EASTCHESTER UNION FREE SCHOOL DISTRICT
2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENTS PROJECT

580 White Plains Rd, Eastchester, NY 10709

SED CONTROL NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

MEMASI

THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW YORK STATE EDUCATION DEPARTMENT.

ISSUED FOR BID: 12/10/2021

AREA MAP
NTS

N

DRAWING LIST

BUILDING INFORMATION SUMMARY

OCCUPANCY CLASS: E

CONSTRUCTION CLASS:
ORIGINAL BUILDING: II-B

BUILDING AREA: **TOTAL: 101,105 SF**
BASEMENT: 11,735
FIRST FLOOR: 54,835 SF
SECOND FLOOR: 34,535

NUMBER OF STORIES: 2

LEVEL OF ALTERATION:
LEVEL 2

BUILDING AREAS LISTED ARE EXISTING AND ARE NOT MODIFIED BY THIS PROJECT.

MEANS OF EGRESS COMPONENTS AND TRAVEL DISTANCE ARE EXIST. AND NOT MODIFIED BY THIS PROJECT.

2020 EXISTING BUILDING CODE OF NEW YORK STATE ANALYSIS - CLASSIFICATION OF WORK

EBC 603	**ALTERATION - LEVEL 2**	
EBC 603.1	SCOPE	LEVEL 2 ALTERATIONS INCLUDE THE RECONFIGURATION OF SPACE [...] OR INSTALLATION OF ANY ADDITIONAL EQUIPMENT.

2020 BUILDING CODE OF NEW YORK STATE - ANALYSIS CHAPTER 3 - OCCUPANCY CLASSIFICATION AND USE CHAPTER 6 - TYPES OF CONSTRUCTION

BC 302.1	OCCUPANCY CLASSIFICATION	3. EDUCATIONAL (SECTION 305): **GROUP E**
BC 305.1	EDUCATIONAL GROUP E	EDUCATIONAL GROUP E OCCUPANCY INCLUDES, AMONG OTHERS, THE USE OF A BUILDING OR STRUCTURE, OR A PORTION THEREOF, BY SIX OR MORE PERSONS AT ANY ONE TIME FOR EDUCATIONAL PURPOSES THROUGH THE 12TH GRADE.
TABLE 601	FIRE-RESISTANCE REQUIREMENTS FOR BUILDING ELEMENTS EXISTING BUILDING	PRIMARY STRUCTURAL FRAME, BEARING WALLS AND PARTITIONS, NONBEARING WALLS AND PARTITIONS, FLOOR CONSTRUCTION, AND ROOF CONSTRUCTION. **TYPE II-B** FIRE-RESISTANCE (HOURS): **0**

2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE

TABLE C301.1 NEW YORK STATE CLIMATE ZONES BY COUNTY

CLIMATE ZONE 4A	WESTCHESTER COUNTY, NY

TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS, R-VALUE METHOD

ROOFS	INSULATION ENTIRELY ABOVE ROOF DECK	R-33 CONTINOUS INSULATION

TABLE C402.3 MINIMUM ROOF REFLECTANCE AND EMITTANCE

THREE-YEAR-AGED SOLAR REFLECTANCE INDEX OF 55 AND 3-YEAR AGED THERMAL EMITTANCE OF 0.75
THREE-YEAR-AGED SOLAR REFLECTANCE INDEX OF 64

TABLE C402.4 BUILDING ENVELOPE FENESTRATION MAXIMUM U-FACTOR AND SHGC REQUIREMENTS

FIXED FENESTRATION	U-FACTOR	0.38
OPERABLE FENESTRATION	U-FACTOR	0.45
ENTRANCE DOORS	U-FACTOR	0.77
SHGC	PF < 0.36	0.36
	0.2 < PF < 0.5	0.43
	PF > 0.5	0.58

PF = PROJECTION FACTOR

SEE SPECIFICATIONS FOR FENESTRATION VALUES COMPLYING WITH 2020 ENERGY CONSERVATION CODE.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ADD	ADDENDUM
ADMIN	ADMINISTRATIVE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT / ARCHITECTURAL
AV	AUDIO VISUAL
BLDG	BUILDING
BOT OR B/	BOTTOM OF
BSMT	BASEMENT
CJ	CONTROL / CONSTRUCTION JOINT
CL	CENTERLINE
CLG / CLNG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONT	CONTINUOUS
COORD	COORDINATE
CORR	CORRIDOR
DEMO	DEMOLITION
DET	DETAIL
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
ED	EDUCATION
EIFS	EXTERIOR INSULATION FINISH SYSTEM
ELECT	ELECTRIC / ELECTRICAL
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EQ	EQUAL
EQUIP	EQUIPMENT
EXST	EXISTING
EJ	EXPANSION JOINT
EXT	EXTERIOR
FIN	FINISH
FIN FL	FINISH FLOOR
FIXT	FIXTURE
FLR	FLOOR
FRT	FIRE-RETARDENT-TREATED MATERIAL
FTG	FOOTING
GA	GAUGE
GAL	GALLON
GALV	GALVANIZE(D)
GC	GENERAL CONTRACT(OR)
GND	GROUND
GWB	GYPSUM WALL BOARD
GWBS	GYPSUM WALL BOARD SOFFIT
HC	HANDICAPPED ACCESSIBLE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HTG	HEATING
HVAC	HEATING/VENTILATING/AIR CONDITIONING
ID	INSIDE DIMENSION
IN	INCH / INCHES
INT	INTERIOR
JAN	JANITOR
JC	JANITOR'S CLOSET
JST	JOIST
JT	JOINT
LAB	LABORATORY
LB	POUND
LIN	LINEAR
LVL	LEVEL
MAN	MANUAL
MAS	MASONRY
MAX	MAXIMUM
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURE(R)
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTL	METAL
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
O/HD	OVERHEAD
OPT	OPTIONAL
OPP	OPPOSITE
OZ	OUNCE
OS	OCCUPANCY SENSOR
PERIM	PERIMETER
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PLAS	PLASTER
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT(ED)
POLYISO	POLYISOCYANURATE
PPT	PRESSURE PRESERVATIVE TREATED
PR	PAIR
PREP	PREPARATORY
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
RAD	RADIUS
RB	RUBBER / RUBBER WALL BASE
REQD	REQUIRED
RM	ROOM
RND	ROUND
RO	ROUGH OPENING
SCH	SCHEDULED
SECT	SECTION
SF	SQUARE FEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL / STRUCTURE
SUSP	SUSPENDED
SAC	SUSPENDED ACOUSTICAL CEILING
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TECH	TECHNOLOGY
TEMP	TEMPORARY
TMPD	TEMPERED
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
U.O.N	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WD	WOOD
WPT	WOOD PRESSURE-TREATED MATERIAL
WT	WEIGHT
YD	YARD

ARCHITECTURAL LEGEND

MATERIAL INDICATIONS

- EARTH
- GRANULAR FILL
- BRICK
- CONCRETE MASONRY UNIT
- CONCRETE
- GROUT
- ROUGH WOOD BLOCKING
- SHIM
- FINISH WOOD
- PLYWOOD
- SHEATHING
- RIGID INSULATION
- BATT INSULATION
- SPRAY FOAM INSULATION
- EPS INSULATION
- STEEL

DIMENSIONING CONVENTIONS

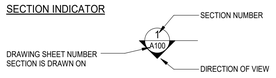
- FACE OF STUD OR CMU
- COLUMN CENTER LINE

SYMBOLS

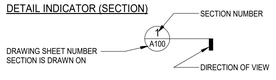
- CLASSROOM / 100 / 000 S.F. — ROOM NAME; ROOM NUMBER; AREA OF ROOM
- A100 — DOOR NUMBER, REFER TO A900 DRAWINGS
- 1 — WINDOW TAG, REFER TO A900 DRAWINGS
- BLT1 — BORROWED LIGHT NUMBER, REFER TO A900 DRAWINGS
- S1 — STOREFRONT / CURTAINWALL NUMBER, REFER TO A900 DRAWINGS
- 1 — COLUMN GRID DESIGNATION
- 1 / M — PARTITION TAG, REFER TO A700 DRAWINGS; ADDITIONAL NOTES FOR PARTITION
- 1 — REVISION NUMBER
- 1 — KEY NOTE, NEW WORK
- 1 — KEY NOTE, DEMOLITION WORK
- +0'-0" — ELEVATION TAG
- HANDICAPPED ACCESSIBLE ELEMENT OR FIXTURE
- WALL FINISH / BASE FINISH / FLOOR FINISH / CEILING FINISH — INTERIOR FINISH TAG, REFER TO AF100 DRAWINGS
- CHANGE IN FINISH MATERIAL

