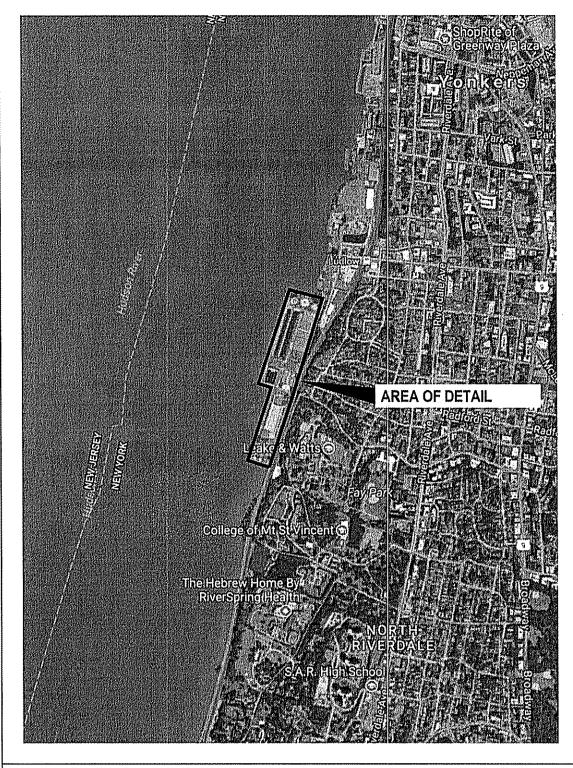




WESTCHESTER COUNTY, NEW YORK
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
DIVISION OF ENGINEERING

CONTRACT No. 16-512 SECONDARY SYSTEM REHABILITATION YONKERS JOINT WASTEWATER TREATMENT PLANT YONKERS, NEW YORK



LOCATION MAP

SCALE: N.T.S.

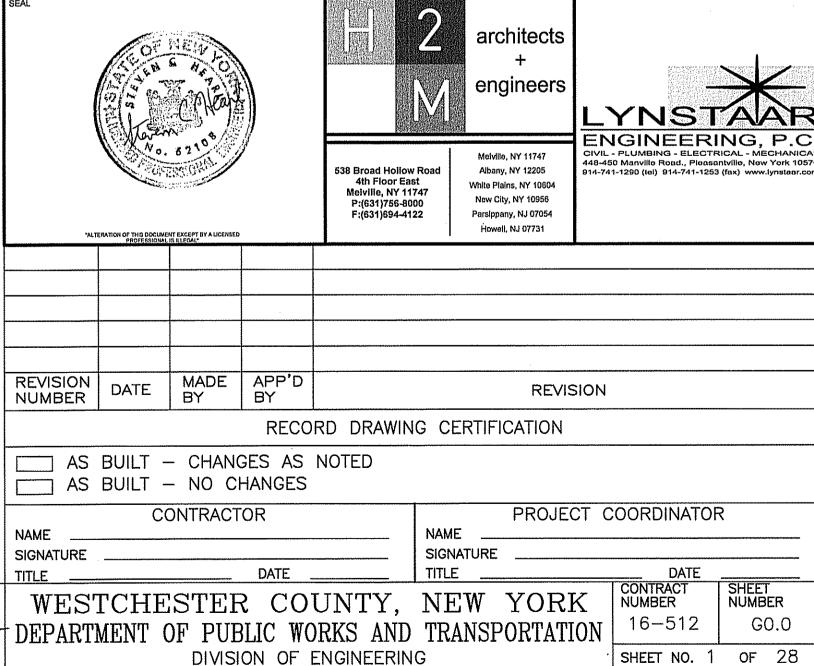
GENERAL DRAWINGS:

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G0.0	TITLE SHEET	200-00-T-1038-0	1
C1.0	SITE PLAN	200-00-G-1039-0	2
STRUCT	URAL DRAWINGS:		
S1.0	AERATION HEADER PARTIAL PLAN	200-00-S-1040-0	3
S1.1	AERATION HEADER REPAIR SECTIONS	200-00-S-1041-0	4
S1.2	STRUCTURAL NOTES AND DETAILS	200-00-S-1042-0	5
S2.0	CONCRETE SUPPORT PAD PLANS AND DETAILS	200-00-S-1043-0	6
MECHAN	IICAL DRAWINGS:		
M0.0	MECHANICAL LEGEND, SYMBOLS, ETC.	200-00-M-1044-0	7
M1.0	AERATION HEADER COATING PLAN	200-00-M-1045-0	8
M1.1	AERATION HEADER PARTIAL PLANS	200-00-M-1046-0	9
M1.2	AERATION HEADER COATING SECTIONS	200-00-M-1047-0	10
M2 0	THICKENER BUILDING REMOVALS PLAN AND SECTIONS	200-00-M-1048-0	11

M0.0	MECHANICAL LEGEND, SYMBOLS, ETC.	200-00-M-1044-0	7
M1.0	AERATION HEADER COATING PLAN	200-00-M-1045-0	8
M1.1	AERATION HEADER PARTIAL PLANS	200-00-M-1046-0	9
M1.2	AERATION HEADER COATING SECTIONS	200-00-M-1047-0	10
M2.0	THICKENER BUILDING REMOVALS PLAN AND SECTIONS	200-00-M-1048-0	11
M2.1	THICKENER BUILDING NEW CONSTRUCTION PLAN AND SECTIONS	200-00-M-1049-0	12
M2.2	PLANT WATER SYSTEM MECHANICAL DETAILS AND SECTIONS	200-00-M-1050-0	13
M3.0	BLOWER AND ADMINISTRATION BUILDING REMOVALS PLAN	200-00-M-1051-0	14
M3.1	BLOWER AND ADMINISTRATION BUILDING REMOVALS SECTIONS	200-00-M-1052-0	15
M3.2	BLOWER AND ADMINISTRATION BUILDING NEW CONSTRUCTION	200-00-M-1053-0	16
M3.3	BLOWER AND ADMINISTRATION BUILDING NEW CONSTRUCTION SECTIONS AND DETAILS	200-00-M-1054-0	17
M3.4	BLOWER AND ADMINISTRATION BUILDING NEW CONSTRUCTION PARTIAL PLANS	200-00-M-1055-0	18
M3.5	PLANT WATER SYSTEM MECHANICAL DETAILS AND SECTIONS	200-00-M-1056-0	19
M3.6	BLOWER AND ADMINISTRATION BUILDING AT ELEVATION -6.00' AND +6.50'	200-00-M-1057-0	20
M3.7	OPERATING GALLERY SECTIONAL PLAN AT ELEVATION +5.00'	200-00-M-1058-0	21

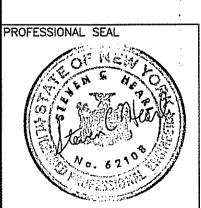
ELECTRICAL DRAWINGS:

EUIR	ICAL DRAWINGS.		
0.0	ELECTRICAL LEGENDS, SYMBOLS, ETC.	200-00-E-1059-0	22
2.0	THICKENER BUILDING ELECTRICAL DEMOLITION PLAN	200-00-E-1060-0	23
2.1	THICKENER BUILDING ELECTRICAL POWER PLAN	200-00-E-1061-0	24
3.0	BLOWER AND ADMINISTRATION BUILDING ELECTRICAL DEMOLITION PLAN	200-00-E-1062-0	25
3.4	BLOWER AND ADMINISTRATION BUILDING ELECTRICAL POWER PLAN	200-00-E-1063-0	26
3.5	BLOWER AND ADMINISTRATION BUILDING POWER AND CONTROLS DIAGRAM	200-00-E-1064-0	27
3.6	BLOWER AND ADMINISTRATION BUILDING STARTER DIAGRAMS AND DETAILS	200-00-E-1065-0	28



CHECKED BY SCH

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JOSEPH GIBNEY, P.E.

DIRECTOR OF WASTEWATER TREATMENT

DEPARTMENT OF ENVIRONMENTAL

FACILITIES

Teah Cally 8.22.22

RECOMMENDED FOR CONSTRUCTION DATE

LEAH RADKO, P.E.

DIRECTOR OF DESIGN COORDINATION

DEPARTMENT OF PUBLIC WORKS

AND TRANSPORTATION

RECOMMENDED FOR CONSTRUCTION DATE

GAYLE M. KATZMAN, P.E.

GAYLE M. KATZMAN, P.E.

FIRST DEPUTY COMMISSIONER

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

VINCENT F. KOPICKI, P.E.

COMMISSIONER

DEPARTMENT OF ENVIRONMENTAL FACILITIES

APPROVED FOR CONSTRUCTION

APPROVED FOR CONSTRUCTION

DATE

APPROVED FOR CONSTRUCTION

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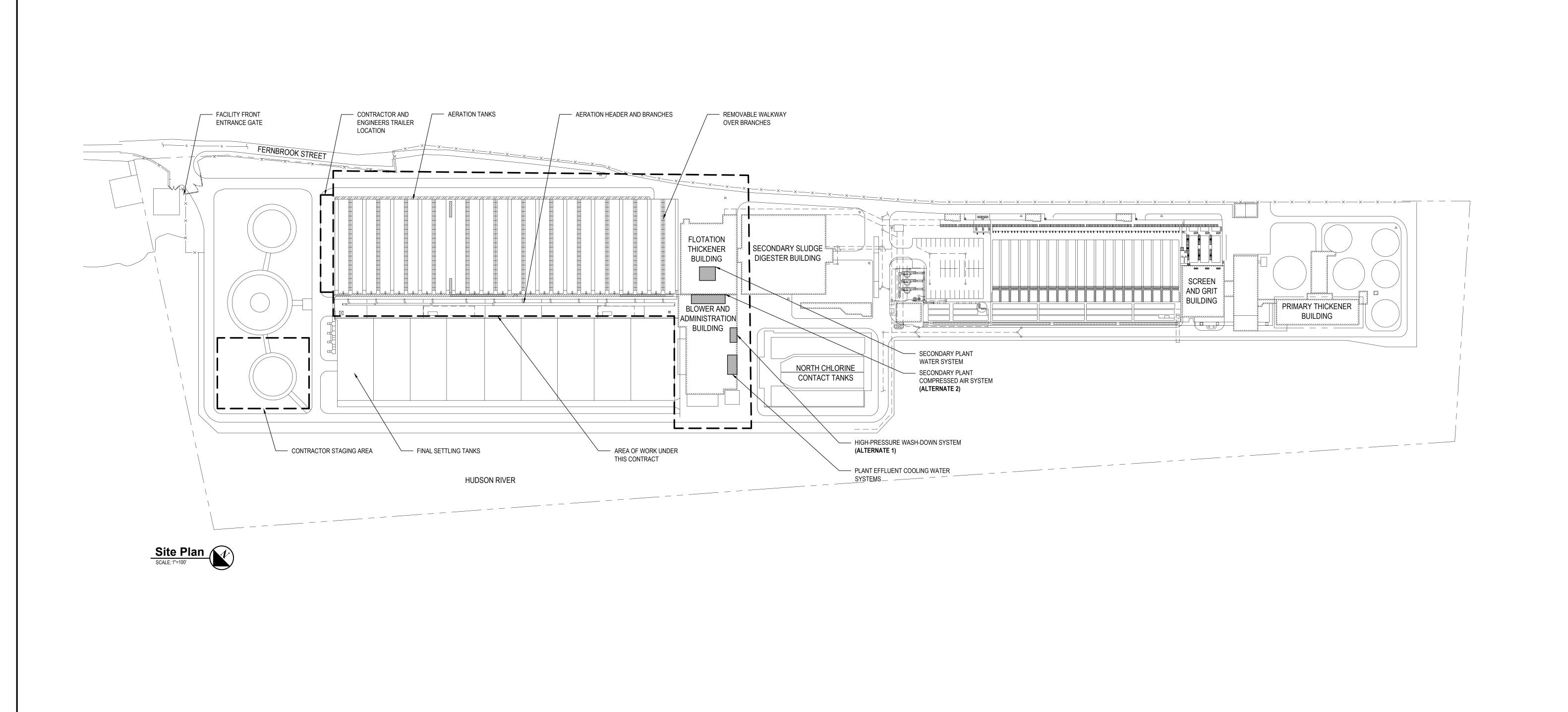
HUGH J. GREECHAN, JR., P.E.
COMMISSIONER
DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION

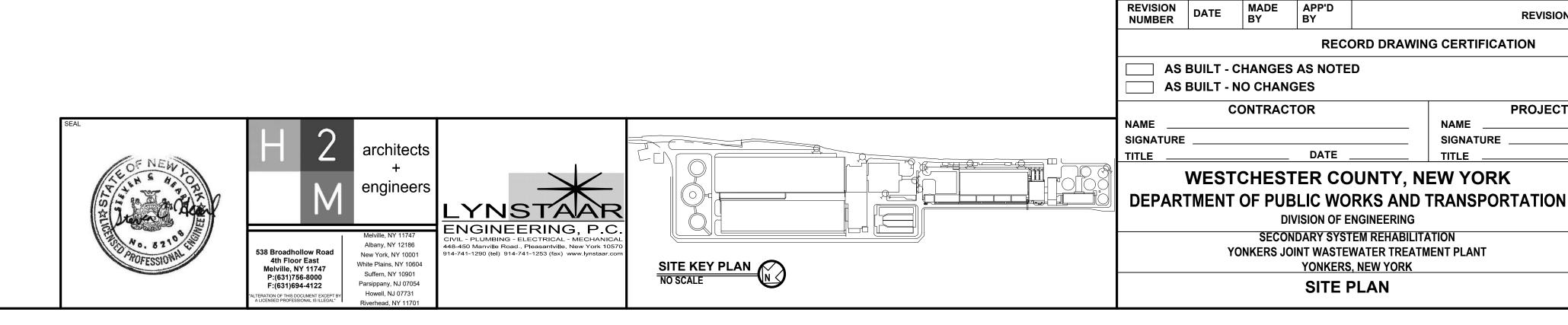
SECONDARY SYSTEM REHABILITATION
YONKERS JOINT WASTEWATER TREATMENT PLANT
YONKERS, NEW YORK
TITLE SHEET

SHEET NO. 1 OF 28

SCALE: N.T.S.
DATE: MARCH 2022

DPW FILE NO. RE
200-00-T-1038-0





REVISION

NAME ____

PROJECT COORDINATOR

DATE SHEET NUMBER NUMBER

SHEET NO. 2 OF 28

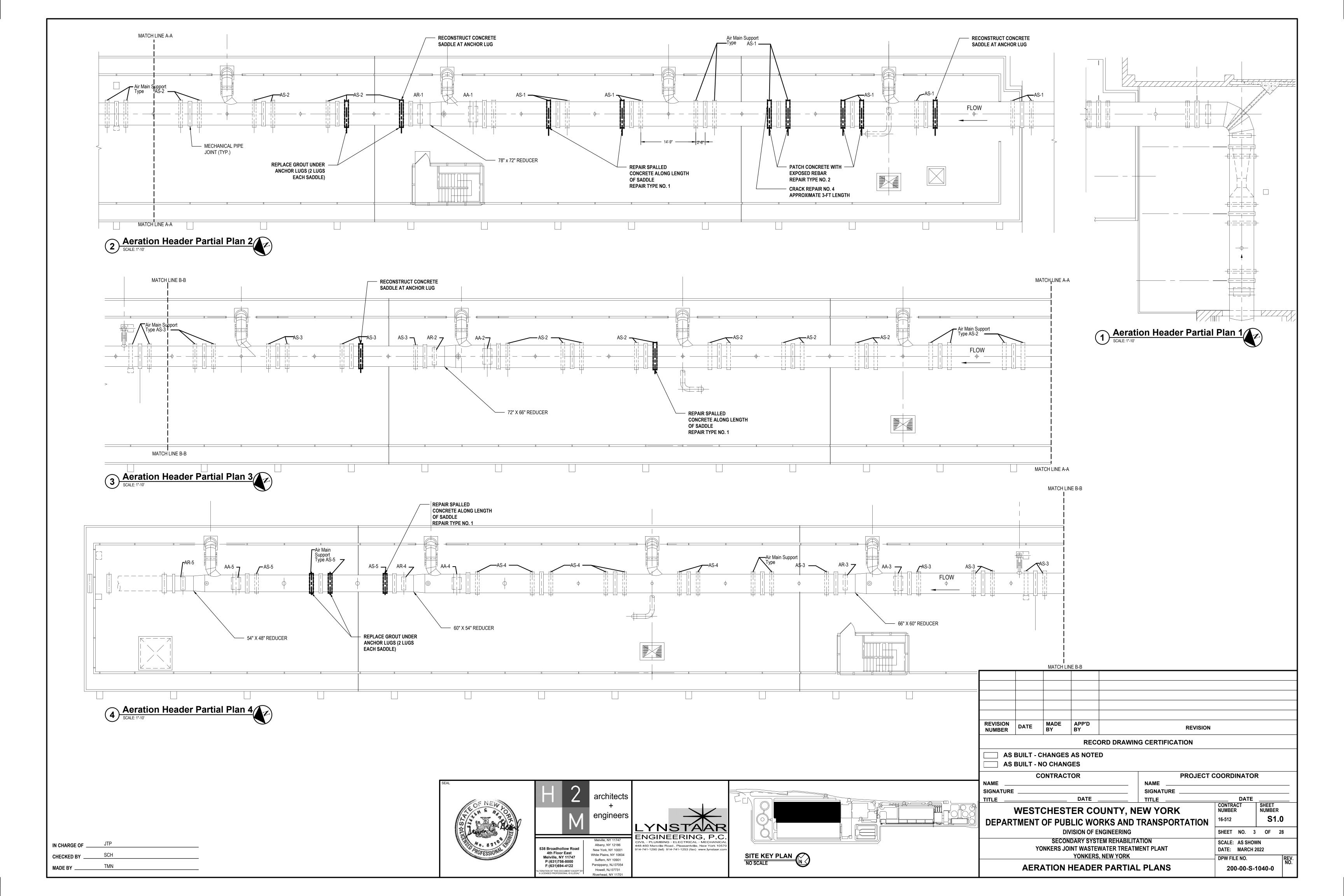
SCALE: AS SHOWN
DATE: MARCH 2022

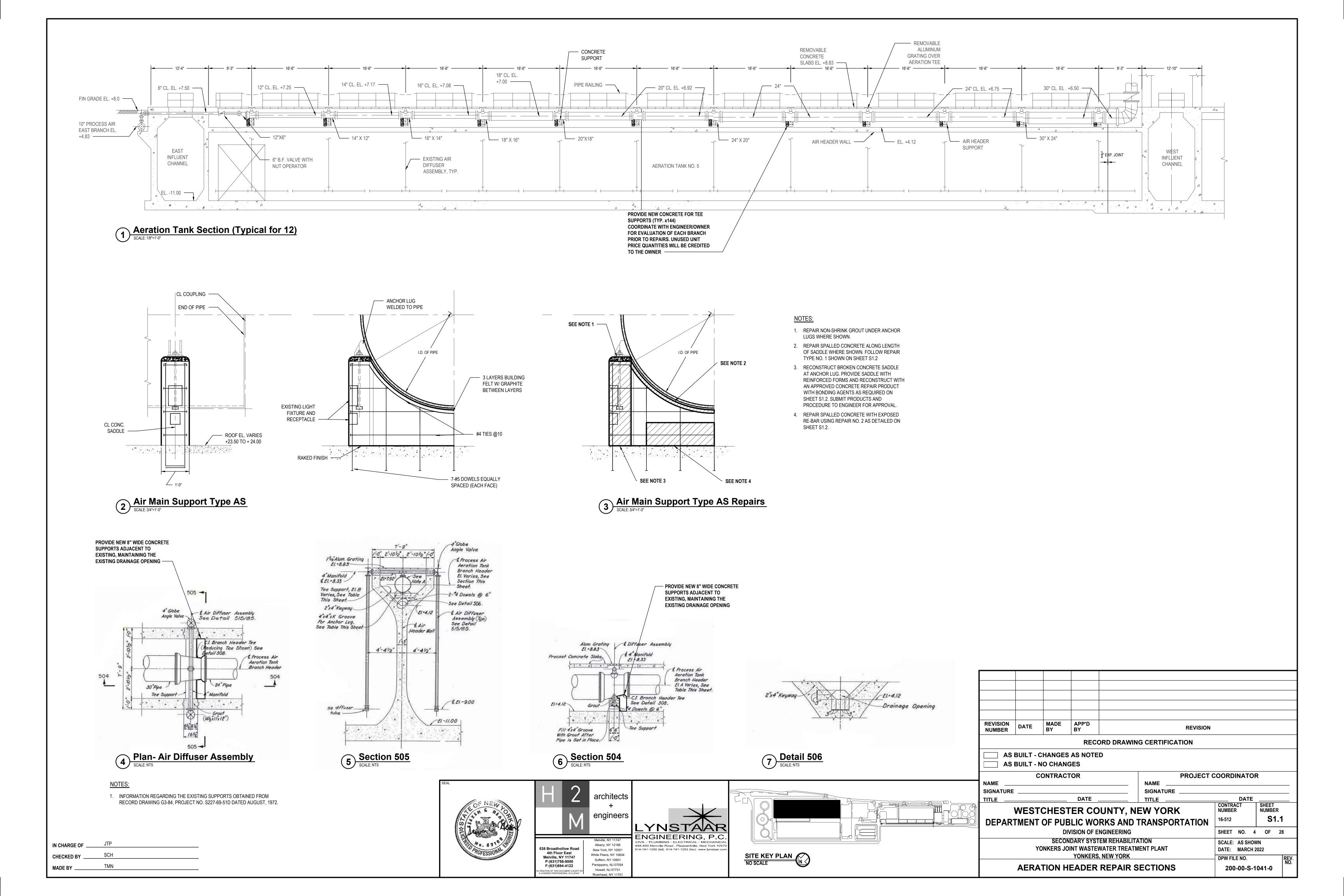
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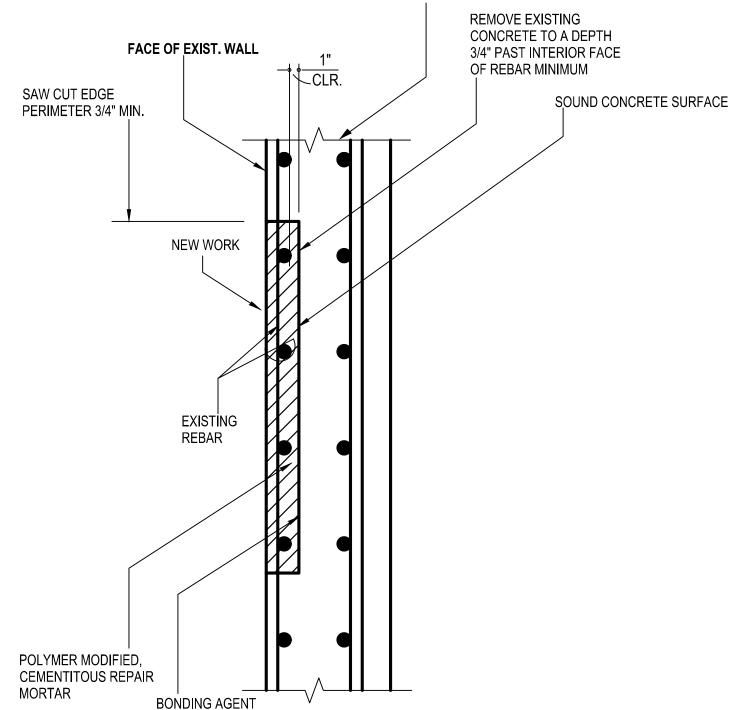
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REMOVED SPALLED AND DAMAGED EXIST. CONC. TANK WALL CONCRETE DOWN TO SOUND CONCRETE AND REINFORCEMENT POLYMER MODIFIED, CEMENTITOUS REPAIR MORTAR **BONDING AGENT** 1" MAX. SAW CUT EDGĖ PERIMETER 3/4" MIN.

