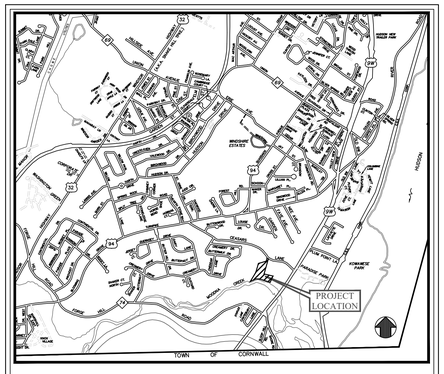
CAESARS LANE WWTP
EXPANSION PROJECT - PHASE 2
145 CAESARS LN., NEW WINDSOR, NY 12553



LOCATION MAP
SCALE : 1" = 2000'

Town Officials

Supervisor -	Stephen A. Bedetti
Council Persons -	Steve Moreau Sylvia Santiago Eve Lincoln Charles H. Broe
Town Clerk -	Patricia A. Clarino

MHE ENGINEERING
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(845) 567-3100
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JADE STONE ENGINEERING

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

TITLE PAGE

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE: 18 APR, 2025
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T-101

PROJECT # 18-732 PHASE #

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TITLE PAGE & DRAWING INDEX

DWG No.	DESCRIPTION
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T-102	DRAWING INDEX SHEET 1
T-103	DRAWING INDEX SHEET 2
T-104	DRAWING INDEX SHEET 3
T-105	DRAWING SERIES KEY PLAN
	000 SERIES - SCHEMATICS
C-001	EXISTING PROCESS SCHEMATIC
C-002	EXISTING HYDRAULIC PROFILE
C-003	PROPOSED PROCESS SCHEMATIC
C-004	PROPOSED HYDRAULIC PROFILE
C-005	MASS BALANCE
C-006	PROPOSED SLUDGE HYDRAULIC PROFILE
C-007	PROPOSED PLANT WATER SCHEMATIC

CIVIL - PROCESS DRAWING LIST

DWG No.	DESCRIPTION
	100 SERIES - SITE WORK
C-100	CONSTRUCTION STAGING PLAN
C-101	OVERALL EXISTING CONDITIONS / DEMOLITION PLAN
C-102	PARTIAL EXISTING CONDITIONS / DEMOLITION PLAN #1
C-103	PARTIAL EXISTING CONDITIONS / DEMOLITION PLAN #2
C-104	PARTIAL EXISTING CONDITIONS / DEMOLITION PLAN #3
C-105	EXISTING PLANT OUTFALL SYSTEM MAP
C-106	EXISTING OUTFALL ABANDONMENT PLAN AND DETAILS
C-107	SOIL BORING LOCATION PLAN
C-108	SOIL BORING LOGS
C-110	OVERALL PROPOSED SITE PLAN
C-111	OVERALL PROCESS PIPING PLAN
C-112	OVERALL SITE KEY PLAN
C-113	PARTIAL SITE PIPING / UTILITY PLAN #1
C-114	PARTIAL SITE PIPING / UTILITY PLAN #2
C-115	PARTIAL SITE PIPING / UTILITY PLAN #3
C-116	PARTIAL SITE PIPING / UTILITY PLAN #4
C-117	PARTIAL SITE PIPING / UTILITY PLAN #5
C-118	PARTIAL SITE PIPING / UTILITY PLAN #6
C-119	PARTIAL SITE PIPING / UTILITY PLAN #7
C-120	OVERALL SITE GRADING PLAN & STORMWATER SCHEDULE
C-121	PARTIAL SITE GRADING PLAN #1
C-122	PARTIAL SITE GRADING PLAN #2
C-123	PROCESS PIPE PROFILES
C-124	PROCESS PIPE PROFILES
C-125	PROCESS PIPE PROFILES
C-126	PROCESS PIPE PROFILES
C-127	PROPOSED WATERMAIN PROFILE
C-130	EROSION & SEDIMENT CONTROL PLAN 1 OF 6
C-131	EROSION & SEDIMENT CONTROL PLAN 2 OF 6
C-132	EROSION & SEDIMENT CONTROL PLAN 3 OF 6
C-133	EROSION & SEDIMENT CONTROL PLAN 4 OF 6
C-134	EROSION & SEDIMENT CONTROL PLAN 5 OF 6
C-135	EROSION & SEDIMENT CONTROL PLAN 6 OF 6
C-136	EROSION & SEDIMENT CONTROL NOTES & DETAILS
C-137	BIO-BASIN & WATER QUALITY DETAILS
C-140	SITE STORMWATER DETAILS
C-141	SITE WATER & SANITARY SEWER DETAILS
C-142	SITE DETAILS
C-142A	SITE DETAILS
C-143	CIVIL DETAILS
C-150	CONSTRUCTION SEQUENCING PHASE 2A
C-151	CONSTRUCTION SEQUENCING PHASE 2B
C-152	CONSTRUCTION SEQUENCING PHASE 2C
C-153	CONSTRUCTION SEQUENCING PHASE 2D
	200 SERIES - HEADWORKS / SCREENING / GRIT
CD-201	DEMO / EXISTING INFLUENT STRUCTURE & PARSHALL FLUME PLAN VIEW
C-201	PROPOSED INFLUENT STRUCTURE & PARSHALL FLUME PLAN & SECTIONS
C-202	DEMO / PROPOSED INFLUENT SPLITTER BOX / SPLITTER AND SEPTAGE HAULING STATION - PLAN VIEWS / SECTION
C-210	PROPOSED HEADWORKS BUILDING & GRIT SYSTEM - PLAN VIEW
C-211	PROPOSED HEADWORKS BUILDING & GRIT SYSTEM - SECTION
C-212	PROPOSED HEADWORKS BUILDING & GRIT SYSTEM SECTIONS / DETAILS
C-213	PROPOSED GRIT CHAMBER SECTION & DETAILS & GRIT WASHER DETAIL
CD-220	EXISTING GRIT CLASSIFIER BUILDING DEMOLITION PLAN
CD-221	EXISTING / DEMO GRIT CHAMBER - PLAN VIEWS / SECTION
C-220	EXISTING GRIT CHAMBER MODIFICATIONS & PRIMARY DISTRIBUTION BOX PLAN VIEW
C-221	EXISTING GRIT CHAMBER MODIFICATIONS & PRIMARY DISTRIBUTION BOX SECTIONS / DETAILS
C-240	EXISTING HEADWORKS BUILDING MODIFICATIONS PLAN
C-250	PROPOSED HEADWORKS PLANT WATER SUPPLY - PLAN VIEW
C-260	PROPOSED HEADWORKS GATE DETAILS AND SCHEDULE

CIVIL - PROCESS DRAWING LIST

DWG No.	DESCRIPTION
	300 SERIES - PRIMARY SETTLING
CD-301	EXISTING PRIMARY SETTLING TANK EQUIPMENT DEMOLITION PLAN AND SECTIONS
C-301	EXISTING PRIMARY SETTLING TANK MODIFICATIONS PLAN
C-302	PRIMARY SETTLING TANK MODIFICATIONS ISOMETRIC & DETAILS
C-310	PROPOSED PRIMARY SETTLING TANK #4 PLAN & SECTION
C-311	PROPOSED PRIMARY SETTLING TANK #4 SECTIONS & DETAILS
C-320	EXISTING PRIMARY SLUDGE VALVE PIT & MODIFICATION, PROPOSED PRIMARY SETTLING TANK #4 SLUDGE VALVE VAULT
C-321	EXISTING PRIMARY SLUDGE PIT MODIFICATIONS
C-322	EXISTING PRIMARY SLUDGE PIT MODIFICATIONS
	400 SERIES - SLUDGE HOLDING / THICKENING
C-401	A.T.A.D. KEY PLAN
C-402	A.T.A.D. OVERALL ABOVE TANK PLAN VIEW AND SECTION
C-410	DRUM THICKENERS & SLUDGE HOLDING IN-BASIN LAYOUT
C-411	FILTRATE PRECAST PUMP STATION DETAILS
C-420	A.T.A.D. OVERALL PLAN
C-421	A.T.A.D. FOAM CONTROL SYSTEM PLAN
C-422	THERMAER & SNDR FOAM CONTROL SECTIONS
C-423	THERMAER & SNDR DETAILS
C-430	BIOFILTER AND SCRUBBER PLANS
C-431	BIOFILTER AND SCRUBBER SECTIONS AND DETAILS
C-440	EQUIPMENT ROOM LAYOUT PLAN AND OVERALL SECTION
C-441	THERMAER AND SNDR PUMP DETAILS
C-442	TRANSFER PUMPS SECTIONS AND DETAILS
C-443	COOLAER SECTIONS AND DETAILS
C-444	A.T.A.D. BLOWERS SECTION AND DETAILS
C-450	POTABLE AND NON-POTABLE WATER SCHEMATICS
	500 SERIES - MBR BASINS
C-501	MBR - OVERALL PROCESS PLAN
C-502	MBR - OVERALL PROCESS SECTION AND REAR ELEVATION
C-510	MBR - INFLUENT PUMPS & MICROSCREEN PLAN
C-511	MBR - INFLUENT PUMPS & MICROSCREEN SECTIONS
C-520	MBR - ANOXIC ZONE TANK PLAN, SECTIONS & DETAILS
C-530	MBR - AEROBIC ZONE TANK PLAN
C-531	MBR - AEROBIC ZONE TANK SECTIONS
C-540	MBR - BASIN PLAN AND DETAILS
C-541	MBR - BASIN SECTIONS
C-542	MBR - CASSETTE LAYDOWN AREA, CHEM. AREA & SCUM PIT SECTIONS
C-543	MBR - MEZZANINE & OFFICE PLAN
C-544	MBR - SLIDE GATE DETAILS & SCHEDULE
C-550	MBR - FIRST FLOOR PROCESS PLAN & SECOND FLOOR PLAN
C-551	MBR - R.A.S. PUMP ROOM PROCESS PLAN AND SECTIONS
C-552	MBR - BLOWER ROOM PROCESS PLAN
C-553	MBR - CHEM. FEED PROCESS PLAN AND DETAILS
C-554	MBR - SECTIONS & PIPE ELEVATIONS
C-555	MBR - R.A.S. PUMP ROOM TURBIDITY PANEL ELEVATION
	600 SERIES - POST-AERATION
C-601	EXISTING DE-CHLORINATION PLAN & SECTION
C-602	POST AERATION PROCESS PLAN
C-603	POST AERATION BLOWER PLATFORM PLAN AND SECTIONS
C-604	BACKPULSE PUMP STATION AND VALVE VAULT
	700 SERIES - EXISTING CONTROL BLDG. / DEWATERING
CD-701	EXISTING CONDITIONS / DEMO PLAN - DEWATERING BUILDING - LOWER LEVEL
CD-702	EXISTING CONDITIONS / DEMO PLAN - DEWATERING BUILDING - UPPER LEVEL
C-701	PROPOSED LAYOUT PLAN - DEWATERING BUILDING - LOWER LEVEL
C-702	PROPOSED LAYOUT PLAN - DEWATERING BUILDING - UPPER LEVEL
C-703	DEWATERING BUILDING SECTIONS / DETAILS
C-704	DEWATERING BUILDING EXISTING SUMP PIT DETAIL
	800 SERIES - SECONDARY SETTLING, TRICKLING FILTERS, MISC. STRUCTURES
CD-801	TYPICAL EXISTING SECONDARY SETTLING TANK DEMOLITION PLAN
CD-802	EXISTING TRICKLING FILTER #1 DEMOLITION PLAN AND DETAILS
CD-803	EXISTING TRICKLING FILTER #2 DEMOLITION PLAN AND DETAILS
CD-804	EXISTING TRICKLING FILTER #3 DEMOLITION PLAN AND SECTIONS
CD-805	EXISTING EFFLUENT PUMP PITS DEMOLITION PLANS AND DETAILS
CD-806	EXISTING TRICKLING FILTER DISTRIBUTION BOX & SETTLING TANK EFFLUENT CHAMBER DEMOLITION PLANS
CD-807	EXISTING SLUDGE THICKENING TANK DEMOLITION PLAN AND SECTION (TYP. OF 2)
CD-808	EXISTING PRIMARY COLLECTION EFFLUENT BOX DEMOLITION PLANS AND SECTIONS

ARCHITECTURAL DRAWING LIST

DWG No.	DESCRIPTION
	200 SERIES - HEADWORKS / SCREENING / GRIT
G-001	ADA CLEARANCES, ABBREVIATIONS & LEGEND
G-201	HEADWORKS BUILDING - EGRESS PLAN & CODE ANALYSIS
AD-201	HEADWORKS BUILDING - DEMO FLOOR PLAN, ROOF PLAN & ELEVATIONS
A-201	HEADWORKS BUILDING - NEW FLOOR PLAN ADDITION, WALL TYPES, DETAILS & DOOR SCHEDULE
A-202	HEADWORKS BUILDING - NEW ROOF PLAN ADDITION & DETAILS
A-203	HEADWORKS BUILDING - NEW ADDITION ELEVATIONS, WALL SECTIONS & DETAIL
	400 SERIES - SLUDGE HOLDING / THICKENING
G-400	ATAD EQUIPMENT BUILDING - EGRESS PLAN
A-400	ATAD EQUIPMENT BUILDING - FLOOR PLAN & ELEVATIONS
A-401	ATAD EQUIPMENT BUILDING - ROOF PLAN & DETAILS
A-402	ATAD EQUIPMENT BUILDING - BUILDING SECTION & DETAILS
	500 SERIES - MBR BASINS
G-510	MICROSCREEN - EGRESS PLAN
A-510	MICROSCREEN - PLANS, ELEVATIONS, & DETAILS
A-511	MICROSCREEN - BUILDING SECTIONS
A-512	MICROSCREEN - BUILDING SECTIONS
G-550	MBR BUILDING - EGRESS PLAN, CODE ANALYSIS & DETAILS
G-551	MBR BUILDING - SECOND FLOOR EGRESS PLAN
A-550	MBR BUILDING - GROUND FLOOR PLAN
A-551	MBR BUILDING - SECOND FLOOR PLAN, INTERIOR ELEVATION & FINISH DETAILS
A-552	MBR BUILDING - ROOF PLAN & DETAILS
A-553	MBR BUILDING - EXTERIOR ELEVATIONS
A-554	MBR BUILDING - EXTERIOR ELEVATION & SECTIONS
A-555	MBR BUILDING - BUILDING SECTIONS & ROOF DETAILS
A-556	MBR BUILDING - TYPICAL FRAMING DETAILS, WALL TYPES & DOOR, WINDOW & FINISH SCHEDULES
A-557	MBR BUILDING - LOUVER DETAILS & DOOR DETAILS
A-558	MBR BUILDING - DOOR, WINDOW & WALL DETAILS
	700 SERIES - EXISTING CONTROL BLDG. / DEWATERING
G-701	DEWATERING BUILDING - LOWER & UPPER LEVEL EGRESS PLANS, CODE ANALYSIS & DETAILS
AD-701	DEWATERING BUILDING - LOWER LEVEL DEMOLITION PLAN & NOTES
AD-702	DEWATERING BUILDING - UPPER LEVEL DEMOLITION PLAN & NOTES
AD-703	DEWATERING BUILDING - ROOF DEMOLITION PLAN & NOTES
AD-704	DEWATERING BUILDING - EXTERIOR ELEVATIONS DEMOLITION, PHOTOS & NOTES
AD-705	DEWATERING BUILDING - EXTERIOR ELEVATIONS DEMOLITION, PHOTOS & NOTES
A-701	DEWATERING BUILDING - LOWER LEVEL FLOOR PLAN, WALL TYPE & NOTES
A-702	DEWATERING BUILDING - UPPER LEVEL FLOOR PLAN, WALL TYPES, FINISH SCHEDULE & NOTES
A-703	DEWATERING BUILDING - ROOF PLAN, DETAILS & NOTES
A-704	DEWATERING BUILDING - EXTERIOR ELEVATIONS, FINISH DETAILS, WALL TYPE & NOTES
A-705	DEWATERING BUILDING - EXTERIOR ELEVATIONS & NOTES
A-706	DEWATERING BUILDING - KITCHEN PLAN, ELEVATIONS & DETAILS, METAL STAIR PLAN, SECTIONS & DETAILS
A-707	DEWATERING BUILDING - EXTERIOR CONCRETE STAIR PLAN, ELEVATION & MISC. DETAILS
A-708	DEWATERING BUILDING - INTERIOR PLANS, INTERIOR ELEVATIONS & DETAILS
A-709	DEWATERING BUILDING - DOOR DETAILS & DOOR SCHEDULE
A-710	DEWATERING BUILDING - WINDOW DETAILS & DOOR DETAILS & WINDOW SCHEDULE
A-711	DEWATERING BUILDING - UPPER LEVEL REFLECTED CEILING PLAN & MISC. DETAILS
	900 SERIES - MAINTENANCE GARAGE
G-950	MAINTENANCE BUILDING - EGRESS PLAN
A-950	MAINTENANCE BUILDING - FLOOR PLAN & WALL TYPES
A-951	MAINTENANCE BUILDING - ROOF PLAN & DETAILS
A-952	MAINTENANCE BUILDING - EXTERIOR ELEVATIONS
A-953	MAINTENANCE BUILDING - BUILDING SECTION
A-954	MAINTENANCE BUILDING - DOOR DETAILS, WINDOW DETAILS & SCHEDULES

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
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DRAWING INDEX SHEET 1

REVISIONS

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T-102

PROJECT # 18-732 PHASE #

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STRUCTURAL DRAWING LIST

DWG No.	DESCRIPTION
	100 SERIES - SITE WORK
S-110	100 SERIES RETAINING WALL #2 NOTES AND DETAILS
S-111	RETAINING WALL #2 SITE PLAN
S-112	RETAINING WALL #2 ELEVATIONS
S-113	RETAINING WALL #2 ELEVATIONS (CONTINUED)
	200 SERIES - HEADWORKS / SCREENING / GRIT
S-200	200 SERIES STRUCTURAL NOTES
S-201	INFLUENT BOX AND PARSHALL FLUME PLAN AND SECTIONS
S-202	INFLUENT SPLITTER BOX PLAN AND SECTION
S-210	PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER FOUNDATION PLAN
S-211	PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER SLAB PLAN
S-212	PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER GRATING PLAN
S-213	PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER FRAMING AND WALL PLAN
S-214	PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER SECTIONS
S-215	PROPOSED HEADWORKS BUILDING WALL ELEVATIONS
S-216	PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER DETAIL
S-217	PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER DETAIL (CONT.)
S-220	EXISTING GRIT CHAMBER AND DISTRIBUTION BOX MODIFICATION PLAN AND DETAILS
S-221	EXISTING GRIT CHAMBER AND DISTRIBUTION BOX REPAIR PLAN
	300 SERIES - PRIMARY SETTLING
S-300	300 SERIES STRUCTURAL NOTES
S-301	EXISTING PRIMARY SETTLING TANKS REPAIRS
S-310	PROPOSED PRIMARY SETTLING TANK #4 PLAN AND SECTION
S-311	PROPOSED PRIMARY SETTLING TANK #4 DETAILS
	400 SERIES - SLUDGE HOLDING / THICKENING
S-400	400 SERIES STRUCTURAL NOTES
S-401	ATAD FOUNDATION PLAN
S-402	ATAD SLAB PLAN
S-403	ATAD WALL AND SLAB PENETRATION PLAN
S-404	ATAD ROOF FRAMING, MASONRY WALL AND TANK COVER PLAN
S-405	ATAD SECTIONS
S-406	ATAD SECTION AND WALL ELEVATIONS
S-407	ATAD WALL ELEVATIONS (CONT.)
S-408	ATAD DETAILS
S-409	ATAD DETAILS (CONTINUED)

STRUCTURAL DRAWING LIST

DWG No.	DESCRIPTION
	500 SERIES - MBR BASINS
S-500A	500 SERIES STRUCTURAL NOTES
S-500B	500 SERIES STRUCTURAL NOTES CONTINUED
S-500C	500 SERIES TYPICAL DETAILS
S-501	MICROSCREEN AND INFLUENT TANK PLANS
S-502	MICROSCREEN PLANS
S-503	MICROSCREEN BUILDING WALL ELEVATIONS
S-504	MICROSCREEN, WET WELL AND INFLUENT TANK SECTIONS
S-505	MICROSCREEN, WET WELL AND INFLUENT TANK DETAILS
S-510	ANOXIC AND AEROBIC TANK PLAN
S-511	ANOXIC AND AEROBIC TANK SECTIONS
S-512	ANOXIC AND AEROBIC TANK DETAILS
S-520	MBR BASIN PLANS
S-521	MBR BASIN AND ENCLOSURE PLANS
S-522	MBR ENCLOSURE PLANS
S-523	MBR BASIN AND ENCLOSURE SECTIONS
S-524	MBR BASIN AND ENCLOSURE SECTIONS CONTINUED
S-525	MBR BASIN AND ENCLOSURE SECTIONS CONTINUED
S-526	MBR BASIN AND ENCLOSURE SECTIONS CONTINUED
S-527	MBR BASIN PILASTER AND FOUNDATION SECTIONS AND DETAILS
S-528	MBR BASIN AND ENCLOSURE DETAILS
S-529	MBR BASIN AND ENCLOSURE DETAILS CONTINUED
S-530	MBR BASIN AND ENCLOSURE DETAILS CONTINUED
S-531	MBR ENCLOSURE REAR ENTRANCE SECTIONS AND DETAILS
S-532	MBR TRAIN BAFFLE DETAILS
S-540	MBR CONTROL BUILDING PLANS
S-541	MBR CONTROL BUILDING PLANS CONTINUED
S-542	R.A.S. ROOM PIPE SUPPORT PLAN AND SECTIONS
S-543	MBR CONTROL BUILDING SECTIONS
S-544	MBR CONTROL BUILDING SECTIONS CONTINUED
S-545	MBR CONTROL BUILDING SECTIONS CONTINUED
S-546	MBR CONTROL BUILDING SECTIONS CONTINUED
S-547	MBR CONTROL BUILDING DETAILS
S-548	MBR CONTROL BUILDING DETAILS CONTINUED
S-549	MBR CONTROL BUILDING DETAILS CONTINUED

STRUCTURAL DRAWING LIST

DWG No.	DESCRIPTION
	600 SERIES - POST-AERATION
S-600	600 SERIES STRUCTURAL NOTES
S-601	BACK-PULSE TANK PLANS AND SECTIONS
S-602	BACK-PULSE TANK DETAILS
S-610	CHLORINATION/DECHLORINATION TANK MODIFICATIONS
S-611	CHLORINATION/DECHLORINATION TANK MODIFICATION DETAILS
S-612	CHLORINATION/DECHLORINATION TANK MODIFICATION DETAILS (CONT.)
S-620	CHLORINATION/DECHLORINATION TANK BLOWER PLATFORM PLANS
S-621	CHLORINATION/DECHLORINATION TANK BLOWER PLATFORM SECTIONS
S-622	CHLORINATION/DECHLORINATION TANK BLOWER PLATFORM AND DETAILS
	700 SERIES - EXISTING CONTROL BLDG. / DEWATERING
S-700	700 SERIES STRUCTURAL NOTES
S-701	SLUDGE DEWATERING BUILDING GROUND LEVEL MODIFICATION PLAN
S-702	SLUDGE DEWATERING BUILDING UPPER LEVEL MODIFICATION PLAN
S-703	SLUDGE DEWATERING BUILDING ADDITIONAL SECTIONS AND DETAILS
S-704	SLUDGE DEWATERING BUILDING DETAILS
S-705	SLUDGE DEWATERING BUILDING DETAILS CONTINUED
S-706	SLUDGE DEWATERING BUILDING ENTRY CANOPY PLAN AND SECTIONS
S-707	SLUDGE DEWATERING BUILDING RETAINING WALL ELEVATION AND SECTION
	900 SERIES - MAINTENANCE GARAGE
S-910	900 SERIES STRUCTURAL NOTES
S-911	MAINTENANCE BUILDING FOUNDATION PLAN
S-912	MAINTENANCE BUILDING SLAB PLAN
S-913	MAINTENANCE BUILDING DETAILS

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DRAWING INDEX
SHEET 2

REVISIONS

NO.	DESCRIPTION	DATE

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T-103

PROJECT # 18-732 PHASE #

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ELECTRICAL DRAWING LIST

DWG No.	DESCRIPTION
	000 SERIES - SCHEMATICS
E-001	ELECTRICAL LEGENDS, ABBREVIATIONS, & NOTES
E-002	ELECTRICAL NFPA AREA CLASSIFICATIONS
E-010	ELECTRICAL DEMOLITION SINGLE LINE DIAGRAMS
E-011	ELECTRICAL DEMOLITION SINGLE LINE DIAGRAMS
E-012	ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS
E-013	ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS
E-014	ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS
E-015	ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS
E-016	ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS
E-017	ELECTRICAL ELEMENTARY WIRING DIAGRAMS
E-020	ELECTRICAL RISER DIAGRAMS
E-021	ELECTRICAL RISER DIAGRAMS
E-022	ELECTRICAL RISER DIAGRAMS
E-023	ELECTRICAL RISER DIAGRAMS
E-024	ELECTRICAL RISER DIAGRAMS
E-025	ELECTRICAL RISER DIAGRAMS
E-026	ELECTRICAL RISER DIAGRAMS
E-027	ELECTRICAL RISER DIAGRAMS
E-028	ELECTRICAL RISER DIAGRAMS
E-030	ELECTRICAL DETAILS
E-031	ELECTRICAL DETAILS
E-032	ELECTRICAL DETAILS
E-033	ELECTRICAL DETAILS
E-034	ELECTRICAL DETAILS
E-035	ELECTRICAL DETAILS
E-036	ELECTRICAL DETAILS
E-040	ELECTRICAL SCHEDULES
E-041	ELECTRICAL SCHEDULES
E-042	ELECTRICAL SCHEDULES
E-043	ELECTRICAL SCHEDULES
E-044	ELECTRICAL SCHEDULES
E-045	ELECTRICAL SCHEDULES
E-046	ELECTRICAL SCHEDULES
E-047	ELECTRICAL SCHEDULES
E-048	ELECTRICAL SCHEDULES
E-049	ELECTRICAL SCHEDULES
E-050	ELECTRICAL SCHEDULES
E-051	ELECTRICAL SCHEDULES
E-052	ELECTRICAL SCHEDULES
	100 SERIES - SITE WORK
E-100	ELECTRICAL SITE PLAN - DEMOLITION
E-101	ELECTRICAL SITE PLAN - NEW WORK
E-102	ELECTRICAL SITE LIGHTING CALCULATION
	200 SERIES - HEADWORKS / SCREENING / GRIT
E-200	ELECTRICAL FLOOR PLANS - INFLUENT STRUCTURE
E-201	ELECTRICAL FLOOR PLANS - HEADWORKS BUILDING
E-202	ELECTRICAL FLOOR PLANS - GRIT SYSTEM
	300 SERIES - PRIMARY SETTLING
E-300	ELECTRICAL DEMOLITION PLANS - PRIMARY SETTLING TANKS
E-301	ELECTRICAL NEW WORK PLANS - PRIMARY SETTLING TANKS
	400 SERIES - SLUDGE HOLDING / THICKENING
E-400	ELECTRICAL POWER & SYSTEMS PLAN - ATAD BUILDING
E-401	ELECTRICAL LIGHTING PLAN - ATAD BUILDING
	500 SERIES - MBR BASINS
E-500	ELECTRICAL OVERALL PLAN - MBR BUILDING
E-501	ELECTRICAL POWER & SYSTEMS PLAN - BLOWER & RAS AREA
E-502	ELECTRICAL POWER & SYSTEMS PLAN - MEMBRANE & AEROBIC AREA
E-503	ELECTRICAL POWER, SYSTEMS, & LIGHTING PLAN - SCREENING & INFLUENT AREA
E-504	ELECTRICAL LIGHTING PLAN - BLOWER & RAS AREA
E-505	ELECTRICAL LIGHTING PLAN - MEMBRANE & AEROBIC ZONES
E-506	ELECTRICAL POWER, SYSTEMS, & LIGHTING PLAN - SCUM PUMP AREA
	600 SERIES - POST-AERATION
E-600	ELECTRICAL FLOOR PLANS - DISINFECTION TANK
E-601	ELECTRICAL FLOOR PLANS - DISINFECTION BUILDING

ELECTRICAL DRAWING LIST

DWG No.	DESCRIPTION
	700 SERIES - EXISTING CONTROL BUILDING / DEWATERING
E-700	ELECTRICAL DEMOLITION PLAN - DEWATERING BUILDING LOWER LEVEL
E-701	ELECTRICAL DEMOLITION PLAN - DEWATERING BUILDING UPPER LEVEL
E-702	ELECTRICAL NEW WORK PLAN - DEWATERING BUILDING LOWER LEVEL
E-703	ELECTRICAL NEW WORK PLAN - DEWATERING BUILDING UPPER LEVEL
	800 SERIES - SECONDARY SETTLING, TRICKLING FILTERS, MISC. STRUCTURES
E-800	ELECTRICAL DEMOLITION PLANS - TRICKLING FILTERS
E-801	ELECTRICAL DEMOLITION PLANS - SECONDARY SETTLING TANKS
E-802	ELECTRICAL FLOOR PLANS - UNDERGROUND STRUCTURES
E-803	ELECTRICAL DEMOLITION PLANS - THICKENING TANKS
	900 SERIES - NEW CONTROL BUILDING & MAINTENANCE GARAGE
E-900	ELECTRICAL POWER & SYSTEMS PLAN - CONTROL BUILDING
E-950	ELECTRICAL POWER, SYSTEMS, & LIGHTING PLAN - GARAGE

MECHANICAL DRAWING LIST

DWG No.	DESCRIPTION
	000 SERIES - SCHEMATICS
M-001	MECHANICAL LEGENDS, ABBREVIATIONS, & NOTES
M-030	MECHANICAL DETAILS
M-040	MECHANICAL SCHEDULES
M-041	MECHANICAL SCHEDULES
	200 SERIES - HEADWORKS / SCREENING / GRIT
M-201	MECHANICAL FLOOR PLAN - HEADWORKS BUILDING
M-202	MECHANICAL FLOOR PLAN - GRIT SYSTEM
	300 SERIES - PRIMARY SETTLING
M-300	MECHANICAL DEMOLITION PLANS - SLUDGE PIT & VALVE PIT
M-301	MECHANICAL NEW WORK PLANS - SLUDGE PIT & VALVE PIT
	400 SERIES - SLUDGE HOLDING / THICKENING
M-400	MECHANICAL FLOOR PLAN - ATAD BUILDING
	500 SERIES - MBR BASINS
M-500	MECHANICAL OVERALL PLAN - MBR BUILDING
M-501	MECHANICAL FLOOR PLAN - BLOWER & RAS AREA
M-502	MECHANICAL FLOOR PLAN - MEMBRANE & AEROBIC AREAS
M-503	MECHANICAL FLOOR PLAN - SCREENING & INFLUENT AREA
	700 SERIES - EXISTING CONTROL BUILDING / DEWATERING
M-700	MECHANICAL DEMOLITION PLANS - DEWATERING BUILDING LOWER LEVEL
M-701	MECHANICAL DEMOLITION PLANS - DEWATERING BUILDING UPPER LEVEL
M-702	MECHANICAL NEW WORK PLANS - DEWATERING BUILDING LOWER LEVEL
M-703	MECHANICAL NEW WORK PLANS - DEWATERING BUILDING UPPER LEVEL
	800 SERIES - SECONDARY SETTLING, TRICKLING FILTERS, MISC. STRUCTURES
M-802	MECHANICAL FLOOR PLAN - UNDERGROUND STRUCTURES
	900 SERIES - NEW CONTROL BUILDING & MAINTENANCE GARAGE
M-950	MECHANICAL FLOOR PLAN - GARAGE

PLUMBING DRAWING LIST

DWG No.	DESCRIPTION
	000 SERIES - SCHEMATICS
P-001	PLUMBING LEGENDS, ABBREVIATIONS, & NOTES
P-030	PLUMBING DETAILS & SCHEDULES
	200 SERIES - HEADWORKS / SCREENING / GRIT
P-202	PLUMBING FLOOR PLAN - GRIT SYSTEM
	400 SERIES - SLUDGE HOLDING / THICKENING
P-400	PLUMBING FLOOR PLAN - ATAD BUILDING
	500 SERIES - MBR BASINS
P-500	PLUMBING OVERALL PLAN - MBR BUILDING
P-501	PLUMBING FLOOR PLAN - BLOWER & RAS AREA
P-502	PLUMBING FLOOR PLAN - MEMBRANE & AEROBIC ZONES
	700 SERIES - EXISTING CONTROL BUILDING / DEWATERING
P-700	PLUMBING DEMOLITION PLANS - DEWATERING BUILDING LOWER LEVEL
P-701	PLUMBING DEMOLITION PLANS - DEWATERING BUILDING UPPER LEVEL
P-702	PLUMBING NEW WORK PLANS - DEWATERING BUILDING LOWER LEVEL
P-703	PLUMBING NEW WORK PLANS - DEWATERING BUILDING UPPER LEVEL
	900 SERIES - NEW CONTROL BUILDING & MAINTENANCE GARAGE
P-950	PLUMBING FLOOR PLAN - GARAGE

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

DRAWING INDEX
SHEET 3

REVISIONS

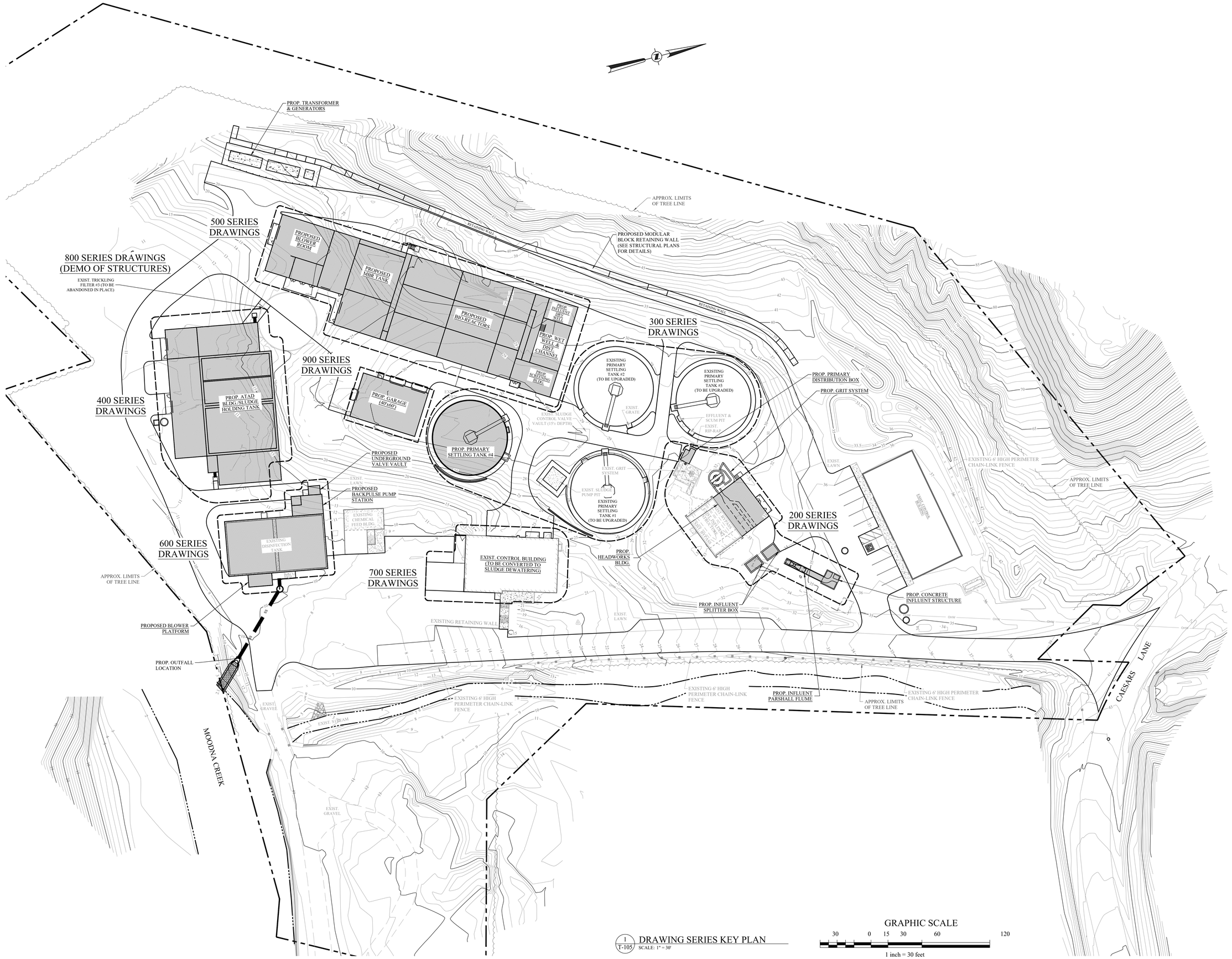
NO.	DESCRIPTION	DATE

ISSUED DATE: 18 APR, 2025
DESIGN BY:
DRAWN BY:
CHECKED BY:
REVIEWED BY:
SHEET NO.

T-104

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\0 - General\18-732 Cover Sheet.dwg, T-104, 4/17/2025 4:34:32 PM



1 / T-105 DRAWING SERIES KEY PLAN
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

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NEW WINDSOR, NY 12553

DRAWING SERIES KEY PLAN

REVISIONS

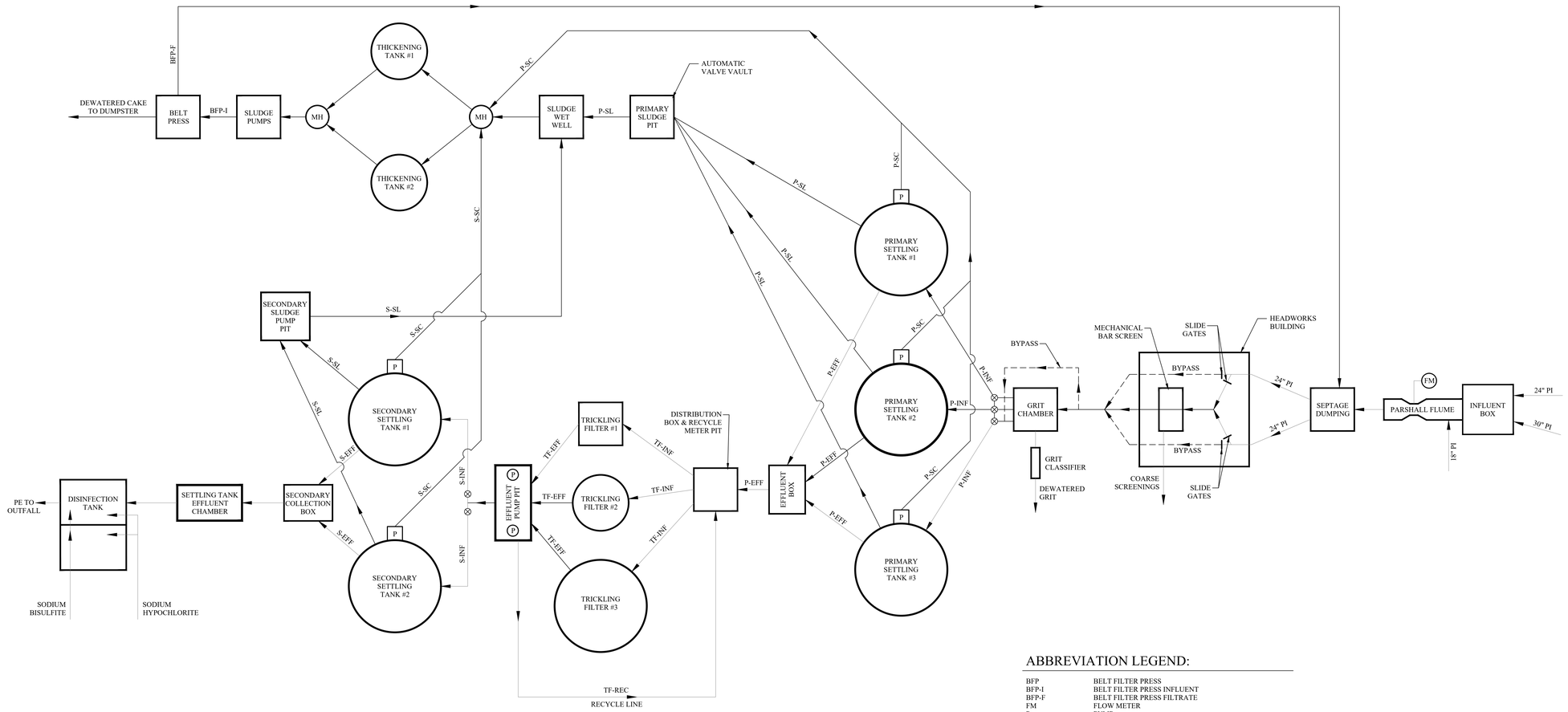
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.
T-105

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1- Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, T-105, 4/17/2025 4:34:43 PM



EXISTING PROCESS SCHEMATIC

SCALE: NONE

ABBREVIATION LEGEND:

BFP	BELT FILTER PRESS
BFP-I	BELT FILTER PRESS INFLUENT
BFP-F	BELT FILTER PRESS FILTRATE
FM	FLOW METER
P	PUMP
P-SC	PRIMARY SCUM
P-SL	PRIMARY SLUDGE
PE	PLANT EFFLUENT
P-EFF	PRIMARY EFFLUENT
P-INF	PRIMARY INFLUENT
PI	PLANT INFLUENT
S-SC	SECONDARY SCUM
S-SL	SECONDARY SLUDGE
S-EFF	SECONDARY EFFLUENT
S-INF	SECONDARY INFLUENT
TF-EFF	TRICKLING FILTER EFFLUENT
TF-INF	TRICKLING FILTER INFLUENT
TF-REC	TRICKLING FILTER RECYCLE

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NEW WINDSOR, NY 12553

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NEW WINDSOR, NY 12553

EXISTING PROCESS SCHEMATIC

REVISIONS

NO.	DESCRIPTION	DATE

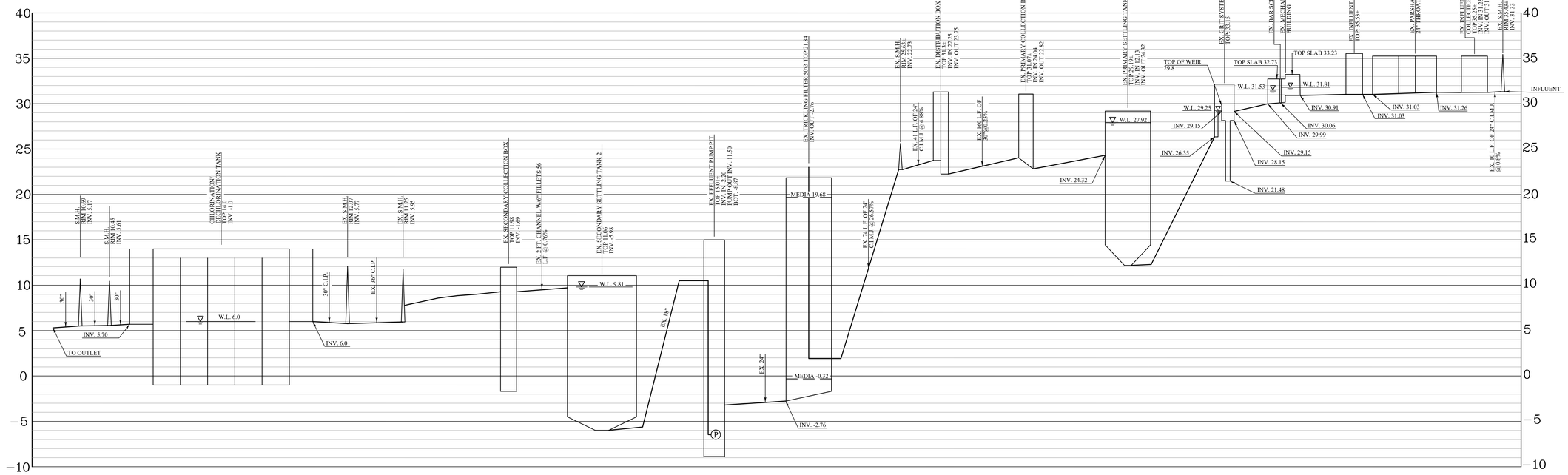
ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-001

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\01 - General\Process Schematic\4-30-2025.dwg, C-001, 4/18/2025 2:53:36 PM



EXISTING HYDRAULIC PROFILE

SCALES:
HORIZ. NONE
VERT. 1"=5'

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EXISTING HYDRAULIC PROFILE

REVISIONS

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ISSUED DATE:	18 APR, 2025
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CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-002

PROJECT # 18-732 PHASE #

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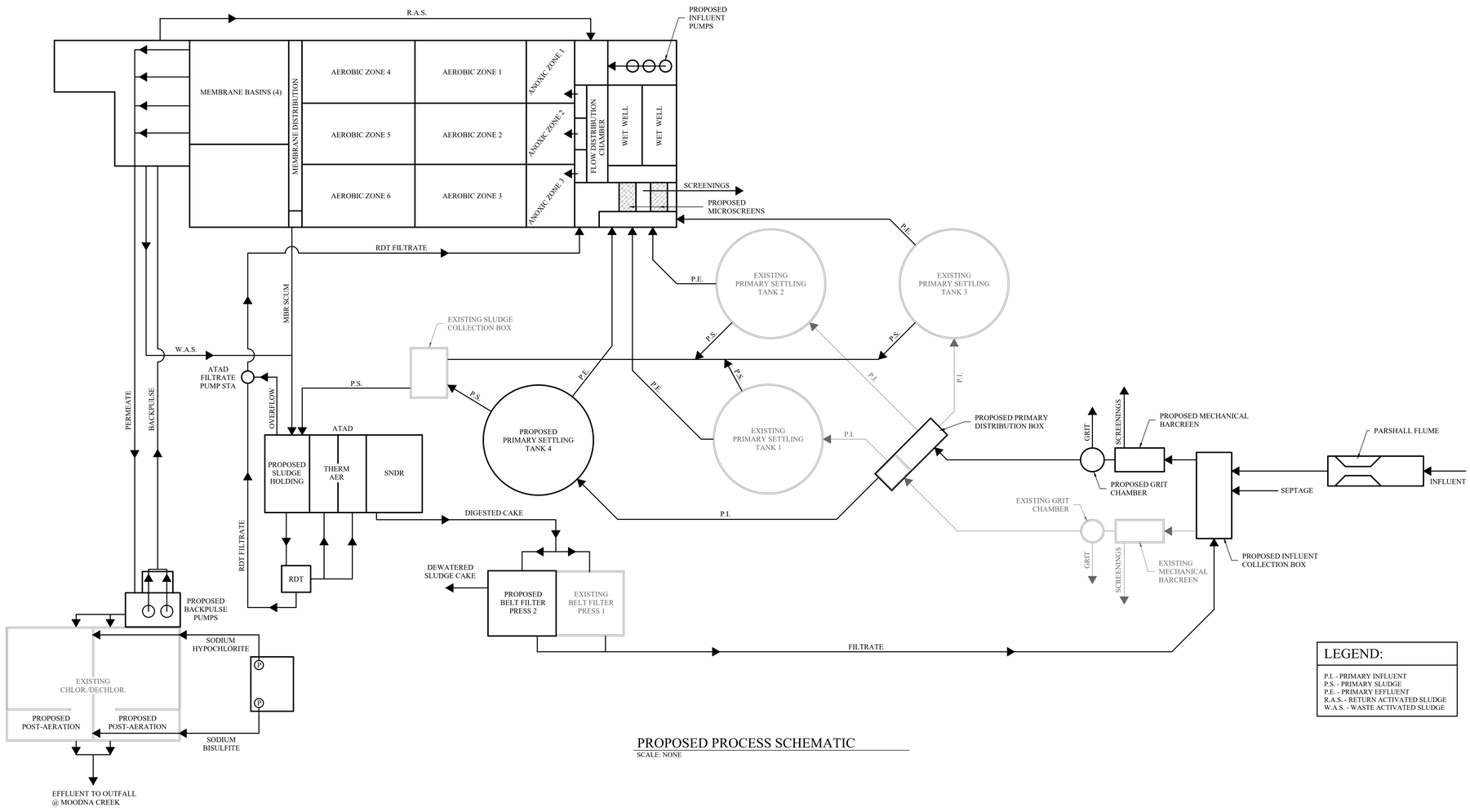

PROPOSED PROCESS SCHEMATIC

SCALE: NONE

LEGEND:

P.I. - PRIMARY INFLUENT
P.S. - PRIMARY SLUDGE
P.E. - PRIMARY EFFLUENT
R.A.S. - RETURN ACTIVATED SLUDGE
W.A.S. - WASTE ACTIVATED SLUDGE

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PROPOSED PROCESS SCHEMATIC

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-003

PROJECT # 18-732 PHASE #

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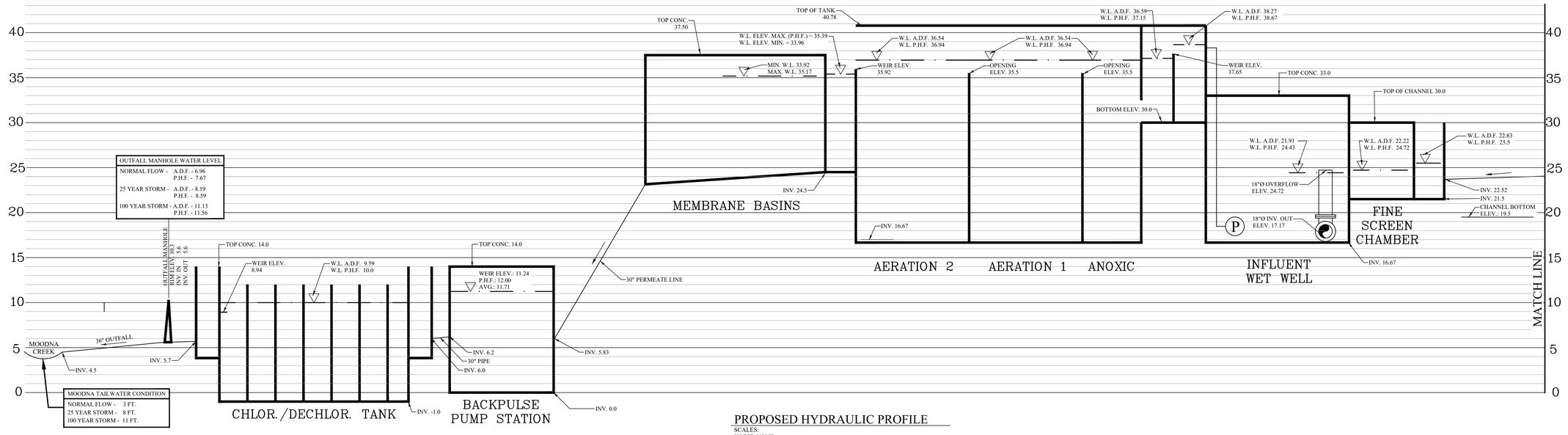
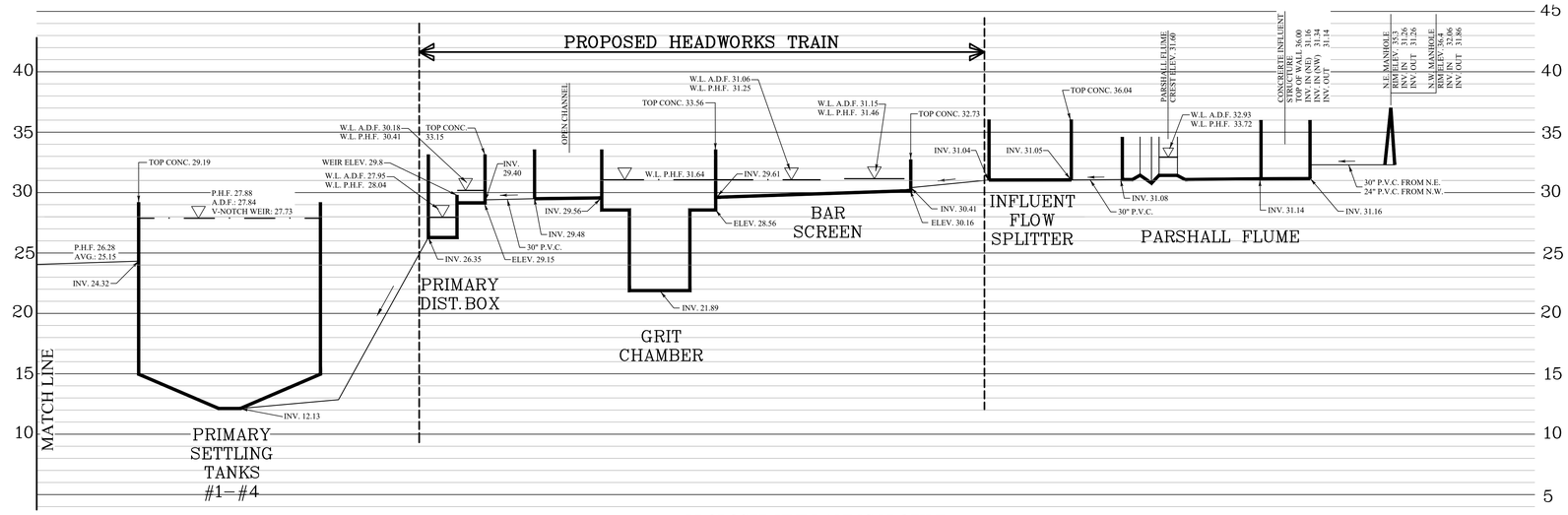


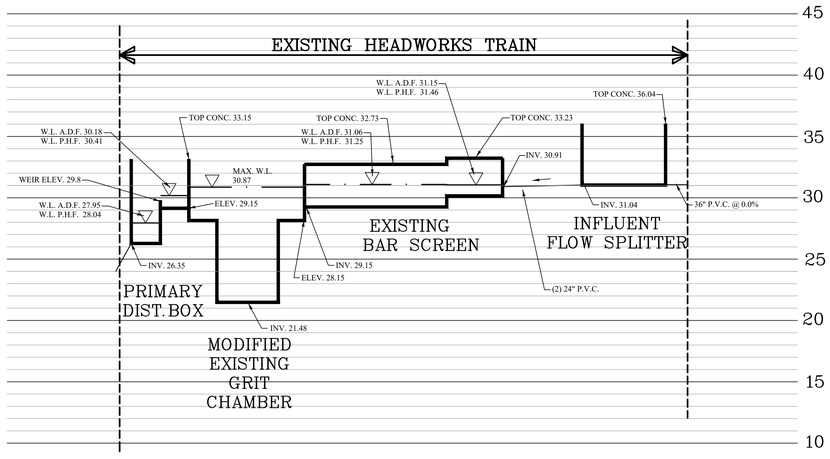
PROPOSED HYDRAULIC PROFILE

SCALES:
HORIZ. NONE
VERT. 1"=5'



PROPOSED HYDRAULIC PROFILE

SCALES:
HORIZ. NONE
VERT. 1"=5'



PROPOSED HYDRAULIC PROFILE

SCALES:
HORIZ. NONE
VERT. 1"=5'

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PROPOSED HYDRAULIC PROFILE

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-004

PROJECT # 18-732 PHASE #

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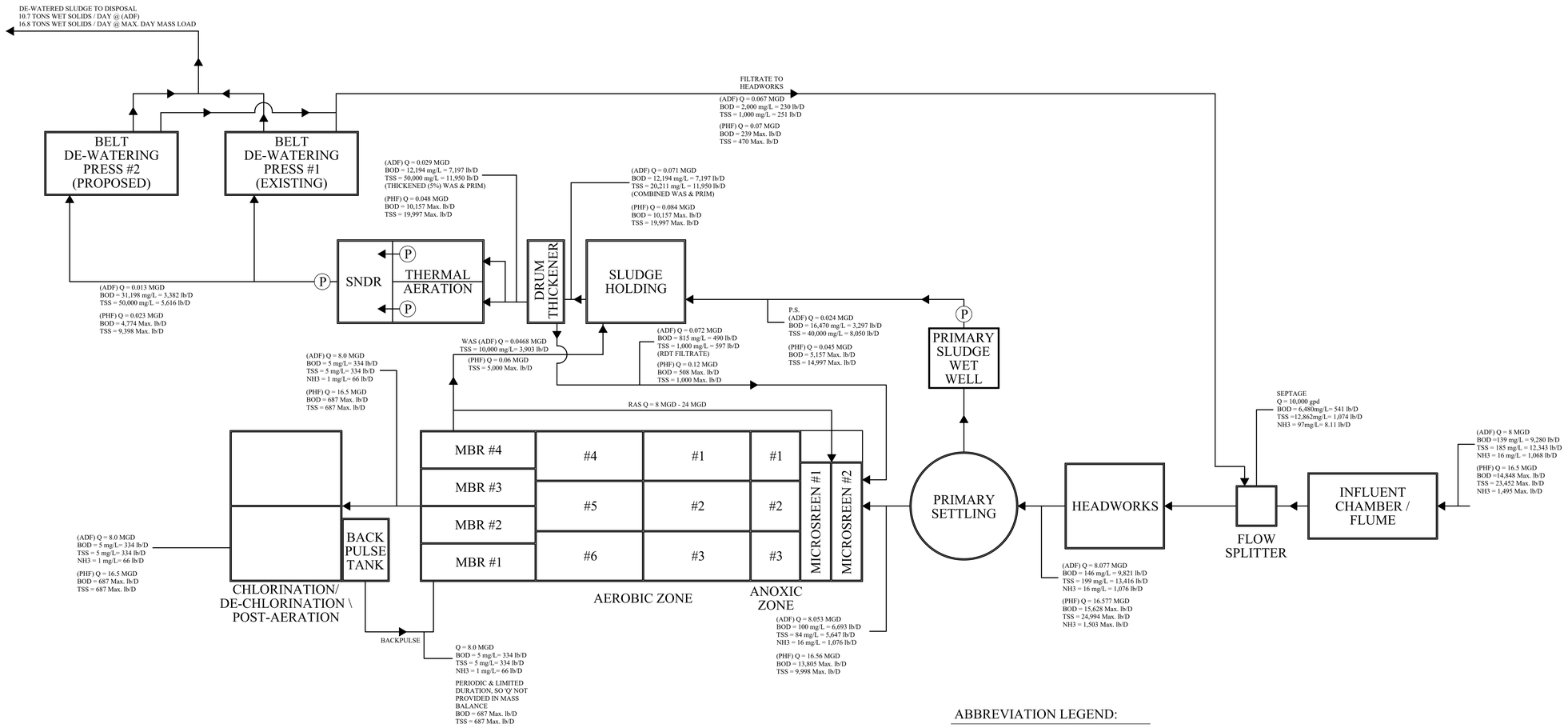

MASS BALANCE

SCALE: NONE

ABBREVIATION LEGEND:

Q	INFLUENT FLOW RATE
WAS	WASTED ACTIVATED SLUDGE
RAS	RETURN ACTIVATED SLUDGE
TSS	TOTAL SUSPENDED SOLIDS
BOD	BIOLOGICAL OXYGEN DEMAND
NH3	FREE AMMONIA
MGD	MILLIONS OF GALLONS PER DAY
mg/L	MILLIGRAMS PER LITER
lb/D	POUNDS PER DAY
Max. lb/D	MAX. DAY MASS LOAD

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NEW WINDSOR, NY 12553

MASS BALANCE

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-005

PROJECT # 18-732 PHASE #

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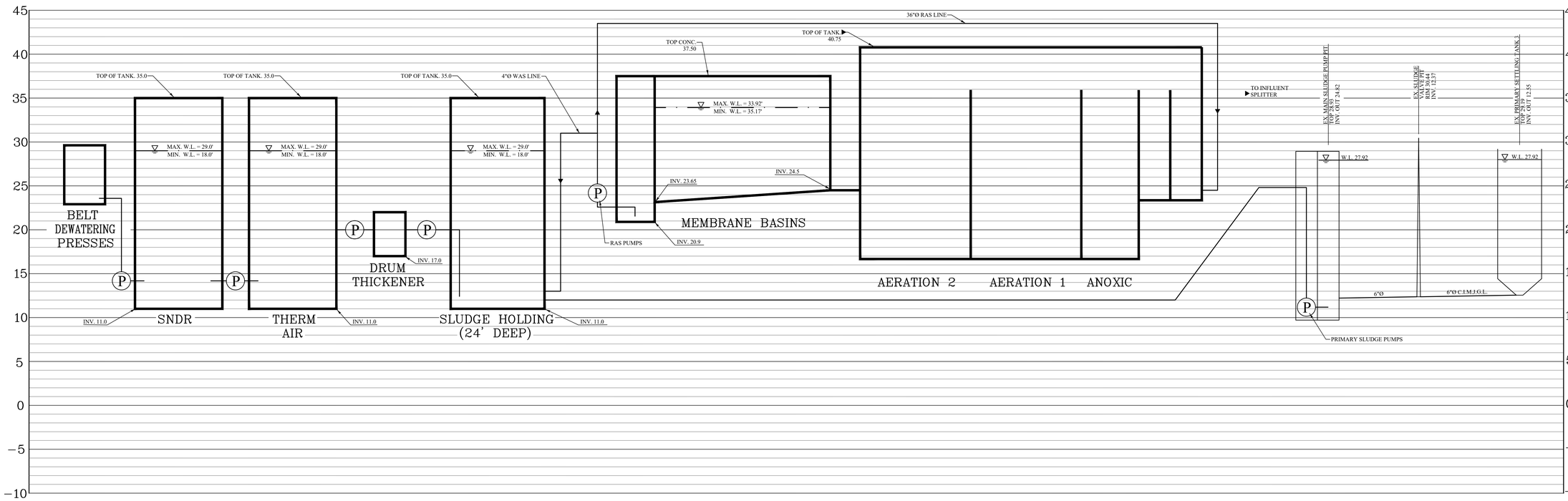

PROPOSED SLUDGE HYDRAULIC PROFILE

SCALES:
HORIZ. NONE
VERT. 1"=5'

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New Windsor, NY 12553
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BID SET

HAZARDOUS MATERIAL NOTE:
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UDIG·NY
SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED SLUDGE HYDRAULIC PROFILE

REVISIONS

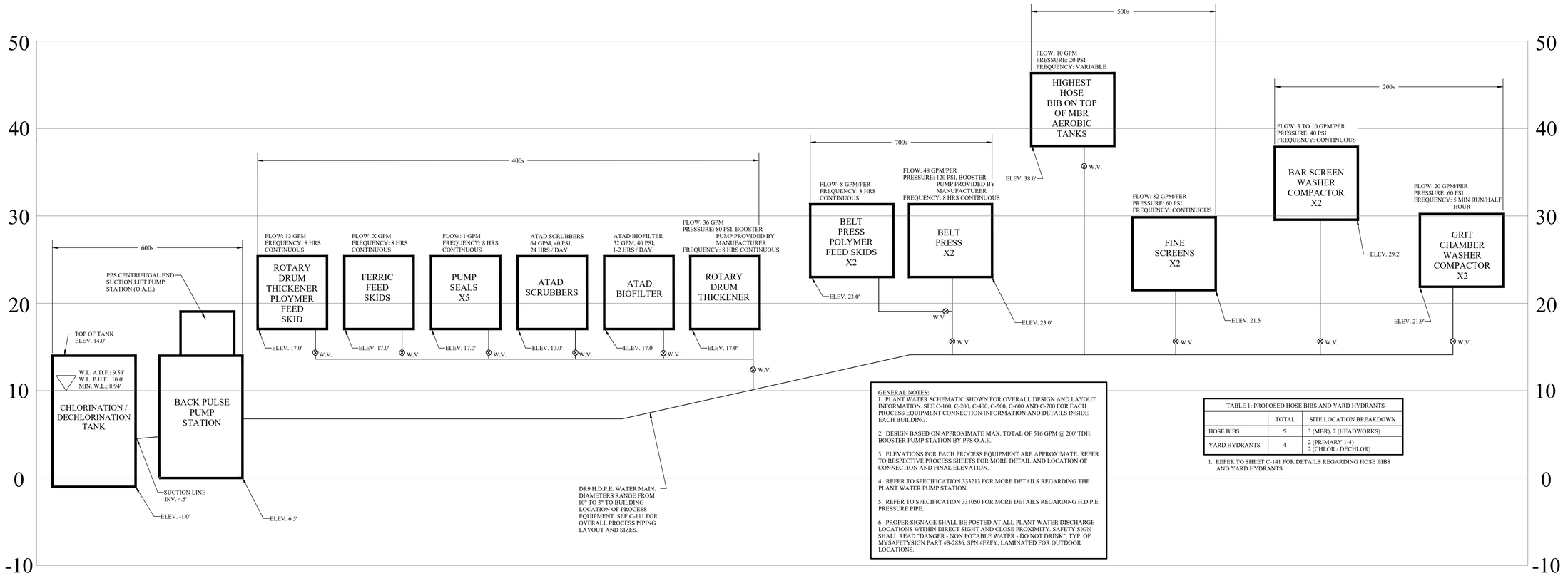
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-006

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\01 - General\Process Schematic-8-30-2023.dwg, C-006, 4/16/2025 2:53:42 PM



GENERAL NOTES:

1. PLANT WATER SCHEMATIC SHOWN FOR OVERALL DESIGN AND LAYOUT INFORMATION. SEE C-100, C-200, C-400, C-500, C-600 AND C-700 FOR EACH PROCESS EQUIPMENT CONNECTION INFORMATION AND DETAILS INSIDE EACH BUILDING.

2. DESIGN BASED ON APPROXIMATE MAX. TOTAL OF 516 GPM @ 200' TDH. BOOSTER PUMP STATION BY PPS O.A.E.

3. ELEVATIONS FOR EACH PROCESS EQUIPMENT ARE APPROXIMATE. REFER TO RESPECTIVE PROCESS SHEETS FOR MORE DETAIL AND LOCATION OF CONNECTION AND FINAL ELEVATION.

4. REFER TO SPECIFICATION 333213 FOR MORE DETAILS REGARDING THE PLANT WATER PUMP STATION.

5. REFER TO SPECIFICATION 331050 FOR MORE DETAILS REGARDING H.D.P.E. PRESSURE PIPE.

6. PROPER SIGNAGE SHALL BE POSTED AT ALL PLANT WATER DISCHARGE LOCATIONS WITHIN DIRECT SIGHT AND CLOSE PROXIMITY. SAFETY SIGN SHALL READ "DANGER - NON POTABLE WATER - DO NOT DRINK", TYP. OF MYSAFETYSIGN PART #S-2836, SPN #FZFY, LAMINATED FOR OUTDOOR LOCATIONS.

TABLE 1: PROPOSED HOSE BIBS AND YARD HYDRANTS

	TOTAL	SITE LOCATION BREAKDOWN
HOSE BIBS	5	3 (MBR), 2 (HEADWORKS)
YARD HYDRANTS	4	2 (PRIMARY 1-4) 2 (CHLOR / DECHLOR)

1. REFER TO SHEET C-141 FOR DETAILS REGARDING HOSE BIBS AND YARD HYDRANTS.

PROPOSED PLANT WATER SCHEMATIC

SCALES:
HORIZ. NONE
VERT. 1" = 5'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED PLANT WATER SCHEMATIC

REVISIONS

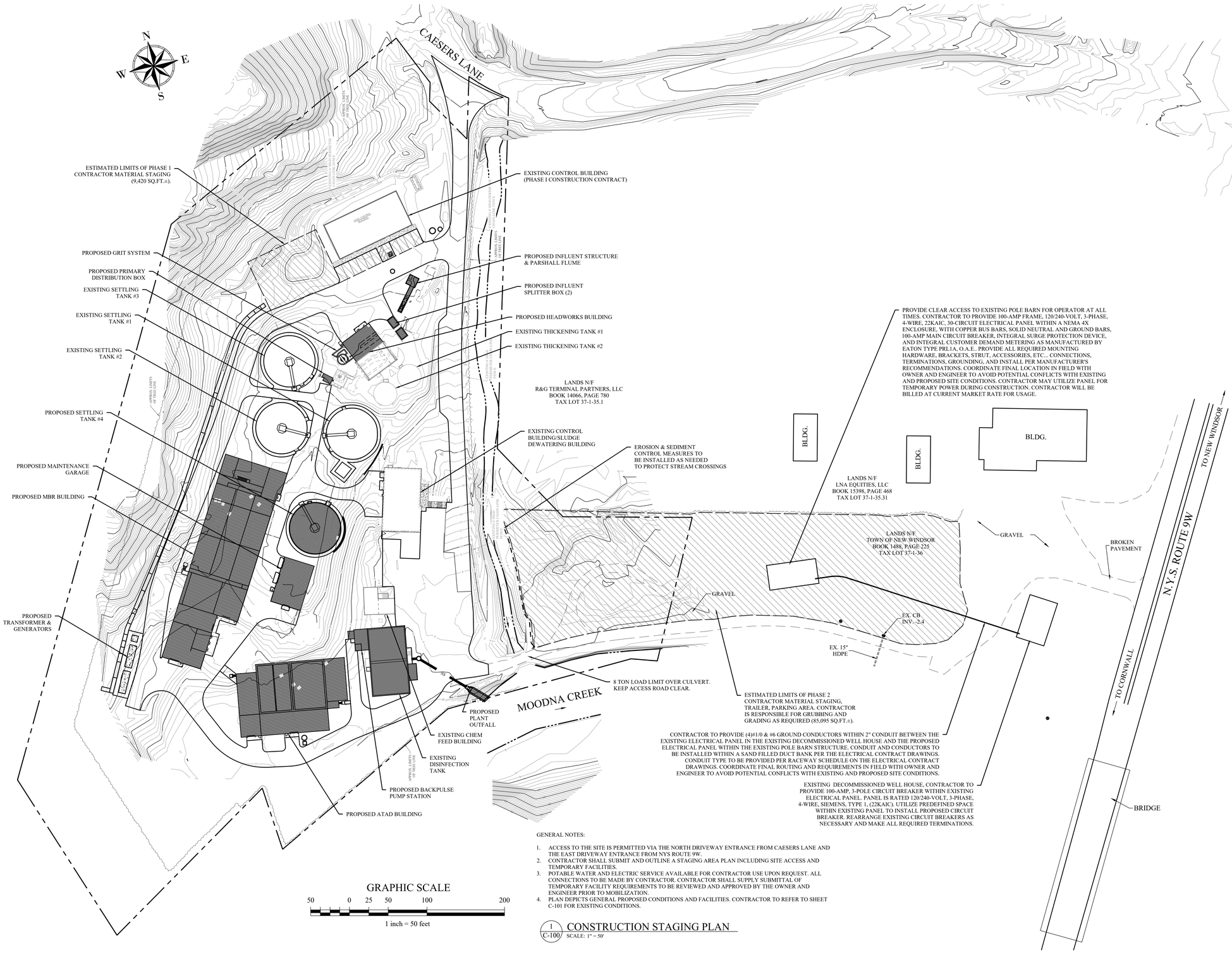
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM, JTW
DRAWN BY:	JRJ, HPHJr
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-007

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\0 - General\Process Schematic\4-30-25\03.dwg, C-007, 4/18/2025 2:53:42 PM



GRAPHIC SCALE

50 0 25 50 100 200

1 inch = 50 feet

GENERAL NOTES:

1. ACCESS TO THE SITE IS PERMITTED VIA THE NORTH DRIVEWAY ENTRANCE FROM CAESERS LANE AND THE EAST DRIVEWAY ENTRANCE FROM NYS ROUTE 9W.
2. CONTRACTOR SHALL SUBMIT AND OUTLINE A STAGING AREA PLAN INCLUDING SITE ACCESS AND TEMPORARY FACILITIES.
3. POTABLE WATER AND ELECTRIC SERVICE AVAILABLE FOR CONTRACTOR USE UPON REQUEST. ALL CONNECTIONS TO BE MADE BY CONTRACTOR. CONTRACTOR SHALL SUPPLY SUBMITTAL OF TEMPORARY FACILITY REQUIREMENTS TO BE REVIEWED AND APPROVED BY THE OWNER AND ENGINEER PRIOR TO MOBILIZATION.
4. PLAN DEPICTS GENERAL PROPOSED CONDITIONS AND FACILITIES. CONTRACTOR TO REFER TO SHEET C-101 FOR EXISTING CONDITIONS.

1 / C-100 CONSTRUCTION STAGING PLAN
SCALE: 1" = 50'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

CONSTRUCTION STAGING PLAN

REVISIONS

NO.	DESCRIPTION	DATE

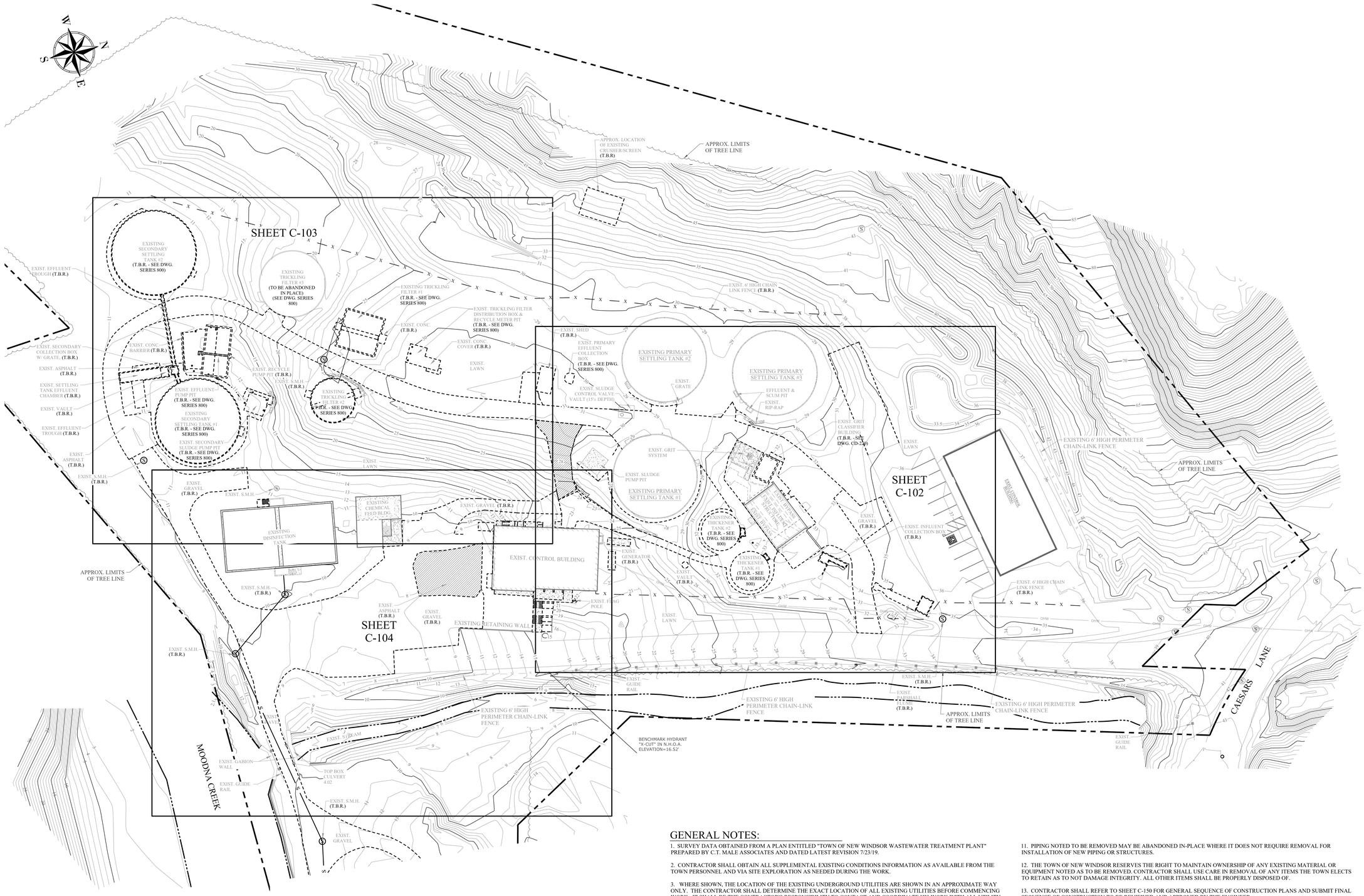
ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.

C-100

PROJECT # 18-732 PHASE #

T:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-100, 4/16/2025 2:07:49 PM



GRAPHIC SCALE

30 0 15 30 60 120

1 inch = 30 feet

1 / C-101 OVERALL EXISTING CONDITIONS / DEMOLITION PLAN
SCALE: 1" = 30'

GENERAL NOTES:

1. SURVEY DATA OBTAINED FROM A PLAN ENTITLED "TOWN OF NEW WINDSOR WASTEWATER TREATMENT PLANT" PREPARED BY C.T. MALE ASSOCIATES AND DATED LATEST REVISION 7/23/19.

2. CONTRACTOR SHALL OBTAIN ALL SUPPLEMENTAL EXISTING CONDITIONS INFORMATION AS AVAILABLE FROM THE TOWN PERSONNEL AND VIA SITE EXPLORATION AS NEEDED DURING THE WORK.

3. WHERE SHOWN, THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT AND COORDINATE HIS WORK WITH ALL UTILITY COMPANIES. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY DAMAGES WHICH MIGHT BE OCCASIONED BY HIS/HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

4. ALL DISTURBED OR DAMAGED AREAS SHALL BE RESTORED AND/OR REPLACED TO MATCH OR EXCEED PRE-EXISTING CONDITIONS, AND COMPLY WITH ANY APPLICABLE CONTRACT DETAILS.

5. ANY MANHOLE OR VALVE ENCOUNTERED BY THE CONTRACTOR WITHIN THE CONTRACT LIMITS AND NOT SHOWN SHALL BE ADJUSTED TO THE NEW GRADE. THIS WORK SHALL BE DEEMED INCLUDED UNDER THE PROPOSAL PAYMENT ITEMS. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REVIEW LAYOUT WITH THE ENGINEER/OWNER IN THE FIELD AFTER THE LAYOUT IS COMPLETED BY THE CONTRACTOR.

7. THE CONTRACTOR SHALL INCLUDE IN THEIR BID COSTS FOR DISCONNECTING, MODIFICATION AND RECONNECTION TO EXISTING PITS AND STRUCTURES AS NEEDED TO PERFORM WORK. SUCH WORK IS SPECIFICALLY CALLED OUT IN SOME AREAS; HOWEVER, OTHER LOCATIONS OF SUCH WORK WHICH IS NECESSARY TO ACCOMPLISH OTHER WORK OR MODIFICATIONS CALLED FOR SHALL BE DEEMED INCLUDED IN THE LUMP SUM BID, EVEN IF NOT SPECIFICALLY CALLED OUT.

8. THE SEWAGE TREATMENT FACILITY MUST REMAIN OPERATIONAL DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CONNECTIONS AND BYPASS PUMPING (WITH BACKUP UNITS) AS MAY BE NECESSARY TO MAINTAIN THE FLOW AND TREATMENT THROUGH THE FACILITY DURING THE CONTRACT PERIOD. ALL SUCH TEMPORARY FACILITIES SHALL BE DEEMED INCLUDED IN THE LUMP SUM BID, EVEN IF NOT SPECIFICALLY CALLED OUT ON THE PLANS OR SPECIFIED. THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING SUBMITTALS FOR REVIEW AND ACCEPTANCE PRIOR TO ANY WORK WHICH WOULD DISRUPT FLOW.

9. ALL ITEMS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

10. UTILITIES NOTED AS TO BE REMOVED OR ABANDONED, THAT ORIGINATE IN EXISTING FACILITIES TO REMAIN, SHALL BE PROPERLY SHUT OFF AND TERMINATED.

11. PIPING NOTED TO BE REMOVED MAY BE ABANDONED IN-PLACE WHERE IT DOES NOT REQUIRE REMOVAL FOR INSTALLATION OF NEW PIPING OR STRUCTURES.

12. THE TOWN OF NEW WINDSOR RESERVES THE RIGHT TO MAINTAIN OWNERSHIP OF ANY EXISTING MATERIAL OR EQUIPMENT NOTED AS TO BE REMOVED. CONTRACTOR SHALL USE CARE IN REMOVAL OF ANY ITEMS THE TOWN ELECTS TO RETAIN AS TO NOT DAMAGE INTEGRITY. ALL OTHER ITEMS SHALL BE PROPERLY DISPOSED OF.

13. CONTRACTOR SHALL REFER TO SHEET C-150 FOR GENERAL SEQUENCE OF CONSTRUCTION PLANS AND SUBMIT FINAL SEQUENCE OF CONSTRUCTION TO BE REVIEWED AND APPROVED BY THE ENGINEER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

OVERALL EXISTING CONDITIONS / DEMOLITION PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-101

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Dwfng\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-101, 4/18/2025 2:07:45 PM

FOR CONTINUATION SEE SHEET C-103

EXIST. SHED (TO BE RELOCATED TO AN AREA SELECTED PER OWNER)

EXIST. PRIMARY EFFLUENT COLLECTION BOX (T.B.R. - SEE SHEET CD-808)

PROP. CUT & CAP FOR CONNECTION TO NEW FINE SCREENS CHANNEL

EXIST. 18"Ø DI

EXIST. SLUDGE CONTROL VALVE VAULT, RIM. 30.44 (TO REMAIN, SEE SHEET C-320 FOR DEMOLITION OF EXISTING EQUIPMENT)

EXISTING PRIMARY SETTLING TANK #2

EXIST. 8"Ø CI VENT

EXIST. 6"Ø CI

EXPOSED & CUT EXIST. 18" INFLUENT TO PRIMARY CLARIFIERS FOR PROP. CONNECTION (TYP. OF 3)

EXISTING PRIMARY SETTLING TANK #3 (SEE SHEET CD-301 FOR DEMOLITION OF EXISTING SETTLING TANK EQUIPMENT, TYP. OF 3)

EXIST. GRATE

EXIST. CB (T.B.R.) GRATE ELEV. 30.43 24" INV. IN 25.73 24" INV. OUT 25.63

EXIST. CB (T.B.R.) GRATE ELEV. 28.33 18" INV. OUT 26.53

END OF EXIST. GRAVEL

EXIST. 18" Ø CMP STORM (T.B.R.)

EXIST. GRAVEL

EXIST. OUTLET STRUCTURE BB1 RIM. 35.0 24" INV. IN 29.0 INV. OUT 28.0

EXISTING 24"Ø HDPE

EXIST. CB RIM. 36.0 INV. IN 32. INV. OUT.

18"Ø HDPE

EXIST. CB (T.B.R.) GRATE ELEV. 28.63 24" INV. IN 25.58 24" INV. OUT 25.53

L.P. (T.B.R.)

EXIST. 12" PIPE (PREVIOUSLY ABANDONED)

EXIST. 24"Ø CMP STORM (T.B.R.)

EXIST. 24"Ø CMP STORM (T.B.R.)

EXIST. 18"Ø CI (T.B.R.)

EXIST. CB (T.B.R.) GRATE ELEV. 29.03 18" INV. IN 26.23 15" INV. IN 26.78 24" INV. OUT 26.03

EXIST. 24"Ø CI SEWER

EXIST. LAWN

EXIST. PRIMARY CLARIFIER SLUDGE PUMP STATION (TO REMAIN, SEE SHEET C-321 FOR DEMOLITION OF EXISTING EQUIPMENT)

EXIST. 6" PVC VENT

EXIST. GRIT SYSTEM

EXIST. MIXER (T.B.R.)

EXISTING 8" WATER MAIN GATE VALVE & BLIND FLANGE CONSTRUCTED IN PHASE 1 (CONNECT NEW 8"Ø DI WATER MAIN - PHASE 2A)

EXIST. 15" Ø CMP STORM (T.B.R.)

EXIST. GRIT CLASSIFIER BUILDING (T.B.R. - SEE SHEET CD-220)

EXIST. CB (T.B.R.) GRATE ELEV. 32.02 12" INV. IN 28.14 15" INV. OUT 27.73

EXIST. STONE RET. WALL (T.B.R.)

EXISTING PRIMARY SETTLING TANK #1

REPUTED EXIST. CB, BURIED (T.B.R.)

EXIST. 24"Ø HDPE STORM PIPE (T.B.R.)

ABANDONED PARSHALL FLUME

PROP. CUT & CAP

EXIST. CB (T.B.R.) GRATE ELEV. 22.79 15" INV. OUT 20.46

EXIST. WOOD RET. WALL (T.B.R.)

EXIST. CB (T.B.R.) GRATE 27.19 24" INV. IN 23.74 24" INV. OUT 23.09

EXIST. 15"Ø STORM (T.B.R.)

EXIST. UNDERGROUND ELECTRIC (T.B.R.)

PROP. CUT & CAP

EXIST. 6" PIPES SLUDGE RETURN LINES (T.B.A.)

EXIST. 4"Ø CI PIPE (T.B.A.)

EXISTING THICKENING TANK #2 (T.B.R. - SEE SHEET CD-807)

EXIST. 12"Ø CMP STORM (T.B.R.)

EXIST. TRENCH DRAIN (T.B.R.)

EXIST. ASPHALT (T.B.R.)

EXIST. INFLUENT COLLECTION BOX (T.B.R.), SEE SHEET C-200S FOR MORE DETAILS

EXIST. 24"Ø CIP SEWER (T.B.R.)

EXIST. S.M.H. RIM ELEV. 36.14 INV. IN 31.96 INV. OUT 32.08 SUMP 31.94 (T.B.R.)

EXIST. 12"Ø VENTS

EXIST. OIL TANK (T.B.R.)

EXIST. STONE RET. WALL (T.B.R.)

EXIST. GENERATOR & CONC. PAD (T.B.R.)

EXIST. 24"Ø HDPE STORM (T.B.R.)

EXIST. ASPHALT (T.B.R.)

EXIST. SLUDGE LINES (T.B.R.)

PROP. CUT & CAP

EXISTING THICKENING TANK #1 (T.B.R. - SEE SHEET CD-807)

EXIST. GUIDE RAIL (T.B.R.)

EXISTING INFLUENT STRUCTURE & PARSHALL FLUME (T.B.R.), SEE SHEET C-200S FOR MORE DETAILS

EXIST. 18"Ø CIP SEWER (T.B.R.)

EXIST. TOP 24"Ø CIP = 33.35 (T.B.R.)

EXIST. TOP 30"Ø HDPE = 33.93 (T.B.R.)

EXIST. 24"Ø CIP SEWER (T.B.R.)

EXISTING CONTROL BUILDING

EXIST. 8" PIPE (T.B.A.)

EXIST. VALVE VAULT (T.B.R.), DEPTH UNKNOWN

EXIST. 8" PIPE (T.B.A.)

EXIST. S.M.H. RIM ELEV. 34.38 (UNABLE TO OPEN) (T.B.R.)

EXIST. UNDERGROUND ELECTRIC (T.B.R.)

EXIST. CHAIN LINK FENCE (T.B.R.)

EXIST. RETAINING WALL (T.B.R.)

EXIST. 18"Ø CIP SEWER PIPE (T.B.R.)

EXIST. FLOW METER (T.B.R.)

EXIST. TOP 24"Ø CIP = 33.34 (T.B.R.)

EXIST. DMH RIM. 32.4 INV. IN/OUT 26.0

EXIST. 24"Ø CIP SEWER (T.B.R.)

EXIST. GATE (T.B.R.)

EXIST. 30"Ø HDPE INV. IN 29.5

EXIST. 24"Ø CIP SEWER (T.B.R. TO LIMITS OF UPSTREAM DOGHOUSE MANHOLE)

EXIST. S.M.H. RIM ELEV. 35.43 TRU/SUMP 31.03 (T.B.R.)

REPUTED 21"Ø AC/TRANSITE PIPE ENCASED IN CONCRETE (ABANDONED)

EXIST. 8"Ø AC/TRANSITE WATER MAIN

EXIST. 8"Ø CLASS 52 DI WATER MAIN

EXISTING 12"Ø HDPE

EXISTING CONC. STAIRS, LANDINGS & WALK (T.B.R.)

EXIST. CONC. (T.B.R.)

EXIST. CB (T.B.R.) GRATE ELEV. 21.99 15" INV. IN 19.79 15" INV. OUT 19.29

EXISTING CONC. (T.B.R.)

EX. DOOR F.F.E. 8.75

EXIST. FLAG POLE (T.B.R.)

EXISTING OVERHANG (T.B.R.)

EXIST. CB (T.B.R.) GRATE ELEV. 20.89 24" INV. IN 18.44 24" INV. OUT 18.14

EXIST. 24" HDPE STORM SECTION (T.B.R.)

EXIST. 24"Ø HDPE STORM

EXIST. 12"Ø CMP (T.B.R.)

INV. IN 17.35

EXISTING LANDSCAPE TIMBER (T.B.R.)

EXISTING CB RIM. 14.8 INV. OUT 12.0

EXIST. HYD.

END OF EXIST. GUIDERAIL

INV. OUT 10.61

EXIST. GUIDERAIL

EXISTING 6' HIGH PERIMETER CHAIN-LINK FENCE

EXIST. 24" CIP TOP 33.13

EXIST. 18" CIP TOP 33.64

EXIST. 30"Ø HDPE INV. OUT 25.8'

REPUTED 8"Ø AC/ TRANSITE WATERMAIN (ABANDONED)

EXIST. 30"Ø HDPE INV. OUT 25.5'

REPUTED 8"Ø AC/ TRANSIT

NOTE : PIPING NOTED TO BE REMOVED MAY BE ABANDONED IN-PLACE WHERE IT DOES NOT REQUIRE REMOVAL FOR INSTALLATION OF NEW PIPING OR STRUCTURES.

1 / C-102 PARTIAL EXISTING CONDITIONS / DEMOLITION PLAN #1
SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202, New Windsor, NY 12553, (845) 567-3100
111 Wheatfield Drive, Suite 1, Milford, PA 18337, (570) 296-2765

BID SET

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UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL EXISTING CONDITIONS / DEMOLITION PLAN #1

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-102

PROJECT # 18-732 PHASE #

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EXISTING SECONDARY SETTLING TANK #2 (T.B.R. - SEE SHEET CD-801)

EXISTING TRICKLING FILTER TANK #3 (TO BE ABANDONED IN PLACE SEE SHEET CD-804)

EXISTING TRICKLING FILTER #2 (T.B.R. - SEE SHEET CD-803)

EXISTING TRICKLING FILTER #1 (T.B.R. - SEE SHEET CD-802)

EXISTING SECONDARY SETTLING TANK #1 (T.B.R. - SEE SHEET CD-801)

EXIST. SETTLING TANK EFFLUENT CHAMBER (T.B.R. - SEE SHEET CD-806)

EXIST. S.M.H. (T.B.R.)
RIM ELEV. 11.87
TOP WATER 3.87
SUMP -8.53
(FIELD VERIFY ALL PIPE CONNECTIONS)

EXIST. FENCE (T.B.R.)

EXIST. 4" (T.B.R.)

EXIST. 6" (T.B.R.)

EXIST. EFFLUENT TROUGH (T.B.R.)

EXIST. 18"Ø CMP STORM (T.B.R.)

EXIST. 6" PIPE (T.B.R.)

EXIST. 18 " PIPE (T.B.R.)

L.P. (T.B.R.)

EXIST. 12" METAL VENT (T.B.R.)

EXIST. 18" CMP STORM (T.B.R.)

EXIST. CB (T.B.R.)
GRATE ELEV. 19.21
INV. OUT 14.86

EXIST. 24" (T.B.R.)

EXIST. CAT WALK (T.B.R.)

EXIST. CONC. (T.B.R.)

EXIST. ASPHALT (T.B.R.)

EXIST. CB (T.B.R.)
GRATE ELEV. 10.09
INV. IN 5.79
INV. OUT 5.69

EXIST. SECONDARY COLLECTION BOX W/ GRATE, (T.B.R.)
TOP CONC. = 11.98
INV. (W) = 9.48
TOP PIPE (S) = 10.48
INV. (E) = 10.18

EXIST. CONC. BARRIER (T.B.R.)

EXIST. ASPHALT (T.B.R.)

TOP PIPE =4.05 (T.B.R.)

TOP PIPE =1.54 (T.B.R.)

EXIST. 18" (T.B.R.)

EXIST. STONE RET. WALL (T.B.R.)

EXIST. 12" METAL VENT (T.B.R.)

EXIST. 18" VERT. PIPE (T.B.R.)

EXIST. EFFLUENT PUMP PIT (T.B.R. -SEE SHEET CD-805)

EXIST. 6" PVC VENT (T.B.R.)

EXIST. VAULT (T.B.R.)
TOP CONC. = 11.85
TOP 30" CIP = 10.45

EXIST. EFFLUENT TROUGH (T.B.R.)

EXIST. RECYCLE PUMP PIT (T.B.R.)

EXIST. CONC. (T.B.R.)

EXIST. 6" PIPE (T.B.R.)

EXIST. SECONDARY SLUDGE PUMP PIT (T.B.R. - SEE SHEET CD-805)

EXIST. 12" METAL VENT (T.B.R.)

E.M.H. (T.B.R.)

EXIST. 4" (T.B.R.)

EXIST. UNDERGROUND ELEC. (T.B.R.)

EXIST. ASPHALT (T.B.R.)

EXIST. 6" (T.B.R.)

EXIST. STONE RET. WALL (T.B.R.)

EXIST. CAT WALK (T.B.R.)

EXIST. S.M.H. (T.B.R.)
RIM ELEV. 25.63
TOP VALVE 22.73
SUMP 19.03

EXIST. 12" RECYCLE PIPE (T.B.R.)

EXIST. 24" PIPE (T.B.R.)

EXIST. TRICKLING FILTER DISTRIBUTION BOX & RECYCLE METER PIT (T.B.R. - SEE SHEET CD-806)

EXIST. 30" (T.B.R.)

EXIST. 12" PIPE (PREVIOUSLY ABANDONED)

EXIST. SHEI RELOCATEI SELECTED I

L.P. (T.B.R.)

EXIST. ASPHALT (T.B.R.)

EXIST. PRIMAI PUMP STA SHEET C-32

EXIST. 30"Ø DI EFFLUENT (T.B.R.)

EXIST. FLOW METER (GREYLINE MODEL AVFM 5.0 MOUNTED INSIDE S.M.H. (T.B.R.)

EXIST. 3" EFFLUENT WATER LINE (T.B.R.)

EXIST. S.M.H. (T.B.R.)
RIM ELEV. 11.75
INV. IN 5.85
IINV. OUT 5.95

EXIST. 30"Ø DI EFFLUENT (T.B.R. & PENETRATION @ MANHOLE PLUGGED WATERTIGHT)

EXIST. 2" CL2 LINE

EXIST. 3" NON-POTABLE WATER LINE (T.B.R.)

EXIST. LAWN

EXISTING CONC. SLAB & STAIRS (T.B.R.)

EXIST. S.M.H. RIM ELEV. 12.07 INV. IN 5.97 INV. OUT 5.77

EXIST. 30" DI INV. 6.0

EXIST. GRATE ELEV. 13.95

BOL. (T.B.R.)

EXIST. INV. 5.92

EXIST. LIGHT POLE TO BE RELOCATED

EXIST. CHEM. LINES TO BE RELOCATED

EXIST. EFFLUENT PUMP STATION TOP CONC.=10.59

EXIST. A.C. UNIT / HEAT PUMP

EXIST. WASH STATION

EXIST. WATERLINE TO BE CUT, CAPPED & ABANDONED IN-PLACE

EXIST. CONTROL BOX

EXIST. VALVE BOXES

EXIST. CONTROL BOX

EXIST. 12"Ø HDPE STORM

PLUG VALVE

EXIST. CB (T.B.R.)
GRATE ELEV. 10.52
INV. IN 6.46
INV. OUT 5.98

EXIST. 4"Ø CI SCUM LINE (T.B.A.)

EXIST. 18"Ø CMP STORM (T.B.R.)

EXIST. 12"Ø HDPE STORM (T.B.R.)

EXIST. CB (T.B.R.)
GRATE ELEV. 9.18
INV. IN (N) 6.13
INV. IN (W) 6.06
INV. OUT (S) 5.91
SUMP = 5.85

EXIST. 8" CIP VERTICAL PR

EXISTING METAL DECK (T.B.R.)

EXISTING CONC. STAIRS, LANDINGS & WALK (T.B.R.)

EXISTING TANK (T.B.R.)

22.83

FOR CONTINUATION SEE SHEET C-102

FOR CONTINUATION SEE SHEET C-104

NOTE : PIPING NOTED TO BE REMOVED MAY BE ABANDONED IN-PLACE WHERE IT DOES NOT REQUIRE REMOVAL FOR INSTALLATION OF NEW PIPING OR STRUCTURES.

1 / C-103 PARTIAL EXISTING CONDITIONS PLAN #2
SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL EXISTING CONDITIONS / DEMOLITION PLAN #2

REVISIONS

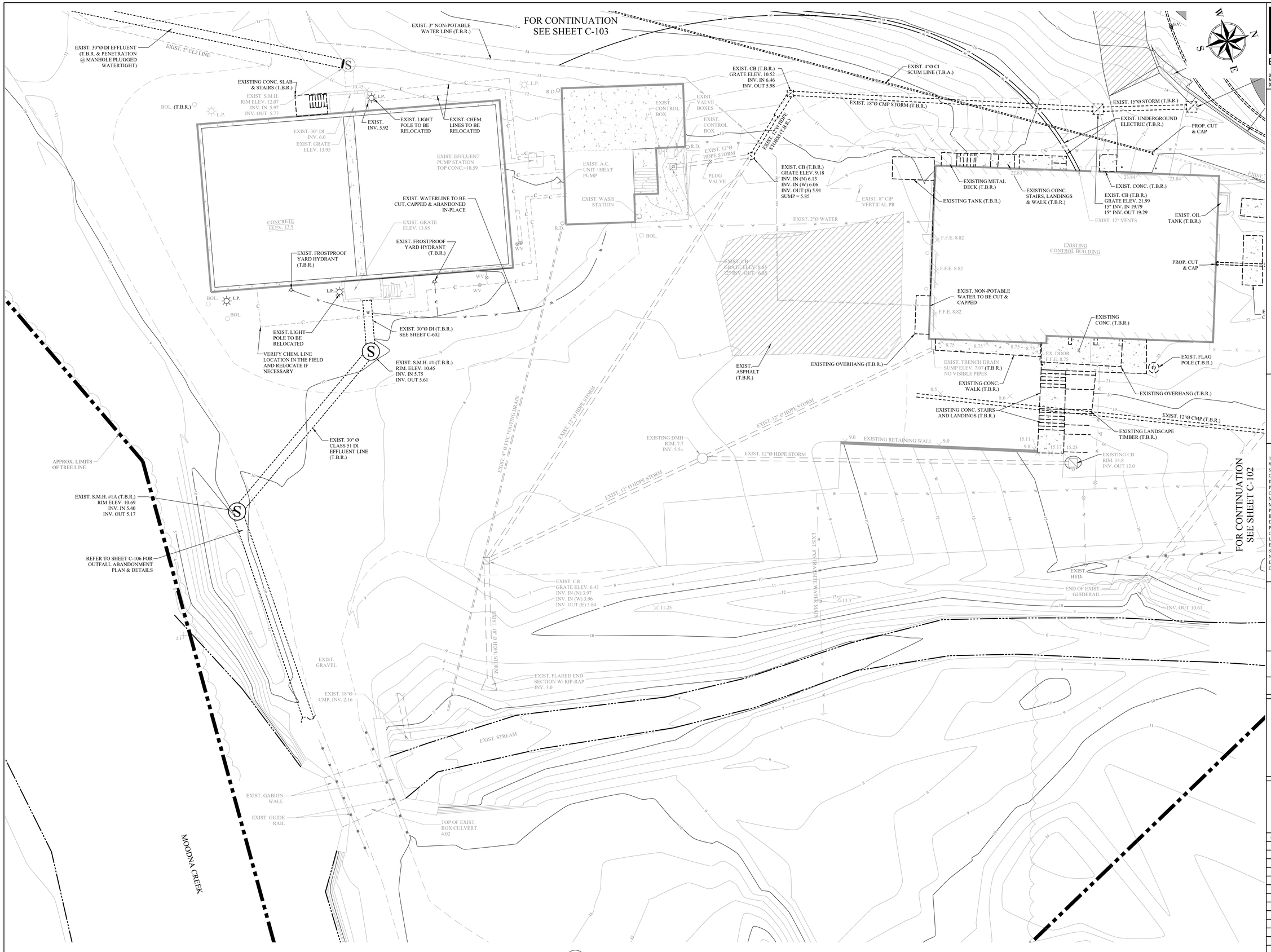
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-103

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-103, 4/16/2025 2:10:15 PM



NOTE : PIPING NOTED TO BE REMOVED MAY BE ABANDONED IN-PLACE WHERE IT DOES NOT REQUIRE REMOVAL FOR INSTALLATION OF NEW PIPING OR STRUCTURES.

1 / C-104 PARTIAL EXISTING CONDITIONS / DEMOLITION PLAN #3
SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

MHE ENGINEERING
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Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL EXISTING CONDITIONS / DEMOLITION PLAN #3

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-104

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-104, 4/18/2025 2:08:38 PM



GRAPHIC SCALE

100 0 50 100 200 400

1 inch = 100 feet

1 C-105 EXISTING PLANT OUTFALL SYSTEM MAP
SCALE: 1" = 100'

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Milford, PA 18337
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING PLANT OUTFALL SYSTEM MAP

REVISIONS

NO.	DESCRIPTION	DATE

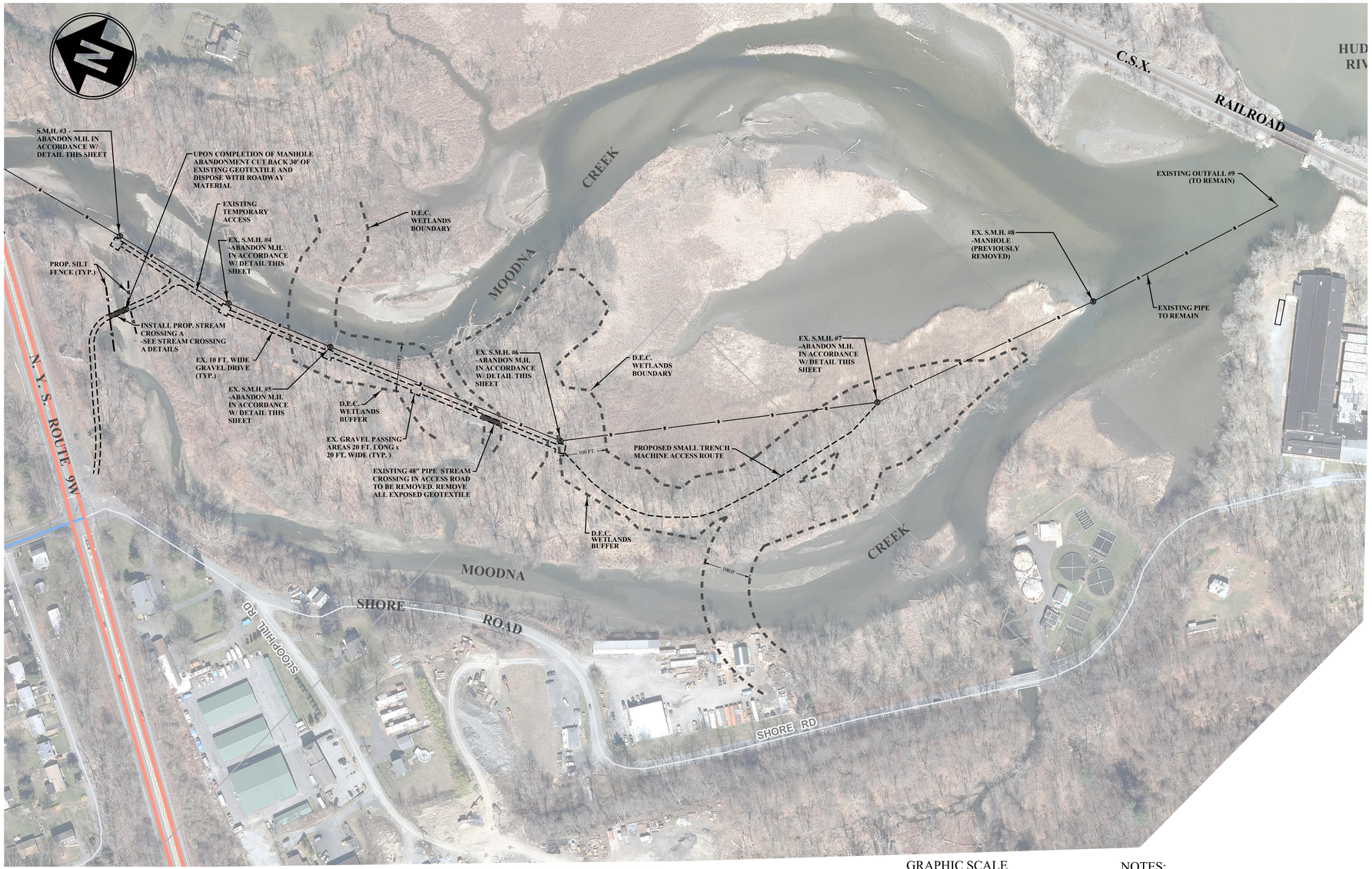
ISSUED DATE:	18 APR. 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-105

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Exist Plant Outfall System Map.dwg, C-105, 4/16/2025 2:09:44 PM



EXISTING OUTFALL ABANDONMENT PLAN

SCALE: 1" = 100'

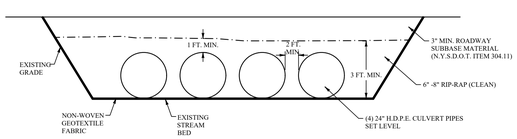
GRAPHIC SCALE

100 0 50 100 200 400

1 inch = 100 feet

NOTES:

1. N.Y.S.D.E.C. WETLANDS BOUNDARY ESTABLISHED IN FIELD WITH N.Y.S.D.E.C. PERSONNEL (DOUG GAUGLER) ON 26 JUNE 2012 AND CONFIRMED BY EMAIL ON 28 JUNE 2012.
2. ASSUMED N.Y.S.D.E.C. WETLANDS BOUNDARY BASED ON FIELD REVIEW 15 NOVEMBER 2018 WITH N.Y.S.D.E.C. PERSONNEL.
3. EXIST. MANHOLE #7 WILL BE ACCESSED BY SMALL TRENCH MACHINE (KUBOTA SVL95 TRENCHER OR EQUAL) TO MINIMIZE DISTURBANCE TO ADJACENT AREA.
4. WORK WITHIN EXISTING ACCESS ROAD FOR REMOVAL OF EXISTING MANHOLES #3-#6 AND 48" PIPE WILL BE LIMITED TO MEDIUM TRENCHER EXCAVATOR (KOMATSU 138 OR EQUAL) AND SINGLE AXLE DUMP TRUCKS.
5. A TIME OF YEAR RESTRICTION WILL BE IMPLEMENTED FOR ALL OUTFALL ABANDONMENT CONSTRUCTION. THE ALLOWABLE WORK WINDOW WILL BE SEPTEMBER 1 TO APRIL 14.
6. AUTHORIZED WORK IS PERMITTED BY NYSDEC FRESHWATER WETLANDS UNDER ARTICLE 24 AND EXCAVATION & FILL IN NAVIGABLE WATERS UNDER ARTICLE 15, TITLE 5, PERMIT ID 3-3348-00055/00016, PERMIT ID 3-3348-00055/00017, AND PERMIT ID 3-3348-00055/00019 APPROVED ON 12/18/23 AND EXPIRES ON 12/31/28.

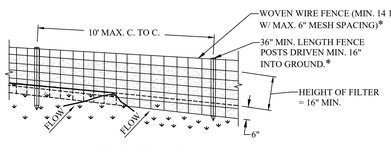


STREAM CROSSING "A" DETAIL

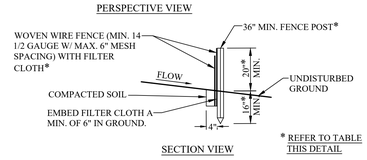
SCALE: NONE

NOTES:

1. STREAM CROSSING TO BE CONSTRUCTED 2 HOURS EITHER SIDE OF SCHEDULED LOW TIDE.
2. EXISTING GEOTECH MATERIAL TO BE REMOVED 30' BACK FROM EXISTING EMBANKMENT WHEN CROSSING IS REMOVED.



PERSPECTIVE VIEW



SECTION VIEW

* REFER TO TABLE THIS DETAIL

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER- LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

		SLOPE LENGTH/FENCE LENGTH (FT.)		
SLOPE	STEEPNESS	STANDARD	REINFORCED	SUPER
< 2%	< 50:1	300/1500	N/A	N/A
2-10%	50:1 TO 10:1	125/1000	250/2000	300/2500
10-20%	10:1 TO 5:1	100/750	150/1000	200/1000
20-33%	5:1 TO 3:1	60/500	80/750	100/1000
33-50%	3:1 TO 2:1	40/250	70/350	100/500
> 50%	> 2:1	20/125	30/175	50/250

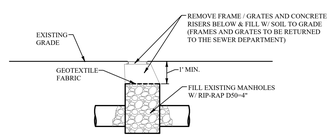
1. STANDARD SILT FENCE (SF) IS FABRIC ROLLS STAPLED TO WOODEN STAKES DRIVEN 16 INCHES IN THE GROUND.
2. REINFORCED SILT FENCE (RSF) IS FABRIC PLACED AGAINST WELDED WIRE FABRIC WITH ANCHORED STEEL POSTS DRIVEN 16 INCHES IN THE GROUND.
3. SUPER SILT FENCE (SSF) IS FABRIC PLACED AGAINST CHAIN LINK FENCE AS SUPPORT BACKING WITH POSTS DRIVEN 3 FEET IN THE GROUND.

SILT FENCE DETAIL

SCALE: NONE

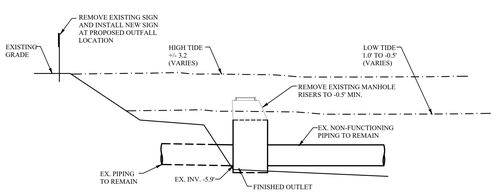
NOTES:

1. CUT BACK ALL GEOTEXTILE MATERIAL 30' MIN. FROM EMBANKMENTS.
2. RE-SEED ALL DISTURBED AREAS WITH WETLAND SEED MIXTURE.
3. WETLAND SEED MIXTURE AND RESTORATION SHALL BE IN ACCORDANCE WITH NYSDEC SUPPLEMENTAL SPECIFICATIONS FOR WETLANDS AND WATERBODIES APPENDIX F.



MANHOLE ABANDONMENT DETAIL

SCALE: NONE



MANHOLE REMOVAL DETAIL

SCALE: NONE

NOTE:

1. REMOVE ALL PORTIONS OF EXISTING MANHOLE/RISERS.

LEGEND:

- WETLAND DELINEATED JUNE 26, 2012
- WETLAND DELINEATED NOVEMBER 15, 2018
- WETLAND 100 FT. BUFFER
- STAKED HAYBALES
- SF SILT FENCE

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE APPLICABLE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION WATER QUALITY CERTIFICATION PROGRAM.
2. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT CONTAMINATION OF THE STREAMS BY SILT, SEDIMENT, FUELS, SOLVENTS, LUBRICANTS, EPOXY COATINGS, CONCRETE, LEACHATE, OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION AND CONSTRUCTION PROCEDURES.
3. DURING CONSTRUCTION, NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE INTO THE WATERS OF NEW YORK STATE, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS OR OTHER DEVICES BE ALLOWED TO ENTER ANY WETLANDS OR WATERS.
4. ANY DEBRIS OR EXCESS MATERIALS FROM CONSTRUCTION OF THIS PROJECT SHALL BE IMMEDIATELY AND COMPLETELY REMOVED FROM THE BED AND BANKS OF ALL WATER AREAS TO AN APPROPRIATE UPLAND AREA FOR DISPOSAL.
5. ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF ON AN UPLAND SITE AND BE SUITABLY STABILIZED SO THAT IT CANNOT REASONABLY REENTER ANY WATER BODY OR WETLAND AREA.
6. ALL AREAS OF SOIL DISTURBANCE RESULTING FROM THIS PROJECT SHALL BE SEEDED WITH WETLANDS SEED MIXTURE AND MULCHED WITH HAY OR STRAW WITHIN ONE (1) WEEK OF FINAL GRADING. IF CONSTRUCTION ACTIVITIES ARE DISCONTINUED IN AREAS OF SOIL DISTURBANCE BEFORE FINAL GRADING IS COMPLETE, TEMPORARY GRADING SHALL ALSO BE SEEDED AND MULCHED. MULCH SHALL BE MAINTAINED UNTIL SUITABLE VEGETATIVE COVER IS ESTABLISHED.
7. PERIODIC CLEANING OF TEMPORARY SOIL EROSION AND POLLUTION CONTROL DEVICES MAY BE NECESSARY AS REQUESTED BY THE PROJECT ENGINEER.
8. IN THE EVENT DEWATERING OPERATIONS BECOME NECESSARY, A SETTLING BASIN WILL BE REQUIRED UNLESS THE PUMP DISCHARGE IS AS CLEAR AND FREE OF SEDIMENT AS THE FLOWING STREAM. LOCATION AND DESIGN TO BE APPROVED BY THE PROJECT ENGINEER.
9. HAYBALES HAVE A LIMITED LIFE EXPECTANCY AND SHALL BE REPLACED IN LOCATIONS WHERE THEY HAVE BEEN IN USE FOR EXTENDED PERIODS AS DIRECTED BY THE PROJECT ENGINEER.
10. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES OR WATERCOURSES.
11. EROSION CONTROL MEASURES SHALL BE DEEMED INCLUDED UNDER THE BID ITEMS OF THE PROPOSAL. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.
12. ALL TREES, STUMPS AND DEBRIS TO BE REMOVED FROM MANHOLES AND SURROUNDING AREAS.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
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Milford, PA 18337
(570) 296-2765

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UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING OUTFALL ABANDONMENT PLAN AND DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-106

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafing\1 - Site Work & Outfall\18-732 Exist Outlet Abandonment Plan.dwg, C-106, 4/16/2025 2:09:59 PM



LEGEND

B-1 APPROXIMATE BORING LOCATION

NOTES:

1. BORING LOCATIONS WERE FIELD LOCATED BY TECTONIC AND SHOULD BE CONSIDERED APPROXIMATE.

GRAPHIC SCALE

30 0 15 30 60 120

1 inch = 30 feet

MHE ENGINEERING

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BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

UNAUTHORIZED ADDITION OR ALTERATION OF THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SOIL BORING LOCATION PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.

C-107

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1- Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-107, 4/16/2025 2:11:05 PM

BORING No. B-1

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 11' | CASING: 4" 0 TO 10' | DIAMOND CORE: TO — | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/12/19 2:00 PM DEPTH 5'

INSPECTOR: Michael Bastien | DRILLER: Mike Tarter | SURFACE ELEVATION: 36.0 | DATUM: See Remarks | DATE START: 6/12/19 | DATE FINISH: 6/12/19 | WEATHER: Clear TEMP: 75° F | DEPTH TO ROCK: 11' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	11	S-1	16	M	SW	4" Topsoil Tn-brn f SAND, trace Silt		10	20	30	40	50		36.0
2														
3	28	S-2	16	M	SM	Tn-brn m-f SAND, little c Gravel, little Silt								
4														
5	39	S-3	24	M	SM	T Same								
6														
7	20	S-4	20	W	GM	T Gy CLAYEY SILT, some c-f Gravel, some cf Sand								
8														
9	10	S-5	24	W	SM	Gy-brn m-f SAND, and Silty Clay, trace c Gravel								31.0
10														
11	50+	S-6	10/0			No Recovery (Drill bit refusal @ 11')								26.0
12														
13						End of Boring at 11.33'								
14														21.0
15														
16														16.0
17														
18														
19														
20														
21														
22														
23														
24														
25														11.0

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-2

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 19' | CASING: 4" 0 TO 15' | DIAMOND CORE: TO — | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/12/19 12:30 PM DEPTH 4'

INSPECTOR: Michael Bastien | DRILLER: Mike Tarter | SURFACE ELEVATION: 30.5 | DATUM: See Remarks | DATE START: 6/12/19 | DATE FINISH: 6/12/19 | WEATHER: Clear TEMP: 75° F | DEPTH TO ROCK: 15' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	31	S-1	12	M	SC	4" Topsoil Brn cf GRAVEL, some c-f Gravel, little Silt Clay		10	20	30	40	50		30.5
2														
3	3	S-2	8	M	CL	Brn SILTY CLAY, and cf Sand, trace m-f Gravel								
4														
5	4	S-3	12	W	CL	Same								25.5
6														
7	6	S-4	16	W	CL	Gy SILTY CLAY, some c-f Sand, little c-f Gravel								
8														
9	4	S-5	4	W	CL	Same								20.5
10														
11	4	S-6	6	W	CL	Gy SILTY CLAY, some c-f Sand, little c-f Gravel								
12														
13	48	S-7	6	W	SM	Gy-blk c-f SAND, some Silt, some f Gravel, likely weathered bedrock								15.5
14														
15	50+	S-8	4	W	SM	Gy-blk c-f SAND, some Silt, some f Gravel, likely weathered bedrock								
16														
17						(Drill bit refusal @ 19')								10.5
18						End of Boring at 19'								
19														
20														5.5
21														
22														
23														
24														
25														0.5

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-3

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 20' | CASING: 4" 0 TO 10' | DIAMOND CORE: TO — | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/12/19 11:00 AM DEPTH 15'

INSPECTOR: Michael Bastien | DRILLER: Mike Tarter | SURFACE ELEVATION: 29.4 30.5 | DATUM: See Remarks | DATE START: 6/12/19 | DATE FINISH: 6/12/19 | WEATHER: Clear TEMP: 70° F | DEPTH TO ROCK: 22' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	42	S-1	14	M	SM	Brn cf SAND, little cf Gravel, little Clayey Silt		10	20	30	40	50		30.5
2														
3	6	S-2	10	M	SM	Same								
4														
5	7	S-3	6	M	SM	Brn-gy c-f SAND, little Clayey Silt, some c-f Gravel								25.5
6														
7	40	S-4	12	M	SM	Brn cf SAND, some c-f Gravel, little Clayey Silt								
8														
9														20.5
10														
11	49	S-5	22	M	SM	Brn cf SAND, and Clayey Silt, little c-f Gravel								
12														
13														15.5
14														
15	73	S-6	18	W	SM	Gy cf SAND, some Clayey Silt, little c-f Gravel								
16														
17														10.5
18														
19														
20														5.5
21	102	S-7	22	W	SC	Dk gy-bl SILTY CLAY, some cf Sand, little c-f Gravel, likely weathered rock								
22						End of Boring at 22'								
23														0.5
24														
25														-4.5

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-4

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 20' | CASING: 4" 0 TO 10' | DIAMOND CORE: TO — | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE — TIME — DEPTH —

INSPECTOR: Kimberly Junkins | DRILLER: Mike Tarter | SURFACE ELEVATION: 29.0 | DATUM: See Remarks | DATE START: 6/11/19 | DATE FINISH: 6/11/19 | WEATHER: Clear TEMP: 70° F | DEPTH TO ROCK: 23.5' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	25	S-1	18	M	SM	3" Topsoil Brn-rd cf SAND, some c-f Gravel, little Silt		10	20	30	40	50		29.0
2														
3	67	S-2	6	M	GM	Gy cf GRAVEL, some c-f Sand, little Silt								
4														
5	34	S-3	8	M	SM	Gy cf SAND, little f Gravel, little Silt								24.0
6														
7	29	S-4	12	M	SM	Gy cf SAND, little f Gravel, little Silt								
8														
9														19.0
10														
11	57	S-5	20	M	SM	Gy cf SAND, little cf Gravel, little Silt								
12														
13														14.0
14														
15	44	S-6	12	M	SM	Gy cf SAND, some Silt, little f Gravel								
16														
17						Bit refusal @ 20.5'								9.0
18						End of Boring at 20.5'								
19														
20														4.0
21														
22														
23														
24														
25														-1.0

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-5

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 20' | CASING: 4" 0 TO 20' | DIAMOND CORE: TO — | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/12/19 8:15 AM DEPTH 10'

INSPECTOR: Kimberly Junkins | DRILLER: Mike Tarter | SURFACE ELEVATION: 30.0 | DATUM: See Remarks | DATE START: 6/11/19 | DATE FINISH: 6/12/19 | WEATHER: Clear TEMP: 75° F | DEPTH TO ROCK: 20' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	14	S-1	4	M	GP	3" Topsoil Brn cf GRAVEL, some c-f Sand, trace Silt		10	20	30	40	50		30.0
2														
3	30	S-2	0			No Recovery								
4														
5	40	S-3	6	M	SM	Gy cf SAND, some c-f Gravel, little Silt								25.0
6														
7														
8														20.0
9														
10	23	S-4	8	W	SM	Gy-brn c-f SAND, some Silty Clay, little c-f Gravel								
11														
12														15.0
13														
14														
15	104	S-5	4	W	SM	No Recovery								10.0
16														
17														
18														5.0
19														
20	50+	S-6	0			No Recovery								
21														
22						End of Boring at 20'								
23														
24														
25														0.0

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-6

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 31' | CASING: 4" 0 TO 20' | DIAMOND CORE: 3" 21 TO 23.5' | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/11/19 11:30 AM DEPTH 11.4'

INSPECTOR: Kimberly Junkins | DRILLER: Mike Tarter | SURFACE ELEVATION: 27.0 | DATUM: See Remarks | DATE START: 6/11/19 | DATE FINISH: 6/11/19 | WEATHER: Overcast TEMP: 65° F | DEPTH TO ROCK: 21' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	16	S-1	18	M	SM	3" Topsoil Brn cf SAND, little cf Gravel, little Silt		10	20	30	40	50		27.0
2														
3	38	S-2	24	M	SM	Brn cf SAND, trace f Gravel, little Silt								
4														
5	9	S-3	6	M	SM	Brn cf SAND, little c-f Gravel, little Silt								22.0
6														
7														
8														17.0
9														
10	12	S-4	15	M	SM	Brn cf SAND, some Silt, trace f Gravel								
11														
12														12.0
13														
14														
15	104	S-5	4	W	SM	Gy-c f SAND, trace f Gravel, trace Silt								7.0
16														
17														
18	103+	S-6	2	W	GP	Gy-brn c-f GRAVEL, some c-f Sand, little Silt								2.0
19														
20		C-1	21/36	22		Gy, slightly weathered, moderately to highly fractured, fine grained, medium hard SHALE; fractures 0 to 90 degrees from horizontal								
21														-3.0
22						End of Boring at 23.5'								
23														
24														
25														-8.0

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-7

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 12' | CASING: 4" 0 TO 10' | DIAMOND CORE: 3" TO — | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/10/19 12:00 pm DEPTH 5'

INSPECTOR: Michael Bastien | DRILLER: Mike Tarter | SURFACE ELEVATION: 9.0 | DATUM: See Remarks | DATE START: 6/10/19 | DATE FINISH: 6/10/19 | WEATHER: Rain TEMP: 60° F | DEPTH TO ROCK: 12' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	27	S-1	16	M	SM	Brn-gy cf SAND, little c-f Gravel, little Silty Clay (FILL)		10	20	30	40	50		9.0
2														
3	38	S-2	24	M	SM	Same								
4														
5	7	S-3	10	W	SM	Brn cf SAND, little c-f Gravel, little Silty Clay								4.0
6														
7	66+	S-4	8	W	GM	Brn cf GRAVEL, some c-f and, little Clayey Silt								
8														
9														-1.0
10	45	S-5	12	W	SM	Brn cf SAND, some c-f Gravel, some Clayey Silt (Drill bit refusal @ 12')								
11														
12						End of Boring at 12'								
13														-6.0
14														
15														
16														-11.0
17														
18														
19														
20														
21														
22														
23														
24														
25														-16.0

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-8

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 2

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 31.5' | CASING: 4" 0 TO 10' | DIAMOND CORE: TO — | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/11/19 9:00 AM DEPTH 13'

INSPECTOR: Kimberly Junkins | DRILLER: Mike Tarter | SURFACE ELEVATION: 21.5 | DATUM: See Remarks | DATE START: 6/11/19 | DATE FINISH: 6/11/19 | WEATHER: Overcast TEMP: 65° F | DEPTH TO ROCK: 31.5' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	7	S-1	10	M	GM	Gravel at surface Brn cf GRAVEL, and cf Sand, little Silt		10	20	30	40	50		21.5
2														
3	27	S-2	15	M	SM	Brn & gy cf SAND, some c-f Gravel, little Silt								
4														
5	26	S-3	12	M	GM	Gy cf GRAVEL, some c-f Sand, little Silt								16.5
6														
7														
8														11.5
9														
10	8	S-4	8	M	GM	Gy cf GRAVEL, some c-f Sand, little Silt								
11														
12	12	S-5	10	W	SM	Gy cf SAND, some c-f Gravel, little Silt								6.5
13														
14														
15	8	S-4	4	W	SM	Gy c SAND, little Gravel, little Silt								1.5
16														
17														
18	17	S-7	12	W	SM	Gy cf SAND, trace Gravel, little Silt								-3.5
19														
20														
21														
22														
23														
24														
25														-8.5

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-8

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 2 of 2

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc.

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
26	53	S-6	6	W	SM	Gy cf SAND, trace f Gravel, little Silt		10	20	30	40	50		-4.5
27														
28														
29														
30														
31	37	S-9	12	W	SM	Gy cf SAND, some c-f Gravel, little Silt								-13.5
32						End of Boring at 32'								
33														
34														
35														-18.5
36														
37														
38														
39														-23.5
40														
41														
42														
43														-28.5
44														
45														
46														
47														-33.5
48														
49														
50														
51														
52														
53														
54														
55														

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall.

BORING No. B-9

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 20' | CASING: 4" 0 TO 10' | DIAMOND CORE: TO — | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/10/19 1:30 PM DEPTH 5'

INSPECTOR: Michael Bastien | DRILLER: Mike Tarter | SURFACE ELEVATION: 12.0 | DATUM: See Remarks | DATE START: 6/10/19 | DATE FINISH: 6/10/19 | WEATHER: Rain TEMP: 70° F | DEPTH TO ROCK: 20' | *CHANGES IN STRATA ARE INFERRED

UNCONFINED COMPRESS. STRENGTH (TONS/FT²): 1 2 3 4 5

DEPTH (FT.)	N (ON MIN./FT. PENETRATION RESISTANCE (BLS./6in.))	SAMPLES	SAMPLE NUMBER	RECOV. LENGTH	ROD PEN.	MOISTURE	UNIFIED SOIL CLASS.	DESCRIPTION OF MATERIAL	LITHOLOGY*	PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %	STANDARD PENETRATION (BLOWS/FT.)	ELEVATION (FT.)
1	21	S-1	18	M	SM	4" Topsoil Tn-brn cf SAND, some Silty Clay, little cf Gravel		10	20	30	40	50		12.0
2														
3	29	S-2	18	M	SM	Tn-gy cf SAND, some Clayey Silt, little cf Gravel								
4														
5	10	S-3	8	W	SM	Gy m-f SAND, some Silty Clay								7.0
6														
7														
8														2.0
9														
10	69	S-4	16	W	SM	Gy c-f SAND, little c-f Gravel, little Clayey Silt								
11														
12														-3.0
13														
14														
15	32	S-5	12	W	SM	Tn-brn c-f SAND, little c-f Gravel, little Clayey Silt								
16														
17						(Drill bit refusal at 20')								-8.0
18						End of Boring at 20'								
19														
20														-13.0
21														
22														
23														
24														
25														-18.0

STANDARD PENETRATION (BLOWS/FT.): 10 20 30 40 50

REMARKS: Surface elevation was estimated to the nearest 0.5-foot by interpolating between contour lines shown on a draft "Proposed Overall Facilities Plan", Sheet SP-1, prepared by McGoey, Hauser & Edsall. Could not core at 20' because the casing was deflected from vertical.

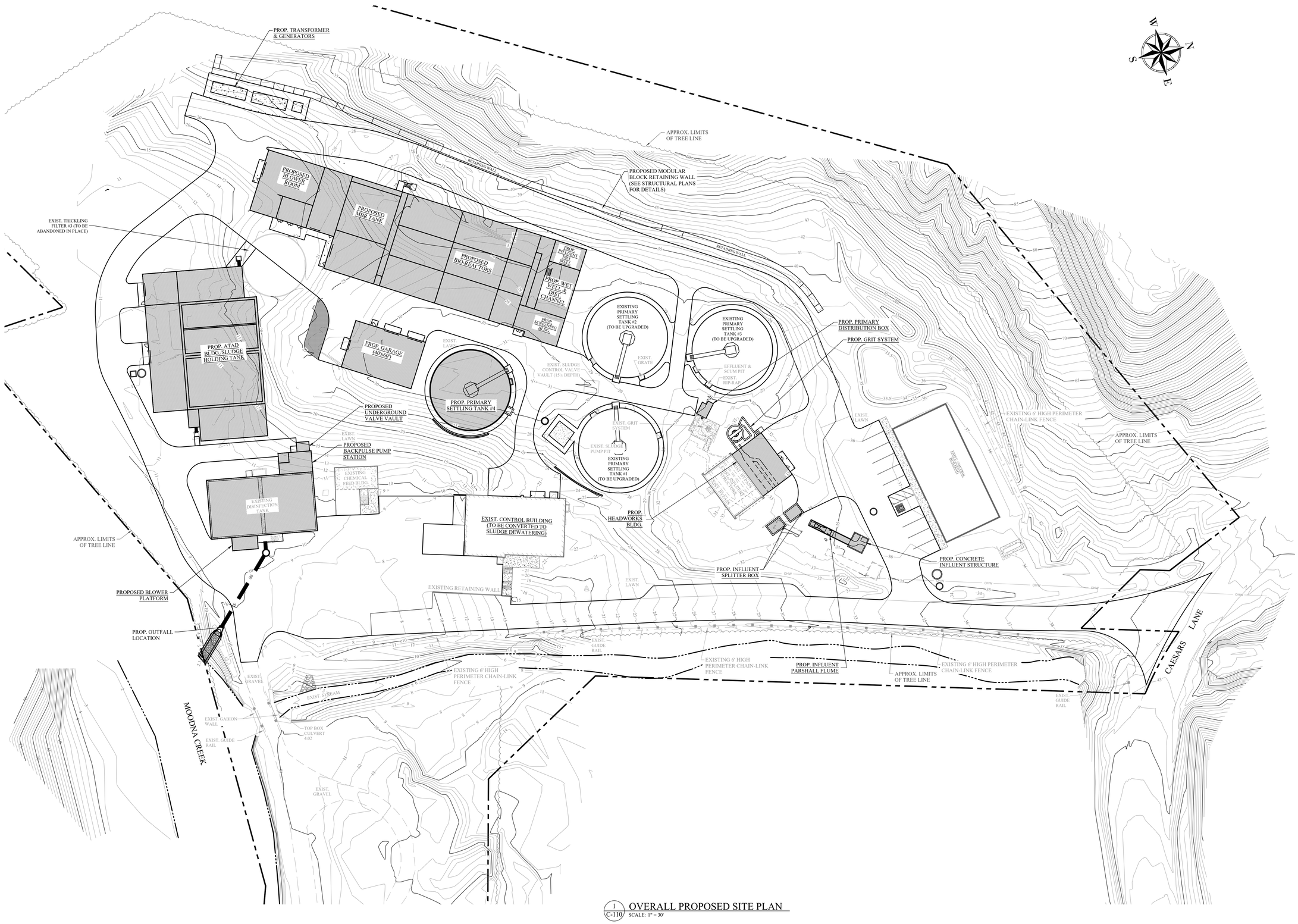
BORING No. B-10

Tectonic

PROJECT No. 9928.01 | PROJECT: Casser's Lane WWTP Improvements | LOCATION: New Windsor, NY | SHEET No. 1 of 1

CLIENT: Town of New Windsor | CONTRACTOR: Craig Test Borings Co., Inc. | METHOD OF ADVANCING BORING: DIA. — DEPTH — TO — | POWER AUGER: TO — | ROT. DRILL: 3 7/8" 0 TO 15' | CASING: 4" 0 TO 15' | DIAMOND CORE: 3" 15 TO 20' | CME 55 ATV with Automatic Hammer

GROUND WATER: DATE 6/10/19 9:30 AM DEPTH



1 C-110 OVERALL PROPOSED SITE PLAN
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

OVERALL PROPOSED SITE PLAN

REVISIONS

NO.	DESCRIPTION	DATE

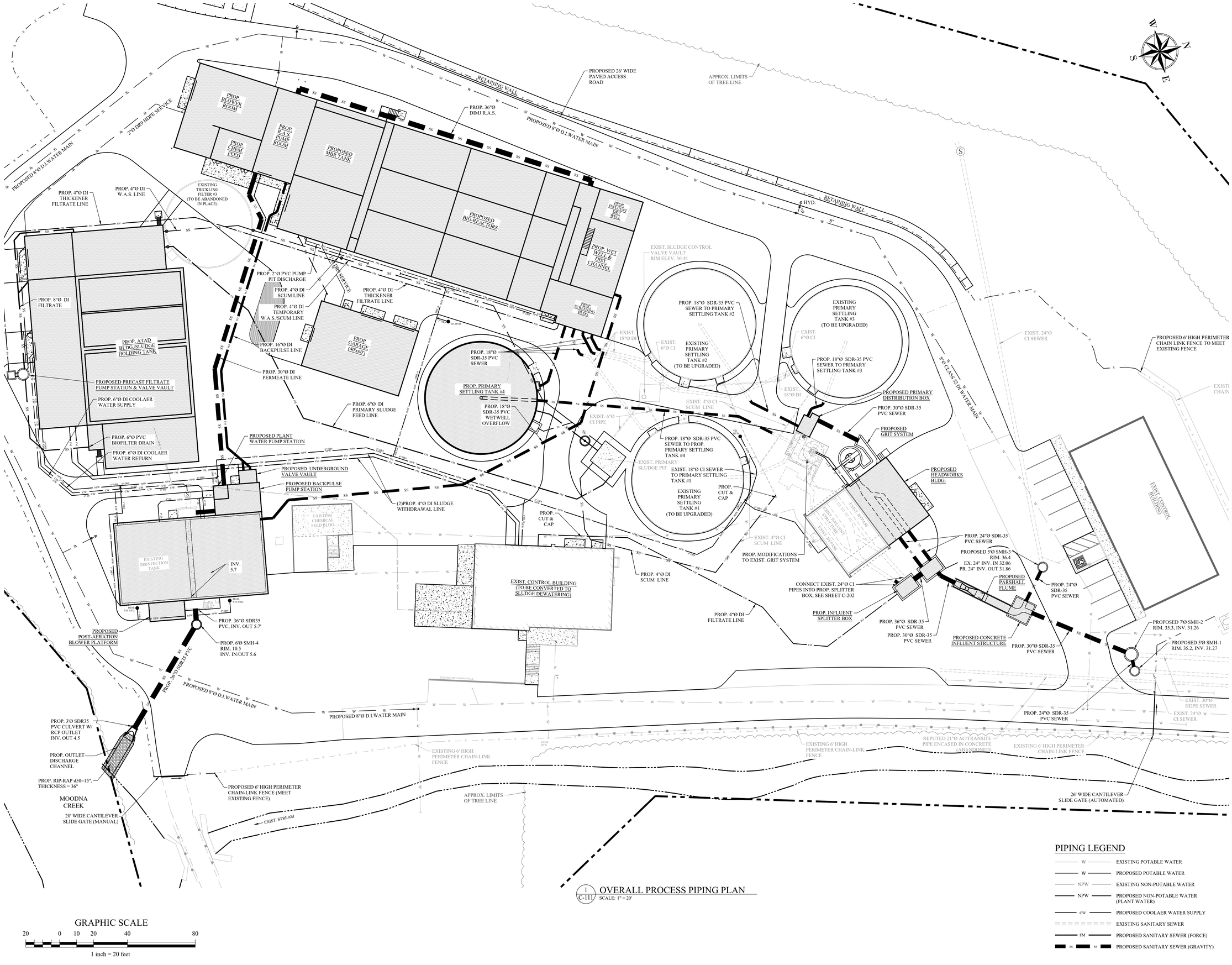
ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-110

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-110, 4/16/2025 2:06:19 PM



1 C-111 OVERALL PROCESS PIPING PLAN
SCALE: 1" = 20'

GRAPHIC SCALE
20 0 10 20 40 80
1 inch = 20 feet

PIPING LEGEND

- W — EXISTING POTABLE WATER
- W — PROPOSED POTABLE WATER
- NPW — EXISTING NON-POTABLE WATER
- NPW — PROPOSED NON-POTABLE WATER (PLANT WATER)
- CW — PROPOSED COOLAER WATER SUPPLY
- SS — EXISTING SANITARY SEWER
- FM — PROPOSED SANITARY SEWER (FORCE)
- SS — PROPOSED SANITARY SEWER (GRAVITY)

MHE ENGINEERING
33 Airport Center Drive, Suite 202
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(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

OVERALL PROCESS PIPING PLAN

REVISIONS

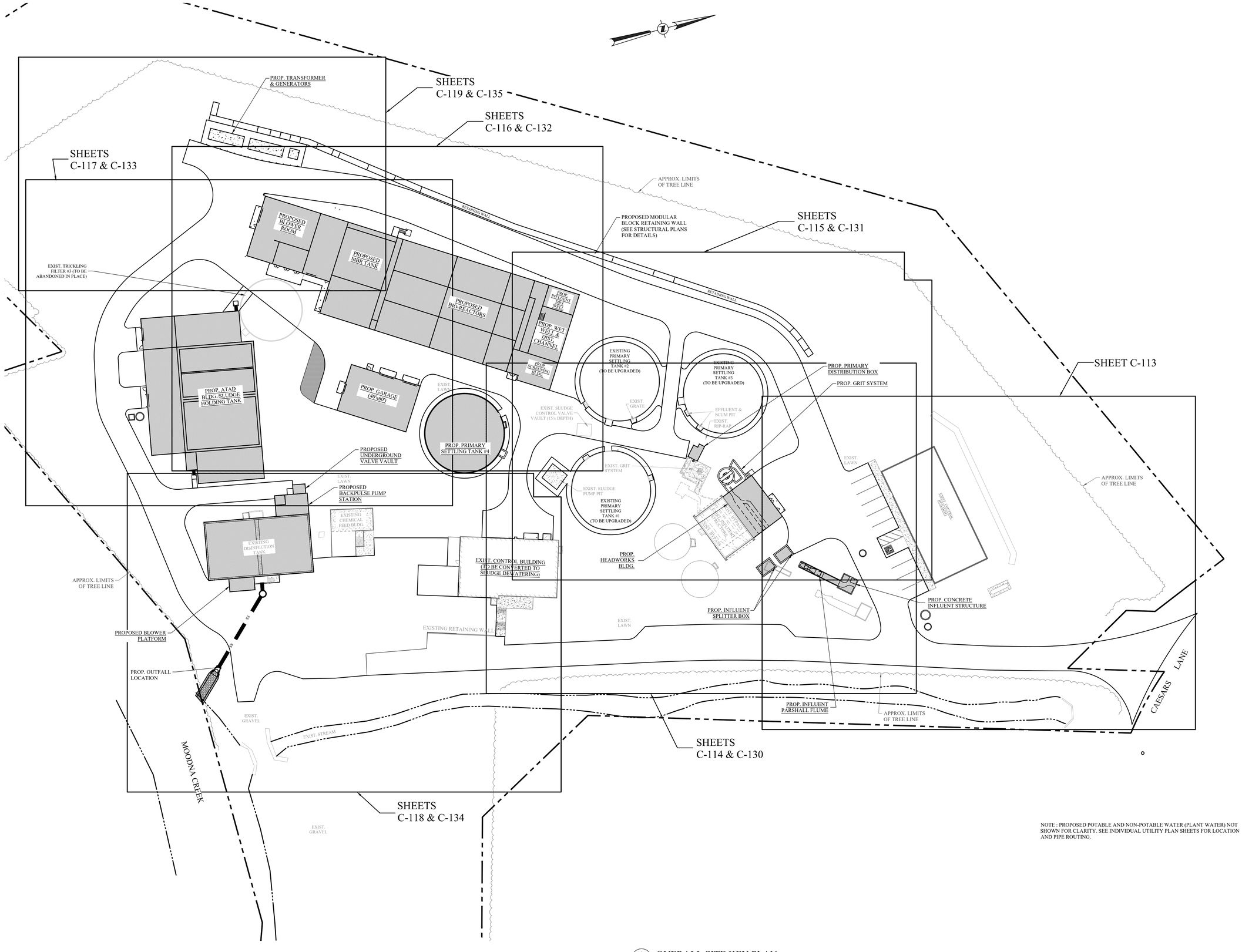
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-111

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-111, 4/16/2025 2:10:49 PM



NOTE : PROPOSED POTABLE AND NON-POTABLE WATER (PLANT WATER) NOT SHOWN FOR CLARITY. SEE INDIVIDUAL UTILITY PLAN SHEETS FOR LOCATION AND PIPE ROUTING.

1 / C-112 OVERALL SITE KEY PLAN
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

OVERALL SITE KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-112

PROJECT # 18-732 PHASE #

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FOR CONTINUATION SEE SHEET C-115

FOR CONTINUATION SEE SHEET C-114

8"Ø CLASS 52 DI WATER MAIN

EXIST. OUTLET STRUCTURE BB1
RIM. 35.0
24" INV. IN 29.0
INV. OUT 28.0

18"Ø HDPE

EXIST. CB
RIM. 36.0
INV. IN 32.5
INV. OUT 30.0

PROPOSED 6' HIGH PERIMETER CHAIN LINK FENCE TO MEET EXISTING FENCE

C.O. TO EL. 35.0

EXISTING 24"Ø HDPE

6"Ø UNDERDRAIN

END CAP

INV. 30.0

BIO-BASIN 1
Q100 EL. 34.79

EXIST. LAWN

EXIST. 24"Ø CI SEWER

PROPOSED PAVEMENT, SEE SHEET C-153

TW=41.0
BW=36.0

35.5

APPROX. LIMITS OF TREE LINE

EXISTING 6' HIGH PERIMETER CHAIN-LINK FENCE

BIO-BASIN 1 NOTES :
1. EXCAVATE AND REMOVE THE EXISTING BOTTOM OF BIO-BASIN 1 TO INSTALL NON-WOVEN GEOTEXTILE, CRUSHED STONE, 6" UNDERDRAIN, BIO-BASIN SOIL, HARDWOOD MULCH AND PLANTINGS AS SHOWN IN THE DETAILS.
2. CONTRACTOR IS TO CAREFULLY EXCAVATE AROUND THE 24"Ø HDPE PIPE.
3. THE CONSTRUCTION IS TO TAKE PLACE AFTER THE ENTIRE DRAINAGE AREA TO THE BIO-BASIN IS STABILIZED.

EXISTING CONTROL BUILDING - F.F. EL. 37.6

1/C-901

EXISTING 8"Ø HDPE

EXIST. 8"Ø CLASS 52 DI WATER MAIN

EXISTING 8" WATER MAIN GATE VALVE & BLIND FLANGE CONSTRUCTED IN PHASE 1 (CONNECT NEW 8"Ø DI WATER MAIN - PHASE 2A)

PROP. GRIT SYSTEM (SEE 200-SERIES DWGS.)

PROP. HEADWORKS BLDG. (SEE 200-SERIES DWGS.)

F.F. 32.73

32.65

PROP. INV. IN 30.41

PROP. 24"Ø SDR35 PVC

PROP. INFLUENT SPLITTER BOXES (SEE 200-SERIES DWGS.)
T.O.W. 36.0, 30" INV. IN 31.05,
24" INVS. OUT 31.04

PROPOSED 5'Ø SMH-3
RIM. 36.4
EX. 24" INV. IN 32.06
PR. 24" INV. OUT 31.86

PROP. 30"Ø SDR35 PVC

INV. 31.08

PROP. INFLUENT PARSHALL FLUME (SEE 200-SERIES DWGS.)

INV. 31.68

INV. IN 33.0

EXIST. 24"Ø CIP SEWER TO BE CUT AND CONNECTED TO PROPOSED 5'Ø CONC. MANHOLE

INV. 31.34

INV. 31.16

T.O.W. 36.5

T.O.W. 36.5

PROP. 30"Ø SDR35 PVC

END CURB

PROPOSED 7'Ø SMH-2
RIM. 35.3, INV. 31.26

PROP. 24"Ø SDR-35 PVC SEWER PIPE

PROPOSED 5'Ø SMH-1
RIM. 35.2, INV. 31.27

15"Ø HDPE

EXIST. DMH
RIM. 32.4
INV. IN/OUT 26.0

PROP. CONCRETE INFLUENT STRUCTURE (SEE 200-SERIES DWGS.)

CONNECT TO EXIST. DMH

EXIST. 30"Ø HDPE
INV. IN 29.5

U.P.

34.5

REPUTED 21"Ø AC/TRANSITE PIPE ENCASED IN CONCRETE (ABANDONED)

EXIST. 8"Ø AC/TRANSITE WATER MAIN

EXIST. 30"Ø HDPE

EXIST. 18"Ø HDPE INV. 33.5'

EXIST. 30"Ø HDPE

EXIST. S.M.H.
RIM ELEV. 37.47
INV. IN 31.47
INV. OUT 31.47

EXIST. 24"Ø HDPE

EXIST. 30"Ø HDPE
INV. OUT 25.8'

REPUTED 8"Ø AC/ TRANSITE WATERMAIN (ABANDONED)

EXIST. 30"Ø PVC SEWER PIPE TO BE CUT AND CONNECTED TO PROPOSED 7'Ø CONC. MANHOLE

EXIST. 24"Ø CIP SEWER PIPE TO BE CUT AND CONNECTED TO PROPOSED 5'Ø CONC. MANHOLE

EXIST. 30"Ø HDPE
INV. OUT 25.5'

EXIST. DMH
RIM. 33.8
INV. IN/OUT 26.0
18" INV. IN 30.0

EXIST. GUIDE RAIL

PROPOSED PAVEMENT, SEE SHEET C-153

REPUTED 8"Ø AC/ TRANSITE ENCASED WATERMAIN (ABANDONED)

26' WIDE CANTILEVER SLIDE GATE (AUTOMATED)

EXISTING 6' HIGH PERIMETER CHAIN-LINK FENCE

EXIST. 24"Ø HDPE
INV. OUT 34.2'

EXIST. CB
RIM. 36.35
INV. IN/OUT 26.4

EXIST. 30"Ø HDPE

TW=40.0
BW=39.0

TW=46.0
BW=36.0

EXIST. SAN. MANHOLE

EXIST. 30"Ø PVC SEWER

EXIST. S.M.H.
RIM. 37.74
INV. 31.47

EXIST. 30"Ø PVC SEWER

EXIST. 30"Ø PVC SEWER

EXIST. CB
RIM. 38.5
INV. IN/OUT 35.0

EXIST. 24"Ø CIP SEWER

U.P.

EXIST. 21"Ø TRANSITE SEWER PIPE

EXIST. S.M.H.
RIM. 40.98

EXIST. 21"Ø TRANSITE SEWER PIPE

EXIST. S.M.H.
RIM. 42.08

CAESARS LANE

EXIST. BOX CULVERT W/ WING WALLS; CREEK EL. 22.7

APPROXIMATE EDGE OF NYSDEC CLASS C TRIBUTARY TO MOODNA CREEK

NOTES :
1. REFER TO STORMWATER STRUCTURE SCHEDULE ON SHEET C-120 FOR DESIGN INFORMATION.
2. REFER TO PROCESS PIPE PROFILE SHEETS C-123, C-124, C-125 AND C-126.
3. REFER TO WATER MAIN PROFILE SHEET C-127.

GRAPHIC SCALE

10 0 5 10 20 40

1 inch = 10 feet

1/C-113 PARTIAL SITE PIPING / UTILITY PLAN #1
SCALE: 1" = 10'

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL SITE PIPING / UTILITY PLAN #1

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-113

PROJECT # 18-732 PHASE #

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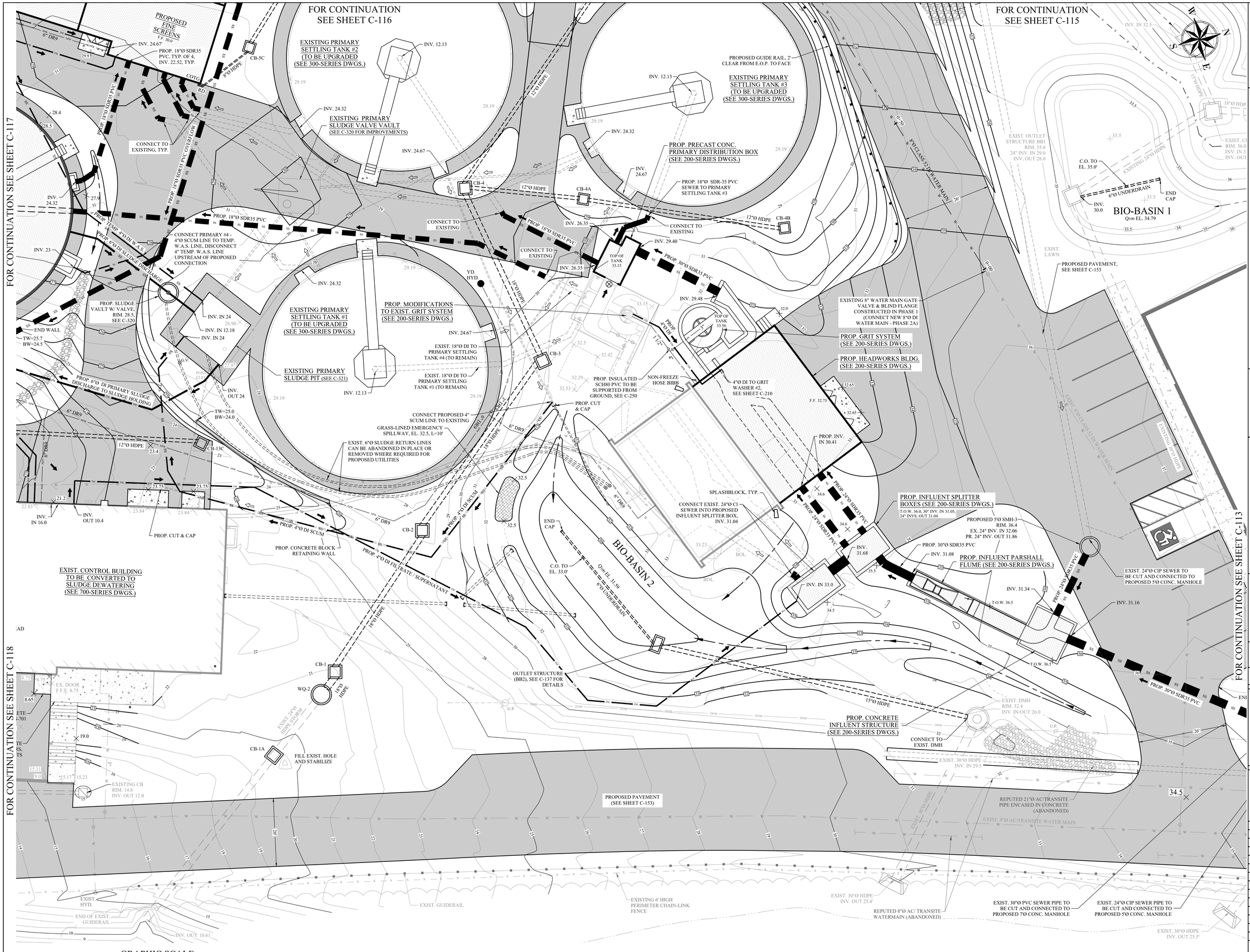

1 C-114 PARTIAL SITE PIPING / UTILITY PLAN #2
SCALE: 1" = 10'

NOTES :
1. REFER TO STORMWATER STRUCTURE SCHEDULE ON SHEET C-120 FOR DESIGN INFORMATION.
2. REFER TO PROCESS PIPE PROFILE SHEETS C-123, C-124, C-125 AND C-126.
3. REFER TO WATER MAIN PROFILE SHEET C-127.

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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

BIO-BASIN 1 NOTES :
1. EXCAVATE AND REMOVE THE EXISTING BOTTOM OF BIO-BASIN 1 TO INSTALL NON-WOVEN GEOTEXTILE, CRUSHED STONE, 6" UNDERDRAIN, BIO-BASIN SOIL, HARDWOOD MULCH AND PLANTINGS AS SHOWN IN THE DETAILS.
2. CONTRACTOR IS TO CAREFULLY EXCAVATE AROUND THE 24"Ø HDPE PIPE.
3. THE CONSTRUCTION IS TO TAKE PLACE AFTER THE ENTIRE DRAINAGE AREA TO THE BIO-BASIN IS STABILIZED.

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UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL SITE PIPING / UTILITY PLAN #2

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-114

PROJECT # 18-732 PHASE #

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FOR CONTINUATION
SEE SHEET C-116

FOR CONTINUATION
SEE SHEET C-118

FOR CONTINUATION
SEE SHEET C-114

FOR CONTINUATION SEE SHEET C-113

ANOXIC ZONE 1
TOP OF TANK 40.75

PROPOSED INFLUENT DRY WELL
TOP OF TANK 33.0

PROPOSED WET WELL & DIST. CHANNEL
TOP OF TANK 33.0

PROPOSED FINE SCREENS
F.F. 30.0

INV. IN 32.5

INV. OUT 17.17

T.O.W. EL. 35.0

INV. 24.67'

PROP. 18"Ø SDR35 PVC, TYP. OF 4, INV. 22.52, TYP.

CB-5C

8"Ø HDPE

CONNECT TO EXISTING, TYP.

PROP. 18"Ø SDR35 PVC

PROP. 18"Ø SDR35 PVC OVERFLOW

PROP. TEMP. 4"Ø DI W.A.S.

PROP. 6"Ø DI SLUDGE DISCHARGE

CONNECT PRIMARY #4 - 4"Ø SCUM LINE TO TEMP. W.A.S. LINE, DISCONNECT 4" TEMP. W.A.S. LINE UPSTREAM OF PROPOSED CONNECTION

EXISTING PRIMARY SETTLING TANK #2 (TO BE UPGRADED) (SEE 300-SERIES DWGS.)

INV. 12.13

INV. 24.32

EXISTING PRIMARY SLUDGE VALVE VAULT (SEE C-320 FOR IMPROVEMENTS)

EXIST. 8"Ø CI VENT

EXIST. 6"Ø CI

INV. 24.67

EXISTING PRIMARY SETTLING TANK #1 (TO BE UPGRADED) (SEE 300-SERIES DWGS.)

INV. 24.32

INV. 24

INV. 12.18

INV. 24

EXIST. 6" PVC VENT

EXISTING PRIMARY SLUDGE PIT (SEE C-321)

INV. 12.13

INV. OUT 24

TW=25.0
BW=24.0

6"Ø DI PRIMARY SLUDGE RGE TO SLUDGE HOLDING

PROP. SLUDGE VAULT W/ VALVE, RIM. 28.5, SEE C-320

PROP. MODIFICATIONS TO EXIST. GRIT SYSTEM (SEE 200-SERIES DWGS.)

INV. 24.67

EXIST. 18"Ø DI TO PRIMARY SETTLING TANK #4 (TO REMAIN)

EXIST. 18"Ø DI TO PRIMARY SETTLING TANK #1 (TO REMAIN)

CONNECT PROPOSED 4" SCUM LINE TO EXISTING

GRASS-LINED EMERGENCY SPILLWAY, EL. 32.5, L=10'

EXIST. 6"Ø SLUDGE RETURN LINES CAN BE ABANDONED IN PLACE OR REMOVED WHERE REQUIRED FOR PROPOSED UTILITIES

12"Ø HDPE

CB-13C

23.4

23.75

23.84

NTROL BUILDING
ONVERTED TO
DEWATERING
SERIES DWGS.)

EXIST. 12" VENTS

PROP. CUT & CAP

PROP. CONCRETE BLOCK RETAINING WALL

PROP. 4"Ø DI FILTRATE/ SUPERNATANT

PROP. 4"Ø DI SCUM

EXIST. 4"Ø DI SCUM

EXIST. 6"Ø DI SCUM

EXIST. 18"Ø DI

EXIST. 6"Ø CI

EXIST. 18"Ø DI

EXIST. 6"Ø CI

CB-4

CB-4A

CB-4B

12"Ø HDPE

CONNECT TO EXISTING

PROP. 18"Ø SDR35 PVC

INV. 26.35

INV. 29.40

CONNECT TO EXISTING

CONNECT TO EXISTING

INV. 26.35

TOP OF TANK 33.15

PROP. 30"Ø SDR35 PVC

YD. HYD.

EXIST. GRIT SYSTEM

INV. 29.48

TOP OF TANK 33.56

PROP. 4"Ø DI

4"Ø

CB-3

18"Ø HDPE

ABANDONED PIPE

PROP. INSULATED SCH80 PVC TO BE SUPPORTED FROM GROUND, SEE C-250

NON-FREEZE HOSE BIBB

4"Ø DI TO GRIT WASHER #2, SEE SHEET C-210

PROP. CUT & CAP

ELEC. PANEL

EXIST. INFLUENT STRUCTURE

BYPASS

BYPASS

6"Ø DR9

6"Ø DR9

6"Ø DR9

CB-2

END CAP

C.O. TO EL. 33.0'

Q100 EL. 31.50
6"Ø UNDERDRAIN

BIO-BASIN 2

SPLASHBLOCK, TYP.

CONNECT EXIST. 24"Ø CI SEWER INTO PROPOSED INFLUENT SPLITTER BOX, INV. 31.04

PROP. INFLUENT SPLITTER BOXES (SEE 200-SERIES DWGS.)
T.O.W. 36.0, 30" INV. IN 31.05,
24" INVS. OUT 31.04

PROP. 24"Ø SDR35 PVC

PROP. 24"Ø SDR35 PVC

PROP. 24"Ø SDR35 PVC

INV. 34.6

INV. 34.6

INV. 31.68

INV. 31.08

PROP. 30"Ø SDR35 PVC

PROP. INFLUENT PARSHALL FLUME (SEE 200-SERIES DWGS.)

PROPOSED 5'Ø SMH-3
RIM. 36.4
EX. 24" INV. IN 32.06
PR. 24" INV. OUT 31.86

INV. IN 33.0

INV. 31.34

T.O.W. 36.5

PROP. 24"Ø DUCTILE IRON

EXIST. 24"Ø CIP SEWER TO BE CUT AND CONNECTED TO PROPOSED 5'Ø CONC. MANHOLE

INV. 31.16

EXIST. 24"Ø CIP SEWER

EXIST. LAWN

PROPOSED PAVEMENT, SEE SHEET C-153

EXISTING 8" WATER MAIN GATE VALVE & BLIND FLANGE CONSTRUCTED IN PHASE 1 (CONNECT NEW 8"Ø DI WATER MAIN - PHASE 2A)

PROP. GRIT SYSTEM (SEE 200-SERIES DWGS.)

PROP. HEADWORKS BLDG. (SEE 200-SERIES DWGS.)

F.F. 32.73

PROP. INV. IN 30.41

EXISTING 30"Ø HDPE

EXIST. 8"Ø CLASS 52 DI WATER MAIN

BOL.

BOL.

EXIST. 24"Ø CIP SEWER PIPE

EXIST. S.M.H. — RIM ELEV. 43.01 INV. IN 33.02 INV. OUT 32.89

GRASS-LINED BYPASS SWALE

PROPOSED MODULAR BLOCK RETAINING WALL (SEE STRUCTURAL PLANS FOR DETAILS)

RETAINING WALL

WATER MAIN PHASE 2B - PROPOSED 8" DI CONNECTION TO BLIND FLANGE @ STA. 1+92± (TO BE CONSTRUCTED DURING THE CONSTRUCTION OF THE MBR BLDG. - 500 SERIES), SEE SHEET C-127

HYD

8x6 TEE

GATE VALVE, TYP.

8" W

1+50

2+00

2+50

BEND

T.O.W. 44.25

T.O.W. 42.75

45° BEND

CB-5B

CB-6

CB-5A

CB-5

12"Ø HDPE

X'ING 26.0'

T.O.W. 39.75

T.O.W. 38.25

T.O.W. 36.75

T.O.W. 35.25

RIP-RAP CHANNEL, D_{50} = 6", THICKNESS = 18" OVER NON-WOVEN GEOTEXTILE

INV. IN 32.5

INV. IN 35.0

15"Ø HDPE

18"Ø HDPE

EXIST. OUTLET STRUCTURE BB1
RIM. 35.0
24" INV. IN 29.0
INV. OUT 28.0

EXIST. CB
RIM. 36.0
INV. IN 32.5
INV. OUT 30.0

C.O. TO EL. 35.0'

EXISTING 24"Ø HDPE

6"Ø UNDERDRAIN

END CAP

INV. 30.0

BIO-BASIN 1
Q100 EL. 34.79

BIO-BASIN 1 NOTES :
1. EXCAVATE AND REMOVE THE EXISTING BOTTOM OF BIO-BASIN 1 TO INSTALL NON-WOVEN GEOTEXTILE, CRUSHED STONE, 6" UNDERDRAIN, BIO-BASIN SOIL, HARDWOOD MULCH AND PLANTINGS AS SHOWN IN THE DETAILS.
2. CONTRACTOR IS TO CAREFULLY EXCAVATE AROUND THE 24"Ø HDPE PIPE.
3. THE CONSTRUCTION IS TO TAKE PLACE AFTER THE ENTIRE DRAINAGE AREA TO THE BIO-BASIN IS STABILIZED.

NOTES :
1. REFER TO STORMWATER STRUCTURE SCHEDULE ON SHEET C-120 FOR DESIGN INFORMATION.
2. REFER TO PROCESS PIPE PROFILE SHEETS C-123, C-124, C-125 AND C-126.
3. REFER TO WATER MAIN PROFILE SHEET C-127.

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

1 C-115 PARTIAL SITE PIPING / UTILITY PLAN #3
SCALE: 1" = 10'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL
SITE PIPING / UTILITY PLAN #3

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-115

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-115, 4/16/2025 2:08:44 PM

NOTES :
1. REFER TO STORMWATER STRUCTURE SCHEDULE ON SHEET C-120 FOR DESIGN INFORMATION.
2. REFER TO PROCESS PIPE PROFILE SHEETS C-123, C-124, C-125 AND C-126.
3. REFER TO WATER MAIN PROFILE SHEET C-127.

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

FOR CONTINUATION SEE SHEET C-119

FOR CONTINUATION SEE SHEET C-117

FOR CONTINUATION SEE SHEETS C-117 & C-118

FOR CONTINUATION SEE SHEET C-115

1 C-116 PARTIAL SITE PIPING / UTILITY PLAN #4
SCALE: 1" = 10'

BASIN 3

6"Ø REMOVABLE BOLLARDS @ 6' O.C.
WATER MAIN PHASE 2C - PROPOSED 8" DI CONNECTION TO BLIND FLANGE @ STA. 5+02±, SEE SHEET C-127
INV. OUT 24.0'
T.O.W. 39.75
RIP-RAP CHANNEL, D50=6", THICKNESS = 12" OVER NON-WOVEN GEOTEXTILE
T.O.W. 42.75
T.O.W. 41.25
OUTLET INV. 38.5 W/ END SECTION & RIP-RAP, SEE DETAIL 1/C-140 FOR OUTLET PROTECTION
15"Ø HDPE
X'ING 24.15'
BEND
8x3 TEE W/ BLIND FLANGE
5+00
8x6 TEE
PROPOSED MBR HYDRANT #2 ASSEMBLY
BEND
4+40
PROPOSED PAVEMENT, SEE SHEET C-153
INV. OUT 20.5
T STRUCTURE
SEE SHEET C-137
ETAILS
5'-50
BEND
11.25° BEND
COTG
4"Ø BOLLARD, TYP.
8"Ø HDPE
CB-9
12"Ø HDPE
PROPOSED GATE VALVE & VALVE BOX TO GRADE
PROPOSED 3"Ø D.I. WATER SERVICE
12"Ø HDPE
PROP. M.B.R. BUILDING (SEE 500-SERIES DWGS.)
24"Ø PERFORATED HDPE IN CRUSHED STONE W/ FABRIC
PROPOSED MODULAR BLOCK RETAINING WALL (SEE STRUCTURAL S-100 SHEETS FOR PLANS & DETAILS)
INLET INV. 39.0 W/ END SECTION
RETAINING WALL
6"Ø UNDERDRAIN
6'-00
2"Ø DR9 HDPE SERVICE
PROPOSED BLOWER ROOM F.F. 25.5
PROPOSED CHEM F.F. 25.5
PROPOSED R.A.S. PUMP ROOM F.F. 21.17
PROPOSED MBR TANK
INV. OUT 41.17
CB-9A
8"Ø HDPE
PROP. 36"Ø DI R.A.S.
PROPOSED 8"Ø D.I.WATER MAIN
4"Ø BOLLARD, TYP.
PROP. GUIDE RAIL, 2' CLEAR TO E.O.P.
CB-8
8"Ø HDPE
CB-8B
6" GV W/ CURB BOX
INV. OUT 16.42
INV. OUT 16.7
INV. IN 18.25
12"Ø HDPE
CB-8A
AEROBIC ZONE 4
TOP OF TANK 40.75
AEROBIC ZONE 1
TOP OF TANK 40.75
AEROBIC ZONE 5
TOP OF TANK 40.75
AEROBIC ZONE 2
TOP OF TANK 40.75
AEROBIC ZONE 6
TOP OF TANK 40.75
AEROBIC ZONE 3
TOP OF TANK 40.75
ANOXIC ZONE 1
TOP OF TANK 40.75
ANOXIC ZONE 2
TOP OF TANK 40.75
ANOXIC ZONE 3
TOP OF TANK 40.75
INV. IN 32.5
T.O.W. EL. 35.0
PROPOSED INFLUENT DRY WELL
TOP OF TANK 33.0
PROPOSED WET WELL & DIST. CHANNEL
TOP OF TANK 33.0
INV. OUT 17.17
CB-5B
CB-5C
12"Ø HDPE
INV. OUT 19.0
PROP. 4"Ø DI RDT FILTRATE DISCHARGE
PROP. 4"Ø DI W.A.S.
PROPOSED SLUDGE HOLDING
TOP OF TANK 35.0
INV. 12.5
EXISTING TRICKLING FILTER #3 (TO BE DEMOLISHED)
PROP. 6"Ø DI PRIMARY SLUDGE
PROP. 30"Ø DI PERMEATE
PROP. 16"Ø DI BACKPULSE
PROP. 4"Ø SDR35 PVC
PROP. 2"Ø SCH80 PVC
PROP. TEMP. 4"Ø DI W.A.S.
PROP. 4"Ø DI
6"Ø DR9
PROP. GUIDE RAIL, 2' CLEAR FROM EDGE OF GRAVEL
CB-7A
COTG
INV. OUT 26.1
PROP. GRAVEL AREA, 6" NYSDOT ITEM 4 OVER GEOTEXTILE
PROPOSED THERM AIR
TOP OF TANK 35.0
4"Ø BOLLARD, SPLASHBLOCK, TYP.
3"Ø DR9
YD. HYD.
PROPOSED FINE SCREENS
F.F. 30.0
INV. 24.67'
PROP. 18"Ø SDR35 PVC, TYP. OF 4, INV. 22.52, TYP.
CB-5C
8"Ø HDPE
EXISTING PRIMARY SETTLING TANK #2 (TO BE UPGRADED (SEE 300-SERIES DWG
GARAGE (SEE 900-SERIES DWGS.) F.F. 28.5
PROPOSED PAVEMENT, SEE SHEET C-153
CB-7
8"Ø HDPE, TYP.
12"Ø HDPE
PROP. PRIMARY SETTLING TANK #4 (SEE 300-SERIES DWGS.)
T.O.W. 29.19
CONNECT TO EXISTING, TYP.
PROP. 18"Ø SDR35 PVC
PROP. 18"Ø SDR35 PVC OVERFLOW
INV. 24.32
EXISTING SLUDGE V (SEE C-320 F
CB-7B
INV. 12.13
INV. 23
PROP. 8"Ø DI SLUDGE DISCHARGE
CONNECT PRIMARY #4 - 4"Ø SCUM LINE TO TEMP. W.A.S. LINE, DISCONNECT 4" TEMP. W.A.S. LINE UPSTREAM OF PROPOSED CONNECTION
PROP. SLUDGE VAULT W/ VALVE, RIM. 28.5, SEE C-320
INV. 8.0
PROPOSED BIOFILTAER
TOP OF TANK 21.0
CORE-DRILL PROP. 6"Ø DI COOLAER WATER RETURN INTO EXIST. MH
4' WIDE RIP-RAP, D50=6", THICKNESS = 12" OVER NON-WOVEN GEOTEXTILE
INV. OUT 14.0
PROP. END OF CONC. BLK. RETAINING WALL
TW=25.7 BW=24.0
TW=24.6 BW=22.2
END WALL TW=25.7 BW=24.5
8" DR9
6"Ø DR9
PROP. 4"Ø DI SLUDGE FEED TO BELT PRESS
CB-12
EXIST. LAWN
EXIST. 6" PVC VENT
INV. IN 24
INV. IN 12.18
EXISTING PRIMARY SETTLING TANK #1 (TO BE UPGRADED (SEE 300-SERIES DWGS.)

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BID SET

CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL SITE PIPING / UTILITY PLAN #4

REVISIONS		
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPB/Jr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-116

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outlet\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-116, 4/18/2025 2:00:01 PM

FOR CONTINUATION
SEE SHEET C-119

FOR CONTINUATION
SEE SHEET C-116

FOR CONTINUATION
SEE SHEET C-118

FOR CONTINUATION
SEE SHEET C-118

HDPE END SECTION
INV. OUT 12.0

RIP RAP OUTLET
PROTECTION, TYP.,
SEE DETAIL 1/C-140

INV. OUT 20.5

OUTLET STRUCTURE
(BB3), SEE SHEET C-137
FOR DETAILS

6"Ø UNDERDRAIN

HDPE END SECTION,
TYP., INV. OUT 11.0

12"Ø HDPE

BIO-BASIN 3

CENTERLINE OF PROPOSED 4' WIDE DRAINAGE
SWALE, TO BE FIELD DETERMINED
GRASS-LINED (SLOPES 0-4%), RIP RAP (SLOPES
>4%), RIP RAP SIZE d50=9", THICKNESS = 18" OVER
NON-WOVEN GEOTEXTILE

PROP. GUIDE RAIL,
2' CLEAR TO E.O.P.

PROPOSED 6' HIGH
PERIMETER CHAIN-LINK
FENCE

HDPE END SECTION
INV. OUT 11.0

PROPOSED 8"Ø DI W.M.

2"Ø DR9 HDPE SERVICE

4"Ø BOLLARD, TYP.

PROP. GUIDE RAIL,
2' CLEAR TO E.O.P.

8"Ø HDPE

CB-8

INV. OUT 19.0

12"Ø HDPE

22.5°
BEND

X'ING
12.4'

WQ-4

CB-10

PROP. 4"Ø DI RDT
FILTRATE DISCHARGE

SPLASHBLOCK,
TYP.

4"Ø BOLLARD,
TYP.

22.5°
BEND

INV. 14.25

PROP. 4"Ø DI W.A.S.

PROP. 4"Ø SDR35 DRAINS

PROP. 8"Ø SDR35 PVC FILTRATE

PROPOSED
ROTARY DRUM
THICKENERS
F.F. 17.0

PROPOSED
SLUDGE
HOLDING
TOP OF TANK 35.0

PROPOSED
THERM AIR
TOP OF TANK 35.0

PROPOSED
EQUIPMENT
ROOM
F.F. 17.0

PROPOSED SNDR
TOP OF TANK 35.0

PROPOSED
BIOFILTAER
TOP OF TANK 21.0

6"Ø DI COOLAER
WATER SUPPLY

6"Ø DI COOLAER
WATER RETURN

INV. 13.7

INV. 12.0

INV.
13.95

22.5°
BEND

INV. 7.2

PROP. ATAD FILTRATE PUMP
STATION & VALVE VAULT
(SEE C-411)

PROPOSED 8"Ø DI WATER MAIN

PROP. 6"Ø SDR35
BIOFILTER DRAIN

INV. 9.5

INV. 8.0

CB-11A

PROP. A.T.A.D. BUILDING
(SEE 400-SERIES DWGS.)

CORE-DRILL PROP. 6"Ø DI
COOLAER WATER RETURN
INTO EXIST. MH

PROP. 4"Ø DI SLUDGE FEED TO BELT PRESS

12"Ø HDPE

18"Ø HDPE

6" DI

8" DI

INV.
5.83

INV. 6.2

PROP. 6"Ø DI PRIMARY SLUDGE

EXISTING
TRICKLING
FILTER #3
(TO BE DEMOLISHED)

INV.
12.5

INV.
12.5

PROP. 10"Ø DI PERMEATE

PROP. 10"Ø DI BACKPULSE

PROP. GRAVEL AREA,
6" NYSDOT ITEM 4
OVER GEOTEXTILE

PROP. GUIDE RAIL,
2' CLEAR FROM
EDGE OF GRAVEL

CB-7A

COTG

INV.
OUT 26.1

PROPOSED PAVEMENT,
SEE SHEET C-153

CB-7

8"Ø HDPE, TYP.

12"Ø HDPE

PROP. 10"Ø DI PERMEATE

PROP. 10"Ø DI BACKPULSE

PROP. 6"Ø DI DISCHARGE TO SLUDGE HOLDING

INV. OUT 14.0

4' WIDE RIP-RAP, D50=6",
THICKNESS = 12" OVER
NON-WOVEN GEOTEXTILE

PROP. 4"Ø DI SLUDGE FEED TO BELT PRESS

PROP. UNDERGROUND
VALVE VAULT (SEE
600-SERIES DRAWINGS)

PROP. BACKPULSE PUMP
STATION (SEE 600-SERIES
DRAWINGS)

INV. 8.7

RIP-RAP CHANNEL, D5
THICKNESS = 12" (
NON-WOVEN GEOTE

PROPOSED
BLOWER
ROOM
F.F. 25.5

PROPOSED
CHEM
F.F. 25.5

PROPOSED
R.A.S.
PUMP
ROOM
F.F. 21.17

PROPOSED
MBR TANK

PROPOSED
CASSETTE
LAYDOWN
AREA
F.F. 25.5

AEROBIC ZONE 4
TOP OF TANK 40.75

AEROBIC ZONE 5
TOP OF TANK 40.75

AEROBIC ZONE 6
TOP OF TANK 40.75

BEND

11.25°
BEND

COTG

4"Ø BOLLARD, TYP.

8"Ø HDPE

12"Ø HDPE

8x3 TEE W/
BLIND FLANGE

8x6 TEE

PROPOSED GATE
VALVE & VALVE
BOX TO GRADE

PROPOSED 3"Ø D.I.
WATER SERVICE

PROPOSED MBR
HYDRANT #2
ASSEMBLY

CB-9

CB-9A

INV. OUT
41.17

PROP. 36"Ø DI R.A.S.

CB-8B

6" GV W/
CURB BOX

INV. OUT 16.42

INV. OUT 16.7

INV. IN
18.25

CB-8A

PROP. 4"Ø DI W.A.S.

INV.
IN 21.5

INV.
OUT 21.5

INV.
OUT 21.5

PROP. TEMP. 4"Ø DI W.A.S.

PROP. 2"Ø SCH80 PVC

1"Ø DR9 SERVICE

PROP. 4"Ø SDR35 PVC

PROP. 4"Ø DI

3" DR9

6" DR9

3" DR9

YD. HYD.

4"Ø BOLLARD, TYP.

SPLASHBLOCK, TYP.

GARAGE
(SEE 900-SERIES DWGS.)
T.F. 28.5

CB-7B

PROP. END OF CONC.
BLK. RETAINING WALL

TW=25.7
BW=24.0

TW=24.6
BW=22.2

8" DR9

6" DR9

PROP. 4"Ø DI SLUDGE FEED TO BELT PRESS

6" DI

12"Ø HDPE

18"Ø HDPE

8" DI

6" DI

GRAPHIC SCALE

10 0 5 10 20 40

1 inch = 10 feet

1 C-117 PARTIAL SITE PIPING / UTILITY PLAN #5
SCALE: 1" = 10'

NOTES :
1. REFER TO STORMWATER STRUCTURE SCHEDULE ON SHEET C-120 FOR DESIGN INFORMATION.
2. REFER TO PROCESS PIPE PROFILE SHEETS C-123, C-124, C-125 AND C-126.
3. REFER TO WATER MAIN PROFILE SHEET C-127.

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111 Wheatfield Drive, Suite 1
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BID SET

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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL
SITE PIPING / UTILITY
PLAN #5

REVISIONS

NO.	DESCRIPTION	DATE

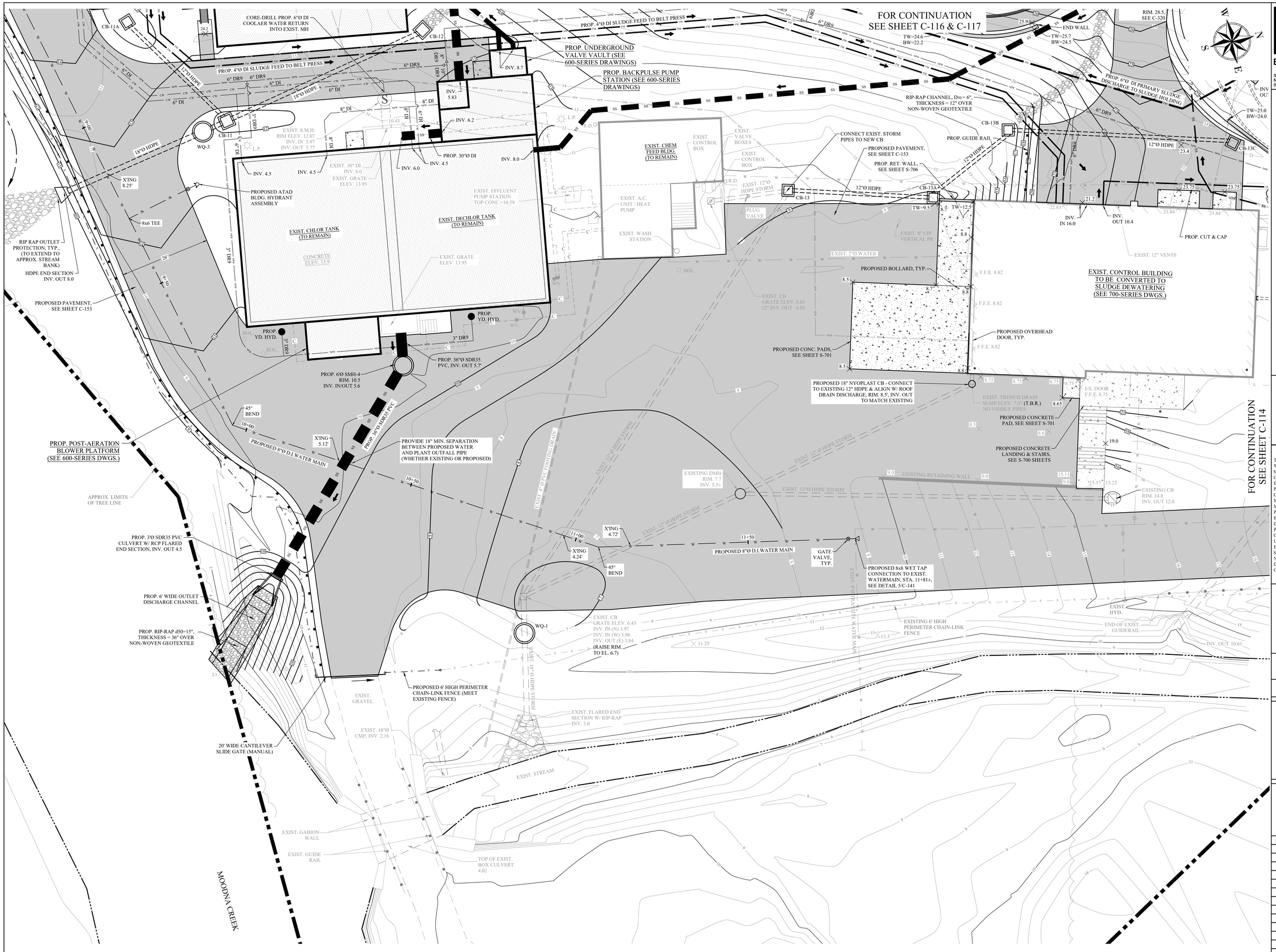
ISSUED DATE:	18 APR. 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-117

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-117, 4/16/2025 2:09:31 PM



NOTES :
1. REFER TO STORMWATER STRUCTURE SCHEDULE ON SHEET C-120 FOR DESIGN INFORMATION.
2. REFER TO PROCESS PIPE PROFILE SHEETS C-123, C-124, C-125 AND C-126.
3. REFER TO WATER MAIN PROFILE SHEET C-127.

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BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CALL 811

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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL
SITE PIPING / UTILITY
PLAN #6

REVISIONS

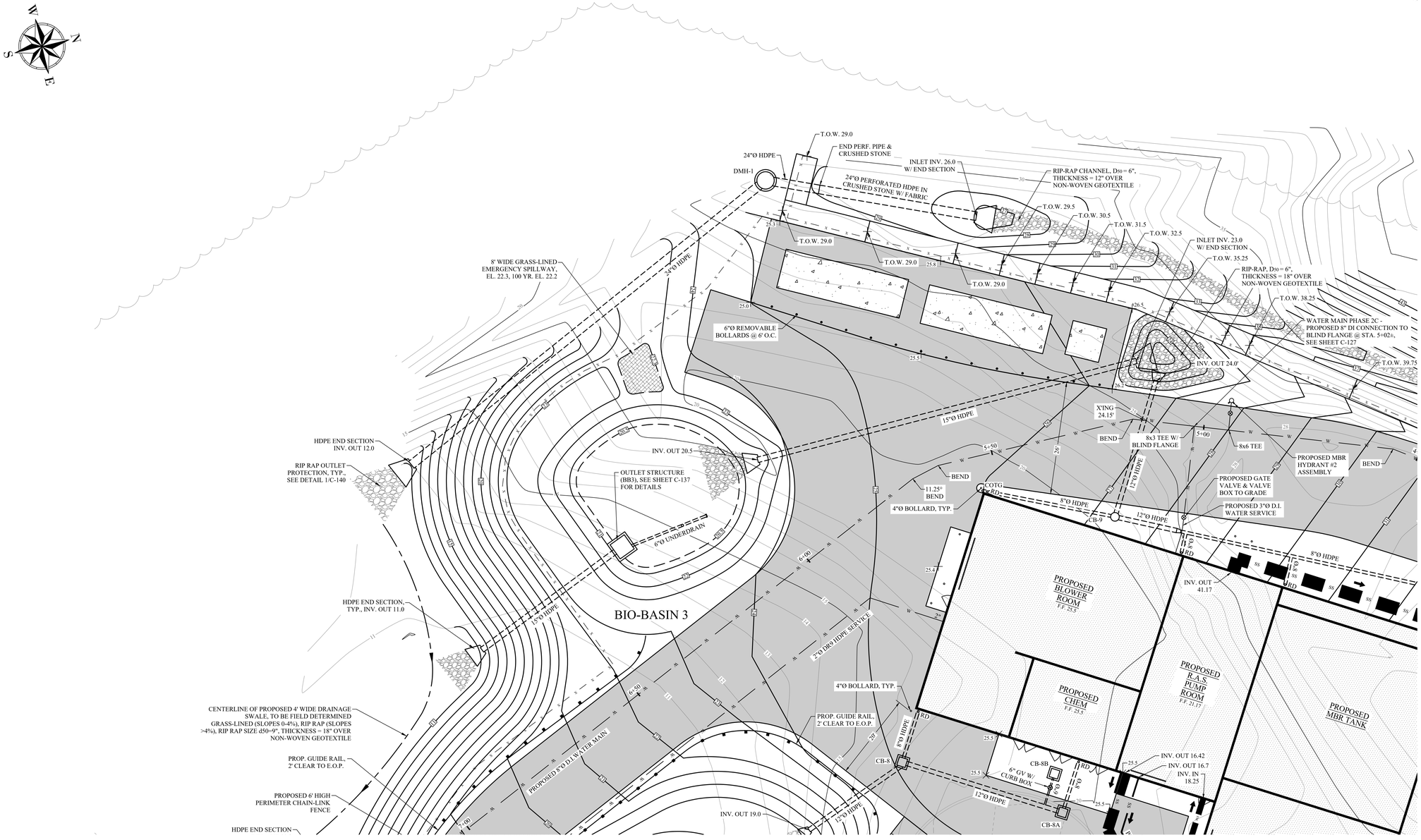
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-118

PROJECT # 18-732 PHASE #

T:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-118, 4/16/2025 2:08:51 PM



1 C-119 PARTIAL SITE PIPING / UTILITY PLAN #7
SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

FOR CONTINUATION SEE SHEET C-116

NOTES :
1. REFER TO STORMWATER STRUCTURE SCHEDULE ON SHEET C-120 FOR DESIGN INFORMATION.
2. REFER TO PROCESS PIPE PROFILE SHEETS C-123, C-124, C-125 AND C-126.
3. REFER TO WATER MAIN PROFILE SHEET C-127.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL SITE PIPING / UTILITY PLAN #7

REVISIONS

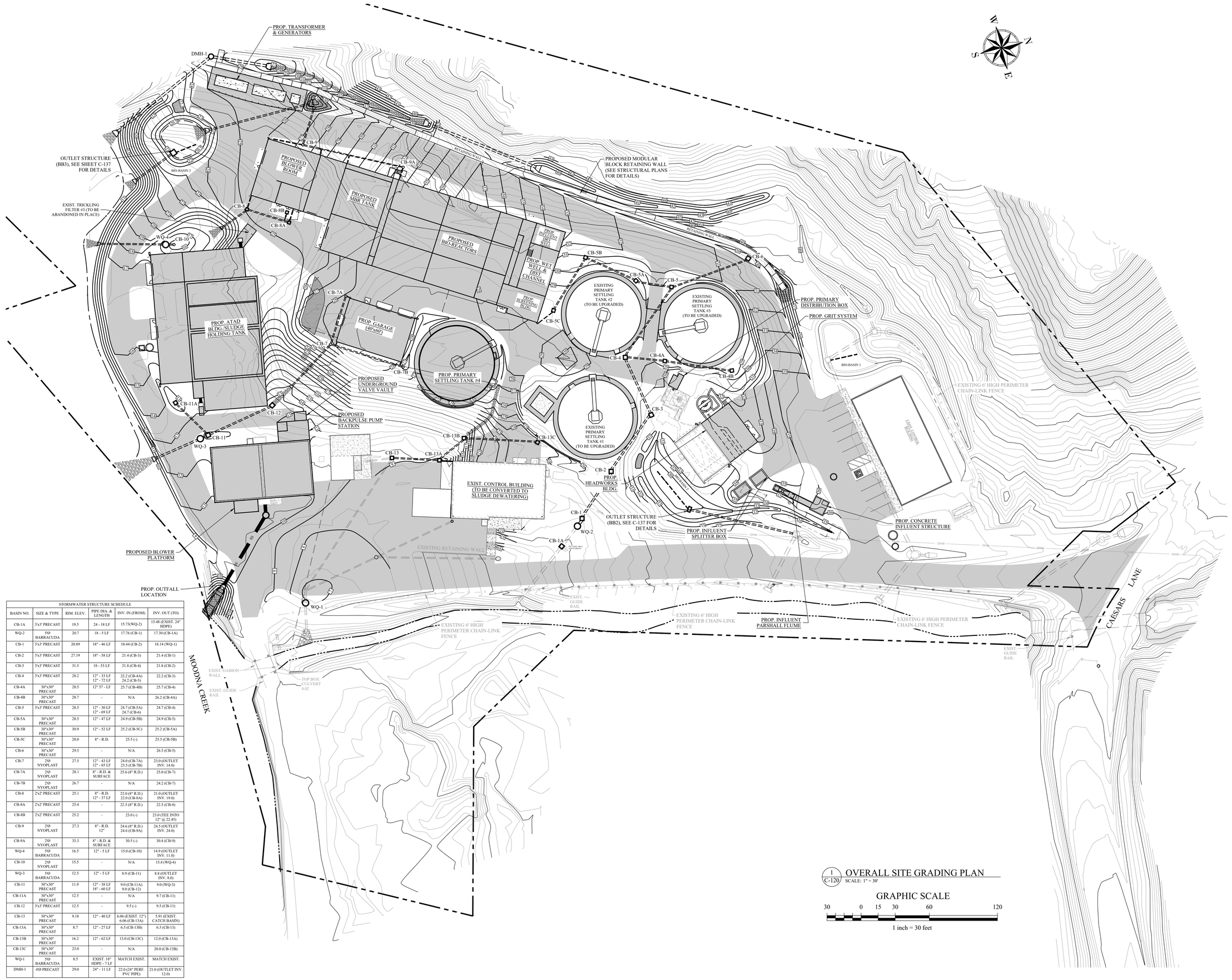
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-119

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-119, 4/16/2025 2:58:04 PM



STORMWATER STRUCTURE SCHEDULE					
BASIN NO.	SIZE & TYPE	RIM. ELEV.	PIPE DIA. & LENGTH	INV. IN (FROM)	INV. OUT (TO)
CB-1A	3'x3' PRECAST	19.5	24 - 18 LF	15.73(WQ-2)	15.48 (EXIST. 24" HDPE)
WQ-2	5'Ø BARRACUDA	20.7	18 - 5 LF	17.76 (CB-1)	17.30 (CB-1A)
CB-1	3'x3' PRECAST	20.89	18" - 46 LF	18.44 (CB-2)	18.14 (WQ-1)
CB-2	3'x3' PRECAST	27.19	18" - 58 LF	21.4 (CB-3)	21.4 (CB-1)
CB-3	3'x3' PRECAST	31.5	18 - 53 LF	21.8 (CB-4)	21.8 (CB-2)
CB-4	3'x3' PRECAST	28.2	12" - 33 LF 12" - 72 LF	22.2 (CB-4A) 24.2 (CB-5)	22.2 (CB-3)
CB-4A	30"x30" PRECAST	28.5	12" 57 - LF	25.7 (CB-4B)	25.7 (CB-4)
CB-4B	30"x30" PRECAST	28.7	-	N/A	26.2 (CB-4A)
CB-5	3'x3' PRECAST	28.5	12" - 30 LF 12" - 69 LF	24.7 (CB-5A) 24.7 (CB-6)	24.7 (CB-4)
CB-5A	30"x30" PRECAST	28.5	12" - 47 LF	24.9 (CB-5B)	24.9 (CB-5)
CB-5B	30"x30" PRECAST	30.9	12" - 52 LF	25.2 (CB-5C)	25.2 (CB-5A)
CB-5C	30"x30" PRECAST	28.0	8" - R.D.	25.5 (-)	25.5 (CB-5B)
CB-6	30"x30" PRECAST	29.5	-	N/A	26.5 (CB-5)
CB-7	2'Ø NYOPLAST	27.5	12" - 43 LF 12" - 65 LF	24.0 (CB-7A) 23.5 (CB-7B)	23.0 (OUTLET INV. 14.0)
CB-7A	2'Ø NYOPLAST	28.1	8" - R.D. & SURFACE	25.6 (8" R.D.)	25.0 (CB-7)
CB-7B	2'Ø NYOPLAST	26.7	-	N/A	24.2 (CB-7)
CB-8	2'x2' PRECAST	25.1	8" - R.D. 12" - 37 LF	22.0 (8" R.D.) 22.0 (CB-8A)	21.0 (OUTLET INV. 19.0)
CB-8A	2'x2' PRECAST	25.4	-	22.5 (8" R.D.)	22.5 (CB-8)
CB-8B	2'x2' PRECAST	25.2	-	23.0 (-)	23.0 (TEE INTO 12" @ 22.45)
CB-9	2'Ø NYOPLAST	27.3	8" - R.D. 12"	24.6 (8" R.D.) 24.6 (CB-9A)	24.5 (OUTLET INV. 24.0)
CB-9A	2'Ø NYOPLAST	33.3	8" - R.D. & SURFACE	30.5 (-)	30.4 (CB-9)
WQ-4	5'Ø BARRACUDA	16.5	12" - 5 LF	15.0 (CB-10)	14.9 (OUTLET INV. 11.0)
CB-10	2'Ø NYOPLAST	15.5	-	N/A	15.4 (WQ-4)
WQ-3	5'Ø BARRACUDA	12.5	12" - 5 LF	8.9 (CB-11)	8.8 (OUTLET INV. 8.0)
CB-11	30"x30" PRECAST	11.9	12" - 38 LF 18" - 60 LF	9.0 (CB-11A) 9.0 (CB-12)	9.0 (WQ-3)
CB-11A	30"x30" PRECAST	12.5	-	N/A	9.7 (CB-11)
CB-12	3'x3' PRECAST	12.5	-	9.5 (-)	9.5 (CB-11)
CB-13	30"x30" PRECAST	9.18	12" - 40 LF	6.06 (EXIST. 12") 6.06 (CB-13A)	5.91 (EXIST. CATCH BASIN)
CB-13A	30"x30" PRECAST	8.7	12" - 27 LF	6.5 (CB-13B)	6.5 (CB-13)
CB-13B	30"x30" PRECAST	16.2	12" - 62 LF	13.0 (CB-13C)	12.0 (CB-13A)
CB-13C	30"x30" PRECAST	23.0	-	N/A	20.0 (CB-13B)
WQ-1	5'Ø BARRACUDA	8.5	EXIST. 18" HDPE - 7 LF	MATCH EXIST.	MATCH EXIST.
DMH-1	4'Ø PRECAST	29.0	24" - 11 LF	22.0 (24" PERF. PVC PIPE)	21.0 (OUTLET INV. 12.0)

1 C-120 OVERALL SITE GRADING PLAN
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

OVERALL SITE GRADING PLAN & STORMWATER SCHEDULE

REVISIONS

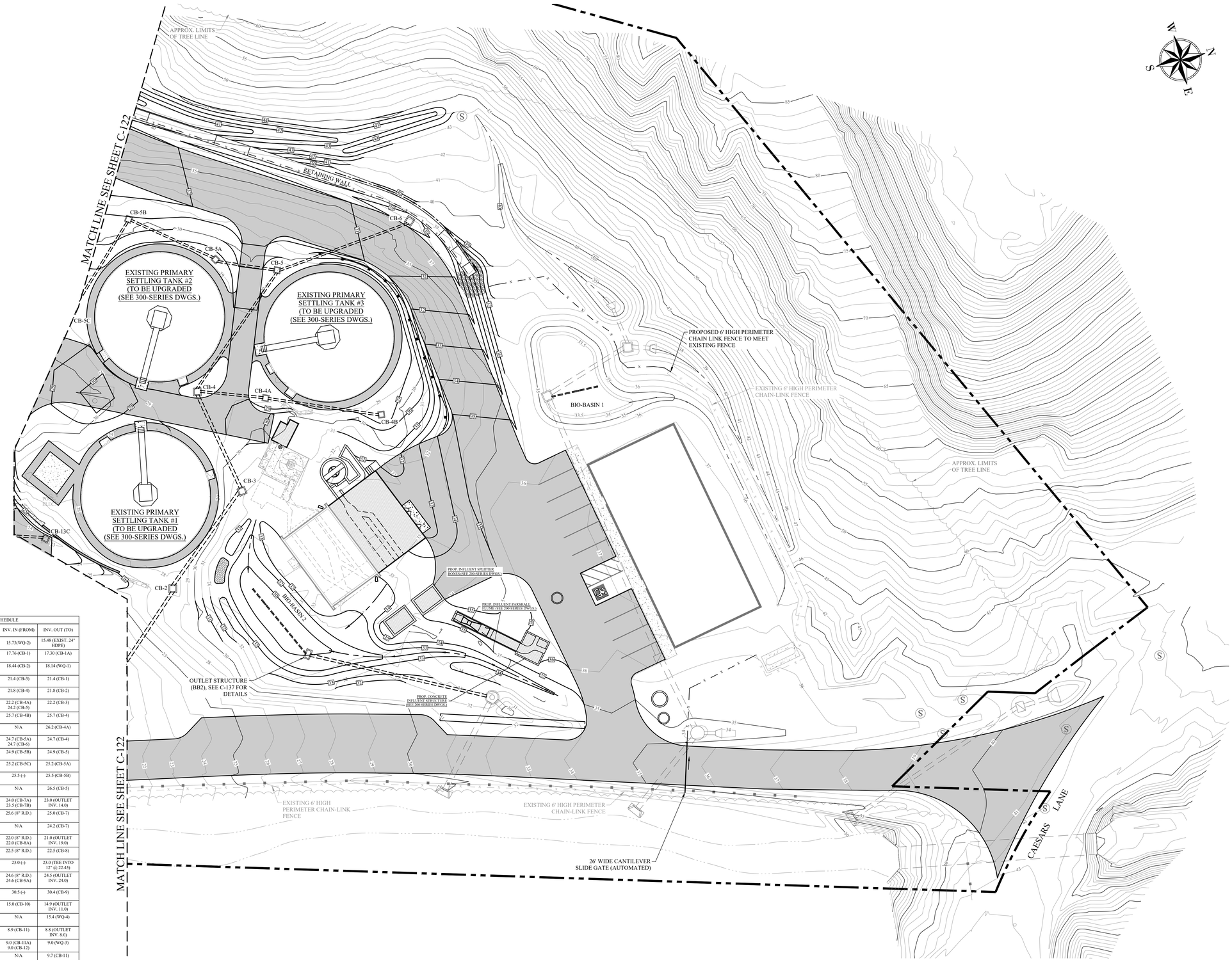
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-120

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Dwg\01 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-120, 4/16/2025 2:09:59 PM



STORMWATER STRUCTURE SCHEDULE					
BASIN NO.	SIZE & TYPE	RIM. ELEV.	PIPE DIA. & LENGTH	INV. IN (FROM)	INV. OUT (TO)
CB-1A	3'x3' PRECAST	19.5	24 - 18 LF	15.73(WQ-2)	15.48 (EXIST. 24" HDPE)
WQ-2	5'Ø BARRACUDA	20.7	18 - 5 LF	17.76 (CB-1)	17.30 (CB-1A)
CB-1	3'x3' PRECAST	20.89	18" - 46 LF	18.44 (CB-2)	18.14 (WQ-1)
CB-2	3'x3' PRECAST	27.19	18" - 58 LF	21.4 (CB-3)	21.4 (CB-1)
CB-3	3'x3' PRECAST	31.5	18 - 53 LF	21.8 (CB-4)	21.8 (CB-2)
CB-4	3'x3' PRECAST	28.2	12" - 33 LF 12" - 72 LF	22.2 (CB-4A) 24.2 (CB-5)	22.2 (CB-3)
CB-4A	30"x30" PRECAST	28.5	12" 57 - LF	25.7 (CB-4B)	25.7 (CB-4)
CB-4B	30"x30" PRECAST	28.7	-	N/A	26.2 (CB-4A)
CB-5	3'x3' PRECAST	28.5	12" - 30 LF 12" - 69 LF	24.7 (CB-5A) 24.7 (CB-6)	24.7 (CB-4)
CB-5A	30"x30" PRECAST	28.5	12" - 47 LF	24.9 (CB-5B)	24.9 (CB-5)
CB-5B	30"x30" PRECAST	30.9	12" - 52 LF	25.2 (CB-5C)	25.2 (CB-5A)
CB-5C	30"x30" PRECAST	28.0	8" - R.D.	25.5 (-)	25.5 (CB-5B)
CB-6	30"x30" PRECAST	29.5	-	N/A	26.5 (CB-5)
CB-7	2'Ø NYOPLAST	27.5	12" - 43 LF 12" - 65 LF	24.0 (CB-7A) 23.5 (CB-7B)	23.0 (OUTLET INV. 14.0)
CB-7A	2'Ø NYOPLAST	28.1	8" - R.D. & SURFACE	25.6 (8" R.D.)	25.0 (CB-7)
CB-7B	2'Ø NYOPLAST	26.7	-	N/A	24.2 (CB-7)
CB-8	2'x2' PRECAST	25.1	8" - R.D. 12" - 37 LF	22.0 (8" R.D.) 22.0 (CB-8A)	21.0 (OUTLET INV. 19.0)
CB-8A	2'x2' PRECAST	25.4	-	22.5 (8" R.D.)	22.5 (CB-8)
CB-8B	2'x2' PRECAST	25.2	-	23.0 (-)	23.0 (TEE INTO 12" @ 22.45)
CB-9	2'Ø NYOPLAST	27.3	8" - R.D. 12"	24.6 (8" R.D.) 24.6 (CB-9A)	24.5 (OUTLET INV. 24.0)
CB-9A	2'Ø NYOPLAST	33.3	8" - R.D. & SURFACE	30.5 (-)	30.4 (CB-9)
WQ-4	5'Ø BARRACUDA	16.5	12" - 5 LF	15.0 (CB-10)	14.9 (OUTLET INV. 11.0)
CB-10	2'Ø NYOPLAST	15.5	-	N/A	15.4 (WQ-4)
WQ-3	5'Ø BARRACUDA	12.5	12" - 5 LF	8.9 (CB-11)	8.8 (OUTLET INV. 8.0)
CB-11	30"x30" PRECAST	11.9	12" - 38 LF 18" - 60 LF	9.0 (CB-11A) 9.0 (CB-12)	9.0 (WQ-3)
CB-11A	30"x30" PRECAST	12.5	-	N/A	9.7 (CB-11)
CB-12	3'x3' PRECAST	12.5	-	9.5 (-)	9.5 (CB-11)
CB-13	30"x30" PRECAST	9.18	12" - 40 LF	6.06 (EXIST. 12") 6.06 (CB-13A)	5.91 (EXIST. CATCH BASIN)
CB-13A	30"x30" PRECAST	8.7	12" - 27 LF	6.5 (CB-13B)	6.5 (CB-13)
CB-13B	30"x30" PRECAST	16.2	12" - 62 LF	13.0 (CB-13C)	12.0 (CB-13A)
CB-13C	30"x30" PRECAST	23.0	-	N/A	20.0 (CB-13B)
WQ-1	5'Ø BARRACUDA	8.5	EXIST. 18" HDPE - 7 LF	MATCH EXIST.	MATCH EXIST.
DMH-1	4'Ø PRECAST	29.0	24" - 11 LF	22.0 (24" PERF. PVC PIPE)	21.0 (OUTLET INV. 12.0)

1 C-121 PARTIAL SITE GRADING PLAN #1
SCALE: 1" = 20'

GRAPHIC SCALE
20 0 10 20 40 80
1 inch = 20 feet

BIO-BASIN 1 NOTES :
1. EXCAVATE AND REMOVE THE EXISTING BOTTOM OF BIO-BASIN 1 TO INSTALL NON-WOVEN GEOTEXTILE, CRUSHED STONE, 6" UNDERDRAIN, BIO-BASIN SOIL, HARDWOOD MULCH AND PLANTINGS AS SHOWN IN THE DETAILS.
2. CONTRACTOR IS TO CAREFULLY EXCAVATE AROUND THE 24"Ø HDPE PIPE.
3. THE CONSTRUCTION IS TO TAKE PLACE AFTER THE ENTIRE DRAINAGE AREA TO THE BIO-BASIN IS STABILIZED.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL SITE GRADING PLAN #1

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-121

PROJECT # 18-732 PHASE #

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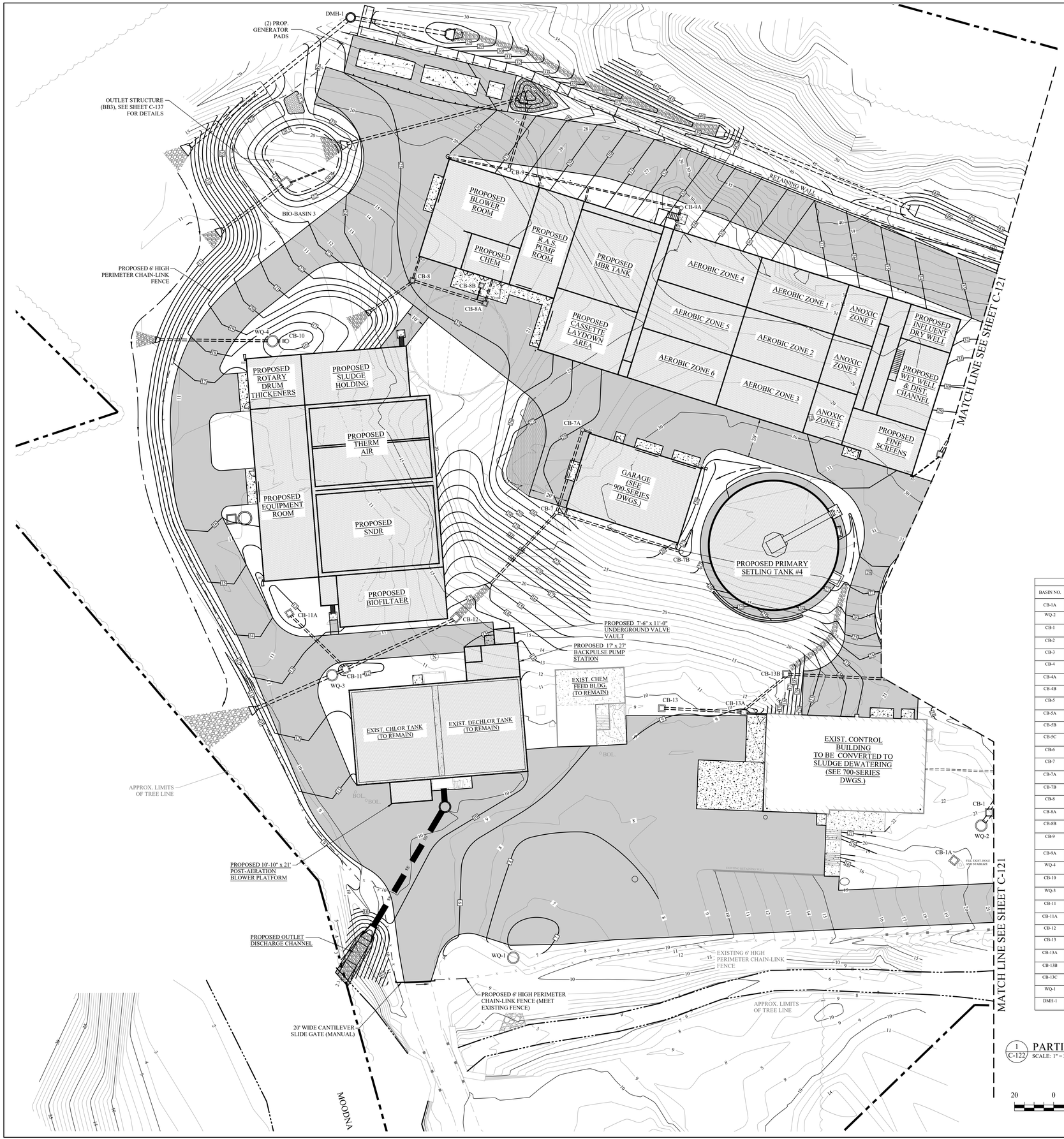

STORMWATER STRUCTURE SCHEDULE					
BASIN NO.	SIZE & TYPE	RIM. ELEV.	PIPE DIA. & LENGTH	INV. IN (FROM)	INV. OUT (TO)
CB-1A	3'x3' PRECAST	19.5	24 - 18 LF	15.73(WQ-2)	15.48 (EXIST. 24" HDPE)
WQ-2	5'Ø BARRACUDA	20.7	18 - 5 LF	17.76 (CB-1)	17.30 (CB-1A)
CB-1	3'x3' PRECAST	20.89	18" - 46 LF	18.44 (CB-2)	18.14 (WQ-1)
CB-2	3'x3' PRECAST	27.19	18" - 58 LF	21.4 (CB-3)	21.4 (CB-1)
CB-3	3'x3' PRECAST	31.5	18 - 53 LF	21.8 (CB-4)	21.8 (CB-2)
CB-4	3'x3' PRECAST	28.2	12" - 33 LF 12" - 72 LF	22.2 (CB-4A) 24.2 (CB-5)	22.2 (CB-3)
CB-4A	30"x30" PRECAST	28.5	12" 57 - LF	25.7 (CB-4B)	25.7 (CB-4)
CB-4B	30"x30" PRECAST	28.7	-	N/A	26.2 (CB-4A)
CB-5	3'x3' PRECAST	28.5	12" - 30 LF 12" - 69 LF	24.7 (CB-5A) 24.7 (CB-6)	24.7 (CB-4)
CB-5A	30"x30" PRECAST	28.5	12" - 47 LF	24.9 (CB-5B)	24.9 (CB-5)
CB-5B	30"x30" PRECAST	30.9	12" - 52 LF	25.2 (CB-5C)	25.2 (CB-5A)
CB-5C	30"x30" PRECAST	28.0	8" - R.D.	25.5 (-)	25.5 (CB-5B)
CB-6	30"x30" PRECAST	29.5	-	N/A	26.5 (CB-5)
CB-7	7'Ø NYOPLAST	27.5	12" - 43 LF 12" - 65 LF	24.0 (CB-7A) 23.5 (CB-7B)	23.0 (OUTLET INV. 14.0)
CB-7A	7'Ø NYOPLAST	28.1	8" - R.D. & SURFACE	25.6 (8" R.D.)	25.0 (CB-7)
CB-7B	7'Ø NYOPLAST	26.7	-	N/A	24.2 (CB-7)
CB-8	2'x2' PRECAST	25.1	8" - R.D. 12" - 37 LF	22.0 (8" R.D.) 22.0 (CB-8A)	21.0 (OUTLET INV. 19.0)
CB-8A	2'x2' PRECAST	25.4	-	22.5 (8" R.D.)	22.5 (CB-8)
CB-8B	2'x2' PRECAST	25.2	-	23.0 (-)	23.0 (TEE INTO 12" @ 22.45)
CB-9	7'Ø NYOPLAST	27.3	8" - R.D. 12"	24.6 (8" R.D.) 24.6 (CB-9A)	24.5 (OUTLET INV. 24.0)
CB-9A	7'Ø NYOPLAST	33.3	8" - R.D. & SURFACE	30.5 (-)	30.4 (CB-9)
WQ-4	5'Ø BARRACUDA	16.5	12" - 5 LF	15.0 (CB-10)	14.9 (OUTLET INV. 11.0)
CB-10	7'Ø NYOPLAST	15.5	-	N/A	15.4 (WQ-4)
WQ-3	5'Ø BARRACUDA	12.5	12" - 5 LF	8.9 (CB-11)	8.8 (OUTLET INV. 8.0)
CB-11	30"x30" PRECAST	11.9	12" - 38 LF 18" - 60 LF	9.0 (CB-11A) 9.0 (CB-12)	9.0 (WQ-3)
CB-11A	30"x30" PRECAST	12.5	-	N/A	9.7 (CB-11)
CB-12	3'x3' PRECAST	12.5	-	9.5 (-)	9.5 (CB-11)
CB-13	30"x30" PRECAST	9.18	12" - 40 LF	6.06 (EXIST. 12") 6.06 (CB-13A)	5.91 (EXIST. CATCH BASIN)
CB-13A	30"x30" PRECAST	8.7	12" - 27 LF	6.5 (CB-13B)	6.5 (CB-13)
CB-13B	30"x30" PRECAST	16.2	12" - 62 LF	13.0 (CB-13C)	12.0 (CB-13A)
CB-13C	30"x30" PRECAST	23.0	-	N/A	20.0 (CB-13B)
WQ-1	5'Ø BARRACUDA	8.5	EXIST. 18" HDPE - 7 LF	MATCH EXIST.	MATCH EXIST.
DMH-1	4'Ø PRECAST	29.0	24" - 11 LF	22.0 (24" PERF. PVC PIPE)	21.0 (OUTLET INV. 12.0)

1 C-122 PARTIAL SITE GRADING PLAN #2
SCALE: 1" = 20'

GRAPHIC SCALE
20 0 10 20 40 80
1 inch = 20 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PARTIAL SITE GRADING PLAN #2

REVISIONS

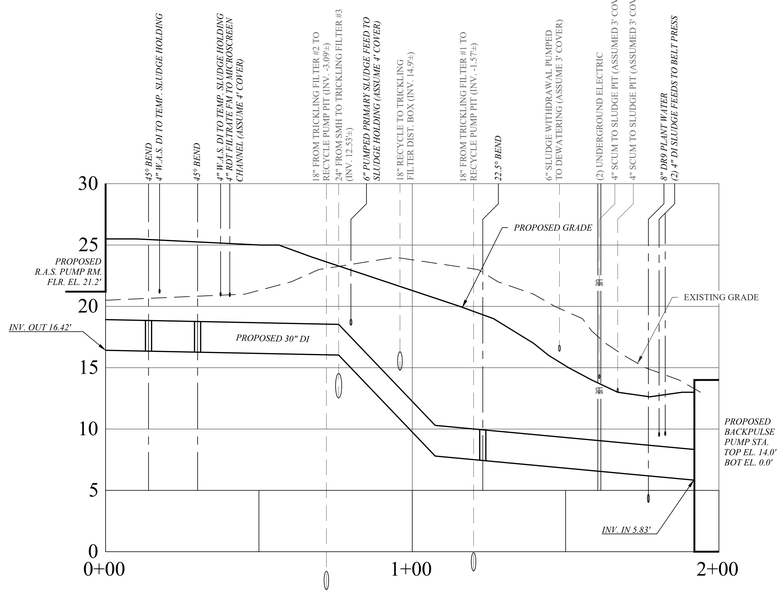
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

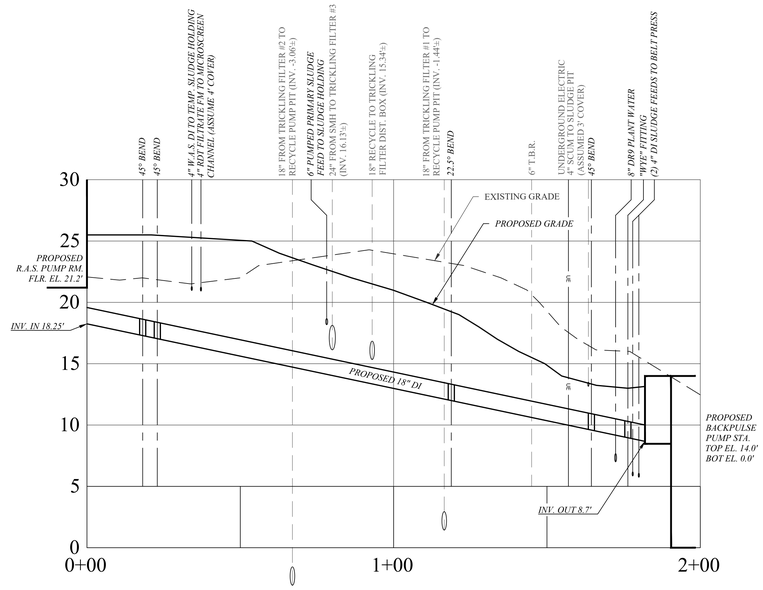
SHEET NO.
C-122

PROJECT # 18-732 PHASE #

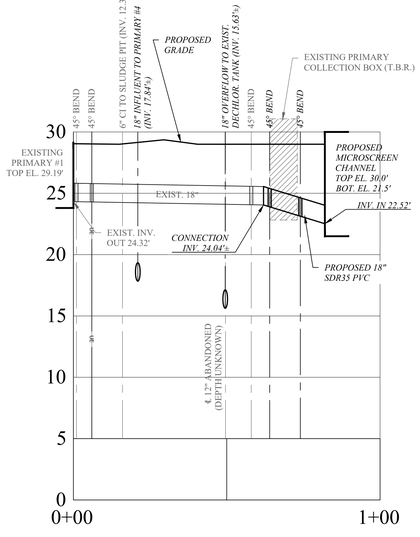
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-122, 4/16/2025 2:10:32 PM



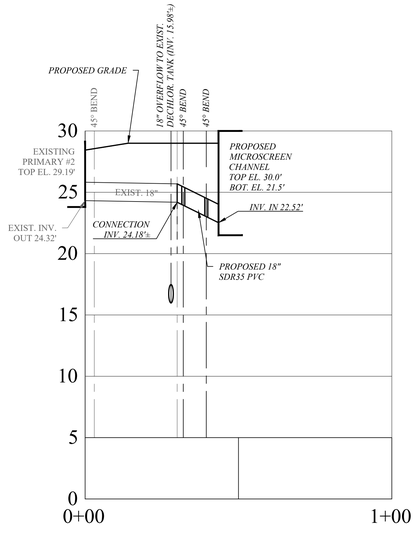
30" D.I. MBR PERMEATE



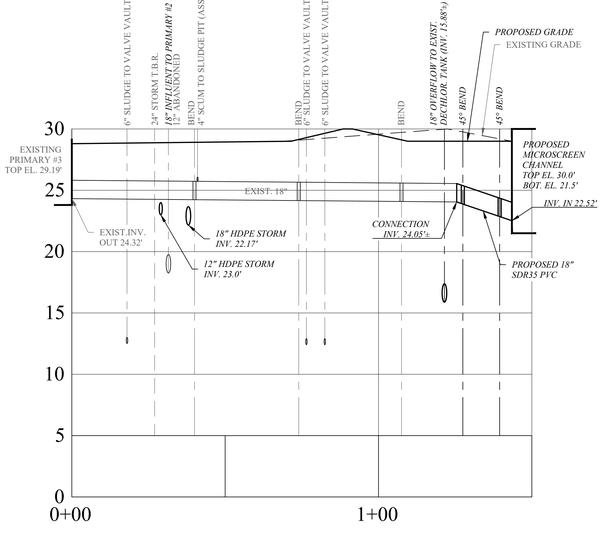
16" D.I. MBR BACKPULSE



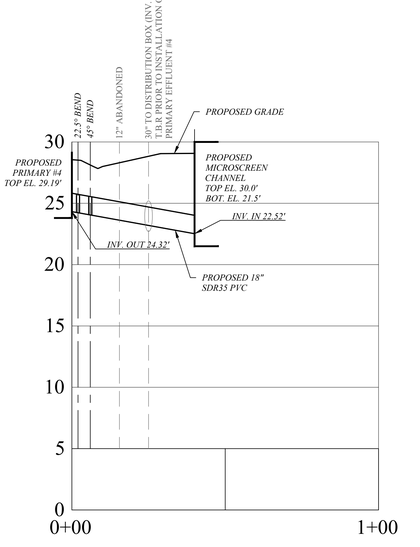
18" SDR35 PVC PRIMARY #1 EFFLUENT
TO MICROSCREEN



18" SDR35 PVC PRIMARY #2 EFFLUENT
TO MICROSCREEN



18" SDR35 PVC PRIMARY #3 EFFLUENT
TO MICROSCREEN



18" SDR35 PVC PRIMARY #4 EFFLUENT
TO MICROSCREEN

SHADED TEXT = EXISTING PIPING
ITALICIZED TEXT = PROPOSED PIPING

NOTE: PIPE CROSSINGS ARE SHOWN FOR INFORMATIONAL PURPOSES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PIPE LOCATIONS AND DEPTHS VIA. TEST PITS PRIOR TO ANY REMOVAL OR PLACEMENT OF NEW PIPING.

1 / C-123 YARD PIPING PROFILES
SCALE: HORIZ. 1" = 20', VERT. 1"=5'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROCESS PIPE PROFILES

REVISIONS

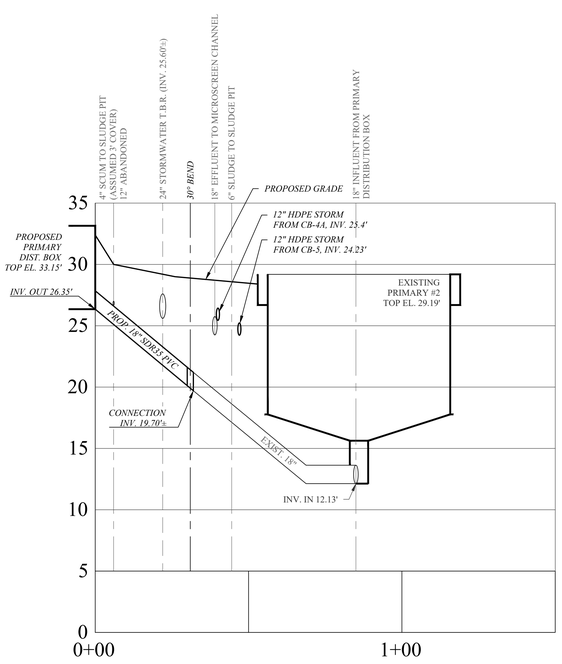
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

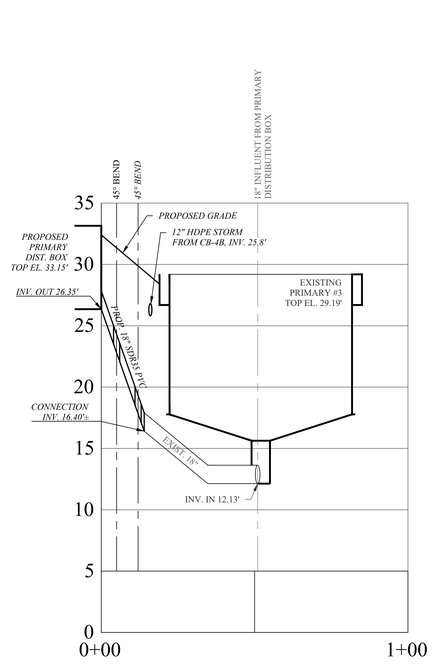
SHEET NO.
C-123

PROJECT # 18-732 PHASE #

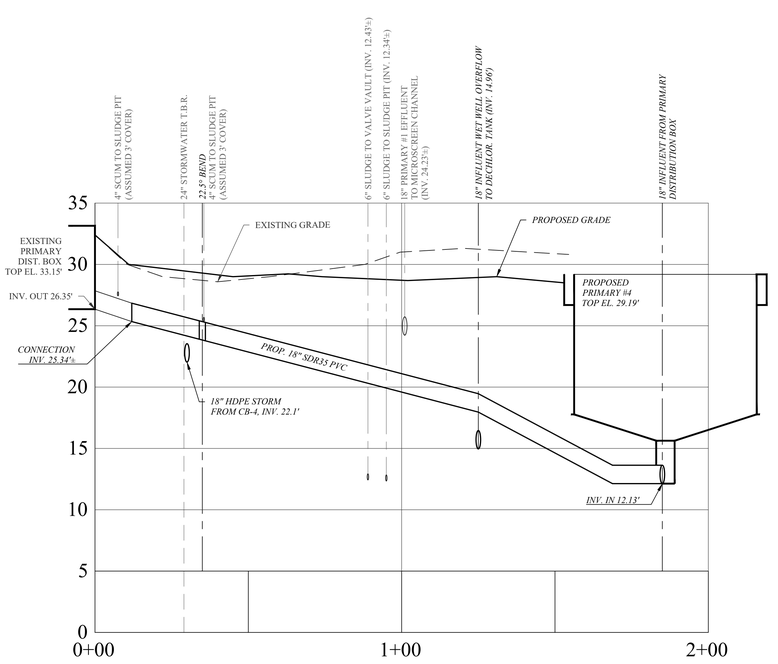
T:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Pipe Profiles.dwg, C-123, 4/16/2025 2:09:19 PM



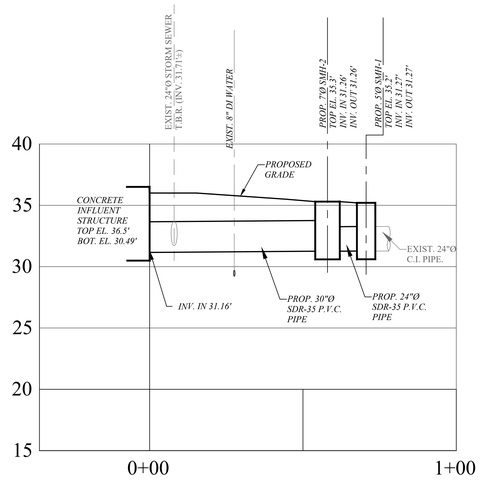
18" SDR35 PVC INFLUENT
TO PRIMARY #2



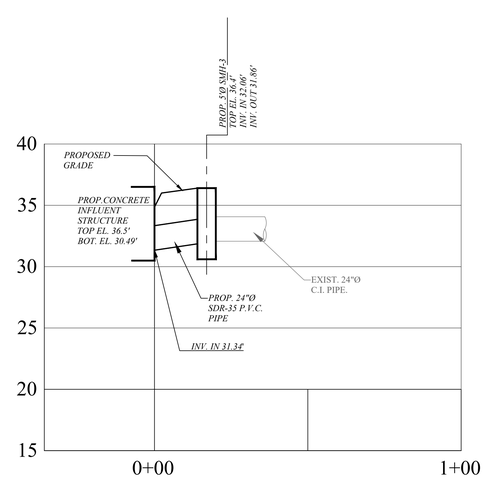
18" SDR35 PVC INFLUENT
TO PRIMARY #3



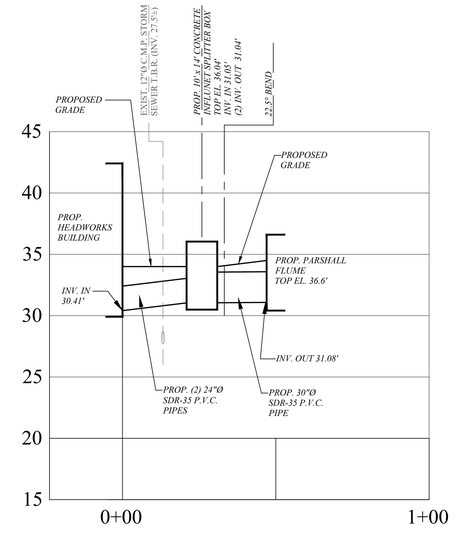
18" SDR35 PVC INFLUENT
TO PRIMARY #4



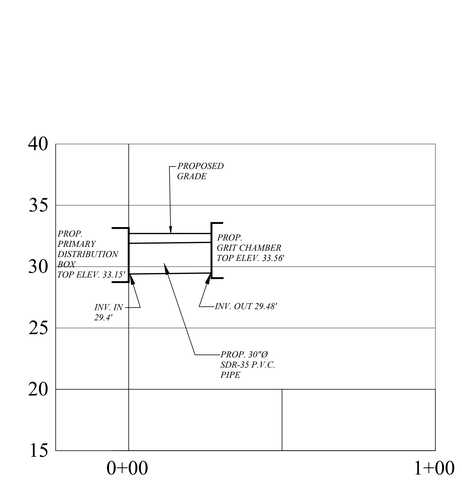
24" SDR35 PVC - SMH-1 TO SMH-2 AND
30" SDR35 PVC - SHM-2 TO INFLUENT STRUCTURE



24" SDR35 PVC - SMH-3
TO INFLUENT STRUCTURE



30" SDR35 PVC - PARSHALL FLUME
EFFLUENT TO INFLUENT SPLITTER BOX
AND 24" SDR35 PVC SPLITTER BOX
EFFLUENT TO HEADWORKS BUILDING



30" SDR35 PVC - GRIT CHAMBER
TO PRIMARY DISTRIBUTION BOX

SHADED TEXT = EXISTING PIPING
ITALICIZED TEXT = PROPOSED PIPING

NOTE: PIPE CROSSINGS ARE SHOWN FOR INFORMATIONAL PURPOSES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PIPE LOCATIONS AND DEPTHS VIA. TEST PITS PRIOR TO ANY REMOVAL OR PLACEMENT OF NEW PIPING.

1 / C-124 YARD PIPING PROFILES
SCALE: HORIZ. 1" = 20', VERT. 1"=5'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROCESS PIPE PROFILES

REVISIONS

NO.	DESCRIPTION	DATE

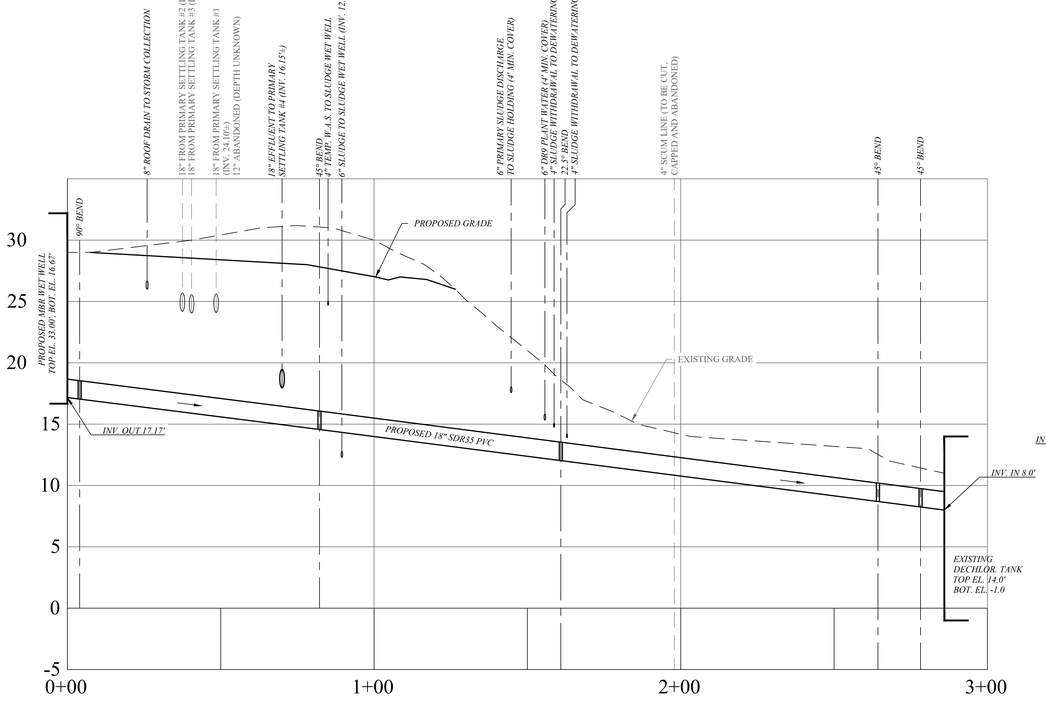
ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.

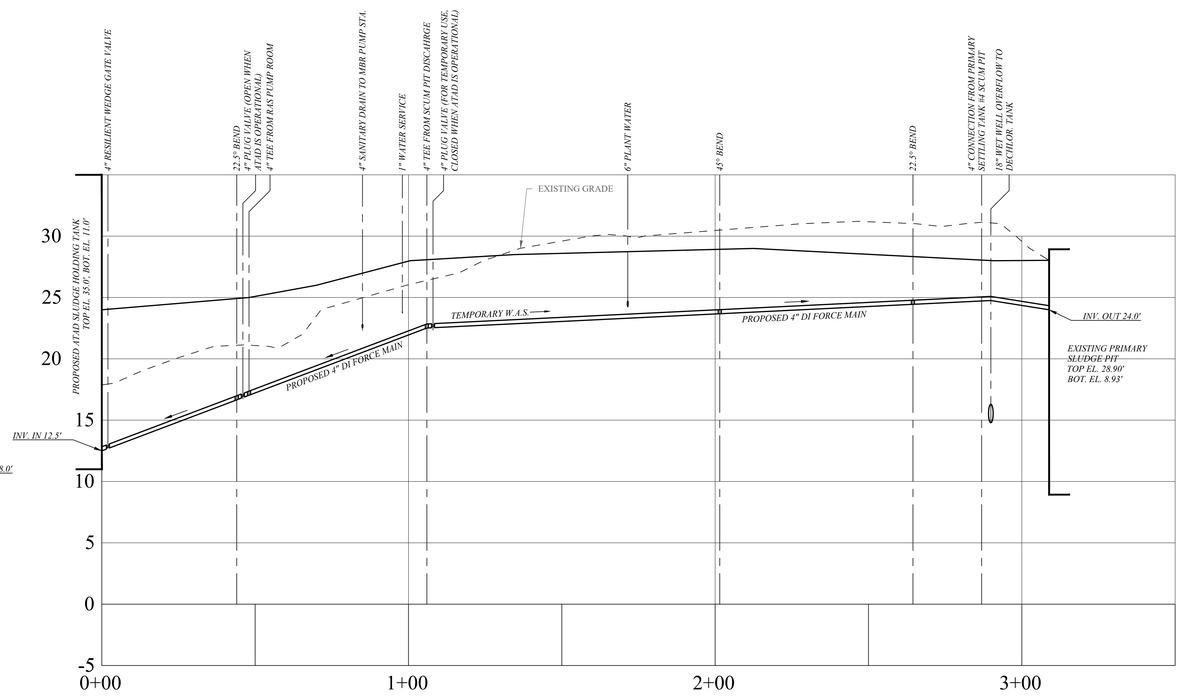
C-124

PROJECT # 18-732 PHASE #

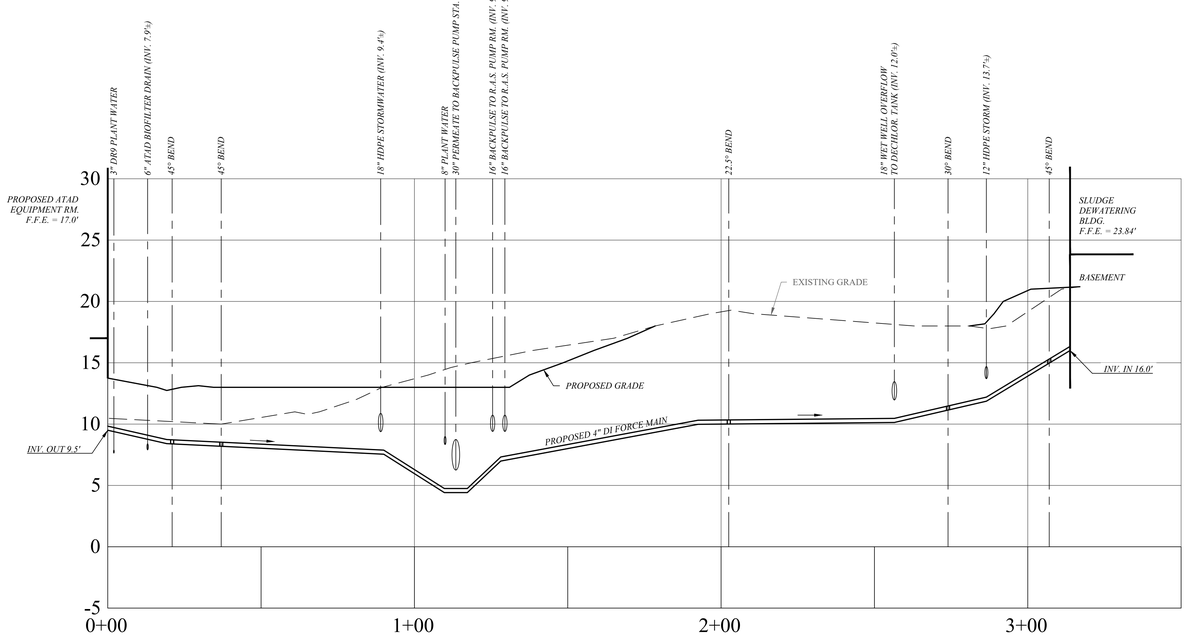
P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Pipe Profiles.dwg, C-124, 4/16/2025 2:09:16 PM



18" SDR35 PVC OVERFLOW FROM MBR WET WELLS TO DECHLOR. TANK



4" DI W.A.S. FEED LINE



4" DI SLUDGE WITHDRAWAL TO DEWATERING (2 REQUIRED)

SHADED TEXT = EXISTING PIPING
ITALICIZED TEXT = PROPOSED PIPING

NOTE: PIPE CROSSINGS ARE SHOWN FOR INFORMATIONAL PURPOSES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PIPE LOCATIONS AND DEPTHS VIA. TEST PITS PRIOR TO ANY REMOVAL OR PLACEMENT OF NEW PIPING.

1 / C-125 YARD PIPING PROFILES
SCALE: HORIZ. 1" = 20', VERT. 1"=5'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROCESS PIPE PROFILES

REVISIONS

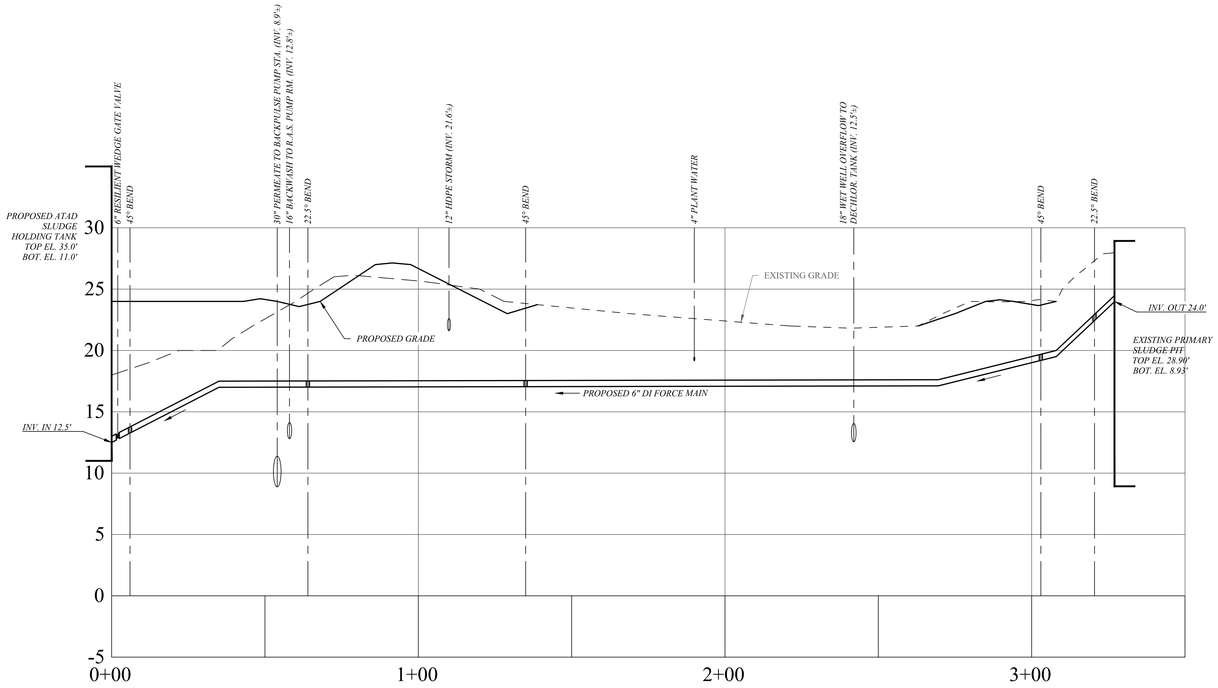
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPB/Jr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

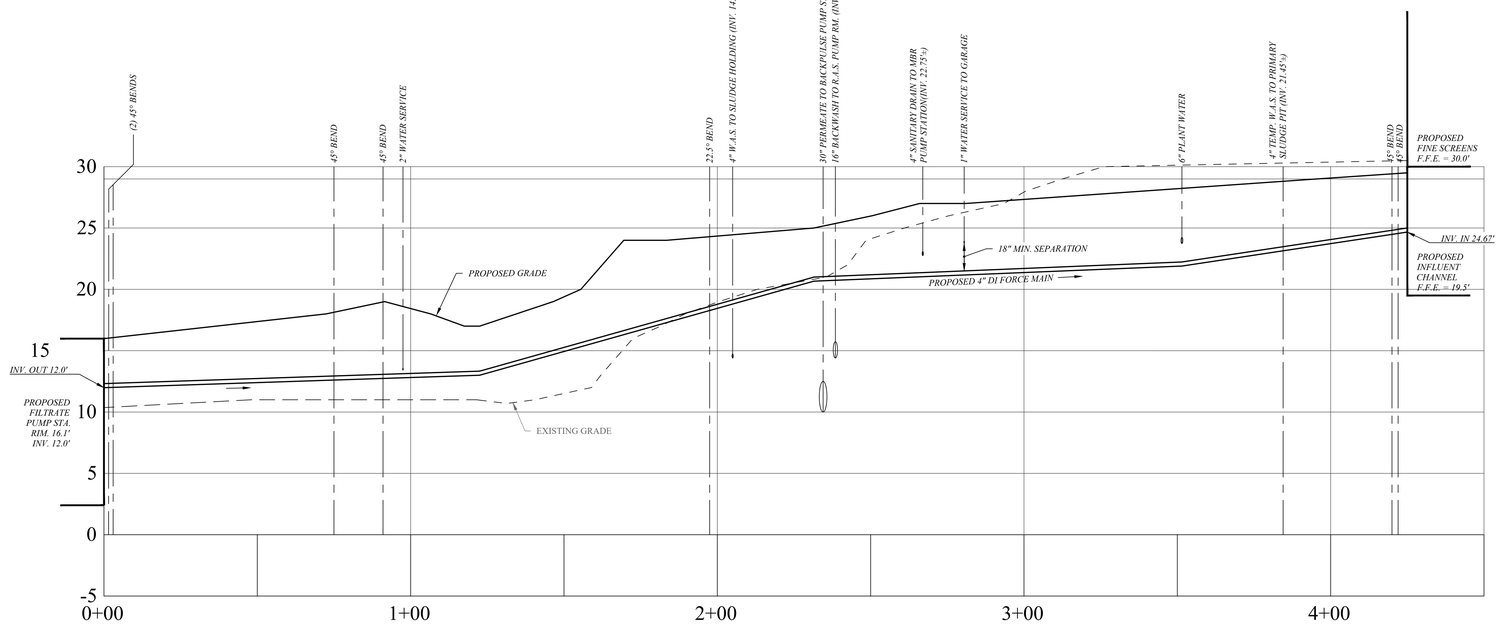
SHEET NO.
C-125

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Pipe Profiles.dwg, C-125, 4/16/2025 2:11:20 PM



6" DI PRIMARY
SLUDGE FEED LINE



4" DI RDT FILTRATE LINE

SHADED TEXT = EXISTING PIPING
ITALICIZED TEXT = PROPOSED PIPING

NOTE: PIPE CROSSINGS ARE SHOWN FOR INFORMATIONAL PURPOSES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PIPE LOCATIONS AND DEPTHS VIA. TEST PITS PRIOR TO ANY REMOVAL OR PLACEMENT OF NEW PIPING.

1 / C-126 YARD PIPING PROFILES
SCALE: HORIZ. 1" = 20', VERT. 1"=5'

ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROCESS PIPE PROFILES

REVISIONS

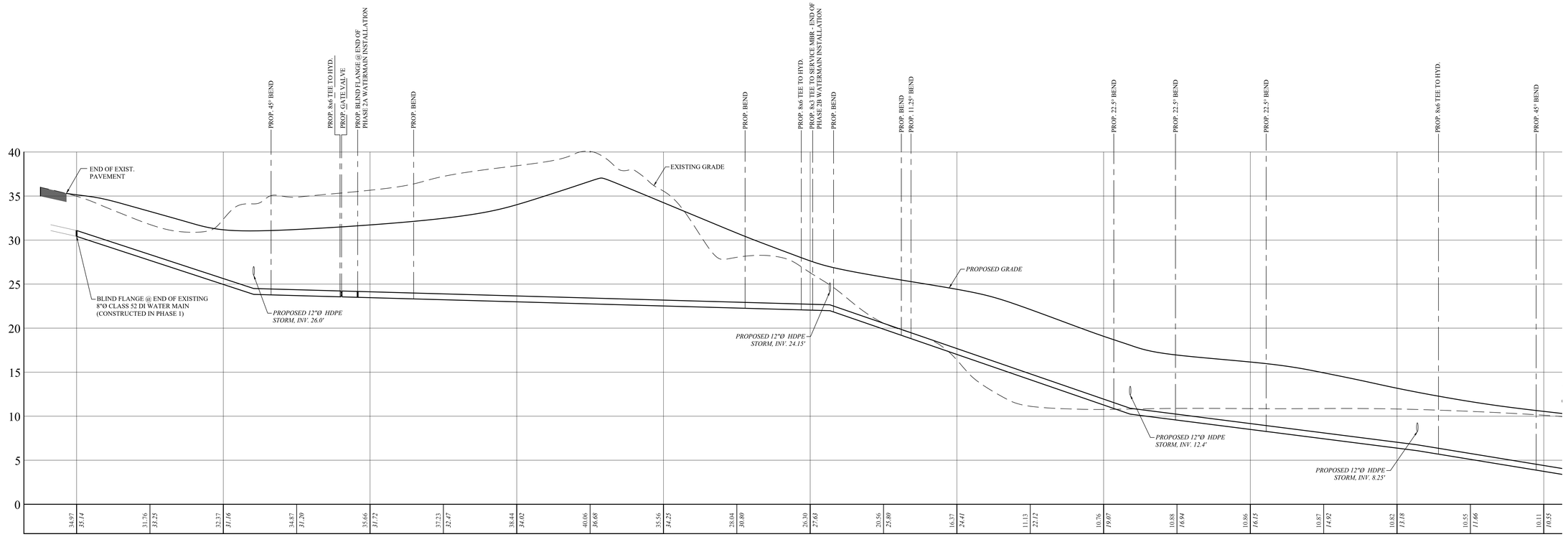
NO.	DESCRIPTION	DATE

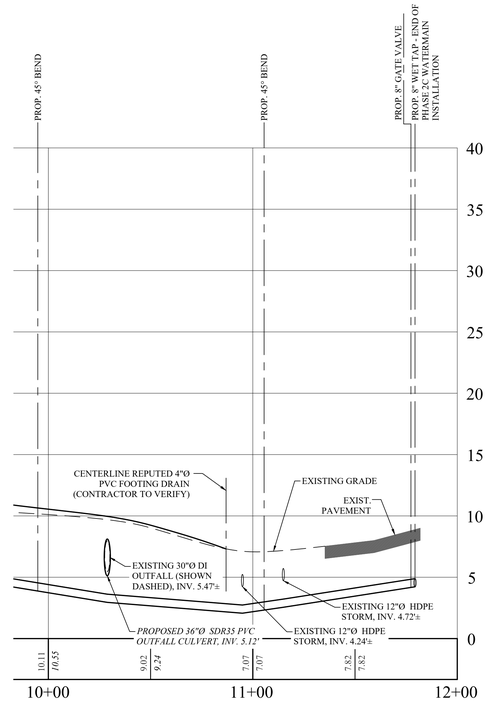
ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-126

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\11 - Site Work & Outfall\18-732 Caesars Lane WWTP Pipe Profiles.dwg, C-126, 4/18/2025 2:08:32 PM





1 / C-127 PROPOSED WATERMAIN PROFILE
SCALE: HORIZ. 1" = 30', VERT. 1"=5'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED WATERMAIN PROFILE

REVISIONS

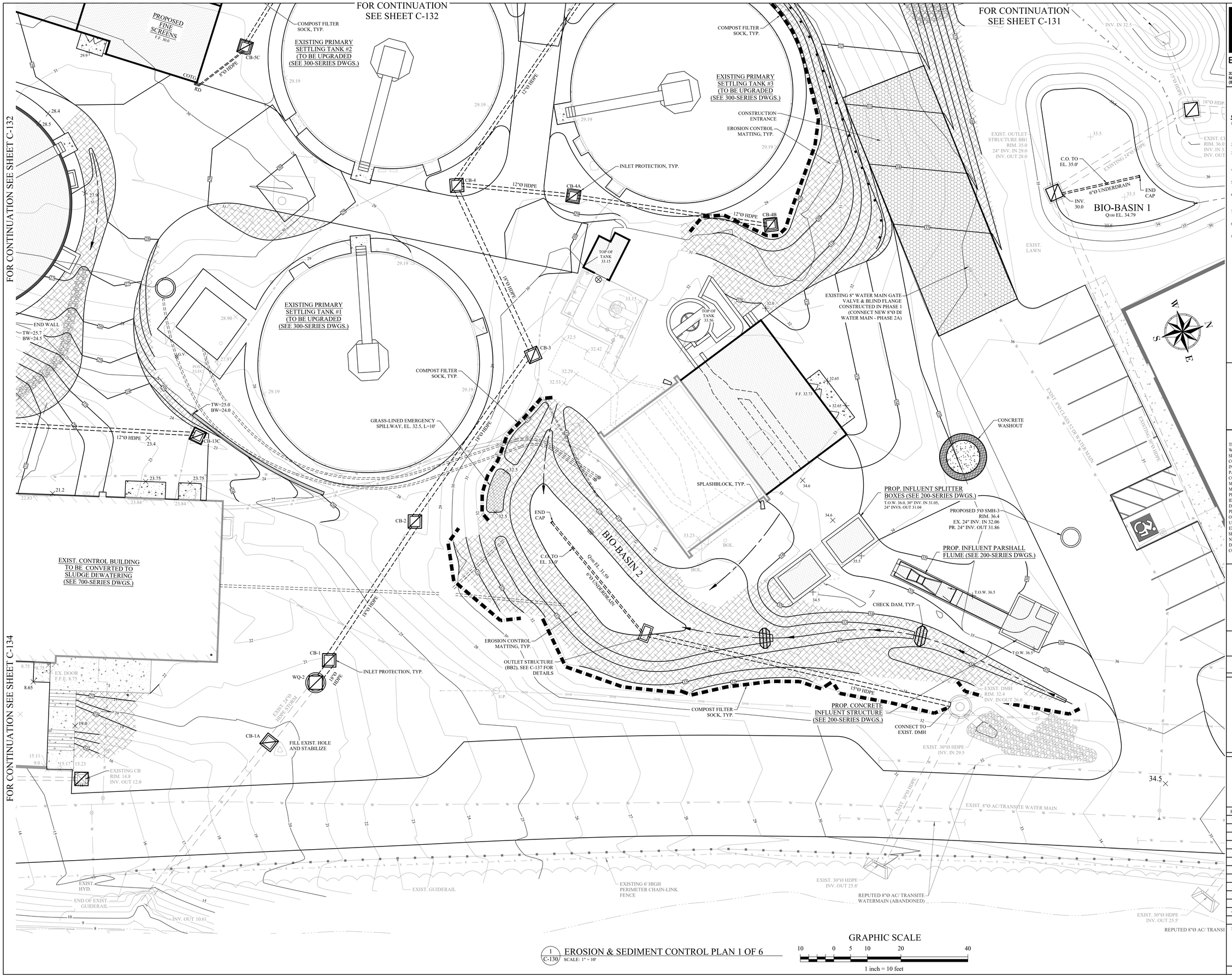
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPB/Jr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.
C-127

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-127, 4/16/2025 2:08:22 PM



1 C-130 EROSION & SEDIMENT CONTROL PLAN 1 OF 6
SCALE: 1" = 10'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

CONSTRUCTION SEQUENCE:

1. SCHEDULE ON-SITE PRECONSTRUCTION MEETING WITH CONTRACTORS, PROJECT ENGINEER & TOWN OF NEW WINDSOR REPRESENTATIVES AT LEAST ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
2. INSTALL STABILIZED SITE CONSTRUCTION ENTRANCE.
3. INSTALL COMPOST FILTER SOCK AT PLACES SHOWN ON PLAN, AROUND INLET PROTECTION & ALL AREAS NEEDED ON SITE.
4. BEGIN CLEARING & GRUBBING, TOPSOIL REMOVAL & STOCKPILE W/ PERIMETER CONTROLS.
5. COMMENCE ROUGH GRADING & TEMPORARY STABILIZATION.
6. REFER TO SHEETS C-150 THROUGH C-154 & SEQUENCING SCHEDULE FOR MAJOR CONSTRUCTION SEQUENCE OF PROJECT INFRASTRUCTURE INSTALLATION.
7. FINAL GRADING & APPLY TOPSOIL AS NECESSARY. SEED, FERTILIZER AND MULCH PER SPECIFICATIONS.
8. INSTALL POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (BIO-BASINS).
9. REMOVE FILTER SOCKS ONLY AFTER ENTIRE PHASE HAS BEEN STABILIZED. VEGETATED AREAS SHALL BE CONSIDERED PERMANENTLY STABILIZED WHEN A UNIFORM 80% VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIFIED HAS BEEN ACHIEVED, OR THE DISTURBED AREAS ARE COVERED WITH AN ACCEPTABLE BMP WHICH PERMANENTLY MINIMIZE ACCELERATED EROSION & SEDIMENTATION UNTIL SUCH TIME AS THIS STANDARD IS ACHIEVED. INTERIM STABILIZATION MEASURES AND TEMPORARY EROSION AND SEDIMENT CONTROL BMPs THAT ARE NOT USED TO TREAT PROJECT RUNOFF MAY NOT BE REMOVED. DURING PERIODS OF DROUGHT, IRRIGATION SHOULD BE UTILIZED UNTIL STABILIZATION HAS OCCURED.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EROSION & SEDIMENT CONTROL PLAN 1 OF 6

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR. 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.

C-130

PROJECT # 18-732 PHASE #

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FOR CONTINUATION
SEE SHEET C-133

ANOXIC ZONE 1

PROPOSED INFLUENT DRY WELL

PROPOSED WET WELL & DIST CHANNEL

PROPOSED FINE SCREENS

EROSION CONTROL MATTING, TYP.

CHECK DAM, TYP.

RETAINING WALL

PROPOSED MODULAR BLOCK RETAINING WALL (SEE STRUCTURAL PLANS FOR DETAILS)

COMPOST FILTER SOCK, TYP.

EROSION CONTROL MATTING, TYP.

CHECK DAM, TYP.

GRASS-LINED BYPASS SWALE

CB-5B

CB-6

12"Ø HDPE

CB-5A

CB-5

INLET PROTECTION, TYP.

COMPOST FILTER SOCK, TYP.

EXISTING PRIMARY SETTLING TANK #2 (TO BE UPGRADED) (SEE 300-SERIES DWGS.)

CB-5C

8"Ø HDPE

COTG

RD

EXISTING PRIMARY SLUDGE VALVE VAULT (SEE C-320 FOR IMPROVEMENTS)

EXISTING PRIMARY SETTLING TANK #3 (TO BE UPGRADED) (SEE 300-SERIES DWGS.)

PROPOSED GUIDE RAIL, 2' CLEAR FROM E.O.P. TO FACE

CONSTRUCTION ENTRANCE

EROSION CONTROL MATTING, TYP.

CB-4

CB-4A

CB-4B

INLET PROTECTION, TYP.

EXISTING PRIMARY SETTLING TANK #1 (TO BE UPGRADED) (SEE 300-SERIES DWGS.)

EXISTING PRIMARY SLUDGE PIT (SEE C-321)

CB-3

COMPOST FILTER SOCK, TYP.

GRASS-LINED EMERGENCY SPILLWAY, EL. 32.5, L=10'

15"Ø HDPE

CB-13C

12"Ø HDPE

CB-2

PROP. CONCRETE BLOCK RETAINING WALL

NTROL BUILDING
ONVERTED TO
DEWATERING
-SERIES DWGS.)

END CAP

BIO-BASIN 2

C.O. TO EL. 33.0'

Q100 EL. 31.50

6"Ø UNDERDRAIN

SPLASHBLOCK, TYP.

REINF. PANEL

BOL.

CHECK DAM, TYP.

PROP. INFLUENT SPLITTER BOXES (SEE 200-SERIES DWGS.)

PROPOSED 5'Ø SMH-3
RIM. 36.4
EX. 24" INV. IN 32.06
PR. 24" INV. OUT 31.86

PROP. INFLUENT PARSHALL FLUME (SEE 200-SERIES DWGS.)

CONCRETE WASHOUT

RIP-RAP CHANNEL, D_{50} = 6", THICKNESS = 18" OVER NON-WOVEN GEOTEXTILE

INV. IN 32.5

INV. IN 35.0

18"Ø HDPE

EXIST. OUTLET STRUCTURE BB1
RIM. 35.0
24" INV. IN 29.0
INV. OUT 28.0

EXIST. CB
RIM. 36.0
INV. IN 32.5
INV. OUT 30.0

C.O. TO EL. 35.0'

EXISTING 24"Ø HDPE

6"Ø UNDERDRAIN

END CAP

INV. 30.0

BIO-BASIN 1
Q100 EL. 34.79

EXIST. LAWN

BIO-BASIN 1 NOTES :
1. EXCAVATE AND REMOVE THE EXISTING BOTTOM OF BIO-BASIN 1 TO INSTALL NON-WOVEN GEOTEXTILE, CRUSHED STONE, 6" UNDERDRAIN, BIO-BASIN SOIL, HARDWOOD MULCH AND PLANTINGS AS SHOWN IN THE DETAILS.
2. CONTRACTOR IS TO CAREFULLY EXCAVATE AROUND THE 24"Ø HDPE PIPE.
3. THE CONSTRUCTION IS TO TAKE PLACE AFTER THE ENTIRE DRAINAGE AREA TO THE BIO-BASIN IS STABILIZED.

EXISTING 30"Ø HDPE

BUILDING

FOR CONTINUATION SEE SHEET C-113

FOR CONTINUATION
SEE SHEET C-134

FOR CONTINUATION
SEE SHEET C-130

1 / C-131 EROSION & SEDIMENT CONTROL PLAN 2 OF 6
SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EROSION & SEDIMENT CONTROL PLAN 2 OF 6

REVISIONS

NO.	DESCRIPTION	DATE

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SHEET NO.
C-131

PROJECT # 18-732 PHASE #

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FOR CONTINUATION
SEE SHEET C-135

FOR CONTINUATION
SEE SHEET C-133

FOR CONTINUATION
SEE SHEETS C-134

FOR CONTINUATION
SEE SHEET C-131

FOR CONTINUATION
SEE SHEET C-131

6"Ø REMOVABLE BOLLARDS @ 6' O.C.

TEMPORARY SOIL STOCKPILE

15"Ø HDPE

INV. OUT 24.0'

RIP-RAP CHANNEL, D50=6", THICKNESS = 12" OVER NON-WOVEN GEOTEXTILE

OUTLET INV. 38.5 W/ END SECTION & RIP-RAP, SEE DETAIL I/C-140 FOR OUTLET PROTECTION

INV. OUT 20.5

T STRUCTURE
SEE SHEET C-137
TAILS

6"Ø UNDERDRAIN

BASIN 3

4"Ø BOLLARD, TYP.

COTG

8"Ø HDPE

CB-9

12"Ø HDPE

RD

PROPOSED BLOWER ROOM

PROPOSED CHEM

PROPOSED R.A.S. PUMP ROOM

PROPOSED MBR TANK

8"Ø HDPE

CB-9A

RETAINING WALL

24"Ø PERFORATED HDPE IN CRUSHED STONE W/ FABRIC

EROSION CONTROL MATTING, TYP.

PROPOSED MODULAR BLOCK RETAINING WALL (SEE STRUCTURAL S-100 SHEETS FOR PLANS & DETAILS)

INLET INV. 39.0
W/ END SECTION

42.5

GRAPHIC SCALE

10 0 5 10 20 40

1 inch = 10 feet

4"Ø BOLLARD, TYP.

PROP. GUIDE RAIL, 2' CLEAR TO E.O.P.

8"Ø HDPE

CB-8

CB-8B

12"Ø HDPE

INLET PROTECTION, TYP.

CB-8A

INV. OUT 19.0

12"Ø HDPE

AEROBIC ZONE 4

AEROBIC ZONE 1

AEROBIC ZONE 5

AEROBIC ZONE 2

AEROBIC ZONE 6

AEROBIC ZONE 3

ANOXIC ZONE 1

ANOXIC ZONE 2

ANOXIC ZONE 3

PROPOSED INFLUENT DRY WELL

PROPOSED WET WELL & DIST. CHANNEL

PROPOSED FINE SCREENS

CB-5B

12"Ø HDPE

COMPOST FI
SOCK, TYP.

CB-5C

8"Ø HDPE

COTG

RD

EXISTING PRIMARY SETTLING TANK #2 (TO BE UPGRADED (SEE 300-SERIES DWG

29.19

EXISTING
SLUDGE V
(SEE C-320 F

PROPOSED SLUDGE HOLDING

EXISTING TRICKLING FILTER #3 (TO BE DEMOLISHED)

PROPOSED THERM AIR

PROPOSED SNDR

PROPOSED BIOFILTAER

PROP. GUIDE RAIL, 2' CLEAR FROM EDGE OF GRAVEL

PROP. GRAVEL AREA, 6" NYSDOT ITEM 4 OVER GEOTEXTILE

CB-7A

RD

4"Ø BOLLARD, TYP.

SPLASHBLOCK, TYP.

CHECK DAM, TYP.

GARAGE
(SEE 900-SERIES DWGS.)

12"Ø HDPE

8"Ø HDPE, TYP.

COMPOST FILTER SOCK, TYP.

CB-7

INLET PROTECTION, TYP.

PROP. PRIMARY SETTLING TANK #4 (SEE 300-SERIES DWGS.)

INV. OUT 14.0

4' WIDE RIP-RAP, D50=6", THICKNESS = 12" OVER NON-WOVEN GEOTEXTILE

EROSION CONTROL MATTING, TYP.

EXIST. LAWN

PROP. END OF CONC. BLK. RETAINING WALL

CB-12

28.90

EXISTING PRIMARY SETTLING TANK #1 (TO BE UPGRADED (SEE 300-SERIES DWGS.)

1 C-132 EROSION & SEDIMENT CONTROL PLAN 3 0F 6
SCALE: 1" = 10'

MHE ENGINEERING

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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EROSION & SEDIMENT CONTROL PLAN 3 OF 6

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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DRAWN BY:	HPH/Jr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-132

PROJECT # 18-732 PHASE #

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FOR CONTINUATION
SEE SHEET C-135

HDPE END SECTION
INV. OUT 12.0

RIP RAP OUTLET
PROTECTION, TYP.,
SEE DETAIL 1/C-140

HDPE END SECTION,
TYP., INV. OUT 11.0

COMPOST FILTER
SOCK, TYP.

CENTERLINE OF PROPOSED 4' WIDE DRAINAGE
SWALE, TO BE FIELD DETERMINED
GRASS-LINED (SLOPES 0-4%), RIP RAP (SLOPES
>4%), RIP RAP SIZE d50=9", THICKNESS = 18" OVER
NON-WOVEN GEOTEXTILE

PROP. GUIDE RAIL,
2' CLEAR TO E.O.P.

PROPOSED 6' HIGH
PERIMETER CHAIN-LINK
FENCE

HDPE END SECTION
INV. OUT 11.0

COMPOST FILTER
SOCK, TYP.

EROSION CONTROL
MATTING, TYP.

EXIST. LIMITS
OF TREE LINE

INV. OUT 20.5

OUTLET STRUCTURE
(BB3), SEE SHEET C-137
FOR DETAILS

6"Ø UNDERDRAIN

BIO-BASIN 3

12"Ø HDPE

COMPOST FILTER
SOCK, TYP.

PROP. GUIDE RAIL,
2' CLEAR TO E.O.P.

INV. OUT 19.0

12"Ø HDPE

WQ-4

CB-10

12"Ø HDPE

SPLASHBLOCK,
TYP.

4"Ø BOLLARD,
TYP.

RD

PROPOSED
ROTARY DRUM
THICKENERS
F.F. 17.0

PROPOSED
SLUDGE
HOLDING
TOP OF TANK 35.0

PROPOSED
THERM AIR
TOP OF TANK 35.0

PROPOSED
EQUIPMENT
ROOM
F.F. 17.0

PROPOSED SNDR
TOP OF TANK 35.0

PROPOSED
BIOFILTAER
TOP OF TANK 21.0

CB-11A

INLET PROTECTION, TYP.

12"Ø HDPE

16"Ø HDPE

EXISTING
TRICKLING
FILTER #3
(TO BE DEMOLISHED)

PROP. GRAVEL AREA,
6" NYSDOT ITEM 4
OVER GEOTEXTILE

CB-12

COMPOST FILTER
SOCK, TYP.

COMPOST FILTER
SOCK, TYP.

4"Ø BOLLARD, TYP.

COTG

8"Ø HDPE

12"Ø HDPE

CB-9

PROPOSED
BLOWER
ROOM
F.F. 25.5

PROPOSED
CHEM
F.F. 25.5

PROPOSED
R.A.S.
PUMP
ROOM
F.F. 21.17

PROPOSED
MBR TANK

CB-9A

AEROBIC ZONE 4
TOP OF TANK 40.75

AEROBIC ZONE 5
TOP OF TANK 40.75

AEROBIC ZONE 6
TOP OF TANK 40.75

4"Ø BOLLARD, TYP.

8"Ø HDPE

CB-8

CB-8B

12"Ø HDPE

INLET PROTECTION, TYP.

CB-8A

PROP. GUIDE RAIL,
2' CLEAR FROM
EDGE OF GRAVEL

CB-7A

4"Ø BOLLARD, TYP.

SPLASHBLOCK, TYP.

CHECK DAM, TYP.

GARAGE
(SEE 900-SERIES DWGS.)
F.F. 28.5

12"Ø HDPE

4"Ø HDPE, TYP.

12"Ø HDPE

COMPOST FILTER
SOCK, TYP.

CB-7B

INLET PROTECTION, TYP.

INV. OUT 14.0

4' WIDE RIP-RAP, D50=6",
THICKNESS = 12" OVER
NON-WOVEN GEOTEXTILE

EROSION CONTROL
MATTING, TYP.

EXIST.
LAWN

PROP. END OF CONC.
BLK. RETAINING WALL

TW=25.7
BW=24.0

TW=24.6
BW=22.2

RIP-RAP CHANNEL, D5
THICKNESS = 12"
NON-WOVEN GEOTE

FOR CONTINUATION
SEE SHEET C-132

FOR CONTINUATION
SEE SHEET C-134

FOR CONTINUATION
SEE SHEET C-134

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

1 / C-133 EROSION & SEDIMENT CONTROL PLAN 4 OF 6
SCALE: 1" = 10'

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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EROSION & SEDIMENT CONTROL PLAN 4 OF 6

REVISIONS

NO.	DESCRIPTION	DATE

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REVIEWED BY:	MJS, JZ

SHEET NO.
C-133

PROJECT # 18-732 PHASE #

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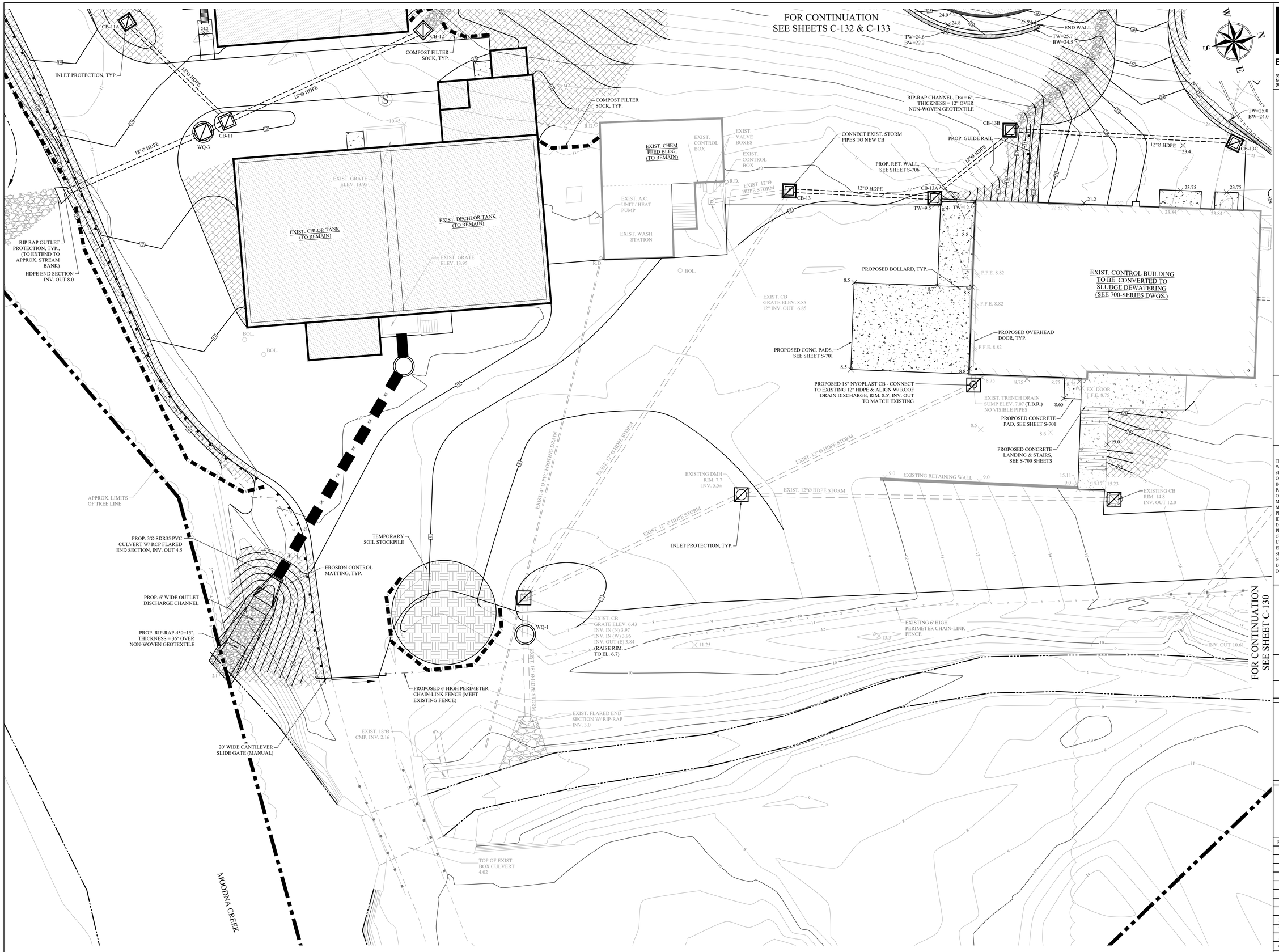

1 / C-134 PARTIAL SITE PIPING / UTILITY PLAN #6
SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

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Milford, PA 18337
(570) 296-2765

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

EROSION & SEDIMENT CONTROPL PLAN 5 OF 6

REVISIONS

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SHEET NO.
C-134

PROJECT # 18-732 PHASE #

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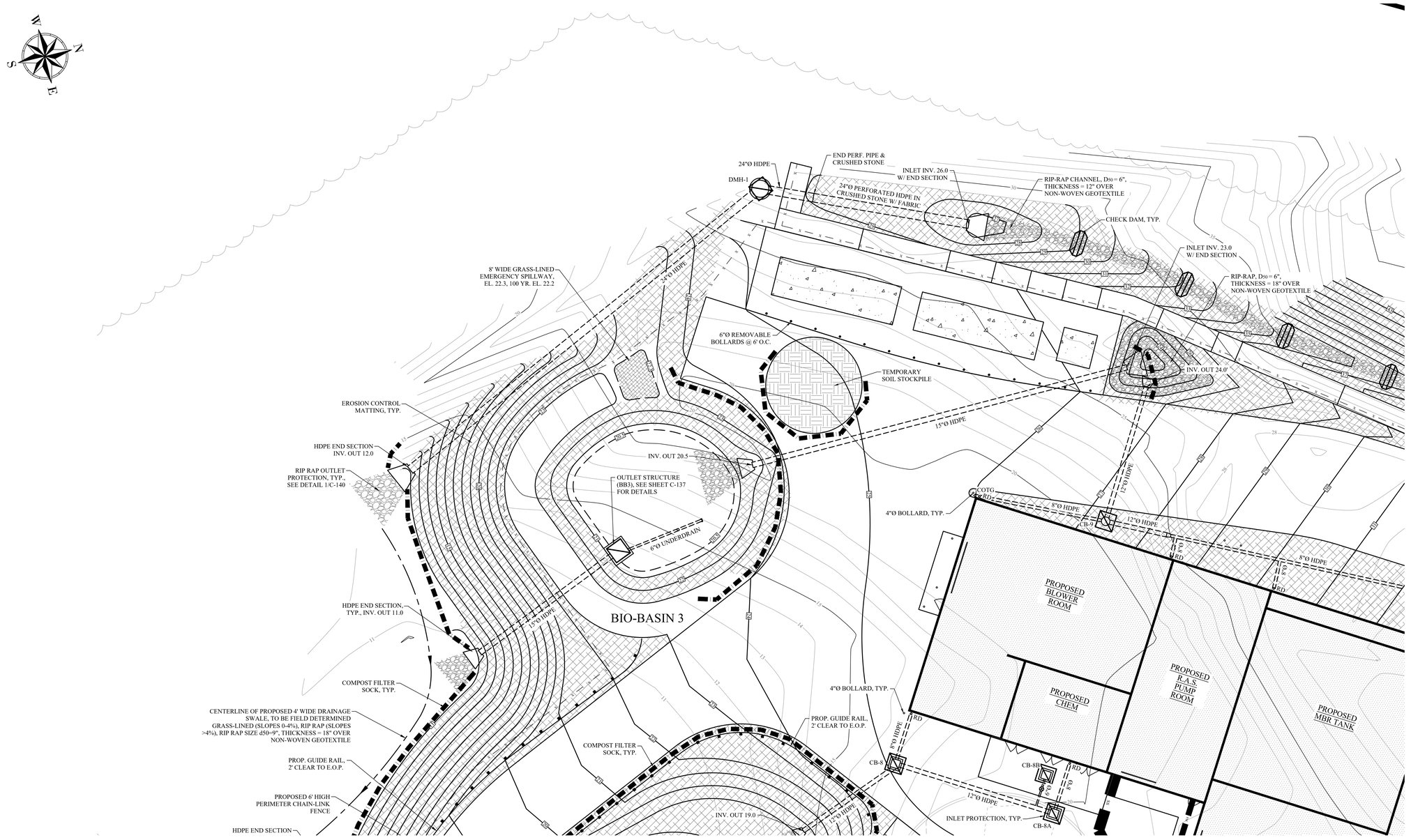

1 C-135 PARTIAL SITE PIPING / UTILITY PLAN #7
SCALE: 1" = 10'

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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EROSION & SEDIMENT CONTROL PLAN 6 OF 6

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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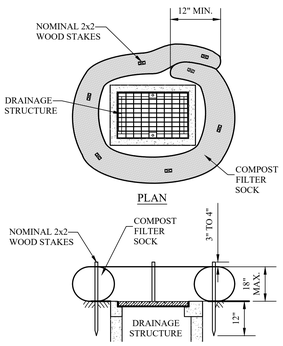
REVIEWED BY:	MJS, JZ

SHEET NO.
C-135

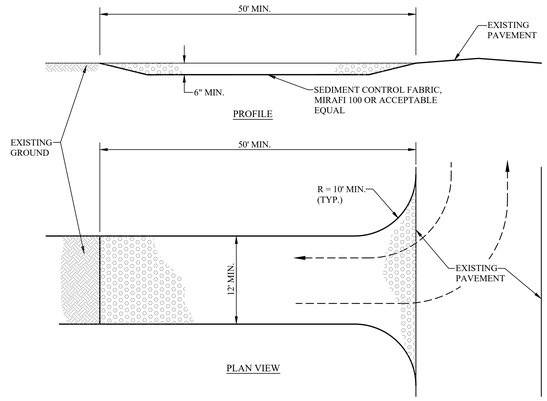
PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-135, 4/16/2025 2:59:59 PM



TYPICAL INLET PROTECTION DETAIL

1 / C-136 SCALE: N.T.S.

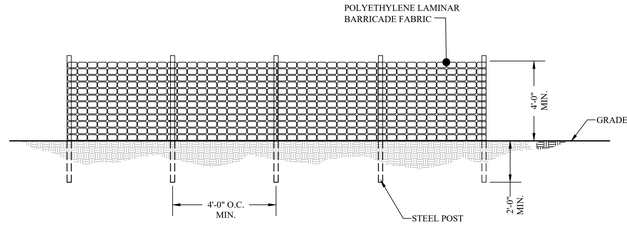


CONSTRUCTION SPECIFICATIONS:

1. STONE SIZE - USE 1"- 4" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MIN. LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MIN. BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ACCESS SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPINGS DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
10. TEMPORARY CONSTRUCTION ENTRANCES, EXITS AND TEMPORARY ACCESS SHALL BE SUBJECT TO THE APPROVAL OF THE APPROPRIATE AUTHORITIES.

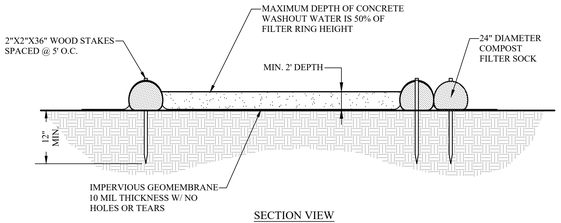
STABILIZED CONSTRUCTION ENTRANCE DETAIL

2 / C-136 SCALE: N.T.S.

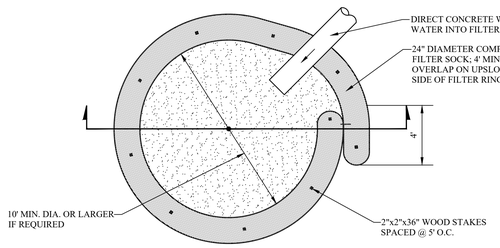


ORANGE SAFETY FENCE DETAIL

3 / C-136 SCALE: N.T.S.



SECTION VIEW



NOTES:

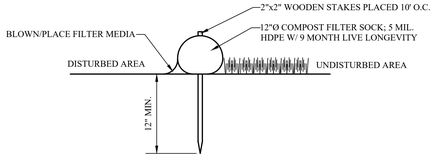
1. CONCRETE WASHOUTS (CW) SHOULD BE LOCATED A MINIMUM OF 100' FROM DRAINAGE SWALES, STORM DRAIN INLETS, OPEN DRAINAGE FACILITIES, AND WATERCOURSES. EACH CW SHOULD BE LOCATED AWAY FROM CONSTRUCTION TRAFFIC OR ACCESS AREAS TO PREVENT DISTURBANCE OR TRACKING.
2. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
3. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
4. A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
5. ALL CONCRETE WASHOUTS SHOULD BE INSPECTED DAILY. DAMAGED, LEAKING OR 75% FULL FACILITIES SHALL BE REPLACED.
6. WHEN THE CW(S) ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED.

PUMPED CONCRETE WASHOUT DETAIL

5 / C-136 SCALE: N.T.S.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. THIS PLAN MUST BE USED IN CONJUNCTION WITH THE COMPLETE PROJECT SITE PLAN SET
2. MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL FACILITIES IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. FACILITIES SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT, BUT NOT LESS THAN ONCE A WEEK, AND IMMEDIATELY RESTORED WHERE NECESSARY.
   a) Disturbed areas are to be re-seeded, if necessary.
   b) Compost filter socks are to be cleaned, re-filled or replaced as necessary.
3. UPON COMPLETION OR TEMPORARY CESSATION OF THE EARTH DISTURBANCE ACTIVITY, OR ANY STAGE THEREOF, THE PROJECT SITE SHALL BE IMMEDIATELY STABILIZED. DURING PERIODS OF NON-GERMINATION, MULCH WILL BE APPLIED IN ACCORDANCE WITH THE RATES.
4. ALL SEDIMENT REMOVED FROM BMP'S SHALL BE PLACED IN THE SEDIMENT STOCKPILE AREA(S) SHOWN ON THE PLAN.
5. CONTRACTOR IS RESPONSIBLE FOR ALL DUST CONTROL DURING CONSTRUCTION.
6. EROSION CONTROLS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS.
7. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
8. INITIATE EARTHMOVING ACTIVITIES FOR SITE DEVELOPMENT. ANY UNSUITABLE MATERIAL IS TO BE REMOVED FROM THE PROJECT SITE. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EROSION AND SEDIMENTATION CONTROL MEASURES AT ANY OFF-SITE SPOIL AREAS. PLACE AND COMPACT MATERIAL IN AREAS OF FILL TO OBTAIN NECESSARY GRADES.
9. PIPELINES WITH JOINTS THAT ALLOW A MANUFACTURED LENGTH OF PIPE TO BE PLACED IN THE TRENCH WITH THE PIPE JOINT ASSEMBLED/MADE IN THE TRENCH REQUIRE AN OPEN PIPELINE TRENCH THAT IS ONLY SLIGHTLY LONGER THAN THE LENGTH OF PIPE BEING INSTALLED. THE TOTAL LENGTH OF EXCAVATED TRENCH OPEN AT ANY ONE TIME SHOULD NOT BE GREATER THAN THE TOTAL LENGTH OF PIPELINE/UTILITY LINE THAT CAN BE PLACED IN THE TRENCH AND BACKFILLED IN ONE WORKING DAY. SOIL SUPPLEMENTS, SEED AND MULCH SHOULD BE APPLIED IMMEDIATELY AFTER THE PIPELINE/UTILITY LINE IS INSTALLED. ALL TRENCHES SHOULD BE BACKFILLED AND TEMPORARILY STABILIZED AT THE END OF EACH DAY.
10. THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE TOWN OF NEW WINDSOR, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
11. BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS THAT MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E & S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE TOWN OF NEW WINDSOR.
12. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION
13. DUE DILIGENCE IS TO BE PERFORMED BY THE CONTRACTOR FOR ANY IMPORTED TOPSOIL FILL MATERIAL TO ENSURE ONLY CLEAN FILL IS BROUGHT ONSITE.
14. ALL DISTURBED AREAS WILL BE RESTORED IN ACCORDANCE WITH THE SOIL RESTORATION REQUIREMENTS IN TABLE 5.3 OF THE DESIGN MANUAL.
17. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE APPLICABLE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION WATER QUALITY CERTIFICATION PROGRAM.
18. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PREVENT CONTAMINATION OF THE STREAMS BY SILT, SEDIMENT, FUELS, SOLVENTS, LUBRICANTS, EPOXY COATINGS, CONCRETE, LEACHATE, OR ANY OTHER POLLUTANT ASSOCIATED WITH CONSTRUCTION AND CONSTRUCTION PROCEDURES.
19. DURING CONSTRUCTION, NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE INTO THE WATERS OF NEW YORK STATE, NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS OR OTHER DEVICES BE ALLOWED TO ENTER ANY WETLANDS OR WATERS.
20. ANY DEBRIS OR EXCESS MATERIALS FROM CONSTRUCTION OF THIS PROJECT SHALL BE IMMEDIATELY AND COMPLETELY REMOVED FROM THE BED AND BANKS OF ALL WATER AREAS TO AN APPROPRIATE UPLAND AREA FOR DISPOSAL.
21. ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF ON AN UPLAND SITE AND BE SUITABLY STABILIZED SO THAT IT CANNOT REASONABLY REENTER ANY WATER BODY OR WETLAND AREA.
22. ALL AREAS OF SOIL DISTURBANCE RESULTING FROM THIS PROJECT SHALL BE SEEDED WITH PERENNIAL GRASS SEED AND MULCHED WITH HAY OR STRAW WITHIN ONE (1) WEEK OF FINAL GRADING. IF CONSTRUCTION ACTIVITIES ARE DISCONTINUED IN AREAS OF SOIL DISTURBANCE BEFORE FINAL GRADING IS COMPLETE, TEMPORARY GRADING SHALL ALSO BE SEEDED AND MULCHED. MULCH SHALL BE MAINTAINED UNTIL SUITABLE VEGETATIVE COVER IS ESTABLISHED.
23. PERIODIC CLEANING OF TEMPORARY SOIL EROSION AND POLLUTION CONTROL DEVICES MAY BE NECESSARY AS REQUESTED BY THE PROJECT ENGINEER.
24. IN THE EVENT DEWATERING OPERATIONS BECOME NECESSARY, A SETTLING BASIN WILL BE REQUIRED UNLESS THE PUMP DISCHARGE IS AS CLEAR AND FREE OF SEDIMENT AS THE FLOWING STREAM. LOCATION AND DESIGN TO BE APPROVED BY THE PROJECT ENGINEER. IF DEWATERING IS DISCHARGED TO THE TOWN'S STORM DRAINAGE SYSTEM IT MUST BE FREE OF EXCESS SEDIMENTS.
25. HAYBALES HAVE A LIMITED LIFE EXPECTANCY AND SHALL BE REPLACED IN LOCATIONS WHERE THEY HAVE BEEN IN USE FOR EXTENDED PERIODS AS DIRECTED BY THE PROJECT ENGINEER.
26. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES OR WATERCOURSES.
27. EROSION CONTROL MEASURES SHALL BE DEEMED INCLUDED UNDER THE BID ITEMS OF THE PROPOSAL. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.



NOTE: COMPOST FILTER SOCK SHALL MEET THE REQUIREMENTS OF THE N.Y.S. EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.

- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (SEE DETAIL).
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE ON THE PLAN.
- SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, THE STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST SHALL MEET THE FOLLOWING STANDARDS:

ORGANIC MATTER CONTENT	25%-100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	6.0-8.0
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	100% PASS 1" SCREEN AND 10.50% PASS THE 3/8" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 dS MAXIMUM

COMPOST FILTER SOCK DETAIL

4 / C-136 SCALE: N.T.S.

SEEDING AND MULCHING SPECIFICATIONS:

TEMPORARY STABILIZATION:

SEEDING MIXTURE	RATE (LBS./ACRE)	(LBS./1,000 SQ. FT.)
ANNUAL RYE GRASS	40	1.0

MULCH

TYPE	RATE (TONS/ACRE)
HAY OR STRAW	3.0

SOIL PREPARATION

SOIL AMENDMENT	RATE	(LBS./1,000 SQ. FT.)
AGRICULTURAL GRADE LIMESTONE	1.0 TONS/ACRE	46
PLUS		
10-20-10 FERTILIZER	50 LBS./ACRE	2

PERMANENT STABILIZATION (UNPAVED AREAS)

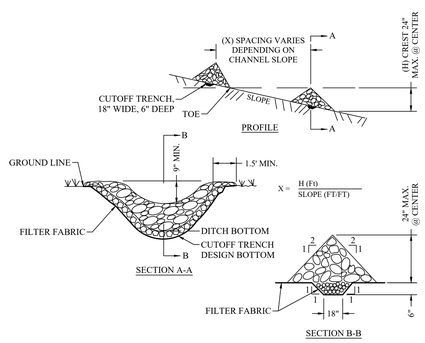
SEEDING MIXTURE	% BY WEIGHT	(LBS./1,000 SQ. FT.)
PERENNIAL RYE GRASS	20%	0.8
KENTUCKY BLUEGRASS	80%	3.2
		TOTAL = 4.0 LBS./1,000 SQ. FT.

MULCH

TYPE	RATE (TONS/ACRE)
HAY OR STRAW	3.0

SOIL PREPARATION

SOIL AMENDMENT	RATE	(LBS./1,000 SQ. FT.)
AGRICULTURAL GRADE LIMESTONE	6.0 TONS/ACRE	275
PLUS		
10-20-10 FERTILIZER	1,000 LBS./ACRE	20

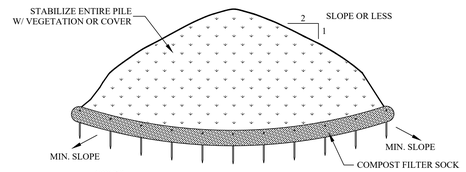


CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE. MAXIMUM DRAINAGE AREA 2 ACRES.

STONE CHECK DAM DETAIL

6 / C-136 SCALE: N.T.S.

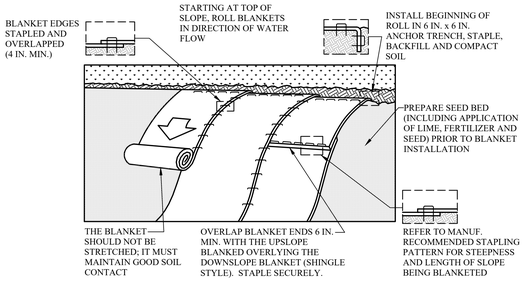


NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER COMPOST FILTER SOCK OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE DETAILS FOR INSTALLATION OF COMPOST FILTER SOCK.

TEMPORARY STOCKPILE DETAIL

7 / C-136 SCALE: N.T.S.



NOTES:

1. SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
2. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
3. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
4. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
5. THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

EROSION CONTROL BLANKET INSTALLATION

8 / C-136 SCALE: N.T.S.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EROSION & SEDIMENT CONTROL NOTES AND DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.

C-136

PROJECT # 18-732 PHASE #

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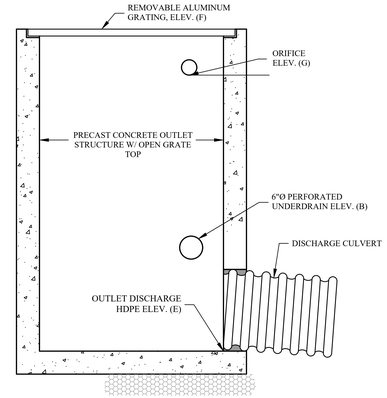


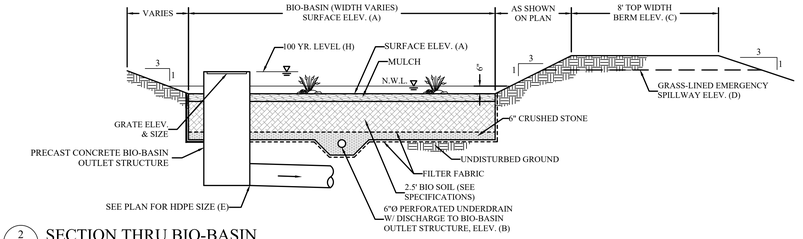
1 C-137 OUTLET STRUCTURE DETAIL
SCALE: N.T.S.

NOTES:

BIO-BASIN SOIL SPECIFICATIONS:

1.
- THE BIO-BASIN SOIL SHALL CONSIST OF A MIXTURE OF CONCRETE SAND (NYSDOT 703-07) AND TYPE A TOPSOIL (NYSDOT 713-01).
- THE SOIL SHALL BE A WELL-BLENDED MIX OF 3 PARTS CONCRETE SAND AND 1 PART TOPSOIL BY VOLUME. THE SOIL SHALL HAVE A pH RANGE OF 5.2 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 10%.

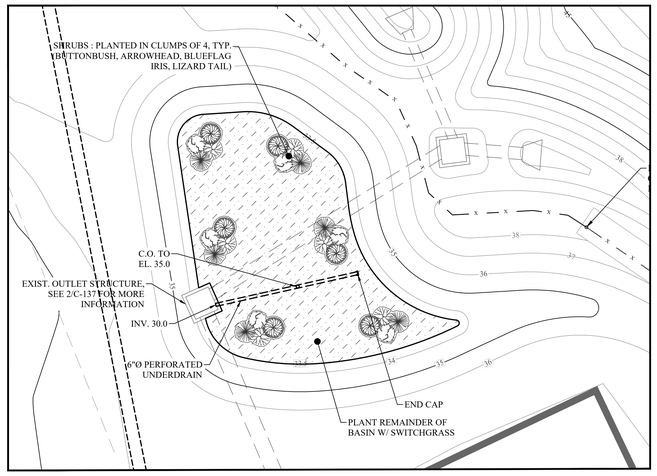
2. THE FILTER FABRIC SHALL BE NON-WOVEN, POLYPROPYLENE GEOTEXTILE WITH FLOW RATE GREATER THAN 125 GPM/SF (ASTM D4491) AND APPARENT OPENING SIZE US #70 SIEVE (ASTM D4751).



2 C-137 SECTION THRU BIO-BASIN
SCALE: N.T.S.

BIO BASIN (BB#)	DISCHARGE CULVERT (DIA.)	SURFACE ELEV. (A)	6"Ø PERF. UNDERDRAIN ELEV. (B)	TOP OF BERM ELEV. (C)	EMERGENCY SPILLWAY ELEV. (D)	DISCHARGE CULVERT OUTLET ELEV. (E)	GRATE DIM. & ELEV. (F)	ORIFICE SIZE (IN.) ELEV. (G)	100 YR. LEVEL (H)
1	30" (EXISTING)	33.5'	30.0'	36.0'	N/A	28.0' (EXISTING)	(EXISTING) 48"x48" - 35.0'	(3)4" - EL. 34.0'	34.79
2	15"	30.0'	26.5'	33.0'	32.5'	26.5'	24"x48" - 31.7'	6" - EL. 30.5'	31.59
3	15"	20.5'	17.0'	23.0'	22.2'	17.0'	24"x48" - 22.0'	(2)6" - EL. 21.0'	22.16

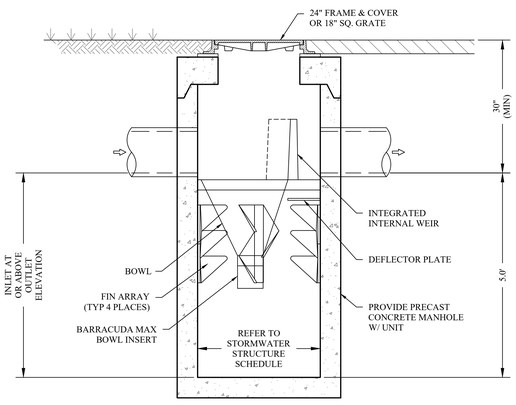
NOTE : THE OUTLET STRUCTURE FOR BASIN 1 IS EXISTING, HOWEVER THE BASIN NEEDS TO BE DEVELOPED INTO A BIO-BASIN AS SHOWN IN THIS DETAIL, INCLUDING THE 6" UNDERDRAIN, CRUSHED STONE, BIO-SOIL, FABRIC, MULCH, ETC.



A C-137 EXISTING BIO-BASIN 1 LANDSCAPING PLAN
SCALE: 1" = 10'

EXISTING BIO-BASIN 1 NOTES :

1. EXCAVATE AND REMOVE THE EXISTING BOTTOM OF BIO-BASIN 1 TO INSTALL NON-WOVEN GEOTEXTILE, CRUSHED STONE, 6" UNDERDRAIN, BIO-BASIN SOIL, HARDWOOD MULCH AND PLANTINGS AS SHOWN IN THE DETAILS.
2. CONTRACTOR IS TO CAREFULLY EXCAVATE AROUND THE 24"Ø HDPE PIPE.
3. THE CONSTRUCTION IS TO TAKE PLACE AFTER THE ENTIRE DRAINAGE AREA TO THE BIO-BASIN IS STABILIZED.



SECTION VIEW A-A
NOT TO SCALE

PRODUCT SPECIFICATIONS:

- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.

  -OR -

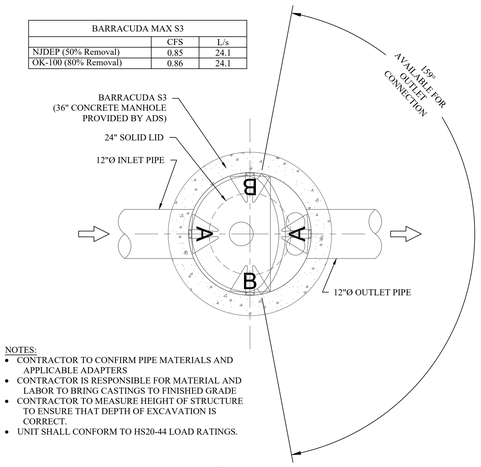
  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH d_{50}=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.

  -OR -

  THE BARRACUDA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER CURRENT NJDEP/NJCAT HDS PROTOCOL .

3 C-137 ADS BARRACUDA STORMWATER PRE-TREATMENT UNIT DETAILS
SCALE: N.T.S.

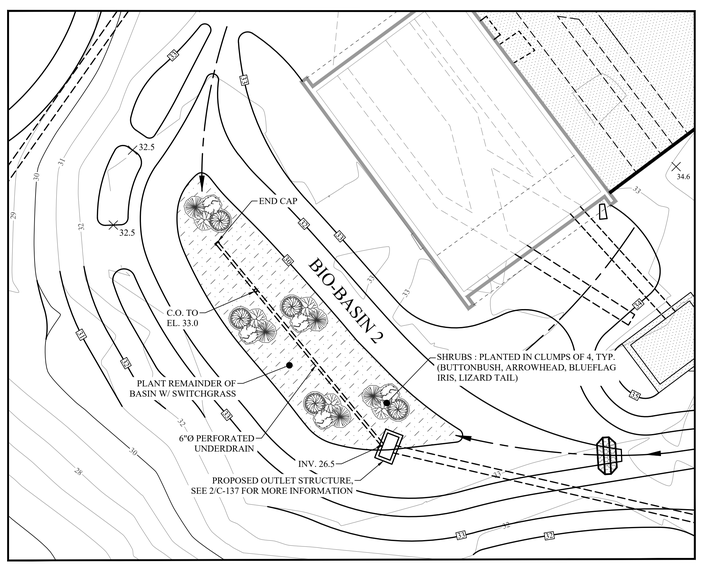
BARRACUDA MAX S3		
	CFS	L/s
NJDEP (50% Removal)	0.85	24.1
OK-100 (80% Removal)	0.86	24.1



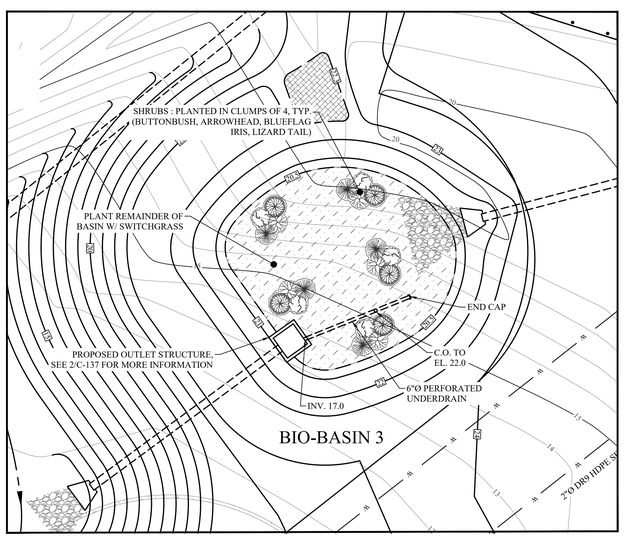
NOTES:

- CONTRACTOR TO CONFIRM PIPE MATERIALS AND APPLICABLE ADAPTERS
- CONTRACTOR IS RESPONSIBLE FOR MATERIAL AND LABOR TO BRING CASTINGS TO FINISHED GRADE
- CONTRACTOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.
- UNIT SHALL CONFORM TO HS20-44 LOAD RATINGS.

PLAN VIEW
NOT TO SCALE



B C-137 PROPOSED BIO-BASIN 2 LANDSCAPING PLAN
SCALE: 1" = 10'



C C-137 PROPOSED BIO-BASIN 3 LANDSCAPING PLAN
SCALE: 1" = 10'

ROUTINE MAINTENANCE OF BIO-RETENTION AND DRY BASIN INCLUDES THE FOLLOWING RECOMMENDATIONS:

1. INSPECTION AND REPAIR/REPLACEMENT OF STORMWATER AREA COMPONENTS.
2. REMOVE SILT IN AREAS OF ACCUMULATION.
3. RE-MULCH BIO-BASIN SURFACE AREAS ANNUALLY.
4. MAINTAIN AND/OR REPLACE BIO-BASIN PLANTINGS AS NEEDED.
5. REPAIR SURFACE EROSION AREAS WITH FILL AS NECESSARY AND RE-ESTABLISH SURFACE TREATMENT.
6. MAINTAIN GRASS COVER AND REPLANT AS NECESSARY.
7. GRASS TO BE MOWED A MINIMUM OF THREE TIMES PER YEAR TO MAINTAIN A MAXIMUM GRASS HEIGHT OF 12 INCHES.
8. MAINTAIN AND/OR REPLACE RIP RAP AS NEEDED.
9. INSPECT OUTLET CONTROL STRUCTURES AND DISCHARGE PIPING. REMOVE DEBRIS AND/OR REPAIR AS REQUIRED.

IN ADDITION TO THE MAINTENANCE ACTIVITIES LISTED ABOVE, SILT/SEDIMENT REMOVAL FROM FILTER BEDS SHALL BE PERFORMED WHEN THE ACCUMULATION EXCEEDS 1 INCH AND/OR EVERY 5/6 YEARS. IF THE BIO-RETENTION PONDING IS PRESENT FOR GREATER THAN 48-HOURS, THE TOP 4-6 INCHES OF THE FILTER MEDIA (BELOW MULCH) SHOULD BE REMOVED AND REPLACED WITH NEW FILTER MEDIA. FILTER MEDIA SHOULD CONFORM TO THE ORIGINAL MEDIA OF SAND, SOIL AND COMPOST MIX COMPRISED OF THE FOLLOWING:

- 3 PARTS CONCRETE SAND (NYSDOT 703-07) BY VOLUME
- 1 PART TOPSOIL BY VOLUME
- SOIL SHALL HAVE A pH RANGE OF 5.2 TO 7.6
- SOILS SHALL HAVE AN ORGANIC CONTENT OF 3% TO 10%

NYSDEC MAINTENANCE GUIDANCE FOR STORMWATER MANAGEMENT PRACTICES DATED MARCH 31, 2017 MUST BE FOLLOWED.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

BIO-BASIN & WATER QUALITY DETAILS

REVISIONS

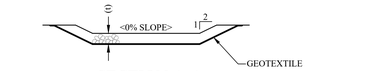
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

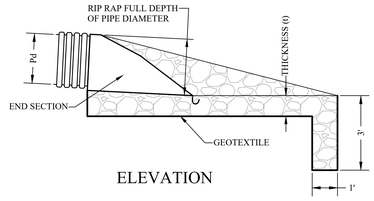
SHEET NO.
C-137

PROJECT # 18-732 PHASE #

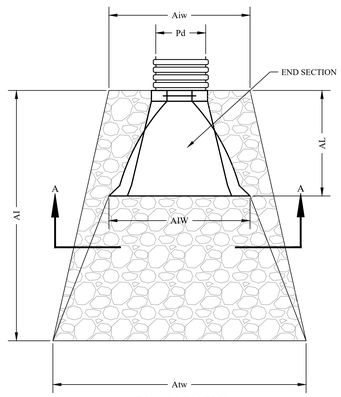
P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Dwhg\1 - Site Work & Outlet\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-137, 4/16/2025 2:00:01 PM



SECTION A-A



ELEVATION



PLAN VIEW

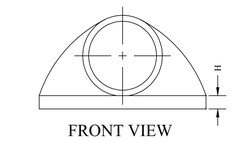
1 C-140 RIP-RAP APRON BY PIPE SIZE DETAIL
SCALE: N.T.S.

TABLE 1

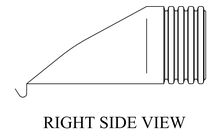
PIPE DIA. Pd (IN.)	FLARED END AIW (IN.)	END SECTION AL (IN.)	RIP RAP SIZE (d50 IN.)	RIP RAP Dmax (IN.)	RIP RAP THICK t (IN.)	APRON LENGTH Al (FT.)	APRON INITIAL WIDTH Aiw (FT.)	APRON TERMINAL WIDTH Atw (FT.)
30	78	58	12	18	24	14	7.5	20
24	60	36	12	18	24	14	6	18
18	50	32	6	14	18	12	5	14
≤15	42	25	6	9	14	10	4	14

NOTES:

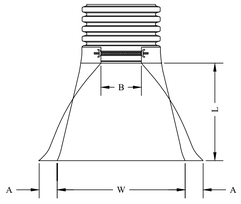
1. THE END SECTION SHALL BE HDPE END SECTION BY ADS OR APPROVED EQUAL.
2. LENGTH (Al) SHALL BE INSTALLED IN ACCORDANCE WITH TABLE 1 UNLESS SPECIFIED ON THE PLANS.



FRONT VIEW



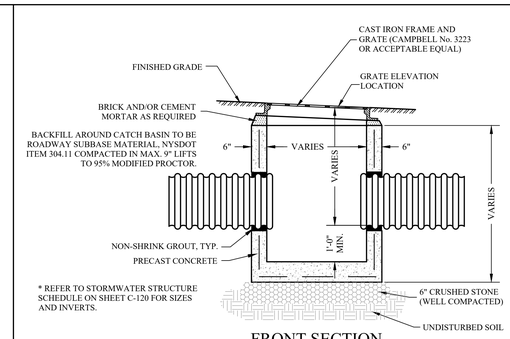
RIGHT SIDE VIEW



TOP VIEW

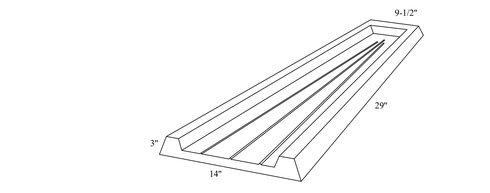
PIPE DIAMETER, in (mm)						
Diameter	12	15	18	24	30	36
A	6.5	6.5	7.5	7.5	7.5	7.5
B (max)	10.0	10.0	15.0	18.0	22.0	25.0
H	6.5	6.5	6.5	6.5	8.6	8.6
L	25.0	25.0	32.0	36.0	58.0	58.0
W	29.0	29.0	35.0	45.0	63.0	63.0

6 C-140 HDPE OUTLET END SECTION DETAIL
SCALE: N.T.S.



FRONT SECTION

8 C-140 FLAT TYPE CATCH BASIN DETAIL
SCALE: N.T.S.

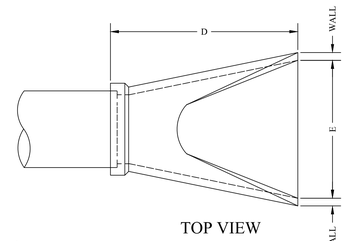


TOP VIEW

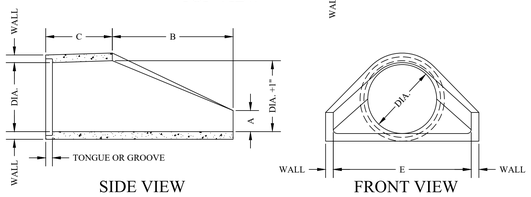
END VIEW

*TYPICAL WOODARD'S CONCRETE PRODUCTS, INC.
MODEL SSB

9 C-140 PRECAST SPLASH BLOCK DETAIL
SCALE: NONE



TOP VIEW

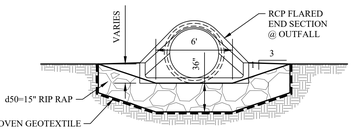


SIDE VIEW

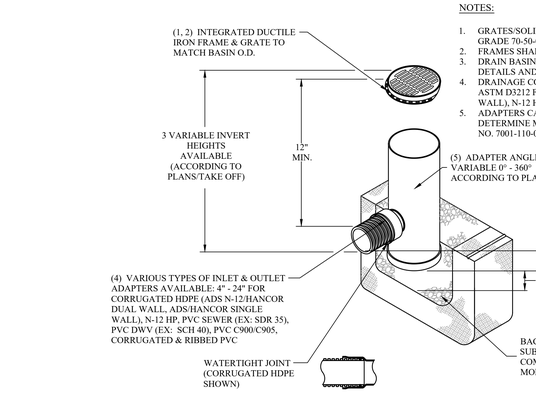
FRONT VIEW

DIA.	WALL	TONGUE OR GROOVE	WEIGHT	A	B	C	D	E	DIA. +1
15"	2 1/4"	3 1/2"	970	6"	27"	46"	73"	30"	16"
18"	2 1/2"	3 1/2"	1340	9"	27"	46"	73"	36"	19"
24"	3"	3 1/2"	1820	9 1/2"	43 1/2"	30"	73 1/2"	48"	25"
30"	3 1/2"	3 1/2"	2400	12"	54"	19 3/4"	73 3/4"	60"	31"
36"	4"	3 1/2"	5500	15"	63"	34 3/4"	97 3/4"	72"	37"
42"	4 1/2"	4"	6300	21 1/2	67"	41 1/2"	103 1/2"	76"	43"

7 C-140 R.C.P. FLARED END SECTION AT OUTFALL
SCALE: N.T.S.



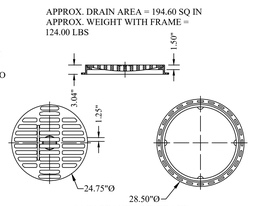
10 C-140 OUTFALL DISCHARGE CHANNEL DETAIL
SCALE: N.T.S.



NOTES:

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS AND MEETING MATERIAL REQUIREMENTS OF ASTM F2764.
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP & PVC SEWER.
5. ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

APPROX. DRAIN AREA = 194.60 SQ IN
APPROX. WEIGHT WITH FRAME =
124.00 LBS



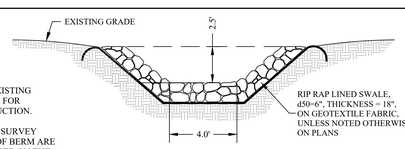
24 IN STANDARD GRATE
ASSEMBLY - TYPE B (2499CGS)

DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
GRATE MEETS H-20 LOAD RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-024

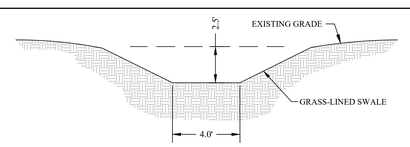
11 C-140 NYOPLAST 24" DRAIN BASIN DETAIL (O.A.E.)
SCALE: N.T.S.

NOTES:

1. CONTRACTOR TO FIELD VERIFY, CONFIRM EXISTING ELEVATIONS AND LAYOUT LIMITS OF SWALE FOR ENGINEERING APPROVAL PRIOR TO CONSTRUCTION.
2. APPROXIMATE LENGTH OF SWALE IS 300'.
3. EXCAVATION OF EXISTING BERM REQUIRED. SURVEY INFORMATION OF LIMITS AND ELEVATIONS OF BERM ARE UNAVAILABLE. CONTRACTOR SHALL BID BASED ON THE APPROXIMATE LINEAL FEET OF PROPOSED SWALE AND TYPICAL INSTALLATION DETAIL OF SWALE.

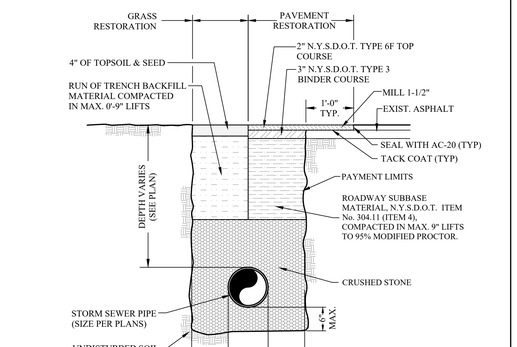


RIP RAP (>4% SLOPES)

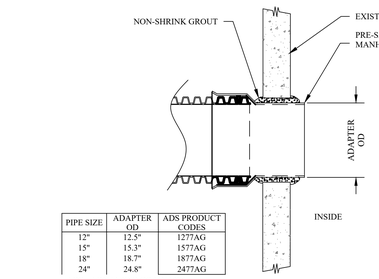


GRASS-LINED
(0-4% SLOPES)

12 C-140 TYPICAL SWALE SECTIONS
SCALE: N.T.S.



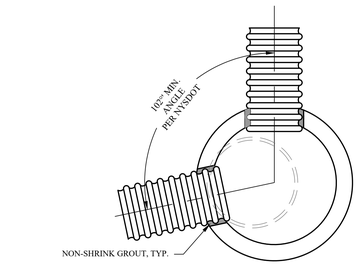
2 C-140 STORMWATER TRENCH DETAIL
SCALE: N.T.S.



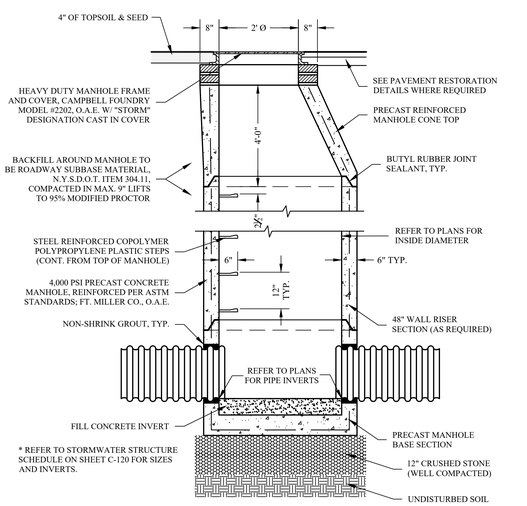
PIPE SIZE	ADAPTER OD	ADS PRODUCT CODES
12"	12.5"	1277AG
15"	15.3"	1577AG
18"	18.7"	1877AG
24"	24.8"	2477AG

ADS - ADVANCED DRAINAGE
SYSTEMS, INC., O.A.E.

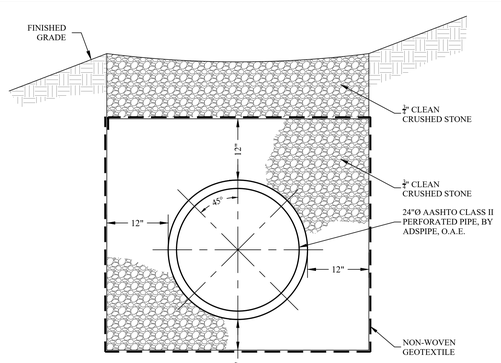
3 C-140 STORMWATER CONNECTION TO EXISTING CATCH BASIN DETAIL
SCALE: N.T.S.



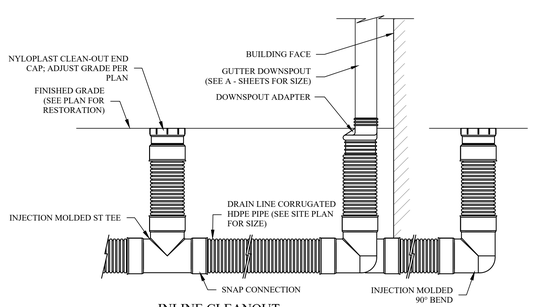
PLAN VIEW



4 C-140 TYPICAL STORM DRAINAGE MANHOLE DETAIL
SCALE: N.T.S.



13 C-140 TYPICAL PERFORATED PIPE TRENCH DETAIL
SCALE: N.T.S.



INLINE CLEANOUT

END CLEANOUT

5 C-140 POLYPROPYLENE BASIN & DOWNSPOUT CONNECTION DETAIL
SCALE: N.T.S.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SITE STORMWATER DETAILS

REVISIONS

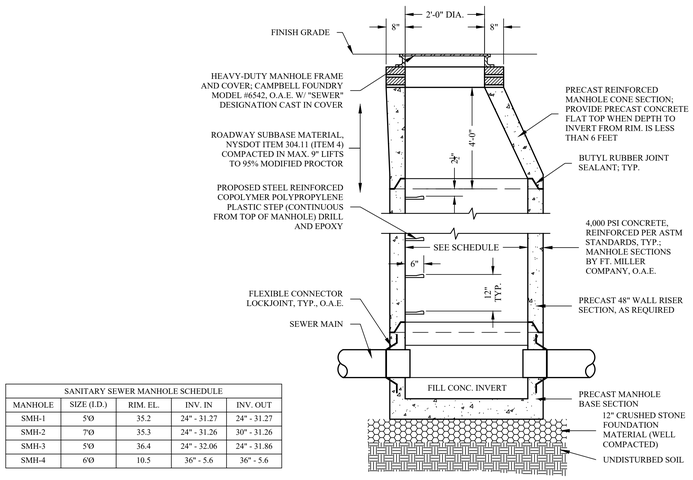
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-140

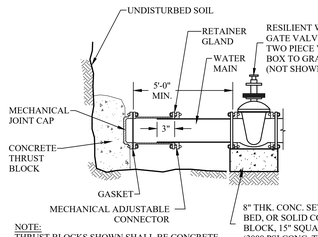
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-140, 4/18/2025 2:08:48 PM



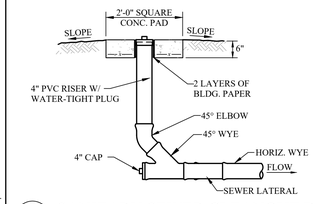
SANITARY SEWER MANHOLE SCHEDULE				
MANHOLE	SIZE (I.D.)	RIM, EL.	INV. IN	INV. OUT
SMH-1	5'Ø	35.2	24" - 31.27	24" - 31.27
SMH-2	7'Ø	35.3	24" - 31.26	30" - 31.26
SMH-3	5'Ø	36.4	24" - 32.06	24" - 31.86
SMH-4	6'Ø	10.5	36" - 5.6	36" - 5.6

1 / C-141 SANITARY SEWER MANHOLE DETAIL
SCALE: N.T.S.

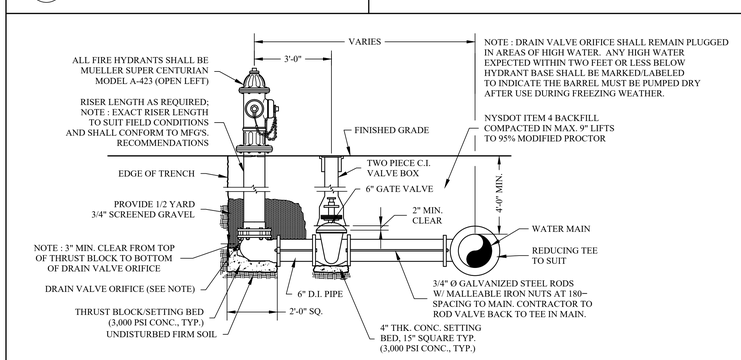


NOTE:
THRUST BLOCKS SHOWN SHALL BE CONCRETE POURED CONTINUOUSLY AND UNIFORMLY FROM CAP TO UNDISTURBED SOIL.

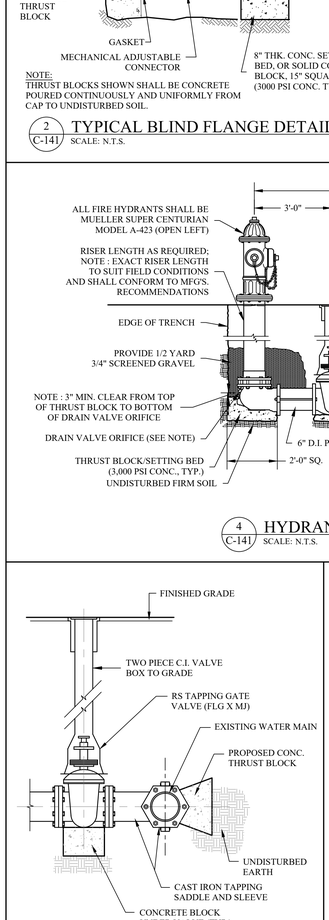
2 / C-141 TYPICAL BLIND FLANGE DETAIL
SCALE: N.T.S.



3 / C-141 SANITARY SEWER CLEANOUT DETAIL
SCALE: N.T.S.



4 / C-141 HYDRANT ASSEMBLY DETAIL
SCALE: N.T.S.

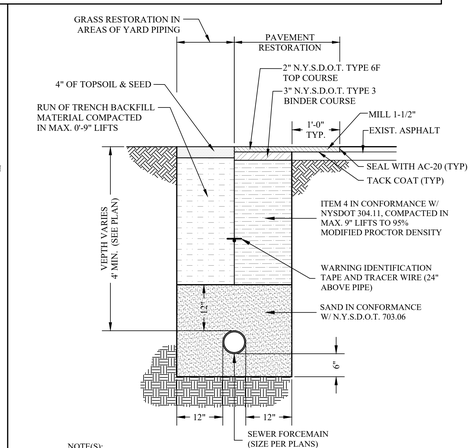


NOTES :

1. MEGA LUGS TO BE USED ON ALL MECHANICAL JOINT FITTINGS.

2. A STAINLESS STEEL TAPPING SLEEVE AND VALVE MAY BE SUBSTITUTED WITH THE APPROVAL OF THE TOWN/CITY/VILLAGE.

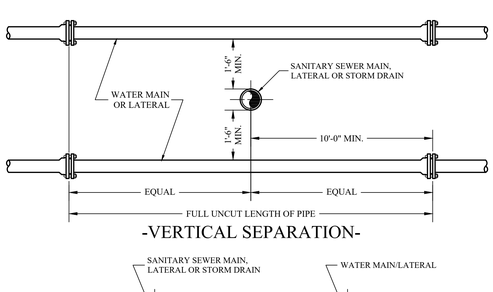
5 / C-141 TYPICAL WET TAP DETAIL
SCALE: N.T.S.



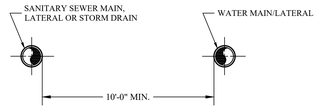
NOTE(S):

1. ALL INITIAL BACKFILL, BEDDING AND HAUNCHING SHALL BE AS DESCRIBED IN ASTM C-12.

6 / C-141 TYPICAL SEWER FORCEMAIN TRENCH DETAIL
SCALE: N.T.S.

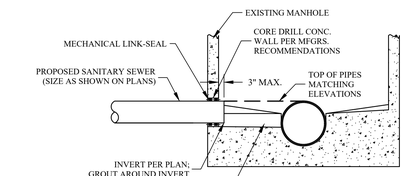


-VERTICAL SEPARATION-

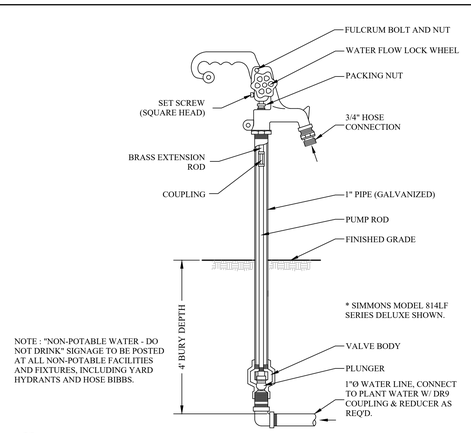


-HORIZONTAL SEPARATION-

7 / C-141 SANITARY SEWER/WATER MAIN SEPARATION DETAIL
SCALE: N.T.S.

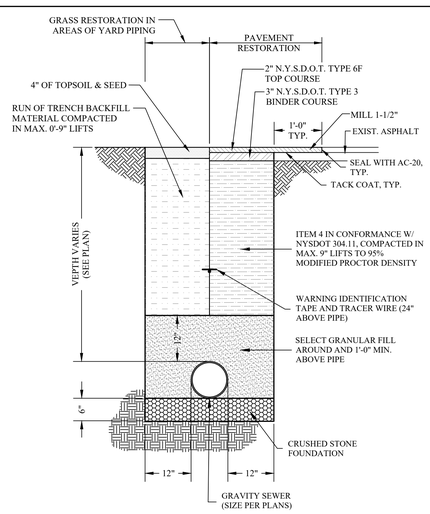


8 / C-141 SEWER PIPE TO EXISTING MANHOLE CONNECTION DETAIL
SCALE: N.T.S.

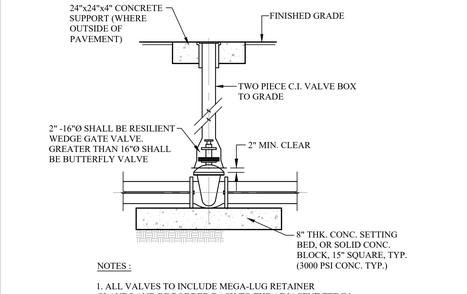


NOTE : "NON-POTABLE WATER - DO NOT DRINK" SIGNAGE TO BE POSTED AT ALL NON-POTABLE FACILITIES AND FIXTURES, INCLUDING YARD HYDRANTS AND HOSE BIBBS.

9 / C-141 SIMMONS FROST-PROOF YARD HYDRANT DETAIL
SCALE: N.T.S.



10 / C-141 TYPICAL GRAVITY SEWER TRENCH DETAIL
SCALE: N.T.S.

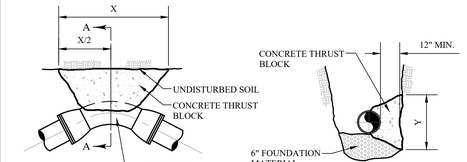


NOTES :

1. ALL VALVES TO INCLUDE MEGA-LUG RETAINER GLANDS AND BE RODDED BACK TO THE ADJACENT TEE IN THE WATER MAIN. INLINE VALVES NEED NOT BE RODDED. CONTRACTOR TO UTILIZE 3/4"Ø GALVANIZED STEEL RODS WITH MALLEABLE IRON NUTS AT 180° SPACING.

2. WATER MAIN VALVES FOR 2-INCH THROUGH 16-INCH SHALL BE RESILIENT WEDGE GATE VALVES. VALVES SHALL BE PROVIDED WITH AN EXTENSION SERVICE BOX TO GRADE.

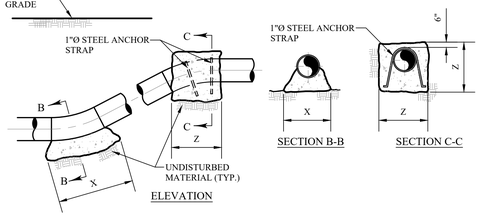
11 / C-141 TYPICAL WATER VALVE DETAIL
SCALE: N.T.S.



NOTE: CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI.

TABLE OF DIMENSIONS									
PIPE SIZE (BRANCH OF TEE)	90° BEND		45° BEND		22 1/2° BEND		TEE & PLUG	
(< OR = TO 6")	X	Y	X	Y	X	Y	X	Y
8"	42"	30"	30"	24"	24"	18"	36"	27"
12"	66"	42"	45"	33"	33"	24"	48"	42"
16"	84"	48"	51"	39"	39"	30"	60"	48"
24"	102"	75"	78"	60"	60"	39"	108"	108"
30"	136"	84"	97"	64"	71"	44"	112"	120"

HORIZONTAL BEND THRUST BLOCK DETAIL



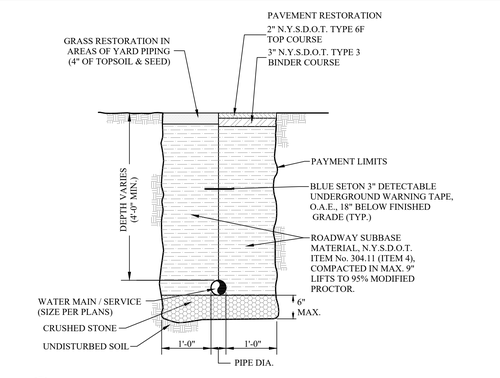
ELEVATION

NOTE : CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF 3,000 PSI.

TABLE OF DIMENSIONS									
PIPE SIZE	90° BEND			45° BEND			22 1/2° BEND		
	X	Y	Z	X	Y	Z	X	Y	Z
(< OR = TO 6")	30"	24"	48"	24"	18"	39"	18"	12"	33"
8"	42"	30"	60"	30"	24"	48"	24"	18"	39"
12"	66"	42"	75"	45"	33"	60"	33"	24"	51"
16"	84"	48"	97"	51"	39"	75"	39"	30"	62"
24"	102"	75"	120"	78"	60"	90"	60"	39"	72"
30"	136"	84"	120"	97"	64"	96"	71"	44"	86"

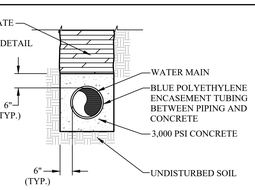
VERTICAL BEND THRUST BLOCK DETAIL

12 / C-141 TYPICAL THRUST BLOCK DETAILS
SCALE: N.T.S.



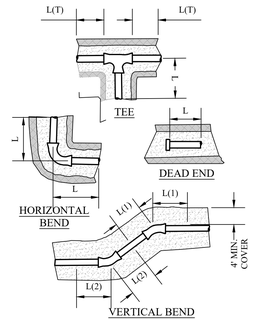
13 / C-141 TYPICAL WATER MAIN/SERVICE TRENCH DETAIL
SCALE: N.T.S.

NOTE : ANY UTILITY LOCATIONS IN EXISTING PAVEMENT TO REMAIN SHALL INCLUDE SAWCUT AND BINDER COURSE TRENCH RESTORATION.



NOTE:
1. WITH APPROVAL FROM ENGINEER, CONCRETE MAY CONTAIN AN ACCELERATOR OR USE TYPE III CEMENT TO ACHIEVE HIGH EARLY STRENGTH CONCRETE.

14 / C-141 TYPICAL WATER MAIN ENCASEMENT DETAIL
SCALE: N.T.S.



WATER MAIN RESTRAINED JOINT TABLE (D.I. PIPE)						
FITTING:	MINIMUM RESTRAINED JOINT LENGTH IN LINEAR FT (L)					
	PIPE DIAMETER					
	6"	8"	10"	12"	16"	24"
DEAD ENDS	29'-0"	38'-0"	45'-0"	53'-0"	68'-0"	97'-0"
TEES (SEE NOTE 4)	1'-0"	1'-0"	5'-0"	13'-0"	28'-0"	55'-0"
90 DEG. BEND	13'-0"	17'-0"	20'-0"	23'-0"	29'-0"	41'-0"
45 DEG. BEND	6'-0"	7'-0"	8'-0"	10'-0"	12'-0"	17'-0"
22½ DEG. BEND	3'-0"	4'-0"	4'-0"	5'-0"	6'-0"	9'-0"
11¼ DEG. BEND	2 FT	2 FT	2 FT	3 FT	3 FT	4'-0"
VERTICAL BENDS	3' 1' 4' 2' 5' 2' 6' 2' 7' 2' 10' 3'					
REDUCER	24"x12"					72'-0"
REDUCER	12"x8"					28'-0"

NOTES:
1) LENGTH OF RESTRAINED JOINTS BASED UPON,
a) 4'-0" MINIMUM COVER
b) TEST PRESSURE = 150 PSI
c) TYPE 5 TRENCH (PER AWWA C600)
d) SAFETY FACTOR = 1.5 TO 1
e) SOIL TYPE = ML, GRAN. FILL

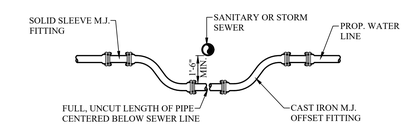
2) ALL REQUIRED JOINT RESTRAINT SHALL BE MEGALUG RETAINING GLANDS AS MANUFACTURED BY EBAA IRON, OR APPROVED EQUAL.

3) CALCULATIONS WERE BASED ON DUCTILE IRON RESTRAINT LENGTH CALCULATOR FROM EBAA IRON FOR DUCTILE IRON PIPE.

4) TABLE CALCULATIONS FOR THE "TEE" ARE BASED ON A MINIMUM "L(T)" LENGTH (TO THE NEXT JOINT) OF 10 FEET. IF "L(T)" LENGTH IS LESS THAN 10 FEET, THE LENGTH OF "L" WITH RESTRAINED JOINTS MUST BE INCREASED.

5) TABLE CALCULATIONS FOR "VERTICAL BENDS" ARE BASED ON LOW SIDE DEPTH OF 6' AND 45 DEGREE BENDS. IF LOW SIDE DEPTH OR TYPE OF BEND CHANGES THE LENGTH OF VERTICAL BEND (L1) & (L2) MUST BE ADJUSTED PER DESIGN ENGINEER.

15 / C-141 TYPICAL WATER RESTRAINED JOINT DETAIL
SCALE: N.T.S.

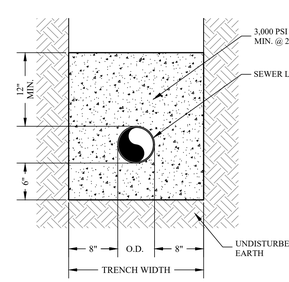


NOTES:
1. WATER LINE OFFSET TO BE USED ONLY WHERE SEWER INTERFERENCE IS UNAVOIDABLE.

2. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM WATER MAIN JOINTS.

3. FLOWABLE FILL TO BE UTILIZED AS BACKFILL FOR WATER MAIN OFFSET FROM BEDDING OF WATER MAIN TO SPRING LINE OF SEWER.

16 / C-141 TYPICAL WATERLINE OFFSET DETAIL
SCALE: N.T.S.



17 / C-141 TYP. SEWER MAIN ENCASEMENT DETAIL
SCALE: N.T.S.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SITE WATER & SANITARY SEWER DETAILS

REVISIONS		
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-141

PROJECT # 18-732 PHASE #

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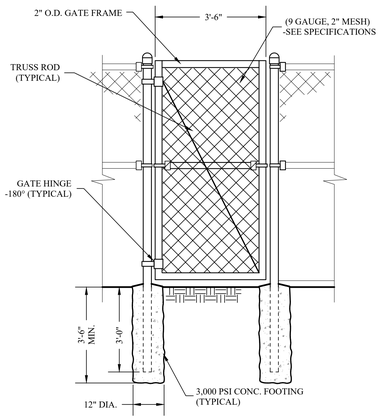
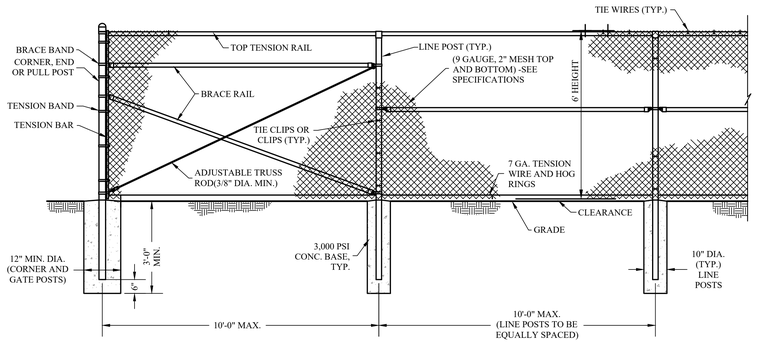
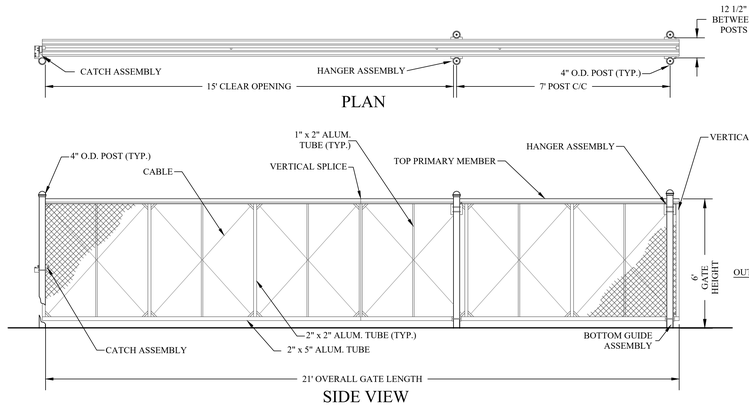


1 C-142 CHAIN LINK MAN GATE DETAIL
SCALE: NONE



2 C-142 CHAIN LINK FENCE DETAIL
SCALE: NONE

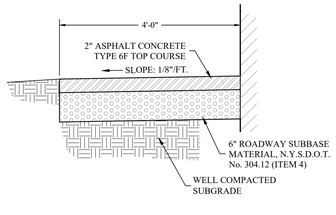


PLAN

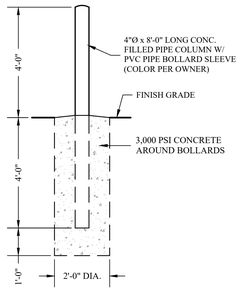
SIDE VIEW

END VIEW

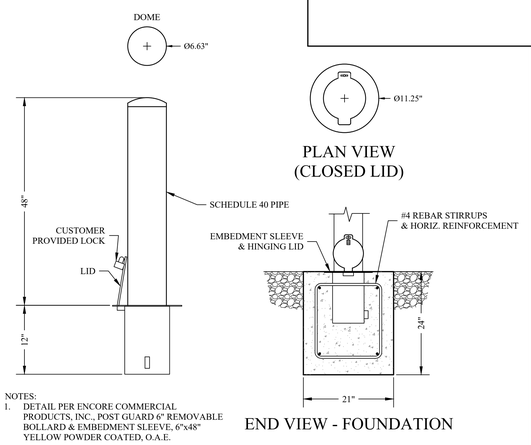
3 C-142 TYP. SLIDING GATE DETAIL
SCALE: NONE



4 C-142 TYP. ASPHALT PAVEMENT WALKWAY SECTION
SCALE: NONE

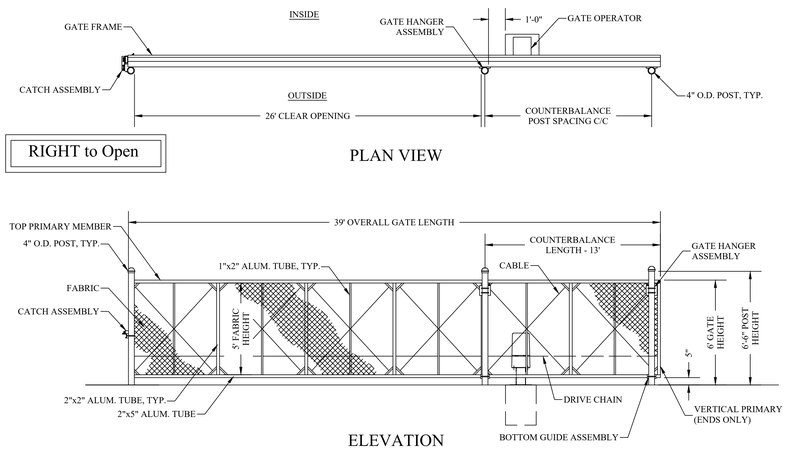


5 C-142 CONCRETE BOLLARD DETAIL
SCALE: NONE



NOTES:
1. DETAIL PER ENCORE COMMERCIAL PRODUCTS, INC., POST GUARD 6" REMOVABLE BOLLARD & EMBEDMENT SLEEVE, 6"x48" YELLOW POWDER COATED, O.A.E.

6 C-142 REMOVABLE BOLLARD DETAIL
SCALE: NONE

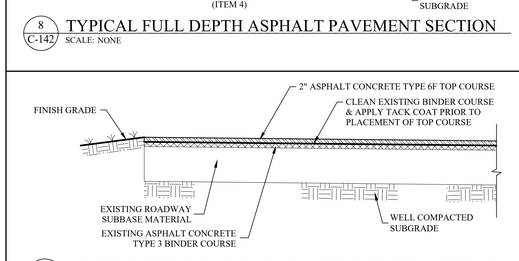


RIGHT to Open

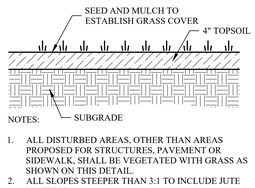
PLAN VIEW

ELEVATION

7 C-142 HEAVY DUTY CANTILEVER SLIDE GATE DETAILS
SCALE: NONE



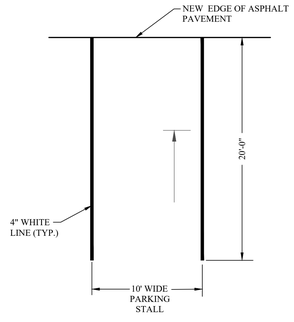
8 C-142 TYPICAL FULL DEPTH ASPHALT PAVEMENT SECTION
SCALE: NONE



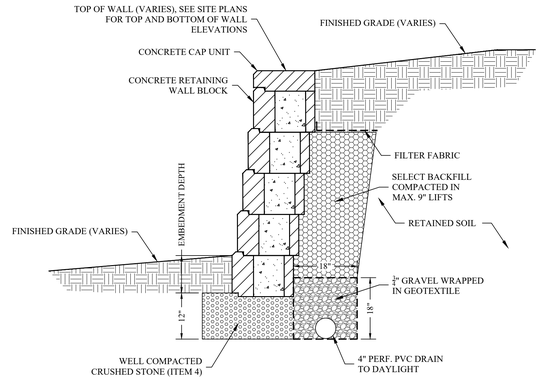
NOTES:
1. ALL DISTURBED AREAS, OTHER THAN AREAS PROPOSED FOR STRUCTURES, PAVEMENT OR SIDEWALK, SHALL BE VEGETATED WITH GRASS AS SHOWN ON THIS DETAIL.
2. ALL SLOPES STEEPER THAN 3:1 TO INCLUDE JUTE MATTING.

9 C-142 TOPSOIL RESTORATION DETAIL
SCALE: NONE

10 C-142 TYPICAL FINAL PAVEMENT ACCESS DRIVE SECTION
SCALE: NONE



11 C-142 TYPICAL PARKING SPACE STRIPING DETAIL
SCALE: N.T.S.



12 C-142 CONCRETE BLOCK RETAINING WALL SECTION
SCALE: N.T.S.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SITE DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-142

PROJECT # 18-732 PHASE #

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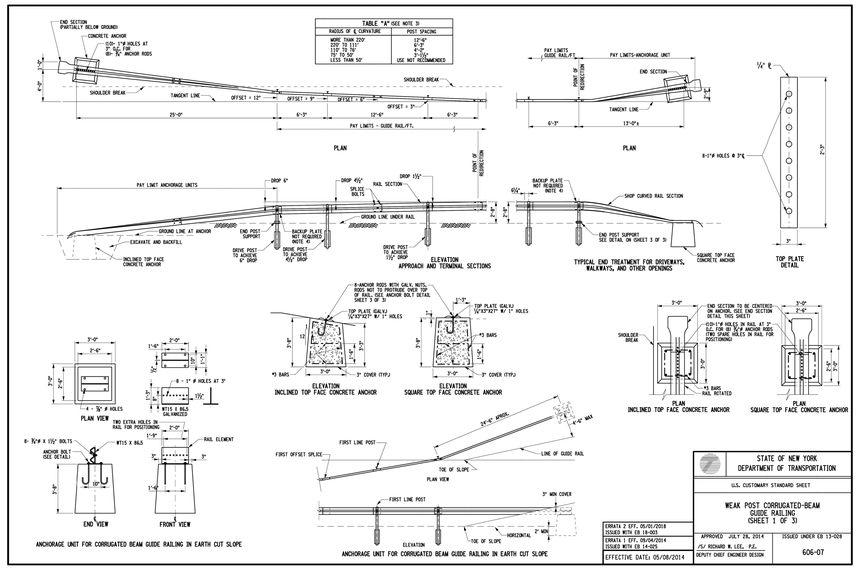


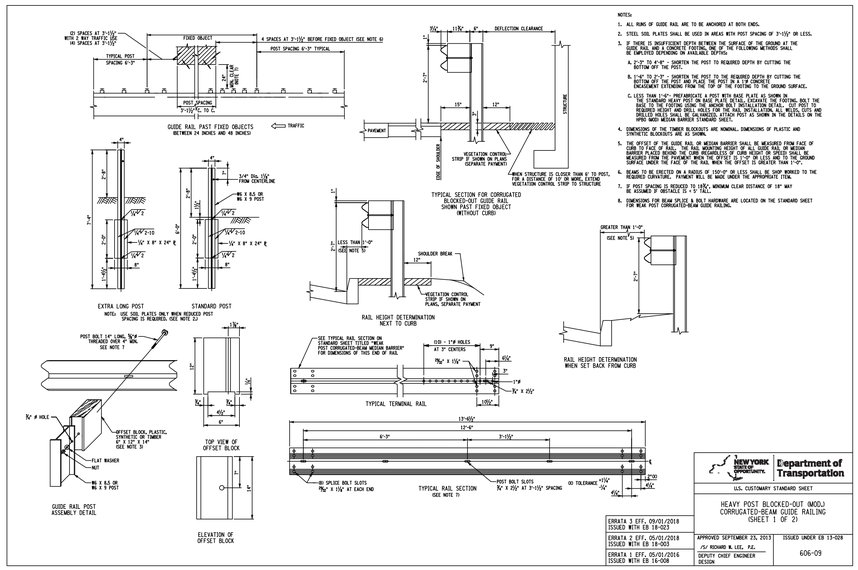
STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY STANDARD SHEET

WEAK POST CORRUGATED-BEAM GUIDE RAILING
(SHEET 1 OF 3)

APPROVED JULY 28, 2014	ISSUED UNDER EB 13-029
/s/ RICHARD N. LEE, P.E. DEPUTY CHIEF ENGINEER DESIGN	606-07

ERRATA 2 EFF. 05/01/2018 ISSUED WITH EB 18-003
ERRATA 1 EFF. 09/04/2014 ISSUED WITH EB 14-025
EFFECTIVE DATE: 05/08/2014



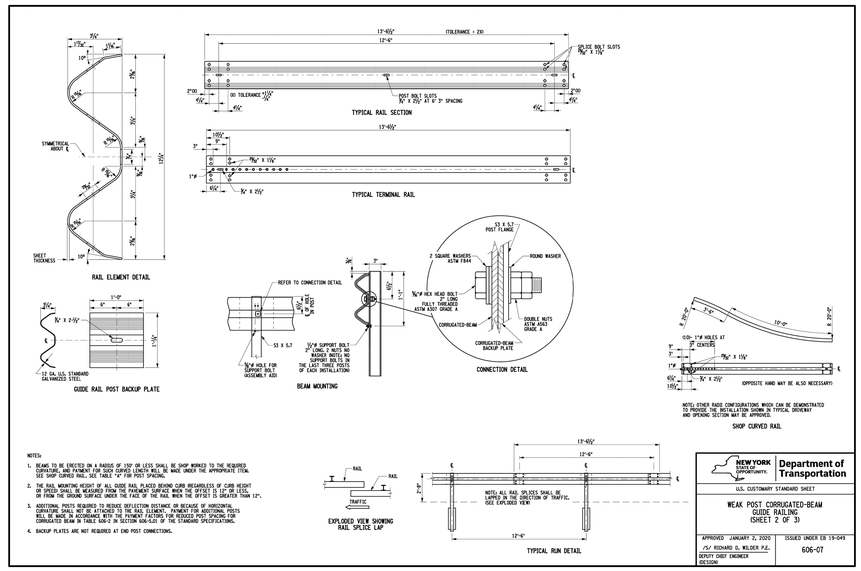
NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

HEAVY POST BLOCKED-OUT (WOD) CORRUGATED-BEAM GUIDE RAILING
(SHEET 1 OF 2)

APPROVED SEPTEMBER 25, 2013	ISSUED UNDER EB 13-029
/s/ RICHARD N. LEE, P.E. DEPUTY CHIEF ENGINEER DESIGN	606-09

ERRATA 3 EFF. 09/01/2018 ISSUED WITH EB 18-003
ERRATA 2 EFF. 05/01/2018 ISSUED WITH EB 18-003
ERRATA 1 EFF. 05/01/2016 ISSUED WITH EB 16-008

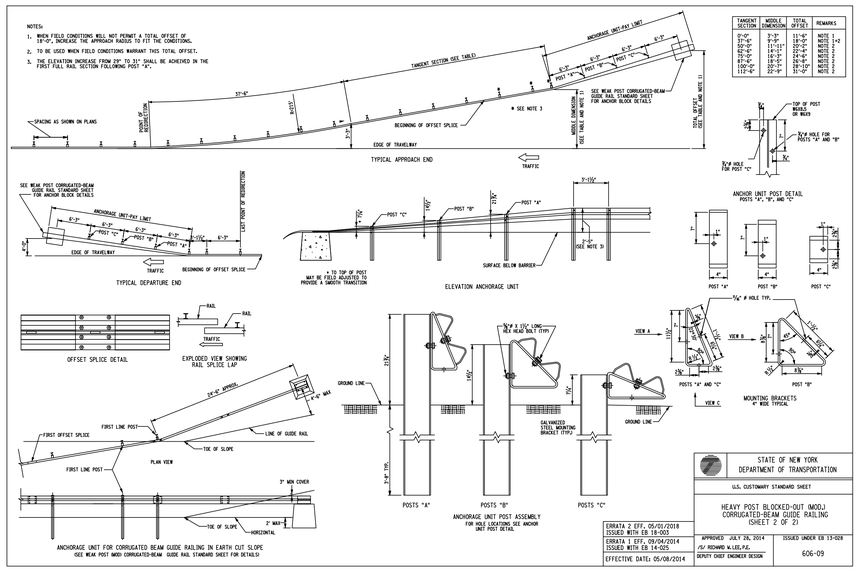


NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WEAK POST CORRUGATED-BEAM GUIDE RAILING
(SHEET 2 OF 3)

APPROVED JANUARY 2, 2020	ISSUED UNDER EB 19-049
/s/ RICHARD D. WILDER P.E. DEPUTY CHIEF ENGINEER DESIGN	606-07



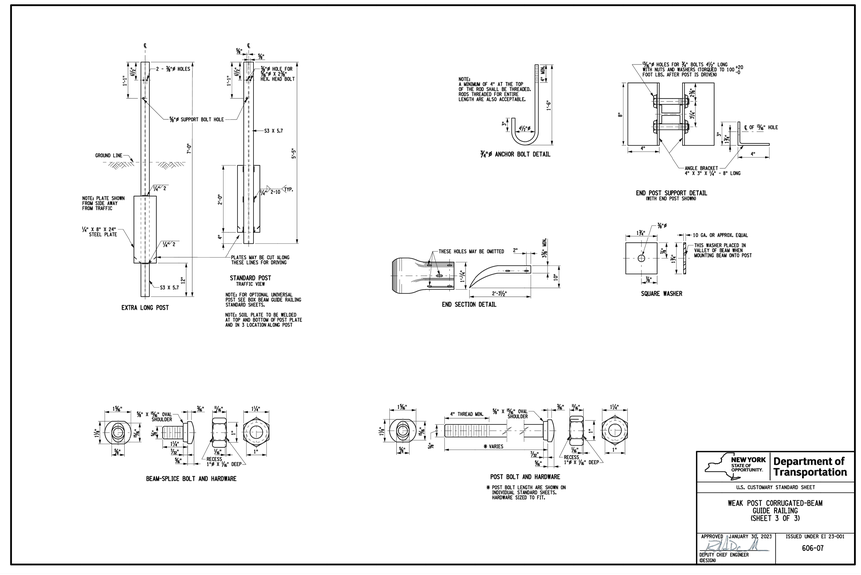
STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY STANDARD SHEET

HEAVY POST BLOCKED-OUT (WOD) CORRUGATED-BEAM GUIDE RAILING
(SHEET 2 OF 2)

APPROVED JULY 28, 2014	ISSUED UNDER EB 13-029
/s/ RICHARD N.LEE,P.E. DEPUTY CHIEF ENGINEER DESIGN	606-09

ERRATA 2 EFF. 05/01/2018 ISSUED WITH EB 18-003
ERRATA 1 EFF. 09/04/2014 ISSUED WITH EB 14-025
EFFECTIVE DATE: 05/08/2014

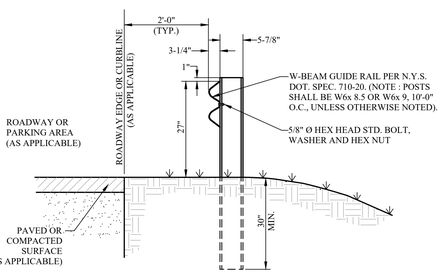


NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WEAK POST CORRUGATED-BEAM GUIDE RAILING
(SHEET 3 OF 3)

APPROVED JANUARY 30, 2023	ISSUED UNDER EI 23-001
DEPUTY CHIEF ENGINEER DESIGN	606-07



NOTE : POSTS SHALL BE SPACED EVERY 6'-3" ON CENTER UNLESS OTHERWISE NOTED. CONTRACTOR SHALL VERIFY THERE ARE NO CONFLICTS WITH PIPING OR UTILITIES PRIOR TO INSTALLATION.

1 C-142A — TYPICAL CORRUGATED BEAM GUIDE RAIL DETAIL
SCALE: NONE

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SITE DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ.

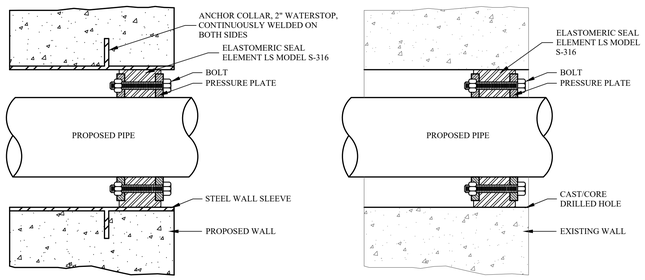
SHEET NO.
C-142A

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-142A, 4/16/2025 2:09:48 PM

PIPE PENETRATION SLEEVE AND LINK SEAL SCHEDULE BY GARLOCK

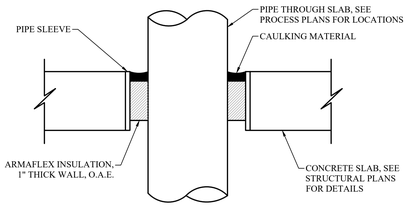
Pipe Type	Water-Stop Steel Wall Sleeve				Cast or Core Drilled Hole		
	Pipe Size Nominal (in)	WS Wall Sleeve Model # *=length of Wall Sleeve	Link-Seal Size *** = Model	Links Per Seal	Hole Inside Diameter (in)	Link-Seal Size *** = Model	Links Per Seal
SDR-35	4	WS-6-28-S-*	LS-315-***	10	6	LS-315-***	10
	6	WS-8-32-S-*	LS-315-***	15	8	LS-315-***	15
	8	WS-10-36-S-*	LS-315-***	19	12	LS-475-***	12
	10	WS-14-37-S-*	LS-360-***	17	14	LS-475-***	14
	12	WS-16-37-S-*	LS-360-***	20	16	LS-475-***	17
	15	WS-20-37-S-*	LS-575-***	17	18	LS-360-***	24
	18	WS-22-37-S-*	LS-360-***	29	22	LS-475-***	24
	24	WS-28-37-S-*	LS-425-***	22	28	LS-475-***	31
	30	WS-36-37-S-*	LS-400-***	29	36	LS-575-***	34
	36	WS-42-37-S-*	LS-400-***	34			
D.I.P	3	WS-6-28-S-*	LS-340-***	9	6	LS-315-***	10
	4	WS-8-32-S-*	LS-410-***	7	8	LS-410-***	7
	6	WS-10-36-S-*	LS-410-***	10	10	LS-410-***	10
	8	WS-12-37-S-*	LS-400-***	9	12	LS-400-***	9
	14	WS-20-37-S-*	LS-575-***	17	18	LS-360-***	24
	16	WS-22-37-S-*	LS-475-***	23	20	LS-360-***	27
	20	WS-26-37-S-*	LS-475-***	27	24	LS-425-***	19
	24	WS-30-37-S-*	LS-400-***	23	28	LS-425-***	23
	30	WS-36-37-S-*	LS-400-***	29	36	LS-575-***	34
	36	WS-44-1/2-37-S-*	LS-500-***	33	42	LS-575-***	40
STEEL & PLASTIC PIPE W/ SAME OUTSIDE DIAMETER (IPS)	1/2	WS-2-15-S-*	LS-275-***	5	2	LS-200-***	4
	1	WS-2-1/2-20-S-*	LS-200-***	5	3	LS-300-***	4
	1 1/4	WS-3-21-S-*	LS-275-***	8	3	LS-275-***	8
	1 1/2	WS-3-21-S-*	LS-200-***	7	4	LS-315-***	6
	2	WS-3-1/2-22-S-*	LS-200-***	8	4	LS-300-***	6
	3	WS-6-28-S-*	LS-360-***	7	5	LS-300-***	8
	4	WS-6-28-S-*	LS-300-***	10	6	LS-300-***	10
	6	WS-10-36-S-*	LS-475-***	10	10	LS-475-***	10
	8	WS-12-37-S-*	LS-475-***	12	12	LS-475-***	12
	10	WS-14-37-S-*	LS-425-***	10	14	LS-475-***	14
	12	WS-16-37-S-*	LS-425-***	12	16	LS-475-***	17
	16	WS-20-37-S-*	LS-475-***	21	20	LS-575-***	18
	18	WS-22-37-S-*	LS-475-***	23	22	LS-575-***	20



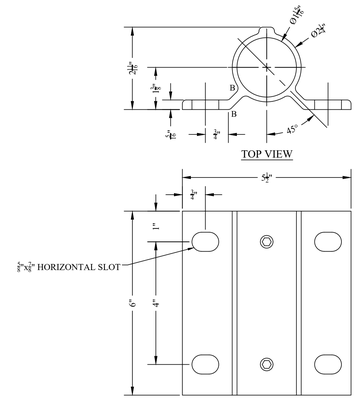
GENERAL NOTES:

1. TYPICAL TABLE ABOVE PROVIDED BY GARLOCK FOR THE CONTRACTOR'S USE TO DETERMINE QUANTITY OF REQUIRED LINK SEAL AND WALL SLEEVES FOR ALL PIPE PENETRATIONS THROUGH NEW AND EXISTING CONCRETE WALLS PROPOSED THROUGHOUT THE PROJECT.
2. ALL WALL SLEEVES SHALL BE STEEL. ALL LINK SEALS SHALL BE MODEL S-316 FOR WASTEWATER APPLICATION.
3. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING CORRECT SIZE AND MODEL NUMBERS FOR ALL LINK SEALS, SLEEVES, CORE DRILLED PIPE PENETRATIONS REQUIRED AND SHALL CONFIRM WITH THE MANUFACTURER PRIOR TO ORDERING AND INSTALLATION.
4. ALL SLEEVES AND LINK SEALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOUND IN THE GARLOCK ENGINEERING MANUAL.
5. FOR MORE INFORMATION CONTACT GARLOCK FOR LINK SEAL AND WALL PENETRATION PRODUCTS ENGINEERING MANUAL.

1 / C-143 PIPE PENETRATION DETAIL AND SCHEDULE
SCALE: N.T.S.

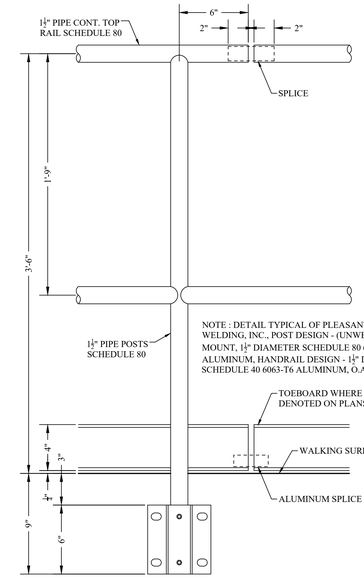


2 / C-143 PIPE FLOOR PENETRATION DETAIL
SCALE: N.T.S.



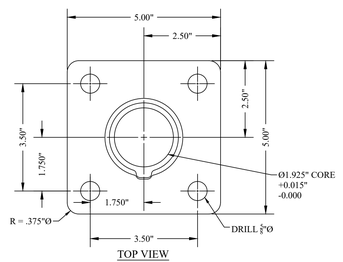
NOTE : DETAIL TYPICAL OF PLEASANT MOUNT WELDING, INC., MOUNT #M11, ALUMIMUM-EXTRUDED ALLOY 6063-T6 MOUNT, 19.0 ksi, O.A.E.

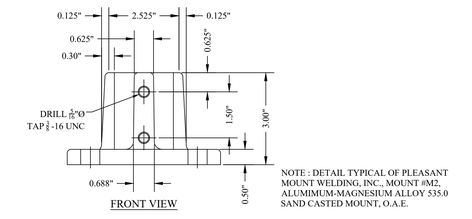
3 / C-143 TYPICAL SIDE MOUNT ALUMINUM RAIL BRACKET DETAIL
SCALE: 1/2" = 1'-0"



NOTE : DETAIL TYPICAL OF PLEASANT MOUNT WELDING, INC., POST DESIGN - (UNWELDED) SIDE MOUNT, 1¼" DIAMETER SCHEDULE 80 6061-T6 ALUMINUM, HANDRAIL DESIGN - 1¼" DIAMETER SCHEDULE 40 6063-T6 ALUMINUM, O.A.E.

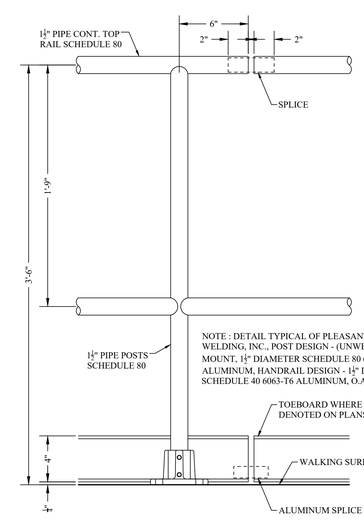
4 / C-143 TYPICAL SIDE MOUNT ALUMINUM RAIL DETAIL
SCALE: NONE





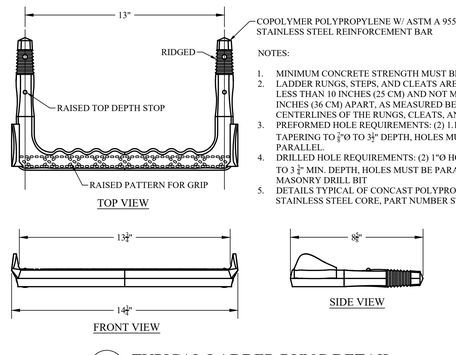
NOTE : DETAIL TYPICAL OF PLEASANT MOUNT WELDING, INC., MOUNT #M2, ALUMIMUM-MAGNESIUM ALLOY 535.0 SAND CASTED MOUNT, O.A.E.

5 / C-143 TYPICAL TOP MOUNT ALUMINUM RAIL BRACKET DETAIL
SCALE: 1/2" = 1'-0"



NOTE : DETAIL TYPICAL OF PLEASANT MOUNT WELDING, INC., POST DESIGN - (UNWELDED) TOP MOUNT, 1¼" DIAMETER SCHEDULE 80 6061-T6 ALUMINUM, HANDRAIL DESIGN - 1¼" DIAMETER SCHEDULE 40 6063-T6 ALUMINUM, O.A.E.

6 / C-143 TYPICAL TOP MOUNT ALUMINUM RAIL DETAIL
SCALE: NONE

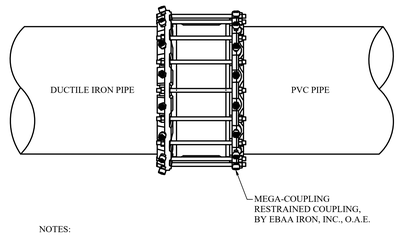


COPOLYMER POLYPROPYLENE W/ ASTM A 955 STAINLESS STEEL REINFORCEMENT BAR

NOTES:

1. MINIMUM CONCRETE STRENGTH MUST BE 3,000 PSI.
2. LADDER RUNGS, STEPS, AND CLEATS ARE SPACED NOT LESS THAN 10 INCHES (25 CM) AND NOT MORE THAN 14 INCHES (36 CM) APART, AS MEASURED BETWEEN THE CENTERLINES OF THE RUNGS, CLEATS, AND STEPS.
3. PREFORMED HOLE REQUIREMENTS: (2) 1.1"Ø HOLES TAPERING TO ¾"Ø TO 3½" DEPTH, HOLES MUST BE PARALLEL.
4. DRILLED HOLE REQUIREMENTS: (2) 1"Ø HOLES DRILLED TO 3 ½" MIN. DEPTH, HOLES MUST BE PARALLEL, USE A 1" MASONRY DRILL BIT
5. DETAILS TYPICAL OF CONCAST POLYPROPYLENE STEP - STAINLESS STEEL CORE, PART NUMBER STP-2, O.A.E.

7 / C-143 TYPICAL LADDER RUNG DETAIL
SCALE: NONE



NOTES:

1. DETAIL TYPICAL OF EBAA IRON, INC. SERIES 3800 RESTRAINED COUPLING DETAIL, O.A.E.

8 / C-143 PIPE TRANSITION COUPLING DETAIL
SCALE: NONE

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

CIVIL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-143

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-143, 4/18/2025 2:09:31 PM

PHASE 2A DESCRIPTION:

1. THIS PHASE WILL GENERALLY CONSIST OF INITIAL SITE WORK AND CONSTRUCTION OF INFRASTRUCTURE FOR THE ENTIRE MBR COMPLEX. INITIAL SITE WORK INCLUDES MOBILIZATION, EROSION AND SEDIMENTATION CONTROL MEASURES, CLEARING AND GRUBBING AND LAYOUT. MBR INFRASTRUCTURE CONSTRUCTED IN THIS PHASE INCLUDES THE MICROSCREEN BUILDING, INFLUENT WET AND DRY WELLS, ANOXIC TANKS, AEROBIC TANKS, MBR BASIN, AND MBR BUILDING ENCLOSURES. PORTIONS OF NEW PLANT DRIVE TO ACCESS THE PROPOSED MBR AREA WILL BE ROUGH GRADED AND ITEM #4 SUBBASE (O.A.E.) COURSE INSTALLED ALONG WITH TEMPORARY FIRE ACCESS. AN EXTENSION OF THE WATERMAIN FROM THE NEW CONTROL BUILDING WILL BE INSTALLED. A NEW MODULAR BLOCK RETAINING WALL WILL BE INSTALLED ALONG WITH THE NEW PORTION OF THE PLANT DRIVE. NEW GENERATOR AND TRANSFORMER PADS WILL BE INSTALLED DURING THIS PHASE WITH ASSOCIATED UNDERGROUND ELECTRICAL SITE WORK.
2. THIS PLAN SHEET IS FOR REFERENCE ONLY AND DEPICTS A SUGGESTED SEQUENCING PHASE TO ALLOW FOR PLANT TO REMAIN FULLY FUNCTIONAL. CONSTRUCTION SEQUENCING IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR. SEQUENCE TO BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO ENGINEER FOR APPROVAL.
3. WORK SHOWN ON THIS PLAN IS NOT ALL EXHAUSTIVE AS NEEDED TO PROVIDE FULLY FUNCTIONAL STRUCTURES.
4. THIS PHASE WILL BE CONCURRENT WITH THE CAESERS LANE WWTP EXPANSION: PHASE 1 PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE THEMSELVES WITH THESE OPERATIONS AND STAGING AREAS. THE PHASE 1 PROJECT PLANS HAVE BEEN INCLUDED IN THE CONTRACT DOCUMENTS FOR REFERENCE.
5. EXISTING PLANT INFRASTRUCTURE WILL REMAIN ONLINE IN THIS PHASE UNLESS OTHERWISE NOTED. CONTRACTOR IS RESPONSIBLE FOR ALL MEASURES NECESSARY TO PROTECT EXISTING INFRASTRUCTURE DURING CONSTRUCTION IN ORDER FOR THE PLANT TO REMAIN OPERATIONAL, INCLUDING TEMPORARY BYPASS AND HANDLING OF ALL PLANT FLOWS.
6. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS.

CONSTRUCT GENERATOR & TRANSFORMER PADS (SEE E-SHEETS)

CONSTRUCT MBR TRAIN AND MBR BUILDING (SEE 500 SERIES DRAWINGS)

CONSTRUCT PLANT DRIVE (ROUGHED IN AS NEEDED), WATERMAIN EXTENSION AND RETAINING WALL STRUCTURES (SEE 100 SERIES DRAWINGS AND S-SHEETS)

TREE STUMP GRUBBING (AS NEEDED)

INSTALL BACKPULSE & EFFLUENT LINES TO DISINFECTION TANK (SEE 100 SERIES & 500 SERIES)

MOBILIZATION, E&S, PROJECT STAGING AREA (SEE 100 SERIES DRAWINGS)

APPROX. LIMITS OF TREE LINE

EXISTING RETAINING WALL

CAESARS LANE

1 C-150 CONSTRUCTION SEQUENCING PHASE 2A
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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UDIG·NY SAFE DIGGING STARTS HERE
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

CONSTRUCTION SEQUENCING PHASE 2A

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

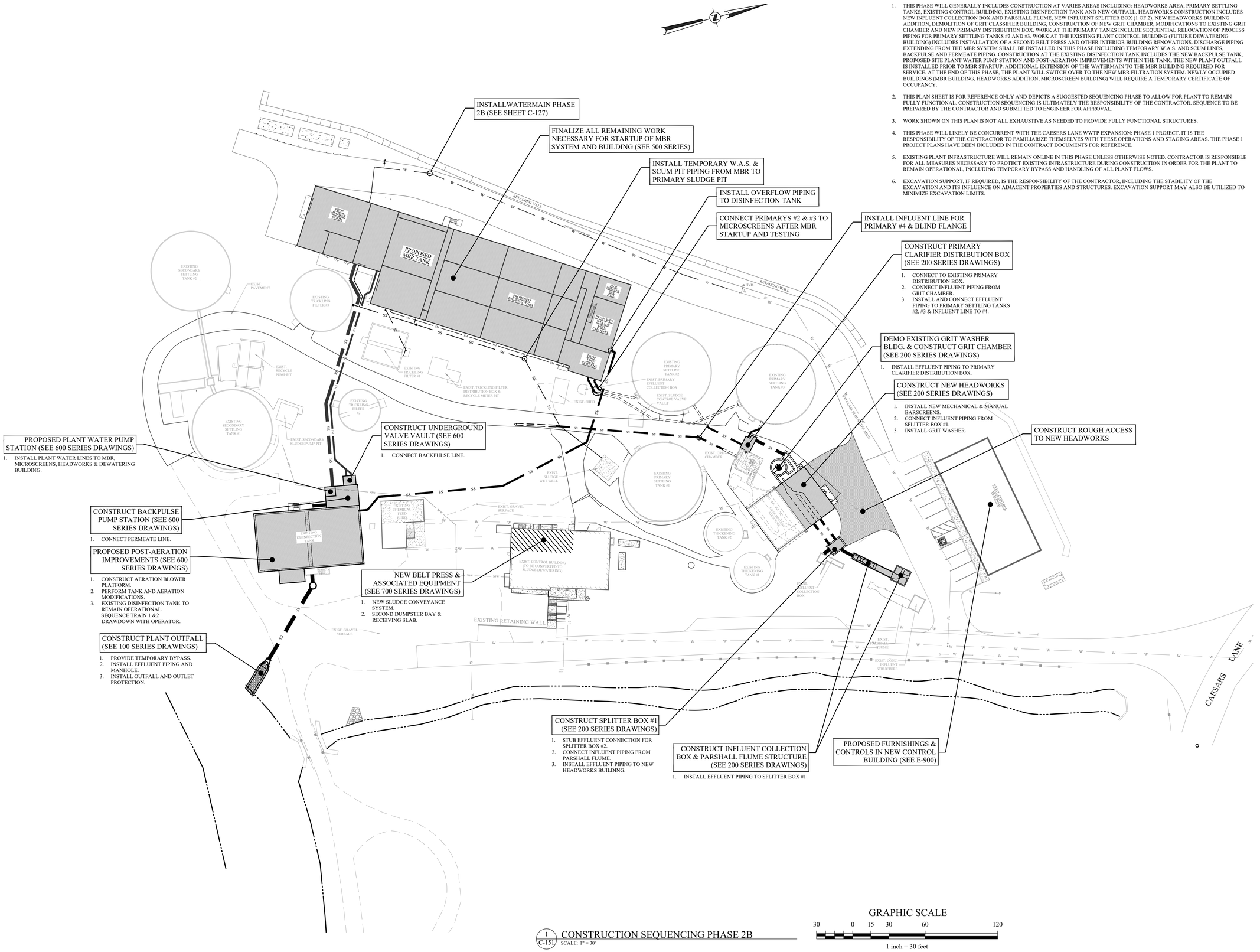
SHEET NO.
C-150

PROJECT # 18-732 PHASE #

T:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-150, 4/16/2025 2:11:18 PM

PHASE 2B DESCRIPTION:

1. THIS PHASE WILL GENERALLY INCLUDES CONSTRUCTION AT VARIES AREAS INCLUDING: HEADWORKS AREA, PRIMARY SETTLING TANKS, EXISTING CONTROL BUILDING, EXISTING DISINFECTION TANK AND NEW OUTFALL. HEADWORKS CONSTRUCTION INCLUDES NEW INFLUENT COLLECTION BOX AND PARSHALL FLUME, NEW INFLUENT SPLITTER BOX (1 OF 2), NEW HEADWORKS BUILDING ADDITION, DEMOLITION OF GRIT CLASSIFIER BUILDING, CONSTRUCTION OF NEW GRIT CHAMBER, MODIFICATIONS TO EXISTING GRIT CHAMBER AND NEW PRIMARY DISTRIBUTION BOX. WORK AT THE PRIMARY TANKS INCLUDE SEQUENTIAL RELOCATION OF PROCESS PIPING FOR PRIMARY SETTLING TANKS #2 AND #3. WORK AT THE EXISTING PLANT CONTROL BUILDING (FUTURE DEWATERING BUILDING) INCLUDES INSTALLATION OF A SECOND BELT PRESS AND OTHER INTERIOR BUILDING RENOVATIONS. DISCHARGE PIPING EXTENDING FROM THE MBR SYSTEM SHALL BE INSTALLED IN THIS PHASE INCLUDING TEMPORARY W.A.S. AND SCUM LINES, BACKPULSE AND PERMEATE PIPING. CONSTRUCTION AT THE EXISTING DISINFECTION TANK INCLUDES THE NEW BACKPULSE TANK, PROPOSED SITE PLANT WATER PUMP STATION AND POST-AERATION IMPROVEMENTS WITHIN THE TANK. THE NEW PLANT OUTFALL IS INSTALLED PRIOR TO MBR STARTUP. ADDITIONAL EXTENSION OF THE WATERMAIN TO THE MBR BUILDING REQUIRED FOR SERVICE. AT THE END OF THIS PHASE, THE PLANT WILL SWITCH OVER TO THE NEW MBR FILTRATION SYSTEM, NEWLY OCCUPIED BUILDINGS (MBR BUILDING, HEADWORKS ADDITION, MICROSCREEN BUILDING) WILL REQUIRE A TEMPORARY CERTIFICATE OF OCCUPANCY.
2. THIS PLAN SHEET IS FOR REFERENCE ONLY AND DEPICTS A SUGGESTED SEQUENCING PHASE TO ALLOW FOR PLANT TO REMAIN FULLY FUNCTIONAL. CONSTRUCTION SEQUENCING IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR. SEQUENCE TO BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO ENGINEER FOR APPROVAL.
3. WORK SHOWN ON THIS PLAN IS NOT ALL EXHAUSTIVE AS NEEDED TO PROVIDE FULLY FUNCTIONAL STRUCTURES.
4. THIS PHASE WILL LIKELY BE CONCURRENT WITH THE CAESERS LANE WWTP EXPANSION: PHASE 1 PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE THEMSELVES WITH THESE OPERATIONS AND STAGING AREAS. THE PHASE 1 PROJECT PLANS HAVE BEEN INCLUDED IN THE CONTRACT DOCUMENTS FOR REFERENCE.
5. EXISTING PLANT INFRASTRUCTURE WILL REMAIN ONLINE IN THIS PHASE UNLESS OTHERWISE NOTED. CONTRACTOR IS RESPONSIBLE FOR ALL MEASURES NECESSARY TO PROTECT EXISTING INFRASTRUCTURE DURING CONSTRUCTION IN ORDER FOR THE PLANT TO REMAIN OPERATIONAL, INCLUDING TEMPORARY BYPASS AND HANDLING OF ALL PLANT FLOWS.
6. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS.



1 / C-151 CONSTRUCTION SEQUENCING PHASE 2B
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

CONSTRUCTION SEQUENCING PHASE 2B

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.
C-151

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\18-732 Caesars Lane WWTP Site Plan Phase 2.dwg, C-151, 4/16/2025 2:08:30 PM

PHASE 2C DESCRIPTION:

1. THIS PHASE BEGINS DIRECTLY AFTER STARTUP OF THE NEW MBR FILTRATION SYATEM. PRIMARY SETTLING TANK #1 PIPING CAN BE MODIFIED TO CONNECT TO THE NEW MBR SYSTEM. EXISTING INFRASTRUCTURE AT THE BACK END OF THE PLANT CAN THEN BE DECOMMISSIONED AND DEMOLISHED AS SHOWN ON THE C-100 AND C-800 SERIES PLAN SHEETS. NEW INFRASTRUCTURE WILL THEN BE CONSTRUCTED IN LOCATIONS OF DEMOLISHED INFRASTRUCTURE INCLUDING THE PROPOSED SLUDGE HOLDING/ATAD SYSTEM TANKS AND BUILDING, NEW PRIMARY SETTLING TANK #4, NEW MAINTENANCE GARAGE, REMAINING PORTIONS OF NEW PLANT DRIVE (ROUGHED-IN) AND REMAINDER OF NEW WATERMAIN. AFTER THE NEW OUTFALL IS IN OPERATION, ABANDONMENT WORKFOR THE EXISTING OUTFALL SYSTEM CAN BE COMPLETED IN ACCORDANCE WITH DESIGNATED TIME OF YEAR RESTRICTIONS. MODIFICATIONS TO PLANT INFLUENT PIPING AND INSTALLATION OF INFLUENT SPLITTER BOX (2 OF 2) WILL BE COMPLETED DURING THIS PHASE AT THE HEAD OF THE PLANT. BYPASS PUMPING WILL BE REQUIRED DURING THIS WORK. INTERIOR AND EXTERIOR RENOVATION WORK WITHIN THE NEW DEWATERING BUILDING CAN BE COMPLETED.
2. THIS PLAN SHEET IS FOR REFERENCE ONLY AND DEPICTS A SUGGESTED SEQUENCING PHASE TO ALLOW FOR PLANT TO REMAIN FULLY FUNCTIONAL. CONSTRUCTION SEQUENCING IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR. SEQUENCE TO BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO ENGINEER FOR APPROVAL.
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CONSTRUCT REMAINDER OF PLANT DRIVE (ROUGHED IN) & REMAINDER OF WATERMAIN (TEST, DISINFECT & COMMISSION)

DEMO OF EXISTING STRUCTURES TO CONSTRUCT PROPOSED A.T.A.D., GARAGE & PRIMARY CLARIFIER #4 (SEE 800 SERIES DRAWINGS)

DEMOLITION OF STRUCTURES INCLUDE:
1. TRICKLING FILTER DISTRIBUTION BOX
2. TRICKLING FILTERS
3. SECONDARY CLARIFIERS
4. RECYCLE PUMP PIT
5. RECYCLE METER PIT
6. SECONDARY CLARIFIER SLUDGE PUMP PIT
7. EFFLUENT CHAMBER AND PIPING TO CHLOR/DECHLOR

CONSTRUCT SLUDGE A.T.A.D. (SEE 400 SERIES DRAWINGS)

CONSTRUCT MAINTENANCE GARAGE (SEE 900 SERIES DRAWINGS)

INSTALL REMAINING PLANT WATER TO ATAD

ABANDON EXISING OUTFALL (SEE SHEET C-106)

REDIRECT MBR W.A.S. AND SCUM DISCHARGE TO SLUDGE HOLDING TANK

CONSTRUCT PRIMARY SETTLING TANK #4 (SEE 300 SERIES DRAWINGS)
1. CONNECT INFLUENT PIPE FROM PHASE 2B.
2. INSTALL EFFLUENT PIPE TO MICROSCREENS.
3. INSTALL SCUM LINE TO PRIMARY SLUDGE PIT.
4. INSTALL SLUDGE DISCHARGE & SLUDGE VAULT W/ VALVE.

RELOCATE EXISTING SHED
1. COORDINATE WITH OWNER.

DEMO EXISTING PRIMARY EFFLUENT COLLECTION BOX

RE-ROUTE SETTLING TANK #1 EFFLUENT TO MICROSCREENS

RE-ROUTE SCUM LINE TO PRIMARY SLUDGE PIT

CONSTRUCT SPLITTER BOX #2
1. CONNECT SPLITTER BOX #1 EFFLUENT PIPE.
2. RELOCATE DEWATERING FILTRATE PIPE TO SPLITTER BOX #2.

EXISTING BARSCREEN / GRIT SYSTEM MODIFICATIONS (SEE 200 SERIES DRAWINGS)

PROPOSED INFLUENT PIPING RELOCATION & DOGHOUSE MANHOLE

DEMO EXISTING HEADWORKS STRUCTURES

PROPOSED INFLUENT PIPING RELOCATIONS & DOGHOUSE MANHOLES

1 / C-152 CONSTRUCTION SEQUENCING PHASE 2C
SCALE: 1" = 30'

GRAPHIC SCALE
30 0 15 30 60 120
1 inch = 30 feet

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

CONSTRUCTION SEQUENCING PHASE 2C

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	**MJS, JZ**

SHEET NO.
C-152

PROJECT # 18-732 PHASE #

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PHASE 2D DESCRIPTION:

1. THIS LAST PHASE WILL SEEK TO COMPLETE ALL REMAINING PLANT IMPROVEMENTS THAT CAN BE COMPLETED WHILE THE NEW MBR FILTRATION SYSTEM IS FULLY FUNCTIONAL. THIS INCLUDES REPAIRS, MODIFICATIONS AND RENOVATIONS TO EXISTING INFRASTRUCTURE (I.E. EXISTING GRIT CHAMBER REPAIRS/UPGRADES, REPAIRS TO EXISTING PRIMARY TANKS #1-#3, EXISTING SLUDGE VALVE VAULT AND PUMP PIT MODIFICATIONS, REPAIRS TO EXISTING HEADWORKS BUILDING) IN THIS PHASE ALSO INCLUDE ANY REMAINING DEMOLITION WORK (I.E. EXISTING THICKENER TANKS), SITE IMPROVEMENTS (ALL PAVING WORK, STORMWATER CONTROLS, FENCING, ETC.) AND ALL OTHER WORK REQUIRED FOR FULL SITE RESTORATION.
2. THIS PLAN SHEET IS FOR REFERENCE ONLY AND DEPICTS A SUGGESTED SEQUENCING PHASE TO ALLOW FOR PLANT TO REMAIN FULLY FUNCTIONAL. CONSTRUCTION SEQUENCING IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR. SEQUENCE TO BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO ENGINEER FOR APPROVAL.
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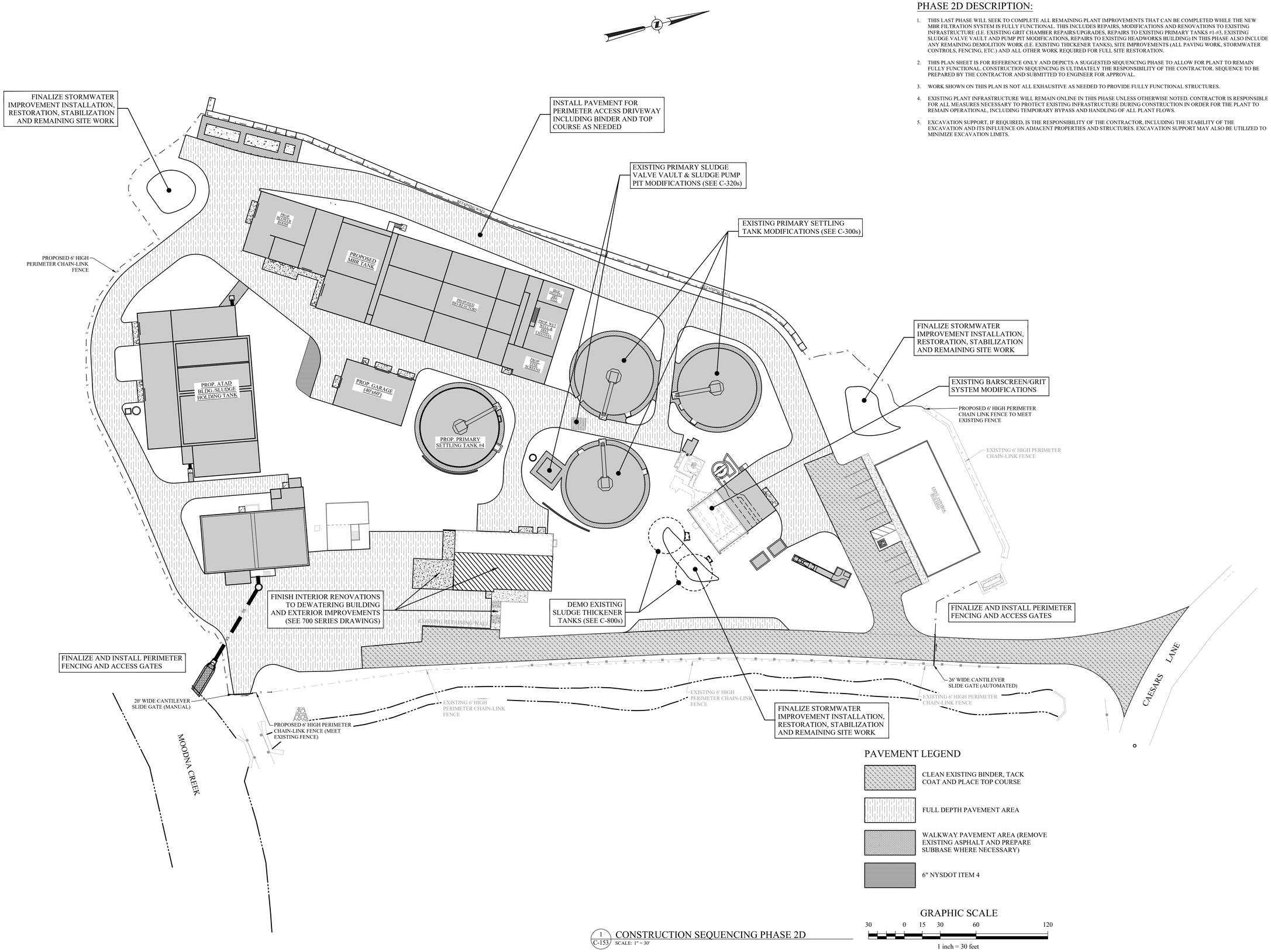

PAVEMENT LEGEND

- CLEAN EXISTING BINDER, TACK COAT AND PLACE TOP COURSE
- FULL DEPTH PAVEMENT AREA
- WALKWAY PAVEMENT AREA (REMOVE EXISTING ASPHALT AND PREPARE SUBBASE WHERE NECESSARY)
- 6" NYSDOT ITEM 4

GRAPHIC SCALE

30 0 15 30 60 120

1 inch = 30 feet

1 / C-153 CONSTRUCTION SEQUENCING PHASE 2D
SCALE: 1" = 30'

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

CONSTRUCTION SEQUENCING PHASE 2D

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	SMQ, JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-153

PROJECT # 18-732 PHASE #

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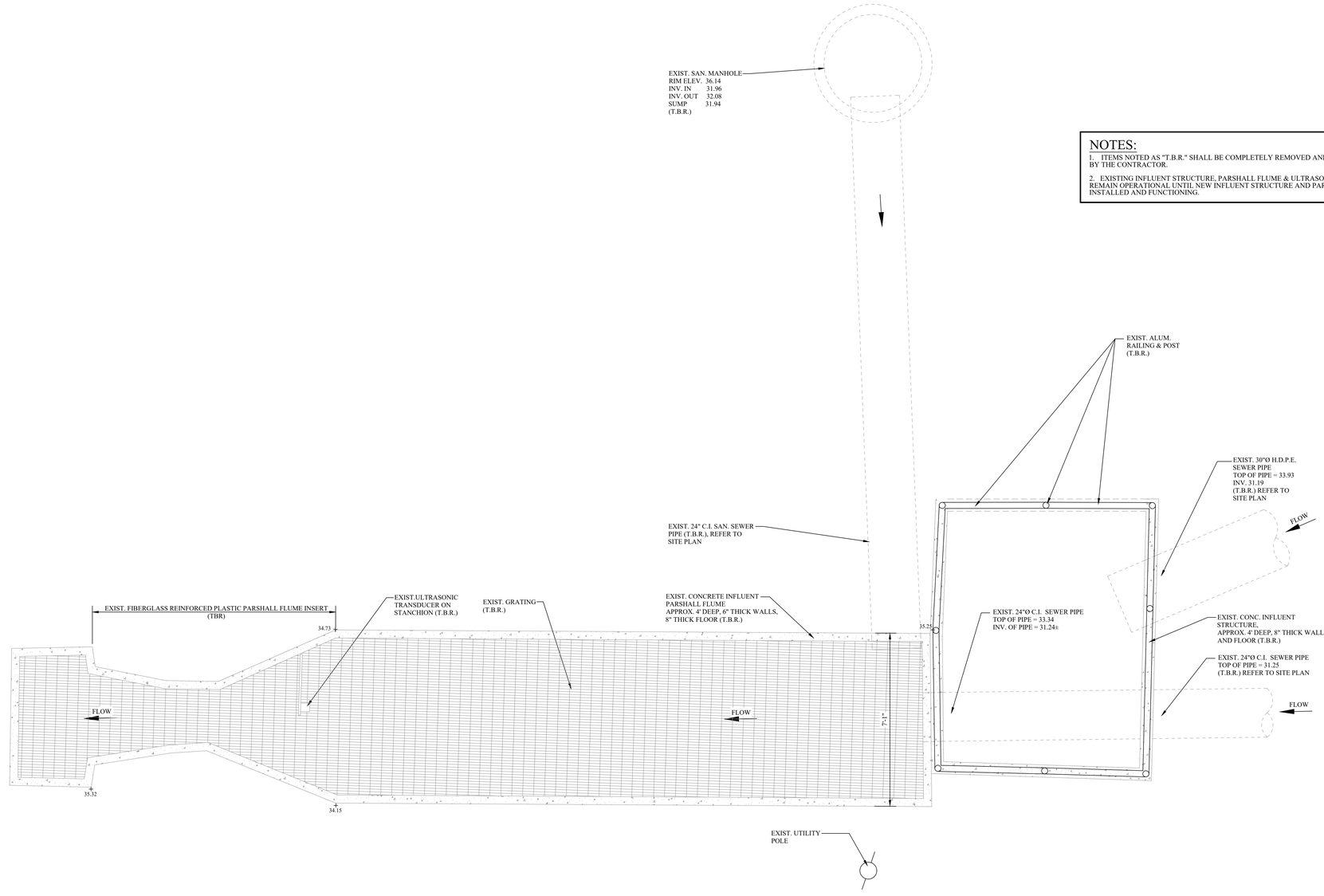

PLAN VIEW

1 CD-201 DEMO / EXISTING INFLUENT STRUCTURE & PARSHALL FLUME PLAN VIEW
SCALE: 1/2" = 1'-0"

NOTES:

1. ITEMS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

2. EXISTING INFLUENT STRUCTURE, PARSHALL FLUME & ULTRASONIC TRANSDUCER TO REMAIN OPERATIONAL UNTIL NEW INFLUENT STRUCTURE AND PARSHALL FLUME ARE INSTALLED AND FUNCTIONING.