DETAIL INDICATOR LEGEND

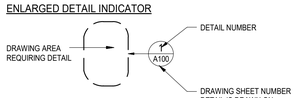
SECTION INDICATOR



DETAIL INDICATOR (SECTION)



ENLARGED DETAIL INDICATOR



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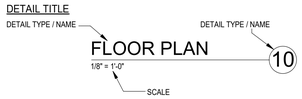
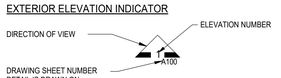
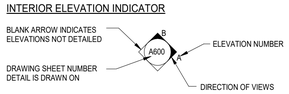


EXTERIOR ELEVATION INDICATOR



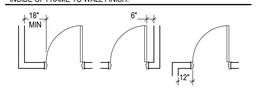
INTERIOR ELEVATION INDICATOR



PLAN GRAPHICS LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- NEW CONCRETE MASONRY WALL
- NEW METAL STUD WALL
- NEW BRICK VENEER
- EXISTING DOOR TO REMAIN
- EXISTING DOOR TO BE REMOVED
- NEW DOOR

FINISHED DOOR OPENINGS SHALL BE LOCATED AS INDICATED BELOW U.O.N. DIMENSIONS SHOWN ARE CLEAR DIMENSIONS FROM INSIDE OF FRAME TO WALL FINISH.



GENERAL NOTES

1. DIMENSIONS ARE GIVEN THUS (UNLESS NOTED OTHERWISE)
   A. TO FACE OF MASONRY WALL
   B. TO FACE OF GYPSUM WALL BOARD
   C. TO COLUMN CENTERLINES
   D. TO FINISH FACE OF SOFFIT OR CEILING
   E. FACE OF EXISTING CONSTRUCTION
2. DO NOT SCALE DRAWINGS. IF A DIMENSION IS NOT SHOWN, BRING IT TO THE ATTENTION OF THE ARCHITECT FOR VERIFICATION BEFORE PROCEEDING WITH THE ASSOCIATED WORK
3. WALLS ON COLUMN LINES ARE CENTERED, UNO
4. ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE VERIFIED IN FIELD. CONTRACTOR TO NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK IN THAT AREA.
5. ALL ELEVATIONS (X'-X") ARE REFERENCE FROM FIRST FLOOR ELEVATION
6. ALL WOOD BLOCKING WITHIN ROOFING SYSTEM AND WITHIN 2'-0" OF GRADE SHALL BE PRESSURE TREATED
7. ALL EXPOSED SURFACES OF NEW PARTITIONS AND SOFFITS ARE TO BE FINISHED.
8. PROVIDE PATCH TO MATCH EXISTING FINISHES AT ALL WALL REMOVAL AREAS, COORDINATE WITH DEMOLITION DRAWINGS AND SPECIFICATIONS.
9. FOR ALL MATERIAL TESTING, REFER TO SPECIFICATION DIVISION 014100 & 014529
10. ALL CONSTRUCTION SHOWN IS NEW UNLESS NOTED OTHERWISE

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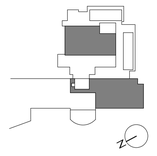
SEAL

ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021
ISSUE	DATE

KEY PLAN



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SYMBOLS, ABBREVIATIONS, AND MISC