FACE OF EXIST. WALL



EXIST. CONC. TANK WALL AND REINFORCEMENT

GENERAL NOTES:

TO THE OWNER.

TO BE REQUIRED BY THE ENGINEER.

1. VERIFY ALL DIMENSIONS BY MEASUREMENTS AT THE JOB SITE AND TAKE MEASUREMENTS

DISCREPANCY BETWEEN THE DRAWINGS AND THE MEASURED DIMENSIONS OF THE

NECESSARY TO VERIFY THE DRAWINGS AND TO PERFORM THE WORK PROPERLY. ANY

EXISTING SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. NO WORK SHALL

PROCEED UNTIL SUCH DISCREPANCY HAS BEEN RECTIFIED INCLUDING BUT NOT LIMITED TO FABRICATION OF MATERIALS. SUCH DISCREPANCIES BETWEEN THE DRAWINGS AND THE

MEASURED DIMENSIONS SHALL NOT BE THE REASONS FOR ANY EXTRA COST OR DELAY IN

THE EXECUTION OF THE WORK AND THE WORK SHALL BE PERFORMED AT NO EXTRA COST

CONTRACTOR ALONE IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND

SHALL INCLUDE BUT NOT BE LIMITED TO DESIGN AND INSTALLATION OF BRACING, SHORING FOR

CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, FORMS AND SCAFFOLDING, SHORING

OF SUPPORT WALLS AND OTHER TEMPORARY SUPPORTS AS REQUIRED. ANY DAMAGE TO THE

STRUCTURE IF OCCURRED SHALL BE RECTIFIED TO THE SATISFACTION OF THE OWNER AT NO

ADDITIONAL COST TO THE OWNER. SCHEDULE THE WORK IN CONSULTATION WITH THE OWNER

AND IN SUCH A WAY AS TO MINIMIZE THE CONFLICT OF THE OPERATION OF THE FACILITY.

COMPLY WITH OSHA AND OTHER GOVERNING BODIES HAVING JURISDICTION AT THE SITE.

3. IN CASE OF ANY DAMAGE TO THE CONSTRUCTION BY THE CONTRACTOR, REPAIR THE SAME TO

4. INFORM THE ENGINEER OF ANY DEMOLITION, ALTERATIONS REQUIRED OR INTERFERENCES

NOT SHOWN ON THE DRAWINGS FOR RESOLUTION. THE CONTRACTOR SHALL ALLOW 7 WORKING DAYS FOR RESOLUTION OF THE CONDITION UNLESS ADDITIONAL TIME IS STATED

5. TYPICAL DETAILS ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT

ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY

WHETHER OR NOT DETAILS ARE REFERENCED AT EACH LOCATION. NOTIFY ENGINEER OF

THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.

CONFLICTS REGARDING APPLICABILITY OF TYPICAL DETAILS.

SAFETY OF STRUCTURE AND WORKERS DURING THE ENTIRE CONSTRUCTION PERIOD, WHICH

THE CONTRACT STRUCTURAL DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE

Type 1 - Repair of Concrete - Rebar Not Exposed

SCALE: 1"=1'-0"

Type 2 - Repair of Concrete - Rebar Exposed - No Replacement of Rebar

SAW CUT PERIMETER 3/4" MIN. MINIMUM SPLICE NEW REBAR TO FACE OF EXIST. WALL LENGTH MATCH EACH DAMAGED EXIST. CONC. TANK WALL #3 EXISTING CLR. AND REINFORCEMENT REBAR IF REQUIRED #9 45" **§** BONDING AGENT **EXISTING** REBAR

POLYMER MODIFIED. **CEMENTITOUS REPAIR** MORTAR

1. 1'-0" OR AS REQUIRED, PROVIDE LAP LENGTH AS DETAILED IN MINIMUM SPLICE LENGTH CHART, THIS SHEET.

NEW REINF. #4, MATCH EXISTING BAR SIZE AND SPACING IF GREATER THAN #4

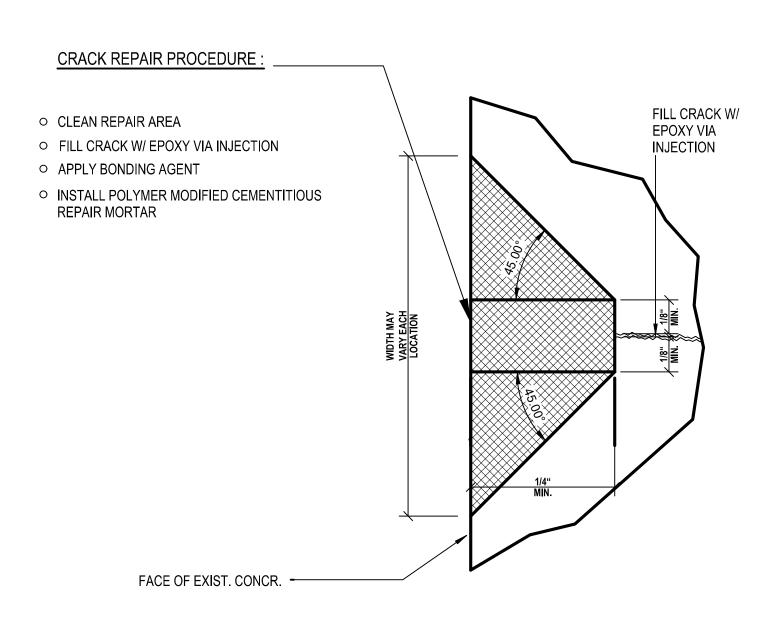
2. DETAIL TO BE USED IF PROPER COVER OF RE-BAR IS NOT OBTAINED. RE-BAR TO BE CUT, REMOVED AND REPLACED IN PROPER LOCATION TO PROVIDE PROPER CONCRETE COVER.

Type 3 - Repair of Concrete - Corroded Rebar

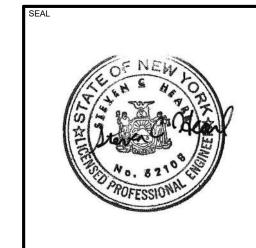
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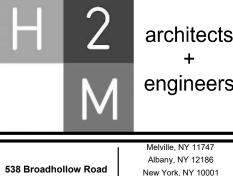
I. ALL POLYMER MODIFIED CONCRETE REPAIR WORK SHALL BE IN CONFORMANCE TO MANUFACTURER'S INSTRUCTIONS. CONTRACTOR SHALL HAVE MANUFACTURER'S REPRESENTATIVE ON SITE FOR SITE EVALUATION AND INSTALLATION OBSERVATION.

INSTALL EPOXY REPAIR PRODUCT IN ACCORDANCE WITH MANUFACTURER'S. INSTRUCTION. CONTRACTOR SHALL HAVE MANUFACTURER'S REPRESENTATIVE ON SITE FOR EVALUATION, RECOMMENDATION AND INSTALLATION OBSERVATION.



Repair of Concrete Wall Cracks





White Plains, NY 10604

Suffern, NY 10901

Parsippany, NJ 07054

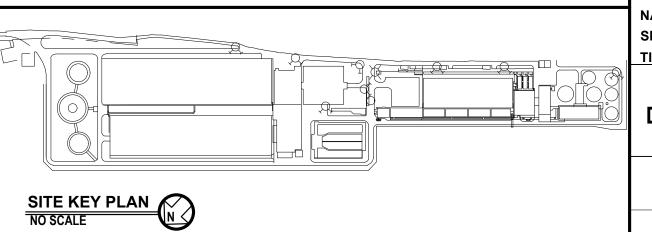
Howell, NJ 07731

4th Floor East

P:(631)756-8000

F:(631)694-4122





CONCRETE REINFORCING NOTES:

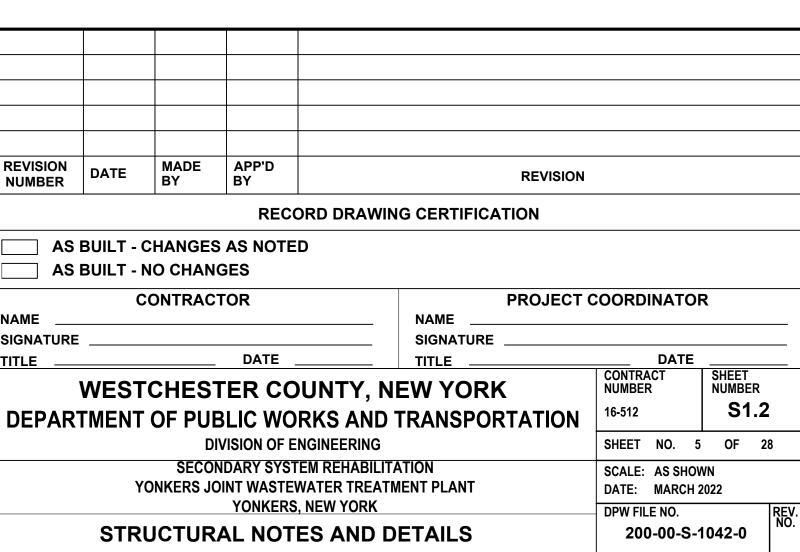
- 1. PROVIDE DETAILING, FABRICATION, AND INSTALLATION OF REINFORCING AND ACCESSORIES IN ACCORDANCE WITH ACI 315 AND ACI 318.
- COORDINATE PLACEMENT OF CAST-IN-PLACE EMBEDS AND ANCHOR RODS. SET ANCHOR RODS WITH A TEMPLATE. SECURELY ATTACH EMBEDDED ITEMS TO FORMWORK OR REINFORCING.
- MAINTAIN THE FOLLOWING CONCRETE COVERAGE FOR REINFORCING STEEL UNLESS NOTED OTHERWISE:
 - A. CONCRETE CAST AGAINST EARTH: 3 INCHES
 - B. CONCRETE EXPOSED TO WEATHER
 - NO. 6 AND LARGER: 2 INCHES
 - NO. 5 AND SMALLER: 1 1/2 INCHES
 - C. CONCRETE NOT EXPOSED TO WEATHER OR CONCRETE NOT IN CONTACT WITH THE GROUND:
 - SLABS AND WALLS
 - NO. 11 AND SMALLER: 1 INCH
- 4. DO NOT WELD OR BEND REINFORCEMENT IN THE FIELD UNLESS SPECIFICALLY SHOWN OR APPROVED BY STRUCTURAL ENGINEER.
- 5. WHERE REQUIRED. PROVIDE DOWELS TO MATCH SIZE AND SPACING OF MAIN REINFORCING.
- PROVIDE CLASS "B" REINFORCEMENT SPLICES FOR CONTINUOUS REINFORCEMENT PROVIDE STANDARD 90- DEGREE HOOKS IN ACCORDANCE WITH ACI 318, UNLESS NOTED OTHERWISE.
- WHEN SPECIFICALLY APPROVED, PROVIDE WELDED REINFORCEMENT IN ACCORDANCE WITH ASTM A 706 GRADE 60. USE LOW HYDROGEN ELECTRODES FOR WELDING OF REINFORCEMENT IN CONFORMANCE WITH "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL", AMERICAN WELDING SOCIETY, AWS D12.1 PROVIDE ASTM A615 GRADE 40 REINFORCING BARS WHERE DETAILED BARS ARE TO BE WELDED TO A STEEL SECTION.
- PROVIDE CONTINUOUS HORIZONTAL WALL REINFORCEMENT WITH 90- DEGREE BENDS AND EXTENSIONS AT CORNERS AND INTERSECTIONS AS SHOWN ON TYPICAL BAR PLACING DETAILS.

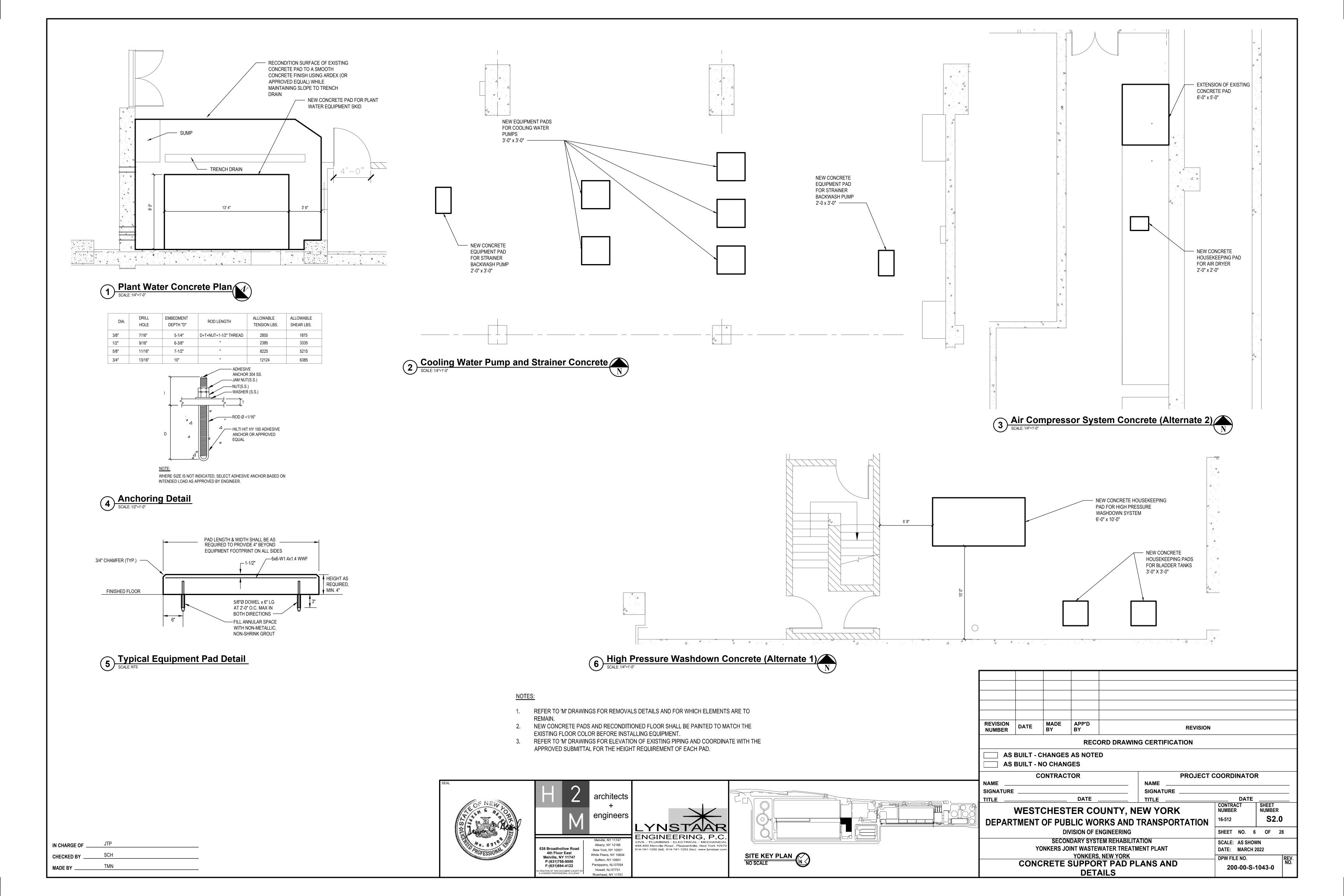
CONCRETE NOTES:

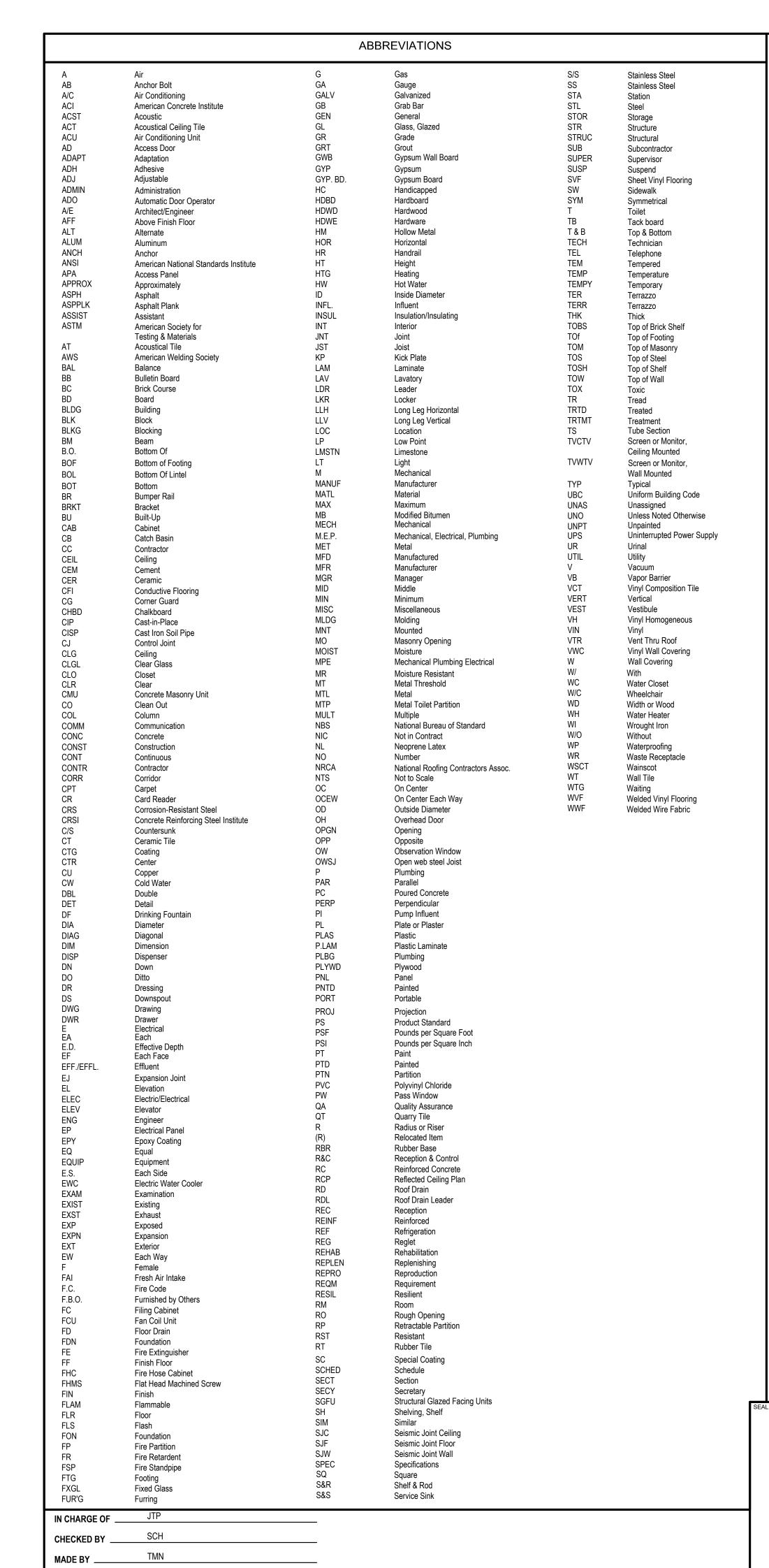
1. PROVIDE BATCH MIXING, TRANSPORTATION, PLACING AND CURING OF CONCRETE IN ACCORDANCE WITH RECOMMENDATIONS OF ACI 301 AND ACI 318. USE TYPE II PORTLAND CEMENT UNLESS NOTED OTHERWISE. PROVIDE ADMIXTURES AND SPECIAL REQUIREMENTS AS SPECIFIED.

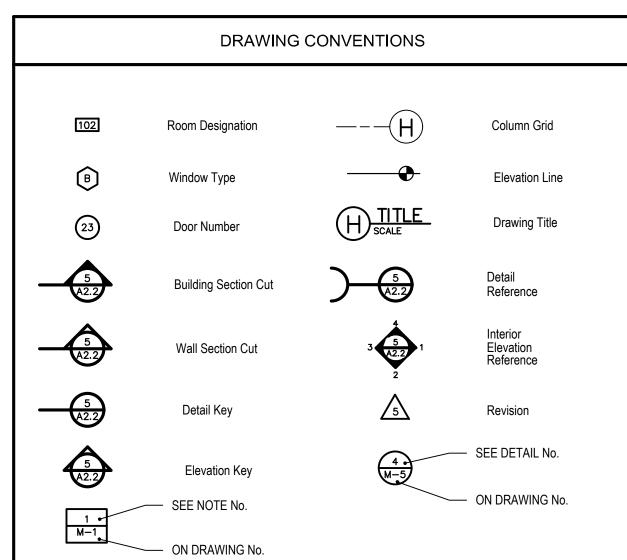
A. ALL CONCRETE SHALL BE NORMAL WEIGHT (145 PCF) CONCRETE F'C = 4000 PSI AT 28 DAYS.