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEMO / EXISTING INFLUENT STRUCTURE & PARSHALL FLUME PLAN VIEW

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
CD-201

PROJECT # 18-732 PHASE #

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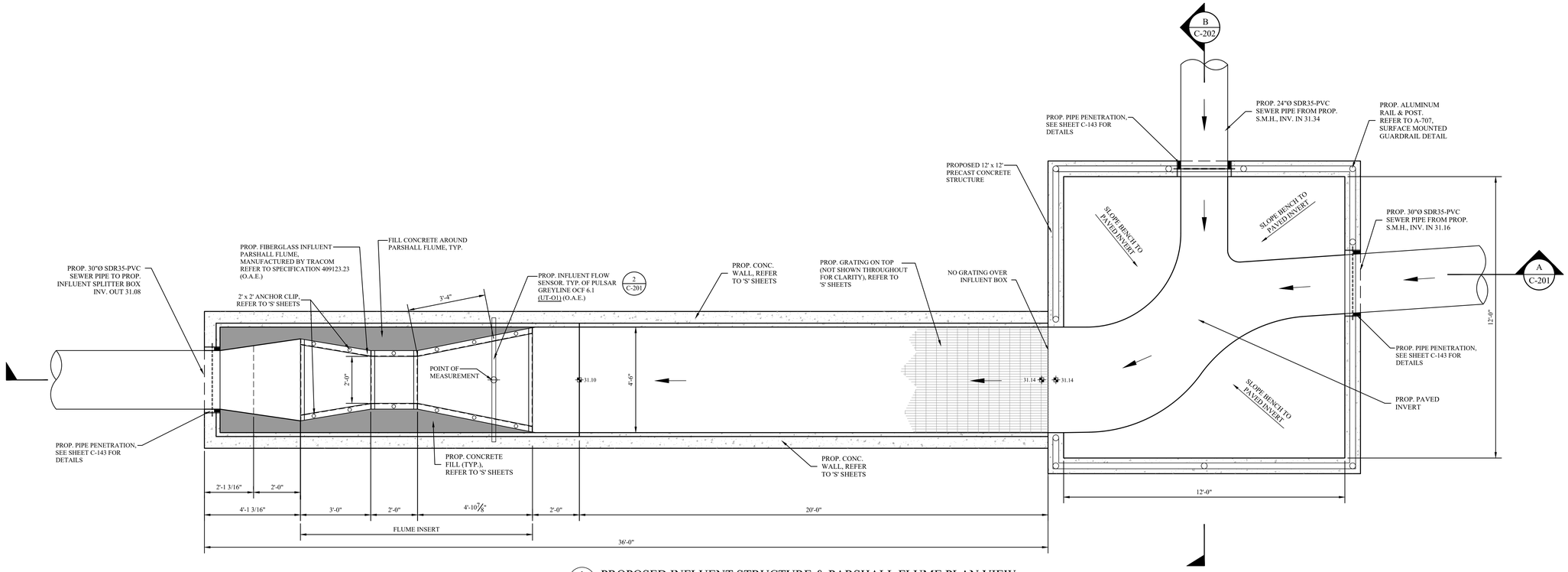
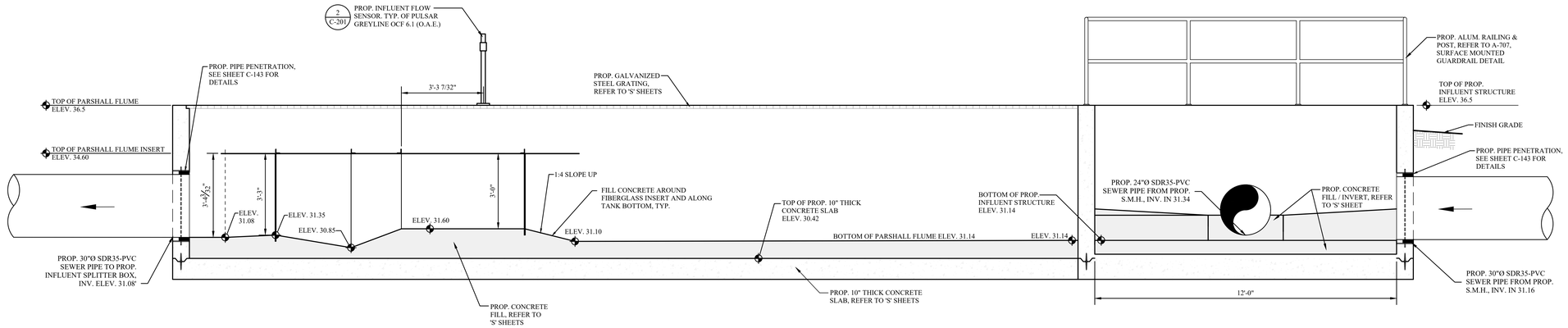
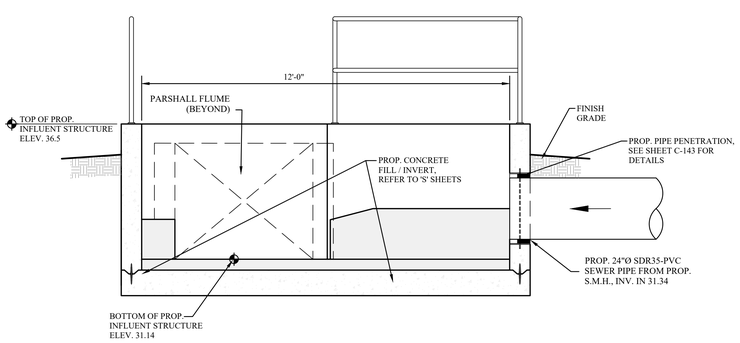


1 C-201 **PROPOSED INFLUENT STRUCTURE & PARSHALL FLUME PLAN VIEW**
SCALE: 1/2" = 1'-0"

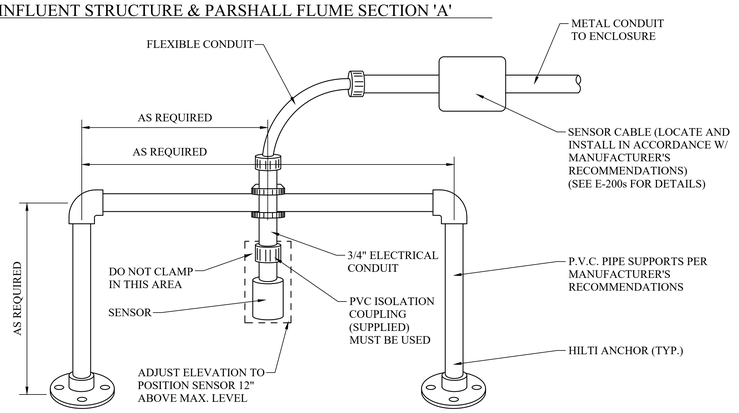


A C-201 **PROPOSED INFLUENT STRUCTURE & PARSHALL FLUME SECTION 'A'**
SCALE: 1/2" = 1'-0"

NOTE:
1. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS OF EXISTING PARSHALL FLUME.



B C-201 **PROPOSED INFLUENT STRUCTURE & PARSHALL FLUME SECTION 'B'**
SCALE: 1/2" = 1'-0"



2 C-201 **ULTRASONIC FLOW SENSOR MOUNTING DETAIL**
SCALE: N.T.S.

NOTE: TAG No: (UT-01), PROVIDED BY AQUALOGICS & CONTRACTOR TO INSTALL

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED INFLUENT STRUCTURE & PARSHALL FLUME PLAN & SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-201

PROJECT # 18-732 PHASE #

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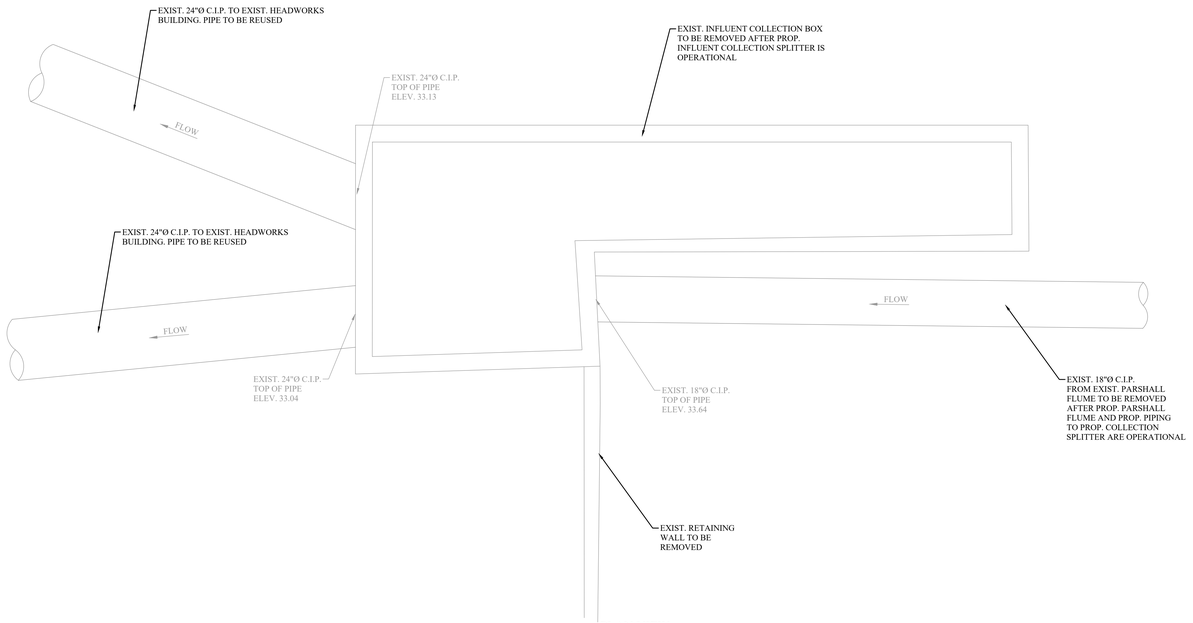
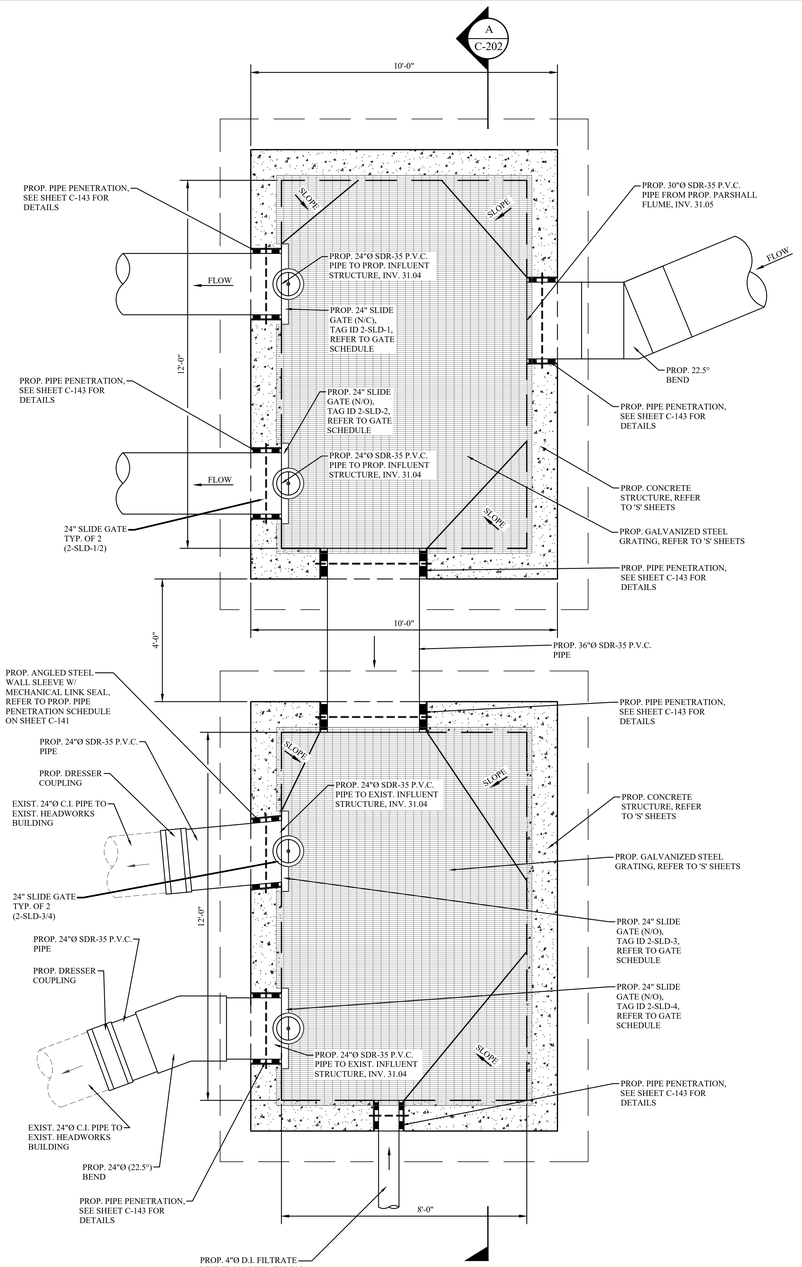


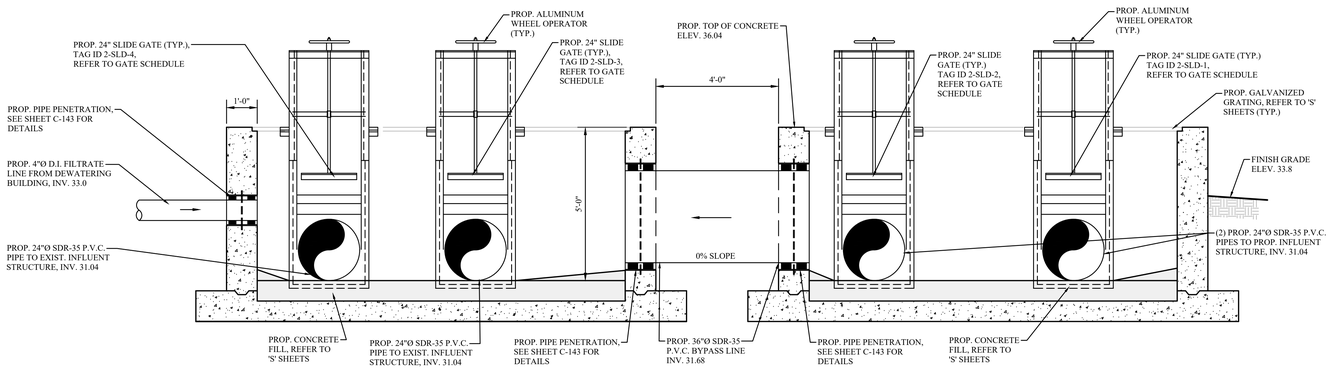
PLAN VIEW

1 / C-202 DEMO INFLUENT COLLECTION BOX / SPLITTER PLAN
SCALE: 1/2" = 1'-0"

NOTE:
1. SEE SHEET C-260 FOR GATE DETAILS & SCHEDULE.



PLAN VIEW



SECTION 'A'

2 / C-202 PROPOSED INFLUENT SPLITTER BOX - PLAN VIEW / SECTION
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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PHASE 2
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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEMO / PROPOSED INFLUENT SPLITTER BOX / SPLITTER AND SEPTAGE HAULING STATION PLAN VIEWS / SECTION

REVISIONS

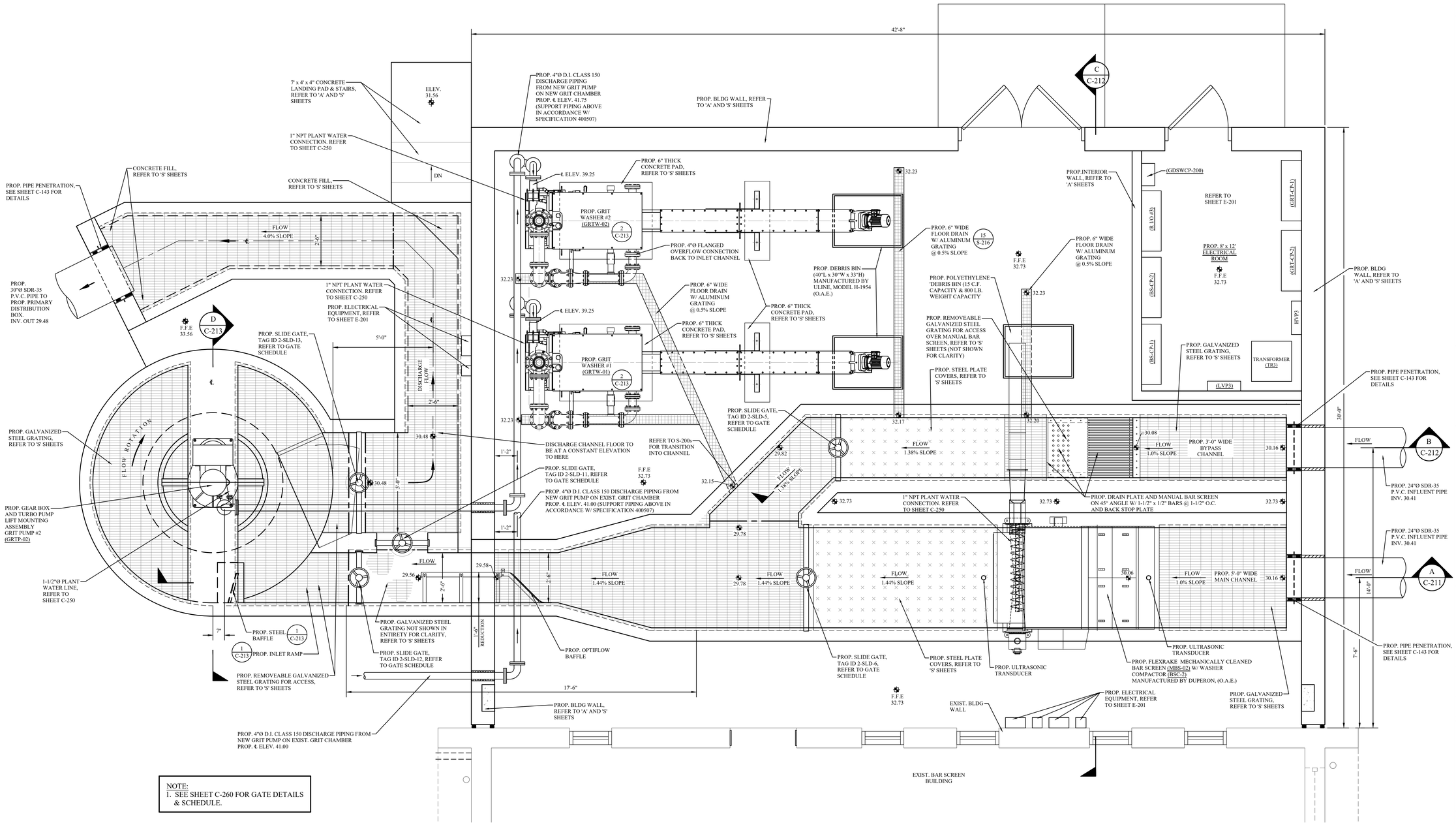
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-202

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\ CIVIL-PROCESS\C-202 - Headworks, Screening, Grit Removal.dwg, C-202, 4/18/2025 11:57:08 AM



NOTE:
1. SEE SHEET C-260 FOR GATE DETAILS & SCHEDULE.

PLAN VIEW

1 / C-210 PROPOSED HEADWORKS BUILDING - PLAN VIEW

SCALE: 1/2" = 1'-0"

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING & GRIT SYSTEM - PLAN VIEW

REVISIONS

NO.	DESCRIPTION	DATE

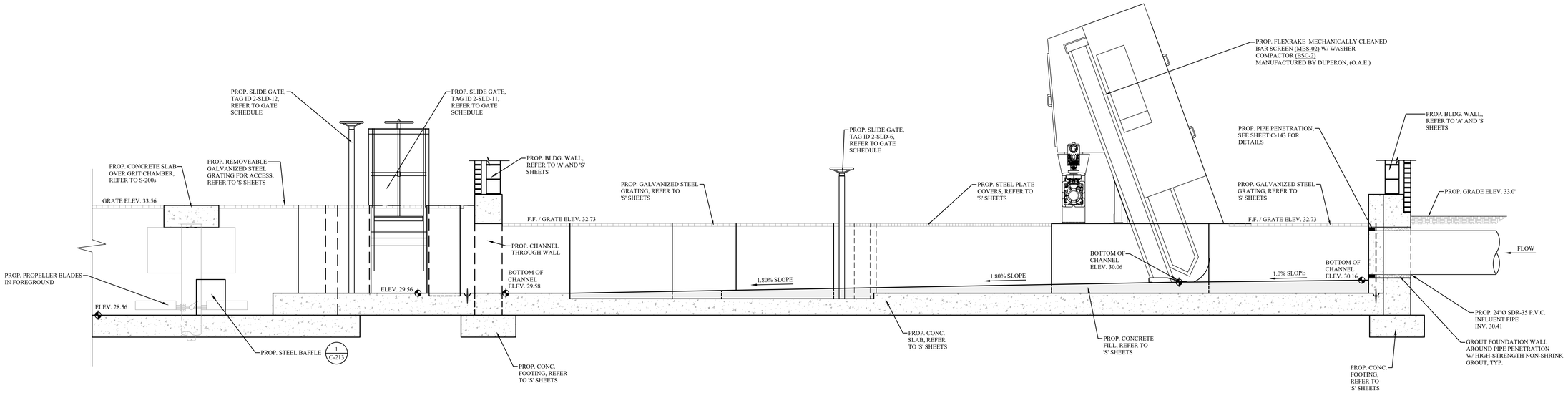
ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-210

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\1 CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, C-210, 4/16/2025 11:57:11 AM



NOTE:
1. SEE SHEET C-260 FOR GATE DETAILS & SCHEDULE.

A / C-211 PROPOSED HEADWORKS BUILDING - SECTION 'A'
SCALE: 1/2" = 1'-0"

ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING & GRIT SYSTEM - SECTION

REVISIONS

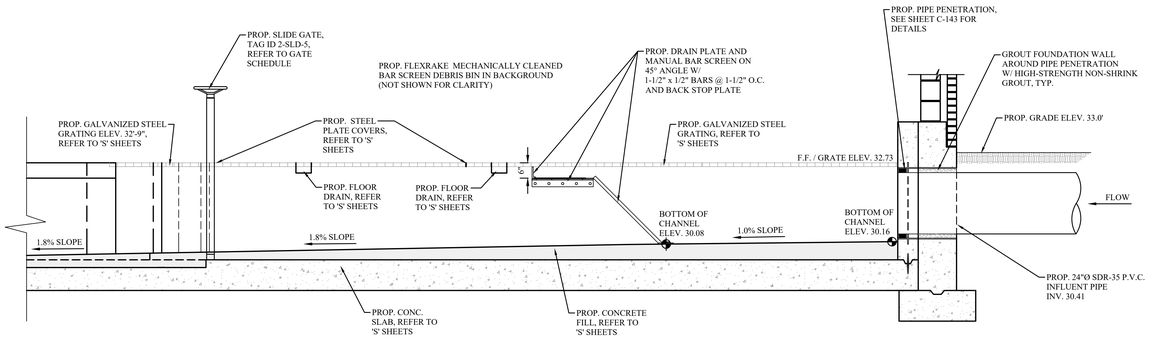
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-211

PROJECT # 18-732 PHASE #

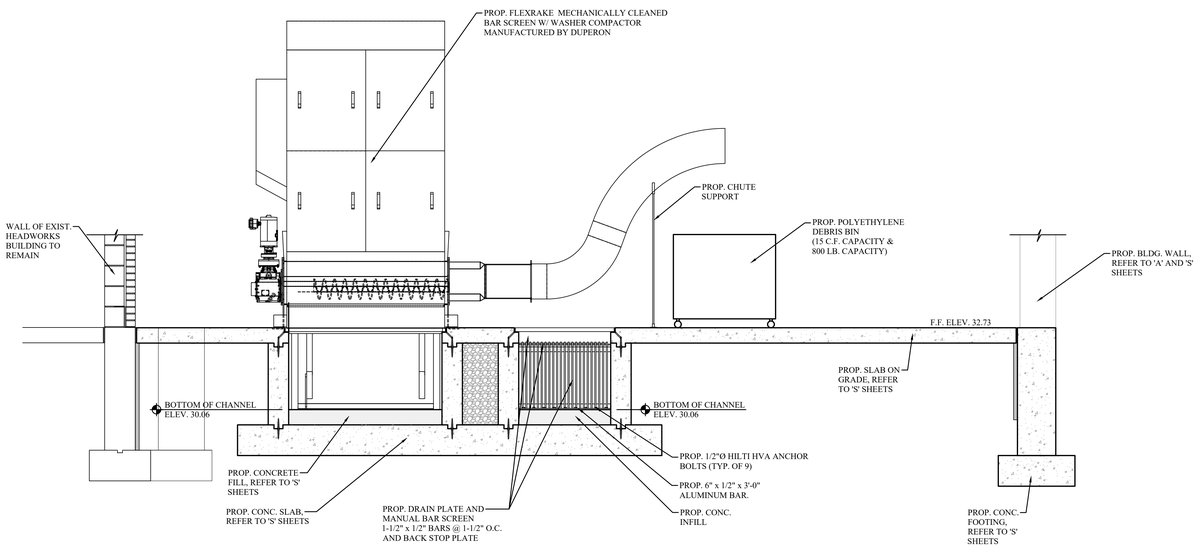
F:\2018\18-732 Caesar Lane WWTP Improvments\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\1 CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, C-211, 4/16/2025 11:57:24 AM



SECTION 'B'

B / C-212 PROPOSED HEADWORKS BUILDING - SECTION 'B'
SCALE: 1/2" = 1'-0"

NOTE:
1. SEE SHEET C-260 FOR GATE DETAILS & SCHEDULE.



SECTION 'C'

C / C-212 PROPOSED HEADWORKS BUILDING - SECTION 'C'
SCALE: 1/2" = 1'-0"

F:\2018\18-732 Caesar Lane WWTP Improvments\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\1 CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, C-212, 4/16/2025 11:57:36 AM

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PROPOSED HEADWORKS BUILDING & GRIT SYSTEM SECTIONS / DETAILS

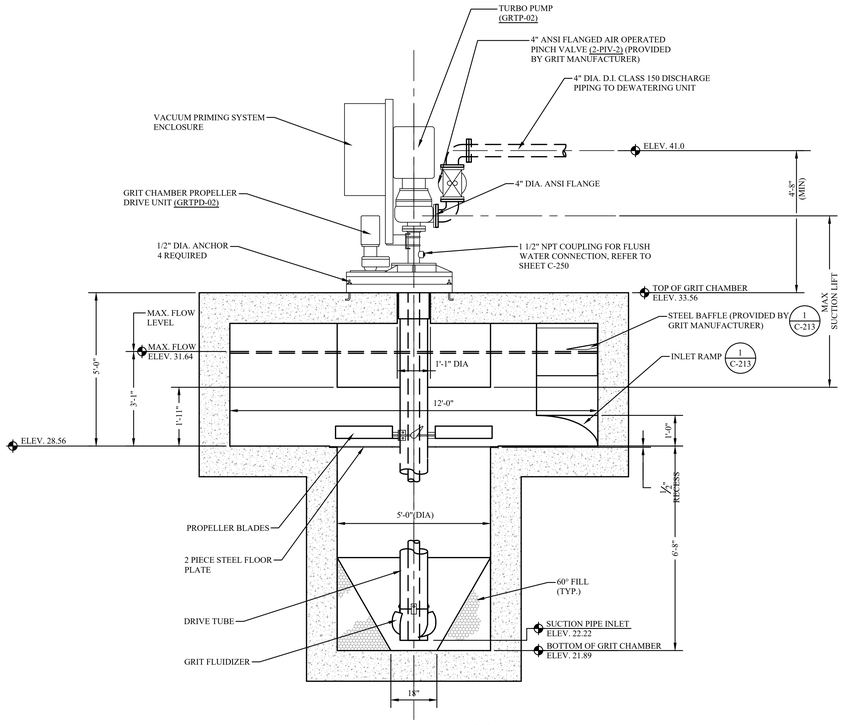
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-212

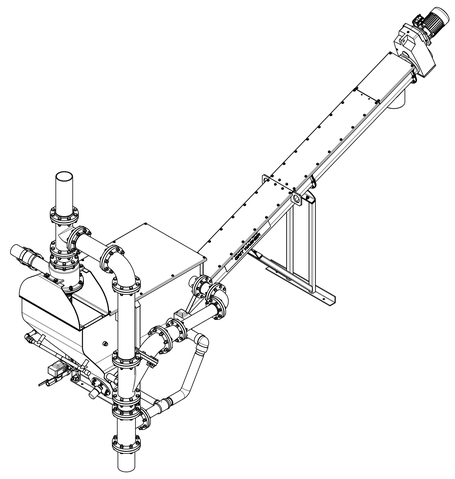
PROJECT # 18-732 PHASE #

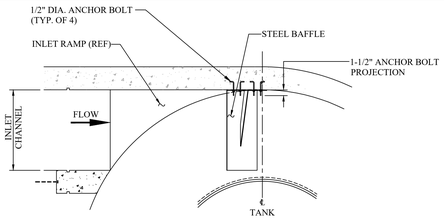


SECTION ELEVATION D-D

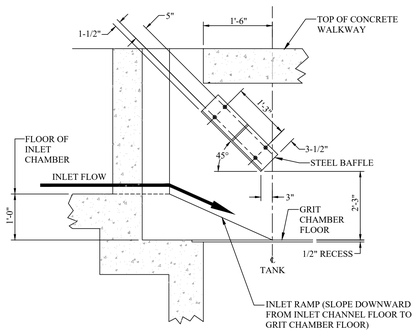
D C-213 PROPOSED GRIT CHAMBER SECTION 'D'

SCALE: 1/2" = 1'-0"





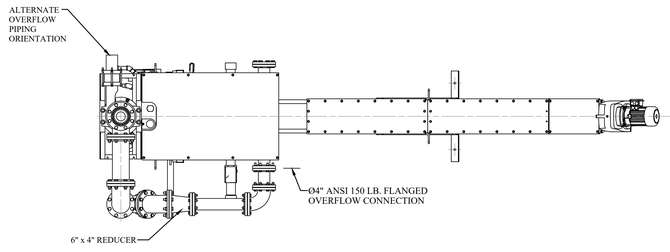
INLET RAMP CUTAWAY PLAN VIEW



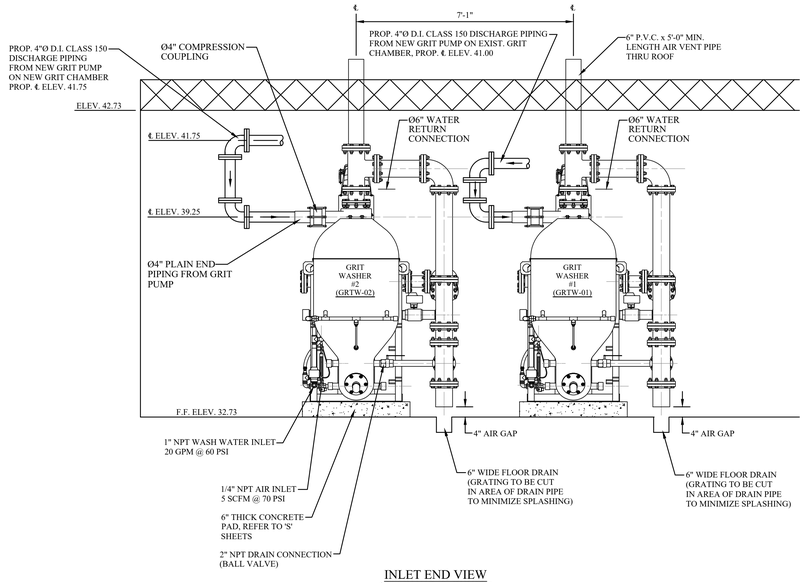
INLET RAMP CUTAWAY ELEVATION VIEW

1 C-213 PROPOSED INLET RAMP / BAFFLE DETAIL

SCALE: N.T.S.



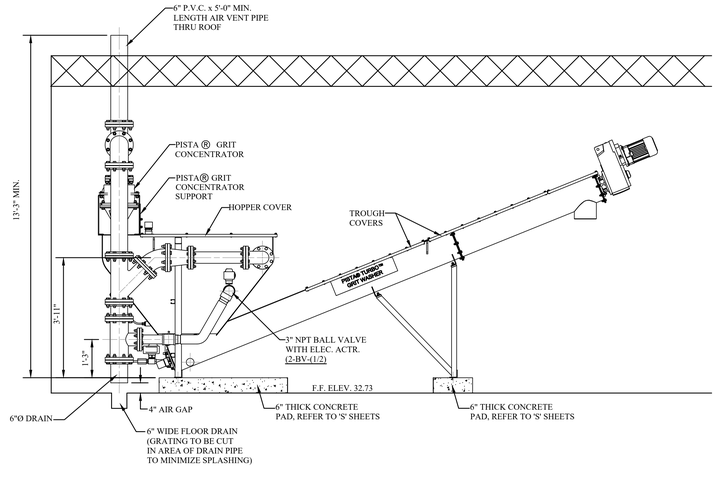
PLAN VIEW
(WASHER & PIPING



INLET END VIEW
(WASHER & PIPING

2 C-213 GRIT WASHER DETAIL

SCALE: N.T.S.



ELEVATION VIEW
(WASHER & PIPING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED GRIT CHAMBER SECTION & DETAILS & GRIT WASHER DETAIL

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-213

PROJECT # 18-732 PHASE #

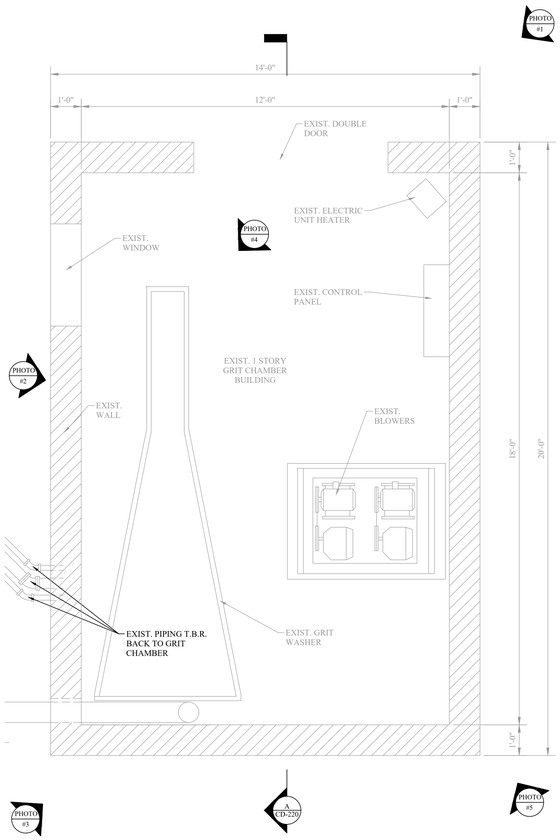
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\1 CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, C-213, 4/18/2025 11:57:56 AM



1 CD-220 PHOTO #1
SCALE: N.T.S.



2 CD-220 PHOTO #2
SCALE: N.T.S.



PLAN VIEW

1 CD-220 EXISTING GRIT CLASSIFIER BUILDING - FLOOR PLAN
SCALE: 1/2" = 1'-0"

NOTES:

1. ENTIRE BUILDING AND ADJOINING SITE FEATURES (ie. ENTRY RAMP, RAILINGS, ETC.) TO BE DEMOLISHED AND PROPERLY DISPOSED OF.
2. EXISTING BUILDING IS A ONE STORY STRUCTURE WITH C.M.U. BEARING WALLS, PRECAST CONC. ROOF PLANKS WITH AN ASPHALT BASED LOW SLOPE ROOF AND FLASHING.
3. SEE ASBESTOS & LEAD PAINT TEST REPORT AND COORDINATE ALL PROPOSED DEMOLITION WITH ASBESTOS & LEAD PAINT ABATEMENT WORK.
4. DIMENSIONS AND EQUIPMENT LOCATIONS SHOWN ARE BASED ON AVAILABLE HISTORICAL PLANS (1986 AS-BUILT PLAN SHEETS).
5. SEE E-SHEETS FOR ELECTRICAL DEMOLITION DETAILS.



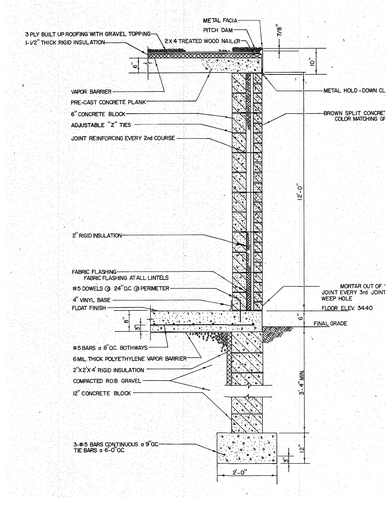
3 CD-220 PHOTO #3
SCALE: N.T.S.



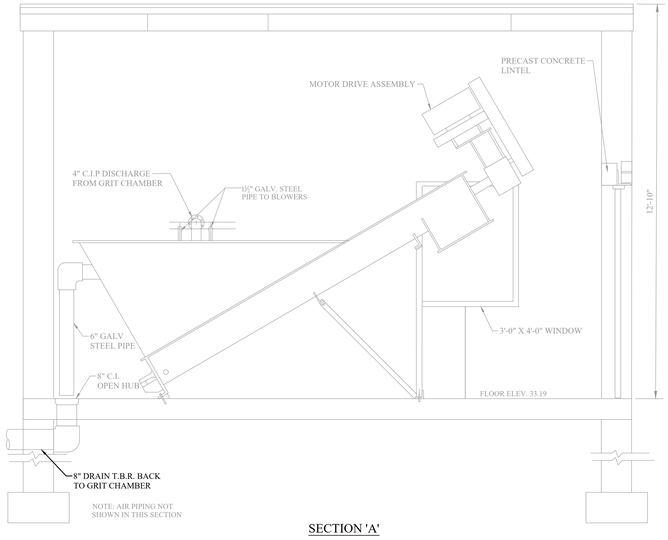
4 CD-220 INTERIOR PHOTO
SCALE: N.T.S.



5 CD-220 ROOF PHOTO
SCALE: N.T.S.



1 CD-220 EXISTING TYPICAL WALL SECTION
SCALE: N.T.S.



SECTION 'A'

A CD-220 EXISTING GRIT CLASSIFIER BUILDING - SECTION 'A'
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING GRIT CLASSIFIER BUILDING DEMOLITION PLAN

REVISIONS

NO.	DESCRIPTION	DATE

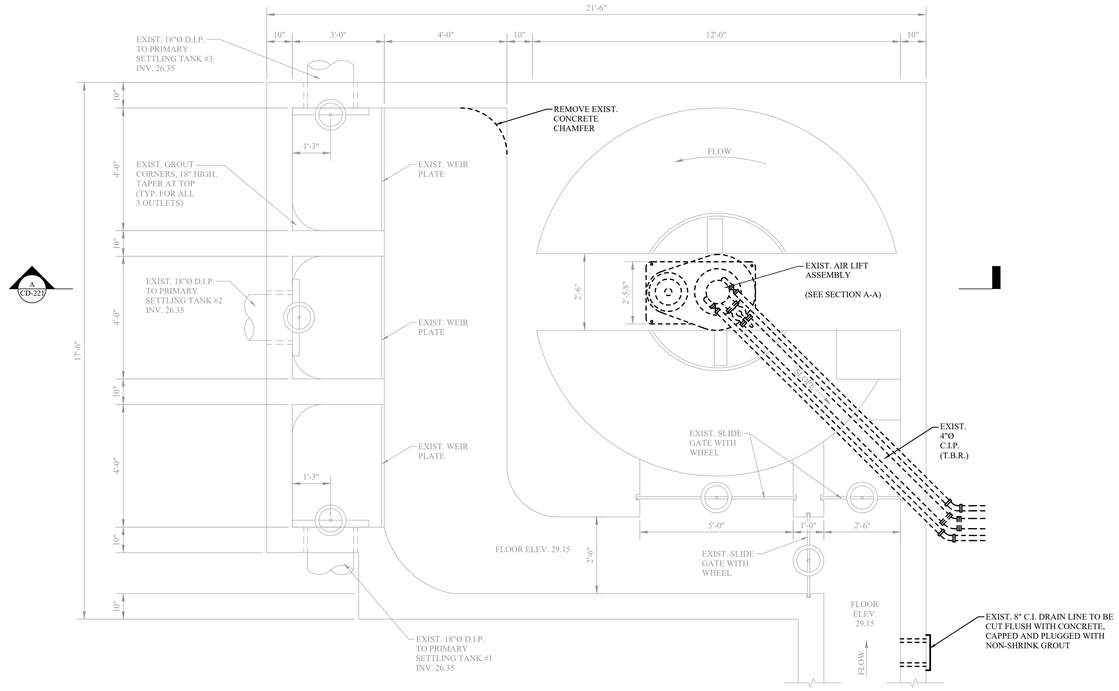
ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

CD-220

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\1 CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, CD-220, 4/18/2025 11:58:13 AM

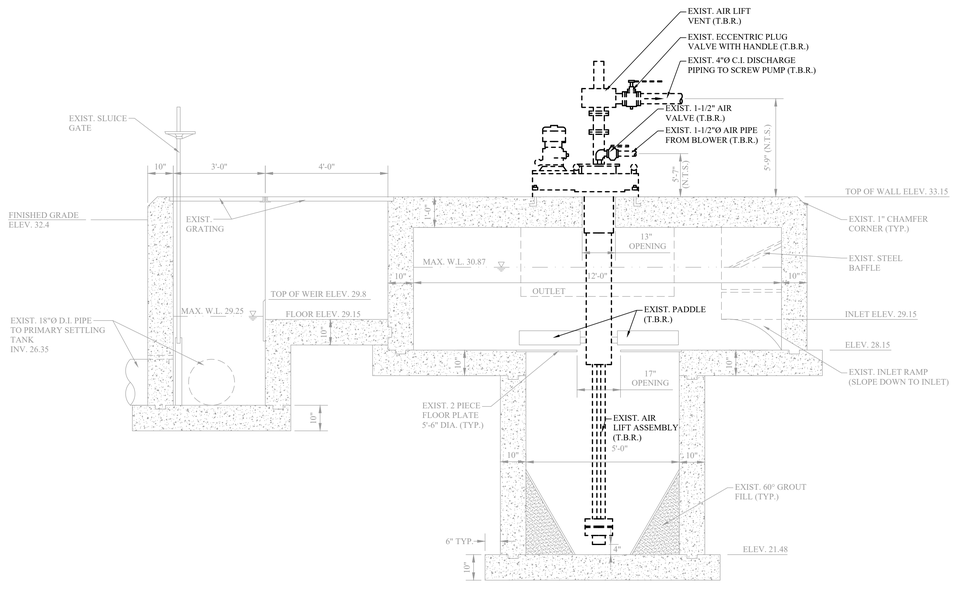


A
CD-221

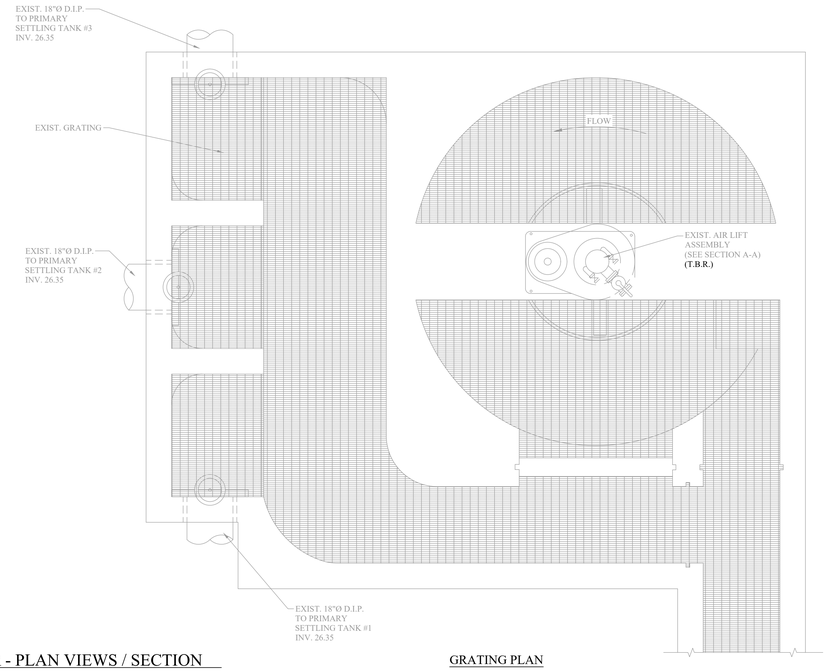
PLAN VIEW

NOTE:

1. ITEMS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.



SECTION 'A'



GRATING PLAN

1 CD-221 EXISTING / DEMO GRIT CHAMBER - PLAN VIEWS / SECTION
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
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(570) 296-2765

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING / DEMO GRIT CHAMBER - PLAN VIEWS / SECTION

REVISIONS

NO.	DESCRIPTION	DATE

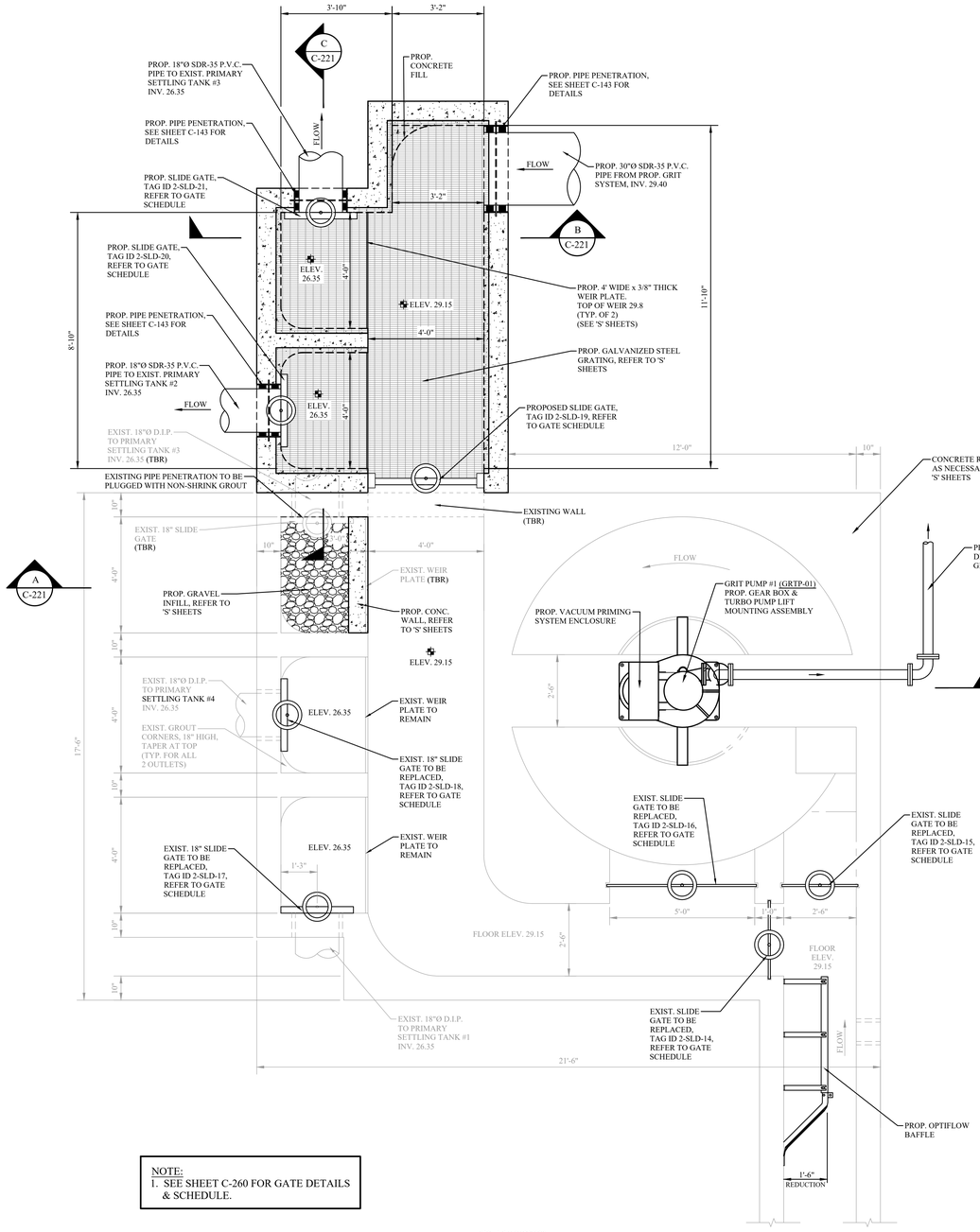
ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

CD-221

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\1 CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, CD-221, 4/18/2025 11:58:17 AM



NOTE:
1. SEE SHEET C-260 FOR GATE DETAILS & SCHEDULE.

PLAN VIEW

1 C-220 EXISTING GRIT CHAMBER MODIFICATIONS & PROPOSED PRIMARY DISTRIBUTION BOX - PLAN VIEW
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING GRIT CHAMBER MODIFICATIONS & PRIMARY DISTRIBUTION BOX PLAN VIEW

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

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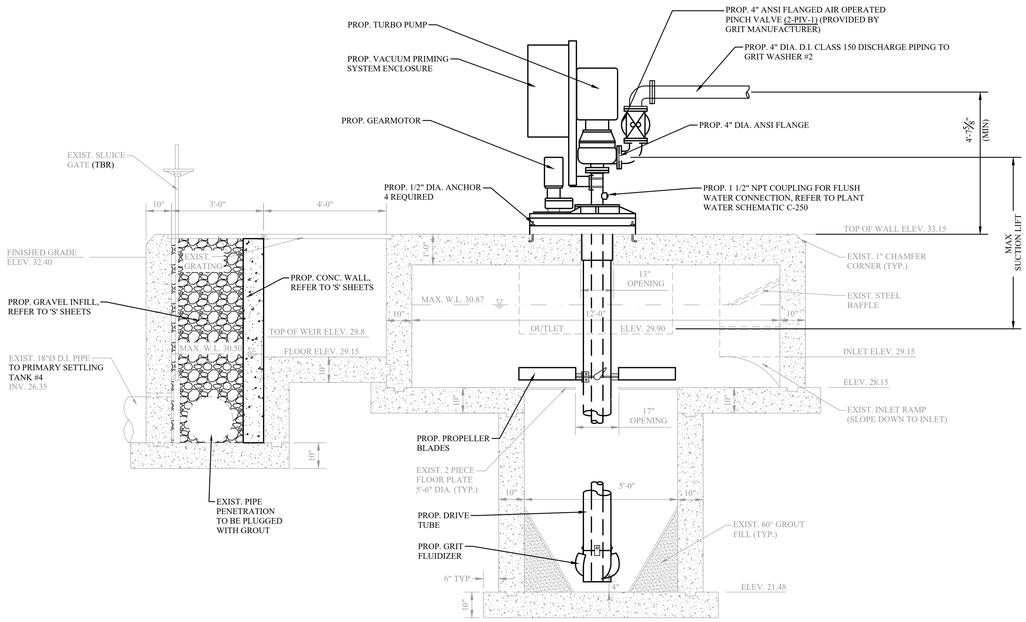
C-220

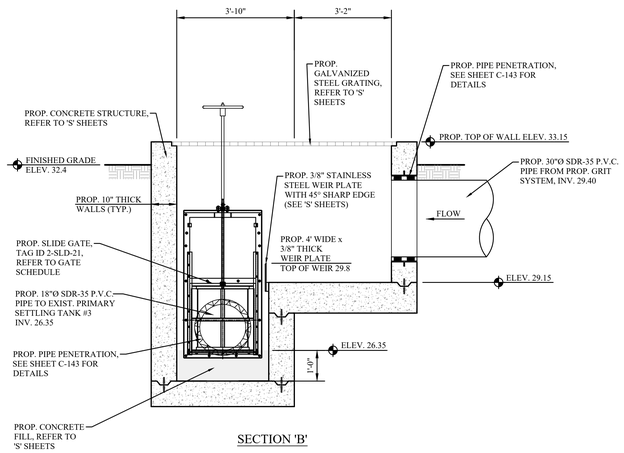
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\ CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, C-220, 4/18/2025 11:30:21 AM



SECTION 'A'

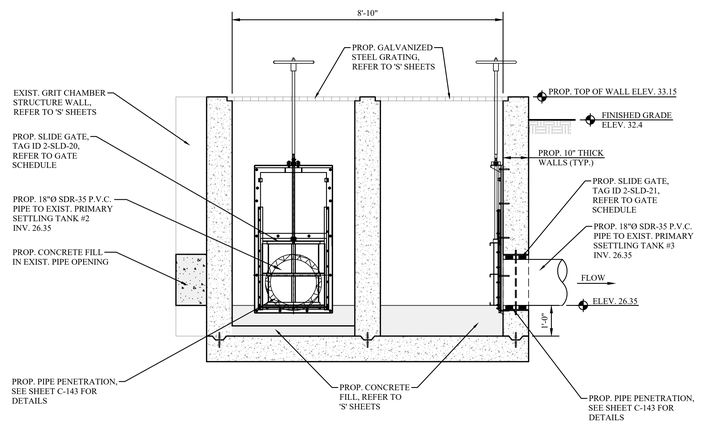
A C-221 EXISTING GRIT CHAMBER MODIFICATIONS - SECTION 'A'
SCALE: 1/2" = 1'-0"



SECTION 'B'

B C-221 PROPOSED PRIMARY DISTRIBUTION BOX - PLAN VIEW / SECTION 'B'
SCALE: 1/2" = 1'-0"

NOTE:
1. SEE SHEET C-260 FOR GATE DETAILS & SCHEDULE.



SECTION 'C'

C C-221 PROPOSED PRIMARY DISTRIBUTION BOX - PLAN VIEW / SECTION 'C'
SCALE: 1/2" = 1'-0"

1 C-221 EXISTING GRIT CHAMBER MODIFICATIONS & PROPOSED PRIMARY DISTRIBUTION BOX - SECTION VIEWS
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
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Milford, PA 18337
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING GRIT CHAMBER MODIFICATIONS & PRIMARY DISTRIBUTION BOX SECTIONS / DETAILS

REVISIONS

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ISSUED DATE:	18 APR, 2025
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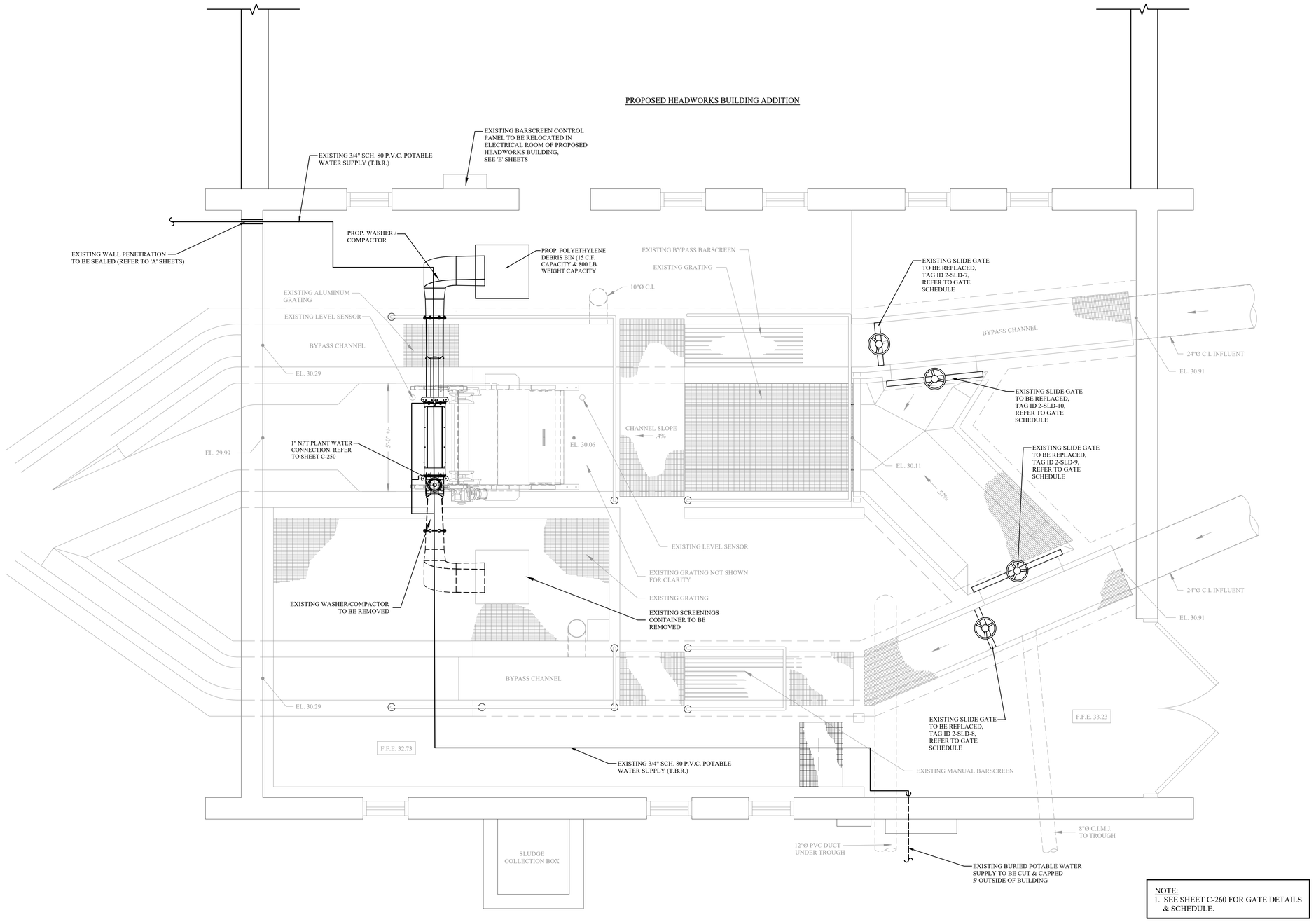
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvments\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\1 CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, C-221, 4/16/2025 11:38:27 AM

PROPOSED HEADWORKS BUILDING ADDITION



NOTE:
1. SEE SHEET C-260 FOR GATE DETAILS & SCHEDULE.

PLAN VIEW

1 / C-240 EXISTING HEADWORKS BUILDING MODIFICATIONS PLAN
SCALE: 1/2" = 1'-0"

ENGINEERING

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New Windsor, NY 12553
(845) 567-3100

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Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING HEADWORKS BUILDING MODIFICATIONS PLAN

REVISIONS

NO.	DESCRIPTION	DATE

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CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

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PROJECT # 18-732 PHASE #

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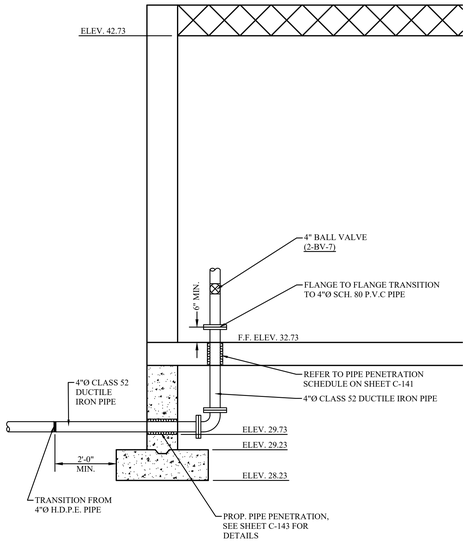
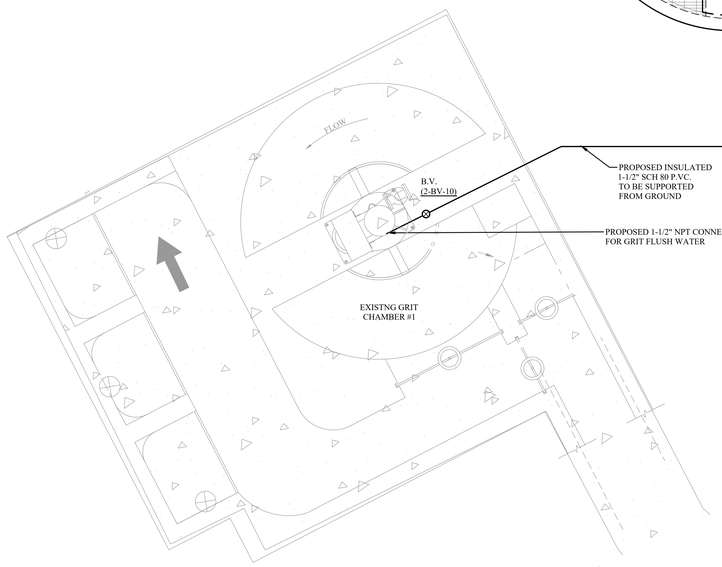
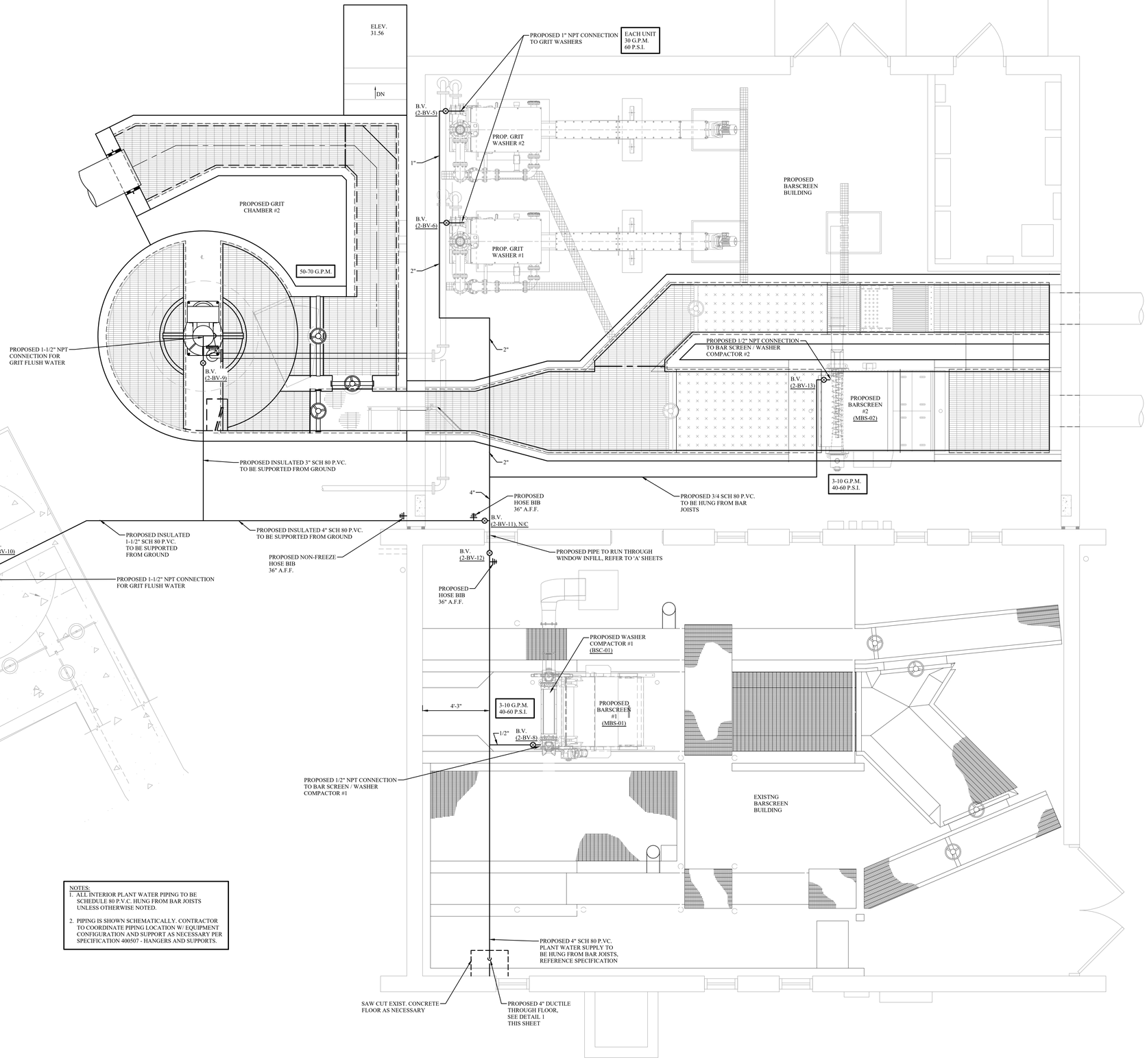


1 C-250 PLANT WATER FLOOR PENETRATION DETAIL
SCALE: 1/2" = 1'-0"



NOTES:
1. ALL INTERIOR PLANT WATER PIPING TO BE SCHEDULE 80 P.V.C. HUNG FROM BAR JOISTS UNLESS OTHERWISE NOTED.
2. PIPING IS SHOWN SCHEMATICALLY. CONTRACTOR TO COORDINATE PIPING LOCATION W/ EQUIPMENT CONFIGURATION AND SUPPORT AS NECESSARY PER SPECIFICATION 400507 - HANGERS AND SUPPORTS.



2 C-250 PROPOSED HEADWORKS PLANT WATER SUPPLY - PLAN VIEW
SCALE: 3/8" = 1'-0"

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EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS PLANT WATER SUPPLY - PLAN VIEW

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-250

PROJECT # 18-732 PHASE #

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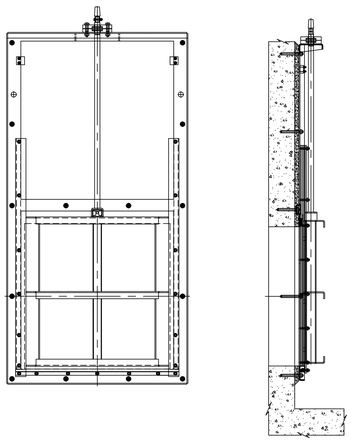
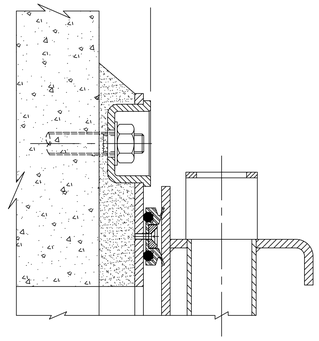
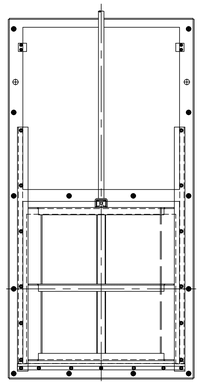
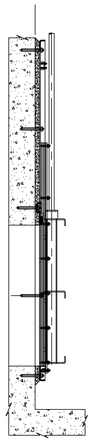


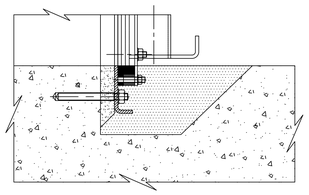


2 C-260 PROJECTION OF TOP ANCHOR FASTENERS
SCALE: N.T.S.

1 C-260 SERIES A-112 SELF CONTAINED CONVENTIONAL CLOSURE STAINLESS STEEL SLIDE GATE DETAIL
SCALE: N.T.S.

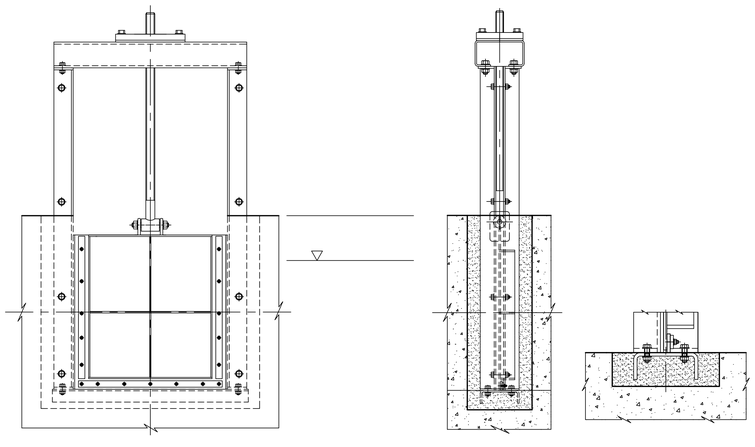




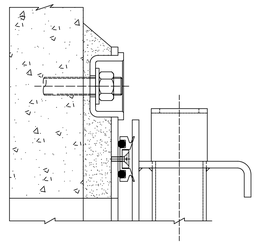


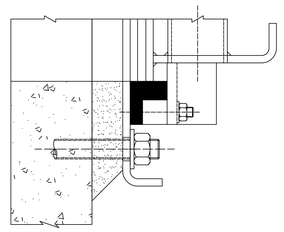
4 C-260 FLUSH BOTTOM CLOSURE DETAIL
SCALE: N.T.S.

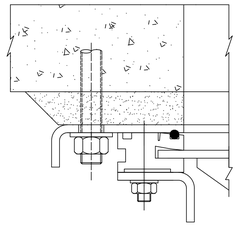
3 C-260 SERIES A-112 NON SELF CONTAINED CONVENTIONAL CLOSURE STAINLESS STEEL SLIDE GATE DETAIL
SCALE: N.T.S.



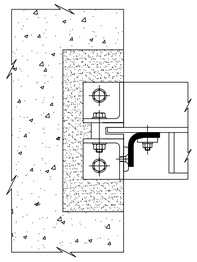
5 C-260 SERIES A-211 SIDE WALL EMBEDDED OPEN CHANNEL STAINLESS STEEL SLIDE GATE DETAIL
SCALE: N.T.S.







7 C-260 SERIES A-112 HARSA RIGID SEALING SYSTEM
SCALE: N.T.S.



9 C-260 SERIES A-211 EASY SLIDE RESILIENT SIDE SEALING ARRANGEMENT DETAIL
SCALE: N.T.S.

	PROJECT LOCATION	ASSOC. EQUIP.	INVERT ELEVATION (FT)	TOP OF WALL ELEVATION (FT)	OPENING WIDTH (IN)	OPENING HEIGHT (IN)	WATER LEVEL (FT)	RODNEY HUNT GATE SERIES	SELF-CONTAINED / NON SELF-CONTAINED (SC / NSC)	SURFACE/ WALL-FACE (S/WF) SIDE-WALL-EMBEDDED (SWE)	PEDESTAL MOUNT (P) / YOKE MOUNT (Y)	CLOSURE: CONVENTIONAL (C) / FLUSH-BOTTOM (FB)	EXTENDED BACK FLANGE (Y/N)	TAG ID
1	INFLUENT SPLITTER BOX	TO 24" SDR35 PVC	31.04	36.04	24	24	31.67	A-112	NSC	S/WF	P	FB	Y	2-SLD-1
2	INFLUENT SPLITTER BOX	TO 24" SDR35 PVC	31.04	36.04	24	24	31.67	A-112	NSC	S/WF	P	FB	Y	2-SLD-2
3	INFLUENT SPLITTER BOX	TO 24" SDR35 PVC	31.04	36.04	24	24	31.67	A-112	NSC	S/WF	P	FB	Y	2-SLD-3
4	INFLUENT SPLITTER BOX	TO 24" SDR35 PVC	31.04	36.04	24	24	31.67	A-112	NSC	S/WF	P	FB	Y	2-SLD-4
5	PROPOSED HEADWORKS BUILDING	MANUAL BAR SCREEN	29.874	32.73	36	32	31.46	A-211	SC	SWE	Y	FB	N	2-SLD-5
6	PROPOSED HEADWORKS BUILDING	MECH. BAR SCREEN	29.83	32.73	60	32	31.46	A-211	SC	SWE	Y	FB	N	2-SLD-6
7	EXISTING HEADWORKS BUILDING (REPLACE)	BYPASS CHANNEL BYPASS BARSCREEN	30.75	32.73	24	32	31.46	A-211	SC	SWE	Y	FB	N	2-SLD-7
8	EXISTING HEADWORKS BUILDING (REPLACE)	BYPASS CHANNEL MANUAL BARSCREEN	30.15	32.73	48	32	31.46	A-211	SC	SWE	Y	FB	N	2-SLD-8
9	EXISTING HEADWORKS BUILDING (REPLACE)	BYPASS CHANNEL WASHER COMPACTOR	30.15	32.73	48	32	31.46	A-211	SC	SWE	Y	FB	N	2-SLD-9
10	EXISTING HEADWORKS BUILDING (REPLACE)	BYPASS CHANNEL WASHER COMPACTOR	30.75	32.73	24	32	31.46	A-211	SC	SWE	Y	FB	N	2-SLD-10
11	PROPOSED GRIT SYSTEM	GRIT CHAMBER BYPASS	29.56	33.56	30	30	31.64	A-211	SC	SWE	Y	FB	N	2-SLD-11
12	PROPOSED GRIT SYSTEM	GRIT CHAMBER BYPASS	29.56	33.56	30	30	31.64	A-211	SC	SWE	Y	FB	N	2-SLD-12
13	PROPOSED GRIT SYSTEM	GRIT CHAMBER BYPASS	29.56	33.56	60	30	31.64	A-211	SC	SWE	Y	FB	N	2-SLD-13
14	EXISTING GRIT SYSTEM	GRIT CHAMBER BYPASS	29.15	33.15	30	36	31.25	A-211	SC	SWE	Y	FB	N	2-SLD-14
15	EXISTING GRIT SYSTEM	GRIT CHAMBER BYPASS	29.15	33.15	30	36	31.25	A-211	SC	SWE	Y	FB	N	2-SLD-15
16	EXISTING GRIT SYSTEM	GRIT CHAMBER BYPASS	29.15	33.15	60	36	31.25	A-211	SC	SWE	Y	FB	N	2-SLD-16
17	EXIST. DISTRIBUTION BOX	18" DIP TO SETTLING TANK 1	26.35	33.15	18	18	28.04	A-112	NSC	S/WF	P	FB	Y	2-SLD-17
18	EXIST. DISTRIBUTION BOX	18" DIP TO SETTLING TANK 4	26.35	33.15	18	18	28.04	A-112	NSC	S/WF	P	FB	Y	2-SLD-18
19	PROP. DISTRIBUTION BOX	OLD DIST BOX TO NEW DIST. BOX	29.15	33.15	48	18	30.41	A-211	SC	SWE	Y	FB	N	2-SLD-19
20	PROP. DISTRIBUTION BOX	18" SDR35 TO SETTLING TANK 2	26.35	33.15	18	18	28.04	A-112	NSC	S/WF	P	FB	Y	2-SLD-20
21	PROP. DISTRIBUTION BOX	18" SDR35 TO SETTLING TANK 3	26.35	33.15	18	18	28.04	A-112	NSC	S/WF	P	FB	Y	2-SLD-21

1. SEE SPECIFICATION 400559.23 STAINLESS STEEL GATES FOR MORE INFORMATION SUCH AS DIMENSIONS, GATE TYPE, RIM PULL, MOUNTING, OPTIONAL FEATURES AND GATE SCHEDULE.
2. BASIS OF DESIGN FROM RODNEY HUNT. CONTRACTOR MAY SUPPLY EQUAL AS APPROVED BY THE ENGINEER.
3. MANUFACTURER SHALL SUPPLY ALL ANCHORS, FASTENERS, HARDWARE, ETC.

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33 Airport Center Drive, Suite 202
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS GATE DETAILS AND SCHEDULE

REVISIONS

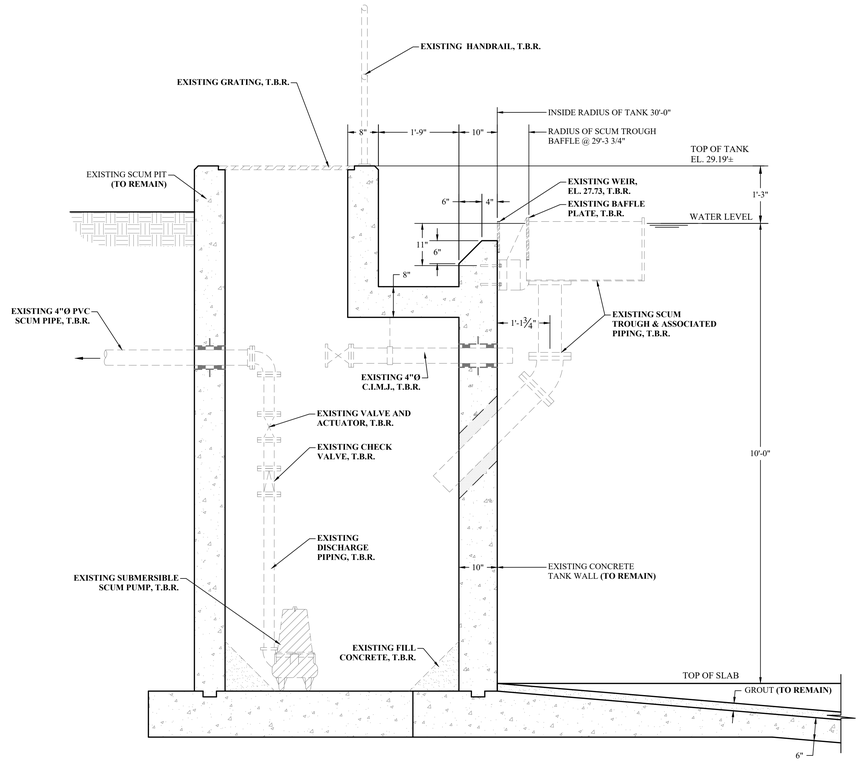
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-260

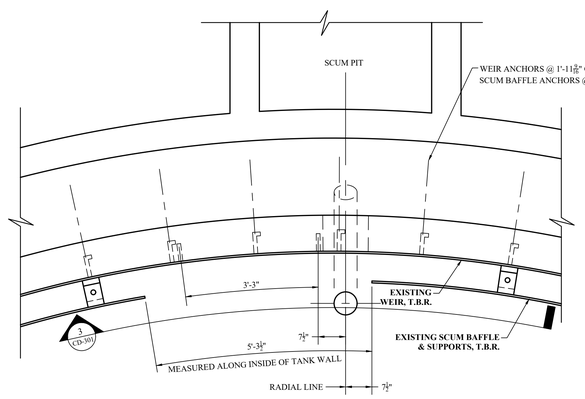
PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\ CIVIL-PROCESS\2 - Headworks, Screening, Grit Removal.dwg, C-260, 4/18/2025 11:58:45 AM



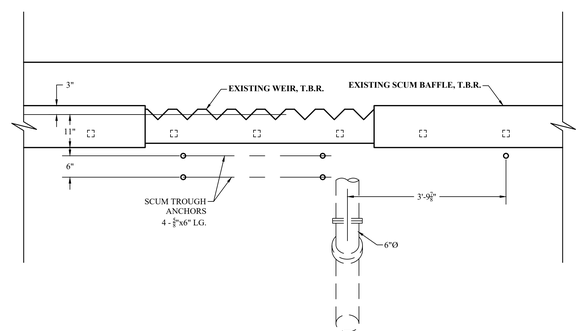
2 / CD-301 PRIMARY SETTLING TANK DEMOLITION SECTION THRU SCUM PIT & TROUGH

SCALE: 3/4" = 1'-0"



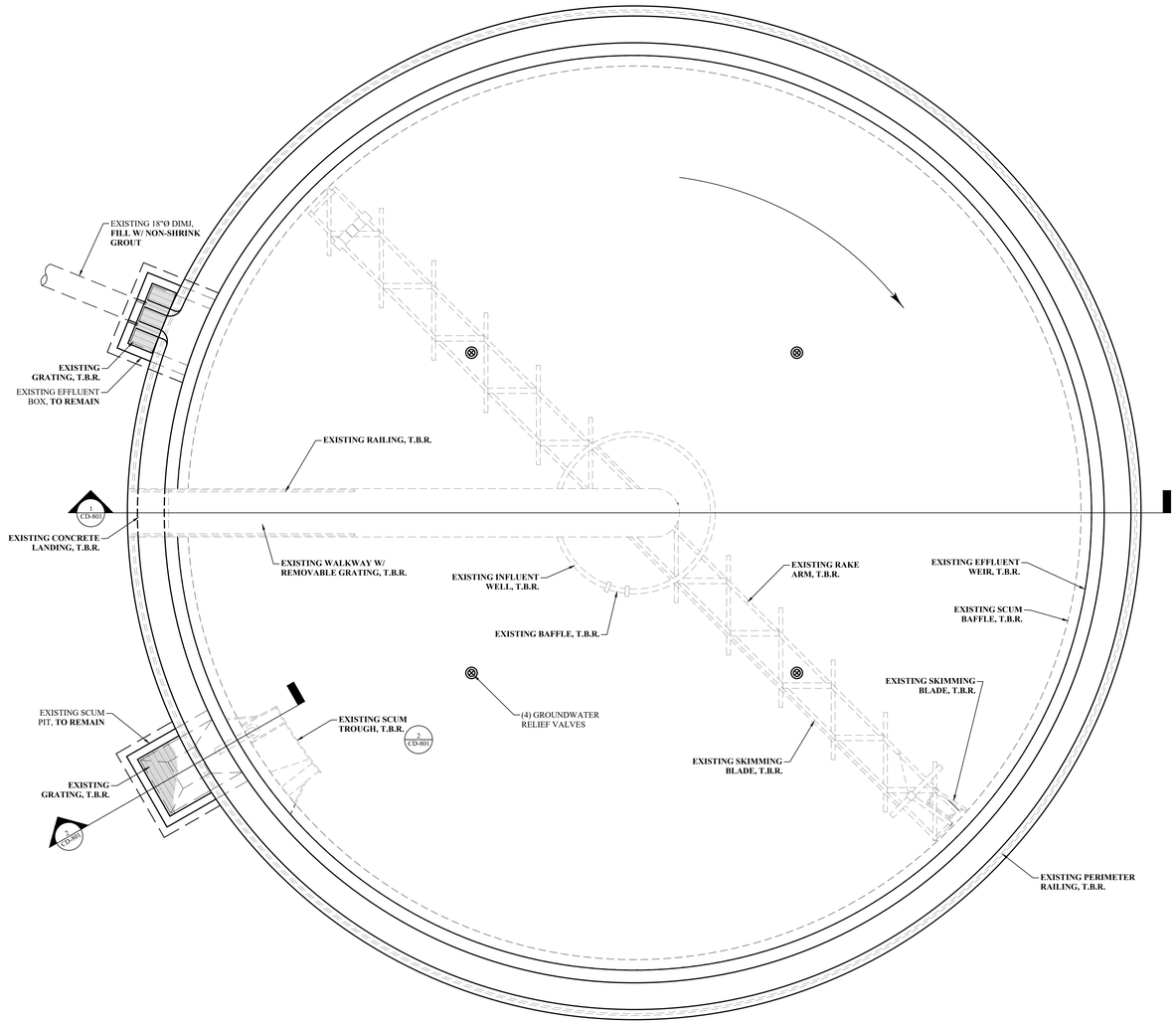
B / CD-301 EXISTING SCUM TROUGH AND BAFFLE PLAN

SCALE: NONE



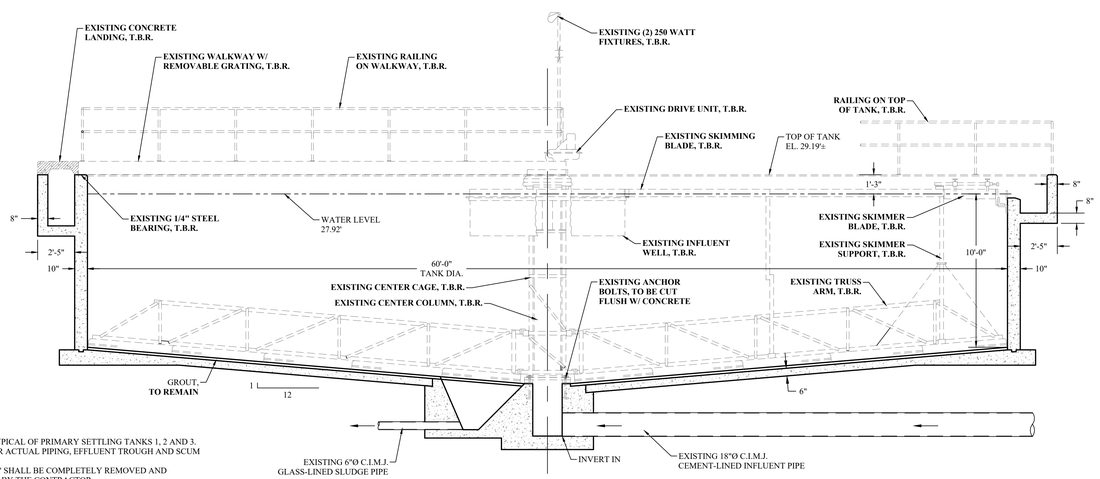
3 / CD-301 EXISTING SCUM TROUGH AND BAFFLE ELEVATION

SCALE: NONE



A / CD-301 EXISTING PRIMARY SETTLING TANK DEMOLITION PLAN (TYP. OF 3)

SCALE: 1/4" = 1'-0"



1 / CD-301 EXISTING PRIMARY SETTLING TANK DEMOLITION ELEVATION - SECTION (TYP. OF 3)

SCALE: 1/4" = 1'-0"

NOTES:

1. DEMOLITION PLAN IS TYPICAL OF PRIMARY SETTLING TANKS 1, 2 AND 3.
2. REFER TO SITE PLAN FOR ACTUAL PIPING, EFFLUENT TROUGH AND SCUM PIT ORIENTATION.
3. ITEMS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
4. CONTRACTOR TO CONFIRM DIMENSIONS AND LAYOUT OF WEIR & SCUM BAFFLES INCLUDING ANCHOR LOCATIONS. CONTRACTOR TO COORDINATE WITH EQUIPMENT MANUFACTURER PRIOR TO FURNISH & INSTALLATION.
5. CONTRACTOR IS RESPONSIBLE FOR DEWATERING AND CLEANING OF TANK PRIOR TO INSTALLATION OF NEW EQUIPMENT. CONTRACTOR SHALL COORDINATE WITH THE OPERATOR AND ENGINEER PRIOR TO DEMOLITION OR DEWATERING.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING PRIMARY SETTLING TANK EQUIPMENT DEMOLITION PLAN AND SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

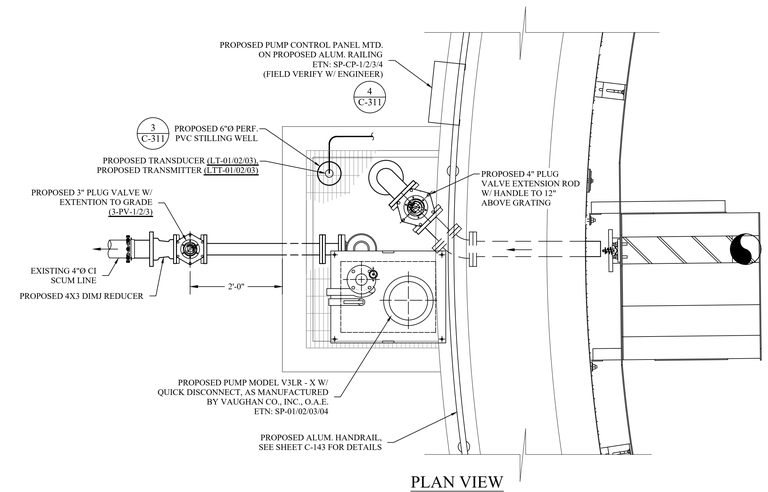
ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

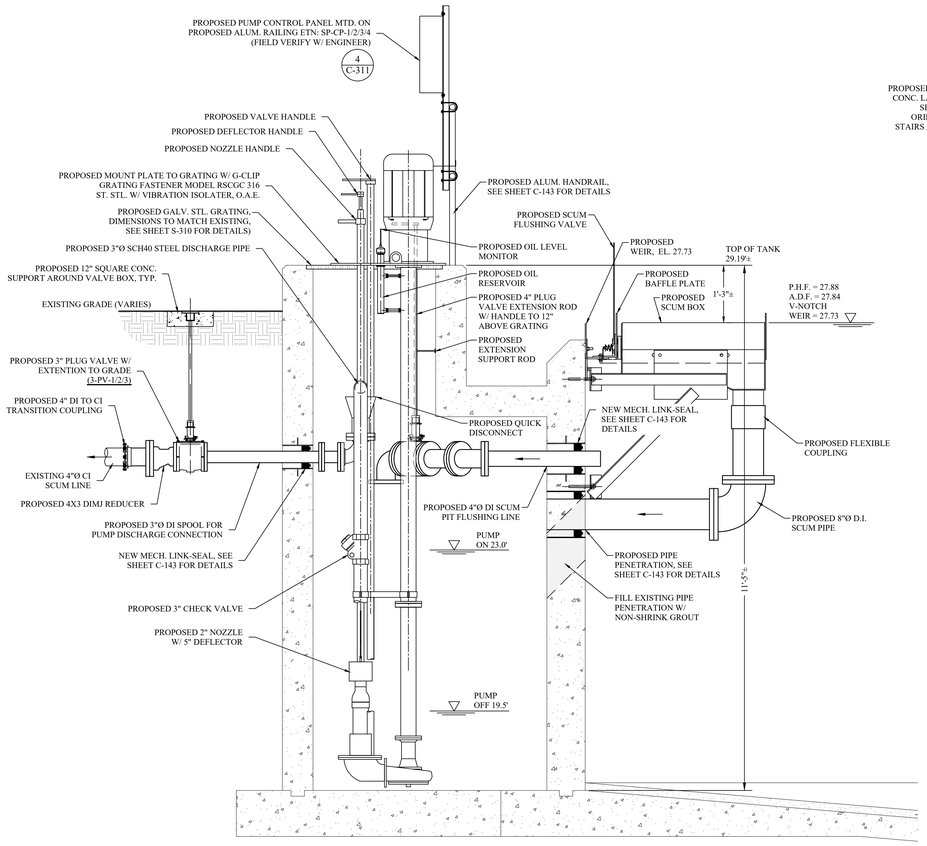
CD-301

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\3 - Primary Settling\Civil Process\Primary Settling tank.dwg, CD-301, 4/18/2025 11:31:05 AM

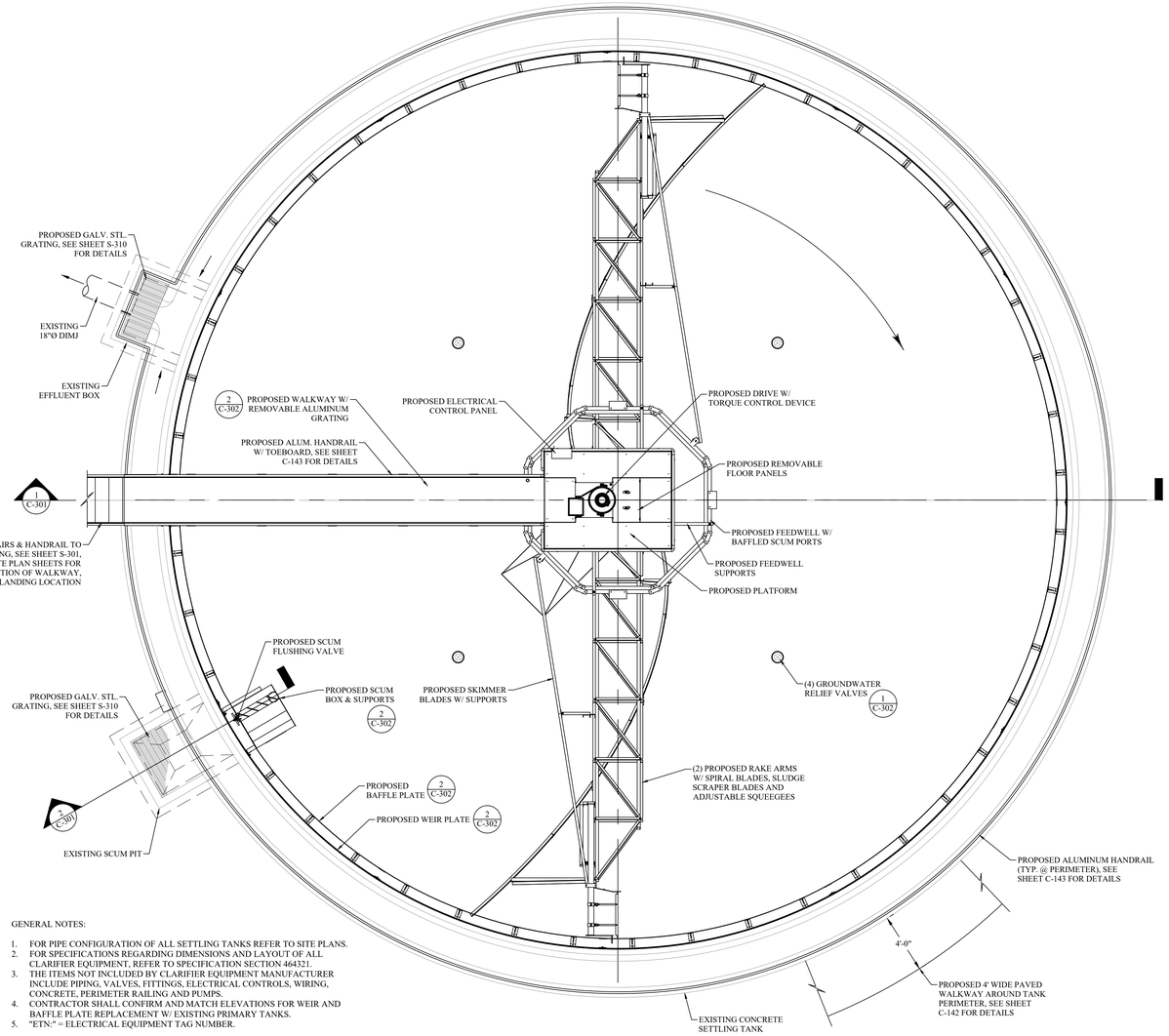


PLAN VIEW



SECTION VIEW

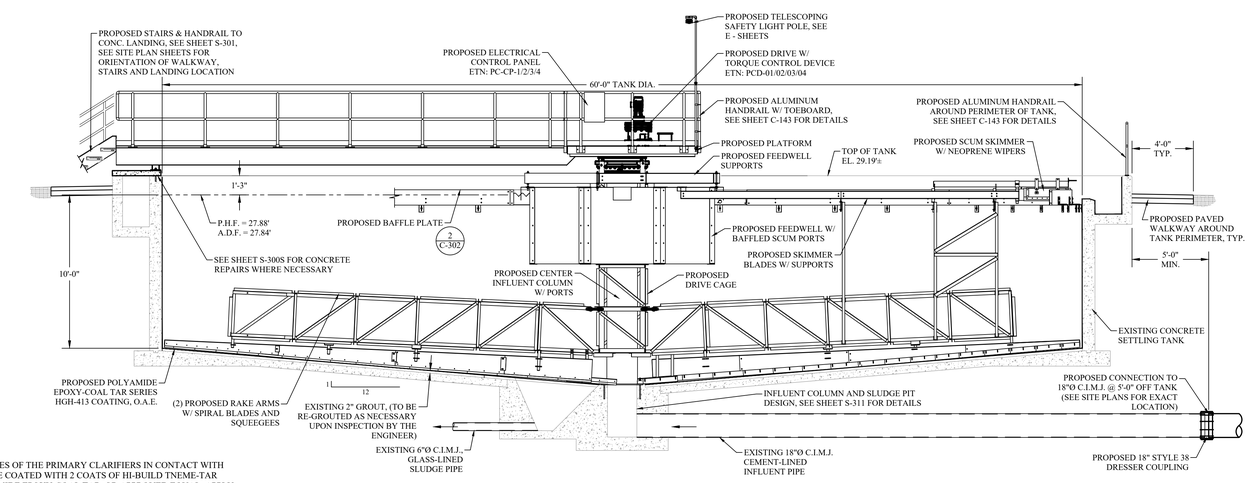
2 C-301 EXISTING PRIMARY SETTLING TANK MODIFICATIONS THRU SCUM PIT & TROUGH (TYP. OF 3)
SCALE: 3/4" = 1'-0"



GENERAL NOTES:

1. FOR PIPE CONFIGURATION OF ALL SETTLING TANKS REFER TO SITE PLANS.
2. FOR SPECIFICATIONS REGARDING DIMENSIONS AND LAYOUT OF ALL CLARIFIER EQUIPMENT, REFER TO SPECIFICATION SECTION 464321.
3. THE ITEMS NOT INCLUDED BY CLARIFIER EQUIPMENT MANUFACTURER INCLUDE PIPING, VALVES, FITTINGS, ELECTRICAL CONTROLS, WIRING, CONCRETE, PERIMETER RAILING AND PUMPS.
4. CONTRACTOR SHALL CONFIRM AND MATCH ELEVATIONS FOR WEIR AND BAFFLE PLATE REPLACEMENT W/ EXISTING PRIMARY TANKS.
5. "ETN:" = ELECTRICAL EQUIPMENT TAG NUMBER.

A C-301 EXISTING PRIMARY SETTLING TANK MODIFICATIONS PLAN (TYP. OF 3)
SCALE: 1/4" = 1'-0"



COATING NOTES:

1. ALL CONCRETE SURFACES OF THE PRIMARY CLARIFIERS IN CONTACT WITH WASTEWATER SHALL BE COATED WITH 2 COATS OF HI-BUILD TNEME-TAR (SERIES 46H-413) POLYAMIDE EPOXY-COAL TAR, OR APPROVED EQUAL. APPLY COATINGS IN STRICT ADHERENCE WITH THE MANUFACTURER'S GUIDELINES.
2. SURFACE PREPARATION FOR COATINGS SHALL BE DONE IN ACCORDANCE WITH SSPC-SP13/NACE 6 AND THE MANUFACTURER'S RECOMMENDATIONS.
3. CORED OR CUT CONCRETE SURFACES WITH EXPOSED REINF. STEEL SHALL BE PRIMED WITH OMNITHANE SERIES 1 POLYURETHANE PRIMER BY TENEMEC INC., OR APPROVED EQUAL, PRIOR TO COATING WITH EPOXY-COAL TAR.

1 C-301 EXISTING PRIMARY SETTLING TANK MODIFICATIONS ELEVATION - SECTION (TYP. OF 3)
SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING PRIMARY SETTLING TANK MODIFICATIONS PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-301

PROJECT # 18-732 PHASE #

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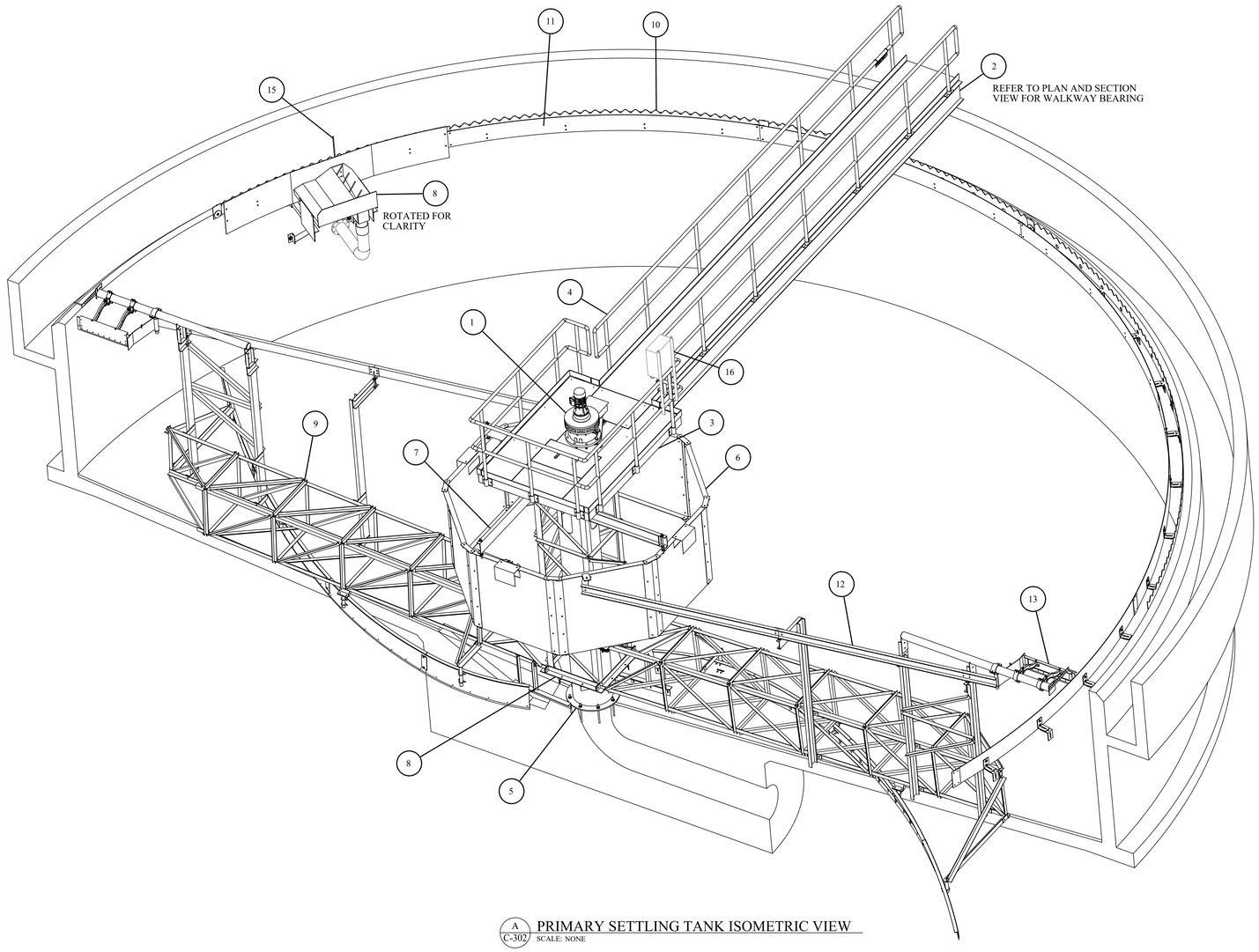
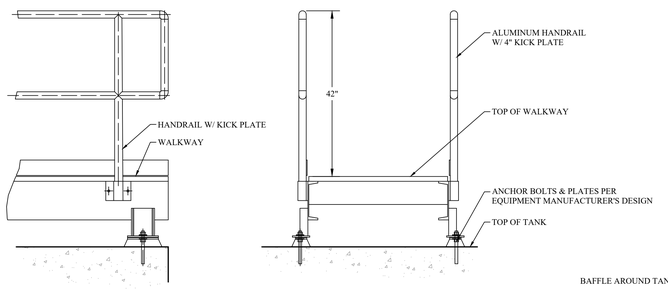


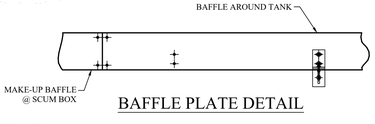
A C-302 PRIMARY SETTLING TANK ISOMETRIC VIEW
SCALE: NONE

EQUIPMENT LIST - (WESTECH), O.A.E.	
ITEM	DESCRIPTION/REMARKS
1	DRIVE WITH TORQUE CONTROL DEVICE.
2	WALKWAY.
3	PLATFORM.
4	HANDRAIL WITH KICK PLATE.
5	CENTER INFLUENT COLUMN WITH PORTS.
6	FEEDWELL WITH BAFFLED SCUM PORTS.
7	FEEDWELL SUPPORTS.
8	DRIVE CAGE.
9	RAKE ARMS WITH SPIRAL BLADES AND SQUEEGEES.
10	WEIR PLATE.
11	BAFFLE PLATE.
12	SKIMMER BLADE WITH SUPPORTS.
13	SCUM SKIMMER ASSEMBLY WITH NEOPRENE WIPERS.
14	SCUM BOX WITH SUPPORTS AND FLEXIBLE COUPLING.
15	SCUM FLUSHING VALVE.
16	ELECTRICAL CONTROL PANEL.

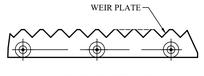
NOTES:
1. FOR ALL PRIMARY CLARIFIER TANKS.
2. DRAWINGS AND DETAILS WERE PROVIDED BY WESTECH FOR DESIGN AND COORDINATION. CONTRACTOR MAY PROVIDE ALTERNATE TO BE APPROVED BY THE ENGINEER.



WALKWAY TO TANK DETAILS

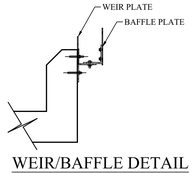


BAFFLE PLATE DETAIL



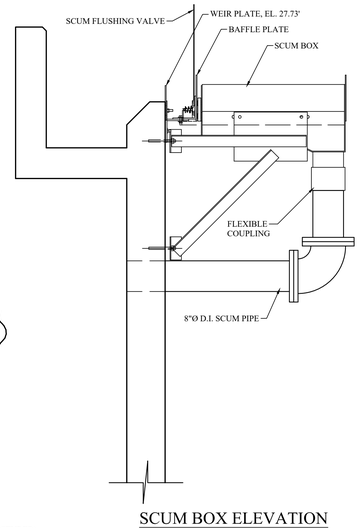
NOTE: ANCHOR SIZE AND SPACING PER EQUIPMENT MANUFACTURER REQUIREMENTS.

WEIR DETAIL

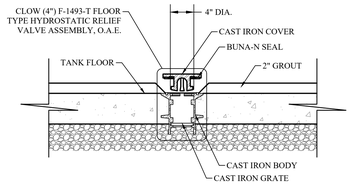


WEIR/BAFFLE DETAIL

2 C-302 TYPICAL DETAILS (AS SUPPLIED BY MANUFACTURER)
SCALE: NONE



SCUM BOX ELEVATION



NOTES:
1. FOR EXISTING TANKS, CONTRACTOR TO CLEAN VALVE BODY AND REPLACE COVER AND SEAL.
2. FOR PROPOSED TANK, CONTRACTOR TO INSTALL COMPLETE VALVE ASSEMBLY.

1 C-302 GROUNDWATER RELIEF VALVE DETAIL (TYP. OF 16)
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PRIMARY SETTLING TANK MODIFICATIONS ISOMETRIC & DETAILS

REVISIONS

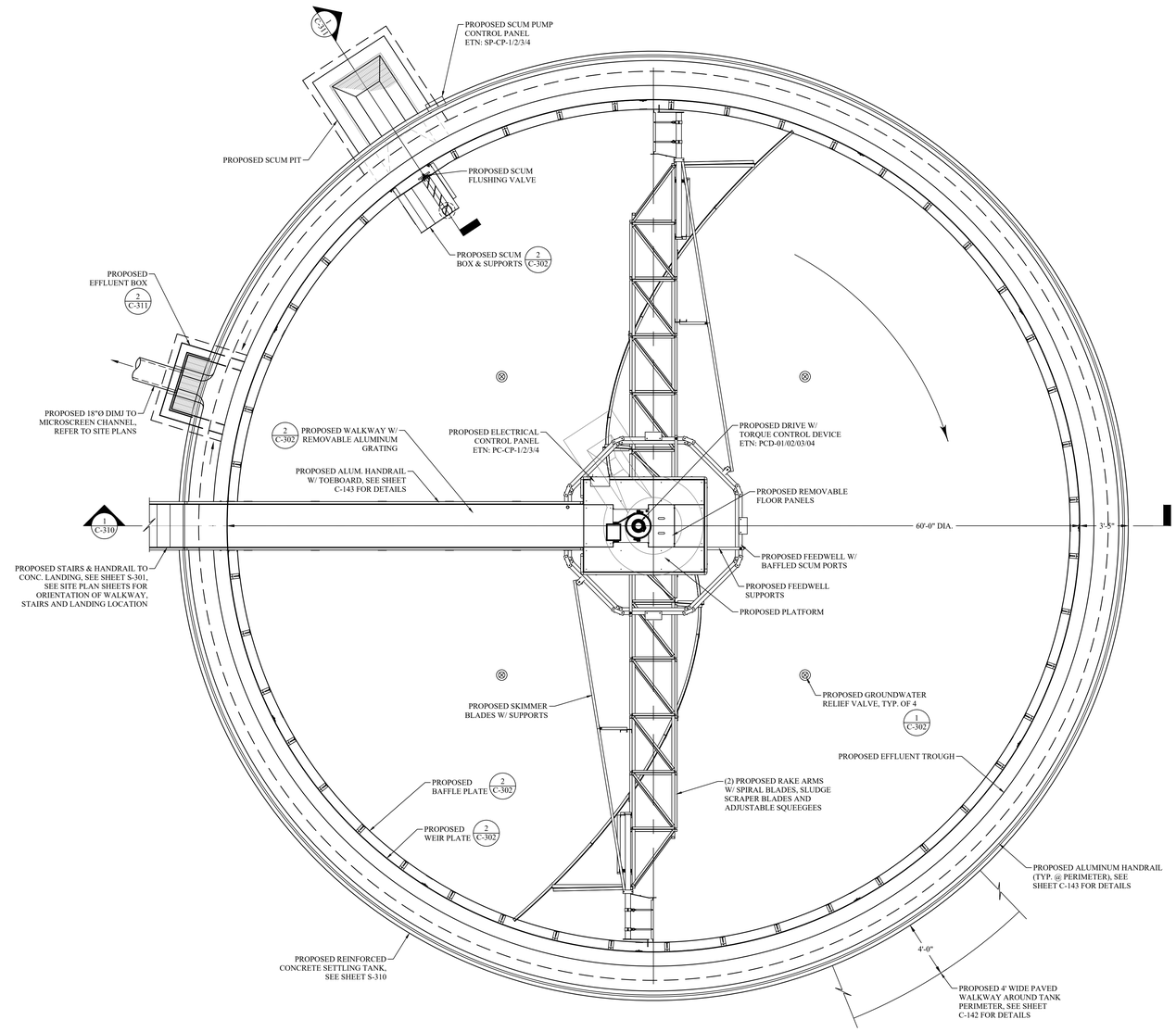
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

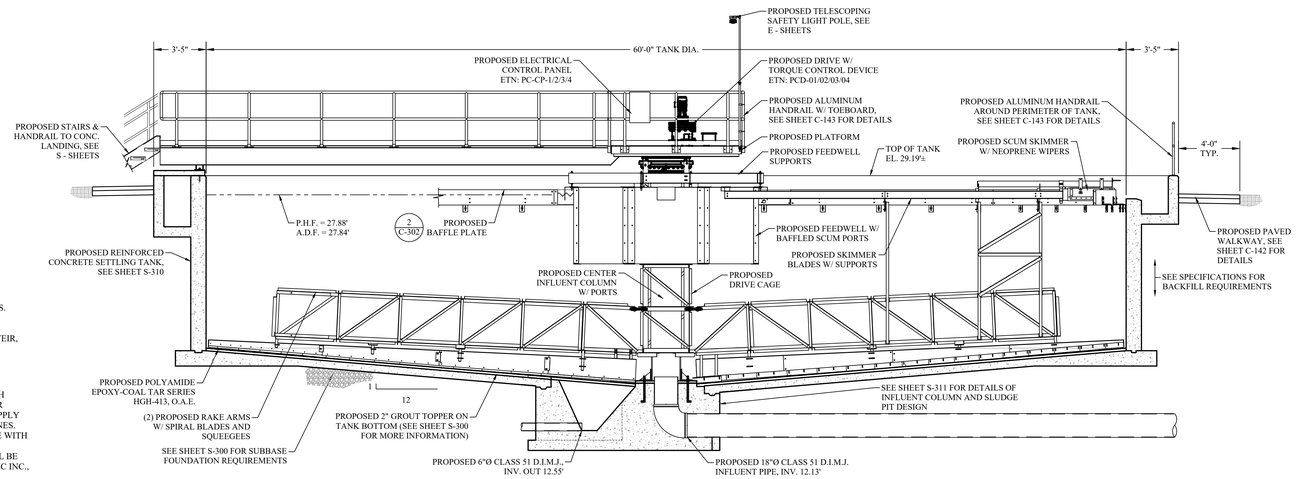
SHEET NO.
C-302

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\3 - Primary Settling\Civil Process\Primary Setting tank.dwg, C-302, 4/18/2025 11:31:05 AM



A C-310 PROPOSED PRIMARY SETTLING TANK #4 PLAN
SCALE: 1/4" = 1'-0"



1 C-310 PROPOSED PRIMARY SETTLING TANK #4 ELEVATION/SECTION
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. FOR PIPE CONFIGURATION OF ALL SETTLING TANKS REFER TO SITE PLANS.
2. FOR SPECIFICATIONS REGARDING DIMENSIONS AND LAYOUT OF ALL CLARIFIER EQUIPMENT, REFER TO SPECIFICATION SECTION 464321.
3. CONTRACTOR SHALL FIELD VERIFY AND MATCH ALL ELEVATIONS FOR WEIR, BAFFLES, INVERTS AND TANK ETC. WITH EXISTING PRIMARY TANKS.

COATING NOTES:

1. ALL CONCRETE SURFACES OF THE PRIMARY CLARIFIER IN CONTACT WITH WASTEWATER SHALL BE COATED WITH 2 COATS OF HI-BUILD TNEME-TAR (SERIES 46H-413) POLYAMIDE EPOXY-COAL TAR, OR APPROVED EQUAL. APPLY COATINGS IN STRICT ADHERENCE WITH THE MANUFACTURER'S GUIDELINES.
2. SURFACE PREPARATION FOR COATINGS SHALL BE DONE IN ACCORDANCE WITH SSPC-SP13/NACE 6 AND THE MANUFACTURER'S RECOMMENDATIONS.
3. CORED OR CUT CONCRETE SURFACES WITH EXPOSED REINF. STEEL SHALL BE PRIMED WITH OMNITHANE SERIES 1 POLYURETHANE PRIMER BY TENEMEC INC., OR APPROVED EQUAL, PRIOR TO COATING WITH EPOXY-COAL TAR.

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED PRIMARY SETTLING TANK #4 PLAN & SECTION

REVISIONS

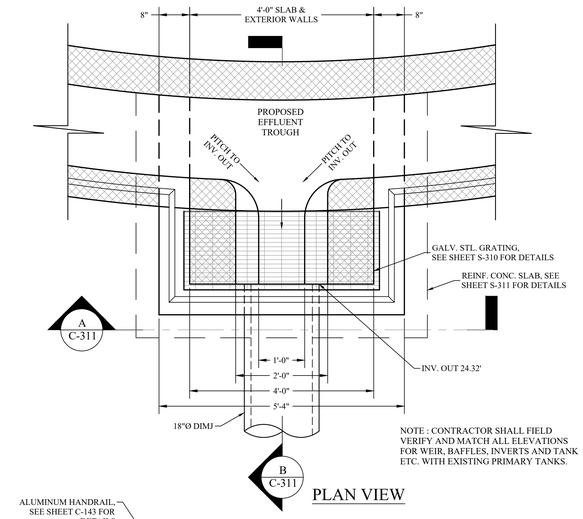
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-310

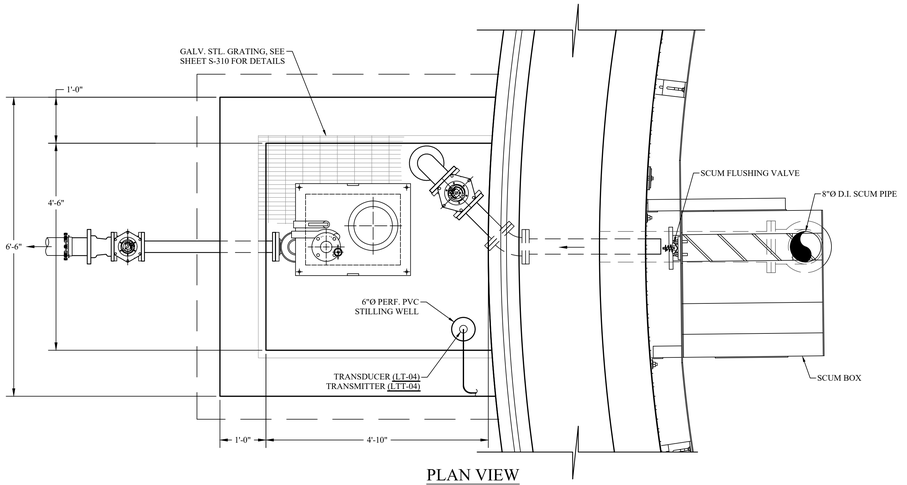
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\3 - Primary Settling\Civil Process\Primary Settling tank.dwg, C-310, 4/18/2025 11:31:14 AM

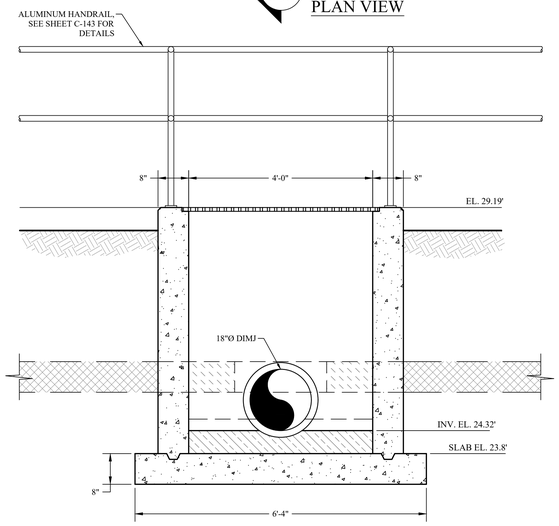


NOTE : CONTRACTOR SHALL FIELD VERIFY AND MATCH ALL ELEVATIONS FOR WEIR, BAFFLES, INVERTS AND TANK ETC. WITH EXISTING PRIMARY TANKS.

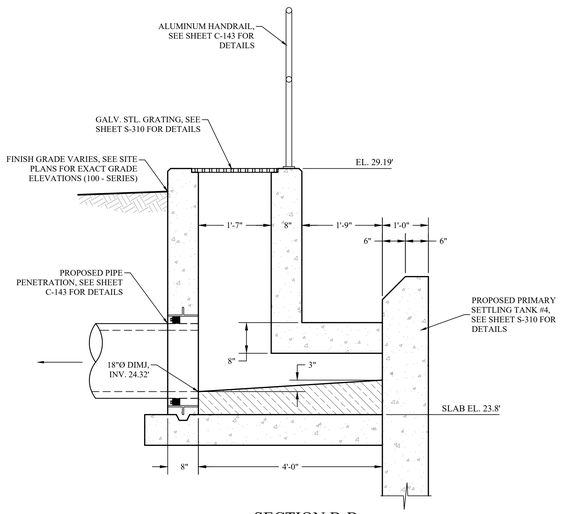
PLAN VIEW



PLAN VIEW

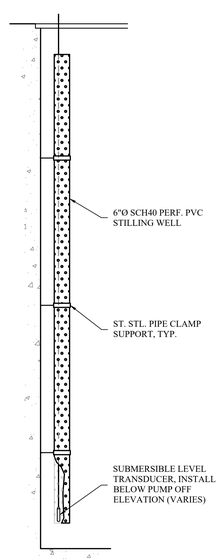


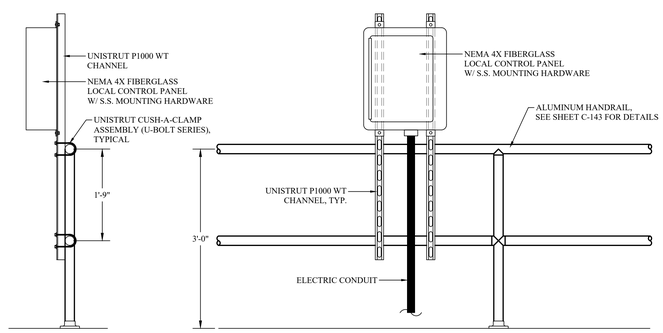
SECTION A-A



SECTION B-B

2 C-311 PROPOSED EFFLUENT BOX DETAILS
SCALE: 3/4" = 1'-0"



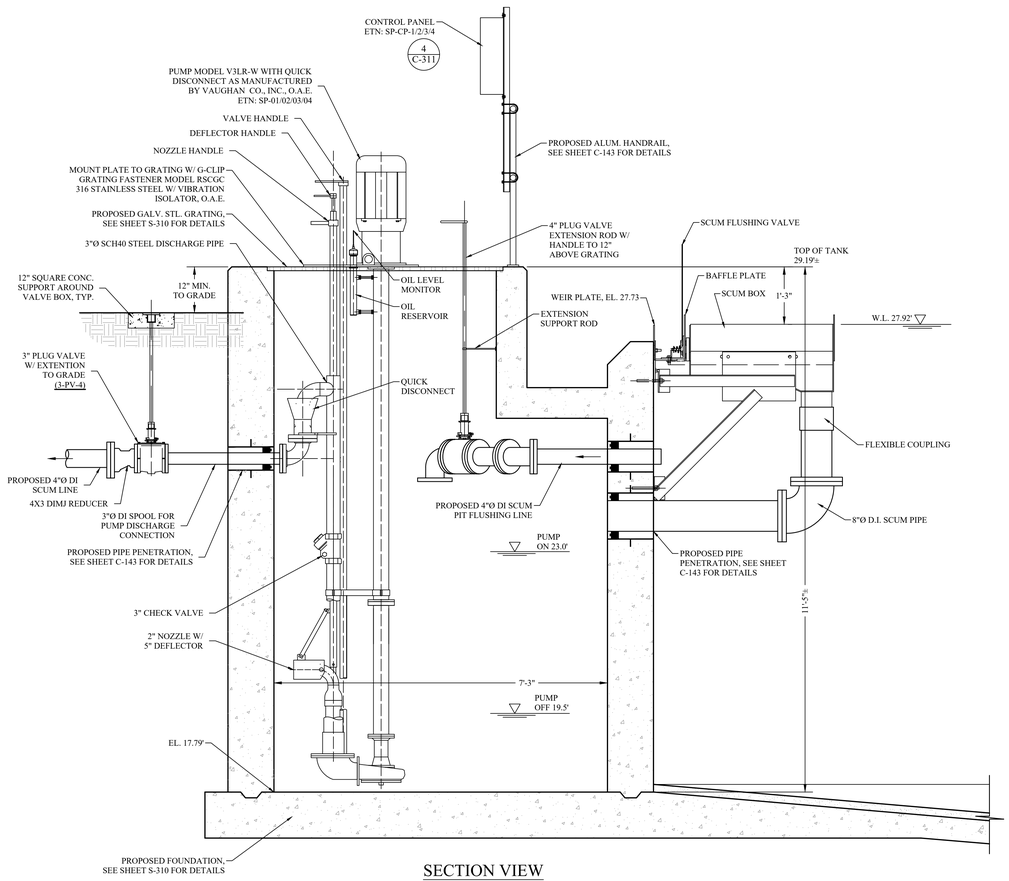


SECTION ELEVATION

NOTE : SEE SHEET E-301 FOR INFORMATION REGARDING CONTROL PANEL MOUNTING DETAILS.

4 C-311 TYP. CONTROL PANEL MOUNTING DETAIL
SCALE: N.T.S.

3 C-311 TYP. STILLING WELL DETAIL
SCALE: N.T.S.



SECTION VIEW

1 C-311 PROPOSED PRIMARY SETTLING TANK #4 SECTION THRU SCUM PIT & TROUGH DETAILS
SCALE: 3/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED PRIMARY SETTLING TANK #4 SECTIONS & DETAILS

REVISIONS

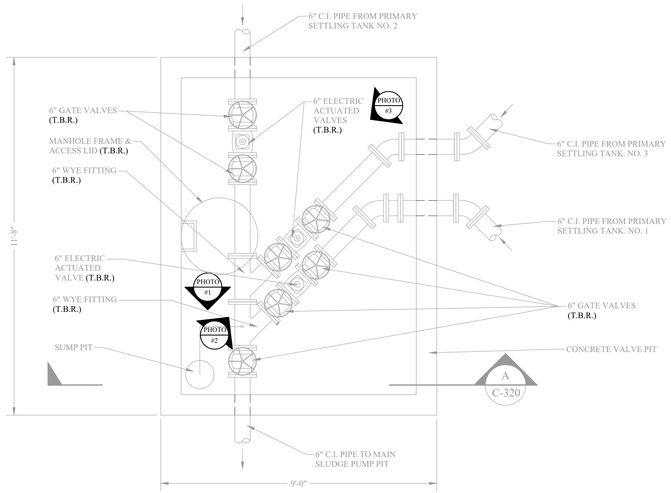
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

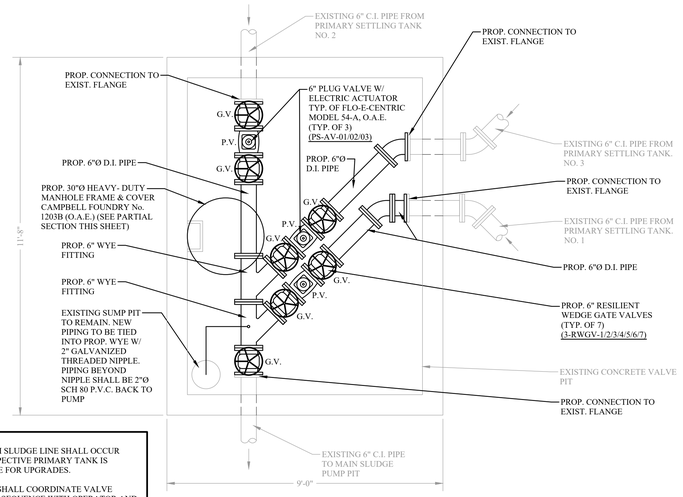
SHEET NO.
C-311

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\3 - Primary Settling\Cad-Process\Primary Setting tank.dwg, C-311, 4/18/2025 11:31:13 AM

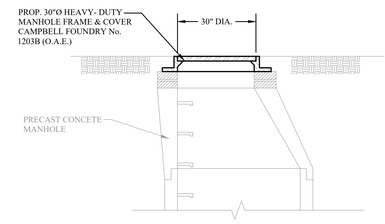


PLAN VIEW



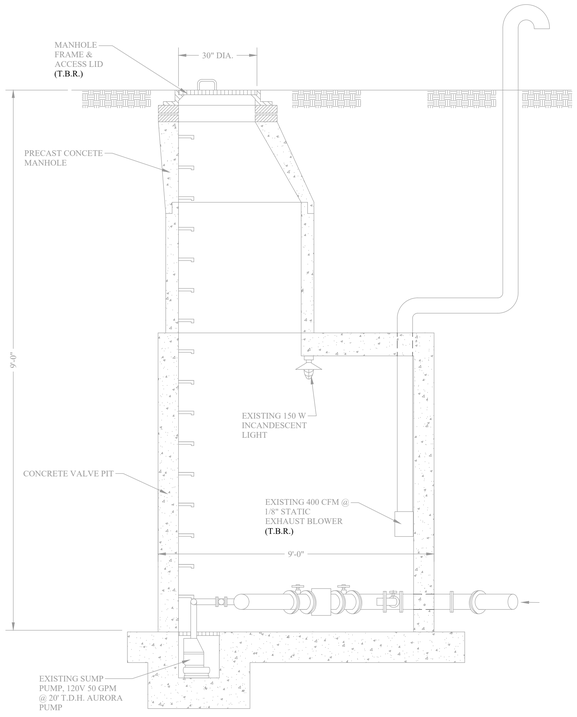
NOTES:
1. WORK ON EACH SLUDGE LINE SHALL OCCUR ONCE THE RESPECTIVE PRIMARY TANK IS TAKEN OFFLINE FOR UPGRADES.
2. CONTRACTOR SHALL COORDINATE VALVE REPLACEMENT SEQUENCE WITH OPERATOR AND ENGINEER PRIOR TO DEMOLITION.

PLAN VIEW



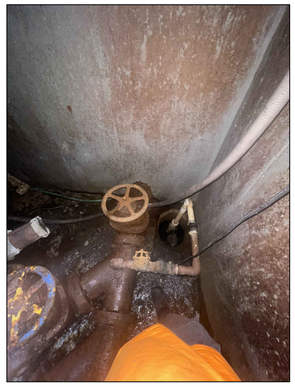
PARTIAL SECTION VIEW

2 C-320 EXISTING SLUDGE VALVE PIT MODIFICATIONS PLAN VIEW
SCALE: 1/2" = 1'-0"



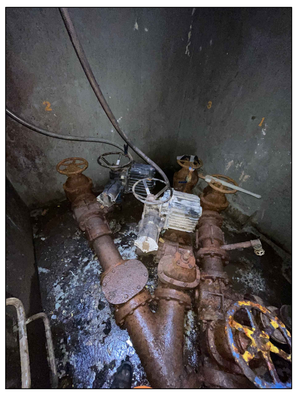
SECTION A

1 C-320 EXISTING SLUDGE VALVE PIT DETAIL
SCALE: 1/2" = 1'-0"



3 C-320 PHOTO #1
SCALE: N.T.S.

EXISTING 6" SLUDGE DISCHARGE TO PRIMARY SLUDGE PUMP PIT

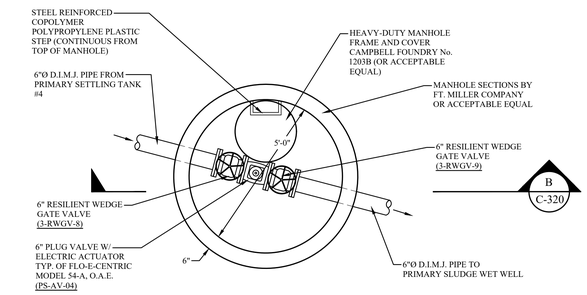


4 C-320 PHOTO #2
SCALE: N.T.S.

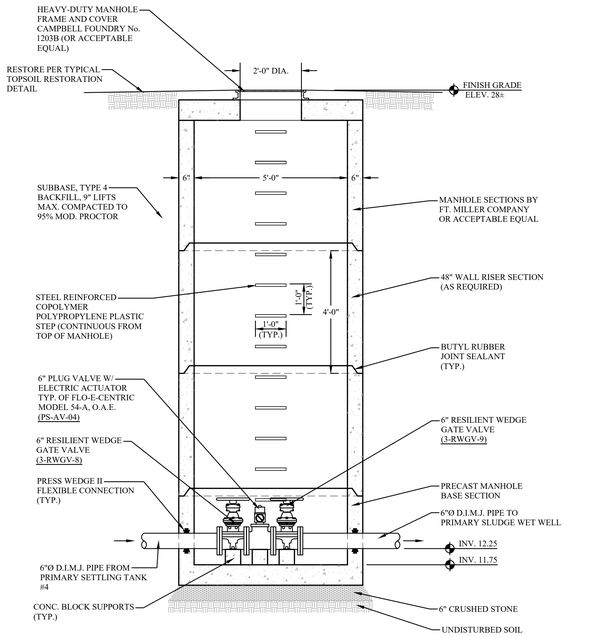
EXISTING PRIMARY CLARIFIERS #1, 2 & 3 INFLUENT SLUDGE LINES (6"Ø)

5 C-320 PHOTO #3
SCALE: N.T.S.

EXISTING PRIMARY SLUDGE VALVE PIT



PLAN VIEW



SECTION B

6 C-320 PROPOSED PRIMARY SETTLING TANK #4 SLUDGE VALVE VAULT
SCALE: 1/2" = 1'-0"

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NEW WINDSOR, NY 12553

EXISTING PRIMARY SLUDGE VALVE PIT & MODIFICATION, PROPOSED PRIMARY SETTLING TANK #4 SLUDGE VALVE VAULT

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-320
PROJECT # 18-732 PHASE #

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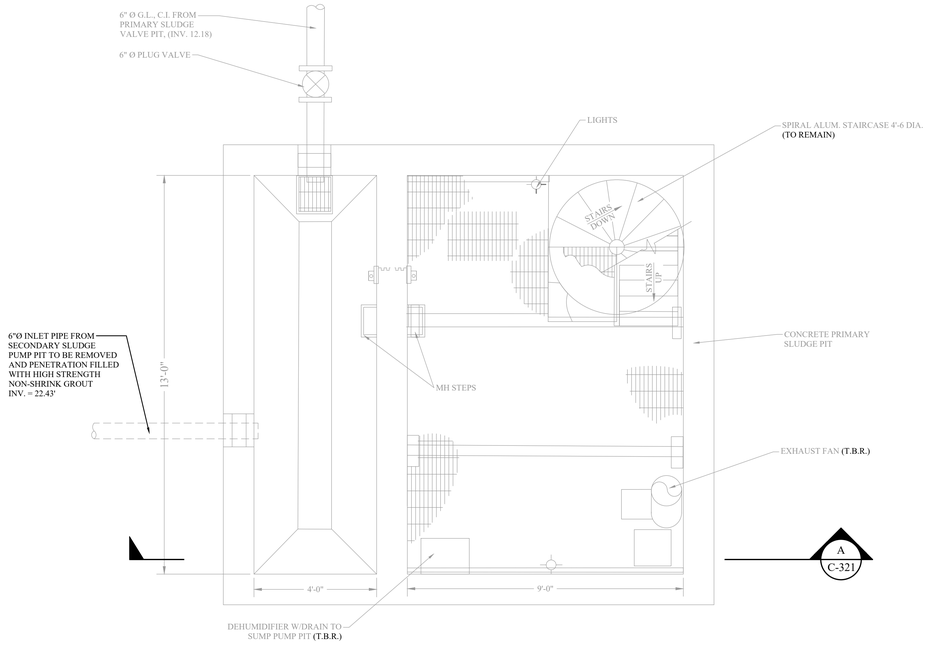
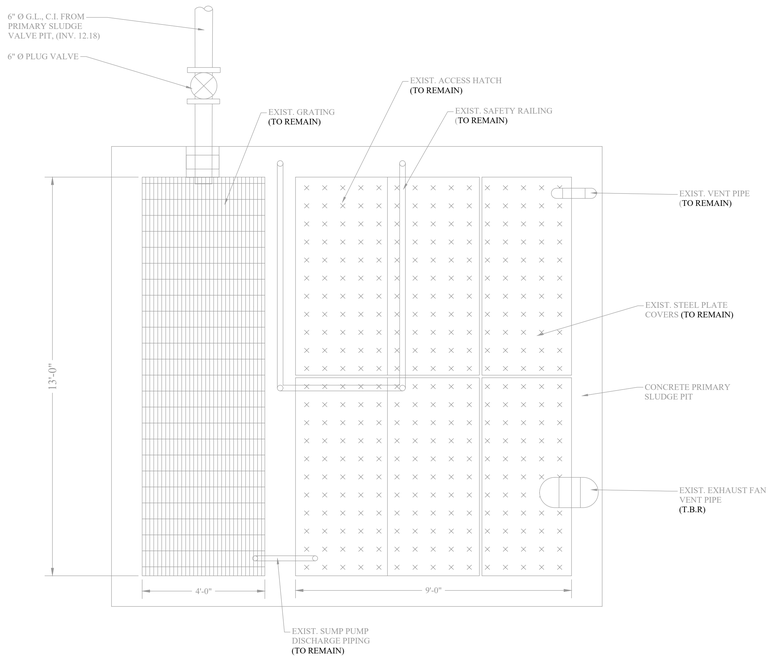


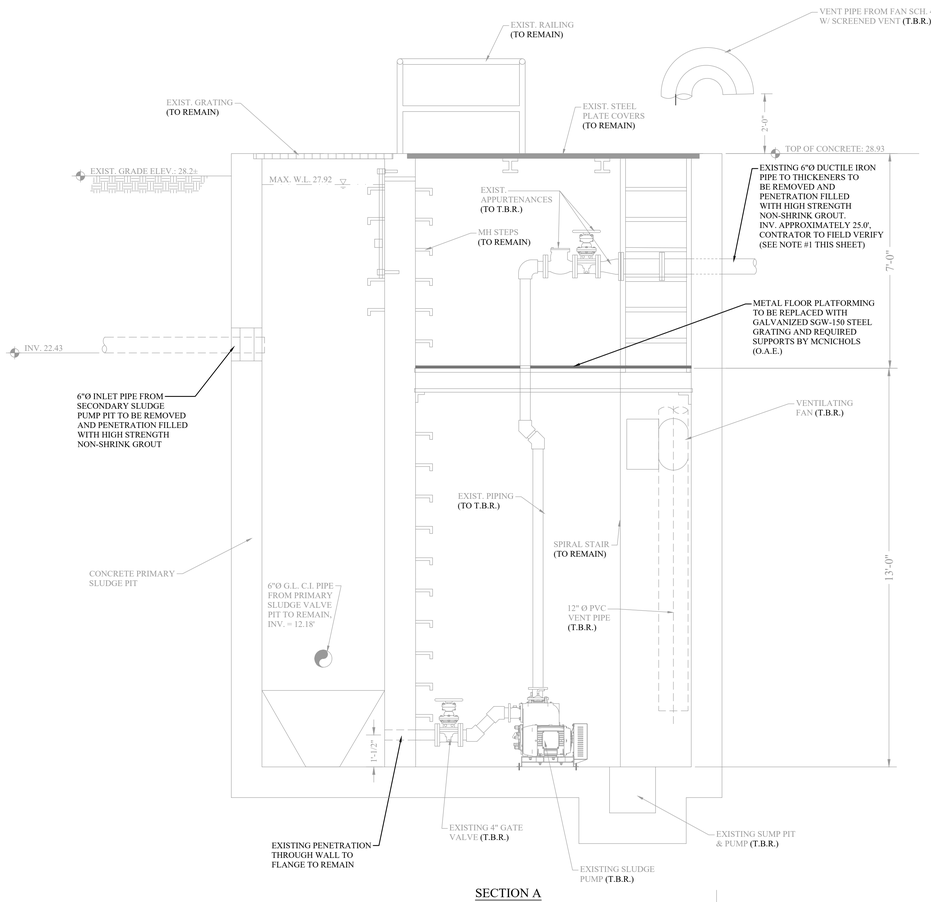
PLAN VIEW



PLAN VIEW

1 C-321 EXISTING PRIMARY SLUDGE PIT TOP VIEW

SCALE: 1/2" = 1'-0"



SECTION A

1 C-321 EXISTING PRIMARY SLUDGE PIT MODIFICATIONS

SCALE: 1/2" = 1'-0"

NOTES:

1. ITEMS NOTED AS "T.B.R." SHALL BE TOTALLY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
2. REFER TO E-301 AND M-301 FOR ADDITIONAL INFORMATION REGARDING ELECTRICAL AND MECHANICAL WORK.

MHE ENGINEERING

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(570) 296-2765

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NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING PRIMARY SLUDGE PIT MODIFICATIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

C-321

PROJECT # 18-732 PHASE #

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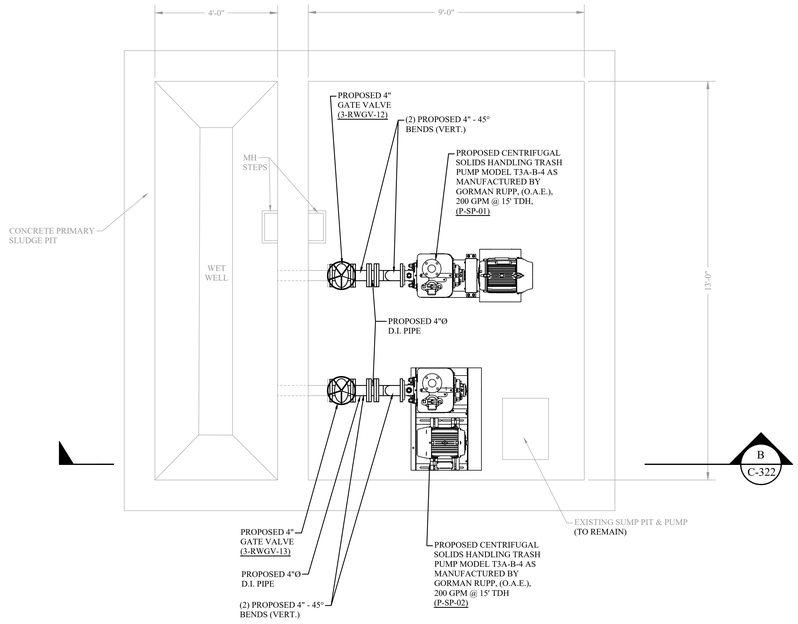
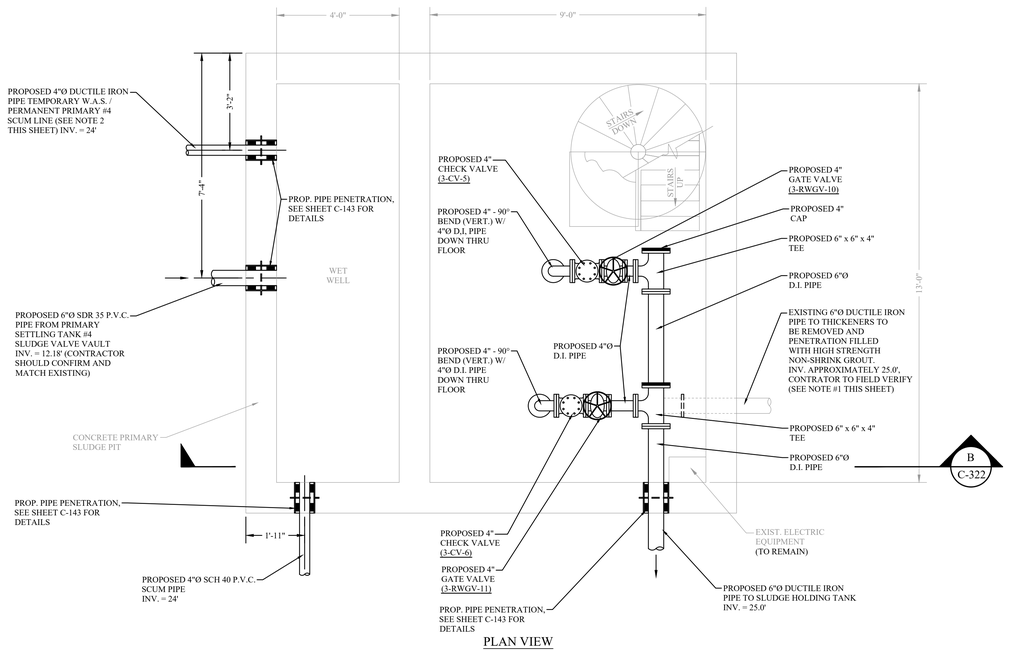


PLAN VIEW

1 C-322 EXISTING PRIMARY SLUDGE PIT LOWER LEVEL MODIFICATIONS
SCALE: 1/2" = 1'-0"

NOTES:
1. NEW SLUDGE PUMPS AND PIPING TO BE REPLACED PRIOR TO M.B.R. STARTUP. SLUDGE DISCHARGE TO REMAIN TO GRAVITY THICKENERS UNTIL A.T.A.D. STARTUP, AT WHICH TIME THE PIPING SHALL BE TIED INTO DISCHARGE TO SLUDGE HOLDING TANK.
2. TEMPORARY 4"Ø DUCTILE W.A.S. LINE TO BE OPERATIONAL UPON INITIAL MBR STARTUP. ONCE PROPOSED A.T.A.D. SYSTEM IS OPERATIONAL, LINE TO BE REUSED AS PRIMARY #4 SCUM LINE. REFER TO SITE PLAN FOR TIE IN LOCATION.
3. ITEMS NOTED AS "T.B.R." SHALL BE TOTALLY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
4. REFER TO SHEET E-031 FOR CONTROL PANEL MOUNTING.



PLAN VIEW

2 C-322 EXISTING PRIMARY SLUDGE PIT UPPER LEVEL MODIFICATIONS
SCALE: 1/2" = 1'-0"

SECTION B

3 C-322 EXISTING PRIMARY SLUDGE PIT LOWER / UPPER LEVEL MODIFICATIONS
SCALE: 1/2" = 1'-0"

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING PRIMARY SLUDGE PIT MODIFICATIONS

REVISIONS

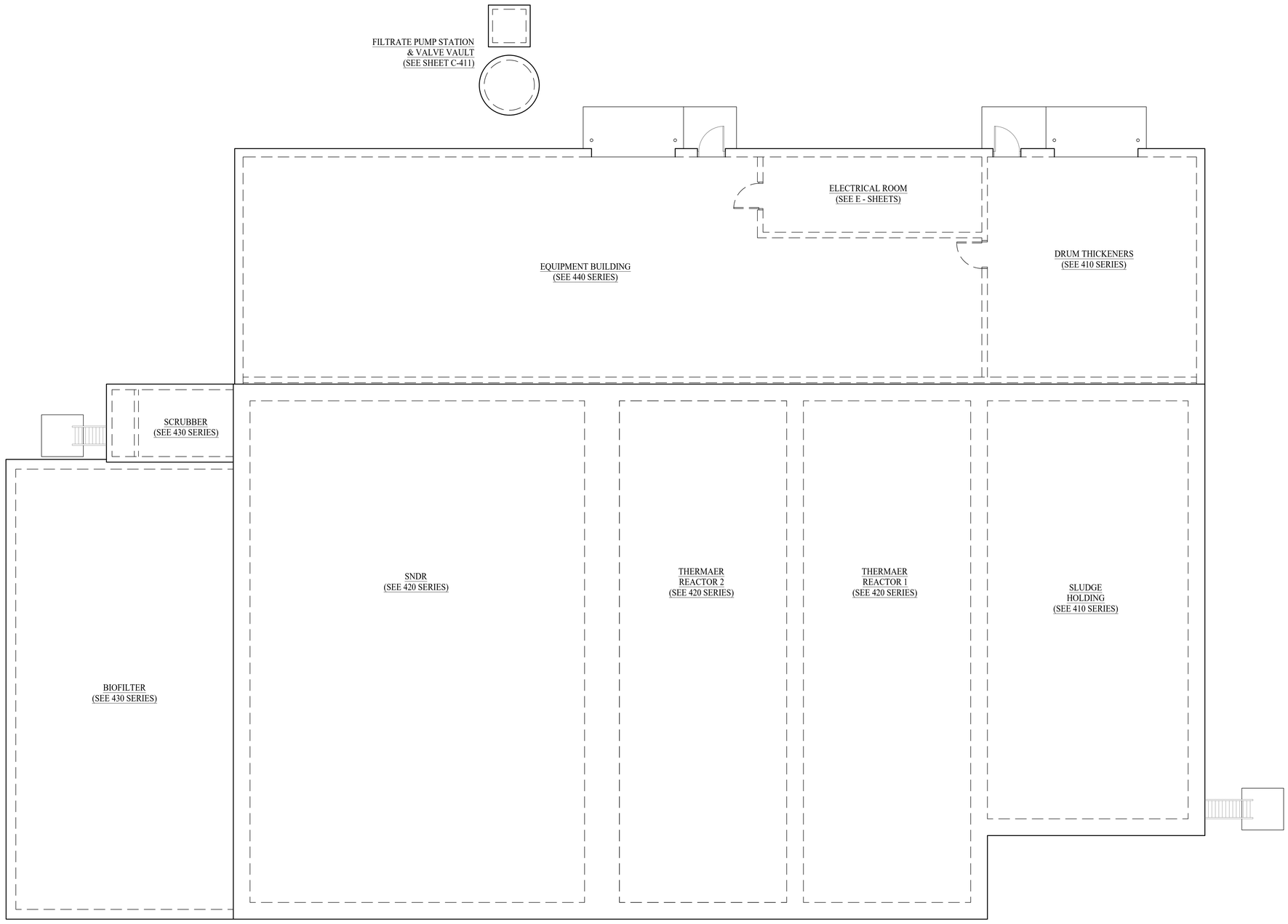
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
C-322

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\3 - Primary Settling\Civil-Process\Main and secondary Sludge pit.dwg, C-322, 4/16/2025 11:31:18 AM



A.T.A.D. KEY PLAN
A / C-401 SCALE: $\frac{1}{16}$" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

A.T.A.D.
KEY PLAN

REVISIONS

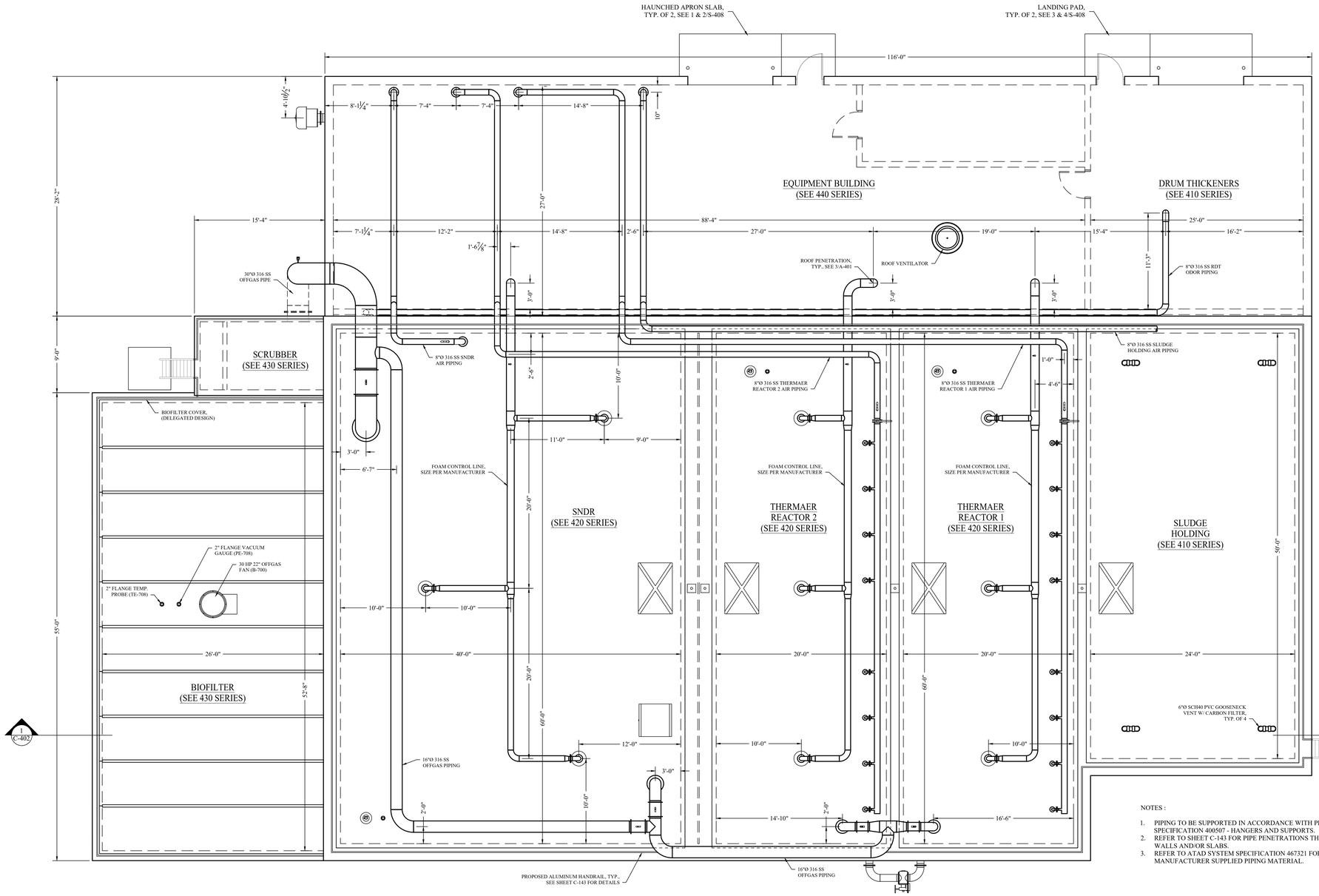
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPB/r
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

SHEET NO.
C-401

PROJECT # 18-732 PHASE #

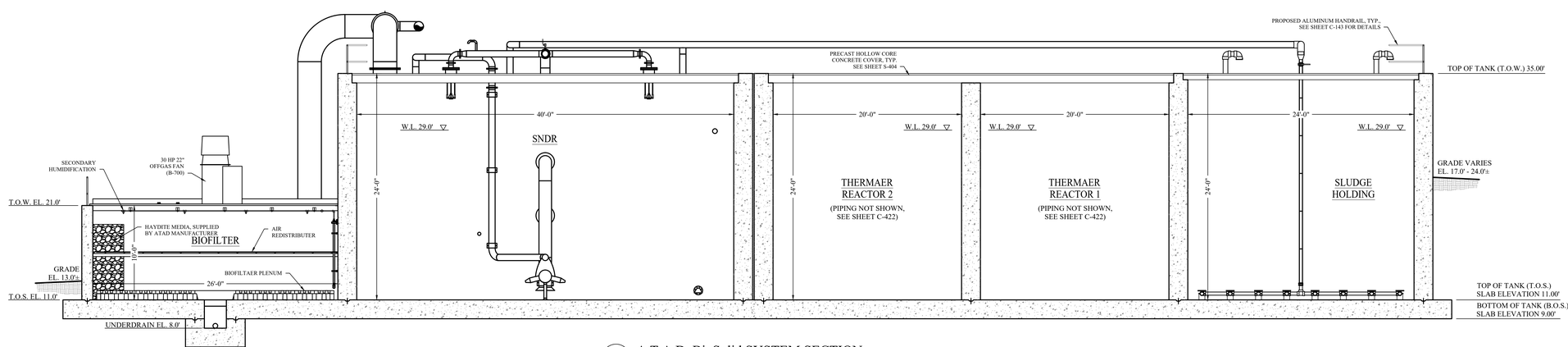
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Ch4-Process\Sludge Holding Tank ALT A.dwg, C-401, 4/15/2025 5:42:19 PM



NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.

A C-402 A.T.A.D. BioSolid SYSTEM PLAN
SCALE: $\frac{1}{16}$" = 1'-0"



1 C-402 A.T.A.D. BioSolid SYSTEM SECTION
SCALE: $\frac{1}{16}$" = 1'-0"

NOTES:

1. THE BASIS OF DESIGN FOR THE AUTOTHERMAL THERMOPHILLIC AEROBIC DIGESTION (ATAD) SYSTEM IS THERMAL PROCESS SYSTEMS (TPS). WHERE TPS OR TPS PROPRIETARY SYSTEMS ARE MENTIONED, OR ACCEPTABLE EQUAL (O.A.E.) APPLIES. REFER TO SPECIFICATION 467321 FOR ADDITIONAL INFORMATION.
2. BIOFILTER TANK COVER SHALL BE SEALED TO ALLOW STANDARD OPERATING VACUUM BETWEEN O & 1" W.C. THE FAN IS CAPABLE OF DEAD HEADING AT 11" W.C. BUT TYPICAL CONTROL SHALL MAINTAIN BELOW 2" W.C. DURING NORMAL OPERATION.
3. JET PUMP SUCTION & DISCHARGE PIPE SHALL BE SECURED W/ H-TYPE SUPPORTS AS SHOWN ON DRAWINGS. INSTALL A DOUBLE NUT CONNECTION ON BOTH SIDES OF THE PUMP EXPANSION BOOTS.
4. CONTRACTOR SHALL SUPPLY ALL PROCESS PIPE & INSTRUMENT TANK PENETRATIONS & CONNECTION SPOOL PIECES W/ THE EXCEPTION OF COVER PENETRATIONS WHICH WILL BE SUPPLIED WITH THE BIOFILTER COVER MANUFACTURER.
5. CONTRACTOR SHALL SUPPLY ALL INSIDE OF TANK PIPE INTERFACE SS HARDWARE W/ THE EXCEPTION OF THE HARDWARE REQUIRED ON ALL BIOFILTER COVER PENETRATIONS WHICH WILL BE SUPPLIED BY THE COVER MANUFACTURER.Z.
6. ALL PROCESS THERMAER PIPING IS TO BE INSULATED BY CONTRACTOR TO A MINIMUM INSULATION OF R-10 W/ INSULATION SUITABLE FOR EXTERIOR CONDITIONS & HIGH HUMIDITY EXPOSURE.
7. ALL PUMP SUCTION PLUG VALVES ARE TO BE FULL PORT PLUG VALVES.
8. CONTRACTOR WILL SUPPLY ALL COVERS W/ 4'x6' HATCHES WHICH ARE LARGE ENOUGH FOR ALL REQUIRED IN-BASIN PIPING & EQUIPMENT TO FIT THROUGH.
9. CONTRACTOR TO SUPPLY DRAIN WITHIN CLOSE PROXIMITY OF EACH PUMP BASE FOR SEAL WATER DRAIN OF ABOUT 1 GPM/PUMP.
10. PIPING TO BE SUPPORTED IN ACCORDANCE WITH SPECIFICATION 400507 - HANGERS AND SUPPORTS.
11. REFER TO SHEET C-143 FOR PIPE PENETRATION DETAILS.

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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

A.T.A.D. OVERALL ABOVE TANK PLAN VIEW AND SECTION

REVISIONS

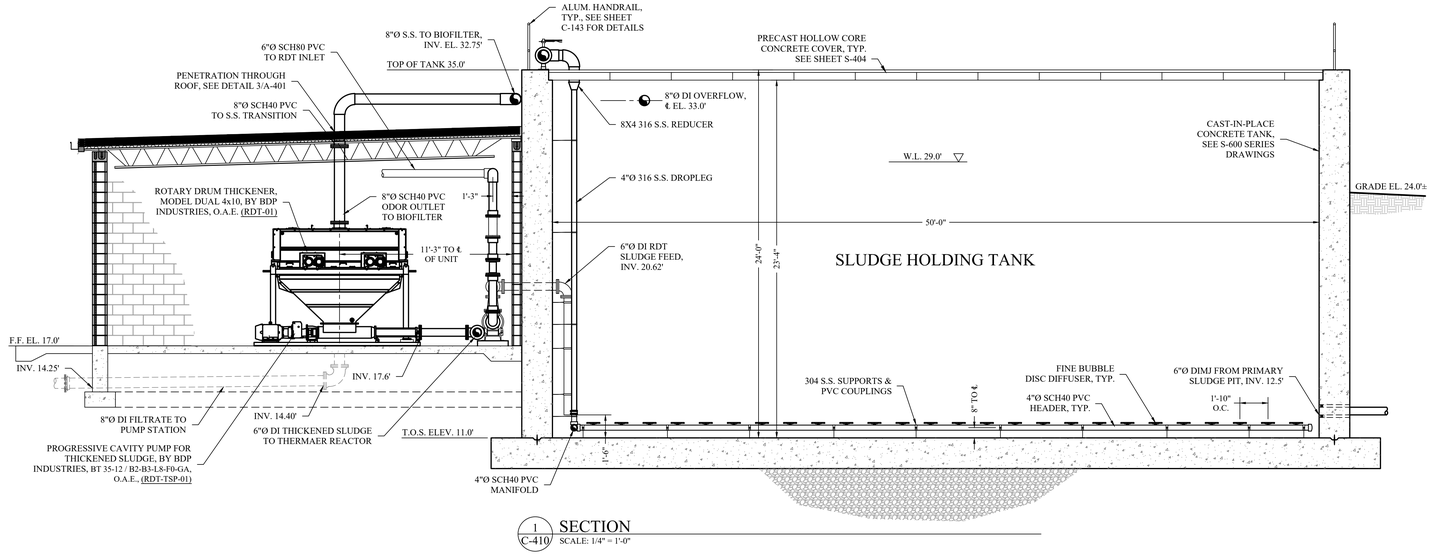
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPB/Jr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

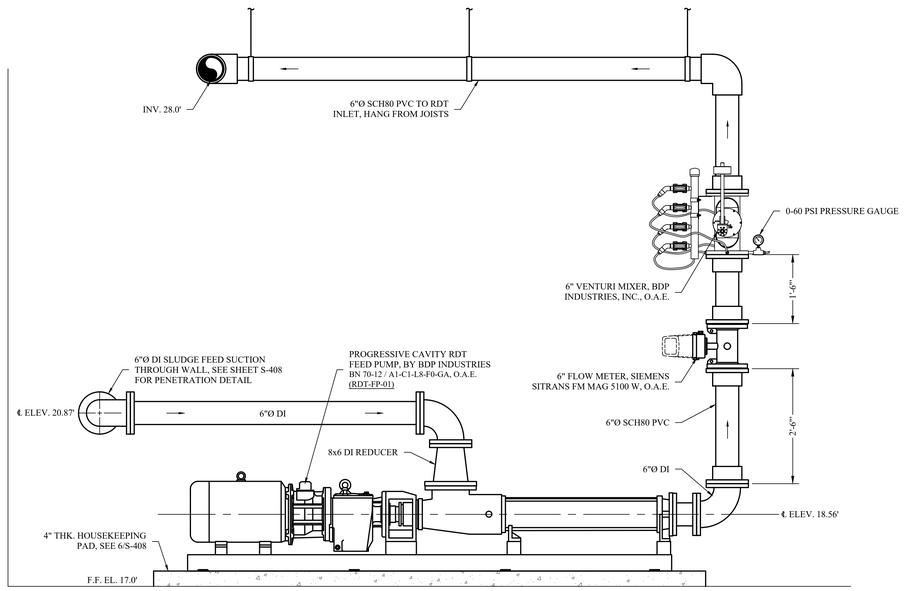
SHEET NO.
C-402

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Ch4-Process\Sludge Holding Tank ALT A.dwg, C-402, 4/15/2025 5:42:19 PM



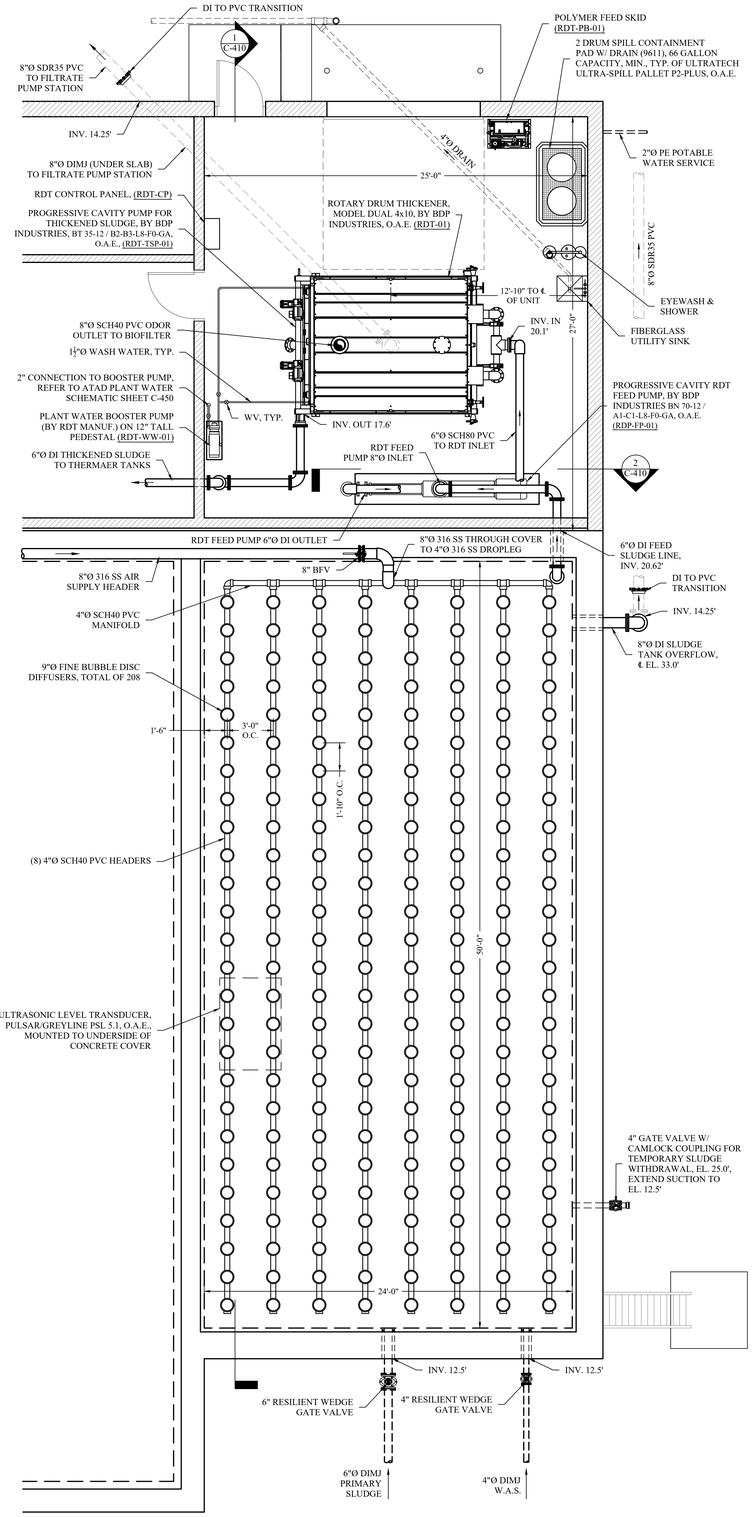
1 C-410 SECTION
SCALE: 1/4" = 1'-0"



2 C-410 SECTION
SCALE: 3/4" = 1'-0"

NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.



A C-410 SLUDGE HOLDING TANK - AERATION LAYOUT
SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

DRUM THICKENERS & SLUDGE HOLDING IN-BASIN LAYOUT

REVISIONS

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ISSUED DATE:	18 APR, 2025
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SHEET NO.
C-410

PROJECT # 18-732 PHASE #

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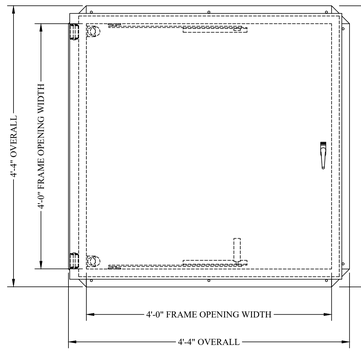
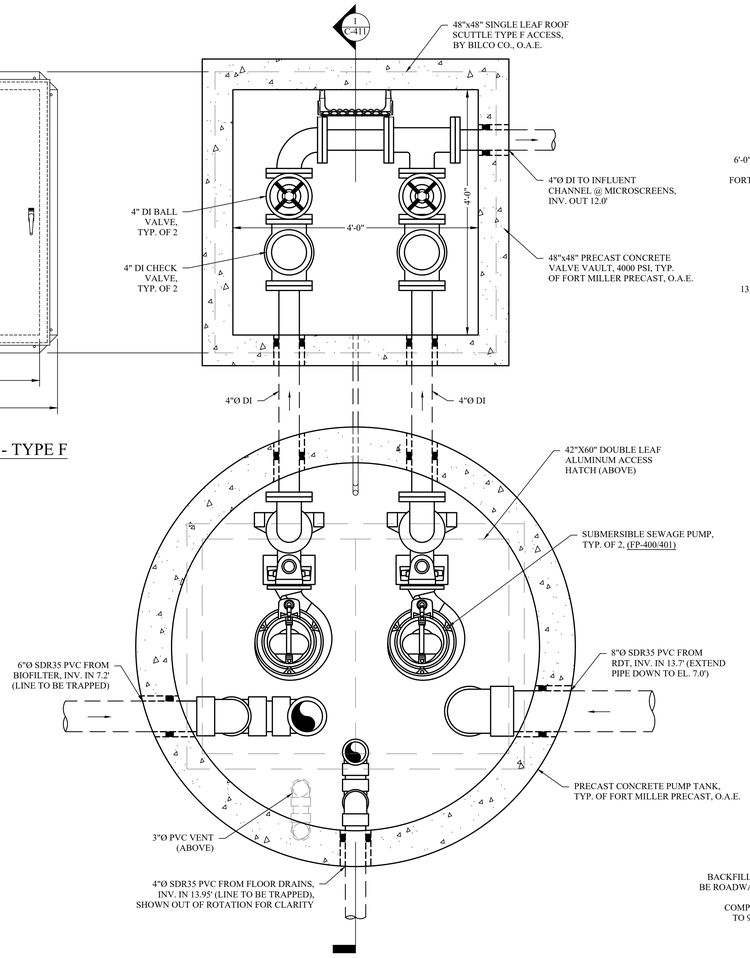
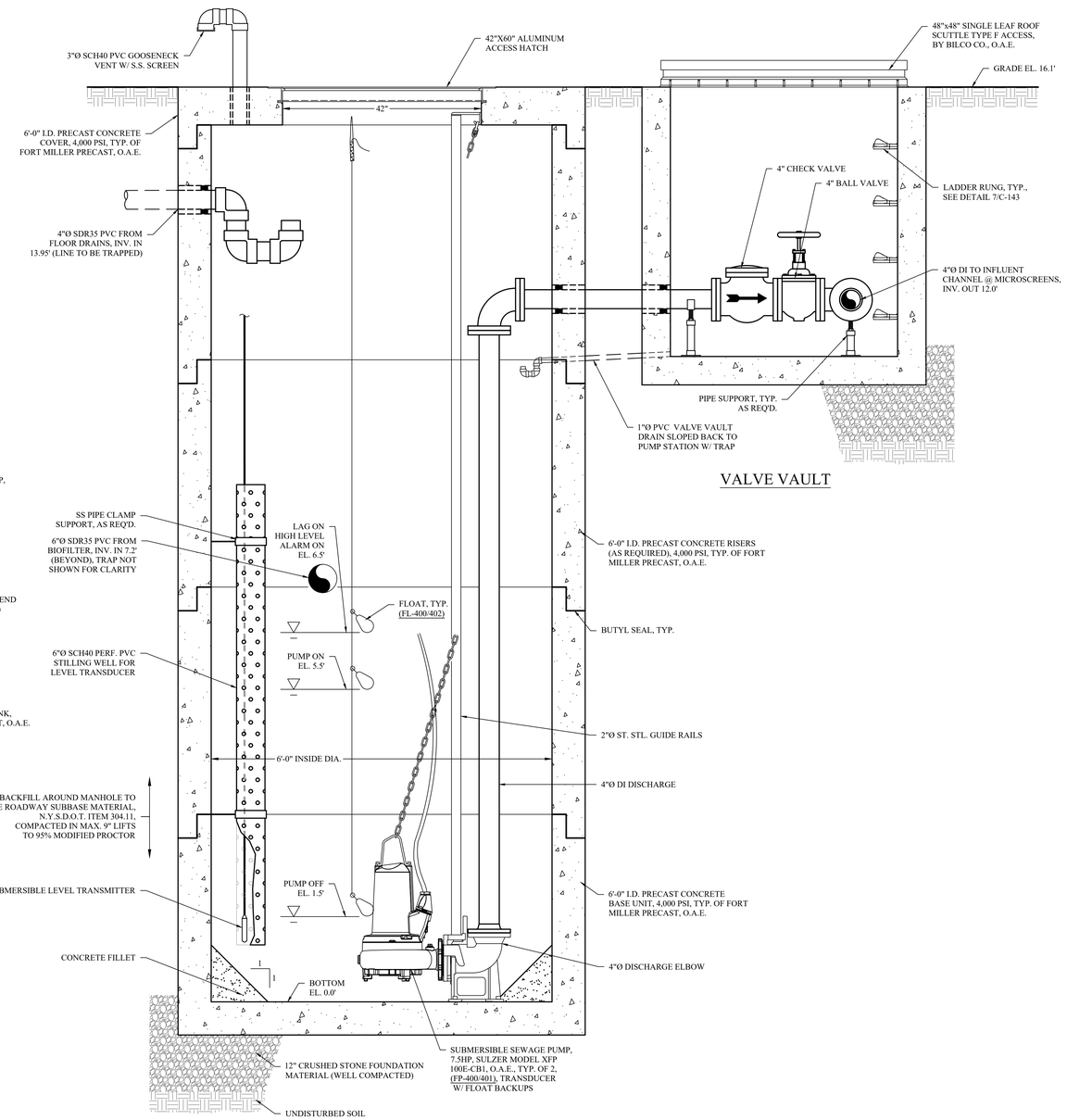


PLAN VIEW
SINGLE LEAF ROOF SCUTTLE - TYPE F



A C-411 ATAD FILTRATE - PRECAST PUMP STATION PLAN VIEW
SCALE: 1"=1'-0"



1 C-411 ATAD FILTRATE - PRECAST PUMP STATION SECTION VIEW
SCALE: 1"=1'-0"

VALVE VAULT

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
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111 Wheatfield Drive, Suite 1
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(570) 296-2765

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

FILTRATE PRECAST PUMP STATION DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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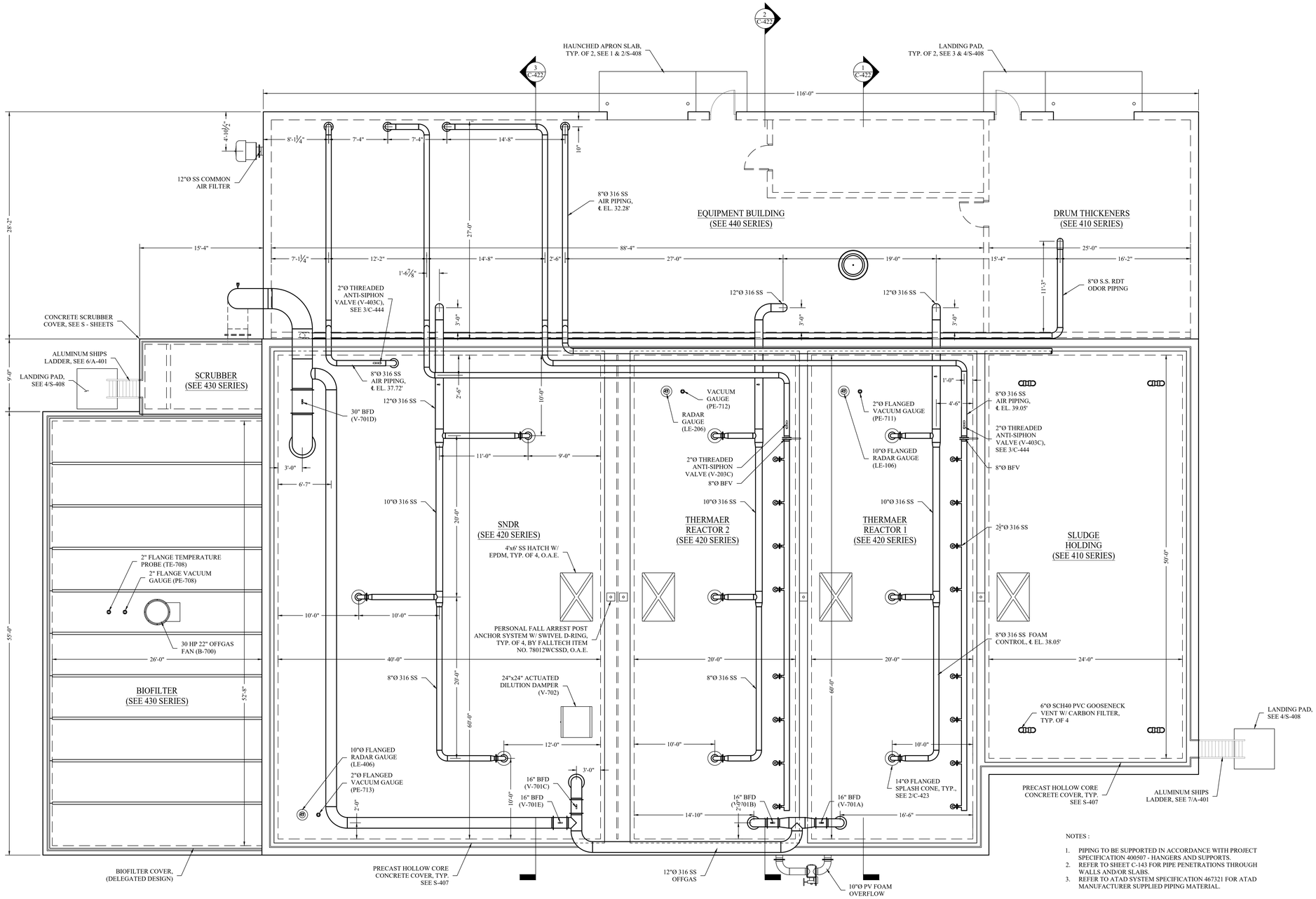
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

SHEET NO.
C-411

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil-Process\Sludge Holding Tank ALT A.dwg, C-411, 4/19/2025 5:42:55 PM



NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.

A / C-420 A.T.A.D. BioSolid SYSTEM PLAN
SCALE: $\frac{3}{16}$" = 1'-0"

MHE ENGINEERING
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New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

A.T.A.D.
OVERALL PLAN

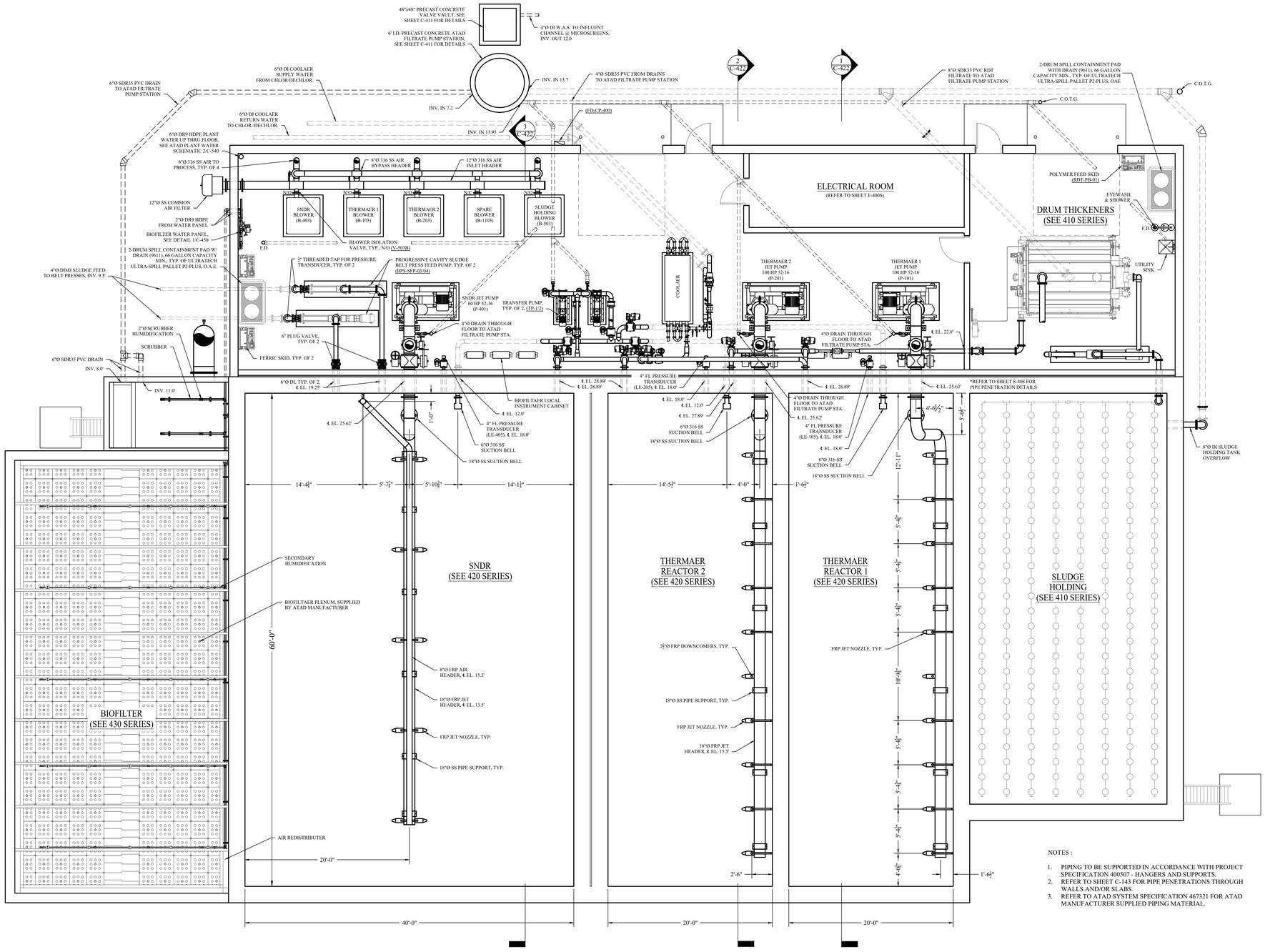
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

SHEET NO.
C-420
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil Process\Sludge Holding Tank ALT A.dwg, C-420, 4/15/2025 5:42:43 PM



A.T.A.D. FOAM CONTROL SYSTEM IN-BASIN PLAN

A / C-421 SCALE : $\frac{3}{16}$" = 1'-0"

NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.

MHE ENGINEERING

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NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
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A.T.A.D. FOAM CONTROL SYSTEM PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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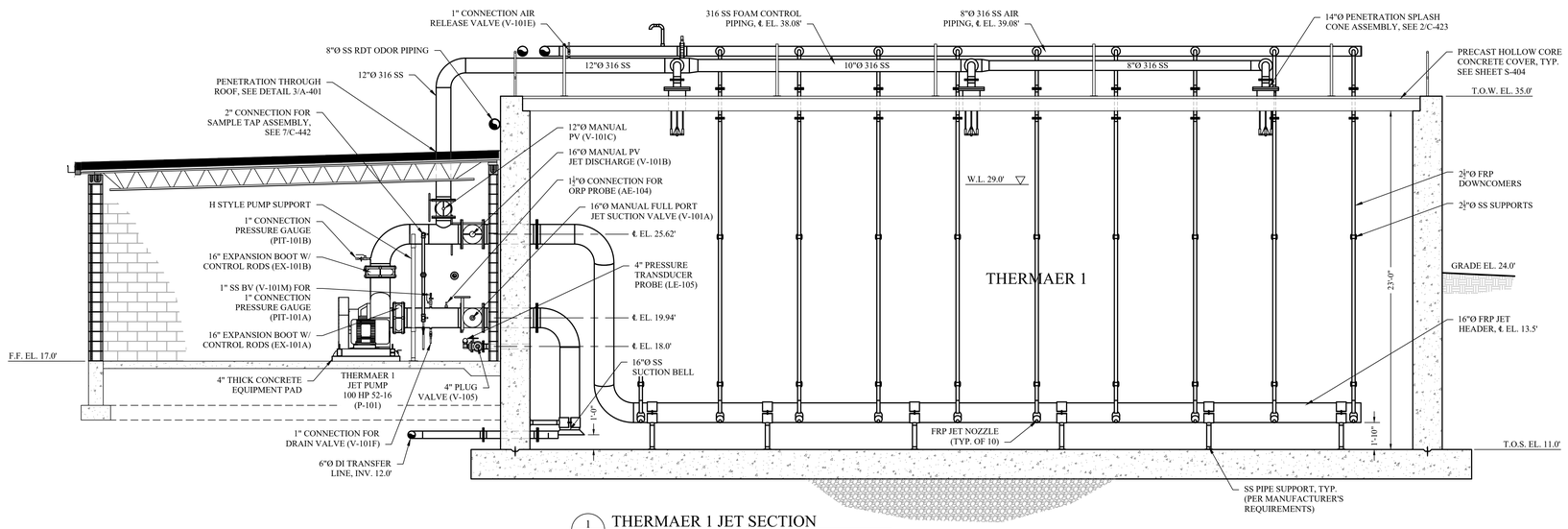
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

SHEET NO.

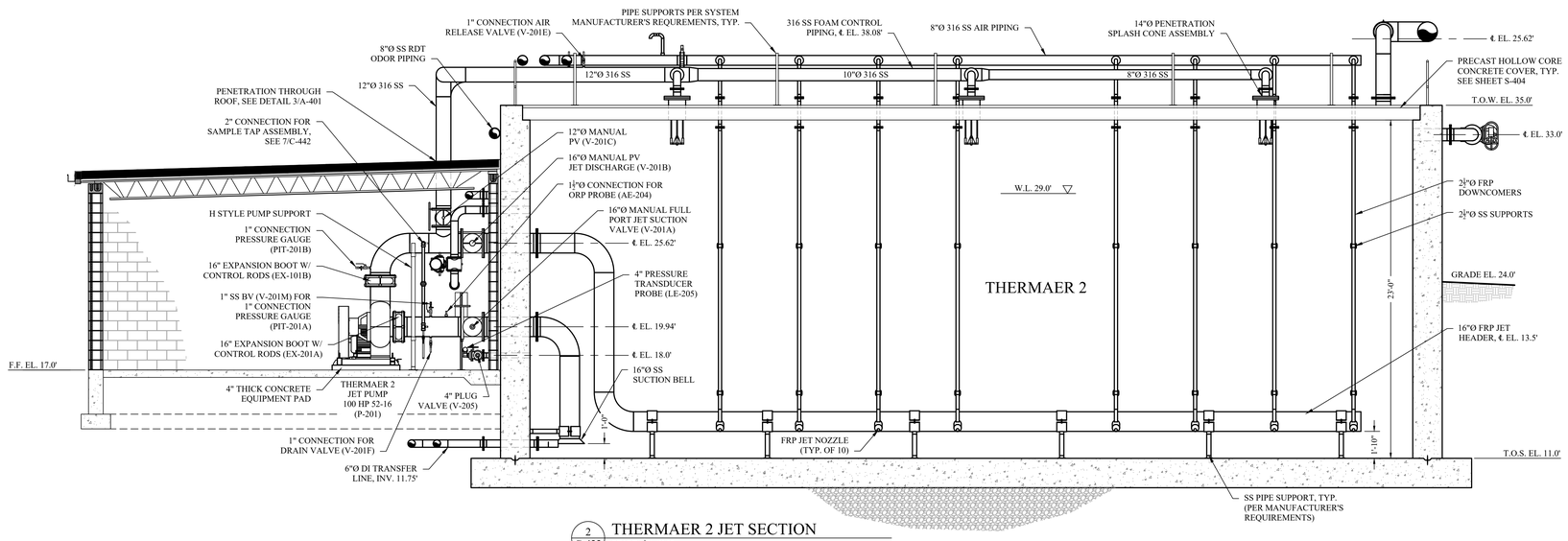
C-421

PROJECT # 18-732 PHASE #

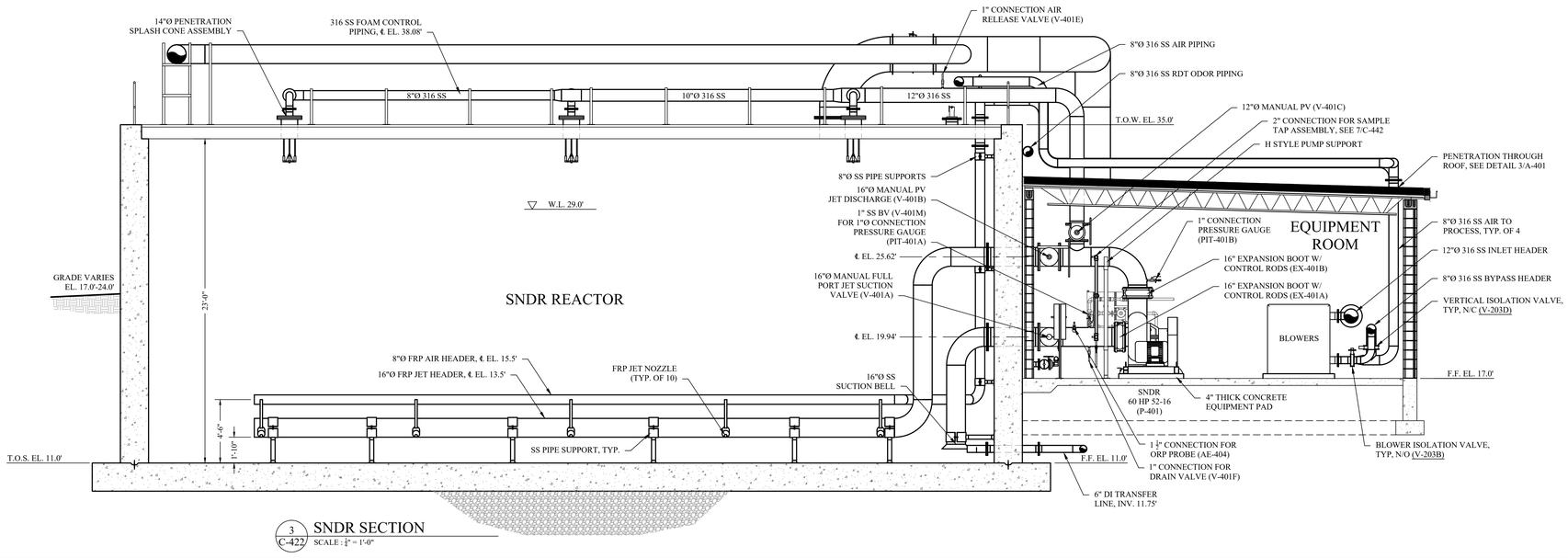
P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil-Process\Sludge Holding Tank ALT A.dwg, C-421, 4/17/2025 5:06:14 PM



1 C-422 THERMAER 1 JET SECTION
SCALE : ¼" = 1'-0"



2 C-422 THERMAER 2 JET SECTION
SCALE : ¼" = 1'-0"



3 C-422 SNDR SECTION
SCALE : ¼" = 1'-0"

NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
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NEW WINDSOR, NY 12553
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NEW WINDSOR, NY 12553

THERMAER & SNDR FOAM CONTROL SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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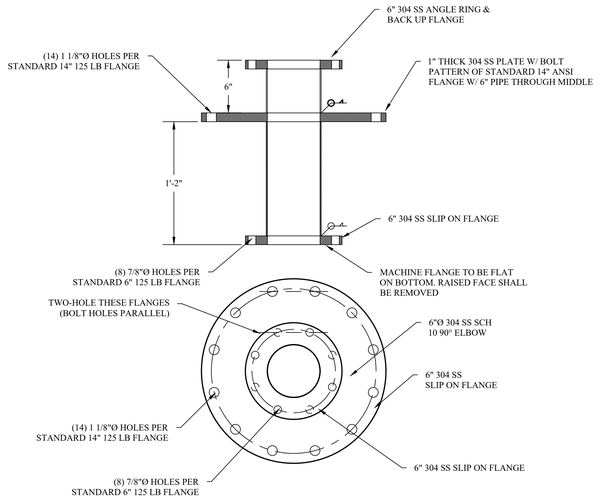
REVIEWED BY:	MJS, JZ

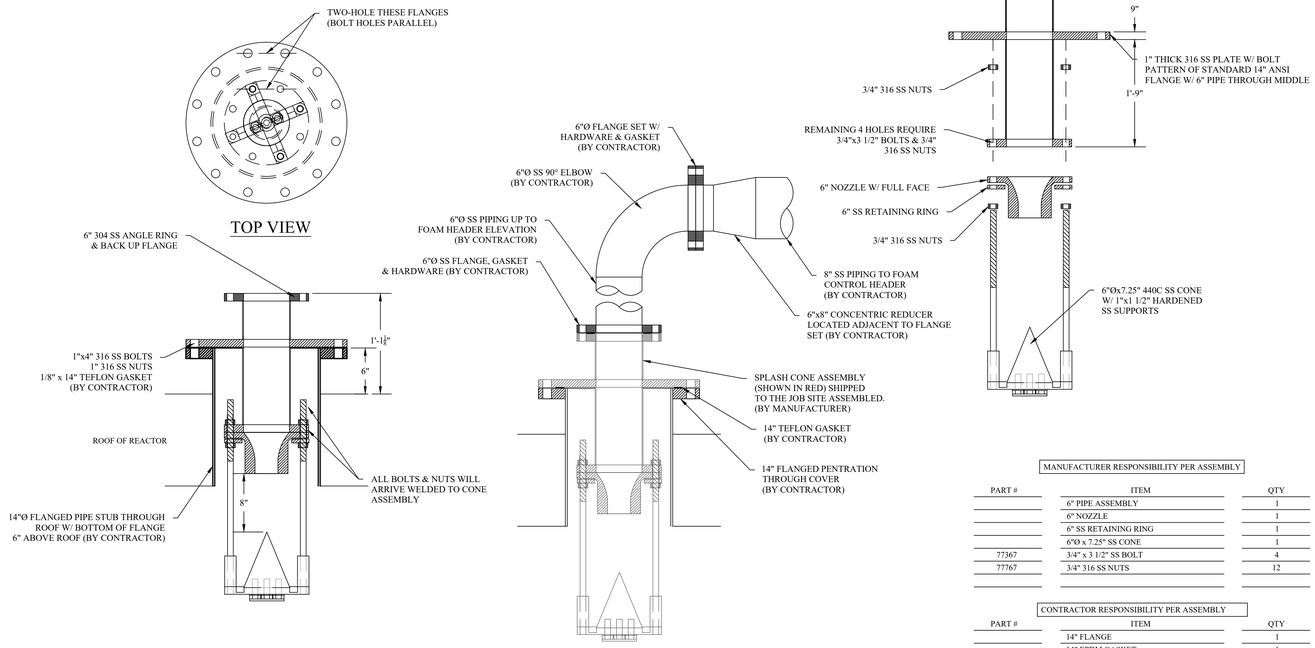
SHEET NO.
C-422

PROJECT # 18-732 PHASE #

T:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil Process\Sludge Holding Tank ALT A.dwg, C-422, 4/15/2025 5:42:29 PM



1 C-423 FLANGE ASSEMBLY VIEW DETAIL
SCALE : NONE



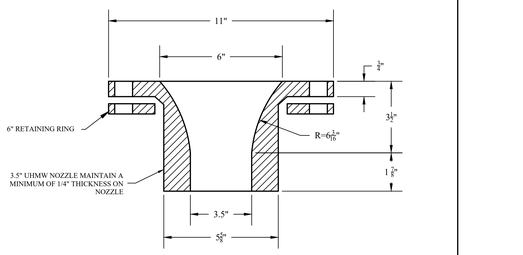
2 C-423 SPLASH CONE ASSEMBLY DETAILS
SCALE : NONE

MANUFACTURER RESPONSIBILITY PER ASSEMBLY

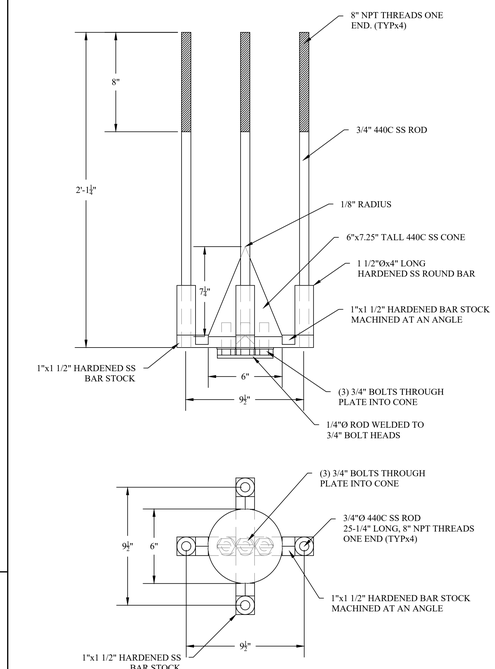
PART #	ITEM	QTY
	6" PIPE ASSEMBLY	1
	6" NOZZLE	1
	6" SS RETAINING RING	1
	6"Ø x 7.25" SS CONE	1
77367	3/4" x 3 1/2" SS BOLT	4
77767	3/4" 316 SS NUTS	12

CONTRACTOR RESPONSIBILITY PER ASSEMBLY

PART #	ITEM	QTY
	14" FLANGE	1
	14" EPDM GASKET	1
	1" x 4" 316 SS BOLT	14
	1" 316 SS NUT	14
	6" EPDM GASKET	1
77367	3/4" x 3 1/2" 316 SS BOLTS	8
77767	3/4" 316 SS NUTS	8



3 C-423 SPRAY NOZZLE DETAIL
SCALE : NONE



4 C-423 CONE ASSEMBLY DETAIL
SCALE : NONE

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

THERMAER & SNDR DETAILS

REVISIONS

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SHEET NO.
C-423

PROJECT # 18-732 PHASE #

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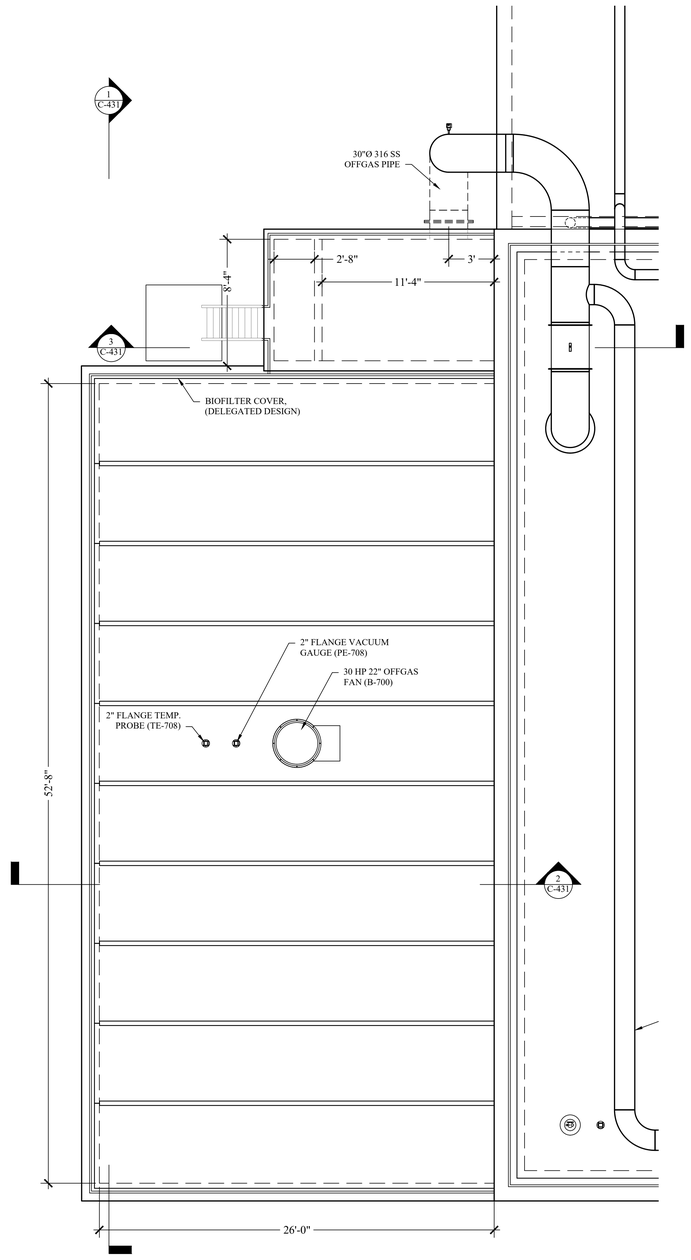
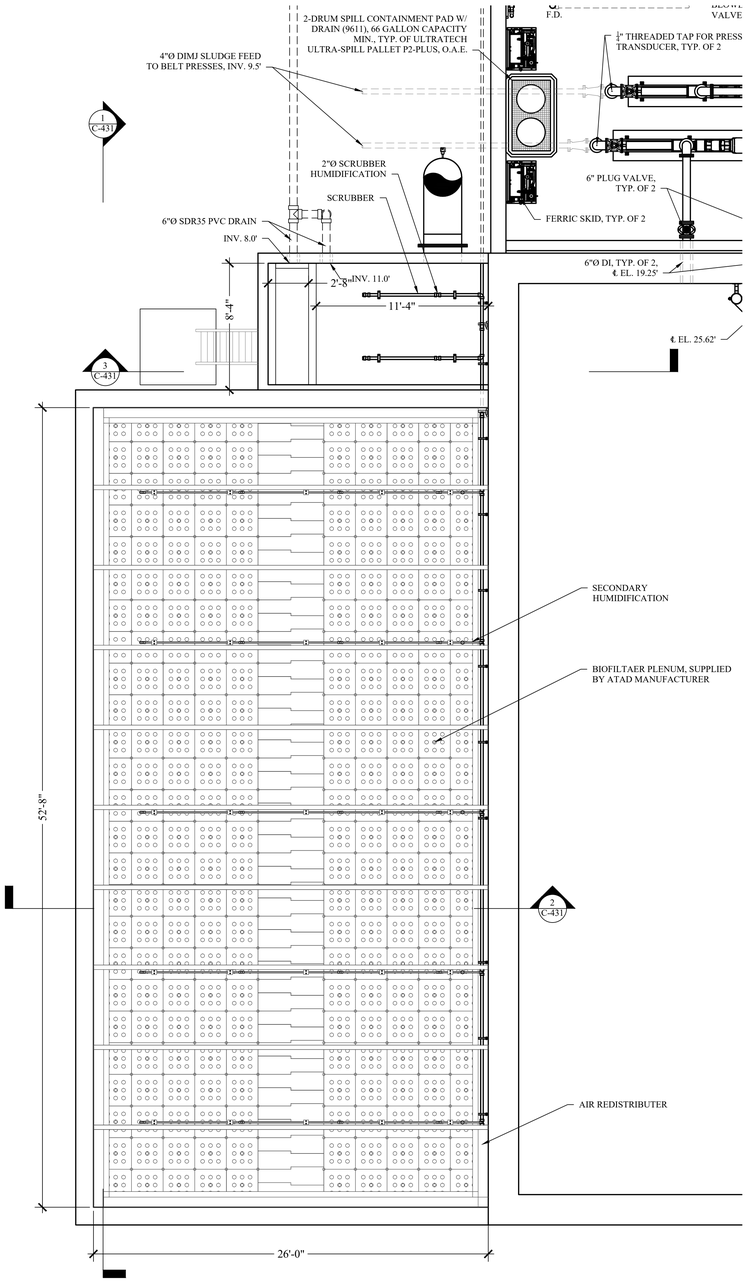


1 C-430 BIOFILTER COVER PLAN
SCALE: 1/4" = 1'-0"



2 C-430 BIOFILTER IN-BASIN PLAN
SCALE: 1/4" = 1'-0"

NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

BIOFILTER AND
SCRUBBER PLANS

REVISIONS

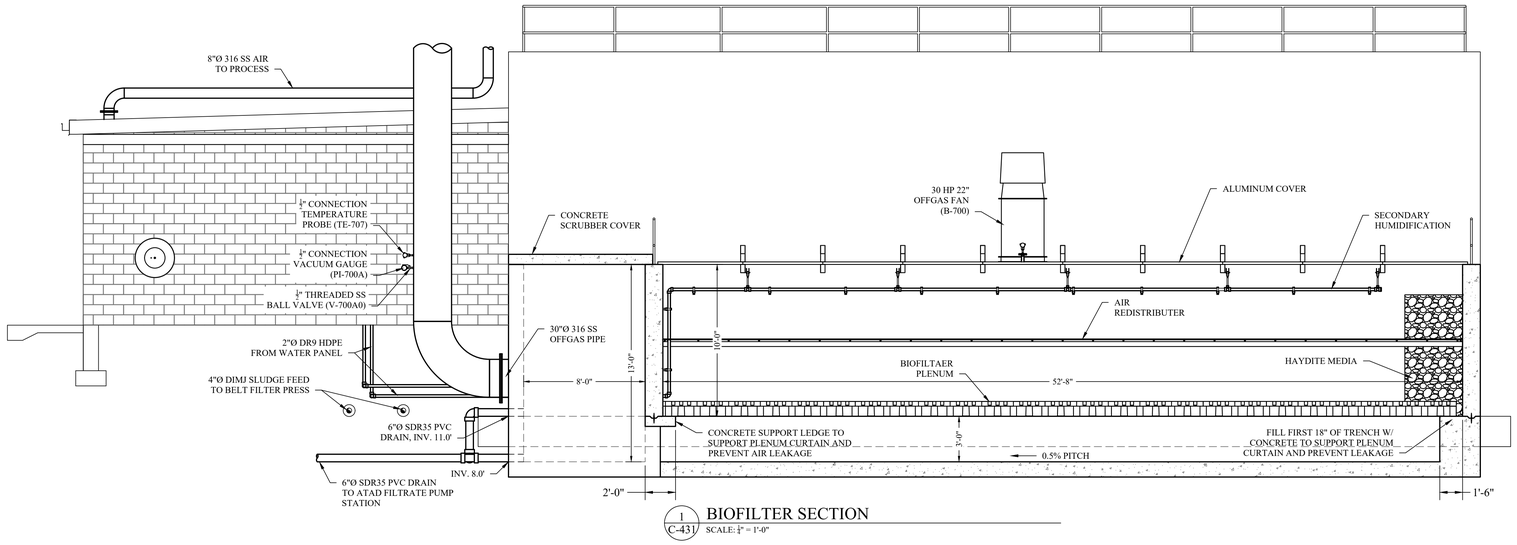
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	MJS, JZ

SHEET NO.
C-430

PROJECT # 18-732 PHASE #

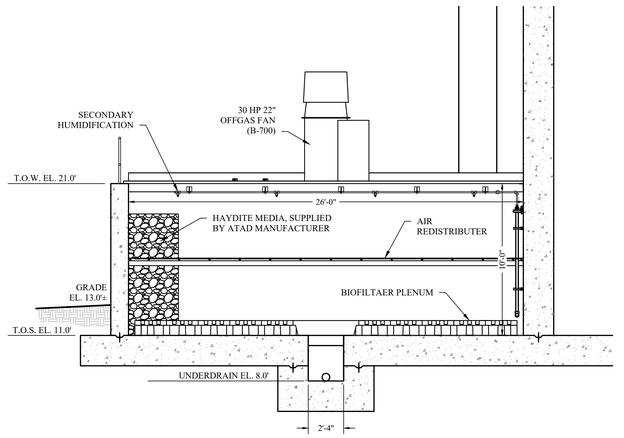
P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil-Process\Sludge Holding Tank ALT A.dwg, C-430, 4/15/2025 5:42:57 PM



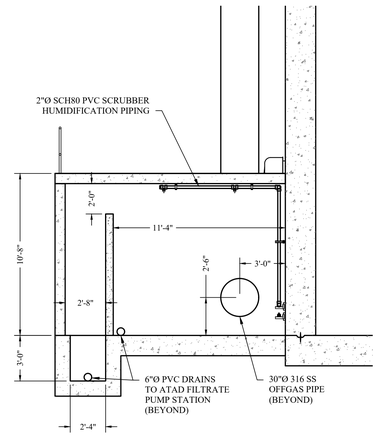
1 C-431 BIOFILTER SECTION
SCALE: ¼" = 1'-0"

NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.



2 C-431 BIOFILTER SECTION
SCALE: ¼" = 1'-0"



3 C-431 SCRUBBER SECTION
SCALE: ¼" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

BIOFILTER AND SCRUBBER SECTIONS AND DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

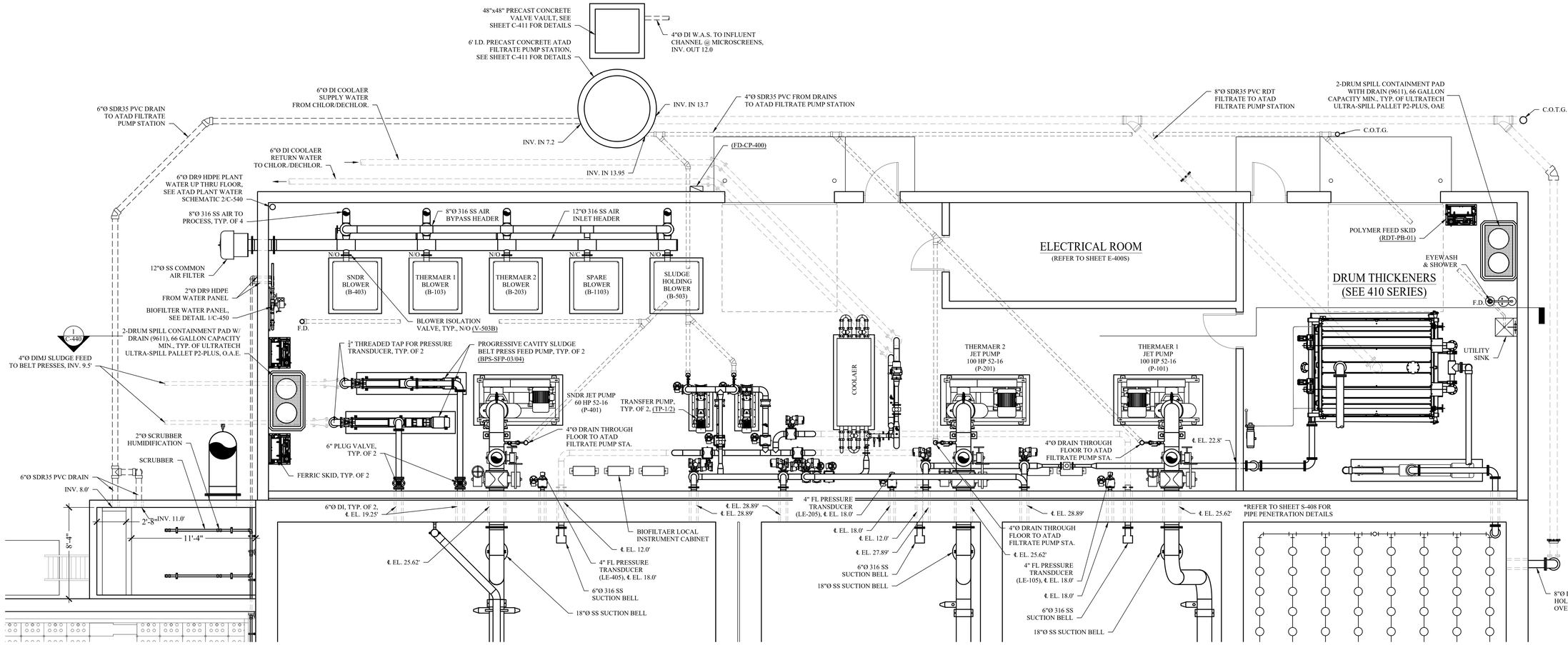
ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

SHEET NO.

C-431

PROJECT # 18-732 PHASE #

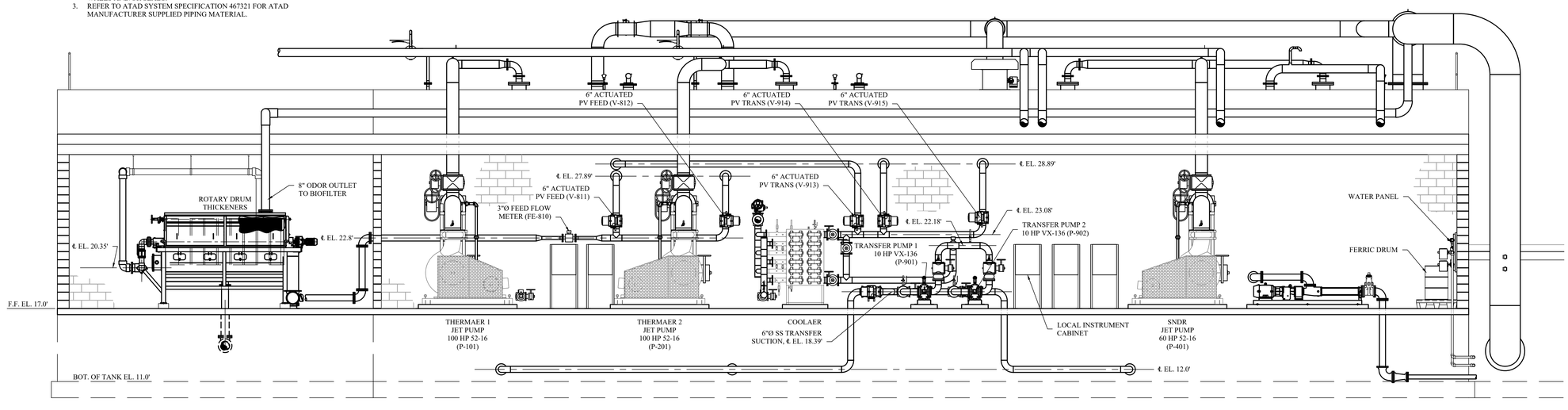
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil-Process\Sludge Holding Tank ALT A.dwg, C-431, 4/15/2025 5:42:42 PM



A C-440 EQUIPMENT ROOM LAYOUT PLAN
SCALE: 1/4" = 1'-0"

NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.



NOTE : PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.

1 C-440 EQUIPMENT ROOM SECTION
SCALE: 1/4" = 1'-0"

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New Windsor, NY 12553
(845) 567-3100
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Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EQUIPMENT ROOM LAYOUT PLAN AND OVERALL SECTION

REVISIONS

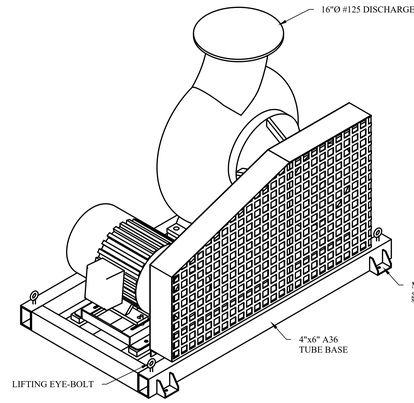
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

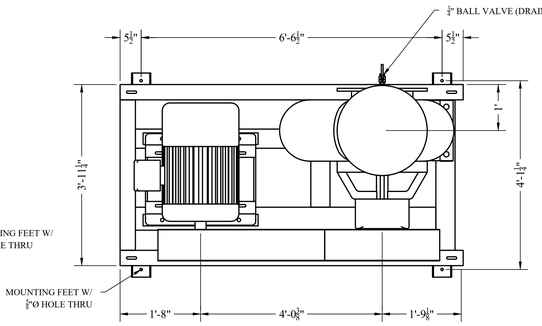
SHEET NO.
C-440

PROJECT # 18-732 PHASE #

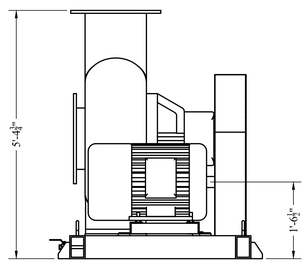
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil-Process\Sludge Holding Tank ALT A.dwg, C-440, 4/15/2025 5:42:28 PM



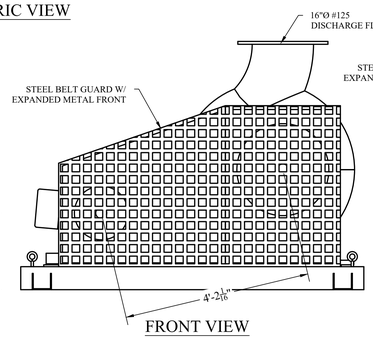
ISOMETRIC VIEW



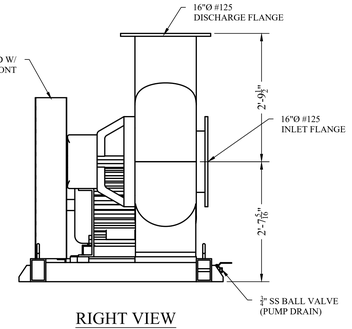
TOP VIEW



LEFT VIEW

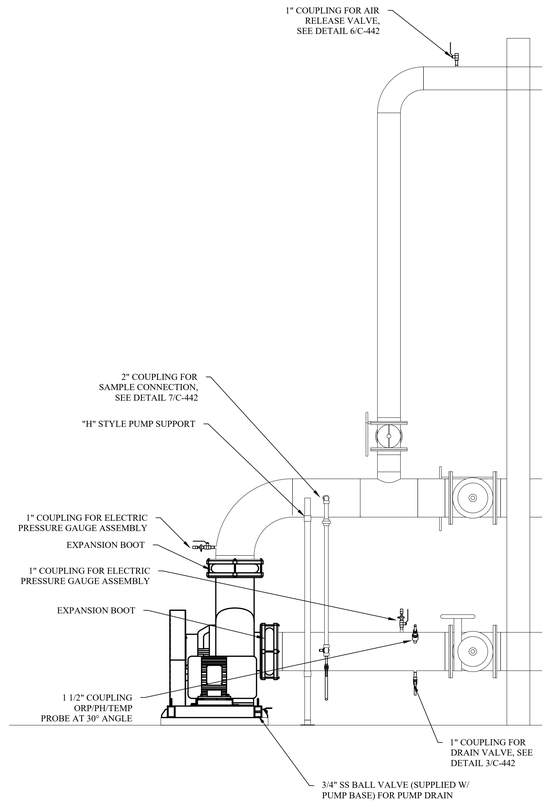


FRONT VIEW

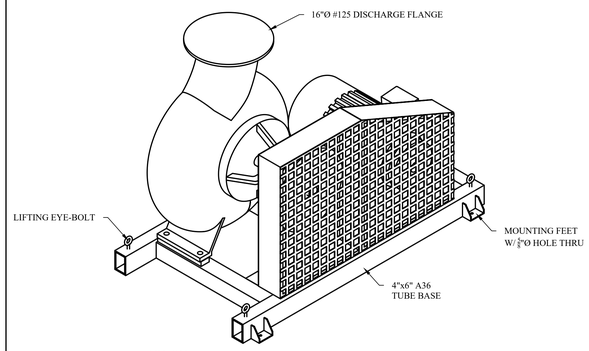


RIGHT VIEW

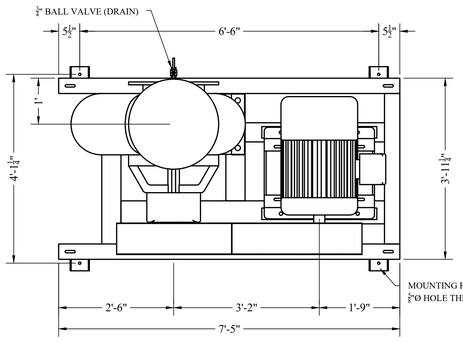
1 C-441 APT 52-16 60 HP LH SNDR PUMP DETAILS
SCALE: NONE



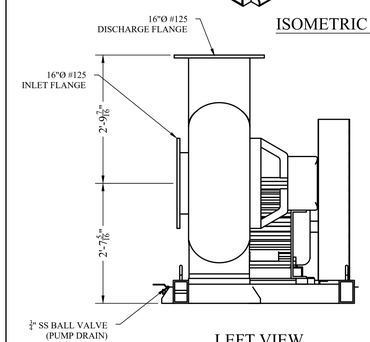
2 C-441 TYPICAL THERMAER & SNDR PUMP DETAIL
SCALE: NONE



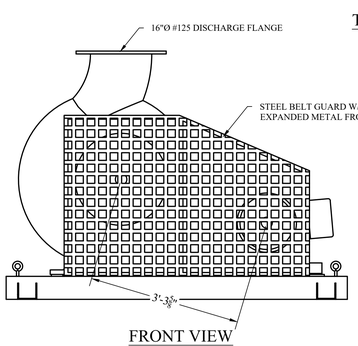
ISOMETRIC VIEW



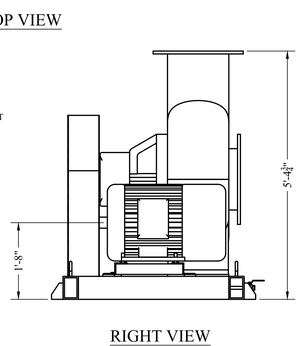
TOP VIEW



LEFT VIEW

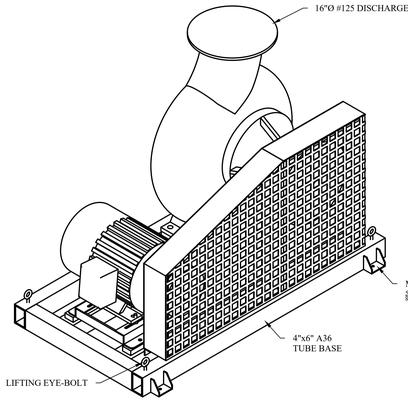


FRONT VIEW

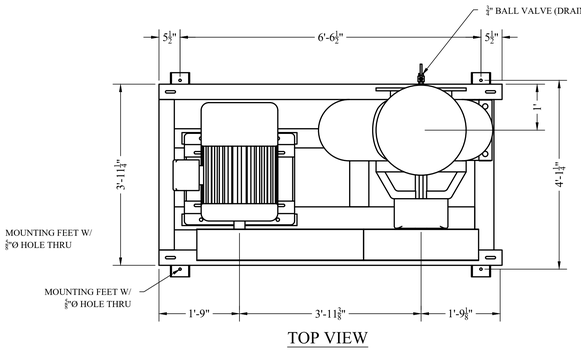


RIGHT VIEW

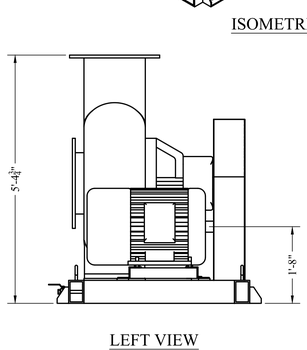
3 C-441 APT 52-16 100 HP RH THERMAER PUMP DETAILS
SCALE: NONE



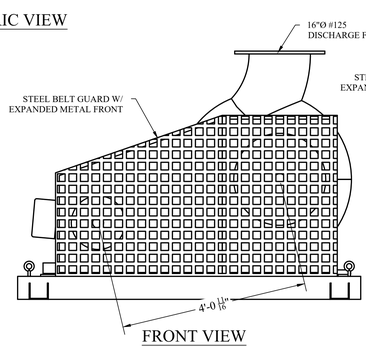
ISOMETRIC VIEW



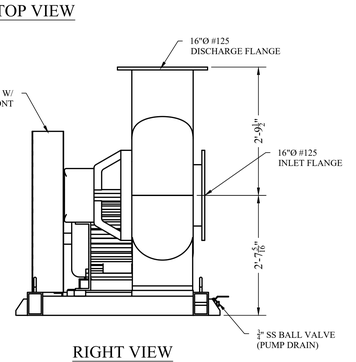
TOP VIEW



LEFT VIEW



FRONT VIEW



RIGHT VIEW

4 C-441 APT 52-16 100 HP LH THERMAER PUMP DETAILS
SCALE: NONE

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

THERMAER AND SNDR PUMP DETAILS

REVISIONS

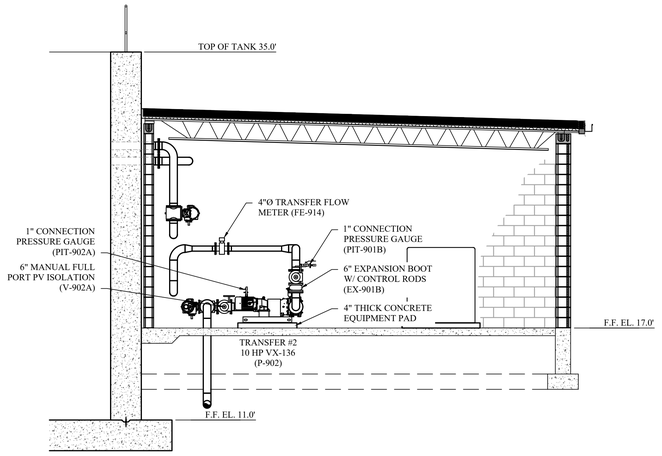
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPB/Jr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

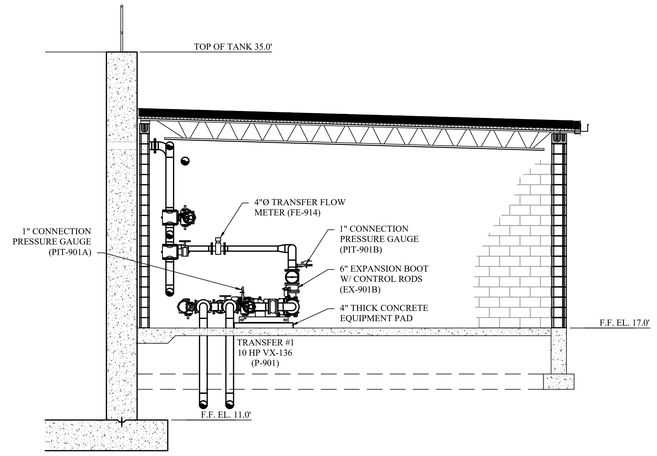
SHEET NO.
C-441

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Ch4-Process\Sludge Holding Tank ALT A.dwg, C-441, 4/15/2025 5:42:49 PM



1 C-442 TRANSFER PUMP #2 SECTION
SCALE: NONE



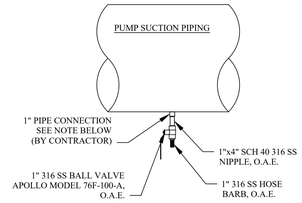
2 C-442 TRANSFER PUMP #1 SECTION
SCALE: NONE

NOTES :

1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.

DRAIN DETAIL

LOCATION	NUM
THERMAER 1 PUMP	1
THERMAER 2 PUMP	1
SNDR PUMP	1
TRANSFER PUMP 1	1
TRANSFER PUMP 2	1



ATAD MANUFACTURER'S RESPONSIBILITY PER ASSEMBLY		
PART	ITEM	QTY
	1"x4" SCH 40 316 SS NIPPLE	1
APO76F10527	1" 316 SS BALL VALVE	1
	1" 316 SS HOSE BARB	1

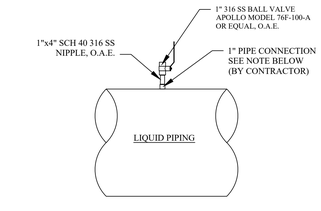
CONTRACTOR RESPONSIBILITY PER ASSEMBLY	
ITEM	QTY
1" THREADED CONNECTION IN PIPE	1

NOTES:
1) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A 1" THREADED CONNECTION ON THE BOTTOM OF THE LIQUID PIPING TO ALLOW THE PIPING SYSTEM TO BE DRAINED. ON STAINLESS PIPE, A 1" DIAMETER HALF COUPLING OR FULL COUPLING SHALL BE WELDED TO THE PIPE. ON DUCTILE IRON OR PVC PIPE, THE PIPE MAY BE DRILLED AND TAPPED FOR A 1" THREADED CONNECTION.

3 C-442 TYPICAL DRAIN DETAIL
SCALE: NONE

AIR RELEASE DETAIL

LOCATION	NUM
THERMAER 1 PUMP	1
THERMAER 2 PUMP	1
SNDR PUMP	1
TRANSFER SYSTEM	1

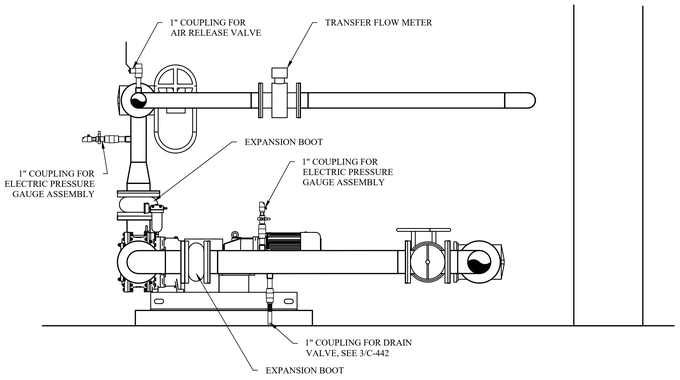


ATAD MANUFACTURER'S RESPONSIBILITY PER ASSEMBLY		
PART	ITEM	QTY
	1"x4" SCH 40 316 SS NIPPLE	1
APO76F10527	1" 316 SS BALL VALVE	1

CONTRACTOR RESPONSIBILITY PER ASSEMBLY	
ITEM	QTY
1" THREADED CONNECTION IN PIPE	1

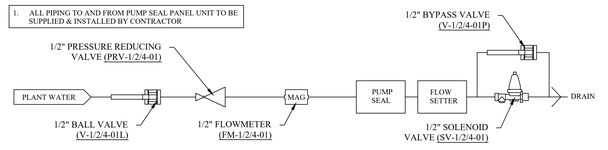
NOTES:
1) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A 1" THREADED CONNECTION ON THE TOP OF THE LIQUID PIPING TO RELEASE ANY AIR IN THE SYSTEM. ON STAINLESS PIPE, A 1" DIAMETER HALF COUPLING OR FULL COUPLING SHALL BE WELDED TO THE PIPE. ON DUCTILE IRON OR PVC PIPE, THE TOP OF THE PIPE MAY BE DRILLED AND TAPPED FOR A 1" THREADED CONNECTION.

6 C-442 TYPICAL AIR RELEASE DETAIL
SCALE: NONE



4 C-442 TYPICAL TRANSFER PUMP DETAIL
SCALE: NONE

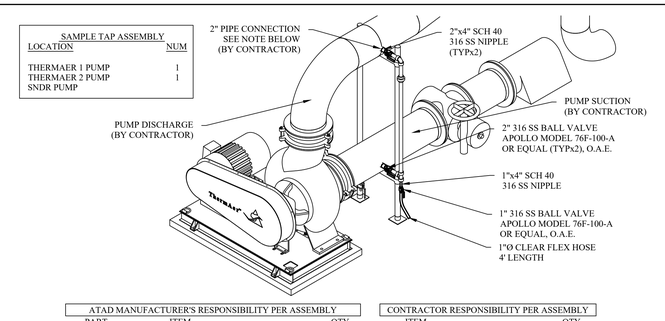
1. ALL PIPING TO AND FROM PUMP SEAL PANEL UNIT TO BE SUPPLIED & INSTALLED BY CONTRACTOR



5 C-442 PUMP SEAL FLUSHING SCHEMATIC
SCALE: NONE

SAMPLE TAP ASSEMBLY

LOCATION	NUM
THERMAER 1 PUMP	1
THERMAER 2 PUMP	1
SNDR PUMP	



ATAD MANUFACTURER'S RESPONSIBILITY PER ASSEMBLY		
PART	ITEM	QTY
	2"x4" SCH 40 316 SS NIPPLE	2
APO76F10827	2" 316 SS BALL VALVE	2
APO76F10827	1" 316 SS BALL VALVE	1
	1" FLEX HOSE 4' LENGTH	1
	1"x4" SCH 40 316 SS NIPPLE	1

CONTRACTOR RESPONSIBILITY PER ASSEMBLY	
ITEM	QTY
2" THREADED CONNECTION IN PIPE	1
2" 90° ELBOW	1
2" UNION	1
2" TEE	1
2" CONNECTING PIPING	1
2"x1" REDUCING BUSHING	1

7 C-442 TYPICAL SAMPLE TAP ASSEMBLY DETAIL
SCALE: NONE

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
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Milford, PA 18337
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

TRANSFER PUMPS SECTIONS AND DETAILS

REVISIONS

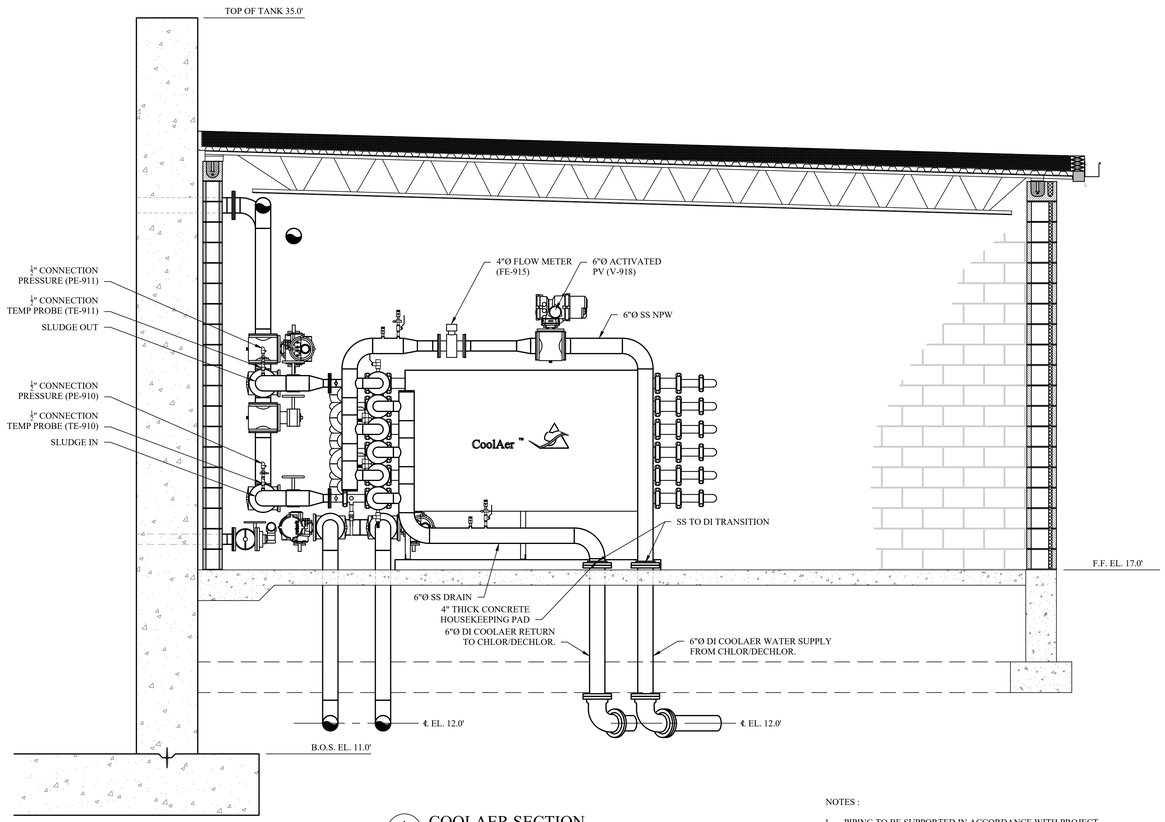
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	MJS, JZ

SHEET NO.
C-442

PROJECT # 18-732 PHASE #

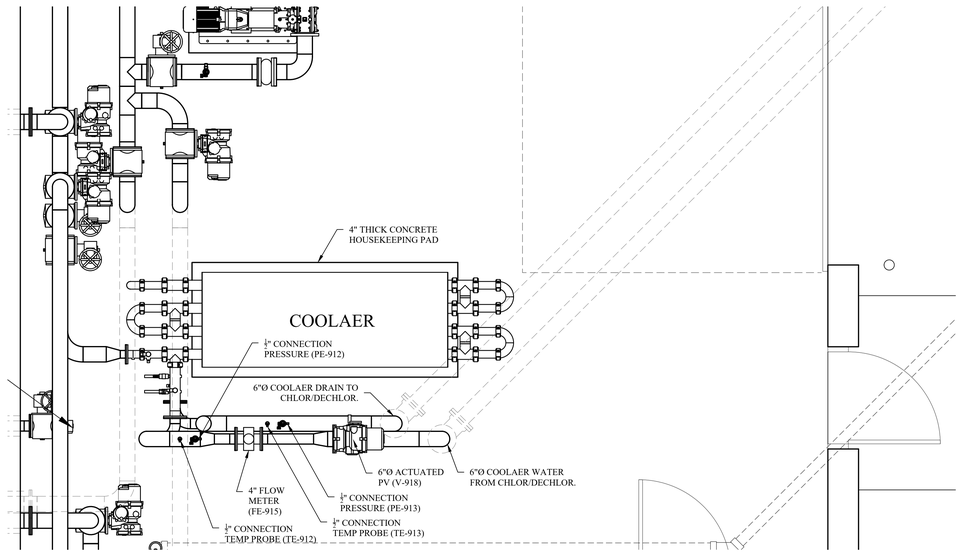
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil-Process\Sludge Holding Tank ALT A.dwg, C-442, 4/15/2025 5:42:31 PM



1 C-443 COOLAER SECTION
SCALE : $\frac{1}{2}$"=1'-0"

NOTES :

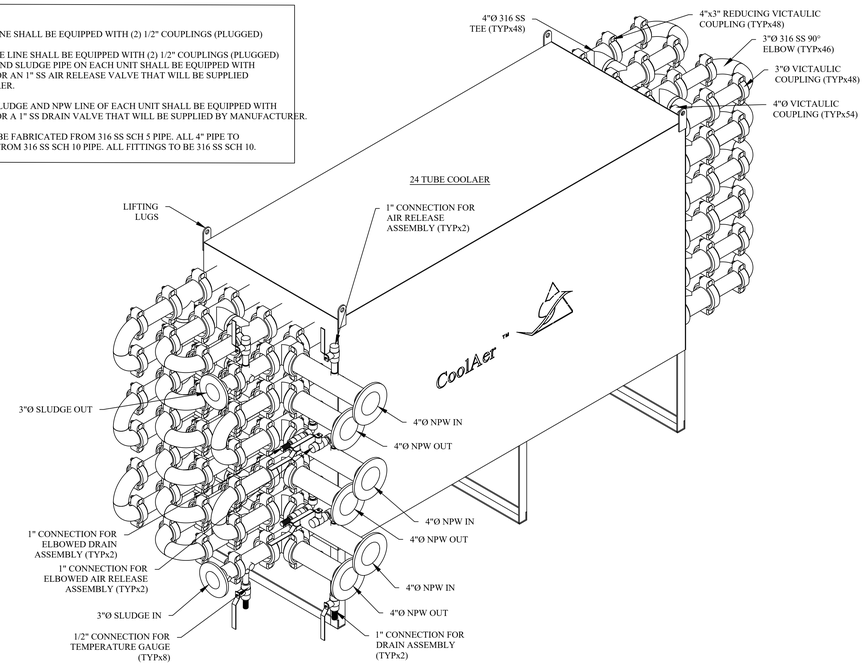
1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.



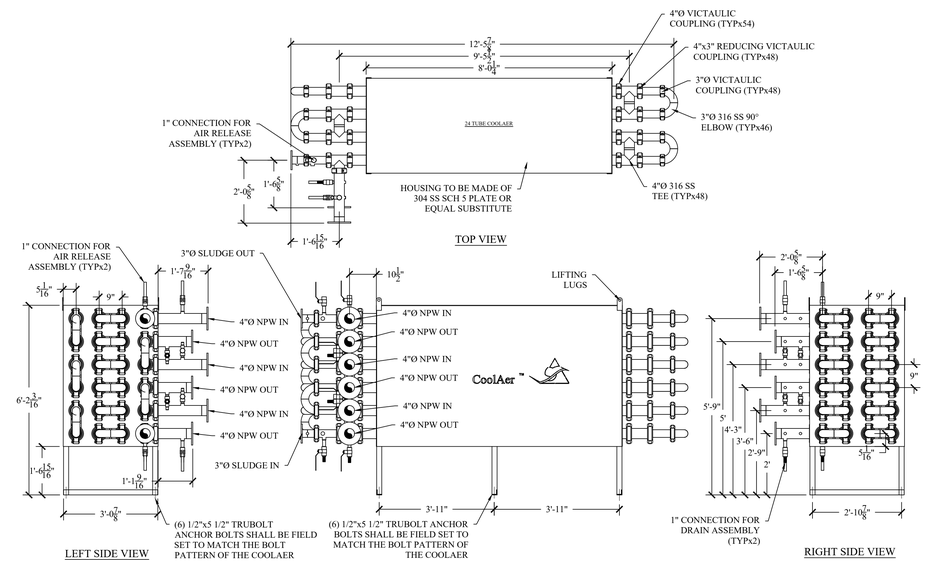
A C-443 COOLAER PLAN VIEW
SCALE : $\frac{1}{2}$"=1'-0"

NOTES:

1. EACH 4" NPW LINE SHALL BE EQUIPPED WITH (2) 1/2" COUPLINGS (PLUGGED)
2. EACH 3" SLUDGE LINE SHALL BE EQUIPPED WITH (2) 1/2" COUPLINGS (PLUGGED)
3. THE TOP NPW AND SLUDGE PIPE ON EACH UNIT SHALL BE EQUIPPED WITH A 1" COUPLING FOR AN 1" SS AIR RELEASE VALVE THAT WILL BE SUPPLIED BY MANUFACTURER.
4. THE BOTTOM SLUDGE AND NPW LINE OF EACH UNIT SHALL BE EQUIPPED WITH A 1" COUPLING FOR A 1" SS DRAIN VALVE THAT WILL BE SUPPLIED BY MANUFACTURER.
5. ALL 3" PIPE TO BE FABRICATED FROM 316 SS SCH 5 PIPE. ALL 4" PIPE TO BE FABRICATED FROM 316 SS SCH 10 PIPE. ALL FITTINGS TO BE 316 SS SCH 10.



2 C-443 24 TUBE COOLAER ISOMETRIC
SCALE : NONE



3 C-443 24 TUBE COOLAER DETAILS
SCALE : NONE

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555 UNION AVE.
NEW WINDSOR, NY 12553

COOLAER SECTIONS AND DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

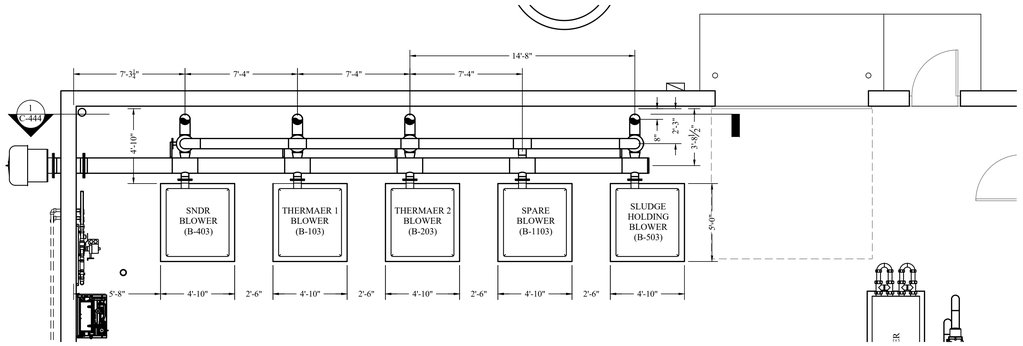
ISSUED DATE:	18 APR. 2025
DESIGN BY:	QMM
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

SHEET NO.

C-443

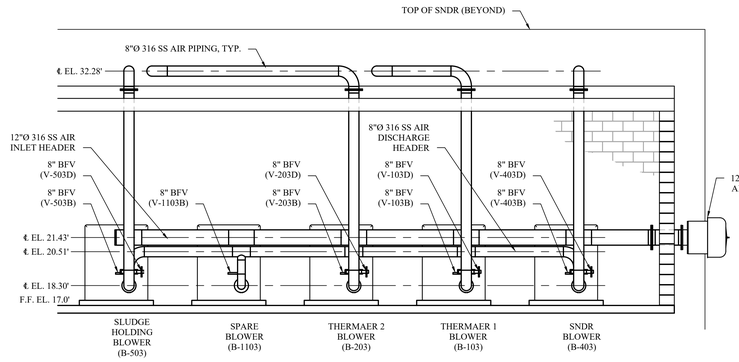
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil-Process\Sludge Holding Tank ALT A.dwg, C-443, 4/15/2025 5:42:51 PM

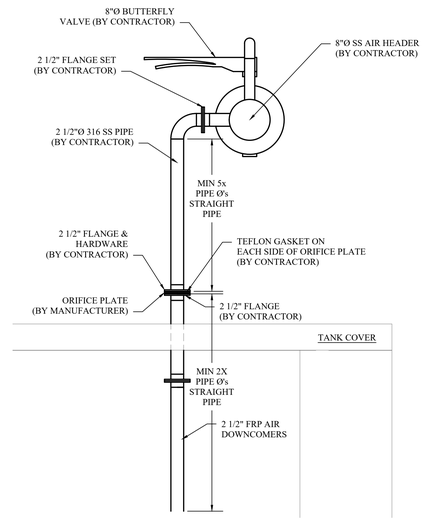


A C-444 BLOWER LAYOUT PLAN
SCALE: ¼"=1'-0"

NOTES:
1. 6" FLANGED EPDM EXPANSION BOOTS SHALL BE PROVIDED ON DISCHARGE OF EACH BLOWER, (EX403, EX-103A, EX203A, EX1103A, EX503).



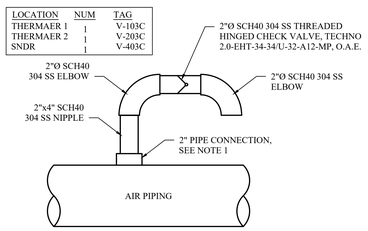
1 C-444 BLOWER LAYOUT ELEVATION
SCALE: ¼"=1'-0"



2 C-444 TYPICAL ORIFICE PLATE DETAIL
SCALE: NONE

NOTES :
1. PIPING TO BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATION 400507 - HANGERS AND SUPPORTS.
2. REFER TO SHEET C-143 FOR PIPE PENETRATIONS THROUGH WALLS AND/OR SLABS.
3. REFER TO ATAD SYSTEM SPECIFICATION 467321 FOR ATAD MANUFACTURER SUPPLIED PIPING MATERIAL.

LOCATION	NUM	TAG
THERMAER 1	1	V-103C
THERMAER 2	1	V-203C
SNDR	1	V-403C



NOTES:
1) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A 2" THREADED CONNECTION ON THE TOP OF THE AIR PIPING PREVENT SIPHONING WHEN THE BLOWER IS TURNED OFF. ON STAINLESS PIPE, A 2" DIAMETER HALF COUPLING OR FULL COUPLING SHALL BE WELDED TO THE PIPE. ON DUCTILE IRON THE TOP OF THE PIPE MAY BE DRILLED AND TAPPED FOR A 2" THREADED CONNECTION.

2) THE SYSTEM WILL ARRIVE PREASSEMBLED FOR FAST CONTRACTOR INSTALLATION.

3) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCESS TO THE ANTI-SIPHON VALVE ASSEMBLY

MANUFACTURER'S RESPONSIBILITY PER ASSEMBLY

ITEM	QTY
2"x4" SCH 40 304 SS NIPPLE	1
2"Ø SCH 40 304 SS ELBOW	2
2"Ø HINGE CHECK VALVE TECHNO	1

CONTRACTOR RESPONSIBILITY PER ASSEMBLY

ITEM	QTY
2" THREADED CONNECTION IN PIPE	1

3 C-444 ANTI-SIPHON ASSEMBLY DETAIL
SCALE: NONE

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555 UNION AVE.
NEW WINDSOR, NY 12553

A.T.A.D. BLOWERS SECTION AND DETAILS

REVISIONS

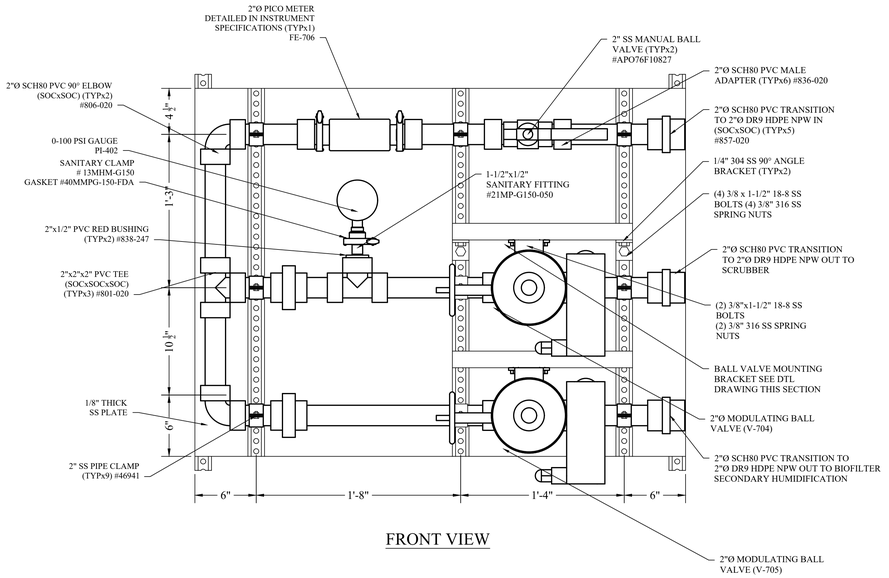
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPB/Jr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

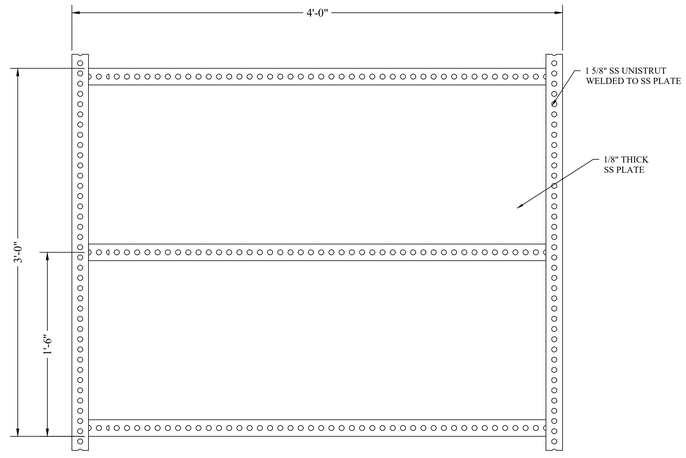
SHEET NO.
C-444

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Ch4-Process\Sludge Holding Tank A\LT A.dwg, C-444, 4/15/2025 5:42:51 PM

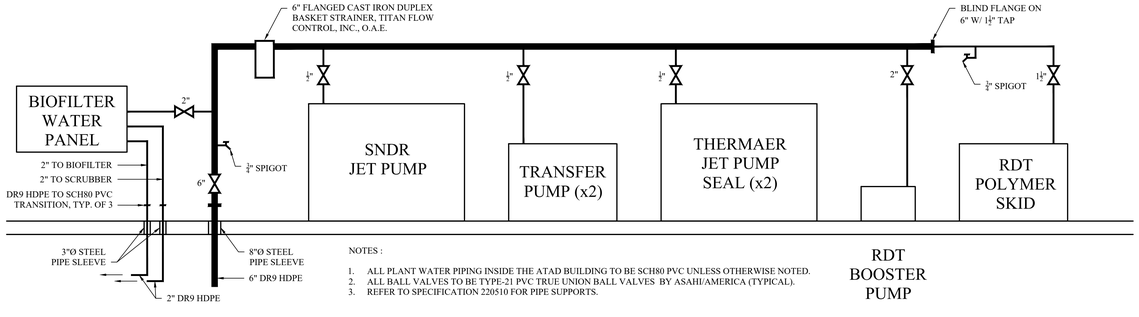


FRONT VIEW



BACK SIDE VIEW

1 C-450 WATER PANEL
SCALE: NONE



NOTES :

1. ALL PLANT WATER PIPING INSIDE THE ATAD BUILDING TO BE SCH80 PVC UNLESS OTHERWISE NOTED.
2. ALL BALL VALVES TO BE TYPE-21 PVC TRUE UNION BALL VALVES BY ASAHI/AMERICA (TYPICAL).
3. REFER TO SPECIFICATION 220510 FOR PIPE SUPPORTS.

2 C-450 ATAD PLANT WATER PROCESS SCHEMATIC
SCALE: NONE

MHE ENGINEERING

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POTABLE AND
NON-POTABLE WATER
SCHEMATICS

REVISIONS

NO.	DESCRIPTION	DATE

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DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

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C-450

PROJECT # 18-732 PHASE #

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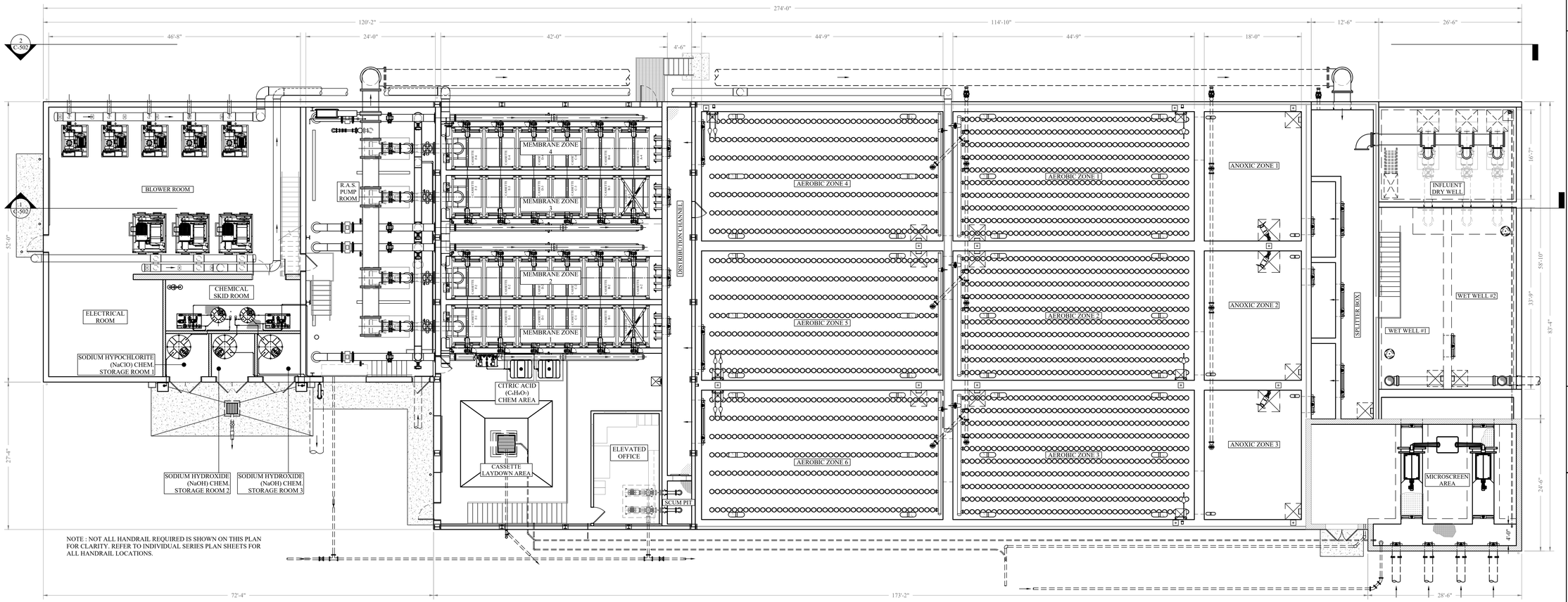
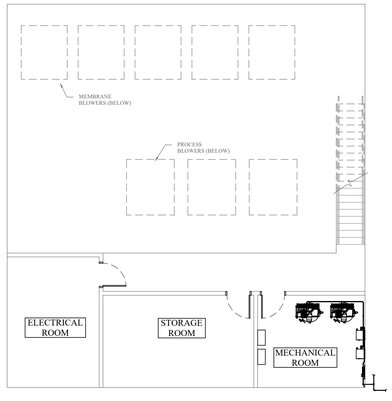


NOTE : NOT ALL HANDRAIL REQUIRED IS SHOWN ON THIS PLAN FOR CLARITY. REFER TO INDIVIDUAL SERIES PLAN SHEETS FOR ALL HANDRAIL LOCATIONS.

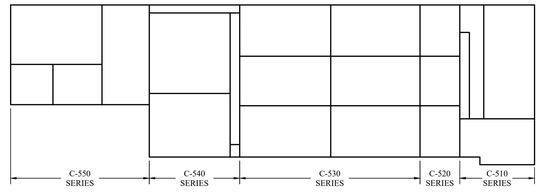
A C-501 MBR - OVERALL PROCESS PLAN
SCALE: 1/8" = 1'-0"



B C-501 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. OWNER HAS PROCURED VEOLIA MBR EQUIPMENT USED AS THE BASIS OF DESIGN FOR THE MBR SYSTEM. CONTRACTOR TO REVIEW VEOLIA'S FINAL SHOP DRAWING SUBMITTAL WHICH INCLUDES P&ID AND BILL OF MATERIALS ATTACHED TO THESE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH P&ID DRAWINGS AND BILL OF MATERIALS PROVIDED IN THE MBR SHOP DRAWINGS. ALL MATERIALS, WHETHER SUPPLIED BY VEOLIA OR OTHERWISE, IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE AND INSTALL IN ACCORDANCE WITH THESE DOCUMENTS.
3. EQUIPMENT PROVIDED BY VEOLIA FOR CONTRACTOR TO INSTALL IDENTIFIED BY GENERAL TAG ID FORMAT (X-XX-XXX-X). REFER TO VEOLIA'S P&ID AND BILL OF MATERIALS.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL PIPING INSULATION FOR ALL EXPOSED HOT AIR PIPING, FITTINGS AND VALVES. SEE SPECIFICATION 404213.1.
5. THE CONTRACTOR SHALL FURNISH AND INSTALL PIPING INSULATION FOR ALL EXPOSED AND EXTERIOR WATER PROCESS PIPING, FITTINGS AND VALVES TO PREVENT FREEZING. SEE SPECIFICATION 404213.
6. REFER TO PROCESS VALVE SPECIFICATION 400552 AND VEOLIA P&ID FOR MORE INFORMATION REGARDING VALVE SCHEDULE AND TAG IDS.
7. CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER FOR ALL PROCESS EQUIPMENT, STARTUP AND WATERTIGHT TESTING (REFER TO S-500A FOR MORE DETAILS). PLANT EFFLUENT WATER CAN BE USED UNLESS OTHERWISE REQUIRED BY THE MANUFACTURER.



KEY PLAN
SCALE: 1/32" = 1'-0"

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NEW WINDSOR, NY 12553

MBR - OVERALL PROCESS PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-501

PROJECT # 18-732 PHASE #

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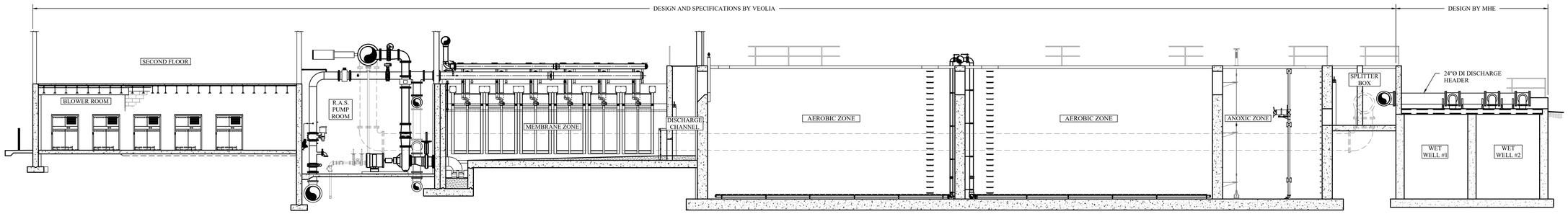
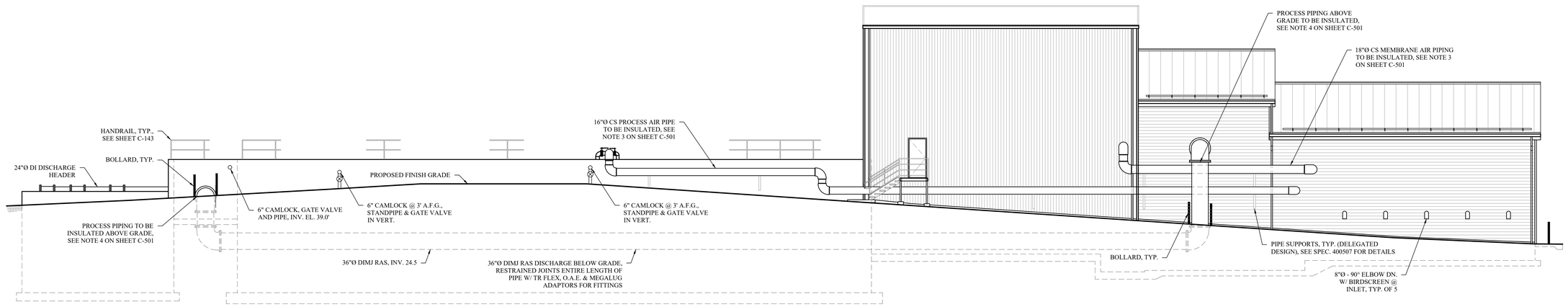


1 C-502 MBR - LONGITUDINAL SECTION
SCALE: 1/8" = 1'-0"



2 C-502 MBR - REAR ELEVATION
SCALE: 1/8" = 1'-0"

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Milford, PA 18337
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NEW WINDSOR, NY 12553

MBR - OVERALL PROCESS SECTION AND REAR ELEVATION

REVISIONS

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ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
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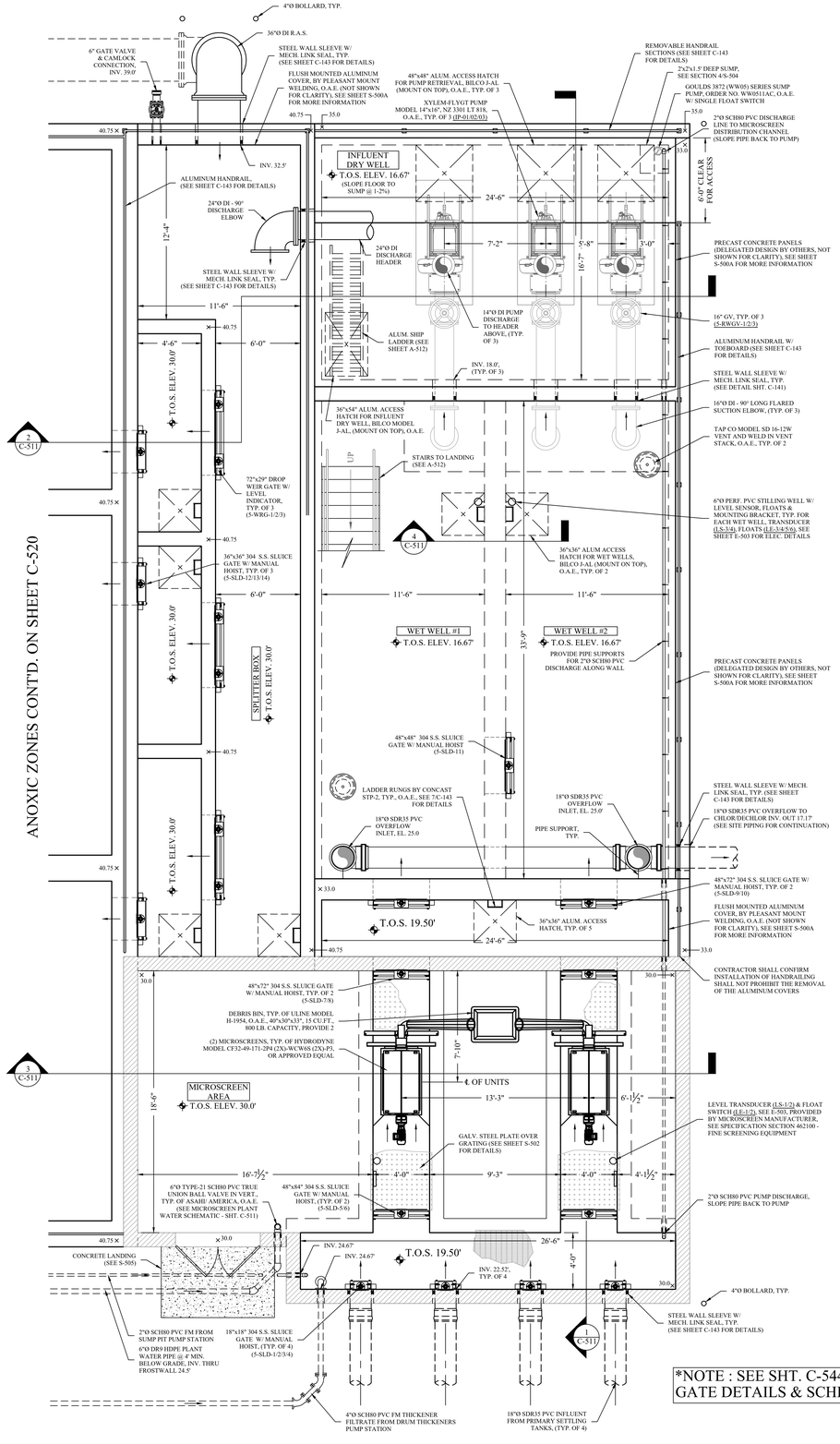
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

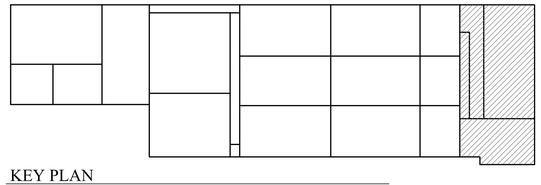
SHEET NO.
C-502

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\5 - MBR\Process\PLANS AND SECTIONS\C-502.dwg, C-502, 4/18/2025 12:49:21 PM



A C-510 MBR - INFLUENT PUMPS & MICROSCREEN PLAN
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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UDIG·NY SAFE DIGGING STARTS HERE
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - INFLUENT PUMPS & MICROSCREEN PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-510

PROJECT # 18-732 PHASE #

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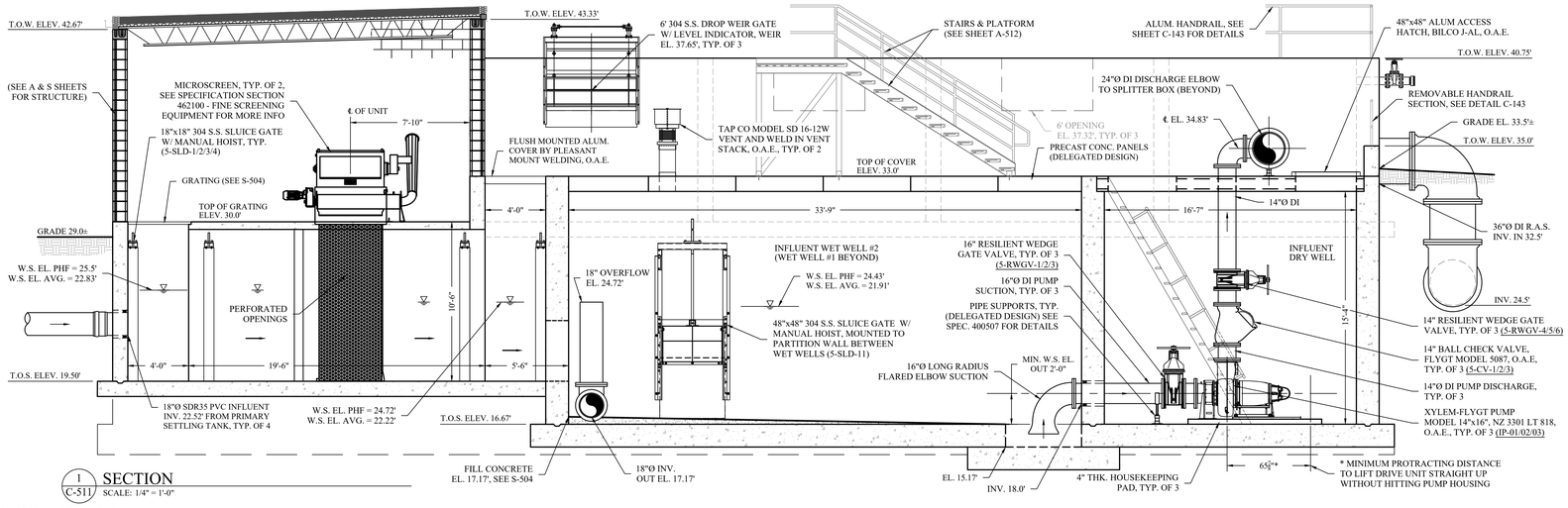
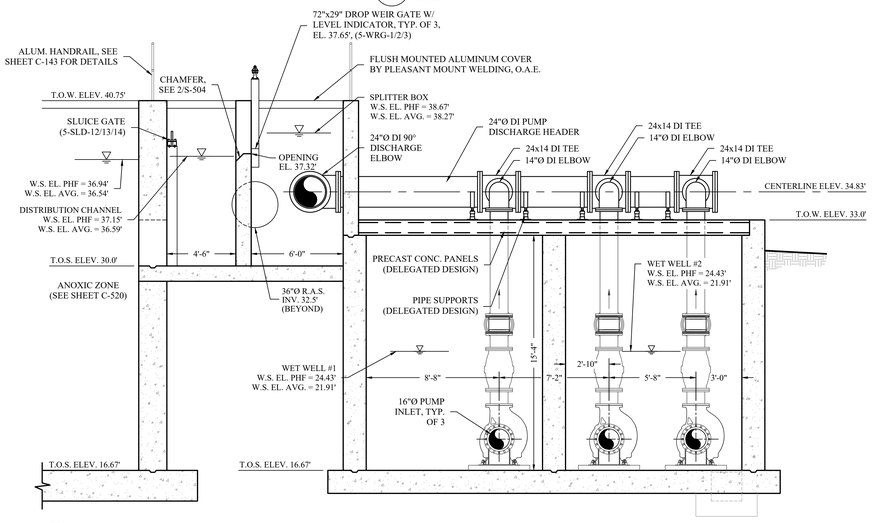


*NOTE : SEE SHT. C-544 FOR GATE DETAILS & SCHEDULE)

1 C-511 SECTION
SCALE: 1/4" = 1'-0"



2 C-511 SECTION
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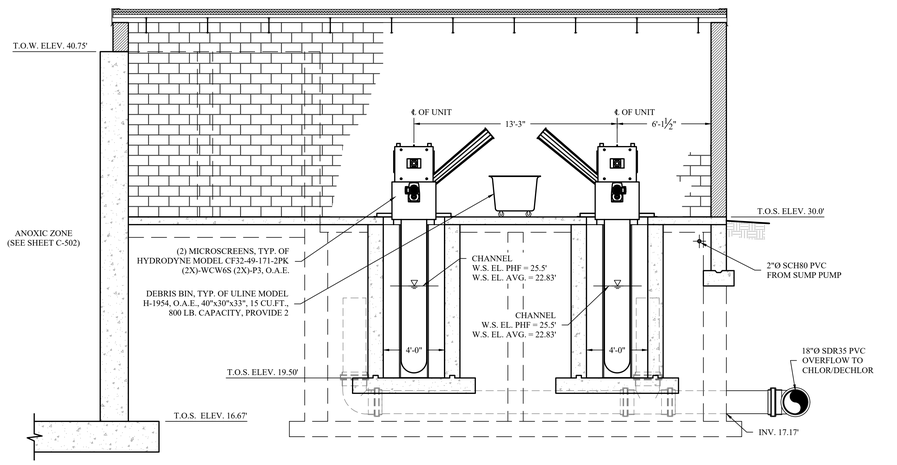
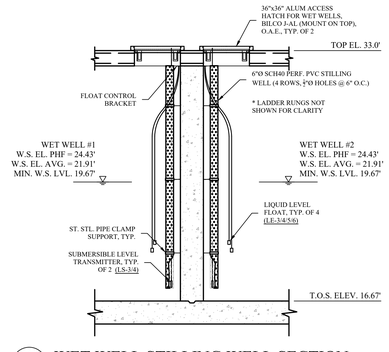


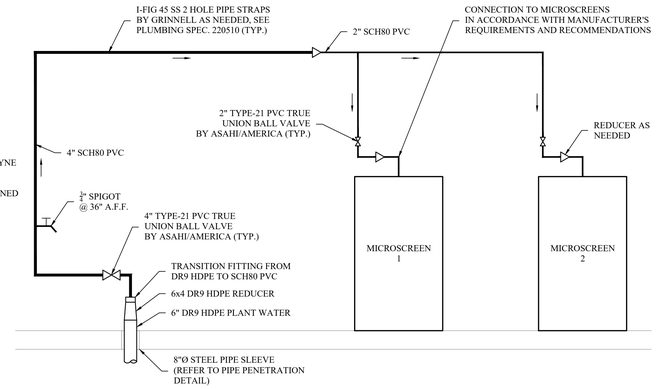
3 C-511 SECTION
SCALE: 1/4" = 1'-0"



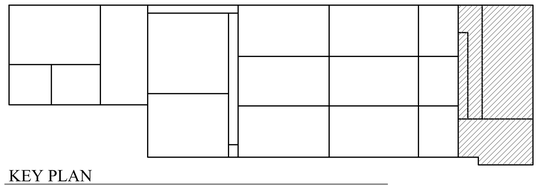
4 C-511 WET WELL STILLING WELL SECTION
SCALE: 3/8"=1'-0"

NOTES:

1. FLOW DIAGRAM PROVIDED FOR CONTRACTOR'S REFERENCE OF OVERALL REQUIREMENTS TO CONNECT PROPOSED PLANT WATER TO HYDRODYNE MICROSCREENS MODEL #CF 32-49-171-2-P, O.A.E. EXACT LOCATION, LAYOUT AND QUANTITY OF INTERNAL PLUMBING MATERIAL TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL INSTALL ALL PLUMBING COMPONENTS SHOWN ON FLOW DIAGRAM.



5 C-511 PLANT WATER PROCESS FLOW DIAGRAM CONNECTION TO MICROSCREENS
SCALE: NONE



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
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BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - INFLUENT PUMPS & MICROSCREEN SECTIONS

REVISIONS

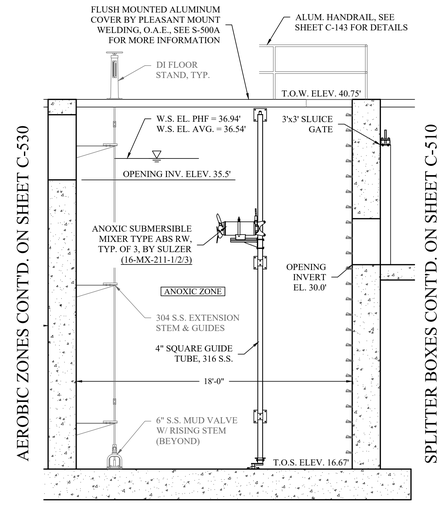
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

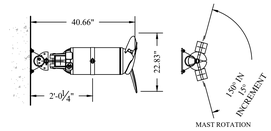
SHEET NO.
C-511

PROJECT # 18-732 PHASE #

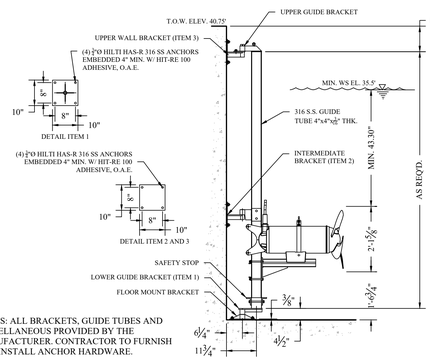
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\5 - MBR\Process\PLANS AND SECTIONS2.dwg, C-511, 4/16/2025 12:55:15 PM



1 C-520 SECTION
SCALE: 1/4" = 1'-0"



PLAN VIEW DETAILS

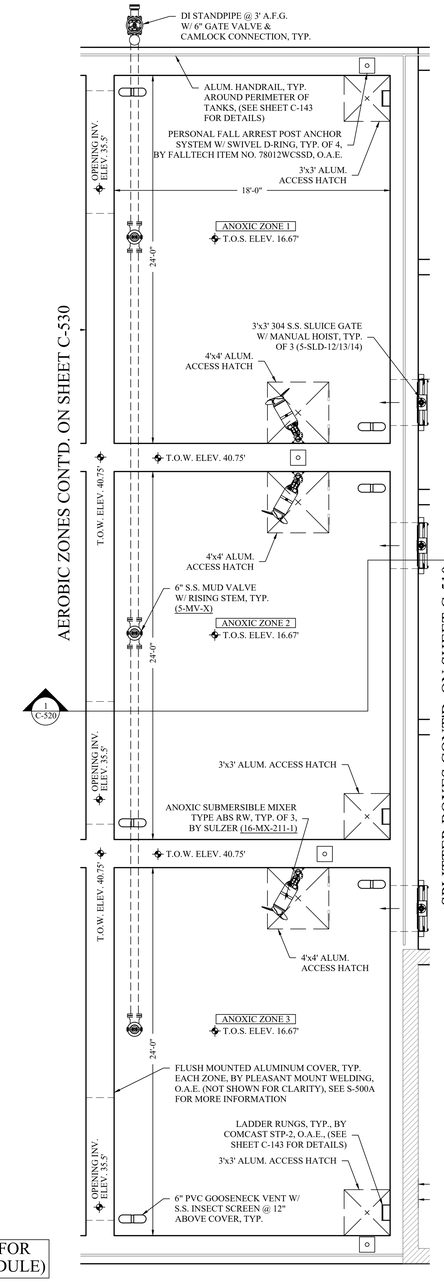


NOTES: ALL BRACKETS, GUIDE TUBES AND MISCELLANEOUS PROVIDED BY THE MANUFACTURER. CONTRACTOR TO FURNISH AND INSTALL ANCHOR HARDWARE.

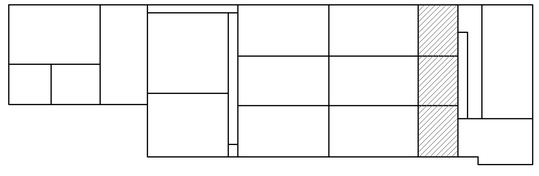
ELEVATION VIEW DETAILS

2 C-520 SUBMERSIBLE MIXER INSTALLATION DETAIL
SCALE: 1/2" = 1'-0" (PROVIDED BY VEOLIA)

*NOTE : SEE SHT. C-544 FOR GATE DETAILS & SCHEDULE)



A C-520 MBR - ANOXIC ZONE TANK PLAN
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - ANOXIC ZONE TANK PLAN, SECTIONS & DETAILS

REVISIONS

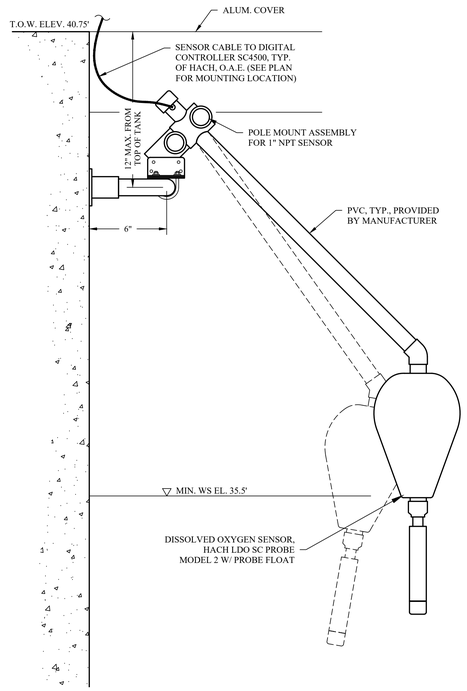
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-520

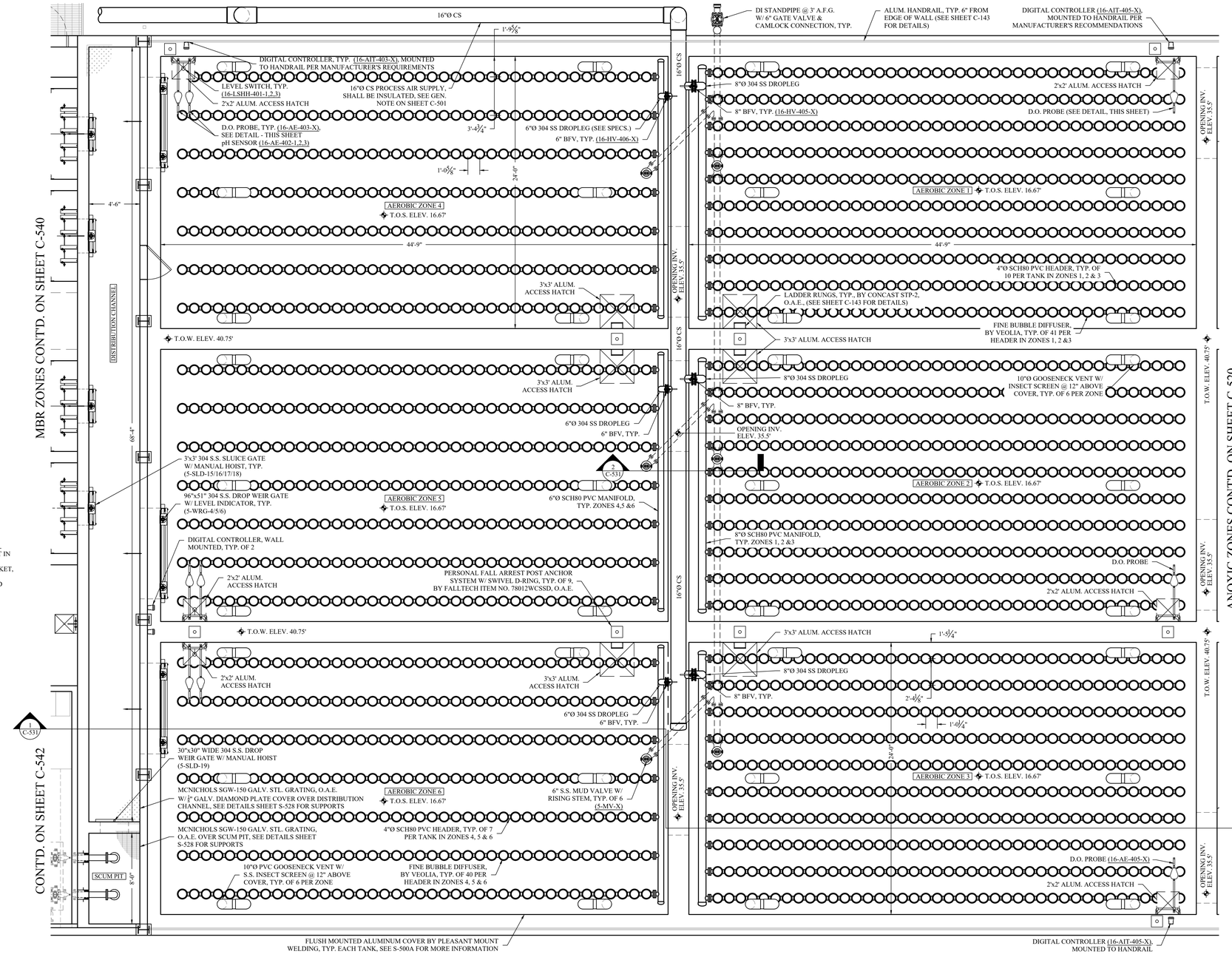
PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\5 - MBR\Photos\PLANS AND SECTIONS2.dwg, C-520, 4/16/2025 12:53:37 PM



1 / C-530 D.O. PROBE/pH SENSOR FLOAT MOUNT DETAIL
SCALE: NONE (PROVIDED BY VEOLIA)

NOTE: CONTRACTOR TO INSTALL AND MOUNT IN ACCORDANCE WITH MANUFACTURER'S MOUNTING INSTALLATION. MOUNTING BRACKET, ANCHORS AND HARDWARE SUPPLIED BY MANUFACTURER. FURNISHED BY VEOLIA AND SUPPLIED BY MANUFACTURER.

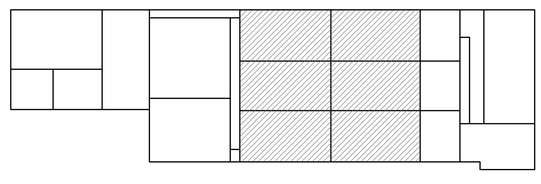


A / C-530 MBR - AEROBIC ZONE TANK PLAN
SCALE: 1/4" = 1'-0"

NOTES :

1. ALL CARBON STEEL AND STAINLESS STEEL PIPE SHALL COMPLY WITH ASTM A53.
2. ALL CARBON STEEL AND STAINLESS STEEL PIPE SHALL BE WELDED.
3. ALL FITTINGS SHALL COMPLY WITH ASTM A234-WPB.

*NOTE : SEE SHT. C-544 FOR GATE DETAILS & SCHEDULE)



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - AEROBIC ZONE TANK PLAN

REVISIONS

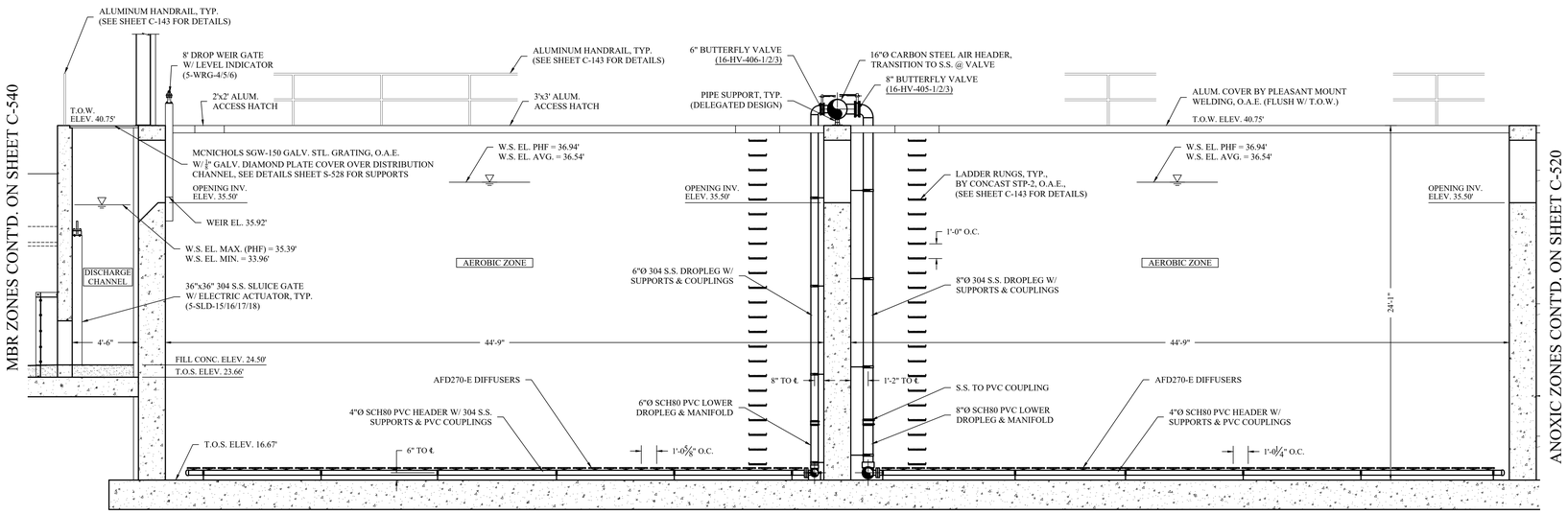
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-530

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\S - MBR\Process\PLANS AND SECTIONS\S2.dwg, C-530, 4/16/2025 12:50:17 PM

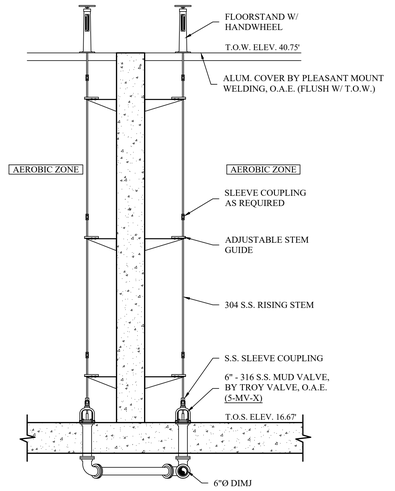


1 C-531 MBR - AEROBIC ZONE TANK SECTION

SCALE: 1/4" = 1'-0"

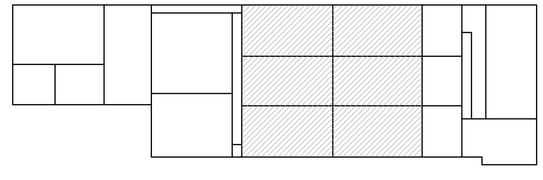
NOTE : CONTRACTOR TO REFER TO VEOLIA'S P&ID AND BILL OF MATERIALS TO CONFIRM SCOPE OF SUPPLY FOR THE FINE BUBBLE DIFFUSER GRIDS.

*NOTE : SEE SHT. C-544 FOR GATE DETAILS & SCHEDULE)



2 C-531 TYP. TANK WALL SECTION @ MUD VALVES

SCALE: 1/4" = 1'-0"



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SCALE: 1/32" = 1'-0"

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - AEROBIC ZONE TANK SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

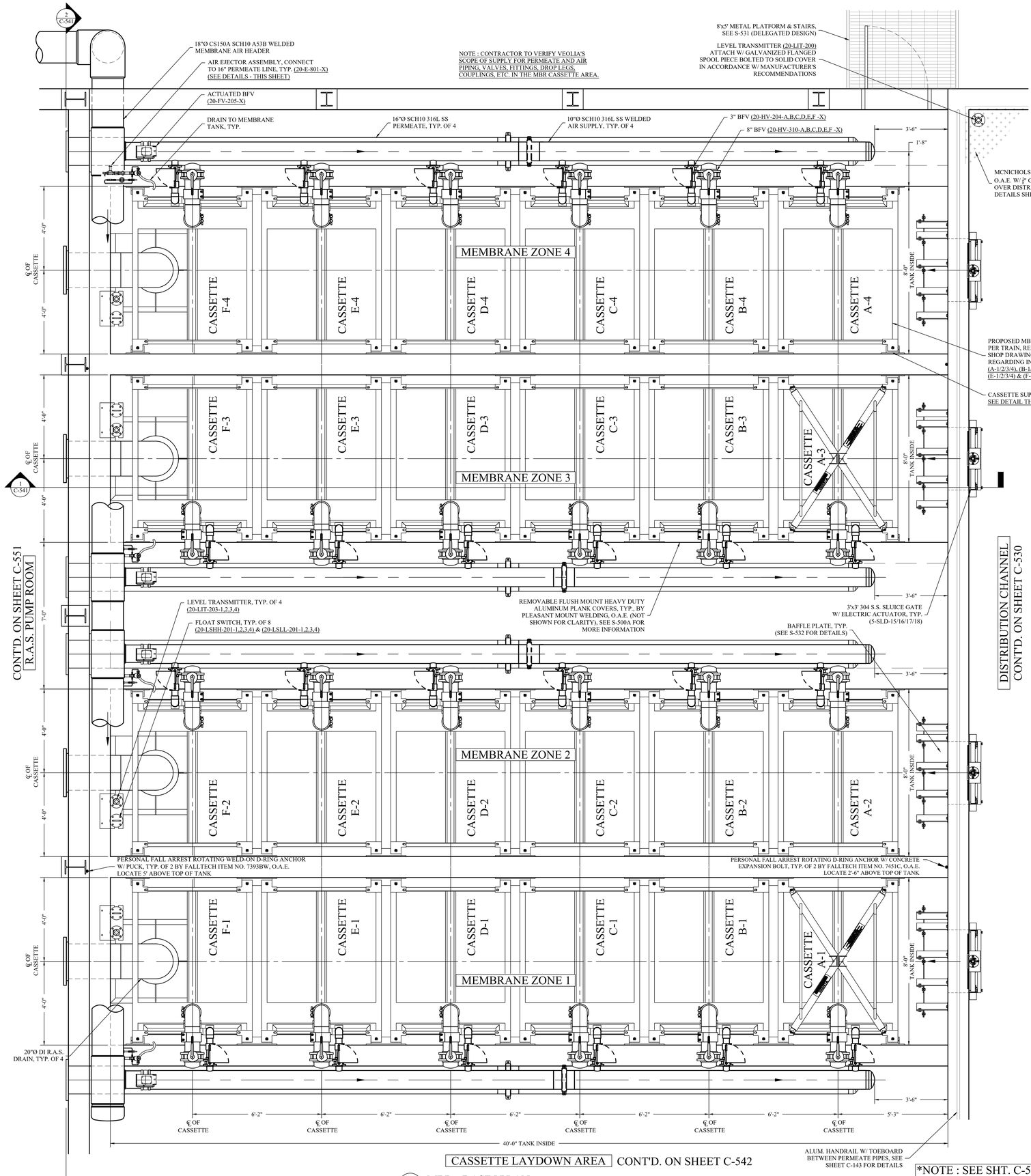
ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-531

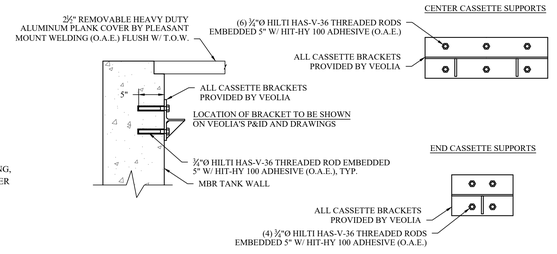
PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\5 - MBR\Process\PLANS AND SECTIONS\2.dwg, C-531, 4/16/2025 12:49:39 PM



A C-540 MBR - BASIN PLAN
SCALE: 1/2" = 1'-0"

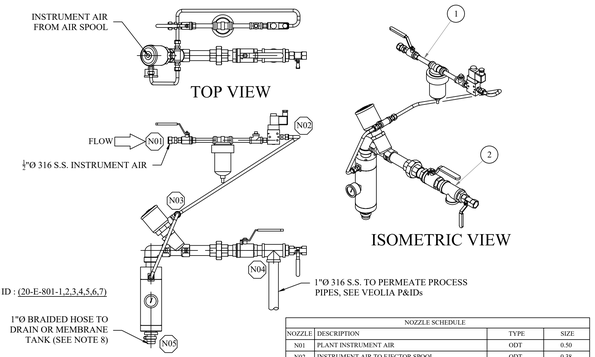
*NOTE : SEE SHT. C-544 FOR GATE DETAILS & SCHEDULE)



1 C-540 TYPICAL MBR CASSETTE SUPPORT BRACKET
SCALE: NONE (PROVIDED BY VEOLIA)

NOTES:

1. BRACKETS SHOWN ARE FOR CONCEPTUAL PURPOSES ONLY. FINAL BRACKETS WILL BE PROVIDED BY VEOLIA.
2. ANCHORAGE SHOWN IS FOR BIDDING PURPOSES ONLY. FINAL ANCHORAGE DESIGN WILL BE CONFIRMED DURING SHOP REVIEW BETWEEN CONTRACTOR AND ENGINEER. FINAL ANCHORAGE WILL BE PROVIDED BY CONTRACTOR.



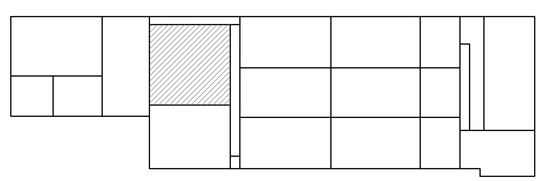
NOZZLE SCHEDULE			
NOZZLE	DESCRIPTION	TYPE	SIZE
N01	PLANT INSTRUMENT AIR	ODT	0.50
N02	INSTRUMENT AIR TO EJECTOR SPOOL	ODT	0.38
N03	INSTRUMENT AIR FROM AIR SPOOL	ODT	0.38
N04	PERMEATE/AIR FROM TOP OF PERMEATE PIPE	F-NPT	1.00
N05	TO OPEN DRAIN/MEMBRANE TANK (AIR GAP)	BARB	1.00

VEOLIA NOTES:

1. ALL PIPING & EQUIPMENT SHOWN SHALL BE FULLY SUPPORTED.
2. ALL VALVES & INSTRUMENTS TO BE PROPERLY TAGGED.
3. PIPING MATERIAL: SCH10, 316 SS / SS TUBING.
4. CONNECTION TO BE PROVIDED AT HIGHEST POINT ON PIPING BETWEEN PERMEATE HEADER AND PUMP.
5. AIR GAP IS REQUIRED ON EJECTOR DISCHARGE LINE EXHAUST TO MEMBRANE TANK OR DRAIN. 1" BRAIDED HOSE REQUIRED AND TO BE SUPPLIED BY THE CONTRACTOR.
6. EJECTOR MUST BE INSTALLED VERTICALLY DOWNWARD.
7. THE 3/8" SS TUBING THAT CONNECTS THE TWO SPOOLS TOGETHER TO BE SUPPLIED BY THE CONTRACTOR.
8. VALVE USED AS AIR INLET FOR MEMBRANE PRESSURE DECAY TEST TO BE CLOSED. AT ALL OTHER TIMES WITH HANDLE LOCKED IN PLACE TO PREVENT ACCIDENTAL OPENING.

MM# 3178110 - W/ 24VDC SOLENOID - PLUMBING TABLE					
ITEM	QTY.	SAP	DOC#	DESCRIPTION	UM
1	1	3178024	1319227	PLMB-AIR,316,0.25,24VDC;SS TUBE	EA
2	1	3178021	1319224	PLMB-EJECTOR,316,1.00X0.25,SS TUBE	EA

2 C-540 TYPICAL AIR EJECTOR ASSEMBLY DETAIL (TYP. OF 7)
SCALE: NONE (PROVIDED BY VEOLIA)



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - BASIN PLAN AND DETAILS

REVISIONS

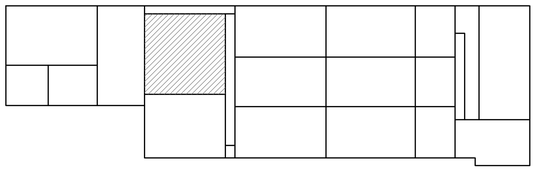
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-540

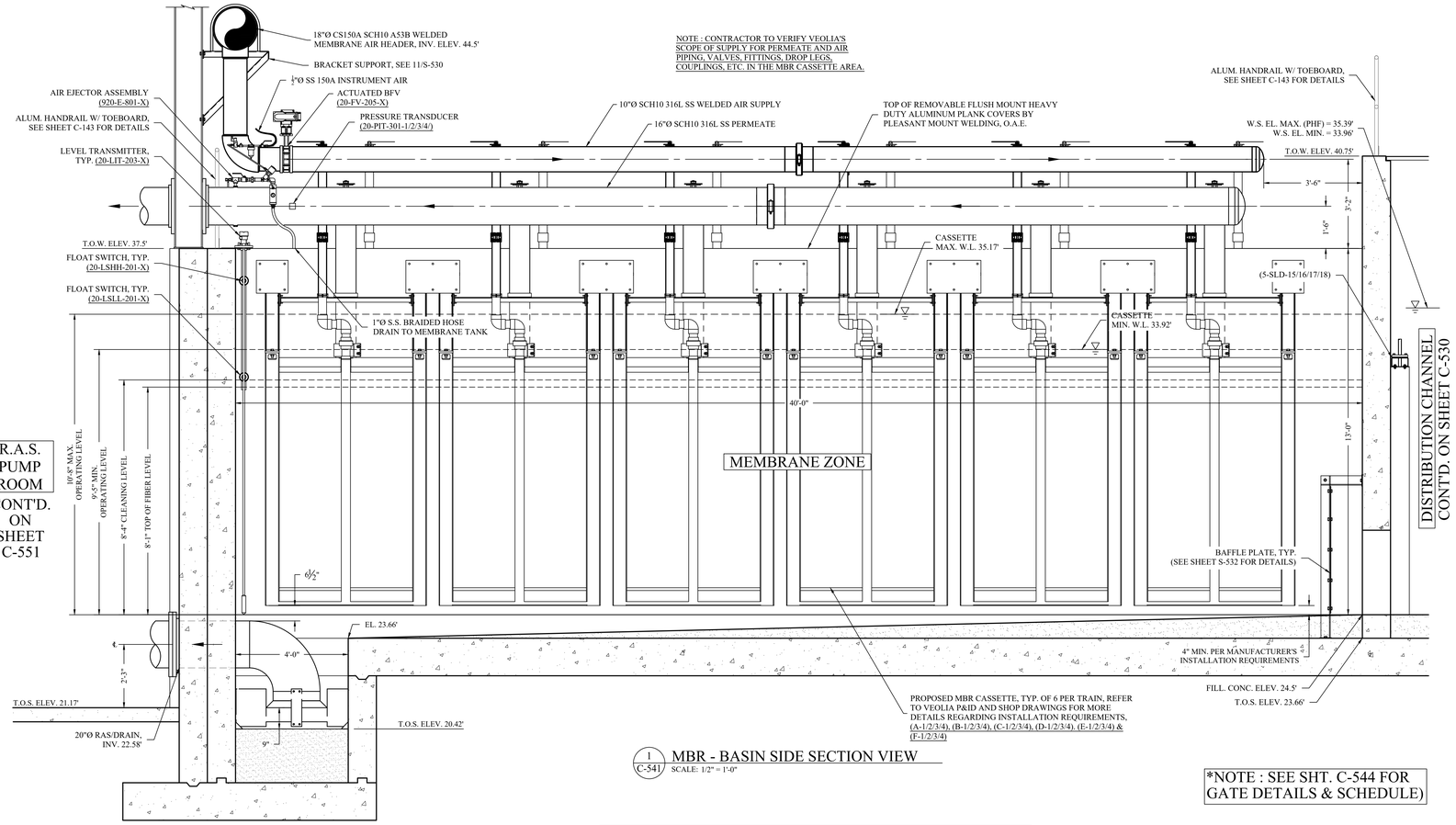
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\S - MBR\Process\PLANS AND SECTIONS\S2.dwg, C-540, 4/16/2025 12:50:34 PM



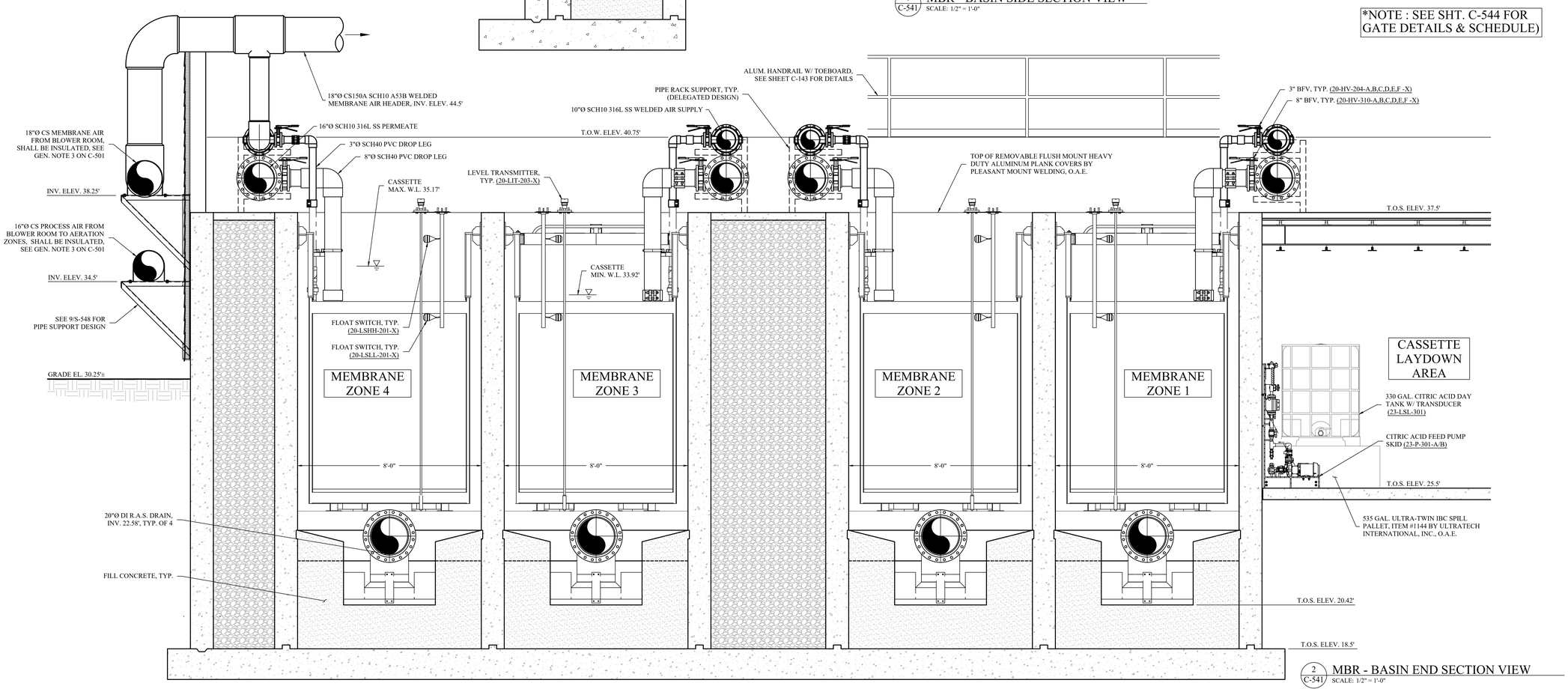
KEY PLAN
SCALE: 1/32" = 1'-0"

R.A.S. PUMP ROOM
CONT'D. ON SHEET C-551



1 / C-541 MBR - BASIN SIDE SECTION VIEW
SCALE: 1/2" = 1'-0"

*NOTE : SEE SHT. C-544 FOR GATE DETAILS & SCHEDULE)



2 / C-541 MBR - BASIN END SECTION VIEW
SCALE: 1/2" = 1'-0"

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - BASIN SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-541

PROJECT # 18-732 PHASE #

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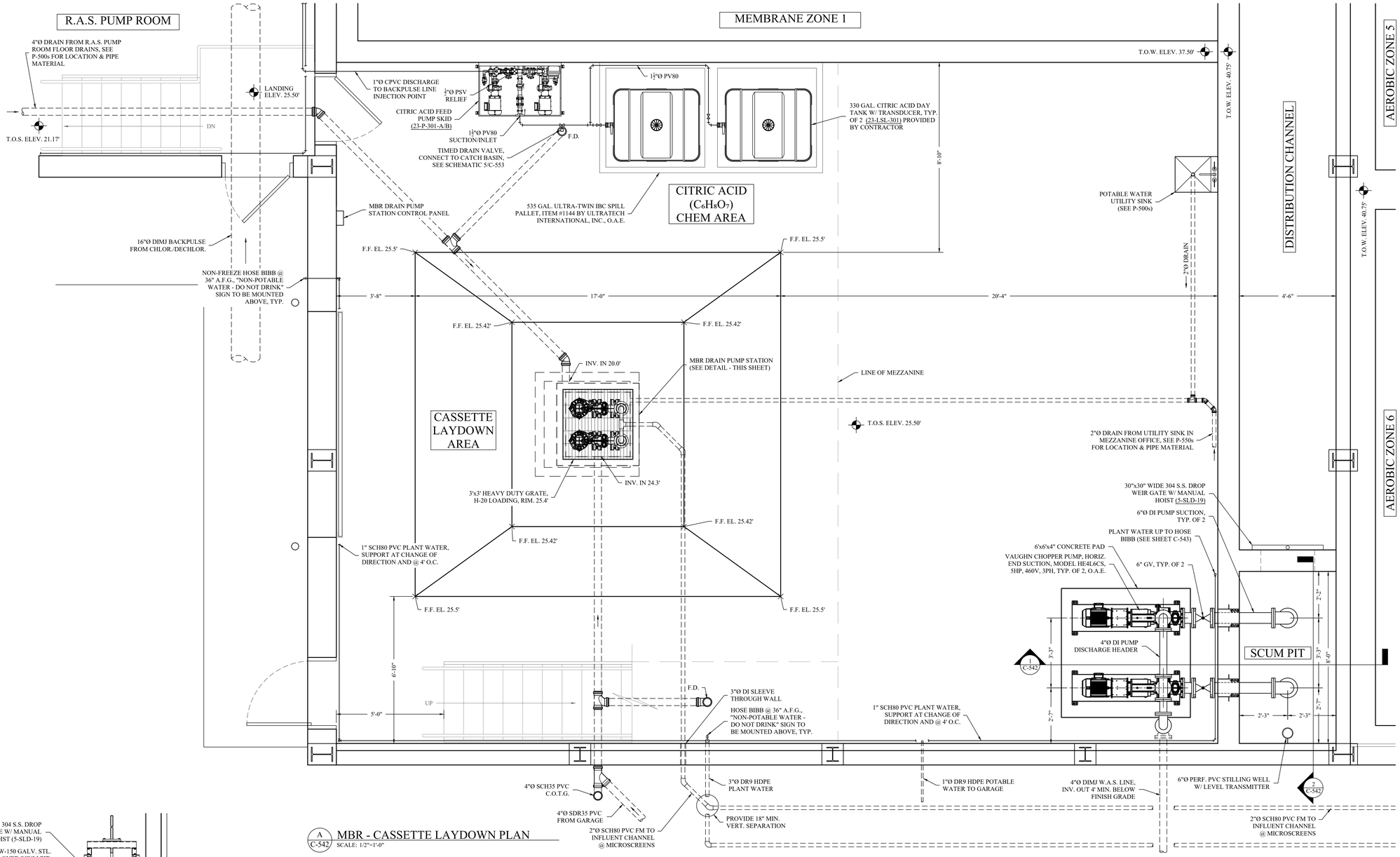
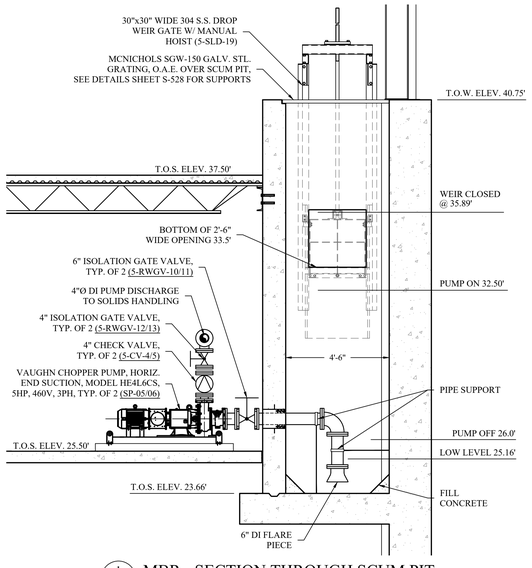
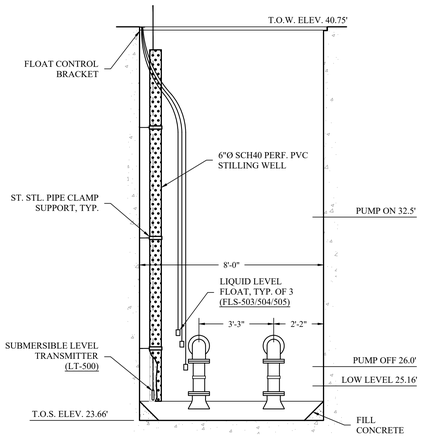


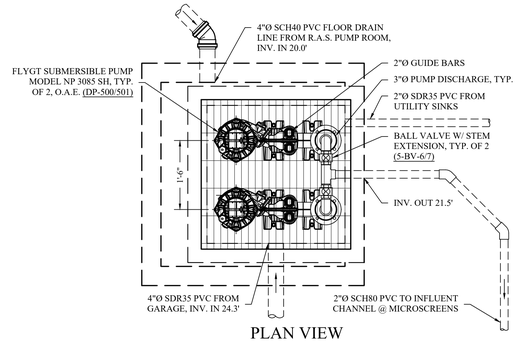
A C-542 MBR - CASSETTE LAYDOWN PLAN
SCALE: 1/2"=1'-0"



1 C-542 MBR - SECTION THROUGH SCUM PIT
SCALE: 3/8"=1'-0"



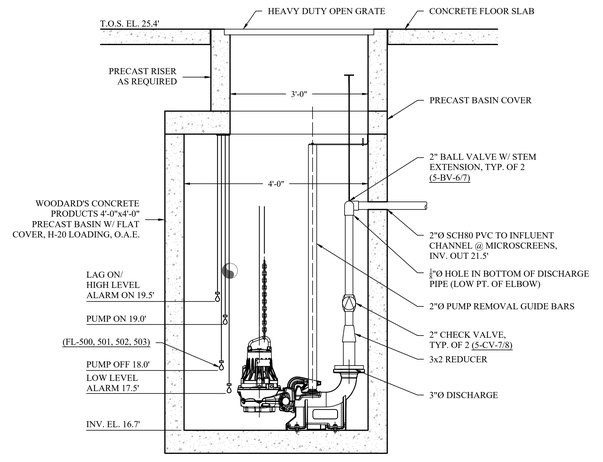
2 C-542 MBR - SECTION THROUGH SCUM PIT
SCALE: 3/8"=1'-0"



PLAN VIEW

NOTES:

1. ALL CONSTRUCTION JOINTS AND PIPE CONNECTIONS SHALL BE WATERTIGHT.
2. PUMPS TO ALTERNATE AND ALARM TO SOUND IF EITHER PUMP FAILS TO CYCLE PROPERLY.
3. ALL APPLICABLE N.E.C. REQUIREMENTS MUST BE MET.



SECTION VIEW

3 C-542 MBR - PRECAST DRAIN PUMP STATION
SCALE: N.T.S.

ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - CASSETTE LAYDOWN AREA, CHEM AREA & SCUM PIT SECTIONS

REVISIONS

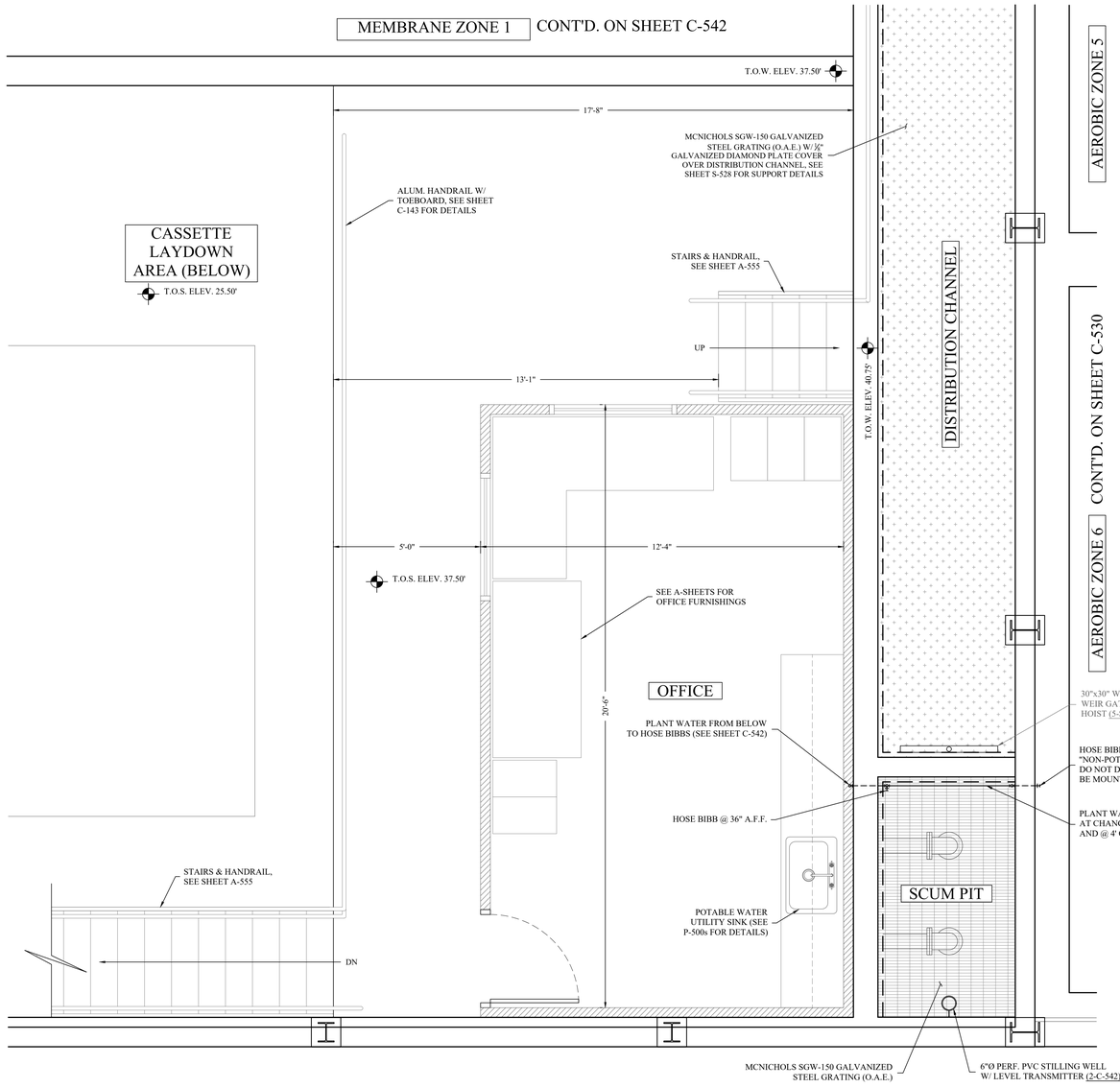
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR. 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-542

PROJECT # 18-732 PHASE #

F:\2016\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\S - MBR\Process\PLANS AND SECTIONS2.dwg, C-542, 4/16/2025 12:30:38 PM



A C-543 MBR - MEZZANINE & OFFICE PLAN
SCALE: 1/2"=1'-0"

ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - MEZZANINE & OFFICE PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-543

PROJECT # 18-732 PHASE #

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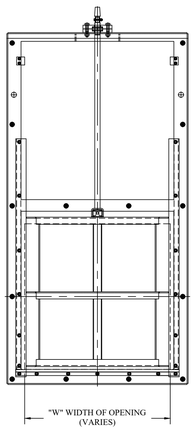
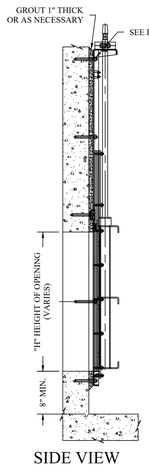
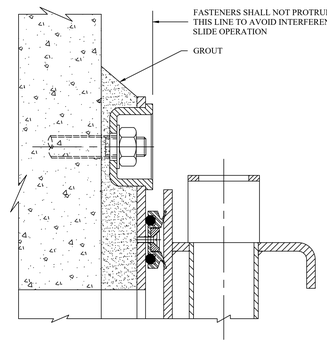


FRONT VIEW

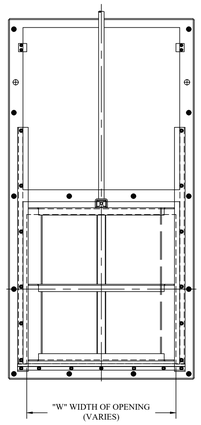


SIDE VIEW

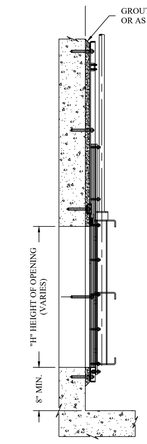


2 C-544 PROJECTION OF TOP ANCHOR FASTENERS
SCALE: N.T.S.

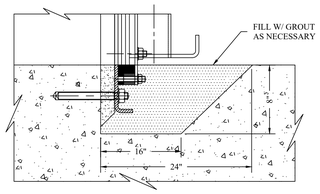
1 C-544 SERIES A-112 SELF CONTAINED CONVENTIONAL CLOSURE STAINLESS STEEL SLIDE GATE DETAIL
SCALE: N.T.S.



FRONT VIEW

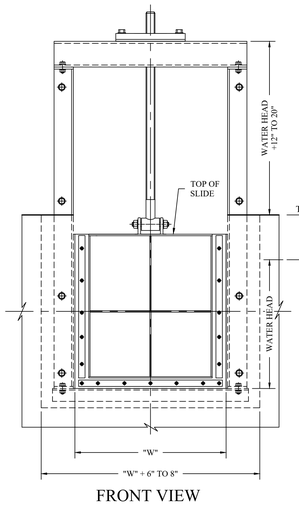


SIDE VIEW

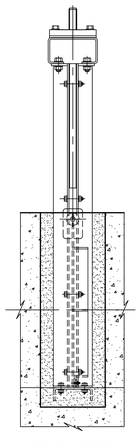


4 C-544 FLUSH BOTTOM CLOSURE DETAIL
SCALE: N.T.S.

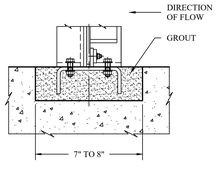
3 C-544 SERIES A-112 NON SELF CONTAINED CONVENTIONAL CLOSURE STAINLESS STEEL SLIDE GATE DETAIL
SCALE: N.T.S.



FRONT VIEW

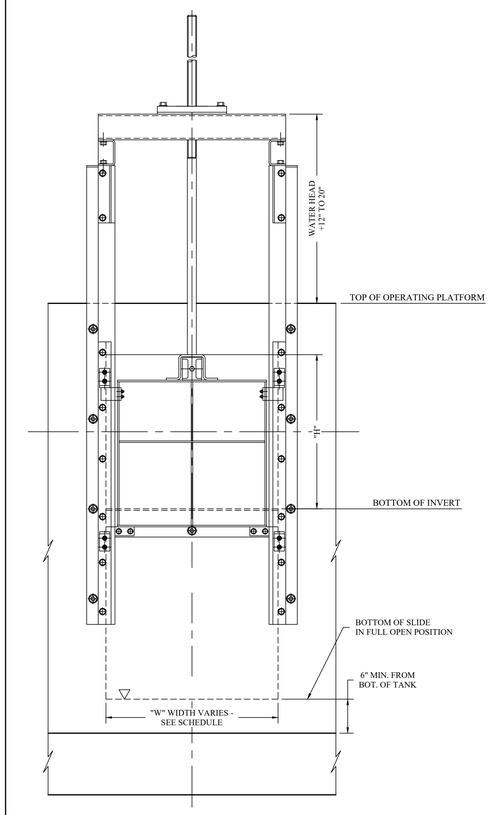


SIDE VIEW

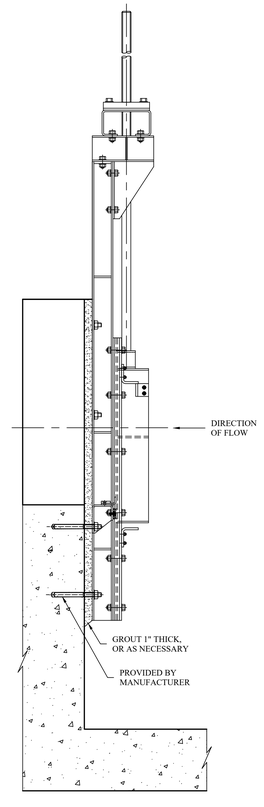


CIVIL DETAILS

5 C-544 SERIES A-211 SIDE WALL EMBEDDED OPEN CHANNEL STAINLESS STEEL SLIDE GATE DETAIL
SCALE: N.T.S.



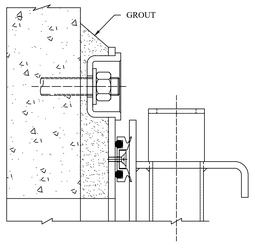
FRONT VIEW



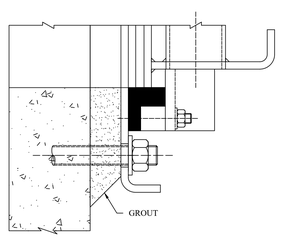
SIDE VIEW

6 C-544 SERIES A-311 SELF CONTAINED STAINLESS STEEL WEIR GATE DETAIL
SCALE: N.T.S.

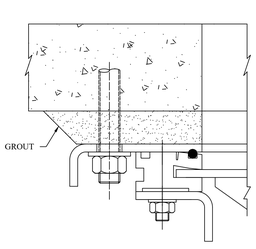
PROJECT LOCATION	ASSOC. EQUIP.	INVERT ELEV. (FT)	T.O.W. ELEV. (FT)	OPENING (IN.) WIDTH	OPENING (IN.) HEIGHT	W.L. (FT)	RODNEY HUNT GATE	TAG ID
MBR MICROSCREEN BLD	18" SDR PRIMARY CLARIFIER #1 EFFLUENT	22.52	30.0	18	18	25.5	A-112	5-SLD-1
MBR MICROSCREEN BLD	18" SDR PRIMARY CLARIFIER #1 EFFLUENT	22.52	30.0	18	18	25.5	A-112	5-SLD-2
MBR MICROSCREEN BLD	18" SDR PRIMARY CLARIFIER #1 EFFLUENT	22.52	30.0	18	18	25.5	A-112	5-SLD-3
MBR MICROSCREEN BLD	18" SDR PRIMARY CLARIFIER #1 EFFLUENT	22.52	30.0	18	18	25.5	A-112	5-SLD-4
MBR MICROSCREEN BLD	DIST CHANNEL 1 TO MICROSCREEN #1	19.5	30.0	48	84	25.5	A-211	5-SLD-5
MBR MICROSCREEN BLD	DIST CHANNEL 1 TO MICROSCREEN #2	19.5	30.0	48	84	25.5	A-211	5-SLD-6
MBR MICROSCREEN BLD	MICROSCREEN #1 TO DIST CHANNEL 2	19.5	30.0	48	72	24.72	A-211	5-SLD-7
MBR MICROSCREEN BLD	MICROSCREEN #2 TO DIST CHANNEL 2	19.5	30.0	48	72	24.72	A-211	5-SLD-8
MBR INFLUENT PUMP STATION	DIST. CHANNEL 2 TO WETWELL 1	19.5	33.0	48	72	24.72	A-112	5-SLD-9
MBR INFLUENT PUMP STATION	DIST. CHANNEL 2 TO WETWELL 2	19.5	33.0	48	72	24.72	A-112	5-SLD-10
MBR INFLUENT PUMP STATION	WETWELL #1 TO WETWELL #2	16.67	33.0	48	48	24.43	A-112	5-SLD-11
MBR BIOREACTOR #1	FROM INFLUENT SPLITTER BOX TO SLUICE TANK 1	37.32	40.78	72	29	38.67	A-311	5-WRG-1
MBR BIOREACTOR #2	FROM INFLUENT SPLITTER BOX TO SLUICE TANK 2	37.32	40.78	72	29	38.67	A-311	5-WRG-2
MBR BIOREACTOR #3	FROM INFLUENT SPLITTER BOX TO SLUICE TANK 3	37.32	40.78	72	29	38.67	A-311	5-WRG-3
MBR BIOREACTOR #1	FROM SLUICE TANK TO ANOXIC ZONE 1	30.0	40.78	36	36	37.15	A-112	5-SLD-12
MBR BIOREACTOR #2	FROM SLUICE TANK TO ANOXIC ZONE 2	30.0	40.78	36	36	37.15	A-112	5-SLD-13
MBR BIOREACTOR #3	FROM SLUICE TANK TO ANOXIC ZONE 3	30.0	40.78	36	36	37.15	A-112	5-SLD-14
MBR BIOREACTOR #1	AEROBIC ZONE 4 TO MEMBRANE DISTRIB CHANNEL	35.5	40.78	96	51	36.94	A-311	5-WRG-4
MBR BIOREACTOR #2	AEROBIC ZONE 5 TO MEMBRANE DISTRIB CHANNEL	35.5	40.78	96	51	36.94	A-311	5-WRG-5
MBR BIOREACTOR #3	AEROBIC ZONE 6 TO MEMBRANE DISTRIB CHANNEL	35.5	40.78	96	51	36.94	A-311	5-WRG-6
MBR TREATMENT TRAIN #1	MEMBRANE DISTRIBUTION CHANNEL TO MBR TRAIN #1	24.5	37.5	36	36	35.39	A-112	5-SLD-15
MBR TREATMENT TRAIN #2	MEMBRANE DISTRIBUTION CHANNEL TO MBR TRAIN #2	24.5	37.5	36	36	35.39	A-112	5-SLD-16
MBR TREATMENT TRAIN #3	MEMBRANE DISTRIBUTION CHANNEL TO MBR TRAIN #3	24.5	37.5	36	36	35.39	A-112	5-SLD-17
MBR TREATMENT TRAIN #4	MEMBRANE DISTRIBUTION CHANNEL TO MBR TRAIN #4	24.5	37.5	36	36	35.39	A-112	5-SLD-18
MBR DISTRIBUTION CHANNEL	DISTRIBUTION CHANNEL TO SCUM PIT	33.5	37.5	30	30	35.39	A-112	5-SLD-19



TOP SEALING ARRANGEMENT

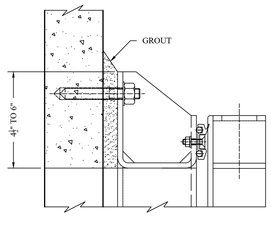


BOTTOM SEALING ARRANGEMENT

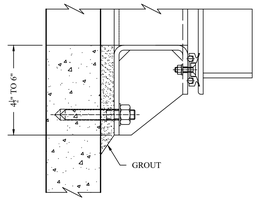


SIDE SEALING ARRANGEMENT

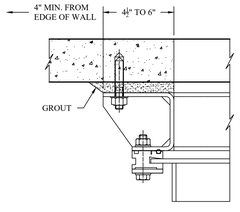
7 C-544 SERIES A-112 HARSA RIGID SEALING SYSTEM
SCALE: N.T.S.



TOP SEALING ARRANGEMENT (OPTIONAL)



BOTTOM SEALING ARRANGEMENT

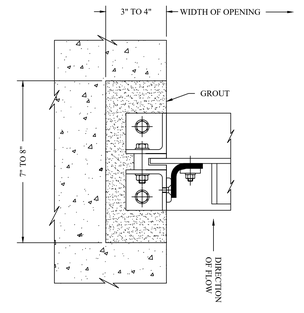


SIDE SEALING ARRANGEMENT

8 C-544 SERIES A-311 HARSA RIGID SEALING SYSTEM
SCALE: N.T.S.

NOTES :

1. SEE SPECIFICATION 400559.23 STAINLESS STEEL GATES FOR MORE INFORMATION SUCH AS DIMENSIONS, GATE TYPE, RIM PULL, MOUNTING, OPTIONAL FEATURES AND GATE SCHEDULE.
2. BASIS OF DESIGN FROM RODNEY HUNT. CONTRACTOR MAY SUPPLY EQUAL AS APPROVED BY THE ENGINEER.
3. MANUFACTURER SHALL SUPPLY ALL ANCHORS, FASTENERS, HARDWARE, ETC.



9 C-544 SERIES A-211 EASY SLIDE RESILIENT SIDE SEALING ARRANGEMENT DETAIL
SCALE: N.T.S.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - SLIDE GATE DETAILS & SCHEDULE

REVISIONS

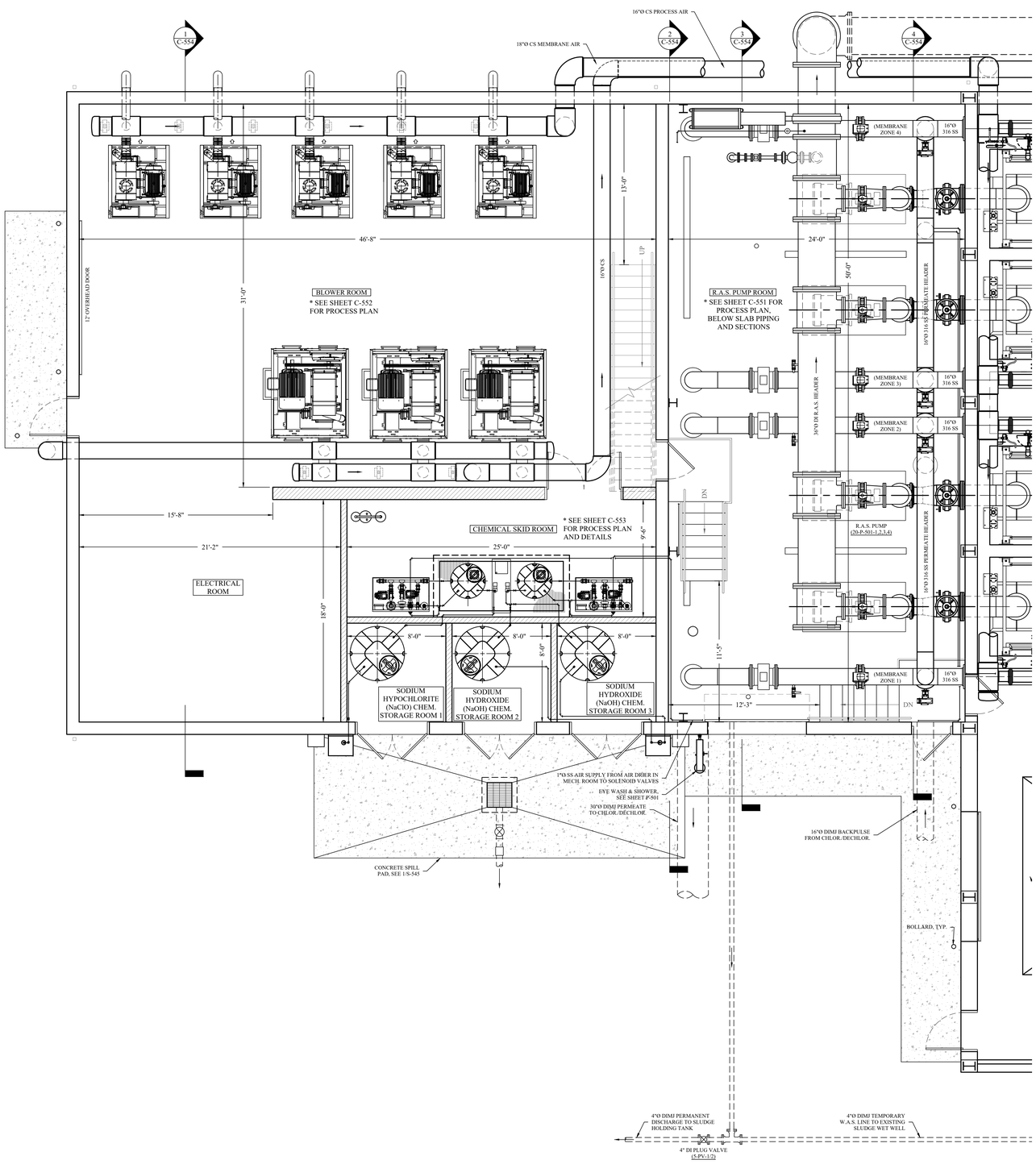
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPB/Jr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

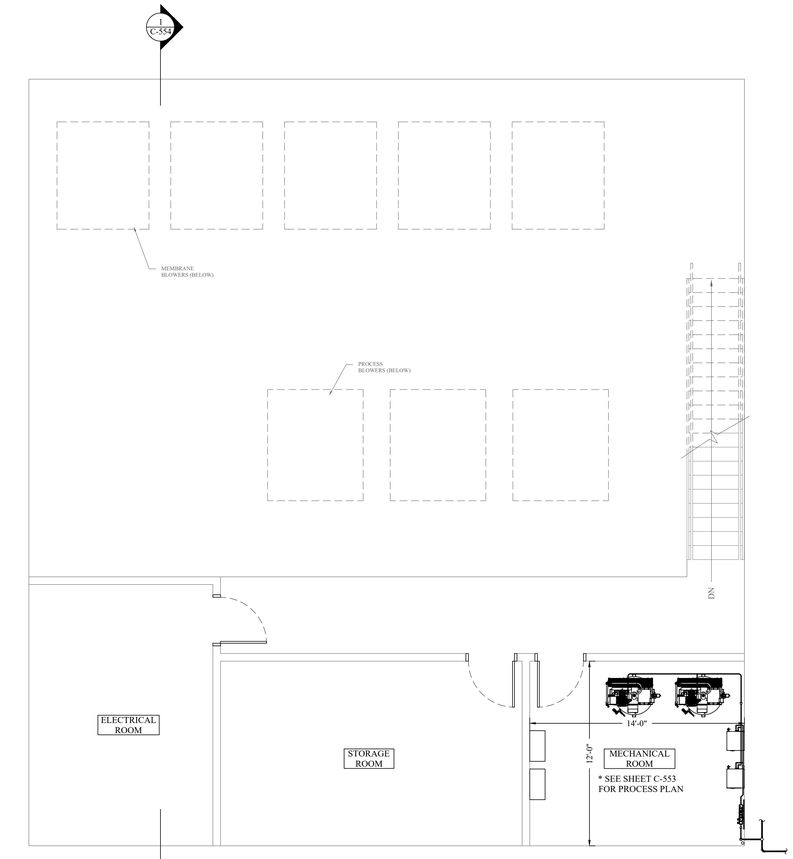
SHEET NO.
C-544

PROJECT # 18-732 PHASE #

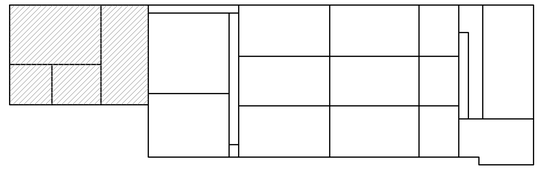
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\S - MBR\Process\PLANS AND SECTIONS2.dwg, C-544, 4/18/2025 12:49:58 PM



A C-550 MBR - FIRST FLOOR PROCESS PLAN
SCALE: 1/4" = 1'-0"



B C-550 MBR - SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - FIRST FLOOR PROCESS PLAN AND SECOND FLOOR PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPB/Ir
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-550

PROJECT # 18-732 PHASE #

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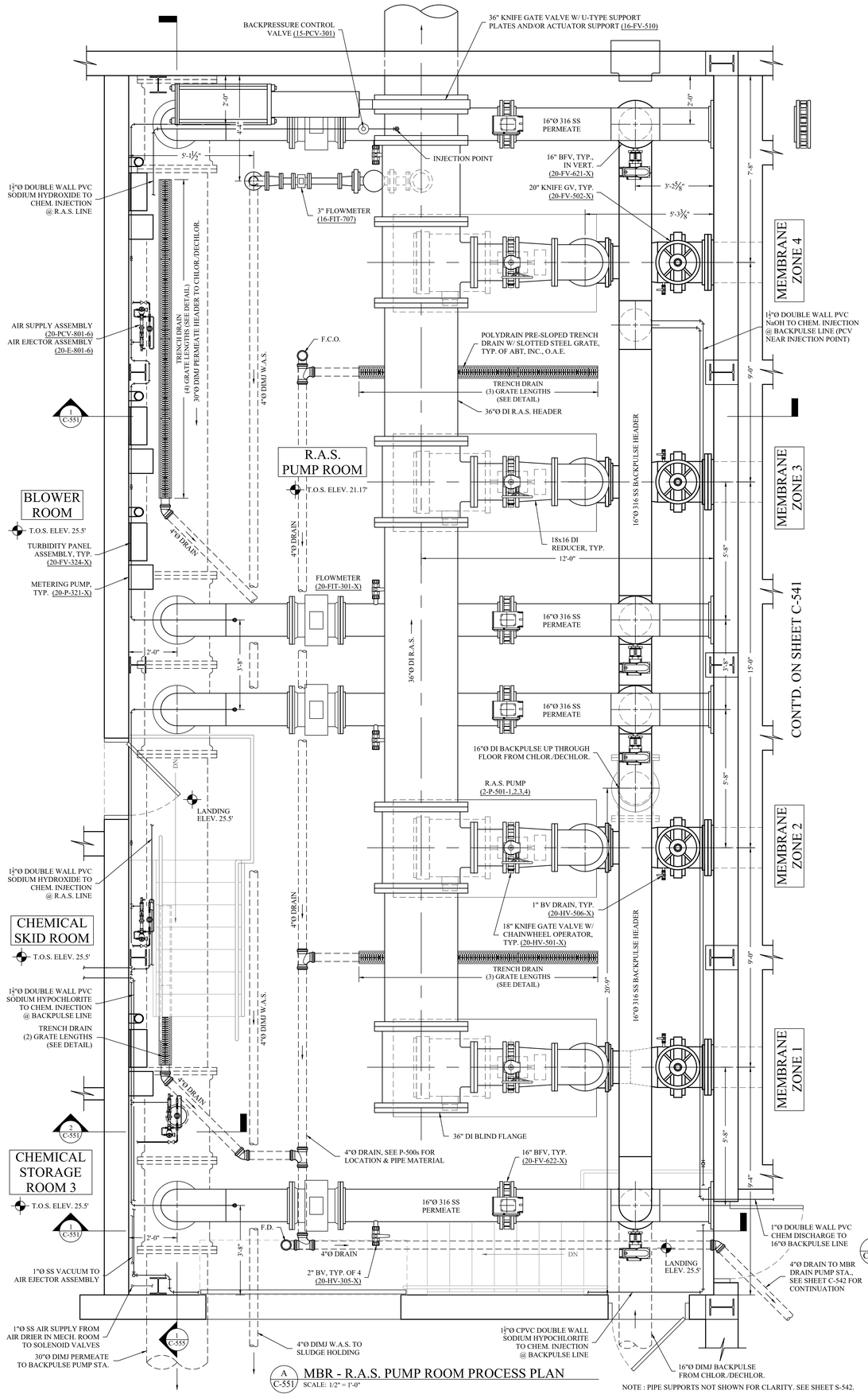
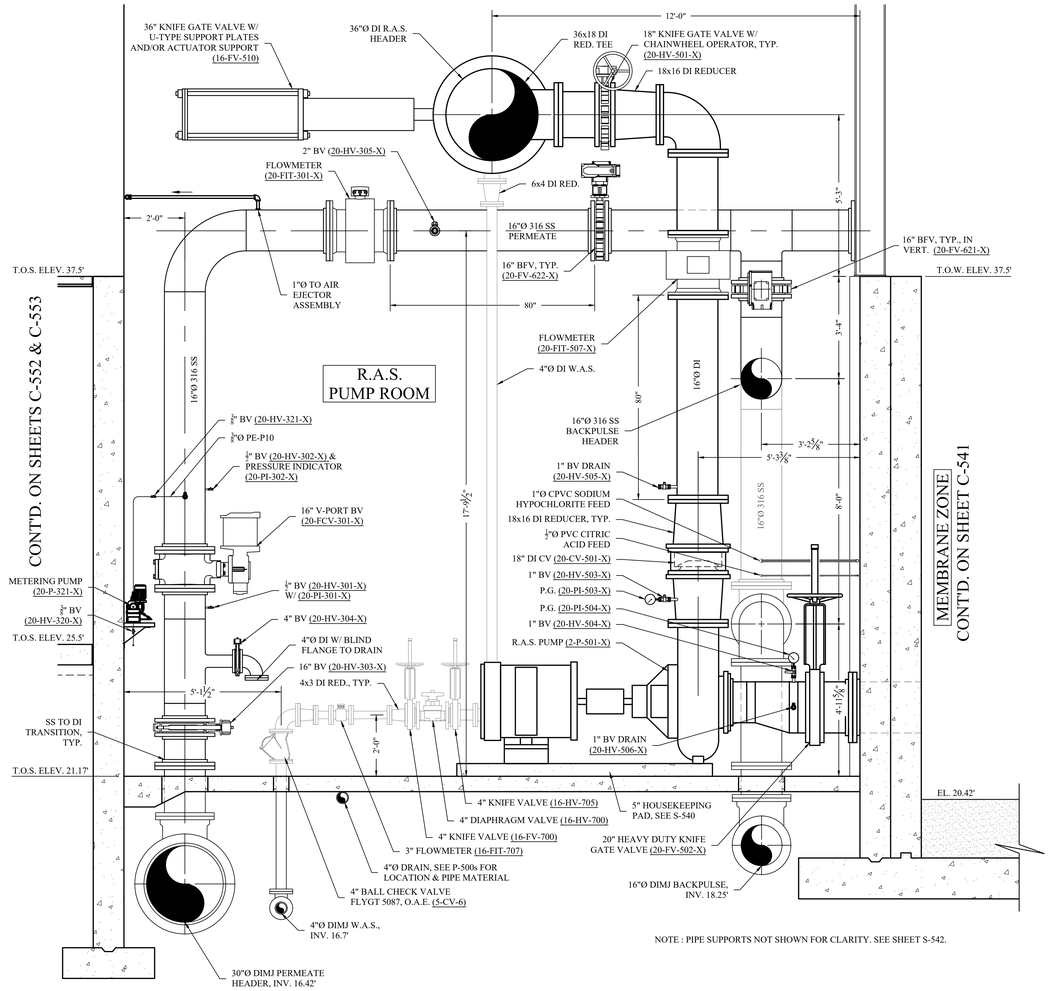


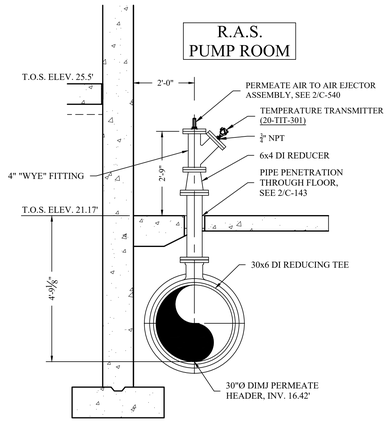
A C-551 MBR - R.A.S. PUMP ROOM PROCESS PLAN
SCALE: 1/2" = 1'-0"

NOTE : PIPE SUPPORTS NOT SHOWN FOR CLARITY. SEE SHEET S-542.

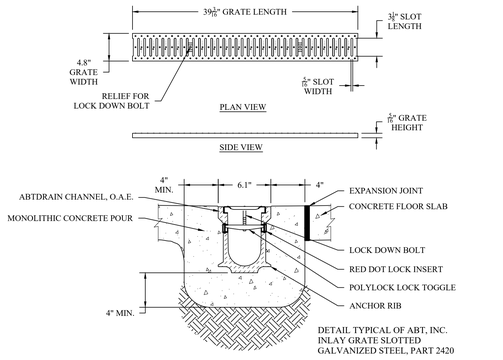


1 C-551 MBR - R.A.S. PUMP ROOM SECTION
SCALE: 1/2" = 1'-0"

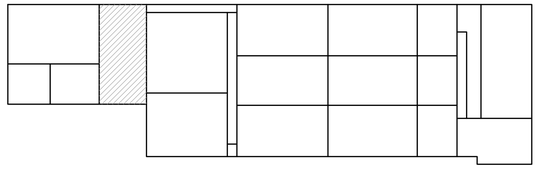
NOTE : PIPE SUPPORTS NOT SHOWN FOR CLARITY. SEE SHEET S-542.



2 C-551 MBR - R.A.S. PUMP ROOM - TEMP. TRANSMITTER DETAIL
SCALE: 1/2" = 1'-0"



3 C-551 PRE-SLOPED TRENCH DRAIN DETAILS
SCALE: NONE



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - R.A.S. PUMP ROOM PROCESS PLAN AND SECTIONS

REVISIONS

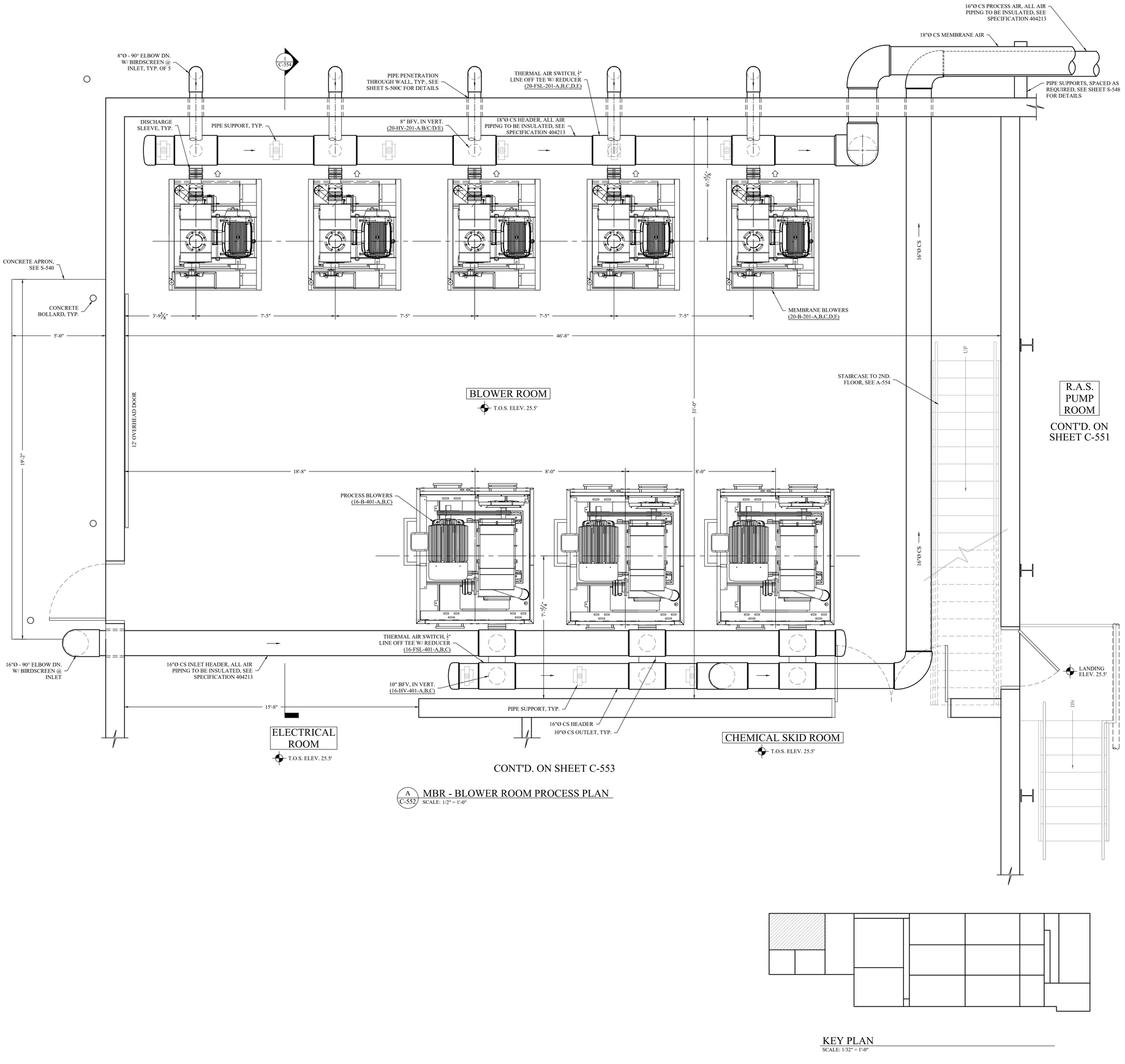
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-551

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drawings\5 - MBR\Process\PLANS AND SECTIONS\2.dwg, C-551, 4/18/2025 12:50:00 PM



CONT'D. ON SHEET C-551

R.A.S. PUMP ROOM

CONT'D. ON SHEET C-553

A C-552 MBR - BLOWER ROOM PROCESS PLAN
SCALE: 1/2" = 1'-0"

KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - BLOWER ROOM PROCESS PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-552

PROJECT # 18-732 PHASE #

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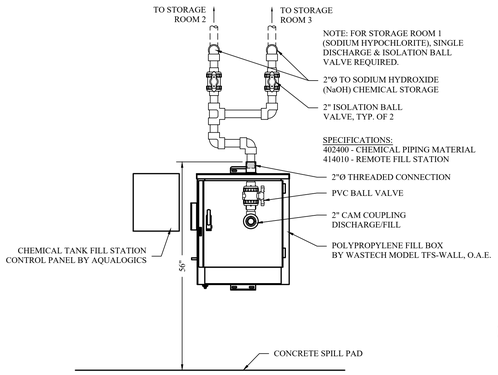
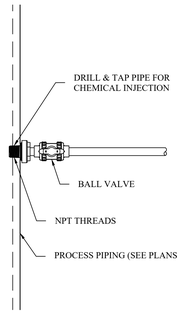
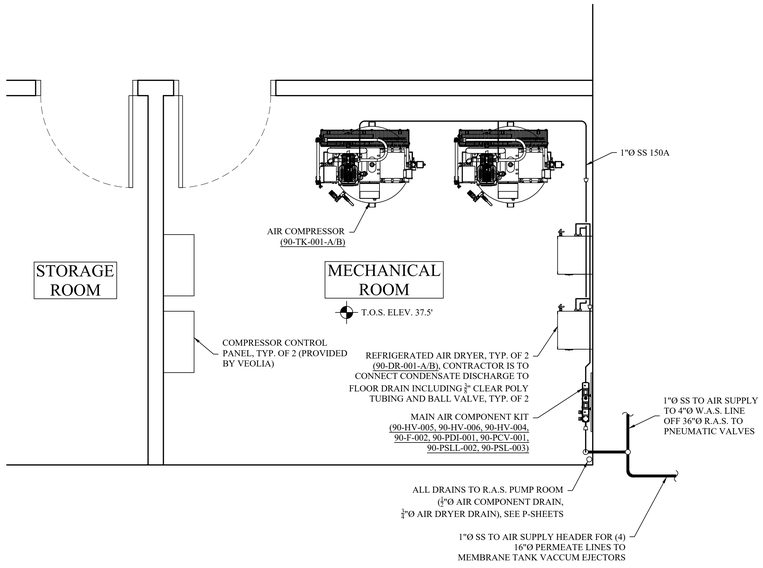


1 C-553 CHEMICAL FILL STATION DETAILS (TYP.)
SCALE: 3/4" = 1'-0"

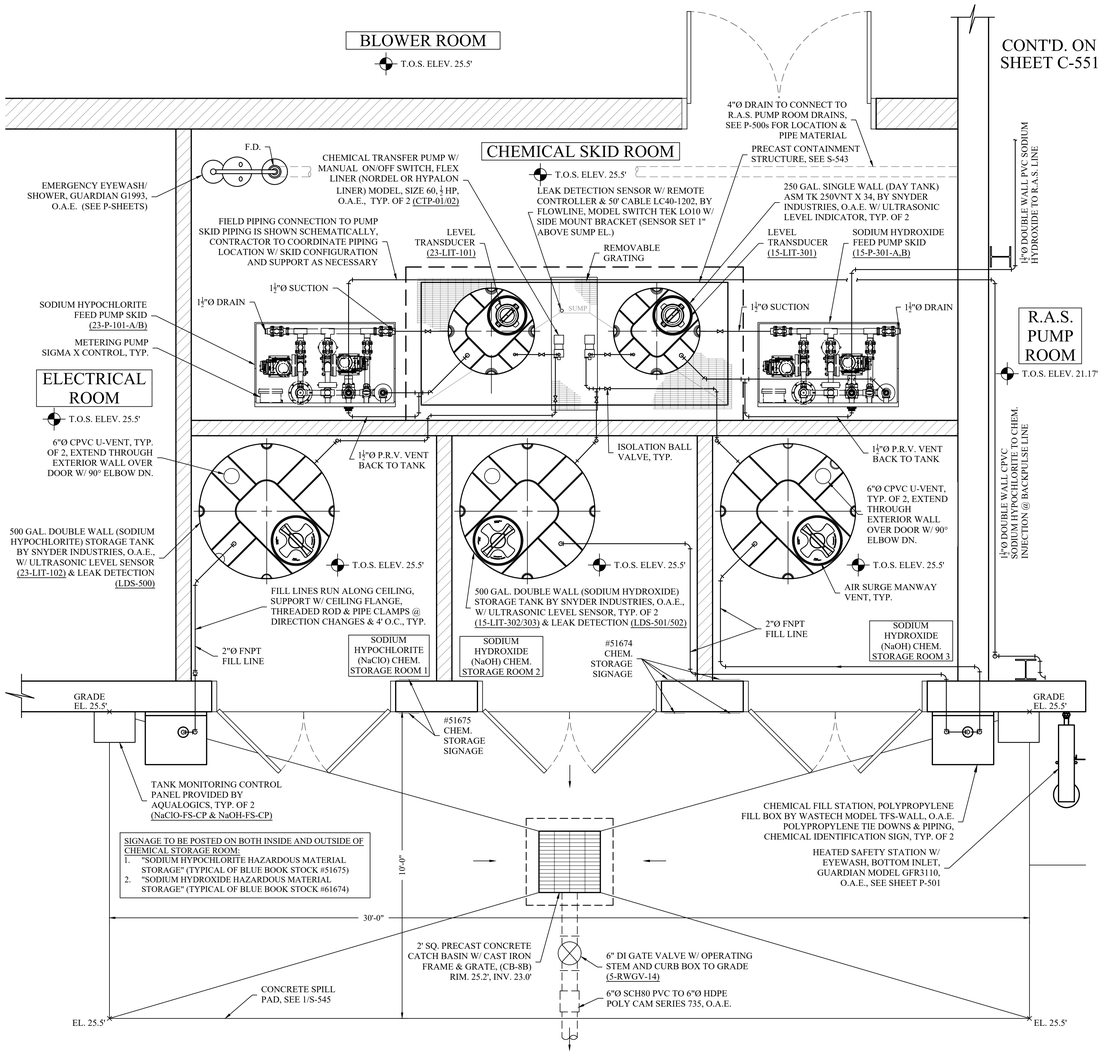


2 C-553 CHEMICAL INJECTION POINT DETAIL
SCALE: N.T.S. (TYP. OF 3)

TOTAL INJECTION POINTS = 3
SODIUM HYPO - BACKPULSE LINE - 4/C-554
CITRIC ACID - BACKPULSE LINE - 4/C-554
SODIUM HYDROXIDE - 36" R.A.S. HEADER - A/C-551

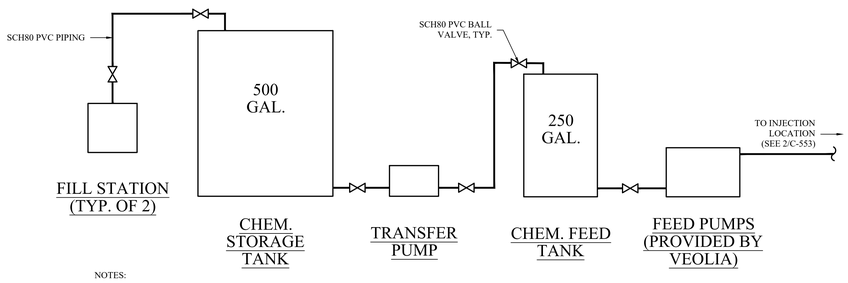


B C-553 MBR - 2ND. FLOOR MECHANICAL ROOM PROCESS PLAN
SCALE: 1/2" = 1'-0"



NOTE : CONTRACTOR TO COORDINATE WITH OWNER FOR FILLING OF TANKS FOR INITIAL STARTUP. OWNER IS RESPONSIBLE FOR INITIAL TANK FILL FOR STARTUP.

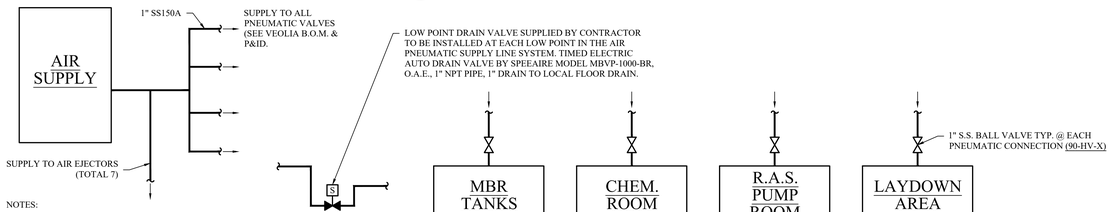
A C-553 MBR - CHEM FEED PROCESS PLAN
SCALE: 1/2" = 1'-0"



NOTES:

1. CONTRACTOR TO REFER TO SPECIFICATION SECTIONS 434183, 414010, 402400 AND 463366 FOR LIQUID CHEMICAL STORAGE TANKS, REMOTE FILL STATIONS, LIQUID CHEMICAL PIPING AND LIQUID CHEMICAL TRANSFER PUMPS RESPECTIVELY FOR MORE INFORMATION.
2. CONTRACTOR SHALL INSTALL CHEMICAL STORAGE TANKS AND CHEMICAL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. ALL PIPING CONTAINING OR TRANSPORTING CORROSIVE OR HAZARDOUS CHEMICALS SHALL BE IDENTIFIED WITH LABELS EVERY TEN FEET (3M) AND WITH AT LEAST TWO LABELS IN EACH ROOM, CLOSET OR PIPE CHASE.
4. PIPES CONTAINING HAZARDOUS OR CORROSIVE CHEMICALS SHOULD NOT BE LOCATED ABOVE SHOULDER LEVEL EXCEPT WHERE CONTINUOUS DRIP COLLECTION TRAYS AND COUPLING GUARDS WILL ELIMINATE CHEMICAL SPRAY OR DRIPPING ONTO PERSONNEL.

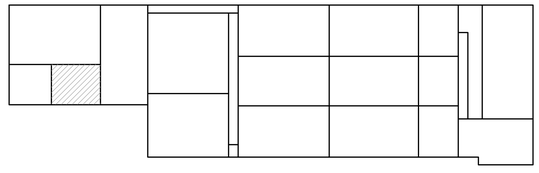
4 C-553 CHEMICAL FILL GENERAL SCHEMATIC
SCALE: N.T.S.



NOTES:

1. CONTRACTOR SHALL REFER TO VEOLIA'S P&ID DS-112 FOR MORE INFORMATION REGARDING THE AIR SUPPLY SYSTEM AND GENERAL NOTES.
2. TOTAL NUMBER OF PNEUMATIC CONNECTIONS IS BASED ON VEOLIA'S SCOPE OF SUPPLY AND DESIGN. (CONTRACTOR SHALL VERIFY PRIOR TO INSTALLATION).
3. CONTRACTOR IS RESPONSIBLE TO VERIFY TOTAL NUMBER OF LOW POINTS IN THE SYSTEM FOR FINAL TOTAL NUMBER OF DRAIN VALVES REQUIRED. DRAIN VALVES SHALL BE FIELD ADJUSTED UPON STARTUP IN ACCORDANCE WITH VEOLIA'S RECOMMENDATIONS AND REQUIREMENTS.
4. LOWEST PNEUMATIC CONNECTION; 10" MEMBRANE AIR LINE, BFV SODIUM HYPO SKID, 4" W.A.S. KNIFE GATE VALVE, CITRIC ACID SKID TAG ID 90-FV-011-A/B/C/B.

5 C-553 PNEUMATIC CONNECTIONS SCHEMATIC
SCALE: N.T.S.



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR - CHEM FEED PROCESS PLAN AND DETAILS

REVISIONS

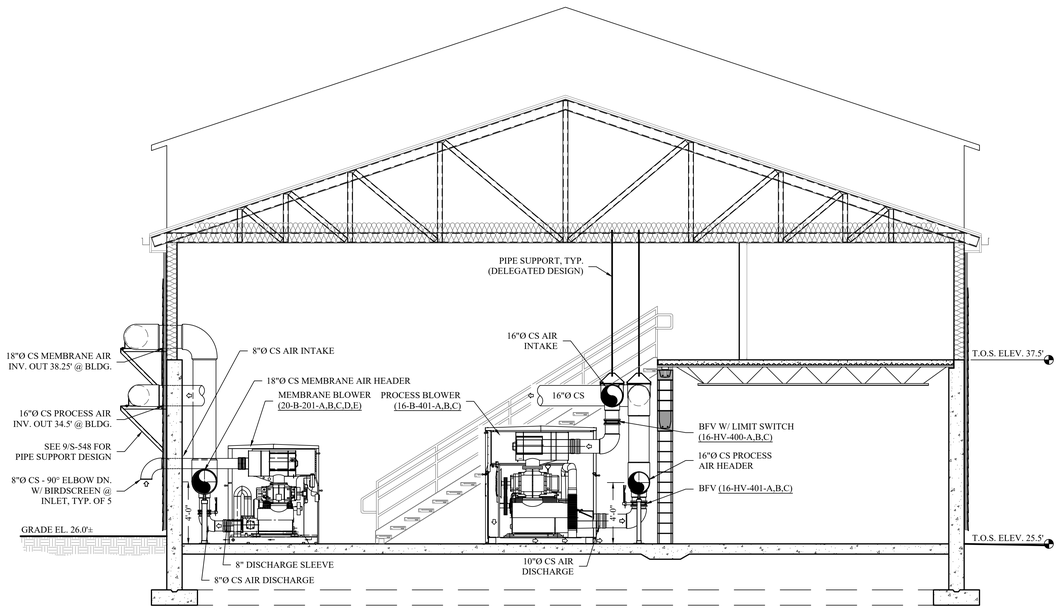
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPB/r
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

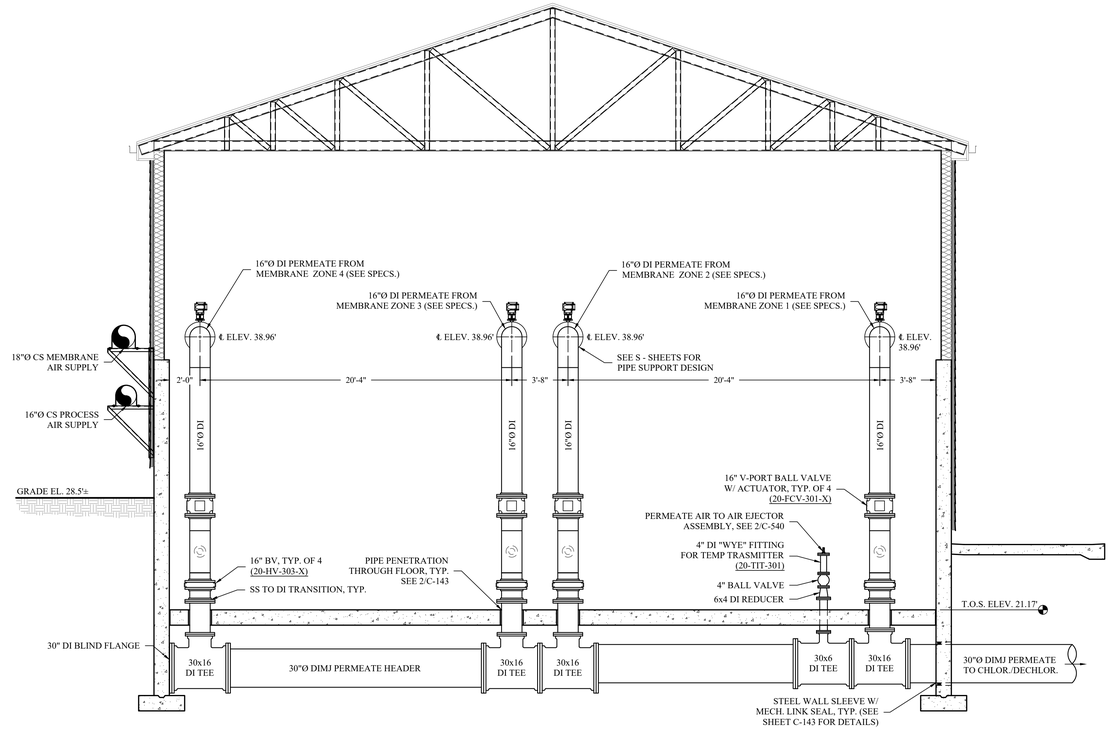
SHEET NO.
C-553

PROJECT # 18-732 PHASE #

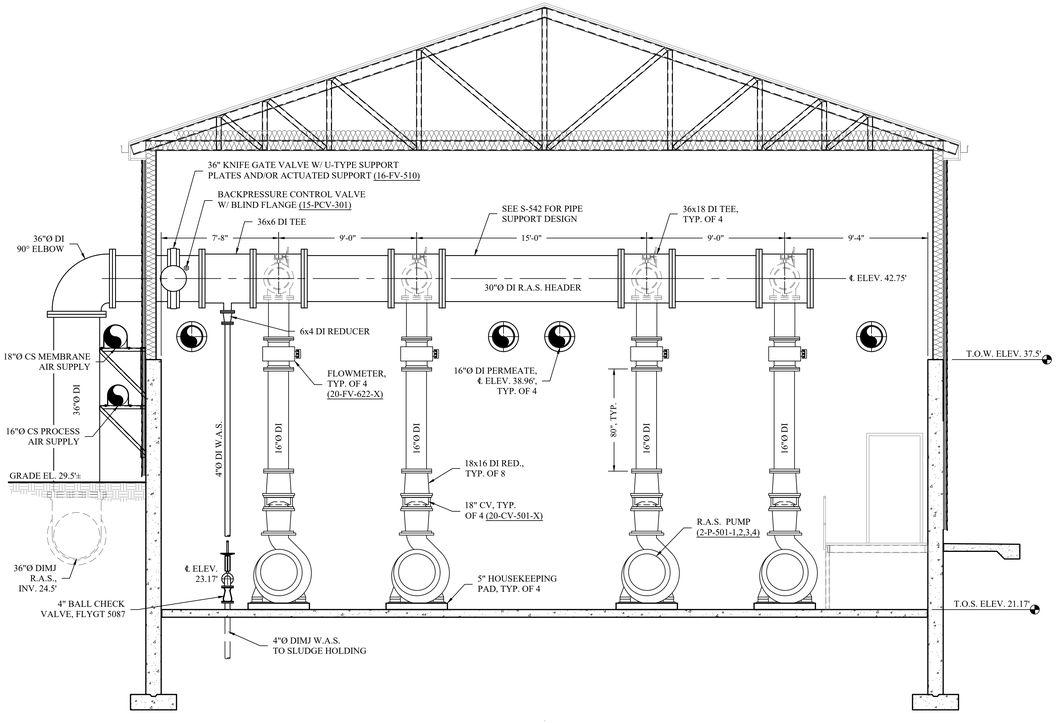
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\S - MBR\Process\PLANS AND SECTIONS2.dwg, C-553, 4/16/2025 12:51:12 PM



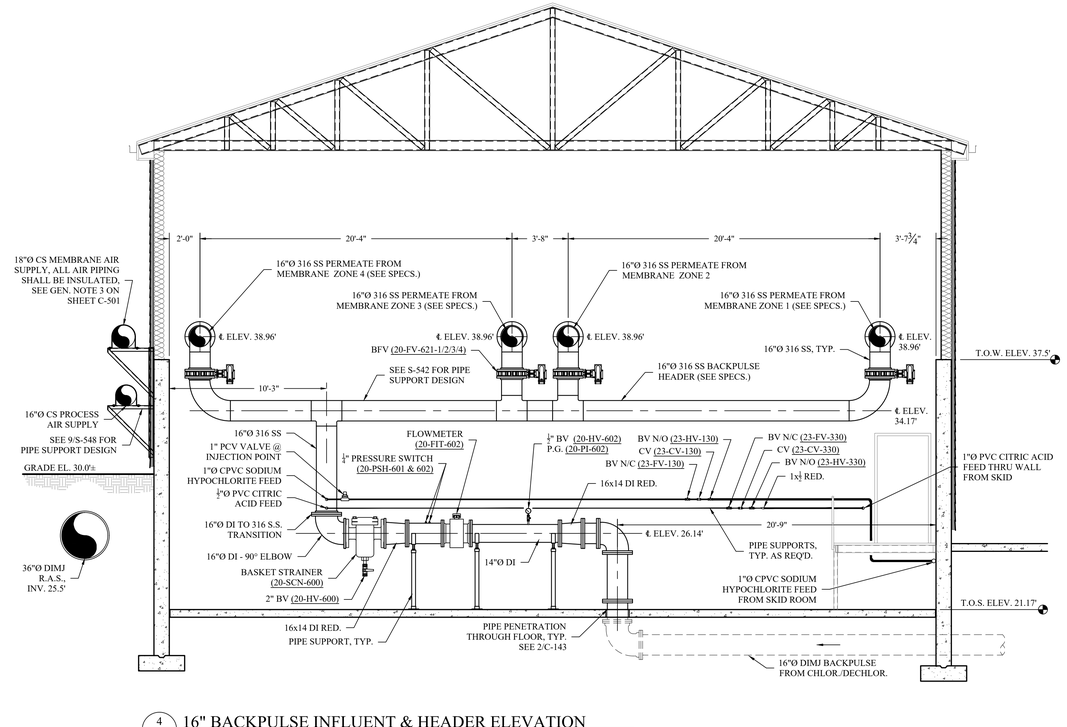
1 C-554 SECTION THRU BLOWER ROOM
SCALE: 1/4" = 1'-0"



2 C-554 30" PERMEATE PIPING ELEVATION
SCALE: 1/4" = 1'-0"



3 C-554 36" R.A.S. PUMPS & PIPING HEADER ELEVATION
SCALE: 1/4" = 1'-0"



4 C-554 16" BACKPULSE INFLUENT & HEADER ELEVATION
SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR SECTIONS &
PIPE ELEVATIONS

REVISIONS

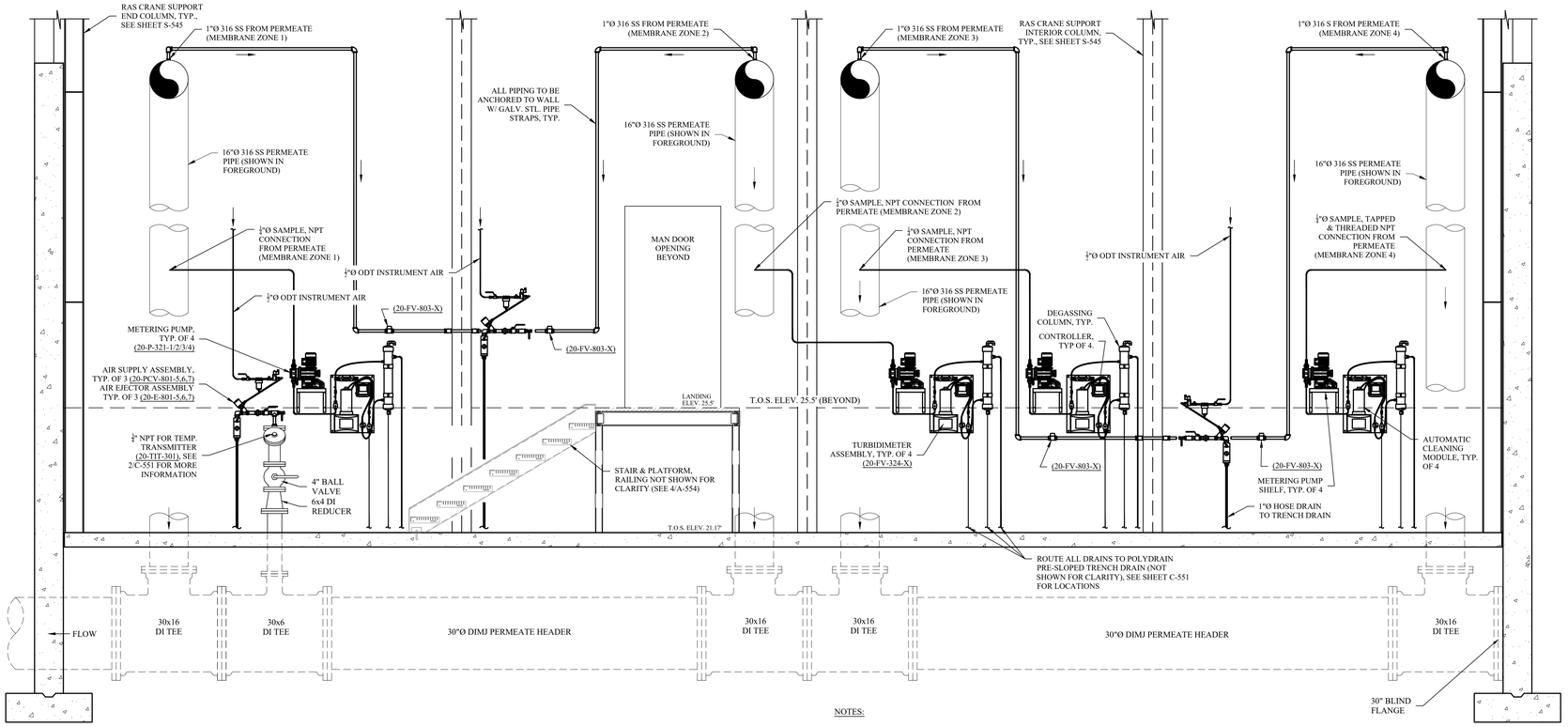
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-554

PROJECT # 18-732 PHASE #

T:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\5 - MBR\Process\PLANS AND SECTIONS\S2.dwg, C-554, 4/18/2025 12:49:55 PM



1 / C-555 TURBIDITY PANEL ELEVATION @ R.A.S. PUMP ROOM WALL

SCALE: 1/2" = 1'-0"

NOTES:

1. REFER TO VEOLIA'S P&ID, BILL OF MATERIALS AND EQUIPMENT CUT SHEETS FOR MORE INFORMATION REGARDING TURBIDITY METER ASSEMBLIES AND VACUUM EJECTOR ASSEMBLIES.
2. FIELD VERIFY MOUNTING HEIGHT OF ALL INSTRUMENTATION AND EQUIPMENT ASSEMBLIES IN THE FIELD WITH ENGINEER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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MBR - R.A.S. PUMP ROOM TURBIDITY PANEL ELEVATION

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPB/Jr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-555

PROJECT # 18-732 PHASE #

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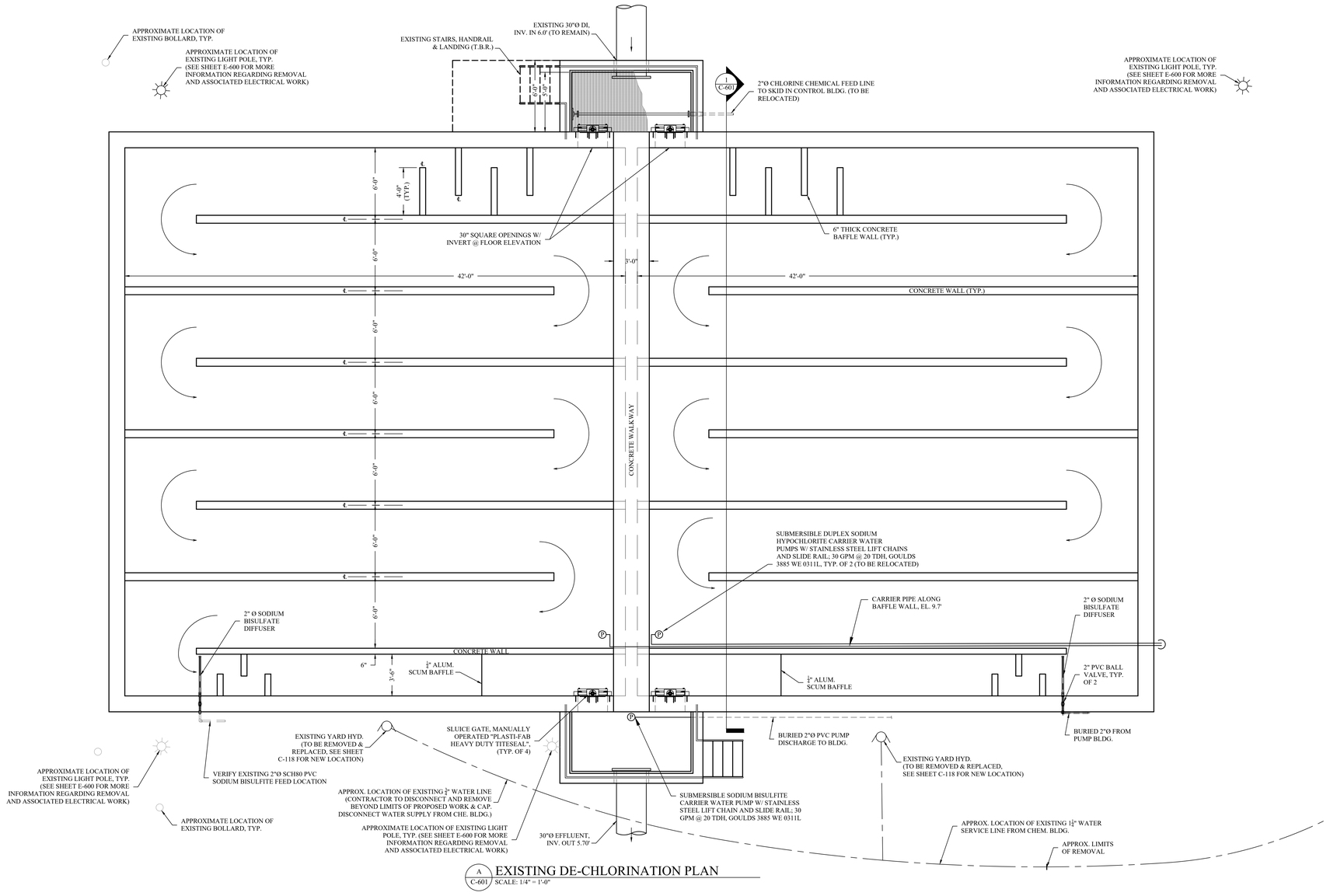
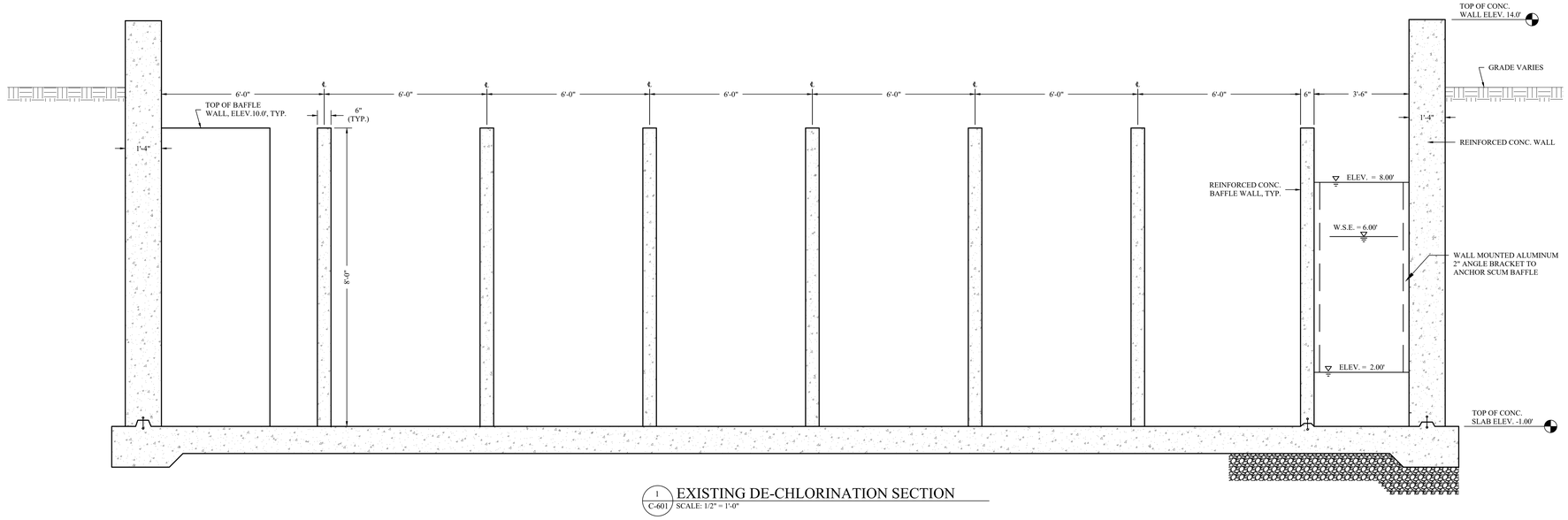


A / C-601 EXISTING DE-CHLORINATION PLAN
SCALE: 1/4" = 1'-0"



1 / C-601 EXISTING DE-CHLORINATION SECTION
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
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New Windsor, NY 12553
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111 Wheatfield Drive, Suite 1
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING DE-CHLORINATION PLAN & SECTION

REVISIONS

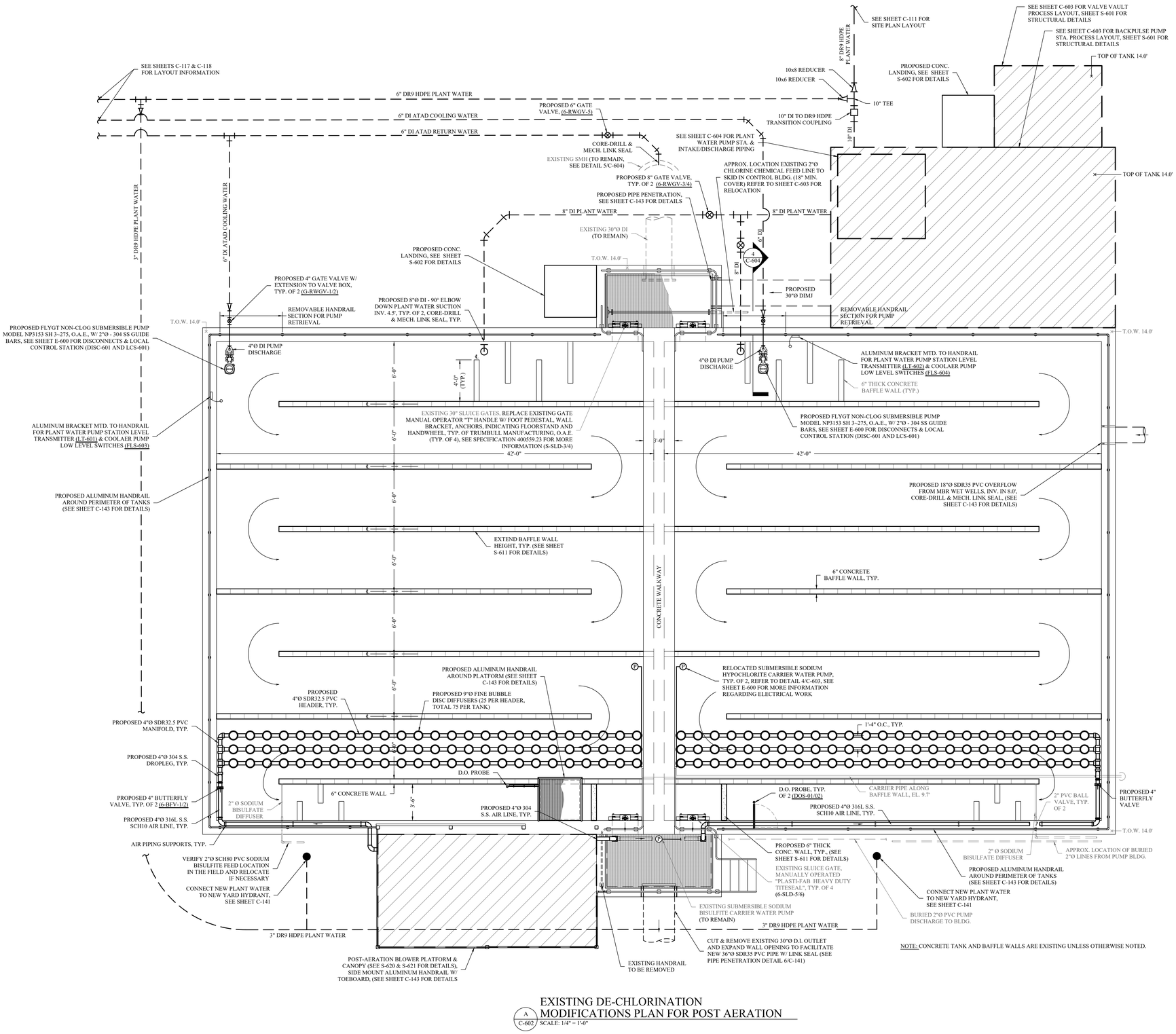
NO.	DESCRIPTION	DATE

ISSUED DATE: 18 APR, 2025
DESIGN BY:
DRAWN BY:
CHECKED BY:
REVIEWED BY:
SHEET NO.

C-601

PROJECT # 18-732 PHASE #

T:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\6 - Post Aeration\Civil Process\POST AERATION REVISIONS.dwg, C-601, 4/16/2025 11:27:31 AM



NOTE: CONCRETE TANK AND BAFFLE WALLS ARE EXISTING UNLESS OTHERWISE NOTED.

A C-602 EXISTING DE-CHLORINATION MODIFICATIONS PLAN FOR POST AERATION

SCALE: 1/4" = 1'-0"

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(845) 567-3100

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(570) 296-2765

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NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
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POST AERATION PROCESS PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE: 18 APR, 2025
DESIGN BY:
DRAWN BY:
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SHEET NO.