MS G001

SHEET NOTES

A. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION

B. PATCH AND REPLACE EXISTING HOLES IN WALLS AND ROOFS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION

C. ALL KEY NOTED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS. U.O.N.

D. REFER TO MEP AND ASBESTOS / LEAD DRAWINGS AND SPECS FOR ADDITIONAL REMOVAL INFORMATION

E. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, U.O.N

F. PROVIDE TEMPORARY SHORING AT ALL AREAS OF MASONRY REMOVAL

G. SEE SHEETS A202 AND A203 FOR WALL REMOVALS

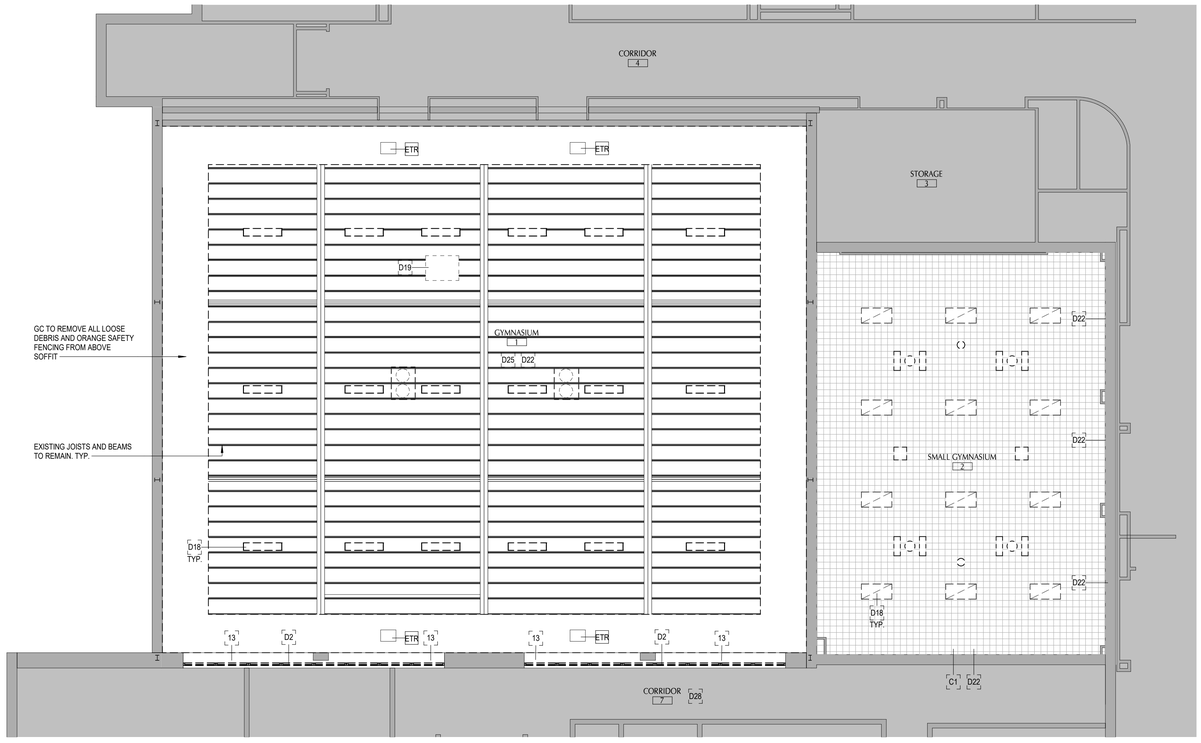
H. GC TO REMOVE ALL LOOSE DEBRIS AND ORANGE SAFETY FENCING FROM ABOVE SOFFIT

LEGEND

NOT IN CONTRACT

KEY NOTES

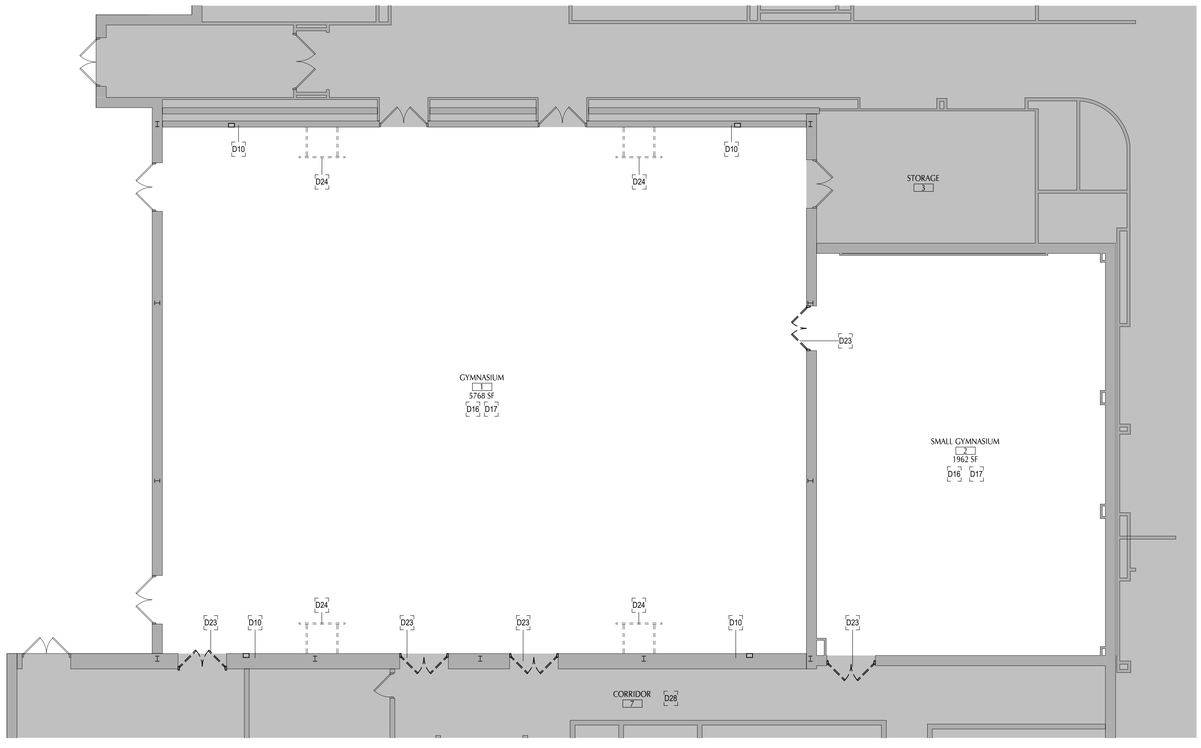
13	REMOVE, REFURBISH, AND REINSTALL EXISTING WINDOW GRATES IN EXISTING MASONRY OPENINGS. SCRAPE, PREP, AND PAINT GRATES TO MATCH WALL COLOR. REMOVE EXISTING MASONRY ANCHORS, REPAIR WALL, AND PROVIDE NEW EPOXY SET HILITI MASONRY ANCHORS, TYP. ALL LOCATIONS.
C1	REMOVE EXISTING SUSPENDED CEILING SYSTEM IN ITS ENTIRETY, INCLUDING ALL HANGERS AND FASTENERS. REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR EQUIPMENT REMOVALS.
D2	REMOVE WINDOW SYSTEM IN ITS ENTIRETY.
D10	REMOVE EXISTING STEAM UNIT HEATERS AND COVERS. STEAM PIPING TO BE TERMINATED AND CAPPED BY MECHANICAL CONTRACTOR.
D16	EXISTING GYM FLOORING TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
D17	EXISTING WALL PADDING TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
D18	REMOVE EXISTING LIGHTING. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
D19	EXISTING CEILING MOUNTED PROJECTOR, MOUNTING ARM, AND CASE TO BE REMOVED, AND TURNED OVER TO THE DISTRICT FOR STORAGE DURING CONSTRUCTION. GC TO REINSTALL PROJECTOR, MOUNTING ARM, AND CASE AT THE SAME LOCATION. POWER AND DATA TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
D22	REMOVE ABANDONED ATHLETIC EQUIPMENT WALL ANCHORS AND CEILING ANCHORS.
D23	REMOVE EXISTING DOOR, HARDWARE, AND DOOR SADDLE. EXISTING DOOR FRAME TO REMAIN.
D24	REMOVE EXISTING STATIONARY BASKETBALL BACKBOARDS, MOUNTING FRAMES, WOOD BLOCKING AND MASONRY ANCHORS. REPAIR MASONRY WALL AND PAINT, TYPICAL ALL (4) LOCATIONS.
D25	REMOVE ABANDONNED BRACKETS FROM ORIGINAL DROP CEILING REMOVAL.
D28	EXISTING CORRIDOR CEILING PLASTER CONTAINS ASBESTOS. CONTRACTORS ARE TO USE EXISTING ACCESS PANELS WHENEVER POSSIBLE. SEE SPECIFICATION SECTION 004321 FOR ALLOWANCES TO BE CARRIED IN BASE BID.
ETR	EXISTING TO REMAIN



DEMOLITION PLAN - GYM RCP

1/8" = 1'-0"

20



DEMOLITION PLAN - GYM

1/8" = 1'-0"

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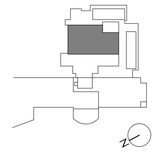

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DEMOLITION PLAN - FIRST FLOOR PLAN + RCP

MS AD101

SHEET NOTES

A. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION

B. PATCH AND REPLACE EXISTING HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION

C. ALL KEY NOTED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS. U.O.N.

D. REFER TO MEP AND ASBESTOS DRAWINGS AND SPECS FOR ADDITIONAL REMOVAL INFORMATION

E. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, U.O.N

F. PROVIDE TEMPORARY SHORING AT ALL AREAS OF MASONRY REMOVAL

LEGEND

NOT IN CONTRACT

ROOF DRAIN

VENT PIPE

KEY NOTES

D3 REMOVE ROOF EDGE FLASHING, TYPICAL AT ENTIRE ROOF PERIMETER UNLESS NOTED OTHERWISE

D4 CUT EXISTING METAL PANEL AS REQUIRED FOR NEW FLASHING HEIGHT.

D6 REMOVE, PROTECT AND STORE METAL ACCESS LADDER.

D7 REMOVE EXPANSION JOINT COVER AND ASSOCIATED FLASHING TO ALLOW FOR NEW WORK.

D8 REMOVE REGLET FLASHING IN ITS ENTIRETY.

D9 REMOVE GRAVEL, BUILT UP ROOFING, INSULATION AND "POREX" ROOF DECK. EXISTING JOISTS AND BEAMS BELOW TO REMAIN.

D11 REMOVE ROOF DRAIN.

D12 REMOVE FLASHING AROUND EXISTING TO REMAIN PIPE PENETRATION.

D13 REMOVE EXISTING METAL ACCESS LADDER, REPAIR HOLES IN WALL

D14 REMOVE EQUIPMENT SEE MECHANICAL FOR MORE INFORMATION. REMOVE CURB TO ALLOW FOR NEW WORK. CONTRACTOR TO COORDINATE WITH ELECTRICAL AND MECHANICAL CONTRACTORS TO PERFORM DISCONNECT/REMOVALS.

D15 REMOVE COUNTER FLASHING, EXISTING THROUGH WALL FLASHING TO REMAIN.

D26 REMOVE EXISTING MEMBRANE ROOF AND INSULATION DOWN TO DECK TO REMAIN.

D27 REMOVE, PROTECT, AND STORE EXISTING MECHANICAL EQUIPMENT FOR REINSTALLATION. CONTRACOR TO COORDINATE WITH ELECTRICAL AND MECHANICAL CONTRACTORS TO PERFORM DISCONNECT/REMOVALS. REMOVE EXISTING CURB IN ITS ENTIRETY.

M1 EXISTING MECHANICAL PIPE ABOVE ROOFING TO REMAIN. SCRAP AND PAINT EXISTING PIPE AFTER ROOFING WORK IS COMPLETE. PROVIDE NEW SUPPORTS AS NECCESSARY TO MAINTAIN EXISTING HEIGHT ABOVE ROOF DECK.

M2 EXISTING MECHANICAL EQUIPMENT TO REMAIN. PROTECT DURING INSTALLATION OF NEW WORK.

MD1 REMOVE EXISTING MECHANICAL GAS PIPE. SEE MEP DRAWINGS FOR MORE INFORMATION.

DEMOLITION PLAN - ROOF

1/8" = 1'-0"

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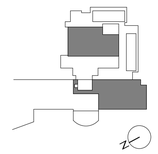

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DEMOLITION PLAN - ROOF AREAS

MS AD102

ASBESTOS ABATEMENT
GENERAL NOTES

GENERAL NOTES:

1. ALL ASBESTOS REMOVAL SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAW, GUIDELINES, REGULATIONS, ORDERS AND DIRECTIVES, INCLUDING WITHOUT LIMITATIONS, THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA), AND U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH), AND NEW YOK STATE DEPARTMENT OF LABOR (NYSDOL).

2. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, SERVICES, ETC., NECESSARY TO PERFORM THE WORK REQUIRED FOR ASBESTOS ABATEMENT IN ACCORDANCE WITH CONTRACT DOCUMENTS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

3. CONTRACTOR SHALL DEVELOP AND IMPLEMENT A WRITTEN STANDARD PROCEDURE FOR ABATEMENT WORK TO ENSURE MAXIMUM PROTECTION AND SAFEGUARD FROM ASBESTOS EXPOSURE OF THE WORKERS, VISITORS, EMPLOYEES, GENERAL PUBLIC, AND THE ENVIRONMENT.