- 2. PROVIDE CONCRETE MIXES DESIGNED BY A QUALIFIED TESTING LABORATORY AS PER ACI 301 FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD
- 3. CHAMFER EXPOSED CONCRETE EDGES 3/4 INCH UNLESS NOTED OTHERWISE.
- 4. WIRE BRUSH AND CLEAN CONSTRUCTION JOINTS PRIOR TO POURING NEW CONCRETE.
- PROVIDE ADEQUATE STRUCTURAL FRAMING FOR MECHANICAL OPENINGS THROUGH, SLABS,
- AND WALLS. PROVIDE CONSTRUCTION AND CONTROL JOINTS AS REQUIRED BY A.C.I.
- CODE AND AS INDICATED ON DRAWINGS. HORIZONTAL CONSTRUCTION JOINTS ARE NOT ALLOWED UNLESS SPECIFICALLY NOTED. SUBMIT PLAN TO ENGINEER INDICATING
- PROPOSED CONTROL AND EXPANSION JOINT LOCATIONS IN CONCRETE SLABS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- PROVIDE THREE (3) COMPONENT, SOLVENT FREE MOISTURE TOLERANT EPOXY-MODIFIED CEMENTITIOUS PRODUCT. PRODUCT ARMATEC 110 EPOCEM AS MANUFACTURED BY SIKA CORP. OR SPECIFICALLY APPROVED EQUAL.

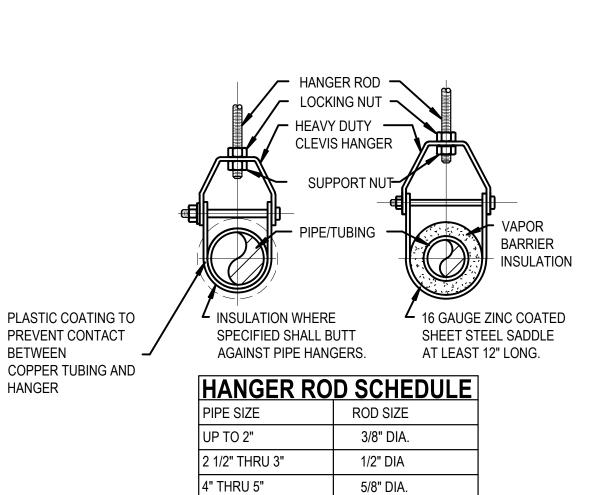








SYMBOL LEGEND							
90° ELBOW		PLUG VALVE					
45° ELBOW		PLUG VALVE WITH SOLENOID					
ELBOW DOWN		OPERATOR					
ELBOW UP		BUTTERFLY VALVE					
TEE		CHECK VALVE					
TEE UP		REDUCER					
CROSS		BALL VALVE					



Parsippany, NJ 07054

Howell, NJ 07731

F:(631)694-4122

PIPING MATERIAL	MAX. HORIZONTAL (FT)	MAX. VERTICAL (FT)
ABS PIPE	4	10
ALUMINUM TUBING	10	15
BRASS PIPE	10	10
CAST-IRON PIPE	5	15
COPPER OR COPPER ALLOY PIPE	12	10
COPPER OR COPPER ALLOY PIPE 1 1/4"Ø OR SMALLER	6	10
COPPER OR COPPER ALLOY PIPE 1 1/2"Ø OR LARGER	10	10
PEX	2.67	10
CPVC 1" OR SMALLER	3	10
CPVC 11/4" OR LARGER	4	10
STEEL PIPE	12	15
POLYETHYLENE /ALUMINUM/ POLYETHYLENE	2.67	4
PVC PIPE	4	10
STAINLESS STEEL DRAINAGE	10	10
D.I. UP TO 20"Ø	-	-

HANGER SPACING

PIPE COLOR CODING PAINT SCHEDULE

COLOR

GREY

BLUE

PURPLE

YELLOW

RED

BLACK

GREEN

PURPLE

1. ALL PIPING, FITTINGS AND VALVES CONVEYING RAW OR TREATED SEWAGE, SLUDGE OR AIR SHALL BE

2. ALL NEW EXPOSED PLUMBING AND PROCESS PIPING, FITTINGS AND VALVES SHALL BE PAINTED UNLESS

BLUE WITH 1" WIDE BLACK BANDS

BLUE WITH 1" WIDE BLACK BANDS

BROWN WITH 1" WIDE BLACK BANDS

APPLICATION

WASHWATER

DOMESTIC WATER

PLANT EFFLUENT

FUEL OIL/DIESEL

COMPRESSED AIR

PAINTING NOTES

POLYMER

WASTEWATER REUSE

SODIUM HYPOCHLORITE

PLUMBING DRAINS AND VENTS

CONSIDERED 'PROCESS PIPING'.

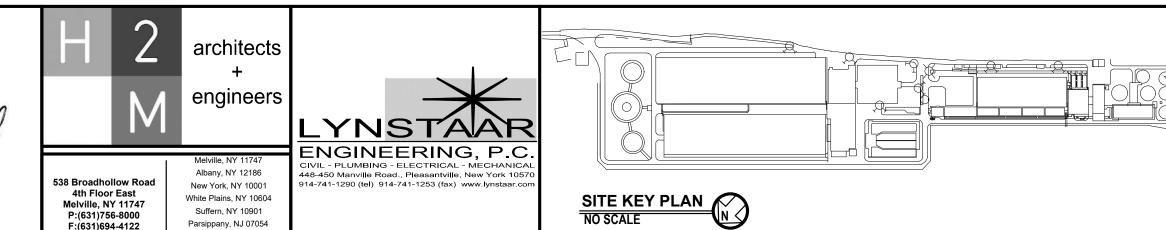
OTHERWISE NOTED

SEWAGE

SLUDGE

HANGER SPACING NOTES:

1. HANGER SPACING BASED ON COPPER AND STEEL PIPE WITHOUT VALVES OR OTHER EQUIPMENT. INCREASED LOAD DUE TO VALVE AND EQUIPMENT SHALL REQUIRE CLOSER SPACING OF HANGERS.



NOTE

- ALL PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH THE STATE PLUMBING CODE, STATE FIRE CODE, STATE MECHANICAL CODE AND THE STATE FUEL GAS CODE.
- APPLY FOR AND SECURE ALL REQUIRED PERMITS AND INSPECTIONS AND BE RESPONSIBLE TO PAY ALL COSTS ASSOCIATED WITH REQUIRED PERMITS AND INSPECTIONS.
- COORDINATE ALL WORK WITH THAT OF OTHER TRADES.

GENERAL NOTES:

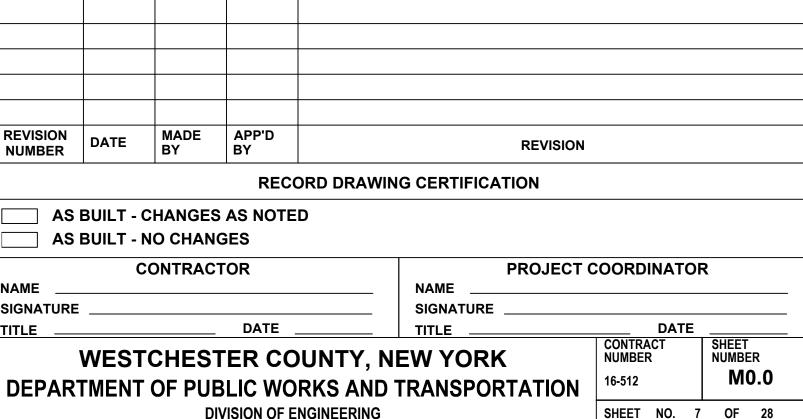
- THE DESIGN DRAWINGS ARE SCHEMATIC IN NATURE, EXACT ROUTING OF PIPING AND INSTALLATION OF VALVES, ACCESS DOORS, CLEAN OUTS, ETC. SHALL BE COORDINATED IN FIELD AS DICTATED BY THE CONDITIONS ENCOUNTERED.
- ALL GAS-FIRED EQUIPMENT SHALL BE SUPPLIED WITH GAS PIPING AS PER THE STATE FUEL GAS CODE. EACH PIECE OF EQUIPMENT SHALL HAVE A DIRT LEG, UNION AND GAS COCK. PROVIDE A VENTED REGULATOR IF EQUIPMENT REQUIRED LOWER THAN LINE GAS PRESSURE.
- ALL CONNECTIONS TO SERVICE PROVIDED BY OTHERS SHALL BE COORDINATED WITH THE OWNER AND UTILITY COMPANIES AS REQUIRED. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NEW SERVICES, CONNECTIONS TO NEW PIPING AS PROVIDED BY LOCAL UTILITY COMPANIES AND ALL UTILITY CONTACTS RELATED TO FIELD CONDITIONS AND WORK.
- ALL PENETRATIONS THROUGH FLOOR ASSEMBLIES, CORRIDOR WALLS AND OTHER SIMILAR FIRE RATED PARTITIONS SHALL
- RECEIVE CODE COMPLIANT FIRE STOPPING TO MAINTAIN THE FIRE RATING OF THE ASSEMBLY PENETRATED INSTALL FIXTURES AND EQUIPMENT WITH VALVES, UNIONS, ETC. TO ALLOW FOR EASE OF SERVICE OR REMOVAL
- 10. ALL SLAB AND FOOTING PENETRATIONS SHALL INCLUDE LINK SEAL TYPE PROTECTION FOR WATER RESISTANT SEALS.
- CUT AND PATCH AS REQUIRED. PATCHING SHALL BE ROUGH PATCH IN PREPARATION FOR FINISH. PATCHING SHALL INCLUDE PROPER FLASHING AND COUNTER FLASHING OF ALL VENT PENETRATIONS, ROOF DRAINS, PIPE PORTALS, ETC. AS REQUIRED TO SEAL ALL PLUMBING ROOF PENETRATIONS. ALL ROOF PENETRATION REPAIR SHALL BE BY A QUALIFIED PROFESSIONAL AND SHALL NOT VOID ANY GUARANTEES ASSOCIATED WITH ROOFING MATERIAL OR INSTALLATIONS.
- 12. ALL MATERIALS, EQUIPMENT AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. COORDINATE EXACT LOCATIONS TO ACCOMMODATE ALL REQUIRED CLEARANCES AND OBSERVE ALL REQUIREMENTS FOR VALVING AND CONNECTIONS.
- 13. ALL DOMESTIC POTABLE WATER PIPING SHALL BE FLUSHED, DISINFECTED AND THE WATER TESTED IN ACCORDANCE WITH THE NYS PLUMBING CODE. PROVIDE CERTIFICATE OF PERFORMANCE AND LABORATORY TEST REPORT TO LOCAL AUTHORITIES FOR THEIR APPROVAL.
- 14. WORK SHOWN IS NEW UNLESS SPECIFICALLY NOTED OR OTHERWISE INDICATED AS EXISTING.
- 15. DO NOT SCALE MEASURE ANY DRAWING. VERIFY THE FIGURES, DIMENSIONS & DESIGN INTENT SHOWN ON THE DRAWINGS BEFORE BEGINNING LAYOUT OF THE WORK. REPORT ANY ERRORS, INACCURACIES, MISSING DIMENSIONAL REQUIREMENTS OR CONFLICTS TO THE ENGINEER IN WRITING BEFORE BEGINNING ANY WORK.
- VERIFY LAYOUT COMPATIBILITY WITH ALL EXISTING CONDITIONS BEFORE BEGINNING WORK.
- 17. ALL WORK SHOWN IS INCLUDED AS WORK OF CONTRACT UNLESS OTHERWISE NOTED
- 18. ALL STORAGE OF CONSTRUCTION MATERIAL, EXCESS EXCAVATED MATERIALS AND CONSTRUCTION STAGING AND OVERNIGHT PARKING OF CONSTRUCTION VEHICLES SHALL BE LIMITED TO THE PROJECT SITE PROPERTY LIMITS AS SHOWN ON THE PLANS.
- 19. THE ENGINEERS ROLE IS NOT TO SUPERVISE, DIRECT, OR HAVE CONTROL OVER THE MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION SELECTED OR USED BY THE CONTRACTOR FOR SECURITY OR SAFETY AT THE SITE, FOR SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL TO THE CONTRACTOR'S WORK IN PROGRESS, NOR ANY FAILURE OF THE CONTRACTOR TO COMPLY WITH LAWS AND REGULATIONS APPLICABLE TO THE CONTRACTOR'S FURNISHING AND PERFORMING THE WORK AS SHOWN AND/OR SPECIFIED.
- 20. ABBREVIATIONS AND SYMBOLS ON THIS SHEET DO NOT DEFINE THE SCOPE OF WORK.

MECHANICAL NOTES

- SUBMIT, FOR ENGINEER'S REVIEW AND APPROVAL, PIPING LAYOUT DRAWINGS TO A SCALE OF 1/4"=1'-0", LAYOUT DRAWINGS IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 013300-SUBMITTALS. USE THE DIMENSIONS OF EQUIPMENT AND VALVES BEING USED FOR THE PROJECT OR ACCOUNT FOR DIMENSIONAL DIFFERENCES IN EQUIPMENT.
- 2. PROVIDE SNAP-ON PLASTIC PIPE MARKERS WITH FLOW DIRECTION ARROWS UNDER PROVISIONS OF SECTION 220553.
- 3. PROVIDE ENGRAVED PLASTIC LAMINATE SIGNS (SECTION 220553) AT LOCATIONS SELECTED BY THE ENGINEER. ALL DANGER SIGNS SHALL BE ALUMINUM OSHA PLATES. ALL CAUTION AND WARNING SIGNS SHALL BE GRAPHIC OSHA SIGNS. THE FOLLOWING SIGNS SHALL BE PROVIDED, QUANTITY AS INDICATED IN PARENTHESIS:

"CAUTION - THIS EQUIPMENT STARTS AND STOPS AUTOMATICALLY" (2) "NOTICE - KEEP AREA CLEAN" (2)

4. ALL MOUNTING HARDWARE AND SUPPORTS, REGARDLESS OF LOCATION AND/OR APPLICATION, SHALL BE 304 S.S.

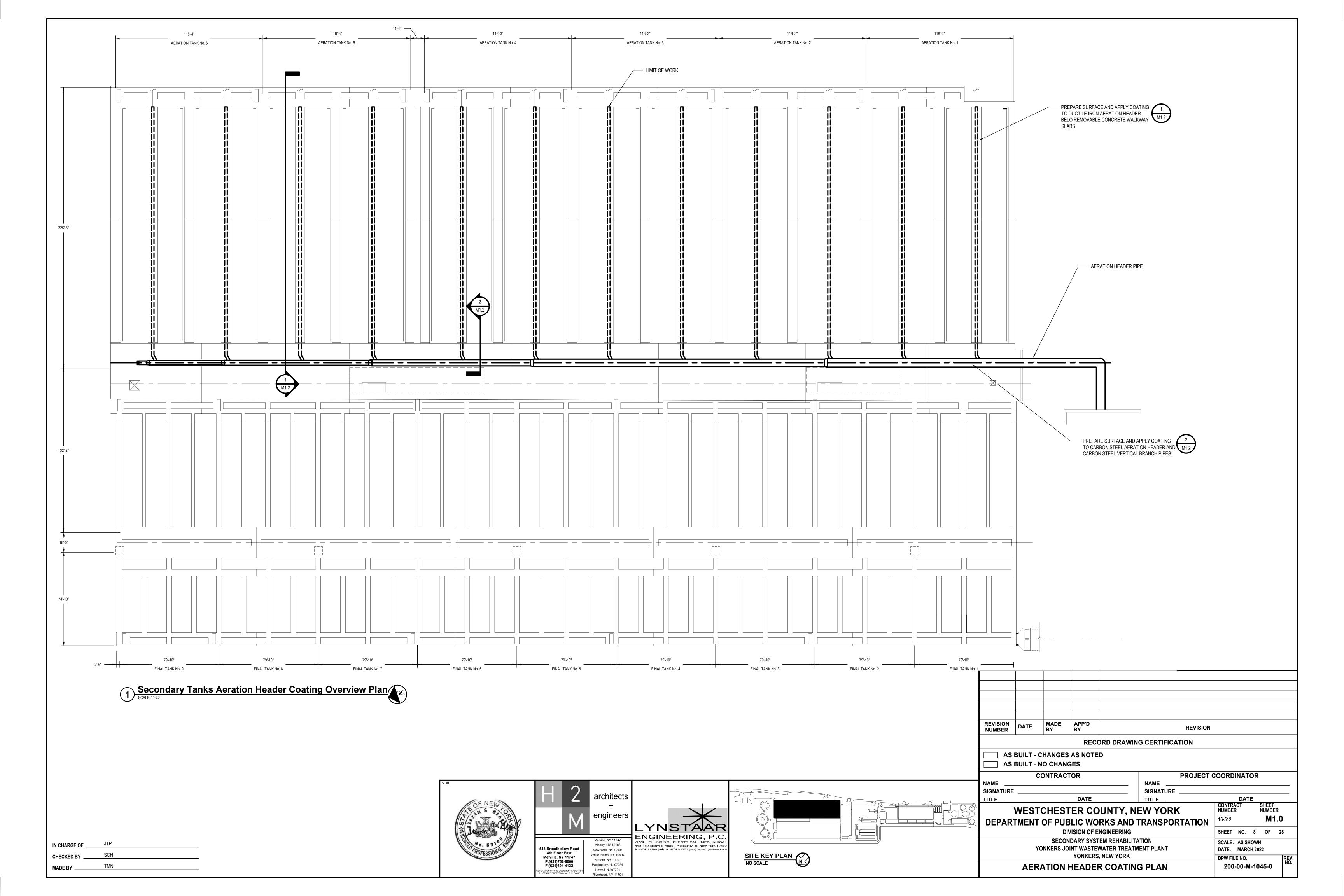


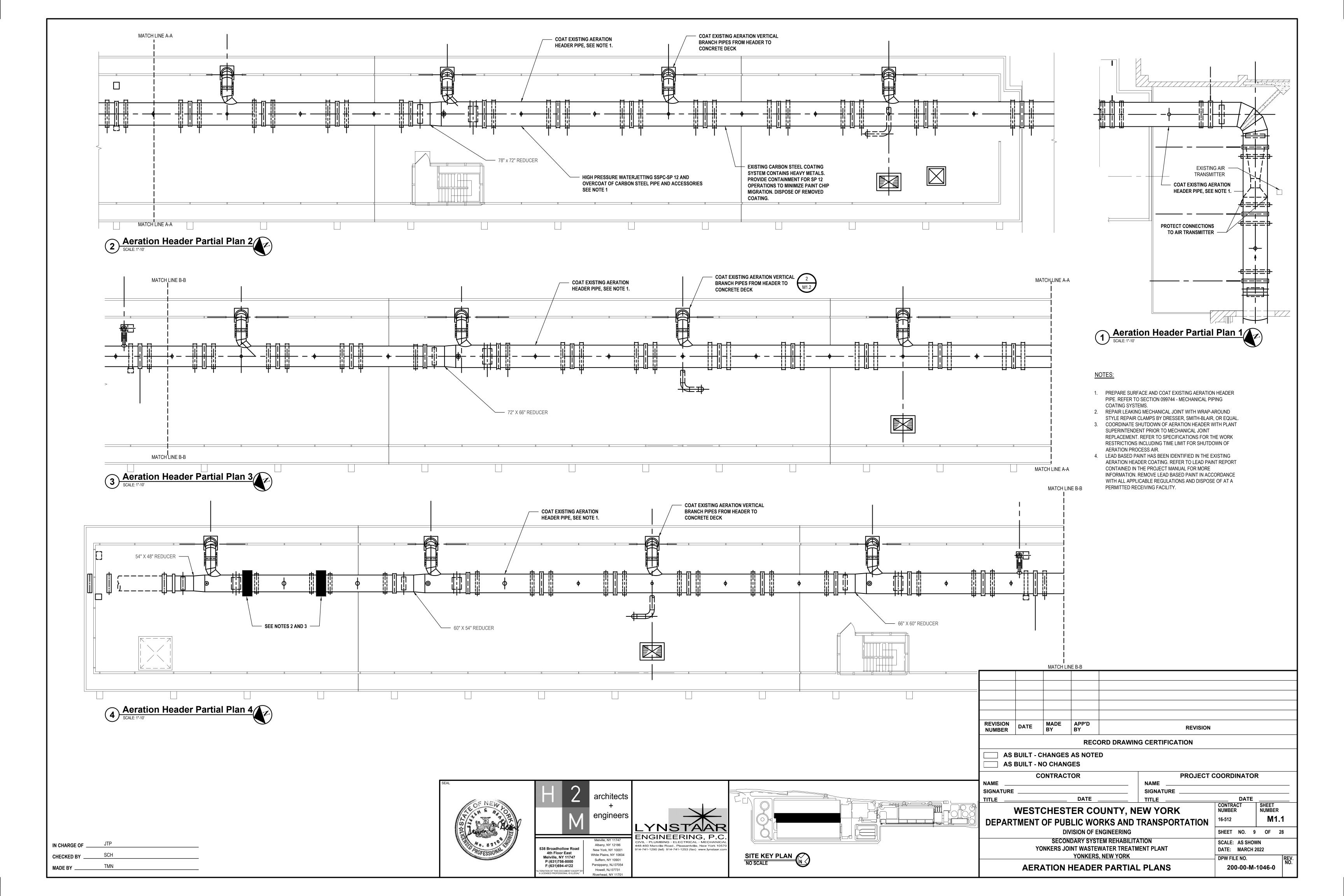
DIVISION OF ENGINEERING

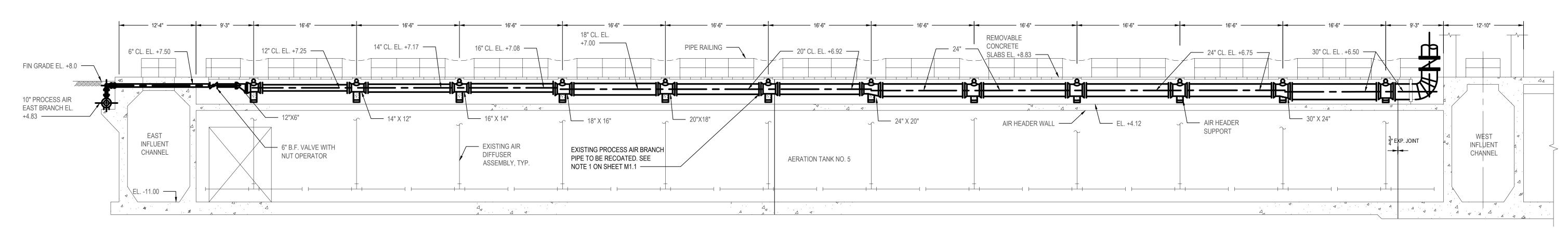
MECHANICAL LEGEND, SYMBOLS, ETC

SECONDARY SYSTEM REHABILITATION YONKERS JOINT WASTEWATER TREATMENT PLANT YONKERS, NEW YORK

SCALE: AS SHOWN DATE: MARCH 2022 DPW FILE NO. 200-00-M-1044-0







Aeration Tank Section (Typical for 12) SCALE: 1/8"=1'-0"