C-602

PROJECT # 18-732 PHASE #

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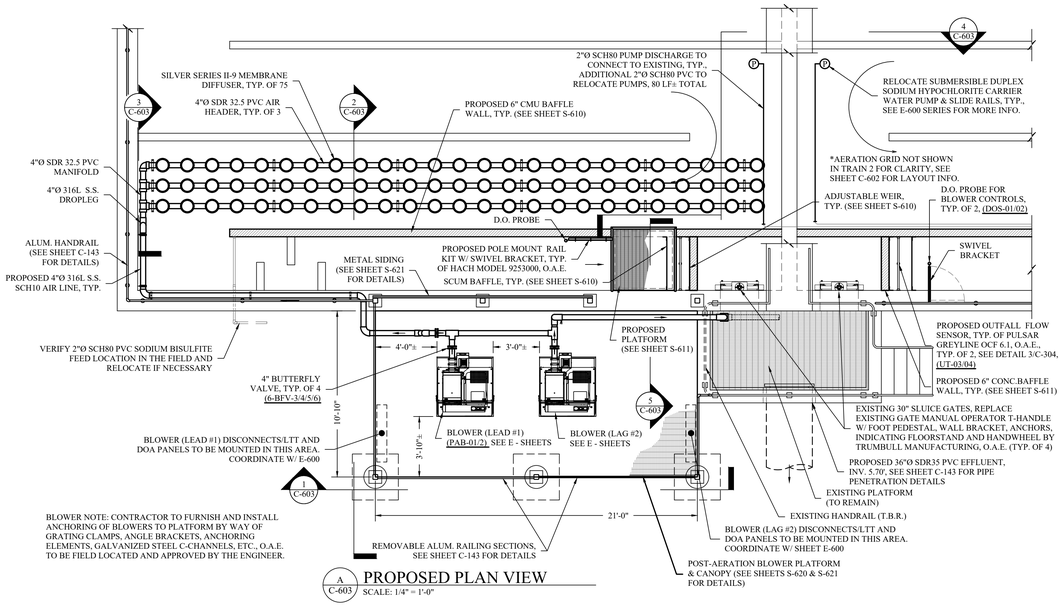
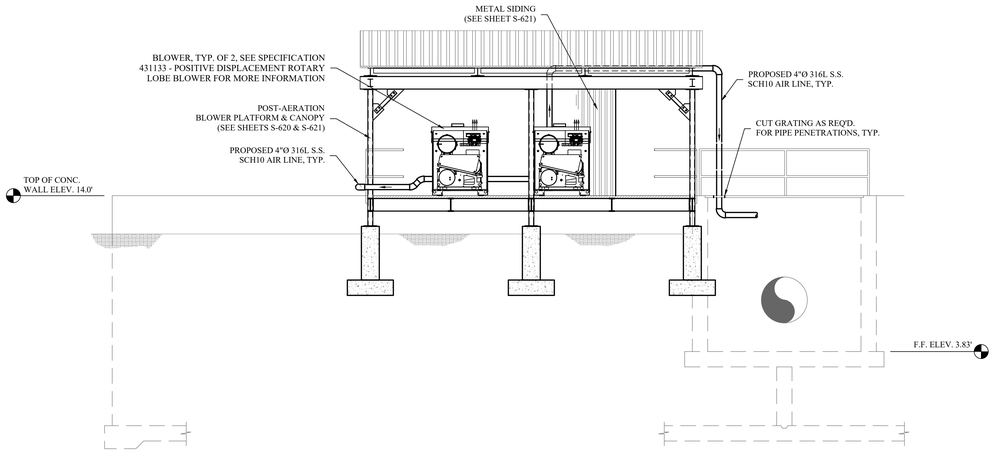
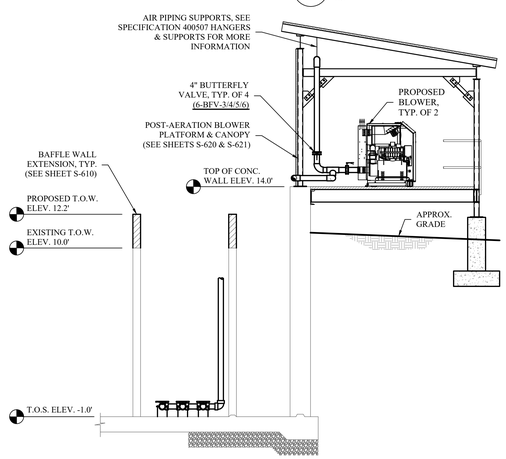


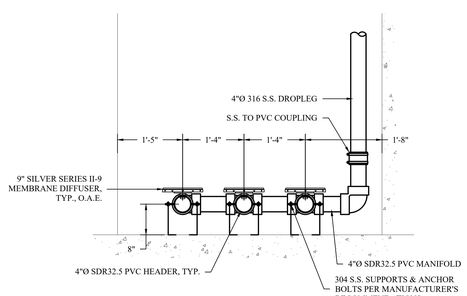
A C-603 **PROPOSED PLAN VIEW**
SCALE: 1/4" = 1'-0"



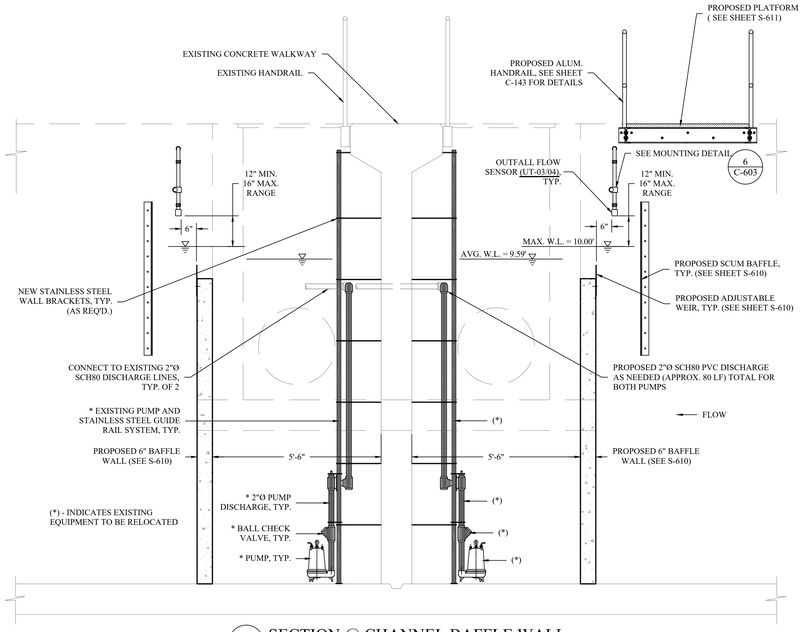
1 C-603 **BLOWER PLATFORM - ELEVATION**
SCALE: 1/4" = 1'-0"



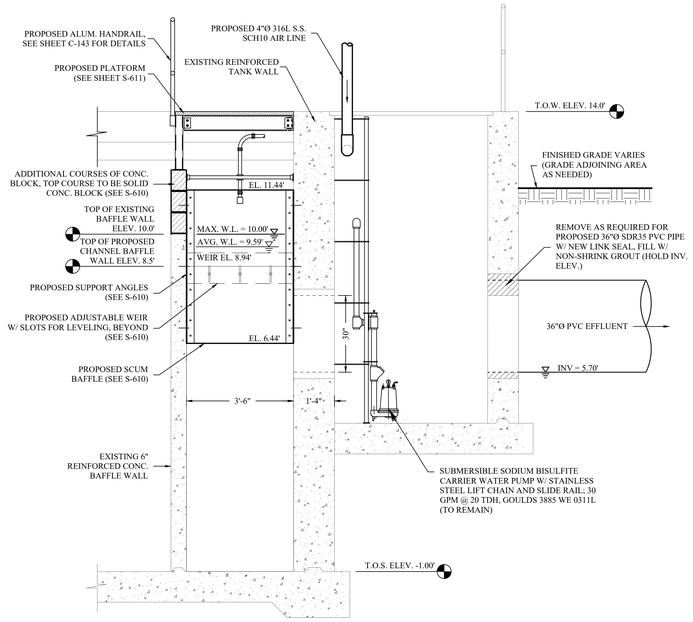
2 C-603 **ELEVATION VIEW**
SCALE: 1/4" = 1'-0"



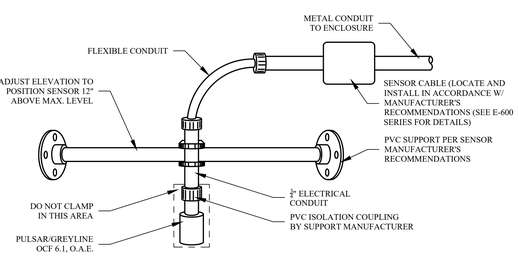
3 C-603 **MEMBRANE DIFFUSER DETAIL & SUPPORTS ELEVATION**
SCALE: 3/4" = 1'-0"
SEE SPECIFICATION 465136.22 AERATION DIFFUSER SYSTEM FOR MORE INFORMATION



4 C-603 **SECTION @ CHANNEL BAFFLE WALL**
SCALE: 1/2" = 1'-0"



5 C-603 **SECTION @ CHANNEL BAFFLE**
SCALE: 1/2" = 1'-0"



6 C-603 **ULTRASONIC FLOW SENSOR MOUNTING DETAIL (TYP.)**
SCALE: NONE
TAG NO. UT-02/03/04, PROVIDED BY AQUALOGICS & CONTRACTOR TO INSTALL

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

POST AERATION BLOWER PLATFORM PLAN AND SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.
C-603

PROJECT # 18-732 PHASE #

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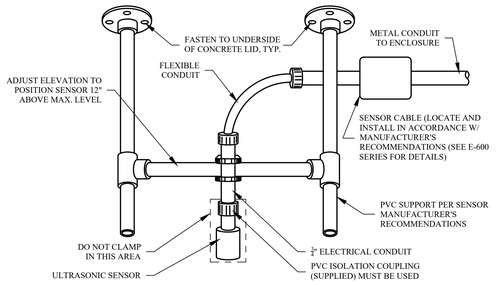
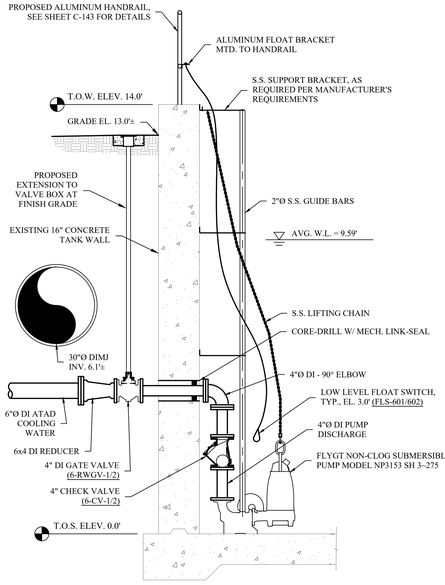
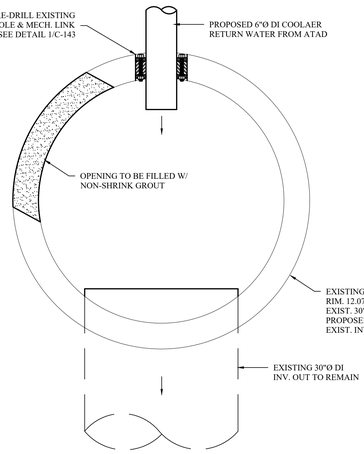


3 / C-604 ULTRASONIC FLOW SENSOR MOUNTING DETAIL
SCALE: NONE

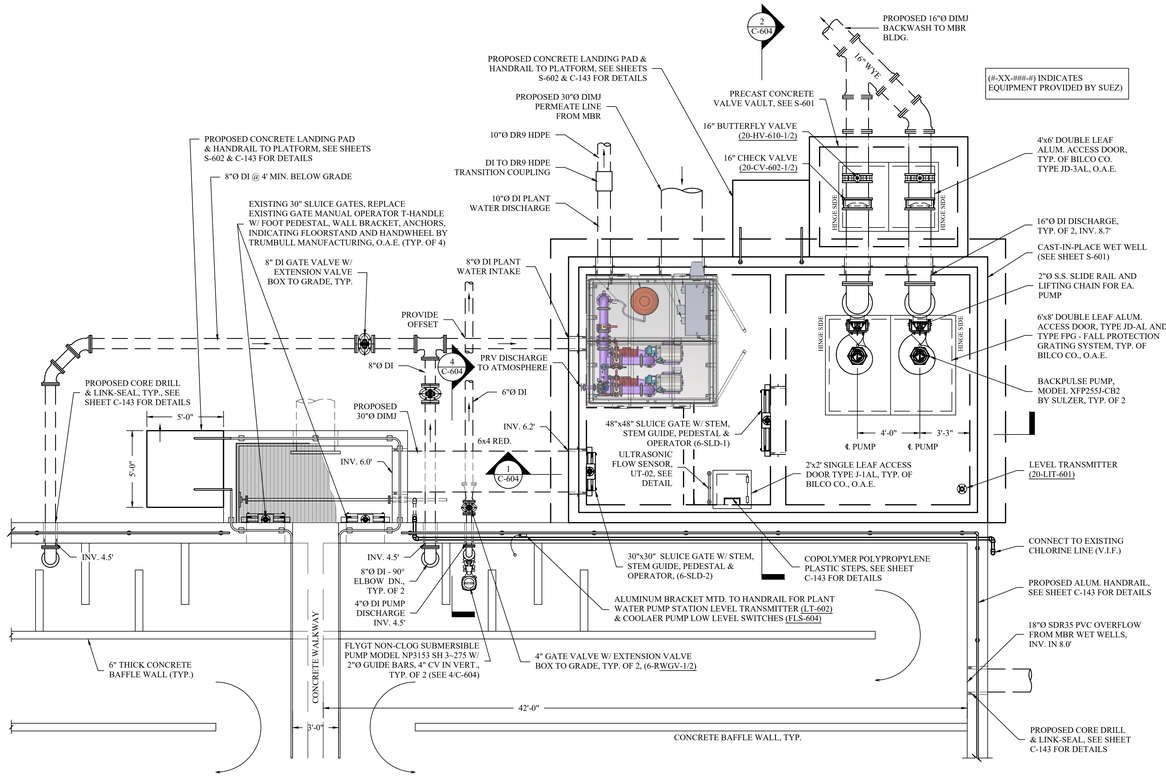
TAG NO. UT-02/03/04, PROVIDED BY AQUALOGICS & CONTRACTOR TO INSTALL



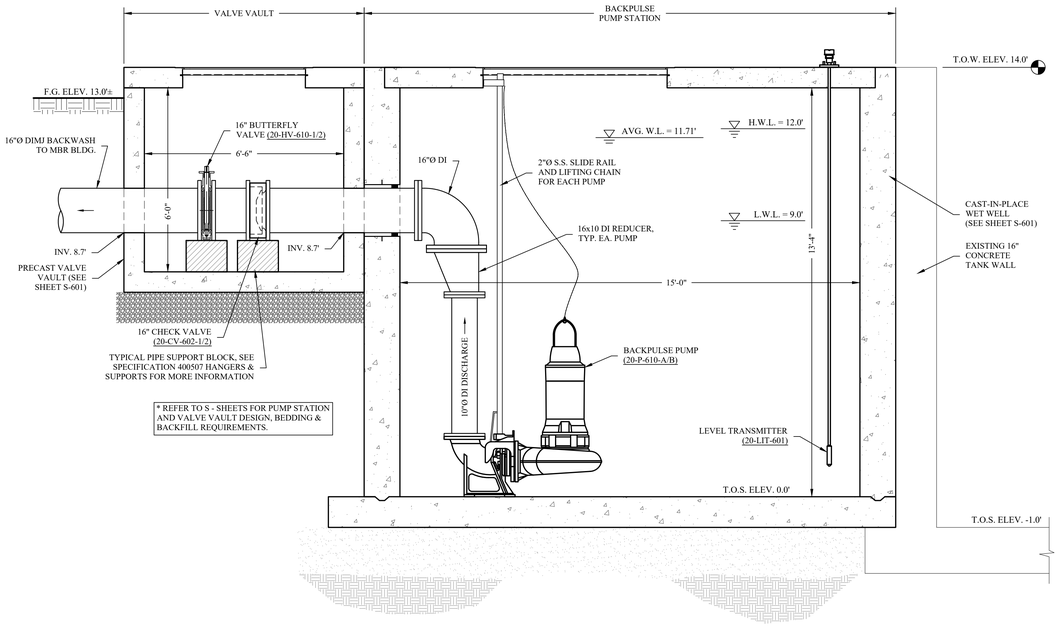
4 / C-604 SECTION
SCALE: 1/2" = 1'-0"



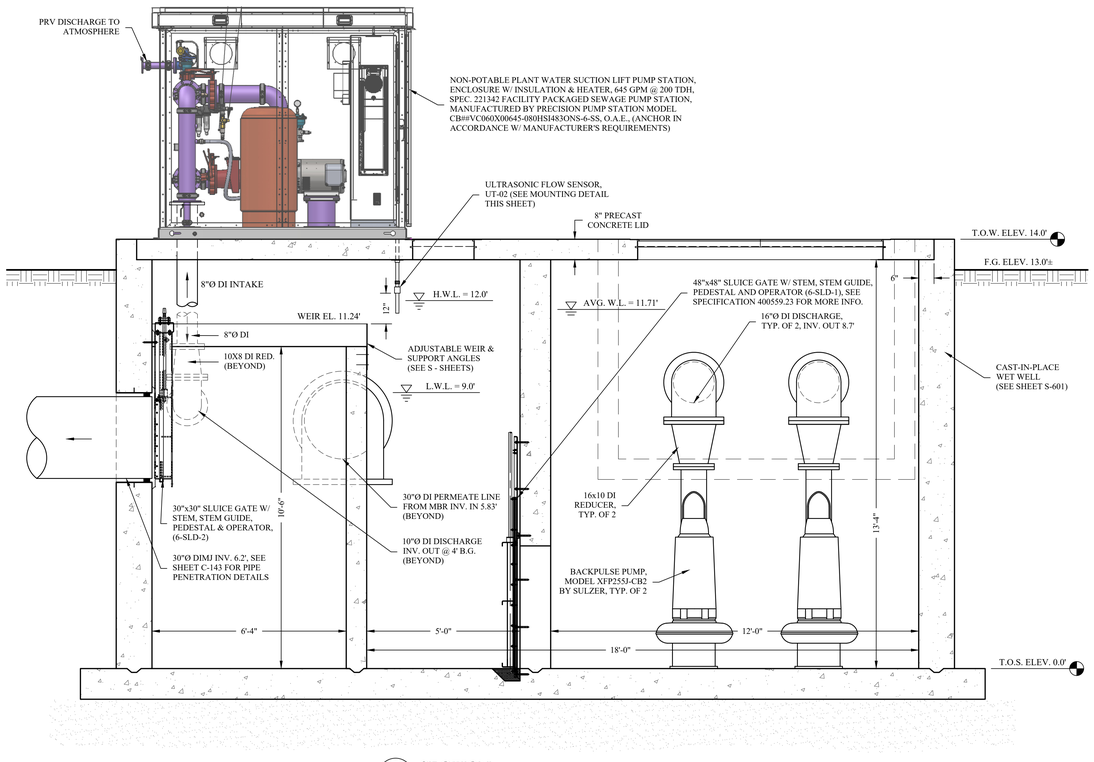
5 / C-604 COOLAER RETURN WATER MANHOLE CONNECTION DETAIL
SCALE: NONE



A / C-604 PROPOSED PLAN VIEW
SCALE: 1/4" = 1'-0"



2 / C-604 SECTION
SCALE: 1/2" = 1'-0"



1 / C-604 SECTION
SCALE: 1/2" = 1'-0"

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
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(570) 296-2765

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

BACKPULSE PUMP STATION AND VALVE VAULT

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

C-604

PROJECT # 18-732 PHASE #

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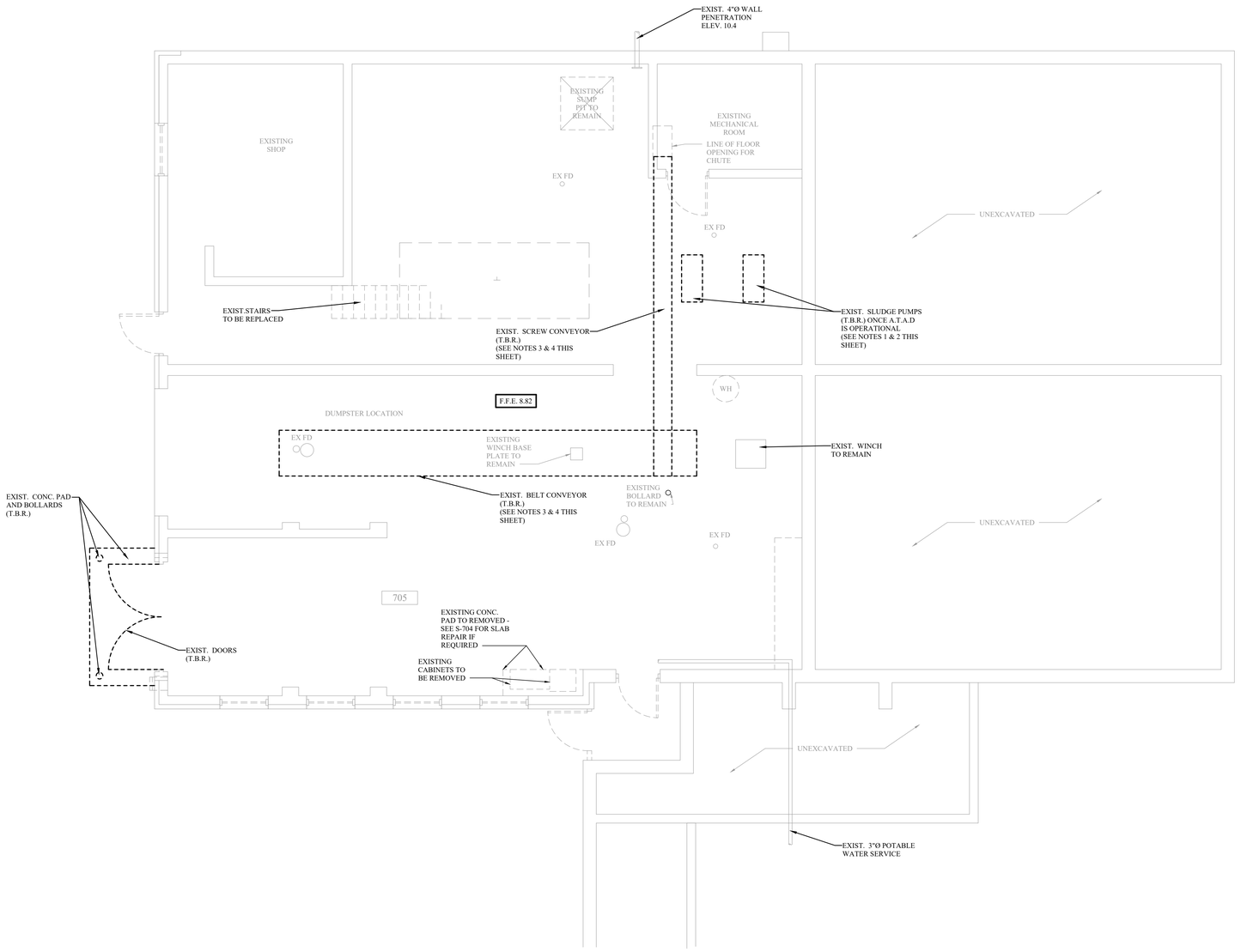

1 CD-701 EXISTING CONDITIONS / DEMO PLAN DEWATERING BUILDING - LOWER LEVEL
SCALE: 1/4" = 1'-0"

NOTES:

1. EXISTING SLUDGE PUMPS TO BE CONNECTED TO NEW BELT PRESS TEMPORARILY WHEN EXISTING PRESS IS TAKEN OFF-LINE.
2. ONCE BOTH PRESSES ARE OPERATIONAL, AN EXISTING SLUDGE PUMP SHALL BE DEDICATED TO EACH PRESS TO ALLOW FOR SIMULTANEOUS OPERATION.
3. CONTRACTOR TO PROVIDE AT A MINIMUM TWO WEEKS NOTICE TO ENGINEER AND OPERATOR PRIOR TO REMOVING THE EXISTING CONVEYOR. NEW CONVEYOR SHALL BE INSTALLED AND OPERATIONAL NO MORE THAN FOUR WEEKS AFTER EXISTING CONVEYOR IS TAKEN OFF-LINE.
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A TEMPORARY CONVEYOR FROM THE EXISTING DISCHARGE CHUTE OF THE EXISTING PRESS. CONTRACTOR TO PROVIDE A MINIMUM OF THREE 1 C.Y. DUMPING CARTS (THAT CAN BE HANDLED BY THE OPERATOR) FOR USE WHEN THE EXISTING CONVEYOR SYSTEM IS TAKEN OFFLINE UNTIL THE NEW CONVEYOR IS COMPLETELY OPERATIONAL.
5. ITEMS NOTED AS "T.B.R." SHALL BE TOTALLY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
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EXISTING CONDITIONS / DEMO PLAN DEWATERING BUILDING - LOWER LEVEL

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

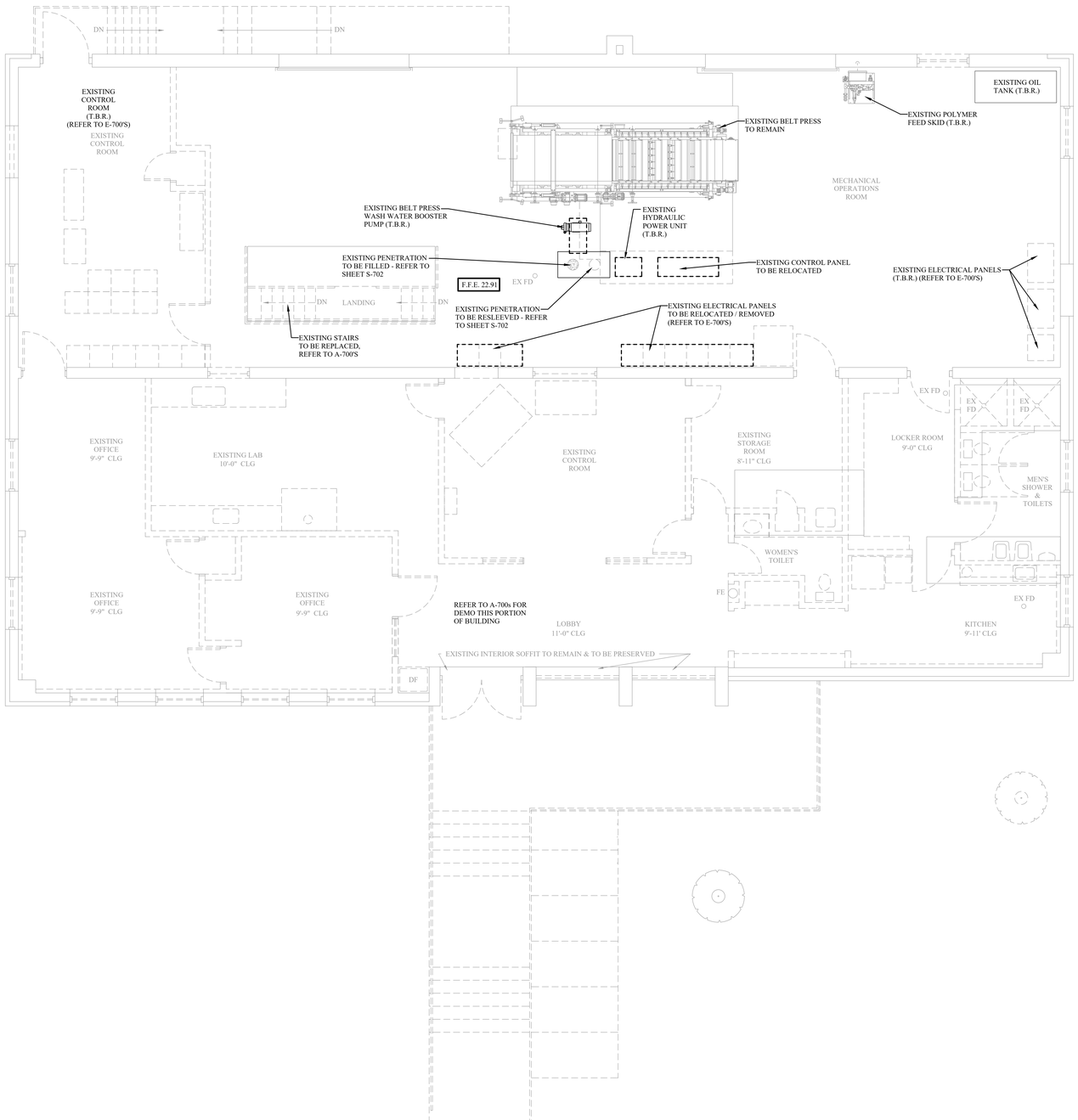
SHEET NO.
CD-701

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\7 - Sludge Dewatering (Existing Control Building)\Civil-Process\7- Sludge Dewatering- Belt Press.dwg, CD-701, 4/17/2025 11:02:52 AM

NOTES:

1. ALL DEMO / RELOCATION IDENTIFIED ON THIS SHEET SHALL BE COMPLETED AFTER NEW BELT PRESS IS OPERATIONAL.
2. ITEMS NOTED AS "T.B.R." SHALL BE TOTALLY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.



1 CD-702 EXISTING CONDITIONS / DEMO PLAN DEWATERING BUILDING - UPPER LEVEL
SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

EXISTING CONDITIONS / DEMO PLAN DEWATERING BUILDING - UPPER LEVEL

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
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REVIEWED BY:	MJS, JZ

SHEET NO.
CD-702

PROJECT # 18-732 PHASE #

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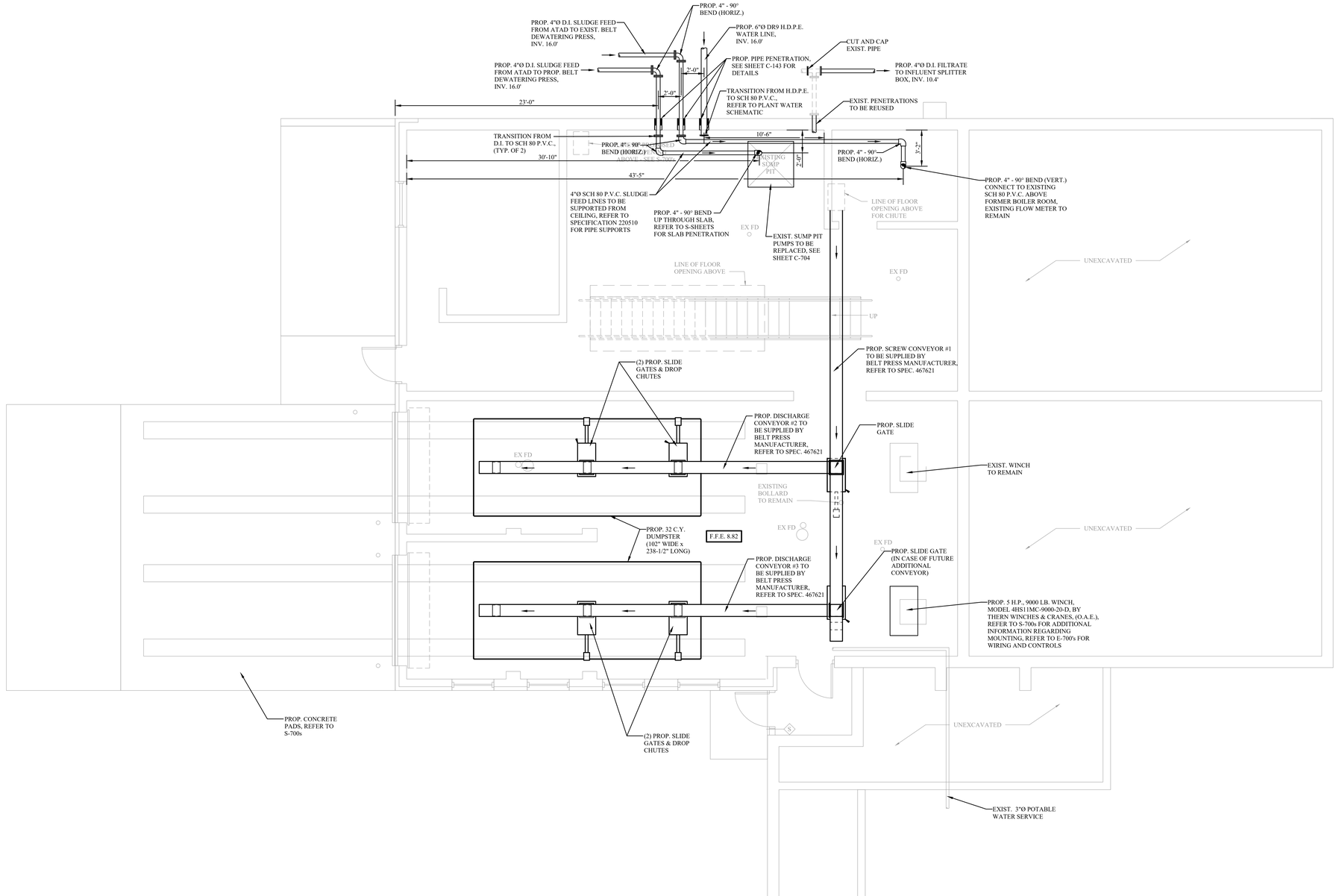
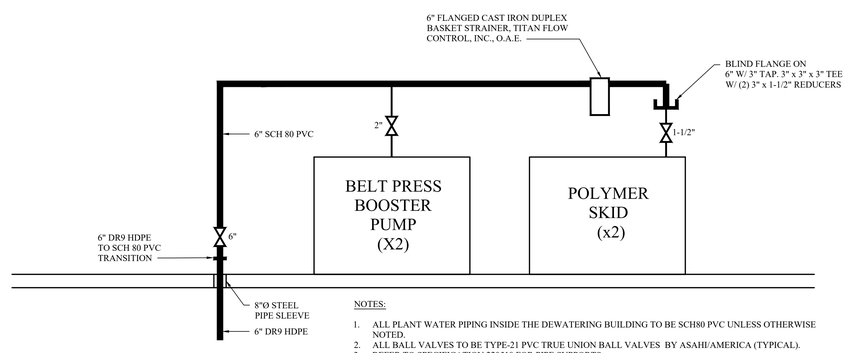


1 C-701 PROPOSED LAYOUT PLAN DEWATERING BUILDING - LOWER LEVEL
SCALE: 1/4" = 1'-0"



NOTES:
1. ALL PLANT WATER PIPING INSIDE THE DEWATERING BUILDING TO BE SCH80 PVC UNLESS OTHERWISE NOTED.
2. ALL BALL VALVES TO BE TYPE-21 PVC TRUE UNION BALL VALVES BY ASAHI/AMERICA (TYPICAL).
3. REFER TO SPECIFICATION 220510 FOR PIPE SUPPORTS.

2 C-701 DEWATERING BUILDING WATER PROCESS SCHEMATIC
SCALE: NONE

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PROPOSED LAYOUT PLAN DEWATERING BUILDING - LOWER LEVEL

REVISIONS

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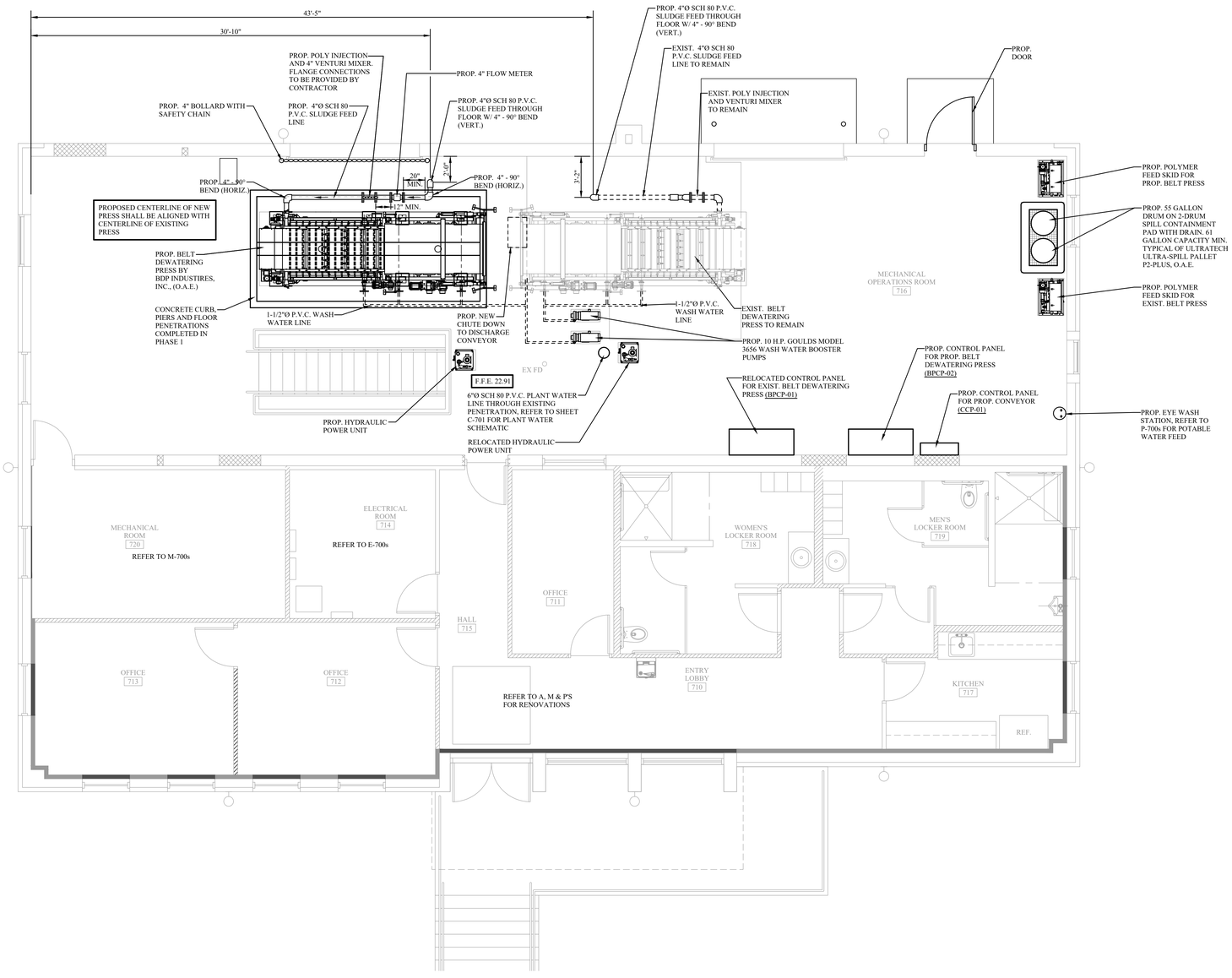
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\7 - Sludge Dewatering (Existing Control Building)\Civil Process\7 - Sludge Dewatering- Belt Press.dwg, C-701, 4/17/2025 11:03:55 AM

NOTE:

1. CONTROL PANEL FOR PROPOSED BELT PRESS TO BE TEMPORARILY LOCATED AND OPERATIONAL, AS NEEDED.



1 C-702 PROPOSED LAYOUT PLAN DEWATERING BUILDING - UPPER LEVEL
SCALE: 1/4" = 1'-0"

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PROPOSED LAYOUT PLAN DEWATERING BUILDING - UPPER LEVEL

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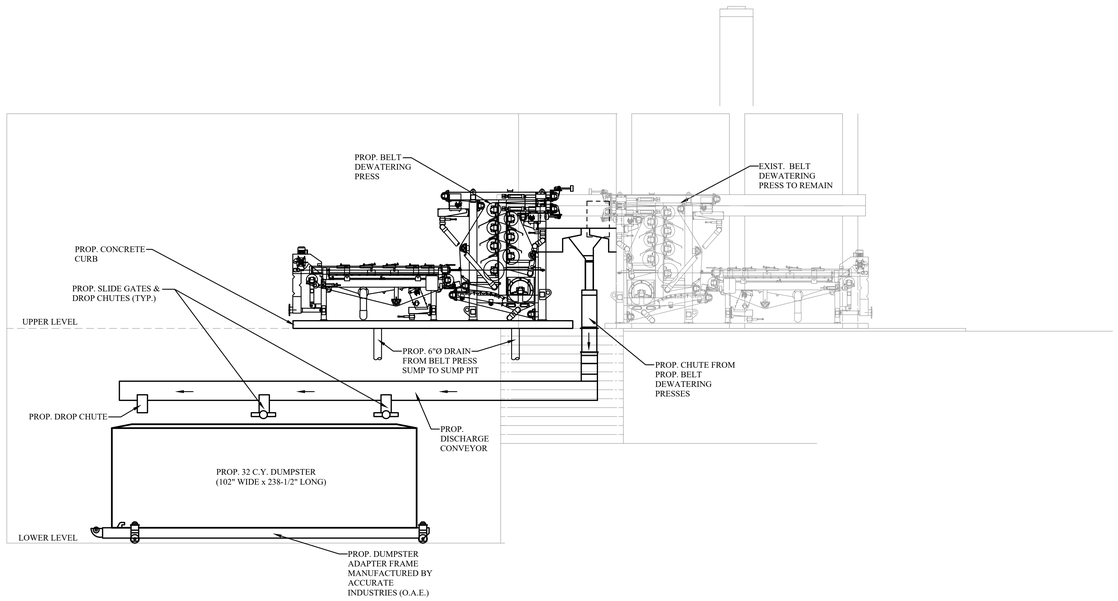
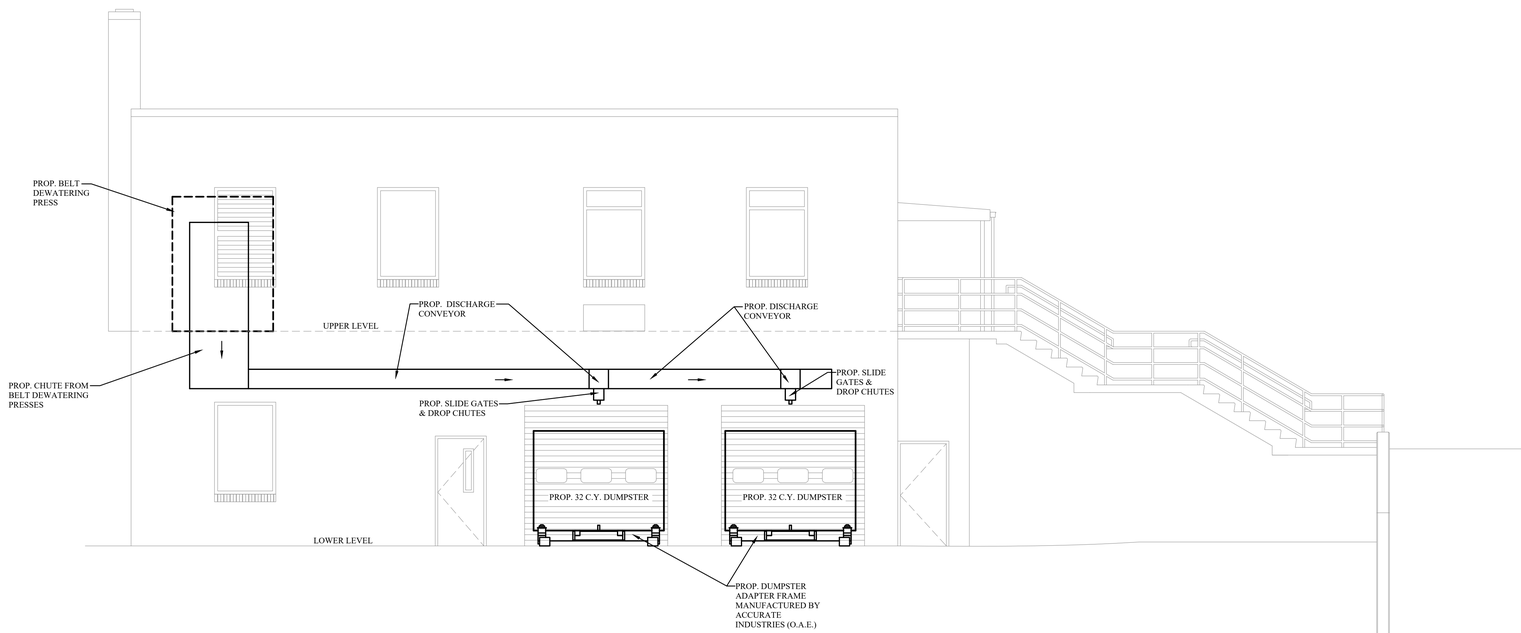


1 / C-703 DEWATERING BUILDING - EAST ELEVATION SECTION
SCALE: 1/4" = 1'-0"



1 / C-703 DEWATERING BUILDING - SOUTH ELEVATION SECTION
SCALE: 1/4" = 1'-0"

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(570) 296-2765

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DEWATERING BUILDING SECTIONS / DETAILS

REVISIONS

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ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

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PROJECT # 18-732 PHASE #

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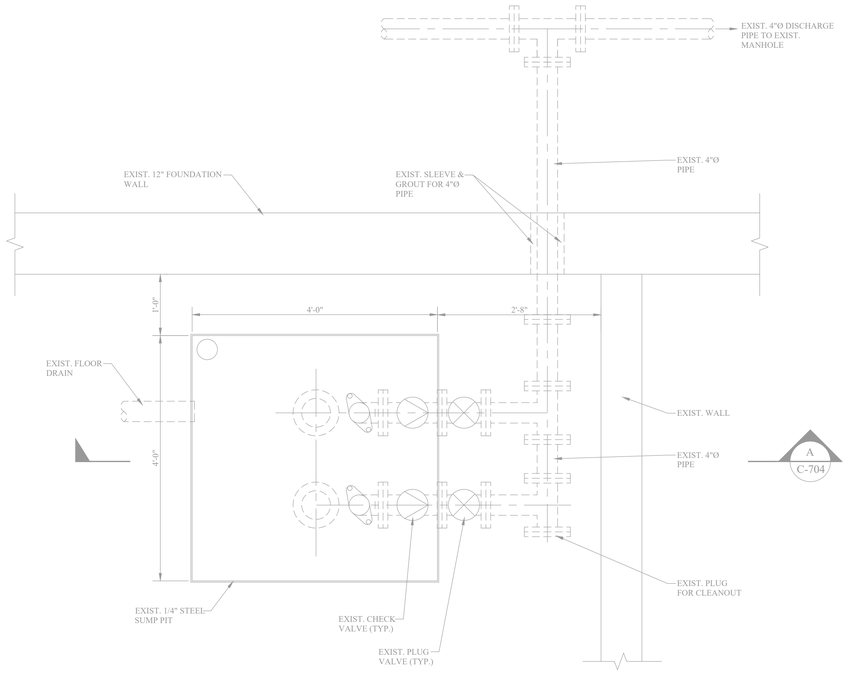
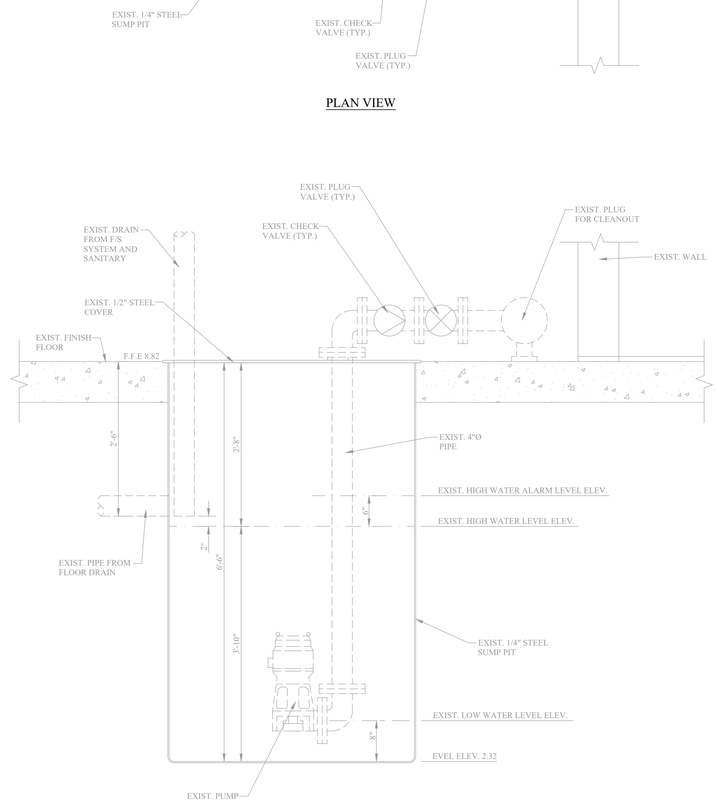


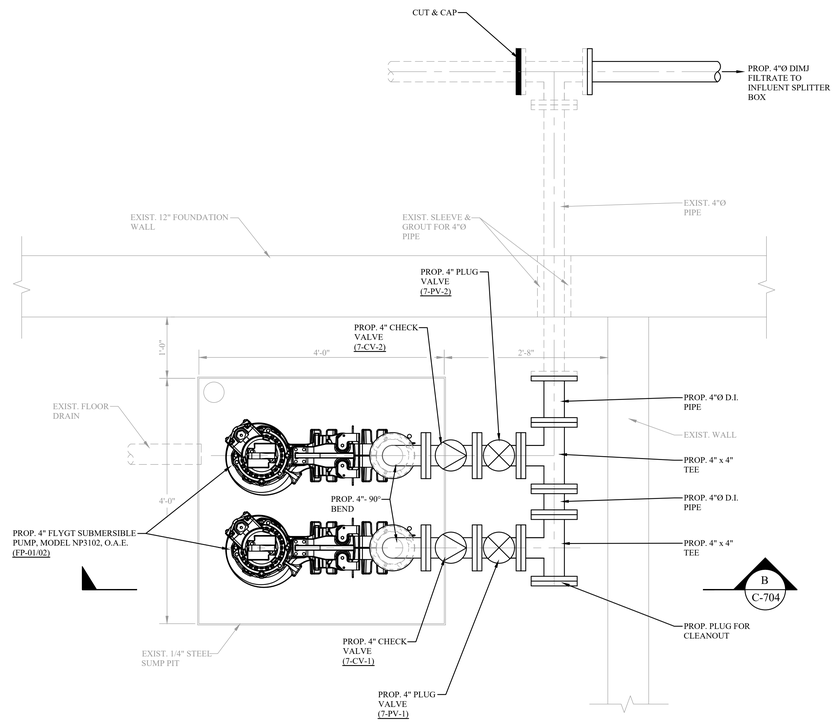
PLAN VIEW



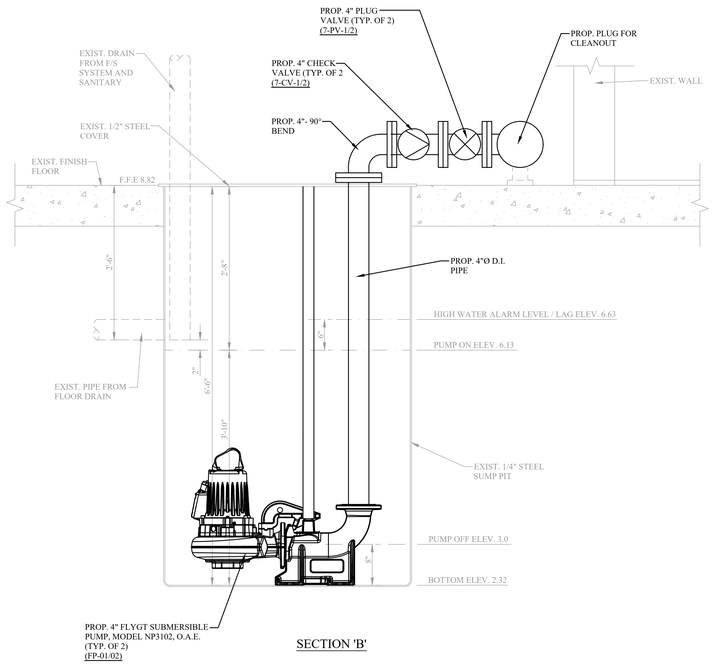
SECTION 'A'

1 C-704 DEWATERING BUILDING EXISTING SUMP PIT

SCALE: 1" = 1'-0"



PLAN VIEW



SECTION 'B'

2 C-704 DEWATERING BUILDING EXISTING SUMP PIT MODIFICATIONS

SCALE: 1" = 1'-0"

ENGINEERING

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New Windsor, NY 12553
(845) 567-3100

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Milford, PA 18337
(570) 296-2765

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DEWATERING BUILDING EXISTING SUMP PIT DETAIL

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

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PROJECT # 18-732 PHASE #

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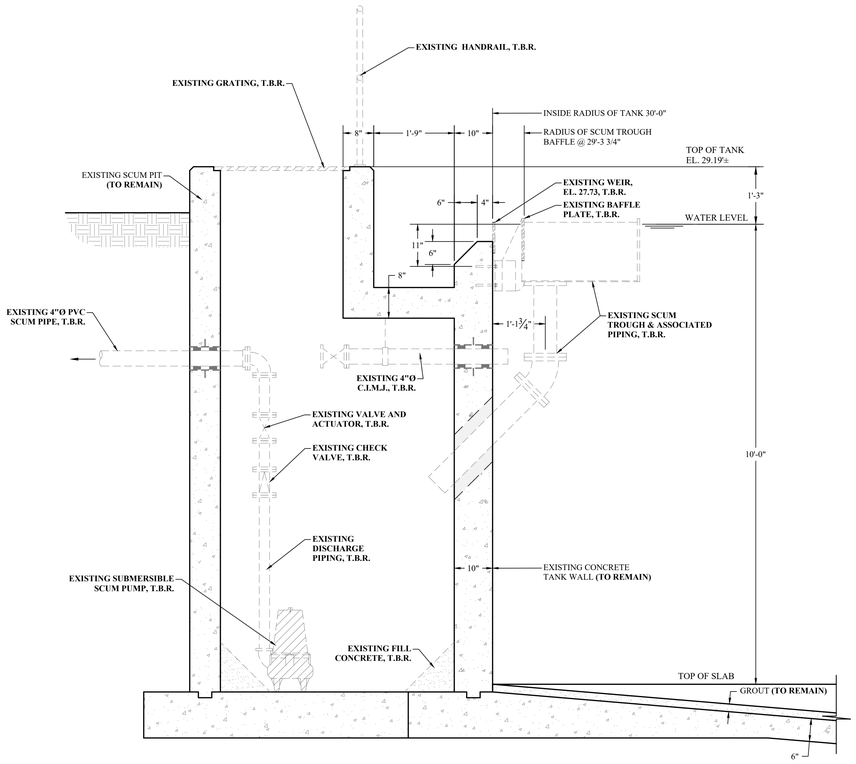
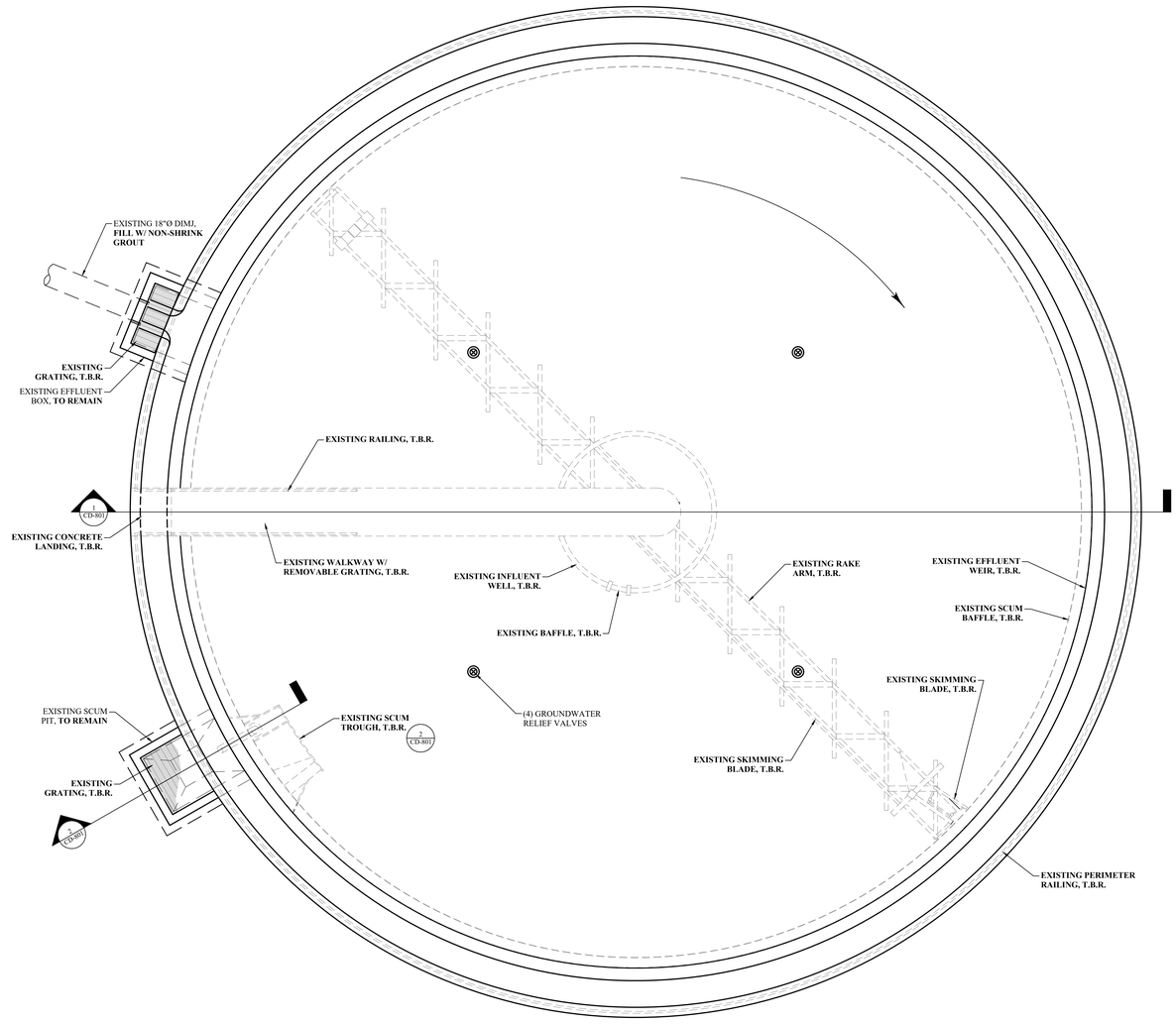


2 / CD-801 TYPICAL SECONDARY SETTLING TANK DEMOLITION SECTION THRU SCUM PIT & TROUGH

SCALE: 3/4" = 1'-0"

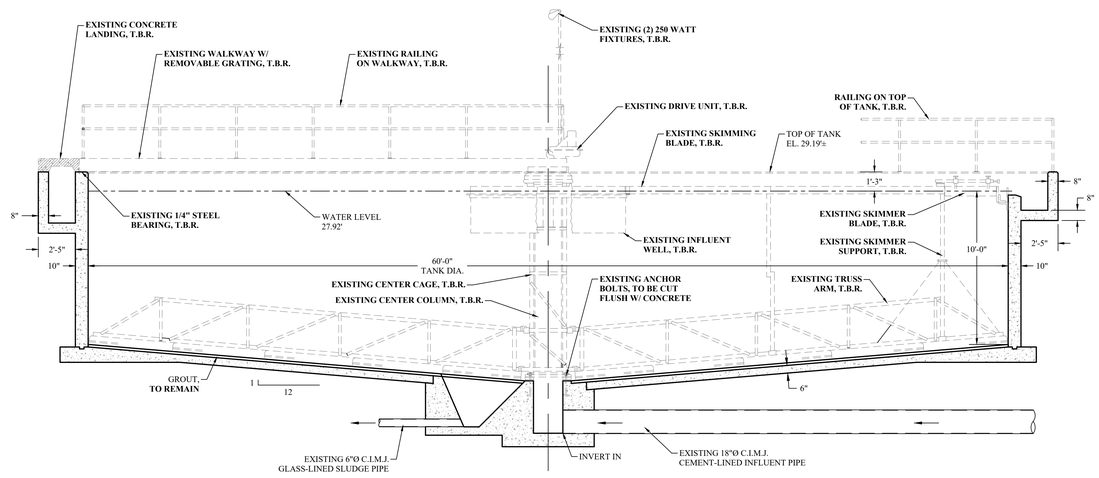
NOTES:

1. ENTIRE STRUCTURE INCLUDING EQUIPMENT, PIPING, CONCRETE, ETC. TO BE REMOVED IN FULL TO TOP OF EXISTING SLAB (T.O.S.) AT APPROXIMATELY ELEVATION 0.0'.
2. DEMOLITION PLAN IS TYPICAL OF SECONDARY SETTLING TANKS 1 AND 2.
3. REFER TO SITE PLAN FOR ACTUAL PIPING, EFFLUENT TROUGH AND SCUM PIT ORIENTATION.
4. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION, BACKFILL AND COMPACTION SPECIFICATION.
5. ALL ITEMS NOTED AS TO BE REMOVED, OR "T.B.R." SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR AND PROPERLY DISPOSED OF. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.
6. CONTENTS OF EXISTING SETTLING TANKS MAY BE DISPOSED OF BY PUMPING TO THE INFLUENT STRUCTURE ON THE GRAVITY THICKENERS AS COORDINATED WITH THE PLANT OPERATOR.
7. ALL POWER AND CONTROL WIRING AT THE SECONDARY SETTLING TANKS, INCLUDING CONDUIT SHALL BE REMOVED AND PROPERLY DISPOSED OF.
8. EXISTING BURIED PIPING NOT REMOVED SHALL BE FILLED WITH NON-SHRINK GROUT.



1 / CD-801 TYPICAL SECONDARY SETTLING TANK DEMOLITION PLAN

SCALE: 1/4" = 1'-0"



3 / CD-801 TYPICAL SECONDARY SETTLING TANK DEMOLITION ELEVATION - SECTION

SCALE: 1/4" = 1'-0"

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(570) 296-2765

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FOR TOWN OF NEW WINDSOR
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TYPICAL EXISTING SECONDARY SETTLING TANK DEMOLITION PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR. 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

CD-801

PROJECT # 18-732 PHASE #

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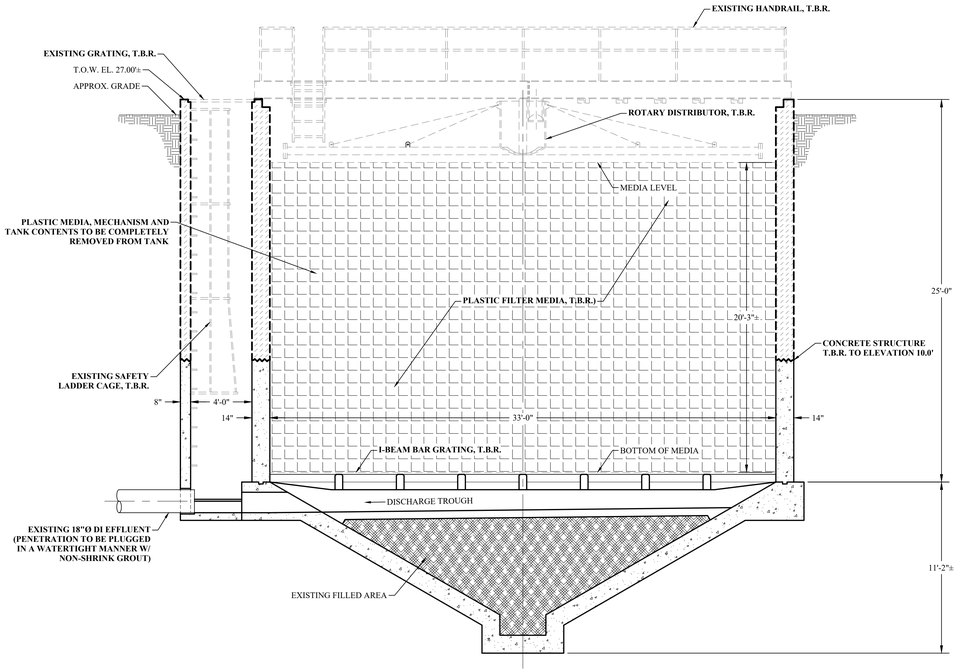
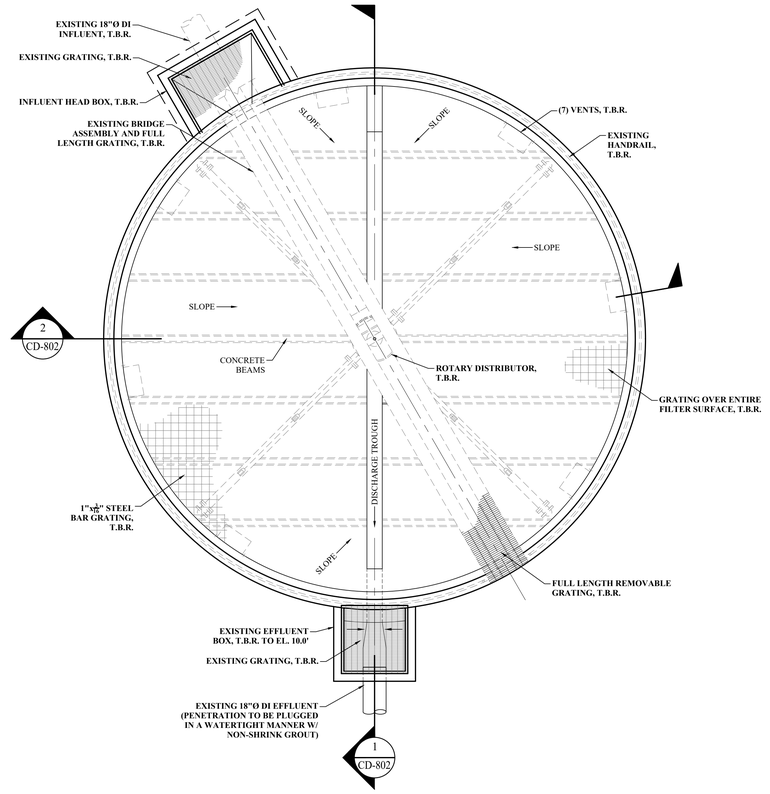


1 CD-802 EXISTING TRICKLING FILTER #1 DEMOLITION - SECTION

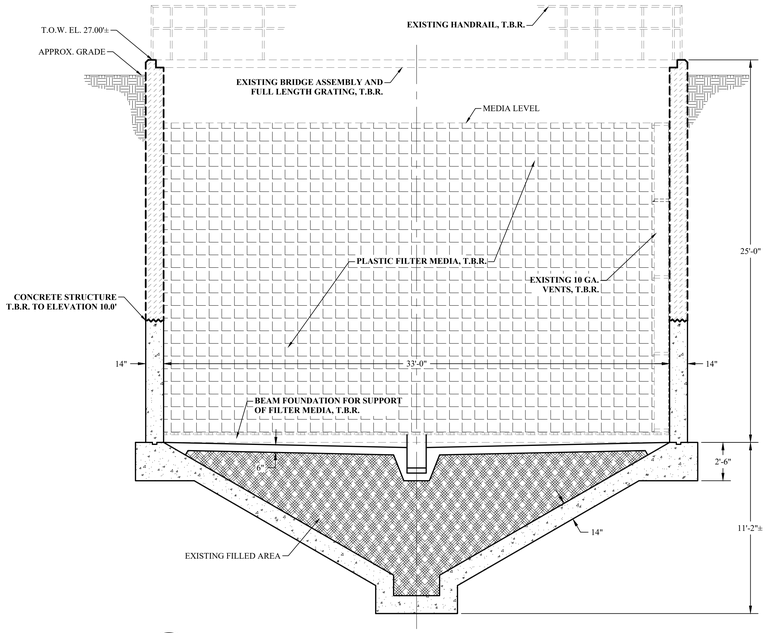
SCALE: 1/4" = 1'-0"

NOTES:
1. REMOVE CONCRETE STRUCTURE TO INDICATED ELEVATION. COMPLETELY REMOVE PLASTIC FILTER MEDIA, MEDIA SUPPORT, BRIDGE ASSEMBLY, DISTRIBUTION ASSEMBLY AND RAILINGS.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.



A CD-802 EXISTING TRICKLING FILTER #1 DEMOLITION - PLAN

SCALE: 1/4" = 1'-0"



2 CD-802 EXISTING TRICKLING FILTER #1 DEMOLITION - SECTION

SCALE: 1/4" = 1'-0"

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555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING TRICKLING FILTER #1 DEMOLITION PLAN AND DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

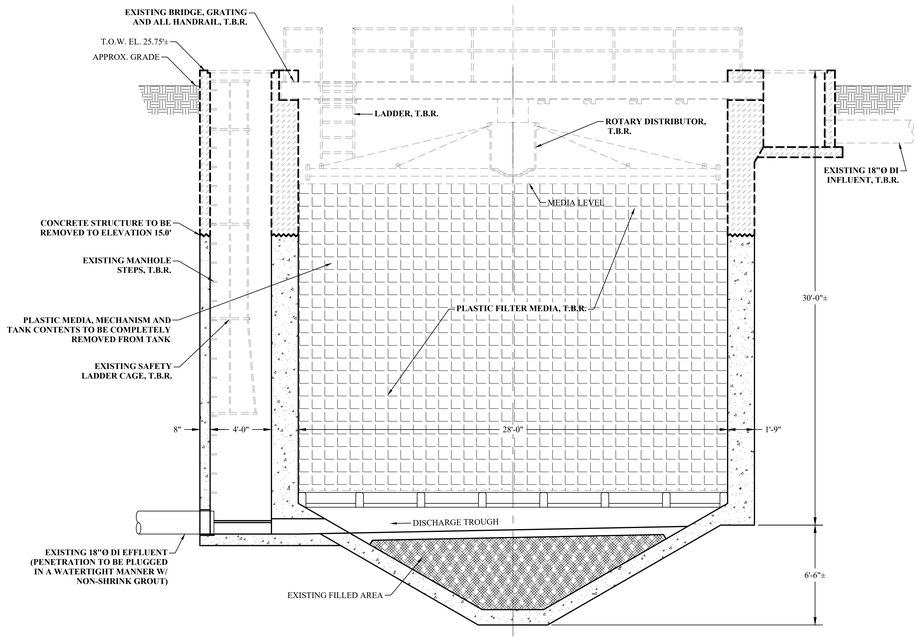
ISSUED DATE:	18 APR. 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

CD-802

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\8 - Secondary Setting, Trickling Filters, Misc\Trickling Filter Demo.dwg, CD-802, 4/18/2025 11:39:17 AM

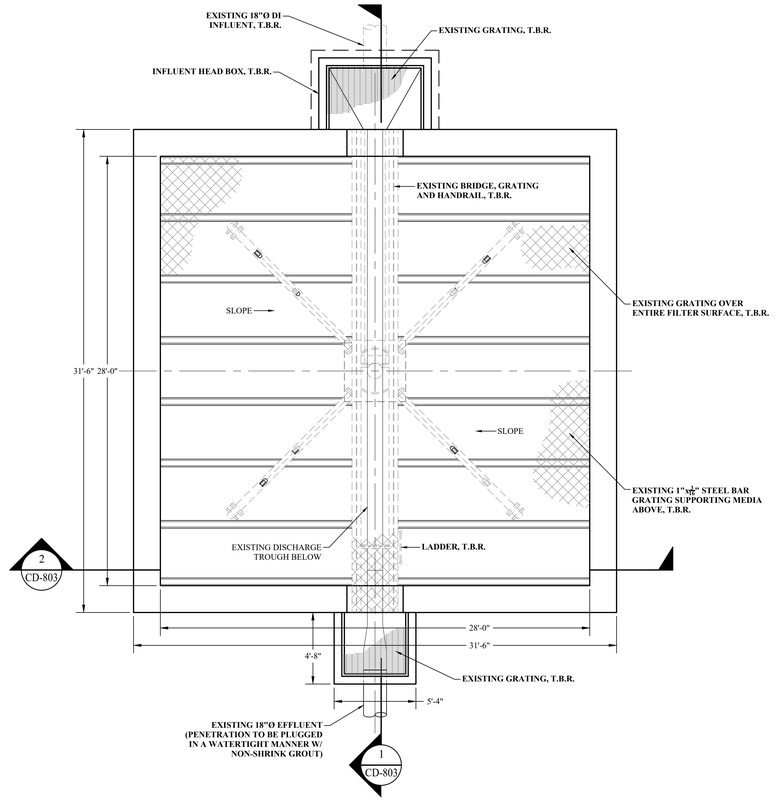


1 CD-803 EXISTING TRICKLING FILTER #2 DEMOLITION - SECTION

SCALE: 1/4" = 1'-0"

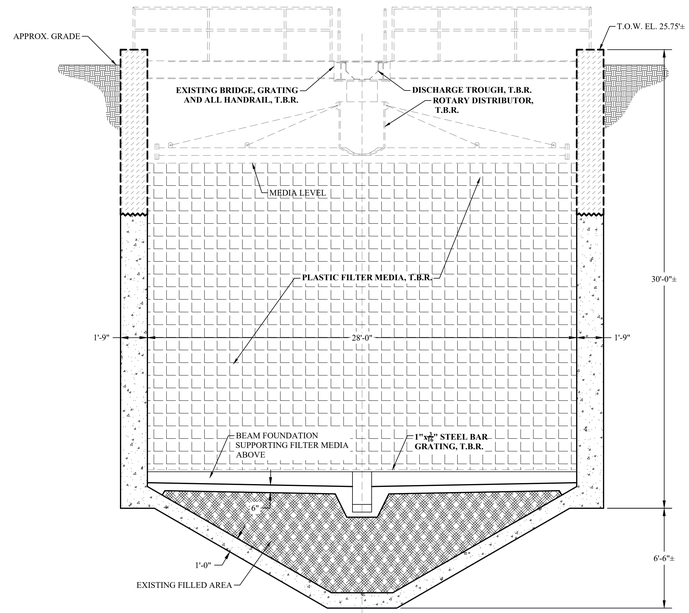
NOTES:

1. REMOVE CONCRETE STRUCTURE TO INDICATED ELEVATION. COMPLETELY REMOVE PLASTIC FILTER MEDIA, MEDIA SUPPORT, BRIDGE ASSEMBLY, DISTRIBUTION ASSEMBLY AND RAILINGS.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.



A CD-803 EXISTING TRICKLING FILTER #2 DEMOLITION - PLAN

SCALE: 1/4" = 1'-0"



2 CD-803 EXISTING TRICKLING FILTER #2 DEMOLITION - SECTION

SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING TRICKLING FILTER #2 DEMOLITION PLAN AND DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

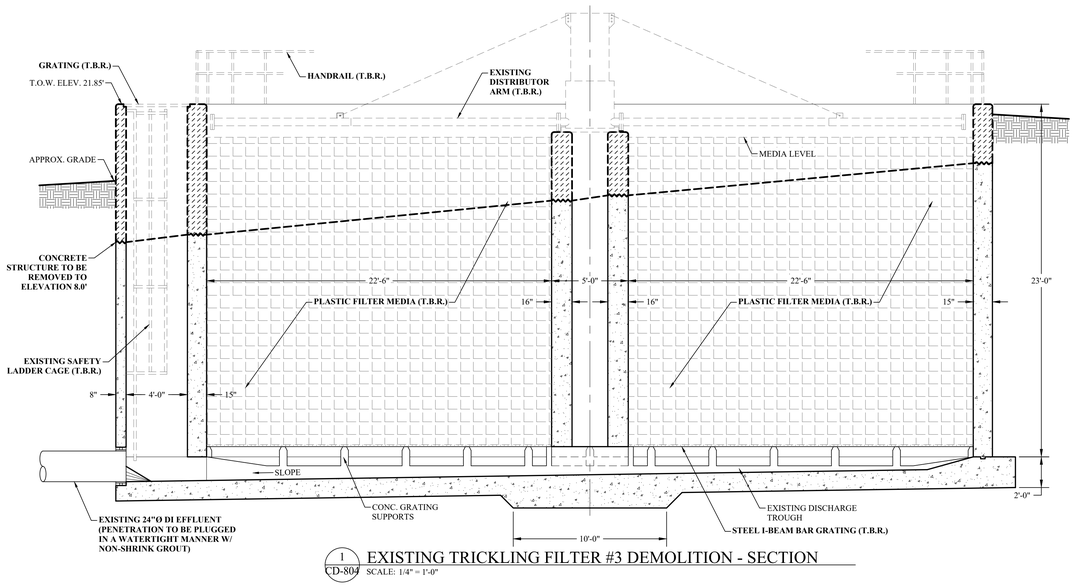
ISSUED DATE:	18 APR, 2025
DESIGN BY:	JTW
DRAWN BY:	HPB/Jr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

CD-803

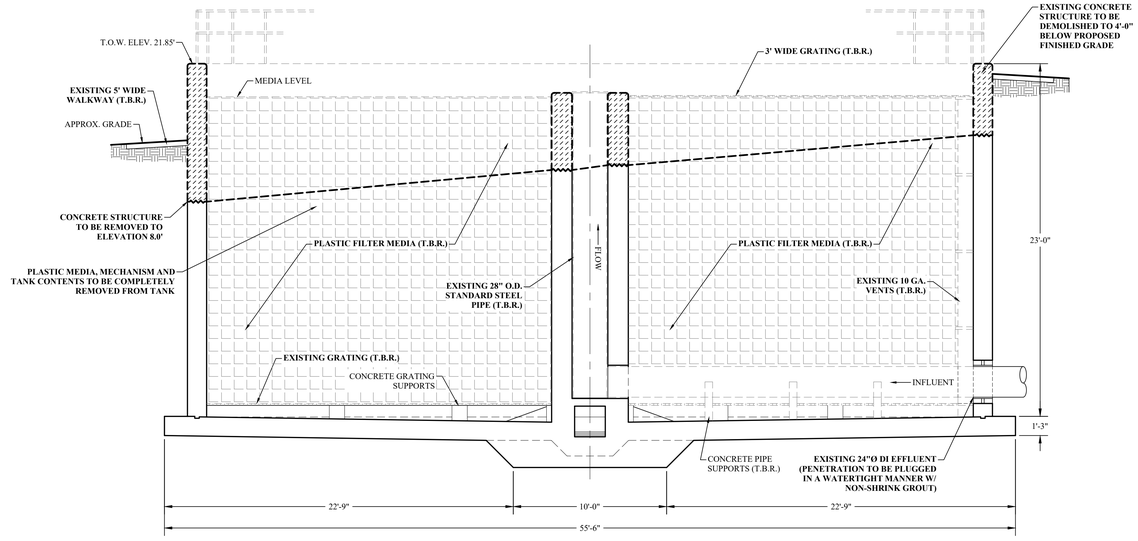
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\dt - Secondary Settling, Trickling Filters, Misc\Trickling Filter Demo.dwg, CD-803, 4/16/2025 11:39:17 AM



1 CD-804 EXISTING TRICKLING FILTER #3 DEMOLITION - SECTION

SCALE: 1/4" = 1'-0"

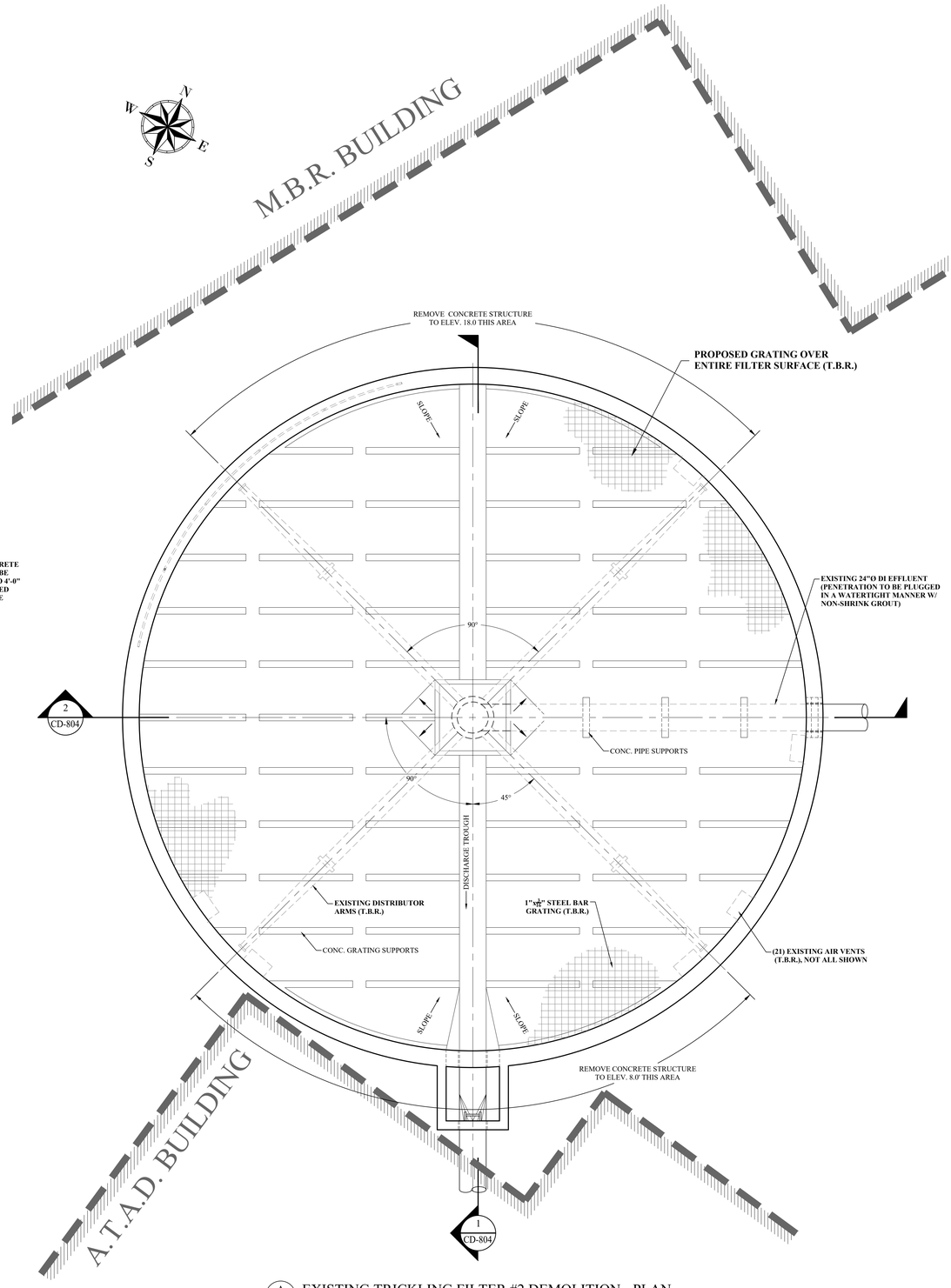


2 CD-804 EXISTING TRICKLING FILTER #3 DEMOLITION - SECTION

SCALE: 1/4" = 1'-0"

NOTES:

1. REMOVE CONCRETE STRUCTURE TO INDICATED ELEVATION. COMPLETELY REMOVE PLASTIC FILTER MEDIA, MEDIA SUPPORT, BRIDGE ASSEMBLY, DISTRIBUTION ASSEMBLY AND RAILINGS.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.



A CD-804 EXISTING TRICKLING FILTER #2 DEMOLITION - PLAN

SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CALL 811

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING TRICKLING FILTER #3 DEMOLITION PLAN AND SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

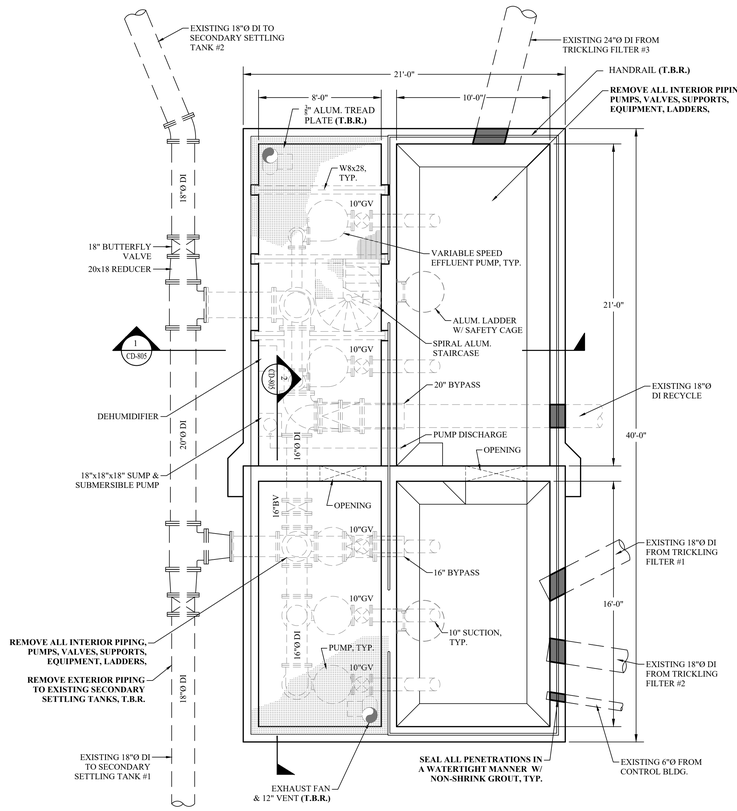
ISSUED DATE:	18 APR. 2025
DESIGN BY:	JTW
DRAWN BY:	HPBJr
CHECKED BY:	MWW
REVIEWED BY:	MJS, JZ

SHEET NO.

CD-804

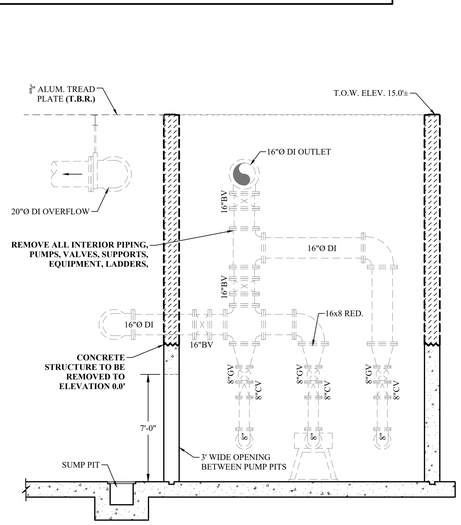
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\8 - Secondary Settling, Trickling Filters, Misc\Trickling Filter Demo.dwg, CD-804, 4/18/2025 11:39:24 AM

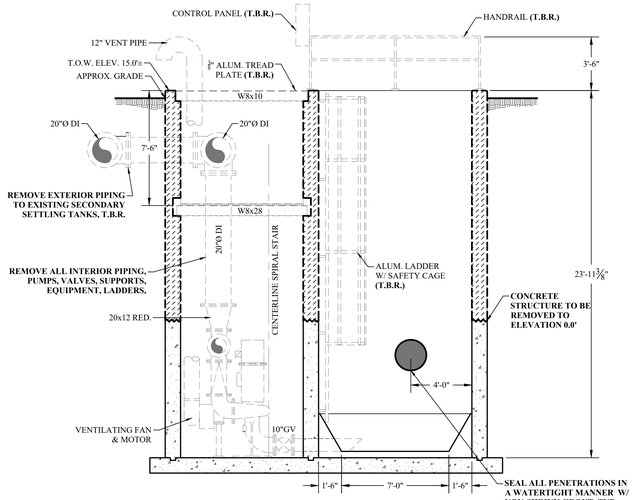


A CD-805 EXISTING EFFLUENT PUMP PIT & RECYCLE PIT DEMOLITION - PLAN
SCALE: 1/4" = 1'-0"

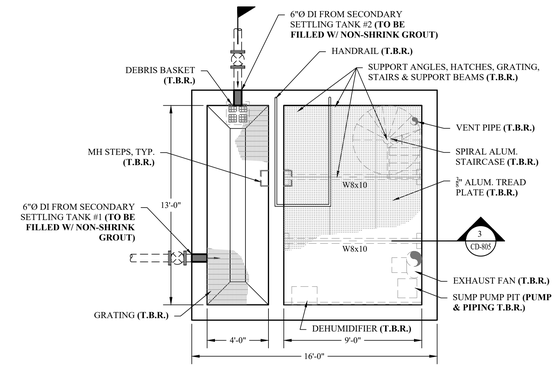
NOTES:
1. REMOVE CONCRETE STRUCTURE TO INDICATED ELEVATION. COMPLETELY REMOVE EQUIPMENT, PIPING, SUPPORTS, VALVES, FITTINGS, GRATING, RAILINGS AND LADDERS.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.



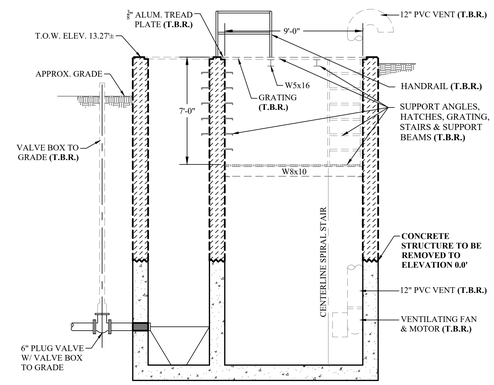
2 CD-805 SECTION
SCALE: 1/4" = 1'-0"



1 CD-805 SECTION
SCALE: 1/4" = 1'-0"



B CD-805 EXISTING SECONDARY SLUDGE PUMP PIT DEMOLITION - PLAN
SCALE: 1/4" = 1'-0"



3 CD-805 SECTION
SCALE: 1/4" = 1'-0"

NOTES:
1. REMOVE CONCRETE STRUCTURE TO INDICATED ELEVATION. COMPLETELY REMOVE EQUIPMENT, PIPING, SUPPORTS, VALVES, FITTINGS, GRATING, RAILINGS AND LADDERS.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING EFFLUENT PUMP PITS DEMOLITION PLANS AND DETAILS

REVISIONS

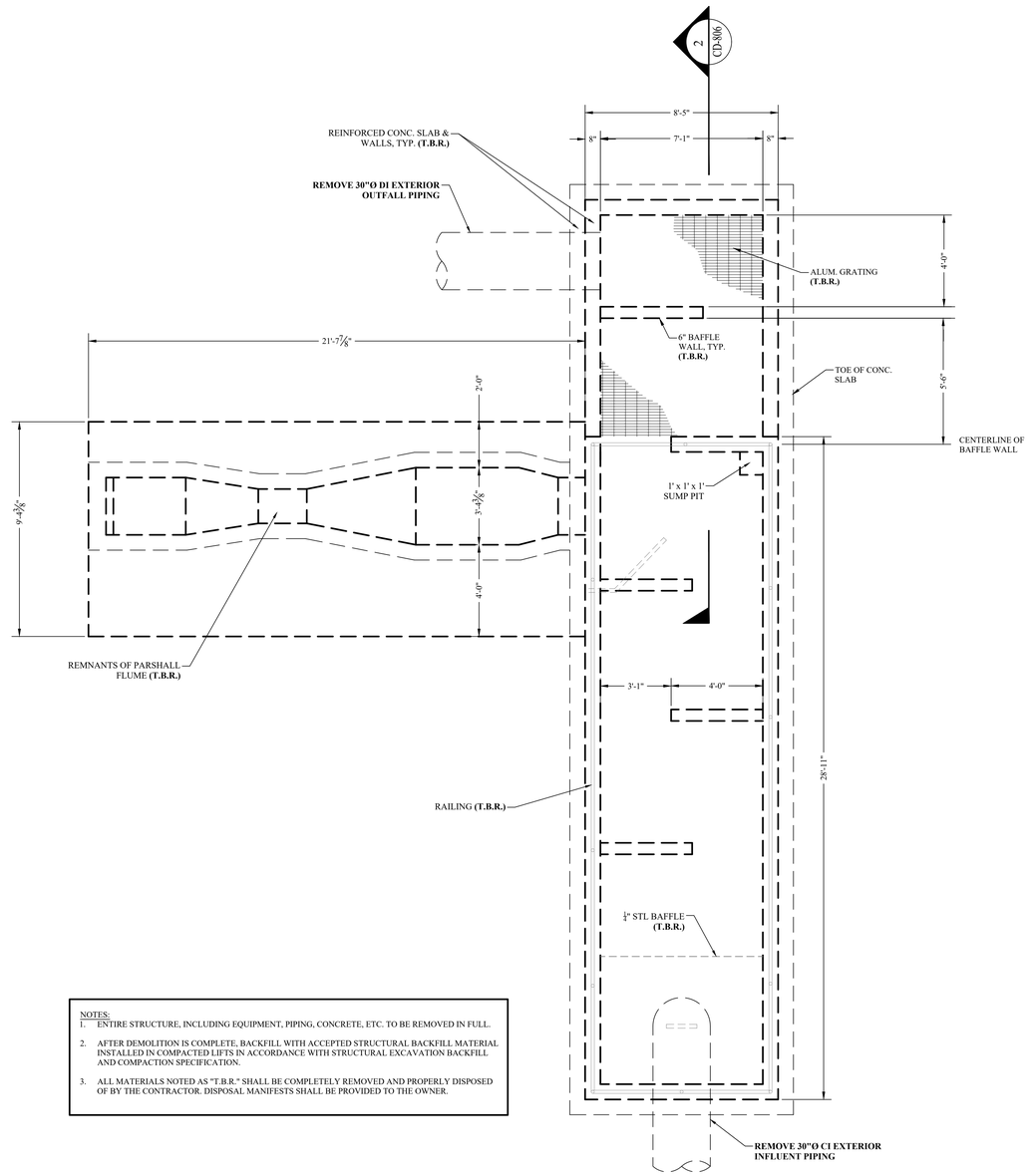
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

SHEET NO.
CD-805

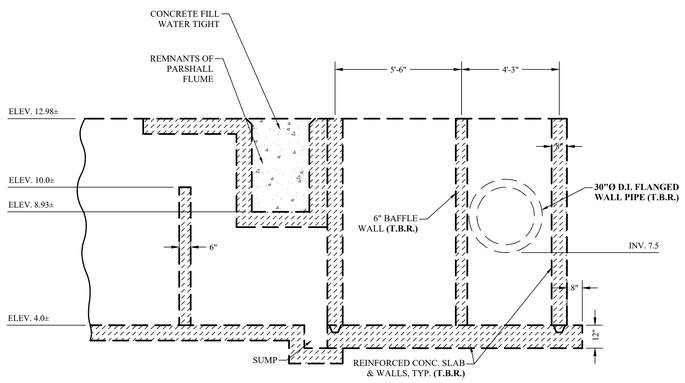
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\8 - Secondary Settling, Trickling Filters, Misc\Effluent Pump Pit.dwg, CD-805, 4/18/2025 11:39:28 AM

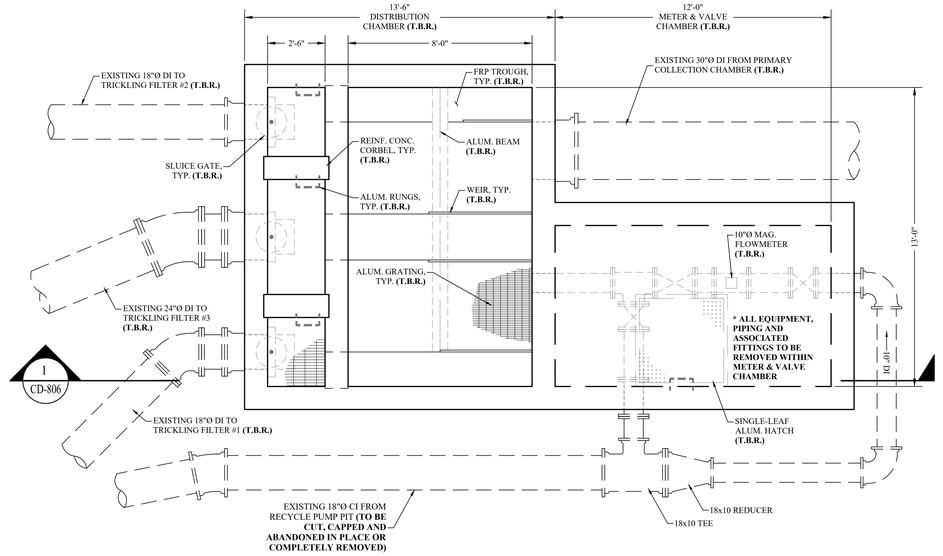


NOTES:
1. ENTIRE STRUCTURE, INCLUDING EQUIPMENT, PIPING, CONCRETE, ETC. TO BE REMOVED IN FULL.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.

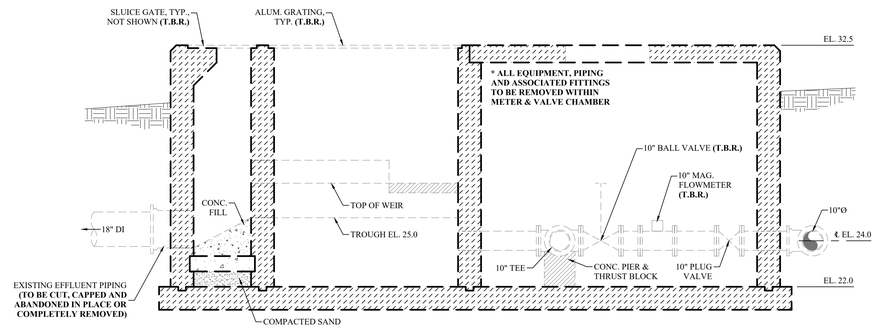
B CD-806 EXISTING SETTLING TANK EFFLUENT CHAMBER DEMOLITION - PLAN
SCALE: 3/8" = 1'-0"



2 CD-806 EXISTING SETTLING TANK EFFLUENT CHAMBER DEMOLITION - SECTION
SCALE: 3/8" = 1'-0"



A CD-806 EXISTING TRICKLING FILTER DISTRIBUTION BOX DEMOLITION - PLAN
SCALE: 3/8" = 1'-0"



1 CD-806 EXISTING TRICKLING FILTER DISTRIBUTION BOX DEMOLITION - SECTION
SCALE: 3/8" = 1'-0"

NOTES:
1. ENTIRE STRUCTURE, INCLUDING EQUIPMENT, PIPING, CONCRETE, ETC. TO BE REMOVED IN FULL.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING TRICKLING FILTER DISTRIBUTION BOX & SETTLING TANK EFFLUENT CHAMBER DEMOLITION PLANS

REVISIONS

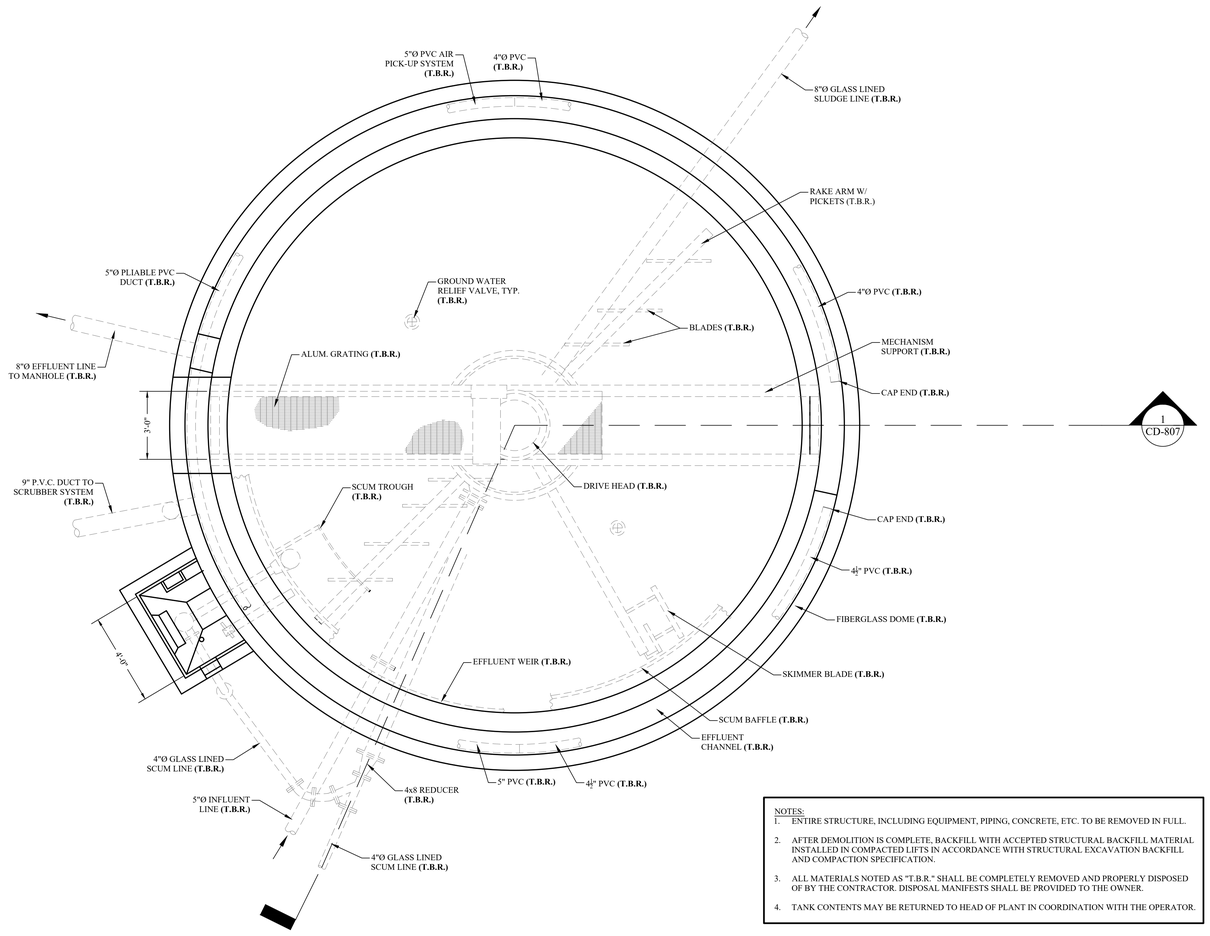
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	HPBJr
CHECKED BY:	MJS, JZ
REVIEWED BY:	**MJS, JZ**

SHEET NO.
CD-806

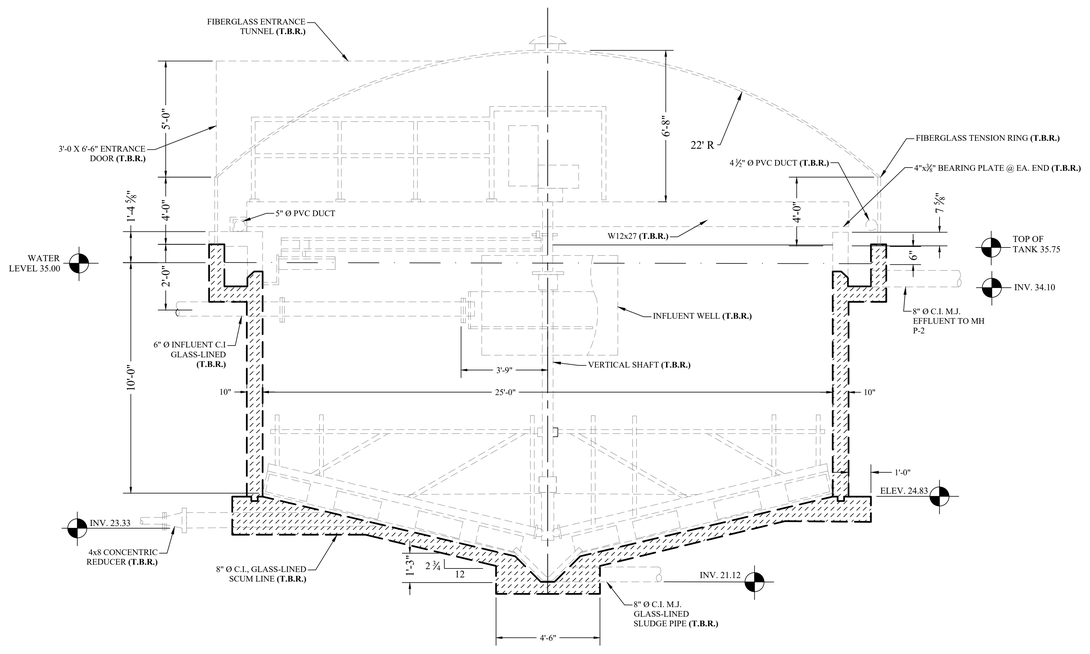
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\8 - Secondary Settling, Trickling Filters, Misc\Trickling Filter Dist Chamber-Chlorine Contact Tank.dwg, CD-806, 4/18/2025 11:39:27 AM



A CD-807 EXISTING SLUDGE THICKENING TANK PLAN
SCALE: 3/8" = 1'-0"

NOTES:
1. ENTIRE STRUCTURE, INCLUDING EQUIPMENT, PIPING, CONCRETE, ETC. TO BE REMOVED IN FULL.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.
4. TANK CONTENTS MAY BE RETURNED TO HEAD OF PLANT IN COORDINATION WITH THE OPERATOR.



1 CD-807 EXISTING SLUDGE THICKENING TANK SECTION
SCALE: 3/8" = 1'-0"

ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING SLUDGE THICKENING TANK DEMOLITION PLAN & SECTION (TYP. OF 2)

REVISIONS

NO.	DESCRIPTION	DATE

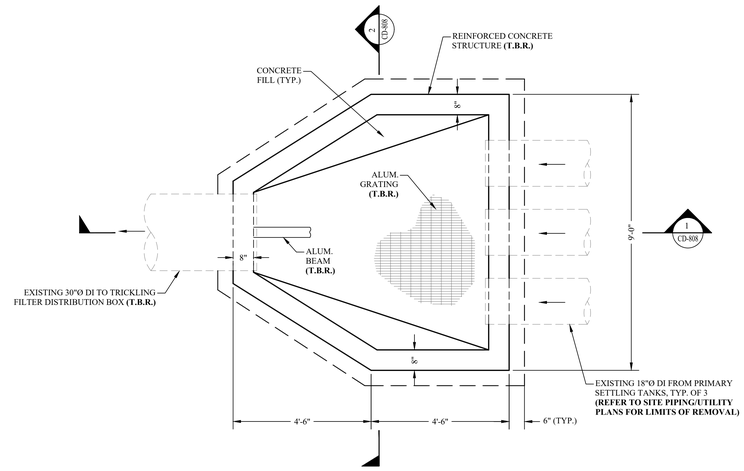
ISSUED DATE:	18 APR, 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.

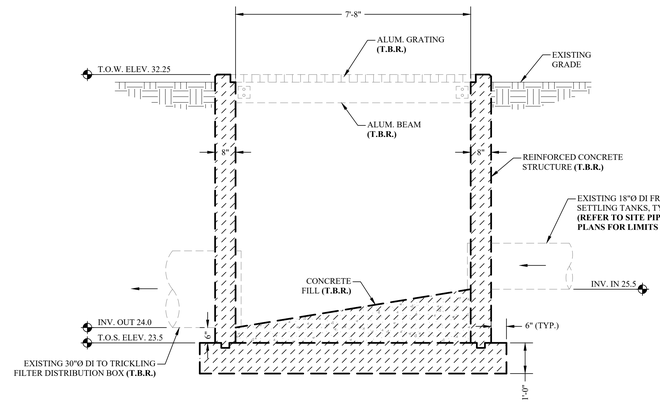
CD-807

PROJECT # 18-732 PHASE #

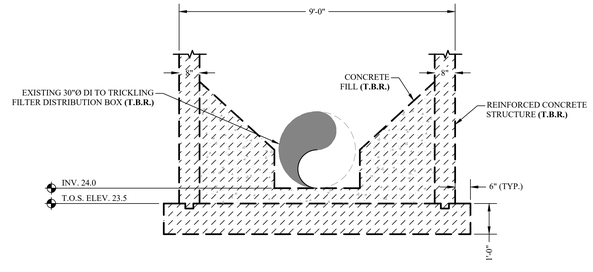
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Civil Process\Sludge thickening tanks.dwg, CD-807, 4/16/2025 11:31:22 AM



A CD-808 EXISTING / DEMO PRIMARY COLLECTION EFFLUENT BOX PLAN
SCALE: 1/2" = 1'-0"



1 CD-808 EXISTING / DEMO PRIMARY COLLECTION EFFLUENT BOX - SECTION
SCALE: 1/2" = 1'-0"



2 CD-808 EXISTING / DEMO PRIMARY COLLECTION EFFLUENT BOX - SECTION
SCALE: 1/2" = 1'-0"

NOTES:
1. ENTIRE STRUCTURE, INCLUDING EQUIPMENT, PIPING, CONCRETE, ETC. TO BE REMOVED IN FULL.
2. AFTER DEMOLITION IS COMPLETE, BACKFILL WITH ACCEPTED STRUCTURAL BACKFILL MATERIAL INSTALLED IN COMPACTED LIFTS IN ACCORDANCE WITH STRUCTURAL EXCAVATION BACKFILL AND COMPACTION SPECIFICATION.
3. ALL MATERIALS NOTED AS "T.B.R." SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. DISPOSAL MANIFESTS SHALL BE PROVIDED TO THE OWNER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING PRIMARY COLLECTION EFFLUENT BOX DEMOLITION PLAN & SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

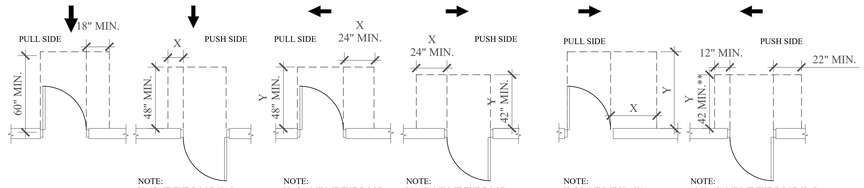
ISSUED DATE:	18 APR. 2025
DESIGN BY:	QMM
DRAWN BY:	JRJ
CHECKED BY:	MJS
REVIEWED BY:	MJS, JZ

SHEET NO.
CD-808

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\8 - Secondary Settling, Trickling Filters, Misc\Primary Collection Chamber.dwg, CD-808, 4/18/2025 11:39:22 AM

ACCESSIBILITY CLEARANCES



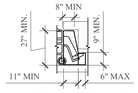
FRONT APPROACHES - SWINGING DOORS

LATCH-SIDE APPROACHES - SWINGING DOORS

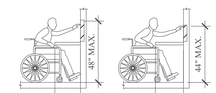
HINGE-SIDE APPROACHES - SWINGING DOORS
NOTE: ALL DOORS IN ALCOVES
SHALL COMPLY WITH CLEARANCES FOR FRONT APPROACHES



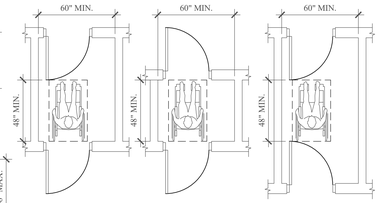
CLEAR FLOOR SPACE



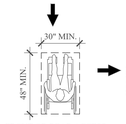
KNEE & TOE CLEARANCE



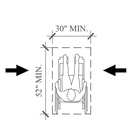
OBSTRUCTED HIGH FORWARD REACH



TWO HINGED DOORS IN SERIES

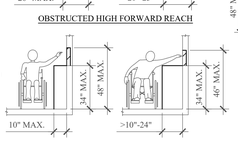


FRONT OR REAR ACCESS

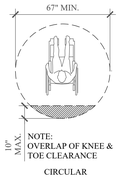


SIDE ACCESS

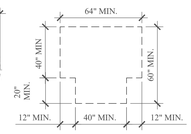
CLEAR FLOOR SPACE



OBSTRUCTED HIGH SIDE REACH

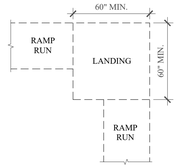


CIRCULAR

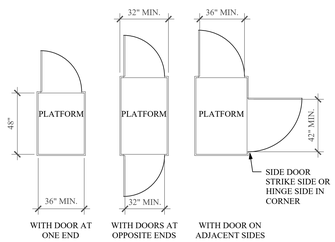


T-SHAPED

ALTERNATE TURNING SPACE



RAMP LANDING AT CHANGE IN DIRECTION

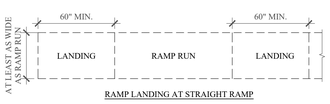


WITH DOOR AT ONE END

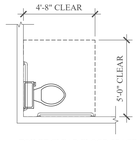
WITH DOORS AT OPPOSITE ENDS

WITH DOOR ON ADJACENT SIDES

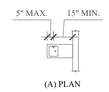
PLATFORM LIFT DOORS AND GATES



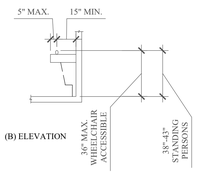
RAMP LANDING AT STRAIGHT RAMP



TOILET CLEAR FLOOR SPACE

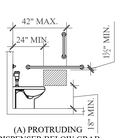


(A) PLAN

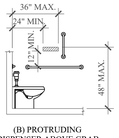


(B) ELEVATION

DRINKING FOUNTAIN SPOUT LOCATION



(A) PROTRUDING DISPENSER BELOW GRAB BAR



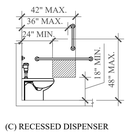
(B) PROTRUDING DISPENSER ABOVE GRAB BAR



HEIGHT OF URINALS

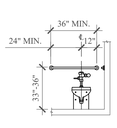


(A) ACCESSIBLE WATER CLOSETS
WATER CLOSET LOCATION

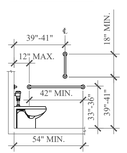


(C) RECESSED DISPENSER

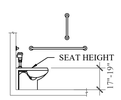
DISPENSER OUTLET LOCATION



REAR WALL GRAB BAR FOR WATER CLOSET



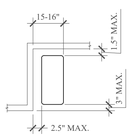
SIDE WALL GRAB BAR FOR WATER CLOSET



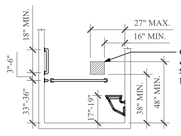
WATER CLOSET SEAT HEIGHT



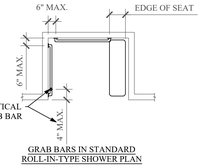
HEIGHT OF LAVATORIES AND SINK



RECTANGULAR SHOWER COMPARTMENT SEAT



GRAB BARS, BENCH & CONTROLS IN STANDARD ROLL-IN-TYPE SHOWER ELEVATION



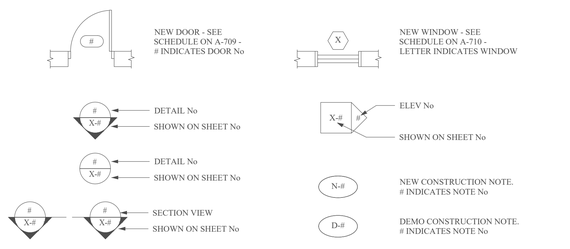
GRAB BARS IN STANDARD ROLL-IN-TYPE SHOWER PLAN

SHOWER COMPARTMENTS

ABBREVIATIONS

@	AT
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJUSTABLE
A.F.C.	ABOVE FINISHED CEILING
A.F.F.	ABOVE FINISHED FLOOR
AIA	AMERICAN INSTITUTE OF ARCHITECTS
AIEE	AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL., ALUM.	ALUMINUM
ALM	ALARM
ALT	ALTERNATE
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APT	APARTMENT
APPROX.	APPROXIMATE
ARCH	ARCHITECT
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING & AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWG	AMERICAN WIRE GAUGE
BD.	BOARD
BL	BUILDING LINE
BLK	BLOCK
BM	BEAM
B.O.	BY OTHERS
BOT.	BOTTOM
BTU	BRITISH THERMAL UNIT
CAB	CABINET
CB	CATCH BASIN
CLG	CEILING
C.T.	CERAMIC TILE
CFM	CUBIT FEET PER MINUTE
CH.	CEILING HEIGHT
C.I.	CAST IRON
C.I.M.J.	CAST IRON MECHANICAL JOINT
C.I.P.	CAST IRON PIPE
CL	CENTERLINE
CLKG	CAULKING
CLO	CLOSET
CLR	CLEAR
C.M.P.	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
COVG	COVERING
CPT	CARPET
CSK	COUNTERSINK
CTR	CENTER
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CU YD	CUBIC YARD
D	DEPTH
DB	DECIBEL
DBL	DOUBLE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET(S)., DTL(S).	DETAIL(S)
D.F.	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
D.I.	DUCTILE IRON
D.I.P.	DUCTILE IRON PIPE
DIV	DIVISION
DN	DOWN
DR(S)	DOOR(S)
DRWG, DWG(S)	DRAWING(S)
E.C.	ELECTRICAL CONTRACTOR
ELEV	ELEVATION
ELEC	ELECTRICAL
ENAM	ENAMEL
ENGR	ENGINEER
EQ.	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXTG/EXIST/EX	EXISTING
EXP	EXPOSED
EXTR	EXTRUDED
F.A.	FIRE ALARM
F'D	FLOOR DRAIN
F.G.	FINISH GRADE
FH	FULL HEIGHT
FIN.	FINISH
FL., FLR	FLOOR
FT	FOOT
FIG.	FIGURE
FPRF	FIREPROOF
FIXT	FIXTURE
F.P.S.C.	FIREPROOF SELF CLOSING
FT. LB.	FOOT POUND
FTG	FOOTING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GL.	GLASS
GPM	GALLONS PER MINUTE
GYP.	GYPSUM
H, HGT	HEIGHT
H..P.E.	HIGH-DENSITY POLYETHYLENE
HDWRE	HARDWARE
H.D.	HOLLOW METAL
HOR., HORZ.	HORIZONTAL
HR	HOUR
H.R.	HANDRAIL
HW	HOT WATER
HYD	HYDRANT
ID	INSIDE DIAMETER
IN	INCH
INCAND	INCANDESCENT
INCL	INCLUDE/INCLUDING
INFO	INFORMATION
INSUL	INSULATION/INSULATING/INSULATE
INT	INTERIOR
INV.	INVERT
JAN	JANITOR
KD	KNOCK DOWN
KO	KNOCK OUT
KW	KILOWATT
L	LENGTH
LAV	LAVATORY
LB	POUND
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LIN	LINEAR
LT	LIGHT
MANUF., MNFR.	MANUFACTURER
MATL.	MATERIAL
MAX.	MAXIMUM
M.C.	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MED	MEDIUM
MEZZ	MEZZANINE
MIN	MINIMUM
MISC	MISCELLANEOUS
M.O.	MASONRY OPENING
MTL	METAL
N	NORTH
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION
N.I.C.	NOT IN CONTRACT
NPT	NATIONAL PIPE THREAD
NO.	NUMBER
N.T.S.	NOT TO SCALE
OA	OVERALL
OAD	OVERALL DIMENSION
O.C., O/C	ON CENTER
OD	OUTSIDE DIAMETER
OFF.	OFFICE
PA	PUBLIC ADDRESS
P.C.	PLUMBING CONTRACTOR
PCF	POUNDS PER CUBIC FOOT
PERF	PERFORATED
PL., LAM.	PLASTIC LAMINATE
PLMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POL	POLISHED
POS	POSITIVE
PSF	POUND PER SQUARE FOOT
PSI	POUND PER SQUARE INCH
PTN	PARTITION
PTD	PAINTED
PTG	PAINTING
PR	PAIR
PREP	PREPARE
PROP.	PROPOSED
P.V.C.	POLYVINYL CHLORIDE
QUAL	QUALITY
R	RADIUS
REC(S).	RECOMMENDATION(S)
RECD	RECEIVED
RECP	RECEPTACLE
REF	REFRIGERATOR
REINF.	REINFORCED
RET.	RETAINING
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
RQ'D.	REQUIRED
RM(S)	ROOM(S)
SAN.	SANITARY
S/S	STAINLESS STEEL
S.C.	SOLID CORE
SDR	STANDARD DIMENSION RATIO
SECT	SECTION
SEP	SEPARATE
SIM	SIMILAR
S.M.H.	SANITARY MANHOLE
SPEC(S)	SPECIFICATION(S)
SPKR	SPEAKER
SPKLR	SPRINKLER
SQ	SQUARE
SR	SENIOR
STD	STANDARD
STL	STEEL
STRUC	STRUCTURAL
SUPT	SUPERINTENDENT
SUSP	SUSPENDED
T.B.R.	TO BE REMOVED
T.C.	TERRA COTTA
TEL	TELEPHONE
TH, THK	THICK / THICKNESS
TYP	TYPICAL
U.L.	UNDERWRITER'S LABORATORIES
U.O.N.	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME
VCT	VINYL COMPOSITE TILE
VERT	VERTICAL
V.I.F.	VERIFY IN FIELD
VS.	VERSUS
VOL	VOLUME
W	WIDTH
W/	WITH
WC	WATER CLOSET
WCV	WALL COVERING
WD	WOOD
W.L.	WATER LINE
W/O	WITHOUT
W.P.	WATERPROOF
WT.	WEIGHT
YD	YARD

SYMBOLS LEGEND



MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ADA CLEARANCES, ABBREVIATIONS & LEGEND

REVISIONS

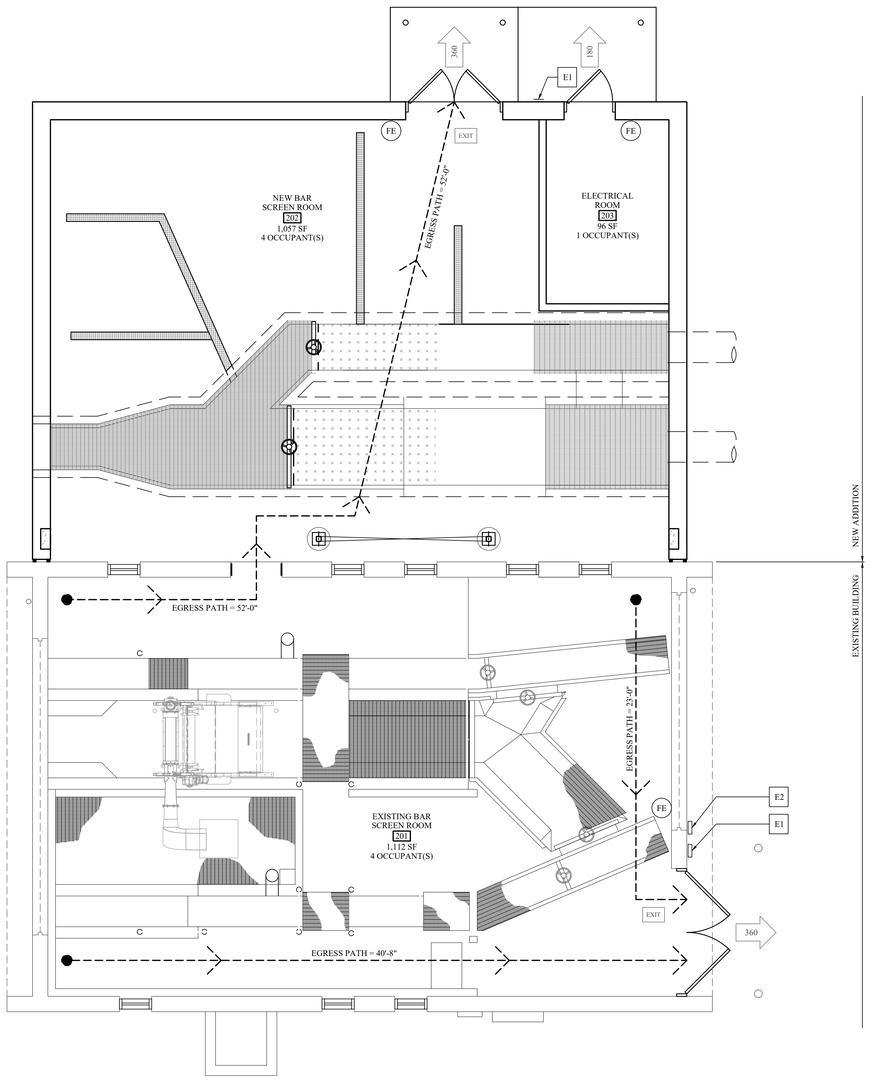
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR. 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.

G-001

PROJECT # 18-732 PHASE #



1 G-201 EGRESS PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

EGRESS PLAN LEGEND

E1	TRUSS PLACARD DETAIL - SEE DETAIL 2/G201
E2	FIRE DEPARTMENT KNOXBOX COORDINATE REQUIREMENTS w/ AUTHORITY HAVING JURISDICTION
E3	FIRE ALARM PANEL

SYMBOLS LEGEND

#	INDICATES CAPACITY OF EXIT IN # OF PERSONS
EXIT	EXIT LIGHT LOCATION
FE	WALL MOUNTED FIRE EXTINGUISHER ON BRACKET
FE	FIRE EXTINGUISHER IN RECESSED WALL CABINET
	LINE OF TRAVEL FOR EGRESS

APPLICABLE CODES

2020 BUILDING CODE OF NEW YORK STATE

GENERAL DESCRIPTION OF BUILDING

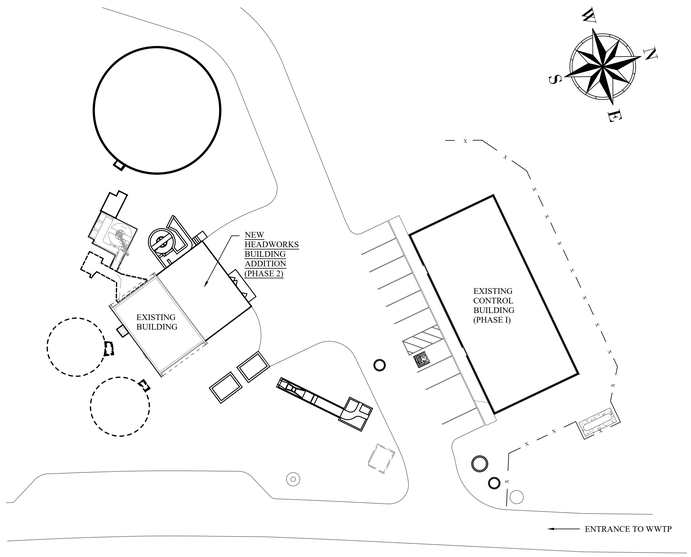
THE BUILDING IS A 1 STORY STRUCTURE, WITH MASONRY WALLS AND METAL TRUSSES AND EPDM ROOFING ON METAL DECK.

GENERAL DESCRIPTION OF THE PROJECT

THE PROPOSED ADDITION WILL HAVE MASONRY WALLS AND EPDM ROOFING ON A METAL DECK. THE PROPOSED SEWER TREATMENT FACILITY BUILDING ADDITION IS A NEW 1 STORY STRUCTURE THAT WILL HOUSE SEWER TREATMENT EQUIPMENT.

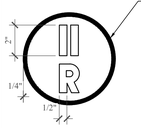
CODE SUMMARY

ITEM	CODE SECTION	REQUIRED / ALLOWED	PROVIDED	REMARKS
OCCUPANCY				
U	312			
INCIDENTAL STORAGE / MECHANICAL SPACE	311.1.1			
GENERAL DESCRIPTION OF BUILDING				
1 STORY				
FLOOR AREA			1,252 SF EXISTING + 1,280 SF ADDITION =	
			2,532 SF TOTAL	
CONSTRUCTION			MASONRY BEARING WALLS WITH REINFORCED CONCRETE SLAB & CONC. FOUNDATION WITH METAL TRUSS ROOF WITH METAL DECKING & EPDM ROOFING	
OCCUPANCY SEPARATION				
SINGLE OCCUPANCY	N/A		NONE	
GENERAL BUILDING HEIGHT AND FIRE AREAS – BASED ON TYPE II b CONSTRUCTION				
U OCCUPANCY HEIGHT (FEET)	TABLE 504.3	55 FEET	12 FEET - 8 INCHES	
U OCCUPANCY HEIGHT (STORIES)	TABLE 504.4	2 STORIES	1 STORY	
U OCCUPANCY AREA	TABLE 506.2	5,500 SF	2,275 SF FLOOR AREA	
TYPES OF CONSTRICTION				
TYPE 2b	TABLE 601			
STRUCTURAL FRAME	TABLE 601	0	0	MASONRY, STEEL COLUMNS & STEEL BEAMS
BEARING EXTERIOR WALLS	TABLE 601	0	0	MASONRY WALLS
BEARING WALLS - INTERIOR	TABLE 601	0	N/A	MASONRY
NONBEARING WALLS AND PARTITIONS-EXTERIOR	TABLE 601	SEE BELOW		
NONBEARING WALLS AND PARTITIONS-INTERIOR	TABLE 601	0	0	
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	TABLE 601	0	N/A	FLOOR IS A REINFORCED CONC. SLAB ON GRADE
ROOF CONSTRUCTION	TABLE 601	0	0	METAL ROOF TRUSSES w/ MTL DECK & EPDM ROOFING
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE				
FIRE SEPARATION DISTANCE	TABLE 602	GREATER THAN 30 FEET	N/A	NO RATING REQUIRED
FIRE-RESISTANCE RATED CONSTRUCTION				
EXTERIOR WALLS	705	N/A		
FIRE WALLS	706	N/A		
FIRE BARRIERS	707	N/A		
SHAFT ENCLOSURES	713	N/A	N/A	
FIRE PARTITIONS	718.4	N/A		
INTERIOR FINISHES				
U OCCUPANCY				
VERTICAL EXITS AND PASSAGEWAYS	TABLE 803.13	N/A	N/A	
EXIT ACCESS CORRIDORS AND OTHER EXITWAYS	TABLE 803.13	NO RESTRICTIONS	N/A	
ROOM AND ENCLOSED SPACES	TABLE 803.13	NO RESTRICTIONS	N/A	
FIRE PROTECTION SYSTEMS				
AUTOMATIC SPRINKLER SYSTEMS	903	NOT REQUIRED	N/A	
STANDPIPE SYSTEMS	905	N/A		
FIRE ALARM SYSTEM	907.2	N/A	NONE	
MEANS OF EGRESS				
OCCUPANT LOAD	TABLE 1004.5	100 SF / OCCUPANT	2,532 / 100 = 26 PEOPLE	
EGRESS WIDTH - STAIRS	1005.3.1	0.3 " PER OCCUPANT	N/A	
EGRESS WIDTH - OTHER	1005.3.2	0.2" PER OCCUPANT	DOORS 36" WIDE / .2 = 180 CAPACITY AT EACH EXIT DOOR	
MEANS OF EGRESS ILLUMINATION	1008	REQUIRED	PROVIDED	
NUMBER OF EXITS	TABLE 1006.2.1	MAX OCCUPANT LOAD FOR ONE EXIT = 49	ONE EXIT PROVIDED FOR OCCUPANT LOAD = 26	
ACCESSIBLE MEANS OF EGRESS	1009	NOT REQUIRED	N/A	
AREA OF REFUGE	1009.6	N/A	N/A	
EXIT ACCESS	1016	N/A	N/A	
EXIT TRAVEL DISTANCE	TABLE 1017.2	300 FEET	LESS THAN 100 FEET	
ACCESSIBILITY				
GENERAL ACCESSIBILITY REQUIREMENTS	1101	NOT REQUIRED	N/A	
PLUMBING FACILITIES				
U OCCUPANCY	TABLE 2902.1	NOT REQUIRED FOR F OCCUPANCY PER 2902.3.3 IF TOILET FACILITIES ARE WITHIN 500 FEET	N/A	



KEY SITE PLAN
SCALE: 1/32" = 1'-0"

TRUE NORTH



6" DIAMETER SIGN, 1/8" ALUMINUM SMOOTH SHEET BASE, WITH REFLECTIVE BASE & LETTERS, WHITE BACKGROUND w/ RED LETTERS, ATT. W/ (3) 5/16" NON-REMOVABLE GALV. ANCHORS

PLACARDS SHALL BE LOCATED AT ALL EXTERIOR BUILDING ENTRANCE DOORS, EXTERIOR EXIT DISCHARGE DOORS, NO MORE THAN 12" FROM THE LATCH SIDE OF THE DOOR JAMB; OR HOSE CONNECTION, MOUNTED BETWEEN 42" AND 60" ABOVE THE ADJACENT WALKING SURFACE

2 G-201 TRUSS PLACARD
SCALE: 3" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

HEADWORKS BUILDING - EGRESS PLAN & CODE ANALYSIS

REVISIONS

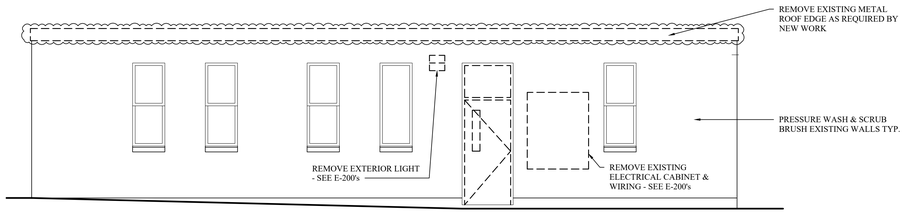
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

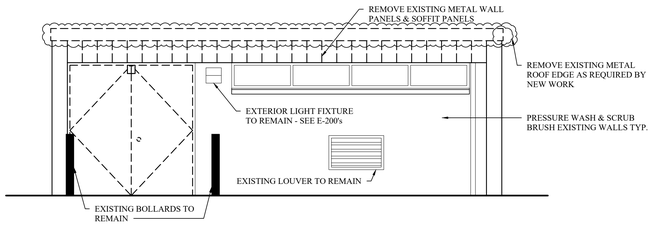
SHEET NO.

G-201

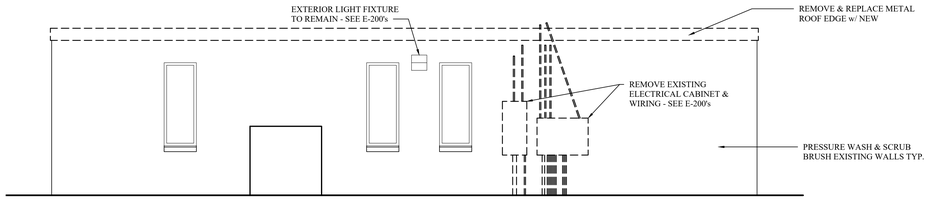
PROJECT # 18-732 PHASE #



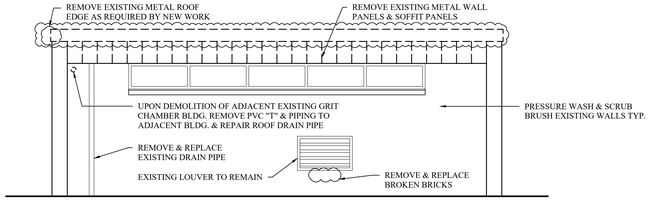
1 AD-201 NORTH ELEVATION - DEMOLITION
SCALE: 1/4" = 1'-0"



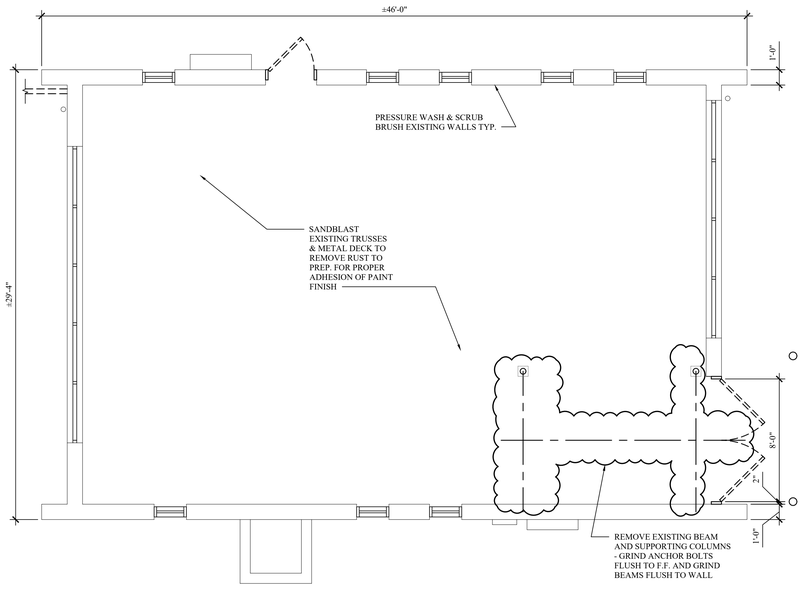
2 AD-201 EAST ELEVATION - DEMOLITION
SCALE: 1/4" = 1'-0"



3 AD-201 SOUTH ELEVATION - DEMOLITION
SCALE: 1/4" = 1'-0"

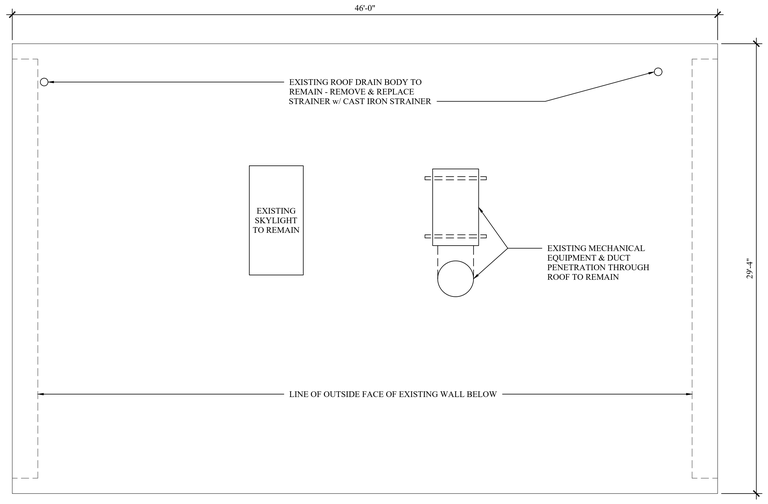


4 AD-201 WEST ELEVATION - DEMOLITION
SCALE: 1/4" = 1'-0"



5 AD-201 EXISTING FLOOR PLAN/ DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH



6 AD-201 EXISTING ROOF PLAN/ DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

SEE ASBESTOS ABATEMENT REPORT AND ABATEMENT DRAWINGS AND SPECIFICATIONS PRIOR TO REMOVAL OF ANY MATERIALS- ALL MATERIALS IDENTIFIED AS ASBESTOS CONTAINING MATERIALS (ACM) AND LEAD BASED PAINT (LBP) SHALL BE REMOVED AS PER ABATEMENT SPECIFICATIONS AND LEAD SAFE WORK PRACTICES DOCUMENTS PREPARED BY QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

GENERAL - DEMOLITION NOTES

- REMOVE ALL EXISTING DOORS INCLUDING FRAMES & HARDWARE - MASONRY OPENING TO BE PRESERVED
- ALL EXISTING WINDOWS INCLUDING FRAME, GLAZING & HARDWARE TO REMAIN

LEGEND

DOOR, FRAME & HARDWARE TO BE REMOVED

EXISTING TO BE REMOVED

EXISTING TO REMAIN

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
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BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

HEADWORKS BUILDING - DEMO FLOOR PLAN, ROOF PLAN & ELEVATIONS

REVISIONS

NO.	DESCRIPTION	DATE

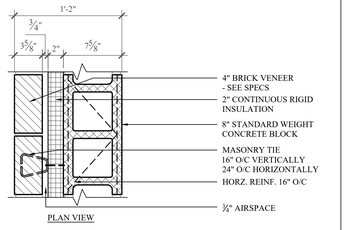
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
AD-201

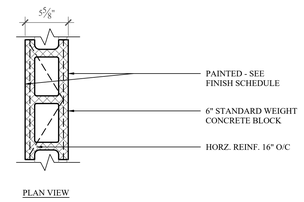
PROJECT # 18-732 PHASE #

FINISH SCHEDULE										
		FLOOR			BASE	WALLS			CEILING	
ROOM No.	N= NORTH E = EAST S = SOUTH W = WEST X = ALL - ROOM NAME	CLEAR COATED CONCRETE	PAINTED CONCRETE	NONE	NONE	EXPOSED STRUCTURE	½" PLASTIC WALL PANEL	PAINTED MASONRY	PAINTED EXPOSED STRUCTURE	REMARKS
201	EXISTING BAR SCREEN ROOM			X	X			X	X	1,2,3
202	NEW BAR SCREEN ROOM			X	X			X	X	2,3
203	ELECTRICAL ROOM			X	X			X	X	2,3

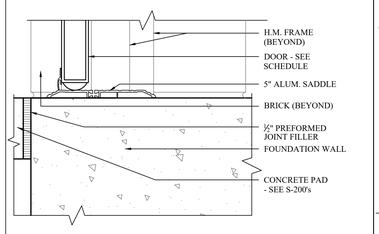
REMARKS:
1 : ALL FLAKING AND LOOSE PAINT SHALL BE SCRAPED AND REMOVED THROUGHOUT ENTIRE BUILDING INCLUDING ALL STRUCTURAL STEEL, ROOF DECKING, SURFACES OF WALLS, CEILINGS, ETC. ALL SURFACES SHALL BE IN A CONDITION TO PROPERLY ACCEPT NEW PAINT - SEE HAZARDOUS MATERIALS REPORT FOR FURTHER INFORMATION
2 : CAULK AND SEAL ALL WINDOW AND DOOR HEADS, JAMBS AND SILLS
3 : PAINTING ALL EXPOSED STEEL STRUCTURE INCLUDING BAR JOISTS, UNDERSIDE OF ROOF DECKING AND STRUCTURAL STEEL BEAMS



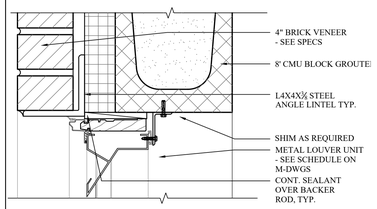
A EXTERIOR WALL TYPE
SCALE: 1-1/2" = 1'-0"



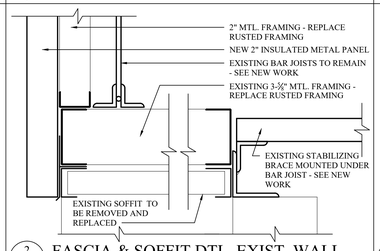
B INTERIOR WALL TYPE
SCALE: 1-1/2" = 1'-0"



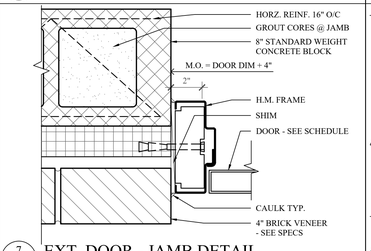
6 A-201 EXT. DOOR - SILL DETAIL
SCALE: 3" = 1'-0"



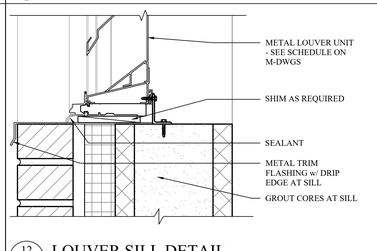
11 A-201 LOUVER HEAD DETAIL
SCALE: 3" = 1'-0"



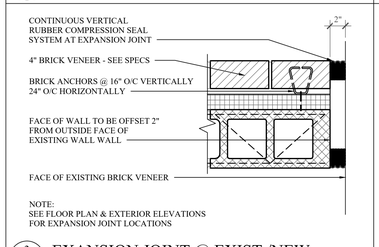
2 A-201 FASCIA & SOFFIT DTL. EXIST. WALL
SCALE: 3" = 1'-0"



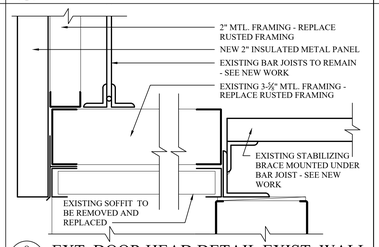
7 A-201 EXT. DOOR - JAMB DETAIL
SCALE: 3" = 1'-0"



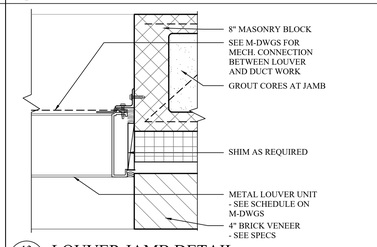
12 A-201 LOUVER SILL DETAIL
SCALE: 3" = 1'-0"



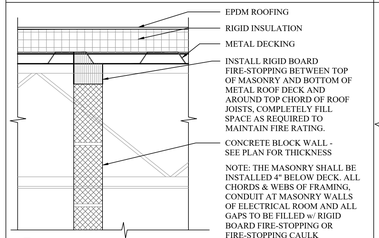
3 A-201 EXANSION JOINT @ EXIST./NEW
SCALE: 1-1/2" = 1'-0"



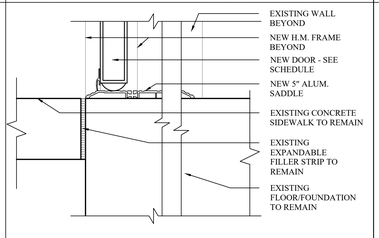
8 A-201 EXT. DOOR HEAD DETAIL EXIST. WALL
SCALE: 3" = 1'-0"



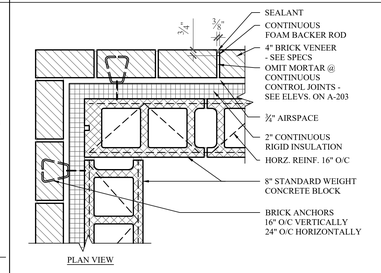
13 A-201 LOUVER JAMB DETAIL
SCALE: 3" = 1'-0"



4 A-201 FIRE STOPPING DETAIL
SCALE: 1" = 1'-0"

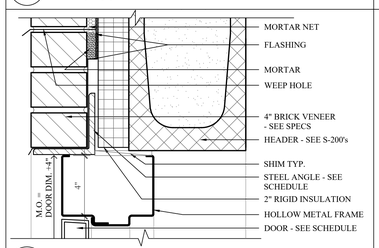


9 A-201 EXT. DOOR SILL DETAIL EXIST. WALL
SCALE: 3" = 1'-0"

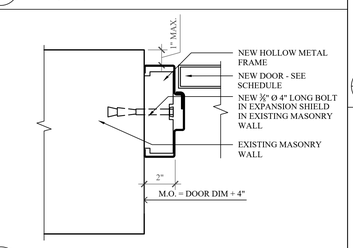


NOTES:
1. LOCATE CONTROL JOINTS AT 30'-0" INTERVALS MAX. SEE EXTERIOR ELEVATIONS FOR ADDITIONAL LOCATIONS.
2. BOND BEAMS, REINFORCEMENTS, AND ANY REINFORCING RODS SHALL NOT CONTINUE THROUGH CONTROL JOINTS.
3. CONTROL JOINTS SHALL BE CONTINUOUS THROUGH ALL WIDTHS OF MASONRY

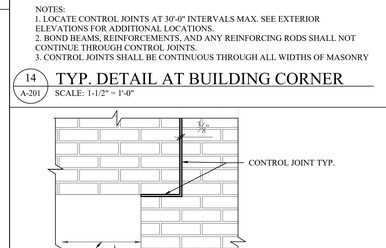
14 A-201 TYP. DETAIL AT BUILDING CORNER
SCALE: 1-1/2" = 1'-0"



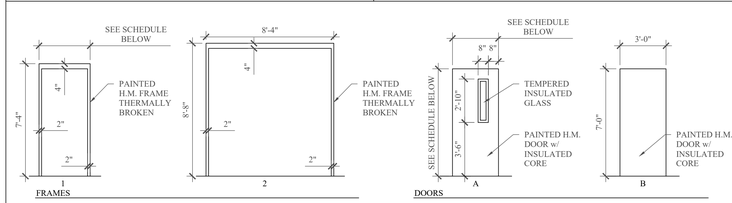
5 A-201 EXT. DOOR - HEAD DETAIL
SCALE: 3" = 1'-0"



10 A-201 EXT. DOOR JAMB DETAIL EXIST. WALL
SCALE: 3" = 1'-0"

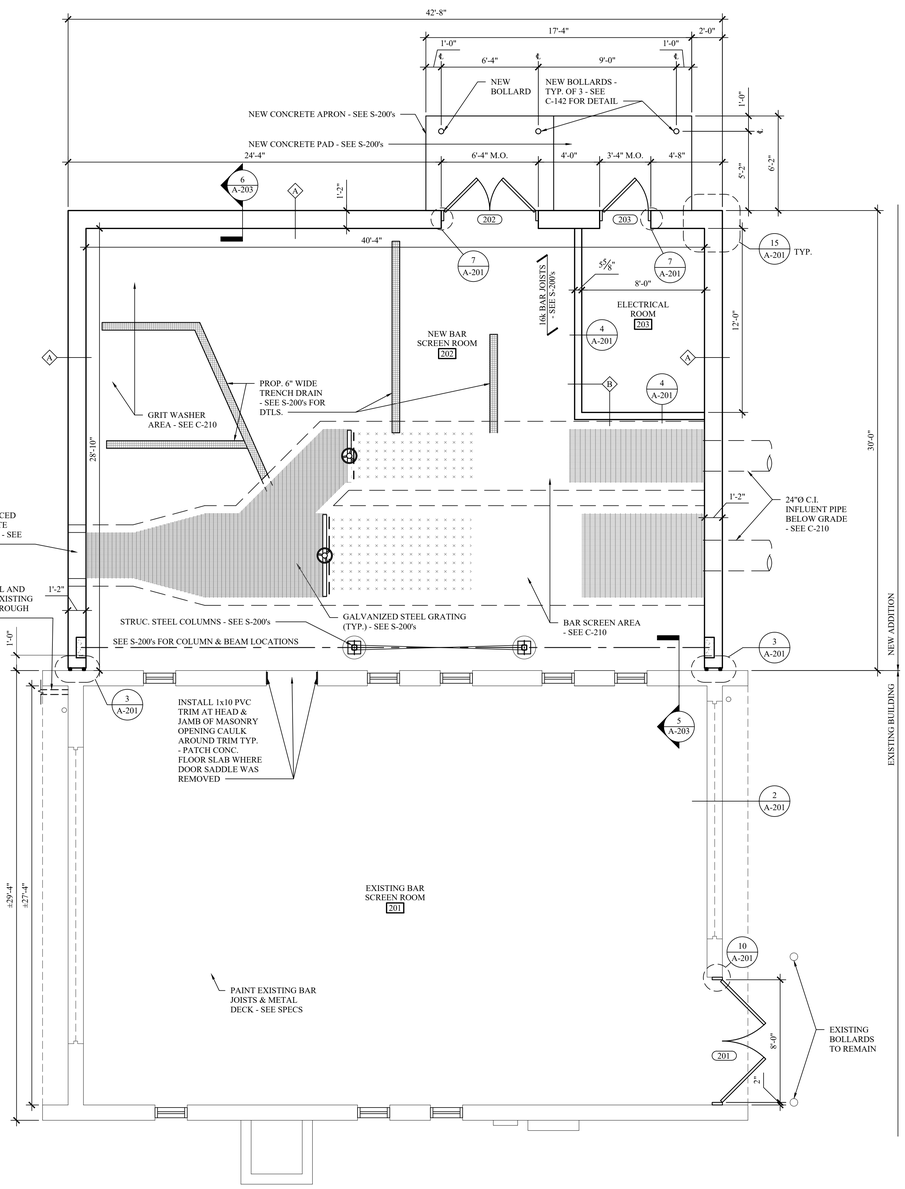


15 A-201 TYP. BRICK CONTROL JOINT DTL. @ WALL OPENING
SCALE: 1" = 1'-0"



DOOR SCHEDULE									
DOOR No.	LOCATION	DOOR SIZE	DOOR TYPE	FRAME TYPE	SADDLE	HARDWARE GROUP	FIRE RATING	DETAILS	REMARKS
201	ROOM 201 - EXTERIOR	(2) 4'-0" x 8'-4"	B	2	ALUM.	1	-	8,9+10/A-201	1,2,3
202	ROOM 202 - EXTERIOR	(2) 3'-0" x 7'-0"	A	1	ALUM.	1	-	5,6+7/A-201	1,2,3
203	ROOM 203 - EXTERIOR	3'-0" x 7'-0"	B	1	ALUM.	3	-	5,6+7/A-201	1,2,3

REMARKS:
1 - DOOR TO HAVE INSULATED CORE
2 - CAULK AND SEAL ALL DOOR HEADS, JAMBS AND SILLS
3 - FRAME TO HAVE THERMAL BREAK



1 A-201 FLOOR PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

HEADWORKS BUILDING - NEW FLOOR PLAN ADDITION, WALL TYPES, DETAILS & DOOR SCHEDULE

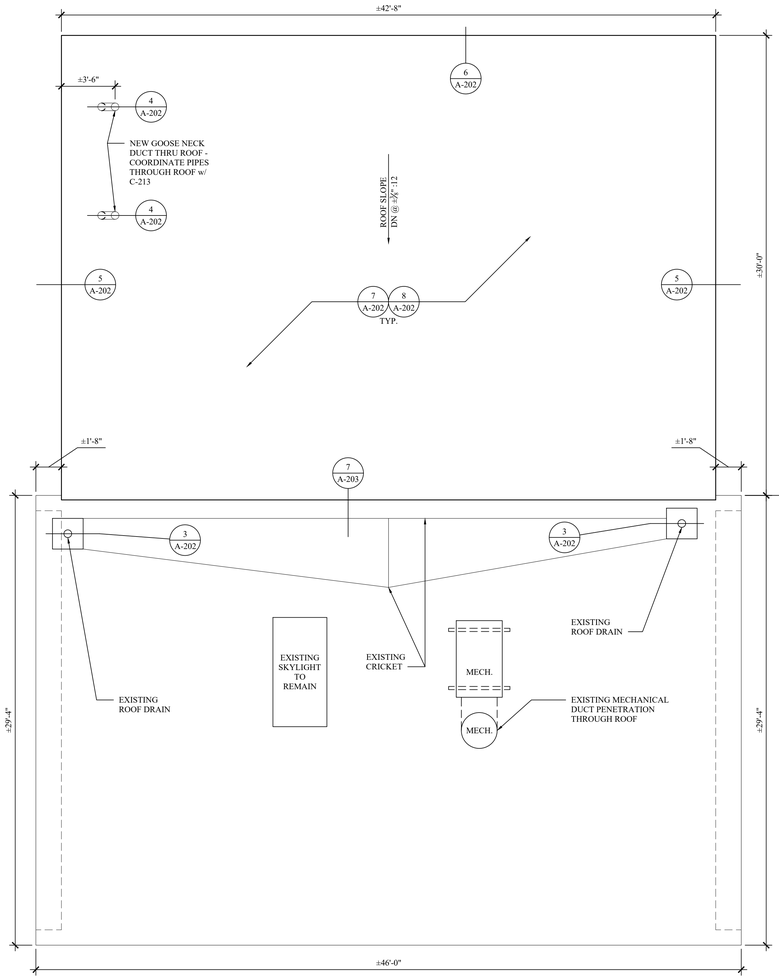
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE: 18 APR, 2025
DESIGN BY: AW, EDIII
DRAWN BY: EDIII
CHECKED BY: AW
REVIEWED BY: JZ, ML

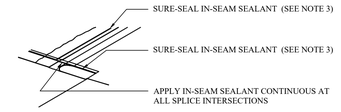
SHEET NO.
A-201

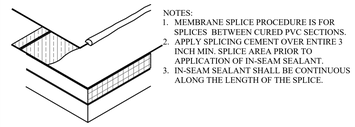
PROJECT # 18-732 PHASE #



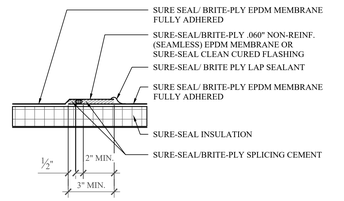
1 A-202 ROOF PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

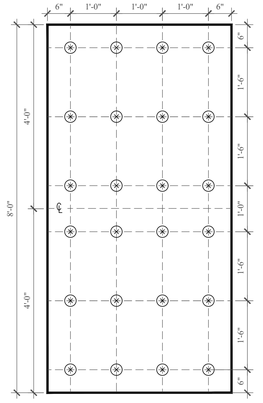




NOTES:
1. MEMBRANE SPLICE PROCEDURE IS FOR SPLICES BETWEEN CURED PVC SECTIONS.
2. APPLY SPLICING CEMENT OVER ENTIRE 3 INCH MIN. SPLICE AREA PRIOR TO APPLICATION OF IN-SEAM SEALANT.
3. IN-SEAM SEALANT SHALL BE CONTINUOUS ALONG THE LENGTH OF THE SPLICE.

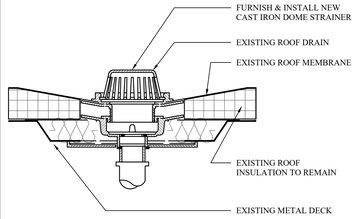


2 A-202 TYP. LAP SEALANT ROOF DTL. - EPDM
SCALE: N.T.S.



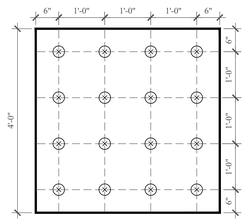
THIS DIAGRAM SHOWS THE FASTENER LOCATIONS FOR A 4' x 8' PANEL OF COVER BOARD AND/OR INSULATION

7 A-202 FASTENER INSTALLATION DETAIL
SCALE: 3/4" = 1'-0"

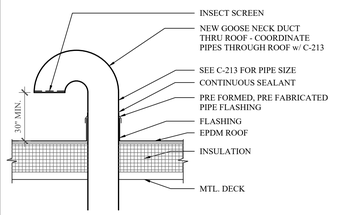


3 A-202 ROOF DRAIN DETAIL
SCALE: 3" = 1'-0"

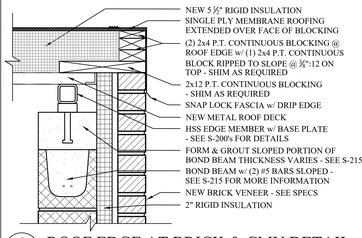
THIS DIAGRAM SHOWS THE FASTENER LOCATIONS FOR A 4' x 4' PANEL OF COVER BOARD AND/OR INSULATION



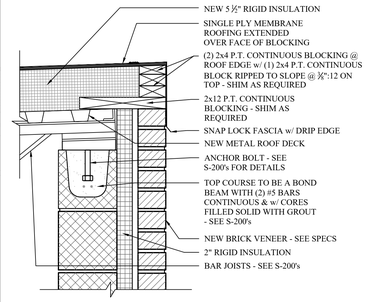
8 A-202 FASTENER INSTALLATION DETAIL
SCALE: 3/4" = 1'-0"



4 A-202 EXHAUST AIR THRU ROOF DETAIL
SCALE: 3" = 1'-0"



5 A-202 ROOF EDGE AT BRICK & CMU DETAIL
SCALE: 1-1/2" = 1'-0"



6 A-202 ROOF EDGE AT BRICK & CMU DETAIL
SCALE: 1-1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

HEADWORKS BUILDING - NEW ROOF PLAN ADDITION & DETAILS

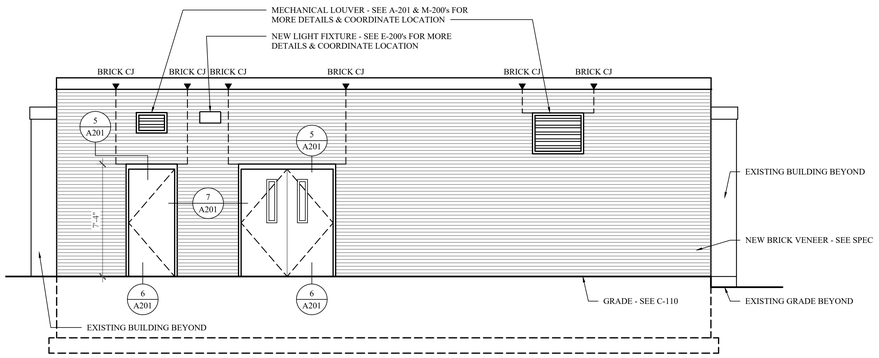
REVISIONS

NO.	DESCRIPTION	DATE

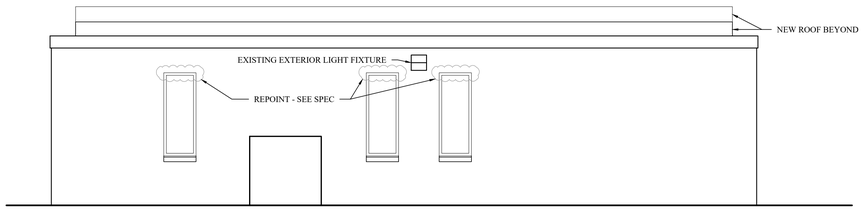
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
A-202

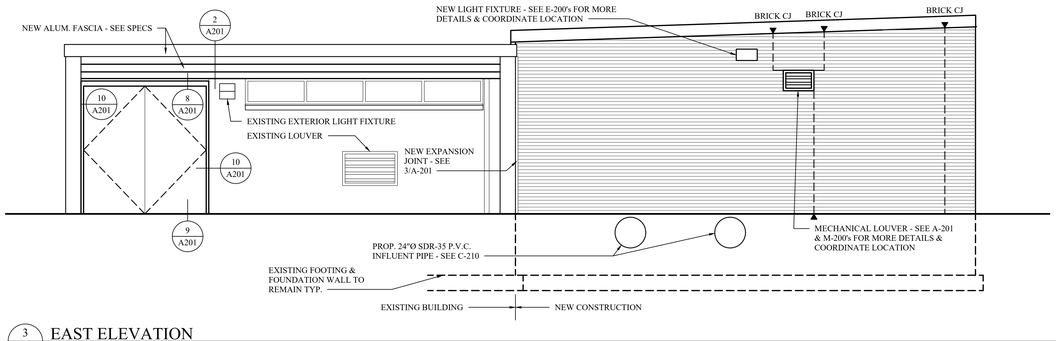
PROJECT # 18-732 PHASE #



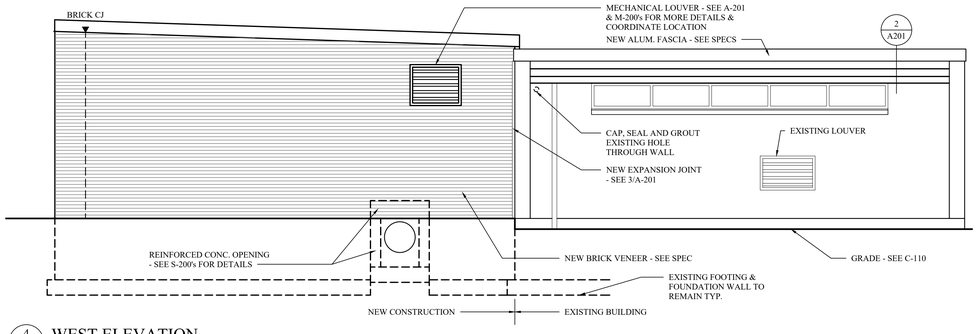
1 A-203 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



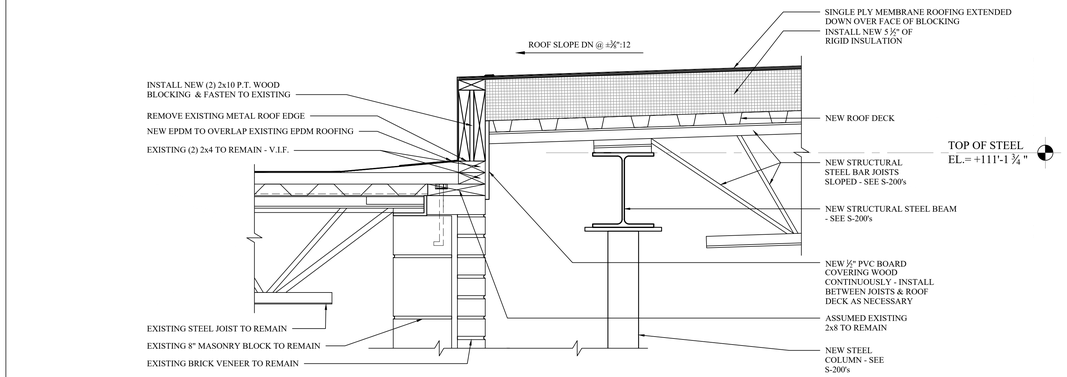
3 A-203 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



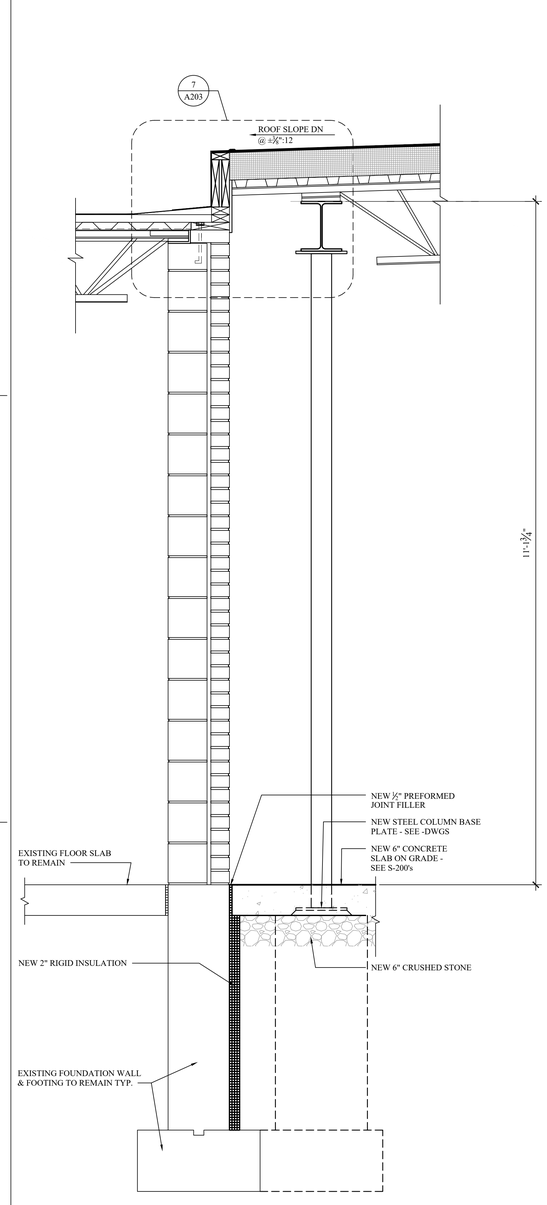
3 A-203 EAST ELEVATION
SCALE: 1/4" = 1'-0"



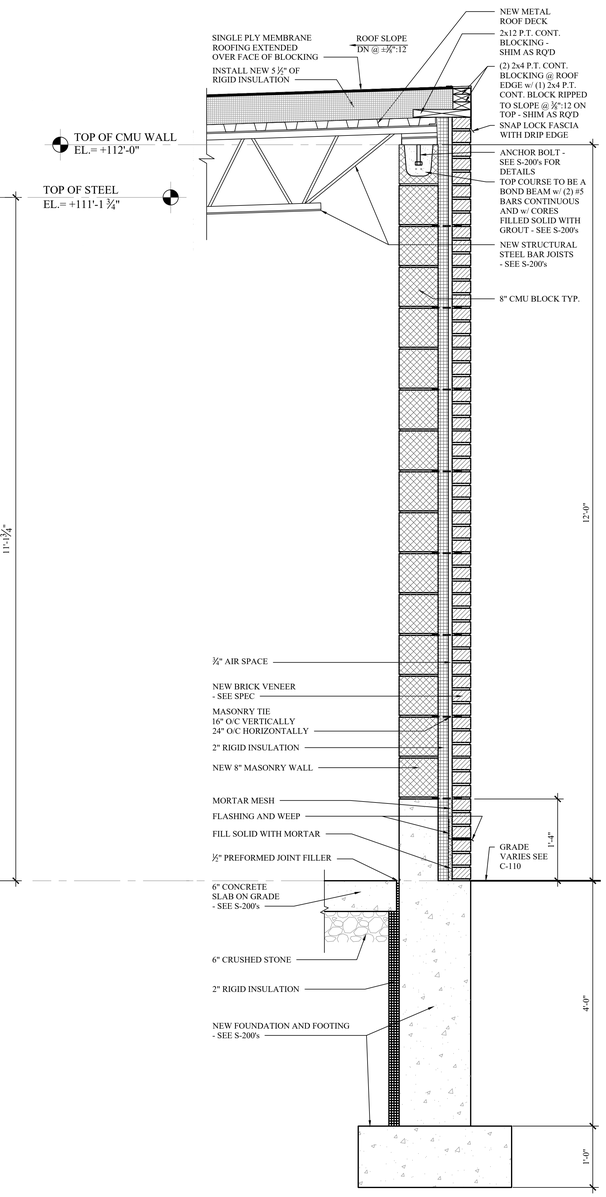
4 A-203 WEST ELEVATION
SCALE: 1/4" = 1'-0"



7 A-203 ROOF EDGE @ EXISTING BRICK & WEB JOIST
SCALE: 1-1/2" = 1'-0"



5 A-203 BUILDING WALL SECTION - CONNECTION TO EXISTING
SCALE: 1" = 1'-0"



6 A-203 TYPICAL WALL SECTION - NEW CONSTRUCTION
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

HEADWORKS BUILDING - NEW ADDITION ELEVATIONS, WALL SECTIONS & DETAIL

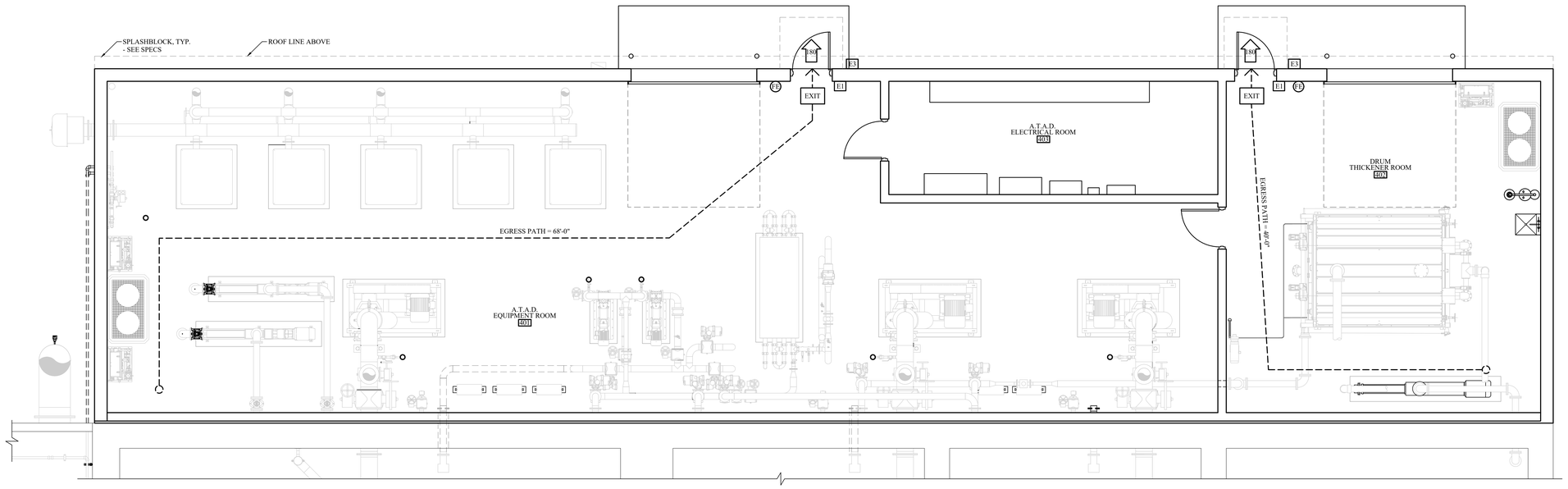
REVISIONS

NO.	DESCRIPTION	DATE

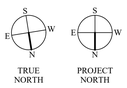
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
A-203

PROJECT # 18-732 PHASE #

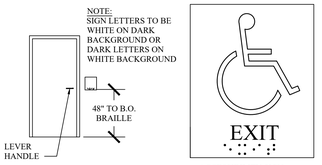


1 G-400 **EGRESS PLAN**
SCALE: 1/4" = 1'-0"



TRUE NORTH

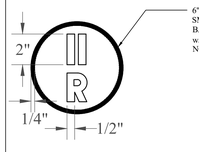
PROJECT NORTH



NOTE:
ALL SIGNAGE SHALL CONFORM WITH ADA ACCESSIBILITY GUIDELINES, INCLUDING BUT NOT LIMITED TO PROPORTION, COLOR CONTRAST AND RELIEF, AND GRADE 2 BRAILLE REQUIREMENTS.

ACCESSIBILITY SIGN
ANSI APPROVED
E.S. PLASTIC
NEMA RATED
SELF EXTINGUISHING
ADHESIVE MOUNTED

2 G-400 **ACCESSIBLE EXIT SIGNAGE DETAIL**
SCALE: N.T.S.



6" DIAMETER SIGN, 1/8" ALUMINUM SMOOTH SHEET BASE, WITH REFLECTIVE BASE & LETTERS, WHITE BACKGROUND w/ RED LETTERS, ATT. W/ (3)½"Ø NON-REMOVABLE GALV. ANCHORS

PLACARDS SHALL BE LOCATED AT ALL EXTERIOR BUILDING ENTRANCE DOORS, EXTERIOR EXIT DISCHARGE DOORS, NO MORE THAN 12" FROM THE LATCH SIDE OF THE DOOR JAMB; MOUNTED BETWEEN 42" AND 60" ABOVE THE ADJACENT WALKING SURFACE

3 G-400 **TRUSS PLACARD DETAIL**
SCALE: 1/4" = 1'-0"

EGRESS PLAN LEGEND

E1	WALL MOUNTED EXIT SIGN - SEE DETAIL 2/G-400
E2	TRUSS PLACARD DETAIL - SEE DETAIL 3/G-400
E3	FIRE DEPARTMENT KNOX BOX - COORDINATE REQUIREMENTS w/ AUTHORITY HAVING JURISDICTION

SYMBOLS LEGEND

#	INDICATES CAPACITY OF EXIT IN # OF PERSONS
EXIT	EXIT LIGHT LOCATION
FE	WALL MOUNTED FIRE EXTINGUISHER ON BRACKET
#	INDICATES WALL TYPE

APPLICABLE CODES				
	2020 BUILDING CODE OF NEW YORK STATE			
GENERAL	DESCRIPTION OF BUILDING			
	THE BUILDING IS A 1 STORY STRUCTURE, WITH CMU WALLS AND EPDM ROOFING ON METAL TRUSSES.			
GENERAL	DESCRIPTION OF THE PROJECT			
	THE PROPOSED BUILDING IS A 1 STORY BUILDING FOR PUMPS AND EQUIPMENT FOR AN ATAD WASTEWATER TREATMENT FACILITY BUILDING.			
CODE SUMMARY				
	ITEM	CODE SECTION	REQUIRED / ALLOWED	PROVIDED	REMARKS
	OCCUPANCY				
	F-1	312			
	INCIDENTAL STORAGE / MECHANICAL SPACE	311.1.1			
	GENERAL DESCRIPTION OF BUILDING				
	1 STORY				
	FLOOR AREA			3,192 SF FLOOR AREA	
	CONSTRUCTION			CMU BEARING WALLS WITH REINFORCED CONCRETE SLAB ON GRADE, CONCRETE FOUNDATION, METAL TRUSS ROOF & EPDM ROOFING	
	OCCUPANCY SEPARATION				
	SINGLE OCCUPANCY	N/A		NONE	
	GENERAL BUILDING HEIGHT AND FIRE AREAS -- BASED ON TYPE II b CONSTRUCTION				
	F-1 OCCUPANCY HEIGHT (FEET)	TABLE 504.3	55 FEET	14 FEET - 0 INCHES	
	F-1 OCCUPANCY HEIGHT (STORIES)	TABLE 504.4	2 STORIES	1 STORY	
	F-1 OCCUPANCY AREA	TABLE 506.2	15,500 SF	3,192 SF FLOOR AREA	
	TYPES OF CONSTRICTION				
	TYPE 2b	TABLE 601			
	STRUCTURAL FRAME	TABLE 601	0	0	
	BEARING EXTERIOR WALLS	TABLE 601	0	0	INSULATED CMU WALLS
	BEARING WALLS - INTERIOR	TABLE 601	0	N/A	
	NONBEARING WALLS AND PARTITIONS-EXTERIOR	TABLE 601	SEE BELOW		
	NONBEARING WALLS AND PARTITIONS-INTERIOR	TABLE 601	0	0	
	FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	TABLE 601	0	N/A	FLOOR IS A REINFORCED CONC. SLAB ON GRADE
	ROOF CONSTRUCTION	TABLE 601	0	0	METAL ROOF TRUSSES w/ EPDM ROOFING
	FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE				
	FIRE SEPARATION DISTANCE	TABLE 602	GREATER THAN 30 FEET	N/A	NO RATING REQUIRED
	FIRE-RESISTANCE RATED CONSTRUCTION				
	EXTERIOR WALLS	705	N/A		
	FIRE WALLS	706	N/A		
	FIRE BARRIERS	707	N/A		
	SHAFT ENCLOSURES	713	N/A	N/A	
	FIRE PARTITIONS	718.4	N/A		
	INTERIOR FINISHES				
	F-1 OCCUPANCY				
	VERTICAL EXITS AND PASSAGEWAYS	TABLE 803.13	N/A	N/A	
	EXIT ACCESS CORRIDORS AND OTHER EXITWAYS	TABLE 803.13	NO RESTRICTIONS	N/A	
	ROOM AND ENCLOSED SPACES	TABLE 803.13	NO RESTRICTIONS	N/A	
	FIRE PROTECTION SYSTEMS				
	AUTOMATIC SPRINKLER SYSTEMS	903	NOT REQUIRED	N/A	
	STANDPIPE SYSTEMS	905	N/A		
	FIRE ALARM SYSTEM	907.2	N/A	NONE	
	MEANS OF EGRESS				
	OCCUPANT LOAD	TABLE 1004.5	100 SF / OCCUPANT	3,192 / 100 = 32 PEOPLE	
	EGRESS WIDTH - STAIRS	1005.3.1	0.3 * PER OCCUPANT	STAIRS 36" WIDE / .3 = 120 CAPACITY AT EACH STAIR	
	EGRESS WIDTH - OTHER	1005.3.2	0.2* PER OCCUPANT	DOORS 36" WIDE / .2 = 180 CAPACITY AT EACH EXIT DOOR	
	MEANS OF EGRESS ILLUMINATION	1008	REQUIRED	PROVIDED	
	NUMBER OF EXITS	TABLE 1006.2.1	MAX OCCUPANT LOAD FOR ONE EXIT = 49	ONE EXIT PROVIDED FOR OCCUPANT LOAD = 32	
	ACCESSIBLE MEANS OF EGRESS	1009	NOT REQUIRED	N/A	
	AREA OF REFUGE	1009.6	N/A	N/A	
	EXIT ACCESS	1016	N/A	N/A	
	EXIT TRAVEL DISTANCE	TABLE 1017.2	300 FEET	MAX. 67 FEET	
	ACCESSIBILITY				
	GENERAL ACCESSIBILITY REQUIREMENTS	1101	NOT REQUIRED	N/A	
	PLUMBING FACILITIES				
	F-1 OCCUPANCY	TABLE 2902.1	NOT REQUIRED FOR F-1 OCCUPANCY PER 2902.3.3 IF TOILET FACILITIES ARE WITHIN 500 FEET	N/A	

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ATAD EQUIPMENT BUILDING - EGRESS PLAN

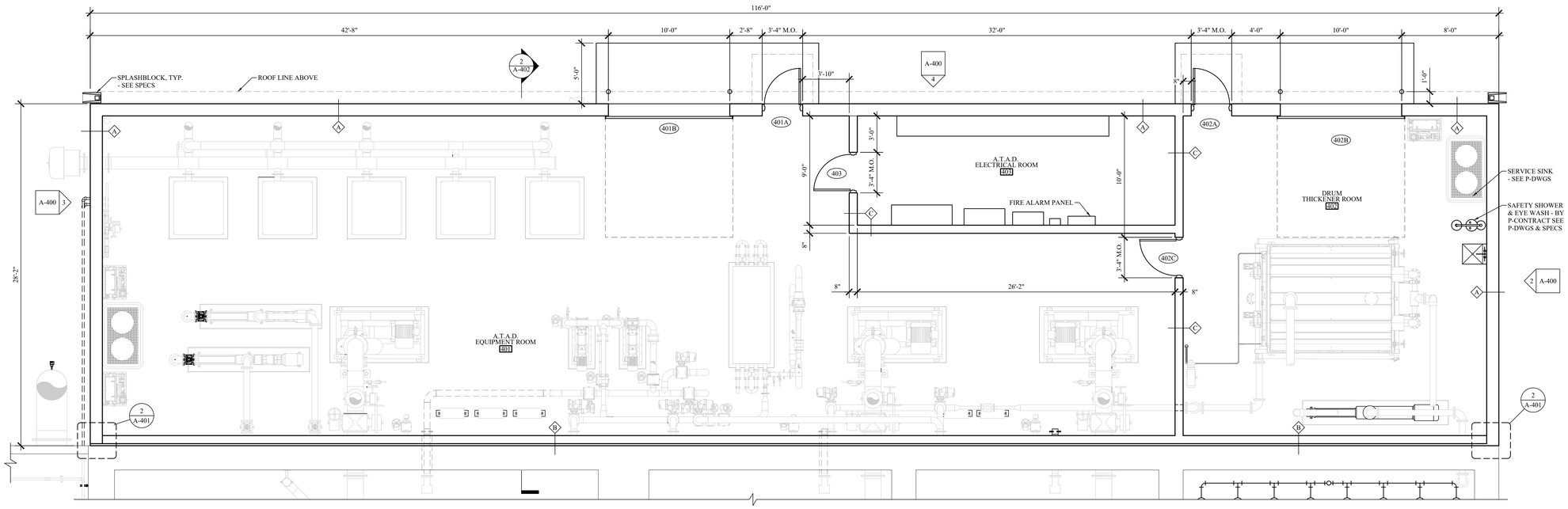
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

SHEET NO.
G-400

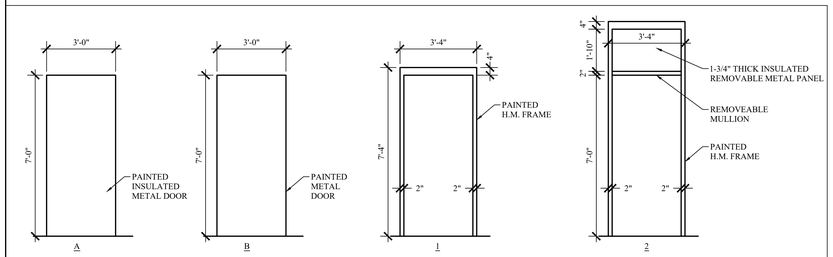
PROJECT # 18-732 PHASE #



1 A-400 FLOOR PLAN
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE

DOOR No.	LOCATION	DOOR SIZE	DOOR TYPE	FRAME TYPE	SADDLE	HARDWARE GROUP	FIRE RATING	DOOR CLOSER	DETAILS	REMARKS
401A	EXTERIOR - ROOM 401	3'-0" x 7'-0" x 1 ¾"	A	1	ALUM.	3	N/A	YES	9,15&16/A-402	THERMALLY BROKEN FRAME
401B	EXTERIOR - ROOM 401	10'-0" x 10'-0"	BY MANUFACTURER						10,11&17/A-402	
402A	EXTERIOR - ROOM 402	3'-0" x 7'-0" x 1 ¾"	A	1	ALUM.	3	N/A	YES	9,15&16/A-402	THERMALLY BROKEN FRAME
402B	EXTERIOR - ROOM 402	10'-0" x 10'-0"	BY MANUFACTURER						10,11&17/A-402	
402C	ROOM 403 - ROOM 402	3'-0" x 7'-0" x 1 ¾"	B	1		6	N/A	YES	8&14/A-402	
403	ROOM 401 - ROOM 403	3'-0" x 7'-0" x 1 ¾"	B	2		6	N/A	YES	8&14/A-402	



DOOR & FRAME TYPES

FINISH SCHEDULE

ROOM No.	FLOOR	BASE	WALL	CEILING	NOTES
401	CONCRETE	NONE	PAINTED CMU	PAINTED EXPOSED STRUCTURAL STEEL FRAMING AND ROOF DECK	
402	CONCRETE	NONE	PAINTED CMU	PAINTED EXPOSED STRUCTURAL STEEL FRAMING AND ROOF DECK	
403	CONCRETE	NONE	PAINTED CMU	PAINTED EXPOSED STRUCTURAL STEEL FRAMING AND ROOF DECK	

2 A-400 WEST ELEVATION
SCALE: 1/4" = 1'-0"

3 A-400 EAST ELEVATION
SCALE: 1/4" = 1'-0"

4 A-400 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ATAD EQUIPMENT BUILDING - FLOOR PLAN & ELEVATIONS

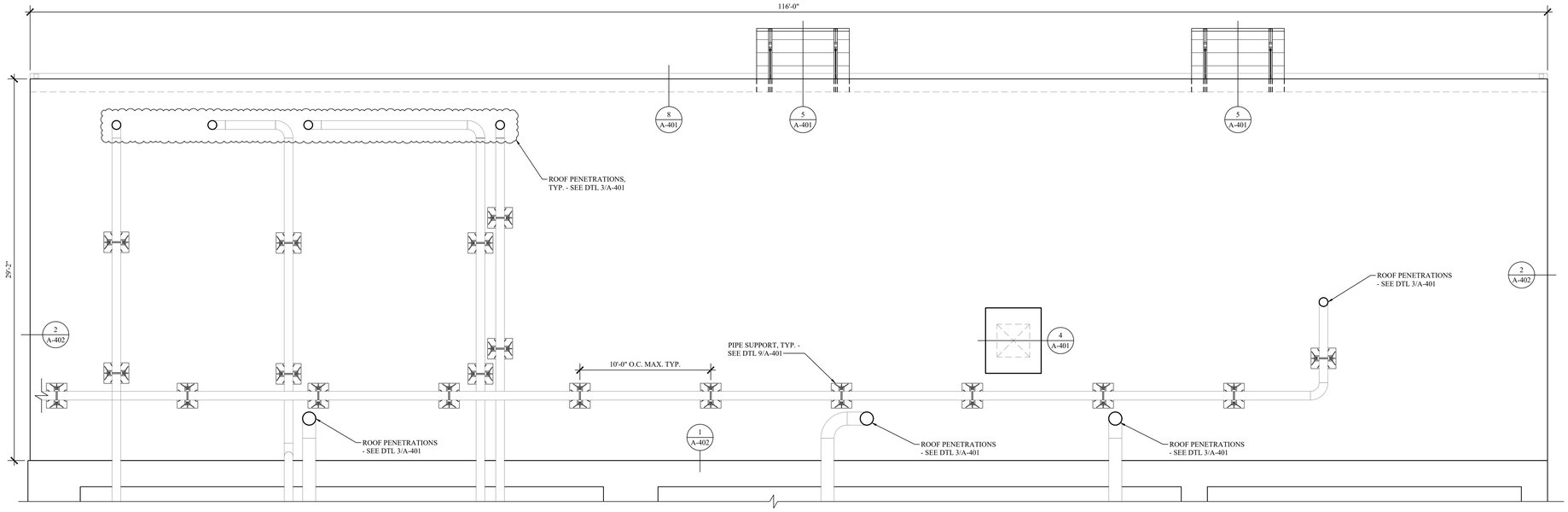
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

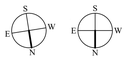
SHEET NO.
A-400

PROJECT # 18-732 PHASE #



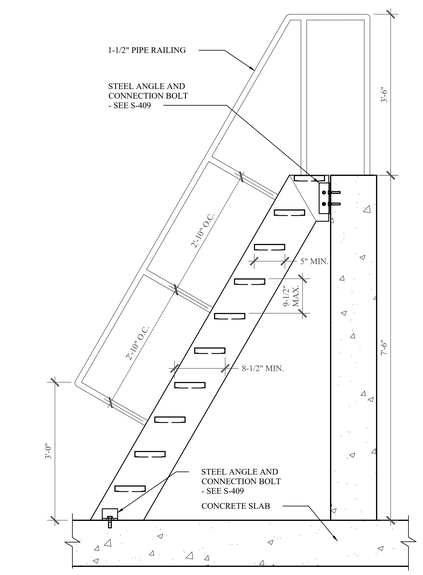
1 A-401 ROOF PLAN

SCALE: 1/4" = 1'-0"



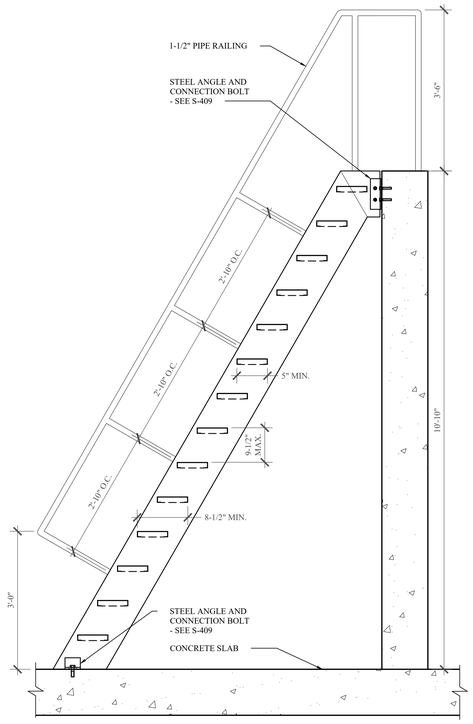
TRUE NORTH

PROJECT NORTH



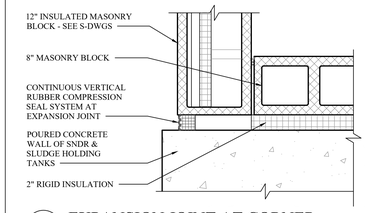
6 A-401 SHIP LADDER SECTION

SCALE: 3/4" = 1'-0"



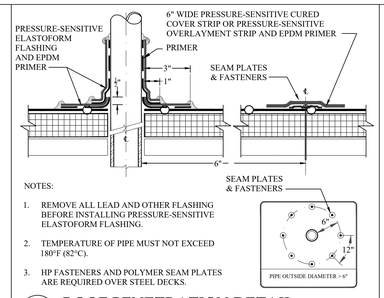
7 A-401 SHIP LADDER SECTION

SCALE: 3/4" = 1'-0"



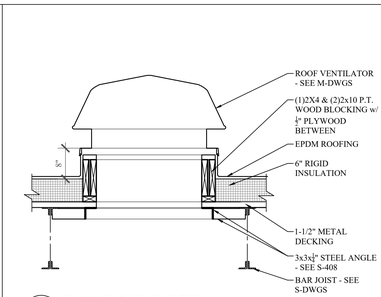
2 A-401 EXPANSION JOINT AT CORNER

SCALE: 1-1/2" = 1'-0"



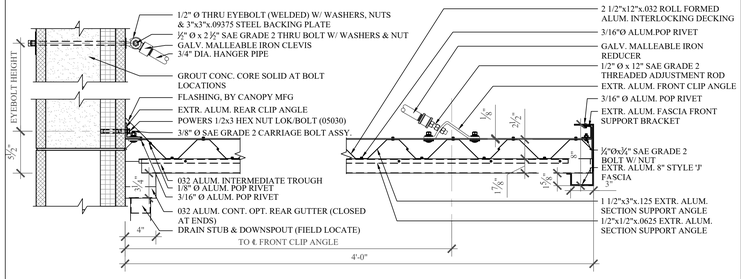
3 A-401 ROOF PENETRATION DETAIL

SCALE: 3" = 1'-0"



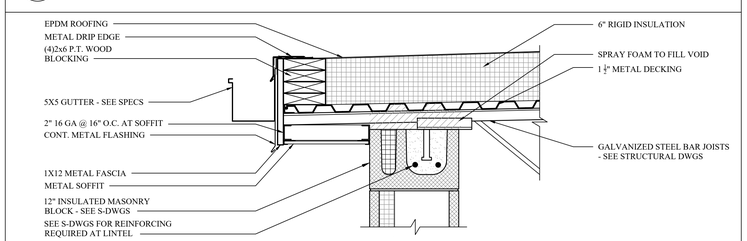
4 A-401 ROOF CURB DETAIL

SCALE: 3/4" = 1'-0"



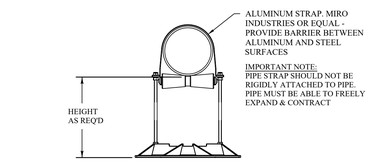
5 A-401 ALUMINUM CANOPY DETAIL - SECTIONS

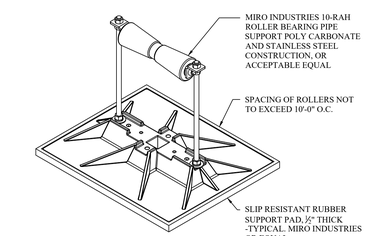
SCALE: 1-1/2" = 1'-0"



8 A-401 EAVE DETAIL

SCALE: 1-1/2" = 1'-0"





9 A-401 12" DIA. OR LESS PIPE SUPPORT

SCALE: N.T.S.

ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100

111 Wheatfield Drive, Suite 1
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(570) 296-2765

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ATAD EQUIPMENT BUILDING - ROOF PLAN & DETAILS

REVISIONS

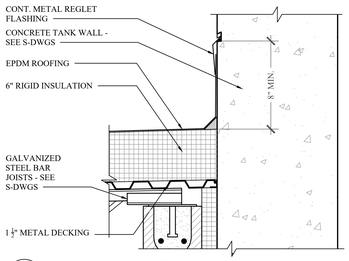
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

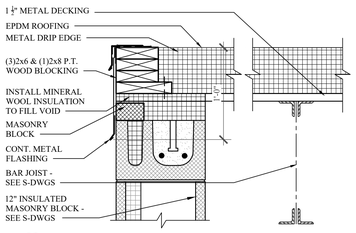
SHEET NO.

A-401

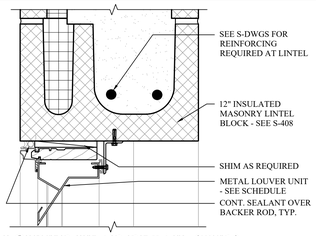
PROJECT # 18-732 PHASE #



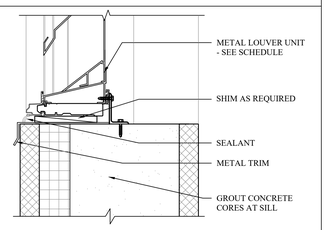
1 A-402 FLASHING DETAIL
SCALE: 1-1/2" = 1'-0"



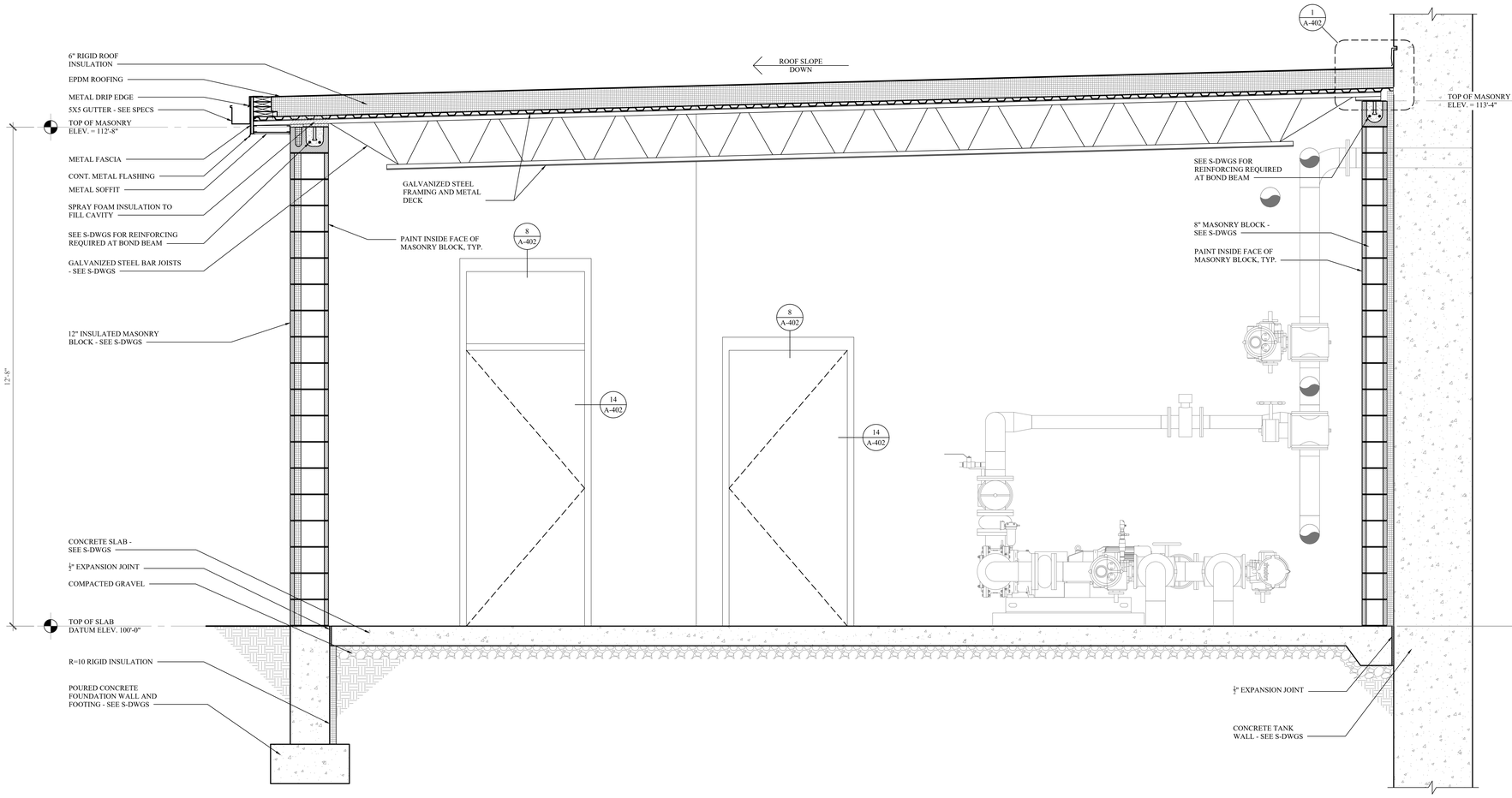
2 A-402 RAKE DETAIL
SCALE: 1-1/2" = 1'-0"



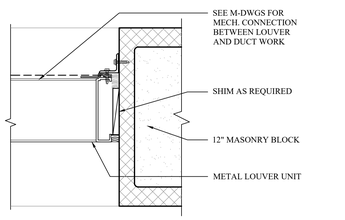
3 A-402 LOUVER HEAD DETAIL (TYP.)
SCALE: 3" = 1'-0"



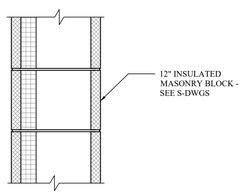
5 A-402 LOUVER SILL DETAIL (TYP.)
SCALE: 3" = 1'-0"



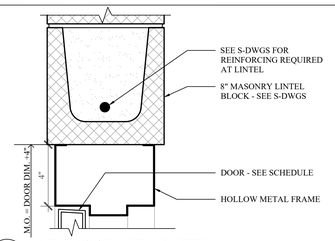
4 A-402 BUILDING SECTION
SCALE: 3/4" = 1'-0"



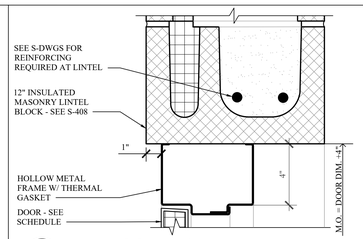
6 A-402 LOUVER JAMB DETAIL (TYP.)
SCALE: 3" = 1'-0"



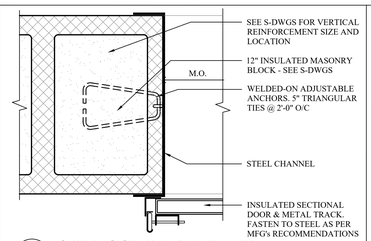
7 A-402 WALL TYPE A
SCALE: 1-1/2" = 1'-0"



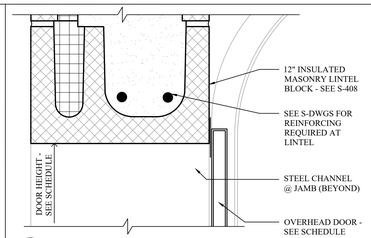
8 A-402 INT. DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



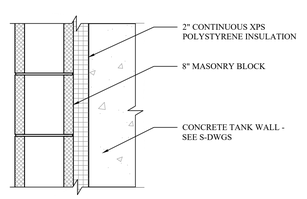
9 A-402 EXT. DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



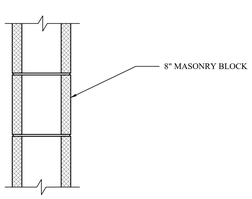
10 A-402 O.H. DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



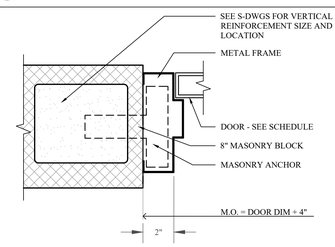
11 A-402 O.H. DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



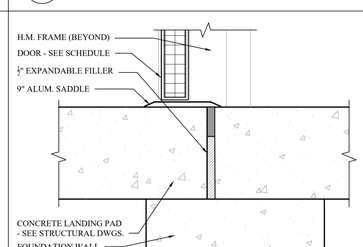
12 A-402 WALL TYPE B
SCALE: 1-1/2" = 1'-0"



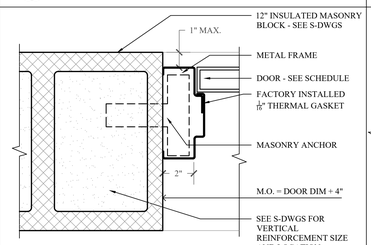
13 A-402 WALL TYPE C
SCALE: 1-1/2" = 1'-0"



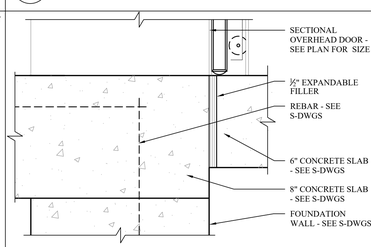
14 A-402 INT. DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



15 A-402 EXT. DOOR SILL DETAIL
SCALE: 3" = 1'-0"



16 A-402 EXT. DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



17 A-402 O.H. DOOR SILL DETAIL
SCALE: 3" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ATAD EQUIPMENT BUILDING - BUILDING SECTION & DETAILS

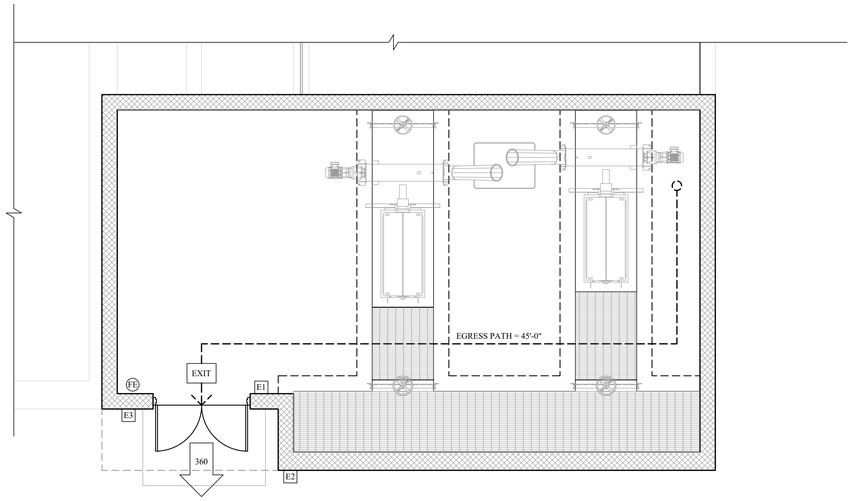
REVISIONS

NO.	DESCRIPTION	DATE

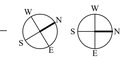
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

SHEET NO.
A-402

PROJECT # 18-732 PHASE #



1 G-510 EGRESS PLAN
SCALE: 1/4" = 1'-0"



TRUE NORTH

PROJECT NORTH

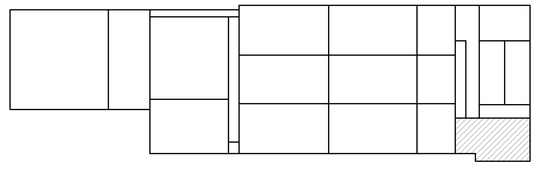
APPLICABLE CODES					
	2020 BUILDING CODE OF NEW YORK STATE				
GENERAL DESCRIPTION OF BUILDING					
	THE BUILDING IS A 1 STORY STRUCTURE, WITH CMU WALLS AND EPDM ROOFING ON METAL TRUSSES.				
GENERAL DESCRIPTION OF THE PROJECT					
	THE PROPOSED 1 STORY BUILDING WILL CONTAIN EQUIPMENT FOR WASTEWATER TREATMENT.				
CODE SUMMARY					
	ITEM	CODE SECTION	REQUIRED / ALLOWED	PROVIDED	REMARKS
	OCCUPANCY				
	F-1	312			
	GENERAL DESCRIPTION OF BUILDING				
	1 STORY				
	FLOOR AREA			934 SF FLOOR AREA	
	CONSTRUCTION			CMU BEARING WALLS WITH REINFORCED CONCRETE SLAB ON GRADE, CONCRETE FOUNDATION, METAL TRUSS ROOF & EPDM ROOFING	
	OCCUPANCY SEPARATION				
	SINGLE OCCUPANCY	N/A		NONE	
	GENERAL BUILDING HEIGHT AND FIRE AREAS – BASED ON TYPE II b CONSTRUCTION				
	F-1 OCCUPANCY HEIGHT (FEET)	TABLE 504.3	55 FEET	14 FEET - 0 INCHES	
	F-1 OCCUPANCY HEIGHT (STORIES)	TABLE 504.4	2 STORIES	1 STORY	
	F-1 OCCUPANCY AREA	TABLE 506.2	15,500 SF	934 SF FLOOR AREA	
	TYPES OF CONSTRICTION				
	TYPE 2b	TABLE 601			
	STRUCTURAL FRAME	TABLE 601	0	0	
	BEARING EXTERIOR WALLS	TABLE 601	0	0	INSULATED CMU WALLS
	BEARING WALLS - INTERIOR	TABLE 601	0	N/A	
	NONBEARING WALLS AND PARTITIONS-EXTERIOR	TABLE 601	SEE BELOW		
	NONBEARING WALLS AND PARTITIONS-INTERIOR	TABLE 601	0	0	
	FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	TABLE 601	0	N/A	FLOOR IS A REINFORCED CONC. SLAB ON GRADE
	ROOF CONSTRUCTION	TABLE 601	0	0	METAL ROOF TRUSSES w/ EPDM ROOFING
	FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE				
	FIRE SEPARATION DISTANCE	TABLE 602	GREATER THAN 30 FEET	N/A	NO RATING REQUIRED
	FIRE-RESISTANCE RATED CONSTRUCTION				
	EXTERIOR WALLS	705	N/A		
	FIRE WALLS	706	N/A		
	FIRE BARRIERS	707	N/A		
	SHAFT ENCLOSURES	707.3.1	N/A	N/A	
	FIRE PARTITIONS	708	N/A		
	INTERIOR FINISHES				
	F-1 OCCUPANCY				
	VERTICAL EXITS AND PASSAGEWAYS	TABLE 803.13	N/A	N/A	
	EXIT ACCESS CORRIDORS AND OTHER EXITWAYS	TABLE 803.13	NO RESTRICTIONS	N/A	
	ROOM AND ENCLOSED SPACES	TABLE 803.13	NO RESTRICTIONS	N/A	
	FIRE PROTECTION SYSTEMS				
	AUTOMATIC SPRINKLER SYSTEMS	903	NOT REQUIRED	N/A	
	STANDPIPE SYSTEMS	905	N/A		
	FIRE ALARM SYSTEM	907	N/A	NONE	
	MEANS OF EGRESS				
	OCCUPANT LOAD	TABLE 1004.5	100 SF / OCCUPANT	934 / 100 = 10 PEOPLE	
	EGRESS WIDTH - STAIRS	1005.3.1	0.3 " PER OCCUPANT	STAIRS 36" WIDE / .3 = 120 CAPACITY AT EACH STAIR	
	EGRESS WIDTH - OTHER	1005.3.2	0.2" PER OCCUPANT	DOORS 36" WIDE / .2 = 180 CAPACITY AT EACH EXIT DOOR	
	MEANS OF EGRESS ILLUMINATION	1008	REQUIRED	PROVIDED	
	NUMBER OF EXITS	TABLE 1006.2.1	MAX OCCUPANT LOAD FOR ONE EXIT = 49	ONE EXIT PROVIDED FOR OCCUPANT LOAD = 10	
	ACCESSIBLE MEANS OF EGRESS	1009	NOT REQUIRED	N/A	
	AREA OF REFUGE	1009.6	N/A	N/A	
	EXIT ACCESS	1016	N/A	N/A	
	EXIT TRAVEL DISTANCE	TABLE 1017.2	300 FEET	MAX. 45 FEET	
	ACCESSIBILITY				
	GENERAL ACCESSIBILITY REQUIREMENTS	1101	NOT REQUIRED	N/A	
	PLUMBING FACILITIES				
	F-1 OCCUPANCY	TABLE 2902.1	NOT REQUIRED FOR F-1 OCCUPANCY PER 2902.3.3 IF TOILET FACILITIES ARE WITHIN 500 FEET	N/A	

EGRESS PLAN LEGEND

E1	WALL MOUNTED EXIT SIGN - SEE DETAIL 1/G-400
E2	TRUSS PLACARD DETAIL - SEE DETAIL 2/G-400
E3	FIRE DEPARTMENT KNOXBOX - COORDINATE REQUIREMENTS w/ AUTHORITY HAVING JURISDICTION

SYMBOLS LEGEND

#	INDICATES CAPACITY OF EXIT IN # OF PERSONS
EXIT	EXIT LIGHT LOCATION
FE	WALL MOUNTED FIRE EXTINGUISHER ON BRACKET
#	INDICATES WALL TYPE



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
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New Windsor, NY 12553
(845) 587-3100
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Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN - EGRESS PLAN

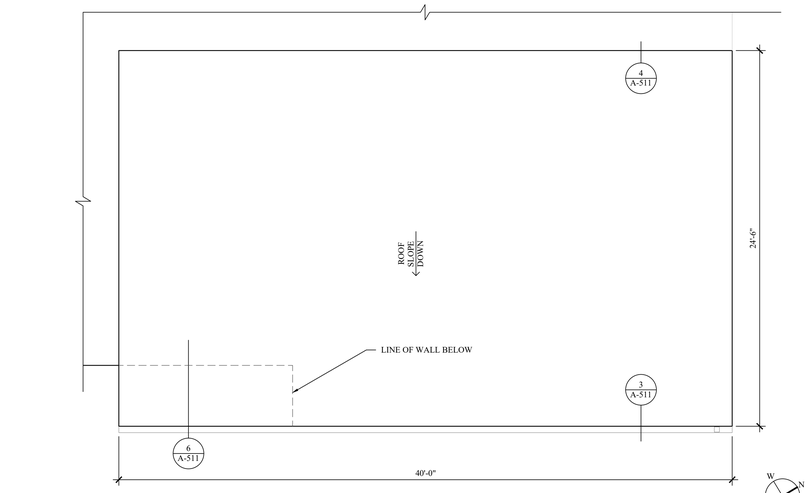
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

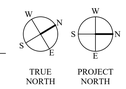
SHEET NO.
G-510

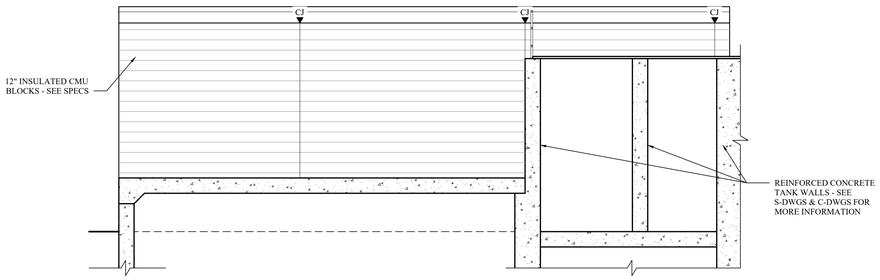
PROJECT # 18-732 PHASE #



1 A-510 ROOF PLAN

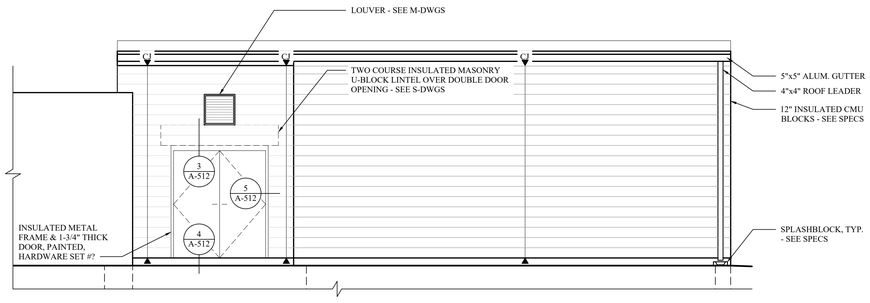
SCALE: 1/4" = 1'-0"





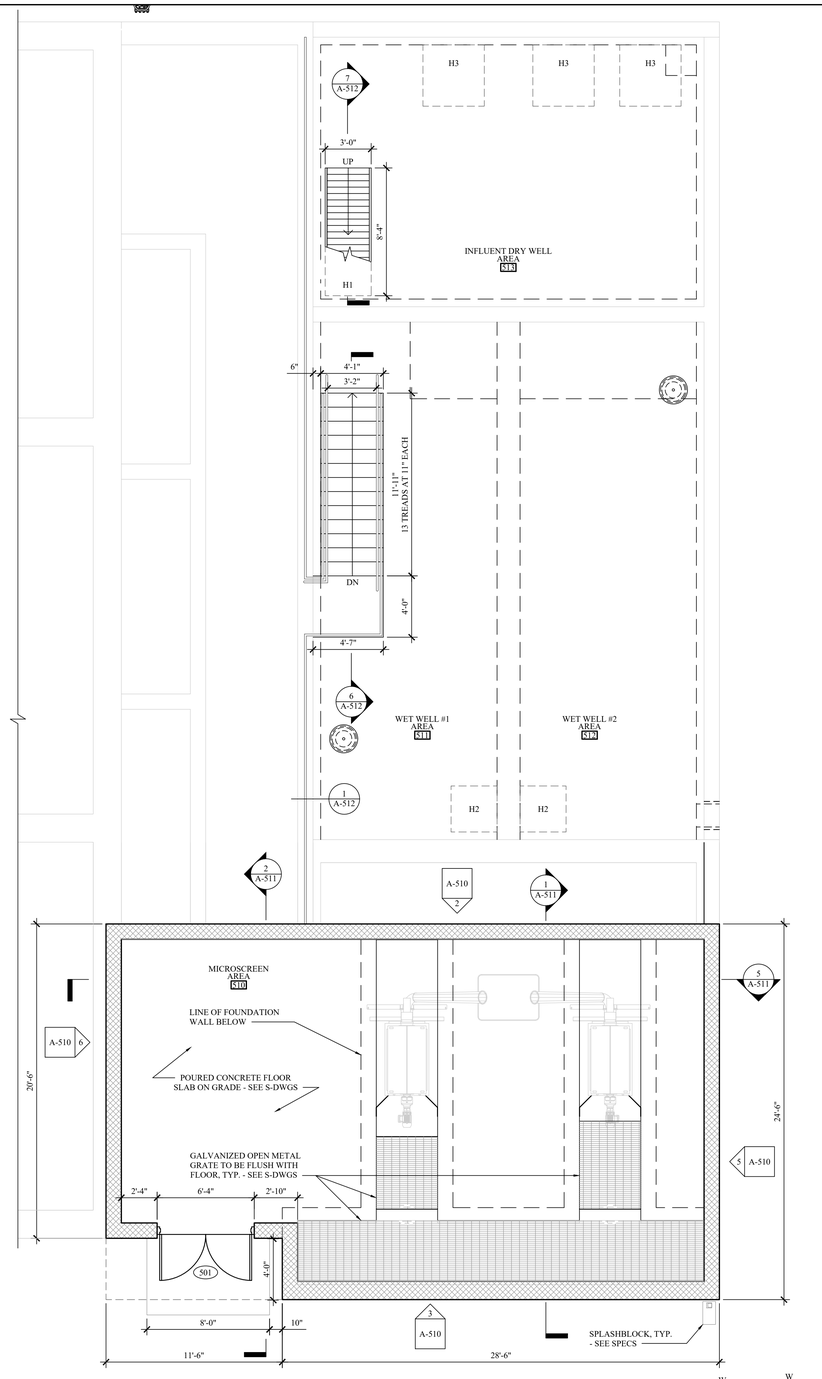
2 A-510 EXTERIOR BUILDING ELEVATION (WEST)

SCALE: 1/4" = 1'-0"



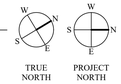
3 A-510 EXTERIOR BUILDING ELEVATION (EAST)

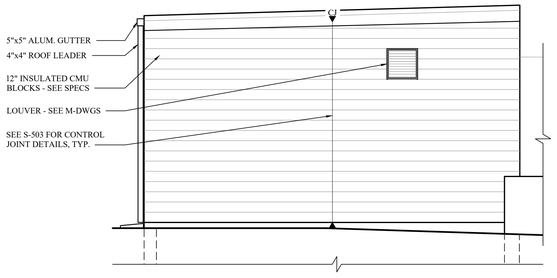
SCALE: 1/4" = 1'-0"



4 A-510 FLOOR PLAN

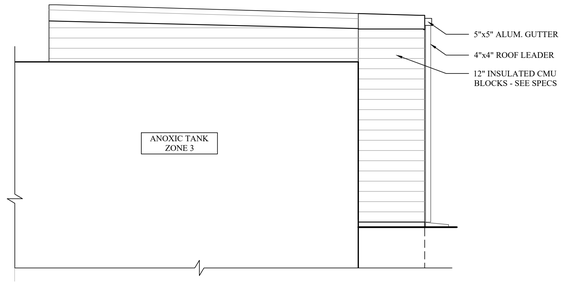
SCALE: 1/4" = 1'-0"





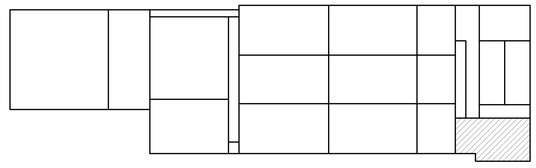
5 A-510 EXTERIOR BUILDING ELEVATION (NORTH)

SCALE: 1/4" = 1'-0"



6 A-510 EXTERIOR BUILDING ELEVATION (SOUTH)

SCALE: 1/4" = 1'-0"



KEY PLAN

SCALE: 1/32" = 1'-0"

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN - PLANS, ELEVATIONS, & DETAILS

REVISIONS

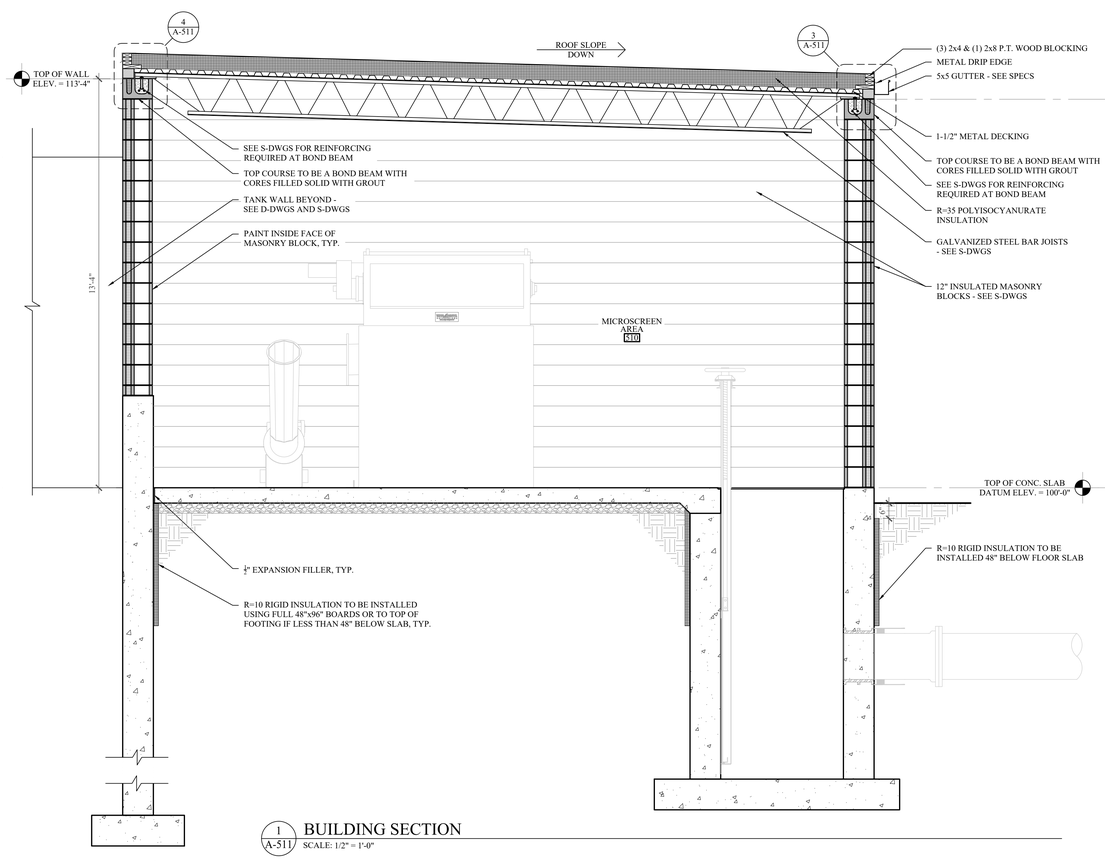
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

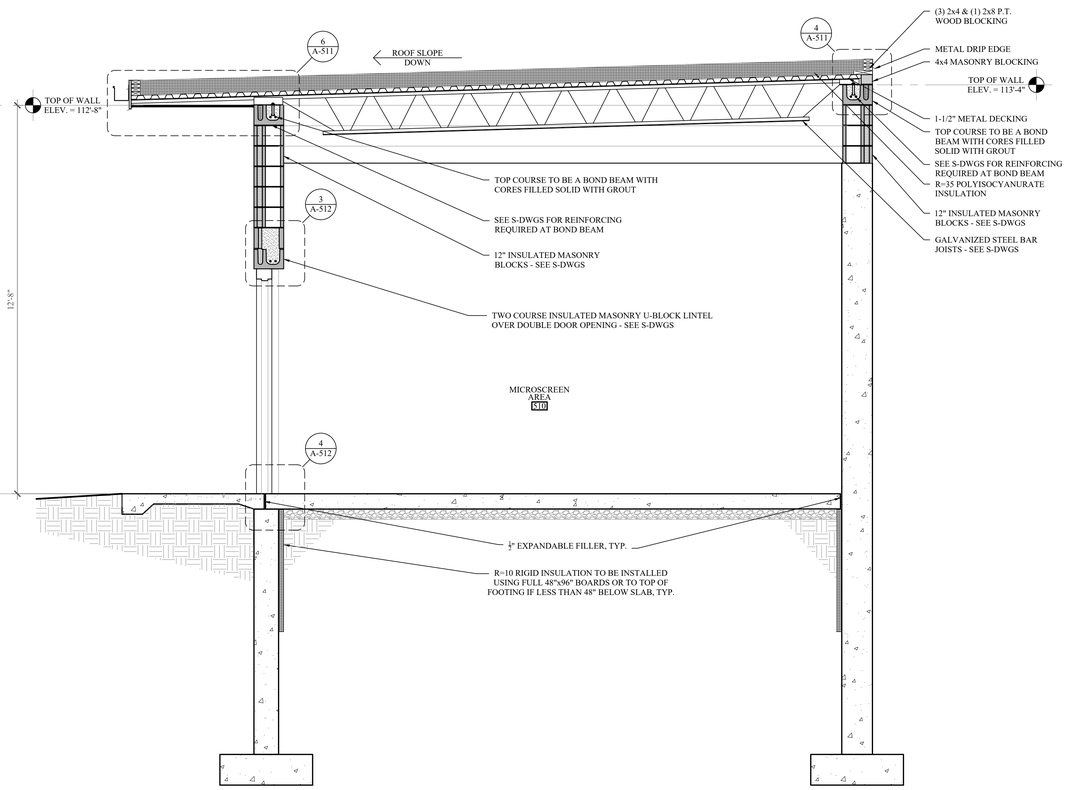
SHEET NO.

A-510

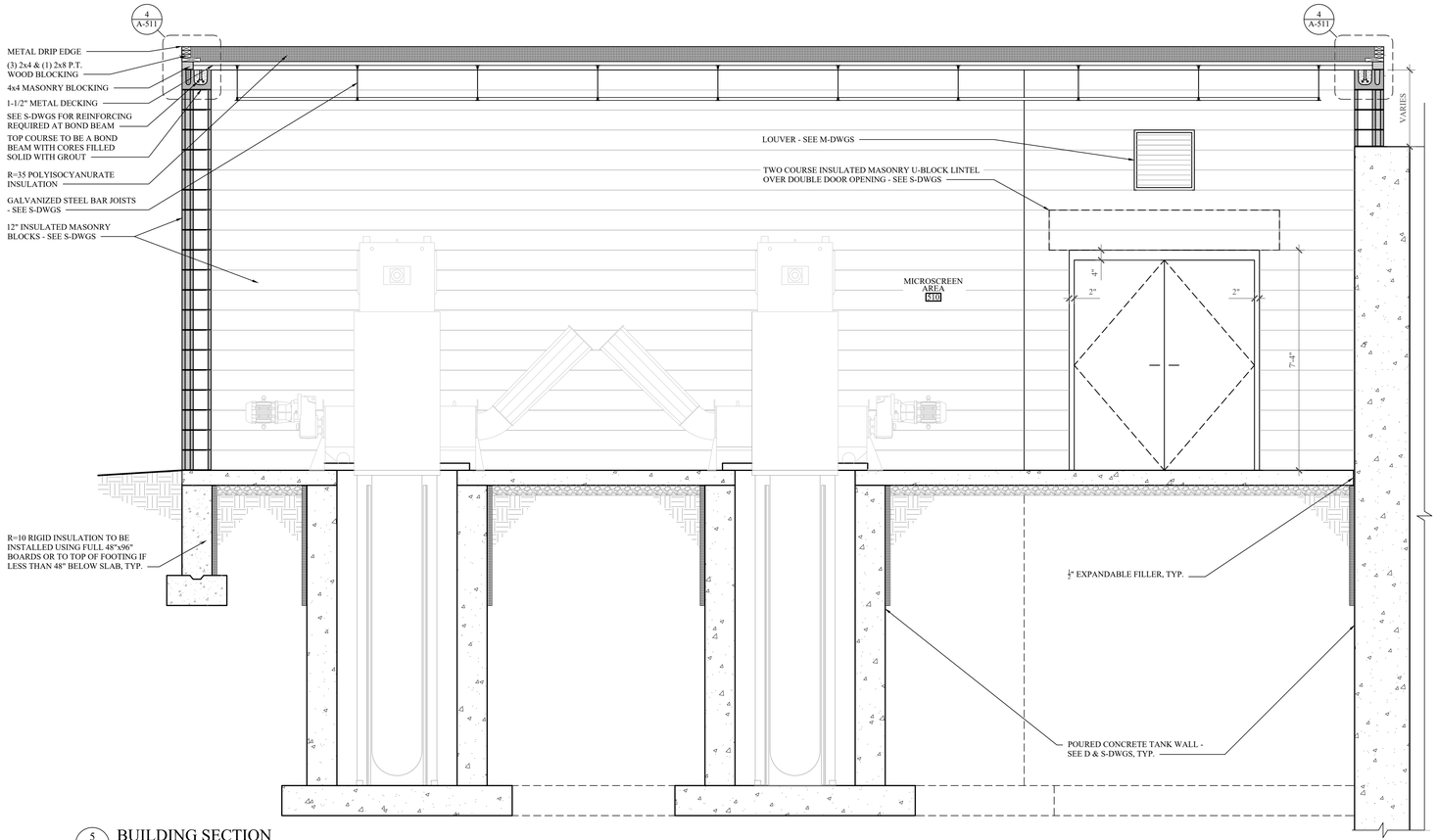
PROJECT # 18-732 PHASE #



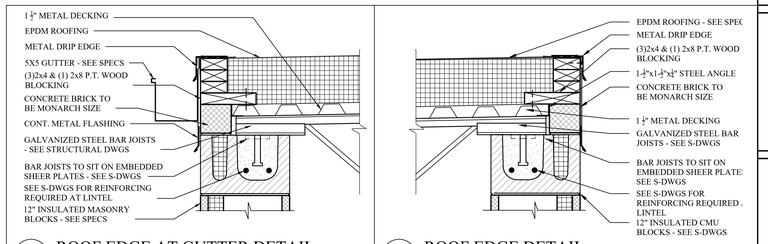
1 A-511 BUILDING SECTION
SCALE: 1/2" = 1'-0"



2 A-511 BUILDING SECTION
SCALE: 1/2" = 1'-0"

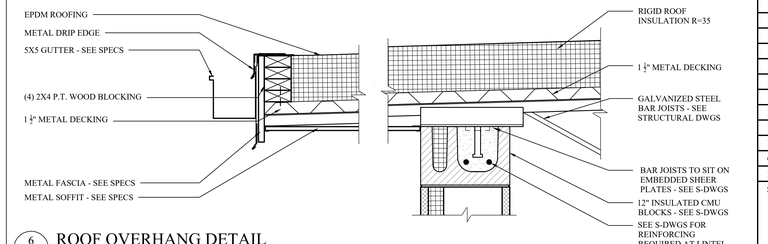


5 A-511 BUILDING SECTION
SCALE: 1/2" = 1'-0"



3 A-511 ROOF EDGE AT GUTTER DETAIL
SCALE: 1-1/2" = 1'-0"

4 A-511 ROOF EDGE DETAIL
SCALE: 1-1/2" = 1'-0"



6 A-511 ROOF OVERHANG DETAIL
SCALE: 1-1/2" = 1'-0"

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN - BUILDING SECTIONS

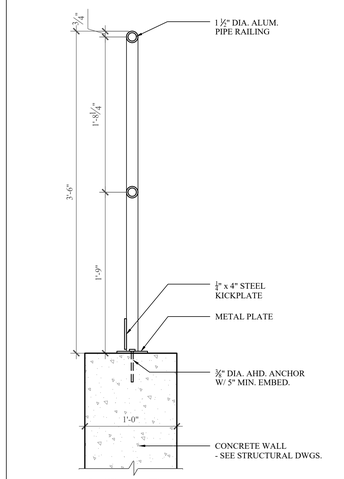
REVISIONS

NO.	DESCRIPTION	DATE

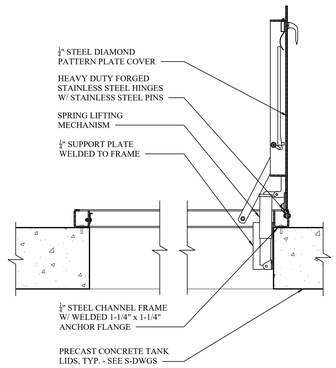
ISSUED DATE:	18 APR. 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

SHEET NO.
A-511

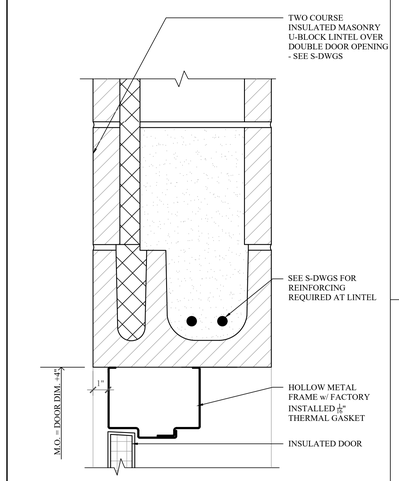
PROJECT # 18-732 PHASE #



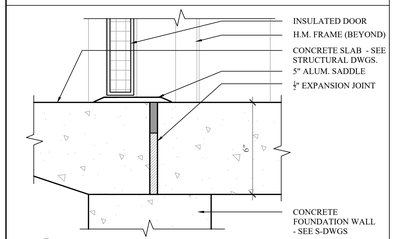
1 A-512 RAILING DETAIL
SCALE: 1-1/2" = 1'-0"



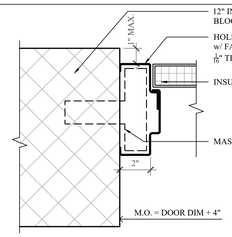
2 A-512 ROOF HATCH
SCALE: 1" = 1'-0"



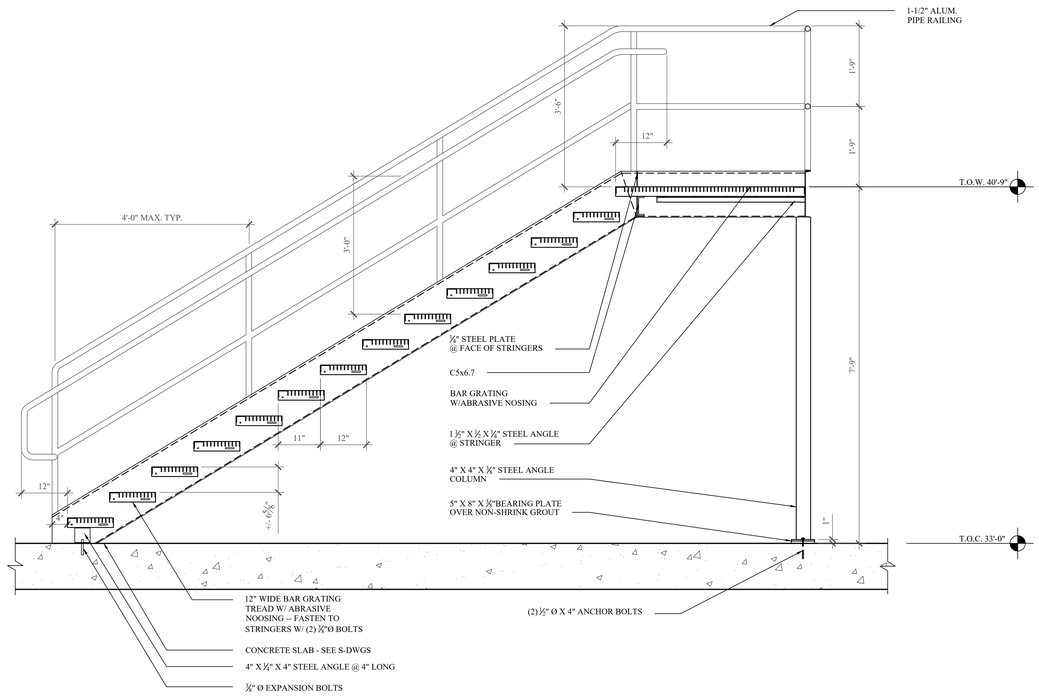
3 A-512 EXT. DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



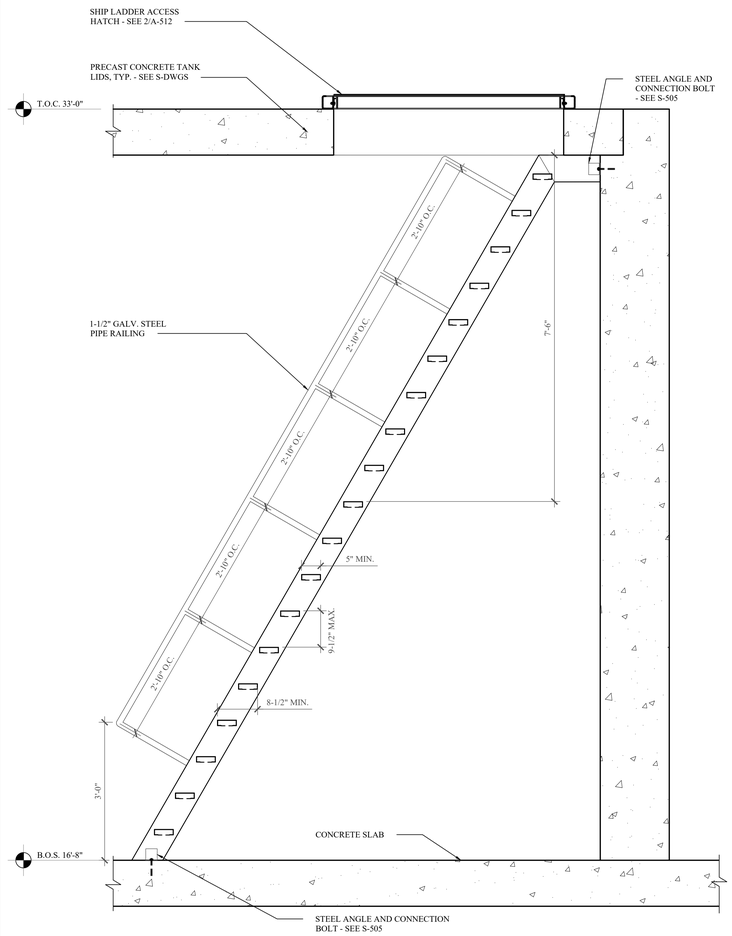
4 A-512 EXT. DOOR SILL DETAIL
SCALE: 3" = 1'-0"



5 A-512 EXT. DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



6 A-512 STAIR SECTION
SCALE: 3/4" = 1'-0"



7 A-512 SHIP LADDER SECTION
SCALE: 3/4" = 1'-0"

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN - BUILDING SECTIONS

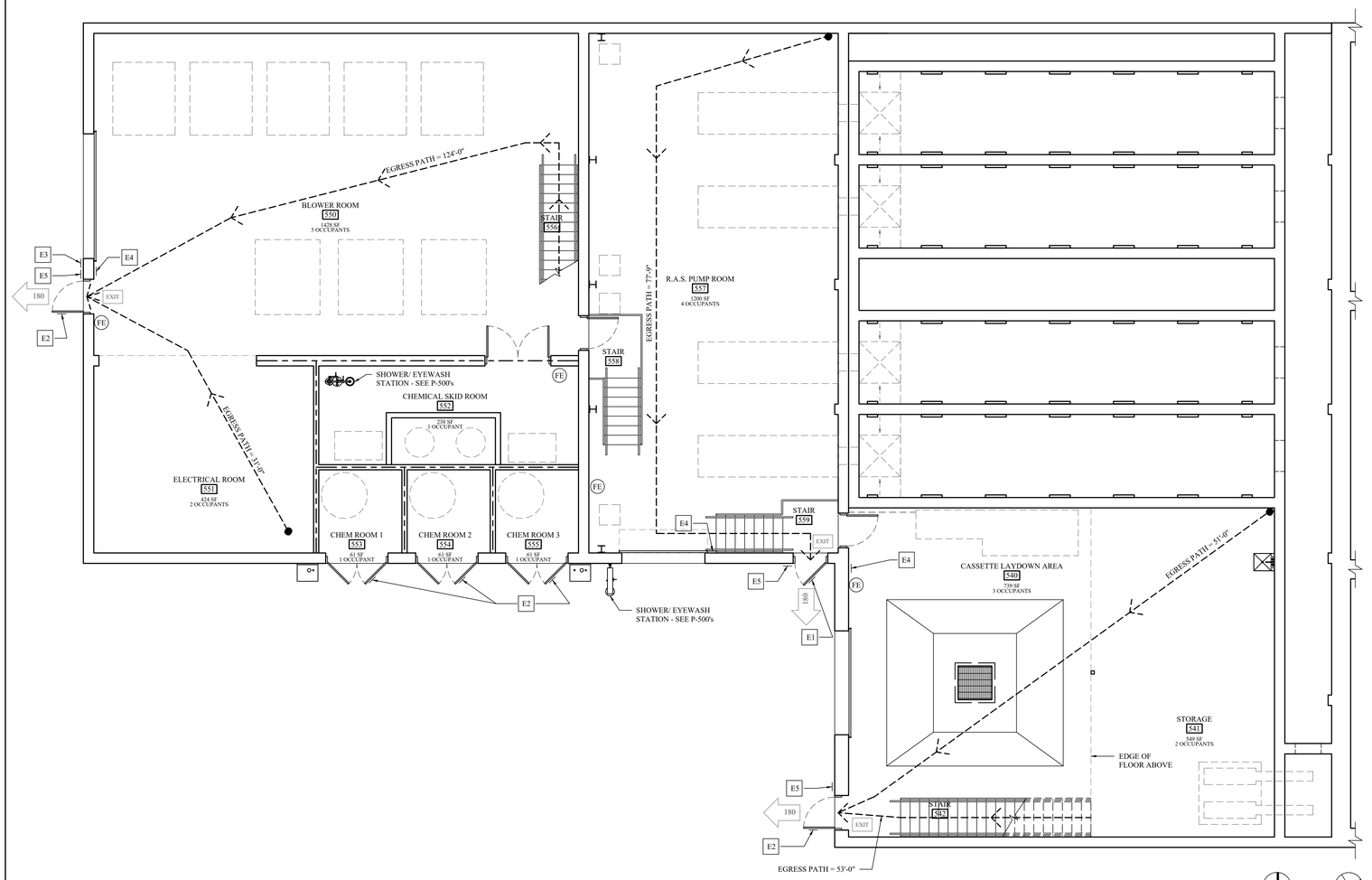
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

SHEET NO.
A-512

PROJECT # 18-732 PHASE #



1 G-550 GROUND FLOOR EGRESS PLAN
SCALE: 3/16" = 1'-0"

PROJECT NORTH TRUE NORTH

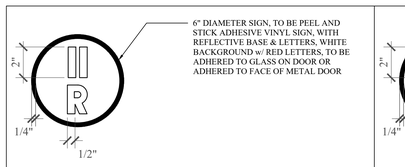
APPLICABLE CODES					
	2020 BUILDING CODE OF NEW YORK STATE				
GENERAL DESCRIPTION OF BUILDING					
	THE BUILDING IS A 2 STORY STRUCTURE, WITH CONCRETE WALLS, METAL FRAME WALLS AND STANDING SEAM ROOFING ON METAL TRUSSES.				
GENERAL DESCRIPTION OF THE PROJECT					
	THE PROPOSED BUILDING IS FOR PUMPS, BLOWERS AND CHEMICAL STORAGE. THIS WATER/SEWER TREATMENT FACILITY BUILDING IS A NEW 2 STORY STRUCTURE THAT WILL HOUSE WATER/SEWER TREATMENT EQUIPMENT.				
CODE SUMMARY					
	ITEM	CODE SECTION	REQUIRED / ALLOWED	PROVIDED	REMARKS
	OCCUPANCY				
	U	312			
	INCIDENTAL STORAGE / MECHANICAL SPACE	311.1.1			
	GENERAL DESCRIPTION OF BUILDING				
	2 STORY				
	FLOOR AREA			3,796 SF FLOOR AREA	
	CONSTRUCTION			CONCRETE AND CMU BEARING WALLS WITH REINFORCED CONCRETE SLAB ON GRADE & CONCRETE ON METAL DECK, CONCRETE FOUNDATION, METAL FRAME WALLS WITH METAL TRUSS ROOF & STANDING SEAM ROOFING	
	OCCUPANCY SEPARATION				
	SINGLE OCCUPANCY	N/A		NONE	
	HAZARDOUS MATERIAL STORAGE CONTROL AREAS				
	# OF STORIES	TABLE 414.2.2	1	1	
	# OF CONTROL AREAS	TABLE 414.2.2	4	4	
	AREA	TABLE 414.2.2	100	100	
	GENERAL BUILDING HEIGHT AND FIRE AREAS – BASED ON TYPE II b CONSTRUCTION				
	U OCCUPANCY HEIGHT (FEET)	TABLE 504.3	55 FEET	31 FEET - 6 INCHES	
	U OCCUPANCY HEIGHT (STORIES)	TABLE 504.4	2 STORIES	2 STORY	
	U OCCUPANCY AREA	TABLE 506.2	8,500 SF	3,796 SF FLOOR AREA	
	TYPES OF CONSTRICTION				
	TYPE 2b	TABLE 601			
	STRUCTURAL FRAME	TABLE 601	0	0	CONCRETE, STEEL COLUMNS, STEEL BEAMS & STEEL TRUSSES
	BEARING EXTERIOR WALLS	TABLE 601	0	0	CONCRETE WALLS & METAL FRAME WALLS
	BEARING WALLS - INTERIOR	TABLE 601	0	N/A	CONCRETE & CMU
	NONBEARING WALLS AND PARTITIONS-EXTERIOR	TABLE 601	SEE BELOW		
	NONBEARING WALLS AND PARTITIONS-INTERIOR	TABLE 601	0	0	
	FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	TABLE 601	0	N/A	FLOOR IS A REINFORCED CONC. SLAB ON GRADE, CONCRETE FLOOR ON METAL DECK SECOND FLOOR
	ROOF CONSTRUCTION	TABLE 601	0	0	METAL ROOF TRUSSES w/ STANDING SEAM ROOFING
	FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE				
	FIRE SEPARATION DISTANCE	TABLE 602	GREATER THAN 30 FEET	N/A	NO RATING REQUIRED
	FIRE-RESISTANCE RATED CONSTRUCTION				
	EXTERIOR WALLS	705	N/A		
	FIRE WALLS	706	N/A		
	FIRE BARRIERS	707	N/A		
	SHAFT ENCLOSURES	713	N/A	N/A	
	FIRE PARTITIONS	718.4	N/A		
	INTERIOR FINISHES				
	U OCCUPANCY				
	VERTICAL EXITS AND PASSAGEWAYS	TABLE 803.13	N/A	N/A	
	EXIT ACCESS CORRIDORS AND OTHER EXITWAYS	TABLE 803.13	NO RESTRICTIONS	N/A	
	ROOM AND ENCLOSED SPACES	TABLE 803.13	NO RESTRICTIONS	N/A	
	FIRE PROTECTION SYSTEMS				
	AUTOMATIC SPRINKLER SYSTEMS	903	NOT REQUIRED	N/A	
	STANDPIPE SYSTEMS	905	N/A	N/A	
	FIRE ALARM SYSTEM	907.2	N/A	NONE	
	MEANS OF EGRESS				
	OCCUPANT LOAD	TABLE 1004.5	100 SF / OCCUPANT	3,796 / 100 = 38 PEOPLE	
	EGRESS WIDTH - STAIRS	1005.3.1	0.3 " PER OCCUPANT	STAIRS 36" WIDE / .3 = 120 CAPACITY AT EACH STAIR	
	EGRESS WIDTH - OTHER	1005.3.2	0.2" PER OCCUPANT	DOORS 36" WIDE / .2 = 180 CAPACITY AT EACH EXIT DOOR	
	MEANS OF EGRESS ILLUMINATION	1008	REQUIRED	PROVIDED	
	NUMBER OF EXITS	TABLE 1006.2.1	MAX OCCUPANT LOAD FOR ONE EXIT = 49	ONE EXIT PROVIDED FOR OCCUPANT LOAD = 38	
	ACCESSIBLE MEANS OF EGRESS	1009	NOT REQUIRED	N/A	
	AREA OF REFUGE	1009.6	N/A	N/A	
	EXIT ACCESS	1016	N/A	N/A	
	EXIT TRAVEL DISTANCE	TABLE 1017.2	300 FEET	MAX. 124 FEET	
	ACCESSIBILITY				
	GENERAL ACCESSIBILITY REQUIREMENTS	1101	NOT REQUIRED	N/A	
	PLUMBING FACILITIES				
	U OCCUPANCY	TABLE 2902.1	NOT REQUIRED FOR U OCCUPANCY PER 2902.3.3 IF TOILET FACILITIES ARE WITHIN 500 FEET	N/A	

EGRESS PLAN LEGEND

E1	TRUSS PLACARD DETAIL - SEE DETAIL 2/G550
E2	TRUSS PLACARD DETAIL - SEE DETAIL 3/G550
E3	FIRE DEPARTMENT KNOXBOX - COORDINATE REQUIREMENTS w/ AUTHORITY HAVING JURISDICTION
E4	FIRE ALARM PULL STATION - SEE E-501 & E-502
E5	CARD READER - SEE E-501 & E-502

SYMBOLS LEGEND

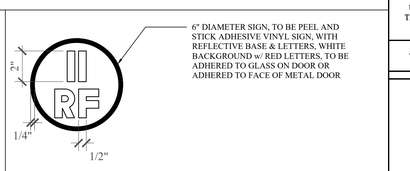
	EGRESS TRAVEL PATH
#	INDICATES CAPACITY OF EXIT IN # OF PERSONS
EXIT	EXIT LIGHT LOCATION
FE	WALL MOUNTED FIRE EXTINGUISHER ON BRACKET
NOT AN EXIT	NOT AN EXIT LIGHT LOCATION
	1 HOUR FIRE RATED WALL - SEE WALL TYPES ON A-556



6" DIAMETER SIGN, TO BE PEEL AND STICK ADHESIVE VINYL SIGN, WITH REFLECTIVE BASE & LETTERS, WHITE BACKGROUND w/ RED LETTERS, TO BE ADHERED TO GLASS ON DOOR OR ADHERED TO FACE OF METAL DOOR

PLACARDS SHALL BE LOCATED AT ALL EXTERIOR BUILDING ENTRANCE DOORS AND EXTERIOR EXIT DISCHARGE DOORS MOUNTED BETWEEN 42" AND 60" ABOVE THE WALKING SURFACE

2 G-550 TRUSS PLACARD DETAIL
SCALE: N.T.S.



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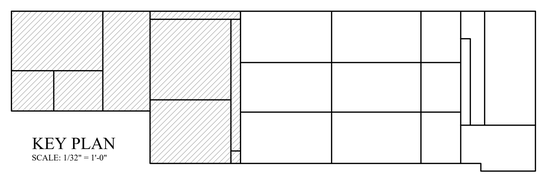
3 G-550 TRUSS PLACARD DETAIL
SCALE: N.T.S.



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR BUILDING - EGRESS PLAN, CODE ANALYSIS & DETAILS

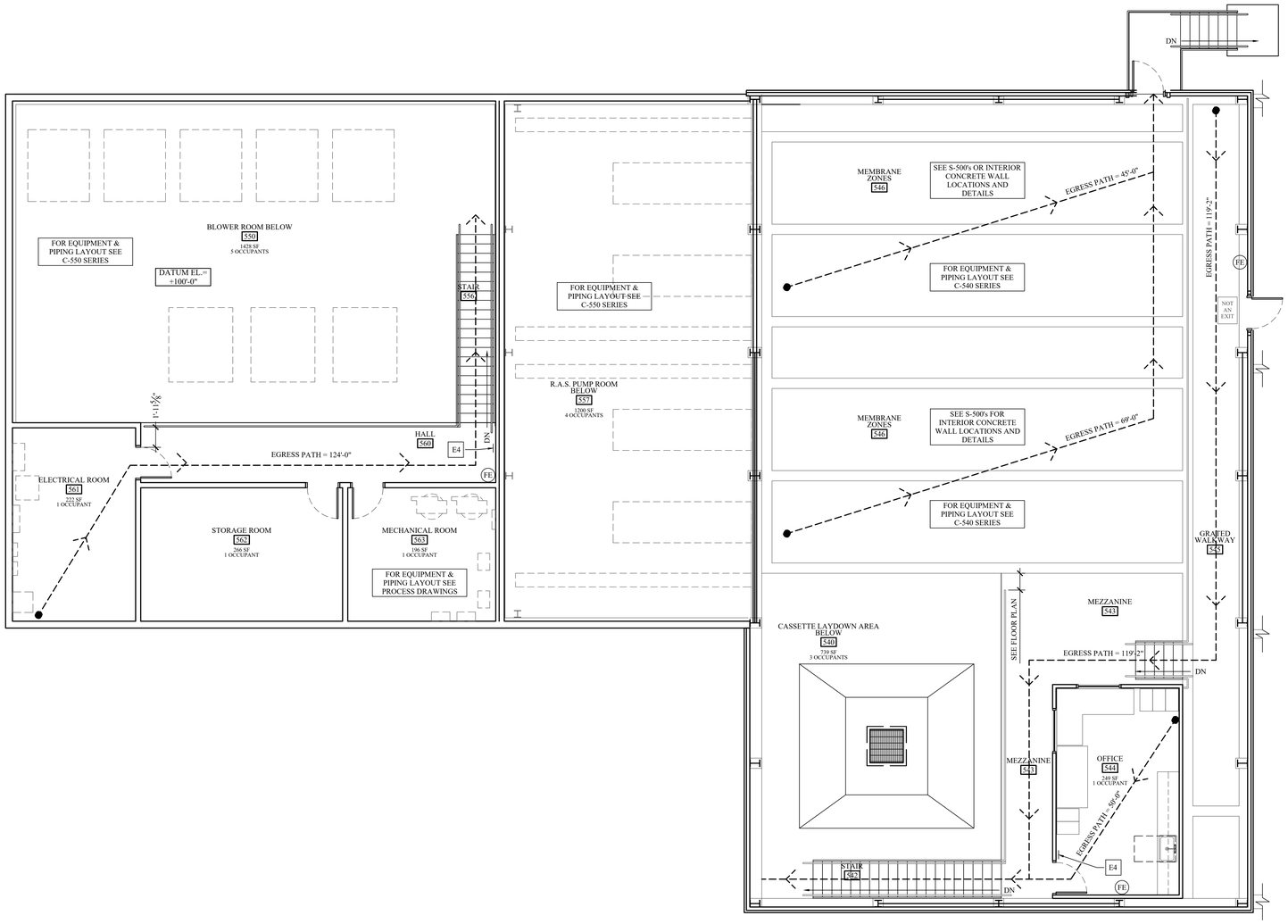
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
G-550

PROJECT # 18-732 PHASE #



1 G-551 SECOND FLOOR EGRESS PLAN
SCALE: 3/16" = 1'-0"

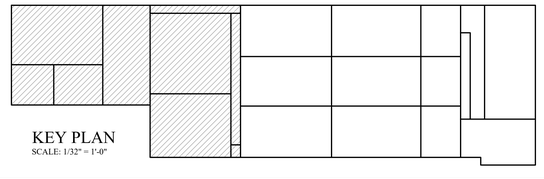
PROJECT NORTH TRUE NORTH

EGRESS PLAN LEGEND

E1	TRUSS PLACARD DETAIL - SEE DETAIL 2/G550
E2	TRUSS PLACARD DETAIL - SEE DETAIL 3/G550
E3	FIRE DEPARTMENT KNOXBOX - COORDINATE REQUIREMENTS w/ AUTHORITY HAVING JURISDICTION
E4	FIRE ALARM PULL STATION - SEE E-501 & E-502
E5	CARD READER - SEE E-501 & E-502

SYMBOLS LEGEND

	EGRESS TRAVEL PATH
#	INDICATES CAPACITY OF EXIT IN # OF PERSONS
EXIT	EXIT LIGHT LOCATION
FE	WALL MOUNTED FIRE EXTINGUISHER ON BRACKET
NOT AN EXIT	NOT AN EXIT LIGHT LOCATION
	1 HOUR FIRE RATED WALL - SEE WALL TYPES ON A-556



KEY PLAN
SCALE: 1/32" = 1'-0"

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MBR BUILDING - SECOND FLOOR EGRESS PLAN

REVISIONS

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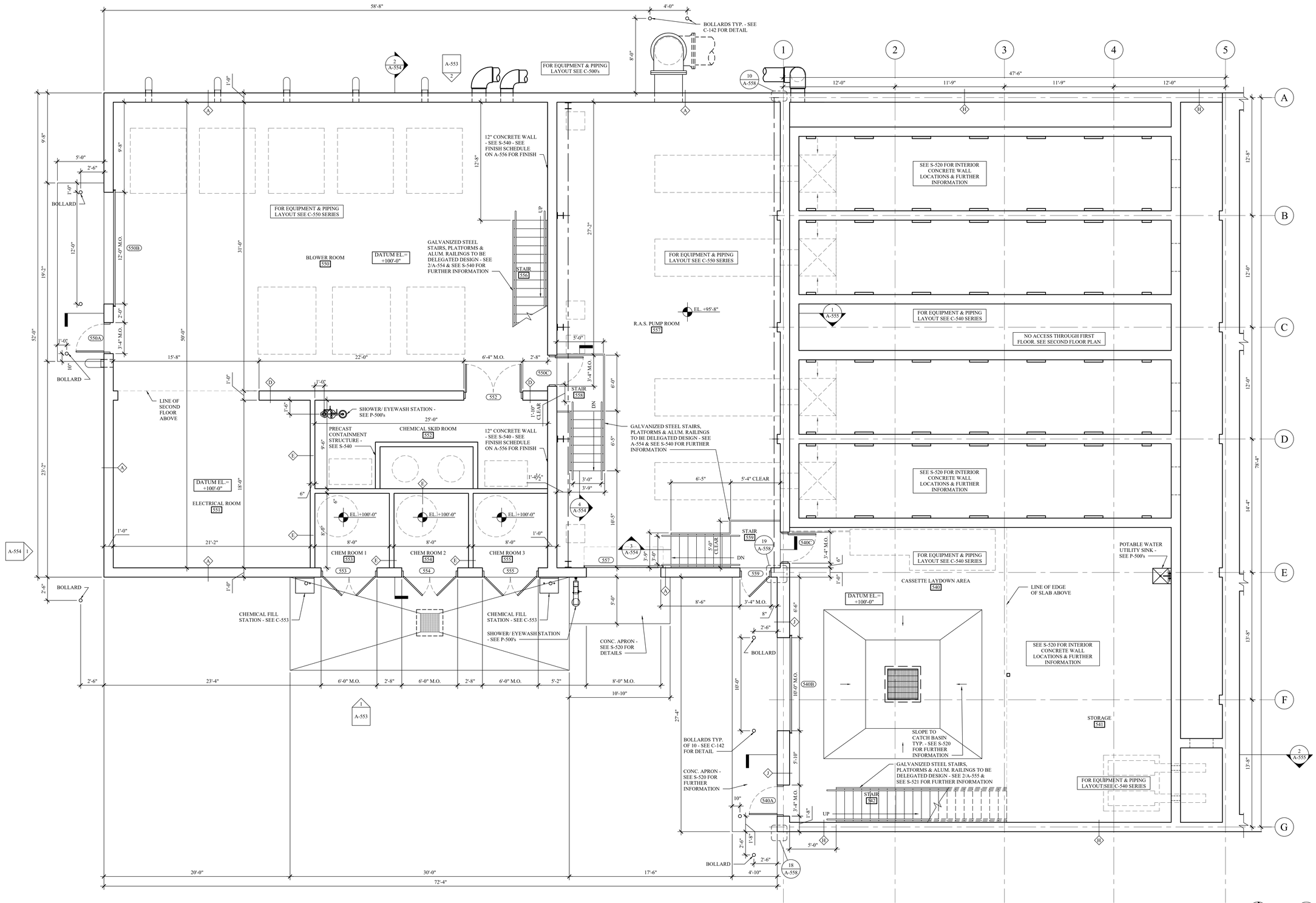
SHEET NO.
G-551

PROJECT # 18-732 PHASE #



1 / A-550 GROUND FLOOR PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

LEGEND

SOUND INSULATION

THERMAL INSULATION

SYMBOLS LEGEND

NEW DOOR - SEE DOOR SCHEDULE ON A-556
# INDICATES DOOR No

NEW WINDOW - SEE WINDOW SCHEDULE ON A-556
LETTER INDICATES WINDOW

NEW WALL TYPE - SEE A-556 FOR WALL TYPE DETAILS
LETTER INDICATES WALL TYPE

KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
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New Windsor, NY 12553
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111 Wheatfield Drive, Suite 1
Milford, PA 18337
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MBR BUILDING - GROUND FLOOR PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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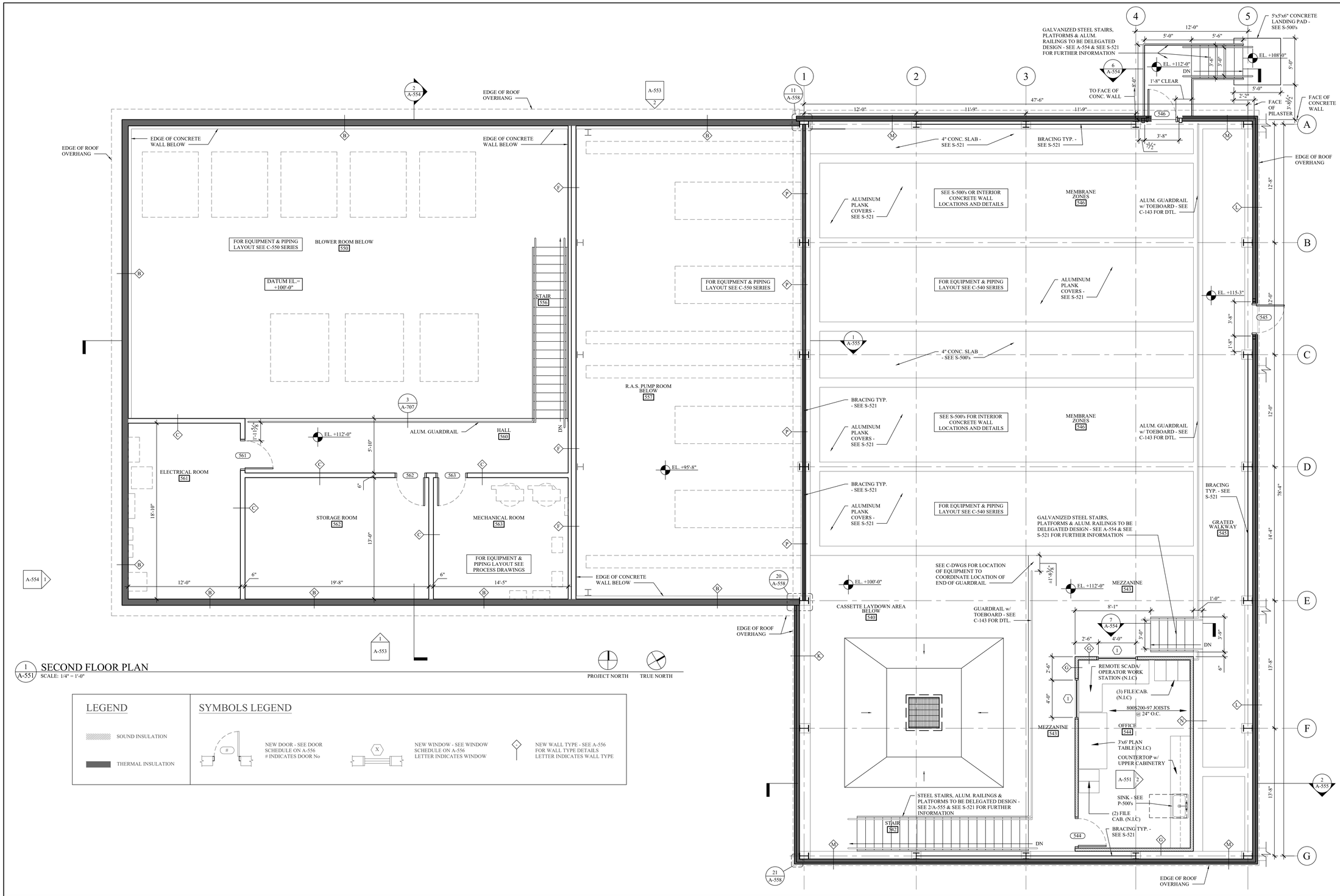
SHEET NO.
A-550

PROJECT # 18-732 PHASE #



1 A-551 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

LEGEND

SOUND INSULATION

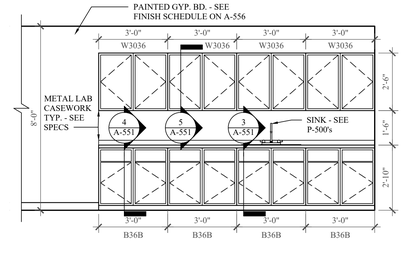
THERMAL INSULATION

SYMBOLS LEGEND

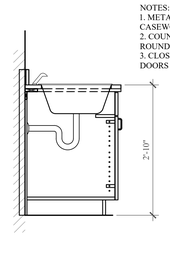
NEW DOOR - SEE DOOR SCHEDULE ON A-556
# INDICATES DOOR No

NEW WINDOW - SEE WINDOW SCHEDULE ON A-556
LETTER INDICATES WINDOW

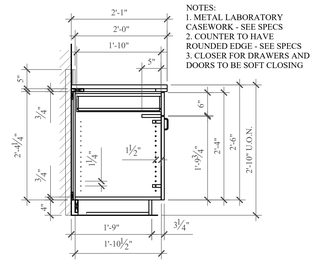
NEW WALL TYPE - SEE A-556 FOR WALL TYPE DETAILS
LETTER INDICATES WALL TYPE



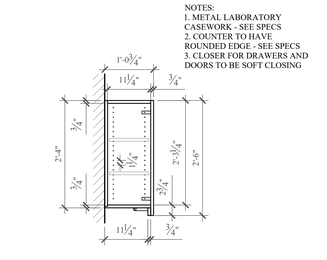
2 A-551 OFFICE 544 ELEVATION
SCALE: 3/8" = 1'-0"



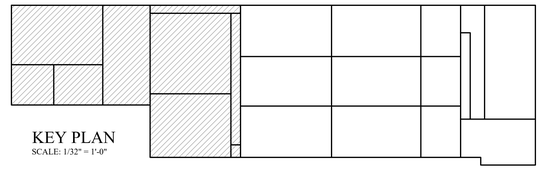
3 A-551 SINK SECTION
SCALE: 3/8" = 1'-0"



4 A-551 BASE CABINET
SCALE: 3/8" = 1'-0"



5 A-551 WALL CABINET
SCALE: 3/8" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

MBR BUILDING - SECOND FLOOR PLAN, INTERIOR ELEVATION & FINISH DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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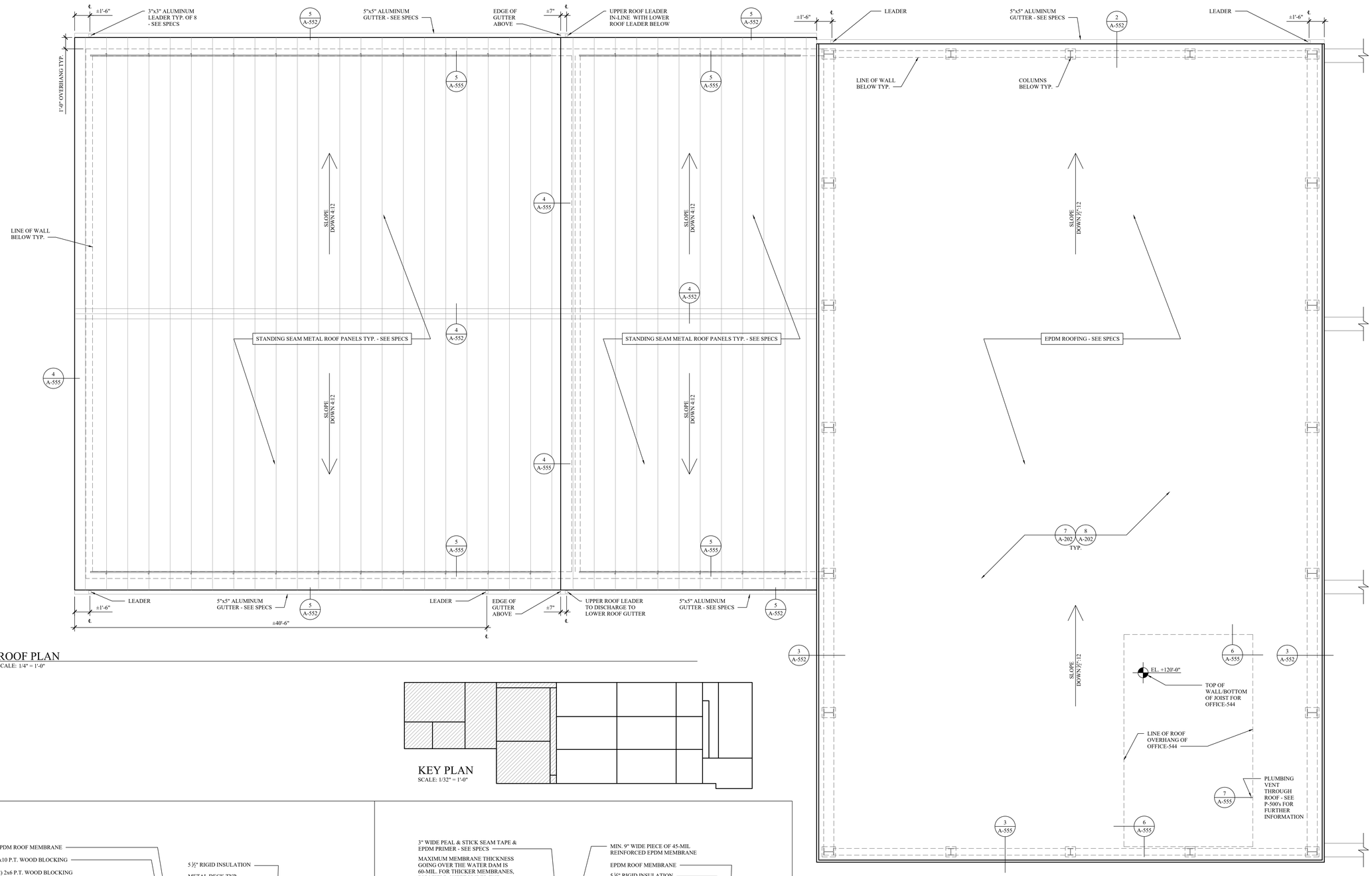
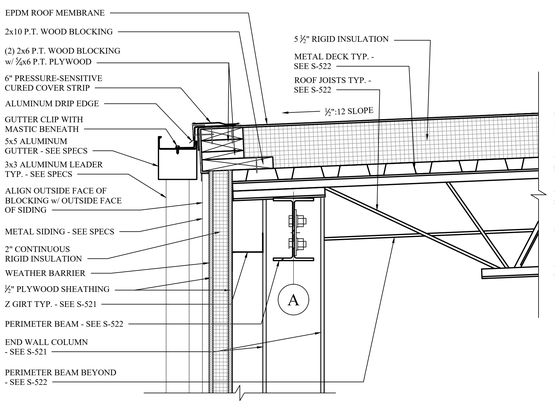
A-551

PROJECT # 18-732 PHASE #

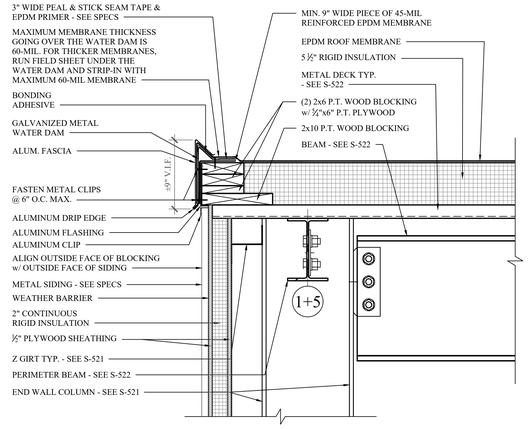


1 A-552 ROOF PLAN
SCALE: 1/4" = 1'-0"

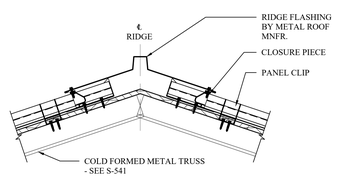
KEY PLAN
SCALE: 1/32" = 1'-0"



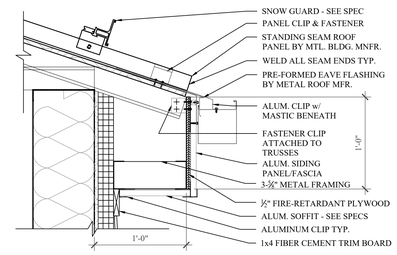
2 A-552 ROOF @ GUTTER DETAIL
SCALE: 1-1/2" = 1'-0"



3 A-552 ROOF EDGE DETAIL
SCALE: 1-1/2" = 1'-0"



4 A-552 FIXED ROOF RIDGE DETAIL
SCALE: 3"= 1'-0"



5 A-552 ROOF EDGE/ GUTTER DETAIL
SCALE: 1 1/2"= 1'-0"

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New Windsor, NY 12553
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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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555 UNION AVE.
NEW WINDSOR, NY 12553

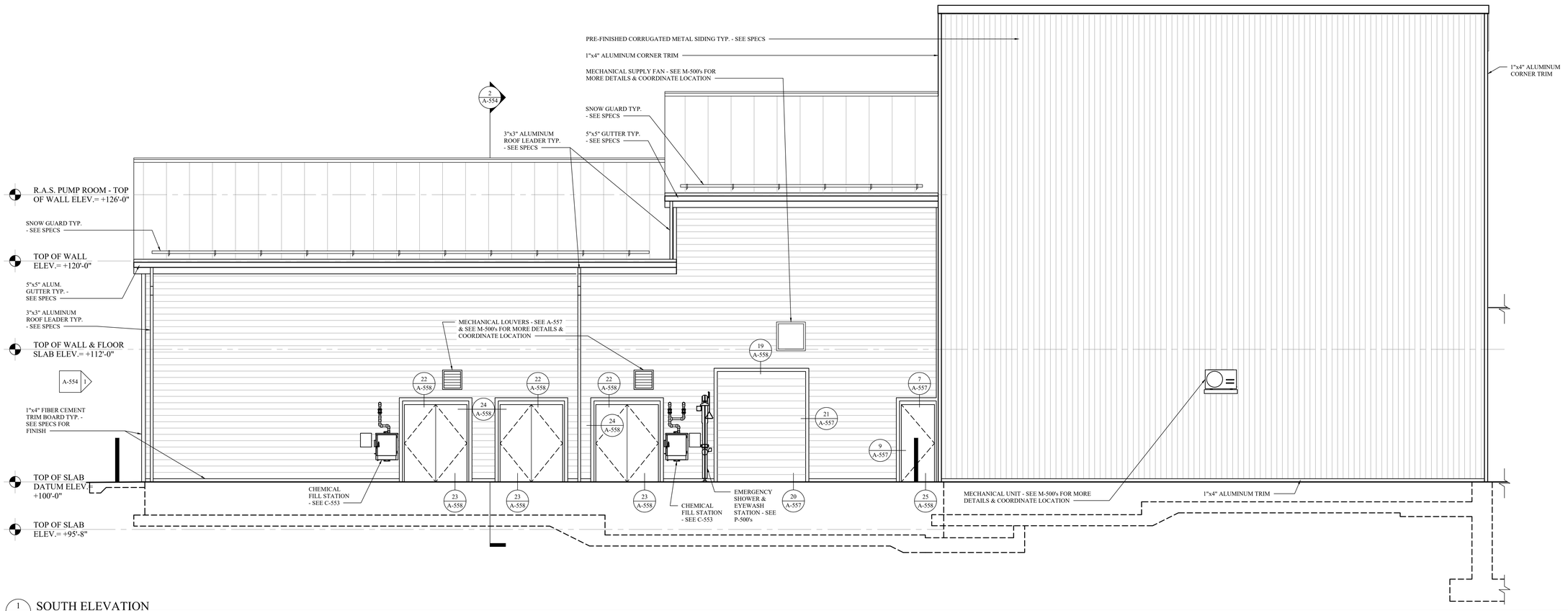
MBR BUILDING - ROOF PLAN & DETAILS

REVISIONS

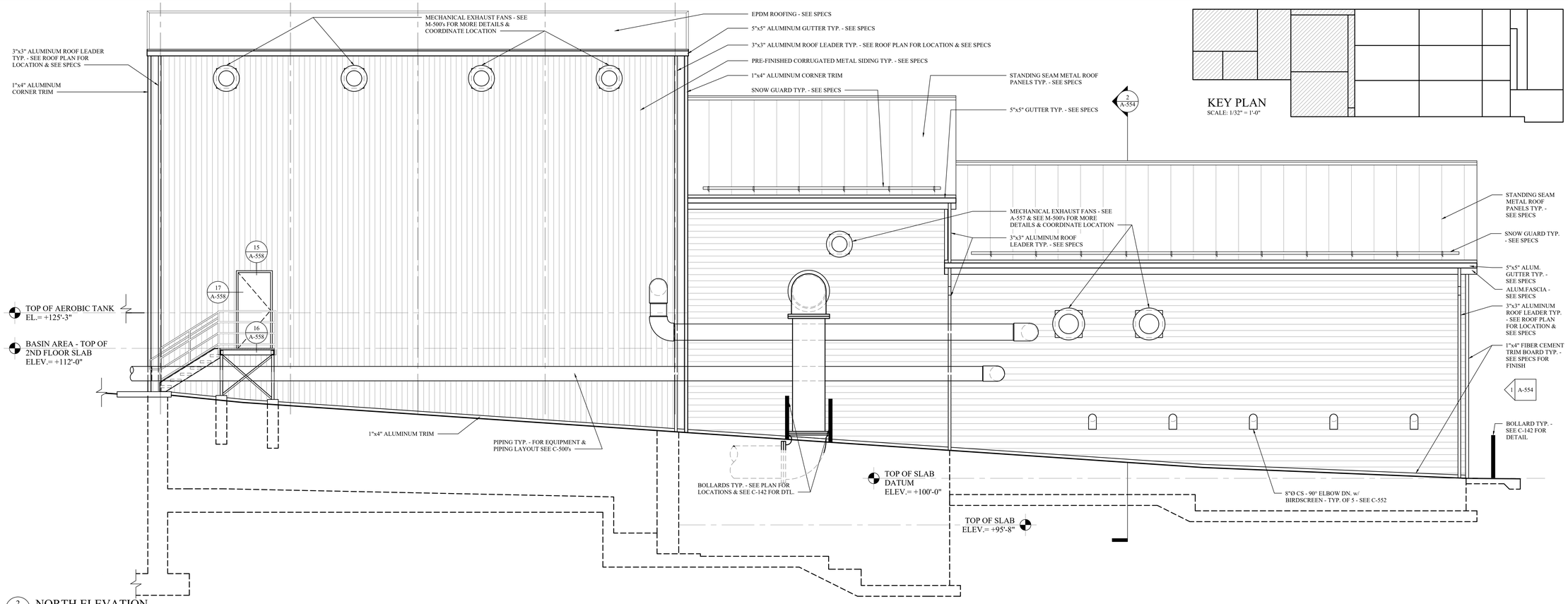
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
A-552
PROJECT # 18-732 PHASE #



1 A-553 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



2 A-553 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

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111 Wheatfield Drive, Suite 1
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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

MBR BUILDING - EXTERIOR ELEVATIONS

REVISIONS

NO.	DESCRIPTION	DATE

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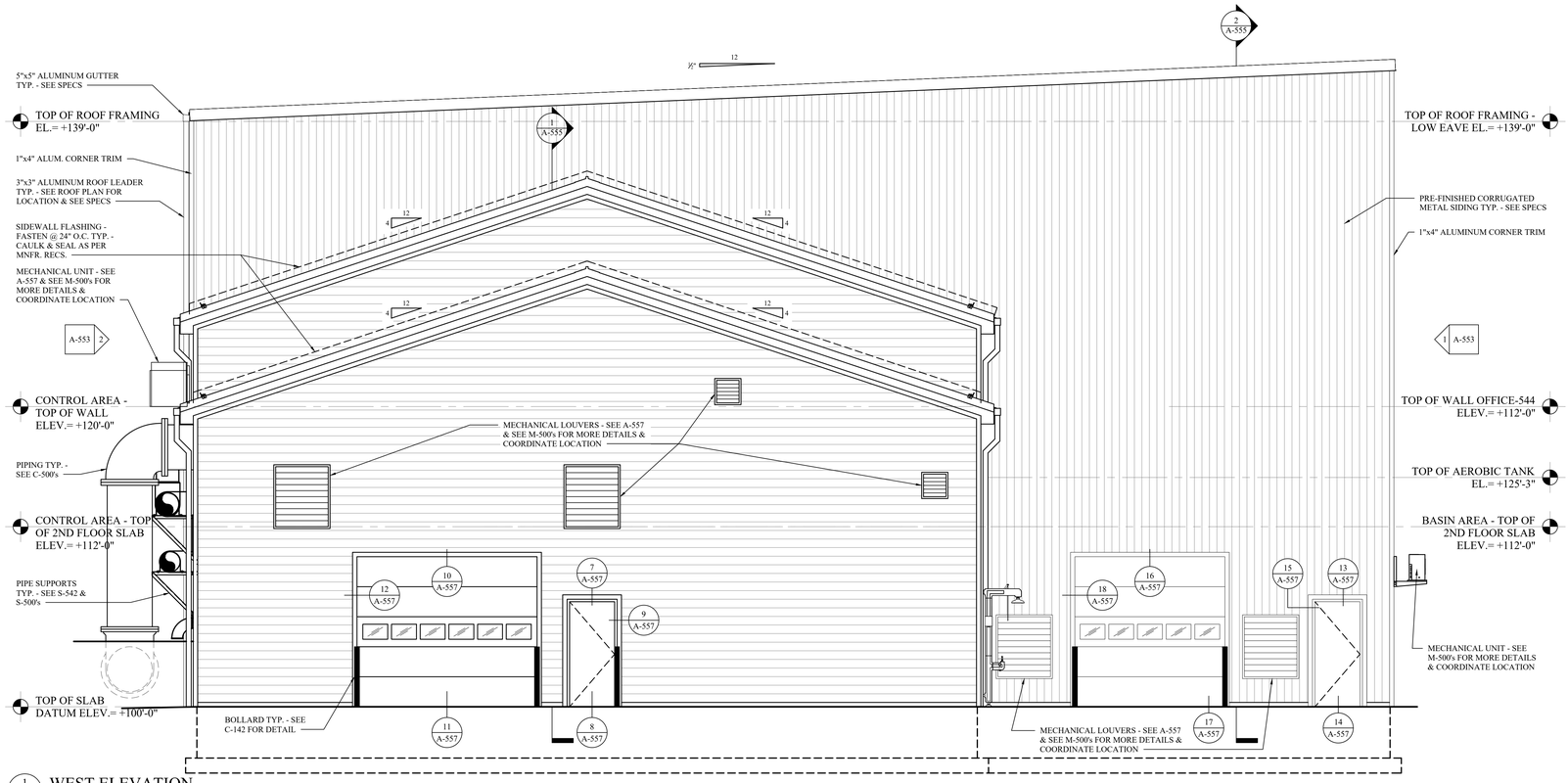
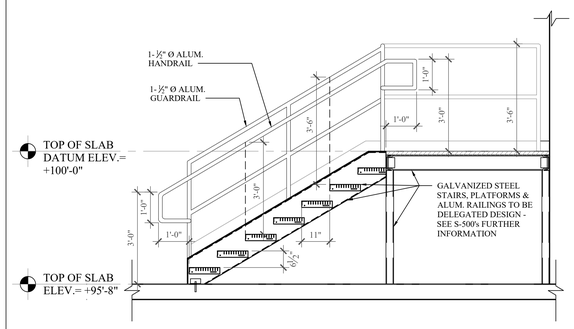
REVIEWED BY:	JZ, ML

SHEET NO.
A-553

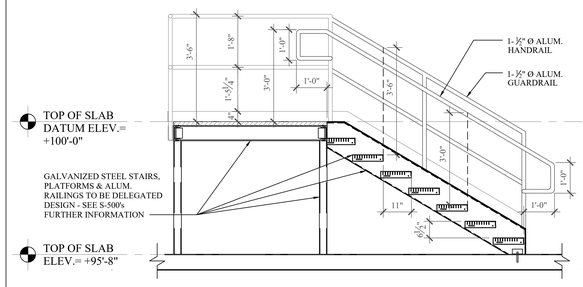
PROJECT # 18-732 PHASE #



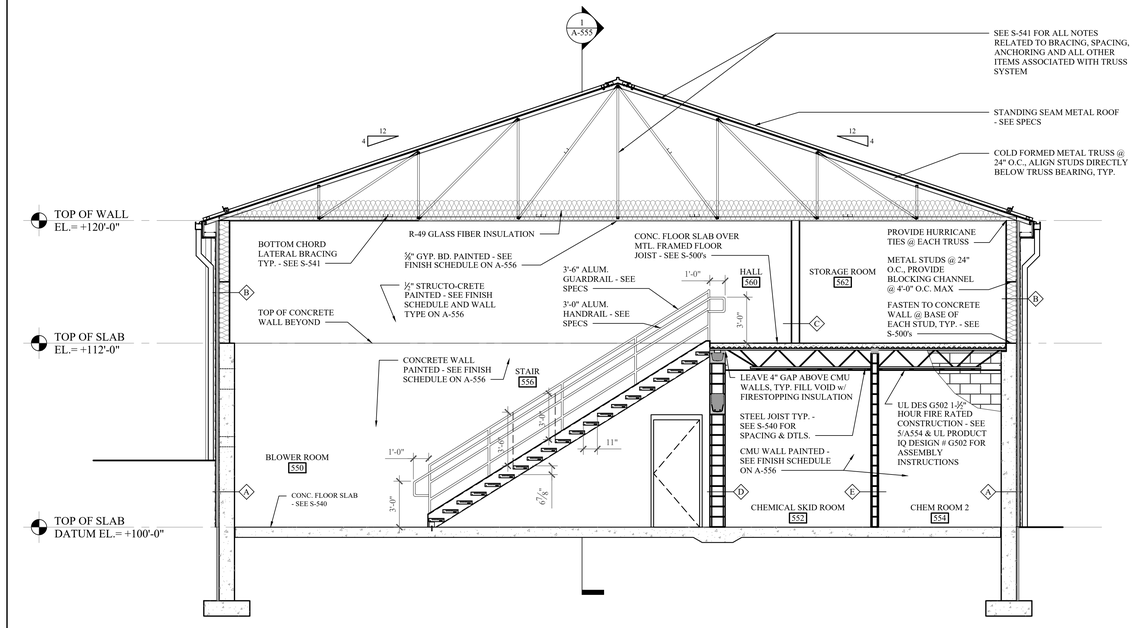
1 A-554 WEST ELEVATION
SCALE: 1/4" = 1'-0"



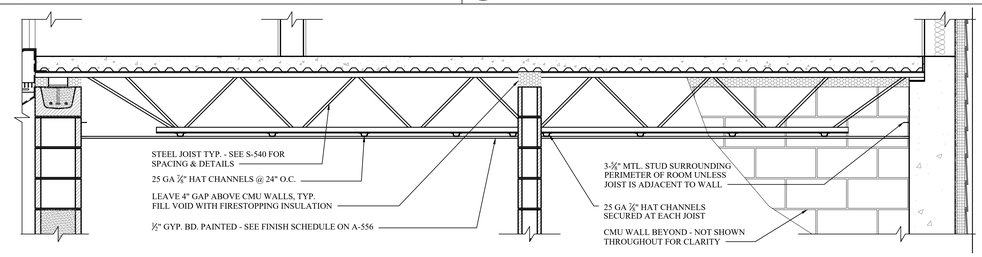
3 A-554 STAIR SECTION
SCALE: 1/2" = 1'-0"



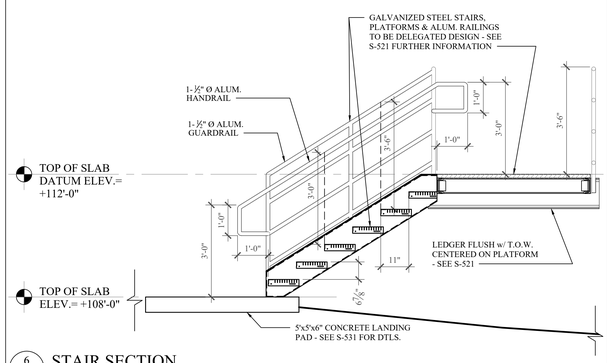
4 A-554 STAIR SECTION
SCALE: 1/2" = 1'-0"



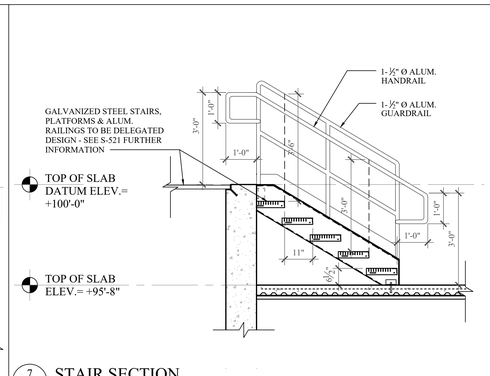
2 A-554 BUILDING SECTION
SCALE: 1/4" = 1'-0"



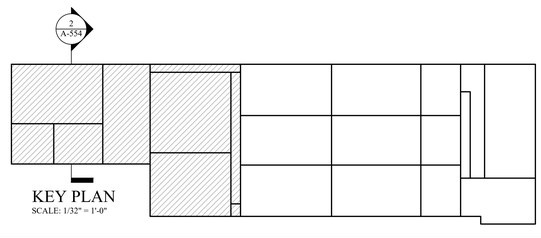
5 A-554 1-1/2 HOUR FIRE RATED CEILING - MODEL: UL DES G502
SCALE: 1/2" = 1'-0"



6 A-554 STAIR SECTION
SCALE: 1/2" = 1'-0"



7 A-554 STAIR SECTION
SCALE: 1/2" = 1'-0"



MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR BUILDING - EXTERIOR ELEVATION & SECTIONS

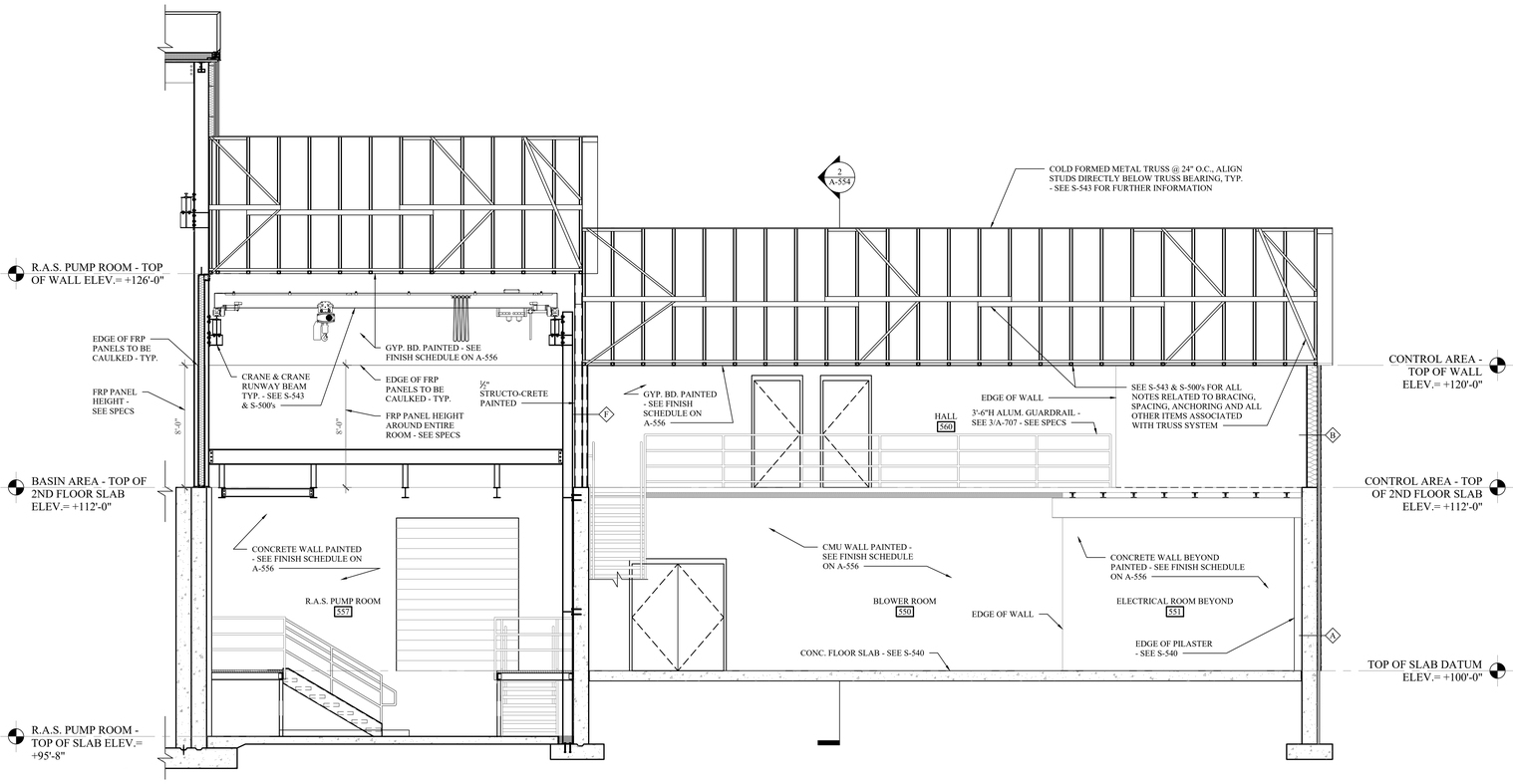
REVISIONS

NO.	DESCRIPTION	DATE

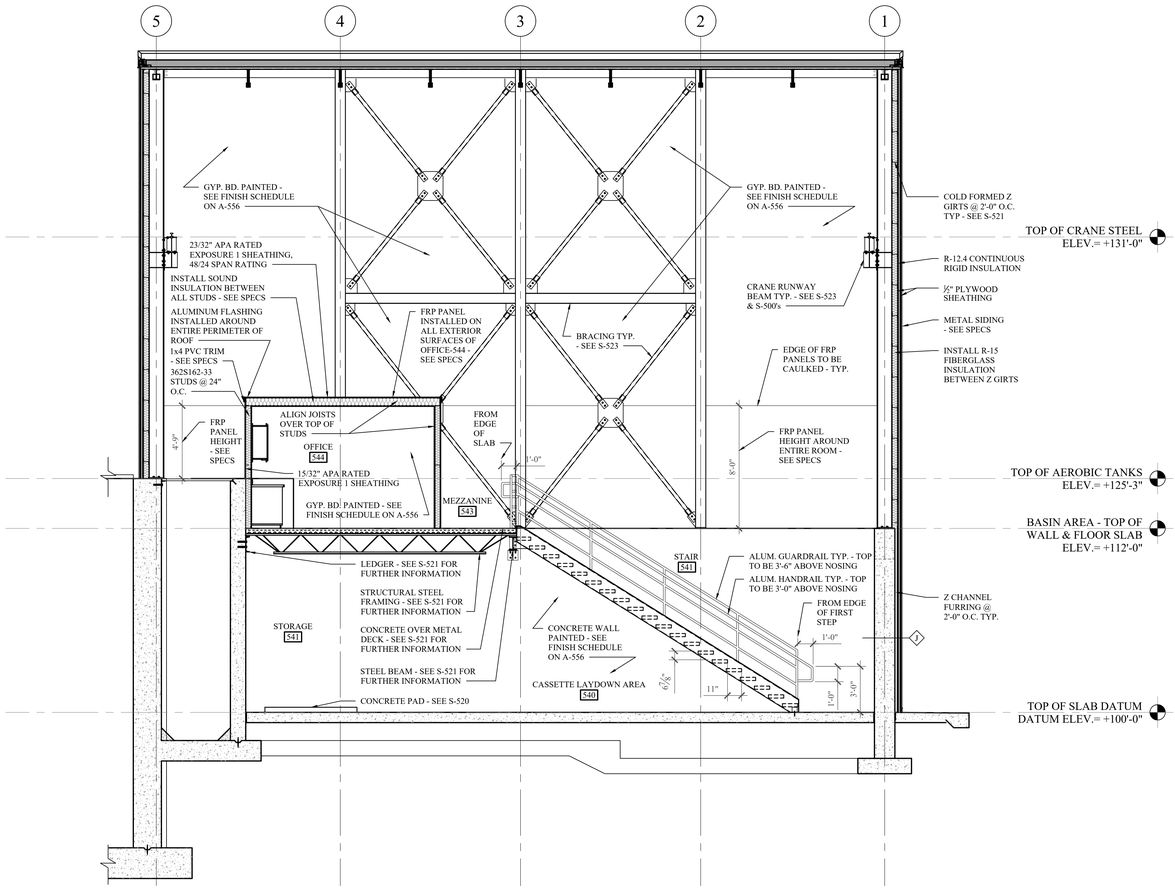
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
A-554

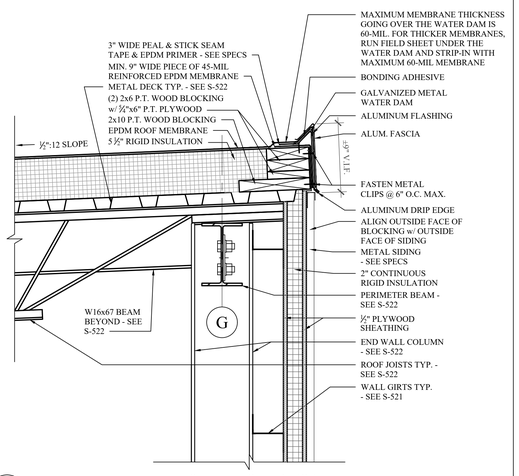
PROJECT # 18-732 PHASE #



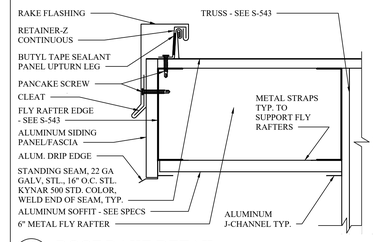
1 A-555 BUILDING SECTION
SCALE: 1/4" = 1'-0"



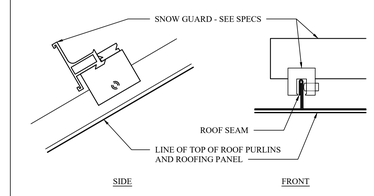
2 A-555 BUILDING SECTION
SCALE: 1/4" = 1'-0"



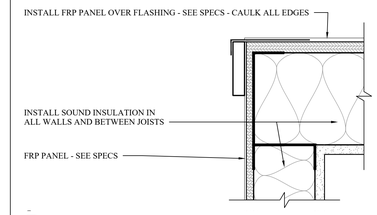
3 A-555 ROOF EDGE DETAIL
SCALE: 1-1/2" = 1'-0"



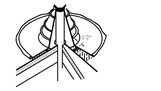
4 A-555 ROOF RAKE DETAIL
SCALE: 1 1/2"= 1'-0"

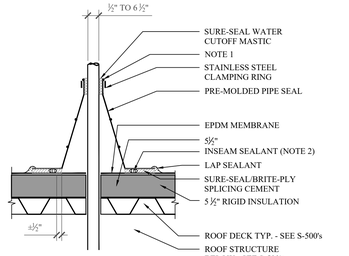


5 A-555 SNOW GUARD DETAIL
SCALE: N.T.S.



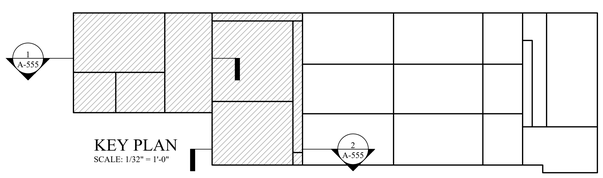
6 A-555 ROOF EDGE DETAIL
SCALE: 3"= 1'-0"





NOTES:
1. PRE-MOLDED PIPE SEAL MUST HAVE INTACT RIB AT TOP EDGE, REGARDLESS OF PIPE DIAMETER.
2. APPLY INSEAM SEALANT ½" FROM INSIDE EDGE OF PIPE SEAL FLANGE.
3. DECK FLANGES OF THE PRE-MOLDED PIPE FLASHING SHALL NOT BE OVERLAPPED, CUT OR APPLIED OVER ANY ANGLE CHANGE.

7 A-555 PLUMBING VENT THRU ROOF DETAIL
SCALE: N.T.S.



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
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New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR BUILDING - BUILDING SECTIONS & ROOF DETAILS

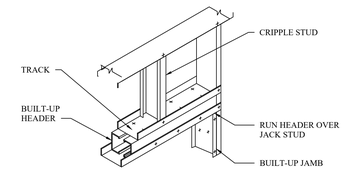
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

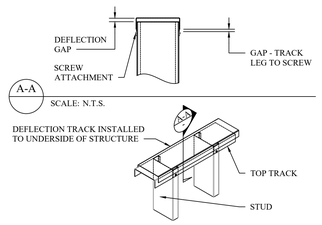
SHEET NO.
A-555

PROJECT # 18-732 PHASE #

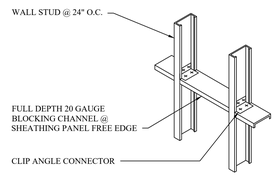


NOTE: FASTEN BUILT-UP MEMBERS TOGETHER @ 12" O.C. MAX

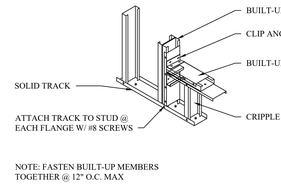
1 / A-556 TYPICAL BOX HEADER TO JAMB
SCALE: N.T.S.



7 / A-556 DEFLECTION TRACK-IN-TRACK
SCALE: N.T.S.

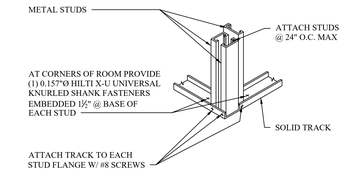


2 / A-556 TYPICAL BLOCKING
SCALE: N.T.S.

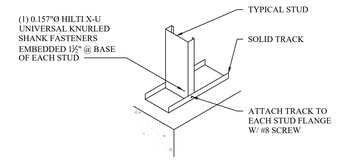


NOTE: FASTEN BUILT-UP MEMBERS TOGETHER @ 12" O.C. MAX

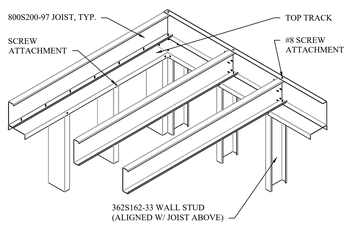
3 / A-556 TYPICAL SILL
SCALE: N.T.S.



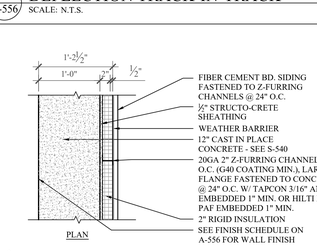
4 / A-556 TYPICAL CORNER
SCALE: N.T.S.



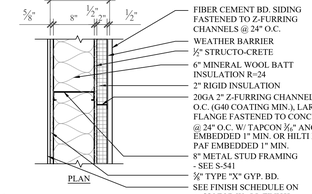
5 / A-556 TYPICAL STUD BASE
SCALE: N.T.S.



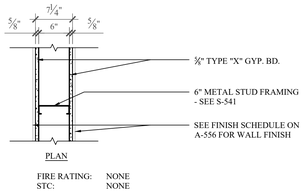
6 / A-556 TYPICAL FLOOR FRAMING
SCALE: N.T.S.



A / EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



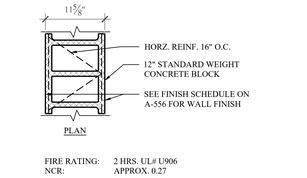
B / EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE
STC: NONE

STUD & WALL BOARD TO EXTEND TO UNDERSIDE OF TRUSS FINISH TO EXTEND TO UNDERSIDE OF TRUSS

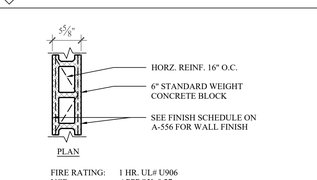
C / INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: 2 HRS. UL# U906
NCR: APPROX. 0.27

NOTE:
SEAL SMOKE TIGHT W/MORTAR OR FIRESTOPPING INSULATION

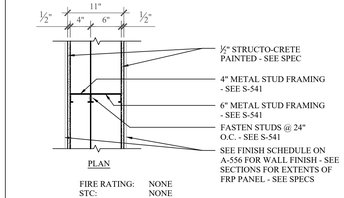
D / INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: 1 HR. UL# U906
NCR: APPROX. 0.27

NOTE:
SEAL SMOKE TIGHT W/MORTAR OR FIRESTOPPING INSULATION

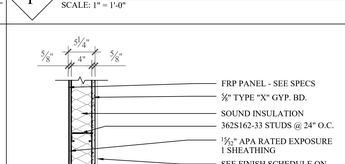
E / INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE
STC: NONE

STUD & SHEATHING TO EXTEND TO UNDERSIDE OF TRUSS FINISH TO EXTEND TO UNDERSIDE OF TRUSS

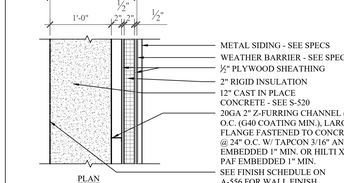
F / INTERIOR BEARING WALL TYPE
SCALE: 1" = 1'-0"



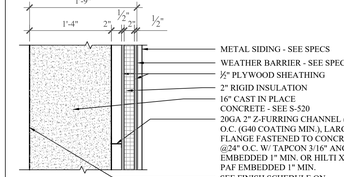
FIRE RATING: NONE
STC: APPROX. 50

STUD & SHEATHING TO EXTEND TO UNDERSIDE OF JOISTS FINISH TO EXTEND TO UNDERSIDE OF CEILING

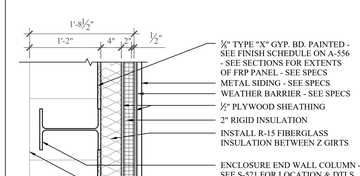
G / INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



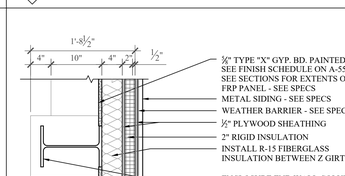
H / EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



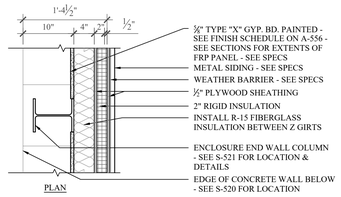
J / EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



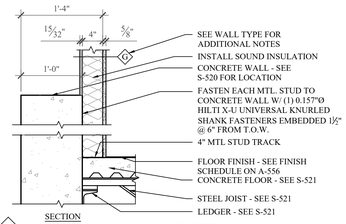
K / EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



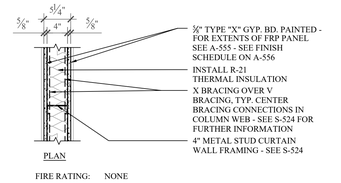
L / EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



M / EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



N / INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE

STUD & BALL BOARD TO EXTEND TO UNDERSIDE OF BRACE BEAM - SEE S-524
SEE A-555 FOR EXTENTS OF WALL FINISH

P / INTERIOR WALL TYPE
SCALE: 1" = 1'-0"

DOOR SCHEDULE									
DOOR No.	LOCATION	DOOR SIZE	DOOR TYPE	FRAME TYPE	SADDLE	HARDWARE GROUP	FIRE RATING	DETAILS	REMARKS
540A	EXTERIOR - ROOM 540	3'-0" x 7'-0" x 1¾"	B	3	ALUM.	2	-	13,14+15/A-557	1,2
540B	EXTERIOR - ROOM 540	10'-0" x 10'-0"	BY SECTIONAL OVERHEAD DOOR MANUFACTURER					16,17+18/A-557	1,3
540C	ROOM 559 - ROOM 540	3'-0" x 7'-0" x 1¾"	A	4	-	6	-	4,5+6/A-558	
544	ROOM 543 - ROOM 544	3'-0" x 7'-0" x 1¾"	A	4	ALUM.	4	-	1,2+3/A-558	
545	EXTERIOR - ROOM 545	3'-0" x 7'-0" x 1¾"	B	3	ALUM.	11	-	22,23+24/A-557	1,2
546	EXTERIOR - ROOM 546	3'-0" x 7'-0" x 1¾"	B	3	ALUM.	3	-	15,16+17/A-558	1,2
550A	EXTERIOR - ROOM 550	3'-0" x 7'-0" x 1¾"	B	3	ALUM.	2	-	7,8+9/A-557	1,2
550B	EXTERIOR - ROOM 550	12'-0" x 10'-0"	BY SECTIONAL OVERHEAD DOOR MANUFACTURER					10,11+12/A-557	1
550C	ROOM 558 - ROOM 550	3'-0" x 7'-0" x 1¾"	A	4	-	6	-	4,5+6/A-558	
552	ROOM 550 - ROOM 552	(2) 3'-0" x 7'-0" x 1¾"	E	2	-	5	C-LABEL	7,8+9/A-558	
553	EXTERIOR - ROOM 553	(2) 2'-10" x 7'-0" x 1¾"	C	1	ALUM.	1	-	22,23+24/A-558	1,2
554	EXTERIOR - ROOM 554	(2) 2'-10" x 7'-0" x 1¾"	C	1	ALUM.	1	-	22,23+24/A-558	1,2
555	EXTERIOR - ROOM 555	(2) 2'-10" x 7'-0" x 1¾"	C	1	ALUM.	1	-	22,23+24/A-558	1,2
557	EXTERIOR - ROOM 557	8'-0" x 10'-0"	BY COILING OVERHEAD DOOR MANUFACTURER					19,20+21/A-557	1
559	EXTERIOR - ROOM 559	3'-0" x 7'-0" x 1¾"	B	3	ALUM.	2	-	7+9/A-557 & 25/A-558	1,2
561	ROOM 560 - ROOM 561	3'-0" x 7'-0" x 1¾"	D	5	-	4	-	25,26+27/A-557	
562	ROOM 560 - ROOM 562	3'-0" x 7'-0" x 1¾"	D	5	-	4	-	25,26+27/A-557	
563	ROOM 560 - ROOM 563	3'-0" x 7'-0" x 1¾"	D	5	-	4	-	25,26+27/A-557	

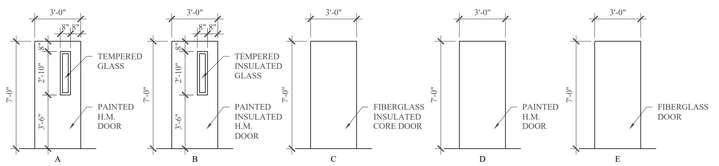
REMARKS:
1 - DOOR TO HAVE INSULATED CORE
2 - DOOR FRAME TO HAVE THERMAL BREAK
3 - LOW HEAD-ROOM TRACK TO BE INSTALLED AND COORDINATED WITH MANUFACTURER

WINDOW SCHEDULE							
WINDOW No.	WINDOW SIZE (W x H)	WINDOW TYPE	FRAME TYPE	FIRE RATING	QTY.	DETAILS	REMARKS
A	3'-8" x 3'-10"	FIXED	H.M.	-	2	12,13+14/A-558	1

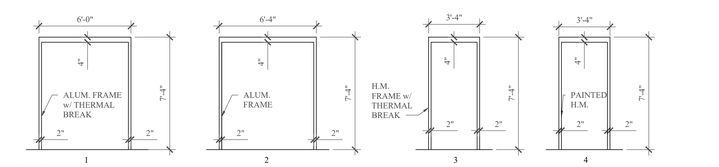
REMARKS:
1 - PAINTED w/ RUST PREVENTATIVE PAINT

FINISH SCHEDULE																
		FLOOR				BASE	WALL							CEILING		
ROOM No.	N= NORTH E = EAST S = SOUTH W = WEST X = ALL ROOM NAME	CONCRETE - SEALED	GALVANIZED GRATED PLATFORM	ALUMINUM PLANK COVERS	VINYL COMPOSITE (VCT)	4" RESILIENT COVE	NONE	⅝" GYP. BD. - PAINTED	EXPOSED STRUCTURE - PAINTED	FRP PLASTIC PANEL	CONCRETE - PAINTED	CMU. - PAINTED	½" STRUCTO-CRETE - PAINTED	⅝" GYP. BD. - PAINTED	EXPOSED STRUCTURE - PAINTED	REMARKS
540	CASSETTE LAYDOWN AREA	X					X	X	X	S,W	X				X	1,2,3
541	STORAGE	X					X		X		X				X	1
542	STAIR		X				X				S				X	1
543	MEZZANINE	X					X	S	X	E,S	E				X	1,2,3
544	OFFICE				X	X		X						X		3
545	GRATED WALKWAY	X	X				X	X	X	X					X	1,2,3
546	MEMBRANE ZONES	X		X			X	X	X	N,W	E				X	1,2,3
550	BLOWER ROOM	X					X	X			N,E,W	S	E	X		3
551	ELECTRICAL ROOM	X					X				S,W	N,E			X	1,3
552	CHEMICAL SKID ROOM	X					X				E	N,S,W		X		3
553	CHEM ROOM 1	X					X				S	N,E,W		X		3
554	CHEM ROOM 2	X					X				S	N,E,W		X		3
555	CHEM ROOM 3	X					X				E,S	N,W		X		3
556	STAIR		X				X				E			X		
557	R.A.S. PUMP ROOM	X					X	N,E,S	X	X	X		W	X		1,2,3
558	STAIR		X				X				W			X		1,2,3
559	STAIR		X				X				E,S			X		1,2,3
560	HALL	X				X		S,W					E	X		3
561	ELECTRICAL ROOM	X				X		X						X		3
562	STORAGE ROOM	X				X		X						X		3
563	MECHANICAL ROOM	X				X		X						X		3

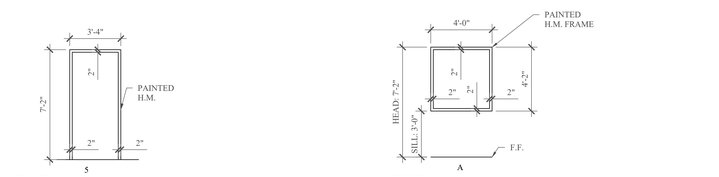
REMARKS:
1 : PAINTING ALL EXPOSED STEEL STRUCTURE INCLUDING BAR JOISTS, UNDERSIDE OF ROOF DECKING AND STRUCTURAL STEEL BEAMS & COLUMNS
2 : FOR EXTENTS OF FRP PLASTIC PANEL - SEE SECTIONS ON A-555 - CAULK AND SEAL ALL EDGES
3 : CAULK AND SEAL ALL WINDOW AND DOOR HEADS, JAMBS AND SILLS



DOORS



FRAMES



FRAMES

WINDOW

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR BUILDING - TYPICAL FRAMING DETAILS, WALL TYPES & DOOR, WINDOW & FINISH SCHEDULES

REVISIONS

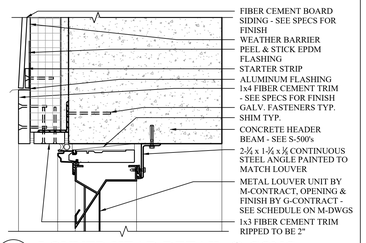
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

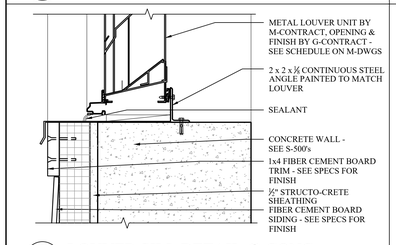
SHEET NO.

A-556

PROJECT # 18-732 PHASE #



1 A-557 LOUVER HEAD DETAIL @ CONC.
SCALE: 3" = 1'-0"



2 A-557 LOUVER SILL DETAIL @ CONC.
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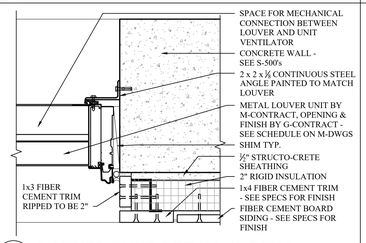

3 A-557 LOUVER JAMB DETAIL @ CONC.
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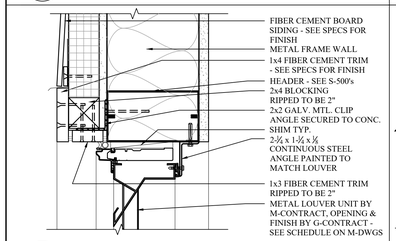

4 A-557 LOUVER HEAD DETAIL @ MTL FRAME
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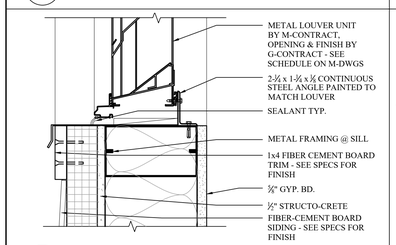

5 A-557 LOUVER SILL DETAIL @ MTL FRAME
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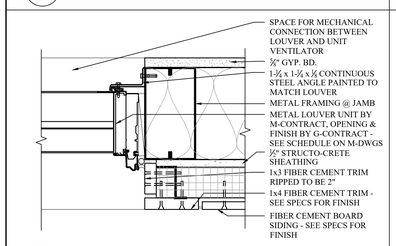

6 A-557 LOUVER JAMB DETAIL @ MTL FRAME
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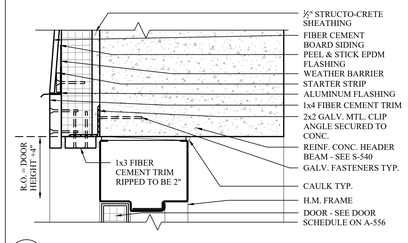
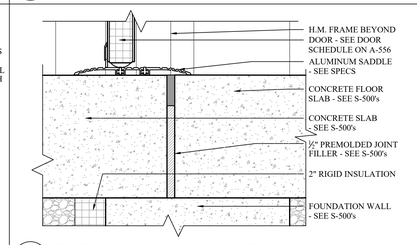


7 A-557 EXTERIOR DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



8 A-557 EXTERIOR DOOR SILL DETAIL
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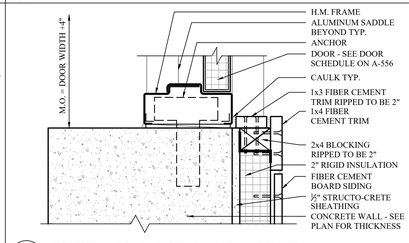

9 A-557 EXTERIOR DOOR JAMB DETAIL
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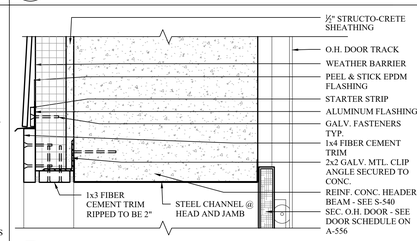

10 A-557 GARAGE DOOR HEAD DETAIL
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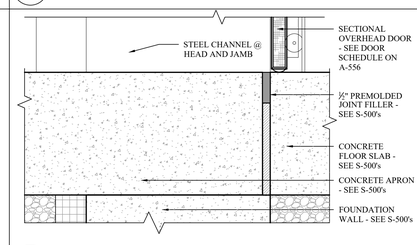

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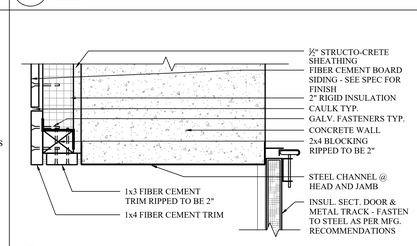

12 A-557 GARAGE DOOR JAMB DETAIL
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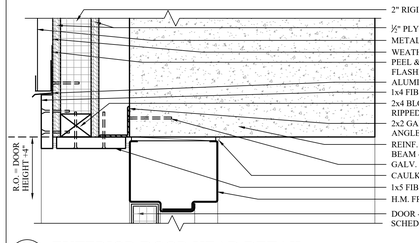

16 A-557 GARAGE DOOR HEAD DETAIL
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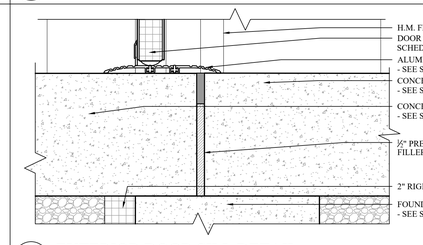

14 A-557 EXTERIOR DOOR HEAD DETAIL
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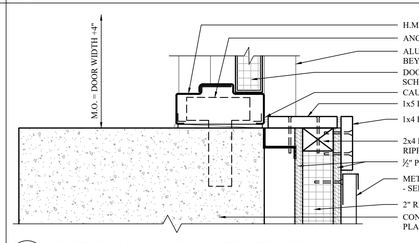

15 A-557 EXTERIOR DOOR JAMB DETAIL
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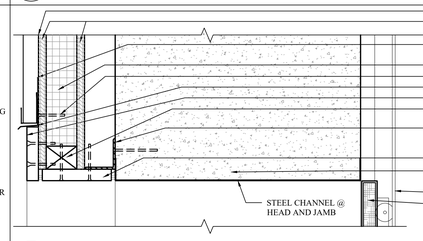

16 A-557 GARAGE DOOR HEAD DETAIL
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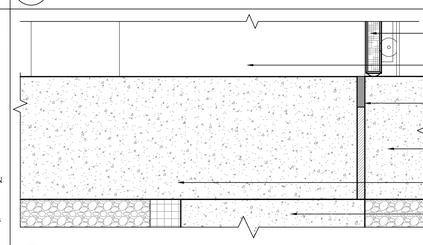

17 A-557 GARAGE DOOR SILL DETAIL
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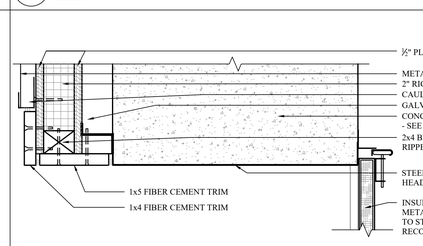
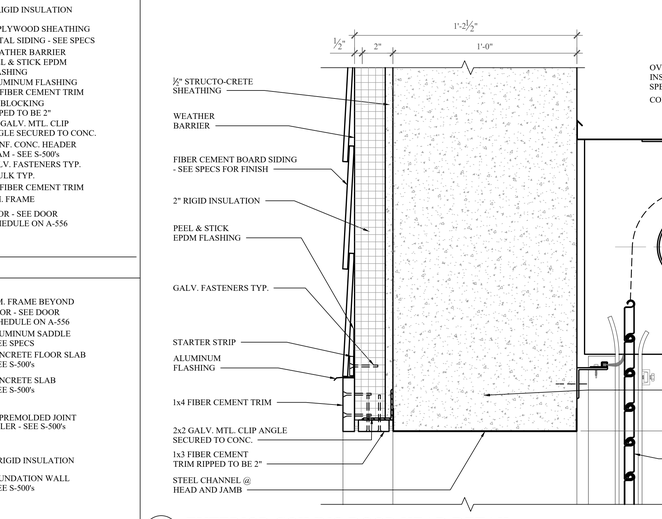
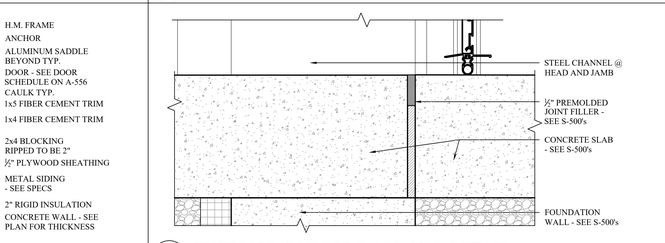


18 A-557 GARAGE DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



19 A-557 EXTERIOR COILING DOOR HEAD DETAIL
SCALE: 19



20 A-557 EXTERIOR COILING DOOR SILL DETAIL
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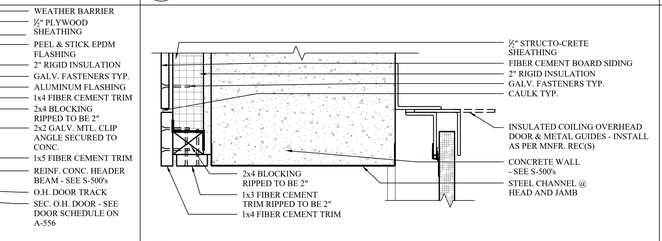

21 A-557 EXTERIOR COILING DOOR JAMB DETAIL
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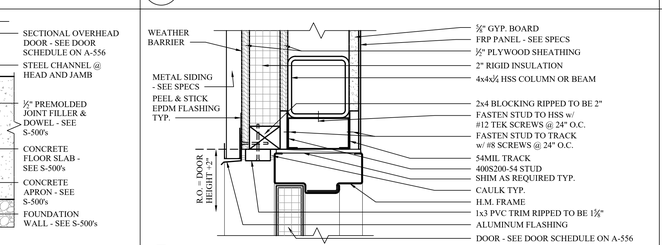

22 A-557 EXTERIOR DOOR HEAD DETAIL
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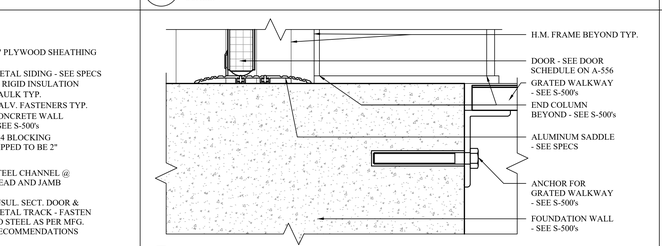

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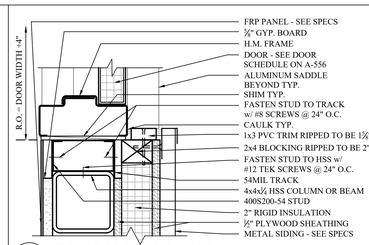
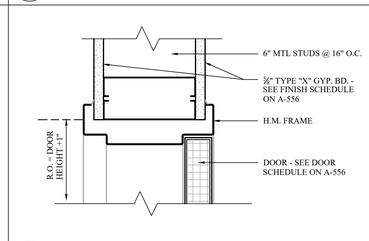


24 A-557 INTERIOR DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



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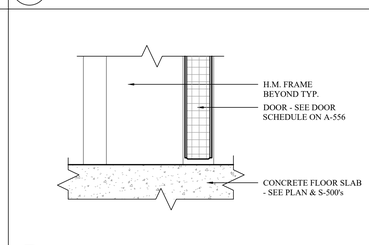

26 A-557 INTERIOR DOOR SILL DETAIL
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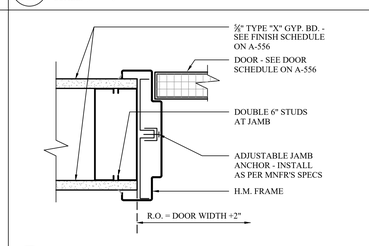

27 A-557 INTERIOR DOOR JAMB DETAIL
SCALE: 3" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

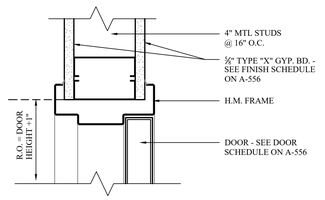
MBR BUILDING - LOUVER DETAILS & DOOR DETAILS

REVISIONS

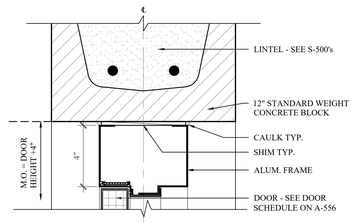
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

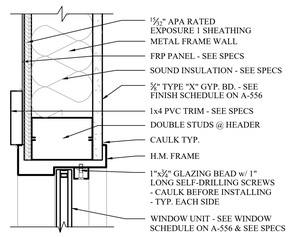
SHEET NO.
A-557
PROJECT # 18-732 PHASE #



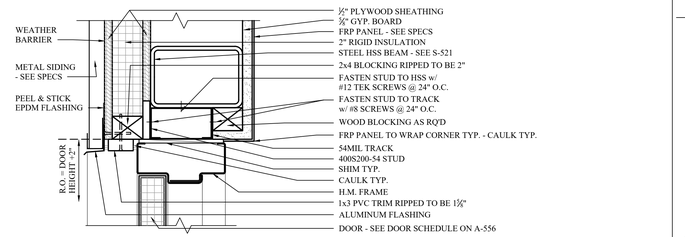
1 A-558 INTERIOR DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



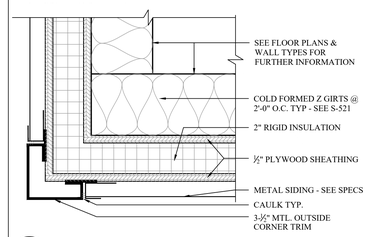
7 A-558 INTERIOR DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



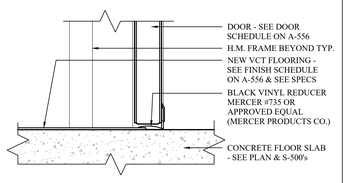
12 A-558 INTERIOR WINDOW HEAD DETAIL
SCALE: 3" = 1'-0"



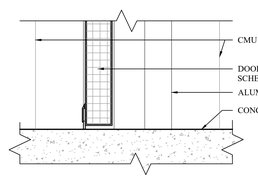
15 A-558 EXTERIOR DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



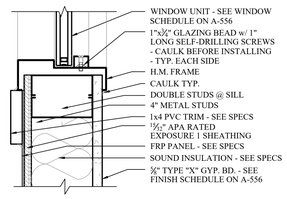
21 A-558 EXTERIOR MTL. SIDING - CORNER DTL.
SCALE: 3" = 1'-0"



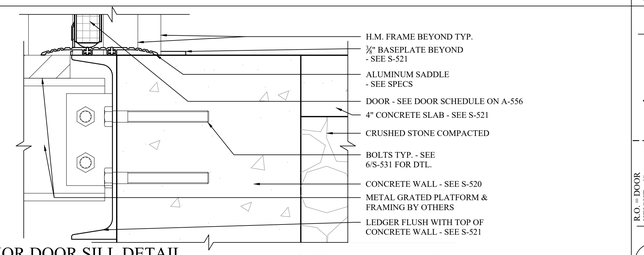
2 A-558 INTERIOR DOOR SILL DETAIL
SCALE: 3" = 1'-0"



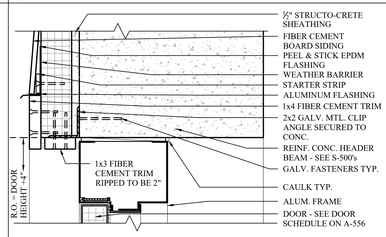
8 A-558 INTERIOR DOOR SILL DETAIL
SCALE: 3" = 1'-0"



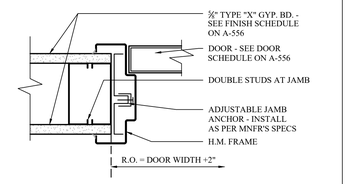
13 A-558 INTERIOR WINDOW SILL DETAIL
SCALE: 3" = 1'-0"



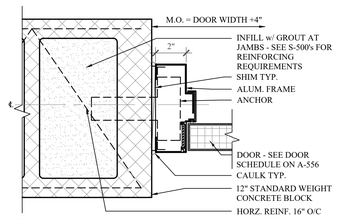
16 A-558 EXTERIOR DOOR SILL DETAIL
SCALE: 3" = 1'-0"



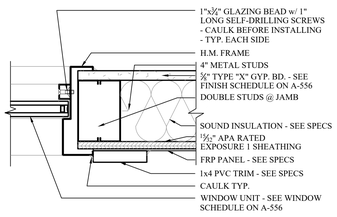
22 A-558 EXTERIOR DOOR HEAD DETAIL
SCALE: 3" = 1'-0"



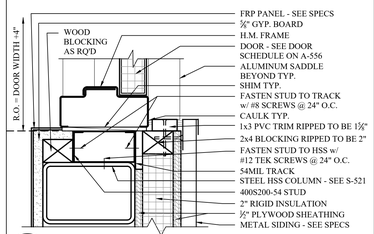
3 A-558 INTERIOR DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



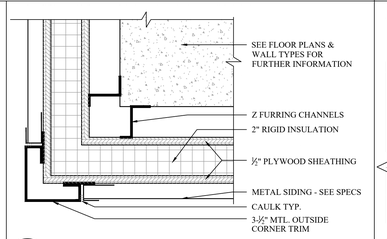
9 A-558 INTERIOR DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



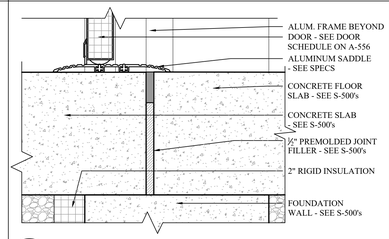
14 A-558 INTERIOR WINDOW JAMB DETAIL
SCALE: 3" = 1'-0"



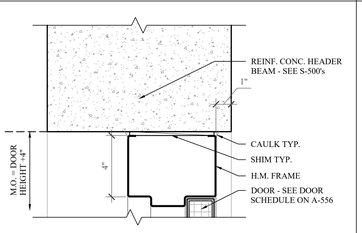
17 A-558 EXTERIOR DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



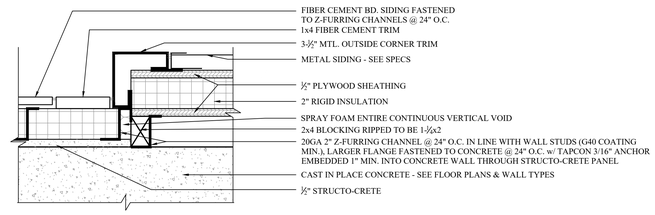
18 A-558 EXTERIOR MTL. SIDING - CORNER DTL.
SCALE: 3" = 1'-0"



23 A-558 EXTERIOR DOOR SILL DETAIL
SCALE: 3" = 1'-0"

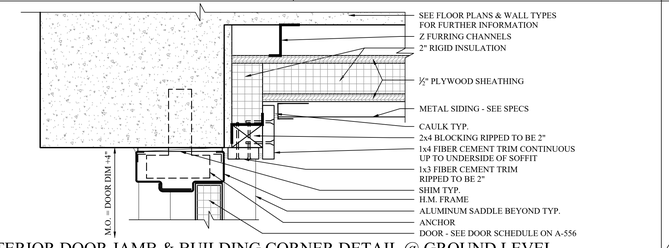


4 A-558 INTERIOR DOOR HEAD DETAIL
SCALE: 3" = 1'-0"

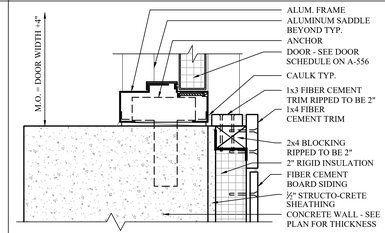


NOTE: SEE WALL TYPES ON A-556 FOR FURTHER INFORMATION

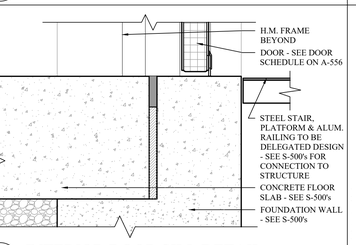
10 A-558 EXTERIOR WALL TRANSITION DETAIL
SCALE: 3" = 1'-0"



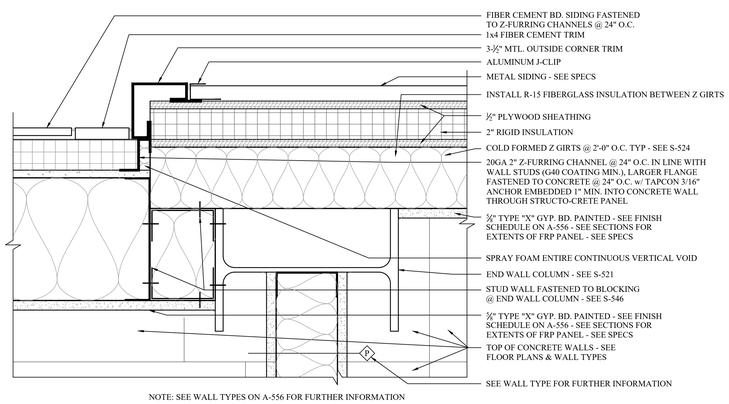
19 A-558 EXTERIOR DOOR JAMB & BUILDING CORNER DETAIL @ GROUND LEVEL
SCALE: 3" = 1'-0"



24 A-558 EXTERIOR DOOR JAMB DETAIL
SCALE: 3" = 1'-0"

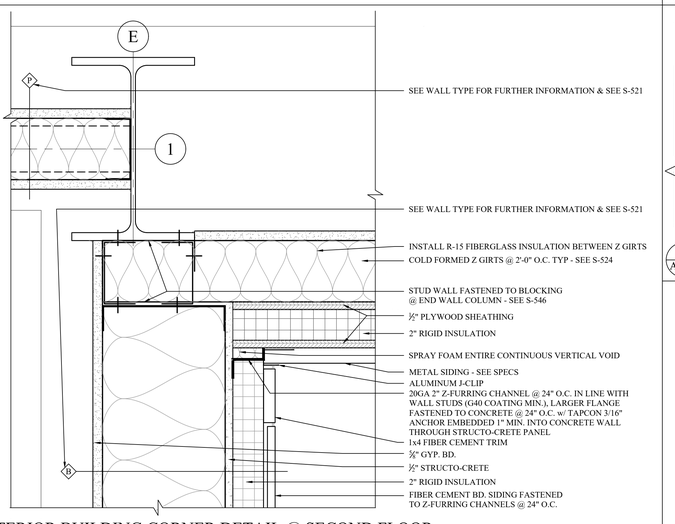


5 A-558 INTERIOR DOOR SILL DETAIL
SCALE: 3" = 1'-0"

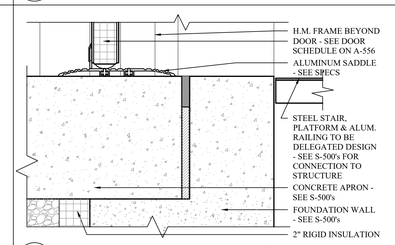


NOTE: SEE WALL TYPES ON A-556 FOR FURTHER INFORMATION

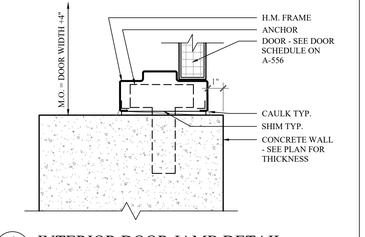
11 A-558 EXTERIOR WALL TRANSITION DETAIL @ END WALL COLUMN ON 2ND FLOOR
SCALE: 3" = 1'-0"



20 A-558 EXTERIOR BUILDING CORNER DETAIL @ SECOND FLOOR
SCALE: 3" = 1'-0"



25 A-558 EXTERIOR DOOR SILL DETAIL
SCALE: 3" = 1'-0"



6 A-558 INTERIOR DOOR JAMB DETAIL
SCALE: 3" = 1'-0"

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR BUILDING - DOOR, WINDOW & WALL DETAILS

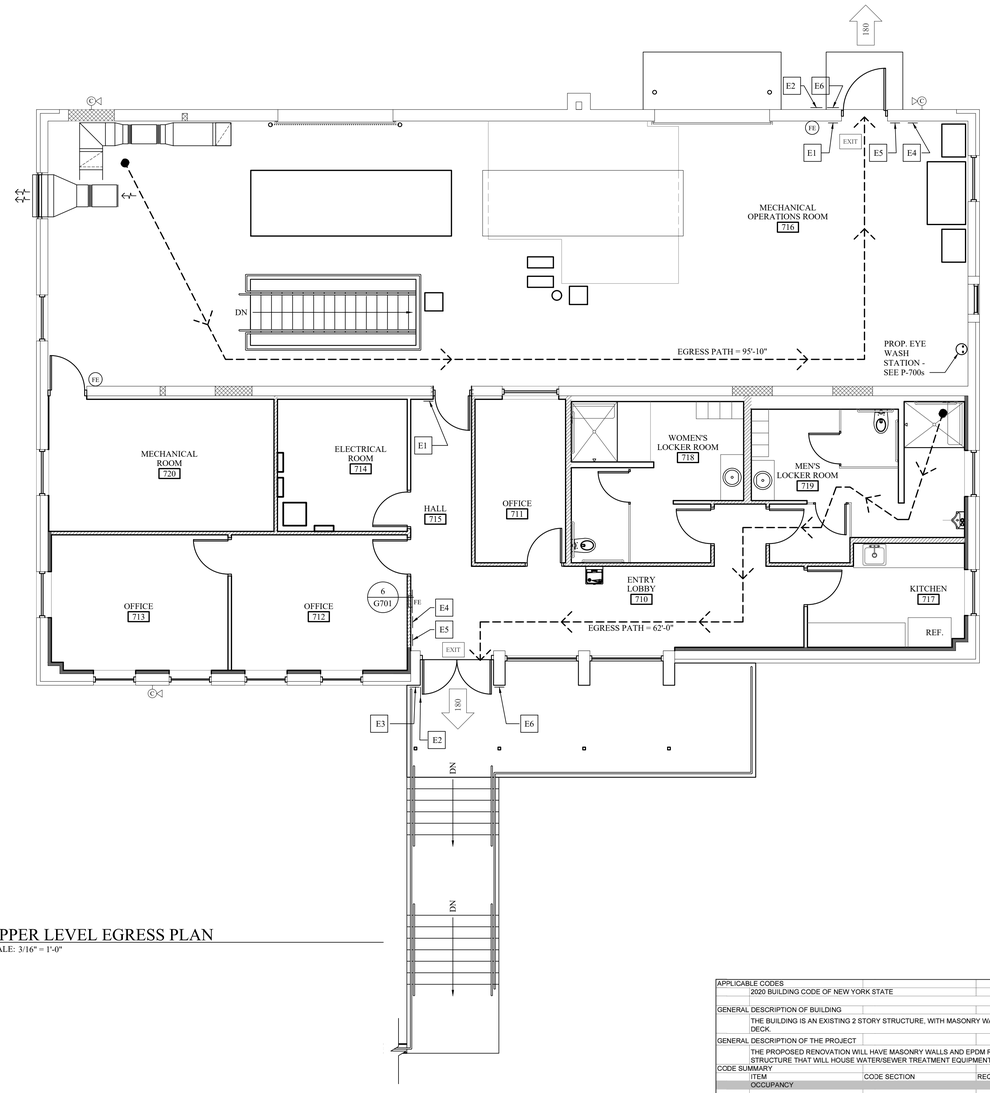
REVISIONS

NO.	DESCRIPTION	DATE

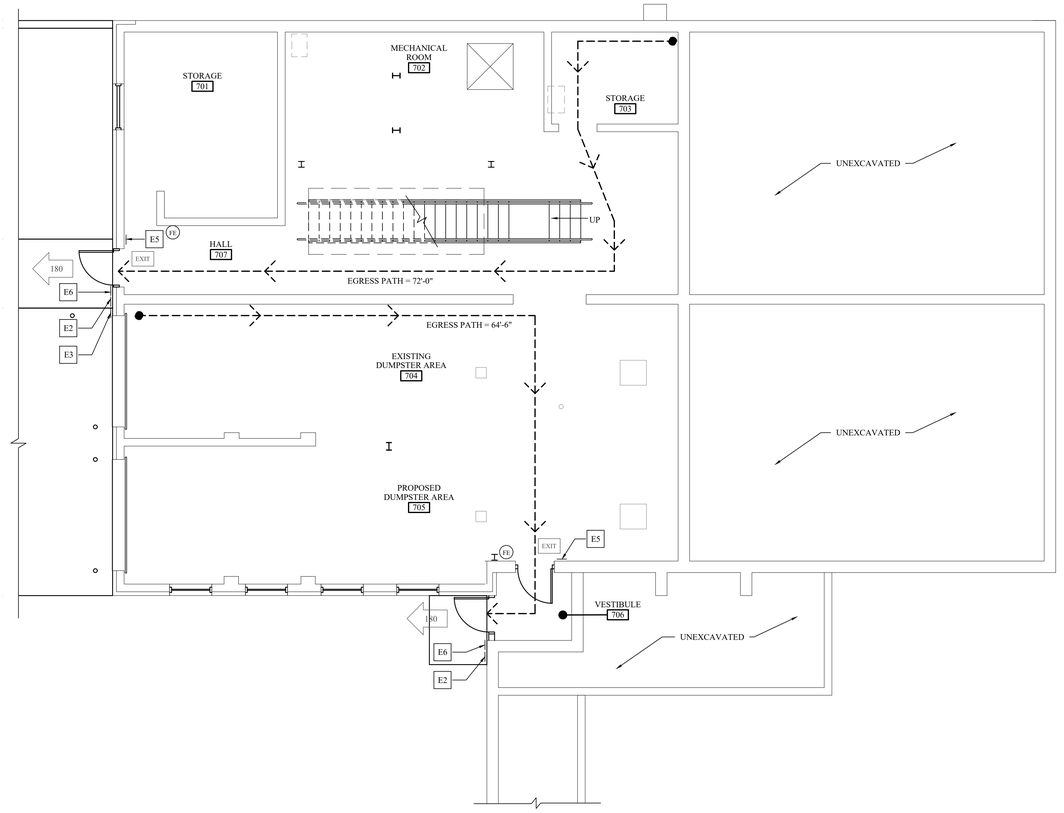
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
A-558

PROJECT # 18-732 PHASE #



1 G-701 UPPER LEVEL EGRESS PLAN
SCALE: 3/16" = 1'-0"



2 G-701 LOWER LEVEL EGRESS PLAN
SCALE: 3/16" = 1'-0"

PROJECT NORTH

TRUE NORTH

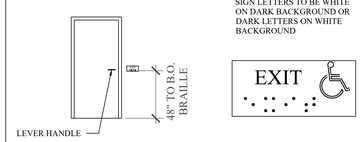
EGRESS PLAN LEGEND

E1	WALL MOUNTED EXIT SIGN - SEE DETAIL 3/G701
E2	TRUSS PLACARD DETAIL - SEE DETAIL 4/G701
E3	FIRE DEPARTMENT KNOXBOX - COORDINATE REQUIREMENTS w/ AUTHORITY HAVING JURISDICTION
E4	FIRE ALARM PANEL - SEE E-703
E5	FIRE ALARM PULL STATION - SEE E-702 & E-703
E6	CARD READER - SEE E-702 & E-703

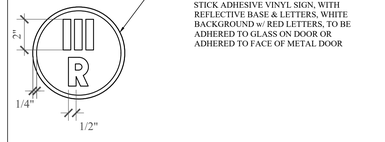
SYMBOLS LEGEND

	COMMON PATH OF EGRESS TRAVEL
#	INDICATES CAPACITY OF EXIT IN # OF PERSONS
EXIT	EXIT LIGHT LOCATION
FE	WALL MOUNTED FIRE EXTINGUISHER ON BRACKET
FE	FIRE EXTINGUISHER IN RECESSED WALL CABINET - SEE DETAIL 6/G701

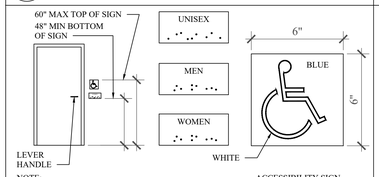
APPLICABLE CODES				
	2020 BUILDING CODE OF NEW YORK STATE			
GENERAL DESCRIPTION OF BUILDING				
	THE BUILDING IS AN EXISTING 2 STORY STRUCTURE, WITH MASONRY WALLS AND STRUCTURAL STEEL FRAMING AND METAL TRUSSES AND EPDM ROOFING ON METAL DECK.			
GENERAL DESCRIPTION OF THE PROJECT				
	THE PROPOSED RENOVATION WILL HAVE MASONRY WALLS AND EPDM ROOFING ON A METAL DECK. THE WATER/SEWER TREATMENT FACILITY BUILDING IS A 2 STORY STRUCTURE THAT WILL HOUSE WATER/SEWER TREATMENT EQUIPMENT, OFFICES, ETC.			
CODE SUMMARY				
	ITEM	CODE SECTION	REQUIRED / ALLOWED	PROVIDED	REMARKS
	OCCUPANCY				
	F-1	306.2			
	ACCESSORY STORAGE / MECHANICAL SPACE	311.1.1			
	GENERAL DESCRIPTION OF BUILDING				
	1 STORY	503, 504, TABLE 504.3			
	FLOOR AREA			4,011 SF	
	CONSTRUCTION			MASONRY BEARING WALLS WITH REINFORCED CONCRETE SLAB/ DECKING FOUNDATION WITH METAL TRUSS ROOF WITH METAL & EPDM ROOFING	
	OCCUPANCY SEPARATION				
	SINGLE OCCUPANCY	N/A		NONE	
	GENERAL BUILDING HEIGHT AND FIRE AREAS -- BASED ON TYPE II b CONSTRUCTION				
	F-1 OCCUPANCY HEIGHT	TABLE 504.4	2 STORIES	2 STORY	
	F-1 OCCUPANCY AREA	TABLE 506.2	5,500 SF	4,011 SF FLOOR AREA	
	TYPES OF CONSTRUCTION				
	TYPE 3b	TABLE 601			MASONRY, STEEL COLUMNS &
	PRIMARY STRUCTURAL FRAME	TABLE 601	0	0	STEEL BEAMS
	BEARING WALLS - EXTERIOR	TABLE 601	2	2	MASONRY WALLS
	BEARING WALLS - INTERIOR	TABLE 601	0	N/A	MASONRY
	NONBEARING WALLS AND PARTITIONS - EXTERIOR	TABLE 601	SEE BELOW - TABLE 602		
	NONBEARING WALLS AND PARTITIONS - INTERIOR	TABLE 601	0	0	
	FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	TABLE 601	0	0	FIRST FLOOR IS A REINFORCED CONC. SLAB ON GRADE. 2ND FLOOR IS POURED CONC. ON MTL. DECK ON STRUCTURAL STEEL
	ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	TABLE 601	0	0	METAL ROOF TRUSSES w/ MTL DECK & EPDM ROOFING
	FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE				
	FIRE SEPARATION DISTANCE	TABLE 602	GREATER THAN 30 FEET	N/A	NO RATING REQUIRED
	FIRE-RESISTANCE RATED CONSTRUCTION				
	EXTERIOR WALLS	704	N/A		
	FIRE WALLS	705	N/A		
	FIRE BARRIERS	706	N/A		
	SHAFT ENCLOSURES	707.3.1	N/A	N/A	
	FIRE PARTITIONS	708	N/A		
	INTERIOR FINISHES				
	F-1 OCCUPANCY				
	VERTICAL EXITS AND PASSAGEWAYS	TABLE 803.13	NO RESTRICTIONS	N/A	
	EXIT ACCESS CORRIDORS AND OTHER EXITWAYS	TABLE 803.13	NO RESTRICTIONS	N/A	
	ROOM AND ENCLOSED SPACES	TABLE 803.13	NO RESTRICTIONS	N/A	
	FIRE PROTECTION SYSTEMS				
	AUTOMATIC SPRINKLER SYSTEMS	903.2.7	NOT REQUIRED	N/A	
	STANDPIPE SYSTEMS	905	N/A	NONE	
	FIRE ALARM SYSTEM	907.2.4	N/A	NONE	
	MEANS OF EGRESS				
	OCCUPANT LOAD	TABLE 1004.1.2	100 SF / OCCUPANT	4,011 / 100 = 41 PEOPLE	
	EGRESS WIDTH - STAIRS	1005.3.1	0.3 " PER OCCUPANT	N/A	
	EGRESS WIDTH - OTHER	1005.3.2	0.2" PER OCCUPANT	DOORS 36" WIDE / .2 = 180 CAPACITY AT EACH EXIT DOOR	
	MEANS OF EGRESS ILLUMINATION	1008	REQUIRED	PROVIDED	
	NUMBER OF EXITS	TABLE 1006.2.1	MAX OCCUPANT LOAD FOR ONE EXIT = 49	ONE EXIT PROVIDED FOR OCCUPANT LOAD = 13	
	ACCESSIBLE MEANS OF EGRESS	1009	1 REQUIRED	1 PROVIDED	
	AREA OF REFUGE	1009.6	N/A	N/A	
	EXIT ACCESS	1016	N/A	N/A	
	EXIT TRAVEL DISTANCE	TABLE 1017.2	300 FEET	LESS THAN 100 FEET	
	ACCESSIBILITY				
	GENERAL ACCESSIBILITY REQUIREMENTS	1101	REQUIRED	PROVIDED	
	PLUMBING FACILITIES				
	F-1 OCCUPANCY	TABLE 2902.1	NOT REQUIRED FOR F OCCUPANCY PER 2902.3.3 IF TOILET FACILITIES ARE WITHIN 500 FEET	N/A	



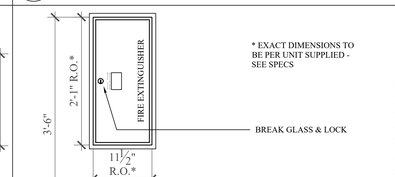
3 G-701 ACCESSIBLE EXIT SIGN DETAIL
SCALE: N.T.S.



4 G-701 TRUSS PLACARD DETAIL
SCALE: N.T.S.



5 G-701 ACCESSIBLE SIGN DETAIL
SCALE: N.T.S.



6 G-701 FIRE EXTINGUISHER DETAIL
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - LOWER & UPPER LEVEL EGRESS PLANS, CODE ANALYSIS & DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML
SHEET NO.	

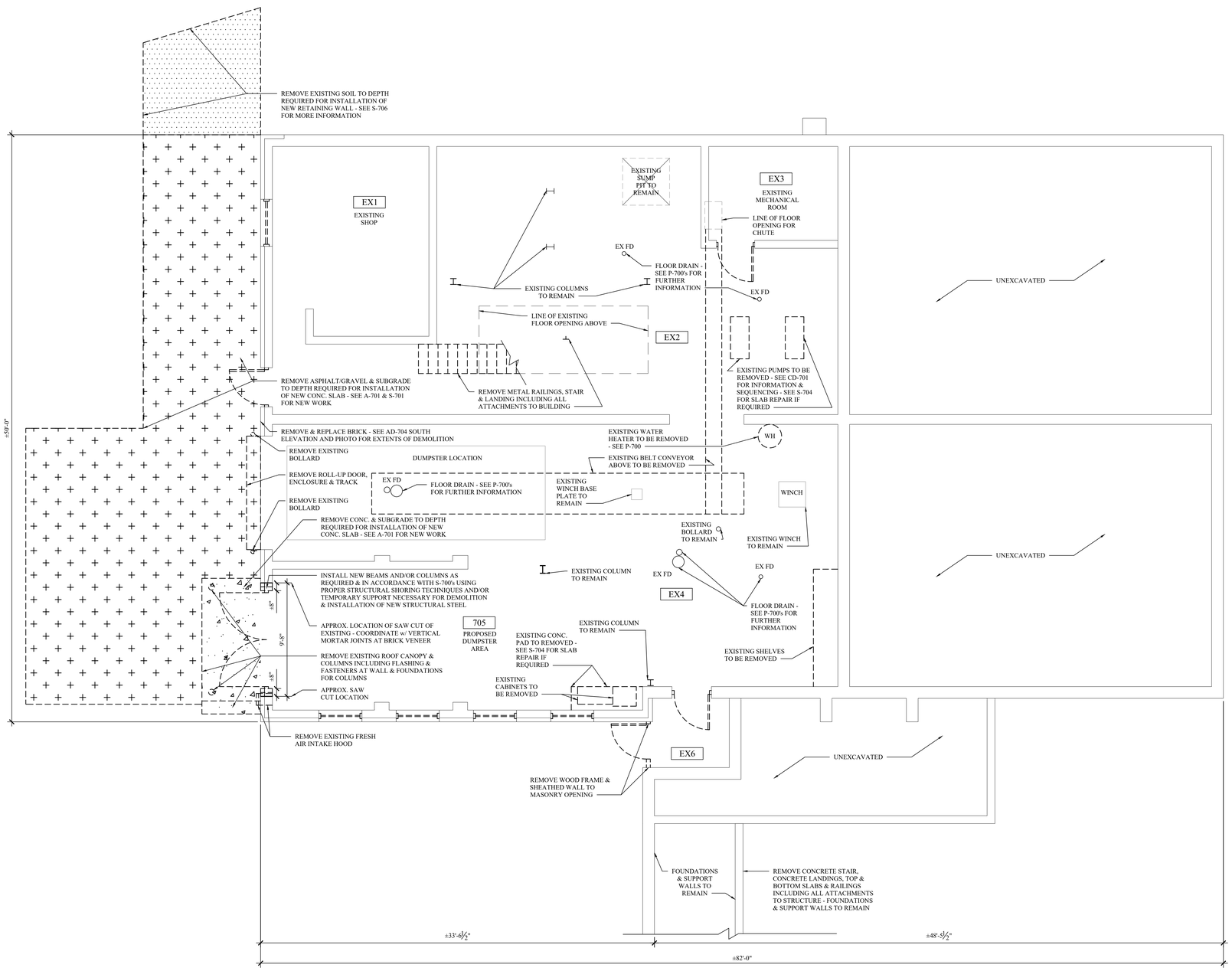
G-701

PROJECT # 18-732 PHASE #

SEE ASBESTOS ABATEMENT REPORT AND ABATEMENT DRAWINGS AND SPECIFICATIONS PRIOR TO REMOVAL OF ANY MATERIALS- ALL MATERIALS IDENTIFIED AS ASBESTOS CONTAINING MATERIALS (ACM) AND LEAD BASED PAINT (LBP) SHALL BE REMOVED AS PER ABATEMENT SPECIFICATIONS AND LEAD SAFE WORK PRACTICES DOCUMENTS PREPARED BY QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

GENERAL - DEMOLITION NOTES

- REMOVE ALL EXISTING WINDOWS INCLUDING FRAME, GLAZING, HARDWARE & TRANSLUCENT PANELS - MASONRY OPENING TO BE PRESERVED U.O.N. - SEE ADDITIONAL DWGS FOR DESCRIPTION OF NEW WORK
- REMOVE ALL EXISTING DOORS INCLUDING FRAMES & HARDWARE - SEE ADDITIONAL DWGS FOR DESCRIPTION OF NEW WORK
- REMOVE ALL EXISTING WOOD FRAME WALLS INCLUDING WALL FINISHES THROUGHOUT ENTIRE BUILDING
- REMOVE ALL EXISTING CEILING FINISHES INCLUDING FRAMING, GRIDS & TILES THROUGHOUT ENTIRE BUILDING
- REMOVE EXISTING WALL FINISHES, CABINETS, COUNTERS, FIXTURES, EQUIPMENT, PLUMBING FIXTURES, AND ALL ASSOCIATED PIPING AS PER P-700's
- REMOVE ALL EXISTING LIGHT FIXTURES INTERIOR AND EXTERIOR - SEE E-700 & E-701 FOR FURTHER INFORMATION
- REMOVE ALL AIR CONDITIONERS & DISPOSE OF EQUIPMENT - FOLLOW ALL FEDERAL, STATE & LOCAL STANDARDS
- REMOVE ALL VINES GROWING ON EXTERIOR OF BUILDING
- ALL FLAKING AND LOOSE PAINT SHALL BE SCRAPED AND REMOVED THROUGHOUT ENTIRE BUILDING INCLUDING ALL STRUCTURAL STEEL, ROOF & FLOOR DECKING, SURFACES OF WALLS, CEILINGS, ETC. ALL SURFACES SHALL BE IN A CONDITION TO PROPERLY ACCEPT NEW PAINT. - SEE HAZARDOUS MATERIALS REPORT FOR FURTHER INFORMATION
- SEE HAZARDOUS MATERIALS REPORT FOR FURTHER INFORMATION
- EXISTING MECHANICAL, ELECTRICAL AND/OR PROCESS EQUIPMENT TO BE REMOVED - SEE E-700's FOR INDICATIONS FOR DISPOSAL, RELOCATION OR SAVE FOR OWNERS USE
- ALL REMOVALS OR MODIFICATIONS REQUIRED FOR SECURITY SYSTEM TO BE DONE BY TOWN VENDOR



LEGEND

- EXISTING TO BE REMOVED
- EXISTING TO REMAIN
- DOOR, FRAME & HARDWARE TO BE REMOVED
- EXISTING WINDOW, FRAME AND HARDWARE TO BE REMOVED - U.O.N.

1 AD-701 LOWER LEVEL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - LOWER LEVEL DEMOLITION PLAN & NOTES

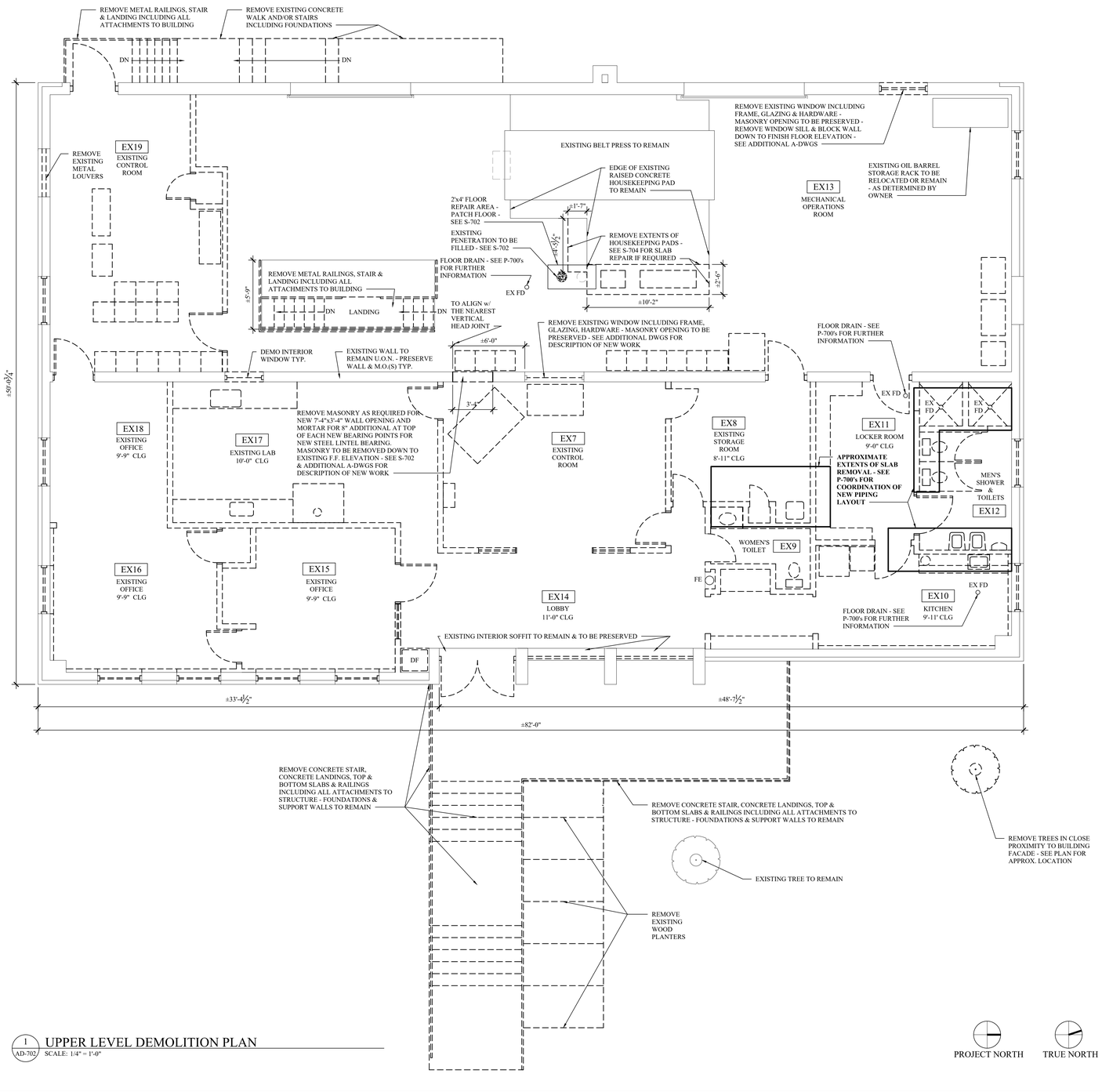
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
AD-701

PROJECT # 18-732 PHASE #



1 AD-702 UPPER LEVEL DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

SEE ASBESTOS ABATEMENT REPORT AND ABATEMENT DRAWINGS AND SPECIFICATIONS PRIOR TO REMOVAL OF ANY MATERIALS- ALL MATERIALS IDENTIFIED AS ASBESTOS CONTAINING MATERIALS (ACM) AND LEAD BASED PAINT (LBP) SHALL BE REMOVED AS PER ABATEMENT SPECIFICATIONS AND LEAD SAFE WORK PRACTICES DOCUMENTS PREPARED BY QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

GENERAL - DEMOLITION NOTES

- REMOVE ALL EXISTING WINDOWS INCLUDING FRAME, GLAZING, HARDWARE & TRANSLUCENT PANELS - MASONRY OPENING TO BE PRESERVED U.O.N. - SEE ADDITIONAL DWGS FOR DESCRIPTION OF NEW WORK
- REMOVE ALL EXISTING DOORS INCLUDING FRAMES & HARDWARE - SEE ADDITIONAL DWGS FOR DESCRIPTION OF NEW WORK
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- REMOVE ALL VINES GROWING ON EXTERIOR OF BUILDING
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- SEE HAZARDOUS MATERIALS REPORT FOR FURTHER INFORMATION
- EXISTING MECHANICAL, ELECTRICAL AND/OR PROCESS EQUIPMENT TO BE REMOVED - SEE E-700's FOR INDICATIONS FOR DISPOSAL, RELOCATION OR SAVE FOR OWNERS USE
- ALL REMOVALS OR MODIFICATIONS REQUIRED FOR SECURITY SYSTEM TO BE DONE BY TOWN VENDOR

LEGEND

- EXISTING TO BE REMOVED
- EXISTING TO REMAIN
- EXISTING WINDOW, FRAME AND HARDWARE TO BE REMOVED - U.O.N.
- DOOR, FRAME & HARDWARE TO BE REMOVED

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - UPPER LEVEL DEMOLITION PLAN & NOTES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.

AD-702

PROJECT # 18-732 PHASE #

SEE ASBESTOS ABATEMENT REPORT AND ABATEMENT DRAWINGS AND SPECIFICATIONS PRIOR TO REMOVAL OF ANY MATERIALS- ALL MATERIALS IDENTIFIED AS ASBESTOS CONTAINING MATERIALS (ACM) AND LEAD BASED PAINT (LBP) SHALL BE REMOVED AS PER ABATEMENT SPECIFICATIONS AND LEAD SAFE WORK PRACTICES DOCUMENTS PREPARED BY QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

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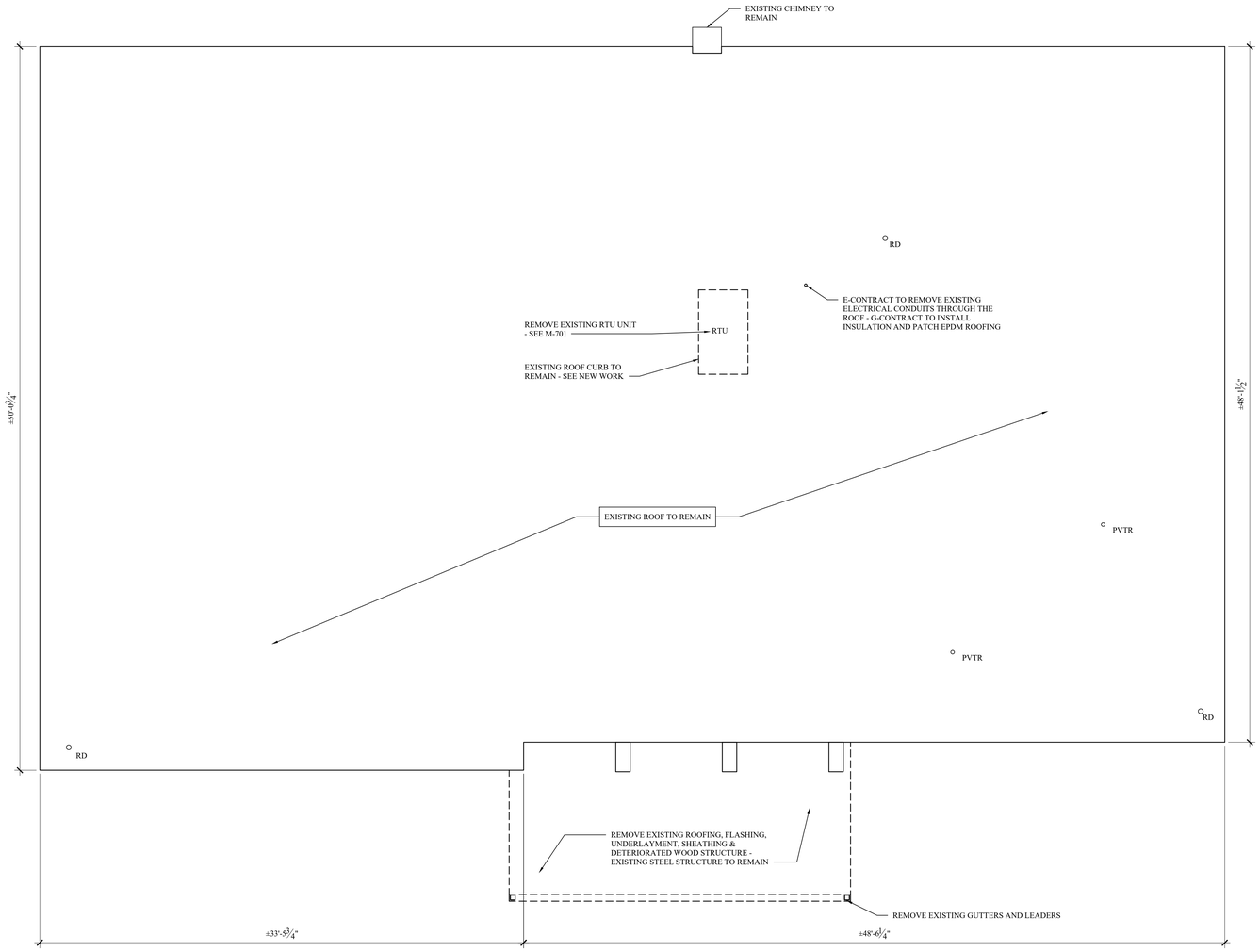

GENERAL - DEMOLITION ROOF PLAN NOTES

- ALL EXISTING PLUMBING PIPE PENETRATION TO REMAIN U.O.N. - SEE P-700's
- ALL EXISTING PVTR PIPES TO REMAIN U.O.N. - SEE P-700's
- EXISTING ROOF DRAINS TO REMAIN U.O.N. - SEE P-700's

RD - ROOF DRAIN
PVTR- PLUMBING VENT THROUGH ROOF
RV - ROOF VENT
RS - ROOF SCUPPER
RCEF - ROOF CURB WITH EXHAUST FANS
GN - GOOSE NECK EXHAUST

1 / AD-703 ROOF DEMOLITION PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

LEGEND

- EXISTING TO BE REMOVED
- EXISTING TO REMAIN

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - ROOF DEMOLITION PLAN & NOTES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
AD-703

PROJECT # 18-732 PHASE #

SEE ASBESTOS ABATEMENT REPORT AND ABATEMENT DRAWINGS AND SPECIFICATIONS PRIOR TO REMOVAL OF ANY MATERIALS- ALL MATERIALS IDENTIFIED AS ASBESTOS CONTAINING MATERIALS (ACM) AND LEAD BASED PAINT (LBP) SHALL BE REMOVED AS PER ABATEMENT SPECIFICATIONS AND LEAD SAFE WORK PRACTICES DOCUMENTS PREPARED BY QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

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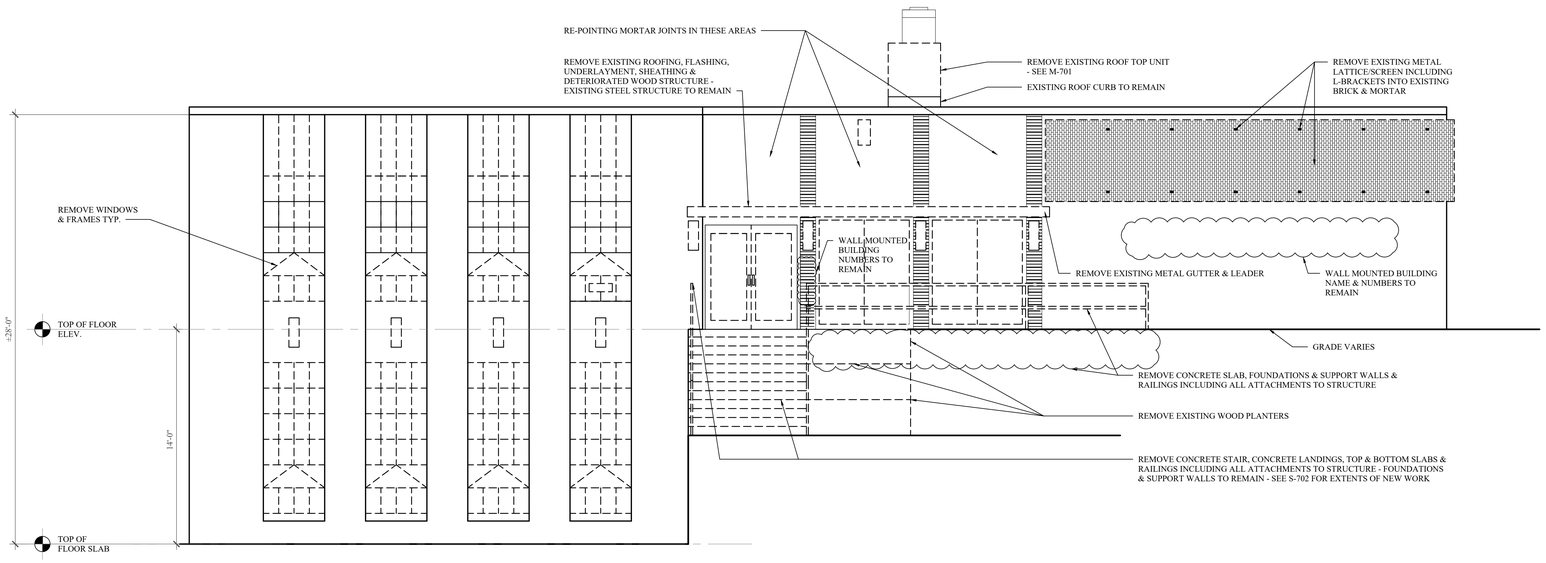
- ALL REMOVALS OR MODIFICATIONS REQUIRED FOR SECURITY SYSTEM TO BE DONE BY TOWN VENDOR



PHOTO AT EAST SIDE
SCALE: N.T.S.



1 AD-704 EAST ELEVATION
SCALE: 1/4" = 1'-0"

LEGEND

- EXISTING TO BE REMOVED
- EXISTING TO REMAIN

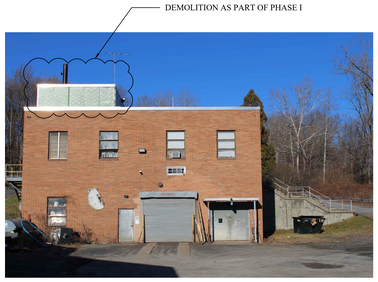
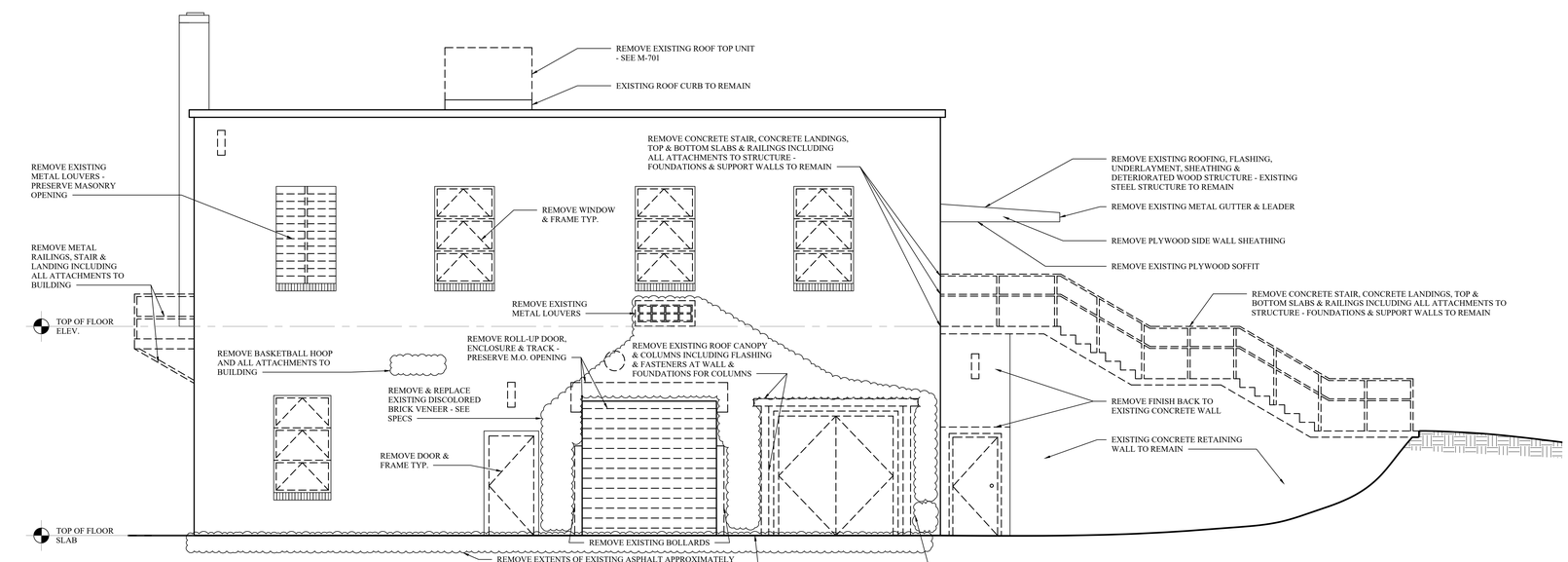


PHOTO AT SOUTH SIDE
SCALE: N.T.S.



2 AD-704 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - EXTERIOR ELEVATIONS DEMOLITION, PHOTOS & NOTES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.

AD-704

PROJECT # 18-732 PHASE #

SEE ASBESTOS ABATEMENT REPORT AND ABATEMENT DRAWINGS AND SPECIFICATIONS PRIOR TO REMOVAL OF ANY MATERIALS- ALL MATERIALS IDENTIFIED AS ASBESTOS CONTAINING MATERIALS (ACM) AND LEAD BASED PAINT (LBP) SHALL BE REMOVED AS PER ABATEMENT SPECIFICATIONS AND LEAD SAFE WORK PRACTICES DOCUMENTS PREPARED BY QUALITY ENVIRONMENTAL SOLUTIONS & TECHNOLOGIES, INC.

GENERAL - DEMOLITION NOTES

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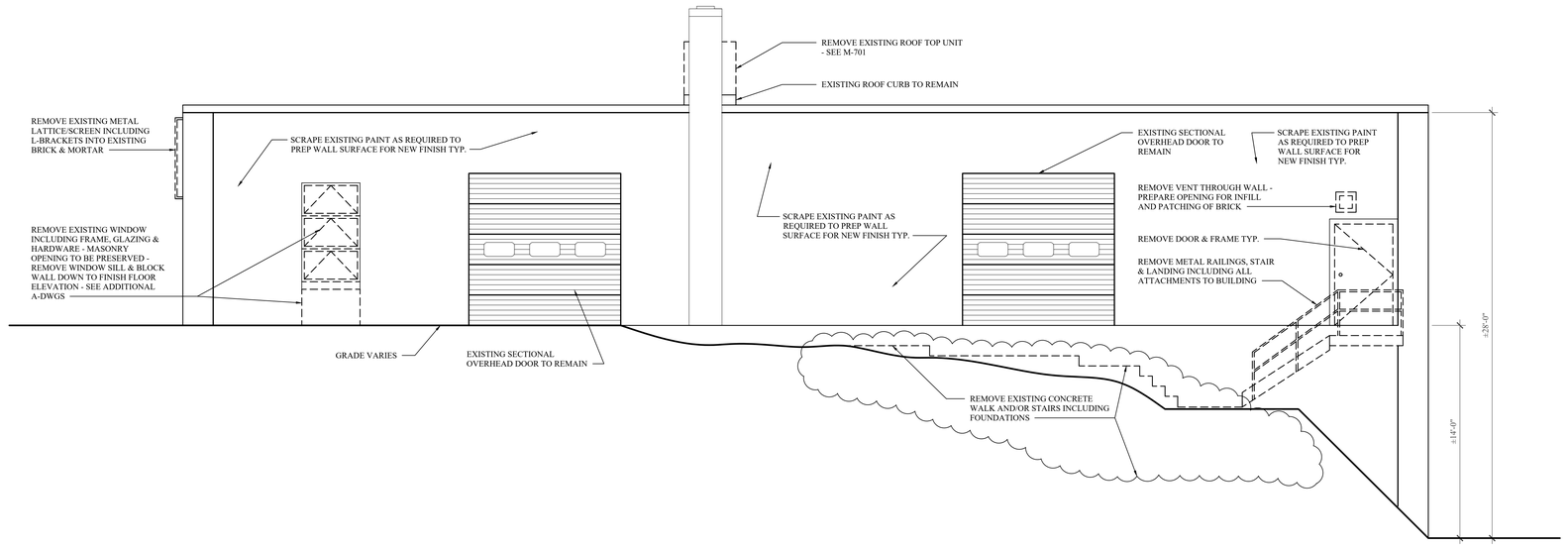
- ALL REMOVALS OR MODIFICATIONS REQUIRED FOR SECURITY SYSTEM TO BE DONE BY TOWN VENDOR

DEMOLITION AS PART OF PHASE I



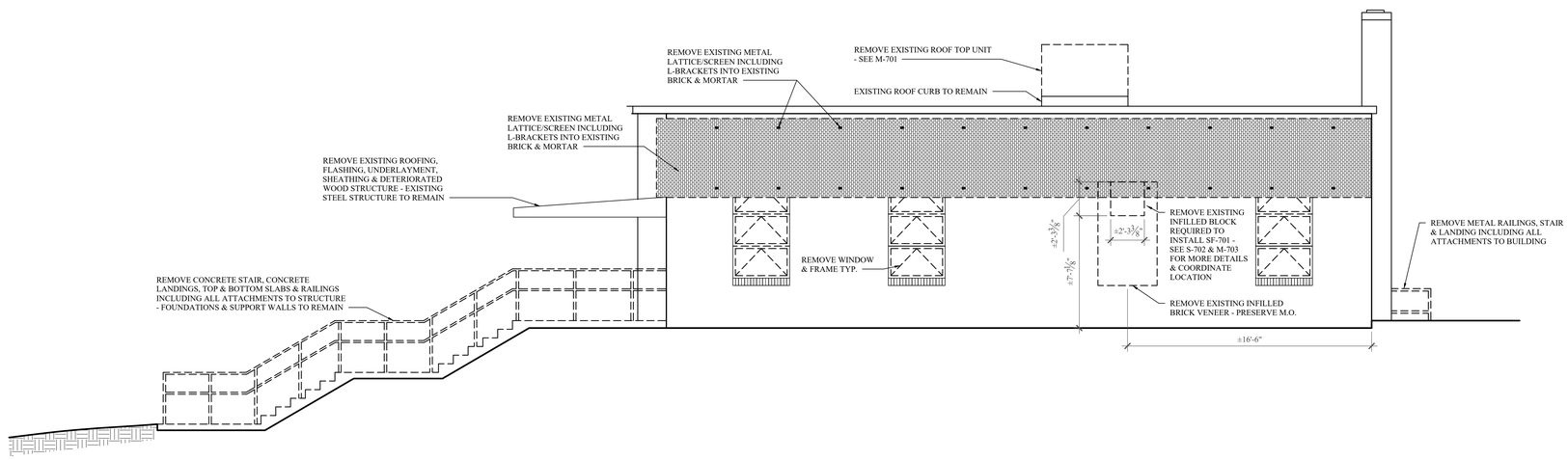
PHOTO AT WEST SIDE
SCALE: N.T.S.



1 AD-705 WEST ELEVATION
SCALE: 1/4" = 1'-0"



PHOTO AT NORTH SIDE
SCALE: N.T.S.



2 AD-705 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

LEGEND

EXISTING TO BE REMOVED

EXISTING TO REMAIN

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - EXTERIOR ELEVATIONS DEMOLITION, PHOTOS & NOTES

REVISIONS

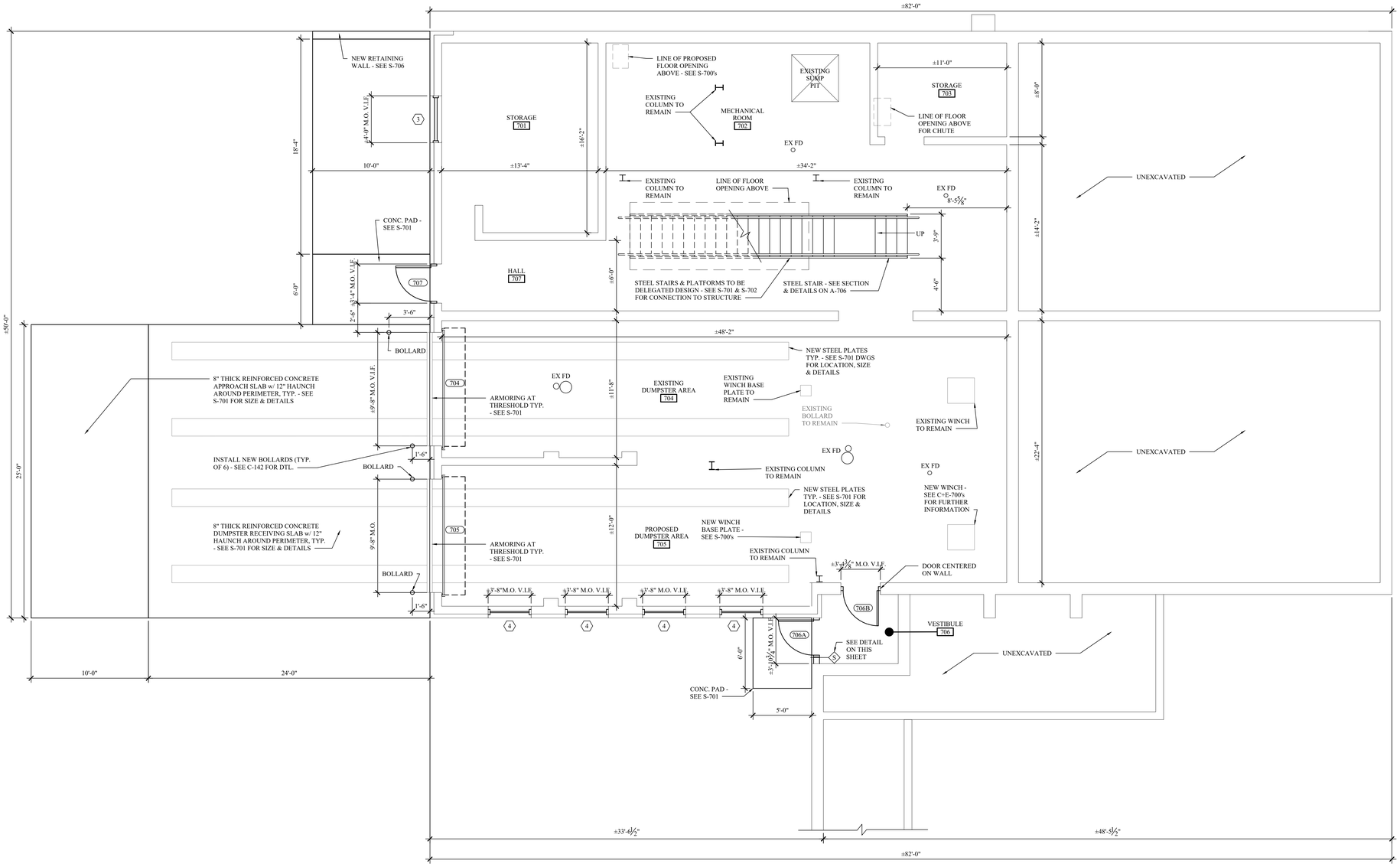
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

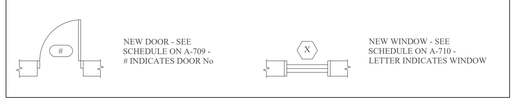
SHEET NO.

AD-705

PROJECT # 18-732 PHASE #



SYMBOLS LEGEND

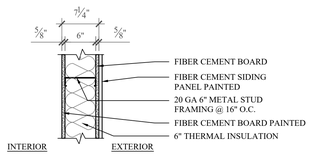


1 / A-701 PROPOSED LOWER LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

GENERAL - NEW CONSTRUCTION NOTES

- PATCH ALL HOLES IN EXISTING MASONRY, BRICK AND/OR MORTAR WITH NEW QUICK SETTING MORTAR COLOR TO MATCH EXISTING MASONRY, BRICK AND/OR EXISTING MORTAR AS APPLICABLE
- INSTALL NEW WALLS AS SPECIFIED - SEE WALL TYPES ON SHEET A-702 FOR FURTHER INFORMATION
- INSTALL NEW WINDOWS THROUGHOUT ENTIRE BUILDING - SEE WINDOW SCHEDULE ON A-710 FOR FURTHER INFORMATION
- INSTALL NEW DOOR, DOOR FRAME & DOOR HARDWARE THROUGHOUT ENTIRE BUILDING - SEE DOOR SCHEDULE ON A-709 FOR FURTHER INFORMATION
- INSTALL NEW INSULATED OVERHEAD COILING DOOR, TRACK, ETC. AS DESIGNATED ON PLAN - SEE DOOR SCHEDULE ON A-709 & SPECS FOR FURTHER INFORMATION
- ALL DIMENSIONS ARE TO FINISHED MASONRY OR FACE OF FRAMING



PLAN

FIRE RATING: NONE

STUD & SHEATHING TO EXTEND TO UNDERSIDE OF CONCRETE FLOOR FINISH TO EXTEND TO UNDERSIDE OF CONCRETE FLOOR

S EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - LOWER LEVEL FLOOR PLAN, WALL TYPE & NOTES

REVISIONS

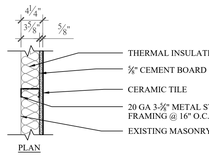
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.