4. CONTRACTOR SHALL PROVIDE SIGNS, LABELS, WARNINGS, AND POST INSTRUCTIONS THAT ARE NECESSARY TO PROTECT, INFORM AND WARN PEOPLE OF THE HAZARD FROM ASBESTOS EXPOSURE. POST IN A PROMINENT AND CONVENIENT PLACE FOR THE WORKERS A COPY OF THE LATEST APPLICABLE REGULATIONS FROM OSHA, EPA, NIOSH AND NYSDOL.

5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATION.

6. THE CONTRACTOR SHALL RELOCATE ALL FURNITURE, LOCKERS, DESKS AND OTHER MISC. ITEMS IN AND OUT OF THE WORK AREAS TO ACCOMODATE ASBESTOS ACTIVITIES.

7. THE CONTRACTOR SHALL PROVIDE ALL ELECTRICAL, WATER, AND WASTE CONNECTIONS, TIE–INS, EXTENSIONS, CONSTRUCTION MATERIALS, SUPPLIES, ETC. AS REQUIRED TO FACILITATE ASBESTOS REMOVAL.

8. CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRIC AND LIGHT THROUGHOUT THE WORK AREA(S) AS REQUIRED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS AND CODES.

9. THE CONTRACTOR SHALL ESTABLISH CRITICAL BARRIERS OVER ALL OPENINGS LOCATED INSIDE THE PARTICULAR WORK AREA AS WELL AS INSIDE THE SCHOOL.

10. CONTRACTOR SHALL PROPERLY PROTECT ALL CONTROLS, TUBING, ELECTRICAL PANELS, EQUIPMENT, ETC. WITHIN THE WORK AREA.

11. THE CONTRACTOR SHALL BE REQUIRED TO ISSUE NON–WHITE WORK COVERALLS FOR ALL ABATEMENT WORKERS.

12. CONTRACTOR SHALL EXERCISE EXTREME CARE AND CAUTION DURING ANY AND ALL DEMOLITION AND ABATEMENT OPERATIONS. CONTRACTOR SHALL CONDUCT REMOVAL OF ALL MATERIALS FROM THE SITE WITH MINIMUM DISTURBANCE; PROVIDE PROPER PROTECTION AND REGULAR MAINTENANCE OF ALL BUILDING PREMISES DIRECTLY OR INDIRECTLY ASSOCIATED WITH ABATEMENT OPERATIONS.

13. CONTRACTOR SHALL LOCATE AND SEAL ALL PENETRATIONS THROUGH WALLS BETWEEN THE WORK AREA AND ADJACENT AREAS, INCLUDING, BUT NOT LIMITED TO PIPE, DUCT, CONDUIT, CHASES, AND OPENINGS IN FIRE WALLS OR DECKS BETWEEN FLOORS AS REQUIRED BY THE FIELD CONDITION.

14. THE CONTRACTOR SHALL USE A WATER SPRAYER TO WET ASBESTOS CONTAINING MATERIALS INSIDE THE WORK AREA.

15. CONTRACTOR SHALL CONSTRUCT A PERSONAL/WASTE DECONTAMINATION ENCLOSURE SYSTEM (P./W.D.E.S.) AS INDICATED. IT SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE STORAGE OF MATERIALS, EQUIPMENT, ETC. .

16. SHOWER AND WASTEWATER MUST BE FILTERED AND DISPOSED OF IN THE BUILDING'S SANITARY SYSTEM. REFER TO CONTRACT SPECIFICATIONS.

17. IF WATER IS NOT AVAILABLE, THE CONTRACTOR SHALL PROVIDE A 55 GALLON WATER TANK FOR THE DECONTAMINATION UNIT.

18. THE CONTRACTOR SHALL UTILIZE GFCI PANEL CONNECTIONS AT THE SOURCE OUTLET WHEN ACCESSING TEMPORARY POWER.

19. CONTRACTOR SHALL SUPPLY ALL NECESSARY CONNECTIONS, FASTENERS, FLEXIBLE DUCTS, MANIFOLDS, SUPPORTS, ETC. ANY AND ALL INSTALLATIONS SHALL COMPLY WITH CONTRACT DOCUMENTS AND MANUFACTURER'S REQUIREMENTS.

20. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE TEMPORARY WATER AND POWER SOURCES PRIOR TO ABATEMENT ACTIVITIES.

21. DEBRIS RESULTING FROM ANY DEMOLITION AND/OR ASBESTOS ABATEMENT ACTIVITIES SHALL BE DISPOSED OF AS ASBESTOS CONTAMINATED WASTE.

22. NO WASTE SHALL BE STORED ON SITE OR INSIDE THE DECONTAMINATION UNIT BETWEEN SHIFTS. WASTE SHALL BE DOUBLE BAGGED BEFORE PROCEEDING TO THE CONTAINER AND/OR DECON. BAGS WILL BE MOVED FROM WORK AREAS TO THE WASTE DECON AND SUBSEQUENTLY TO THE CONTAINER IN COVERED CARTS. BAGS WILL BE CARRIED BY HAND ONLY WHEN NECESSARY. ALL WASTE SHALL BE CONTAINERIZED AT THE END OF EACH WORK SHIFT BEFORE RELINQUISHING TO WASTE HAULER.

23. CONTRACTOR IS RESPONSIBLE TO COORDINATE AND CONFIRM THE EXACT SCOPE OF WORK FOR EACH PHASE OF ABATEMENT WITH THE GENERAL CONTRACTOR AND OTHER TRADES.

24. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, TOOLS, TRANSPORTATION AND ANY OTHER EQUIPMENT REQUIRED AND/OR NECESSARY TO COMPLETE ALL WORK DESCRIBED IN THE CONTRACT DOCUMENTS.

25. THE LOCATION OF THE PERSONAL/WASTE DECONTAMINATION UNITS, AIRLOCKS, ETC. IS SHOWN FOR REFERENCE PURPOSES. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD.

DRAWING	DRAWING NAME
H-001.00	ASBESTOS ABATEMENT LOCATIONS - GENERAL NOTES
H-002.00	ASBESTOS ABATEMENT LOCATIONS - SMALL GYMNASIUM FLOOR PLAN - FIRST FLOOR
H-003.00	ASBESTOS ABATEMENT LOCATIONS - PARTIAL ROOF PLAN - ROOF Z

PROJECT DESIGNER: STEVE EGET NYS 06-06432

EASTCHESTER
UNION FREE
SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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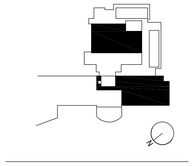
SEAL