NOTES:

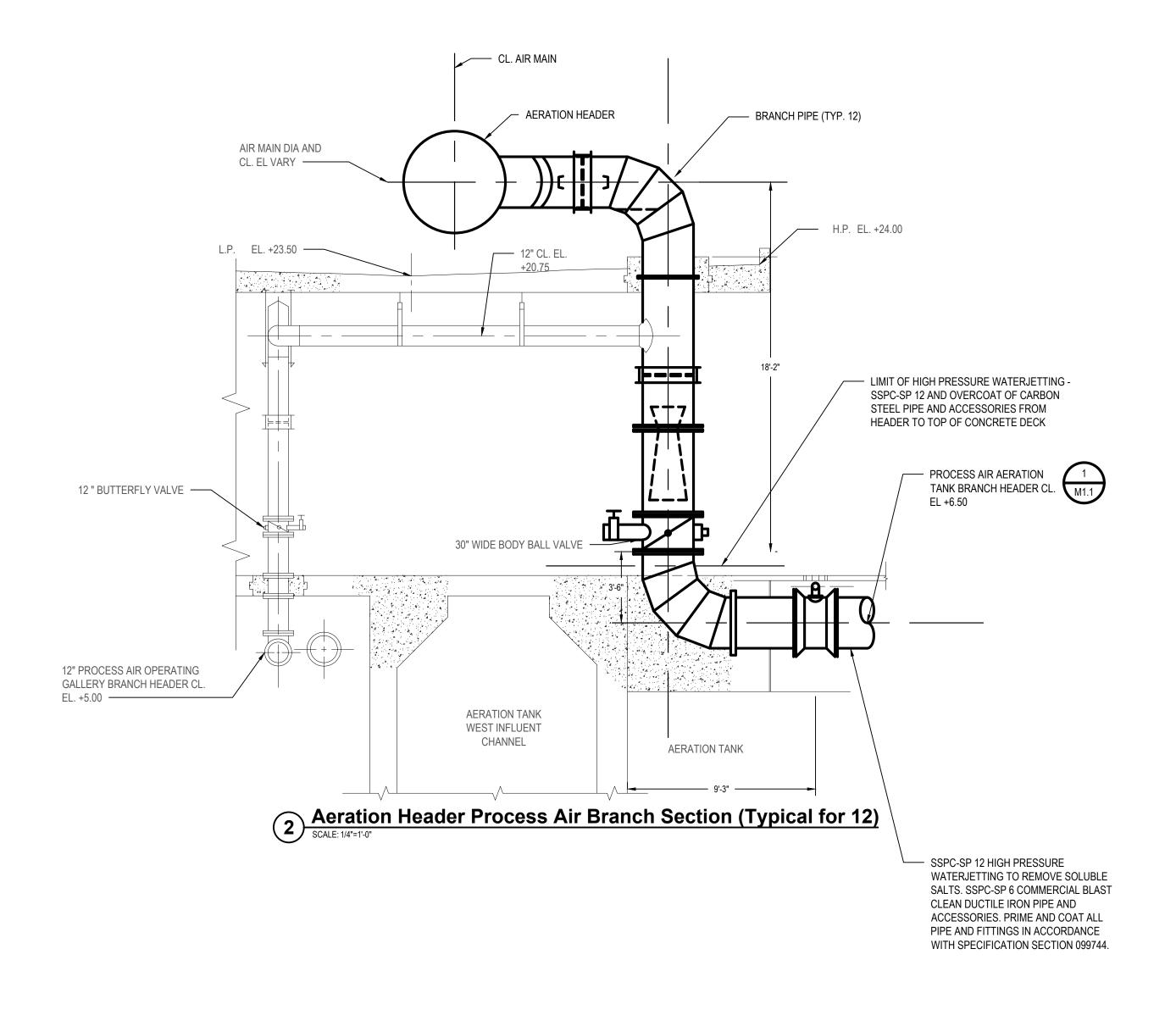
IN CHARGE OF

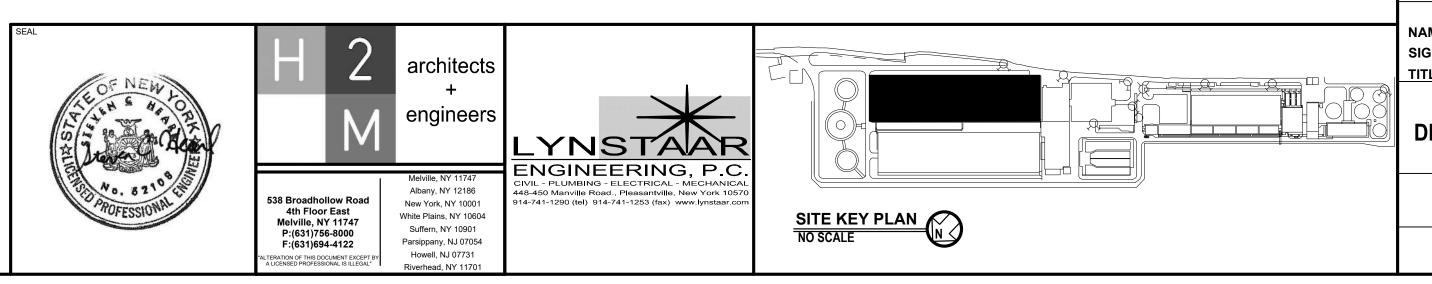
CHECKED BY

TMN

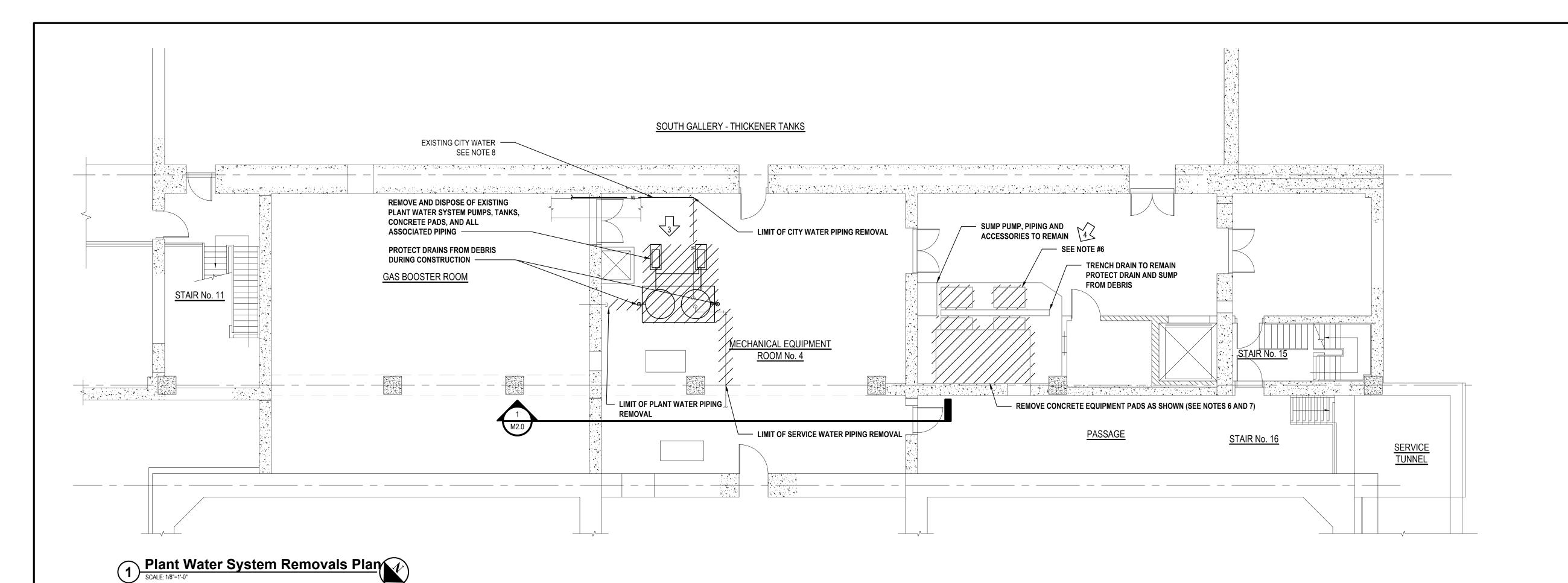
- 1. NEW COATING SYSTEM SHALL BE COMPLETED PRIOR TO CONCRETE REHABILITATION WORK.
- 2. CONTRACTOR RESPONSIBLE FOR MAINTAINING PROPER CURING CONDITIONS FOR THE NEW COATING INCLUDING, BUT NOT LIMITED TO, MOISTURE AND TEMPERATURE. PROVIDE ALL NECESSARY LABOR AND

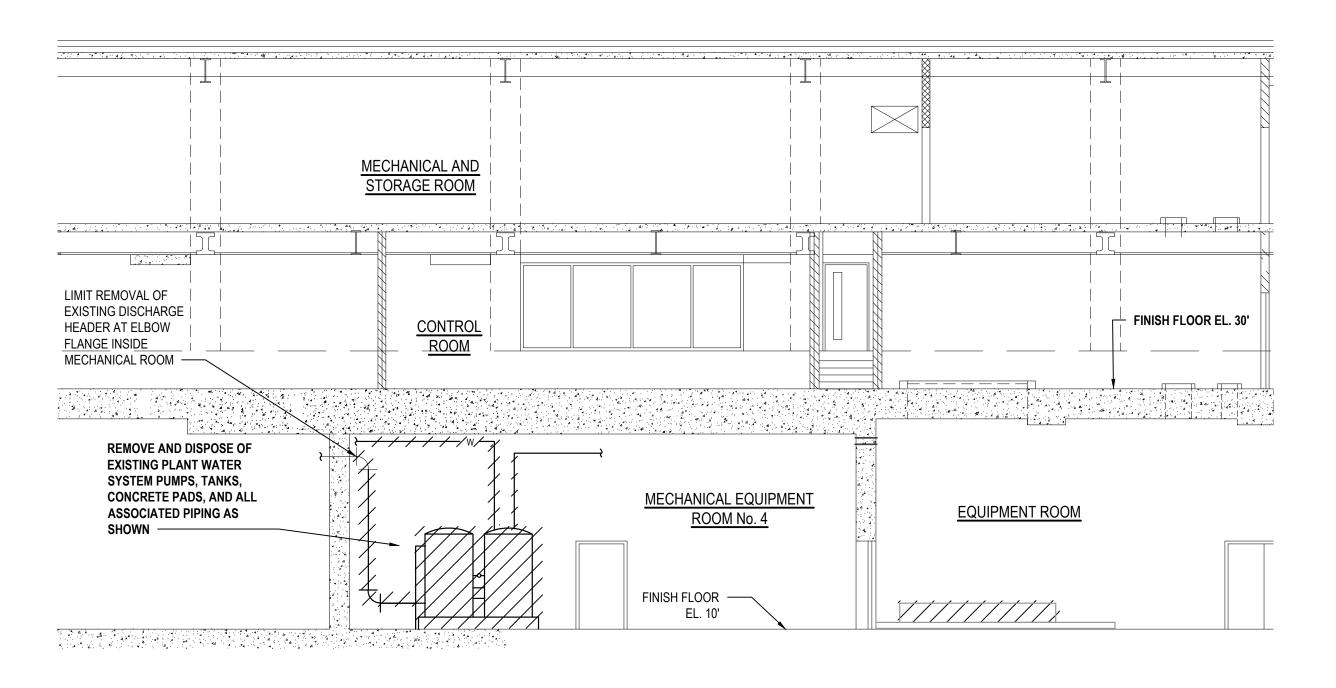
EQUIPMENT TO ENSURE THESE ENVIRONMENTAL CONDITIONS ARE MAINTAINED FOR FULL CURING TIME.





REVISION NUMBER DATE MADE APP'D BY **REVISION** RECORD DRAWING CERTIFICATION AS BUILT - CHANGES AS NOTED AS BUILT - NO CHANGES CONTRACTOR PROJECT COORDINATOR NAME NAME ___ SIGNATURE **SIGNATURE** DATE SHEET NUMBER NUMBER DATE **WESTCHESTER COUNTY, NEW YORK** M1.2 **DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION** SHEET NO. 10 OF 28 **DIVISION OF ENGINEERING** SECONDARY SYSTEM REHABILITATION SCALE: AS SHOWN YONKERS JOINT WASTEWATER TREATMENT PLANT DATE: MARCH 2022 YONKERS, NEW YORK DPW FILE NO. **AERATION HEADER COATING SECTIONS** 200-00-M-1047-0

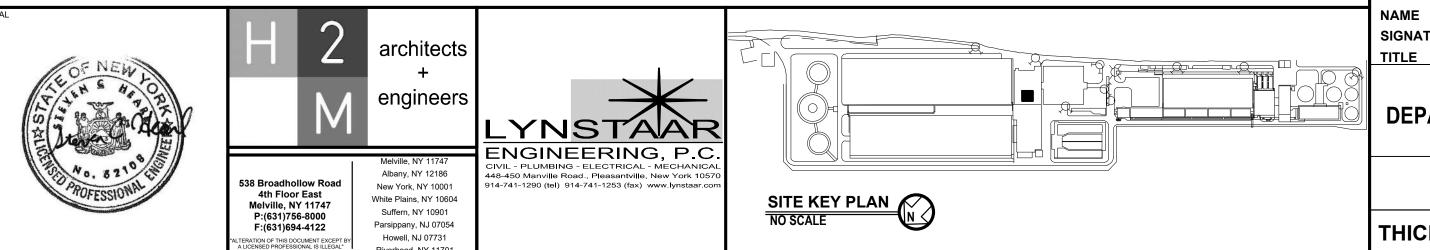




Plant Water System Removals Section
SCALE: 1/8"=1'-0"

IN CHARGE OF

CHECKED BY



DEMOLITION NOTES:

- ALL VOIDS CREATED FROM REMOVAL OF EXISTING PIPING OR EQUIPMENT THROUGH A WALL/SLAB SHALL BE FILLED WITH NON-SHRINK GROUT UNLESS OTHERWISE NOTED.
- 2. REMOVAL OF CALLED OUT OR HATCHED EQUIPMENT SHALL INCLUDE REMOVAL AND DISPOSAL OF EQUIPMENT AND ALL ASSOCIATED ACCESSORIES INCLUDING, BUT NOT LIMITED TO, PIPING, VALVES, FITTINGS, SUPPORTS, MAINTENANCE PADS, AND CONTROL EQUIPMENT UNLESS OTHERWISE NOTED.
- 3. DEMOLITION DRAWINGS WERE OBTAINED FROM RECORDS SUPPLIED BY OTHERS. THE OWNER AND ENGINEER DO NOT GUARANTEE OR ACCEPT RESPONSIBILITY FOR DISCREPANCIES IN LOCATION AND SIZE SHOWN ON THE PLANS, NOR WILL ANY COMPENSATION BE MADE TO THE CONTRACTOR FOR ANY INCONVENIENCES CAUSED BY THE CONTRACTOR BY ENCOUNTERING THE AFOREMENTIONED DISCREPANCIES WHICH ARE INCORRECTLY SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING EXISTING CONDITIONS PRIOR TO COMMENCING THE WORK.
- 4. REVIEW ALL DEMOLITION WITH THE OWNER/ENGINEER TO CONFIRM DEMOLITION EXTENTS PRIOR TO BEGINNING THE WORK OF THIS PHASE. CLEARLY MARK ALL EQUIPMENT PIPING, VALVES, FITTINGS, SUPPORTS, MAINTENANCE PADS, CONTROL EQUIPMENT, ETC. SCHEDULED FOR DEMOLITION PRIOR TO BEGINNING THE WORK.
- 5. SCHEDULE AND PERFORM ALL DEMOLITION TO CONFORM WITH REQUIREMENTS SET FORTH IN SPECIFICATION SECTION 017000 MAINTENANCE OF PLANT OPERATIONS.

6. EQUIPMENT PAD REMOVALS

PAD SIZE	<u>CO</u>
8' x 14' x 2' 5' x 2' x 1'	
3' x 5' x 1'	

- 7. RECONDITION CONCRETE SURFACE UNDER REMOVED PADS TO A SMOOTH CONCRETE FINISH TO MATCH THAT OF THE LARGER 14' x 20' PAD.
- 8. CONTRACTOR TO COORDINATE POTABLE WATER SHUTDOWN WITH YONKERS JWWTP SUPERVISOR. PROVIDE VALVES SUCH THAT THE EXISTING AND NEW PLANT WATER SYSTEMS CAN BE UTILIZED DURING STARTUP PERIOD.

<u>LEGE</u>1

REMOVE AND DISPOSE

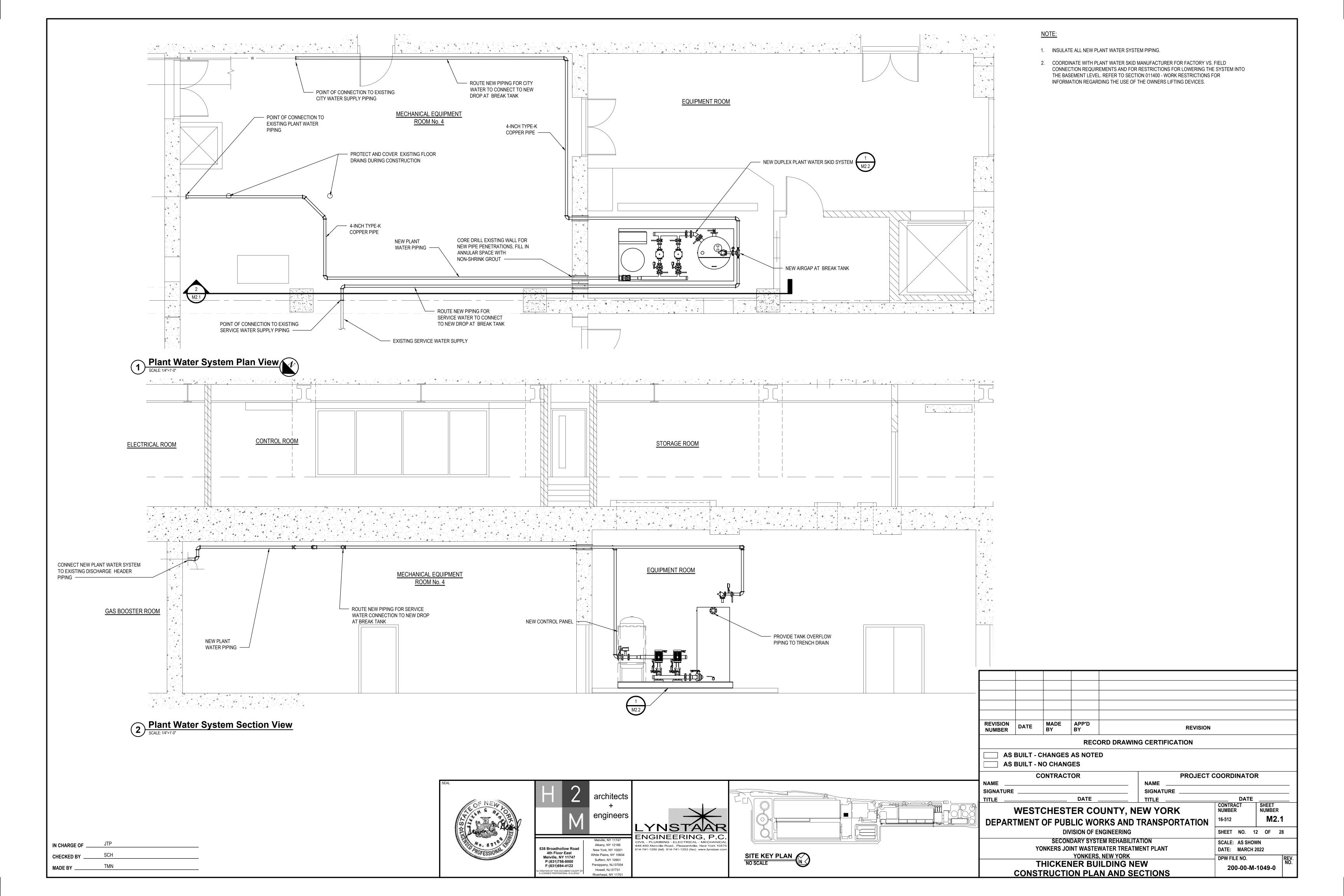


Existing Plant Water SystemSCALE: NTS



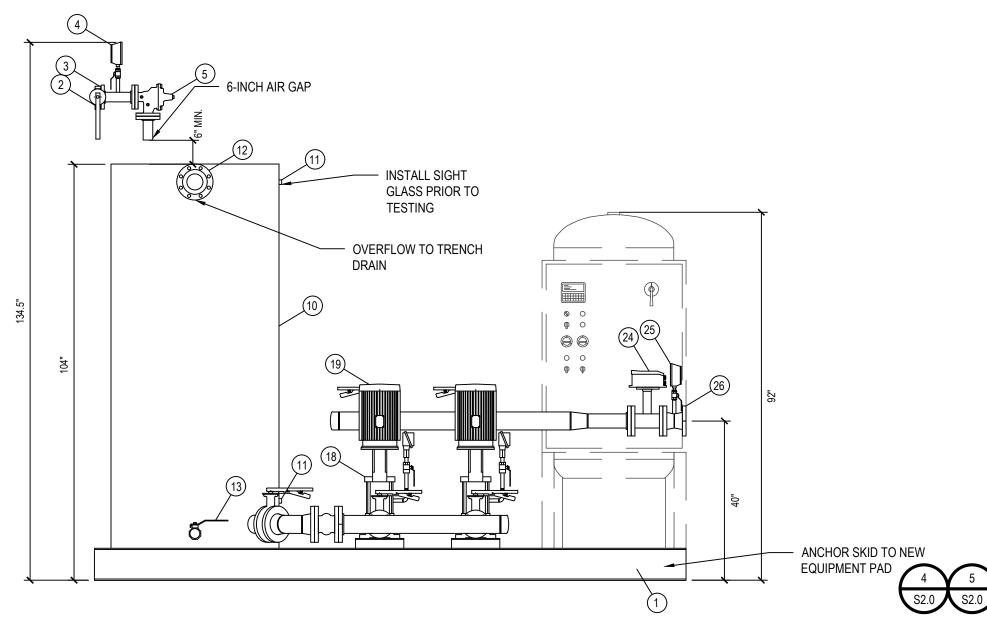
New Plant Water System Location SCALE: NTS