A-701

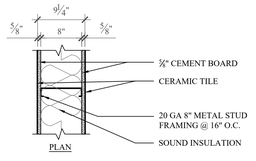
PROJECT # 18-732 PHASE #



FIRE RATING: NONE

STUDS, INSULATION & WALL BOARD TO EXTEND TO WITHIN 3" OF ROOF DECK & FILL TOP GAP w/ THERMAFIBER
CERAMIC TILE FINISH TO EXTEND TO UNDERSIDE OF CEILING

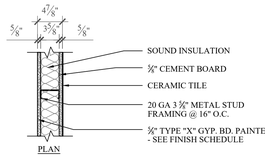
A EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE
STC: APPROX. 50

STUDS, SOUND INSULATION & WALL BOARD ON ONE SIDE OF FRAMING TO EXTEND TO WITHIN 3" OF ROOF DECK & FILL TOP GAP w/ THERMAFIBER
CERAMIC TILE FINISH TO EXTEND TO UNDERSIDE OF CEILING

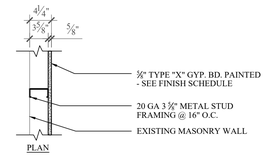
B INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE
STC: APPROX. 50

STUDS, SOUND INSULATION & WALL BOARD ON ONE SIDE OF FRAMING TO EXTEND TO WITHIN 3" OF ROOF DECK & FILL TOP GAP w/ THERMAFIBER
PAINT & CERAMIC TILE FINISH TO EXTEND TO UNDERSIDE OF CEILING

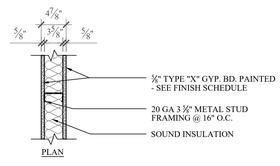
C INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE
STC: NONE

STUDS & WALL BOARD TO EXTEND TO 6" ABOVE CEILING
PAINT FINISH TO EXTEND TO UNDERSIDE OF CEILING

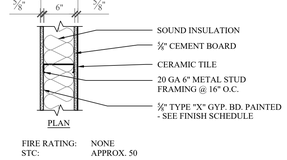
D INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE
STC: APPROX. 50

STUDS, SOUND INSULATION & WALL BOARD ON ONE SIDE OF FRAMING TO EXTEND TO WITHIN 3" OF ROOF DECK & FILL TOP GAP w/ THERMAFIBER
PAINT FINISH TO EXTEND TO UNDERSIDE OF CEILING

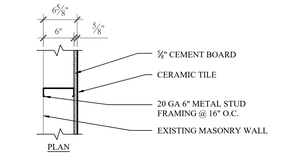
E INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE
STC: APPROX. 50

STUDS, SOUND INSULATION & WALL BOARD ON ONE SIDE OF FRAMING TO EXTEND TO WITHIN 3" OF ROOF DECK & FILL TOP GAP w/ THERMAFIBER
PAINT & CERAMIC TILE FINISH TO EXTEND TO UNDERSIDE OF CEILING

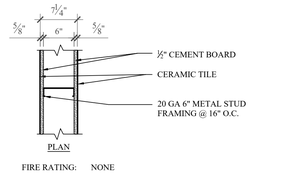
F INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE

STUDS & WALL BOARD TO EXTEND TO 6" ABOVE CEILING
CERAMIC TILE FINISH TO EXTEND TO UNDERSIDE OF CEILING

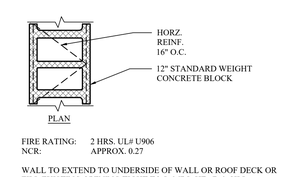
G INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE

STUDS & WALL BOARD TO EXTEND TO 6" ABOVE CEILING &
BRACED AS REQUIRED
CERAMIC TILE FINISH TO EXTEND TO UNDERSIDE OF CEILING

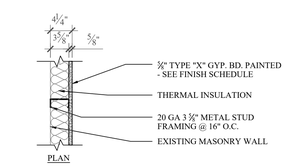
H INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: 2 HRS. UL# U906
NCR: APPROX. 0.27

WALL TO EXTEND TO UNDERSIDE OF WALL OR ROOF DECK OR
FILL EXISTING OPENING TIGHT TO JAMBS, HEAD & SILL
SEAL SMOKE TIGHT w/ MORTAR OR FIRESTOPPING INSULATION

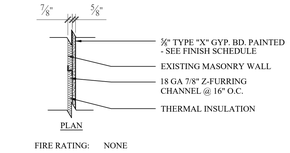
J EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE

STUDS, INSULATION & WALL BOARD TO EXTEND TO WITHIN 3" OF ROOF
DECK & FILL TOP GAP w/ THERMAFIBER
PAINT FINISH TO EXTEND TO UNDERSIDE OF CEILING

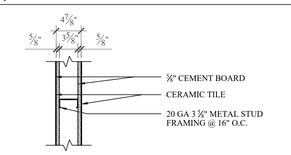
K EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE

STUDS, INSULATION & WALL BOARD TO EXTEND TO
WITHIN 3" OF ROOF DECK & FILL TOP GAP w/ THERMAFIBER
PAINT FINISH TO EXTEND TO UNDERSIDE OF CEILING

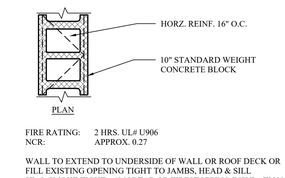
L EXTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE

STUDS & WALL BOARD TO EXTEND TO 6" ABOVE CEILING &
BRACED AS REQUIRED
CERAMIC TILE FINISH TO EXTEND TO UNDERSIDE OF CEILING

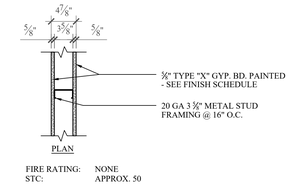
M INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: 2 HRS. UL# U906
NCR: APPROX. 0.27

WALL TO EXTEND TO UNDERSIDE OF WALL OR ROOF DECK OR
FILL EXISTING OPENING TIGHT TO JAMBS, HEAD & SILL
SEAL SMOKE TIGHT w/ MORTAR OR FIRESTOPPING INSULATION

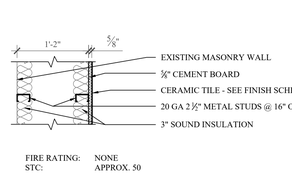
N INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



FIRE RATING: NONE
STC: APPROX. 50

STUDS, SOUND INSULATION & WALL BOARD ON ONE SIDE OF FRAMING TO
EXTEND TO WITHIN 3" OF ROOF DECK & FILL TOP GAP w/ THERMAFIBER
PAINT FINISH TO EXTEND TO UNDERSIDE OF CEILING

P INTERIOR WALL TYPE
SCALE: 1" = 1'-0"



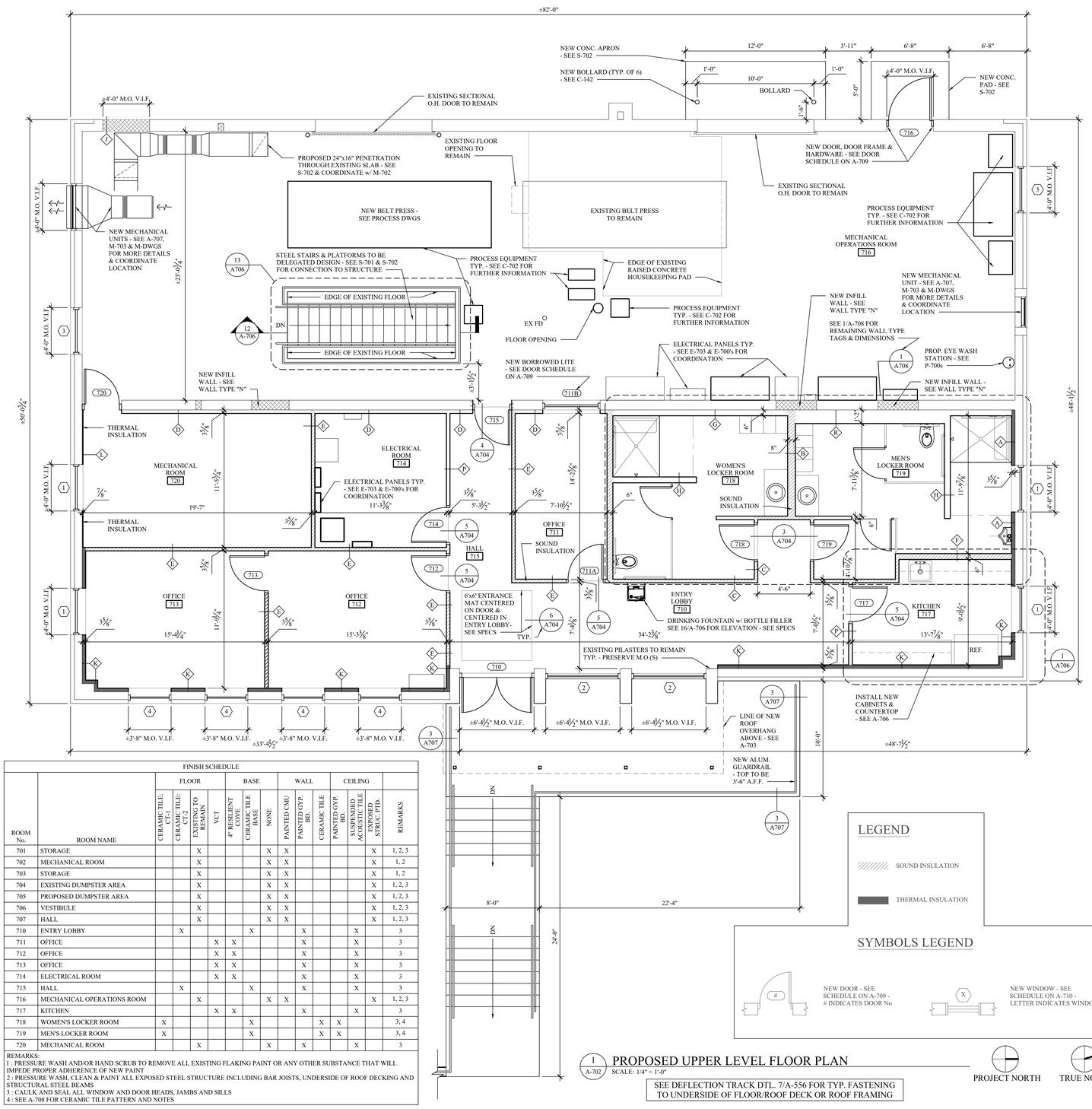
FIRE RATING: NONE
STC: APPROX. 50

STUD TO EXTEND TO UNDERSIDE OF DECK
WALL BOARD TO EXTEND 1'-0" ABOVE CEILING
FINISH TO EXTEND TO UNDERSIDE OF CEILING

R INTERIOR WALL TYPE
SCALE: 1" = 1'-0"

GENERAL - NEW CONSTRUCTION NOTES

- PATCH ALL HOLES IN EXISTING MASONRY, BRICK AND/OR MORTAR WITH NEW QUICK SETTING MORTAR COLOR TO MATCH EXISTING MASONRY, BRICK AND/OR EXISTING MORTAR AS APPLICABLE
- INSTALL NEW WALLS AS SPECIFIED - SEE WALL TYPES ON SHEET A-702 FOR FURTHER INFORMATION
- INSTALL NEW WINDOWS THROUGHOUT ENTIRE BUILDING - SEE WINDOW SCHEDULE ON A-710 FOR FURTHER INFORMATION
- INSTALL NEW DOOR, DOOR FRAME & DOOR HARDWARE THROUGHOUT ENTIRE BUILDING - SEE DOOR SCHEDULE ON A-709 FOR FURTHER INFORMATION
- INSTALL NEW INSULATED OVERHEAD COILING DOOR, TRACK, ETC. AS DESIGNATED ON PLAN - SEE DOOR SCHEDULE ON A-709 & SPECS FOR FURTHER INFORMATION
- ALL DIMENSIONS ARE TO FINISHED MASONRY OR FACE OF FRAMING



FINISH SCHEDULE															
		FLOOR			BASE			WALL			CEILING				
ROOM No.	ROOM NAME	CERAMIC TILE: CT-1	CERAMIC TILE: CT-2	EXISTING TO REMAIN	VCT	4" RESILIENT COVE	CERAMIC TILE BASE	NONE	PAINTED CMU	PAINTED GYP. BD.	CERAMIC TILE	PAINTED GYP. BD.	SUSPENDED ACOUSTIC TILE SYSTEM (NON-STRUCT'D)	NONE	REMARKS
701	STORAGE			X				X	X					X	1, 2, 3
702	MECHANICAL ROOM			X				X	X					X	1, 2
703	STORAGE			X				X	X					X	1, 2
704	EXISTING DUMPSTER AREA			X				X	X					X	1, 2, 3
705	PROPOSED DUMPSTER AREA			X				X	X					X	1, 2, 3
706	VESTIBULE			X				X	X					X	1, 2, 3
707	HALL			X				X	X					X	1, 2, 3
710	ENTRY LOBBY		X				X			X			X		3
711	OFFICE				X	X				X			X		3
712	OFFICE				X	X				X			X		3
713	OFFICE				X	X				X			X		3
714	ELECTRICAL ROOM				X	X				X			X		3
715	HALL		X				X			X			X		3
716	MECHANICAL OPERATIONS ROOM			X				X	X					X	1, 2, 3
717	KITCHEN				X	X				X			X		3
718	WOMEN'S LOCKER ROOM	X					X				X	X			3, 4
719	MEN'S LOCKER ROOM	X					X				X	X			3, 4
720	MECHANICAL ROOM			X				X		X			X		3

REMARKS:
1 : PRESSURE WASH AND/OR HAND SCRUB TO REMOVE ALL EXISTING FLAKING PAINT OR ANY OTHER SUBSTANCE THAT WILL IMPEDE PROPER ADHERENCE OF NEW PAINT
2 : PRESSURE WASH, CLEAN & PAINT ALL EXPOSED STEEL STRUCTURE INCLUDING BAR JOISTS, UNDERSIDE OF ROOF DECKING AND STRUCTURAL STEEL BEAMS
3 : CAULK AND SEAL ALL WINDOW AND DOOR HEADS, JAMBS AND SILLS
4 : SEE A-708 FOR CERAMIC TILE PATTERN AND NOTES

LEGEND

SOUND INSULATION

THERMAL INSULATION

SYMBOLS LEGEND

NEW DOOR - SEE SCHEDULE ON A-709 - # INDICATES DOOR No

NEW WINDOW - SEE SCHEDULE ON A-710 - LETTER INDICATES WINDOW

1/A-702 PROPOSED UPPER LEVEL FLOOR PLAN
SCALE: 1/4" = 1'-0"

SEE DEFLECTION TRACK DTL. 7/A-556 FOR TYP. FASTENING TO UNDERSIDE OF FLOOR/ROOF DECK OR ROOF FRAMING

PROJECT NORTH

TRUE NORTH

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - UPPER LEVEL FLOOR PLAN, WALL TYPES, FINISH SCHEDULE & NOTES

REVISIONS

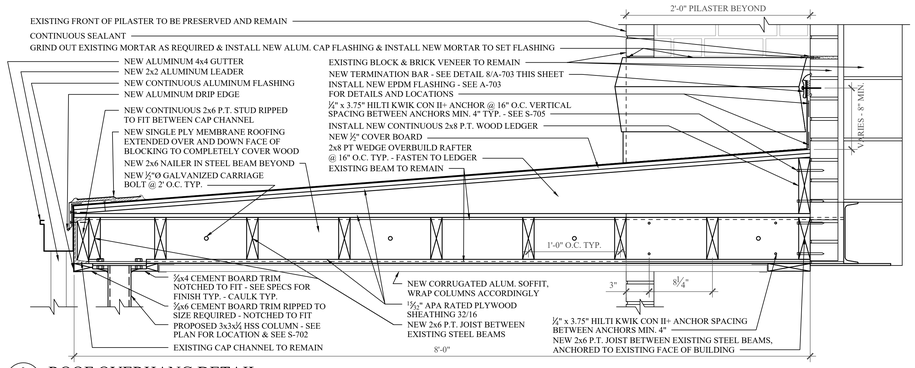
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

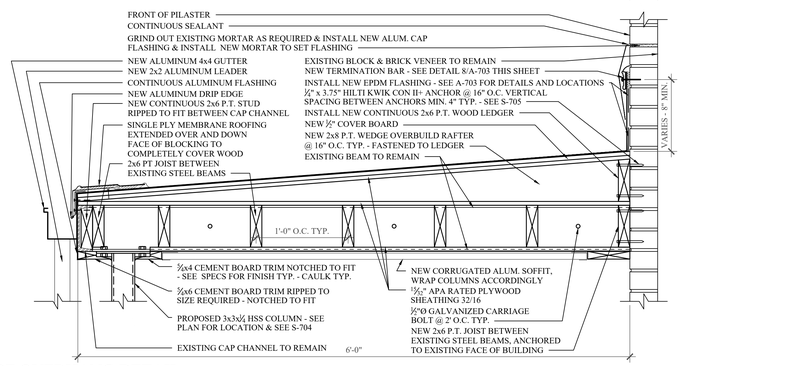
SHEET NO.

A-702

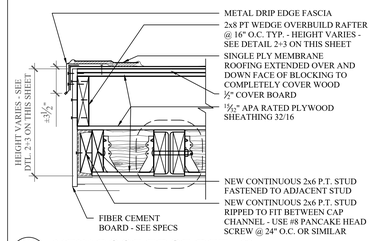
PROJECT # 18-732 PHASE #



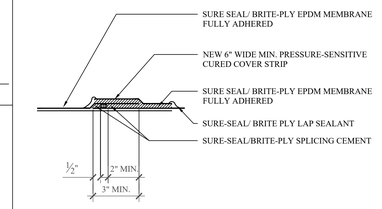
2 A-703 ROOF OVERHANG DETAIL
SCALE: 1-1/2" = 1'-0"



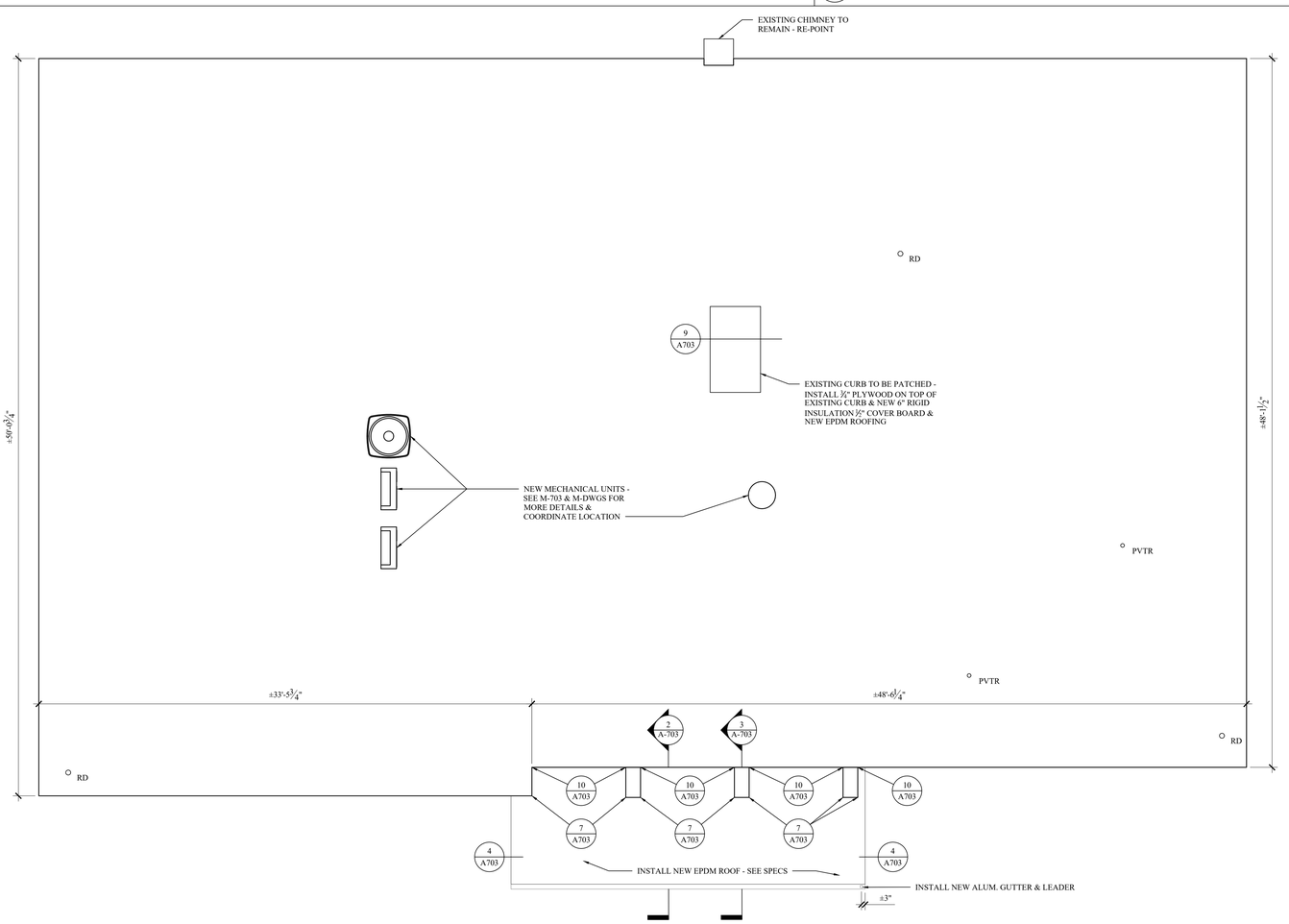
3 A-703 ROOF OVERHANG DETAIL
SCALE: 1-1/2" = 1'-0"



4 A-703 NEW ROOF EDGE DETAIL
SCALE: 1-1/2" = 1'-0"



5 A-703 LAP SEALANT - EPDM (TYP.)
SCALE: 3" = 1'-0"



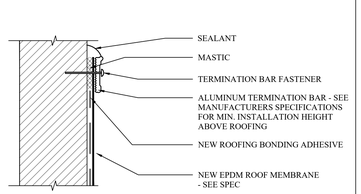
1 A-703 PROPOSED ROOF PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH TRUE NORTH

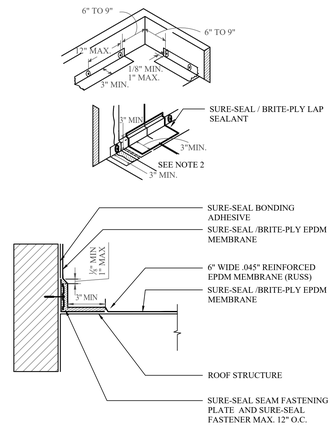
ROOF PLAN NOTES - GENERAL

- ALL EXISTING PLUMBING PIPE PENETRATION LOCATIONS THROUGH ROOF TO REMAIN U.O.N. - SEE P-700's
- EXISTING PVTR PIPE LOCATION TO REMAIN U.O.N. - SEE P-700's

RD - ROOF DRAIN
PVTR - PLUMBING VENT THROUGH ROOF
RV - ROOF VENT
RS - ROOF SCUPPER
RCEF - ROOF CURB WITH EXHAUST FANS
GN - GOOSE NECK EXHAUST

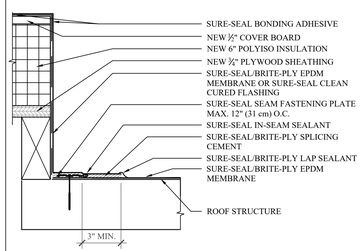


8 A-703 TERMINATION BAR DETAIL (TYP.)
SCALE: 3" = 1'-0"

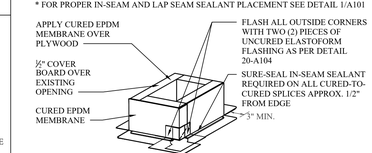


NOTES:
1. FOR CORNER APPLICATION, SEE DETAILS BY ROOF MFG
2. 6" WIDE UNCURED ELASTOFORM FLASHING OR PRESSURE SENSITIVE FLASHING MUST BE CENTERED OVER FIELD SPLICE AT ANGLE CHANGE.

6 A-703 PARAPET/CURB w/ RUSS (VERT) - EPDM (TYP.)
SCALE: N.T.S.

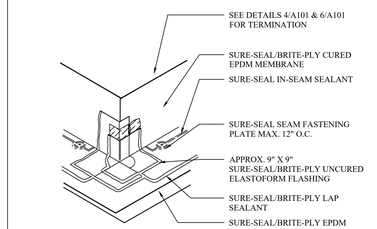


* FOR PROPER IN-SEAM AND LAP SEAM SEALANT PLACEMENT SEE DETAIL 1/A101



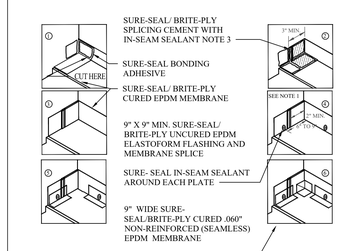
NOTES:
1. HP LOCKING SEAM PLATES OR POLYMER SEAM PLATES ARE REQUIRED IN LIEU OF SEAM FASTENING PLATES FOR MECHANICALLY-FASTENED ROOFING SYSTEMS OVER STEEL DECKS.
2. IF VERTICAL SPLICE NOT LOCATED AT CORNER, 6 IN. WIDE UNCURED ELASTOFORM FLASHING OR PRESSURE SENSITIVE FLASHING MUST BE CENTERED OVER FIELD SPLICE AT ANGLE CHANGE.

9 A-703 CURB FLASHING - EPDM (TYP.)
SCALE: N.T.S.



NOTES:
1. UNCURED ELASTOFORM FLASHING TO OVERLAP DECK MEMBRANE 3 IN. MINIMUM AND EXTEND 2 IN. MINIMUM AROUND CORNERS.
2. SEAL ALL EDGES WITH LAP SEALANT.
3. FOR USE OF SURE-SEAL PRESSURE-SENSITIVE OUTSIDE CORNER FLASHING REFER TO DETAIL ROOF MFR'S DTLS.
4. A HEAT GUN MUST BE USED WHEN FORMING BRITE-PLY FLASHING.
5. SEMI-CURED PRESSURE SENSITIVE FLASHING ROLLS CANNOT BE USED AT CORNERS. ELASTOFORM FLASHING OR SURE-SEAL INSIDE/OUTSIDE CORNERS MUST BE USED.

7 A-703 EPDM FLASHING DETAIL (TYP.)
SCALE: N.T.S.



NOTES:
1. INSTALL SEAM FASTENING PLATES 6 TO 9 IN. AWAY FROM ANY CORNER.
2. SEAL ALL EDGES WITH LAP SEALANT.
3. IN-SEAM SEALANT IS REQUIRED ON ALL VERTICAL SPLICES BETWEEN ADJOINING SECTIONS OF CURED EPDM MEMBRANE.
4. FOR USE OF SURE-SEAL INSIDE CORNER FLASHING REFER TO DETAIL OTHER DETAILS BY ROOF MFR.
5. SEMI-CURED PRESSURE SENSITIVE FLASHING ROLLS CANNOT BE USED AT CORNERS. ELASTOFORM FLASHING OR SURE-SEAL INSIDE/OUTSIDE CORNERS MUST BE USED.

10 A-703 EPDM WALL FLASHING - INSIDE CORNER (TYP.)
SCALE: N.T.S.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - ROOF PLAN, DETAILS & NOTES

REVISIONS

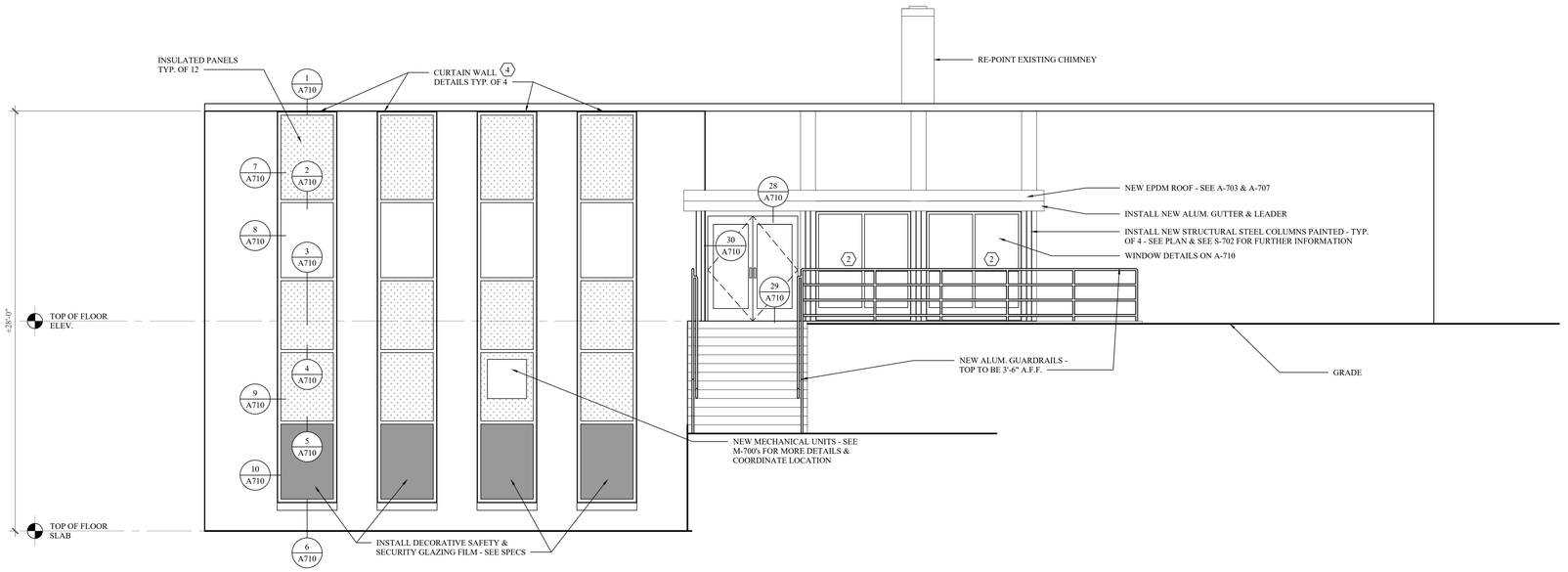
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

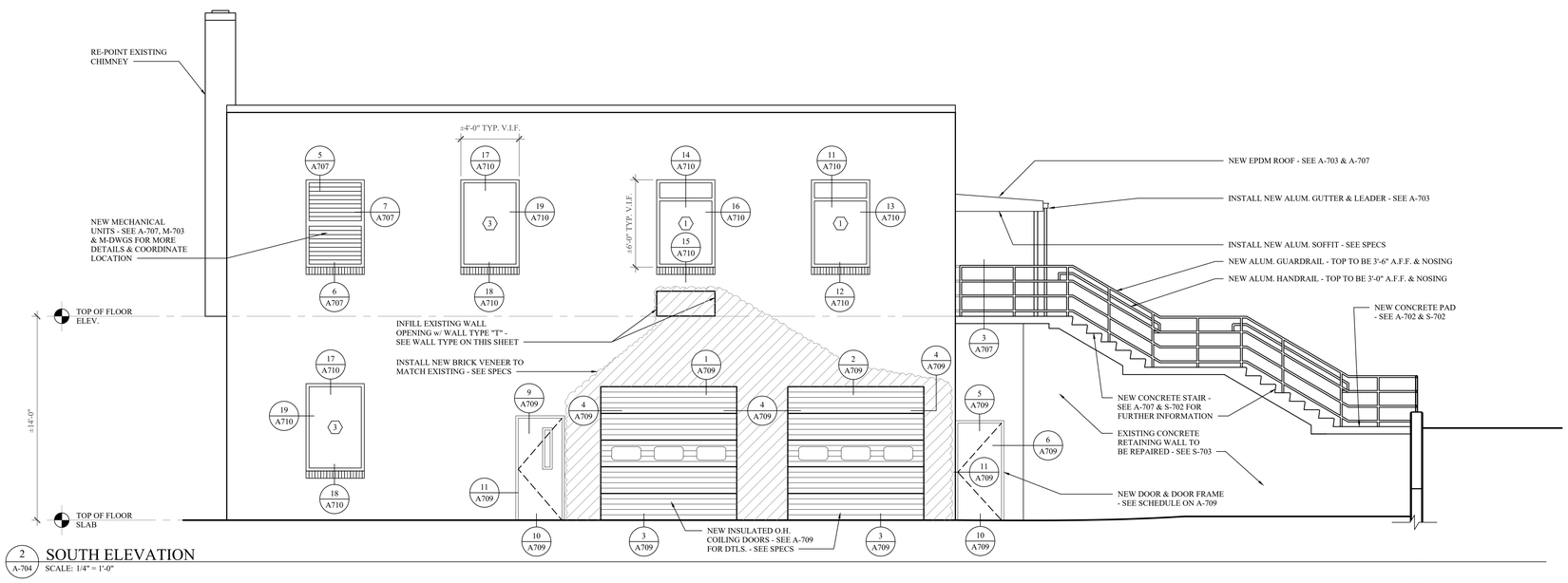
SHEET NO.

A-703

PROJECT # 18-732 PHASE #



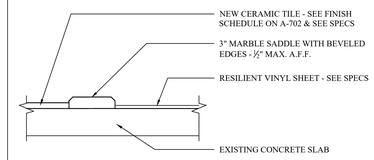
1 A-704 **EAST ELEVATION**
SCALE: 1/4" = 1'-0"



2 A-704 **SOUTH ELEVATION**
SCALE: 1/4" = 1'-0"

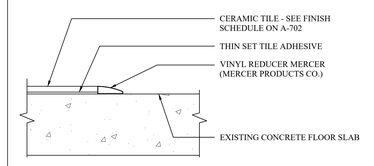
GENERAL - NEW CONSTRUCTION NOTES

- PATCH ALL HOLES IN EXISTING MASONRY, BRICK AND/OR MORTAR WITH NEW QUICK SETTING MORTAR COLOR TO MATCH EXISTING MASONRY, BRICK AND/OR EXISTING MORTAR AS APPLICABLE
- INSTALL NEW WALLS AS SPECIFIED - SEE WALL TYPES ON SHEET A-702 FOR FURTHER INFORMATION
- INSTALL NEW WINDOWS THROUGHOUT ENTIRE BUILDING - SEE WINDOW SCHEDULE ON A-710 FOR FURTHER INFORMATION
- INSTALL NEW DOOR, DOOR FRAME & DOOR HARDWARE THROUGHOUT ENTIRE BUILDING - SEE DOOR SCHEDULE ON A-709 FOR FURTHER INFORMATION
- INSTALL NEW INSULATED OVERHEAD COILING DOOR, TRACK, ETC. AS DESIGNATED ON PLAN - SEE DOOR SCHEDULE ON A-709 & SPECS FOR FURTHER INFORMATION
- ALL DIMENSIONS ARE TO FINISHED MASONRY OR FACE OF FRAMING



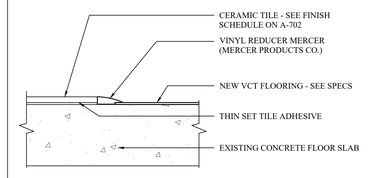
VCT TO CERAMIC TILE

3 A-704 **FLOOR TRANSITION DETAIL**
SCALE: 3" = 1'-0"



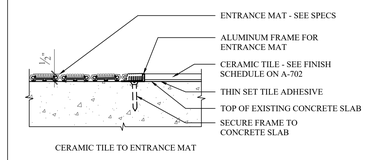
CERAMIC TILE TO CONCRETE

4 A-704 **FLOOR TRANSITION DETAIL**
SCALE: 3" = 1'-0"



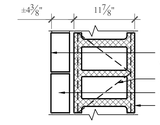
CERAMIC TILE TO VCT

5 A-704 **FLOOR TRANSITION DETAIL**
SCALE: 3" = 1'-0"



CERAMIC TILE TO ENTRANCE MAT

6 A-704 **FLOOR TRANSITION DETAIL**
SCALE: 3" = 1'-0"



PLAN

FIRE RATING: 2 HRS. UL# U906
NCR: APPROX. 0.27

WALL TO EXTEND TO UNDERSIDE OF WALL OR ROOF DECK OR FILL EXISTING OPENING TIGHT TO JAMBS, HEAD & SILL
SEAL SMOKE TIGHT w/ MORTAR OR FIRESTOPPING INSULATION

T **EXTERIOR WALL TYPE**
SCALE: 1" = 1'-0"

ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - EXTERIOR ELEVATIONS, FINISH DETAILS, WALL TYPE & NOTES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.

A-704

PROJECT # 18-732 PHASE #

GENERAL - NEW CONSTRUCTION NOTES

- PATCH ALL HOLES IN EXISTING MASONRY, BRICK AND/OR MORTAR WITH NEW QUICK SETTING MORTAR COLOR TO MATCH EXISTING MASONRY, BRICK AND/OR EXISTING MORTAR AS APPLICABLE
- INSTALL NEW WALLS AS SPECIFIED - SEE WALL TYPES ON SHEET A-702 FOR FURTHER INFORMATION
- INSTALL NEW WINDOWS THROUGHOUT ENTIRE BUILDING - SEE WINDOW SCHEDULE ON A-710 FOR FURTHER INFORMATION
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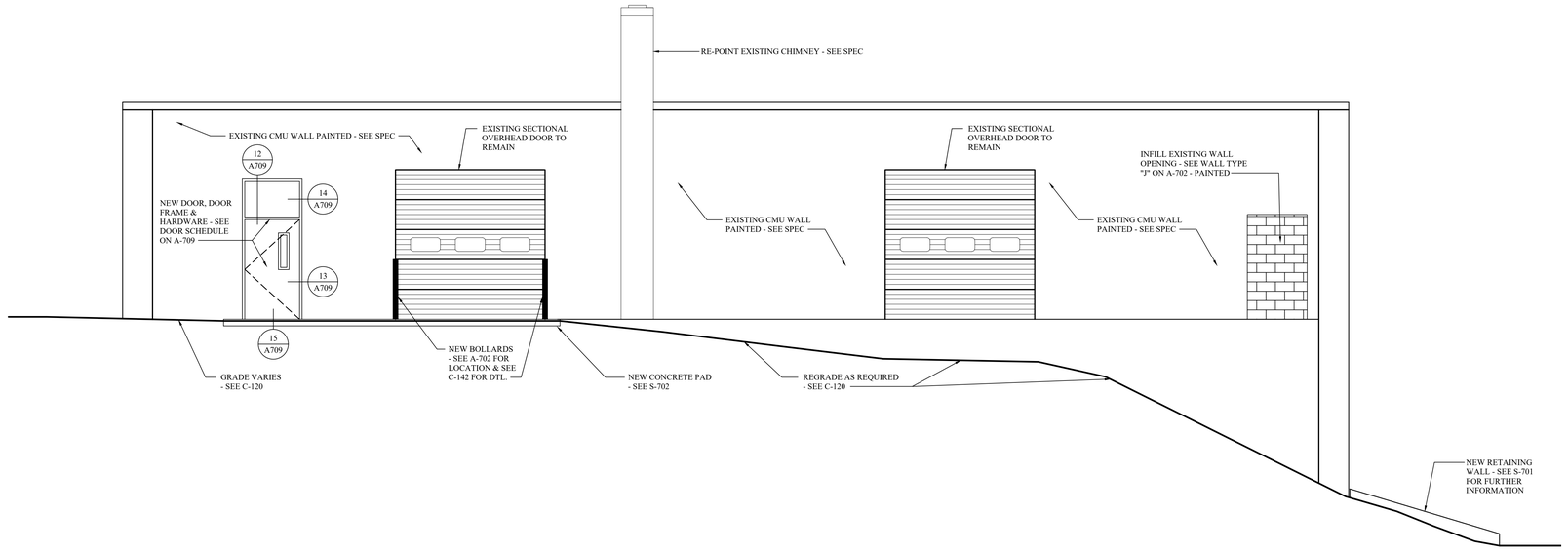
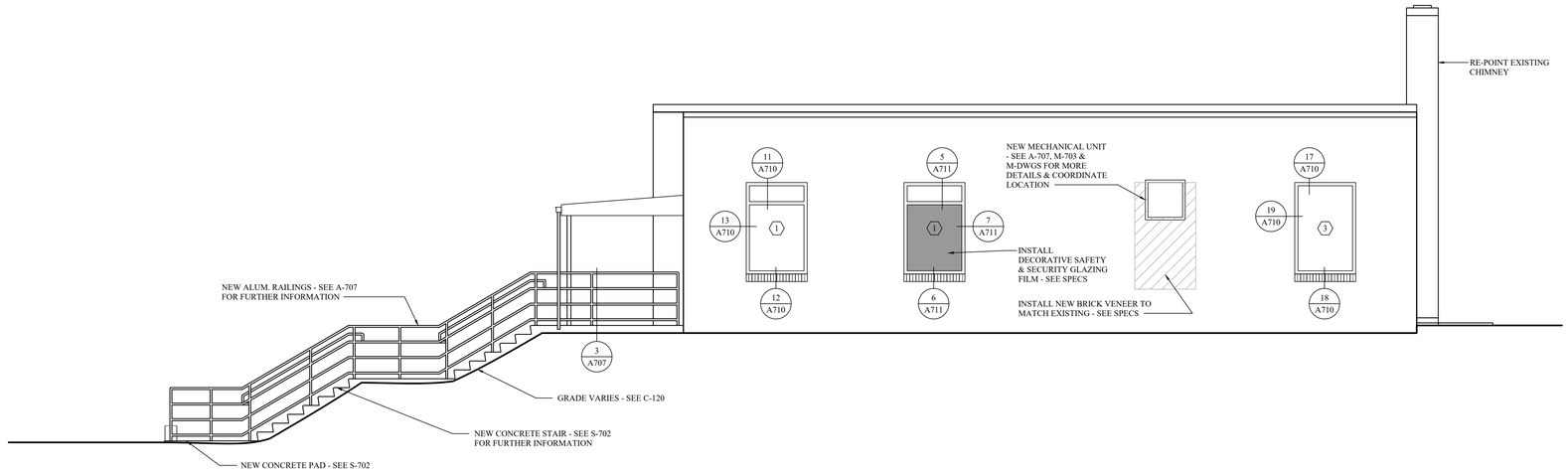
- INSTALL NEW INSULATED OVERHEAD COILING DOOR, TRACK, ETC. AS DESIGNATED ON PLAN - SEE DOOR SCHEDULE ON A-709 & SPECS FOR FURTHER INFORMATION
- ALL DIMENSIONS ARE TO FINISHED MASONRY OR FACE OF FRAMING



1 A-705 WEST ELEVATION
SCALE: 1/4" = 1'-0"



2 A-705 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - EXTERIOR ELEVATIONS & NOTES

REVISIONS

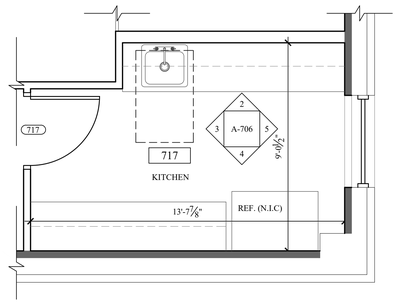
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

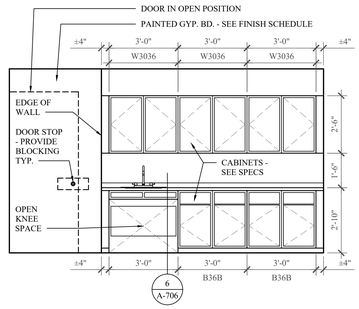
SHEET NO.

A-705

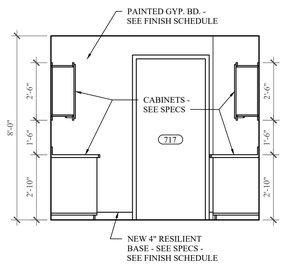
PROJECT # 18-732 PHASE #



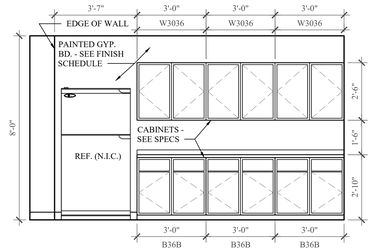
1 A-706 KITCHEN FLOOR PLAN
SCALE: 3/8" = 1'-0"



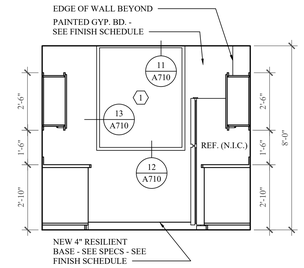
2 A-706 KITCHEN ELEVATION
SCALE: 3/8" = 1'-0"



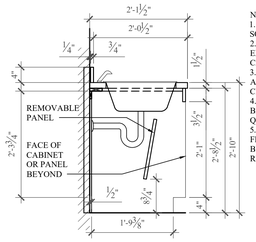
3 A-706 KITCHEN ELEVATION
SCALE: 3/8" = 1'-0"



4 A-706 KITCHEN ELEVATION
SCALE: 3/8" = 1'-0"

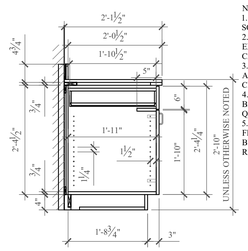


5 A-706 KITCHEN ELEVATION
SCALE: 3/8" = 1'-0"



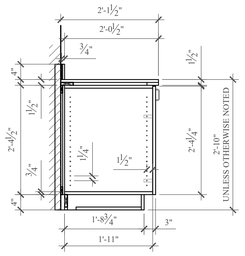
NOTES:
1. CABINET DOORS TO BE SOLID WOOD
2. WOOD VENEER AT ALL EXPOSED SURFACES OF CABINET BODY
3. CLOSER FOR DRAWERS AND DOORS TO BE SOFT CLOSING
4. COUNTERTOP & BACKSPLASH TO BE QUARTZ
5. PROVIDE & INSTALL 6" FLAT STRAP METAL BLOCKING IN WALL AS REQUIRED

6 A-706 PANTRY SINK CABINET DETAIL
SCALE: 3/4" = 1'-0"



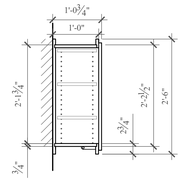
NOTES:
1. CABINET DOORS TO BE SOLID WOOD
2. WOOD VENEER AT ALL EXPOSED SURFACES OF CABINET BODY
3. CLOSER FOR DRAWERS AND DOORS TO BE SOFT CLOSING
4. COUNTERTOP & BACKSPLASH TO BE QUARTZ
5. PROVIDE & INSTALL 6" FLAT STRAP METAL BLOCKING IN WALL AS REQUIRED

7 A-706 BASE CABINET w/ DRAWER & DOOR DETAIL
SCALE: 3/4" = 1'-0"



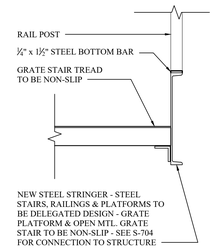
NOTES:
1. CABINET DOORS TO BE SOLID WOOD
2. WOOD VENEER AT ALL EXPOSED SURFACES OF CABINET BODY
3. CLOSER FOR DRAWERS AND DOORS TO BE SOFT CLOSING
4. COUNTERTOP & BACKSPLASH TO BE QUARTZ
5. PROVIDE & INSTALL 6" FLAT STRAP METAL BLOCKING IN WALL AS REQUIRED

8 A-706 BASE CABINET WITHOUT DRAWER DETAIL
SCALE: 3/4" = 1'-0"



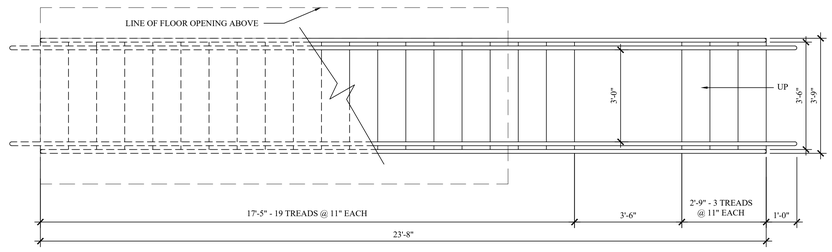
NOTES:
1. CABINET DOORS TO BE SOLID WOOD
2. WOOD VENEER AT ALL EXPOSED SURFACES OF CABINET BODY
3. CLOSER FOR DRAWERS AND DOORS TO BE SOFT CLOSING
4. COUNTERTOP & BACKSPLASH TO BE QUARTZ
5. PROVIDE & INSTALL 6" FLAT STRAP METAL BLOCKING IN WALL AS REQUIRED

9 A-706 WALL CABINET DETAIL
SCALE: 3/4" = 1'-0"

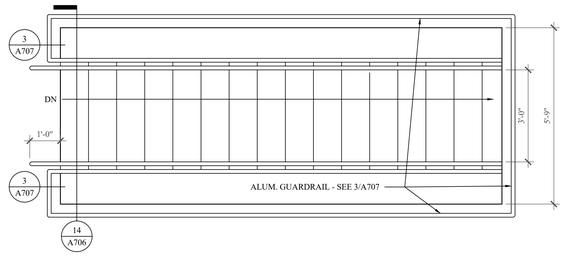


NOTE: ALL STEEL TO BE FINISH PAINTED

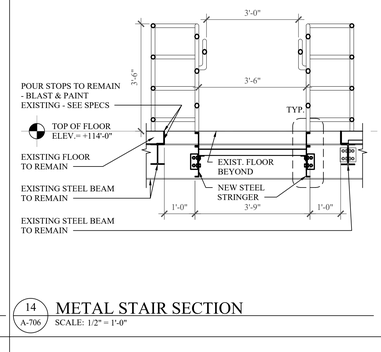
10 A-706 STRINGER AT LANDING
SCALE: 1-1/2" = 1'-0"



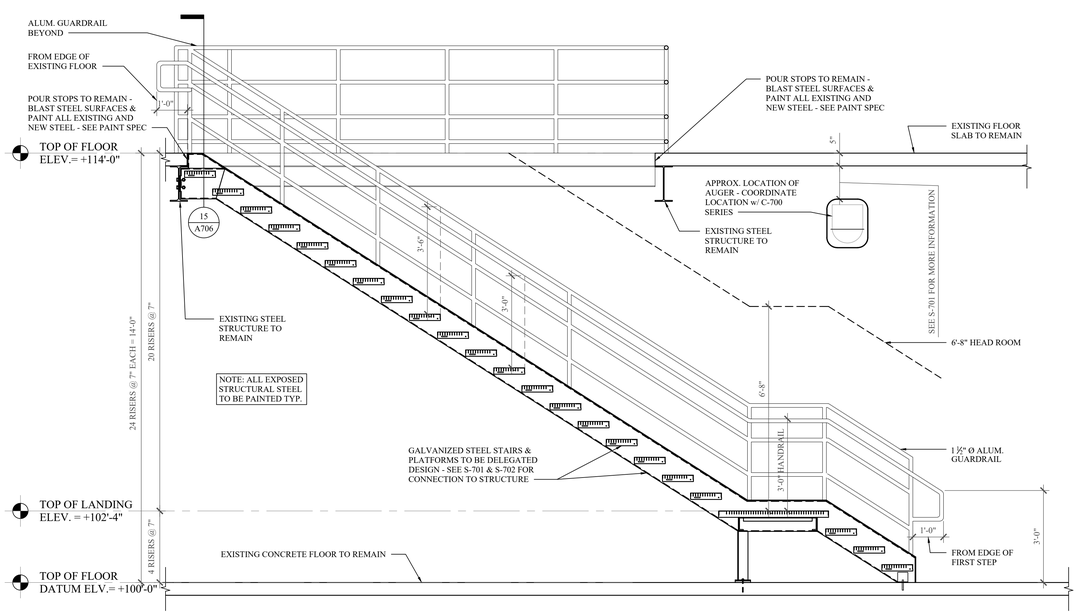
11 A-706 METAL STAIR LOWER LEVEL PLAN
SCALE: 1/2" = 1'-0"



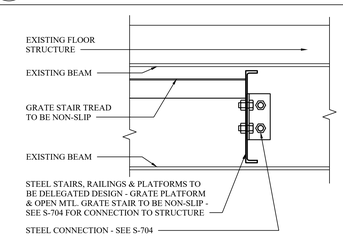
13 A-706 METAL STAIR UPPER LEVEL PLAN
SCALE: 1/2" = 1'-0"



14 A-706 METAL STAIR SECTION
SCALE: 1/2" = 1'-0"

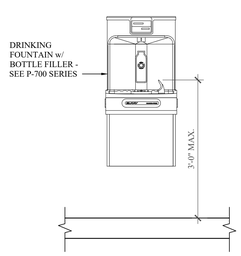


12 A-706 METAL STAIR SECTION
SCALE: 1/2" = 1'-0"



NOTE: ALL STEEL TO BE FINISH PAINTED

15 A-706 CONNECTION TO EXISTING FLOOR
SCALE: 1-1/2" = 1'-0"



16 A-706 DRINKING FOUNTAIN ELEVATION
SCALE: 3/4" = 1'-0"

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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UDIG·NY SAFE DIGGING STARTS HERE
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - KITCHEN PLAN, ELEVATIONS & DETAILS, METAL STAIR PLAN, SECTIONS & DETAILS

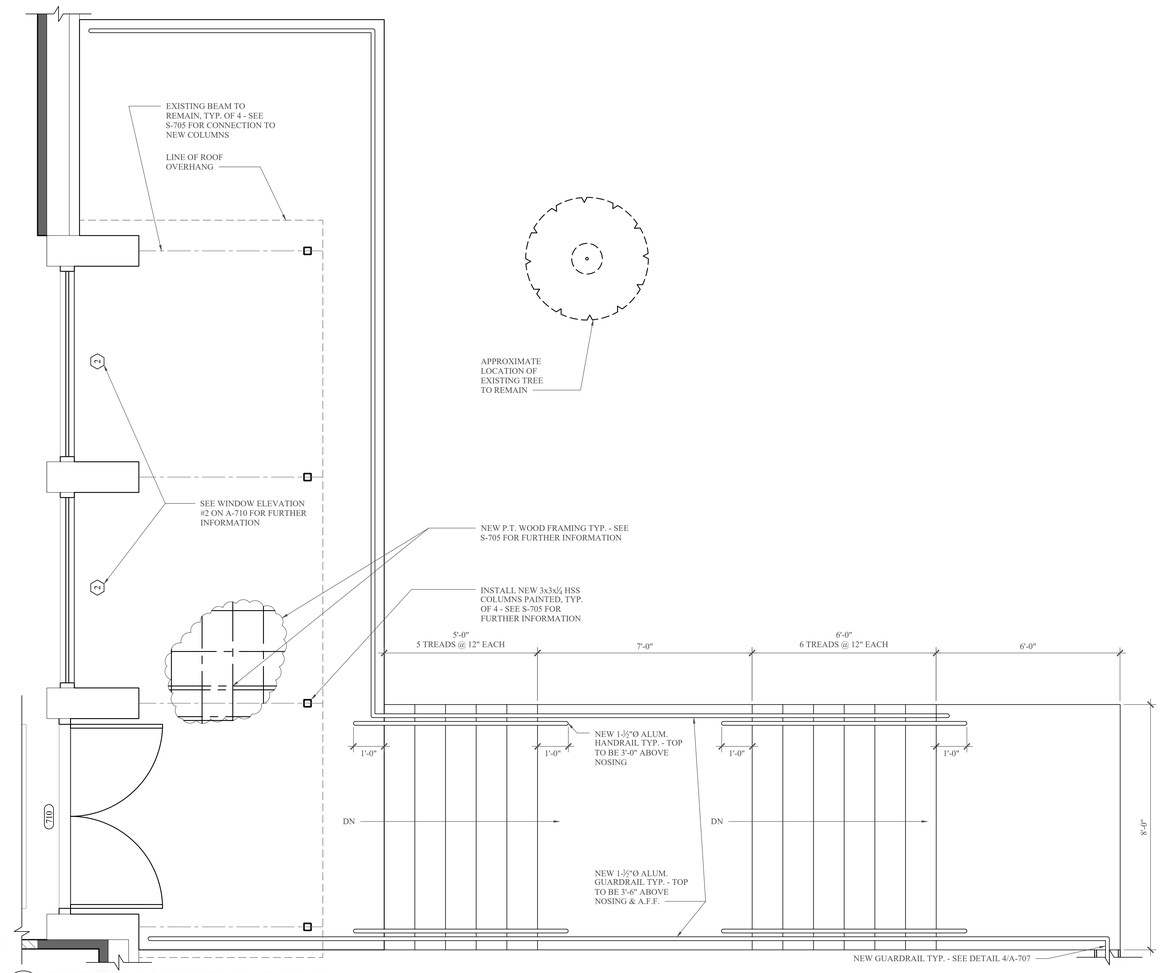
REVISIONS

NO.	DESCRIPTION	DATE

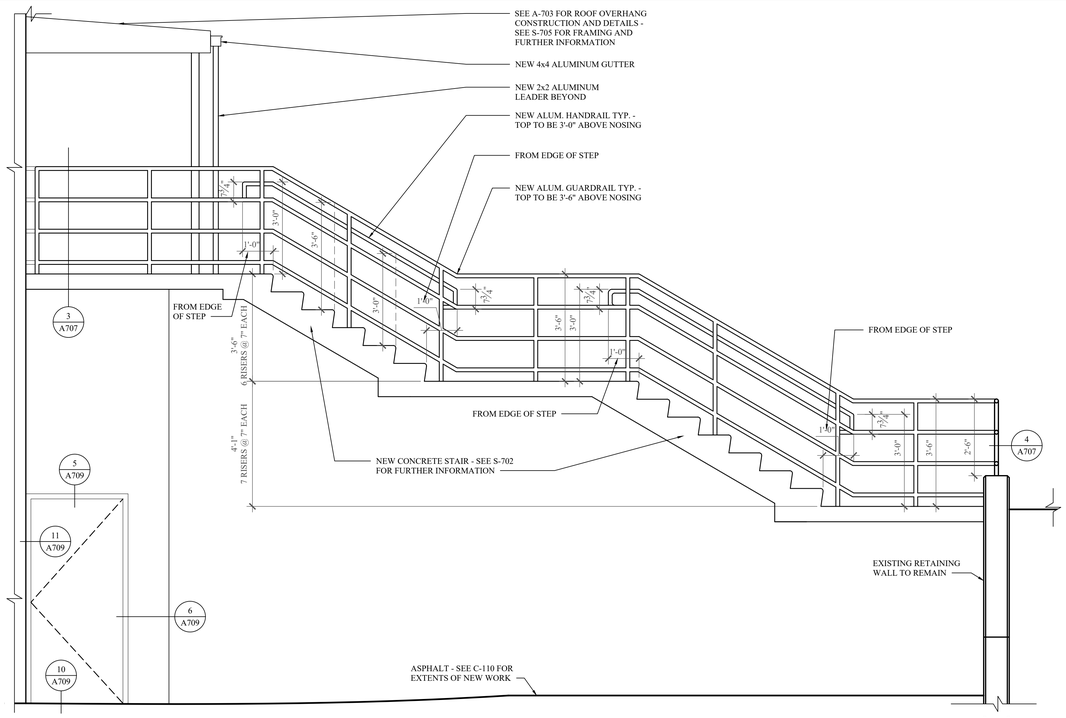
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
A-706

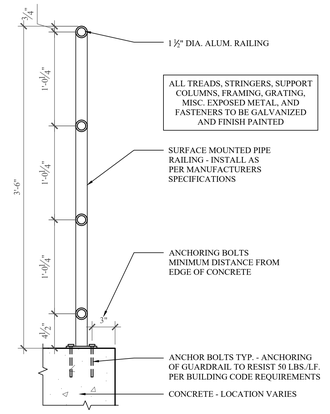
PROJECT # 18-732 PHASE #



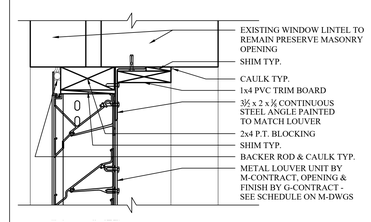
1 A-707 EXTERIOR CONCRETE STAIR PLAN
SCALE: 1/2" = 1'-0"



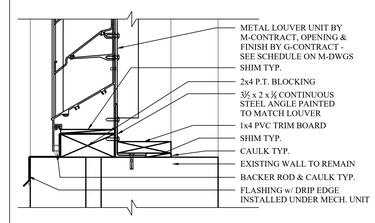
2 A-707 EXTERIOR CONCRETE STAIR ELEVATION
SCALE: 1/2" = 1'-0"



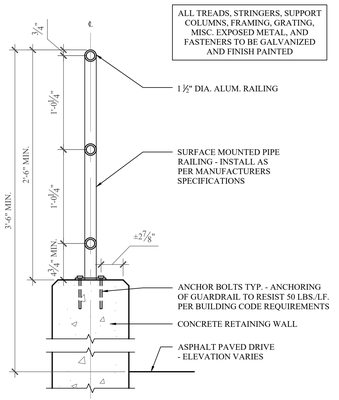
3 A-707 SURFACE MOUNTED GUARDRAIL DTL.
SCALE: 1-1/2" = 1'-0"



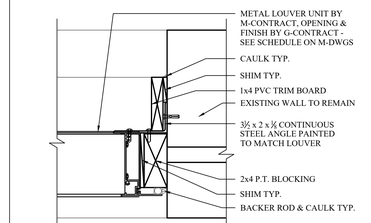
5 A-707 LOUVER HEAD DETAIL
SCALE: 3" = 1'-0"



6 A-707 LOUVER SILL DETAIL
SCALE: 3" = 1'-0"



4 A-707 SURFACE MOUNTED GUARDRAIL DTL.
SCALE: 1-1/2" = 1'-0"



7 A-707 LOUVER JAMB DETAIL
SCALE: 3" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - EXTERIOR CONCRETE STAIR PLAN, ELEVATION & MISC. DETAILS

REVISIONS

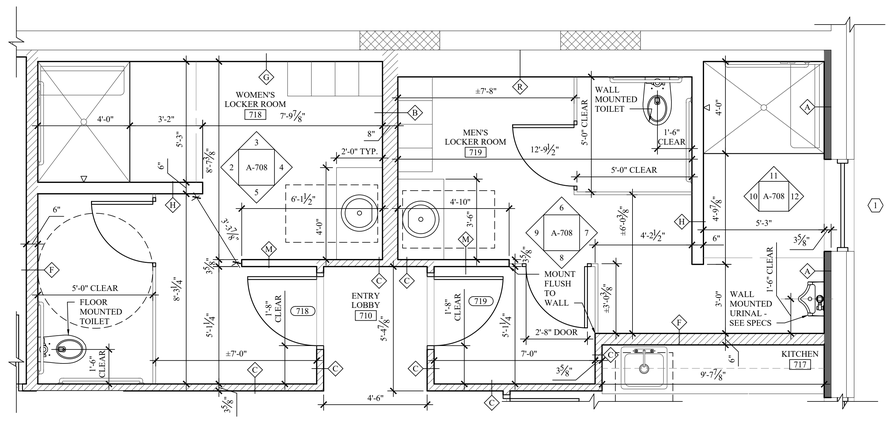
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.

A-707

PROJECT # 18-732 PHASE #



1 LOCKER ROOM FLOOR PLANS
A-708 SCALE: 3/8" = 1'-0"

GENERAL - NEW CONSTRUCTION NOTES

- PATCH ALL HOLES IN EXISTING MASONRY, BRICK AND/OR MORTAR WITH NEW QUICK SETTING MORTAR COLOR TO MATCH EXISTING MASONRY, BRICK AND/OR EXISTING MORTAR AS APPLICABLE
- INSTALL NEW WALLS AS SPECIFIED - SEE WALL TYPES ON SHEET A-702 FOR FURTHER INFORMATION
- INSTALL NEW WINDOWS THROUGHOUT ENTIRE BUILDING - SEE WINDOW SCHEDULE ON A-710 FOR FURTHER INFORMATION
- INSTALL NEW DOOR, DOOR FRAME & DOOR HARDWARE THROUGHOUT ENTIRE BUILDING - SEE DOOR SCHEDULE ON A-709 FOR FURTHER INFORMATION
- INSTALL NEW OVERHEAD DOOR, TRACK, ETC. AS DESIGNATED ON PLAN - SEE DOOR SCHEDULE ON A-709 FOR FURTHER INFORMATION
- PROVIDE & INSTALL 6" FLAT STRAP METAL BLOCKING IN WALL AS REQUIRED

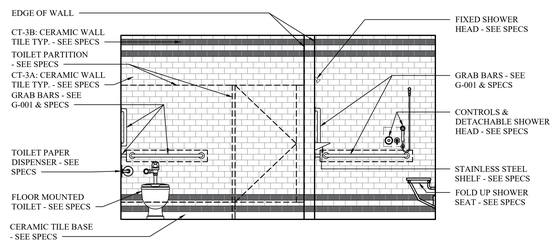
CERAMIC TILE - KEY:

CT-1 : 2"x2" CERAMIC FLOOR TILE - SEE SPECS

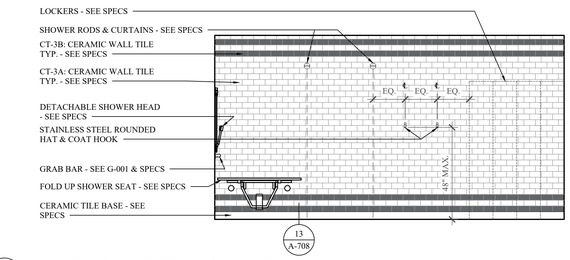
CT-2 : 11-3/16 "x11-3/16 " GLAZED PORCELAIN FLOOR TILE - SEE SPECS

CT-3A: 3"x6" CERAMIC SUBWAY WALL TILE (FIELD) - SEE SPECS

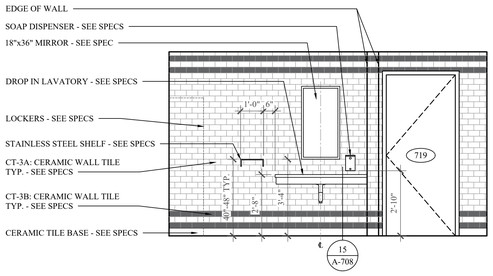
CT-3B: 3"x6" CERAMIC SUBWAY WALL TILE (ACCENT) - SEE SPECS



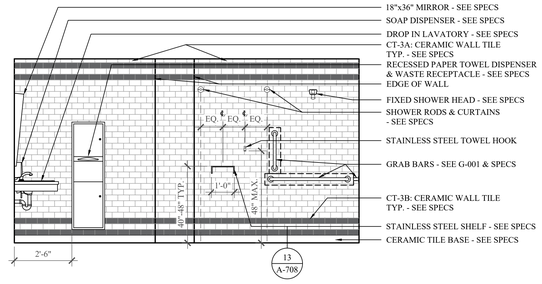
2 WOMEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



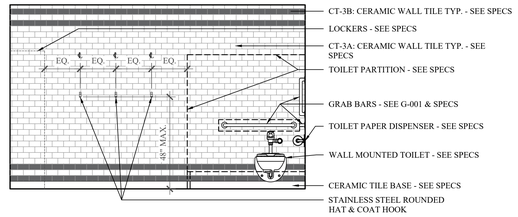
3 WOMEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



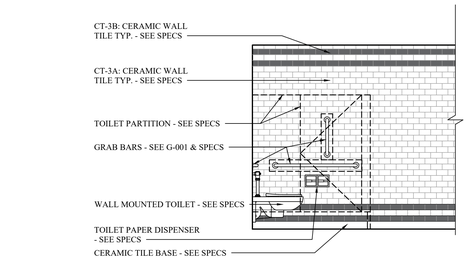
4 WOMEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



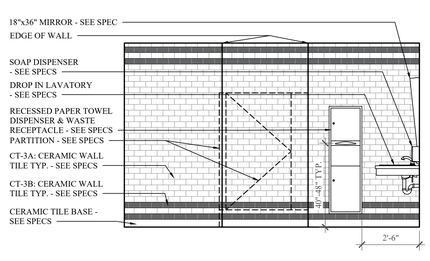
5 WOMEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



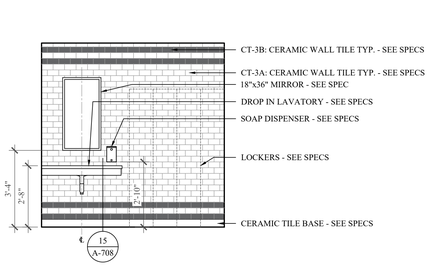
6 MEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



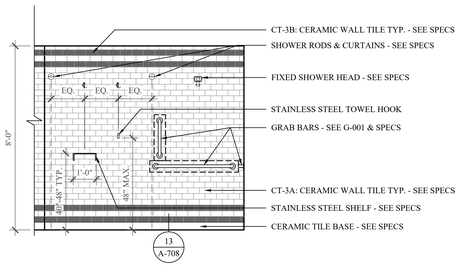
7 MEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



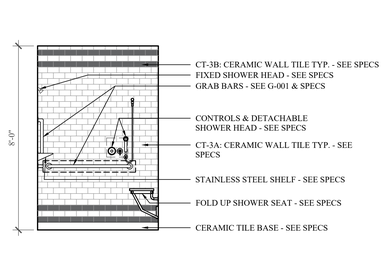
8 MEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



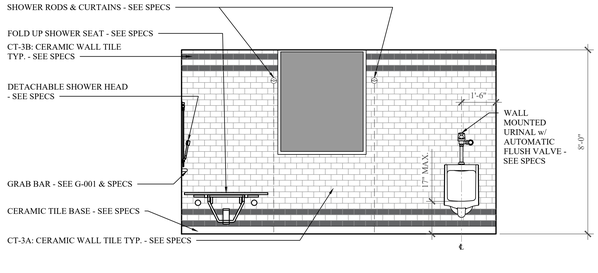
9 MEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



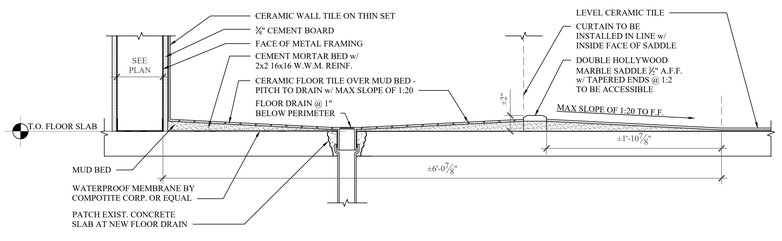
10 MEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



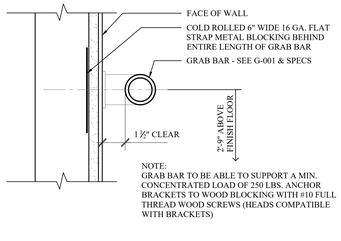
11 MEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



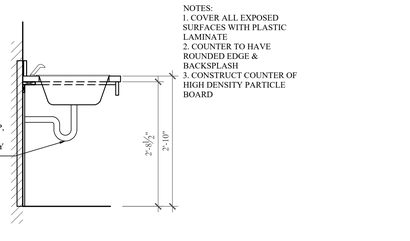
12 MEN'S LOCKER ROOM ELEVATION
A-708 SCALE: 3/8" = 1'-0"



13 ROLL IN SHOWER DETAIL
A-708 SCALE: 1-1/2" = 1'-0"



14 GRAB BAR DETAIL
A-708 SCALE: 3" = 1'-0"



15 DROP IN SINK DETAIL
A-708 SCALE: 1-1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
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Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - INTERIOR PLANS, INTERIOR ELEVATIONS & DETAILS

REVISIONS

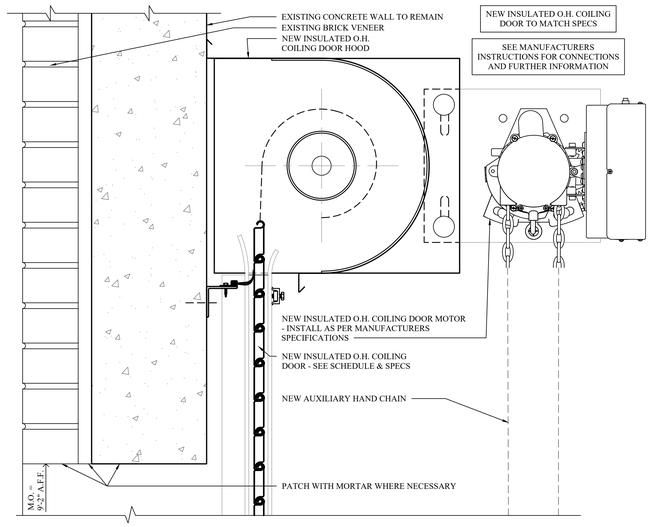
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

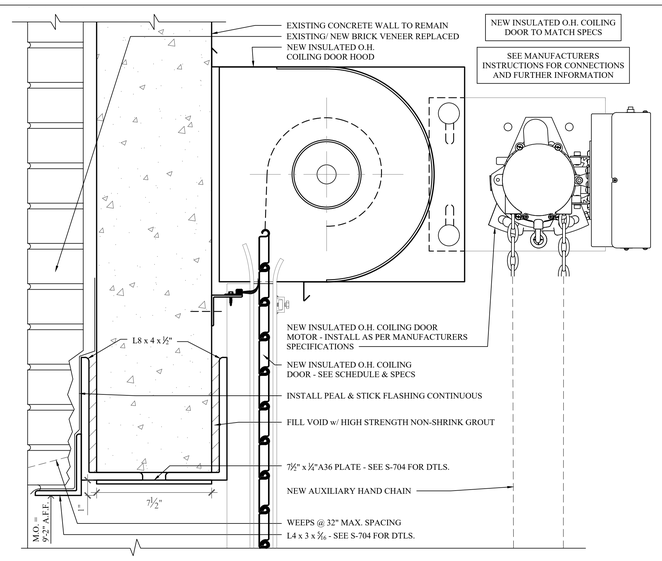
SHEET NO.

A-708

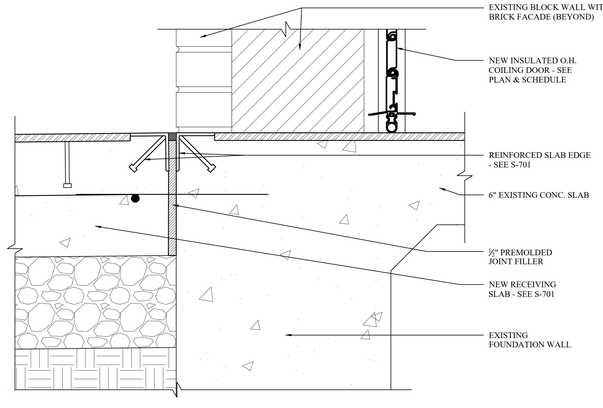
PROJECT # 18-732 PHASE #



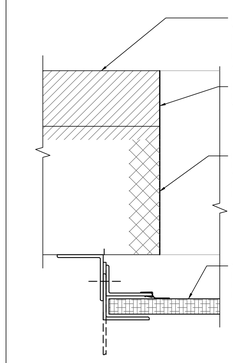
1 A-709 O.H. DOOR - HEAD DETAIL
SCALE: 3" = 1'-0"



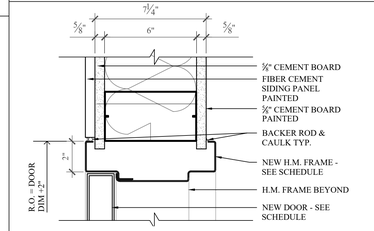
2 A-709 O.H. DOOR - HEAD DETAIL
SCALE: 3" = 1'-0"



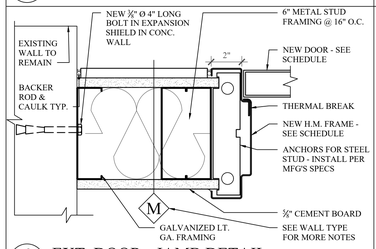
3 A-709 O.H. DOOR - SILL DETAIL
SCALE: 3" = 1'-0"



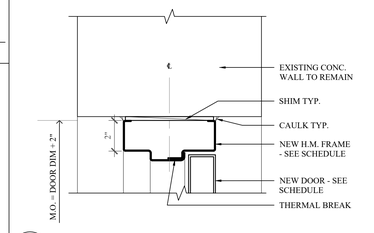
4 A-709 O.H. DOOR - JAMB DETAIL
SCALE: 3" = 1'-0"



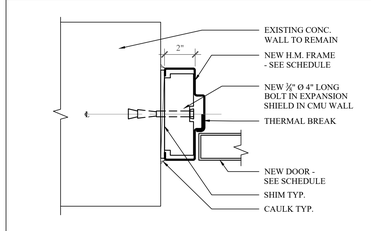
5 A-709 EXT. DOOR - HEAD DETAIL (MTL.)
SCALE: 3" = 1'-0"



6 A-709 EXT. DOOR - JAMB DETAIL
SCALE: 3" = 1'-0"



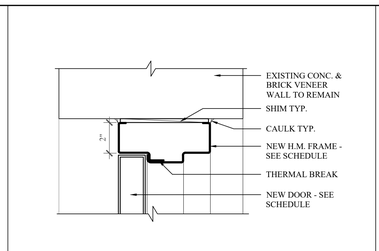
7 A-709 INT. DOOR - HEAD DETAIL (CONC.)
SCALE: 3" = 1'-0"



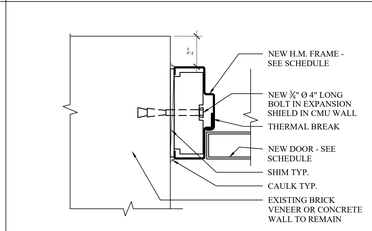
8 A-709 INT. DOOR - JAMB DETAIL (CONC.)
SCALE: 3" = 1'-0"



9 A-709 EXT. DOOR - HEAD DETAIL
SCALE: 3" = 1'-0"



10 A-709 EXT. DOOR - SILL DETAIL
SCALE: 3" = 1'-0"



11 A-709 EXT. DOOR - JAMB DETAIL
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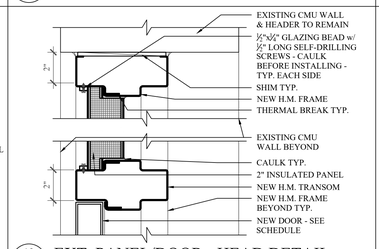
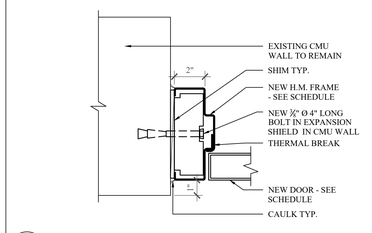
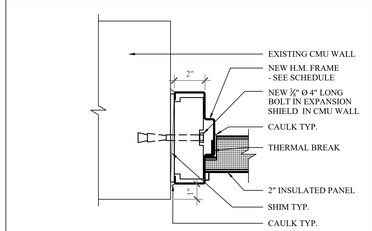


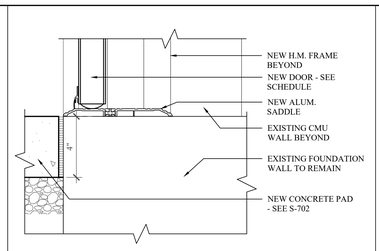
12 A-709 EXT. PANEL/DOOR - HEAD DETAIL
SCALE: 3" = 1'-0"



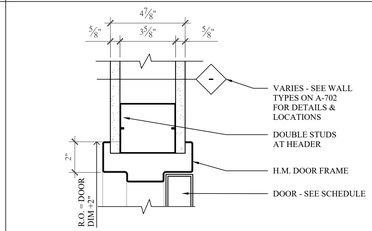
13 A-709 EXT. DOOR - JAMB DETAIL (CMU.)
SCALE: 3" = 1'-0"



14 A-709 EXT. PANEL - JAMB DETAIL (CMU.)
SCALE: 3" = 1'-0"

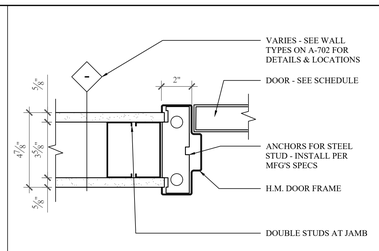


15 A-709 EXT. DOOR - SILL DETAIL
SCALE: 3" = 1'-0"

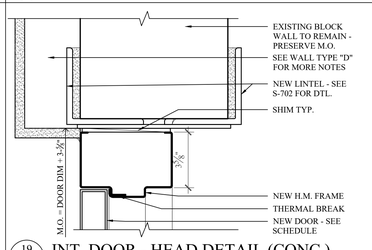


16 A-709 DOOR - SILL DETAIL
SCALE: 3" = 1'-0"

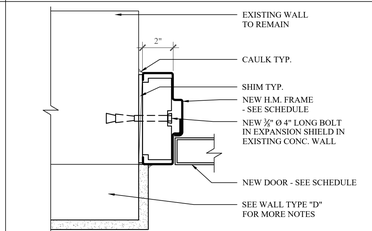
17 A-709 INT. DOOR - HEAD DETAIL (MTL.)
SCALE: 3" = 1'-0"



18 A-709 INT. DOOR - JAMB DETAIL (MTL.)
SCALE: 3" = 1'-0"



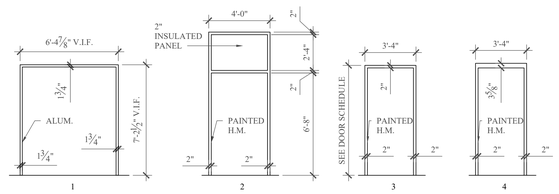
19 A-709 INT. DOOR - HEAD DETAIL (CONC.)
SCALE: 3" = 1'-0"



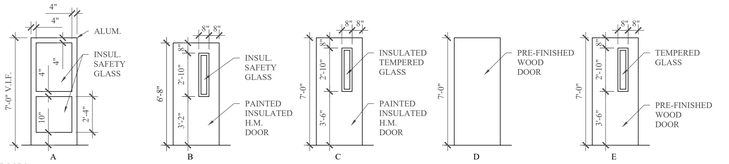
20 A-709 INT. DOOR - JAMB DETAIL (CONC.)
SCALE: 3" = 1'-0"

DOOR SCHEDULE									
DOOR No.	LOCATION	DOOR SIZE	DOOR TYPE	FRAME TYPE	SADDLE	HARDWARE GROUP	FIRE RATING	DETAILS	REMARKS
704	ROOM 704 - EXTERIOR	9'-8" x 9'-2"	BY COILING OVERHEAD DOOR MANUFACTURER					1,3+4/A-709	1
705	ROOM 705 - EXTERIOR	9'-8" x 9'-2"	BY COILING OVERHEAD DOOR MANUFACTURER					2,3+4/A-709	1
706A	ROOM 706 - EXTERIOR	3'-0" x 6'-8"	F	3	ALUM.	2	-	5,6,10+11/A-709	
706B	ROOM 706 - ROOM 705	3'-0" x 6'-8"	G	3	ALUM.	6	-	7,8+16/A-709	1, 2
707	ROOM 707 - EXTERIOR	3'-0" x 6'-8"	B	3	ALUM.	2	-	9,10+11/A-709	1, 2
710	ROOM 710 - EXTERIOR	(2) 3'-0" x 7'-0"	A	1	ALUM.	8	-	28,29+30/A-710	1, 2
711A	ROOM 710 - ROOM 711	3'-0" x 7'-0"	E	3	-	4	-	17+18/A-709	
711B	ROOM 711 - ROOM 716	5'-0" x 3'-0" V.I.F.	H	-	-	-	3/4 HR.	8,9+10/A-711	
712	ROOM 715 - ROOM 712	3'-0" x 7'-0"	E	3	-	4	-	17+18/A-709	
713	ROOM 712 - ROOM 713	3'-0" x 7'-0"	E	3	-	4	-	17+18/A-709	
714	ROOM 715 - ROOM 714	3'-0" x 7'-0"	D	3	-	4	-	17+18/A-709	
715	ROOM 715 - ROOM 716	3'-0" x 7'-0"	C	4	ALUM.	6	1 HR.	16,19+20/A-709	1, 2
716	ROOM 716 - EXTERIOR	3'-8" x 6'-8"	B	2	ALUM.	2	-	12,13,14+15/A-709	1, 2
717	ROOM 710 - ROOM 717	3'-0" x 7'-0"	D	3	-	6	-	17+18/A-709	
718	ROOM 710 - ROOM 718	3'-0" x 7'-0"	D	3	MARBLE	7	-	17+18/A-709 + 2/A-702	
719	ROOM 710 - ROOM 719	3'-0" x 7'-0"	D	3	MARBLE	7	-	17+18/A-709 + 2/A-702	
720	ROOM 716 - ROOM 720	3'-8" x 6'-8"	G	3	ALUM.	4	1 HR.	16/A-709 & 25,26,27/A-710	1, 2

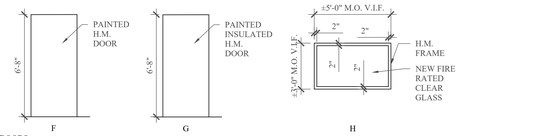
REMARKS:
1- DOOR TO HAVE INSULATED CORE
2- FRAME TO HAVE THERMAL BREAK



FRAMES



DOORS



DOORS

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - DOOR DETAILS & DOOR SCHEDULE

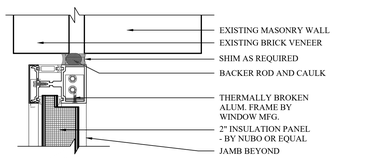
REVISIONS

NO.	DESCRIPTION	DATE

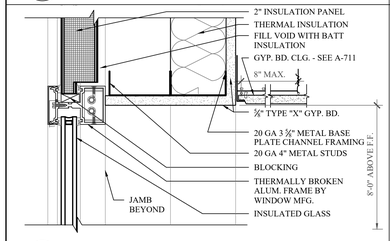
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.
A-709

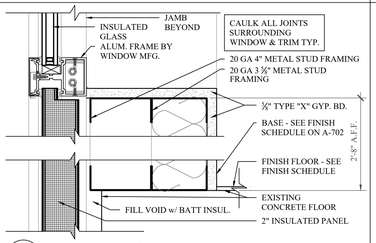
PROJECT # 18-732 PHASE #



1 A-710 HEAD DETAIL - ROOF/ PANEL
SCALE: 3" = 1'-0"



2 A-710 HEAD DETAIL - WINDOW/ PANEL
SCALE: 3" = 1'-0"



3 A-710 SILL/FLOOR DETAIL
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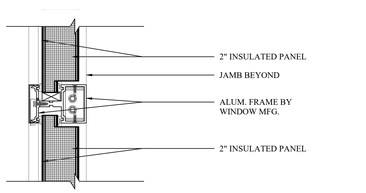

4 A-710 HORIZONTAL MULLION DETAIL
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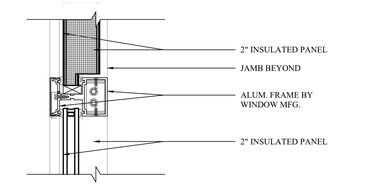

5 A-710 HORIZONTAL MULLION DETAIL
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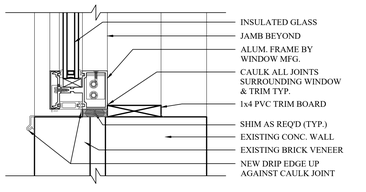

6 A-710 SILL DETAIL
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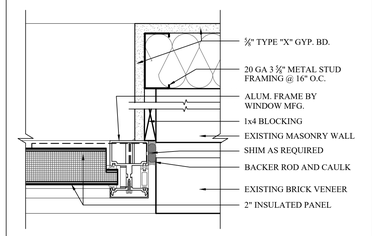

7 A-710 JAMB DETAIL
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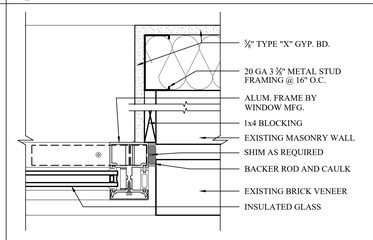

8 A-710 JAMB DETAIL
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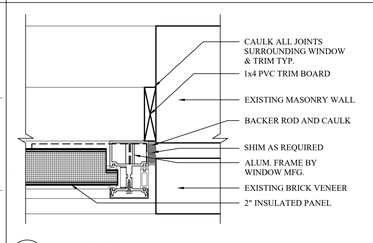

9 A-710 JAMB DETAIL - PANEL
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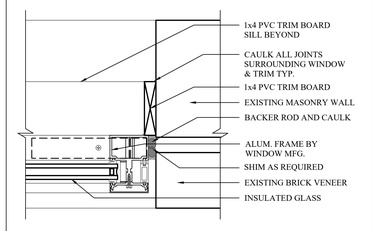

10 A-710 JAMB DETAIL
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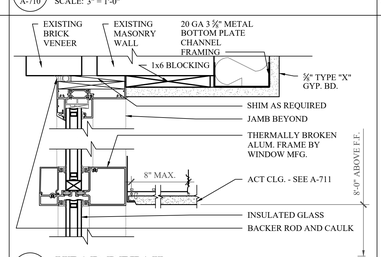

11 A-710 HEAD DETAIL
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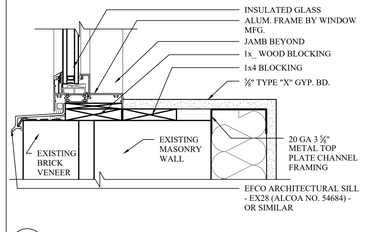

12 A-710 SILL DETAIL
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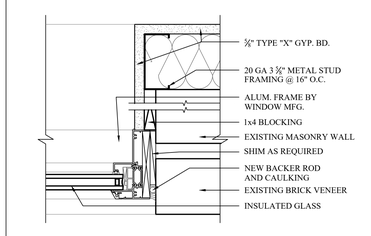

13 A-710 JAMB DETAIL
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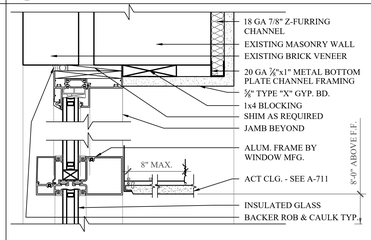

14 A-710 HEAD DETAIL
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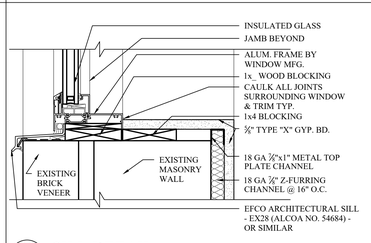

15 A-710 SILL DETAIL
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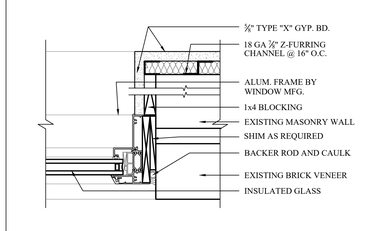

16 A-710 JAMB DETAIL
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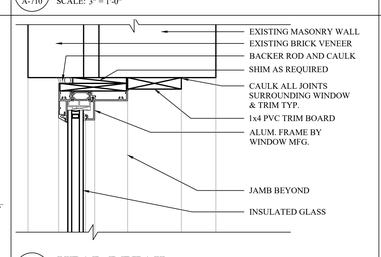

17 A-710 HEAD DETAIL
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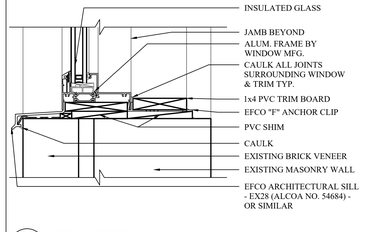

18 A-710 SILL DETAIL
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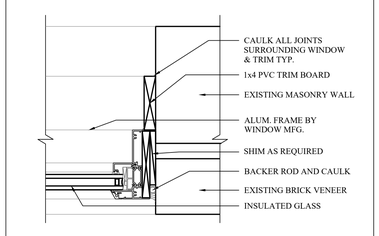

19 A-710 JAMB DETAIL
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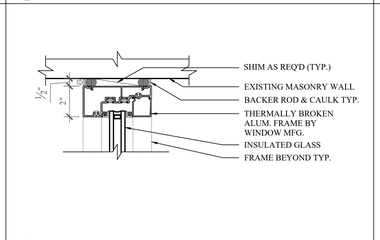

20 A-710 HEAD DETAIL
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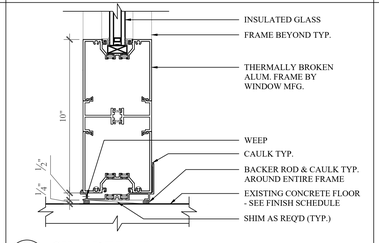

21 A-710 SILL DETAIL
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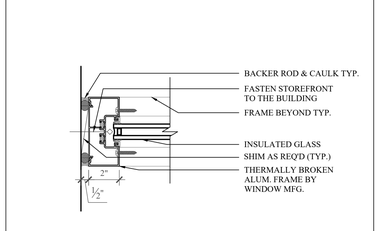

22 A-710 JAMB DETAIL
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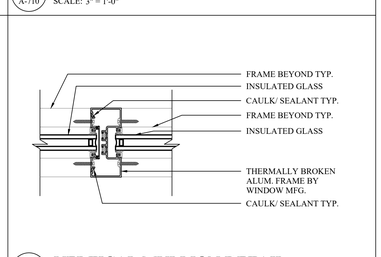

23 A-710 VERTICAL MULLION DETAIL
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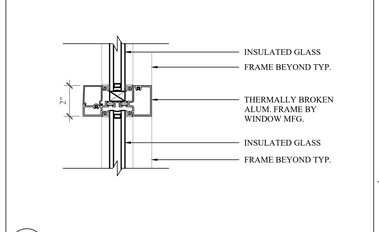
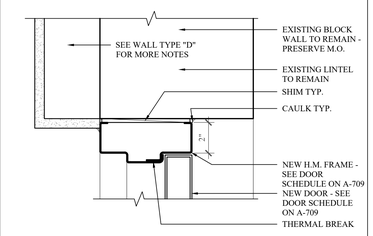


24 A-710 HORIZONTAL MULLION DETAIL
SCALE: 3" = 1'-0"



25 A-710 INT. DOOR - HEAD DETAIL (CONC.)
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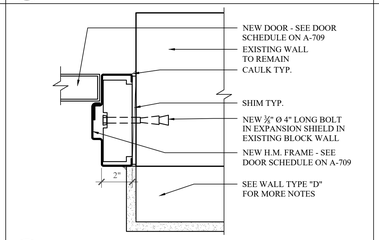

26 A-710 INT. DOOR - JAMB DETAIL (CONC.)
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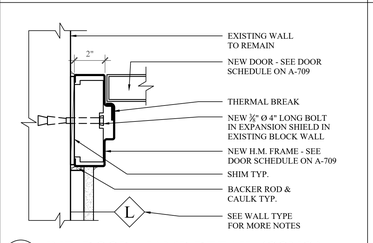

27 A-710 INT. DOOR - JAMB DETAIL (CONC.)
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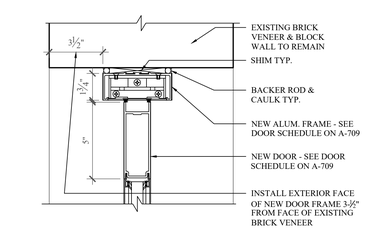

28 A-710 EXT. ALUM DOOR - HEAD DETAIL
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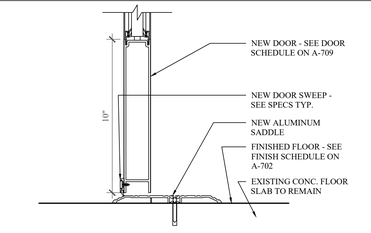

29 A-710 EXT. ALUM DOOR - SILL DETAIL
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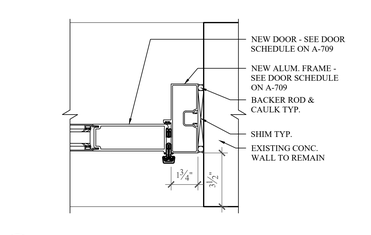
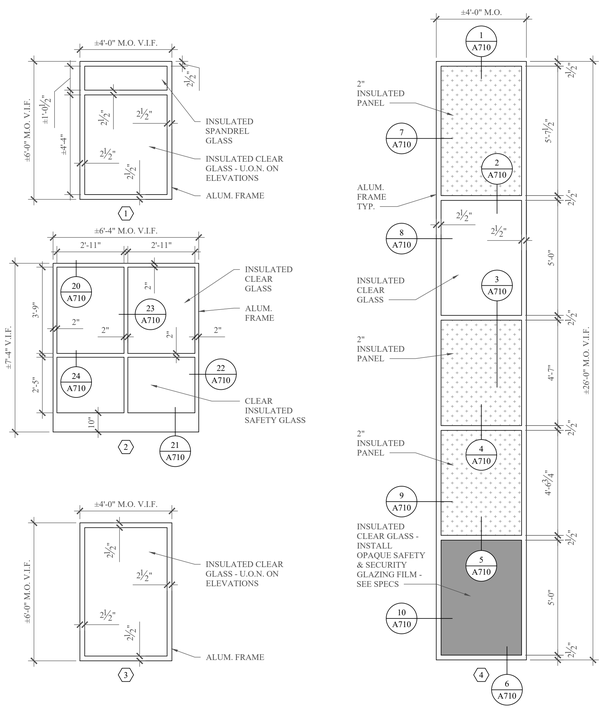


30 A-710 EXT. ALUM DOOR - JAMB DETAIL
SCALE: 3" = 1'-0"



WINDOWS

WINDOW SCHEDULE							
WINDOW No.	WINDOW SIZE (W x H)	WINDOW TYPE	FRAME TYPE	FIRE RATING	QTY.	DETAILS	REMARKS
1	4'-0" x 6'-0" (V.I.F.)	FIXED	ALUM.	-	5	SEE A-704+A-705	
2	6'-3 ⅜" x 7'-3 ⅜" (V.I.F.)	FIXED	ALUM.	-	2	20,21,22,23+24/A-710	
3	4'-0" x 6'-0" (V.I.F.)	FIXED	ALUM.	-	3	17,18+19/A-710	
4	3'-11" x 26'-0 ⅞" (V.I.F.)	FIXED	ALUM.	-	4	1,2,3,4,5,6,7,8,9+10/A-710	
REMARKS:							

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

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Milford, PA 18337
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BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - WINDOW DETAILS & DOOR DETAILS & WINDOW SCHEDULE

REVISIONS

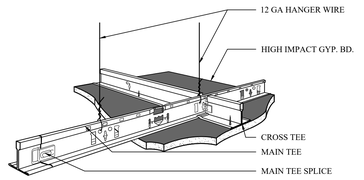
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

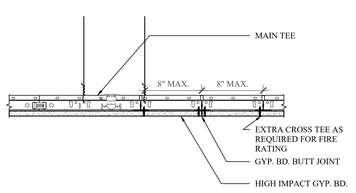
SHEET NO.

A-710

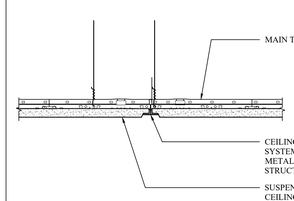
PROJECT # 18-732 PHASE #



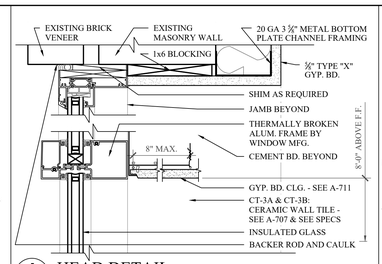
2 A-711 SUSPENDED HARD CEILING DETAIL
SCALE: 3" = 1'-0"



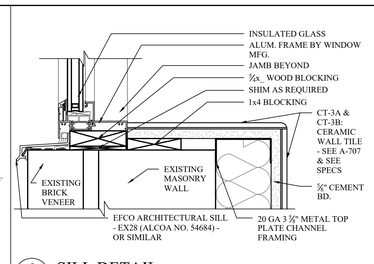
3 A-711 SUSPENDED HARD CEILING DETAIL
SCALE: 3" = 1'-0"



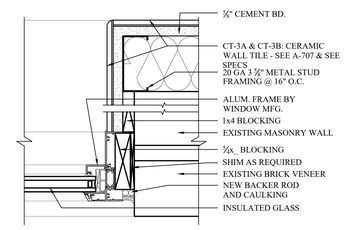
4 A-711 SUSPENDED ACT TILE CLG. DETAIL
SCALE: 3" = 1'-0"



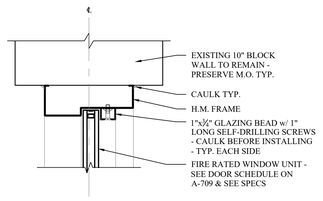
5 A-711 HEAD DETAIL
SCALE: 3" = 1'-0"



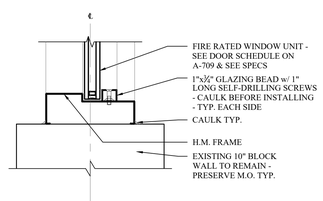
6 A-711 SILL DETAIL
SCALE: 3" = 1'-0"



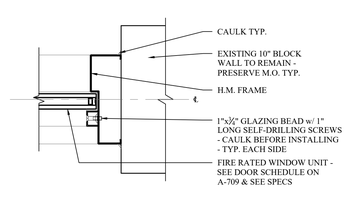
7 A-711 JAMB DETAIL
SCALE: 3" = 1'-0"



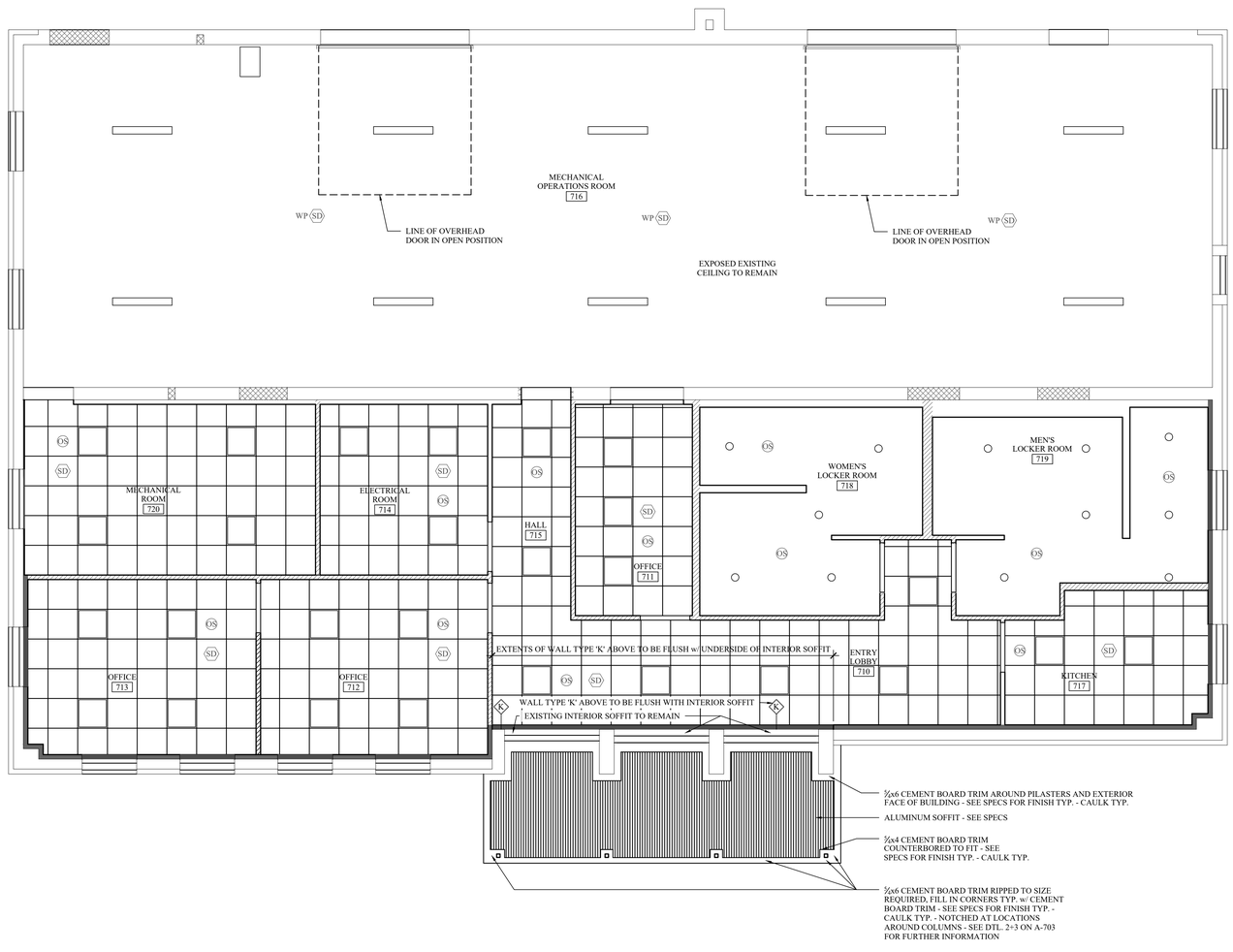
8 A-711 INTERIOR WINDOW HEAD DTL.
SCALE: 3" = 1'-0"



9 A-711 INTERIOR WINDOW SILL DTL.
SCALE: 3" = 1'-0"



10 A-711 INTERIOR WINDOW JAMB DTL.
SCALE: 3" = 1'-0"



1 A-711 PROPOSED UPPER LEVEL REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

PROJECT NORTH

TRUE NORTH

LEGEND

- 2'x2' LED SURFACE LIGHT FIXTURE
- 6"x4' LED SURFACE LIGHT FIXTURE
- 6" LED RECESSED LIGHT FIXTURE
- SD — SMOKE DETECTOR
- WP SD — WATER PROOF SMOKE DETECTOR
- OS — OCCUPANCY SENSOR

CEILINGS			
ROOM No.	HEIGHT	TYPE	DETAIL
704	EXISTING	EXISTING	EXISTING
705	EXISTING	EXISTING	EXISTING
706	EXISTING	EXISTING	EXISTING
707	EXISTING	EXISTING	EXISTING
710	8'-0"	ACT (2'x2')	4/A711
711	8'-0"	ACT (2'x2')	4/A711
712	8'-0"	ACT (2'x2')	4/A711
713	8'-0"	ACT (2'x2')	4/A711
714	8'-0"	ACT (2'x2')	4/A711
715	8'-0"	ACT (2'x2')	4/A711
716	EXISTING	EXISTING	EXISTING
717	8'-0"	ACT (2'x2')	4/A711
718	8'-0"	GYP. GB.	2+3/A711
719	8'-0"	GYP. GB.	2+3/A711
720	8'-0"	ACT (2'x2')	4/A711

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

DEWATERING BUILDING - UPPER LEVEL REFLECTED CEILING PLAN & MISC. DETAILS

REVISIONS

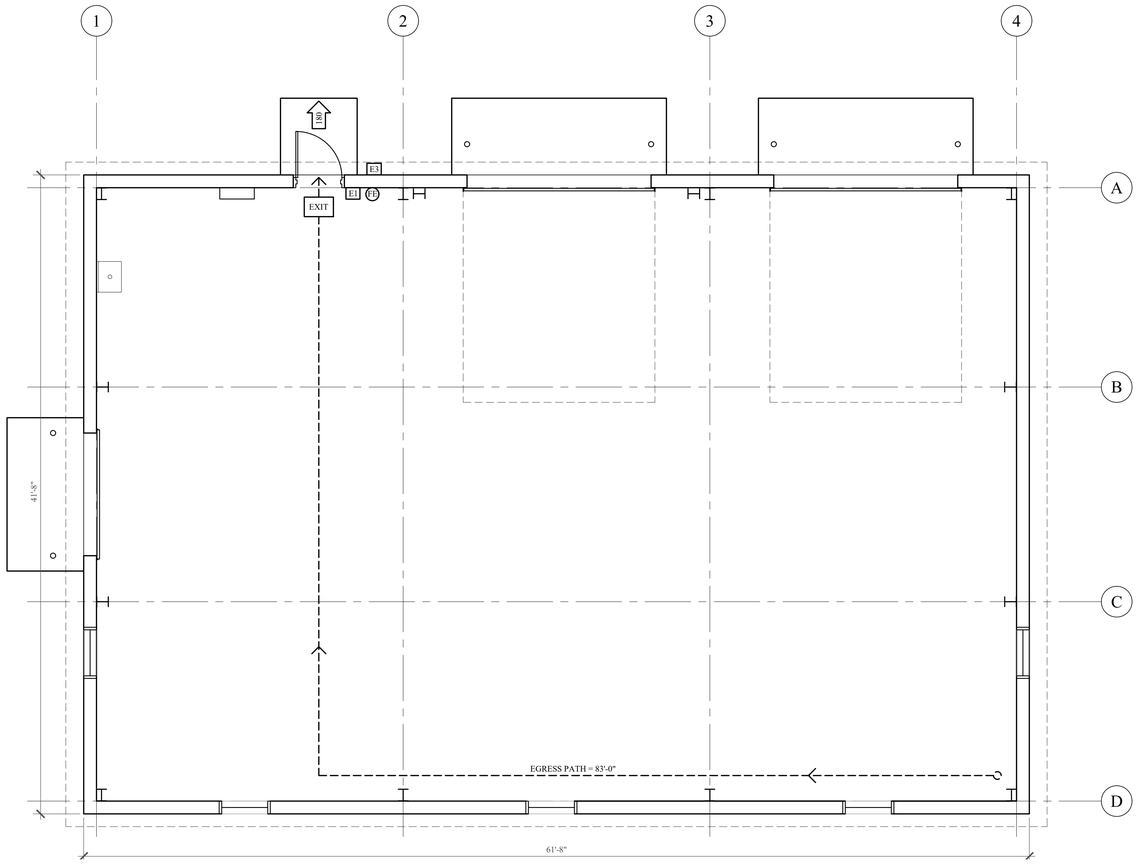
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR. 2025
DESIGN BY:	AW, EDIII
DRAWN BY:	EDIII
CHECKED BY:	AW
REVIEWED BY:	JZ, ML

SHEET NO.

A-711

PROJECT # 18-732 PHASE #



1 G-950 EGRESS PLAN
SCALE: 1/4" = 1'-0"

TRUE NORTH

PROJECT NORTH

EGRESS PLAN LEGEND

E1	WALL MOUNTED EXIT SIGN - SEE DETAIL 1/G-400
E3	FIRE DEPARTMENT KNOX BOX - COORDINATE REQUIREMENTS w/ AUTHORITY HAVING JURISDICTION

SYMBOLS LEGEND

#	INDICATES CAPACITY OF EXIT IN # OF PERSONS
EXIT	EXIT LIGHT LOCATION
FE	WALL MOUNTED FIRE EXTINGUISHER ON BRACKET
#	INDICATES WALL TYPE

APPLICABLE CODES					
	2020 BUILDING CODE OF NEW YORK				
GENERAL DESCRIPTION OF BUILDING					
	THE PROPOSED BUILDING IS A NEW 1 STORY STRUCTURE WITH PRE-ENGINEERED STRUCTURAL STEEL RIGID FRAMES WITH STEEL ROOF PURLINS & WALL GIRTS WITH INSULATION AND METAL ROOF & METAL SIDING				
GENERAL DESCRIPTION OF THE PROJECT					
	THE PROPOSED BUILDING IS A NEW 1 STORY STRUCTURE. IT WILL BE USED FOR STORAGE AND MAINTENANCE FOR THE WASTE TREATMENT PLANT				
CODE SUMMARY					
	ITEM	CODE SECTION	REQUIRED / ALLOWED	PROVIDED	REMARKS
	OCCUPANCY				
	STORAGE GROUP S-1	311.2 OR 311.3			
	GENERAL DESCRIPTION OF BUILDING				
	HEIGHT - STORIES			1	
	FLOOR AREA			2,570 SF	
	CONSTRUCTION			PRE-ENGINEERED STRUCTURAL STEEL RIGID FRAMES WITH STEEL ROOF PURLINS & WALL GIRTS WITH INSULATION AND METAL ROOF& METAL SIDING WITH A REINFORCED CONCRETE SLAB	
	OCCUPANCY SEPARATION				
	SINGLE OCCUPANCY	N/A		NONE	
	GENERAL BUILDING HEIGHT AND FIRE AREAS – BASED ON TYPE 2B CONSTRUCTION				
	S-1 OCCUPANCY HEIGHT (STORIES)	TABLE 504.3	2 STORY	1 STORY	
	S-1 OCCUPANCY HEIGHT (FEET)	TABLE 504.4	55 FEET	23 FEET	
	S-1 OCCUPANCY AREA	TABLE 506.2	ALLOWED – 17,500 SF	2,570 SF	
	TYPES OF CONSTRUCTION				
	TYPE 2B	TABLE 601			
	STRUCTURAL FRAME	TABLE 601	0	0	STEEL FRAMING
	BEARING EXTERIOR WALLS	TABLE 601	0	0	N/A
	BEARING WALLS - INTERIOR	TABLE 601	0	N/A	N/A
	NONBEARING WALLS AND PARTITIONS-EXTERIOR	TABLE 601	SEE BELOW	N/A	
	NONBEARING WALLS AND PARTITIONS-INTERIOR	TABLE 601	0	N/A	
	FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	TABLE 601	0	N/A	FLOOR IS A REINFORCED CONCRETE SLAB ON GRADE
	ROOF CONSTRUCTION	TABLE 601	0	0	STEEL PURLINS AND RIGID FRAMES
	FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE				
	FIRE SEPARATION DISTANCE	TABLE 602	GREATER THAN 30 FEET	N/A	NO RATING REQUIRED
	FIRE RESISTANCE RATED CONSTRUCTION				
	EXTERIOR WALLS	705	N/A		
	FIRE WALLS	706	N/A		
	FIRE BARRIERS	707	N/A		
	SHAFT ENCLOSURES	707.3.1	N/A		
	FIRE PARTITIONS	708	N/A		
	INTERIOR FINISHES				
	S-1 OCCUPANCY				
	VERTICAL EXITS AND PASSAGEWAYS	TABLE 803.13	B	N/A	
	EXIT ACCESS CORRIDORS AND OTHER EXITWAYS	TABLE 803.13	C	N/A	
	ROOM AND ENCLOSED SPACES	TABLE 803.13	C	N/A	CMU WALLS TO 8'-0" W/ INSULATION & LINER SYSTEM ABOVE
	FIRE PROTECTION SYSTEMS				
	AUTOMATIC SPRINKLER SYSTEMS	903.2.9	NOT REQUIRED **	NONE PROVIDED	** NONE OF THE 5 ITEMS IN THIS SECTION OF THE CODE APPLY TO THIS BUILDING
	STANDPIPE SYSTEMS	905	N/A		
	FIRE ALARM SYSTEM - S-1 OCCUPANCY	907.2.10	N/A	NONE	
	MEANS OF EGRESS				
	OCCUPANT LOAD	TABLE 1004.5	500 SF / OCCUPANT	2,570/500 = 6 PERSONS	
	EGRESS WIDTH - STAIRS	TABLE 1005.3.1	0.3 " PER OCCUPANT	N/A	
	EGRESS WIDTH - OTHER	TABLE 1005.3.2	0.2" PER OCCUPANT	DOORS 36" WIDE / 2 = 180 CAPACITY AT EACH OF 5 EXIT DOORS	
	SPACES W/ ONE EXIT	TABLE 1006.2.1	ALLOWED	PROVIDED	
	MEANS OF EGRESS ILLUMINATION	1008	REQUIRED	ONE PROVIDED	
	ACCESSIBLE MEANS OF EGRESS	1009 / TABLE 1014.1	1 REQUIRED	1 PROVIDED	
	AREA OF REFUGE	1009.6	N/A	N/A	
	EXIT ACCESS	1016	N/A	N/A	
	EXIT TRAVEL DISTANCE	TABLE 1017.2	100 FEET	LESS THAN 100 FEET TO DOOR	
	ACCESSIBILITY				
	GENERAL ACCESSIBILITY REQUIREMENTS	1101	REQUIRED	PROVIDED	THE ENTIRE BUILDING WILL BE ACCESSIBLE
	PLUMBING FACILITIES				
	S-1 OCCUPANCY	TABLE 2902.3.2	REQUIRED EMPLOYEE TOILET FACILITIES LOCATED IN NEARBY BUILDING WITHIN 500 FEET	PROVIDED IN NEARBY BUILDING	FACILITIES ARE LOCATED 375 FEET FROM NEW BUILDING

MHE ENGINEERING

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145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MAINTENANCE BUILDING - EGRESS PLAN

REVISIONS

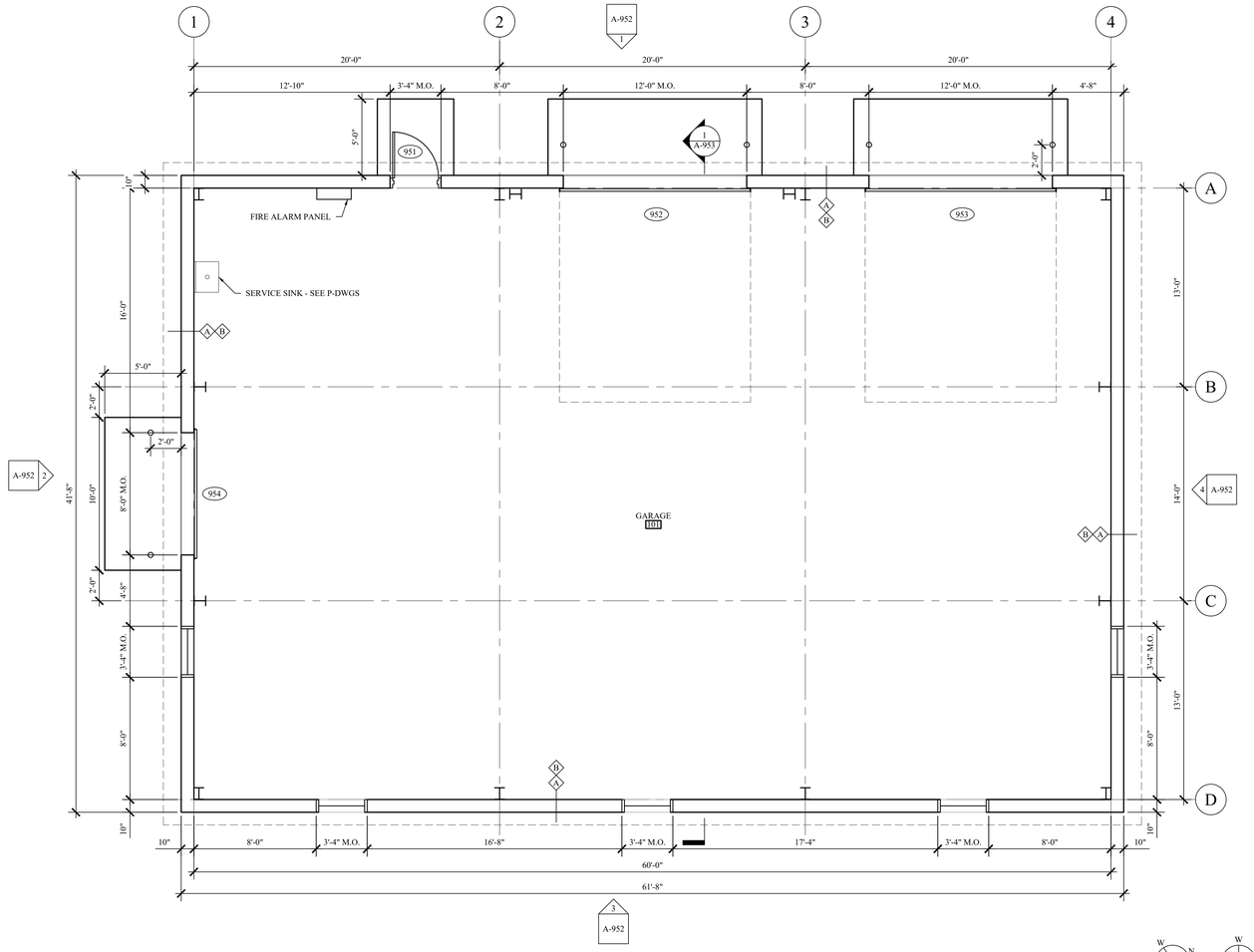
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

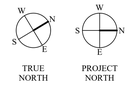
SHEET NO.

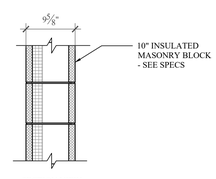
G-950

PROJECT # 18-732 PHASE #

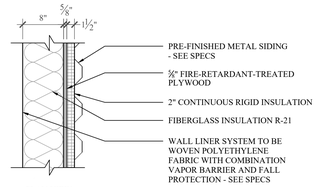


1 A-950 FLOOR PLAN
SCALE: 1/4" = 1'-0"





2 A-950 WALL TYPE A
SCALE: 1" = 1'-0"



3 A-950 WALL TYPE B
SCALE: 1" = 1'-0"

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
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111 Wheatfield Drive, Suite 1
Milford, PA 18337
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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

MAINTENANCE BUILDING - FLOOR PLAN & WALL TYPES

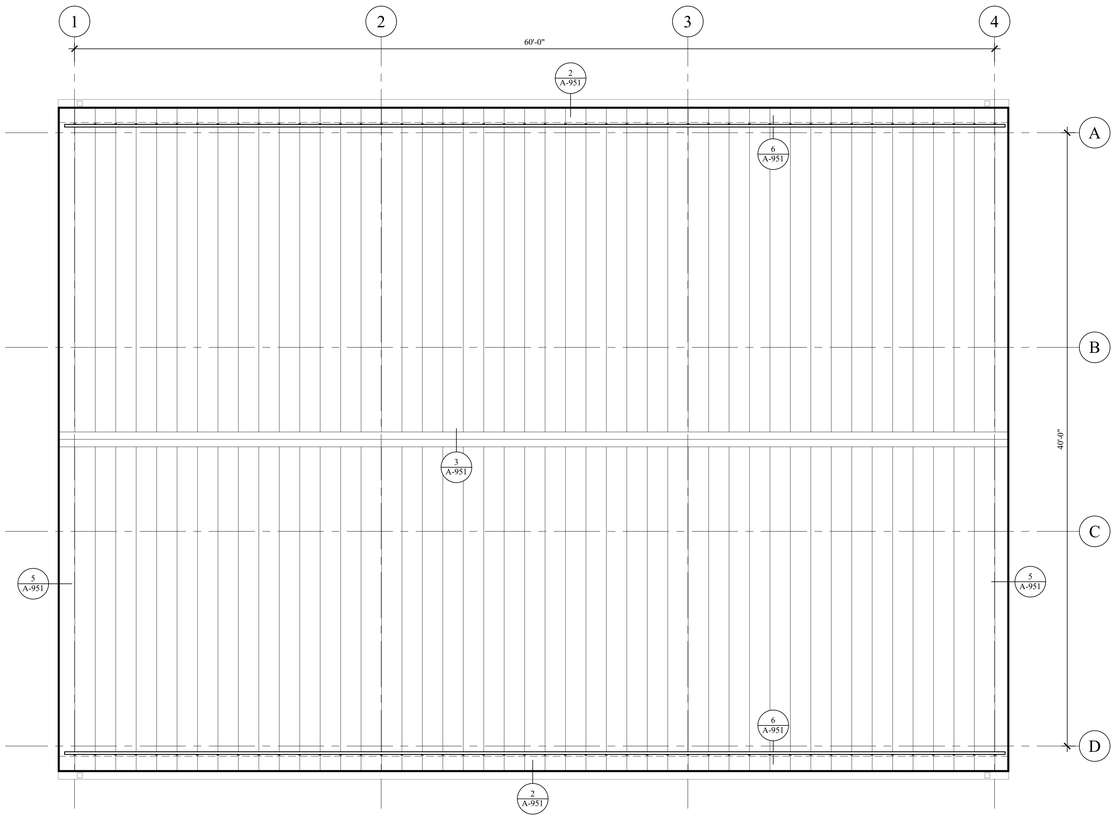
REVISIONS

NO.	DESCRIPTION	DATE

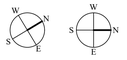
ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

SHEET NO.
A-950

PROJECT # 18-732 PHASE #

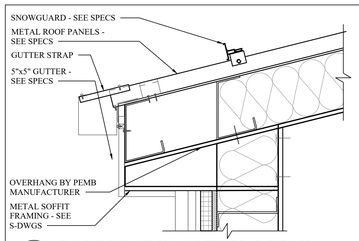


1 A-951 ROOF PLAN
SCALE: 1/4" = 1'-0"

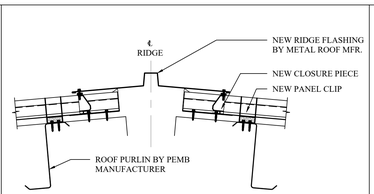


TRUE NORTH

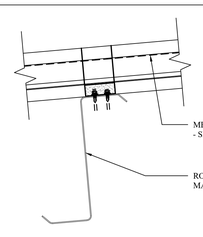
PROJECT NORTH



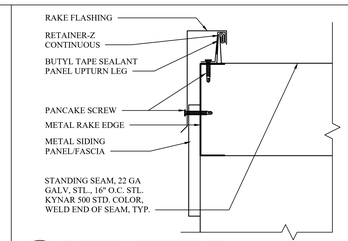
2 A-951 ROOF EDGE W/ GUTTER DETAIL
SCALE: 1-1/2" = 1'-0"



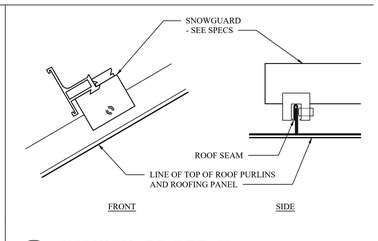
3 A-951 ROOF RIDGE DETAIL
SCALE: 1-1/2" = 1'-0"



4 A-951 METAL ROOF FASTENING DETAIL
SCALE: 3" = 1'-0"



5 A-951 ROOF RAKE DETAIL
SCALE: 3" = 1'-0"



6 A-951 SNOWGUARD DETAIL
SCALE: 3" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MAINTENANCE BUILDING - ROOF PLAN & DETAILS

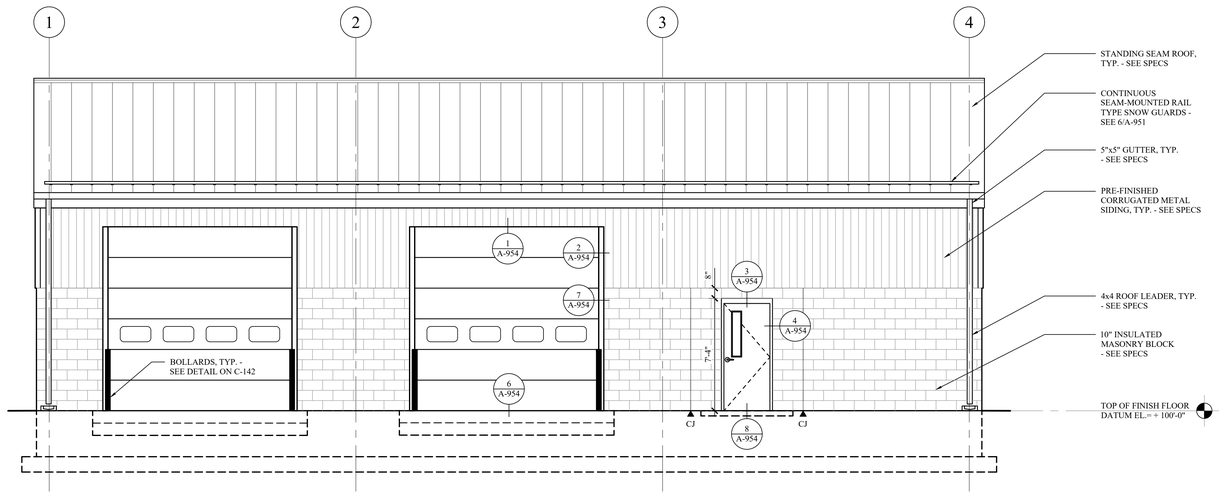
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

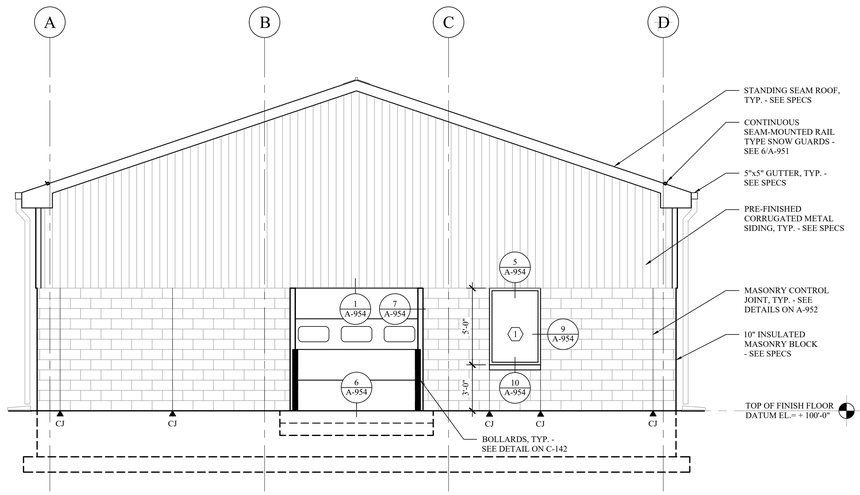
SHEET NO.
A-951

PROJECT # 18-732 PHASE #



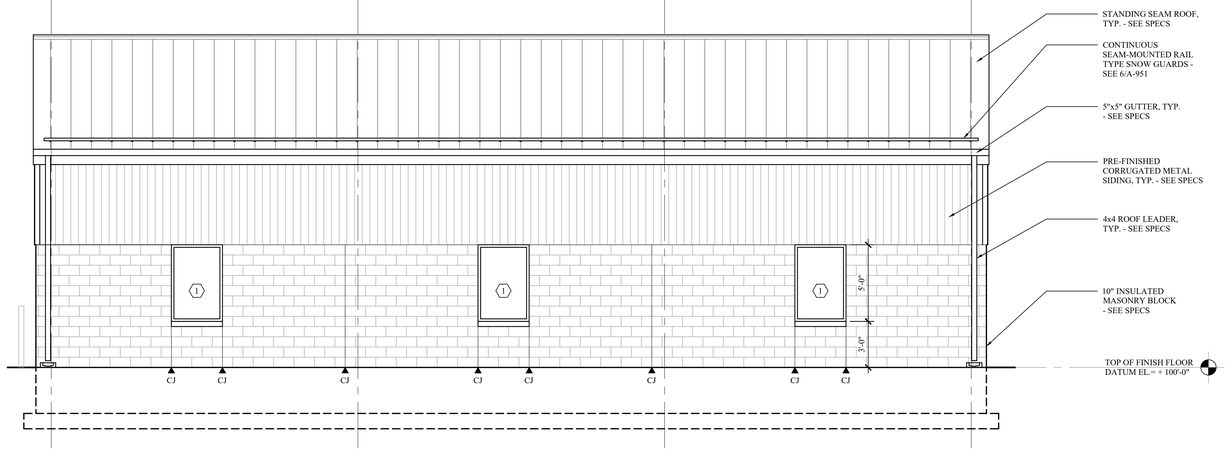
1 A-952 WEST ELEVATION

SCALE: 1/4" = 1'-0"



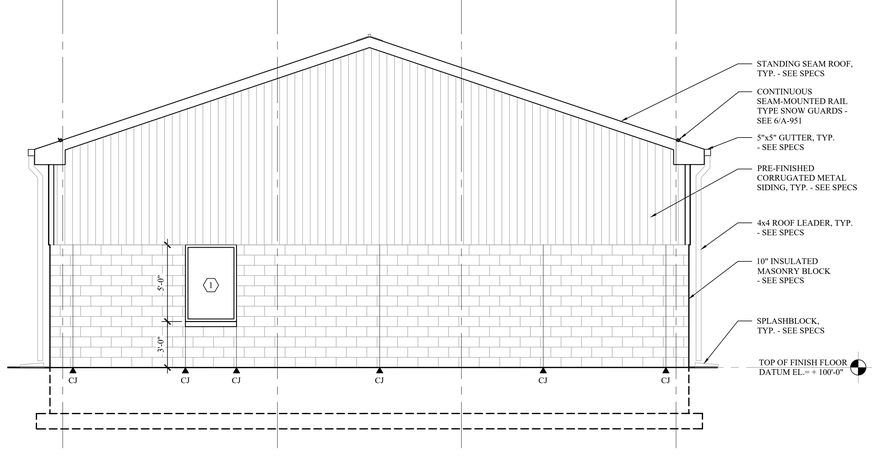
2 A-952 SOUTH ELEVATION

SCALE: 1/4" = 1'-0"



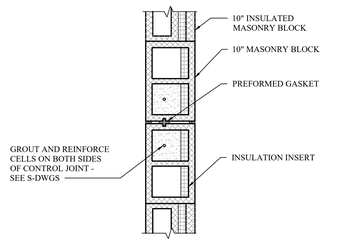
3 A-952 EAST ELEVATION

SCALE: 1/4" = 1'-0"



4 A-952 NORTH ELEVATION

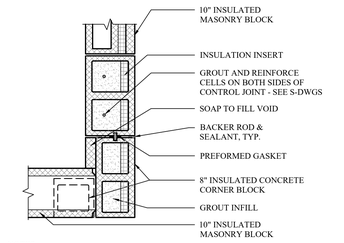
SCALE: 1/4" = 1'-0"



NOTES:
1. LOCATE CONTROL JOINTS AT 26'-0" INTERVALS MAX. SEE EXTERIOR ELEVATIONS FOR ADDITIONAL LOCATIONS.
2. BOND BEAMS, REINFORCEMENTS, AND ANY REINFORCING RODS SHALL NOT CONTINUE THROUGH CONTROL JOINTS.
3. CONTROL JOINTS SHALL BE CONTINUOUS THROUGH ALL WIDTHS OF MASONRY

5 A-952 CONTROL JOINT DETAIL

SCALE: 1" = 1'-0"



NOTES:
1. LOCATE CONTROL JOINTS AT 26'-0" INTERVALS MAX. SEE EXTERIOR ELEVATIONS FOR ADDITIONAL LOCATIONS.
2. BOND BEAMS, REINFORCEMENTS, AND ANY REINFORCING RODS SHALL NOT CONTINUE THROUGH CONTROL JOINTS.
3. CONTROL JOINTS SHALL BE CONTINUOUS THROUGH ALL WIDTHS OF MASONRY

6 A-952 CORNER CONTROL JOINT DETAIL

SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MAINTENANCE BUILDING - EXTERIOR ELEVATIONS

REVISIONS

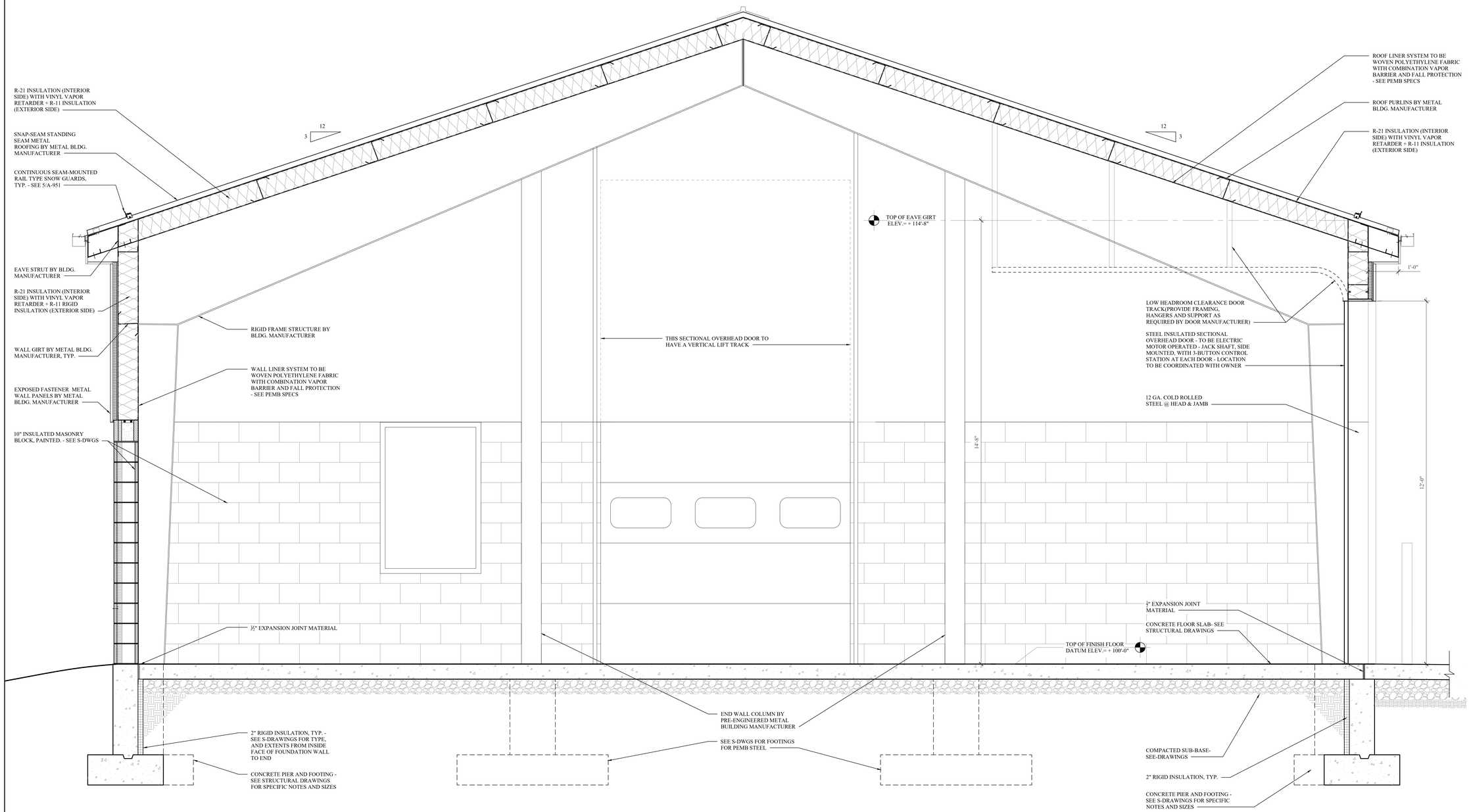
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

SHEET NO.

A-952

PROJECT # 18-732 PHASE #



1 A-953 BUILDING SECTION

SCALE: 3/4" = 1'-0"

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MAINTENANCE BUILDING - BUILDING SECTION

REVISIONS

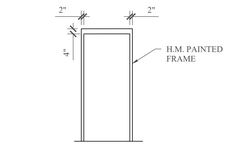
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR. 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

SHEET NO.

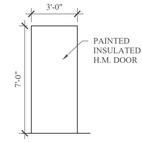
A-953

PROJECT # 18-732 PHASE #



1

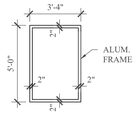
FRAMES



A

DOORS

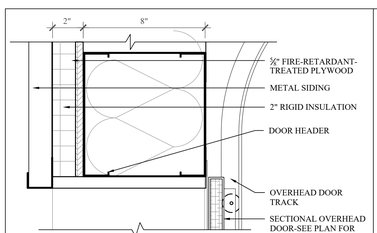
DOOR SCHEDULE										
DOOR No.	LOCATION	DOOR SIZE	DOOR TYPE	FRAME TYPE	SADDLE	HARDWARE GROUP	FIRE RATING	DOOR CLOSER	DETAILS	REMARKS
951	EXTERIOR - ROOM 101	3'-0" x 7'-0" x 1 ¾"	A	1	ALUM.	2	N/A	YES	3,4&8/A-954	
952	EXTERIOR - ROOM 101	12'-0" x 12'-0"	BY MANUFACTURER						1,2,6&7/A-954	
953	EXTERIOR - ROOM 101	12'-0" x 12'-0"	BY MANUFACTURER						1,2,6&7/A-954	
954	EXTERIOR - ROOM 101	8'-0" x 8'-0"	BY MANUFACTURER						1,6&7/A-954	



1

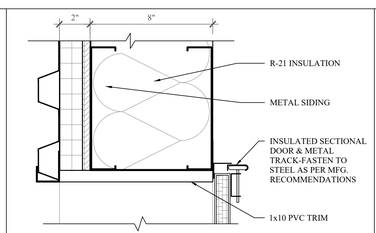
WINDOWS

WINDOW SCHEDULE							
WINDOW No.	WINDOW SIZE (W x H)	WINDOW TYPE	FRAME TYPE	FIRE RATING	QTY.	DETAILS	REMARKS
1	3'-0" x 5'-0"	FIXED	ALUM.	NO	5	5,9&10/A-954	



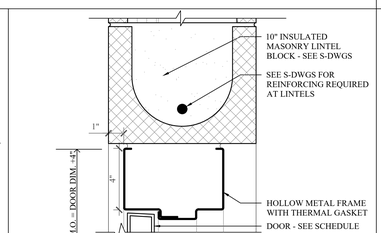
1 A-954 O.H. DOOR HEAD DETAIL

SCALE: 3" = 1'-0"



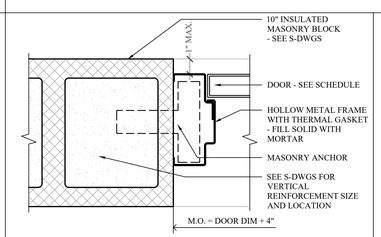
2 A-954 O.H. DOOR JAMB DETAIL

SCALE: 3" = 1'-0"



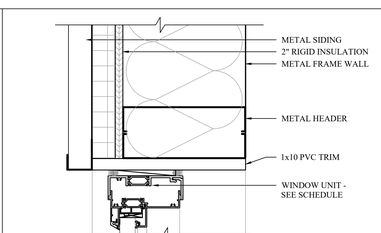
3 A-954 EXT. DOOR HEAD DETAIL

SCALE: 3" = 1'-0"



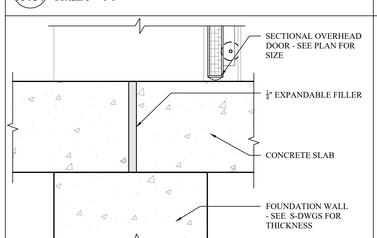
4 A-954 EXT. DOOR JAMB DETAIL

SCALE: 3" = 1'-0"



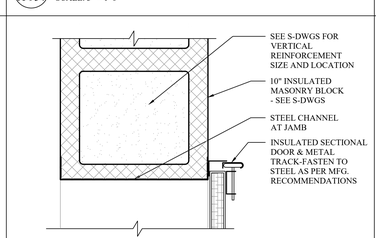
5 A-954 WINDOW HEAD DETAIL

SCALE: 3" = 1'-0"



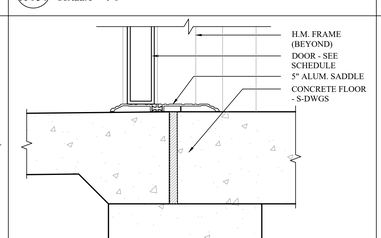
6 A-954 O.H. DOOR SILL DETAIL

SCALE: 3" = 1'-0"



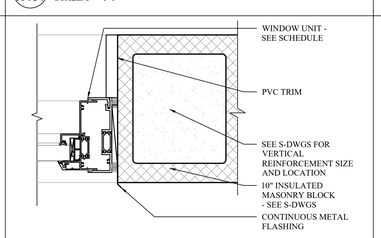
7 A-954 O.H. DOOR JAMB DETAIL

SCALE: 3" = 1'-0"



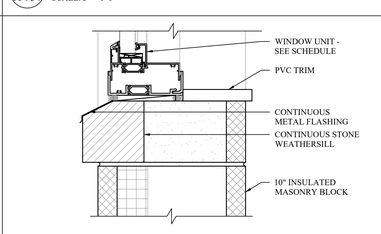
8 A-954 EXT. DOOR SILL DETAIL

SCALE: 3" = 1'-0"



9 A-954 WINDOW JAMB DETAIL

SCALE: 3" = 1'-0"



10 A-954 WINDOW SILL DETAIL

SCALE: 3" = 1'-0"

ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MAINTENANCE BUILDING - DOOR DETAILS, WINDOW DETAILS & SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	AW
DRAWN BY:	CH
CHECKED BY:	AW
REVIEWED BY:	JSS

SHEET NO.

A-954

PROJECT # 18-732 PHASE #

RETAINING WALL UNITS:

1. PRECAST MODULAR BLOCKS SHALL BE STONE STRONG UNITS MANUFACTURED UNDER LICENSE FROM STONE STRONG L.L.C..
2. WALL UNITS SHALL CONFORM TO ASTM C1776.
3. DIMENSION TOLERANCES FOR PRECAST MODULAR BLOCKS SHALL BE ±⅛" FOR HEIGHT, ±⅛" FOR LENGTH (ALONG FACE), AND +½" TO - ⅛" FOR WIDTH (FACE TO TAIL).
4. CONCRETE FOR PRECAST MODULAR BLOCKS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000PSI. ENTRAINED AIR CONTENT SHALL BE BETWEEN 5% AND 7%.
5. INTERNAL UNIT REINFORCEMENT OR UNREINFORCED UNITS SHALL BE PROVIDED ACCORDING TO PUBLISHED STONE STRONG ENGINEERING GUIDANCE. REINFORCED UNITS SHALL BE MARKED WITH THE TYPE OF REINFORCEMENT.
6. THE FACE PATTERN SHALL BE CHOSEN BY THE OWNER AND SELECTED FROM THE MANUFACTURER'S STANDARD MOLDS. THE COLOR OF THE UNITS SHALL BE NATURAL GRAY. A CONCRETE STAIN MAY BE FIELD APPLIED TO COLOR THE UNITS IF SPECIFIED BY THE OWNER. IF DESIRED BY OWNER, CONTRACTOR SHALL SEND PHYSICAL SAMPLES FOR REVIEW.
7. BLOCKS SHALL BE CONSISTENT AND FREE OF STAINS, DEFECTS, CRACKS, AND/OR CHIPS.
8. MINIMUM GRADE IN FRONT OF WALL - 0.75 FEET (9INCHES).

LEVELING PAD (WALL BASE) MATERIAL:

1. THE WALL BASE SHALL BE AASHTO 57 STONE AND CONFORM TO THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT PASSING
1-1/2"	100
1"	95-100
1/2"	25-60
#4	0-10
#5	0-5

2. BASE THICKNESS = 9".

UNIT FILL MATERIAL:

1. THE WALL BASE SHALL BE AASHTO 57 STONE AND CONFORM TO THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT PASSING
1-1/2"	100
1"	95-100
1/2"	25-60
#4	0-10
#5	0-5

DRAINAGE TILE:

1. DRAINAGE AGGREGATE SHALL BE DURABLE CLEAN CRUSHED STONE HAVING AT LEAST TWO FRACTURED FACES AND COMPLY WITH THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT PASSING
1 INCH	100
⅜ INCH	100 - 75
NO. 4	0 - 10
NO. 50	0 - 5

2. ROUNDED AGGREGATE (E.G. RIVER ROCK AND PEA GRAVEL) IS NOT ACCEPTABLE DRAINAGE AGGREGATE MATERIAL.
3. DRAIN TILE SHALL BE A 4" DIAMETER PERFORATED OR SLOTTED PVC OR CORRUGATED HDPE PIPE.
4. THE DRAIN TILE SHALL BE DAYLIGHTED THROUGH THE WALL AS SHOWN ON THE PLANS.
5. WHERE DRAINAGE TILE PENETRATES THROUGH FACE OF WALL, PROVIDE RODENT SCREEN.
6. PROVIDE A GEOTEXTILE FILTER FOR SEPERATION FROM RETAINED SOIL BEHIND BLOCKS.
7. GEOTEXTILE SHALL BE A NONWOVEN FABRIC, TYPICAL OF MIRAFI 140N OR APPROVED EQUAL.

FOUNDATION SOIL

1. THE FOUNDATION SOIL IS ASSUMED TO BE SAND EXHIBITING A MINIMUM EFFECTIVE INTERNAL FRICTION ANGLE OF 30°, A MOIST UNIT WEIGHT OF 135 PCF, AND A COHESION OF 0 PSF.
2. FOUNDATION SOIL SHALL BE EXAMINED AND TESTED TO CONFIRM THAT THE ACTUAL CONDITIONS MEET OR EXCEED THE DESIGN ASSUMPTIONS.
3. CONTRACTOR SHALL COMPACT SUBGRADE TO 95% MODIFIED PROCTOR PRIOR TO PLACEMENT OF WALL BASE MATERIAL.
4. ALLOWABLE BEARING CAPACITY OF 4000 PSF
5. THE FOUNDATION SOIL SHALL BE FREE OF DEBRIS, HIGH PLASTIC CLAY, FROST, ICE, ORGANIC MATTER (<1%), AND OTHER DELETERIOUS MATERIALS.

SOIL COMPACTION

1. COARSE GRAINED SOILS: ALL COARSE GRAINED SOIL SHALL BE PLACED IN MAXIMUM 9-INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% OF ITS MODIFIED PROCTOR DENSITY AS DETERMINED BY ASTM D1557. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL, PRIOR TO AND DURING CONSTRUCTION, SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE WITHIN A RANGE OF 2% BELOW TO 2% ABOVE OPTIMUM MOISTURE CONTENT.
2. FINE GRAINED SOILS: ALL FINE GRAINED SOIL SHALL BE PLACED IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% OF ITS MODIFIED PROCTOR DENSITY AS DETERMINED BY ASTM D1557. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL, PRIOR TO AND DURING CONSTRUCTION, SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE WITHIN A RANGE OF 2% BELOW TO OPTIMUM MOISTURE CONTENT.
3. CRUSHED STONE: CRUSHED STONE SHALL BE PLACED IN MAXIMUM 12-INCH LOOSE LIFTS AND COMPACTED WITH A MINIMUM OF THREE (3) PASSES OF A VIBRATORY COMPACTOR (OR OTHER SUITABLE EQUIPMENT) CAPABLE OF EXERTING A MINIMUM OF 3,000 LBS OF CENTRIFUGAL FORCE AND TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
4. ONLY LIGHTWEIGHT HAND-OPERATED COMPACTION EQUIPMENT SHALL BE USED WITHIN 3-FEET OF THE BACK OF WALL DURING CONSTRUCTION.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 NEW YORK STATE BUILDING CODE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 24 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

SOILS:
1. CONTINUOUS INSPECTION OF
   - 1.1. PROPER MATERIALS
   - 1.2. DENSITIES
   - 1.3. LIFT THICKNESSES DURING PLACEMENT
   - 1.4. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   - 2.1. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   - 2.2. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   - 2.3. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   - 2.4. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE.

GENERAL NOTES

1. THE DESIGN OF THE GRAVITY RETAINING WALL WAS PERFORMED UTILIZING STONE STRONG SYSTEMS. IF THE CONTRACTOR ELECTS TO UTILIZE A DIFFERENT RETAINING WALL SYSTEM, THE CONTRACTOR MUST SUBMIT PLANS AND CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN NEW YORK STATE TO THE ENGINEER OF RECORD (E.O.R.) FOR REVIEW PRIOR TO ORDERING MATERIALS.
2. CONTRACTOR TO PROVIDE SHOP DRAWING INDICATING BLOCK TYPES AND LOCATIONS FOR REVIEW PRIOR TO CONSTRUCTION.
3. ERECT UNITS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. THE CONTRACTOR IS RESPONSIBLE FOR QUALITY CONTROL OF GRAVITY RETAINING WALL INSTALLATION.
5. THE OWNER WILL ENGAGE A QUALIFIED THIRD PARTY INSPECTION AGENCY TO PERFORM SPECIAL INSPECTIONS LISTED ON THIS SHEET.
6. THE CONTRACTOR SHALL CALL 811 TO HAVE UTILITIES LOCATED AND ANY OTHER APPLICABLE ENTITY BEFORE BEGINNING WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL LOCATIONS AND DEPTHS OF EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND AVOID IMPACTING THEM.
7. THE CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING CONDUITS AND SERVICES WITH THE UTILITY PROVIDER. IF CONFLICTS EXIST, NOTIFY THE E.O.R. IMMEDIATELY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS FOR EXECUTION OF WORK, INCLUDING LOCAL BUILDING INSPECTION AND CURRENT OSHA STANDARDS.
9. THE WORK SHALL BE PERFORMED IN A GENERAL SEQUENCE DEVELOPED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR THE SEQUENCES AND PROCEDURES TO BE USED.
10. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES.
11. IF THE CONTRACTOR FINDS A CONFLICT, ERROR, OR DISCREPANCY WITHIN OR BETWEEN THE CONTRACT DOCUMENTS, DESIGN PLANS AND EXISTING CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY REPORT THE ISSUE TO THE RESPECTIVE E.O.R. IN WRITING. THE CONTRACTOR SHALL OBTAIN A WRITTEN INTERPRETATION OR CLARIFICATION FROM THE E.O.R. PRIOR TO PROCEEDING WITH CONSTRUCTION. WORK DONE BEFORE THE E.O.R. RENDERS A DECISION IS AT THE SOLE RISK OF THE CONTRACTOR.
12. A GEOTECHNICAL REPORT WAS SUPPLIED FOR THE PROJECT AND CAN BE FOUND WITHIN THE CONTRACT. THE FIELD SOIL PROPERTIES MUST BE VERIFIED BY THE TESTING AGENCY OF RECORD. IF FIELD SOIL PROPERTIES DIFFER FROM SOILS USED FOR DESIGN, NOTIFY THE E.O.R. IMMEDIATELY.
13. WALL HEIGHTS SHOWN MUST NOT BE EXCEEDED WITHOUT THE CONSULTATION AND APPROVAL OF THE WALL DESIGNER.
14. THESE PLANS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, MECHANICAL, ELECTRICAL, AND PLUMBING PLAN SETS.
15. ELEVATIONS SHOWN ARE BASED ON SURVEY BY CTMALE DATED APRIL 3, 2023.

DESIGN INFORMATION

1. DESIGN METHOD: AASHTO
2. RETAINING WALL TYPE: SEGMENTAL RETAINING WALL BLOCK

LOADING CONDITIONS:
1. LIVE LOAD SURCHARGE: N/A
2. DEAD LOAD SURCHARGE (BUILDING): 0 PSF
3. HYDROSTATIC LOADING: NONE

IN-SITU SOIL (RETAINED SOIL) VALUES:
1. UNIT WEIGHT: 135 PCF
2. INTERNAL FRICTION ANGLE: 30°
3. COHESION = 0 PSF

WALL GEOMETRY:
1. TOE SLOPE: VARIES (SEE GRADING PLAN)
2. BACK SLOPE: VARIES (SEE GRADING PLAN)
3. BATTER: 5.0°

FACTORS OF SAFETY:
1. INTERNAL STABILITY: (MINIMUM FOS)
   - 1.1. SLIDING: 1.5
   - 1.2. OVERTURNING: 1.5
2. EXTERNAL STABILITY :
   - 2.1. BASE SLIDING 1.5
   - 2.2. BEARING 2.0
   - 2.3. OVERTURNING 1.5

SEISMIC:
1. SEISMIC ANALYSIS IS NOT REQUIRED PER THE 2020 BUILDING CODE OF NEW YORK STATE SECTION 1807.2.2 (SITE CLASS C).

TECHNICAL REFERENCES

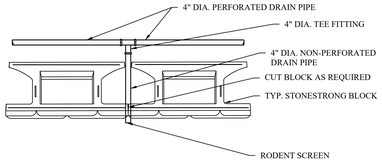
1. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (8TH EDITION, 2017)
2. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES - ASCE/SEI 7-16
3. NEW YORK STATE BUILDING CODE, 2020 EDITION.
4. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) TECHNICAL MANUAL.
5. UNIFIED SOIL CLASSIFICATION SYSTEM (USCS).

TESTING REFERENCES

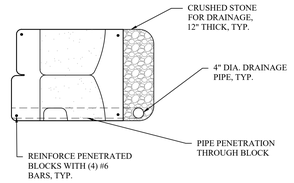
1. AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) INTERNATIONAL.
2. AMERICAN CONCRETE INSTITUTE (ACI).
3. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)

GEOTECHNICAL NOTES

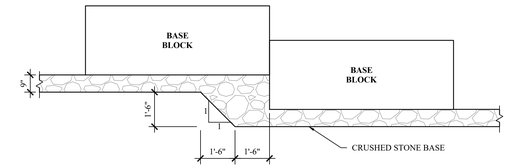
1. ALLOWABLE SOIL BEARING PRESSURES ARE AS FOLLOWS FOR THE FOLLOWING AND LOCATIONS PER THE GEOTECHNICAL EVALUATION REPORT PERFORMED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS, AND LAND SURVEYORS, D.P.C.:
   - 1.1. ALLOWABLE BEARING PRESSURE = 4,000 PSF
2. THESE SOIL BEARING PRESSURES ARE FOUND IN SECTION 9.1 OF THE GEOTECHNICAL EVALUATION REPORT PREPARED BY TECTONIC.
3. CONTRACTOR SHALL VERIFY BEARING CAPACITIES PRIOR TO THE PLACEMENT OF ANY FOUNDATIONS IN THE COINCIDING AREAS.
4. FOR ADDITIONAL GEOTECHNICAL INFORMATION, SEE THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY TECTONIC PROVIDED IN THE CONTRACT.



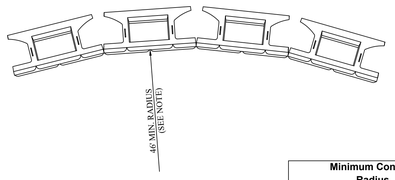
1 S-110 TYPICAL DRAINAGE DETAIL (PLAN VIEW)
SCALE: 1/4" = 1'-0"



2 S-110 TYP. DRAINAGE DETAIL (ELEV. VIEW)
SCALE: 1/2" = 1'-0"



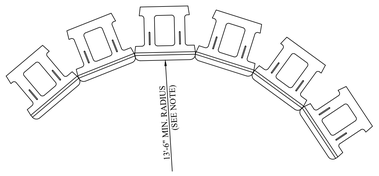
3 S-110 TYPICAL LEVELING PAD STEP DETAIL
SCALE: 3/8" = 1'-0"



NOTE:
MINIMUM RADIUS OCCURS AT LOWEST COURSE. RADIUS INCREASES 2" PER COURSE ABOVE. SEE TABLE.

Minimum Concave Radius		
Wall Height (ft)	Total # of Courses	Reqd. Radius at Top Course
6	2	46' 4"
9	3	46' 8"
12	4	47' 0"
15	5	47' 4"
18	6	47' 8"
21	7	48' 0"
24	8	48' 4"

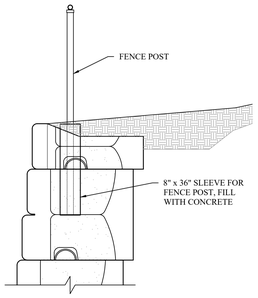
4 S-110 TYPICAL 24-44 CONCAVE RADIUS DETAIL
SCALE: 3/16" = 1'-0"



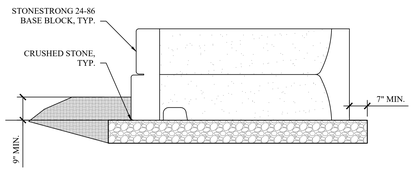
NOTE:
MINIMUM RADIUS OCCURS AT LOWEST COURSE. RADIUS INCREASES 2" PER COURSE ABOVE. SEE TABLE.

Minimum Concave Radius		
Wall Height (ft)	Total # of Courses	Reqd. Radius at Top Course
3	2	13' 8"
4 1/2	3	13' 10"
6	4	14' 0"
7 1/2	5	14' 2"
9	6	14"4"
10 1/2	7	14' 6"
12	8	14' 8"

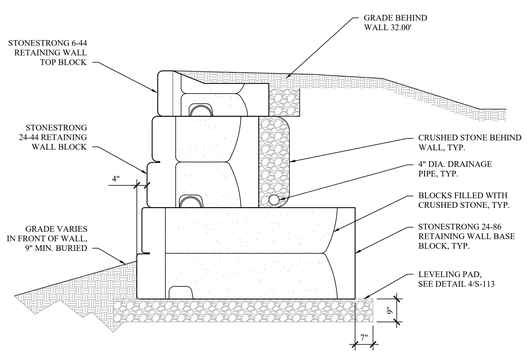
5 S-110 TYPICAL 6-44 CONCAVE RADIUS DETAIL
SCALE: 1/4" = 1'-0"



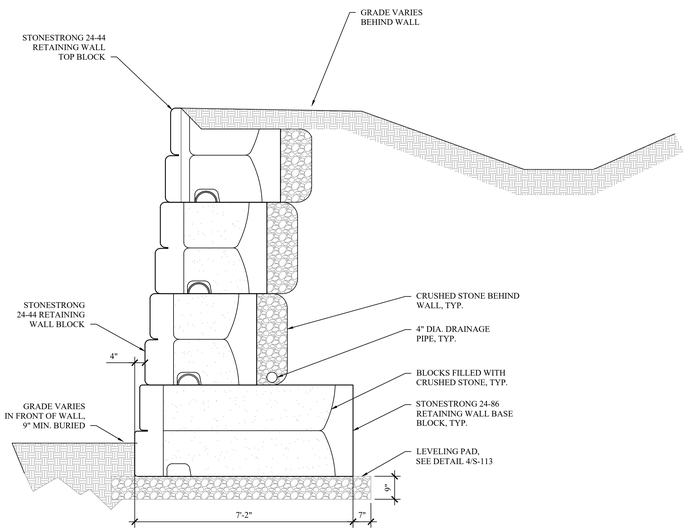
6 S-110 TYPICAL FENCE POST DETAIL
SCALE: 1/2" = 1'-0"



7 S-110 TYPICAL LEVELING PAD DETAIL
SCALE: 1/2" = 1'-0"



8 S-110 WALL SECTION #1 (STATION 0+96)
SCALE: 1/2" = 1'-0"



9 S-110 WALL SECTION #2 (STATION 4+15)
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
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111 Wheatfield Drive, Suite 1
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BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

100 SERIES RETAINING WALL #2 NOTES AND DETAILS

REVISIONS

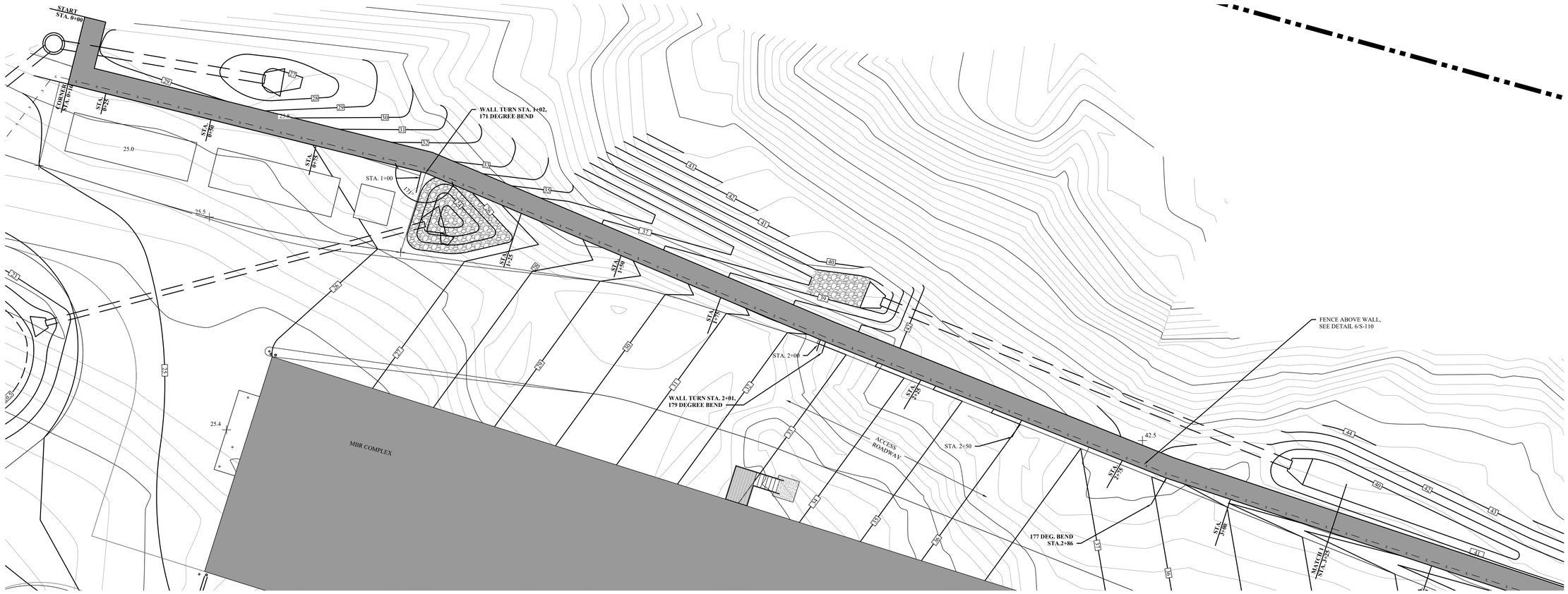
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

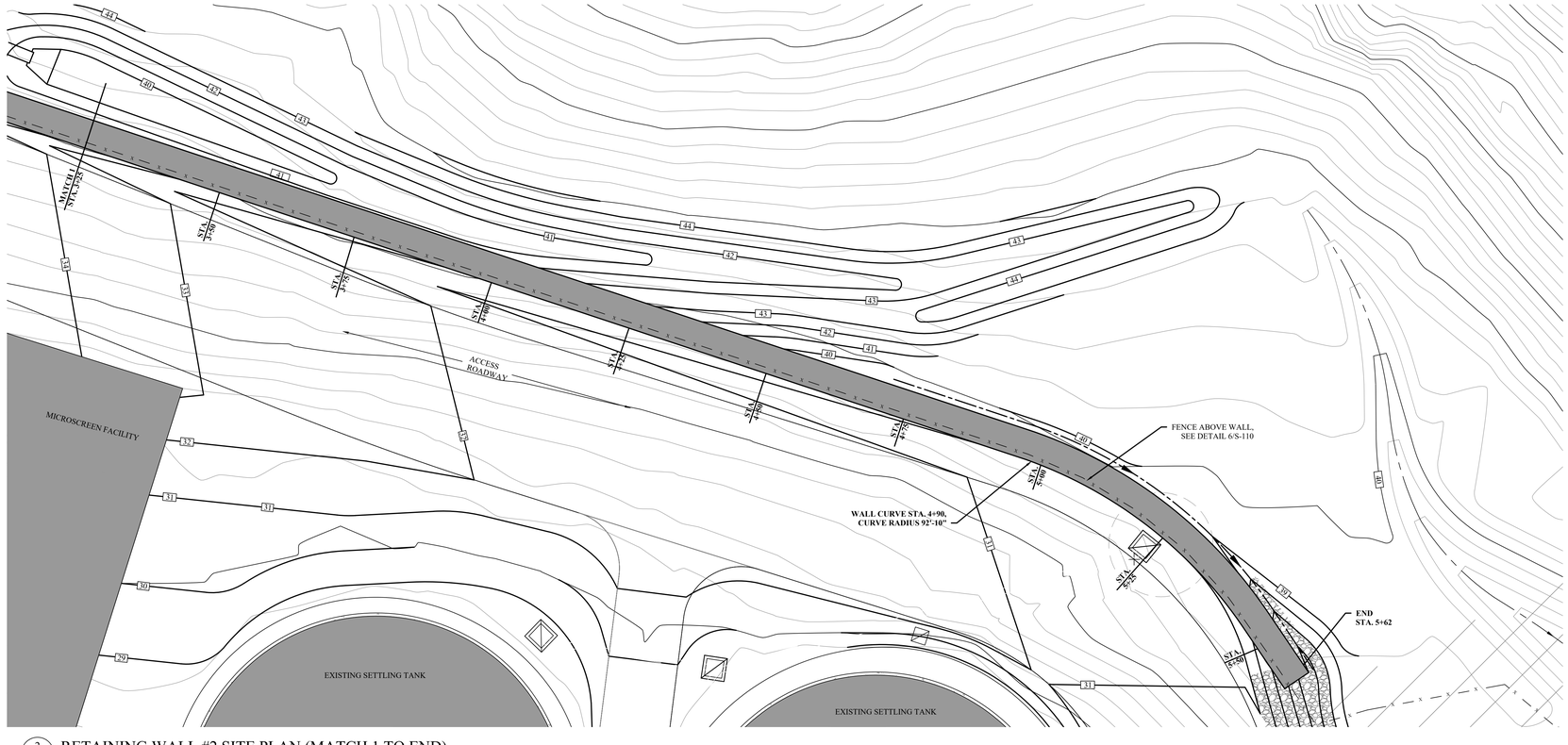
SHEET NO.
S-110

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafing\1 - Site Work & Outfall\Structural\Site Work Retaining Walls - Structural.dwg, S-110, 4/18/2025 11:55:14 AM



1 S-111 RETAINING WALL #2 SITE PLAN (START TO MATCH 1)
SCALE: 1:10



2 S-111 RETAINING WALL #2 SITE PLAN (MATCH 1 TO END)
SCALE: 1:10

GRAPHIC SCALE
10 0 5 10 20 40
1 inch = 10 feet

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RETAINING WALL #2 SITE PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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REVIEWED BY:	JSS

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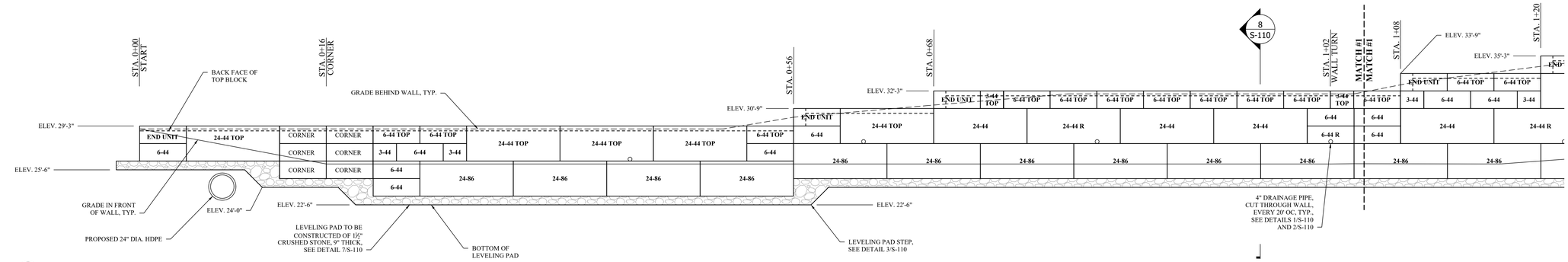
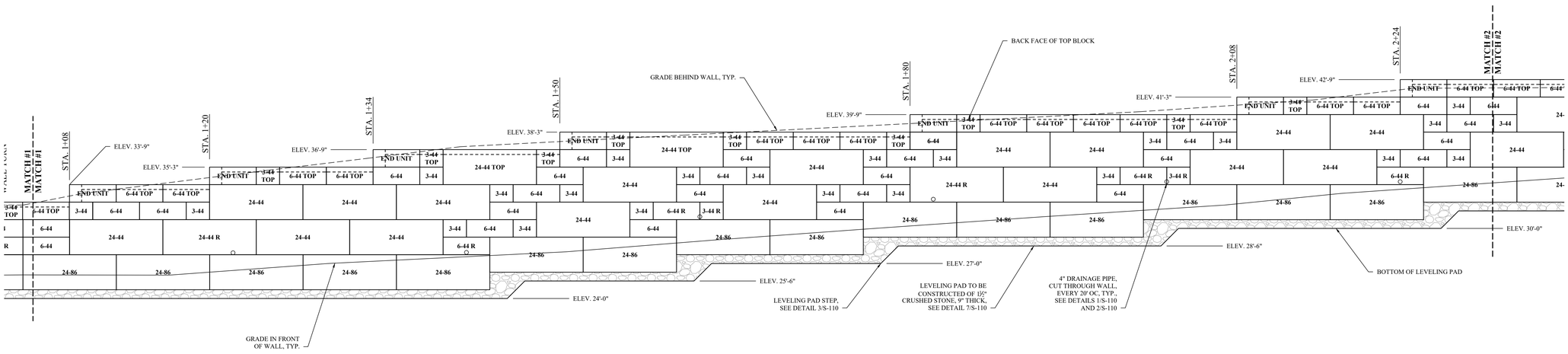
S-111

PROJECT # 18-732 PHASE #

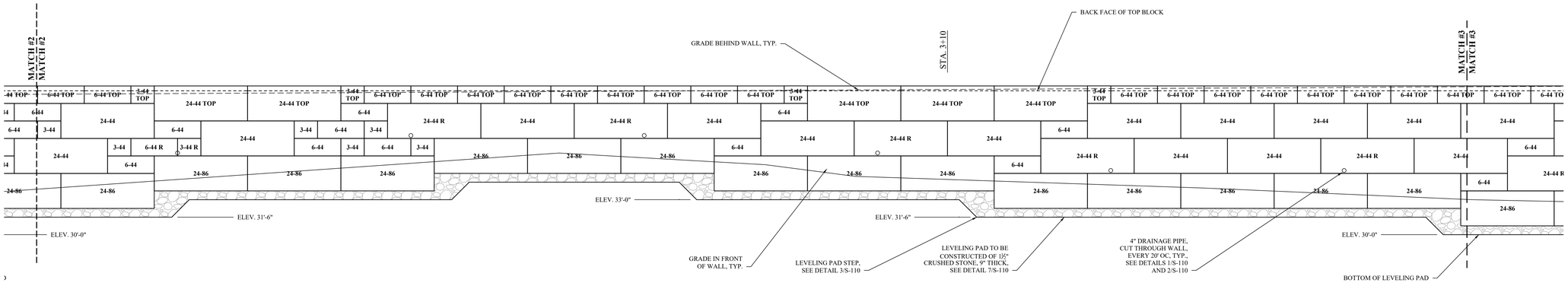
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1- Site Work & Outfall\Structural\Site Work Retaining Walls - Structural.dwg, S-111, 4/16/2025 11:55:18 AM



1 S-112 WALL #2 - START TO MATCH #1
SCALE: 1/4" = 1'-0"



2 S-112 WALL #2 - MATCH #1 TO MATCH #2
SCALE: 1/4" = 1'-0"



3 S-112 WALL #2 - MATCH #2 TO MATCH #3
SCALE: 1/4" = 1'-0"

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NEW WINDSOR, NY 12553

RETAINING WALL #2 ELEVATIONS

REVISIONS

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ISSUED DATE:	18 APR, 2025
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CHECKED BY:	PJW
REVIEWED BY:	JSS

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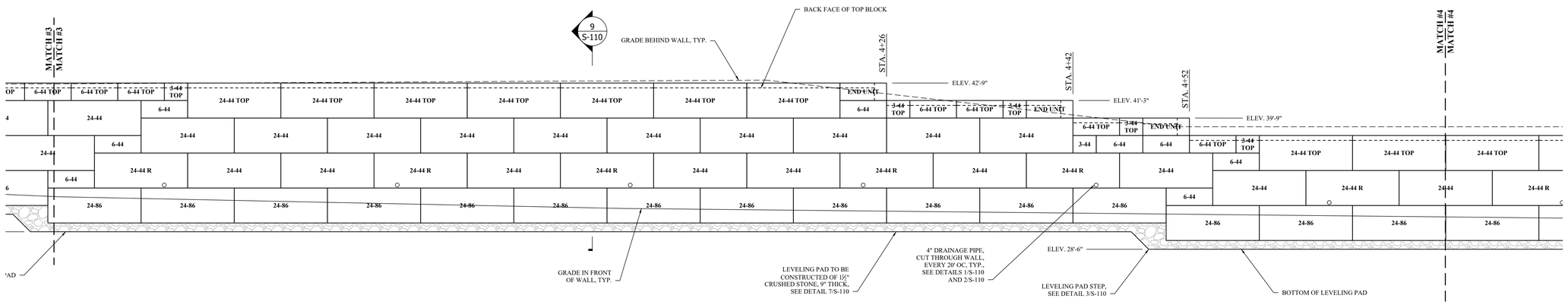
S-112

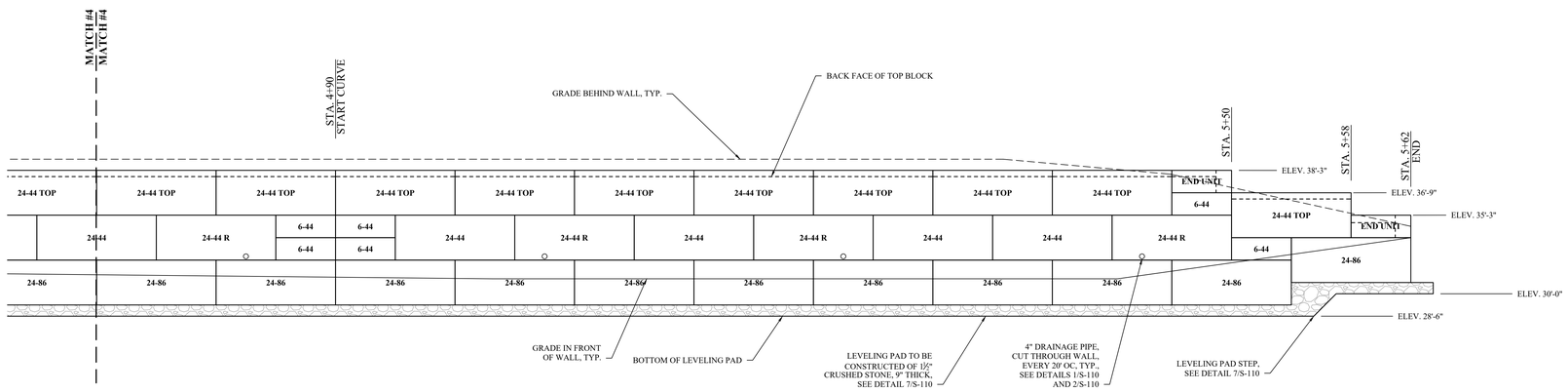
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outlet\Structural\Site Work Retaining Walls - Structural.dwg, S-112, 4/18/2025 11:50:21 AM



1 S-113 WALL #2 - MATCH #3 TO MATCH #4

SCALE: 1/4" = 1'-0"



2 S-113 WALL #2 - MATCH #4 TO END

SCALE: 1/4" = 1'-0"

STONE STRONG BLOCK WALL SCHEDULE - WALL 2	
BLOCK TYPE	QUANTITY
24-86	67
24-44 TOP	31
24-44	58
24-44 R	18
6-44 TOP	50
6-44	56
6-44 R	6
3-44 TOP	20
3-44	30
3-44 R	3
CORNER	6
LEFT END UNIT	10
RIGHT END UNIT	5

*NOTE: QUANTITIES ES TO BE VERIFIED BY CONTRACTOR PRIOR TO ORDERING MATERIALS.
"R" DENOTES REINFORCED BLOCKS DUE TO PIPE PENETRATIONS THROUGH RETAINING WALL UNIT. SEE DETAILS 7/S-114 AND 10/S-114.

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RETAINING WALL #2 ELEVATIONS (CONTINUED)

REVISIONS

NO.	DESCRIPTION	DATE

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DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
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SHEET NO.

S-113

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\1 - Site Work & Outfall\Structural\Site Work Retaining Walls - Structural.dwg, S-113, 4/18/2025 11:55:25 AM

GENERAL NOTES (STRUCTURAL):

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS TO STRUCTURES OR SURROUNDING AREAS. DAMAGE WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER OF RECORD (E.O.R.) AT NO ADDITIONAL COST TO THE OWNER.

2. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER TO THE E.O.R. PRIOR TO INSTALLATION OF EXCAVATION SUPPORT MEASURES.

3. ALL ITEMS NOT INDICATED TO BE EXISTING SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.

4. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES REGARDING SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN STRUCTURAL WORK.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE E.O.R.

6. ANY ITEMS INDICATED TO BE REPLACED-IN-KIND SHALL BE INSTALLED TO MATCH EXISTING LOCATIONS, CONFIGURATIONS, AND ELEVATIONS UNLESS OTHERWISE NOTED.

7. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. IF MANUFACTURER'S SPECIFICATIONS CONFLICT WITH CONTRACT DRAWINGS OR SPECIFICATIONS, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT. NEITHER THE STRUCTURE NOR INDIVIDUAL STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, JOISTS, AND COLUMNS WILL BE LATERALLY STABLE UNTIL ALL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS COMPLETE.

9. ALL SUBSURFACE UTILITIES SHALL BE IDENTIFIED PRIOR TO EXCAVATION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EXCAVATION. IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

10. ALL ITEMS SHOWN TO BE REMOVED SHALL BE PROPERLY HANDLED AND DISPOSED OF OFF SITE.

11. NO BACKFILLING OF THE STRUCTURE SHALL OCCUR UNTIL CONCRETE BREAKS SATISFACTORY TO THE E.O.R. ARE OBTAINED OR UNTIL THE CONTAINMENT STRUCTURE HAS SUCCESSFULLY PASSED HYDROSTATIC TESTING IF APPLICABLE.

12. ALL ITEMS INDICATED TO BE A DELEGATED DESIGN SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO ORDERING MATERIALS. SUBMITTALS SHALL INCLUDE PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.

13. ELEVATIONS SHOWN ARE BASED ON SURVEY BY CTMALE DATED APRIL 3, 2023.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 BUILDING CODE OF NEW YORK STATE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 24 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

STEEL:

1. STRUCTURAL STEEL:
   - 1.1. SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16.
2. COLD-FORMED STEEL DECK:
   - 2.1. SPECIAL INSPECTIONS AND QUALIFICATION OF WELDING SPECIAL INSPECTORS FOR COLD-FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF SDI QA/QC.
3. INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS:
   - 3.1. PERIODIC SPECIAL INSPECTION OF END CONNECTIONS - WELDED OR BOLTED.
   - 3.2. PERIODIC SPECIAL INSPECTION OF BRIDGING - HORIZONTAL OR DIAGONAL

CONCRETE:

1. PERIODIC INSPECTION OF REINFORCING STEEL.
2. PERIODIC INSPECTION OF ANCHORS CAST IN CONCRETE.
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.
   - 3.1. CONTINUOUS INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.
   - 3.2. PERIODIC INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NO DEFINED IN 3.1.
4. PERIODIC VERIFICATION OF DESIGN MIX.
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP, AIR, AND TEMPERATURE TESTS; CONTINUOUS.
6. CONTINUOUS INSPECTION OF PLACEMENT & FOR PROPER APPLICATION TECHNIQUES.
7. PERIODIC INSPECTION OF ERECTION OF PRECAST CONCRETE MEMBERS.
8. PERIODIC INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
9. PERIODIC VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.
10. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS, OF THE CONCRETE MEMBER BEING FORMED.

MASONRY:

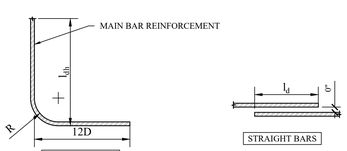
1. SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402 AND TMS 602.

SOILS:

1. CONTINUOUS INSPECTION OF
   - 1.1. PROPER MATERIALS
   - 1.2. DENSITIES
   - 1.3. LIFT THICKNESSES DURING PLACEMENT
   - 1.4. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   - 2.1. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   - 2.2. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   - 2.3. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   - 2.4. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE.

CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO ACI 211.1, ACI 301, ACI 304R (WHEN PUMPING), AND ACI 318-14. AGGREGATE SHALL CONFORM TO ASTM C33. COMPRESSIVE STRENGTH, RANGE OF SLUMP, WATER-TO-CEMENT RATIO, AND AIR ENTRAINMENT SHALL BE PER THE CONCRETE CLASS SPECIFIED HEREIN AND IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000. SUBMIT COPIES OF TEST REPORTS SHOWING THAT THE MIX HAS BEEN SUCCESSFULLY TESTED TO PRODUCE CONCRETE WITH THE PROPERTIES SPECIFIED. TEST REPORTS SHALL BE SUBMITTED TO THE E.O.R. FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.
   - 1.1. CONCRETE CLASSIFICATIONS PER SPECIFICATION SECTION 033000:
     - 1.1.1. FOOTINGS & FROST WALLS: CLASS A
     - 1.1.2. TANK AND CHANNEL WALLS AND TANK WALL REPAIR/REPLACE: CLASS B
     - 1.1.3. INTERIOR SLABS-ON-GROUND: CLASS C
     - 1.1.4. TANK AND CHANNEL FOUNDATIONS: CLASS D
     - 1.1.5. APRONS AND LANDINGS: CLASS H
     - 1.1.6. FILL CONCRETE: CLASS G
   - 1.2. CONCRETE FINISHES PER SPECIFICATION SECTION 033000:
     - 1.2.1. FOUNDATIONS BELOW GRADE: AS-CAST SF-2.0 FINISH
     - 1.2.2. TANK WALLS & SLABS: AS-CAST SF-3.0 FINISH
     - 1.2.3. EXTERIOR SLABS: FINE BROOM FINISH
     - 1.2.4. INTERIOR SLABS: TROWEL FINISH
2. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 7 DAYS.
3. CONCRETE SHALL BE WET CURED, USING BURLAP OR COTTON CURING MATS, OR CURED USING ASTM D4397 POLYETHYLENE SHEETING IN ACCORDANCE WITH ASTM C171. WET THE ENTIRE EXPOSED SURFACE OF THE CONCRETE THOROUGHLY WITH A FINE SPRAY OF WATER AND COVER WITH SHEETING THROUGHOUT THE CURING PERIOD. LAY SHEETING DIRECTLY ON CONCRETE SURFACE. PROVIDE SHEETING NOT LESS THAN 18 INCHES WIDER THAN CONCRETE SURFACE. OVERLAP EDGES 12 INCHES AND CONTINUOUSLY TAPE JOINTS.
4. PUMPING SHALL NOT RESULT IN SEPARATION OR LOSS OF MATERIALS NOR CAUSE INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF PLASTICITY BETWEEN SUCCESSIVE INCREMENTS. LOSS OF SLUMP IN PUMPING EQUIPMENT SHALL NOT EXCEED 2 INCHES. CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. RAPID CHANGES IN PIPE SIZES SHALL BE AVOIDED. MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO 33 PERCENT OF THE DIAMETER OF THE PIPE. MAXIMUM SIZE OF WELL ROUNDED AGGREGATE SHALL BE LIMITED TO 40 PERCENT OF THE PIPE DIAMETER. SAMPLES FOR TESTING SHALL BE TAKEN AT BOTH THE POINT OF DELIVERY TO THE PUMP AND AT THE DISCHARGE END.
5. CONCRETE SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT PROPER PLACEMENT AND CONSOLIDATION INCLUDING PERIODS OF PRECIPITATION. TRANSPORT CONCRETE AS RAPIDLY AS PRACTICABLE TAKING PRECAUTION TO PREVENT SEGREGATION OR LOSS OF INGREDIENTS. PUMPING IN ACCORDANCE WITH ACI 304 SHALL BE PERMITTED. DO NOT EXCEED A FREE VERTICAL DROP OF 3 FEET FROM THE POINT OF DISCHARGE. PLACE CONCRETE IN ONE CONTINUOUS OPERATIONS FROM ONE SIDE OF SLAB TO THE OTHER. POSITION GRADE STAKES AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION.
6. UNLESS OTHERWISE NOTED, REINFORCEMENT BARS SHALL BE BLACK STEEL. REINFORCING BARS SHALL CONFORM TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A1064. REINFORCEMENT SHALL NOT CONTAIN RUST, SCALE, OIL, GREASE, CLAY, OR FOREIGN SUBSTANCES THAT WOULD REDUCE THE CONCRETE BONDING STRENGTH. REMOVE LOOSE RUST PRIOR TO PLACEMENT OF REINFORCEMENT.
7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
8. PROVIDE MINIMUM 2" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST FORMS OR 3" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST EARTH, UNLESS OTHERWISE INDICATED.
9. CONCRETE FOOTINGS AND MAT FOUNDATIONS SHALL BE PLACED MONOLITHICALLY WITH THE EXCEPTION THAT VERTICAL CONSTRUCTION JOINTS WILL BE ALLOWED IF EPOXY BONDING COMPOUND IS APPLIED TO THE ROUGHENED SURFACE OF THE HARDENED CONCRETE.
10. INTERIOR SLABS: THE CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AS INDICATED. JOINTS MAY BE SAWCUT OR CUT WITH A JOINTING TOOL. SAWED JOINTS SHALL BE COMPLETED WITHIN 4 TO 12 HOURS AFTER PLACEMENT OF CONCRETE. JOINTS SHALL INTERSECT WITH THE CORNERS OF ISOLATION JOINT AT COLUMN LOCATIONS, IF ANY ARE PRESENT, AND BE SPACED A MAXIMUM OF 15 FEET ON CENTER, UNLESS NOTED OTHERWISE.
11. REINFORCEMENT SUPPORTS SHALL BE CONCRETE OR OTHER NON-CORRODIBLE MATERIAL HAVING A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE COMPRESSIVE STRENGTH OF THE CONCRETE BEING PLACED.
12. PROVIDE A ½" ROUNDED EDGE ON ALL EXPOSED SLAB EDGES. PROVIDE A ½" CHAMFER ON ALL OTHER EXPOSED CONCRETE CORNERS.
13. EPOXY BONDING COMPOUND SHALL BE USED ON ALL CONTACTING SURFACES BETWEEN EXISTING CONCRETE AND NEW CONCRETE. EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C881, TYPE AND GRADE TO BE IN ACCORDANCE WITH APPROPRIATE USE INDICATED IN SPECIFICATION 033000 CAST-IN-PLACE CONCRETE. DO NOT ALLOW COMPOUND TO HARDEN PRIOR TO CONCRETE PLACEMENT. BONDING AGENT USED SHALL BE NSF 61 APPROVED.
14. PLACE, CONSOLIDATE AND IMMEDIATELY STRIKE OFF CONCRETE TO OBTAIN PROPER CONTOUR GRADE AND ELEVATION BEFORE BLEEDWATER APPEARS. PERMIT CONCRETE TO ATTAIN A SET SUFFICIENT FOR FLOATING AND SUPPORTING THE WEIGHT OF THE FINISHER AND EQUIPMENT. IF BLEEDWATER IS PRESENT PRIOR TO FLOATING THE SURFACE, DRAG THE EXCESS WATER OFF OR REMOVE BY ABSORPTION WITH POROUS MATERIALS. DO NOT USE DRY CEMENT TO ABSORB BLEEDWATER.
15. UNLESS OTHERWISE NOTED, ALL CONCRETE CONSTRUCTION SHALL MEET THE SPECIFIED TOLERANCES OF ACI 117. TOP ELEVATIONS SHALL MATCH THE SPECIFIED ELEVATIONS WITHIN A TOLERANCE OF ±¼"
16. THE REQUIREMENTS OF ACI 302.1R CLASS 4 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL FLOORS AND SLABS. THE REQUIREMENTS OF ACI 360.R-10 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL SLABS-ON-GROUND.
   - 16.1. SLABS-ON-GRADE: FF = 25 AND FL = 20
   - 16.2. SUSPENDED SLABS: FF = 25 AND FL = 20
17. NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED ITEMS (I.E. PROCESS, ELECTRICAL, MECHANICAL, ETC) HAVE BEEN SET. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES.
18. ALL BAR PLACING AND BENDING SHALL BE IN ACCORDANCE WITH ACI 315.
19. PERFORM COMPRESSIVE TESTS IN ACCORDANCE WITH ASTM C39. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM SPECIMENS. TEST ONE CYLINDER AT 3 DAYS, ONE CYLINDER AT 7 DAYS, AND TWO (THREE FOR 4"x8" CYLINDERS) CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE. PERFORM SLUMP TESTS IN ACCORDANCE WITH ASTM C143. PERFORM AIR CONTENT TESTING IN ACCORDANCE WITH ASTM C173 OR ASTM C231. SUBMIT ALL TEST DATA TO THE E.O.R.
20. CONSOLIDATE CONCRETE WITH HIGH FREQUENCY, INTERNAL, MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING AND TAMPING. FURNISH A SPARE VIBRATOR ON THE JOB SITE WHENEVER CONCRETE IS PLACED. OPERATE VIBRATORS WITH VIBRATORY ELEMENT SUBMERGED IN THE CONCRETE, WITH A MINIMUM FREQUENCY OF NOT LESS THAN 6000 IMPULSES PER MINUTE WHEN SUBMERGED. INSERT AND WITHDRAW VIBRATORS AT INTERVALS APPROXIMATELY 18 INCHES APART.
21. ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920, TYPE S, GRADE P, CLASS 25. JOINT SEALANT IN CONTACT WITH POTABLE WATER SHALL BE NSF 61 APPROVED.
22. CONTROLLED DENSITY FILL SHALL BE IN ACCORDANCE WITH SPECIFICATION 033110.
23. CRYSTALLINE WATERPROOFING ADMIXTURES SHALL BE IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000 AND THE CRYSTALLINE WATERPROOFING SPECIFICATION 071616.
    APPLICABLE LOCATIONS:
    - INFLUENT BOX
    - PARSHALL FLUME
    - HEADWORKS CHANNELS
    - GRIT CHAMBER
    - DISTRIBUTION BOX



STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SYSTEMS INCLUDING MATERIALS, INSTALLATION, WORKMANSHIP, FABRICATION, ASSEMBLY, ERECTION, INSPECTION, QUALITY CONTROL, AND TESTING SHALL BE PROVIDED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
2. ALL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:
   - W SHAPES: ASTM A992, Fy = 50KSI
   - HSS: ASTM A500 GR. C, Fy = 50KSI
   - PLATES AND OTHER STEEL SHAPES: ASTM A36, Fy = 36KSI
3. ALL HOLES IN STEEL SHALL BE STANDARD SIZE 1/16" LARGER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE DRILLED OR PUNCHED. BURNING IS NOT ALLOWED. COLUMN BASEPLATE HOLES FOR ANCHOR BOLTS ARE PERMITTED TO BE OVERSIZED.
4. COPES SHALL BE PROVIDED WITH 1/2" RADIUS MINIMUM, SMOOTH CORNERS, AND FREE OF NOTCHES. DEPTH AND LENGTH OF COPES SHALL BE AS INDICATED.
5. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL CONFORM TO ASTM A325, EXCEPT ANCHOR BOLTS SHALL CONFORM TO ASTM F1554. ALL NUTS SHALL CONFORM TO ASTM A563, GRADE AND STYLE FOR APPLICABLE ASTM BOLT STANDARD. ALL WASHERS SHALL CONFORM TO ASTM F436 FOR ASTM A325 BOLTS AND F1554 ANCHOR BOLTS.
6. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE SNUG-TIGHT. BOLTS SPECIFIED AS PRE-TENSIONED (PT) SHALL BE PRE-TENSIONED USING THE TURN-OF-NUT METHOD. CONNECTIONS SPECIFIED AS SLIP-CRITICAL (SC) SHALL HAVE BOLTS PRE-TENSIONED USING THE TURN-OF-NUT METHOD AND FAYING SURFACES PREPARED IN ACCORDANCE WITH THE CLASSIFICATION INDICATED. BOLTS INDICATED TO USE A JAM NUT SHALL BE INSTALLED USING THE FOLLOWING SEQUENCE:
   - INSTALL THIN NUT (JAM NUT) FIRST AND TORQUE TO 50% OF TORQUE VALUE
   - INSTALL THICK NUT (STANDARD HEX) SECOND AND TORQUE TO 100% OF TORQUE VALUE WHILE HOLDING THE JAM NUT TO PREVENT ROTATION
7. STEEL DETAILER SHALL PROVIDE CONNECTION DESIGN IN ACCORDANCE WITH ANSI/AISC 303. DETAILER SHALL SELECT AND COMPLETE CONNECTIONS USING SCHEMATIC DETAILS INDICATED ON PLANS AND ANSI/AISC 360.
8. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ALL STRUCTURAL STEEL FASTENERS (INCLUDING NUTS, BOLTS, WASHERS, ETC.) SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153. REPAIR AREAS OF DAMAGED GALVANIZATION IN ACCORDANCE WITH ASTM A780.
9. STEEL GRATING SHALL BE GALVANIZED SGW-150 BY MCNICHOLS OR APPROVED EQUAL.

STEEL JOISTS NOTES:

1. STEEL JOISTS SHALL BE DESIGNED, FABRICATED, AND INSTALLED IN ACCORDANCE WITH STEEL JOIST INSTITUTE (SJI) "STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS" LATEST EDITION AND SJI "CODE OF STANDARD PRACTICE" LATEST EDITION.
2. STEEL JOIST FABRICATOR SHALL SUPPLY AN AFFIDAVIT STATING COMPLIANCE WITH ALL APPLICABLE AISC, SJI AND AISI REQUIREMENTS.
3. STEEL JOIST SUPPLIER MUST BE A MEMBER OF SJI.
4. ALL STEEL JOISTS SHALL BE BRACED IN ACCORDANCE WITH SJI. JOIST BRIDGING SHALL BE FURNISHED BY THE JOIST MANUFACTURER.
5. JOIST LAYOUTS SHOWN ON PLANS ARE CONCEPTUAL, WITH MAXIMUM SPACING AS INDICATED, ACTUAL JOIST LAYOUT SHALL BE PER APPROVED SHOP DRAWINGS.
6. UNLESS NOTED OTHERWISE ALL STEEL JOISTS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
7. UNLESS OTHERWISE NOTED, ALL M.E.P. FIXTURES SUPPORTED BELOW JOISTS SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS.

WELDING NOTES:

1. ALL WELDING SHALL BE CONDUCTED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1, LATEST EDITION FOR STRUCTURAL STEEL AND AWS D1.3, LATEST EDITION FOR STRUCTURAL SHEET STEEL.
2. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR PROTECTING EXISTING EQUIPMENT, MATERIALS, BUILDING STRUCTURES, AND BUILDING COMPONENTS DURING ANY FIELD WELDING OPERATIONS.
3. WELDS OF HEADED STUDS SHALL MATCH STRENGTH OF STUDS

GEOTECHNICAL NOTES:

1. THE FOLLOWING BEARING PRESSURE VALUES WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - MAX NET ALLOWABLE BEARING OF UNDISTURBED NATIVE SOIL: 4000PSF
   - MAX NET ALLOWABLE BEARING OF SHALE OR SANDSTONE BEDROCK: 8000PSF
2. BOTTOM OF EXCAVATION IS DEFINED AS THE ELEVATION BENEATH THE SUBBASE. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
3. IF UNSUITABLE MATERIAL IS ENCOUNTERED AT OR UNDER THE PROPOSED BOTTOM OF EXCAVATION, THE UNSUITABLE MATERIAL SHALL BE REMOVED FROM WITHIN THE ZONE OF INFLUENCE OF THE BEARING ELEMENT AND REPLACED IN ACCORDANCE WITH NOTE 4.
4. ZONE OF INFLUENCE IS DEFINED AS A 1V:1H PLANE EXTENDING DOWNWARD FROM THE BOTTOM PERIMETER OF THE FOUNDATION ELEMENT TO WITHIN A SUITABLE DISTANCE BELOW, TO BE DETERMINED BY THE E.O.R. BASED ON FIELD CONDITIONS AND MATERIAL TYPE.
5. OVER EXCAVATION IS DEFINED AS ANY EXCAVATION BELOW THE PROPOSED BOTTOM OF EXCAVATION IDENTIFIED ON THE PLANS OR AS DESCRIBED WITHIN THE PROJECT SPECIFICATIONS; OVER EXCAVATION SHALL BE RE-ESTABLISHED AS FOLLOWS:
   - BENEATH FOUNDATIONS AND SLABS-ON-GRADE: COMPACTED SELECT FILL
   - BENEATH TANKS: CONTROLLED DENSITY FILL
6. SELECT FILL SHALL BE UTILIZED FOR BACKFILL OF ALL STRUCTURES (UNLESS OTHERWISE NOTED).
7. THE MINIMUM SELECT FILL PROPERTIES LISTED BELOW WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - UNIT WEIGHT = 130 PSF
   - FRICTION ANGLE = 35°
   - Ka = 0.27
   - Ko = 0.43
   - Kp = 3.69
8. THE CONTRACTOR SHALL SUBMIT DESIRED BACKFILL MATERIAL SPECIFICATION MEETING ALL DESIGN CRITERIA LISTED ABOVE, AT A MINIMUM, TO THE ENGINEER OF RECORD PRIOR TO USE ON SITE. ALTERNATIVELY, THE CONTRACTOR SHALL ELECT TO PERFORM A FIELD PROCTOR OF THE EXISTING SITE SOILS TO VERIFY THAT EXISTING SOILS MEET THE MINIMUM DESIGN VALUES STATED ABOVE.
9. IN-SITU COMPACTION TESTING OF SUBGRADE AND BACKFILL MATERIAL SHALL BE PERFORMED BY THE OWNER'S SPECIAL INSPECTOR.
10. FOR ADDITIONAL GEOTECHNICAL INFORMATION, SEE THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY TECTONIC PROVIDED IN THE CONTRACT.

TYPICAL STRAIGHT REBAR LAP SPLICE LENGTHS PER ACI 350 CHAPTER 12 AND ACI 318 CHAPTER 25 (ASSUMING 5000 PSI CONCRETE, BLACK STEEL)

MAIN BAR SIZE	l_d (in)	TOP BARS IN SLABS > 18" THICK, l_d (in)
#4	14	19
#5	17	23
#6	20	26
#7	32	42
#8	42	55
#9	53	69
#10	65	85

TYPICAL STRAIGHT REBAR LAP SPLICE LENGTHS PER ACI 350 CHAPTER 12 AND ACI 318 CHAPTER 25 (ASSUMING 4000 PSI CONCRETE, BLACK STEEL)

MAIN BAR SIZE	l_d (in)	TOP BARS IN SLABS > 18" THICK, l_d (in)
#4	15	20
#5	19	29
#6	23	30
#7	36	47
#8	47	62
#9	59	77
#10	73	95

NYSBC 2020 STRUCTURAL PROVISIONS:

THE STRUCTURE SHOWN HEREIN HAS/SHALL BE DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH THE 2020 BUILDING CODE OF NEW YORK STATE AND ASCE 7-16:

FLOOR LIVE LOAD (L):
SLAB-ON-GRADE: N/A

ROOF LIVE LOAD:
DISTRIBUTED LOAD (L_r) = 20 PSF (SNOW LOAD GOVERNS)
CONCENTRATED LOAD (L) = 2,000 LBS (CONCENTRATED @ ANY POINT ALONG PRIMARY STRUCTURAL ROOF MEMBERS)

ROOF SNOW LOAD (S):
GROUND SNOW LOAD (P_g) = 30 PSF
FLAT ROOF SNOW LOAD (P_f) = 22 PSF
SNOW EXPOSURE FACTOR (C_e) = 0.90
SNOW IMPORTANCE FACTOR (I) = 1.10
THERMAL FACTOR (C_t) = 1.0
SLOPE FACTOR (C_s) = 1.0
UNBALANCED SNOW LOAD = N/A
DRIFT SURCHARGE LOAD = N/A
DRIFT WIDTH = N/A

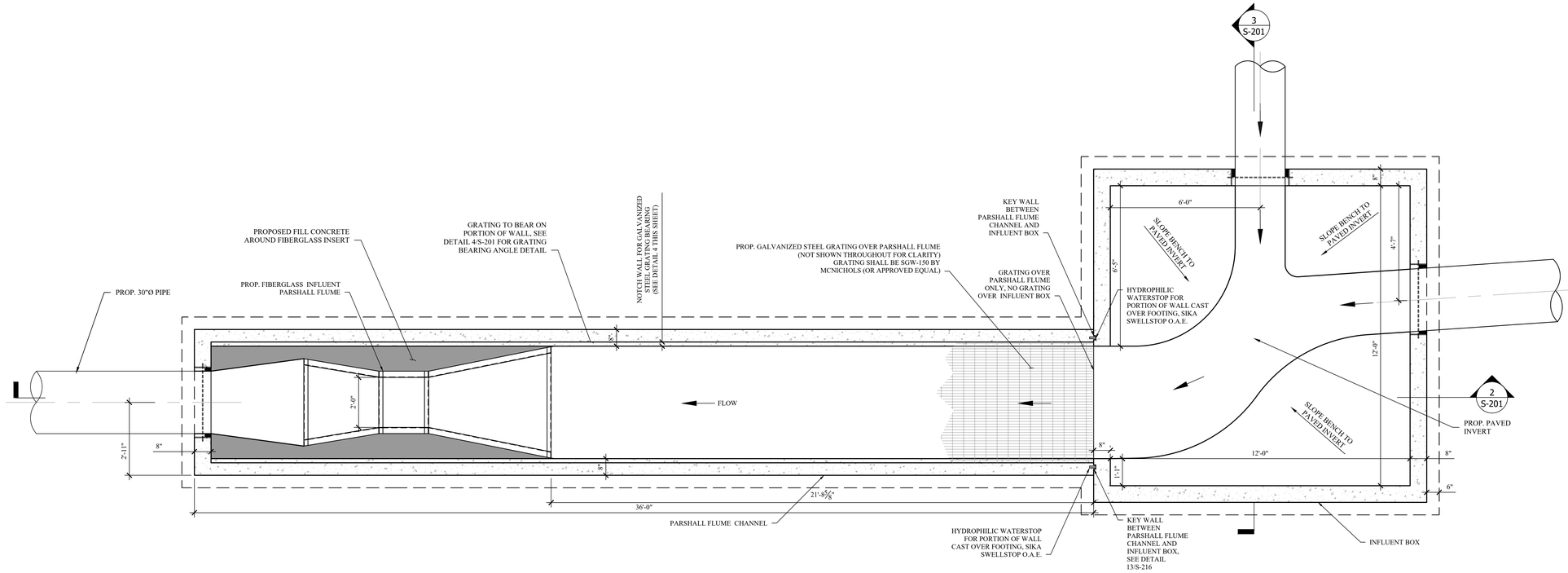
WIND LOAD (W):
BASIC WIND SPEED (V)= 120 MPH
ASD WIND SPEED (V_{asd}) = 93 MPH
BUILDING CATEGORY = RISK CATEGORY III
WIND EXPOSURE = C
WIND DIRECTIONALITY FACTOR = Kd=0.85
TOPOGRAPHIC FACTOR = Kzt=1.0
GUST FACTOR = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
APPLICABLE. INTERNAL PRESSURE COEFF. = ±0.18
COMPONENTS & CLADDING PRESSURES:

ROOF WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	+16/-34	+16/-32	+16/-29	+16/-27	+16/-27
1'	+16/-20	+16/-20	+16/-20	+16/-20	+16/-20
2	+16/-45	+16/-42	+16/-38	+16/-36	+16/-36
3	+16/-61	+16/-56	+16/-48	+16/-42	+16/-42

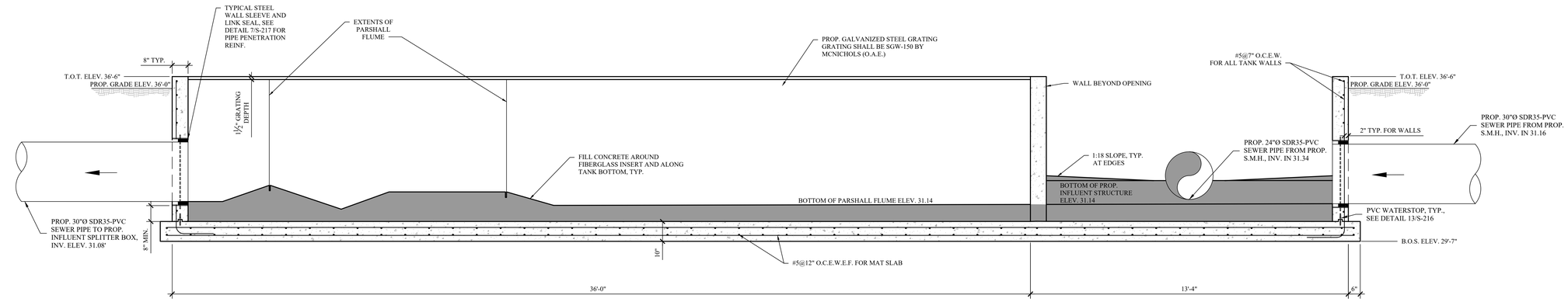
WALL WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
4	+22/-24	+21/-23	+20/-21	+19/-20	+19/-20
5	+22/-29	+21/-27	+20/-25	+19/-23	+19/-23

NOTES:
1. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE PROJECTED SURFACE, RESPECTIVELY.
2. WIND PRESSURES SHOWN ARE ULTIMATE AND CAN BE CONVERTED TO SERVICE BY BEING MULTIPLIED BY 0.6
3. JOIST NET UPLIFT LOAD COMBINATION IS 0.9D+W, "D" = 3PSF
4. WIDTH OF PRESSURE COEFFICIENT ZONE, a = 3.00 FT.

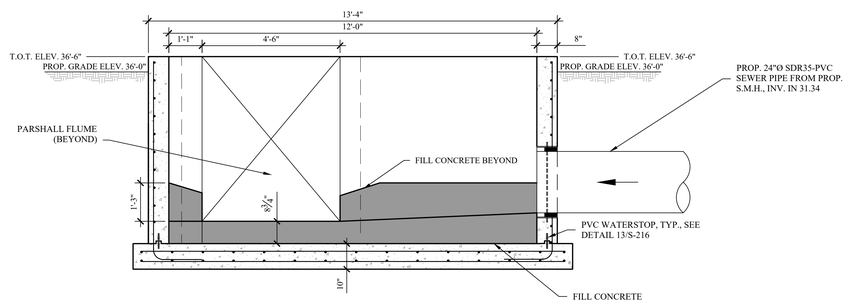
SEISMIC DESIGN DATA (E):
OCCUPANCY RISK CATEGORY: III
SEISMIC IMPORTANCE FACTOR: I = 1.25
SITE CLASS: C
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_s = 0.242 AND S_1 = 0.058
SPECTRAL RESPONSE PARAMETERS: S_{DS} = 0.210 AND S_{D1} = 0.058
SEISMIC DESIGN CATEGORY: B
SEISMIC RESPONSE COEFFICIENT: C_S = 0.10
RESPONSE MODIFICATION COEFFICIENT: R =



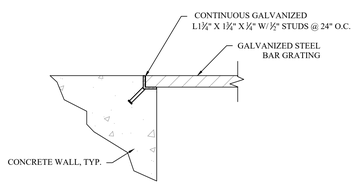
1 S-201 INFLUENT BOX & PARSHALL FLUME PLAN
SCALE: 1/2" = 1'-0"



2 S-201 PROPOSED INFLUENT STRUCTURE AND PARSHALL FLUME SECTION
SCALE: 1/2" = 1'-0"



3 S-201 PROPOSED INFLUENT STRUCTURE AND PARSHALL FLUME SECTION
SCALE: 1/2" = 1'-0"



4 S-201 GRATING BEARING ANGLE DETAIL
SCALE: 1-1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

INFLUENT BOX AND PARSHALL FLUME PLAN AND SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

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S-201

PROJECT # 18-732 PHASE #

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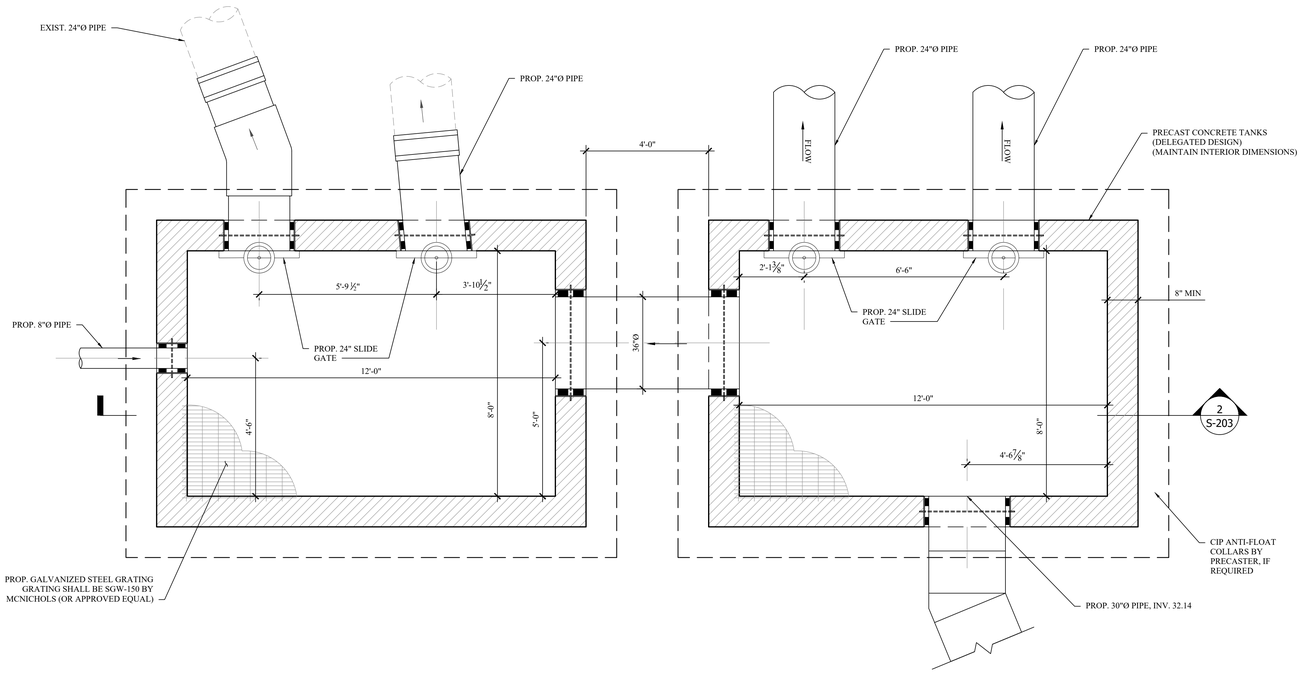
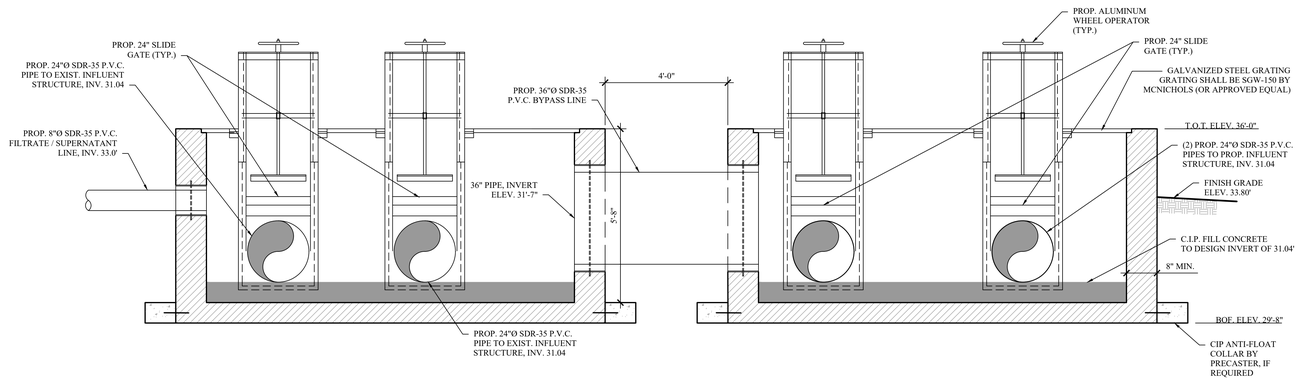


1 S-202 PROPOSED INFLUENT COLLECTION BOX WALL AND FOUNDATION PLAN

SCALE: 1/2" = 1'-0"



2 S-202 PROPOSED INFLUENT COLLECTION BOX / SPLITTER STATION SECTION

SCALE: 1/2" = 1'-0"

MHE ENGINEERING

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New Windsor, NY 12553
(845) 567-3100

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(570) 296-2765

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INFLUENT SPLITTER BOX PLAN AND SECTION

REVISIONS

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REVIEWED BY:	JSS

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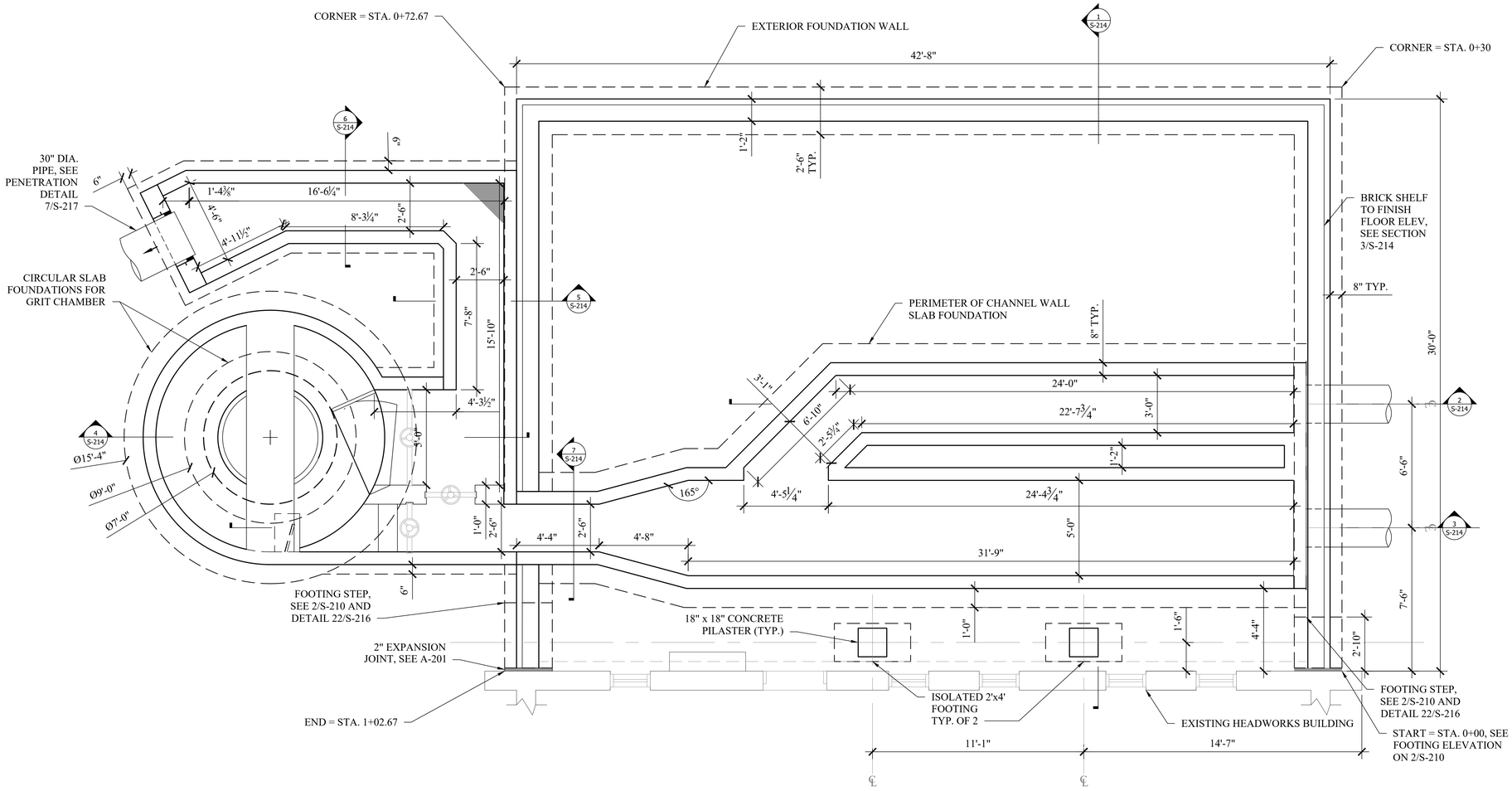
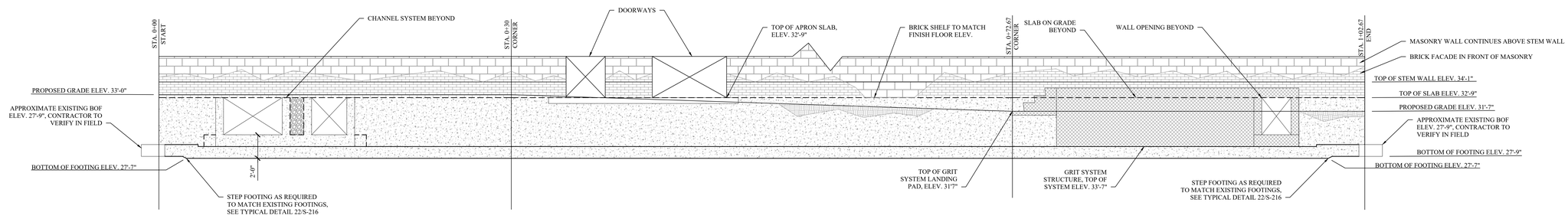


1/S-210 PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER FOUNDATION PLAN

SCALE: 3/8" = 1'-0"



2/S-210 PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER FOUNDATION ELEVATION PLAN

SCALE: 1/4" = 1'-0"

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NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER FOUNDATION PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

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PROJECT # 18-732 PHASE #

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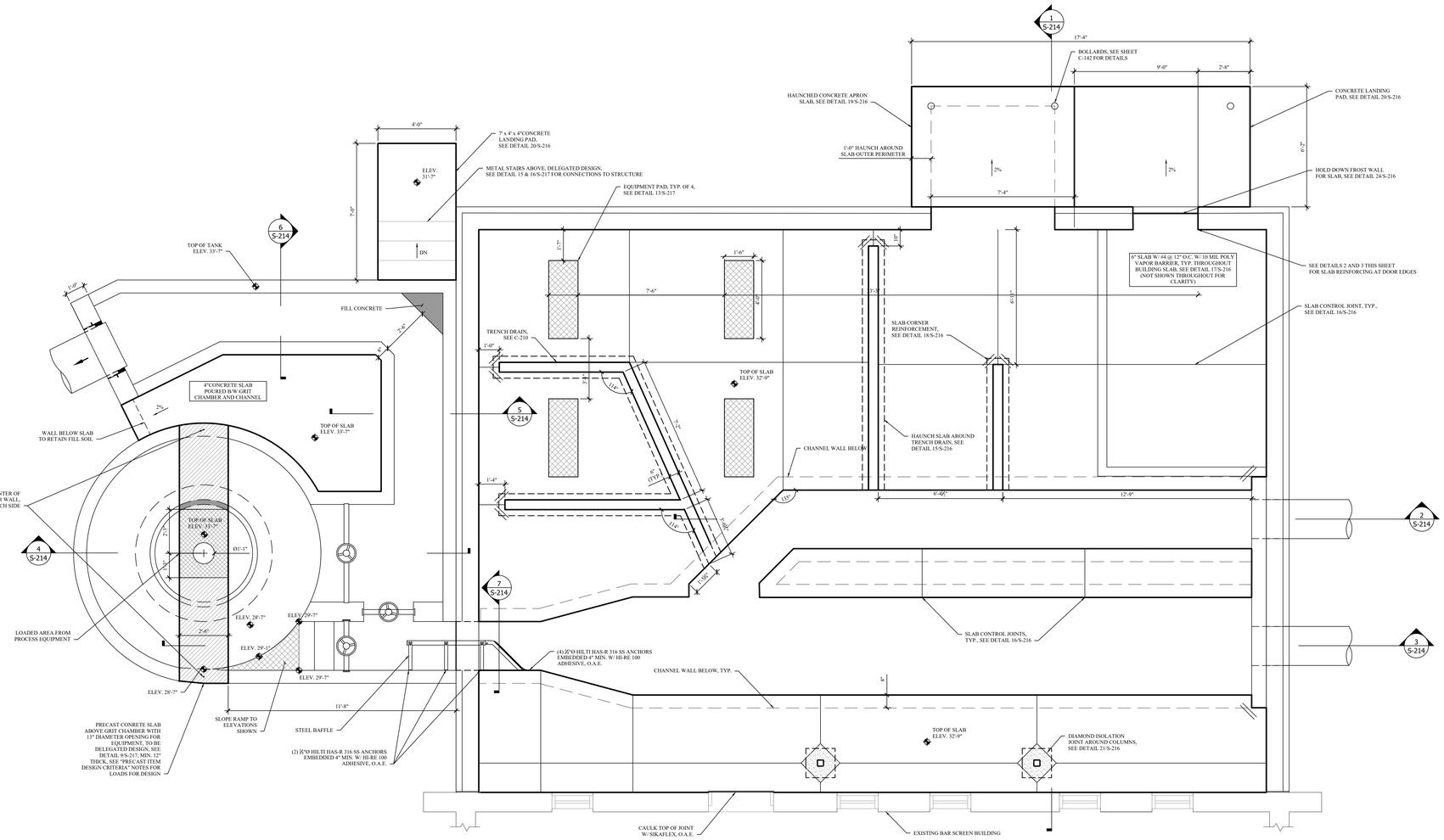
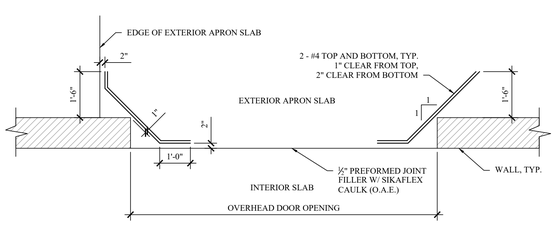


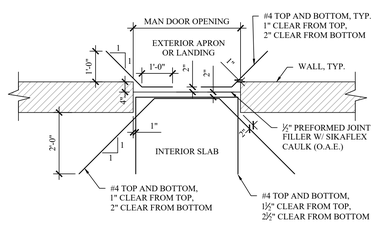
1 S-211 PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER SLAB PLAN

SCALE: 3/8" = 1'-0"



2 S-211 TYPICAL DOUBLE DOOR SLAB REINF.

SCALE: N.T.S.



3 S-211 TYPICAL MAN DOOR SLAB REINF.

SCALE: N.T.S.

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NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER SLAB PLAN

REVISIONS

NO.	DESCRIPTION	DATE

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REVIEWED BY:	JSS

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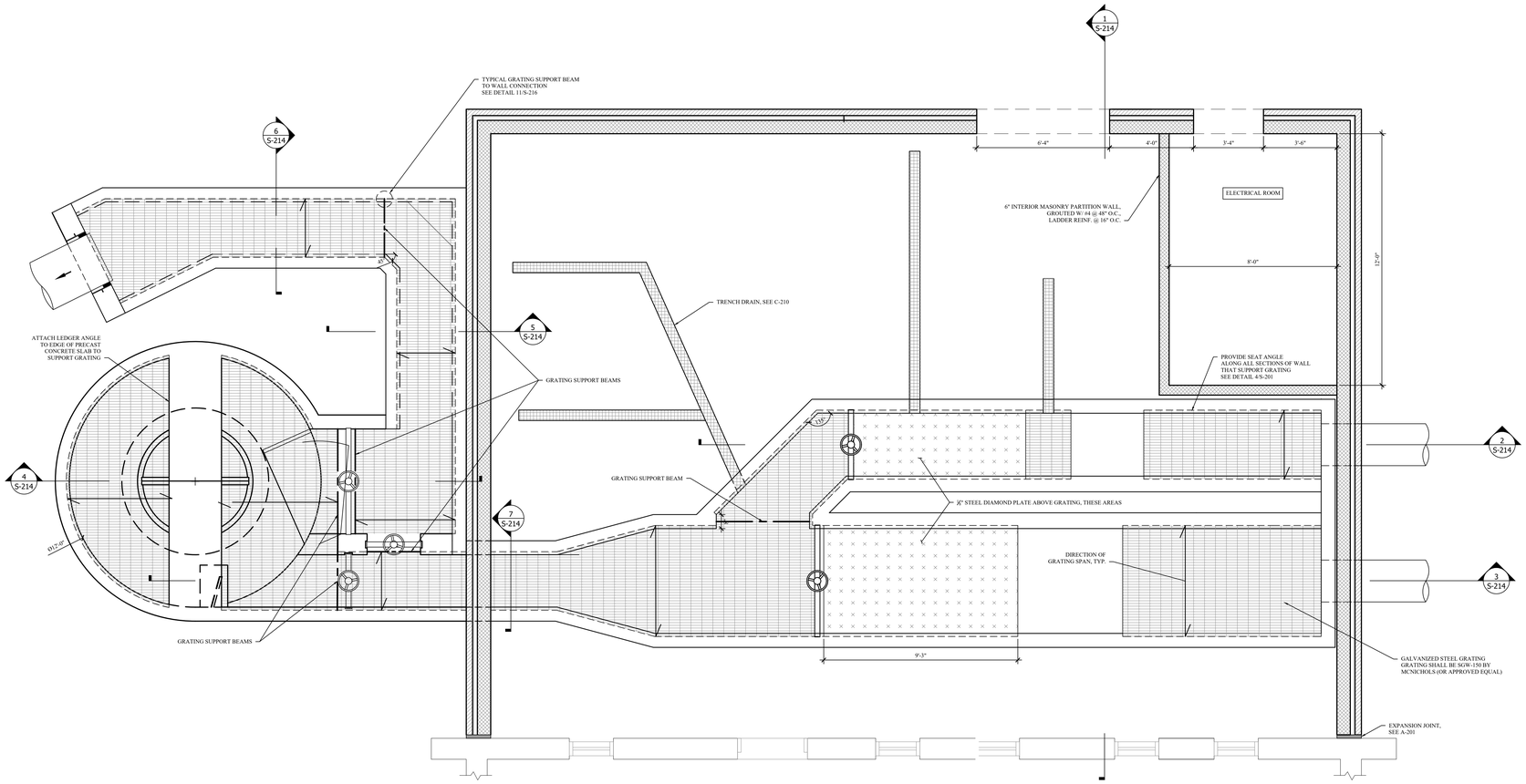

1 S-212 PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER GRATING PLAN

SCALE: 3/8" = 1'-0"

F:\2018\18-732 Caesar Lane WWTP Improvments\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\3 STRUCTURAL\2024 11 04 02 - Headworks Screening Grit Removal - Structural Rec.dwg, S-212, 4/16/2025 12:01:41 PM

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PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER GRATING PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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REVIEWED BY:	JSS

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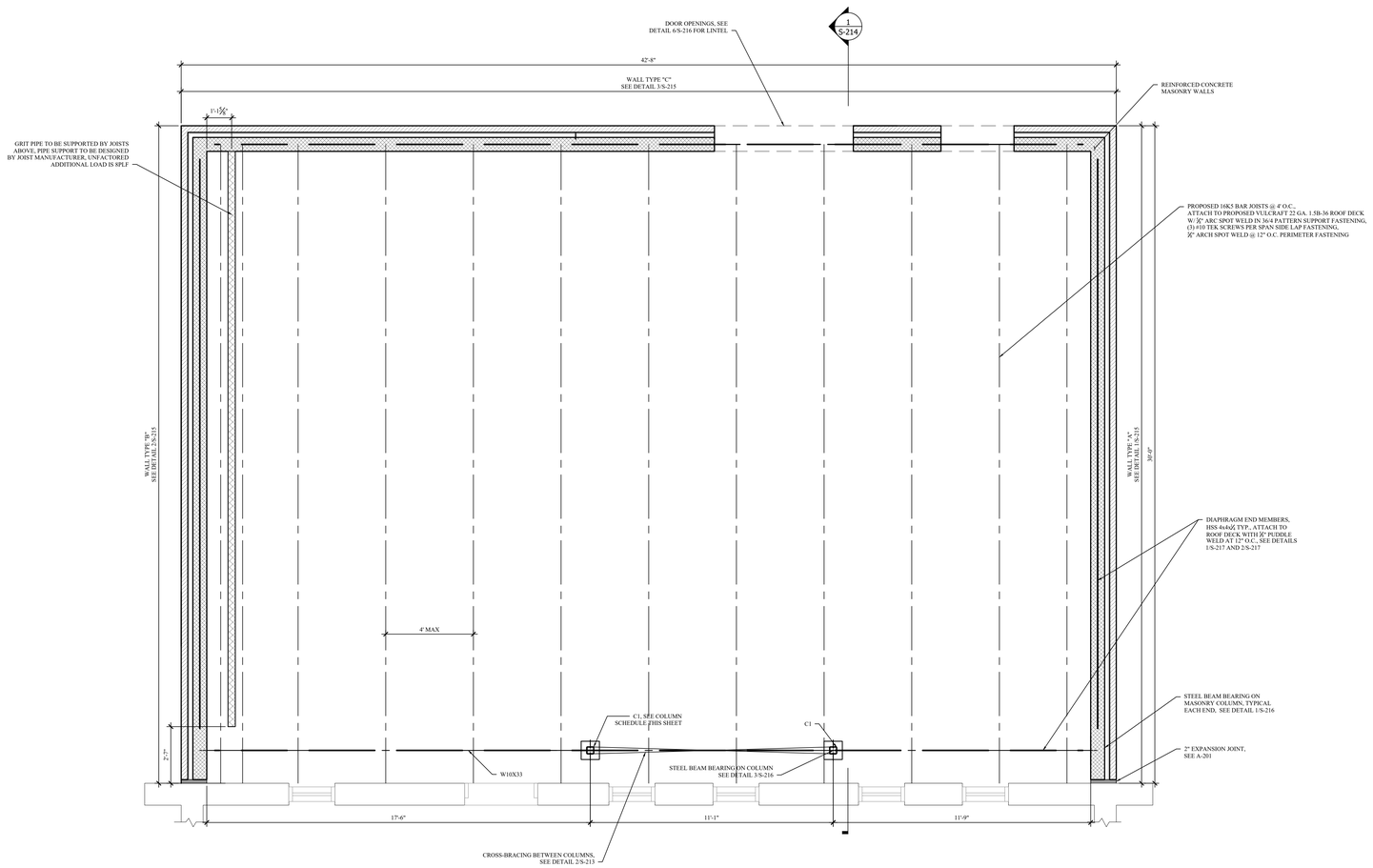
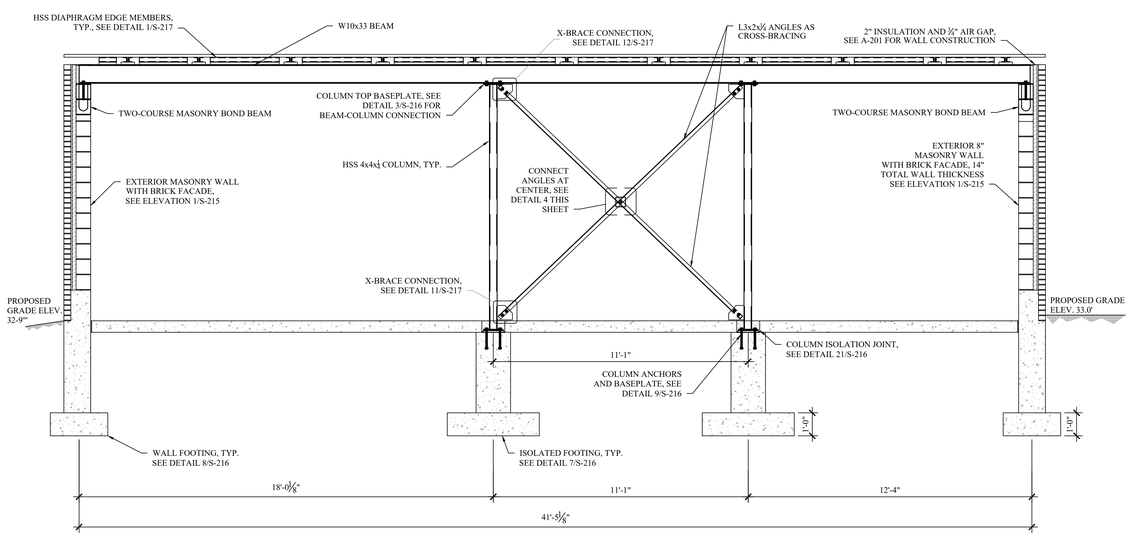


1 S-213 PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER FRAMING AND WALL PLAN

SCALE: 3/8" = 1'-0"

NOTE: ALL MEP FIXTURES SUPPORTED BY JOISTS SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS



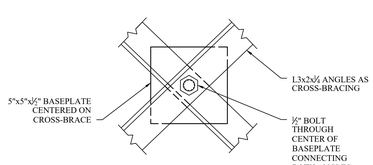
2 S-213 PROPOSED HEADWORKS BUILDING STEEL BRACING SECTION

SCALE: 3/8" = 1'-0"

ELEVATION	COLUMN ID
	C1
TOP PLATE B X N X t	10" X 6" X ½"
TOP SIDE OF TOP PLATE 43'-6"	
T.O.S. 32'-9"	
UNDERSIDE OF BASE PLATE 32'-4"	
BASE PLATE B X N X t	10" X 10" X ½"
ANCHOR RODS	(4) ¾"Ø F1554 GR36 X 6" EMBEDMENT

3 S-213 COLUMN SCHEDULE

SCALE: 1" = 1'-0"



4 S-213 CROSS-BRACE MID CONNECTION

SCALE: 3" = 1'-0"

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111 Wheatfield Drive, Suite 1
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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER FRAMING AND WALL PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

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S-213

PROJECT # 18-732 PHASE #

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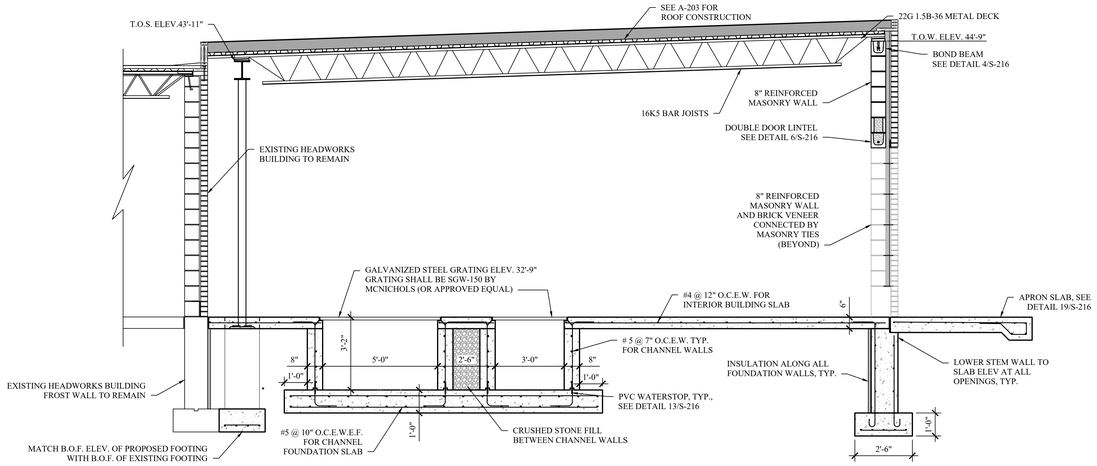
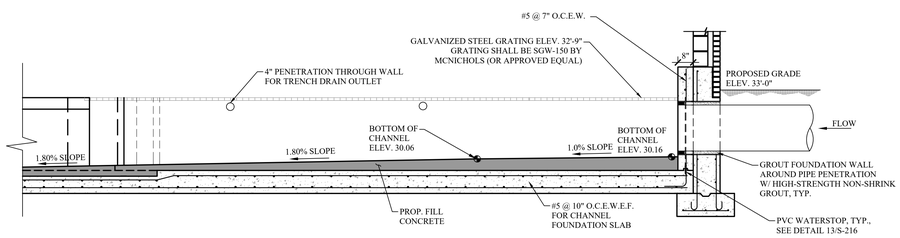


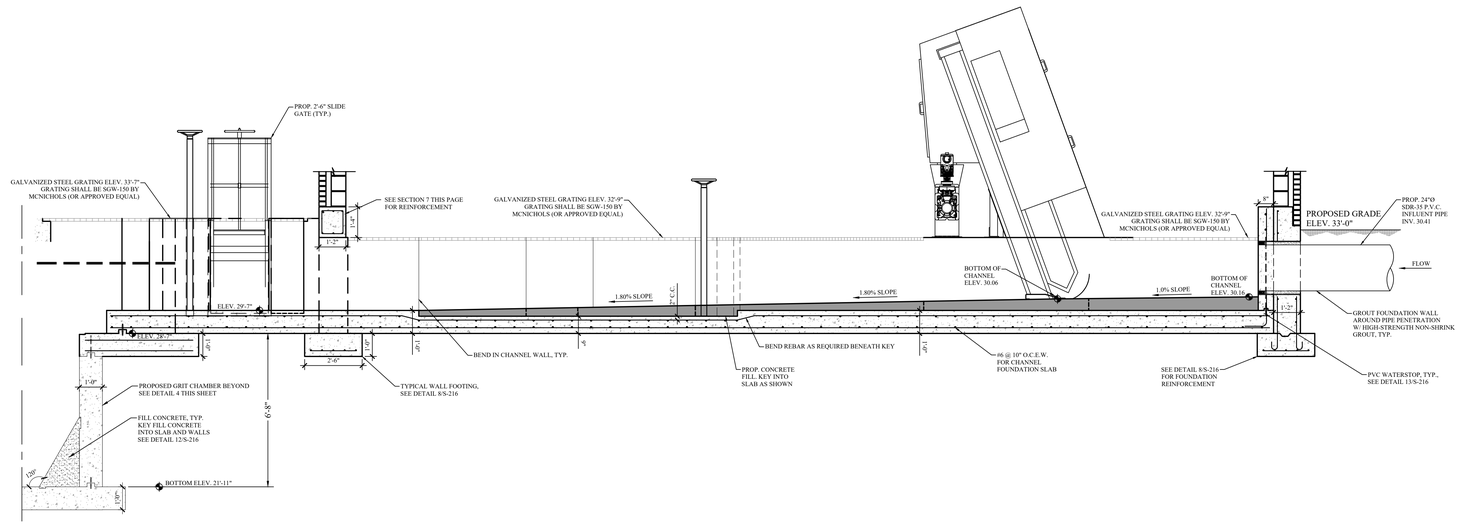
1 S-214 PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER SECTION 1

SCALE: 3/8" = 1'-0"



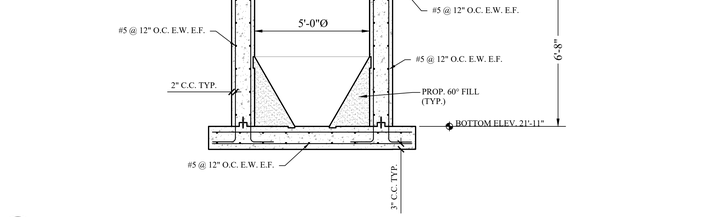
2 S-214 PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER SECTION 2

SCALE: 3/8" = 1'-0"



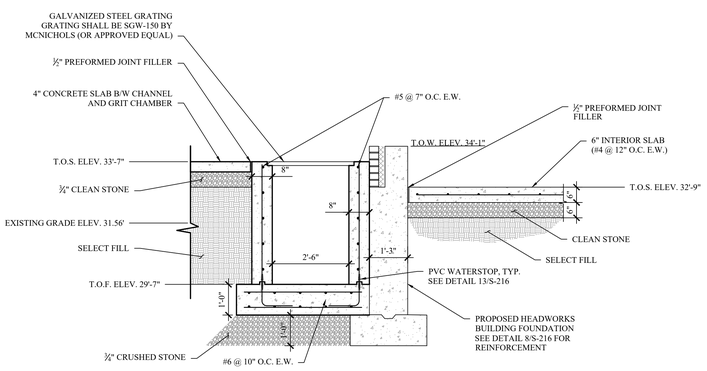
3 S-214 PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER SECTION 3

SCALE: 3/8" = 1'-0"



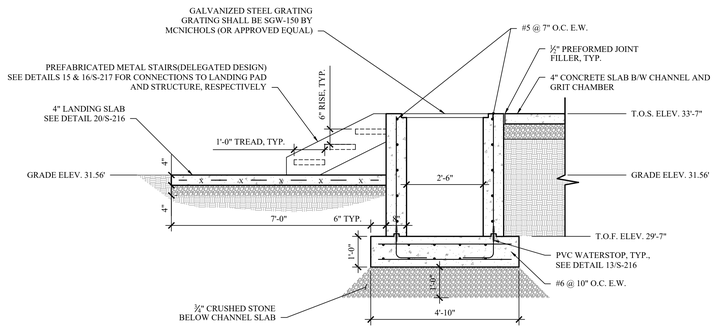
4 S-214 PROPOSED GRIT CHAMBER SECTION 4

SCALE: 3/8" = 1'-0"



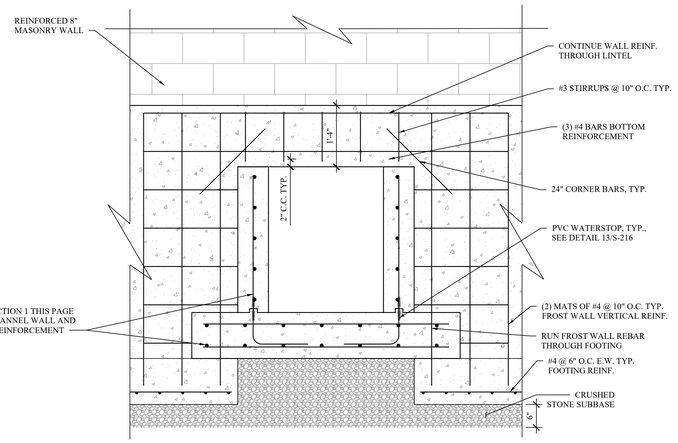
5 S-214 PROPOSED GRIT CHAMBER SECTION

SCALE: 1/2" = 1'-0"



6 S-214 PROPOSED GRIT CHAMBER SECTION

SCALE: 1/2" = 1'-0"



7 S-214 PROPOSED HEADWORKS BUILDING SECTION 7

SCALE: 3/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

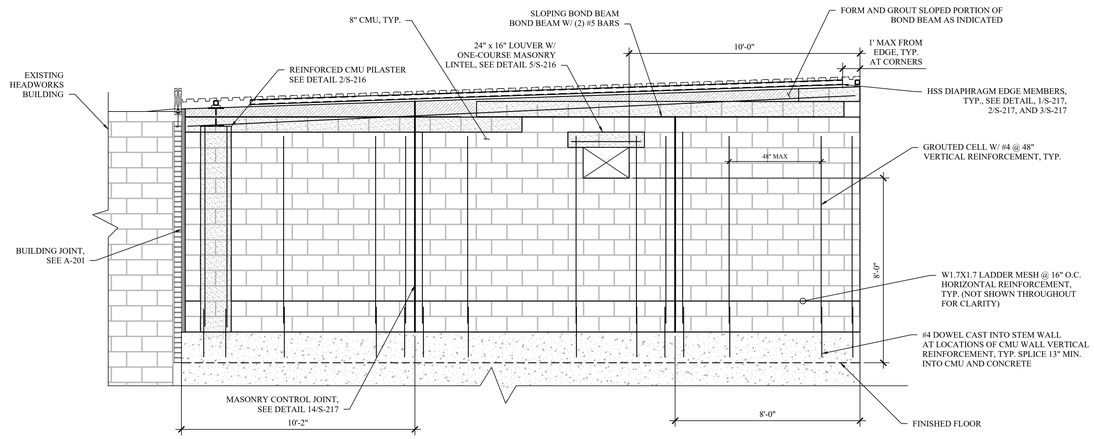
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

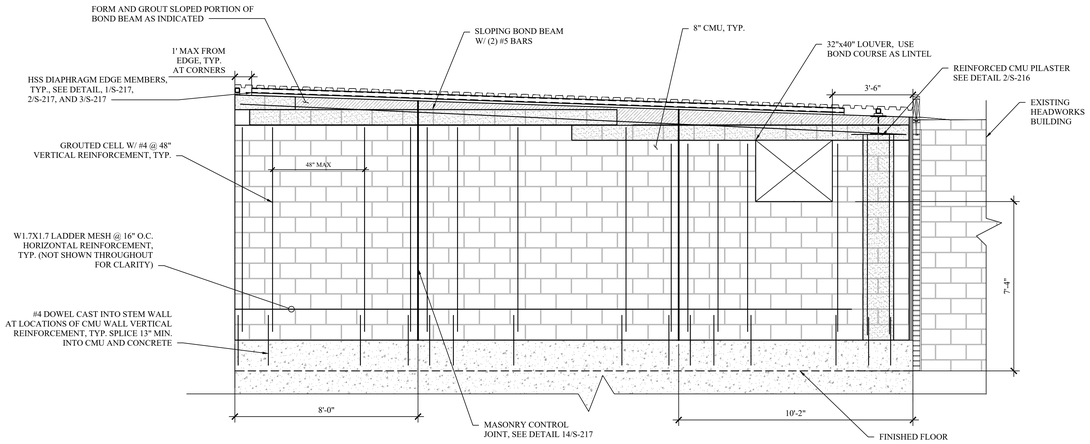
S-214

PROJECT # 18-732 PHASE #

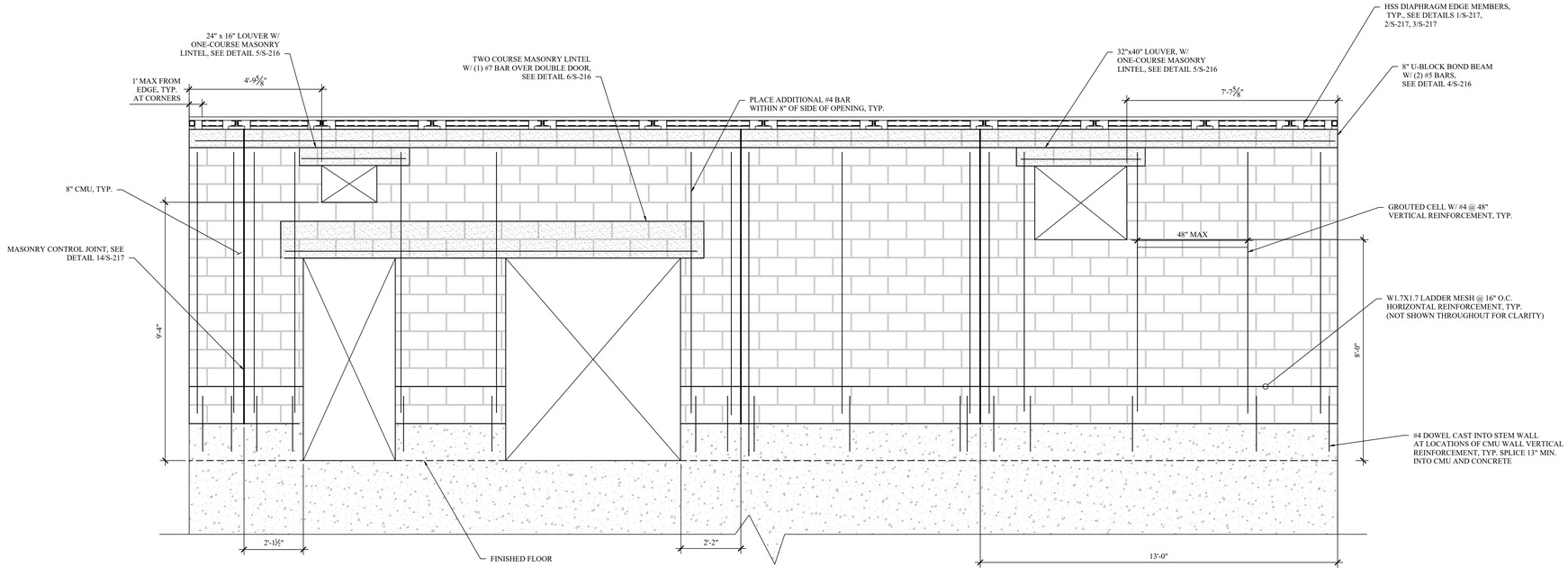
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\3 STRUCTURAL\2025\4.11.04 02 - Headworks Screening Grit Removal - Structural Rec.dwg, S-214, 4/16/2025 12:01:44 PM



1 S-215 WALL TYPE A ELEVATION
SCALE: 3/8" = 1'-0"



2 S-215 WALL TYPE B ELEVATION
SCALE: 3/8" = 1'-0"



3 S-215 WALL TYPE C ELEVATION
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING WALL ELEVATIONS

REVISIONS

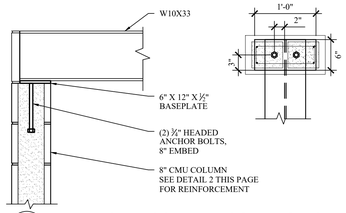
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

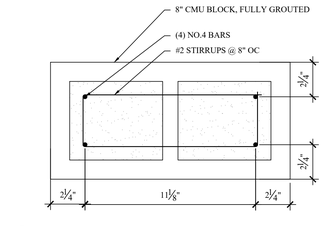
SHEET NO.
S-215

PROJECT # 18-732 PHASE #

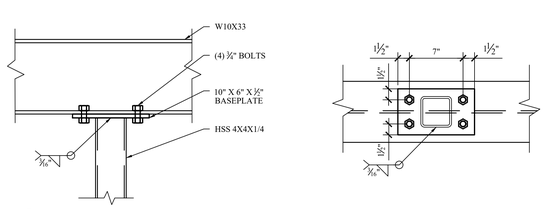
P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\3 STRUCTURAL\2025\4.11.04 02 - Headworks Screening Grit Removal - Structural Rec.dwg, S-215, 4/16/2025 12:01:48 PM



1 S-216 BEAM-CMU COLUMN CONNECTION
SCALE: 1" = 1'-0"

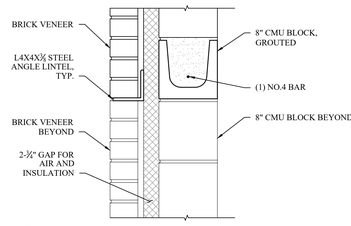


2 S-216 CMU COLUMN
SCALE: 3" = 1'-0"

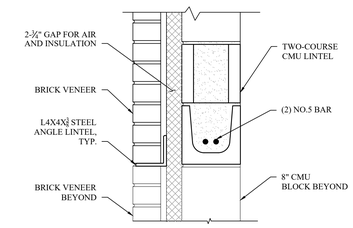


3 S-216 BEAM-COLUMN CONNECTION
SCALE: 1-1/2" = 1'-0"

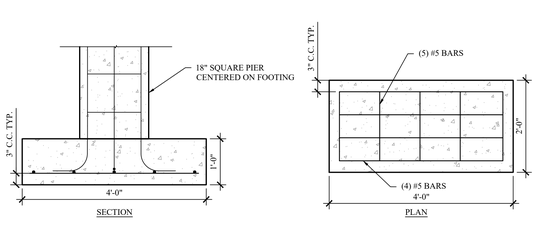
4 S-216 JOIST-CMU CONNECTION
SCALE: 1" = 1'-0"



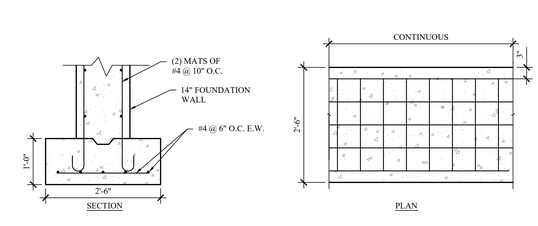
5 S-216 LOUVERS LINTEL
SCALE: 1-1/2" = 1'-0"



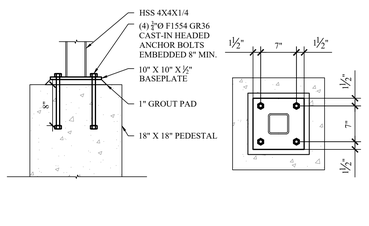
6 S-216 DOOR LINTEL
SCALE: 1-1/2" = 1'-0"



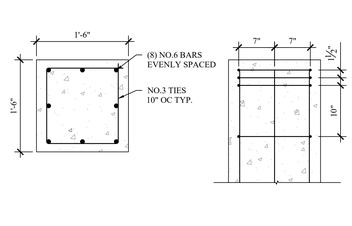
7 S-216 ISOLATED FOOTING
SCALE: 3/4" = 1'-0"



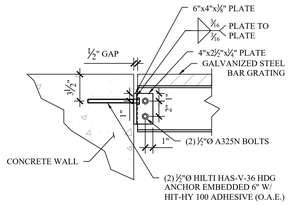
8 S-216 FROST WALL AND CONTINUOUS FOOTING
SCALE: 3/4" = 1'-0"

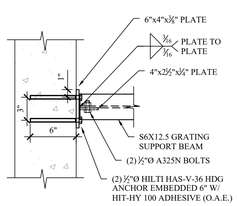


9 S-216 BASEPLATE DETAIL
SCALE: 1" = 1'-0"

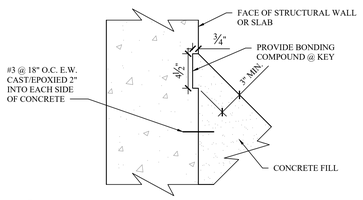


10 S-216 PIER REINFORCEMENT
SCALE: 1" = 1'-0"

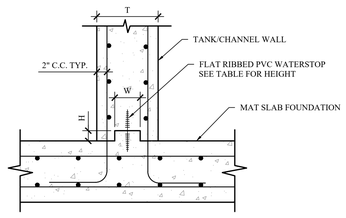




11 S-216 GRATING ANGLE AND BEAM SUPPORT CONNECTIONS
SCALE: 1-1/2" = 1'-0"

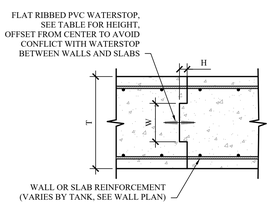


12 S-216 TYPICAL CONCRETE FILL KEY
SCALE: 1-1/2" = 1'-0"



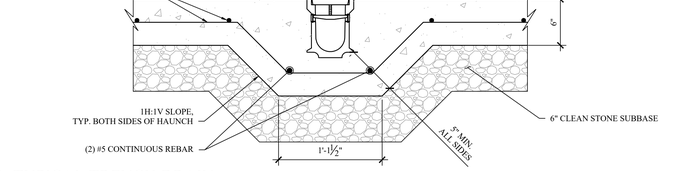
13 S-216 TYPICAL CONCRETE TANK/CHANNEL KEY AND WATERSTOP
SCALE: NOT TO SCALE

KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"

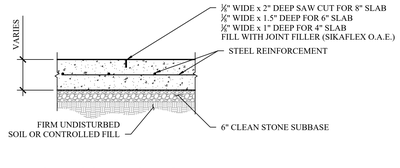


14 S-216 TYPICAL TANK WALL/MAT SLAB CONSTRUCTION JOINT
SCALE: NOT TO SCALE

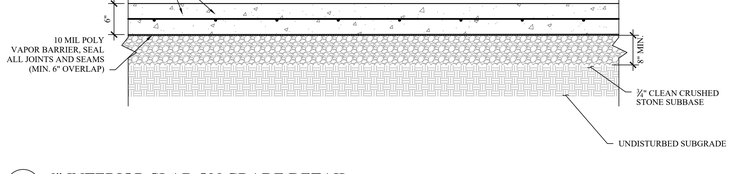
KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"



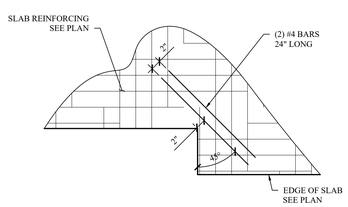
15 S-216 TYPICAL TRENCH DRAIN
SCALE: 1-1/2" = 1'-0"



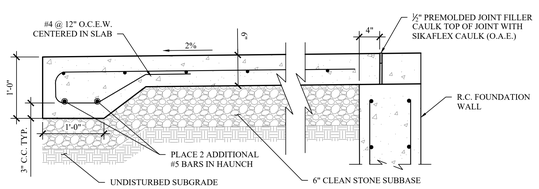
16 S-216 TYPICAL CONTROL JOINT
SCALE: 3/4" = 1'-0"



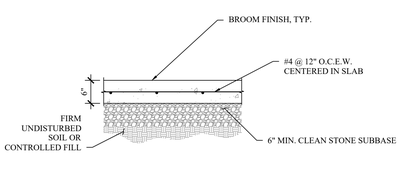
17 S-216 6" INTERIOR SLAB ON GRADE DETAIL
SCALE: 1" = 1'-0"



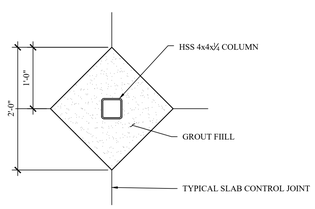
18 S-216 TYPICAL SLAB CORNER REINF.
SCALE: 1" = 1'-0"

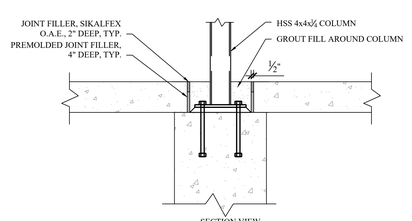


19 S-216 TYPICAL APRON SLAB REINFORCEMENT
SCALE: 1" = 1'-0"

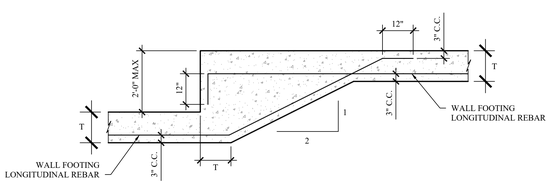


20 S-216 TYPICAL LANDING PAD
SCALE: 3/4" = 1'-0"

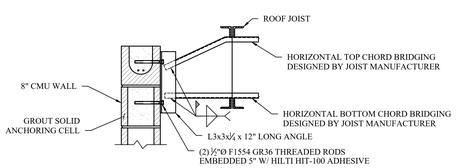




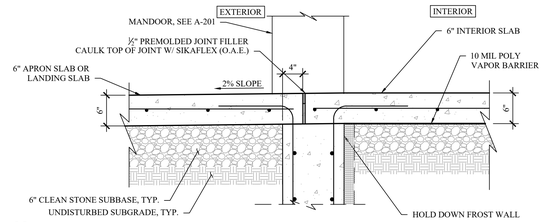
21 S-216 TYPICAL COLUMN ISOLATION JOINT DETAIL
SCALE: 1" = 1'-0"



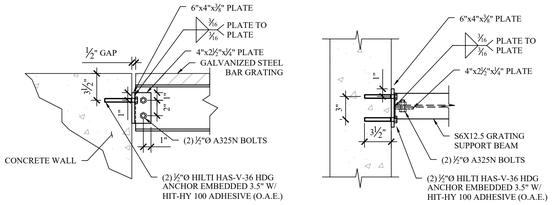
22 S-216 TYPICAL FOOTING STEP DETAIL
SCALE: NO SCALE



23 S-216 TYPICAL JOIST BRIDGING TERMINATION
SCALE: 1" = 1'-0"



24 S-216 TYPICAL SLAB AT MANDOOR
SCALE: 1" = 1'-0"



25 S-216 GRIT CHAMBER GRATING BEAM SUPPORT CONNECTIONS
SCALE: 1-1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER DETAIL

REVISIONS

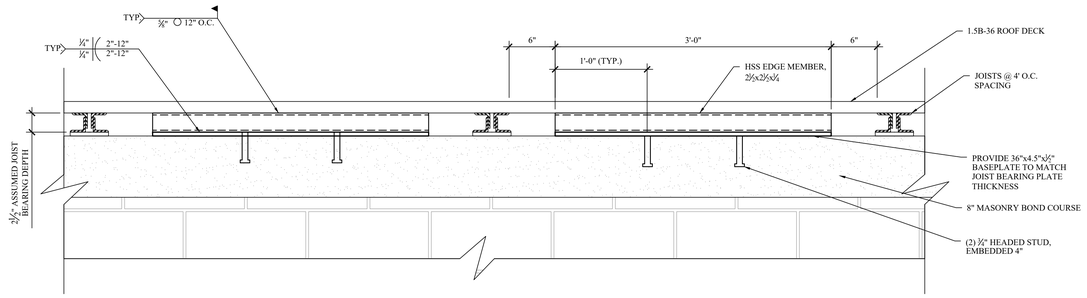
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-216

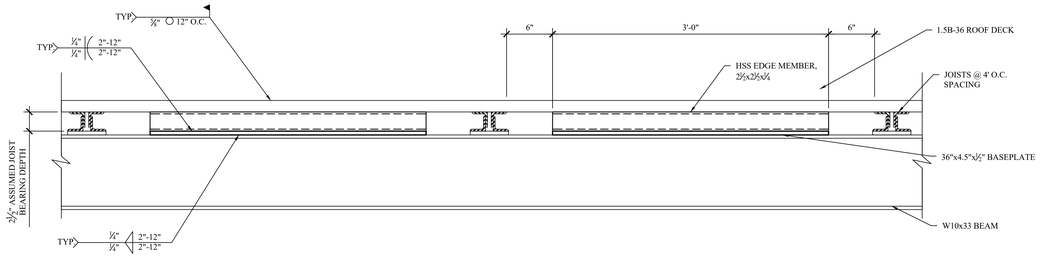
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\3 STRUCTURAL\2024.11.04 02 - Headworks Screening Grit Removal - Structural Rec.dwg, S-216, 4/18/2025 12:01:45 PM



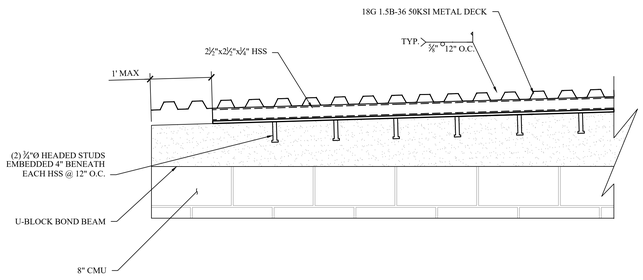
NOTE: IF FINAL JOIST BEARING SEAT DEPTH IS OTHER THAN 2½", HSS DEPTH AND WIDTH SHALL BE UPDATED TO MATCH

1 S-217 DIAPHRAGM EDGE MEMBER DETAIL ON MASONRY
SCALE: 1-1/2" = 1'-0"



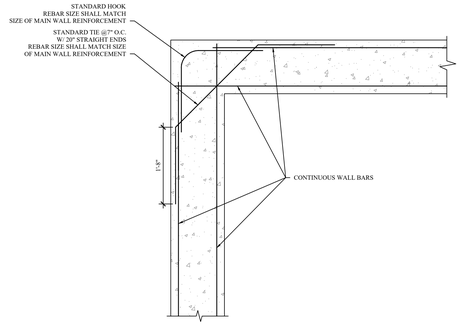
NOTE: IF FINAL JOIST BEARING SEAT DEPTH IS OTHER THAN 2½", HSS DEPTH AND WIDTH SHALL BE UPDATED TO MATCH

2 S-217 DIAPHRAGM EDGE MEMBER DETAIL ON STEEL BEAM
SCALE: 1-1/2" = 1'-0"

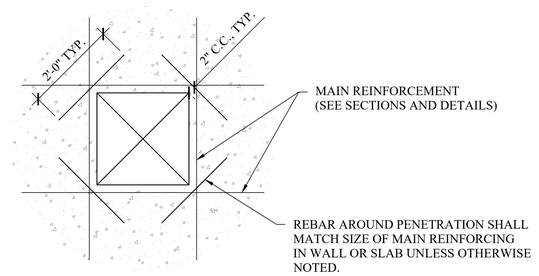


3 S-217 DIAPHRAGM EDGE MEMBER DETAIL ON RAKER
SCALE: 1" = 1'-0"

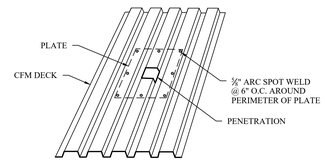
NOTE: IF FINAL JOIST BEARING SEAT DEPTH IS OTHER THAN 2½", HSS DEPTH AND WIDTH SHALL BE UPDATED TO MATCH



4 S-217 TYPICAL 90 DEGREE WALL TURN REINFORCEMENT
SCALE: 3/4" = 1'-0"

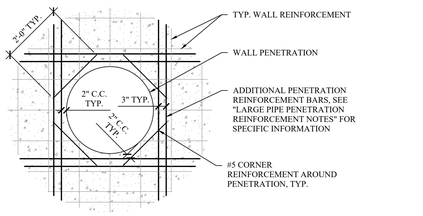


5 S-217 SQUARE PENETRATION REINFORCEMENT
SCALE: 3/4" = 1'-0"



METAL DECK PENETRATION REINFORCEMENT	
DIAMETER/WIDTH OF PENETRATION	REQUIRED REINFORCEMENT
< = 6"	NONE OR 0.045" PLATE
< = 8"	0.045" PLATE
< = 13"	0.054" PLATE
> 13"	DESIGNED BY ENGINEER

6 S-217 METAL DECK PENETRATION REINF.
SCALE: NOT TO SCALE



LARGE PIPE PENETRATION REINFORCEMENT NOTES

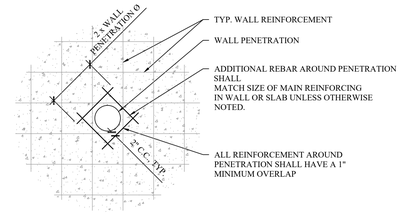
1. ADDITIONAL PENETRATION REINFORCEMENT SHALL BE OF THE SIZE OF WALL REBAR INTERRUPTED BY THE PENETRATION.

2. TOTAL AMOUNT OF VERTICAL OR HORIZONTAL REBAR SHALL BE THE SUM OF THE BARS INTERRUPTED BY THE PENETRATION, EVENLY SPLIT BETWEEN BOTH SIDES OF THE OPENING.

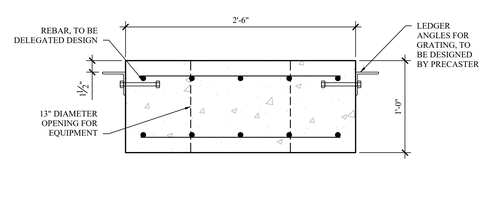
3. THE PENETRATION REINFORCEMENT SHALL HAVE A SPACING OF 3" BETWEEN REBAR. IF PENETRATION REINFORCEMENT CONFLICTS WITH WALL REINFORCEMENT, THE PENETRATION REINFORCEMENT SHALL BE PLACED AWAY FROM THE WALL REINFORCEMENT UTILIZING 3" SPACING.

4. IF THE TOP OR BOTTOM OF THE WALL IS WITHIN 12" OF EDGE OF PENETRATION, OMIT ADDITIONAL PENETRATION STEEL.

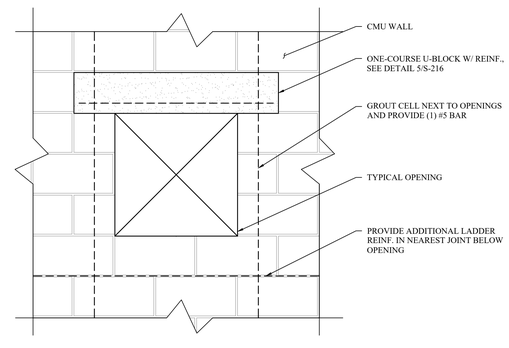
7 S-217 LARGE CIRCULAR WALL PENETRATION REINFORCEMENT DETAIL (DIA. > 18")
SCALE: 1/2" = 1'-0"



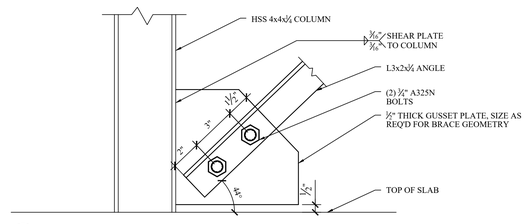
8 S-217 CIRCULAR WALL PENETRATION REINFORCEMENT DETAIL (DIA. < 18")
SCALE: 1/2" = 1'-0"



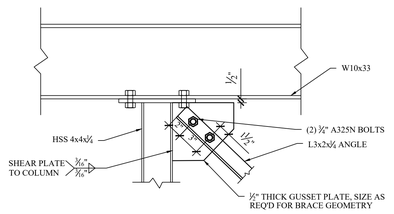
9 S-217 PROPOSED GRIT CHAMBER PRECAST EQUIPMENT PLATFORM
SCALE: 1-1/2" = 1'-0"



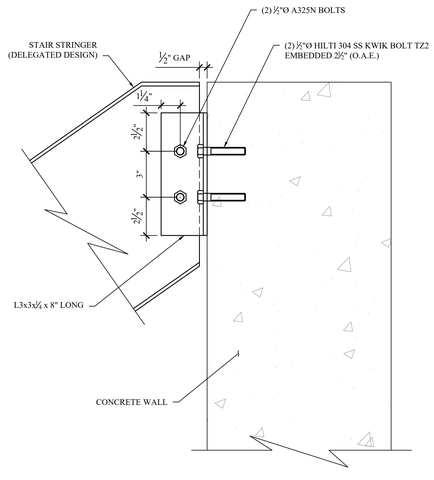
10 S-217 TYPICAL MASONRY PENETRATION REINFORCEMENT
SCALE: 1" = 1'-0"



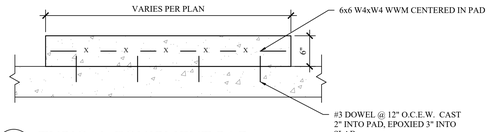
11 S-217 CROSS-BRACE BOTTOM GUSSET PLATE
SCALE: 3" = 1'-0"



12 S-217 CROSS-BRACE TOP GUSSET PLATE
SCALE: 1-1/2" = 1'-0"

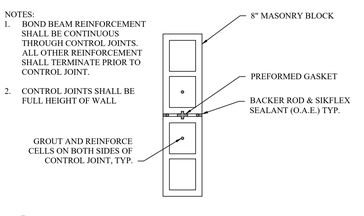


16 S-217 TYPICAL STAIR CONNECTION TO CONCRETE WALL
SCALE: 3" = 1'-0"

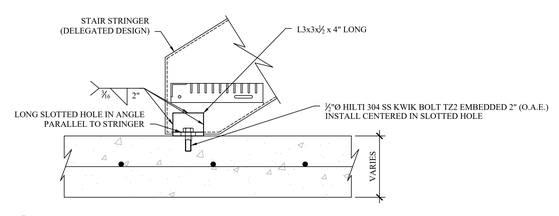


13 S-217 TYPICAL EQUIPMENT PAD
SCALE: 1" = 1'-0"

NOTES:
1. BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. ALL OTHER REINFORCEMENT SHALL TERMINATE PRIOR TO CONTROL JOINT.
2. CONTROL JOINTS SHALL BE FULL HEIGHT OF WALL



14 S-217 MASONRY CONTROL JOINT
SCALE: 1" = 1'-0"



15 S-217 TYPICAL METAL STAIRS CONNECTION TO SLAB-ON-GRADE
SCALE: 1-1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
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Milford, PA 18337
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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED HEADWORKS BUILDING AND GRIT CHAMBER DETAIL (CONT.)

REVISIONS

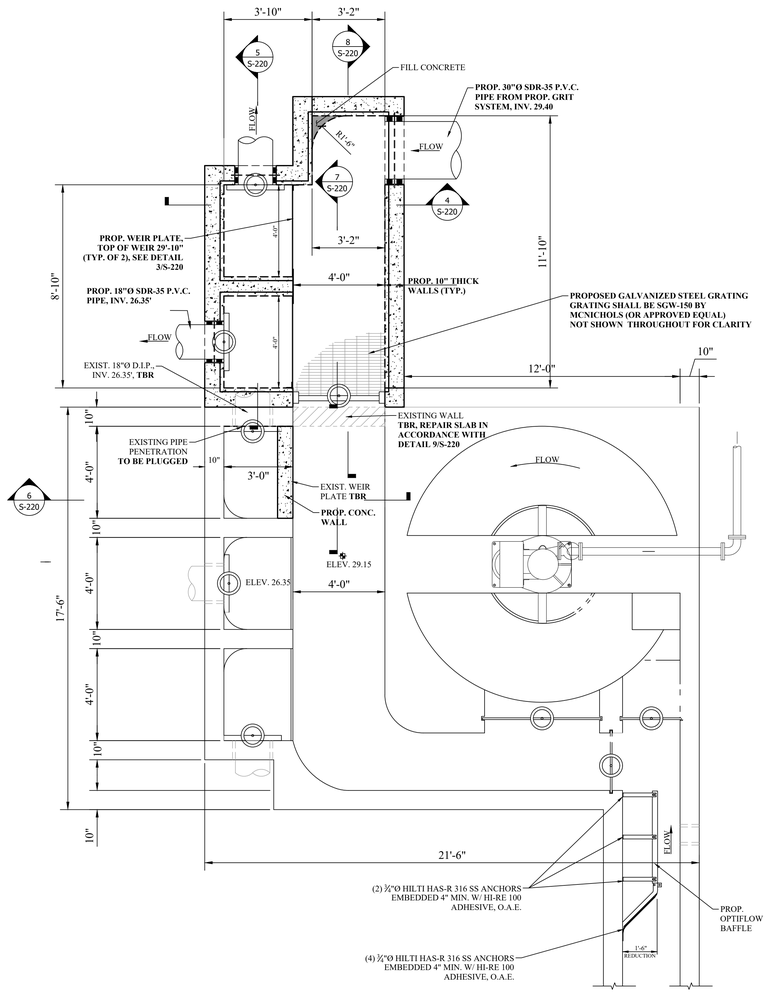
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-217

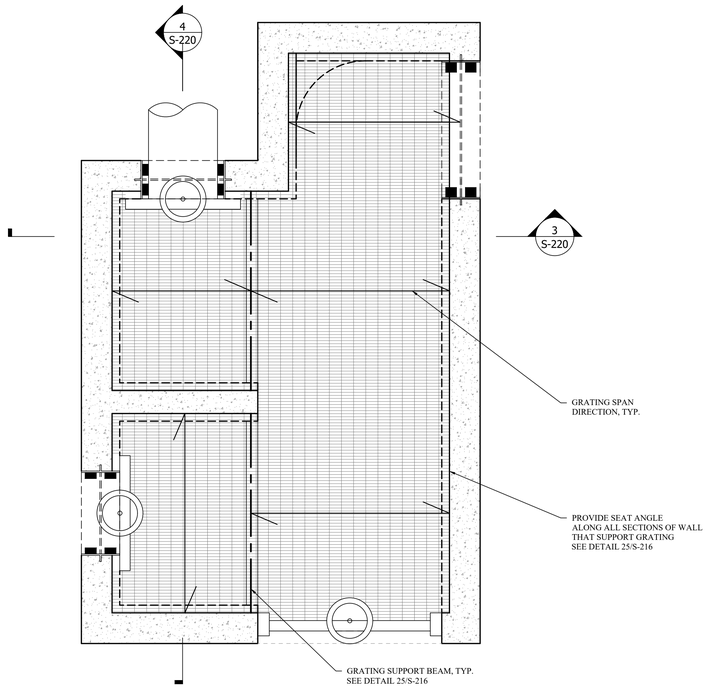
PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\3 STRUCTURAL\2024.11.04 02 - Headworks Screening Grit Removal - Structural Rec.dwg, S-217, 4/16/2025 12:01:52 PM

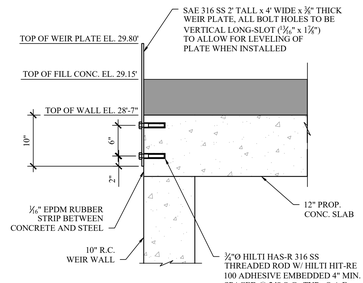


NOTE: PROVIDE SIKA SWELLSTOP SEALANT (O.A.E.) IN ALL JOINTS BETWEEN NEW AND EXISTING CONCRETE CHANNELS.

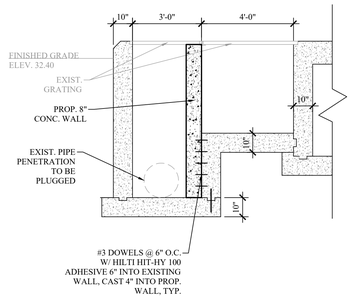
1 S-220 EXISTING GRIT CHAMBER AND SPLITTER BOX MODIFICATION PLAN
SCALE: 3/8" = 1'-0"



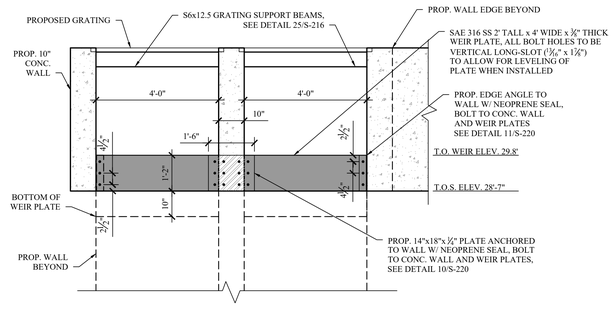
2 S-220 DISTRIBUTION BOX GRATING PLAN
SCALE: 3/4" = 1'-0"



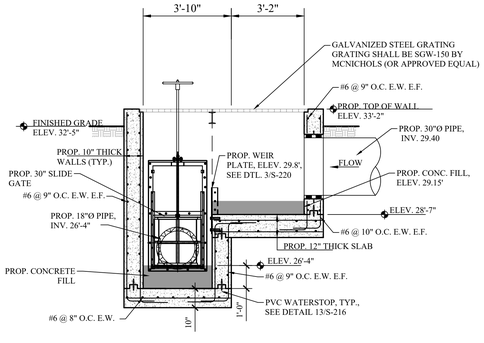
3 S-220 WEIR PLATE
SCALE: 1" = 1'-0"



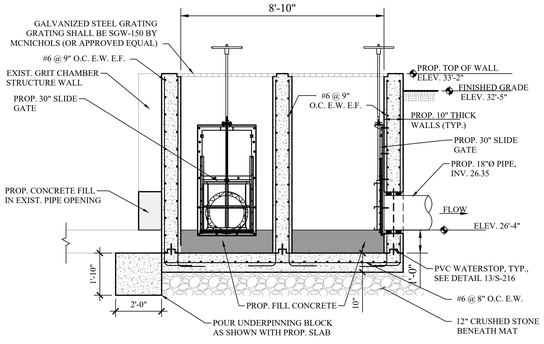
6 S-220 EX. GRIT CHAMBER MODIFICATION - SECTION 1
SCALE: 3/8" = 1'-0"



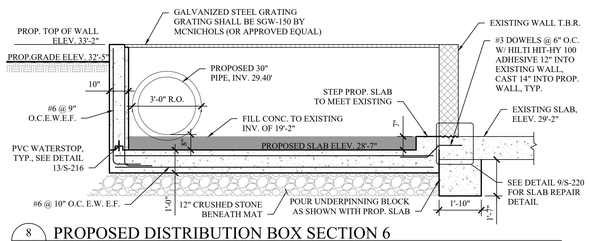
7 S-220 EX. GRIT CHAMBER MODIFICATION - SECTION 1
SCALE: 1/2" = 1'-0"



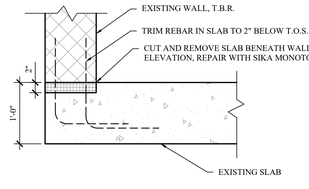
4 S-220 PROPOSED DISTRIBUTION BOX SECTION 3
SCALE: 3/8" = 1'-0"



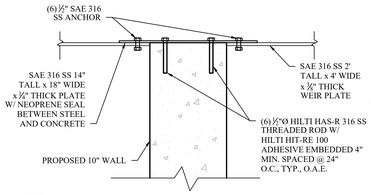
5 S-220 PROPOSED DISTRIBUTION BOX SECTION 4
SCALE: 3/8" = 1'-0"



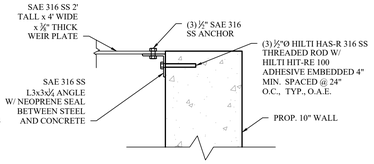
8 S-220 PROPOSED DISTRIBUTION BOX SECTION 6
SCALE: 3/8" = 1'-0"



9 S-220 EXISTING DISTRIBUTION BOX SLAB REPAIR DETAIL
SCALE: 1" = 1'-0"



10 S-220 WEIR PLATE
SCALE: 1" = 1'-0"



11 S-220 WEIR PLATE
SCALE: 1" = 1'-0"

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New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING GRIT CHAMBER AND DISTRIBUTION BOX MODIFICATION PLAN AND DETAILS

REVISIONS

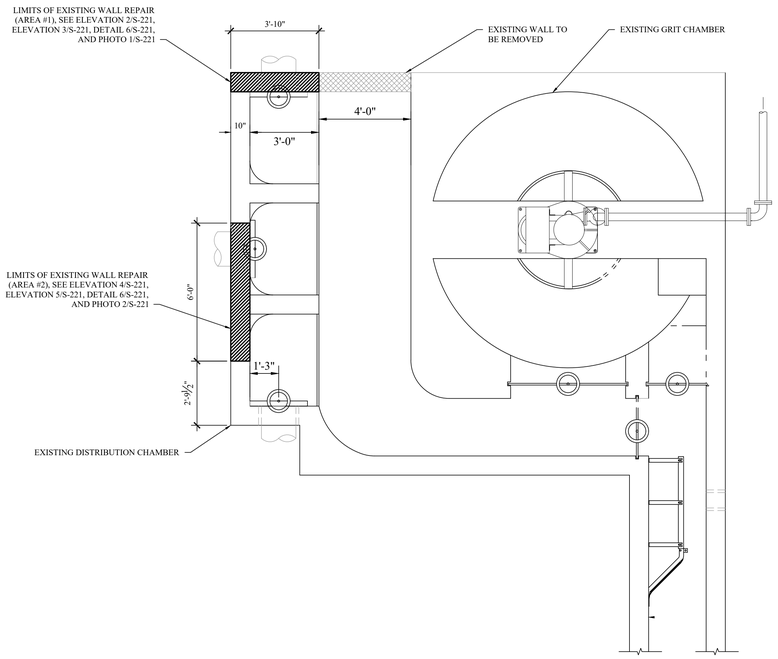
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

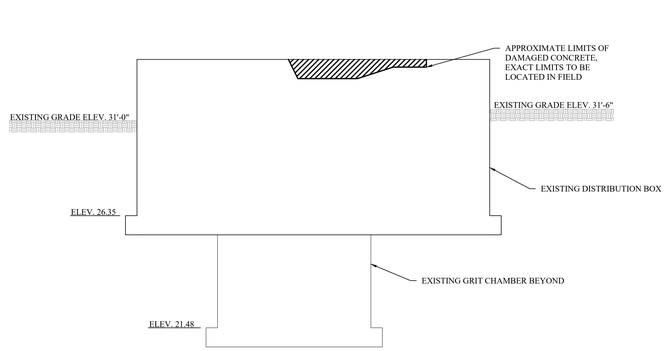
SHEET NO.
S-220

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\3 STRUCTURAL\2024 11 04 02 - Headworks Screening Grit Removal - Structural Rec.dwg, S-220d, 4/16/2025 12:01:53 PM

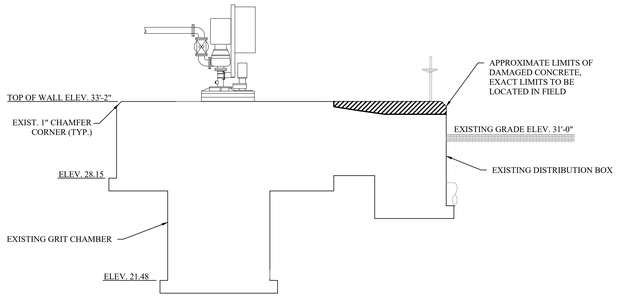


1 S-221 EXISTING GRIT CHAMBER REPAIR PLAN
SCALE: 3/8" = 1'-0"

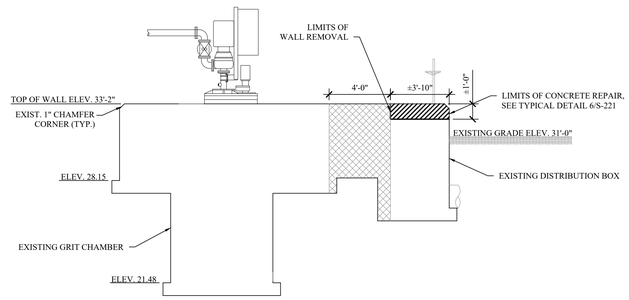


4 S-221 EXISTING CONDITION GRIT CHAMBER REPAIR - PLAN WEST SECTION
SCALE: 3/8" = 1'-0"

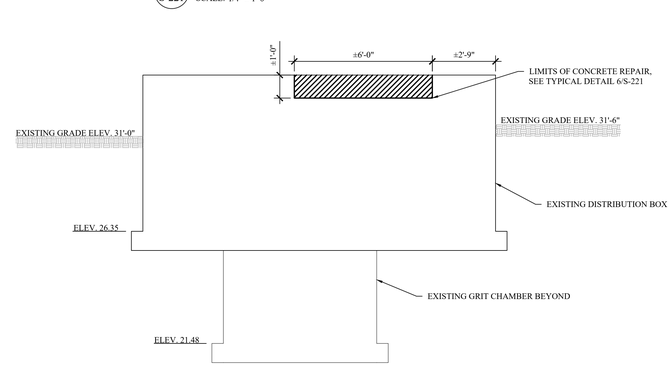
6 S-221 TYPICAL CONCRETE REPAIR DETAIL
SCALE: 1-1/2" = 1'-0"



2 S-221 EXISTING CONDITION GRIT CHAMBER REPAIR - PLAN NORTH SECTION
SCALE: 1/4" = 1'-0"



3 S-221 PROPOSED CONDITION GRIT CHAMBER REPAIR - PLAN NORTH SECTION
SCALE: 1/4" = 1'-0"



5 S-221 PROPOSED CONDITION GRIT CHAMBER REPAIR - PLAN WEST SECTION
SCALE: 3/8" = 1'-0"

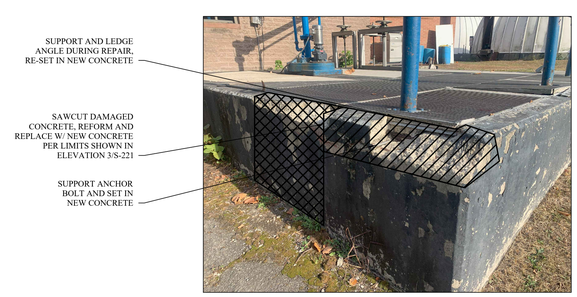


PHOTO 1

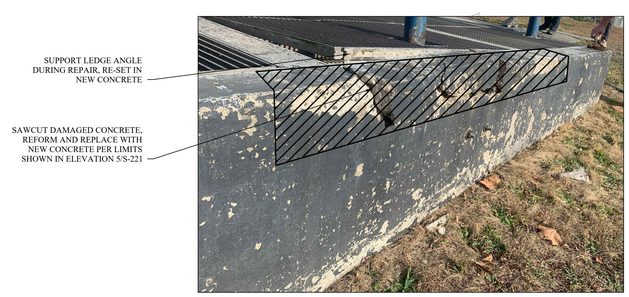


PHOTO 2

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING GRIT CHAMBER AND DISTRIBUTION BOX REPAIR PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
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SHEET NO.
S-221

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\2 - Headworks, Screening, Grit Removal\3 STRUCTURAL\2024.11.04.02 - Headworks Screening Grit Removal - Structural Rec.dwg, S-221, 4/16/2025 12:01:57 PM

GENERAL NOTES (STRUCTURAL):

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS TO STRUCTURES OR SURROUNDING AREAS. DAMAGE WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER OF RECORD (E.O.R.) AT NO ADDITIONAL COST TO THE OWNER.

2. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER TO THE E.O.R. PRIOR TO INSTALLATION OF EXCAVATION SUPPORT MEASURES.

3. ALL ITEMS NOT INDICATED TO BE EXISTING SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.

4. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES REGARDING SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN STRUCTURAL WORK.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE E.O.R.

6. ANY ITEMS INDICATED TO BE REPLACED-IN-KIND SHALL BE INSTALLED TO MATCH EXISTING LOCATIONS, CONFIGURATIONS, AND ELEVATIONS UNLESS OTHERWISE NOTED.

7. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. IF MANUFACTURER'S SPECIFICATIONS CONFLICT WITH CONTRACT DRAWINGS OR SPECIFICATIONS, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT. NEITHER THE STRUCTURE NOR INDIVIDUAL STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, JOISTS, AND COLUMNS WILL BE LATERALLY STABLE UNTIL ALL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS COMPLETE.

9. ALL SUBSURFACE UTILITIES SHALL BE IDENTIFIED PRIOR TO EXCAVATION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EXCAVATION. IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

10. ALL ITEMS SHOWN TO BE REMOVED SHALL BE PROPERLY HANDLED AND DISPOSED OF OFF SITE.

11. NO BACKFILLING OF THE STRUCTURE SHALL OCCUR UNTIL CONCRETE BREAKS SATISFACTORY TO THE E.O.R. ARE OBTAINED OR UNTIL THE CONTAINMENT STRUCTURE HAS SUCCESSFULLY PASSED HYDROSTATIC TESTING IF APPLICABLE.

12. ALL ITEMS INDICATED TO BE A DELEGATED DESIGN SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO ORDERING MATERIALS. SUBMITTALS SHALL INCLUDE PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.

13. ELEVATIONS SHOWN ARE BASED ON SURVEY BY CTMALE DATED APRIL 3, 2023.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 BUILDING CODE OF NEW YORK STATE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 24 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

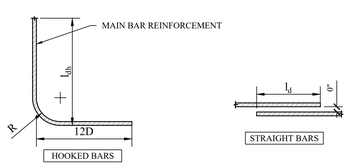
SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

CONCRETE:
1. PERIODIC INSPECTION OF REINFORCING STEEL.
2. PERIODIC INSPECTION OF ANCHORS CAST IN CONCRETE.
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.
   - 3.1. CONTINUOUS INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.
   - 3.2. PERIODIC INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NO DEFINED IN 3.1.
4. PERIODIC VERIFICATION OF DESIGN MIX.
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP, AIR, AND TEMPERATURE TESTS; CONTINUOUS.
6. CONTINUOUS INSPECTION OF PLACEMENT & FOR PROPER APPLICATION TECHNIQUES.
7. PERIODIC INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
8. PERIODIC VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.
9. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS, OF THE CONCRETE MEMBER BEING FORMED.

SOILS:
1. CONTINUOUS INSPECTION OF
   - 1.1. PROPER MATERIALS
   - 1.2. DENSITIES
   - 1.3. LIFT THICKNESSES DURING PLACEMENT
   - 1.4. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   - 2.1. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   - 2.2. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   - 2.3. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   - 2.4. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE.

CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO ACI 211.1, ACI 301, ACI 304R (WHEN PUMPING), AND ACI 318-14. AGGREGATE SHALL CONFORM TO ASTM C33. COMPRESSIVE STRENGTH, RANGE OF SLUMP, WATER-TO-CEMENT RATIO, AND AIR ENTRAINMENT SHALL BE PER THE CONCRETE CLASS SPECIFIED HEREIN AND IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000. SUBMIT COPIES OF TEST REPORTS SHOWING THAT THE MIX HAS BEEN SUCCESSFULLY TESTED TO PRODUCE CONCRETE WITH THE PROPERTIES SPECIFIED. TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (E.O.R.) FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.
   - 1.1. CONCRETE CLASSIFICATIONS PER SPECIFICATION SECTION 033000:
     - 1.1.1. TANK WALLS: CLASS B
     - 1.1.2. FOUNDATIONS: CLASS D
     - 1.1.3. FILL CONCRETE: CLASS G
     - 1.1.4. REPAIR CONCRETE: CLASS B
     - 1.1.5. LANDING PADS: CLASS H
   - 1.2. CONCRETE FINISHES PER SPECIFICATION SECTION 033000:
     - 1.2.1. TANK WALLS & SLABS: AS-CAST SF-3.0 FINISH
     - 1.2.2. LANDING PADS: BROOM FINISH
2. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 7 DAYS.
3. CONCRETE SHALL BE WET CURED, USING BURLAP OR COTTON CURING MATS, OR CURED USING ASTM D4397 POLYETHYLENE SHEETING IN ACCORDANCE WITH ASTM C171. WET THE ENTIRE EXPOSED SURFACE OF THE CONCRETE THOROUGHLY WITH A FINE SPRAY OF WATER AND COVER WITH SHEETING THROUGHOUT THE CURING PERIOD. LAY SHEETING DIRECTLY ON CONCRETE SURFACE. PROVIDE SHEETING NOT LESS THAN 18 INCHES WIDER THAN CONCRETE SURFACE. OVERLAP EDGES 12 INCHES AND CONTINUOUSLY TAPE JOINTS.
4. PUMPING SHALL NOT RESULT IN SEPARATION OR LOSS OF MATERIALS NOR CAUSE INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF PLASTICITY BETWEEN SUCCESSIVE INCREMENTS. LOSS OF SLUMP IN PUMPING EQUIPMENT SHALL NOT EXCEED 2 INCHES. CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. RAPID CHANGES IN PIPE SIZES SHALL BE AVOIDED. MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO 33 PERCENT OF THE DIAMETER OF THE PIPE. MAXIMUM SIZE OF WELL ROUNDED AGGREGATE SHALL BE LIMITED TO 40 PERCENT OF THE PIPE DIAMETER. SAMPLES FOR TESTING SHALL BE TAKEN AT BOTH THE POINT OF DELIVERY TO THE PUMP AND AT THE DISCHARGE END.
5. CONCRETE SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT PROPER PLACEMENT AND CONSOLIDATION INCLUDING PERIODS OF PRECIPITATION. TRANSPORT CONCRETE AS RAPIDLY AS PRACTICABLE TAKING PRECAUTION TO PREVENT SEGREGATION OR LOSS OF INGREDIENTS. PUMPING IN ACCORDANCE WITH ASTM C94 SHALL BE PERMITTED. DO NOT EXCEED A FREE VERTICAL DROP OF 3 FEET FROM THE POINT OF DISCHARGE. PLACE CONCRETE IN ONE CONTINUOUS OPERATIONS FROM ONE SIDE OF SLAB TO THE OTHER. POSITION GRADE STAKES AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION.
6. UNLESS OTHERWISE NOTED, REINFORCEMENT BARS SHALL BE BLACK STEEL. REINFORCING BARS SHALL CONFORM TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A1064. REINFORCEMENT SHALL NOT CONTAIN RUST, SCALE, OIL, GREASE, CLAY, OR FOREIGN SUBSTANCES THAT WOULD REDUCE THE CONCRETE BONDING STRENGTH. REMOVE LOOSE RUST PRIOR TO PLACEMENT OF REINFORCEMENT.
7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
8. PROVIDE MINIMUM 2" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST FORMS OR 3" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST EARTH, UNLESS OTHERWISE INDICATED.
9. CONCRETE FOOTINGS AND MAT FOUNDATIONS SHALL BE PLACED MONOLITHICALLY WITH THE EXCEPTION THAT VERTICAL CONSTRUCTION JOINTS WILL BE ALLOWED IF EPOXY BONDING COMPOUND IS APPLIED TO THE ROUGHENED SURFACE OF THE HARDENED CONCRETE.
10. INTERIOR SLABS: THE CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AS INDICATED. JOINTS MAY BE SAWCUT OR CUT WITH A JOINTING TOOL. SAWED JOINTS SHALL BE COMPLETED WITHIN 4 TO 12 HOURS AFTER PLACEMENT OF CONCRETE. JOINTS SHALL INTERSECT WITH THE CORNERS OF ISOLATION JOINT AT COLUMN LOCATIONS, IF ANY ARE PRESENT, AND BE SPACED A MAXIMUM OF 15 FEET ON CENTER, UNLESS NOTED OTHERWISE.
11. REINFORCEMENT SUPPORTS SHALL BE CONCRETE OR OTHER NON-CORRODIBLE MATERIAL HAVING A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE COMPRESSIVE STRENGTH OF THE CONCRETE BEING PLACED.
12. PROVIDE A ½" ROUNDED EDGE ON ALL EXPOSED SLAB EDGES. PROVIDE A ½" CHAMFER ON ALL OTHER EXPOSED CONCRETE CORNERS.
13. EPOXY BONDING COMPOUND SHALL BE USED ON ALL CONTACTING SURFACES BETWEEN EXISTING CONCRETE AND NEW CONCRETE. EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C881, TYPE AND GRADE TO BE IN ACCORDANCE WITH APPROPRIATE USE INDICATED IN SPECIFICATION 033000 CAST-IN-PLACE CONCRETE. DO NOT ALLOW COMPOUND TO HARDEN PRIOR TO CONCRETE PLACEMENT. BONDING AGENT USED SHALL BE NSF 61 APPROVED.
14. PLACE, CONSOLIDATE AND IMMEDIATELY STRIKE OFF CONCRETE TO OBTAIN PROPER CONTOUR GRADE AND ELEVATION BEFORE BLEEDWATER APPEARS. PERMIT CONCRETE TO ATTAIN A SET SUFFICIENT FOR FLOATING AND SUPPORTING THE WEIGHT OF THE FINISHER AND EQUIPMENT. IF BLEEDWATER IS PRESENT PRIOR TO FLOATING THE SURFACE, DRAG THE EXCESS WATER OFF OR REMOVE BY ABSORPTION WITH POROUS MATERIALS. DO NOT USE DRY CEMENT TO ABSORB BLEEDWATER.
15. UNLESS OTHERWISE NOTED, ALL CONCRETE CONSTRUCTION SHALL MEET THE SPECIFIED TOLERANCES OF ACI 117. TOP ELEVATIONS SHALL MATCH THE SPECIFIED ELEVATIONS WITHIN A TOLERANCE OF ±¼"
16. NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED ITEMS (I.E. PROCESS, ELECTRICAL, MECHANICAL, ETC) HAVE BEEN SET. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES.
17. ALL BAR PLACING AND BENDING SHALL BE IN ACCORDANCE WITH ACI 315.
18. PERFORM COMPRESSIVE TESTS IN ACCORDANCE WITH ASTM C39. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM SPECIMENS. TEST ONE CYLINDER AT 3 DAYS, ONE CYLINDER AT 7 DAYS, AND TWO (THREE FOR 4"x8" CYLINDERS) CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE. PERFORM SLUMP TESTS IN ACCORDANCE WITH ASTM C143. PERFORM AIR CONTENT TESTS IN ACCORDANCE WITH ASTM C173 OR ASTM C231. SUBMIT ALL TEST DATA TO THE E.O.R.
19. CONSOLIDATE CONCRETE WITH HIGH FREQUENCY, INTERNAL, MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING AND TAMPING. FURNISH A SPARE VIBRATOR ON THE JOB SITE WHENEVER CONCRETE IS PLACED. OPERATE VIBRATORS WITH VIBRATORY ELEMENT SUBMERGED IN THE CONCRETE, WITH A MINIMUM FREQUENCY OF NOT LESS THAN 6000 IMPULSES PER MINUTE WHEN SUBMERGED. INSERT AND WITHDRAW VIBRATORS AT INTERVALS APPROXIMATELY 18 INCHES APART.
20. ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920, TYPE S, GRADE P, CLASS 25. JOINT SEALANT IN CONTACT WITH POTABLE WATER SHALL BE NSF 61 APPROVED.
21. CONTROLLED DENSITY FILL SHALL BE IN ACCORDANCE WITH SPECIFICATION 033110.
22. CRYSTALLINE WATERPROOFING ADMIXTURES SHALL BE IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000 AND THE CRYSTALLINE WATERPROOFING SPECIFICATION 071616.
    APPLICABLE LOCATIONS:
    - PRIMARY SETTLING TANK
    - EFFLUENT BOX
    - SCUM PIT



CONTAINMENT STRUCTURE DESIGN PROVISIONS:

THE CONCRETE CONTAINMENT STRUCTURES SHOWN HEREIN HAVE BEEN DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH PCA RECTANGULAR CONCRETE TANKS REVISED 5TH EDITION, ACI 318-14, ACI 350-06, ACI 350.3-06 AND ACI 350.4R-04.

SOIL AND BACKFILL PROPERTIES (APPLICABLE TO ALL TANKS):
- SOIL UNIT WEIGHT, γ = 130 PCF
- GROUNDWATER ASSUMED TO BE FULL HEIGHT OF BACKFILL
- SOIL FRICTION ANGLE, Φ = 35°
- ACTIVE EARTH PRESSURE, K_a = 0.27
- AT REST EARTH PRESSURE, K_o = 0.43 (UTILIZED FOR ALL TANK DESIGNS)
- PASSIVE EARTH PRESSURE, K_p = 3.69
- SUBGRADE MODULUS = 250 PSI
- SUBGRADE BEARING CAPACITY = 4000PSF

PRIMARY SETTLING TANK:
- UNIT WEIGHT OF LIQUID, γ = 62.4 PCF
- HEIGHT OF LIQUID = 13'
- BACKFILL HEIGHT = 13'

EFFLUENT BOX:
- UNIT WEIGHT OF LIQUID, γ = 65 PCF
- HEIGHT OF LIQUID = 3'
- BACKFILL HEIGHT = N/A

SCUM PIT:
- UNIT WEIGHT OF LIQUID, γ = 65 PCF
- HEIGHT OF LIQUID = 6'
- BACKFILL HEIGHT = 12'

GEOTECHNICAL NOTES:

1. THE FOLLOWING BEARING PRESSURE VALUES WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - MAX NET ALLOWABLE BEARING OF UNDISTURBED NATIVE SOIL: 4000PSF
   - MAX NET ALLOWABLE BEARING OF SHALE OR SANDSTONE BEDROCK: 8000PSF
2. BOTTOM OF EXCAVATION IS DEFINED AS THE ELEVATION BENEATH THE SUBBASE. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
3. IF UNSUITABLE MATERIAL IS ENCOUNTERED AT OR UNDER THE PROPOSED BOTTOM OF EXCAVATION, THE UNSUITABLE MATERIAL SHALL BE REMOVED FROM WITHIN THE ZONE OF INFLUENCE OF THE BEARING ELEMENT AND REPLACED IN ACCORDANCE WITH NOTE 4.
4. ZONE OF INFLUENCE IS DEFINED AS A 1V:1H PLANE EXTENDING DOWNWARD FROM THE BOTTOM PERIMETER OF THE FOUNDATION ELEMENT TO WITHIN A SUITABLE DISTANCE BELOW, TO BE DETERMINED BY THE E.O.R. BASED ON FIELD CONDITIONS AND MATERIAL TYPE.
5. OVER EXCAVATION IS DEFINED AS ANY EXCAVATION BELOW THE PROPOSED BOTTOM OF EXCAVATION IDENTIFIED ON THE PLANS OR AS DESCRIBED WITHIN THE PROJECT SPECIFICATIONS; OVER EXCAVATION SHALL BE RE-ESTABLISHED AS FOLLOWS:
   - BENEATH FOUNDATIONS AND SLABS-ON-GRADE: COMPACTED SELECT FILL
   - BENEATH TANKS: CONTROLLED DENSITY FILL
6. SELECT FILL SHALL BE UTILIZED FOR BACKFILL OF ALL STRUCTURES (UNLESS OTHERWISE NOTED).
7. THE MINIMUM SELECT FILL PROPERTIES LISTED BELOW WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - UNIT WEIGHT = 130 PSF
   - FRICTION ANGLE = 35°
   - Ka = 0.27
   - Ko = 0.43
   - Kp = 3.69
8. THE CONTRACTOR SHALL SUBMIT DESIRED BACKFILL MATERIAL SPECIFICATION MEETING ALL DESIGN CRITERIA LISTED ABOVE, AT A MINIMUM, TO THE ENGINEER OF RECORD PRIOR TO USE ON SITE. ALTERNATIVELY, THE CONTRACTOR SHALL ELECT TO PERFORM A FIELD PROCTOR OF THE EXISTING SITE SOILS TO VERIFY THAT EXISTING SOILS MEET THE MINIMUM DESIGN VALUES STATED ABOVE.
9. IN-SITU COMPACTION TESTING OF SUBGRADE AND BACKFILL MATERIAL SHALL BE PERFORMED BY THE OWNER'S SPECIAL INSPECTOR.
10. FOR ADDITIONAL GEOTECHNICAL INFORMATION, SEE THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY TECTONIC PROVIDED IN THE CONTRACT.

CONCRETE CONTAINMENT STRUCTURE TESTING PROCEDURE:

1. THE FOLLOWING TESTING PROCEDURE SHALL BE PERFORMED ON ANY CONCRETE CONTAINMENT STRUCTURE WHICH DIRECTLY HOLDS OR TRANSFERS PROCESS RELATED LIQUIDS OR MATERIALS. THIS TESTING PROCEDURE IS APPLICABLE TO BOTH CAST-IN-PLACE AND PRECAST STRUCTURES.
2. THE CONTRACTOR SHALL ENGAGE A QUALIFIED 3RD PARTY INSPECTION AGENCY TO PERFORM THE FOLLOWING TESTING PROCEDURE. THE 3RD PARTY INSPECTION AGENCY SHALL SUBMIT ALL REPORTS TO THE ENGINEER OF RECORD (E.O.R.). IN THE EVENT THAT ANY CONTAINMENT STRUCTURE FAILS A TEST AT ANY TIME, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.
3. THE FOLLOWING TESTING PROCURE HAS BEEN DEVELOPED USING ACI 350.1-10 "HYDROSTATIC TIGHTNESS TEST FOR OPEN OR COVERED STRUCTURES".
4. TESTING SHALL NOT COMMENCE UNTIL THE CONCRETE HAS ATTAINED ITS SPECIFIED COMPRESSIVE STRENGTH.
5. SIMULTANEOUS TESTING OF TANKS WITH SHARED WALLS SHALL NOT BE PERMITTED.
6. CONTRACTOR IS PERMITTED TO USE PLANT EFFLUENT WATER FOR TESTING AND STARTUP IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND COORDINATION WITH OPERATOR.
7. PREPARATION FOR TESTING:
   - 7.1. ANY/ALL DEBRIS WITHIN TANK SHALL BE CLEARED.
   - 7.2. TANK AND OPENINGS SHALL BE INSPECTED AND REPAIRED AS NEEDED.
   - 7.3. ALL PENETRATIONS SHALL BE SEALED.
   - 7.4. NO BACKFILL AGAINST WALLS OR FOOTINGS SHALL BE PLACED UNLESS SPECIFIED.
   - 7.5. GROUNDWATER LEVEL SHALL NOT BE ABOVE THE BOTTOM OF THE TANK SLAB.
   - 7.6. IF THE CONTAINMENT STRUCTURE IS TO BE FILLED USING THE CONTAINMENT STRUCTURE INLET/OUTLET PIPE, POSITIVE MEANS SHALL BE PROVIDED TO CHECK THE WATER IS NOT ENTERING OR LEAVING THE CONTAINMENT STRUCTURE THROUGH THIS PIPE ONCE THE CONTAINMENT STRUCTURE IS FILLED TO THE TEST LEVEL.
8. UPON COMMENCEMENT OF TESTING, THE TANK SHALL BE FILLED WITH WATER AT A MAXIMUM RATE OF 4 FT/HR UNTIL THE DESIGN WATER LEVEL IS REACHED OR EITHER 1" BELOW OR 4" BELOW ANY FIXED OVERFLOW LEVEL IN A COVERED OR OPEN CONTAINMENT STRUCTURE, RESPECTIVELY.
9. CONTAINMENT STRUCTURE PENETRATIONS, PIPES, CHANNELS AND CONDUIT INLET/OUTLETS SHALL BE MONITORED BEFORE AND DURING THE TEST TO VERIFY THE WATER TIGHTNESS OF THESE APPURTENANCES. SEEPAGE AT THESE LOCATIONS SHALL BE REPAIRED BEFORE TEST MEASUREMENTS. NO ALLOWANCE SHALL BE MADE IN TEST MEASUREMENTS FOR UNCORRECTED KNOWN POINTS OF SEEPAGE. THE FLOW FROM ANY UNDERDRAIN SYSTEM, IF A SYSTEM IS PROVIDED, SHALL BE MONITORED DURING TESTING, AND ANY INCREASE IN FLOW SHALL BE RECORDED AND CONSIDERED FOR INFORMATION AS A PART OF THE HYDROSTATIC TIGHTNESS TEST.
10. PART 1: VISUAL INSPECTIONS FOR LEAKS
    - 10.1. ONCE FILLED TO THE TESTING WATER LEVEL, THE TANK WILL BE VISUALLY INSPECTED FOR LEAKAGE FOR 3 DAYS (72 HRS), BOTH IN THE EARLY MORNING AND LATE AFTERNOON EACH DAY.
    - 10.2. IF ANY WATER IS OBSERVED ON THE CONTAINMENT STRUCTURE EXTERIOR SURFACES, INCLUDING JOINTS, REPAIRED HONEYCOMBED AREAS AND CRACKS, WHERE MOISTURE CAN BE PICKED UP ON A DRY HAND, THE CONTAINMENT STRUCTURE SHALL BE CONSIDERED TO HAVE FAILED PART 1. (WET AREAS ON TOP OF FOOTINGS DO NOT COUNT AS A FAILURE UNLESS THE WATER IS FLOWING)
11. PART 2: MEASURED DROP IN WATER LEVEL
    - 11.1. PART 2 OF TESTING SHALL BEGIN AFTER PART 1. PART 1 INSPECTIONS AND CRITERIA WILL CONTINUE THROUGHOUT PART 2.
    - 11.2. PART 2 SHALL NOT BE SCHEDULED WHEN THE FORECAST IS FOR A DIFFERENCE OF MORE THAN 35°F BETWEEN THE AMBIENT TEMPERATURE READINGS AT THE TIME OF THE INITIAL AND FINAL LEVEL MEASUREMENTS OF THE WATER SURFACE.
    - 11.3. THE TEST SHALL NOT BE SCHEDULED WHEN THE WEATHER INDICATES THE WATER COULD FREEZE DURING TESTING.
    - 11.4. WATER TEMPERATURE SHALL BE RECORDED 18" BELOW WATER SURFACE.
    - 11.5. EVAPORATION AND PRECIPITATION SHALL BE MEASURED AND ACCOUNTED FOR.
    - 11.6. THE WATER LEVEL SHALL BE HELD AND MEASURED WITHIN 1/16" FROM A FIXED POINT ON THE TANK.
    - 11.7. MEASUREMENTS SHALL BE MADE IN 24-HOUR INTERVALS.
    - 11.8. THE MAXIMUM ALLOWABLE RATE OF LEAKAGE DURING PART 2 TESTING SHALL BE 0.0125% OF TANK VOLUME PER DAY.
    - 11.9. THE TEST PERIOD FOR PART 2 TESTING SHALL BE AT LEAST THE THEORETICAL TIME REQUIRED TO LOWER THE WATER SURFACE BY 3/8", ASSUMING A LOSS OF WATER AT THE MAXIMUM ALLOWABLE RATE. THE TEST PERIOD NEED NOT BE LONGER THAN 5 DAYS.
    - 11.10. AT THE END OF THE TEST PERIOD, THE WATER SURFACE SHALL BE RECORDED TO WITHIN 1/16" AT THE LOCATION OF THE ORIGINAL MEASUREMENTS. THE WATER TEMPERATURE, EVAPORATION AND PRECIPITATION MEASUREMENTS SHALL BE RECORDED. THE CHANGE IN WATER VOLUME IN THE TANK SHALL BE CALCULATED AND CORRECTED, IF NECESSARY, FOR EVAPORATION, PRECIPITATION AND TEMPERATURE. IF THE LOSS EXCEEDS THE REQUIRED CRITERION, THE TANK SHALL BE CONSIDERED TO FAIL PART 2 OF THE TEST.
12. A RESTART OF THE TEST SHALL BE REQUIRED WHEN TEST MEASUREMENTS BECOME UNRELIABLE DUE TO UNUSUAL PRECIPITATION OR OTHER EXTERNAL FACTORS.
13. IT SHALL BE PERMITTED TO IMMEDIATELY RETEST A TANK FAILING PART 2 OF THE HYDROSTATIC TEST WHEN PART 1 IS PASSED. IF THE CONTAINMENT STRUCTURE FAILS THE SECOND TEST OR IF NOT IMMEDIATELY RETESTED AFTER THE FIRST TEST FAILURE, THE INTERIOR OF THE CONTAINMENT STRUCTURE SHALL BE OBSERVED FOR PROBABLE PROBLEM AREAS BY THE CONTRACTOR. THE CONTAINMENT STRUCTURE SHALL ONLY BE RETESTED AFTER THE PROBLEM AREAS ARE REPAIRED.
14. CONTAINMENT STRUCTURES SHALL BE RETESTED UNTIL THEY MEET THE REQUIRED PART 1 AND PART 2 CRITERIA.

TYPICAL STRAIGHT REBAR LAP SPLICE LENGTHS PER ACI 350 CHAPTER 12 AND ACI 318 CHAPTER 25 (ASSUMING 5000 PSI CONCRETE, BLACK STEEL)

MAIN BAR SIZE	l_d (in)	TOP BARS IN SLABS > 18" THICK, l_d (in)
#4	14	19
#5	17	23
#6	20	26
#7	32	42
#8	42	55
#9	53	69
#10	65	85

TYPICAL HOOKED REBAR DEVELOPMENT LENGTHS PER ACI 350 CHAPTER 12 AND ACI 318 CHAPTER 25 (ASSUMING 5000 PSI CONCRETE, BLACK STEEL)

MAIN BAR SIZE	R (in)	l_{dh} (C.C. > 2.5")	l_{dh} (C.C. < 2.5")
#4	1.5	6	9
#5	1.875	8	11
#6	2.25	9	13
#7	2.625	11	15
#8	3	12	17
#9	4.75	14	20
#10	5.375	15	22

TYPICAL STRAIGHT REBAR LAP SPLICE LENGTHS PER ACI 350 CHAPTER 12 AND ACI 318 CHAPTER 25 (ASSUMING 4000 PSI CONCRETE, BLACK STEEL)

MAIN BAR SIZE	l_d (in)	TOP BARS IN SLABS > 18" THICK, l_d (in)
#4	15	20
#5	19	29
#6	23	30
#7	36	47
#8	47	62
#9	59	77
#10	73	95

TYPICAL HOOKED REBAR DEVELOPMENT LENGTHS PER ACI 350 CHAPTER 12 AND ACI 318 CHAPTER 25 (ASSUMING 4000 PSI CONCRETE, BLACK STEEL)

MAIN BAR SIZE	R (in)	l_{dh} (C.C. > 2.5")	l_{dh} (C.C. < 2.5")
#4	1.5	7	11
#5	1.875	8	13
#6	2.25	10	16
#7	2.625	12	18
#8	3	13	21
#9	4.75	15	23
#10	5.375	17	26

REBAR LAP SPLICE TABLES AND REFERENCE DETAIL

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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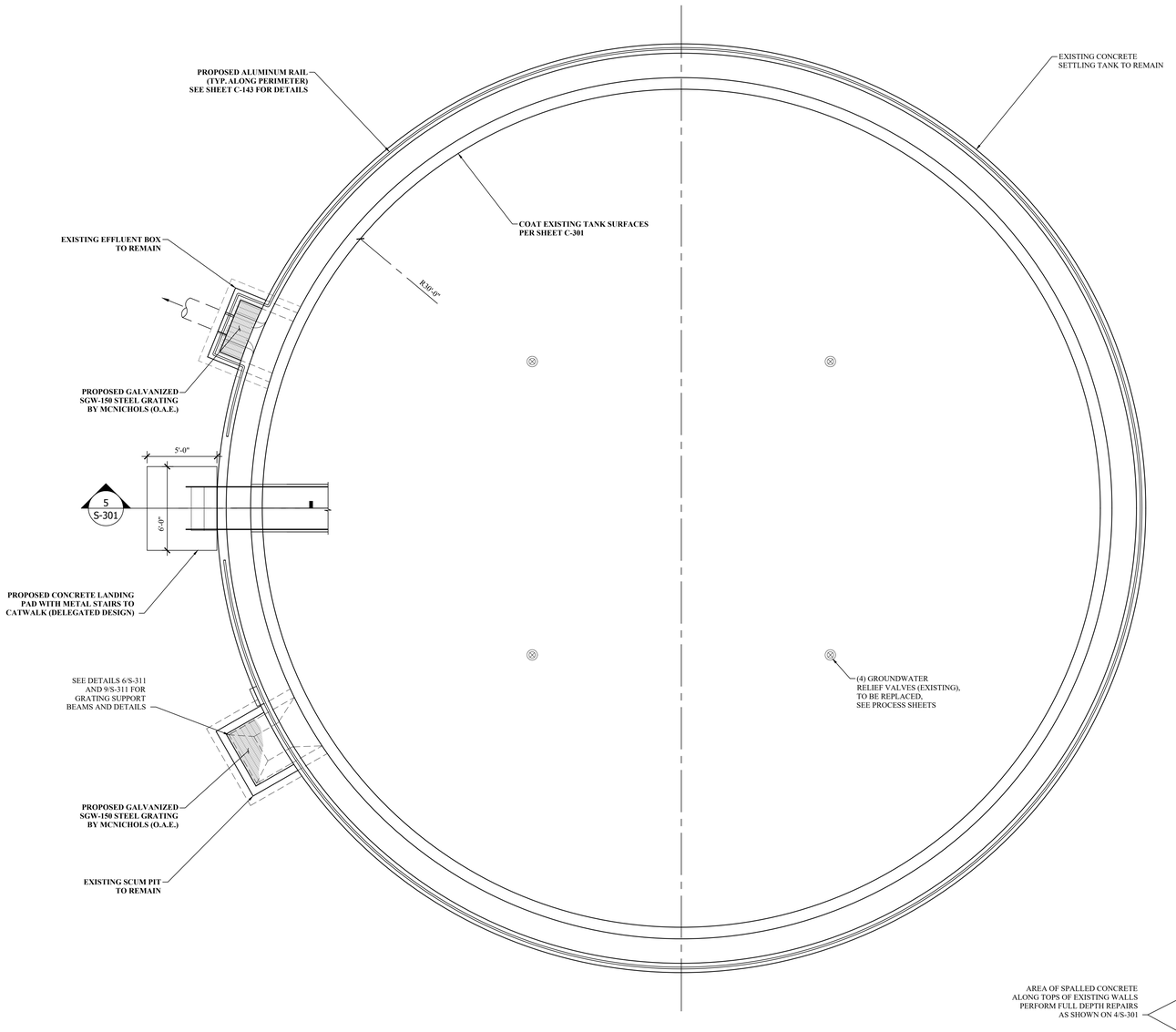
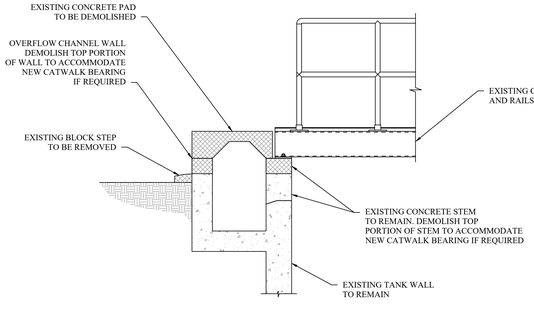
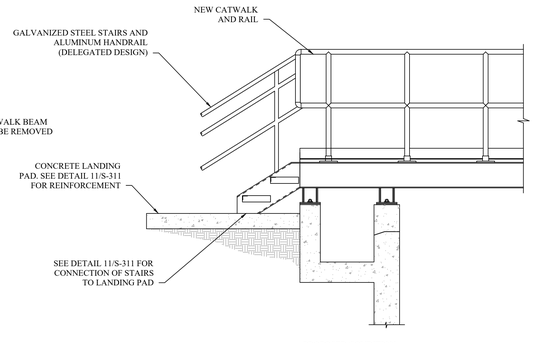


1 S-301 EXISTING PRIMARY SETTLING TANK (TYPICAL FOR SETTLING TANKS 1, 2, AND 3)
SCALE: 1/4" = 1'-0"



EXISTING CONDITION



PROPOSED CONDITION

4 S-301 SECTION 5
SCALE: 1/2" = 1'-0"

MISCELLANEOUS CONCRETE TANK REPAIR TYPES:

1. TYPE 1 REPAIR - (LIMITED TO THE REMOVAL AND PATCHING OF UNSOUND CONCRETE UP TO A DEPTH OF 1.5" OR NO EXPOSED REINFORCING STEEL):
   - 1.1. DETERMINE THE EXTENTS OF THE REPAIR FROM SOUNDING THE AREA WITH A HAMMER; AREA(S) TO BE CONFIRMED IN THE FIELD BY THE ENGINEER.
   - 1.2. USING A HANDHELD CHIPPING HAMMER, REMOVE THE UNSOUND CONCRETE UNTIL HARD, SOUND CONCRETE IS REACHED.
   - 1.3. USING COMPRESSED AIR, THOROUGHLY CLEAN OUT THE REPAIR AREA, REMOVING ANY LOOSE DEBRIS AND DUST.
   - 1.4. PATCH THE REPAIR AREA USING SIKA MONOTOP-4500 GEO HYBRID (OR APPROVED EQUAL), FOLLOWING MANUFACTURER'S SPECIFICATIONS.
2. TYPE 2 REPAIR - (LIMITED TO THE REMOVAL, REINFORCING, AND PATCHING OF UNSOUND CONCRETE IN AREAS EXCEEDING 1.5" DEPTH OR HAVING EXPOSED REINFORCING BARS PRESENT):
   - 2.1. DETERMINE THE EXTENTS OF THE REPAIR FROM SOUNDING THE AREA WITH A HAMMER; AREA(S) TO BE CONFIRMED IN THE FIELD BY THE ENGINEER.
   - 2.2. USING A HANDHELD CHIPPING HAMMER, REMOVE THE UNSOUND CONCRETE UNTIL HARD, SOUND CONCRETE IS REACHED.
   - 2.3. USING COMPRESSED AIR, THOROUGHLY CLEAN OUT THE REPAIR AREA, REMOVING ANY LOOSE DEBRIS AND DUST.
   - 2.4. SPLICE IN NEW EPOXY COATED REBAR OF SAME SIZE WITH A MINIMUM LAP OF 12".
   - 2.5. THOROUGHLY APPLY SIKA ARMATEC 110 EPOCEM (OR APPROVAL EQUAL) TO ANY EXPOSED STEEL REINFORCEMENT AND HARDENED CONCRETE, FOLLOWING MANUFACTURER'S SPECIFICATIONS.
   - 2.6. PATCH THE REPAIR AREA USING SIKA MONOTOP-4500 GEO HYBRID (OR APPROVED EQUAL), FOLLOWING MANUFACTURER'S SPECIFICATIONS.
3. TYPE 3 REPAIR - (FULL DEPTH REPAIR AT DAMAGED LOCATIONS ALONG TOPS OF EXISTING SETTLING TANK WALLS):
   - 3.1. SAWCUT AND DEMOLISH EXISTING CONCRETE 3" BEYOND DAMAGED LIMITS.
   - 3.2. USING COMPRESSED AIR, THOROUGHLY CLEAN OUT THE REPAIR AREA, REMOVING ANY LOOSE DEBRIS AND DUST.
   - 3.3. DRILL AND INSTALL #4 REBAR WITH HILTI HIT-HY 100 EPOXY.
   - 3.4. THOROUGHLY EPOXY BONDING COMPOUND TO ANY EXPOSED STEEL REINFORCEMENT AND HARDENED CONCRETE, FOLLOWING MANUFACTURER'S SPECIFICATIONS.
   - 3.5. PATCH THE REPAIR AREA USING CLASS B CONCRETE IN ACCORDANCE WITH SPECIFICATION 033000 - CAST-IN-PLACE CONCRETE.

ESTIMATED CONCRETE REPAIR QUANTITIES (FOR BID PURPOSES ONLY, TOTAL FOR ALL 3 TANKS)	
REPAIR TYPE	QUANTITY (SF)
TYPE 1 REPAIR	5000
TYPE 2 REPAIR	1500
TYPE 3 REPAIR	500

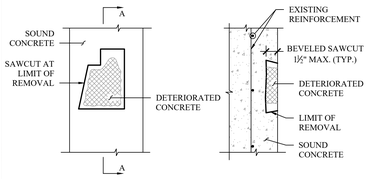
NOTE: EXACT AREAS REQUIRING REPAIR ARE UNKNOWN. WHEN TANKS ARE EMPTIED, ENGINEER SHALL PERFORM SOUNDING OF WALLS AND SLAB TO DETERMINE EXTENTS OF REPAIR. CONTRACTOR TO PERFORM REPAIRS AS DIRECTED BY THE ENGINEER USING THE NOTES AND DETAILS FOUND IN THESE PLANS. THIS WORK SHALL BE PERFORMED UTILIZING THE BID CONTINGENCY ITEMS LISTED IN THE CONTRACT.

AREA OF SPALLED CONCRETE ALONG TOPS OF EXISTING WALLS PERFORM FULL DEPTH REPAIRS AS SHOWN ON 4/S-301

PHOTO 1

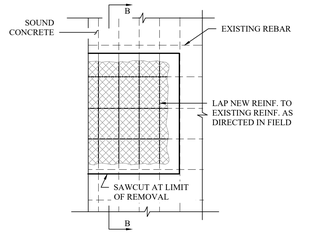


PHOTO 2

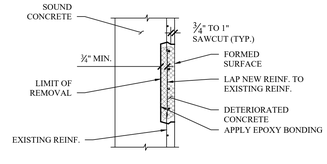


ELEVATION VIEW — SECTION A-A

2 S-301 CONCRETE REPAIR - TYPE 1
SCALE: NONE

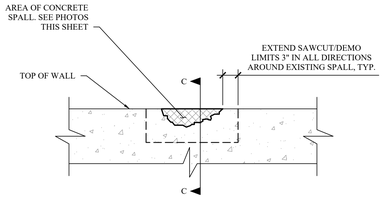


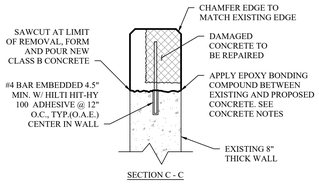
ELEVATION VIEW



SECTION B-B
NEW REINFORCEMENT

3 S-301 CONCRETE REPAIR - TYPE 2
SCALE: NONE





SECTION C - C

4 S-301 CONCRETE REPAIR - TYPE 3
SCALE: 1" = 1'-0"

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Milford, PA 18337
(570) 296-2765

BID SET

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UDIG·NY SAFE DIGGING STARTS HERE
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

EXISTING PRIMARY SETTLING TANKS REPAIRS

REVISIONS

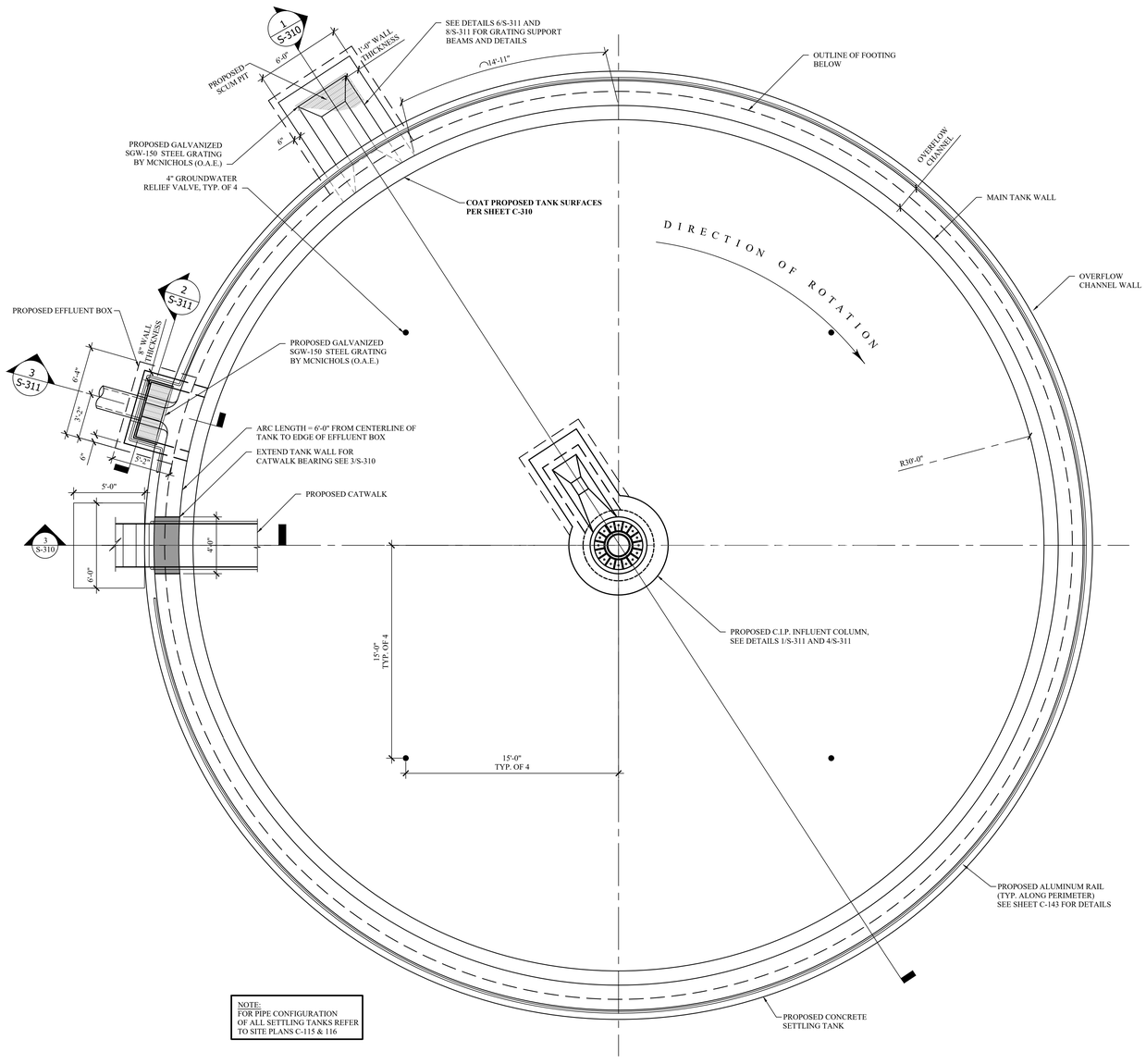
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-301

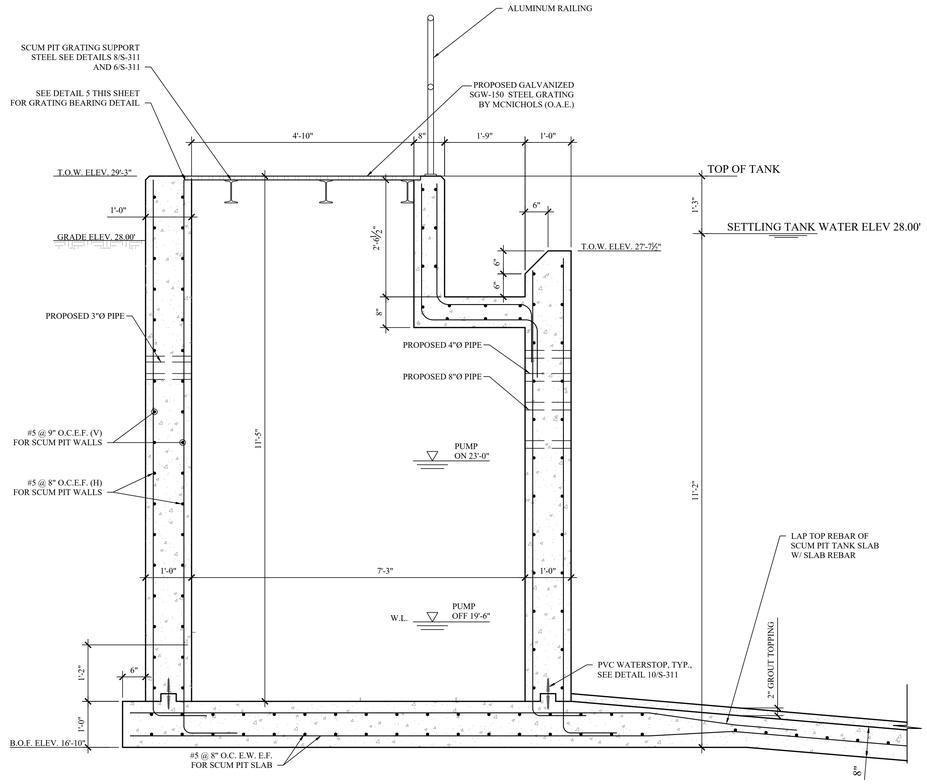
PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\3 - Primary Settling\Structural\03 - Primary Settling - Structural.dwg, S-301, 4/16/2025 12:06:06 PM



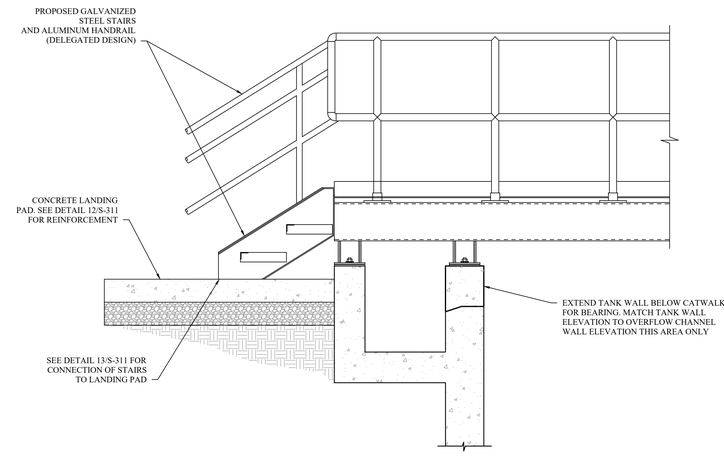
PROPOSED PRIMARY SETTLING TANK #4 PLAN

SCALE: 3/8" = 1'-0"



2/S-310 SCUM PIT DETAIL

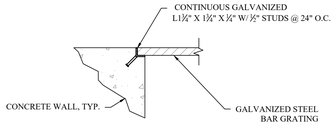
SCALE: 3/4" = 1'-0"



3/S-310 CATWALK BEARING SECTION

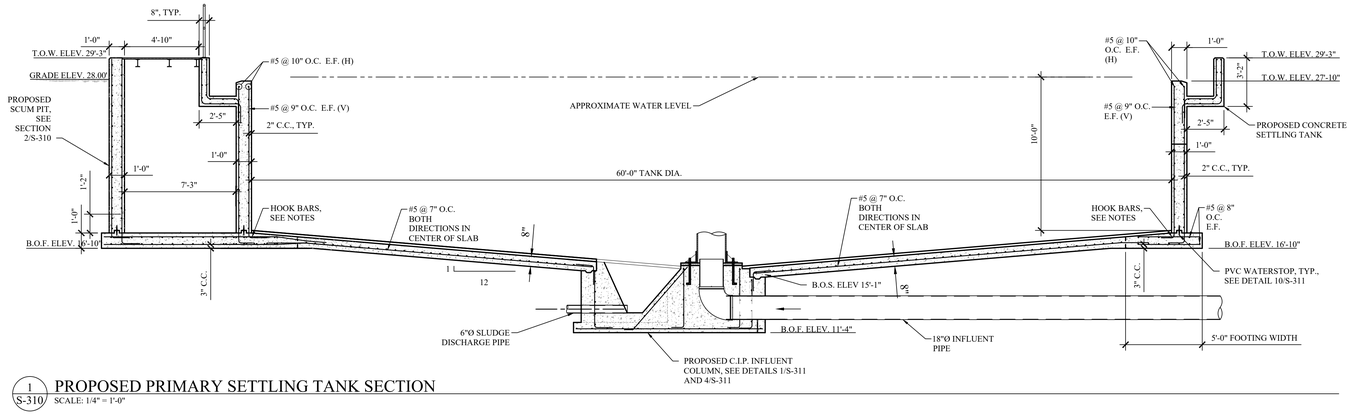
SCALE: 1/4" = 1'-0"

*NOTE: WALL REINFORCEMENT NOT SHOWN FOR CLARITY



5/S-310 GRATING BEARING ANGLE DETAIL

SCALE: 1" = 1'-0"



1/S-310 PROPOSED PRIMARY SETTLING TANK SECTION

SCALE: 1/4" = 1'-0"

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New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED PRIMARY SETTLING TANK #4 PLAN AND SECTION

REVISIONS

NO.	DESCRIPTION	DATE

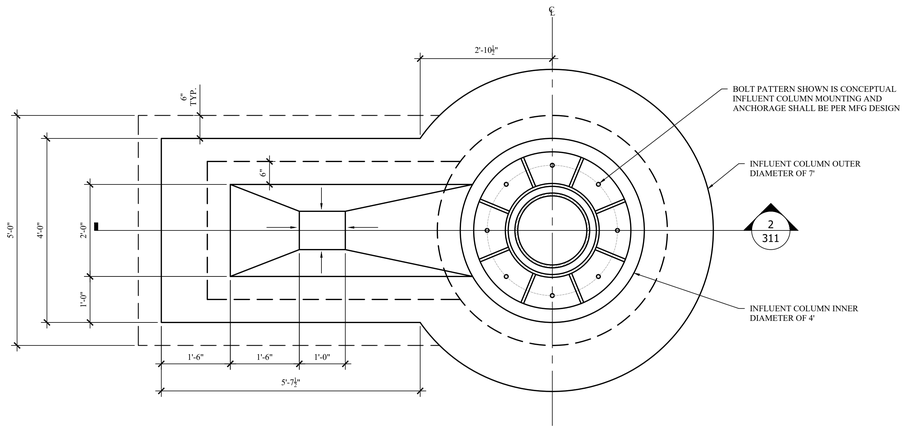
ISSUED DATE:	18 APR. 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

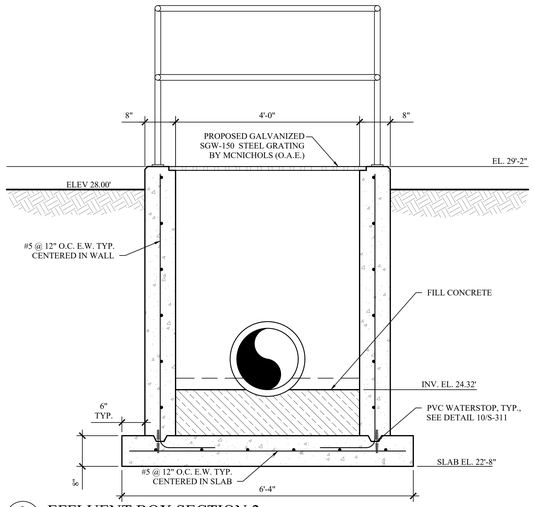
S-310

PROJECT # 18-732 PHASE #

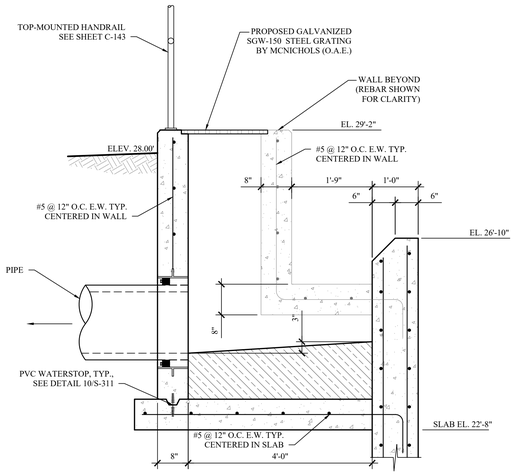
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\3 - Primary Settling\Structural\03 - Primary Setting - Structural.dwg, S-310, 4/18/2025 12:26:10 PM



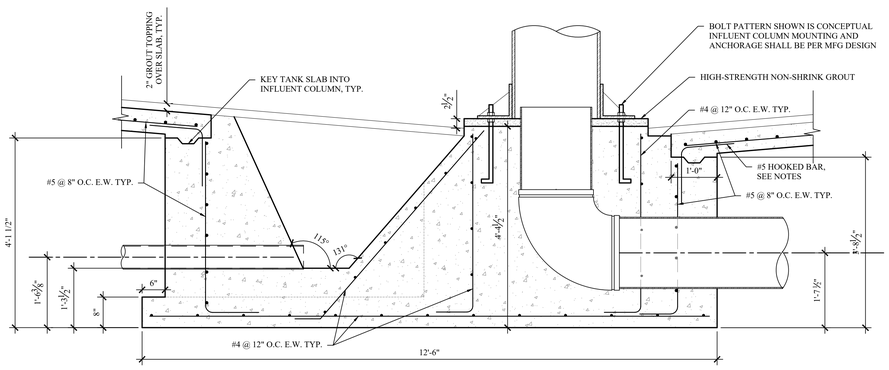
1 S-311 INFLUENT COLUMN
SCALE: 3/4" = 1'-0"



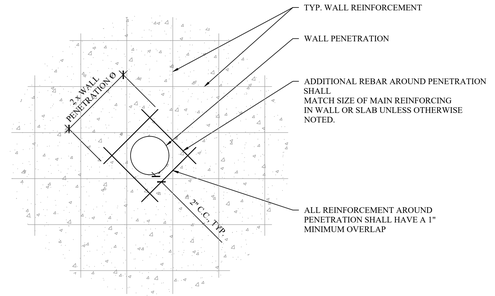
2 S-311 EFFLUENT BOX SECTION 2
SCALE: 3/4" = 1'-0"



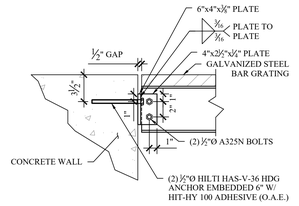
3 S-311 EFFLUENT BOX SECTION 3
SCALE: 3/4" = 1'-0"



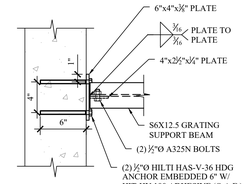
4 S-311 INFLUENT COLUMN SECTION
SCALE: 3/4" = 1'-0"

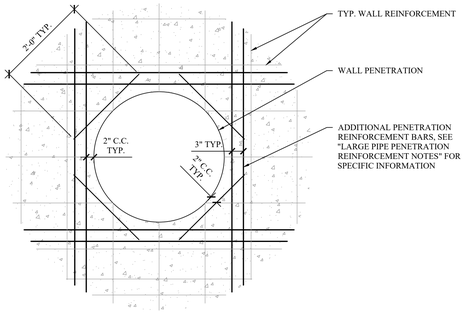


5 S-311 CIRCULAR WALL PENETRATION REINF. (DIA. < 18")
SCALE: 3/4" = 1'-0"



6 S-311 SCUM PIT PLATFORM FRAMING
SCALE: 1-1/2" = 1'-0"





LARGE PIPE PENETRATION REINFORCEMENT NOTES

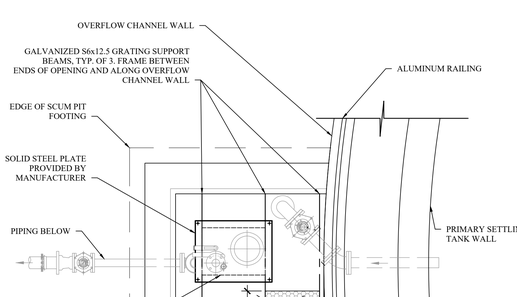
1. ADDITIONAL PENETRATION REINFORCEMENT SHALL BE OF THE SIZE OF WALL REBAR INTERRUPTED BY THE PENETRATION.

2. TOTAL AMOUNT OF VERTICAL OR HORIZONTAL REBAR SHALL BE THE SUM OF THE BARS INTERRUPTED BY THE PENETRATION, EVENLY SPLIT BETWEEN BOTH SIDES OF THE OPENING.

3. THE PENETRATION REINFORCEMENT SHALL HAVE A SPACING OF 3" BETWEEN REBAR. IF PENETRATION REINFORCEMENT CONFLICTS WITH WALL REINFORCEMENT, THE PENETRATION REINFORCEMENT SHALL BE PLACED AWAY FROM THE WALL REINFORCEMENT UTILIZING 3" SPACING.

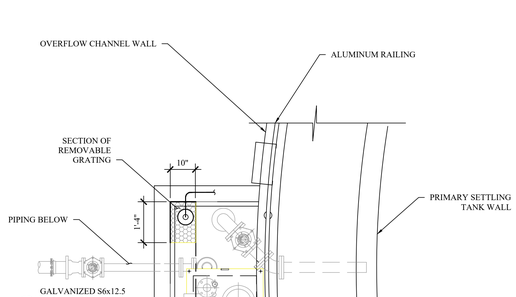
4. IF THE TOP OR BOTTOM OF THE WALL IS WITHIN 12" OF EDGE OF PENETRATION, OMIT ADDITIONAL PENETRATION STEEL.

7 S-311 CIRCULAR WALL PENETRATION REINFORCEMENT (DIA. > 18")
SCALE: 1" = 1'-0"



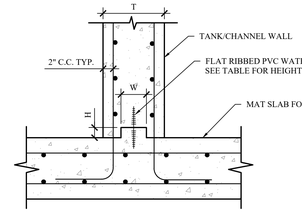
PLAN VIEW

8 S-311 PROPOSED SCUM PIT PLATFORM FRAMING (PLAN)
SCALE: 1/2" = 1'-0"



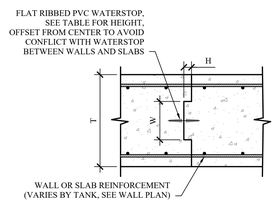
PLAN VIEW

9 S-311 EXISTING SCUM PIT PLATFORM FRAMING (PLAN)
SCALE: 1/2" = 1'-0"



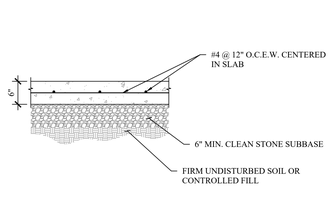
KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"

10 S-311 TYPICAL CONCRETE TANK/CHANNEL KEY AND WATERSTOP
SCALE: NOT TO SCALE

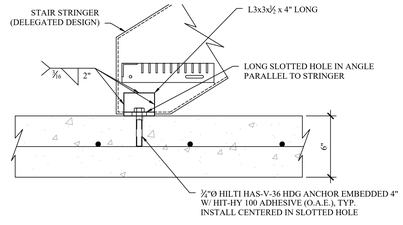


KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"

11 S-311 TYPICAL TANK WALL/MAT SLAB CONSTRUCTION JOINT
SCALE: NOT TO SCALE



12 S-311 TYPICAL LANDING PAD DETAIL
SCALE: 3/4" = 1'-0"



13 S-311 TYPICAL STAIR CONNECTION DETAIL
SCALE: 3/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

UNAUTHORIZED ADDITION OR ALTERATION OF THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PROPOSED PRIMARY SETTLING TANK #4 DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-311

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\3 - Primary Settling\Structural\03 - Primary Settling - Structural.dwg, S-311, 4/16/2025 12:06:15 PM

GENERAL NOTES (STRUCTURAL):

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS TO STRUCTURES OR SURROUNDING AREAS. DAMAGE WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER OF RECORD (E.O.R.) AT NO ADDITIONAL COST TO THE OWNER.

2. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER TO THE E.O.R. PRIOR TO INSTALLATION OF EXCAVATION SUPPORT MEASURES.

3. ALL ITEMS NOT INDICATED TO BE EXISTING SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.

4. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES REGARDING SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN STRUCTURAL WORK.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE E.O.R.

6. ANY ITEMS INDICATED TO BE REPLACED-IN-KIND SHALL BE INSTALLED TO MATCH EXISTING LOCATIONS, CONFIGURATIONS, AND ELEVATIONS UNLESS OTHERWISE NOTED.

7. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. IF MANUFACTURER'S SPECIFICATIONS CONFLICT WITH CONTRACT DRAWINGS OR SPECIFICATIONS, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT. NEITHER THE STRUCTURE NOR INDIVIDUAL STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, JOISTS, AND COLUMNS WILL BE LATERALLY STABLE UNTIL ALL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS COMPLETE.

9. ALL SUBSURFACE UTILITIES SHALL BE IDENTIFIED PRIOR TO EXCAVATION. THE CONTRACTOR SHALL EXERCISE CAUTION DURING EXCAVATION. IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

10. ALL ITEMS SHOWN TO BE REMOVED SHALL BE PROPERLY HANDLED AND DISPOSED OF OFF SITE.

11. NO BACKFILLING OF THE STRUCTURE SHALL OCCUR UNTIL CONCRETE BREAKS SATISFACTORY TO THE E.O.R. ARE OBTAINED OR UNTIL THE CONTAINMENT STRUCTURE HAS SUCCESSFULLY PASSED HYDROSTATIC TESTING IF APPLICABLE.

12. ALL ITEMS INDICATED TO BE A DELEGATED DESIGN SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO ORDERING MATERIALS. SUBMITTALS SHALL INCLUDE PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.

13. ELEVATIONS SHOWN ARE BASED ON SURVEY BY CTMALE DATED APRIL 3, 2023.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 NEW YORK STATE BUILDING CODE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 24 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

STEEL:

1. COLD-FORMED STEEL DECK:
   - 1.1. SPECIAL INSPECTIONS AND QUALIFICATION OF WELDING SPECIAL INSPECTORS FOR COLD-FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF SDI QA/QC.
2. INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS:
   - 2.1. PERIODIC SPECIAL INSPECTION OF END CONNECTIONS - WELDED OR BOLTED.
   - 2.2. PERIODIC SPECIAL INSPECTION OF BRIDGING - HORIZONTAL OR DIAGONAL

CONCRETE:

1. PERIODIC INSPECTION OF REINFORCING STEEL.
2. PERIODIC INSPECTION OF ANCHORS CAST IN CONCRETE.
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.
   - 3.1. CONTINUOUS INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.
   - 3.2. PERIODIC INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NO DEFINED IN 3.1.
4. PERIODIC VERIFICATION OF DESIGN MIX.
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP, AIR, AND TEMPERATURE TESTS; CONTINUOUS.
6. CONTINUOUS INSPECTION OF PLACEMENT & FOR PROPER APPLICATION TECHNIQUES.
7. PERIODIC INSPECTION OF ERECTION OF PRECAST CONCRETE MEMBERS.
8. PERIODIC INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
9. PERIODIC VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.
10. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS, OF THE CONCRETE MEMBER BEING FORMED.

MASONRY:

1. SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402 AND TMS 602.

SOILS:

1. CONTINUOUS INSPECTION OF
   - 1.1. PROPER MATERIALS
   - 1.2. DENSITIES
   - 1.3. LIFT THICKNESSES DURING PLACEMENT
   - 1.4. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   - 2.1. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   - 2.2. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   - 2.3. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   - 2.4. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE.

CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO ACI 211.1, ACI 301, ACI 304R (WHEN PUMPING), AND ACI 318-14. AGGREGATE SHALL CONFORM TO ASTM C33. COMPRESSIVE STRENGTH, RANGE OF SLUMP, WATER-TO-CEMENT RATIO, AND AIR ENTRAINMENT SHALL BE PER THE CONCRETE CLASS SPECIFIED HEREIN AND IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000. SUBMIT COPIES OF TEST REPORTS SHOWING THAT THE MIX HAS BEEN SUCCESSFULLY TESTED TO PRODUCE CONCRETE WITH THE PROPERTIES SPECIFIED. TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (E.O.R.) FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.
   - 1.1. CONCRETE CLASSIFICATIONS PER SPECIFICATION SECTION 033000:
     - 1.1.1. FOOTINGS & FROST WALLS: CLASS A
     - 1.1.2. TANK WALLS: CLASS B
     - 1.1.3. INTERIOR SLABS-ON-GROUND: CLASS C
     - 1.1.4. TANK FOUNDATIONS: CLASS D
     - 1.1.5. APRONS, LANDINGS, EQUIPMENT PADS: CLASS H
     - 1.1.6. FILL CONCRETE/TOPPING: CLASS G
   - 1.2. CONCRETE FINISHES PER SPECIFICATION SECTION 033000:
     - 1.2.1. FOUNDATIONS BELOW GRADE: AS-CAST SF-2.0 FINISH
     - 1.2.2. TANK WALLS & SLABS: AS-CAST SF-3.0 FINISH
     - 1.2.3. EXTERIOR SLABS: FINE BROOM FINISH
     - 1.2.4. INTERIOR SLABS: TROWEL FINISH
2. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 7 DAYS.
3. CONCRETE SHALL BE WET CURED, USING BURLAP OR COTTON CURING MATS, OR CURED USING ASTM D4397 POLYETHYLENE SHEETING IN ACCORDANCE WITH ASTM C171. WET THE ENTIRE EXPOSED SURFACE OF THE CONCRETE THOROUGHLY WITH A FINE SPRAY OF WATER AND COVER WITH SHEETING THROUGHOUT THE CURING PERIOD. LAY SHEETING DIRECTLY ON CONCRETE SURFACE. PROVIDE SHEETING NOT LESS THAN 18 INCHES WIDER THAN CONCRETE SURFACE. OVERLAP EDGES 12 INCHES AND CONTINUOUSLY TAPE JOINTS.
4. PUMPING SHALL NOT RESULT IN SEPARATION OR LOSS OF MATERIALS NOR CAUSE INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF PLASTICITY BETWEEN SUCCESSIVE INCREMENTS. LOSS OF SLUMP IN PUMPING EQUIPMENT SHALL NOT EXCEED 2 INCHES. CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. RAPID CHANGES IN PIPE SIZES SHALL BE AVOIDED. MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO 33 PERCENT OF THE DIAMETER OF THE PIPE. MAXIMUM SIZE OF WELL ROUNDED AGGREGATE SHALL BE LIMITED TO 40 PERCENT OF THE PIPE DIAMETER. SAMPLES FOR TESTING SHALL BE TAKEN AT BOTH THE POINT OF DELIVERY TO THE PUMP AND AT THE DISCHARGE END.
5. CONCRETE SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT PROPER PLACEMENT AND CONSOLIDATION INCLUDING PERIODS OF PRECIPITATION. TRANSPORT CONCRETE AS RAPIDLY AS PRACTICABLE TAKING PRECAUTION TO PREVENT SEGREGATION OR LOSS OF INGREDIENTS. PUMPING IN ACCORDANCE WITH ACI 304 SHALL BE PERMITTED. DO NOT EXCEED A FREE VERTICAL DROP OF 3 FEET FROM THE POINT OF DISCHARGE. PLACE CONCRETE IN ONE CONTINUOUS OPERATIONS FROM ONE SIDE OF SLAB TO THE OTHER. POSITION GRADE STAKES AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION.
6. UNLESS OTHERWISE NOTED, REINFORCEMENT BARS SHALL BE BLACK STEEL. REINFORCING BARS SHALL CONFORM TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A1064. REINFORCEMENT SHALL NOT CONTAIN RUST, SCALE, OIL, GREASE, CLAY, OR FOREIGN SUBSTANCES THAT WOULD REDUCE THE CONCRETE BONDING STRENGTH. REMOVE LOOSE RUST PRIOR TO PLACEMENT OF REINFORCEMENT.
7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
8. PROVIDE MINIMUM 2" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST FORMS OR 3" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST EARTH, UNLESS OTHERWISE INDICATED.
9. CONCRETE FOOTINGS AND MAT FOUNDATIONS SHALL BE PLACED MONOLITHICALLY WITH THE EXCEPTION THAT VERTICAL CONSTRUCTION JOINTS WILL BE ALLOWED IF EPOXY BONDING COMPOUND IS APPLIED TO THE ROUGHENED SURFACE OF THE HARDENED CONCRETE.
10. INTERIOR SLABS: THE CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AS INDICATED. JOINTS MAY BE SAWCUT OR CUT WITH A JOINTING TOOL. SAWED JOINTS SHALL BE COMPLETED WITHIN 4 TO 12 HOURS AFTER PLACEMENT OF CONCRETE. JOINTS SHALL INTERSECT WITH THE CORNERS OF ISOLATION JOINT AT COLUMN LOCATIONS, IF ANY ARE PRESENT, AND BE SPACED A MAXIMUM OF 15 FEET ON CENTER, UNLESS NOTED OTHERWISE.
11. REINFORCEMENT SUPPORTS SHALL BE CONCRETE OR OTHER NON-CORRODIBLE MATERIAL HAVING A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE COMPRESSIVE STRENGTH OF THE CONCRETE BEING PLACED.
12. PROVIDE A ½" ROUNDED EDGE ON ALL EXPOSED SLAB EDGES. PROVIDE A ¾" CHAMFER ON ALL OTHER EXPOSED CONCRETE CORNERS.
13. EPOXY BONDING COMPOUND SHALL BE USED ON ALL CONTACTING SURFACES BETWEEN EXISTING CONCRETE AND NEW CONCRETE. EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C881, TYPE AND GRADE TO BE IN ACCORDANCE WITH APPROPRIATE USE INDICATED IN SPECIFICATION 033000 CAST-IN-PLACE CONCRETE. DO NOT ALLOW COMPOUND TO HARDEN PRIOR TO CONCRETE PLACEMENT. BONDING AGENT USED SHALL BE NSF 61 APPROVED.
14. PLACE, CONSOLIDATE AND IMMEDIATELY STRIKE OFF CONCRETE TO OBTAIN PROPER CONTOUR GRADE AND ELEVATION BEFORE BLEEDWATER APPEARS. PERMIT CONCRETE TO ATTAIN A SET SUFFICIENT FOR FLOATING AND SUPPORTING THE WEIGHT OF THE FINISHER AND EQUIPMENT. IF BLEEDWATER IS PRESENT PRIOR TO FLOATING THE SURFACE, DRAG THE EXCESS WATER OFF OR REMOVE BY ABSORPTION WITH POROUS MATERIALS. DO NOT USE DRY CEMENT TO ABSORB BLEEDWATER.
15. UNLESS OTHERWISE NOTED, ALL CONCRETE CONSTRUCTION SHALL MEET THE SPECIFIED TOLERANCES OF ACI 117. TOP ELEVATIONS SHALL MATCH THE SPECIFIED ELEVATIONS WITHIN A TOLERANCE OF ±¼"
16. THE REQUIREMENTS OF ACI 302.1R CLASS 4 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL FLOORS AND SLABS. THE REQUIREMENTS OF ACI 360.R-10 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL SLABS-ON-GROUND.
   - 16.1. SLABS-ON-GRADE: FF = 25 AND FL = 20
   - 16.2. SUSPENDED SLABS: FF = 25 AND FL = 20
17. NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED ITEMS (I.E. PROCESS, ELECTRICAL, MECHANICAL, ETC) HAVE BEEN SET. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES.
18. ALL BAR PLACING AND BENDING SHALL BE IN ACCORDANCE WITH ACI 315.
19. PERFORM COMPRESSIVE TESTS IN ACCORDANCE WITH ASTM C39. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM SPECIMENS. TEST ONE CYLINDER AT 3 DAYS, ONE CYLINDER AT 7 DAYS, AND TWO (THREE FOR 4"x8" CYLINDERS) CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE. PERFORM SLUMP TESTS IN ACCORDANCE WITH ASTM C143. PERFORM AIR CONTENT TESTS IN ACCORDANCE WITH ASTM C173 OR ASTM C231. SUBMIT ALL TEST DATA TO THE E.O.R.
20. CONSOLIDATE CONCRETE WITH HIGH FREQUENCY, INTERNAL, MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING AND TAMPING. FURNISH A SPARE VIBRATOR ON THE JOB SITE WHENEVER CONCRETE IS PLACED. OPERATE VIBRATORS WITH VIBRATORY ELEMENT SUBMERGED IN THE CONCRETE, WITH A MINIMUM FREQUENCY OF NOT LESS THAN 6000 IMPULSES PER MINUTE WHEN SUBMERGED. INSERT AND WITHDRAW VIBRATORS AT INTERVALS APPROXIMATELY 18 INCHES APART.
21. ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920, TYPE S, GRADE P, CLASS 25. JOINT SEALANT IN CONTACT WITH POTABLE WATER SHALL BE NSF 61 APPROVED.
22. CONTROLLED DENSITY FILL SHALL BE IN ACCORDANCE WITH SPECIFICATION 033110.
23. CRYSTALLINE WATERPROOFING ADMIXTURES SHALL BE IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000 AND THE CRYSTALLINE WATERPROOFING SPECIFICATION 071616.
    APPLICABLE LOCATIONS:
    - BIOFILTER TANK
    - SNDR TANK
    - THERMAER TANK
    - SLUDGE HOLDING TANK

STEEL JOISTS NOTES:

1. STEEL JOISTS SHALL BE DESIGNED, FABRICATED, AND INSTALLED IN ACCORDANCE WITH STEEL JOIST INSTITUTE (SJI) "STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS" LATEST EDITION AND SJI "CODE OF STANDARD PRACTICE" LATEST EDITION.
2. STEEL JOIST FABRICATOR SHALL SUPPLY AN AFFIDAVIT STATING COMPLIANCE WITH ALL APPLICABLE AISC, SJI AND AISI REQUIREMENTS.
3. STEEL JOIST SUPPLIER MUST BE A MEMBER OF SJI.
4. ALL STEEL JOISTS SHALL BE BRACED IN ACCORDANCE WITH SJI. JOIST BRIDGING SHALL BE FURNISHED BY THE JOIST MANUFACTURER.
5. JOIST LAYOUTS SHOWN ON PLANS ARE CONCEPTUAL, WITH MAXIMUM SPACING AS INDICATED, ACTUAL JOIST LAYOUT SHALL BE PER APPROVED SHOP DRAWINGS.
6. UNLESS NOTED OTHERWISE ALL STEEL JOISTS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
7. UNLESS OTHERWISE NOTED, ALL M.E.P. FIXTURES SUPPORTED BELOW JOISTS SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS.

MASONRY NOTES:

1. ALL MASONRY CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530/TMS 402.
2. ALL HI-R MASONRY STRUCTURES WERE DESIGNED SPECIFICALLY FOR THE HI-R MASONRY PROPRIETARY SYSTEM. IF AN ALTERNATIVE INSULATED MASONRY PRODUCT IS SUBMITTED FOR USE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED P.E. TO THE E.O.R.
3. ALL CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT WITH TWO (2) CELLS AND CONFORM TO ASTM C90 UNLESS OTHERWISE SPECIFIED.
4. ALL BRICK MASONRY UNITS SHALL CONFORM TO ASTM C216. REFER TO THE ARCHITECTURAL DRAWINGS FOR SIZE AND COLOR.
5. ALL MORTAR SHALL CONFORM TO ASTM C270.
6. ALL GROUT SHALL CONFORM TO ASTM C476.
7. THE MINIMUM SPECIFIED NET AREA COMPRESSIVE STRENGTH OF MASONRY (f'm) SHALL BE 2000 PSI AND SHALL CONSIST OF THE FOLLOWING COMPONENTS:
   - CONCRETE MASONRY UNITS: 2000 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH
   - BRICK MASONRY UNITS: 4950 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH
   - PORTLAND CEMENT MORTAR: TYPE S
   - GROUT: 2000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH (GROUT COMPRESSIVE STRENGTH SHALL NOT BE LESS THAN f'm)
8. UNLESS NOTED OTHERWISE, PROVIDE CONTINUOUS HORIZONTAL BOND BEAMS REINFORCED WITH (2) #5 BARS WITH TOP OF BOND BEAM ELEVATIONS AS INDICATED. UNLESS NOTED OTHERWISE, CONTINUE REINFORCEMENT ACROSS CONTROL JOINTS.
9. GROUT ALL CELLS CONTAINING REINFORCEMENT AND/OR HEADED STUD ANCHORS AS WELL AS DIRECTLY BELOW ALL BEARING PLATES.
10. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE MASONRY LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
11. UNLESS OTHERWISE INDICATED, ALL CMU WALLS SHALL BE PROVIDED WITH HOT DIPPED GALVANIZED HORIZONTAL REINFORCEMENT (DURO-WAL W1.7 LADDER WIRE, OR EQUAL) EVERY OTHER COURSE (16" O.C.). PROVIDE HORIZONTAL REINFORCING FOR THE FIRST TWO COURSES ABOVE ALL LINTELS.
12. REINFORCEMENT SHALL BE PLACED SUCH THAT A MINIMUM OF ¾" MORTAR COVER EXISTS FOR EXTERIOR FACES, AND A MINIMUM OF ½" MORTAR COVER EXISTS FOR ALL INTERIOR FACES.
13. UNLESS OTHERWISE NOTED, PROVIDE (1) CONTINUOUS VERTICAL #4 BAR FOR THE FULL HEIGHT OF WALL AND ANCHORED INTO THE FOUNDATION AT THE FOLLOWING LOCATIONS:
    - WALL CORNERS
    - EACH SIDE OF CONTROL JOINTS
    - SIDES OF MASONRY OPENINGS (DOOR JAMBS, ETC.)
    - WALL ENDS
14. PROVIDE CONTROL JOINTS IN MASONRY WALLS AS DIRECTED ON PLANS.
15. CONTROL JOINTS SHALL BE PLACED AT ALL CHANGES IN MASONRY WALL HEIGHT AND MASONRY WALL THICKNESS.
16. UNLESS OTHERWISE NOTED ALL MASONRY WALLS SHALL HAVE #4 @ 48" O.C. VERTICAL REINFORCEMENT.

WELDING NOTES:

1. ALL WELDING SHALL BE CONDUCTED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1, LATEST EDITION FOR STRUCTURAL STEEL AND AWS D1.3, LATEST EDITION FOR STRUCTURAL SHEET STEEL.
2. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR PROTECTING EXISTING EQUIPMENT, MATERIALS, BUILDING STRUCTURES, AND BUILDING COMPONENTS DURING ANY FIELD WELDING OPERATIONS.
3. WELDS OF HEADED STUDS SHALL MATCH STRENGTH OF STUDS.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SYSTEMS INCLUDING MATERIALS, INSTALLATION, WORKMANSHIP, FABRICATION, ASSEMBLY, ERECTION, INSPECTION, QUALITY CONTROL, AND TESTING SHALL BE PROVIDED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
2. ALL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:
   - W SHAPES: ASTM A992, Fy = 50KSI
   - HSS: ASTM A500 GR. C, Fy = 50KSI
   - PLATES AND OTHER STEEL SHAPES: ASTM A36, Fy = 36KSI
3. STEEL DETAILER SHALL PROVIDE CONNECTION DESIGN IN ACCORDANCE WITH ANSI/AISC 303. DETAILER SHALL SELECT AND COMPLETE CONNECTIONS USING SCHEMATIC DETAILS INDICATED ON PLANS AND ANSI/AISC 360.
4. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ALL STRUCTURAL STEEL FASTENERS (INCLUDING NUTS, BOLTS, WASHERS, ETC.,) SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153. REPAIR AREAS OF DAMAGED GALVANIZATION IN ACCORDANCE WITH ASTM A780.

NYSBC 2020 STRUCTURAL PROVISIONS:

THE STRUCTURE SHOWN HEREIN HAS/SHALL BE DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH THE 2020 NEW YORK STATE BUILDING CODE AND ASCE 7-16:

FLOOR LIVE LOAD (L):
SLAB-ON-GRADE: N/A

ROOF LIVE LOAD:
DISTRIBUTED LOAD (L_r) = 20 PSF (SNOW LOAD GOVERNS)
CONCENTRATED LOAD (L) = 2,000 LBS (CONCENTRATED @ ANY POINT ALONG PRIMARY STRUCTURAL ROOF MEMBERS)

ROOF SNOW LOAD (S):
GROUND SNOW LOAD (P_g) = 30 PSF
FLAT ROOF SNOW LOAD (P_f) = 22 PSF
SNOW EXPOSURE FACTOR (C_e) = 0.90
SNOW IMPORTANCE FACTOR (I) = 1.10
THERMAL FACTOR (C_t) = 1.0
SLOPE FACTOR (C_s) = 1.0
UNBALANCED SNOW LOAD = N/A
DRIFT SURCHARGE LOAD = 24 PSF
DRIFT WIDTH = 11'-0"

WIND LOAD (W):
BASIC WIND SPEED (V)= 120 MPH
ASD WIND SPEED (V_{asd}) = 93 MPH
BUILDING CATEGORY = RISK CATEGORY III
WIND EXPOSURE = B
WIND DIRECTIONALITY FACTOR = Kd=0.85
TOPOGRAPHIC FACTOR = Kzt=1.0
GUST FACTOR = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
APPLICABLE. INTERNAL PRESSURE COEFF. = ±0.18
COMPONENTS & CLADDING PRESSURES:

ROOF WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	+16/-34	+16/-32	+16/-29	+16/-27	+16/-27
1'	+16/-20	+16/-20	+16/-20	+16/-20	+16/-20
2	+16/-45	+16/-42	+16/-38	+16/-36	+16/-36
3	+16/-61	+16/-56	+16/-48	+16/-42	+16/-42

WALL WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
4	+22/-24	+21/-23	+20/-21	+19/-20	+19/-20
5	+22/-29	+21/-27	+20/-25	+19/-23	+19/-23

OVERHANG WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	-31	-31	-30	-29	-29
1'	-31	-31	-30	-29	-29
2	-42	-38	-33	-29	-29
3	-58	-51	-43	-26	-26

NOTES:
1. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE PROJECTED SURFACE, RESPECTIVELY.
2. WIND PRESSURES SHOWN ARE ULTIMATE AND CAN BE CONVERTED TO SERVICE BY BEING MULTIPLIED BY 0.6
3. JOIST NET UPLIFT LOAD COMBINATION IS 0.9D+W, "D" = 3PSF
4. WIDTH OF PRESSURE COEFFICIENT ZONE, a = 3.00 FT.

SEISMIC DESIGN DATA (E):
OCCUPANCY RISK CATEGORY: III
SISMIC IMPORTANCE FACTOR: I = 1.25
SITE CLASS: C
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_s = 0.242 AND S_1 = 0.058
SPECTRAL RESPONSE PARAMETERS: S_{DS} = 0.210 AND S_{D1} = 0.058
SEISMIC DESIGN CATEGORY: B
SEISMIC RESPONSE COEFFICIENT: C_S = 0.08
RESPONSE MODIFICATION COEFFICIENT: R = 3.5
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE METHOD
DESIGN BASE SHEAR: V = 21.4K
BASIC SEISMIC FORCE RESISTING SYSTEM = A8, INTERMEDIATE REINFORCED MASONRY SHEAR WALLS

GEOTECHNICAL INFORMATION:
ALLOWABLE SOIL BEARING PRESSURE = 4000 PSF

ROOF DECK NOTES:

1. STEEL FORM DECK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR FORM DECKS" LATEST EDITION. STEEL FORM DECK SHALL BE PROVIDED WITH A G90 GALVANIZED COATING AND HAVE THE FOLLOWING MINIMUM PROPERTIES:

   POS MOMENT OF INERTIA = 0.277 in4/ft.
   NEG MOMENT OF INERTIA = 0.290 in4/ft.
   GAGE/THICKNESS = 18 ga/ 0.0474 in.
   POSITIVE SECTION MODULUS = 0.306 in3/ft
   NEGATIVE SECTION MODULUS = 0.318 in3/ft

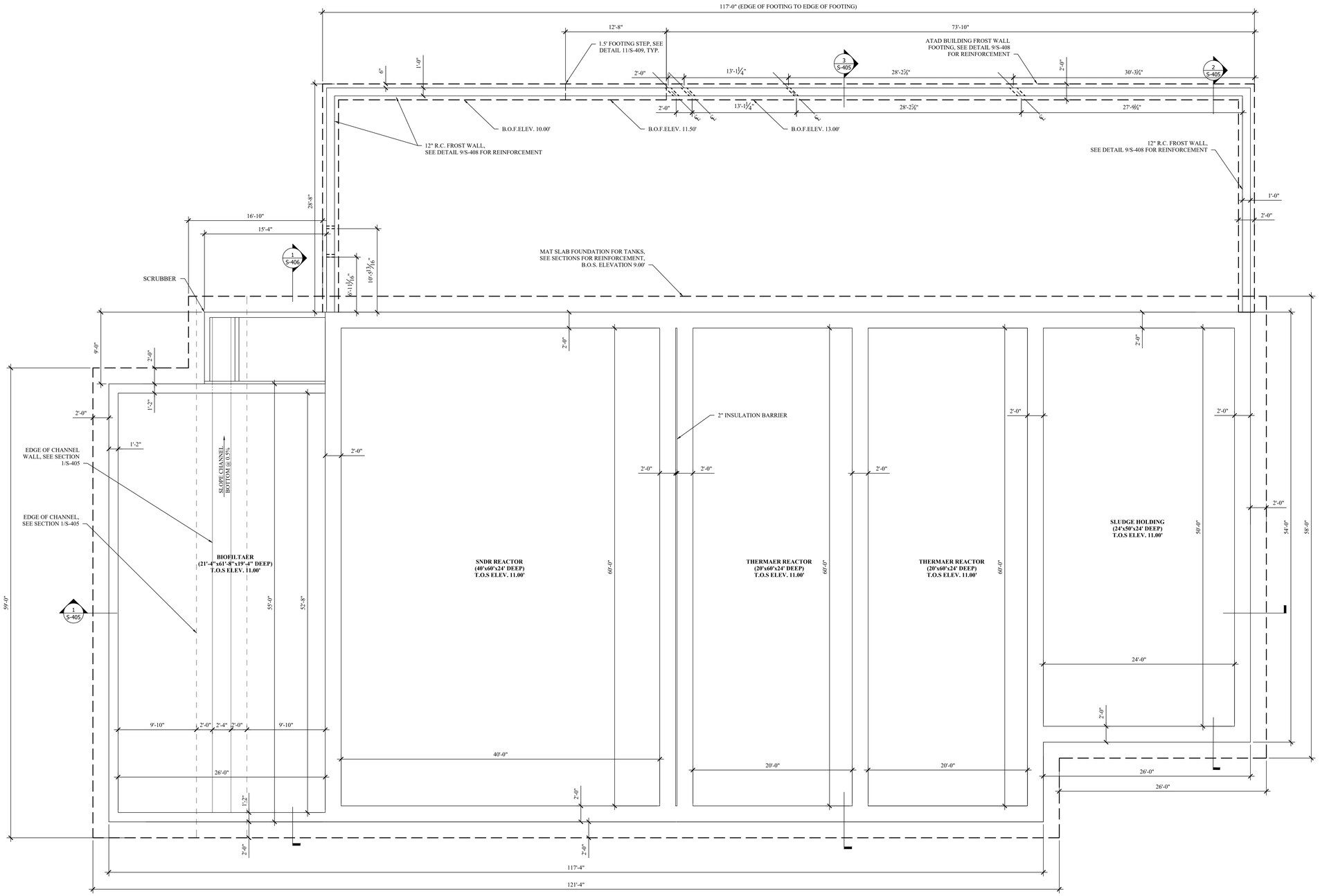
2. UNLESS OTHERWISE NOTED, STEEL DECK SHALL BE WELDED TO ALL SUPPORTING STEEL (INCLUDING CONTINUOUS SUPPORTING STEEL ALONG PERIMETER) AT 1'-0" ON CENTER WITH 5/8"DIAMETER PUDDLE WELDS. DECK UNITS SHALL BE ATTACHED TO ADJACENT UNITS AT SIDELAPS WITH (5) NO.12 STITCH SCREWS PER SPAN EQUALLY SPACED.
3. STEEL DECK SHALL BE VULCRAFT 18 GAGE 1.5B-36 50KSI, OR EQUAL. DECK SHALL BE CAPABLE OF SPANNING 4.0 FEET (MIN).

CONTAINMENT STRUCTURE DESIGN PROVISIONS:

THE CONCRETE CONTAINMENT STRUCTURES SHOWN HEREIN HAVE BEEN DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH PCA RECTANGULAR CONCRETE TANKS REVISED 5TH EDITION, ACI 350-06, ACI 350.3-06 AND ACI 350.4R-04.