ISSUE	DATE
ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021

KEY PLAN



SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

ASBESTOS ABATEMENT
GENERAL NOTES

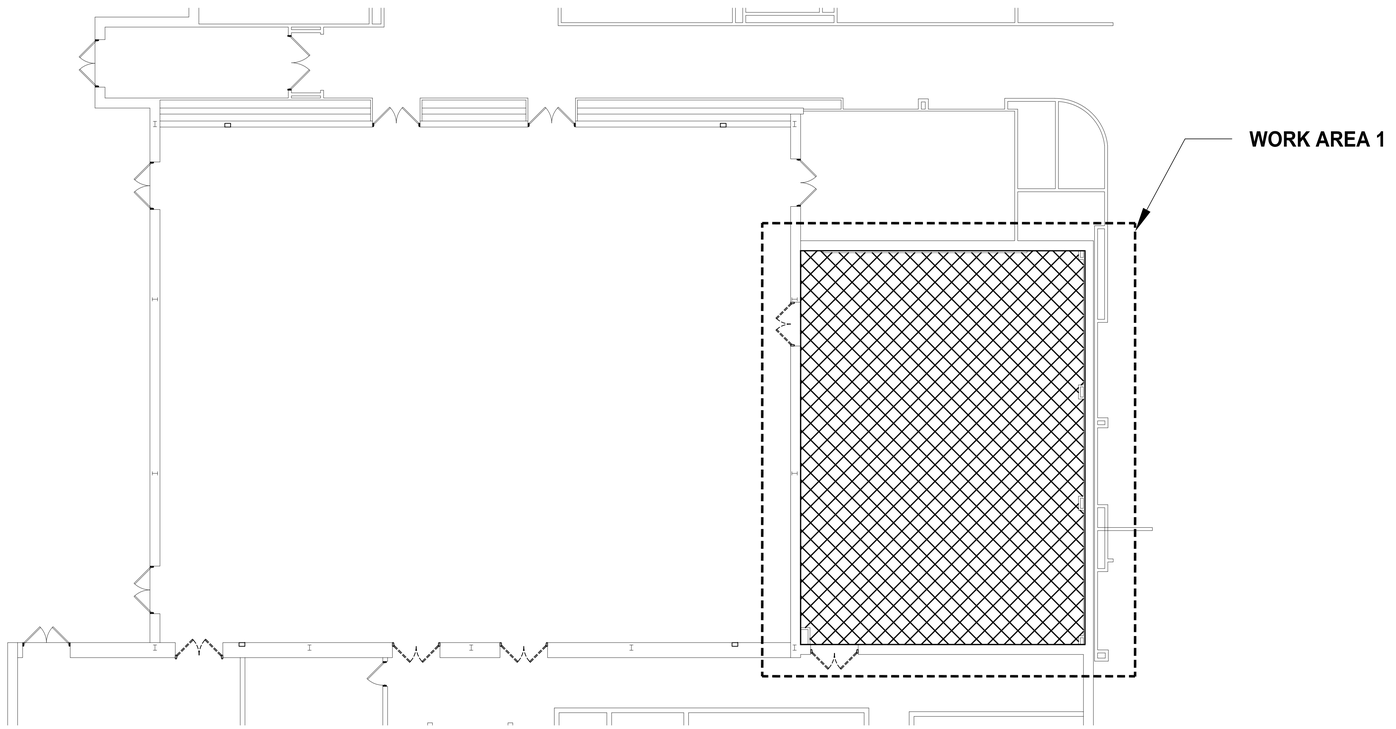
H001.00

LEGEND

LOCATION OF ASBESTOS CONTAINING PIPE FITTING/ELBOW INSULATION (WHITE)

WORK AREA BOUNDARY

TYPICAL DECONTAMINATION UNIT



SMALL GYMNASIUM FLOOR PLAN - FIRST FLOOR

1/8" = 1'-0"

1

WORK AREA	LOCATION	ASBESTOS-CONTAINING MATERIAL	APPROXIMATE QUANTITY	REMOVAL PROCEDURES
1	SMALL GYMNASIUM (WRESTLING GYM) CEILING PLENUM	PIPE FITTING/ELBOW INSULATION	80 LINEAR FEET	NYS DOL 12 NYCRR PART 56 § 7.11 (ii) TENT PROCEDURES

PROJECT DESIGNER: STEVE EGET NYS 06-06432

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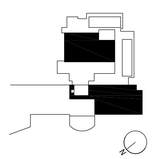

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MEMASI PROJECT NO. 102-2101

ASBESTOS ABATEMENT

SMALL GYMNASIUM FLOOR PLAN - FIRST FL.

H002.00

LEGEND

LOCATION OF ASBESTOS CONTAINING CAULKING AT WINDOWS (GRAY)

LOCATION OF ASBESTOS CONTAINING CAULKING TO DOOR FRAME (OLD TAN)

DF

WORK AREA BOUNDARY

Air Lock | Equipment Room | Air Lock | Shower | Air Lock | Clean Room | Lockable Door

TYPICAL DECONTAMINATION UNIT

PARTIAL FLOOR PLAN - ROOF Z

1/8" = 1'-0"

1

WORK AREA	LOCATION	ASBESTOS-CONTAINING MATERIAL	APPROXIMATE QUANTITY	REMOVAL PROCEDURES
2	ROOF Z BULKHEAD	CAULK AT WINDOW (GRAY)	56 LINEAR FEET	NYS DOL 12 NYCRR PART 56 § 11.6 EXTERIOR PROJECT REMOVAL OF NON-FRIABLE ACM ROOFING, SIDING, CAULKING, GLAZING, COMPOUND, TRANSITE, TARS, SEALERS, COATING, AND OTHER NOB ACMs
3	ROOF Z BULKHEAD	CAULK TO DOOR NEWER (WHITE) AND CAULK TO DOOR OLD (TAN)	18 LINEAR FEET	

PROJECT DESIGNER: STEVE EGET NYS 06-06432

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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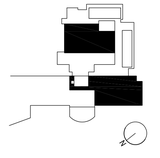

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MEMASI PROJECT NO. 102-2101

ASBESTOS ABATEMENT

PARTIAL ROOF PLAN - ROOF Z

H003.00

SHEET NOTES

A. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION

B. PATCH AND REPLACE EXISTING HOLES IN WALLS AND ROOFS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION

C. ALL KEYED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS. U.O.N.

D. REFER TO MEP AND ASBESTOS DRAWINGS AND SPECS FOR ADDITIONAL REMOVAL INFORMATION

E. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, U.O.N

F. ALL NEW AND EXISTING CONDUITS, PIPING, ETC. TO BE PAINTED

G. GC TO PROVIDE TEMPORARY SHORING OR ACCESS TO PLASTER SOFFIT FOR INSTALLATION OF ROOF DRAINS AND MECHANICAL DUCTWORK.

H. ALL EXISTING DOOR FRAMES IN GYMNASIUM, AND SMALL GYMNASIUM TO BE PAINTED. COLOR SELECTED BY ARCHITECT.

KEY NOTES

8 EXISTING STRUCTURE TO REMAIN SCRAPE, PREP, AND PAINT WITH RUST INHIBITING PAINT.

9 SCRAPE, PATCH, PREP, AND PAINT EXISTING WALLS FROM TOP OF EXISTING WALL PADS TO UNDERSIDE OF SOFFIT, INCLUDING EXISTING CONDUIT. PROTECT EXISTING DEVICES, WALL PADS, AND FLOOR.

13 REMOVE, REFURBISH, AND REINSTALL EXISTING WINDOW GRATES IN EXISTING MASONRY OPENINGS. SCRAPE, PREP, AND PAINT GRATES TO MATCH WALL COLOR. REMOVE EXISTING MASONRY ANCHORS. REPAIR WALL, AND PROVIDE NEW EPOXY SET HILITI MASONRY ANCHORS, TYP. ALL LOCATIONS.

19 GWB WALL AT EXISTING PLASTER SOFFIT.

20 NEW STRUCTURAL ANGLE FOR ROOF CURB SUPPORT. SEE STRUCTURAL DRAWINGS FOR MORE INFORMATION.

23 PAINT UNDERSIDE OF DECK, CONDUIT, AND SHEETMETAL DUCTWORK.

E2 PROVIDE POWER AND DATA TO REINSTALLED CEILING MOUNTED PROJECTOR.

F1 NEW LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION. CENTER LIGHT'S BETWEEN BAR JOISTS.

F2 NEW LIGHT FIXTURE. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION. CENTER LIGHT'S BETWEEN BAR JOISTS.