REVISION NUMBER	DATE	MADE BY	APP'D BY		REVISION			
RECORD DRAWING CERTIFICATION					G CERTIFICATION			
AS BUILT - CHANGES AS NOTED								
AS E	BUILT - N	O CHANG	SES					
	CC	ONTRACT	OR		PROJECT C	COORDINATOR	₹	
NAME								
SIGNATURE			DATE		SIGNATURE	DATE		
TITLE			-		TITLE	CONTRACT	SHEET	
· ·	WEST (CHEST	ER CO	UNTY, NI	EW YORK	NUMBER	NUMBER	
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION					16-512	M2.0)	
DIVISION OF ENGINEERING					SHEET NO. 1	1 OF 2	8	
SECONDARY SYSTEM REHABILITATION					SCALE: AS SHOWN			
YONKERS JOINT WASTEWATER TREATMENT PLANT						DATE: MARCH 2	2022	
YONKERS, NEW YORK						DPW FILE NO.		REV. NO.
THICKE	THICKENER BUILDING REMOVALS PLAN AND SECTIONS					200-00-M-	1048-0	



PLAN VIEW

SECTION VIEW



Plant Water Equipment

SCALE: 1/2"=1' 0"

PLANT WATER EQUIPMENT SCHEDULE

ITEM	QTY	SIZE	DESCRIPTION		
1	1	8"	SYSTEM SUPPORT, OPEN FRAMEWORK		
2	1	2"	TANK FILL CONNECTION	ANS	
3	1	2"	LUG PATTERN BUTTERFLY VALVE		
4	1	4.5"	INLET PRESSURE GAUGE		
5	1	2"	FLOAT OPERATED VALVE		
6	1	4"	TANK OPENING FOR FILLING		
7	1	10"	TANK OPENING FOR FLOAT		
8	1		INSPECTION HATCH		
9	1	4"	TANK OPENING FOR FLOAT SWITCHES		
10	1	500GAL	AIR BREAK TANK		
11	2	1/2"	SIGHT GLASS CONNECTION		
12	1	4"	OVERFLOW CONNECTION		
13	1	2"	DRAIN VALVE		
14	1	4"	LUG PATTERN BUTTERFLY VALVE		
15	1	4"	FLEX CONNECTOR		
16	4	2.5"	LUG PATTERN BUTTERFLY VALVE		
17	4	2.5"	GROOVED FLEX CONNECTOR		
18	2	2x2	VERTICAL MULTI STAGE PUMP		
19	2	7.5HP	TEFC VERTICAL C-FACE MOTOR		
20	2	2.5"	PUMP DISCHARGE PRESSURE GAUGE		
21	2		PUMP DISCHARGE PRESSURE SWITCH		
22	2	2.5"	PRESSURE REDUCING VALVE		
23	1	185GAL	200 PSI ASME BLADDER TANK		
24	1	3"	MAGNETIC FLOWMETER		
25	1	4.5"	SYSTEM DISCHARGE PRESSURE GAUGE		
26	1	3"	SYSTEM DISCHARGE CONNECTION		
27	1	30A	CONTROL PANEL		
28	1		PRESSURE TRANSMITTER		
29	2	2.75"	FLOAT SWITCH		
30	2	2.75"	FLOAT SWITCH		
31	1	1/2"	SAMPLE TAP		
32	1	3/4"	HOSE BIBB		

1. MINIMUM 42" TO ANY OBSTRUCTION REQUIRED BY NATIONAL ELECTRIC CODE IN FRONT OF CONTROL PANEL.

2. SUCTION AND DISCHARGE PIPING CONNECTIONS SHALL BE RESTRAINED AGAINST THRUST.

3. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

4. ALL SADDLES SHALL BE DETACHABLE.

5. PIPING ON PACKAGE SYSTEM SHALL BE 304 STAINLESS STEEL.

7. DIMENSIONAL TOLERANCE IS +/-1/2" UNLESS STATED OTHERWISE.

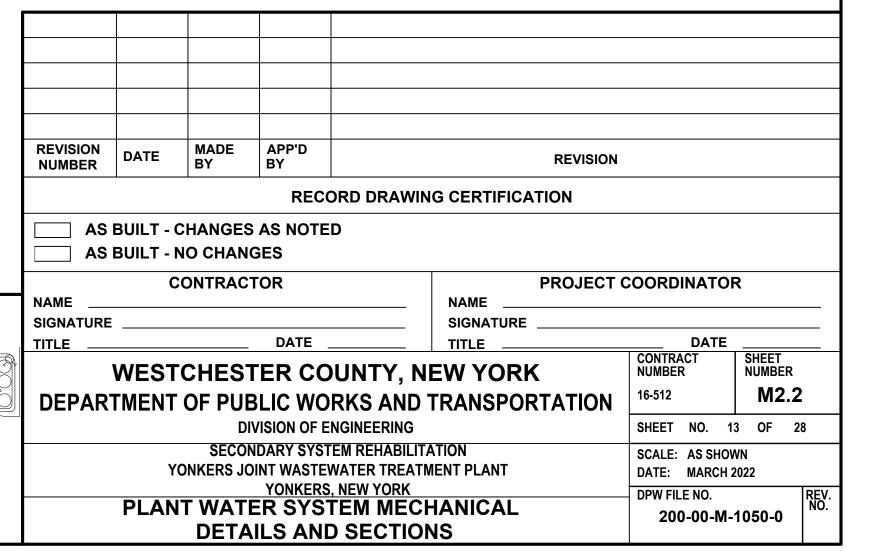
8. TWO OF FOUR BUTTERFLY VALVES SHIPPED LOOSE FOR FIELD INSTALLATION.

9. PRESSURE RELIEF VALVE SHIPPED LOOSE FOR FIELD INSTALLATION.

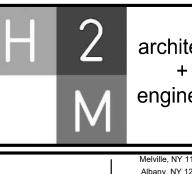
10. SKID SYSTEM SHALL BE TESTED AT FACTORY. SYSTEM COMPONENTS TO BE DISASSEMBLED AS NECESSARY AND SHIPPED TO THE PROJECT SITE FOR REASSEMBLY BY THE CONTRACTOR PRIOR TO FINAL FIELD TESTING.