SOIL AND BACKFILL PROPERTIES (APPLICABLE TO ALL TANKS):
- SOIL UNIT WEIGHT, γ = 130 PCF
- GROUNDWATER ASSUMED TO BE FULL HEIGHT OF BACKFILL
- SOIL FRICTION ANGLE, Φ = 35°
- ACTIVE EARTH PRESSURE, K_a = 0.27
- AT REST EARTH PRESSURE, K_o = 0.43 (UTILIZED FOR ALL TANK DESIGNS)
- PASSIVE EARTH PRESSURE, K_p = 3.69
- SUBGRADE MODULUS = 250 PSI
- SUBGRADE BEARING CAPACITY = 4000PSF

BIOFILTER TANK:
- UNIT WEIGHT OF MEDIA, γ = 30 PCF
- HEIGHT OF MEDIA = 10'
- BACKFILL HEIGHT =



1 S-401 ATAD FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ATAD FOUNDATION PLAN

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-401

PROJECT # 18-732 PHASE #

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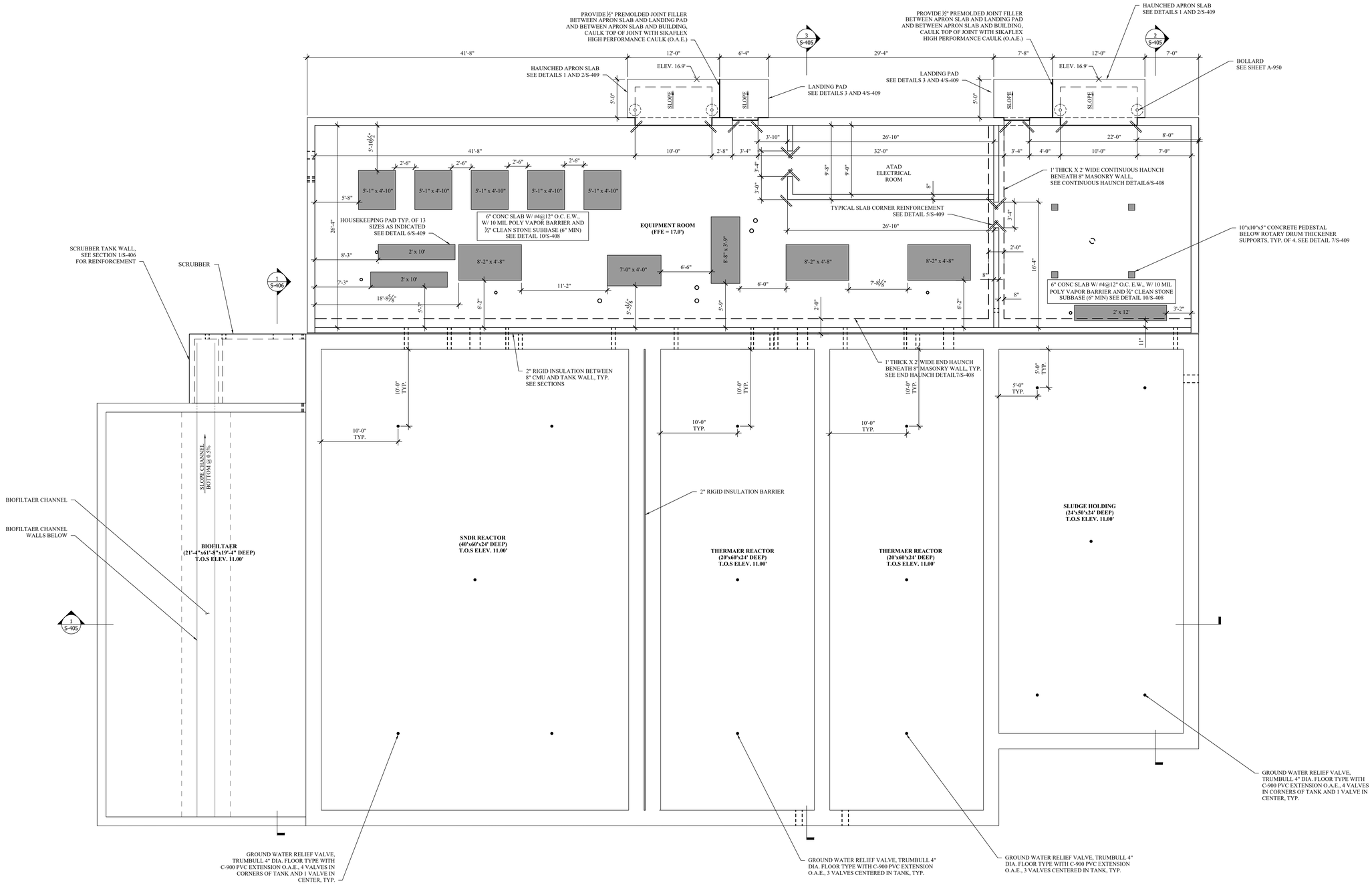

1/S-402 ATAD SLAB PLAN

SCALE: 3/16" = 1'-0"

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111 Wheatfield Drive, Suite 1
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(570) 296-2765

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ATAD SLAB PLAN

REVISIONS

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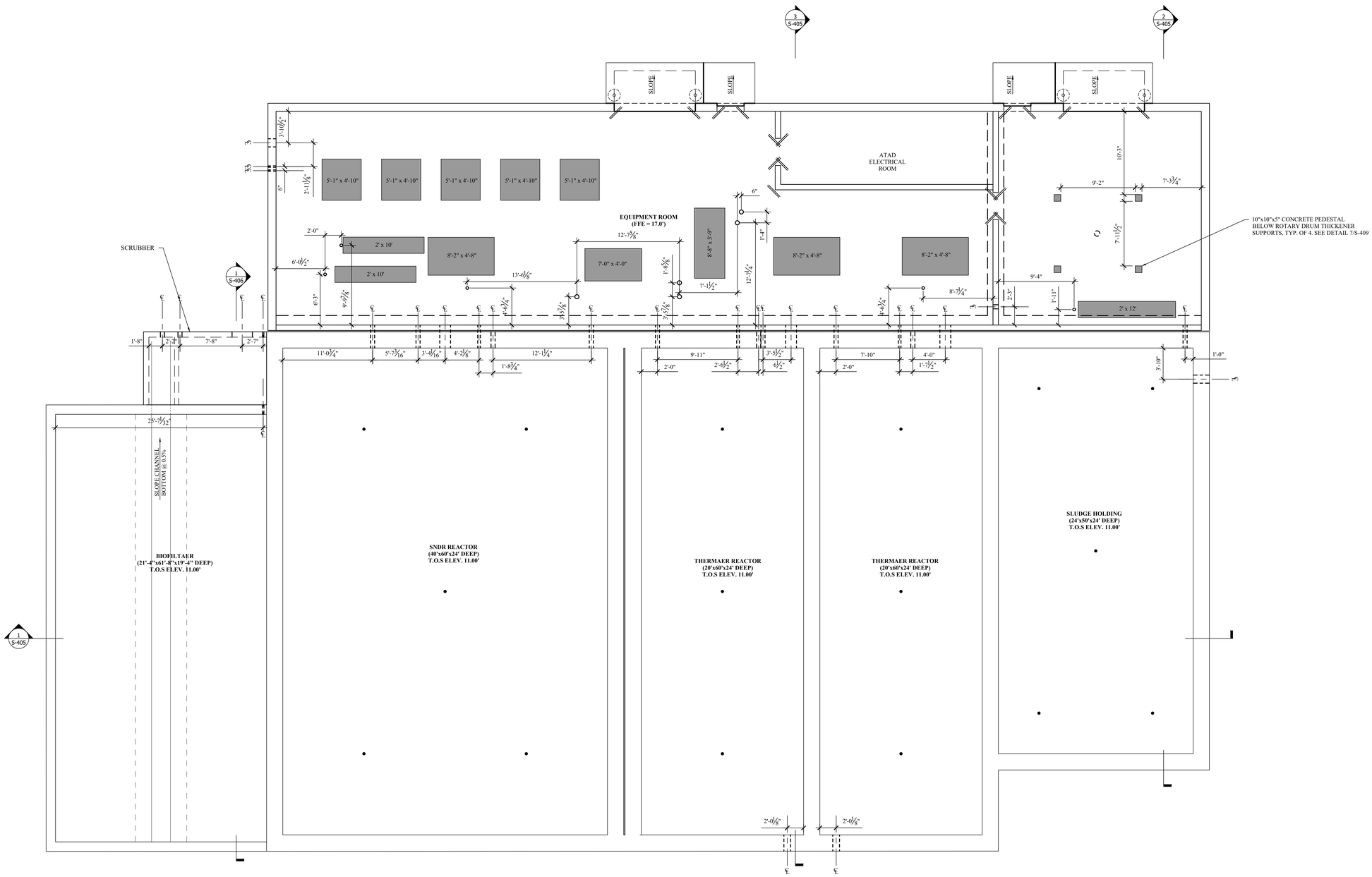

1 S-403 ATAD WALL AND SLAB PENETRATION PLAN

SCALE: 3/16" = 1'-0"

NOTE: COORDINATE PENETRATION SIZES AND INVERTS WITH 400-SERIES PROCESS SHEETS

MHE ENGINEERING

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ATAD WALL AND SLAB PENETRATION PLAN

REVISIONS

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ISSUED DATE:	18 APR, 2025
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CHECKED BY:	PJW
REVIEWED BY:	JSS

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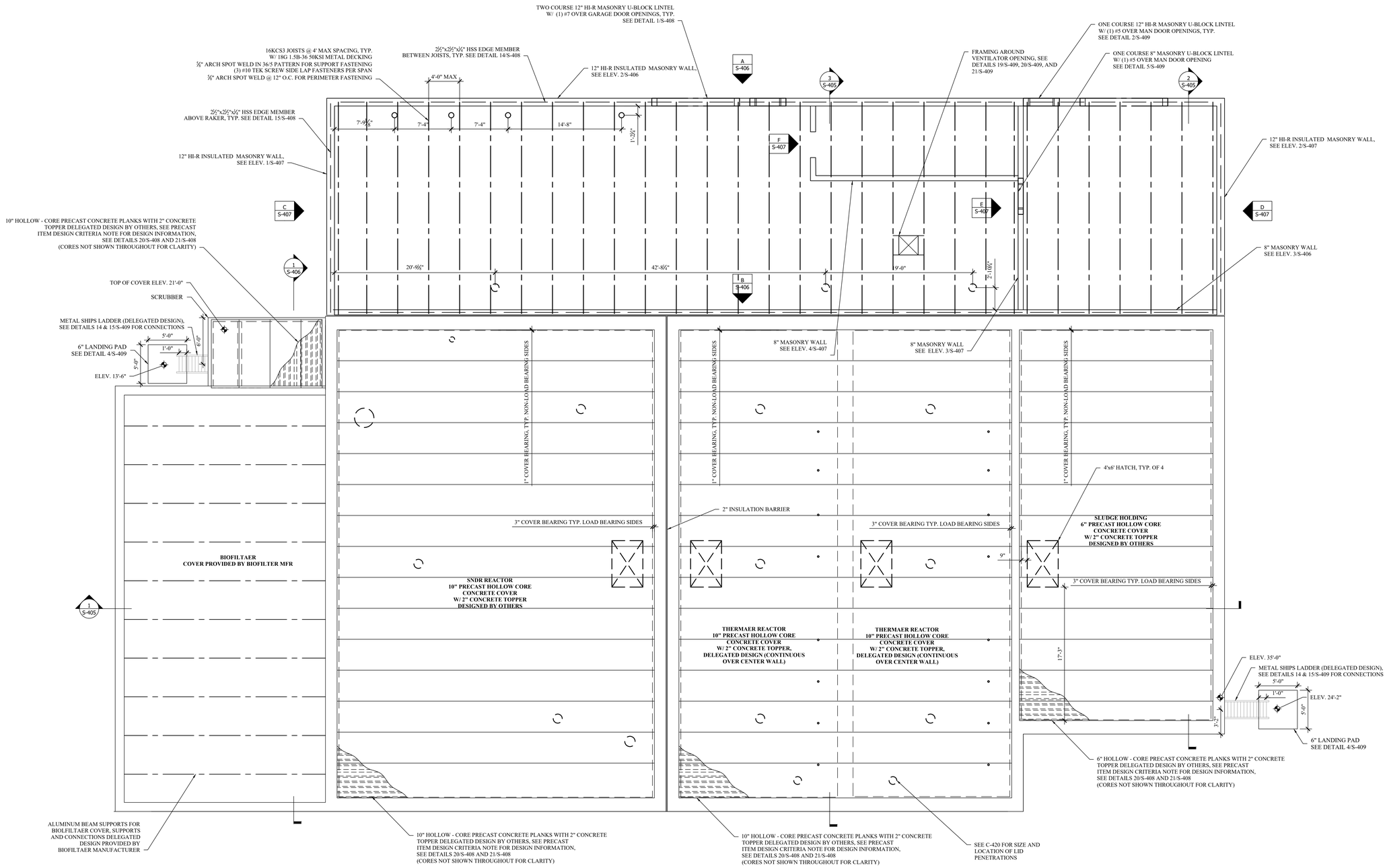

1 S-404 ATAD FRAMING AND WALL PLAN

SCALE: 3/16" = 1'-0"

MHE ENGINEERING

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New Windsor, NY 12553
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Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553

ATAD ROOF FRAMING, MASONRY WALL AND TANK COVER PLAN

REVISIONS

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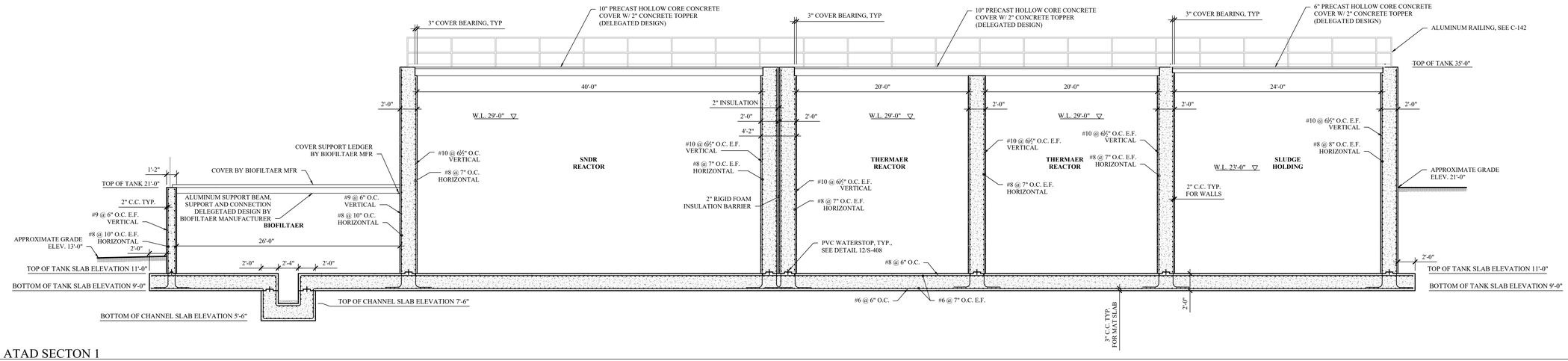
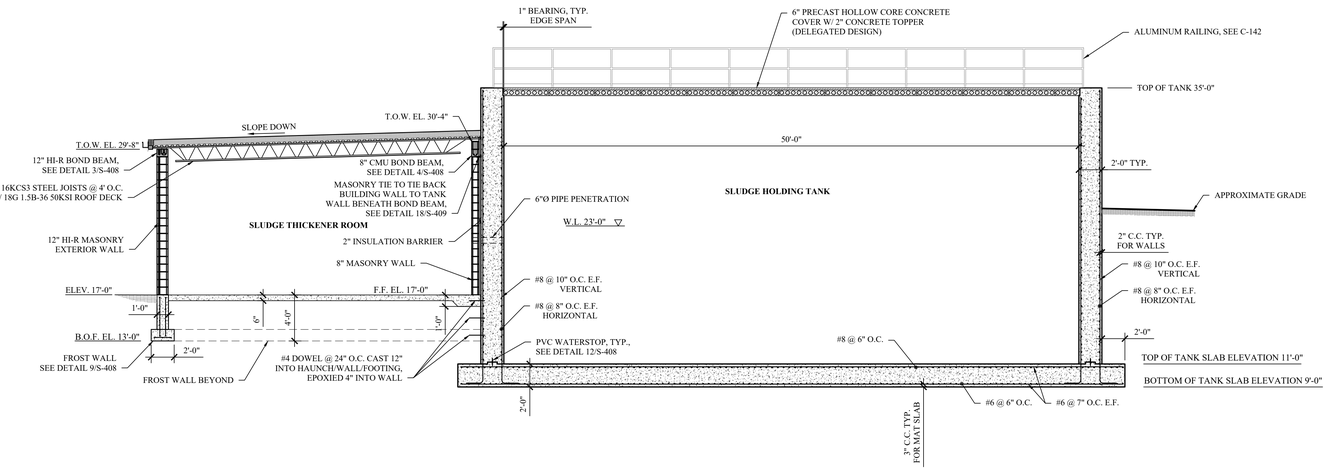


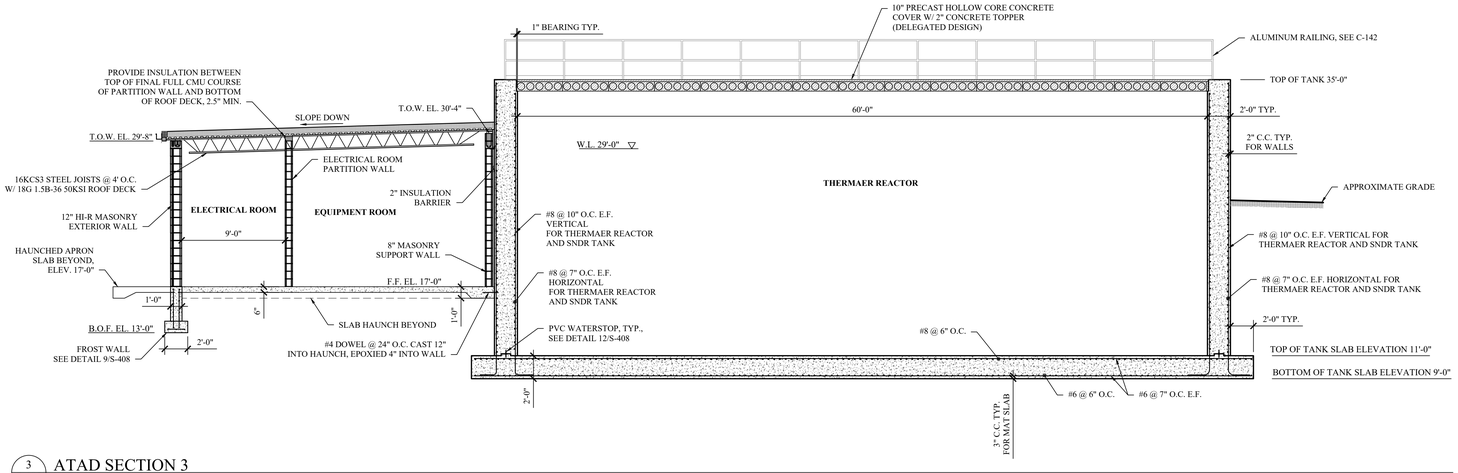
1 S-405 ATAD SECTON 1

SCALE: 3/16" = 1'-0"



2 S-405 ATAD SECTION 2

SCALE: 3/16" = 1'-0"



3 S-405 ATAD SECTION 3

SCALE: 3/16" = 1'-0"

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FOR TOWN OF NEW WINDSOR
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ATAD SECTIONS

REVISIONS

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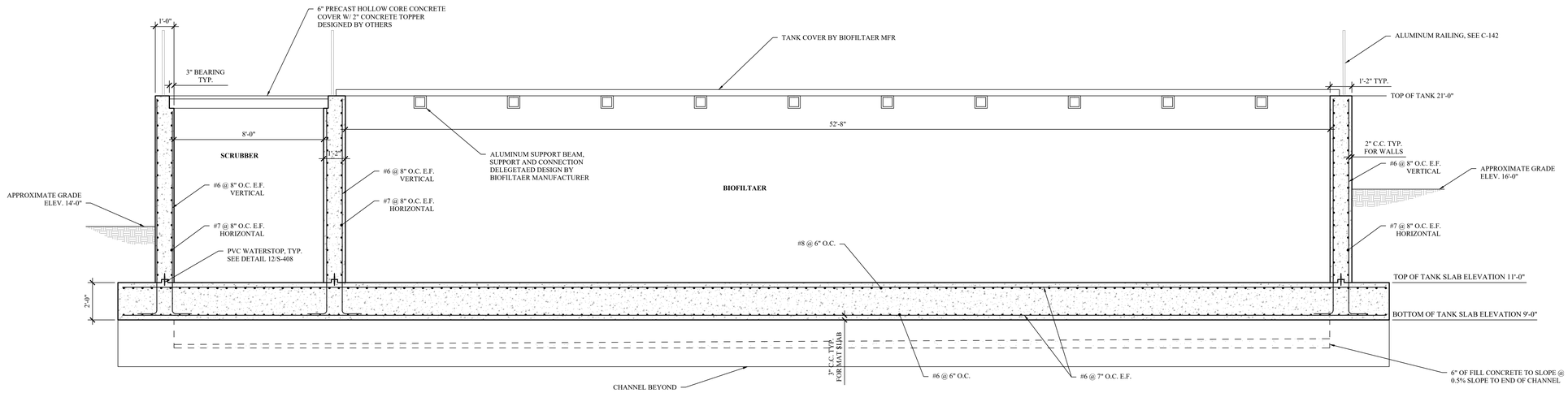
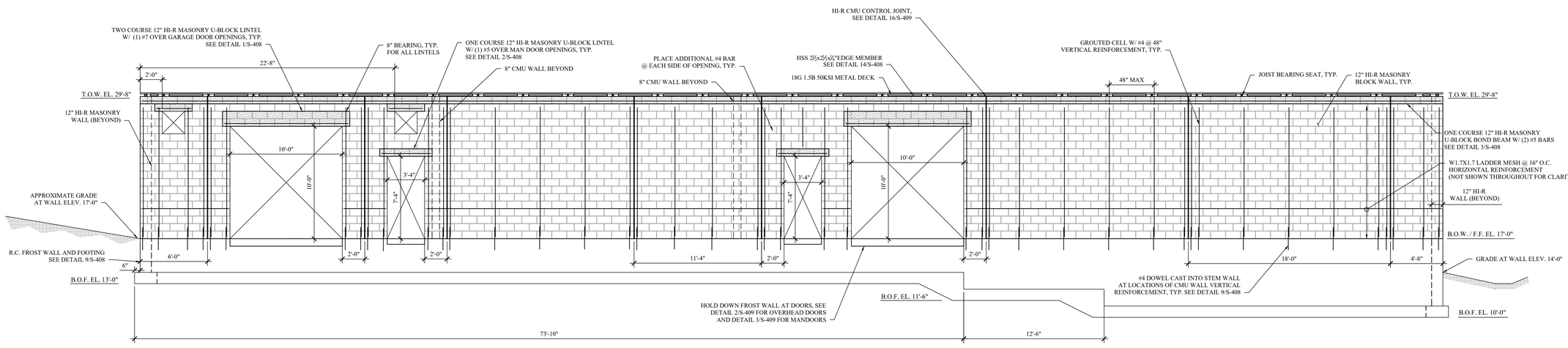


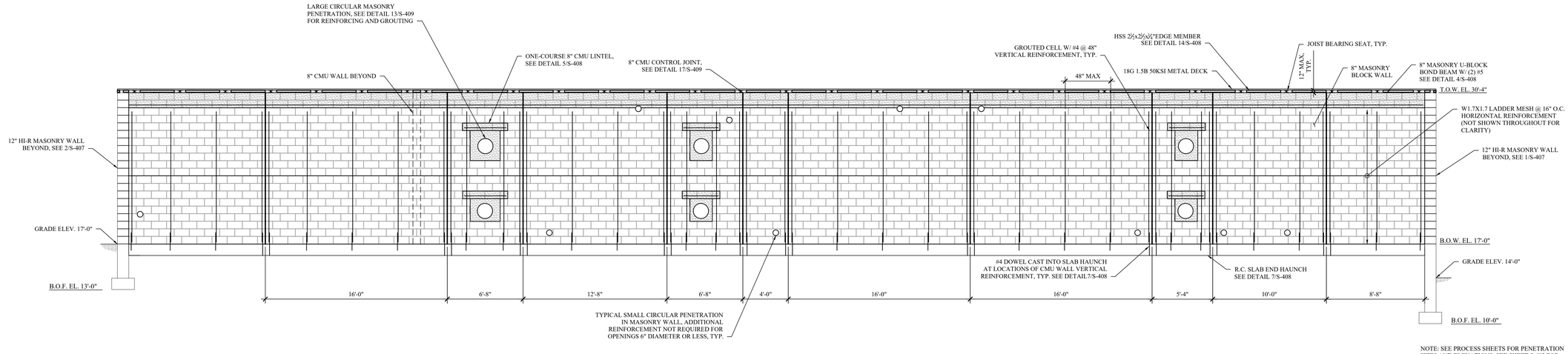
1 S-406 ATAD SECTION 4

SCALE: 3/8" = 1'-0"



2 S-406 ATAD WALL TYPE A ELEVATION

SCALE: 1/4" = 1'-0"



NOTE: SEE PROCESS SHEETS FOR PENETRATION SIZES AND ELEVATIONS. SEE SHEET S-403 FOR PENETRATION LOCATIONS

4 S-406 ATAD WALL TYPE B ELEVATION

SCALE: 1/4" = 1'-0"

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ATAD SECTION AND WALL ELEVATIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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CHECKED BY:	PJW
REVIEWED BY:	JSS

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S-406

PROJECT # 18-732 PHASE #

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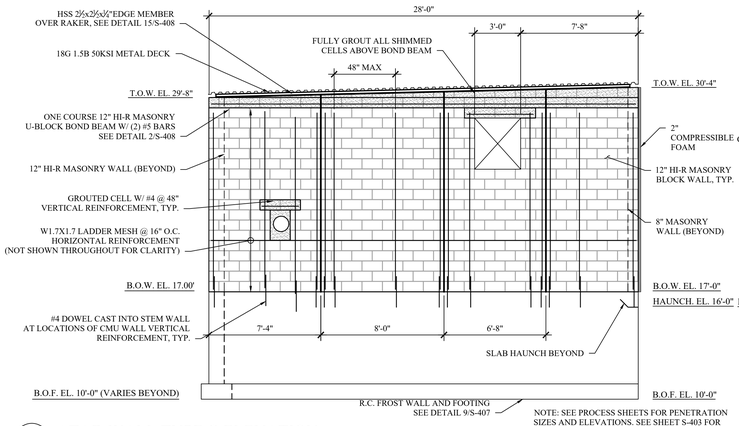
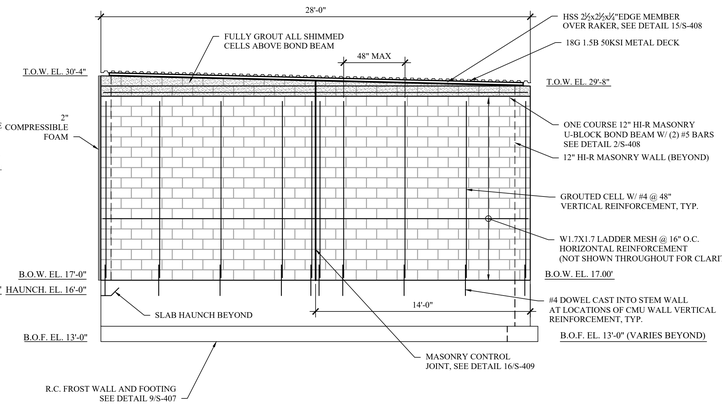


NOTE: SEE PROCESS SHEETS FOR PENETRATION SIZES AND ELEVATIONS. SEE SHEET S-403 FOR PENETRATION LOCATIONS

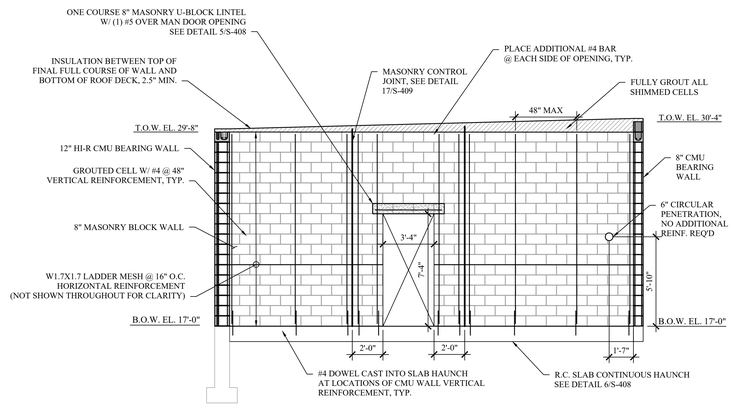
1 S-407 ATAD WALL TYPE C ELEVATION

SCALE: 1/4" = 1'-0"



2 S-407 ATAD WALL TYPE D ELEVATION

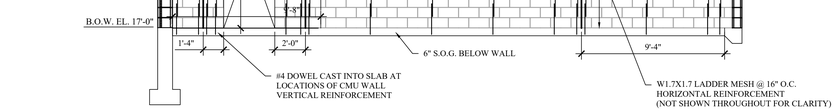
SCALE: 1/4" = 1'-0"



NOTE: SEE PROCESS SHEETS FOR PENETRATION SIZES AND ELEVATIONS. SEE SHEET S-403 FOR PENETRATION LOCATIONS

3 S-407 ATAD WALL TYPE E ELEVATION

SCALE: 1/4" = 1'-0"



4 S-407 ATAD WALL TYPE F ELEVATION

SCALE: 1/4" = 1'-0"

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New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ATAD WALL ELEVATIONS (CONT.)

REVISIONS

NO.	DESCRIPTION	DATE

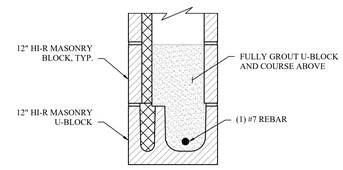
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

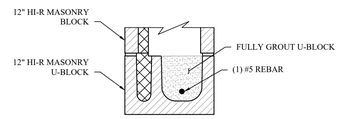
S-407

PROJECT # 18-732 PHASE #

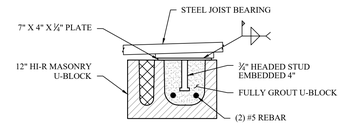
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\04 - Sludge Holding - ATAD\Structural\ATADS04 - ATAD - Structural - Revision5 (Update).dwg, S-407, 4/16/2025 12:12:47 PM



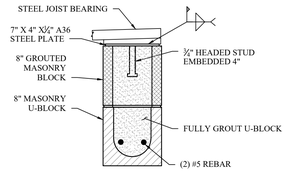
1 S-408 TWO COURSE 12" HI-R CMU LINTEL
SCALE: 1-1/2" = 1'-0"



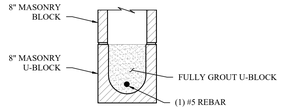
2 S-408 ONE COURSE 12" HI-R CMU LINTEL
SCALE: 1-1/2" = 1'-0"



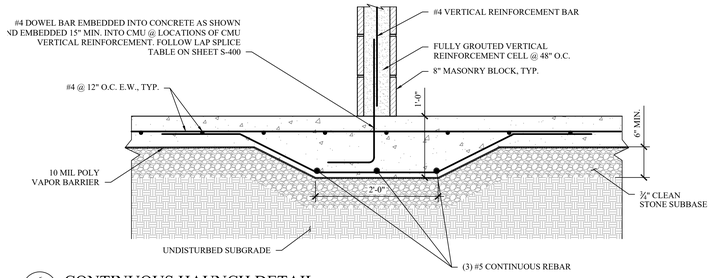
3 S-408 12" HI-R CMU BOND BEAM
SCALE: 1-1/2" = 1'-0"



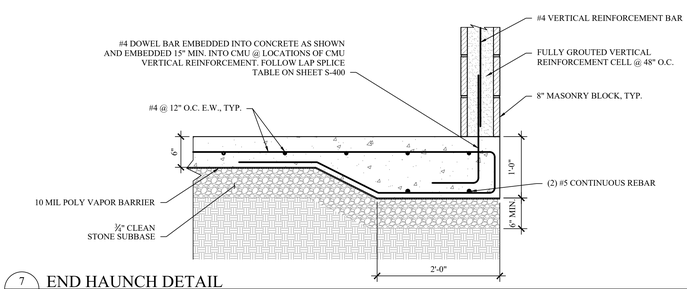
4 S-408 8" STANDARD CMU BOND BEAM
SCALE: 1-1/2" = 1'-0"



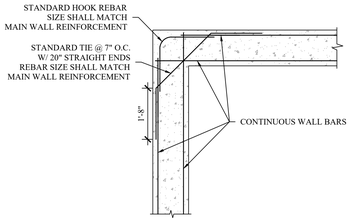
5 S-408 ONE COURSE 8" CMU LINTEL
SCALE: 1-1/2" = 1'-0"



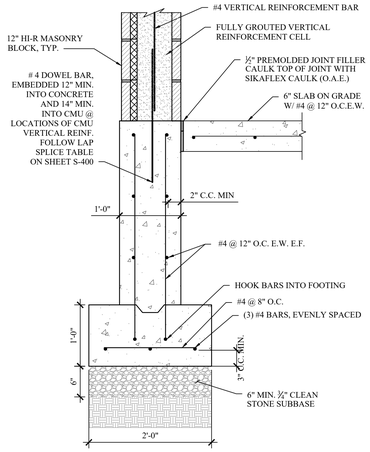
6 S-408 CONTINUOUS HAUNCH DETAIL
SCALE: 1 = 1'-0"



7 S-408 END HAUNCH DETAIL
SCALE: 1" = 1'-0"



8 S-408 TYPICAL CORNER REINFORCEMENT
SCALE: 1/2" = 1'-0"



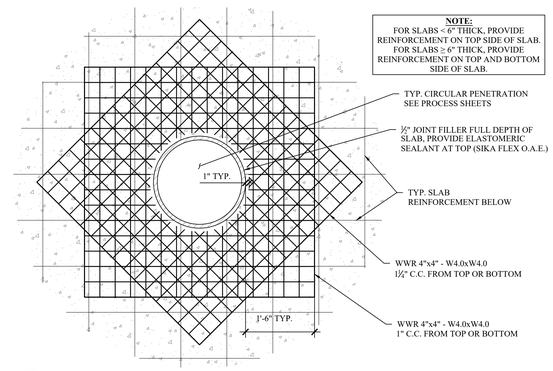
9 S-408 FROST WALL AND FOOTING DETAIL
SCALE: 1" = 1'-0"

10 S-408 EQUIPMENT ROOM SLAB DETAIL
SCALE: 1 = 1'-0"

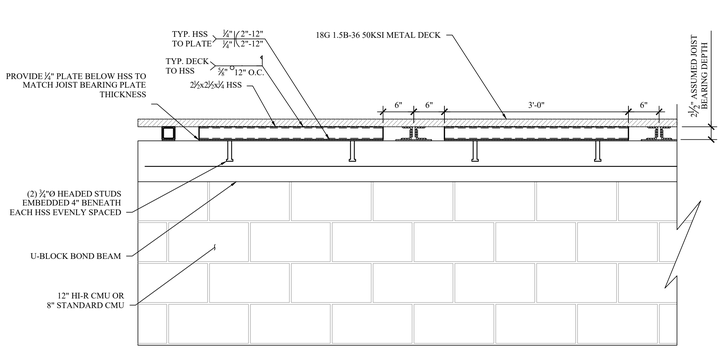
11 S-408 TYPICAL CONTROL JOINT
SCALE: 1-1/2" = 1'-0"

12 S-408 TYPICAL CONCRETE TANK/CHANNEL KEY AND WATERSTOP
SCALE: NOT TO SCALE

KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"

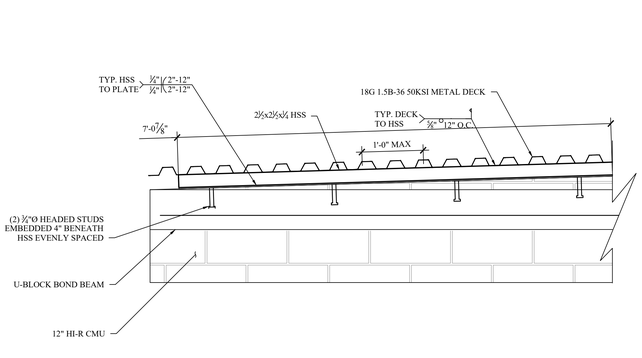


13 S-408 TYPICAL CIRCULAR SLAB PENETRATION REINFORCEMENT
SCALE: 3/4" = 1'-0"



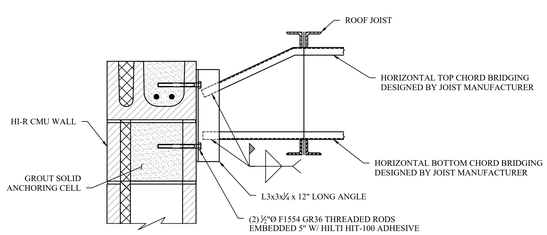
14 S-408 HSS EDGE MEMBER BETWEEN JOISTS
SCALE: 1" = 1'-0"

NOTE: IF FINAL JOIST BEARING SEAT DEPTH IS OTHER THAN 2½", HSS DEPTH AND WIDTH SHALL BE UPDATED TO MATCH

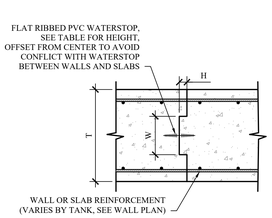


15 S-408 HSS EDGE MEMBER ABOVE RAKER
SCALE: 1" = 1'-0"

NOTE: IF FINAL JOIST BEARING SEAT DEPTH IS OTHER THAN 2½", HSS DEPTH AND WIDTH SHALL BE UPDATED TO MATCH

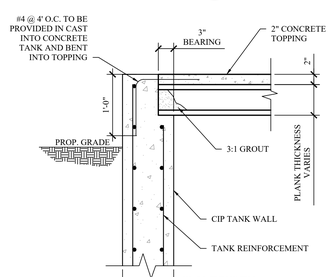


18 S-408 TYPICAL JOIST BRIDGING TERMINATION
SCALE: 1-1/2" = 1'-0"

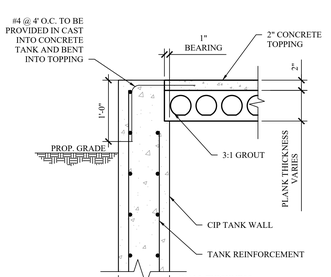


19 S-408 TYPICAL TANK WALL/MAT SLAB CONSTRUCTION JOINT
SCALE: NOT TO SCALE

KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"



20 S-408 TYP. HOLLOW CORE LID SECTION 1
SCALE: 1" = 1'-0"



21 S-408 TYP. HOLLOW CORE LID SECTION 2
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ATAD DETAILS

REVISIONS

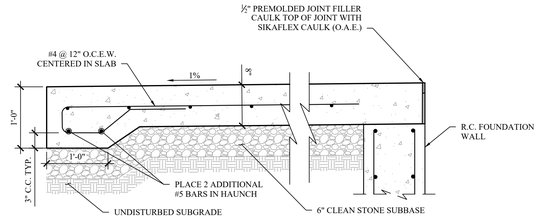
NO.	DESCRIPTION	DATE

ISSUED DATE: 18 APR, 2025
DESIGN BY: WPG, NEM, PJW
DRAWN BY: WPG, NEM, PJW
CHECKED BY: PJW
REVIEWED BY: JSS

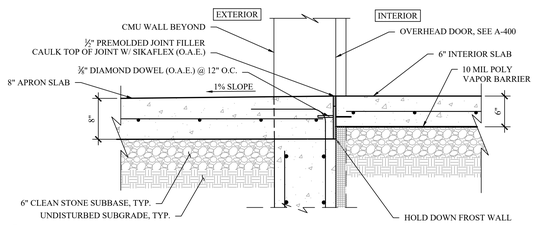
SHEET NO.
S-408

PROJECT # 18-732 PHASE #

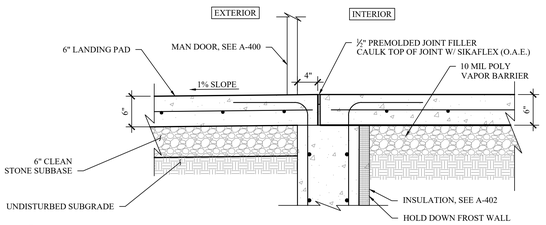
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Structural\ATADS04 - ATAD - Structural - Revision5 (Update).dwg, S-408, 4/16/2025 12:12:33 PM



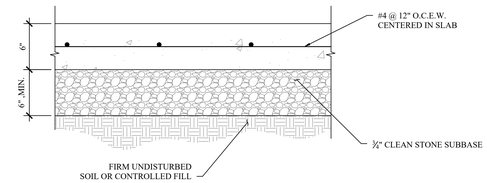
1 S-409 HAUNCHED APRON SLAB
SCALE: 1" = 1'-0"



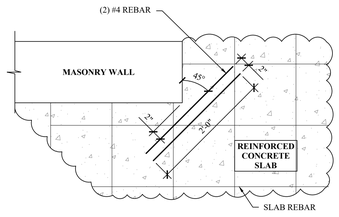
2 S-409 TYPICAL OVERHEAD DOOR TRANSITION
SCALE: 1" = 1'-0"



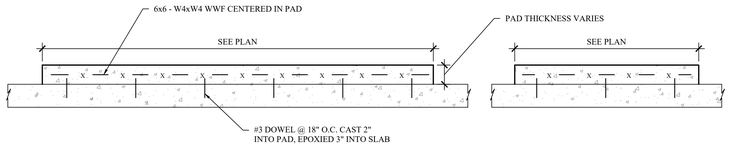
3 S-409 TYPICAL MAN DOOR TRANSITION
SCALE: 1" = 1'-0"



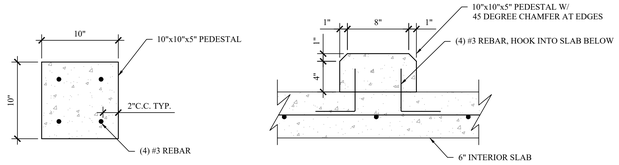
4 S-409 TYPICAL LANDING PAD
SCALE: 1-1/2" = 1'-0"



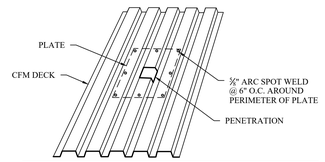
5 S-409 SLAB CORNER REINFORCEMENT
SCALE: 1" = 1'-0"



6 S-409 TYPICAL HOUSEKEEPING PAD
SCALE: 3/4" = 1'-0"

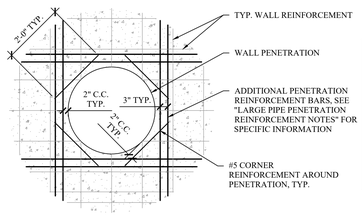


7 S-409 ROTARY DRUM THICKENER PEDESTAL
SCALE: 1-1/2" = 1'-0"



METAL DECK PENETRATION REINFORCEMENT	
DIAMETER/WIDTH OF PENETRATION	REQUIRED REINFORCEMENT
<= 6"	NONE OR 0.045" PLATE
<= 8"	0.045" PLATE
<= 13"	0.054" PLATE
> 13"	DESIGNED BY ENGINEER

8 S-409 METAL DECK PENETRATION REINF.
SCALE: NOT TO SCALE



LARGE PIPE PENETRATION REINFORCEMENT NOTES

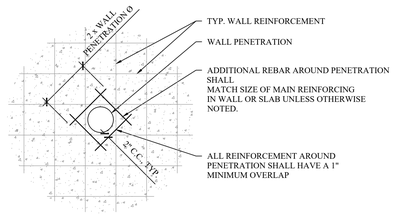
1. ADDITIONAL PENETRATION REINFORCEMENT SHALL BE OF THE SIZE OF WALL REBAR INTERRUPTED BY THE PENETRATION.

2. TOTAL AMOUNT OF VERTICAL OR HORIZONTAL REBAR SHALL BE THE SUM OF THE BARS INTERRUPTED BY THE PENETRATION, EVENLY SPLIT BETWEEN BOTH SIDES OF THE OPENING.

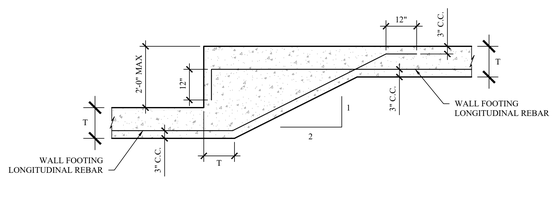
3. THE PENETRATION REINFORCEMENT SHALL HAVE A SPACING OF 3" BETWEEN REBAR. IF PENETRATION REINFORCEMENT CONFLICTS WITH WALL REINFORCEMENT, THE PENETRATION REINFORCEMENT SHALL BE PLACED AWAY FROM THE WALL REINFORCEMENT UTILIZING 3" SPACING.

4. IF THE TOP OR BOTTOM OF THE WALL IS WITHIN 12" OF EDGE OF PENETRATION, OMIT ADDITIONAL PENETRATION STEEL.

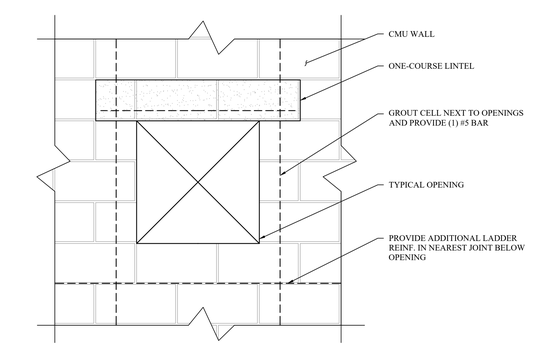
9 S-409 CIRCULAR WALL PENETRATION REINFORCEMENT DETAIL (DIA. > 18")
SCALE: 1/2" = 1'-0"



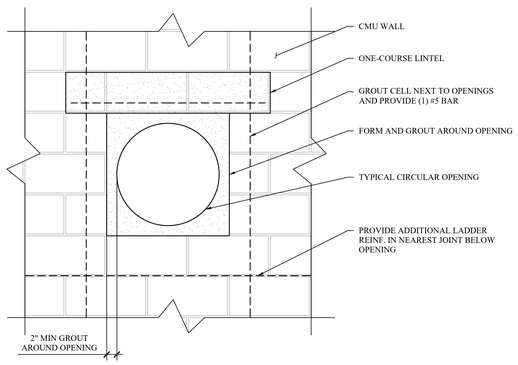
10 S-409 CIRCULAR WALL PENETRATION REINF. DETAIL (DIA. < 18")
SCALE: 1/2" = 1'-0"



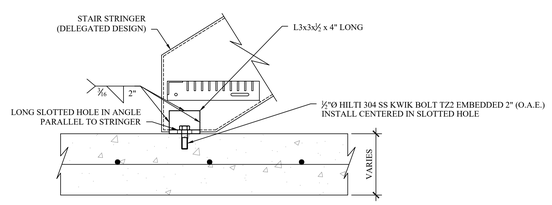
11 S-409 TYPICAL FOOTING STEP
SCALE: NOT TO SCALE



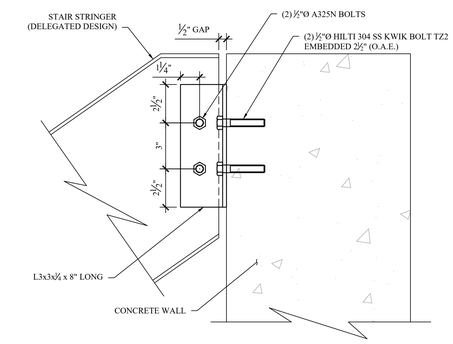
12 S-409 TYPICAL SQUARE MASONRY PENETRATION
SCALE: 1" = 1'-0"



13 S-409 TYPICAL CIRCULAR MASONRY PENETRATION
SCALE: 1" = 1'-0"

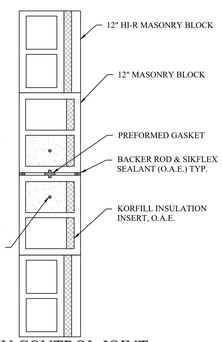


14 S-409 TYPICAL METAL STAIRS CONNECTION TO LANDING PAD
SCALE: 1-1/2" = 1'-0"



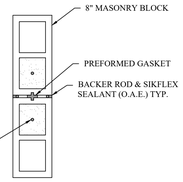
15 S-409 TYPICAL METAL STAIRS CONNECTION TO WALL
SCALE: 3" = 1'-0"

NOTES:
1. BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. ALL OTHER REINFORCEMENT SHALL TERMINATE PRIOR TO CONTROL JOINT.
2. CONTROL JOINTS SHALL BE FULL HEIGHT OF WALL
3. CONTROL JOINT SHALL BE BETWEEN 12" NON-INSULATED BLOCK WITH KORFILL INSULATION INSERTS (O.A.E.). NON-INSULATED MASONRY BLOCK SHALL MATCH COLOR AND FINISH OF HI-R BLOCKS.

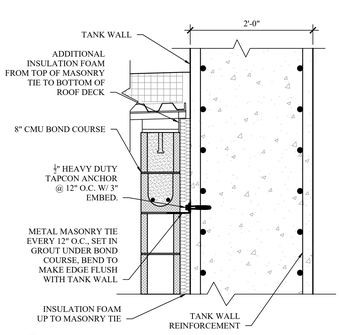


16 S-409 12" HI-R CMU CONTROL JOINT
SCALE: 1" - 1'-0"

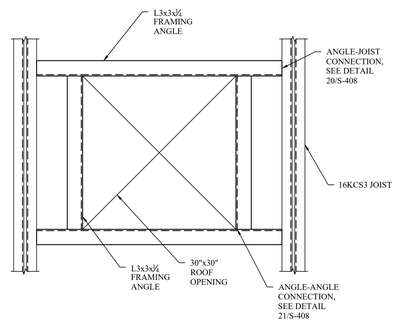
NOTES:
1. BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. ALL OTHER REINFORCEMENT SHALL TERMINATE PRIOR TO CONTROL JOINT.
2. CONTROL JOINTS SHALL BE FULL HEIGHT OF WALL



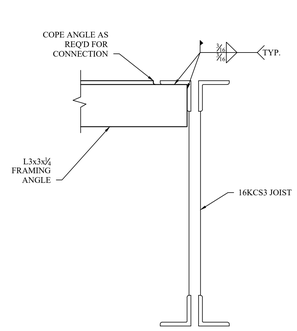
17 S-409 8" CMU CONTROL JOINT
SCALE: 1" - 1'-0"



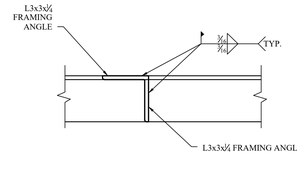
18 S-409 MASONRY-WALL TIEBACK
SCALE: 1" - 1'-0"



19 S-409 LARGE ROOF OPENING FRAMING (PLAN)
SCALE: 1" - 1'-0"



20 S-409 ANGLE-JOIST CONNECTION
SCALE: 3" - 1'-0"



21 S-409 FRAME ANGLE-ANGLE CONNECTION
SCALE: 3" - 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

UNAUTHORIZED ADDITION OR ALTERATION OF THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ATAD DETAILS (COTNINUED)

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-409

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\4 - Sludge Holding - ATAD\Structural\ATADdet.dwg, S-409, 4/16/2025 12:13:04 PM

GENERAL NOTES (STRUCTURAL):

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS TO STRUCTURES OR SURROUNDING AREAS. DAMAGE WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER OF RECORD (E.O.R.) AT NO ADDITIONAL COST TO THE OWNER.

2. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER TO THE E.O.R. PRIOR TO INSTALLATION OF EXCAVATION SUPPORT MEASURES.

3. ALL ITEMS NOT INDICATED TO BE EXISTING SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.

4. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES REGARDING SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN STRUCTURAL WORK.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE E.O.R.

6. ANY ITEMS INDICATED TO BE REPLACED-IN-KIND SHALL BE INSTALLED TO MATCH EXISTING LOCATIONS, CONFIGURATIONS, AND ELEVATIONS UNLESS OTHERWISE NOTED.

7. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. IF MANUFACTURER'S SPECIFICATIONS CONFLICT WITH CONTRACT DRAWINGS OR SPECIFICATIONS, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT. NEITHER THE STRUCTURE NOR INDIVIDUAL STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, JOISTS, AND COLUMNS WILL BE LATERALLY STABLE UNTIL ALL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS COMPLETE.

9. ALL SUBSURFACE UTILITIES SHALL BE IDENTIFIED PRIOR TO EXCAVATION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EXCAVATION. IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

10. ALL ITEMS SHOWN TO BE REMOVED SHALL BE PROPERLY HANDLED AND DISPOSED OF OFF SITE.

11. NO BACKFILLING OF THE STRUCTURE SHALL OCCUR UNTIL CONCRETE BREAKS SATISFACTORY TO THE E.O.R. ARE OBTAINED OR UNTIL THE CONTAINMENT STRUCTURE HAS SUCCESSFULLY PASSED HYDROSTATIC TESTING IF APPLICABLE.

12. ALL ITEMS INDICATED TO BE A DELEGATED DESIGN SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO ORDERING MATERIALS. SUBMITTALS SHALL INCLUDE PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.

13. ELEVATIONS SHOWN ARE BASED ON SURVEY BY CTMALE DATED APRIL 3, 2023.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 NEW YORK STATE BUILDING CODE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 48 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

STEEL:

1. STRUCTURAL STEEL:
   - 1.1. SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16.
2. COLD-FORMED STEEL DECK:
   - 2.1. SPECIAL INSPECTIONS AND QUALIFICATION OF WELDING SPECIAL INSPECTORS FOR COLD-FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF SDI QA/QC.
3. INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS:
   - 3.1. PERIODIC SPECIAL INSPECTION OF END CONNECTIONS - WELDED OR BOLTED.
   - 3.2. PERIODIC SPECIAL INSPECTION OF BRIDGING - HORIZONTAL OR DIAGONAL

CONCRETE:

1. PERIODIC INSPECTION OF REINFORCING STEEL.
2. PERIODIC INSPECTION OF ANCHORS CAST IN CONCRETE.
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.
   - 3.1. CONTINUOUS INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.
   - 3.2. PERIODIC INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 3.1.
4. PERIODIC VERIFICATION OF DESIGN MIX.
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP, AIR, AND TEMPERATURE TESTS; CONTINUOUS.
6. CONTINUOUS INSPECTION OF PLACEMENT & FOR PROPER APPLICATION TECHNIQUES.
7. PERIODIC INSPECTION OF ERECTION OF PRECAST CONCRETE MEMBERS.
8. PERIODIC INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
9. PERIODIC VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.
10. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS, OF THE CONCRETE MEMBER BEING FORMED.

MASONRY:

1. SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402 AND TMS 602.

SOILS:

1. CONTINUOUS INSPECTION OF
   - 1.1. PROPER MATERIALS
   - 1.2. DENSITIES
   - 1.3. LIFT THICKNESSES DURING PLACEMENT
   - 1.4. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   - 2.1. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   - 2.2. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   - 2.3. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   - 2.4. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE.

CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO ACI 211.1, ACI 301, ACI 304R (WHEN PUMPING), AND ACI 318-14. AGGREGATE SHALL CONFORM TO ASTM C33. COMPRESSIVE STRENGTH, RANGE OF SLUMP, WATER-TO-CEMENT RATIO, AND AIR ENTRAINMENT SHALL BE PER THE CONCRETE CLASS SPECIFIED HEREIN AND IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000. SUBMIT COPIES OF TEST REPORTS SHOWING THAT THE MIX HAS BEEN SUCCESSFULLY TESTED TO PRODUCE CONCRETE WITH THE PROPERTIES SPECIFIED. TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (E.O.R.) FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.
   - 1.1. CONCRETE CLASSIFICATIONS PER SPECIFICATION SECTION 033000:
     - 1.1.1. FOOTINGS & FROST WALLS: CLASS A
     - 1.1.2. ABOVE GRADE WALLS, EXPOSED FOUNDATION WALLS, TANK AND CHANNEL WALLS: CLASS B
     - 1.1.3. INTERIOR SLABS-ON-GROUND: CLASS C
     - 1.1.4. TANK AND CHANNEL FOUNDATIONS: CLASS D
     - 1.1.5. INTERIOR SUSPENDED SLABS: CLASS E
     - 1.1.6. L.W. CONCRETE INTERIOR SUSPENDED SLABS: CLASS F
     - 1.1.7. APRONS, LANDINGS, EQUIPMENT PADS, SIDEWALKS & CURBS: CLASS H
     - 1.1.8. FILL CONCRETE: CLASS G
   - 1.2. CONCRETE FINISHES PER SPECIFICATION SECTION 033000:
     - 1.2.1. FOUNDATIONS BELOW GRADE: AS-CAST SF-2.0 FINISH
     - 1.2.2. EXPOSED FOUNDATION WALLS: GROUT-CLEANED FINISH
     - 1.2.3. TANK WALLS & SLABS: AS-CAST SF-3.0 FINISH
     - 1.2.4. EXTERIOR SLABS: FINE BROOM FINISH
     - 1.2.5. INTERIOR SLABS: TROWEL FINISH
2. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 7 DAYS.
3. CONCRETE SHALL BE WET CURED, USING BURLAP OR COTTON CURING MATS, OR CURED USING ASTM D4397 POLYETHYLENE SHEETING IN ACCORDANCE WITH ASTM C171. WET THE ENTIRE EXPOSED SURFACE OF THE CONCRETE THOROUGHLY WITH A FINE SPRAY OF WATER AND COVER WITH SHEETING THROUGHOUT THE CURING PERIOD. LAY SHEETING DIRECTLY ON CONCRETE SURFACE. PROVIDE SHEETING NOT LESS THAN 18 INCHES WIDER THAN CONCRETE SURFACE. OVERLAP EDGES 12 INCHES AND CONTINUOUSLY TAPE JOINTS.
4. PUMPING SHALL NOT RESULT IN SEPARATION OR LOSS OF MATERIALS NOR CAUSE INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF PLASTICITY BETWEEN SUCCESSIVE INCREMENTS. LOSS OF SLUMP IN PUMPING EQUIPMENT SHALL NOT EXCEED 2 INCHES. CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. RAPID CHANGES IN PIPE SIZES SHALL BE AVOIDED. MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO 33 PERCENT OF THE DIAMETER OF THE PIPE. MAXIMUM SIZE OF WELL ROUNDED AGGREGATE SHALL BE LIMITED TO 40 PERCENT OF THE PIPE DIAMETER. SAMPLES FOR TESTING SHALL BE TAKEN AT BOTH THE POINT OF DELIVERY TO THE PUMP AND AT THE DISCHARGE END.
5. CONCRETE SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT PROPER PLACEMENT AND CONSOLIDATION INCLUDING PERIODS OF PRECIPITATION. TRANSPORT CONCRETE AS RAPIDLY AS PRACTICABLE TAKING PRECAUTION TO PREVENT SEGREGATION OR LOSS OF INGREDIENTS. PUMPING IN ACCORDANCE WITH ACI 304 SHALL BE PERMITTED. DO NOT EXCEED A FREE VERTICAL DROP OF 3 FEET FROM THE POINT OF DISCHARGE. PLACE CONCRETE IN ONE CONTINUOUS OPERATIONS FROM ONE SIDE OF SLAB TO THE OTHER. POSITION GRADE STAKES AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION.
6. UNLESS OTHERWISE NOTED, REINFORCEMENT BARS SHALL BE BLACK STEEL. REINFORCING BARS SHALL CONFORM TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A1064. REINFORCEMENT SHALL NOT CONTAIN RUST, SCALE, OIL, GREASE, CLAY, OR FOREIGN SUBSTANCES THAT WOULD REDUCE THE CONCRETE BONDING STRENGTH. REMOVE LOOSE RUST PRIOR TO PLACEMENT OF REINFORCEMENT.
7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE LAP SLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
8. PROVIDE MINIMUM 2" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST FORMS OR 3" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST EARTH, UNLESS OTHERWISE INDICATED.
9. CONCRETE FOOTINGS AND MAT FOUNDATIONS SHALL BE PLACED MONOLITHICALLY WITH THE EXCEPTION THAT VERTICAL CONSTRUCTION JOINTS WILL BE ALLOWED IF EPOXY BONDING COMPOUND IS APPLIED TO THE ROUGHENED SURFACE OF THE HARDENED CONCRETE.
10. INTERIOR SLABS: THE CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AS INDICATED. JOINTS MAY BE SAWCUT OR CUT WITH A JOINTING TOOL. SAWED JOINTS SHALL BE COMPLETED WITHIN 4 TO 12 HOURS AFTER PLACEMENT OF CONCRETE. JOINTS SHALL INTERSECT WITH THE CORNERS OF ISOLATION JOINT AT COLUMN LOCATIONS, IF ANY ARE PRESENT, AND BE SPACED A MAXIMUM OF 15 FEET ON CENTER, UNLESS NOTED OTHERWISE.
11. REINFORCEMENT SUPPORTS SHALL BE CONCRETE OR OTHER NON-CORRODIBLE MATERIAL HAVING A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE COMPRESSIVE STRENGTH OF THE CONCRETE BEING PLACED.
12. PROVIDE A ½" ROUNDED EDGE ON ALL EXPOSED SLAB EDGES. PROVIDE A ½" CHAMFER ON ALL OTHER EXPOSED CONCRETE CORNERS.
13. EPOXY BONDING COMPOUND SHALL BE USED ON ALL CONTACTING SURFACES BETWEEN EXISTING CONCRETE AND NEW CONCRETE. EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C881, TYPE AND GRADE TO BE IN ACCORDANCE WITH APPROPRIATE USE INDICATED IN SPECIFICATION 033000 CAST-IN-PLACE CONCRETE. DO NOT ALLOW COMPOUND TO HARDEN PRIOR TO CONCRETE PLACEMENT. BONDING AGENT USED SHALL BE NSF 61 APPROVED.
14. PLACE, CONSOLIDATE AND IMMEDIATELY STRIKE OFF CONCRETE TO OBTAIN PROPER CONTOUR GRADE AND ELEVATION BEFORE BLEEDWATER APPEARS. PERMIT CONCRETE TO ATTAIN A SET SUFFICIENT FOR FLOATING AND SUPPORTING THE WEIGHT OF THE FINISHER AND EQUIPMENT. IF BLEEDWATER IS PRESENT PRIOR TO FLOATING THE SURFACE, DRAG THE EXCESS WATER OFF OR REMOVE BY ABSORPTION WITH POROUS MATERIALS. DO NOT USE DRY CEMENT TO ABSORB BLEEDWATER.
15. UNLESS OTHERWISE NOTED, ALL CONCRETE CONSTRUCTION SHALL MEET THE SPECIFIED TOLERANCES OF ACI 117. TOP ELEVATIONS SHALL MATCH THE SPECIFIED ELEVATIONS WITHIN A TOLERANCE OF ±¼"
16. THE REQUIREMENTS OF ACI 302.1R CLASS 4 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL FLOORS AND SLABS. THE REQUIREMENTS OF ACI 360.R-10 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL SLABS-ON-GROUND.
    - 16.1. SLABS-ON-GRADE: FF = 25 AND FL = 20
    - 16.2. SUSPENDED SLABS: FF = 25 AND FL = 20
17. NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED ITEMS (I.E. PROCESS, ELECTRICAL, MECHANICAL, ETC) HAVE BEEN SET. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES.
18. ALL BAR PLACING AND BENDING SHALL BE IN ACCORDANCE WITH ACI 315.
19. PERFORM COMPRESSIVE TESTS IN ACCORDANCE WITH ASTM C39. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM SPECIMENS. TEST ONE CYLINDER AT 3 DAYS, ONE CYLINDER AT 7 DAYS, AND TWO (THREE FOR 4"x8" CYLINDERS) CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE. PERFORM SLUMP TESTS IN ACCORDANCE WITH ASTM C143. PERFORM AIR CONTENT TESTS IN ACCORDANCE WITH ASTM C173 OR ASTM C231. SUBMIT ALL TEST DATA TO THE E.O.R.
20. CONSOLIDATE CONCRETE WITH HIGH FREQUENCY, INTERNAL, MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING AND TAMPING. FURNISH A SPARE VIBRATOR ON THE JOB SITE WHENEVER CONCRETE IS PLACED. OPERATE VIBRATORS WITH VIBRATORY ELEMENT SUBMERGED IN THE CONCRETE, WITH A MINIMUM FREQUENCY OF NOT LESS THAN 6000 IMPULSES PER MINUTE WHEN SUBMERGED. INSERT AND WITHDRAW VIBRATORS AT INTERVALS APPROXIMATELY 18 INCHES APART.
21. ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920, TYPE S, GRADE P, CLASS 25. JOINT SEALANT IN CONTACT WITH POTABLE WATER SHALL BE NSF 61 APPROVED.
22. CONTROLLED DENSITY FILL SHALL BE IN ACCORDANCE WITH SPECIFICATION 033110.
23. CRYSTALLINE WATERPROOFING ADMIXTURES SHALL BE IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000 AND THE CRYSTALLINE WATERPROOFING SPECIFICATION 071616. APPLICABLE LOCATIONS:
    - MICROSCREEN CHANNELS
    - WET WELLS
    - DRY WELL
    - SPLITTER BOX
    - ANOXIC TANKS
    - AEROBIC TANKS
    - DISTRIBUTION CHANNEL
    - MBR TRAINS

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SYSTEMS INCLUDING MATERIALS, INSTALLATION, WORKMANSHIP, FABRICATION, ASSEMBLY, ERECTION, INSPECTION, QUALITY CONTROL, AND TESTING SHALL BE PROVIDED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
2. ALL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:
   - W SHAPES: ASTM A992, Fy = 50KSI
   - HSS: ASTM A500 GR. C, Fy = 50KSI
   - PLATES AND OTHER STEEL SHAPES: ASTM A36, Fy = 36KSI
3. ALL HOLES IN STEEL SHALL BE STANDARD SIZE 1/16" LARGER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE DRILLED OR PUNCHED. BURNING IS NOT ALLOWED. COLUMN BASEPLATE HOLES FOR ANCHOR BOLTS ARE PERMITTED TO BE OVERSIZED.
4. COPES SHALL BE PROVIDED WITH 1/2" RADIUS MINIMUM, SMOOTH CORNERS, AND FREE OF NOTCHES. DEPTH AND LENGTH OF COPES SHALL BE AS INDICATED.
5. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL CONFORM TO ASTM A325, EXCEPT ANCHOR BOLTS SHALL CONFORM TO ASTM F1554. ALL NUTS SHALL CONFORM TO ASTM A563, GRADE AND STYLE FOR APPLICABLE ASTM BOLT STANDARD. ALL WASHERS SHALL CONFORM TO ASTM F436 FOR ASTM A325 BOLTS AND F1554 ANCHOR BOLTS.
6. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE SNUG-TIGHT. BOLTS SPECIFIED AS PRE-TENSIONED (PT) SHALL BE PRE-TENSIONED USING THE TURN-OF-NUT METHOD. CONNECTIONS SPECIFIED AS SLIP-CRITICAL (SC) SHALL HAVE BOLTS PRE-TENSIONED USING THE TURN-OF-NUT METHOD AND FAYING SURFACES PREPARED IN ACCORDANCE WITH THE CLASSIFICATION INDICATED. BOLTS INDICATED TO USE A JAM NUT SHALL BE INSTALLED USING THE FOLLOWING SEQUENCE:
   - INSTALL THIN NUT (JAM NUT) FIRST AND TORQUE TO 50% OF TORQUE VALUE
   - INSTALL THICK NUT (STANDARD HEX) SECOND AND TORQUE TO 100% OF TORQUE VALUE WHILE HOLDING THE JAM NUT TO PREVENT ROTATION
7. STEEL DETAILER SHALL PROVIDE CONNECTION DESIGN IN ACCORDANCE WITH ANSI/AISC 303. DETAILER SHALL SELECT AND COMPLETE CONNECTIONS USING SCHEMATIC DETAILS INDICATED ON PLANS AND ANSI/AISC 360.
8. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ALL STRUCTURAL STEEL FASTENERS (INCLUDING NUTS, BOLTS, WASHERS, ETC.) SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153. REPAIR AREAS OF DAMAGED GALVANIZATION IN ACCORDANCE WITH ASTM A780.
9. UNLESS NOTED OTHERWISE, ALL MBR ENCLOSURE COLUMNS SHALL BE PROVIDED WITH A ½" THICK CAP PLATE.
10. STEEL GRATING SHALL BE GALVANIZED SGW-150 BY MCNICHOLS OR APPROVED EQUAL.

STEEL JOISTS NOTES:

1. STEEL JOISTS SHALL BE DESIGNED, FABRICATED, AND INSTALLED IN ACCORDANCE WITH STEEL JOIST INSTITUTE (SJI) "STANDARD SPECIFICATIONS LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS" LATEST EDITION AND SJI "CODE OF STANDARD PRACTICE" LATEST EDITION.
2. STEEL JOIST FABRICATOR SHALL SUPPLY AN AFFIDAVIT STATING COMPLIANCE WITH ALL APPLICABLE AISC, SJI AND AISI REQUIREMENTS.
3. STEEL JOIST SUPPLIER MUST BE A MEMBER OF SJI.
4. ALL STEEL JOISTS SHALL BE BRACED IN ACCORDANCE WITH SJI. JOIST BRIDGING SHALL BE FURNISHED BY THE JOIST MANUFACTURER.
5. JOIST LAYOUTS SHOWN ON PLANS ARE CONCEPTUAL, WITH MAXIMUM SPACING AS INDICATED, ACTUAL JOIST LAYOUT SHALL BE PER APPROVED SHOP DRAWINGS.
6. UNLESS NOTED OTHERWISE ALL STEEL JOISTS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.
7. UNLESS OTHERWISE NOTED, ALL M.E.P. FIXTURES SUPPORTED BELOW JOISTS SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS.

WELDING NOTES:

1. ALL WELDING SHALL BE CONDUCTED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1, LATEST EDITION FOR STRUCTURAL STEEL AND AWS D1.3, LATEST EDITION FOR STRUCTURAL SHEET STEEL.
2. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR PROTECTING EXISTING EQUIPMENT, MATERIALS, BUILDING STRUCTURES, AND BUILDING COMPONENTS DURING ANY FIELD WELDING OPERATIONS.
3. WELDS OF HEADED STUDS SHALL MATCH STRENGTH OF STUDS.

GEOTECHNICAL NOTES:

1. THE FOLLOWING BEARING PRESSURE VALUES WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - MAX NET ALLOWABLE BEARING OF UNDISTURBED NATIVE SOIL: 4000PSF
   - MAX NET ALLOWABLE BEARING OF SHALE OR SANDSTONE BEDROCK: 8000PSF
2. BOTTOM OF EXCAVATION IS DEFINED AS THE ELEVATION BENEATH THE SUBBASE. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
3. IF UNSUITABLE MATERIAL IS ENCOUNTERED AT OR UNDER THE PROPOSED BOTTOM OF EXCAVATION, THE UNSUITABLE MATERIAL SHALL BE REMOVED FROM WITHIN THE ZONE OF INFLUENCE OF THE BEARING ELEMENT AND REPLACED IN ACCORDANCE WITH NOTE 4.
4. ZONE OF INFLUENCE IS DEFINED AS A 1V:1H PLANE EXTENDING DOWNWARD FROM THE BOTTOM PERIMETER OF THE FOUNDATION ELEMENT TO WITHIN A SUITABLE DISTANCE BELOW, TO BE DETERMINED BY THE ENGINEER OF RECORD (E.O.R.) BASED ON FIELD CONDITIONS AND MATERIAL TYPE.
5. OVER EXCAVATION IS DEFINED AS ANY EXCAVATION BELOW THE PROPOSED BOTTOM OF EXCAVATION IDENTIFIED ON THE PLANS OR AS DESCRIBED WITHIN THE PROJECT SPECIFICATIONS; OVER EXCAVATION SHALL BE RE-ESTABLISHED AS FOLLOWS:
   - BENEATH FOUNDATIONS AND SLABS-ON-GRADE: COMPACTED SELECT FILL
   - BENEATH TANKS: CONTROLLED DENSITY FILL
6. SELECT FILL SHALL BE UTILIZED FOR BACKFILL OF ALL STRUCTURES (UNLESS OTHERWISE NOTED).
7. THE MINIMUM SELECT FILL PROPERTIES LISTED BELOW WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - UNIT WEIGHT = 130 PSF
   - FRICTION ANGLE = 35°
   - Ka = 0.27
   - Ko = 0.43
   - Kp = 3.69
8. THE CONTRACTOR SHALL SUBMIT DESIRED BACKFILL MATERIAL SPECIFICATION MEETING ALL DESIGN CRITERIA LISTED ABOVE, AT A MINIMUM, TO THE ENGINEER OF RECORD PRIOR TO USE ON SITE. ALTERNATIVELY, THE CONTRACTOR SHALL ELECT TO PERFORM A FIELD PROCTOR OF THE EXISTING SITE SOILS TO VERIFY THAT EXISTING SOILS MEET THE MINIMUM DESIGN VALUES STATED ABOVE.
9. IN-SITU COMPACTION TESTING OF SUBGRADE AND BACKFILL MATERIAL SHALL BE PERFORMED BY THE OWNER'S SPECIAL INSPECTOR.
10. FOR ADDITIONAL GEOTECHNICAL INFORMATION, SEE THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY TECTONIC PROVIDED IN THE CONTRACT.

TRUSS NOTES:

1. ALL TRUSSES SHALL BE DESIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK. ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:

   GROUND SNOW LOAD = 30 PSF
   FLAT ROOF SNOW LOAD = 22 PSF
   UNBALANCED SNOW LOAD SHALL BE PER ASCE-7, LATEST EDITION
   DEAD LOAD TOP CHORD = 10 PSF
   LIVE LOAD BOTTOM CHORD = 10 PSF
   DEAD LOAD BOTTOM CHORD = 10 PSF
   UPLIFT FROM WIND = 26 PSF
   CARBON STEEL PIPE LOAD = 60PLF

2. LOADS DO NOT INCLUDE TRUSS SELF WEIGHT. LOADS DO NOT INCLUDE NON-UNIFORM OR UNBALANCED SNOW LOADS. CARBON STEEL PIPE LOADS WILL BE MODELED AS POINT LOADS SUPPORTED BY THE TRUSS VIA HANGERS. EACH HANGER SHALL BE SUPPORTED BY A MINIMUM OF 3 TRUSSES. TRUSSES SHALL BE DESIGNED UTILIZING THE REQUIREMENTS OF ASCE-7; LATEST ADDITION FOR UNBALANCED SNOW LOADS.
3. EACH TRUSS SHALL BE RESTRAINED AGAINST UPLIFT UTILIZING AN APPROVED CLIP WITH A MINIMUM CAPACITY OF 500 LBS.
4. UNLESS NOTED OTHERWISE ALL TRUSSES AND THEIR CONNECTIONS SHALL BE GALVANIZED AND SHALL COMPLY WITH THE REQUIREMENTS OF AISI SPECIFICATION FOR THE DESIGN OF COLD FORM STEEL STRUCTURAL MEMBERS, LATEST EDITION.
5. TRUSS LAYOUTS SHOWN ON PLANS ARE CONCEPTUAL, WITH MAXIMUM SPACING AS INDICATED, ACTUAL TRUSS LAYOUT SHALL BE PER APPROVED SHOP DRAWINGS.

AISI COLD FORMED FRAMING NOTES:

1. METAL STUD SIZES SHOWN ON PLANS AND DETAILS ARE BASED ON CLARKDIETRICH GALVANIZED STEEL STUDS. ALL FRAMING MATERIALS AND CONNECTIONS SHALL BE EQUIVALENT TO THOSE MANUFACTURED BY CLARKDIETRICH. ALL STUDS AND THEIR CONNECTIONS SHALL BE GALVANIZED AND SHALL COMPLY WITH THE REQUIREMENTS OF AISI SPECIFICATION FOR THE DESIGN OF COLD FORM STEEL STRUCTURAL MEMBERS, LATEST EDITION.
2. METAL PURLIN AND GIRT SIZES SHOWN ON PLANS AND DETAILS ARE BASED ON FLEXOSPAN GALVANIZED STEEL FRAMING. ALL FRAMING MATERIALS AND CONNECTIONS SHALL BE EQUIVALENT TO THOSE MANUFACTURED BY FLEXOSPAN. ALL ROOF FRAMING MEMBERS AND THEIR CONNECTIONS SHALL BE GALVANIZED OR PAINTED AND SHALL COMPLY WITH THE REQUIREMENTS OF AISI SPECIFICATION FOR THE DESIGN OF COLD FORM STEEL STRUCTURAL MEMBERS, LATEST EDITION.
3. ALL METAL STUDS SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI. METAL PURLINS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55 KSI.
4. STEEL STUDS: MANUFACTURER'S STANDARD C-SHAPED STEEL STUDS, OF WEB DEPTHS INDICATED, PUNCHED, WITH STIFFENED FLANGES, AND AS FOLLOWS:
   - MINIMUM BASE-MTAL THICKNESS: 16 GA. (54 MILS)
   - MINIMUM FLANGE WIDTH: 1-5/8 INCHES
5. INSTALL CONTINUOUS U-SHAPED STEEL TRACKS SIZED TO MATCH STUDS. ALIGN TRACKS ACCURATELY AND SECURELY ANCHOR TO SUPPORTING STRUCTURE AT EACH STUD LOCATION. TRACKS SHALL BE UNPUNCHED WITH STRAIGHT FLANGES AND MATCH MINIMUM BASE METAL THICKNESS OF STUDS.
6. FASTEN BOTH FLANGES OF STUDS TO BOTTOM TRACK UNLESS OTHERWISE INDICATED. SPACE STUDS AS FOLLOWS:
   - STUD SPACING: 24" O.C. MAX
7. SET STUDS PLUMB, EXCEPT AS NEEDED FOR DIAGONAL BRACING OR REQUIRED FOR NON-PLUMB WALLS OR WARPED SURFACES AND SIMILAR REQ

NYSBC 2020 STRUCTURAL PROVISIONS (MICROSCREEN BUILDING):

THE STRUCTURE SHOWN HEREON HAS/SHALL BE DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH THE 2020 NEW YORK STATE BUILDING CODE AND ASCE 7-16:

FLOOR LIVE LOAD (L):
SLAB-ON-GRADE: N/A

ROOF LIVE LOAD:
DISTRIBUTED LOAD (L_r) = 20 PSF (SNOW LOAD GOVERNS)
CONCENTRATED LOAD (L) = 2,000 LBS (CONCENTRATED @ ANY POINT ALONG PRIMARY STRUCTURAL ROOF MEMBERS)

ROOF SNOW LOAD (S):
GROUND SNOW LOAD (P_g) = 30 PSF
FLAT ROOF SNOW LOAD (P_f) = 25 PSF
SNOW EXPOSURE FACTOR (C_s) = 0.90
SNOW IMPORTANCE FACTOR (I) = 1.10
THERMAL FACTOR (C_t) = 1.2
SLOPE FACTOR (C_s) = 1.0
UNBALANCED SNOW LOAD = N/A
DRIFT SURCHARGE LOAD = N/A
DRIFT WIDTH = N/A

WIND LOAD (W):
BASIC WIND SPEED (V)= 120 MPH
ASD WIND SPEED (V_{asd}) = 93 MPH
BUILDING CATEGORY = RISK CATEGORY III
WIND EXPOSURE = B
WIND DIRECTIONALITY FACTOR = Kd=0.85
TOPOGRAPHIC FACTOR = Kzt=1.0
GUST FACTOR = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
APPLICABLE. INTERNAL PRESSURE COEFF. = ±0.18
COMPONENTS & CLADDING PRESSURES:

ROOF WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	+16/-34	+16/-32	+16/-29	+16/-27	+16/-27
1'	+16/-20	+16/-20	+16/-20	+16/-20	+16/-20
2	+16/-45	+16/-42	+16/-38	+16/-36	+16/-36
3	+16/-61	+16-56	+16/-48	+16/-42	+16/-42

WALL WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
4	+22/-24	+21/-23	+20/-21	+19/-20	+19/-20
5	+22/-29	+21/-27	+20/-25	+19/-23	+19/-23

OVERHANG WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	-31	-31	-30	-29	-29
1'	-31	-31	-30	-29	-29
2	-42	-38	-33	-29	-29
3	-58	-51	-43	-36	-36

NOTES:
1. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE PROJECTED SURFACE, RESPECTIVELY.
2. WIND PRESSURES SHOWN ARE ULTIMATE AND CAN BE CONVERTED TO SERVICE BY BEING MULTIPLIED BY 0.6
3. JOIST NET UPLIFT LOAD COMBINATION IS 0.9D+W. "D" = 3PSF
4. WIDTH OF PRESSURE COEFFICIENT ZONE, a = 3.00 FT.

SEISMIC DESIGN DATA (E):
OCCUPANCY RISK CATEGORY: III
SEISMIC IMPORTANCE FACTOR: I = 1.25
SITE CLASS: C
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_s = 0.242 AND S_1 = 0.058
SPECTRAL RESPONSE PARAMETERS: S_{DS} = 0.210 AND S_{D1} = 0.058
SEISMIC DESIGN CATEGORY: B
SEISMIC RESPONSE COEFFICIENT: C_S = 0.06
RESPONSE MODIFICATION COEFFICIENT: R = 3.5
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE METHOD
DESIGN BASE SHEAR: V = 13.4K
BASIC SEISMIC FORCE RESISTING SYSTEM: A8, INTERMEDIATE REINFORCED MASONRY SHEAR WALLS

GEOTECHNICAL INFORMATION:
ALLOWABLE SOIL BEARING PRESSURE = 4000 PSF

MICRSCREEN BUILDING ROOF DECK NOTES:

1. STEEL FORM DECK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR FORM DECKS" LATEST EDITION. STEEL FORM DECK SHALL BE PROVIDED WITH A G90 GALVANIZED COATING AND HAVE THE FOLLOWING MINIMUM PROPERTIES:

   POS MOMENT OF INERTIA = 0.155 in4/ft.
   NEG MOMENT OF INERTIA = 0.178 in4/ft.
   GAGE/THICKNESS = 22 ga/ 0.0295 in.
   POSITIVE SECTION MODULUS =0.169 in3/ft
   NEGATIVE SECTION MODULUS = 0.179 in3/ft

2. UNLESS OTHERWISE NOTED, STEEL DECK SHALL BE WELDED TO ALL SUPPORTING STEEL (INCLUDING CONTINUOUS SUPPORTING STEEL AT PERIMETER) AT 1'-0" ON CENTER WITH 5/8"DIAMETER PUDDLE WELDS. DECK UNITS SHALL BE ATTACHED TO ADJACENT UNITS AT SIDELAPS WITH (5) NO.12 STITCH SCREWS PER SPAN EQUALLY SPACED.

3. STEEL DECK SHALL BE VULCRAFT 22 GAGE 1.5B-36 50KSI, OR EQUAL. DECK SHALL BE CAPABLE OF SPANNING 4.0 FEET (MIN).

NYSBC 2020 STRUCTURAL PROVISIONS (MBR ENCLOSURE):

THE STRUCTURE SHOWN HEREON HAS/SHALL BE DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH THE 2020 NEW YORK STATE BUILDING CODE AND ASCE 7-16:

FLOOR LIVE LOAD (L):
SLAB-ON-GRADE: N/A
SUSPENDED SLAB: 100PSF

ROOF LIVE LOAD:
DISTRIBUTED LOAD (L_r) = 20 PSF (SNOW LOAD GOVERNS)
CONCENTRATED LOAD (L) = 2,000 LBS (CONCENTRATED @ ANY POINT ALONG PRIMARY STRUCTURAL ROOF MEMBERS)

ROOF SNOW LOAD (S):
GROUND SNOW LOAD (P_g) = 30 PSF
FLAT ROOF SNOW LOAD (P_f) = 25 PSF
SNOW EXPOSURE FACTOR (C_s) = 0.90
SNOW IMPORTANCE FACTOR (I) = 1.10
THERMAL FACTOR (C_t) = 1.2
SLOPE FACTOR (C_s) = 1.0
UNBALANCED SNOW LOAD = N/A
DRIFT SURCHARGE LOAD = N/A
DRIFT WIDTH = N/A

WIND LOAD (W):
BASIC WIND SPEED (V)= 120 MPH
ASD WIND SPEED (V_{asd}) = 93 MPH
BUILDING CATEGORY = RISK CATEGORY III
WIND EXPOSURE = B
WIND DIRECTIONALITY FACTOR = Kd=0.85
TOPOGRAPHIC FACTOR = Kzt=1.0
GUST FACTOR = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
APPLICABLE. INTERNAL PRESSURE COEFF. = ±0.18
COMPONENTS & CLADDING PRESSURES:

ROOF WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	+16/-42	+16/-39	+16/-35	+16/-33	+16/-33
1'	+16/-24	+16/-24	+16/-24	+16/-24	+16/-24
2	+16/-55	+16/-51	+16/-47	+16/-43	+16/-43
3	+16/-75	+16/-68	+16/-58	+16/-51	+16/-51

WALL WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
4	+26/-29	+25/-27	+24/-26	+22/-25	+22/-25
5	+26/-35	+25/-33	+24/-30	+22/-27	+22/-27

NOTES:
1. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE PROJECTED SURFACE, RESPECTIVELY.
2. WIND PRESSURES SHOWN ARE ULTIMATE AND CAN BE CONVERTED TO SERVICE BY BEING MULTIPLIED BY 0.6
3. JOIST NET UPLIFT LOAD COMBINATION IS 0.9D+W. "D" = 3 PSF
4. WIDTH OF PRESSURE COEFFICIENT ZONE, a = 4.80 FT.

SEISMIC DESIGN DATA (E):
OCCUPANCY RISK CATEGORY: III
SEISMIC IMPORTANCE FACTOR: I = 1.25
SITE CLASS: C
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_s = 0.242 AND S_1 = 0.058
SPECTRAL RESPONSE PARAMETERS: S_{DS} = 0.210 AND S_{D1} = 0.058
SEISMIC DESIGN CATEGORY: B
SEISMIC RESPONSE COEFFICIENT: C_S = 0.09 (STEEL), 0.07 (CONCRETE)
RESPONSE MODIFICATION COEFFICIENT: R = 3 (STEEL), 4 (CONCRETE)
ANALYSIS PROCEDURE: TWO-STAGE EQUIVALENT LATERAL FORCE METHOD
DESIGN BASE SHEAR: V = 20.5K (STEEL), 57.0K (CONCRETE)
BASIC SEISMIC FORCE RESISTING SYSTEMS:
- H, STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC
- A2, ORDINARY REINFORCED CONCRETE SHEAR WALLS

GEOTECHNICAL INFORMATION:
ALLOWABLE SOIL BEARING PRESSURE = 4000 PSF

MBR ENCLOSURE ROOF DECK NOTES:

1. STEEL FORM DECK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR FORM DECKS" LATEST EDITION. STEEL FORM DECK SHALL BE PROVIDED WITH A G90 GALVANIZED COATING AND HAVE THE FOLLOWING MINIMUM PROPERTIES:

   POS MOMENT OF INERTIA = 0.277 in4/ft.
   NEG MOMENT OF INERTIA = 0.290 in4/ft.
   GAGE/THICKNESS = 18 ga/ 0.0474 in.
   POSITIVE SECTION MODULUS =0.306 in3/ft
   NEGATIVE SECTION MODULUS = 0.318 in3/ft

2. UNLESS OTHERWISE NOTED, STEEL DECK SHALL BE WELDED TO ALL SUPPORTING STEEL (INCLUDING CONTINUOUS SUPPORTING STEEL AT PERIMETER) AT 1'-0" ON CENTER WITH 5/8"DIAMETER PUDDLE WELDS. DECK UNITS SHALL BE ATTACHED TO ADJACENT UNITS AT SIDELAPS WITH (5) NO.12 STITCH SCREWS PER SPAN EQUALLY SPACED.

3. STEEL DECK SHALL BE VULCRAFT 18 GAGE 1.5B-36 50KSI, OR EQUAL. DECK SHALL BE CAPABLE OF SPANNING 4.0 FEET (MIN).

MBR BASIN MEZZANINE CONCRETE DECK NOTES:

1. STEEL FORM DECK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR FORM DECKS" LATEST EDITION. STEEL FORM DECK SHALL BE PROVIDED WITH A G90 GALVANIZED COATING AND HAVE THE FOLLOWING MINIMUM PROPERTIES:

   POS MOMENT OF INERTIA = 0.041 in4/ft.
   NEG MOMENT OF INERTIA = 0.043 in4/ft.
   GAGE/THICKNESS = 26 ga/ 0.0179 in.
   POSITIVE SECTION MODULUS =0.067 in3/ft
   NEGATIVE SECTION MODULUS = 0.071 in3/ft

2. UNLESS OTHERWISE NOTED, STEEL DECK SHALL BE WELDED TO ALL SUPPORTING STEEL (INCLUDING CONTINUOUS SUPPORTING STEEL AT PERIMETER) AT 1'-0" ON CENTER WITH 5/8"DIAMETER PUDDLE WELDS. DECK UNITS SHALL BE ATTACHED TO ADJACENT UNITS AT SIDELAPS WITH (5) NO.12 STITCH SCREWS PER SPAN EQUALLY SPACED.

3. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CLOSURE PLATES FOR STEEL DECK PRIOR TO PLACING CONCRETE.

4. STEEL DECK SHALL BE VULCRAFT 26 GAGE 1.0C-32 80KSI, OR EQUAL. DECK SHALL BE CAPABLE OF SPANNING 2 FEET (MIN) WITH THE USE OF NORMAL WEIGHT CONCRETE.

MBR BRIDGE CRANE DESIGN NOTES:

1. THE BRIDGE CRANE SHOWN HEREON SHALL BE DESIGNED USING THE FOLLOWING CRITERIA IN ACCORDANCE WITH ANY/ALL APPLICABLE CODES AND STANDARDS INCLUDING BUT NOT LIMITED TO OSHA, CMAA, ANSI/ASME, NEMA, NEC AND AISC.

2. THE BRIDGE CRANE MANUFACTURER SHALL BE RESPONSIBLE FOR PROVIDING A DETAILED DESIGN OF COMPLETED CRANE SYSTEM INCLUDING BRIDGE, END TRUCKS, TROLLEY, HOIST, CABLING, CONTROLS, RAIL, END STOPS, AND CONNECTION BETWEEN RAIL AND RUNWAY BEAM.

3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO FURNISHING ANY MATERIALS.

4. BRIDGE CRANE DESIGN CRITERIA:
   4.1. SINGLE GIRDER TOP RUNNING CRANE
   4.2. REMOTE OPERATED
   4.3. CRANE RAIL CENTERED ON RUNWAY BEAM
   4.4. BRIDGE SPAN = 45'-6" CENTER-TO-CENTER RUNWAY BEAMS
   4.5. MAX UNFACTORED PICK = 5 TONS (10,000#)
   4.6. MAX HEIGHT OF CRANE COMPONENTS FROM TOP OF RUNWAY BEAM = 6'-8"
   4.7. HOIST SHALL BE CAPABLE OF REACHING ALL LOCATIONS WITHIN THE CRANE COVERAGE AREA AS SHOWN ON THE PLANS
   4.8. HOIST VERTICAL REACH = 31'-0" BELOW TOP OF RUNWAY BEAM
   4.9. CMAA SPECIFICATION #70 CRANE CLASSIFICATION "A"

NYSBC 2020 STRUCTURAL PROVISIONS (MBR CONTROL BUILDING):

THE STRUCTURE SHOWN HEREON HAS/SHALL BE DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH THE 2020 NEW YORK STATE BUILDING CODE AND ASCE 7-16:

FLOOR LIVE LOAD (L):
SLAB-ON-GRADE: N/A
SUSPENDED SLAB: 125PSF

ROOF LIVE LOAD:
DISTRIBUTED LOAD (L_r) = 20 PSF (SNOW LOAD GOVERNS)
CONCENTRATED LOAD (L) = 2,000 LBS (CONCENTRATED @ ANY POINT ALONG PRIMARY STRUCTURAL ROOF MEMBERS)

ROOF SNOW LOAD (S):
GROUND SNOW LOAD (P_g) = 30 PSF
FLAT ROOF SNOW LOAD (P_f) = 25 PSF
SNOW EXPOSURE FACTOR (C_s) = 0.90
SNOW IMPORTANCE FACTOR (I) = 1.10
THERMAL FACTOR (C_t) = 1.2
SLOPE FACTOR (C_s) = 1.0
UNBALANCED SNOW LOAD = N/A
DRIFT SURCHARGE LOAD = 46 PSF
DRIFT WIDTH = 10'-2"

WIND LOAD (W):
BASIC WIND SPEED (V)= 120 MPH
ASD WIND SPEED (V_{asd}) = 93 MPH
BUILDING CATEGORY = RISK CATEGORY III
WIND EXPOSURE = B
WIND DIRECTIONALITY FACTOR = Kd=0.85
TOPOGRAPHIC FACTOR = Kzt=1.0
GUST FACTOR = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
APPLICABLE. INTERNAL PRESSURE COEFF. = ±0.18
COMPONENTS & CLADDING PRESSURES:

ROOF WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	+25/-46	+23/-39	+19/-30	+16/-23	+16/-23
2e	+25/-46	+23/-39	+19/-30	+16/-23	+16/-23
2n	+25/-51	+23/-45	+19/-38	+16/-33	+16/-33
2r	+25/-46	+23/-39	+19/-30	+16/-23	+16/-23
3e	+25/-62	+23/-55	+19/-46	+16/-39	+16/-39
3r	+25/-51	+23/-45	+19/-38	+16/-33	+16/-33

WALL WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
4	+28/-30	+26/-29	+25/-27	+24/-26	+24/-26
5	+28/-37	+26/-35	+25/-31	+24/-29	+24/-29

OVERHANG WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	-51	-48	-43	-40	-40
2e	-65	-60	-53	-47	-47
2n	-65	-60	-53	-47	-47
2r	-51	-48	-43	-40	-40
3e	-76	-69	-60	-53	-53
3r	-65	-60	-53	-47	-47

NOTES:
1. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE PROJECTED SURFACE, RESPECTIVELY.
2. WIND PRESSURES SHOWN ARE ULTIMATE AND CAN BE CONVERTED TO SERVICE BY BEING MULTIPLIED BY 0.6
3. JOIST NET UPLIFT LOAD COMBINATION IS 0.9D+W. "D" = 5 PSF
4. WIDTH OF PRESSURE COEFFICIENT ZONE, a = 5.20 FT.

SEISMIC DESIGN DATA (E):
OCCUPANCY RISK CATEGORY: III
SEISMIC IMPORTANCE FACTOR: I = 1.25
SITE CLASS: C
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_s = 0.242 AND S_1 = 0.058
SPECTRAL RESPONSE PARAMETERS: S_{DS} = 0.210 AND S_{D1} = 0.058
SEISMIC DESIGN CATEGORY: B
SEISMIC RESPONSE COEFFICIENT: C_S = 0.13 (LIGHT-FRAME), 0.07 (CONCRETE)
RESPONSE MODIFICATION COEFFICIENT: R = 2 (LIGHT-FRAME), 4 (CONCRETE)
ANALYSIS PROCEDURE: TWO-STAGE EQUIVALENT LATERAL FORCE METHOD
DESIGN BASE SHEAR: V = 11.3K (LIGHT-FRAME), 49.4K (CONCRETE)
BASIC SEISMIC FORCE RESISTING SYSTEMS:
- A17, LIGHT-FRAME WALLS WITH SHEAR PANELS OF ALL OTHER MATERIALS
- A2, ORDINARY REINFORCED CONCRETE SHEAR WALLS

GEOTECHNICAL INFORMATION:
ALLOWABLE SOIL BEARING PRESSURE = 4000 PSF

MBR CONTROL BUILDING SECOND FLOOR CONCRETE DECK NOTES:

1. STEEL FORM DECK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR FORM DECKS" LATEST EDITION. STEEL FORM DECK SHALL BE PROVIDED WITH A G90 GALVANIZED COATING AND HAVE THE FOLLOWING MINIMUM PROPERTIES:

   POS MOMENT OF INERTIA = 0.041 in4/ft.
   NEG MOMENT OF INERTIA = 0.043 in4/ft.
   GAGE/THICKNESS = 26 ga/ 0.0179 in.
   POSITIVE SECTION MODULUS =0.067 in3/ft
   NEGATIVE SECTION MODULUS = 0.071 in3/ft

2. UNLESS OTHERWISE NOTED, STEEL DECK SHALL BE WELDED TO ALL SUPPORTING STEEL (INCLUDING CONTINUOUS SUPPORTING STEEL AT PERIMETER) AT 1'-0" ON CENTER WITH 5/8"DIAMETER PUDDLE WELDS. DECK UNITS SHALL BE ATTACHED TO ADJACENT UNITS AT SIDELAPS WITH (5) NO.12 STITCH SCREWS PER SPAN EQUALLY SPACED.

3. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CLOSURE PLATES FOR STEEL DECK PRIOR TO PLACING CONCRETE.

4. STEEL DECK SHALL BE VULCRAFT 26 GAGE 1.0C-32 80KSI, OR EQUAL. DECK SHALL BE CAPABLE OF SPANNING 2 FEET (MIN) WITH THE USE OF LIGHT WEIGHT CONCRETE.

RAS BRIDGE CRANE DESIGN NOTES:

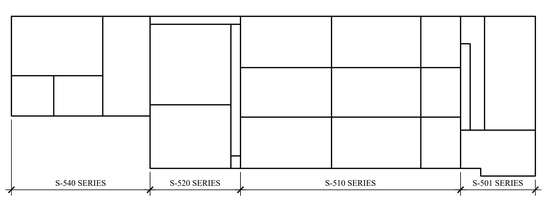
1. THE BRIDGE CRANE SHOWN HEREON SHALL BE DESIGNED USING THE FOLLOWING CRITERIA IN ACCORDANCE WITH ANY/ALL APPLICABLE CODES AND STANDARDS INCLUDING BUT NOT LIMITED TO OSHA, CMAA, ANSI/ASME, NEMA, NEC AND AISC.

2. THE BRIDGE CRANE MANUFACTURER SHALL BE RESPONSIBLE FOR PROVIDING A DETAILED DESIGN OF COMPLETED CRANE SYSTEM INCLUDING BRIDGE, END TRUCKS, TROLLEY, HOIST, CABLING, CONTROLS, RAIL, END STOPS, AND CONNECTION BETWEEN RAIL AND RUNWAY BEAM.

3. SHOP DRAWINGS SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO FURNISHING ANY MATERIALS.

4. BRIDGE CRANE DESIGN CRITERIA:
   4.1. SINGLE GIRDER TOP RUNNING CRANE
   4.2. REMOTE OPERATED
   4.3. CRANE RAIL CENTERED ON RUNWAY BEAM
   4.4. BRIDGE SPAN = 22'-1½" CENTER-TO-CENTER RUNWAY BEAMS
   4.5. MAX UNFACTORED PICK = 2 TONS (4,000#)
   4.6. MAX HEIGHT OF CRANE COMPONENTS FROM TOP OF RUNWAY BEAM = 2'-9"
   4.7. HOIST SHALL BE CAPABLE OF REACHING ALL LOCATIONS WITHIN THE CRANE COVERAGE AREA AS SHOWN ON THE PLANS
   4.8. HOIST VERTICAL REACH = 27'-4" BELOW TOP OF RUNWAY BEAM
   4.9. CMAA SPECIFICATION #70 CRANE CLASSIFICATION "A"

MBR COMPLEX KEY PLAN



MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

500 SERIES STRUCTURAL NOTES CONTINUED

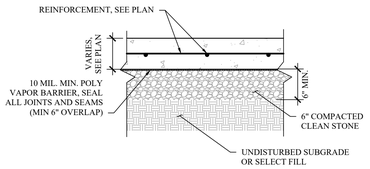
REVISIONS

NO.	DESCRIPTION	DATE

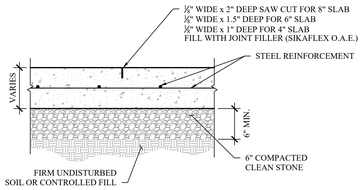
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-500B

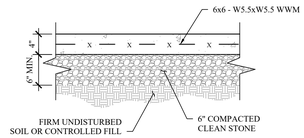
PROJECT # 18-732 PHASE #



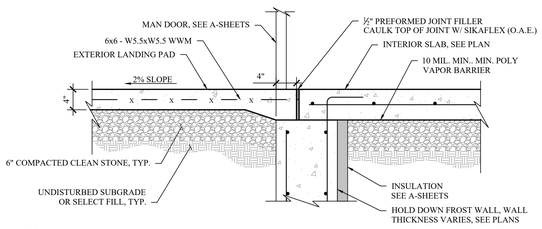
1 S-500C TYPICAL INTERIOR SLAB-ON-GRADE
SCALE: 1" = 1'-0"



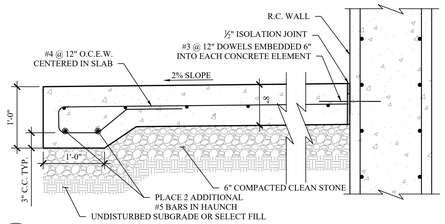
2 S-500C TYPICAL CONTROL JOINT
SCALE: 1" = 1'-0"



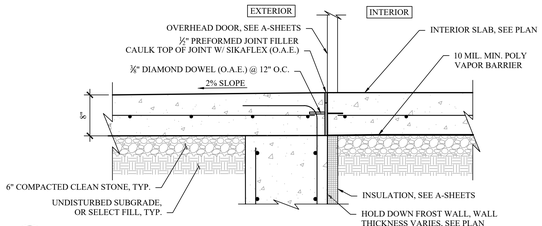
3 S-500C TYPICAL LANDING PAD
SCALE: 1" = 1'-0"



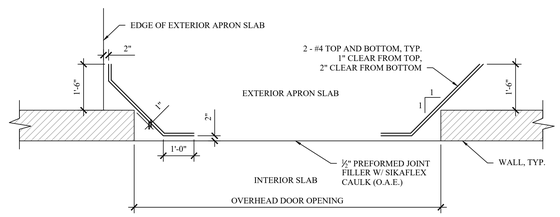
4 S-500C TYPICAL LANDING PAD TRANSITION AT MAN DOOR
SCALE: 1" = 1'-0"



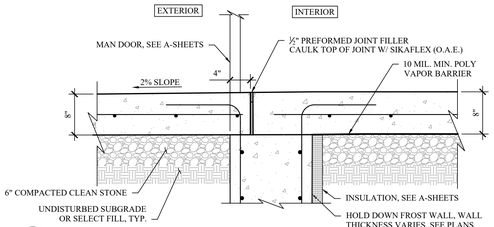
5 S-500C TYPICAL APRON SLAB
SCALE: 1" = 1'-0"



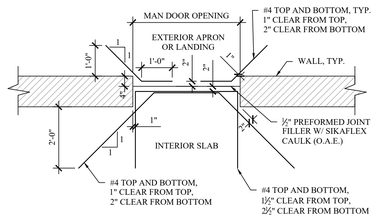
6 S-500C TYPICAL APRON SLAB TRANSITION AT OVERHEAD DOOR
SCALE: 1" = 1'-0"



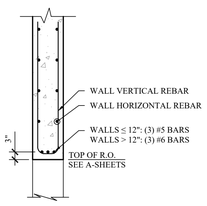
7 S-500C TYPICAL OVERHEAD DOOR SLAB REINF.
SCALE: N.T.S.



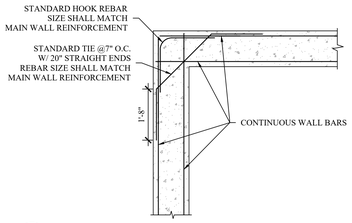
8 S-500C TYPICAL APRON SLAB TRANSITION AT MAN DOOR
SCALE: 1" = 1'-0"



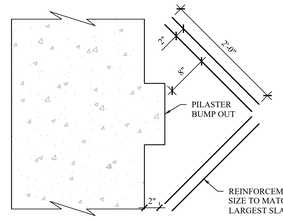
9 S-500C TYPICAL MAN DOOR SLAB REINF.
SCALE: N.T.S.



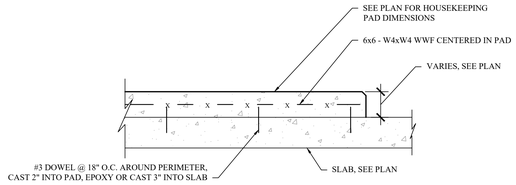
10 S-500C TYPICAL R.C. WALL R.O. REINF.
SCALE: 1/2" = 1'-0"



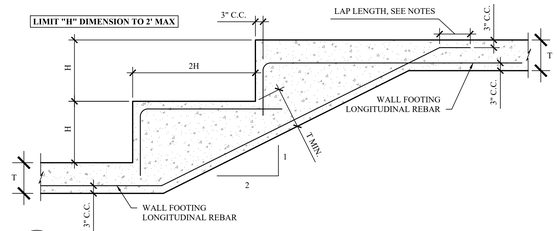
11 S-500C TYPICAL R.C. WALL CORNER REINF.
SCALE: 1/2" = 1'-0"



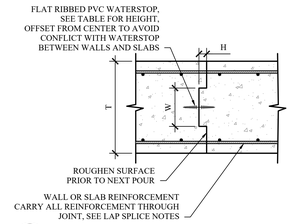
12 S-500C TYPICAL SLAB REINF. AT PILASTER
SCALE: 1" = 1'-0"



13 S-500C TYPICAL HOUSEKEEPING PAD
SCALE: 1" = 1'-0"

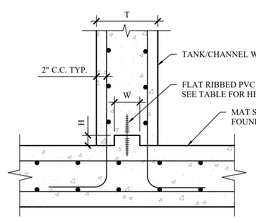


14 S-500C TYPICAL WALL FOOTING STEP
SCALE: 1/2" = 1'-0"



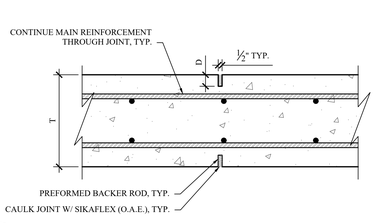
KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"

15 S-500C TYPICAL TANK WALL/MAT SLAB CONSTRUCTION JOINT
SCALE: N.T.S.



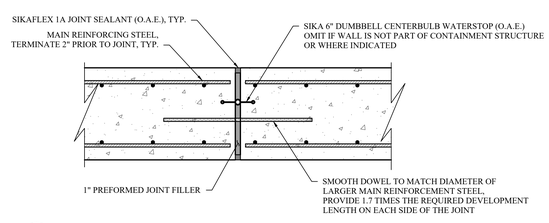
KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"

16 S-500C TYPICAL TANK/ CHANNEL KEY AND WATERSTOP
SCALE: N.T.S.

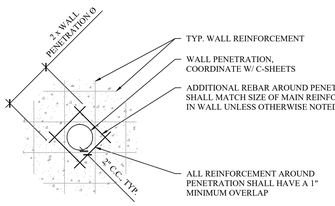


CONTRACTION JOINT NOTCH DEPTH	
T (IN)	D (IN)
8	1
12	1½
16	2

17 S-500C TYPICAL R.C. WALL CONTRACTION JOINT
SCALE: N.T.S.



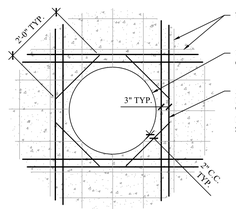
18 S-500C TYPICAL R.C. WALL EXPANSION JOINT
SCALE: N.T.S.



19 S-500C TYPICAL SMALL CIRCULAR WALL PENETRATION REINFORCEMENT (DIA. < 18")
SCALE: 1/2" = 1'-0"

SMALL PIPE PENETRATION REINFORCEMENT NOTES
1. ADDITIONAL PENETRATION REINFORCEMENT SHALL BE OF THE SIZE OF WALL REBAR INTERRUPTED BY THE PENETRATION.

2. IF THE BOTTOM OF THE WALL IS WITHIN 12" OF EDGE OF PENETRATION, LOWER REINFORCEMENT STEEL SHALL BE ORIENTED VERTICALLY AND HOOKED INTO FOUNDATION.



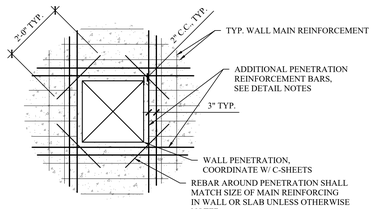
20 S-500C TYPICAL LARGE CIRCULAR WALL PENETRATION REINFORCEMENT (DIA. ≥ 18")
SCALE: 1/2" = 1'-0"

LARGE PIPE PENETRATION REINFORCEMENT NOTES
1. ADDITIONAL PENETRATION REINFORCEMENT SHALL BE OF THE SIZE OF WALL REBAR INTERRUPTED BY THE PENETRATION.

2. TOTAL AMOUNT OF VERTICAL OR HORIZONTAL REBAR SHALL BE THE SUM OF THE BARS INTERRUPTED BY THE PENETRATION, EVENLY SPLIT BETWEEN BOTH SIDES OF THE OPENING.

3. THE PENETRATION REINFORCEMENT SHALL HAVE A SPACING OF 3" BETWEEN REBAR. IF PENETRATION REINFORCEMENT CONFLICTS WITH WALL REINFORCEMENT, THE PENETRATION REINFORCEMENT SHALL BE PLACED AWAY FROM THE WALL REINFORCEMENT UTILIZING 3" SPACING.

4. IF THE BOTTOM OF THE WALL IS WITHIN 12" OF EDGE OF PENETRATION, OMIT ADDITIONAL BOTTOM PENETRATION STEEL AND HOOK SIDE PENETRATION STEEL INTO FOUNDATION.



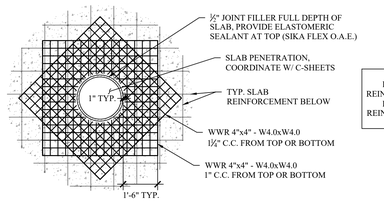
SQUARE PENETRATION REINFORCEMENT NOTES
1. ADDITIONAL PENETRATION REINFORCEMENT SHALL BE OF THE SIZE OF WALL REBAR INTERRUPTED BY THE PENETRATION.

2. TOTAL AMOUNT OF VERTICAL OR HORIZONTAL REBAR SHALL BE THE SUM OF THE BARS INTERRUPTED BY THE PENETRATION, EVENLY SPLIT BETWEEN BOTH SIDES OF THE OPENING.

3. THE PENETRATION REINFORCEMENT SHALL HAVE A SPACING OF 3" BETWEEN REBAR. IF PENETRATION REINFORCEMENT CONFLICTS WITH WALL REINFORCEMENT, THE PENETRATION REINFORCEMENT SHALL BE PLACED AWAY FROM THE WALL REINFORCEMENT UTILIZING 3" SPACING.

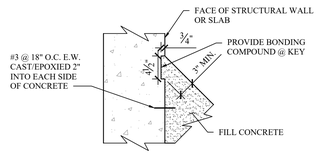
4. IF THE BOTTOM OF THE WALL IS WITHIN 12" OF EDGE OF PENETRATION, OMIT ADDITIONAL BOTTOM PENETRATION STEEL AND HOOK SIDE PENETRATION STEEL INTO FOUNDATION.

21 S-500C TYPICAL SQUARE WALL PENETRATION REINFORCEMENT
SCALE: 1/2" = 1'-0"

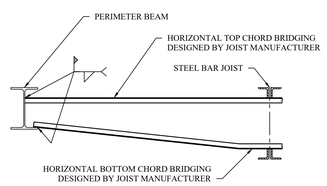


NOTE:
FOR SLABS < 6" THICK, PROVIDE REINFORCEMENT ON TOP SIDE OF SLAB.
FOR SLABS ≥ 6" THICK, PROVIDE REINFORCEMENT ON TOP AND BOTTOM SIDE OF SLAB.

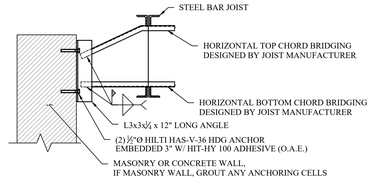
22 S-500C TYPICAL CIRCULAR SLAB PENETRATION REINFORCEMENT
SCALE: 3/8" = 1'-0"



23 S-500C TYPICAL FILL CONCRETE KEY
SCALE: 1" = 1'-0"



24 S-500C JOIST BRIDGING STEEL TERMINATION
SCALE: 1" = 1'-0"



25 S-500C JOIST BRIDGING WALL TERMINATION
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

500 SERIES TYPICAL DETAILS

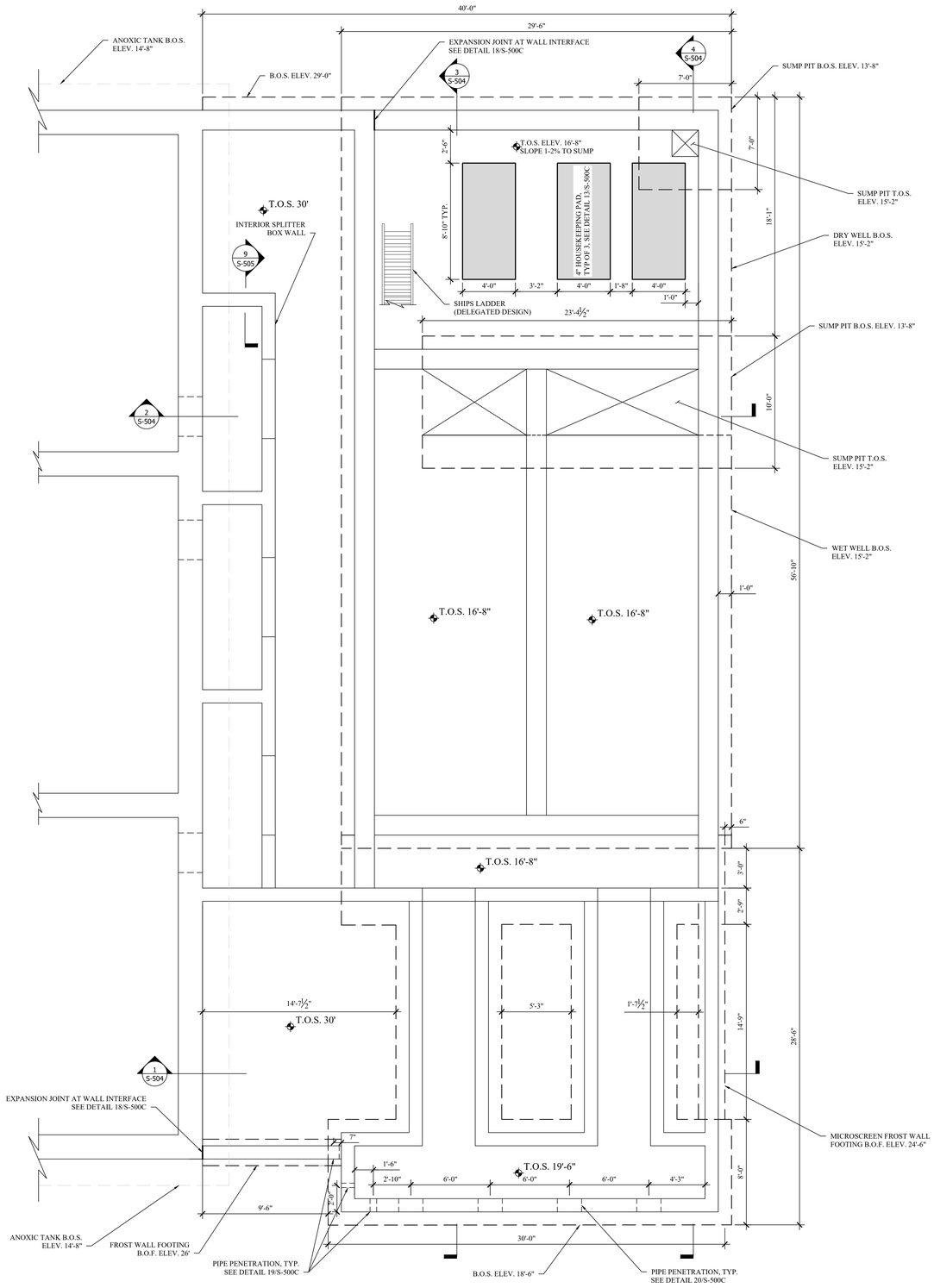
REVISIONS

NO.	DESCRIPTION	DATE

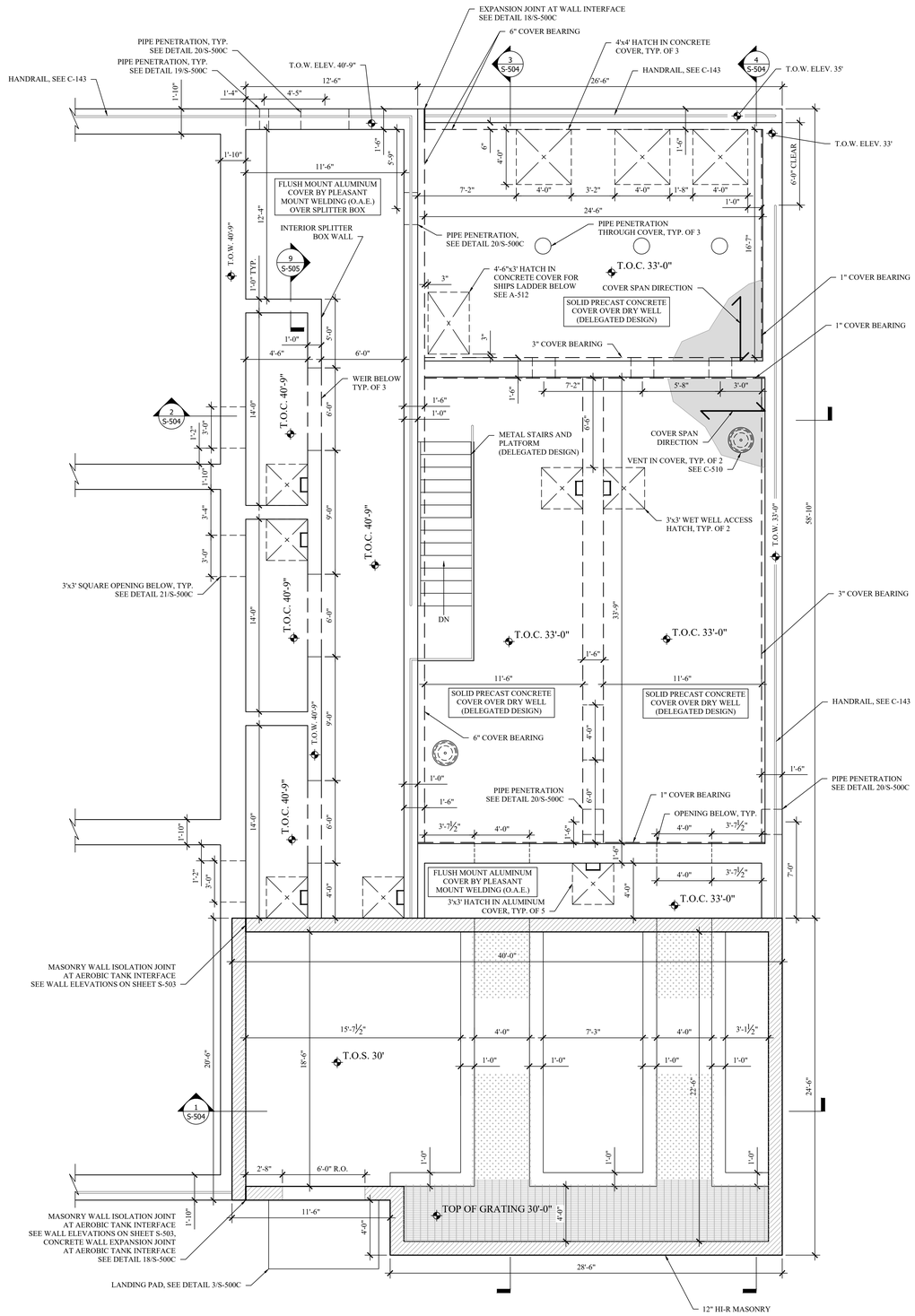
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-500C

PROJECT # 18-732 PHASE #



1 S-501 FOUNDATION AND SLAB PLAN
SCALE: 1/4" = 1'-0"



2 S-501 WALL AND COVER PLAN
SCALE: 1/4" = 1'-0"

T.O.C. = TOP OF COVER

KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN AND INFLUENT TANK PLANS

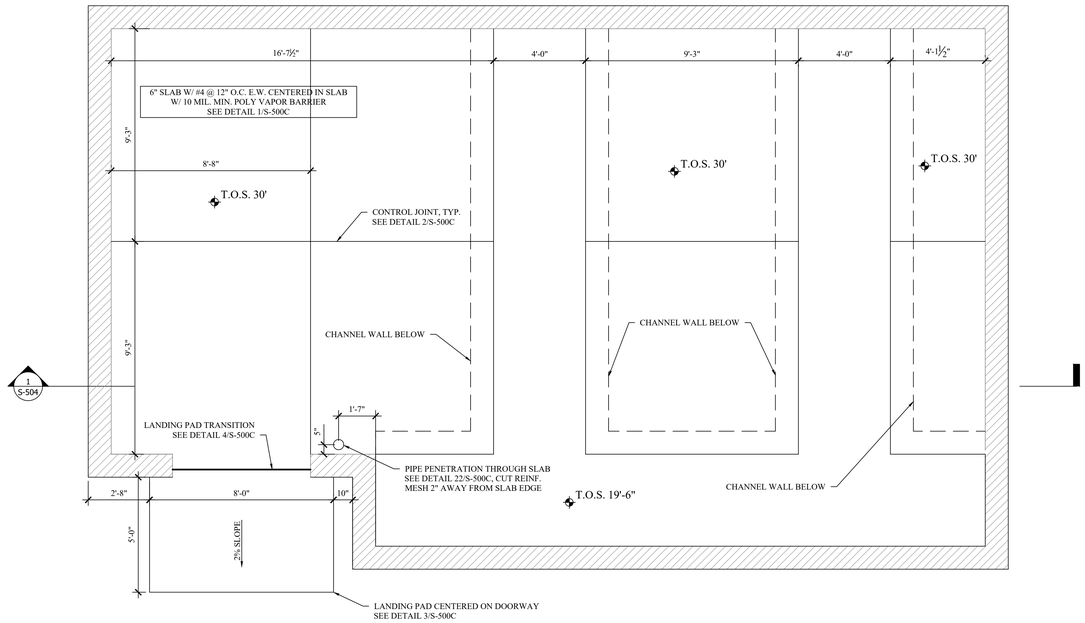
REVISIONS

NO.	DESCRIPTION	DATE

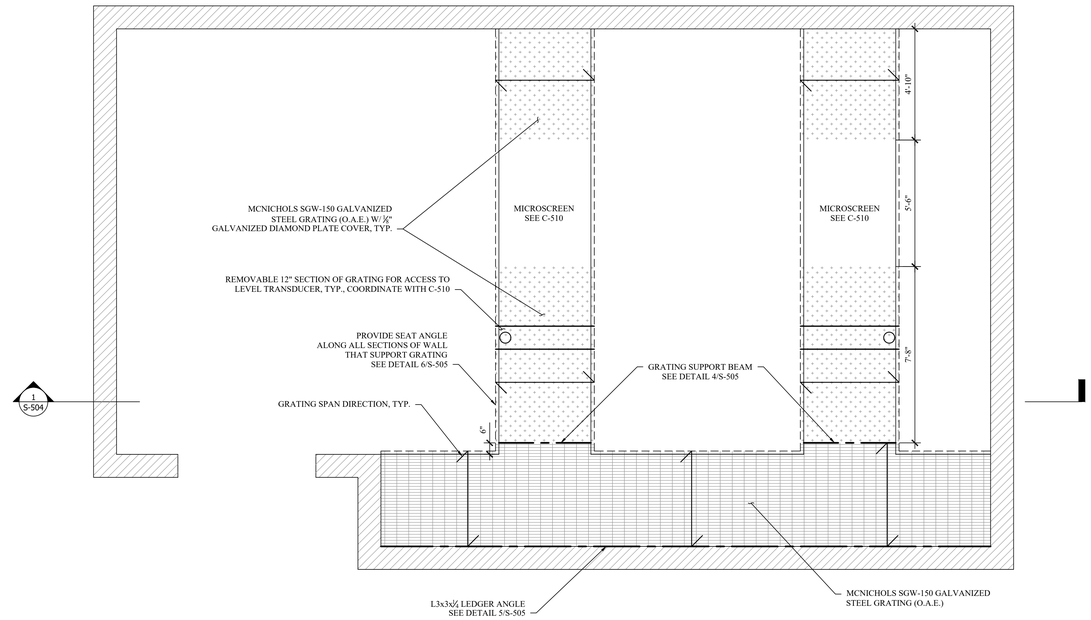
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-501

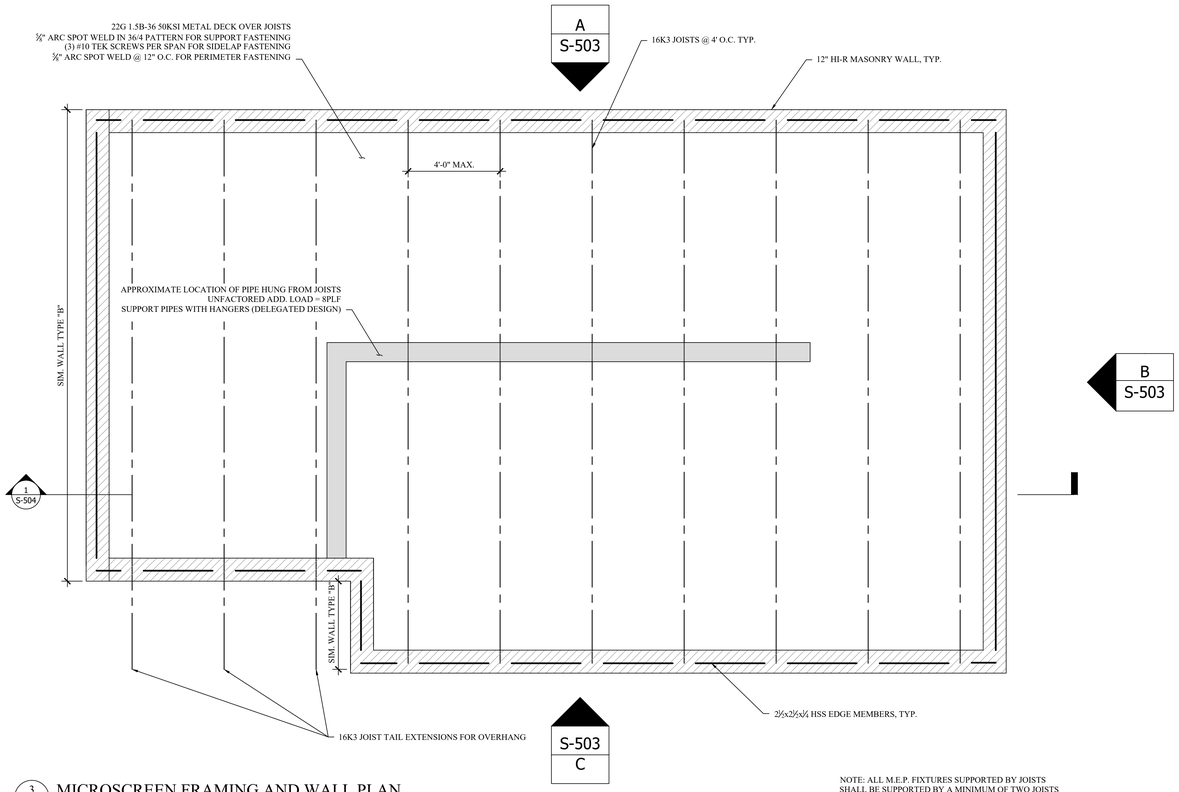
PROJECT # 18-732 PHASE #



1 S-502 MICROSCREEN SLAB PLAN
SCALE: 3/8" = 1'-0"

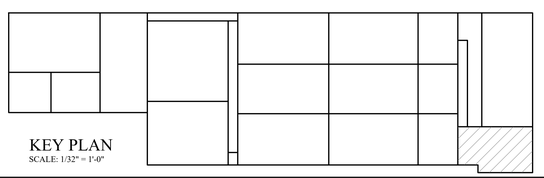


2 S-502 MICROSCREEN GRATING PLAN
SCALE: 3/8" = 1'-0"



3 S-502 MICROSCREEN FRAMING AND WALL PLAN
SCALE: 3/8" = 1'-0"

NOTE: ALL M.E.P. FIXTURES SUPPORTED BY JOISTS
SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN PLANS

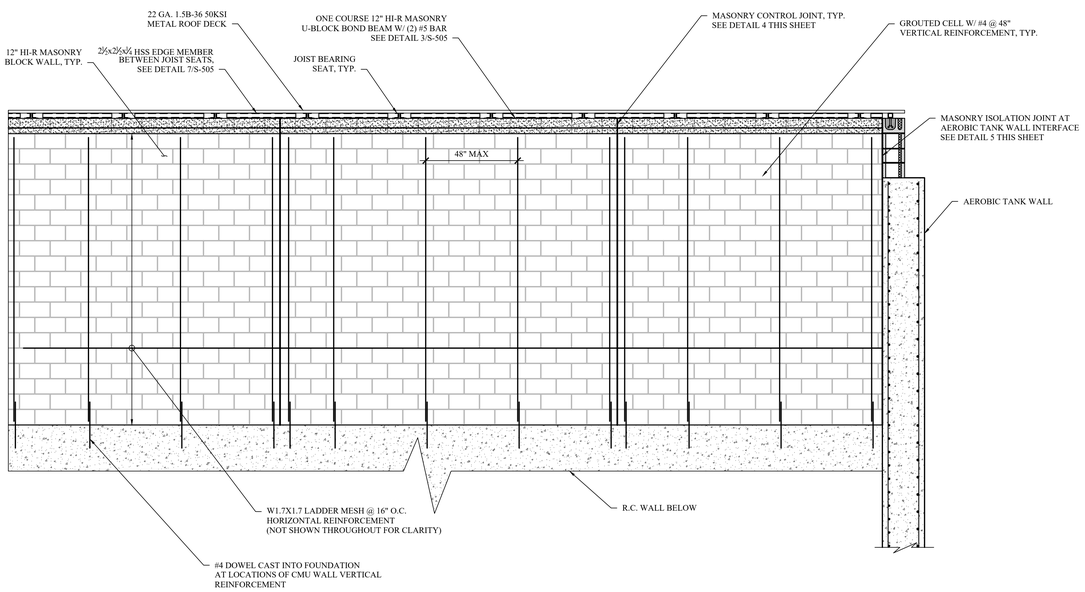
REVISIONS

NO.	DESCRIPTION	DATE

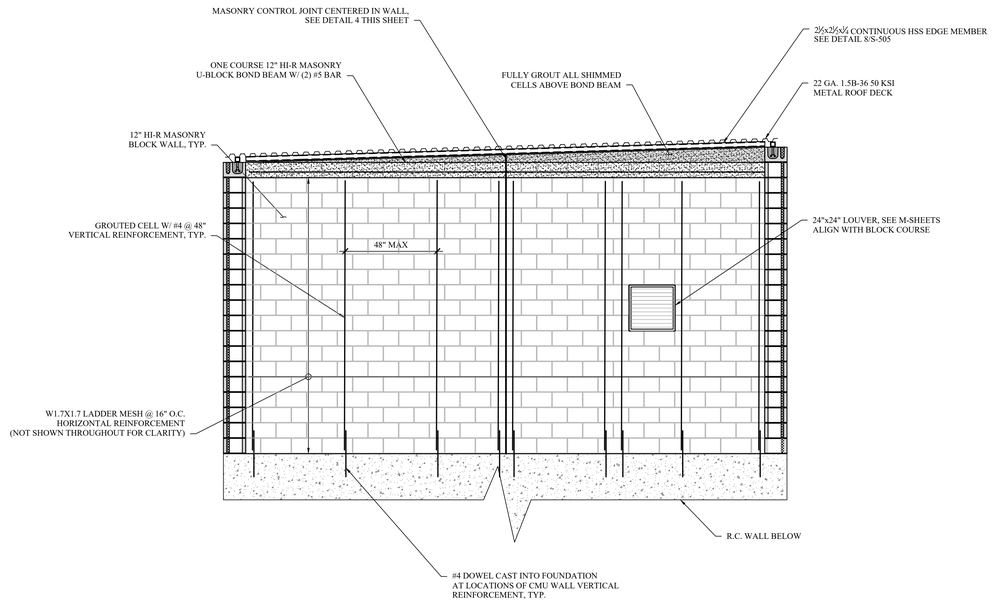
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-502

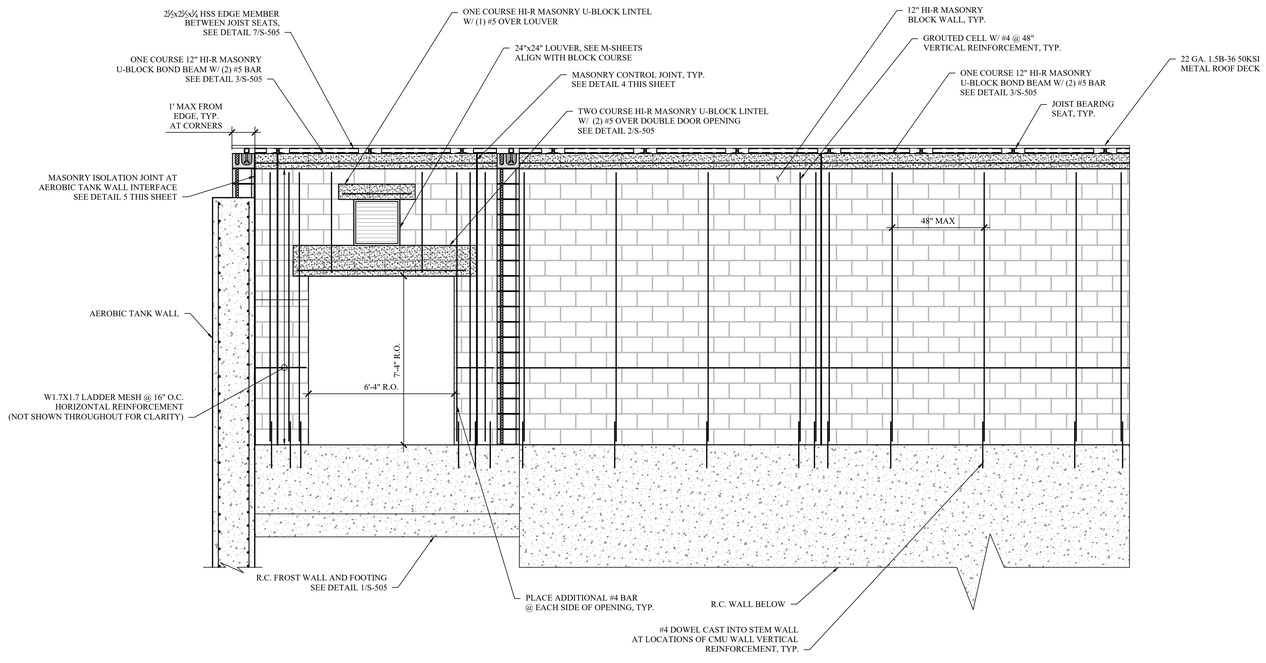
PROJECT # 18-732 PHASE #



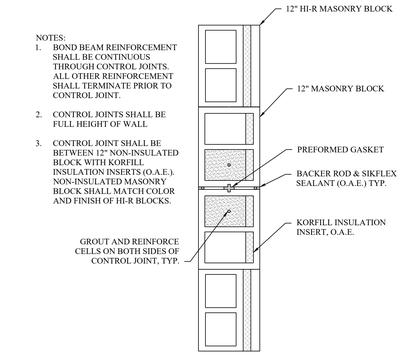
1 S-503 WALL TYPE "A" REINFORCEMENT
SCALE: 3/8" = 1'-0"



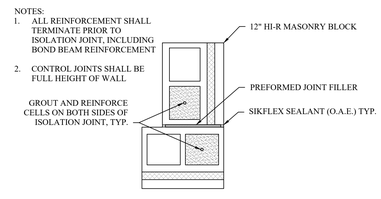
2 S-503 WALL TYPE "B" REINFORCEMENT
SCALE: 3/8" = 1'-0"



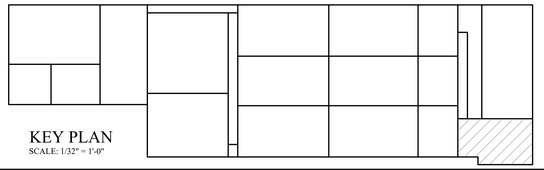
3 S-503 WALL TYPE "C" REINFORCEMENT
SCALE: 3/8" = 1'-0"



4 S-503 MASONRY CONTROL JOINT
SCALE: 1" = 1'-0"



5 S-503 MASONRY ISOLATION JOINT
SCALE: 1" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
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(570) 296-2765

BID SET

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN BUILDING WALL ELEVATIONS

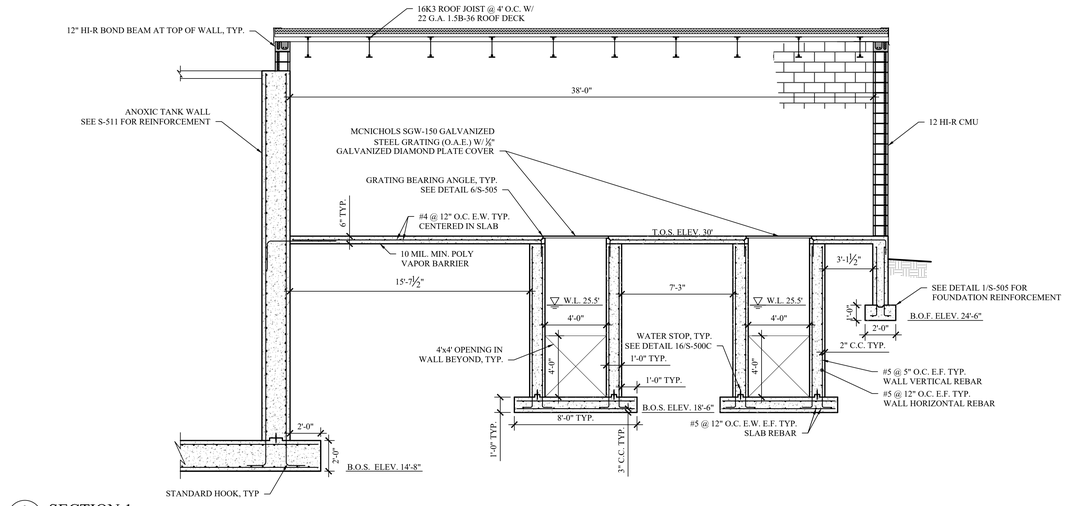
REVISIONS

NO.	DESCRIPTION	DATE

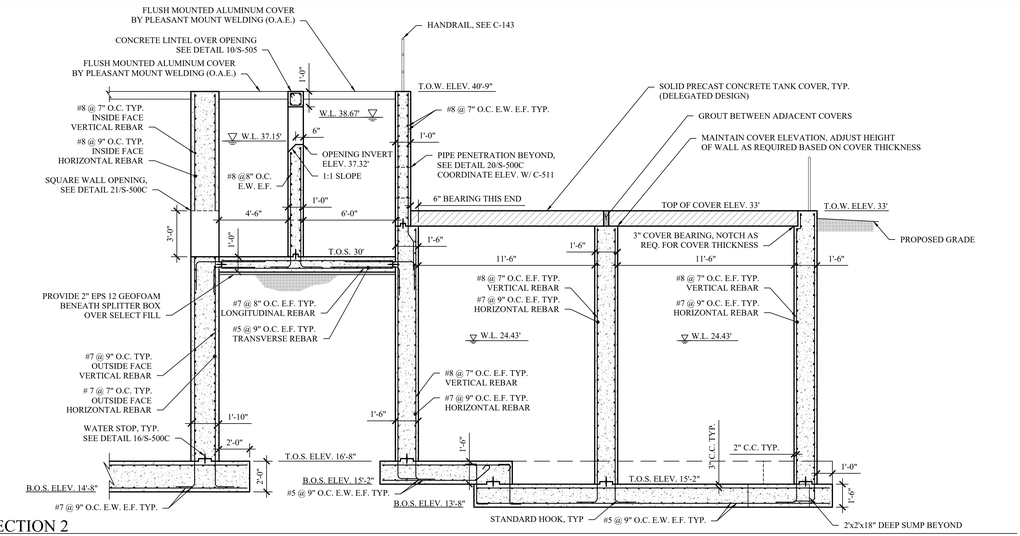
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-503

PROJECT # 18-732 PHASE #



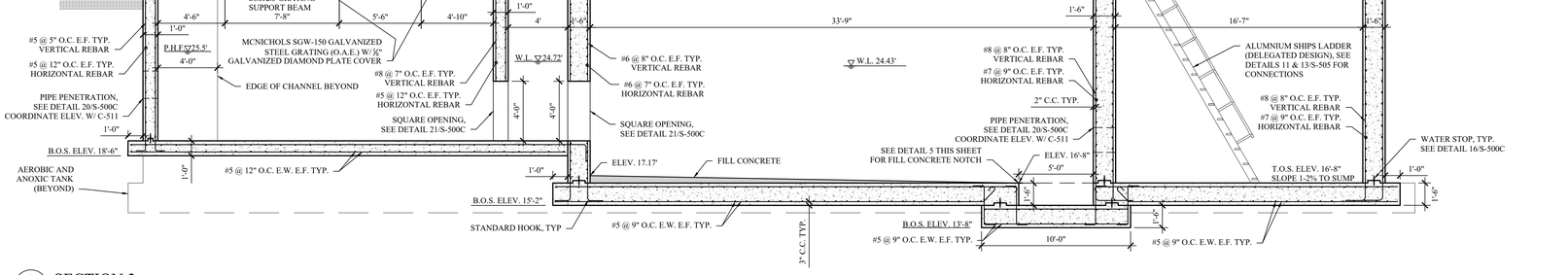
1 S-504 SECTION 1
SCALE: 1/4" = 1'-0"



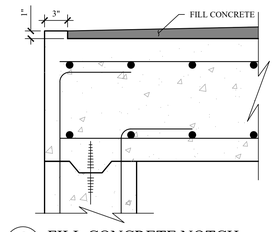
2 S-504 SECTION 2
SCALE: 1/4" = 1'-0"

SUBBASE AND BACKFILL NOTES:

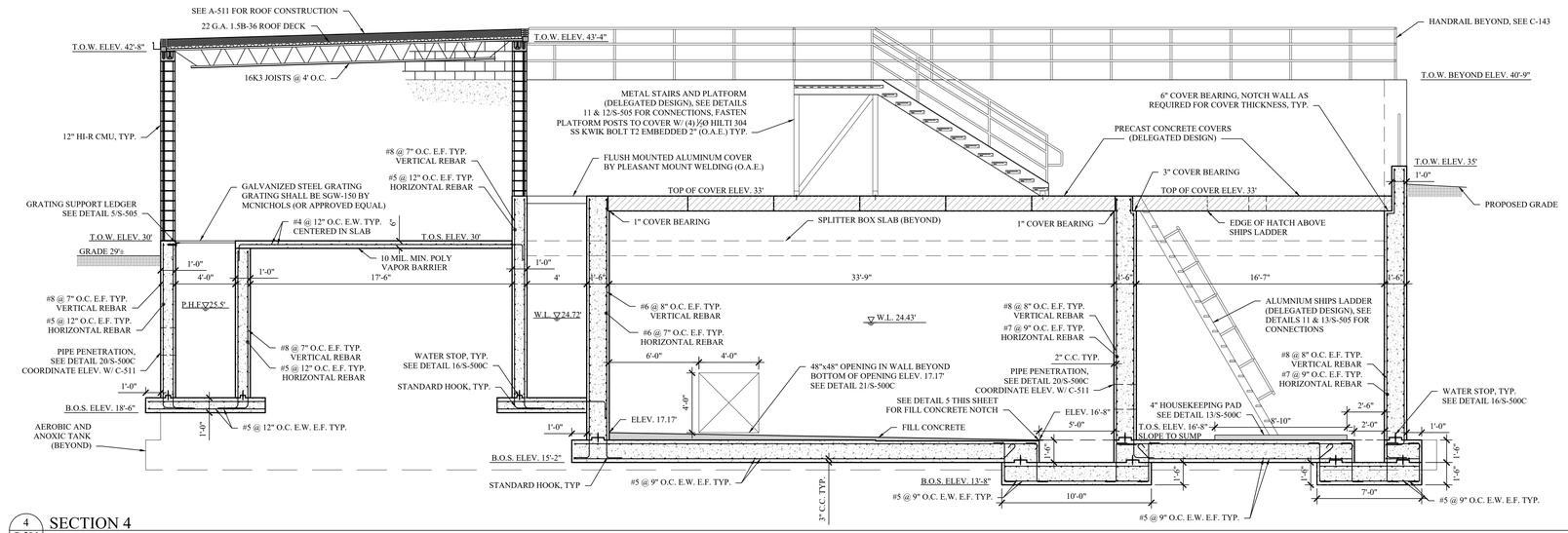
1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



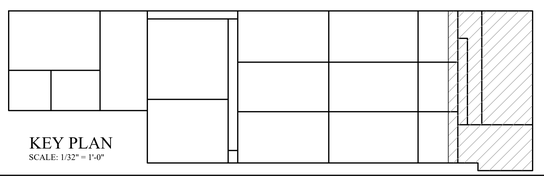
3 S-504 SECTION 3
SCALE: 1/4" = 1'-0"



5 S-504 FILL CONCRETE NOTCH
SCALE: 3" = 1'-0"



4 S-504 SECTION 4
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN, WET WELL AND INFLUENT TANK SECTIONS

REVISIONS

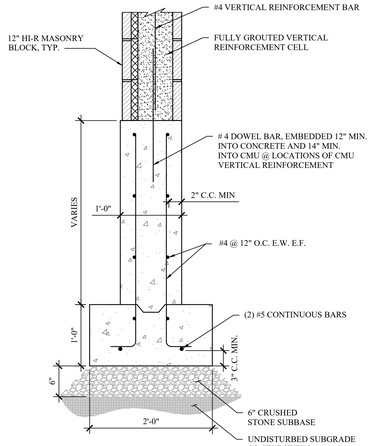
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

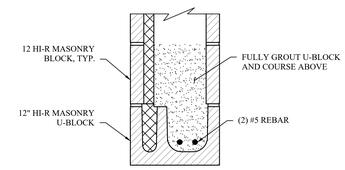
SHEET NO.

S-504

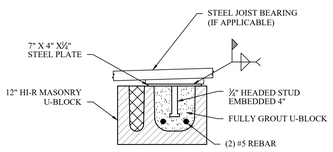
PROJECT # 18-732 PHASE #



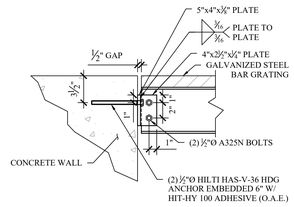
1 S-505 FROST WALL AND FOOTING DETAIL
SCALE: 1" = 1'-0"

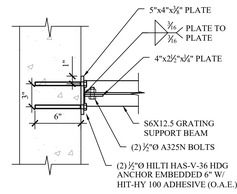


2 S-505 TWO COURSE HI-R CMU LINTEL
SCALE: 1-1/2" = 1'-0"

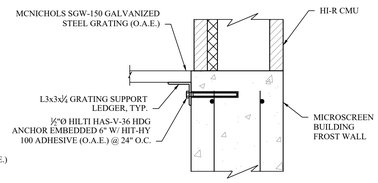


3 S-505 TYPICAL HI-R CMU BOND BEAM
SCALE: 1-1/2" = 1'-0"

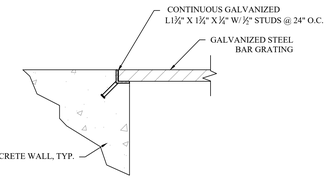




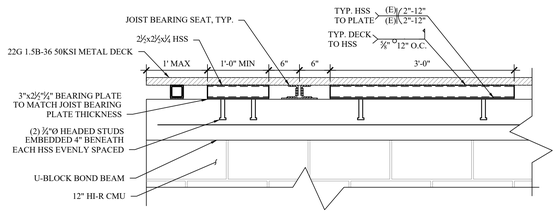
4 S-505 GRATING SUPPORT BEAM CONNECTION AND ANCHORAGE
SCALE: 1-1/2" = 1'-0"



5 S-505 GRATING SUPPORT LEDGER
SCALE: 1-1/2" = 1'-0"

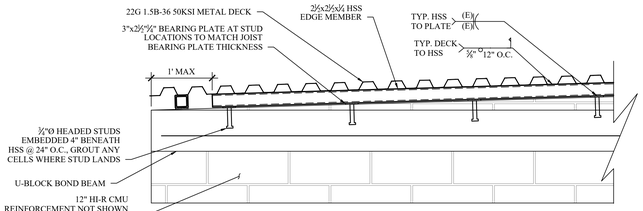


6 S-505 GRATING BEARING ANGLE
SCALE: 1-1/2" = 1'-0"



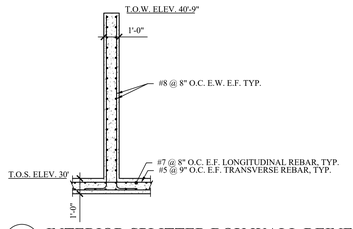
7 S-505 HSS EDGE MEMBER BETWEEN JOISTS
SCALE: 1" = 1'-0"

NOTE: IF FINAL JOIST BEARING SEAT DEPTH IS OTHER THAN 2½", HSS DEPTH AND WIDTH SHALL BE UPDATED TO MATCH

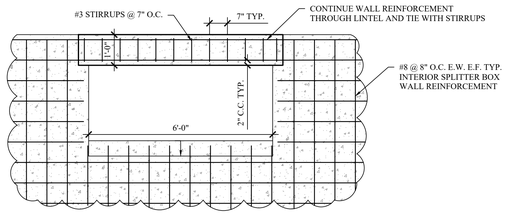


8 S-505 HSS EDGE MEMBER ABOVE RAKER
SCALE: 1" = 1'-0"

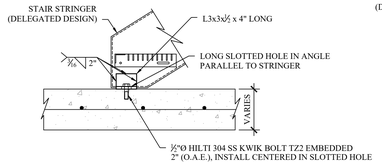
NOTE: IF FINAL JOIST BEARING SEAT DEPTH IS OTHER THAN 2½", HSS DEPTH AND WIDTH SHALL BE UPDATED TO MATCH



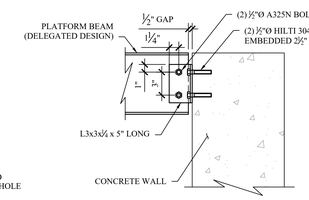
9 S-505 INTERIOR SPLITTER BOX WALL REINF.
SCALE: 3/8" = 1'-0"



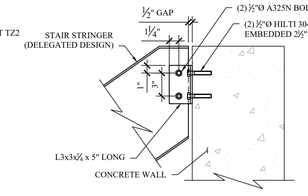
10 S-505 INTERIOR SPLITTER BOX WALL LINTEL REINFORCEMENT
SCALE: 1/2" = 1'-0"



11 S-505 STAIR ANCHOR TO PRECAST COVER
SCALE: 1" = 1'-0"



12 S-505 PLATFORM ANCHOR TO WALL
SCALE: 1-1/2" = 1'-0"



13 S-505 STAIR ANCHOR TO WALL
SCALE: 1-1/2" = 1'-0"

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MICROSCREEN, WET WELL AND INFLUENT TANK DETAILS

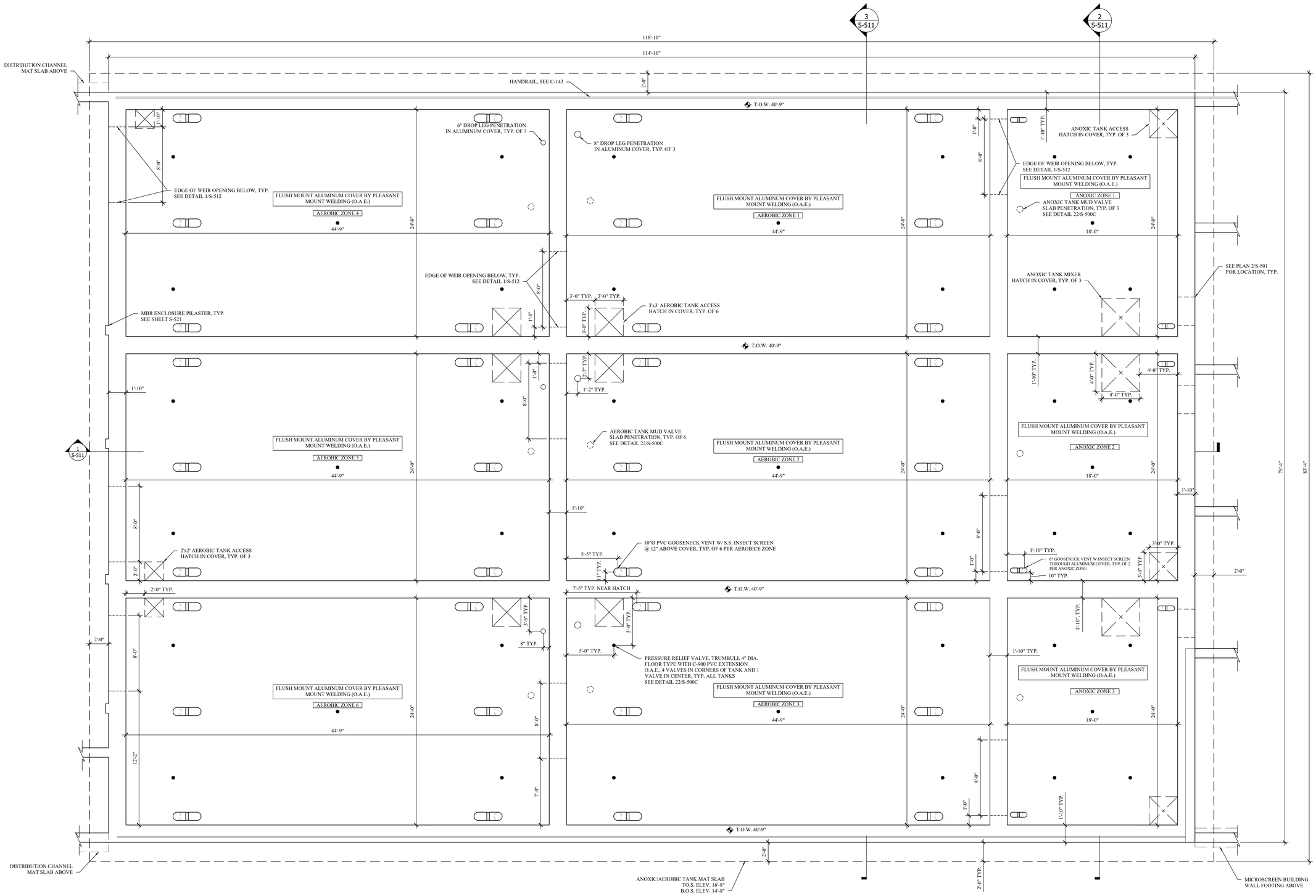
REVISIONS

NO.	DESCRIPTION	DATE

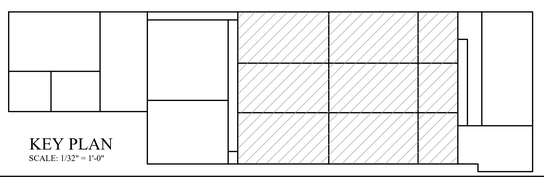
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-505

PROJECT # 18-732 PHASE #



1 S-510 SLAB, WALL AND COVER PLAN
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

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ANOXIC AND AEROBIC TANK PLAN

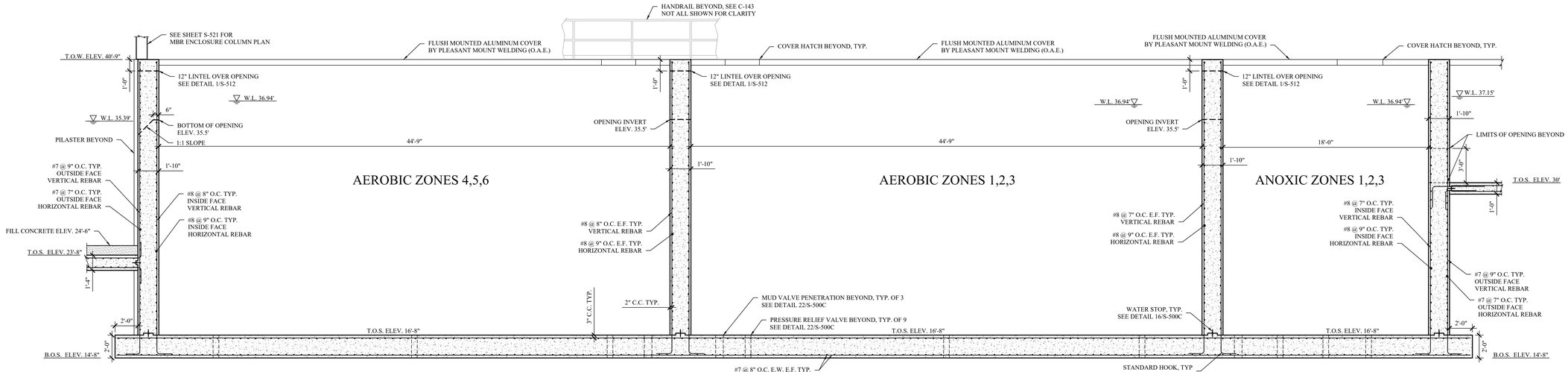
REVISIONS

NO.	DESCRIPTION	DATE

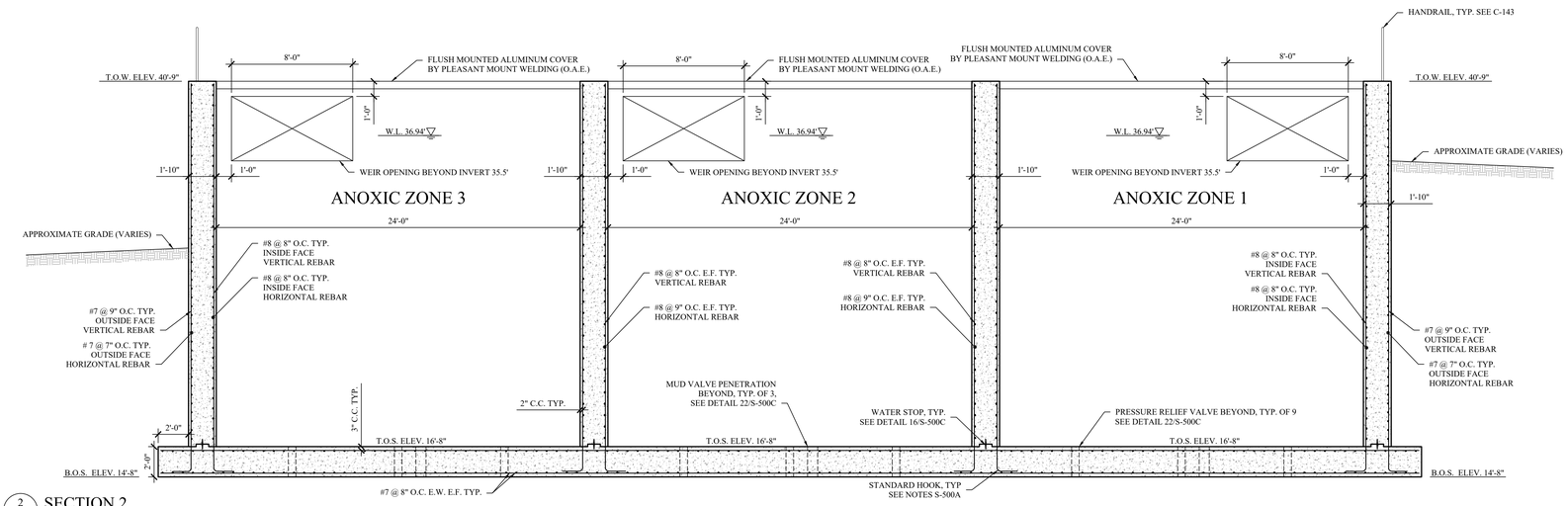
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-510

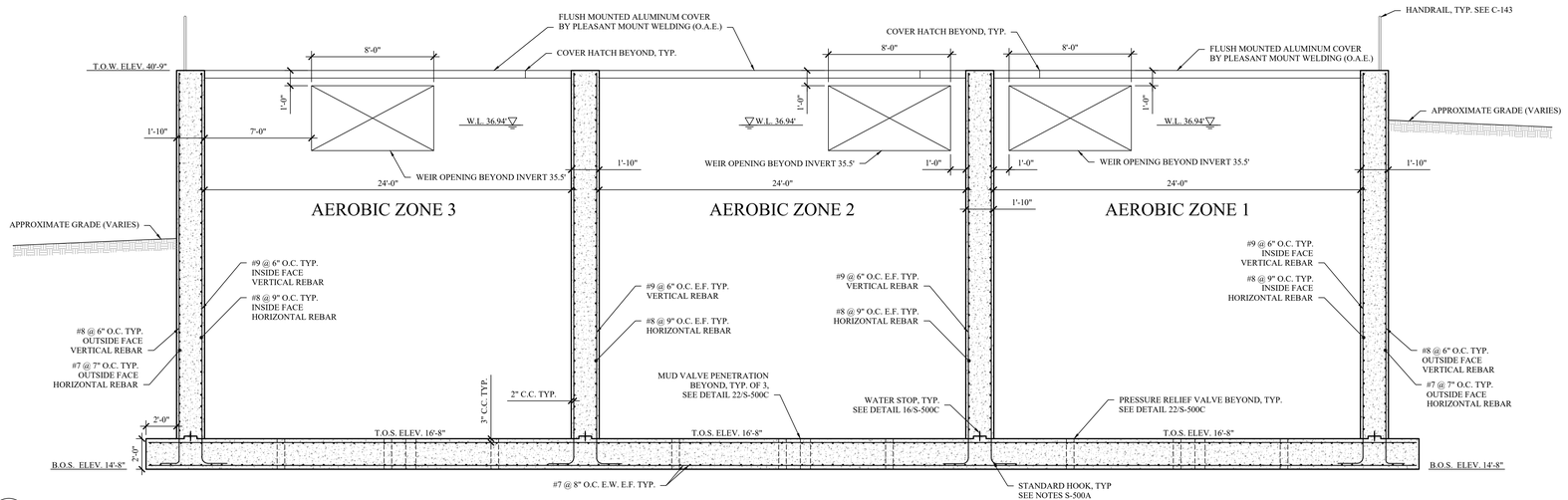
PROJECT # 18-732 PHASE #



1 S-511 SECTION 1
SCALE: 1/4" = 1'-0"



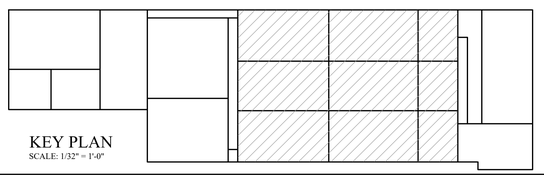
2 S-511 SECTION 2
SCALE: 1/4" = 1'-0"



3 S-511 SECTION 3 (AEROBIC ZONES 4,5,6 SIMILAR TO ABOVE, WEIR OPENINGS VARY SEE SHEET S-510 FOR LOCATIONS)
SCALE: 1/4" = 1'-0"

SUBBASE AND BACKFILL NOTES:

1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ANOXIC AND AEROBIC TANK SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
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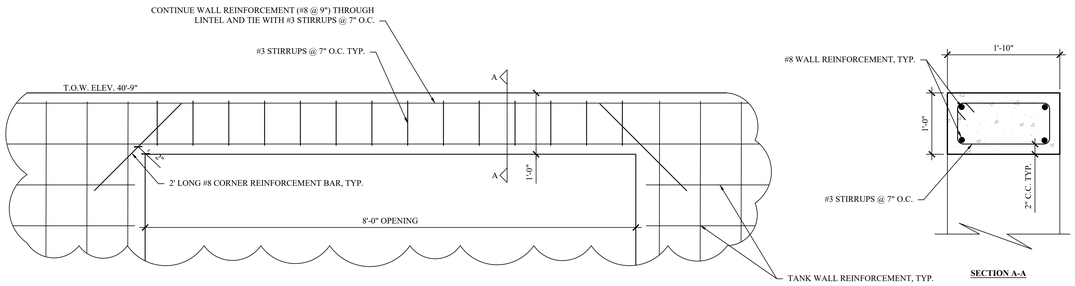
REVIEWED BY:	JSS

SHEET NO.
S-511

PROJECT # 18-732 PHASE #



SECTION A-A

1 / S-512 AEROBIC TANK WALL OPENING LINTEL

SCALE: 1" = 1'-0"

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

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Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553

ANOXIC AND AEROBIC TANK DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

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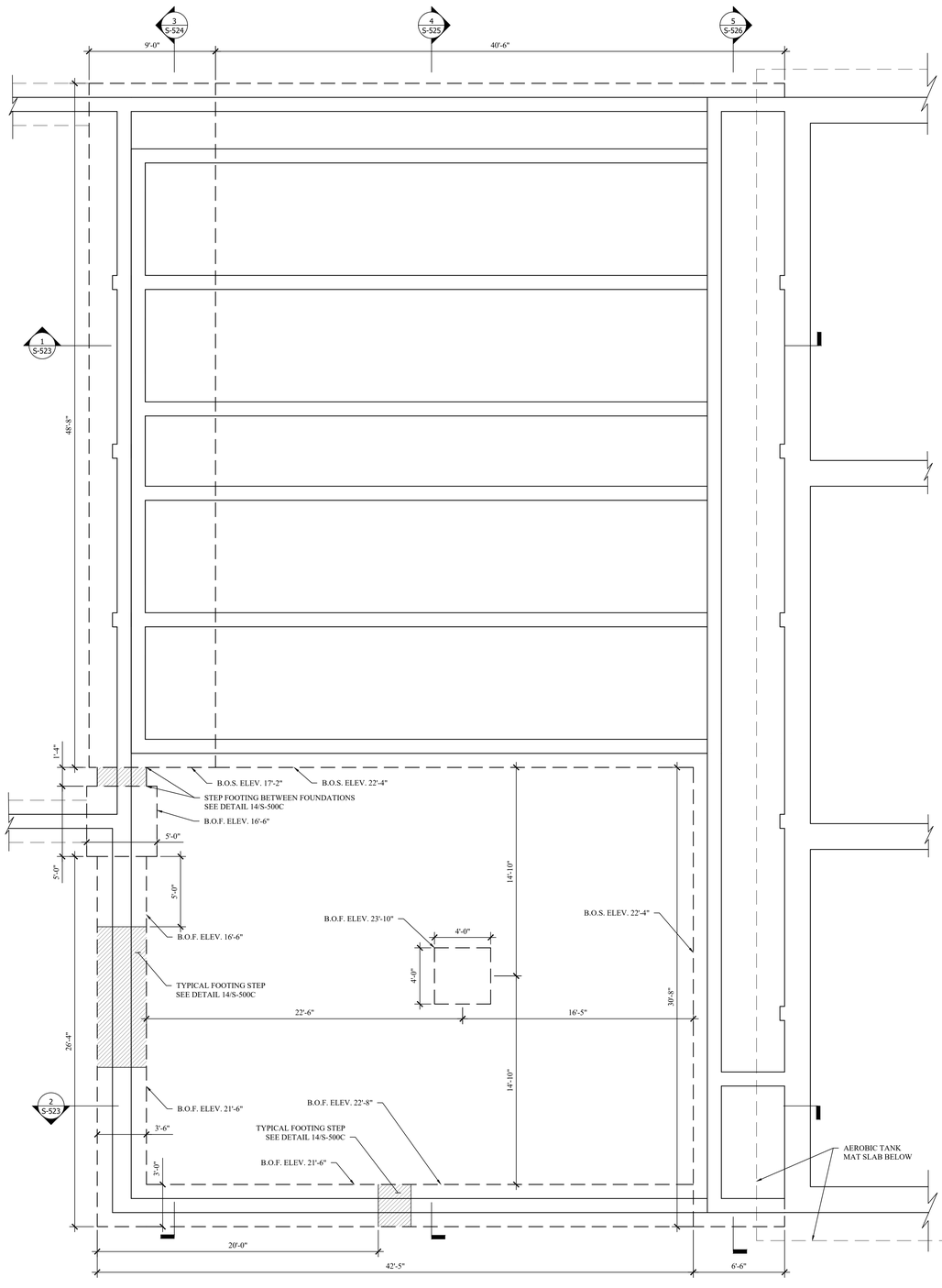
REVIEWED BY:	JSS

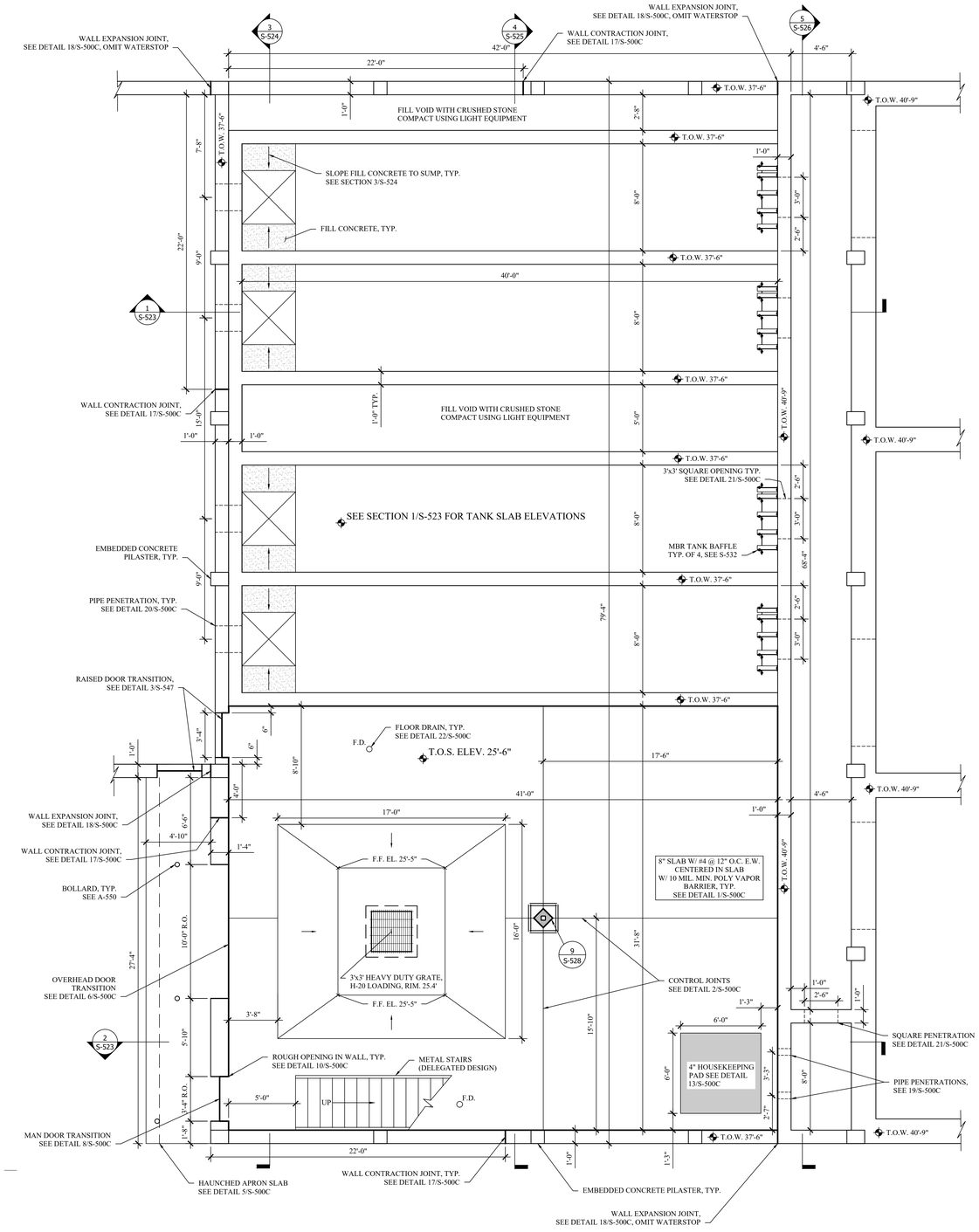
SHEET NO.

S-512

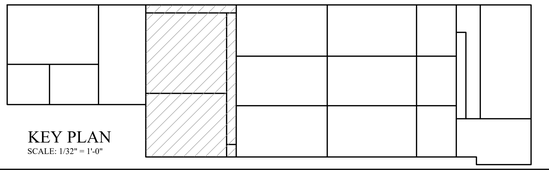
PROJECT # 18-732 PHASE #



1 S-520 MBR BASIN FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



2 S-520 MBR BASIN SLAB AND WALL PLAN
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
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New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553

MBR BASIN PLANS

REVISIONS

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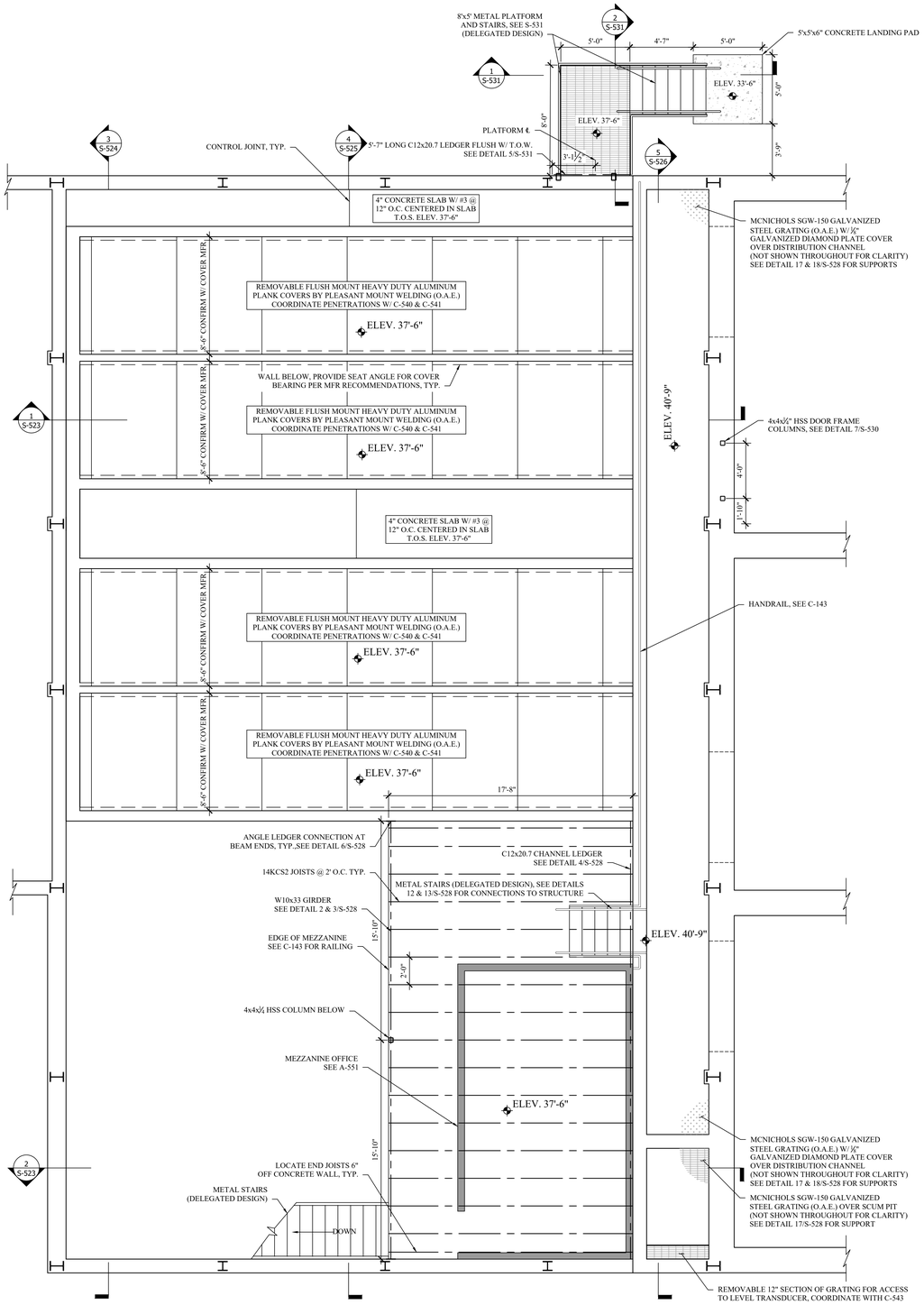
SHEET NO.
S-520

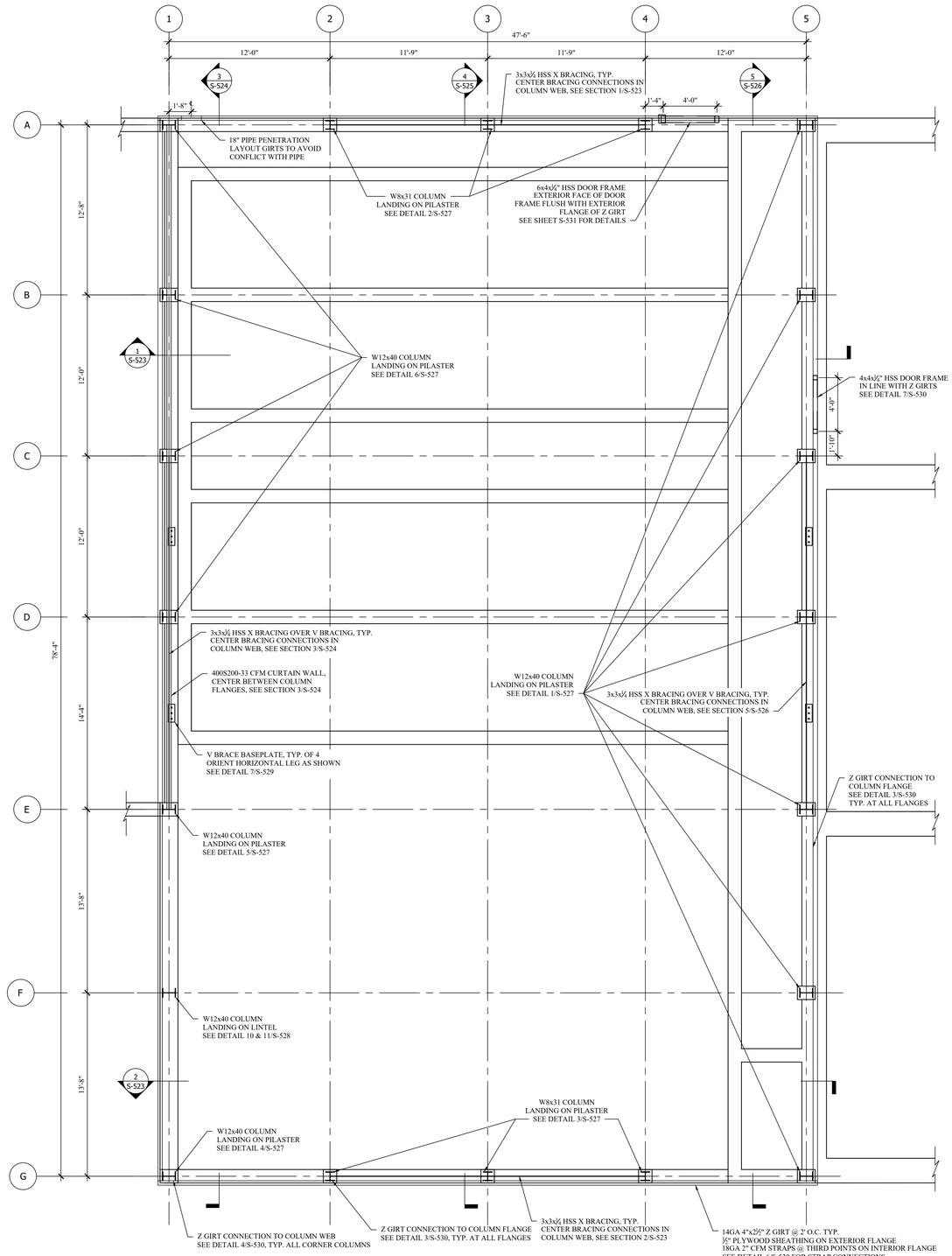
PROJECT # 18-732 PHASE #



3 S-521 MBR BASIN GRATING, COVERS AND MEZZANINE FRAMING PLAN

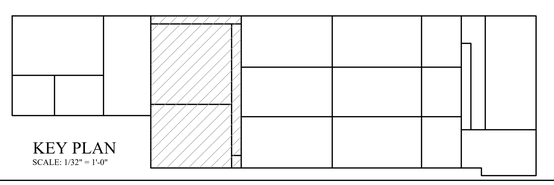
SCALE: 1/4" = 1'-0"

NOTE: ALL M.E.P. FIXTURES SUPPORTED BY JOISTS SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS



4 S-521 MBR ENCLOSURE COLUMN, BRACING AND WALL FRAMING PLAN

SCALE: 1/4" = 1'-0"



KEY PLAN

SCALE: 1/32" = 1'-0"

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New Windsor, NY 12553
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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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MBR BASIN AND ENCLOSURE PLANS

REVISIONS

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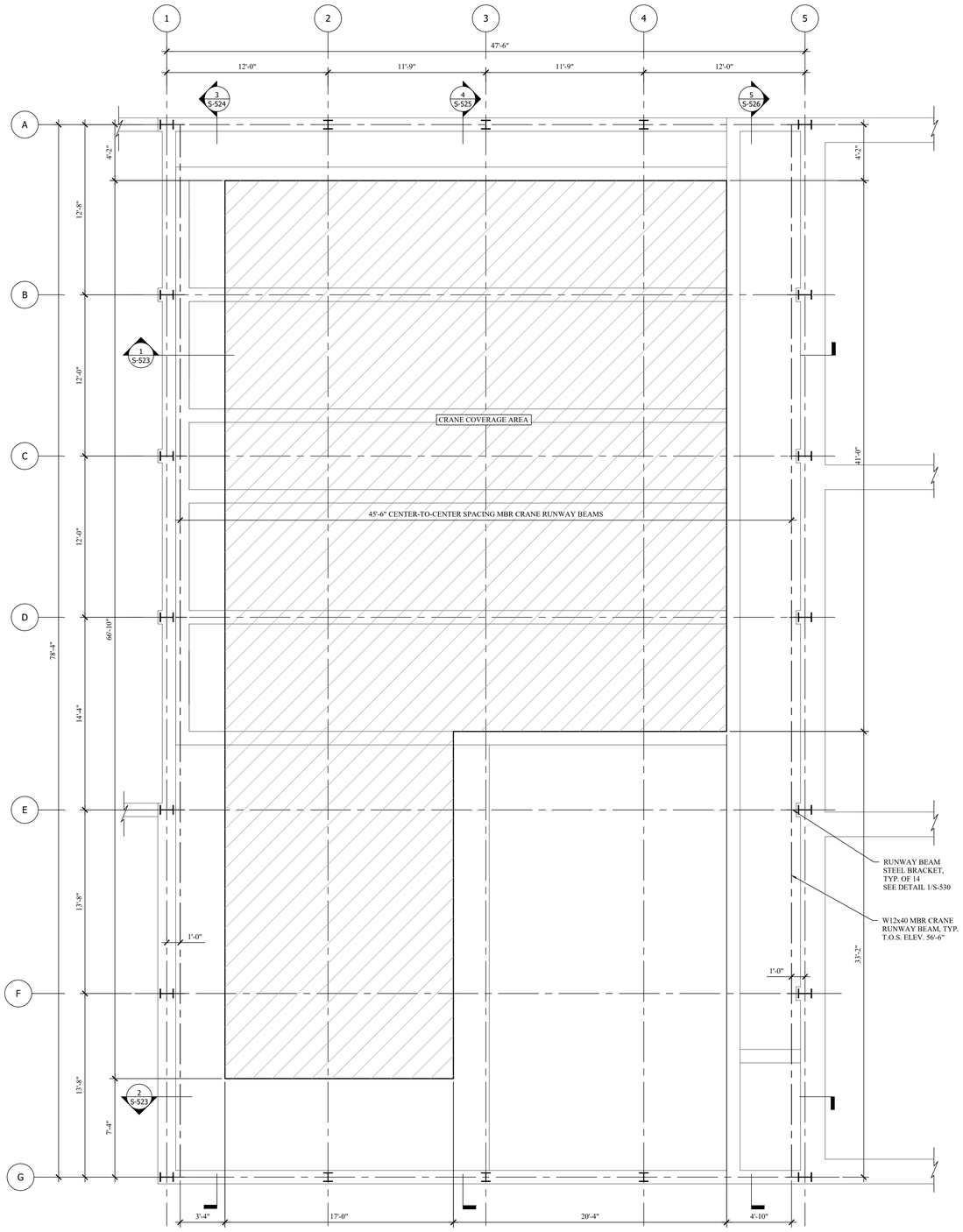
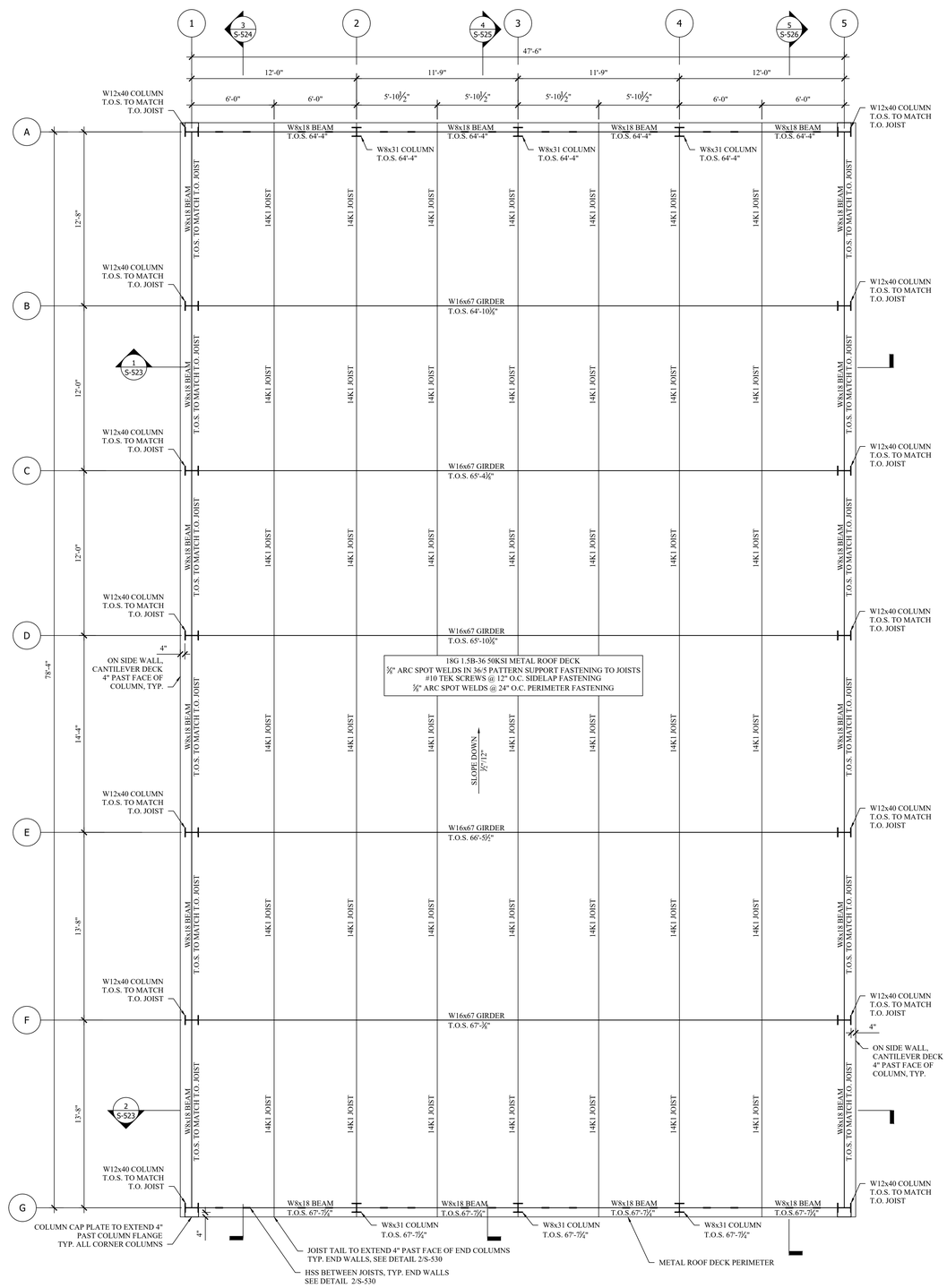
S-521

PROJECT # 18-732 PHASE #

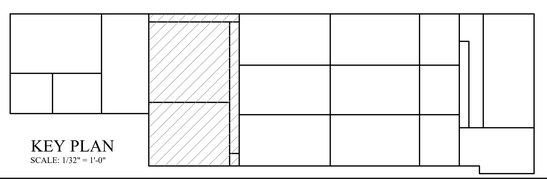


5 S-522 MBR ENCLOSURE CRANE FRAMING PLAN
SCALE: 1/4" = 1'-0"



6 S-522 MBR ENCLOSURE WALL AND ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

NOTE: ALL M.E.P. FIXTURES SUPPORTED BY JOISTS SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS



KEY PLAN
SCALE: 1/32" = 1'-0"

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New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553

MBR ENCLOSURE PLANS

REVISIONS

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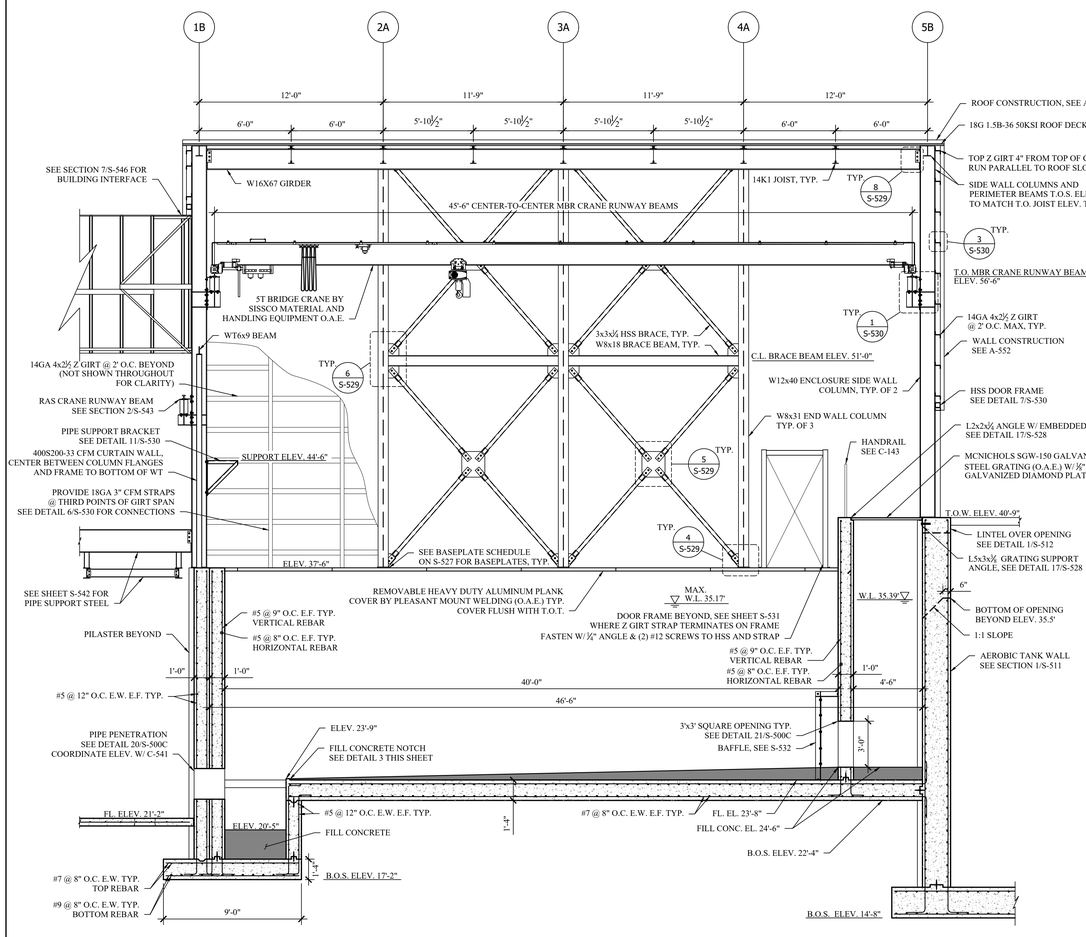
CHECKED BY:	PJW
REVIEWED BY:	JSS

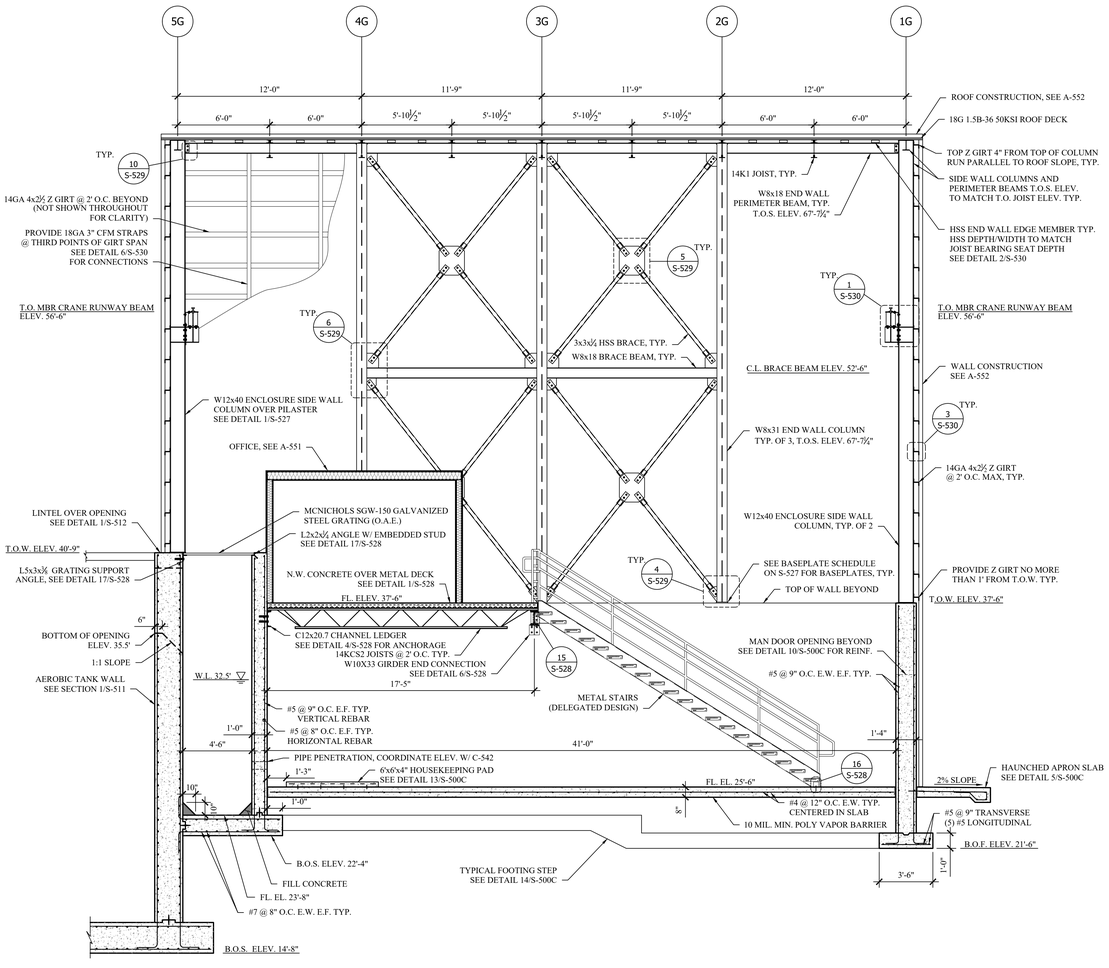
SHEET NO.
S-522

PROJECT # 18-732 PHASE #

SUBBASE AND BACKFILL NOTES:

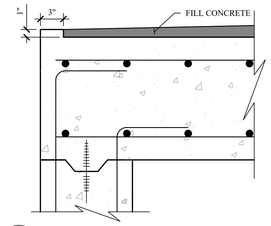
1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



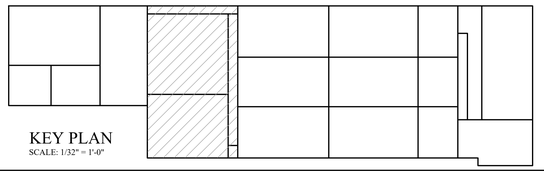


1 S-523 SECTION 1
SCALE: 1/4" = 1'-0"

2 S-523 SECTION 2
SCALE: 1/4" = 1'-0"



3 S-523 MBR TANK FILL CONCRETE NOTCH
SCALE: 3" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

MBR BASIN AND ENCLOSURE SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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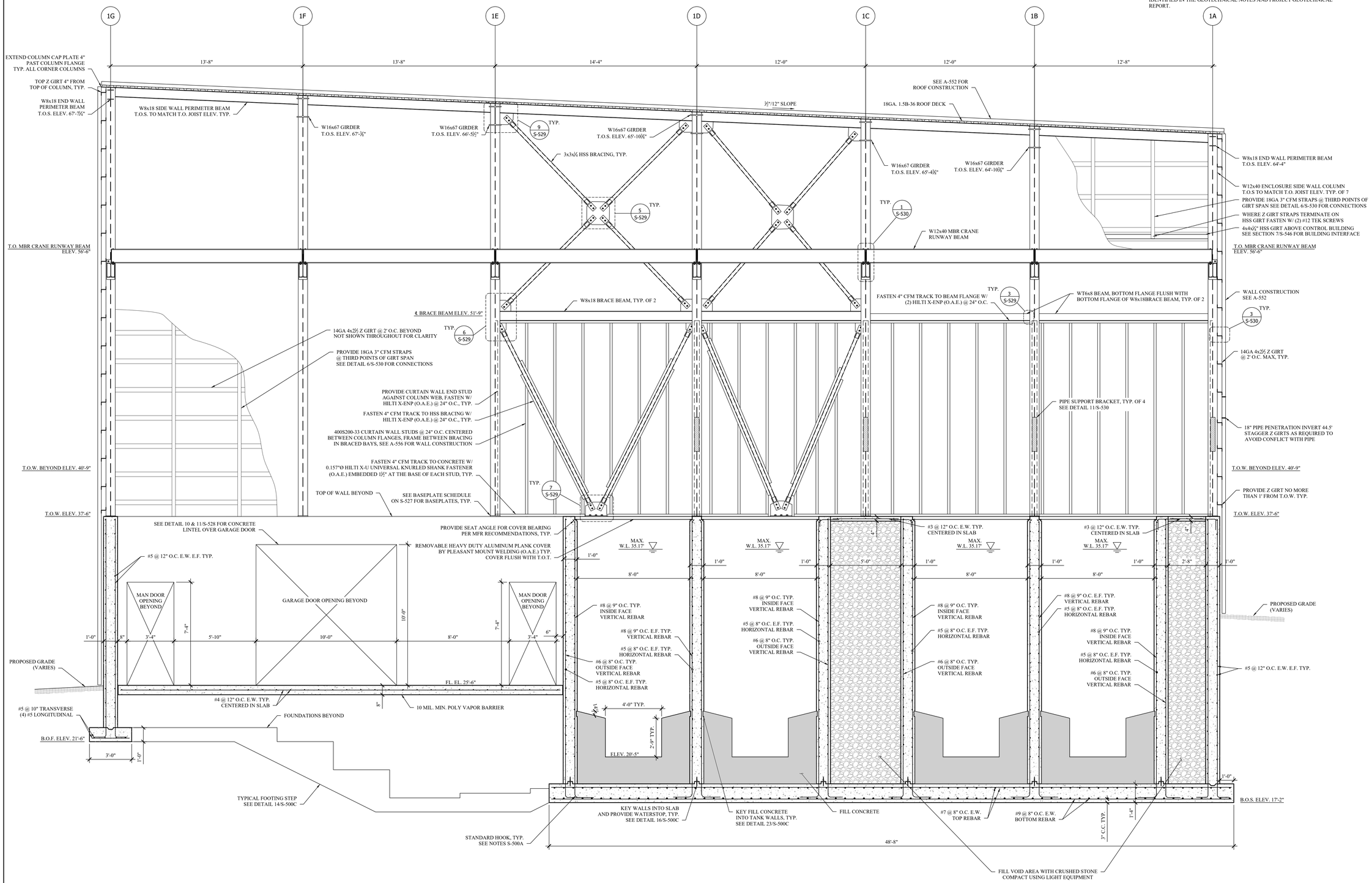
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-523

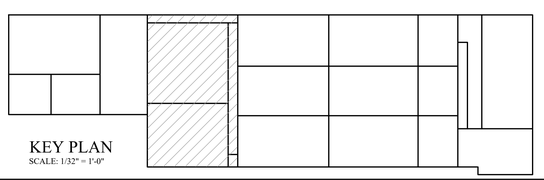
PROJECT # 18-732 PHASE #

SUBBASE AND BACKFILL NOTES:

1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



3 / S-524 SECTION 3
SCALE: 3/8" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

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MBR BASIN AND ENCLOSURE SECTIONS CONTINUED

REVISIONS

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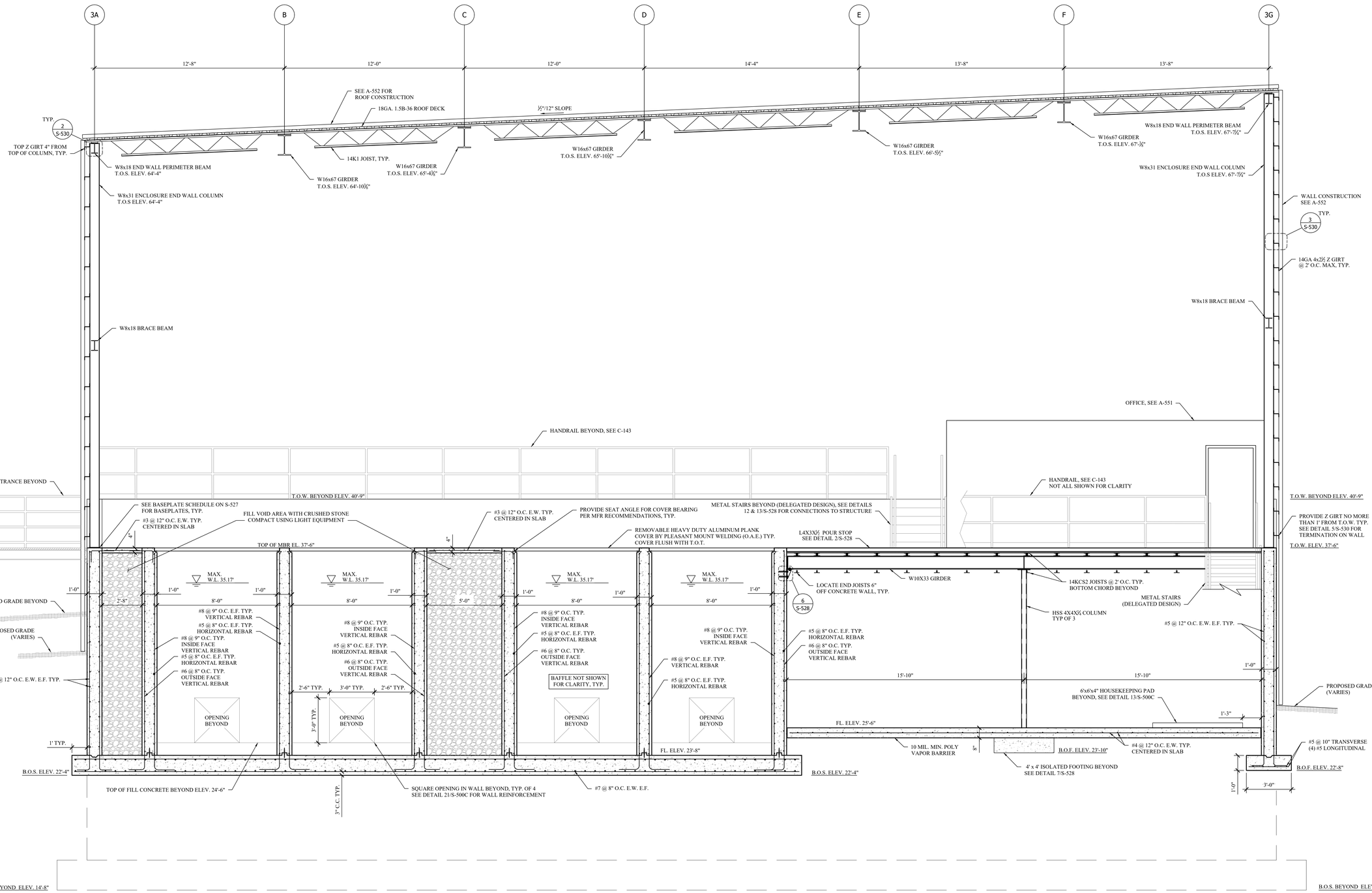
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-524

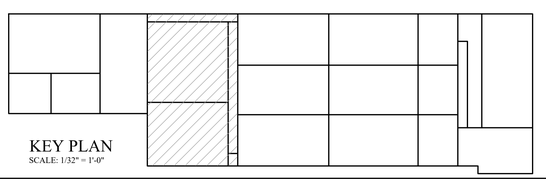
PROJECT # 18-732 PHASE #

SUBBASE AND BACKFILL NOTES:

1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



4 S-525 SECTION 4
SCALE: 3/8" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR BASIN AND ENCLOSURE SECTIONS CONTINUED

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

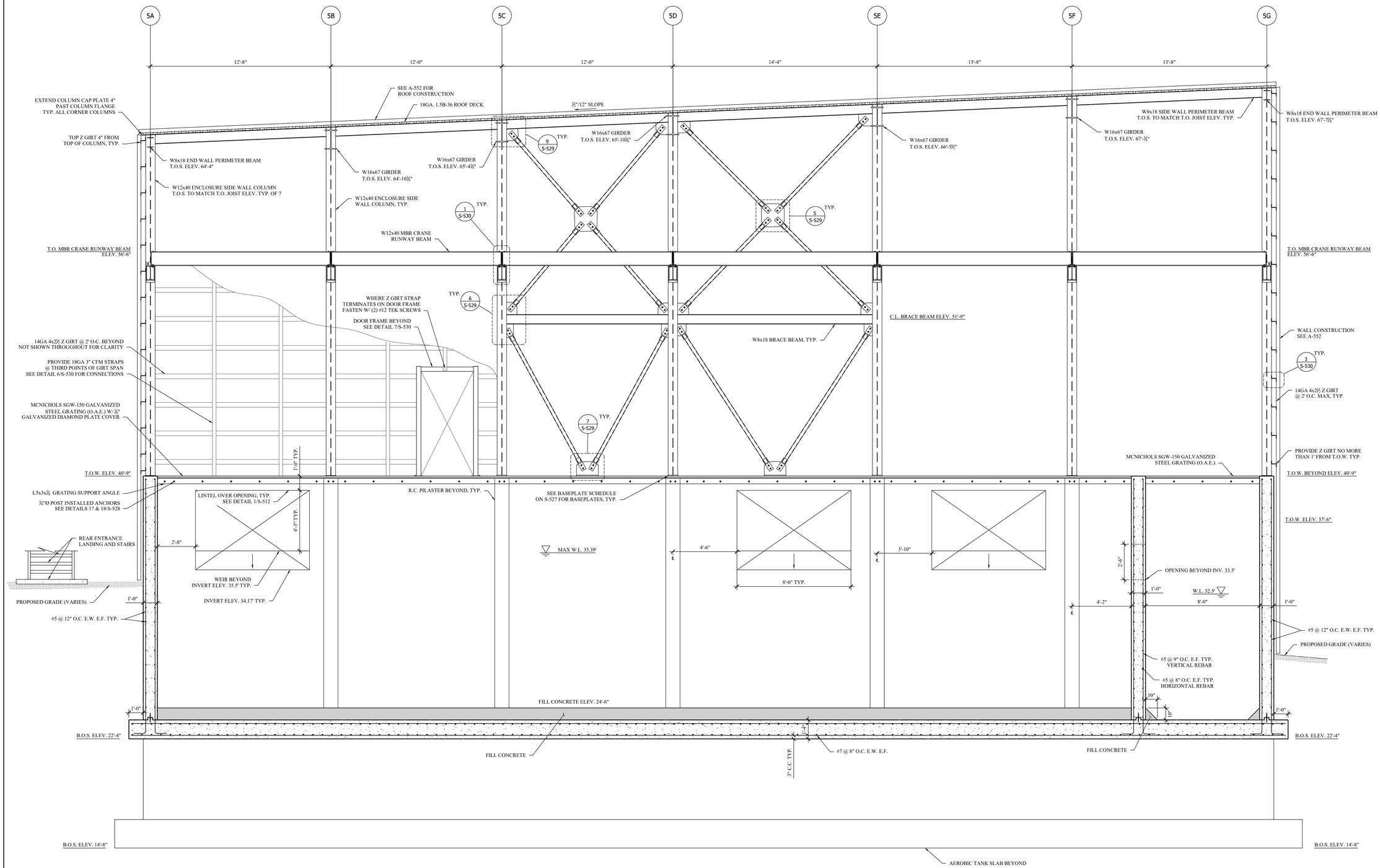
SHEET NO.

S-525

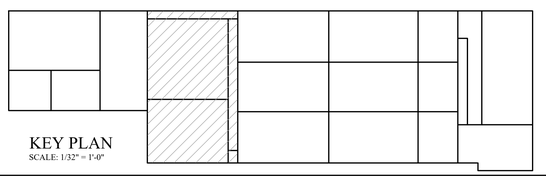
PROJECT # 18-732 PHASE #

SUBBASE AND BACKFILL NOTES:

1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



5 S-526 SECTION 5
SCALE: 3/8" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
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MBR BASIN AND ENCLOSURE SECTIONS CONTINUED

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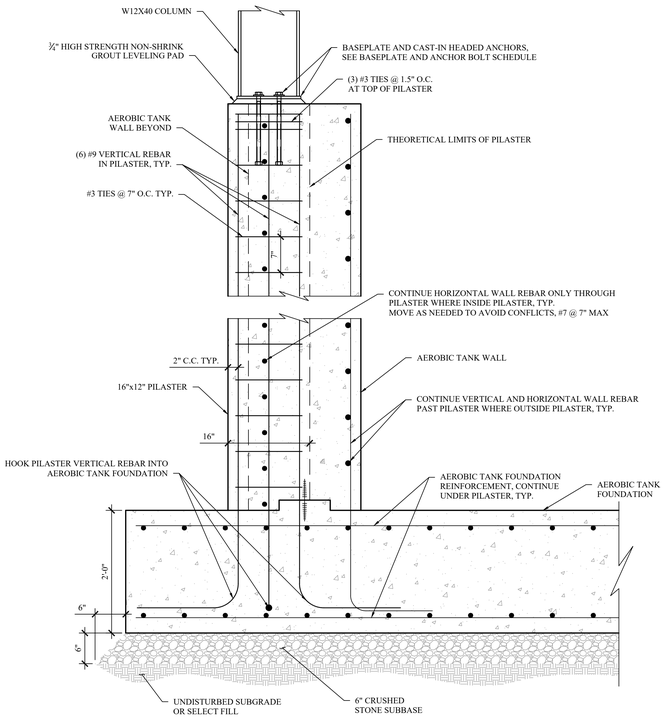
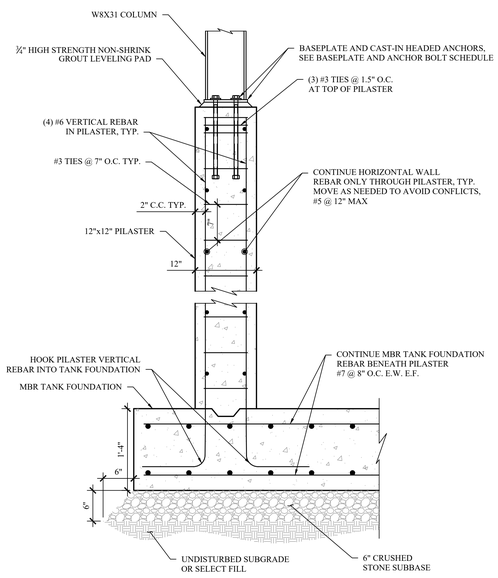
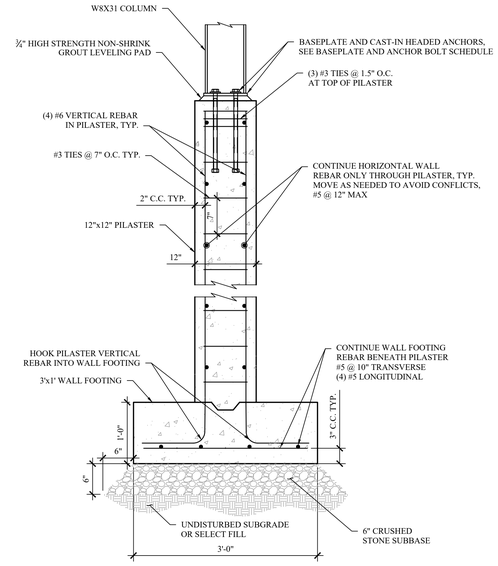
PROJECT # 18-732 PHASE #



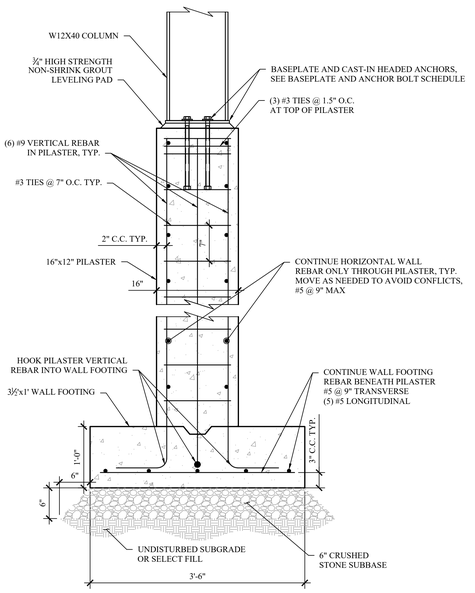
1 S-527 COLUMN LINE 5 PILASTER AND FOUNDATION
SCALE: 1" = 1'-0"



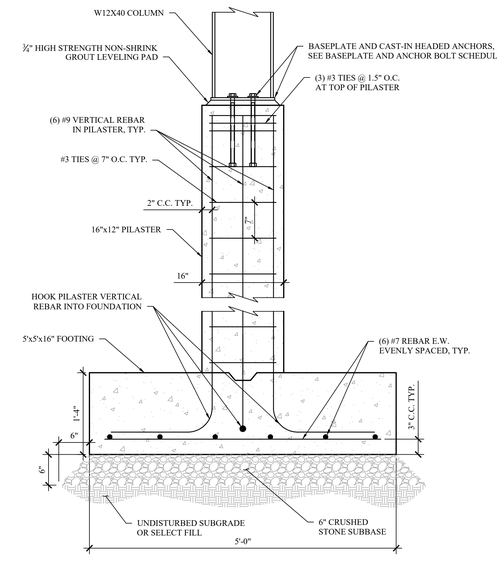
2 S-527 COLUMN 2A, 3A, 4A PILASTER AND FOUNDATION
SCALE: 1" = 1'-0"



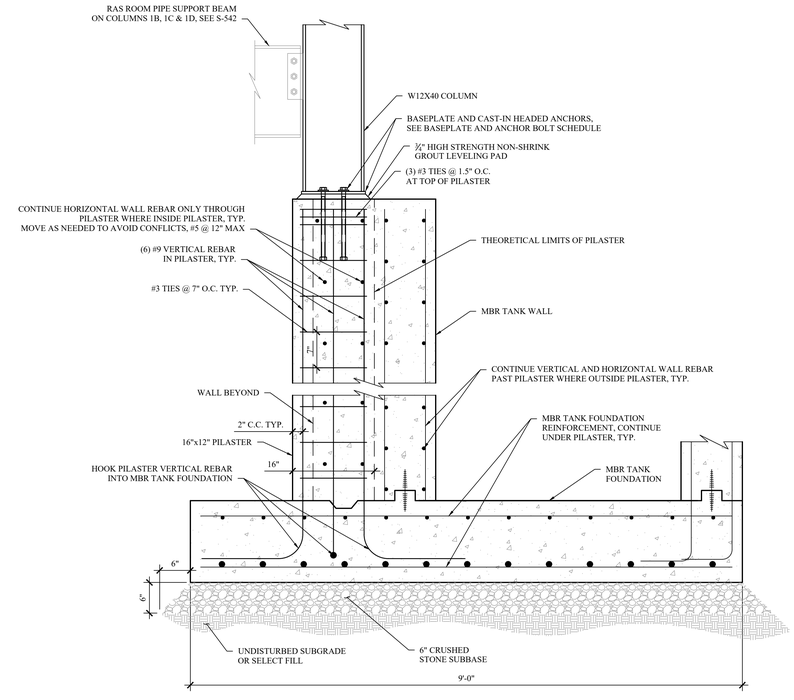
3 S-527 COLUMN 2G, 3G, 4G PILASTER AND FOUNDATION
SCALE: 1" = 1'-0"



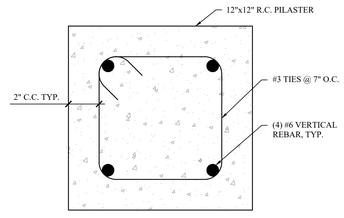
4 S-527 COLUMN 1G PILASTER AND FOUNDATION
SCALE: 1" = 1'-0"



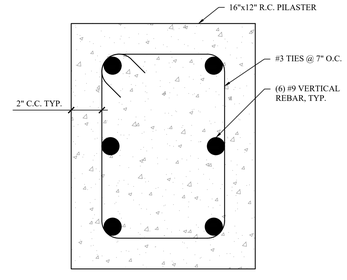
5 S-527 COLUMN 1E PILASTER AND FOUNDATION
SCALE: 1" = 1'-0"



6 S-527 COLUMN 1A, 1B, 1C, 1D PILASTER AND FOUNDATION
SCALE: 1" = 1'-0"



7 S-527 12"x12" PILASTER REINFORCEMENT
SCALE: 3" = 1'-0"



8 S-527 16"x12" PILASTER REINFORCEMENT
SCALE: 3" = 1'-0"

BASEPLATE AND ANCHOR BOLT SCHEDULE

COLUMN	BASEPLATE	ANCHOR BOLTS	DETAIL
1A, 1B, 1C, 1D, 1E 1G, 5A, 5B, 5C, 5D, 5E, 5F, 5G	13"x9"x½"	(4) ¾"Ø F1554 GR 36 EMBEDDED 12"	1/S-529
1F	13"x9"x½"	(4) ¾"Ø F1554 GR 36 EMBEDDED 12"	10 & 11/S-528
2A, 3A, 4A, 2G, 3G, 4G	9"x9"x¾"	(4) ¾"Ø F1554 GR 36 EMBEDDED 18"	2/S-529

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

MBR BASIN PILASTER AND FOUNDATION SECTIONS AND DETAILS

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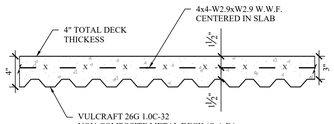
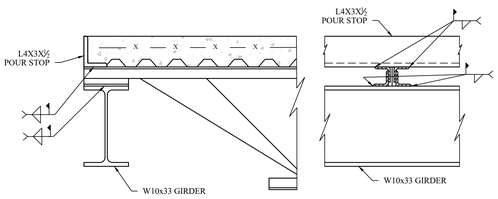
SHEET NO.
S-527

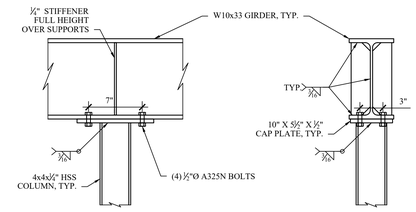
PROJECT # 18-732 PHASE #



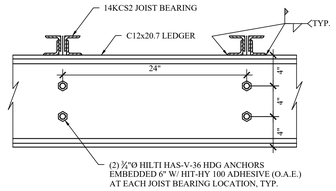
1 S-528 MEZZANINE SLAB REINFORCEMENT
SCALE: 1-1/2" = 1'-0"



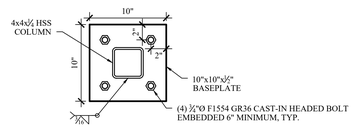
2 S-528 MEZZANINE POUR STOP AND GIRDER TO JOIST CONNECTION
SCALE: 1-1/2" = 1'-0"



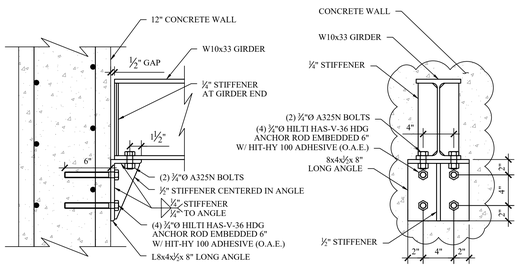
3 S-528 MEZZANINE GIRDER TO COLUMN CONNECTION
SCALE: 1-1/2" = 1'-0"



4 S-528 MEZZANINE CHANNEL LEDGER CONNECTIONS
SCALE: 1-1/2" = 1'-0"

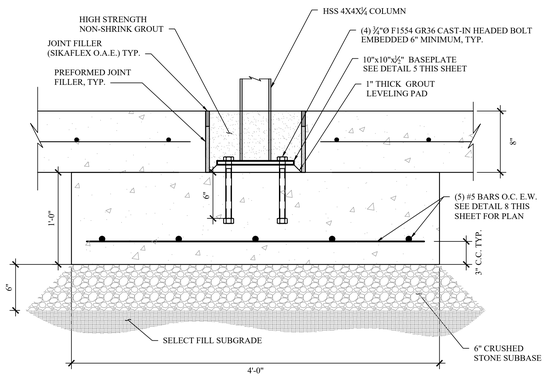


5 S-528 MEZZANINE COLUMN BASEPLATE
SCALE: 1-1/2" = 1'-0"

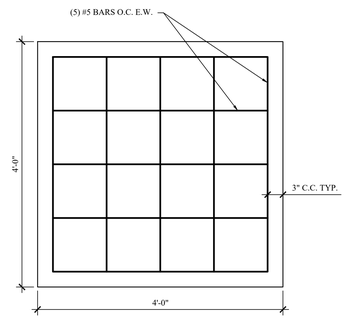


NOTE: METAL DECK, POUR STOP AND SUSPENDED SLAB NOT SHOWN FOR CLARITY

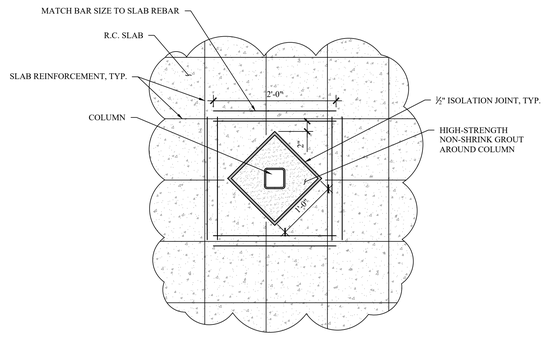
6 S-528 MEZZANINE GIRDER END CONNECTION
SCALE: 1-1/2" = 1'-0"



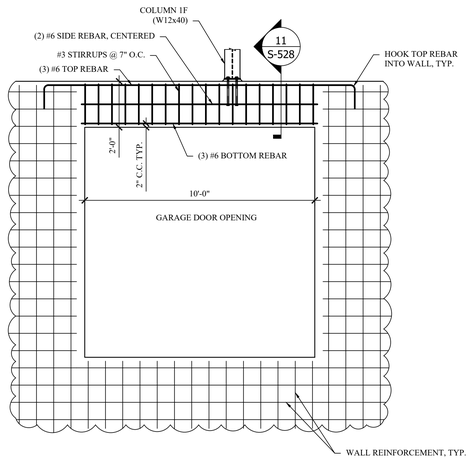
7 S-528 MEZZANINE CENTER COLUMN AND 4'x4' ISOLATED FOOTING
SCALE: 1-1/2" = 1'-0"



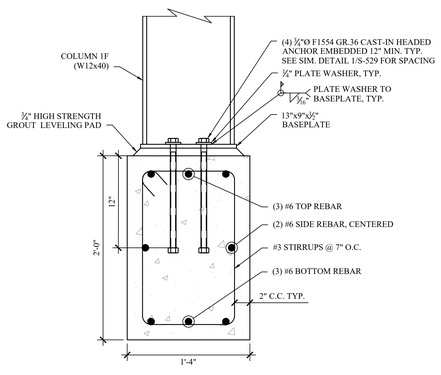
8 S-528 4'x4' ISOLATED FOOTING REINF. PLAN
SCALE: 1" = 1'-0"



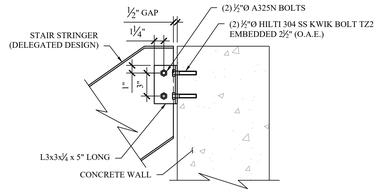
9 S-528 SLAB REINFORCEMENT AROUND COLUMN PENETRATION
SCALE: 1" = 1'-0"



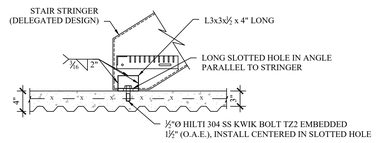
10 S-528 CONCRETE LINTEL OVER GARAGE DOOR
SCALE: 3/8" = 1'-0"



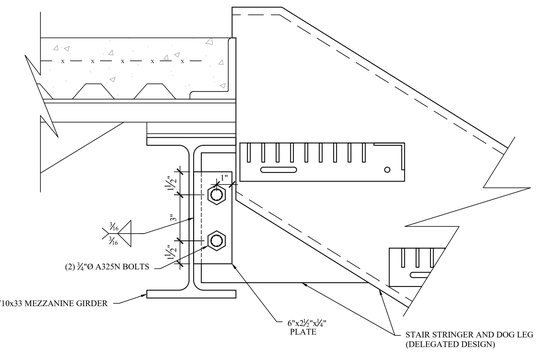
11 S-528 CONCRETE LINTEL OVER GARAGE DOOR
SCALE: 1-1/2" = 1'-0"



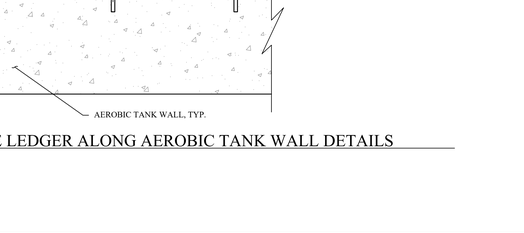
12 S-528 STAIR TO CONCRETE WALL CONN.
SCALE: 1-1/2" = 1'-0"



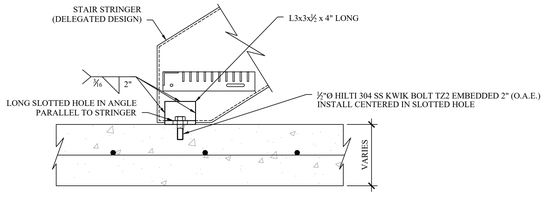
13 S-528 STAIR TO SUSPENDED SLAB CONN.
SCALE: 1-1/2" = 1'-0"



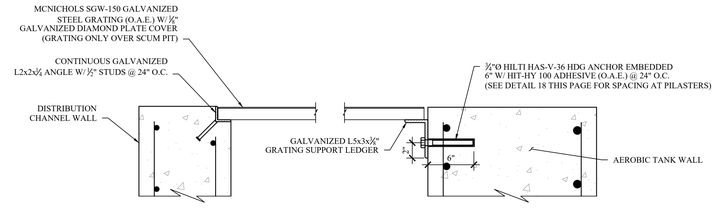
15 S-528 STAIR TO MEZZANINE GIRDER CONNECTION
SCALE: 3" = 1'-0"



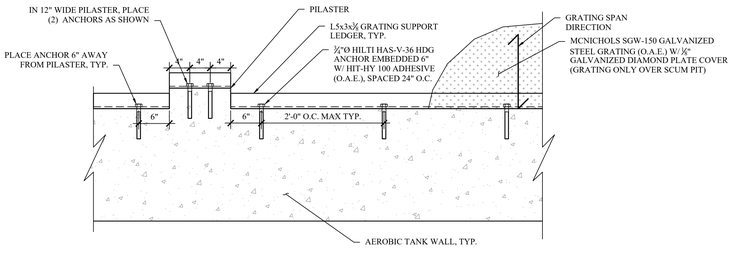
14 S-528 MBR TANK REINFORCEMENT AT COVER BEARING
SCALE: 1-1/2" = 1'-0"



16 S-528 TYPICAL METAL STAIR CONNECTION TO SLAB-ON-GRADE
SCALE: 1-1/2" = 1'-0"



17 S-528 DISTRIBUTION CHANNEL/SCUM PIT GRATING SUPPORTS
SCALE: 1-1/2" = 1'-0"



18 S-528 GRATING SUPPORT ANGLE LEDGER ALONG AEROBIC TANK WALL DETAILS
SCALE: 1" = 1'-0"

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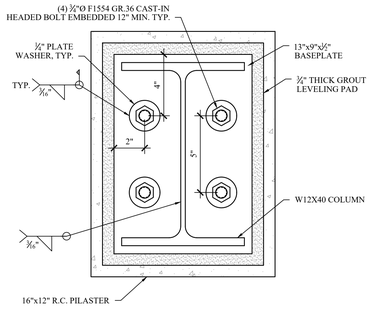
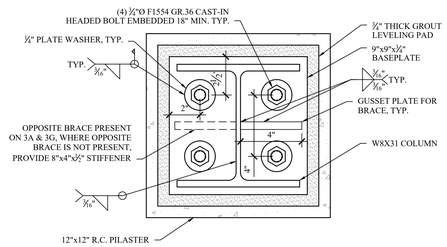
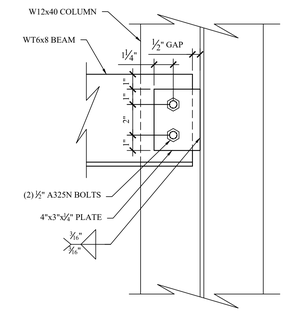
PROJECT # 18-732 PHASE #



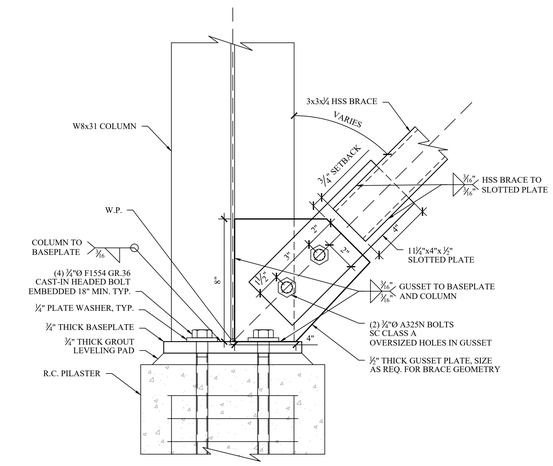
1 S-529 W12X40 COLUMN BASEPLATE
SCALE: 3" = 1'-0"



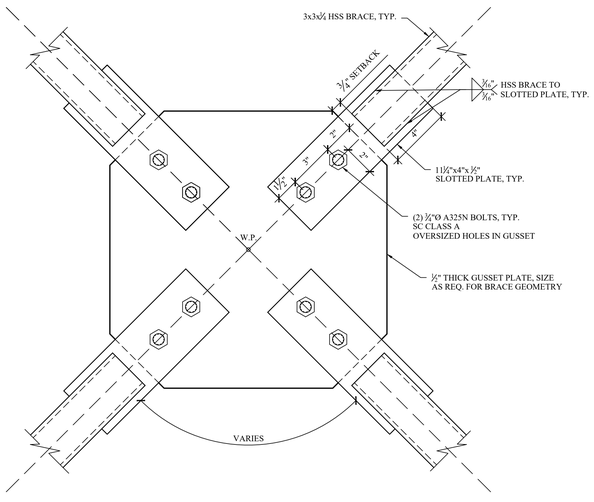
2 S-529 W8X31 COLUMN BASEPLATE
SCALE: 3" = 1'-0"



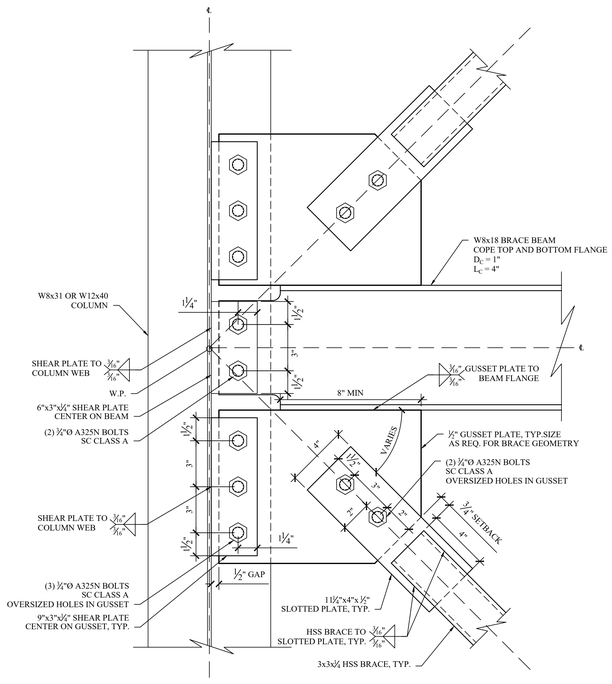
3 S-529 WT6x8 SHEAR PLATE CONNECTION
SCALE: 3" = 1'-0"



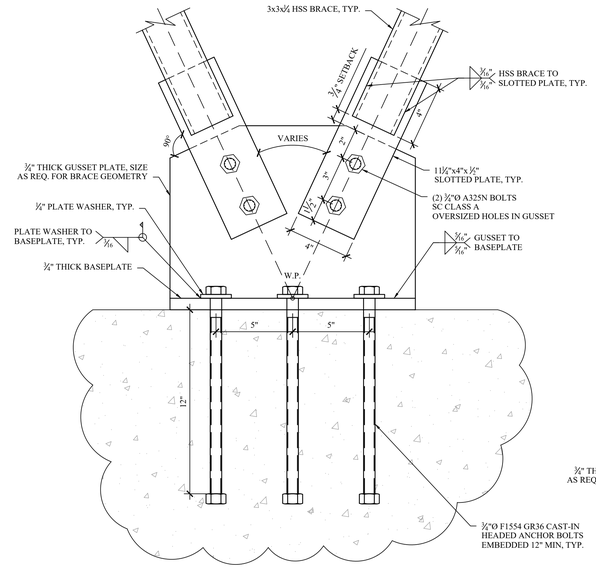
4 S-529 TYPICAL BRACE TO COLUMN/BASEPLATE CONNECTION
SCALE: 3" = 1'-0"



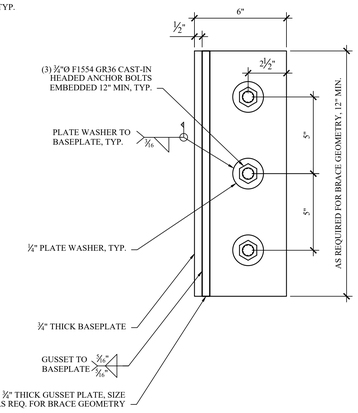
5 S-529 TYPICAL X BRACE INTERSECTION
SCALE: 3" = 1'-0"

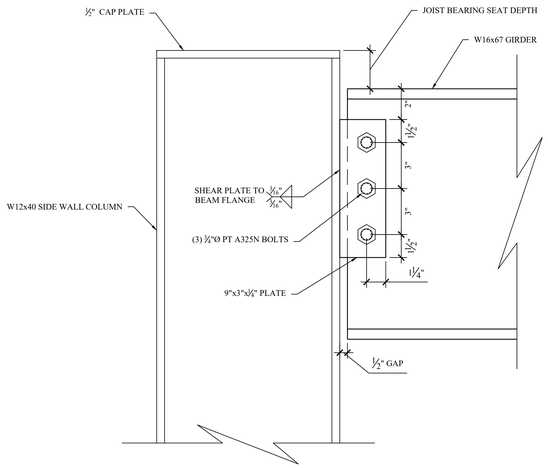


6 S-529 TYPICAL BRACE TO COLUMN/BEAM CONNECTION
SCALE: 3" = 1'-0"

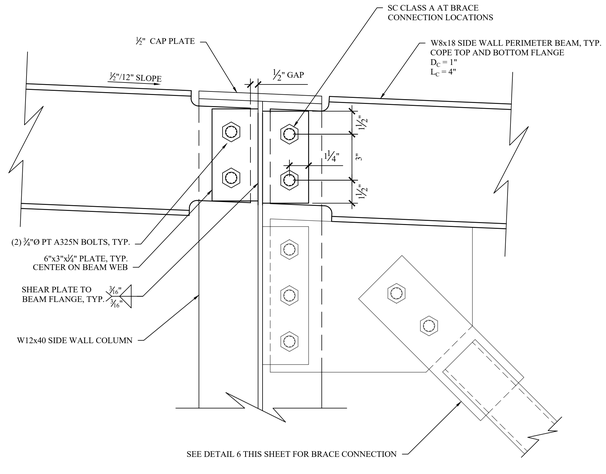


7 S-529 TYPICAL V BRACE TO BASEPLATE CONNECTION
SCALE: 3" = 1'-0"

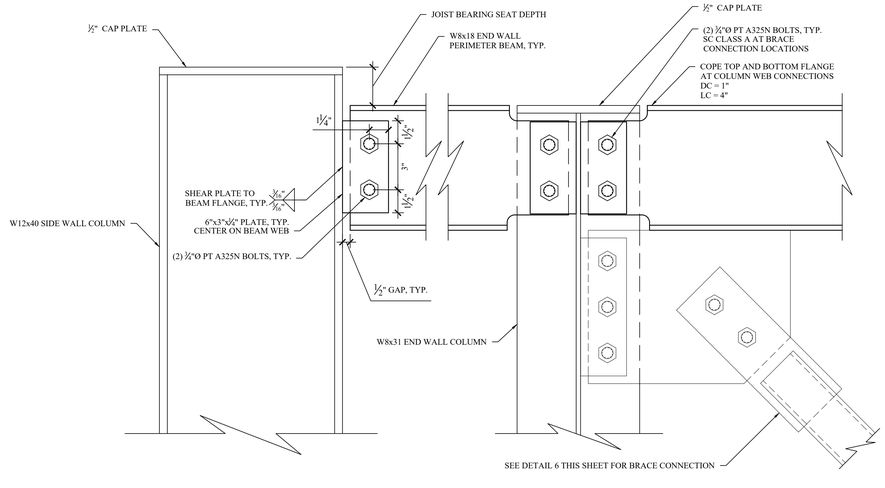




8 S-529 W16x67 GIRDER SHEAR PLATE CONNECTION
SCALE: 3" = 1'-0"



9 S-529 W8x18 SIDE WALL PERIMETER BEAM SHEAR PLATE CONNECTION
SCALE: 3" = 1'-0"



10 S-529 W8x18 END WALL PERIMETER BEAM SHEAR PLATE CONNECTION
SCALE: 3" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR BASIN AND ENCLOSURE DETAILS CONTINUED

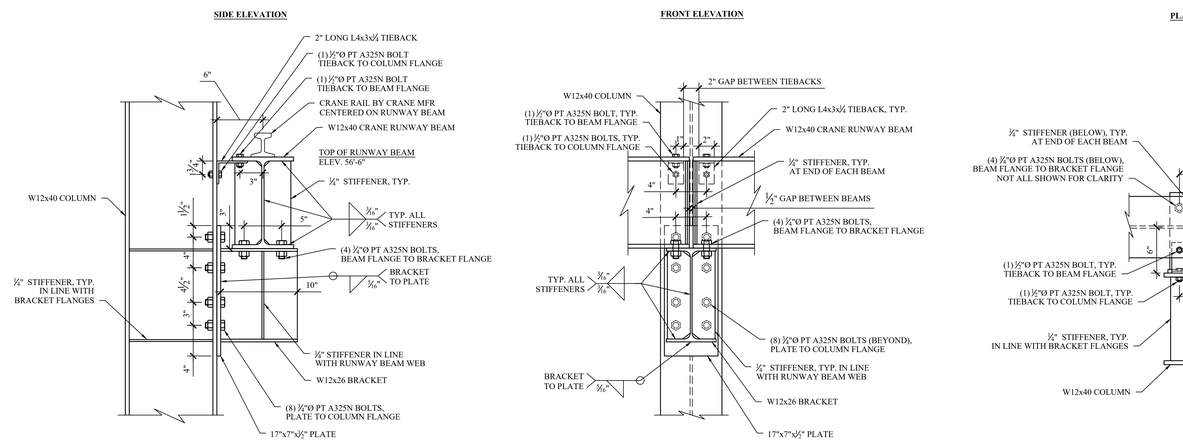
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

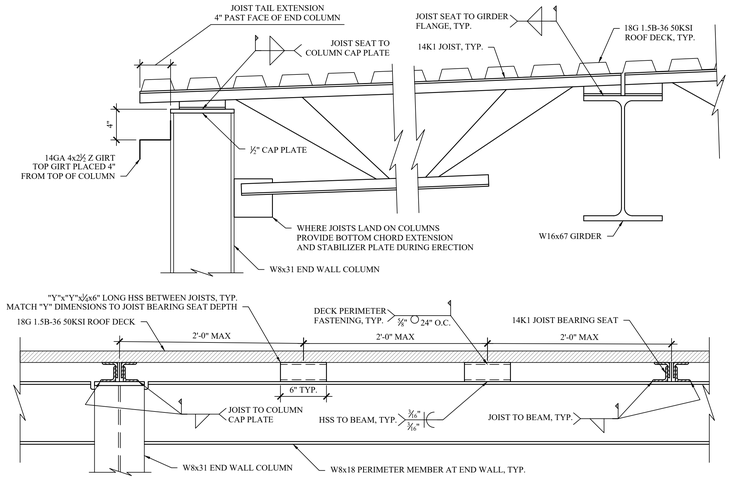
SHEET NO.
S-529

PROJECT # 18-732 PHASE #



1 S-530 MBR CRANE RUNWAY BEAM TO STEEL BRACKET CONNECTION

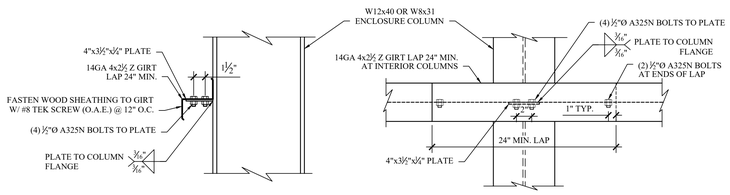
SCALE: 1-1/2" = 1'-0"



NOTE: JOISTS LANDING ON COLUMNS TO BE BOLTED TO CAP PLATE W/ (2) A307 BOLTS DURING ERECTION

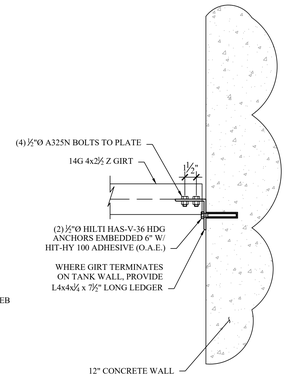
2 S-530 TYPICAL JOIST CONNECTIONS

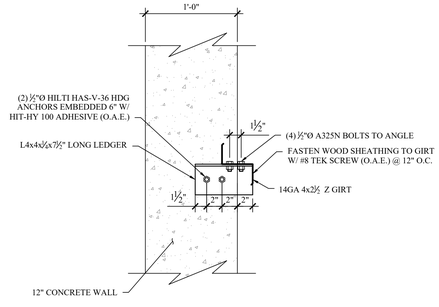
SCALE: 1-1/2" = 1'-0"

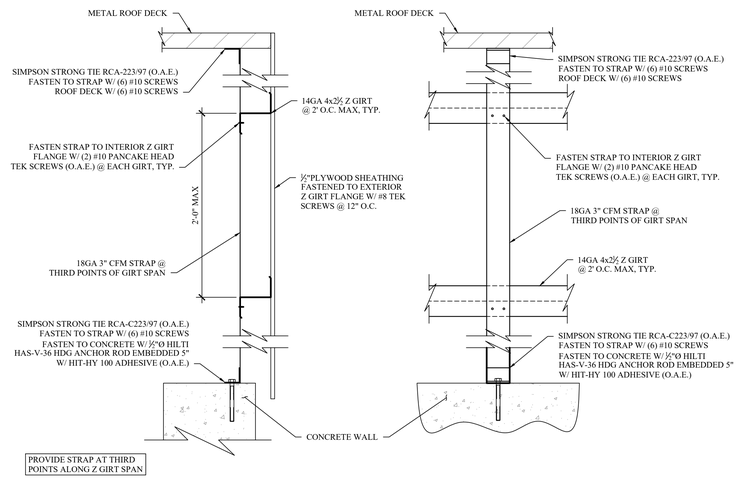


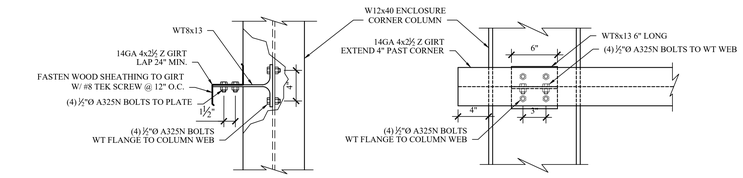
3 S-530 MBR ENCLOSURE WALL GIRT CONNECTION AT COLUMN FLANGE

SCALE: 1-1/2" = 1'-0"









4 S-530 MBR ENCLOSURE WALL GIRT CONNECTION AT COLUMN WEB

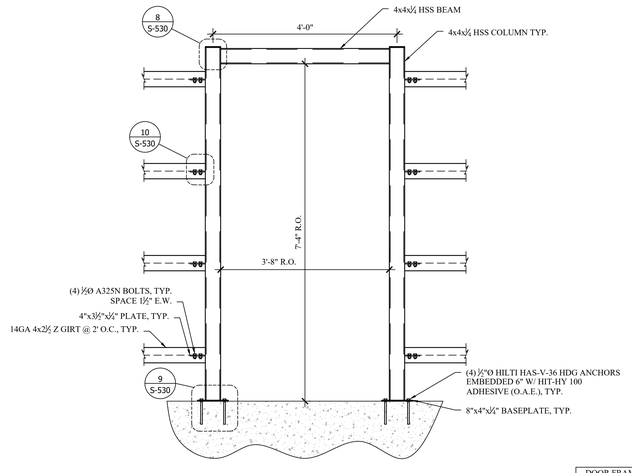
SCALE: 1-1/2" = 1'-0"

5 S-530 MBR ENCLOSURE LOWER Z GIRTS TERMINATION AT CONCRETE WALL

SCALE: 1-1/2" = 1'-0"

6 S-530 MBR ENCLOSURE Z GIRT STRAP BRACING AND SHEATHING

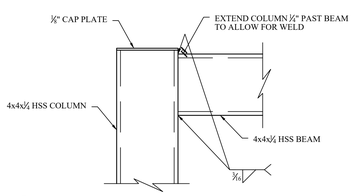
SCALE: 1-1/2" = 1'-0"



DOOR FRAME PLACED IN LINE WITH ENCLOSURE WALL Z GIRTS

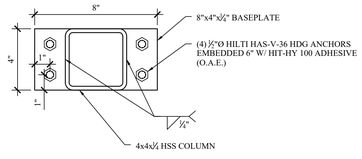
7 S-530 MBR ENCLOSURE SIDE DOOR FRAME

SCALE: 3/4" = 1'-0"



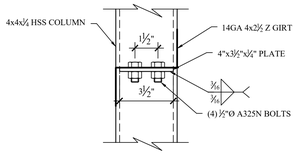
8 S-530 DOOR FRAME COLUMN TO BEAM

SCALE: 3" = 1'-0"



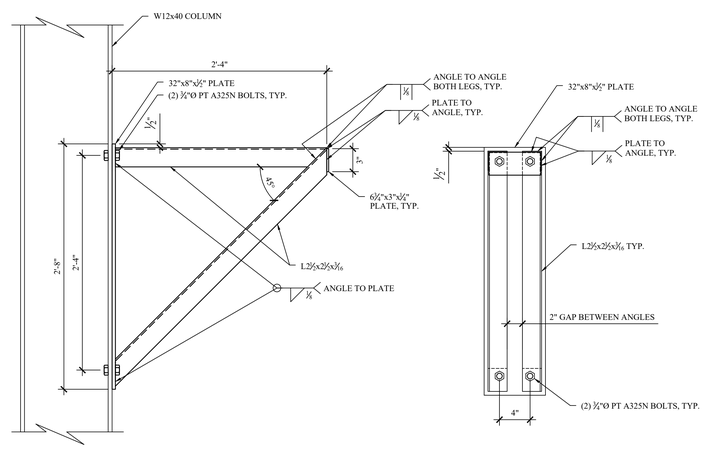
9 S-530 DOOR FRAME COLUMN BASEPLATE

SCALE: 3" = 1'-0"



10 S-530 DOOR FRAME COLUMN TO GIRT

SCALE: 3" = 1'-0"



11 S-530 MBR ENCLOSURE PIPE SUPPORT BRACKET

SCALE: 1-1/2" = 1'-0"

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR BASIN AND ENCLOSURE DETAILS CONTINUED

REVISIONS

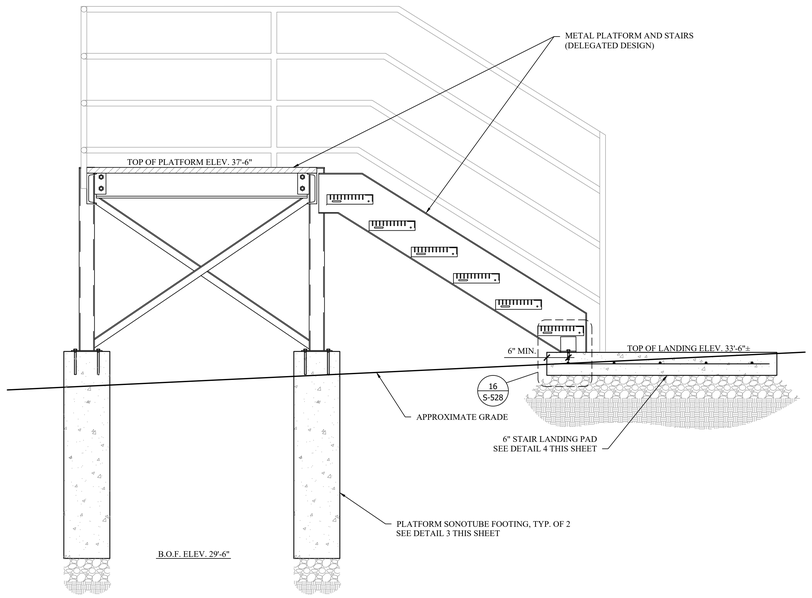
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

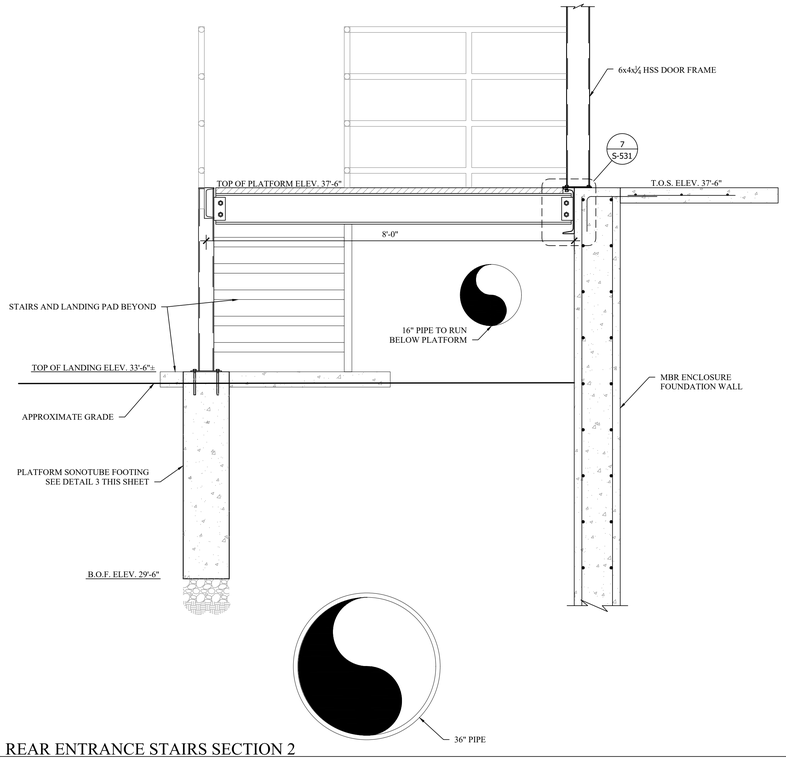
SHEET NO.

S-530

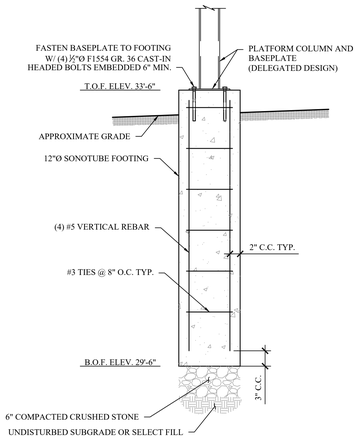
PROJECT # 18-732 PHASE #



1 S-531 REAR ENTRANCE STAIRS SECTION 1
SCALE: 3/4" = 1'-0"



2 S-531 REAR ENTRANCE STAIRS SECTION 2
SCALE: 3/4" = 1'-0"



3 S-531 PLATFORM SONOTUBE FOOTING
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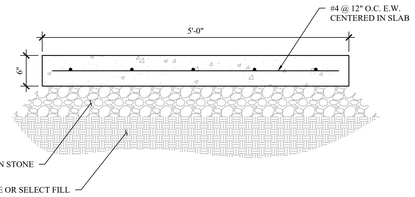
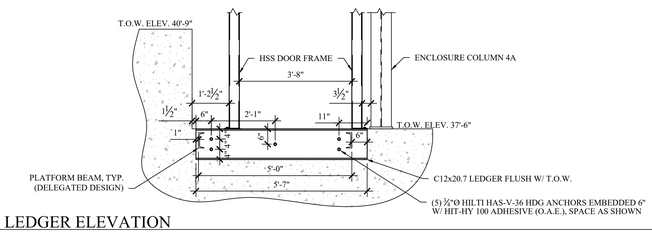
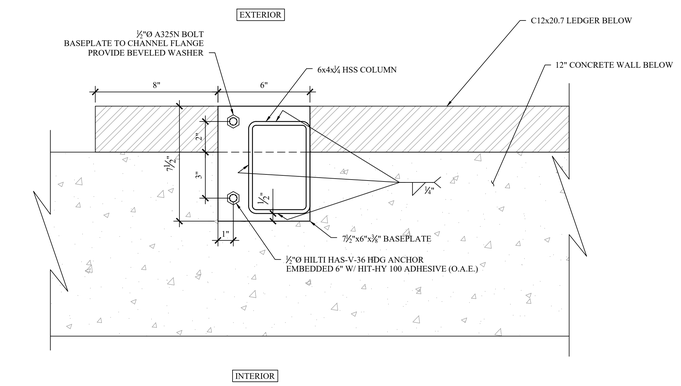


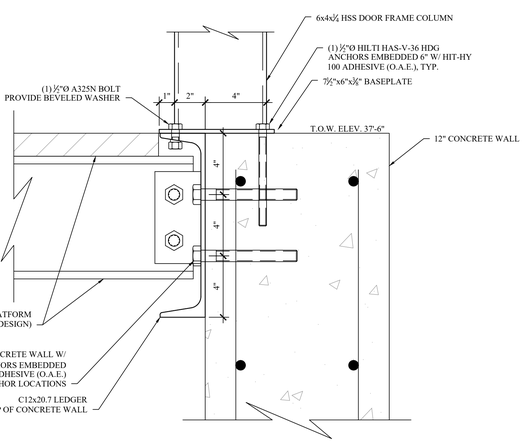
4 S-531 STAIR LANDING PAD
SCALE: 1" = 1'-0"



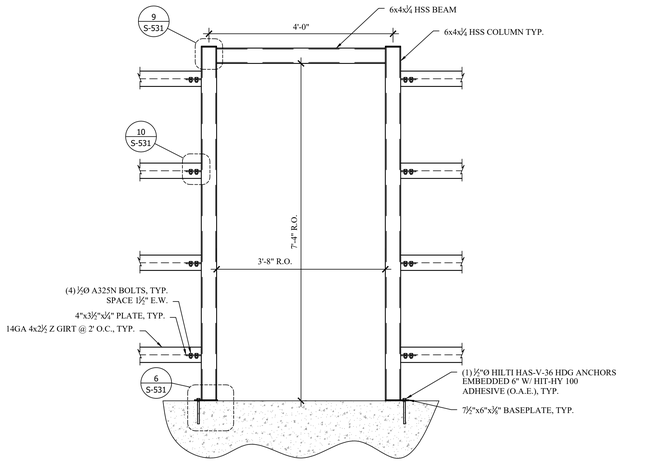
5 S-531 LEDGER ELEVATION
SCALE: 1/2" = 1'-0"



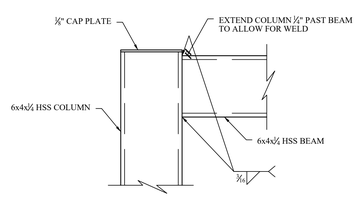
6 S-531 DOOR FRAME COLUMN BASEPLATE
SCALE: 3" = 1'-0"



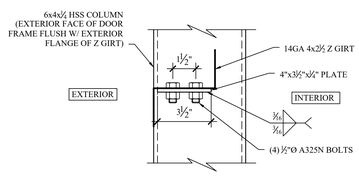
7 S-531 DOOR FRAME CONNECTION AND CHANNEL LEDGER
SCALE: 1" = 1'-0"



8 S-531 MBR ENCLOSURE REAR DOOR FRAME
SCALE: 3/4" = 1'-0"



9 S-531 DOOR FRAME COLUMN TO BEAM
SCALE: 3" = 1'-0"



10 S-531 DOOR FRAME COLUMN TO GIRT
SCALE: 3" = 1'-0"

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR ENCLOSURE REAR ENTRANCE SECTIONS AND DETAILS

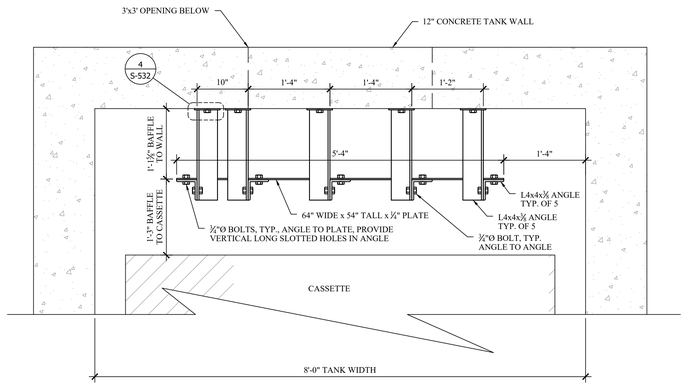
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

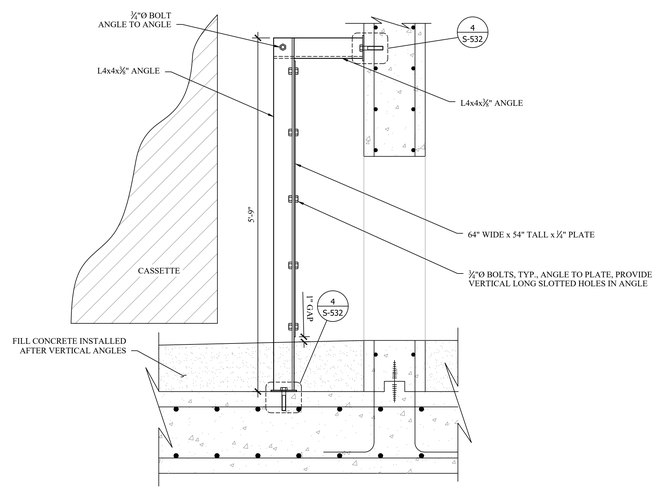
SHEET NO.
S-531

PROJECT # 18-732 PHASE #



1 S-532 MBR TANK BAFFLE PLAN VIEW

SCALE: 1" = 1'-0"

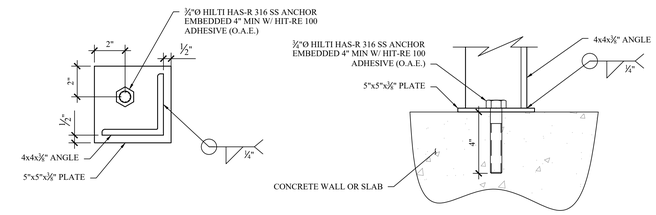


2 S-532 MBR TANK BAFFLE SECTION VIEW

SCALE: 1" = 1'-0"

3 S-532 MBR TANK BAFFLE FRONT ELEVATION VIEW

SCALE: 1" = 1'-0"



4 S-532 TYPICAL BAFFLE ANGLE BASEPLATE AND ANCHOR

SCALE: 3" = 1'-0"

MBR TANK BAFFLE NOTES:

1. ALL PLATES, ANGLES AND FASTENERS USED IN BAFFLE CONSTRUCTION SHALL BE 316 SS.

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(845) 567-3100

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Milford, PA 18337
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UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR TRAIN BAFFLE DETAILS

REVISIONS

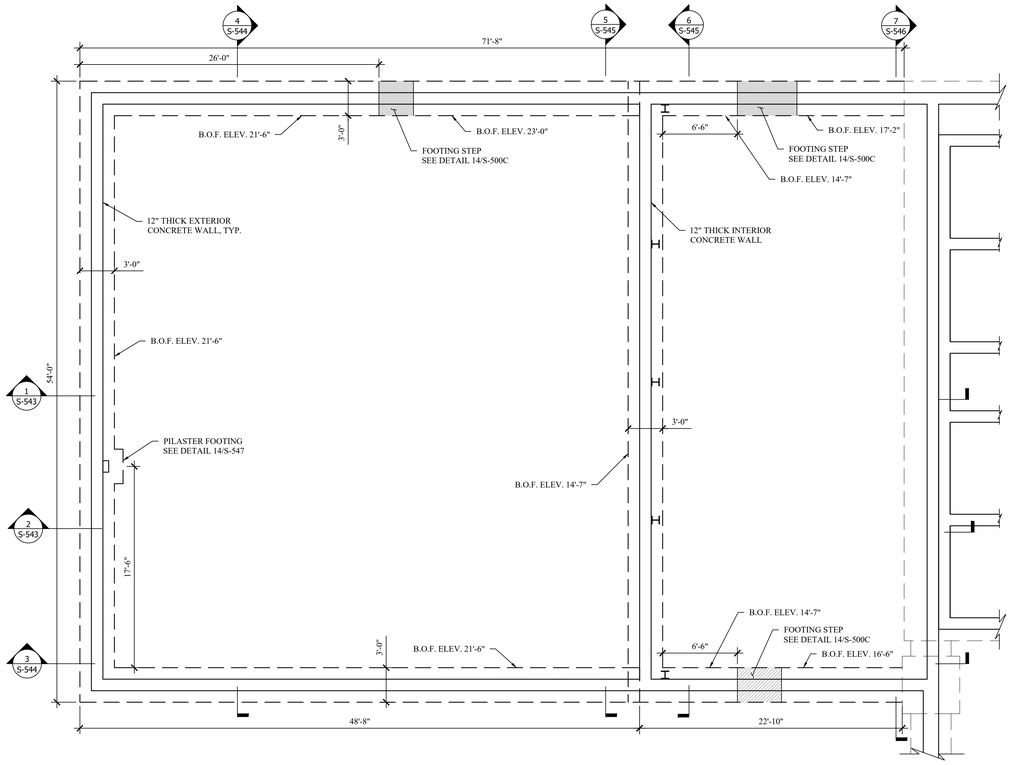
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

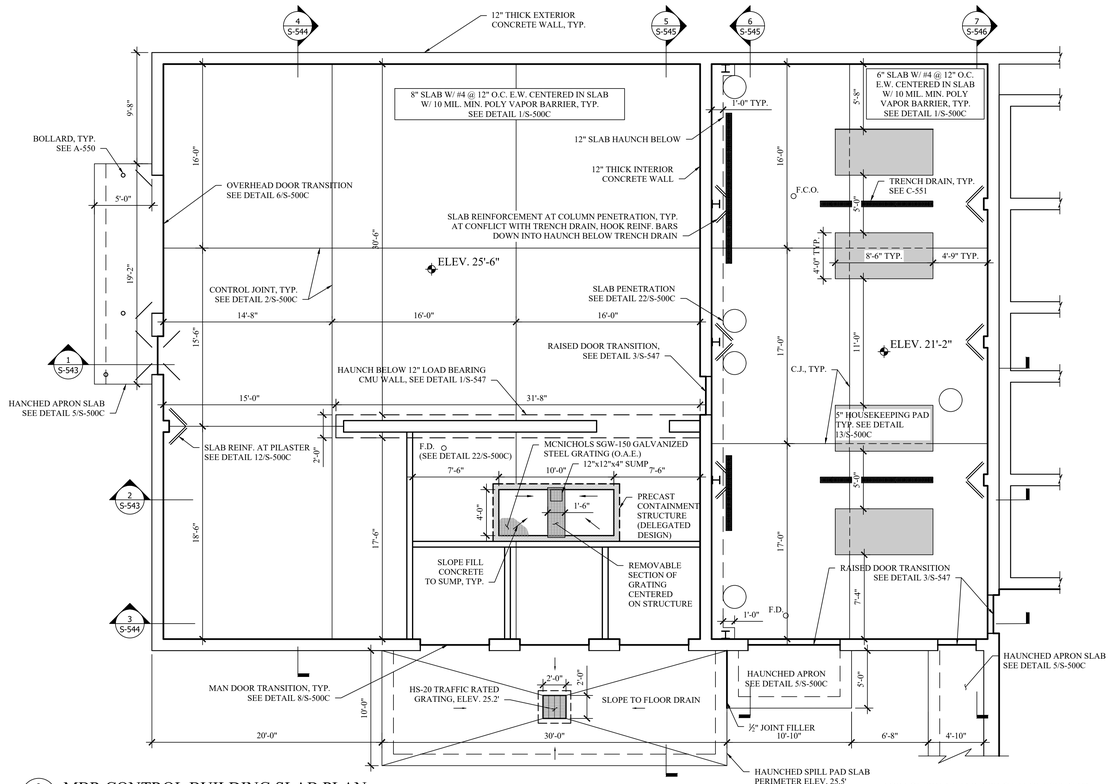
SHEET NO.

S-532

PROJECT # 18-732 PHASE #

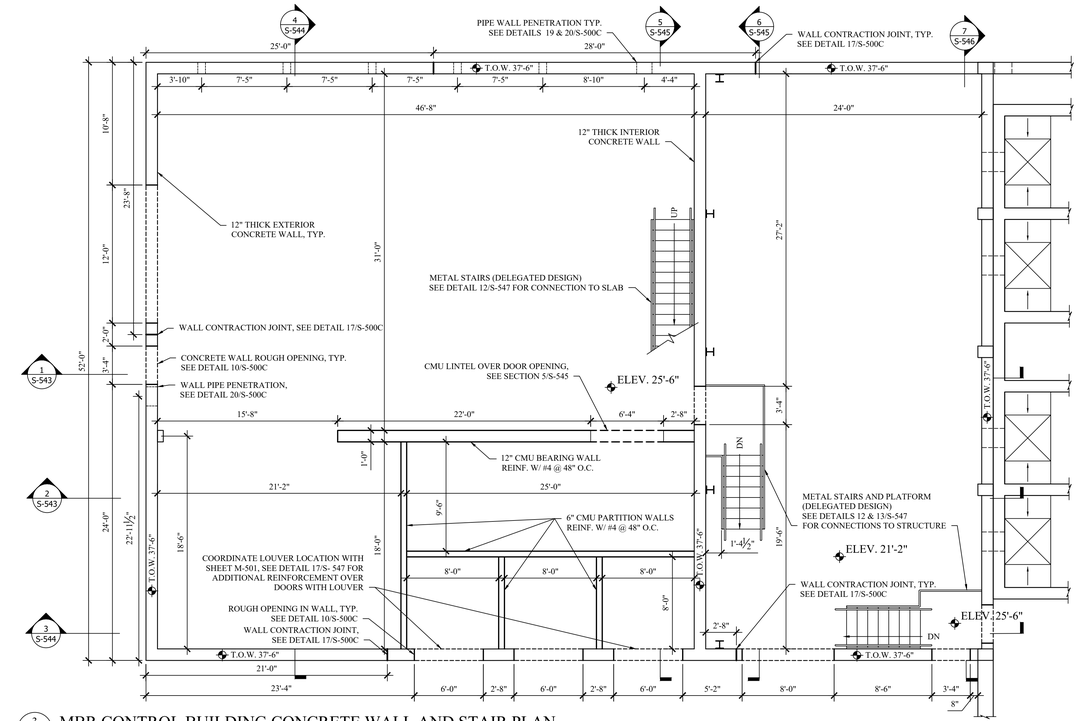


1 S-540 MBR CONTROL BUILDING FOUNDATION PLAN
SCALE: 3/16" = 1'-0"

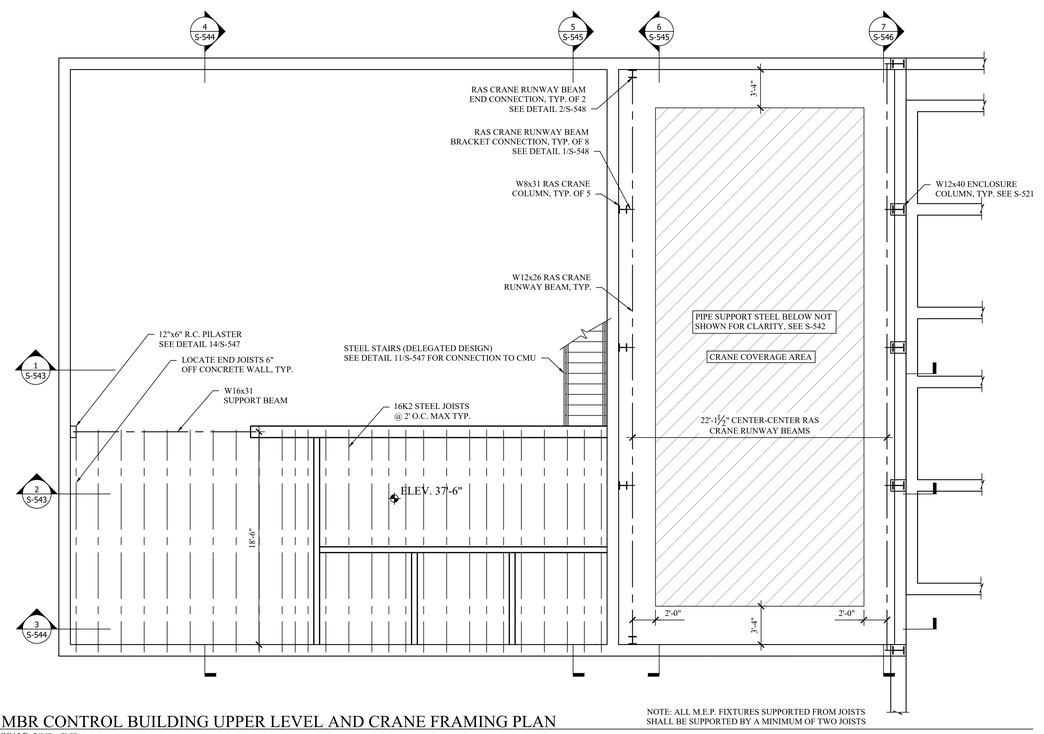


2 S-540 MBR CONTROL BUILDING SLAB PLAN
SCALE: 3/16" = 1'-0"

FOR EQUIPMENT AND PIPING LAYOUT SEE C-551

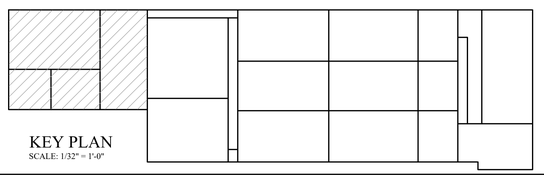


3 S-540 MBR CONTROL BUILDING CONCRETE WALL AND STAIR PLAN
SCALE: 3/16" = 1'-0"



NOTE: ALL M.E.P. FIXTURES SUPPORTED FROM JOISTS
SHALL BE SUPPORTED BY A MINIMUM OF TWO JOISTS

4 S-540 MBR CONTROL BUILDING UPPER LEVEL AND CRANE FRAMING PLAN
SCALE: 3/16" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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HAZARDOUS MATERIAL NOTE:
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NEW WINDSOR, NY 12553
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555 UNION AVE.
NEW WINDSOR, NY 12553

MBR CONTROL BUILDING PLANS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
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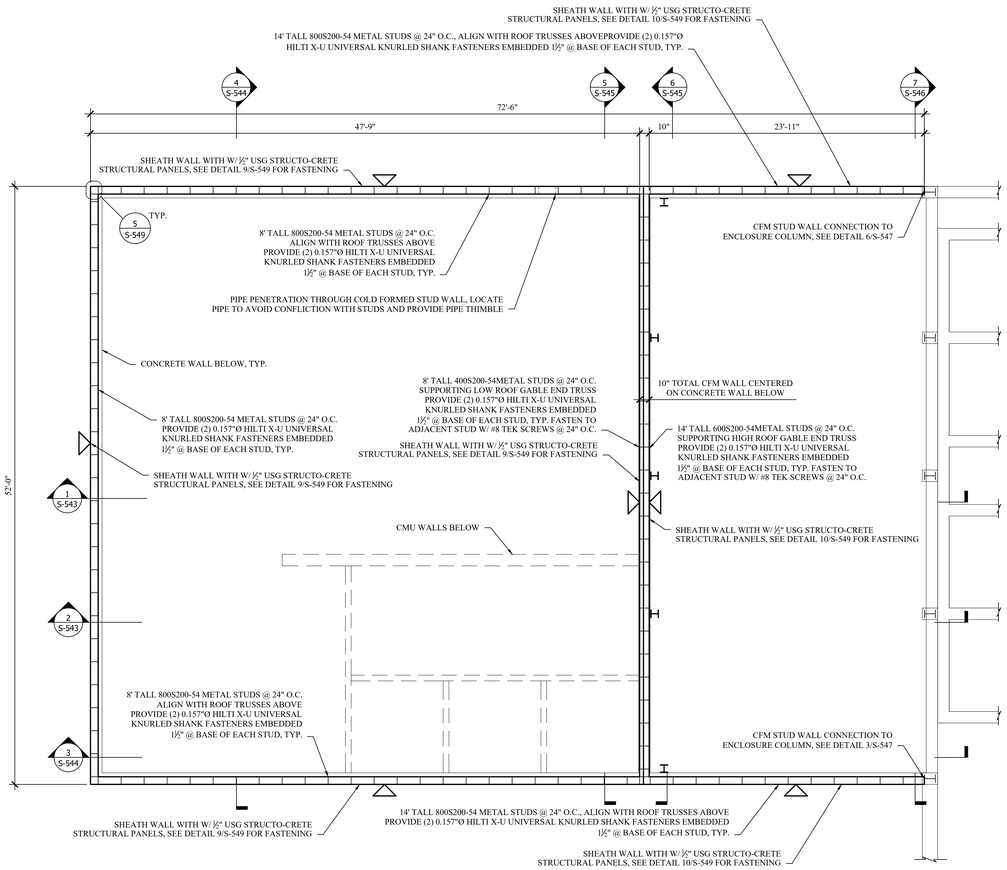
REVIEWED BY:	JSS

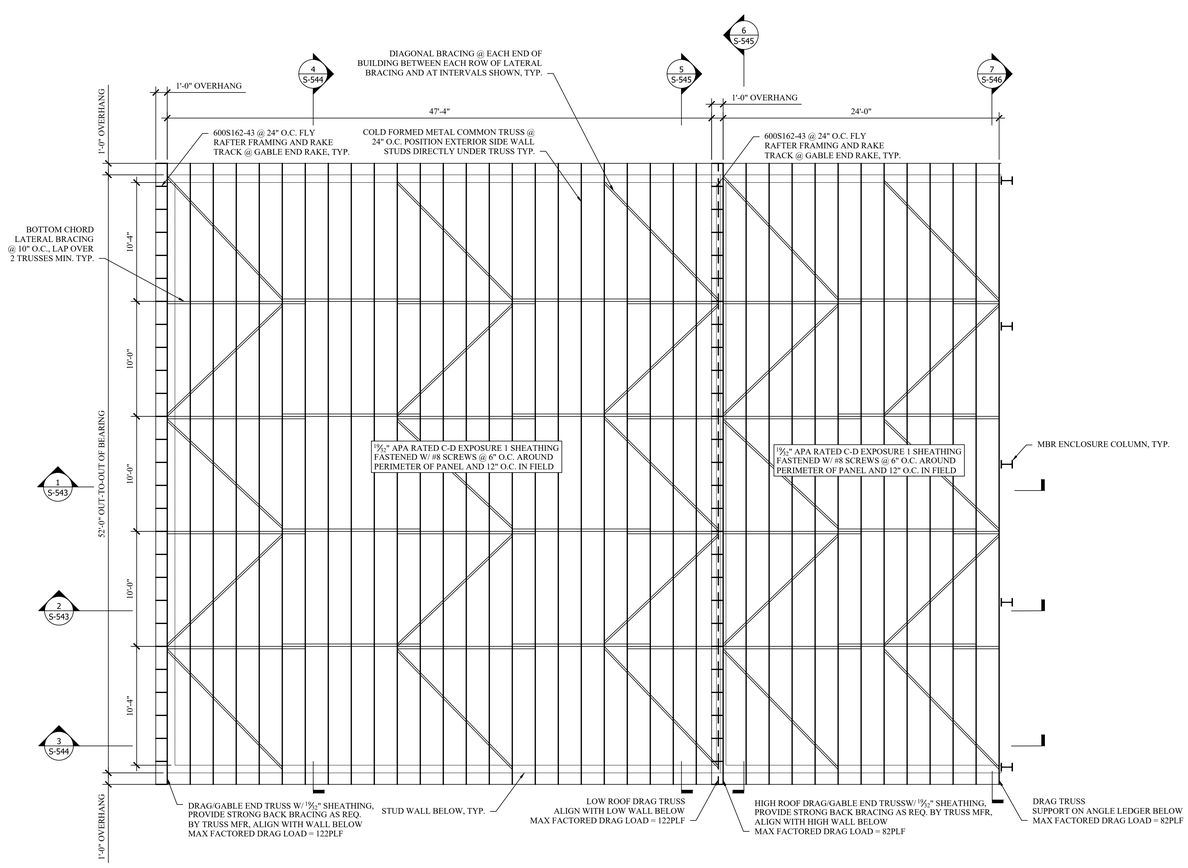
SHEET NO.
S-540

PROJECT # 18-732 PHASE #

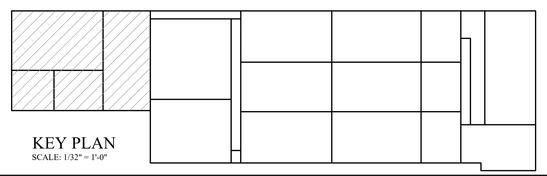


5/S-541 MBR CONTROL BUILDING COLD FORMED METAL WALL FRAMING
SCALE: 3/16" = 1'-0"

NOTE: TRIANGLE INDICATES SHEATHED SIDE OF WALL



6/S-541 MBR CONTROL BUILDING ROOF FRAMING
SCALE: 3/16" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553

MBR CONTROL BUILDING PLANS CONTINUED

REVISIONS

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ISSUED DATE:	18 APR, 2025
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REVIEWED BY:	JSS

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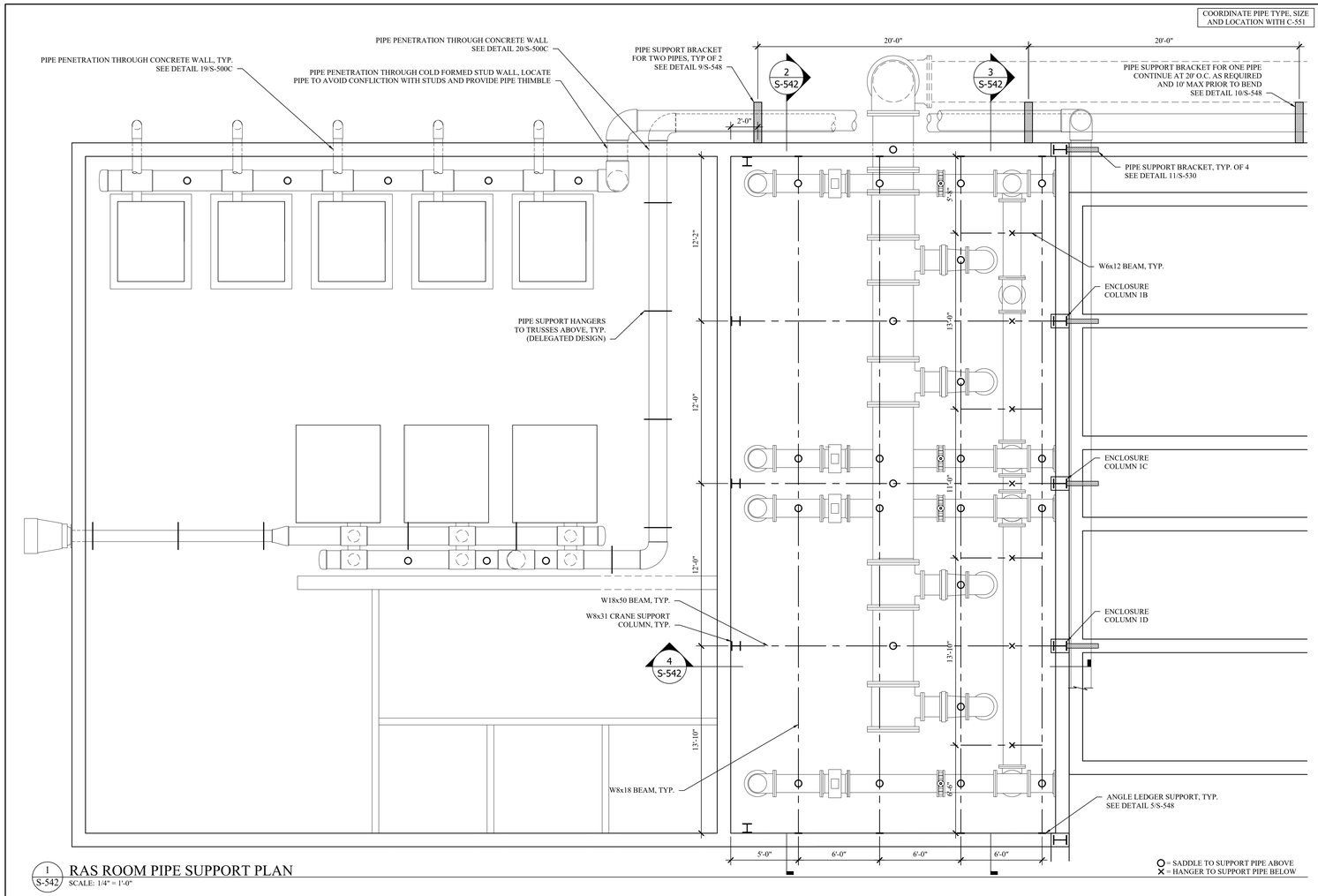
S-541

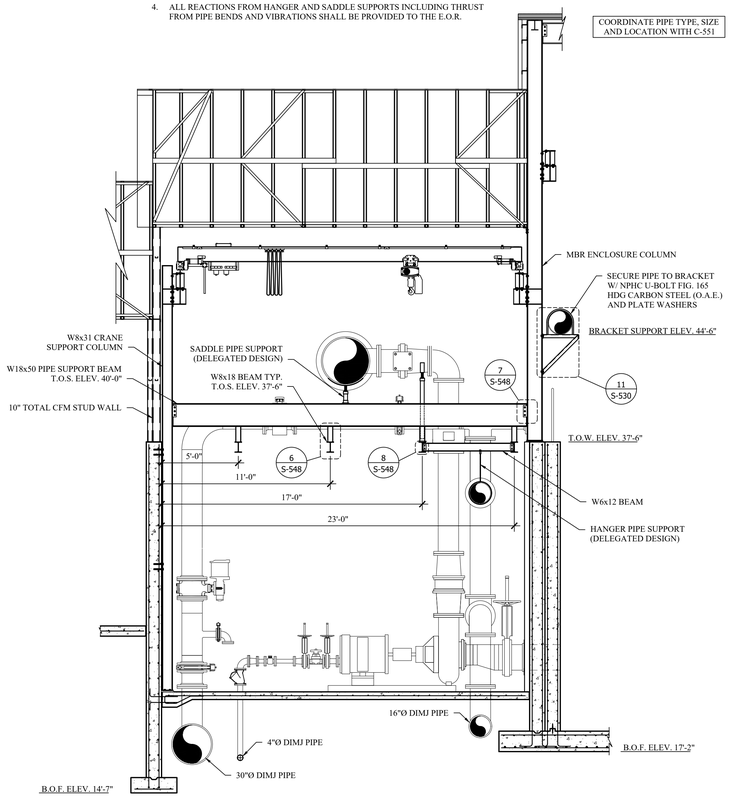
PROJECT # 18-732 PHASE #



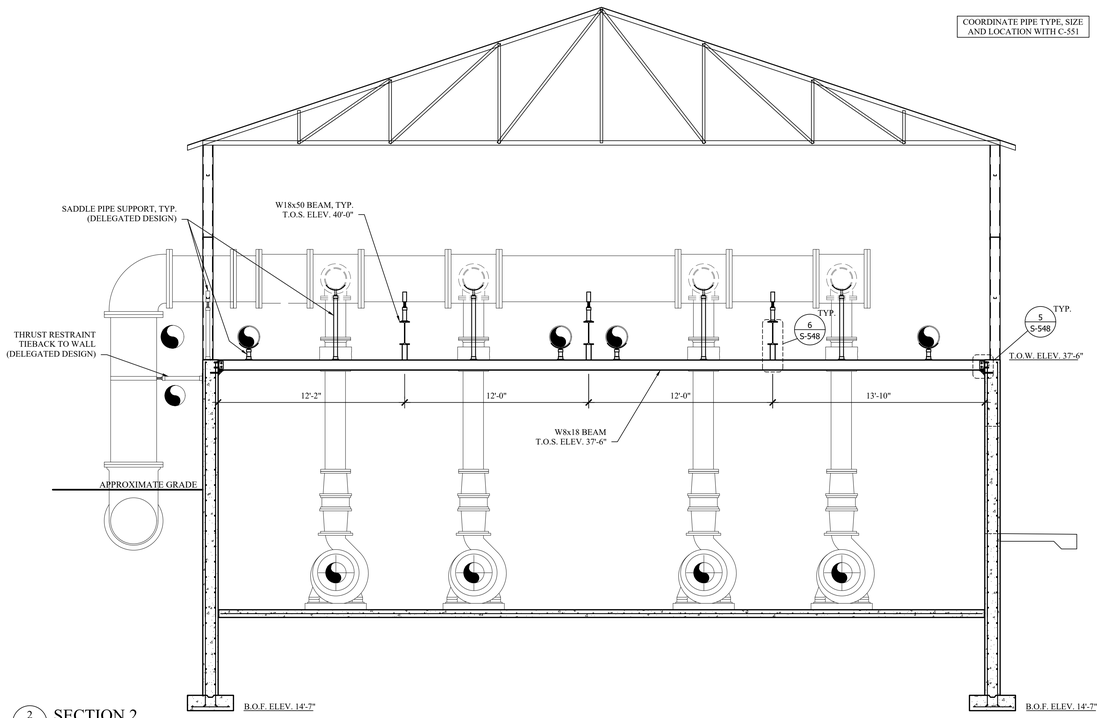
1 S-542 RAS ROOM PIPE SUPPORT PLAN
SCALE: 1/4" = 1'-0"

PIPE SUPPORT NOTES:

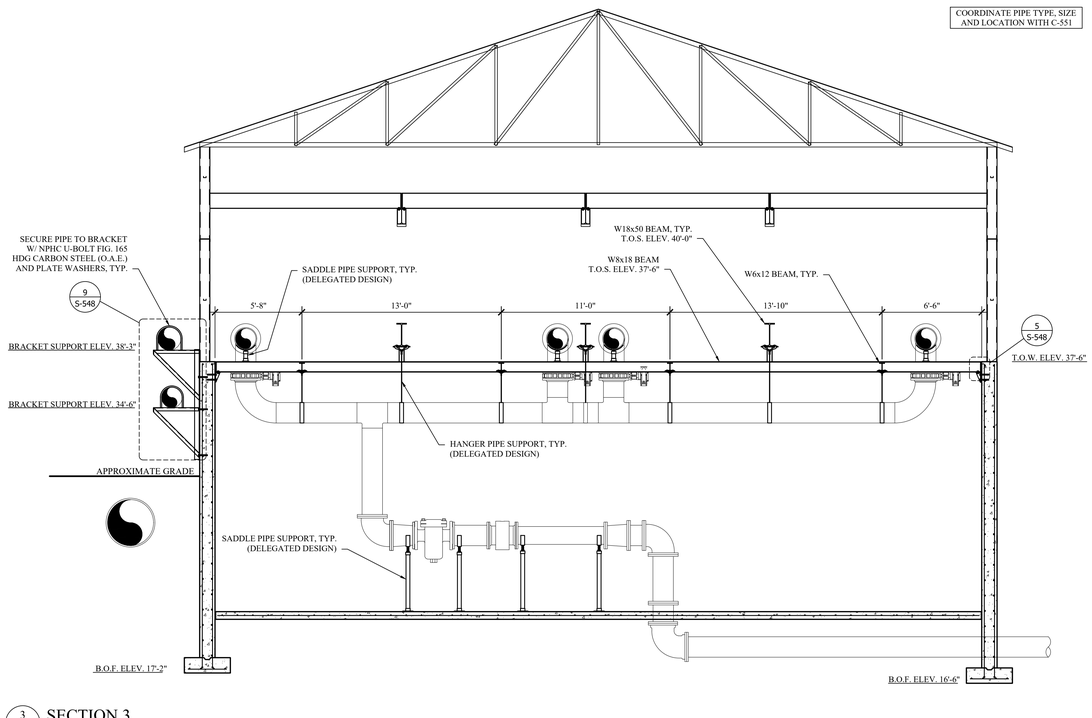
1. ALL PIPE SUPPORT SADDLES AND HANGERS SHALL BE A DELEGATED DESIGN PER THE HANGERS AND SUPPORTS SPECIFICATION 400507. DESIGN CALCULATIONS AND DRAWINGS SHALL BE SIGNED AND SEALED BY A NEW YORK STATE LICENSED P.E.
2. PIPE SUPPORT LOCATIONS SHOWN ON PLANS ARE CONCEPTUAL. IF ADDITIONAL STRUCTURAL STEEL SUPPORT FRAMING IS REQUIRED TO PROVIDE NECESSARY PIPE SUPPORT NOTIFY THE E.O.R. IMMEDIATELY.
3. HANGERS FROM ROOF TRUSSES ABOVE SHALL BE SUPPORTED BY A MINIMUM OF THREE TRUSSES. REACTIONS ON TRUSSES SHALL BE COORDINATED WITH TRUSS MANUFACTURER.
4. ALL REACTIONS FROM HANGER AND SADDLE SUPPORTS INCLUDING THRUST FROM PIPE BENDS AND VIBRATIONS SHALL BE PROVIDED TO THE E.O.R.



4 S-542 SECTION 4
SCALE: 1/4" = 1'-0"



2 S-542 SECTION 2
SCALE: 1/4" = 1'-0"



3 S-542 SECTION 3
SCALE: 1/4" = 1'-0"

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NEW WINDSOR, NY 12553

R.A.S. ROOM PIPE SUPPORT PLAN AND SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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DRAWN BY:	WPG, NEM, PJW
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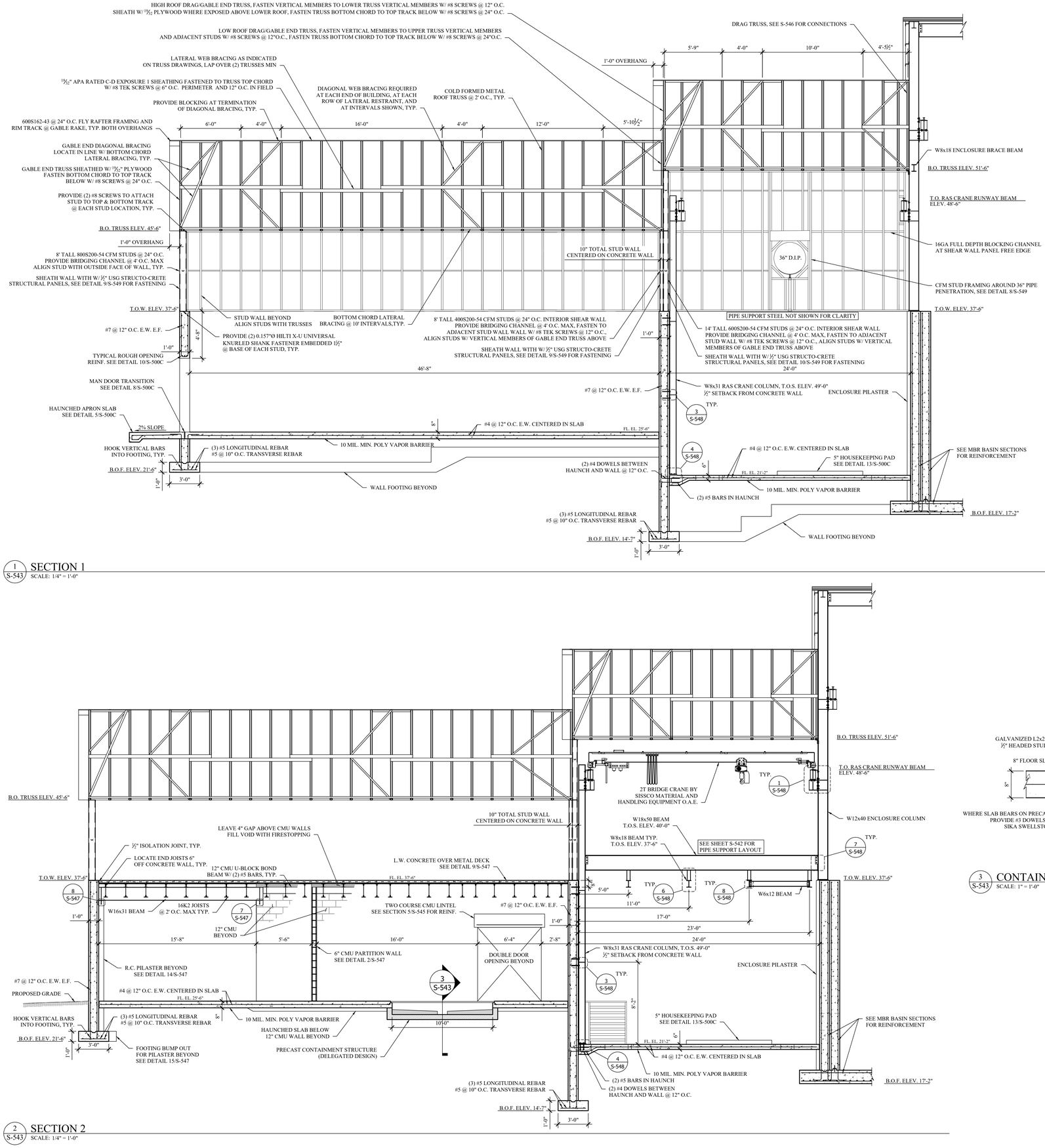
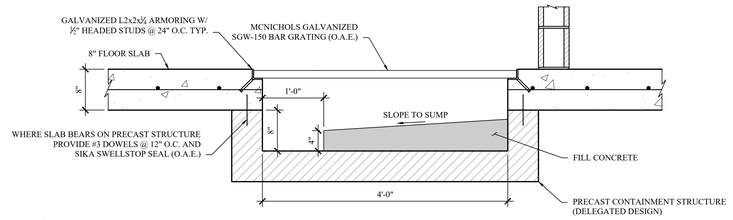
SHEET NO.
S-542

PROJECT # 18-732 PHASE #



1 S-543 SECTION 1
SCALE: 1/4" = 1'-0"

2 S-543 SECTION 2
SCALE: 1/4" = 1'-0"



3 S-543 CONTAINMENT STRUCTURE SECTION
SCALE: 1" = 1'-0"

SUBBASE AND BACKFILL NOTES:

1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.

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New Windsor, NY 12553
(845) 567-3100
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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

MBR CONTROL
BUILDING SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR. 2025
DESIGN BY:	WPG, NEM, PJW
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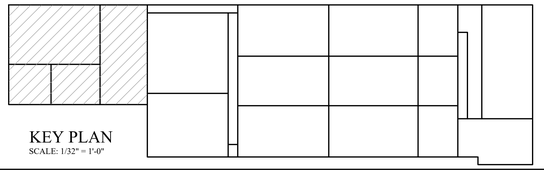
REVIEWED BY:	JSS

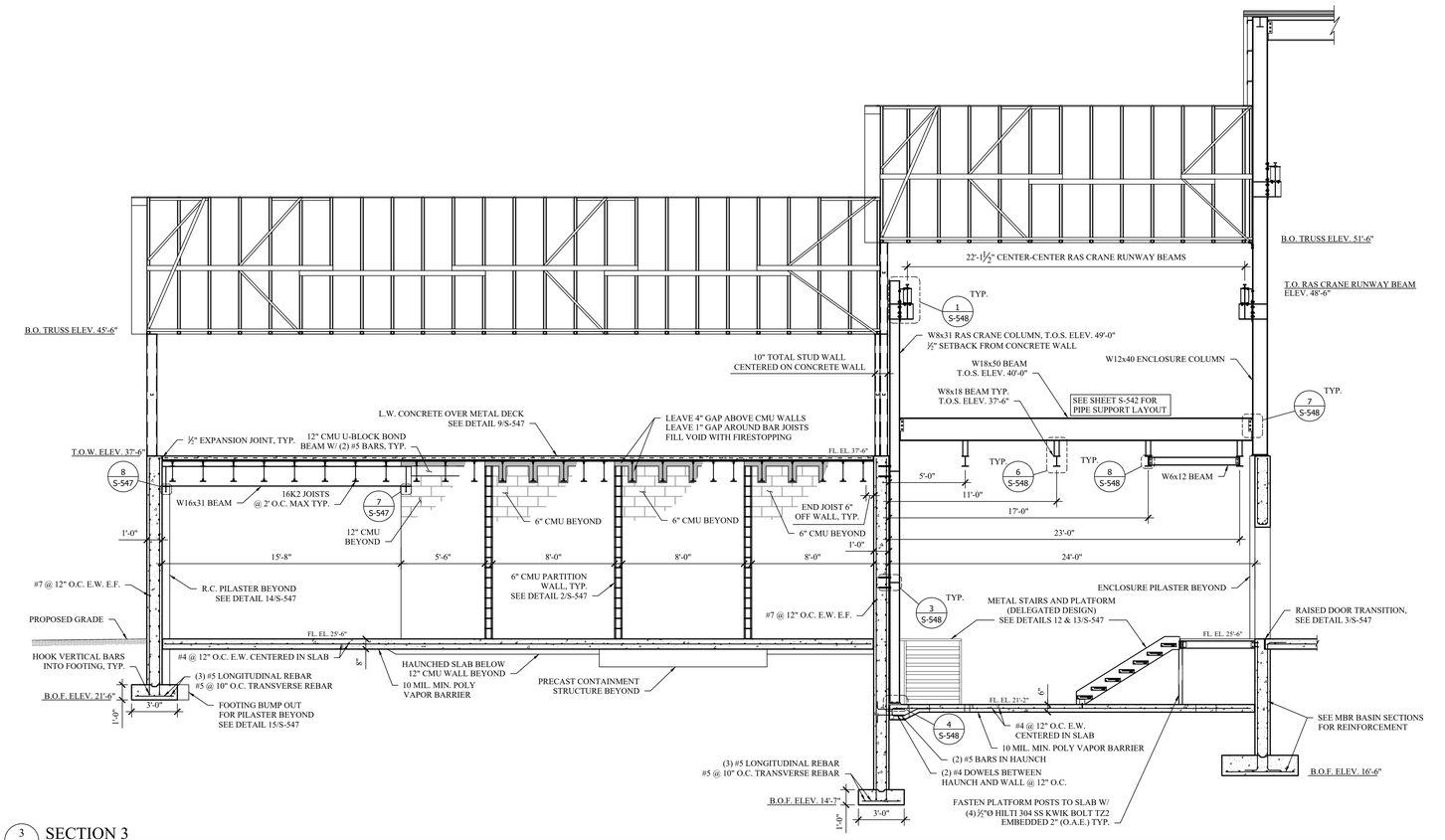
SHEET NO.
S-543

PROJECT # 18-732 PHASE #

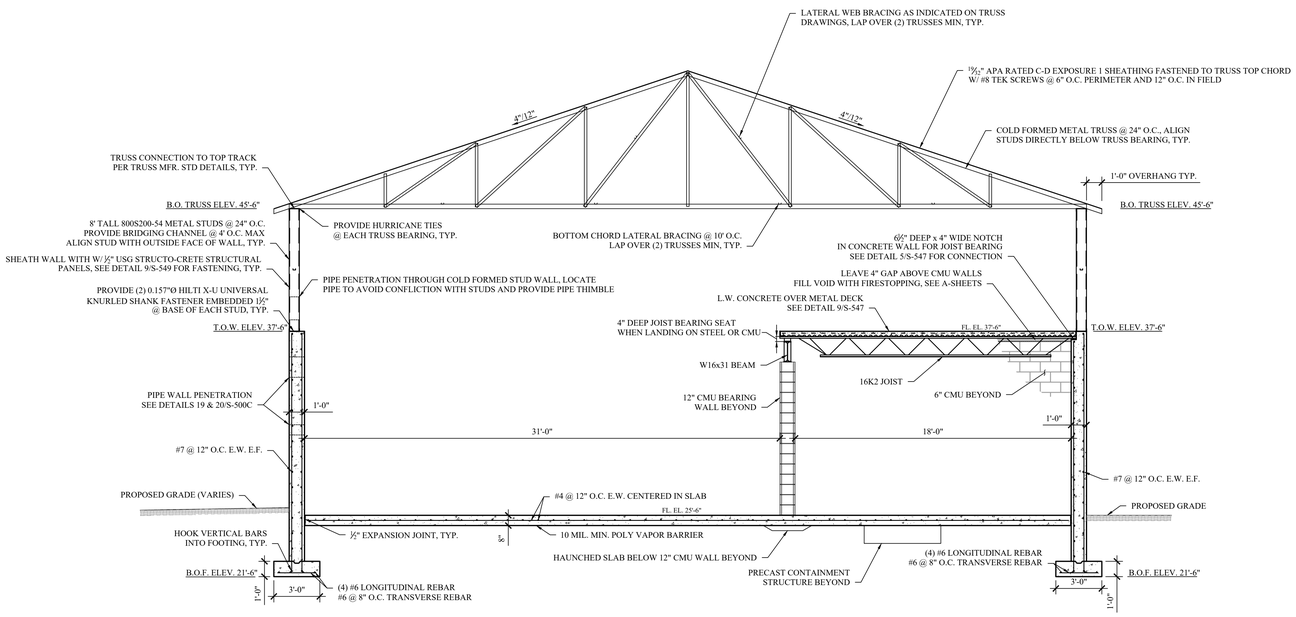

KEY PLAN
SCALE: 1/32" = 1'-0"

SUBBASE AND BACKFILL NOTES:

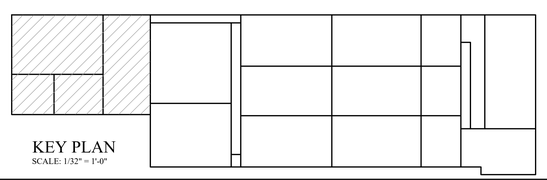
1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



3 / S-544 SECTION 3
SCALE: 1/4" = 1'-0"



4 / S-544 SECTION 4
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

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111 Wheatfield Drive, Suite 1
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(570) 296-2765

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

MBR CONTROL BUILDING SECTIONS CONTINUED

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
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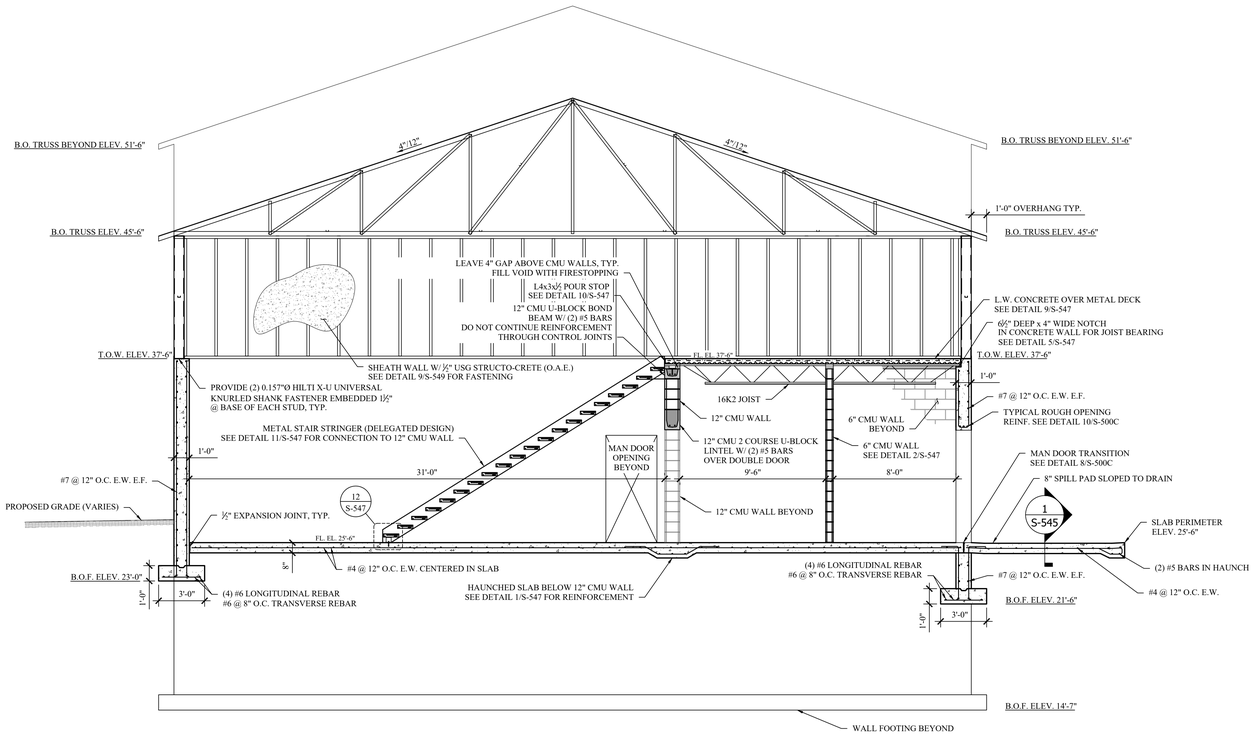
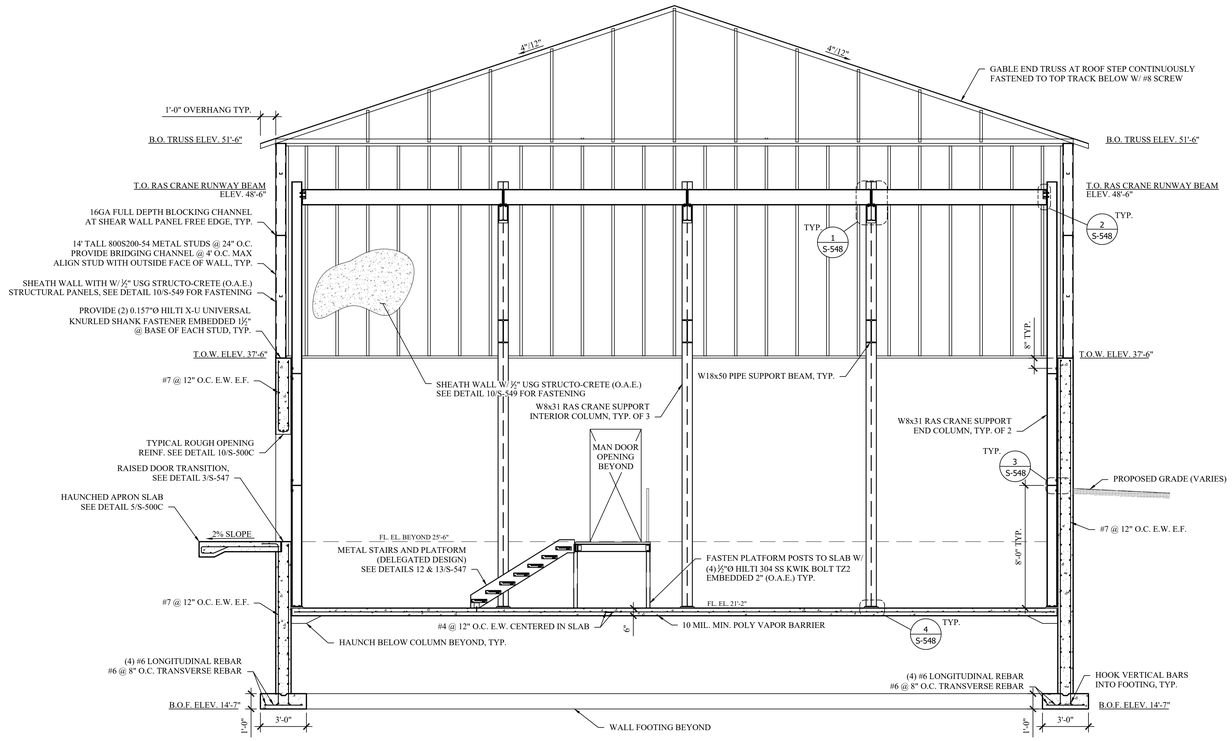
REVIEWED BY:	JSS

SHEET NO.
S-544

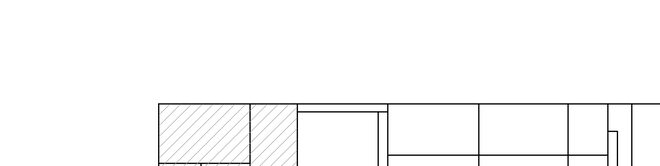
PROJECT # 18-732 PHASE #



5 S-545 SECTION 5
SCALE: 1/4" = 1'-0"



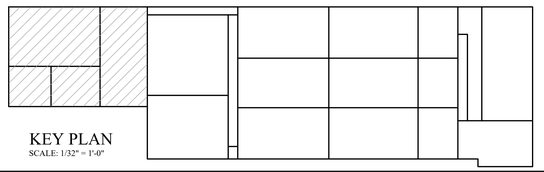
6 S-545 SECTION 6
SCALE: 1/4" = 1'-0"



1 S-545 SPILL PAD SECTION
SCALE: 3/8" = 1'-0"

SUBBASE AND BACKFILL NOTES:

1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



KEY PLAN
SCALE: 1/32" = 1'-0"

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111 Wheatfield Drive, Suite 1
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BID SET

HAZARDOUS MATERIAL NOTE:
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UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR CONTROL BUILDING SECTIONS CONTINUED

REVISIONS

NO.	DESCRIPTION	DATE

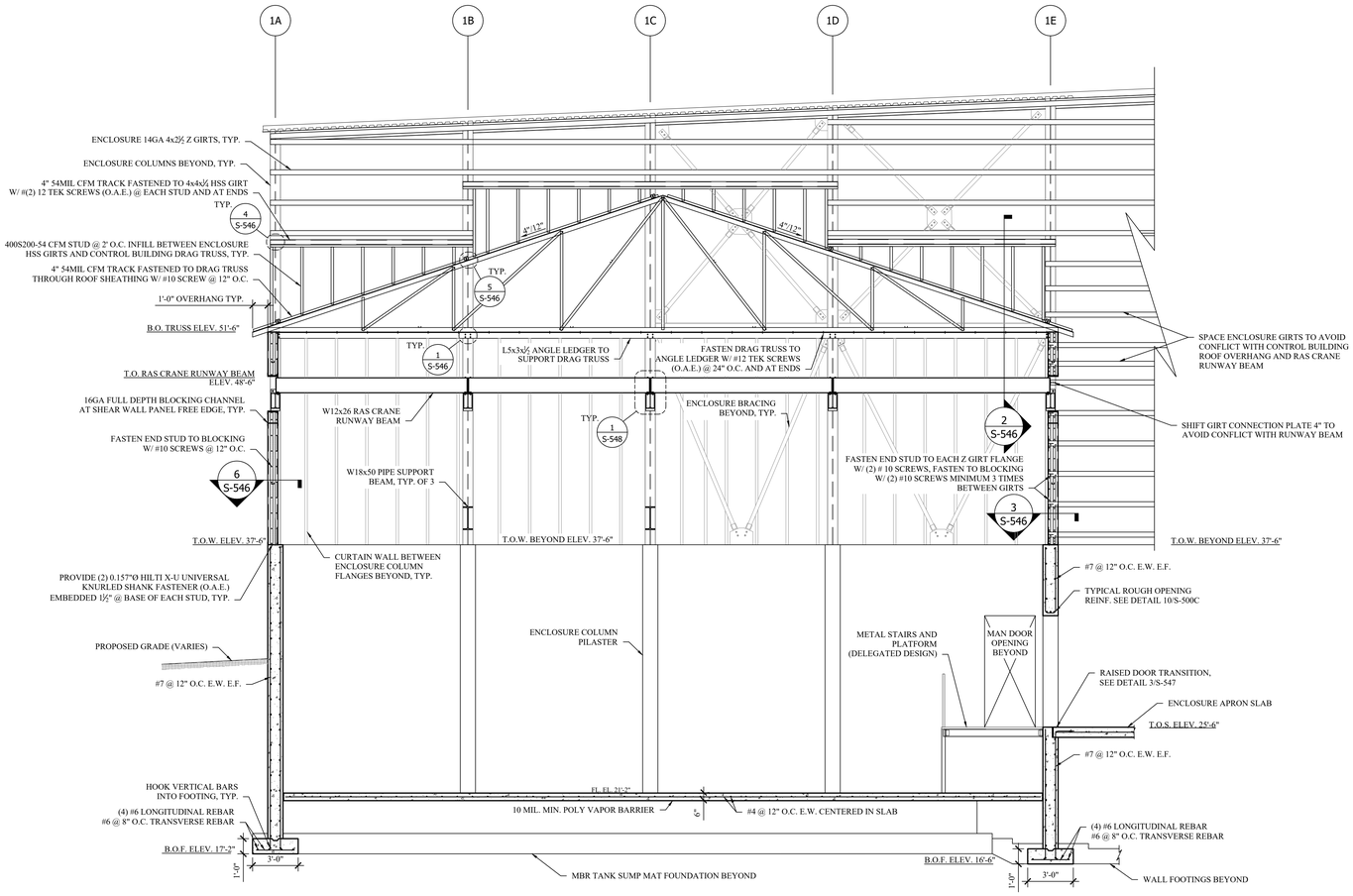
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-545

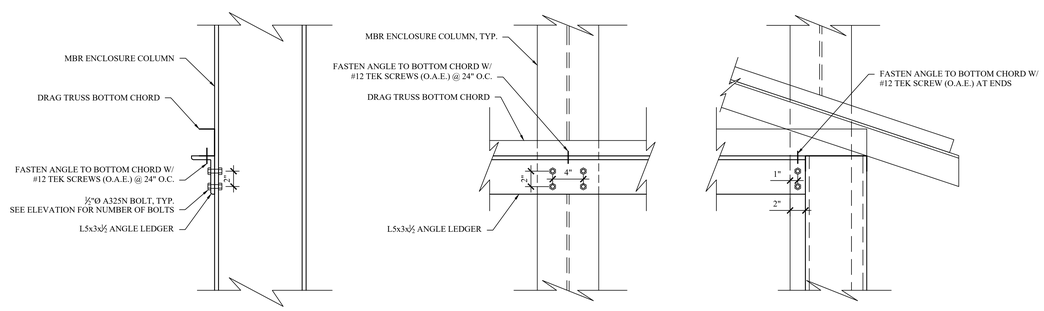
PROJECT # 18-732 PHASE #

SUBBASE AND BACKFILL NOTES:

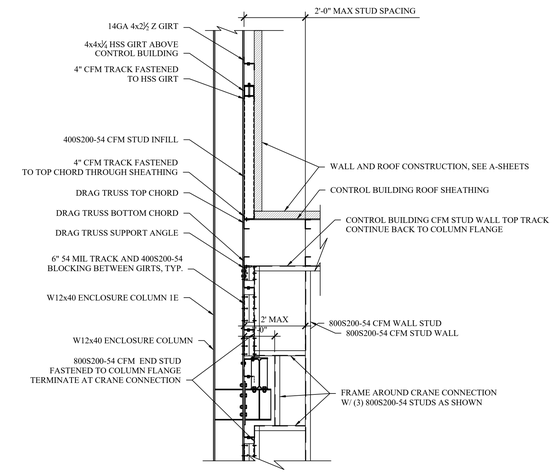
1. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
2. BACKFILL ALL STRUCTURES WITH SOIL THAT MEETS MINIMUM PROPERTIES IDENTIFIED IN THE GEOTECHNICAL NOTES AND PROJECT GEOTECHNICAL REPORT.



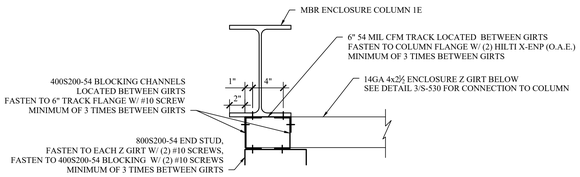
7 S-546 SECTION 7
SCALE: 1/4" = 1'-0"



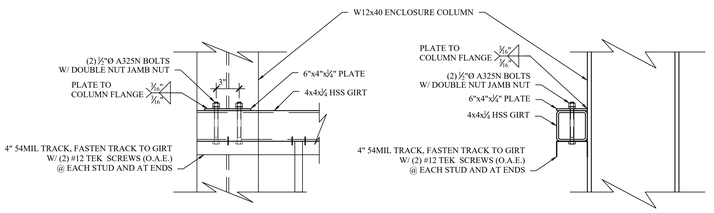
1 S-546 DRAG TRUSS SUPPORT LEDGER
SCALE: 1/4" = 1'-0"



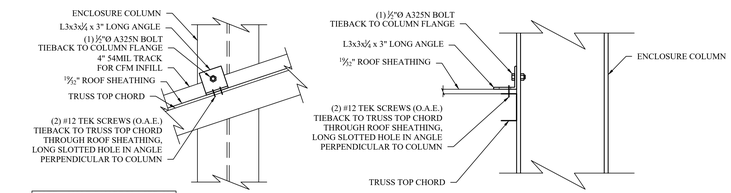
2 S-546 MBR ENCLOSURE AND CONTROL BUILDING INTERFACE SECTION
SCALE: 1" = 1'-0"



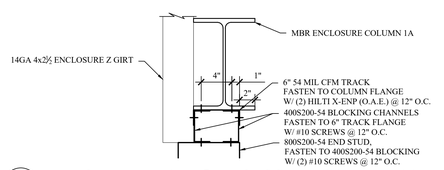
3 S-546 END STUD DETAIL @ ENCLOSURE COLUMN 1E
SCALE: 1-1/2" = 1'-0"



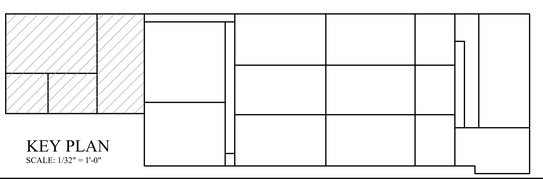
4 S-546 ENCLOSURE HSS GIRT CONNECTION ABOVE CONTROL BUILDING
SCALE: 1-1/2" = 1'-0"



5 S-546 TRUSS TOP CHORD TIEBACK TO COLUMN
SCALE: 1-1/2" = 1'-0"



6 S-546 END STUD DETAIL @ ENCLOSURE COLUMN 1A
SCALE: 1-1/2" = 1'-0"



KEY PLAN
SCALE: 1/32" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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MBR CONTROL BUILDING SECTIONS CONTINUED

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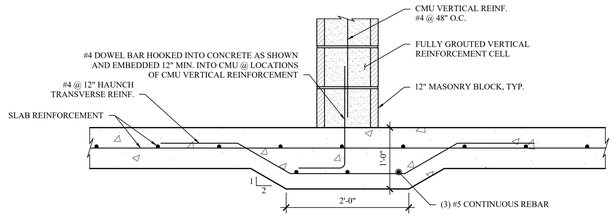
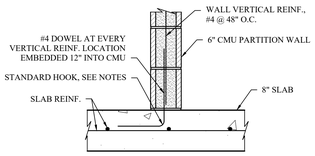
S-546

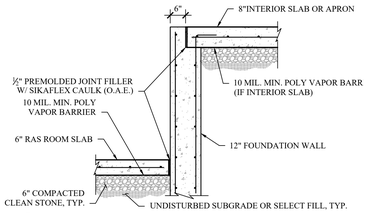
PROJECT # 18-732 PHASE #



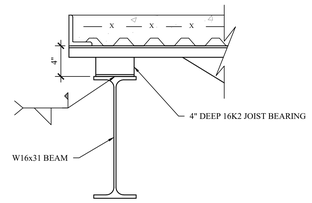
1 S-547 SLAB HAUNCH REINFORCEMENT
SCALE: 1" = 1'-0"



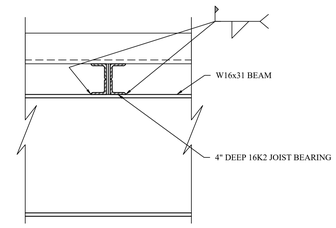
2 S-547 PARTITION WALL SLAB DOWEL
SCALE: 1" = 1'-0"

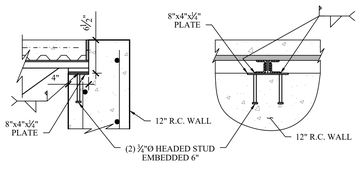


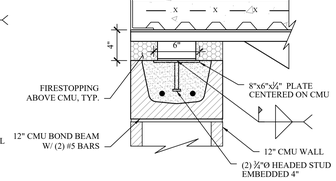
3 S-547 RAISED DOOR TRANSITION
SCALE: 1/2" = 1'-0"



4 S-547 JOIST TO BEAM CONNECTION
SCALE: 1-1/2" = 1'-0"

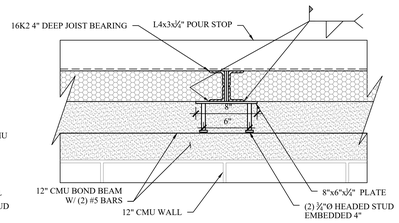


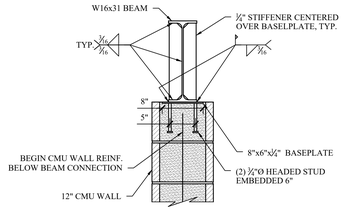




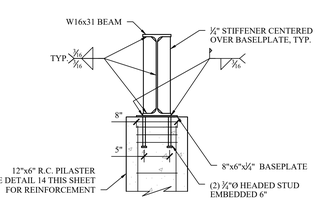
5 S-547 JOIST TO CONCRETE CONNECTION
SCALE: 1" = 1'-0"

6 S-547 JOIST TO CMU CONNECTION
SCALE: 1-1/2" = 1'-0"

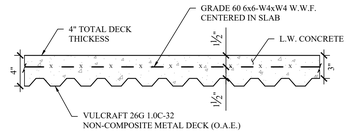




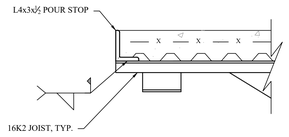
7 S-547 BEAM TO CMU CONNECTION
SCALE: 1" = 1'-0"

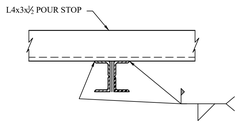


8 S-547 BEAM TO PILASTER CONNECTION
SCALE: 1" = 1'-0"

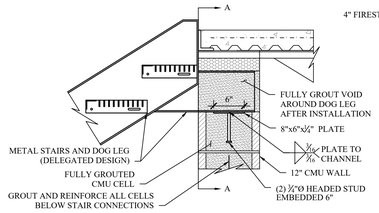


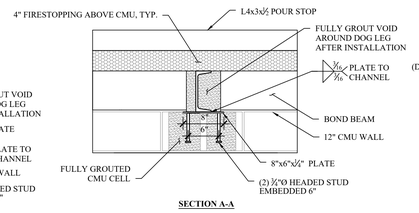
9 S-547 SECOND FLOOR REINFORCEMENT
SCALE: 1-1/2" = 1'-0"



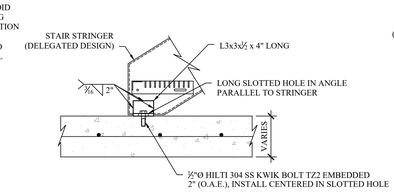


10 S-547 JOIST TO POUR STOP CONNECTION
SCALE: 1-1/2" = 1'-0"

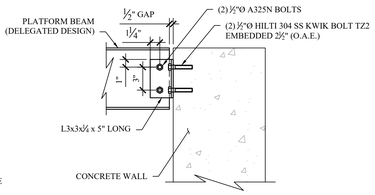




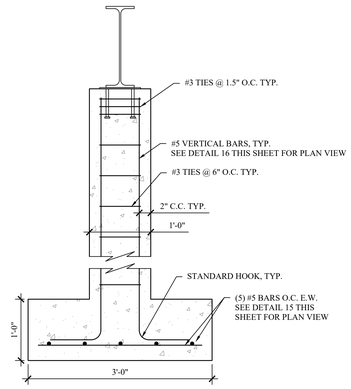
11 S-547 STEEL STAIRS CONNECTION TO CMU WALL
SCALE: 1" = 1'-0"



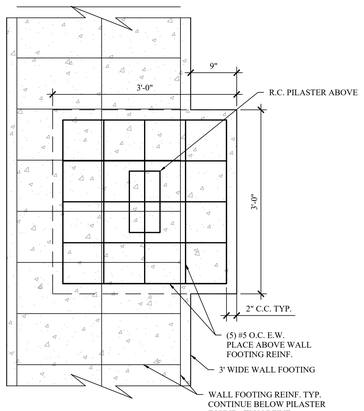
12 S-547 STAIR ANCHOR TO SLAB-ON-GRADE
SCALE: 1" = 1'-0"



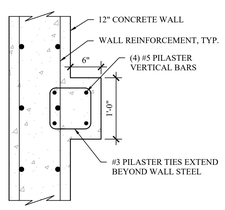
13 S-547 PLATFORM ANCHOR TO WALL
SCALE: 1-1/2" = 1'-0"



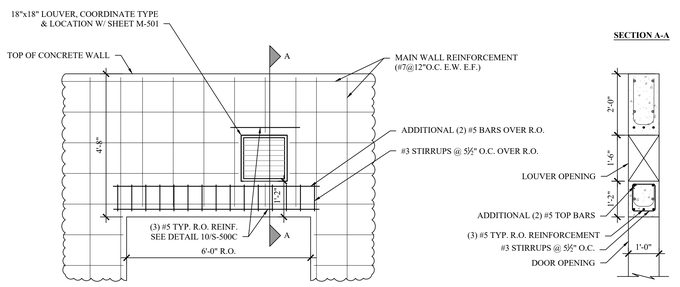
14 S-547 PILASTER REINFORCEMENT SECTION
SCALE: 1" = 1'-0"



15 S-547 PILASTER FOUNDATION PLAN
SCALE: 1" = 1'-0"



16 S-547 PILASTER REINFORCEMENT PLAN
SCALE: 1" = 1'-0"



17 S-547 OPENING REINFORCEMENT OVER CHEM. STORAGE ROOM DOORS WITH LOUVERS
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR CONTROL
BUILDING DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

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CHECKED BY:	PJW
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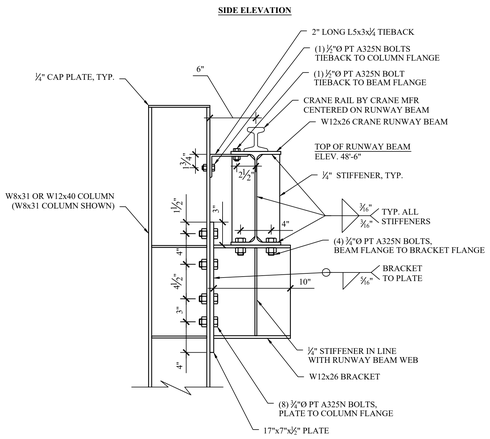
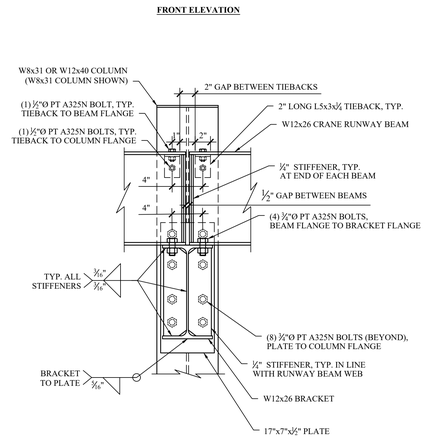
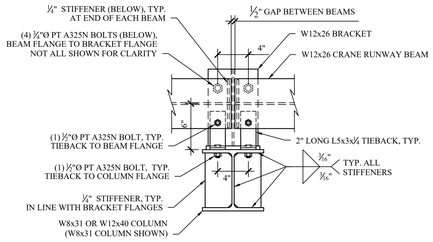
SHEET NO.
S-547

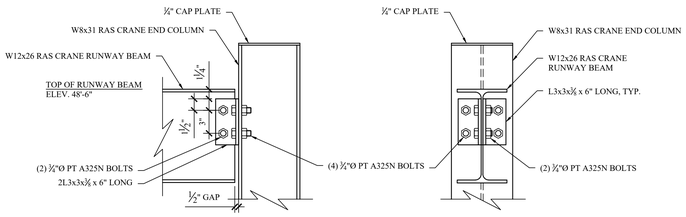
PROJECT # 18-732 PHASE #



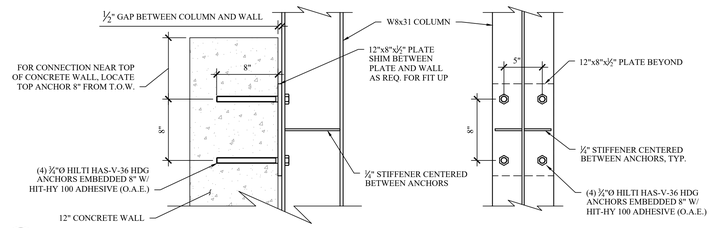




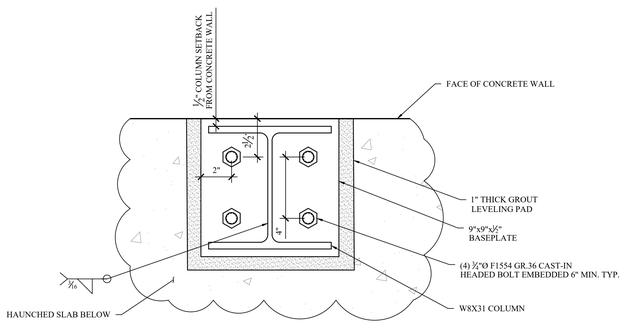
1 S-548 RAS CRANE RUNWAY BEAM TO STEEL BRACKET CONNECTION
SCALE: 1-1/2" = 1'-0"



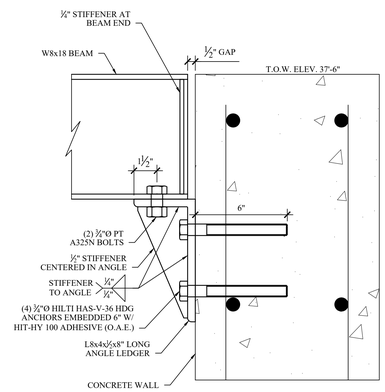
2 S-548 RAS CRANE RUNWAY BEAM TO END COLUMN CONNECTION
SCALE: 1-1/2" = 1'-0"



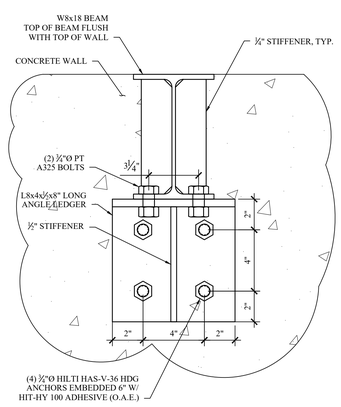
3 S-548 RAS CRANE SUPPORT COLUMN TO WALL CONNECTION
SCALE: 1-1/2" = 1'-0"

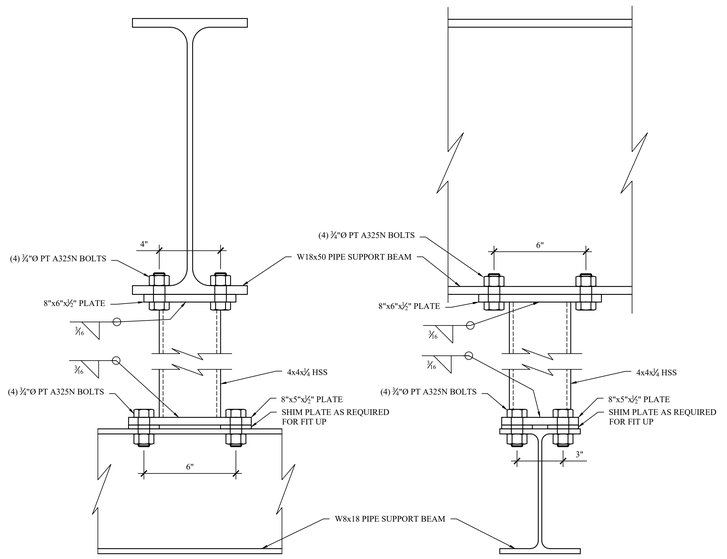


4 S-548 W8x31 RAS CRANE COLUMN TO HAUNCHED SLAB CONNECTION
SCALE: 3" = 1'-0"

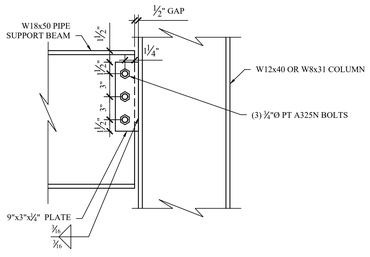


5 S-548 W8x18 BEAM TO ANGLE LEDGER CONNECTION
SCALE: 3" = 1'-0"

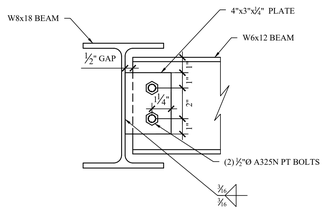




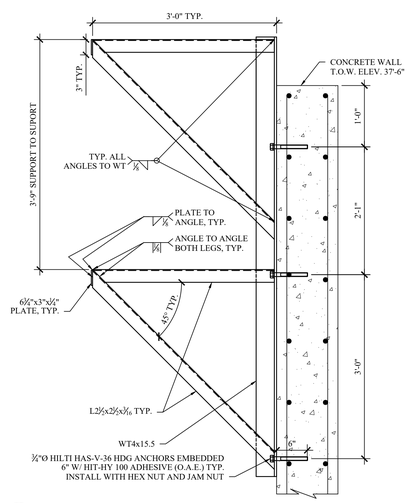
6 S-548 W18x50 BEAM TO W8x18 BEAM CONNECTION
SCALE: 3" = 1'-0"



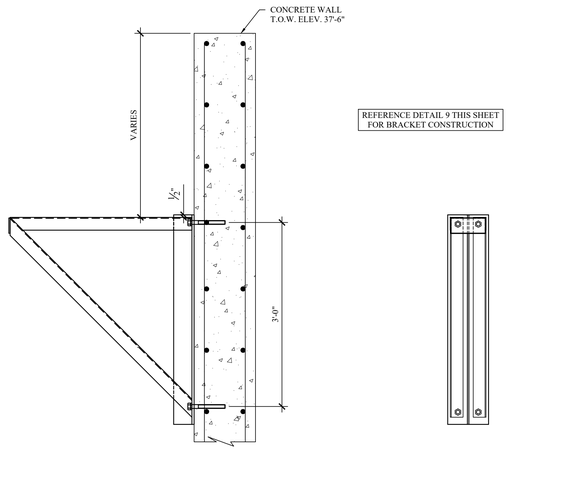
7 S-548 W18x50 BEAM TO COLUMN CONNECTION
SCALE: 3" = 1'-0"



8 S-548 W8x18 BEAM TO W6x12 BEAM CONNECTION
SCALE: 3" = 1'-0"



9 S-548 EXTERIOR PIPE SUPPORT BRACKET FOR TWO PIPES
SCALE: 1" = 1'-0"



10 S-548 EXTERIOR PIPE SUPPORT BRACKET FOR ONE PIPE
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR CONTROL BUILDING DETAILS CONTINUED

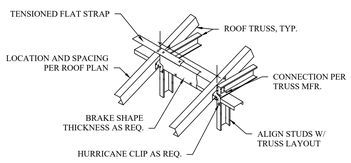
REVISIONS

NO.	DESCRIPTION	DATE

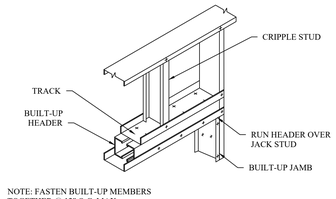
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-548

PROJECT # 18-732 PHASE #

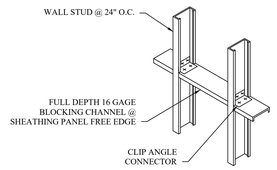


1 S-549 TYPICAL ROOF TRUSS BEARING
SCALE: N.T.S.

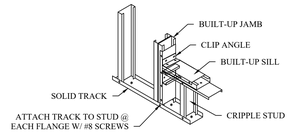


NOTE: FASTEN BUILT-UP MEMBERS TOGETHER @ 12" O.C. MAX

2 S-549 TYPICAL BOX HEADER TO JAMB
SCALE: N.T.S.

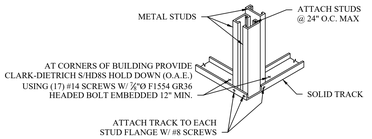


3 S-549 TYPICAL BLOCKING
SCALE: N.T.S.

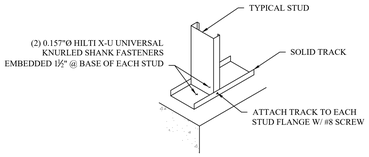


NOTE: FASTEN BUILT-UP MEMBERS TOGETHER @ 12" O.C. MAX

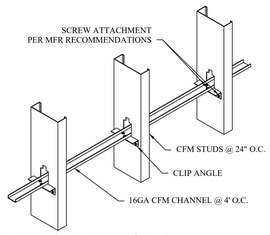
4 S-549 TYPICAL SILL
SCALE: N.T.S.



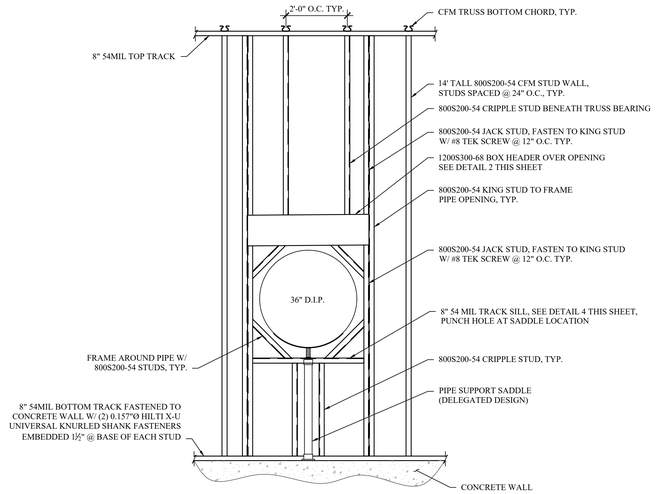
5 S-549 TYPICAL CORNER
SCALE: N.T.S.



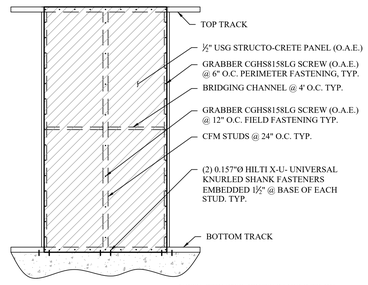
6 S-549 TYPICAL STUD BASE
SCALE: N.T.S.



7 S-549 TYPICAL BRIDGING
SCALE: N.T.S.

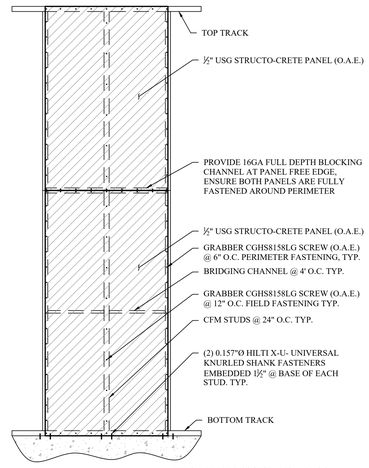


8 S-549 CFM FRAMING AROUND PIPE PENETRATION
SCALE: 1/2" = 1'-0"



NOTE: STRUCTO-CRETE PANELS TO BE HUNG VERTICALLY WITH PRINT SIDE OUT

9 S-549 8' TALL SHEAR WALL
SCALE: 1" = 1'-0"



NOTE: STRUCTO-CRETE PANELS TO BE HUNG VERTICALLY WITH PRINT SIDE OUT

10 S-549 14' TALL SHEAR WALL
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MBR CONTROL BUILDING DETAILS CONTINUED

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-549

PROJECT # 18-732 PHASE #

GENERAL NOTES (STRUCTURAL):

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS TO STRUCTURES OR SURROUNDING AREAS. DAMAGE WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER OF RECORD (E.O.R.) AT NO ADDITIONAL COST TO THE OWNER.

2. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER TO THE E.O.R. PRIOR TO INSTALLATION OF EXCAVATION SUPPORT MEASURES.

3. ALL ITEMS NOT INDICATED TO BE EXISTING SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.

4. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES REGARDING SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN STRUCTURAL WORK.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE E.O.R.

6. ANY ITEMS INDICATED TO BE REPLACED-IN-KIND SHALL BE INSTALLED TO MATCH EXISTING LOCATIONS, CONFIGURATIONS, AND ELEVATIONS UNLESS OTHERWISE NOTED.

7. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. IF MANUFACTURER'S SPECIFICATIONS CONFLICT WITH CONTRACT DRAWINGS OR SPECIFICATIONS, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT. NEITHER THE STRUCTURE NOR INDIVIDUAL STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, JOISTS, AND COLUMNS WILL BE LATERALLY STABLE UNTIL ALL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS COMPLETE.

9. ALL SUBSURFACE UTILITIES SHALL BE IDENTIFIED PRIOR TO EXCAVATION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EXCAVATION. IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

10. ALL ITEMS SHOWN TO BE REMOVED SHALL BE PROPERLY HANDLED AND DISPOSED OF OFF SITE.

11. NO BACKFILLING OF THE STRUCTURE SHALL OCCUR UNTIL CONCRETE BREAKS SATISFACTORY TO THE E.O.R. ARE OBTAINED OR UNTIL THE CONTAINMENT STRUCTURE HAS SUCCESSFULLY PASSED HYDROSTATIC TESTING IF APPLICABLE.

12. ALL ITEMS INDICATED TO BE A DELEGATED DESIGN SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO ORDERING MATERIALS. SUBMITTALS SHALL INCLUDE PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.

13. ELEVATIONS SHOWN ARE BASED ON SURVEY BY CTMALE DATED APRIL 3, 2023.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 NEW YORK STATE BUILDING CODE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 24 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

STEEL:

1. STRUCTURAL STEEL:
   - 1.1. SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16.
2. COLD-FORMED STEEL DECK:
   - 2.1. SPECIAL INSPECTIONS AND QUALIFICATION OF WELDING SPECIAL INSPECTORS FOR COLD-FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF SDI QA/QC.

CONCRETE:

1. PERIODIC INSPECTION OF REINFORCING STEEL
2. PERIODIC INSPECTION OF ANCHORS CAST IN CONCRETE.
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.
   - 3.1. CONTINUOUS INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.
   - 3.2. PERIODIC INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NO DEFINED IN 3.1.
4. PERIODIC VERIFICATION OF DESIGN MIX.
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP, AIR, AND TEMPERATURE TESTS; CONTINUOUS.
6. CONTINUOUS INSPECTION OF PLACEMENT & FOR PROPER APPLICATION TECHNIQUES.
7. PERIODIC INSPECTION OF ERECTION OF PRECAST CONCRETE MEMBERS.
8. PERIODIC INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
9. PERIODIC VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.
10. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS, OF THE CONCRETE MEMBER BEING FORMED.

MASONRY:

1. SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402 AND TMS 602.

SOILS:

1. CONTINUOUS INSPECTION OF
   - 1.1. PROPER MATERIALS
   - 1.2. DENSITIES
   - 1.3. LIFT THICKNESSES DURING PLACEMENT
   - 1.4. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   - 2.1. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   - 2.2. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   - 2.3. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   - 2.4. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE.

CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO ACI 211.1, ACI 301, ACI 304R (WHEN PUMPING), AND ACI 318-14. AGGREGATE SHALL CONFORM TO ASTM C33. COMPRESSIVE STRENGTH, RANGE OF SLUMP, WATER-TO-CEMENT RATIO, AND AIR ENTRAINMENT SHALL BE PER THE CONCRETE CLASS SPECIFIED HEREIN AND IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000. SUBMIT COPIES OF TEST REPORTS SHOWING THAT THE MIX HAS BEEN SUCCESSFULLY TESTED TO PRODUCE CONCRETE WITH THE PROPERTIES SPECIFIED. TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (E.O.R.) FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.
   - 1.1. CONCRETE CLASSIFICATIONS PER SPECIFICATION SECTION 033000:
     - 1.1.1. FOOTINGS: CLASS A
     - 1.1.2. TANK WALLS: CLASS B
     - 1.1.3. TANK FOUNDATIONS: CLASS D
     - 1.1.4. LANDING PAD & CONCRETE STEPS: CLASS H
   - 1.2. CONCRETE FINISHES PER SPECIFICATION SECTION 033000:
     - 1.2.1. FOUNDATIONS BELOW GRADE: AS-CAST SF-2.0 FINISH
     - 1.2.2. TANK WALLS & SLABS: AS-CAST SF-3.0 FINISH
     - 1.2.3. LANDING PAD & CONCRETE STEPS: FINE BROOM FINISH
2. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 7 DAYS.
3. CONCRETE SHALL BE WET CURED, USING BURLAP OR COTTON CURING MATS, OR CURED USING ASTM D4397 POLYETHYLENE SHEETING IN ACCORDANCE WITH ASTM C171. WET THE ENTIRE EXPOSED SURFACE OF THE CONCRETE THOROUGHLY WITH A FINE SPRAY OF WATER AND COVER WITH SHEETING THROUGHOUT THE CURING PERIOD. LAY SHEETING DIRECTLY ON CONCRETE SURFACE. PROVIDE SHEETING NOT LESS THAN 18 INCHES WIDER THAN CONCRETE SURFACE. OVERLAP EDGES 12 INCHES AND CONTINUOUSLY TAPE JOINTS.
4. PUMPING SHALL NOT RESULT IN SEPARATION OR LOSS OF MATERIALS NOR CAUSE INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF PLASTICITY BETWEEN SUCCESSIVE INCREMENTS. LOSS OF SLUMP IN PUMPING EQUIPMENT SHALL NOT EXCEED 2 INCHES. CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. RAPID CHANGES IN PIPE SIZES SHALL BE AVOIDED. MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO 33 PERCENT OF THE DIAMETER OF THE PIPE. MAXIMUM SIZE OF WELL ROUNDED AGGREGATE SHALL BE LIMITED TO 40 PERCENT OF THE PIPE DIAMETER. SAMPLES FOR TESTING SHALL BE TAKEN AT BOTH THE POINT OF DELIVERY TO THE PUMP AND AT THE DISCHARGE END.
5. CONCRETE SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT PROPER PLACEMENT AND CONSOLIDATION INCLUDING PERIODS OF PRECIPITATION. TRANSPORT CONCRETE AS RAPIDLY AS PRACTICABLE TAKING PRECAUTION TO PREVENT SEGREGATION OR LOSS OF INGREDIENTS. PUMPING IN ACCORDANCE WITH ACI 304 SHALL BE PERMITTED. DO NOT EXCEED A FREE VERTICAL DROP OF 3 FEET FROM THE POINT OF DISCHARGE. PLACE CONCRETE IN ONE CONTINUOUS OPERATIONS FROM ONE SIDE OF SLAB TO THE OTHER. POSITION GRADE STAKES AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION.
6. UNLESS OTHERWISE NOTED, REINFORCEMENT BARS SHALL BE BLACK STEEL. REINFORCING BARS SHALL CONFORM TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A1064. REINFORCEMENT SHALL NOT CONTAIN RUST, SCALE, OIL, GREASE, CLAY, OR FOREIGN SUBSTANCES THAT WOULD REDUCE THE CONCRETE BONDING STRENGTH. REMOVE LOOSE RUST PRIOR TO PLACEMENT OF REINFORCEMENT.
7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
8. PROVIDE MINIMUM 2" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST FORMS OR 3" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST EARTH, UNLESS OTHERWISE INDICATED.
9. CONCRETE FOOTINGS AND MAT FOUNDATIONS SHALL BE PLACED MONOLITHICALLY WITH THE EXCEPTION THAT VERTICAL CONSTRUCTION JOINTS WILL BE ALLOWED IF ROUGHENED PRIOR TO BEING APPLIED TO THE ROUGHENED SURFACE OF THE HARDENED CONCRETE.
10. INTERIOR SLABS: THE CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AS INDICATED. JOINTS MAY BE SAWCUT OR CUT WITH A JOINTING TOOL. SAWED JOINTS SHALL BE COMPLETED WITHIN 4 TO 12 HOURS AFTER PLACEMENT OF CONCRETE. JOINTS SHALL INTERSECT WITH THE CORNERS OF ISOLATION JOINT AT COLUMN LOCATIONS. IF ANY ARE PRESENT, AND BE SPACED A MAXIMUM OF 15 FEET ON CENTER, UNLESS NOTED OTHERWISE.
11. REINFORCEMENT SUPPORTS SHALL BE CONCRETE OR OTHER NON-CORRODIBLE MATERIAL HAVING A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE COMPRESSIVE STRENGTH OF THE CONCRETE BEING PLACED.
12. PROVIDE A ½" ROUNDED EDGE ON ALL EXPOSED SLAB EDGES. PROVIDE A ½" CHAMFER ON ALL OTHER EXPOSED CONCRETE CORNERS.
13. EPOXY BONDING COMPOUND SHALL BE USED ON ALL CONTACTING SURFACES BETWEEN EXISTING CONCRETE AND NEW CONCRETE. EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C881, TYPE AND GRADE TO BE IN ACCORDANCE WITH APPROPRIATE USE INDICATED IN SPECIFICATION 033000 CAST-IN-PLACE CONCRETE. DO NOT ALLOW COMPOUND TO HARDEN PRIOR TO CONCRETE PLACEMENT. BONDING AGENT USED SHALL BE NSF 61 APPROVED.
14. PLACE, CONSOLIDATE AND IMMEDIATELY STRIKE OFF CONCRETE TO OBTAIN PROPER CONTOUR GRADE AND ELEVATION BEFORE BLEEDWATER APPEARS. PERMIT CONCRETE TO ATTAIN A SET SUFFICIENT FOR FLOATING AND SUPPORTING THE WEIGHT OF THE FINISHER AND EQUIPMENT. IF BLEEDWATER IS PRESENT PRIOR TO FLOATING THE SURFACE, DRAG THE EXCESS WATER OFF OR REMOVE BY ABSORPTION WITH POROUS MATERIALS. DO NOT USE DRY CEMENT TO ABSORB BLEEDWATER.
15. UNLESS OTHERWISE NOTED, ALL CONCRETE CONSTRUCTION SHALL MEET THE SPECIFIED TOLERANCES OF ACI 117. TOP ELEVATIONS SHALL MATCH THE SPECIFIED ELEVATIONS WITHIN A TOLERANCE OF ±¼"
16. NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED ITEMS (I.E. PROCESS, ELECTRICAL, MECHANICAL, ETC) HAVE BEEN SET. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES.
17. ALL BAR PLACING AND BENDING SHALL BE IN ACCORDANCE WITH ACI 315.
18. PERFORM COMPRESSIVE TESTS IN ACCORDANCE WITH ASTM C39. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM SPECIMENS. TEST ONE CYLINDER AT 3 DAYS, ONE CYLINDER AT 7 DAYS, AND TWO (THREE FOR 4"x8" CYLINDERS) CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE. PERFORM SLUMP TESTS IN ACCORDANCE WITH ASTM C143. PERFORM AIR CONTENT TESTS IN ACCORDANCE WITH ASTM C173 OR ASTM C231. SUBMIT ALL TEST DATA TO THE E.O.R.
19. CONSOLIDATE CONCRETE WITH HIGH FREQUENCY, INTERNAL, MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING AND TAMPING. FURNISH A SPARE VIBRATOR ON THE JOB SITE WHENEVER CONCRETE IS PLACED. OPERATE VIBRATORS WITH VIBRATORY ELEMENT SUBMERGED IN THE CONCRETE, WITH A MINIMUM FREQUENCY OF NOT LESS THAN 6000 IMPULSES PER MINUTE WHEN SUBMERGED. INSERT AND WITHDRAW VIBRATORS AT INTERVALS APPROXIMATELY 18 INCHES APART.
20. ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920, TYPE S, GRADE P, CLASS 25. JOINT SEALANT IN CONTACT WITH POTABLE WATER SHALL BE NSF 61 APPROVED.
21. CONTROLLED DENSITY FILL SHALL BE IN ACCORDANCE WITH SPECIFICATION 033110.
22. CRYSTALLINE WATERPROOFING ADMIXTURES SHALL BE IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000 AND THE CRYSTALLINE WATERPROOFING SPECIFICATION 071616.
    APPLICABLE LOCATIONS:
    - BACK-PULSE TANK
    - VALVE VAULT

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SYSTEMS INCLUDING MATERIALS, INSTALLATION, WORKMANSHIP, FABRICATION, ASSEMBLY, ERECTION, INSPECTION, QUALITY CONTROL, AND TESTING SHALL BE PROVIDED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
2. ALL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:
   - W SHAPES: ASTM A992, Fy = 50KSI
   - HSS: ASTM A500GR. C, Fy = 50KSI
   - PLATES AND OTHER STEEL SHAPES: ASTM A36, Fy = 36KSI
3. ALL HOLES IN STEEL SHALL BE STANDARD SIZE 1/16" LARGER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE DRILLED OR PUNCHED. BURNING IS NOT ALLOWED. COLUMN BASEPLATE HOLES FOR ANCHOR BOLTS ARE PERMITTED TO BE OVERSIZED.
4. COPES SHALL BE PROVIDED WITH 1/2" RADIUS MINIMUM, SMOOTH CORNERS, AND FREE OF NOTCHES. DEPTH AND LENGTH OF COPES SHALL BE AS INDICATED.
5. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL CONFORM TO ASTM A325, EXCEPT ANCHOR BOLTS SHALL CONFORM TO ASTM F1554. ALL NUTS SHALL CONFORM TO ASTM A563, GRADE AND STYLE FOR APPLICABLE ASTM BOLT STANDARD. ALL WASHERS SHALL CONFORM TO ASTM F436 FOR ASTM A325 BOLTS AND F1554 ANCHOR BOLTS.
6. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE SNUG-TIGHT. BOLTS SPECIFIED AS PRE-TENSIONED (PT) SHALL BE PRE-TENSIONED USING THE TURN-OF-NUT METHOD. CONNECTIONS SPECIFIED AS SLIP-CRITICAL (SC) SHALL HAVE BOLTS PRE-TENSIONED USING THE TURN-OF-NUT METHOD AND FAYING SURFACES PREPARED IN ACCORDANCE WITH THE CLASSIFICATION INDICATED. BOLTS INDICATED TO USE A JAM NUT SHALL BE INSTALLED USING THE FOLLOWING SEQUENCE:
   - INSTALL THIN NUT (JAM NUT) FIRST AND TORQUE TO 50% OF TORQUE VALUE
   - INSTALL THICK NUT (STANDARD HEX) SECOND AND TORQUE TO 100% OF TORQUE VALVE WHILE HOLDING THE JAM NUT TO PREVENT ROTATION
7. STEEL DETAILER SHALL PROVIDE CONNECTION DESIGN IN ACCORDANCE WITH ANSI/AISC 303. DETAILER SHALL SELECT AND COMPLETE CONNECTIONS USING SCHEMATIC DETAILS INDICATED ON PLANS AND ANSI/AISC 360.
8. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ALL STRUCTURAL STEEL FASTENERS (INCLUDING NUTS, BOLTS, WASHERS, ETC.) SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153. REPAIR AREAS OF DAMAGED GALVANIZATION IN ACCORDANCE WITH ASTM A780.
9. STEEL GRATING SHALL BE GALVANIZED SGW-150 BY MCNICHOLS OR APPROVED EQUAL.

WELDING NOTES:

1. ALL WELDING SHALL BE CONDUCTED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1, LATEST EDITION FOR STRUCTURAL STEEL AND AWS D1.3, LATEST EDITION FOR STRUCTURAL SHEET STEEL.
2. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR PROTECTING EXISTING EQUIPMENT, MATERIALS, BUILDING STRUCTURES, AND BUILDING COMPONENTS DURING ANY FIELD WELDING OPERATIONS.
3. WELDS OF HEADED STUDS SHALL MATCH STRENGTH OF STUDS.

MASONRY NOTES:

1. ALL MASONRY CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530/TMS 402.
2. ALL CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT WITH TWO (2) CELLS AND CONFORM TO ASTM C90 UNLESS OTHERWISE SPECIFIED.
3. ALL MORTAR SHALL CONFORM TO ASTM C270.
4. ALL GROUT SHALL CONFORM TO ASTM C476.
5. THE MINIMUM SPECIFIED NET AREA COMPRESSIVE STRENGTH OF MASONRY (f'm) SHALL BE 2000 PSI AND SHALL CONSIST OF THE FOLLOWING COMPONENTS:
   - CONCRETE MASONRY UNITS: 2000 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH
   - BRICK MASONRY UNITS: 4950 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH
   - PORTLAND CEMENT MORTAR: TYPE S
   - GROUT: 2000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH (GROUT COMPRESSIVE STRENGTH SHALL NOT BE LESS THAN f'm)
6. GROUT ALL CELLS CONTAINING REINFORCEMENT AND/OR HEADED STUD ANCHORS AS WELL AS DIRECTLY BELOW ALL BEARING PLATES.
7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE MASONRY LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
8. REINFORCEMENT SHALL BE PLACED SUCH THAT A MINIMUM OF ¾" MORTAR COVER EXISTS FOR EXTERIOR FACES, AND A MINIMUM OF ½" MORTAR COVER EXISTS FOR ALL INTERIOR FACES.

CONTAINMENT STRUCTURE DESIGN PROVISIONS:

THE CONCRETE CONTAINMENT STRUCTURES SHOWN HEREIN HAVE BEEN DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH PCA RECTANGULAR CONCRETE TANKS REVISED 5TH EDITION, ACI 350-06, ACI 350.3-06 AND ACI 350.4R-04.

SOIL AND BACKFILL PROPERTIES (APPLICABLE TO ALL TANKS):
- SOIL UNIT WEIGHT, γ = 130 PCF
- GROUNDWATER ASSUMED TO BE FULL HEIGHT OF BACKFILL
- SOIL FRICTION ANGLE, Φ = 35°
- ACTIVE EARTH PRESSURE, K_a = 0.27
- AT REST EARTH PRESSURE, K_o = 0.43 (UTILIZED FOR ALL TANK DESIGNS)
- PASSIVE EARTH PRESSURE, K_p = 3.69
- SUBGRADE MODULUS = 250 PSI
- SUBGRADE BEARING CAPACITY = 4000PSF

BACKPULSE TANK:
- UNIT WEIGHT OF LIQUID, γ = 65 PCF
- HEIGHT OF LIQUID = 12'
- BACKFILL HEIGHT = 13'

PRECAST ITEM DESIGN CRITERIA:

THE PRECAST CONCRETE ITEMS SHOWN HEREIN SHALL BE DESIGNED USING THE PROVIDED LOADING AND SOIL PROPERTIES (IF APPLICABLE) IN ACCORDANCE WITH ANY/ALL APPLICABLE CODES, STANDARDS AND THE PRECAST STRUCTURAL CONCRETE SPEC 034100.

CRYSTALLINE WATERPROOFING ADMIXTURES SHALL BE IN ACCORDANCE WITH THE PRECAST STRUCTURAL CONCRETE SPECIFICATION 034100 AND THE CRYSTALLINE WATERPROOFING SPECIFICATION 071616.
APPLICABLE LOCATIONS:
- VALVE VAULT

SOIL PROPERTIES BASED ON GEOTECHNICAL REPORT BY TECTONIC DATED JANUARY 1, 2020.

SOIL AND BACKFILL PROPERTIES:
- SOIL UNIT WEIGHT, γ = 130 PCF
- GROUNDWATER ASSUMED TO BE FULL HEIGHT OF BACKFILL
- SOIL FRICTION ANGLE, Φ = 35°
- ACTIVE EARTH PRESSURE, K_a = 0.27
- AT REST EARTH PRESSURE, K_o = 0.43 (UTILIZE FOR DESIGN)
- PASSIVE EARTH PRESSURE, K_p = 3.69
- SUBGRADE MODULUS = 250 PSI
- SUBGRADE BEARING CAPACITY = 4000PSF

VALVE VAULT:
- BACKFILL HEIGHT = 6'-4"

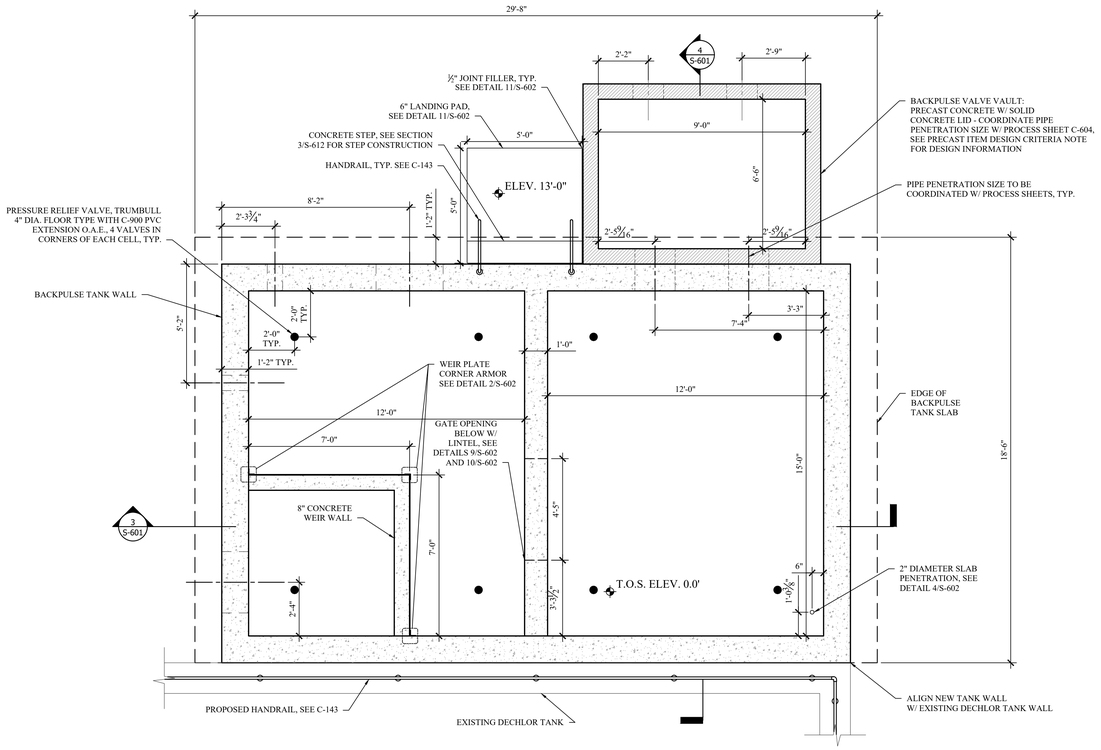
HOLLOW-CORE PRECAST CONCRETE PLANK LID:
- DEAD LOAD, DL = SELF-WEIGHT
- LIVE LOAD, LL = 200PSF UNDER PRE-MANUFACTURED PUMP STATION
  100PSF ELSEWHERE
  500# POINT LOAD AT ANY LOCATION

GEOTECHNICAL NOTES:

1. THE FOLLOWING BEARING PRESSURE VALUES WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - MAX NET ALLOWABLE BEARING OF UNDISTURBED NATIVE SOIL: 4000PSF
   - MAX NET ALLOWABLE BEARING OF SHALE OR SANDSTONE BEDROCK: 8000PSF
2. BOTTOM OF EXCAVATION IS DEFINED AS THE ELEVATION BENEATH THE SUBBASE. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
3. IF UNSUITABLE MATERIAL IS ENCOUNTERED AT OR UNDER THE PROPOSED BOTTOM OF EXCAVATION, THE UNSUITABLE MATERIAL SHALL BE REMOVED FROM WITHIN THE ZONE OF INFLUENCE OF THE BEARING ELEMENT AND REPLACED IN ACCORDANCE WITH NOTE 4.
4. ZONE OF INFLUENCE IS DEFINED AS A 1V:1H PLANE EXTENDING DOWNWARD FROM THE BOTTOM PERIMETER OF THE FOUNDATION ELEMENT TO WITHIN A SUITABLE DISTANCE BELOW, TO BE DETERMINED BY THE E.O.R. BASED ON FIELD CONDITIONS AND MATERIAL TYPE.
5. OVER EXCAVATION IS DEFINED AS ANY EXCAVATION BELOW THE PROPOSED BOTTOM OF EXCAVATION IDENTIFIED ON THE PLANS OR AS DESCRIBED WITHIN THE PROJECT SPECIFICATIONS; OVER EXCAVATION SHALL BE RE-ESTABLISHED AS FOLLOWS:
   - BENEATH FOUNDATIONS AND SLABS-ON-GRADE: COMPACTED SELECT FILL
   - BENEATH TANKS: CONTROLLED DENSITY FILL
6. SELECT FILL SHALL BE UTILIZED FOR BACKFILL OF ALL STRUCTURES (UNLESS OTHERWISE NOTED).
7. THE MINIMUM SELECT FILL PROPERTIES LISTED BELOW WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - UNIT WEIGHT = 130 PSF
   - FRICTION ANGLE = 35°
   - Ka = 0.27
   - Ko = 0.43
   - Kp = 3.69
8. THE CONTRACTOR SHALL SUBMIT DESIRED BACKFILL MATERIAL SPECIFICATION MEETING ALL DESIGN CRITERIA LISTED ABOVE, AT A MINIMUM, TO THE ENGINEER OF RECORD PRIOR TO USE ON SITE. ALTERNATIVELY, THE CONTRACTOR SHALL ELECT TO PERFORM A FIELD PROCTOR OF THE EXISTING SITE SOILS TO VERIFY THAT EXISTING SOILS MEET THE MINIMUM DESIGN VALUES STATED ABOVE.
9. IN-SITU COMPACTION TESTING OF SUBGRADE AND BACKFILL MATERIAL SHALL BE PERFORMED BY THE OWNER'S SPECIAL INSPECTOR.
10. FOR ADDITIONAL GEOTECHNICAL INFORMATION, SEE THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY TECTONIC PROVIDED IN THE CONTRACT.

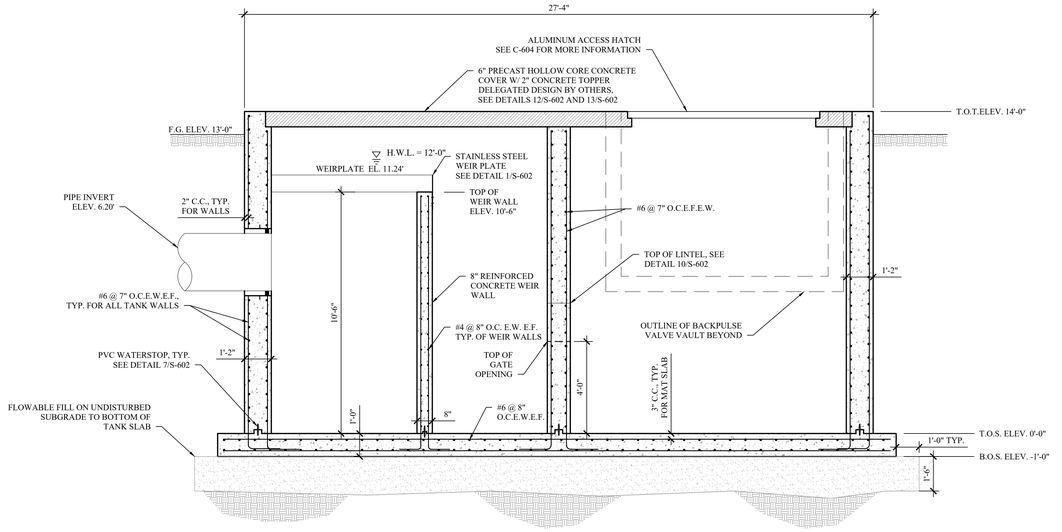
CONCRETE CONTAINMENT STRUCTURE TESTING PROCEDURE:

1. THE FOLLOWING TESTING PROCEDURE SHALL BE PERFORMED ON ANY CONCRETE CONTAINMENT STRUCTURE WHICH DIRECTLY HOLDS OR TRANSFERS PROCESS RELATED LIQUIDS OR MATERIALS. THIS TESTING PROCEDURE IS APPLICABLE TO BOTH CAST-IN-PLACE AND PRECAST STRUCTURES.
2. THE CONTRACTOR SHALL ENGAGE A QUALIFIED 3RD PARTY INSPECTION AGENCY TO PERFORM THE FOLLOWING TESTING PROCEDURE. THE 3RD PARTY INSPECTION AGENCY SHALL SUBMIT ALL REPORTS TO THE ENGINEER OF RECORD (E.O.R.). IN THE EVENT THAT ANY CONTAINMENT STRUCTURE FAILS A TEST AT ANY TIME, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.
3. THE FOLLOWING TESTING PROCURE HAS BEEN DEVELOPED USING ACI 350.1-10 "HYDROSTATIC TIGHTNESS TEST FOR OPEN OR COVERED STRUCTURES".
4. TESTING SHALL NOT COMMENCE UNTIL THE CONCRETE HAS ATTAINED ITS SPECIFIED COMPRESSIVE STRENGTH.
5. SIMULTANEOUS TESTING OF TANKS WITH SHARED WALLS SHALL NOT BE PERMITTED.
6. CONTRACTOR IS PERMITTED TO USE PLANT EFFLUENT WATER FOR TESTING AND STARTUP IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND COORDINATION WITH OPERATOR.
7. PREPARATION FOR TESTING:
   - 7.1. ANY/ALL DEBRIS WITHIN TANK SHALL BE CLEARED.
   - 7.2. TANK AND OPENINGS SHALL BE INSPECTED AND REPAIRED AS NEEDED.
   - 7.3. ALL PENETRATIONS SHALL BE SEALED.
   - 7.4. NO BACKFILL AGAINST WALLS OR FOOTINGS SHALL BE PLACED UNLESS SPECIFIED.
   - 7.5. GROUNDWATER LEVEL SHALL NOT BE ABOVE THE BOTTOM OF THE TANK SLAB.
   - 7.6. IF THE CONTAINMENT STRUCTURE IS TO BE FILLED USING THE CONTAINMENT STRUCTURE INLET/OUTLET PIPE, POSITIVE MEANS SHALL BE PROVIDED TO CHECK THE WATER IS NOT ENTERING OR LEAVING THE CONTAINMENT STRUCTURE THROUGH THIS PIPE ONCE THE CONTAINMENT STRUCTURE IS FILLED TO THE TEST LEVEL.
8. UPON COMMENCEMENT OF TESTING, THE TANK SHALL BE FILLED WITH WATER AT A MAXIMUM RATE OF 4 FT/HR UNTIL THE DESIGN WATER LEVEL IS REACHED OR EITHER 1" BELOW OR 4" BELOW ANY FIXED OVERFLOW LEVEL IN A COVERED OR OPEN CONTAINMENT STRUCTURE, RESPECTIVELY.



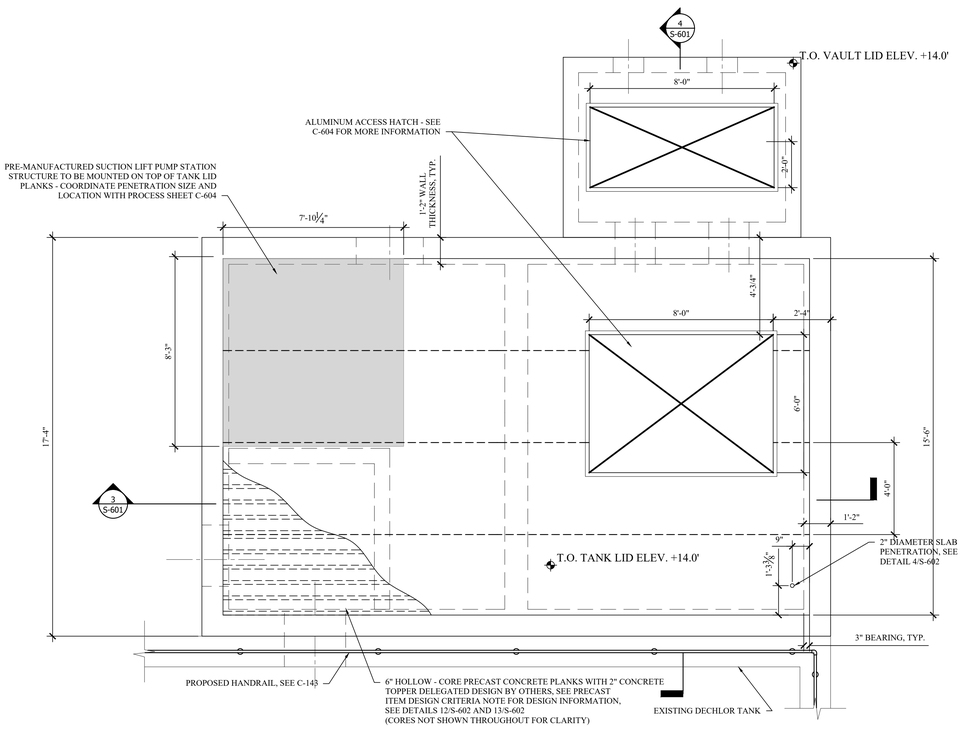
1 S-601 BACKPULSE TANK FOUNDATION AND SLAB PLAN

SCALE: 3/8" = 1'-0"



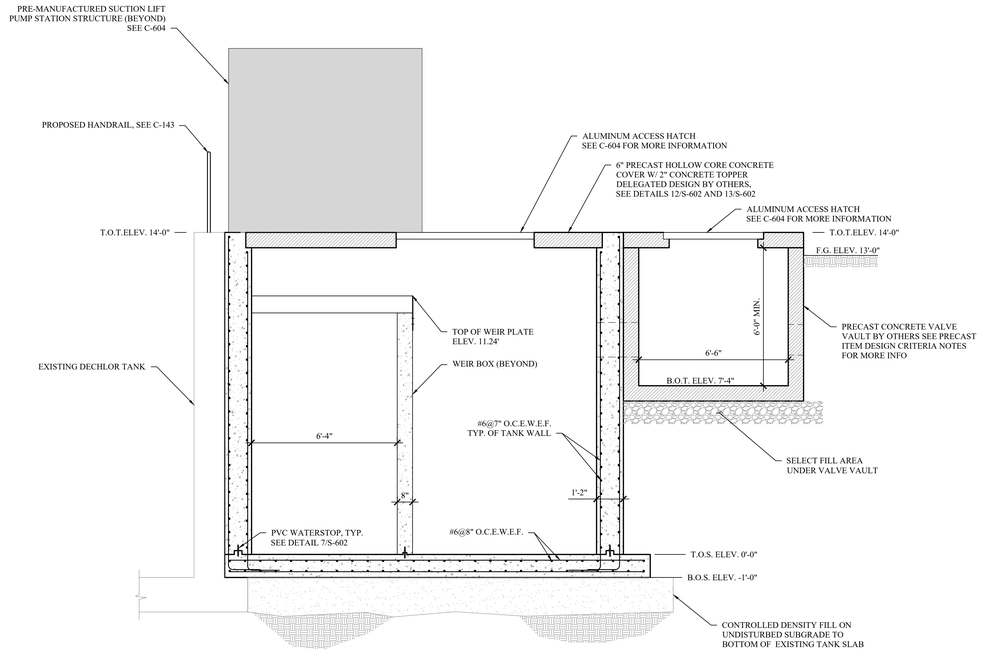
3 S-601 BACKPULSE TANK SECTION 1

SCALE: 3/8" = 1'-0"



2 S-601 BACKPULSE TANK LID PLAN

SCALE: 3/8" = 1'-0"



4 S-601 BACKPULSE TANK SECTION 2

SCALE: 3/8" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

BACK-PULSE TANK
PLANS AND SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

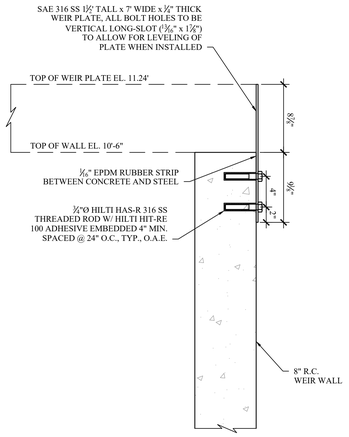
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

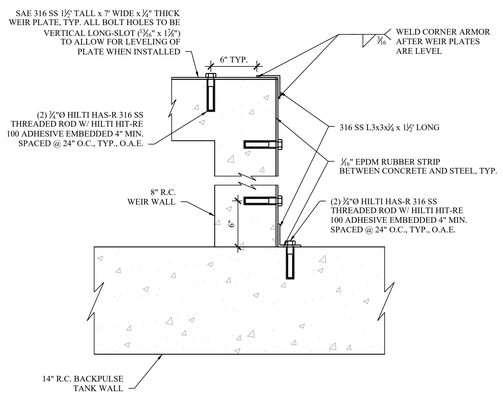
S-601

PROJECT # 18-732 PHASE #

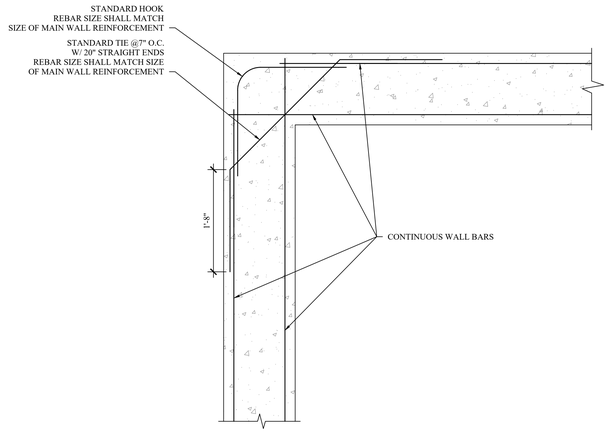
P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\6 - Post Aeration\Structural\06 - Post Aeration - Structural.dwg, S-601, 4/17/2025 7:59:03 AM



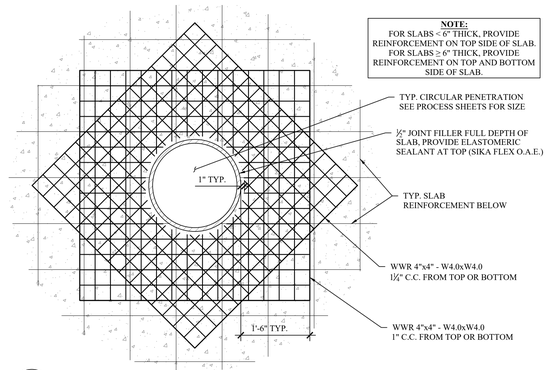
1 S-602 WEIR PLATE
SCALE: 1-1/2" = 1'-0"



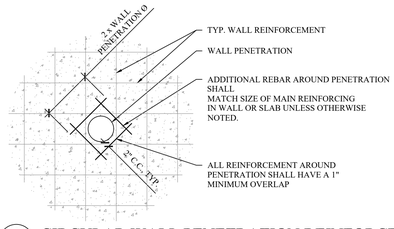
2 S-602 WEIR PLATE CORNER ARMOURING
SCALE: 1-1/2" = 1'-0"



3 S-602 TYPICAL CORNER REBAR DETAIL
SCALE: 1" = 1'-0"



4 S-602 TYPICAL CIRCULAR SLAB PENETRATION REINFORCEMENT
SCALE: 3/4" = 1'-0"

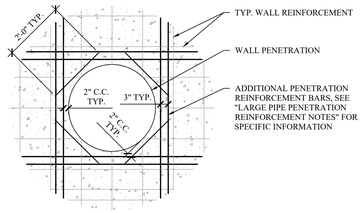


5 S-602 CIRCULAR WALL PENETRATION REINFORCEMENT DETAIL (DIA. < 18")
SCALE: 1/2" = 1'-0"

SMALL PIPE PENETRATION REINFORCEMENT NOTES

1. ADDITIONAL PENETRATION REINFORCEMENT SHALL BE OF THE SIZE OF WALL REBAR INTERRUPTED BY THE PENETRATION.

2. IF THE BOTTOM OF THE WALL IS WITHIN 12" OF EDGE OF PENETRATION, LOWER REINFORCEMENT STEEL SHALL BE ORIENTED VERTICALLY AND HOOKED INTO FOUNDATION.



6 S-602 CIRCULAR WALL PENETRATION REINFORCEMENT DETAIL (DIA. > 18")
SCALE: 1" = 1'-0"

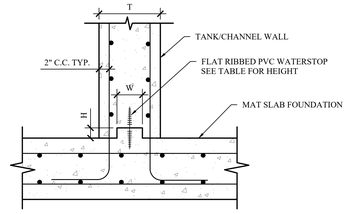
LARGE PIPE PENETRATION REINFORCEMENT NOTES

1. ADDITIONAL PENETRATION REINFORCEMENT SHALL BE OF THE SIZE OF WALL REBAR INTERRUPTED BY THE PENETRATION.

2. TOTAL AMOUNT OF VERTICAL OR HORIZONTAL REBAR SHALL BE THE SUM OF THE BARS INTERRUPTED BY THE PENETRATION, EVENLY SPLIT BETWEEN BOTH SIDES OF THE OPENING.

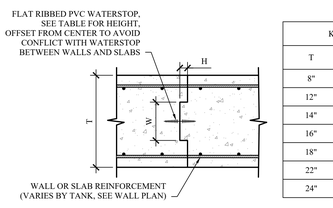
3. THE PENETRATION REINFORCEMENT SHALL HAVE A SPACING OF 3" BETWEEN REBAR. IF PENETRATION REINFORCEMENT CONFLICTS WITH WALL REINFORCEMENT, THE PENETRATION REINFORCEMENT SHALL BE PLACED AWAY FROM THE WALL REINFORCEMENT UTILIZING 3" SPACING.

4. IF THE BOTTOM OF THE WALL IS WITHIN 12" OF EDGE OF PENETRATION, OMIT ADDITIONAL BOTTOM PENETRATION STEEL AND HOOK SIDE PENETRATION STEEL INTO FOUNDATION.



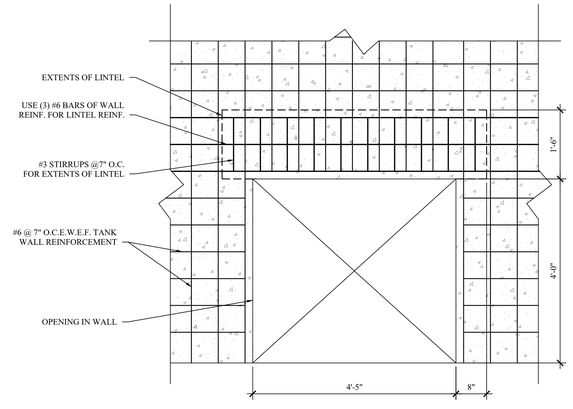
KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"

7 S-602 TYPICAL CONCRETE TANK/CHANNEL KEY AND WATERSTOP
SCALE: NOT TO SCALE

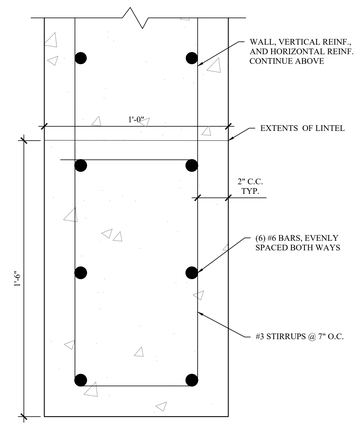


KEY AND WATERSTOP DIMENSIONS			
T	W	H	WATERSTOP HEIGHT
8"	2"	1"	4"
12"	4"	2"	4"
14"	4"	2"	6"
16"	6"	2"	6"
18"	8"	2"	6"
22"	10"	2"	6"
24"	10"	2"	6"

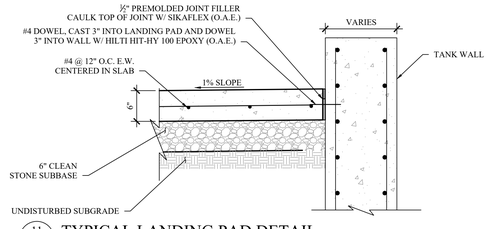
8 S-602 TYPICAL TANK WALL/MAT SLAB CONSTRUCTION JOINT
SCALE: NOT TO SCALE



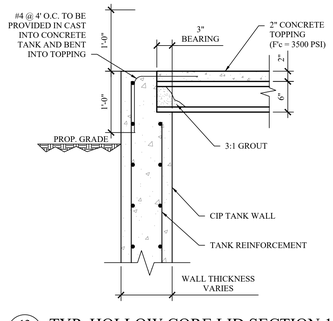
9 S-602 CONCRETE LINTEL DETAIL (ELEVATION)
SCALE: 3/4" = 1'-0"



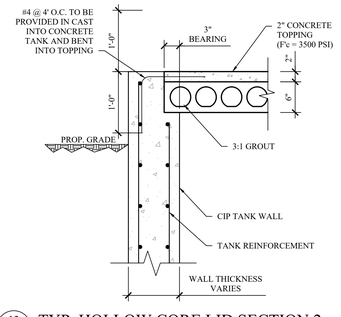
10 S-602 CONCRETE LINTEL DETAIL SECTION
SCALE: 3" = 1'-0"



11 S-602 TYPICAL LANDING PAD DETAIL
SCALE: 1" = 1'-0"



12 S-602 TYP. HOLLOW CORE LID SECTION 1
SCALE: 1" = 1'-0"



13 S-602 TYP. HOLLOW CORE LID SECTION 2
SCALE: 1" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
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(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

BACK-PULSE TANK DETAILS

REVISIONS

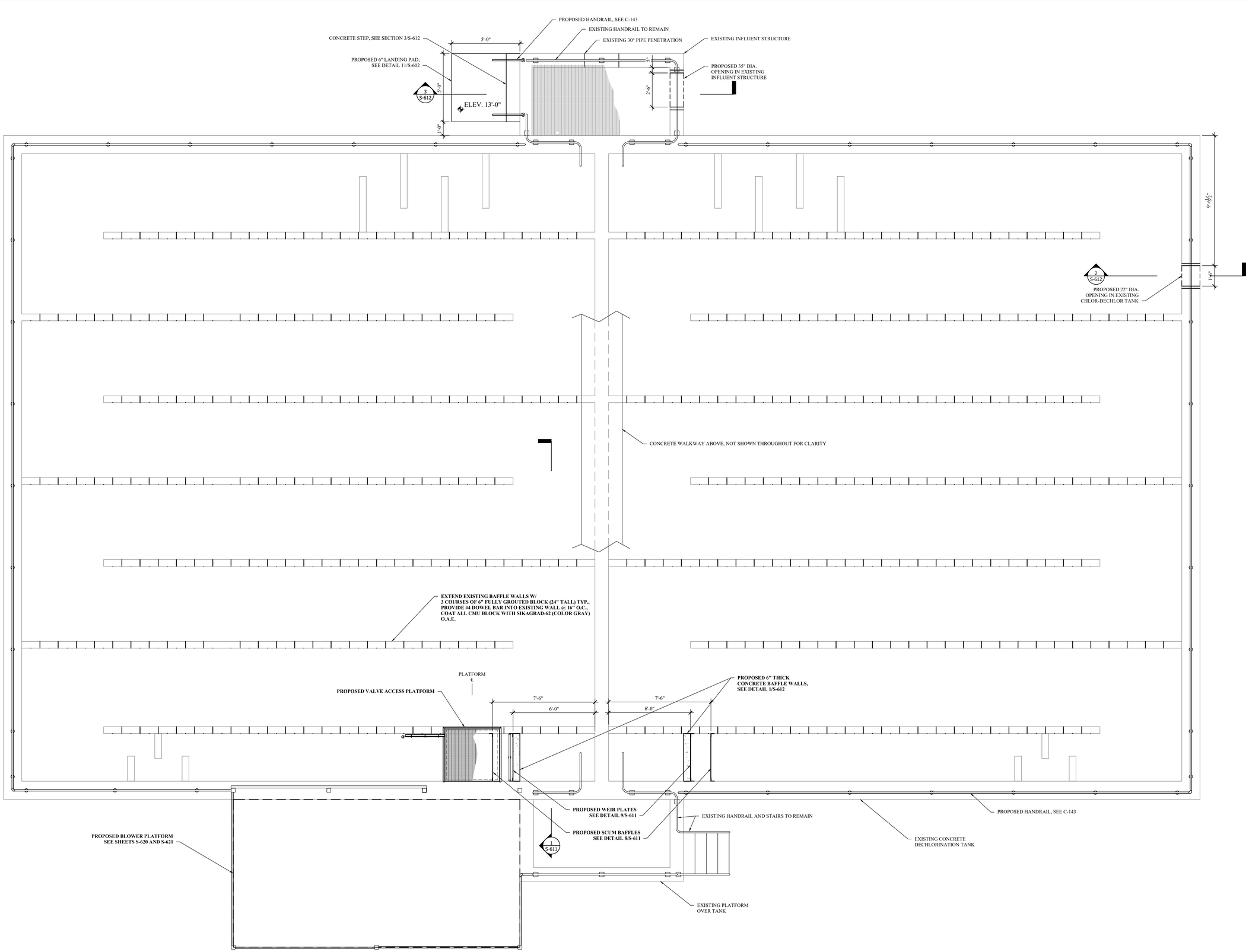
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-602

PROJECT # 18-732 PHASE #

I:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\6 - Post Aeration\Structural\06 - Post Aeration - Structural.dwg, S-602, 4/17/2025 7:39:04 AM



1 S-610 EXISTING CHLORINATION/DECHLORINATION TANK MODIFICATION PLAN
SCALE: 3/8" = 1'-0"

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NEW WINDSOR, NY 12553

CHLORINATION/ DECHLORINATION TANK MODIFICATIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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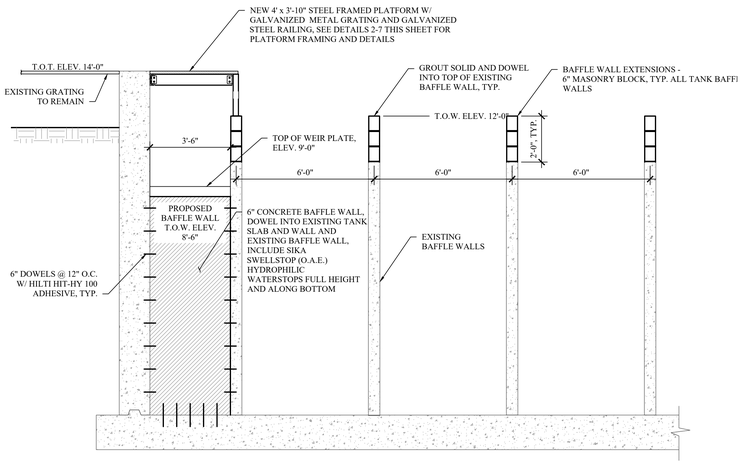
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

S-610

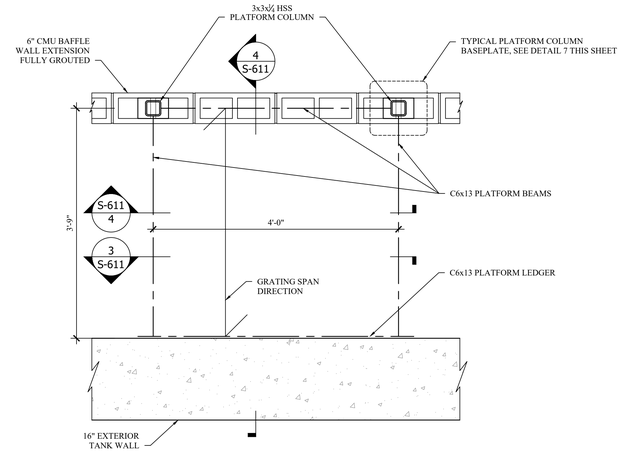
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\6 - Post Aeration\Structural\06 - Post Aeration - Structural.dwg, S-610, 4/17/2025 7:59:15 AM



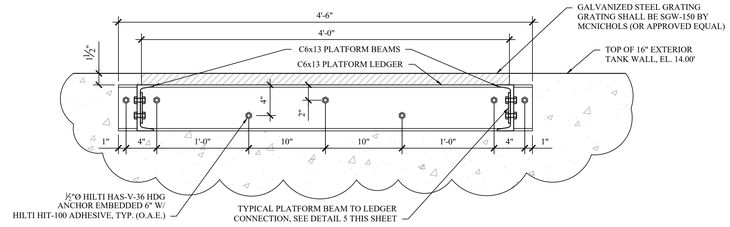
1 S-611 CHLORINATION/DECHLORINATION TANK MODIFICATION SECTION

SCALE: 3/8" = 1'-0"



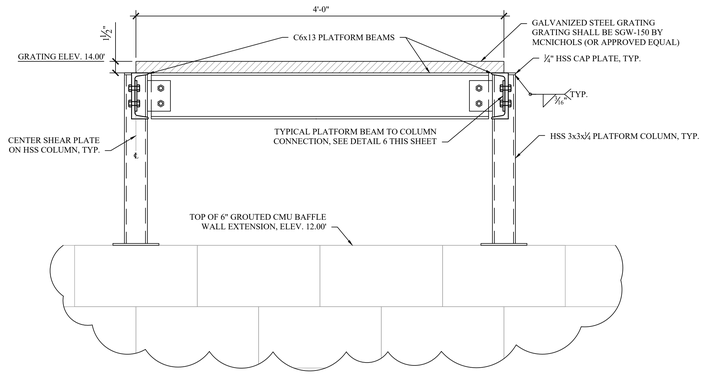
2 S-611 PLATFORM FRAMING PLAN

SCALE: 1" = 1'-0"



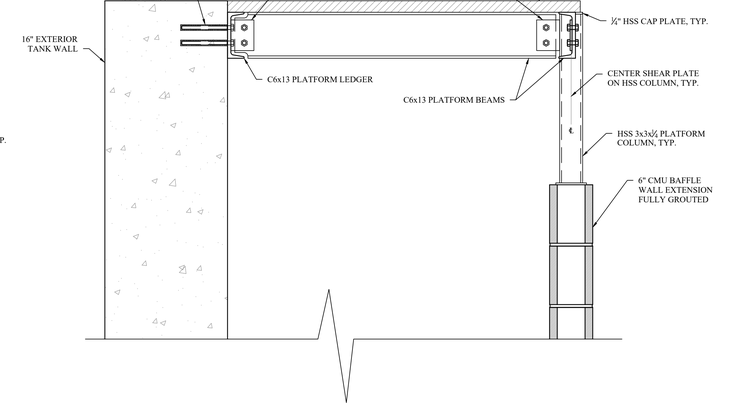
3 S-611 PLATFORM SECTION 2

SCALE: 1-1/2" = 1'-0"



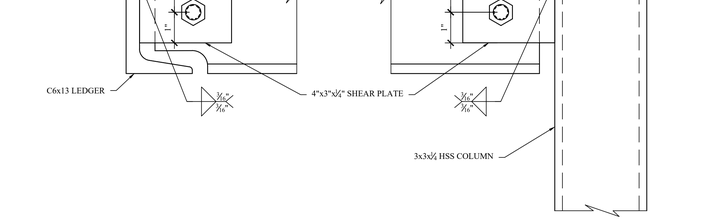
4 S-611 PLATFORM SECTION 3

SCALE: 1-1/2" = 1'-0"



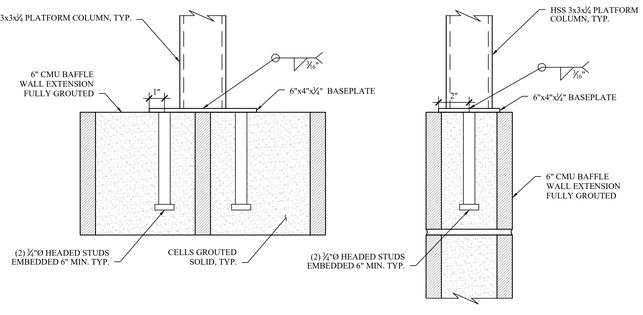
5 S-611 PLATFORM SECTION 4

SCALE: 1-1/2" = 1'-0"



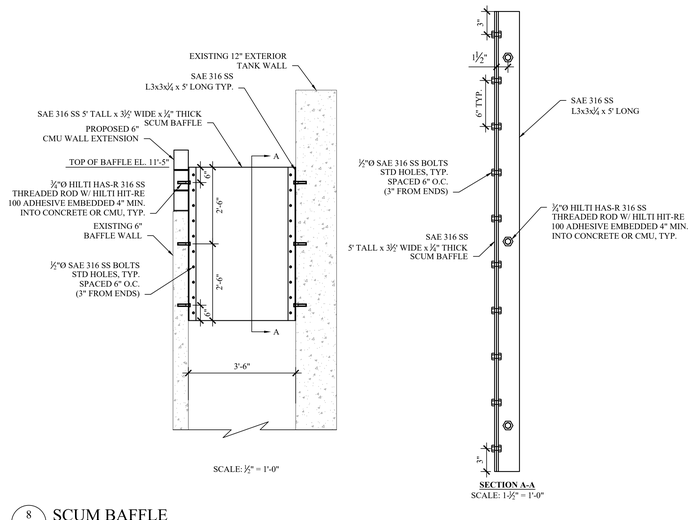
6 S-611 TYPICAL PLATFORM FRAMING CONNECTIONS

SCALE: 6" = 1'-0"



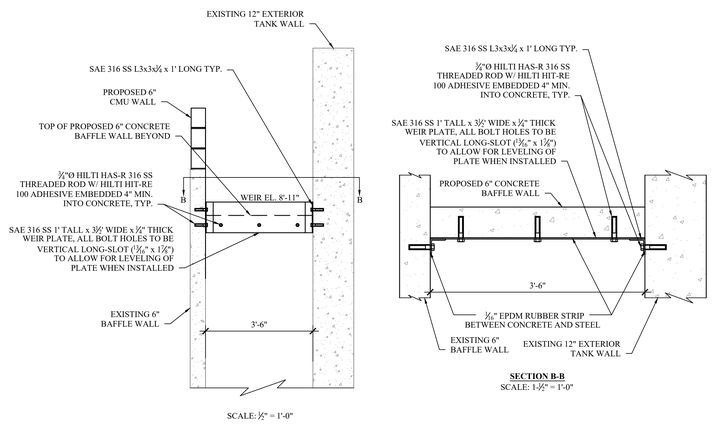
7 S-611 TYPICAL PLATFORM COLUMN BASEPLATE

SCALE: 3" = 1'-0"



8 S-611 SCUM BAFFLE

SCALE: SEE DETAIL



9 S-611 WEIR PLATE

SCALE: SEE DETAIL

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

CHLORINATION/ DECHLORINATION TANK MODIFICATION DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

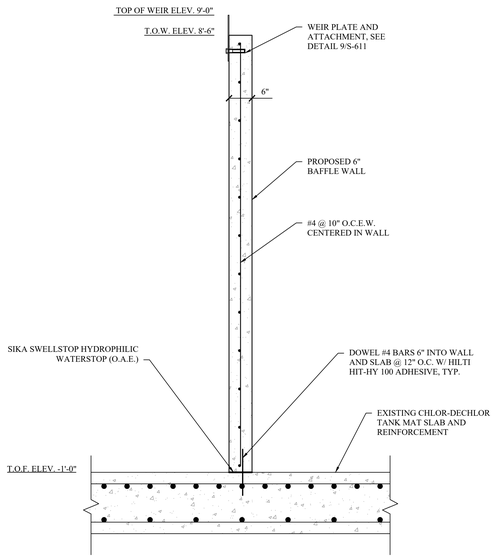
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

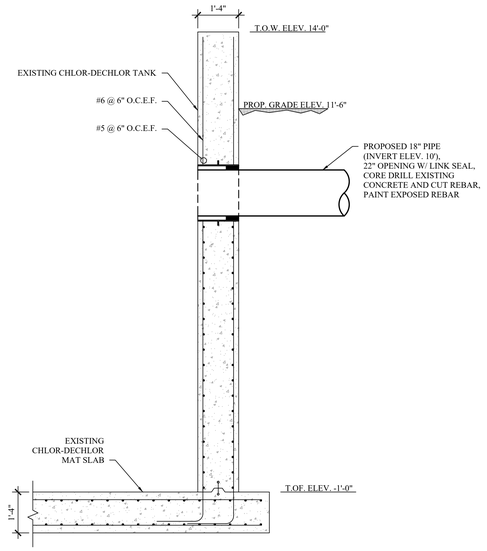
S-611

PROJECT # 18-732 PHASE #

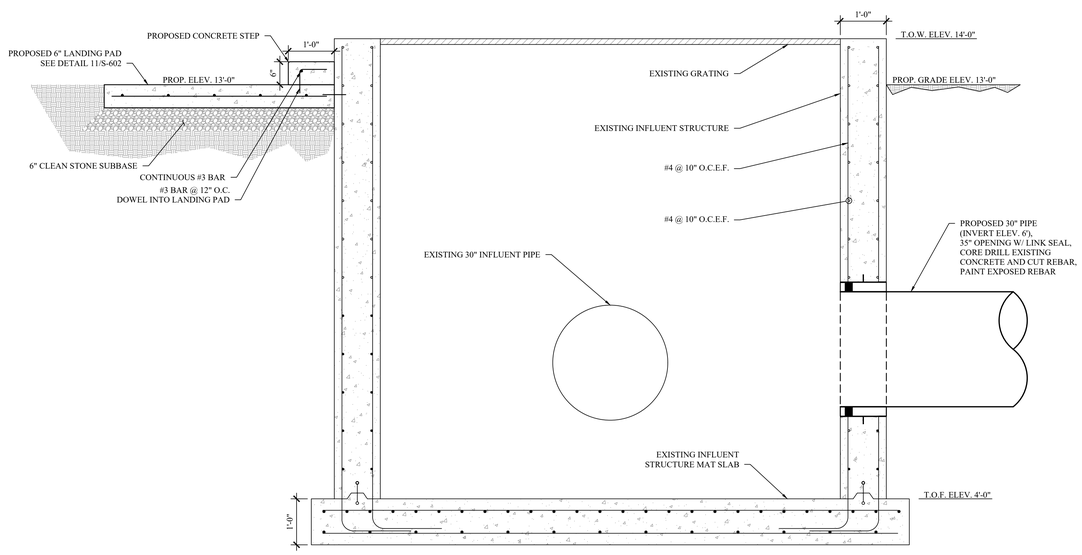
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\6 - Post Aeration\Structural\06 - Post Aeration - Structural.dwg, S-611, 4/17/2025 7:59:14 AM



1 S-612 PROPOSED BAFFLE WALL REINFORCEMENT
SCALE: 3/4" = 1'-0"



2 S-612 PROP. PENETRATION IN EXISTING CHLOR-DECHLOR TANK
SCALE: 1/2" = 1'-0"



3 S-612 PROPOSED PENETRATION IN EXISTING INFLUENT TANK
SCALE: 3/4" = 1'-0"

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NEW WINDSOR, NY 12553

CHLORINATION/ DECHLORINATION TANK MODIFICATION DETAILS (CONT.)