LEGEND

- NOT IN CONTRACT
- NEW LIGHT FIXTURE
- SUPPLY DUCT
- RETURN DUCT

GLAZING TYPES

X-1 VISION GLASS

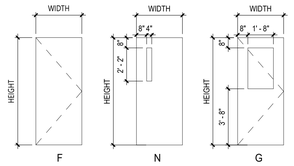
I-1 1 HR. FIRE PROTECTED GLASS

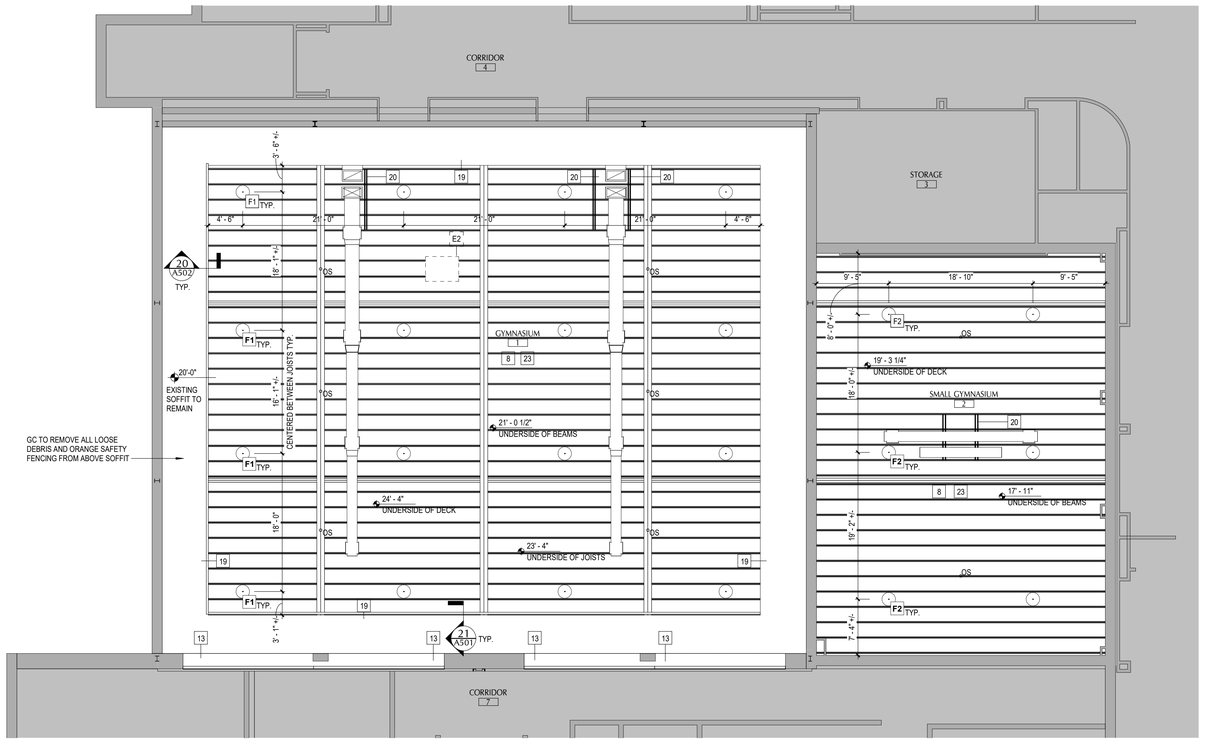
DOOR SCHEDULE

DOOR NUMBER	DOOR LEAF COUNT	DOOR FROM	DOOR FROM	DOOR TO	DOOR TO	DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FRAME HEAD DETAIL	FRAME JAMB DETAIL	FRAME SILL DETAIL	LABEL (MIN)	GLAZING	HARDWARE	MAG HOLD-OPEN	ACCESS CONTROL	REMARKS
001	2	7	CORRIDOR	1	GYMNASIUM	3' - 0"	7' - 0"	1 3/4"	G	FRP	FF	EXST.	HM	PNT	-	-	30/A502	45	I-1	002	-	-	
001A	2	7	CORRIDOR	1	GYMNASIUM	3' - 0"	7' - 0"	1 3/4"	G	FRP	FF	EXST.	HM	PNT	-	-	30/A502	45	I-1	002	-	-	
001B	2	5	LOCKER ROOM	1	GYMNASIUM	3' - 0"	7' - 0"	1 3/4"	F	FRP	FF	EXST.	HM	PNT	-	-	30/A502	-	-	001	-	-	
002	2	7	CORRIDOR	2	SMALL GYMNASIUM	3' - 0"	7' - 0"	1 3/4"	G	FRP	FF	EXST.	HM	PNT	-	-	30/A502	45	I-1	002	-	-	
002A	2	1	GYMNASIUM	2	SMALL GYMNASIUM	2' - 9"	7' - 0"	1 3/4"	G	FRP	FF	EXST.	HM	PNT	-	-	30/A502	-	I-1	002	-	-	

DOOR NOTES:
1. GC TO VERIFY EXISTING TO REMAIN FRAME DIMENSIONS TO ENSURE PROPER FIT AND RATING ON NEW FRP DOOR ASSEMBLIES.

DOOR TYPES

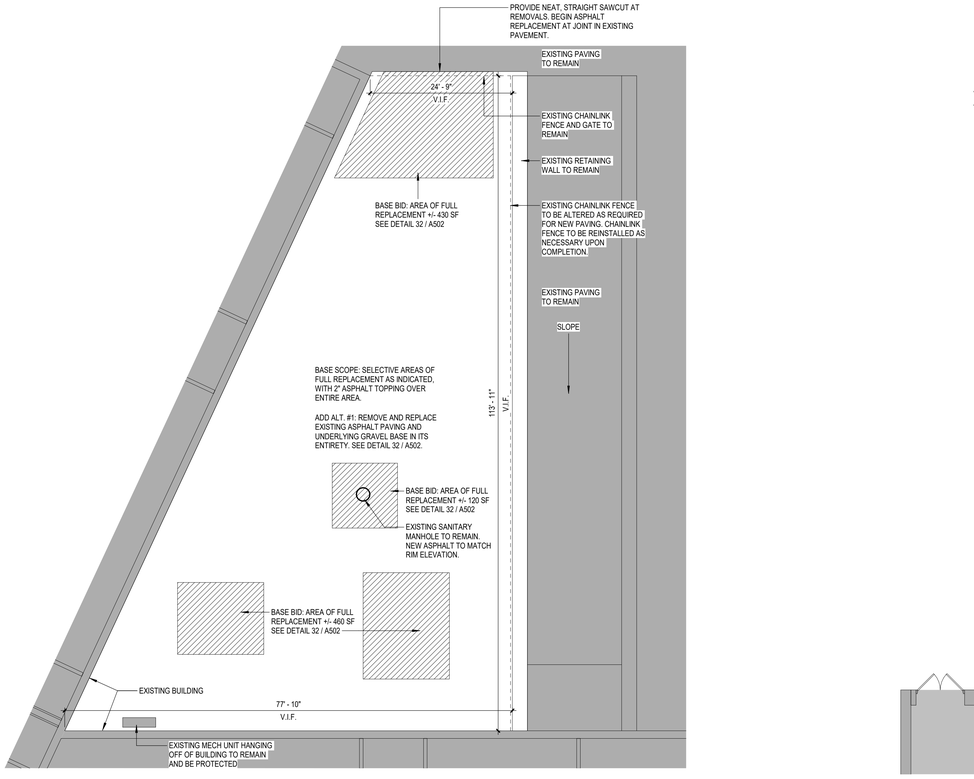




FIRST FLOOR RCP

1/8" = 1'-0"

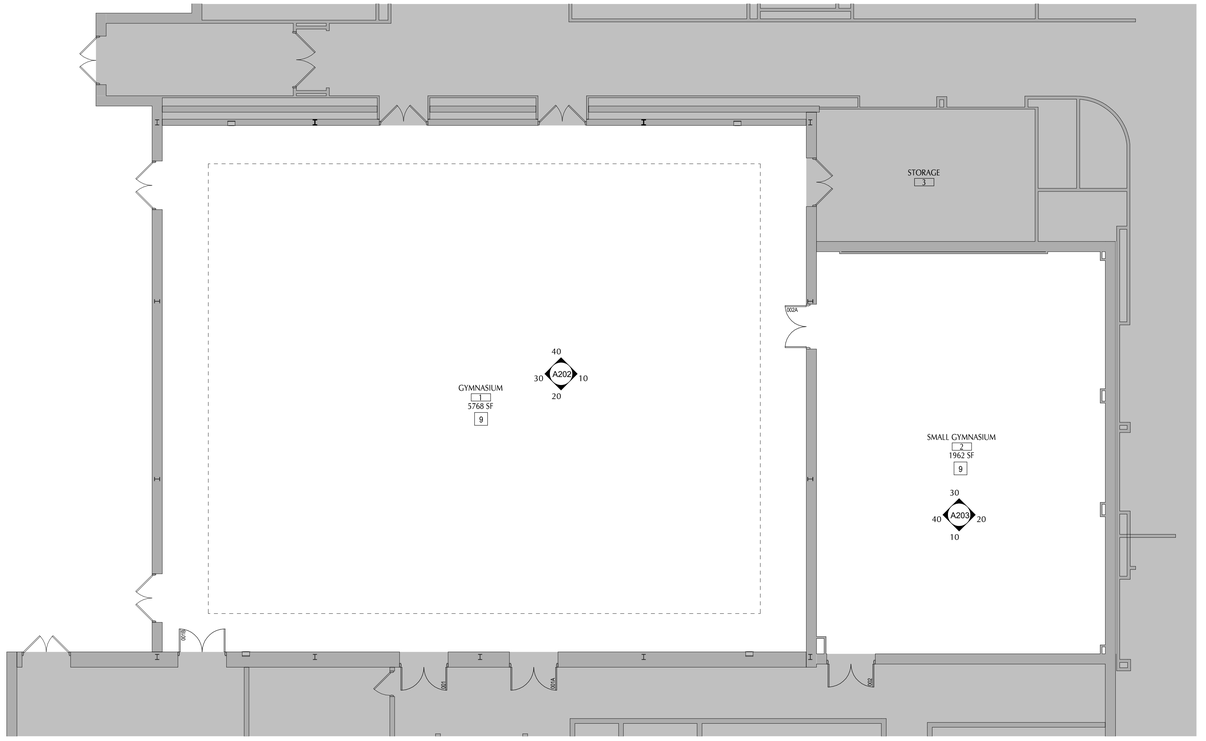
20



STAGING AREA RE-PAVING PLAN

3/32" = 1'-0"