11. FOUR EYE BOLTS PROVIDED IN THE SKID PERIPHERY NOT SHOWN FOR CLARITY. REMOVE EYE BOLTS AFTER SYSTEM SET IN PLACE.

12. PROVIDE $\frac{1}{2}$ " SCH80 PVC PIPING FROM THERMAL PURGE TO TRENCH DRAIN.



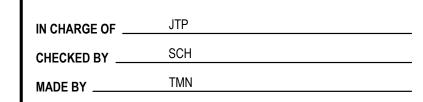


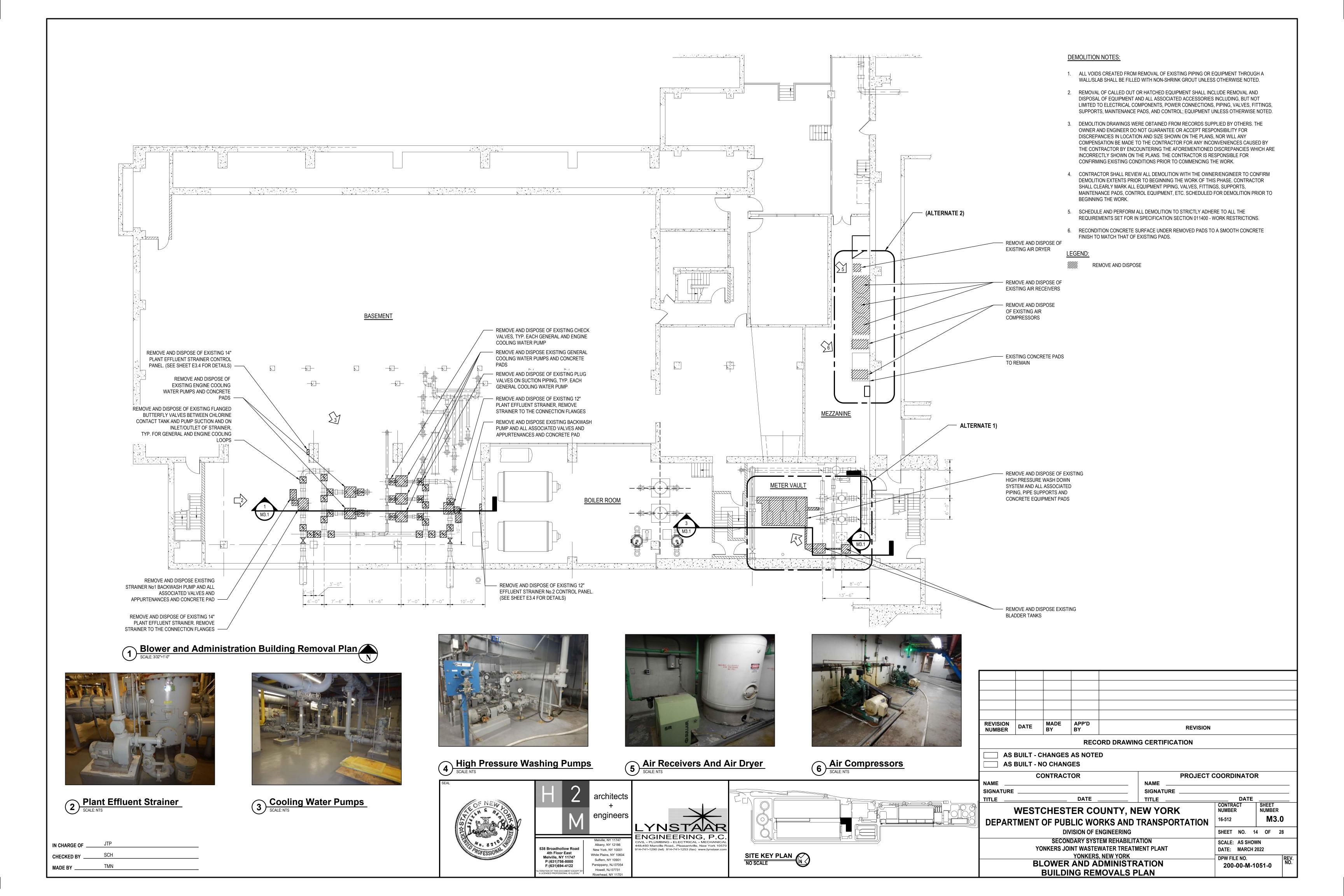


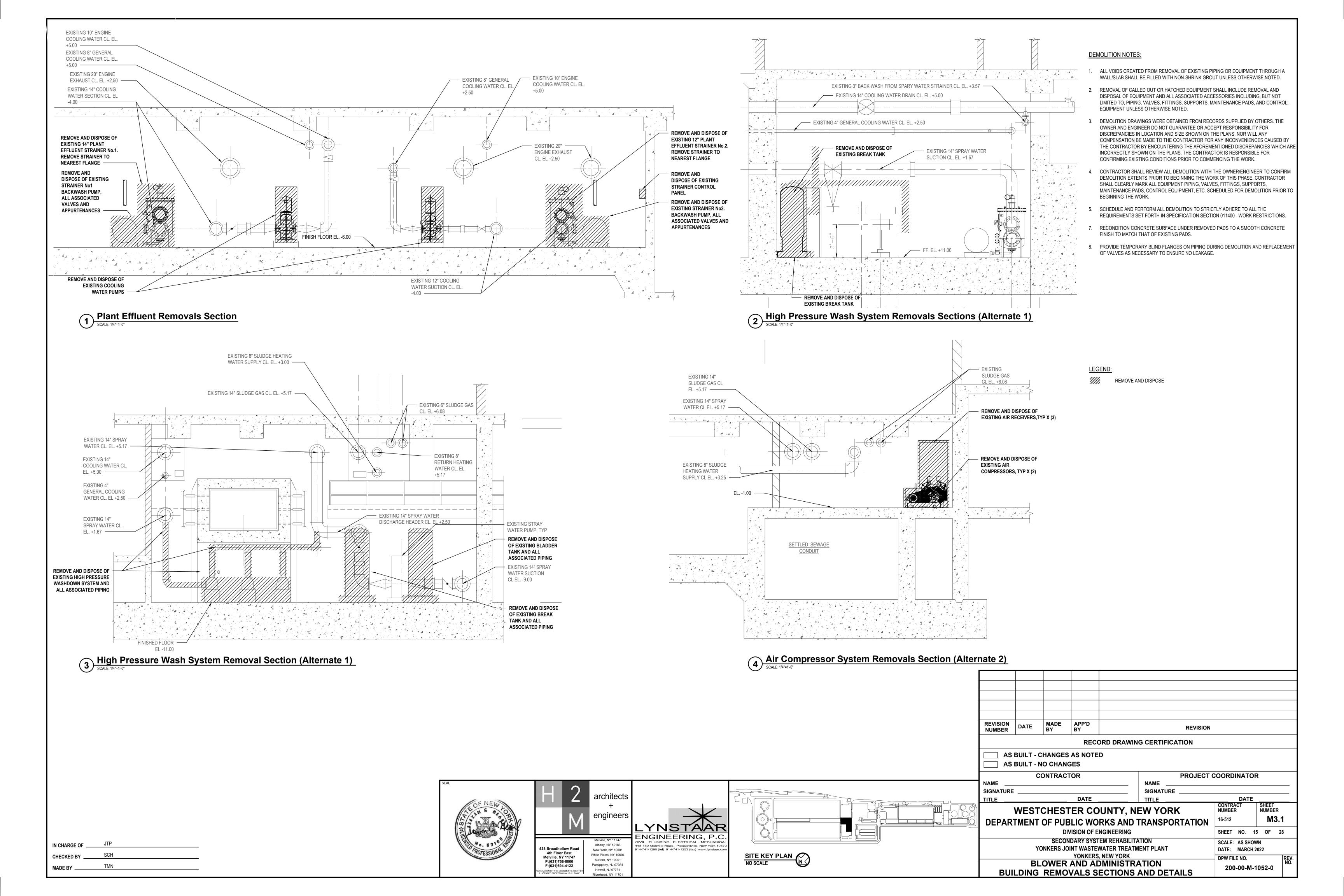


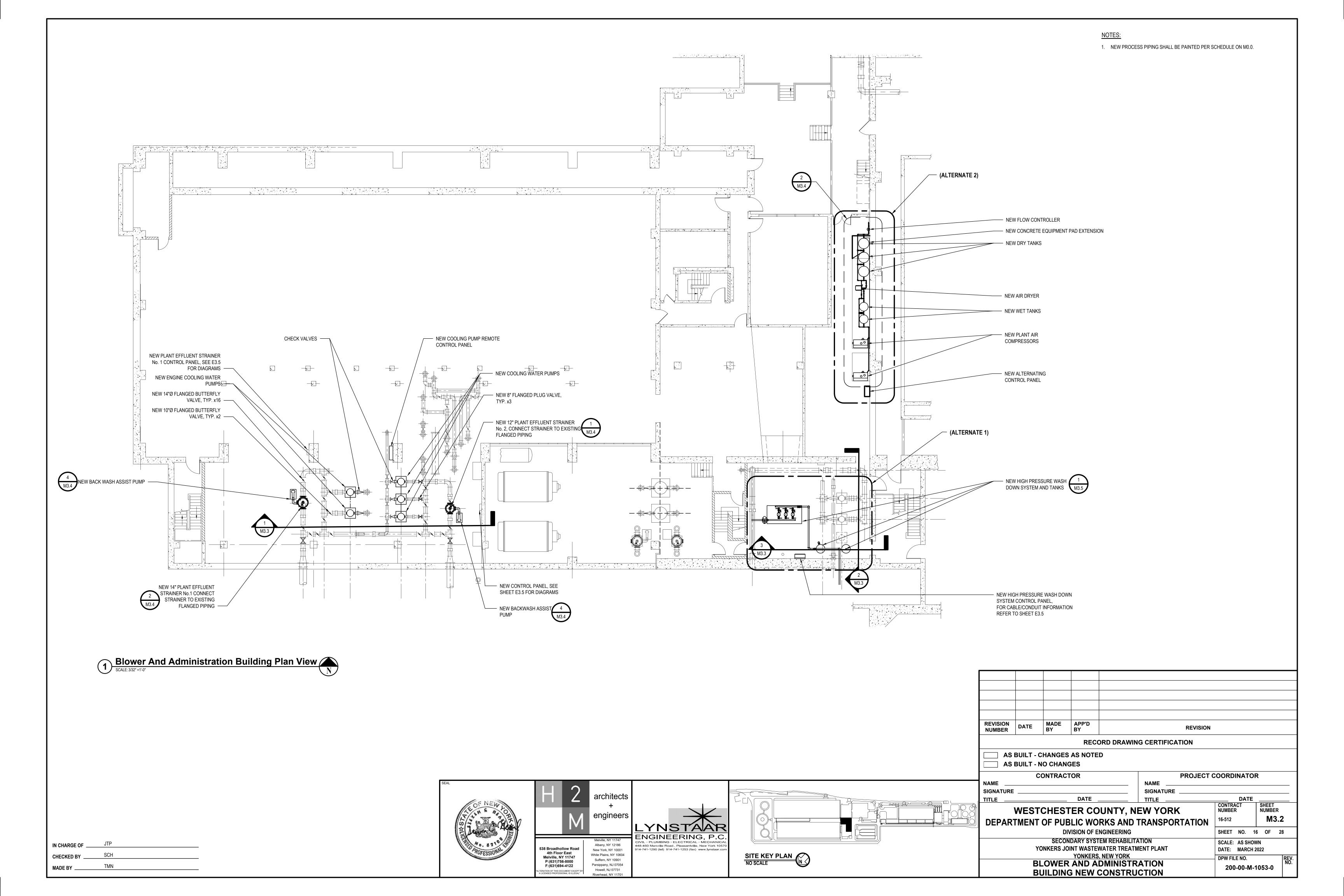
SITE KEY PLAN NO SCALE

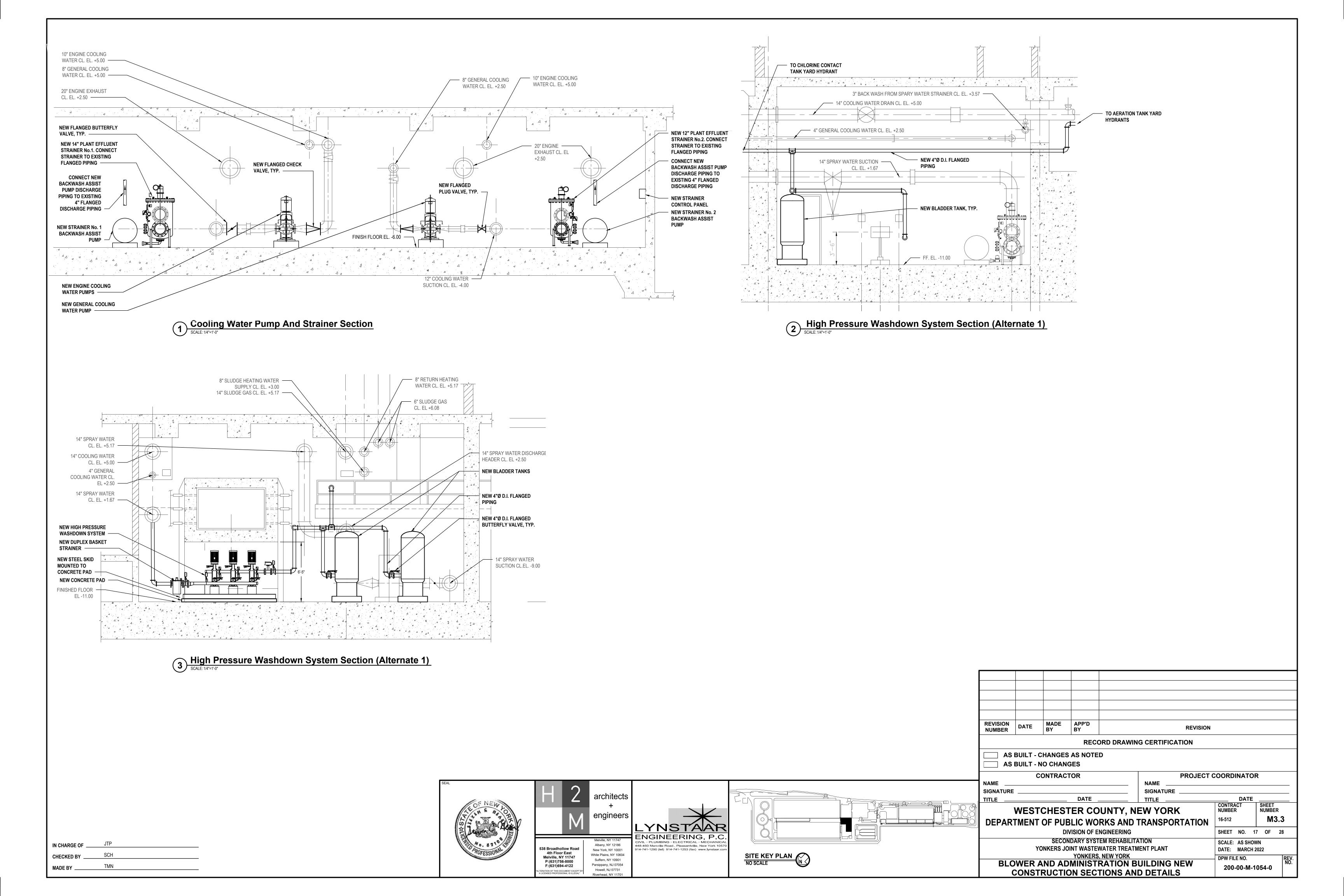


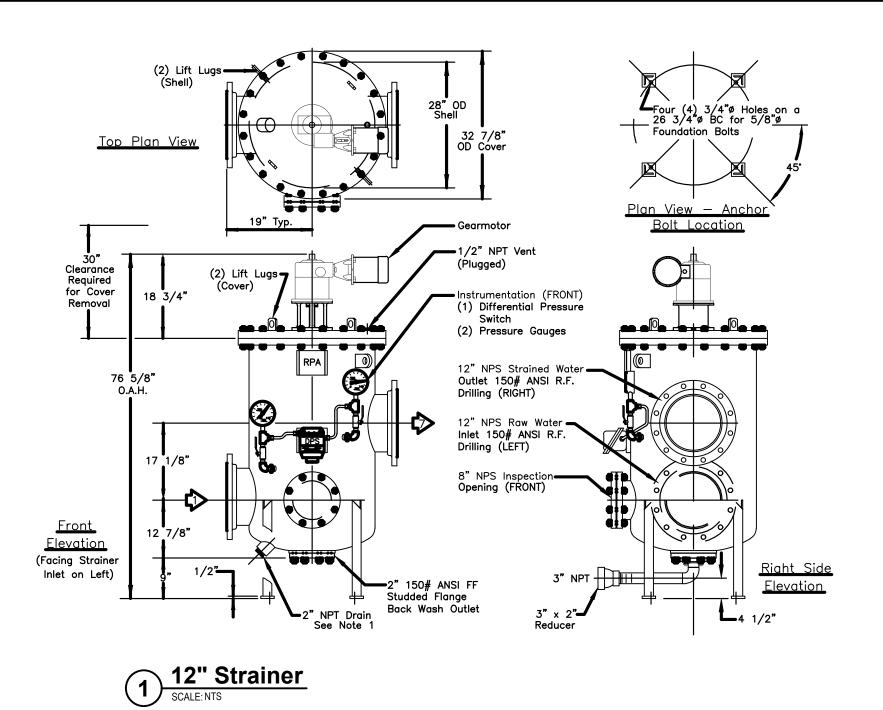




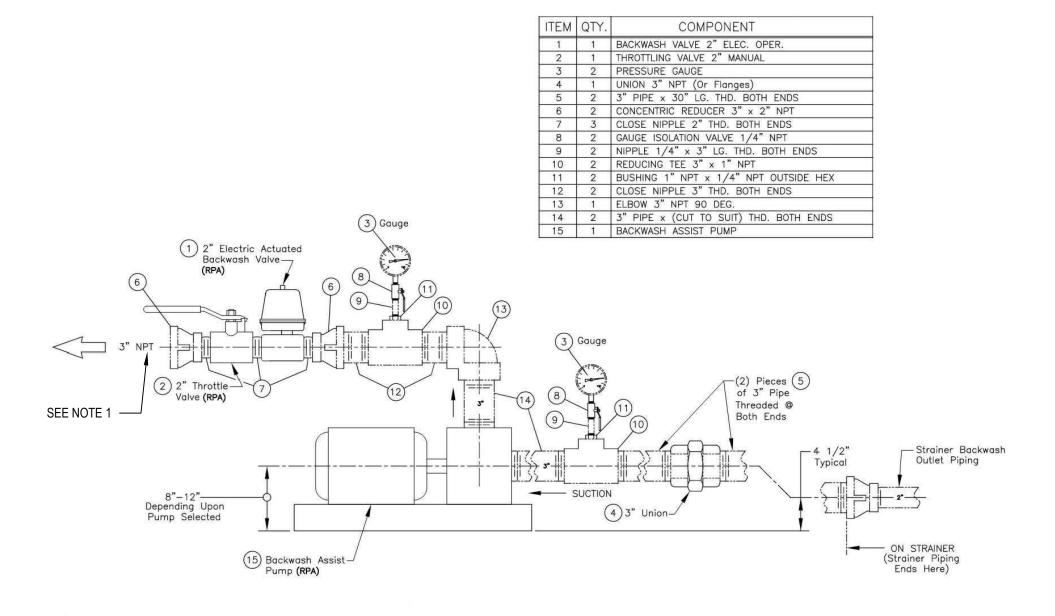








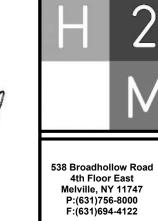
- 1. PROVIDE 2" SCH80 PVC PIPING WITH BALL VALVE ON STRAINER DRAIN, PIPED TO ADJACENT FLOOR DRAIN.
- 2. GENERAL ORIENTATION SHOWN IN THIS DETAIL. COORDINATE ACTUAL ORIENTATION WITH M3.2.

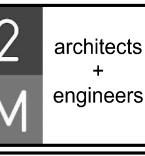


Backwash Assist Pump - General Arrangement SCALE: NTS

1. PROVIDE 4" FLANGED SWING CHECK VALVE WITH NECESSARY REDUCING FITTINGS TO TRANSITION FROM 2"NPT TO 4" FLANGED PIPING, HORIZONTALLY MOUNTED ON DISCHARGE PIPING.







Albany, NY 12186

New York, NY 10001

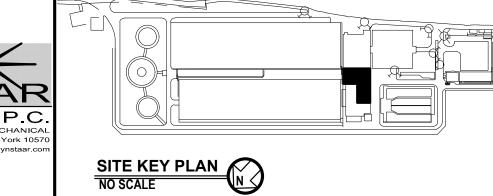
White Plains, NY 10604

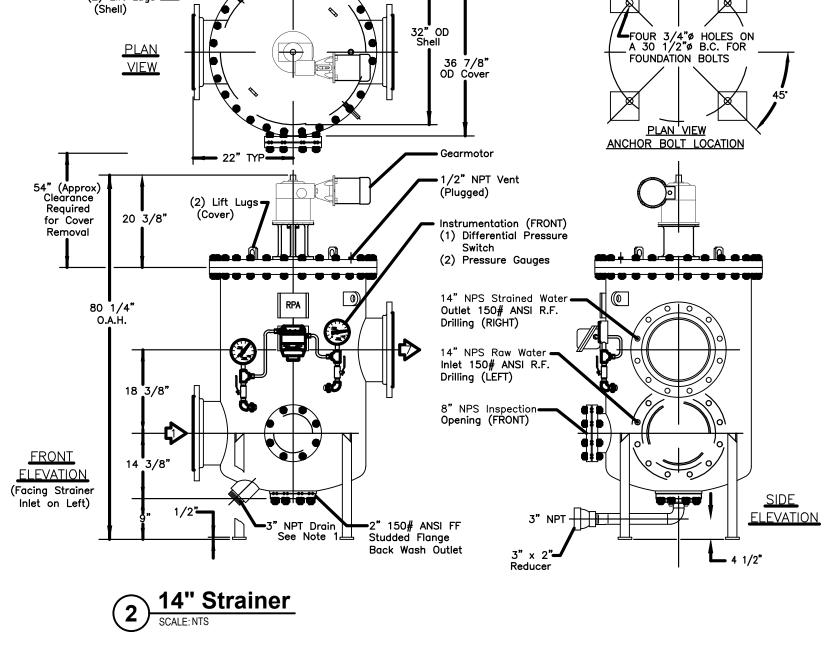
Suffern, NY 10901

Howell, NJ 07731

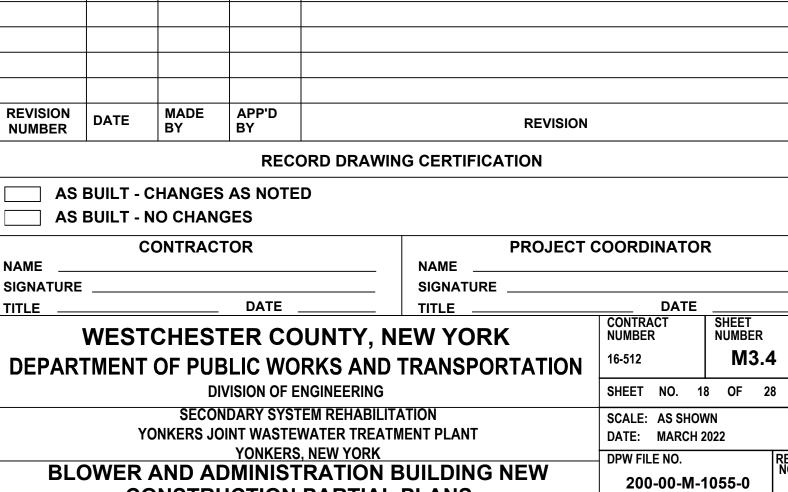
Parsippany, NJ 07054





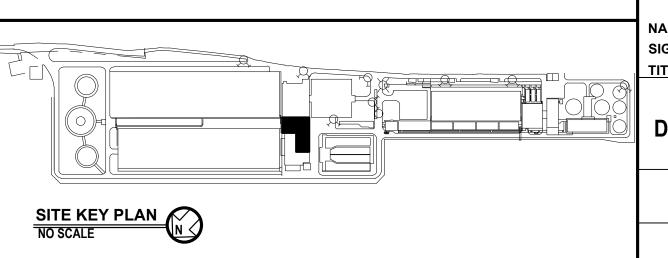


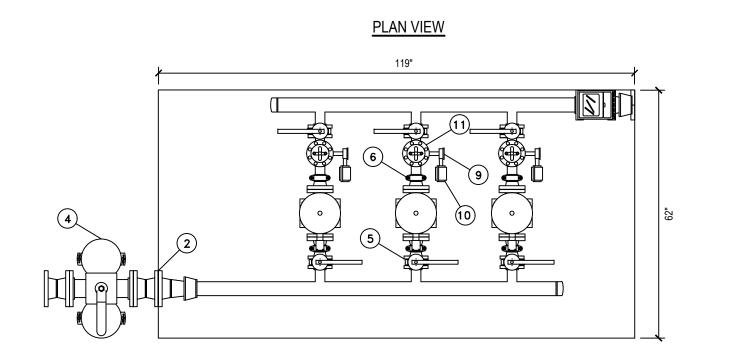
- 1. PROVIDE 3" SCH80 PVC PIPING WITH BALL VALVE ON STRAINER DRAIN, PIPED TO ADJACENT FLOOR DRAIN.
- 2. GENERAL ORIENTATION SHOWN IN THIS DETAIL. COORDINATE ACTUAL ORIENTATION WITH M3.2.



CONSTRUCTION PARTIAL PLANS

IN CHARGE OF CHECKED BY TMN





High Pressure Wash Water System (Alternate 1)

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

SECTION VIEW

ITEM	QTY	SIZE	DESCRIPTION		
1	1	6"	SYSTEM SUPPORT, OPEN FRAMEWORK		
2	1	4"	SYSTEM SUCTION CONNECTION		
3	2	4.5"	SYSTEM SUCTION PRESSURE GAUGES		
4	1	4"	DUPLEX BASKET STARINER		
5	6	2"	LUG PATTERN BUTTERFLY VALVE		
6	6	2"	GROOVED FLEX CONNECTOR		
7	3	2x2	VERTICAL MULTI STAGE PUMP		
8	3	10 HP	TEFC PREM EFF VERTICAL C-FACE MOTOR		
9	3	2.5"	PUMP DISCHARGE PRESSURE GAUGE		
10	3		PUMP DISCHARGE PRESSURE SWITCH		
11	3	2"	PRESSURE REDUCING VALVE		
12	1	3"	MAGNETIC FLOWMETER		
13	1	4.5"	SYSTEM DISCHARGE PRESSURE GAUGE		
14	2	185GAL	200 PSI ASME BLADDER TANK		
15	1	3"	SYSTEM DISCHARGE CONNECTION		
16	1	60A	CONTROL PANEL		
17	2		PRESSURE TRANSMITTER		
18	1	1/2"	SAMPLE TAP		
19	1	3/4"	HOSE BIBB		

HIGH PRESSURE WASH WATER EQUIPMENT SCHEDULE

HIGH PRESSURE WASHDOWN SYSTEM NOTES:

1. MINIMUM 42" TO ANY OBSTRUCTION REQUIRED BY NATIONAL ELECTRIC CODE IN FRONT OF CONTROL PANEL.

2. SUCTION AND DISCHARGE PIPING CONNECTIONS SHALL BE RESTRAINED AGAINST THRUST.

3. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.

4. ALL SADDLES SHALL BE DETACHABLE.

5. PIPING ON SKID SHALL BE 304 STAINLESS STEEL.

6. DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. DO NOT USE FOR CONSTRUCTION.

7. DIMENSIONAL TOLERANCE IS +/- 1/2" UNLESS STATED OTHERWISE.

8. AFTER TESTING AT FACTORY, SHIP MOTORS LOOSE FOR FIELD INSTALLATION.

9. SKID SYSTEM SHALL BE TESTED AT FACTORY. SYSTEM COMPONENTS TO BE DISASSEMBLED AS NECESSARY AND SHIPPED TO THE PROJECT SITE FOR REASSEMBLY BY THE CONTRACTOR PRIOR TO FINAL FIELD TESTING.

10. FOUR EYE BOLTS PROVIDED IN THE SKID PERIPHERY NOT SHOWN FOR CLARITY. REMOVE EYE BOLTS AFTER SYSTEM SET IN PLACE.

11. PROVIDE $\frac{1}{2}$ " SCH80 PVC PIPING FROM THERMAL PURGE TO TRENCH DRAIN.

12. DUPLEX STRAINER AND SYSTEM SUCTION PRESSURE GAUGES AND FITTINGS TO BE PROVIDED BY THE

CL EL. +6.08

NEW DRY TANKS, TYP. (3)

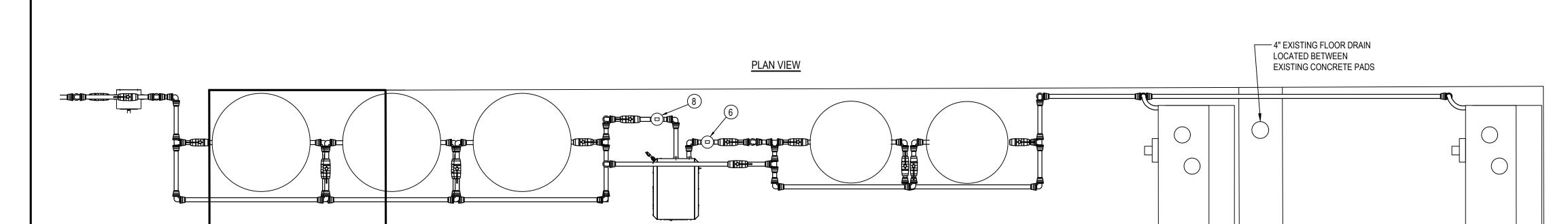
NEW WET TANKS, TYP. (2)

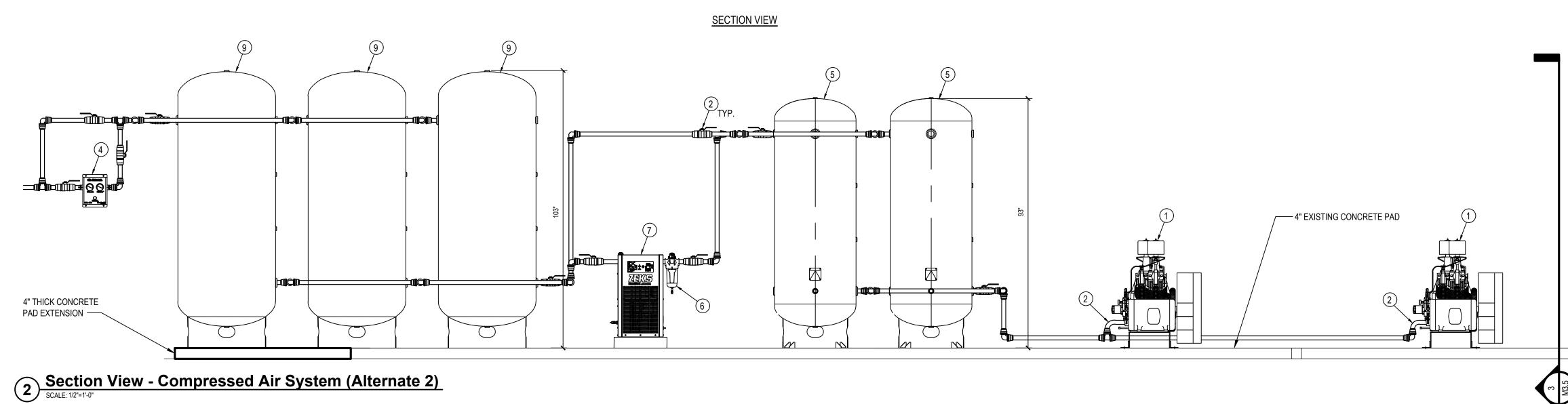
COMPRESSORS, TYP. (2)

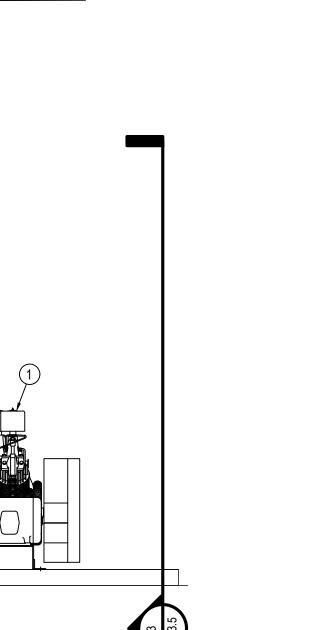
NEW AIR DRYER

NEW PLANT AIR

CONTRACTOR OUTSIDE OF THE SCOPE OF THE SKID SUPPLIER.







COMPRESSED AIR EQUIPMENT SCHEDULE

ITEM	QTY	SIZE	DESCRIPTION			
1	2	25kW	AIR COMPRESSOR WITH AFTERCOOLER			
2	16	1.5"	BALL ISOLATION VALVE			
3	2	1.25"	FLEX CONNECTOR			
4	1		FLOW CONTROLLER			
5	2	250GAL	WET TANK WITH SKIRT			
6	1	1 µm	COALESCING PREFILTER			
7	1	115V	AIR DRYER			
8	1	.01 µm	HIGH EFFICIENCY COALESCER			
9	3	400GAL	DRY TANK WITH SKIRT			
10	5		ROBO CONDENSATE DRAIN			
11	5	0.5"	SAFETY RELIEF VALVE			
12	5	3.5"	PRESSURE GAUGE			

COMPRESSED AIR SYSTEM NOTES:

1. NEW COMPRESSED AIR PIPING SHALL BE BLUE ALUMINUM PIPING.

2. EACH COMPRESSOR SHALL HAVE FLEXIBLE PIPING FROM THE UNIT TO THE COMMON HEADER PIPING.

3. PROVIDE SCH40 GALVANIZED STEEL PIPING FROM EACH TANK'S ROBO CONDENSATE DRAIN TO COMMON CONDENSATE DRAIN HEADER TO CONVEY CONDENSATE TO THE EXISTING FLOOR DRAIN.

Howell, NJ 07731

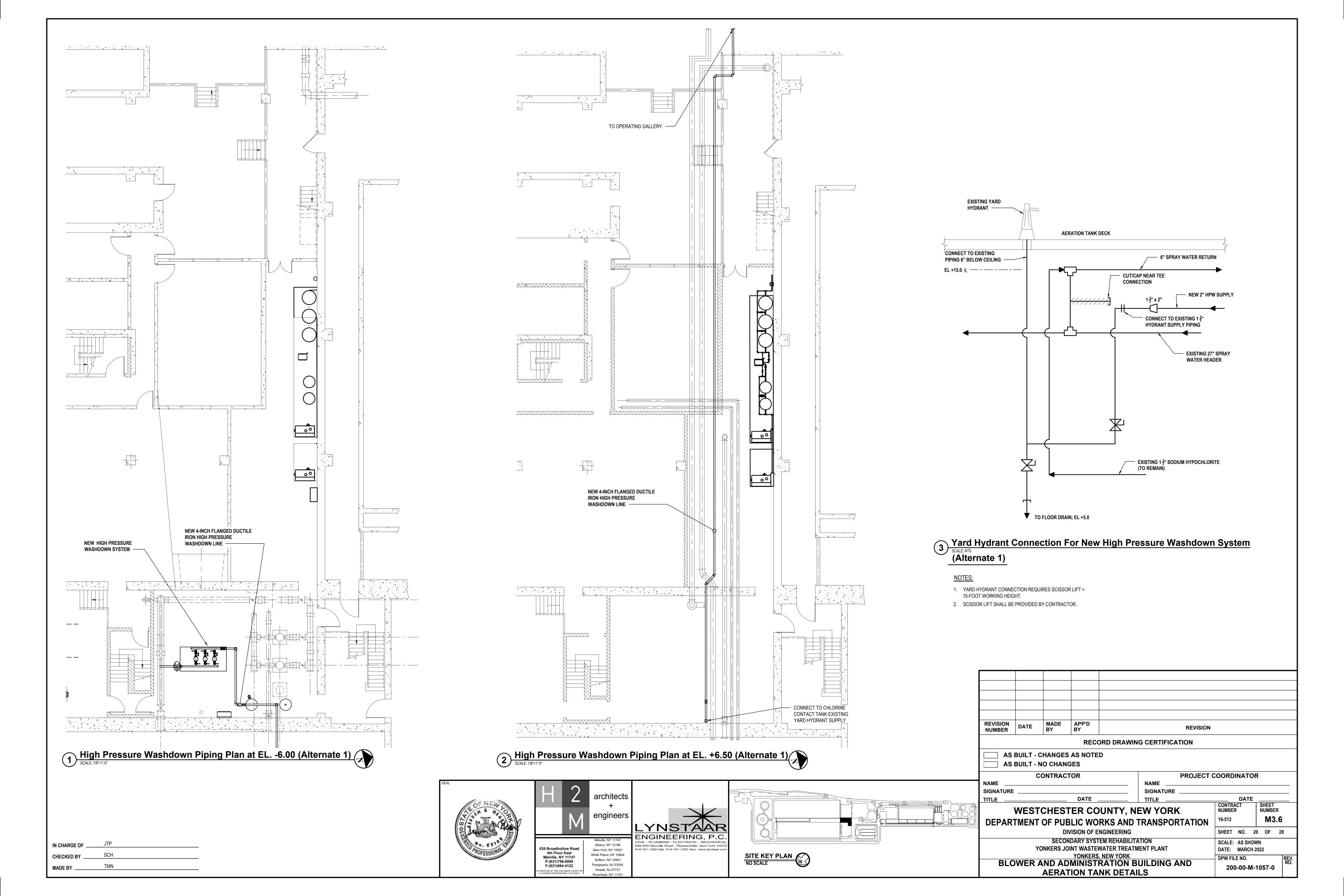
4. FIELD LOCATE PRESSURE GAUGES PER SYSTEM SUPPLIER RECOMMENDATIONS.