REVISIONS

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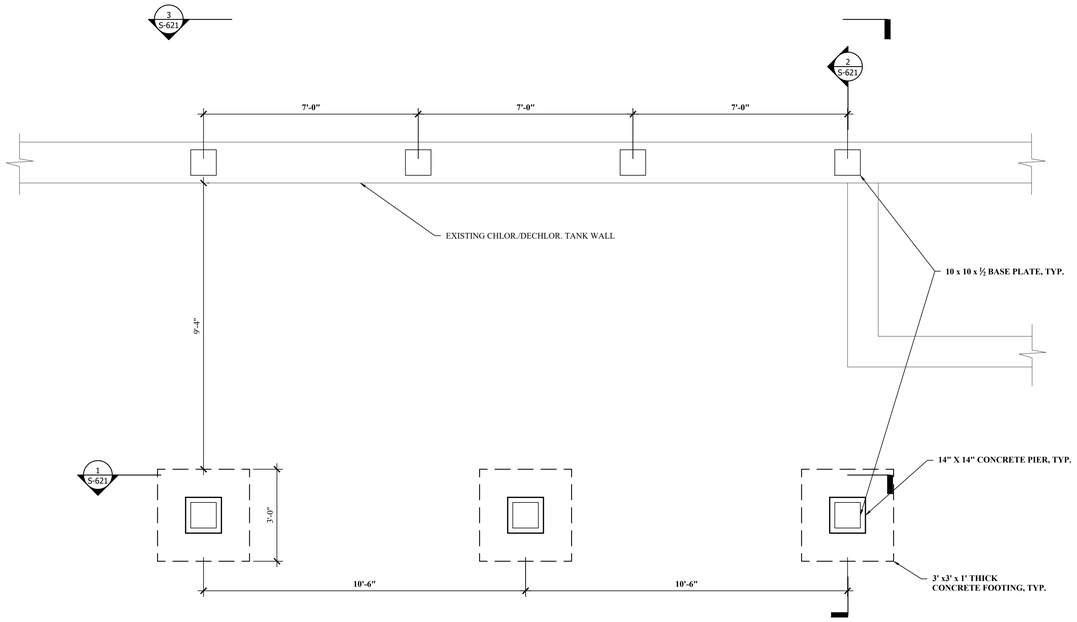
CHECKED BY:	PJW
REVIEWED BY:	JSS

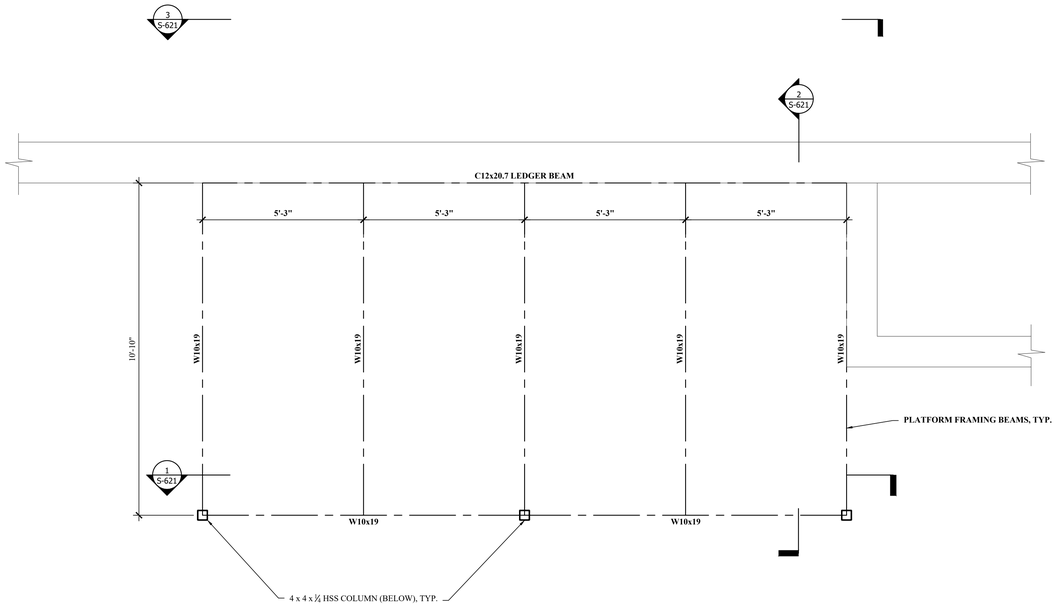
SHEET NO.
S-612

PROJECT # 18-732 PHASE #

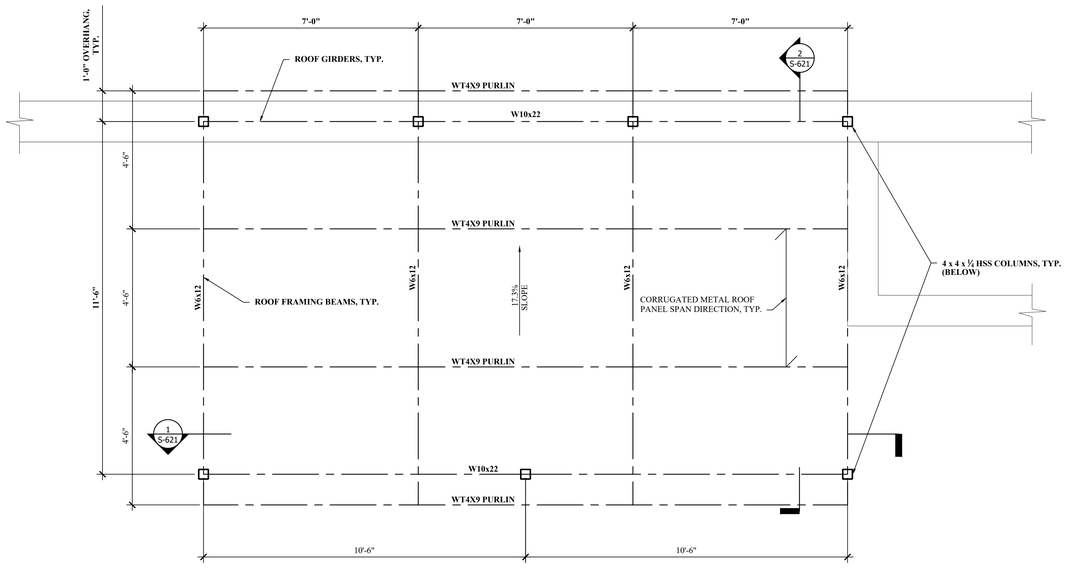
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\8 - Post Aeration\Structural\06 - Post Aeration - Structural.dwg, S-612, 4/17/2025 7:58:15 AM



1 S-620 BLOWER PLATFORM FOUNDATION PLAN
SCALE: 1/2" = 1'-0"



2 S-620 BLOWER PLATFORM FRAMING PLAN
SCALE: 1/2" = 1'-0"



3 S-620 BLOWER PLATFORM ROOF FRAMING PLAN
SCALE: 1/2" = 1'-0"

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NEW WINDSOR, NY 12553

CHLORINATION/ DECHLORINATION TANK BLOWER PLATFORM PLANS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
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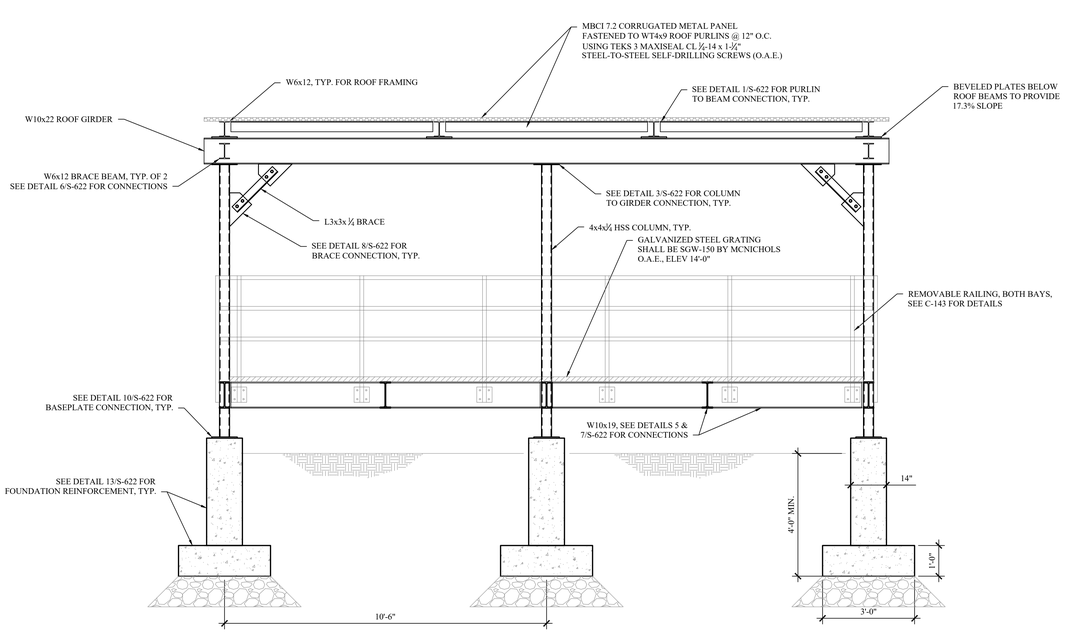
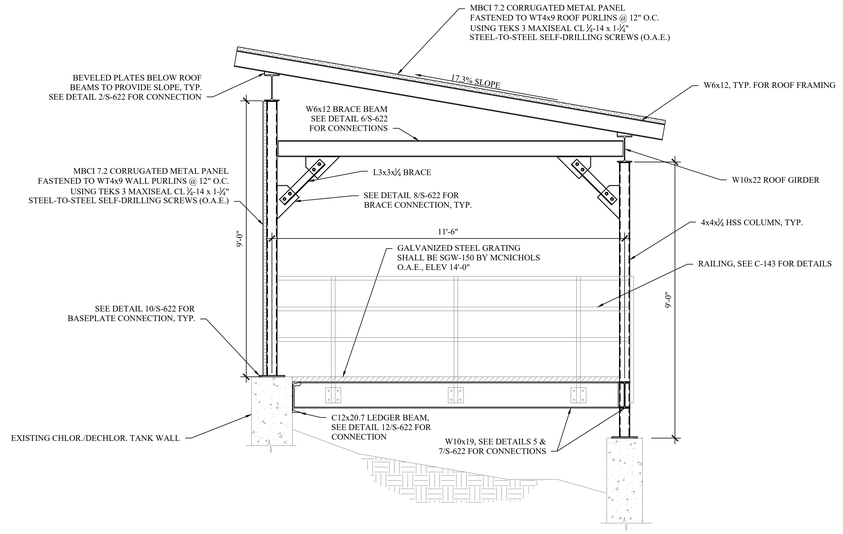
SHEET NO.
S-620

PROJECT # 18-732 PHASE #

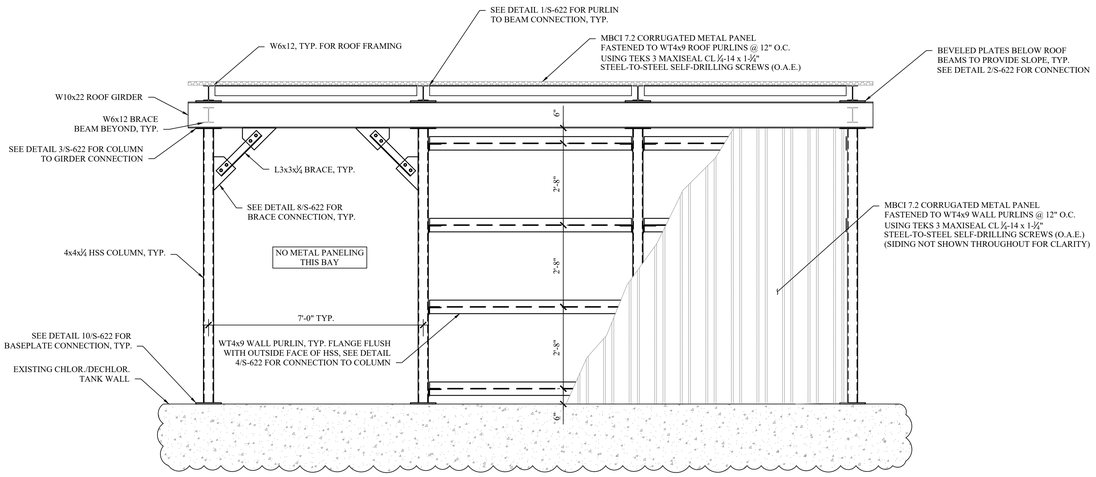
F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\6 - Post Aeration\Structural\06 - Post Aeration - Structural.dwg, S-620, 4/17/2025 7:59:08 AM



1 S-621 BLOWER PLATFORM SECTION 1
SCALE: 1/2" = 1'-0"



2 S-621 BLOWER PLATFORM SECTION 2
SCALE: 1/2" = 1'-0"



3 S-621 BLOWER PLATFORM SECTION 3
SCALE: 1/2" = 1'-0"

MHE ENGINEERING

33 Airport Center Drive, Suite 202
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CHLORINATION/ DECHLORINATION TANK BLOWER PLATFORM SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
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CHECKED BY:	PJW
REVIEWED BY:	JSS

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S-621

PROJECT # 18-732 PHASE #

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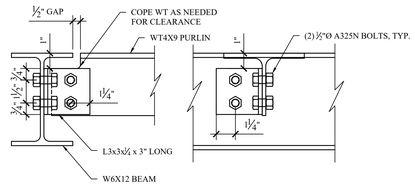
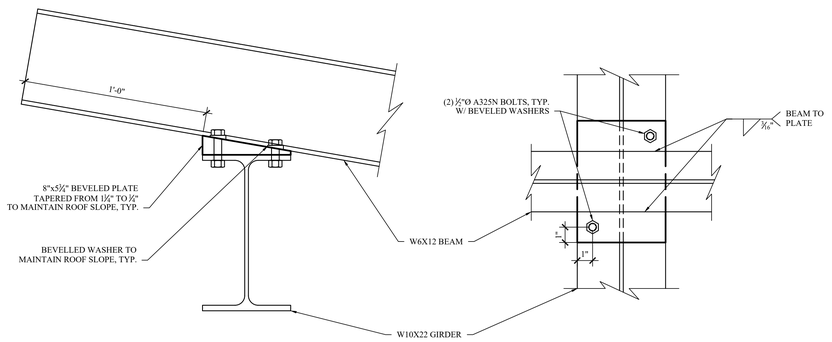
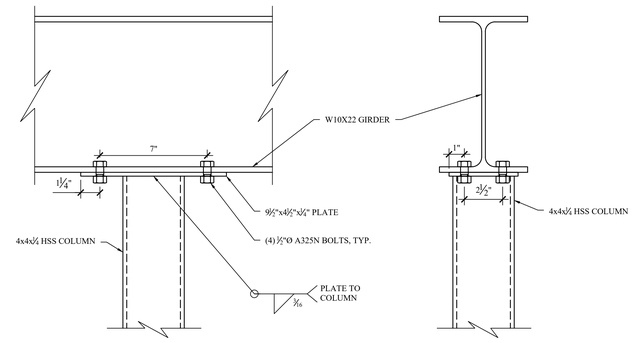


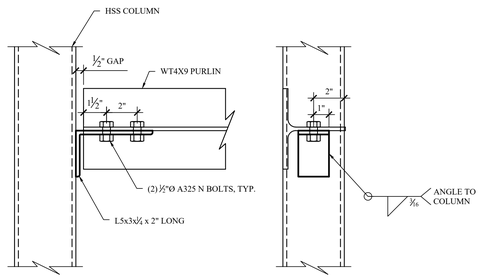
1 S-622 ROOF BEAM TO ROOF PURLIN CONNECTION
SCALE: 3" = 1'-0"



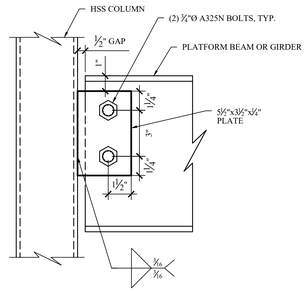
2 S-622 ROOF BEAM TO ROOF GIRDER CONNECTION
SCALE: 3" = 1'-0"



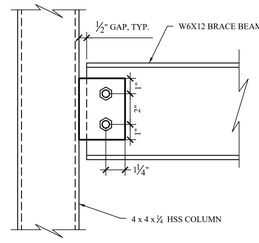
3 S-622 ROOF GIRDER TO COLUMN CONNECTION
SCALE: 3" = 1'-0"

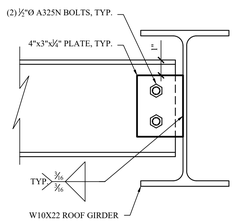


4 S-622 COLUMN TO WALL PURLIN CONNECTION
SCALE: 3" = 1'-0"

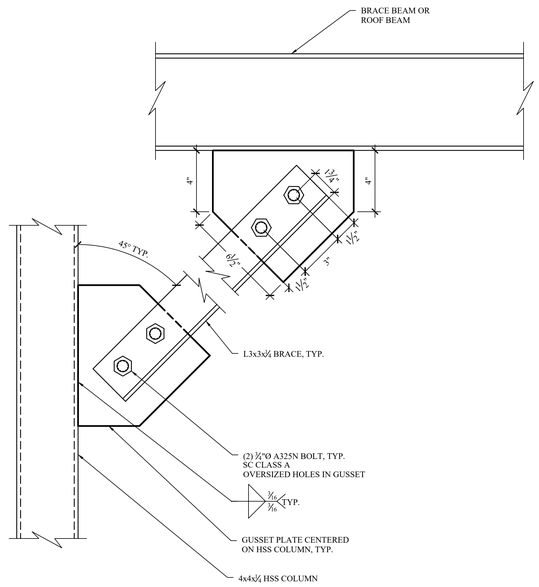


5 S-622 TYPICAL UNCOPED SHEAR PLATE
SCALE: 3" = 1'-0"

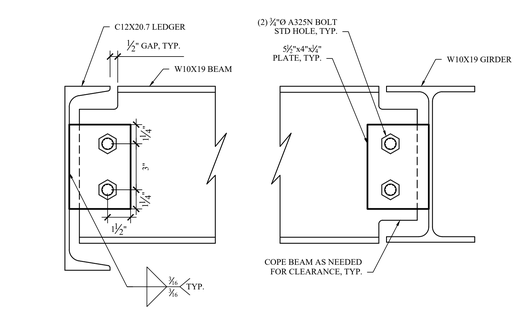




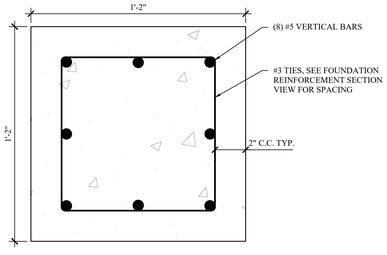
6 S-622 BRACE BEAM CONNECTIONS
SCALE: 3" = 1'-0"



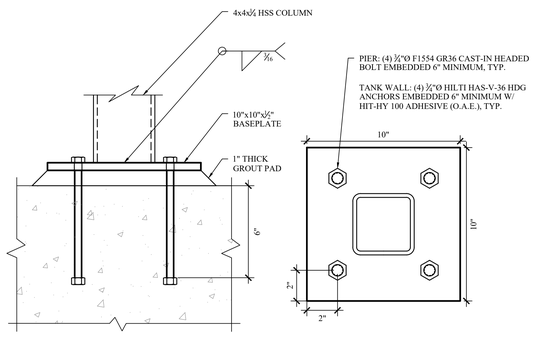
8 S-622 ANGLE BRACING CONNECTIONS
SCALE: 3" = 1'-0"



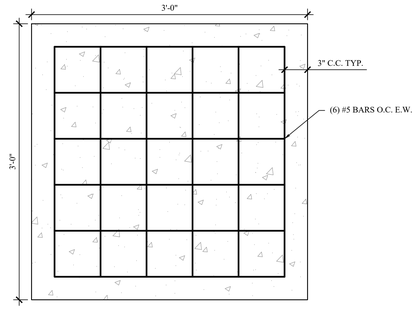
7 S-622 TYPICAL COPED SHEAR PLATE
SCALE: 3" = 1'-0"



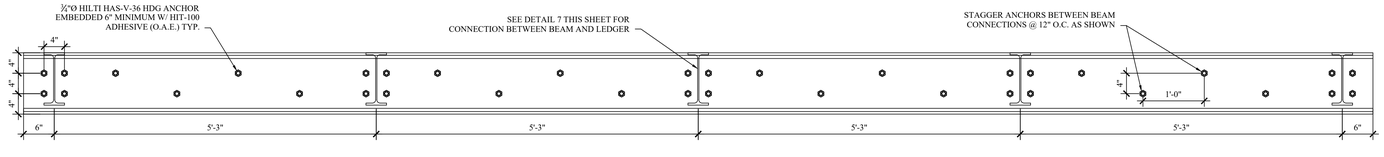
9 S-622 PIER REINFORCEMENT PLAN
SCALE: 3" = 1'-0"



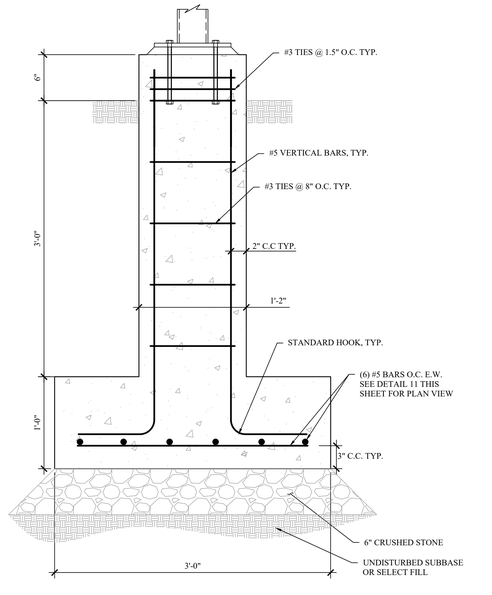
10 S-622 COLUMN BASEPLATE
SCALE: 3" = 1'-0"



11 S-622 FOUNDATION REINFORCEMENT PLAN
SCALE: 1-1/2" = 1'-0"



12 S-622 LEDGER BEAM
SCALE: 1" = 1'-0"



13 S-622 FOUNDATION REINFORCEMENT SECTION
SCALE: 1-1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

UNAUTHORIZED ADDITION OR ALTERATION OF THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

CHLORINATION/ DECHLORINATION TANK BLOWER PLATFORM DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

S-622

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\6 - Post Aeration\Structural\06 - Post Aeration - Structural.dwg, S-622, 4/17/2025 7:59:09 AM

GENERAL NOTES (STRUCTURAL):

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS TO STRUCTURES OR SURROUNDING AREAS. DAMAGE WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER OF RECORD (E.O.R.) AT NO ADDITIONAL COST TO THE OWNER.

2. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER TO THE E.O.R. PRIOR TO INSTALLATION OF EXCAVATION SUPPORT MEASURES.

3. ALL ITEMS NOT INDICATED TO BE EXISTING SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.

4. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES REGARDING SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN STRUCTURAL WORK.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE E.O.R.

6. ANY ITEMS INDICATED TO BE REPLACED-IN-KIND SHALL BE INSTALLED TO MATCH EXISTING LOCATIONS, CONFIGURATIONS, AND ELEVATIONS UNLESS OTHERWISE NOTED.

7. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. IF MANUFACTURER'S SPECIFICATIONS CONFLICT WITH CONTRACT DRAWINGS OR SPECIFICATIONS, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT. NEITHER THE STRUCTURE NOR INDIVIDUAL STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, JOISTS, AND COLUMNS WILL BE LATERALLY STABLE UNTIL ALL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS COMPLETE.

9. ALL SUBSURFACE UTILITIES SHALL BE IDENTIFIED PRIOR TO EXCAVATION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EXCAVATION. IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

10. ALL ITEMS SHOWN TO BE REMOVED SHALL BE PROPERLY HANDLED AND DISPOSED OF OFF SITE.

11. NO BACKFILLING OF THE STRUCTURE SHALL OCCUR UNTIL CONCRETE BREAKS SATISFACTORY TO THE E.O.R. ARE OBTAINED OR UNTIL THE CONTAINMENT STRUCTURE HAS SUCCESSFULLY PASSED HYDROSTATIC TESTING IF APPLICABLE.

12. ALL ITEMS INDICATED TO BE A DELEGATED DESIGN SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO ORDERING MATERIALS. SUBMITTALS SHALL INCLUDE PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.

13. ELEVATIONS SHOWN ARE BASED ON SURVEY BY CTMALE DATED APRIL 3, 2023.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 NEW YORK STATE BUILDING CODE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 24 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

STEEL:

1. STRUCTURAL STEEL:
   - 1.1. SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16.

CONCRETE:

1. PERIODIC INSPECTION OF REINFORCING STEEL.
2. PERIODIC INSPECTION OF ANCHORS CAST IN CONCRETE.
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.
   - 3.1. CONTINUOUS INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.
   - 3.2. PERIODIC INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 3.1.
4. PERIODIC VERIFICATION OF DESIGN MIX.
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP, AIR, AND TEMPERATURE TESTS; CONTINUOUS.
6. CONTINUOUS INSPECTION OF PLACEMENT & FOR PROPER APPLICATION TECHNIQUES.
7. PERIODIC INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
8. PERIODIC VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.
9. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS, OF THE CONCRETE MEMBER BEING FORMED.

SOILS:

1. CONTINUOUS INSPECTION OF
   - 1.1. PROPER MATERIALS
   - 1.2. DENSITIES
   - 1.3. LIFT THICKNESSES DURING PLACEMENT
   - 1.4. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   - 2.1. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   - 2.2. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   - 2.3. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   - 2.4. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE.

CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO ACI 211.1, ACI 301, ACI 304R (WHEN PUMPING), AND ACI 318-14. AGGREGATE SHALL CONFORM TO ASTM C33. COMPRESSIVE STRENGTH, RANGE OF SLUMP, WATER-TO-CEMENT RATIO, AND AIR ENTRAINMENT SHALL BE PER THE CONCRETE CLASS SPECIFIED HEREIN AND IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000. SUBMIT COPIES OF TEST REPORTS SHOWING THAT THE MIX HAS BEEN SUCCESSFULLY TESTED TO PRODUCE CONCRETE WITH THE PROPERTIES SPECIFIED. TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (E.O.R.) FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.
   - 1.1. CONCRETE CLASSIFICATIONS PER SPECIFICATION SECTION 033000:
     - 1.1.1. FOOTINGS & FROST WALLS: CLASS A
     - 1.1.2. INTERIOR SLABS-ON-GROUND: CLASS C
     - 1.1.3. EXTERIOR SLABS-ON-GROUND: CLASS D
     - 1.1.4. APRONS & LANDINGS: CLASS H
   - 1.2. CONCRETE FINISHES PER SPECIFICATION SECTION 033000:
     - 1.2.1. FOUNDATIONS BELOW GRADE: AS-CAST SF-2.0 FINISH
     - 1.2.2. EXTERIOR SLABS: FINE BROOM FINISH
     - 1.2.3. INTERIOR SLABS: TROWEL FINISH
2. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 7 DAYS.
3. CONCRETE SHALL BE WET CURED, USING BURLAP OR COTTON CURING MATS, OR CURED USING ASTM D4397 POLYETHYLENE SHEETING IN ACCORDANCE WITH ASTM C171. WET THE ENTIRE EXPOSED SURFACE OF THE CONCRETE THOROUGHLY WITH A FINE SPRAY OF WATER AND COVER WITH SHEETING THROUGHOUT THE CURING PERIOD. LAY SHEETING DIRECTLY ON CONCRETE SURFACE. PROVIDE SHEETING NOT LESS THAN 18 INCHES WIDER THAN CONCRETE SURFACE. OVERLAP EDGES 12 INCHES AND CONTINUOUSLY TAPE JOINTS.
4. PUMPING SHALL NOT RESULT IN SEPARATION OR LOSS OF MATERIALS NOR CAUSE INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF PLASTICITY BETWEEN SUCCESSIVE INCREMENTS. LOSS OF SLUMP IN PUMPING EQUIPMENT SHALL NOT EXCEED 2 INCHES. CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. RAPID CHANGES IN PIPE SIZES SHALL BE AVOIDED. MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO 33 PERCENT OF THE DIAMETER OF THE PIPE. MAXIMUM SIZE OF WELL ROUNDED AGGREGATE SHALL BE LIMITED TO 40 PERCENT OF THE PIPE DIAMETER. SAMPLES FOR TESTING SHALL BE TAKEN AT BOTH THE POINT OF DELIVERY TO THE PUMP AND AT THE DISCHARGE END.
5. CONCRETE SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT PROPER PLACEMENT AND CONSOLIDATION INCLUDING PERIODS OF PRECIPITATION. TRANSPORT CONCRETE AS RAPIDLY AS PRACTICABLE TAKING PRECAUTION TO PREVENT SEGREGATION OR LOSS OF INGREDIENTS. PUMPING IN ACCORDANCE WITH ACI 304 SHALL BE PERMITTED. DO NOT EXCEED A FREE VERTICAL DROP OF 3 FEET FROM THE POINT OF DISCHARGE. PLACE CONCRETE IN ONE CONTINUOUS OPERATIONS FROM ONE SIDE OF SLAB TO THE OTHER. POSITION GRADE STAKES AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION.
6. UNLESS OTHERWISE NOTED, REINFORCEMENT BARS SHALL BE BLACK STEEL. REINFORCING BARS SHALL CONFORM TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A1064. REINFORCEMENT SHALL NOT CONTAIN RUST, SCALE, OIL, GREASE, CLAY, OR FOREIGN SUBSTANCES THAT WOULD REDUCE THE CONCRETE BONDING STRENGTH. REMOVE LOOSE RUST PRIOR TO PLACEMENT OF REINFORCEMENT.
7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
8. PROVIDE MINIMUM 2" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST FORMS OR 3" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST EARTH, UNLESS OTHERWISE INDICATED.
9. CONCRETE FOOTINGS AND MAT FOUNDATIONS SHALL BE PLACED MONOLITHICALLY WITH THE EXCEPTION THAT VERTICAL CONSTRUCTION JOINTS WILL BE ALLOWED IF EPOXY BONDING COMPOUND IS APPLIED TO THE ROUGHENED SURFACE OF THE HARDENED CONCRETE.
10. INTERIOR SLABS: THE CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AS INDICATED. JOINTS MAY BE SAWCUT OR CUT WITH A JOINTING TOOL. SAWED JOINTS SHALL BE COMPLETED WITHIN 4 TO 12 HOURS AFTER PLACEMENT OF CONCRETE. JOINTS SHALL INTERSECT WITH THE CORNERS OF ISOLATION JOINT AT COLUMN LOCATIONS, IF ANY ARE PRESENT, AND BE SPACED A MAXIMUM OF 15 FEET ON CENTER, UNLESS NOTED OTHERWISE.
11. REINFORCEMENT SUPPORTS SHALL BE CONCRETE OR OTHER NON-CORRODIBLE MATERIAL HAVING A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE COMPRESSIVE STRENGTH OF THE CONCRETE BEING PLACED.
12. PROVIDE A ½" ROUNDED EDGE ON ALL EXPOSED SLAB EDGES. PROVIDE A ½" CHAMFER ON ALL OTHER EXPOSED CONCRETE CORNERS.
13. EPOXY BONDING COMPOUND SHALL BE USED ON ALL CONTACTING SURFACES BETWEEN EXISTING CONCRETE AND NEW CONCRETE. EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C881, TYPE AND GRADE TO BE IN ACCORDANCE WITH APPROPRIATE USE INDICATED IN SPECIFICATION 033000 CAST-IN-PLACE CONCRETE. DO NOT ALLOW COMPOUND TO HARDEN PRIOR TO CONCRETE PLACEMENT. BONDING AGENT USED SHALL BE NSF 61 APPROVED.
14. PLACE, CONSOLIDATE AND IMMEDIATELY STRIKE OFF CONCRETE TO OBTAIN PROPER CONTOUR GRADE AND ELEVATION BEFORE BLEEDWATER APPEARS. PERMIT CONCRETE TO ATTAIN A SET SUFFICIENT FOR FLOATING AND SUPPORTING THE WEIGHT OF THE FINISHER AND EQUIPMENT. IF BLEEDWATER IS PRESENT PRIOR TO FLOATING THE SURFACE, DRAG THE EXCESS WATER OFF OR REMOVE BY ABSORPTION WITH POROUS MATERIALS. DO NOT USE DRY CEMENT TO ABSORB BLEEDWATER.
15. UNLESS OTHERWISE NOTED, ALL CONCRETE CONSTRUCTION SHALL MEET THE SPECIFIED TOLERANCES OF ACI 117. TOP ELEVATIONS SHALL MATCH THE SPECIFIED ELEVATIONS WITHIN A TOLERANCE OF $\pm\frac{1}{4}$"
16. THE REQUIREMENTS OF ACI 302.1R CLASS 4 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL FLOORS AND SLABS. THE REQUIREMENTS OF ACI 360.R-10 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL SLABS-ON-GROUND.
   - 16.1. SLABS-ON-GRADE: FF = 25 AND FL = 20
   - 16.2. SUSPENDED SLABS: FF = 25 AND FL = 20
17. NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED ITEMS (I.E. PROCESS, ELECTRICAL, MECHANICAL, ETC) HAVE BEEN SET. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES.
18. ALL BAR PLACING AND BENDING SHALL BE IN ACCORDANCE WITH ACI 315.
19. PERFORM COMPRESSIVE TESTS IN ACCORDANCE WITH ASTM C39. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM SPECIMENS. TEST ONE CYLINDER AT 3 DAYS, ONE CYLINDER AT 7 DAYS, AND TWO (THREE FOR 4"x8" CYLINDERS) CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE. PERFORM SLUMP TESTS IN ACCORDANCE WITH ASTM C143. PERFORM AIR CONTENT TESTS IN ACCORDANCE WITH ASTM C173 OR ASTM C231. SUBMIT ALL TEST DATA TO THE E.O.R.
20. CONSOLIDATE CONCRETE WITH HIGH FREQUENCY, INTERNAL, MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING AND TAMPING. FURNISH A SPARE VIBRATOR ON THE JOB SITE WHENEVER CONCRETE IS PLACED. OPERATE VIBRATORS WITH VIBRATORY ELEMENT SUBMERGED IN THE CONCRETE, WITH A MINIMUM FREQUENCY OF NOT LESS THAN 6000 IMPULSES PER MINUTE WHEN SUBMERGED. INSERT AND WITHDRAW VIBRATORS AT INTERVALS APPROXIMATELY 18 INCHES APART.
21. ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920, TYPE S, GRADE P, CLASS 25. JOINT SEALANT IN CONTACT WITH POTABLE WATER SHALL BE NSF 61 APPROVED.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SYSTEMS INCLUDING MATERIALS, INSTALLATION, WORKMANSHIP, FABRICATION, ASSEMBLY, ERECTION, INSPECTION, QUALITY CONTROL, AND TESTING SHALL BE PROVIDED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
2. ALL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:
   - W SHAPES: ASTM A992, Fy = 50KSI
   - HSS: ASTM A500 GR. C, Fy = 50KSI
   - PLATES AND OTHER STEEL SHAPES: ASTM A36, Fy = 36KSI
3. ALL HOLES IN STEEL SHALL BE STANDARD SIZE 1/16" LARGER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE DRILLED OR PUNCHED. BURNING IS NOT ALLOWED. COLUMN BASEPLATE HOLES FOR ANCHOR BOLTS ARE PERMITTED TO BE OVERSIZED.
4. COPES SHALL BE PROVIDED WITH 1/2" RADIUS MINIMUM, SMOOTH CORNERS, AND FREE OF NOTCHES. DEPTH AND LENGTH OF COPES SHALL BE AS INDICATED.
5. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL CONFORM TO ASTM A325, EXCEPT ANCHOR BOLTS SHALL CONFORM TO ASTM F1554. ALL NUTS SHALL CONFORM TO ASTM A563, GRADE AND STYLE FOR APPLICABLE ASTM BOLT STANDARD. ALL WASHERS SHALL CONFORM TO ASTM F436 FOR ASTM A325 BOLTS AND F1554 ANCHOR BOLTS.
6. UNLESS OTHERWISE NOTED, ALL BOLTS SHALL BE SNUG-TIGHT. BOLTS SPECIFIED AS PRE-TENSIONED (PT) SHALL BE PRE-TENSIONED USING THE TURN-OF-NUT METHOD. CONNECTIONS SPECIFIED AS SLIP-CRITICAL (SC) SHALL HAVE BOLTS PRE-TENSIONED USING THE TURN-OF-NUT METHOD AND FAYING SURFACES PREPARED IN ACCORDANCE WITH THE CLASSIFICATION INDICATED. BOLTS INDICATED TO USE A JAM NUT SHALL BE INSTALLED USING THE FOLLOWING SEQUENCE:
   - INSTALL THIN NUT (JAM NUT) FIRST AND TORQUE TO 50% OF TORQUE VALUE
   - INSTALL THICK NUT (STANDARD HEX) SECOND AND TORQUE TO 100% OF TORQUE VALUE WHILE HOLDING THE JAM NUT TO PREVENT ROTATION
7. STEEL DETAILER SHALL PROVIDE CONNECTION DESIGN IN ACCORDANCE WITH ANSI/AISC 303. DETAILER SHALL SELECT AND COMPLETE CONNECTIONS USING SCHEMATIC DETAILS INDICATED ON PLANS AND ANSI/AISC 360.
8. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 AND ALL STRUCTURAL STEEL FASTENERS (INCLUDING NUTS, BOLTS, WASHERS, ETC..) SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153. REPAIR AREAS OF DAMAGED GALVANIZATION IN ACCORDANCE WITH ASTM A780.

WELDING NOTES:

1. ALL WELDING SHALL BE CONDUCTED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1, LATEST EDITION FOR STRUCTURAL STEEL AND AWS D1.3, LATEST EDITION FOR STRUCTURAL SHEET STEEL.
2. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR PROTECTING EXISTING EQUIPMENT, MATERIALS, BUILDING STRUCTURES, AND BUILDING COMPONENTS DURING ANY FIELD WELDING OPERATIONS.
3. WELDS OF HEADED STUDS SHALL MATCH STRENGTH OF STUDS.

GEOTECHNICAL NOTES:

1. THE FOLLOWING BEARING PRESSURE VALUES WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - MAX NET ALLOWABLE BEARING OF UNDISTURBED NATIVE SOIL: 4000PSF
   - MAX NET ALLOWABLE BEARING OF SHALE OR SANDSTONE BEDROCK: 8000PSF
2. BOTTOM OF EXCAVATION IS DEFINED AS THE ELEVATION BENEATH THE SUBBASE. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
3. IF UNSUITABLE MATERIAL IS ENCOUNTERED AT OR UNDER THE PROPOSED BOTTOM OF EXCAVATION, THE UNSUITABLE MATERIAL SHALL BE REMOVED FROM WITHIN THE ZONE OF INFLUENCE OF THE BEARING ELEMENT AND REPLACED IN ACCORDANCE WITH NOTE 4.
4. ZONE OF INFLUENCE IS DEFINED AS A 1V:1H PLANE EXTENDING DOWNWARD FROM THE BOTTOM PERIMETER OF THE FOUNDATION ELEMENT TO WITHIN A SUITABLE DISTANCE BELOW, TO BE DETERMINED BY THE ENGINEER OF RECORD BASED ON FIELD CONDITIONS AND MATERIAL TYPE.
5. OVER EXCAVATION IS DEFINED AS ANY EXCAVATION BELOW THE PROPOSED BOTTOM OF EXCAVATION IDENTIFIED ON THE PLANS OR AS DESCRIBED WITHIN THE PROJECT SPECIFICATIONS; OVER EXCAVATION SHALL BE RE-ESTABLISHED AS FOLLOWS:
   - BENEATH FOUNDATIONS AND SLABS-ON-GRADE: COMPACTED SELECT FILL
   - BENEATH TANKS: CONTROLLED DENSITY FILL
6. SELECT FILL SHALL BE UTILIZED FOR BACKFILL OF ALL STRUCTURES (UNLESS OTHERWISE NOTED).
7. THE MINIMUM SELECT FILL PROPERTIES LISTED BELOW WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - UNIT WEIGHT = 130 PSF
   - FRICTION ANGLE = 35°
   - Ka = 0.27
   - Ko = 0.43
   - Kp = 3.69
8. THE CONTRACTOR SHALL SUBMIT DESIRED BACKFILL MATERIAL SPECIFICATION MEETING ALL DESIGN CRITERIA LISTED ABOVE, AT A MINIMUM, TO THE ENGINEER OF RECORD PRIOR TO USE ON SITE. ALTERNATIVELY, THE CONTRACTOR SHALL ELECT TO PERFORM A FIELD PROCTOR OF THE EXISTING SITE SOILS TO VERIFY THAT EXISTING SOILS MEET THE MINIMUM DESIGN VALUES STATED ABOVE.
9. IN-SITU COMPACTION TESTING OF SUBGRADE AND BACKFILL MATERIAL SHALL BE PERFORMED BY THE OWNER'S SPECIAL INSPECTOR.
10. FOR ADDITIONAL GEOTECHNICAL INFORMATION, SEE THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY TECTONIC PROVIDED IN THE CONTRACT.

ENTRY SLAB CONCRETE DECK NOTES:

1. STEEL FORM DECK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH STEEL DECK INSTITUTE (SDI) "DESIGN MANUAL FOR FORM DECKS" LATEST EDITION. STEEL FORM DECK SHALL BE PROVIDED WITH A G90 GALVANIZED COATING AND HAVE THE FOLLOWING MINIMUM PROPERTIES:

   POS MOMENT OF INERTIA = 0.290 in4/ft.
   NEG MOMENT OF INERTIA = 0.277 in4/ft.
   GAGE/THICKNESS = 18 ga/ 0.0474 in.
   POSITIVE SECTION MODULUS =0.318 in3/ft
   NEGATIVE SECTION MODULUS = 0.306 in3/ft
2. UNLESS OTHERWISE NOTED, STEEL DECK SHALL BE WELDED TO ALL SUPPORTING STEEL (INCLUDING CONTINUOUS SUPPORTING STEEL AT PERIMETER) AT 1'-0" ON CENTER WITH 5/8"DIAMETER PUDDLE WELDS. DECK UNITS SHALL BE ATTACHED TO ADJACENT UNITS AT SIDELAPS WITH (5) NO.12 STITCH SCREWS PER SPAN EQUALLY SPACED.
3. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CLOSURE PLATES FOR STEEL DECK PRIOR TO PLACING CONCRETE.
4. STEEL DECK SHALL BE VULCRAFT 18 GAGE 1.5C-36 50KSI, OR EQUAL. DECK SHALL BE CAPABLE OF SPANNING 6 FEET (MIN) WITH THE USE OF NORMAL WEIGHT CONCRETE.

WOOD FRAMING NOTES:

1. ALL LUMBER SHALL HAVE A MOISTURE CONTENT OF 19% OR LESS. ALLOWABLE UNIT STRESSES SHALL BE AS FOLLOWS:
   - 1.1. 2x6 JOISTS - SOUTHERN PINE No. 2
     - 1.1.1. MINIMUM ALLOWABLE BENDING STRESS = 1100 PSI
     - 1.1.2. MINIMUM ALLOWABLE SHEAR STRESS = 175 PSI
   - 1.2. 2X8 WEDGE OVERBUILD RAFTERS - SOUTHERN PINE No. 2
     - 1.2.1. MINIMUM ALLOWABLE BENDING STRESS = 1100 PSI
     - 1.2.2. MINIMUM ALLOWABLE SHEAR STRESS = 175 PSI
2. ALL NAILING SHALL BE DONE IN ACCORDANCE WITH NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS), LATEST EDITION AND THE 2020 NEW YORK STATE BUILDING CODE.
3. ROOF SHEATHING SHALL FASTENED WITH 10d NAILS @ 6" O.C. ALONG SUPPORTED EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERWISE. ROOF SHEATHING ALONG THE EAVE PERIMETER SHALL BE FASTENED AT 4" O.C.
4. ALL WOOD MEMBERS SHALL BE PRESSURE TREATED FOR EXPOSURE TO THE WEATHER.
5. ALL FASTENERS TO BE GALVANIZED OR COATED FOR USE IN PRESSURE TREATED WOOD.

TYPICAL STRAIGHT REBAR LAP SPLICE LENGTHS PER ACI 318 CHAPTER 25 (ASSUMING 4000 PSI CONCRETE, EPOXY COATED)

MAIN BAR SIZE	l_d (in)	TOP BARS IN SLABS > 18" THICK, l_d (in)
#4	18	24
#5	23	30
#6	27	36
#7	43	56
#8	56	73
#9	71	93
#10	87	114

TYPICAL HOOKED REBAR DEVELOPMENT LENGTHS PER ACI 318 CHAPTER 25 (ASSUMING 4000 PSI CONCRETE, EPOXY COATED)

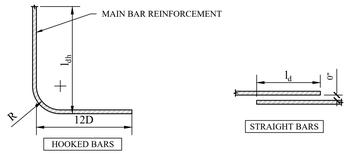
MAIN BAR SIZE	R (in)	l_{dh} (C.C. > 2.5")	l_{dh} (C.C. < 2.5")
#4	1.5	8	12
#5	1.875	10	15
#6	2.25	12	18
#7	2.625	14	20
#8	3	16	23
#9	4.75	18	26
#10	5.375	20	29

TYPICAL STRAIGHT REBAR LAP SPLICE LENGTHS PER ACI 318 CHAPTER 25 (ASSUMING 4000 PSI CONCRETE, BLACK STEEL)

MAIN BAR SIZE	l_d (in)	TOP BARS IN SLABS > 18" THICK, l_d (in)
#4	15	20
#5	19	29
#6	23	30
#7	36	47
#8	47	62
#9	59	77
#10	73	95

TYPICAL HOOKED REBAR DEVELOPMENT LENGTHS PER ACI 318 CHAPTER 25 (ASSUMING 4000 PSI CONCRETE, BLACK STEEL)

MAIN BAR SIZE	R (in)	l_{dh} (C.C. > 2.5")	l_{dh} (C.C. < 2.5")
#4	1.5	7	11
#5	1.875	8	13
#6	2.25	10	16
#7	2.625	12	18
#8	3	13	21
#9	4.75	15	23
#10	5.375	17	26



REBAR LAP SPLICE TABLES AND REFERENCE DETAIL

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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555 UNION AVE.
NEW WINDSOR, NY 12553

700 SERIES STRUCTURAL NOTES

REVISIONS

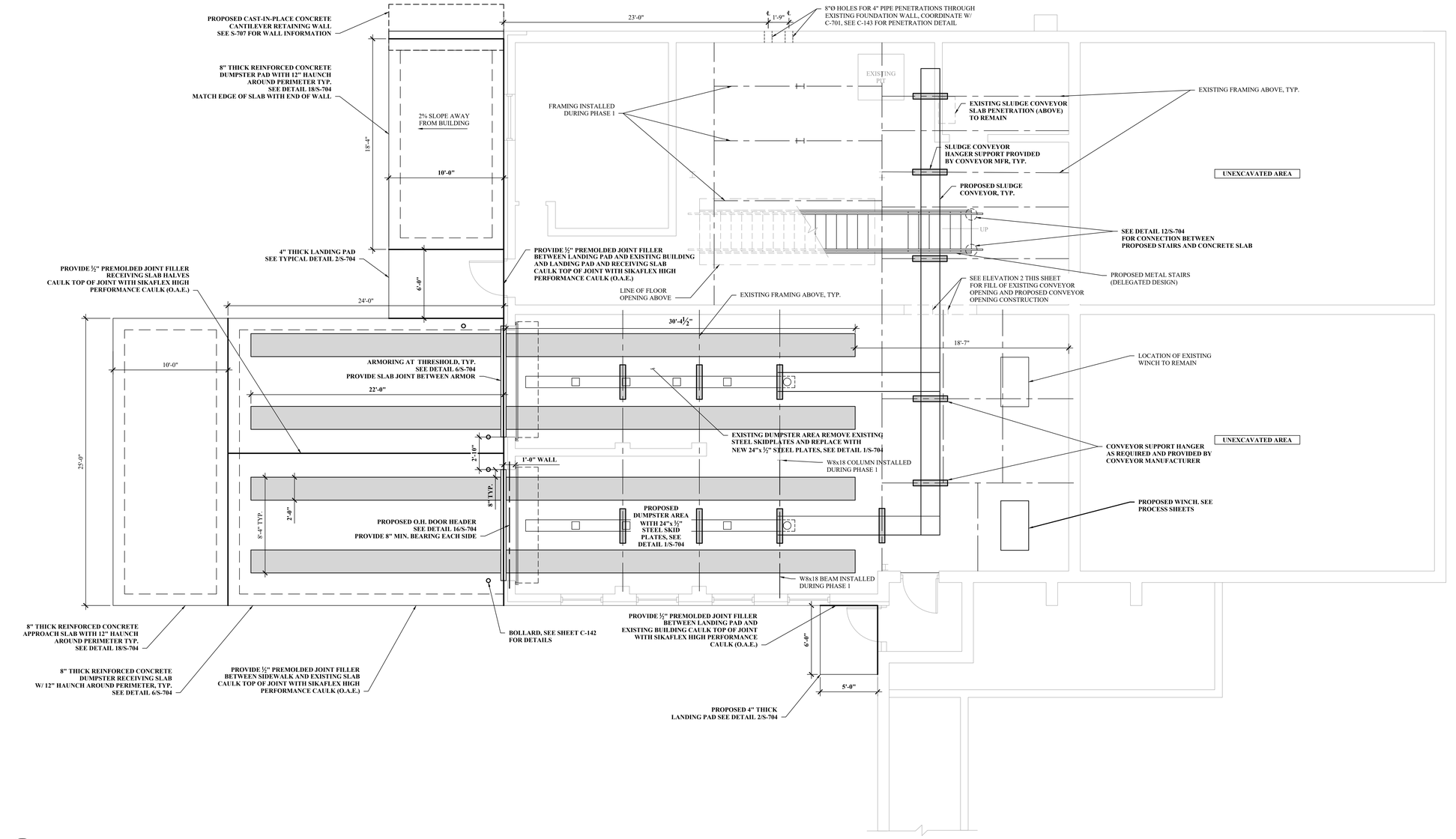
NO.	DESCRIPTION	DATE

ISSUED DATE: 18 APR, 2025
DESIGN BY: WPG, NEM, PJW
DRAWN BY: WPG, NEM, PJW
CHECKED BY: PJW
REVIEWED BY: JSS

SHEET NO.
S-700

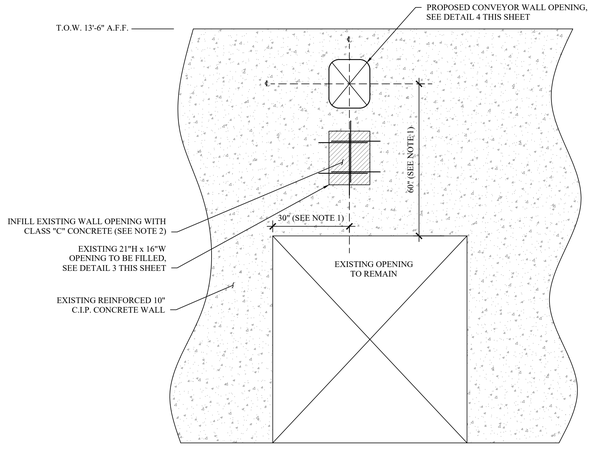
PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion



1 S-701 GROUND LEVEL MODIFICATION PLAN

SCALE: 1/4" = 1'-0"

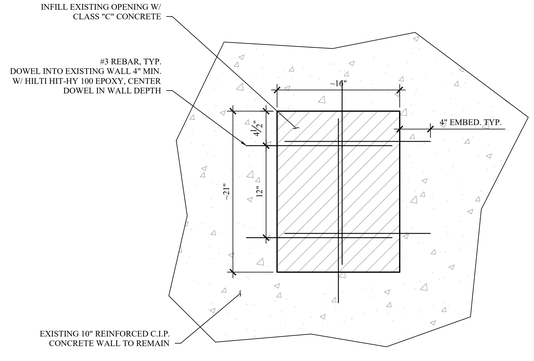


NOTES:

1. COORDINATE LOCATION OF NEW WALL OPENING W/ APPLICABLE PROCESS SHEETS AND CONVEYOR MANUFACTURER PRIOR TO PERFORMING WORK.
2. FILL EXISTING WALL OPENING AS DETAILED PRIOR TO MAKING NEW OPENING ABOVE.

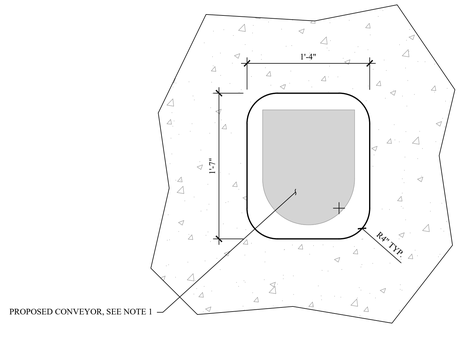
2 S-701 EXISTING AND PROPOSED CONVEYOR WALL OPENING ELEVATION

SCALE: 1/2" = 1'-0"



3 S-701 EXISTING CONVEYOR WALL OPENING INFILL DETAIL

SCALE: 1-1/2" = 1'-0"



NOTES:

1. COORDINATE REQUIRED SIZE AND LOCATION OF WALL OPENING W/ CONVEYOR MANUFACTURER PRIOR TO PERFORMING WORK IN THE FIELD - CONFIRM MINIMUM OPERATIONAL CLEARANCES.
2. IF SIZE INCREASES FROM INDICATED IN THE DETAIL, CONFIRM ACCEPTANCE WITH THE E.O.R. PRIOR TO PERFORMING WORK IN THE FIELD.
3. PAINT ENDS OF REBAR EXPOSED DURING PROPOSED WORK.

4 S-701 PROPOSED CONVEYOR WALL OPENING DETAIL

SCALE: 1-1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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SLUDGE DEWATERING BUILDING GROUND LEVEL MODIFICATION PLAN

REVISIONS

NO.	DESCRIPTION	DATE

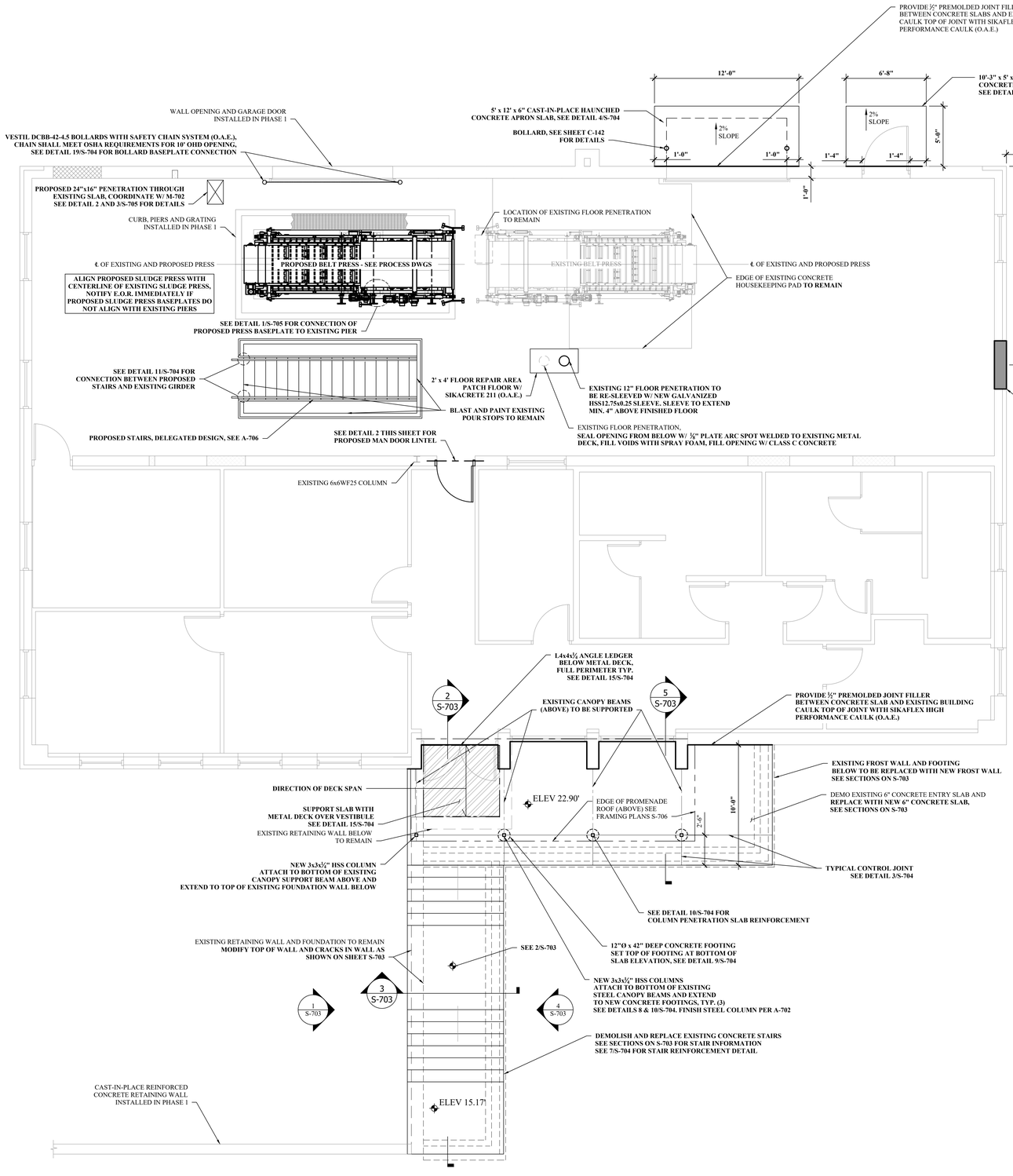
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

S-701

PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\7 - Sludge Dewatering (Existing Control Building)\Structural\07 - Sludge Dewatering - Structural.dwg S-701, 4/16/2025 8:55:33 PM



1 S-702 UPPER LEVEL MODIFICATION PLAN
SCALE: 1/4" = 1'-0"

GENERATOR EQUIPMENT T.B.R.

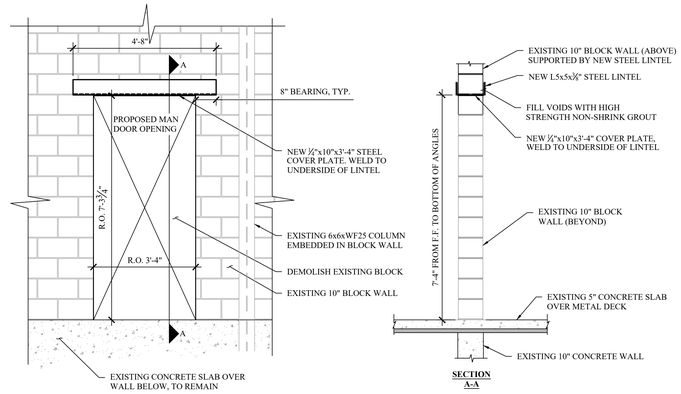


PHOTO 1 (INTERIOR)

EXISTING FILLED IN OPENING



PHOTO 2 (EXTERIOR)



2 S-702 PROPOSED MAN DOOR LINTEL
SCALE: 1/2" = 1'-0"

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33 Airport Center Drive, Suite 202
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111 Wheatfield Drive, Suite 1
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SLUDGE DEWATERING BUILDING UPPER LEVEL MODIFICATION PLAN

REVISIONS

NO.	DESCRIPTION	DATE

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DESIGN BY:	WPG, NEM, PJW
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REVIEWED BY:	JSS

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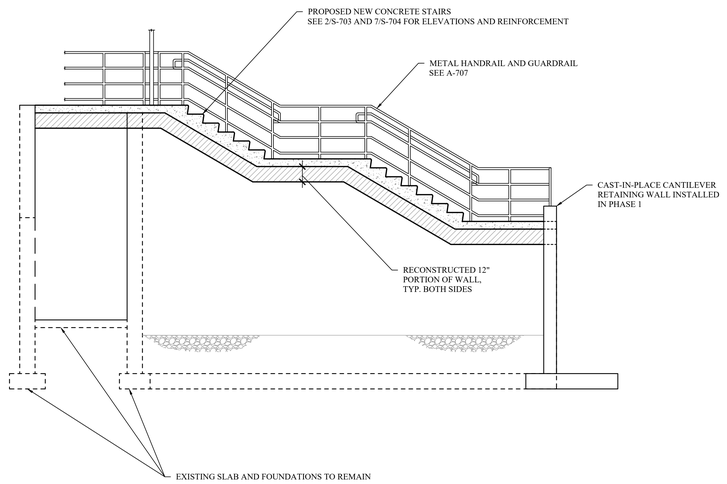
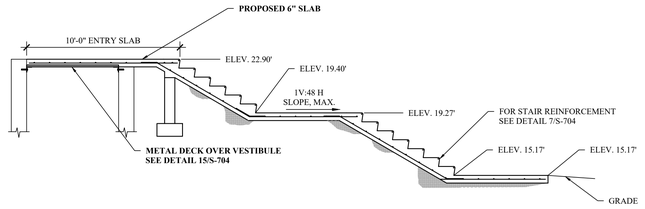
PROJECT # 18-732 PHASE #

T:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\7 - Sludge Dewatering (Existing Control Building)\Structural\S07 - Sludge Dewatering - Structural.dwg, S-702, 4/16/2025 8:55:33 PM



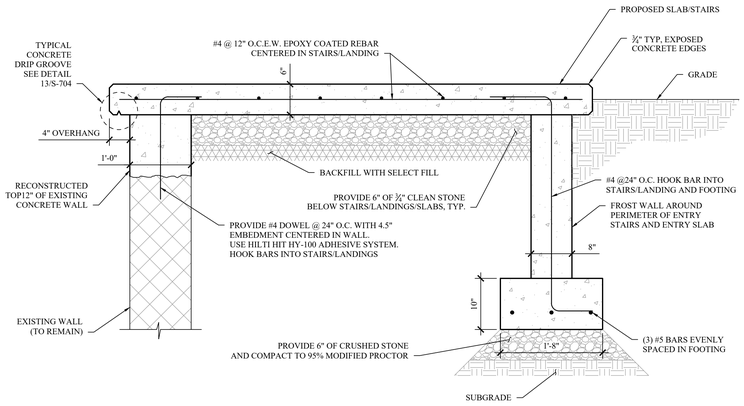
1 S-703 PROPOSED ENTRANCE STAIRWAY LAYOUT - WEST ELEVATION

SCALE: 1/4" = 1'-0"



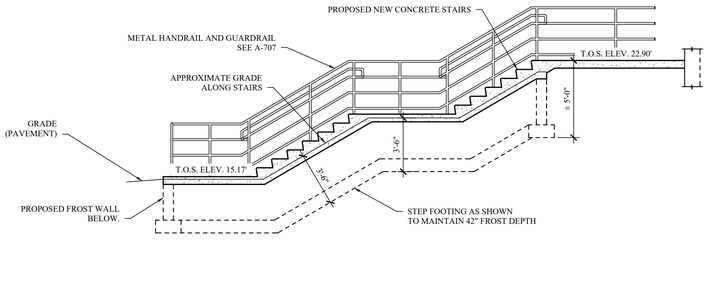
2 S-703 ENTRY SLAB AND STAIR SECTION

SCALE: 3/8" = 1'-0"



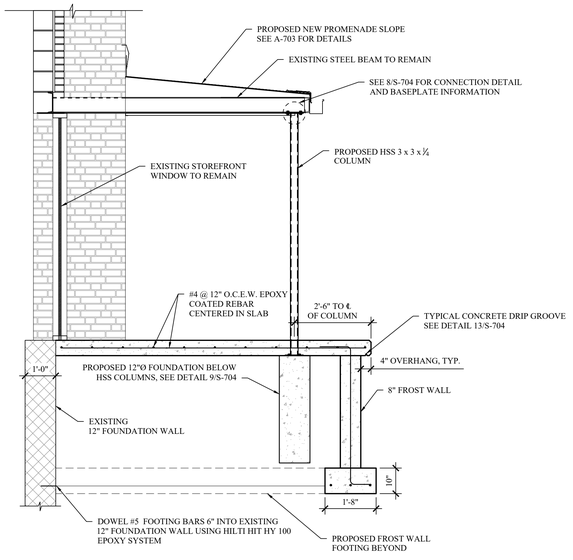
3 S-703 PROPOSED STAIRS AND FROST WALL

SCALE: 1" = 1'-0"



4 S-703 PROPOSED ENTRANCE STAIRWAY LAYOUT - EAST ELEVATION

SCALE: 1/4" = 1'-0"



5 S-703 PROPOSED ENTRY SLAB AND FROST WALL

SCALE: 1/2" = 1'-0"



PHOTO #1



PHOTO #2

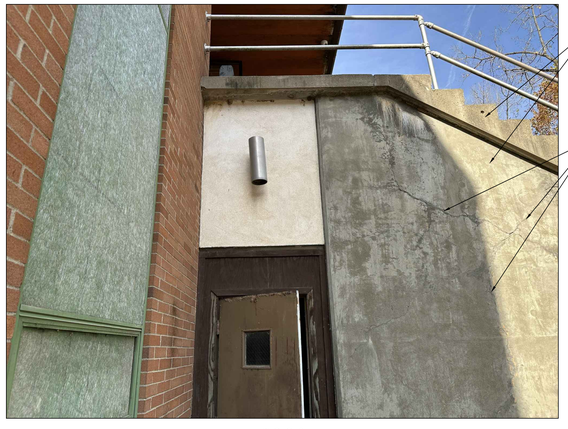


PHOTO #3

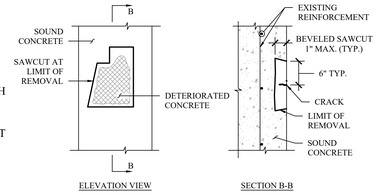
CONCRETE RETAINING WALL REPAIR:

1. TYPE 1 REPAIR - (LIMITED TO PATCHING OF SEVERELY PITTED (≤1"), BUT OTHERWISE SOUND AND HARD CONCRETE):

   1.1. SAWCUT A PERIMETER AROUND CRACKS 6" IN EACH DIRECTION AND CHIP AWAY CONCRETE USING HAND TOOLS.

   1.2. USING COMPRESSED AIR, THOROUGHLY CLEAN OUT THE REPAIR AREA, REMOVING ANY LOOSE DEBRIS AND DUST.

   1.3. THOROUGHLY APPLY SIKAQUICK VOH (OR APPROVAL EQUAL) TO THE REPAIR AREA, FOLLOWING MANUFACTURER'S SPECIFICATIONS.



6 S-703 CONCRETE REPAIR - TYPE 1

SCALE: NONE

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(845) 567-3100
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Milford, PA 18337
(570) 296-2765

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

SLUDGE DEWATERING BUILDING ADDITIONAL SECTIONS AND DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

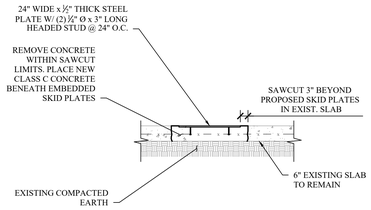
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

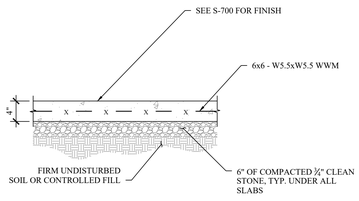
S-703

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\7 - Sludge Dewatering (Existing Control Building)\Structural\07 - Sludge Dewatering - Structural.dwg, S-703, 4/18/2025 8:55:45 PM



1 S-704 EMBEDDED STEEL SKID PLATE
SCALE: 1/2 " = 1'-0"



2 S-704 TYPICAL LANDING PAD DETAIL
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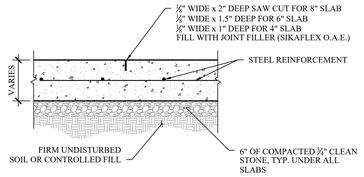
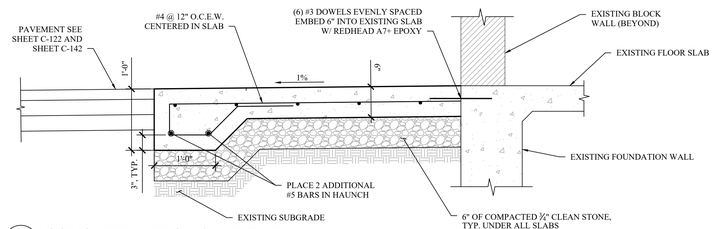
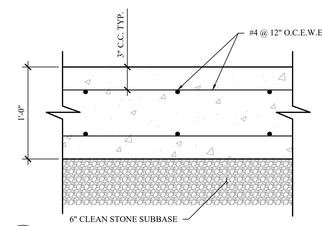


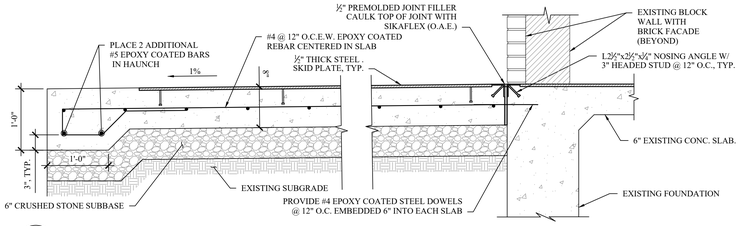
3 S-704 CONTROL JOINT
SCALE: 1" = 1'-0"



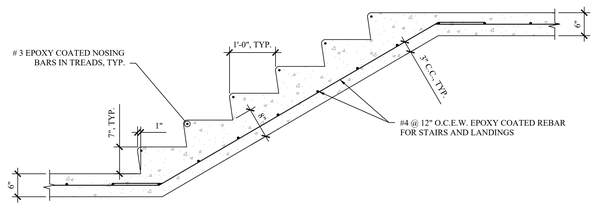
4 S-704 CONCRETE APRON SLAB DETAIL
SCALE: 1" = 1'-0"



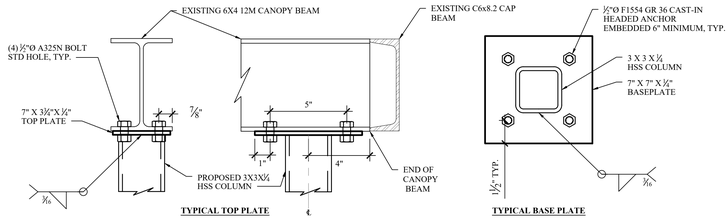
5 S-704 L.P. TANK PAD DETAIL
SCALE: 1-1/2" = 1'-0"



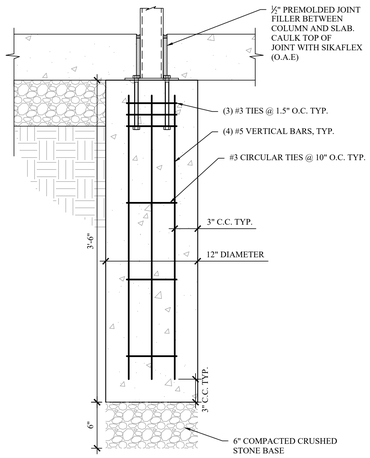
6 S-704 CONCRETE RECEIVING SLAB DETAIL
SCALE: 1" = 1'-0"



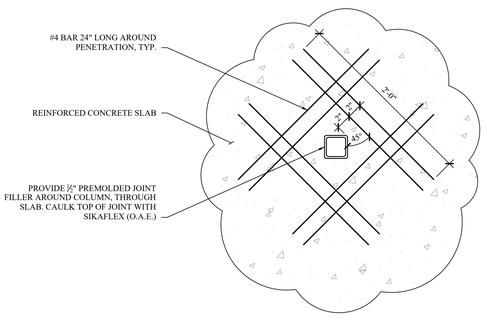
7 S-704 TYPICAL MAIN ENTRANCE CONCRETE STAIR DETAIL
SCALE: 3/4" = 1'-0"



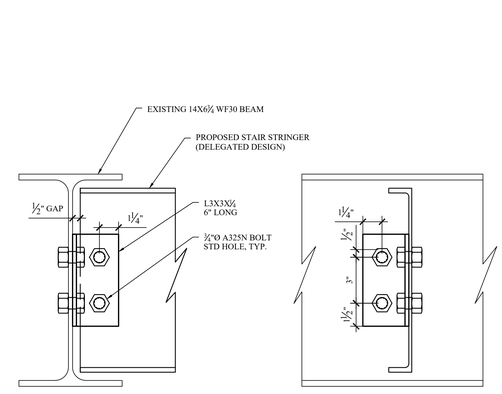
8 S-704 CANOPY BEAM AND COLUMN CONNECTION DETAILS
SCALE: 3" = 1'-0"



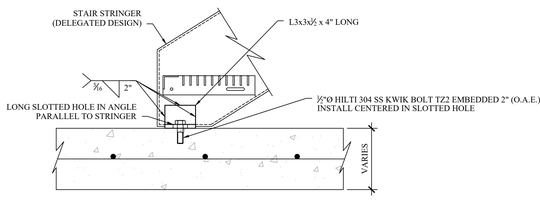
9 S-704 ENTRYWAY COLUMN FOUNDATION
SCALE: 1-1/2" = 1'-0"



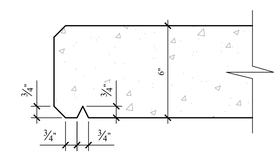
10 S-704 COLUMN PENETRATION REINFORCEMENT
SCALE: 3" = 1'-0"



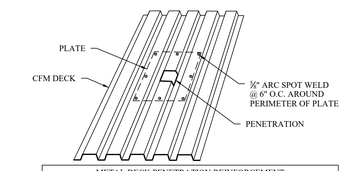
11 S-704 STAIR STRINGER TO EXISTING BEAM CONNECTION
SCALE: 3" = 1'-0"



12 S-704 TYPICAL METAL STAIR CONNECTION TO SLAB ON GRADE
SCALE: 3" = 1'-0"

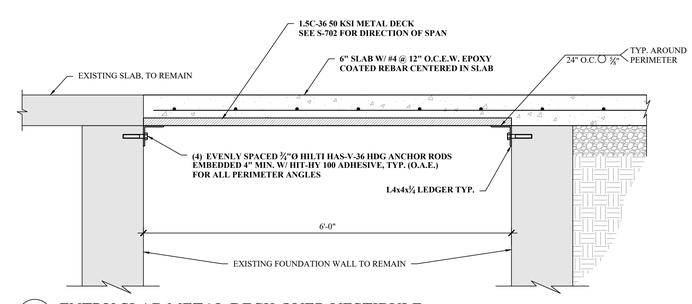


13 S-704 TYPICAL DRIP GROOVE DETAIL
SCALE: 3" = 1'-0"

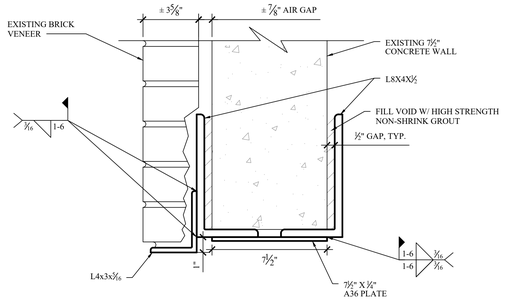


METAL DECK PENETRATION REINFORCEMENT	
DIAMETER/WIDTH OF PENETRATION	REQUIRED REINFORCEMENT
<= 6"	NONE OR 0.045" PLATE
<= 8"	0.045" PLATE
<= 13"	0.054" PLATE
> 13"	DESIGNED BY ENGINEER

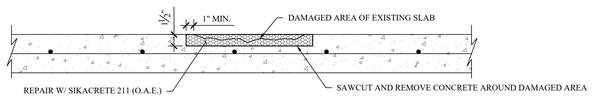
14 S-704 METAL DECK PENETRATION REINF.
SCALE: NOT TO SCALE



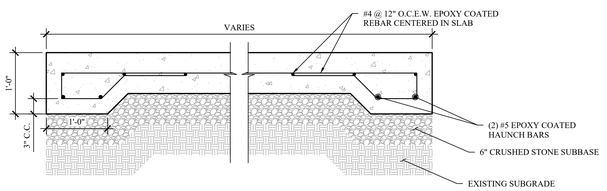
15 S-704 ENTRY SLAB METAL DECK OVER VESTIBULE
SCALE: 1" = 1'-0"



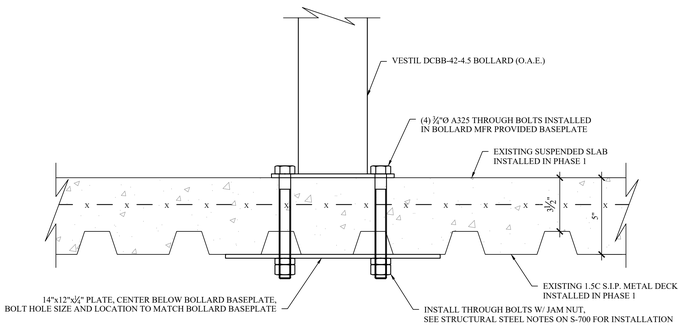
16 S-704 PROPOSED O.H. DOOR HEADER
SCALE: 3" = 1'-0"



17 S-704 MISC. SLAB REPAIR DETAIL
SCALE: 1-1/2" = 1'-0"



18 S-704 DUMPSTER PAD/APPROACH SLAB DETAIL
SCALE: 3/4" = 1'-0"



19 S-704 BOLLARD CONNECTION TO SUSPENDED SLAB
SCALE: 3" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SLUDGE DEWATERING BUILDING DETAILS

REVISIONS

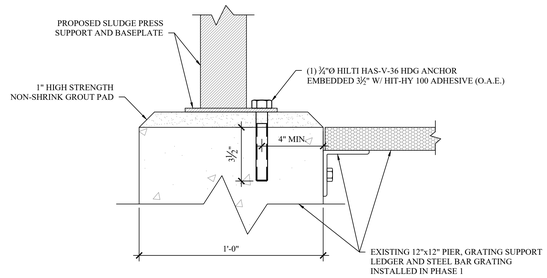
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-704

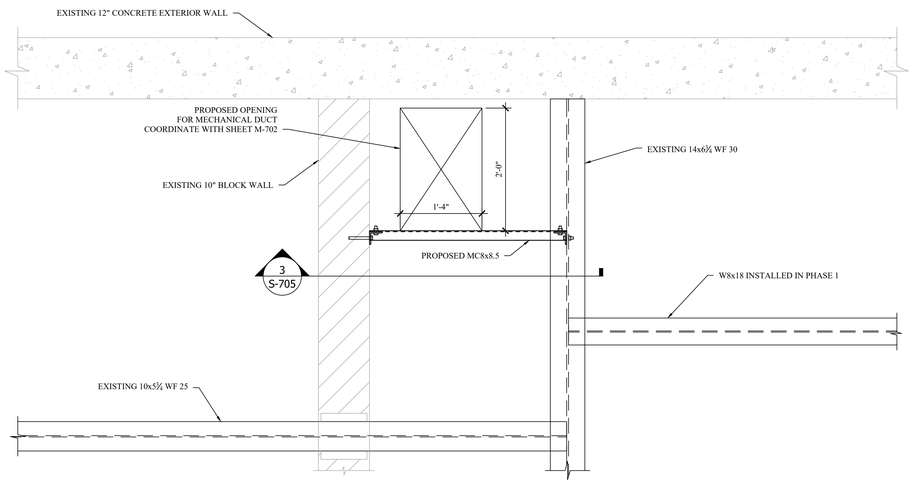
PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\7 - Sludge Dewatering (Existing Control Building)\Structural\s7 - Sludge Dewatering - Structural.dwg, S-704, 4/18/2025 8:55:39 PM



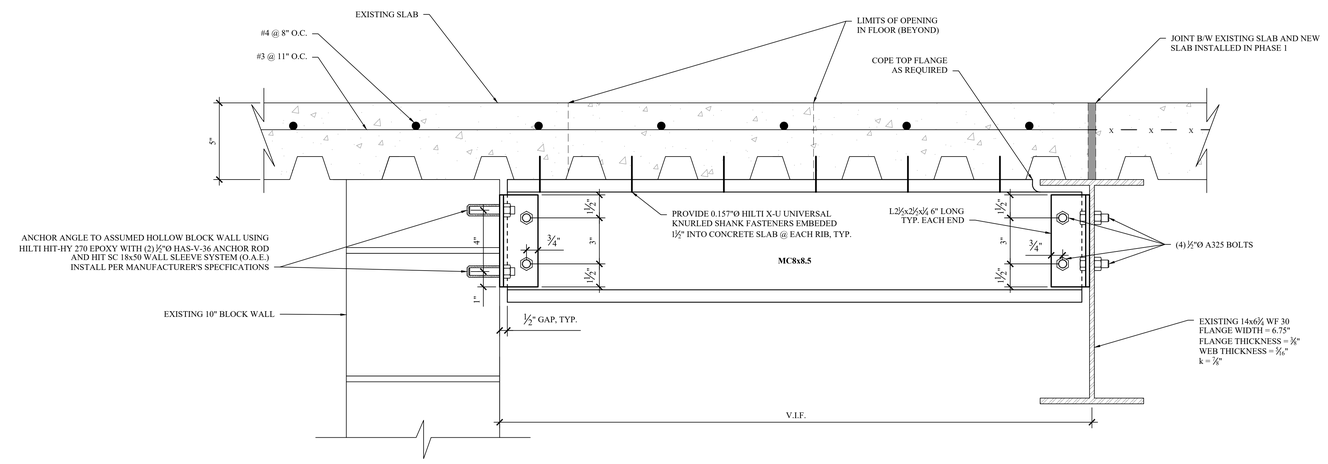
1 S-705 SLUDGE PRESS CONNECTION TO EXISTING PIER

SCALE: 3" = 1'-0"



2 S-705 MECHANICAL SLAB PENETRATION REINFORCEMENT

SCALE: 1" = 1'-0"



3 S-705 MECHANICAL SLAB PENETRATION REINFORCEMENT CONNECTIONS

SCALE: 3" = 1'-0"

MHE ENGINEERING
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New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SLUDGE DEWATERING BUILDING DETAILS CONTINUED

REVISIONS

NO.	DESCRIPTION	DATE

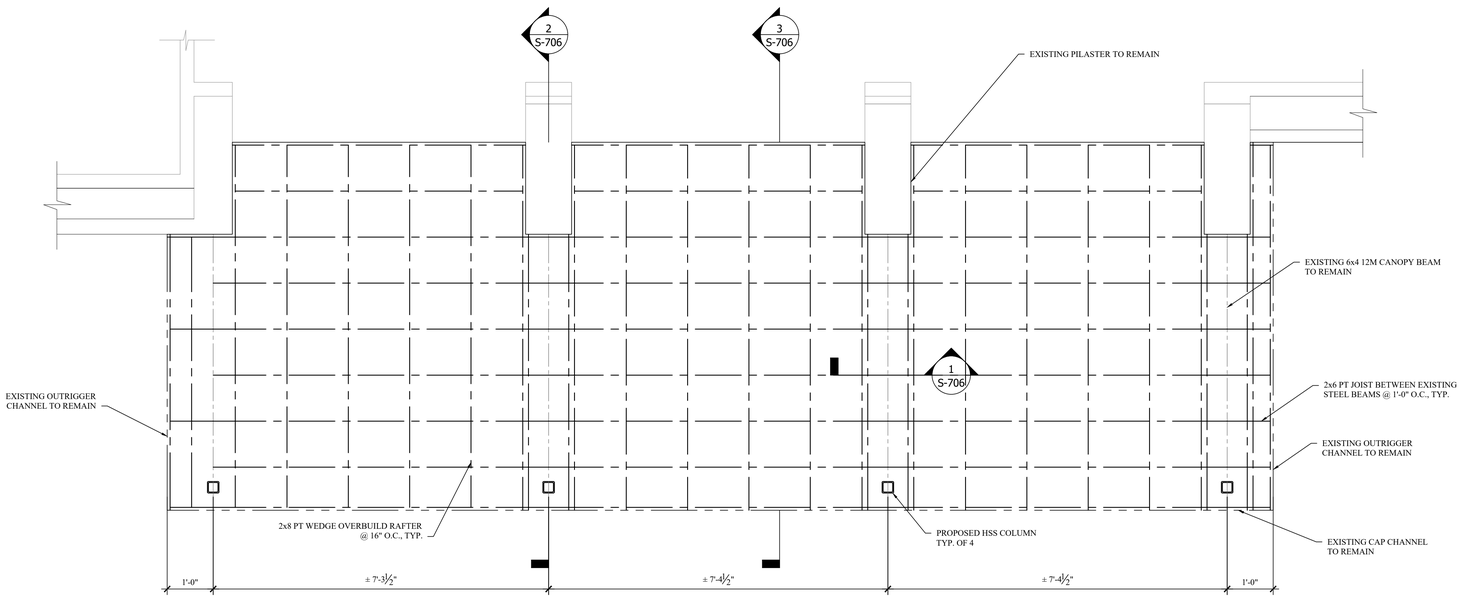
ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

S-705

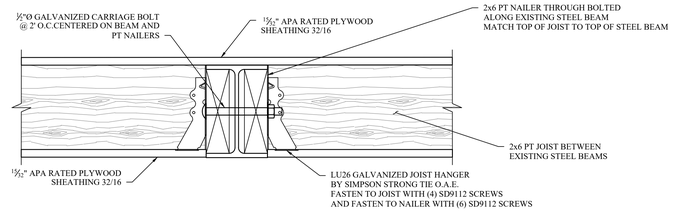
PROJECT # 18-732 PHASE #

P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\7 - Sludge Dewatering (Existing Control Building)\Structural\s7 - Sludge Dewatering - Structural.dwg, S-705, 4/18/2025 8:55:45 PM



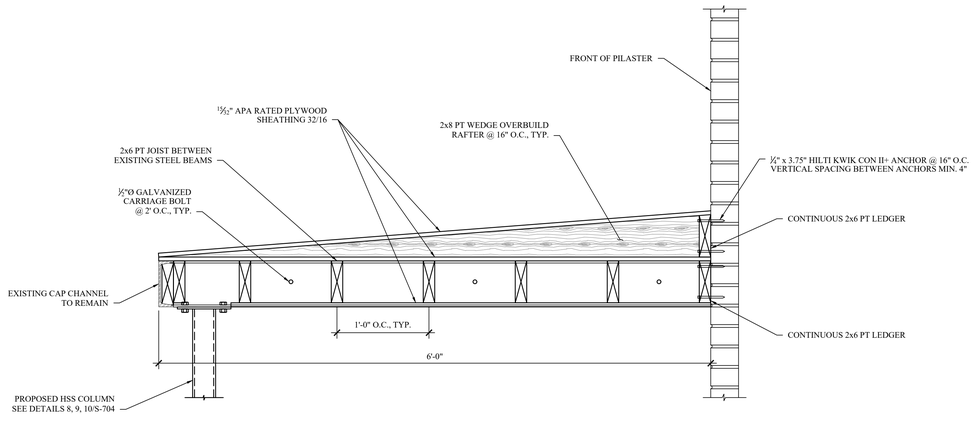
PROMENADE FRAMING PLAN

SCALE: ½" = 1'-0"



1 S-706 SECTION 1

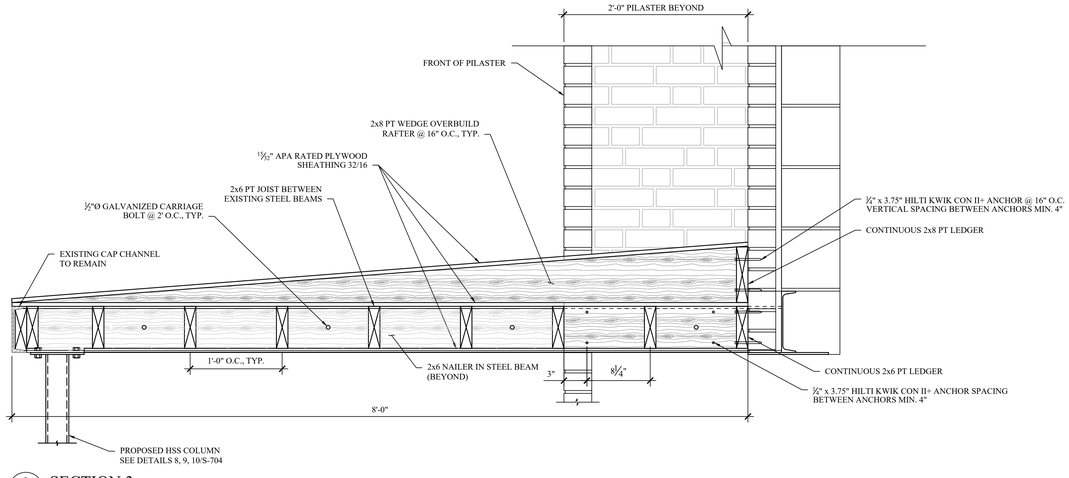
SCALE: 3" = 1'-0"



2 S-706 SECTION 2

SCALE: 1-1/2 " = 1'-0"

*NOTE: SEE ARCHITECTURAL SHEETS FOR FLASHING, ROOFING, GUTTERS, ETC.



3 S-706 SECTION 3

SCALE: 1-1/2 " = 1'-0"

*NOTE: SEE ARCHITECTURAL SHEETS FOR FLASHING, ROOFING, GUTTERS, ETC.

MHE ENGINEERING

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(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SLUDGE DEWATERING BUILDING ENTRY CANOPY PLAN AND SECTIONS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

S-706

PROJECT # 18-732 PHASE #

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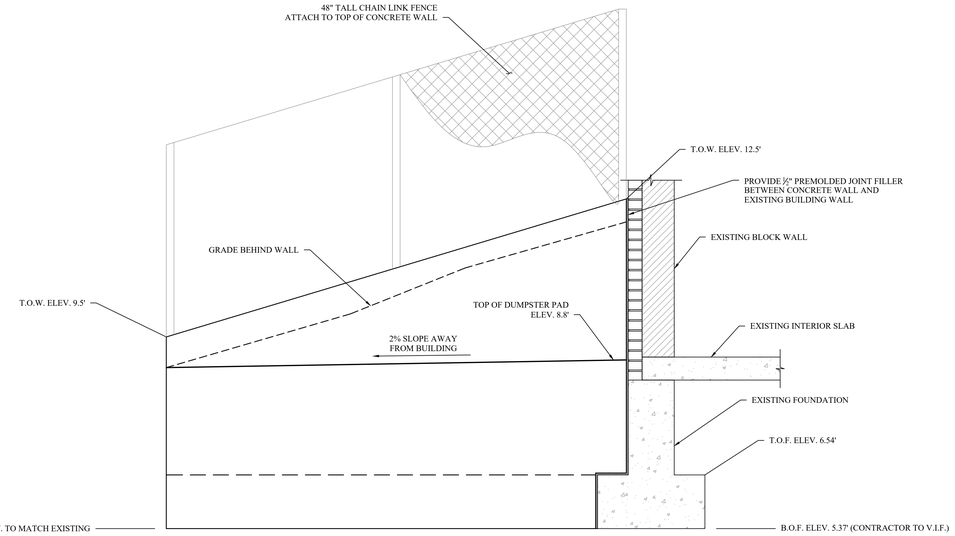
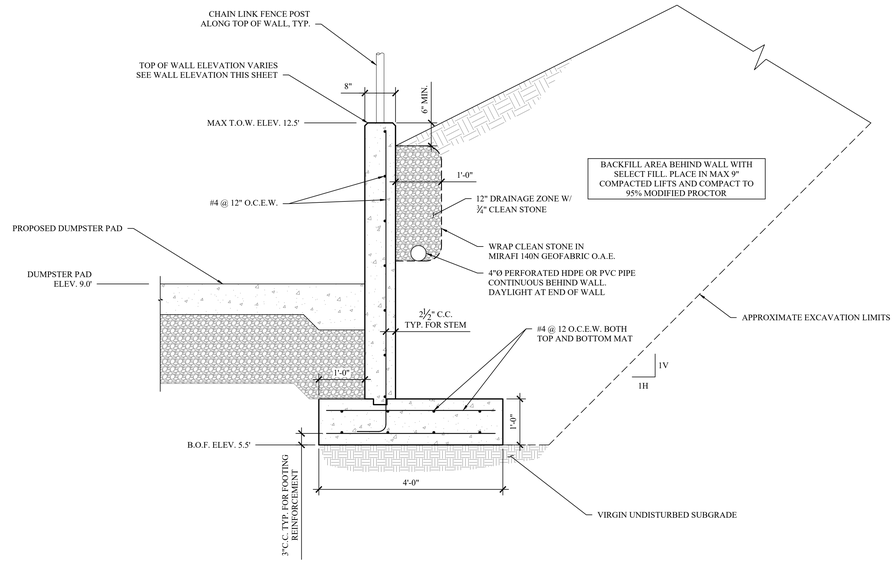


1 S-707 PROPOSED RETAINING WALL ELEVATION

SCALE: 1/2 " = 1'-0"



2 S-707 PROPOSED RETAINING WALL TYPICAL SECTION

SCALE: 3/4 " = 1'-0"

ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

SLUDGE DEWATERING BUILDING RETAINING WALL ELEVATION AND SECTION

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.

S-707

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\7 - Sludge Dewatering (Existing Control Building)\Structural\07 - Sludge Dewatering - Structural.dwg, S-707, 4/18/2025 8:55:39 PM

GENERAL NOTES (STRUCTURAL):

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY THE CONTRACTOR OR HIS AGENTS TO STRUCTURES OR SURROUNDING AREAS. DAMAGE WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER OF RECORD (E.O.R.) AT NO ADDITIONAL COST TO THE OWNER.

2. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR, INCLUDING THE STABILITY OF THE EXCAVATION AND ITS INFLUENCE ON ADJACENT PROPERTIES AND STRUCTURES. EXCAVATION SUPPORT MAY ALSO BE UTILIZED TO MINIMIZE EXCAVATION LIMITS. THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER TO THE E.O.R. PRIOR TO INSTALLATION OF EXCAVATION SUPPORT MEASURES.

3. ALL ITEMS NOT INDICATED TO BE EXISTING SHALL BE PROVIDED AND INSTALLED UNDER THE REQUIREMENTS OF THIS CONTRACT.

4. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES REGARDING SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND ADDITIONAL ITEMS TO BE PLACED OR SET IN STRUCTURAL WORK.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE E.O.R.

6. ANY ITEMS INDICATED TO BE REPLACED-IN-KIND SHALL BE INSTALLED TO MATCH EXISTING LOCATIONS, CONFIGURATIONS, AND ELEVATIONS UNLESS OTHERWISE NOTED.

7. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. IF MANUFACTURER'S SPECIFICATIONS CONFLICT WITH CONTRACT DRAWINGS OR SPECIFICATIONS, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

8. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT. NEITHER THE STRUCTURE NOR INDIVIDUAL STRUCTURAL ELEMENTS SUCH AS WALLS, BEAMS, JOISTS, AND COLUMNS WILL BE LATERALLY STABLE UNTIL ALL WORK INDICATED ON THE STRUCTURAL DRAWINGS IS COMPLETE.

9. ALL SUBSURFACE UTILITIES SHALL BE IDENTIFIED PRIOR TO EXCAVATION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING EXCAVATION. IF UNIDENTIFIED UTILITIES ARE ENCOUNTERED, THE E.O.R. SHALL BE NOTIFIED IMMEDIATELY.

10. ALL ITEMS SHOWN TO BE REMOVED SHALL BE PROPERLY HANDLED AND DISPOSED OF OFF SITE.

11. NO BACKFILLING OF THE STRUCTURE SHALL OCCUR UNTIL CONCRETE BREAKS SATISFACTORY TO THE E.O.R. ARE OBTAINED OR UNTIL THE CONTAINMENT STRUCTURE HAS SUCCESSFULLY PASSED HYDROSTATIC TESTING IF APPLICABLE.

12. ALL ITEMS INDICATED TO BE A DELEGATED DESIGN SHALL BE SUBMITTED TO THE E.O.R. PRIOR TO ORDERING MATERIALS. SUBMITTALS SHALL INCLUDE PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.

13. ELEVATIONS SHOWN ARE BASED ON SURVEY BY CTMALE DATED APRIL 3, 2023.

SPECIAL INSPECTIONS:

ALL SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO ALL INSPECTION REQUIRED BY STATE AND LOCAL BUILDING CODES. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN AGENCY RETAINED AND PAID BY THE OWNER OR OWNER'S REPRESENTATIVE. THE APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS. COPIES OF NECESSARY TEST AND INSPECTION RECORDS SHALL BE FILED WITH THE BUILDING OFFICIAL AND REGISTERED DESIGN PROFESSIONAL. ALL SPECIAL INSPECTIONS AND REPORTS SHALL BE IN ACCORDANCE WITH CHAPTER 17 OF THE 2020 NEW YORK STATE BUILDING CODE LATEST REVISION.

CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER'S DESIGNATED INSPECTOR FOR SCHEDULING OF ALL SPECIAL INSPECTIONS. CONTRACTOR SHALL NOTIFY INSPECTOR MINIMUM 24 HOURS PRIOR TO NEED OF INSPECTION.

THE OWNER RESERVES THE RIGHT TO BACK CHARGE THE CONTRACTOR FOR ANY COSTS ASSOCIATED WITH ADDITIONAL SPECIAL INSPECTIONS REQUIRED DUE TO CANCELLATION OF SCHEDULED INSPECTIONS AND RE-INSPECTION OF PREVIOUSLY FAILED INSPECTIONS.

SPECIAL INSPECTIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO:

STEEL:

1. STRUCTURAL STEEL:
   - 1.1. SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16.

CONCRETE:

1. PERIODIC INSPECTION OF REINFORCING STEEL.
2. PERIODIC INSPECTION OF ANCHORS CAST IN CONCRETE.
3. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE.
   - 3.1. CONTINUOUS INSPECTION OF ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.
   - 3.2. PERIODIC INSPECTION OF MECHANICAL ANCHORS AND ADHESIVE ANCHORS NO DEFINED IN 3.1.
4. PERIODIC VERIFICATION OF DESIGN MIX.
5. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP, AIR, AND TEMPERATURE TESTS; CONTINUOUS.
6. CONTINUOUS INSPECTION OF PLACEMENT & FOR PROPER APPLICATION TECHNIQUES.
7. PERIODIC INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.
8. PERIODIC VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.
9. PERIODIC INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS, OF THE CONCRETE MEMBER BEING FORMED.

MASONRY:

1. SPECIAL INSPECTIONS AND TESTS OF MASONRY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE QUALITY ASSURANCE PROGRAM REQUIREMENTS OF TMS 402 AND TMS 602.

SOILS:

1. CONTINUOUS INSPECTION OF
   - 1.1. PROPER MATERIALS
   - 1.2. DENSITIES
   - 1.3. LIFT THICKNESSES DURING PLACEMENT
   - 1.4. COMPACTION OF CONTROLLED FILL
2. PERIODIC INSPECTION OF
   - 2.1. MATERIALS BELOW FOOTINGS ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY
   - 2.2. EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL
   - 2.3. CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS
   - 2.4. SUBGRADE PRIOR TO PLACEMENT OF COMPACTED FILL
3. THE APPROVED SOILS REPORT, IF ANY EXISTS, SHALL BE USED TO DETERMINE COMPLIANCE.

CONCRETE NOTES:

1. CONCRETE SHALL CONFORM TO ACI 211.1, ACI 301, ACI 304R (WHEN PUMPING), AND ACI 318-14. AGGREGATE SHALL CONFORM TO ASTM C33. COMPRESSIVE STRENGTH, RANGE OF SLUMP, WATER-TO-CEMENT RATIO, AND AIR ENTRAINMENT SHALL BE PER THE CONCRETE CLASS SPECIFIED HEREIN AND IN ACCORDANCE WITH CAST-IN-PLACE CONCRETE SPECIFICATION 033000. SUBMIT COPIES OF TEST REPORTS SHOWING THAT THE MIX HAS BEEN SUCCESSFULLY TESTED TO PRODUCE CONCRETE WITH THE PROPERTIES SPECIFIED. TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (E.O.R.) FOR APPROVAL PRIOR TO CONCRETE PLACEMENT.
   - 1.1. CONCRETE CLASSIFICATIONS PER SPECIFICATION SECTION 033000:
     - 1.1.1. FOOTINGS, FROST WALLS & GRADE BEAMS: CLASS A
     - 1.1.2. INTERIOR SLABS-ON-GROUND: CLASS C
     - 1.1.3. APRONS & LANDINGS: CLASS H
   - 1.2. CONCRETE FINISHES PER SPECIFICATION SECTION 033000:
     - 1.2.1. FOUNDATIONS BELOW GRADE: AS-CAST SF-2.0 FINISH
     - 1.2.2. EXTERIOR SLABS: FINE BROOM FINISH
     - 1.2.3. INTERIOR SLABS: TROWEL FINISH
2. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 7 DAYS.
3. CONCRETE SHALL BE WET CURED, USING BURLAP OR COTTON CURING MATS, OR CURED USING ASTM D4397 POLYETHYLENE SHEETING IN ACCORDANCE WITH ASTM C171. WET THE ENTIRE EXPOSED SURFACE OF THE CONCRETE THOROUGHLY WITH A FINE SPRAY OF WATER AND COVER WITH SHEETING THROUGHOUT THE CURING PERIOD. LAY SHEETING DIRECTLY ON CONCRETE SURFACE. PROVIDE SHEETING NOT LESS THAN 18 INCHES WIDER THAN CONCRETE SURFACE. OVERLAP EDGES 12 INCHES AND CONTINUOUSLY TAPE JOINTS.
4. PUMPING SHALL NOT RESULT IN SEPARATION OR LOSS OF MATERIALS NOR CAUSE INTERRUPTIONS SUFFICIENT TO PERMIT LOSS OF PLASTICITY BETWEEN SUCCESSIVE INCREMENTS. LOSS OF SLUMP IN PUMPING EQUIPMENT SHALL NOT EXCEED 2 INCHES. CONCRETE SHALL NOT BE CONVEYED THROUGH PIPE MADE OF ALUMINUM OR ALUMINUM ALLOY. RAPID CHANGES IN PIPE SIZES SHALL BE AVOIDED. MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE LIMITED TO 33 PERCENT OF THE DIAMETER OF THE PIPE. MAXIMUM SIZE OF WELL ROUNDED AGGREGATE SHALL BE LIMITED TO 40 PERCENT OF THE PIPE DIAMETER. SAMPLES FOR TESTING SHALL BE TAKEN AT BOTH THE POINT OF DELIVERY TO THE PUMP AND AT THE DISCHARGE END.
5. CONCRETE SHALL NOT BE PLACED WHEN WEATHER CONDITIONS PREVENT PROPER PLACEMENT AND CONSOLIDATION INCLUDING PERIODS OF PRECIPITATION. TRANSPORT CONCRETE AS RAPIDLY AS PRACTICABLE TAKING PRECAUTION TO PREVENT SEGREGATION OR LOSS OF INGREDIENTS. PUMPING IN ACCORDANCE WITH ACI 304 SHALL BE PERMITTED. DO NOT EXCEED A FREE VERTICAL DROP OF 3 FEET FROM THE POINT OF DISCHARGE. PLACE CONCRETE IN ONE CONTINUOUS OPERATIONS FROM ONE SIDE OF SLAB TO THE OTHER. POSITION GRADE STAKES AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION.
6. UNLESS OTHERWISE NOTED, REINFORCEMENT BARS SHALL BE BLACK STEEL. REINFORCING BARS SHALL CONFORM TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60 KSI. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A1064. REINFORCEMENT SHALL NOT CONTAIN RUST, SCALE, OIL, GREASE, CLAY, OR FOREIGN SUBSTANCES THAT WOULD REDUCE THE CONCRETE BONDING STRENGTH. REMOVE LOOSE RUST PRIOR TO PLACEMENT OF REINFORCEMENT.
7. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
8. PROVIDE MINIMUM 2" OF CONCRETE COVER FOR ALL REINFORCING STEEI WHEN CAST AGAINST FORMS OR 3" OF CONCRETE COVER FOR ALL REINFORCING STEEL WHEN CAST AGAINST EARTH, UNLESS OTHERWISE INDICATED.
9. CONCRETE FOOTINGS AND MAT FOUNDATIONS SHALL BE PLACED MONOLITHICALLY WITH THE EXCEPTION THAT VERTICAL CONSTRUCTION JOINTS WILL BE ALLOWED IF EPOXY BONDING COMPOUND IS APPLIED TO THE ROUGHENED SURFACE OF THE HARDENED CONCRETE.
10. INTERIOR SLABS: THE CONTRACTOR SHALL PROVIDE CONTRACTION JOINTS AS INDICATED. JOINTS MAY BE SAWCUT OR CUT WITH A JOINTING TOOL. SAWED JOINTS SHALL BE COMPLETED WITHIN 4 TO 12 HOURS AFTER PLACEMENT OF CONCRETE. JOINTS SHALL INTERSECT WITH THE CORNERS OF ISOLATION JOINT AT COLUMN LOCATIONS, IF ANY ARE PRESENT, AND BE SPACED A MAXIMUM OF 15 FEET ON CENTER, UNLESS NOTED OTHERWISE.
11. REINFORCEMENT SUPPORTS SHALL BE CONCRETE OR OTHER NON-CORRODIBLE MATERIAL HAVING A COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE COMPRESSIVE STRENGTH OF THE CONCRETE BEING PLACED.
12. PROVIDE A ¾" ROUNDED EDGE ON ALL EXPOSED SLAB EDGES. PROVIDE A ¾" CHAMFER ON ALL OTHER EXPOSED CONCRETE CORNERS.
13. EPOXY BONDING COMPOUND SHALL BE USED ON ALL CONTACTING SURFACES BETWEEN EXISTING CONCRETE AND NEW CONCRETE. EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C881, TYPE AND GRADE TO BE IN ACCORDANCE WITH APPROPRIATE USE INDICATED IN SPECIFICATION 033000 CAST-IN-PLACE CONCRETE. DO NOT ALLOW COMPOUND TO HARDEN PRIOR TO CONCRETE PLACEMENT. BONDING AGENT USED SHALL BE NSF 61 APPROVED.
14. PLACE, CONSOLIDATE AND IMMEDIATELY STRIKE OFF CONCRETE TO OBTAIN PROPER CONTOUR GRADE AND ELEVATION BEFORE BLEEDWATER APPEARS. PERMIT CONCRETE TO ATTAIN A SET SUFFICIENT FOR FLOATING AND SUPPORTING THE WEIGHT OF THE FINISHER AND EQUIPMENT. IF BLEEDWATER IS PRESENT PRIOR TO FLOATING THE SURFACE, DRAG THE EXCESS WATER OFF OR REMOVE BY ABSORPTION WITH POROUS MATERIALS. DO NOT USE DRY CEMENT TO ABSORB BLEEDWATER.
15. UNLESS OTHERWISE NOTED, ALL CONCRETE CONSTRUCTION SHALL MEET THE SPECIFIED TOLERANCES OF ACI 117. TOP ELEVATIONS SHALL MATCH THE SPECIFIED ELEVATIONS WITHIN A TOLERANCE OF $\pm\frac{1}{2}$"
16. THE REQUIREMENTS OF ACI 302.1R CLASS 4 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL FLOORS AND SLABS. THE REQUIREMENTS OF ACI 360.R-10 SHALL BE IN EFFECT FOR THE CONSTRUCTION OF ALL SLABS-ON-GROUND.
   - 16.1. SLABS-ON-GRADE: FF = 25 AND FL = 20
17. NO CONCRETE SHALL BE PLACED UNTIL ALL EMBEDDED ITEMS (I.E. PROCESS, ELECTRICAL, MECHANICAL, ETC) HAVE BEEN SET. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES.
18. ALL BAR PLACING AND BENDING SHALL BE IN ACCORDANCE WITH ACI 315.
19. PERFORM COMPRESSIVE TESTS IN ACCORDANCE WITH ASTM C39. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. TAKE PRECAUTIONS TO PREVENT EVAPORATION AND LOSS OF WATER FROM SPECIMENS. TEST ONE CYLINDER AT 3 DAYS, ONE CYLINDER AT 7 DAYS, AND TWO (THREE FOR 4"x8" CYLINDERS) CYLINDERS AT 28 DAYS AND HOLD ONE IN RESERVE. PERFORM SLUMP TESTS IN ACCORDANCE WITH ASTM C143. PERFORM AIR CONTENT TESTS IN ACCORDANCE WITH ASTM C173 OR ASTM C231. SUBMIT ALL TEST DATA TO THE E.O.R.
20. CONSOLIDATE CONCRETE WITH HIGH FREQUENCY, INTERNAL, MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND SPADING AND TAMPING. FURNISH A SPARE VIBRATOR ON THE JOB SITE WHENEVER CONCRETE IS PLACED. OPERATE VIBRATORS WITH VIBRATORY ELEMENT SUBMERGED IN THE CONCRETE, WITH A MINIMUM FREQUENCY OF NOT LESS THAN 6000 IMPULSES PER MINUTE WHEN SUBMERGED. INSERT AND WITHDRAW VIBRATORS AT INTERVALS APPROXIMATELY 18 INCHES APART.
21. ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920, TYPE S, GRADE P, CLASS 25. JOINT SEALANT IN CONTACT WITH POTABLE WATER SHALL BE NSF 61 APPROVED.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SYSTEMS INCLUDING MATERIALS, INSTALLATION, WORKMANSHIP, FABRICATION, ASSEMBLY, ERECTION, INSPECTION, QUALITY CONTROL, AND TESTING SHALL BE PROVIDED IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
2. ALL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:
   - W SHAPES: ASTM A992, Fy = 50KSI
   - HSS: ASTM A500 GR. C, Fy = 50KSI
   - OTHER STEEL SHAPES: ASTM A36, Fy = 36KSI
3. ALL HOLES IN STEEL SHALL BE STANDARD SIZE 1/16" LARGER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE DRILLED OR PUNCHED. BURNING IS NOT ALLOWED. COLUMN ANCHOR BOLT HOLES MAY BE OVERSIZED.
4. COPES SHALL BE PROVIDED WITH 1/2" RADIUS MINIMUM, SMOOTH CORNERS, AND FREE OF NOTCHES. DEPTH AND LENGTH OF COPES SHALL BE AS INDICATED.
5. ALL BOLTS SHALL CONFORM TO ASTM A325, EXCEPT ANCHOR BOLTS SHALL CONFORM TO ASTM F1554. ALL NUTS SHALL CONFORM TO ASTM A563, GRADE AND STYLE FOR APPLICABLE ASTM BOLT STANDARD. ALL WASHERS SHALL CONFORM TO ASTM F436 FOR ASTM A325 BOLTS AND F1554 ANCHOR BOLTS.

MASONRY NOTES:

1. ALL MASONRY CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530/TMS 402.
2. ALL HI-R MASONRY STRUCTURES WERE DESIGNED SPECIFICALLY FOR THE HI-R MASONRY PROPRIETARY SYSTEM. IF AN ALTERNATIVE INSULATED MASONRY PRODUCT IS SUBMITTED FOR USE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING PLANS AND CALCULATIONS SIGNED AND SEALED BY A NEW YORK STATE LICENSED P.E. TO THE E.O.R.
3. ALL CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT WITH TWO (2) CELLS AND CONFORM TO ASTM C90 UNLESS OTHERWISE SPECIFIED.
4. ALL BRICK MASONRY UNITS SHALL CONFORM TO ASTM C216. REFER TO THE ARCHITECTURAL DRAWINGS FOR SIZE AND COLOR.
5. ALL MORTAR SHALL CONFORM TO ASTM C270.
6. ALL GROUT SHALL CONFORM TO ASTM C476.
7. THE MINIMUM SPECIFIED NET AREA COMPRESSIVE STRENGTH OF MASONRY (f'm) SHALL BE 2000 PSI AND SHALL CONSIST OF THE FOLLOWING COMPONENTS:
   - CONCRETE MASONRY UNITS: 2000 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH
   - BRICK MASONRY UNITS: 4950 PSI MINIMUM NET AREA COMPRESSIVE STRENGTH
   - PORTLAND CEMENT MORTAR: TYPE S
   - GROUT: 2000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH (GROUT COMPRESSIVE STRENGTH SHALL NOT BE LESS THAN f'm)
8. UNLESS NOTED OTHERWISE, PROVIDE CONTINUOUS HORIZONTAL BOND BEAMS REINFORCED WITH (2) #5 BARS WITH TOP OF BOND BEAM ELEVATIONS AS INDICATED. UNLESS NOTED OTHERWISE, CONTINUE REINFORCEMENT ACROSS CONTROL JOINTS.
9. GROUT ALL CELLS CONTAINING REINFORCEMENT AND/OR HEADED STUD ANCHORS AS WELL AS DIRECTLY BELOW ALL BEARING PLATES.
10. REINFORCEMENT SPLICES SHALL BE KEPT TO A PRACTICAL MINIMUM. SEE THE MASONRY LAP SPLICE TABLE ON THIS SHEET FOR MINIMUM LAP SPLICE LENGTHS.
11. UNLESS OTHERWISE INDICATED, ALL CMU WALLS SHALL BE PROVIDED WITH HOT DIPPED GALVANIZED HORIZONTAL REINFORCEMENT (DURO-WAL W1.7 LADDER WIRE, OR EQUAL) EVERY OTHER COURSE (16" O.C.). PROVIDE HORIZONTAL REINFORCING FOR THE FIRST TWO COURSES ABOVE ALL LINTELS.
12. REINFORCEMENT SHALL BE PLACED SUCH THAT A MINIMUM OF ⅝" MORTAR COVER EXISTS FOR EXTERIOR FACES, AND A MINIMUM OF ½" MORTAR COVER EXISTS FOR ALL INTERIOR FACES.
13. UNLESS OTHERWISE NOTED, PROVIDE (1) CONTINUOUS VERTICAL #4 BAR FOR THE FULL HEIGHT OF WALL AND ANCHORED INTO THE FOUNDATION AT THE FOLLOWING LOCATIONS:
   - WALL CORNERS
   - EACH SIDE OF CONTROL JOINTS
   - SIDES OF MASONRY OPENINGS (DOOR JAMBS, ETC.)
   - WALL ENDS
14. UNLESS OTHERWISE NOTED ALL MASONRY WALLS SHALL HAVE #4 @ 48" O.C. VERTICAL REINFORCEMENT.

NYSBC 2020 STRUCTURAL PROVISIONS (MBR CONTROL BUILDING):

THE STRUCTURE SHOWN HEREON HAS/SHALL BE DESIGNED FOR THE FOLLOWING IN ACCORDANCE WITH THE 2020 NEW YORK STATE BUILDING CODE AND ASCE 7-16:

FLOOR LIVE LOAD (L):
SLAB-ON-GRADE: N/A
SUSPENDED SLAB: 125PSF

ROOF LIVE LOAD:
DISTRIBUTED LOAD (L_r) = 20 PSF (SNOW LOAD GOVERNS)
CONCENTRATED LOAD (L) = 2,000 LBS (CONCENTRATED @ ANY POINT ALONG PRIMARY STRUCTURAL ROOF MEMBERS)

ROOF SNOW LOAD (S):
GROUND SNOW LOAD (P_g) = 30 PSF
FLAT ROOF SNOW LOAD (P_f) = 25 PSF
SNOW EXPOSURE FACTOR (C_e) = 0.90
SNOW IMPORTANCE FACTOR (I) = 1.10
THERMAL FACTOR (C_t) = 1.0
SLOPE FACTOR (C_s) = 1.0
UNBALANCED SNOW LOAD = 7.5 PSF FOR 20', 38.5 PSF FOR NEXT 8', 25 PSF FOR NEXT 12'DRIFT SURCHARGE LOAD = N/A
DRIFT WIDTH = N/A

WIND LOAD (W):
BASIC WIND SPEED (V)= 115 MPH
ASD WIND SPEED (V_{asd}) = 89 MPH
BUILDING CATEGORY = RISK CATEGORY II
WIND EXPOSURE = B
WIND DIRECTIONALITY FACTOR = Kd=0.85
TOPOGRAPHIC FACTOR = Kzt=1.0
GUST FACTOR = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
APPLICABLE INTERNAL PRESSURE COEFF. = ±0.18
WIND PRESSURE FOR DESIGN = 29PSF
COMPONENTS & CLADDING PRESSURES:

ROOF WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
1	+16/-22	+16/-21	+16/-20	+16/-20	+16/-20
2	+16/-38	+16/-35	+16/-31	+16/-28	+16/-28
3	+16/-56	+16/-53	+16/-48	+16/-44	+16/-44

WALL WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
4	+24/-26	+23/-25	+21/-23	+20/-22	+18/-20
5	+24/-32	+23/-30	+21/-27	+20/-25	+18/-20

OVERHANG WIND PRESSURES (PSF)					
ZONE	< 10 SQ. FT.	< 20 SQ. FT.	< 50 SQ. FT.	< 100 SQ. FT	< 500 SQ. FT.
2	-45	-45	-44	-44	-44
3	-75	-67	-58	-50	-51

NOTES:
1. PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARD AND AWAY FROM THE PROJECTED SURFACE, RESPECTIVELY.
2. WIND PRESSURES SHOWN ARE ULTIMATE AND CAN BE CONVERTED TO SERVICE BY BEING MULTIPLIED BY 0.6
3. JOIST NET UPLIFT LOAD COMBINATION IS 0.9D+W. "D" = 5 PSF
4. WIDTH OF PRESSURE COEFFICIENT ZONE, a = 4.20 FT.

SEISMIC DESIGN DATA (E):
OCCUPANCY RISK CATEGORY = III
SEISMIC IMPORTANCE FACTOR = 1.25
SITE CLASS = C
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_s = 0.15 AND S_1 = 0.085
SPECTRAL RESPONSE PARAMETERS: S_{DS} = 0.16 AND S_{D1} = 0.136
SEISMIC DESIGN CATEGORY = B
SEISMIC RESPONSE COEFFICIENT: C_s = 0.10
RESPONSE MODIFICATION COEFFICIENT: R = 2.00
ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE (E.L.F.) METHOD
DESIGN BASE SHEAR = 40.7 KIPS
BASIC SEISMIC FORCE RESIST. SYS. = STEEL MOMENT FRAME (PROVIDED BY PEMB MANUFACTURER)

GEOTECHNICAL INFORMATION:
ALLOWABLE SOIL BEARING PRESSURE = 4000 PSF

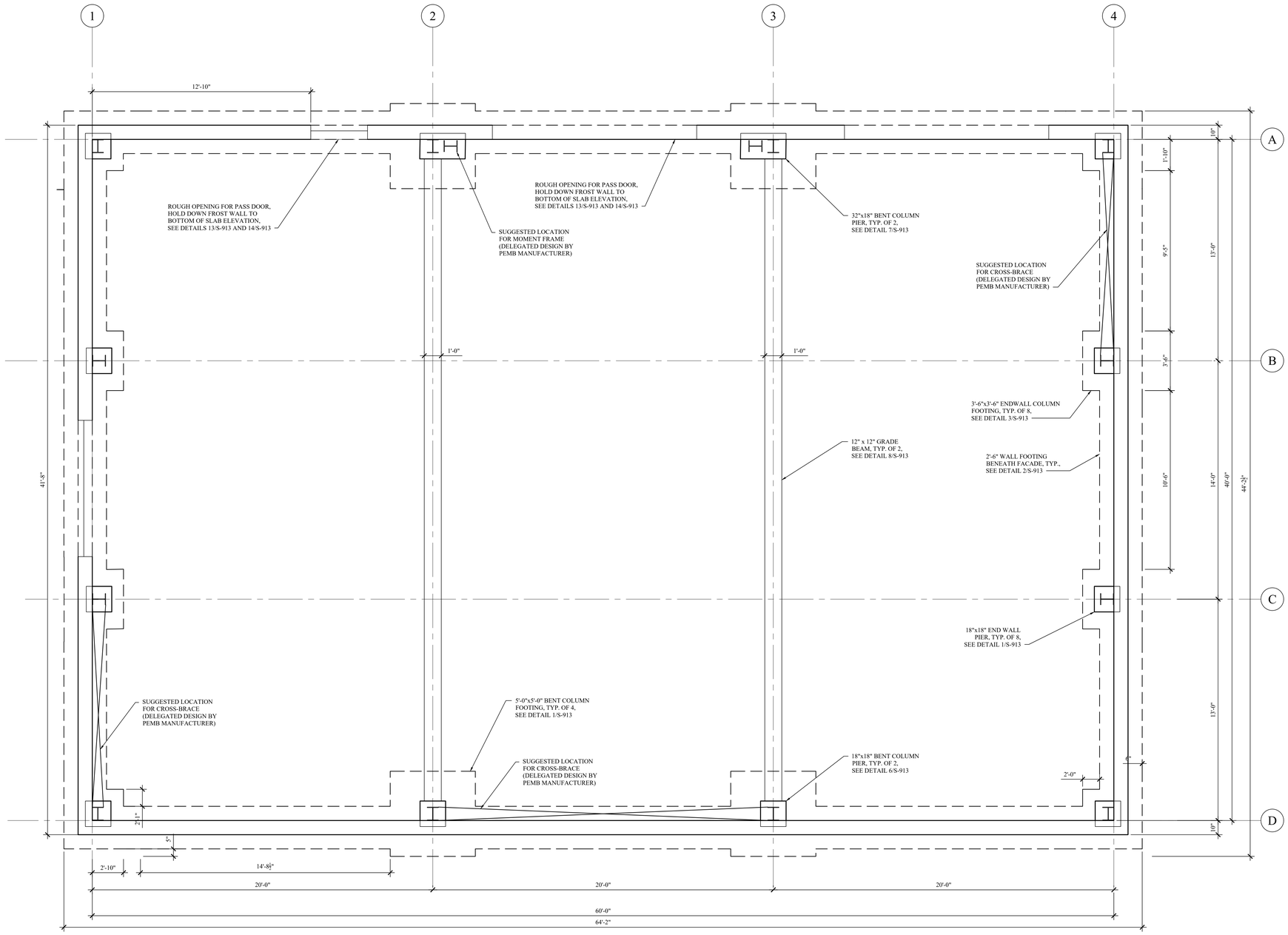
PRE-ENGINEERED METAL BUILDING DESIGN DATA:
LOAD AT MASONRY FACADE CONNECTION = 320 PLF (WIND CONTROLLED)
LOAD AT TOP CONNECTION = 20.4 KIPS (SEISMIC CONTROLLED)

GEOTECHNICAL NOTES:

1. THE FOLLOWING BEARING PRESSURE VALUES WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - MAX NET ALLOWABLE BEARING OF UNDISTURBED NATIVE SOIL: 4000PSF
   - MAX NET ALLOWABLE BEARING OF SHALE OR SANDSTONE BEDROCK: 8000PSF
2. BOTTOM OF EXCAVATION IS DEFINED AS THE ELEVATION BENEATH THE SUBBASE. SUBBASE PREPARATION SHALL BE AS FOLLOWS:
   - BENEATH SLABS-ON-GRADE: 6" COMPACTED LIFT OF CLEAN STONE
   - BENEATH FOUNDATIONS/MAT SLABS: 6" COMPACTED LIFT OF CRUSHED STONE
3. IF UNSUITABLE MATERIAL IS ENCOUNTERED AT OR UNDER THE PROPOSED BOTTOM OF EXCAVATION, THE UNSUITABLE MATERIAL SHALL BE REMOVED FROM WITHIN THE ZONE OF INFLUENCE OF THE BEARING ELEMENT AND REPLACED IN ACCORDANCE WITH NOTE 4.
4. ZONE OF INFLUENCE IS DEFINED AS A 1V:1H PLANE EXTENDING DOWNWARD FROM THE BOTTOM PERIMETER OF THE FOUNDATION ELEMENT TO WITHIN A SUITABLE DISTANCE BELOW, TO BE DETERMINED BY THE ENGINEER OF RECORD (E.O.R.) BASED ON FIELD CONDITIONS AND MATERIAL TYPE.
5. OVER EXCAVATION IS DEFINED AS ANY EXCAVATION BELOW THE PROPOSED BOTTOM OF EXCAVATION IDENTIFIED ON THE PLANS OR AS DESCRIBED WITHIN THE PROJECT SPECIFICATIONS; OVER EXCAVATION SHALL BE RE-ESTABLISHED AS FOLLOWS:
   - BENEATH FOUNDATIONS AND SLABS-ON-GRADE: COMPACTED SELECT FILL
   - BENEATH TANKS: CONTROLLED DENSITY FILL
6. SELECT FILL SHALL BE UTILIZED FOR BACKFILL OF ALL STRUCTURES (UNLESS OTHERWISE NOTED).
7. THE MINIMUM SELECT FILL PROPERTIES LISTED BELOW WERE RECOMMENDED PER THE GEOTECHNICAL REPORT PREPARED BY TECTONIC ENGINEERING CONSULTANTS, GEOLOGISTS & LAND SURVEYORS, D.P.C. DATED JANUARY 15, 2020:
   - UNIT WEIGHT = 130 PSF
   - FRICTION ANGLE = 35°
   - Ka = 0.27
   - Ko = 0.43
   - Kp = 3.69
8. THE CONTRACTOR SHALL SUBMIT DESIRED BACKFILL MATERIAL SPECIFICATION MEETING ALL DESIGN CRITERIA LISTED ABOVE, AT A MINIMUM, TO THE ENGINEER OF RECORD PRIOR TO USE ON SITE. ALTERNATIVELY, THE CONTRACTOR SHALL ELECT TO PERFORM A FIELD PROCTOR OF THE EXISTING SITE SOILS TO VERIFY THAT EXISTING SOILS MEET THE MINIMUM DESIGN VALUES STATED ABOVE.
9. IN-SITU COMPACTION TESTING OF SUBGRADE AND BACKFILL MATERIAL SHALL BE PERFORMED BY THE OWNER'S SPECIAL INSPECTOR.
10. FOR ADDITIONAL GEOTECHNICAL INFORMATION, SEE THE SITE SPECIFIC GEOTECHNICAL REPORT PREPARED BY TECTONIC PROVIDED IN THE CONTRACT.

METAL BUILDING NOTES:

1. THE PRE-ENGINEERED BUILDING SHOWN HEREON SHALL BE A DELEGATED DESIGN.
2. FOUNDATIONS SHOWN HEREON ARE TO SUPPORT A PRE-ENGINEERED BUILDING. DESIGN LOADS TO THE FOUNDATION SHALL BE PROVIDED TO THE ENGINEER OF RECORD (E.O.R.) AND APPROVED BY THE E.O.R. PRIOR TO COMMENCEMENT OF CONCRETE WORK.
3. METAL BUILDING SHALL BE DESIGNED IN ACCORDANCE WITH APPLICABLE INDUSTRY STANDARDS, THE 2020 NEW YORK STATE BUILDING CODE AND ALL OTHER APPLICABLE STATE AND LOCAL CODES. DRIFTING AND SLIDING SNOW LOADS SHALL ALSO BE CONSIDERED IN THE DESIGN OF THE METAL BUILDING.
4. CONTRACTOR SHALL VERIFY ALL ANCHOR BOLT LOCATIONS WITH THE PRE-ENGINEERED BUILDING MANUFACTURER PRIOR TO THE PLACEMENT OF ANY CONCRETE. IF DISCREPANCIES BETWEEN THE FOUNDATION PLANS AND THE ANCHOR BOLT PLACEMENT SHOWN ON THE BUILDING PLANS EXIST, DO NOT PLACE CONCRETE AND NOTIFY THE E.O.R. IMMEDIATELY.
5. CONTRACTOR SHALL VERIFY ALL FOUNDATION DIMENSIONS WITH THOSE PROVIDED BY THE PRE-ENGINEERED BUILDING MANUFACTURER. NOTIFY E.O.R. IMMEDIATELY IF DISCREPANCIES ARE FOUND BETWEEN THE PRE-ENGINEERED DRAWINGS AND THESE FOUNDATION PLANS.
6. ALL ANCHOR BOLTS AS IDENTIFIED AND SPECIFIED ON THE PRE-ENGINEERED BUILDING PLANS SHALL BE HEADED AND SHALL BE EMBEDDED INTO THE CONCRETE A MINIMUM OF 18 INCHES, UNLESS NOTED OTHERWISE.
7. PROVIDE OVERSIZED HOLES IN ALL COLUMN BASEP



1 S-911 FOUNDATION PLAN
SCALE: 3/8" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MAINTENANCE BUILDING FOUNDATION PLAN

REVISIONS

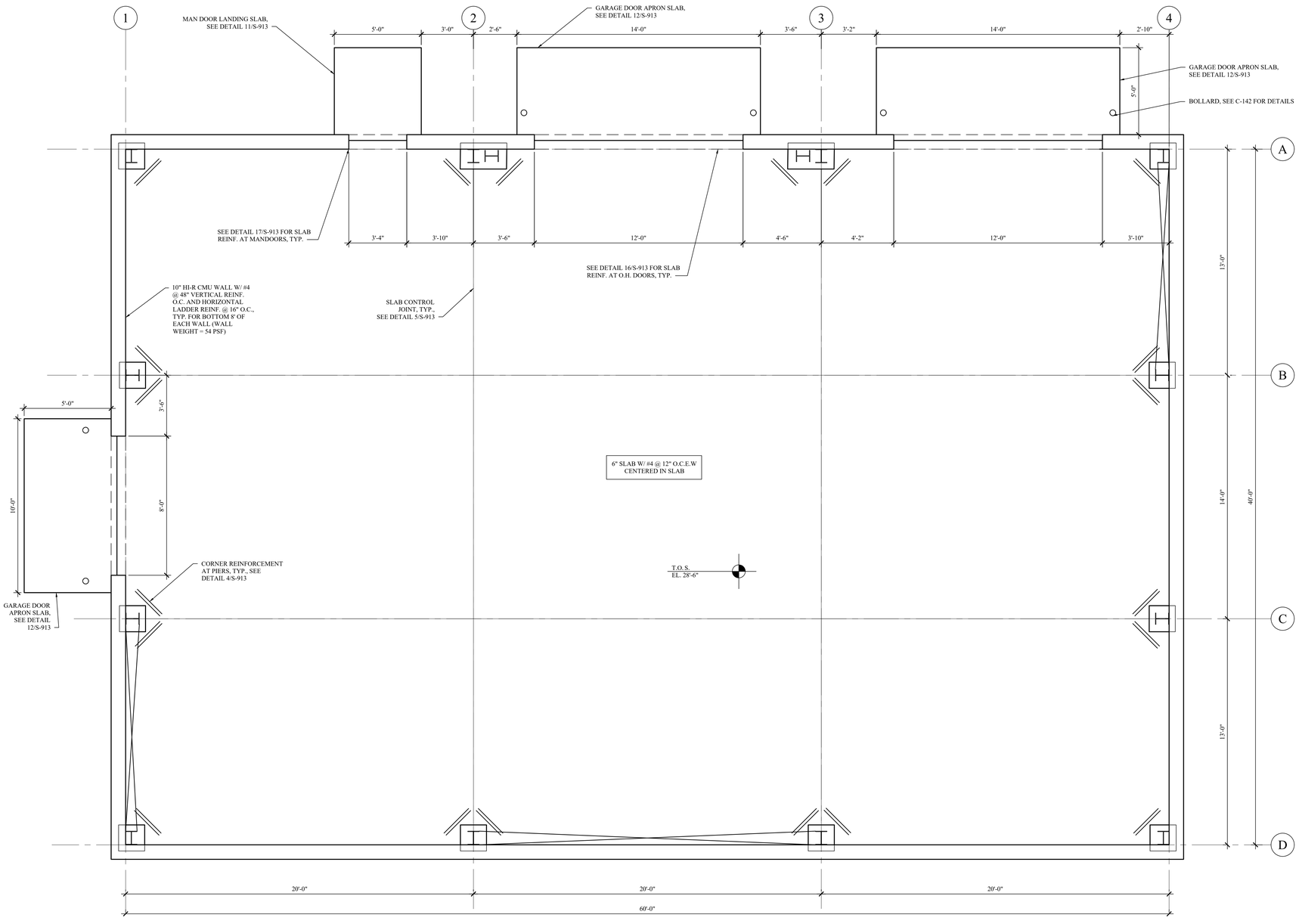
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-911

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\9 - New Control Building & PEMB Maintenance Garage\3 STRUCTURAL\9 10s - PEMB Foundation Plan and Details - Structural.dwg, S-911, 4/16/2025 4:21:53 PM



1 S-912 SLAB PLAN
SCALE: 3/8" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MAINTENANCE BUILDING SLAB PLAN

REVISIONS

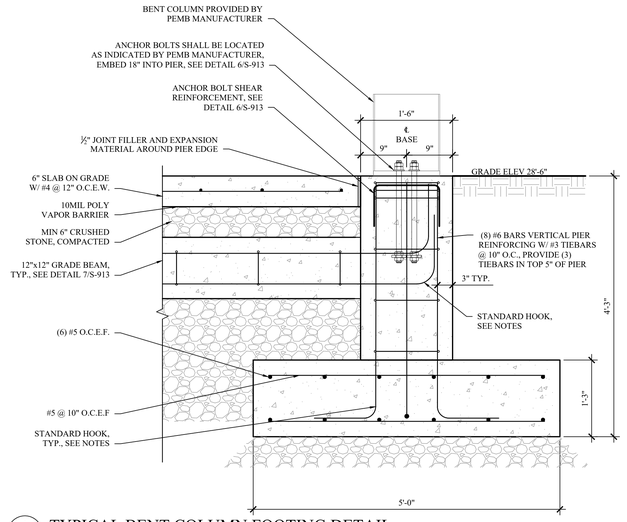
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

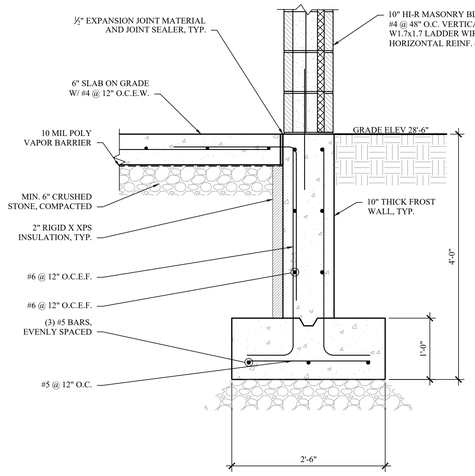
SHEET NO.
S-912

PROJECT # 18-732 PHASE #

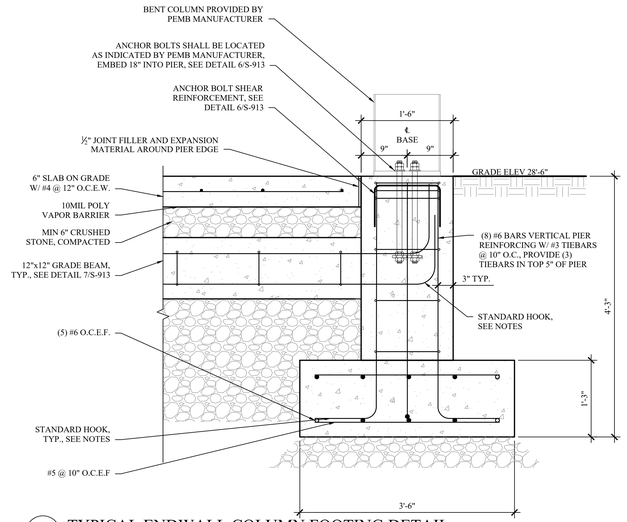
P:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\9 - New Control Building & PEMB Maintenance Garage\3-STRUCTURALS\18x - PEMB Foundation Plan and Details - Structure.dwg, S-912, 4/18/2025 4:21:34 PM



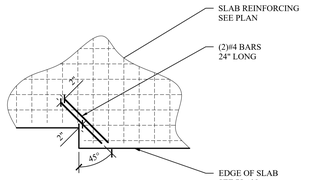
1 S-913 TYPICAL BENT COLUMN FOOTING DETAIL
SCALE: 1" = 1'-0"



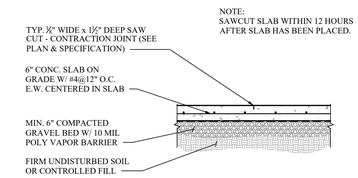
2 S-913 TYPICAL 10" FROST WALL FOOTING DETAIL
SCALE: 1" = 1'-0"



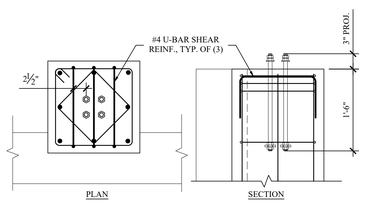
3 S-913 TYPICAL ENDWALL COLUMN FOOTING DETAIL
SCALE: 1" = 1'-0"



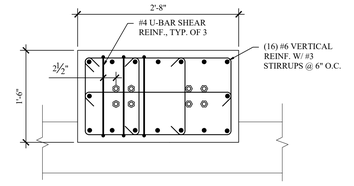
4 S-913 SLAB CORNER REINFORCING
SCALE: 1/2" = 1'-0"



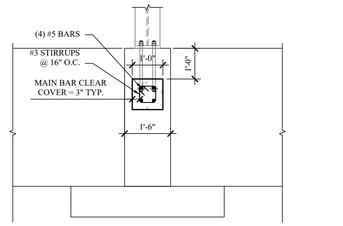
5 S-913 TYPICAL 6" SLAB ON GRADE
SCALE: 1/2" = 1'-0"



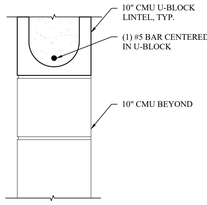
6 S-913 SINGLE PIER ANCHOR REINFORCING
SCALE: 1" = 1'-0"



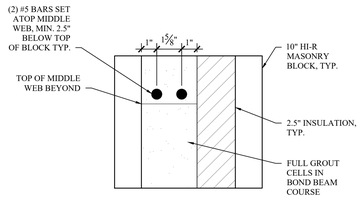
7 S-913 DOUBLE PIER ANCHOR REINFORCING
SCALE: 1" = 1'-0"



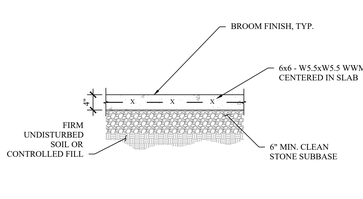
8 S-913 TYPICAL GRADE BEAM DETAIL
SCALE: 1/2" = 1'-0"



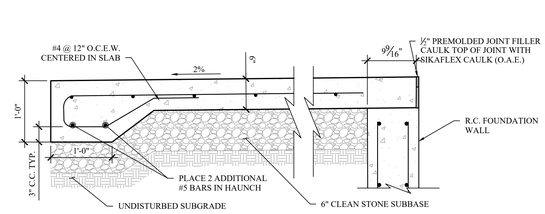
9 S-913 MASONRY LINTEL DETAIL
SCALE: 1-1/2" = 1'-0"



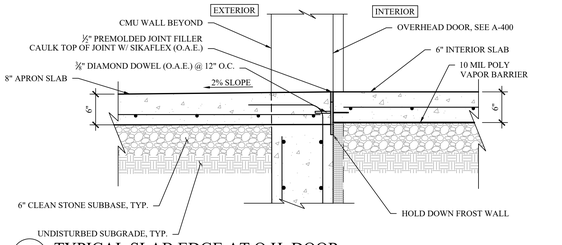
10 S-913 HI-R MASONRY BOND COURSE
SCALE: 3" = 1'-0"



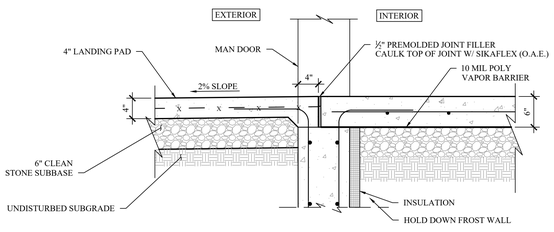
11 S-913 TYPICAL LANDING PAD
SCALE: 3/4" = 1'-0"



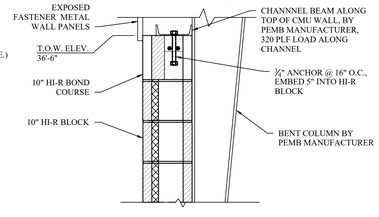
12 S-913 TYPICAL APRON PAD
SCALE: 1" = 1'-0"



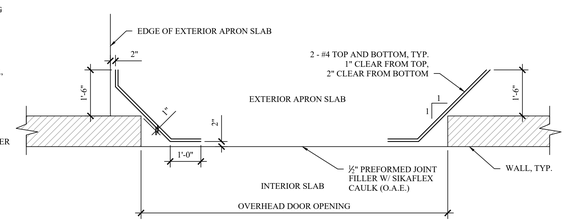
13 S-913 TYPICAL SLAB EDGE AT O.H. DOOR
SCALE: 1" = 1'-0"



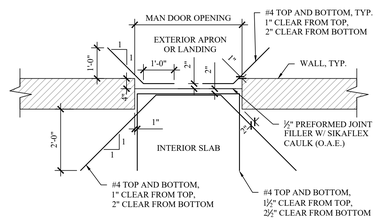
14 S-913 TYPICAL SLAB EDGE AT MAN DOOR
SCALE: 1" = 1'-0"



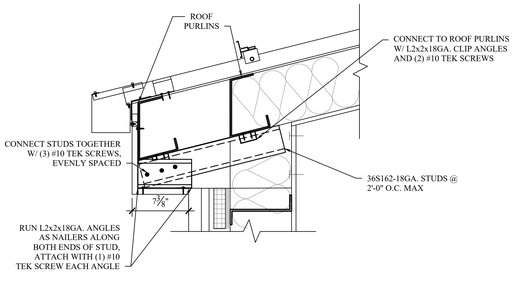
15 S-913 MASONRY-CHANNEL CONNECTION
SCALE: 1" = 1'-0"



16 S-913 TYPICAL OVERHEAD DOOR SLAB REINF.
SCALE: N.T.S.



17 S-913 TYPICAL MAN DOOR SLAB REINF.
SCALE: N.T.S.



18 S-913 TYPICAL SOFFIT FRAMING
SCALE: 1-1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MAINTENANCE BUILDING DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APR, 2025
DESIGN BY:	WPG, NEM, PJW
DRAWN BY:	WPG, NEM, PJW
CHECKED BY:	PJW
REVIEWED BY:	JSS

SHEET NO.
S-913

PROJECT # 18-732 PHASE #

F:\2018\18-732 Caesar Lane WWTP Improvements\Expansion Phase\Drafting\9 - New Control Building & PEMB Maintenance Garage\3 STRUCTURAL\9\10s - PEMB Foundation Plan and Details - Structural.dwg, S-913, 4/16/2025 1:21:53 PM

GENERAL NOTES

SYMBOLS AND ABBREVIATIONS
1. THIS SHEET CONTAINS SYMBOLS AND ABBREVIATIONS TYPICALLY SHOWN ON ELECTRICAL DRAWINGS AND SCHEMATICS. THIS CONTRACT DRAWING SET MAY NOT CONTAIN ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET.

UTILITY
1. ELECTRICAL UTILITY COMPANY WHICH SERVES THE SITE IS CENTRAL HUDSON. COORDINATE ALL WORK WITH THE UTILITY AS REQUIRED.
2. UTILITY CONTACT INFORMATION:
   NAME - COREY CHAMBERS
   EMAIL - CCHAMBERS@CENHUD.COM
   NAME - JESSE LOUBIER
   EMAIL - JLOUBIER@CENHUD.COM

SAFEGUARDS DURING CONSTRUCTION
2. ALL CONSTRUCTION WORK COVERED IN THE UNIFORM CODE, INCLUDING ANY REMOVAL, SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 33 OF THE 2020 FCNYS AND CHAPTER 33 OF THE 2020 BCNYS.

PERMITS AND INSPECTIONS
1. OBTAIN ALL REQUIRED PERMITS AND ARRANGE FOR ALL REQUIRED INSPECTIONS IN ACCORDANCE WITH STATE AND LOCAL GOVERNING AUTHORITIES.
2. COMPLETE WORK IN ACCORDANCE WITH THE 2017 NEC, AND STATE AND LOCAL GOVERNING REGULATIONS.
3. PERFORM WORK AS REQUIRED BY CODES, REGULATIONS, LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES WITH LAWFUL JURISDICTION. ALL MATERIAL AND EQUIPMENT SHALL BE UL LISTED.

SCOPE
1. UNLESS OTHERWISE INDICATED, PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM INCLUDING ALL NECESSARY MATERIAL, LABOR, AND EQUIPMENT.
2. ALL DISCONNECTS REQUIRED BY CODE MAY NOT BE SHOWN. CONTRACTOR SHALL PROVIDE ALL NECESSARY DISCONNECTS PER 2017 NEC.
3. ALL EQUIPMENT AND MATERIAL SHALL BE LABELED AND LISTED, AND INSTALLED IN ACCORDANCE WITH THEIR LISTING.
4. PROVIDE ELECTRICAL CONNECTION FOR EVERY FIXTURE, OR ITEM OF EQUIPMENT REQUIRING SAME, WHICH IS SHOWN OR LISTED ON ANY CONTRACT DRAWING
5. CONTRACTOR SHALL PROVIDE NECESSARY SUPPORT FRAMING, STIFFENERS, BRACING, AND HANGERS WHETHER SHOWN OR NOT TO ENSURE A COMPLETE AND DURABLE SYSTEM. SUPPORT FRAMING CONNECTIONS SHALL BE WELDED UNLESS SPECIFICALLY SHOWN OTHERWISE. ACTUAL SUPPORTS MAY VARY FROM THOSE SHOWN IN DETAILS TO ACCOMMODATE EXISTING FIELD CONDITIONS.
6. THE WORK INCLUDED IN THIS CONTRACT ENCOMPASSES THE DRAWINGS AND SPECIFICATIONS. WORK INCLUDED ON THE DRAWINGS ONLY, OR IN THE SPECIFICATIONS ONLY, SHALL BE INCORPORATED AS IF INCLUDED IN BOTH. ALL SYSTEMS SHOWN ARE INTENDED TO BE COMPLETE AND FULLY FUNCTIONING. THE CONTRACTOR SHALL PROVIDE SUCH COMPONENTS AS NECESSARY FOR A FULLY FUNCTIONING SYSTEM.
7. ALL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE.
8. FIELD VERIFY ALL SITE CONDITIONS AND DIMENSIONS PRIOR TO COMMENCEMENT OF ANY WORK OR SHOP FABRICATION. REPORT ANY DISCREPANCIES TO THE OWNER/ENGINEER IN WRITING, PRIOR TO COMMENCEMENT OF ANY WORK.

COORDINATION OF WORK
1. COORDINATE AND VERIFY THAT WORKING AND DEDICATED EQUIPMENT SPACE REQUIREMENTS ARE MET PER NEC.
2. FIELD LOCATE ALL CORE DRILL LOCATIONS.
3. BEFORE CUTTING OR DRILLING INTO BUILDING ELEMENTS INSPECT AND LAYOUT WORK TO AVOID DAMAGING STRUCTURAL ELEMENTS AND BUILDING UTILITIES.
4. BEFORE SELECTING MATERIAL/EQUIPMENT AND PROCEEDING WITH WORK, INSPECT AREAS WHERE MATERIAL AND EQUIPMENT ARE TO BE INSTALLED TO ENSURE SUITABILITY, AND CHECK NEEDED SPACE FOR PLACEMENT, CLEARANCES AND INTERCONNECTIONS.
5. POSSIBLE SYSTEM SHUT-DOWNS AND WORK AREAS CLOSURES MUST BE COORDINATED WELL IN ADVANCE WITH THE OWNER.
6. VERIFY RECEPTACLE, SWITCH, & COVER PLATE COLORS WITH THE OWNER.
7. TURN OVER TO THE OWNER ALL MANUFACTURER'S WARRANTIES FOR EQUIPMENT AND MATERIALS PROVIDED.
8. COORDINATE ANY REQUIRED CONTRACTOR STAGING AREA WITH THE OWNER.

DEFINITIONS
1. THE DEFINITION OF ELECTRICAL TERMS USED SHALL BE AS DEFINED IN THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AS REFERENCED IN THE BUILDING CODE OF NEW YORK STATE.
2. THE TERM "INDICATED" SHALL MEAN "AS SHOWN ON CONTRACT DOCUMENTS (SPECIFICATIONS, DRAWINGS, AND RELATED ATTACHMENTS)".
3. THE TERM "PROVIDE" SHALL MEAN "TO FURNISH, INSTALL, AND CONNECT COMPLETELY".
4. THE TERM "SIZE" SHALL MEAN ONE OR MORE OF THE FOLLOWING: "LENGTH, CURRENT AND VOLTAGE RATING, NUMBER OF POLES, NEMA SIZE, AND OTHER SIMILAR ELECTRICAL CHARACTERISTICS".

PLANS
1. ELECTRICAL PLANS, DETAILS, AND ONE LINE DIAGRAMS SHOW THE GENERAL LOCATION AND ARRANGEMENT OF THE ELECTRICAL SYSTEM. THEY ARE DIAGRAMMATIC AND DO NOT SHOW ALL CONDUIT BODIES, CONNECTORS, BENDS, FITTINGS, HANGERS, AND ADDITIONAL PULL BOXES WHICH THE CONTRACTOR MUST PROVIDE TO COMPLETE THE ELECTRICAL SYSTEM.
2. ELECTRICAL PLANS AND DETAILS DO NOT SHOW ALL INTERFERENCES AND CONDITIONS, VISIBLE AND/OR HIDDEN, THAT MAY EXIST. CONTRACTOR MUST INSPECT AND SURVEY THE SPACE BEFORE PERFORMING THE WORK.
3. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND REPRESENT A COMPLETED PROJECT. MINOR MODIFICATIONS OF WORK SHALL BE PROVIDED BY THE CONTRACTOR TO COMPLY WITH PROJECT REQUIREMENTS, LOCATIONS OF DEVICES AND EQUIPMENT SHOW A GENERAL ARRANGEMENT AND INTENDED FUNCTION. ALL COMPONENTS SHOWN ON THE RISER DIAGRAMS, BUT NOT ON THE PLAN OR VICE VERSA, SHALL BE INCLUDED AS IF SHOWN ON BOTH. EXACT LOCATION OF MECHANICAL EQUIPMENT THAT REQUIRE ELECTRICAL CONNECTIONS ARE SHOWN ON THE MECHANICAL DRAWINGS. BEFORE INSTALLATION OF WORK, CHECK FOR SWINGS AND ALL REQUIRED CLEARANCES, TO AVOID INTERFERENCE WITH OTHER TRADES. COORDINATE WITH ALL CONTRACT DOCUMENTS, SHOP DRAWINGS AND EQUIPMENT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED CONTRACT DRAWINGS.

METHODS
1. CORE DRILL ALL THRU WALL & THRU FLOOR PENETRATIONS. ALL THRU FLOOR CONDUIT PENETRATIONS TO BE PROPERLY SEALED TO ELIMINATE POTENTIAL FOR WATER TO ENTER CONDUIT SYSTEM OR PASS THRU FLOOR PENETRATION.
2. ALL EXTERIOR CONDUITS TO HAVE DUCT SEAL INSTALLED AT ALL ENDS, BOXES, WEATHERHEADS, PENETRATIONS TO INTERIOR SPACES, ETC.
3. DUCT BANKS SHALL NOT BE ROUTED DIRECTLY ABOVE OR BELOW EXISTING/NEW UTILITIES EXCEPT WHEN CROSSING. WHERE CROSSING EXISTING OR NEW UTILITY DUCT BANKS SHALL CROSS AT 90 DEGREE ANGLES.
4. ALL CONDUIT SYSTEMS EXPOSED TO TEMPERATURE DIFFERENTIALS, IN POTENTIAL CONDENSING ATMOSPHERES, EXTERIOR INSTALLED, OR INSTALLED UNDERGROUND SHALL HAVE PROVISIONS FOR DRAINING WATER OUT OF CONDUIT SYSTEMS.
5. WHERE WIRE SIZE IS NOT NOTED ON DRAWINGS, CONTRACTOR SHALL SIZE ACCORDING TO THE NEC AND SHALL ADHERE TO THE FOLLOWING CRITERIA:
   - EQUIPMENT CIRCUITS AND FEEDERS LESS THAN OR EQUAL TO 100A SHALL BE SIZED USING THE 60°C COPPER AMPACITY COLUMN (NEC T310.16).
   - EQUIPMENT CIRCUITS AND FEEDERS GREATER THAN 100A SHALL BE SIZED USING THE 75°C COPPER AMPACITY COLUMN (NEC T310.16). MINIMUM WIRE SIZE SHALL BE #12 THHN/THWN.
   - ALUMINUM SHALL NOT BE USED. CONDUCTORS SHALL BE STRANDED.
6. FASTENERS ON THE UNDERSIDE OF PRECAST/PRESTRESSED CONCRETE MEMBERS (PLANKS OR DOUBLE TEES) WHICH SERVE FOR DIRECT ATTACHMENT FOR HANGERS OF CONDUIT, ELECTRICAL EQUIPMENT, ETC., MAY NOT BE DRILLED-IN OR SHOT-IN IN THE VICINITY OF THE PRESTRESSING TENDONS. THIS MEANS THAT THE FASTENERS AT THE CONCRETE PLANKS CAN BE PLACED ONLY AT THE JOINT BETWEEN UNITS (UNITS ARE APPROXIMATELY 40" WIDE). ANY INTERMEDIATE SUPPORTS NEEDED TO ACCOMPLISH THIS SHALL BE PROVIDED BY THE CONTRACTOR. AT DOUBLE TEES, ATTACHMENT TO THE FLANGES IS ALLOWED. HOWEVER, BECAUSE OF THEIR THIN CROSS SECTIONS, HEAVY LOADS MUST BE CARRIED BY THROUGH-BOLTS WHICH MUST BE INSTALLED BEFORE THE ROOFING IS APPLIED.

UNDERGROUND UTILITIES
1. UNDERGROUND UTILITY LOCATIONS ARE NOT GUARANTEED, NOR IS THERE ANY GUARANTEE THAT ALL EXISTING UTILITIES WHETHER FUNCTIONAL OR ABANDONED WITHIN THE PROJECT AREA ARE SHOWN ON THESE DRAWINGS.
2. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES BEFORE BEGINNING WORK & SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM HIS/HER WORK.
3. THE CONTRACTOR SHALL NOTIFY "DIG SAFELY NEW YORK" 1-800-962-7962 PRIOR TO ANY EXCAVATION.
4. NO ATTEMPT WAS MADE TO LOCATE SUBSURFACE STRUCTURES, ABOVEGROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE EXISTING UTILITIES NEEDED TO COMPLETE THE WORK AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. CONTRACTOR SHALL COMPLY WITH THE STATE OF NEW YORK DEPARTMENT OF PUBLIC SERVICE, 16NYCRR PART 753.
5. THE OWNER/ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE OWNER/ENGINEER.
6. CONTRACTOR SHALL PROTECT ALL EXISTING STORM WATER DRAINAGE FACILITIES, INCLUDING PIPES, DRAINAGE STRUCTURES, SWALES, DITCHES, ETC. CONTRACTOR SHALL REPLACE AND RESTORE ANY AND ALL OF THESE FACILITIES, AFFECTED BY CONSTRUCTION ACTIVITIES, AT NO ADDITIONAL COST TO THE OWNER/ENGINEER.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES DURING OPERATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY SURVEY OR RIGHT-OF-WAY MONUMENTS DISTURBED DURING CONSTRUCTION. THE CONTRACTOR SHALL EMPLOY A LICENSED LAND SURVEYOR TO RESTORE ALL DISTURBED MONUMENTS TO THEIR ORIGINAL LOCATION.
9. RESTORE ALL SURFACES TO AS GOOD OR BETTER CONDITION THAN BEFORE CONSTRUCTION AS SOON AS POSSIBLE FOLLOWING COMPLETION OF WORK IN ANY AREA.
10. THE CONTRACTOR SHALL BECOME FAMILIAR WITH SITE CONDITIONS AND SHALL INCLUDE PROVISIONS TO AVOID CONFLICTS WITH AND/OR RESTORE SITE FEATURES IN THE BID.
11. ALL SUITABLE EXCAVATED MATERIAL SHALL BE REUSED ON SITE AND BE SUITABLY STABILIZED SO THAT IT CANNOT REASONABLY RE-ENTER ANY BODY OF WATER.
12. ALL EXCAVATION SHALL BE CONDUCTED IN ACCORDANCE WITH OSHA STANDARDS, LOCAL REGULATIONS, STATE REGULATIONS, AND FEDERAL REGULATIONS.

SEQUENCE OF CONSTRUCTION

PHASE 2A:
1. PRIMARY ELECTRIC DUCT BANK (DB-01), PRIMARY METERING POLE, PAD-MOUNTED TRANSFORMER, GENERATORS.
2. MBR BUILDING ELECTRICAL FEEDS AND SERVICE ENTRANCE EQUIPMENT.
3. REMAINING MBR ELECTRICAL.

PHASE 2B:
1. HEADWORKS BUILDING ELECTRICAL FEEDS, SERVICE, AND EQUIPMENT.
2. BELT PRESSES AND ASSOCIATED ELECTRICAL EQUIPMENT.
3. POST AERATION TANK ELECTRICAL FEEDS AND EQUIPMENT.
4. PARSHALL FLUME STRUCTURE ELECTRICAL FEEDS AND EQUIPMENT.

PHASE 2C:
1. PRIMARY SETTLING TANK #4 AND PROPOSED PRIMARY SLUDGE VALVE PIT ELECTRICAL FEED AND EQUIPMENT.
2. EXISTING GRIT SYSTEM ELECTRICAL IMPROVEMENTS.
3. ATAD BUILDING ELECTRICAL FEEDS, SERVICE, AND EQUIPMENT.
4. DEWATERING BUILDING ELECTRICAL FEEDS, SERVICE, AND REMAINING ELECTRICAL EQUIPMENT.
5. MAINTENANCE GARAGE ELECTRICAL FEEDS, SERVICE, AND EQUIPMENT.

PHASE 2D:
1. EXISTING BARSCREEN SYSTEM ELECTRICAL IMPROVEMENTS.
2. EXISTING PRIMARY SETTLING TANK ELECTRICAL FEEDS AND IMPROVEMENTS.
3. PRIMARY SLUDGE PIT AND PRIMARY SLUDGE VALVE PIT ELECTRICAL FEEDS AND EQUIPMENT.
4. REMAINING ELECTRICAL FEEDS AND EQUIPMENT.

GENERAL NOTATION

DRAWING NOTATION

- HEAVY & DOTTED AND/OR HATCHED INDICATES EXISTING EQUIPMENT TO BE REMOVED BY THIS CONTRACT.
- SOLID & LIGHT INDICATES EXISTING EQUIPMENT TO REMAIN.
- HEAVY & SOLID INDICATES EQUIPMENT TO BE PROVIDED BY THIS CONTRACT.
- DB-XX — DESIGNATION FOR UNDERGROUND ELECTRICAL DUCT BANK

TEXT ADJACENT TO EQUIPMENT IS SOMETIMES ADDED FOR EXTRA CLARIFICATION ON REMOVAL/EXISTING TO REMAIN ITEMS. REFER TO LIST BELOW FOR DEFINITIONS.

- TBR — EXISTING EQUIPMENT TO BE REMOVED BY THIS CONTRACT.
- ETR — EXISTING EQUIPMENT TO REMAIN.
- ERE — EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED AS SHOWN BY THIS CONTRACT.
- ETN — EXISTING EQUIPMENT TO BE REMOVED AND REPLACED BY THIS CONTRACT.
- UGE — UNDERGROUND ELECTRIC (SAND FILL)
- RUGE — UNDERGROUND ELECTRIC (REINFORCED CONCRETE)
- OHE — OVERHEAD ELECTRIC
- HT — HEAT TRACE

POWER EQUIPMENT

SINGLE LINE DIAGRAM

- POWER TRANSFORMER
- PT — POTENTIAL TRANSFORMER
- CT — CURRENT TRANSFORMER
- FUSE
- **AF / **AT — MOLDED CASE CIRCUIT BREAKER "AF" INDICATES AMPERE FRAME SIZE "AT" INDICATES AMPERE TRIP SETTINGS
- 400AF / 300AT — FUSED DISCONNECT "400AF" INDICATES AMPERE SWITCH SIZE "300AT" INDICATES AMPERE FUSE SIZE
- 200A — DISCONNECT SWITCH (NON-FUSED) "200A" INDICATES AMPERE SWITCH SIZE
- SYSTEM GROUND OR EQUIPMENT GROUND
- PANELBOARD WITH MAIN CIRCUIT BREAKER
- PANELBOARD WITH MAIN LUGS ONLY
- EMERGENCY GENERATOR
- METER
- ATS / MTS
- ACROSS-THE-LINE STARTER (AXL)
- CONTACTOR (NORMALLY OPEN)
- CONTACTOR (NORMALLY CLOSED)
- CONDUIT SEALING FITTING
- CONDUIT UNION
- CONDUIT BUSHING
- CONTROL DEVICE/INSTRUMENT
- VARIABLE FREQUENCY DRIVE (VFD)
- THRU WALL WATERTIGHT PENETRATION
- E — FLEX CONNECTION (E DENOTES EXPLOSION PROOF)
- HGP — PASSIVE HARMONIC FILTER
- KWHD — POWER METER
- KDR — INPUT LINE REACTOR
- DV/DT — OUTPUT FILTER
- PMR — PUMP MONITORING RELAY
- LOR — LOCAL/OFF/REMOTE SWITCH
- HOA — HAND/OFF/AUTO SWITCH
- ETM — ELAPSED TIME METER
- STATUS/PILOT LIGHT
- PUSH BUTTON
- # — INDICATES COLOR OF LIGHT OR PUSH BUTTON: G = GREEN, A = AMBER, R = RED, B = BLACK

FLOOR PLAN

- SURFACE MTD BRANCH CIRCUIT PANELBOARD.
- RECESSED MTD BRANCH CIRCUIT PANELBOARD.
- JB — JUNCTION AND/OR PULL BOX
- ELECTRICAL CONNECTION AS DEFINED IN EQUIPMENT CONNECTION SCHEDULE.
- (HP) — EXISTING ELECTRICAL CONNECTION. ('HP' DENOTES HORSEPOWER.)
- LOCAL PUSH BUTTON/ CONTROL STATION
- UTILITY POLE
- SPD — SURGE SUPPRESSION DEVICE
- CO — CARBON MONOXIDE DETECTOR
- DATA DROP
- PS — DIFFERENTIAL PRESSURE SWITCH
- GAS DETECTION, LEAK DETECTION, OR VENTILATION SYSTEM ALARM HORN/STROBE (MULTIPLE DEVICES)

CIRCUITING LEGEND

CIRCUITING

- LP2A-1,3,5 — HOMERUN TO PANEL "LP2A", CIRCUITS #1,3,5 (VIA 20A-3P C/B). PROVIDE INSULATED GROUND CONDUCTOR IN ACCORDANCE WITH SPECIFICATIONS. NUMBER OF CIRCUITS INDICATED BY QUANTITY OF ARROW HEADS
- LP2A-2 — HOMERUN TO PANEL "LP2A" VIA 20A/1P CKT BKR. SEE BELOW PARAGRAPH 'HASH MARKS' FOR CONDUCTOR SIZING:
- HASH MARKS INDICATE QUANTITY OF #12 AWG COPPER CONDUCTORS IN CONDUIT. WHEN NO HASH MARKS ARE INDICATED, CONDUIT SHALL CONTAIN (2) #12 WIRES AND #12 GROUND WIRE. ASSUME 1/2" DIAMETER CONDUIT, UNLESS NOTED OTHERWISE NOTED EXAMPLE SHOWN AT LEFT INDICATES 2 HOT (SHORT LINES), 2 NEUTRAL (LONG LINES), AND 1 GROUND WIRES (LONG LINE WITH TAIL).

NOTE
CONDUCTORS REQUIRED FOR LUMINAIRE SWITCHING ARE NOT ACCOUNTED FOR ON THE PLANS USING HASH MARKS. CONTRACTOR SHALL INCLUDE ANY NECESSARY CONDUCTORS REQUIRED FOR SWITCHING IN BID. SWITCHING DESIGNATIONS (LOWER CASE LETTERS) ARE SHOWN TO ILLUSTRATE SWITCHING INTENT.

CIRCUIT ROUTING SHOWN ON DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC ONLY. CONTRACTOR SHALL PROVIDE NECESSARY OFFSETS AND ROUTE FEEDERS AFTER HAVING CONSIDERED ALL FIELD OBSTACLES

WIRING DEVICES

RECEPTACLES
1. FACEPLATE COLOR - STAINLESS STEEL, UON.
2. DEVICE COLOR - GRAY, UON.
- # — 125 VOLT, 2 POLE, 3 WIRE, 20 AMP., HEAVY DUTY DUPLEX RECEPTACLE, MOUNTING HEIGHT 18" AFF (UON).
- # — 125 VOLT, 2 POLE, 3 WIRE, 20 AMP., HEAVY DUTY DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER (UON).
- # — 125 VOLT, 2 POLE, 3 WIRE, 20 AMP., HEAVY DUTY DUPLEX RECEPTACLE, STANCHION-MOUNTED. REFER TO PLAN VIEWS FOR SPECIFIC MOUNTING REQUIREMENTS.

TEXT ADJACENT TO RECEPTACLES INDICATES CONFIGURATION OR ACCESSORIES. REFER TO LIST BELOW FOR DEFINITIONS.

- # — INDICATES PANELBOARD CIRCUIT TO WHICH RECEPTACLE SHALL BE CIRCUITED. REFER TO HOMERUN FOR PANELBOARD DESIGNATION.
- WP — EXTERIOR RECEPTACLES SUBJECT TO DAMP ENVIRONMENTS SHALL HAVE WEATHERPROOF WHILE-IN-USE COVER WITH PADLOCK CAPABILITY. WEATHER-PROOF RECEPTACLES ARE TO HAVE INTEGRAL GFI PROTECTION (SEE BELOW)
- GFI — RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
- XP — EXPLOSION PROOF. RATED FOR CLASS I DIVISION I INSTALLATION.

WIRING DEVICES

RECEPTACLES
1. FACEPLATE COLOR - STAINLESS STEEL, UON.
2. DEVICE COLOR - GRAY, UON.
- # — 125 VOLT, 2 POLE, 3 WIRE, 20 AMP, HEAVY DUTY DUPLEX RECEPTACLE, MOUNTING HEIGHT 18" AFF (UON).
- # — 125 VOLT, 2 POLE, 3 WIRE, 20 AMP, HEAVY DUTY DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER (UON).
- # — 125 VOLT, 2 POLE, 3 WIRE, 20 AMP, HEAVY DUTY DUPLEX RECEPTACLE, STANCHION-MOUNTED. PROVIDE NECESSARY UNISTRUT/MOUNTING HARDWARE @ 24" A.F.G. (UON)

TEXT ADJACENT TO RECEPTACLES INDICATES CONFIGURATION OR ACCESSORIES. REFER TO LIST BELOW FOR DEFINITIONS.

- # — INDICATES PANELBOARD CIRCUIT TO WHICH RECEPTACLE SHALL BE CIRCUITED. REFER TO HOMERUN FOR PANELBOARD DESIGNATION.
- WP — EXTERIOR RECEPTACLES SUBJECT TO DAMP ENVIRONMENTS SHALL HAVE WEATHER-PROOF-IN-USE BUBBLE COVER WITH PADLOCK CAPABILITY. WEATHER-PROOF RECEPTACLES ARE TO HAVE INTEGRAL GFI PROTECTION (SEE BELOW)
- GFI — RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
- XP — EXPLOSION PROOF. RATED FOR CLASS I DIVISION I INSTALLATION.
- DED — DEDICATED RECEPTACLE.

SWITCHES
1. FACEPLATE COLOR - STAINLESS STEEL, UON.
2. DEVICE COLOR - GRAY, UON.
- 125V, 20A HEAVY DUTY SWITCH.

TEXT ADJACENT TO SWITCH INDICATES SPECIAL CONFIGURATION OR ACCESSORIES. REFER TO LIST BELOW FOR DEFINITIONS.

- a,b — LOWER CASE LETTER INDICATES SWITCH DESIGNATION.
- 3,4 — INDICATES A 3-WAY OR 4-WAY SWITCH.
- WP — EXTERIOR SWITCHES SUBJECT TO DAMP ENVIRONMENTS SHALL HAVE WEATHER-PROOF-IN-USE BUBBLE COVER WITH PADLOCK CAPABILITY.
- M — MOTOR RATED SNAP SWITCH WITH OVERLOADS. CONTRACTOR SHALL SIZE SWITCH AND OVERLOADS BASED ON ACTUAL NAMEPLATE DATA OF EQUIPMENT SUPPLIED/PURCHASED.
- XP — EXPLOSION PROOF. RATED FOR CLASS I DIVISION I INSTALLATION.

GENERAL ABBREVIATIONS

A	AMPERES	FMC	FLEXIBLE METAL CONDUIT	MDP	MAIN DISTRIBUTION PANELBOARD	SP	SPARE
AE	PROBE ELEMENT	FRAC	FRACTIONAL	MFG	MANUFACTURER	SPD	SURGE PROTECTIVE DEVICE
AFF	ABOVE FINISH FLOOR	FT	FEET	MFM	MULTI-FUNCTION METER	STP	SHIELDED TWISTED PAIR
AFG	ABOVE FINISH GRADE	FURN	FURNISHED	MIN	MINIMUM		
AHJ	AUTHORITY HAVING JURISDICTION	FVR	FULL VOLTAGE REVERSING STARTER	MLO	MAIN LUGS ONLY	TBR	TO BE REMOVED
AIC	AMPERE INTERRUPTING CAPACITY	FVNR	FULL VOLTAGE NON-REVERSING STARTER	NP	NAME PLATE	TSTAT	THERMOSTAT
AIT	PROBE TRANSMITTER	FWP	FINISHED WATER PUMP	MS	MOTOR STARTER	TT	TEMPERATURE SENSOR
AL	ALUMINUM			MTS	MANUAL TRANSFER SWITCH	TYP	TYPICAL
APPROX	APPROXIMATELY	GC	GENERAL CONTRACTOR	MW	MEGAWATT	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
ATS	AUTOMATIC TRANSFER SWITCH	GF	GROUND FAULT	MWTP	MOTOR WINDING THERMAL PROTECTOR		
AWG	AMERICAN WIRE GAUGE	GFCI,GFI	GROUND-FAULT CIRCUIT INTERRUPTER			UGE	UNDERGROUND ELECTRIC
AXL	ACROSS THE LINE STARTER	GND,G	GROUND OR GROUNDING	NC	NORMALLY CLOSED	UOI	UNLESS OTHERWISE INDICATED
				NEC	NATIONAL ELECTRICAL CODE	UON	UNLESS OTHERWISE NOTED
BCNYS	NEW YORK STATE BUILDING CODE	HH	HANDHOLE	NEMA	NAT'L ELECTRICAL MANUFACTURER'S ASSOC.	UPS	UNINTERRUPTIBLE POWER SUPPLY
BLDG	BUILDING	HMI	HUMAN MACHINE INTERFACE	NESC	NATIONAL ELECTRICAL SAFETY CODE		
BOD	BASIS OF DESIGN	HOA	HAND, OFF, AUTOMATIC SWITCH	NF	NON FUSED	V	VOLT
		HP	HORSEPOWER	NIC	NOT IN CONTRACT	VFD	VARIABLE FREQUENCY DRIVE
C	CONDUIT	HT	HEAT TRACE	NP	NAME PLATE	VFI	VACUUM FAULT INTERRUPTER
CB	CIRCUIT BREAKER	HVAC	HEATING, VENTILATING, & AIR CONDITIONING	NTS	NOT TO SCALE		
CKT	CIRCUIT					W	WIRE
CL	CENTERLINE			OC	ON CENTER	WC	WASHER COMPACTOR
CLF	CURRENT LIMITING FUSE	IBC	INTERNATIONAL BUILDING CODE	OCB	OIL CIRCUIT BREAKER	WP	WEATHER PROOF RATED DEVICE
CONT	CONTRACT	IFC	INTERNATIONAL FIRE CODE	OEM	ORIGINAL EQUIPMENT MANUFACTURER	WTP	WATER TREATMENT PLANT
CP	CONTROL PANEL	INST	INSTALLED	OHE	OVERHEAD ELECTRIC	WWTP	WASTE WATER TREATMENT PLANT
CPT	CONTROL POWER TRANSFORMER			OIU	OPERATOR INTERFACE UNIT		
CT	CURRENT TRANSFORMER	JB	JUNCTION BOX	OL	OVERLOADS	XFMR	TRANSFORMER
CU	COPPER						
		KCMIL	THOUSAND CIRCULAR MILS	P	POLE	ZS	SWING VALVE POSITION SWITCH
DB	DUCT BANK	KVA	KILOVOLT AMPERES	PH	PHASE		
DISC	DISCONNECT	KW	KILOWATTS	PIT	PRESSURE ISENSOR	Δ	DELTA
DP	DIFFERENTIAL PRESSURE SWITCH			PLC	PROGRAMMABLE LOGIC CONTROLLER	Y	WYE
DWG	DRAWING	LA	LIGHTNING ARRESTORS	PS	PUMP STATION	Φ	PHASE
		LC	UNLOADING STATION	PSH	HIGH PRESSURE SWITCH		
EC	ELECTRICAL CONTRACTOR	LCS	LOCAL CONTROL STATION	PSL	LOW PRESSURE SWITCH		
ECS	EQUIPMENT CONNECTION SCHEDULE	LE	LEVEL SENSOR ELEMENT	PSLL	LOW LOW PRESSURE SWITCH		
EGS	EMERGENCY GENERATOR SYSTEM	LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT	PVC	POLYVINYL CHLORIDE		
EM	EMERGENCY	LIT	LEVEL SENSOR TRANSDUCER				
EMT	ELECTRICAL METALLIC TUBING	LPS	LIGHTNING PROTECTION SYSTEM	QTY	QUANTITY		
ERE	EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED	LSH	HIGH LEVEL FLOAT SWITCH				
		LSHH	HIGH HIGH LEVEL FLOAT SWITCH	REQ'D	REQUIRED		
EPR	ELECTRONIC PROTECTION RELAY	LSL	LOW LEVEL FLOAT SWITCH	RGS	RIGID GALVANIZED STEEL		
ETR	EXISTING TO REMAIN	LSLL	LOW LOW LEVEL FLOAT SWITCH	RMC	RIGID METAL CONDUIT		
		LTG	LIGHTING	RUGE	REINFORCED UNDERGROUND ELECTRIC		
FCNYS	NEW YORK STATE FIRE CODE	LVT	LINE VOLTAGE THERMOSTAT	RWP	RAW WATER PUMP		
FC	FOOT CANDLE						
FE	FLOW METER ELEMENT	MCC	MOTOR CONTROL CENTER	SC	SCREEN		
FIT	FLOW METER TRANSMITTER	MCB	MAIN CIRCUIT BREAKER	SE	SERVICE ENTRANCE RATED		
FLA	FULL LOAD AMPERES	MCP	MOTOR CIRCUIT PROTECTOR	SLD	SINGLE LINE DIAGRAM		

LIGHTING

LIGHT FIXTURES



- 'A' — UPPER CASE LETTER INDICATES FIXTURE TYPE (REFER TO LUMINAIRE SCHEDULE)
- 'a' — LOWER CASE LETTER INDICATES SWITCH CONTROL. WHERE NO SWITCH CONTROL DESIGNATION IS PROVIDED, CONTROL SHALL BE VIA MASTER ROOM SWITCH OR MASTER ROOM OCCUPANCY SENSOR (WHERE PROVIDED).
- '#' — INDICATES PANELBOARD CIRCUIT TO WHICH FIXTURE SHALL BE CIRCUITED.

WHEN A LIGHT FIXTURE IS HALF SHADED THAT IS INDICATION THE FIXTURE CONTAINS AN EMERGENCY BATTERY BACKUP OPTION. REFER TO LUMINAIRE SCHEDULE.

EXIT & EGRESS

- EBU — EMERGENCY BATTERY UNIT (EBU). REFER TO LUMINAIRE SCHEDULE
- CEILING-MOUNTED ILLUMINATED "EXIT" SIGN LIGHTING FIXTURE.
- WALL-MOUNTED ILLUMINATED "EXIT" SIGN LIGHTING FIXTURE.

NOTE: ARROWS INDICATE DIRECTION OF EGRESS. XP DENOTES EXPLOSION PROOF LED EMERGENCY LIGHT & EXIT SIGN COMBINATION

EXIT SIGNS SHALL BE INSTALLED 8'-6" AFF. PROVIDE PENDANTS AS REQUIRED BY ROOM CEILING/STRUCTURE HEIGHT.

BLDG./STRUCTURE ABBREVIATIONS

ATAD	AUTOTHERMAL THERMOPHILIC AEROBIC DIGESTION
BLDG	BUILDING
MBR	MEMBRANE BIO REACTOR
RAS	RETURNED ACTIVATED SLUDGE
SNDR	STORAGE NITRIFICATION DENITRIFICATION REACTOR
WAS	WASTE ACTIVATED SLUDGE

BUILDING CODE NOTE

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

ENERGY CODE NOTE

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

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BID SET

JADE STONE ENGINEERING

HAZARD

NFPA 820 (2020 EDITION) CODE REVIEW, TEN STATE STANDARDS, & AREA CLASSIFICATION

ELECTRICAL SHEETS	AREA	NFPA 820 REFERENCE	FUNCTION	FIRE AND EXPLOSION HAZARD	VENTILATION REQUIRED PER TEN STATE STANDARDS	CLASSIFICATION	REMARKS
E-200 SERIES	SCREENING AREA	TABLE 5.2.2 LIQUID STREAM TREATMENT PROCESSES ROW 2, LINE B	COARSE AND FINE SCREEN FACILITIES - REMOVAL OF SCREENINGS FROM RAW WASTEWATER.	POSSIBLE IGNITION OF FLAMMABLE GASES AND FLOATING FLAMMABLE LIQUIDS	CONTINUOUSLY VENTILATED AT 12 AIR CHANGES PER HOUR	CLASS I, DIVISION II, GROUP D IN ENTIRE CLOSED SPACE	COMBUSTIBLE GAS DETECTION SYSTEM REQUIRED
	GRIT CHAMBER	TABLE 5.2.2 LIQUID STREAM TREATMENT PROCESSES ROW 5, LINE C	GRIT REMOVAL TANKS - SEPARATION OF GRIT FROM RAW WASTEWATER	POSSIBLE IGNITION OF FLAMMABLE GASES AND FLOATING FLAMMABLE LIQUIDS	NOT ENCLOSED, OPEN TO ATMOSPHERE	CLASS I, DIVISION II, GROUP D WITHIN 10' ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL	
	INFLUENT STRUCTURE	TABLE 5.2.2 LIQUID STREAM TREATMENT PROCESSES ROW 1, LINE C	DIVERSION AND CONTROL STRUCTURES - NOT PRECEDED BY PRIMARY TREATMENT WITH SKIMMING	POSSIBLE IGNITION OF FLAMMABLE GASES AND FLOATING FLAMMABLE LIQUIDS	NOT ENCLOSED, OPEN TO ATMOSPHERE	CLASS I, DIVISION II, GROUP D WITHIN 10' ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL	
	ELECTRICAL AREAS	UNCLASSIFIED					
E-300 SERIES	PRIMARY SETTLING TANKS	TABLE 5.2.2 LIQUID STREAM TREATMENT PROCESSES ROW 7, LINE C	PRIMARY SEDIMENTATION TANKS - SEPARATION OF FLOATING OR SETTLEABLE SOLIDS FROM RAW WASTEWATER	POSSIBLE IGNITION OF FLAMMABLE GASES AND FLOATING FLAMMABLE LIQUIDS	NOT ENCLOSED, OPEN TO ATMOSPHERE	CLASS I, DIVISION II, GROUP D INTERIOR OF THE TANK FROM THE MIN. OPERATING WATER SURFACE TO THE TOP OF THE WALL; ENVELOPE 18" ABOVE THE TOP OF THE TANK AND EXTENDING 18" BEYOND THE EXTERIOR WALL; ENVELOPE 18" ABOVE GRADE EXTENDING 10' HORIZONTALLY FROM THE EXTERIOR WALLS	
	SCUM PIT	TABLE 6.2.2(A) SOLIDS TREATMENT PROCESSES ROW 5, LINE C	SCUM PUMPING AREAS - PUMPING OF SCUM, WET SIDE OF PUMPING STATION	BUILDUP OF VAPORS FROM FLAMMABLE OR COMBUSTIBLE LIQUIDS	ENCLOSED	CLASS I, DIVISION I, GROUP D WITHIN 10' ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL	
	SLUDGE WET WELL	TABLE 6.2.2(A) SOLIDS TREATMENT PROCESSES ROW 10, LINE A	SLUDGE STORAGE WET WELLS, PITS, AND HOLDING TANKS - RETAINING OF SLUDGE	POSSIBLE GENERATION OF METHANE GAS IN EXPLOSIVE CONCENTRATIONS; CARRYOVER OF FLOATING FLAMMABLE LIQUIDS	NOT ENCLOSED, OPEN TO ATMOSPHERE	CLASS I, DIVISION I, GROUP D WITHIN ENVELOPE 18" ABOVE WATER SURFACE AND 10' HORIZONTALLY FROM WETTED WALLS	
	PRIMARY SLUDGE PIT	TABLE 6.2.2(A) SOLIDS TREATMENT PROCESSES ROW 9, LINE B	SLUDGE PUMPING STATION DRY WELLS - DRY SIDE OF A SLUDGE PUMPING STATION	BUILDUP OF METHANE GAS OR FLAMMABLE VAPORS	CONTINUOUSLY VENTILATED AT 6 AIR CHANGES PER HOUR	UNCLASSIFEID	VENTILATION REQUIREMENT SATISFIED; HVAC MONITORING REQUIRED
	PRIMARY SLUDGE VALVE VAULT & PROPOSED SLUDGE VALVE PIT	TABLE 4.2.2 COLLECTION SYSTEMS ROW 29, LINE A	BELOWGRADE VALVE VAULT - PHYSICALLY SEPARATED FROM THE WET WELL AND WITH CLOSED PIPING SYSTEM	BUILDUP OF VAPORS FROM FLAMMABLE OR COMBUSTIBLE LIQUIDS	NOT NORMALLY VENTILATED	CLASS I, DIVISION II, GROUP D IN ENTIRE CLOSED SPACE	
E-400 SERIES	THERMA, SNDR, BIOFILTER	TABLE 5.2.2 LIQUID STREAM TREATMENT PROCESSES ROW 18	NITRIFICATION AND DENITRIFICATION TANKS - TERTIARY TREATMENT OF WASTEWATER TO REDUCE OR REMOVE NITROGEN	N/A	N/A	UNCLASSIFIED	PRECEDED BY PRIMARY SEDIMENTATION
	THICKENING ROOM	TABLE 6.2.2 SOLID TREATMENT PROCESSES ROW 8, LINE C	SLUDGE THICKENER - SLUDGE CONCENTRATION AND REMOVAL, GRAVITY, OR DISSOLVED AIR FLOTATION	POSSIBLE GENERATION OF METHANE FROM SLUDGE; CARRYOVER OF FLOATING FLAMMABLE LIQUIDS	CONTINUOUSLY VENTILATED AT 6 AIR CHANGES PER HOUR	UNCLASSIFIED	PRECEDED BY PRIMARY TREATMENT WITH SKIMMING; VENTILATION REQUIREMENT SATISFIED; HVAC MONITORING REQUIRED
	SLUDGE HOLDING TANK	TABLE 6.2.2(A) SOLIDS TREATMENT PROCESSES ROW 10, LINE A	SLUDGE STORAGE WET WELLS, PITS, AND HOLDING TANKS - RETAINING OF SLUDGE	POSSIBLE GENERATION OF METHANE FROM SLUDGE; CARRYOVER OF FLOATING FLAMMABLE LIQUIDS	NOT ENCLOSED, OPEN TO ATMOSPHERE	CLASS I, DIVISION I, GROUP D WITHIN ENVELOPE 18" ABOVE WATER SURFACE AND 10' HORIZONTALLY FROM WETTED WALLS	
	ALL OTHER AREAS	UNCLASSIFIED					
E-500 SERIES	MCROSCREEN BLDG / INFLUENT DRY WELL / WET WELL	TABLE 5.2.2 LIQUID STREAM TREATMENT PROCESSES ROW 21	INTERMEDIATE OR FINAL PUMPING STATIONS AND OTHER UNIT PROCESSES AND STRUCTURES NOT SPECIFICALLY ADDRESSED IN THIS TABLE - PRECEDED BY PRIMARY TREATMENT WITH SKIMMING	N/A	NO REQUIREMENT	UNCLASSIFIED	
	ANEROBIC / ANOXIC ZONES	TABLE 5.2.2 LIQUID STREAM TREATMENT PROCESSES ROW 11	ENCLOSED AERATION BASIN, AEROBIC OR SUSPENDED GROWTH SYSTEMS, MEMBRANE BIOLOGICAL REACTORS - AEROBIC TREATMENT OF WASTEWATER PRECEDED BY PRIMARY TREATMENT WITH SKIMMING	N/A	NO REQUIREMENT	UNCLASSIFEID	PRECEDED BY PRIMARY TREATMENT WITH SKIMMING
	RAS PUMP ROOM / MEMBRANE ZONE / CASSETTE LAYDOWN AREA / SCUM PUMPING AREA	TABLE 6.2.2(A) SOLIDS TREATMENT PROCESSES ROW 9, LINE B	SLUDGE PUMPING STATION DRY WELLS - DRY SIDE OF A SLUDGE PUMPING STATION	BUILDUP OF METHANE GAS OR FLAMMABLE VAPORS	CONTINUOUSLY VENTILATED AT 6 AIR CHANGES PER HOUR	UNCLASSIFEID	VENTILATION REQUIREMENT SATISFIED; HVAC MONITORING REQUIRED
	SCUM PIT	TABLE 6.2.2(A) SOLIDS TREATMENT PROCESSES ROW 5, LINE C	SCUM PUMPING AREAS - PUMPING OF SCUM, WET SIDE OF PUMPING STATION	BUILDUP OF VAPORS FROM FLAMMABLE OR COMBUSTIBLE LIQUIDS	NOT ENCLOSED, OPEN TO ATMOSPHERE	CLASS I, DIVISION I, GROUP D WITHIN 10' ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL	
	ALL OTHER AREAS	UNCLASSIFIED					
E-600 SERIES	CHEMICAL FEED ROOM / DISINFECTION TANK	TABLE 5.2.2 LIQUID STREAM TREATMENT PROCESSES ROW 21	INTERMEDIATE OR FINAL PUMPING STATIONS AND OTHER UNIT PROCESSES AND STRUCTURES NOT SPECIFICALLY ADDRESSED IN THIS TABLE - PRECEDED BY PRIMARY TREATMENT WITH SKIMMING	N/A	NO REQUIREMENT	UNCLASSIFEID	THESE UNIT PROCESSES USE CORROSIVE CHEMICALS THAT REQUIRE THE USE OF SPECIFIC MATERIALS OF CONSTRUCTION.
	BACKPULSE PUMP STATION	TABLE 4.2.2 COLLECTION SYSTEM ROW 16	ABOVEGRADE WASTEWATER PUMPING STATION - PUMP ROOM PHYSICALLY SEPARATED WITH NO PERSONNEL ACCESS TO WET WELL; PUMPING OF WASTEWATER FROM A SANITARY OR COMBINED SEWER SYSTEM THROUGH CLOSED PUMPS AND PIPES	N/A	NO REQUIREMENT	UNCLASSIFIED	
	ALL OTHER AREAS	UNCLASSIFIED					
E-700 SERIES	BELT PRESS ROOM / LOWER LEVEL OF DEWATERING BUILDING	TABLE 6.2.2(A) SOLIDS TREATMENT PROCESSES ROW 12	DEWATERING BUILDINGS CONTAINING CENTRIFUGES, GRAVITY BELT THICKENERS, BELT AND VACUUM FILTERS, AND FILTER PRESSES - REMOVAL OF WATER FROM SLUDGE AND THE CONVEYANCE OF SLUDGE CAKE	ACCUMULATION OF METHANE GAS	CONTINUOUSLY VENTILATED AT 6 AIR CHANGES PER HOUR	UNCLASSIFIED	VENTILATION REQUIREMENT SATISFIED; HVAC MONITORING REQUIRED
	ALL OTHER AREAS	UNCLASSIFIED					
E-900 SERIES	GARAGE	UNCLASSIFIED					

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JADE STONE ENGINEERING

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL NFPA AREA CLASSIFICATIONS

REVISIONS

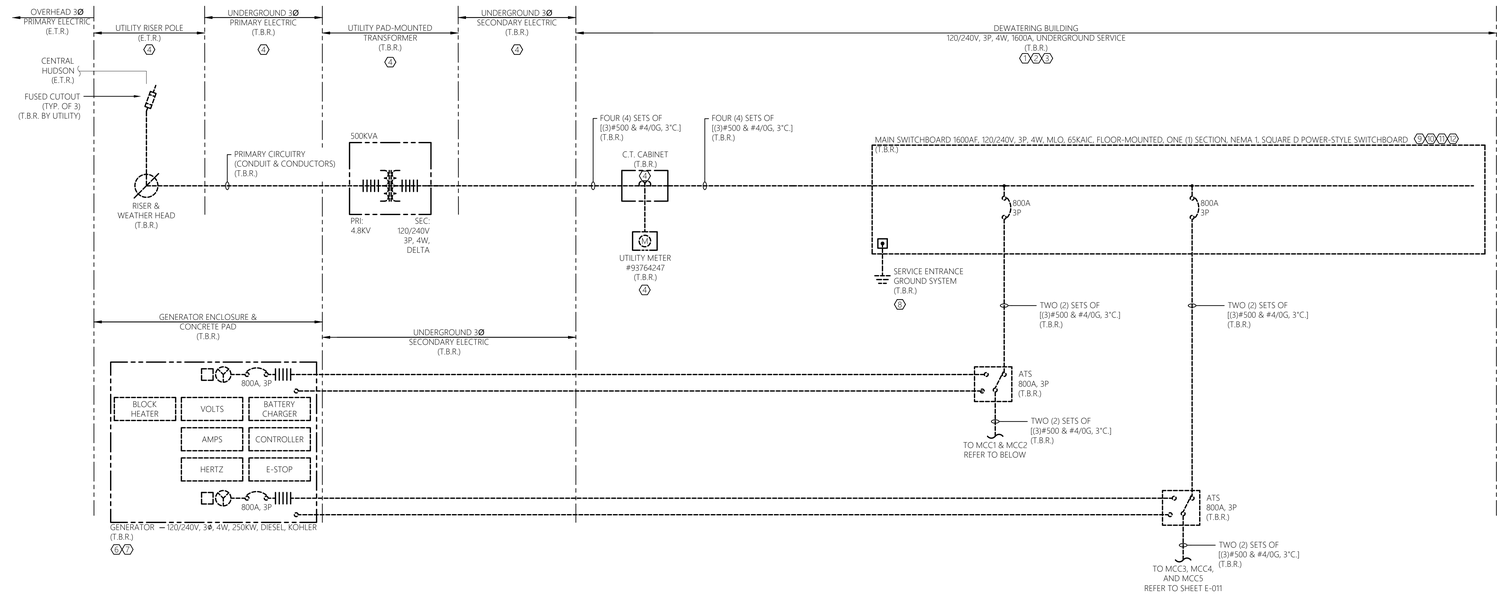
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

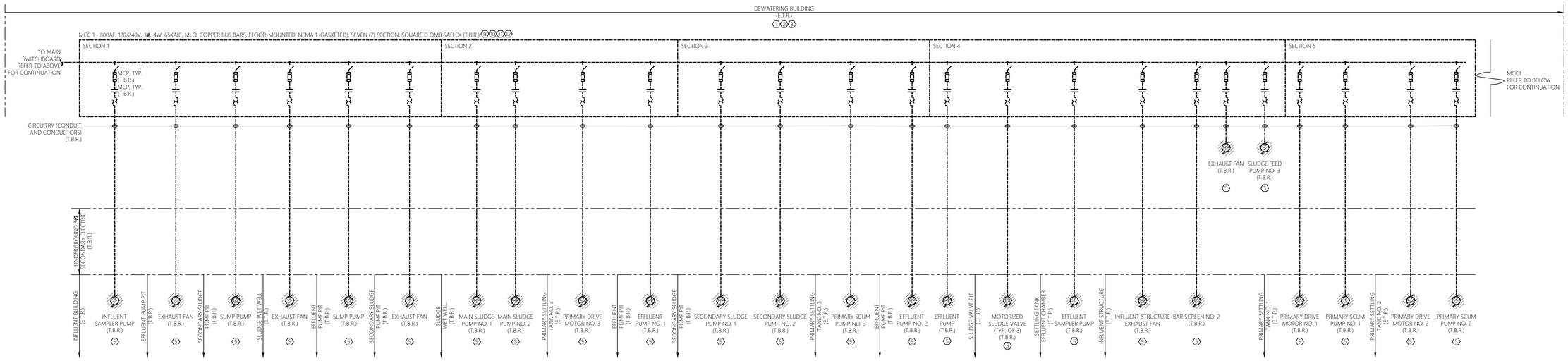
SHEET NO.

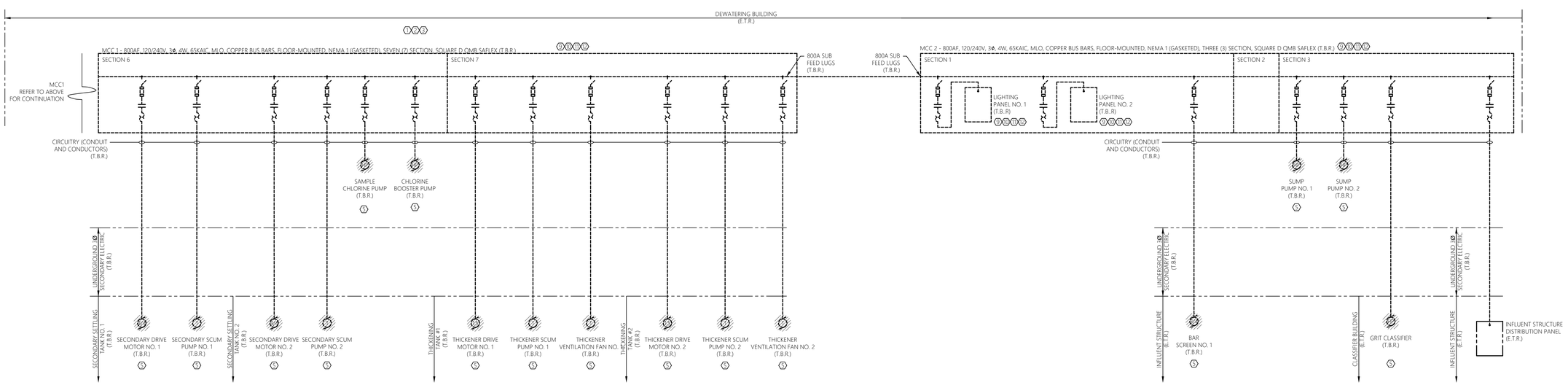
E-002

PROJECT # 18-732 PHASE #



REFER TO SHEET E-011 FOR THE GENERAL DEMOLITION NOTES AND SHEET KEY NOTES THAT APPLY TO THIS SHEET.





1 E-010 ELECTRICAL DEMOLITION SINGLE LINE DIAGRAM - MCC1 & MCC2
SCALE: NTS
CAESAR LANE WWTP

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION SINGLE LINE DIAGRAMS

REVISIONS

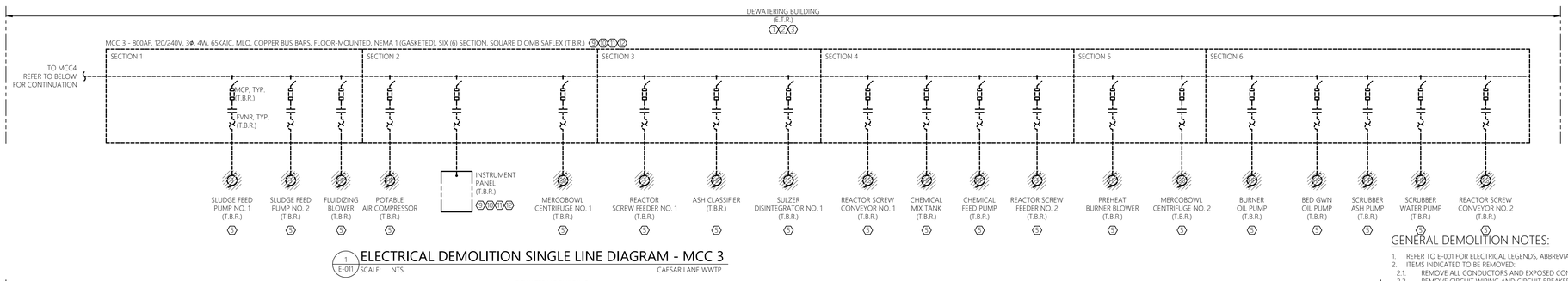
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

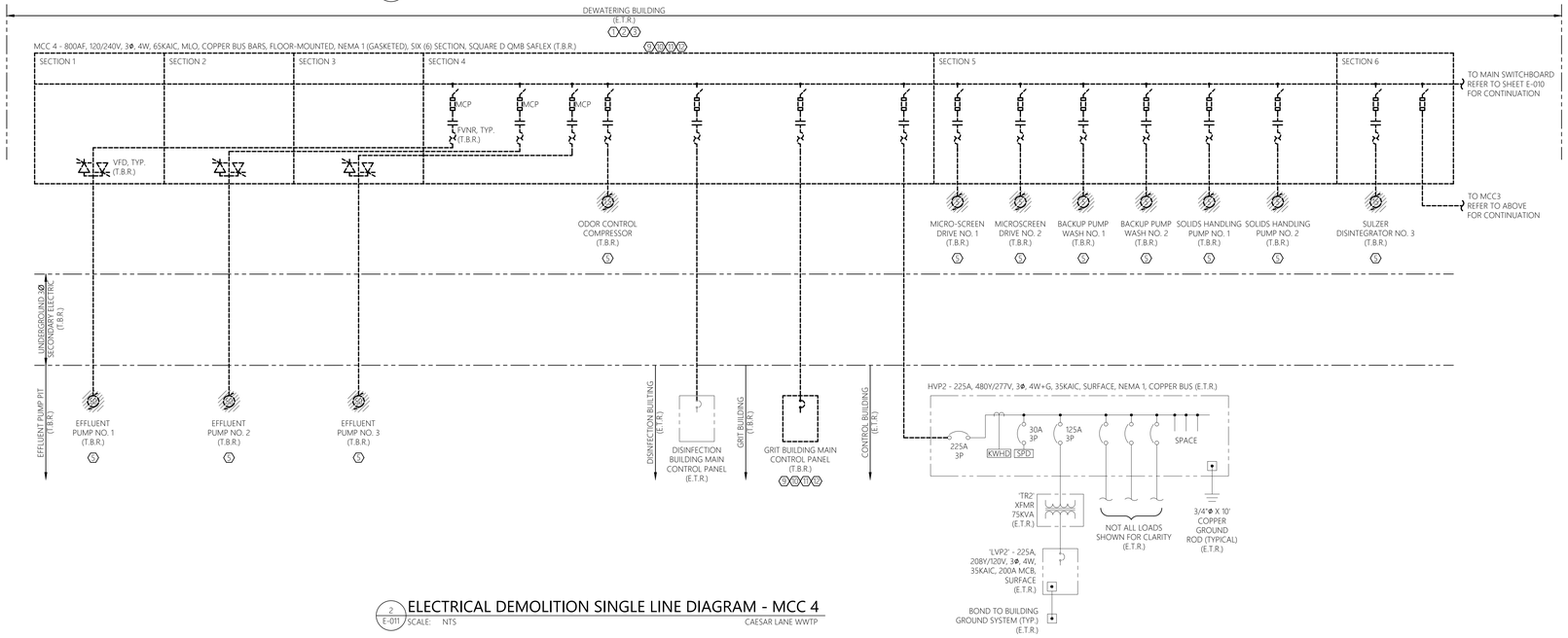
SHEET NO.

E-010

PROJECT # 18-732 PHASE #



1 E-011 ELECTRICAL DEMOLITION SINGLE LINE DIAGRAM - MCC 3
SCALE: NTS — CAESAR LANE WWTP



2 E-011 ELECTRICAL DEMOLITION SINGLE LINE DIAGRAM - MCC 4
SCALE: NTS — CAESAR LANE WWTP

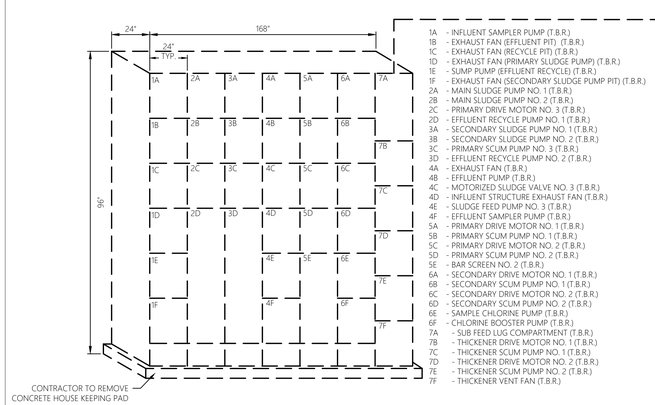
THE GENERAL DEMOLITION NOTES AND SHEET KEY NOTES ON THIS SHEET, ALSO APPLY TO SHEET E-010.

GENERAL DEMOLITION NOTES:

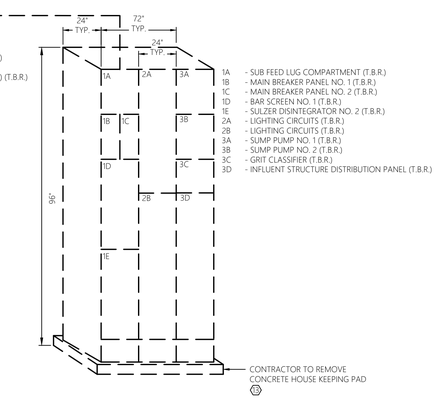
1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUIT, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, CONTROL STATIONS, AND ALL ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC., (UOI).
   - 2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED. CLOSE COORDINATION BETWEEN ALL TRADE CONTRACTORS REQUIRED.
4. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
5. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
6. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
7. THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM, INCLUDING ALL CONDUCTORS AND CIRCUITRY NOT SHOWN FOR CLARITY. CONTRACTOR TO FIELD VERIFY.
8. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER, ENGINEER, AND ALL TRADE CONTRACTORS.
9. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH OWNER, ENGINEER, AND ALL TRADE CONTRACTORS.
10. REFER TO ELECTRICAL SITE PLAN & FLOOR PLAN SHEETS FOR GENERAL EQUIPMENT LOCATIONS.
11. REFER TO ELECTRICAL SCHEDULE AND DETAIL SHEETS FOR ADDITIONAL REMOVAL INFORMATION/REQUIREMENTS.
12. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE CONTRACTOR TO REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. CONTRACTOR TO FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.
13. ALL UTILITY CHARGES RESULTING FROM THE REMOVAL OF THE EXISTING ELECTRICAL SERVICE SHALL BE BILLED DIRECTLY TO THE OWNER FROM THE UTILITY COMPANY.

SHEET KEY NOTES:

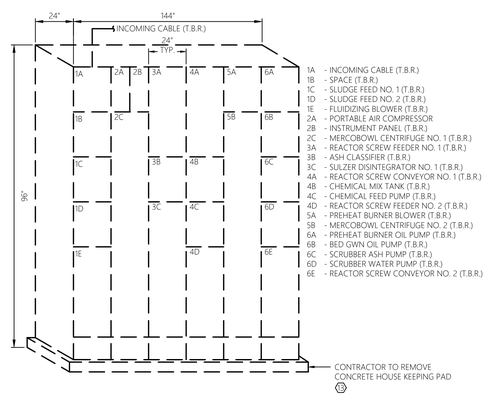
1. WWTP IS TO BE OPERATIONAL AT ALL TIMES. PROVIDE TEMPORARY POWER PROVISIONS AS REQUIRED TO FACILITATE NORMAL WWTP OPERATION DURING ELECTRICAL DEMOLITION AND INSTALLATION. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, CABLING, ETC... AS REQUIRED FOR AN OVERALL COMPLETE AND OPERABLE TEMPORARY POWER SYSTEM. CONTRACTOR TO MINIMIZE DOWN TIMES TO THE GREATEST EXTENT POSSIBLE. COORDINATE ALL REQUIREMENTS WITH THE OWNER AND ALL TRADE CONTRACTORS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING TEMPORARY POWER.
2. CONTRACTOR TO PROVIDE TEMPORARY POWER PLAN IN WRITING TO ENGINEER FOR APPROVAL PRIOR TO PERFORMING ELECTRICAL SERVICE DISRUPTIONS.
3. CONTRACTOR TO NOT COMMENCE ELECTRICAL DEMOLITION UNTIL TEMPORARY POWER PROVISIONS HAVE BEEN ESTABLISHED AND APPROVED BY THE ENGINEER. NOTE, IT IS THE INTENTION THAT THE NEW ELECTRICAL SERVICE BE INSTALLED, TESTED, AND OPERATIONAL BEFORE THE EXISTING ELECTRICAL SERVICE BE REMOVED.
4. CONTRACTOR TO CLOSELY COORDINATE FINAL REMOVAL REQUIREMENTS OF ALL UTILITY OWNED EQUIPMENT, INCLUDING BUT NOT LIMITED TO, UTILITY DEMAND METER, C.T. CABINET, FUSED CUTOUTS, PAD-MOUNTED TRANSFORMERS, SWITCHGEAR, GROUNDING, AND CIRCUITRY (CONDUIT & CONDUCTORS) WITH THE UTILITY. REFER TO THE 'GENERAL NOTES' SECTION ON SHEET E-001 FOR UTILITY CONTACT INFORMATION AND ASSOCIATED WORK ORDER NUMBER.
5. NOT ALL ASSOCIATED CONTROLS, STARTERS, DISCONNECTS & CONTROLS CIRCUITRY MAY BE SHOWN FOR CLARITY. CONTRACTOR TO FIELD VERIFY AND COMPLETELY REMOVE ALL ASSOCIATED CONTROLS, STARTERS, DISCONNECTS & CONTROLS CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO THE SOURCE ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL. COORDINATE FINAL REQUIREMENTS WITH THE OWNER, ENGINEER; AND APPLICABLE TRADE CONTRACTORS.
6. CONTRACTOR TO REMOVE EMERGENCY GENERATOR SYSTEM (EGS) IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO, ENGINE BLOCK HEATER, BATTERY CHARGER, CONTROLS, ALARMS, AUTOMATIC TRANSFER SWITCH, OVER-CURRENT PROTECTIVE DEVICE, EQUIPMENT SKID, CONCRETE PAD, ENCLOSURE, FUEL TANK, AND ALL ASSOCIATED CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. COORDINATE CLOSELY WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER.
7. GENERATOR AND ALL ASSOCIATED EQUIPMENT, DEVICES, CONTROLS, AND AUTOMATIC TRANSFER SWITCH ARE TO BECOME THE PROPERTY OF THE OWNER UPON DISCONNECTION AND REMOVAL. CONTRACTOR TO MOVE GENERATOR AND ALL ASSOCIATED EQUIPMENT TO LOCATION ON SITE AS DESIGNATED BY THE OWNER. COORDINATE FINAL REQUIREMENTS CLOSELY WITH OWNER AND ENGINEER.
8. CONTRACTOR TO REMOVE SERVICE ENTRANCE GROUND SYSTEM IN ITS ENTIRETY, INCLUDING BUT NOT LIMITED TO, ALL ASSOCIATED GROUND RODS, BONDING EQUIPMENT, AND CABLING. CONTRACTOR TO FIELD VERIFY AND PROVIDE COMPLETE ELECTRICAL DEMOLITION AS REQUIRED.
9. CONTRACTOR TO DISCONNECT, MAKE ELECTRICALLY SAFE, AND REMOVE/DEMOLISH IN ITS ENTIRETY. EQUIPMENT IS TO BECOME PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE IN ITS ENTIRETY. OWNER HAS THE RIGHT TO MAINTAIN ANY EQUIPMENT, COMPONENTS, DEVICES, CONTROLS, ETC... SCHEDULED FOR REMOVAL. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER.
10. NOT ALL EXISTING INTERNAL CABLING/COMPONENTS SHOWN FOR CLARITY. CONTRACTOR TO FIELD VERIFY AND REMOVE ALL ASSOCIATED INTERNAL CABLING/COMPONENTS IN THEIR ENTIRETY.
11. CIRCUIT BREAKER RATINGS, MOTOR HORSEPOWER RATINGS AND ASSOCIATED CABLE SIZES/QUANTITIES ARE BASED UPON EXISTING DRAWINGS AND CURSORY FIELD OBSERVATIONS. CONTRACTOR TO FIELD VERIFY ACTUAL RATINGS OF ANY EXISTING TO REMAIN EQUIPMENT PRIOR TO COMMENCEMENT OF DEMOLITION.
12. REFER TO ELECTRICAL DEMOLITION PLANS, SCHEDULES AND DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS. CONTRACTOR TO COORDINATE ALL EQUIPMENT SCHEDULED FOR REMOVAL AND FINAL SEQUENCE OF REMOVAL REQUIREMENTS WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER. PRIOR TO COMMENCEMENT OF DEMOLITION. CONTRACTOR TO FIELD VERIFY AND PROVIDE AS REQUIRED. FOR ALL EQUIPMENT SCHEDULED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE AND ALL ASSOCIATED DISCONNECTS, STARTERS, CONTROLS AND CONTROL CIRCUITRY, AS WELL AS, ALL MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
13. UPON REMOVAL OF EQUIPMENT, CONTRACTOR TO REMOVE CONCRETE EQUIPMENT PAD IN ITS ENTIRETY. FILL ALL HOLES/PENETRATIONS WITHIN THE FLOOR SLAB. PATCH AND REPAIR FLOOR AS NECESSARY. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE FINAL REQUIREMENTS WITH THE OWNER.



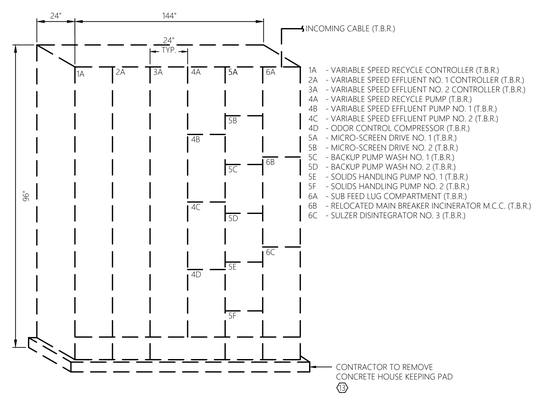
3 E-011 ELECTRICAL ELEVATION - MOTOR CONTROL CENTER MCC1
SCALE: NTS — CAESAR LANE WWTP



4 E-011 ELECTRICAL ELEVATION - MOTOR CONTROL CENTER MCC2
SCALE: NTS — CAESAR LANE WWTP



5 E-011 ELECTRICAL ELEVATION - MOTOR CONTROL CENTER MCC3
SCALE: NTS — CAESAR LANE WWTP



6 E-011 ELECTRICAL ELEVATION - MOTOR CONTROL CENTER MCC4
SCALE: NTS — CAESAR LANE WWTP

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION SINGLE LINE DIAGRAMS

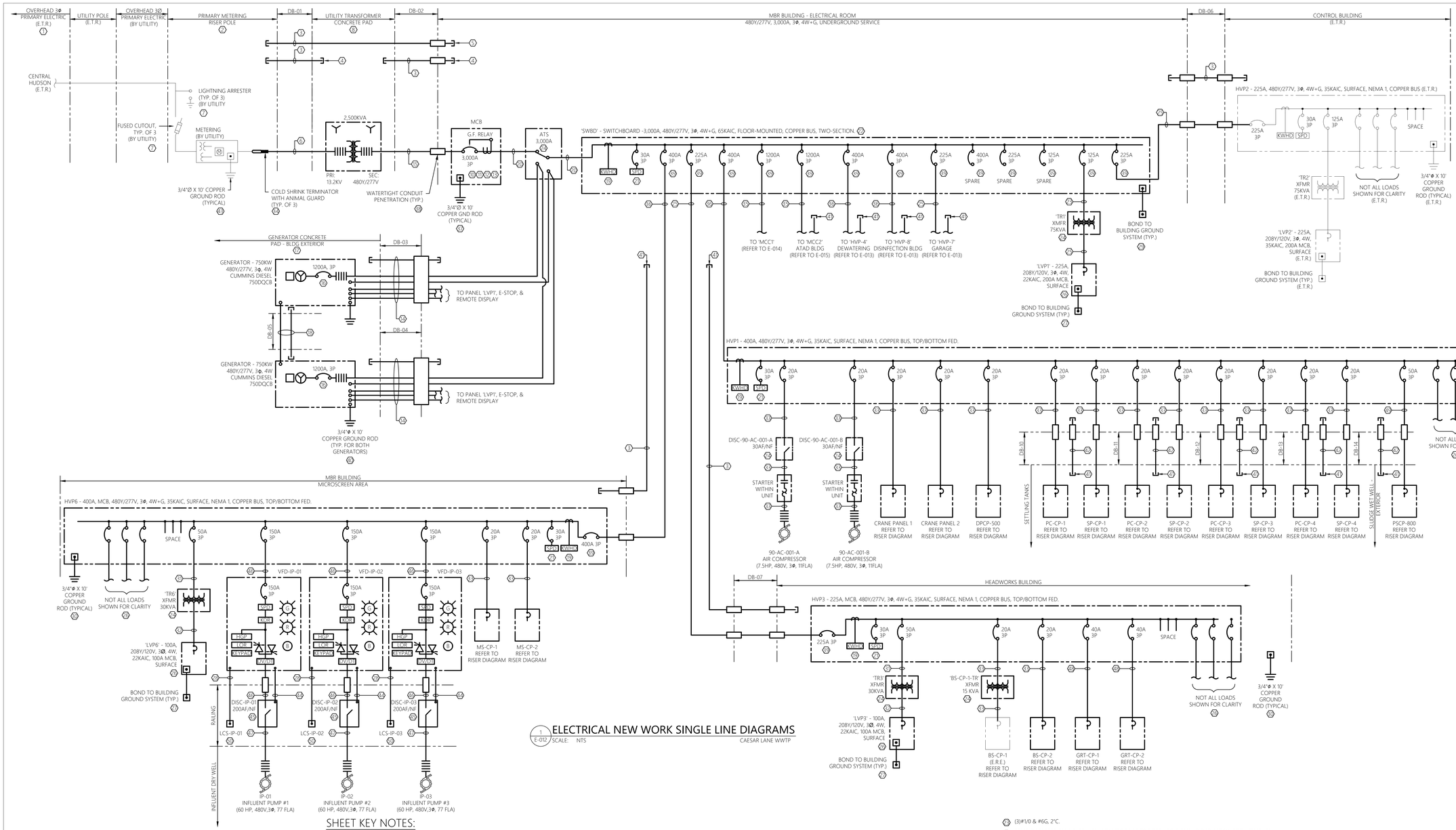
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-011

PROJECT # 18-732 — PHASE #



1 E-012 ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS
SCALE: NTS — CAESAR LANE WWTP

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. NEW ELECTRICAL EQUIPMENT BASIS OF DESIGN - EATON
3. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
4. ALL CONDUCTORS AND EQUIPMENT NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
5. ALL UTILITY CHARGES RESULTING FROM THIS SERVICE ENTRANCE DESIGN SHALL BE BILLED DIRECTLY TO THE OWNER FROM THE UTILITY COMPANY.
6. REFER TO CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. REFER TO ELECTRICAL FLOOR PLAN DRAWINGS AND ELECTRICAL SITE PLAN FOR GENERAL LOCATIONS AND DUCT BANK INFORMATION.
8. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
9. CONTRACTOR TO PROVIDE ADDITIONAL LUG TERMINATION KITS OR PIN ADAPTORS WITHIN EQUIPMENT SHOWN/SPECIFIED AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.
10. CIRCUITS SHOWN ARE POWER. REFER TO CONTROL RISER DIAGRAMS FOR INSTRUMENTATION AND CONTROL CIRCUITS. REFER TO SCHEDULES FOR ADDITIONAL CIRCUITS.
11. NOT ALL REQUIRED THRU-WALL AND THRU-FLOOR WATERTIGHT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL/FLOOR WATERTIGHT PENETRATION FOR ALL PENETRATIONS WITHIN BUILDING EXTERIOR WALLS AND FLOORS. REFER TO DETAIL SHEETS FOR ADDITIONAL INFORMATION.
12. CONTRACTOR SHALL INCLUDE A SHORT CIRCUIT, COORDINATION, AND ARC FLASH HAZARD ANALYSIS FOR THIS PROJECT. STUDY SHALL BE PERFORMED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. SUBMIT SHORT CIRCUIT REPORT FINDINGS PRIOR TO SUBMITTAL DOCUMENTS ON ELECTRICAL GEAR & CONFIRM ALL PROPOSED AIC RATINGS. PROVIDE COORDINATION AND ARC FLASH HAZARD ANALYSIS FOR ALL ELECTRICAL EQUIPMENT. CONTRACTOR SHALL PROVIDE THE APPROPRIATE WARNING STICKERS ON ALL PANELBOARDS, CONTROL PANELS, AND EQUIPMENT DISCONNECTS. COORDINATION AND ARC FLASH HAZARD ANALYSIS TO BE IN ACCORDANCE WITH THE LATEST IEEE & NFPA 70E REQUIREMENTS. CONTRACTOR TO PROVIDE STUDY RESULTS IN REPORT FORMAT AND SUBMIT TO THE ENGINEER FOR REVIEW. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
13. CONTRACTOR TO COORDINATE OVERALL SEQUENCE OF CONSTRUCTION WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER
14. SERVICE EQUIPMENT TO BE LABELED WITH MAX AVAILABLE FAULT CURRENT PER NEC 110.24. CONTRACTOR TO PROVIDE A SHORT CIRCUIT ANALYSIS TO DETERMINE THE MAX AVAILABLE FAULT CURRENT. ANALYSIS TO BE PERFORMED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. SUBMIT SHORT CIRCUIT REPORT TO ENGINEER FOR APPROVAL DURING THE SUBMITTAL PHASE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
15. REFER TO DUCT BANK SCHEDULE FOR ADDITIONAL SPARE CONDUIT REQUIREMENTS.
16. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION (UNLESS OTHERWISE NOTED).
17. CONTRACTOR TO COMPLY WITH THE HIGH VOLTAGE PROXIMITY ACT AND ALL NESC REQUIREMENTS WHEN ERECTING STRUCTURES AND UTILIZING EQUIPMENT NEAR ENERGIZED UTILITY LINES. ALL CRANES, ETC. TO BE KEPT A MINIMUM OF 10'-0" FROM ENERGIZED UTILITY LINES. TYPICAL.

SHEET KEY NOTES:

1. FINAL CONNECTIONS BETWEEN CENTRAL HUDSON'S EXISTING OVERHEAD FACILITIES AND CUSTOMERS FACILITIES (SPECIFIED AS PART OF CONTRACT) SHALL BE MADE BY CENTRAL HUDSON. REFER TO SHEET E-001 FOR UTILITY CONTACT INFORMATION AND ASSOCIATED WORK ORDER NUMBER. CONTRACTOR TO REFERENCE WORK ORDER NUMBER WHEN CONTACTING THE UTILITY.
2. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, DETAILS, & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CONTRACTOR TO COORDINATE ALL WORK AND REQUIREMENTS ASSOCIATED WITH THE PROPOSED ELECTRICAL SERVICE WITH THE UTILITY COMPANY INCLUDING BUT NOT LIMITED TO THE FOLLOWING: PRIMARY METERING RISER POLE, OVERHEAD 3Φ PRIMARY ELECTRIC, METERING, EQUIPMENT LOCATIONS, AND POINT OF SUPPLY. REFER TO SHEET E-001 FOR UTILITY CONTACT INFORMATION AND ASSOCIATED WORK ORDER. CONTRACTOR TO REFERENCE WORK ORDER NUMBER WHEN CONTACTING CENTRAL HUDSON.
3. SPARE 4" CONDUIT.
4. PROVIDE SPARE CONDUIT FROM UTILITY RISER POLE TO UTILITY PAD-MOUNTED TRANSFORMER AND FROM UTILITY PAD-MOUNTED TRANSFORMER TO MBR BUILDING AS SHOWN. STUB CONDUIT ADJACENT TO SERVICE EQUIPMENT OR AS DIRECTED BY UTILITY/OWNER. PROVIDE PULL STRING AND CAP BOTH ENDS. LABEL BOTH ENDS OF SPARE CONDUIT INDICATING ORIGIN/DESTINATION.
5. PROVIDE SPARE CONDUIT FROM UTILITY RISER POLE TO MBR BUILDING. CONDUIT INTENDED FOR COMMUNICATION SERVICES. PROVIDE INNERDUCT SYSTEM WITHIN CONDUIT AS SPECIFIED ON ELECTRICAL DETAILS. REFER TO SITE PLAN FOR ADDITIONAL INFORMATION.
6. PROVIDE AS 15KV CABLE SYSTEM. PROVIDE AS (4)#4/0 ALUMINUM, UL TYPE MV-105, 133% INSULTAION LEVEL, 220 MILS, EPR, AND COPPER TAPE SHIELD. PROVIDE AS GENERAL CABLE SPEC 6360 OR APPROVED EQUAL. CONTRACTOR TO PROVIDE 45'-0" OF COILED PRIMARY CONDUCTOR SLACK AT THE UTILITY RISER POLE AND 20'-0" OF COILED PRIMARY CONDUCTOR SLACK AT THE UTILITY PAD-MOUNTED TRANSFORMER. ALL PRIMARY CONNECTIONS AT THE UTILITY RISER POLE AND PAD-MOUNTED TRANSFORMER ARE BY THIS CONTRACT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. PROVIDED BY UTILITY. TYPICAL OF FUSED CUTOUTS, LIGHTING ARRESTERS, METERING (METER, CURRENT TRANSFORMERS, POTENTIAL TRANSFORMERS, AND ALL WIRING AND CONDUCTORS BETWEEN COMPONENTS OF THE PRIMARY METERING SYSTEM). THIS CONTRACT IS RESPONSIBLE FOR PROVIDING AND INSTALLING POLE CROSS ARMS AND BRACING, PRIMARY INSULATORS, GROUND RODS, GROUND BONDING, COLD SHRINK TERMINATOR KITS, ANIMAL GUARDS, THREE PHASE FIBERGLASS EQUIPMENT BRACKET, POLYMER VISE TOP INSULATOR, NEUTRAL ATTACHMENT, PRIMARY RISER (CONDUCTORS AND CONDUIT). REFER TO SITE PLAN, POLE DETAILS ON SHEET E-035, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
8. PROPOSED PAD-MOUNTED TRANSFORMER BY THIS CONTRACT. THIS CONTRACT RESPONSIBLE FOR THE TRANSFORMER, CONCRETE PAD, CONCRETE VAULT, AND GROUNDING AS SHOWN. REFER TO 'TYPICAL UTILITY TRANSFORMER PAD AND VAULT DETAIL' FOR ADDITIONAL INFORMATION. TRANSFORMER TO BE KEPT A MINIMUM OF 10'-0" FROM ALL STRUCTURES, ACCESS DRIVES, BUILDINGS, UNDERGROUND UTILITIES, AND ALL OTHER ABOVE GRADE EQUIPMENT. IN ADDITION, TRANSFORMER TO BE KEPT A MINIMUM OF 25'-0" FROM ABOVE GRADE EXPOSED GAS LINES, GAS METERS, WATER LINES, AND SEWER LINES. FINAL LOCATION TO BE COORDINATED IN THE FIELD WITH THE UTILITY, OWNER, ENGINEER AND APPLICABLE CONTRACTOR TO AVOID CONFLICT WITH EXISTING SITE CONDITIONS AND PROPOSED WORK, AS WELL AS COMPLY WITH ALL UTILITY REQUIREMENTS. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAM & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
9. CONTRACTOR TO BOND TO BUILDING GROUND SYSTEM AND LIGHTING PROTECTION SYSTEM. UTILIZE #1/0 COPPER GROUND CONDUCTOR UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. MAIN SERVICE DISCONNECT. PROVIDE AS SERVICE ENTRANCE RATED. PROVIDE SERVICE ENTRANCE LABEL AND LABEL INDICATING SWITCH POSITION PER NEC. IN ADDITION MAIN SERVICE DISCONNECT TO BE LABELED WITH MAX AVAILABLE FAULT CURRENT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11. MAIN SERVICE DISCONNECT TO CONTAIN GROUND FAULT PROTECTION AND A DIGITRIP 1150+ ELECTRONIC TRIP UNIT WITH LSIG PROTECTION. MAIN SERVICE DISCONNECT TO BE A FIXED MOUNTED MAGNUM DS LOW VOLTAGE POWER CIRCUIT BREAKER AS MANUFACTURED BY EATON OR APPROVED EQUAL. PROVIDE PILOT LIGHT INDICATING LINE SIDE VOLTAGE IS PRESENT.
12. CIRCUIT BREAKER TO BE EQUIPPED WITH ARC FLASH REDUCTION MAINTENANCE SYSTEM. THIS FUNCTION IS TO BE ACTIVATED WITH A LOCAL SWITCH DIRECTLY ON THE CIRCUIT BREAKER. THIS FUNCTION IS REQUIRED TO COMPLY WITH NEC ARTICLE 240.87.
13. GROUND FAULT PROTECTION SYSTEM TO BE PERFORMANCE TESTED ONCE FIRST INSTALLED. TESTS TO BE IN ACCORDANCE WITH NEC 230.95 (C) AND UTILITY REQUIREMENTS. TESTS TO INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: SECONDARY CURRENT INJECTION TEST. SUBMIT RESULTS TO ENGINEER AND UTILITY UPON COMPLETION.
14. GENERATOR CIRCUITRY TO INCLUDE:
    - 4 SETS OF [(4)#350 & #3/0G, 4" C] FROM PROPOSED GENERATOR TO ATS.
    - (12)#14 & (2)#18STP, 1" C FROM PROPOSED GENERATOR TO ATS.
    - BELDEN 9729, 1" C FROM GENERATOR CONTROL SYSTEM TO REDUNDANT DISPLAY. REFER TO SPECIFICATIONS.
    - SPARE 4" C FROM PANEL GENERATOR ENCLOSURE TO MBR BUILDING ELECTRICAL ROOM.
    - (2)#4 & #8G, 1-1/4" C FROM GENERATOR LOAD CENTER TO PANEL LVP1 .
    - (4)#14, 3/4" C FROM GENERATOR CONTROL SYSTEM TO REMOTE E-STOP
15. EIGHT (8) SETS OF [(4)#500, 4"C]. CONTRACTOR TO PROVIDE 20'-0" COILED SLACK AT THE UTILITY PAD-MOUNTED TRANSFORMER. CONTRACTOR IS RESPONSIBLE FOR SECONDARY TERMINATIONS AT THE UTILITY PAD-MOUNTED TRANSFORMER. CONTRACTOR TO COORDINATE ALL TRANSFORMER SECONDARY WORK WITH THE UTILITY. PROVIDE ADDITIONAL TERMINATION/LUG KITS AS REQUIRED TO TERMINATE ALL PROPOSED CONDUCTORS.
16. PROVIDE AS 100% RATED UNIT MOUNTED CIRCUIT BREAKER WITH ELECTRONIC LSI TRIP UNIT.
17. OUTDOOR EMERGENCY GENERATOR FOUNDATION AND EQUIPMENT PAD TO BE PROVIDED BY THIS CONTRACT. TYPICAL FOR (2) TWO GENERATOR UNITS. REFER TO SITE PLAN AND 'TYPICAL GENERATOR PAD DETAIL' FOR ADDITIONAL INFORMATION/REQUIREMENTS. CLOSELY COORDINATE ALL REQUIREMENTS WITH ALL OTHER TRADE CONTRACTORS.
18. FINAL GENERATOR INTERCONNECTION CIRCUITRY TO BE COORDINATED WITH THE EQUIPMENT MANUFACTURER AND PROVIDED AS REQUIRED. FOR BIDDING PURPOSES ASSUME CIRCUITRY BETWEEN GENERATOR UNITS TO INCLUDE:
    - (12)#14 & (2)#18STP, 1" C
    - SPARE 4" C.
19. PROVIDE CUSTOMER POWER METERING INTERNAL TO SWITCHBOARD/PANELBOARD. METER TO BE MODEL POWER XPERT METER 3000/1000 SERIES AS MANUFACTURED BY EATON OR APPROVED EQUAL. PROVIDE METER WITH OPTIONAL COMMUNICATIONS EXPANSION CARD TO ENABLE ETHERNET CONNECTION TO SCADA FOR MONITORING. PROVIDE ALL REQUIRED INTERNAL PROTECTION AND CABLING AS REQUIRED.
20. EIGHT (8) SETS OF [(4)#500 & #500G, 4"C].
21. PROVIDE SECONDARY SURGE PROTECTIVE DEVICE SUITABLE FOR INSTALLED SERVICE PER MANUFACTURERS RECOMMENDATIONS. AT MINIMUM DEVICE TO BE RATED FOR A SURGE CAPACITY RATING OF 200KA PER PHASE, BE A TYPE 1 DEVICE, 20KA NOMINAL DISCHARGE CURRENT, AND CONTAIN STANDARD PACKAGE OPTIONS/FEATURES. PROVIDE DEVICE INTERNAL TO MAIN SWITCHBOARD AND PROVIDE DISCONNECT AS REQUIRED. BOND TO BUILDING GROUND SYSTEM.
22. MAIN SWITCHBOARD TO BE FRONT ACCESSIBLE AND PROVIDED WITHIN A NEMA 1 ENCLOSURE. SWITCHBOARD ASSEMBLY TO BE RATED FOR A MINIMUM 65KAIC. IN ADDITION SWITCHBOARD TO BE PROVIDED WITH INTEGRAL SURGE PROTECTION AND CUSTOMER METERING. REFER TO ELECTRICAL ELEVATION AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. SWITCHBOARD TO BE CONFIGURED FOR TOP/BOTTOM CONDUIT ENTRY WITH THE MAIN BREAKER ON THE RIGHT MOST SECTION WITH ALL SUBSEQUENT SECTIONS TO THE LEFT (WHILE LOOKING AT THE SWITCHBOARD FRONT). SWITCHBOARD TO BE AS MANUFACTURED BY EATON OR APPROVED EQUAL.
23. (3)#1/0 & #6G, 2"C.
24. REFER TO ELECTRICAL SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
25. (4)#4/0 & #4G, 3"C
26. NOT ALL LOADS SHOWN FOR CLARITY. REFER TO EQUIPMENT CONNECTION SCHEDULE, PANEL SCHEDULES, ELEVATIONS, AND SUPPLEMENTAL RISER DIAGRAMS FOR ADDITIONAL CIRCUITING INFORMATION/REQUIREMENTS.
27. CONTRACTOR TO BOND TO BUILDING GROUND SYSTEM. UTILIZE #4 COPPER GROUND CONDUCTOR UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
28. (16)#14, 1"C
29. CONTRACTOR TO BOND TO BUILDING GROUND SYSTEM AND LIGHTING PROTECTION SYSTEM. UTILIZE #400 COPPER GROUND CONDUCTOR UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
30. CONTRACTOR TO PROVIDE TWO (2) 3/4"Ø x 10' COPPER GROUND RODS. PROVIDE GROUNDING ELECTRODE FOR BUILDING SERVICE PER NEC. GROUND RODS TO BE PLACED AT MINIMUM OF 10 FEET APART. BOND GROUND RODS TOGETHER WITH A LOOPED #2 COPPER CONDUCTOR.
31. (3)#6 & #8G, 1-1/2"C.
32. (4)#1/0 & #6G, 2"C
33. (3)#10 & #10G, 1"C.
34. PROVIDE AS 3M COLD SHRINK QT-III TERMINATION KIT. TYPICAL OF THREE (3). INSTALL ON THREE PHASE FIBERGLASS EQUIPMENT BRACKET PER MANUFACTURERS RECOMMENDATIONS. PROVIDE AND INSTALL ANIMAL GUARD ON COLD SHRINK TERMINATION KIT PER MANUFACTURERS RECOMMENDATIONS. REFER TO POLE DETAILS ON SHEET E-035 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
35. FOUR (4) SETS OF [(4)#500 & #4/0G, 4"C]
36. TWO (2) SETS OF [(4)#4/0 & #4G, 3"C]
37. CONTRACTOR TO PROVIDE TWO (2) 3/4"Ø x 10' COPPER GROUND RODS. PROVIDE GROUNDING ELECTRODE FOR BUILDING SERVICE PER NEC. GROUND RODS TO BE PLACED AT MINIMUM OF 10 FEET APART. BOND GROUND RODS TOGETHER WITH A LOOPED #400 COPPER CONDUCTOR. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
38. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
39. PROVIDE BREAKER WITH ELECTRONIC LSI TRIP UNIT. COORDINATE PROTECTIVE DEVICE SETTINGS WITH COORDINATION STUDY. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
40. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM EQUIPMENT AT ALL TIMES. PROVIDE AND INSTALL 3/4"Ø x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF FOUR (4) GROUND RODS. ALL GROUND CONDUCTORS SHALL BE #3/0 COPPER, U.O.N.
41. PROVIDE SPARE CONDUIT AS SHOWN. STUB CONDUIT ADJACENT TO SERVICE EQUIPMENT OR AS DIRECTED BY UTILITY/OWNER. PROVIDE PULL STRING AND CAP BOTH ENDS. LABEL BOTH ENDS OF SPARE CONDUIT INDICATING ORIGIN/DESTINATION.
42. SPARE 2" CONDUIT.
43. PROVIDE AND INSTALL TWO (2) 3/4"Φ x 10'-0" COPPER GROUND RODS. BOND ALL EQUIPMENT ON PRIMARY METERING RISER POLE AS SHOWN ON POLE DETAILS ON SHEET E-035 OR AS REQUIRED BY THE UTILITY. GROUND ROD TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM POLES AT ALL TIMES. ALL GROUND CONDUCTORS SHALL BE #1/0 COPPER, U.O.N.
44. (2)#14, 3/4"C. CIRCUIT TO BE UTILIZED TO SHUT DOWN THE PROPOSED VFD IN THE EVENT THE DISCONNECT IS OPENED (PREVENT DAMAGE TO THE PROPOSED VFD) AND REENGAGE THE VFD WHEN THE DISCONNECT IS CLOSED.
45. PROPOSED DISCONNECT SWITCH TO BE PROVIDED WITH 2 SETS OF AUXILIARY CONTACTS. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION.
46. (3)#2 & #8G, 1-1/2"C, PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE LISTED AS MINIMUM. PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING VFD CABLE.
47. FACTORY CABLE BY EQUIPMENT MANUFACTURER. PROVIDE 2" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH EQUIPMENT MANUFACTURER.
48. (3)#8 & #10G, 1"C.
49. (3)#6 & #10G, 1-1/2"C.
50. CONTRACTOR TO PROVIDE FOUR (4) DEVICE LOCAL CONTROL STATION. STATION TO INCLUDE START (MOMENTARY SWITCH), STOP (MOMENTARY SWITCH), HAND/OFF/AUTO (THREE (3) POSITION SELECTOR SWITCH) AND E-STOP (PUSH BUTTON). STATION TO BE RATED NEMA 4X (NON-METALLIC / FIBERGLASS). ENCLOSURE TO BE PROVIDED AS NEMA 4X (NON-METALLIC / FIBERGLASS), FOUR (4) DEVICE, AND SUPPORT TWO CONTACT BLOCK DEPTH. CONTRACTOR TO PROVIDE MOUNTING NUTS, LEGEND PLATES, OPERATORS, CONTACT BLOCKS, AND ENCLOSURE FOR A COMPLETE UL LISTED CONTROL STATION ASSEMBLY. PROVIDE AS KILLARK HKH SERIES OR APPROVED EQUAL. TYPICAL OF THREE (3) CONTROL STATIONS ONE (1) FOR EACH INFLUENT PUMP.

MHE ENGINEERING
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BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS

REVISIONS

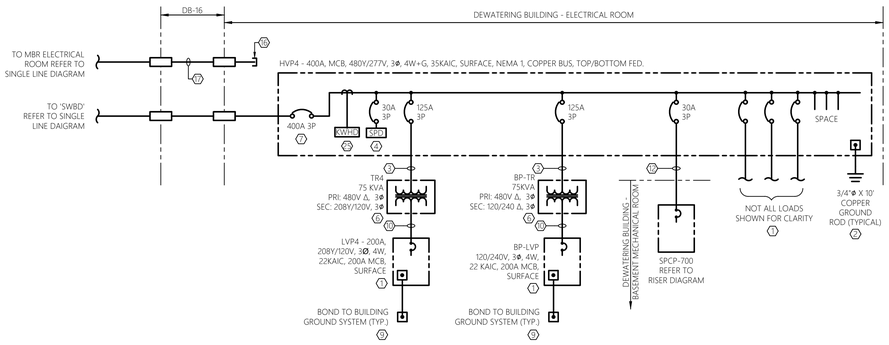
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

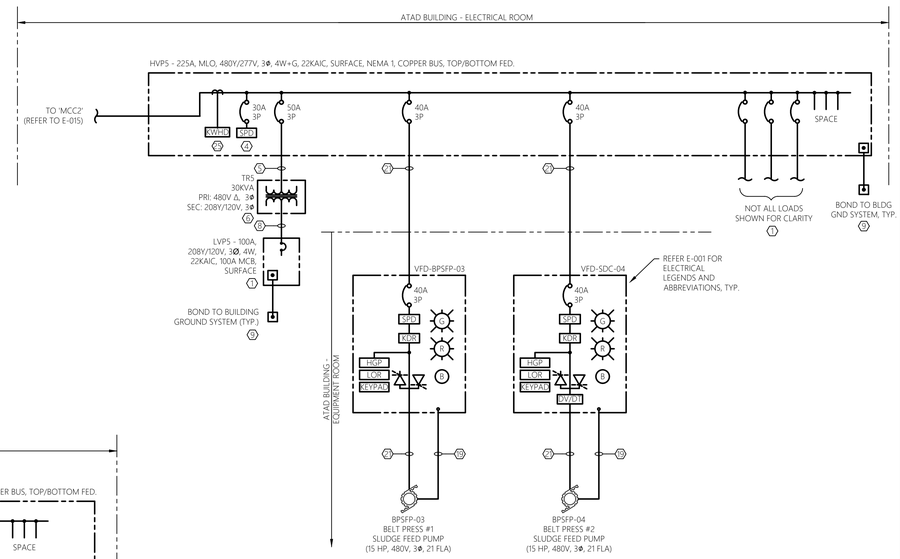
SHEET NO.

E-012

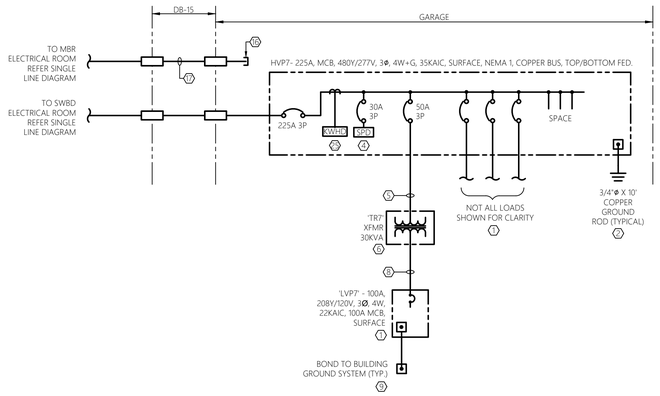
PROJECT # 18-732 — PHASE #



1 E-013 ELECTRICAL NEW WORK SINGLE LINE DIAGRAM
SCALE: NTS — DEWATERING BUILDING



1 E-013 ELECTRICAL NEW WORK SINGLE LINE DIAGRAM
SCALE: NTS — ATAD BUILDING



2 E-013 ELECTRICAL NEW WORK SINGLE LINE DIAGRAM
SCALE: NTS — GARAGE

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. NEW ELECTRICAL EQUIPMENT BASIS OF DESIGN = EATON
3. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
4. ALL CONDUCTORS AND EQUIPMENT NOT SHOWN FOR CLARITY, COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
5. REFER TO CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. REFER TO ELECTRICAL FLOOR PLAN DRAWINGS AND ELECTRICAL SITE PLAN FOR GENERAL LOCATIONS AND DUCT BANK INFORMATION.
7. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
8. CONTRACTOR TO PROVIDE ADDITIONAL LUG TERMINATION KITS OR PIN ADAPTORS WITHIN EQUIPMENT SHOWN/SPECIFIED AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.
9. CIRCUITS SHOWN ARE POWER. REFER TO CONTROL RISER DIAGRAMS FOR INSTRUMENTATION AND CONTROL CIRCUITS. REFER TO SCHEDULES FOR ADDITIONAL CIRCUITS.
10. NOT ALL REQUIRED THRU-WALL AND THRU-FLOOR WATERTIGHT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL/FLOOR WATERTIGHT PENETRATION FOR ALL PENETRATIONS WITHIN BUILDING EXTERIOR WALLS AND FLOORS. REFER TO DETAIL SHEETS FOR ADDITIONAL INFORMATION.
11. CONTRACTOR SHALL INCLUDE A SHORT CIRCUIT, COORDINATION, AND ARC FLASH HAZARD ANALYSIS FOR THIS PROJECT. STUDY SHALL BE PERFORMED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. SUBMIT SHORT CIRCUIT REPORT FINDINGS PRIOR TO SUBMITTAL DOCUMENTS ON ELECTRICAL GEAR & CONFIRM ALL PROPOSED AIC RATINGS. PROVIDE COORDINATION AND ARC FLASH HAZARD ANALYSIS FOR ALL ELECTRICAL EQUIPMENT. CONTRACTOR SHALL PROVIDE THE APPROPRIATE WARNING STICKERS ON ALL PANELBOARDS, CONTROL PANELS, AND EQUIPMENT DISCONNECTS. COORDINATION AND ARC FLASH HAZARD ANALYSIS TO BE IN ACCORDANCE WITH THE LATEST IEEE & NFPA 70E REQUIREMENTS. CONTRACTOR TO PROVIDE STUDY RESULTS IN REPORT FORMAT AND SUBMIT TO THE ENGINEER FOR REVIEW. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
12. CONTRACTOR TO COORDINATE OVERALL SEQUENCE OF CONSTRUCTION WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
13. SERVICE EQUIPMENT TO BE LABELED WITH MAX AVAILABLE FAULT CURRENT PER NEC 110.24. CONTRACTOR TO PROVIDE A SHORT CIRCUIT ANALYSIS TO DETERMINE THE MAX AVAILABLE FAULT CURRENT. ANALYSIS TO BE PERFORMED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. SUBMIT SHORT CIRCUIT REPORT TO ENGINEER FOR APPROVAL DURING THE SUBMITTAL PHASE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
14. REFER TO DUCT BANK SCHEDULE FOR ADDITIONAL SPARE CONDUIT REQUIREMENTS.
15. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION (UNLESS OTHERWISE NOTED).

SHEET KEY NOTES:

(1) NOT ALL LOADS SHOWN FOR CLARITY, REFER TO EQUIPMENT CONNECTION SCHEDULE, PANEL SCHEDULES, ELEVATIONS, AND SUPPLEMENTAL RISER DIAGRAMS FOR ADDITIONAL CIRCUITING INFORMATION/REQUIREMENTS.

(2) CONTRACTOR TO PROVIDE TWO (2) 3/4"Ø x 10' COPPER GROUND RODS. PROVIDE GROUNDING ELECTRODE FOR BUILDING. SERVICE PER NEC. GROUND RODS TO BE PLACED AT MINIMUM OF 10 FEET APART. BOND GROUND RODS TOGETHER WITH A LOOPED #3 COPPER CONDUCTOR.

(3) (3)#1/0 & #6G, 2"C

(4) PROVIDE SECONDARY SURGE PROTECTIVE DEVICE SUITABLE FOR INSTALLED SERVICE PER MANUFACTURERS RECOMMENDATIONS, AT MINIMUM DEVICE TO BE RATED FOR A SURGE CAPACITY RATING OF 160KA PER PHASE, BE A TYPE 2 DEVICE, 20KA NOMINAL DISCHARGE CURRENT, AND CONTAIN STANDARD PACKAGE OPTIONS/FEATURES. PROVIDE DEVICE INTERNAL TO MAIN SWITCHBOARD AND PROVIDE DISCONNECT AS REQUIRED. BOND TO BUILDING GROUND SYSTEM.

(5) (3)#6 & #8G, 1-1/2"C.

(6) REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(7) PROVIDE BREAKER WITH ELECTRONIC LSI TRIP UNIT. COORDINATE PROTECTIVE DEVICE SETTINGS WITH COORDINATION STUDY. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

(8) (4)#1/0 & #6G, 2"C

(9) CONTRACTOR TO BOND TO STRUCTURE GROUND SYSTEM. UTILIZE #4 COPPER GROUND CONDUCTOR UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(10) (4)#4/0 & #4G, 2-1/2"C

(11) (2)#14, 3/4"C. CIRCUIT TO BE UTILIZED TO SHUT DOWN THE PROPOSED VFD IN THE EVENT THE DISCONNECT IS OPENED (PREVENT DAMAGE TO THE PROPOSED VFD) AND REENGAGE THE VFD WHEN THE DISCONNECT IS CLOSED.

(12) (4)#10 & #10G, 3/4"C.

(13) PROPOSED DISCONNECT SWITCH TO BE PROVIDED WITH A SET OF AUXILIARY CONTACTS. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION.

(14) REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(15) FACTORY CABLE BY EQUIPMENT MANUFACTURER. PROVIDE 3/4" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH EQUIPMENT MANUFACTURER.

(16) PROVIDE SPARE CONDUIT AS SHOWN. STUB CONDUIT ADJACENT TO SERVICE EQUIPMENT OR AS DIRECTED BY UTILITY/OWNER. PROVIDE PULL STRING AND CAP BOTH ENDS. LABEL BOTH ENDS OF SPARE CONDUIT INDICATING ORIGIN/DESTINATION.

(17) SPARE 4" CONDUIT.

(18) (4)#14, 3/4"C.

(19) (16)#14 & (4)#18STP, 1"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED VFD. IN THE EVENT OF A MOTOR HIGH TEMPERATURE THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE TO UNIT. NOTE, SPARE CONDUCTORS TO BE UTILIZED FOR VARIOUS INPUT/OUTPUT FUNCTIONS.

(20) (4)#4/0 & #4G, 4"C.

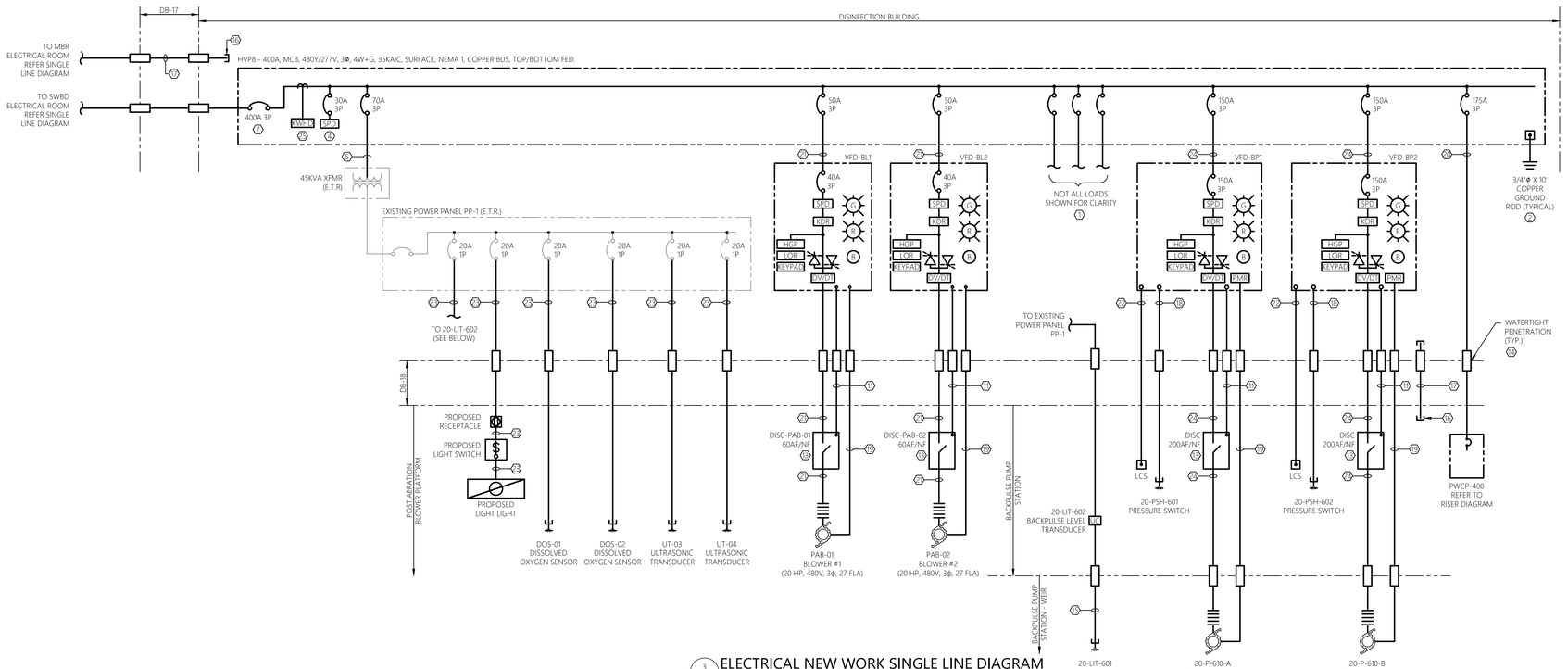
(21) (3)#8 & #10G, 1"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.

(22) (10)#14 & (2)18STP, 1"C

(23) (2)#12 & #12G, 3/4"C

(24) (3)#1/0 & #6G, 2" C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE LISTED AS MINIMUM. PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING VFD CABLE.

(25) PROVIDE CUSTOMER POWER METERING INTERNAL TO PANELBOARD. METER TO BE MODEL POWER XPERT METER 1000 SERIES AS MANUFACTURED BY EATON OR APPROVED EQUAL. PROVIDE METER WITH OPTIONAL COMMUNICATIONS EXPANSION CARD TO ENABLE ETHERNET CONNECTION TO SCADA FOR MONITORING. PROVIDE ALL REQUIRED INTERNAL PROTECTION AND CABLING AS REQUIRED.



3 E-013 ELECTRICAL NEW WORK SINGLE LINE DIAGRAM
SCALE: NTS — CHEMICAL FEED BUILDING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS

REVISIONS

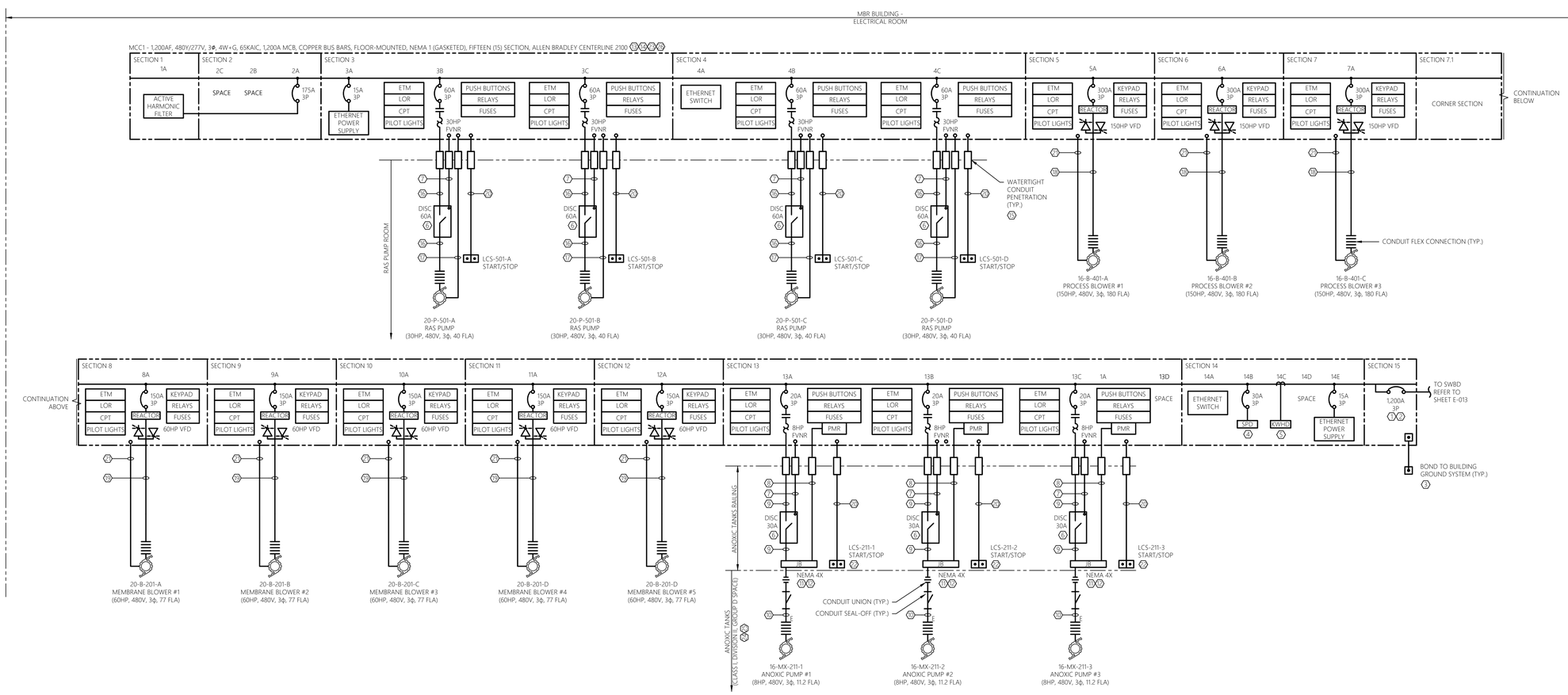
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

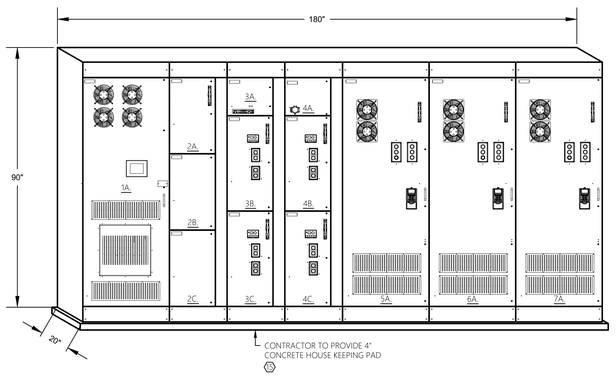
SHEET NO.

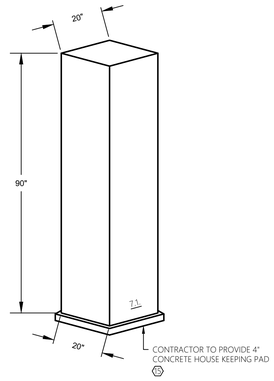
E-013

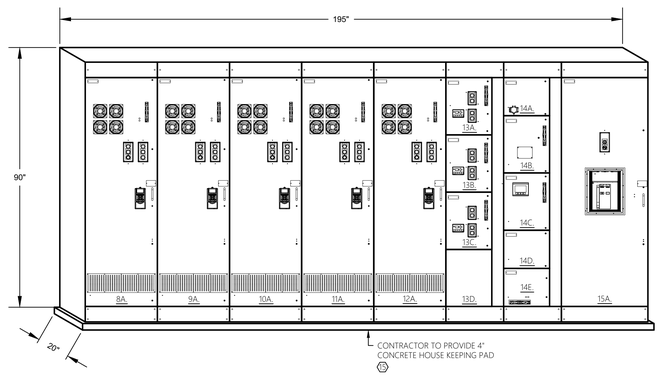
PROJECT # 18-732 PHASE #



1 E-014 ELECTRICAL NEW WORK SINGLE LINE DIAGRAM
SCALE: NTS MCC1



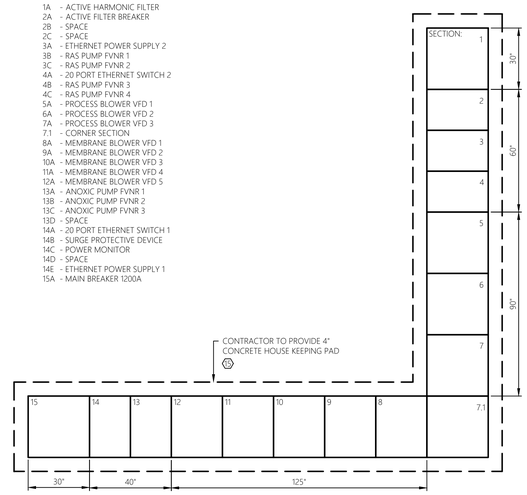




2 E-014 ELECTRICAL ELEVATION
SCALE: NTS MCC1

MCC1

1A - ACTIVE HARMONIC FILTER
2A - ACTIVE FILTER BREAKER
2B - SPACE
2C - SPACE
3A - ETHERNET POWER SUPPLY 2
3B - RAS PUMP FVNR 1
3C - RAS PUMP FVNR 2
4A - 20 PORT ETHERNET SWITCH 2
4B - RAS PUMP FVNR 3
4C - RAS PUMP FVNR 4
5A - PROCESS BLOWER VFD 1
6A - PROCESS BLOWER VFD 2
7A - PROCESS BLOWER VFD 3
7.1 - CORNER SECTION
8A - MEMBRANE BLOWER VFD 1
9A - MEMBRANE BLOWER VFD 2
10A - MEMBRANE BLOWER VFD 3
11A - MEMBRANE BLOWER VFD 4
12A - MEMBRANE BLOWER VFD 5
13A - ANOXIC PUMP FVNR 1
13B - ANOXIC PUMP FVNR 2
13C - ANOXIC PUMP FVNR 3
13D - SPACE
14A - 20 PORT ETHERNET SWITCH 1
14B - SURGE PROTECTIVE DEVICE
14C - POWER MONITOR
14D - SPACE
14E - ETHERNET POWER SUPPLY 1
15A - MAIN BREAKER 1200A



3 E-014 ELECTRICAL PAD LAYOUT
SCALE: NTS MCC1

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. NEW ELECTRICAL EQUIPMENT BASIS OF DESIGN - ALLEN BRADLEY
3. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
4. ALL CONDUCTORS AND EQUIPMENT NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
5. REFER TO CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. REFER TO ELECTRICAL FLOOR PLAN DRAWINGS AND ELECTRICAL SITE PLAN FOR GENERAL LOCATIONS AND DUCT BANK INFORMATION.
7. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
8. CONTRACTOR TO PROVIDE ADDITIONAL LUG TERMINATION KITS OR PIN ADAPTORS WITHIN EQUIPMENT SHOWN/SPECIFIED AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.
9. CIRCUITS SHOWN ARE POWER. REFER TO CONTROL RISER DIAGRAMS FOR INSTRUMENTATION AND CONTROL CIRCUITS. REFER TO SCHEDULES FOR ADDITIONAL CIRCUITS.
10. NOT ALL REQUIRED THRU-WALL AND THRU-FLOOR WATERTIGHT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL/FLOOR WATERTIGHT PENETRATION FOR ALL PENETRATIONS WITHIN BUILDING EXTERIOR WALLS AND FLOORS. REFER TO DETAIL SHEETS FOR ADDITIONAL INFORMATION.
11. CONTRACTOR SHALL INCLUDE A SHORT CIRCUIT, COORDINATION, AND ARC FLASH HAZARD ANALYSIS FOR THIS PROJECT. STUDY SHALL BE PERFORMED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. SUBMIT SHORT CIRCUIT REPORT FINDINGS PRIOR TO SUBMITTAL DOCUMENTS ON ELECTRICAL GEAR & CONFIRM ALL PROPOSED AIC RATINGS. PROVIDE COORDINATION AND ARC FLASH HAZARD ANALYSIS FOR ALL ELECTRICAL EQUIPMENT. CONTRACTOR SHALL PROVIDE THE APPROPRIATE WARNING STICKERS ON ALL PANELBOARDS, CONTROL PANELS, AND EQUIPMENT DISCONNECTS. COORDINATION AND ARC FLASH HAZARD ANALYSIS TO BE IN ACCORDANCE WITH THE LATEST IEEE & NFPA 70E REQUIREMENTS. CONTRACTOR TO PROVIDE STUDY RESULTS IN REPORT FORMAT AND SUBMIT TO THE ENGINEER FOR REVIEW. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
12. CONTRACTOR TO COORDINATE OVERALL SEQUENCE OF CONSTRUCTION WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
13. SERVICE EQUIPMENT TO BE LABELED WITH MAX AVAILABLE FAULT CURRENT PER NEC 110.24. CONTRACTOR TO PROVIDE A SHORT CIRCUIT ANALYSIS TO DETERMINE THE MAX AVAILABLE FAULT CURRENT. ANALYSIS TO BE PERFORMED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. SUBMIT SHORT CIRCUIT REPORT TO ENGINEER FOR APPROVAL DURING THE SUBMITTAL PHASE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
14. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION (UNLESS OTHERWISE NOTED).

SHEET KEY NOTES:

1. CIRCUIT BREAKER TO BE PROVIDED WITH AN ELECTRONIC TRIP UNIT WITH LSI PROTECTION.
2. CIRCUIT BREAKER TO BE EQUIPPED WITH ARC FLASH REDUCTION MAINTENANCE SYSTEM. THIS FUNCTION IS TO BE ACTIVATED WITH A LOCAL SWITCH DIRECTLY ON THE CIRCUIT BREAKER. THIS FUNCTION IS REQUIRED TO COMPLY WITH NEC ARTICLE 240.87.
3. CONTRACTOR TO BOND TO BUILDING GROUND SYSTEM. UTILIZE #3/0 COPPER GROUND CONDUCTOR UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
4. PROVIDE SECONDARY SURGE PROTECTIVE DEVICE SUITABLE FOR INSTALLED SERVICE PER MCC MANUFACTURERS RECOMMENDATIONS. AT MINIMUM DEVICE TO BE RATED FOR A SURGE CAPACITY RATING OF 200KA PER PHASE, BE A TYPE 1 DEVICE, 20KA NOMINAL DISCHARGE CURRENT, AND CONTAIN STANDARD PACKAGE OPTIONS/FEATURES. PROVIDE DEVICE INTERNAL TO MCC AND PROVIDE DISCONNECT AS REQUIRED. BOND TO BUILDING GROUND SYSTEM.
5. PROVIDE CUSTOMER POWER METERING INTERNAL TO MCC. METER TO BE MODEL POWER XPERT METER 2000 SERIES AS MANUFACTURED BY EATON OR APPROVED EQUAL. PROVIDE ALL REQUIRED OVERCURRENT PROTECTION AND CABLING AS REQUIRED.
6. PROPOSED DISCONNECT SWITCH TO BE PROVIDED WITH A SET OF AUXILIARY CONTACTS. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION.
7. (4)#14, 3/4"C. CIRCUIT TO BE UTILIZED TO SHUT DOWN THE PROPOSED STARTER IN THE EVENT THE DISCONNECT IS OPENED AND PROVIDE STATUS OF OPEN DISCONNECT VIA PILOT LIGHT.
8. (6)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH AND SEAL FAILURE. CIRCUIT TO CONTROL TERMINALS OF PROPOSED STARTER. IN THE EVENT OF A MOTOR HIGH TEMPERATURE OR LEAKAGE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
9. (3)#10 & #10G, 1"C.
10. FACTORY CABLE. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE CONDUIT SYSTEM WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. PROVIDE CONDUIT SIZE AS REQUIRED PER MANUFACTURER.
11. CONTRACTOR TO PROVIDE STAINLESS STEEL (NEMA 4X) JUNCTION BOX TO SERVE AS A PULL POINT TO EXTEND CIRCUITRY AS SHOWN. CONTRACTOR TO FIELD VERIFY AND COORDINATE CONDUIT ARRANGEMENT ENTERING/LEAVING PROPOSED JUNCTION BOX. CONTRACTOR TO ASSUME A 6"W X 8"L X 4"D (INSIDE DIMENSIONS) BOX IS REQUIRED FOR BIDDING PURPOSES. FINAL BOX SIZE TO COMPLY WITH NEC ARTICLE 314. JUNCTION BOX TO BE 'STB' SERIES AS MANUFACTURED BY EATON OR APPROVED EQUAL.
12. CONTRACTOR TO PROVIDE NECESSARY TERMINAL STRIPS AND SPLICE KITS WITHIN JUNCTION BOX TO EXTEND CIRCUITRY AS SHOWN.
13. MOTOR CONTROL CENTER (MCC) TO BE FRONT ACCESSIBLE AND PROVIDED WITHIN A NEMA 1 (GASKETED) ENCLOSURE. MCC ASSEMBLY TO BE RATED FOR A MINIMUM 65KAIC. IN ADDITION, MCC TO BE PROVIDED WITH INTEGRAL SURGE PROTECTION AND CUSTOMER METERING. REFER TO ELECTRICAL ELEVATION AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. MCC TO BE MODEL CENTERLINE 2100 AS MANUFACTURED BY ALLEN-BRADLEY OR APPROVED EQUAL. CONTRACTOR TO PROVIDE 4" CONCRETE HOUSEKEEPING PAD AND ALL REQUIRED ANCHORING EQUIPMENT, MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
14. NOT ALL LOADS SHOWN FOR CLARITY. REFER TO EQUIPMENT CONNECTION SCHEDULE, MCC SCHEDULE, ELEVATIONS, AND SUPPLEMENTAL WIRING DIAGRAMS FOR ADDITIONAL CIRCUITING INFORMATION/REQUIREMENTS.
15. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
16. (3)#6 & #10G, 1-1/2"C
17. (4)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED STARTER. IN THE EVENT OF A MOTOR HIGH TEMPERATURE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
18. (3)#300 & #4G, 4"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM. PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.
19. (3)#1/0 & #6G, 2"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.
20. (12)#14, 3/4"C.
21. (16)#14 & (4)#18STP, 1"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED VFD. IN THE EVENT OF A MOTOR HIGH TEMPERATURE THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE TO UNIT. NOTE, SPARE CONDUCTORS TO BE UTILIZED FOR VARIOUS INPUT/OUTPUT FUNCTIONS.
22. CONTRACTOR TO PROVIDE START/STOP PUSH BUTTON LOCAL CONTROL STATION WITHIN NEMA 4X ENCLOSURE.
23. CONTRACTOR TO PROVIDE ALL VFD WITHIN THE MCC AS HEAVY DUTY VARIABLE FREQUENCY AC DRIVE WITH CIRCUIT BREAKER. VFD TO BE MODEL POWERFLEX 750 SERIES AS MANUFACTURED BY ALLEN BRADLEY OR APPROVED EQUAL.
24. TANK INTERIOR IS A CLASS I DIVISION II GROUP D SPACE. THE CLASS I DIVISION II GROUP D SPACE EXTENDS TO ENVELOPE OF 18" SURROUNDING TANK. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I DIVISION II GROUP D ENVIRONMENT.
25. ALL ELECTRICAL EQUIPMENT, DEVICES, AND RACEWAY SYSTEMS TO BE KEPT OUT OF THE CLASSIFIED AREA AT ALL TIMES.
26. CONTRACTOR TO FOLLOW MANUFACTURER'S SPECIAL HANDLING REQUIREMENTS CLOSELY WHILE RIGGING EQUIPMENT THRU ACCESS DOORS. EQUIPMENT MANUFACTURER TO BE ON SITE WHILE EQUIPMENT IS MOVED THRU ACCESS DOORS AND RIGGED INTO FINAL INSTALL LOCATION. NOTE, MCC TO BE SHIPPED AS MULTIPLE SECTIONS. EACH SECTION TO BE RIGGED THRU ACCESS DOORS SEPARATELY PRIOR TO ASSEMBLING TOGETHER. CONTRACTOR TO FIELD VERIFY AND COORDINATE CLOSELY WITH THE EQUIPMENT MANUFACTURER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS

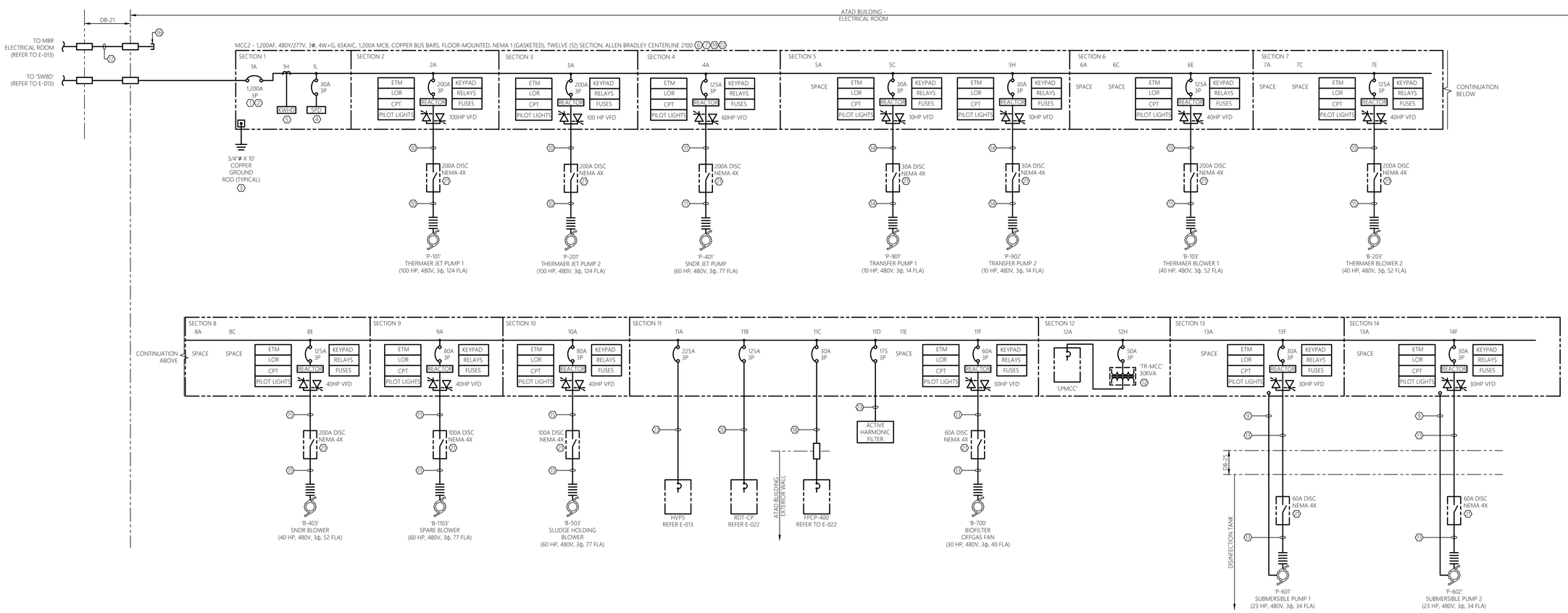
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

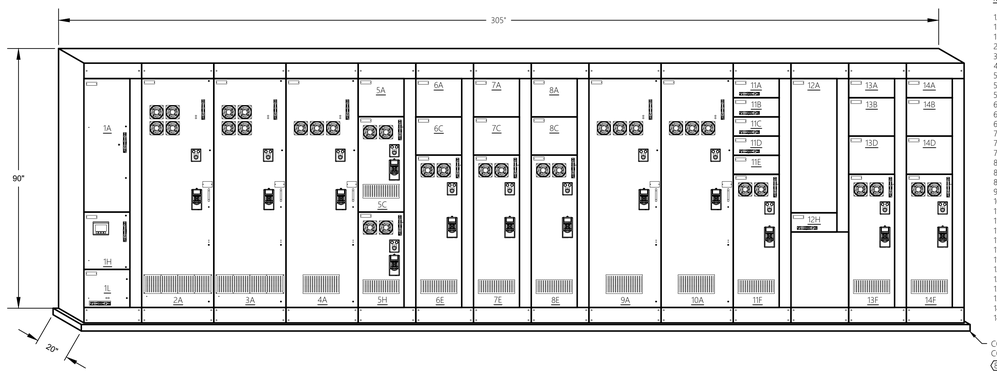
SHEET NO.
E-014

PROJECT # 18-732 PHASE #



1 E-015 SCALE: NTS MCC2

ELECTRICAL NEW WORK SINGLE LINE DIAGRAM



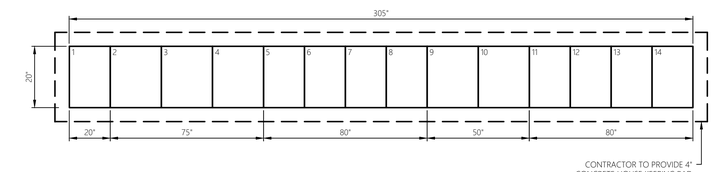
MCC1

1A - MAIN BREAKER 1,200A
1H - POWER MONITOR
1L - SURGE PROTECTIVE DEVICE
2A - THERMAER JET PUMP 1 VFD
3A - THERMAER JET PUMP 2 VFD
4A - SNDR JET PUMP VFD
5A - SPACE
5C - TRANSFER PUMP 1 VFD
5H - TRANSFER PUMP 2 VFD
6A - SPACE
6C - SPACE
6E - THERMAER BLOWER 1 VFD
7A - SPACE
7B - SPACE
7E - THERMAER BLOWER 2 VFD
8A - SPACE
8C - SPACE
8E - SNDR BLOWER VFD
9A - SPARE BLOWER VFD
10A - SLUDGE HOLDING BLOWER VFD
11A - 225A BREAKER HVP5
11B - 125A BREAKER RDT-CP
11C - 30A BREAKER RDTFP-CP
11D - 175A BREAKER ACTIVE HARMONIC FILTER
11E - SPACE
11F - BIOFILTER OFF GAS FAN VFD
12A - LPMCC
12B - TRMCC
13A - SPACE
13F - SUBMERSIBLE PUMP 1 VFD
14A - SPACE
14F - SUBMERSIBLE PUMP 2 VFD

CONTRACTOR TO PROVIDE 4" CONCRETE HOUSE KEEPING PAD (Y)

2 E-015 SCALE: NTS MCC2

ELECTRICAL ELEVATION



3 E-015 SCALE: NTS MCC2

ELECTRICAL PAD LAYOUT

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. NEW ELECTRICAL EQUIPMENT BASIS OF DESIGN - ALLEN BRADLEY
3. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
4. ALL CONDUCTORS AND EQUIPMENT NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
5. REFER TO CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. REFER TO ELECTRICAL FLOOR PLAN DRAWINGS AND ELECTRICAL SITE PLAN FOR GENERAL LOCATIONS AND DUCT BANK INFORMATION.
7. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
8. CONTRACTOR TO PROVIDE ADDITIONAL LUG TERMINATION KITS OR PIN ADAPTORS WITHIN EQUIPMENT SHOWN/SPECIFIED AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.
9. CIRCUITS SHOWN ARE POWER. REFER TO CONTROL RISER DIAGRAMS FOR INSTRUMENTATION AND CONTROL CIRCUITS. REFER TO SCHEDULES FOR ADDITIONAL CIRCUITS.
10. NOT ALL REQUIRED THRU-WALL AND THRU-FLOOR WATERTIGHT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL/FLOOR WATERTIGHT PENETRATION FOR ALL PENETRATIONS WITHIN BUILDING EXTERIOR WALLS AND FLOORS. REFER TO DETAIL SHEETS FOR ADDITIONAL INFORMATION.
11. CONTRACTOR SHALL INCLUDE A SHORT CIRCUIT, COORDINATION, AND ARC FLASH HAZARD ANALYSIS FOR THIS PROJECT. STUDY SHALL BE PERFORMED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. SUBMIT SHORT CIRCUIT REPORT FINDINGS PRIOR TO SUBMITTAL DOCUMENTS ON ELECTRICAL GEAR & CONFIRM ALL PROPOSED AIC RATINGS. PROVIDE COORDINATION AND ARC FLASH HAZARD ANALYSIS FOR ALL ELECTRICAL EQUIPMENT. CONTRACTOR SHALL PROVIDE THE APPROPRIATE WARNING STICKERS ON ALL PANELBOARDS, CONTROL PANELS, AND EQUIPMENT DISCONNECTS. COORDINATION AND ARC FLASH HAZARD ANALYSIS TO BE IN ACCORDANCE WITH THE LATEST IEEE & NFPA 70E REQUIREMENTS. CONTRACTOR TO PROVIDE STUDY RESULTS IN REPORT FORMAT AND SUBMIT TO THE ENGINEER FOR REVIEW. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
12. CONTRACTOR TO COORDINATE OVERALL SEQUENCE OF CONSTRUCTION WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
13. SERVICE EQUIPMENT TO BE LABELED WITH MAX AVAILABLE FAULT CURRENT PER NEC 110.24. CONTRACTOR TO PROVIDE A SHORT CIRCUIT ANALYSIS TO DETERMINE THE MAX AVAILABLE FAULT CURRENT. ANALYSIS TO BE PERFORMED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER. SUBMIT SHORT CIRCUIT REPORT TO ENGINEER FOR APPROVAL DURING THE SUBMITTAL PHASE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
14. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION (UNLESS OTHERWISE NOTED).

SHEET KEY NOTES:

(1) CIRCUIT BREAKER TO BE PROVIDED WITH AN ELECTRONIC TRIP UNIT WITH LSI PROTECTION.

(2) CIRCUIT BREAKER TO BE EQUIPPED WITH ARC FLASH REDUCTION MAINTENANCE SYSTEM. THIS FUNCTION IS TO BE ACTIVATED WITH A LOCAL SWITCH DIRECTLY ON THE CIRCUIT BREAKER. THIS FUNCTION IS REQUIRED TO COMPLY WITH NEC ARTICLE 240.87.

(3) CONTRACTOR TO PROVIDE TWO (2) 3/4"ϕ x 10' COPPER GROUND RODS. PROVIDE GROUNDING ELECTRODE FOR BUILDING SERVICE PER NEC. GROUND RODS TO BE PLACED AT MINIMUM OF 10 FEET APART. BOND GROUND RODS TOGETHER WITH A LOOPED #3/0 COPPER CONDUCTOR.

(4) PROVIDE SECONDARY SURGE PROTECTIVE DEVICE SUITABLE FOR INSTALLED SERVICE PER MCC MANUFACTURERS RECOMMENDATIONS. AT MINIMUM DEVICE TO BE RATED FOR A SURGE CAPACITY RATING OF 200KA PER PHASE, BE A TYPE 1 DEVICE, 20KA NOMINAL DISCHARGE CURRENT, AND CONTAIN STANDARD PACKAGE OPTIONS/FEATURES. PROVIDE DEVICE INTERNAL TO MCC AND PROVIDE DISCONNECT AS REQUIRED. BOND TO BUILDING GROUND SYSTEM.

(5) PROVIDE CUSTOMER POWER METERING INTERNAL TO MCC. METER TO BE MODEL POWER XPERT METER 2000 SERIES AS MANUFACTURED BY EATON OR APPROVED EQUAL. PROVIDE ALL REQUIRED OVERCURRENT PROTECTION AND CABLING AS REQUIRED.

(6) MOTOR CONTROL CENTER (MCC) TO BE FRONT ACCESSIBLE AND PROVIDED WITHIN A NEMA 1 (GASKETED) ENCLOSURE. MCC ASSEMBLY TO BE RATED FOR A MINIMUM 65KAIC. IN ADDITION, MCC TO BE PROVIDED WITH INTEGRAL SURGE PROTECTION AND CUSTOMER METERING. REFER TO ELECTRICAL ELEVATION AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. MCC TO BE MODEL CENTERLINE 2100 AS MANUFACTURED BY ALLEN-BRADLEY OR APPROVED EQUAL. CONTRACTOR TO PROVIDE 4" CONCRETE HOUSEKEEPING PAD AND ALL REQUIRED ANCHORING EQUIPMENT, MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...

(7) NOT ALL LOADS SHOWN FOR CLARITY. REFER TO EQUIPMENT CONNECTION SCHEDULE, MCC SCHEDULE, ELEVATIONS, AND SUPPLEMENTAL WIRING DIAGRAMS FOR ADDITIONAL CIRCUITING INFORMATION/REQUIREMENTS.

(8) REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS

(9) (6)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY AND SEAL LEAK SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED VFD. IN THE EVENT OF A MOTOR HIGH TEMPERATURE OR LEAKAGE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.

(10) (3)#4/0 & #4G, 4"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.

(11) (3)#1/0 & #6G, 2"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.

(12) REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(13) (3)#6 & #10G, 1-1/2"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.

(14) (3)#10 & #10G, 1"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.

(15) (3)#4 & #10G, 2"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.

(16) PROVIDE SPARE CONDUIT AS SHOWN. STUB CONDUIT ADJACENT TO SERVICE EQUIPMENT OR AS DIRECTED BY UTILITY/OWNER. PROVIDE PULL STRING AND CAP BOTH ENDS. LABEL BOTH ENDS OF SPARE CONDUIT INDICATING ORIGIN/DESTINATION.

(17) SPARE 4" CONDUIT.

(18) (3)#10 & #10G, 1"C

(19) CONTRACTOR TO PROVIDE ALL VFD WITHIN THE MCC AS HEAVY DUTY VARIABLE FREQUENCY AC DRIVE WITH CIRCUIT BREAKER. VFD TO BE MODEL POWERFLEX 750 SERIES AS MANUFACTURED BY ALLEN BRADLEY OR APPROVED EQUAL.

(20) (3)#1/0 & #6G, 2"C.

(21) PROPOSED EQUIPMENT DISCONNECT TO BE PROVIDED WITH A SET OF AUXILIARY CONTACTS. REFER TO EQUIPMENT CONNECTION SCHEDULE AND RISER DIAGRAMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(22) CONTRACTOR TO FOLLOW MANUFACTURER'S SPECIAL HANDLING REQUIREMENTS CLOSELY WHILE RIGGING EQUIPMENT THRU ACCESS DOORS. EQUIPMENT MANUFACTURER TO BE ON SITE WHILE EQUIPMENT IS MOVED THRU ACCESS DOORS AND RIGGED INTO FINAL INSTALL LOCATION. NOTE, MCC TO BE SHIPPED AS MULTIPLE SECTIONS. EACH SECTION TO BE RIGGED THRU ACCESS DOORS SEPARATELY PRIOR TO ASSEMBLING TOGETHER. CONTRACTOR TO FIELD VERIFY AND COORDINATE CLOSELY WITH THE EQUIPMENT MANUFACTURER.

(23) (3)#4/0 & #4G, 2-1/2"C.

MHE ENGINEERING
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(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL NEW WORK SINGLE LINE DIAGRAMS

REVISIONS

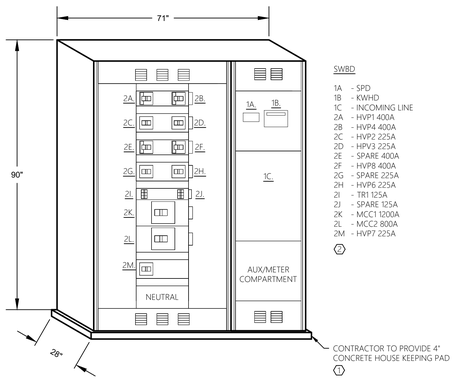
NO.	DESCRIPTION	DATE

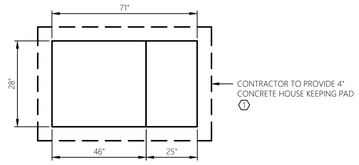
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

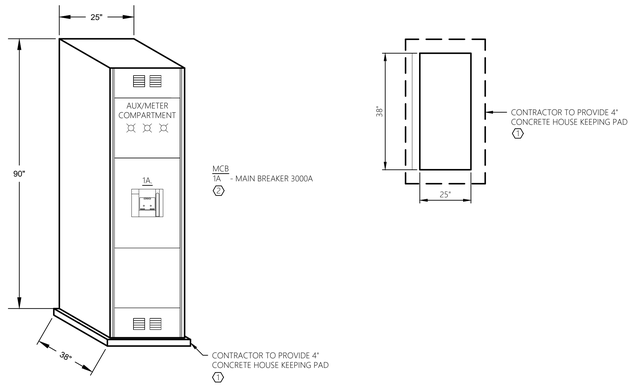
E-015

PROJECT # 18-732 PHASE #





1 E-016 ELECTRICAL ELEVATION AND PAD LAYOUT
SCALE: NTS SWITCHBOARD



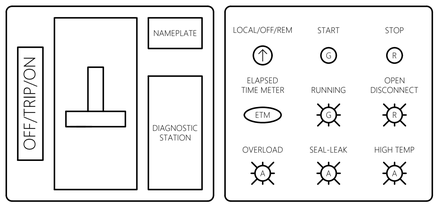
2 E-016 ELECTRICAL ELEVATION AND PAD LAYOUT
SCALE: NTS MAIN SERVICE DISCONNECT

GENERAL SHEET NOTES:

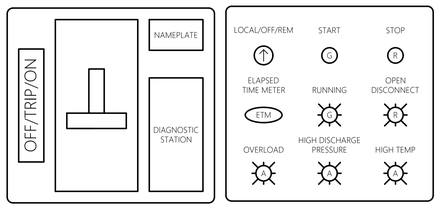
1. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS.
2. NEW ELECTRICAL EQUIPMENT BASIS OF DESIGN - ALLEN BRADLEY (MCC), SIEMENS (SWITCHBOARD)
3. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
4. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
5. REFER TO ELECTRICAL SCHEDULES AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. REFER TO ELECTRICAL RISER DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. ALL CONDUCTORS, EQUIPMENT, COMPONENTS, AND DEVICES NOT SHOWN FOR CLARITY, COORDINATE WITH ALL TRADES AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
8. CONTRACTOR TO PROVIDE ADDITIONAL LUG TERMINATION KITS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED. CIRCUITS SHOWN ARE POWER, CONTROL, AND CONTROL CIRCUIT POWER. REFER TO ELECTRICAL RISER DIAGRAMS AND ELEMENTARY WIRING DIAGRAMS FOR ADDITIONAL INSTRUMENTATION AND CONTROL CIRCUITS.
9. CONTRACTOR TO PROVIDE ADDITIONAL LUG TERMINATION KITS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.
   CIRCUITS SHOWN ARE POWER, CONTROL, AND CONTROL CIRCUIT POWER. REFER TO ELECTRICAL RISER DIAGRAMS AND ELEMENTARY WIRING DIAGRAMS FOR ADDITIONAL INSTRUMENTATION AND CONTROL CIRCUITS.
10. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS PROVIDED BY CONTRACT #1 WITH CONTRACT #1 AND OWNER. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC.. TO INSTALL PANELS & CONTROLLERS FURNISHED BY CONTRACT #1.
11. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL, WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING EXTERIOR WALLS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION.
12. ELEVATIONS SHOWN ARE GENERAL IN NATURE AND ARE INTENDED TO PROVIDE GENERAL DESIGN OVERVIEW AND INTENT. REFER TO SUBMITTAL DOCUMENTATION FOR ACTUAL LAYOUT AND FOR ADDITIONAL INFORMATION/REQUIREMENTS.
13. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS (POWER SYSTEM ANALYSIS) FOR REQUIREMENTS.
14. CONTRACTOR TO COORDINATE OVERALL SEQUENCE OF CONSTRUCTION WITH THE OWNER AND CONTRACT #1.
15. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH CONTRACT #1 AND OWNER PRIOR TO ROUGH-IN.
16. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
17. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
18. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED. ALL REQUIREMENTS TO BE PER NEC.
19. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE.
20. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION.

SHEET KEY NOTES:

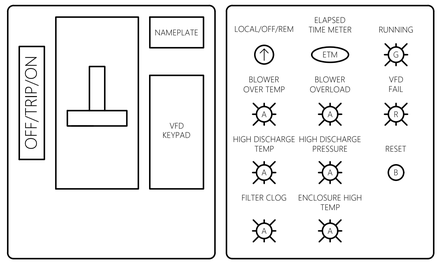
1. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. CONTRACTOR TO FOLLOW MANUFACTURER'S SPECIAL HANDLING REQUIREMENTS CLOSELY WHILE RIGGING EQUIPMENT THRU ACCESS DOORS. EQUIPMENT MANUFACTURER TO BE ON SITE WHILE EQUIPMENT IS MOVED THRU ACCESS DOORS AND RIGGED INTO FINAL INSTALL LOCATION. NOTE, EQUIPMENT MAY BE SHIPPED AS MULTIPLE SECTIONS. EACH SECTION TO BE RIGGED THRU ACCESS DOORS SEPARATELY PRIOR TO ASSEMBLING TOGETHER. CONTRACTOR TO FIELD VERIFY AND COORDINATE CLOSELY WITH THE EQUIPMENT MANUFACTURER.



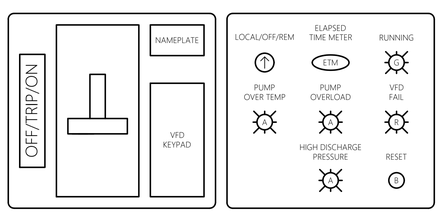
3 E-016 TYPICAL DOOR ASSEMBLY
SCALE: NTS ANOXIC MIXERS



4 E-016 TYPICAL DOOR ASSEMBLY
SCALE: NTS RAS PUMPS



5 E-016 TYPICAL DOOR ASSEMBLY
SCALE: NTS BLOWERS



6 E-016 TYPICAL DOOR ASSEMBLY
SCALE: NTS ATAD SYSTEM PUMPS

MCC SCHEDULE

DESIGNATION	ELECTRICAL CHARACTERISTICS	LOCATION	MAIN BUS (HORIZONTAL)	VERTICAL BUS	MAIN BREAKER	INCOMING POWER	MIN. INTERRUPTING RATING - SYM	NEMA ENCLOSURE	BASIS OF DESIGN	COMMUNICATIONS / I/O	REMARKS
MCC1	480Y/277V, 3Φ, 4W	MBR BUILDING (ELECTRICAL ROOM)	1,200A	600A (MINIMUM)	1,200 AMP FRAME 1,200 AMP ELECTRONIC TRIP UNIT WITH LSI	BOTTOM LEFT	65KAIC	1 (GASKETED)	ALLEN BRADLEY (CENTERLINE 2100)	HARDWIRED	
MCC2	480Y/277V, 3Φ, 4W	ATAD BUILDING (EQUIPMENT ROOM)	800A	600A (MINIMUM)	1,200 AMP FRAME 1,200 AMP ELECTRONIC TRIP UNIT WITH LSI	BOTTOM LEFT	65KAIC	1 (GASKETED)	ALLEN BRADLEY (CENTERLINE 2100)	HARDWIRED	

GENERAL SCHEDULE NOTES:

1. PROVIDE 4" CONCRETE HOUSE KEEPING PAD AND ALL REQUIRED ANCHORING EQUIPMENT, MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. CIRCUIT BREAKER AND MOTOR HORSEPOWER RATINGS SHOWN ON THE ELECTRICAL SINGLE LINE DIAGRAM AND EQUIPMENT CONNECTION SCHEDULE ARE TO BE VERIFIED AND COORDINATED WITH THE PROPOSED EQUIPMENT. COORDINATE CLOSELY WITH OWNER, ENGINEER, AND CONTRACT #1 PRIOR TO RELEASE OF ORDER.
3. ELEVATIONS SHOWN ARE GENERAL IN NATURE. COORDINATE FINAL CONFIGURATION, ORIENTATION, LAYOUT, ETC..., AND CONDUIT ENTRY POINTS WITH THE EQUIPMENT MANUFACTURER PRIOR TO RELEASE OF ORDER. EQUIPMENT IS TO BE CONFIGURED TO ACCOMMODATE PROPOSED INSTALLATION LOCATION AS SHOWN ON THE ELECTRICAL FLOOR PLAN SHEETS. MCC IS TO BE CONFIGURED FOR TOP AND BOTTOM CONDUIT ENTRY WITH THE MAIN BREAKER LOCATED IN THE BOTTOM LEFT WITH ALL SUBSEQUENT SECTIONS TO THE RIGHT (WHILE LOOKING AT THE MCC FRONT). MCC TO BE SET UP FOR BACK TO BACK CONFIGURATION AS SHOWN.
4. PROVIDE INTERNAL POWER METERING AND SURGE PROTECTION WITHIN MCC AS SPECIFIED ON THE ASSOCIATED SINGLE LINE DIAGRAM.
5. MCC TO FOLLOW NEMA CLASS II STANDARDS AND TYPE B-T WIRING STANDARDS.
6. MCC TO BE PROVIDED WITH PRE-DEFINED SPACE AS INDICATED WITHIN ELEVATION VIEW.
7. COORDINATE DELIVERY, STORAGE, AND HANDLING IN FIELD AND INSTALL PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. MAINTAIN ALL REQUIRED NEC CLEARANCES. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO ROUGH-IN TO AVOID ANY POTENTIAL OBSTRUCTIONS, OR CONFLICTS AND REPORT ANY ISSUES, OR DISCREPANCIES TO ENGINEER PRIOR TO PROCEEDING WITH WORK.
8. PROVIDE IDENTIFICATION NAMEPLATES AND LABELS PER ELECTRICAL SPECIFICATIONS.
9. REFER TO ELECTRICAL SPECIFICATIONS FOR INSPECTION, TESTING, START-UP, TRAINING, WARRANTY, AND ADDITIONAL INFORMATION/REQUIREMENTS.
10. CONTRACTOR RESPONSIBLE FOR INSTALLING ARC FLASH WARNING LABELS AND ADJUSTING OVER-CURRENT PROTECTIVE DEVICE SETTINGS PER POWER SYSTEM ANALYSIS.
11. PROVIDE ADDITIONAL LUG TERMINATION KITS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

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BID SET

JADE STONE ENGINEERING

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL
NEW WORK
SINGLE LINE DIAGRAMS

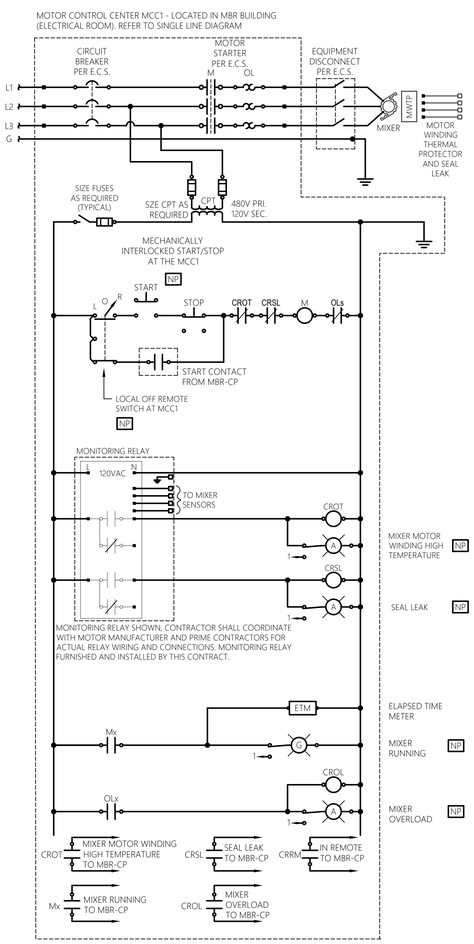
REVISIONS

NO.	DESCRIPTION	DATE

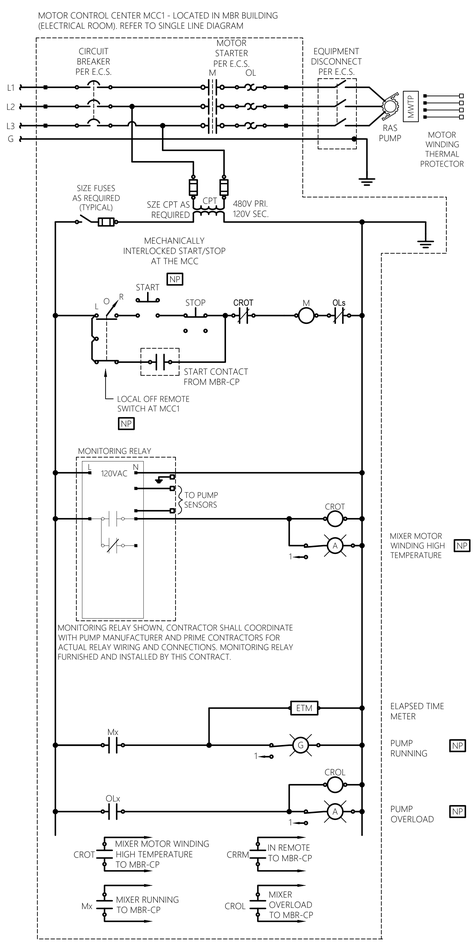
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-016

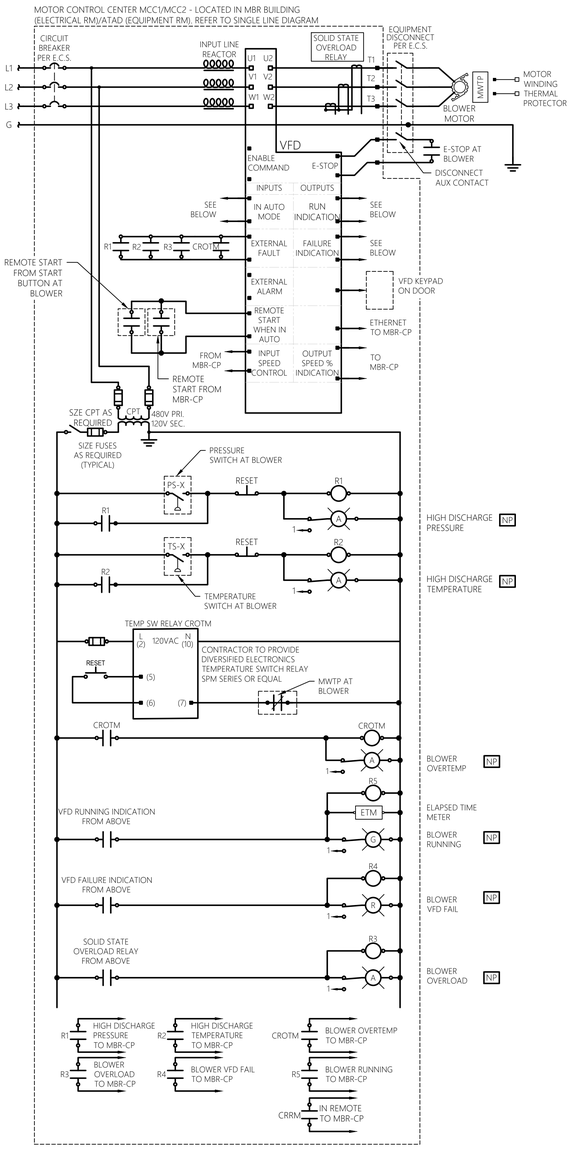
PROJECT # 18-732 PHASE #



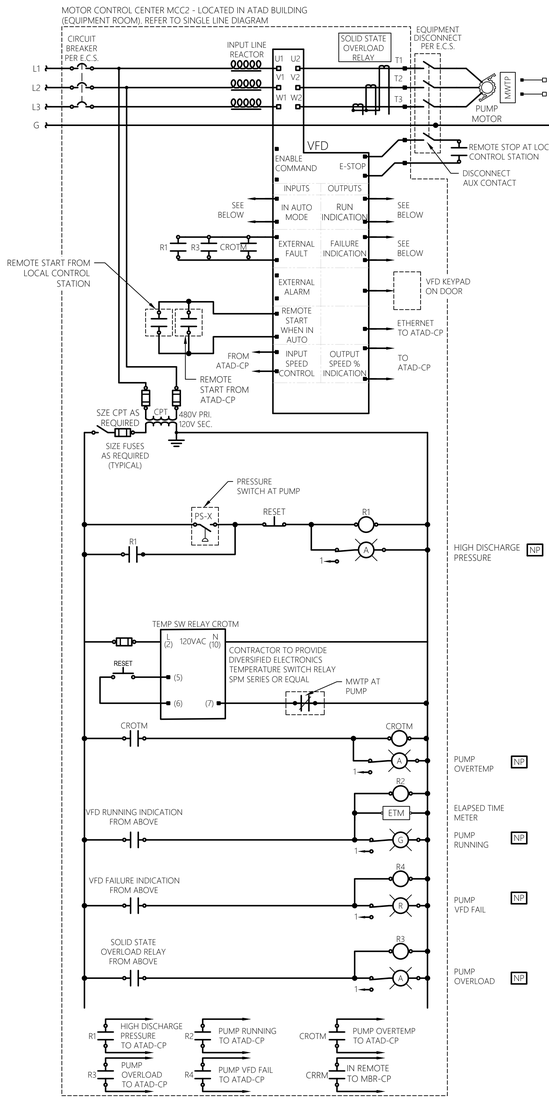
1 E-018 ELEMENTARY WIRING DIAGRAM
SCALE: NTS — ANOXIC MIXERS



2 E-018 ELEMENTARY WIRING DIAGRAM
SCALE: NTS — RAS PUMPS



3 E-018 ELEMENTARY WIRING DIAGRAM
SCALE: NTS — MBR BLOWERS



4 E-018 ELEMENTARY WIRING DIAGRAM
SCALE: NTS — ATAD PUMPS

DIAGRAM IS TYPICAL OF ANOXIC MIXERS
(16-MX-211-1, 16-MX-211-2, 16-MX-211-3).

DIAGRAM IS TYPICAL OF RAS PUMPS
(20-P-501-A, 20-P-501-B, 20-P-501-C, 20-P-501-D).

DIAGRAM IS TYPICAL OF ALL BLOWERS
(20-B-201-A, B, C, D, E; 16-B-401-A, B, C, ATAD BLOWERS)

DIAGRAM IS TYPICAL OF ATAD PROCESS PUMPS

GENERAL SHEET NOTES:

1. CONTRACTOR TO SIZE PROPOSED MOTOR STARTERS AND OVERCURRENT PROTECTION DEVICES WITHIN MCC BUCKETS BASED UPON LOAD DATA LISTED WITHIN EQUIPMENT CONNECTION SCHEDULE.
2. REFER TO EQUIPMENT CONNECTION SCHEDULE, SINGLE LINE DIAGRAMS, CONTROL RISER DIAGRAMS, SCHEDULES, DETAILS, AND SPECIFICATIONS FOR CIRCUITING INFORMATION AND ADDITIONAL REQUIREMENTS.
3. NOTE, NOT ALL MCC BUCKET LOADS ARE SHOWN WITHIN DIAGRAMS. THE DIAGRAMS SHOWN ARE OF PERTINENT LOADS AND SPECIAL SITUATIONS.
4. ELEMENTARY WIRING DIAGRAMS ARE INTENDED TO SHOW DESIGN INTENT AND NOT EVERY RELAY, CONTACT, TIMER, CIRCUITRY, ETC. REQUIRED WITHIN THE MCC BUCKET. CONTRACTOR RESPONSIBLE TO WORK WITH THE EQUIPMENT MANUFACTURER/SUPPLIER IN ORDER TO PROVIDE A COMPLETE AND OPERABLE SYSTEM PER DESIGN INTENT SHOWN/SPECIFIED.

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111 Wheatfield Drive, Suite 1
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ELECTRICAL ELEMENTARY WIRING DIAGRAMS

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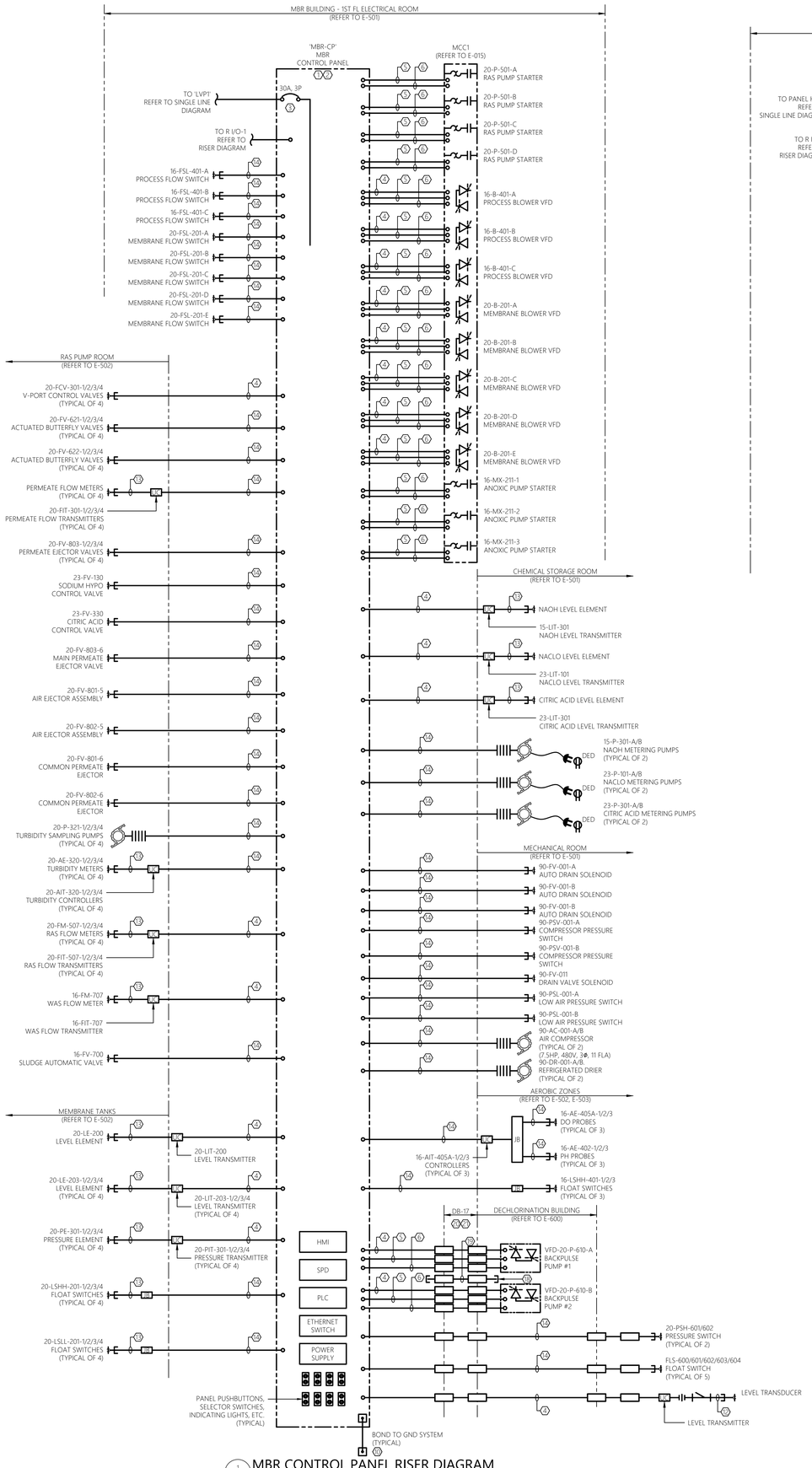
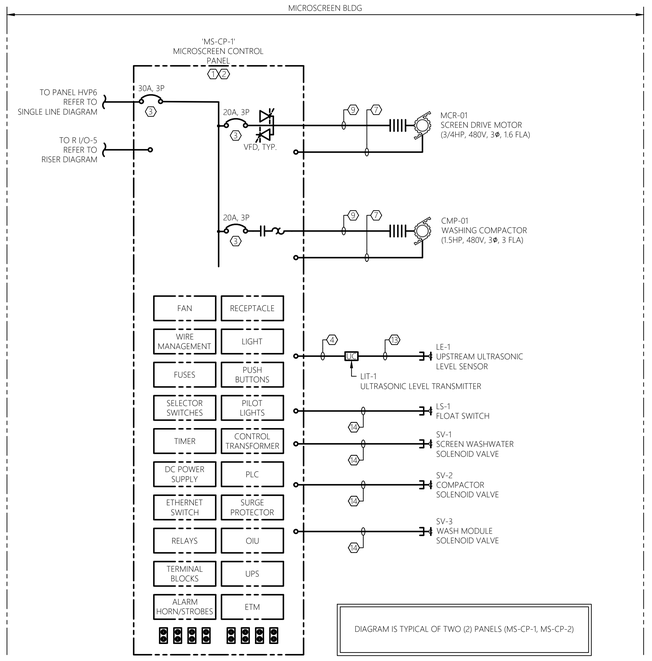
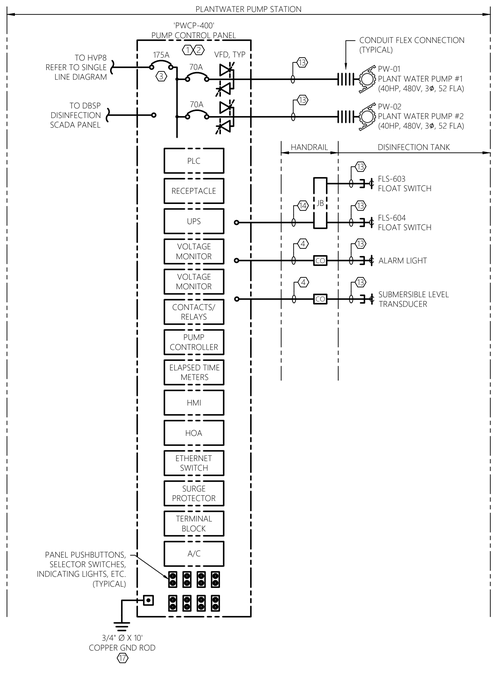


1 E-020 SCALE: NTS
MBR CONTROL PANEL RISER DIAGRAM



2 E-020 SCALE: NTS
MICROSCREEN CONTROL PANEL RISER DIAGRAM
MICROSCREEN BUILDING



3 E-020 SCALE: NTS
PLANT WATER SYSTEM CONTROL PANEL
PLANTWATER PUMP STATION

CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND SHOWS ALL INTERCONNECTIONS. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. VFD INPUT & OUTPUT CONDUCTORS MUST BE RUN INDEPENDENT OF OTHER CONDUCTORS.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
3. ALL CONDUCTORS NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO FLOOR PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH PROCESS MECHANICAL DRAWINGS. REFER TO SITE PLAN FOR DUCT BANK INFORMATION.
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER ALL OTHER TRADE CONTRACTORS.
7. CIRCUITS SHOWN ARE POWER, CONTROL, INSTRUMENTATION, AND CONTROL CIRCUIT POWER. REFER TO SINGLE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR ADDITIONAL CIRCUITS.
8. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
9. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
10. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
11. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
12. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS WITH OWNER AND ALL OTHER TRADE CONTRACTORS. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC..
13. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED INTERNAL TO CONTROL PANELS. ALL REQUIREMENTS TO BE PER NEC.
14. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE.
15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL, WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION.
18. ALL CONTROL/COMMUNICATION WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
19. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

1. NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION FOR ALL PANEL INTERNAL COMPONENTS. CONTRACTOR TO PROVIDE ADDITIONAL INTERNAL CONTACTS AND JUMPERS PER CONTROL PANEL MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM.
2. CONTROL PANEL AND ALL INTERNAL COMPONENTS ARE BY THIS CONTRACT. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, TERMINATIONS, AND MOUNTING/INSTALLATION OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH ALL OTHER TRADE CONTRACTORS TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
3. DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED DISCONNECT SIZE. ALL REQUIREMENTS TO BE PER NEC.
4. (2)#18STP, 3/4"C
5. CAT 6 CABLE, 1"C
6. (12)#14, 1"C
7. (4)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED VFD. IN THE EVENT OF A MOTOR HIGH TEMPERATURE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
8. (4)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED STARTER. IN THE EVENT OF A MOTOR HIGH TEMPERATURE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
9. (2)#14, 3/4"C. CIRCUIT TO BE UTILIZED TO SHUT DOWN THE PROPOSED VFD IN THE EVENT THE DISCONNECT IS OPENED (PREVENT DAMAGE TO THE PROPOSED VFD) AND REENGAGE THE VFD WHEN THE DISCONNECT IS CLOSED.
10. (4)#14, 3/4"C. CIRCUIT TO BE UTILIZED TO SHUT DOWN THE PROPOSED STARTER IN THE EVENT THE DISCONNECT IS OPENED AND PROVIDE STATUS OF OPEN DISCONNECT VIA PILOT LIGHT.
11. (3)#12 & #12G, 3/4"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.
12. (3)#1/0 & #6G, 2"C.
13. FACTORY CABLE BY THIS CONTRACT. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE 3/4" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH ALL OTHER TRADE CONTRACTORS.
14. (4)#14, 3/4"C.
15. (2)#14, 3/4"C.
16. PROVIDE CONDUIT BUSHING, FITTING, OR FLEX CONNECTION AS REQUIRED FOR PROPER CONNECTION OF DEVICE. ALL BUSHINGS, FITTINGS, OR FLEX CONNECTIONS TO BE SUITED FOR ENVIRONMENT INSTALLED WITHIN. COORDINATE WITH EQUIPMENT MANUFACTURER. FLEX CONNECTION LENGTHS TO BE MINIMIZED TO GREATEST EXTENT POSSIBLE. TYPICAL
17. CONTRACTOR TO PROVIDE TWO (2) 3/4"Ø x 10' COPPER GROUND RODS. PROVIDE GROUNDING ELECTRODE FOR CONTROL PANEL PER NEC. GROUND RODS TO BE PLACED AT MINIMUM OF 10 FEET APART. BOND GROUND RODS TOGETHER WITH A LOOPED #6 COPPER CONDUCTOR.
18. PROVIDE SPARE CONDUIT AS SHOWN. STUB CONDUIT ADJACENT TO SERVICE EQUIPMENT OR AS DIRECTED BY UTILITY/OWNER. PROVIDE PULL STRING AND CAP BOTH ENDS. LABEL BOTH ENDS OF SPARE CONDUIT INDICATING ORIGIN/DESTINATION.
19. SPARE 4" CONDUIT.
20. CONTRACTOR RESPONSIBLE TO RESTORE ALL DISTURBED SURFACES AS PART OF THIS CONTRACT. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER. REFER TO TYPICAL SAND-FILL DUCT BANK SECTION DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
21. CONTRACTOR TO COORDINATE FINAL DUCT BANK ROUTING/REQUIREMENTS WITH EXISTING FIELD CONDITIONS, PROPOSED WORK, OWNER AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.

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(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL RISER DIAGRAMS

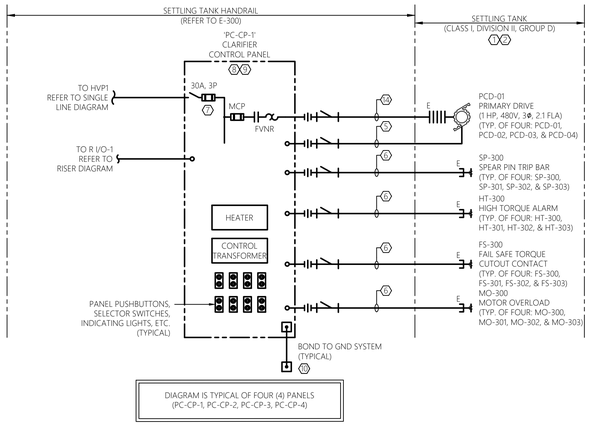
REVISIONS

NO.	DESCRIPTION	DATE

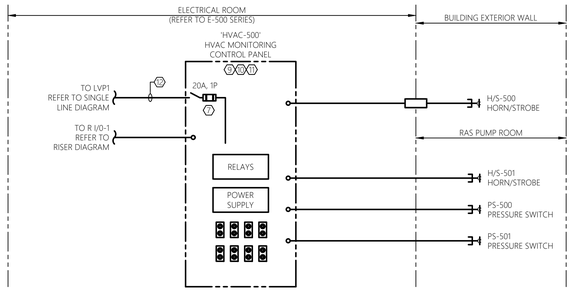
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-020

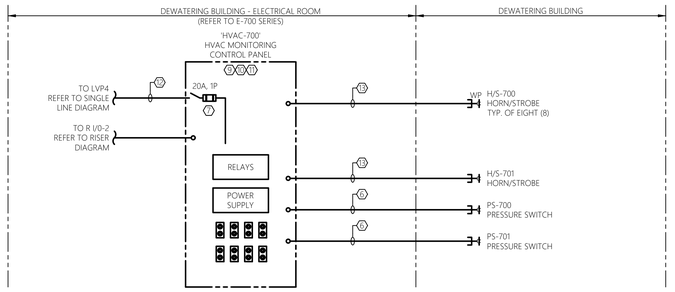
PROJECT # 18-732 PHASE #



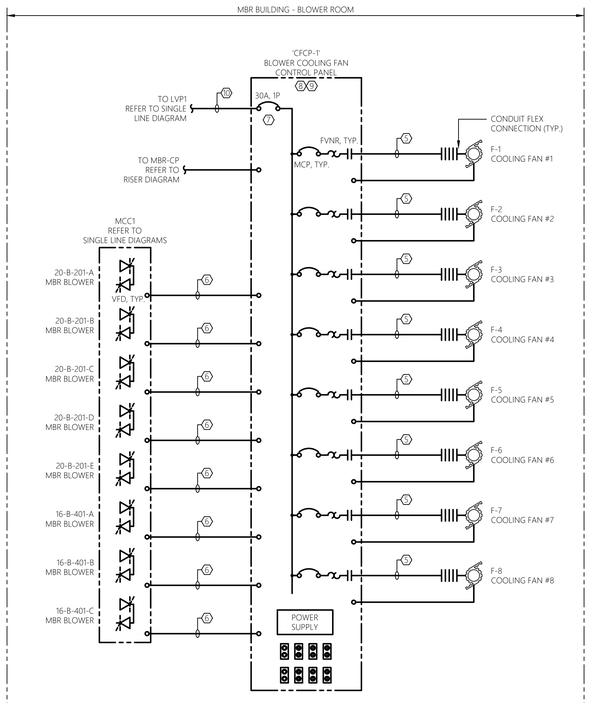
1 E-021 CLARIFIER CONTROL PANEL RISER DIAGRAM
SCALE: NTS — SETTLING TANKS



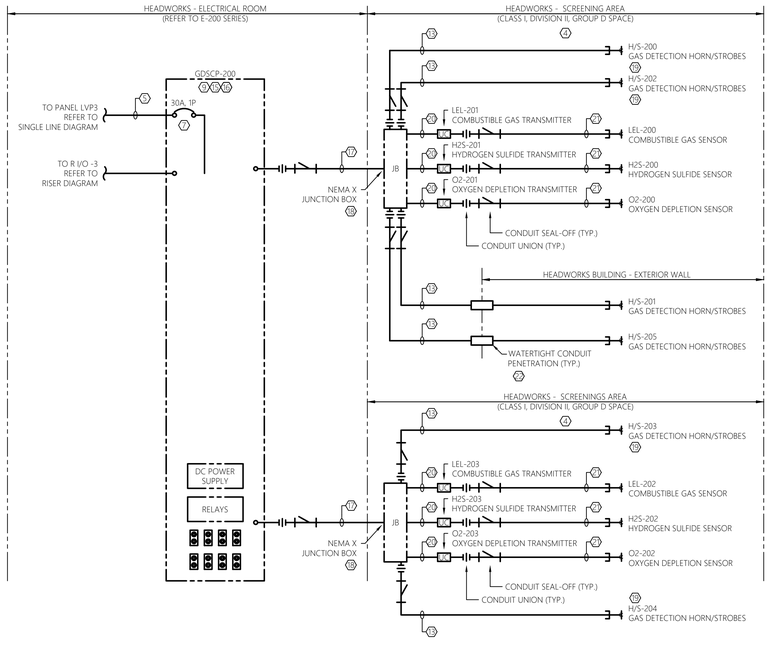
4 E-021 HVAC MONITORING CONTROL PANEL RISER DIAGRAM
SCALE: NTS — MBR BUILDING



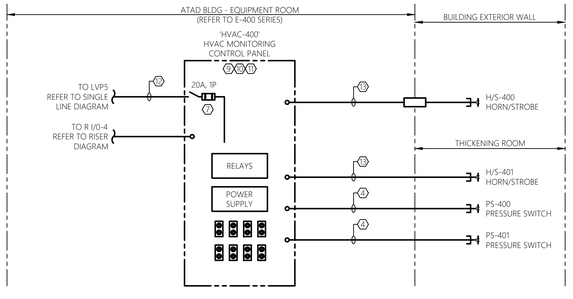
5 E-021 HVAC MONITORING CONTROL PANEL RISER DIAGRAM
SCALE: NTS — DEWATERING BUILDING



2 E-021 COOLING FAN CONTROL PANEL RISER DIAGRAM
SCALE: NTS — MBR BUILDING



6 E-021 GAS DETECTION SYSTEM CONTROL PANEL RISER DIAGRAM
SCALE: NTS — HEADWORKS ELECTRICAL ROOM



3 E-021 HVAC MONITORING CONTROL PANEL RISER DIAGRAM
SCALE: NTS — ATAD BUILDING

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
3. ALL CONDUCTORS NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO FLOOR PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH PROCESS MECHANICAL DRAWINGS. REFER TO SITE PLAN FOR DUCT BANK INFORMATION
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER ALL OTHER TRADE CONTRACTORS.
7. CIRCUITS SHOWN ARE POWER, CONTROL, INSTRUMENTATION, AND CONTROL CIRCUIT POWER. REFER TO SINGLE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR ADDITIONAL CIRCUITS.
8. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
9. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
10. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
11. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
12. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS WITH OWNER AND ALL OTHER TRADE CONTRACTORS. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC..
13. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED INTERNAL TO CONTROL PANELS. ALL REQUIREMENTS TO BE PER NEC.
14. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE.
15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION.
18. ALL CONTROL/COMMUNICATION WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
19. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

(1) TANK INTERIOR IS CLASS I, DIVISION II, GROUP D SPACE. CLASSIFICATION EXTENDS TO THE MINIMUM OPERATING WATER SURFACE TO THE TOP OF THE WALL; ENVELOPE 18" ABOVE THE TOP OF THE TANK AND EXTENDING 18" BEYOND THE EXTERIOR WALL; ENVELOPE 18" ABOVE GRADE EXTENDING 10' HORIZONTALLY FROM THE EXTERIOR WALLS. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT.

(2) ALL ELECTRICAL EQUIPMENT, COMPONENTS, DEVICES, AND RACEWAY SYSTEMS TO BE KEPT OUT OF CLASSIFIED AREAS TO GREATEST EXTENT POSSIBLE.

(3) AREA IS CLASS I, DIVISION II, GROUP D SPACE. CLASSIFICATION EXTENDS TO WITHIN 10' ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT.

(4) AREA IS CLASS I, DIVISION II, GROUP D SPACE. CLASSIFICATION EXTENDS TO ENTIRE ENCLOSED SPACE. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT.

(5) (2)#10 & #10G, 3/4"C.

(6) (4)#14, 3/4"C.

(7) DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED DISCONNECT SIZE. ALL REQUIREMENTS TO BE PER NEC.

(8) NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION FOR ALL PANEL INTERNAL COMPONENTS. CONTRACTOR TO PROVIDE ADDITIONAL INTERNAL CONTACTS AND JUMPERS PER CONTROL PANEL MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM.

(9) CONTROL PANEL AND ALL INTERNAL COMPONENTS ARE BY THIS CONTRACT. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, TERMINATIONS, AND MOUNTING/INSTALLATION OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH ALL OTHER TRADE CONTRACTORS TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

(10) CONTRACTOR TO PROVIDE HVAC MONITORING CONTROL PANEL, HORN/ALARM LIGHTS, AND ALL ACCESSORIES FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE WITHIN NEMA 12 ENCLOSURE.

(11) CONTRACTOR TO WORK WITH CSI TO PROVIDE RELAY BASED CONTROL PANEL. UPON A LOSS OF ADEQUATE AIR FLOW OR A VENTILATION FAN FAILURE, THE CONTROL PANEL IS TO ENERGIZE THE APPROPRIATE LED WARNING LIGHTS AND SOUNDER/HORN. COORDINATE OVERALL SEQUENCE OF OPERATION WITH ENGINEER DURING SUBMITTAL PHASE.

(12) (2)#12 & #12G, 3/4"C.

(13) (12)#14, 3/4"C.

(14) (3)#12 & #12G, 3/4"C.

(15) GAS DETECTION SYSTEM CONTROL PANEL 'GDSCP-200' AND ASSOCIATED SENSORS, TRANSMITTERS, COMPONENTS & DEVICES ARE TO BE PROVIDED AND INSTALLED UNDER THIS CONTRACT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(16) CONTRACTOR TO PROVIDE ADDITIONAL DC POWER SUPPLY SIZED AS NECESSARY WITHIN NEMA 1 ENCLOSURE TO PROVIDE 24 VDC POWER TO PROPOSED TRANSMITTERS, HORNS, AND STROBES. PROVIDE CIRCUITRY (CONDUITS AND CONDUCTORS) AND TERMINATIONS AS REQUIRED.

(17) (6)#18STP & (36)#14, 2"C.

(18) CONTRACTOR TO PROVIDE JUNCTION/PULL BOXES AS REQUIRED. COORDINATE FINAL LOCATIONS WITH OTHER TRADE CONTRACTORS (NOTE, JUNCTION BOXES ARE NOT ALWAYS SHOWN ON FLOOR PLANS. CONTRACTOR TO FIELD LOCATE AS NECESSARY). JUNCTION BOXES ARE TO BE RATED FOR ENVIRONMENT INSTALLED, INCLUDING BUT NOT LIMITED TO HAZARDOUS ENVIRONMENTS AND OUTDOORS INSTALLATIONS. CONTRACTOR TO SIZE JUNCTION BOXES PER NEC ARTICLE 314. TYPICAL OF ALL JUNCTION BOXES SHOWN ON THIS DRAWING.

(19) REFER TO ELECTRICAL PLANS FOR GENERAL LOCATION. FINAL LOCATION AND MOUNTING HEIGHT TO BE COORDINATED WITH THE OWNER. PROVIDE ALL REQUIRED STAINLESS STEEL MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... FOR A COMPLETE AND OPERABLE SYSTEM. NOTE, MAY INCLUDE MULTIPLE DEVICES. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. TYPICAL OF TWO (2), THIS SHEET.

(20) (2)#18STP & (4)#14, 3/4"C.

(21) FACTORY CABLE. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE 3/4" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM. PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH MANUFACTURER.

(22) REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CLOSELY COORDINATE FINAL PENETRATION LOCATION/REQUIREMENTS WITH OTHER TRADE CONTRACTORS AND OWNER. TYPICAL.

CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND SHOWS ALL INTERCONNECTIONS. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. VFD INPUT & OUTPUT CONDUCTORS MUST BE RUN INDEPENDENT OF OTHER CONDUCTORS.

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BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL RISER DIAGRAMS

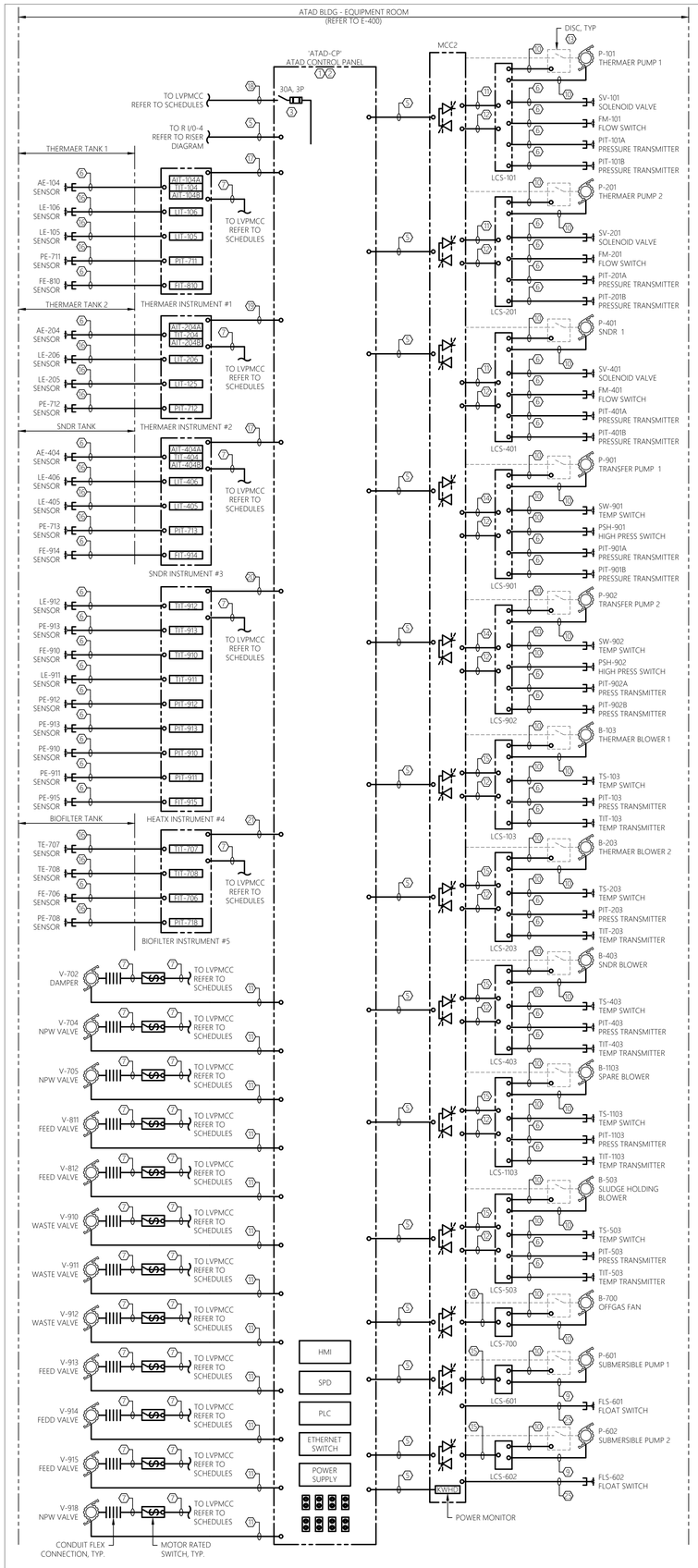
REVISIONS

NO.	DESCRIPTION	DATE

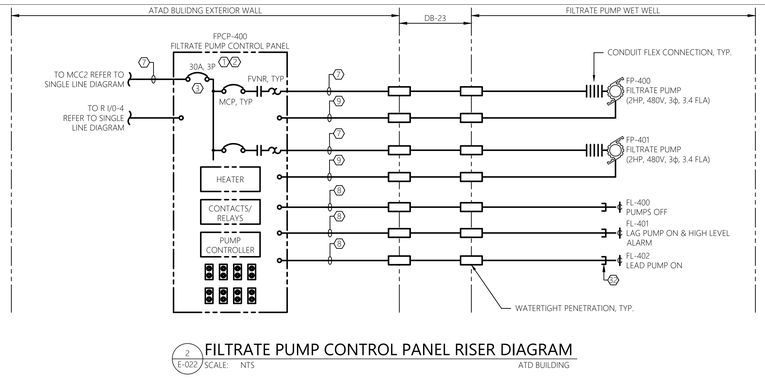
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-021

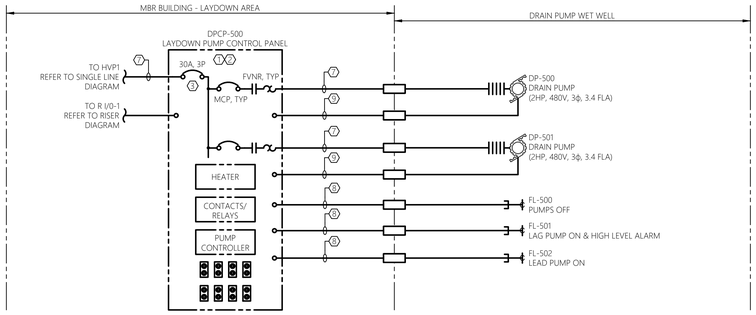
PROJECT # 18-732 PHASE #



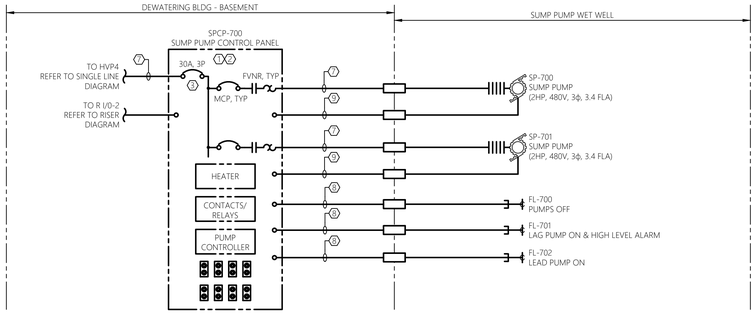
1 E-022 ATAD CONTROL PANEL RISER DIAGRAM
SCALE: NTS — ATAD EQUIPMENT ROOM



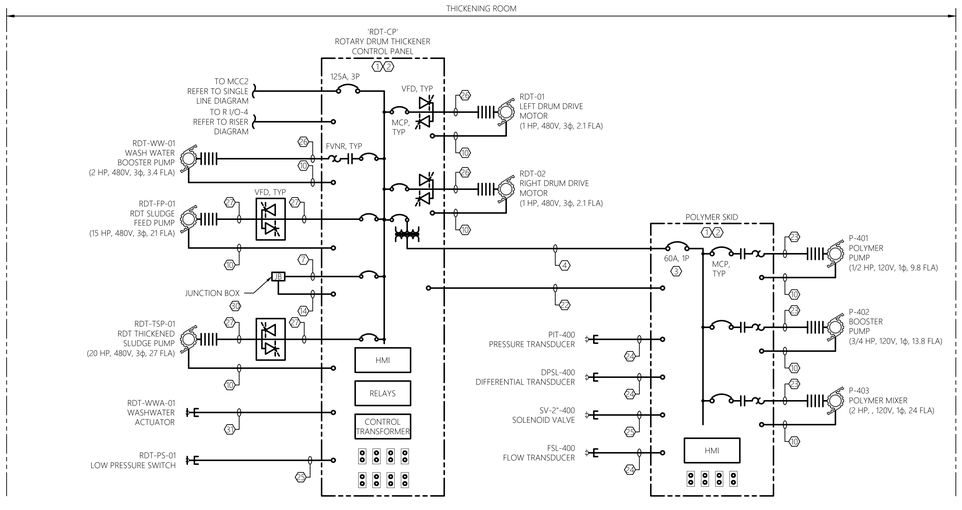
2 E-022 FILTRATE PUMP CONTROL PANEL RISER DIAGRAM
SCALE: NTS — ATD BUILDING



3 E-022 DRAIN PUMP CONTROL PANEL RISER DIAGRAM
SCALE: NTS — MBR BUILDING



4 E-022 SUMP PUMP CONTROL PANEL RISER DIAGRAM
SCALE: NTS — DEWATERING BUILDING



5 E-022 RDT CONTROL PANEL RISER DIAGRAM
SCALE: NTS — RDT ROOM

CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND SHOWS ALL INTERCONNECTIONS. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. VFD INPUT & OUTPUT CONDUCTORS MUST BE RUN INDEPENDENT OF OTHER CONDUCTORS.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
3. ALL CONDUCTORS NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO FLOOR PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH PROCESS MECHANICAL DRAWINGS. REFER TO SITE PLAN FOR DUCT BANK INFORMATION
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER ALL OTHER TRADE CONTRACTORS.
7. CIRCUITS SHOWN ARE POWER, CONTROL, INSTRUMENTATION, AND CONTROL CIRCUIT POWER. REFER TO SINGLE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR ADDITIONAL CIRCUITS.
8. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
9. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
10. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
11. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
12. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS WITH OWNER AND ALL OTHER TRADE CONTRACTORS. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC..
13. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED INTERNAL TO CONTROL PANELS. ALL REQUIREMENTS TO BE PER NEC.
14. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE.
15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION.
18. ALL CONTROL/COMMUNICATION WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
19. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

1. NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION FOR ALL PANEL INTERNAL COMPONENTS. CONTRACTOR TO PROVIDE ADDITIONAL INTERNAL CONTACTS AND JUMPERS PER CONTROL PANEL MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM.
2. CONTROL PANEL AND ALL INTERNAL COMPONENTS ARE BY THIS CONTRACT. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, TERMINATIONS, AND MOUNTING/INSTALLATION OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH ALL OTHER TRADE CONTRACTORS TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
3. DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED DISCONNECT SIZE. ALL REQUIREMENTS TO BE PER NEC.
4. (2)#6 & #10G, 1-1/2"C
5. CAT 6 CABLE, 1"C
6. FACTORY CABLE. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE 1" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH MANUFACTURER.
7. (2)#12 & #12G, 3/4"C.
8. (6)#14, 3/4"C.
9. (6)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY AND SEAL LEAK SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED VFD. IN THE EVENT OF A MOTOR HIGH TEMPERATURE OR SEAL LEAKAGE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
10. (4)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED VFD. IN THE EVENT OF A MOTOR HIGH TEMPERATURE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
11. (10)#14, 1"C.
12. (3)#18STP, 3/4"C
13. REFER TO SINGLE LINE DIAGRAM SHEET E-015 FOR POWER AND DISCONNECT INFORMATION/DETAILS.
14. (12)#14, 1"C
15. (8)#14, 1"C
16. (1)#18STP, 3/4"C
17. (9)#18STP, 1"C
18. (2)#10 & #10G, 1"C.
19. (8)#18STP, 1"C
20. (11)#18STP, 1"C
21. (7)#18STP, 1"C
22. (10)#14, (2)#18STP, 1"C
23. (3)#12 & #12G, 3/4"C
24. (2)#18STP, 3/4"C.
25. (4)#14, 3/4"C
26. (3)#10 & #10G, 3/4"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.
27. (3)#8 & #10G, 3/4"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.
28. (3)#12 & #12G, 3/4"C.
29. JUNCTION BOX BY EQUIPMENT MANUFACTURER. COORDINATE FINAL LOCATION WITH EQUIPMENT MANUFACTURER. JUNCTION BOX FACTORY WIRED TO RDT SYSTEM CONTROL INSTRUMENTATION/DEVICES. THIS CONTRACT RESPONSIBLE FOR PROVIDING CIRCUITRY (CONDUIT & CONDUCTORS) AND TERMINATIONS AS SHOWN/SPECIFIED AS A MINIMUM. PROVIDE ADDITIONAL CIRCUITRY AS REQUIRED PER MANUFACTURERS RECOMMENDATIONS. REFER TO SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION AND COORDINATE FINAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER. REFER TO FLOOR PLAN FOR GENERAL LOCATION.
30. (8)#14, 3/4"C.
31. PROVIDE CONDUIT BUSHING, FITTING, OR FLEX CONNECTION AS REQUIRED FOR PROPER CONNECTION OF DEVICE. ALL BUSHINGS, FITTINGS, OR FLEX CONNECTIONS TO BE SUITED FOR ENVIRONMENT INSTALLED WITHIN. COORDINATE WITH OTHER TRADE CONTRACTORS AND EQUIPMENT MANUFACTURER. FLEX CONNECTIONS TO BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE. TYPICAL.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP
EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL
RISER DIAGRAMS

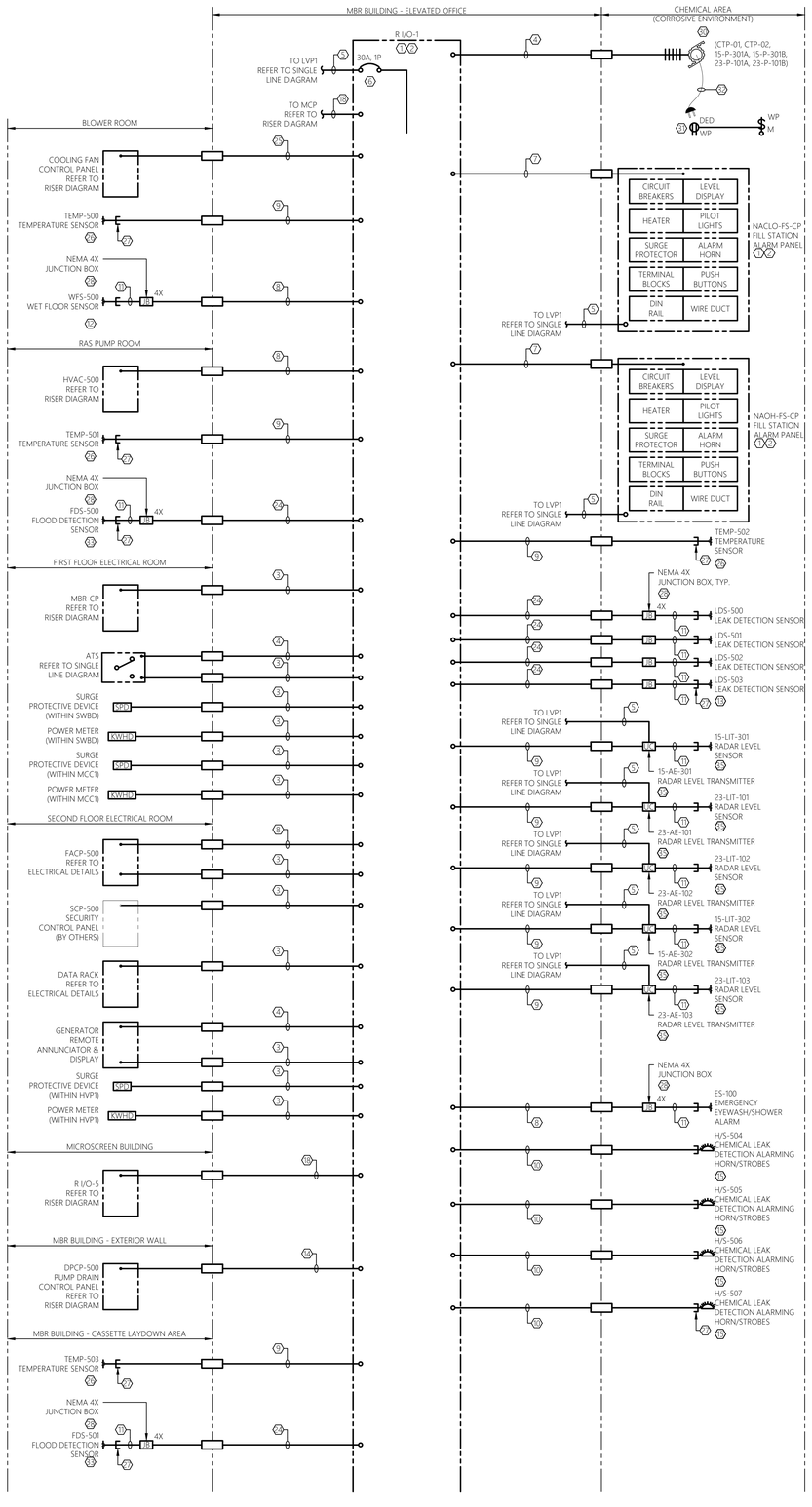
REVISIONS

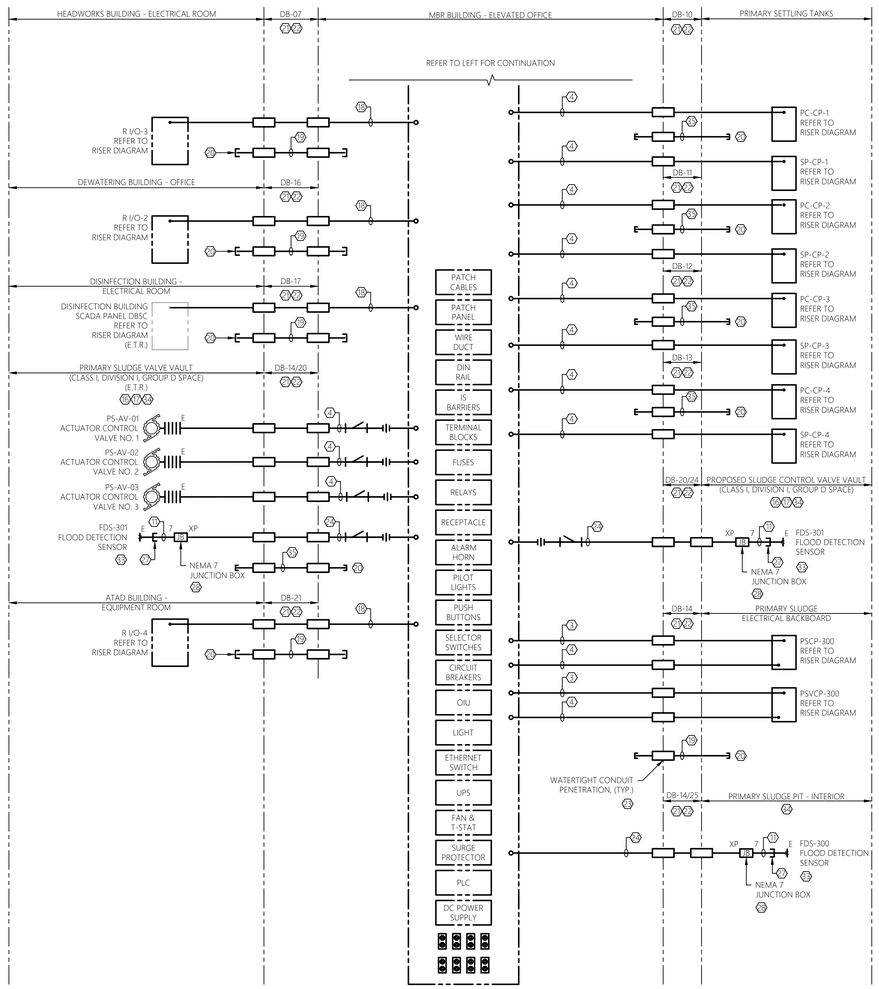
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-022

PROJECT # 18-732 PHASE #





GENERAL SHEET NOTES:

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3. ALL CONDUCTORS, EQUIPMENT, COMPONENTS, AND DEVICES NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC
4. REFER TO ELECTRICAL PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH ALL PRIME CONTRACT DRAWINGS. REFER TO ELECTRICAL SITE PLAN FOR DUCT BANK INFORMATION
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
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15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL, WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN XHHW-2 INSULATION.
18. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

(1) CONTROL PANEL AND ALL INTERNAL COMPONENTS TO BE FURNISHED BY CONTRACTOR THRU BID ALLOWANCE #1. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, AND MOUNTING/INSTALLATION/WIRING OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH OWNER AND ENGINEER TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

(2) NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION AND SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ALL PANEL INTERNAL COMPONENTS.

(3) (1) CAT 6A PREMIUM ETHERNET CABLE, 1"C. PROVIDE AS PLENUM RATED WITH 4 BONDED PAIRS. TO BE BELDEN #3633 OR APPROVED EQUAL.

(4) (12)#14 & (2)#18STP, 1"C.

(5) (2)#10 & #10G, 1"C.

(6) DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED DISCONNECT SIZE. ALL REQUIREMENTS TO BE PER NEC.

(7) (24)#14 & (4)#18STP, 1-1/2"C.

(8) (4)#14, 1"C

(9) (2)#18STP, 1"C

(10) (12)#14, 1"C

(11) FACTORY CABLE. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE 1" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH MANUFACTURER.

(12) WET FLOOR SENSOR TO BE PROVIDED AS PART OF BID ALLOWANCE #1. PROVIDE AS WINLAND ELECTRONICS, WATERBUG WB200, OR APPROVED EQUAL.

(13) LEAK DETECTION SENSOR TO BE PROVIDED AS PAINTEK CLS200 CAPACITANCE PROBE AS MANUFACTURED BY SIEMENS, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETTS, ACCESSORIES, ETC... AND CIRCUITRY (CONDUIT AND CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE LEAK DETECTION SYSTEM. REFER TO SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.

(14) (32)#14, 1-1/2"C.

(15) CHEMICAL LEAK DETECTION ALARMING LIGHTS AND HORNS (HORN/STROBE) TO BE PROVIDED AS FEDERAL SIGNAL GLOBAL SERIES CUSTOM CONFIGURED FIXTURES MODEL #C-MSC-3A-120-NN-LG-SR OR APPROVED EQUAL THRU BID ALLOWANCE #1. TO BE 3 POSITION VERTICAL STACK, SOUNDER HORN, GREEN 'OK' LED LIGHT, & RED 'LEAK DETECTED' LED LIGHT), RATED NEMA 4X, AND POWERED BY 120V AC CONTACT CLOSURES WITHIN CONTROL PANEL. PROVIDE ALL REQUIRED POWER SUPPLIES, CONTROL TRANSFORMERS, AND RELAYS, AS WELL AS, DOME GUARDS TO PROTECT LED LIGHTS FROM PHYSICAL DAMAGE, CONDUIT ADAPTORS, INDICATOR RINGS AND LEGEND PLATE KITS AS NECESSARY. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETTS, ACCESSORIES, ETC... AND CIRCUITRY (CONDUIT AND CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE LEAK DETECTION SYSTEM. REFER TO SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.

(16) AREA IS A CLASS I, DIVISION I, GROUP D SPACE. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION I, GROUP D ENVIRONMENT. NOTE, NOT ALL REQUIRED SEAL-OFFS SHOWN FOR CLARITY. PROVIDE PER NEC.

(17) ALL ELECTRICAL EQUIPMENT, COMPONENTS, DEVICES, AND RACEWAY SYSTEMS TO BE KEPT OUT OF CLASSIFIED AREAS TO GREATEST EXTENT POSSIBLE.

(18) 8-STRAND, MULTI-MODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C. PROVIDE MAXCELL FABRIC INNERDUCT WITHIN 4" CONDUIT. PROVIDE AS MAXCELL 4" 3-CELL PRODUCT. INSTALL PROPOSED FIBER OPTIC CABLE WITHIN 1-CELL OF THE PROPOSED INNERDUCT AND A PULL STRING THROUGH THE OTHER TWO (2) CELLS. FIBER OPTIC CABLE TO BE CONTINUOUS (NO SPLICE) AND SUITABLE FOR INDOOR/OUTDOOR APPLICATIONS ALONG WITH SUITABLE FOR DIRECT BURIAL APPLICATIONS. FIBER OPTIC CABLE TO BE MODEL CLEARCURVE AS MANUFACTURED BY CORNING OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER FOR REVIEW DURING SUBMITTAL PHASE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(19) SPARE 4"C.

(20) PROVIDE SPARE CONDUIT AS SHOWN. STUB CONDUIT ADJACENT TO EQUIPMENT, OR AS DIRECTED BY THE OWNER. PROVIDE PULL ROPE AND CAP BOTH ENDS. CONTRACTOR TO PROVIDE LABEL FOR ALL SPARE CONDUITS INDICATING CONDUIT DESTINATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(21) CONTRACTOR RESPONSIBLE TO RESTORE ALL DISTURBED SURFACES AS PART OF THIS CONTRACT. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER. REFER TO TYPICAL DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(22) CONTRACTOR TO COORDINATE FINAL DUCT BANK ROUTING/REQUIREMENTS WITH EXISTING FIELD CONDITIONS, PROPOSED WORK, OWNER AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.

(23) REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CLOSELY COORDINATE FINAL PENETRATION LOCATIONS/REQUIREMENTS WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. TYPICAL.

(24) (2)#18STP & (4)#14, 1"C

(25) (64)#14, 1-1/2"C.

(26) TEMPERATURE SENSOR TO BE PROVIDED AS OMEGA EWS-TX SERIES WALL MOUNT SENSOR, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE ELECTRICAL BOX, 24V DC POWER SUPPLY, CIRCUITRY (CONDUIT AND CONDUCTORS), WALL PLATE, AND MOUNTING BRACKETS AS REQUIRED FOR AN OVERALL COMPLETE AND OPERABLE ROOM TEMPERATURE SENSING DEVICE PER MANUFACTURER'S RECOMMENDATIONS. REFER TO SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.

(27) PROVIDE CONDUIT BUSHING, FITTING, OR FLEX CONNECTION AS REQUIRED FOR PROPER CONNECTION OF DEVICE. ALL BUSHINGS, FITTINGS, OR FLEX CONNECTIONS TO BE SUITED FOR ENVIRONMENT INSTALLED WITHIN, INCLUDING BUT NOT LIMITED TO, HAZARDOUS ENVIRONMENTS, CORROSIVE ENVIRONMENTS, AND OUTDOOR INSTALLATIONS. COORDINATE WITH APPLICABLE CONTRACTOR AND EQUIPMENT MANUFACTURER. FLEX CONNECTION LENGTHS TO BE MINIMIZED TO GREATEST EXTENT POSSIBLE. TYPICAL.

(28) CONTRACTOR TO PROVIDE JUNCTION/PULL BOXES FOR SPLICING, OR EXTENDING CIRCUITRY AS REQUIRED. PROVIDE NECESSARY TERMINAL STRIPS, OR SPLICE KITS WITHIN JUNCTION BOX TO EXTEND CIRCUITRY AS SHOWN. (NOTE, JUNCTION BOXES ARE NOT ALWAYS SHOWN ON FLOOR PLANS, CONTRACTOR TO FIELD LOCATE AS NECESSARY). JUNCTION BOXES ARE TO BE RATED FOR ENVIRONMENT INSTALLED, INCLUDING BUT NOT LIMITED TO HAZARDOUS ENVIRONMENTS, CORROSIVE ENVIRONMENTS, AND OUTDOOR INSTALLATIONS. CONTRACTOR TO FIELD VERIFY AND COORDINATE CONDUIT ARRANGEMENT ENTERING/LEAVING JUNCTION BOX AS REQUIRED. CONTRACTOR TO SIZE JUNCTION BOXES PER NEC ARTICLE 314. JUNCTION BOXES TO BE MANUFACTURED BY EATON, OR APPROVED EQUAL. TYPICAL OF ALL JUNCTION BOXES SHOWN ON THIS DRAWING.

(29) FLOAT SWITCH TO BE PROVIDED AS SJE RHOMBUS MILI-AMP-MASTER, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... AND CIRCUITRY (CONDUIT AND CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE FLOAT SWITCH SYSTEM. REFER TO SPECIFICATIONS SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.

(30) ROOM INTERIOR IS A CORROSIVE ENVIRONMENT. ALL WIRING METHODS, EQUIPMENT, AND DEVICES WITHIN THIS SPACE ARE TO BE OF CORROSION RESISTANT MATERIALS/METHODS. ALL RACEWAY TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC... TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE FOR ADDITIONAL INFORMATION. UTILIZE NEMA 4X (NON-METALLIC) ENCLOSURES FOR ALL ELECTRICAL EQUIPMENT, SWITCHES, RECEPTACLES, DISCONNECTS, BOXES, ETC...

(31) CONTRACTOR TO PROVIDE 125-VOLT, 2-POLE, 3-WIRE, 20-AMP, HEAVY DUTY, DUPLEX WEATHERPROOF RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER (GFI) MOUNTED ADJACENT TO EQUIPMENT. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...PROVIDE DEDICATED CIRCUIT FROM PROPOSED PANEL 'LVP1'. PROVIDE AS SWITCHED RECEPTACLE.

(32) EQUIPMENT WHIP (CORD) AND PLUG PROVIDED BY EQUIPMENT MANUFACTURER. CONTRACTOR TO SUBSTITUTE HARD WIRED CONNECTION IN LIEU OF RECEPTACLE (CORD & PLUG) PER MANUFACTURERS RECOMMENDATIONS. COORDINATE FINAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER, OWNER, AND ENGINEER. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(33) FLOOD DETECTION SENSOR TO BE PROVIDED AS PAINTEK CLS200 CAPACITANCE PROBE AS MANUFACTURED BY SIEMENS, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETTS, ACCESSORIES, ETC... AND CIRCUITRY (CONDUIT AND CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE FLOOD DETECTION SYSTEM. REFER TO SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.

(34) ROUTING AND ATTACHMENT METHODS OF ALL CONDUITS WITHIN STRUCTURE ARE TO BE CLOSELY COORDINATED WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER TO AVOID CONFLICTS. ALL RACEWAY TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC... TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE FOR ADDITIONAL INFORMATION.

(35) SPARE 2"C.

CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND SHOWS ALL INTERCONNECTIONS. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. VFD INPUT & OUTPUT CONDUCTORS MUST BE RUN INDEPENDENT OF OTHER CONDUCTORS.

1 E-023 REMOTE I/O PANEL #1 RISER DIAGRAM
SCALE: NTS — MBR BUILDING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL RISER DIAGRAMS

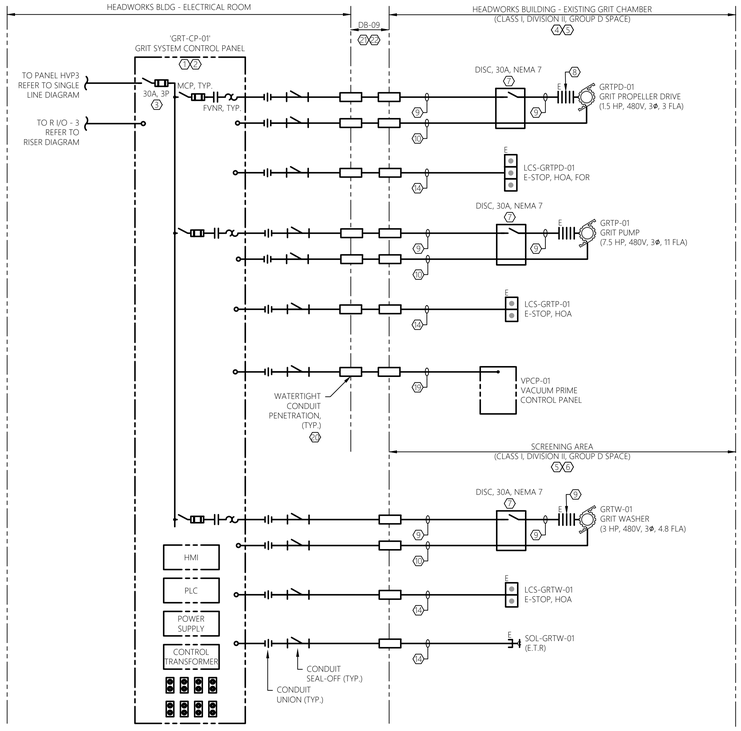
REVISIONS

NO.	DESCRIPTION	DATE

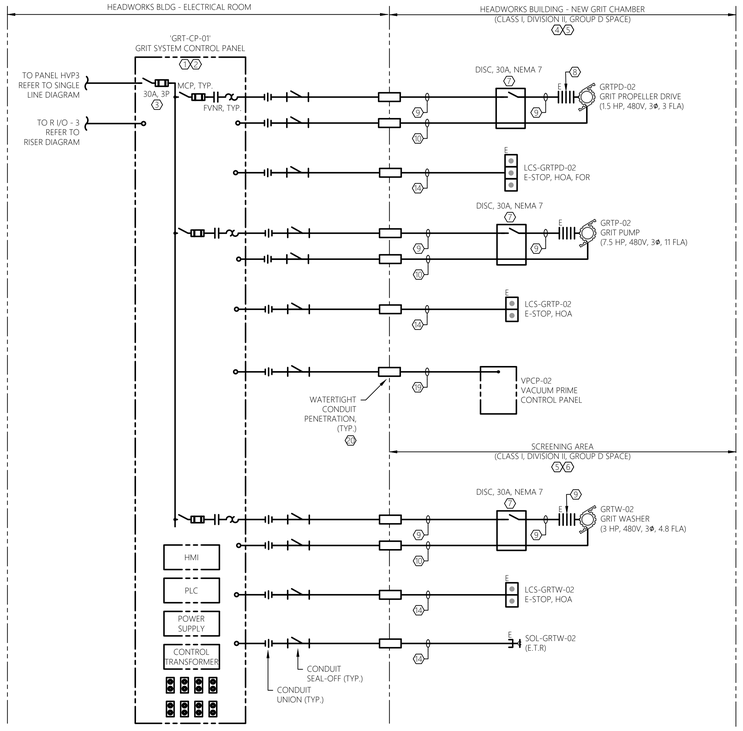
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-023

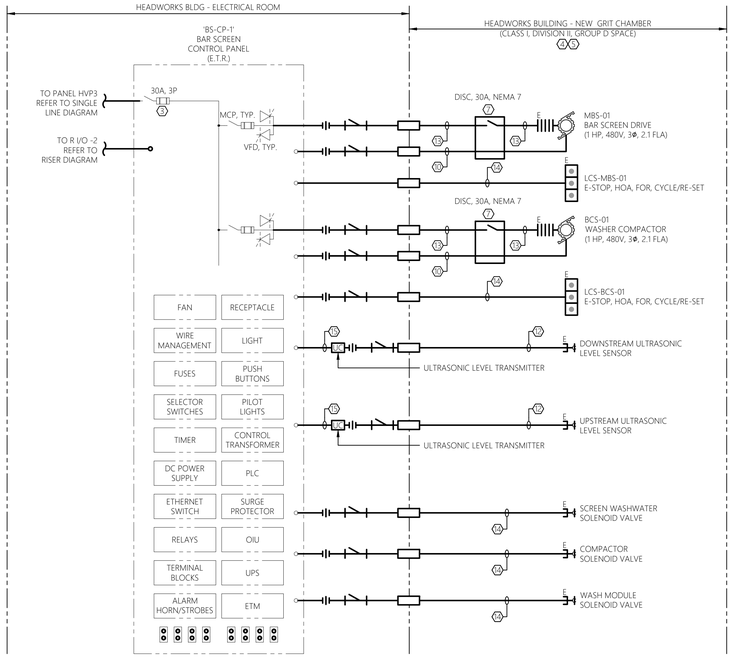
PROJECT # 18-732 PHASE #



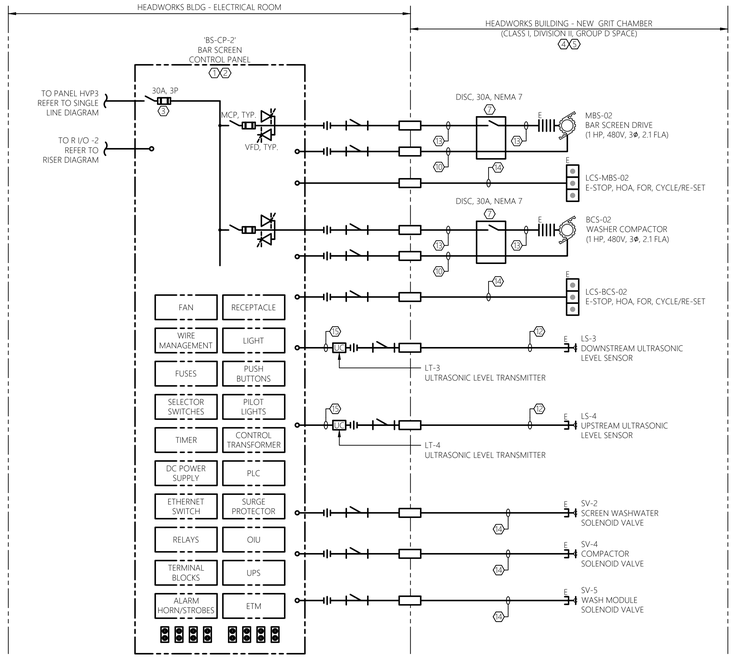
1 E-024 SCALE: NTS — GRIT SYSTEM CONTROL PANEL RISER DIAGRAM — HEADWORKS BUILDING



2 E-024 SCALE: NTS — GRIT SYSTEM CONTROL PANEL RISER DIAGRAM — HEADWORKS BUILDING



3 E-024 SCALE: NTS — BAR SCREEN CONTROL PANEL RISER DIAGRAM — HEADWORKS BLDG



4 E-024 SCALE: NTS — BAR SCREEN CONTROL PANEL RISER DIAGRAM — HEADWORKS BLDG

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
3. ALL CONDUCTORS NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO FLOOR PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH PROCESS MECHANICAL DRAWINGS. REFER TO SITE PLAN FOR DUCT BANK INFORMATION
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER ALL OTHER TRADE CONTRACTORS.
7. CIRCUITS SHOWN ARE POWER, CONTROL, INSTRUMENTATION, AND CONTROL CIRCUIT POWER. REFER TO SINGLE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR ADDITIONAL CIRCUITS.
8. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
9. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
10. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
11. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
12. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS WITH OWNER AND ALL OTHER TRADE CONTRACTORS. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC..
13. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED INTERNAL TO CONTROL PANELS. ALL REQUIREMENTS TO BE PER NEC.
14. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE.
15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION.
18. ALL CONTROL/COMMUNICATION WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
19. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

1. CONTROL PANEL AND ALL INTERNAL COMPONENTS ARE BY THIS CONTRACT. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, AND MOUNTING/INSTALLATION OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH OWNER TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
2. NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION FOR ALL PANEL INTERNAL COMPONENTS. CONTRACTOR TO PROVIDE ADDITIONAL INTERNAL CONTACTS AND JUMPERS PER CONTROL PANEL MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM.
3. DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED SIZE. ALL REQUIREMENTS TO BE PER NEC.
4. AREA IS A CLASS I, DIVISION II, GROUP D SPACE. THE CLASS I, DIVISION II, GROUP D SPACE EXTENDS 10' ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT.
5. ALL ELECTRICAL EQUIPMENT, COMPONENTS, DEVICES, AND RACEWAY SYSTEMS TO BE KEPT OUT OF CLASSIFIED AREAS TO GREATEST EXTENT POSSIBLE.
6. AREA IS A CLASS I, DIVISION II, GROUP D SPACE. THE CLASS I, DIVISION II, GROUP D SPACE EXTENDS TO ENTIRE CLOSED SPACE. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT.
7. PROPOSED EQUIPMENT DISCONNECT TO BE PROVIDED WITH A SET OF AUXILIARY CONTACTS. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
8. PROVIDE CONDUIT BUSHING, FITTING, OR FLEX CONNECTION AS REQUIRED FOR PROPER CONNECTION OF DEVICE. ALL BUSHINGS, FITTINGS, OR FLEX CONNECTIONS TO BE SUITED FOR ENVIRONMENT INSTALLED WITHIN. COORDINATE WITH OTHER PRIME CONTRACTORS AND EQUIPMENT MANUFACTURER. FLEX CONNECTION LENGTHS TO BE MINIMIZED TO GREATEST EXTENT POSSIBLE. TYPICAL.
9. (3)#10 & #10G, 1"C.
10. (4)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED STARTER WITHIN CONTROL PANEL. IN THE EVENT OF A MOTOR HIGH TEMPERATURE CONDITION THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE TO UNIT. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
11. (2)#18STP & (4)#14, 3/4"C
12. FACTORY CABLE. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE 3/4" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER AS REQUIRED PER MANUFACTURER
13. (3)#12 & #12G, 3/4"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.
14. (12)#14, 1"C
15. (2)#18STP, 3/4"C
16. (4)#14, 3/4"C
17. CONTRACTOR TO COORDINATE FINAL DUCT BANK ROUTING/REQUIREMENTS WITH EXISTING FIELD CONDITIONS, PROPOSED WORK, OWNER AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.
18. CONTRACTOR RESPONSIBLE TO RESTORE ALL DISTURBED SURFACES AS PART OF THIS CONTRACT. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER. REFER TO TYPICAL DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
19. (24)#14, 1-1/2"C
20. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CLOSELY COORDINATE FINAL PENETRATION LOCATIONS/REQUIREMENTS WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. TYPICAL.

CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND SHOWS ALL INTERCONNECTIONS. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. VFD INPUT & OUTPUT CONDUCTORS MUST BE RUN INDEPENDENT OF OTHER CONDUCTORS.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL RISER DIAGRAMS

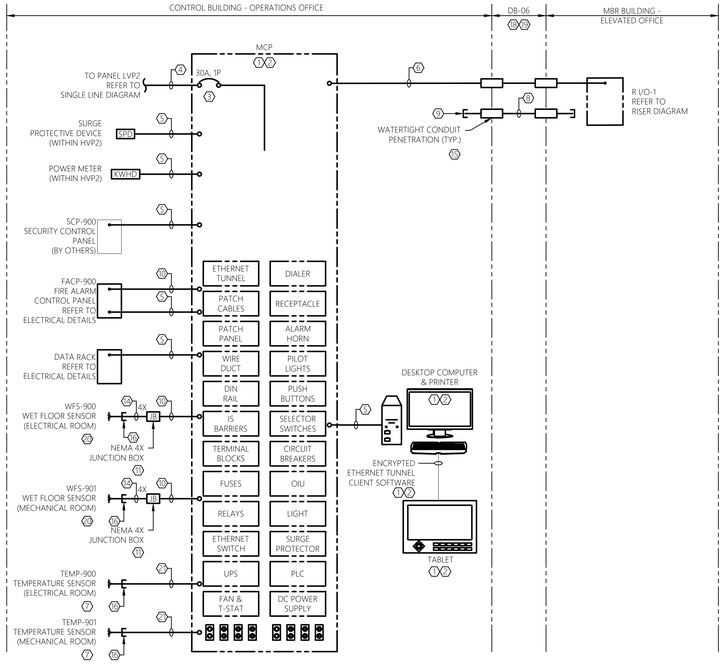
REVISIONS

NO.	DESCRIPTION	DATE

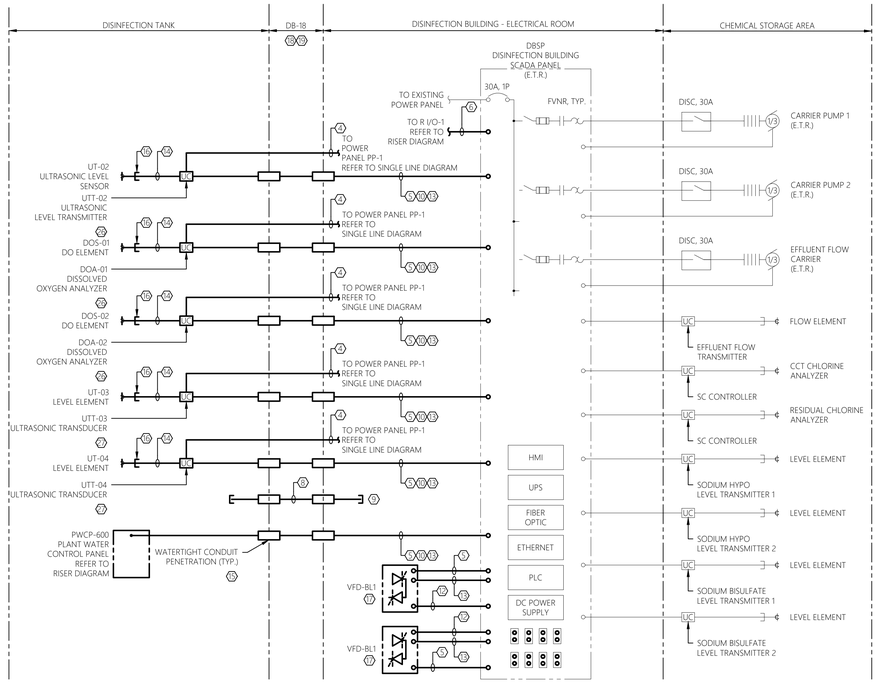
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-024

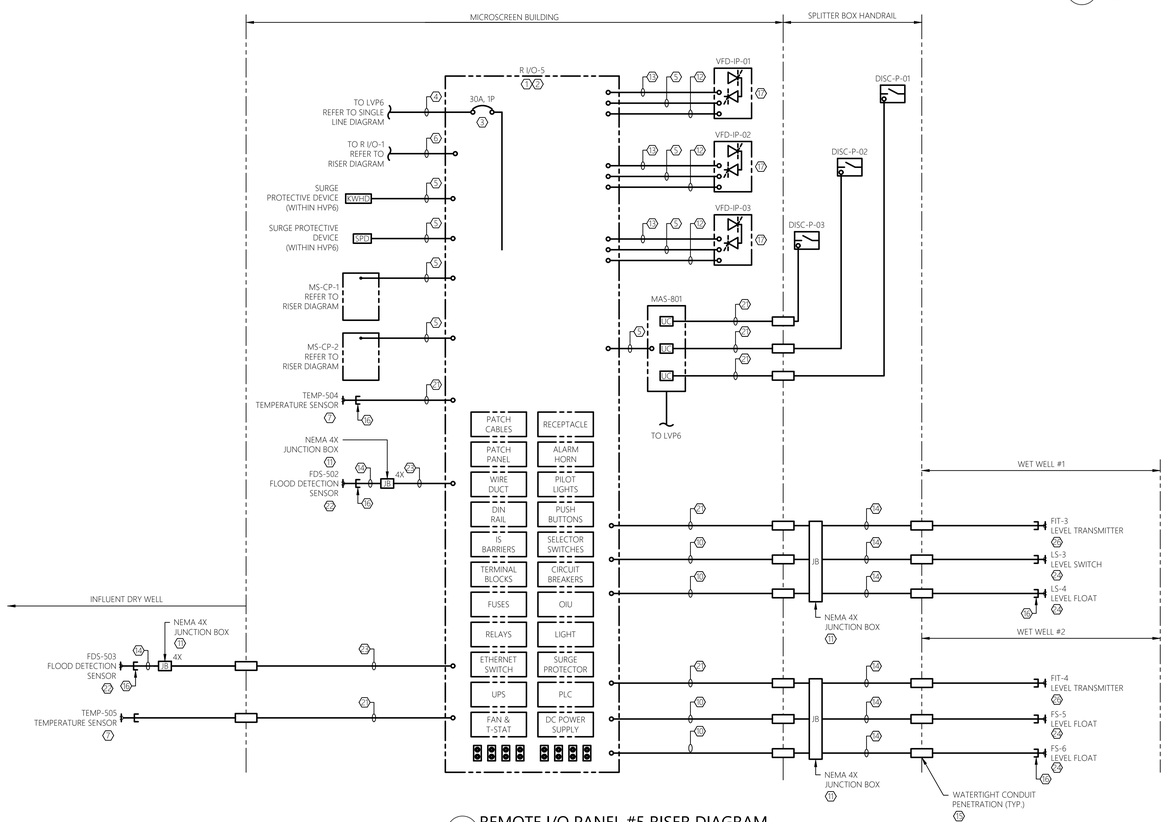
PROJECT # 18-732 PHASE #



1 E-025 MAIN CONTROL PANEL RISER DIAGRAM
SCALE: NTS — CONTROL BUILDING



2 E-025 EXISTING DISINFECTION BUILDING SCADA PANEL DBSP RISER DIAGRAM
SCALE: NTS — CHEMICAL FEED BUILDING



3 E-025 REMOTE I/O PANEL #5 RISER DIAGRAM
SCALE: NTS — MICROSCREEN BUILDING

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
3. ALL CONDUCTORS, EQUIPMENT, COMPONENTS, AND DEVICES NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO ELECTRICAL PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH ALL PRIME CONTRACT DRAWINGS. REFER TO ELECTRICAL SITE PLAN FOR DUCT BANK INFORMATION
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND ALL OTHER TRADE CONTRACTORS.
7. CIRCUITS SHOWN ARE POWER, CONTROL, INSTRUMENTATION, AND CONTROL CIRCUIT POWER. REFER TO SINGLE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR ADDITIONAL CIRCUITS.
8. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
9. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
10. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
11. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
12. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS WITH OWNER AND ALL OTHER TRADE CONTRACTORS. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC.
13. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED INTERNAL TO CONTROL PANELS. ALL REQUIREMENTS TO BE PER NEC.
14. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE
15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL, WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN XHHW-2 INSULATION.
18. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

1. CONTROL PANEL AND ALL INTERNAL COMPONENTS TO BE FURNISHED BY CONTRACTOR THRU BID ALLOWANCE #1. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, AND MOUNTING/INSTALLATION/WIRING OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH OWNER AND ENGINEER TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
2. NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION AND SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ALL PANEL INTERNAL COMPONENTS.
3. DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED SIZE. ALL REQUIREMENTS TO BE PER NEC.
4. (2)#12 & #12G, 3/4"C.
5. (1) CAT 6A PREMIUM ETHERNET CABLE, 1"C. PROVIDE AS PLENUM RATED WITH 4 BONDED PAIRS. TO BE BELDEN #3633 OR APPROVED EQUAL.
6. 8-STRAND, MULTI-MODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C. PROVIDE MAXCELL FABRIC INNERDUCT WITHIN 4" CONDUIT. PROVIDE AS MAXCELL 4" 3-CELL PRODUCT. INSTALL PROPOSED FIBER OPTIC CABLE WITHIN 1-CELL OF THE PROPOSED INNERDUCT AND A PULL STRING THROUGH THE OTHER TWO (2) CELLS. FIBER OPTIC CABLE TO BE CONTINUOUS (NO SPLICE) AND SUITABLE FOR INDOOR/OUTDOOR APPLICATIONS ALONG WITH SUITABLE FOR DIRECT BURIAL APPLICATIONS. FIBER OPTIC CABLE TO BE MODEL CLEARCURVE AS MANUFACTURED BY CORNING OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER FOR REVIEW DURING SUBMITTAL PHASE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. TEMPERATURE SENSOR TO BE PROVIDED AS PART OF THIS CONTRACT. TEMPERATURE SENSORS SHALL BE OMEGA EWS-TX SERIES WALL MOUNT SENSOR OR APPROVED EQUAL. CONTRACTOR TO PROVIDE ELECTRICAL BOX, 24 VDC POWER SUPPLY, CIRCUITRY (CONDUIT AND CONDUCTORS) WALL PLATE, AND MOUNTING BRACKET AS REQUIRED FOR A COMPLETE AND OPERABLE ROOM TEMPERATURE SENSING DEVICE PER MANUFACTURER'S RECOMMENDATIONS
8. SPARE 4"C.
9. PROVIDE SPARE CONDUIT AS SHOWN. STUB CONDUIT ADJACENT TO EQUIPMENT, OR AS DIRECTED BY THE OWNER. PROVIDE PULL ROPE AND CAP BOTH ENDS. CONTRACTOR TO PROVIDE LABEL FOR ALL SPARE CONDUITS INDICATING CONDUIT DESTINATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. (4)#14, 1"C
11. CONTRACTOR TO PROVIDE JUNCTION/PULL BOXES FOR SPLICING, OR EXTENDING CIRCUITRY AS REQUIRED. PROVIDE NECESSARY TERMINAL STRIPS, OR SPLICE KITS WITHIN JUNCTION BOX TO EXTEND CIRCUITRY AS SHOWN. (NOTE, JUNCTION BOXES ARE NOT ALWAYS SHOWN ON FLOOR PLANS. CONTRACTOR TO FIELD LOCATE AS NECESSARY). JUNCTION BOXES ARE TO BE RATED FOR ENVIRONMENT INSTALLED, INCLUDING BUT NOT LIMITED TO HAZARDOUS ENVIRONMENTS, CORROSIVE ENVIRONMENTS, AND OUTDOOR INSTALLATIONS. CONTRACTOR TO FIELD VERIFY AND COORDINATE CONDUIT ARRANGEMENT ENTERING/LEAVING JUNCTION BOX AS REQUIRED. CONTRACTOR TO SIZE JUNCTION BOXES PER NEC ARTICLE 314. JUNCTION BOXES TO BE MANUFACTURED BY EATON, OR APPROVED EQUAL. TYPICAL OF ALL JUNCTION BOXES SHOWN ON THIS DRAWING.
12. (24)#14, 1"C
13. (4)#18STP, 1"C
14. FACTORY CABLE. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE 1" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH MANUFACTURER.
15. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CLOSELY COORDINATE FINAL PENETRATION LOCATIONS/REQUIREMENTS WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. TYPICAL.
16. PROVIDE CONDUIT BUSHING, FITTING, OR FLEX CONNECTION AS REQUIRED FOR PROPER CONNECTION OF DEVICE. ALL BUSHINGS, FITTINGS, OR FLEX CONNECTIONS TO BE SUITED FOR ENVIRONMENT INSTALLED WITHIN, INCLUDING BUT NOT LIMITED TO, HAZARDOUS ENVIRONMENTS, CORROSIVE ENVIRONMENTS, AND OUTDOOR INSTALLATIONS. COORDINATE WITH APPLICABLE CONTRACTOR AND EQUIPMENT MANUFACTURER. FLEX CONNECTION LENGTHS TO BE MINIMIZED TO GREATEST EXTENT POSSIBLE. TYPICAL.
17. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR POWER CIRCUITRY SPECIFICATIONS. REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL INFORMATION & ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
18. CONTRACTOR RESPONSIBLE TO RESTORE ALL DISTURBED SURFACES AS PART OF THIS CONTRACT. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER. REFER TO TYPICAL DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
19. CONTRACTOR TO COORDINATE FINAL DUCT BANK ROUTING/REQUIREMENTS WITH EXISTING FIELD CONDITIONS, PROPOSED WORK, OWNER AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.
20. WET FLOOR SENSOR TO BE PROVIDED AS PART OF BID ALLOWANCE #1. PROVIDE AS WINLAND ELECTRONICS, WATERBUG WB200, OR APPROVED EQUAL.
21. (2)#18STP, 1"C
22. FLOOD DETECTION SENSOR TO BE PROVIDED AS PAINTEK CLS200 CAPACITANCE PROBE AS MANUFACTURED BY SIEMENS, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... AND CIRCUITRY (CONDUIT AND CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE FLOOD DETECTION SYSTEM. REFER TO SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.
23. (2)#18STP & (4)#14, 1"C
24. FLOAT SWITCH TO BE PROVIDED AS SJE RHOMBUS MILI-AMP-MASTER, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... AND CIRCUITRY (CONDUIT AND CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE FLOAT SWITCH SYSTEM. REFER TO SPECIFICATIONS SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.
25. (3)#18STP, 3/4"C.
26. LEVEL TRANSMITTER TO BE PROVIDED AS KELLER AMERICA LEVELRAT SUBMERSIBLE LEVEL TRANSMITTER, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... AND CIRCUITRY (CONDUIT AND CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE TRANSMITTER SYSTEM. REFER TO SPECIFICATIONS SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.

CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND SHOWS ALL INTERCONNECTIONS. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. VFD INPUT & OUTPUT CONDUCTORS MUST BE RUN INDEPENDENT OF OTHER CONDUCTORS.

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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL RISER DIAGRAMS

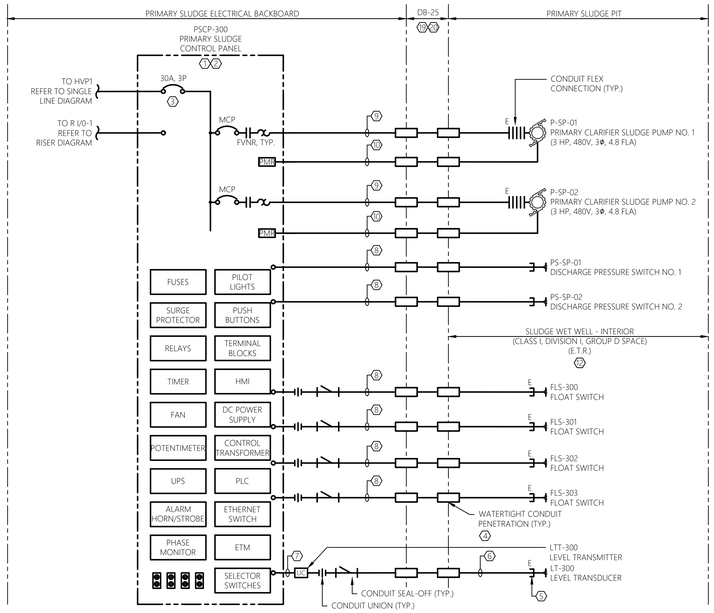
REVISIONS

NO.	DESCRIPTION	DATE

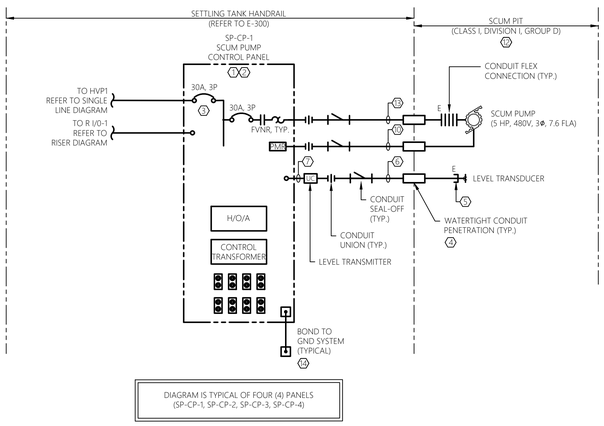
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-025

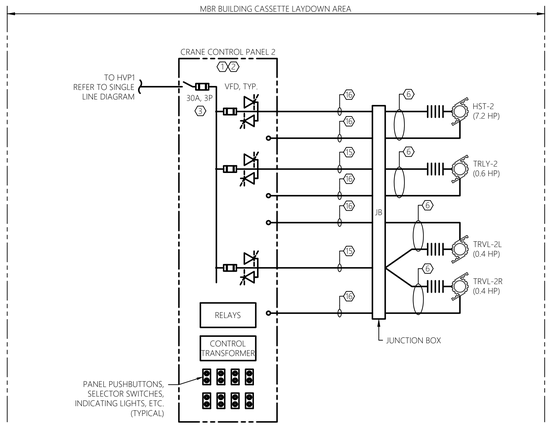
PROJECT # 18-732 PHASE #



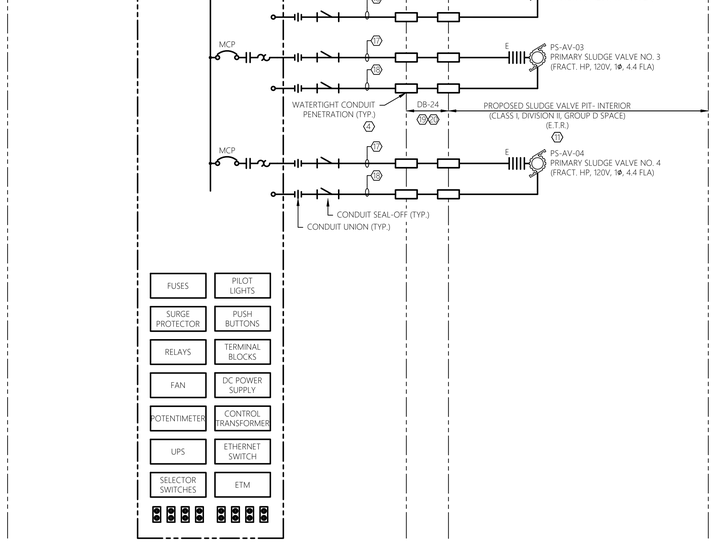
4 PRIMARY SLUDGE PUMP CONTROL PANEL RISER DIAGRAM
E-026 SCALE: NTS CAESARS LANE



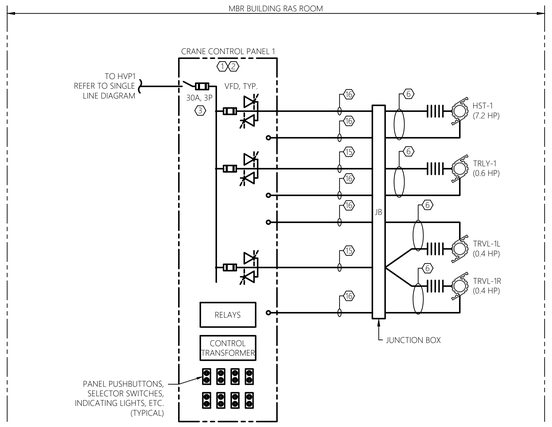
5 SCUM PUMP CONTROL PANEL RISER DIAGRAM
E-026 SCALE: NTS SETTLING TANKS



4 BRIDGE CRANE CONTROL PANEL RISER DIAGRAM
E-026 SCALE: NTS CASSETTE LAYDOWN AREA



4 PRIMARY SLUDGE PUMP CONTROL PANEL RISER DIAGRAM
E-026 SCALE: NTS CAESARS LANE



3 BRIDGE CRANE CONTROL PANEL RISER DIAGRAM
E-026 SCALE: NTS RAS PUMP ROOM

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
3. ALL CONDUCTORS NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO FLOOR PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH PROCESS MECHANICAL DRAWINGS. REFER TO SITE PLAN FOR DUCT BANK INFORMATION
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER ALL OTHER TRADE CONTRACTORS.
7. CIRCUITS SHOWN ARE POWER, CONTROL, INSTRUMENTATION, AND CONTROL CIRCUIT POWER. REFER TO SINGLE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR ADDITIONAL CIRCUITS.
8. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
9. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
10. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
11. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
12. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS WITH OWNER AND ALL OTHER TRADE CONTRACTORS. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC..
13. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED INTERNAL TO CONTROL PANELS. ALL REQUIREMENTS TO BE PER NEC.
14. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE.
15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL, WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN THWN OR XHHW INSULATION.
18. ALL CONTROL/COMMUNICATION WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
19. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

1. CONTROL PANEL AND ALL INTERNAL COMPONENTS ARE BY THIS CONTRACT. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, AND MOUNTING/INSTALLATION OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH OWNER TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
2. NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION FOR ALL PANEL INTERNAL COMPONENTS. CONTRACTOR TO PROVIDE ADDITIONAL INTERNAL CONTACTS AND JUMPERS PER CONTROL PANEL MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM.
3. DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED SIZE. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CLOSELY COORDINATE FINAL PENETRATION LOCATIONS/REQUIREMENTS WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. TYPICAL.
5. PROVIDE CONDUIT BUSHING, FITTING, OR FLEX CONNECTION AS REQUIRED FOR PROPER CONNECTION OF DEVICE. ALL BUSHINGS, FITTINGS, OR FLEX CONNECTIONS TO BE SUITED FOR ENVIRONMENT INSTALLED WITHIN, INCLUDING BUT NOT LIMITED TO, HAZARDOUS ENVIRONMENTS, CORROSIVE ENVIRONMENTS, AND OUTDOOR INSTALLATIONS. COORDINATE WITH APPLICABLE CONTRACTOR AND EQUIPMENT MANUFACTURER. FLEX CONNECTION LENGTHS TO BE MINIMIZED TO GREATEST EXTENT POSSIBLE. TYPICAL.
6. FACTORY CABLE. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE 1" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM. PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH MANUFACTURER.
7. (2)#18STP, 3/4"C
8. (2)#14, 3/4"C
9. (3)#12 & #12G, 3/4"C
10. (6)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY AND SEAL LEAK SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED VFD. IN THE EVENT OF A MOTOR HIGH TEMPERATURE OR SEAL LEAKAGE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
11. AREA IS A CLASS I DIVISION II GROUP D SPACE WITHIN 10' ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL. ALL WIRING METHODS TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES INTERIOR TO THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I DIVISION II GROUP D ENVIRONMENT.
12. AREA IS A CLASS I DIVISION I GROUP D SPACE WITHIN 18" ENVELOPE ABOVE WATER SURFACE AND HORIZONTALLY FROM WETTED WALLS. ALL WIRING METHODS TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES INTERIOR TO THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I DIVISION II GROUP D ENVIRONMENT.
13. (3)#10 & #10G, 1"C
14. CONTRACTOR TO BOND TO BUILDING/STRUCTURE GROUND SYSTEM. UTILIZE #4 COPPER GROUND CONDUCTOR UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
15. (3)#10 & #10G, 1"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.
16. (4)#14, 3/4"C. CIRCUIT TO BE UTILIZED FOR THE ASSOCIATED MOTOR THERMAL SAFETY SWITCH. CIRCUIT TO CONTROL TERMINALS OF PROPOSED STARTER. IN THE EVENT OF A MOTOR HIGH TEMPERATURE, THE UNIT IS TO BE SHUT DOWN TO PREVENT DAMAGE. NOTE, TWO CONDUCTORS TO BE UTILIZED AS SPARES.
17. (12)#14 & (2)#18STP, 1"C.
18. CAT 6 CABLE, 1"C.
19. CONTRACTOR RESPONSIBLE TO RESTORE ALL DISTURBED SURFACES AS PART OF THIS CONTRACT. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER. REFER TO TYPICAL DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
20. CONTRACTOR TO COORDINATE FINAL DUCT BANK ROUTING/REQUIREMENTS WITH EXISTING FIELD CONDITIONS, PROPOSED WORK, OWNER AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.

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BID SET

JSE
JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL RISER DIAGRAMS

REVISIONS

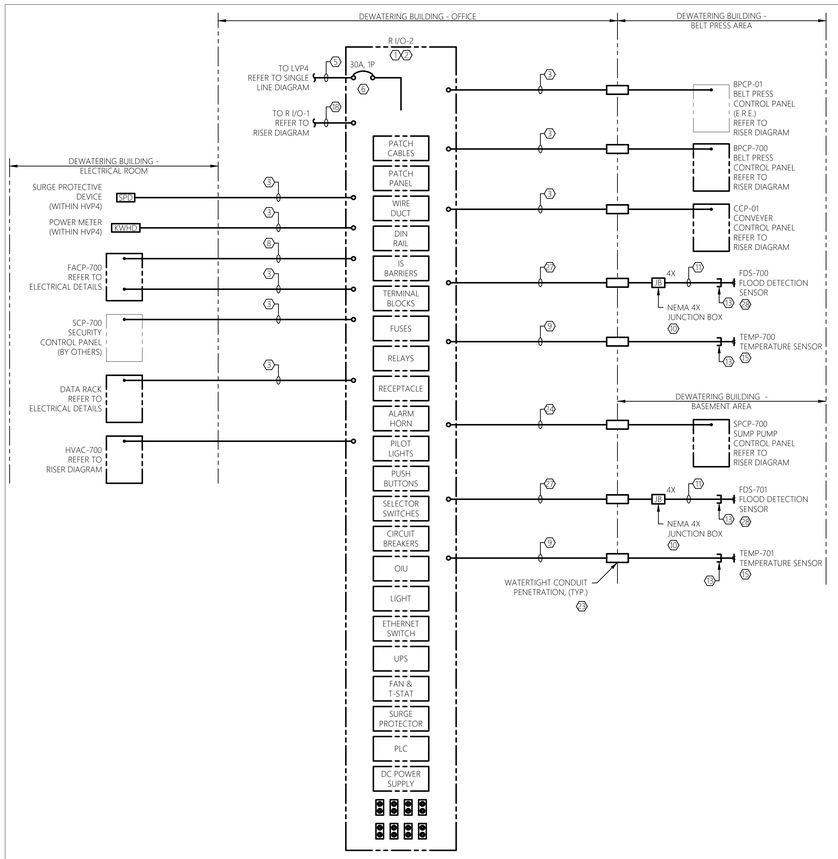
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-026

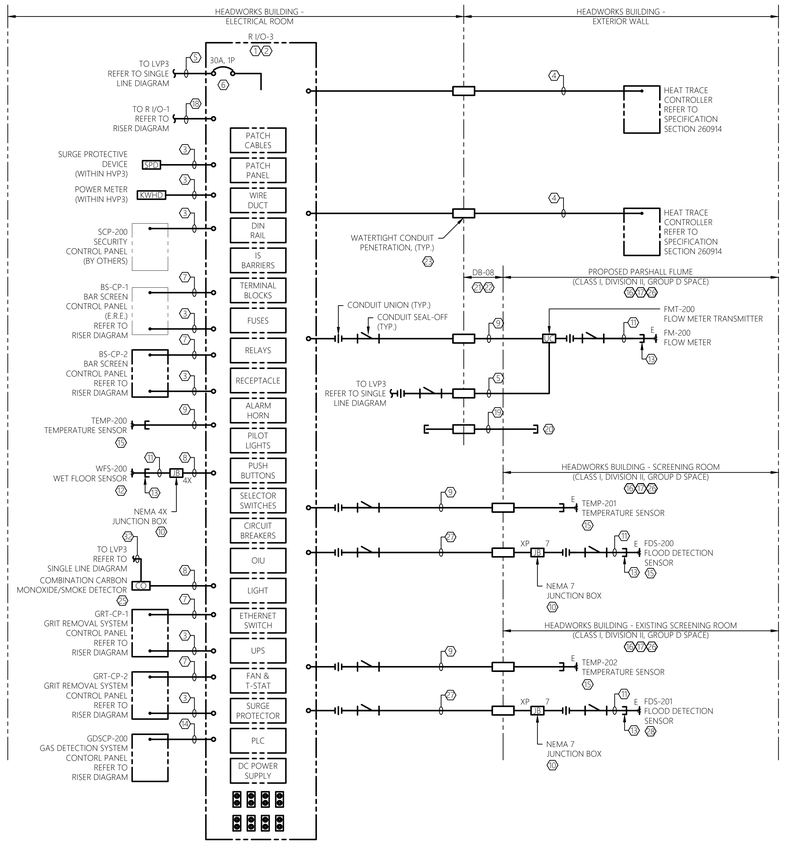
PROJECT # 18-732 PHASE #



1 E-027 SCALE: NTS

REMOTE I/O PANEL #2 RISER DIAGRAM

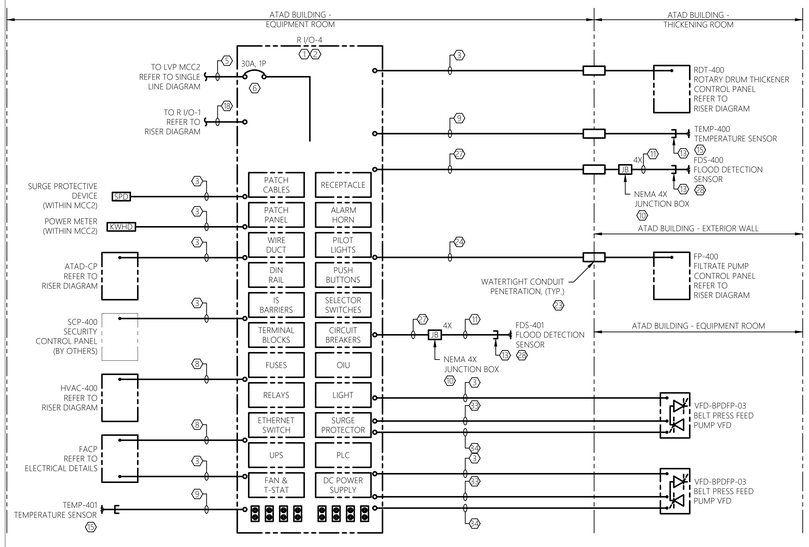
DEWATERING BUILDING



2 E-027 SCALE: NTS

REMOTE I/O PANEL #3 RISER DIAGRAM

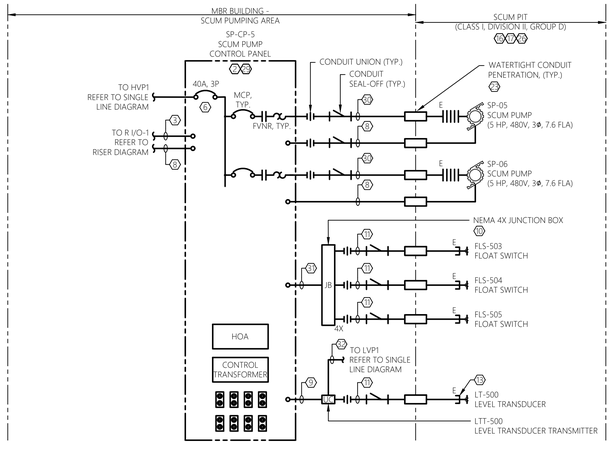
HEADWORKS BUILDING



3 E-027 SCALE: NTS

REMOTE I/O PANEL #4 RISER DIAGRAM

ATAD BUILDING



5 E-026 SCALE: NTS

SCUM PUMP CONTROL PANEL RISER DIAGRAM

SETTLING TANKS

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
3. ALL CONDUCTORS, EQUIPMENT, COMPONENTS, AND DEVICES NOT SHOWN FOR CLARITY. COORDINATE WITH ALL PRIME CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO ELECTRICAL PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH ALL PRIME CONTRACT DRAWINGS. REFER TO ELECTRICAL SITE PLAN FOR DUCT BANK INFORMATION
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND ALL OTHER TRADE CONTRACTORS.
7. CIRCUITS SHOWN ARE POWER, CONTROL, INSTRUMENTATION, AND CONTROL CIRCUIT POWER. REFER TO SINGLE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR ADDITIONAL CIRCUITS.
8. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
9. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
10. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
11. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
12. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS WITH OWNER AND ALL OTHER TRADE CONTRACTORS. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC.
13. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED INTERNAL TO CONTROL PANELS. ALL REQUIREMENTS TO BE PER NEC.
14. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE
15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL, WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN XHHW-2 INSULATION.
18. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

1. CONTROL PANEL AND ALL INTERNAL COMPONENTS TO BE FURNISHED BY CONTRACTOR THRU BID ALLOWANCE #1. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, AND MOUNTING/INSTALLATION/WIRING OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH OWNER AND ENGINEER TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
2. NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING REQUIRED UNDER THIS CONTRACT. REFERENCE SUBMITTAL DOCUMENTATION AND SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ALL PANEL INTERNAL COMPONENTS.
3. (1) CAT 6A PREMIUM ETHERNET CABLE, 1"C, PROVIDE AS PLENUM RATED WITH 4 BONDED PAIRS. TO BE BELDEN #3633 OR APPROVED EQUAL.
4. (12)#14 & (2)#18STP, 1"C.
5. (2)#10 & #10G, 3/4"C.
6. DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED DISCONNECT SIZE. ALL REQUIREMENTS TO BE PER NEC.
7. (24)#14 & (4)#18STP, 1-1/2"C.
8. (4)#14, 3/4"C
9. (2)#18STP, 3/4"C
10. CONTRACTOR TO PROVIDE JUNCTION/PULL BOXES FOR SPLICING, OR EXTENDING CIRCUITRY AS REQUIRED. PROVIDE NECESSARY TERMINAL STRIPS, OR SPLICE KITS WITHIN JUNCTION BOX TO EXTEND CIRCUITRY AS SHOWN. (NOTE, JUNCTION BOXES ARE NOT ALWAYS SHOWN ON FLOOR PLANS. CONTRACTOR TO FIELD LOCATE AS NECESSARY). JUNCTION BOXES ARE TO BE RATED FOR ENVIRONMENT INSTALLED, INCLUDING BUT NOT LIMITED TO HAZARDOUS ENVIRONMENTS, CORROSIVE ENVIRONMENTS, AND OUTDOOR INSTALLATIONS. CONTRACTOR TO FIELD VERIFY AND COORDINATE CONDUIT ARRANGEMENT ENTERING/LEAVING JUNCTION BOX AS REQUIRED. CONTRACTOR TO SIZE JUNCTION BOXES PER NEC ARTICLE 314. JUNCTION BOXES TO BE MANUFACTURED BY EATON, OR APPROVED EQUAL. TYPICAL OF ALL JUNCTION BOXES SHOWN ON THIS DRAWING.
11. FACTORY CABLE. THIS CONTRACT RESPONSIBLE FOR ALL TERMINATIONS PER MANUFACTURERS RECOMMENDATIONS. PROVIDE 1" CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE AND RECOMMENDED BY THE EQUIPMENT MANUFACTURER. CONDUIT SIZE IS LISTED AS MINIMUM. PROVIDE LARGER AS REQUIRED PER MANUFACTURER. COORDINATE FINAL INSTALLATION REQUIREMENTS WITH MANUFACTURER.
12. WET FLOOR SENSOR TO BE PROVIDED AS PART OF BID ALLOWANCE #1. PROVIDE AS WINLAND ELECTRONICS, WATERBUG WB200, OR APPROVED EQUAL.
13. PROVIDE CONDUIT BUSHING, FITTING, OR FLEX CONNECTION AS REQUIRED FOR PROPER CONNECTION OF DEVICE. ALL BUSHINGS, FITTINGS, OR FLEX CONNECTIONS TO BE SUITED FOR ENVIRONMENT INSTALLED WITHIN, INCLUDING BUT NOT LIMITED TO, HAZARDOUS ENVIRONMENTS, CORROSIVE ENVIRONMENTS, AND OUTDOOR INSTALLATIONS. COORDINATE WITH APPLICABLE CONTRACTOR AND EQUIPMENT MANUFACTURER. FLEX CONNECTION LENGTHS TO BE MINIMIZED TO GREATEST EXTENT POSSIBLE. TYPICAL.
14. (24)#14 & (12)#18STP, 1-1/2"C.
15. TEMPERATURE SENSOR TO BE PROVIDED AS OMEGA EWS-TX SERIES WALL MOUNT SENSOR, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE AS OMEGA OSAT SERIES WITHIN CLASSIFIED AREAS. PROVIDE ELECTRICAL BOX, 24V DC POWER SUPPLY, CIRCUITRY (CONDUIT AND CONDUCTORS), WALL PLATE, AND MOUNTING BRACKETS AS REQUIRED FOR AN OVERALL COMPLETE AND OPERABLE ROOM TEMPERATURE SENSING DEVICE PER MANUFACTURER'S RECOMMENDATIONS. REFER TO SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.
16. AREA IS A CLASSIFIED SPACE. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASSIFIED GROUP D ENVIRONMENT. REFER TO NFPA 820 TABLE FOR ADDITIONAL INFORMATION/REQUIREMENTS. NOTE, NOT ALL REQUIRED SEAL-OFFS SHOWN FOR CLARITY. PROVIDE PER NEC.
17. ALL ELECTRICAL EQUIPMENT, COMPONENTS, DEVICES, AND RACEWAY SYSTEMS TO BE KEPT OUT OF CLASSIFIED AREAS TO GREATEST EXTENT POSSIBLE.
18. 8-STRAND, MULTI-MODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C. PROVIDE MAXCELL FABRIC INNERDUCT WITHIN 4" CONDUIT. PROVIDE AS MAXCELL 4" 3-CELL PRODUCT. INSTALL PROPOSED FIBER OPTIC CABLE WITHIN 1-CELL OF THE PROPOSED INNERDUCT AND A PULL STRING THROUGH THE OTHER TWO (2) CELLS. FIBER OPTIC CABLE TO BE CONTINUOUS (NO SPLICES) AND SUITABLE FOR INDOOR/OUTDOOR APPLICATIONS ALONG WITH SUITABLE FOR DIRECT BURIAL APPLICATIONS. FIBER OPTIC CABLE TO BE MODEL CLEARCURVE AS MANUFACTURED BY CORNING OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER FOR REVIEW DURING SUBMITTAL PHASE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
19. SPARE 4"C.
20. PROVIDE SPARE CONDUIT AS SHOWN. STUB CONDUIT ADJACENT TO EQUIPMENT, OR AS DIRECTED BY THE OWNER. PROVIDE PULL ROPE AND CAP BOTH ENDS. CONTRACTOR TO PROVIDE LABEL FOR ALL SPARE CONDUITS INDICATING CONDUIT DESTINATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
21. CONTRACTOR RESPONSIBLE TO RESTORE ALL DISTURBED SURFACES AS PART OF THIS CONTRACT. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER. REFER TO TYPICAL DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
22. CONTRACTOR TO COORDINATE FINAL DUCT BANK ROUTING/REQUIREMENTS WITH EXISTING FIELD CONDITIONS, PROPOSED WORK, OWNER AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.
23. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CLOSELY COORDINATE FINAL PENETRATION LOCATIONS/REQUIREMENTS WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. TYPICAL.
24. (32)#14, 1-1/2"C.
25. CONTRACTOR TO PROVIDE COMBINATION CARBON MONOXIDE/SMOKE DETECTOR MODEL GN-503F AS MANUFACTURED BY GENTEX OR APPROVED EQUAL. DETECTOR TO BE 120V POWERED BY BUILDING ELECTRICAL SYSTEM, CONTAIN BATTERY BACKUP, AND BE UL LISTED. DETECTOR TO FEATURE ONE (1) SET OF CONTACTS THAT ACTIVATE UPON DETECTION OF SMOKE, OR CARBON MONOXIDE. INSTALL ON WALL/CEILING PER MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH NFPA 720.
26. ROUTING AND ATTACHMENT METHODS OF ALL CONDUITS WITHIN STRUCTURE ARE TO BE CLOSELY COORDINATED WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER TO AVOID CONFLICTS. ALL RACEWAY TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC... TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE FOR ADDITIONAL INFORMATION.
27. (2)#18STP & (4)#14, 3/4"C
28. FLOOD DETECTION SENSOR TO BE PROVIDED AS PAINTEK CLS200 CAPACITANCE PROBE AS MANUFACTURED BY SIEMENS, OR APPROVED EQUAL THRU BID ALLOWANCE #1. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC., AND CIRCUITRY (CONDUIT AND CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE FLOOD DETECTION SYSTEM. REFER TO SPECIFICATION SECTION 260912 CONTROL PANELS AND INTEGRATION FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE LABEL PER SPECIFICATION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS.
29. CONTROL PANEL AND ALL INTERNAL COMPONENTS ARE BY THIS CONTRACT. THIS CONTRACT IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, AND MOUNTING/INSTALLATION OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH OWNER TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
30. (3)#12 & #12G, 3/4" C.
31. (8)#14, 3/4" C.
32. (2)#12 & #12G, 3/4" C.
33. (12)#14, 3/4"C.
34. (4)#18STP, 3/4"C.

CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND SHOWS ALL INTERCONNECTIONS. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. VFD INPUT & OUTPUT CONDUCTORS MUST BE RUN INDEPENDENT OF OTHER CONDUCTORS.

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(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
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BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL RISER DIAGRAMS

REVISIONS

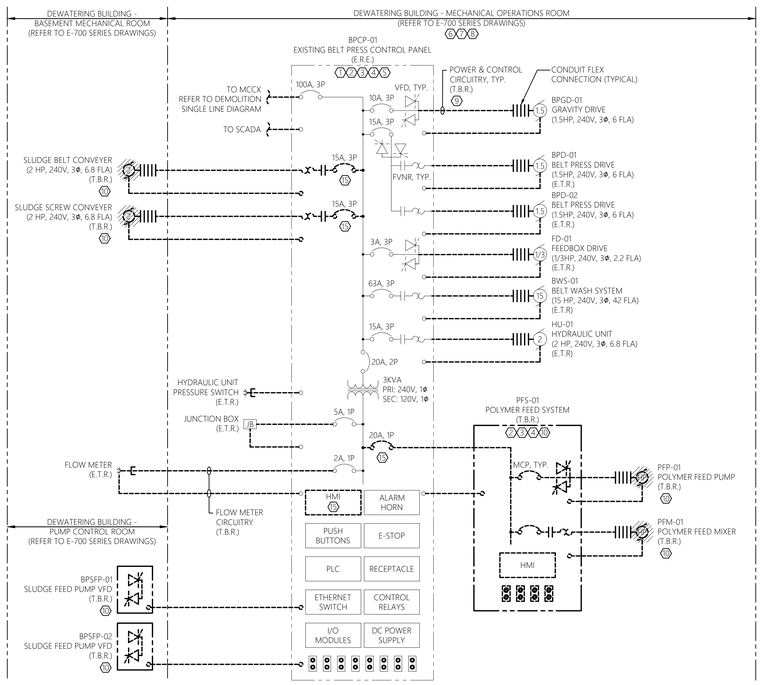
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

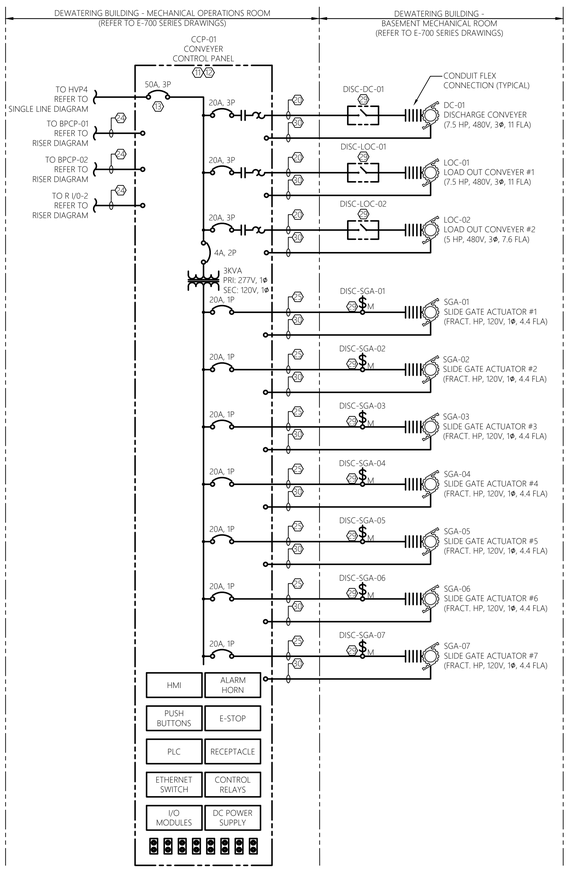
E-027

PROJECT # 18-732 PHASE #



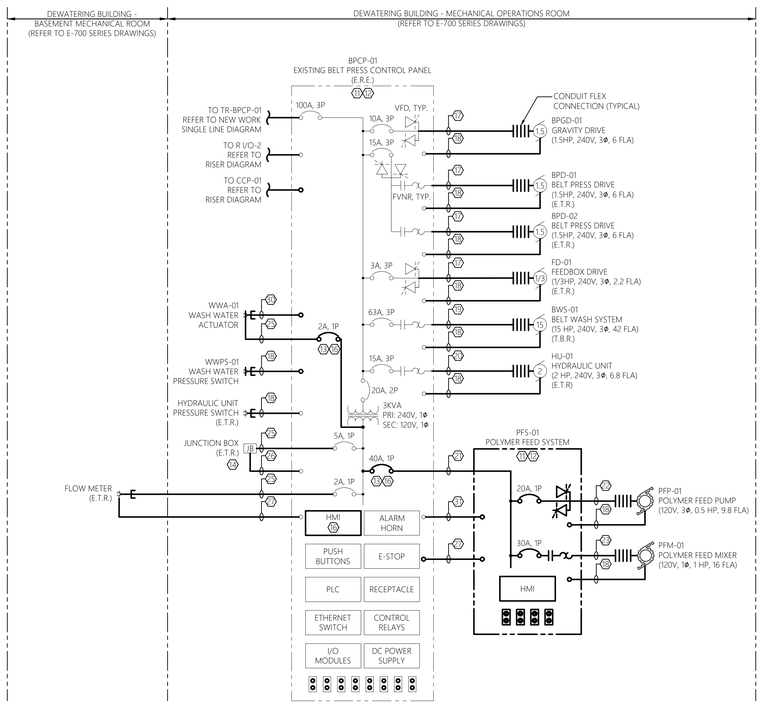
1 E-028 EXISTING BELT FILTER PRESS CONTROL PANEL RISER DIAGRAM - DEMOLITION

SCALE: NTS DEWATERING BLDG



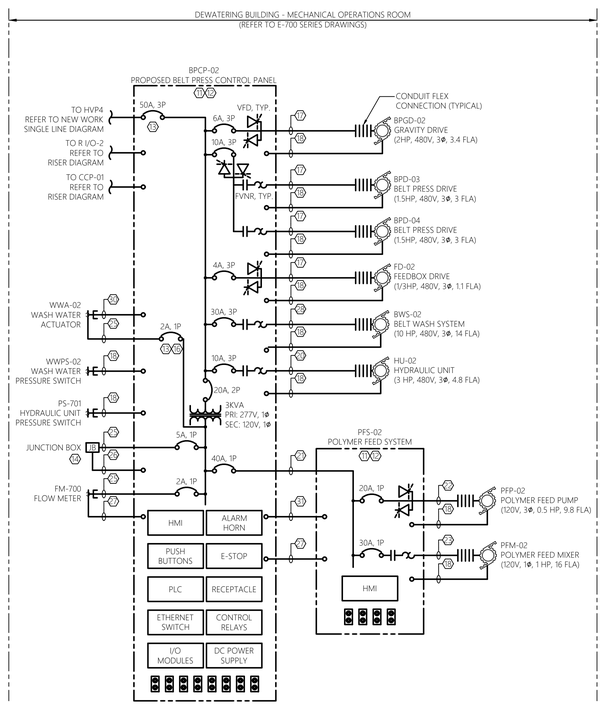
1 E-028 CONVEYER CONTROL PANEL RISER DIAGRAM

SCALE: NTS DEWATERING BLDG



1 E-028 EXISTING BELT FILTER PRESS CONTROL PANEL RISER DIAGRAM - NEW WORK

SCALE: NTS DEWATERING BLDG



1 E-028 PROPOSED BELT FILTER PRESS CONTROL PANEL RISER DIAGRAM

SCALE: NTS DEWATERING BLDG

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
3. ALL CONDUCTORS NOT SHOWN FOR CLARITY. COORDINATE WITH OTHER TRADE CONTRACTORS AND PROVIDE COMPLETE ELECTRICAL CIRCUITING FOR ALL INSTALLED EQUIPMENT. ALL REQUIREMENTS TO BE PER NEC.
4. REFER TO FLOOR PLANS FOR GENERAL DEVICE/EQUIPMENT LOCATIONS. COORDINATE FINAL LOCATIONS WITH PROCESS MECHANICAL DRAWINGS. REFER TO SITE PLAN FOR DUCT BANK INFORMATION AS REQUIRED.
5. REFER TO SINGLE LINE DIAGRAMS, SPECIFICATIONS, AND SUBMITTAL DOCUMENTATION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER ALL OTHER TRADE CONTRACTORS.
7. CIRCUITS SHOWN ARE POWER, CONTROL, INSTRUMENTATION, AND CONTROL CIRCUIT POWER. REFER TO SINGLE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR ADDITIONAL CIRCUITS.
8. ALL WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
9. QUANTITY OF CONDUCTORS CALLED FOR MAY INCLUDE SPARE CONDUCTORS. PROVIDE CONDUCTORS SHOWN OR MINIMUM NUMBER REQUIRED PER MANUFACTURERS WRITTEN INSTRUCTIONS. ALL REQUIREMENTS TO BE PER NEC.
10. CONTRACTOR TO PROVIDE ARC FLASH WARNING LABELS FOR ALL NEW OR MODIFIED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
11. REFER TO ELECTRICAL DETAIL SHEETS AND SCHEDULE SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
12. CONTRACTOR TO COORDINATE MOUNTING LOCATIONS OF ALL PANELS WITH OWNER AND ALL OTHER TRADE CONTRACTORS. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC..
13. PROVIDE INTRINSICALLY SAFE BARRIERS AS REQUIRED INTERNAL TO CONTROL PANELS. ALL REQUIREMENTS TO BE PER NEC.
14. NOT ALL REQUIRED CLASSIFIED SPACE WIRING METHODS INCLUDING, BUT NOT LIMITED TO SEAL-OFFS MAY BE SHOWN. PROVIDE WIRING METHODS PER NEC (LATEST EDITION). PROVIDE CONDUIT UNION WITHIN 6" OF EACH SEAL-OFF AT CONTROL PANELS, DISTRIBUTION PANELS, VFDS, STARTERS, DISCONNECTS, OR SOURCE OF SUPPLY WHERE FEASIBLE.
15. NOT ALL REQUIRED THRU-WALL, WATERTIGHT, CONDUIT PENETRATIONS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE A THRU-WALL, WATERTIGHT, CONDUIT PENETRATION FOR ALL CONDUIT PENETRATIONS WITHIN BUILDING INTERIOR/EXTERIOR WALLS AND FLOORS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN
16. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL OTHER TRADE CONTRACTORS AND OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUCTORS TO BE COPPER AND CONTAIN XHHW INSULATION.
18. ALL CONTROL/COMMUNICATION WIRING REQUIREMENTS INCLUDING BUT NOT LIMITED TO WIRE SIZE, TYPE, AND QUANTITY OF CONDUCTORS TO BE VERIFIED WITH EQUIPMENT MANUFACTURER.
19. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.

SHEET KEY NOTES:

(1) CONTRACTOR TO DISCONNECT FROM POWER SOURCE AND ALL CONNECTED EQUIPMENT, MAKE ELECTRICALLY SAFE, AND RELOCATE EXISTING BELT PRESS CONTROL PANEL 'BPCP-01' AS SHOWN ON E-700 SERIES DRAWINGS. EQUIPMENT TO BE REMOVED IS TO BECOME PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE IN ITS ENTIRETY. OWNER HAS THE RIGHT TO MAINTAIN ANY EQUIPMENT, COMPONENTS, DEVICES, CONTROLS, ETC... SCHEDULED FOR REMOVAL. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND COORDINATE FINAL REQUIREMENTS WITH APPLICABLE TRADE CONTRACTOR, OWNER, BELT PRESS CONTROL PANEL MANUFACTURE, AND ENGINEER.

(2) NOT ALL ASSOCIATED CONTROLS, STARTERS, DISCONNECTS & CIRCUITRY MAY BE SHOWN FOR CLARITY. CONTRACTOR TO FIELD VERIFY AND COMPLETELY REMOVE ALL ASSOCIATED CONTROLS, STARTERS, DISCONNECTS, CONTROLS, CONTROLS CIRCUITRY (CONDUIT & CONDUCTORS), ALL MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... ASSOCIATED WITH EQUIPMENT/CIRCUITING SCHEDULED FOR REMOVAL. COORDINATE FINAL REQUIREMENTS WITH APPLICABLE TRADE CONTRACTOR, OWNER, BELT PRESS CONTROL PANEL MANUFACTURE, AND ENGINEER.

(3) NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING AND EQUIPMENT TO BE REMOVED AS REQUIRED BY THE CONTRACTOR. CONTRACTOR TO REMOVE ANY EXISTING CIRCUITING ASSOCIATED WITH THE BELT PRESS SYSTEM. CLOSELY COORDINATE ALL REQUIREMENTS WITH APPLICABLE TRADE CONTRACTOR, OWNER, BELT PRESS CONTROL PANEL MANUFACTURE, AND ENGINEER.

(4) REFER TO ELECTRICAL DEMOLITION PLANS, SCHEDULES AND DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS. CONTRACTOR TO COORDINATE ALL EQUIPMENT/CIRCUITING SCHEDULED FOR REMOVAL AND FINAL SEQUENCE OF REMOVAL REQUIREMENTS WITH APPLICABLE TRADE CONTRACTOR, OWNER, BELT PRESS CONTROL PANEL MANUFACTURE, AND ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION. CONTRACTOR TO FIELD VERIFY AND PROVIDE AS REQUIRED.

(5) FOR EXISTING TO REMAIN EQUIPMENT, CONTRACTOR TO DISCONNECT, MAKE ELECTRICALLY SAFE, AND LABEL TO BE RECONNECTED AS SHOW ON NEW WORK.

(6) WWTP IS TO BE OPERATIONAL AT ALL TIMES. PROVIDE TEMPORARY POWER PROVISIONS AS REQUIRED TO FACILITATE WWTP OPERATION DURING ELECTRICAL DEMOLITION AND INSTALLATION. PROVIDE ALL NECESSARY EQUIPMENT, DEVICES, CABLING, ETC... AS REQUIRED FOR AN OVERALL COMPLETE AND OPERABLE TEMPORARY POWER SYSTEM. CONTRACTOR TO MINIMIZE DOWN TIMES TO THE GREATEST EXTENT POSSIBLE. COORDINATE ALL REQUIREMENTS WITH APPLICABLE TRADE CONTRACTOR, OWNER, AND ENGINEER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING TEMPORARY POWER.

(7) CONTRACTOR TO PROVIDE TEMPORARY POWER PLAN IN WRITING TO ENGINEER FOR APPROVAL PRIOR TO PERFORMING ELECTRICAL SERVICE DISRUPTIONS.

(8) CONTRACTOR TO NOT COMMENCE ELECTRICAL DEMOLITION UNTIL TEMPORARY POWER PROVISIONS HAVE BEEN ESTABLISHED AND APPROVED BY THE ENGINEER. NOTE, IT IS THE INTENTION THAT THE NEW ELECTRICAL SERVICE BE INSTALLED, TESTED, AND OPERATIONAL BEFORE THE EXISTING ELECTRICAL SERVICE BE REMOVED.

(9) CONTRACTOR TO REMOVE ALL POWER AND CONTROL CIRCUITRY (CONDUIT AND CONDUCTORS) IN IT'S ENTIRETY AS SHOWN. CONTRACTOR TO FIELD VERIFY.

(10) CONTRACTOR TO DISCONNECT/REMOVE ALL POWER AND CONTROL CIRCUITRY (CONDUIT & CONDUCTORS) IN ITS ENTIRETY BACK TO SOURCE AS WELL AS DEMOLISH ASSOCIATED JUNCTION BOXES, DISCONNECTS, STARTERS, ASSOCIATED CONTROL DEVICES, ALL MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... ALL ITEMS REMOVED TO BECOME PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE PROJECT SITE. CONTRACTOR TO FIELD VERIFY.

(11) NOT ALL INTERNAL COMPONENTS SHOWN FOR CLARITY. DIAGRAM IS INTENDED TO SHOW ALL REQUIRED FIELD CIRCUITING AND TERMINATION REQUIRED BY THE CONTRACTOR. REFERENCE SUBMITTAL DOCUMENTATION FOR ALL PANEL INTERNAL COMPONENTS. CONTRACTOR TO PROVIDE ADDITIONAL INTERNAL COMPONENTS, CONTACTS, AND JUMPERS PER CONTROL PANEL MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM. CLOSELY COORDINATE ALL REQUIREMENTS WITH ALL OTHER TRADE CONTRACTORS AND PANEL MANUFACTURE.

(12) CONTROL PANEL AND ALL INTERNAL COMPONENTS (IF NOT EXISTING) ARE BY TO BE PROVIDED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR ALL FIELD WIRING BETWEEN DEVICES, AND MOUNTING/INSTALLATION OF PANEL AS SHOWN/INDICATED. REFER TO SUBMITTAL DOCUMENTATION AND COORDINATE WITH APPLICABLE TRADE CONTRACTOR, OWNER, CONTROL PANEL MANUFACTURE, AND ENGINEER TO PROVIDE COMPLETE SYSTEM FIELD CIRCUITRY AND TERMINATIONS AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

(13) DISCONNECT SIZE SHOWN FOR BIDDING PURPOSES ONLY. COORDINATE DISCONNECT SIZE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS. COORDINATE CONDUCTOR/CONDUIT SIZE WITH MANUFACTURERS RECOMMENDED DISCONNECT SIZE. ALL REQUIREMENTS TO BE PER NEC. TYPICAL.

(14) COORDINATE TERMINATIONS OF CIRCUITRY AT BELT PRESS MANUFACTURE PROVIDED (IF NOT EXISTING) JUNCTION BOX CLOSELY WITH MANUFACTURER & OTHER TRADE CONTRACTORS.

(15) COMPONENT INTERNAL TO CONTROL PANEL IS TO BE REMOVED BY BELT PRESS CONTROL PANEL MANUFACTURE. NOT ALL PROPOSED COMPONENTS INTERNAL TO CONTROL PANEL MAY BE SHOWN FOR CLARITY. COORDINATE WITH BELT PRESS CONTROL PANEL MANUFACTURE AS NEEDED.

(16) COMPONENT INTERNAL TO CONTROL PANEL IS TO BE INSTALLED BY BELT PRESS CONTROL PANEL MANUFACTURE. NOT ALL PROPOSED COMPONENTS INTERNAL TO CONTROL PANEL MAY BE SHOWN FOR CLARITY. COORDINATE WITH BELT PRESS CONTROL PANEL MANUFACTURE AS NEEDED.

(17) (3)#12 & #12G, 3/4"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.

(18) (4)#14, 3/4"C.

(19) (3)#4 & #8G, 1-1/2"C.

(20) (3)#12 & #12G, 3/4"C.

(21) (2)#8 & #10G, 3/4"C.

(22) (2)#12 & #12G, 3/4"C. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.

(23) (2)#10 & #10G, 3/4"C.

(24) CAT 6 CABLE, 1"C.

(25) (2)#12 & #12G, 3/4"C.

(26) (12)#14, 3/4"C.

(27) (2)#18STP, 3/4"C.

(28) (3)#10 & #10G, 3/4"C.

(29) REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS, TYPICAL.

(30) (6)#14, 3/4"C.

CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND SHOWS ALL INTERCONNECTIONS. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. VFD INPUT & OUTPUT CONDUCTORS MUST BE RUN INDEPENDENT OF OTHER CONDUCTORS.

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BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL RISER DIAGRAMS

REVISIONS

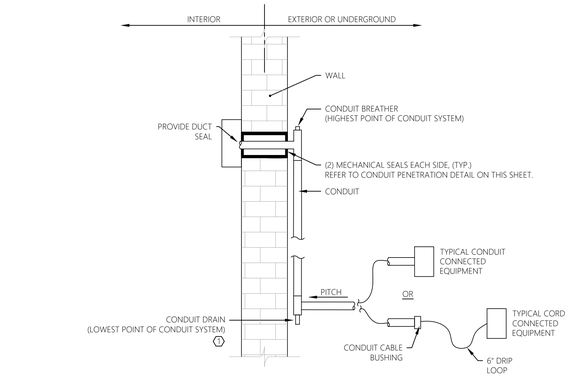
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

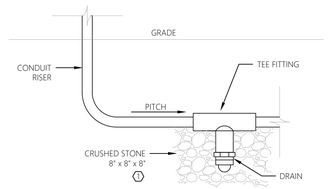
SHEET NO.

E-028

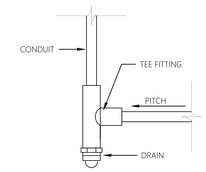
PROJECT # 18-732 PHASE #



DRAIN ABOVE GRADE

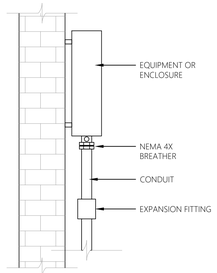


DRAIN BELOW GRADE



DRAIN ABOVE GRADE

CORD/CABLE CONNECTED EQUIPMENT



CONDUIT CONNECTED EQUIPMENT

GENERAL NOTES:

1. ALL CONDUIT SYSTEMS EXPOSED TO TEMPERATURE DIFFERENTIALS, IN POTENTIAL CONDENSING ATMOSPHERES, EXTERIOR INSTALLED, OR INSTALLED UNDERGROUND SHALL HAVE PROVISIONS FOR DRAINING WATER OUT OF CONDUIT SYSTEMS. PROVIDE DRAIN IN CONDUIT SYSTEMS AT LOW POINTS, LOW POINT SHALL NOT BE AT EQUIPMENT OR DEVICE. A BREATHER SHALL BE PROVIDED AT THE HIGH POINT OF THE SYSTEM.
2. ALL DRAIN FITTINGS TO BE STAINLESS STEEL AND ALL TEE FITTINGS TO BE OF RIGID GALVANIZED STEEL MATERIAL.
3. CONDENSATION PREVENTION - WHERE CONDUITS CROSS BARRIERS BETWEEN AREAS OF POTENTIAL SUBSTANTIAL TEMPERATURE DIFFERENTIAL, PROVIDE SEALING FITTING OR APPROVED SEALING COMPOUND AT AN ACCESSIBLE POINT NEAR THE PENETRATION TO PREVENT CONDENSATION. THIS INCLUDES, BUT IS NOT LIMITED TO:
   3.1. WHERE CONDUITS PASS FROM OUTDOORS INTO CONDITIONED INTERIOR SPACES.
   3.2. WHERE CONDUITS PASS FROM UNCONDITIONED INTERIOR SPACES INTO CONDITIONED INTERIOR SPACES.
4. CONTRACTOR TO FIELD VERIFY ALL UNDERGROUND CONDUIT DRAINS AND COORDINATE WITH THE OWNER/ENGINEER. ELEVATIONS TO BE COORDINATED SO THAT CONDUIT SYSTEMS DO NOT DRAIN TO EQUIPMENT/BUILDINGS.

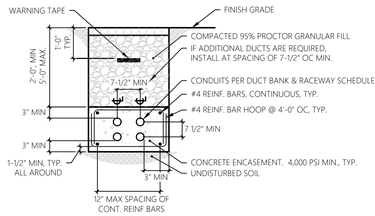
KEY NOTES:

(1) PROVIDE CRUSHED STONE (MIN. 8" x 8" x 8") WHERE LOWEST POINT IS LOCATED BENEATH GRADE.

1 E-030 TYPICAL CONDUIT DRAIN DETAILS
SCALE: NTS

GENERAL NOTES:

1. COORDINATE DUCT BANK REQUIREMENTS (IF ANY) FOR NEW SERVICE WITH THE UTILITY.
2. POWER AND CONTROL CONDUITS TO HAVE SEPARATION OF 12" MINIMUM
3. DETAIL IS TYPICAL AND MAY REFLECT CONDUITS NOT REQUIRED FOR PROJECT.
4. FINISHED SURFACE TO MATCH SURFACE BEING DISTURBED.
   - IN AREA OF GRASS: USE 4" TOP SOIL & SEEDING, AND COVER WITH MULCH.
   - IN ROADWAY OR NON-GRASS: USE COMPACTED 95% PROCTOR GRANULAR FILL.
5. CONTRACTOR TO UTILIZE CONDUIT SPACERS FOR ALL DUCT BANKS, NOT SHOWN ON DETAIL FOR CLARITY.



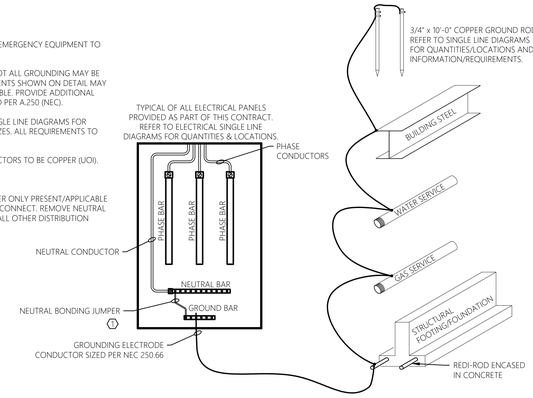
2 E-030 TYPICAL REINFORCED CONCRETE DUCT BANK SECTION DETAIL
SCALE: NTS

GENERAL NOTES:

1. BOND ALL NORMAL AND EMERGENCY EQUIPMENT TO GROUND SYSTEM.
2. DETAIL IS TYPICAL AND NOT ALL GROUNDING MAY BE SHOWN. SOME COMPONENTS SHOWN ON DETAIL MAY NOT BE PRESENT/APPLICABLE. PROVIDE ADDITIONAL GROUNDING AS REQUIRED PER A.250 (NEC).
3. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS FOR GROUND CONDUCTOR SIZES. ALL REQUIREMENTS TO BE PER NEC.
4. ALL GROUNDING CONDUCTORS TO BE COPPER (UOI).

KEY NOTES:

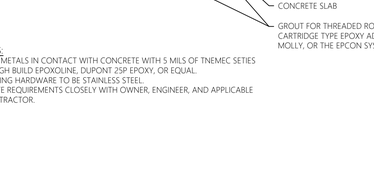
1. NEUTRAL BONDING JUMPER ONLY PRESENT/APPLICABLE WITHIN MAIN SERVICE DISCONNECT. REMOVE NEUTRAL BONDING JUMPER FROM ALL OTHER DISTRIBUTION PANELS.



3 E-030 TYPICAL PANEL GROUNDING DETAIL
SCALE: NTS

GENERAL NOTES:

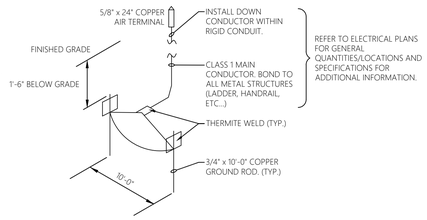
1. COORDINATE DUCT BANK REQUIREMENTS (IF ANY) FOR NEW SERVICE WITH THE UTILITY.
2. POWER AND COMMUNICATION CONDUITS TO HAVE SEPARATION OF 12" MINIMUM
3. DETAIL IS TYPICAL AND MAY REFLECT CONDUITS NOT REQUIRED FOR PROJECT.
4. FINISHED SURFACE TO MATCH SURFACE BEING DISTURBED.
   - IN AREA OF GRASS: USE 4" TOP SOIL & SEEDING, AND COVER WITH MULCH.
   - IN ROADWAY OR NON-GRASS: USE COMPACTED 95% PROCTOR GRANULAR FILL.
5. CONTRACTOR TO UTILIZE CONDUIT SPACERS FOR ALL DUCT BANKS, NOT SHOWN ON DETAIL FOR CLARITY.



4 E-030 TYPICAL SAND FILL DUCT BANK SECTION DETAIL
SCALE: NTS

GENERAL NOTES:

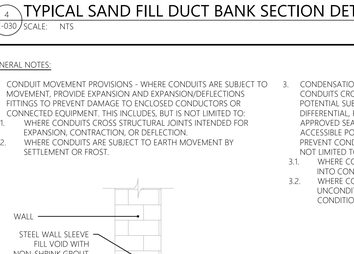
1. REFER TO ELECTRICAL PLANS FOR GENERAL QUANTITIES/LOCATIONS. COORDINATE FINAL QUANTITIES/LOCATIONS WITH OWNER, ENGINEER, AND EQUIPMENT MANUFACTURER.
2. BOND ALL NORMAL AND EMERGENCY EQUIPMENT TO GROUND SYSTEM.
3. DETAIL IS TYPICAL AND NOT ALL GROUNDING MAY BE SHOWN. SOME COMPONENTS SHOWN ON DETAIL MAY NOT BE PRESENT/APPLICABLE. PROVIDE ADDITIONAL GROUNDING AS REQUIRED PER A.250 (NEC).
4. ALL GROUND CONDUCTORS SHALL BE IN ACCORDANCE WITH THE NEC.
5. INSTALL AIR TERMINAL/DOWN CONDUCTOR PER MANUFACTURERS RECOMMENDATIONS.
6. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.



5 E-030 TYPICAL LIGHTNING PROTECTION GROUNDING DETAIL
SCALE: NTS

GENERAL NOTES:

1. BACK PAINT METALS IN CONTACT WITH CONCRETE WITH 5 MILS OF TNEMEC SETIES 66-GRAY, HIGH BUILD EPOXOLINE, DUPONT 25P EPOXY, OR EQUAL.
2. ALL MOUNTING HARDWARE TO BE STAINLESS STEEL.
3. COORDINATE REQUIREMENTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.

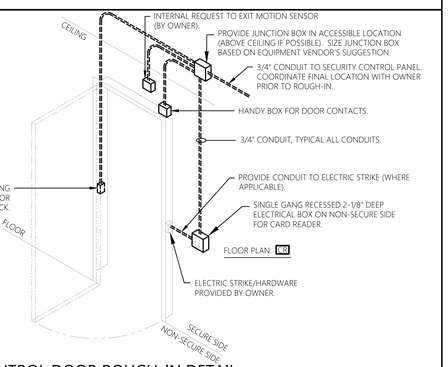


TYPICAL BLOCK/BRICK/CAST-IN PLACE CONDUIT PENETRATION DETAIL

6 E-030 SCALE: NTS

CARD ACCESS CONTROL PROJECT REQUIREMENTS:

1. GENERIC ROUGH-IN REQUIREMENTS ARE ILLUSTRATED IN THE ADJACENT DETAIL. CONTRACTOR SHALL COORDINATE WITH OWNER TO PROVIDE ACTUAL ROUGH-IN REQUIRED FOR EACH SPECIFIC DOOR INSTALLATION. THIS DETAIL IS NOT INTENDED TO SHOW ALL CONDITIONS/INSTALLATION REQUIREMENTS.
2. ACCESS CONTROL SYSTEM AND ASSOCIATED EQUIPMENT, CABLING, COMPONENTS, AND DEVICES ARE PROVIDED BY THE OWNER. THIS CONTRACT TO PROVIDE ALL REQUIRED RACEWAY AND BOXES FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM. COORDINATE FINAL REQUIREMENTS CLOSELY WITH THE OWNER.



7 E-030 TYPICAL ACCESS CONTROL DOOR ROUGH-IN DETAIL
SCALE: NTS

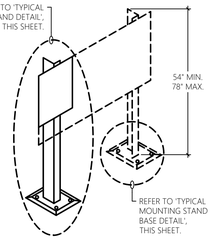
GENERAL NOTES

EQUIPMENT/ENCLOSURES LARGER THAN 4" x 4" SHALL BE INSTALLED ON A 1/4" THICK STAINLESS STEEL MOUNTING PLATE. TWO POSTS ARE REQUIRED FOR EQUIPMENT/ENCLOSURES WIDER THAN 8". MOUNTING PLATE SHALL BE 2" GREATER ON EACH SIDE THAN DIMENSION OF EQUIPMENT/ENCLOSURE TO BE MOUNTED. ROUND AND GRIND ALL CORNERS AND EDGES OF PLATE. FASTEN EQUIPMENT/ENCLOSURE TO PLATE AND FASTEN PLATE TO SUPPORT ANGLES WITH 3/8" STAINLESS STEEL FASTENERS. QUANTITY AS REQUIRED. PROVIDE #6 GROUND TO GROUND GRID.

SIDE MOUNTED ON CONCRETE EQUIPMENT PAD

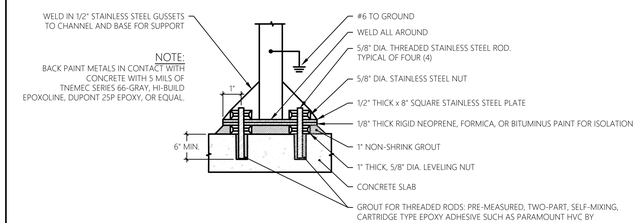
GENERAL NOTES:

1. BACK PAINT METALS IN CONTACT WITH CONCRETE WITH 5 MILS OF TNEMEC SETIES 66-GRAY, HIGH BUILD EPOXOLINE, DUPONT 25P EPOXY, OR EQUAL.
2. ALL MOUNTING HARDWARE TO BE STAINLESS STEEL.
3. COORDINATE REQUIREMENTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.



FREE STANDING

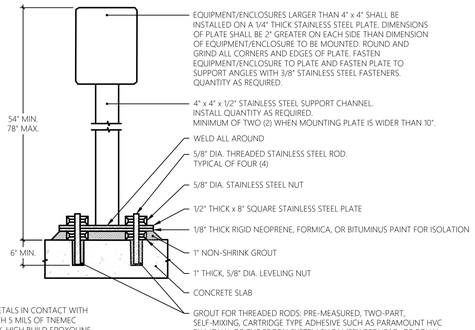
8 E-030 TYPICAL MOUNTING STAND INSTALLATION DETAIL
SCALE: NTS



GENERAL NOTES:

1. BACK PAINT METALS IN CONTACT WITH CONCRETE WITH 5 MILS OF TNEMEC SETIES 66-GRAY, HIGH BUILD EPOXOLINE, DUPONT 25P EPOXY, OR EQUAL.
2. ALL MOUNTING HARDWARE TO BE STAINLESS STEEL.
3. COORDINATE REQUIREMENTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.

9 E-030 TYPICAL MOUNTING STAND BASE DETAIL
SCALE: NTS



GENERAL NOTES:

1. BACK PAINT METALS IN CONTACT WITH CONCRETE WITH 5 MILS OF TNEMEC SETIES 66-GRAY, HIGH BUILD EPOXOLINE, DUPONT 25P EPOXY, OR EQUAL.
2. ALL MOUNTING HARDWARE TO BE STAINLESS STEEL.
3. COORDINATE REQUIREMENTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.

10 E-030 TYPICAL MOUNTING STAND DETAIL
SCALE: NTS

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

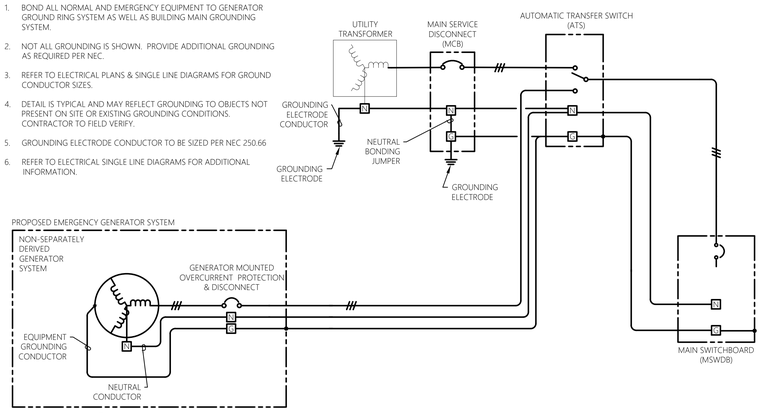
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-030

PROJECT # 18-732 PHASE #

GENERAL NOTES:

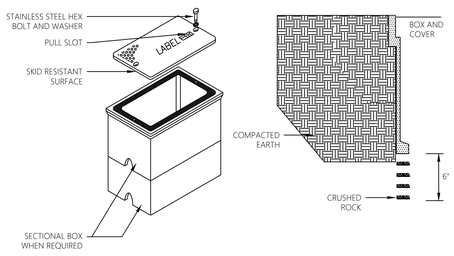
1. BOND ALL NORMAL AND EMERGENCY EQUIPMENT TO GENERATOR GROUND RING SYSTEM AS WELL AS BUILDING MAIN GROUNDING SYSTEM.
2. NOT ALL GROUNDING IS SHOWN. PROVIDE ADDITIONAL GROUNDING AS REQUIRED PER NEC.
3. REFER TO ELECTRICAL PLANS & SINGLE LINE DIAGRAMS FOR GROUND CONDUCTOR SIZES.
4. DETAIL IS TYPICAL AND MAY REFLECT GROUNDING TO OBJECTS NOT PRESENT ON SITE OR EXISTING GROUNDING CONDITIONS. CONTRACTOR TO FIELD VERIFY.
5. GROUNDING ELECTRODE CONDUCTOR TO BE SIZED PER NEC 250.66
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS FOR ADDITIONAL INFORMATION.



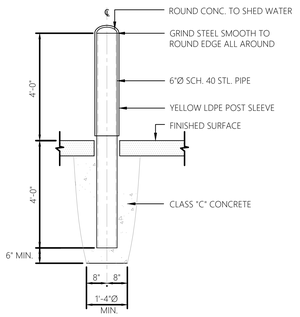
1 E-031 TYPICAL NON-SEPERATELY DERIVED GENERATOR SYSTEM DETAIL
SCALE: NTS

GENERAL NOTES:

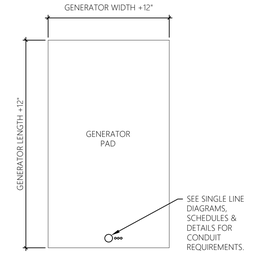
1. CONSTRUCTION SHALL BE A POLYMER CONCRETE.
2. HAND HOLE TO HAVE A MINIMUM TIER 15 RATING.
3. ALL HARDWARE SHALL BE STAINLESS STEEL, PROVIDE SLEEVES AND SEALS FOR ALL PENETRATIONS.
4. BOTTOM SHALL BE OPEN FOR DRAINAGE.
5. PROVIDE LOGO ON COVER 'ELECTRIC', OR 'COMMUNICATIONS'. COVER TO BE SECURED WITH STAINLESS STEEL PENTA BOLTS AND BE GASKETED.
6. HAND HOLES MUST MEET ALL APPLICABLE REQUIREMENTS OF ANSI/SCTE 77-2013 AND BE UL LISTED.
7. PROVIDE HAND HOLE AS 48" x 48" x 48". HAND HOLES SHALL MEET MINIMUM SIZE REQUIREMENTS IN ACCORDANCE WITH NEC ARTICLE 314.30. CONTRACTOR TO FIELD VERIFY.
8. PROVIDE AS SPLIT HANDHOLE SEPARATING VOLTAGE, OR SIGNAL TYPE.
9. HAND HOLE TO BE AS MANUFACTURED BY QUAZITE (HUBBELL POWER SYSTEMS), OLDCASTLE, OR APPROVED EQUAL.
10. PROVIDE HEAVY DUTY FIBERGLASS CABLE RACKS AND SUPPORTS ON EACH INTERIOR WALL OF HANDHOLE.



2 E-031 TYPICAL HANDHOLE DETAIL
SCALE: NTS



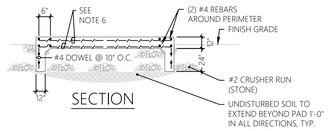
3 E-031 TYPICAL BOLLARD DETAIL
SCALE: NTS



PLAN

GENERAL NOTES:

1. CONCRETE 4,000 PSI @ 28 DAYS.
2. WELDED WIRE FABRIC ASTM A-185. (FLAT SHEETS)
3. DEFORMED BARS ASTM A-615, GRADE 60.
4. TOP SURFACE SHALL BE TROWEL FINISHED.
5. 3/4" CHAMFER ALONG ALL EXPOSED EDGES, INCLUDING OPENING.
6. REINFORCING SHALL BE AS FOLLOWS:
   - #4 BARS @ 12" EACH WAY
7. GENERATOR PAD SHALL BE CAST IN PLACE.
8. COORDINATE CONDUIT STUB-UPS & PENETRATIONS AT PAD WITH INSTALLED EQUIPMENT, AND FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY.

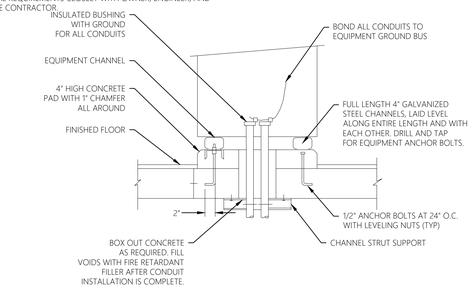


SECTION

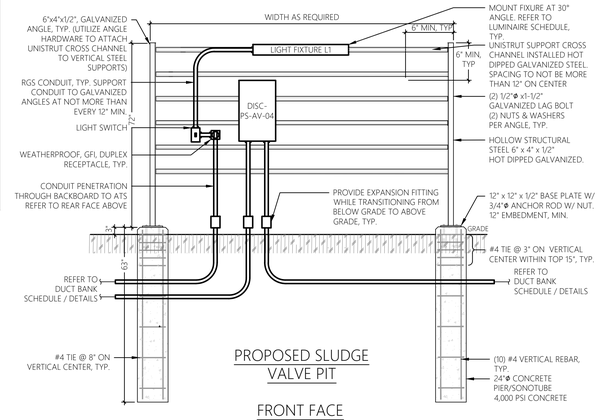
4 E-031 TYPICAL GENERATOR PAD DETAIL
SCALE: NTS

GENERAL NOTES:

1. BACK PAINT METALS IN CONTACT WITH CONCRETE WITH 5 MILS OF TNEMEC SERIES 66-GRAY, HIGH BUILD EPOXOLINE, DUPONT 25P EPOXY, OR EQUAL.
2. ALL MOUNTING HARDWARE TO BE STAINLESS STEEL.
3. COORDINATE FINAL REQUIREMENTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.



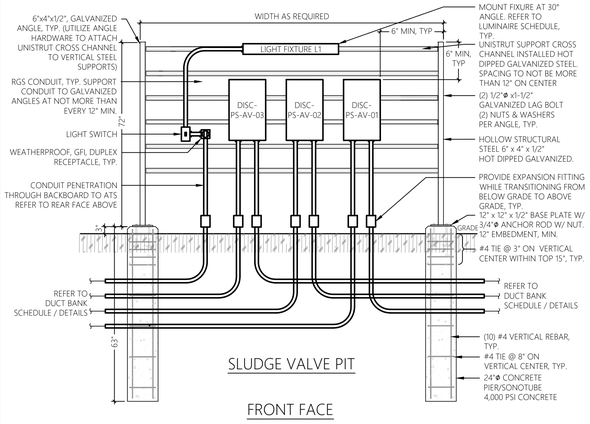
5 E-031 TYPICAL MOTOR CONTROL CENTER EQUIPMENT PAD DETAIL
SCALE: NTS



PROPOSED SLUDGE VALVE PIT

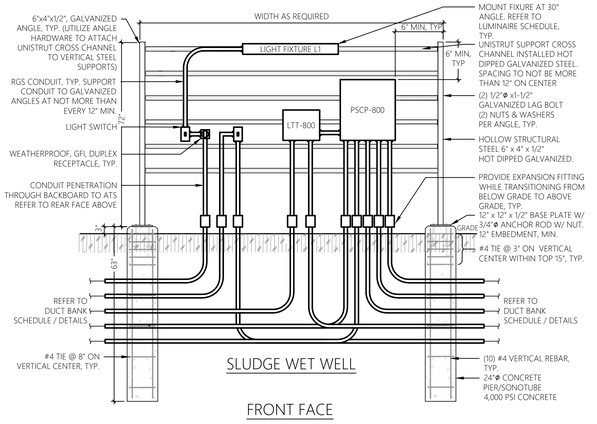
FRONT FACE





SLUDGE VALVE PIT

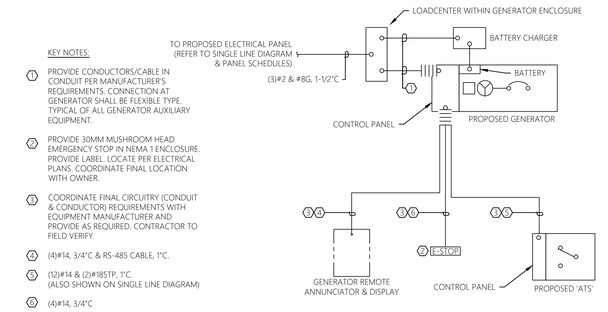
FRONT FACE



SLUDGE WET WELL

FRONT FACE

4 E006 TYPICAL ELECTRICAL BACKBOARD DETAIL
SCALE: NTS



KEY NOTES:

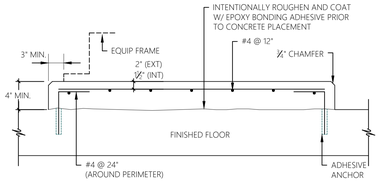
1. PROVIDE CONDUCTORS/CABLE IN CONDUIT PER MANUFACTURER'S REQUIREMENTS. CONNECTION AT GENERATOR SHALL BE FLEXIBLE TYPE. TYPICAL OF ALL GENERATOR AUXILIARY EQUIPMENT.
2. PROVIDE 30MM MUSHROOM HEAD EMERGENCY STOP IN NEMA 1 ENCLOSURE. PROVIDE LABEL. LOCATE PER ELECTRICAL PLANS. COORDINATE FINAL LOCATION WITH OWNER.
3. COORDINATE FINAL CIRCUITRY (CONDUIT & CONDUCTOR) REQUIREMENTS WITH EQUIPMENT MANUFACTURER AND PROVIDE AS REQUIRED. CONTRACTOR TO FIELD VERIFY.
4. (4)#14, 3/4"C & RS-485 CABLE, 1"C.
5. (12)#14 & (2)#18STP, 1"C. (ALSO SHOWN ON SINGLE LINE DIAGRAM)
6. (4)#14, 3/4"C

TYPICAL GENERATOR CONTROL AND AUXILIARY EQUIPMENT RISER DIAGRAM

6 E-031 SCALE: NTS

GENERAL NOTES:

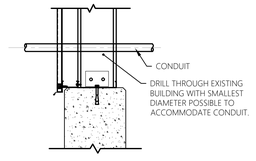
1. CONCRETE 4,000 PSI @ 28 DAYS.
2. PROVIDE AS 4" MIN. PAD UNLESS OTHERWISE NOTED.
3. DEFORMED BARS ASTM A-615, GRADE 60.
4. TOP SURFACE SHALL BE TROWEL FINISHED.
5. 3/4" CHAMFER ALONG ALL EXPOSED EDGES, INCLUDING OPENING.
6. REINFORCING SHALL BE AS FOLLOWS:
   - #4 BARS @ 12" EACH WAY
7. COORDINATE CONDUIT PENETRATIONS AT PAD WITH INSTALLED EQUIPMENT, AND FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY.



8 E-031 TYPICAL INTERIOR EQUIPMENT PAD DETAIL
SCALE: NTS

GENERAL NOTES:

1. WHEN BORING THROUGH BUILDING, USE SMALLEST DIAMETER POSSIBLE TO ACCOMMODATE CONDUIT.
2. SEAL PENETRATIONS WITH POLYURETHANE CAULK. PATCH & MATCH DISTURBED SURFACES.



TYPICAL METAL BUILDING CONDUIT PENETRATION DETAIL

9 E-031 SCALE: NTS

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JSE
JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DETAILS

REVISIONS

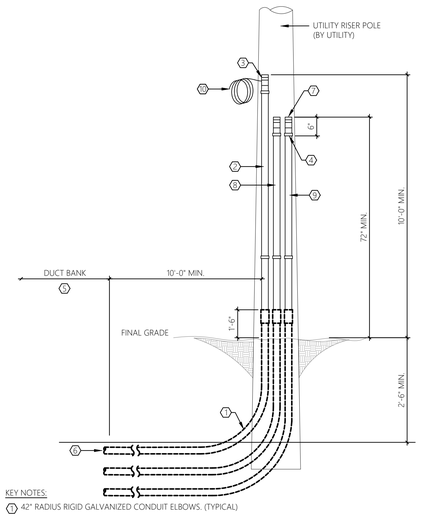
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-031

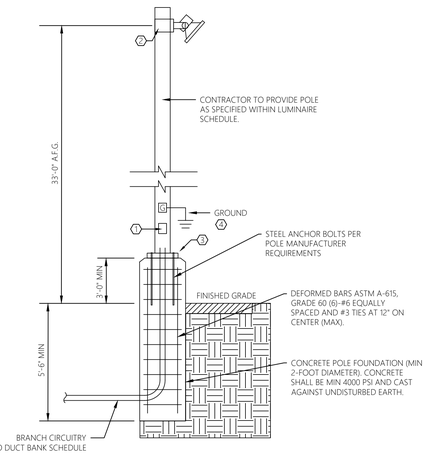
PROJECT # 18-732 PHASE #



KEY NOTES:

1. 42" RADIUS RIGID GALVANIZED CONDUIT ELBOWS. (TYPICAL)
2. ONE (1) 4" DIAMETER RGS CONDUIT (OR AS REQUIRED BY UTILITY) WITH PIPE STRAPS. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. UTILITY APPROVED GROUNDING, INSULATED BUSHING BONDED TO COPPER GROUND CONDUCTOR. GROUND CONDUCTOR TO BE SIZED PER NEC ARTICLE 250. PROVIDE 20'-0" OF COILED SLACK.
4. UTILITY APPROVED GROUND CLAMP BONDED TO COPPER GROUND CONDUCTOR. (TYPICAL)
5. REFER TO ELECTRICAL SITE PLAN, SCHEDULES, AND SINGLE LINE DIAGRAMS FOR LOCATIONS AND ADDITIONAL INFORMATION/REQUIREMENTS.
6. PROVIDE SPACING UNDERGROUND PER DUCT BANK SECTION DETAILS. (TYPICAL)
7. PROVIDE SUFFICIENT DRIP LOOP & DUCT SEAL ON CONDUIT SYSTEMS (ALL CONDUITS) TO PREVENT WATER ENTRANCE INTO CONDUIT SYSTEM. (TYPICAL)
8. ONE (1) 4" DIAMETER RGS SPARE CONDUIT WITH PIPE STRAP, EXTEND MIN 72" AFG. CAP AND INSTALL PULL WIRE. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
9. ONE (1) 4" DIAMETER RGS SPARE CONDUIT (INTENDED FOR COMMUNICATION SERVICE) WITH PIPE STRAP, EXTEND MIN 72" AFG. CAP AND INSTALL PULL WIRE. REFER TO SINGLE LINE DIAGRAM AND DETAILS FOR ADDITIONAL INFORMATION.
10. PROVIDE AS 15KV CABLE SYSTEM. PROVIDE AS (3)#4/0 ALUMINUM, UL TYPE MV-105, 133% INSULATION LEVEL, 220 MILS, EPR, AND COPPER TAPE SHIELD. PROVIDE AS GENERAL CABLE SPEC. 6360 OR APPROVED EQUAL. CONTRACTOR TO PROVIDE 45'-0" OF COILED PRIMARY CONDUCTOR SLACK AT THE UTILITY RISER POLE AND 20'-0" OF COILED PRIMARY CONDUCTOR SLACK AT THE UTILITY PAD-MOUNTED TRANSFORMER. ALL PRIMARY CONNECTIONS AT THE UTILITY RISER POLE AND PAD-MOUNTED TRANSFORMER ARE BY THE UTILITY. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

1 / E-032 TYPICAL UTILITY RISER POLE DETAIL
SCALE: NTS



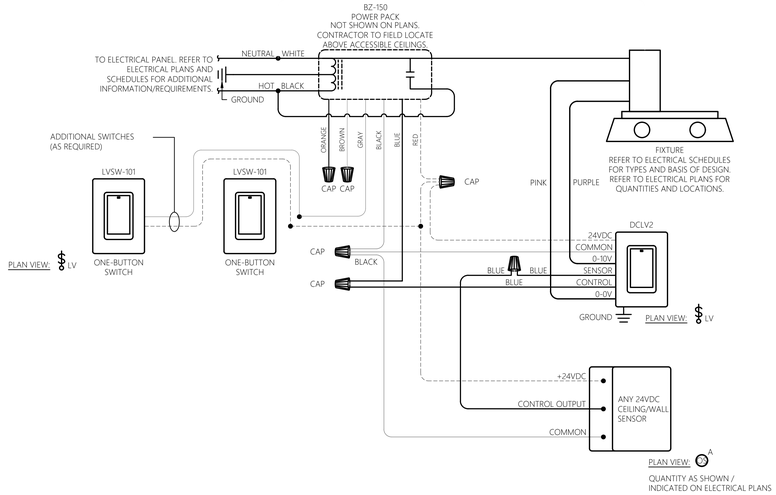
GENERAL NOTES:

1. DETAIL IS TYPICAL FOR ALL PROPOSED AREA/SITE POLE MOUNTED LUMINAIRES.
2. AREA/SITE LUMINAIRE FIXTURES TO BE DARK SKY COMPLIANT AND UL LISTED FOR WET LOCATION.
3. MOUNT AREA/SITE LIGHT FIXTURES AT HEIGHT SPECIFIED TO ALUMINUM POLE.
4. REFER TO ELECTRICAL PLANS FOR QUANTITIES & PROPOSED LOCATIONS.
5. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH OWNER.
6. REFER TO LUMINAIRE SCHEDULE FOR SPECIFICATIONS REGARDING LIGHT POLE AND LIGHT FIXTURE.
7. PRECAST FOUNDATIONS MAY BE USED IF APPROVED BY THE ENGINEER.

KEY NOTES:

1. HAND HOLE PROVIDED IN POLE. ALL SPLICES SHALL BE IN HAND HOLE. UTILIZE WATERTIGHT SPLICING METHODS. COORDINATE WITH POLE MANUFACTURER TO PROVIDE HAND HOLE (PULL POINT) WITHIN BASE OF POLE AS SHOWN.
2. PROVIDE ARM, TENON ADAPTOR, AND/OR SLIP FITTER WITH SOLID STATE AREA LIGHTING FIXTURE FOR AN OVERALL COMPLETE INSTALLATION. CONTRACTOR TO COORDINATE WITH EQUIPMENT MANUFACTURER AND PROVIDE ALL REQUIRED STAINLESS STEEL MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... FOR AN OVERALL COMPLETE AND OPERABLE POLE MOUNTED LIGHT FIXTURE.
3. CONTRACTOR TO COORDINATE BOLT HOLE PATTERN IN FIELD PRIOR TO RELEASING ORDER. PROVIDE BASE PLATE AS REQUIRED FOR ANCHORING POLE TO CONCRETE. CONTRACTOR TO FIELD VERIFY AND PROVIDE AS REQUIRED.
4. CONTRACTOR TO GROUND EACH POLE MOUNTED LIGHT FIXTURE. PROVIDE 3/4"Ø x 10' COPPER GROUND ROD AND BOND TO POLE. ALL GROUNDING CONDUCTORS TO BE #2 AWG COPPER (MINIMUM).

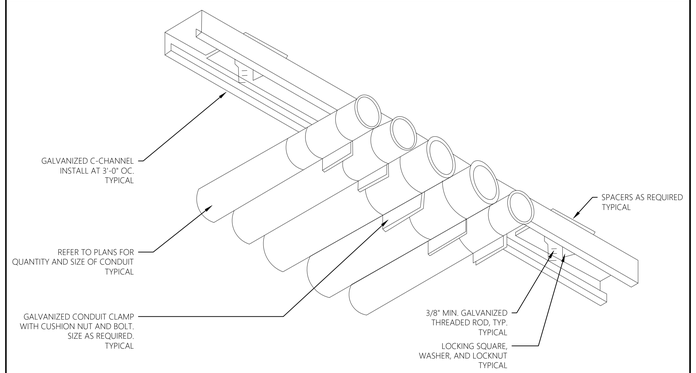
2 / E-032 TYPICAL POLE MOUNTED LIGHT FIXTURE INSTALLATION DETAIL
SCALE: NTS



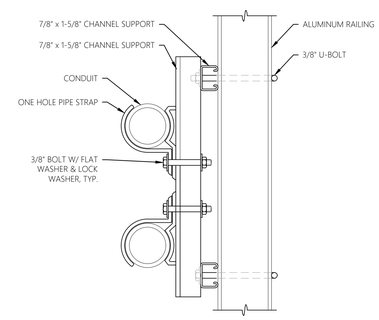
SEQUENCE OF OPERATION:

1. OCCUPANCY SENSOR SHALL BE SET TO 20 MINUTE TIME DELAY. SENSOR SHALL BE SET FOR AUTOMATIC ON OPERATION.
2. LOW VOLTAGE SWITCH SHALL TOGGLE ON/OFF LIGHTING FIXTURES.
3. REFER TO ELECTRICAL PLANS FOR EXACT QUANTITIES REQUIRED PER ROOM.

3 / E-032 TYPICAL ANALOG OCCUPANCY SENSOR WITH POWER PACK & LOW VOLTAGE MOMENTARY SWITCH
SCALE: NTS



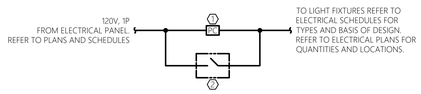
4 / E-032 TYPICAL CONDUIT SUPPORT DETAIL
SCALE: NTS



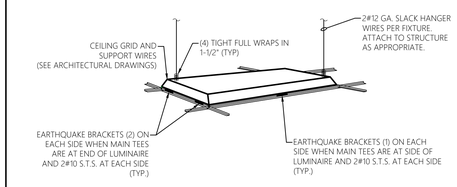
5 / E-032 TYPICAL ALUMINUM RAILING CONDUIT CLAMP DETAIL
SCALE: NTS

KEY NOTES:

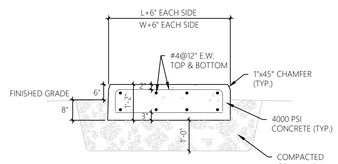
1. CONTRACTOR TO PROVIDE THREE (3) 120V, 20A PHOTO CONTROL WITH ADJUSTABLE SHIELD FOR CONTROL OF EXTERIOR LIGHTING CIRCUITS. INTERLOCK WITH ASTRONOMICAL TIME SWITCHES. CONFIRM FINAL LOCATION WITH THE OWNER PRIOR TO ROUGH-IN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR TO PROVIDE THREE (3) WATTSTOPPER RT-200 ASTRONOMICAL TIME SWITCH OR APPROVED EQUAL WITHIN NEMA 1 ENCLOSURES. ONE SWITCH TO CONTROL PROPOSED EXTERIOR WALL MOUNTED LIGHT FIXTURES TYPES 'WP1' & 'WP1E'. THE SECOND TO CONTROL THE SBR SITE LIGHTING FIXTURES STPE 'S1', AND THE THIRD TO CONTROL GENERATOR SITE LIGHTING FIXTURE TYPE 'S1'. PROGRAM TIME SWITCHES FOR LIGHTING 'ON' AT ASTRONOMICAL SUNSET AND 'OFF' AT ASTRONOMICAL SUNRISE. FINAL ON/OFF PROGRAMMING PARAMETERS TO BE COORDINATED WITH THE OWNER.



6 / E-032 PHOTOCELL WIRING DIAGRAM
SCALE: NTS



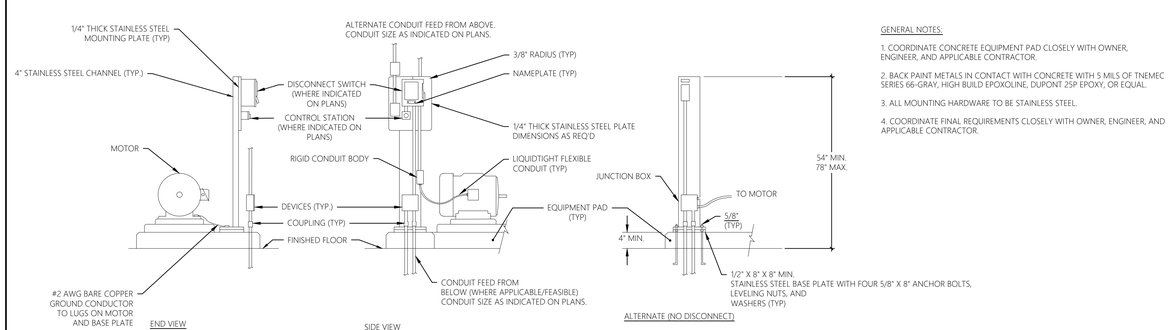
7 / E-032 TYPICAL LAY-IN FIXTURE MOUNTING DETAIL
SCALE: NTS



GENERAL NOTES, EQUIPMENT PAD DETAIL:

1. L = LENGTH OF EQUIPMENT
2. W = WIDTH OF EQUIPMENT
3. ANCHOR EQUIPMENT TO PAD PER MANUFACTURERS REQUIREMENTS

8 / E-032 TYPICAL EXTERIOR EQUIPMENT PAD DETAIL
SCALE: NTS



GENERAL NOTES:

1. COORDINATE CONCRETE EQUIPMENT PAD CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE CONTRACTOR.
2. BACK PAINT METALS IN CONTACT WITH CONCRETE WITH 5 MILS OF TNEMEC SERIES 66-GRAY, HIGH BUILD EPOXOLINE, DUPONT 215P EPOXY, OR EQUAL.
3. ALL MOUNTING HARDWARE TO BE STAINLESS STEEL.
4. COORDINATE FINAL REQUIREMENTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE CONTRACTOR.

9 / E-032 TYPICAL MOTOR INSTALLATION DETAIL
SCALE: NTS

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
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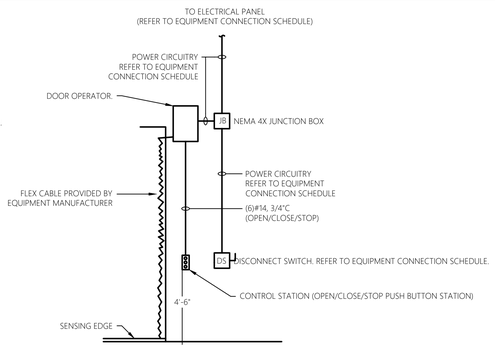
SHEET NO.

E-032

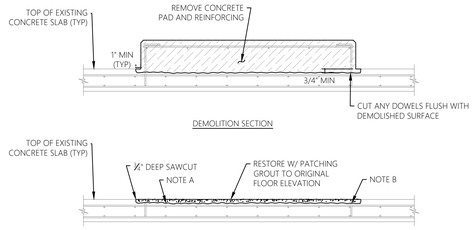
PROJECT # 18-732 PHASE #

GENERAL NOTES:

1. REFER TO ELECTRICAL FLOOR PLANS FOR GENERAL LOCATIONS.
2. REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. COORDINATE FINAL REQUIREMENTS CLOSELY WITH THE EQUIPMENT MANUFACTURER AND PROVIDE AS REQUIRED.
4. COORDINATE FINAL ROUGH-IN REQUIREMENTS/LOCATIONS WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.



1 E-033 SCALE: NTS
TYPICAL OVERHEAD DOOR RISER DIAGRAM DETAIL



DEMOLITION SECTION

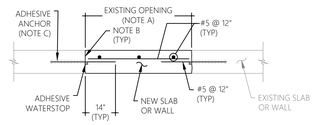
RESTORATION SECTION

NOTES:

A. SANDBLAST OR MECHANICALLY REMOVE ALL LOOSE AND SPALLED MATERIALS. COAT EXPOSED CONCRETE WITH BONDING AGENT PRIOR TO PLACING PATCHING GROUT.

B. CUT REINFORCEMENT FLUSH AND COAT WITH CORROSION INHIBITOR.

2 E-033 SCALE: NTS
TYPICAL CONCRETE PAD DEMO/RESTORATION DETAIL



NOTES:

A. FOR OPENING DIMENSION OR DIAMETER GREATER THAN OR EQUAL TO 18", PLACE DOWELS AS SHOWN. IF OPENING DIMENSION OR DIAMETER IS LESS THAN 18", OMIT DOWELS.

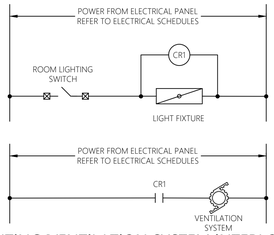
B. INTENTIONALLY ROUGHEN SURFACE TO A FULL AMPLITUDE OF X", CLEAN AND COAT SURFACE WITH BONDING AGENT PRIOR TO PLACING NEW CONCRETE.

C. COORDINATE EMBEDMENT LENGTH WITH ADHESIVE ANCHOR MANUFACTURER'S REQUIREMENTS TO PROVIDE FULL YIELD STRENGTH OF REINFORCING BAR.

3 E-033 SCALE: NTS
TYPICAL OPENING RESTORATION DETAIL

GENERAL NOTES:

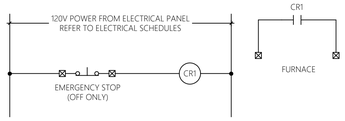
1. PROVIDE ALL LINE VOLTAGE WIRING (120V AND ABOVE).
2. PROVIDE NEMA-4X ENCLOSURES FOR CONTROL RELAY 'CR1' AND REQUIRED TERMINAL STRIPS. CONTRACTOR TO FIELD LOCATE AS REQUIRED.
3. ALL CONTACTS, WIRING, AND RELAYS TO BE PROVIDED BY CONTRACTOR FOR AN OVERALL COMPLETE AND OPERABLE ROOM LIGHTING / VENTILATION SYSTEM. TO CLARIFY VENTILATION SYSTEM TO BE INTERLOCKED WITH ROOM LIGHTING CIRCUIT. REFER TO ELECTRICAL PLANS AND SCHEDULES FOR LOCATIONS AND COORDINATE FINAL REQUIREMENTS CLOSELY WITH THE MECHANICAL CONTRACTOR.
4. ALL REQUIRED ELECTRICAL EQUIPMENT, COMPONENTS, DEVICES, & WIRING METHODS TO BE SUITABLE FOR ENVIRONMENT INSTALLED, INCLUDING, BUT NOT LIMITED TO, HAZARDOUS, DAMP, WET, AND CORROSIVE ENVIRONMENTS. ALL REQUIREMENTS TO BE PER NEC.
5. CR1 TO BE RIB RELAY, OR APPROVED EQUAL. PROVIDE REQUIRED CONTROL RELAY TO INTERLOCK WITH 120V LIGHTING SYSTEM.



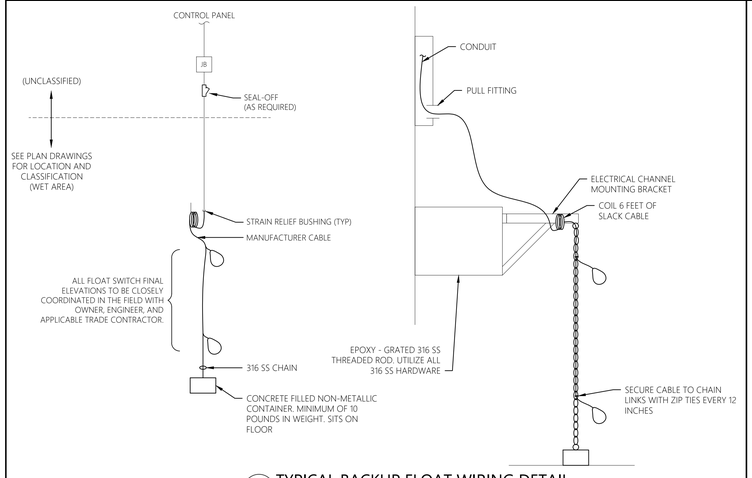
4 E-033 SCALE: NTS
TYPICAL ROOM LIGHTING/VENTILATION SYSTEM INTERLOCK CIRCUITRY DETAIL

GENERAL NOTES:

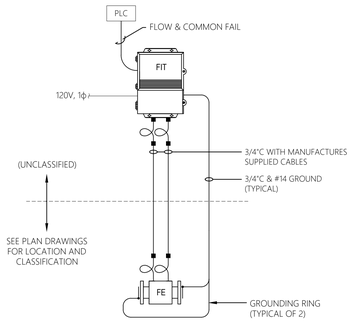
1. DETAIL IS TYPICAL OF EACH FURNACE SYSTEM.
2. PROVIDE ALL LINE VOLTAGE WIRING (120V AND ABOVE).
3. CR1 CONTACT PROVIDED FOR LOW VOLTAGE INTERLOCK WITH REFERENCED EQUIPMENT (FURNACE).
4. PROVIDE 30MM MUSHROOM HEAD EMERGENCY STOP. PROVIDE LABEL. SEE ELECTRICAL PLANS FOR LOCATION OF EMERGENCY STOP. INSTALL EMERGENCY STOP AT 4 FT ABOVE FINISHED FLOOR.
5. EMERGENCY STOP TO BE PUSH-TO-OPEN / TWIST-AND-PULL-TO-RESET (TO NORMALLY CLOSED).
6. PROVIDE NEMA4X ENCLOSURES FOR CR1 AND REQUIRED TERMINAL STRIPS.
7. ALL CONTACTS, WIRING, AND EMERGENCY STOPS TO BE PROVIDED BY CONTRACTOR FOR AN OVERALL COMPLETE AND OPERABLE FURNACE EMERGENCY SHUT DOWN FUNCTION .
8. COORDINATE ALL REQUIREMENTS WITH THE MECHANICAL CONTRACTOR.



5 E-033 SCALE: NTS
TYPICAL FURNACE EMERGENCY SHUT-DOWN WIRING DIAGRAM



6 E-033 SCALE: NTS
TYPICAL BACKUP FLOAT WIRING DETAIL



7 E-033 SCALE: NTS
TYPICAL MAGNETIC FLOWMETER WIRING DETAIL

GENERAL NOTES:

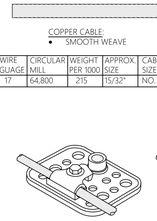
1. CONTRACTOR TO WORK WITH CERTIFIED LIGHTNING PROTECTION INSTALLER TO PROVIDE COMPLETE BUILDING & STRUCTURE LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH NFPA. UPON COMPLETION PROVIDE UL MASTER LABEL FOR EACH INSTALLED SYSTEM.
2. REFER TO SPECIFICATION SECTION 26 4113 - LIGHTING PROTECTION FOR ADDITIONAL INFORMATION/REQUIREMENTS.

LIGHTNING PROTECTION SYSTEMS TO BE PROVIDED FOR ALL STRUCTURES/BUILDINGS. REFER TO SPECIFICATIONS AND FLOOR PLANS.

LONG SHARP TIP AIR TERMINAL:
- CLASS I
- SOLID COPPER
- 5/8" DIAMETER x 24"

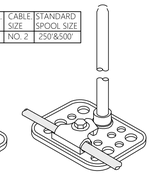


COPPER GROUND RODS:
- 3/4" DIAMETER x 10' LONG
- WT. 12.36 LBS. EACH.



COPPER CABLE:
- SMOOTH WEAVE

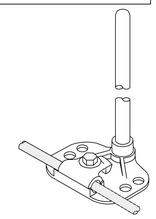
NO. OF STRANDS	WIRE GUAGE	CIRCULAR MILL	WEIGHT PER 1000	APPROX SIZE	CABLE SIZE	STANDARD SPOOL SIZE
32	17	64,800	215	15/32"	NO. 2	250'&500'

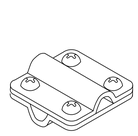


ADHESIVE STYLE HORIZONTAL MOUNTING BASE:
- CAST BRONZE WITH 1/2" FEMALE THREADS
- WT. 0.86 LBS. EACH

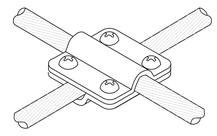


HORIZONTAL MOUNTING BASE:
- CAST ALUMINUM WITH 1/2" FEMALE THREADS
- WT. 0.26 LBS. EACH

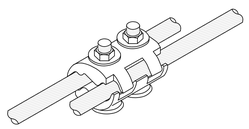




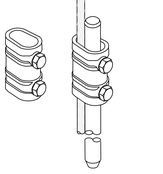
CROSS RUN CONNECTOR:
- CAST BRONZE PRESSURE TYPE CONNECTOR FOR CONNECTING TWO CABLES
- WT. 0.58 LBS. EACH

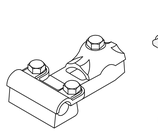


PARALLEL ALL PURPOSE CONNECTOR:
- CAST BRONZE PRESSURE STYLE CONNECTOR 2" LENGTH
- WT. 0.65 LBS. EACH

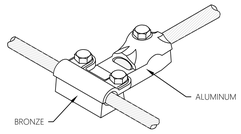


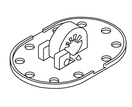
GROUND ROD CLAMP:
- CAST BRONZE 3/4" CLAMP FOR SECURING CABLE TO GROUND ROD
- WT. 0.52 LBS. EACH



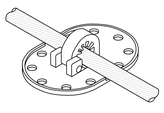


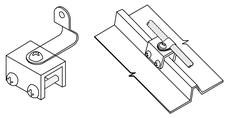
BIMETAL "T" CONNECTOR:
- CAST BRONZE AND ALUMINUM PRESSURE TYPE "T" CONNECTOR
- WT. 0.64 LBS. EACH



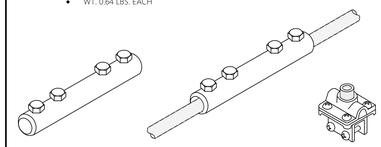


POLY ADHESIVE CABLE HOLDER:
- SUPERIOR POLYCARBONATE PLASTIC ADHESIVE CABLE HOLDER
- PART IS 2-3/8" WIDE x 3-1/4" LONG.
- PART IS EXTREMELY DURABLE AND IS FULLY TESTED AND APPROVED INCLUDING TEMPERATURE AND IMPACT TESTS
- WT. 0.04 LBS. EACH

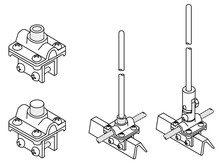




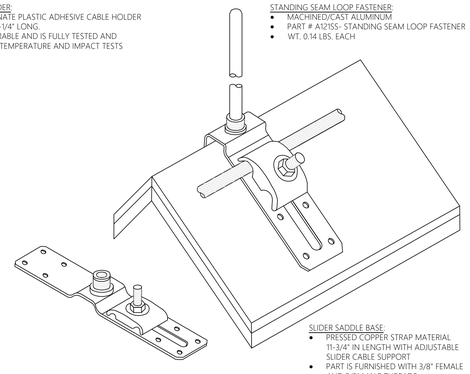
STANDING SEAM LOOP FASTENER:
- MACHINED/CAST ALUMINUM
- PART # A12155- STANDING SEAM LOOP FASTENER
- WT. 0.14 LBS. EACH



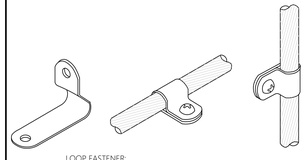
HEAVY DUTY STRAIGHT CABLE CONNECTOR:
- MACHINED BRASS BOLT STYLE PART 4 7/8" LENGTH
- WT. 0.65 LBS. EACH



STANDING SEAM BASE SUPPORT:
- MACHINED/CAST ALUMINUM
- PART # A6055- STANDING SEAM BASE SUPPORT
- WT. 0.28 LBS. EACH



SLIDER SADDLE BASE:
- PRESSED COPPER STRAP MATERIAL 11-3/4" IN LENGTH WITH ADJUSTABLE SLIDER CABLE SUPPORT
- PART IS FURNISHED WITH 3/8" FEMALE AND 5/8" MALE THREADS
- WT. 0.77 LBS. EACH



LOOP FASTENER:
- PRESSED ALUMINUM LOOP FOR STANDARD SIZE CABLES
- MOUNTING HOLE IS 1/4" DIAMETER
- WT. 0.01 LBS. EACH

8 E-033 SCALE: NTS
TYPICAL LIGHTNING PROTECTION & GROUNDING DETAILS

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JSE
JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-033

PROJECT # 18-732 PHASE #

WIRING LEGEND

(A)	2 PAIR #14AWG FIRE ALARM WIRE, 3/4"C

GENERAL CABLING NOTES:
1. ALL FIRE ALARM CABLE SHALL BE INSTALLED WITHIN RED RGS CONDUIT, PER RACEWAY SCHEDULE. PROVIDE LABEL ON RACEWAY INDICATING FIRE ALARM CIRCUITRY WITHIN.
2. ALL WIRING TO COMPLY WITH NEC ARTICLE 760.
3. CONDUIT/RACEWAY SIZE LISTED ABOVE IS UNLESS OTHERWISE INDICATED.

FIRE ALARM LEGEND

STROBES
- FIRE ALARM STROBE WALL MOUNTED

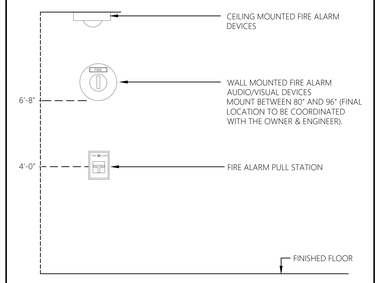
COMBINATION HORN/STROBES
- FIRE ALARM HORN/STROBE WALL MOUNTED

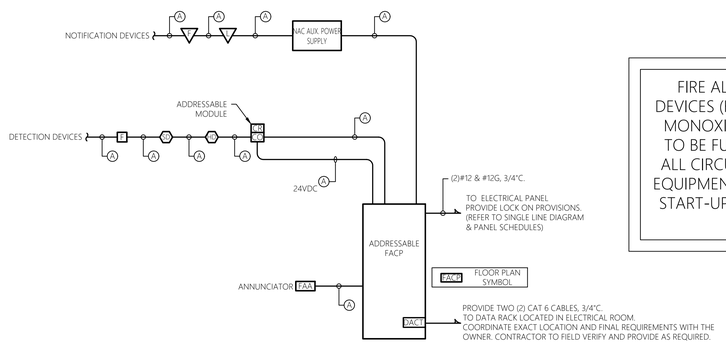
INITIATION DEVICES
- F — FIRE ALARM PULL STATION
- SD — FIRE ALARM SMOKE DETECTOR
- HD — FIRE ALARM HEAT DETECTOR
- CO — FIRE ALARM CARBON MONOXIDE DETECTOR

FIRE ALARM EQUIPMENT
- FACP — FIRE ALARM CONTROL PANEL
- NAC — NOTIFICATION APPLIANCE POWER SUPPLY
- FAA — FIRE ALARM ANNUNCIATOR PANEL
- CR — ADDRESSABLE CONTROL RELAY MODULE

NOTE, WP INDICATES WEATHERPROOF RATED DEVICE.

F/A DEVICE MOUNTING LEGEND





FIRE ALARM CONTROL PANEL AND ALL ASSOCIATED EQUIPMENT, COMPONENTS, AND DEVICES (HORNS, STROBES, PULL STATIONS, SMOKE DETECTORS, HEAT DETECTORS, CARBON MONOXIDE DETECTORS, ANNUNCIATORS, CONTROL RELAYS, POWER SUPPLIES, ETC...) ARE TO BE FURNISHED THRU THE CONTRACT ALLOWANCE. CONTRACTOR IS RESPONSIBLE FOR ALL CIRCUITRY (CONDUIT AND CONDUCTORS), TERMINATIONS, AND INSTALLATION OF ALL EQUIPMENT, COMPONENTS, AND DEVICES AS SHOWN AND SPECIFIED. INSPECTION, TESTING, START-UP, AND TRAINING SERVICES ARE INCLUDED BY THE EQUIPMENT SUPPLIER THRU THE CONTRACT ALLOWANCE.

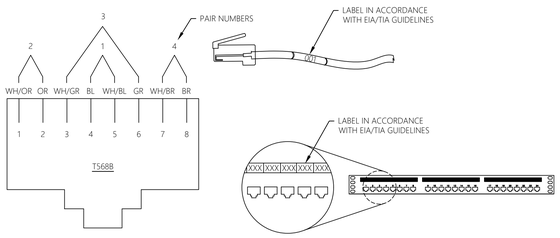
1 E-034 TYPICAL FIRE ALARM DETAIL
SCALE: NTS

GENERAL SHEET NOTES:

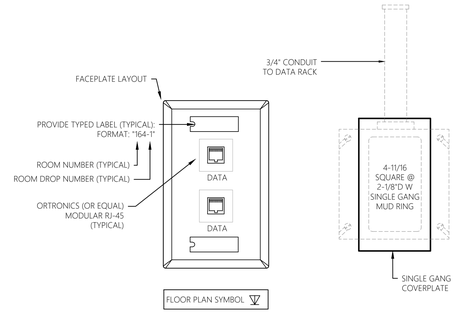
1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL NOTES.
2. ALL CABLING SHALL BE LABELED AT EACH END, AND AT FACEPLATE. FOLLOW ADJACENT LABELING SCHEME. CABLE LABELS SHALL BE SELF LAMINATING, PANDUIT OR EQUAL. FINAL LABELING REQUIREMENTS TO BE CLOSELY COORDINATED WITH OWNER.
3. ALL CABLING SHALL BE NEATLY RUN AND SUFFICIENTLY SUPPORTED. FOLLOW NECA 1-2010 GUIDELINES.
4. PROVIDE GROUNDING PER NEC FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT.
5. ALL PENETRATIONS TO BE PERFORMED IN A NEAT MANOR AND CAULKED. PROVIDE FIRE RATED CAULK WHERE REQUIRED.
6. ALL CABLING SHALL BE TESTED FOR PROPER IDENTIFICATION AND CONTINUITY. ALL OPENS, SHORTS, CROSSES, GROUNDS AND REVERSALS SHALL BE CORRECTED.
7. CONTRACTOR TO COORDINATE ALL PROPOSED WORK WITH THE OWNER.
8. EXACT ROUTING OF HORIZONTAL CABLING SHALL BE DETERMINED BY CONTRACTOR IN FIELD.
9. CONTRACTOR SHALL SUBMIT PRODUCT/SUBMITTAL DATA ON ALL MATERIALS SHOWN ON THIS SHEET FOR APPROVAL BY ENGINEER AND OWNER, PRIOR TO PURCHASE/INSTALL.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE UTP PATCH PANEL FOR ALL NEW DEVICES. UTP PATCH PANEL TO BE MODEL 49255-D24 (24 PORT), 1RU AS MANUFACTURED BY LEVITON OR APPROVED EQUAL. PROVIDE PATCH CABLES AS REQUIRED. PATCH CABLES TO BE AS MANUFACTURED BY SUPERIOR ESSEX OR APPROVED EQUAL. FINAL REQUIREMENTS TO BE CLOSELY COORDINATED WITH OWNER PRIOR TO INSTALLATION & TERMINATIONS.
2. CONTRACTOR TO PROVIDE VERTICAL CABLE MANAGEMENT SYSTEMS WITHIN THE RACK ENCLOSURE ON EACH SIDE AS REQUIRED TO FACILITATE A NEAT CABLE MANAGEMENT SYSTEM. VERTICAL CABLE MANAGEMENT SYSTEMS TO BE VERSI DUCT (LENGTH TO SUIT RACK HEIGHT) AS MANUFACTURED BY LEVITON OR APPROVED EQUAL. FINAL REQUIREMENTS TO BE CLOSELY COORDINATED WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.
3. CONTRACTOR TO PROVIDE HORIZONTAL CABLE MANAGEMENT SYSTEMS WITHIN THE RACK ENCLOSURE AS REQUIRED TO FACILITATE A NEAT CABLE MANAGEMENT SYSTEM. HORIZONTAL CABLE MANAGEMENT SYSTEMS TO BE MODEL 49253-LPM, 1RU, 4" D-SHAPE RINGS AS MANUFACTURED BY LEVITON OR APPROVED EQUAL. FINAL REQUIREMENTS TO BE CLOSELY COORDINATED WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.
4. CONTRACTOR SHALL DETERMINE HOMERUN ROUTE IN FIELD. ALL THRU-WALL PENETRATIONS TO BE PROPERLY SEALED WITH APPROPRIATE FIRE PROOFING.
5. CONTRACTOR TO PROVIDE 10-SPACE SBX SERIES WALL MOUNTED RACK WITH TOP AND BOTTOM 4-1/2" FANS MODEL #AXS-FAN, BOTH AS MANUFACTURED BY MIDDLE ATLANTIC OR APPROVED EQUAL. CONTRACTOR TO PROVIDE ALL REQUIRED CIRCUITRY FOR FAN CONNECTION/OPERATION. FINAL REQUIREMENTS TO BE CLOSELY COORDINATED WITH OWNER PRIOR TO INSTALLATION & TERMINATIONS.
6. CONTRACTOR TO PROVIDE ALL REQUIRED EQUIPMENT WITHIN RACK ENCLOSURE TO FACILITATE MOUNTING OF PROPOSED EQUIPMENT INCLUDING BUT NOT LIMITED TO; REAR RACKRAIL (RRF10) AS MANUFACTURED BY MIDDLE ATLANTIC OR APPROVED EQUAL. FINAL REQUIREMENTS TO BE CLOSELY COORDINATED WITH OWNER PRIOR TO INSTALLATION & TERMINATIONS.
7. CONTRACTOR TO PROVIDE 24-PORT FULLY MANAGED NETWORK SWITCH AS MANUFACTURED BY CISCO MERAKI MS130-24P WITH LIC-MS130-24-5YR, OR APPROVED EQUAL. PROVIDE WITH WIRELESS ACCESS POINT AS MANUFACTURED BY CISCO MERAKI MR28-HW WITH LIC-ENT-5YR, OR APPROVED EQUAL. PROVIDE SFP MODULES AXS85-192-M3 MANUFACTURED BY 10GTEK, OR APPROVED EQUAL. CONTRACTOR TO INSTALL WITHIN THE RACK UNDER THIS CONTRACT. FINAL REQUIREMENTS TO BE CLOSELY COORDINATED WITH OWNER PRIOR TO INSTALLATION & TERMINATIONS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATIONS, TESTING, AND GROUNDING. COORDINATE ALL REQUIREMENTS WITH THE OWNER. INSTALLATION TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS. UPON COMPLETION OF TESTING TURN A COPY OF THE TESTING REPORT OVER TO THE OWNER AND ENGINEER.
9. CONTRACTOR TO PROVIDE FIBER OPTIC PATCH PANEL WITHIN DATA RACK. CONTRACTOR TO PROVIDE REQUIRED CONNECTORS AND TERMINATE CABLE. CONTRACTOR TO COORDINATE FINAL REQUIREMENTS WITH THE OWNER.
10. CONTRACTOR TO FUSION SPLICE PROPOSED FIBER OPTIC CABLE ON PROPOSED FIBER OPTIC PATCH PANEL WITHIN DATA RACK.
11. PROVIDE 3/4" CONDUIT WITH CAT 6 CABLE BACK TO LOCATION OF SECURITY CONTROL PANEL. REFER TO ELECTRICAL PLANS FOR QUANTITIES AND GENERAL LOCATIONS. COORDINATE FINAL QUANTITIES AND LOCATIONS WITH OWNER AND ENGINEER PRIOR TO ROUGH-IN.
12. 12-STRAND, MULTI-MODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C. PROVIDE MAXCELL FABRIC INNERDUCT WITHIN 4" CONDUIT. PROVIDE AS MAXCELL 4" 3-CELL PRODUCT. INSTALL PROPOSED FIBER OPTIC CABLE WITHIN 1-CELL OF THE PROPOSED INNERDUCT AND A PULL STRING THROUGH THE OTHER TWO (2) CELLS. FIBER OPTIC CABLE TO BE CONTINUOUS (NO SPLICES) AND SUITABLE FOR INDOOR/OUTDOOR APPLICATIONS, AS WELL AS, SUITABLE FOR DIRECT BURIAL APPLICATIONS. FIBER OPTIC CABLE TO BE MODEL CLEARCURVE AS MANUFACTURED BY CORNING OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER FOR REVIEW DURING SUBMITTAL PHASE. CONTRACTOR RESPONSIBLE FOR ALL REQUIRED CONNECTORS, TERMINATIONS, AND TESTING. PROVIDE PATCH CABLES AS REQUIRED. COORDINATE FINAL LOCATIONS AND TERMINATION REQUIREMENTS WITH OWNER AND ENGINEER.
13. SECURITY CONTROL PANEL AND ALL ASSOCIATED EQUIPMENT, COMPONENTS, AND DEVICES (ACCESS CARD READERS, CAMERAS, ETC...) ARE TO BE FURNISHED THRU THE CONTRACT ALLOWANCE. CONTRACTOR IS RESPONSIBLE FOR ALL CIRCUITRY (CONDUIT AND CONDUCTORS), TERMINATIONS, AND INSTALLATION OF ALL EQUIPMENT, COMPONENTS, AND DEVICES AS SHOWN AND SPECIFIED. INSPECTION, TESTING, START-UP, AND TRAINING SERVICES ARE INCLUDED BY THE EQUIPMENT SUPPLIER THRU THE CONTRACT ALLOWANCE.
14. CONTRACTOR TO INSTALL RECEPTACLE WITHIN RACK AND POWER FROM BUILDING LVP PANEL. REFER TO ELECTRICAL SCHEDULES FOR ADDITIONAL INFORMATION / REQUIREMENTS. CONTRACTOR TO PROVIDE AND INSTALL AN UNINTERRUPTIBLE POWER SUPPLY (UPS) WITHIN RACK. UPS TO BE MANUFACTURED BY CYBERPOWER MODEL OR500LCDRM1U, OR APPROVED EQUAL.

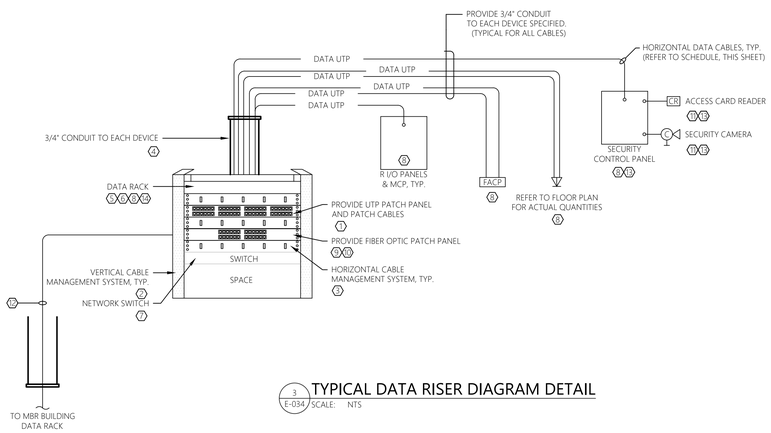


2 E-034 TYPICAL UTP PUNCHDOWN & LABLING DETAIL
SCALE: NTS



4 E-034 TYPICAL DATA BOX INSTALLATION DETAIL
SCALE: NTS

TYPICAL OF FIVE (5) DATA RACKS. MBR BUILDING, ATAD BUILDING, DEWATERING BUILDING, HEADWORKS BUILDING, & GARAGE.



3 E-034 TYPICAL DATA RISER DIAGRAM DETAIL
SCALE: NTS

HORIZONTAL UTP CABLING

	CABLE COLOR					UTP TYPE				INSULATION			RJXX JACK COLOR					CONFIG.		
	BLUE	WHITE	PURPLE	RED	GRAY	CAT 5e	CAT 6	CAT 6A	CAT 3 or 5E	RG-8	PLENUM	RISER	GENERAL	RED	BLACK	IVORY	BLUE	OTHER	T568A	T568B	HOMERUN LOCATION
DATA	●				●		●				●							●		●	DATA RACK (ELECTRICAL ROOM)

GENERAL SCHEDULE NOTES:
1. COORDINATE FINAL CABLING, DEVICE, AND FACEPLATE COLORS WITH OWNER AND ENGINEER. CONTRACTOR TO COORDINATE FINAL COLORS DURING THE SUBMITTAL PHASE.
2. ALL CABLING TO BE LABELED AT EACH END.

REMARKS:
1. PROVIDE A DEDICATED CABLE FOR EACH JACK IDENTIFIED ON THE PLANS/DETAILS.
2. REFER TO ELECTRICAL PLANS FOR QUANTITIES & GENERAL LOCATIONS.
3. CONFIRM PUNCHDOWN SCHEME REQUIRED (T568B OR T568A) WITH OWNER PRIOR TO PUNCHDOWN (T568B SHOWN ON THIS DRAWING).

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111 Wheatfield Drive, Suite 1, Milford, PA 18337, (570) 296-2765

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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

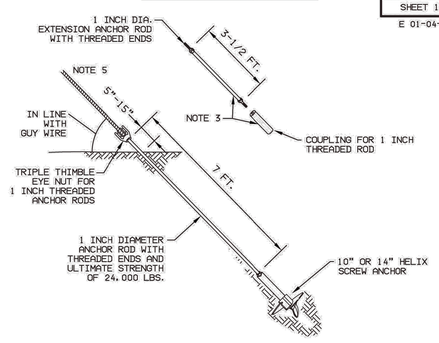
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-034

PROJECT # 18-732 PHASE #

FIG. 17
SHEET 1 OF 4
E 01-04-002.3

SINGLE HELIX SCREW ANCHORS



INSTALLATION REQUIREMENTS							
SOIL CLASS (SEE ANCHOR MANUFACTURER LITERATURE)		2	3	4	5	6	7
10" HELIX	INSTALL TORQUE (FT/LBS)	6,000	4,000	2,500	1,750	1,250	500
	EXPECTED HOLDING CAPACITY (LBS.)	28,000	24,500	20,500	16,000	14,000	8,500
14" HELIX	INSTALL TORQUE (FT/LBS)	7,000	4,000	3,000	2,000	1,500	750
	EXPECTED HOLDING CAPACITY (LBS.)	32,000	28,000	24,000	20,000	16,000	12,500

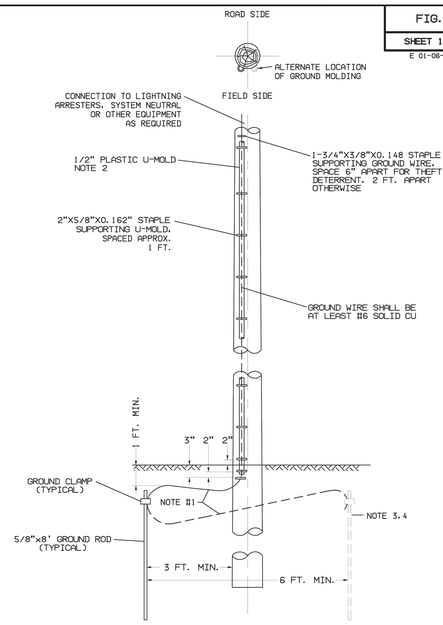
NOTES:

1. A TORQUE INDICATOR SHALL BE USED ON EACH INSTALLATION TO INSURE THAT PROPER TORQUE IS OBTAINED.
2. EXCESSIVE DOWNWARD THRUST ON INSTALLATION WILL CLOSE THE HELIX AND MAKE INSTALLATION IMPOSSIBLE.
3. IF SOIL IS NOT FIRM ENOUGH TO PROVIDE PROPER TORQUE, ADD UP TO TWO (2) EXTENSIONS. IF PROPER TORQUE ISN'T MET AFTER ADDING TWO EXTENSIONS, REMOVE ANCHOR AND INSTALL APPROPRIATE ALTERNATE ANCHOR.
4. AFTER ACHIEVING PROPER TORQUE, INSTALL ANCHOR ROD BETWEEN 5" AND 15" ABOVE GROUND.

ELECTRIC STANDARDS	CENTRAL HUDSON GAS & ELECTRIC CORP.	DATE 10-1-18
DRWN. ____ CLEAR. ____ ENGR. ____ APPD. ____	ANCHOR INSTALLATIONS	ISSUE APP. APP.

1 E-035 SCALE: NTS — TYPICAL GUY SCREW ANCHOR DETAIL

FIG. 19
SHEET 1 OF 2
E 01-06-001.0



ELECTRIC STANDARDS	CENTRAL HUDSON GAS & ELECTRIC CORP.	DATE 8-7-18
DRWN. ____ DSGN. ____ APPD. ____	GENERAL - GROUNDS AND GROUND GRIDS GROUND INSTALLATION AT WOOD POLE BASE MULTI - GROUNDED COMMON NEUTRAL SYSTEM	ISSUE APP. APP.

2 E-035 SCALE: NTS — TYPICAL POLE GOUNDING DETAIL

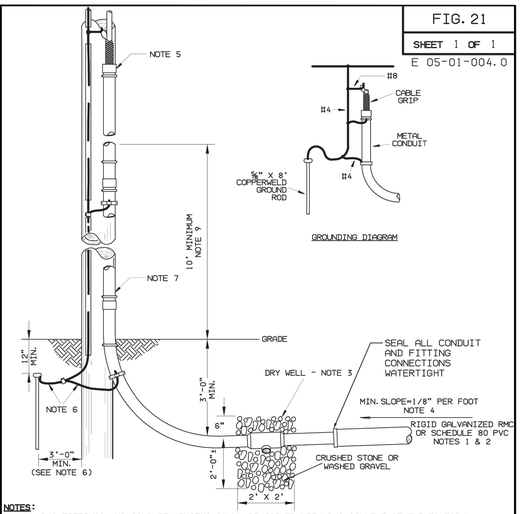
FIG. 19
SHEET 2 OF 2

NOTES:

1. CONNECTING WIRES TO BE SLACK TO AVOID BREAKAGE DUE TO FROST ACTION.
2. PLASTIC MOLDING TO COVER GROUND WIRE ALONG FULL RUN ON POLE.
3. AT THE LAST GROUND INSTALLATION ON PRIMARY LINES, INCLUDING PRIVATE SPURS, DRIVE ONE ADDITIONAL ROD AND CONNECT AS SHOWN.
4. ADDITIONAL ROD TO BE CONNECTED WITH CONTINUOUS WIRE LOOPED THROUGH ROD CONNECTORS.
5. A COMMON NEUTRAL CONDUCTOR REQUIRES A MINIMUM OF FOUR GROUNDS AT SEPARATE LOCATIONS PER MILE EITHER AS EQUIPMENT GROUNDS OR AS SEPARATE INSTALLATIONS.
6. IF NECESSARY TO SPLICE GROUNDING CONDUCTOR ABOVE GROUND, USE COMPRESSION SPLICE.

ELECTRIC STANDARDS	CENTRAL HUDSON GAS & ELECTRIC CORP.	DATE 8-7-18
DRWN. ____ DSGN. ____ APPD. ____	GENERAL - GROUNDS AND GROUND GRIDS GROUND INSTALLATION AT WOOD POLE BASE MULTI - GROUNDED COMMON NEUTRAL SYSTEM	ISSUE APP. APP.

FIG. 21
SHEET 1 OF 1
E 05-01-004.0

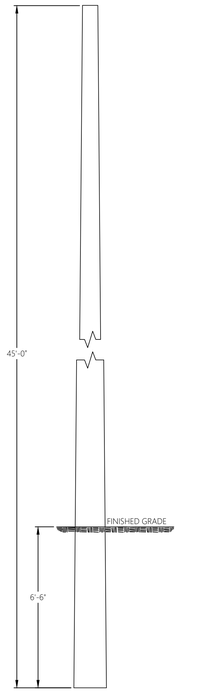


NOTES:

1. ALL PVC FITTINGS AND CONDUIT LENGTHS SHALL BE JOINED WITH PVC SOLVENT CEMENT TO FORM WATERTIGHT JOINTS. SCHEDULE 80 PVC SHALL BE USED UNDER AREAS SUBJECT TO VEHICLE TRAFFIC. SCHEDULE 40 PVC IS ACCEPTABLE IN OTHER AREAS.
2. SEAL TERMINAL END OF ACTIVE CONDUITS WITH FORM OR CAULK DESIGNED TO RESIST WATER PENETRATION. MATCH FORM OR CAULK WITH CONDUIT MATERIAL.
3. DRY WELL NOT REQUIRED IF DUCTS TERMINATE IN A MANHOLE OR PULLBOX.
4. DUCTS SHOULD SLOPE TOWARDS DRY WELL WHEN DRY WELL IS USED. OTHERWISE SLOPE DUCTS TOWARD MANHOLE OR PULLBOX.
5. SEAL TOP OF DUCT AFTER CABLE IS IN PLACE.
6. CONNECTING WIRES TO BE SLACK TO AVOID BREAKAGE DUE TO FROST ACTION.
7. LOCATE RISER CONDUIT ON SIDE OF POLE OPPOSITE TO TRAFFIC DIRECTION.
8. SUPPLEMENTAL GROUND IS REQUIRED IF GROUND RESISTANCE IS GREATER THAN 25 OHMS. SEE NEC SECTION 250.53.
9. FOR SECONDARY RISER SYSTEMS, RIGID METAL CONDUIT IS REQUIRED FOR THE FIRST 10 FEET ABOVE GRADE. RIGID METAL CONDUIT IS REQUIRED FOR ALL ABOVE GRADE CONDUIT FOR PRIMARY RISER SYSTEMS.

ELECTRIC STANDARDS	CENTRAL HUDSON GAS & ELECTRIC CORP.	DATE 8/29/23
DRWN. GC CLEAR. ____ ENGR. ____ APPD. ____	UNDERGROUND CONSTRUCTION CONDUIT RISER INSTALLATION NON VENTILATED	ISSUE 1 APP. APP.

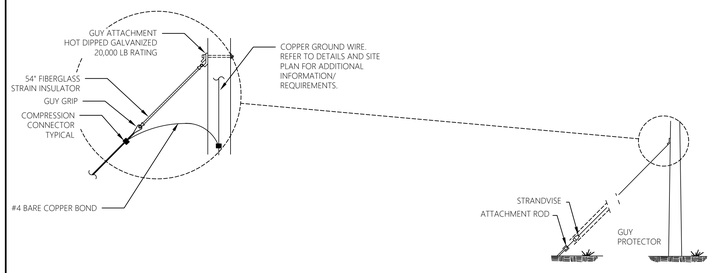
3 E-035 SCALE: NTS — TYPICAL PRIMARY CONDUIT RISER DETAIL



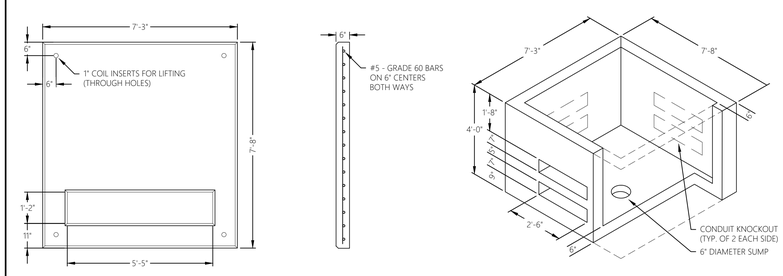
NOTES:

1. PROVIDE UTILITY POLE AS 45-FOOT, CLASS 2, TREATED SOUTHERN YELLOW PINE, OR AS REQUIRED BY THE UTILITY.
2. POLE IS TO BURIED 6'-6" BELOW FINISHED GRADE, OR AS REQUIRED BY UTILITY.
3. REFER TO OTHER DETAILS ON THIS SHEET FOR EQUIPMENT TO BE MOUNTED TO POLE BY THIS CONTRACT.
4. COORDINATE ALL REQUIREMENTS WITH ENGINEER AND UTILITY.

4 E-035 SCALE: NTS — TYPICAL WOOD POLE INSTALLATION DETAIL



5 E-035 SCALE: NTS — TYPICAL GROUNDED GUY DETAIL

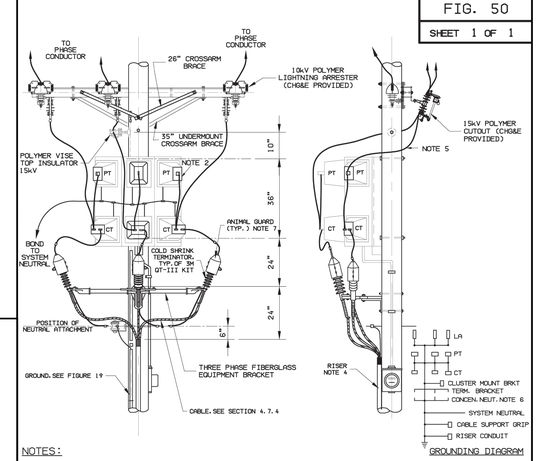


NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO ACI-318.
2. CONCRETE TO HAVE A MINIMUM STRENGTH OF 5000 P.S.I. AFTER 28 DAYS. AIR ENTRAINMENT TO BE 6% ±1%. ALL EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
3. REINFORCING TO BE #5 - GRADE 60 BARS AND SHALL CONFORM TO ASTM A-615 OF LATEST DATE. REINFORCING TO BE PLACED A MINIMUM OF 2" CLEAR FROM FACE OF CONCRETE.
4. ALL OPENINGS SHALL HAVE ADDITIONAL REBAR REINFORCEMENT OF 1-#5 EACH CORNER, MID-DEPTH.
5. LIFTING ANCHORS SHALL BE INSTALLED WITH APPROPRIATE DAYTON LIFTING ANCHORS OR EQUIVALENT.
6. CONTRACTOR SHALL SEAL SECONDARY CONDUITS WITH EXPANDING FOAM AND SHALL ALSO GROUT PRIMARY & SECONDARY CONDUIT OPENINGS ON PAD.
7. REFER TO ELECTRICAL SITE PLAN FOR GENERAL LOCATIONS OF EQUIPMENT AND ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
8. TRANSFORMER PAD SHALL BE CAST IN PLACE OR MANUFACTURED PRECAST TYPE AS MANUFACTURED BY LAKELANDS CONCRETE PRODUCTS, OR APPROVED EQUAL.
9. COORDINATE FINAL REQUIREMENTS CLOSELY WITH THE UTILITY. PROVIDE AS REQUIRED. REFER TO 'GENERAL NOTES' SECTION ON SHEET E-001 FOR UTILITY CONTACT INFORMATION AND PROJECT WORK ORDER NUMBER. CONTRACTOR IS TO REFERENCE WORK ORDER NUMBER WHEN CONTACTING THE UTILITY.
10. REFER TO SITE PLAN AND SINGLE LINE DIAGRAM FOR GROUNDING INFORMATION/REQUIREMENTS.

6 E-035 SCALE: NTS — TYPICAL TRANSFORMER PAD AND VAULT DETAIL

FIG. 50
SHEET 1 OF 1



NOTES:

1. COMPANY SHALL SUPPLY CUTOUTS, METER TEST SWITCHES, CURRENT AND POTENTIAL TRANSFORMERS, METER WIRE, CT/PT MOUNTING CLUSTER, AND CONDUIT. COMPANY WILL ENERGIZE THE METER AND TERMINATIONS. POLE INSTALLATION AND ALL OTHER WORK SHALL BE BY CUSTOMER ON CUSTOMER OWNED POLES.
2. PT'S MAY BE ROTATED 90° IF NECESSARY.
3. HARDWARE TO BE 5/8" AND GALVANIZED. USE DOUBLE COIL WASHERS ON ALL POLE MOUNTED HARDWARE.
4. MINIMUM CONDUIT SIZE: 4 INCH. CONDUIT FILL SHALL NOT EXCEED 40%
5. CONDUCTOR FROM OPEN WIRE TO TERMINATOR SHALL BE COVERED CONDUCTOR AND SHALL BE AT LEAST ELECTRICALLY EQUIVALENT (AMPACITY) TO RISER CABLE CONDUCTOR. FOR EXAMPLE, USE #2 CU FOR 1/0 AL CABLE.
6. LEAD BETWEEN CONCENTRIC NEUTRAL AND SYSTEM NEUTRAL SHALL BE ELECTRICALLY EQUIVALENT (AMPACITY) TO THE CONCENTRIC NEUTRAL:

   30-55-349 & 30-55-420: 15KV #2 AL URD CABLE WITH 10-#14 AWG CONCENTRIC NEUTRAL - USE #4 CU.

   30-55-361: 15KV 4/0 AL URD CABLE WITH 20-#12 AWG CONCENTRIC NEUTRAL - USE 1/0 CU.

7. ANIMAL GUARDS MUST BE INSTALLED FOLLOWING MANUFACTURER RECOMMENDATIONS ON TERMINATOR TO PROTECT AGAINST ANIMAL CONTACT.
8. THE COMPANY MAINTAINS 34.5KV DISTRIBUTION SYSTEMS IN THE TOWNS OF HUNTER, JEWETT & LEXINGTON. COORDINATE WITH THE COMPANY IF 34.5KV EQUIPMENT IS REQUIRED PRIOR TO INSTALLATION WHERE WORKING IN THESE LOCATIONS.

ELECTRIC STANDARDS	CENTRAL HUDSON GAS & ELECTRIC CORP.	DATE 9/18/23
DRWN. GC CLEAR. ____ ENGR. ____ APPD. ____	CUSTOMER POLE - 13.2kV THREE PHASE PRIMARY METERING INSTALLATION - RISER POLE TO OVERHEAD	ISSUE 1 APP. APP.

1 E-035 SCALE: NTS — TYPICAL PRIMARY METERING INSTALLATION DETAIL

MHE ENGINEERING
33 Airport Center Drive, Suite 202, New Windsor, NY 12553, (845) 587-3100
111 Wheatfield Drive, Suite 1, Milford, PA 18337, (570) 296-2765

BID SET

JSE JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

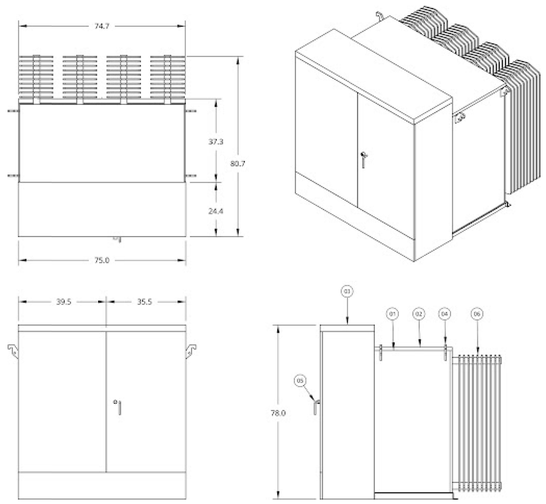
ELECTRICAL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-035
PROJECT # 18-732 PHASE #



LEGEND	
ITEM	DESCRIPTION
01	TANK
02	BOLT-ON LID
03	CABINET
04	LIFTING HOOKS
05	PAD-LOCKABLE DOOR HANDLE
06	COOLING RADIATORS

TAP SETTINGS		
TAPS	VOLTAGE	AMPERAGE
A	13860	104.1
B	13530	106.7
C	13200	109.3
D	12870	112.2
E	12540	115.1

APPROX. WEIGHT: 15667 LBS

DESCRIPTION		
KVA:	2500	AMPS
HIGH VOLTAGE:	13200 GY/ 7620, 95 kV BIL	109.3
LOW VOLTAGE:	480 Y/ 277, 30 kV BIL	3007.1
HV BUSHINGS:	(6) 15kV 200A Wells & Inserts (dead front loop feed)	
LV BUSHINGS:	(4) 10-Hole Spades w/ Supports, Common H0/X0	
TEMP RISE:	65C	
COOLING CLASS:	KNAN	
CONDUCTOR:	Al / Al	
FLUID:	FR3	
TYPE:	General Purpose	
ARRESTERS:	(3) 10 kV, 8.4 kV MCOV Arresters	
PROTECTION:	Current Sensing Bayonets w/ CLFs	
SWITCH:	4 Pos. LBOR	
ACCESSORIES:	-Dial-Type Thermometer	
	-Liquid Level Gauge	
	-Pressure Vacuum Gauge	
	-Grounding Provisions	
	-Schrader Valve	
	-Drain & Sample Valve	
	-Pressure Relief Valve	
	-UL Listed, Made in USA	

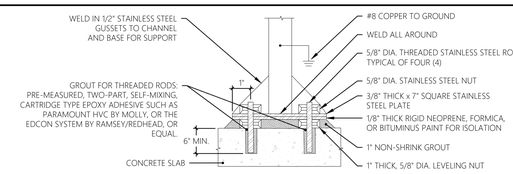
NOTES:

1) TRANSFORMER IS MANUFACTURED AND TESTED PER LATEST APPLICABLE ANSI AND IEEE STANDARDS
2) UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES
3) TRANSFORMER MEETS OR EXCEEDS 2016 EFFICIENCY STANDARDS AS APPLICABLE
4) STANDARD PAINT
5) TRANSFORMER IS UL LISTED, MADE IN USA
6) TANK MATERIAL IS STAINLESS CABINET TANK & RADIATORS

Maddox

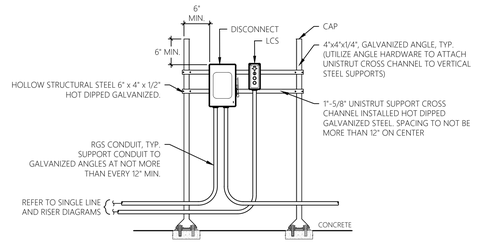
1 / E-036 PAD-MOUNTED TRANSFROMER
SCALE: NTS

GENERAL NOTES:
1. BACK PAINT METALS IN CONTACT WITH CONCRETE WITH 5 MILS OF TNEMEC SETIES 66-GRAY, HIGH BUILD EPOXOLINE, DUPONT 25P EPOXY, OR EQUAL.
2. ALL MOUNTING HARDWARE TO BE STAINLESS STEEL.
3. COORDINATE REQUIREMENTS CLOSELY WITH CONTRACT 'G.

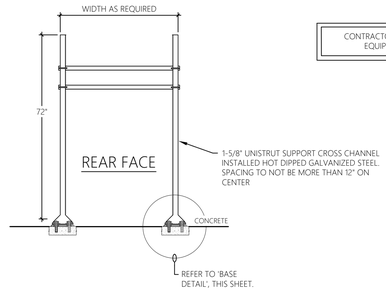


2 / E-036 TYPICAL BASE DETAIL
SCALE: NTS

GENERAL NOTES:
1. MOUNTING STAND TO BE FABRICATED/CONSTRUCTED OF STEEL MATERIALS.
2. ALL DISCONNECTS, PANELBOARDS, AND ELECTRICAL EQUIPMENT SHALL BE LOCATED FIVE (5) FEET ABOVE GRADE (ON CENTER) AND COMPLY WITH NEC REQUIREMENTS, UNLESS OTHERWISE INDICATED.
3. CONDUIT AND ELECTRICAL EQUIPMENT TO BE SUPPORTED/BRACED (UNISTRUT CROSS MEMBER) AT MINIMUM EVERY 12".
4. NOT ALL ELECTRICAL EQUIPMENT MOUNTED TO MOUNTING STAND MAY BE SHOWN. DETAIL IS DIAGRAMMATIC IN NATURE. SIZE AND ARRANGE PANELS AND ELECTRICAL EQUIPMENT TO FIT MOUNTING STAND. UTILIZE BOTH SIDES OF ELECTRICAL MOUNTING STAND AS REQUIRED.
5. ALL REQUIREMENTS TO BE PER NEC.
6. QUANTITY OF CONDUITS/CIRCUITS SHOWN IN DETAIL IS DIAGRAMMATIC IN NATURE. REFER TO ELECTRICAL SITE PLAN, SCHEDULES, AND SINGLE LINE DIAGRAMS FOR SPECIFIC QUANTITIES.
7. COORDINATE ALL ELECTRICAL EQUIPMENT MOUNTED TO ELECTRICAL MOUNTING STAND AND FINAL LOCATION WITH THE OWNER.
8. CONTRACTOR TO PROVIDE NAMEPLATE FOR ALL EQUIPMENT PER SPECIFICATIONS.
9. NOTE, SPARE CONDUITS NOT SHOWN FOR CLARITY. REFER TO SINGLE LINE DIAGRAMS AND RISER DIAGRAMS FOR ADDITIONAL REQUIREMENTS/INFORMATION.



FRONT FACE



CONTRACTOR TO SIZE AND ARRANGE ELECTRICAL EQUIPMENT TO FIT MOUNTING STAND.

3 / E-036 ELECTRICAL MOUNTING STAND DETAIL
SCALE: NTS TYPICAL FOR DISCONNECT AND LCS SETUP

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-036

PROJECT # 18-732 PHASE #

DUCT BANK SCHEDULE - WWTP (1 OF 4)

DESIGNATION DB-XX	TYPE	ORIGIN	DESTINATION	CIRCUIT			REMARKS
				CONDUCTORS/CONDUIT	ORIGIN	DESTINATION	
DB-01	REINFORCED CONCRETE	UTILITY RISER POLE	UTILITY PAD-MOUNTED TRANSFORMER	(4)#4/0, 4"C 15KV PRIMARY ALUMINUM FEEDER	UTILITY RISER POLE	UTILITY PAD-MOUNTED TRANSFORMER	②
				4"C. SPARE	UTILITY RISER POLE	UTILITY PAD-MOUNTED TRANSFORMER	
				4"C. SPARE	UTILITY RISER POLE	MBR BUILDING DATA RACK	
DB-02	REINFORCED CONCRETE	UTILITY PAD-MOUNTED TRANSFORMER	MBR BUILDING	EIGHT (8) SETS OF [(4)#500, 4"C.]	UTILITY PAD-MOUNTED TRANSFORMER	MAIN CIRCUIT BREAKER MCB	②
				4"C. SPARE	UTILITY PAD-MOUNTED TRANSFORMER	ADJACENT TO MCB	
				4"C. SPARE	UTILITY RISER POLE	MBR BUILDING DATA RACK	
DB-03	REINFORCED CONCRETE	MBR BUILDING	EMERGENCY GENERATOR #1	4 SETS OF [(4)#500 & #4/0G, 4" C]	AUTOMATIC TRANSFER SWITCH ATS	EMERGENCY GENERATOR #1	②
				(12)#14 & (2)#18STP, 1"C.	AUTOMATIC TRANSFER SWITCH ATS	EMERGENCY GENERATOR #1	
				(3)#2 & #8G, 1-1/2"C.	PANEL LVP1	EMERGENCY GENERATOR #1 LOAD CENTER	
				BELDEN 9729, 1"C.	REMOTE ANNUNCIATOR & DISPLAY	EMERGENCY GENERATOR #1	
				(4)#14, 3/4"C.	EMERGENCY STOP	EMERGENCY GENERATOR #1	
				4"C. SPARE	ADJACENT TO ATS	EMERGENCY GENERATOR #1	
DB-04	REINFORCED CONCRETE	MBR BUILDING	EMERGENCY GENERATOR #2	4 SETS OF [(4)#500 & #4/0G, 4" C]	AUTOMATIC TRANSFER SWITCH ATS	EMERGENCY GENERATOR #2	②
				(12)#14 & (2)#18STP, 1"C.	AUTOMATIC TRANSFER SWITCH ATS	EMERGENCY GENERATOR #2	
				(3)#2 & #8G, 1-1/2"C.	PANEL LVP1	EMERGENCY GENERATOR #2 LOAD CENTER	
				BELDEN 9729, 1"C.	REMOTE ANNUNCIATOR & DISPLAY	EMERGENCY GENERATOR #2	
				(4)#14, 3/4"C.	EMERGENCY STOP	EMERGENCY GENERATOR #2	
				4"C. SPARE	ADJACENT TO ATS	EMERGENCY GENERATOR #2	
DB-05	REINFORCED CONCRETE	EMERGENCY GENERATOR #1	EMERGENCY GENERATOR #2	(12)#14 & (2)#18STP, 1"C.	EMERGENCY GENERATOR #1	EMERGENCY GENERATOR #2	②
				BELDEN 9729, 1"C.	EMERGENCY GENERATOR #1	EMERGENCY GENERATOR #2	
				4"C. SPARE	EMERGENCY GENERATOR #1	EMERGENCY GENERATOR #2	
DB-06	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	CONTROL BUILDING	8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	R I/O-1	MCP	① ②
				4" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO MCP	
				8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	DATA RACK	DATA RACK	
				(4)#4/0 & #4G, 4"C.	SWBD	HVP2	
				4" C. SPARE	ADJACENT TO SWBD	ADJACENT TO HVP2	
DB-07	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	HEADWORKS BUILDING	8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	R I/O-1	R I/O-3	① ②
				4" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO R I/O-3	
				8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	DATA RACK	DATA RACK	
				(4)#4/0 & #4G, 4"C.	SWBD	HVP3	
				4" C. SPARE	ADJACENT TO SWBD	ADJACENT TO HVP3	
DB-08	SAND FILL	HEADWORKS BUILDING	INFLUENT STRUCTURE/PARSHALL FLUME	(2)#18STP & (4)#14, 1"C.	R I/O-3	PARSHALL FLUME FLOW METER	②
				(2)#10 & #10G, 1"C.	LVP3	PARSHALL FLUME FLOW METER	
				2" C. SPARE	ADJACENT TO R I/O-3	ADJACENT TO PARSHALL FLUME	
DB-09	SAND FILL	HEADWORKS BUILDING	GRIT CHAMBER	(3)#10 & #10G, 1"C.	DISCONNECT SWITCH	GRIT PROPELLER DRIVE GRTPD-01	② ③
				(4)#14, 3/4"C.	DISCONNECT SWITCH	GRIT PROPELLER DRIVE GRTPD-01	
				(3)#10 & #10G, 1"C.	DISCONNECT SWITCH	GRIT PUMP GRTP-01	
				(4)#14, 3/4"C.	DISCONNECT SWITCH	GRIT PUMP GRTP-01	
				(4)#14, 3/4"C.	GRIT CONTROL PANEL GRT-CP-01	SOLENOID VALVE SOL-203	
				(24)#14, 1"C.	GRIT CONTROL PANEL GRT-CP-01	VACUUM PRIME CONTROL PANEL	
				2" C. SPARE	ADJACENT TO GRT-CP-01	GRIT CHAMBER	
DB-10	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	PRIMARY SETTLING TANK NO. 1	(4)#10 & #10G, 1"C.	HVP1	PC-CP-1	① ② ③
				(4)#10 & #10G, 1"C.	HVP1	SP-CP-1	
				2" C. SPARE	ADJACENT TO HVP1	ADJACENT TO PC-CP-1	
				(12)#14 & (2)#18STP, 1"C.	R I/O-1	PC-CP-1	
				(12)#14 & (2)#18STP, 1"C.	R I/O-1	SP-CP-1	
				2" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO PC-CP-1	
				(2)#10 & #10G, 1"C.	LVP1	RECEPTACLES	
				(2)#10 & #10G, 1"C.	LVP1	LIGHTS	

DUCT BANK SCHEDULE - WWTP (2 OF 4)

DESIGNATION DB-XX	TYPE	ORIGIN	DESTINATION	CIRCUIT			REMARKS
				CONDUCTORS/CONDUIT	ORIGIN	DESTINATION	
DB-11	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	PRIMARY SETTLING TANK NO. 2	(4)#10 & #10G, 1"C.	HVP1	PC-CP-2	① ② ③
				(4)#10 & #10G, 1"C.	HVP1	SP-CP-2	
				2" C. SPARE	ADJACENT TO HVP1	ADJACENT TO PC-CP-2	
				(12)#14 & (2)#18STP, 1"C.	R I/O-1	PC-CP-2	
				(12)#14 & (2)#18STP, 1"C.	R I/O-1	SP-CP-2	
				2" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO PC-CP-2	
				(2)#10 & #10G, 1"C.	LVP1	RECEPTACLES	
				(2)#10 & #10G, 1"C.	LVP1	LIGHTS	
DB-12	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	PRIMARY SETTLING TANK NO. 3	(4)#10 & #10G, 1"C.	HVP1	PC-CP-3	① ② ③
				(4)#10 & #10G, 1"C.	HVP1	SP-CP-3	
				2" C. SPARE	ADJACENT TO HVP1	ADJACENT TO PC-CP-3	
				(12)#14 & (2)#18STP, 1"C.	R I/O-1	PC-CP-3	
				(12)#14 & (2)#18STP, 1"C.	R I/O-1	SP-CP-3	
				2" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO PC-CP-3	
				(2)#10 & #10G, 1"C.	LVP1	RECEPTACLES	
				(2)#10 & #10G, 1"C.	LVP1	LIGHTS	
DB-13	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	PRIMARY SETTLING TANK NO. 4	(4)#10 & #10G, 1"C.	HVP1	PC-CP-4	① ② ③
				(4)#10 & #10G, 1"C.	HVP1	SP-CP-4	
				2" C. SPARE	ADJACENT TO HVP1	ADJACENT TO PC-CP-4	
				(12)#14 & (2)#18STP, 1"C.	R I/O-1	PC-CP-4	
				(12)#14 & (2)#18STP, 1"C.	R I/O-1	SP-CP-4	
				2" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO PC-CP-4	
				(2)#10 & #10G, 1"C.	LVP1	RECEPTACLES	
				(2)#10 & #10G, 1"C.	LVP1	LIGHTS	
DB-14	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	ELECTRICAL BACKBOARD	(3)#8 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE VALVE CONTROL PANEL	① ② ③
				(48)#14 & (8)#18STP, 2"C. CAT 6 CABLE, 1"C.	R I/O-1	PRIMARY SLUDGE VALVE CONTROL PANEL	
				(2)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT LIGHT	
				(2)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT SUMP PUMP	
				(2)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT EXHAUST FAN	
				(3)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT UNIT HEATER	
				(4)#14 & (2)#18STP, 1"C.	R I/O-1	SLUDGE VALVE PIT FLOOD DETECTION	
				(2)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT SUMP PUMP	
				(4)#14 & (2)#18STP, 1"C.	R I/O-1	SLUDGE VALVE PIT FLOOD DETECTION	
				(4)#6 & #10G, 2"C.	PANEL HVP1	PRIMARY SLUDGE CONTROL PANEL	
				(12)#14 & (2)#18STP, 1"C. CAT 6 CABLE, 1"C.	R I/O-1	PRIMARY SLUDGE CONTROL PANEL	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT LIGHT	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT SUMP PUMP	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT EXHAUST FAN	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT SRV	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT DEHUMIDIFIER	
				(3)#10 & #10G, 1"C.	PANEL HVP1	PRIMARY SLUDGE PIT UNIT HEATER	
				(4)#14 & (2)#18STP, 1"C.	R I/O-1	PRIMARY SLUDGE PIT FLOOD DETECTION	
				(2)#10 & #10G, 1"C.	PANEL LVP1	ELECTRICAL BACKBOARD LIGHT	
				(2)#10 & #10G, 1"C.	PANEL LVP1	ELECTRICAL BACKBOARD RECEPTACLE	
				(2)#10 & #10G, 1"C.	PANEL LVP1	LEVEL TRANSDUCER TRANSMITTER	
				2"C. SPARE	ADJACENT TO LVP1	ELECTRICAL BACKBOARD	
				2"C. SPARE	ADJACENT TO R I/O-1	ELECTRICAL BACKBOARD	
DB-15	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	GARAGE	8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	DATA RACK	DATA RACK	① ②
				(4)#4/0 & #4G, 4"C.	SWBD	HVP7	
				4" C. SPARE	ADJACENT TO SWBD	ADJACENT TO HVP7	

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HAZARDOUS MATERIAL NOTE:

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-040

PROJECT # 18-732 PHASE #

DUCT BANK SCHEDULE - WWTP (3 OF 4)

DESIGNATION DB-XX	TYPE	ORIGIN	DESTINATION	CIRCUIT			REMARKS
				CONDUCTORS/CONDUIT	ORIGIN	DESTINATION	
DB-16	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	DEWATERING BUILDING	8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	R I/O-1	R I/O-2	1 2
				4" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO R I/O-2	
				8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	DATA RACK	DATA RACK	
				TWO (2) SETS OF [(4)#4/0 & #2G, 4"C.]	SWBD	HVP4	
				4" C. SPARE	ADJACENT TO SWBD	ADJACENT TO HVP4	
DB-17	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	DISINFECTION BUILDING	8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	R I/O-1	DBSP	1 2
				4" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO DBSP	
				TWO (2) SETS OF [(4)#4/0 & #2G, 4"C.]	SWBD	HVP8	
				4" C. SPARE	ADJACENT TO SWBD	ADJACENT TO HVP8	
DB-19	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	SITE LIGHTING	(2)#8 & #10G, 1"C.	PANEL LVP1	POLE-MOUNTED SITE LIGHTS	1
DB-20	SAND FILL	ELECTRICAL BACKBOARD	SLUDGE VALVE PIT	(2)#10 & #10G, 1"C.	PRIMARY SLUDGE VALVE CONTROL PANEL	PRIMARY SLUDGE VALVE NO. 1	2 3
				(12)#14 & (2)#18STP, 1"C. CAT 6 CABLE, 1"C.	PRIMARY SLUDGE VALVE CONTROL PANEL	PRIMARY SLUDGE VALVE NO. 1	
				(2)#10 & #10G, 1"C.	PRIMARY SLUDGE VALVE CONTROL PANEL	PRIMARY SLUDGE VALVE NO. 2	
				(12)#14 & (2)#18STP, 1"C. CAT 6 CABLE, 1"C.	PRIMARY SLUDGE VALVE CONTROL PANEL	PRIMARY SLUDGE VALVE NO. 2	
				(2)#10 & #10G, 1"C.	PRIMARY SLUDGE VALVE CONTROL PANEL	PRIMARY SLUDGE VALVE NO. 3	
				(12)#14 & (2)#18STP, 1"C. CAT 6 CABLE, 1"C.	PRIMARY SLUDGE VALVE CONTROL PANEL	PRIMARY SLUDGE VALVE NO. 3	
				(2)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT LIGHT	
				(2)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT SUMP PUMP	
				(2)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT EXHAUST FAN	
				(3)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT UNIT HEATER	
				(4)#14 & (2)#18STP, 1"C.	R I/O-1	SLUDGE VALVE PIT FLOOD DETECTION	
				TWO (2) 2"C. SPARE	ELECTRICAL BACKBOARD	SLUDGE VALVE PIT	
DB-21	SAND FILL/ REINFORCED CONCRETE	MBR BUILDING	ATAD BUILDING	8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	R I/O-1	R I/O-4	1 2
				4" C. SPARE	ADJACENT TO R I/O-1	ADJACENT TO R I/O-4	
				8STRAND MULTIMODE (50 MICRON CORE / 125 MICRON CLADDING DIAMETER), FIBER OPTIC CABLE, 4"C	DATA RACK	DATA RACK	
				FOUR (4) SETS OF [(4)#500 & #4/0G, 4"C.]	SWBD	MCC2	
				4" C. SPARE	ADJACENT TO SWBD	ADJACENT TO MCC2	
DB-22	SAND FILL/ REINFORCED CONCRETE	CONTROL BUILDING	MOTORIZED ENTRANCE GATE	(3)#6 & #10G, 1"C.	PANEL LVP2	MOTORIZED ENTRANCE GATE	1 2
				CAT 6 CABLE, 1"C.	DATA RACK	MOTORIZED ENTRANCE GATE	
				2"C. SPARE	ADJACENT TO DATA RACK	MOTORIZED ENTRANCE GATE	
DB-23	REINFORCED CONCRETE	ATAD BUILDING	FILTRATE PUMP WET WELL	(3)#10 & #10G, 1"C.	FILTRATE PUMP CONTROL PANEL	FILTRATE PUMP FP-400	2 3
				(6)#14, 3/4"C.	FILTRATE PUMP CONTROL PANEL	FILTRATE PUMP FP-400	
				(3)#10 & #10G, 1"C.	FILTRATE PUMP CONTROL PANEL	FILTRATE PUMP FP-401	
				(6)#14, 3/4"C.	FILTRATE PUMP CONTROL PANEL	FILTRATE PUMP FP-401	
				(6)#14, 3/4"C.	FILTRATE PUMP CONTROL PANEL	FLOAT FL-400	
				(6)#14, 3/4"C.	FILTRATE PUMP CONTROL PANEL	FLOAT FL-401	
				(6)#14, 3/4"C.	FILTRATE PUMP CONTROL PANEL	FLOAT FL-402	
				2"C. SPARE	ADJACENT TO CONTROL PANEL	FILTRATE PUMP WET WELL	
DB-24	SAND FILL	ELECTRICAL BACKBOARD	SLUDGE VALVE PIT	(2)#10 & #10G, 1"C.	PRIMARY SLUDGE VALVE CONTROL PANEL	PRIMARY SLUDGE VALVE NO. 4	2 3
				(12)#14 & (2)#18STP, 1"C. CAT 6 CABLE, 1"C.	PRIMARY SLUDGE VALVE CONTROL PANEL	PRIMARY SLUDGE VALVE NO. 4	
				(2)#10 & #10G, 1"C.	PANEL LVP1	SLUDGE VALVE PIT SUMP PUMP	
				(4)#14 & (2)#18STP, 1"C.	R I/O-1	SLUDGE VALVE PIT FLOOD DETECTION	
				TWO (2) 2"C. SPARE	ELECTRICAL BACKBOARD	SLUDGE VALVE PIT	

DUCT BANK SCHEDULE - WWTP (4 OF 4)

DESIGNATION DB-XX	TYPE	ORIGIN	DESTINATION	CIRCUIT			REMARKS
				CONDUCTORS/CONDUIT	ORIGIN	DESTINATION	
DB-25	SAND FILL	ELECTRICAL BACKBOARD	PRIMARY SLUDGE PIT	(3)#10 & #10G, 1"C.	PRIMARY SLUDGE CONTROL PANEL	PRIMARY SLUDGE PUMP NO. 1	2 3
				(6)#14, 1"C.	PRIMARY SLUDGE CONTROL PANEL	PRIMARY SLUDGE PUMP NO. 1	
				(3)#10 & #10G, 1"C.	PRIMARY SLUDGE CONTROL PANEL	PRIMARY SLUDGE PUMP NO. 2	
				(6)#14, 1"C.	PRIMARY SLUDGE CONTROL PANEL	PRIMARY SLUDGE PUMP NO. 2	
				(4)#14, 3/4"C.	PRIMARY SLUDGE CONTROL PANEL	PRESSURE SWITCH PS-SP-01	
				(4)#14, 3/4"C.	PRIMARY SLUDGE CONTROL PANEL	PRESSURE SWITCH PS-SP-02	
				(4)#14, 3/4"C.	PRIMARY SLUDGE CONTROL PANEL	BACKUP FLOAT FLS-300	
				(4)#14, 3/4"C.	PRIMARY SLUDGE CONTROL PANEL	BACKUP FLOAT FLS-301	
				(4)#14, 3/4"C.	PRIMARY SLUDGE CONTROL PANEL	BACKUP FLOAT FLS-302	
				(4)#14, 3/4"C.	PRIMARY SLUDGE CONTROL PANEL	BACKUP FLOAT FLS-303	
				(2)#18STP, 3/4"C.	PRIMARY SLUDGE CONTROL PANEL	LEVEL TRANSDUCER LT-300	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT LIGHT	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT SUMP PUMP	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT EXHAUST FAN	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT SRV	
				(2)#10 & #10G, 1"C.	PANEL LVP1	PRIMARY SLUDGE PIT DEHUMIDIFIER	
				(3)#10 & #10G, 1"C.	PANEL HVP1	PRIMARY SLUDGE PIT UNIT HEATER	
				(4)#14 & (2)#18STP, 1"C.	R I/O-1	PRIMARY SLUDGE PIT FLOOD DETECTION	
				TWO (2) 2"C. SPARE	ELECTRICAL BACKBOARD	PRIMARY SLUDGE PIT	

GENERAL SCHEDULE NOTES:

1. VERIFY CIRCUIT REQUIREMENTS WITH APPLICABLE EQUIPMENT MANUFACTURERS. PROVIDE CONDUCTORS AND CONDUIT AS REQUIRED.
2. COORDINATE DUCT BANK LOCATIONS AND INSTALLATIONS WITH EXISTING AND PROPOSED STRUCTURES, EQUIPMENT, PIPING SYSTEMS, AND WITH OWNER / ENGINEER.
3. REFER TO THE TYPICAL DUCT BANK DETAILS FOR ADDITIONAL REQUIREMENTS.
4. REFER TO THE ELECTRICAL SITE PLANS FOR GENERAL LOCATIONS, ROUTING AND ADDITIONAL INFORMATION.
5. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS AND RISER DIAGRAMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. CONTRACTOR RESPONSIBLE FOR ALL ASPHALT REPAIR (IF ANY). COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER.
7. CONTRACTOR TO CLOSELY COORDINATE FINAL DUCT BANK REQUIREMENTS WITH OWNER / ENGINEER AND SHARE A COMMON TRENCH WHERE FEASIBLE/PRACTICAL. WHERE A COMMON TRENCH BETWEEN UTILITIES IS USED CONTRACTOR TO MAINTAIN NESC SEPARATION BETWEEN UTILITIES AT ALL TIMES.
8. REFER TO ELECTRICAL SITE PLAN FOR PROPOSED HAND HOLE LOCATIONS (IF ANY). WHERE HAND HOLES ARE REQUIRED, LOCATE IN GRASSY AREAS NOT SUBJECT TO VEHICLE LOADING. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SPECIFICATIONS, & DETAILS FOR ADDITIONAL INFORMATION. COORDINATE FINAL REQUIREMENTS WITH OVERALL SITE PLANS AND WITH OWNER / ENGINEER.

REMARKS:

1. PROVIDE AS SAND FILLED DUCT BANK WHERE BENEATH GRASSY AREAS, OR AREAS NOT SUBJECT TO VEHICLE LOADING. PROVIDE AS REINFORCED CONCRETE DUCT BANK WHERE BENEATH PAVED AREAS, OR AREAS SUBJECT TO VEHICLE LOADING. COORDINATE FINAL REQUIREMENTS WITH THE OVERALL SITE PLANS AND WITH OWNER / ENGINEER
2. FINAL SPARE CONDUIT STUB-UP LOCATION TO BE COORDINATED WITH THE OWNER AND ENGINEER. PROVIDE PULL STRING AND CAP BOTH ENDS. CONTRACTOR TO PROVIDE LABEL FOR ALL SPARE CONDUITS INDICATING CONDUIT DESTINATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. CONTRACTOR MAY GROUP POWER CIRCUITS INTO LARGER CONDUIT AND GROUP CONTROL CIRCUITS INTO SEPARATE LARGER CONDUIT. GROUPING OF CIRCUITS INTO LARGER CONDUITS MUST COMPLY WITH NEC FILL AND DERATING REQUIREMENTS. REFER TO ELECTRICAL RISER DIAGRAMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

DUCT BANK SCHEDULES ARE NOT INTENDED TO INDICATE ALL REQUIRED UNDERGROUND CIRCUITRY, BUT RATHER A GENERAL IDEA/MAGNITUDE OF OVERALL DUCT BANK SIZE. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, DETAILS, AND FLOOR PLANS FOR ADDITIONAL INFORMATION/REQUIREMENTS.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-041

PROJECT # 18-732 PHASE #

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	FIXTURE BASIS OF DESIGN	LENS/DIFFUSER/ FINISH	VOLTAGE	LAMPS	BALLAST BASIS OF DESIGN	MOUNTING	DIMMING	REMARKS
L1	2' X 4' TROFFER LED MODULE	COOPER - METALUX 22EN-LD2-19-UNV-L840-CD1-U	ACRYLIC	120V	LED 1,900 LUMENS / 4000K 16.5W	0-10V DIMMING DRIVER	RECESSED	YES	
L1E	2' X 4' TROFFER LED MODULE WITH EMERGENCY	COOPER - METALUX 22EN-LD2-19-UNV-EL7W-L840-CD1-U	ACRYLIC	120V	LED 1,900 LUMENS / 4000K 16.5W	0-10V DIMMING DRIVER	RECESSED	YES	1 2
L2	2' X 4' TROFFER LED MODULE	COOPER - METALUX 22EN-LD2-25-UNV-L840-CD1-U	ACRYLIC	120V	LED 2,500 LUMENS / 4000K 20W	0-10V DIMMING DRIVER	RECESSED	YES	
L2E	2' X 4' TROFFER LED MODULE WITH EMERGENCY	COOPER - METALUX 22EN-LD2-25-UNV-EL7W-L840-CD1-U	ACRYLIC	120V	LED 3,620 LUMENS / 4000K 27W	0-10V DIMMING DRIVER	RECESSED	YES	1 2
L3	EXPLOSION PROOF LINEAR LED LIGHTING (1' x 4')	RIG-A-LITE XML-07-L-C-4-U-MB-EM	TEMPERED GLASS	120V	LED 7,291 LUMENS / 4000K 54W	LED DRIVER	SURFACE	NO	4 5
L3E	EXPLOSION PROOF LINEAR LED LIGHTING W/EM (1' x 4')	RIG-A-LITE XML-07-L-C-4-U-MB-EM	TEMPERED GLASS	120V	LED 7,291 LUMENS / 4000K 54W	LED DRIVER	SURFACE	NO	1 2 4 5
L4	4' INDUSTRIAL LED LAMP (1' x 4')	COOPER - METALUX 4VT2-LD5-8-DR-UNV-L840-CD1-WL-U	TEMPERED GLASS	120V	LED 8,000 LUMENS / 4000K 58W	0-10V DIMMING DRIVER	SURFACE	NO	4 5
L4E	4' INDUSTRIAL LED LAMP W/ EM (1' x 4')	COOPER - METALUX 4VT2-LD5-8-DR-UNV-VT-REM-EL-L840-CD1-WL-U	TEMPERED GLASS	120V	LED 8,000 LUMENS / 4000K 58W	0-10V DIMMING DRIVER	SURFACE	NO	1 2 4 5
L5	2' INDUSTRIAL LED LAMP (1' x 2')	COOPER - METALUX 2VT2-LD5-3-DR-UNV-L840-CD1-WL-U	TEMPERED GLASS	120V	LED 3,000 LUMENS / 4000K 22W	0-10V DIMMING DRIVER	SURFACE	NO	4 5
L5E	2' INDUSTRIAL LED LAMP W/ EM (1' x 2')	COOPER - METALUX 2VT2-LD5-3-DR-UNV-VT-REM-EL-L840-CD1-WL-U	TEMPERED GLASS	120V	LED 3,000 LUMENS / 4000K 22W	0-10V DIMMING DRIVER	SURFACE	NO	1 2 4 5
L6	4' INDUSTRIAL LED LAMP (1' x 4')	COOPER - METALUX 4VT2-LD5-6-DR-UNV-L840-CD1-WL-U	TEMPERED GLASS	120V	LED 6,000 LUMENS / 4000K 51W	0-10V DIMMING DRIVER	SURFACE	NO	4 5
L6E	4' INDUSTRIAL LED LAMP W/ EM (1' x 4')	COOPER - METALUX 4VT2-LD5-6-DR-UNV-VT-REM-EL-L840-CD1-WL-U	TEMPERED GLASS	120V	LED 6,000 LUMENS / 4000K 51W	0-10V DIMMING DRIVER	SURFACE	NO	1 2 4 5
L7	LED HIGH BAY (1' x 4')	COOPER - METALUX 4ILED-LD5-11-W-UNV-L840-CD1-U-AYC-CHAIN/SET/U	WIDE BEAM	120V	LED 11,000 LUMENS / 4000K 120W	0-10V DIMMING DRIVER	CHAIN HANG	NO	
L7E	LED HIGH BAY (1' x 4')	COOPER - METALUX 4ILED-LD5-11-W-UNV-L840-EL7W-CD1-U-AYC-CHAIN/SET/U	WIDE BEAM	120V	LED 11,000 LUMENS / 4000K 120W	0-10V DIMMING DRIVER	CHAIN HANG	NO	
L8	STAINLESS STEEL LED LIGHTING (1' x 2')	RIG-A-LITE MHLS04-L-C-2-U-MB-316	STAINLESS STEEL	120V	LED 3,620 LUMENS / 4000K 27W	0-10V DIMMING DRIVER	SURFACE	NO	4 15
L8E	STAINLESS STEEL LED LIGHTING W/EMERGENCY (1' x 2')	RIG-A-LITE MHLS04-L-C-2-U-MB-EM-316	STAINLESS STEEL	120V	LED 3,620 LUMENS / 4000K 27W	0-10V DIMMING DRIVER	SURFACE	NO	1 2 4 15
L9	STAINLESS STEEL LED LIGHTING (1' x 4')	RIG-A-LITE MHLS05-L-C-2-U-MB-316	STAINLESS STEEL	120V	LED 4,833 LUMENS / 4000K 37W	0-10V DIMMING DRIVER	SURFACE	NO	4 15
L9E	STAINLESS STEEL LED LIGHTING W/EMERGENCY (1' x 4')	RIG-A-LITE MHLS05-L-C-2-U-MB-EM-316	STAINLESS STEEL	120V	LED 4,833 LUMENS / 4000K 37W	0-10V DIMMING DRIVER	SURFACE	NO	1 2 4 15
L10	6" LED MEDIUM BEAM DOWN LIGHT	COOPER (PORTFOLIO) LD6C-10IC-90-40-D010-B26-M-1-LI	SPECULAR CLEAR	120V	LED 1,000 LUMENS / 4000K 11W	0-10V DIMMING DRIVER	RECESSED	NO	18 19 20
L10E	6" LED MEDIUM BEAM DOWN LIGHT W/EMERGENCY	COOPER (PORTFOLIO) LD6C-10IC-90-40-D010-B26-M-1-LI-IEM7	SPECULAR CLEAR	120V	LED 1,000 LUMENS / 4000K 11W	0-10V DIMMING DRIVER	RECESSED	NO	1 2 18 19 20
S1	AREA/SITE LUMINAIRE	COOPER - MCGRAW-EDISON GALN-SA3B-740-U-T4W-BK	BLACK	277V	LED 17,000 LUMENS / 4000K 11W	LED DRIVER	POLE	NO	9 10 11 12 13 14 16
S2	AREA/SITE LUMINAIRE	COOPER - MCGRAW-EDISON GALN-SA3B-740-U-SWQ-BK	BLACK	277V	LED 17,000 LUMENS / 4000K 11W	LED DRIVER	POLE	NO	9 10 11 12 13 14 16
WP1	EXTERIOR WALL MOUNT LUMINAIRE	COOPER (MCGRAW-EDISON) IST-SA1B-740-U-SL4-BZ	BRONZE	120V	LED 3,342 LUMENS / 4000K 25.4W	LED DRIVER	WALL	NO	7 8 9 14
WP1E	EXTERIOR WALL MOUNT LUMINAIRE W/EMERGENCY	COOPER (MCGRAW-EDISON) IST-SA1B-740-U-SL4-CBP-BZ	BRONZE	120V	LED 3,342 LUMENS / 4000K 25.4W	LED DRIVER	WALL	NO	1 6 7 8 9 14
A	ARCHITECTURAL LED EXIT SIGN	COOPER (EVENLITE) SOV-EM-R-1C-BA	BRUSHED ALUMINUM W/RED LETTERING	120V	LED 2.5W	-	CEILING OR WALL	-	1 2 3
I	INDUSTRIAL LED EXIT SIGN	COOPER (SURE-LITES) UX7-1-BK-SD	ALUMINUM	120V	LED 1.5W	-	CEILING OR WALL	-	1 2 3
XP	EXPLOSION PROOF LED EXIT SIGN	COOPER (RIG-A-LITE) XPEX-1-R-DT-WP-EM-SD	A356T6 ALUMINUM BODY W/ACRYLIC SIGN	120V	LED 2.5W	-	WALL	-	1 2 3 5

GENERAL SCHEDULE NOTES:
1. MODELS ARE GIVEN FOR QUALITY ONLY, SUBSTITUTE LIGHT FIXTURES SHALL BE OF APPROVED EQUAL OR GREATER QUALITY.
2. ALL FIXTURES (WHERE APPLICABLE) SHALL BE POST FABRICATION PAINTED, BAKED ACRYLIC ENAMEL.
3. PROVIDE ALL NECESSARY MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... FOR INSTALLATION TYPE AS INDICATED.
4. ALL FIXTURES TO BE PROVIDED WITH LAMPS INSTALLED.
5. REFER TO ELECTRICAL PLANS FOR QUANTITIES AND GENERAL LOCATIONS.
6. REFER TO ELECTRICAL PLANS AND DETAILS FOR LIGHTING CONTROL AND ADDITIONAL INFORMATION/REQUIREMENTS.

REMARKS:
1. INTERCEPT & CONNECT TO NEAREST NON-SWITCHED PORTION OF LIGHTING CIRCUIT. TYPICAL FOR ALL EXIT SIGNS AND FIXTURES WITH INTEGRAL EMERGENCY BATTERY OPTION.
2. FIXTURE TO BE PROVIDED WITH INTEGRAL EMERGENCY BATTERY BACK-UP.
3. CONTRACTOR TO REFER TO ELECTRICAL FLOOR PLANS TO DETERMINE ORIENTATION OF FACES/ARROWS AND TO VERIFY MOUNTING TYPE.
4. PROVIDE EACH FIXTURE WITH STAINLESS STEEL MOUNTING BRACKETS FOR SURFACE MOUNTING AS SPECIFIED.
5. FIXTURE TO BE UL LISTED FOR USE IN A CLASS 1 DIVISION 1 GROUP D SPACE.
6. FIXTURE TO BE PROVIDED WITH INTEGRAL COLD WEATHER BATTERY PACK.
7. FIXTURE TO BE UL LISTED FOR WET LOCATIONS.
8. FIXTURE TO BE DARK SKY COMPLIANT.
9. REFER TO ELECTRICAL PLANS FOR MOUNTING HEIGHTS. FINAL MOUNTING HEIGHT TO BE COORDINATED WITH THE OWNER/ENGINEER PRIOR TO ROUGH-IN.
10. CONTRACTOR TO PROVIDE/INSTALL POLE. POLE TO BE MODEL NO. RTA30C7B4 (ROUND TAPERED ALUMINUM POLE) AS MANUFACTURED BY HAPCO OR APPROVED EQUAL. CONTRACTOR TO PROVIDE APPROPRIATE POLE TO ACHIEVE LIGHTING MOUNTING HEIGHT AS INDICATED ON THE ELECTRICAL PLANS. THIS CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL POLE MOUNTING/ANCHORING HARDWARE AS WELL AS ALL MOUNTING HARDWARE FOR ATTACHING PROPOSED LIGHT FIXTURE TO POLE. REFER TO "TYPICAL POLE MOUNTED LIGHT FIXTURE INSTALLATION DETAIL" FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LIGHT FIXTURE WITH STANDARD ARM FOR POLE MOUNTING AS INDICATED.
12. LIGHT FIXTURE TO BE DLC LISTED.
13. DRIVE CURRENT TO BE FACTORY SET AT 800MA.
14. REFER TO ELECTRICAL PLANS AND DETAILS FOR EXTERIOR LIGHTING CONTROL AND ADDITIONAL INFORMATION/REQUIREMENTS.
15. FIXTURE TO BE PROVIDED WITH 316 STAINLESS STEEL OPTION.
16. PROVIDE POLE WITH LIFETIME WARRANTY.
17. FIXTURE TO BE PROVIDED WITH EYE BOLT MOUNTING KIT AND STAINLESS STEEL MOUNTING CABLE AS REQUIRED TO SUSPEND 20'-0"A.F.F.
18. FIXTURE TO BE IC RATED.
19. FIXTURE TO BE UL LISTED FOR WET LOCATIONS WITH COVERED CEILINGS. PROVIDE GASKET KIT AS REQUIRED.
20. FIXTURE TO BE PROVIDED WITH HANGER BARS AS SPECIFIED.

SWITCH TAG SCHEDULE

TEXT ADJACENT TO SYMBOL REPRESENTS THE TAG

SWITCH TAG	DESCRIPTION	FACEPLATE COLOR	BASIS OF DESIGN FACEPLATE	SWITCH TYPE	BASIS OF DESIGN SWITCH	REMARKS
NO MARKING	STANDARD SWITCH	COORDINATE WITH OWNER/ENGINEER	THERMOPLASTIC NYLON	120V, 20A, HEAVY DUTY	PASS & SEYMOUR PT20AC1	
DCLV	DIMMABLE CONTROL LOW VOLTAGE LED SWITCH	COORDINATE WITH OWNER/ENGINEER	THERMOPLASTIC NYLON	LOW VOLTAGE	WATTSTOPPER DCLV-2	
LV	1-BUTTON LOW VOLTAGE LED SWITCH	COORDINATE WITH OWNER/ENGINEER	THERMOPLASTIC NYLON	LOW VOLTAGE	WATTSTOPPER LVSW-101	

GENERAL SCHEDULE NOTES:
1. NYLON FACEPLATE COLOR SHALL MATCH DEVICE COLOR.
2. ALL DEVICES SHALL BE PIGTAIL TYPE (WITH SEPARABLE WIRING HARNESS) WHERE AVAILABLE BY MANUFACTURER.
3. "a, b, c ..." LOWER CASE LETTERING IS USED TO INDICATE FIXTURE SWITCHING CONFIGURATION.
4. '3' OR '4' INDICATES 3 OR 4 WAY SWITCHING DEVICE, SUBSTITUTE INDICATED SWITCH TYPE (BASIS OF DESIGN COLUMN) WITH 3 OR 4 WAY VERSION.
5. REFER TO ELECTRICAL PLANS FOR TYPES, QUANTITIES, AND GENERAL LOCATIONS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER.

OCCUPANCY SENSOR SCHEDULE

TYPE	TYPICAL USAGE	BASIS OF DESIGN	COVERAGE	TECHNOLOGY	MOUNTING	OPTIONS	REMARKS
A	GENERAL PURPOSE	WATTSTOPPER DT-200	2000SF WALKING/1000SF SITTING	DUAL TECHNOLOGY	CEILING/WALL	-	

GENERAL NOTES:
1. POWER PACKS NOT SHOWN ON PLAN. PROVIDE POWER PACKS AND ALL CIRCUITING AS REQUIRED FOR PROPER OPERATION OF LIGHTING SYSTEM. POWER PACKS SHALL BE MODEL "BZ" AS MANUFACTURED BY WATTSTOPPER OR APPROVED EQUAL. CONCEAL POWER PACK WITHIN CEILING/WALL ADJACENT TO SENSOR WHERE FEASIBLE.
2. CONTRACTOR TO FIELD ADJUST OCCUPANCY SENSORS AS REQUIRED TO LIGHT DESIRED AREAS. COORDINATE WITH OWNER AND ENGINEER.
3. COORDINATE FINAL DEVICE & FACEPLATE COLORS WITH OWNER.
4. "a, b, c ..." LOWER CASE LETTERING IS USED TO INDICATE FIXTURE SWITCHING CONFIGURATION.
5. REFER TO ELECTRICAL PLANS FOR TYPES, QUANTITIES, AND GENERAL LOCATIONS. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER.

PANEL LVP1
MBR BUILDING

225 AMP FRAME
225A MCB
208Y/120 VOLT 3ϕ, 4W+G
22KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	NACLO METERING PUMP 23-P-101-A	20	1	20	1	NACLO METERING PUMP 23-P-101-B	2
3	NAOH METERING PUMP 15-P-301-A	20	1	20	1	NAOH METERING PUMP 15-P-301-B	4
5	RECEPTS. - CHEMICAL ROOMS	20	1	20	1	RECEPTS. - ELECTRICAL ROOM	6
7	RECEPTS. - MECHANICAL/STORAGE ROOM	20	1	20	1	RECEPTS. - MEMBRANE ZONE	8
9	RECEPTS. - MEMBRANE ZONE	20	1	20	1	RECEPTS. - ELEVATED OFFICE	10
11	LIGHTS - ELECTRICAL ROOM	20	1	20	1	LIGHTS - CHEMICAL ROOM	12
13	LIGHTS - BLOWER/MECHANICAL ROOM	20	1	20	1	LIGHTS - ELECTRICAL/STORAGE ROOM	14
15	LIGHTS - EXTERIOR	20	1	20	1	LIGHTS - MEMBRANE ZONE	16
17	LIGHTS - ELEVATED OFFICE	20	1	20	1	RECEPTS. - ELECTRICAL/BLOWER ROOM	18
19	RECEPTS. - EXTERIOR	20	1	30	1	SCUM PUMP CONTROL PANEL	20
21	RECEPTS. INTERIOR	20	1	20	1	SPARE	22
23	SPARE	20	1	20	1	SPARE	24
25	SPARE	20	1	20	1	SPARE	26
27	SPARE	20	1	15	1	SPARE	28
29	SPARE	20	1	20	1	SPARE	30
31	SPARE	20	1	20	1	SPACE	32
33	SPARE	20	1	20	1	SPACE	34
35	SPARE	20	1	20	1	SPARE	36
37	SPARE	20	1	–	–	SPACE	38
39	SPARE	20	1	–	–	SPACE	40
41	SPARE	20	1	–	–	SPACE	42

GENERAL SCHEDULE NOTES:
1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:
1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. BASIS OF DESIGN: EATON PRL1A

PANEL LVP3
HEADWORKS BUILDING

100 AMP FRAME
100A MCB
208Y/120 VOLT 3ϕ, 4W+G
22KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	LIGHTS - INTERIOR HEADWORKS BUILDING	20	1	20	1	LIGHTS - EXTERIOR	2
3	RECEPTS. - ELECTRICAL ROOM	20	1	20	1	RECEPTS. - SCREEN ROOM	4
5	RECEPTS. - EXTERIOR	20	1	30	1	R I/O-3	6
7	FLOW METER TRANSMITTER FMT-200	20	1	20	1	COMBIN. CARBON MONOXIDE/SMOKE DETECTOR	8
9	EXHAUST FAN EF-200	20	1	20	1	EXHAUST FAN EF-201	10
11	SUPPLY FAN SF-200	20	1	20	1	LOUVER W/MOTORIZED DAMPER LV-200	12
13	LOUVER W/MOTORIZED DAMPER LV-201	20	1	20	1	LOUVER W/MOTORIZED DAMPER LV-202	14
15	LOUVER W/MOTORIZED DAMPER LV-203	20	1	20	1	HEAT TRACE HT-200	16
17	HEAT TRACE HT-201	20	1	20	1	HEAT TRACE HT-202	18
19	HEAT TRACE HT-203	20	1	20	1	SPARE	20
21	SPARE	20	1	20	1	SPARE	22
23	SPARE	20	1	20	1	SPARE	24
25	SPARE	20	1	20	1	SPARE	26
27	SPARE	20	1	20	1	SPARE	28
29	SPARE	20	1	20	1	SPARE	30
31	SPARE	20	1	20	1	SPARE	32
33	SPARE	20	1	20	1	SPARE	34
35	SPARE	20	1	20	1	SPARE	36
37	SPARE	20	1	20	1	SPARE	38
39	SPARE	20	1	20	1	SPARE	40
41	SPARE	20	1	20	1	SPARE	42
43	SPARE	20	1	20	1	SPARE	44
45	SPARE	20	1	20	1	SPARE	46
47	SPARE	20	1	20	1	SPARE	48
49	SPARE	20	1	20	1	SPARE	50
51	SPARE	20	1	20	1	SPARE	52
53	SPARE	20	1	20	1	SPARE	54
55	SPACE	-	-	20	1	SPARE	56
57	SPACE	-	-	20	1	SPARE	58
59	SPACE	-	-	20	1	SPARE	60

GENERAL SCHEDULE NOTES:
1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:
1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. BASIS OF DESIGN: EATON PRL1A

PANEL HVP1
MBR BUILDING

400 AMP FRAME
MLO
480Y/277 VOLT 3ϕ, 4W+G
35KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	AIR COMPRESSOR A	20	3	20	3	AIR COMPRESSOR B	2
3	↓	↓	↓	↓	↓	↓	4
5	↓	↓	↓	↓	↓	↓	6
7	CLARIFIER CONTROL PANEL - 1	20	3	20	3	SCUM PUMP CONTROL PANEL - 1	8
9	↓	↓	↓	↓	↓	↓	10
11	↓	↓	↓	↓	↓	↓	12
13	CLARIFIER CONTROL PANEL - 2	20	3	20	3	SCUM PUMP CONTROL PANEL - 2	14
15	↓	↓	↓	↓	↓	↓	16
17	↓	↓	↓	↓	↓	↓	18
19	CLARIFIER CONTROL PANEL - 3	20	3	20	3	SCUM PUMP CONTROL PANEL - 3	20
21	↓	↓	↓	↓	↓	↓	22
23	↓	↓	↓	↓	↓	↓	24
25	CLARIFIER CONTROL PANEL - 4	20	3	50	3	SCUM PUMP CONTROL PANEL - 4	26
27	↓	↓	↓	↓	↓	↓	28
29	↓	↓	↓	↓	↓	↓	30
31	PRIMARY SLUDGE PUMP CONTROL PANEL	20	3	20	3	DRAIN PUMP CONTROL PANEL	32
33	↓	↓	↓	↓	↓	↓	34
35	↓	↓	↓	↓	↓	↓	36
37	SPARE	20	3	20	3	SPARE	38
39	↓	↓	↓	↓	↓	↓	40
41	↓	↓	↓	↓	↓	↓	42
43	SPARE	40	2	100	3	SPARE	44
45	↓	↓	↓	↓	↓	↓	46
47	SPARE	20	2	↓	↓	↓	48
49	↓	↓	↓	↓	↓	SPARE	50
51	POLE-MOUNTED SITE LIGHTS TYPE S2	20	1	60	3	↓	52
53	POLE-MOUNTED ROADWAY LIGHTS TYPE S1	20	1	↓	↓	↓	54
55	SPACE	-	-	30	3	SPD	56
57	SPACE	-	-	↓	↓	↓	58
59	SPACE	-	-	↓	↓	↓	60

GENERAL SCHEDULE NOTES:
1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:
1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. INTEGRAL SPD
6. INTEGRAL KWHD
7. BASIS OF DESIGN: EATON

PANEL HVP3
HEADWORKS BUILDING

800 AMP FRAME
800A MCB
480Y/277 VOLT 3ϕ, 4W+G
35KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	SURGE PROTECTIVE DEVICE	30	3	50	3	BOND TO BUILDING GROUND SYSTEM	2
3	↓	↓	↓	↓	↓	↓	4
5	↓	↓	↓	↓	↓	↓	6
7	BAR SCREEN CONTROL PANEL #1	20	3	20	3	BAR SCREEN CONTROL PANEL #2	8
9	↓	↓	↓	↓	↓	↓	10
11	↓	↓	↓	↓	↓	↓	12
13	GRIT SYSTEM CONTROL PANEL #1	20	3	20	3	GRIT SYSTEM CONTROL PANEL #2	14
15	↓	↓	↓	↓	↓	↓	16
17	↓	↓	↓	↓	↓	↓	18
19	SPARE	50	3	50	3	SPARE	20
21	↓	↓	↓	↓	↓	↓	22
23	↓	↓	↓	↓	↓	↓	24
25	SPARE	125	3	50	3	SPARE	26
27	↓	↓	↓	↓	↓	↓	28
29	↓	↓	↓	↓	↓	↓	30
31	SPARE	20	3	20	3	SPARE	32
33	↓	↓	↓	↓	↓	↓	34
35	↓	↓	↓	↓	↓	↓	36
37	SPARE	30	3	225	3	SPARE	38
39	↓	↓	↓	↓	↓	↓	40
41	↓	↓	↓	↓	↓	↓	42
43	SPARE	40	2	100	3	SPARE	44
45	↓	↓	↓	↓	↓	↓	46
47	SPARE	20	2	↓	↓	↓	48
49	↓	↓	↓	↓	↓	SPARE	50
51	SPARE	20	1	60	3	↓	52
53	SPARE	20	1	↓	↓	↓	54
55	SPACE	-	-	30	3	SPARE	56
57	SPACE	-	-	↓	↓	↓	58
59	SPACE	-	-	↓	↓	↓	60
61	SPACE	-	-	15	3	SPARE	62
63	SPACE	-	-	↓	↓	↓	64
65	SPACE	-	-	↓	↓	↓	66
67	SPACE	-	-	-	-	SPACE	68
69	SPACE	-	-	-	-	SPACE	70
71	SPACE	-	-	-	-	SPACE	72

GENERAL SCHEDULE NOTES:
1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:
1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4

PANEL LVP4
DEWATERING BUILDING

225 AMP FRAME
200A MCB
208Y/120 VOLT 3ϕ, 4W+G
22KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	LIGHTS - MECHANICAL OPERATIONS ROOM	20	1	20	1	LIGHTS - ELECTRICAL/OFFICE 1 & 2/STORAGE	2
3	LIGHTS - ENTRY ROOM	20	1	20	1	LIGHTS - KITCHEN/WOMEN LOCKER ROOM	4
5	LIGHTS - OFFICE 3	20	1	20	1	LIGHTS - EXTERIOR	6
7	LIGHTS - SHOP/MECHANICAL ROOM	20	1	20	1	LIGHTS - DUMPSTER AREA	8
9	RECEPTS. - MECHANICAL OPERATION ROOM	20	1	20	1	LIGHTS - ELECTRICAL/MECHANICAL ROOM	10
11	RECEPTS. - OFFICE 1 & 2	20	1	20	1	RECEPTS. - ENTRY LOBBY	12
13	RECEPTS. - KITCHEN	20	1	20	1	RECEPTS. - KITCHEN	14
15	RECEPTS. - LOCKER ROOM	20	1	20	1	RECEPTS. - OFFICE 3	16
17	RECEPTS. - MECHANICAL ROOM	20	1	20	1	RECEPTS. - STORAGE ROOM	18
19	RECEPTS. - DUMPSTER AREA	20	1	20	1	RECEPTS. - SHOP	20
21	RECEPTS. - EXTERIOR	20	1	20	1	SPARE	22
23	SPARE	20	1	20	1	SPARE	24
25	SPARE	20	1	20	1	SPARE	26
27	SPARE	20	1	20	1	SPARE	28
29	SPACE	20	1	20	1	SPARE	30
31	SPARE	20	1	20	1	SPARE	32
33	SPARE	20	1	20	1	SPACE	34
35	SPARE	20	1	20	1	SPARE	36
37	SPARE	20	1	20	1	SPARE	38
39	SPARE	20	1	20	1	SPARE	40
41	SPARE	20	1	20	1	SPARE	42
43	SPACE	20	1	30	1	SPARE	46
47	SPACE	30	1	15	1	SPARE	48
49	SPACE	20	1	–	–	SPACE	50
51	SPARE	20	1	–	–	SPACE	52
53	SPARE	20	1	–	–	SPACE	54

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. BASIS OF DESIGN: EATON PRL1A

PANEL HVP4
DEWATERING BUILDING

400 AMP FRAME
400A MCB
480Y/277 VOLT 3ϕ, 4W+G
35KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	SURGE PROTECTIVE DEVICE	50	3	40	3	BOND TO BUILDING GROUND SYSTEM	2
3	↓					↓	4
5	↓					↓	6
7	EXISTING BELT PRESS CONTROL PANEL	40	3	20	3	BELT PRESS CONTROL PANEL - 700	8
9	↓					↓	10
11	↓					↓	12
13	FILTRATION PUMP CONTROL PANEL - 700	20	3	20	3	DISCHARGE CONVEYOR #1	14
15	↓					↓	16
17	↓					↓	18
19	DISCHARGE CONVEYOR #2	40	3	50	3	SLUDGE FEED PUMP	20
21	↓					↓	22
23	↓					↓	24
25	SPARE	125	3	50	3	SPARE	26
27	↓					↓	28
29	↓					↓	30
31	SPARE	20	3	20	3	SPARE	32
33	↓					↓	34
35	↓					↓	36
37	SPARE	30	3	225	3	SPARE	38
39	↓					↓	40
41	↓					↓	42
43	SPARE	40	2	100	3	SPARE	44
45	↓					↓	46
47	SPARE	20	2			SPARE	48
49	↓			60	3	↓	50
51	SPARE	20	1			SPARE	52
53	SPARE	20	1			SPARE	54
55	SPACE	-	-	30	3	SPARE	56
57	SPACE	-	-			↓	58
59	SPACE	-	-			↓	60
61	SPACE	-	-	15	3	SPARE	62
63	SPACE	-	-			↓	64
65	SPACE	-	-			↓	66
67	SPACE	-	-	-	-	SPACE	68
69	SPACE	-	-	-	-	SPACE	70
71	SPACE	-	-	-	-	SPACE	72

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. INTEGRAL SPD
6. INTEGRAL KWHD
7. BASIS OF DESIGN: EATON

PANEL LVPMCC
ATAD BUILDING MCC

225 AMP FRAME
225A MCB
208Y/120 VOLT 3ϕ, 4W+G
22KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	V-910	20	1	30	1	ATAD MCP	2
3	V-911	20	1	20	1	FERRIC SKID	4
5	V-912	20	1	20	1	FERRIC SKID	6
7	V-913	20	1	20	1	V-811	8
9	V-914	20	1	20	1	V-812	10
11	V-915	20	1	20	1	LCS-101	12
13	V-918	20	1	20	1	LCS-201	14
15	V-702	20	1	20	1	LCS-401	16
17	V-704	20	1	20	1	LCS-901	18
19	V-705	20	1	20	1	LCS-902	20
21	LCS-503	20	1	20	1	LCS-103	22
23	LCS-700	20	1	20	1	LCS-403	24
25	LCS-601	20	1	20	1	LCS-1103	26
27	LCS-602	20	1	15	1	SPARE	28
29	SPARE	20	1	20	1	SPARE	30

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
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11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. BASIS OF DESIGN: EATON PRL1A

PANEL HVP5
ATAD BUILDING

225AMP FRAME
225A MCB
480Y/277 VOLT 3ϕ, 4W+G
22KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	TRS	80	3	60	3	HEATER 1	2
3	↓					↓	4
5	↓					↓	6
7	HEATER 2	60	3	40	3	VFD-BPSFP-03	8
9	↓					↓	10
11	↓					↓	12
13	SPARE	60	3	40	3	VFD-BPSFP-04	14
15	↓					↓	16
17	↓					↓	18
19	SPACE	-	-	40	3	SPARE	20
21	↓					↓	22
23	↓					↓	24
25	SPACE	-	-	30	3	SPD	26
27	↓					↓	28
29	↓					↓	30

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
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11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. INTEGRAL SPD
6. INTEGRAL KWHD
7. BASIS OF DESIGN: EATON

PANEL LVP5
ATAD BUILDING

100 AMP FRAME
100A MCB
208Y/120 VOLT 3ϕ, 4W+G
22KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	EQUIPMENT ROOM RECEPTACLES	20	1	20	1	EQUIPMENT ROOM LIGHTING	2
3	THICKENING ROOM RECEPTACLES	20	1	20	1	THICKENING ROOM LIGHTING	4
5	ELECTRICAL ROOM RECEPTACLES	20	1	20	1	ELECTRICAL ROOM LIGHTING	6
7	ATAD BUILDING EXTERIOR RECEPTACLES	20	1	20	1	ATAD BUILDING EXTERIOR LIGHTING	8
9	FERRIC FEED PUMP 1 RECEPTACLE	20	1	20	1	SPARE	10
11	FERRIC FEED PUMP 2 RECEPTACLE	20	1	20	1	SPARE	12
13	SPARE	20	1	20	1	SPARE	14
15	SPARE	20	1	20	1	SPARE	16
17	SPARE	20	1	20	1	SPARE	18
19	SPARE	20	1	20	1	SPARE	20
21	SPARE	20	1	20	1	SPARE	22
23	SPARE	20	1	20	1	SPARE	24
25	SPARE	20	1	20	1	SPARE	26
27	SPARE	20	1	20	1	SPARE	28
29	SPARE	20	1	20	1	SPARE	30

GENERAL SCHEDULE NOTES:

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11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. BASIS OF DESIGN: EATON PRL1A

PANEL HVP6
MIRCROSCREEN

225 AMP FRAME
225A MCB
480Y/277 VOLT 3ϕ, 4W+G
35KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	SURGE PROTECTIVE DEVICE	30	3	20	3	MICROSCREEN CONTROL PANEL #1	2
3	↓					↓	4
5	↓					↓	6
7	MICROSCREEN CONTROL PANEL #2	20	3	20	3	INFLUENT PUMP #3	8
9	↓					↓	10
11	↓					↓	12
13	INFLUENT PUMP #2	20	3	20	3	INFLUENT PUMP #1	14
15	↓					↓	16
17	↓					↓	18
19	BOND TO BUILDING GROUND SYSTEM	50	3	50	3	SPARE	20
21	↓					↓	22
23	↓					↓	24
25	SPARE	30	3	50	3	SPARE	26
27	↓					↓	28
29	↓					↓	30
31	SPARE	-		-	-	SPARE	32
33	↓					↓	34
35	↓					↓	36
37	SPARE	-	-	-	-	SPARE	38
39	↓					↓	40
41	↓					↓	42

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
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5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
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11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. BASIS OF DESIGN: EATON

PANEL LVP6
MICROSCREEN BUILDING

100 AMP FRAME
100A MCB
208Y/120 VOLT 3ϕ, 4W+G
22KAIC RMS SYM

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	RECEPTS. - EXTERIOR FINE SCREEN AREA	20	1	20	1	RECEPTS. - INTERIOR FINE SCREEN AREA	2
3	LIGHTS - FINE SCREEN AREA	20	1	20	1	LIGHTS - EXTERIOR FINE SCREEN AREA	4
5	RECEPTS. - INFLUENT DRYWELL	20	1	20	1	LIGHTS - INFLUENT DRY WELL	6
7	SUMP PUMP 'SP-01' DED. RECEPT.	20	1	20	1	SPARE	8
9	LIT-01	20	1	20	1	SPARE	10
11	SPARE	20	1	20	1	SPARE	12
13	SPARE	20	1	20	1	SPARE	14
15	SPARE	20	1	20	1	SPARE	16
17	SPARE	20	1	20	1	SPARE	18
19	SPARE	20	1	20	1	SPARE	20
21	SPARE	20	1	20	1	SPARE	22
23	SPARE	20	1	20	1	SPARE	24
25	SPARE	20	1	20	1	SPARE	26
27	SPARE	20	1	20	1	SPARE	28
29	SPARE	20	1	20	1	SPARE	30

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
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ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. BASIS OF DESIGN: EATON PRL1A

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

UNAUTHORIZED ADDITION OR ALTERATION OF THIS PLAN IS A VIOLATION OF SECTION 7209(2) OF THE NEW YORK STATE EDUCATION LAW.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-043

PROJECT # 18-732 PHASE #

100 AMP FRAME
100A MCB
208Y/120 VOLT 3ϕ, 4W+G
22KAIC RMS SYM

PANEL LVP7
GARAGE

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	LIGHTS - INTERIOR	20	1	20	1	RECEPTS. - INTERIOR	2
3	LIGHTS - EXTERIOR	20	1	20	1	RECEPTACLES - EXTERIOR	4
5	WELDING EQUIPMENT	20	1	20	1	AIR COMPRESSOR	6
7	HOIST SYSTEM	20	1	20	1	LATHE MILLING MACHINE	8
9	LIGHT - SLUDGE WET WELL	20	1	20	1	SPARE	10
11	SPARE	20	1	20	1	SPARE	12
13	SPARE	20	1	20	1	SPARE	14
15	SPARE	20	1	20	1	SPARE	16
17	SPARE	20	1	20	1	SPARE	18
19	SPARE	20	1	20	1	SPARE	20
21	SPARE	20	1	20	1	SPARE	22
23	SPARE	20	1	20	1	SPARE	24
25	SPARE	20	1	20	1	SPARE	26
27	SPARE	20	1	20	1	SPARE	28
29	SPARE	20	1	20	1	SPARE	30
31	SPARE	20	1	20	1	SPARE	32
33	SPARE	20	1	20	1	SPARE	34
35	SPARE	20	1	20	1	SPARE	36
37	SPARE	20	1	20	1	SPARE	38
39	SPARE	20	1	20	1	SPARE	40
41	SPARE	20	1	20	1	SPARE	42
43	SPARE	20	1	15	1	SPARE	44
45	SPARE	20	1	30	1	SPARE	46
47	SPARE	30	1	15	1	SPARE	48
49	SPARE	20	1	–	–	SPACE	50
51	SPARE	20	1	–	–	SPACE	52
53	SPARE	20	1	–	–	SPACE	54

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
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11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. BASIS OF DESIGN: EATON PRL1A

225 AMP FRAME
225A MCB
480Y/277 VOLT 3ϕ, 4W+G
35KAIC RMS SYM

PANEL HVP7
GARAGE

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	SURGE PROTECTIVE DEVICE	30	3	50	3	BOND TO BUILDING GROUND SYSTEM	2
3	↓					↓	4
5	↓					↓	6
7	SPARE	400	3	20	3	SPARE	8
9	↓					↓	10
11	↓					↓	12
13	SPARE	50	3	20	3	SPARE	14
15	↓					↓	16
17	↓					↓	18
19	SPARE	50	3	50	3	SPARE	20
21	↓					↓	22
23	↓					↓	24
25	SPARE	125	3	50	3	SPARE	26
27	↓					↓	28
29	↓					↓	30
31	SPARE	20	3	20	3	SPARE	32
33	↓					↓	34
35	↓					↓	36
37	SPARE	30	3	225	3	SPARE	38
39	↓					↓	40
41	↓					↓	42
43	SPARE	40	2	100	3	SPARE	44
45	↓					↓	46
47	↓					↓	48
49	SPARE	20	2	60	3	SPARE	50
51	SPARE	20	1			↓	52
53	SPARE	20	1			↓	54
55	SPACE	-	-	30	3	SPARE	56
57	SPACE	-	-			↓	58
59	SPACE	-	-			↓	60
61	SPACE	-	-	15	3	SPARE	62
63	SPACE	-	-			↓	64
65	SPACE	-	-			↓	66
67	SPACE	-	-	-	-	SPACE	68
69	SPACE	-	-	-	-	SPACE	70
71	SPACE	-	-	-	-	SPACE	72

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. INTEGRAL SPD
6. INTEGRAL KWHD
7. BASIS OF DESIGN: EATON

400 AMP FRAME
400A MCB
480Y/277 VOLT 3ϕ, 4W+G
35KAIC RMS SYM

PANEL HVP8
DISINFECTION BUILDING

CIRCUIT NUMBER	CIRCUIT SERVED	BREAKER AMP	BREAKER POLE	BREAKER AMP	BREAKER POLE	CIRCUIT SERVED	CIRCUIT NUMBER
1	SURGE PROTECTIVE DEVICE	30	3	70	3	LIGHTING PANEL	2
3	↓					↓	4
5	↓					↓	6
7	BLOWER #1	50	3	50	3	BLOWER #2	8
9	↓					↓	10
11	↓					↓	12
13	BACKPULSE PUMP #1	150	3	150	3	BACKPULSE PUMP #2	14
15	↓					↓	16
17	↓					↓	18
19	MOUNTED PUMP CONTROL PANEL	200	3	200	3	SPARE	20
21	↓					↓	22
23	↓					↓	24
25	SPARE	150	3	100	3	SPARE	26
27	↓					↓	28
29	↓					↓	30
31	SPARE	50	3	30	3	SPARE	32
33	↓					↓	34
35	↓					↓	36
37	SPARE	40	2	15	3	SPARE	38
39	↓					↓	40
41	SPARE	20	2			↓	42
43	↓			20	1	SPARE	44
45	SPARE	20	1	20	1	SPARE	46
47	SPARE	20	1	20	1	SPARE	48
49	SPACE	–	–	–	–	SPACE	50
51	SPACE	–	–	–	–	SPACE	52
53	SPACE	–	–	–	–	SPACE	54

GENERAL SCHEDULE NOTES:

1. PROVIDE SPARE BREAKERS AS INDICATED.
2. PROVIDE ARC FLASH WARNING LABEL PER SPECIFICATIONS.
3. PROVIDE TYPED PANEL DIRECTORY INDICATING LOADS SERVED.
4. REFER TO ELECTRICAL PLANS FOR GENERAL LOCATIONS OF EQUIPMENT.
5. PROVIDE ALL REQUIRED MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC...
6. CONTRACTOR TO BALANCE PROPOSED PANEL LOAD ACROSS ALL PHASES EQUALLY.
7. VERIFY ALL CIRCUIT BREAKER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE AS REQUIRED.
8. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND PROVIDE NAMEPLATE PER SPECIFICATIONS.
9. PROVIDE TOTAL NUMBER OF 1P SPACES AS INDICATED. PROVIDE BLOCK OFF PLATES FOR ALL SPACES WHICH ARE NOT UTILIZED.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. PROVIDE LUG TERMINATION KITS, OR PIN ADAPTORS AS NECESSARY TO TERMINATE THE NUMBER OF SETS OF CONDUCTORS AND SIZE SHOWN/SPECIFIED.

ACCESSORIES & TRIM:

1. MOUNTING: SURFACE
2. NEMA 1 ENCLOSURE
3. DOOR-IN-DOOR COVER
4. COPPER BUS BARS
5. INTEGRAL SPD
6. INTEGRAL KWHD
7. BASIS OF DESIGN: EATON

TRANSFORMER SCHEDULE

DESIGNATION	LOCATION	RATING	TYPE	VOLTAGE PRIMARY	VOLTAGE SECONDARY	TAPS	DEGREE C TEMPERATURE RISE	NEMA ENCLOSURE	REMARKS
TR1	MBR BLDG - ELECTRICAL ROOM	75KVA	DRY-TYPE	480V Δ, 3Ø	208Y/120V, 3Ø	4 AT -2.5% FCBN 2 AT +2.5% FCAN	115	2	-
TR2	CONTROL BLDG	75KVA	DRY-TYPE	480V Δ, 3Ø	208Y/120V, 3Ø	4 AT -2.5% FCBN 2 AT +2.5% FCAN	115	2	-
TR3	HEADWORKS BLDG	30KVA	DRY-TYPE	480V Δ, 3Ø	208Y/120V, 3Ø	4 AT -2.5% FCBN 2 AT +2.5% FCAN	115	2	-
TR4	DEWATERING BLDG	30KVA	DRY-TYPE	480V Δ, 3Ø	208Y/120V, 3Ø	4 AT -2.5% FCBN 2 AT +2.5% FCAN	115	2	-
TR5	DECHLORINATION BLDG	45KVA	EXISTING						
TR6	MICROSCREEN BLDG	30KVA	DRY-TYPE	480V Δ, 3Ø	208Y/120V, 3Ø	4 AT -2.5% FCBN 2 AT +2.5% FCAN	115	2	-
TR7	GARAGE	30KVA	DRY-TYPE	480V Δ, 3Ø	208Y/120V, 3Ø	4 AT -2.5% FCBN 2 AT +2.5% FCAN	115	2	-
TR-MCC	ATAD MCC2	30KVA	DRY-TYPE	480V Δ, 3Ø	208Y/120V, 3Ø	4 AT -2.5% FCBN 2 AT +2.5% FCAN	115	2	-

GENERAL SCHEDULE NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. PROVIDE 4" CONCRETE HOUSEKEEPING PAD AND ALL REQUIRED ANCHORING EQUIPMENT, MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... FOR EACH TRANSFORMER. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. TRANSFORMERS TO BE PROVIDED WITH COPPER WINDINGS.
4. TRANSFORMERS TO MEET MINIMUM ENERGY EFFICIENCY STANDARDS SET FORTH IN 10 CFR PART 431 (DOE 2016).
5. TRANSFORMERS TO BE INSTALLED A MINIMUM OF 4" OFF WALL(S) TO ALLOW FOR VENTILATION. FINAL REQUIREMENTS TO BE COORDINATED WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS.

TRANSFER SWITCH SCHEDULE

DESIGNATION	LOCATION	TRANSFER TYPE	VOLTAGE	AMPERAGE	MAIN INPUT BREAKER	POLE	KAIC	NEUTRAL	NEMA ENCLOSURE	REMARKS
ATS	MBR BLDG	AUTOMATIC	480V, 3Ø, 4W	3,000A	N/A	3	65	SOLID	1	-

GENERAL SCHEDULE NOTES:

1. SWITCH TO HAVE A SOLID GROUND BAR.
2. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. TRANSFER SWITCH TO BE RATED AT MINIMUM 65KAIC.
4. TRANSFER SWITCH TO BE OF THE OPEN TRANSITION TYPE.
5. ATS TO BE PROVIDED WITH PROGRAMMABLE EXERCISER CLOCK.

EXISTING DISTRIBUTION PANEL PP1

LOAD	CONDUCTORS	C.B.		C.B.	CONDUCTORS	LOAD
EF-1	(2) #12 THHN COPPER & (1) #12 GRND.	20		20	(2) #12 THHN COPPER & (1) #12 GRND.	RECEPTACLES
EUH-1	(2) #12 THHN COPPER & (1) #12 GRND.	20		20	(2) #12 THHN COPPER & (1) #12 GRND.	RECEPTACLES
				20	(2) #12 THHN COPPER & (1) #12 GRND.	FEED PUMP RECEPTS.
WH-1	(3) #12 THHN COPPER & (1) #8 GRND.	90		20	(2) #12 THHN COPPER & (1) #12 GRND.	FLOW METER
				20	(2) #12 THHN COPPER & (1) #12 GRND.	INTERIOR LIGHTING
				20	(2) #12 THHN COPPER & (1) #12 GRND.	MOTORIZED ACTUATOR
SITE LIGHTS	(2) #12 THHN COPPER & (1) #12 GRND.	20		20	(2) #12 THHN COPPER & (1) #12 GRND.	EXTERIOR LIGHTING
PUMP CONTROL PANEL	(2) #12 THHN COPPER & (1) #12 GRND.	20		20	(2) #12 THHN COPPER & (1) #12 GRND.	CL ANALYZER
SUBMERSIBLE PUMP	(2) #10 THHN COPPER & (1) #10 GRND.	20		20	(2) #10 THHN COPPER & (1) #10 GRND.	SUBMERSIBLE PUMP
SUBMERSIBLE PUMP	(2) #10 THHN COPPER & (1) #10 GRND.	20		20	(2) #10 THHN COPPER & (1) #10 GRND.	EFFLUENT PUMP
ACC-1 / AC-1	(2) #12 THHN COPPER & (1) #12 GRND.	20		20	(2) #12 THHN COPPER & (1) #12 GRND.	TANK RECEPTACLES
				20	(2)#18STP, 3/4"C.	DOS-AE-1
DOS-AE-2	(2)#18STP, 3/4"C.	20		20	(2)#18STP, 3/4"C.	UT-AE-3
UT-AE-4	(2)#18STP, 3/4"C.	20		20	(2)#18STP, 3/4"C.	UT-AE-5
SPARE		20		20		SPARE

RACEWAY SCHEDULE

AREA	CABLING/RACEWAY METHOD	REMARKS
EXTERIOR EXPOSED	RGS	SEE NOTES BELOW
RISERS FROM UNDERGROUND	RGS	SEE NOTES BELOW
UNDERGROUND 90 DEGREE SWEEPS	RGS	SEE NOTES BELOW
UNDERGROUND (SAND FILL DUCT BANK)	PVC #80	SEE NOTES BELOW
UNDERGROUND (REINFORCED CONCRETE DUCT BANK)	PVC #40	SEE NOTES BELOW
IN SLAB	PVC #40	SEE NOTES BELOW
CLASSIFIED AREAS	PVC COATED RGS	SEE NOTES BELOW
CORROSIVE AREAS	PVC COATED RGS	SEE NOTES BELOW
FORCEMAIN DISCHARGE CHAMBER - INTERIOR	PVC COATED RGS	SEE NOTES BELOW
FLOW CONTROL BUILDING - INTERIOR	RGS	SEE NOTES BELOW
INFLUENT BUILDING - ELECTRICAL ROOM	RGS	SEE NOTES BELOW
INFLUENT BUILDING - PUMP ROOM	RGS	SEE NOTES BELOW
INFLUENT BUILDING - INFLUENT ROOM	PVC COATED RGS	SEE NOTES BELOW
INFLUENT BUILDING - WET WELL	PVC COATED RGS	SEE NOTES BELOW
INFLUENT BUILDING - FOG VAULT	PVC COATED RGS	SEE NOTES BELOW
SBR - PRE-REACT BASINS	PVC COATED RGS	SEE NOTES BELOW
SBR - AERATION BASINS	PVC COATED RGS	SEE NOTES BELOW
AEROBIC DIGESTERS - INTERIOR	PVC COATED RGS	SEE NOTES BELOW
SLUDGE HOLDING TANK - INTERIOR	PVC COATED RGS	SEE NOTES BELOW
FOUNDATION DRAIN PUMP STATION - INTERIOR	PVC COATED RGS	SEE NOTES BELOW
METERING MANHOLE - INTERIOR	RGS	SEE NOTES BELOW
POST AERATION TANK - INTERIOR	RGS	SEE NOTES BELOW
PROCESS BUILDING - CHEMICAL ROOM	PVC COATED RGS	SEE NOTES BELOW
PROCESS BUILDING - FILTER / UV ROOM	RGS	SEE NOTES BELOW
PROCESS BUILDING - BLOWER ROOM	RGS	SEE NOTES BELOW
PROCESS BUILDING - ELECTRICAL & RPZ ROOM	RGS	SEE NOTES BELOW
PROCESS BUILDING - LAB, OFFICE, LOCKERS, & BATHROOM	EMT	SEE NOTES BELOW
PROCESS BUILDING - BASEMENT	RGS	SEE NOTES BELOW
SOLIDS HANDLING FACILITY - CONT, ELECT, & BATHROOM	RGS	SEE NOTES BELOW
SOLIDS HANDLING FACILITY - BELT PRESS ROOM	RGS	SEE NOTES BELOW
SOLIDS HANDLING FACILITY - DRYER AREA (FUTURE)	RGS	SEE NOTES BELOW
SOLIDS HANDLING FACILITY - BIOSOLIDS STORAGE AREA	RGS	SEE NOTES BELOW
SEPTAGE RECEIVING STATION - WET WELL	PVC COATED RGS	SEE NOTES BELOW
SEPTAGE RECEIVING STATION - DRY WELL	PVC COATED RGS	SEE NOTES BELOW
SEPTAGE RECEIVING STATION - BASEMENT / PUMP ROOM	RGS	SEE NOTES BELOW
SEPTAGE RECEIVING STATION - SHOP AREA	RGS	SEE NOTES BELOW
UNPROTECTED SERVICE CONDUCTORS - WITHIN A BUILDING	RGS	SEE NOTES BELOW

GENERAL CONDUIT SCHEDULE NOTES:

1. FITTINGS:
   - RGS: THREADED
   - PVC: BELL OR GLUE
   - EMT : SET SCREW TYPE
2. ALL CIRCUITS SHALL CONTAIN DEDICATED NEUTRALS (NO MULTI-WIRE CIRCUITS PERMITTED)
3. CONDUIT SHALL NOT BE UTILIZED FOR EFFECTIVE GROUND FAULT RETURN PATH - ALL CIRCUITS SHALL CONTAIN DEDICATED GREEN INSULATED CONDUCTOR, SIZED PER DRAWINGS, OR IN ACCORDANCE WITH APPLICABLE NEC CRITERIA.
4. ALL RACEWAY TYPES ARE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
5. PVC COATED RGS CONDUIT AND ASSOCIATED COMPONENTS TO BE BY PLASTI-BOND OR APPROVED EQUAL. WHEN USING PVC COATED RGS CONDUIT CONTRACTOR TO USE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER OR APPROVED EQUAL FOR ALL ASSOCIATED CHANNEL, FITTINGS, AND CONDUIT CLAMPS/SUPPORTS.
6. "UNPROTECTED SERVICE CONDUCTORS - WITHIN A BUILDING" REFERS TO BUILDING SERVICE/FEEDER CONDUCTORS BETWEEN THE POINT THEY ENTER THE BUILDING UNTIL THE POINT AT WHICH THEY REACH THE FIRST DISCONNECTING DEVICE WITHIN THAT BUILDING.
7. CONTRACTOR TO PROVIDE TRANSITION FITTINGS TO SWITCH BETWEEN RACEWAY TYPES AS REQUIRED.

BRANCH CIRCUIT SCHEDULE

CIRCUIT BREAKER	PHASE CONDUCTORS AND/OR NEUTRAL CONDUCTORS	GROUND CONDUCTOR	CONDUIT
3 POLE CIRCUITS			
50/3	(3)#6	#10	1-1/2" CONDUIT
40/3	(3)#8	#10	1" CONDUIT
30/3	(3)#10	#10	3/4" CONDUIT
20/3	(3)#12	#12	3/4" CONDUIT
15/3	(3)#12	#12	3/4" CONDUIT
2 POLE CIRCUITS			
50/2	(2)#6	#10	1-1/4" CONDUIT
40/2	(2)#8	#10	1" CONDUIT
30/2	(2)#10	#10	3/4" CONDUIT
20/2	(2)#12	#12	3/4" CONDUIT
15/2	(2)#12	#12	3/4" CONDUIT
1 POLE CIRCUITS			
50/1	(2)#6	#10	1-1/4" CONDUIT
40/1	(2)#8	#10	1" CONDUIT
30/1	(2)#10	#10	3/4" CONDUIT
20/1	(2)#12	#12	3/4" CONDUIT
15/1	(2)#12	#12	3/4" CONDUIT

NOTES REGARDING THE USE OF THIS SCHEDULE:

1. USE THIS SCHEDULE FOR:
   - ALL RECEPTACLE AND LIGHTING CIRCUITS.
   - WHERE SPECIFIC CONDUCTOR/CONDUIT SIZING IS NOT INDICATED ELSEWHERE ON THE DRAWING SET.
   - FOR ANY BRANCH CIRCUITS THAT ARE REQUIRED TO BE RELOCATED/EXTENDED, ETC.
2. DO NOT USE THIS SCHEDULE:
   - FOR LARGE MECHANICAL LOADS (ANYTHING SHOWN WITHIN THE EQUIPMENT CONNECTION SCHEDULE).
   - FOR SERVICE ENTRANCE CONDUCTORS.
   - WHERE SPECIFIC CONDUCTOR/CONDUIT IS CALLED FOR ON THE DRAWINGS.
3. WHERE CIRCUIT LENGTH EXCEEDS 100' - CONTRACTOR SHALL USE NEXT HIGHER PHASE/NEUTRAL CONDUCTOR SIZE, TO COMPENSATE FOR VOLTAGE DROP.
4. NOTE MC CABLE IS NOT ALLOWED.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG-NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT:
PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-044

PROJECT # 18-732 PHASE #

INDICATED BY ⟨S⟩ ON PLAN SHEETS

EQUIPMENT CONNECTION SCHEDULE (SHEET 1 OF 3)

SPECIFIC NOTES:

1. WHEN LOCATION IS NOT REFERENCED ON 'E' SHEETS, REFER TO ASSOCIATED CONTRACT DRAWINGS.
2. LOCATIONS SHOWN ARE GENERAL IN NATURE. COORDINATE WITH ALL TRADE CONTRACTORS PRIOR TO ROUGH-IN.

TYPES:
A: NON-FUSED
B: FUSED
M: MOTOR RATED SWITCH
R: RECEPTACLE/CORD/PLUG
N: NOT REQUIRED
C: CKT BREAKER WITHIN SIGHT

SIZES:
AF: AMPERE FRAME
NF: NON-FUSED
AT: FUSE SIZE (RK5, UON)

TYPES:
VFD: VARIABLE FREQUENCY DRIVE
CMS: COMBINATION MOTOR STARTER WITH DISCONNECT
ATL: ACROSS THE LINE, FVNR MAGNETIC STARTER
M: MOTOR RATED SWITCH - MANUAL STARTER
P: PACKAGED CONTROLLER BY MANUFACTURER
LVT: THERMOSTAT

EQUIPMENT			ELECTRICAL LOAD				POWER CONNECTION			CONTROL CONNECTION		DISCONNECT/SAFETY SWITCH		STARTER		REMARKS
EQUIPMENT TAG	EQUIPMENT TYPE	LOCATION ON PLAN	FLA	HP (KW)	V	PH	HOMERUN TO	CIRCUIT BREAKER	CONDUCTORS & CONDUIT	HOMERUN / INTERLOCK TO	CONDUCTORS & CONDUIT	DISCONNECT TYPE/SIZE	NEMA ENCLOSURE TYPE	STARTER TYPE	NEMA ENCLOSURE TYPE	
PCD-01	PRIMARY DRIVE #1	PRIMARY SETTLING TANK #1	2.1	1	480	3	PC-CP-1		REFER TO RISER DIAGRAM	PC-CP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
PCD-02	PRIMARY DRIVE #2	PRIMARY SETTLING TANK #2	2.1	1	480	3	PC-CP-1		REFER TO RISER DIAGRAM	PC-CP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
PCD-03	PRIMARY DRIVE #3	PRIMARY SETTLING TANK #3	2	1	480	3	PC-CP-1		REFER TO RISER DIAGRAM	PC-CP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
PCD-04	PRIMARY DRIVE #4	PRIMARY SETTLING TANK #4	2.1	1	480	3	PC-CP-1		REFER TO RISER DIAGRAM	PC-CP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
PC-CP-1	CLARIFIER CONTROL PANEL #1	PRIMARY SETTLING TANK #1	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.	R I/O #1	REFER TO RISER DIAGRAM	-	-	-	-	
PC-CP-2	CLARIFIER CONTROL PANEL #2	PRIMARY SETTLING TANK #2	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.	R I/O #1	REFER TO RISER DIAGRAM	-	-	-	-	
PC-CP-3	CLARIFIER CONTROL PANEL #3	PRIMARY SETTLING TANK #3	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.	R I/O #1	REFER TO RISER DIAGRAM	-	-	-	-	
PC-CP-4	CLARIFIER CONTROL PANEL #4	PRIMARY SETTLING TANK #4	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.	R I/O #1	REFER TO RISER DIAGRAM	-	-	-	-	
SP-01	SCUM PUMP #1	PRIMARY SETTLING TANK #1	7.6	5	480	3	SP-CP-1		REFER TO RISER DIAGRAM	SP-CP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
SP-02	SCUM PUMP #2	PRIMARY SETTLING TANK #2	7.6	5	480	3	SP-CP-1		REFER TO RISER DIAGRAM	SP-CP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
SP-03	SCUM PUMP #3	PRIMARY SETTLING TANK #3	7.6	5	480	3	SP-CP-1		REFER TO RISER DIAGRAM	SP-CP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
SP-04	SCUM PUMP #4	PRIMARY SETTLING TANK #4	7.6	5	480	3	SP-CP-1		REFER TO RISER DIAGRAM	SP-CP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
SP-CP-1	SCUM PUMP CONTROL PANEL #1	PRIMARY SETTLING TANK #1	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.	R I/O-1	REFER TO RISER DIAGRAM	-	-	-	-	
SP-CP-2	SCUM PUMP CONTROL PANEL #2	PRIMARY SETTLING TANK #2	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.	R I/O-1	REFER TO RISER DIAGRAM	-	-	-	-	
SP-CP-3	SCUM PUMP CONTROL PANEL #3	PRIMARY SETTLING TANK #3	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.	R I/O-1	REFER TO RISER DIAGRAM	-	-	-	-	
SP-CP-4	SCUM PUMP CONTROL PANEL #4	PRIMARY SETTLING TANK #4	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.	R I/O-1	REFER TO RISER DIAGRAM	-	-	-	-	
20-B-201-A	MEMBRANE BLOWER #1	MBR BUILDING	77	60	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	VFD	-	
20-B-201-B	MEMBRANE BLOWER #2	MBR BUILDING	77	60	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	VFD	-	
20-B-201-C	MEMBRANE BLOWER #3	MBR BUILDING	77	60	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	VFD	-	
20-B-201-D	MEMBRANE BLOWER #4	MBR BUILDING	77	60	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	VFD	-	
20-B-201-E	MEMBRANE BLOWER #5	MBR BUILDING	77	60	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	VFD	-	
20-P-501-A	RAS PUMP #1	MBR BUILDING	40	30	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	A (60AF/NF)	4X	ATL	-	
20-P-501-B	RAS PUMP #2	MBR BUILDING	40	30	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	A (60AF/NF)	4X	ATL	-	
20-P-501-C	RAS PUMP #3	MBR BUILDING	40	30	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	A (60AF/NF)	4X	ATL	-	
20-P-501-D	RAS PUMP #4	MBR BUILDING	40	30	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	A (60AF/NF)	4X	ATL	-	
16-B-401-A	PROCESS BLOWER #1	MBR BUILDING	180	150	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	VFD	-	
16-B-401-B	PROCESS BLOWER #2	MBR BUILDING	180	150	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	VFD	-	
16-B-401-C	PROCESS BLOWER #3	MBR BUILDING	180	150	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	VFD	-	
16-MX-211-1	ANOXIC TANK SUBMERSIBLE MIXERS	MBR BUILDING	14	8	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	ATL	-	
16-MX-211-2	ANOXIC TANK SUBMERSIBLE MIXERS	MBR BUILDING	14	8	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	ATL	-	
16-MX-211-3	ANOXIC TANK SUBMERSIBLE MIXERS	MBR BUILDING	14	8	480	3	MCC1		REFER TO RISER DIAGRAM	MCC1	REFER TO RISER DIAGRAM	-	-	ATL	-	
90-AC-001-A	AIR COMPRESSOR #1	MBR BUILDING	11	7.5	480	3	HVP1		(4)#10 & #10G, 1"C.	MBR-CP	REFER TO RISER DIAGRAM	A (30AF/NF)	4X	ATL	-	
90-AC-001-B	AIR COMPRESSOR #2	MBR BUILDING	11	7.5	480	3	HVP1		(4)#10 & #10G, 1"C.	MBR-CP	REFER TO RISER DIAGRAM	A (30AF/NF)	4X	ATL	-	
90-DR-001-A	REFRIGERATED DRYER #1	MBR BUILDING			480	3	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
90-DR-001-B	REFRIGERATED DRYER #2	MBR BUILDING			480	3	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
15-P-301-A	NAOH METERING PUMPS	MBR BUILDING	4.4	FRACTIONAL	120	1	LVP1		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
15-P-301-B	NAOH METERING PUMPS	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
23-P-101-A	NACLO METERING PUMPS	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
23-P-101-B	NACLO METERING PUMPS	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
23-P-301-A	CITRIC ACID METERING PUMPS	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
23-P-301-B	CITRIC ACID METERING PUMPS	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
20-P-321-1	TURBIDITY SAMPLING PUMPS #1	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
20-P-321-2	TURBIDITY SAMPLING PUMPS #2	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
20-P-321-3	TURBIDITY SAMPLING PUMPS #3	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
20-P-321-4	TURBIDITY SAMPLING PUMPS #4	MBR BUILDING	4.4	FRACTIONAL	120	1	MBR-CP		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
F-1	COOLING FAN #1	MBR BUILDING	4	FRACTIONAL	120	1	CFCP-1		REFER TO RISER DIAGRAM	CFCP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
F-2	COOLING FAN #2	MBR BUILDING	4	FRACTIONAL	120	1	CFCP-1		REFER TO RISER DIAGRAM	CFCP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
F-3	COOLING FAN #3	MBR BUILDING	4	FRACTIONAL	120	1	CFCP-1		REFER TO RISER DIAGRAM	CFCP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
F-4	COOLING FAN #4	MBR BUILDING	4	FRACTIONAL	120	1	CFCP-1		REFER TO RISER DIAGRAM	CFCP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
F-5	COOLING FAN #5	MBR BUILDING	4	FRACTIONAL	120	1	CFCP-1		REFER TO RISER DIAGRAM	CFCP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
F-6	COOLING FAN #6	MBR BUILDING	4	FRACTIONAL	120	1	CFCP-1		REFER TO RISER DIAGRAM	CFCP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
F-7	COOLING FAN #7	MBR BUILDING	4	FRACTIONAL	120	1	CFCP-1		REFER TO RISER DIAGRAM	CFCP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
F-8	COOLING FAN #8	MBR BUILDING	4	FRACTIONAL	120	1	CFCP-1		REFER TO RISER DIAGRAM	CFCP-1	REFER TO RISER DIAGRAM	-	-	ATL	-	
CFCP-1	BLOWER COOLING FAN CONTROL PANEL	MBR BUILDING	-	-	120	1	LVP1		REFER TO RISER DIAGRAM	MBR-CP	REFER TO RISER DIAGRAM	-	-	-	-	
P-SP-01	PRIMARY CLARIFIER SLUDGE PUMP #1	MBR BUILDING			480	3	PSCP-800		REFER TO RISER DIAGRAM	PSCP-800	REFER TO RISER DIAGRAM	-	-	ATL	-	
P-SP-02	PRIMARY CLARIFIER SLUDGE PUMP #2	MBR BUILDING			480	3	PSCP-800		REFER TO RISER DIAGRAM	PSCP-800	REFER TO RISER DIAGRAM	-	-	ATL	-	
PSCP-800	PRIMARY SLUDGE CONTROL PANEL	MBR BUILDING	-	-	480	3	HVP1		(4)#4 & #8G, 1-1/2"C.	MCP	REFER TO RISER DIAGRAM	-	-	-	-	
SUBP-01	SUBMERSIBLE PUMP #1	MBR BUILDING					DPCP-01		REFER TO RISER DIAGRAM	DPCP-01	REFER TO RISER DIAGRAM	-	-	ATL	-	
SUBP-02	SUBMERSIBLE PUMP #2	MBR BUILDING					DPCP-01		REFER TO RISER DIAGRAM	DPCP-01	REFER TO RISER DIAGRAM	-	-	ATL	-	
DPCP-01	DRAIN PUMP CONTROL PANEL	MBR BUILDING	-	-	480	3	HVP1	20A/3P	(4)#10 & #10G, 1"C.		REFER TO RISER DIAGRAM	-	-	ATL	-	
HVAC-500	HVAC MONITORING CONTROL PANEL	MBR BUILDING	-	-	120	1	LVP1	20A/3P	(2)#12 & #12G, 3/4"C.	R I/O #1	REFER TO RISER DIAGRAM	-	-	-	-	
MBR-BC-CB #1	CRANE BEAM MOTOR #1	MBR BUILDING	2.4	0.4	208	3	LVP1	20A/3P		-	REFER TO RISER DIAGRAM	-	-	-	-	
MBR-BC-CB #2	CRANE BEAM MOTOR #2	MBR BUILDING	2.4	0.4	208	3	LVP1	20A/3P		-	REFER TO RISER DIAGRAM	-	-	-	-	
MBR-BC-CH	CRANE HOIST MOTOR	MBR BUILDING	24	7.2	208	3	LVP1	40A/3P		-	REFER TO RISER DIAGRAM	-	-	-	-	
MBR-BC-TR	TROLLEY HOIST	MBR BUILDING	3.5	0.6	208	3	LVP1	40A/3P		-	REFER TO RISER DIAGRAM	-	-	-	-	
MBS-01	MECHANICAL BAR SCREEN #1	HEADWORKS BUILDING	2.2	1/2	240	3	BS-CP-1		REFER TO RISER DIAGRAM	BS-CP-1	REFER TO RISER DIAGRAM	A (30AF/NF)	7	VFD	-	
BSC-1	WASHER COMPACTOR #1	HEADWORKS BUILDING	3.2	3/4	240	3	BS-CP-1		REFER TO RISER DIAGRAM	BS-CP-1	REFER TO RISER DIAGRAM	A (30AF/NF)	7	VFD	-	
BS-CP-1	BAR SCREEN CONTROL PANEL	HEADWORKS BUILDING	-	-	480	3	HVP-3	20A/3P	(4)#10 & #10G, 1"C.	R I/O #2	REFER TO RISER DIAGRAM	-	-	-	-	
MBS-02	MECHANICAL BAR SCREEN #2	HEADWORKS BUILDING	2.1	1	480	3	BS-CP-2		REFER TO RISER DIAGRAM	BS-CP-2	REFER TO RISER DIAGRAM	A (30AF/NF)	7	VFD	-	
BSC-2	WASHER COMPACTOR #2	HEADWORKS BUILDING	2.1	1	480	3	BS-CP-2		REFER TO RISER DIAGRAM	BS-CP-2	REFER TO RISER DIAGRAM	A (30AF/NF)	7	VFD	-	
BS-CP-2	BAR SCREEN CONTROL PANEL	HEADWORKS BUILDING	-	-	480	3	HVP3	20A/3P	(4)#10 & #10G, 1"C.	R I/O #2	REFER TO RISER DIAGRAM	-	-	-	-	
GRTPD-01	GRIT CHAMBER PROPELLER DRIVE UNIT #1	HEADWORKS BUILDING	3.0	1.5	480	3	GRT-CP-01		REFER TO RISER DIAGRAM	GRT-CP-01	REFER TO RISER DIAGRAM	A (30AF/NF)	7	ATL	-	
GRTP-01	GRIT PUMP #1	HEADWORKS BUILDING	52	10	480	3	GRT-CP-01		REFER TO RISER DIAGRAM	GRT-CP-01	REFER TO RISER DIAGRAM	A (30AF/NF)	7	ATL	-	
GRTW-01	GRIT WASHER #1	HEADWORKS BUILDING	4.8	3	480	3	GRT-CP-01		REFER TO RISER DIAGRAM	GRT-CP-01	REFER TO RISER DIAGRAM	A (30AF/NF)	7	ATL	-	
GRT-CP-01	GRIT SYSTEM CONTROL PANEL	HEADWORKS BUILDING	-	-	480	3	HVP3	40A/3P	(4)#8 & #10G, 1"C.	R I/O #2	REFER TO RISER DIAGRAM	-	-	-	-	
GRTPD-02	GRIT CHAMBER PROPELLER DRIVE UNIT #2	HEADWORKS BUILDING	3.0	1.5	480	3	GRT-CP-02		REFER TO RISER DIAGRAM	GRT-CP-02	REFER TO RISER DIAGRAM	A (30AF/NF)	7	ATL	-	
GRTP-02	GRIT PUMP #2	HEADWORKS BUILDING	14	10	480	3	GRT-CP-02		REFER TO RISER DIAGRAM	GRT-CP-02	REFER TO RISER DIAGRAM	A (30AF/NF)	7	ATL	-	
GRTW-01	GRIT WASHER #2	HEADWORKS BUILDING	4.8	3	480	3	GRT-CP-02		REFER TO RISER DIAGRAM	GRT-CP-02	REFER TO RISER DIAGRAM	A (30AF/NF)	7	ATL	-	
GRT-CP-02	GRIT SYSTEM CONTROL PANEL	HEADWORKS BUILDING	-	-	480	3	HVP3	40A/3P	(4)#8 & #10G, 1"C.	R I/O-2	REFER TO RISER DIAGRAM	-	-	-	-	
GDSCP-200	GAS DETECTION SYSTEM CONTROL PANEL	HEADWORKS BUILDING	-	-	120	1	LVP2	30A/1P	(2)#10 & #10G, 3/4"C.	R I/O-1	REFER TO RISER DIAGRAM	-	-	-	-	
BWS-01	BELT WASH SYSTEM #1	DEWATERING BUILDING	14	10	480	3	BP-CP		REFER TO RISER DIAGRAM	BP-CP	REFER TO RISER DIAGRAM	-	-	ATL	-	
BPCP	EXISTING BELT PRESS CONTROL PANEL	DEWATERING BUILDING	-	-	480	3	HVP4	40A/3P		R I/O-2	REFER TO RISER DIAGRAM	-	-	-	-	
BPGD-02	BELT PRESS #2 GRAVITY DRIVE	DEWATERING BUILDING	3.4	2	480	3	BP-CP-700		REFER TO RISER DIAGRAM	BP-CP-700	REFER TO RISER DIAGRAM	-	-	ATL	-	
BPD-03	BELT PRESS #2 PRESS DRIVE #1	DEWATERING BUILDING	3.0	1.5	480	3	BP-CP-700		REFER TO RISER DIAGRAM	BP-CP-700	REFER TO RISER DIAGRAM	-	-	ATL	-	
BPD-04	BELT PRESS #2 PRESS DRIVE #2	DEWATERING BUILDING	3.0	1.5	480	3	BP-CP-700		REFER TO RISER DIAGRAM	BP-CP-700	REFER TO RISER DIAGRAM	-	-	ATL	-	
PFS-02	POLYMER FEED SYSTEM #2	DEWATERING BUILDING	2.1	1	480	3	BP-CP-700		REFER TO RISER DIAGRAM	BP-CP-700	REFER TO RISER DIAGRAM	-	-	VFD	-	
BPSFP-03	BP1 NEW SLUDGE FEED PUMP	ATAD	34	25	480	3	HVP4		(3)#10 & #10G, 3/4"C.	BP-CP-700	REFER TO RISER DIAGRAM	A (60AF/NFA)	4X	VFD	-	
BPSFP-04	BP2 NEW SLUDGE FEED PUMP	ATAD	34	25	480	3	HVP4		(3)#10 & #10G, 3/4"C.	BP-CP-700	REFER TO RISER DIAGRAM	A (60AF/NFA)	4X	-	-	
SDC-01	SLUDGE DISCHARGE CONVEYOR #1	DEWATERING BUILDING	7.6	5	480	3	HVP4		(3)#10 & #10G, 3/4"C.	BP-CP-700	REFER TO RISER DIAGRAM	A (60AF/NF)	4X	VFD	-	
SDC-02	SLUDGE DISCHARGE CONVEYOR #2	DEWATERING BUILDING	7.6	5	480	3	HVP4		(3)#10 & #10G, 3/4"C.	BP-CP-700	REFER TO RISER DIAGRAM	A (60AF/NF)	4X	VFD	-	

REFER TO SHEET E-045 FOR SCHEDULE CONTINUATION

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-045

PROJECT # 18-732 PHASE #

INDICATED BY ⟨S⟩ ON PLAN SHEETS

EQUIPMENT CONNECTION SCHEDULE (SHEET 2 OF 3)

SPECIFIC NOTES:

1. WHEN LOCATION IS NOT REFERENCED ON 'E' SHEETS, REFER TO ASSOCIATED CONTRACT DRAWINGS.
2. LOCATIONS SHOWN ARE GENERAL IN NATURE. COORDINATE WITH ALL TRADE CONTRACTORS PRIOR TO ROUGH-IN.

DISCONNECT/SAFETY SWITCH — TYPES: A: NON-FUSED; B: FUSED; M: MOTOR RATED SWITCH; R: RECEPTACLE/CORD/PLUG; N: NOT REQUIRED; C: CKT BREAKER WITHIN SIGHT. SIZES: AF: AMPERE FRAME; NF: NON-FUSED; AT: FUSE SIZE (RK5, UON)

STARTER — TYPES: VFD: VARIABLE FREQUENCY DRIVE; CMS: COMBINATION MOTOR STARTER WITH DISCONNECT; ATL: ACROSS THE LINE, FVNR MAGNETIC STARTER; M: MOTOR RATED SWITCH - MANUAL STARTER; P: PACKAGED CONTROLLER BY MANUFACTURER; LVT: THERMOSTAT

EQUIPMENT			ELECTRICAL LOAD				POWER CONNECTION			CONTROL CONNECTION		DISCONNECT/SAFETY SWITCH		STARTER		REMARKS
EQUIPMENT TAG	EQUIPMENT TYPE	LOCATION ON PLAN	FLA	HP (KW)	V	PH	HOMERUN TO	CIRCUIT BREAKER	CONDUCTORS & CONDUIT	HOMERUN / INTERLOCK TO	CONDUCTORS & CONDUIT	DISCONNECT TYPE/SIZE	NEMA ENCLOSURE TYPE	STARTER TYPE	NEMA ENCLOSURE TYPE	
BP-CP-700	NEW BELT PRESS CONTROL PANEL	DEWATERING BUILDING	-	-	480	3	HVP4	50A/3P	(4)#6 & #10G, 1-1/2"C.	R I/O-2	REFER TO RISER DIAGRAM	-	-	-	-	
FP-01	FILTRATION PUMPS	DEWATERING BUILDING	7.6	5	480	3	FPCP-700		REFER TO RISER DIAGRAM	FPCP-700	REFER TO RISER DIAGRAM	-	-	ATL	-	
FP-02	FILTRATION PUMPS	DEWATERING BUILDING	7.6	5	480	3	FPCP-700		REFER TO RISER DIAGRAM	FPCP-700	REFER TO RISER DIAGRAM	-	-	ATL	-	
FPCP-700	FILTRATION PUMP CONTROL PANEL	DEWATERING BUILDING	-	-	480	3	HVP4	30A/3P		R I/O-2	REFER TO RISER DIAGRAM	-	-	-	-	
HVAC-700	HVAC MONITORING CONTROL PANEL	DEWATERING BUILDING	-	-	120	1	LVP2	20A/3P	(2)#12 & #12G, 3/4"C.	R I/O-2	REFER TO RISER DIAGRAM	-	-	-	-	
BPCP	EXISTING BELT PRESS CONTROL PANEL	DEWATERING BUILDING	-	-	480	3	HVP4	40A/3P		R I/O-2	REFER TO RISER DIAGRAM	-	-	-	-	
PAB-01	BLOWER #1	DECHLORINATION BUILDING	27	20	480	3	HVP5		(4)#6 & #10G, 1-1/2"C.	MBR-CP	REFER TO RISER DIAGRAM	A (60AF/NF)	4X	VFD	-	
PAB-02	BLOWER #2	DECHLORINATION BUILDING	27	20	480	3	HVP5		(4)#6 & #10G, 1-1/2"C.	MBR-CP	REFER TO RISER DIAGRAM	A (60AF/NF)	4X	VFD	-	
20-P-610-A	BACKPULSE PUMP #1	DECHLORINATION BUILDING	77	58	480	3	HVP5		(3)#1/0 & #6G, 2" C.	MBR-CP	REFER TO RISER DIAGRAM	A (200AF/NF)	4X	VFD	-	
20-P-610-B	BACKPULSE PUMP #2	DECHLORINATION BUILDING	77	58	480	3	HVP5		(3)#1/0 & #6G, 2" C.	MBR-CP	REFER TO RISER DIAGRAM	A (200AF/NF)	4X	VFD	-	
IP-01	IMPELLER PUMP #1	DECHLORINATION BUILDING	34	25	460	3	PWCP-400		REFER TO RISER DIAGRAM	PWCP-400	REFER TO RISER DIAGRAM	-	-	VFD	-	
IP-02	IMPELLER PUMP #2	DECHLORINATION BUILDING	34	25	460	3	PWCP-400		REFER TO RISER DIAGRAM	PWCP-400	REFER TO RISER DIAGRAM	-	-	VFD	-	
PWCP-400	PUMP CONTROL PANEL	DECHLORINATION BUILDING	-	-	480	3	HVP5	150A/3P	(3)#1/0 & #6G, 2"C.		REFER TO RISER DIAGRAM	-	-	-	-	
IP-01	INFLUENT PUMP #1	MICROSCREEN BUILDING	77	60	480	3	HVP6		(3)#1/0 & #6G, 2" C.	IP-CP-1	REFER TO RISER DIAGRAM	A (200AF/NF)	4X	VFD	-	
IP-02	INFLUENT PUMP #2	MICROSCREEN BUILDING	77	60	480	3	HVP6		(3)#1/0 & #6G, 2" C.	IP-CP-1	REFER TO RISER DIAGRAM	A (200AF/NF)	4X	VFD	-	
IP-03	INFLUENT PUMP #3	MICROSCREEN BUILDING	77	60	480	3	HVP6		(3)#1/0 & #6G, 2" C.	IP-CP-1	REFER TO RISER DIAGRAM	A (200AF/NF)	4X	VFD	-	
MCR-01	MICROSCREEN #1	MICROSCREEN BUILDING	1.6	3/4	480	3	MS-CP-1		REFER TO RISER DIAGRAM	MC-CP-1	REFER TO RISER DIAGRAM	-	-	VFD	-	
IP-CP-1	INFLUENT PUMP CONTROL PANEL	MICROSCREEN BUILDING	-	-	120	1	LVP6	30A/1P		R I/O-1	REFER TO RISER DIAGRAM	-	-	-	-	
CMP-01	COMPACTOR #1	MICROSCREEN BUILDING	3.0	1.5	480	3	MS-CP-1		REFER TO RISER DIAGRAM	MC-CP-1	REFER TO RISER DIAGRAM	-	-	VFD	-	
MS-CP-1	MICROSCREEN CONTROL PANEL #1	MICROSCREEN BUILDING	-	-	480	3	HVP6	20A/3P	(4)#10 & #10G, 1"C.	R I/O-1	REFER TO RISER DIAGRAM	-	-	-	-	
MCR-02	MICROSCREEN #2	MICROSCREEN BUILDING	1.6	3/4	480	3	MS-CP-2		REFER TO RISER DIAGRAM	MS-CP-2	REFER TO RISER DIAGRAM	-	-	VFD	-	
CMP-02	COMPACTOR #2	MICROSCREEN BUILDING	3.0	1.5	480	3	MS-CP-2		REFER TO RISER DIAGRAM	MS-CP-2	REFER TO RISER DIAGRAM	-	-	VFD	-	
MS-CP-2	MICROSCREEN CONTROL PANEL #2	MICROSCREEN BUILDING	-	-	480	3	HVP6	20A/3P	(4)#10 & #10G, 1"C.	R I/O-1	REFER TO RISER DIAGRAM	-	-	-	-	
	WELDING EQUIPMENT	GARAGE	2	FRACTIONAL	230	3	LVP7		REFER TO RISER DIAGRAM		REFER TO RISER DIAGRAM	-	-	-	-	
	AIR COMPRESSOR	GARAGE	2	FRACTIONAL	230	3	LVP7		REFER TO RISER DIAGRAM		REFER TO RISER DIAGRAM	-	-	-	-	
	ELECTRONIC HOIST SYSTEM	GARAGE	15	5	230	3	LVP7		REFER TO RISER DIAGRAM		REFER TO RISER DIAGRAM	-	-	-	-	
	LATHE MILLING MACHINE	GARAGE	13	2	230	3	LVP7		REFER TO RISER DIAGRAM		REFER TO RISER DIAGRAM	-	-	-	-	
RDT-01	ROTARY DRUM THICKENER	ATAD BUILDING	2.1	1	480	3	RDT-CP		REFER TO RISER DIAGRAM	RDT-CP	REFER TO RISER DIAGRAM	-	-	ATL	-	
RDT-WW-01	RTD SLUDGE FEED PUMP	ATAD BUILDING	21	15	480	3	RDT-CP		REFER TO RISER DIAGRAM	RDT-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
RTD-TSP-01	RTD THICKENED SLUDGE PUMP	ATAD BUILDING	27	20	480	3	RDT-CP		REFER TO RISER DIAGRAM	RDT-CP	REFER TO RISER DIAGRAM	-	-	ATL	-	
RDT-PB-01	POLYMER PUMP	ATAD BUILDING	2.1	1	480	3	RDT-CP		REFER TO RISER DIAGRAM	RDT-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
RDT-CP	ROTARY DRUM THICKENER CONTROL PANEL	ATAD BUILDING	-	-	120	3	MCC2	125A/3P	(3)#10 & #10G, 1"C.	R I/O-2	REFER TO RISER DIAGRAM	-	-	-	-	
P-101	THERMAER 1 JET MOTIVE PUMP	ATAD BUILDING	124	100	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
P-102	THERMAER 2 JET PUMP	ATAD BUILDING	124	100	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
P-401	52016 SNDR JET MOTIVE PUMP	ATAD BUILDING	77	60	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
B-103	THERMAER 1 BLOWER	ATAD BUILDING	52	40	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
B-203	THERMAER 2 BLOWER	ATAD BUILDING	52	40	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
B-403	SNDR BLOWER	ATAD BUILDING	52	40	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
B-503	SLUDGE HOLDING BLOWER 1	ATAD BUILDING	52	40	480	3			REFER TO RISER DIAGRAM		REFER TO RISER DIAGRAM	-	-	-	-	
B-1103	SPARE BLOWER	ATAD BUILDING	52	40	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
P-901	TRANSFER PUMP	ATAD BUILDING	14	10	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
P-902	TRANSFER PUMP	ATAD BUILDING	14	10	480	3	MCC2		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
FAN-1	10,000 SCFM 9INCH WC FAN	ATAD BUILDING	40	30	480	3	ATAD-CP		REFER TO RISER DIAGRAM	ATAD-CP	REFER TO RISER DIAGRAM	-	-	VFD	-	
ATAD-CP	ATAD CONTROL PANEL	ATAD BUILDING	-	-	120	3	LVPMCC	30A/3P		R I/O-4	REFER TO RISER DIAGRAM	-	-	-	-	

SUBP-03	SUBMERSIBLE PUMP #3	ATAD BUILDING					DPCP-02		REFER TO RISER DIAGRAM	DPCP-02	REFER TO RISER DIAGRAM	-	-	ATL	-	
SUBP-04	SUBMERSIBLE PUMP #4	ATAD BUILDING					DPCP-02		REFER TO RISER DIAGRAM	DPCP-02	REFER TO RISER DIAGRAM	-	-	ATL	-	
DPCP-02	DRAIN PUMP CONTROL PANEL	ATAD BUILDING	-	-	480	3	MCC2	125A/3P	(3)#10 & #10G, 1"C.	R I/O-4	REFER TO RISER DIAGRAM	-	-	ATL	-	
HVAC-400	HVAC MONITORING CONTROL PANEL	ATAD BUILDING	-	-	120	1	LVPMCC	20A/3P	(2)#12 & #12G, 3/4"C.	R I/O-4	REFER TO RISER DIAGRAM	-	-	-	-	
EF-200	EXHAUST FAN	HEADWORKS BUILDING	9.8	1/2	120	1	LVP3	20A/1P	(2)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	7	M	7	
EF-201	EXHAUST FAN	HEADWORKS BUILDING	4.4	1/10	120	1	LVP3	20A/1P	(2)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	7	M	7	
EF-400	EXHAUST FAN	ATAD BUILDING	7.6	3/4	208	1	LVPMCC	20A/2P		CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-401	EXHAUST FAN	ATAD BUILDING	5.8	1/4	120	1	LVPMCC	20A/1P	(2)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-500	EXHAUST FAN	MBR BUILDING	4.4	1/6	120	1	LVP1	20A/1P	(2)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-501	EXHAUST FAN	MBR BUILDING	8.8	1	208	1	LVP1	20A/2P		CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-502	EXHAUST FAN	MBR BUILDING	8.8	1	208	1	LVP1	20A/2P		CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-503	EXHAUST FAN	MBR BUILDING	4.4	1/10	120	1	LVP1	20A/1P	(2)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-700	EXHAUST FAN	DEWATERING BUILDING - DUMPSTER AREA & MECHANICAL	7.6	3/4	208	1	LVP4	20A/2P	(3)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-701	EXHAUST FAN	DEWATERING BUILDING - MECHANICAL OPERATIONS ROOM	7.6	3/4	208	1	LVP4	20A/2P	(3)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-702	EXHAUST FAN	DEWATERING BUILDING - LOCKER ROOMS	2.4	1/8	208	1	LVP4	20A/2P	(3)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	
EF-900	EXHAUST FAN	CONTROL BUILDING	4.4	1/10	120	1	LVP2	20A/1P	(2)#12 & #12G, 3/4"C.			A (UNIT MOUNTED)	4X	M	4X	
EF-901	EXHAUST FAN	CONTROL BUILDING	4.4	1/10	120	1	LVP2	20A/1P	(2)#12 & #12G, 3/4"C.			A (UNIT MOUNTED)	4X	M	4X	
EF-902	EXHAUST FAN	CONTROL BUILDING		(128)	120	1	LVP2					A (UNIT MOUNTED)	4X	M	4X	
EF-903	EXHAUST FAN	CONTROL BUILDING		(43)	120	1	LVP2					A (UNIT MOUNTED)	4X	M	4X	
EF-904	EXHAUST FAN	CONTROL BUILDING		(80)	120	1	LVP2					A (UNIT MOUNTED)	4X	M	4X	
EUH-200	ELECTRIC UNIT HEATER	HEADWORKS BUILDING		(25KW)	480	3	HVP3	40A/3P		LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-201	ELECTRIC UNIT HEATER	HEADWORKS BUILDING		(25KW)	480	3	HVP3	40A/3P		LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-202	ELECTRIC UNIT HEATER	HEADWORKS BUILDING		(25KW)	480	3	HVP3	40A/3P		LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-203	ELECTRIC UNIT HEATER	HEADWORKS BUILDING		(3.3KW)	480	3	HVP3	20A/3P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-400	ELECTRIC UNIT HEATER	ATAD BUILDING		(20KW)	480	3		40A/3P		LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-401	ELECTRIC UNIT HEATER	ATAD BUILDING		(20KW)	480	3		40A/3P		LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-402	ELECTRIC UNIT HEATER	ATAD BUILDING		(25KW)	480	3		40A/3P		LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-500	ELECTRIC UNIT HEATER	MBR BUILDING		(10KW)	480	3	HVP3	20A/3P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-501	ELECTRIC UNIT HEATER	MBR BUILDING		(5KW)	208	3	LVP1	20A/2P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-502	ELECTRIC UNIT HEATER	MBR BUILDING		(5KW)	208	3	LVP1	20A/2P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-503	ELECTRIC UNIT HEATER	MBR BUILDING		(5KW)	208	3	LVP1	20A/2P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-506	ELECTRIC UNIT HEATER	MBR BUILDING		(5KW)	208	3	LVP1	20A/3P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-507	ELECTRIC UNIT HEATER	MBR BUILDING		(25KW)	480	3	HVP1	40A/3P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-508	ELECTRIC UNIT HEATER	MBR BUILDING		(25KW)	480	3	HVP1	40A/3P		LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-509	ELECTRIC UNIT HEATER	MBR BUILDING		(25KW)	480	3	HVP1	40A/3P		LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-510	ELECTRIC UNIT HEATER	MBR BUILDING		(3.3KW)	480	3	HVP1	20A/3P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-511	ELECTRIC UNIT HEATER	MBR BUILDING		(5KW)	480	3	HVP1			LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-512	ELECTRIC UNIT HEATER	MBR BUILDING		(3.3KW)	480	3	HVP1	20A/3P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-900	ELECTRIC UNIT HEATER	CONTROL BUILDING		(3.3KW)	480	3	HVP2	20A/3P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
EUH-901	ELECTRIC UNIT HEATER	CONTROL BUILDING		(3.3KW)	480	3	HVP2	20A/3P	(3)#12 & #12G, 3/4"C.	LOW VOLTAGE THERMOSTAT		A (UNIT MOUNTED)	4X	LVT	-	
F-700	FURNACE	DEWATERING BUILDING		-	120	1	LVP4									
F-900	FURNACE	CONTROL BUILDING	12.8	-	120	1	LVP2	20A/1P	(2)#12 & #12G, 3/4"C.							
F-901	FURNACE	CONTROL BUILDING	12.8	-	120	1	LVP2	20A/1P	(2)#12 & #12G, 3/4"C.							
SF-200	SUPPLY FAN	HEADWORKS BUILDING	9.8	1/2	120	1	LVP3	20A/1P	(2)#12 & #12G, 3/4"C.	CONTINUOUS OPERATION		A (UNIT MOUNTED)	4X	M	4X	

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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-046

PROJECT # 18-732 PHASE #

INDICATED BY ⟨S⟩ ON PLAN SHEETS

EQUIPMENT CONNECTION SCHEDULE (SHEET 3 OF 3)

EQUIPMENT	ELECTRICAL LOAD	POWER CONNECTION	CONTROL CONNECTION	DISCONNECT/SAFETY SWITCH	STARTER	REMARKS
SPECIFIC NOTES: 1. WHEN LOCATION IS NOT REFERENCED ON 'E' SHEETS, REFER TO ASSOCIATED CONTRACT DRAWINGS. 2. LOCATIONS SHOWN ARE GENERAL IN NATURE. COORDINATE WITH ALL TRADE CONTRACTORS PRIOR TO ROUGH-IN.				TYPES: A: NON-FUSED B: FUSED M: MOTOR RATED SWITCH R: RECEPTACLE/CORD/PLUG N: NOT REQUIRED C: CKT BREAKER WITHIN SIGHT SIZES: AF: AMPERE FRAME NF: NON-FUSED AT: FUSE SIZE (RK5, UON)	TYPES: VFD: VARIABLE FREQUENCY DRIVE CMS: COMBINATION MOTOR STARTER WITH DISCONNECT ATL: ACROSS THE LINE, FVNR MAGNETIC STARTER M: MOTOR RATED SWITCH - MANUAL STARTER P: PACKAGED CONTROLLER BY MANUFACTURER LVT: THERMOSTAT	

EQUIPMENT TAG	EQUIPMENT TYPE	LOCATION ON PLAN	FLA	HP (KW)	V	PH	HOMERUN TO	CIRCUIT BREAKER	CONDUCTORS & CONDUIT	HOMERUN / INTERLOCK TO	CONDUCTORS & CONDUIT	DISCONNECT TYPE/SIZE	NEMA ENCLOSURE TYPE	STARTER TYPE	NEMA ENCLOSURE TYPE	REMARKS
EBB-500	ELECTRIC BASEBOARD	MBR BUILDING	-	-	280	1	LVP1	30A/2P								
DSCU-500	DUCTLESS SPLIT SYSTEM	MBR BUILDING EXTERIOR WALL	-	-	208	1	LVP1	20A/2P								
LV-200	LOUVER W/MOTORIZED DAMPER	HEADWORKS BUILDING	4.4	-	120	1	LVP3	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-200		-	-	-	-	
LV-201	LOUVER W/MOTORIZED DAMPER	HEADWORKS BUILDING	4.4	-	120	1	LVP3	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-201		-	-	-	-	
LV-202	LOUVER W/MOTORIZED DAMPER	HEADWORKS BUILDING	4.4	-	120	1	LVP3	20A/1P	(2)#12 & #12G, 3/4"C.			-	-	-	-	
LV-203	LOUVER W/MOTORIZED DAMPER	HEADWORKS BUILDING	4.4	-	120	1	LVP3	20A/1P	(2)#12 & #12G, 3/4"C.			-	-	-	-	
LV-400	LOUVER W/MOTORIZED DAMPER	ATAD BUILDING	4.4	-	120	1	LVPMCC	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-400		-	-	-	-	
LV-401	LOUVER W/MOTORIZED DAMPER	ATAD BUILDING	4.4	-	120	1	LVPMCC	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-401		-	-	-	-	
LV-402	LOUVER W/MOTORIZED DAMPER	ATAD BUILDING	4.4	-	120	1	LVPMCC	20A/1P	(2)#12 & #12G, 3/4"C.			-	-	-	-	
LV-403	LOUVER W/MOTORIZED DAMPER	ATAD BUILDING	4.4	-	120	1	LVPMCC	20A/1P	(2)#12 & #12G, 3/4"C.			-	-	-	-	
LV-500	LOUVER W/MOTORIZED DAMPER	MBR BUILDING	4.4	-	120	1	LVP1	20A/1P	(2)#12 & #12G, 3/4"C.			-	-	-	-	
LV-501	LOUVER W/MOTORIZED DAMPER	MBR BUILDING	4.4	-	120	1	LVP1	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-500		-	-	-	-	
LV-502	LOUVER W/MOTORIZED DAMPER	MBR BUILDING	4.4	-	120	1	LVP1	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-501		-	-	-	-	
LV-503	LOUVER W/MOTORIZED DAMPER	MBR BUILDING	4.4	-	120	1	LVP1	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-502		-	-	-	-	
LV-504	LOUVER W/MOTORIZED DAMPER	MBR BUILDING	4.4	-	120	1	LVP1	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-503		-	-	-	-	
LV-900	LOUVER W/MOTORIZED DAMPER	CONTROL BUILDING	4.4	-	120	1	LVP2	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-900		-	-	-	-	
LV-901	LOUVER W/MOTORIZED DAMPER	CONTROL BUILDING	4.4	-	120	1	LVP2	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-900		-	-	-	-	
LV-902	LOUVER W/MOTORIZED DAMPER	CONTROL BUILDING	4.4	-	120	1	LVP2	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-901		-	-	-	-	
LV-903	LOUVER W/MOTORIZED DAMPER	CONTROL BUILDING	4.4	-	120	1	LVP2	20A/1P	(2)#12 & #12G, 3/4"C.	INTERLOCK W/ EXHAUST FAN EF-901		-	-	-	-	

GENERAL SCHEDULE NOTES:

1. CONTRACTOR TO INSTALL STARTER/DISCONNECT ADJACENT TO UNIT, UNLESS OTHERWISE INDICATED. INSTALLATION TO COMPLY WITH NEC ARTICLE 110.26. CONTRACTOR TO PROVIDE ALL NECESSARY STAINLESS STEEL MOUNTING HARDWARE/EQUIPMENT. REFER TO INSTALLATION DETAILS FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATIONS WITH ALL TRADE CONTRACTORS PRIOR TO ROUGH-IN.
2. EQUIPMENT FURNISHED BY OTHERS (UNLESS OTHERWISE INDICATED ON DRAWINGS). COORDINATE WITH ASSOCIATED TRADE CONTRACTOR.
3. CONFIRM HP, VOLTAGE AND PHASE CONNECTIONS PRIOR TO ROUGH-IN OF EQUIPMENT. COORDINATION REQUIRED BETWEEN TRADES.
4. STARTERS SHALL BE NEMA STYLE AND SIZED BASED ON ELECTRICAL LOAD DATA LISTED ON SCHEDULE.
5. MOTOR RATED SWITCHES SHALL BE EQUIPPED WITH HEATERS, WHICH SHALL BE SIZED BASED ON NAMEPLATE DATA (TO BE OBTAINED IN FIELD), NOT ON ELECTRICAL LOAD DATA ON SCHEDULE.
6. CIRCUIT BREAKERS INDICATED ON SCHEDULE ABOVE SHALL BE PROVIDED BY THE CONTRACTOR (UNLESS OTHERWISE NOTED ON THE DRAWINGS) IN THE PROPOSED OR EXISTING PANEL (THEY ARE NOT EXISTING BREAKERS, UNLESS INDICATED ON THE PANELBOARD SCHEDULE).
7. NOTE, THIS SCHEDULE DOES NOT INCLUDE THE REQUIRED ELECTRICAL CONNECTIONS FOR PROPOSED INSTRUMENTS, CONTROLLERS, VALVES, ETC.. REFER TO THE SINGLE LINE DIAGRAMS AND RISER DIAGRAMS FOR REQUIRED ELECTRICAL POWER AND CONTROL CONNECTIONS FOR ALL PROPOSED INSTRUMENTS, CONTROLS, VALVES, ETC..

REMARKS:

1. PROVIDE AS VFD SHIELDED CABLE. CONDUIT SIZE IS LISTED AS MINIMUM, PROVIDE LARGER DIAMETER AS REQUIRED PER MANUFACTURER RECOMMENDATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. ALL REQUIREMENTS TO BE PER NEC.
2. EQUIPMENT DISCONNECT TO BE PROVIDED WITH A SET OF AUXILIARY CONTACTS FOR CONTROL AS SHOWN/SPECIFIED ON THE ELECTRICAL SINGLE LINE DIAGRAMS AND RISER DIAGRAMS.
3. EQUIPMENT LOCATED WITHIN A CLASS I, DIVISION II, GROUP D SPACE. ALL WIRING METHODS TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT, DEVICES AND WIRING METHODS WITHIN THIS AREA TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT.
4. STARTER INTERNAL TO OEM CONTROL PANEL AND PROVIDED BY CONTRACT #1.
5. PROVIDE CIRCUIT BREAKER SUITABLE FOR USE AS AN EQUIPMENT DISCONNECT. PROVIDE PERMANENT LOCK-OUT CAPABILITY FOR PROPOSED CIRCUIT BREAKER. CIRCUIT BREAKER SHALL BE OF THE INDICATING TYPE. ALL REQUIREMENTS TO BE PER NEC.
6. COORDINATE FINAL STARTER LOCATION/REQUIREMENTS WITH THE OWNER PRIOR TO ROUGH-IN. FAN IS INTENDED TO BE IN CONTINUOUS OPERATION 24/7, 365 DAYS OF THE YEAR. MOTOR RATED SWITCH TO BE KEYED. REFER TO FLOOR PLAN FOR ADDITIONAL REQUIREMENTS.
7. EQUIPMENT IS CORD+PLUG CONNECTED. COORDINATE FINAL ELECTRICAL REQUIREMENTS WITH CONTRACT #1.
8. PROVIDE MOTOR RATED SWITCH FOR ON/OFF CONTROL OF PUMP. SWITCH INTENDED TO CREATE A SWITCHED RECEPTACLE. INSTALL SWITCH ADJACENT TO RECEPTACLE AND PUMP.
9. CONTRACTOR TO PROVIDE RECEPTACLE AS 125-VOLT, 2-POLE, 3-WIRE, 20-AMP, HEAVY DUTY, DUPLEX, AND OF THE GFI TYPE. INSTALL RECEPTACLE AT LOCATION OF MOTOR AS INDICATED ON FLOOR PLAN VIEW. NOTE, RECEPTACLE NOT SHOWN ON FLOOR PLAN FOR CLARITY. COORDINATE MOUNTING HEIGHT WITH CONTRACT #1. FINAL REQUIREMENTS TO BE CLOSELY COORDINATED WITH CONTRACT #1.
10. FAN PROVIDED WITH 120V MOTORIZED DAMPER. CONTRACTOR TO PROVIDE ADDITIONAL 120V CIRCUIT PER MANUFACTURERS RECOMMENDATIONS. COORDINATE FINAL REQUIREMENTS WITH CONTRACT #1 AND PROVIDE AS REQUIRED. PROVIDE ADDITIONAL CONTROL POWER TRANSFORMER AS REQUIRED.
11. EQUIPMENT PROVIDED WITH FACTORY MOUNTED DISCONNECT SWITCH BY CONTRACT #1.
12. THERMOSTAT IS BY CONTRACT #1. THIS CONTRACT IS RESPONSIBLE FOR PROVIDING ALL NECESSARY INTERLOCK CIRCUITRY. PROVIDE CONTROL POWER TRANSFORMER AND ENCLOSURE AS REQUIRED TO OBTAIN NECESSARY VOLTAGE FOR THERMOSTAT. REFER TO CONTRACT #1 DRAWINGS AND COORDINATE WITH CONTRACT #1 FOR THERMOSTAT LOCATIONS AND FINAL REQUIREMENTS.
13. CONTRACTOR RESPONSIBLE FOR PROVIDING ALL NECESSARY INTERLOCK CIRCUITRY (CONDUIT & CONDUCTORS) FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM. REFER TO HVAC DRAWINGS FOR ADDITIONAL INFORMATION AND COORDINATE FINAL REQUIREMENTS WITH CONTRACT #1.
14. EQUIPMENT LOCATED WITHIN A CLASS I, DIVISION I, GROUP D SPACE. ALL WIRING METHODS TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT, DEVICES AND WIRING METHODS WITHIN THIS AREA TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION I, GROUP D ENVIRONMENT.
15. VFD FURNISHED BY CONTRACT #1.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-047

PROJECT # 18-732 PHASE #

I/O TABLE (1 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
20-P-501-A	RUNNING	MBR-CP	DO			
RAS PUMP STARTER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
20-P-501-B	RUNNING	MBR-CP	DO			
RAS PUMP STARTER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
20-P-501-C	RUNNING	MBR-CP	DO			
RAS PUMP STARTER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
20-P-501-D	RUNNING	MBR-CP	DO			
RAS PUMP STARTER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
16-B-401-A	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
PROCESS BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
16-B-401-B	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
PROCESS BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
16-B-401-B	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
PROCESS BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
16-B-401-C	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
PROCESS BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
20-B-201-A	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
MEMBRANE BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
20-B-201-B	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
MEMBRANE BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
20-B-201-C	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
MEMBRANE BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
20-B-201-D	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
MEMBRANE BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
20-B-201-E	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
MEMBRANE BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
16-MX-211-1	RUNNING	MBR-CP	DO			
ANOXIC PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
16-MX-211-2	RUNNING	MBR-CP	DO			
ANOXIC PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
16-MX-211-3	RUNNING	MBR-CP	DO			
ANOXIC PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
15-LE-301	NAOH LEVEL ELEMENT	15-LIT-301	DO			
15-LIT-301	NAOH LEVEL TRANSMITTER	MBR-CP	DO			
23-LE-101	NACLO LEVEL ELEMENT	23-LIT-101	DO			
23-LIT-101	NACLO LEVEL TRANSMITTER	MBR-CP	DO			
23-LE-301	CITRIC ACID LEVEL ELEMENT	23-LIT-301	DO			
23-LIT-301	CITRIC ACID TRANSMITTER	MBR-CP	DO			
15-P-301-A	SPEED CONTROL ANALOG INPUT	MBR-CP	AI			
NAOH METERING PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			

I/O TABLE (2 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
15-P-301-B	SPEED CONTROL ANALOG INPUT	MBR-CP	AI			
NAOH METERING PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
23-P-101-A	SPEED CONTROL ANALOG INPUT	MBR-CP	AI			
NACLO METERING PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
23-P-101-B	SPEED CONTROL ANALOG INPUT	MBR-CP	AI			
NACLO METERING PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
23-P-301-A	SPEED CONTROL ANALOG INPUT	MBR-CP	AI			
CITRIC ACID METERING PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
23-P-301-B	SPEED CONTROL ANALOG INPUT	MBR-CP	AI			
CITRIC ACID METERING PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
90-FV-001-A	AUTO DRAIN SOLENOID	MBR-CP	DI			
90-FV-001-B	AUTO DRAIN SOLENOID	MBR-CP	DI			
90-FV-001-C	AUTO DRAIN SOLENOID	MBR-CP	DI			
90-PSV-001-A	COMPRESSOR PRESSURE SWITCH	MBR-CP	DI			
90-PSV-001-B	COMPRESSOR PRESSURE SWITCH	MBR-CP	DI			
90-FV-011	DRAIN VALVE SOLENOID	MBR-CP	DI			
90-PSL-001-A	LOW AIR PRESSURE SWITCH	MBR-CP	DI			
90-PSL-001-B	LOW AIR PRESSURE SWITCH	MBR-CP	DI			
90-AC-001-A	RUNNING	MBR-CP	DO			
AIR COMPRESSOR	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
90-AC-001-B	RUNNING	MBR-CP	DO			
AIR COMPRESSOR	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
90-DR-001-A	RUNNING	MBR-CP	DO			
REFRIGERATED DRIER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
90-DR-001-B	RUNNING	MBR-CP	DO			
REFRIGERATED DRIER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
16-AE-402-1	PH PROBE	16-AIT-405A-1	DI			
16-AE-405A-1	DO PROBE	16-AIT-405A-1	DI			
16-AIT-405A-1	CONTROLLER	MBR-CP	DO			
16-AE-402-2	PH PROBE	16-AIT-405A-2	DI			
16-AE-405A-2	DO PROBE	16-AIT-405A-2	DI			
16-AIT-405A-2	CONTROLLER	MBR-CP	DO			
16-AE-402-3	PH PROBE	16-AIT-405A-3	DI			
16-AE-405A-3	DO PROBE	16-AIT-405A-3	DI			
16-AIT-405A-3	CONTROLLER	MBR-CP	DO			
16-LSHH-401-1	FLOAT SWITCH	MBR-CP	DI			
16-LSHH-401-2	FLOAT SWITCH	MBR-CP	DI			
16-LSHH-401-3	FLOAT SWITCH	MBR-CP	DI			
20-P-610-A	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
BACKPULSE PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
20-P-610-B	VFD READY STATUS	MBR-CP	DO			0 - 60 HZ
BACKPULSE PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
20-PSH-601	BACKPULSE PRESSURE SWITCH	MBR-CP	DI			
20-PSH-602	BACKPULSE PRESSURE SWITCH	MBR-CP	DI			
20-PSH-602	BACKPULSE PRESSURE SWITCH	MBR-CP	DI			
FLS-600	FLOAT SWITCH	MBR-CP	DI			
FLS-601	FLOAT SWITCH	MBR-CP	DI			
FLS-602	FLOAT SWITCH	MBR-CP	DI			
FLS-603	FLOAT SWITCH	MBR-CP	DI			
FLS-604	FLOAT SWITCH	MBR-CP	DI			
20-LIT-601	LEVEL TRANSDUCER	20-LIT-602	DI			
20-LIT-602	LEVEL TRANSMITTER	MBR-CP	DO			
16-FSL-401-A	PROCESS FLOW FLOAT SWITCH	MBR-CP	DI			
16-FSL-401-B	PROCESS FLOW FLOAT SWITCH	MBR-CP	DI			
16-FSL-401-C	PROCESS FLOW FLOAT SWITCH	MBR-CP	DI			
20-FSL-201-A	MEMBRANE FLOW FLOAT SWITCH	MBR-CP	DI			
20-FSL-201-B	MEMBRANE FLOW FLOAT SWITCH	MBR-CP	DI			
20-FSL-201-C	MEMBRANE FLOW FLOAT SWITCH	MBR-CP	DI			
20-FSL-201-D	MEMBRANE FLOW FLOAT SWITCH	MBR-CP	DI			
20-FSL-201-E	MEMBRANE FLOW FLOAT SWITCH	MBR-CP	DI			
20-FCV-301-1	V-PORT CONTROL VALVE	MBR-CP	AO			
20-FCV-301-2	V-PORT CONTROL VALVE	MBR-CP	AO			
20-FCV-301-3	V-PORT CONTROL VALVE	MBR-CP	AO			
20-FCV-301-4	V-PORT CONTROL VALVE	MBR-CP	AO			
20-FV-621-1	ACTUATED BUTTERFLY VALVE	MBR-CP	DI			
20-FV-621-2	ACTUATED BUTTERFLY VALVE	MBR-CP	DI			
20-FV-621-3	ACTUATED BUTTERFLY VALVE	MBR-CP	DI			
20-FV-621-4	ACTUATED BUTTERFLY VALVE	MBR-CP	DI			
20-FV-622-1	ACTUATED BUTTERFLY VALVE	MBR-CP	DI			
20-FV-622-2	ACTUATED BUTTERFLY VALVE	MBR-CP	DI			
20-FV-622-3	ACTUATED BUTTERFLY VALVE	MBR-CP	DI			
20-FV-622-4	ACTUATED BUTTERFLY VALVE	MBR-CP	DI			
20-FM-301-1	PERMEATE FLOW METER	20-FIT-301-1	AI			
20-FIT-301-1	PERMEATE FLOW TRANSMITTER	MBR-CP	ETHERNET			
20-FM-301-2	PERMEATE FLOW METER	20-FIT-301-2	AI			
20-FIT-301-2	PERMEATE FLOW TRANSMITTER	MBR-CP	ETHERNET			
20-FM-301-3	PERMEATE FLOW METER	20-FIT-301-3	AI			
20-FIT-301-3	PERMEATE FLOW TRANSMITTER	MBR-CP	ETHERNET			
20-FM-301-4	PERMEATE FLOW METER	20-FIT-301-4	AI			
20-FIT-301-4	PERMEATE FLOW TRANSMITTER	MBR-CP	ETHERNET			

I/O TABLE (3 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
20-FV-803-1	PERMEATE EJECTOR VALVES	MBR-CP	DI			
20-FV-803-2	PERMEATE EJECTOR VALVES	MBR-CP	DI			
20-FV-803-3	PERMEATE EJECTOR VALVES	MBR-CP	DI			
20-FV-803-4	PERMEATE EJECTOR VALVES	MBR-CP	DI			
23-FV-130	SODIUM HYPO CONTROL VALVE	MBR-CP	DI			
23-FV-330	CITRIC ACID CONTROL VALVE	MBR-CP	DI			
20-FV-803-6	MAIN PERMEATE EJECTOR VALVE	MBR-CP	DI			
20-FV-801-5	AIR EJECTOR VALVE	MBR-CP	DI			
20-FV-802-5	AIR EJECTOR ASSEMBLY	MBR-CP	DI			
20-FV-801-6	COMMON PERMEATE EJECTOR	MBR-CP	DI			
20-FV-802-6	COMMON PERMEATE EJECTOR	MBR-CP	DI			
20-P-321-1	RUNNING	MBR-CP	DO			
TURBIDITY SAMPLING PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
20-P-321-2	RUNNING	MBR-CP	DO			
TURBIDITY SAMPLING PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
20-P-321-3	RUNNING	MBR-CP	DO			
TURBIDITY SAMPLING PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
20-P-321-4	RUNNING	MBR-CP	DO			
TURBIDITY SAMPLING PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
20-AE-320-1	TURBIDITY METER	20-AIT-320-1	DI			
20-AIT-320-1	TURBIDITY CONTROLLER	MBR-CP	DO			
20-AE-320-2	TURBIDITY METER	20-AIT-320-2	DI			
20-AIT-320-2	TURBIDITY CONTROLLER	MBR-CP	DO			
20-AE-320-3	TURBIDITY METER	20-AIT-320-3	DI			
20-AIT-320-3	TURBIDITY CONTROLLER	MBR-CP	DO			
20-AE-320-4	TURBIDITY METER	20-AIT-320-4	DI			
20-AIT-320-4	TURBIDITY CONTROLLER	MBR-CP	DO			
20-RFM-507-1	RAS FLOW METER	20-FIT-570-1	DI			
20-FIT-570-1	RAS FLOW TRANSMITTERS	MBR-CP	DO			
20-RFM-507-2	RAS FLOW METER	20-FIT-570-2	DI			
20-FIT-570-2	RAS FLOW TRANSMITTERS	MBR-CP	DO			
20-RFM-507-3	RAS FLOW METER	20-FIT-570-3	DI			
20-FIT-570-3	RAS FLOW TRANSMITTERS	MBR-CP	DO			
20-RFM-507-4	RAS FLOW METER	20-FIT-570-4	DI			
20-FIT-570-4	RAS FLOW TRANSMITTERS	MBR-CP	DO			
16-WFM-707	WAS FLOW METER	16-FIT-707	DI			
16-FIT-707	WAS FLOW TRANSMITTER	MBR-CP	DO			
16-FV-700	SLUDGE AUTOMATIC VALVE	MBR-CP	DI			
20-LE-200	LEVEL ELEMENT	20-LIT-200	DI			
20-LIT-200	LEVEL TRANSMITTER	MBR-CP	DO			
20-LE-203-1	LEVEL ELEMENT	20-LIT-203-1	DI			
20-LIT-203-1	LEVEL TRANSMITTER	MBR-CP	DO			
20-LE-203-2	LEVEL ELEMENT	20-LIT-203-2	DI			
20-LIT-203-2	LEVEL TRANSMITTER	MBR-CP	DO			
20-LE-203-3	LEVEL ELEMENT	20-LIT-203-3	DI			
20-LIT-203-3	LEVEL TRANSMITTER	MBR-CP	DO			
20-LE-203-4	LEVEL ELEMENT	20-LIT-203-4	DI			
20-LIT-203-4	LEVEL TRANSMITTER	MBR-CP	DO			
20-PE-301-1	PRESSURE ELEMENT	20-PIT-301-1	DI			
20-PIT-301-1	PRESSURE TRANSMITTER	MBR-CP	DO			
20-PE-301-2	PRESSURE ELEMENT	20-PIT-301-2	DI			
20-PIT-301-2	PRESSURE TRANSMITTER	MBR-CP	DO			
20-PE-301-3	PRESSURE ELEMENT	20-PIT-301-3	DI			
20-PIT-301-3	PRESSURE TRANSMITTER	MBR-CP	DO			
20-PE-301-4	PRESSURE ELEMENT	20-PIT-301-4	DI			
20-PIT-301-4	PRESSURE TRANSMITTER	MBR-CP	DO			
20-LSHH-201-1	FLOAT SWITCHES	MBR-CP	DI			
20-LSHH-201-2	FLOAT SWITCHES	MBR-CP	DI			
20-LSHH-201-3	FLOAT SWITCHES	MBR-CP	DI			
20-LSHH-201-4	FLOAT SWITCHES	MBR-CP	DI			
20-LSLL-201-1	FLOAT SWITCHES	MBR-CP	DI			
20-LSLL-201-2	FLOAT SWITCHES	MBR-CP	DI			
20-LSLL-201-3	FLOAT SWITCHES	MBR-CP	DI			
20-LSLL-201-4	FLOAT SWITCHES	MBR-CP	DI			
MCR-01	VFD READY STATUS	MS-CP-1	DO			0 - 60 HZ
SCREEN DRIVE MOTOR	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
LCS-M-601	HAND	SRSPS-700	DO			
LOCAL CONTROL STATION	OFF		DI			
	AUTO		DO			
	FORWARD		AO			
	OFF		AO			
	REVERSE		AO			
	CYCLE		AO			
	RESET		AO			
	EMERGENCY STOP		DI			
CMP-01	VFD READY STATUS	MS-CP-1	DO			0 - 60 HZ
WASHING COMPACTOR	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
LS-1	DOWNSTREAM ULTRASONIC LEVEL SENSOR	LT-1	DI			
LT-1	ULTRASONIC LEVEL TRANSMITTER	MS-CP-1	DO			
LS-2	UPSTREAM ULTRASONIC LEVEL SENSOR	LT-2	DI			
LT-2	ULTRASONIC LEVEL TRANSMITTER	MS-CP-1	DO			
FL-1	HIGH LEVEL FLOAT SWITCH	MS-CP-1	DI			
SV-1	SCREEN WASHWATER SOLENOID VALVE	MS-CP-1	DI			
SV-2	COMPACTOR SOLENOID VALVE	MS-CP-1	DI			
SV-3	WASH MODULE SOLENOID VALVE	MS-CP-1	DI			

MHE ENGINEERING

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NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-048

PROJECT # 18-732 PHASE #

I/O TABLE (4 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
PW-01	VFD READY STATUS	PWCP-400	DO			0 - 60 HZ
PLANT WATER PUMP #1	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
PW-02	VFD READY STATUS	PWCP-400	DO			0 - 60 HZ
PLANT WATER PUMP #2	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
	FLOW SENSOR	PWCP-400	DI			
	PRESSURE TRANSMITTER	PWCP-400	DI			
	ALARM LIGHT	PWCP-400	DI			
	SUBMERSIBLE LEVEL TRANSDUCER	PWCP-400	DI			
	TEMPERATURE SENSOR	PWCP-400	DI			
	HEATER	PWCP-400	DI			
	SOLENOID VALVE #1	PWCP-400	DI			
	SOLENOID VALVE #2	PWCP-400	DI			
	FLOAT SWITCH #1	PWCP-400	DI			
	FLOAT SWITCH #2	PWCP-400	DI			
	FLOAT SWITCH #3	PWCP-400	DI			
PCD-01	RUNNING	PC-CP-1	DO			
PRIMARY DRIVE	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
SP-300	SPEAR PIN TRIP BAR	PC-CP-1	DI			
HT-300	HIGH TORQUE ALARM	PC-CP-1	DI			
FS-300	FAIL SAFE TORQUE CUTOUT CONTACT	PC-CP-1	DI			
MO-300	MOTOR OVERLOAD	PC-CP-1	DI			
PCD-02	RUNNING	PC-CP-2	DO			
PRIMARY DRIVE	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
SP-301	SPEAR PIN TRIP BAR	PC-CP-2	DI			
HT-301	HIGH TORQUE ALARM	PC-CP-2	DI			
FS-301	FAIL SAFE TORQUE CUTOUT CONTACT	PC-CP-2	DI			
MO-301	MOTOR OVERLOAD	PC-CP-2	DI			
PCD-03	RUNNING	PC-CP-3	DO			
PRIMARY DRIVE	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
SP-302	SPEAR PIN TRIP BAR	PC-CP-3	DI			
HT-302	HIGH TORQUE ALARM	PC-CP-3	DI			
FS-302	FAIL SAFE TORQUE CUTOUT CONTACT	PC-CP-3	DI			
MO-302	MOTOR OVERLOAD	PC-CP-3	DI			
PCD-04	RUNNING	PC-CP-4	DO			
PRIMARY DRIVE	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
SP-303	SPEAR PIN TRIP BAR	PC-CP-4	DI			
HT-303	HIGH TORQUE ALARM	PC-CP-4	DI			
FS-303	FAIL SAFE TORQUE CUTOUT CONTACT	PC-CP-4	DI			
MO-303	MOTOR OVERLOAD	PC-CP-4	DI			
F-1	RUNNING	CFCP-1	DO			
COOLING FAN #1	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
F-2	RUNNING	CFCP-1	DO			
COOLING FAN #2	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
F-3	RUNNING	CFCP-1	DO			
COOLING FAN #3	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
F-4	RUNNING	CFCP-1	DO			
COOLING FAN #4	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
F-5	RUNNING	CFCP-1	DO			
COOLING FAN #5	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
F-6	RUNNING	CFCP-1	DO			
COOLING FAN #6	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
F-7	RUNNING	CFCP-1	DO			
COOLING FAN #7	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
F-8	RUNNING	CFCP-1	DO			
COOLING FAN #8	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
H/S-400	SYSTEM HORN/STROBES	HVAC-400	DI			
H/S-401	SYSTEM HORN/STROBES	HVAC-400	DI			
PS-400	PRESSURE SWITCH	HVAC-400	DI			
PS-401	PRESSURE SWITCH	HVAC-400	DI			
H/S-500	SYSTEM HORN/STROBES	HVAC-500	DI			
H/S-501	SYSTEM HORN/STROBES	HVAC-500	DI			
PS-500	PRESSURE SWITCH	HVAC-500	DI			
PS-501	PRESSURE SWITCH	HVAC-500	DI			
H/S-700	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-701	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-702	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-703	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-704	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-705	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-706	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-707	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-708	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-709	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-710	SYSTEM HORN/STROBES	HVAC-700	DI			

I/O TABLE (5 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
H/S-711	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-712	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-713	SYSTEM HORN/STROBES	HVAC-700	DI			
H/S-714	SYSTEM HORN/STROBES	HVAC-700	DI			
PS-700	PRESSURE SWITCH	HVAC-500	DI			
PS-701	PRESSURE SWITCH	HVAC-500	DI			
H/S-200	GAS DETECTION HORN/STROBE	GDSCP-200	DI			
H/S-201	GAS DETECTION HORN/STROBE	GDSCP-200	DI			
H/S-202	GAS DETECTION HORN/STROBE	GDSCP-200	DI			
H/S-203	GAS DETECTION HORN/STROBE	GDSCP-200	DI			
H/S-204	GAS DETECTION HORN/STROBE	GDSCP-200	DI			
H/S-205	GAS DETECTION HORN/STROBE	GDSCP-200	DI			
LEL-200	COMBUSTIBLE GAS SENSOR	LEL-201	DI			
LEL-201	COMBUSTIBLE GAS TRANSMITTER	GDSCP-200	DO			
LEL-202	COMBUSTIBLE GAS SENSOR	LEL-203	DI			
LEL-203	COMBUSTIBLE GAS TRANSMITTER	GDSCP-200	DO			
H2S-200	HYDROGEN SULFIDE SENSOR	H2S-201	DI			
H2S-201	HYDROGEN SULFIDE TRANSMITTER	GDSCP-200	DO			
H2S-202	HYDROGEN SULFIDE SENSOR	H2S-203	DI			
H2S-203	HYDROGEN SULFIDE TRANSMITTER	GDSCP-200	DO			
O2-200	OXYGEN DEPLETION SENSOR	O2-201	DI			
O2-201	OXYGEN DEPLETION TRANSMITTER	GDSCP-200	DO			
O2-202	OXYGEN DEPLETION SENSOR	O2-201	DI			
O2-203	OXYGEN DEPLETION TRANSMITTER	GDSCP-200	DO			
BPGD-01	RUNNING	BP-CP-1	DO			
GRAVITY DRIVE (E.T.R.)	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
BPD-01	RUNNING	BP-CP-1	DO			
PRESS DRIVE (E.T.R.)	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
BPD-02	RUNNING	BP-CP-1	DO			
PRESS DRIVE (E.T.R.)	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
BPSFP-01	VFD READY STATUS	BP-CP-1	DO			0 - 60 HZ
SLUDGE FEED PUMP #1 (E.T.R.)	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BPSFP-02	VFD READY STATUS	BP-CP-1	DO			0 - 60 HZ
SLUDGE FEED PUMP #2 (E.T.R.)	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BWS-01	VFD READY STATUS	BP-CP-1	DO			0 - 60 HZ
BELT WASH SYSTEM (E.T.R.)	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
SDC-01	VFD READY STATUS	BP-CP-1	DO			0 - 60 HZ
SLUDGE DISCHARGE CONVEYOR	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
PFS-01	VFD READY STATUS	PFS-CP-01	DO			0 - 60 HZ
POLYMER FEED SYSTEM (E.T.R.)	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
PFS-CP-01 (E.T.R.)	COMMUNICATION LINK	BP-CP-01	DO			
FE-1 (E.T.R.)	MAGNETIC FLOW METER	FIT-1	DI			
FIT-1 (E.T.R.)	MAGNETIC FLOW TRANSMITTER	BP-CP-01	DO			
PS-01	PRESSURE SWITCH	BP-CP-01	DO			
SDC-02	VFD READY STATUS	BP-CP-2	DO			0 - 60 HZ
SLUDGE DISCHARGE CONVEYOR	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
SDC-02	VFD READY STATUS	BP-CP-2	DO			0 - 60 HZ
SLUDGE DISCHARGE CONVEYOR	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BPGD-02	VFD READY STATUS	BP-CP-2	DO			0 - 60 HZ
BELT PRESS #2 GRAVITY DRIVE	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			

I/O TABLE (6 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
BPD-03	VFD READY STATUS	BP-CP-2	DO			0 - 60 HZ
BELT PRESS #2 DRIVE	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BPD-03	VFD READY STATUS	BP-CP-2	DO			0 - 60 HZ
BELT PRESS #2 DRIVE	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BPD-04	VFD READY STATUS	BP-CP-2	DO			0 - 60 HZ
BELT PRESS #2 DRIVE	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BPSFP-03	VFD READY STATUS	BP-CP-2	DO			0 - 60 HZ
BELT PRESS SLUDGE FEED PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BPSFP-03	VFD READY STATUS	BP-CP-2	DO			0 - 60 HZ
BELT PRESS SLUDGE FEED PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
PFS-02	VFD READY STATUS	BP-PFS-02	DO			0 - 60 HZ
DEWATERING POLYMER PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
PFS-CP-02	COMMUNICATION LINK	BP-CP-02	DO			
FE-2	MAGNETIC FLOW METER	FIT-2	DI			
FIT-2	MAGNETIC FLOW TRANSMITTER	BP-CP-02	DO			
PS-01	PRESSURE SWITCH	BP-CP-02	DO			
P-101	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
THERM JET MOTIVE PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
FP-1	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
FOAM PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
JMP-2	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
SNDR JET MOTIVE PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
TP-1	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
TRANSFER PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BL-1	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
THERMAL BLOWER 1	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
TP-2	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
TRANSFER PUMP 2	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BL-2	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
THERMAL BLOWER 2	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			

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NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-049

PROJECT # 18-732 PHASE #

I/O TABLE (7 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
BL-3	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
SNDR BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
FAN-1	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
OFFGAS FAN	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BL-4	VFD READY STATUS	ATAD-CP	DO			0 - 60 HZ
SPARE BLOWER	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
RAD-1	RADAR FOAM LEVEL	ATAD-CP	DI			
ORP-1	ORP PROBE	LIT-ORP-2	DO			
LIT-ORP-1	ORP PROBE TRANSMITTER	ATAD-CP	DI			
VAC-1	VACUUM SENSOR	ATAD-CP	DI			
LV-1	LEVEL SENSOR	LIT-LVL-1	DO			
LIT-LV-1	LEVEL TRANSMITTER	ATAD-CP	DI			
RAD-2	RADAR FOAM LEVEL	ATAD-CP	DI			
ORP-2	ORP PROBE	LIT-ORP-2	DO			
LIT-ORP-2	ORP PROBE TRANSMITTER	ATAD-CP	DI			
VAC-2	VACUUM SENSOR	ATAD-CP	DI			
LV-2	LEVEL SENSOR	LIT-LV-2	DO			
LIT-LV-2	LEVEL TRANSMITTER	ATAD-CP	DI			
RAD-3	RADAR FOAM LEVEL	ATAD-CP	DI			
ORP-3	ORP PROBE	LIT-ORP-3	DO			
LIT-ORP-3	ORP PROBE TRANSMITTER	ATAD-CP	DI			
VAC-3	VACUUM SENSOR	ATAD-CP	DI			
LV-3	LEVEL SENSOR	LIT-LV-3	DO			
LIT-LV-3	LEVEL TRANSMITTER	ATAD-CP	DI			
FP-01	RUNNING	FPCP-700	DO			
FILTRATE PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FP-02	RUNNING	FPCP-700	DO			
FILTRATE PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FLS-700	LOW LEVEL ALARM FLOAT	FPCP-700	DI			
FLS-701	HIGH LEVEL ALARM FLOAT	FPCP-700	DI			
FLS-702	LAG PUMP ON	FPCP-700	DI			
FLS-703	LEAD PUMP ON	FPCP-700	DI			
FLS-704	PUMP OFF	FPCP-700	DI			
CTP-01	SPEED CONTROL ANALOG INPUT	R I/O-1	AI			
TRANSFER PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
CTP-02	SPEED CONTROL ANALOG INPUT	R I/O-1	AI			
TRANSFER PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
15-P-301-A	SPEED CONTROL ANALOG INPUT	R I/O-1	AI			
NAOH DUAL METERING PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
15-P-301-B	SPEED CONTROL ANALOG INPUT	R I/O-1	AI			
NAOH DUAL METERING PUMP	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
23-P-101-A	SPEED CONTROL ANALOG INPUT	R I/O-1	AI			
SODIUM HYPO METERING PUMPS	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
23-P-101-B	SPEED CONTROL ANALOG INPUT	R I/O-1	AI			
SODIUM HYPO METERING PUMPS	SPEED REFERENCE ANALOG INPUT		AI			
	RUN/STOP INPUT		AO			
	GENERAL ALARMS/STATUS INPUTS		DI			
PS-AV-01	RUNNING	R I/O-1	DO			
ACTUATOR CONTROL VALVE #1	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
PS-AV-02	RUNNING	R I/O-1	DO			
ACTUATOR CONTROL VALVE #2	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
PS-AV-03	RUNNING	R I/O-1	DO			
ACTUATOR CONTROL VALVE #3	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
PS-AV-04	RUNNING	R I/O-1	DO			
ACTUATOR CONTROL VALVE #4	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
TEMP-500	TEMPERATURE SENSOR	R I/O-1	DI			
TEMP-501	TEMPERATURE SENSOR	R I/O-1	DI			
TEMP-502	TEMPERATURE SENSOR	R I/O-1	DI			
TEMP-503	TEMPERATURE SENSOR	R I/O-1	DI			
LDS-500	LEAK DETECTION SENSOR	R I/O-1	DO			
LDS-501	LEAK DETECTION SENSOR	R I/O-1	DO			
LDS-502	LEAK DETECTION SENSOR	R I/O-1	DO			
LDS-503	LEAK DETECTION SENSOR	R I/O-1	DO			
LDS-504	LEAK DETECTION SENSOR	R I/O-1	DO			
LDS-505	LEAK DETECTION SENSOR	R I/O-1	DO			
15-LIT-301	ULTRASONIC LEVEL SENSOR	15-AE-301	DO			
15-AE-301	ULTRASONIC LEVEL TRANSMITTER	R I/O-1	DI			
15-LIT-302	ULTRASONIC LEVEL SENSOR	15-AE-302	DO			
15-AE-302	ULTRASONIC LEVEL TRANSMITTER	R I/O-1	DI			
23-LIT-101	ULTRASONIC LEVEL SENSOR	23-AE-101	DO			

I/O TABLE (8 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
23-AE-101	ULTRASONIC LEVEL TRANSMITTER	R I/O-1	DI			
23-LIT-102	ULTRASONIC LEVEL SENSOR	23-AE-102	DO			
23-AE-102	ULTRASONIC LEVEL TRANSMITTER	R I/O-1	DI			
23-LIT-103	ULTRASONIC LEVEL SENSOR	23-AE-103	DO			
23-AE-103	ULTRASONIC LEVEL TRANSMITTER	R I/O-1	DI			
ES-100	EMERGENCY EYEWASH/SHOWER	R I/O-1	DI			
FLS-500	FLOAT SWITCH	R I/O-1	DI			
FLS-501	FLOAT SWITCH	R I/O-1	DI			
FLS-502	FLOAT SWITCH	R I/O-1	DI			
FILL STATION ALARM PANEL	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
FILL STATION ALARM PANEL	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
ATS	GENERATOR START (RUNNING)	MCP	DI			
	NORMAL POWER OFF		DO			
	EMERGENCY POWER OFF		DI			
	FAULT		DO			
	GENERATOR TEST ACTIVE		DO			
SURGE PROTECTION DEVICE	COMMUNICATION LINK (ETHERNET)	R I/O-1	DO			
KWHD	COMMUNICATION LINK (ETHERNET)	R I/O-1	DO			
MBR-CP	COMMUNICATION LINK (ETHERNET)	R I/O-1	DO			
CFCP-1	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
HVAC-500	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
FACP-500	COMMUNICATION LINK (ETHERNET)	R I/O-1	DO			
	COMMUNICATION LINK (HARDWIRED)					
SCP-500	COMMUNICATION LINK (ETHERNET)	R I/O-1	DO			
GEN. ANNUNCIATOR AND DISPLAY	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
	COMMUNICATION LINK (ETHERNET)					
IP-CP-1	COMMUNICATION LINK (FIBER)	R I/O-1	DO			
DPCP-01	COMMUNICATION LINK (FIBER)	R I/O-1	DO			
PC-CP-1	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
PC-CP-2	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
PC-CP-3	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
PC-CP-4	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
SP-CP-1	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
SP-CP-2	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
SP-CP-3	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
SP-CP-4	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
PSP-CP-800	COMMUNICATION LINK (HARDWIRED)	R I/O-1	DO			
R I/O-2	COMMUNICATION LINK (FIBER)	R I/O-1	DO			
R I/O-3	COMMUNICATION LINK (FIBER)	R I/O-1	DO			
R I/O-4	COMMUNICATION LINK (FIBER)	R I/O-1	DO			
DBSC (E.T.R.)	COMMUNICATION LINK (FIBER)	R I/O-1	DO			
GRTPD-01	RUNNING	GRT-CP-01	DO			
GRIT PROPELLER DRIVE	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
GRTP-01	RUNNING	GRT-CP-01	DO			
GRIT PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
GRTW-01	RUNNING	GRT-CP-01	DO			
GRIT WASHER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
GRTPD-02	RUNNING	GRT-CP-02	DO			
GRIT PROPELLER DRIVE	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
GRTP-02	RUNNING	GRT-CP-02	DO			
GRIT PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
GRTW-02	RUNNING	GRT-CP-02	DO			
GRIT WASHER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
UE-01	FLUME LEVEL ELEMENT	UT-01	DO			
UT-01	FLUME LEVEL TRANSMITTER	GRT-CP-02	DO			
MBS-01	VFD READY STATUS	BS-CP-1	DO			0 - 60 HZ
MECHANICAL BAR SCREEN (E.T.R.)	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
LCS-1	HAND	BS-CP-1	DO			
LOCAL CONTROL STATION (E.T.R.)	OFF		DI			
	AUTO		DO			
	FORWARD		AO			
	OFF		AO			
	REVERSE		AO			
	CYCLE		AO			
	RESET		AO			
	EMERGENCY STOP		DI			
BSC-1	VFD READY STATUS	BS-CP-1	DO			0 - 60 HZ
WASHER COMPACTOR (E.T.R.)	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
ULS-1 (E.T.R.)	DOWNSTREAM ULTRASONIC LEVEL SENSOR	ULT-1	DO			
ULT-1 (E.T.R.)	ULTRASONIC LEVEL TRANSMITTER	BS-CP-1	DI			
ULS-2 (E.T.R.)	DOWNSTREAM ULTRASONIC LEVEL SENSOR	ULT-2	DO			
ULT-2 (E.T.R.)	ULTRASONIC LEVEL TRANSMITTER	BS-CP-1	DI			
FLS-1 (E.T.R.)	HIGH LEVEL FLOAT SWITCH	BS-CP-1	DI			
SV-1 (E.T.R.)	SOLENOID VALVE	BS-CP-1	DI			
SV-2 (E.T.R.)	COMPACTOR SOLENOID VALVE	BS-CP-1	DI			
SV-3 (E.T.R.)	WASH MODULE SOLENOID VALVE	BS-CP-1	DI			
MBS-02	VFD READY STATUS	BS-CP-2	DO			0 - 60 HZ
BAR SCREEN DRIVE	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			

I/O TABLE (9 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
LCS-2	HAND	BS-CP-1	DO			0 - 60 HZ
LOCAL CONTROL STATION	OFF		DI			
	AUTO		DO			
	FORWARD		AO			
	OFF		AO			
	REVERSE		AO			
	CYCLE		AO			
	RESET		AO			
	EMERGENCY STOP		DI			
MBS-02	VFD READY STATUS	BS-CP-2	DO			0 - 60 HZ
BAR SCREEN DRIVE	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
BCS-02	VFD READY STATUS	BS-CP-2	DO			0 - 60 HZ
BAR SCREEN DRIVE	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
ULS-3	DOWNSTREAM ULTRASONIC LEVEL SENSOR	ULT-3	DO			
ULT-3	ULTRASONIC LEVEL TRANSMITTER	BS-CP-2	DI			
ULS-4	DOWNSTREAM ULTRASONIC LEVEL SENSOR	ULT-4	DO			
ULT-4	ULTRASONIC LEVEL TRANSMITTER	BS-CP-2	DI			
FLS-3	HIGH LEVEL FLOAT SWITCH	BS-CP-1	DI			
SV-4	SOLENOID VALVE	BS-CP-1	DI			
SV-5	COMPACTOR SOLENOID VALVE	BS-CP-1	DI			
SV-6	WASH MODULE SOLENOID VALVE	BS-CP-1	DI			
R I/O-1	COMMUNICATION LINK (FIBER)	MCP	DO			
SURGE PROTECTION DEVICE	COMMUNICATION LINK (ETHERNET)	MCP	DO			
KWHD	COMMUNICATION LINK (ETHERNET)	MCP	DO			
SCP-900	COMMUNICATION LINK (ETHERNET)	MCP	DO			
FACP	COMMUNICATION LINK (HARDWIRED)	MCP	DO			
	COMMUNICATION LINK (ETHERNET)					
DATA RACK	COMMUNICATION LINK (ETHERNET)	MCP	DO			
WFS-900	WET FLOOR SENSOR	MCP	DO			
WFS-901	WET FLOOR SENSOR	MCP	DO			
TEMP-900	TEMPERATURE SENSOR	MCP	DO			
TEMP-901	TEMPERATURE SENSOR	MCP	DO			
DESKTOP COMPUTER	ETHERNET TUNNEL CLIENT SOFTWARE	TABLET	DO			
CHLOR-CWP-1	RUNNING	DBSC	DO			
CARRIER PUMP 1 (E.T.R.)	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
CHLOR-CWP-2	RUNNING	DBSC	DO			
CARRIER PUMP 2 (E.T.R.)	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
DECHLOR-CWP-1	RUNNING	DBSC	DO			
CARRIER PUMP 2 (E.T.R.)	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FE-1 (E.T.R.)	FLOW ELEMENT	FET-1	DO			
FET-1 (E.T.R.)	FLOW ELEMENT TRANSMITTER	DBSC	DI			
FE-2 (E.T.R.)	CCT CHLORINE ANALYZER	FET-2	DO			
FET-2 (E.T.R.)	CHLORINE CONTROLLER	DBSC	DI			
FE-3 (E.T.R.)	RESIDUAL CHLORINE ANALYZER	FET-3	DO			
FET-3 (E.T.R.)	CHLORINE CONTROLLER	DBSC	DI			
FE-4 (E.T.R.)	LEVEL ELEMENT	FET-4	DO			
FET-4 (E.T.R.)	SODIUM HYPO LEVEL TRANSMITTER 1	DBSC	DI			
FE-5 (E.T.R.)	LEVEL ELEMENT	FET-5	DO			
FET-5 (E.T.R.)	SODIUM HYPO LEVEL TRANSMITTER 2	DBSC	DI			
FE-6 (E.T.R.)	LEVEL ELEMENT	FET-6	DO			
FET-6 (E.T.R.)	SODIUM BISULFATE LEVEL TRANSMITTER 1	DBSC	DI			
FE-7 (E.T.R.)	LEVEL ELEMENT	FET-7	DO			
FET-7 (E.T.R.)	SODIUM BISULFATE LEVEL TRANSMITTER 2	DBSC	DI			
DOS-AE-1	DISSOLVED OXYGEN ELEMENT	DOS-1	DO			
DOS-1	DISSOLVED OXYGEN TRANSMITTER	DBSC	DI			
DOS-AE-2	DISSOLVED OXYGEN ELEMENT	DOS-2	DO			
DOS-2	DISSOLVED OXYGEN TRANSMITTER	DBSC	DI			
UT-AE-03	ULTRASONIC LEVEL ELEMENT	UT-03	DO			
UT-03	ULTRASONIC TRANSMITTER	DBSC	DI			
UT-AE-04	ULTRASONIC LEVEL ELEMENT	UT-04	DO			
UT-04	ULTRASONIC TRANSMITTER	DBSC	DI			
PWCP-600	COMMUNICATION LINK (ETHERNET)	DBSC	DO			
IP-01	VFD READY STATUS	IP-CP-1	DO			0 - 60 HZ
INFLUENT PUMP #1	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
IP-02	VFD READY STATUS	IP-CP-1	DO			0 - 60 HZ
INFLUENT PUMP #2	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
IP-03	VFD READY STATUS	IP-CP-1	DO			0 - 60 HZ
INFLUENT PUMP #3	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
LS-5	LEVEL SENSOR	LT-5	DO			
LT-5	LEVEL TRANSMITTER	IP-CP-1	DI			
LS-6	LEVEL SENSOR	LT-6	DO			
LT-6	LEVEL TRANSMITTER	IP-CP-1	DI			
FL-3	LEVEL FLOAT	IP-CP-1	DI			
FL-4	LEVEL FLOAT	IP-CP-1	DI			

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-050

PROJECT # 18-732 PHASE #

I/O TABLE (10 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
FL-5	LEVEL FLOAT	IP-CP-1	DI			
FL-6	LEVEL FLOAT	IP-CP-1	DI			
TEMP-504	TEMPERATURE SENSOR	IP-CP-1	DI			
WFS-504	WET FLOOR SENSOR	IP-CP-1	DI			
SURGE PROTECTION DEVICE	COMMUNICATION LINK (ETHERNET)	IP-CP-1	DO			
MS-CP-1	COMMUNICATION LINK (ETHERNET)	IP-CP-1	DO			
MS-CP-2	COMMUNICATION LINK (ETHERNET)	IP-CP-1	DO			
RDT-01	RUNNING	RDT-CP	DO			
ROTARY DRUM THICKENER	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
RDT-FP-01	VFD READY STATUS	RDT-CP	DO			0 - 60 HZ
SLUDGE FEED PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
RDT-WW-01	VFD READY STATUS	RDT-CP	DO			0 - 60 HZ
SLUDGE FEED PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
RDT-TSP-01	RUNNING	RDT-CP	DO			
THICKENED SLUDGE PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
RDT-PB-01	VFD READY STATUS	PFS-02	DO			0 - 60 HZ
POLYMER PUMP	VFD CALL TO RUN		DI			
	VFD SPEED CONTROL		AI			
	VFD SPEED REFERENCE		AO			
	VFD FAULT		DO			
	AUTO MODE		DO			
	MOTOR HIGH TEMPERATURE		DI			
	MOTOR DISCONNECT POSITION		DO			
FE-3	MAGNETIC FLOW METER	FIT-3	DO			
FIT-3	MAGNETIC FLOW TRANSMITTER	RDT-CP	DI			
PS-03	PRESSURE SWITCH	RDT-CP	DI			
P-SP-01	RUNNING	PSCP-800	DO			
PRIMARY CLARIFIER PUMP NO. 1	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
P-SP-02	RUNNING	PSCP-800	DO			
PRIMARY CLARIFIER PUMP NO. 2	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
PS-SP-01	DISCHARGE PRESSURE SWITCH NO. 1	PSCP-800	DI			
PS-SP-02	DISCHARGE PRESSURE SWITCH NO. 2	PSCP-800	DI			
FLS-800	HIGH LEVEL BACKUP FLOAT	PSCP-800	DI			
FLS-801	LOW LEVEL BACKUP FLOAT	PSCP-800	DI			
LT-800	LEVEL TRANSDUCER	LTT-800	DO			
LTT-800	LEVEL TRANSDUCER	PSCP-800	DI			
SUBP-01	RUNNING	DPCP-01	DO			
SUBMERSIBLE PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
SUBP-02	RUNNING	DPCP-01	DO			
SUBMERSIBLE PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FLS-01	HIGH LEVEL ALARM	DPCP-01	DI			
FLS-02	LAG PUMP ON	DPCP-01	DI			
FLS-03	LEAD PUMP ON	DPCP-01	DI			
FLS-04	PUMP OFF	DPCP-01	DI			
LT-01	LEVEL TRANSDUCER	DPCP-01	DI			
SUBP-03	RUNNING	DPCP-02	DO			
SUBMERSIBLE PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
SUBP-04	RUNNING	DPCP-02	DO			
SUBMERSIBLE PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FLS-05	HIGH LEVEL ALARM	DPCP-02	DI			
FLS-06	LAG PUMP ON	DPCP-02	DI			
FLS-07	LEAD PUMP ON	DPCP-02	DI			
FLS-08	PUMP OFF	DPCP-02	DI			
LT-02	LEVEL TRANSDUCER	DPCP-02	DI			
SP-01	RUNNING	SP-CP-1	DO			
SCUM PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FLS-01	HIGH LEVEL BACKUP FLOAT	SP-CP-1	DI			
FLS-02	HIGH LEVEL BACKUP FLOAT	SP-CP-1	DI			
LT-001	LEVEL TRANSDUCER	LTT-001	DI			
LTT-001	LEVEL TRANSMITTER	SP-CP-1	DO			
SP-02	RUNNING	SP-CP-2	DO			
SCUM PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FLS-03	HIGH LEVEL BACKUP FLOAT	SP-CP-2	DI			
FLS-04	HIGH LEVEL BACKUP FLOAT	SP-CP-2	DI			
LT-002	LEVEL TRANSDUCER	LTT-002	DI			
LTT-002	LEVEL TRANSMITTER	SP-CP-2	DO			
SP-03	RUNNING	SP-CP-3	DO			
SCUM PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FLS-05	HIGH LEVEL BACKUP FLOAT	SP-CP-3	DI			
FLS-06	HIGH LEVEL BACKUP FLOAT	SP-CP-3	DI			
LT-003	LEVEL TRANSDUCER	LTT-003	DI			
LTT-003	LEVEL TRANSMITTER	SP-CP-3	DO			

I/O TABLE (11 OF 11)

EQUIPMENT	FUNCTION	HOMERUN	I/O TYPE	INDICATE	SURGE PROTECTION	UNITS/RANGE
SP-04	RUNNING	SP-CP-4	DO			
SCUM PUMP	FAULT		DI			
	CALL TO RUN		DO			
	MOTOR HIGH TEMPERATURE		DI			
FLS-07	HIGH LEVEL BACKUP FLOAT	SP-CP-4	DI			
FLS-08	HIGH LEVEL BACKUP FLOAT	SP-CP-4	DI			
LT-004	LEVEL TRANSDUCER	LTT-004	DI			
LTT-004	LEVEL TRANSMITTER	SP-CP-4	DO			
WFS-700	WET FLOOR SENSOR	R I/O-2	DI			
WFS-701	WET FLOOR SENSOR	R I/O-2	DI			
TEMP-700	TEMPERATURE SENSOR	R I/O-2	DI			
TEMP-701	TEMPERATURE SENSOR	R I/O-2	DI			
BELT PRESS CONTROL PANEL (E.T.R.)	COMMUNICATION LINK (ETHERNET)	R I/O-2	DO			
BPCP-700	COMMUNICATION LINK (ETHERNET)	R I/O-2	DO			
HVAC-700	COMMUNICATION LINK (HARDWIRED)	R I/O-2	DO			
FPCP-700	COMMUNICATION LINK (HARDWIRED)	R I/O-2	DO			
FACP-700	COMMUNICATION LINK (HARDWIRED)	R I/O-2	DO			
	COMMUNICATION LINK (ETHERNET)					
SCP-700	COMMUNICATION LINK (HARDWIRED)	R I/O-2	DO			
DATA RACK	COMMUNICATION LINK (HARDWIRED)	R I/O-2	DO			
SURGE PROTECTION DEVICE	COMMUNICATION LINK (HARDWIRED)	R I/O-2	DO			
KWHD	COMMUNICATION LINK (HARDWIRED)	R I/O-2	DO			
TEMP-200	TEMPERATURE SENSOR	R I/O-3	DI			
TEMP-201	TEMPERATURE SENSOR	R I/O-3	DI			
TEMP-202	TEMPERATURE SENSOR	R I/O-3	DI			
WFS-200	WET FLOOR SENSOR	R I/O-3	DI			
HT-01	COMMUNICATION LINK (HARDWIRED)	R I/O-3	DO			
HT-02	COMMUNICATION LINK (HARDWIRED)	R I/O-3	DO			
UE-01	FLUME LEVEL ELEMENT	UT-01	DO			
UT-01	FLUME LEVEL TRANSMITTER	R I/O-3	DI			
SURGE PROTECTOR DEVICE	COMMUNICATION LINK (ETHERNET)	R I/O-3	DI			
KWHD	COMMUNICATION LINK (ETHERNET)	R I/O-3	DI			
SCP-4200	COMMUNICATION LINK (ETHERNET)	R I/O-3	DI			
BAR SCREEN CONTROL PANEL (E.T.R.)	COMMUNICATION LINK (HARDWIRED)	R I/O-3	DO			
	COMMUNICATION LINK (ETHERNET)					
BAR SCREEN BS-CP-2	COMMUNICATION LINK (HARDWIRED)	R I/O-3	DO			
	COMMUNICATION LINK (ETHERNET)					
GRT-CP-1	COMMUNICATION LINK (HARDWIRED)	R I/O-3	DO			
	COMMUNICATION LINK (ETHERNET)					
GRT-CP-2	COMMUNICATION LINK (HARDWIRED)	R I/O-3	DO			
	COMMUNICATION LINK (ETHERNET)					
GDSCP-200	COMMUNICATION LINK (HARDWIRED)	R I/O-3	DO			
CO	CARBON MONOXIDE/SMOKE DETECTOR	R I/O-3	DI			
TEMP-400	TEMPERATURE SENSOR	R I/O-4	DI			
TEMP-401	TEMPERATURE SENSOR	R I/O-4	DI			
WFS-1	WET FLOOR SENSOR	R I/O-4	DI			
WFS-2	WET FLOOR SENSOR	R I/O-4	DI			
RDT-400	COMMUNICATION LINK (ETHERNET)	R I/O-4	DO			
DPCP-02	COMMUNICATION LINK (HARDWIRED)	R I/O-4	DO			
SURGE PROTECTION DEVICE	COMMUNICATION LINK (ETHERNET)	R I/O-4	DO			
KWHD	COMMUNICATION LINK (ETHERNET)	R I/O-4	DO			
ATAD-CP	COMMUNICATION LINK (ETHERNET)	R I/O-4	DO			
SCP-400	COMMUNICATION LINK (ETHERNET)	R I/O-4	DO			
HVAC-400	COMMUNICATION LINK (HARDWIRED)	R I/O-4	DO			
FACP	COMMUNICATION LINK (HARDWIRED)	R I/O-4	DO			

GENERAL SCHEDULE NOTES:

1. I/O TABLE IS INTENDED TO GIVE A GENERAL PERSPECTIVE OF I/O QUANTITIES. FINAL I/O TO BE COORDINATED WITH EQUIPMENT MANUFACTURERS, OWNER, AND CONTRACT #1. PROVIDE 20% SPARE I/O CAPACITY IN ALL CONTROL PANELS PROVIDED AS PART OF THIS CONTRACT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. ALL AVAILABLE STATUS, ALARMS, AND CONTROL POINTS FOR THE WWTP PROCESS SYSTEMS SHALL BE INTEGRATED INTO THE CONTROL NETWORK. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH THE OWNER AND ENGINEER.
4. UNITS/RANGE COLUMN FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE COORDINATED BY OTHERS.
5. GENERAL ABBREVIATIONS : DI - DIGITAL INPUT, DO - DATA OUTPUT, AI - ANALOG INPUT, AO - ANALOG OUTPUT

REMARKS:

1. ALL EXISTING SIGNALS (I/O) AVAILABLE FROM THE EXISTING EQUIPMENT ARE TO BE EXTENDED AND MODIFIED TO THE PROPOSED PANEL AS INDICATED. REFER TO THE ELECTRICAL RISER DIAGRAMS & FLOOR PLANS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CONTRACTOR TO FIELD VERIFY, CLOSELY COORDINATE ALL EXISTING TO REMAIN SIGNALS WITH THE OWNER/ENGINEER AND PROVIDE CIRCUITRY (CONDUIT & CONDUCTORS) AS REQUIRED. ALL EXISTING TO REMAIN SIGNALS (I/O) AVAILABLE ARE TO BE INTEGRATED INTO THE CONTROL NETWORK AS SPECIFIED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. FOR BIDDING PURPOSES, CONTRACTOR TO ASSUME AN ADDITIONAL TWELVE (12) DISCRETE SIGNALS AND TWO (2) ANALOG SIGNALS ASSOCIATED WITH EXISTING I/O TO BE EXTENDED TO PROPOSED PANEL.

MHE ENGINEERING

33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100

111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2

145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-051

PROJECT # 18-732 PHASE #

CAESARS LANE WWTP
NEW WINDSOR, NEW YORK

Demand Load Calculations

LOCATION - MAIN ELECTRICAL SERVICE

No.	Process	Item Description	Quantity	Volts	Phase	FLA	KW	PF	KVA	LOAD Diversity	Demand Load (KVA)	Load Type	LOAD (KVA) Lighting (L)	Recept. (R)	Equipment Continous (C)	Equipment Non-cont. (N)	MECHANICAL EQUIPMENT All Season (A)	MECHANICAL EQUIPMENT Cooling (AC)	MECHANICAL EQUIPMENT Heating (H)
1	CONTROL BUILDING 4500 SQFT	PROPANE WATER HEATER	1	120	1	15	1.80	1.00	1.80	1.00	1.80	N				1.80			
2	HVP2 DEMAND AMPS = 28	MISC	1	480	3	10	8.31	1.00	8.31	1.00	8.31	N				8.31			
3		HEATING	2	480	3	4	6.65	1.00	6.65	1.00	6.65	H							6.65
4		LIGHTS	1	120	1	31	3.72	1.00	3.72	1.00	3.72	L	3.72						
5		VENTILATION	1	120	1	3.33	0.40	1.00	0.40	1.00	0.40	A					0.40		
6		RECEPTACLE	40	120	1	1.5	7.20	1.00	7.20	1.00	7.20	R		7.20					
7		FURNACE	2	120	1	12.8	3.07	1.00	3.07	1.00	3.07	H							3.07
8	HEADWORKS 2494 SQFT	MBS-01 BAR SCREEN 1/2 HP (EXISTING)	1	240	3	2.2	0.91	1.00	0.91	1.00	0.91	C			0.91				
9	HVP3 @125% = 138A	BSC-1 WASHER COMPACTOR 3/4 HP (EXISTING)	1	240	3	3.2	1.33	1.00	1.33	1.00	1.33	N				1.33			
10		MBS-02 BAR SCREEN 1 HP	1	480	3	2.1	1.75	1.00	1.75	1.00	1.75	C			1.75				
11		BSC-2 WASHER COMPACTOR 1 HP	1	480	3	2.1	1.75	1.00	1.75	1.00	1.75	N				1.75			
12		GRTP01-01, 02 GRIT PROP DRIVE 1.5 HP	2	480	3	3	4.99	1.00	4.99	1.00	4.99	C			4.99				
13		GRTP-01, 02 GRIT PUMP 7.5 HP	2	480	3	11	18.29	1.00	18.29	1.00	18.29	N				18.29			
14		GRTW-01, 02 GRIT WASHER 3 HP	2	480	3	4.8	7.98	1.00	7.98	1.00	7.98	N				7.98			
15		VENTILATION	1	120	1	6.72	0.81	1.00	0.81	1.00	0.81	A					0.81		
16		MISC	1	480	3	10	8.31	1.00	8.31	1.00	8.31	N				8.31			
17		HEATING	1	480	3	94	78.15	1.00	78.15	1.00	78.15	H							78.15
18		LIGHTS	1	120	1	17.66	2.12	1.00	2.12	1.00	2.12	L	2.12						
19		RECEPTACLE	25	120	1	1.5	4.50	1.00	4.50	1.00	4.50	R		4.50					
20	MBR BUILDING 3744 SQFT	20-B-201-A/B/C/D/E MEMBRANE BLOWER 60 HP	5	480	3	77	320.08	1.00	320.08	0.60	192.05	C			192.05				
21	MCC1 @125% = 929A	16-B-401-A/B/C PROCESS BLOWER 150 HP	3	480	3	180	449.95	1.00	449.95	0.67	299.30	C			299.30				
22	HVP1 @125% = 318A	16-MX-211-1/2/3 ANOXIC SUBMERSIBLE PUMP 8 HP	3	480	3	14	34.92	1.00	34.92	1.00	34.92	C			34.92				
23		20-P-501-A/B/C/D CENTRIFUGAL PUMP 30 HP	4	480	3	40	133.02	1.00	133.02	0.75	99.77	N				99.77			
24		90-AC-001-A/B AIR COMPRESSOR 7.5 HP	2	480	3	11	18.29	1.00	18.29	0.50	9.15	N				9.15			
25		PCD-01.02.03.04 PRIMARY DRIVE 1 HP	4	480	3	2.1	6.98	1.00	6.98	1.00	6.98	C			6.98				
26		SP-01.02.03.04 SCUM PUMPS 5 HP	4	480	3	7.6	25.27	1.00	25.27	0.75	18.96	N				18.96			
27		MISC	1	480	3	10	8.31	1.00	8.31	1.00	8.31	N				8.31			
28		ELECTRIC WATER HEATER	1	480	3	17.44	14.50	1.00	14.50	1.00	14.50	N				14.50			
29		HEATING 208	1	208	3	100	36.03	1.00	36.03	1.00	36.03	H							36.03
30		HEATING 480	1	480	3	346.6	205.02	1.00	205.02	1.00	205.02	H							205.02
31		VENTILATION 120	1	120	1	25	3.00	1.00	3.00	1.00	3.00	A					3.00		
32		VENTILATION 208	1	208	1	75	15.60	1.00	15.60	1.00	15.60	A					15.60		
33		DEHUMIDIFIER	1	120	1	10	1.20	1.00	1.20	1.00	1.20	N				1.20			
34		90-DR-001-A/B REF AIR DRIER 1 HP	2	120	1	10	2.40	1.00	2.40	0.50	1.20	N				1.20			
35		RECEPTACLE	35	120	1	1.5	6.30	1.00	6.30	1.00	6.30	R		6.30					
36		CTP-01.02 TRANSFER PUMPS 1/2 HP	2	120	1	10	2.40	1.00	2.40	0.50	1.20	N				1.20			
37		LIGHTS	1	120	1	27	3.24	1.00	3.24	1.00	3.24	L	3.24						
38		20-P-321-1/2/3/4 TURBIDITY SAMPLING PUMPS 1/5 HP	4	120	1	4.4	2.11	1.00	2.11	0.50	1.06	N				1.06			
39		CHEMICAL METERING PUMPS	4	120	1	4.4	2.11	1.00	2.11	0.50	1.06	N				1.06			
40		P-SP-01/02 PRIMARY SLUDGE PUMP	2	480	3	4.8	7.98	1.00	7.98	0.50	3.99	N				3.99			
41		PS-AV-01/02/03/04 SLUDGE VALVES	4	120	1	4.4	2.11	1.00	2.11	0.50	1.06	N				1.06			
42		LAYDOWN PUMP	2	480	3	3.4	5.65	1.00	5.65	0.50	2.83	N				2.83			
43		DUCTLESS SPLIT SYSTEM	1	208	1	20	4.16	1.00	4.16	1.00	4.16	AC						4.16	
44	ATAD EQP BLDG 1809 SQFT	THERMAER JET 100 HP	2	480	3	124	206.18	1.00	206.18	1.00	206.18	C			206.18				
45	MCC2 @125% = 992A	SNDR JET 60 HP	1	480	3	77	64.02	1.00	64.02	1.00	64.02	C			64.02				
46		TRANSFER PUMP 10 HP	2	480	3	14	23.28	1.00	23.28	0.50	11.64	N				11.64			
47		THERMAER BLOWER 40 HP	2	480	3	52	86.46	1.00	86.46	1.00	86.46	C			86.46				
48		SNDR BLOWER 40 HP	1	480	3	52	43.23	1.00	43.23	1.00	43.23	C			43.23				
49		SPARE BLOWER 60 HP	1	480	3	77	64.02	1.00	64.02	1.00	64.02	STANDBY							
50		SLUDGE HOLDING BLOWER 60 HP	1	480	3	77	64.02	1.00	64.02	1.00	64.02	C			64.02				
51		OFF GAS FAN 30 HP	1	480	3	40	33.26	1.00	33.26	1.00	33.26	C			33.26				
52		RDT WASH WATER BOOSTER PUMP	1	480	3	3.4	2.83	1.00	2.83	1.00	2.83	N				2.83			
53		POLYMER FEED PUMP	1	120	1	9.8	2.35	2.00	1.18	1.00	1.18	N				1.18			
54		RDT-TSP-01 RDT THICKENED SLUDGE PUMP 20 HP	1	480	3	27	22.45	1.00	22.45	1.00	22.45	N				22.45			
55		RDT-FP-01 RDT SLUDGE FEED PUMP 20 HP	1	480	3	27	22.45	1.00	22.45	1.00	22.45	N				22.45			
56		POLYMER MIXER	1	120	1	9.8	1.18	1.00	1.18	1.00	1.18	N				1.18			
57		RTD-01 ROTARY DUM THICKENER 1 HP	2	480	3	2.1	3.49	1.00	3.49	1.00	3.49	N				3.49			
58		POLYMER BOOSTER PUMP	1	120	1	9.8	1.18	1.00	1.18	1.00	1.18	N				1.18			
59		COOLING WATER PUMP 30 HP	2	480	3	40	66.51	1.00	66.51	0.50	33.26	N				33.26			
60		BELT PRESS SLUDGE FEED PUMPS 15 HP	2	480	3	21	34.92	1.00	34.92	0.50	17.46	N				17.46			
61		RECEPTACLE	10	120	1	1.5	1.80	1.00	1.80	1.00	1.80	R		1.80					
62		MISC	1	480	3	10	8.31	1.00	8.31	1.00	8.31	N				8.31			
63		LIGHTS	1	120	1	16	1.92	1.00	1.92	1.00	1.92	L	1.92						
64		VENTILATION	1	208	1	15	3.12	1.00	3.12	1.00	3.12	A					3.12		
65		ELECTRIC WATER HEATER	1	480	3	14.44	12.01	1.00	12.01	1.00	12.01	N				12.01			
66		DUCTLESS SPLIT SYSTEM	1	208	1	20	4.16	1.00	4.16	1.00	4.16	AC						4.16	
67		HEATING	1	480	3	82	68.17	1.00	68.17	1.00	68.17	H							68.17
68	GARAGE 2400 SQFT	RECEPTACLE	20	120	1	1.5	3.60	1.00	3.60	1.00	3.60	R		3.60					
69	HVP7 @125% = 75A	MISC	1	480	3	10	8.31	1.00	8.31	1.00	8.31	N				8.31			
70		LIGHTS	1	120	1	20	2.40	1.00	2.40	1.00	2.40	L	2.40						
71		HOIST 5 HP	1	208	3	16.7	6.02	1.00	6.02	1.00	6.02	N				6.02			
72		AIR COMPRESSOR 7.5HP	1	480	3	11	9.15	1.00	9.15	1.00	9.15	N				9.15			
73		LATHE MILLING MACHINE 2 HP	1	208	1	13.2	2.75	1.00	2.75	1.00	2.75	N				2.75			
74		Welding Receptacle 208V 40A 1PH	3	208	1	32	19.97	1.00	19.97	0.33	6.66	N				6.66			
75		ELECTRIC WATER HEATER	1	120	1	11.66	1.40	1.00	1.40	1.00	1.40	N				1.40			
76		VENTILATION	1	120	1	10	1.20	1.00	1.20	1.00	1.20	A					1.20		
77		HEATING	1	480	3	37	30.76	1.00	30.76	1.00	30.76	H							30.76
78	MICROSCREEN BLDG	IP-01, 02, 03 INFLUENT PUMPS 60	3	480	3	77	192.05	1.00	192.05	0.67	128.03	C			128.03				
79	HVP8 @125% = 261A	MCR-01, 02 MICROSCREEN 3/4 HP	2	480	3	1.6	2.66	1.00	2.66	1.00	2.66	C			2.66				
80		CMP-01, 02 COMPACTOR 1.5 HP	2	480	3	3	4.99	1.00	4.99	1.00	4.99	N				4.99			
81		MISC	1	480	3	10	8.31	1.00	8.31	1.00	8.31	N				8.31			
82		HEATING	1	480	3	54.2	45.06	1.00	45.06	1.00	45.06	H							45.06
83		RECEPTACLE	15	120	1	1.5	2.70	1.00	2.70	1.00	2.70	R		2.70					
84		LIGHTS	1	120	1	3	0.36	1.00	0.36	1.00	0.36	L	0.36						
85		VENTILATION	1	120	1	10	1.20	1.00	1.20	1.00	1.20	A					1.20		
86	CHEM FEED BLDG 630 SQFT	CHEM FEED PUMP (EXISTING)	4	120	1	4.4	2.11	1.00	2.11	0.50	1.06	N				1.06			
87	HVP9 @125% = 225A	CHEMICAL CARRIER WATER PUMP 1/2 HP (EXISTING)	3	120	1	9.8	3.53	1.00	3.53	0.66	2.33	N				2.33			
88		RECEPTACLE	25	120	1	1.5	4.50	1.00	4.50	1.00	4.50	R		4.50					
89		VENTILATION	1	120	1	10	1.20	1.00	1.20	1.00	1.20	A					1.20		
90		LIGHTS	1	120	1	5	0.60	1.00	0.60	1.00	0.60	L	0.60						
91		TANKLESS WATER HEATER	1	208	3	67	24.14	1.00	24.14	1.00	24.14	N				24.14			
92		PAB-01.02 BLOWER 20 HP	2	480	3	27	44.89	1.00	44.89	1.00	44.89	C			44.89				
93		20-P-610-A/B BACKPULSE PUMPS 56 HP	2	480	3	77	128.03	1.00	128.03	0.50	64.02	N				64.02			
94		MISC	1	480	3	10	8.31	1.00	8.31	1.00	8.31	N				8.31			
95		HEATING	1	208	1	31	6.45	1.00	6.45	1.00	6.45	H							6.45
96		DUCTLESS SPLIT SYSTEM	1	208	1	18	3.74	1.00	3.74	1.00	3.74	AC						3.74	
97	PLANT WATER	PW-1 40 HP	2	480	3	52	86.46	1.00	86.46	0.50	43.23	N				43.23			
98	DEWATERING BLDG 3530 SQFT	BELT PRESS GRAVITY DRIVE 2 HP	2	480	3	3.4	5.65	1.00	5.65	1.00	5.65	N				5.65			
99	HVP4 @125% = 141A	BELT PRESS DRIVE 1.5 HP	4	480	3	3	9.98	1.00	9.98	1.00	9.98	N				9.98			
100		BELT PRESS FEEDBOX DRIVE	2	480	3	1.1	1.83	1.00	1.83	1.00	1.83	N				1.83			
101		POLYMER FEED SYSTEM	2	120	1	20	4.80	1.00	4.80	1.00	4.80	N				4.80			
102		BELT PRESS HYDRAULIC UNIT	2	480	3	4.8	7.98	1.00	7.98	1.00	7.98	N				7.98			
103		BELT PRESS WASH WATER 10 HP	2	480	3	14	23.28	1.00	23.28	1.00	23.28	N				23.28			
104		DISCHARGE CONVEYOR 7.5 HP	3	480	3	11	27.44	1.00	27.44	1.00	27.44	N				27.44			
105		SUMP PUMP 2 HP	2	480	3	3.4	5.65	1.00	5.65	0.50	2.83	N				2.83			
106		WINCH	2	480	3	7.6	12.64	1.00	12.64	0.50	6.32	N				6.32			
107		HOT WATER HEATER	1	120	1	20	2.40	1.00	2.40	1.00	2.40	N				2.40			
108		HEATING	1	480	3	20	16.63	1.00	16.63	1.00	16.63	H							16.63
109		VENTILATION	1	208	1	25.6	5.32	1.00	5.32	1.00	5.32	A					5.32		
110		DUCTLESS SPLIT SYSTEM	2	208	1	20	8.32	1.00	8.32	1.00	8.32	AC						8.32	
111		MISC	1	480	3	10	8.31	1.00	8.31	1.00	8.31	N				8.31			
112		FURNACE	1	120	1	12.8	1.54	1.00	1.54	1.00	1.54	H							1.54
113		LIGHTS	1	120	1	25	3.00	1.00	3.00	1.00	3.00	L	3.00						
114		RECEPTACLE	40	120	1	1.5	7.20	1.00	7.20	1.00	7.20	R		7.20					
		SUB-TOTALS					**3121.8**		**3120.6**		**2823.5**		17.36	37.80	1,213.65	640.93	31.85	20.38	497.53

SERVICE ENTRANCE	
VOLTAGE	480
PHASE	3
AMPS	2451.51

TOTAL DEMAND LOAD

Load Type	Connected kVA	Factor	Demand kVA
Lighting	17.36	1	17.36
Receptacles	10.00 | 27.8	0.5	23.90
Equipment: Continuous	1213.65	1	1213.65
Equipment: Non-Continuous	640.93	0.66	423.02
Mechanical: Concurrent	31.85	1	31.85
Mech: Non-Concurrent	497.53	0.66	328.37
TOTAL KVA	2,439.12		2,038.15

FEEDER DEMAND: CONSERVATIVE

DEMAND kVA	DEMAND AMPS	%	SERVICE SIZE
2038.1	2451.5	125%	3064

FEEDER DEMAND: NEC

	DEMAND kVA	DEMAND AMPS	%	SERVICE SIZE
Lighting	17.4	20.9	125%	26
Receptacle	23.9	28.7	100%	29
Equipment: Continuous	1213.7	1459.8	125%	1825
Equipment: Non-Continuous	423.0	508.8	100%	509
Mech: Concurrent	31.9	38.3	100%	38
Mech: Non-Concurrent	328.4	395.0	100%	395
Largest motor	150.0	180.4	25%	45
TOTALS	2188.1	2631.9	109%	2867

1 E-051 ELECTRICAL SERVICE DEMAND/LOADING CALCULATION
SCALE: NTS — CAESAR'S LANE WWTP

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE: 18 APRIL, 2025
DESIGN BY: RRM
DRAWN BY: CDJ
CHECKED BY: MGR
REVIEWED BY: JER

SHEET NO.
E-052

PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, CONTROL STATIONS, AND ALL ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   - 2.6. REVISE PANELBOARD DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED. COORDINATE REMOVAL EFFORTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.
7. CONTRACTOR TO COORDINATE SEQUENCE OF REMOVALS WITH THE OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR. NOTE, WWTP MUST REMAIN OPERATIONAL AT ALL TIMES. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAMS FOR ADDITIONAL INFORMATION.
8. NOT ALL EQUIPMENT/DEVICES WITHIN THE WWTP ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE CONTRACTOR TO REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. CONTRACTOR TO FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER, TYPICAL.
10. NOT ALL EXISTING UNDERGROUND UTILITIES SHOWN FOR CLARITY. REFER TO CIVIL SITE PLANS AND GENERAL NOTES ON SHEET E-001 FOR ADDITIONAL SITE INFORMATION. CONTRACTOR TO FIELD VERIFY AS REQUIRED.
11. NOT ALL EXISTING UNDERGROUND/SUB-SURFACE ELECTRICAL DUCT BANKS, FEEDERS, AND BRANCH CIRCUITS SHOWN FOR CLARITY. REFER TO ELECTRICAL SINGLE LINE DIAGRAM DEMOLITION SHEETS FOR REMOVAL INFORMATION.
12. ALL UTILITY CHARGES RESULTING FROM THE REMOVAL OF THE EXISTING ELECTRICAL SERVICE SHALL BE BILLED DIRECTLY TO THE OWNER FROM THE UTILITY COMPANY.

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO ALL TRADE CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED, UOI.
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, PADS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

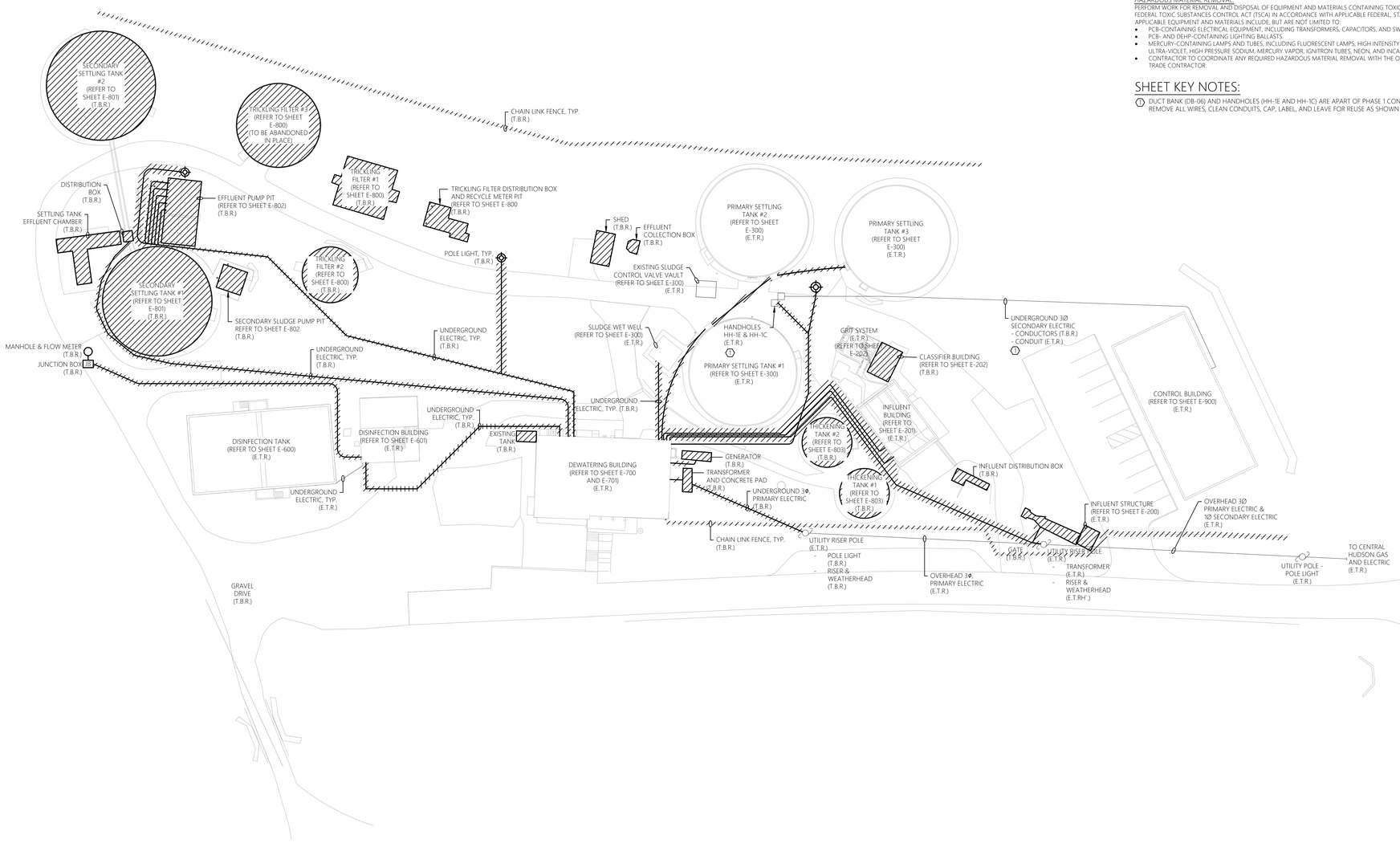
CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.

SHEET KEY NOTES:

(1) DUCT BANK (DB-06) AND HANDHOLES (HH-1E AND HH-1C) ARE APART OF PHASE 1 CONSTRUCTION. CONTRACTOR TO REMOVE ALL WIRES, CLEAN CONDUITS, CAP, LABEL, AND LEAVE FOR REUSE AS SHOWN ON NEW WORK PLANS.



0' 10' 20' 40'
SCALE: 1" = 20'

1 / E-100 ELECTRICAL SITE PLAN - DEMOLITION
SCALE: 1" = 20'-0" CAESARS LANE WASTEWATER TREATMENT PLANT

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SITE PLAN - DEMOLITION

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-100

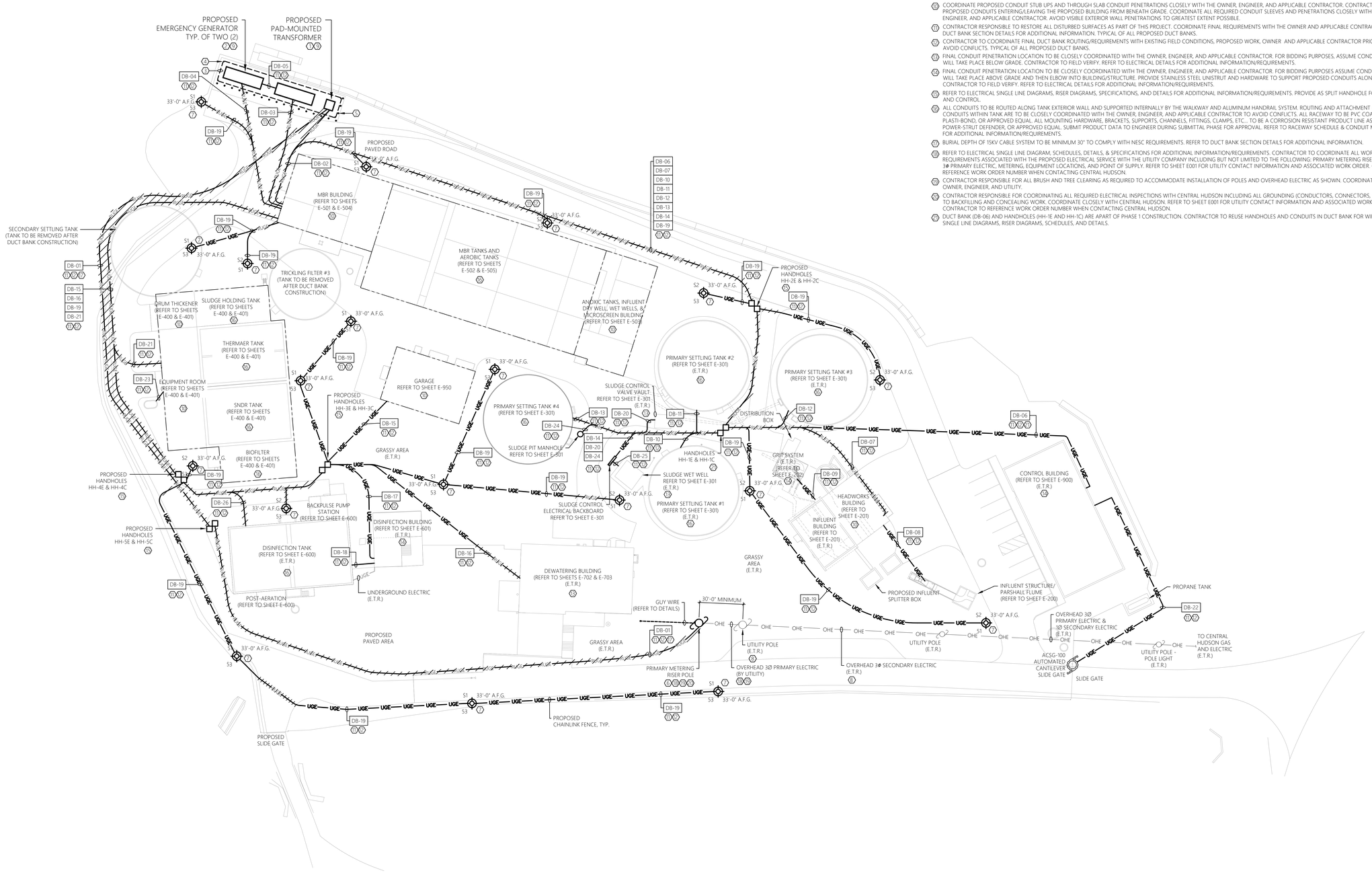
PROJECT # 18-732 PHASE #

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROPOSED UG DUCT BANKS AND STRUCTURES SHOWN ARE APPROXIMATE IN LOCATION. ROUTE UG DUCT BANKS WITH GENERAL ROUTING AS SHOWN ON PLANS. ROUTE DUCT BANKS AS NECESSARY TO AVOID CONFLICTS WITH SITE CONDITIONS AND PROPOSED PIPING SYSTEMS.
3. DUCT BANKS SHALL NOT BE LOCATED ABOVE OTHER PIPING SYSTEMS EXCEPT WHERE CROSSING. MAINTAIN NESC SEPARATION BETWEEN UTILITIES.
4. REFER TO UNDERGROUND UTILITIES (GENERAL NOTES) ON SHEET E-001 FOR ADDITIONAL INFORMATION.
5. COORDINATE FINAL DUCT BANK LOCATIONS (PRIOR TO ROUGH-IN) WITH APPLICABLE CONTRACTOR AND THE OWNER TO AVOID CONFLICT WITH PROPOSED WORK AND EXISTING CONDITIONS.
6. REFER TO DUCT BANK SCHEDULE FOR ADDITIONAL INFORMATION REGARDING DUCT BANK ROUTING, PURPOSE, AND CONTENTS.
7. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
8. EQUIPMENT AND DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO GENERAL SHEETS AND COORDINATE WITH APPLICABLE CONTRACTOR FOR EXACT LOCATIONS.
9. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH THE OWNER AND APPLICABLE CONTRACTOR.
10. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, FLOOR PLANS, RISER DIAGRAMS, SCHEDULES, DETAILS, & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. REFER TO OVERALL SITE PLANS ON CIVIL/GENERAL SHEETS FOR ADDITIONAL SITE INFORMATION.
12. NOT ALL EXISTING/PROPOSED SITE UTILITIES SHOWN FOR CLARITY. REFER TO GENERAL/CIVIL SHEETS FOR ADDITIONAL SITE INFORMATION.
13. CONTRACTOR IS RESPONSIBLE FOR ALL SITE RESTORATION. REFER TO TYPICAL DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. CONTRACTOR TO COORDINATE PARKING & LAYDOWN AREA WITH THE OWNER AND APPLICABLE CONTRACTOR.
15. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH THE OWNER AND APPLICABLE CONTRACTOR. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
16. NOT ALL HAND-HOLES AND PULL POINTS SHOWN FOR CLARITY. CONTRACTOR TO PROVIDE HAND-HOLES AND PULL POINTS AS REQUIRED AND PER NEC. CONTRACTOR TO FIELD VERIFY. REFER TO TYPICAL HANDHOLE DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
17. ALL UTILITY CHARGES RESULTING FROM THE PROPOSED SERVICE ENTRANCE DESIGN SHALL BE BILLED DIRECTLY TO THE OWNER FROM THE UTILITY COMPANY.

SHEET KEY NOTES:

1. PROPOSED PAD-MOUNTED TRANSFORMER BY THIS CONTRACT. THIS CONTRACT RESPONSIBLE FOR THE TRANSFORMER, CONCRETE PAD, CONCRETE VAULT, AND GROUNDING AS SHOWN. REFER TO 'TYPICAL UTILITY TRANSFORMER PAD AND VAULT DETAIL' FOR ADDITIONAL INFORMATION. TRANSFORMER TO BE KEPT A MINIMUM OF 10'-0" FROM ALL STRUCTURES, ACCESS DRIVES, BUILDINGS, UNDERGROUND UTILITIES, AND ALL OTHER ABOVE GRADE EQUIPMENT. IN ADDITION, TRANSFORMER TO BE KEPT A MINIMUM OF 25'-0" FROM ABOVE GRADE EXPOSED GAS LINES, GAS METERS, WATER LINES, AND SEWER LINES. FINAL LOCATION TO BE COORDINATED IN THE FIELD WITH THE UTILITY, OWNER, ENGINEER AND APPLICABLE CONTRACTOR TO AVOID CONFLICT WITH EXISTING SITE CONDITIONS AND PROPOSED WORK, AS WELL AS COMPLY WITH ALL UTILITY REQUIREMENTS. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAM & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. PROPOSED EMERGENCY GENERATOR, ENCLOSURE AND CONCRETE EQUIPMENT PAD. TYPICAL OF TWO (2). GENERATORS TO BE KEPT A MINIMUM OF 10'-0" FROM ALL STRUCTURES, ACCESS DRIVES, BUILDINGS, AND EQUIPMENT. FINAL LOCATION TO BE ADJUSTED TO AVOID CONFLICT AND COMPLY WITH NEC ARTICLE 110.26 'SPACE ABOUT ELECTRICAL EQUIPMENT'. COORDINATE FINAL LOCATION AND ORIENTATION IN THE FIELD WITH THE OWNER, ENGINEER, AND APPLICABLE CONTRACTOR. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAM, SPECIFICATIONS AND 'TYPICAL GENERATOR PAD DETAIL' FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. EQUIPMENT GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM EQUIPMENT (GENERATORS & TRANSFORMER) AT ALL TIMES. PROVIDE AND INSTALL 3/4" Ø X 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF FOUR (4) GROUND RODS. BOND ALL PROPOSED EQUIPMENT (GENERATORS & TRANSFORMER) TO GROUND RING. ALL GROUND CONDUCTORS SHALL BE #4/0 COPPER, U.O.N.
4. 3/4"Ø x 10'-0" COPPER GROUND ROD. TYPICAL OF 4, ONE AT EACH CORNER OF THE GROUND RING.
5. PROTECTIVE BOLLARD; TYPICAL OF TWENTY (20). DISTANCE FROM BOLLARD TO EQUIPMENT PAD (GENERATOR AND TRANSFORMER) TO BE 5'-0" MINIMUM TO COMPLY WITH NEC REQUIRED WORKING CLEARANCES AND ALLOW FOR ROUTINE MAINTENANCE. BOLLARDS TO BE SPACED 5'-0" APART ON CENTER. REFER TO TYPICAL BOLLARD DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS. COORDINATE FINAL QUANTITIES / LOCATIONS IN THE FIELD WITH THE OWNER, UTILITY, ENGINEER, AND APPLICABLE CONTRACTOR PRIOR TO ROUGH-IN.
6. PROVIDE AND INSTALL TWO (2) 3/4"Ø x 10'-0" COPPER GROUND RODS. BOND ALL EQUIPMENT ON PRIMARY METERING RISER POLE AS SHOWN ON POLE DETAILS ON SHEET E-035 OR AS REQUIRED BY THE UTILITY. GROUND ROD TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM POLES AT ALL TIMES. ALL GROUND CONDUCTORS SHALL BE #1/0 COPPER, U.O.N.
7. CONTRACTOR TO COORDINATE FINAL LOCATION WITH OWNER, ENGINEER, AND APPLICABLE CONTRACTOR TO AVOID POTENTIAL CONFLICTS WITH EXISTING AND PROPOSED CONDITIONS. ADJUST FIXTURE TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. REFER TO ELECTRICAL DETAILS AND SCHEDULES FOR ADDITIONAL INSTALLATION, CONTROL, AND WIRING INFORMATION/REQUIREMENTS.
8. CONTRACTOR TO COMPLY WITH THE HIGH VOLTAGE PROXIMITY ACT AND ALL NESC REQUIREMENTS WHEN ERECTING STRUCTURES NEAR ENERGIZED UTILITY LINES. ALL EQUIPMENT, CRANES, ETC. TO BE KEPT A MINIMUM OF 10'-0" FROM ENERGIZED UTILITY LINES. COORDINATE WITH UTILITY PRIOR TO COMMENCING WORK. TYPICAL.
9. AREA IS TO BE RE-GRADED BY APPLICABLE CONTRACTOR PRIOR TO EQUIPMENT INSTALLATION. COORDINATE FINAL REQUIREMENTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER PRIOR TO EQUIPMENT INSTALLATION TO AVOID CONFLICTS WITH EXISTING AND PROPOSED CONDITIONS. REFER TO CIVIL SITE PLANS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. COORDINATE PROPOSED CONDUIT STUB UPS AND THROUGH SLAB CONDUIT PENETRATIONS CLOSELY WITH THE OWNER, ENGINEER, AND APPLICABLE CONTRACTOR. CONTRACTOR TO ROUTE ALL PROPOSED CONDUITS ENTERING/LEAVING THE PROPOSED BUILDING FROM BENEATH GRADE. COORDINATE ALL REQUIRED CONDUIT SLEEVES AND PENETRATIONS CLOSELY WITH THE OWNER, ENGINEER, AND APPLICABLE CONTRACTOR. AVOID VISIBLE EXTERIOR WALL PENETRATIONS TO GREATEST EXTENT POSSIBLE.
11. CONTRACTOR RESPONSIBLE TO RESTORE ALL DISTURBED SURFACES AS PART OF THIS PROJECT. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND APPLICABLE CONTRACTOR. REFER TO DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION. TYPICAL OF ALL PROPOSED DUCT BANKS.
12. CONTRACTOR TO COORDINATE FINAL DUCT BANK ROUTING/REQUIREMENTS WITH EXISTING FIELD CONDITIONS, PROPOSED WORK, OWNER AND APPLICABLE CONTRACTOR PRIOR TO ROUGH-IN TO AVOID CONFLICTS. TYPICAL OF ALL PROPOSED DUCT BANKS.
13. FINAL CONDUIT PENETRATION LOCATION TO BE CLOSELY COORDINATED WITH THE OWNER, ENGINEER, AND APPLICABLE CONTRACTOR. FOR BIDDING PURPOSES, ASSUME CONDUIT PENETRATIONS WILL TAKE PLACE BELOW GRADE. CONTRACTOR TO FIELD VERIFY. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. FINAL CONDUIT PENETRATION LOCATION TO BE CLOSELY COORDINATED WITH THE OWNER, ENGINEER, AND APPLICABLE CONTRACTOR. FOR BIDDING PURPOSES ASSUME CONDUIT PENETRATIONS WILL TAKE PLACE ABOVE GRADE AND THEN ELBOW INTO BUILDING/STRUCTURE. PROVIDE STAINLESS STEEL UNISTRUT AND HARDWARE TO SUPPORT PROPOSED CONDUITS ALONG EXTERIOR WALL. CONTRACTOR TO FIELD VERIFY. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
15. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SPECIFICATIONS, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE AS SPLIT HANDHOLE FOR BOTH POWER AND CONTROL.
16. ALL CONDUITS TO BE ROUTED ALONG TANK EXTERIOR WALL AND SUPPORTED INTERNALLY BY THE WALKWAY AND ALUMINUM HANDRAIL SYSTEM. ROUTING AND ATTACHMENT METHODS OF ALL CONDUITS WITHIN TANK ARE TO BE CLOSELY COORDINATED WITH THE OWNER, ENGINEER, AND APPLICABLE CONTRACTOR TO AVOID CONFLICTS. ALL RACEWAY TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC... TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE & CONDUIT MOUNTING DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
17. BURIAL DEPTH OF 15KV CABLE SYSTEM TO BE MINIMUM 30" TO COMPLY WITH NESC REQUIREMENTS. REFER TO DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION.
18. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, DETAILS, & SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. CONTRACTOR TO COORDINATE ALL WORK AND REQUIREMENTS ASSOCIATED WITH THE PROPOSED ELECTRICAL SERVICE WITH THE UTILITY COMPANY INCLUDING BUT NOT LIMITED TO THE FOLLOWING: PRIMARY METERING RISER POLE, OVERHEAD 3Ø PRIMARY ELECTRIC, METERING, EQUIPMENT LOCATIONS, AND POINT OF SUPPLY. REFER TO SHEET E001 FOR UTILITY CONTACT INFORMATION AND ASSOCIATED WORK ORDER. CONTRACTOR TO REFERENCE WORK ORDER NUMBER WHEN CONTACTING CENTRAL HUDSON.
19. CONTRACTOR RESPONSIBLE FOR ALL BRUSH AND TREE CLEARING AS REQUIRED TO ACCOMMODATE INSTALLATION OF POLES AND OVERHEAD ELECTRIC AS SHOWN. COORDINATE CLOSELY WITH OWNER, ENGINEER, AND UTILITY.
20. CONTRACTOR RESPONSIBLE FOR COORDINATING ALL REQUIRED ELECTRICAL INSPECTIONS WITH CENTRAL HUDSON INCLUDING ALL GROUNDING (CONDUCTORS, CONNECTORS, RODS, ETC...) PRIOR TO BACKFILLING AND CONCEALING WORK. COORDINATE CLOSELY WITH CENTRAL HUDSON. REFER TO SHEET E001 FOR UTILITY CONTACT INFORMATION AND ASSOCIATED WORK ORDER. CONTRACTOR TO REFERENCE WORK ORDER NUMBER WHEN CONTACTING CENTRAL HUDSON.
21. DUCT BANK (DB-06) AND HANDHOLES (HH-1E AND HH-1C) ARE APART OF PHASE 1 CONSTRUCTION. CONTRACTOR TO REUSE HANDHOLES AND CONDUITS IN DUCT BANK FOR WIRING SHOWN ON SINGLE LINE DIAGRAMS, RISER DIAGRAMS, SCHEDULES, AND DETAILS.



0 30' 60'
SCALE: 1" = 30'-0"

1 E-101 ELECTRICAL SITE PLAN - NEW WORK
SCALE: 1" = 30'-0" CAESARS LANE WASTEWATER TREATMENT PLANT

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SITE PLAN - NEW WORK

REVISIONS

NO.	DESCRIPTION	DATE

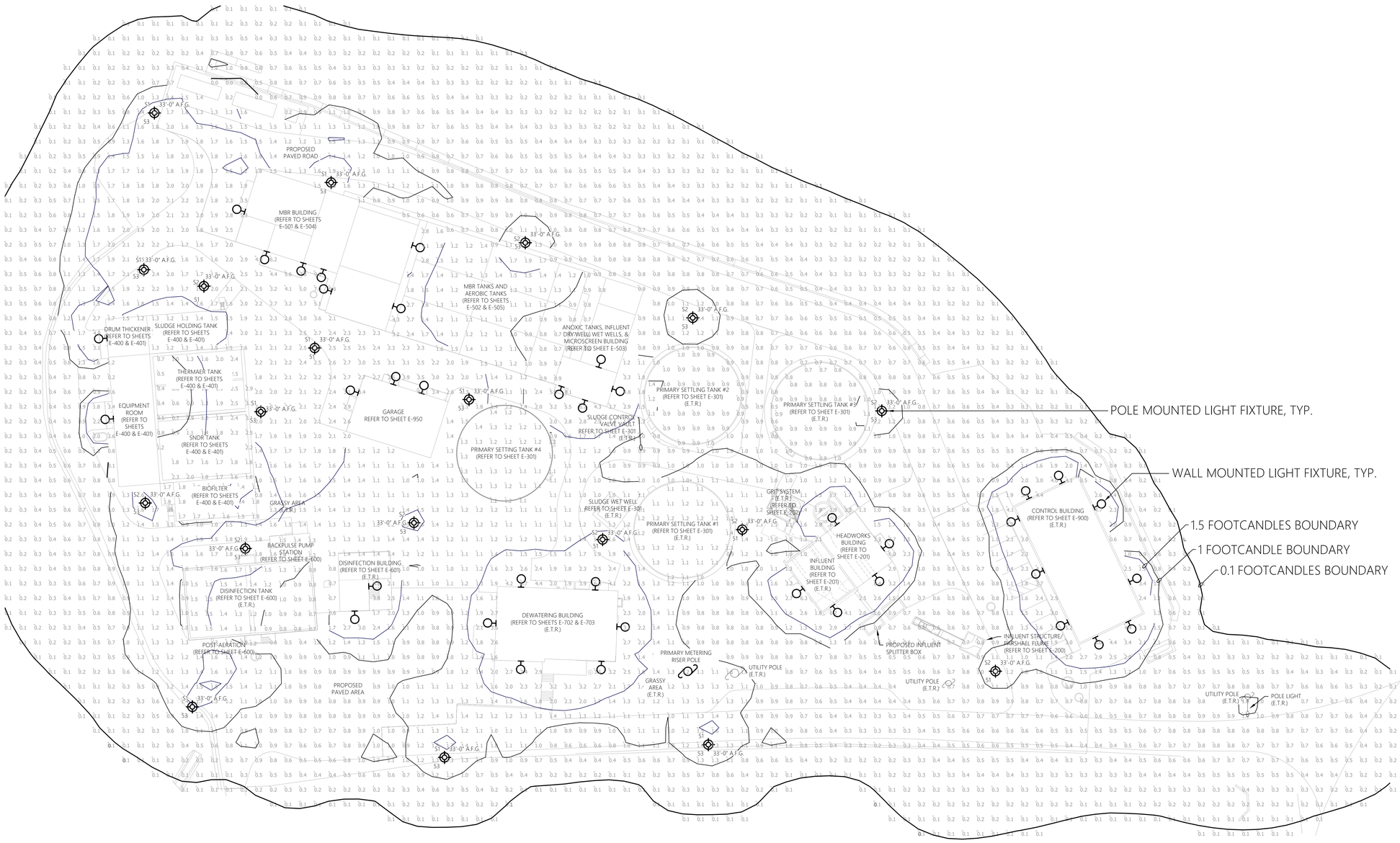
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-101

PROJECT # 18-732 PHASE #

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
BIOFILTER_Top	Illuminance	Fc	1.65	1.8	1.3	1.27	1.38
DISINFECTION TANK_Top	Illuminance	Fc	1.23	1.7	0.7	1.76	2.43
ENTIRE SITE_Planar	Illuminance	Fc	0.64	9.6	0.0	N.A.	N.A.
MBR TANKS_Top	Illuminance	Fc	1.34	4.3	0.6	2.23	7.17
PRI SETTLING TANK #1_Top_1	Illuminance	Fc	1.18	1.4	1.0	1.18	1.40
PRI SETTLING TANK #2_Top_1	Illuminance	Fc	0.93	1.4	0.8	1.16	1.75
PRI SETTLING TANK #3_Top	Illuminance	Fc	0.88	1.1	0.7	1.26	1.57
PRI SETTLING TANK #4_Top_1	Illuminance	Fc	1.22	1.4	1.1	1.11	1.27
SLUDGE-THERMAER-SNDR TANKS_Top	Illuminance	Fc	1.57	3.1	0.4	3.93	7.75



0' 30' 60'
SCALE: 1" = 30'-0"

1 E-102 ELECTRICAL SITE LIGHTING CALCULATION
SCALE: 1" = 30'-0" CAESARS LANE WASTEWATER TREATMENT PLANT

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL SITE LIGHTING CALCULATION

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-102

PROJECT # 18-732 PHASE #

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED (UOI).
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

GENERAL SHEET NOTES:

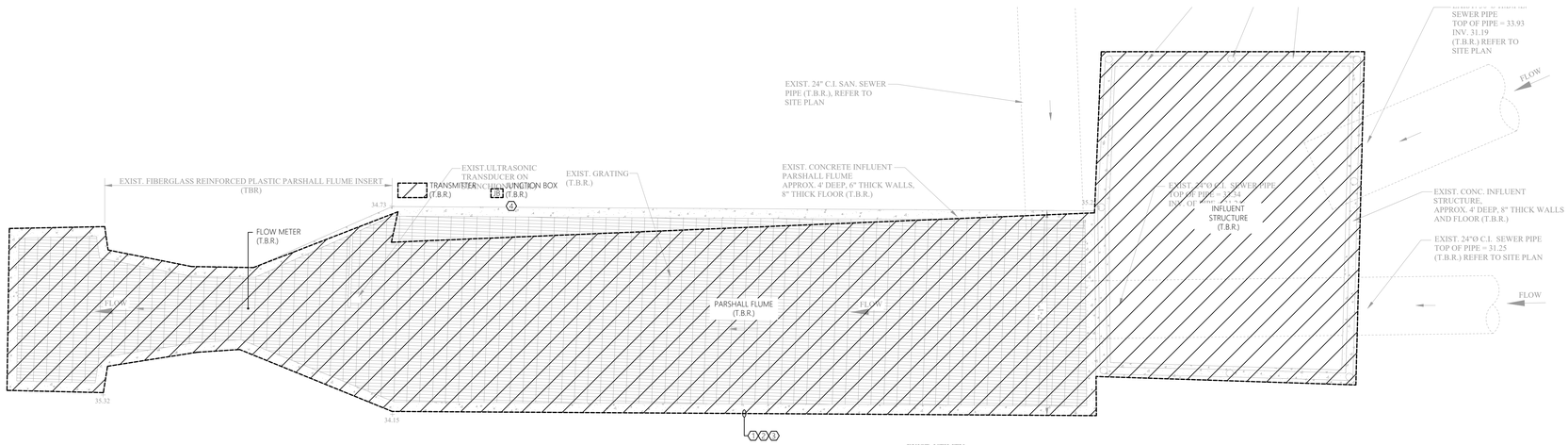
1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER, TYPICAL.

GENERAL NEW WORK NOTES:

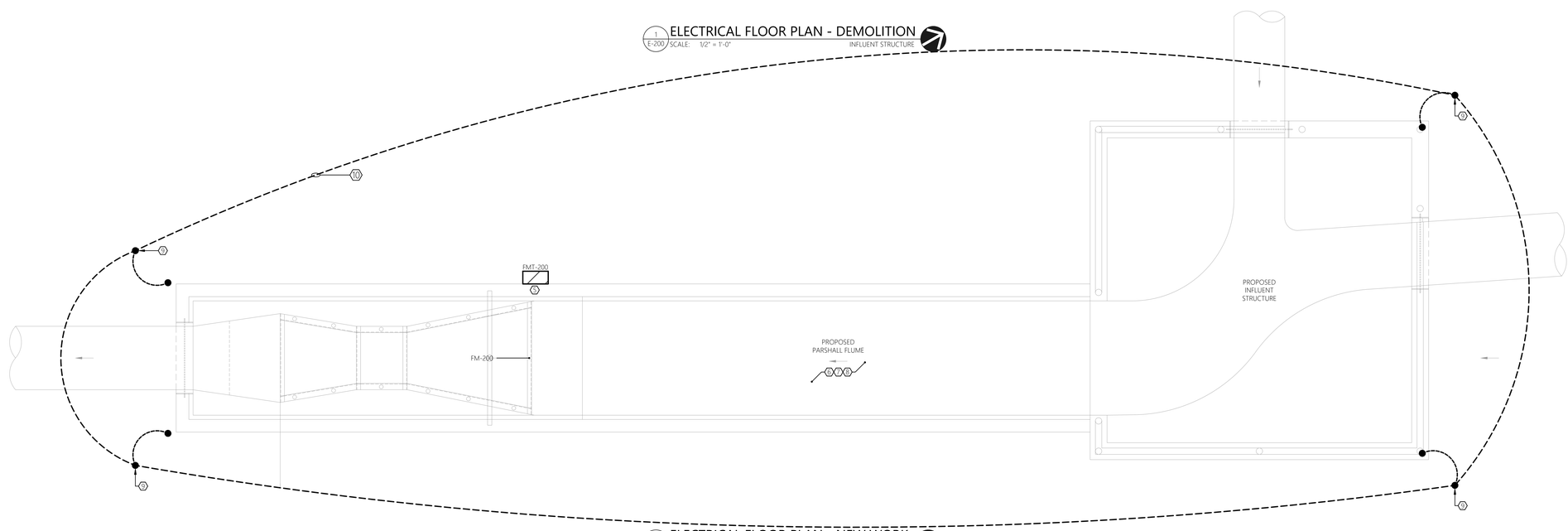
1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.
5. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. CONTRACTOR RESPONSIBLE FOR MOUNTING OF APPLICABLE CONTRACTOR FURNISHED PANELS. COORDINATE WITH APPLICABLE CONTRACTOR AND PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT.
8. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
9. COORDINATE WITH ALL FINAL INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH EQUIPMENT, PIPING SYSTEMS, AND DUCTWORK. COORDINATE WITH ALL TRADES.
10. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
12. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER PRIOR TO ROUGH-IN.
13. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, RISER DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR LABELING INFORMATION/REQUIREMENTS. PROVIDE LABEL FOR ALL LIGHT SWITCHES/TIME SWITCHES INDICATING LOAD SERVED, AS WELL AS ALARM LIGHTS/HORNS.
15. ALL EQUIPMENT/DEVICES INSTALLED ON EXTERIOR WALLS OF THE HEADWORKS ROOM TO BE INSTALLED 3'-0" MINIMUM FROM ANY OPENINGS (DOORS, LOUVERS, ETC.). FINAL REQUIREMENTS TO BE IN COMPLIANCE WITH THE LATEST EDITION OF NFPA 820.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO; ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING ELECTRODES, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
2. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
3. NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
4. JUNCTION BOX IS TO BE REMOVED. NOTE, ALL BOXES AND RACEWAY SYSTEMS ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL ARE TO BE REMOVED IN THEIR ENTIRETY.
5. PROVIDE ALL REQUIRED STAINLESS STEEL UNISTRUT, MOUNTING HARDWARE, BRACKETS, SUPPORTS, ACCESSORIES, ETC... FOR STANCHION MOUNTING ON INFLUENT STRUCTURE HANDRAIL AS SHOWN/INDICATED.
6. STRUCTURE INTERIOR IS A CLASS I, DIVISION II, GROUP D SPACE. THE CLASS I, DIVISION II, GROUP D SPACE EXTENDS 18" ABOVE TOP OF STRUCTURE WALL AND EXTENDS 10'-0" HORIZONTALLY FROM THE STRUCTURE EXTERIOR WALL. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT.
7. ROUTING AND ATTACHMENT METHODS OF ALL CONDUITS WITHIN STRUCTURE ARE TO BE CLOSELY COORDINATED WITH APPLICABLE CONTRACTOR; OWNER, AND ENGINEER TO AVOID CONFLICTS. ALL RACEWAY TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC... TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE FOR ADDITIONAL INFORMATION.
8. ALL ELECTRICAL EQUIPMENT, COMPONENTS, DEVICES, AND RACEWAY SYSTEMS TO BE KEPT OUT OF CLASSIFIED AREAS TO GREATEST EXTENT POSSIBLE.
9. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES (HANDRAIL, GRATING, ETC...) TO GROUND ROD USING #2 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO TYPICAL GROUNDING DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM STRUCTURE AT ALL TIMES. PROVIDE AND INSTALL 3/4"Ø x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF FOUR (4) GROUND RODS. ALL GROUND CONDUCTORS SHALL BE #2 COPPER, U.O.N.



1 E-200 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/2" = 1'-0" INFLUENT STRUCTURE



2 E-200 ELECTRICAL FLOOR PLAN - NEW WORK
SCALE: 1/2" = 1'-0" INFLUENT STRUCTURE

0' 1' 2' 4'
SCALE: 1/2" = 1'-0"

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL FLOOR PLANS - INFLUENT STRUCTURE

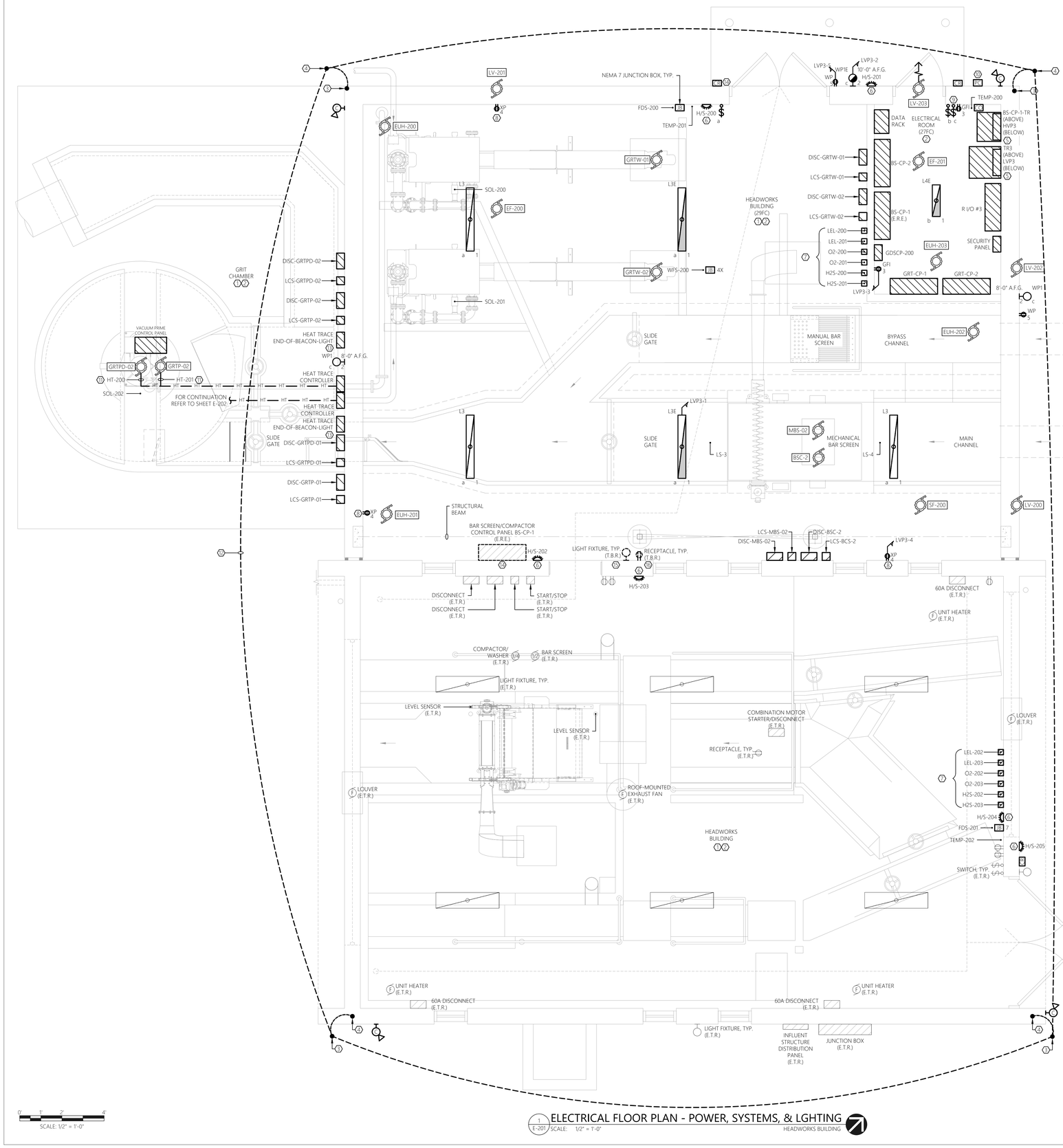
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-200

PROJECT # 18-732 PHASE #



0' 1' 2' 4'
SCALE: 1/2" = 1'-0"

1 E-201 ELECTRICAL FLOOR PLAN - POWER, SYSTEMS, & LGHTING
SCALE: 1/2" = 1'-0"
HEADWORKS BUILDING

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED (UOI).
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO; GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS; AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE OWNER AND CONTRACT #1.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC., (UOI).
   2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH CONTRACT #1 AND OWNER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND CONTRACT #2. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE; REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.
5. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH CONTRACT #1 AND OWNER.
7. CONTRACTOR RESPONSIBLE FOR MOUNTING OF CONTRACT #1 FURNISHED PANELS. COORDINATE WITH CONTRACT #1 AND PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT.
8. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH THE OWNER AND CONTRACT #1.
9. CONTRACTOR TO ADJUST FINAL INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH EQUIPMENT, PIPING SYSTEMS, AND DUCTWORK. COORDINATE WITH ALL TRADES.
10. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH THE OWNER. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
12. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH CONTRACT #1 AND OWNER PRIOR TO ROUGH-IN.
13. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, RISER DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR LABELING INFORMATION/REQUIREMENTS. PROVIDE LABEL FOR ALL LIGHT SWITCHES/TIME SWITCHES INDICATING LOAD SERVED, AS WELL AS ALARM LIGHTS/HORNS.
15. ALL EQUIPMENT/DEVICES INSTALLED ON EXTERIOR WALLS OF THE HEADWORKS ROOM TO BE INSTALLED 3'-0" MINIMUM FROM ANY OPENINGS (DOORS, LOUVERS, ETC.). FINAL REQUIREMENTS TO BE IN COMPLIANCE WITH THE LATEST EDITION OF NFPA 820.

SHEET KEY NOTES:

1. AREA IS A CLASS I, DIVISION II, GROUP D SPACE. ALL WIRING METHODS TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES INTERIOR TO THIS AREA ARE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT. ALL RACEWAY AND BOXES TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC... TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. ROUTING & ATTACHMENT METHODS OF ALL CONDUITS TO BE CLOSELY COORDINATED WITH APPLICABLE TRADE CONTRACTOR & OWNER PRIOR TO ROUGH-IN AND VERIFIED IN FIELD TO AVOID POTENTIAL CONFLICTS WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS.
3. CONTRACTOR TO PROVIDE 3/4"Φ x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES, EQUIPMENT, AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #2 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO 'TYPICAL LIGHTNING PROTECTION GROUNDING DETAIL' AND 'TYPICAL PANEL GROUNDING DETAIL' FOR ADDITIONAL INFORMATION/REQUIREMENTS.
4. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN RGS CONDUIT AND ATTACH TO EXTERIOR WALL. CONTRACTOR TO WORK WITH CERTIFIED LIGHTNING PROTECTION INSTALLER TO PROVIDE COMPLETE BUILDING LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH NFPA. UPON COMPLETION PROVIDE UL MASTER LABEL. REFER TO LIGHTNING PROTECTION FOR STRUCTURES SPECIFICATIONS FOR REQUIREMENTS AND ADDITIONAL INFORMATION.
5. CONTRACTOR TO PROVIDE WALL MOUNT BRACKETS FOR INSTALLATION OF TRANSFORMER ON WALL ABOVE PANEL.
6. GAS DETECTION SYSTEM MONITORING ALARM HORN/STROBES, INSTALL DEVICES (HORN/STROBES) AT 8'-0" ABOVE FINISHED FLOOR/GRADE. TYPICAL OF SIX (6). REFER TO SPECIFICATIONS AND RISER DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. GAS DETECTION SYSTEM SENSORS AND TRANSMITTERS. INSTALL SENSORS PER MANUFACTURER'S RECOMMENDATIONS, INSTALL TRANSMITTERS AT 48" A.F.F. ON CENTER. REFER TO RISER DIAGRAM AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
8. CONTRACTOR TO PROVIDE 20 AMP, 125 VOLT RECEPTACLE (NEMA 5-20R) SUITABLE FOR USE IN A CLASS I DIVISION I GROUP D SPACE. PROVIDE AS CATALOG # ENR21201 M4 AS MANUFACTURED BY CROUSE-HINDS OR APPROVED EQUAL. IN ADDITION, CONTRACTOR TO PROVIDE CORRESPONDING PLUG CATALOG # ENPS201 AS MANUFACTURED BY CROUSE-HINDS, OR APPROVED EQUAL. TURN PLUG OVER TO OWNER. MOUNT RECEPTACLE AT 36" A.F.F.
9. CONTRACTOR TO PROVIDE AS WATTSTOPPER RT-200 ASTRONOMICAL TIME SWITCH OR APPROVED EQUAL WITHIN NEMA 1 ENCLOSURE. SWITCH TO CONTROL PROPOSED EXTERIOR WALL MOUNTED LIGHT FIXTURES TYPES 'WP1' & 'WP1E'. PROGRAM TIME SWITCH FOR LIGHTING 'ON' AT ASTRONOMICAL SUNSET AND 'OFF' AT ASTRONOMICAL SUNRISE. FINAL ON/OFF PROGRAMMING PARAMETERS TO BE COORDINATED WITH THE OWNER.
10. CONTRACTOR TO PROVIDE ONE (1) 120V, 20A PHOTO CONTROL WITH ADJUSTABLE SHIELD FOR CONTROL OF EXTERIOR LIGHTING CIRCUIT. INTERLOCK WITH ASTRONOMICAL TIME SWITCH. CONFIRM FINAL LOCATION WITH THE OWNER PRIOR TO ROUGH-IN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
11. EXTERIOR 4" DUCTILE DISCHARGE AND EXTERIOR 1-1/2" POTABLE FLUSH WATER BETWEEN THE BUILDING AND GRIT CHAMBER TO HAVE HEAT TRACE SYSTEM APPLIED. PROVIDE HEAT TRACING CABLES, INSULATION, AND JACKET. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. THIS CONTRACT RESPONSIBLE FOR ALL HEATING CABLES, PIPE INSULATION/JACKET, AND ANCILLARY EQUIPMENT AS SHOWN/SPECIFIED FOR AN OVERALL COMPLETE AND OPERABLE HEAT TRACE SYSTEM. PROVIDE 30A, 208V/1P DEDICATED CIRCUIT ((2)#10 & #10G, 3/4"C) FROM PANEL 'LVP3' AS SHOWN ON PANEL SCHEDULE. NOTE, THE PIPING WILL BE PROVIDED/INSTALLED BY APPLICABLE CONTRACTOR. COORDINATE ALL EFFORTS AND FINAL REQUIREMENTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
12. GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM BUILDING AT ALL TIMES. PROVIDE AND INSTALL 3/4"Φ x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF FOUR (4) GROUND RODS. ALL GROUND CONDUCTORS SHALL BE #2 COPPER, U.O.N.
13. CONTRACTOR TO INSTALL END OF BEACON LIGHT ASSOCIATED WITH HEAT TRACE SYSTEM ON BUILDING EXTERIOR WALL (VISIBLE TO OWNER). COORDINATE FINAL LOCATIONS IN FIELD WITH THE OWNER (PRIOR TO ROUGH-IN) AND PROVIDE ALL NECESSARY STAINLESS STEEL MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. TYPICAL OF FOUR (4).
14. PANEL TO BE RELOCATED TO ELECTRICAL ROOM BY THIS CONTRACT. DISCONNECT ELECTRICAL PANEL, MAKE ELECTRICALLY SAFE AND REMOVE ALL CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE.
15. CONTRACTOR TO DISCONNECT & REMOVE LIGHT FIXTURE IN ITS ENTIRETY. REMOVE CONDUIT AND CONDUCTORS BACK TO SOURCE. CONTRACTOR TO FIELD VERIFY.
16. CONTRACTOR TO DISCONNECT & REMOVE RECEPTACLE IN ITS ENTIRETY. REMOVE CONDUIT AND CONDUCTORS BACK TO SOURCE. CONTRACTOR TO FIELD VERIFY.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL FLOOR PLANS - HEADWORKS BUILDING

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-201

PROJECT # 18-732 PHASE #

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED (UOI).
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

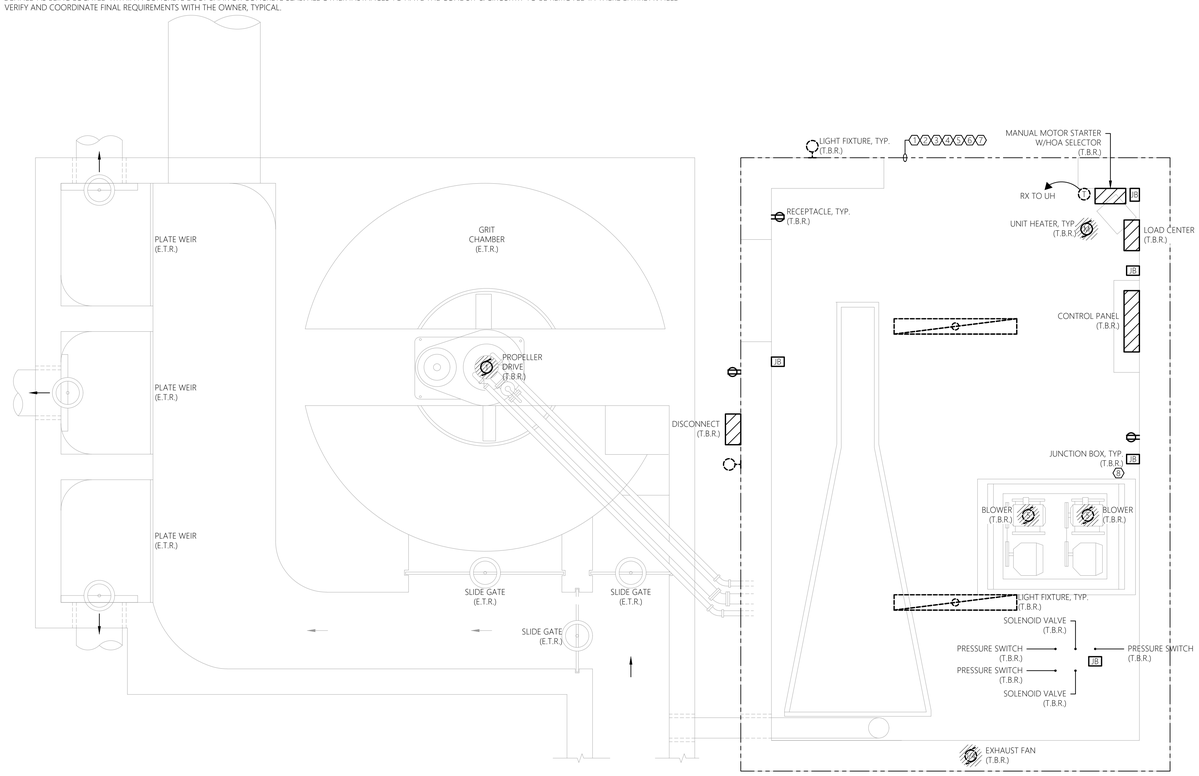
CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE OWNER AND THE APPLICABLE CONTRACTOR.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND CONTRACT #2. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.