11



FIRST FLOOR PLAN

1/8" = 1'-0"

10

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENTS PROJECT

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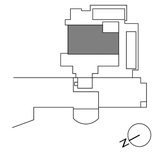
SEAL

ISSUE	DATE
ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021

KEY PLAN



SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

FIRST FLOOR PLAN + RCP

MS A101

SHEET NOTES

A. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION

B. PATCH AND REPLACE EXISTING HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION

C. REFER TO MEP AND ASBESTOS DRAWINGS AND SPECS FOR ADDITIONAL REMOVAL INFORMATION

D. CURB SIZES SHOWN REFLECT PENETRATING DUCT SIZE. CURB SIZE MAY VARY, COORDINATE ACTUAL SIZE OF CURBS IN FIELD.

E. NEW ROOF AND ROOF INSULATION FASTENERS TO ENGAGE HIGH POINT OF STEEL DECK FLUTES.

F. INSTALL WALKWAY PADS AT BASE OF ALL LADDER LOCATIONS

G. INSTALL WALKWAY PADS UNDER ALL NEW AND EXISTING PIPE SUPPORTS THROUGHOUT NEW ROOF SECTIONS

H. (RE)INSTALL ALL CONDENSATE DRAINS ON MECHANICAL UNITS AND PITCH THEM TOWARDS ROOF SUMP.

LEGEND

NOT IN CONTRACT

ROOF DRAIN

VENT PIPE

KEY NOTES

1 INSTALL ROOFING ASSEMBLY AT ROOFS Z. SEE DETAIL 10/A501.

2 INSTALL ROOFING ASSEMBLY AT ROOF CC & DD. SEE DETAIL 11/A501.

3 REINSTALL REFURBISHED METAL ACCESS LADDER. ADJUST LADDER AS REQUIRED TO ACCOMODATE NEW ROOF ASSEMBLY THICKNESS.

4 INSTALL NEW FLASHING AT EXISTING MECHANICAL UNIT & CURB.

5 FLASH EXISTING PIPE PENETRATION SEE DETAIL 21/A501 FOR MORE INFORMATION.

6 INSTALL NEW ROOF DRAIN INSERT IN EXISTING LOCATION. SEE DETAIL 14/A501

12 PROVIDE NEW GALVANIZED METAL ROOF ACCESS LADDER, SEE DETAIL 13/A502.

18 INSTALL NEW ROOFING ASSEMBLY AT ROOF J. SEE DETAIL 10/A501.

21 PROVIDE NEW PITCH POCKETS FILLED WITH POURABLE SEALER AT MECHANICAL UNIT.

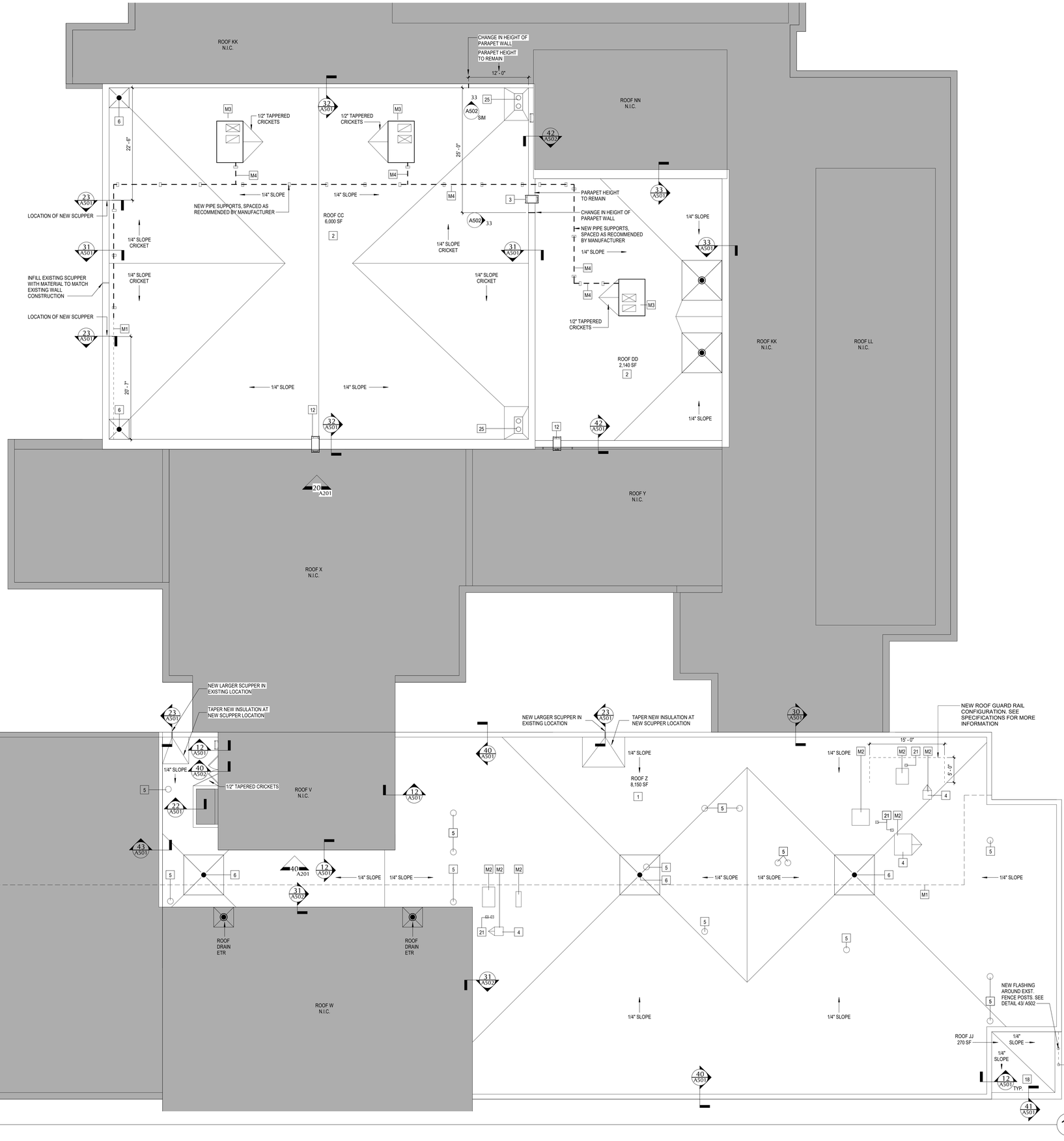
25 INSTALL NEW DOUBLE ROOF DRAIN. MAIN DRAIN TO BE ATTACHED TO EXISTING PLUMBING RISER, NEW OVERFLOW DRAIN TO OVERFLOW ONTO ROOF DD. SEE PLUMBING DRAWINGS FOR MORE INFORMATION.

M1 EXISTING MECHANICAL PIPE ABOVE ROOFING TO REMAIN. SCRAP AND PAINT EXISTING PIPE AFTER ROOFING WORK IS COMPLETE. PROVIDE NEW SUPPORTS AS NECCESSARY TO MAINTAIN EXISTING HEIGHT ABOVE ROOF DECK.

M2 EXISTING MECHANICAL EQUIPMENT TO REMAIN. PROTECT DURING INSTALLATION OF NEW WORK.

M3 NEW MECHANICAL ROOFTOP UNIT, SEE MECHANICAL DRAWINGS.

M4 SEE MEP DRAWINGS FOR GAS LINE MODIFICATION, EXISTING AND NEW PORTIONS OF PIPE TO BE SCRAPED AND PAINTED.