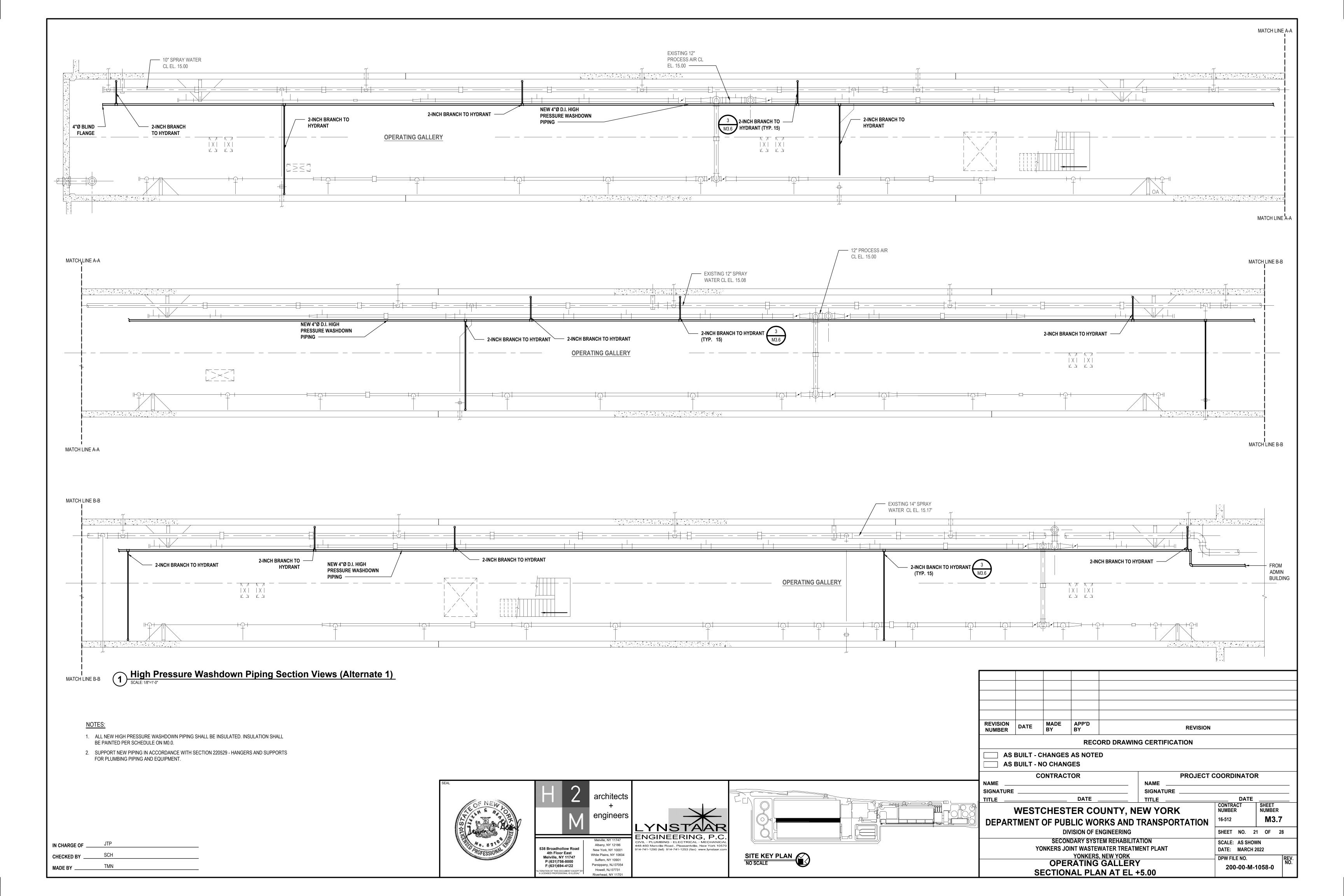
ENGINEERING, P.C Albany, NY 12186 538 Broadhollow Road 4th Floor East Melville, NY 11747 P:(631)756-8000 F:(631)694-4122 New York, NY 10001 SITE KEY PLAN NO SCALE White Plains, NY 10604 Suffern, NY 10901 Parsippany, NJ 07054

REVISION NUMBER	DATE	MADE BY	APP'D BY		REVISIO	N		
			REC	ORD DRAWIN	G CERTIFICATION			
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		ONTRAC	TOR		PROJEC:	T COORDINATO		
NAME					NAME			
SIGNATURE					SIGNATURE			
TITLE			DATE		TITLE	DATE		
	WEST	CHES	TER CC	UNTY, NI	EW YORK	CONTRACT NUMBER	SHEET NUMBER	
				•	TRANSPORTATION	16-512	M3.5	5
		DI	VISION OF E	NGINEERING		SHEET NO. 1	9 OF 2	28
SECONDARY SYSTEM REHABILITATION					SCALE: AS SHO	WN		
	Y	ONKERS JO	_	WATER TREATM	IENT PLANT	DATE: MARCH	2022	
				NEW YORK		DPW FILE NO.		REV. NO.
MECHANICAL DETAILS AND SECTIONS 200-00-M-					1056-0			
		DETA	IILO AIVI	JULUI	10			

Section View- Air Compressor (Alternate 2)

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



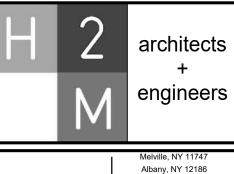


	ELECTRICAL LEGENDS							
SYMBOL	DESCRIPTION	ABBREVIATION	DESCRIPTION					
	EXISTING WORK TO REMAIN	А	AMPERE					
	EXISTING WORK TO BE REMOVED	С	CONDUIT					
	REMOVE AND DISPOSE OF	EPO	EMERGENCY POWER OFF					
	EQUIPMENT, DEVICE, CONDUIT, WIRE, ETC. TO BE PROVIDED AND INSTALLED	KV	KILO-VOLT					
	DEDICATED HOMERUN TO PANELBOARD - 2 #12 AWG + #12 AWG GND IN 3/4" C.	KVA	KILO-VOLT AMPERE					
□ ¹ 60/50	FUSED DISCONNECTION SWITCH - NUMBERS INDICATES FRAME SIZE/FUSE SIZE	LCS	LOCAL CONTROL STATION					
0	JUNCTION BOX	MCC	MOTOR CONTROL CENTER					
T	TRANSFORMER	S/S	START/STOP					
φ	SPECIAL PURPOSE RECEPTACLE	TW/SH	TWISTED SHIELDED					
5	MOTOR, NUMBER INDICATES HORSEPOWER	TYP	TYPICAL					
H	MOTOR STARTER	V	VOLTS					
P	CONDUIT SEAL-OFF							

CONTROLS LEGEND		
SYMBOL	DESCRIPTION	
PSL	PRESSURE SENSOR LOW	
PT	PRESSURE TRANSMITTER	
PSH	PRESSURE SENSOR HIGH	
DPS	DIFFERENTIAL PRESSURE SWITCH	
₽	ELECTRICAL ACTUATOR FOR BALL VALVE	
FM	FLOW METER	
L ^O R XOO OOX	3-POSITION SELECTOR SWITCH LOR INDICATES LOCAL/OFF/REMOTE	
START STOP	MAINTAINED CONTACT PUSHBUTTON SWITCHES: LEFT: N.O. RIGHT: N.C. TEXT DENOTES LEGEND PLATE	
$\sum_{O\Gamma}$	THERMAL OVERLOAD RELAY	
60AF/60AT	CIRCUIT BREAKER. AF/AT DENOTES FRAME/TRIP SIZE.	
« □□•	FUSE	
⊶	NORMALLY CLOSED CONTACTOR	
CR2	NORMALLY OPEN MOTOR CONTACTOR	
• <u>M</u> •	MOTOR CONTROL RELAY	
NP	EQUIPMENT NAME PLATE	
- 11	GROUND	
480V/120V CPT	480V/120VAC CONTROL POWER TRANSFORMER	
- R	MOTOR STATUS LIGHTS; PUSH-TO-TEST LED: A: AMBER - FAULT G: GREEN - ON R: RED - OFF	
LCS	LOCAL CONTROL STATON	
EPO	LOCAL E-STOP PANEL	
	MECHANICAL INTERLOCK CONNECT	

DRAWING CONVENTIONS			
5 A2.2	DETAIL KEY		
—— H	COLUMN GRID		
Title SCALE:	DRAWING TITLE		

Social Application of the state of the state



New York, NY 10001

White Plains, NY 10604

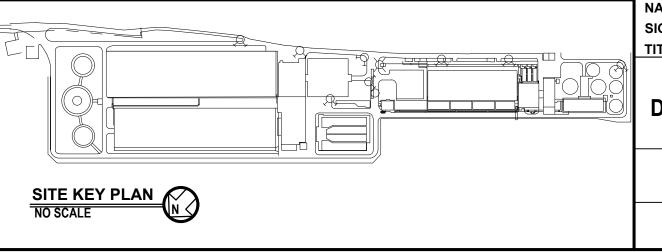
Suffern, NY 10901

Parsippany, NJ 07054

Howell, NJ 07731

2 Executive Boulevard Suite 401 Suffern, NY 10901 P:(845)357-7238 F:(845)357-7267



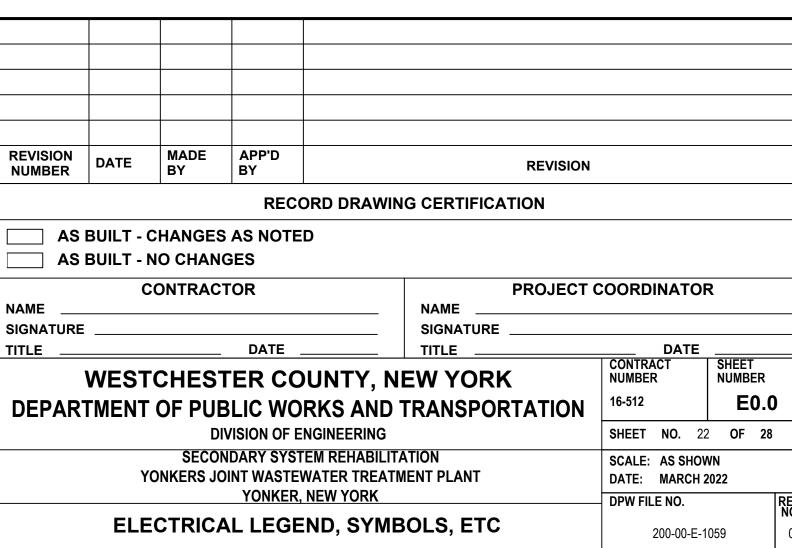


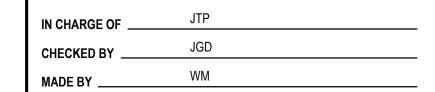
GENERAL NOTES:

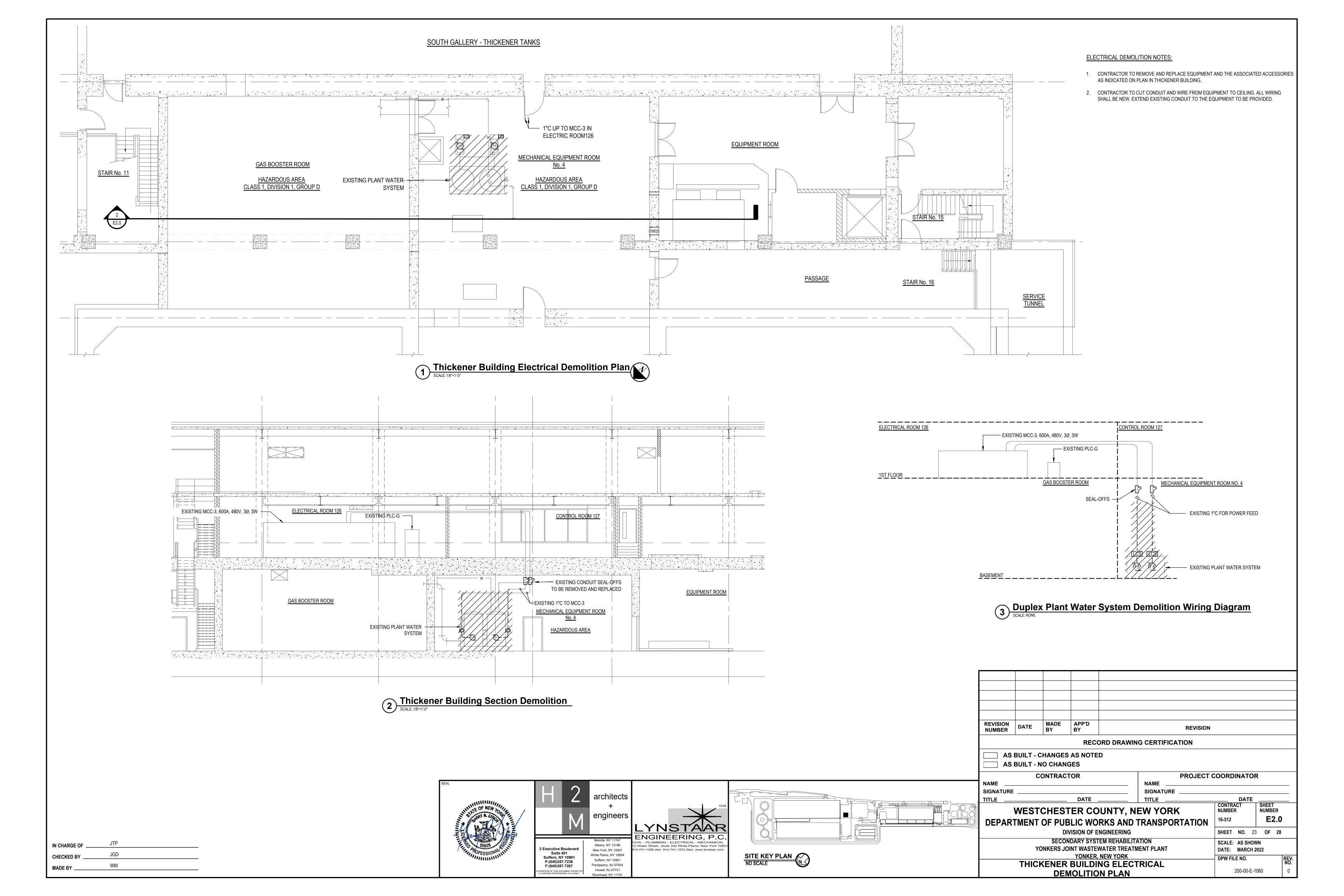
- 1. ALL WORK SHALL COMPLY WITH AND BE INSTALLED IN ACCORDANCE WITH THE
 SUPPLEMENTAL UNIFORM AND FIRE PREVENTION BUILDING CODE OF THE STATE OF NEW
 YORK AND ALL CODES LOCAL OR OTHERWISE HAVING JURISDICTION OVER THE WORK.

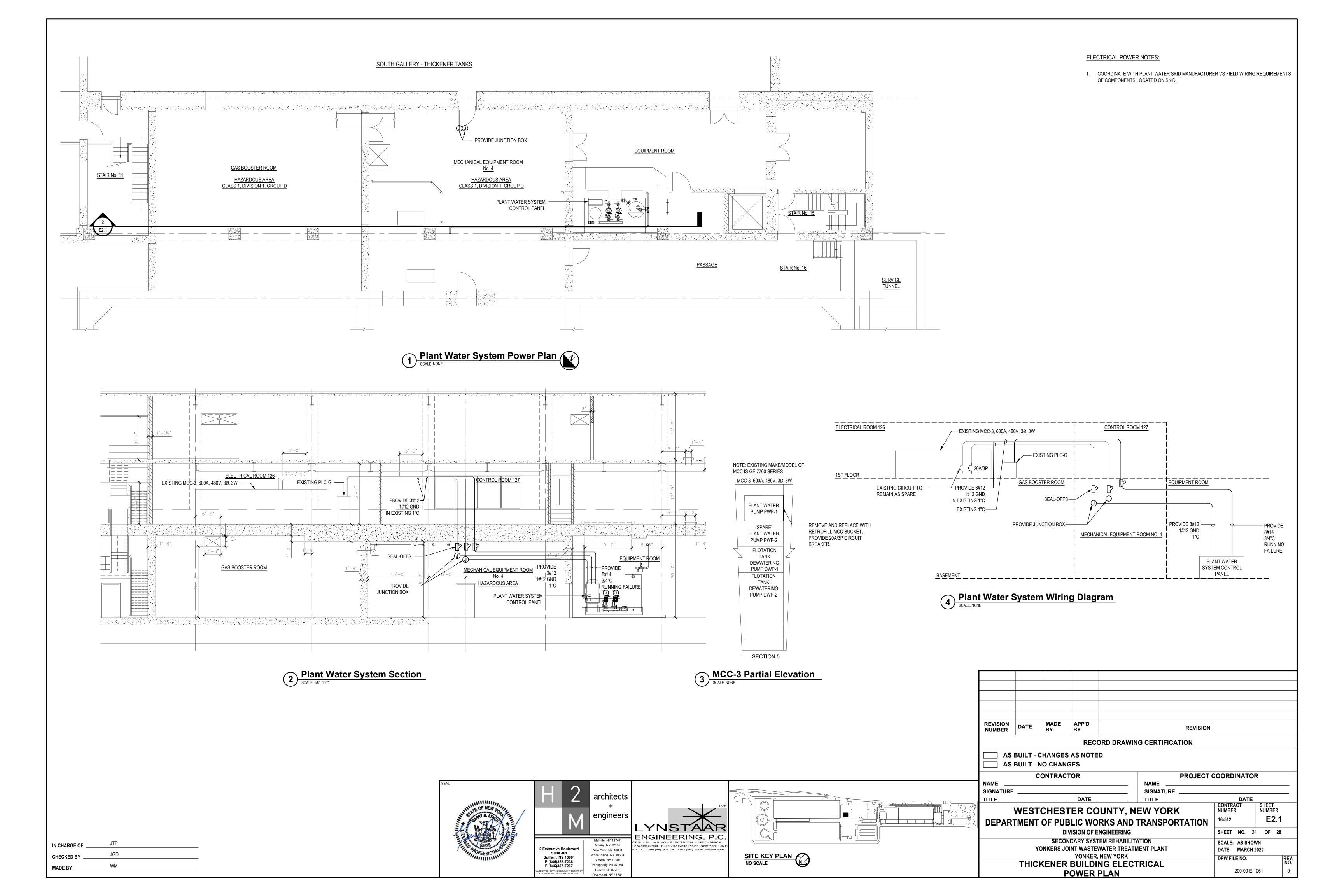
 2. THE WORDS PROVIDE OR INSTALL SINGLY OR IN COMPINATION SHALL MEAN ELIPHISH AND.
- 2. THE WORDS PROVIDE OR INSTALL, SINGLY OR IN COMBINATION SHALL MEAN FURNISH AND INSTALL.
- PROVIDE ALL CUTTING AND PATCHING AS REQUIRED FOR THE INSTALLATION OF HIS WORK.
 THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF HIS WORK AND NEWLY INSTALLED OR EXISTING WORK, INCLUDING PROTECTION OF BUILDING OCCUPANTS, PUBLIC, AND PERSONNEL. PROVIDE APPROPRIATE BARRIERS, AND SAFETY GUARD RAILS AS REQUIRED.
- LIMIT THE SPREAD OF DUST WHEN CUTTING BY INSTALLING POLYETHYLENE BARRIERS OR TARPAULINS TO CONTAIN AIRBORNE MATERIALS.
- 6. NO SYSTEM SHALL BE SHUT DOWN WITHOUT PERMISSION OF THE PLANT. MINIMUM OF 2 WEEKS ADVANCED NOTICE SHALL BE GIVEN TO THE FACILITIES OPERATION MGR. WHEN SYSTEM SHUTDOWN INVOLVES A TEMPORARY DISRUPTION TO BUILDING SERVICES.
- 7. ANY DISRUPTION IN BUILDING SERVICES SHALL BE KEPT TO A MINIMUM AND SHALL NOT BE IMPLEMENTED WITHOUT RECEIVING PRIOR WRITTEN APPROVAL OF THE PLANT.
- 8. ALL WORK SHALL BE COORDINATED WITH THE PLANT AND ALL TRADES RELATED TO THE INSTALLATION OF THIS PROJECT.
- 9. THE CONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORK INSTALLED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR, AFTER ACCEPTANCE OF THE INSTALLATION BY THE ENGINEER AND OWNER. THE CONTRACTOR SHALL SUBMIT IN WRITING TO OWNER STATING SAME.
- 10. PROVIDE ALL RIGGING, HOISTING AND SCAFFOLDING AS REQUIRED FOR THE INSTALLATION
- 11. ALL WORK SHALL BE PERFORMED BY LICENSED CONTRACTORS AND WORKERS EXPERIENCED IN THE TRADE HAVING JURISDICTION. ALL WORK SHALL BE SUPERVISED AT ALL TIMES AND WORKMANSHIP SHALL BE FIRST CLASS IN ALL RESPECTS.
- 12. ANY DEVIATION OR CHANGE IN DESIGN SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER OR OWNER. ANY WORK INSTALLED WITHOUT PRIOR APPROVAL OF THE ENGINEER OR OWNER OR FOUND TO BE DEFECTIVE OR OF POOR QUALITY SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- 13. ALL CONSTRUCTION WORK SHALL BE CONFINED TO THE AREA INDICATED ON PLANS AND SHALL NOT BLOCK MEANS OF EGRESS FOR OCCUPANTS OF THE BUILDING.
- 14. PATCHING OF WALLS, FLOORS, ETC. SHALL BE BY TRADE WHO PERFORMED WORK AND SHALL MATCH EXISTING SURROUNDING AREA IN ALL RESPECTS. WORK AREA SHALL BE LEFT BROOM CLEAN AT THE END OF EACH DAY. ALL DISCARDED AND DEMOLISHED MATERIAL AND RUBBISH SHALL BE REMOVED FROM PREMISES DAILY IN A LEGAL AND APPROVED MANNER.
- 15. ALL WORK SHOWN ON ALL DRAWINGS IS NEW UNLESS OTHERWISE NOTED.