0' 1' 2' 4'
SCALE: 1/2" = 1'-0"

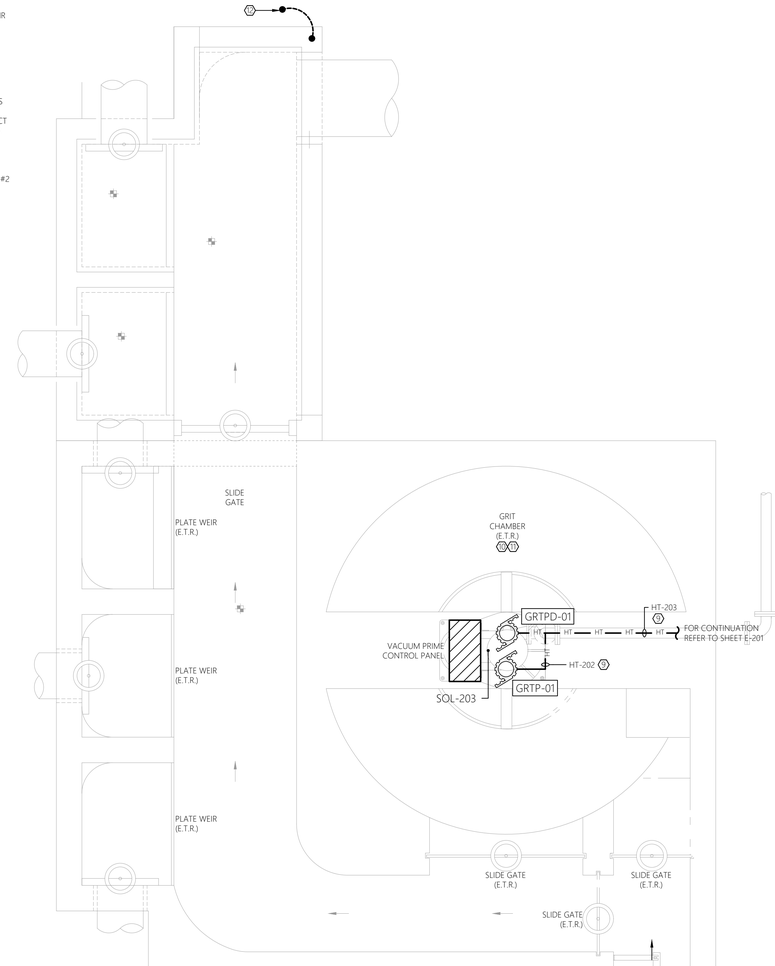
1 E-202 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/2" = 1'-0" GRIT SYSTEM

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.
5. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. CONTRACTOR RESPONSIBLE FOR MOUNTING OF THE APPLICABLE CONTRACTOR FURNISHED PANELS. COORDINATE WITH THE APPLICABLE CONTRACTOR AND PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT.
8. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH THE OWNER AND THE APPLICABLE CONTRACTOR.
9. CONTRACTOR TO ADJUST FINAL INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH EQUIPMENT, PIPING SYSTEMS, AND DUCTWORK. COORDINATE WITH ALL TRADES.
10. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH THE OWNER. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
12. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. PRIOR TO ROUGH-IN.
13. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, RISER DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR LABELING INFORMATION/REQUIREMENTS. PROVIDE LABEL FOR ALL LIGHT SWITCHES/TIME SWITCHES INDICATING LOAD SERVED, AS WELL AS ALARM LIGHTS/HORNS.
15. ALL EQUIPMENT/DEVICES INSTALLED ON EXTERIOR WALLS OF THE HEADWORKS ROOM TO BE INSTALLED 3'-0" MINIMUM FROM ANY OPENINGS (DOORS, LOUVERS, ETC.). FINAL REQUIREMENTS TO BE IN COMPLIANCE WITH THE LATEST EDITION OF NFPA 820.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO; ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING EQUIPMENT, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
2. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
3. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL HVAC EQUIPMENT SCHEDULED FOR REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
4. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLUMBING EQUIPMENT SCHEDULED FOR REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
5. CONTRACTOR TO DISCONNECT & REMOVE ALL EXISTING LIGHT FIXTURES, LIGHT SWITCHES, LIGHTING CONTROL DEVICES, MOUNTING HARDWARE, AND ASSOCIATED COMPONENTS IN THEIR ENTIRETY. REMOVE CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. CONTRACTOR TO FIELD VERIFY.
6. CONTRACTOR TO PROVIDE TEMPORARY LIGHTING INCLUDING ALL CIRCUITING AND CONTROLS FOR A COMPLETE AND OPERABLE TEMPORARY LIGHTING SYSTEM THROUGHOUT THE DURATION OF PROJECT. CONTRACTOR TO COORDINATE FINAL TEMPORARY LIGHTING REQUIREMENTS WITH THE OWNER AND PROVIDE AS NECESSARY. TEMPORARY LIGHTING SYSTEMS TO BE PROVIDED FOR ALL AREAS IN WHICH THE EXISTING LIGHTING SYSTEMS ARE DISTURBED AS PART OF THIS PROJECT.
7. NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
8. JUNCTION BOX IS TO BE REMOVED. NOTE, ALL BOXES AND RACEWAY SYSTEMS ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL ARE TO BE REMOVED IN THEIR ENTIRETY.
9. EXTERIOR 4" DUCTILE DISCHARGE AND EXTERIOR 1-1/2" POTABLE FLUSH WATER BETWEEN THE BUILDING AND GRIT CHAMBER TO HAVE HEAT TRACE SYSTEM APPLIED. PROVIDE HEAT TRACING CABLES, INSULATION, AND JACKET. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS. THIS CONTRACT RESPONSIBLE FOR ALL HEATING CABLES, PIPE INSULATION/JACKET, AND ANCILLARY EQUIPMENT AS SHOWN/SPECIFIED FOR AN OVERALL COMPLETE AND OPERABLE HEAT TRACE SYSTEM. PROVIDE 30A, 208V/1P DEDICATED CIRCUIT ((2)#10 & #10G, 3/4"C) FROM PANEL 'LVP3' AS SHOWN ON PANEL SCHEDULE. NOTE, THE PIPING WILL BE PROVIDED/INSTALLED BY APPLICABLE CONTRACTOR. COORDINATE ALL EFFORTS AND FINAL REQUIREMENTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
10. AREA IS A CLASS I, DIVISION II, GROUP D SPACE. ALL WIRING METHODS TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES INTERIOR TO THIS AREA ARE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT. ALL RACEWAY AND BOXES TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC... TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. ROUTING & ATTACHMENT METHODS OF ALL CONDUITS TO BE CLOSELY COORDINATED WITH CONTRACT #1 & OWNER PRIOR TO ROUGH-IN AND VERIFIED IN FIELD TO AVOID POTENTIAL CONFLICTS WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS.
12. CONTRACTOR TO PROVIDE 3/4"ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES (GRATING, LADDERS, HANDRAILS, STAIRS, ETC...) TO GROUND ROD USING #2 COPPER CONDUCTOR WITHIN RGS CONDUIT.



2 E-202 ELECTRICAL FLOOR PLAN - NEW WORK
SCALE: 1/2" = 1'-0" GRIT SYSTEM

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL FLOOR PLANS - GRIT SYSTEM

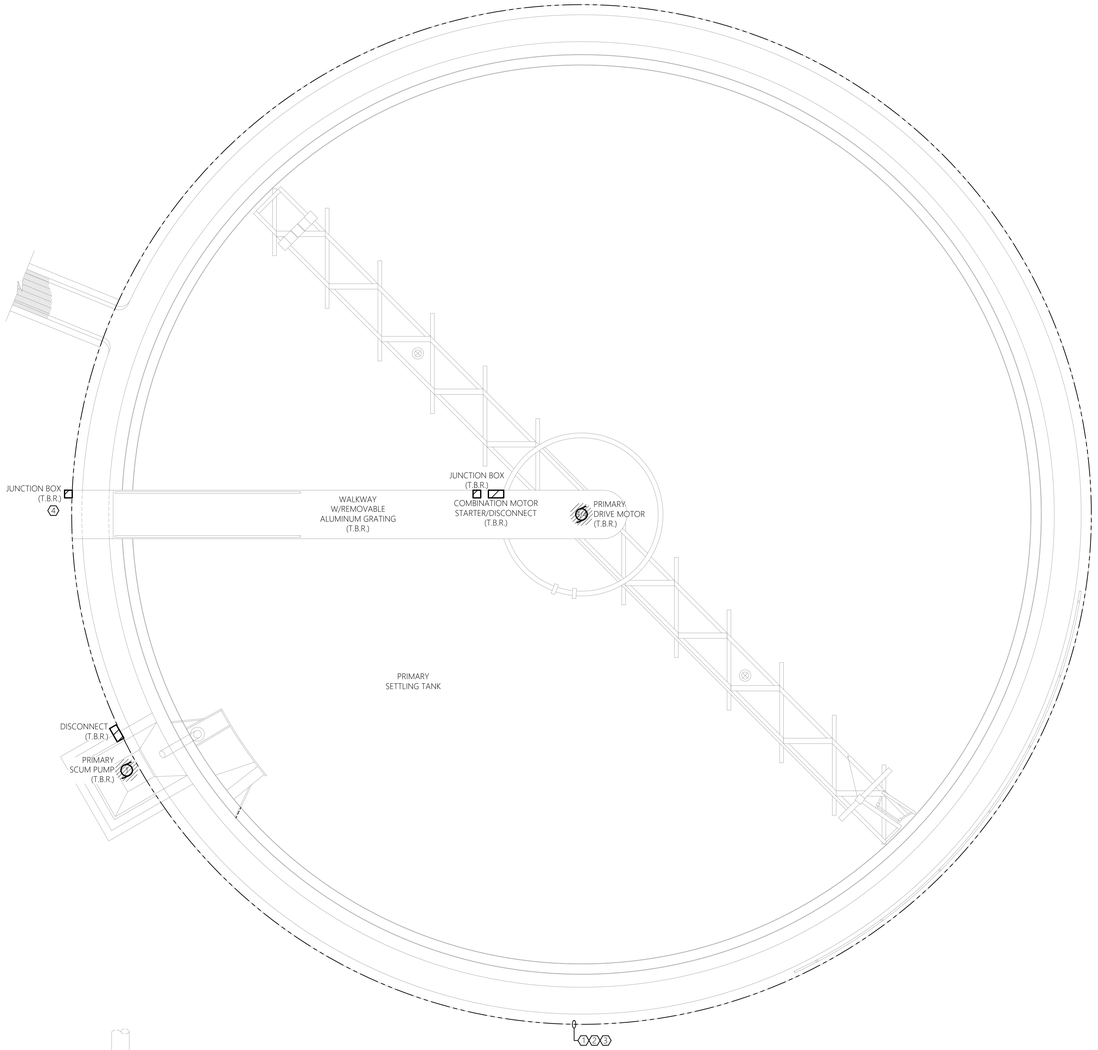
REVISIONS

NO.	DESCRIPTION	DATE

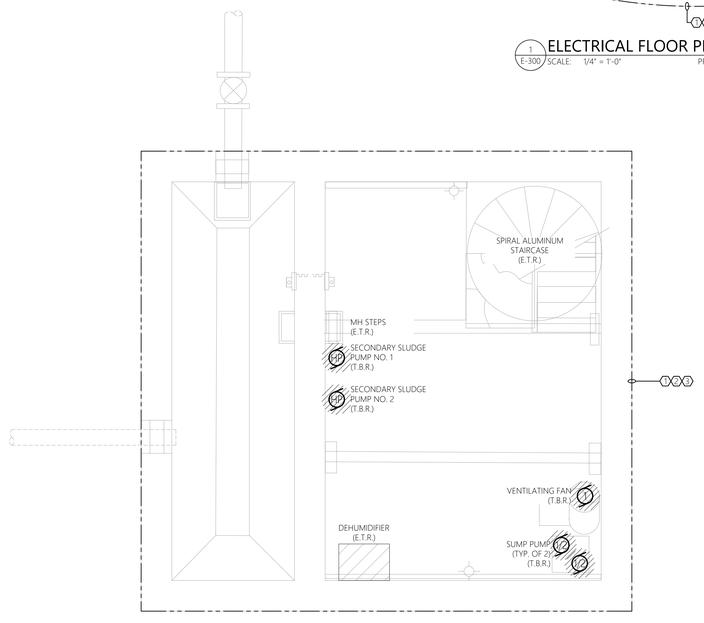
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-202

PROJECT # 18-732 PHASE #

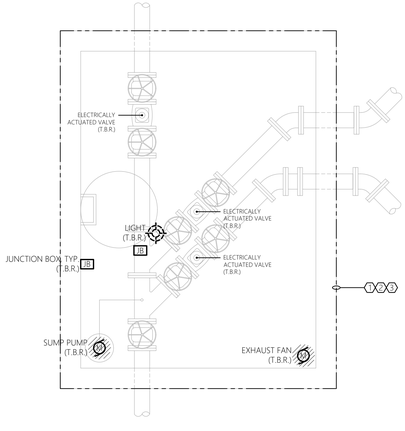


1 E-300 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0" PRIMARY SETTLING TANK #1, #2, AND #3



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

2 E-300 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/2" = 1'-0" PRIMARY SLUDGE PIT



3 E-300 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/2" = 1'-0" PRIMARY VALVE PIT

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED, UOI.
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE OWNER AND CONTRACT #1.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   - 2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH CONTRACT #1 AND OWNER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND CONTRACT #2. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO; ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING EQUIPMENT, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH CONTRACT #1 AND OWNER.
2. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH CONTRACT #1 AND OWNER.
3. NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH CONTRACT #1 AND OWNER.
4. JUNCTION BOX IS TO BE REMOVED. NOTE, ALL BOXES AND RACEWAY SYSTEMS ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL ARE TO BE REMOVED IN THEIR ENTIRETY.

TYPICAL OF THREE (3):
PRIMARY SETTLING TANK #1,
PRIMARY SETTLING TANK #2,
AND PRIMARY SETTLING TANK #3

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33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION PLANS - PRIMARY SETTLING TANKS

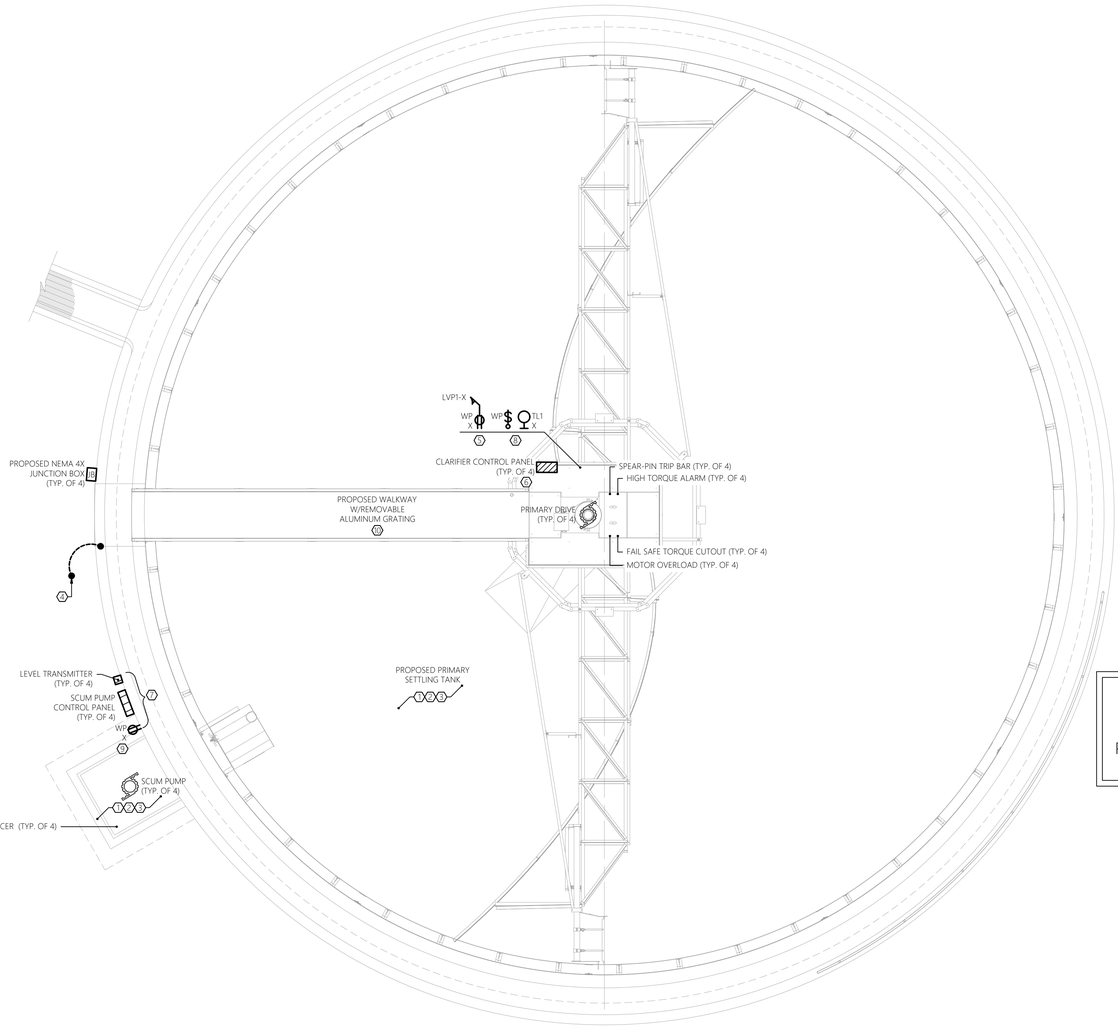
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

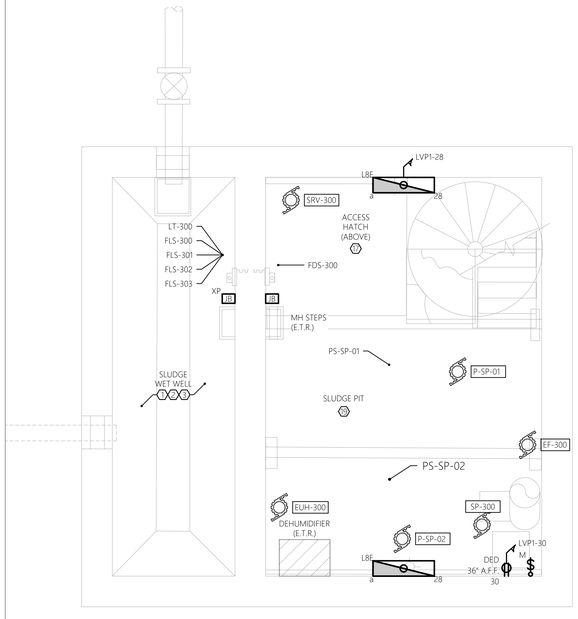
SHEET NO.
E-300

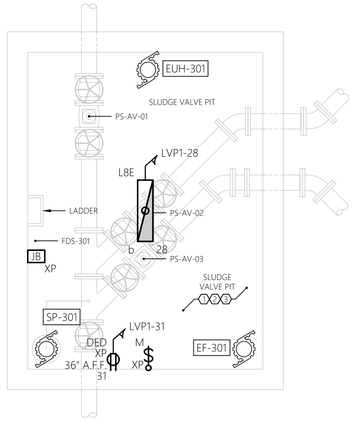
PROJECT # 18-732 PHASE #

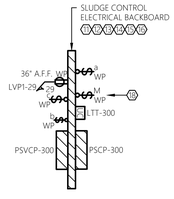


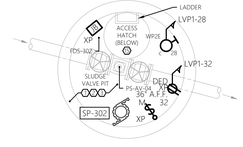
TYPICAL OF FOUR (4):
PRIMARY SETTLING TANK #1,
PRIMARY SETTLING TANK #2,
PRIMARY SETTLING TANK #3, AND
PRIMARY SETTLING TANK #4

1 E-301 ELECTRICAL FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0" PRIMARY SETTLING TANK #1, #2, #3, AND #4









0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

2 E-301 ELECTRICAL FLOOR PLAN - NEW WORK
SCALE: 1/2" = 1'-0" PRIMARY SLUDGE PIT

3 E-301 ELECTRICAL FLOOR PLAN - NEW WORK
SCALE: 1/2" = 1'-0" PRIMARY SLUDGE VALVE PIT

4 E-301 SLUDGE CONTROL ELECTRICAL BACKBOARD
SCALE: 1/2" = 1'-0"

4 E-301 ELECTRICAL FLOOR PLAN - NEW WORK
SCALE: 1/2" = 1'-0" PROPOSED SLUDGE VALVE PIT

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.
5. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. CONTRACTOR RESPONSIBLE FOR MOUNTING OF APPLICABLE CONTRACTOR, OWNER, AND ENGINEER FURNISHED PANELS. COORDINATE WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER AND PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT.
8. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
9. CONTRACTOR TO ADJUST FINAL INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH EQUIPMENT, PIPING SYSTEMS, AND DUCTWORK. COORDINATE WITH ALL TRADES.
10. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH THE OWNER. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
12. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER PRIOR TO ROUGH-IN.
13. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, RISER DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR LABELING INFORMATION/REQUIREMENTS. PROVIDE LABEL FOR ALL LIGHT SWITCHES/TIME SWITCHES INDICATING LOAD SERVED, AS WELL AS ALARM LIGHTS/HORNS.
15. ALL EQUIPMENT/DEVICES INSTALLED ON EXTERIOR WALLS OF THE HEADWORKS ROOM TO BE INSTALLED 3'-0" MINIMUM FROM ANY OPENINGS (DOORS, LOUVERS, ETC.). FINAL REQUIREMENTS TO BE IN COMPLIANCE WITH THE LATEST EDITION OF NFPA 820.

SHEET KEY NOTES:

1. TANK INTERIOR IS A CLASSIFIED SPACE. THE CLASS I, DIVISION II, GROUP D SPACE EXTENDS 18" ABOVE TOP OF TANK WALL AND EXTENDS 10'-0" HORIZONTALLY FROM THE TANK EXTERIOR WALL. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASSIFIED ENVIRONMENT. REFER TO TABLE NFPA820 TABLE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. ROUTING AND ATTACHMENT METHODS OF ALL CONDUITS WITHIN STRUCTURE ARE TO BE CLOSELY COORDINATED WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER TO AVOID CONFLICTS. ALL RACEWAY TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC... TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE FOR ADDITIONAL INFORMATION.
3. ALL ELECTRICAL EQUIPMENT, COMPONENTS, DEVICES, AND RACEWAY SYSTEMS TO BE KEPT OUT OF CLASSIFIED AREAS TO GREATEST EXTENT POSSIBLE.
4. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES (GRATING, LADDERS, HANDRAILS, STAIRS, ETC...) TO GROUND ROD USING #2 COPPER CONDUCTOR WITHIN RGS CONDUIT. TYPICAL OF EACH PRIMARY SETTLING TANK.
5. CONTRACTOR TO PROVIDE 125V, 2-POLE, 3-WIRE, 20-AMP, HEAVY-DUTY, WEATHER-PROOF, DUPLEX RECEPTACLE WITH INTEGRAL GFI PROTECTION AND INSTALL AT 36" ABOVE TANK WALKWAY. PROVIDE STAINLESS STEEL MOUNTING HARDWARE & UNISTRUT FOR INSTALLATION AS INDICATED. PROVIDE DEDICATED CIRCUIT FROM PANEL 'LVP4' AS SHOWN. CIRCUIT IS TO BE SHARED WITH RECEPTACLE NEAR SCUM PUMP CONTROL PANEL. REFER TO 'LVP1' PANEL SCHEDULE AND DUCT BANK SCHEDULE FOR CIRCUITING AND ADDITIONAL INFORMATION/REQUIREMENTS. TYPICAL OF EACH PRIMARY SETTLING TANK.
6. PROVIDE ALL REQUIRED STAINLESS STEEL UNISTRUT, MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... FOR STANCHION MOUNTING ABOVE TANK WALKWAY AS SHOWN/INDICATED.
7. PROVIDE ALL REQUIRED STAINLESS STEEL UNISTRUT, MOUNTING HARDWARE, BRACKETS, SUPPORTS, ACCESSORIES, ETC... FOR STANCHION MOUNTING ON TANK HANDRAIL AS SHOWN/INDICATED.
8. CONTRACTOR TO PROVIDE TELESCOPING POLE LIGHT AND 125V, 20A, HEAVY-DUTY SWITCH WITH WEATHER-PROOF-IN-USE BUBBLE COVER FOR ON/OFF CONTROL OF LIGHT. LIGHT IS TO SHARE THE CIRCUIT WITH TANK RECEPTACLES FROM PANEL 'LVP1' AS SHOWN. REFER TO 'LVP1' PANEL SCHEDULE AND DUCT BANK SCHEDULE FOR CIRCUITING AND ADDITIONAL INFORMATION/REQUIREMENTS. PROVIDE STAINLESS STEEL MOUNTING HARDWARE AND UNISTRUT FOR INSTALLATION AS INDICATED. COORDINATE FINAL LOCATION WITH OWNER AND APPLICABLE TRADE CONTRACTORS. TYPICAL OF EACH PRIMARY SETTLING TANK.
9. CONTRACTOR TO PROVIDE 125V, 2-POLE, 3-WIRE, 20A, EAVY-DUTY, WEATHER-PROOF-IN-USE BUBBLE COVER, DUPLEX RECEPTACLE WITH INTEGRAL GFI PROTECTION AND INSTALL AT 36" ABOVE FINISHED GRADE. RECEPTACLE CIRCUIT IS TO SHARED WITH RECEPTACLE ON TANK WALKWAY. REFER TO 'LVP1' PANEL SCHEDULE AND DUCT BANK SCHEDULE FOR CIRCUITING AND ADDITIONAL INFORMATION/REQUIREMENTS. TYPICAL OF EACH PRIMARY SETTLING TANK.
10. CONTRACTOR TO ROUTE ALL CONDUIT UNDER WALKWAY FOR EQUIPMENT LOCATED ON WALKWAY. PROVIDE ALL REQUIRED STAINLESS STEEL MOUNTING HARDWARE, UNISTRUT ACCESSORIES, ETC... AS REQUIRED TO INSTALL CONDUITS UNDER WALKWAY PER NEC. ROUTING METHODS TO BE CLOSELY COORDINATED WITH THE APPLICABLE TRADE CONTRACTOR TO AVOID CONFLICTS.
11. CONTRACTOR TO PROVIDE 20WATT LED LUMINAIRE SUITED FOR EXTERIOR USE. PROVIDE WITH BRACKET/MOUNT TO ALLOW OWNER TO ADJUST LIGHT FIXTURE ANGLE/POSITION. PROVIDE POWER CIRCUITRY FROM PANEL 'LVP1'. INSTALL LIGHT TO BACKBOARD AT MINIMUM 48" ABOVE FINISHED GRADE.
12. CONTRACTOR TO PROVIDE RECEPTACLE AS 125 VOLT, 2 POLE, 3 WIRE, 20 AMP, WEATHERPROOF GFCI HEAVY DUTY DUPLEX RECEPTACLE. PROVIDE POWER CIRCUITRY FROM PANEL 'LVP1'. INSTALL RECEPTACLE TO BACKBOARD AT MINIMUM 36" ABOVE FINISHED GRADE.
13. ALL PROPOSED EQUIPMENT/ENCLOSURES ON ELECTRICAL BACKBOARD TO BE RATED FOR OUTDOOR USE (MINIMUM NEMA 4X).
14. CONTRACTOR TO PROVIDE ELECTRICAL BACKBOARD. FINAL LOCATION TO BE COORDINATED WITH THE OWNER AND APPLICABLE CONTRACTOR PRIOR TO ROUGH-IN TO AVOID CONFLICT WITH EXISTING CONDITIONS AND PROPOSED WORK. REFER TO SLUDGE CONTROL ELECTRICAL BACKABOARD DETAIL AND SITE PLAN FOR ADDITIONAL INFORMATION, REQUIREMENTS, AND GENERAL LOCATION.
15. CONTRACTOR TO PROVIDE ALL REQUIRED STAINLESS STEEL MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... REFER TO 'TYPICAL ELECTRICAL BACKBOARD DETAIL' FOR ADDITIONAL INFORMATION/REQUIREMENTS.
16. WHERE APPLICABLE, ALL PROPOSED EQUIPMENT ON ELECTRICAL BACKBOARD TO PROVIDED AS PAD-LOCKABLE. PROVIDE LOCK (TURN KEY OVER TO THE OWNER). COORDINATE FINAL REQUIREMENTS WITH THE OWNER.
17. ACCESS HATCH (BELOW)CONTRACTOR TO KEEP AREA CLEAR AND COORDINATE FINAL LOCATION/REQUIREMENTS WITH CONTRACT #1.
18. CONTRACTOR TO PROVIDE MOTOR RATED SWITCH WITHIN NEMA 4X ENCLOSURE FOR CONTROL OF PRIMARY SLUDGE PIT EXHAUST FAN 'EF-300'. IN ADDITION, MOTOR RATED SWITCH TO BE KEYED AND LOCKED IN THE 'ON' POSITION FOR CONTINUOUS OPERATION (CONTROLLED BY THERMOSTAT BY APPLICABLE CONTRACTOR). PROVIDE KEY AND TURN OVER TO OWNER. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION. COORDINATE FINAL REQUIREMENTS WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
19. ROUTING AND ATTACHMENT METHODS OF ALL CONDUITS TO BE CLOSELY COORDINATED WITH APPLICABLE CONTRACTOR AND OWNER PRIOR TO ROUGH-IN AND VERIFIED IN FIELD TO AVOID POTENTIAL CONFLICTS WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS.
20. MOUNT TWO (2) LIGHT FIXTURES ON WALLS OF UPPER LEVEL OF SLUDGE PIT AS SHOWN AND MOUNT AND ADDITIONAL TWO (2) LIGHT FIXTURES ON WALLS OF LOWER LEVEL DIRECTLY BELOW UPPER LEVEL LIGHT FIXTURES FOR A TOTAL OF FOUR (4) IN THE SLUDGE PIT. ALL LIGHTS ARE TO BE ON THE SAME CIRCUIT AND CONTROLLED BY LIGHT SWITCH 'a' AS SHOWN.

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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL NEW WORK PLANS - PRIMARY SETTLING TANKS

REVISIONS

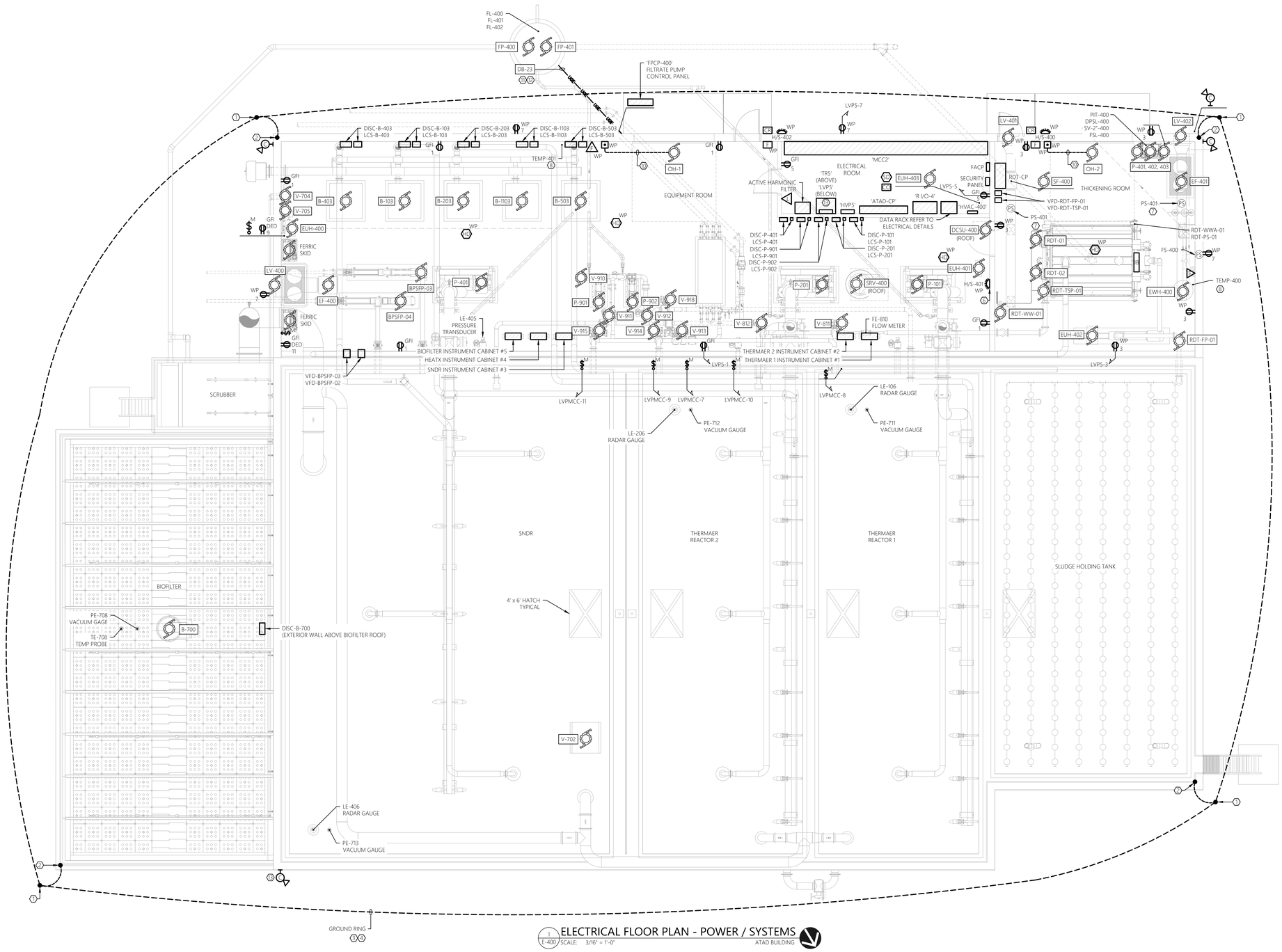
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-301

PROJECT # 18-732 PHASE #



1 E-400 ELECTRICAL FLOOR PLAN - POWER / SYSTEMS ATAD BUILDING

SCALE: 3/16" = 1'-0"

0' 2' 4' 8' 16'

SCALE: 3/16" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC... THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND GENERAL CONTRACTOR.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.
11. REFER TO DATA DETAILS FOR COMMUNICATION SCOPE OF WORK.

SHEET KEY NOTE:

1. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #2/0 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO TYPICAL LIGHTNING PROTECTION GROUNDING DETAILS AND TYPICAL PANEL GROUNDING DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN RGS CONDUIT WITHIN EXTERIOR WALL CONSTRUCTION. CONTRACTOR TO WORK WITH CERTIFIED LIGHTNING PROTECTION INSTALLER TO PROVIDE COMPLETE BUILDING LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH NFPA. UPON COMPLETION PROVIDE UL MASTER LABEL. REFER TO LIGHTNING PROTECTION FOR STRUCTURES SPECIFICATIONS FOR REQUIREMENTS AND ADDITIONAL INFORMATION.
3. GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM BUILDING AT ALL TIMES. PROVIDE AND INSTALL 3/4"Ø x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF SIX (6) GROUND RODS. ALL GROUND CONDUCTORS SHALL BE #2/0 COPPER, U.O.N.
4. CONTRACTOR TO ADDITIONALLY BOND GROUND RING TO ADJACENT BUILDING GROUND SYSTEM. UTILIZE #2/0 COPPER GROUND CONDUCTOR.
5. LADDER, STAIRS, HANDRAIL AND ALL OTHER METALLIC STRUCTURES.
6. HVAC MONITORING SYSTEM ALARM HORN/STROBES. INSTALL DEVICES (HORN/STROBES) AT 8'-0" ABOVE FINISHED FLOOR/GRADE. TYPICAL OF TWO (2). REFER TO RISER DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. PRESSURE SENSOR FOR MONITORING. COORDINATE FINAL CIRCUITRY REQUIREMENTS WITH THE HVAC CONTRACTOR. CONNECT TO 'HVAC-400'.
8. TEMPERATURE SENSOR FOR MONITORING. COORDINATE FINAL CIRCUITRY REQUIREMENTS WITH THE HVAC CONTRACTOR. CONNECT TO 'R I/O-4'. TYPICAL OF TWO (2)
9. CONTRACTOR TO PROVIDE COMBINATION CARBON MONOXIDE/SMOKE DETECTOR MODEL GN-503F AS MANUFACTURED BY GENTEX OR APPROVED EQUAL. DETECTOR TO BE 120V POWERED BY BUILDING ELECTRICAL SYSTEM, CONTAIN BATTERY BACKUP, AND BE UL LISTED. DETECTOR TO FEATURE ONE (1) SET OF CONTACTS THAT ACTIVATE UPON DETECTION OF SMOKE, OR CARBON MONOXIDE. INSTALL ON WALL PER MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH NFPA 720.
10. PROVIDE LOW VOLTAGE CONDUCTORS IN 1/2" CONDUIT PER MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM. COORDINATE FINAL REQUIREMENTS WITH ALL OTHER TRADE CONTRACTORS AND THE OWNER.
11. CONTRACTOR RESPONSIBLE TO RESTORE ALL DISTURBED SURFACES AS PART OF THIS PROJECT. COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND APPLICABLE CONTRACTOR. REFER TO DUCT BANK SECTION DETAILS FOR ADDITIONAL INFORMATION. TYPICAL OF ALL PROPOSED DUCT BANKS.
12. CONTRACTOR TO COORDINATE FINAL DUCT BANK ROUTING/REQUIREMENTS WITH EXISTING FIELD CONDITIONS, PROPOSED WORK, OWNER AND APPLICABLE CONTRACTOR PRIOR TO ROUGH-IN TO AVOID CONFLICTS. TYPICAL OF ALL PROPOSED DUCT BANKS.
13. CONTRACTOR TO PROVIDE WALL MOUNT BRACKETS FOR INSTALLATION ON WALL ABOVE PANEL LVPS.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL POWER & SYSTEMS PLAN - ATAD BUILDING

REVISIONS

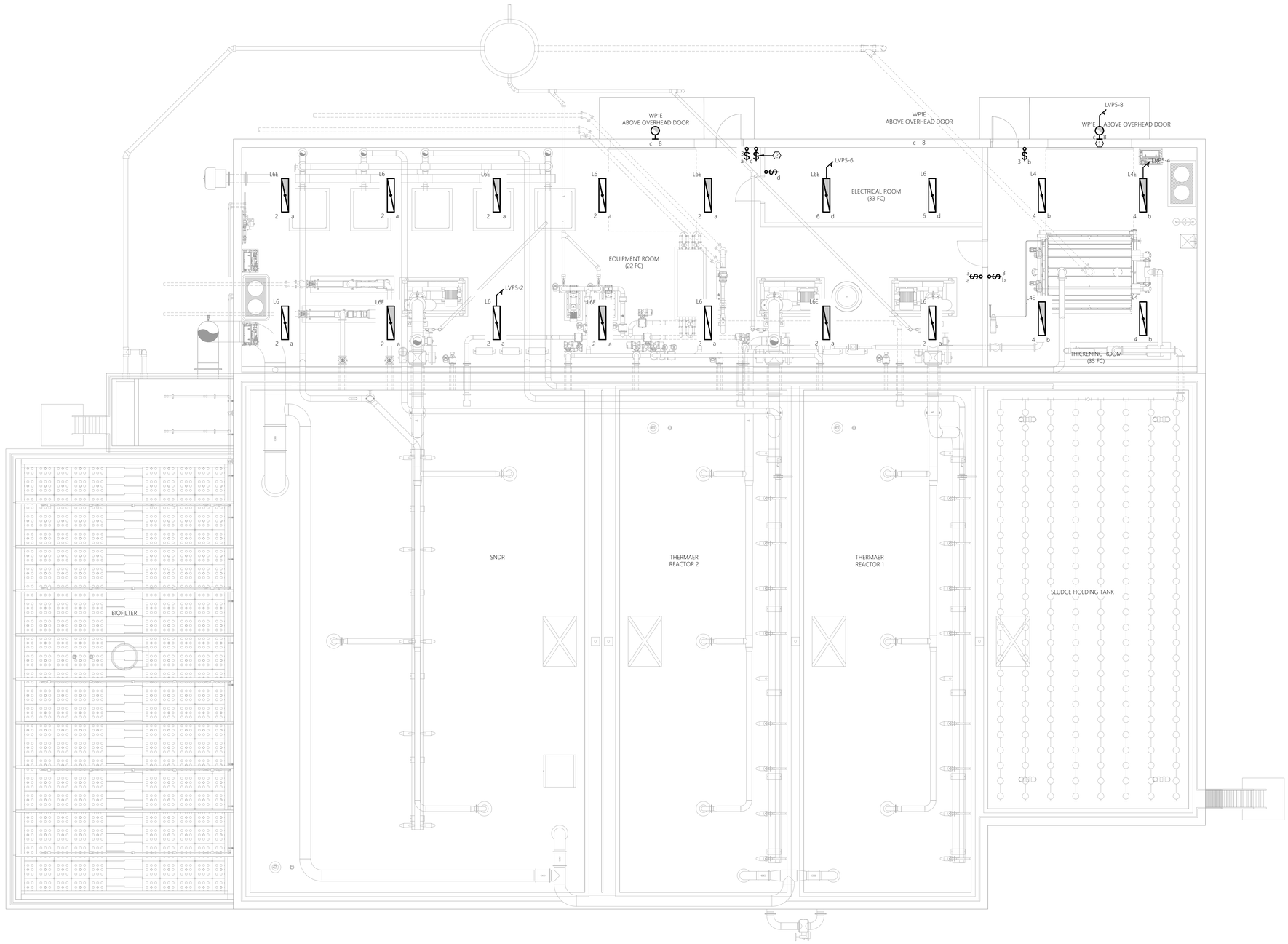
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-400

PROJECT # 18-732 PHASE #



ELECTRICAL FLOOR PLAN - LIGHTING
E-401 SCALE: 3/16" = 1'-0" ATAD BUILDING

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC... THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND GENERAL CONTRACTOR.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.
11. REFER TO DATA DETAILS FOR COMMUNICATION SCOPE OF WORK.
12. CONTRACTOR TO ADJUST FINAL PROPOSED INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS.
13. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.

SHEET KEY NOTES:

1. COORDINATE FINAL INSTALLATION LOCATION WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN. TYPICAL OF FOUR (4) WALL PACK LIGHTING FIXTURES.
2. CONTRACTOR TO PROVIDE TIME SWITCH AS WATTSTOPPER RT-200 ASTRONOMICAL TIME SWITCH OR APPROVED EQUAL. TIME SWITCH TO CONTROL PROPOSED EXTERIOR LIGHTING FIXTURES TYPE WP1/WP1E. PROGRAM THE SWITCH FOR LIGHTING 'ON' AT ASTRONOMICAL SUNSET AND 'OFF' AT ASTRONOMICAL SUN RISE. FINAL ON/OFF PARAMETERS TO BE COORDINATED WITH THE OWNER.

0' 2' 4' 8' 16'
SCALE: 3/16" = 1'-0"

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NEW WINDSOR, NY 12553

ELECTRICAL LIGHTING PLAN - ATAD BUILDING

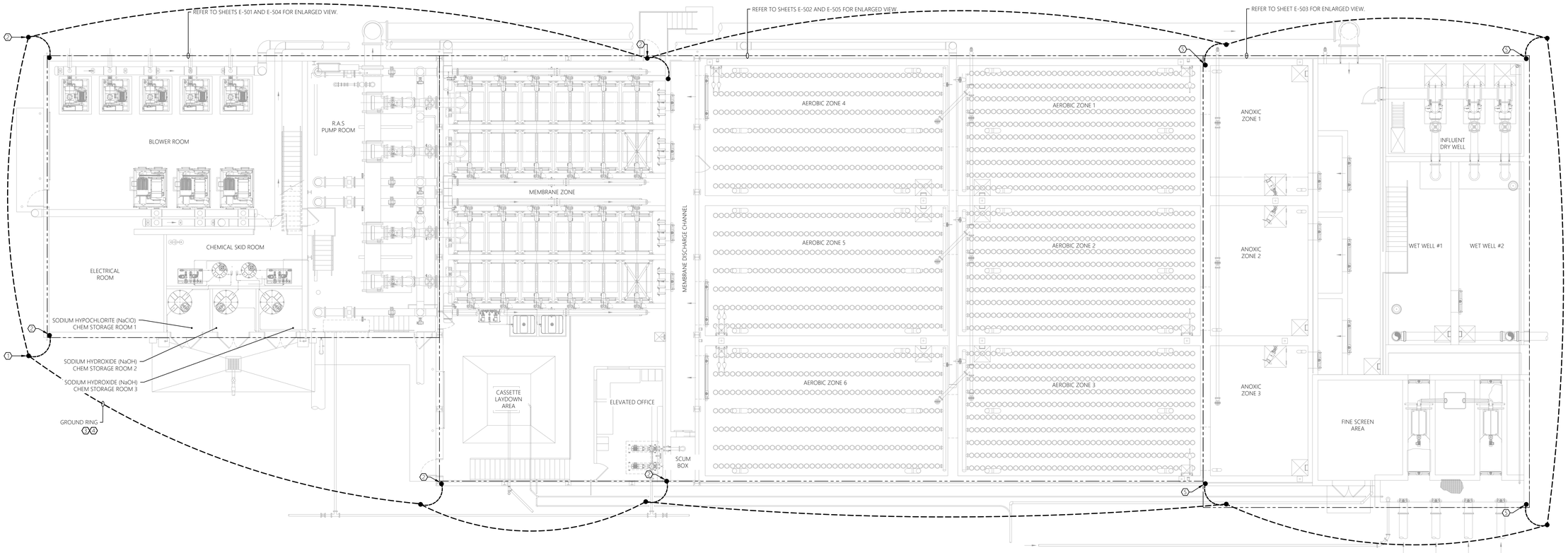
REVISIONS

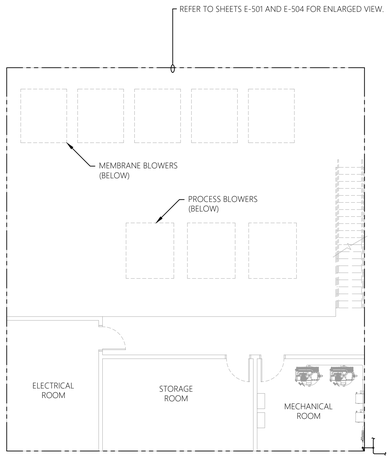
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

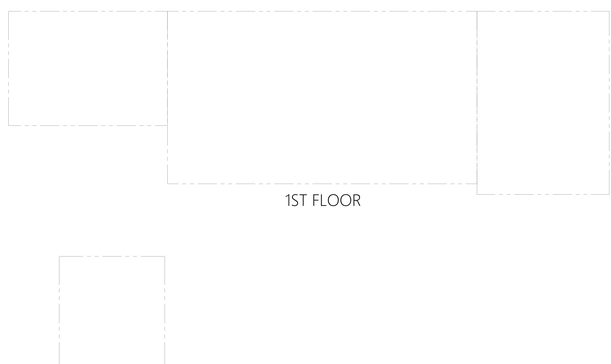
SHEET NO.
E-401

PROJECT # 18-732 PHASE #





2 ELECTRICAL OVERALL PLAN
E-500 SCALE: 3/16" = 1'-0" MBR BUILDING 2ND FLOOR



3 OVERALL PLAN KEY
E-500 SCALE: NTS MBR BUILDING

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC... THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND GENERAL CONTRACTOR.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.

0' 2' 4' 8' 16'
SCALE: 1/8" = 1'-0"

SHEET KEY NOTE:

1. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METALLIC STRUCTURES AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #400 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO TYPICAL LIGHTNING PROTECTION GROUNDING DETAILS AND TYPICAL PANEL GROUNDING DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN RGS CONDUIT WITHIN EXTERIOR WALL CONSTRUCTION. CONTRACTOR TO WORK WITH CERTIFIED LIGHTNING PROTECTION INSTALLER TO PROVIDE COMPLETE BUILDING LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH NFPA. UPON COMPLETION PROVIDE UL MASTER LABEL. REFER TO LIGHTNING PROTECTION FOR STRUCTURES SPECIFICATIONS FOR REQUIREMENTS AND ADDITIONAL INFORMATION.
3. GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM BUILDING AT ALL TIMES. PROVIDE AND INSTALL 3/4"Ø x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF NINE (9) GROUND RODS. ALL GROUND CONDUCTORS SHALL BE #400 COPPER, U.O.N.
4. CONTRACTOR TO ADDITIONALLY BOND GROUND RING TO ADJACENT BUILDING GROUND SYSTEM. UTILIZE #400 COPPER GROUND CONDUCTOR.
5. LADDER, STAIRS, HANDRAIL AND ALL OTHER METALLIC STRUCTURES.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
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111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL OVERALL PLAN - MBR BUILDING

REVISIONS

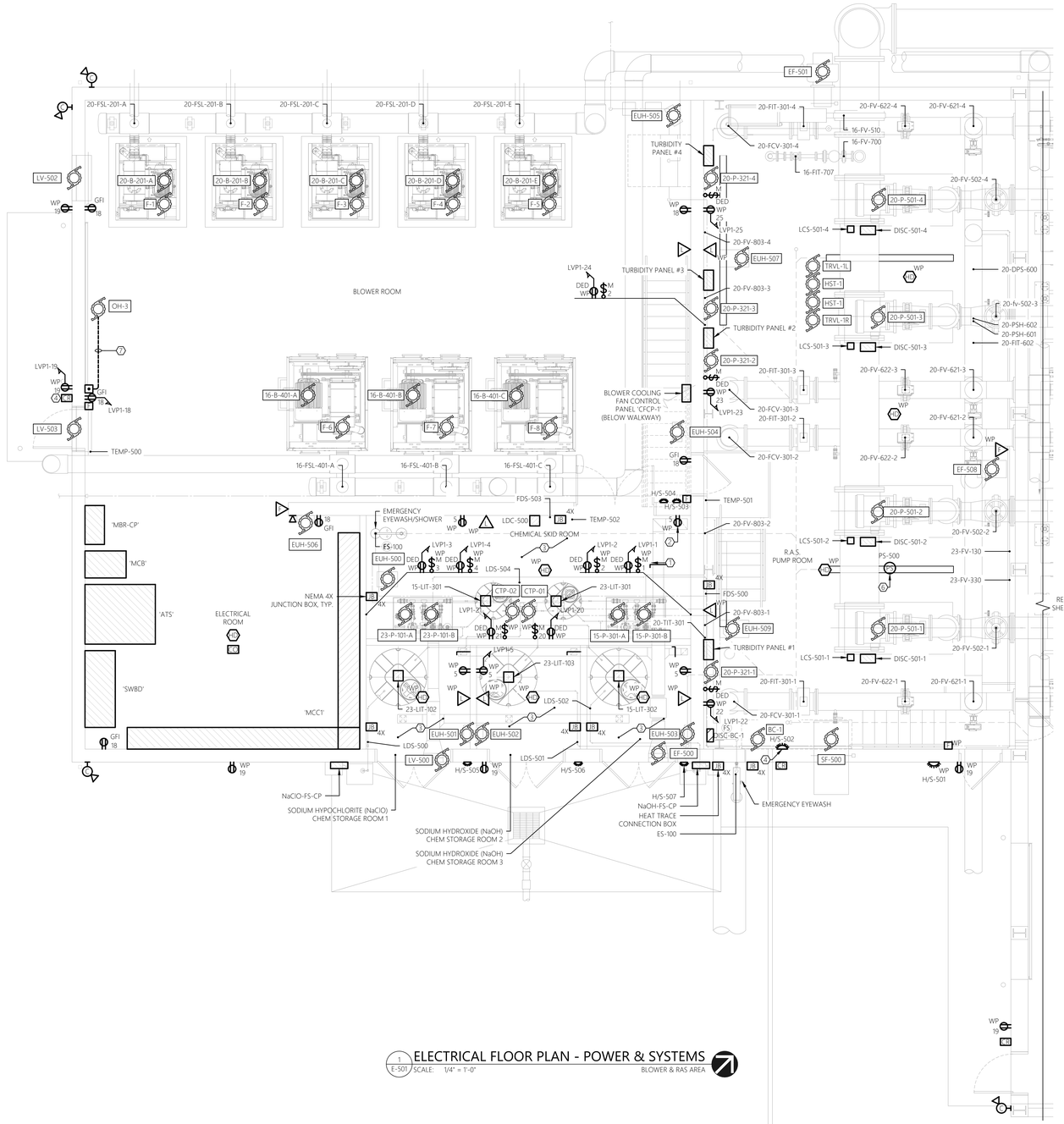
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

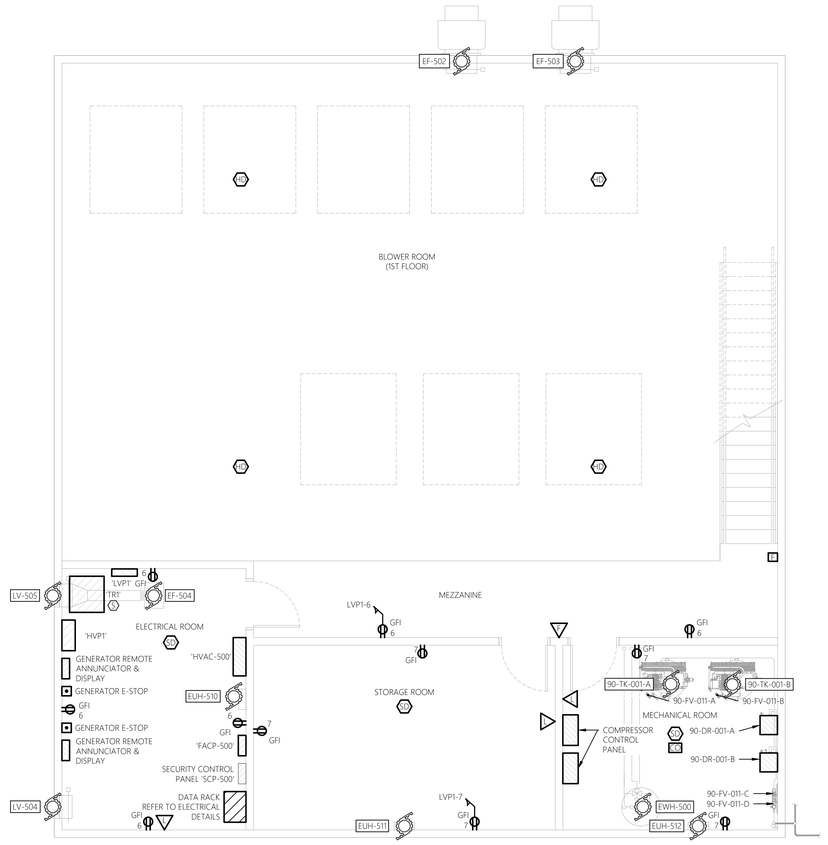
E-500

PROJECT # 18-732 PHASE #



1 ELECTRICAL FLOOR PLAN - POWER & SYSTEMS

E-501 SCALE: 1/4" = 1'-0" BLOWER & RAS AREA



2 ELECTRICAL FLOOR PLAN - POWER & SYSTEMS

E-501 SCALE: 1/4" = 1'-0" 2ND FLOOR



3 OVERALL PLAN KEY

E-501 SCALE: NTS MBR BUILDING

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC... THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND ALL OTHER TRADE CONTRACTORS.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.
11. REFER TO DATA DETAILS FOR COMMUNICATION SCOPE OF WORK.

SHEET KEY NOTES:

1. EACH CHEMICAL PUMP TO BE PROVIDED WITH A SWITCHED RECEPTACLE FOR ON/OFF CONTROL OF CHEMICAL PUMP. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION. TYPICAL.
2. ALL RECEPTACLES WITHIN CHEMICAL ROOM TO BE PROVIDED WITH PVC COATED BOX AND COVER SYSTEM. TYPICAL.
3. CHEMICAL ROOM INTERIOR IS A CORROSIVE ENVIRONMENT. ALL ELECTRICAL EQUIPMENT, WIRING METHODS, AND DEVICES INTERIOR TO THE CHEMICAL ROOM TO BE OF CORROSION RESISTANT MATERIALS/METHODS. UTILIZE NEMA 4X (NON-METALLIC) ENCLOSURES FOR DISCONNECTS AND LOCAL CONTROL STATIONS. UTILIZED TITANIUM FOR ALL SUPPORTS, ANCHORS, AND FASTENERS.
4. HVAC MONITORING SYSTEM ALARM HORN/STROBES. INSTALL DEVICES (HORN/STROBES) AT 8'-0" ABOVE FINISHED FLOOR/GRADE. REFER TO RISER DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
5. CONTRACTOR TO PROVIDE WALL MOUNT BRACKETS FOR INSTALLATION ON WALL ABOVE PANEL LVP1.
6. PRESSURE SENSOR FOR MONITORING. COORDINATE FINAL CIRCUITRY REQUIREMENTS WITH THE HVAC CONTRACTOR. CONNECT TO 'HVAC-500'.
7. PROVIDE LOW VOLTAGE CONDUCTORS IN 1/2" CONDUIT PER MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM. COORDINATE FINAL REQUIREMENTS WITH ALL OTHER TRADE CONTRACTORS AND THE OWNER.

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL POWER & SYSTEMS PLAN - BLOWER & RAS AREA

REVISIONS

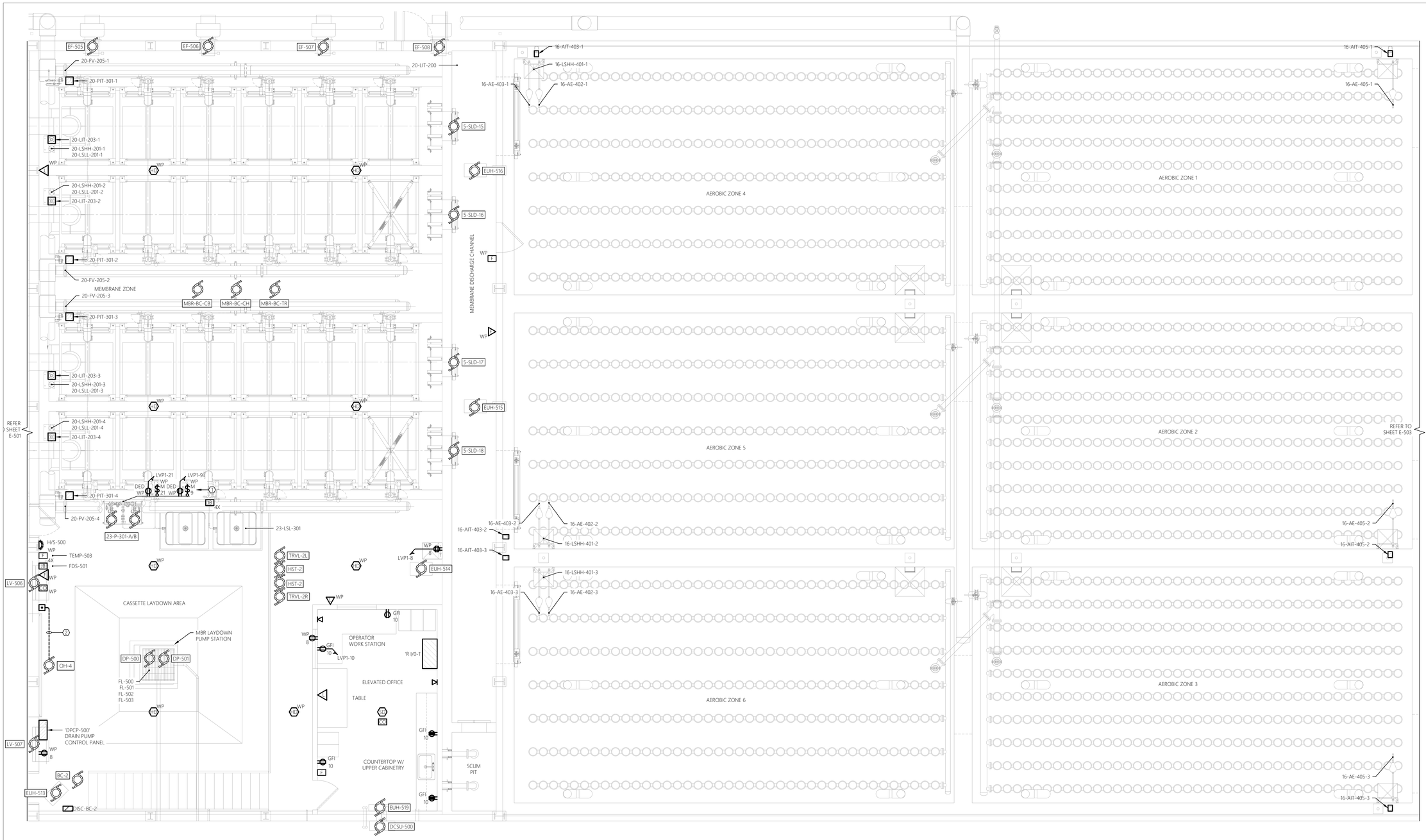
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-501

PROJECT # 18-732 PHASE #



GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC... THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND ALL OTHER TRADE CONTRACTORS.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.
11. REFER TO DATA DETAILS FOR COMMUNICATION SCOPE OF WORK.

SHEET KEY NOTES:

(1) EACH CHEMICAL PUMP TO BE PROVIDED WITH A SWITCHED RECEPTACLE FOR ON/OFF CONTROL OF CHEMICAL PUMP. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION. TYPICAL.

(2) PROVIDE LOW VOLTAGE CONDUCTORS IN 1/2" CONDUIT PER MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM. COORDINATE FINAL REQUIREMENTS WITH ALL OTHER TRADE CONTRACTORS AND THE OWNER.

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-502 ELECTRICAL FLOOR PLAN - POWER & SYSTEMS
SCALE: 1/4" = 1'-0" MEMBRANE & AEROBIC ZONES



2 E-502 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

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(570) 296-2765

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL POWER & SYSTEMS PLAN - MEMBRANE & AEROBIC AREA

REVISIONS

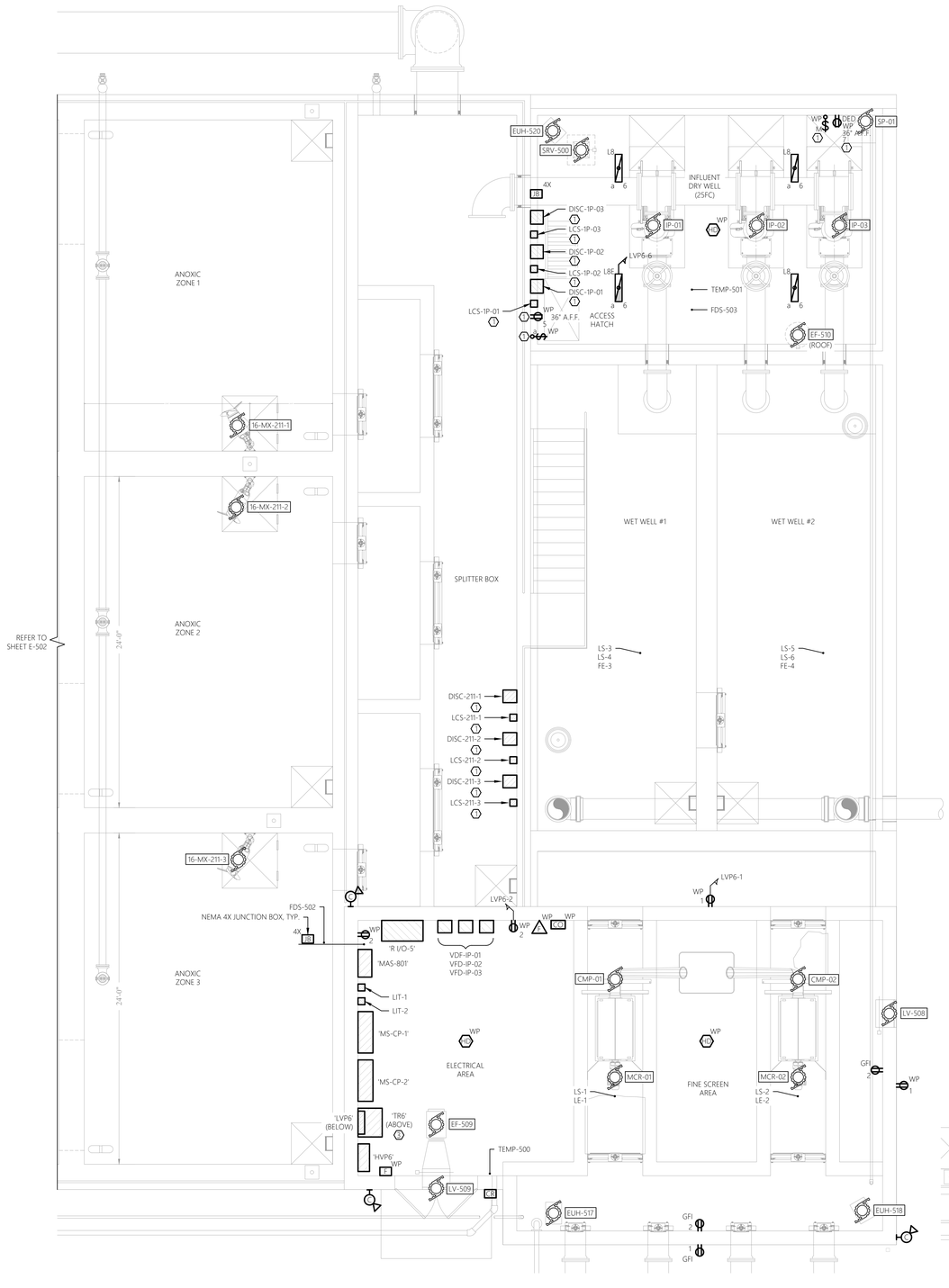
NO.	DESCRIPTION	DATE

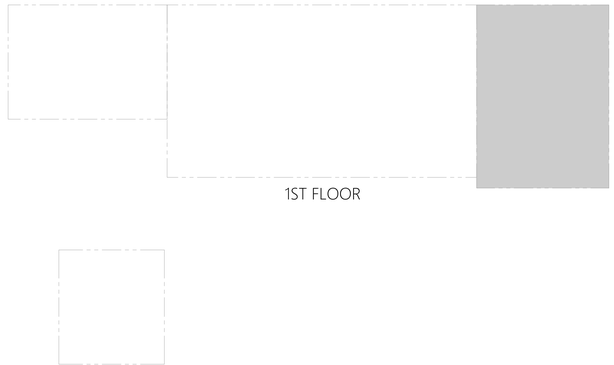
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

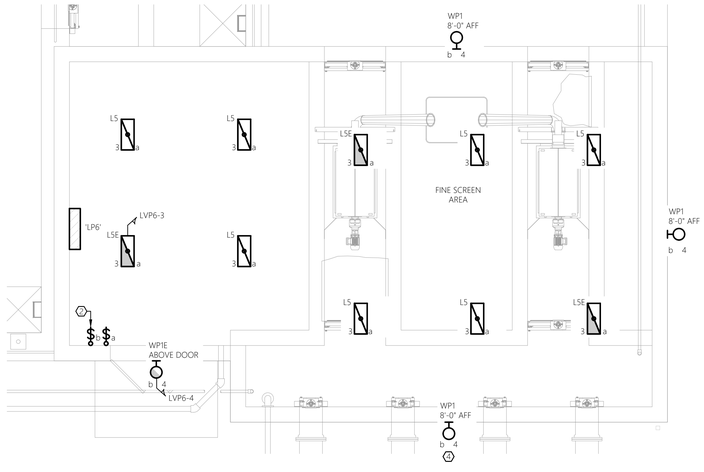
E-502

PROJECT # 18-732 PHASE #





2 E-503 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING



1 E-503 ELECTRICAL FLOOR PLAN - POWER & SYSTEMS
SCALE: 1/4" = 1'-0" SCREENING & INFLUENT AREA

3 E-503 ELECTRICAL FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0" SCREENING & INFLUENT AREA

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC... THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND APPLICABLE TRADE CONTRACTORS.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.
11. REFER TO DATA DETAILS FOR COMMUNICATION SCOPE OF WORK.
12. CONTRACTOR TO ADJUST FINAL PROPOSED INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS.
13. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH ALL OTHER TRADE CONTRACTORS. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.

SHEET KEY NOTES:

1. PROVIDE ALL REQUIRED STAINLESS STEEL UNISTRUT, MOUNTING HARDWARE, BRACKETS, SUPPORTS, ACCESSORIES, ETC... FOR STANCHION MOUNTING ABOVE TANK WALKWAY AS SHOWN/INDICATED. COORDINATE WITH ALL OTHER TRADE CONTRACTORS AND INSTALL TO HANDRAIL SYSTEM. TYPICAL.
2. CONTRACTOR TO PROVIDE TIME SWITCH AS WATTSTOPPER RT-200 ASTRONOMICAL TIME SWITCH OR APPROVED EQUAL. TIME SWITCH TO CONTROL PROPOSED EXTERIOR LIGHTING FIXTURES TYPE WP1/WP1E. PROGRAM THE SWITCH FOR LIGHTING 'ON' AT ASTRONOMICAL SUNSET AND 'OFF' AT ASTRONOMICAL SUN RISE. FINAL ON/OFF PARAMETERS TO BE COORDINATED WITH THE OWNER.
3. CONTRACTOR TO PROVIDE WALL MOUNT BRACKETS FOR INSTALLATION ON WALL ABOVE PANEL LVP6.
4. COORDINATE FINAL INSTALLATION LOCATION WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN. TYPICAL OF FOUR (4) WALL PACK LIGHTING FIXTURES.

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(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL POWER, SYSTEMS, & LIGHTING PLAN - SCREENING & INFLUENT AREA

REVISIONS

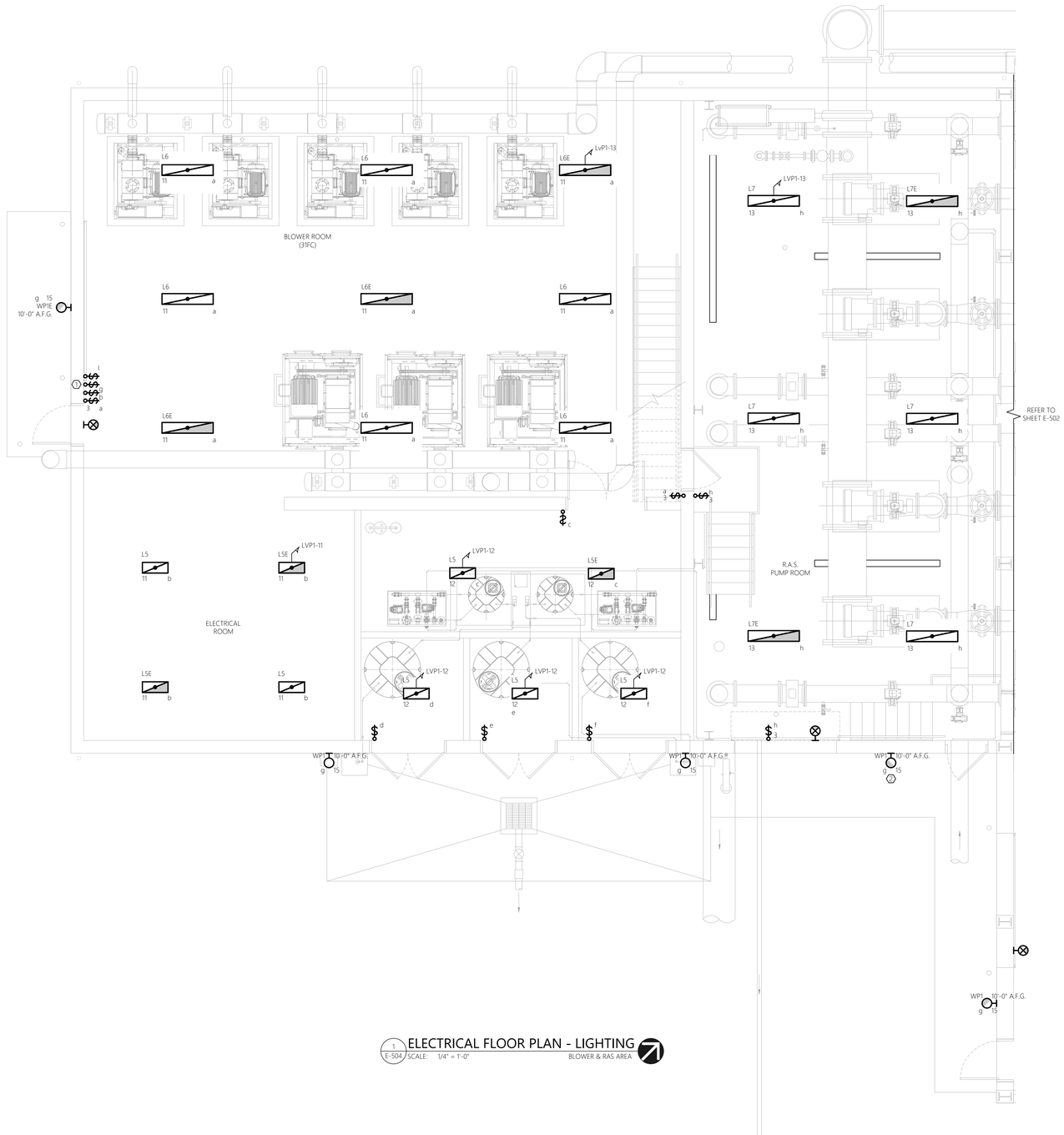
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

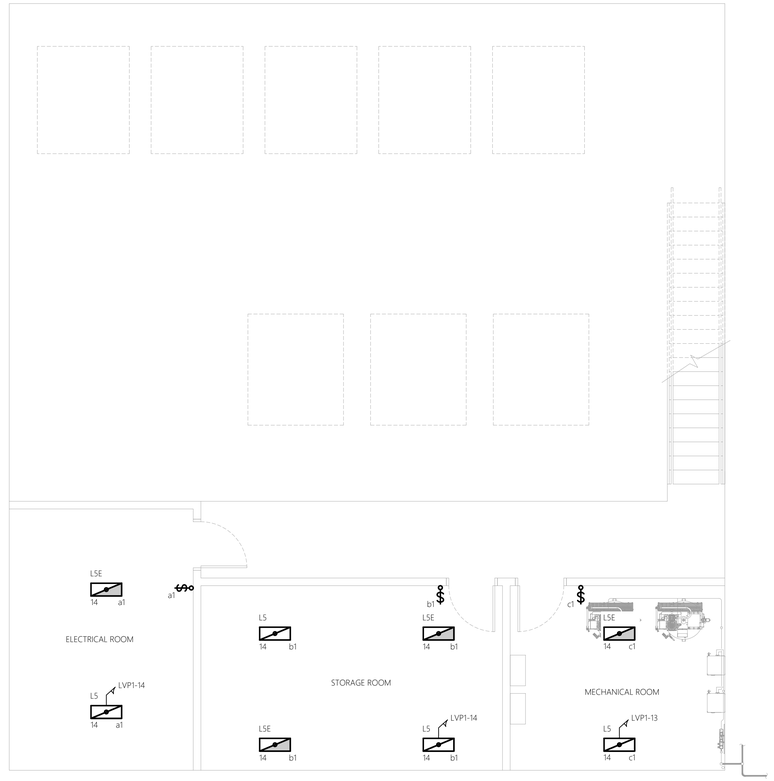
SHEET NO.

E-503

PROJECT # 18-732 PHASE #



1 E-504 ELECTRICAL FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0" BLOWER & RAS AREA



2 E-504 ELECTRICAL FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0" 2ND FLOOR

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC... THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND GENERAL CONTRACTOR.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.
11. REFER TO DATA DETAILS FOR COMMUNICATION SCOPE OF WORK.
12. CONTRACTOR TO ADJUST FINAL PROPOSED INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS.
13. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH ALL OTHER TRADE CONTRACTORS. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE TWO (2) WATTSTOPPER RT-200 ASTRONOMICAL TIME SWITCHES, OR APPROVED EQUAL WITHIN SEPARATE NEMA 1 ENCLOSURES. ONE (1) SWITCH TO CONTROL THE PROPOSED EXTERIOR WALL MOUNTED LIGHT FIXTURES TYPES 'WP1' & 'WP1E' AND THE SECOND TO CONTROL THE PROPOSED SITE LIGHT POLE FIXTURE TYPE 'S1' LOCATED NEAR THE FORCEMAIN DISCHARGE CHAMBER (TYPICAL OF TWO). PROGRAM TIME SWITCHES FOR LIGHTING 'ON' AT ASTRONOMICAL SUNSET AND 'OFF' AT ASTRONOMICAL SUNRISE. FINAL ON/OFF PROGRAMMING PARAMETERS TO BE COORDINATED WITH THE OWNER.
2. COORDINATE FINAL INSTALLATION LOCATION WITH OWNER AND ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH-IN. TYPICAL OF SEVEN (7) WALL PACK LIGHTING FIXTURES.



3 E-504 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL LIGHTING PLAN - BLOWER & RAS AREA

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-504

PROJECT # 18-732 PHASE #



GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC., THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND ALL OTHER TRADE CONTRACTORS.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.
11. REFER TO DATA DETAILS FOR COMMUNICATION SCOPE OF WORK.
12. CONTRACTOR TO ADJUST FINAL PROPOSED INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS.
13. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH OWNER AND ALL OTHER TRADE CONTRACTORS. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.

SHEET KEY NOTES:

1. LIGHTING IS LOCATED ABOVE ON THE MAIN CEILING WHICH IS ABOVE THE ROOF OF THE ELEVATED OFFICE.
2. THE 'L7/L7E' FIXTURES TO BE SUSPENSION/PENDANT MOUNTED 2'-0" BENEATH CEILING. PROVIDE NECESSARY SUSPENSION/PENDANT KITS.
3. DIMMING SWITCH FOR DIMMING CONTROL OF ROOM LIGHTING FIXTURES. PROVIDE ALL NECESSARY LOW VOLTAGE CONDUCTORS FOR FULL DIMMING CAPABILITY.
4. CONTROLLED BY SWITCH LOCATED IN E-504.

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-505 ELECTRICAL FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0" MEMBRANE & AEROBIC ZONES



2 E-505 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL LIGHTING PLAN - MEMBRANE & AEROBIC ZONES

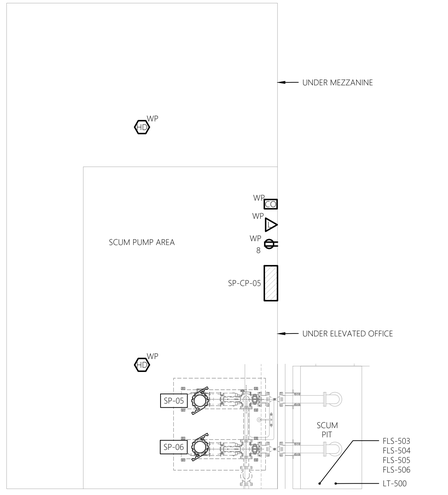
REVISIONS

NO.	DESCRIPTION	DATE

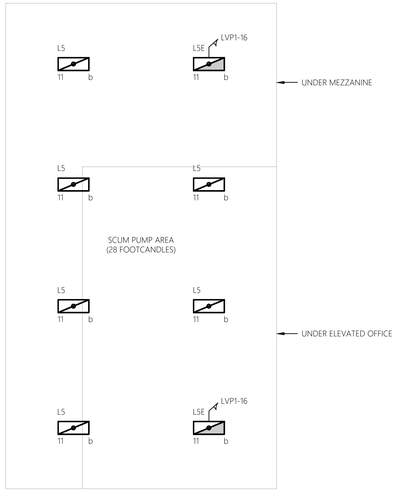
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-505

PROJECT # 18-732 PHASE #



1 E-506 ELECTRICAL FLOOR PLAN - POWER & SYSTEMS
SCALE: 1/4" = 1'-0" SCUM PUMP AREA AND SCUM PIT



2 E-506 ELECTRICAL FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0" SCUM PUMP AREA AND SCUM PIT

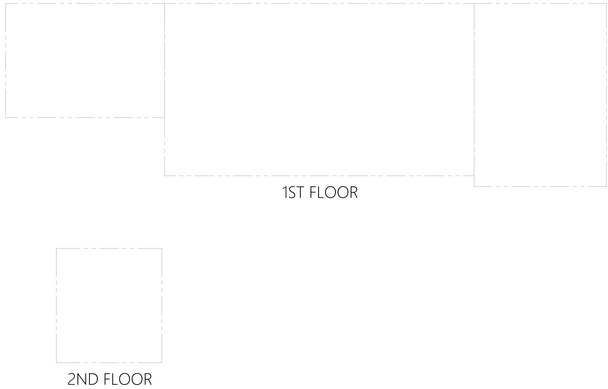
0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT AND DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO MECHANICAL, PROCESS AND HVAC DRAWINGS FOR EXACT LOCATIONS.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH ALL OTHER TRADE CONTRACTORS PRIOR TO ROUGH IN.
5. CONTRACTOR RESPONSIBLE FOR MOUNTING OF ALL CONTROL PANELS, CONTROLLERS, TRANSMITTERS, ETC., THAT ARE FURNISHED AS PART OF THIS PROJECT (INCLUDING GENERAL CONTRACTOR). PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT. ALL MOUNTING HARDWARE/EQUIPMENT TO BE STAINLESS STEEL. REFERENCE TYPICAL MOUNTING DETAILS FOR ADDITIONAL INFORMATION.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAM, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER AND GENERAL CONTRACTOR.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G. ALL INTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 24" A.F.F. UNLESS NOTED OTHERWISE.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER AND ALL OTHER TRADE CONTRACTORS.
10. COORDINATE CONDUIT PENETRATION LOCATIONS THRU EXTERIOR BUILDING WALLS CLOSELY WITH GENERAL CONTRACTOR PRIOR TO PERFORMING WORK.

SHEET KEY NOTE:

1. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METALLIC STRUCTURES AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #400 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO TYPICAL LIGHTNING PROTECTION GROUNDING DETAILS AND TYPICAL PANEL GROUNDING DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN RGS CONDUIT WITHIN EXTERIOR WALL CONSTRUCTION. CONTRACTOR TO WORK WITH CERTIFIED LIGHTNING PROTECTION INSTALLER TO PROVIDE COMPLETE BUILDING LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH NFPA. UPON COMPLETION PROVIDE UL MASTER LABEL. REFER TO LIGHTNING PROTECTION FOR STRUCTURES SPECIFICATIONS FOR REQUIREMENTS AND ADDITIONAL INFORMATION.
3. GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM BUILDING AT ALL TIMES. PROVIDE AND INSTALL 3/4"Ø x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF NINE (9) GROUND RODS. ALL GROUND CONDUCTORS SHALL BE #400 COPPER, U.O.N.
4. CONTRACTOR TO ADDITIONALLY BOND GROUND RING TO ADJACENT BUILDING GROUND SYSTEM. UTILIZE #400 COPPER GROUND CONDUCTOR.
5. LADDER, STAIRS, HANDRAIL AND ALL OTHER METALLIC STRUCTURES.



MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
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BID SET

JADE STONE ENGINEERING

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

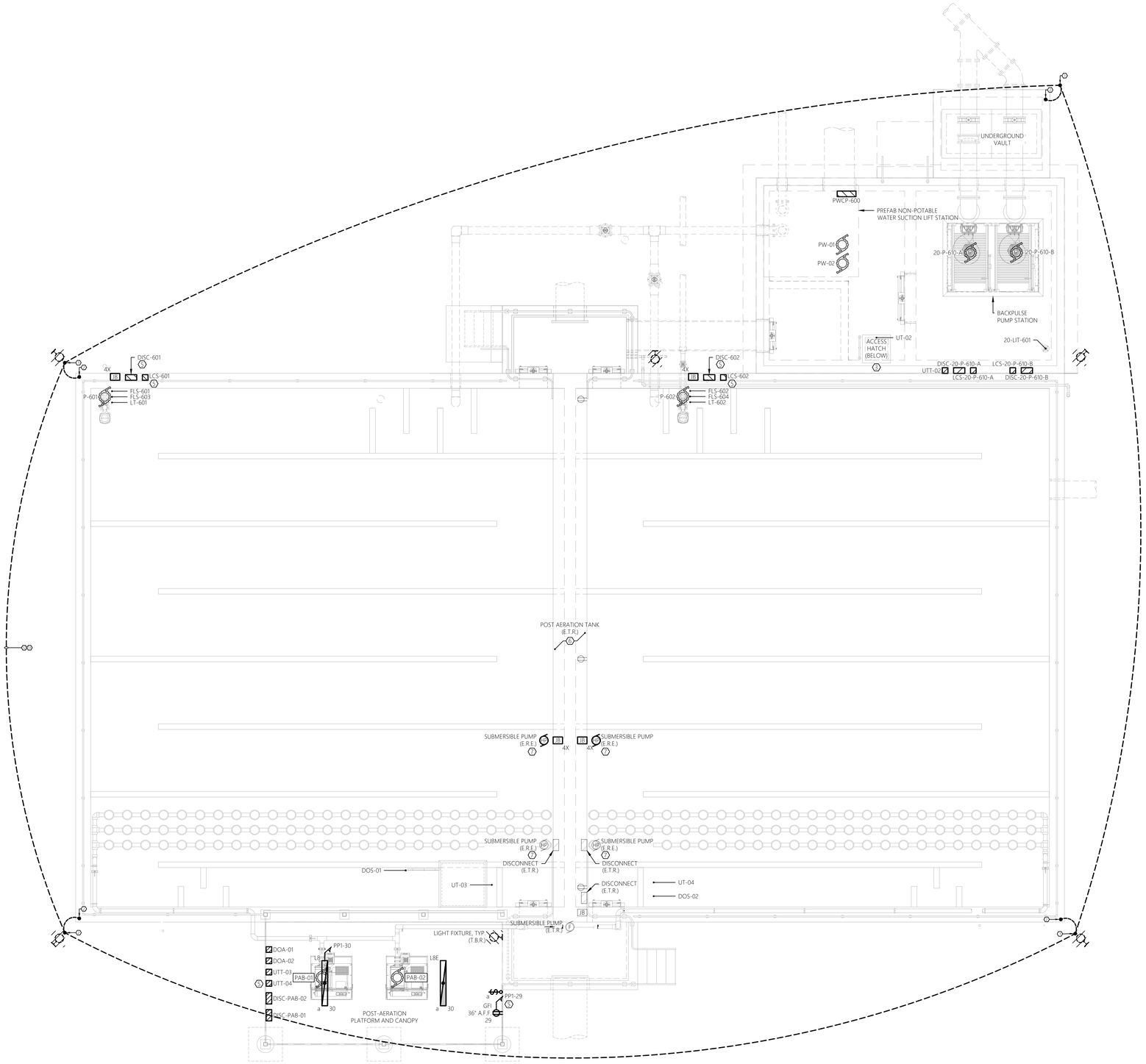
ELECTRICAL POWER, SYSTEMS, & LIGHTING PLAN - SCUM PUMP AREA

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-506
PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-600 ELECTRICAL FLOOR PLAN - POWER, SYSTEMS, & LIGHTING
SCALE: 1/4" = 1'-0"
DISINFECTION TANK

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH APPLICABLE TRADE CONTRACTOR, OWNER, AND ENGINEER PRIOR TO ROUGH-IN.
5. CONTRATOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER, ENGINEER, AND ALL TRADE CONTRACTORS.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER. REFER TO SPECIFICATION SECTION 26 0553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND ROUTING WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.
11. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER.

GENERAL DEMOLITION NOTES:

DEMOLITION EQUIPMENT & RIGGING (ELECTRICAL EQUIPMENT)
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL RECEPTACLES & CONTROLS & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED U.O.N.
- REMOVE ALL EXPOSED CONDUIT, WIRING, CONTROLS, STARTERS, & DISCONNECTS. U.O.N.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED CIRCUIT BREAKER, U.O.I.
- REMOVE ALL INTERLOCK CIRCUITRY, U.O.I.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, U.O.I.

RECEPTACLES
- RECEPTACLES TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. *NOTE* ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, U.O.I.

LIGHTING
- LIGHTING TO BE DEMOLISHED:
- REMOVE ALL LIGHTING IMPACTED BY ABOVE CEILING SPACE. *NOTE* ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, U.O.I.
- REMOVE SWITCHING AND CONTROL DEVICES, U.O.I.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, LARGE SWITCHING DEVICES, U.O.I.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARDS, BRANCH, AND MAIN SCHEDULES
- REFER TO SHEET E-004 FOR ADDITIONAL TYPES OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT
- CIRCUITS AND FEEDERS TO REMAIN IN SERVICE:
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATIONS/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMPLISH WORK SHALL BE COORDINATED WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER WELL IN ADVANCE.

SITE GROUNDING SYSTEMS (GROUND SYSTEMS)
- CONTRACTOR TO PROTECT, MAINTAIN IN SERVICE AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, BUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL
INTENT OF WORK FOR REMOVAL ALL DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB LIQUID FILLED EQUIPMENT, INCLUDING ELECTRIC TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND CFC-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES, EQUIPMENT, AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #2 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO TYPICAL LIGHTNING PROTECTION GROUNDING DETAIL AND TYPICAL PANEL GROUNDING DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN CONDUIT WITHIN EXTERIOR WALL. REFER TO "LIGHTNING PROTECTION FOR STRUCTURES" SPECIFICATION FOR LIGHTNING PROTECTION SYSTEM REQUIREMENTS AND ADDITIONAL INFORMATION.
3. ACCESS HATCH (BELOW). CONTRACTOR TO KEEP AREA CLEAR AND COORDINATE FINAL LOCATION/REQUIREMENTS WITH APPLICABLE CONTRACTORS.
4. GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM BUILDINGS, STRUCTURES, AND EQUIPMENT AT ALL TIMES. PROVIDE AND INSTALL 3/4"Ø x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF FOUR (4) GROUND RODS. BOND ALL METAL STRUCTURES, EQUIPMENT, AND LIGHTNING PROTECTION DOWN CONDUCTOR TO GROUND RING. ALL GROUND CONDUCTORS SHALL BE #2 COPPER, U.O.N.
5. CONTRACTOR TO PROVIDE ALL REQUIRED STAINLESS STEEL UNISTRUT AND ASSOCIATED MOUNTING BRACKETS, ACCESSORIES, ETC... TO MOUNT ELECTRICAL EQUIPMENT TO HANDRAIL. COORDINATE FINAL LOCATION WITH OWNER AND APPLICABLE TRADE CONTRACTORS. ALL REQUIREMENTS TO BE PER NEC.
6. ROUTING AND ATTACHMENT METHODS OF ALL CONDUITS WITHIN TANK IS TO BE CLOSELY COORDINATED WITH APPLICABLE TRADE CONTRACTORS AND THE OWNER TO AVOID CONFLICTS. PROVIDE ALL NECESSARY SUPPORT HARDWARE AND EQUIPMENT TO INSTALL CONDUITS AS REQUIRED. ALL SUPPORTING HARDWARE AND EQUIPMENT TO BE STAINLESS STEEL.
7. SUBMERSIBLE PUMPS ARE TO BE RELOCATED AS SHOWN. PROVIDE ALL NECESSARY CIRCUIT EXTENSIONS, SPLICES, AND JUNCTION BOXES FOR A COMPLETE AND OPERABLE SYSTEM. SPLICE KITS ARE TO BE FULLY SHIELDED, SEPARABLE, AND INSULATED AS MANUFACTURED BY ILSCO, OR APPROVED EQUAL.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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UDIG·NY SAFE DIGGING STARTS HERE
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL FLOOR PLANS - DISINFECTION TANK

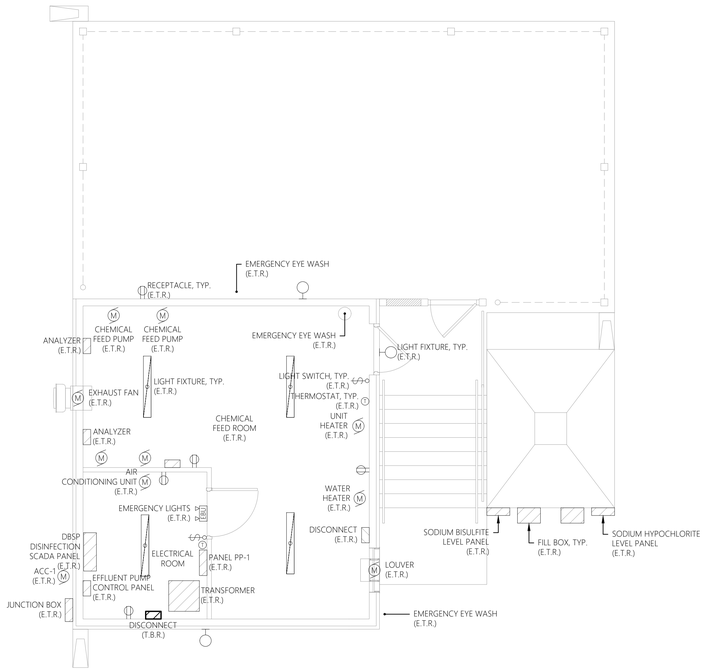
REVISIONS

NO.	DESCRIPTION	DATE

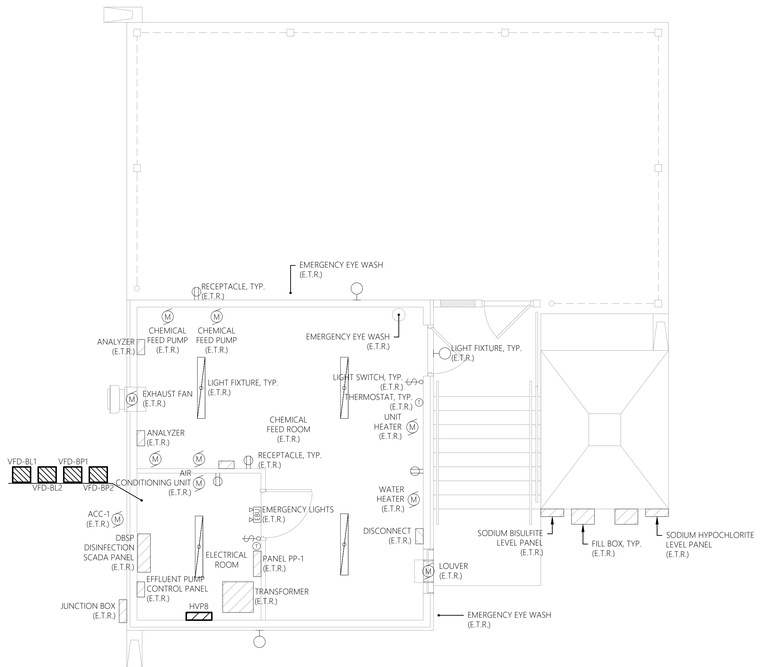
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-600

PROJECT # 18-732 PHASE #



1 E-601 SCALE: 1/4" = 1'-0" ELECTRICAL FLOOR PLAN - DEMOLITION DISINFECTION BUILDING



2 E-601 SCALE: 1/4" = 1'-0" ELECTRICAL FLOOR PLAN - NEW WORK DISINFECTION BUILDING

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED (UOI).
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE OWNER AND CONTRACT #1.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH CONTRACT #1 AND OWNER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND CONTRACT #2. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.
5. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH CONTRACT #1 AND OWNER.
7. CONTRACTOR RESPONSIBLE FOR MOUNTING OF CONTRACT #1 FURNISHED PANELS. COORDINATE WITH CONTRACT #1 AND PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT.
8. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH THE OWNER AND CONTRACT #1.
9. CONTRACTOR TO ADJUST FINAL INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH EQUIPMENT, PIPING SYSTEMS, AND DUCTWORK. COORDINATE WITH ALL TRADES.
10. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH THE OWNER. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
12. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH CONTRACT #1 AND OWNER PRIOR TO ROUGH-IN.
13. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, RISER DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR LABELING INFORMATION/REQUIREMENTS. PROVIDE LABEL FOR ALL LIGHT SWITCHES/TIME SWITCHES INDICATING LOAD SERVED, AS WELL AS ALARM LIGHTS/HORNS.
15. ALL EQUIPMENT/DEVICES INSTALLED ON EXTERIOR WALLS OF THE HEADWORKS ROOM TO BE INSTALLED 3'-0" MINIMUM FROM ANY OPENINGS (DOORS, LOUVERS, ETC.). FINAL REQUIREMENTS TO BE IN COMPLIANCE WITH THE LATEST EDITION OF NFPA 820.

SHEET KEY NOTES:

1. AREA IS A CLASS I, DIVISION I, GROUP D SPACE. ALL WIRING METHODS TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES INTERIOR TO THIS AREA ARE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION I, GROUP D ENVIRONMENT. ALL RACEWAY AND BOXES TO BE PVC COATED RGS BY PLASTI-BOND, OR APPROVED EQUAL. ALL MOUNTING HARDWARE, BRACKETS, SUPPORTS, CHANNELS, FITTINGS, CLAMPS, ETC., TO BE A CORROSION RESISTANT PRODUCT LINE AS MANUFACTURED BY POWER-STRUT DEFENDER, OR APPROVED EQUAL. SUBMIT PRODUCT DATA TO ENGINEER DURING SUBMITTAL PHASE FOR APPROVAL. REFER TO RACEWAY SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. ROUTING & ATTACHMENT METHODS OF ALL CONDUITS TO BE CLOSELY COORDINATED WITH CONTRACT #1 & OWNER PRIOR TO ROUGH-IN AND VERIFIED IN FIELD TO AVOID POTENTIAL CONFLICTS WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS.
3. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #2 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO 'TYPICAL LIGHTNING PROTECTION GROUNDING DETAIL' AND 'TYPICAL PANEL GROUNDING DETAIL' FOR ADDITIONAL INFORMATION/REQUIREMENTS.
4. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN RGS CONDUIT ALONG EXTERIOR WALL. REFER TO "LIGHTNING PROTECTION FOR STRUCTURES" SPECIFICATION FOR LIGHTNING PROTECTION SYSTEM REQUIREMENTS AND ADDITIONAL INFORMATION/REQUIREMENTS.
5. SECURITY CAMERA BY OTHERS. THIS CONTRACT TO PROVIDE EMPTY 4-SQUARE JUNCTION BOX AT CAMERA LOCATION AND SPARE 3/4" CONDUIT BACK TO LOCATION OF SECURITY CONTROL PANEL. TYPICAL OF TWO (2).
6. GAS DETECTION SYSTEM MONITORING ALARM HORN/STROBES. INSTALL DEVICES (HORN/STROBES) AT 8'-0" ABOVE FINISHED FLOOR/GRADE. TYPICAL OF TWO (2). REFER TO SPECIFICATIONS AND RISER DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. GAS DETECTION SYSTEM SENSORS AND TRANSMITTERS. INSTALL SENSORS PER MANUFACTURER'S RECOMMENDATIONS. INSTALL TRANSMITTERS AT 48" A.F.F. ON CENTER. REFER TO RISER DIAGRAM AND SPECIFICATIONS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
8. CONTRACTOR TO PROVIDE 20 AMP, 125 VOLT RECEPTACLE (NEMA 5-20R) SUITABLE FOR USE IN A CLASS I DIVISION I GROUP D SPACE. PROVIDE AS CATALOG # ENR21201 M4 AS MANUFACTURED BY CROUSE-HINDS OR APPROVED EQUAL. IN ADDITION, CONTRACTOR TO PROVIDE CORRESPONDING PLUG CATALOG # ENP5201 AS MANUFACTURED BY CROUSE-HINDS, OR APPROVED EQUAL. TURN PLUG OVER TO OWNER. MOUNT RECEPTACLE AT 36" A.F.F.
9. CONTRACTOR TO PROVIDE AS WATTSTOPPER RT-200 ASTRONOMICAL TIME SWITCH OR APPROVED EQUAL WITHIN NEMA 1 ENCLOSURE. SWITCH TO CONTROL PROPOSED EXTERIOR WALL MOUNTED LIGHT FIXTURES TYPES 'WP1' & 'WP1E'. PROGRAM TIME SWITCH FOR LIGHTING 'ON' AT ASTRONOMICAL SUNSET AND 'OFF' AT ASTRONOMICAL SUNRISE. FINAL ON/OFF PROGRAMMING PARAMETERS TO BE COORDINATED WITH THE OWNER.
10. CONTRACTOR TO PROVIDE ONE (1) 120V, 20A PHOTO CONTROL WITH ADJUSTABLE SHIELD FOR CONTROL OF EXTERIOR LIGHTING CIRCUIT. INTERLOCK WITH ASTRONOMICAL TIME SWITCH. CONFIRM FINAL LOCATION WITH THE OWNER PRIOR TO ROUGH-IN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
11. CONTRACTOR TO PROVIDE COMBINATION CARBON MONOXIDE/SMOKE DETECTOR MODEL GN-503F AS MANUFACTURED BY GENTEX OR APPROVED EQUAL. DETECTOR TO BE 120V POWERED BY BUILDING ELECTRICAL SYSTEM, CONTAIN BATTERY BACKUP, AND BE UL LISTED. DETECTOR TO FEATURE ONE (1) SET OF CONTACTS THAT ACTIVATE UPON DETECTION OF SMOKE, OR CARBON MONOXIDE. INSTALL ON WALL PER MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH NFPA 720.
12. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #4 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO TYPICAL LIGHTNING PROTECTION GROUNDING DETAIL AND TYPICAL PANEL GROUNDING DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
13. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN RGS CONDUIT WITHIN EXTERIOR WALL CONSTRUCTION. CONTRACTOR TO WORK WITH CERTIFIED LIGHTNING PROTECTION INSTALLER TO PROVIDE COMPLETE BUILDING LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH NFPA. UPON COMPLETION PROVIDE UL MASTER LABEL.
14. ACCESS CARD READER BY OTHERS. THIS CONTRACT TO PROVIDE EMPTY 4-SQUARE JUNCTION BOX AT CARD READER LOCATION AND SPARE 3/4" CONDUIT BACK TO LOCATION OF SECURITY CONTROL PANEL. TYPICAL OF THREE (3).
15. CONTRACTOR TO DISCONNECT & REMOVE LIGHT FIXTURE IN ITS ENTIRETY. REMOVE CONDUIT AND CONDUCTORS BACK TO SOURCE. CONTRACTOR TO FIELD VERIFY.
16. CONTRACTOR TO DISCONNECT & REMOVE RECEPTACLE IN ITS ENTIRETY. REMOVE CONDUIT AND CONDUCTORS BACK TO SOURCE. CONTRACTOR TO FIELD VERIFY.
17. PANEL TO BE RELOCATED TO ELECTRICAL ROOM BY APPLICABLE CONTRACTOR. DISCONNECT ELECTRICAL PANEL, MAKE ELECTRICALLY SAFE AND REMOVE ALL CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. PROVIDE SPLICE KIT TO EXTEND CIRCUITRY (CONDUIT & CONDUCTORS) TO LOCATION AS SHOWN. SPLICE KITS TO BE FULLY SHIELDED, SEPARABLE, AND INSULATED AS MANUFACTURED BY ILSCO, OR APPROVED EQUAL.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL FLOOR PLANS - DISINFECTION BUILDING

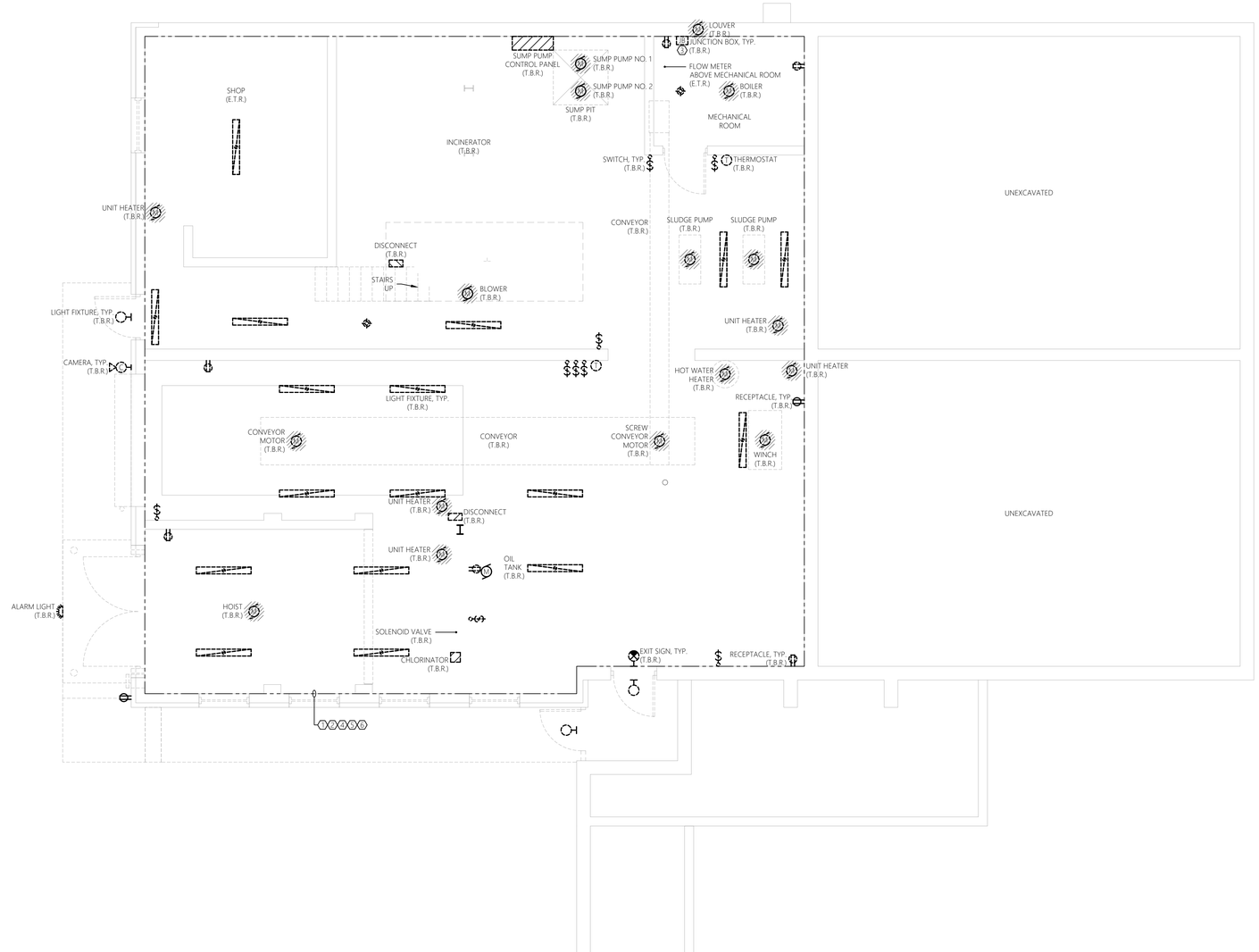
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-601

PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-700 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - LOWER LEVEL

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED, UOI.
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER; UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   - 2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND APPLICABLE CONTRACTOR. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO; ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING EQUIPMENT, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
2. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL HVAC EQUIPMENT SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLUMBING EQUIPMENT SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
3. JUNCTION BOX IS TO BE REMOVED. NOTE, ALL BOXES AND RACEWAY SYSTEMS ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL ARE TO BE REMOVED IN THEIR ENTIRETY.
4. CONTRACTOR TO DISCONNECT & REMOVE ALL EXISTING LIGHT FIXTURES, LIGHT SWITCHES, LIGHTING CONTROL DEVICES, MOUNTING HARDWARE, AND ASSOCIATED COMPONENTS IN THEIR ENTIRETY. REMOVE CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. CONTRACTOR TO FIELD VERIFY.
5. CONTRACTOR TO PROVIDE TEMPORARY LIGHTING INCLUDING ALL CIRCUITING AND CONTROLS FOR A COMPLETE AND OPERABLE TEMPORARY LIGHTING SYSTEM THROUGHOUT THE DURATION OF PROJECT. CONTRACTOR TO COORDINATE FINAL TEMPORARY LIGHTING REQUIREMENTS WITH THE OWNER AND PROVIDE AS NECESSARY. TEMPORARY LIGHTING SYSTEMS TO BE PROVIDED FOR ALL AREAS IN WHICH THE EXISTING LIGHTING SYSTEMS ARE DISTURBED AS PART OF THIS PROJECT.
6. NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION PLAN - DEWATERING BUILDING LOWER LEVEL

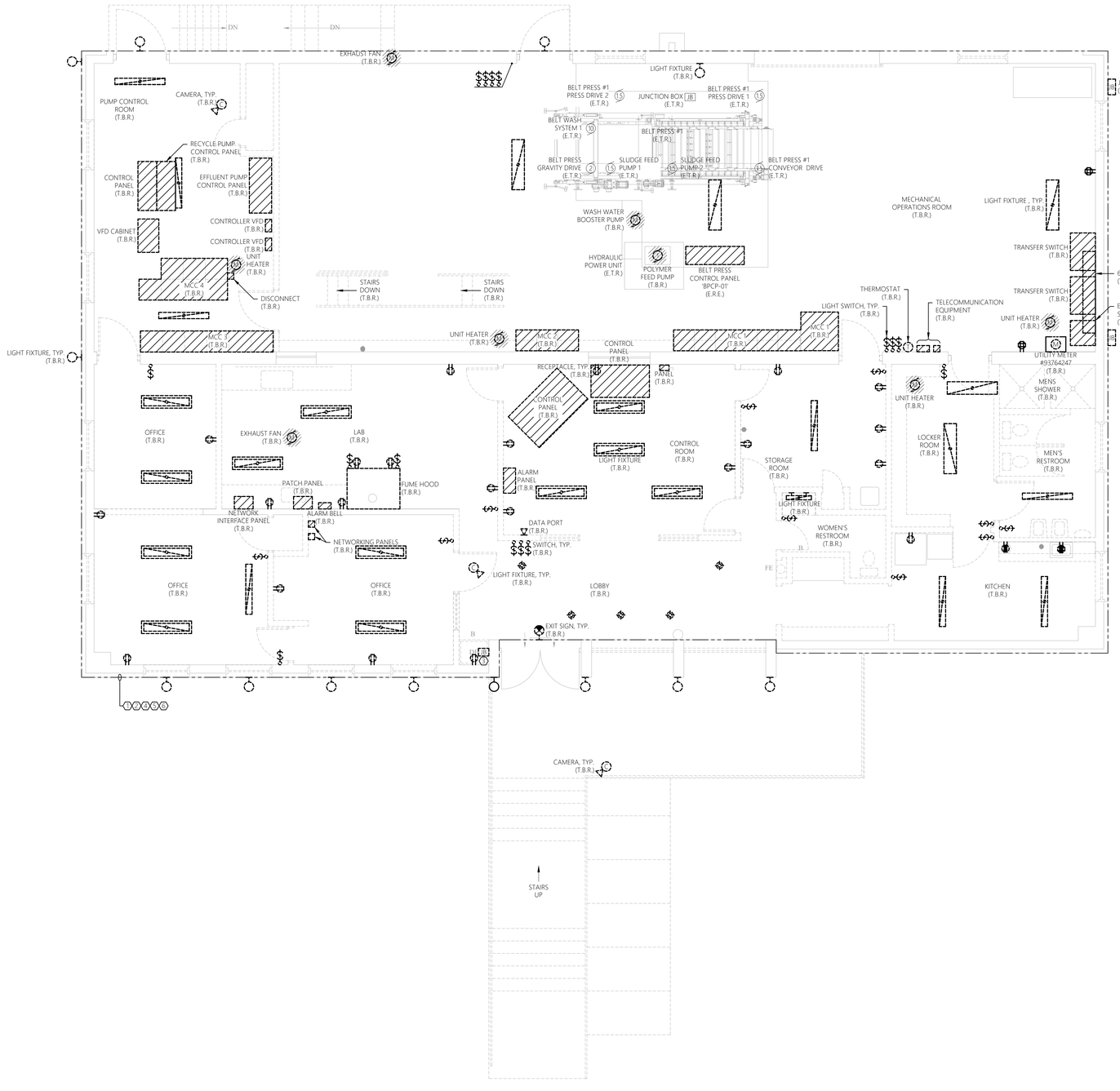
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-700

PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-701 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - UPPER LEVEL

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED, UOI.
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER; UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   - 2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND APPLICABLE CONTRACTOR. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED); REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO; ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING EQUIPMENT, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
2. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL HVAC EQUIPMENT SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLUMBING EQUIPMENT SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
3. JUNCTION BOX IS TO BE REMOVED. NOTE, ALL BOXES AND RACEWAY SYSTEMS ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL ARE TO BE REMOVED IN THEIR ENTIRETY.
4. CONTRACTOR TO DISCONNECT & REMOVE ALL EXISTING LIGHT FIXTURES, LIGHT SWITCHES, LIGHTING CONTROL DEVICES, MOUNTING HARDWARE, AND ASSOCIATED COMPONENTS IN THEIR ENTIRETY. REMOVE CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. CONTRACTOR TO FIELD VERIFY.
5. CONTRACTOR TO PROVIDE TEMPORARY LIGHTING INCLUDING ALL CIRCUITING AND CONTROLS FOR A COMPLETE AND OPERABLE TEMPORARY LIGHTING SYSTEM THROUGHOUT THE DURATION OF PROJECT. CONTRACTOR TO COORDINATE FINAL TEMPORARY LIGHTING REQUIREMENTS WITH THE OWNER AND PROVIDE AS NECESSARY. TEMPORARY LIGHTING SYSTEMS TO BE PROVIDED FOR ALL AREAS IN WHICH THE EXISTING LIGHTING SYSTEMS ARE DISTURBED AS PART OF THIS PROJECT.
6. NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

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HAZARDOUS MATERIAL NOTE:

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION PLAN - DEWATERING BUILDING UPPER LEVEL

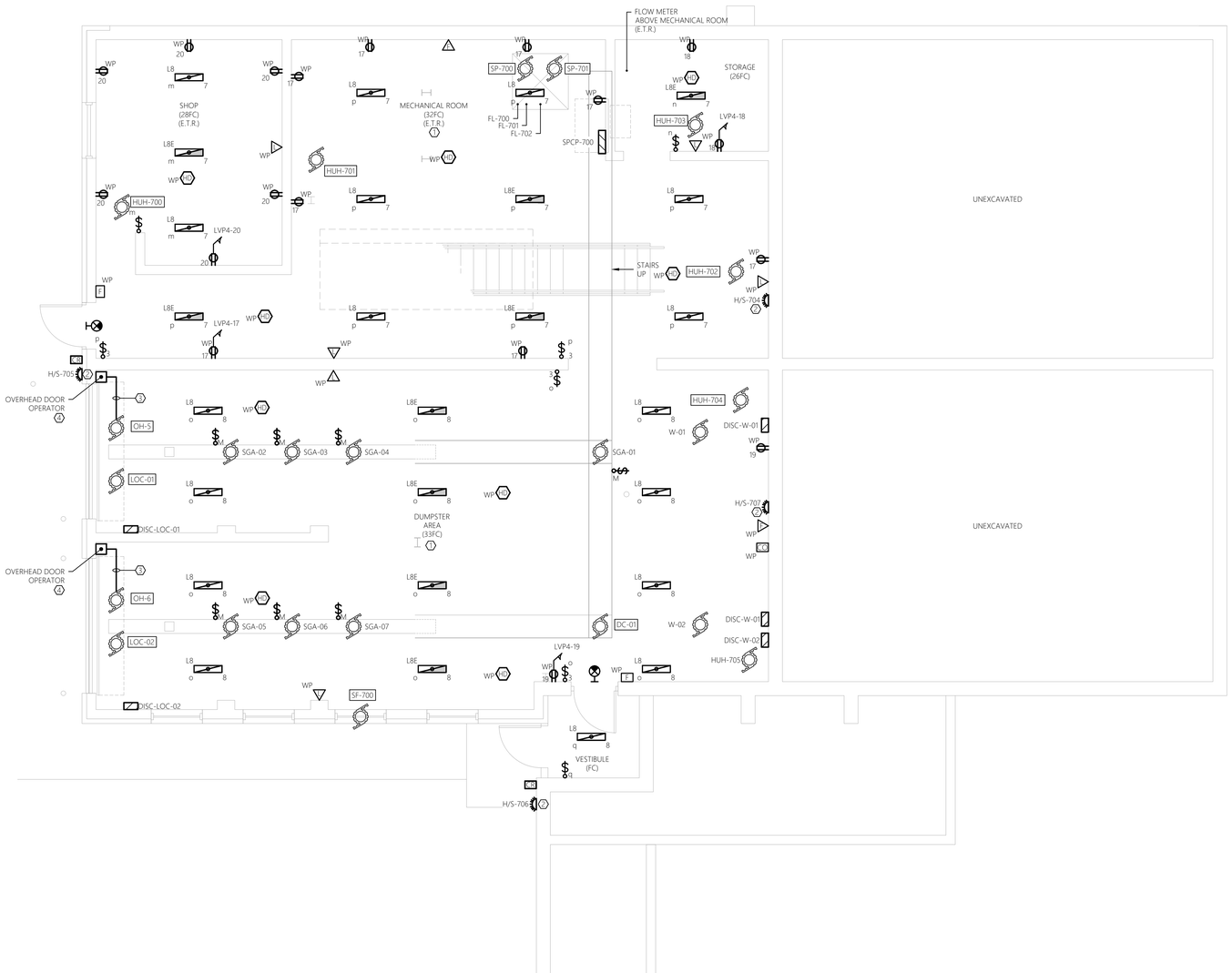
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-701

PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-702 ELECTRICAL FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - LOWER LEVEL

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.
5. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. CONTRACTOR RESPONSIBLE FOR MOUNTING OF APPLICABLE CONTRACTOR, OWNER, AND ENGINEER FURNISHED PANELS. COORDINATE WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER AND PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT.
8. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
9. CONTRACTOR TO ADJUST FINAL INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH EQUIPMENT, PIPING SYSTEMS, AND DUCTWORK. COORDINATE WITH ALL TRADES.
10. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH THE OWNER. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. ALL WEATHERPROOF RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
12. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER AND OWNER PRIOR TO ROUGH-IN.
13. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, RISER DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR LABELING INFORMATION/REQUIREMENTS. PROVIDE LABEL FOR ALL LIGHT SWITCHES/TIME SWITCHES INDICATING LOAD SERVED, AS WELL AS ALARM LIGHTS/HORNS.
15. ALL EQUIPMENT/DEVICES INSTALLED ON EXTERIOR WALLS OF THE HEADWORKS ROOM TO BE INSTALLED 3'-0" MINIMUM FROM ANY OPENINGS (DOORS, LOUVERS, ETC.). FINAL REQUIREMENTS TO BE IN COMPLIANCE WITH THE LATEST EDITION OF NFPA 820.

SHEET KEY NOTES:

1. ROUTING & ATTACHMENT METHODS OF ALL CONDUITS TO BE CLOSELY COORDINATED WITH APPLICABLE TRADE CONTRACTOR & OWNER PRIOR TO ROUGH-IN AND VERIFIED IN FIELD TO AVOID POTENTIAL CONFLICTS WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS.
2. HVAC VENTILATION MONITORING ALARM HORN/STROBES. INSTALL DEVICES (HORN/STROBES) AT 8'-0" ABOVE FINISHED FLOOR/GRADE. REFER TO SPECIFICATIONS AND RISER DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. PROVIDE LOW VOLTAGE CONDUCTORS 1/2" CONDUIT PER MANUFACTURERS RECOMMENDATIONS FOR A COMPLETE AND OPERABLE SYSTEM. COORDINATE FINAL REQUIREMENTS WITH THE OWNER.
4. REFER TO EQUIPMENT CONNECTION SCHEDULE AND 'TYPICAL OVERHEAD DOOR RISER DIAGRAM' FOR ADDITIONAL INFORMATION/REQUIREMENTS.

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HAZARDOUS MATERIAL NOTE:

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL NEW WORK PLAN - DEWATERING BUILDING LOWER LEVEL

REVISIONS

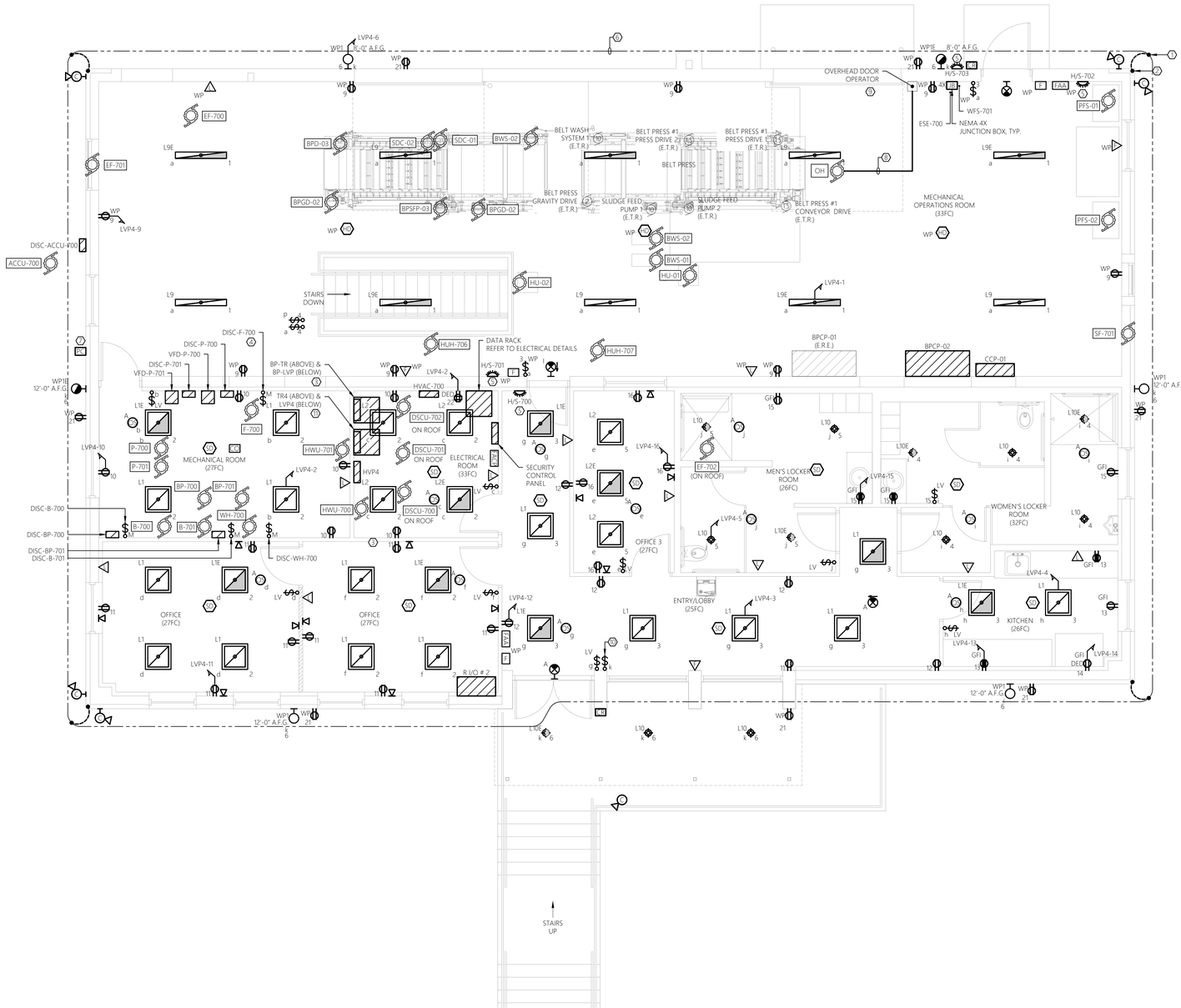
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-702

PROJECT # 18-732 PHASE #



1 E-703 ELECTRICAL FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - UPPER LEVEL

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH APPLICABLE TRADE CONTRACTOR, OWNER, AND ENGINEER PRIOR TO ROUGH-IN.
5. CONTRATOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC., PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER, ENGINEER, AND ALL TRADE CONTRACTORS.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER. REFER TO SPECIFICATION SECTION 26 0553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND ROUTING WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.
11. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE 3/4"Ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES, EQUIPMENT, AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #2 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO TYPICAL LIGHTNING PROTECTION GROUNDING DETAIL AND TYPICAL PANEL GROUNDING DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN RGS CONDUIT AND ATTACH CONDUIT TO EXTERIOR WALL. CONTRACTOR TO WORK WITH CERTIFIED LIGHTNING PROTECTION INSTALLER TO PROVIDE COMPLETE BUILDING LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH NFPA. UPON COMPLETION PROVIDE UL MASTER LABEL. REFER TO SPECIFICATION SECTION 26 4113 LIGHTNING PROTECTION FOR ADDITIONAL INFORMATION/REQUIREMENTS.
3. CONTRACTOR TO PROVIDE WALL MOUNT BRACKETS FOR INSTALLATION OF TRANSFORMER 'TR-BP' ON WALL ABOVE PANEL 'BP-LVP'.
4. FURNACE EMERGENCY SHUTDOWN. REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION/REQUIREMENTS WITH APPLICABLE CONTRACTOR.
5. HVAC VENTILATION MONITORING ALARM HORN/STROBES. INSTALL DEVICES (HORN/STROBES) AT 8'-0" ABOVE FINISHED FLOOR/GRADE. REFER TO SPECIFICATIONS AND RISER DIAGRAM FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM BUILDINGS, STRUCTURES, AND EQUIPMENT AT ALL TIMES. PROVIDE AND INSTALL 3/4"Ø x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF FOUR (4) GROUND RODS. BOND ALL METAL STRUCTURES, EQUIPMENT, AND LIGHTNING PROTECTION DOWN CONDUCTOR TO GROUND RING. ALL GROUND CONDUCTORS SHALL BE #2 COPPER, U.O.N.
7. CONTRACTOR TO PROVIDE ONE (1) 120V, 20A PHOTO CONTROL WITH ADJUSTABLE SHIELD FOR CONTROL OF EXTERIOR LIGHTING CIRCUITS. INTERLOCK WITH ASTRONOMICAL TIME SWITCHES. CONFIRM FINAL LOCATIONS WITH THE OWNER PRIOR TO ROUGH-IN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE LOW VOLTAGE CONDUCTORS 1/2" CONDUIT PER MANUFACTURERS RECOMMENDATIONS FOR A COMPLETE AND OPERABLE SYSTEM. COORDINATE FINAL REQUIREMENTS WITH THE OWNER.
9. REFER TO EQUIPMENT CONNECTION SCHEDULE AND 'TYPICAL OVERHEAD DOOR RISER DIAGRAM' FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. CONTRACTOR TO PROVIDE AS WATTSTOPPER RT-200 ASTRONOMICAL TIME SWITCH OR APPROVED EQUAL WITHIN NEMA 1 ENCLOSURE. SWITCH TO CONTROL PROPOSED EXTERIOR WALL MOUNTED LIGHT FIXTURES TYPES 'WP1' & 'WP1E'. PROGRAM TIME SWITCH FOR LIGHTING 'ON' AT ASTRONOMICAL SUNSET AND 'OFF' AT ASTRONOMICAL SUNRISE. FINAL ON/OFF PROGRAMMING PARAMETERS TO BE COORDINATED WITH THE OWNER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL NEW WORK PLAN - DEWATERING BUILDING UPPER LEVEL

REVISIONS

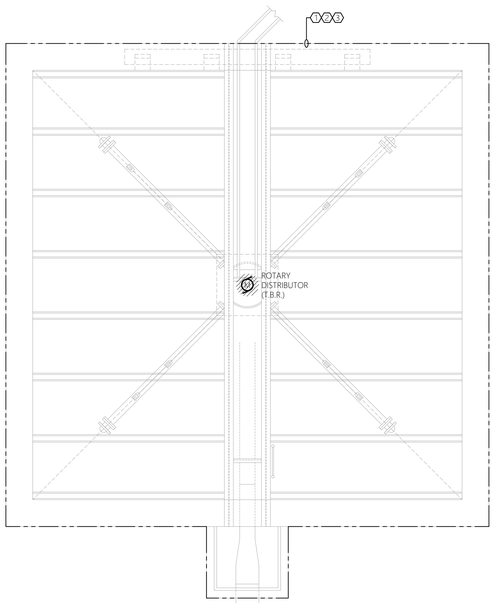
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

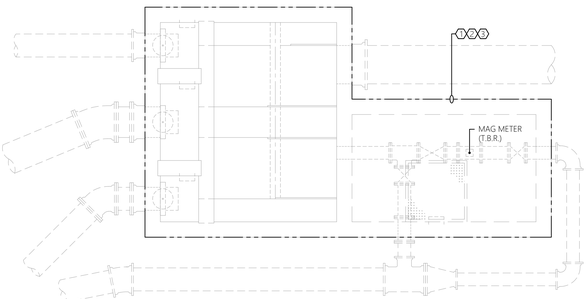
SHEET NO.

E-703

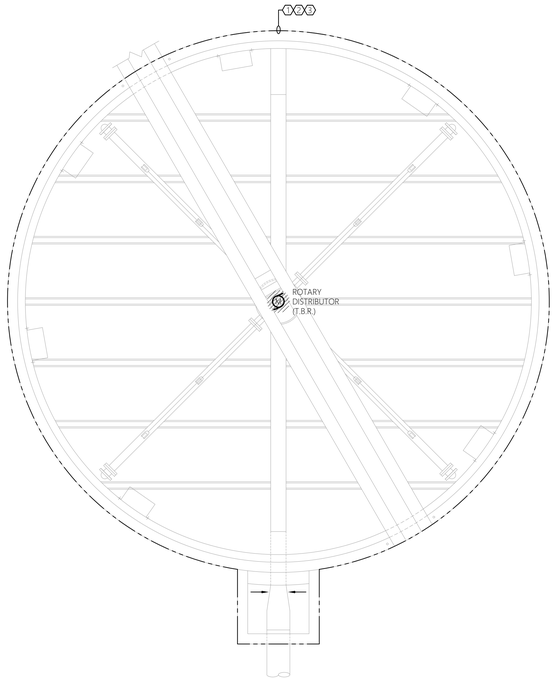
PROJECT # 18-732 PHASE #



1 E-800 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0" TRICKLING FILTER #1

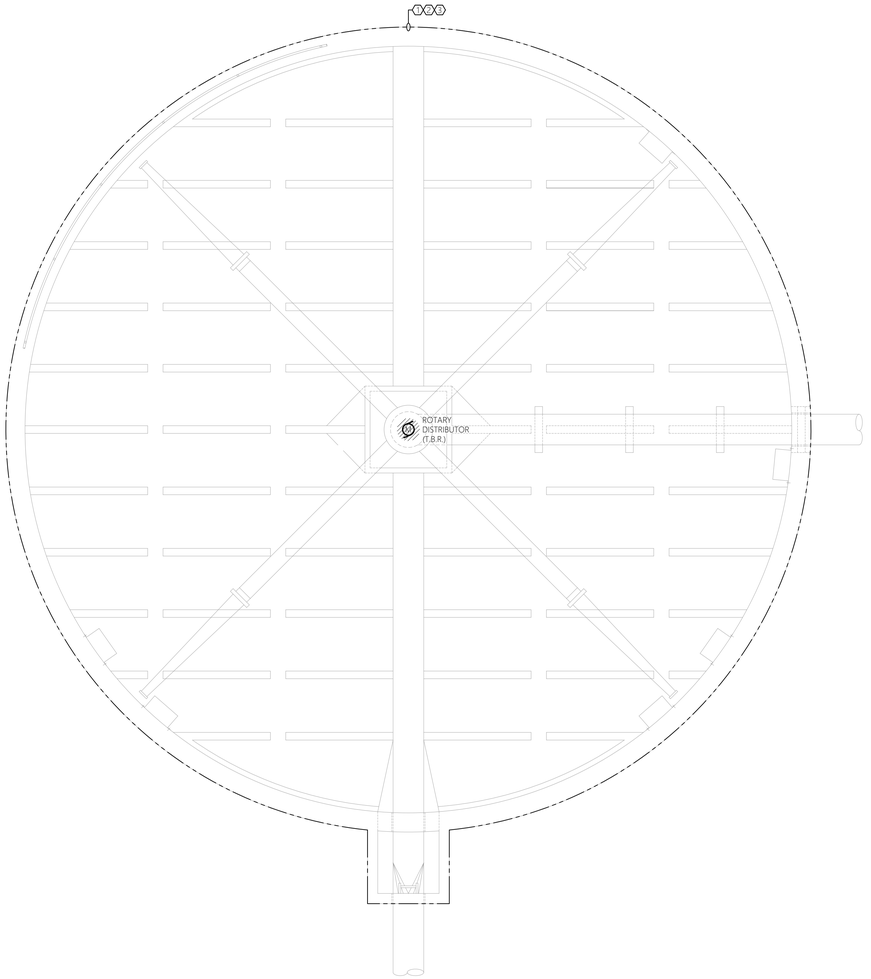


2 E-800 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0" TRICKLING FILTER DISTRIBUTION BOX



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

3 E-800 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0" TRICKLING FILTER #2



4 E-800 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0" TRICKLING FILTER #3

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL UNLESS OTHERWISE INDICATED, UOI.
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE OWNER AND CONTRACT #1.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   - 2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH CONTRACT #1 AND OWNER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND CONTRACT #2. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO; ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING EQUIPMENT, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH CONTRACT #1 AND OWNER.
2. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH CONTRACT #1 AND OWNER.
3. NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH CONTRACT #1 AND OWNER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION PLANS - TRICKLING FILTERS

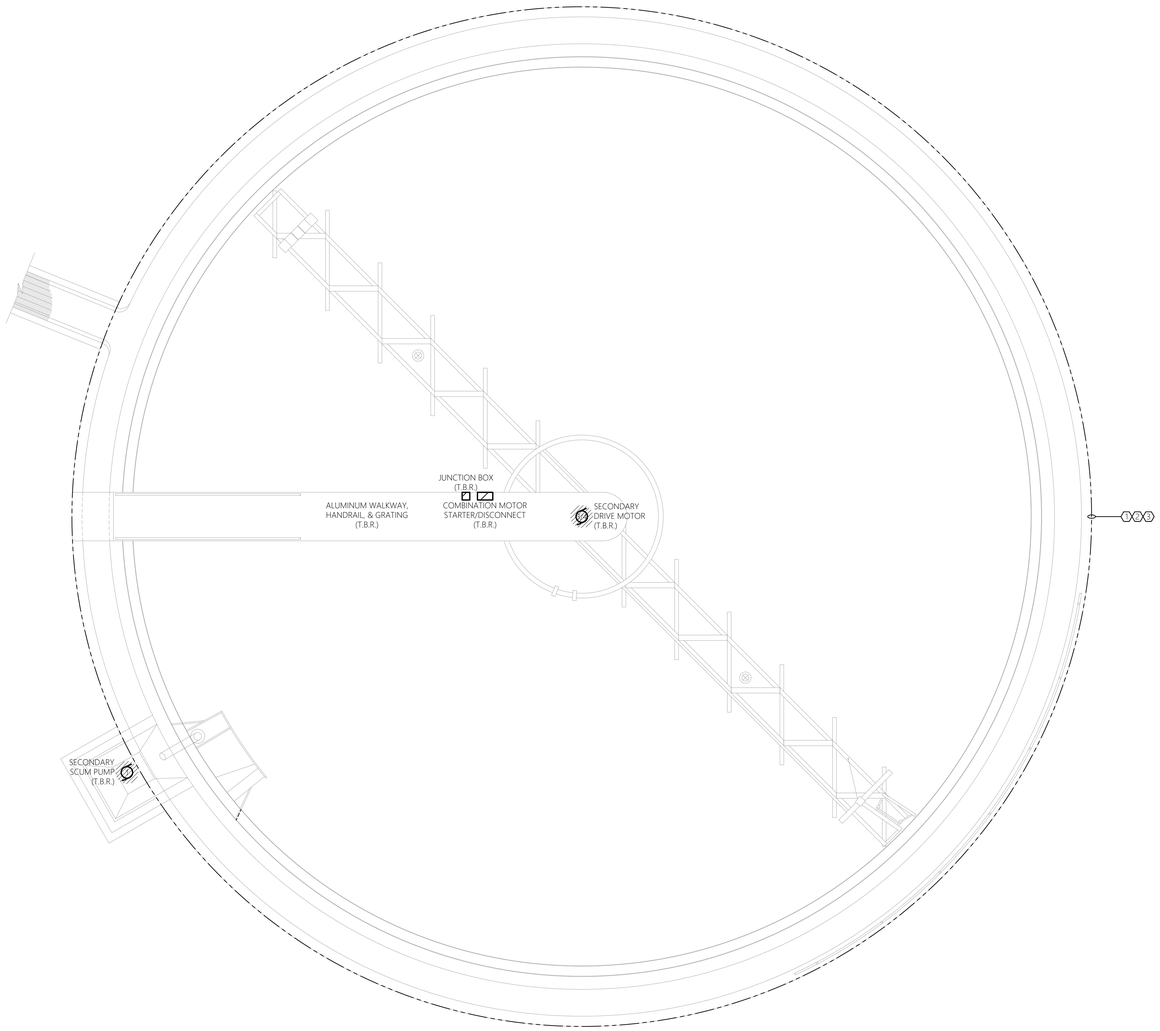
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-800

PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-801 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0" SECONDARY SETTLING TANK #1 & #2

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED, UOI.
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   - 2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND CONTRACT #2. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO; ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING EQUIPMENT, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
2. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
3. NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

TYPICAL OF TWO (2):
SECONDARY SETTLING TANK #1 AND
SECONDARY SETTLING TANK #2

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 567-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION PLANS - SECONDARY SETTLING TANKS

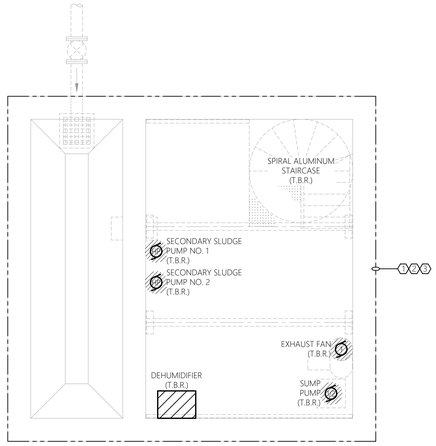
REVISIONS

NO.	DESCRIPTION	DATE

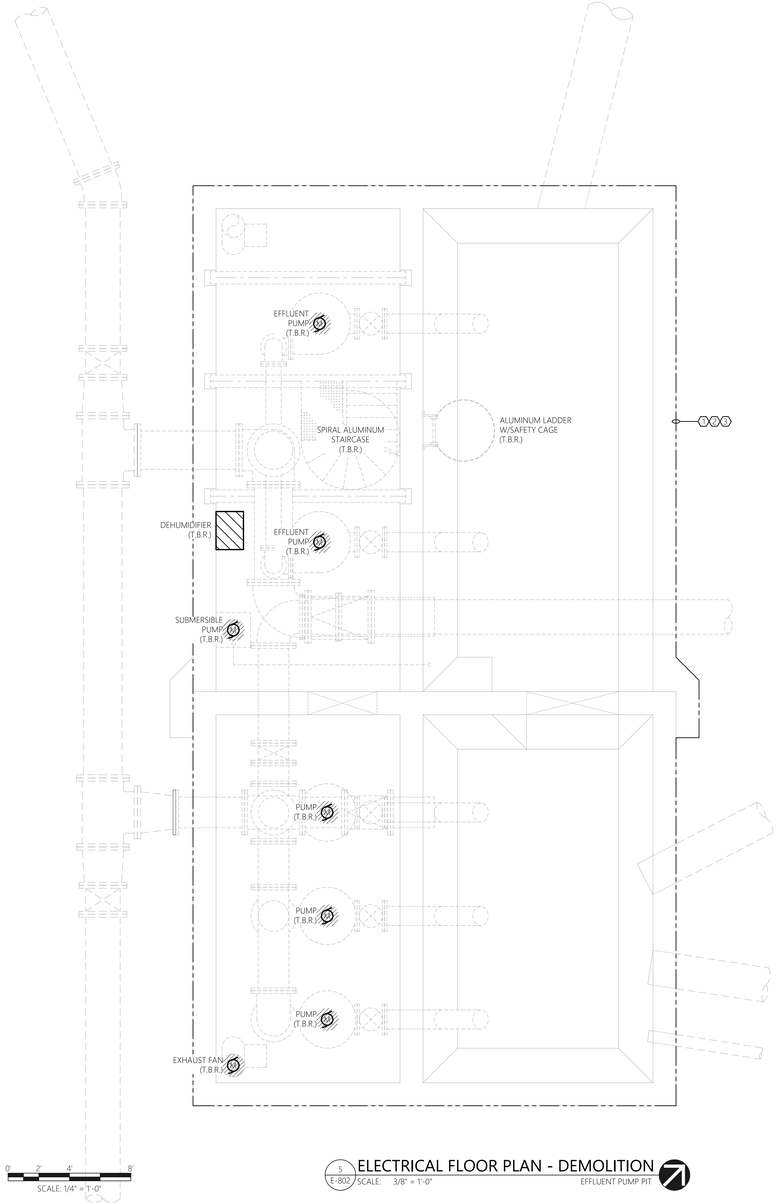
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-801

PROJECT # 18-732 PHASE #



1 / E-802 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 3/8" = 1'-0" SECONDARY SLUDGE PUMP PIT



5 / E-802 ELECTRICAL FLOOR PLAN - DEMOLITION
SCALE: 3/8" = 1'-0" EFFLUENT PUMP PIT

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO GENERAL CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL, UNLESS OTHERWISE INDICATED, UOI.
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   - 2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER AND CONTRACT #2. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER, TYPICAL.

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'.
5. CONTRACTOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH ALL TRADE CONTRACTORS, OWNER AND ENGINEER.
7. CONTRACTOR RESPONSIBLE FOR MOUNTING OF OWNER FURNISHED PANELS, AND PANELS FURNISHED BY OTHERS. COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER AND PROVIDE ALL NECESSARY MOUNTING HARDWARE/EQUIPMENT.
8. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER.
9. CONTRACTOR TO ADJUST FINAL INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH EQUIPMENT, PIPING SYSTEMS, AND DUCTWORK. COORDINATE WITH ALL TRADES.
10. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH THE OWNER AND ENGINEER. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
12. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND CONDUIT ROUTING WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER PRIOR TO ROUGH-IN.
13. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, RISER DIAGRAMS, SCHEDULES & DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
14. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR LABELING INFORMATION/REQUIREMENTS. PROVIDE LABEL FOR ALL LIGHT SWITCHES/TIME SWITCHES INDICATING LOAD SERVED, AS WELL AS ALARM LIGHTS/HORNS.
15. ALL EQUIPMENT/DEVICES INSTALLED ON EXTERIOR WALLS OF THE HAZARDOUS/CLASSIFIED AREA TO BE INSTALLED 3'-0" MINIMUM FROM ANY OPENINGS (DOORS, LOUVERS, HATCHES, ETC.). FINAL REQUIREMENTS TO BE IN COMPLIANCE WITH THE LATEST EDITION OF NFPA 820.

SHEET KEY NOTES:

(X) CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO; ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING ELECTRODES, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

(2) CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

(3) NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

(4) JUNCTION BOX IS TO BE REMOVED. NOTE, ALL BOXES AND RACEWAY SYSTEMS ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL ARE TO BE REMOVED IN THEIR ENTIRETY.

(5) CONTRACTOR TO WIRE AND INTEGRATE A TEMPORARY ULTRASONIC LEVEL SENSOR FOR EFFLUENT FLOW MEASUREMENT UPON DEMOLITION OF EXISTING INFLUENT PARSHALL FLUME. CONTRACTOR SHALL WIRE ULTRASONIC LEVEL SENSOR TO EXISTING CHART RECORDER TO BE MAINTAINED IN OPERATION.

(6) CONTRACTOR TO PROVIDE 20WATT LED LUMINAIRE SUITED FOR EXTERIOR USE. PROVIDE WITH BRACKET/MOUNT TO ALLOW OWNER TO ADJUST LIGHT FIXTURE ANGLE/POSITION. PROVIDE POWER CIRCUITRY FROM PANEL 'LVP1'. INSTALL LIGHT TO BACKBOARD AT MINIMUM 48" ABOVE FINISHED GRADE.

(7) CONTRACTOR TO PROVIDE RECEPTACLE AS 125 VOLT, 2 POLE, 3 WIRE, 20 AMP, WEATHERPROOF GFCI HEAVY DUTY DUPLEX RECEPTACLE. PROVIDE POWER CIRCUITRY FROM PANEL 'LVP1'. INSTALL RECEPTACLE TO BACKBOARD AT MINIMUM 36" ABOVE FINISHED GRADE.

(8) ALL PROPOSED EQUIPMENT/ENCLOSURES ON ELECTRICAL BACKBOARD TO BE RATED FOR OUTDOOR USE (MINIMUM NEMA 4X).

(9) CONTRACTOR TO PROVIDE ELECTRICAL BACKBOARD. FINAL LOCATION TO BE COORDINATED WITH THE OWNER AND CONTRACT #2 PRIOR TO ROUGH-IN TO AVOID CONFLICT WITH EXISTING CONDITIONS AND PROPOSED WORK. REFER TO DETAIL FOR ADDITIONAL REQUIREMENTS.

(10) CONTRACTOR TO PROVIDE ALL REQUIRED STAINLESS STEEL MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... REFER TO 'TYPICAL ELECTRICAL BACKBOARD DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.

(11) WHERE APPLICABLE, ALL PROPOSED EQUIPMENT ON ELECTRICAL BACKBOARD TO BE PROVIDED AS PAD LOCKABLE. PROVIDE LOCK (TURN KEY OVER TO OWNER). COORDINATE FINAL REQUIREMENTS WITH THE OWNER.

(12) TANK INTERIOR IS A CLASS I, DIVISION II, GROUP D SPACE. THE CLASS I, DIVISION II, GROUP D SPACE EXTENDS 18" ABOVE TOP OF TANK WALL AND EXTENDS 10'-0" HORIZONTALLY FROM THE TANK EXTERIOR WALL. ALL WIRING METHODS WITHIN THIS SPACE TO COMPLY WITH NEC ARTICLE 501. ALL ELECTRICAL EQUIPMENT AND DEVICES WITHIN THIS SPACE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION II, GROUP D ENVIRONMENT.

(13) ROUTING & ATTACHMENT METHODS OF ALL CONDUITS TO BE CLOSELY COORDINATED WITH CONTRACT #1 & OWNER PRIOR TO ROUGH-IN AND VERIFIED IN FIELD TO AVOID POTENTIAL CONFLICTS WITH PROPOSED EQUIPMENT, DUCT WORK, AND PIPING SYSTEMS.

(14) ALL ELECTRICAL EQUIPMENT, COMPONENTS, DEVICES, AND RACEWAY SYSTEMS TO BE KEPT OUT OF CLASSIFIED AREAS TO GREATEST EXTENT POSSIBLE.

(15) ACCESS HATCH (BELOW). CONTRACTOR TO KEEP AREA CLEAR AND COORDINATE FINAL LOCATION/REQUIREMENTS WITH CONTRACT #1.

(16) CONTRACTOR TO PROVIDE MOTOR RATED SWITCH WITHIN NEMA 4X ENCLOSURE FOR CONTROL OF WET WELL EXHAUST SYSTEM (EXHAUST FAN EF-800). IN ADDITION, MOTOR RATED SWITCH TO BE KEYED AND LOCKED IN THE 'ON' POSITION FOR CONTINUOUS OPERATION (CONTROLLED BY THERMOSTAT BY APPLICABLE CONTRACTOR). PROVIDE KEY AND TURN OVER TO OWNER. REFER TO EQUIPMENT CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION. COORDINATE FINAL REQUIREMENTS WITH APPLICABLE CONTRACTOR, OWNER, AND ENGINEER.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CALL 811

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION PLANS - UNDERGROUND STRUCTURES

REVISIONS

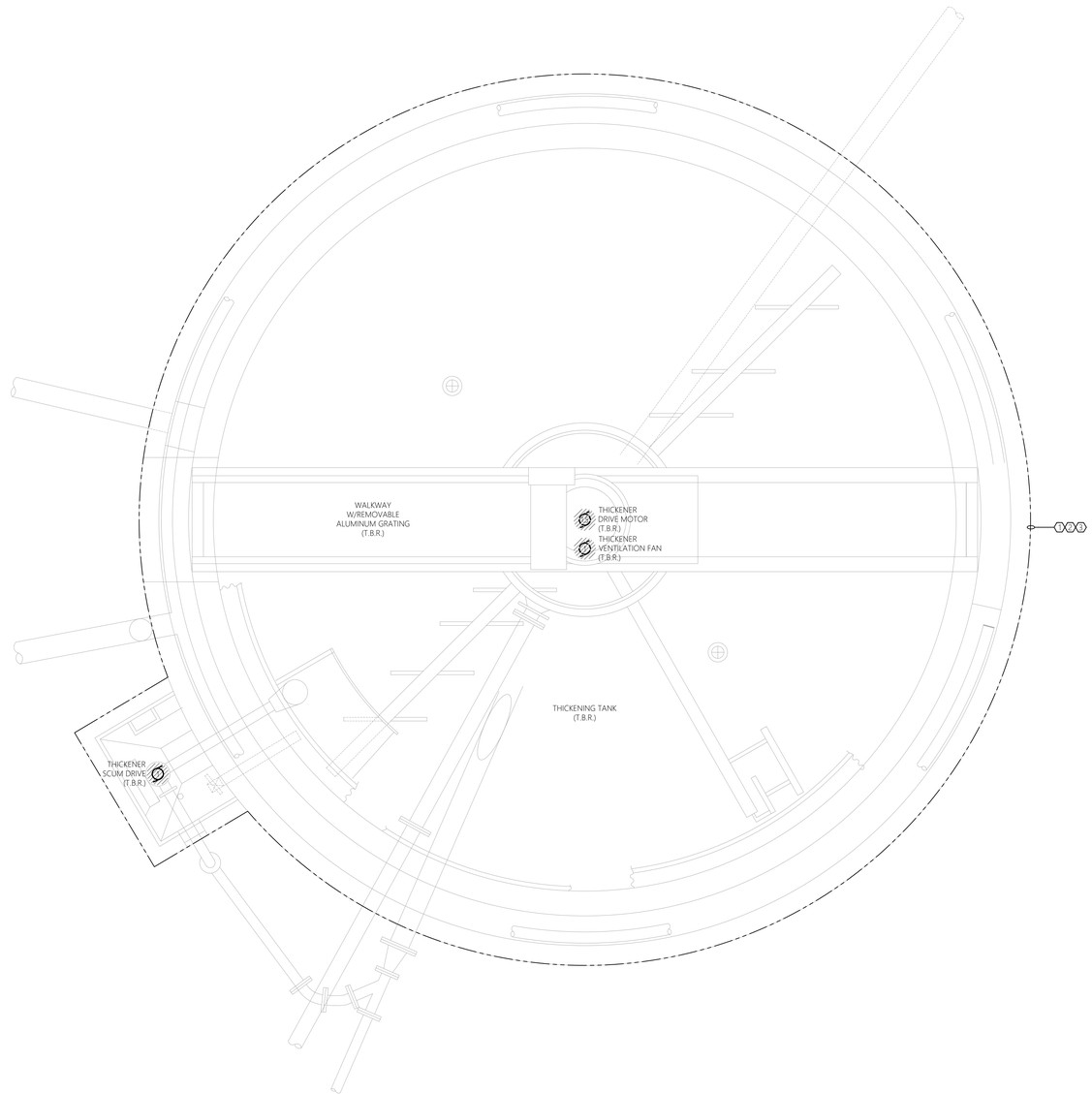
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-802

PROJECT # 18-732 PHASE #



0' 1' 2' 4'
SCALE: 1/2" = 1'-0"

1 E-803 ELECTRICAL DEMOLITION PLAN
SCALE: 1/2" = 1'-0" THICKENING TANKS

TYPICAL OF TWO (2):
THICKENING TANK #1 AND
THICKENING TANK #2

GENERAL DEMOLITION NOTES:

MECHANICAL EQUIPMENT & MISC. ELECTRICAL EQUIPMENT:
WHERE INDICATED TO BE DEMOLISHED:
- REFER TO ALL TRADE CONTRACT DRAWINGS FOR AN ACCURATE DEPICTION OF ALL DEMOLITION REQUIRED AS PART OF THIS CONTRACT.
- REMOVE ALL WIRE (POWER & CONTROLS) & EXPOSED CONDUIT BACK TO SOURCE PANEL UNLESS OTHERWISE INDICATED, UOI.
- REMOVE ANY ASSOCIATED MOTOR STARTERS, CONTROL STATIONS, &/OR DISCONNECTS, UOI.
- REMOVE CIRCUIT WIRING FROM SOURCE PANEL AND REMOVE ASSOCIATED SOURCE CIRCUIT BREAKER, UOI.
- REMOVE ALL INTERLOCK CIRCUITRY, UOI.
- PROVIDE REVISED TYPED PANELBOARD DIRECTORIES FOR ALL EXISTING TO REMAIN PANELS WHERE CIRCUITS ARE TO BE REMOVED.
- REMOVE ALL ASSOCIATED MOUNTING HARDWARE, BRACKETS, AND EQUIPMENT, UOI.

RECEPTACLES:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL RECEPTACLES IMPACTED BY WALL MODIFICATIONS AND OVERALL PROJECT IMPROVEMENTS. **NOTE** ALL EXISTING RECEPTACLES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE DEVICE, AND ALL ASSOCIATED WIRE & CONDUIT BACK TO SOURCE OR NEAREST ACTIVE JUNCTION BOX, UOI.

LIGHTING:
WHERE INDICATED TO BE DEMOLISHED:
- REMOVE ALL FIXTURES THROUGHOUT SPACE. **NOTE** ALL EXISTING LIGHTING FIXTURES MAY NOT BE SHOWN ON THESE DEMOLITION PLANS. MINOR FIELD VERIFICATION REQUIRED.
- REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE, UOI.
- REMOVE SWITCHING AND CONTROL DEVICES, UOI.
- REMOVE CONTACTORS ASSOCIATED WITH LOW VOLTAGE SWITCHING DEVICES, UOI.
- DISPOSE OF ALL LAMPS IN ACCORDANCE WITH STATE/FEDERAL AND EPA REQUIREMENTS.

PANELBOARD REMOVAL AND REPLACEMENT:
- REFER TO SINGLE LINE DIAGRAMS FOR SCOPE OF WORK.

CIRCUIT AND FEEDER REMOVAL AND REPLACEMENT:
- MAINTAIN ANY EXISTING NON-IMPACTED PANELBOARDS AND ANY NON-IMPACTED CIRCUITS WHICH ARE EXISTING TO REMAIN.
- WHERE CIRCUITS ARE AFFECTED BY MODIFICATION/REMOVAL ACTIVITIES, PROVIDE NECESSARY CIRCUIT EXTENSIONS AND ALL NECESSARY LABOR/MATERIALS AS NECESSARY TO REPAIR AND RE-CONNECT CIRCUIT(S).
- ANY CIRCUITS/FEEDERS WHICH REQUIRE SHUTDOWN TO ACCOMMODATE WORK SHALL BE COORDINATED WITH THE OWNER WELL IN ADVANCE.

BUILDING/STRUCTURE GROUND SYSTEM:
- CONTRACTOR TO CAREFULLY PROTECT AND MAINTAIN ALL GROUND SYSTEMS ASSOCIATED WITH BUILDINGS/STRUCTURES EXISTING TO REMAIN.
- CONTRACTOR TO REMOVE ALL GROUND SYSTEMS ASSOCIATED WITH BUILDING/STRUCTURES TO BE REMOVED.
- GROUND SYSTEM COMPONENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, GROUNDING CONDUCTORS, JUMPERS, TERMINATIONS, RODS, AND AIR TERMINALS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF DEMOLITION.

HAZARDOUS MATERIAL REMOVAL:
PERFORM WORK FOR REMOVAL AND DISPOSAL OF EQUIPMENT AND MATERIALS CONTAINING TOXIC SUBSTANCES REGULATED UNDER THE FEDERAL TOXIC SUBSTANCES CONTROL ACT (TSCA) IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. APPLICABLE EQUIPMENT AND MATERIALS INCLUDE, BUT ARE NOT LIMITED TO:
- PCB-CONTAINING ELECTRICAL EQUIPMENT, INCLUDING TRANSFORMERS, CAPACITORS, AND SWITCHES.
- PCB- AND DEHP-CONTAINING LIGHTING BALLASTS.
- MERCURY-CONTAINING LAMPS AND TUBES, INCLUDING FLUORESCENT LAMPS, HIGH INTENSITY DISCHARGE (HID), ARC LAMPS, ULTRA-VIOLET, HIGH PRESSURE SODIUM, MERCURY VAPOR, IGNITRON TUBES, NEON, AND INCANDESCENT.
- CONTRACTOR TO COORDINATE ANY REQUIRED HAZARDOUS MATERIAL REMOVAL WITH THE OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.

GENERAL SHEET NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. ITEMS INDICATED TO BE REMOVED:
   - 2.1. REMOVE ALL CONDUCTORS AND EXPOSED CONDUIT BACK TO SOURCE (UOI).
   - 2.2. REMOVE CIRCUIT WIRING AND CIRCUIT BREAKER FROM SOURCE PANEL (UOI).
   - 2.3. REMOVE ALL ASSOCIATED CONTROL CONDUCTORS, CONDUITS, AND DEVICES (UOI).
   - 2.4. REMOVE ASSOCIATED STARTERS, DISCONNECTS, AND ASSOCIATED CIRCUITRY (UOI).
   - 2.5. REMOVE EQUIPMENT PADS & MOUNTING HARDWARE, BRACKETS, ACCESSORIES, ETC... (UOI).
   - 2.6. REVISE PANELBOARD AND MOTOR CONTROL CENTER DIRECTORIES/NAME PLATES AS CHANGES OCCUR (UOI).
3. THESE DEMOLITION DRAWINGS ARE SCHEMATIC IN NATURE AND ARE BASED ON CURSORY FIELD OBSERVATION AND EXISTING DRAWINGS. IT IS NOT THE INTENTION OF THESE DRAWINGS TO INDICATE EVERY DEVICE/FIXTURE REQUIRING REMOVAL/DEMO RATHER GENERAL SYSTEMS WHICH ARE TO BE REMOVED.
4. CIRCUITS NOT IN AREA OF WORK THAT ARE AFFECTED BY WORK SHALL BE OPERATIONAL DURING PROJECT. PROVIDE TEMPORARY CIRCUITS AS NECESSARY.
5. CIRCUIT, EQUIPMENT, AND DEVICE REMOVAL SHALL NOT AFFECT THE INTEGRITY OR FUNCTIONALITY OF CIRCUITS TO REMAIN. ALL CIRCUITS TO REMAIN SHALL BE MAINTAINED. PROVIDE ALL NECESSARY CIRCUIT MODIFICATIONS AND EXTENSIONS.
6. WHERE REMOVALS LEAVE HOLES AND DAMAGED SURFACES EXPOSED IN THE FINISHED WORK, PATCH AND REPAIR THESE HOLES AND DAMAGED SURFACES TO MATCH ADJACENT FINISHED SURFACES. WHERE NEW WORK IS TO BE APPLIED TO EXISTING SURFACES, PERFORM REMOVALS, AND PATCHING IN A MANNER TO PRODUCE SURFACES SUITABLE FOR RECEIVING NEW WORK. COORDINATE ALL WORK WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.
7. COORDINATE WITH ALL CONTRACT DRAWINGS AND TRADE CONTRACTORS FOR ADDITIONAL EQUIPMENT THAT IS TO BE DEMOLISHED. FOR ALL EQUIPMENT SHOWN/INDICATED FOR REMOVAL, DISCONNECT AND REMOVE ELECTRICAL CIRCUIT INCLUDING CONDUCTORS AND CONDUIT BACK TO SOURCE.
8. NOT ALL EQUIPMENT/DEVICES ARE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO COMMENCEMENT OF DEMOLITION.
9. REFER TO THE ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, SCHEDULES & DETAILS FOR ADDITIONAL DEMOLITION INFORMATION/REQUIREMENTS.
10. COORDINATE ALL ASPECTS OF SEQUENCE OF REMOVAL WITH THE OWNER, ENGINEER, AND APPLICABLE CONTRACTOR. REFER TO SPECIFICATIONS AND DEMOLITION SINGLE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
11. WHERE REMOVAL OF CONDUIT SYSTEM IS NOT FEASIBLE, REMOVE ALL CONDUCTORS FROM CONDUIT SYSTEM, CUT FLUSH, CAP CONDUIT SYSTEM, AND ABANDON IN PLACE. FEASIBLE IS DEFINED AS BEING LOCATED WITHIN A CONCRETE DUCT BANK OR CONCRETE SLAB. ALL OTHER INSTANCES TO HAVE THE CONDUIT & CIRCUITRY TO BE REMOVED IN THERE ENTIRETY. FIELD VERIFY AND COORDINATE FINAL REQUIREMENTS WITH THE OWNER AND ENGINEER, TYPICAL.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE ELECTRICAL DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). REMOVE THE FOLLOWING DEVICES INCLUDING BUT NOT LIMITED TO: ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROLLERS, CONTROL PANELS, DISCONNECTS, MOTOR STARTERS, RECEPTACLES, INTERIOR/EXTERIOR LIGHTING, JUNCTION BOXES, BONDING/GROUNDING EQUIPMENT, ELECTRIC VALVES, MOTORS (DISCONNECT & REMOVE BRANCH CIRCUITRY), AND INSTRUMENTATION/CONTROLS. REMOVE ALL ASSOCIATED CIRCUITRY (CONDUIT & CONDUCTORS) BACK TO SOURCE. COORDINATE REMOVAL EFFORTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.
2. CONTRACTOR TO CLOSELY COORDINATE THE REMOVAL EFFORTS OF ALL PLANT PROCESS EQUIPMENT/DEVICES SCHEDULED FOR REMOVAL WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.
3. NOTE, CONTRACTOR TO ENSURE ALL ELECTRICAL BRANCH CIRCUITS AND CONDUITS ARE REMOVED IN THIS AREA ASSOCIATED WITH EQUIPMENT SCHEDULED FOR REMOVAL, TO AVOID CONFLICT WITH PROPOSED EQUIPMENT, AND PIPING SYSTEMS. COORDINATE ALL EFFORTS CLOSELY WITH OWNER, ENGINEER, AND APPLICABLE TRADE CONTRACTOR.

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Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL DEMOLITION PLANS - THICKENING TANKS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.
E-803

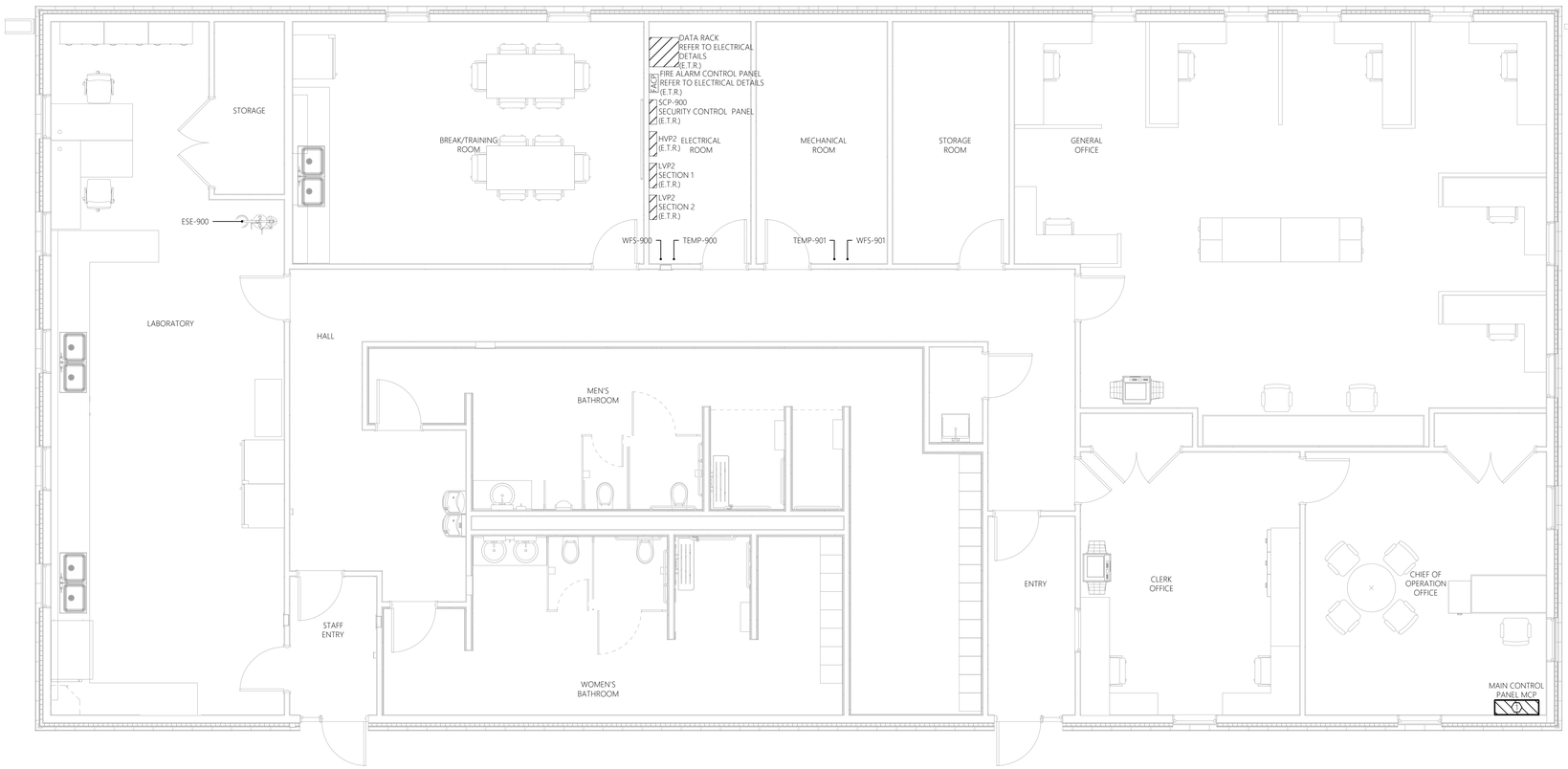
PROJECT # 18-732 PHASE #

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH APPLICABLE TRADE CONTRACTOR, OWNER, AND ENGINEER PRIOR TO ROUGH-IN.
5. CONTRATOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC... PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER, ENGINEER, AND ALL TRADE CONTRACTORS.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER. REFER TO SPECIFICATION SECTION 26 0553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND ROUTING WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.
11. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE CONCRETE HOUSEKEEPING PAD BENEATH EQUIPMENT. REFER TO TYPICAL EQUIPMENT PAD DETAIL FOR REQUIREMENTS.



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-900 ELECTRICAL POWER PLAN
SCALE: 1/4" = 1'-0"
CONTROL BUILDING

MHE ENGINEERING
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111 Wheatfield Drive, Suite 1
Milford, PA 18337
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HAZARDOUS MATERIAL NOTE:

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL POWER & SYSTEMS PLAN - CONTROL BUILDING

REVISIONS

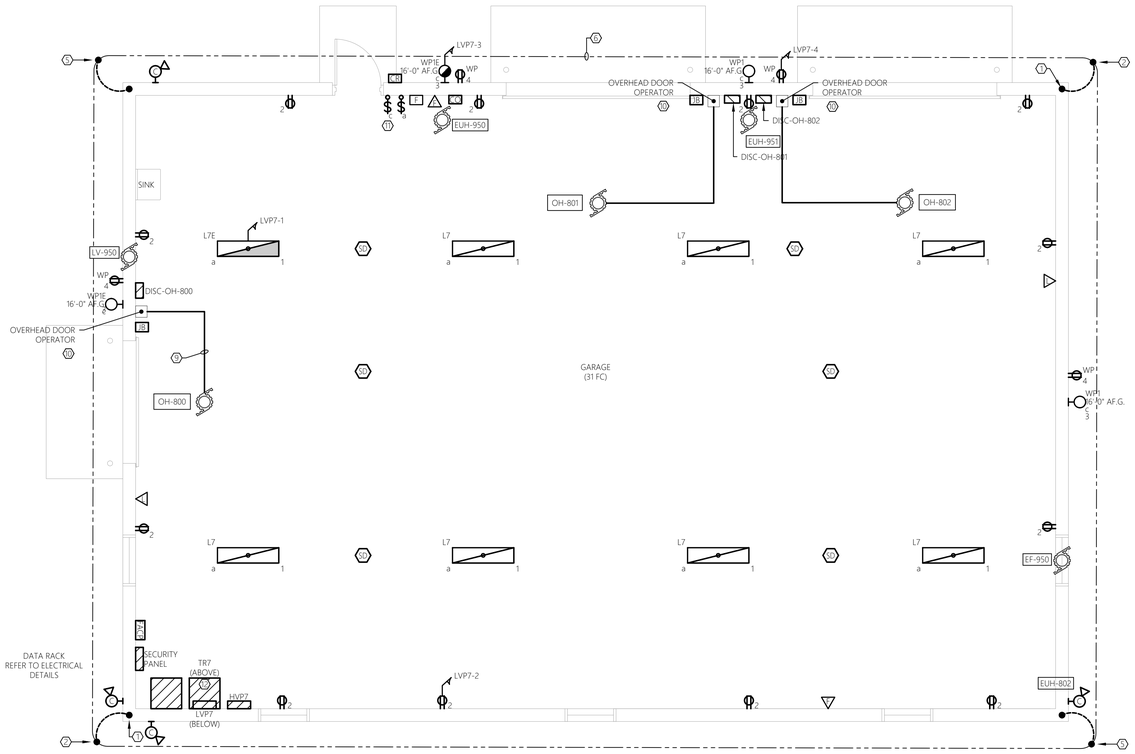
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

E-900

PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 E-950 ELECTRICAL POWER, SYSTEMS, & LIGHTING PLAN - GARAGE
SCALE: 1/4" = 1'-0"

GENERAL NEW WORK NOTES:

1. REFER TO E-001 FOR ELECTRICAL LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. PROVIDE A DEDICATED GROUNDING CONDUCTOR FOR ALL ELECTRICAL EQUIPMENT AND ASSOCIATED EQUIPMENT/DEVICES.
3. EQUIPMENT & DEVICE LOCATIONS ARE SHOWN AS GENERAL IN NATURE. REFER TO ALL TRADE CONTRACT DRAWINGS AND COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER FOR EXACT LOCATIONS. CLOSE CONTRACTOR COORDINATION REQUIRED.
4. ALL PROPOSED EQUIPMENT LOCATIONS/INSTALLATIONS TO COMPLY WITH NEC ARTICLE 110.26 'SPACES ABOUT ELECTRICAL EQUIPMENT'. CONTRACTOR TO COORDINATE INSTALLATION LOCATIONS OF ALL EQUIPMENT WITH APPLICABLE TRADE CONTRACTOR, OWNER, AND ENGINEER PRIOR TO ROUGH-IN.
5. CONTRATOR TO PROVIDE ALL REQUIRED MOUNTING HARDWARE, EQUIPMENT, BRACKETS, SUPPORTS, ACCESSORIES, ETC.,. PROVIDE AS STAINLESS STEEL IN CORROSIVE ENVIRONMENTS, EXTERIOR APPLICATIONS, OR WHERE INDICATED ON THE CONTRACT DRAWINGS.
6. REFER TO ELECTRICAL SINGLE LINE DIAGRAMS, SPECIFICATIONS, SCHEDULES, AND DETAILS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
7. CONTRACTOR TO COORDINATE ALL ASPECTS OF SEQUENCE OF CONSTRUCTION WITH OWNER, ENGINEER, AND ALL TRADE CONTRACTORS.
8. ALL EXTERIOR RECEPTACLES TO BE INSTALLED AT A HEIGHT OF 36" A.F.G.
9. CONTRACTOR TO PROVIDE LABEL FOR ALL PROPOSED ELECTRICAL EQUIPMENT AND DEVICES. COORDINATE FINAL LABELING REQUIREMENTS WITH THE OWNER. REFER TO SPECIFICATION SECTION 26 0553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS FOR ADDITIONAL INFORMATION/REQUIREMENTS.
10. CONTRACTOR TO COORDINATE ALL CONDUIT PENETRATIONS AND ROUTING WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER PRIOR TO ROUGH-IN TO AVOID CONFLICTS.
11. NOT ALL EQUIPMENT/DEVICES MAY BE SHOWN FOR CLARITY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND PROPOSED CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER.
11. CONTRACTOR TO ADJUST FINAL INTERIOR LIGHT FIXTURE LOCATIONS TO AVOID CONFLICTS WITH EQUIPMENT, PIPING SYSTEMS, AND DUCT WORK. COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER PRIOR TO ROUGH-IN.
12. CONTRACTOR TO ADJUST FINAL AIMING ANGLE OF EXTERIOR LIGHT FIXTURES TO LIGHT DESIRED AREAS AND MINIMIZE LIGHT POLLUTION. COORDINATE WITH ALL TRADE CONTRACTORS, OWNER, AND ENGINEER.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE 3/4"ø x 10' COPPER GROUND ROD. BOND ALL METAL STRUCTURES AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND ROD USING #4 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO TYPICAL LIGHTNING PROTECTION GROUNDING DETAIL AND TYPICAL PANEL GROUNDING DETAIL FOR ADDITIONAL INFORMATION/REQUIREMENTS.
2. LIGHTNING PROTECTION DOWN CONDUCTOR. CONCEAL IN RGS CONDUIT WITHIN EXTERIOR WALL CONSTRUCTION. CONTRACTOR TO WORK WITH CERTIFIED LIGHTNING PROTECTION INSTALLER TO PROVIDE COMPLETE BUILDING LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH NFPA. UPON COMPLETION PROVIDE UL MASTER LABEL.
3. CONTRACTOR TO PROVIDE CONCRETE HOUSEKEEPING PAD BENEATH EQUIPMENT. REFER TO TYPICAL EQUIPMENT PAD DETAIL FOR REQUIREMENTS.
4. FURNACE EMERGENCY SHUTDOWN, TYPICAL OF TWO (2). REFER TO ELECTRICAL DETAILS FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION/REQUIREMENTS WITH CONTRACT #3.
5. BOND ALL METAL STRUCTURES, ELECTRICAL EQUIPMENT, AND LIGHTING PROTECTION DOWN CONDUCTOR TO GROUND RING USING #2 COPPER CONDUCTOR WITHIN RGS CONDUIT. REFER TO 'TYPICAL LIGHTNING PROTECTION GROUNDING DETAIL' AND 'TYPICAL PANEL GROUNDING DETAIL' FOR ADDITIONAL INFORMATION/REQUIREMENTS.
6. GROUND RING. GROUND RING TO BE BURIED AT MINIMUM 3 FEET BELOW FINISHED GRADE. GROUND RING TO BE KEPT AT MINIMUM OF 3 FEET AWAY FROM EQUIPMENT AT ALL TIMES. PROVIDE AND INSTALL 3/4"Ø x 10' GROUND RODS AT EACH CORNER OF GROUND RING FOR A TOTAL OF FOUR (4) GROUND RODS. ALL GROUND CONDUCTORS SHALL BE #2 COPPER, U.O.N.
7. ACCESS CARD READER BY OTHERS. THIS CONTRACT TO PROVIDE EMPTY 4-SQUARE JUNCTION BOX AT CARD READER LOCATION AND SPARE 3/4" CONDUIT BACK TO LOCATION OF SECURITY CONTROL PANEL. TYPICAL OF THREE (3).
8. SECURITY CAMERA BY OTHERS. THIS CONTRACT TO PROVIDE EMPTY 4-SQUARE JUNCTION BOX AT CAMERA LOCATION AND SPARE 3/4" CONDUIT BACK TO LOCATION OF SECURITY CONTROL PANEL. TYPICAL OF TWO (2).
9. PROVIDE LOW VOLTAGE CONDUCTORS IN 1/2" CONDUIT PER MANUFACTURERS RECOMMENDATIONS FOR AN OVERALL COMPLETE AND OPERABLE SYSTEM. COORDINATE FINAL REQUIREMENTS WITH CONTRACT #1 AND THE OWNER.
10. REFER TO EQUIPMENT CONNECTION SCHEDULE AND 'TYPICAL OVERHEAD DOOR RISER DIAGRAM' FOR ADDITIONAL INFORMATION/REQUIREMENTS.
11. CONTRACTOR TO PROVIDE TWO (2) WATTSTOPPER RT-200 ASTRONOMICAL TIME SWITCHES, OR APPROVED EQUAL WITHIN SEPARATE NEMA 1 ENCLOSURES. ONE (1) SWITCH TO CONTROL THE PROPOSED EXTERIOR WALL MOUNTED LIGHT FIXTURES TYPES 'WP1' & 'WP1E' AND THE SECOND TO CONTROL THE PROPOSED SITE LIGHT POLE FIXTURE TYPE 'S1' LOCATED NEAR THE FORCEMAIN DISCHARGE CHAMBER (TYPICAL OF TWO). PROGRAM TIME SWITCHES FOR LIGHTING 'ON' AT ASTRONOMICAL SUNSET AND 'OFF' AT ASTRONOMICAL SUNRISE. FINAL ON/OFF PROGRAMMING PARAMETERS TO BE COORDINATED WITH THE OWNER.
12. CONTRACTOR TO PROVIDE CONCRETE HOUSEKEEPING PAD BENEATH EQUIPMENT. REFER TO TYPICAL EQUIPMENT PAD DETAIL FOR REQUIREMENTS.

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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

ELECTRICAL POWER, SYSTEMS, & LIGHTING PLAN - GARAGE

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

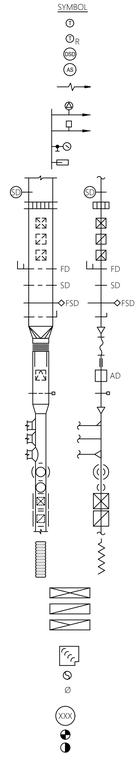
E-950

PROJECT # 18-732 PHASE #

PIPING SYMBOLS

	TWO WAY VALVE
	THREE WAY VALVE
	SHUT OFF VALVE
	GLOBE VALVE
	THERMOMETER
	PRESSURE GAGE
	MANUAL AIR VENT
	FLEXIBLE PIPE CONNECTOR
	Y STRAINER
	RELIEF VALVE
	PUMP
	BALANCING VALVE
	UNION
	PIPE DROP
	PIPE RISE
	SANITARY TRAP
	TOP CONNECTION
	BOTTOM CONNECTION
	CAP OR PLUG
	CHECK VALVE
	WEIGHTED CHECK VALVE
	PIPE REDUCER

HVAC LEGEND



DESCRIPTION
THERMOSTAT OR TEMPERATURE SENSOR
REVERSE-ACTING (COOLING) THERMOSTAT OR SENSOR
DUCT SMOKE DETECTOR
AIRFLOW PROVING SWITCH/SENSOR
AIR FLOW
AUTOMATIC AIR VENT
PRESSURE/TEMPERATURE PLUG
PRESSURE GAUGE w/GAUGE COCK
THERMOMETER
SMOKE DETECTOR
AIR MONITORING DEVICE
SUPPLY AIR DIFFUSER
RETURN AIR GRILLE
EXHAUST AIR GRILLE
FIRE DAMPER
SMOKE DAMPER
FIRE SMOKE DAMPER
MANUAL VOLUME DAMPER
SQUARE TO ROUND DUCT TRANSITION
FLEXIBLE CONNECTION
DUCTWORK SOUND LINING, 1"THICK
ACCESS DOOR
MOTOR OPERATED DAMPER
DUCT TRANSITION
RECTANGULAR BRANCH TAKE-OFF
BELL MOUTH BRANCH TAKE-OFF
ROUND BRANCH TAKE-OFF
CIRCULAR AIR DIFFUSER
CIRCULAR DUCT DROP OFF BOTTOM
SUPPLY AIR DEVICE WITH 2'x2' LAY-IN PANEL
RETURN AIR DEVICE WITH 2'x2' LAY-IN PANEL
FLEXIBLE DUCTWORK
SUPPLY/OUTSIDE AIR DUCT RISER
RETURN AIR DUCT RISER
EXHAUST/RELIEF AIR DUCT RISER
ELBOW w/ DOUBLE THICKNESS TURNING VANES
ROUND DUCT RISER
DIAMETER
CONTROL DEVICE
POINT OF CONNECTION, NEW TO EXISTING
POINT OF DISCONNECTION FROM EXISTING

ABBREVIATIONS

@	AT
AAD	AUTOMATIC AIR DAMPER
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATELY
AS	AIR SEPARATOR
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BTU/HR	BRITISH THERMAL UNITS PER HOUR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CONV	CONVECTOR
DIA, Ø	DIAMETER
DN	DOWN
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXT	EXPANSION TANK
°F	DEGREES FAHRENHEIT
FC	FLEXIBLE CONNECTION
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FO	FUEL OIL
FOP	FUEL OIL PUMP
FPM	FEET PER MINUTE
FTR	FIN TUBE RADIATOR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HZ	HERTZ
HX	HEAT EXCHANGER
IN,"	INCH, INCHES
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LV	LOUVER
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MIN	MINIMUM
MOP	MAXIMUM OVERCURRENT PROTECTION
NIC	NOT IN CONTRACT
NO	NUMBER
OA	OUTDOOR AIR
%	PERCENT
PH	PHASE
PSI	POUNDS PER SQUARE INCH
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RX	REMOVE EXISTING
SA	SUPPLY AIR
SF	SUPPLY FAN
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ	SQUARE
SQ FT	SQUARE FOOT
SRV	STATIONARY ROOF VENTILATOR
S.S.	STAINLESS STEEL
ΔT	TEMPERATURE DROP
TBR	TO BE REMOVED
TEMP, T	TEMPERATURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
V	VENT, VOLTS
VD	VOLUME DAMPER
VEL	VELOCITY
W/	WITH
WG	WATER GAUGE
(W)	WATT

DESIGNATIONS

EQUIPMENT

B-	BOILER
BP-	BOILER PUMP
DSCU-	DUCTLESS SPLIT CONDENSING UNIT
EBB-	ELECTRIC BASEBOARD
EF-	EXHAUST FAN
EUH-	ELECTRIC UNIT HEATER
F-	FURNACE
HUH-	HYDRONIC UNIT HEATER
LV-	LOUVER
HWU-	HIGH WALL UNIT
P	PUMP
SF-	SUPPLY FAN
SRV-	STATIONARY ROOF VENTILATOR

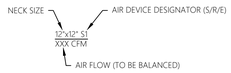
DRAWING

DRAWING NORTH ARROW



SECTION REFERENCE:

AIR DEVICES



GENERAL NOTES

1. WORK SHALL CONFORM TO THE CONTRACT DRAWINGS, SPECIFICATIONS, THE LATEST APPLICABLE CODE OF THE AUTHORITY HAVING JURISDICTION, AND APPLICABLE RULES, REGULATIONS, LAWS, AND ORDINANCES OF FEDERAL AND LOCAL AUTHORITIES.
2. THE SCOPE OF WORK INDICATED IN THESE DOCUMENTS SHALL INCLUDE MECHANICAL AND ELECTRICAL SYSTEMS, FULLY ADJUSTED, TESTED AND READY TO USE. PROVIDE ITEMS NECESSARY TO COMPLETE THE SYSTEMS SUCH AS CUTTING, AND PATCHING ROOFING, CARPENTRY ETC. EXAMINE WORK INDICATED FOR TRADES IN ORDER TO DETERMINE THE EXTENT OF THE WORK REQUIRED TO BE COMPLETED.
3. IT IS THE INTENTION OF THESE DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. WHEREVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL COMPLETE, TESTED, AND READY FOR USE."
4. THE DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW EVERY COMPONENT AND/OR ACCESSORY REQUIRED FOR A COMPLETE INSTALLATION. ADDITIONAL DETAILS REQUIRED FOR A COMPLETE INSTALLATION AND NOT SHOWN ON THE DRAWINGS ARE REQUIRED TO BE DEVELOPED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE ITEMS NECESSARY FOR A PROPERLY WORKING SYSTEM IN COMPLIANCE WITH ACCEPTED INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
5. PRIOR TO BID, THE CONTRACTOR MAY VISIT THE SITE AND IDENTIFY ITEMS THAT MAY AFFECT THEIR BID. FAILURE OF THE CONTRACTOR TO VISIT THE SITE TO UNDERSTAND THE COMPLEXITY OF THE PROJECT SHALL NOT ALLOW THE CONTRACTOR TO SUBMIT CONTRACT CHANGES RELATED TO SITE FACILITY CONDITIONS. PRIOR TO THE INSTALLATION, FABRICATION, REMOVAL, OR RELOCATION OF ANY WORK, THE CONTRACTORS SHALL REVIEW THE ACTUAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND SHALL COORDINATE WORK WITH THE PLANS, EXISTING EQUIPMENT AND SYSTEMS, BUILDING STRUCTURE AND WORK OF OTHER TRADES. WHERE CONFLICTS OCCUR, OR IF CONNECTIONS THERETO CAN NOT BE MADE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER PRIOR TO MATERIAL FABRICATION OR INSTALLATION.
6. WHERE THE WORK OF VARIOUS TRADES WILL BE INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER OR WHERE THERE IS EVIDENCE THAT THE WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER, THE CONTRACTOR SHALL WORK OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR ALLOWS ONE TRADE TO INSTALL HIS WORK BEFORE COORDINATING WITH WORK OF OTHER TRADES THE CONTRACTOR SHALL MAKE NECESSARY CHANGES TO CORRECT THE CONDITIONS IN A MANNER ACCEPTABLE TO THE OWNER AND BEAR THE COST OF SUCH CORRECTIONS. MAINTENANCE ACCESS TO EXISTING AND NEW SYSTEMS AND EQUIPMENT SHALL NOT BE COMPROMISED.
7. THE CONTRACTOR SHALL LOCATE EQUIPMENT WHICH MUST BE SERVICED, OPERATED, OR MAINTAINED IN FULLY ACCESSIBLE POSITION. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, MOTORS, CONTROLLERS, DRAIN PANS, ETC. IF REQUIRED FOR ACCESSIBILITY, FURNISH ACCESS DOORS FOR THE PURPOSE. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ALLOW FOR BETTER ACCESSIBILITY AND ANY CHANGES FOR THAT PURPOSE SHOULD BE PRE-APPROVED BY THE ENGINEER.
8. WORK IN OCCUPIED SPACE SHALL BE COORDINATED WITH THE OWNER, SCHEDULED IN ADVANCE AND ARRANGE TO MINIMIZE DISRUPTION TO THE OWNERS OPERATION.
9. THE CONTRACTOR SHALL LEAVE THE ENTIRE MECHANICAL SYSTEM INSTALLED UNDER THIS CONTRACT IN PROPER WORKING ORDER AND SHALL, WITHOUT CHARGE, REPLACE ANY WORK OR MATERIALS WHICH DEVELOP DEFECTS, WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL INCUR FINANCIAL RESPONSIBILITIES FOR, ANY DAMAGES CAUSED BY OR RESULTING FROM DEFECTS IN HIS WORK.
11. PRIOR TO THE BEGINNING OF WORK, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUBMITTALS OF EQUIPMENT FOR REVIEW BY THE ENGINEER. ADDITIONALLY, THE CONTRACTOR SHALL FURNISH A DRAWING SHOWING THE DIMENSIONED LOCATION AND SIZE OF PENETRATIONS FOR ENGINEER'S APPROVAL.
12. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS AND HEIGHTS OF THERMOSTATS WITH OWNER PRIOR TO INSTALLATION. CONTRACTOR SHALL ADHERE TO ADA REQUIREMENTS AND SHALL NOT MOUNT THERMOSTATS GREATER THAN 48 INCHES OFF FINISHED FLOOR AND NO LESS THAN 15 INCHES ABOVE FINISHED FLOOR.
13. WHEREVER PIPES, CONDUITS, OR OTHER ITEMS PASS THROUGH FIRE RATED WALLS AND FLOORS, THE SPACE BETWEEN THE ITEM AND THE MASONRY OR THE SPACE BETWEEN THE ITEM AND THE SLEEVE SHALL BE ADEQUATELY FIRE STOPPED WITH A NON COMBUSTIBLE, NON MELTING UL LISTED SYSTEM IN ACCORDANCE WITH NFPA STANDARDS AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
14. OPENINGS RESULTING FROM DEMOLITION SHALL BE CLOSED, SEALED AND FINISHED TO MATCH EXISTING AND TO MAINTAIN FIRE RATINGS. IMMEDIATELY FOR FIRE SEPARATIONS AND TEMPORARILY FOR OPENINGS TO MAINTAIN FIRE SEPARATION.
15. PROVIDE REPAIR OR REPLACEMENT OF WALLS, CEILINGS, FLOORS, ROOFS ETC. REQUIRED FOR DEMOLITION OR NEW WORK, REPAIR OR REPLACEMENT TO MATCH EXISTING & ADJACENT FINISHES. CONTRACTOR SHALL PATCH AND FINISH DAMAGED AREA TO NEAREST WALL CORNER.
16. FINISHES DAMAGED DURING THE PROJECT SHALL BE REPAIRED TO MATCH EXISTING.
17. WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 70, THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE, INTERNATIONAL MECHANICAL CODE, OSHA AND NATIONAL SAFETY CODE REQUIREMENTS.
18. SHOULD ANY OUTAGES BE REQUIRED IN THE COURSE OF THIS PROJECT, THE CONTRACTOR SHALL COORDINATE SUCH OUTAGES WITH THE PROJECT MANAGER OR DESIGNATED REPRESENTATIVE. SCHEDULING ANY OUTAGES DURING THE NON WORKING HOURS, SO AS NOT TO EFFECT FACILITY OPERATIONS, 72 HOURS NOTICE WILL BE REQUIRED PRIOR TO ANY OUTAGE. NO OUTAGE MAY BE EXECUTED PRIOR TO APPROVAL OF THE OWNER'S DESIGNATED REPRESENTATIVE AND THE FACILITY MANAGER.
19. ALL ROOF WORK SHALL BE PERFORMED BY A CERTIFIED ROOF INSPECTOR. ROOF OPENINGS BEING REUSED SHALL BE CAPPED UNTIL REPLACEMENT EQUIPMENT IS INSTALLED.
20. DUCT DIMENSIONS SHOWN ON DRAWINGS ARE SHOWN AS "SIDE SEEN" X "SIDE NOT SEEN" AND INDICATE CLEAR INSIDE DIMENSIONS. ROUND DUCT MAY BE SUBSTITUTED FOR RECTANGULAR DUCT, AS APPROVED, PROVIDING CROSS-SECTIONAL AREA IS MAINTAINED. SUBSTITUTE SIZES ACCORDING TO THE TABLE OF EQUIVALENT RECTANGULAR DUCT DIMENSIONS, ASHRAE HANDBOOK OF FUNDAMENTALS. FIELD VERIFY CLEARANCE FOR ROUND DUCT IN LIEU OF RECTANGULAR.
21. COORDINATE WALL AND ROOF PENETRATIONS WITH THE GENERAL CONTRACTOR.
22. EQUIPMENT INSTALLATION HEIGHTS LISTED IN MECHANICAL SCHEDULES ARE APPROXIMATIONS ONLY. COORDINATE FINAL LOCATION AND INSTALLATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

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33 Airport Center Drive, Suite 202
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Milford, PA 18337
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BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE
CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL LEGENDS, ABBREVIATIONS, & NOTES

REVISIONS

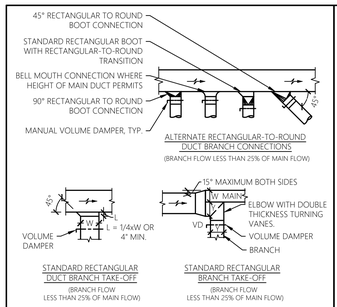
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

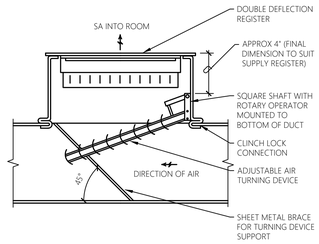
M-001

PROJECT # 18-732 PHASE #



DUCTWORK DETAILS

SCALE: NTS



SUPPLY GRILLE CONNECTION TO EXPOSED DUCT DETAIL

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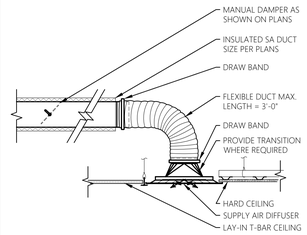

CEILING DIFFUSER DETAIL

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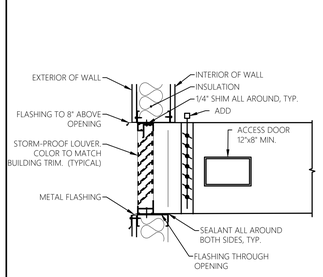

LOUVER DETAIL

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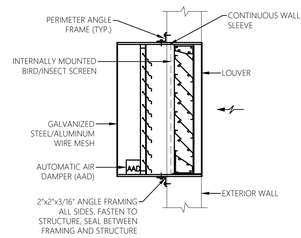
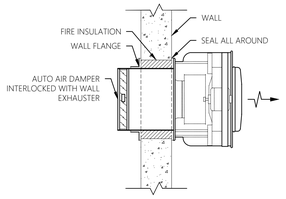


LOUVER WITH AAD DETAIL

SCALE: NTS



SIDEWALL EXHAUSTER DETAIL

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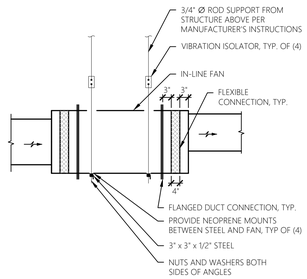
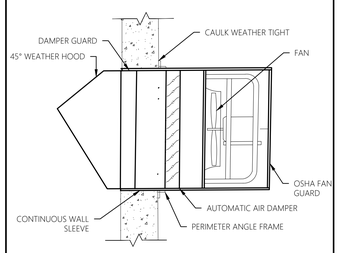


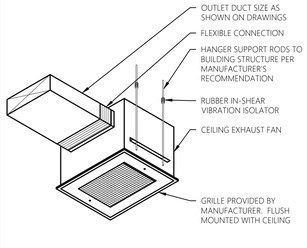
IN-LINE FAN DETAIL

SCALE: NTS



WALL MOUNTED PROPELLER FAN DETAIL

SCALE: NTS



CEILING EXHAUST FAN DETAIL

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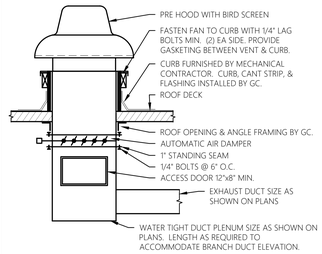
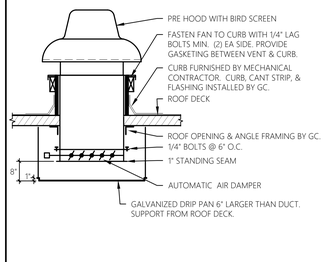


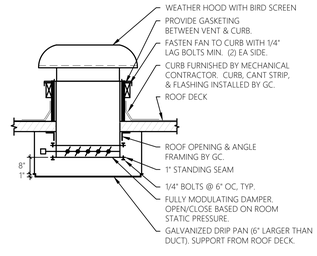
ROOF-MOUNTED EXHAUST FAN WITH AAD DETAIL

SCALE: NTS



POWER ROOF EXHAUSTER WITH AAD & EXTERNAL DRIP PAN DETAIL

SCALE: NTS



RELIEF HOOD DETAIL

SCALE: NTS

PIPE HANGER DETAILS

SCALE: NTS

NOTE:
1. THIS DETAIL APPLIES TO BOTH INSULATED AND NON-INSULATED PIPE.
2. FOR FIRE RATED CONSTRUCTION PROVIDE APPROPRIATE APPROVED THROUGH-PENETRATION FIRESTOP ASSEMBLY TO MAINTAIN THE FIRE RATING OF THE WALL ASSEMBLY.

PIPE THRU WALL DETAIL

SCALE: NTS

NOTE:
1. SUSPEND UNIT DEAD LEVEL BOTH VERTICALLY & HORIZONTALLY.
2. SUSPEND UNIT HEATER SO THAT IT MAY BE EASILY DISCONNECTED & REMOVED FOR SERVICE.
3. PROVIDE FOR EXPANSION IN RUNOUT.
4. DO NOT ALLOW PIPING TO EXTEND BELOW CASING.
5. ADJUST SUPPORT RODS SO THAT UNIT DOES NOT REST ON PIPING.
6. ADJUST PIPE HANGERS SO THAT PIPING DOES NOT REST ON UNIT HEATER.
7. PROVIDE WITH BALANCING VALVE ON RETURN PIPE.

HYDRONIC UNIT HEATER PIPING DETAIL

SCALE: NTS

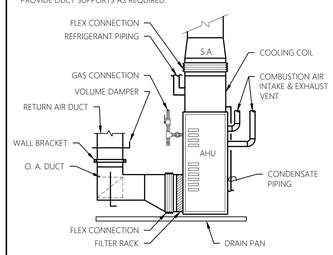
GAS CONNECTION DETAIL

SCALE: NTS

WATER MAKE-UP DETAIL

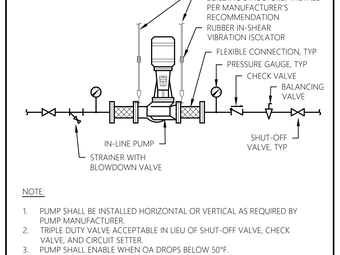
SCALE: NTS

NOTE:
PROVIDE DUCT SUPPORTS AS REQUIRED.



FURNACE DETAIL

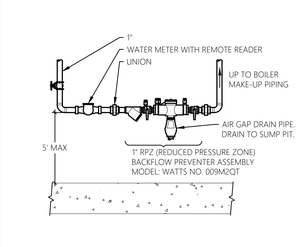
SCALE: NTS



NOTE:
1. PUMP SHALL BE INSTALLED HORIZONTAL OR VERTICAL AS REQUIRED BY PUMP MANUFACTURER.
2. TRIPLE DUTY VALVE ACCEPTABLE IN LIEU OF SHUT-OFF VALVE, CHECK VALVE, AND CIRCUIT SETTER.
3. PUMP SHALL ENABLE WHEN OA DROPS BELOW 50°F.

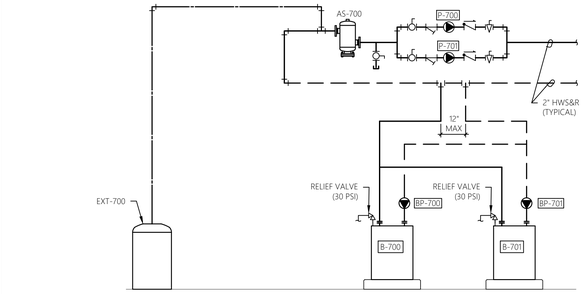
IN-LINE PUMP DETAIL

SCALE: NTS



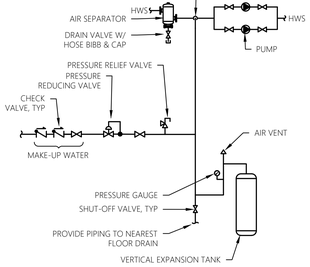
BOILER RPZ DETAIL

SCALE: NTS



BUILDING HEATING SYSTEM SCHEMATIC

SCALE: NTS



AIR CONTROL DETAIL

SCALE: NTS

NOTE:
ALL REFRIGERANT PIPING SHALL BE SIZED AND INSTALLED IN STRICT COMPLIANCE WITH THE UNIT MANUFACTURER'S PRINTED INSTRUCTIONS.

DX COIL DETAIL

SCALE: NTS

GENERAL NOTES:
1. EXACT LENGTH DIMENSION SHALL BE CONFIRMED IN FIELD TO ENSURE PROPER FIT BETWEEN WALLS. INTENT IS TO EXTEND DRAIN PAN FROM WALL TO WALL. FINAL DIMENSION OF LENGTH CAN VARY BY A FEW INCHES FROM LENGTH SHOWN IN DETAIL.

DRIP PAN DETAIL

SCALE: NTS

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33 Airport Center Drive, Suite 202
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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

UDIG·NY SAFE DIGGING STARTS HERE CALL 811

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-030

PROJECT # 18-732 PHASE #

BOILER SCHEDULE

UNIT TAG	LOCATION	SYSTEM FLUID	NATURAL GAS		OUTPUT MBH	BOILER HP	% EFF	RELIEF VALVE (PSI)	ELECTRICAL		FLUE OUTLET CONNECTION	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
			INPUT (MBH)	RATE (CFH)					VOLTS/ PH	MOP (AMPS)				
B-700	MECHANICAL	WATER	399	399	383	N/A	95	12	120/1	20	4"	WEIL-MCLAIN	EVG-399	1 2
B-701	MECHANICAL	WATER	399	399	383	N/A	95	12	120/1	20	4"	WEIL-MCLAIN	EVG-399	1 2

1. PROVIDE WITH CONCENTRIC VENT AND CONDENSATE NEUTRALIZER KIT.
2. PROVIDE WITH BOILER CONTROLS/PUMP CONTROLLERS AS NECESSARY FOR OPERATION OF CIRCULATING PUMPS.

PUMP SCHEDULE

UNIT TAG	LOCATION	SERVICE	SYSTEM FLUID	GPM	HEAD FT. WG.	RPM	ELECTRICAL			BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
							HP	VOLTS	PHASE			
P-700	MECHANICAL	HWS&R LOOP	WATER	56	40	1578	2	460	3	BELL&GOSSETT	E-90	1 2
P-701	MECHANICAL	HWS&R LOOP	WATER	56	40	1579	2	460	3	BELL&GOSSETT	E-90	1 2
BP-700	MECHANICAL	B-700	WATER	29	25	1725	1/2	460	3	TACO	2400	
BP-701	MECHANICAL	B-701	WATER	29	25	1725	1/2	460	3	TACO	2400	

1. PROVIDE W/ VFD.
2. PUMPS TO OPERATE AS DUTY/STANDBY.

EXPANSION TANK SCHEDULE

UNIT TAG	SERVICE	TYPE	ACCEPTANCE VOLUME (GAL)	TANK VOLUME (GAL)	DIAMETER (IN)	LENGTH (IN)	FILL PRESSURE (PSI)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
EXT-700	BOILER SYSTEM	DIAPHRAGM	6.3	7.8	12	19	12	BELL & GOSSETT	D-15	

AIR SEPARATOR SCHEDULE

UNIT TAG	LOCATION	SERVICE	TYPE	GPM	WPD FT-H_2O	CONN. SIZE (IN)	VELOCITY FPM	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
AS-700	MECHANICAL	BOILER SYSTEM	TANGENTIAL	56	0.2	3	144	BELL&GOSSETT	ROLAIRTROL RL-3F	

STATIONARY ROOF VENTILATOR SCHEDULE

UNIT TAG	LOCATION	SERVICE	CFM	THROAT DIMENSIONS	FREE AREA (SQ. FT.)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
SRV-300	SLUDGE PIT	SLUDGE PIT	250	8X8	0.44	GREENHECK	FGI	1
SRV-400	ATAD BUILDING	EQUIPMENT ROOM	3000	30X30	6.25	GREENHECK	FGI	1
SRV-500	MBR BUILDING	INFLUENT DRY WELL	675	14X14	1.36	GREENHECK	FGI	1

1. PROVIDE WITH 14" HIGH INSULATED ALUMINUM ROOF CURB AND 120V AAD (NEMA 4X ACTUATOR/ENCLOSURE).

AIR INLET AND OUTLET SCHEDULE

TYPE	DESCRIPTION	SERVICE	FACE SIZE (NECK SIZE)	MOUNTING TYPE	BASIS OF DESIGN MANUFACTURER AND MODEL	REMARKS
S1	DIFFUSER	SUPPLY	24X24	LAY-IN	PRICE SCD	1
S2	GRILLE	SUPPLY	SEE PLANS	TO DUCT	PRICE 720 SERIES	1
R1	GRILLE	RETURN	24X24/12X12	LAY-IN	PRICE 80 SERIES	1
E1	GRILLE	EXHAUST	SEE PLANS	TO DUCT	PRICE 730 SERIES	1

1. PROVIDE WITH BALANCING DAMPER

DUCTLESS SPLIT SYSTEM SCHEDULE

INDOOR UNIT											OUTDOOR UNIT									
UNIT TAG	LOCATION	ARRANGEMENT	INSTALLATION HEIGHT AFF (APPROX)	TOTAL COOLING (BTUH)	MIN SEER	HEATING CAPACITY (BTUH)	SUPPLY CFM HIGH/LOW	ELECTRICAL			REMARKS	UNIT TAG	LOCATION	INSTALLATION HEIGHT AFG (APPROX)	SERVICE	ELECTRICAL			BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER INDOOR UNIT	BASIS OF DESIGN MODEL NUMBER OUTDOOR UNIT	REMARKS
								VOLTS	PHASE	MOP						VOLTS	PHASE	MOP				
HWU-400	ATAD BUILDING	HIGH WALL MOUNT	7'-0"	33,000	18.5	35,200	883/601	208	1	30	1	DSCU-400	ROOF	-	HWU-400	208	1	30	LG	LSN36HLV3	LSU36HLV3	1 2
HWU-500	MBR BUILDING	HIGH WALL MOUNT	7'-0"	12,000	22.7	13,600	282/177	208	1	20	1	DSCU-500	EXTERIOR WALL	8'-0"	HWU-500	208	1	20	LG	LSN120HSVR	LSU120HSV5	1 2
HWU-700	DEWATERING BUILDING	HIGH WALL MOUNT	7'-0"	12,000	22.7	13,600	282/177	208	1	20	1	DSCU-700	ROOF	-	HWU-700	208	1	20	LG	LSN120HSVR	LSU120HSV5	1 3
HWU-701	DEWATERING BUILDING	HIGH WALL MOUNT	7'-0"	12,000	22.7	13,600	282/177	208	1	20	1	DSCU-701	ROOF	-	HWU-700	208	1	20	LG	LSN120HSVR	LSU120HSV5	1 3
F-700 CC	DEWATERING BUILDING	CASED COIL	-	60,000	13	-	1575	-	-	-	1	DSCU-702	ROOF	-	F-700 CC	208	1	50	COMFORTAIRE	-	RSG1360S1M	1 3

1. PROVIDE WITH LOW AMBIENT WIND BAFFLE KIT, REMOTE CONTROLLER, BASE PAN HEATER, AND HIGH LIFT CONDENSATE PUMP.
2. MOUNT EXTERIOR DUCTLESS SPLIT CONDENSING UNIT ON WALL MOUNT BRACKET/STAND PER MANUFACTURER RECOMMENDATIONS.
3. MOUNT EXTERIOR DUCTLESS SPLIT CONDENSING UNIT ON ROOF MOUNT QUICKSLING (NON-PENETRATING) STAND AND INSTALL PER MANUFACTURER RECOMMENDATIONS.

FURNACE SCHEDULE

UNIT TAG	LOCATION	SERVICE	SA CFM	OA CFM (MIN)	ESP (IN WG)	ELECTRICAL				DX COOLING COIL	GAS HEATING				SEER	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
						MOP	VOLTS	PHASE	FLA	NOMINAL TONNAGE	INPUT MBH	OUTPUT MBH	RISE (°F)	AFUE				
F-700	DEWATERING BUILDING	OFFICE/LOCKER AREA	1575	175	0.8	20	120	1	12.8	5	110	106	80	97	14	COMFORT-AIRE	GUH97M	1

1. PROVIDE WITH LP CONVERSION KIT, LOW VOLTAGE HONEYWELL PRESTIGE 2.0 THERMOSTAT, AND CONCENTRIC VENT KIT.

EXHAUST FAN SCHEDULE

UNIT TAG	LOCATION	SERVICE	ARRANGEMENT	DRIVE	CFM	SP (IN WG)	FAN RPM	MAX SONES	WALL / ROOF OPENING SIZE (MAX)	BOTTOM OF FAN HEIGHT AFF (APPROX)	ELECTRICAL			BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
											HP (W)	VOLTS	PHASE			
EF-200	HEADWORKS BUILDING	BAR SCREEN ROOM	IN-LINE	BELT	2650	0.3	1235	-	-	8'-4"	1/2	120	1	GREENHECK	QEI-15	1
EF-201	HEADWORKS BUILDING	ELECTRICAL ROOM	IN-LINE	DIRECT	500	0.3	1522	-	-	9'-4"	1/10	120	1	GREENHECK	SQ-90-VG	2 3
EF-300	SLUDGE PIT	SLUDGE PIT	ROOF MOUNT	DIRECT	250	0.3	1569	5	13.5"X13.5"	-	1/15	120	1	GREENHECK	G-070-VG	7
EF-301	SLUDGE VALVE PIT	SLUDGE VALVE PIT	IN-LINE	DIRECT	400	0.3	1379	-	-	2'-0"	1/10	120	1	GREENHECK	SQ-90-VG	10
EF-400	ATAD BUILDING	EQUIPMENT ROOM	IN-LINE	DIRECT	3000	0.3	1139	-	-	9'-0"	3/4	208	1	GREENHECK	SQ-160-VG	4 3
EF-401	ATAD BUILDING	THICKENING ROOM	IN-LINE	DIRECT	925	0.3	1318	-	-	9'-4"	1/4	120	1	GREENHECK	SQ-100-VG	5
EF-500	MBR BUILDING	CHEMICAL ROOMS	IN-LINE	DIRECT	600	0.5	1689	-	-	8'-6"	1/6	120	1	GREENHECK	SQ-95-VG	9
EF-501	MBR BUILDING	RAS PUMP ROOM	WALL MOUNT	DIRECT	3900	0.3	1434	21	18"X18"	25'-0"	2	208	1	GREENHECK	CUE-160-VG	6
EF-502	MBR BUILDING	BLOWER ROOM	WALL MOUNT	DIRECT	5000	0.3	982	19	26"X26"	13'-0"	2	208	1	GREENHECK	CUE-200-VG	6 3
EF-503	MBR BUILDING	BLOWER ROOM	WALL MOUNT	DIRECT	5000	0.3	982	19	26"X26"	13'-0"	2	208	1	GREENHECK	CUE-200-VG	6 3
EF-504	MBR BUILDING	ELECTRICAL ROOM	CEILING	DIRECT	500	0.3	1212	7	-	8'-0"	(121)	120	1	GREENHECK	SP-A510-VG	9 5
EF-505	MBR BUILDING	MEMBRANE AREA	WALL MOUNT	DIRECT	2500	0.3	1479	16	18"X18"	24'-0"	3/4	208	1	GREENHECK	CUE-140-VG	6 3
EF-506	MBR BUILDING	MEMBRANE AREA	WALL MOUNT	DIRECT	2500	0.3	1479	16	18"X18"	24'-0"	3/4	208	1	GREENHECK	CUE-140-VG	6 3
EF-507	MBR BUILDING	MEMBRANE AREA	WALL MOUNT	DIRECT	2500	0.3	1479	16	18"X18"	24'-0"	3/4	208	1	GREENHECK	CUE-140-VG	6 3
EF-508	MBR BUILDING	MEMBRANE AREA	WALL MOUNT	DIRECT	2500	0.3	1479	16	18"X18"	24'-0"	3/4	208	1	GREENHECK	CUE-140-VG	6 3
EF-509	MBR BUILDING	FINE SCREEN ROOM	IN-LINE	DIRECT	1100	0.3	1488	-	-	9'-0"	1/4	120	1	GREENHECK	SQ-100-VG	9
EF-510	MBR BUILDING	INFLUENT DRY WELL	ROOF MOUNT	DIRECT	675	0.3	1670	9	13"X13"	-	1/10	120	1	GREENHECK	G-090-VG	7
EF-700	DEWATERING BUILDING	DUMPSTER AREA & MECHANICAL	IN-LINE	DIRECT	2700	0.6	1147	-	-	8'-0"	3/4	208	1	GREENHECK	SQ-160-VG	4
EF-701	DEWATERING BUILDING	MECHANICAL OPERATIONS ROOM	IN-LINE	DIRECT	2600	0.3	1019	-	-	8'-0"	3/4	208	1	GREENHECK	SQ-160-VG	4
EF-702	DEWATERING BUILDING	LOCKER ROOMS	ROOF MOUNT	DIRECT	445	0.6	1550	-	12.5"X12.5"	-	1/8	120	1	GREENHECK	G-095-VG	7
EF-950	GARAGE	GARAGE	WALL MOUNT	DIRECT	1800	0.3	1107	-	27.38"X27.38"	8'-0"	1/2	120	1	GREENHECK	AER-20-03-0615-VG	8

1. PROVIDE WITH ALUMINUM/SPARK RESISTANT CONSTRUCTION, EXPLOSION PROOF MOTOR, EXPLOSION PROOF DISCONNECT SWITCH (NEMA-7), ALUMINUM MOTOR COVER, MOUNTING RAIL/VIBRATION ISOLATORS, EPOXY COATING, AND SPARE BELT. EQUIPMENT AND ACCESSORIES TO BE RATED FOR USE IN A CLASS 1, DIV 1 SPACE.
2. PROVIDE WITH ALUMINUM CONSTRUCTION, SPEED CONTROLLER (VG MOTOR), UNIT MOUNTED DISCONNECT SWITCH, INLET GUARD, AND VIBRATION ISOLATORS.
3. CONTROL BY LINE VOLTAGE REVERSE-ACTING (COOLING) THERMOSTAT. UPON A RISE IN TEMPERATURE ABOVE 85°F (ADJUSTABLE), FAN SHALL ENABLE.
4. PROVIDE WITH ALUMINUM CONSTRUCTION, SPEED CONTROLLER (VG MOTOR), UNIT MOUNTED DISCONNECT SWITCH (NEMA-4X), INLET GUARD, VIBRATION ISOLATORS, AND EPOXY COATING.
5. PROVIDE WITH ALUMINUM CONSTRUCTION, SPEED CONTROLLER (VG MOTOR), UNIT MOUNTED DISCONNECT SWITCH (NEMA-4X), VIBRATION ISOLATORS, AND EPOXY COATING.
6. PROVIDE WITH ALUMINUM CONSTRUCTION, SPEED CONTROLLER (VG MOTOR), UNIT MOUNTED DISCONNECT SWITCH (NEMA-4X), WALL BRACKET, AND 120V AAD (NEMA 4X ACTUATOR/ENCLOSURE).
7. PROVIDE WITH ALUMINUM CONSTRUCTION, SPEED CONTROLLER (VG MOTOR), UNIT MOUNTED DISCONNECT SWITCH (NEMA-4X), 12" HIGH ROOF CURB, AND 120V ADD (NEMA 4X ACTUATOR/ENCLOSURE).
8. PROVIDE WITH ALUMINUM CONSTRUCTION, SPEED CONTROLLER (VG MOTOR), UNIT MOUNTED DISCONNECT SWITCH (NEMA-4X), WALL HOUSING/SLEEVE, OSHA APPROVED MOTOR/FAN GUARD, 120V AAD (NEMA 4X ACTUATOR/ENCLOSURE), AND 45° WEATHERHOOD.
9. PROVIDE WITH SPEED CONTROLLER, DISCONNECT SWITCH, AND VIBRATION ISOLATORS.
10. PROVIDE WITH ALUMINUM CONSTRUCTION, SPEED CONTROLLER (VG MOTOR), UNIT MOUNTED DISCONNECT SWITCH (NEMA-4X), INLET GUARD, VIBRATION ISOLATORS, GRAVITY BACKDRAFT DAMPER, AND EPOXY COATING.

SUPPLY FAN SCHEDULE

UNIT TAG	LOCATION	SERVICE	ARRANGEMENT	DRIVE	CFM	SP (IN WG)	FAN RPM	MAX SONES	WALL OPENING SIZE	BOTTOM OF FAN HEIGHT AFF (APPROX)	ELECTRICAL			BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
											HP (W)	VOLTS	PHASE			
SF-200	HEADWORKS BUILDING	BAR SCREEN ROOM	IN-LINE	BELT	2525	0.5	1270	-	-	7'-10"	1/2	120	1	GREENHECK	QEI-15	1
SF-400	ATAD BUILDING	THICKENING ROOM	IN-LINE	DIRECT	875	0.3	1270	-	-	9'-4"	1/4	120	1	GREENHECK	SQ-100-VG	2
SF-500	MBR BUILDING	RAS PUMP ROOM	WALL	DIRECT	3700	0.3	1655	-	27.38"X27.38"	16'-4"	3/4	120	1	GREENHECK	AER-20-03-0320-VG	3
SF-700	DEWATERING BUILDING	DUMPSTER AREA & MECHANICAL	WALL	DIRECT	2700	0.3	1710	-	27.33"X27.33"	9'-0"	1/2	120	1	GREENHECK	AER-20-03-0315-VG	3
SF-701	DEWATERING BUILDING	MECHANICAL OPERATIONS ROOM	WALL	DIRECT	2600	0.3	1674	-	27.33"X27.33"	4'-0"	1/2	120	1	GREENHECK	AER-20-03-0315-VG	3

1. PROVIDE WITH ALUMINUM/SPARK RESISTANT CONSTRUCTION, EXPLOSION PROOF INSULATED MOTOR, EXPLOSION PROOF DISCONNECT SWITCH (NEMA-7), ALUMINUM MOTOR COVER, MOUNTING RAIL/VIBRATION ISOLATORS, DRAIN WITH PLUG, AND EPOXY COATING. EQUIPMENT AND ACCESSORIES TO BE RATED FOR USE IN A CLASS 1, DIV 1 SPACE.
2. PROVIDE WITH ALUMINUM CONSTRUCTION, DISCONNECT SWITCH (NEMA-4X), SPEED CONTROLLER (VG MOTOR), INSULATED HOUSING, MOTOR COVER, EPOXY COATING, AND VIBRATION ISOLATORS.
3. PROVIDE WITH ALUMINUM CONSTRUCTION, OSHA APPROVED MOTOR GUARD/HOUSING, DISCONNECT SWITCH (NEMA-4X), SPEED CONTROLLER (VG MOTOR), 120V AAD (NEMA 4X ACTUATOR/ENCLOSURE), ALUMINUM 90° WEATHERHOOD KIT WITH BIRD SCREEN, AND EPOXY COATING.

LOUVER SCHEDULE

UNIT TAG	LOCATION	SERVICE	WIDTH	HEIGHT	BOTTOM OF LOUVER HEIGHT AFF (APPROX)	CFM	FREE AREA (SQ FT)	FACE VELOCITY (FPM)	BIRD SCREEN	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
LV-200	HEADWORKS BUILDING	INTAKE	40	32	7'-4"	2525	4.52	559	YES	GREENHECK	ESD-435	2
LV-201	HEADWORKS BUILDING	EXHAUST	40	32	8'-0"	2525	4.52	559	YES	GREENHECK	ESD-435	2
LV-202	HEADWORKS BUILDING	INTAKE	24	16	8'-0"	500	0.99	504	YES	GREENHECK	ESD-435	1 2
LV-203	HEADWORKS BUILDING	EXHAUST	24	16	9'-4"	500	0.99	504	YES	GREENHECK	ESD-435	1 2
LV-400	ATAD BUILDING	EXHAUST	36	40	8'-0"	3000	5.28	568	YES	GREENHECK	ESD-435	1 2
LV-401	ATAD BUILDING	INTAKE	24	24	9'-4"	875	1.75	502	YES	GREENHECK	ESD-435	1 2
LV-402	ATAD BUILDING	EXHAUST	24	24	9'-4"	875	1.75	502	YES	GREENHECK	ESD-435	1 2
LV-500	MBR BUILDING	INTAKE	18	18	8'-6"	510	0.84	608	YES	GREENHECK	ESD-435	2
LV-501	MBR BUILDING	EXHAUST	18	18	8'-6"	510	0.84	608	YES	GREENHECK	ESD-435	2
LV-502	MBR BUILDING	INTAKE	42	48	12'-0"	5000	7.74	646	YES	GREENHECK	ESD-435	1 2
LV-503	MBR BUILDING	INTAKE	42	48	12'-0"	5000	7.74	646	YES	GREENHECK	ESD-435	1 2
LV-504	MBR BUILDING	INTAKE	18	18	2'-0"	500	0.84	596	YES	GREENHECK	ESD-435	1 2
LV-505	MBR BUILDING	EXHAUST	18	18	8'-0"	500	0.84	596	YES	GREENHECK	ESD-435	1 2
LV-506	MBR BUILDING	INTAKE	42	48	2'-0"	5000	7.74	646	YES	GREENHECK	ESD-435	1 2
LV-507	MBR BUILDING	INTAKE	42	48	2'-0"	5000	7.74	646	YES	GREENHECK	ESD-435	1 2
LV-508	MBR BUILDING	INTAKE	24	24	5'-4"	1100	1.81	609	YES	GREENHECK	ESD-435	1 2
LV-509	MBR BUILDING	EXHAUST	24	24	8'-8"	1100	1.81	609	YES	GREENHECK	ESD-435	1 2
LV-700	DEWATERING BUILDING	EXHAUST	45	32	6'-4 1/2"	2700	5.10	498	YES	GREENHECK	ESD-435	1 2
LV-701	DEWATERING BUILDING	EXHAUST	45	32	3'-4 1/2"	2600	5.10	480	YES	GREENHECK	ESD-435	1 2
LV-950	GARAGE	INTAKE	32	32	3'-0"	1800	3.55	507	YES	GREENHECK	ESD-435	1 2

1. WITH FACTORY PROVIDED 120V AAD (NEMA 4X ACTUATOR/ENCLOSURE).
2. PROVIDE WITH 1-1/2" EXTERIOR PERIMETER FLANGE AND MOUNTING CLIPS.

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-040

PROJECT # 18-732 PHASE #

HYDRONIC UNIT HEATER SCHEDULE

UNIT TAG	LOCATION	AIRFLOW DIRECTION	BOTTOM OF UNIT HEIGHT AFF (MIN.)	MBH	SUPPLY CFM	EWT (°F)	LWT (°F)	GPM	ELECTRICAL			BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
									VOLTS	PHASE	HP (W)			
HUH-700	STORAGE 701	HORIZONTAL	9'-0"	18.4	500	180	140	1.9	120	1	(16)	STERLING	HS-118A	1
HUH-701	MECHANICAL ROOM 702	HORIZONTAL	9'-0"	43.6	900	180	140	4.4	120	1	1/12	STERLING	HS-060B	1
HUH-702	MECHANICAL ROOM 702	HORIZONTAL	9'-0"	43.6	900	180	140	4.4	120	1	1/12	STERLING	HS-060B	1
HUH-703	STORAGE 703	HORIZONTAL	9-0"	8.03	245	180	140	0.8	120	1	(16)	STERLING	HS-108A	1
HUH-704	DUMPSTER AREA 704	HORIZONTAL	9'-0"	61.0	1400	180	140	6.1	120	1	1/12	STERLING	HS-084B	1
HUH-705	DUMPSTER AREA 705	HORIZONTAL	9'-0"	61.0	1400	180	140	6.1	120	1	1/12	STERLING	HS-084B	1
HUH-706	MECHANICAL OPERATIONS ROOM 716	HORIZONTAL	9'-0"	95.8	2000	180	140	9.6	120	1	1/3	STERLING	HS-132B	1
HUH-707	MECHANICAL OPERATIONS ROOM 716	HORIZONTAL	9'-0"	95.8	2000	180	140	9.6	120	1	1/3	STERLING	HS-132B	1

1. PROVIDE WITH WALL MOUNTED LINE VOLTAGE THERMOSTAT AND DISCONNECT.

ELECTRIC UNIT HEATER SCHEDULE

UNIT TAG	LOCATION	AIRFLOW DIRECTION	BOTTOM OF UNIT HEIGHT AFF (MIN.)	KW	SUPPLY CFM	ELECTRICAL			BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
						VOLTS	PHASE	AMPS			
EUH-200	HEADWORKS BUILDING	HORIZONTAL	8'-0"	25	2450	480	3	30.1	TRANE	UHXA	2 4 5
EUH-201	HEADWORKS BUILDING	HORIZONTAL	8'-0"	25	2450	480	3	30.1	TRANE	UHXA	2 4 5
EUH-202	HEADWORKS BUILDING	HORIZONTAL	8'-0"	25	2450	480	3	30.1	TRANE	UHXA	2 4 5
EUH-203	HEADWORKS BUILDING	HORIZONTAL	8'-0"	3.3	400	480	3	4	TRANE	UHEC	1 3
EUH-300	SLUDGE PIT	HORIZONTAL	8'-0"	5	400	480	3	6.1	TRANE	UHRA	1 4
EUH-301	SLUDGE VALVE PIT	HORIZONTAL	2'-0"	3	-	208	3	-	TRANE	UHWA	7
EUH-400	ATAD BUILDING	HORIZONTAL	8'-0"	20	1100	480	3	24.1	TRANE	UHRA	1 4
EUH-401	ATAD BUILDING	HORIZONTAL	8'-0"	20	1100	480	3	24.1	TRANE	UHRA	1 4
EUH-402	ATAD BUILDING	HORIZONTAL	8'-0"	25	1400	480	3	30.2	TRANE	UHRA	1 4
EUH-403	ATAD BUILDING	HORIZONTAL	8'-0"	3.3	400	480	3	4	TRANE	UHEC	1 3
EUH-500	MBR BUILDING	HORIZONTAL	8'-0"	10	700	480	3	12.1	TRANE	UHRA	1 6
EUH-501	MBR BUILDING	HORIZONTAL	2'-0"	5	-	208	3	-	TRANE	UHWA	7
EUH-502	MBR BUILDING	HORIZONTAL	2'-0"	5	-	208	3	-	TRANE	UHWA	7
EUH-503	MBR BUILDING	HORIZONTAL	2'-0"	5	-	208	3	-	TRANE	UHWA	7
EUH-504	MBR BUILDING	HORIZONTAL	8'-0"	10	700	480	3	12.1	TRANE	UHEC	1 3
EUH-505	MBR BUILDING	HORIZONTAL	8'-0"	10	700	480	3	12.1	TRANE	UHEC	1 3
EUH-506	MBR BUILDING	HORIZONTAL	2'-0"	5	-	208	3	-	TRANE	UHWA	7
EUH-507	MBR BUILDING	HORIZONTAL	8'-0"	25	1400	480	3	30.2	TRANE	UHRA	1 4
EUH-508	MBR BUILDING	HORIZONTAL	8'-0"	25	1400	480	3	30.2	TRANE	UHRA	1 4
EUH-509	MBR BUILDING	HORIZONTAL	8'-0"	25	1400	480	3	30.2	TRANE	UHRA	1 4
EUH-510	MBR BUILDING	HORIZONTAL	2'-0"	3	-	208	3	-	TRANE	UHWA	7
EUH-511	MBR BUILDING	HORIZONTAL	2'-0"	5	-	208	3	-	TRANE	UHWA	7
EUH-512	MBR BUILDING	HORIZONTAL	2'-0"	4	-	208	3	-	TRANE	UHWA	7
EUH-513	MBR BUILDING	HORIZONTAL	8'-0"	25	1400	480	3	30.2	TRANE	UHRA	1 4
EUH-514	MBR BUILDING	HORIZONTAL	8'-0"	25	1400	480	3	30.2	TRANE	UHRA	1 4
EUH-515	MBR BUILDING	HORIZONTAL	8'-0"	25	1400	480	3	30.2	TRANE	UHRA	1 4
EUH-516	MBR BUILDING	HORIZONTAL	8'-0"	25	1400	480	3	30.2	TRANE	UHRA	1 4
EUH-517	MBR BUILDING	HORIZONTAL	8'-0"	15	700	480	3	18.1	TRANE	UHRA	1 4
EUH-518	MBR BUILDING	HORIZONTAL	8'-0"	15	700	480	3	18.1	TRANE	UHRA	1 4
EUH-519	MBR BUILDING	HORIZONTAL	2'-0"	5	-	208	3	-	TRANE	UHWA	7
EUH-520	MBR BUILDING	HORIZONTAL	8'-0"	15	700	480	3	18.1	TRANE	UHRA	1 4
EUH-950	GARAGE	HORIZONTAL	8'-0"	15	1100	480	3	18.1	TRANE	UHEC	1 3
EUH-951	GARAGE	HORIZONTAL	8'-0"	15	1100	480	3	18.1	TRANE	UHEC	1 3

1. PROVIDE WITH BUILT-IN 24V CONTROL TRANSFORMER AND CIRCUIT, WALL MOUNTED 24V THERMOSTAT, UNIT MOUNTED DISCONNECT SWITCH, AND FAN GUARD.
2. PROVIDE WITH BUILT-IN 120V CONTROL TRANSFORMER AND CIRCUIT, AND WALL MOUNTED 120V EXPLOSION PROOF THERMOSTAT.
3. PROVIDE WITH MOUNTING BRACKET.
4. PROVIDE WITH STAINLESS STEEL MOUNTING BRACKET AND MATERIALS.
5. UNIT HEATER TO BE EPOXY COATED. EQUIPMENT AND ACCESSORIES TO BE EXPLOSION PROOF AND RATED FOR USE IN A CLASS 1, DIV 1 SPACE.
6. PROVIDE WITH EPOXY COATED/FRP MOUNTING BRACKET AND MATERIALS SUITABLE FOR CHEMICAL ROOM.
7. PROVIDE WITH BUILT-IN THERMOSTAT AND DISCONNECT SWITCH.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL SCHEDULES

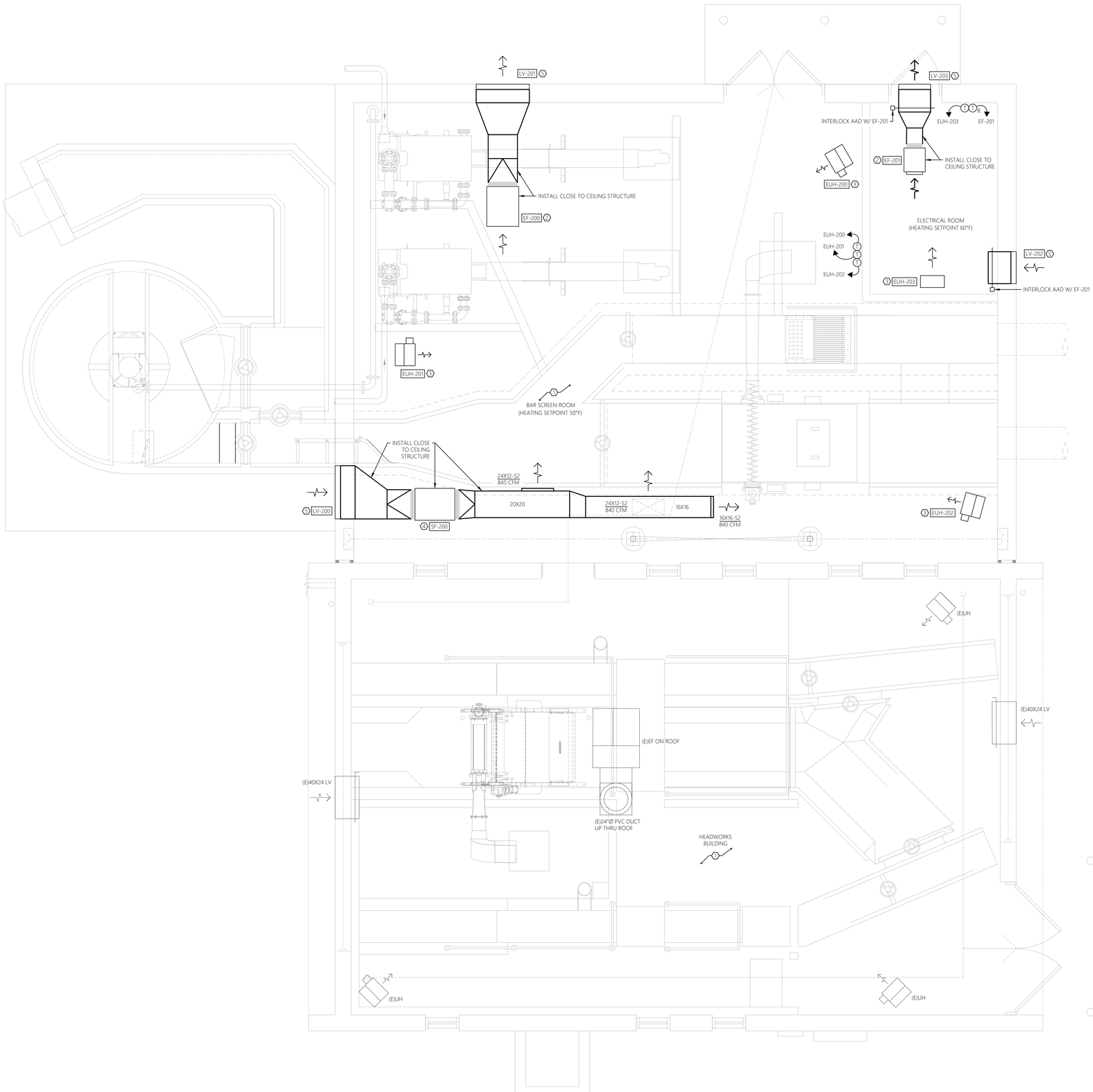
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.
M-041

PROJECT # 18-732 PHASE #



0' 1' 2' 4' 8'

SCALE: 3/8" = 1'-0"

1 M-201 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 3/8" = 1'-0"
HEADWORKS BUILDING

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. SUPPLY AIR AND EXHAUST AIR DUCTWORK WITHIN BAR SCREEN ROOM SHALL BE TYPE 316 STAINLESS STEEL. SUPPLY AIR AND EXHAUST AIR DUCTWORK WITHIN THE ELECTRICAL ROOM SHALL BE GALVANIZED STEEL.
5. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN BAR SCREEN ROOM SHALL BE TYPE 316 STAINLESS STEEL. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN ELECTRICAL ROOM SHALL BE GALVANIZED STEEL.

SHEET KEY NOTES:

1. AREA IS A CLASS I, DIVISION I, GROUP D SPACE. ALL HVAC EQUIPMENT AND DEVICES INTERIOR TO THIS AREA ARE TO BE EXPLOSION PROOF RATED FOR USE IN A CLASS I, DIVISION I, GROUP D ENVIRONMENT.
2. NEW IN-LINE EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
3. NEW ELECTRIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
4. NEW IN-LINE SUPPLY FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
5. NEW LOUVER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

SEQUENCE OF OPERATIONS:

FANS

SF-200/EF-200 SHALL OPERATE CONTINUOUSLY TO PROVIDE 12 AIR CHANGES PER HOUR (ACPH) VENTILATION TO BAR SCREEN ROOM.

EF-201 SHALL BE CONTROLLED THRU WALL MOUNTED REVERSE-ACTING (COOLING) THERMOSTAT LOCATED WITHIN ELECTRICAL ROOM.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL FLOOR PLAN - HEADWORKS BUILDING

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-201

PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

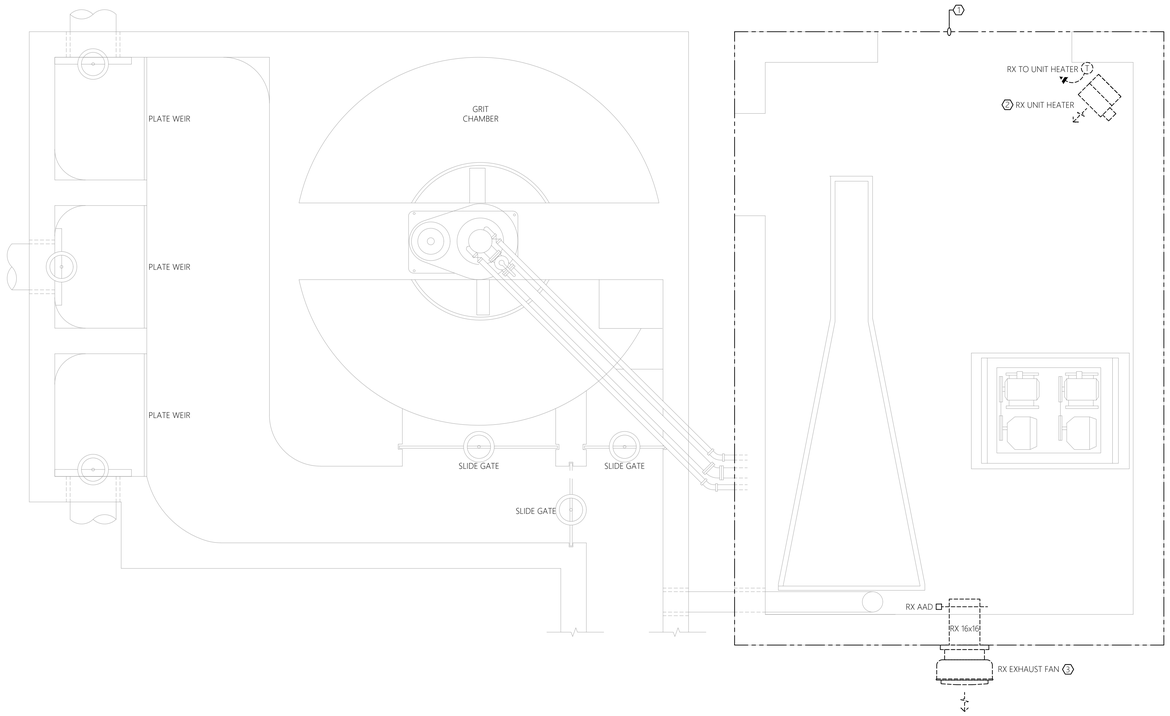
1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY DASHED (▬ ▬ ▬) SHALL BE DEMOLISHED.

SHEET KEY NOTES:

(1) CONTRACTOR TO PROVIDE COMPLETE HVAC DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). COORDINATE REMOVAL EFFORTS CLOSELY WITH OWNER.

(2) EXISTING ELECTRIC UNIT HEATER AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.

(3) EXISTING WALL MOUNT EXHAUST FAN AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.



1 / M-202 MECHANICAL FLOOR PLAN - DEMOLITION
SCALE: 1/2" = 1'-0" GRIT SYSTEM

0' 1' 2' 4'
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL FLOOR PLAN - GRIT SYSTEM

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-202

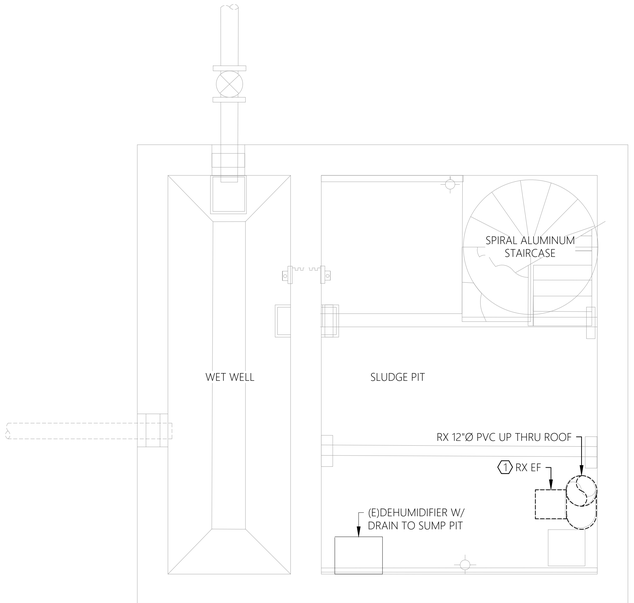
PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

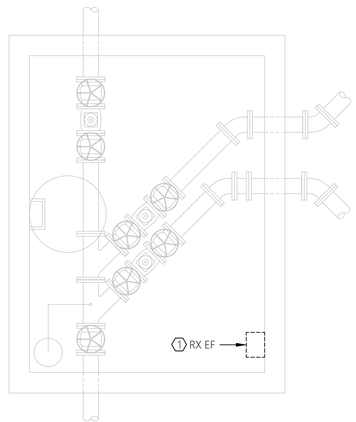
1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY DASHED (- - -) SHALL BE DEMOLISHED.

SHEET KEY NOTES:

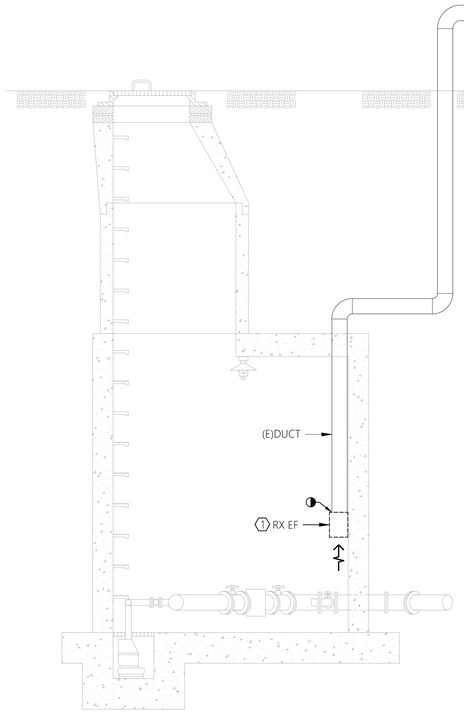
(1) EXISTING EXHAUST FAN AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.



1 M-300 MECHANICAL FLOOR PLAN - DEMOLITION
SCALE: 1/2" = 1'-0" SLUDGE PIT



2 M-300 MECHANICAL FLOOR PLAN - DEMOLITION
SCALE: 1/2" = 1'-0" SLUDGE VALVE PIT



3 M-300 MECHANICAL SECTION PLAN - DEMOLITION
SCALE: 1/2" = 1'-0" SLUDGE VALVE PIT

0' 1' 2' 4'
SCALE: 1/2" = 1'-0"

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New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL DEMOLITION PLANS - SLUDGE PIT & VALVE PIT

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	MGR
REVIEWED BY:	JER

SHEET NO.

M-300

PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. SUPPLY AND EXHAUST DUCTWORK WITHIN SLUDGE PIT SHALL BE TYPE 316 STAINLESS STEEL.
5. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN SLUDGE PIT SHALL BE TYPE 316 STAINLESS STEEL.

SHEET KEY NOTES:

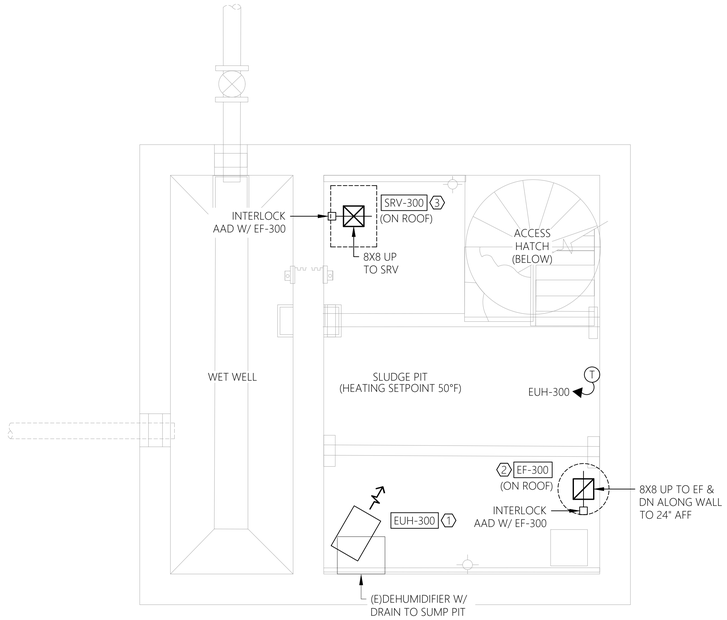
1. NEW ELECTRIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
2. NEW ROOF MOUNT EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
3. NEW STATIONARY ROOF VENTILATOR TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
4. NEW IN-LINE EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

SEQUENCE OF OPERATIONS:

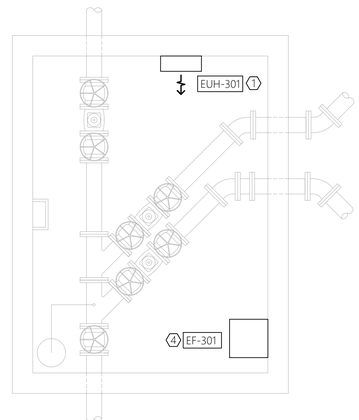
FANS:

EF-300 SHALL OPERATE CONTINUOUSLY TO PROVIDE 6 AIR CHANGES PER HOUR (ACPH) CONTINUOUS TO SLUDGE PIT.

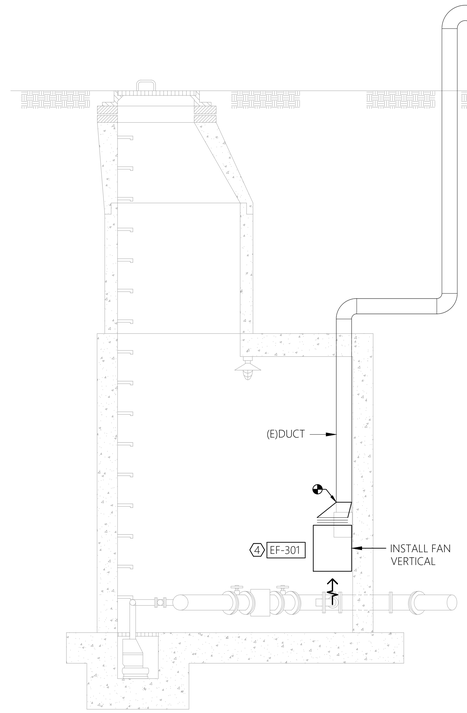
EF-301 SHALL OPERATE INTERMITTENTLY (INTERLOCK WITH SPACE LIGHTING) TO PROVIDE 30 AIR CHANGES PER HOUR (ACPH) TO SLUDGE VALVE PIT.



1 M-301 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/2" = 1'-0" SLUDGE PIT



2 M-301 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/2" = 1'-0" SLUDGE VALVE PIT



3 M-301 MECHANICAL SECTION PLAN - NEW WORK
SCALE: 1/2" = 1'-0" SLUDGE VALVE PIT

0' 1' 2' 4'
SCALE: 1/2" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL NEW WORK PLANS - SLUDGE PIT & VALVE PIT

REVISIONS

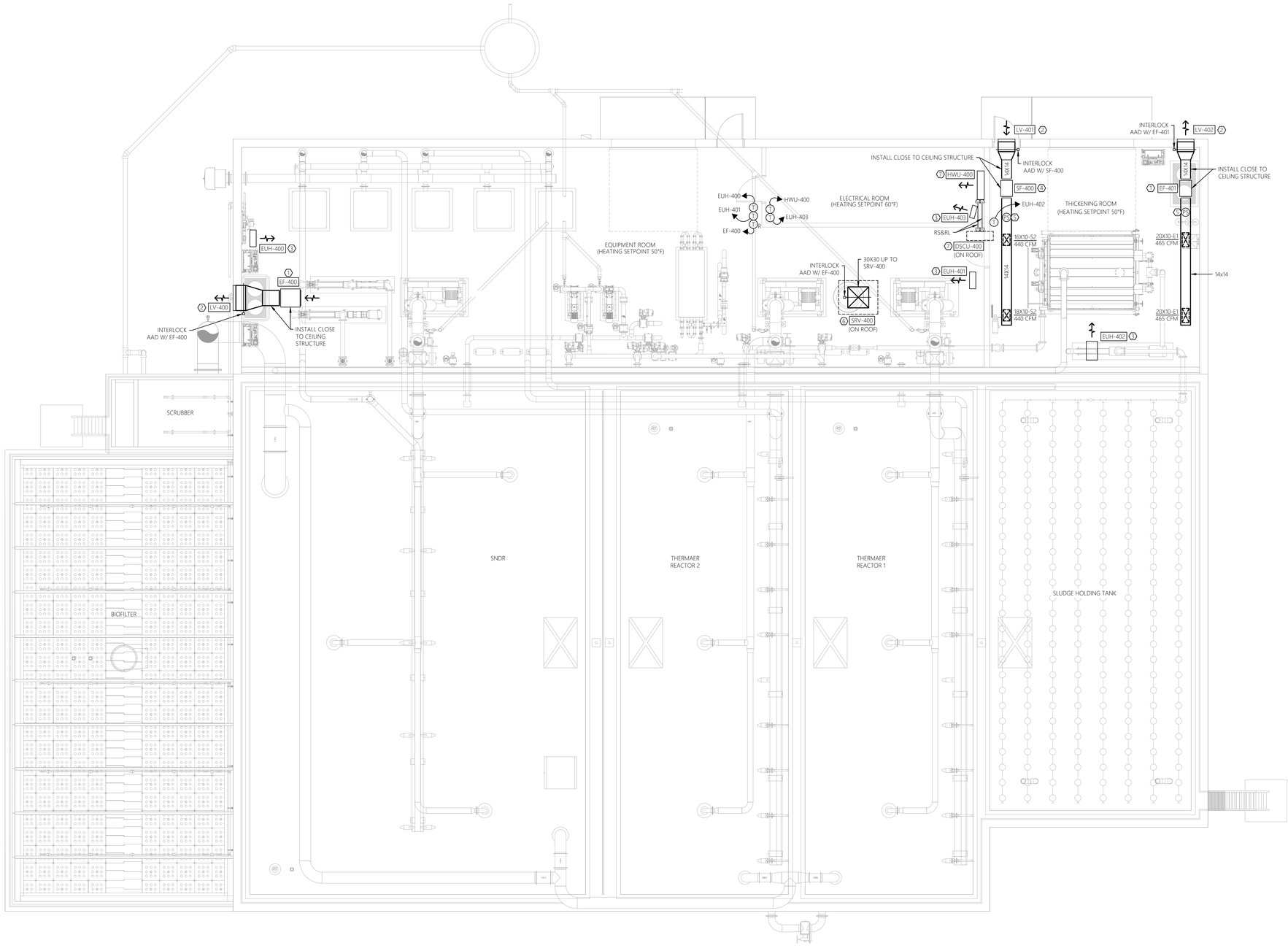
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-301

PROJECT # 18-732 PHASE #



1 M-400 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 3/16" = 1'-0" ATAD BUILDING

0' 2' 4' 8' 16'
SCALE: 3/16" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. SUPPLY AIR AND EXHAUST AIR DUCTWORK WITHIN THICKENING ROOM SHALL BE TYPE 316 STAINLESS STEEL. DUCTWORK WITHIN THE EQUIPMENT ROOM SHALL BE GALVANIZED STEEL.
5. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN THICKENING ROOM SHALL BE TYPE 316 STAINLESS STEEL. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN EQUIPMENT ROOM SHALL BE GALVANIZED STEEL.

SHEET KEY NOTES:

1. NEW IN-LINE EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
2. NEW LOUVER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
3. NEW ELECTRIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
4. NEW IN-LINE SUPPLY FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
5. NEW AIRFLOW PROVING SWITCH/PRESSURE SENSOR TO BE PROVIDED AND INSTALLED WITHIN DUCTWORK FOR AIRFLOW MONITORING PER MANUFACTURER RECOMMENDATIONS. UNIT SHALL BE CLEVELAND CONTROLS MODEL AFS-222-139 OR EQUAL. PROVIDE ALL COMPONENTS FOR A COMPLETE AND OPERABLE AIRFLOW MONITORING SYSTEM.
6. NEW STATIONARY ROOF VENTILATOR TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
7. NEW OUTDOOR AIR COOLED DUCTLESS SPLIT CONDENSING UNIT AND INDOOR HIGH WALL UNIT TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. INDOOR UNIT TO BE MOUNTED HIGH ON WALL AND OUTDOOR UNIT TO BE MOUNTED ON ROOF (PROVIDE REQUIRED STAND & MOUNTING HARDWARE). CONTRACTOR SHALL SIZE AND INSTALL REFRIGERANT PIPING FROM OUTDOOR UNIT TO INDOOR UNIT PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. ROUTE INDOOR UNIT CONDENSATE DRAINAGE TO NEAREST FLOOR DRAIN OR TO EXTERIOR.

SEQUENCE OF OPERATIONS:

FANS:

EF-400 SHALL BE CONTROLLED THRU WALL MOUNTED HAND-OFF-AUTO (H-O-A) SWITCH WITH WALL MOUNTED REVERSE-ACTING (COOLING) THERMOSTAT AS AUTO FUNCTION LOCATED WITHIN SPACE.

SF-400 & EF-401 SHALL OPERATE CONTINUOUSLY TO PROVIDE 6 AIR CHANGES PER HOUR (ACPH) VENTILATION TO DECLASSIFY THICKENING ROOM.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL FLOOR PLAN - ATAD BUILDING

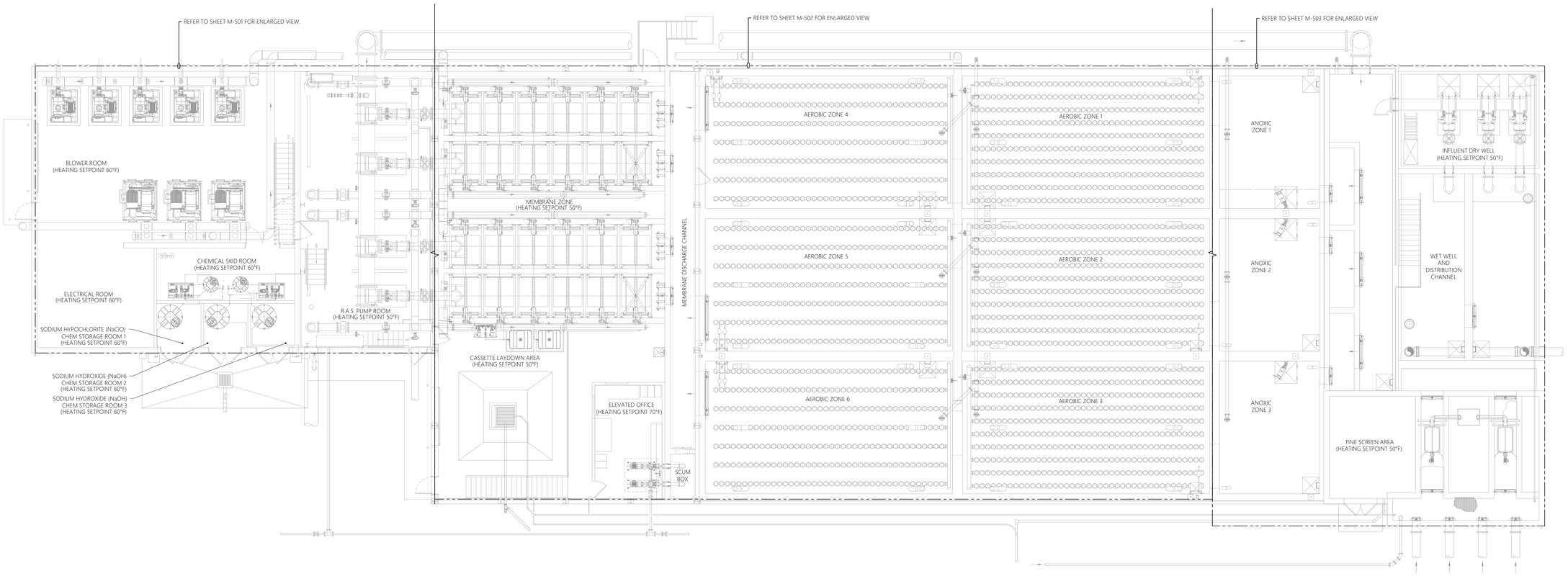
REVISIONS

NO.	DESCRIPTION	DATE

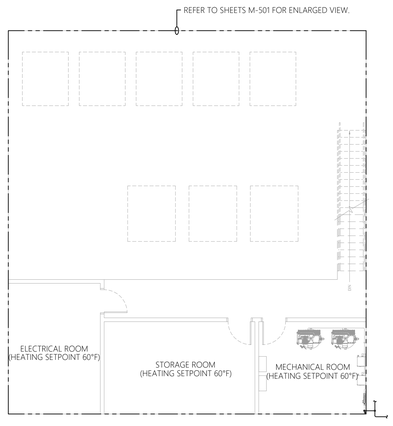
ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.
M-400

PROJECT # 18-732 PHASE #



1 M-500 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/8" = 1'-0" MBR BUILDING



2 M-500 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/8" = 1'-0" 2ND FLOOR

0' 2' 4' 8' 16'
SCALE: 1/8" = 1'-0"

SHEET KEY NOTE:

1. SHEET IS INTENDED FOR REFERENCE ONLY. ENLARGED FLOOR PLANS ARE FROM SHEET M-501 TO M-503.

SHADED AREA SIGNIFIES CURRENT VIEW IN THE MBR BUILDING





2ND FLOOR

3 M-500 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL OVERALL PLAN - MBR BUILDING

REVISIONS

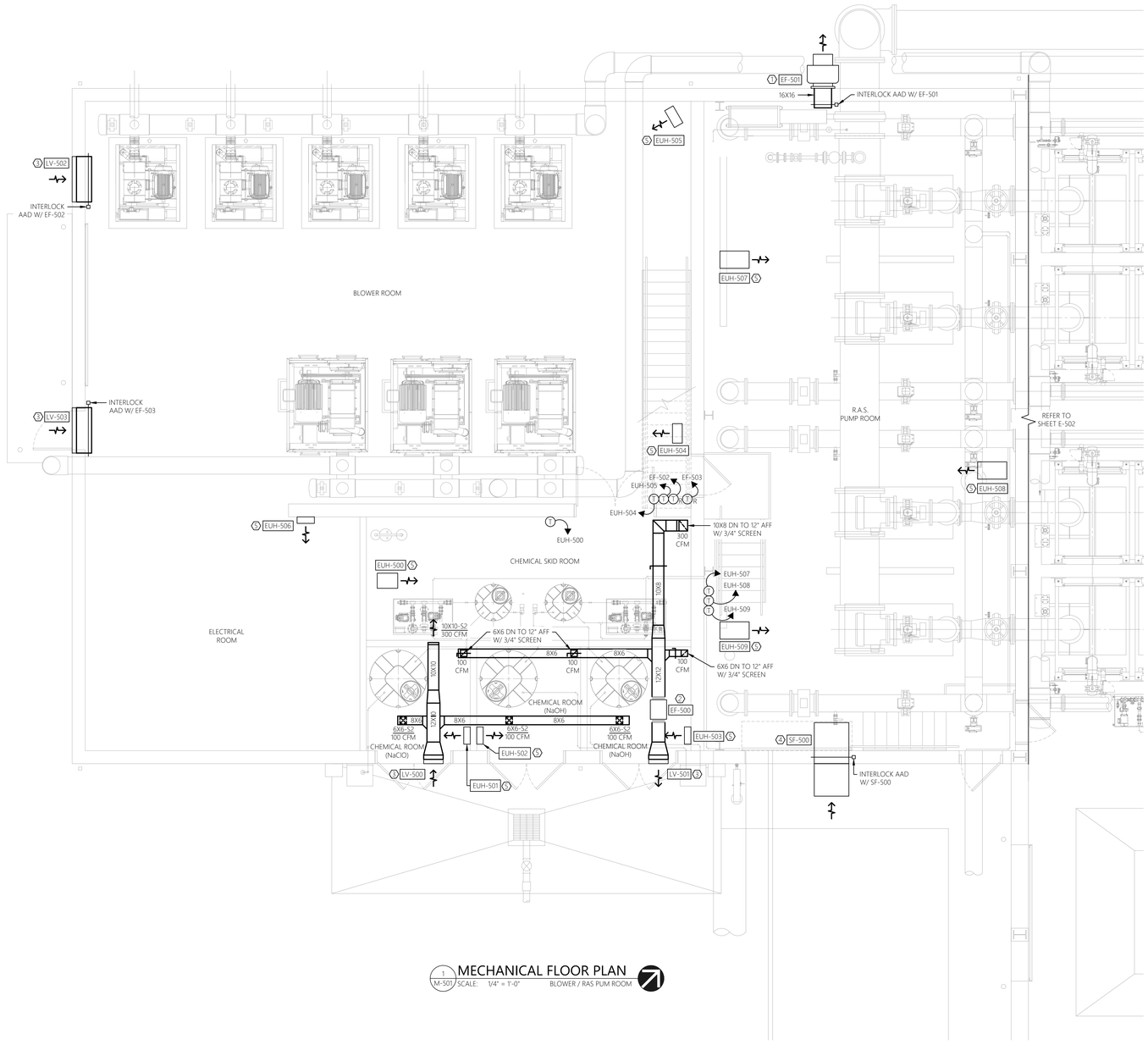
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

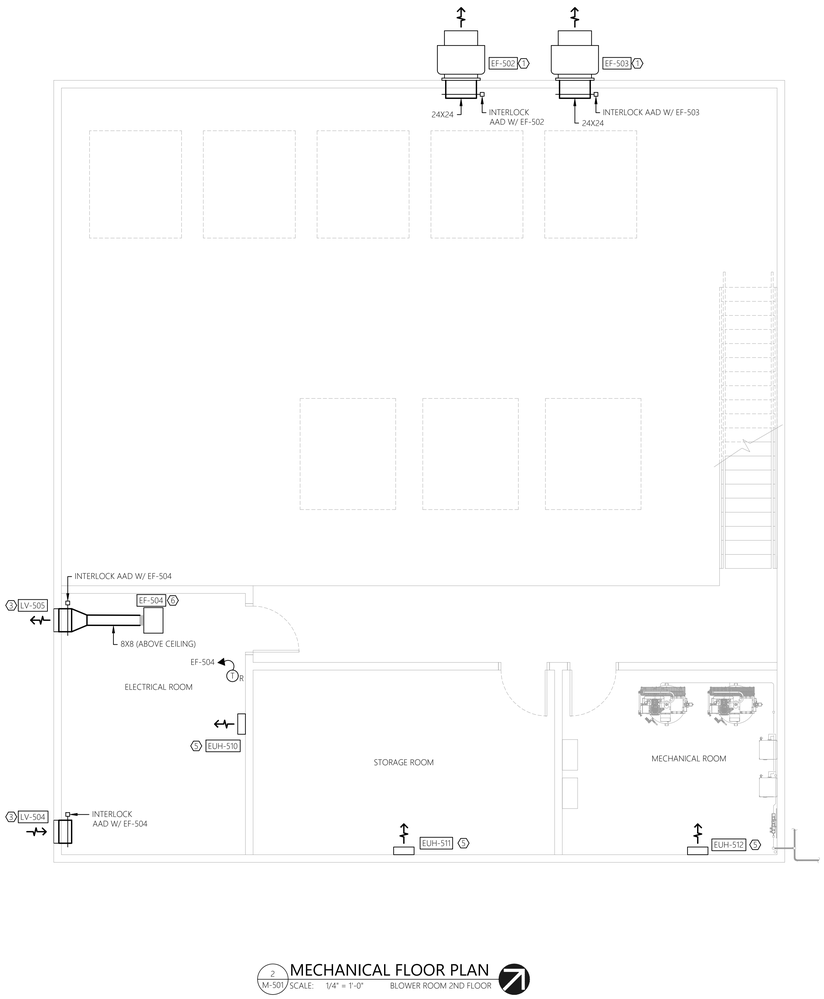
SHEET NO.

M-500

PROJECT # 18-732 PHASE #



1 M-501 MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0" BLOWER / RAS PUM ROOM



2 M-501 MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0" BLOWER ROOM 2ND FLOOR

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. SUPPLY AIR AND EXHAUST AIR DUCTWORK WITHIN CHEMICAL ROOMS SHALL BE FRP. DUCTWORK WITHIN RAS PUMP ROOM SHALL BE ALUMINUM. DUCTWORK WITHIN BLOWER ROOM AND ELECTRICAL ROOM SHALL BE GALVANIZED STEEL.
5. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN CHEMICAL ROOMS SHALL BE FRP/PVC COATED. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN RAS PUMP ROOM SHALL BE STAINLESS STEEL. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN BLOWER ROOM AND ELECTRICAL ROOM SHALL BE GALVANIZED STEEL.

SHEET KEY NOTES:

(1) NEW WALL MOUNTED EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

(2) NEW IN-LINE EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

(3) NEW LOUVER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION AND INSTALLATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

(4) NEW WALL MOUNTED SUPPLY FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

(5) NEW ELECTRIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

(6) NEW CEILING MOUNTED EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

SEQUENCE OF OPERATIONS:

FANS:

EF-500 SHALL OPERATE CONTINUOUSLY TO PROVIDE VENTILATION TO CHEMICAL ROOMS.

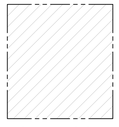
SF-500/EF-501 SHALL OPERATE CONTINUOUSLY TO PROVIDE 6 AIR CHANGES PER HOUR (ACPH) VENTILATION TO DECLASSIFY RAS PUMP ROOM.

EF-502/EF-503 SHALL BE CONTROLLED THRU WALL MOUNTED REVERSE-ACTING (COOLING) THERMOSTAT LOCATED WITHIN BLOWER ROOM.

EF-504 SHALL BE CONTROLLED THRU WALL MOUNTED REVERSE-ACTING (COOLING) THERMOSTAT LOCATED WITHIN ELECTRICAL ROOM.

SHADED AREA SIGNIFIES CURRENT VIEW IN THE MBR BUILDING





2ND FLOOR

3 M-501 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL FLOOR PLAN - BLOWER & RAS AREA

REVISIONS

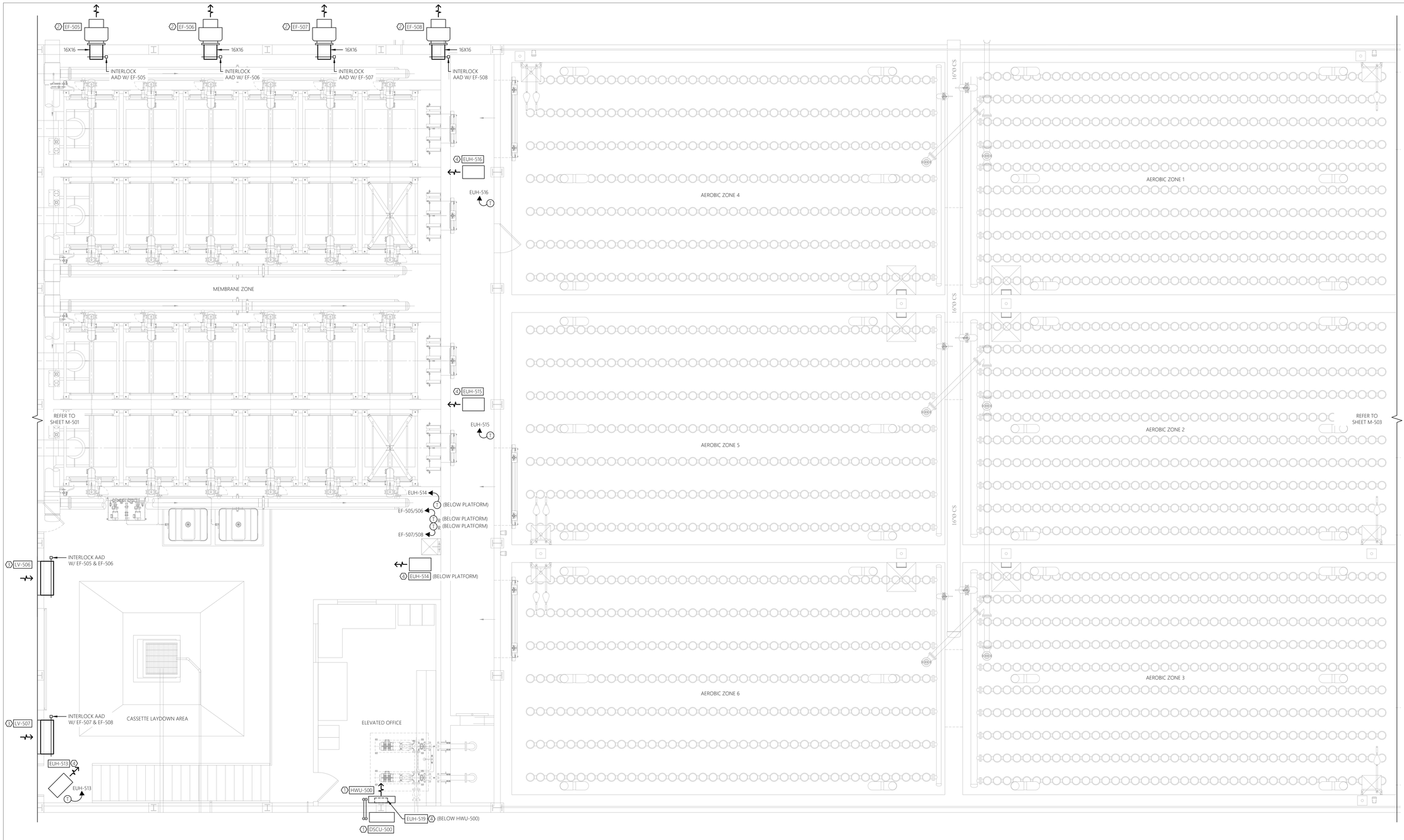
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-501

PROJECT # 18-732 PHASE #



GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. SUPPLY AIR AND EXHAUST AIR DUCTWORK WITHIN MEMBRANE ZONE AND CASSETTE LAYDOWN AREA SHALL BE TYPE 316 STAINLESS STEEL.
5. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN MEMBRANE ZONE AND CASSETTE LAYDOWN AREA SHALL BE TYPE 316 STAINLESS STEEL.

SEQUENCE OF OPERATIONS:

FANS:

EF-505/EF-506 SHALL BE CONTROLLED THRU WALL MOUNTED HAND-OFF-AUTO (H-O-A) SWITCH WITH WALL MOUNTED REVERSE-ACTING (COOLING) THERMOSTAT LOCATED WITHIN MEMBRANE AREA.

EF-507/EF-508 SHALL BE CONTROLLED THRU WALL MOUNTED HAND-OFF-AUTO (H-O-A) SWITCH WITH WALL MOUNTED REVERSE-ACTING (COOLING) THERMOSTAT LOCATED WITHIN MEMBRANE AREA.

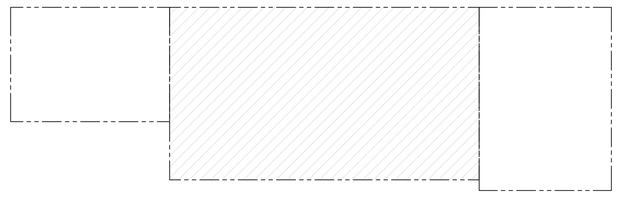
SHEET KEY NOTES:

1. NEW OUTDOOR AIR COOLED DUCTLESS SPLIT CONDENSING UNIT AND INDOOR HIGH WALL UNIT TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. INDOOR UNIT TO BE MOUNTED HIGH ON WALL AND OUTDOOR UNIT TO BE MOUNTED ON EXTERIOR WALL VIA WALL BRACKET. CONTRACTOR SHALL SIZE AND INSTALL REFRIGERANT PIPING FROM OUTDOOR UNIT TO INDOOR UNIT PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. ROUTE INDOOR UNIT CONDENSATE DRAINAGE TO NEAREST FLOOR DRAIN OR TO EXTERIOR OF BUILDING.
2. NEW WALL MOUNTED EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
3. NEW LOUVER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION AND INSTALLATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
4. NEW ELECTRIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 / M-502 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0"

BLOWER & RAS PUMP AREA



2ND FLOOR

SHADED AREA SIGNIFIES CURRENT VIEW IN THE MBR BUILDING

2 / M-502 OVERALL PLAN KEY
SCALE: NTS

MBR BUILDING

MHE ENGINEERING
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New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL FLOOR PLAN - MEMBRANE & AEROBIC AREAS

REVISIONS

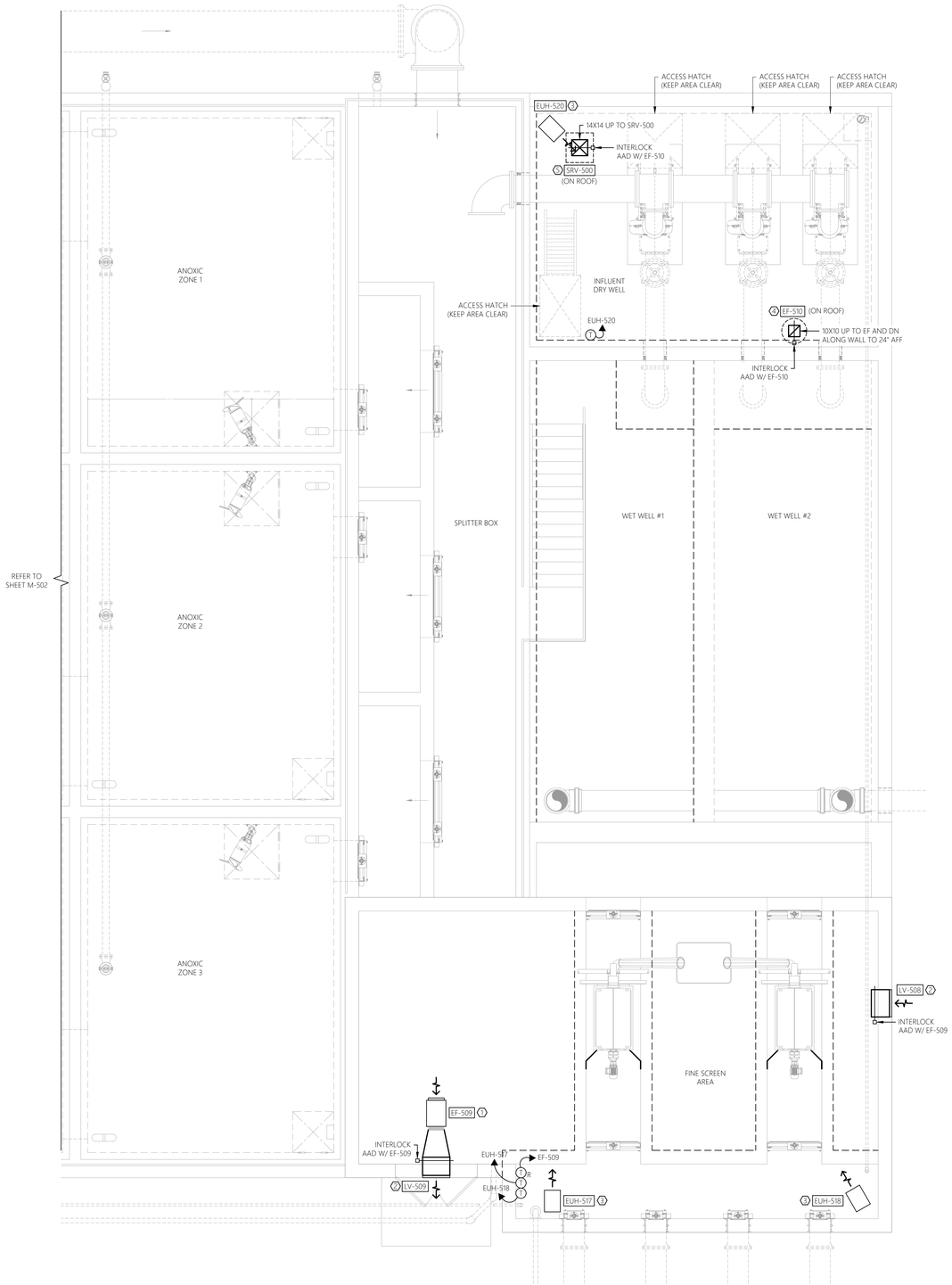
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-502

PROJECT # 18-732 PHASE #



1 M-503 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0" SCREENING & INFLUENT AREA

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"



2ND FLOOR

SHADED AREA SIGNIFIES CURRENT VIEW IN THE MBR BUILDING

2 M-503 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. SUPPLY AIR AND EXHAUST AIR DUCTWORK WITHIN FINE SCREEN ROOM SHALL BE TYPE 316 STAINLESS STEEL. DUCTWORK WITHIN INFLUENT DRY WELL SHALL BE TYPE 316 STAINLESS STEEL.
5. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/ETC. WITHIN FINE SCREEN ROOM AND INFLUENT DRY WELL SHALL BE TYPE 316 STAINLESS STEEL.

SHEET KEY NOTES:

1. NEW IN-LINE EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
2. NEW LOUVER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION AND INSTALLATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
3. NEW ELECTRIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
4. NEW ROOF MOUNT EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
5. NEW STATIONARY ROOF VENTILATOR TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

SEQUENCE OF OPERATIONS:

FANS:

EF-509 SHALL BE CONTROLLED THRU WALL MOUNTED HAND-OFF-AUTO (H-O-A) SWITCH WITH WALL MOUNTED REVERSE-ACTING (COOLING) THERMOSTAT LOCATED WITHIN FINE SCREEN AREA.

EF-510 SHALL OPERATE CONTINUOUSLY TO PROVIDE 6 AIR CHANGES PER HOUR (ACPH) TO INFLUENT DRY WELL.

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New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL FLOOR PLAN - SCREENING & INFLUENT AREA

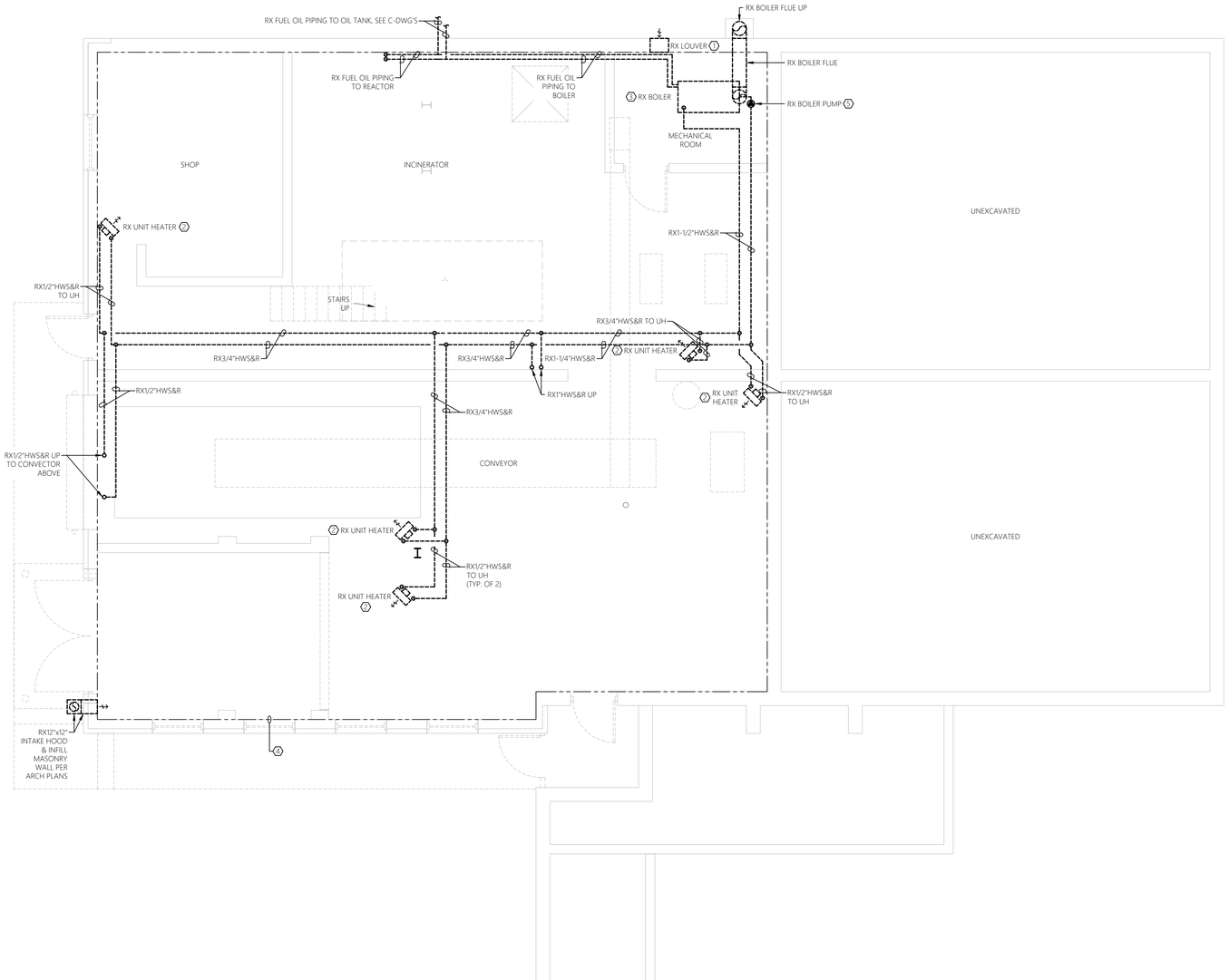
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.
M-503

PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 M-700 MECHANICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - LOWER LEVEL

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY DASHED (- - - -) SHALL BE DEMOLISHED.

SHEET KEY NOTES:

1. EXISTING LOUVER AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
2. EXISTING HYDRONIC UNIT HEATER AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
3. EXISTING BOILER AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
4. CONTRACTOR TO PROVIDE COMPLETE HVAC DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). COORDINATE REMOVAL EFFORTS CLOSELY WITH OWNER AND ALL OTHER TRADES.
5. EXISTING HYDRONIC PUMP AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL DEMOLITION PLAN - DEWATERING BUILDING LOWER LEVEL

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-700

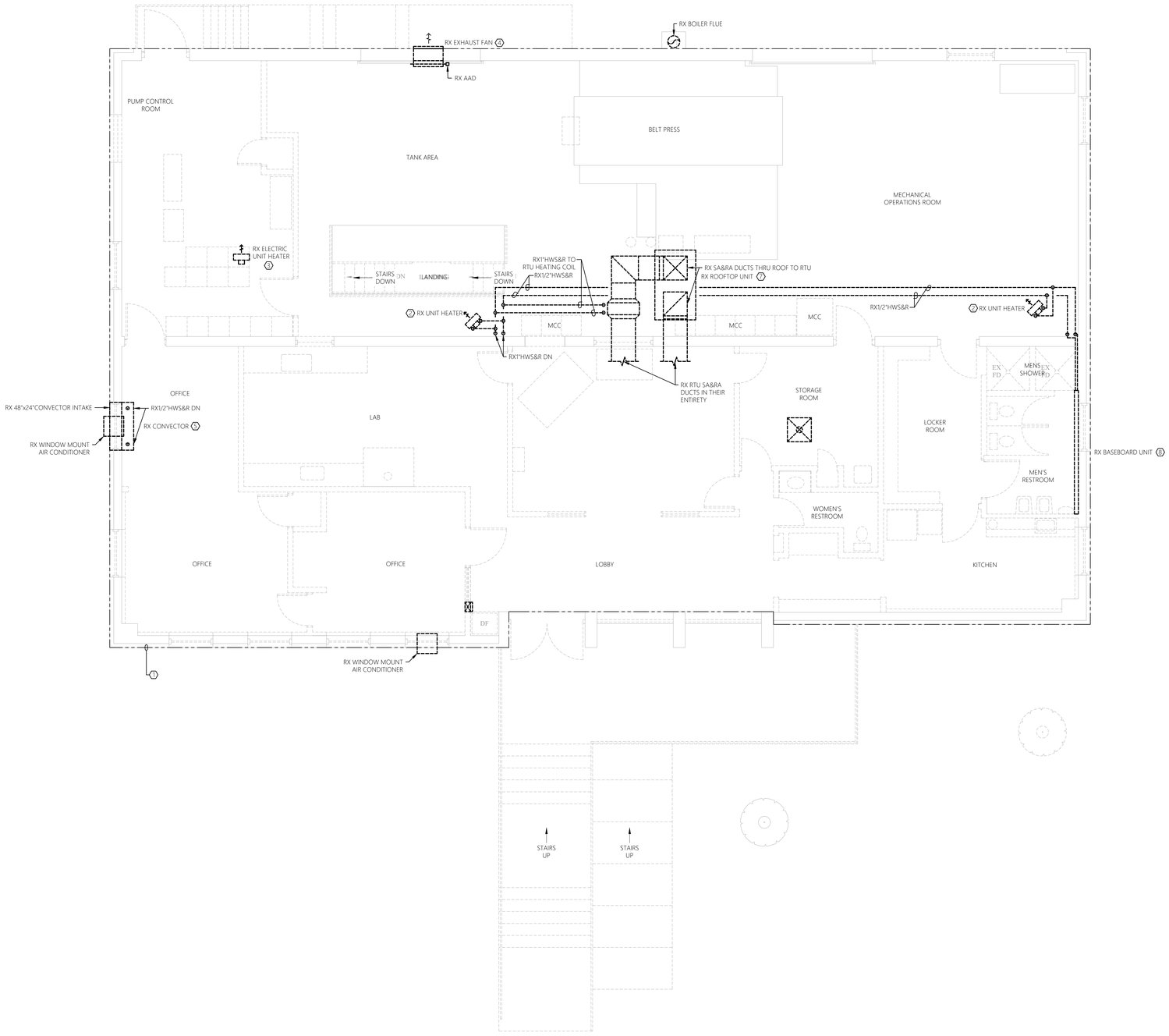
PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY DASHED (- - - -) SHALL BE DEMOLISHED.

SHEET KEY NOTES:

1. CONTRACTOR TO PROVIDE COMPLETE HVAC DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). COORDINATE REMOVAL EFFORTS CLOSELY WITH OWNER AND ALL OTHER TRADES.
2. EXISTING HYDRONIC UNIT HEATER AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
3. EXISTING ELECTRIC UNIT HEATER AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
4. EXISTING FAN AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
5. EXISTING CONVECTOR AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
6. EXISTING FIN TUBE RADIATOR AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
7. EXISTING ROOFTOP UNIT AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 / M-701 MECHANICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0" DEWATERING BUILDING - UPPER LEVEL

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

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MECHANICAL DEMOLITION PLAN - DEWATERING BUILDING UPPER LEVEL

REVISIONS

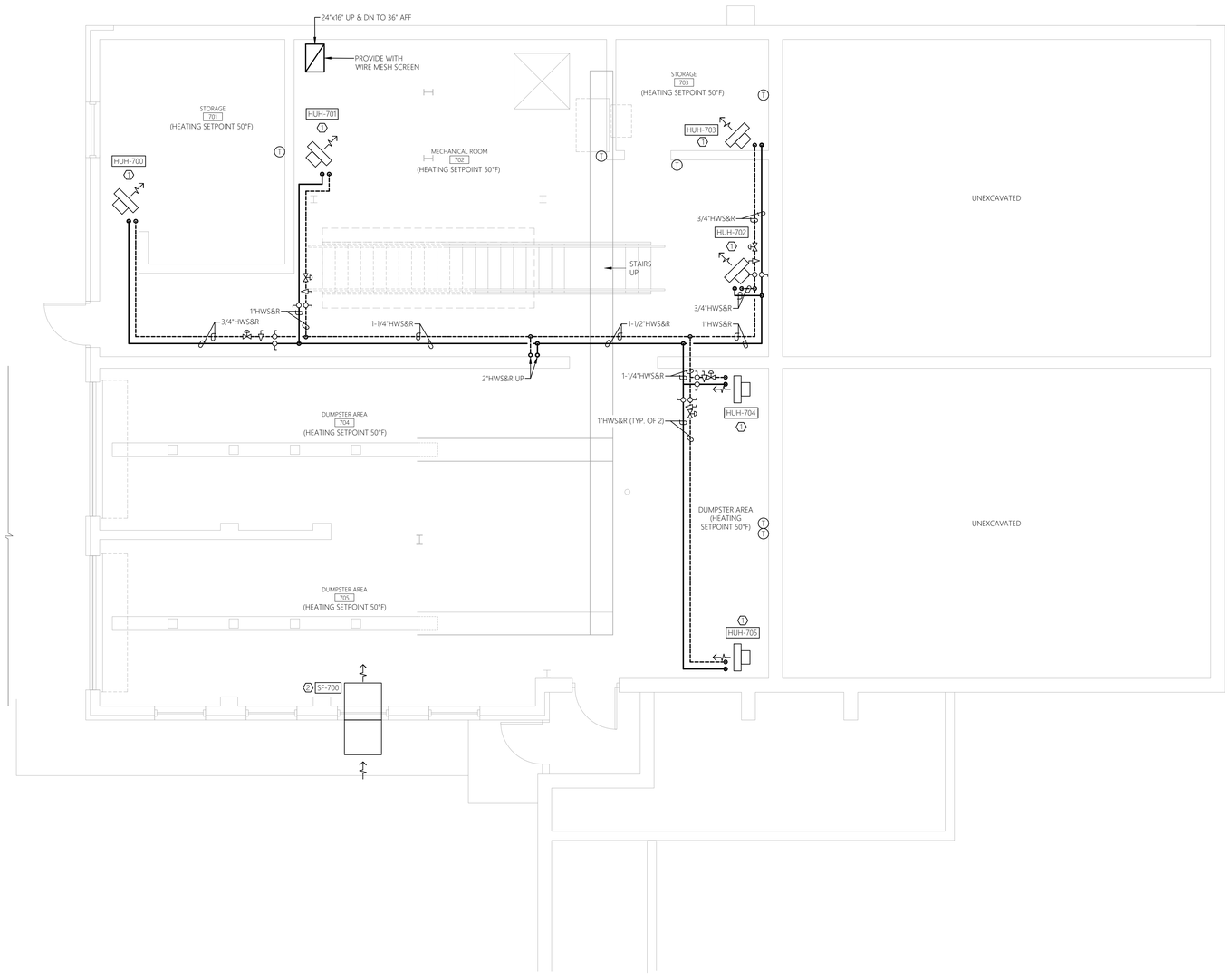
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

M-701

PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 / M-702 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0" DEWATERING BUILDING - LOWER LEVEL

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT/PIPING LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. EXHAUST AIR DUCTWORK WITHIN LOWER LEVEL SHALL BE TYPE 316 STAINLESS STEEL.
5. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/PIPING/ETC. WITHIN LOWER LEVEL SHALL BE TYPE 316 STAINLESS STEEL.

SHEET KEY NOTES:

(1) NEW HYDRONIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.

(2) NEW WALL MOUNTED SUPPLY FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. INSTALL FAN AS HIGH AS POSSIBLE.

SEQUENCE OF OPERATIONS:

FANS

SF-700/EF-700 SHALL OPERATE CONTINUOUSLY TO PROVIDE 6 AIR CHANGES PER HOUR (ACPH) VENTILATION TO DECLASSIFY LOWER LEVEL.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL NEW WORK PLAN - DEWATERING BUILDING LOWER LEVEL

REVISIONS

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M-702

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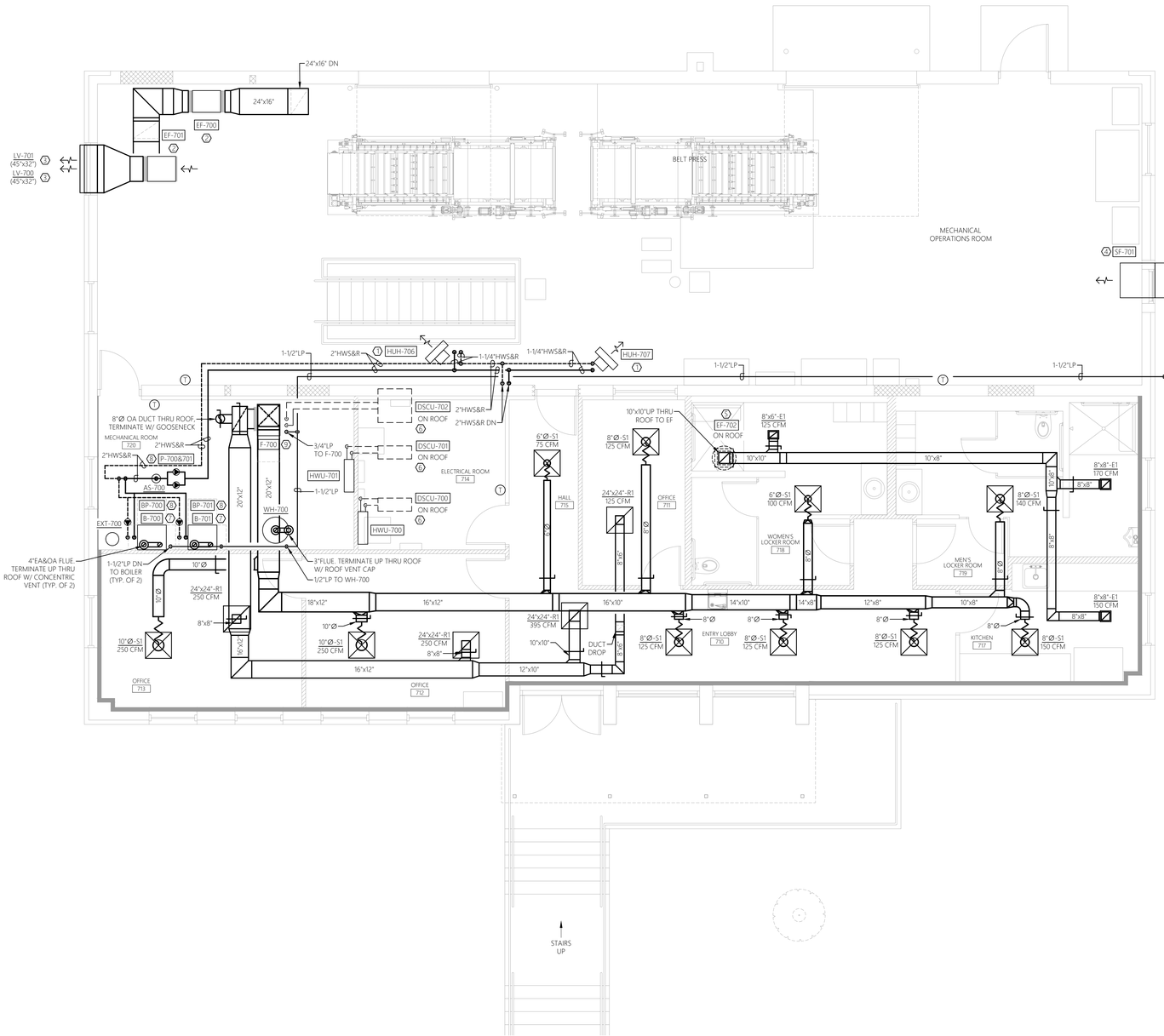

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 M-703 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - UPPER LEVEL

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT/PIPING LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. EXHAUST AIR DUCTWORK WITHIN MECHANICAL OPERATIONS ROOM SHALL BE TYPE 316 STAINLESS STEEL.
5. HANGERS AND SUPPORTS FOR ALL DUCTWORK/EQUIPMENT/PIPING/ETC. WITHIN MECHANICAL OPERATIONS ROOM SHALL BE TYPE 316 STAINLESS STEEL.

SHEET KEY NOTES:

1. NEW HYDRONIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
2. NEW IN-LINE EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
3. NEW LOUVER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
4. NEW WALL MOUNTED SUPPLY FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
5. NEW ROOF MOUNTED EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
6. NEW OUTDOOR AIR COOLED DUCTLESS SPLIT CONDENSING UNIT AND INDOOR UNIT TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. CONTRACTOR SHALL SIZE AND INSTALL REFRIGERANT PIPING FROM OUTDOOR UNIT TO INDOOR UNIT PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. ROUTE INDOOR UNIT CONDENSATE DRAINAGE TO NEAREST FLOOR DRAIN.
7. NEW HYDRONIC BOILER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE NEW COLD WATER MAKE-UP CONNECTION TO BOILER. ROUTE INTAKE/EXHAUST PIPING AND TERMINATE WITH CONCENTRIC VENT PER MANUFACTURER RECOMMENDATIONS.
8. NEW IN-LINE HYDRONIC PUMP TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
9. NEW GAS-FIRED FURNACE TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. ROUTE VENT AND EXHAUST PIPING PER MANUFACTURERS RECOMMENDATIONS AND TERMINATE OUTSIDE WITH CONCENTRIC VENT. COORDINATE FURNACE THERMOSTAT LOCATION WITH OWNER.

SEQUENCE OF OPERATIONS:

FANS

SF-700/EF-700 SHALL OPERATE CONTINUOUSLY TO PROVIDE 6 AIR CHANGES PER HOUR (ACPH) VENTILATION TO DECLASSIFY LOWER LEVEL.

SF-701/EF-701 SHALL OPERATE CONTINUOUSLY TO PROVIDE 6 AIR CHANGES PER HOUR (ACPH) VENTILATION TO DECLASSIFY MECHANICAL OPERATIONS ROOM.

MHE ENGINEERING
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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL NEW WORK PLAN - DEWATERING BUILDING UPPER LEVEL

REVISIONS

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SHEET NO.
M-703

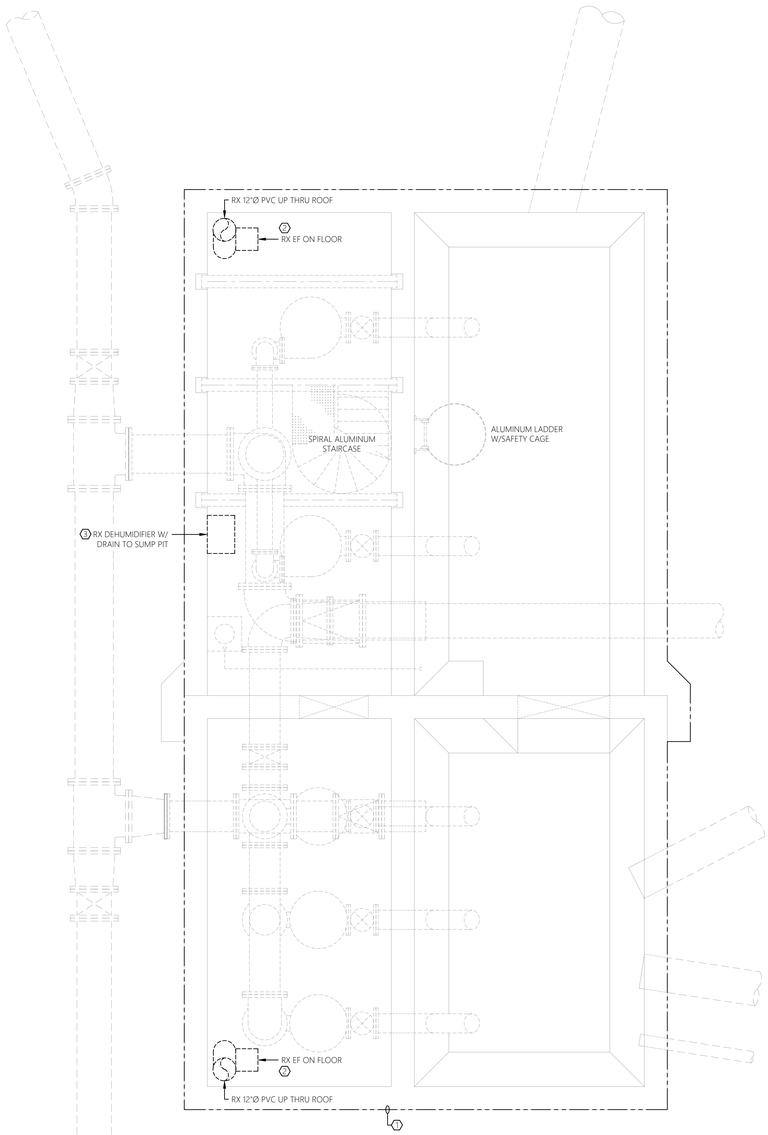
PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

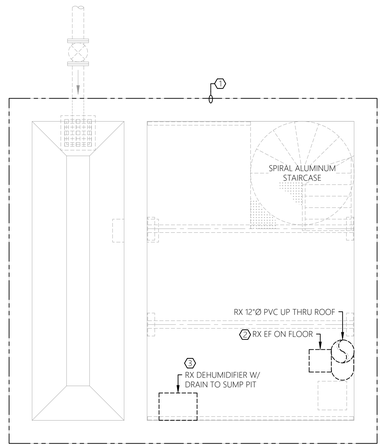
1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY DASHED (- - -) SHALL BE DEMOLISHED.

SHEET KEY NOTES - DEMOLITION:

1. CONTRACTOR TO PROVIDE COMPLETE HVAC DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). COORDINATE REMOVAL EFFORTS CLOSELY WITH OWNER.
2. EXISTING EXHAUST FAN AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.
3. EXISTING DEHUMIDIFIER AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.



2 M-802 MECHANICAL FLOOR PLAN - DEMOLITION
SCALE: 3/8" = 1'-0" EFFLUENT PUMP PIT



1 M-802 MECHANICAL FLOOR PLAN - DEMOLITION
SCALE: 3/8" = 1'-0" SECONDARY SLUDGE PUMP PIT

0' 1' 2' 4' 8'
SCALE: 3/8" = 1'-0"

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Milford, PA 18337
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JADE STONE ENGINEERING

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FOR TOWN OF NEW WINDSOR
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NEW WINDSOR, NY 12553

MECHANICAL FLOOR PLAN - UNDERGROUND STRUCTURES

REVISIONS

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M-802

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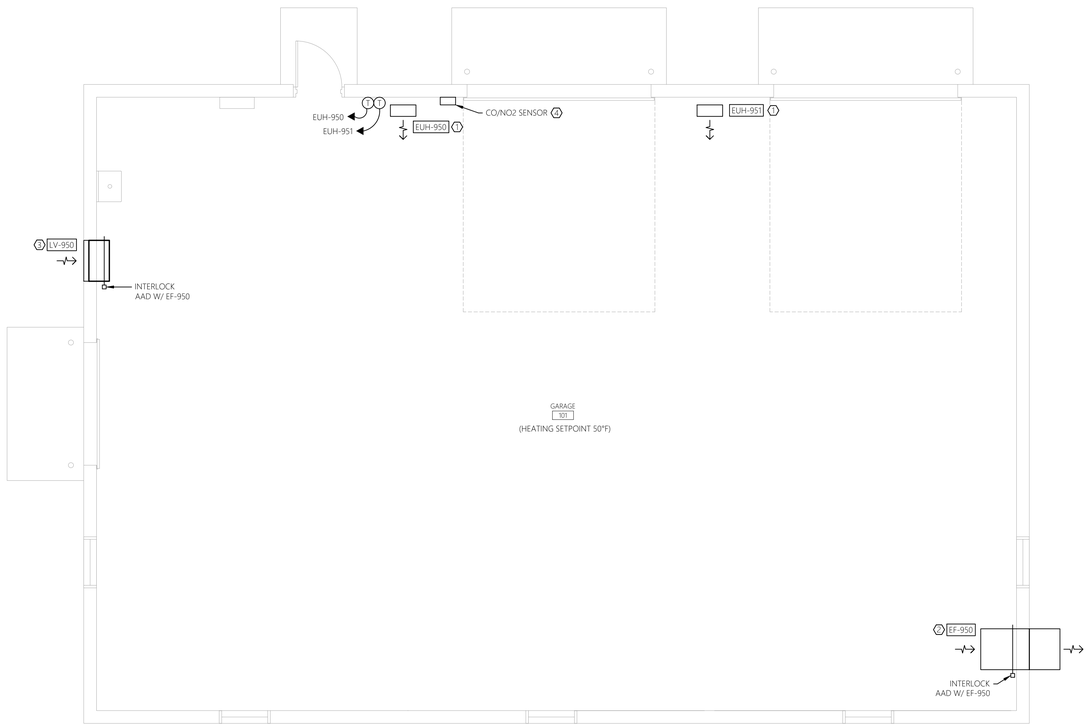

1 M-950 MECHANICAL FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0"
GARAGE

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO M-001 FOR HVAC LEGENDS, ABBREVIATIONS AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, HVAC ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW.
3. COORDINATE DUCTWORK/EQUIPMENT LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.

SHEET KEY NOTES:

1. NEW ELECTRIC UNIT HEATER TO BE INSTALLED AT LOCATION SHOWN PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
2. NEW WALL MOUNT EXHAUST FAN TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
3. NEW LOUVER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET M-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT.
4. NEW CO/NO2 DETECTION SYSTEM (ARMSTRONG AMC-1BVC OR EQUAL) TO BE INSTALLED AT LOCATION SHOWN. ELECTRICAL TRADE SHALL PROVIDE INTERLOCK BETWEEN GAS DETECTION SYSTEM AND EXHAUST FAN. WHEN GAS LEVELS RISE THE DETECTION SYSTEM SHALL ENABLE EXHAUST FAN.

SEQUENCE OF OPERATIONS:

FANS

EF-950 SHALL BE CONTROLLED THRU CO/NO_2 DETECTION SYSTEM WITH TWO POSITION SELECTOR SWITCH (ON/AUTO). ON SHALL ENABLE EXHAUST FAN. AUTO SHALL BE INTERLOCKED WITH GAS DETECTION SYSTEM.

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111 Wheatfield Drive, Suite 1
Milford, PA 18337
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JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

MECHANICAL FLOOR PLAN - GARAGE

REVISIONS

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SHEET NO.
M-950

PROJECT # 18-732 PHASE #

FIXTURE SCHEDULE

FIXTURE TAG	FIXTURE DESCRIPTION	MINIMUM CONNECTIONS (IN)				DESIGN BASIS		
		COLD	HOT	WASTE	VENT	FIXTURE	FAUCET/FLUSH/MIXING VALVE	REMARKS
WC-A	WATER CLOSET - ADA WALL MOUNT - FLUSH VALVE - REAR OUTLET	1	-	3	2	SLOAN WALL MOUNTED TOILET BOWL WITH TOP SPUD. MODEL ST-2459	SLOAN ROYAL 111 EXPOSED MANUAL WATER CLOSET FLUSHOMETER - ADA	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
UR-A	URINAL - ADA - WALL MOUNT	3/4	-	3	2	SLOAN VITREOUS CHINA WASHDOWN URINAL. MODEL SU-1009.	SLOAN ROYAL 111 EXPOSED MANUAL URINAL FLUSHOMETER	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
LAV-A	LAVATORY - ADA WALL HUNG	1/2	1/2	1-1/2	1-1/2	AMERICAN STANDARD AQUALYN DROP-IN SINK	MOEN 8413 CHROME ONE HANDLE LAVATORY FAUCET	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
KS-A	DOUBLE BASIN- DROP IN - KITCHEN SINK	1/2	1/2	1 1/2	1 1/2	ELKAY DAYTON EQUAL DOUBLE BOWL DROP-IN SINK. 33"X21-1/4"	AMERICAN STANDARD COLONY PRO KITCHEN SINK FAUCET	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
KS-B	SINGLE BOWL - DROP IN-KITCHEN SINK	1/2	1/2	1 1/2	1 1/2	ELKAY DAYTON SINGLE BOWL DROP-IN SINK. 25"X22"	AMERICAN STANDARD COLONY PRO KITCHEN SINK FAUCET	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
SS-A	SERVICE SINK (FLOOR MOUNT WITH LEGS)	3/4	3/4	2	1-1/2	MUSTEE UTILITUB COMBO KIT, MODEL#12C WITH FAUCET.	MUSTEE COMBO KIT FAUCET PROVIDED WITH FIXTURE.	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
SH-A	SHOWER	3/4	3/4	3	2	BY GENERAL TRADE (REFER TO ARCH DRAWINGS/SPECS)	SYMMONS ADA SAFETY MIX SHOWER/HAND SHOWER WITH 60" FLEXIBLE HOSE AND SLIDE RAIL.	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
WF-A	WATER FOUNTAIN - BI LEVEL - ADA COMPLIANT	1/2	-	-	-	ELKAY LZSTL8WSVRLK EZH20 BOTTLE FILLING & BI-LEVEL ADA VANDAL RESISTANT COOLER, FILTERED & REFRIGERATED. LIGHT GRAY.	-	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
FD-A	FLOOR DRAIN	-	-	-	-	WATTS FD-100-B (HEAVY DUTY). SEE PLANS FOR OUTLET SIZES.	-	PROVIDE WITH TRAP BARRIER SEAL. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
FD-B	SHOWER FLOOR DRAIN	-	-	3	2	STAINLESS STEEL SCHLUTER SYSTEMS - INCLUDE FLOOR DRAIN, FLOOR MEMBRANCE, FLOOR FLANGE, SS STRAINER, ETC. FOR FULL SYSTEM (SHOWER PAN BY GENERAL TRADE, REFER TO ARCH DRAWINGS/SPECS)	-	PROVIDE WITH TRAP BARRIER SEAL. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
DPCO	DECK PLATE CLEAN-OUT	-	-	-	-	JAY R. SMITH #4020 4" OUTLET SIZE W/ ADJUSTABLE NICKEL BRONZE TOP	-	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES.
ESE-A	INTERIOR - COMBINATION EMERGENCY EYEWASH/SHOWER (PVC CONSTRUCTION)	1 1/4	1 1/4	-	-	GUARDIAN G1993	-	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES. PROVIDE WITH GUARDIAN FLOW SWITCH AP275-615. PROVIDE WITH HIGHLY VISIBLE SIGNAGE PER ANSI Z358.1
ESE-B	EXTERIOR - COMBINATION EMERGENCY EYEWASH/SHOWER (FREEZE RESISTANT HEAT TRACE)	1 1/4	1 1/4	-	-	GUARDIAN GFR3110	-	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES. PROVIDE WITH GUARDIAN FLOW SWITCH AP275-615. PROVIDE WITH HIGHLY VISIBLE SIGNAGE PER ANSI Z358.1
EEW-A	INTERIOR - EMERGENCY EYEWASH (PVC CONSTRUCTION)	1/2	1/2	2	-	GUARDIAN G1896	GUARDIAN G6020 MIXING VALVE WITH SURFACE MOUNTED STAINLESS STEEL CABINET ENCLOSURE	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES. PROVIDE WITH GUARDIAN FLOW SWITCH AP285-615. PROVIDE WITH HIGHLY VISIBLE SIGNAGE PER ANSI Z358.1
HB-A	HOSE BIB - EXTERIOR (NON-FREEZING)	3/4	-	-	-	WALL HYDRANT WITH INTEGRAL VACUUM BREAKER/BACKFLOW PREVENTER. MODEL: WATTS HY-410	-	COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES. PROVIDE WITH SIGNAGE, ANSI MODEL ADE-4975.

PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
	COLD WATER SUPPLY
	HOT WATER SUPPLY
	HOT WATER RETURN
SAN	SANITARY WASTE LINE
	NATURAL GAS PIPING
V	SANITARY VENT PIPING
	CAP OR PLUG
	CHECK VALVE
	BALANCING VALVE
	DECK PLATE CLEAN OUT
	FLOOR DRAIN/P-TRAP
	FLOW ARROW
	HOSE BIB
	MANUAL GAS COCK
	PIPE DROP
	PIPE RISE
	RELIEF VALVE
	WATER HAMMER ARRESTOR
	BALL TYPE VALVE
	UNION
	VENT THRU ROOF (VTR)
	Y STRAINER
	TRAP PRIMER
	PUMP
	POINT OF DISCONNECTION, FROM EXISTING
	POINT OF CONNECTION, NEW TO EXISTING

ABBREVIATIONS

@	AT
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
CLG	CEILING
CW	DOMESTIC COLD WATER
DIA, ø	DIAMETER
DN	DOWN
DPCO	DECK PLATE CLEANOUT
(E)	EXISTING
FD	FLOOR DRAIN
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
INV	INVERT
LAV	LAVATORY
LS	LAUNDRY SUPPLY
MIN	MINIMUM
NG	NATURAL GAS
NTS	NOT TO SCALE
PRS	POTABLE REUSE SYSTEM
RCP	RECIRCULATION PUMP
SHFD	SHOWER FLOOR DRAIN
SNK	SINK
SS	STAINLESS STEEL
TMV	TEMPERATURE MIXING VALVE
TW	TEMPERED WATER
TYP	TYPICAL
V	VENT
VTR	VENT THRU ROOF
WC	WATER CLOSET

GENERAL NOTES

1. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE SIZE AND GENERAL ARRANGEMENT OF PIPING, EQUIPMENT, AND SPECIALTIES. EXACT LOCATIONS AND ROUTINGS SHALL BE DETERMINED IN THE FIELD BEFORE AND AS THE WORK PROGRESSES.
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCEMENT OF ANY WORK. ANY REQUIRED CHANGES TO WORK SHOWN ON DRAWINGS SHALL BE COORDINATED WITH ARCHITECT/ENGINEER AND OTHER TRADES PRIOR TO CONSTRUCTION.
3. DRAWINGS DO NOT INDICATE ALL OFFSETS, CHANGES IN ELEVATION, ETC. WHICH MAY BE REQUIRED BY ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL PROVIDE FOR SUCH CHANGES IN PIPING OR EQUIPMENT LOCATIONS AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS AND THE WORK OF OTHER CONTRACTS.
4. THE WORK INCLUDED IN THIS CONTRACT ENCOMPASSES BOTH THE DRAWINGS AND SPECIFICATIONS. WORK INCLUDED ON THE DRAWINGS ONLY, OR IN THE SPECIFICATIONS ONLY, SHALL BE INCORPORATED AS IF INCLUDED IN BOTH. SYSTEMS ARE INTENDED TO BE COMPLETE AND FULLY FUNCTIONING. THE CONTRACTOR SHALL PROVIDE SUCH COMPONENTS AS NECESSARY FOR A FULLY FUNCTIONING SYSTEM.
5. COORDINATE THE WORK OF THIS CONTRACT WITH THE WORK OF OTHER CONTRACTS. PHASE INSTALLATION OF EQUIPMENT AND PIPING TO ENSURE CONSTRUCTABILITY, AND THAT CONSTRUCTION PROCEEDS IN AN ORGANIZED, EFFICIENT, AND ORDERLY MANNER. PIPING TO BE SLOPED SHALL TAKE PRECEDENCE OVER PRESSURE PIPING, DUCTWORK, AND EQUIPMENT LOCATIONS.
6. CONTRACTOR SHALL SEAL ALL PIPING AND DUCT PENETRATIONS IN ACCORDANCE WITH THE NEW YORK STATE BUILDING CODE AND NFPA.
7. EXCEPT AS NOTED IN SPECIFICATIONS, ALL CUTTING AND PATCHING OF BUILDING COMPONENTS REQUIRED TO ACCOMMODATE THE WORK OF THIS CONTRACT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. ALL PATCHING SHALL MATCH THE EXISTING COMPONENTS AND FINISHES. CUTTING AND PATCHING WORK SHALL BE PERFORMED BY PERSONNEL TRAINED AND REGULARLY EMPLOYED FOR SUCH SERVICES.
8. ALL HORIZONTAL DRAINAGE SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT FOR PIPING 2-1/2" OR LESS, AND 1/8" PER FOOT FOR 3" TO 6" PIPING.
9. INSTALL ALL PIPING, EQUIPMENT, AND SPECIALTIES TO ALLOW MAXIMUM CLEARANCE AND AVOID INTERFERENCE WITH THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT, NEW OR EXISTING. DO NOT INSTALL ANYTHING ABOVE OR WITHIN 3 FT. IN FRONT OF ELECTRICAL GEAR.
10. CONTRACTOR SHALL PROVIDE NECESSARY SUPPORT FRAMING, STIFFENERS, BRACING, AND HANGERS WHETHER SHOWN OR NOT TO ENSURE A COMPLETE AND DURABLE SYSTEM. SUPPORT FRAMING CONNECTIONS SHALL BE WELDED UNLESS SPECIFICALLY SHOWN OTHERWISE. ACTUAL SUPPORTS MAY VARY FROM THOSE SHOWN IN DETAILS AS REQUIRED BY ACTUAL EQUIPMENT FURNISHED OR BY FIELD CONDITIONS.
11. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTION MANUAL OR MANUFACTURER'S REPRESENTATIVE'S WRITTEN INSTRUCTIONS.
12. CONTRACTOR SHALL PROVIDE BALL TYPE SHUT-OFF VALVES IN ALL PIPING BRANCH TAKE-OFFS FROM THE DOMESTIC WATER SUPPLY MAINS, WHETHER SHOWN OR NOT, FOR ISOLATION AND SERVICE TO SYSTEM.
13. WATER HAMMER ARRESTORS SHALL BE INSTALLED WHERE QUICK-CLOSING VALVES ARE UTILIZED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND ASSE 1010.

BACKFLOW PREVENTER NOTES

1. NEW AND REPLACEMENT DEVICES MUST BE TESTED AFTER INSTALLATION AND BEFORE ENTERING SERVICE. DEVICES MUST BE TESTED ANNUALLY THEREAFTER.
2. STRAINERS ARE RECOMMENDED PRIOR TO EACH BACKFLOW DEVICE ON NON-FIRE FIGHTING LINES ONLY. NO STRAINER IS TO BE USED ON A FIRE LINE WITHOUT INSURANCE UNDERWRITER APPROVAL.
3. ASSEMBLIES SHOULD BE SPECIFIED AND INSTALLED WITH MANUFACTURER SUPPLIED VALVES.
4. WATER LINES SHOULD BE THOROUGHLY FLUSHED BEFORE INSTALLATION OF DEVICE TO PREVENT DEBRIS FOULING THE DEVICE CHECK VALVES.
5. DEVICES MUST BE MOUNTED HORIZONTALLY UNLESS APPROVED FOR VERTICAL INSTALLATION.
6. ASSEMBLIES SHOULD NOT BE INSTALLED IN AREAS CONTAINING CORROSIVE OR TOXIC GASES WHICH COULD RENDER THE DEVICE INOPERABLE.
7. DUE TO INHERENT DESIGN OF RPZ ASSEMBLIES, FLUCTUATING SUPPLY PRESSURE ON A LOW FLOW CONDITION MAY CAUSE NUISANCE DRIPPING. INSTALLATION OF A SOFT SEATED CHECK VALVE AHEAD OF THE RPZ WILL OFTEN HOLD PRESSURE CONSTANT DURING PERIODS OF LOW FLOW.
8. WHERE THE DISTANCE BETWEEN THE WATER METER AND DEVICE IS GREATER THAN 10 FEET, ALL EXPOSED PIPING SHOULD BE MARKED "FEED LINE TO BACKFLOW PREVENTER - DO NOT TAP" AT 5-FOOT INTERVALS.
9. ORANGE COUNTY DEPARTMENT OF HEALTH PLAN APPROVAL IS LIMITED TO 5 YEARS. TIME EXTENSIONS FOR PLAN APPROVAL MAY BE GRANTED BY THE ORANGE COUNTY DEPARTMENT OF HEALTH BASED UPON DEVELOPMENT FACTS AND ANY NEW REGULATIONS, OR GUIDANCE, IN EFFECT AT THAT TIME. A NEW PLAN SUBMISSION MAY BE REQUIRED TO OBTAIN A TIME EXTENSION.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING LEGENDS, ABBREVIATIONS, & NOTES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

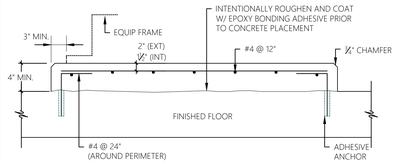
SHEET NO.

P-001

PROJECT # 18-732 PHASE #

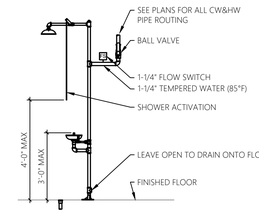
GENERAL NOTES:

1. CONCRETE 4,000 PSI @ 28 DAYS.
2. PROVIDE AS 4" MIN. PAD UNLESS OTHERWISE NOTED.
3. DEFORMED BARS ASTM A-615, GRADE 60.
4. TOP SURFACE SHALL BE TROWEL FINISHED.
5. 3/4" CHAMFER ALONG ALL EXPOSED EDGES, INCLUDING OPENING.
6. REINFORCING SHALL BE AS FOLLOWS: #4 BARS @ 12" EACH WAY.



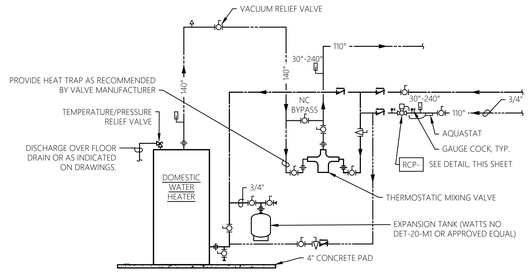
TYPICAL EQUIPMENT PAD DETAIL

SCALE: NTS



TYP. EMERGENCY EYEWASH/SHOWER DETAIL

SCALE: NTS



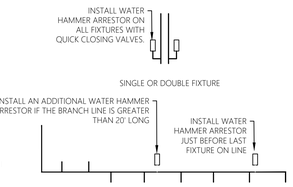
DOMESTIC WATER HEATER PIPING SCHEMATIC DETAIL

SCALE: NTS

PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	154-330

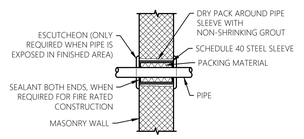
WATER SUPPLY FIXTURE UNIT (WSFU)		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	5	- -
URINAL	4	- -
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3

NOTE:
1) WATER HAMMER ARRESTORS SHALL HAVE PISTON AND O-RING CONSTRUCTION WITH PDI #WH-201 ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. SIZE THE UNI9TS AS SHOWN PER THE TABLES SHOWN ABOVE.



WATER HAMMER ARRESTOR DETAIL

SCALE: NTS

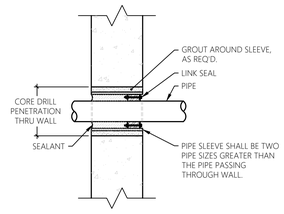


NOTE:

1. THIS DETAIL APPLIES TO BOTH INSULATED AND NON-INSULATED PIPE.
2. FOR FIRE RATED CONSTRUCTION PROVIDE APPROPRIATE APPROVED THROUGH-PENETRATION FIRESTOP ASSEMBLY TO MAINTAIN THE FIRE RATING OF THE WALL ASSEMBLY.

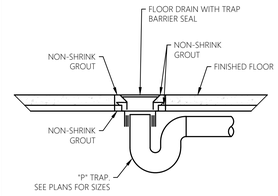
PIPE THRU WALL DETAIL

SCALE: NTS



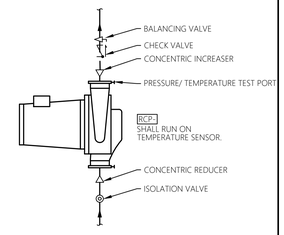
BELOW-GRADE PIPE WALL PENETRATION DETAIL

SCALE: NTS



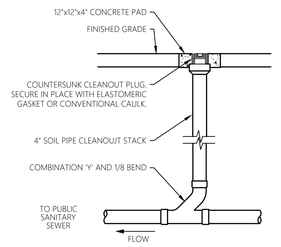
FLOOR DRAIN DETAIL

SCALE: NTS



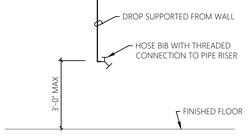
DOMESTIC WATER RECIRC PUMP DETAIL

SCALE: NTS



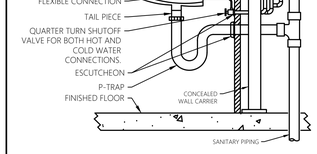
TYPICAL INTERIOR FLOOR CLEANOUT DETAIL

SCALE: NTS



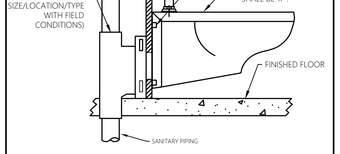
HOSE BIB PIPING DROP DETAIL

SCALE: NTS



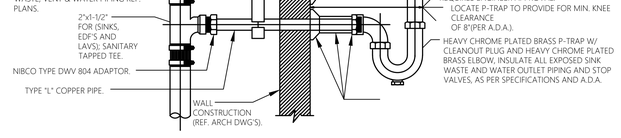
WALL HUNG SINK DETAIL

SCALE: NTS



WALL HUNG TOILET DETAIL

SCALE: NTS



TYPICAL LAVATORY & SINK CONNECTION DETAIL

SCALE: NTS

PROPANE GAS FIRED WATER HEATER SCHEDULE

UNIT TAG	LOCATION	SERVICE	TANK (GAL)	INPUT (MBH)	FLUE DIA	ELECTRICAL			BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
						MOP	VOLTS	PHASE			
WH-700	DEWATERING BLG - MECHANICAL ROOM 720	BLG DOM HW	55	54	57	15	120	1	AO SMITH	BT-60	1

1 PROVIDE WITH CONCENTRIC VENT KIT AND ACID NEUTRALIZER KIT.

ELECTRIC WATER HEATER SCHEDULE

UNIT TAG	LOCATION	VOLTS	PHASE	CAPACITY (KW)	SIZE GAL)	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
EWH-400	ATAD BUILDING - THICKENING ROOM	480	3	12	119	VAUGHN	S120A4-12	
EWH-500	MBR BUILDING - MECHANICAL ROOM	480	3	12	119	VAUGHN	S120A4-12	
EWH-501	MBR BUILDING - BELOW MEZZANINE	120	1	2.5	10	A.O. SMITH	DEL-10	
EWH-950	GARAGE	120	1	1.4	6	EEMAX	EMT-6	

DOMESTIC CIRCULATION PUMP SCHEDULE

UNIT TAG	LOCATION	SERVICE	GPM (GPH)	HEAD FT. WG.	RPM	ELECTRICAL			BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NUMBER	REMARKS
						HP	VOLTS	PHASE			
RCP-500	MBR BUILDING - MECHANICAL ROOM	TW RECIRC LOOP	5	25	-	1/3	120	1	B&G	E SERIES	1
RCP-700	DEWATERING BLG - MECHANICAL ROOM 720	BLG DOM HWR	1	15	3600	1/15	120	1	BELL&GOSSETT	PL-36	1

1 PROVIDE WITH BRASS LEAD FREE CONSTRUCTION AND AQUASTAT.

MHE ENGINEERING
33 Airport Center Drive, Suite 202
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145 CAESARS LN.
NEW WINDSOR, NY 12553

FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING DETAILS & SCHEDULES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

P-030

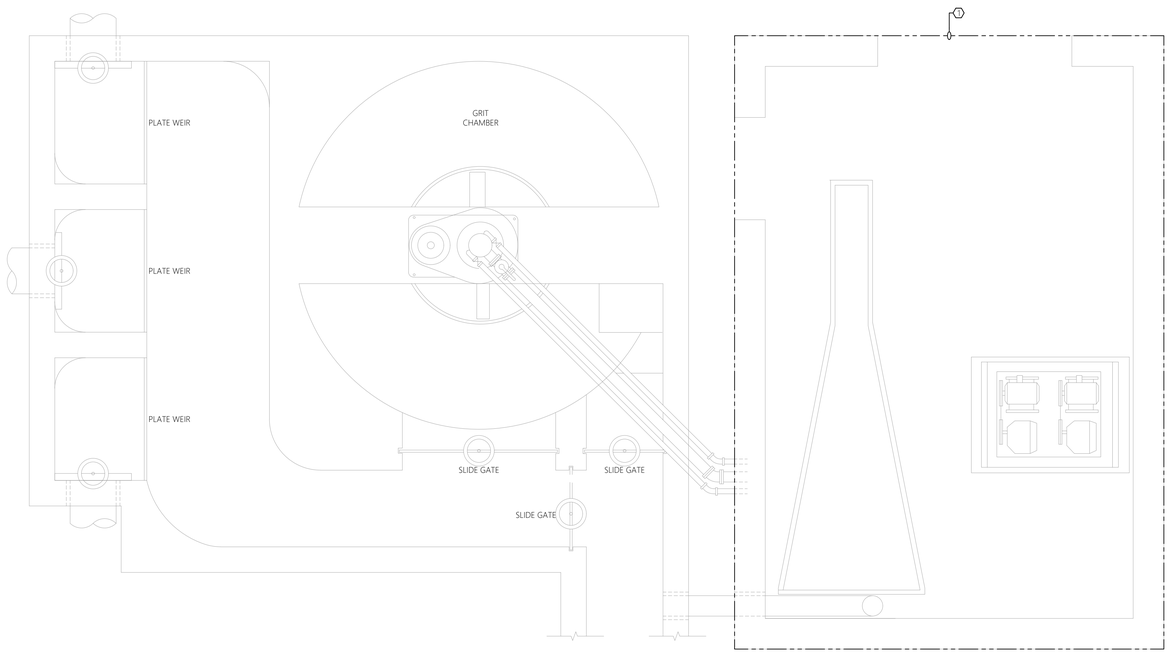
PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY DASHED (- - - -) SHALL BE DEMOLISHED.

SHEET KEY NOTES:

(1) CONTRACTOR TO PROVIDE COMPLETE PLUMBING DEMOLITION FOR THIS AREA (UNLESS OTHERWISE INDICATED). COORDINATE REMOVAL EFFORTS CLOSELY WITH OWNER.



1 P-202 PLUMBING FLOOR PLAN - DEMOLITION
SCALE: 1/2" = 1'-0"
GRIT SYSTEM

0' 1' 2' 4'
SCALE: 1/2" = 1'-0"

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NEW WINDSOR, NY 12553

PLUMBING FLOOR PLANS - GRIT SYSTEM

REVISIONS

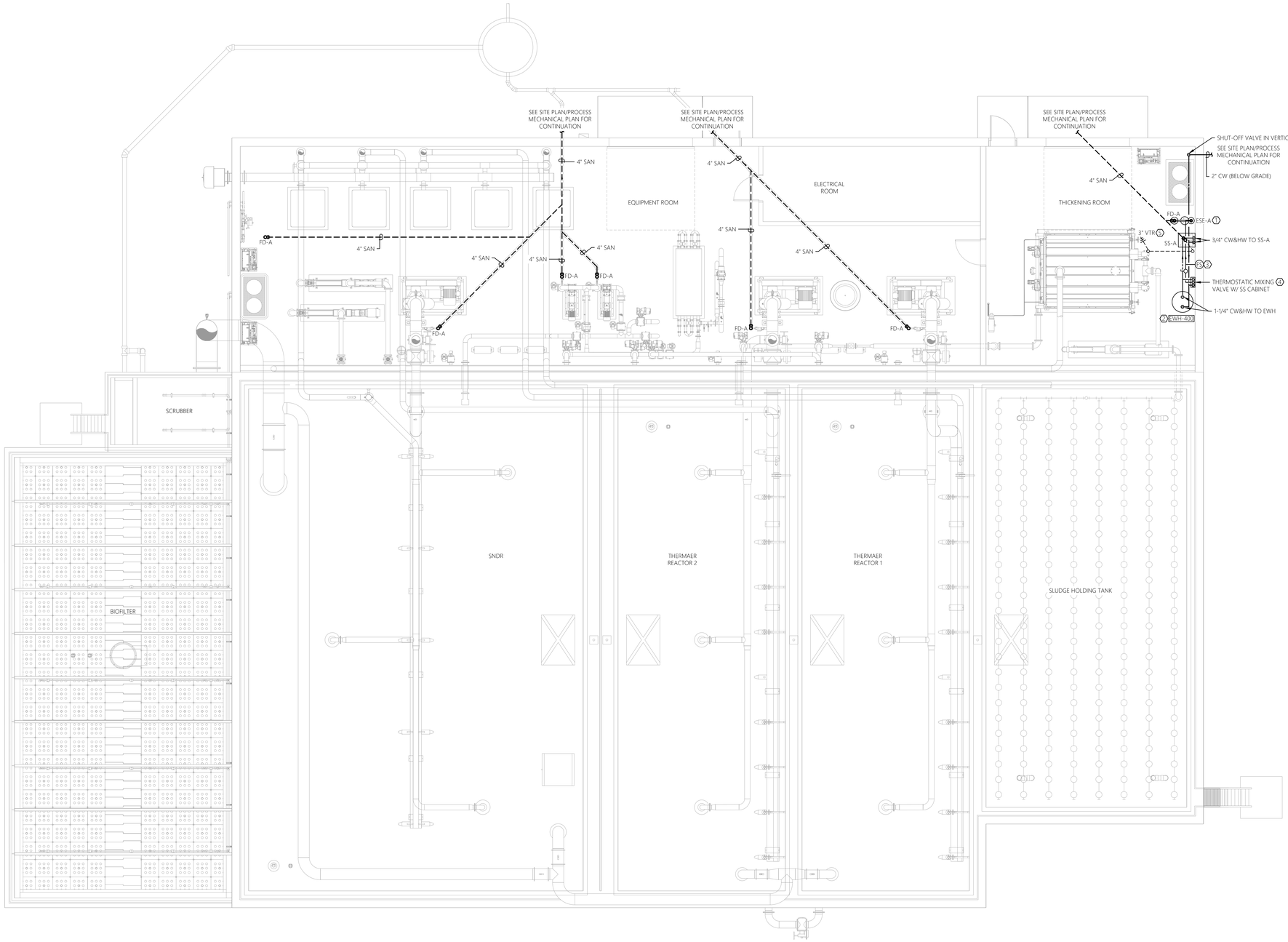
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

P-202

PROJECT # 18-732 PHASE #



1 P-400 PLUMBING FLOOR PLAN - NEW WORK
SCALE: 3/16" = 1'-0" ATAD BUILDING

0' 2' 4' 8' 16'
SCALE: 3/16" = 1'-0"

GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY SOLID (▬) SHALL BE NEW.
3. COORDINATE PLUMBING PIPING/FIXTURE/EQUIPMENT/ETC. LAYOUT WITH ALL OTHER TRADES TO AVOID CONFLICT.
4. AVOID ROUTING WATER PIPING OVER ELECTRICAL EQUIPMENT WHRE POSSIBLE. PROVIDE DRIP SHIELD IN LOCATIONS WHERE WATER PIPING IS ROUTED ABOVE ELECTRICAL EQUIPMENT.
5. ALL HANGERS AND SUPPORTS SHALL BE TYPE 316 STAINLESS STEEL.

SHEET KEY NOTES:

1. NEW EMERGENCY EYEWASH/SHOWER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
2. NEW ELECTRIC WATER HEATER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE 4" HIGH HOUSEKEEPING PAD. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
3. PROVIDE NEW FLOW SWITCH (GUARDIAN AP275-615 OR EQUAL) AND INSTALL PER MANUFACTURER RECOMMENDATIONS. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
4. NEW THERMOSTATIC MIXING VALVE (GUARDIAN 6040 OR EQUAL) TO PROVIDE TEPID WATER (85°F) TO EMERGENCY FIXTURE.
5. FIELD ROUTE PLUMBING VENT AND EXTEND THOUGH ROOF.

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JADE STONE ENGINEERING

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING FLOOR PLAN - ATAD BUILDING

REVISIONS

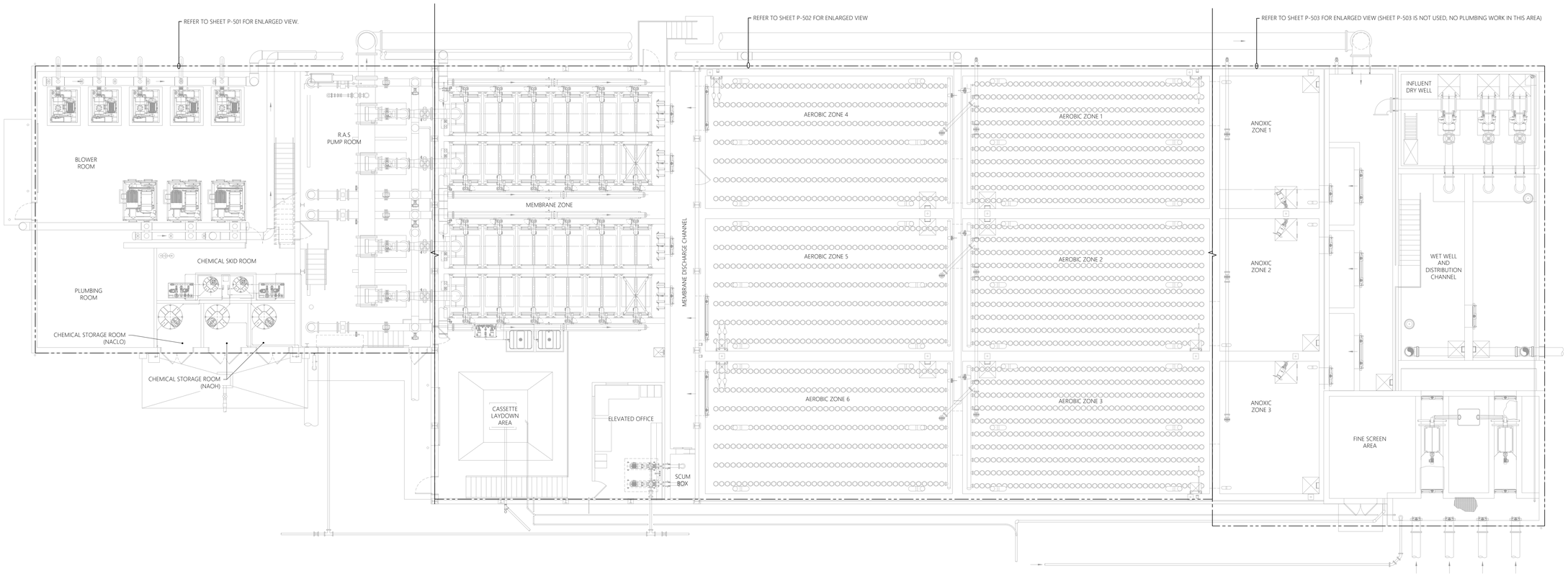
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

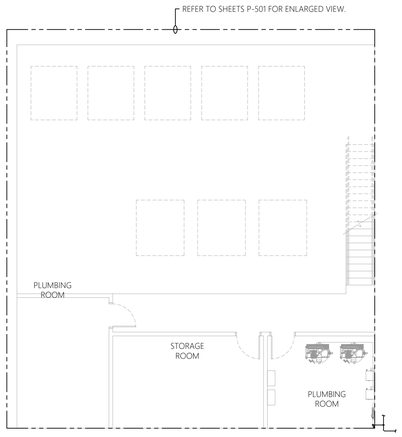
SHEET NO.

P-400

PROJECT # 18-732 PHASE #



1 P-500 PLUMBING OVERALL PLAN - NEW WORK
SCALE: 1/8" = 1'-0" MBR BUILDING



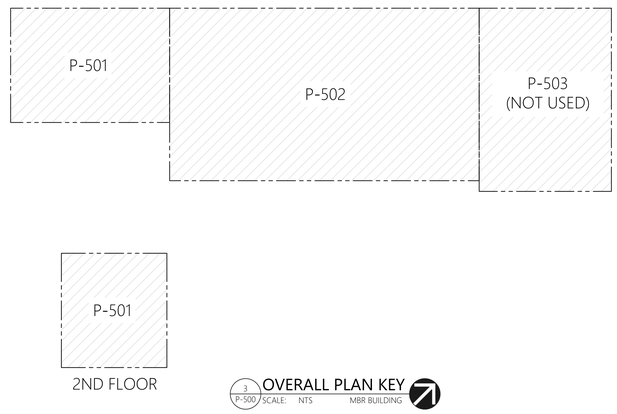
2 P-500 PLUMBING OVERALL PLAN - NEW WORK
SCALE: 1/8" = 1'-0" MBR BUILDING 2ND FLOOR

0' 2' 4' 8' 16'
SCALE: 1/8" = 1'-0"

SHEET KEY NOTE:

1. SHEET IS INTENDED FOR REFERENCE ONLY. ENLARGED FLOOR PLANS ARE FROM SHEET P-501 TO P-503.

SHADED AREA SIGNIFIES CURRENT VIEW IN THE MBR BUILDING



3 P-500 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING OVERALL PLAN - MBR BUILDING

REVISIONS

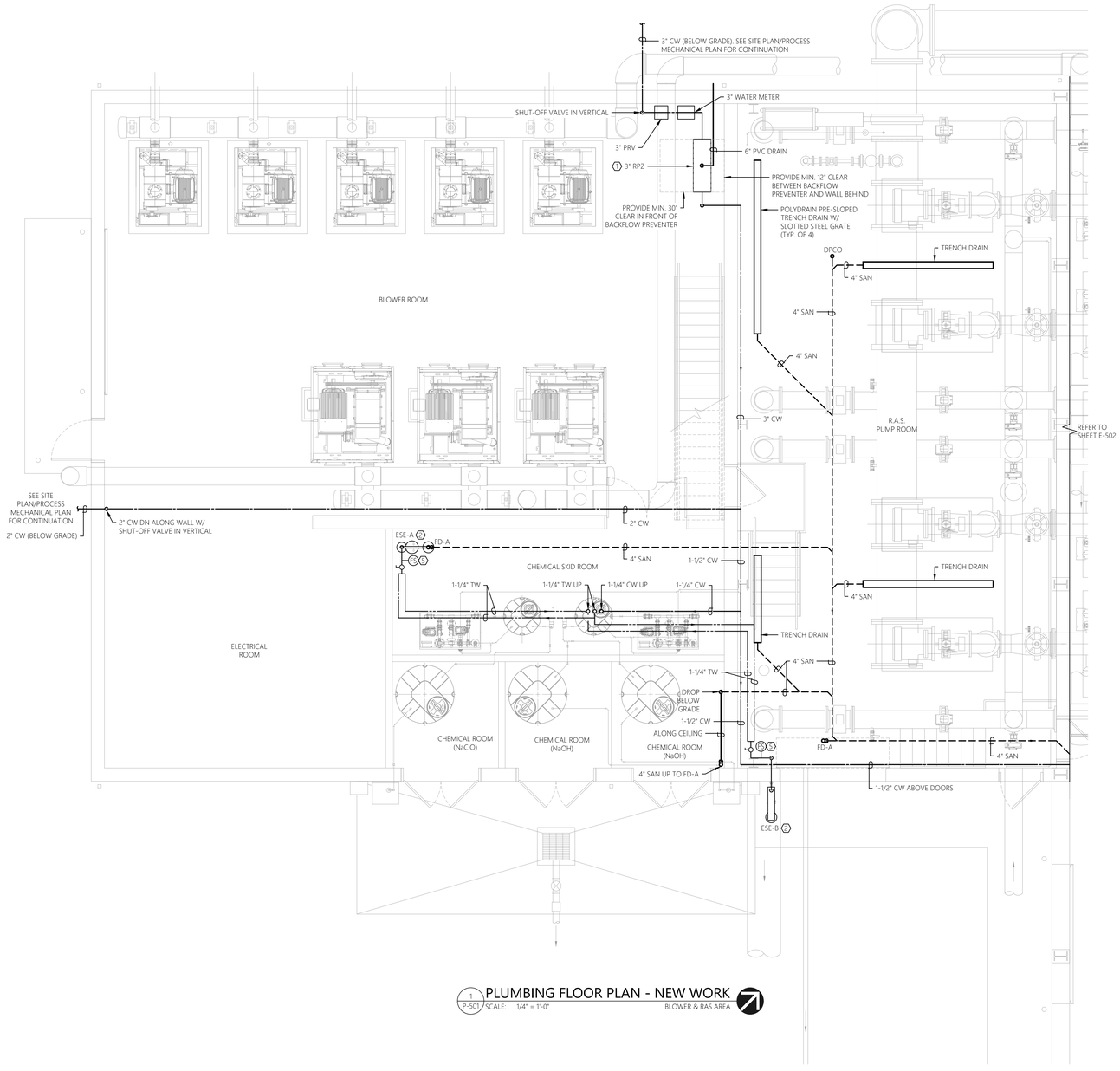
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

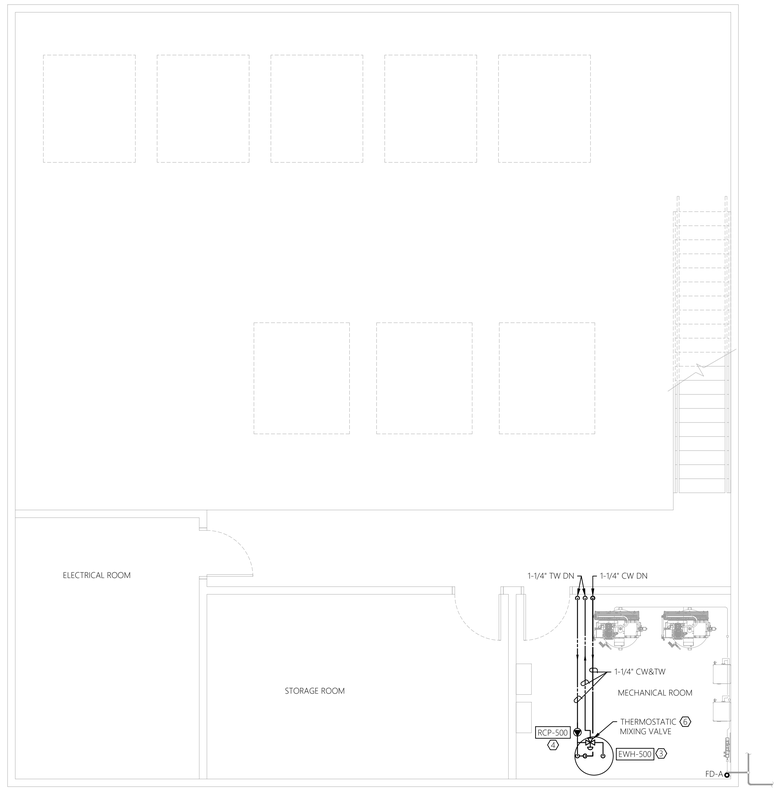
SHEET NO.

P-500

PROJECT # 18-732 PHASE #



1 P-501 PLUMBING FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0" BLOWER & RAS AREA



2 P-501 PLUMBING FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0" 2ND FLOOR

GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY SOLID (▬) SHALL BE NEW.
3. COORDINATE PLUMBING PIPING/FIXTURE/EQUIPMENT/ETC. LAYOUT WITH ALL OTHER TRADES TO AVOID CONFLICT.
4. AVOID ROUTING WATER PIPING OVER ELECTRICAL EQUIPMENT WHRE POSSIBLE. PROVIDE DRIP SHIELD IN LOCATIONS WHERE WATER PIPING IS ROUTED ABOVE ELECTRICAL EQUIPMENT.
5. ALL HANGERS AND SUPPORTS IN THE R.A.S. PUMP ROOM SHALL BE TYPE 316 STAINLESS STEEL. ALL HANGERS AND SUPPORTS IN THE CHEMICAL SKID ROOM AND CHEMICAL ROOMS SHALL BE PVC COATED.

SHEET KEY NOTES:

1. NEW RPZ BACKFLOW PREVENTER (WATTS LF009 OR EQUAL) TO BE INSTALLED AT LOCATION SHOWN PER SECTION VIEW ON THIS SHEET AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE AIR GAP AND FUNNEL DRAIN CONNECTION BELOW RPZ AND ROUTE PVC DRAIN PIPE OUT EXTERIOR WALL WITH FLAP VALVE.
2. NEW EMERGENCY EYEWASH/SHOWER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
3. NEW ELECTRIC WATER HEATER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE 4" HIGH HOUSEKEEPING PAD. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

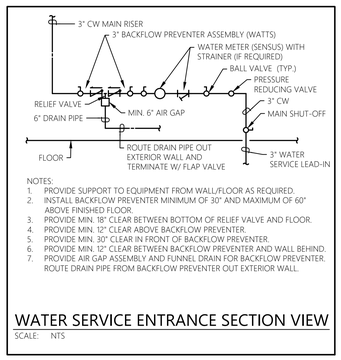
0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

SHEET KEY NOTES:

4. NEW IN-LINE CIRCULATING PUMP TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
5. NEW FLOW SWITCH (GUARDIAN AP275-615 OR EQUAL) AND INSTALL PER MANUFACTURER RECOMMENDATIONS. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
6. NEW THERMOSTATIC MIXING VALVE (GUARDIAN 6040 OR EQUAL) TO PROVIDE TEPID WATER (85°F) TO EMERGENCY FIXTURE.

BACKFLOW PREVENTER NOTES:

1. NEW AND REPLACEMENT DEVICES MUST BE TESTED AFTER INSTALLATION AND BEFORE ENTERING SERVICE. DEVICES MUST BE TESTED ANNUALLY THEREAFTER.
2. STRAINERS ARE RECOMMENDED PRIOR TO EACH BACKFLOW DEVICE ON NON-FIRE FIGHTING LINES ONLY. NO STRAINER IS TO BE USED ON A FIRE LINE WITHOUT INSURANCE UNDERWRITER APPROVAL.
3. ASSEMBLIES SHOULD BE SPECIFIED AND INSTALLED WITH MANUFACTURER SUPPLIED VALVES.
4. WATER LINES SHOULD BE THOROUGHLY FLUSHED BEFORE INSTALLATION OF DEVICE TO PREVENT DEBRIS FOULING THE DEVICE CHECK VALVES.
5. DEVICES MUST BE MOUNTED HORIZONTALLY UNLESS APPROVED FOR VERTICAL INSTALLATION.
6. ASSEMBLIES SHOULD NOT BE INSTALLED IN AREAS CONTAINING CORROSIVE OR TOXIC GASES WHICH COULD RENDER THE DEVICE INOPERABLE.
7. DUE TO INHERENT DESIGN OF RPZ ASSEMBLIES, FLUCTUATING SUPPLY PRESSURE ON A LOW FLOW CONDITION MAY CAUSE NUISANCE DRIPPING. INSTALLATION OF A SOFT SEATED CHECK VALVE AHEAD OF THE RPZ WILL OFTEN HOLD PRESSURE CONSTANT DURING PERIODS OF LOW FLOW.
8. WHERE THE DISTANCE BETWEEN THE WATER METER AND DEVICE IS GREATER THAN 10 FEET, ALL EXPOSED PIPING SHOULD BE MARKED "FEED LINE TO BACKFLOW PREVENTER - DO NOT TAP" AT 5-FOOT INTERVALS.
9. ORANGE COUNTY DEPARTMENT OF HEALTH PLAN APPROVAL IS LIMITED TO 5 YEARS. TIME EXTENSIONS FOR PLAN APPROVAL MAY BE GRANTED BY THE ORANGE COUNTY DEPARTMENT OF HEALTH BASED UPON DEVELOPMENT FACTS AND ANY NEW REGULATIONS, OR GUIDANCE, IN EFFECT AT THAT TIME. A NEW PLAN SUBMISSION MAY BE REQUIRED TO OBTAIN A TIME EXTENSION.
10. ADEQUATE HEAT WILL BE PROVIDED TO PREVENT FREEZING AND ADEQUATE LIGHTING WILL BE PROVIDED TO FACILITATE SERVICING OF THE DEVICE.



NOTES:
1. PROVIDE SUPPORT TO EQUIPMENT FROM WALL/FLOOR AS REQUIRED.
2. INSTALL BACKFLOW PREVENTER MINIMUM OF 30" AND MAXIMUM OF 60" ABOVE FINISHED FLOOR.
3. PROVIDE MIN. 18" CLEAR BETWEEN BOTTOM OF RELIEF VALVE AND FLOOR.
4. PROVIDE MIN. 12" CLEAR ABOVE BACKFLOW PREVENTER.
5. PROVIDE MIN. 30" CLEAR IN FRONT OF BACKFLOW PREVENTER.
6. PROVIDE MIN. 12" CLEAR BETWEEN BACKFLOW PREVENTER AND WALL BEHIND.
7. PROVIDE AIR GAP ASSEMBLY AND FUNNEL DRAIN FOR BACKFLOW PREVENTER. ROUTE DRAIN PIPE FROM BACKFLOW PREVENTER OUT EXTERIOR WALL.

WATER SERVICE ENTRANCE SECTION VIEW
SCALE: NTS

SHADED AREA SIGNIFIES CURRENT VIEW IN THE MBR BUILDING





2ND FLOOR

3 P-501 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING FLOOR PLAN - BLOWER & RAS AREA

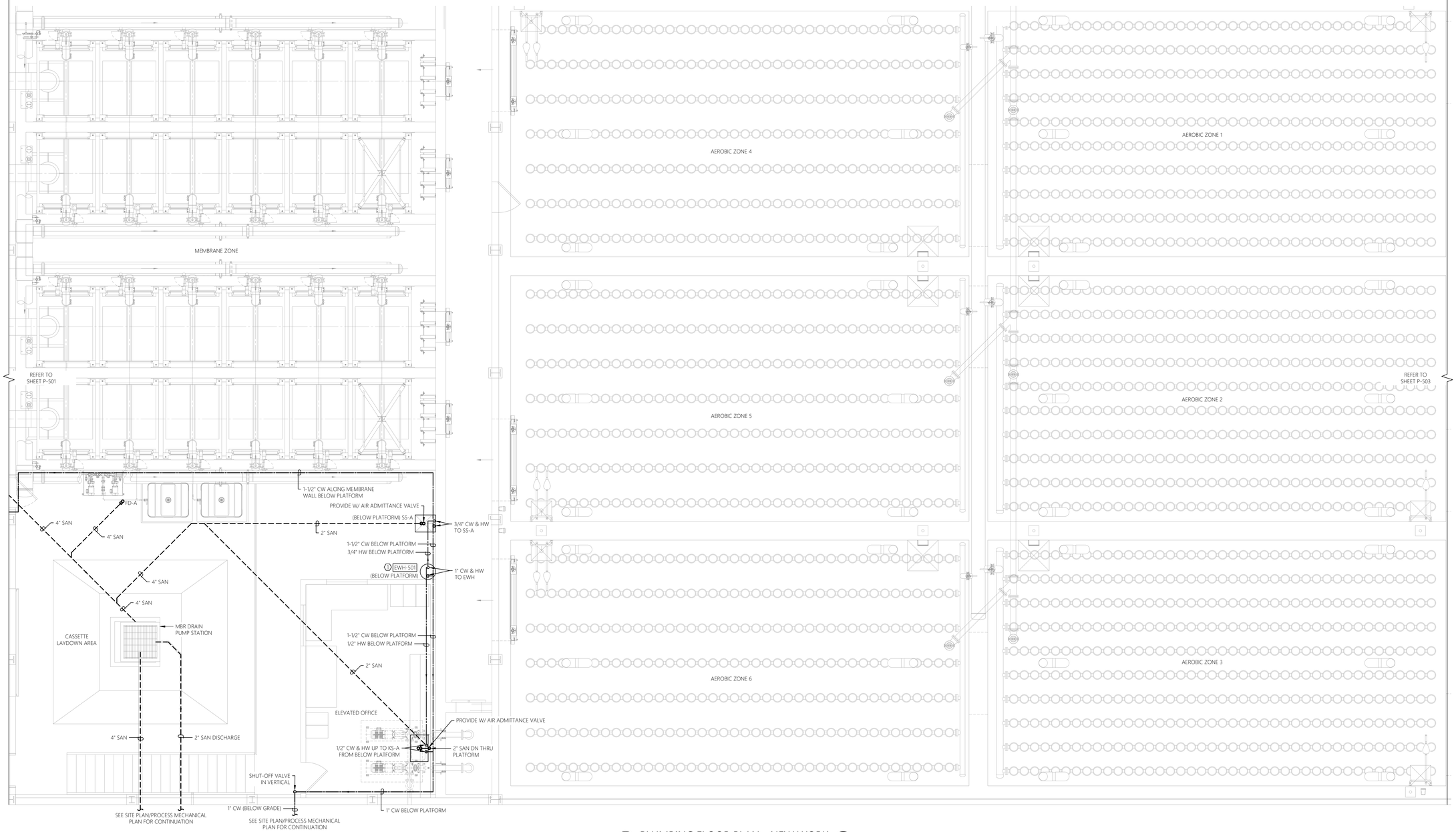
REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.
P-501

PROJECT # 18-732 PHASE #



1 P-502 PLUMBING FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0" MEMBRANE & AEROBIC ZONES

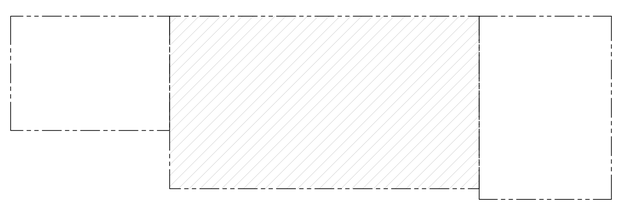
GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY SOLID (▬) SHALL BE NEW.
3. COORDINATE PLUMBING PIPING/FIXTURE/EQUIPMENT/ETC. LAYOUT WITH ALL OTHER TRADES TO AVOID CONFLICT.
4. AVOID ROUTING WATER PIPING OVER ELECTRICAL EQUIPMENT WHRE POSSIBLE. PROVIDE DRIP SHIELD IN LOCATIONS WHERE WATER PIPING IS ROUTED ABOVE ELECTRICAL EQUIPMENT.
5. ALL HANGERS AND SUPPORTS IN THE CASSETTE LAYDOWN AREA AND BELOW THE ELEVATED OFFICE/BELOW PLATFORM SHALL BE TYPE 316 STAINLESS STEEL.

SHEET KEY NOTES:

(1) NEW ELECTRIC WATER HEATER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE 4" HIGH HOUSEKEEPING PAD. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"



2ND FLOOR

SHADED AREA SIGNIFIES CURRENT VIEW IN THE MBR BUILDING

2 P-502 OVERALL PLAN KEY
SCALE: NTS MBR BUILDING

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:
THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING FLOOR PLAN - MEMBRANE & AEROBIC ZONES

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.
P-502

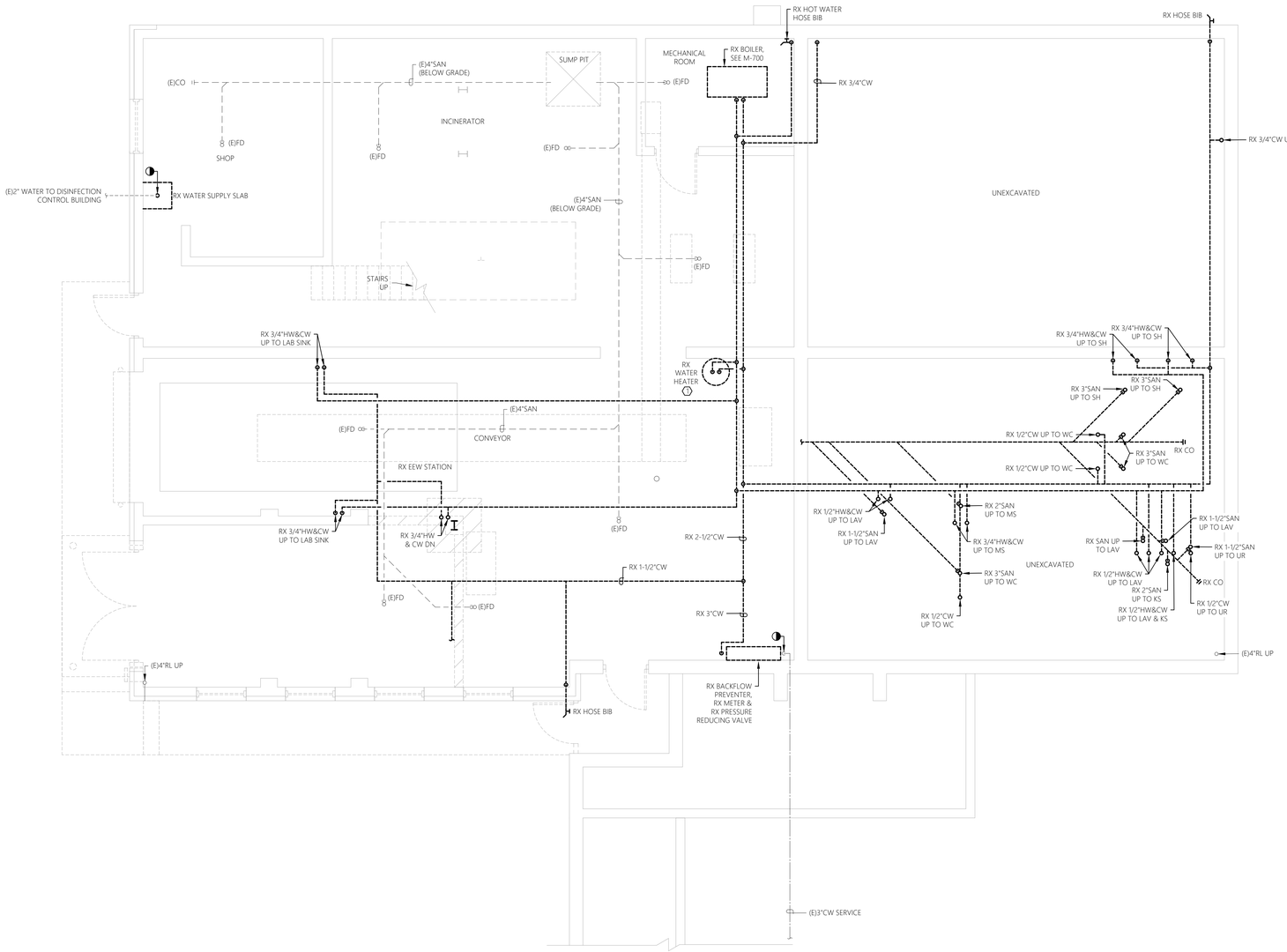
PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY DASHED (- - -) SHALL BE DEMOLISHED AND PLUMBING ITEMS SHOWN LIGHT SOLID (——) SHALL BE EXISTING TO REMAIN.
3. COORDINATE REMOVAL OF PLUMBING FIXTURES/PIPING/ETC. WITH OWNER AND ALL OTHER TRADES.

SHEET KEY NOTES:

1. EXISTING WATER HEATER AND ASSOCIATED COMPONENTS TO BE REMOVED IN THEIR ENTIRETY.



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 P-700 PLUMBING FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - LOWER LEVEL

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING DEMOLITION PLAN - DEWATERING BUILDING LOWER LEVEL

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

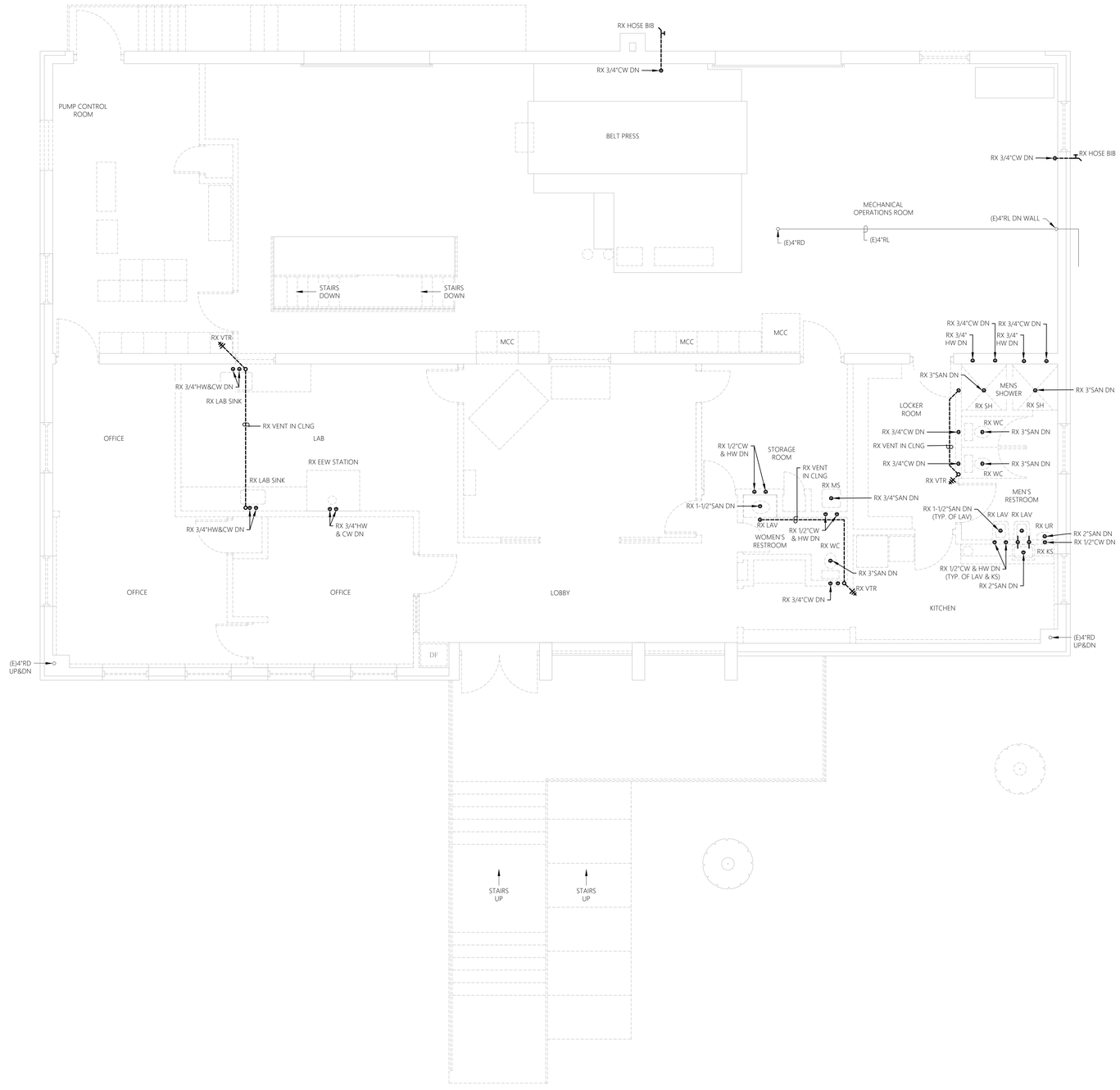
SHEET NO.

P-700

PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY DASHED (- - -) SHALL BE DEMOLISHED AND PLUMBING ITEMS SHOWN LIGHT SOLID (——) SHALL BE EXISTING TO REMAIN.
3. COORDINATE REMOVAL OF PLUMBING FIXTURES/PIPING/ETC. WITH OWNER AND ALL OTHER TRADES.



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 P-701 MECHANICAL FLOOR PLAN - DEMOLITION
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - UPPER LEVEL

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING DEMOLITION PLAN - DEWATERING BUILDING UPPER LEVEL

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

P-701

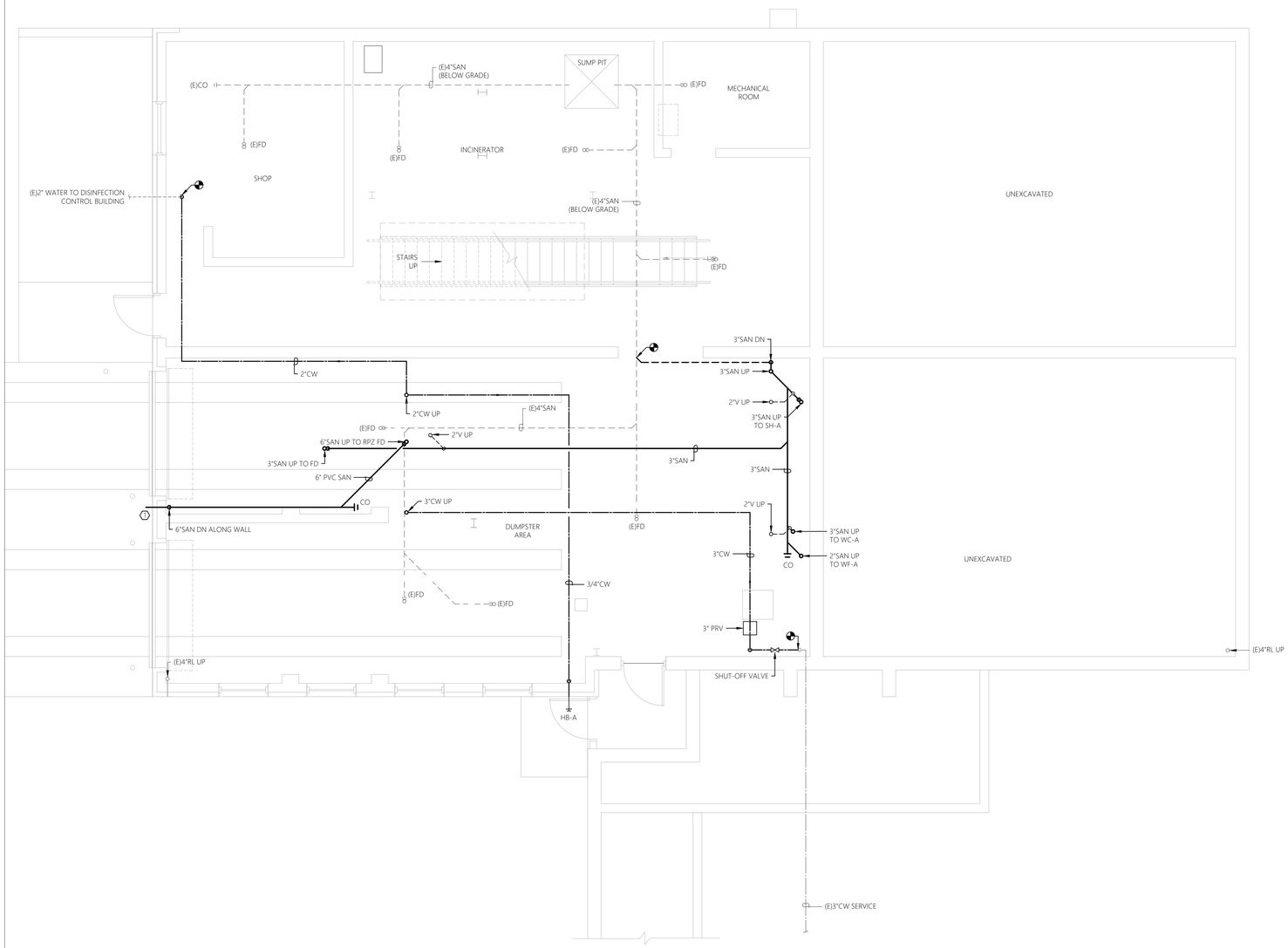
PROJECT # 18-732 PHASE #

GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW
3. COORDINATE PLUMBING PIPING/FIXTURE/EQUIPMENT/ETC. LAYOUT WITH ALL OTHER TRADES TO AVOID CONFLICT.
4. AVOID ROUTING WATER PIPING OVER ELECTRICAL EQUIPMENT WHRE POSSIBLE. PROVIDE DRIP SHIELD IN LOCATIONS WHERE WATER PIPING IS ROUTED ABOVE ELECTRICAL EQUIPMENT.
5. ALL HANGERS AND SUPPORTS SHALL BE TYPE 316 STAINLESS STEEL.

SHEET KEY NOTES:

(1) ROUTE PVC DRAIN PIPE OUT EXTERIOR WALL WITH FLAP VALVE.



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 P-702 PLUMBING FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0"
DEWATERING BUILDING - LOWER LEVEL

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

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CAESARS LANE WWTP EXPANSION PROJECT: PHASE 2
145 CAESARS LN.
NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING NEW WORK PLAN - DEWATERING BUILDING LOWER LEVEL

REVISIONS

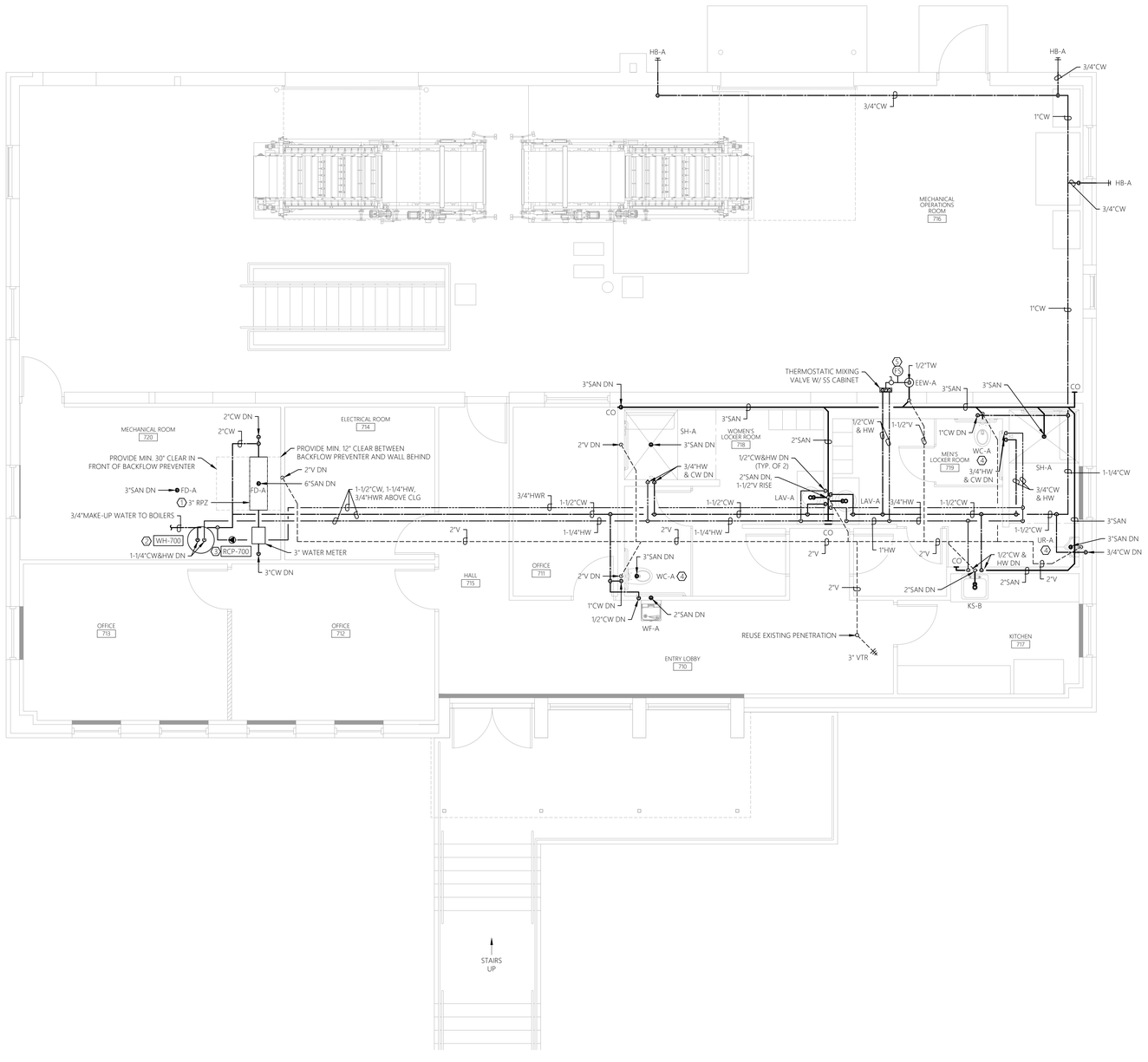
NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

P-702

PROJECT # 18-732 PHASE #



0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

1 / P-703 PLUMBING FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0" DEWATERING BUILDING - UPPER LEVEL

GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW
3. COORDINATE PLUMBING PIPING/FIXTURE/EQUIPMENT/ETC. LAYOUT WITH ALL OTHER TRADES TO AVOID CONFLICT.
4. AVOID ROUTING WATER PIPING OVER ELECTRICAL EQUIPMENT WHRE POSSIBLE. PROVIDE DRIP SHIELD IN LOCATIONS WHERE WATER PIPING IS ROUTED ABOVE ELECTRICAL EQUIPMENT.
5. ALL HANGERS AND SUPPORTS IN MECHANICAL OPERATIONS ROOM SHALL BE TYPE 316 STAINLESS STEEL.

SHEET KEY NOTES:

(1) NEW RPZ BACKFLOW PREVENTER (WATTS LF009 OR EQUAL) TO BE INSTALLED AT LOCATION SHOWN PER SECTION VIEW ON THIS SHEET AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE ALL ACCESSORIES FOR A COMPLETE AND OPERABLE SYSTEM. PROVIDE AIR GAP AND FUNNEL DRAIN CONNECTION BELOW RPZ AND ROUTE PVC DRAIN PIPE TO FLOOR DRAIN.

(2) NEW GAS-FIRED WATER HEATER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE 4" HIGH HOUSEKEEPING PAD. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

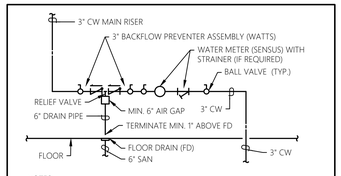
(3) NEW IN-LINE CIRCULATING PUMP TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

(4) CONTRACTOR SHALL SIZE AND INSTALL WATER HAMMER ARRESTORS PER MANUFACTURER'S RECOMMENDATIONS.

(5) PROVIDE NEW FLOW SWITCH (GUARDIAN AP28S-615 OR EQUAL) AND INSTALL PER MANUFACTURER RECOMMENDATIONS. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

BACKFLOW PREVENTER NOTES:

1. NEW AND REPLACEMENT DEVICES MUST BE TESTED AFTER INSTALLATION AND BEFORE ENTERING SERVICE. DEVICES MUST BE TESTED ANNUALLY THEREAFTER.
2. STRAINERS ARE RECOMMENDED PRIOR TO EACH BACKFLOW DEVICE ON NON-FIRE FIGHTING LINES ONLY. NO STRAINER IS TO BE USED ON A FIRE LINE WITHOUT INSURANCE UNDERWRITER APPROVAL.
3. ASSEMBLIES SHOULD BE SPECIFIED AND INSTALLED WITH MANUFACTURER SUPPLIED VALVES.
4. WATER LINES SHOULD BE THOROUGHLY FLUSHED BEFORE INSTALLATION OF DEVICE TO PREVENT DEBRIS FOULING THE DEVICE CHECK VALVES.
5. DEVICES MUST BE MOUNTED HORIZONTALLY UNLESS APPROVED FOR VERTICAL INSTALLATION.
6. ASSEMBLIES SHOULD NOT BE INSTALLED IN AREAS CONTAINING CORROSIVE OR TOXIC GASES WHICH COULD RENDER THE DEVICE INOPERABLE.
7. DUE TO INHERENT DESIGN OF RPZ ASSEMBLIES, FLUCTUATING SUPPLY PRESSURE ON A LOW FLOW CONDITION MAY CAUSE NUISANCE DRIPPING. INSTALLATION OF A SOFT SEATED CHECK VALVE AHEAD OF THE RPZ WILL OFTEN HOLD PRESSURE CONSTANT DURING PERIODS OF LOW FLOW.
8. WHERE THE DISTANCE BETWEEN THE WATER METER AND DEVICE IS GREATER THAN 10 FEET, ALL EXPOSED PIPING SHOULD BE MARKED 'FEED LINE TO BACKFLOW PREVENTER - DO NOT TAP" AT 5-FOOT INTERVALS.
9. ORANGE COUNTY DEPARTMENT OF HEALTH PLAN APPROVAL IS LIMITED TO 5 YEARS. TIME EXTENSIONS FOR PLAN APPROVAL MAY BE GRANTED BY THE ORANGE COUNTY DEPARTMENT OF HEALTH BASED UPON DEVELOPMENT FACTS AND ANY NEW REGULATIONS, OR GUIDANCE, IN EFFECT AT THAT TIME. A NEW PLAN SUBMISSION MAY BE REQUIRED TO OBTAIN A TIME EXTENSION.
10. ADEQUATE HEAT WILL BE PROVIDED TO PREVENT FREEZING AND ADEQUATE LIGHTING WILL BE PROVIDED TO FACILITATE SERVICING OF THE DEVICE.



NOTES:
1. PROVIDE SUPPORT TO EQUIPMENT FROM WALL/FLOOR AS REQUIRED.
2. INSTALL BACKFLOW PREVENTER MINIMUM OF 30" AND MAXIMUM OF 60" ABOVE FINISHED FLOOR.
3. PROVIDE MIN. 18" CLEAR BETWEEN BOTTOM OF RELIEF VALVE AND FLOOR.
4. PROVIDE MIN. 12" CLEAR ABOVE BACKFLOW PREVENTER.
5. PROVIDE MIN. 30" CLEAR IN FRONT OF BACKFLOW PREVENTER.
6. PROVIDE MIN. 12" CLEAR BETWEEN BACKFLOW PREVENTER AND WALL BEHIND.
7. PROVIDE AIR GAP ASSEMBLY AND FUNNEL DRAIN FOR BACKFLOW PREVENTER. DISCHARGE PIPING FROM RELIEF VALVE MUST TERMINATE MIN. 1" ABOVE FLOOR DRAIN.

WATER SERVICE ENTRANCE SECTION VIEW

SCALE: NTS

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

HAZARDOUS MATERIAL NOTE:

THE SERVICES PROVIDED BY MHE, INCLUDING ALL WORK DEPICTED ON MHE PLANS, DO NOT INCLUDE SERVICES RELATED TO THE IDENTIFICATION, CONTROLS OR HANDLING OF HAZARDOUS MATERIALS, INCLUDING SUCH MATERIALS AS ASBESTOS AND LEAD PAINT. ALL TESTING, IDENTIFICATION, ABATEMENT, CONTROLS, AND HANDLING OF HAZARDOUS MATERIALS SHALL BE UNDERTAKEN BY A HAZARDOUS MATERIAL CONSULTANT AND CERTIFIED PROFESSIONALS. IF SUCH MATERIALS HAVE BEEN IDENTIFIED, CONTRACTOR WILL COMMUNICATE DIRECTLY WITH HAZARDOUS MATERIAL PROFESSIONAL FOR THE PERFORMANCE OF ANY WORK ON OR ADJACENT TO SAID MATERIALS. IF UNIDENTIFIED MATERIALS OF CONCERN ARE ENCOUNTERED WHILE UNDERTAKING THE WORK SHOWN HEREON, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER AND OWNER, AND SHALL OBTAIN DIRECTION FROM THE HAZARDOUS MATERIAL CONSULTANT PRIOR TO THE CONTINUATION OF WORK INVOLVING SUSPECTED MATERIAL.

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING NEW WORK PLAN - DEWATERING BUILDING UPPER LEVEL

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

P-703

PROJECT # 18-732 PHASE #

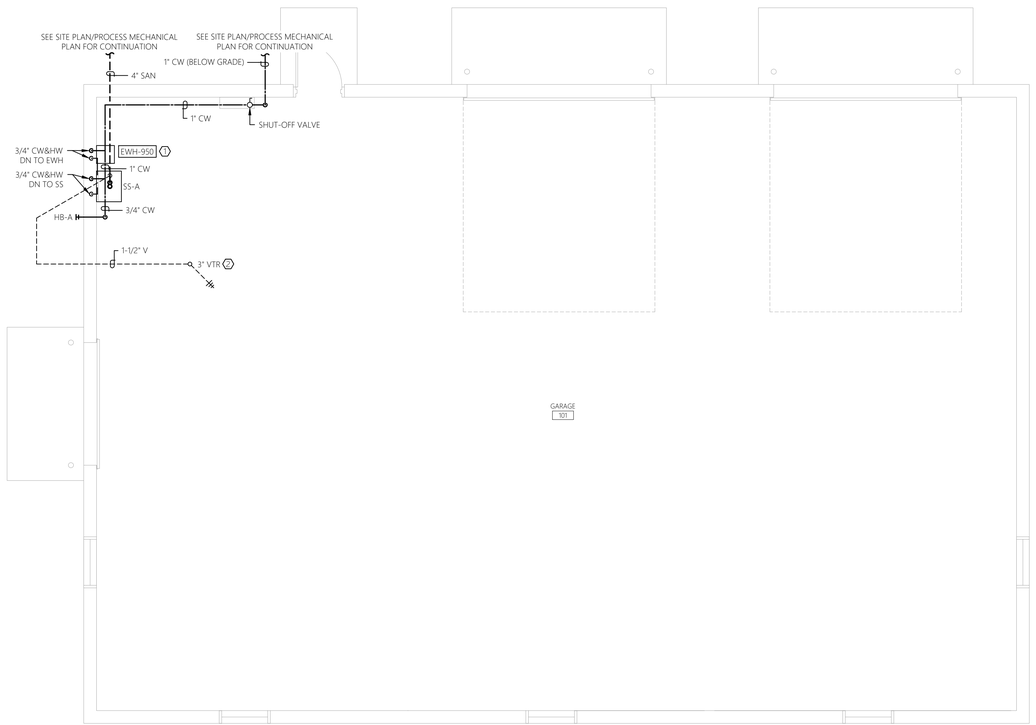
GENERAL SHEET NOTES:

1. REFER TO P-001 FOR PLUMBING LEGEND, ABBREVIATIONS, AND GENERAL PROJECT NOTES.
2. UNLESS OTHERWISE NOTED, PLUMBING ITEMS SHOWN HEAVY SOLID (——) SHALL BE NEW
3. COORDINATE PIPING/FIXTURE/EQUIPMENT LAYOUT WITH STRUCTURAL, PROCESS MECHANICAL, ELECTRICAL COMPONENTS, ETC. TO AVOID CONFLICT.
4. AVOID ROUTING WATER PIPING OVER ELECTRICAL EQUIPMENT WHRE POSSIBLE. PROVIDE DRIP SHIELD IN LOCATIONS WHERE WATER PIPING IS ROUTED ABOVE ELECTRICAL EQUIPMENT.

SHEET KEY NOTES:

(1) NEW ELECTRIC WATER HEATER TO BE INSTALLED AT LOCATION SHOWN PER DETAIL ON SHEET P-030 AND PER MANUFACTURER RECOMMENDATIONS. COORDINATE FINAL LOCATION WITH OWNER AND ALL OTHER TRADES TO AVOID CONFLICT. PROVIDE 4" HIGH HOUSEKEEPING PAD. PROVIDE ALL FITTINGS/ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

(2) FIELD ROUTE PLUMBING VENT AND EXTEND THRU ROOF.



1 P-950 PLUMBING FLOOR PLAN - NEW WORK
SCALE: 1/4" = 1'-0"
GARAGE

0' 2' 4' 8'
SCALE: 1/4" = 1'-0"

MHE ENGINEERING
33 Airport Center Drive, Suite 202
New Windsor, NY 12553
(845) 587-3100
111 Wheatfield Drive, Suite 1
Milford, PA 18337
(570) 296-2765

BID SET

JADE STONE ENGINEERING

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NEW WINDSOR, NY 12553
FOR TOWN OF NEW WINDSOR
555 UNION AVE.
NEW WINDSOR, NY 12553

PLUMBING FLOOR PLAN - GARAGE

REVISIONS

NO.	DESCRIPTION	DATE

ISSUED DATE:	18 APRIL, 2025
DESIGN BY:	RRM
DRAWN BY:	CDJ
CHECKED BY:	RJK
REVIEWED BY:	RJK

SHEET NO.

P-950

PROJECT # 18-732 PHASE #