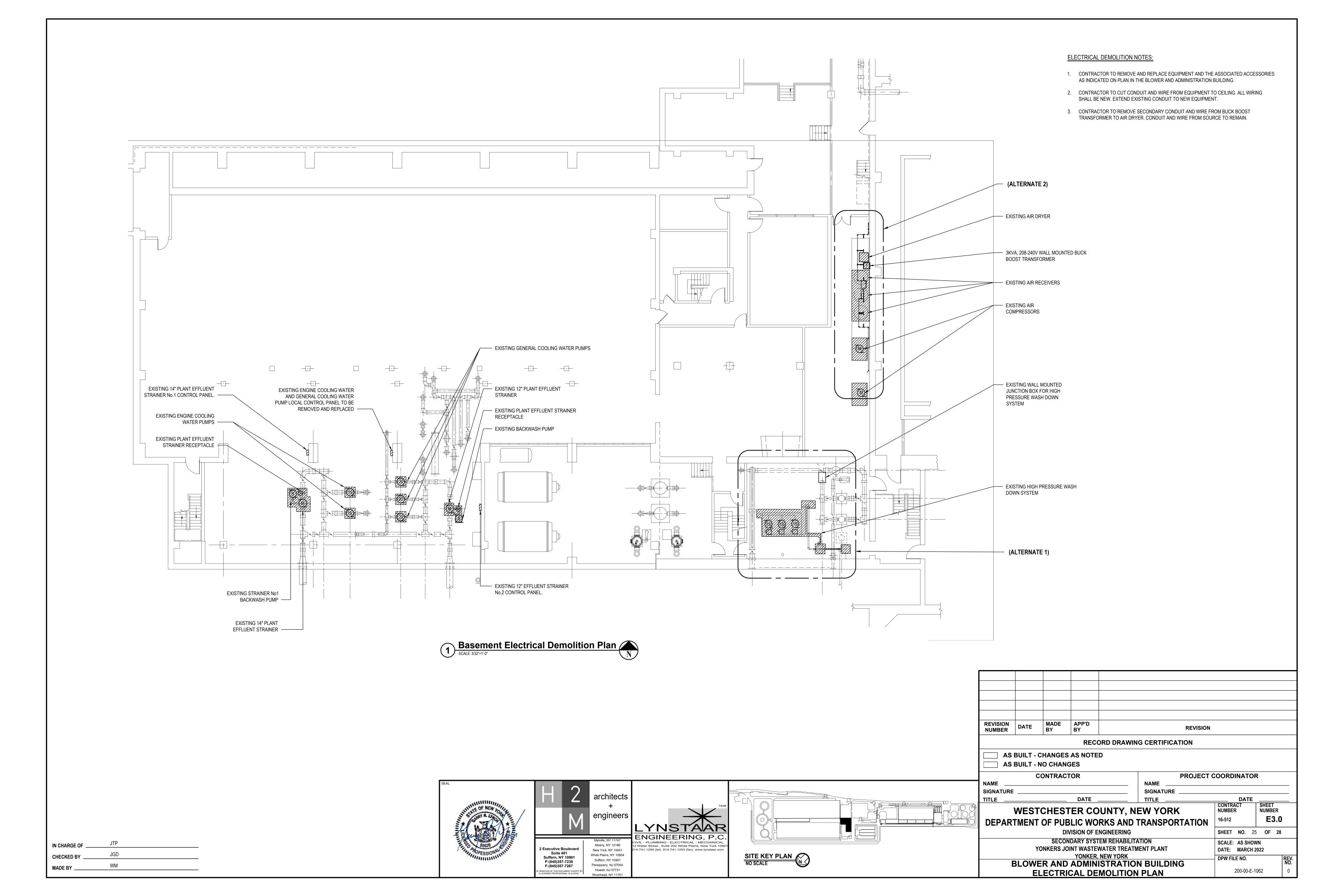
 16. ALL PENETRATIONS THROUGH PARTITIONS FLOORS WALLS AND ROOF FOR ALL
- 16. ALL PENETRATIONS THROUGH PARTITIONS, FLOORS, WALLS AND ROOF FOR ALL PIPING, CONDUIT AND DUCTWORK SHALL BE SEALED AND FIRE SAFED OFF TO MAINTAIN FIRE INTEGRITY OF EXISTING STRUCTURE.
- 17. ALL DOWNSTREAM DEVICES WHICH BECOME DISCONNECTED DURING THIS CONSTRUCTION SHALL BE RECONNECTED AT NO COST TO THE OWNER. PROVIDE ALL CONDUIT AND WIRE AS REQUIRED.
- 18. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, AS WELL AS BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF THE WORK.
- 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING REASONABLE PRECAUTIONS AND SHALL PROVIDE REASONABLE PROTECTION TO PREVENT INJURY OR DAMAGE TO PERSONS, THE WORK, AND OTHER PROPERTY.

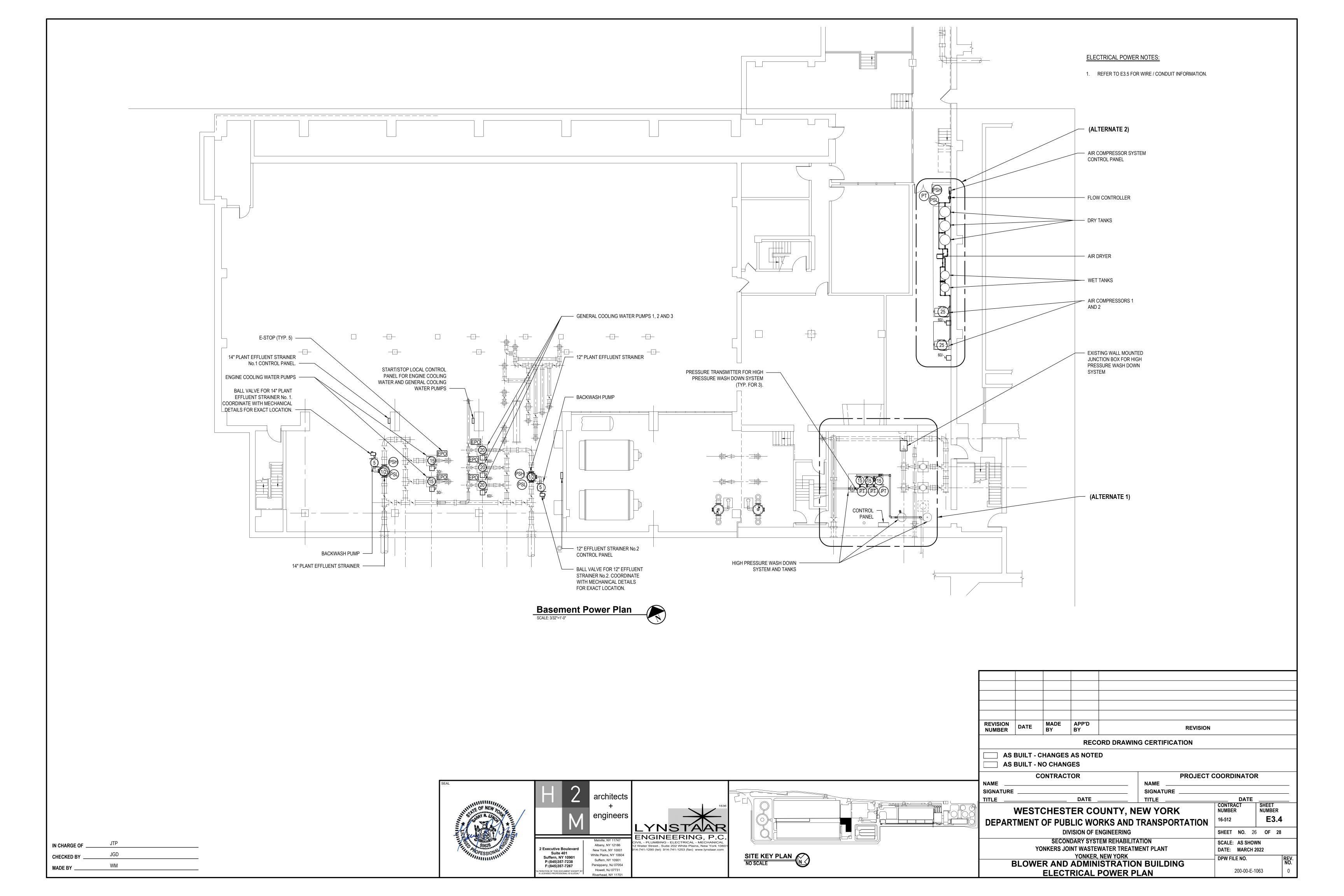


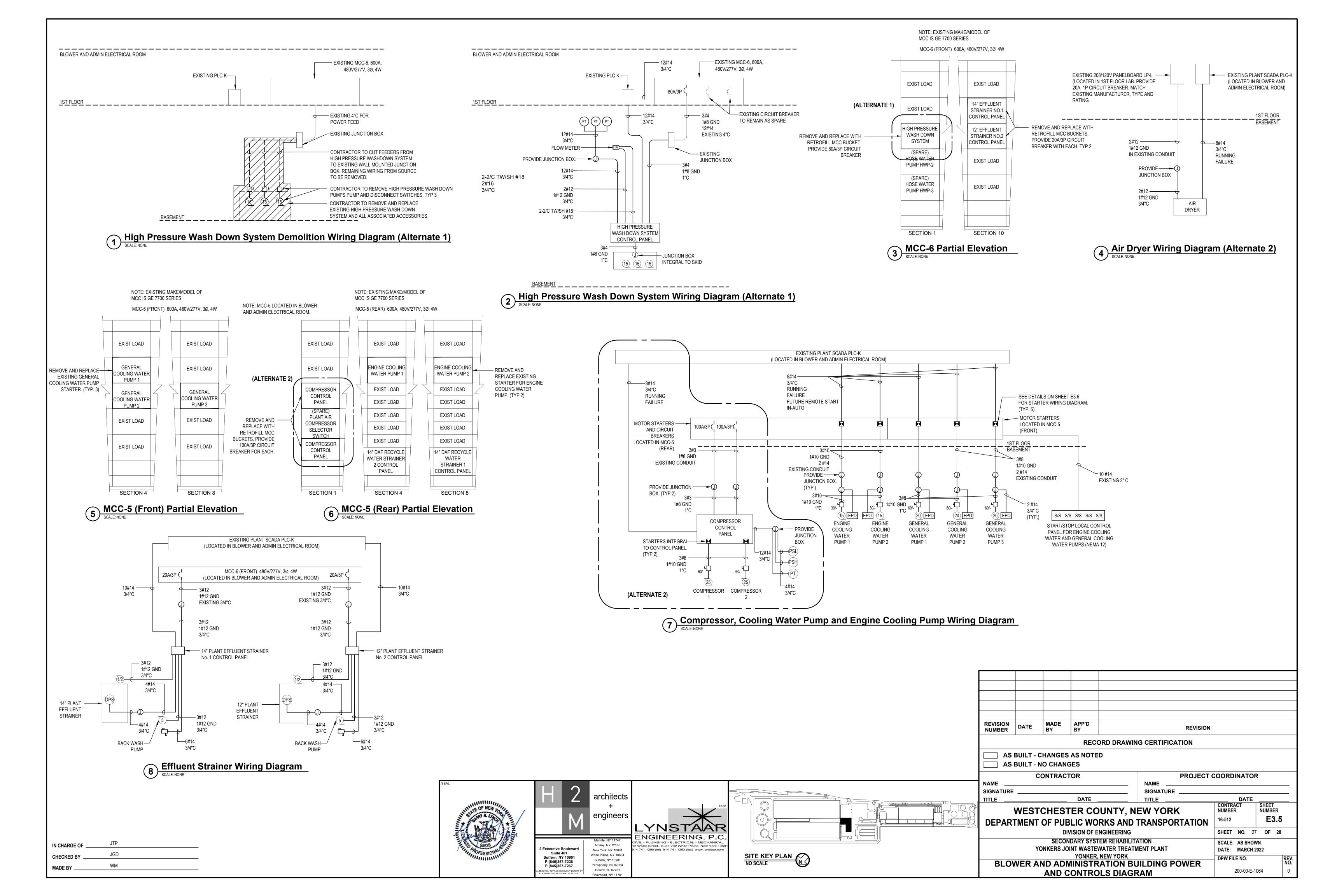


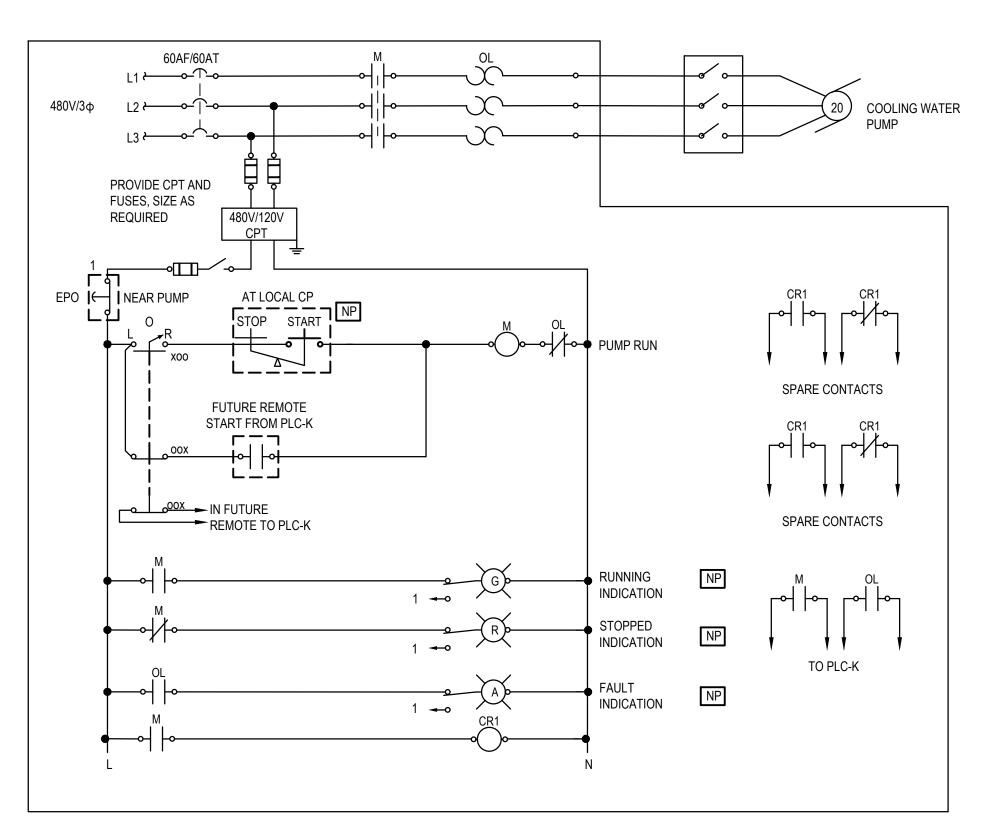








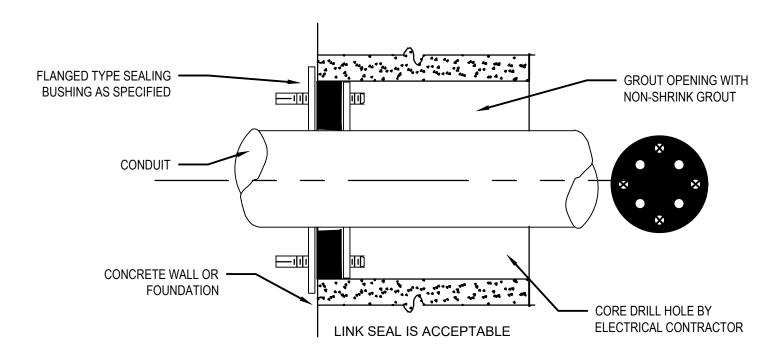




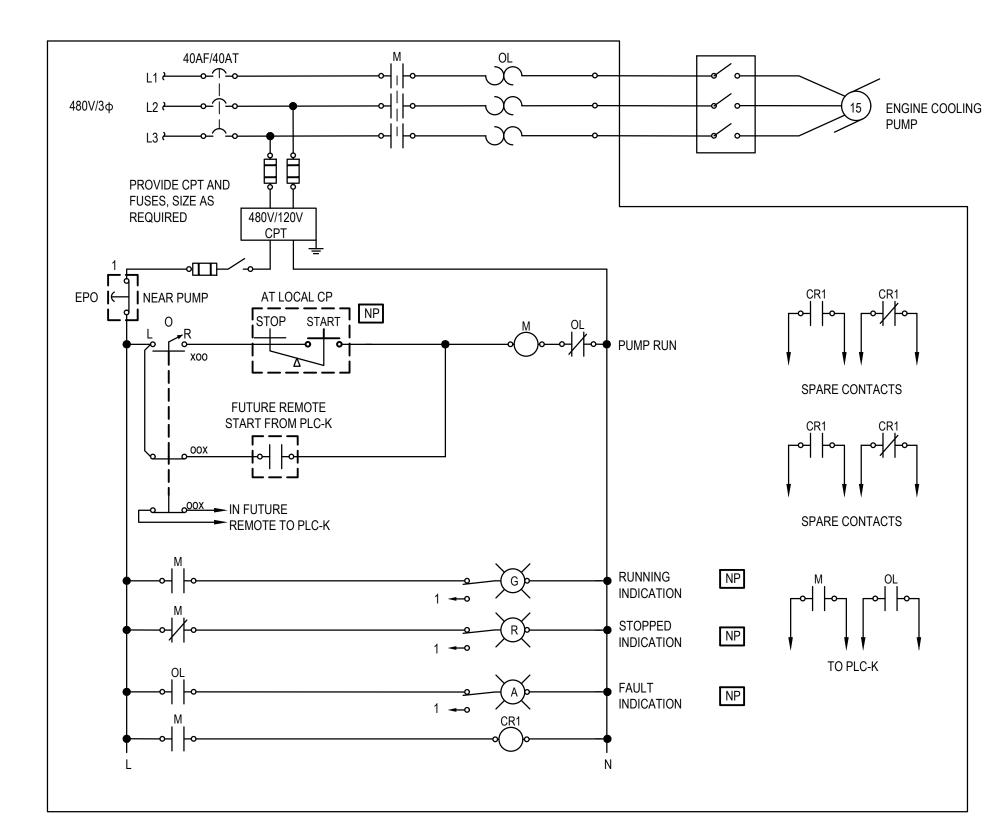
NOTES:
1. THIS ELEMENTARY DIAGRAM IS TYPICAL FOR GENERAL COOLING WATER PUMPS.

- 2. PROVIDE NEMA SIZE 2 STARTER AND OVERLOAD HEATERS AS REQUIRED.
- 3. SEE ONE LINE DIAGRAMS FOR CONTROL SCHEMATIC DIAGRAMS FOR ADDITIONAL DETAILS AND COORDINATION.
- 4. UNLESS NOTED OTHERWISE, ALL DEVICES SHOWN ON THE CONTROL ELEMENTARY ARE LOCATED IN THE MOTOR STARTER ENCLOSURE.

General Cooling Water Pump Starter Diagram SCALE: NONE



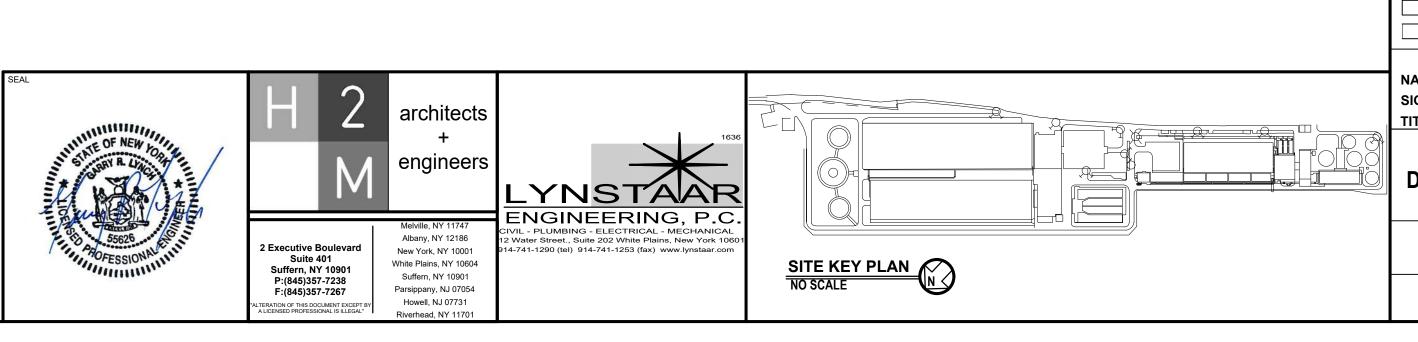
Typical Sleeve Detail For Existing Concrete Wall PenetrationSCALE: NONE

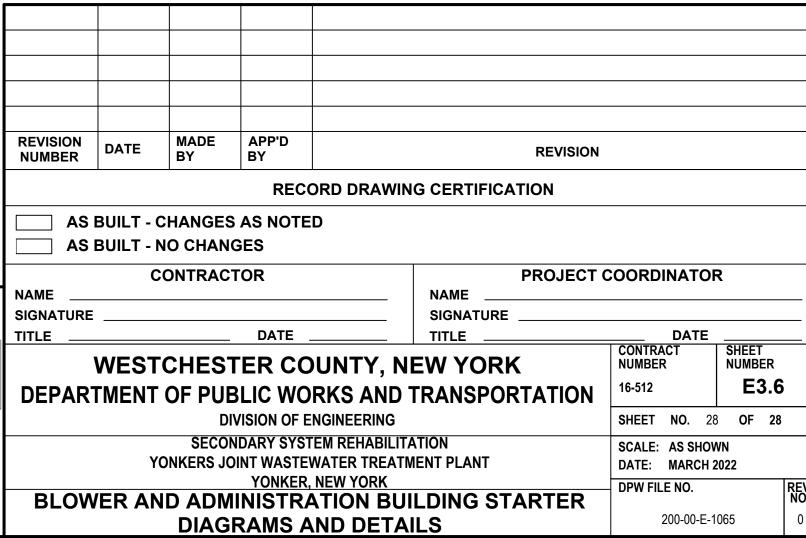


NOTES:
1. THIS ELEMENTARY DIAGRAM IS TYPICAL FOR ENGINE COOLING PUMPS.

- 2. PROVIDE NEMA SIZE 2 STARTER AND OVERLOAD HEATERS AS REQUIRED.
- 3. SEE ONE LINE DIAGRAMS FOR CONTROL SCHEMATIC DIAGRAMS FOR ADDITIONAL DETAILS AND COORDINATION.
- 4. UNLESS NOTED OTHERWISE, ALL DEVICES SHOWN ON THE CONTROL ELEMENTARY ARE LOCATED IN THE MOTOR STARTER ENCLOSURE.
- **Engine Cooling Pump Starter Diagra**m

 SCALE: NONE





 IN CHARGE OF
 JTP

 CHECKED BY
 JGD

 MADE BY
 WM