ROOF PLAN
1/8" = 1'-0"

10

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENTS PROJECT

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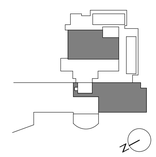


SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

ROOF PLAN

MS A102

SHEET NOTES

A. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION

B. PATCH AND REPLACE EXISTING HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION

C. REFER TO MEP AND ASBESTOS DRAWINGS AND SPECS FOR ADDITIONAL REMOVAL INFORMATION

GLAZING TYPES

X-1 VISION GLASS

I-1 1 HR. FIRE PROTECTED GLASS

KEY NOTES

12 PROVIDE NEW GALVANIZED METAL ROOF ACCESS LADDER, SEE DETAIL 13/A502.

16 TRANSLUCENT INSULATED PANEL, BY CPI DAYLIGHTING INC. OR EQUAL. GC TO VIF DIMENSIONS OF EXISTING MASONRY OPENING.

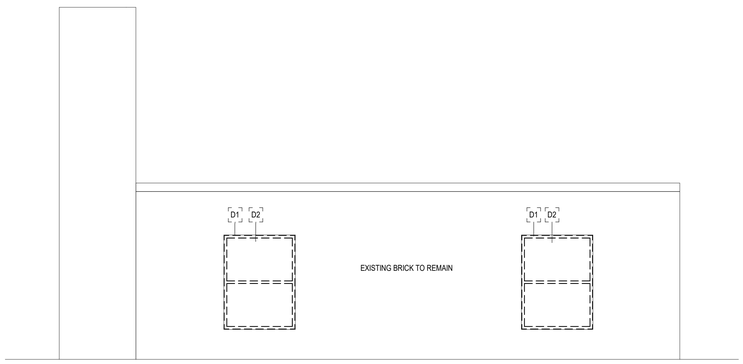
17 DOUBLE HUNG WINDOW SEE SPECIFICATION. GC TO VIF DIMENSIONS OF EXISTING MASONRY OPENING.

D1 EXISTING STEEL LINTEL TO REMAIN. SCRAPE, PREP, PAINT WITH RUST INHIBITING PAINT.

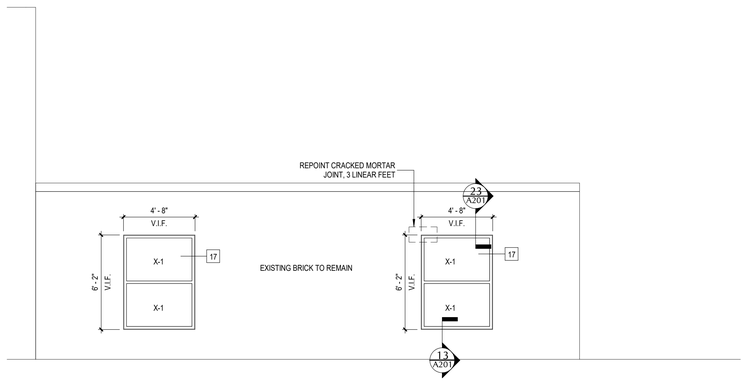
D2 REMOVE WINDOW SYSTEM IN ITS ENTIRETY.

D13 REMOVE EXISTING METAL ACCESS LADDER, REPAIR HOLES IN WALL.

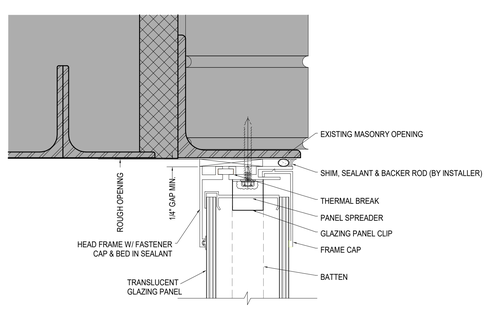
D20 EXISTING SILL FLASHING TO REMAIN



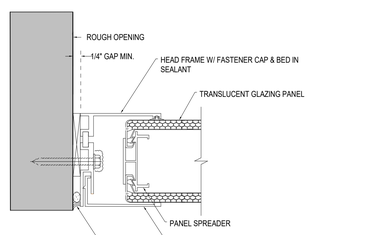
MECHANICAL PENTHOUSE WEST ELEVATION DEMOLITION 41
1/4" = 1'-0"



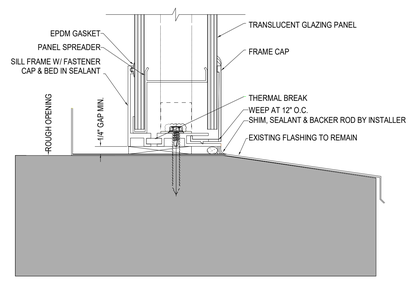
MECHANICAL PENTHOUSE WEST ELEVATION 40
1/4" = 1'-0"



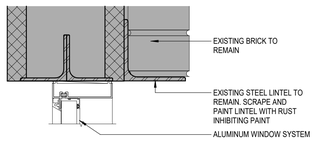
SECTION AT HEAD 32
6" = 1'-0"



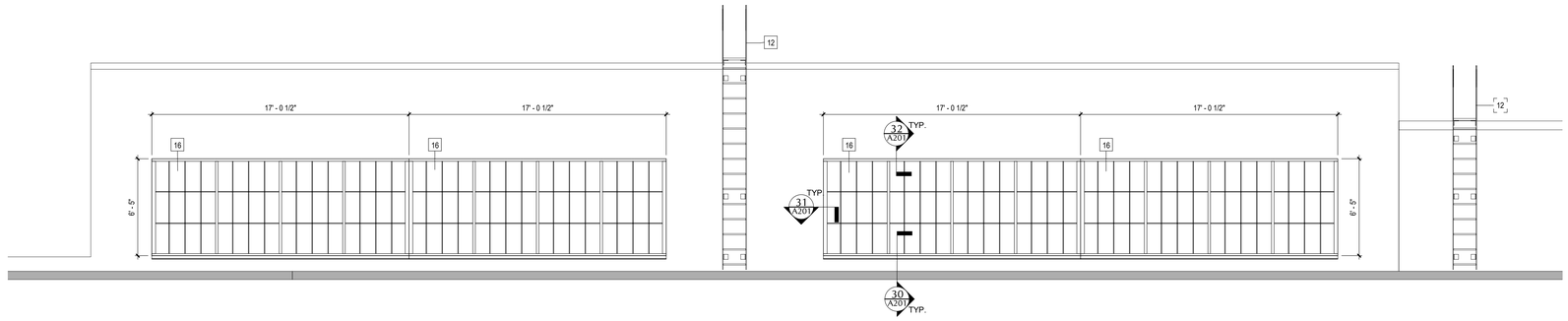
SECTION AT JAMB 31
6" = 1'-0"



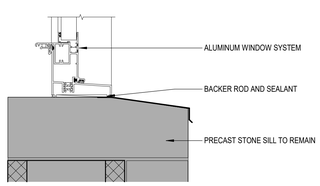
SECTION AT SILL 30
6" = 1'-0"



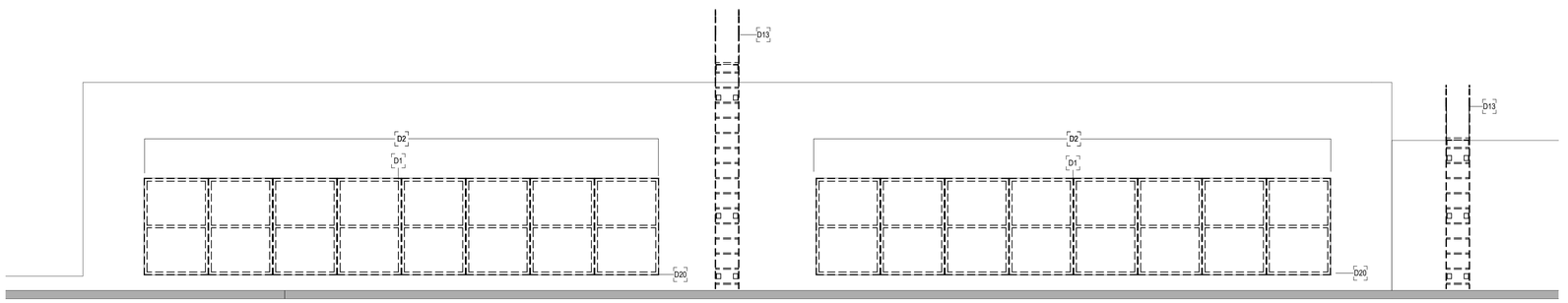
ALUMINUM WINDOW HEAD DETAIL 23
3" = 1'-0"



GYMNASIUM WEST ELEVATION 20
1/4" = 1'-0"



ALUMINUM WINDOW SILL DETAIL 13
3" = 1'-0"



GYMNASIUM WEST ELEVATION DEMOLITION 10
1/4" = 1'-0"

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENTS PROJECT

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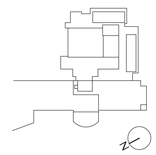
NEW YORK, NY 10014
212.612.7924

SEAL

ISSUE	DATE
ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021

KEY PLAN



SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

EXTERIOR ELEVATIONS

MS A201

SHEET NOTES

A. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION

B. WALL MOUNTED DEVICES ARE TO REMAIN U.O.N.

C. GC TO REPAIR MASONRY WALL WHERE ABANDONNED DEVICES AND EQUIPMENT HAVE BEEN REMOVED.

D. EXISTING WALK DRAW CURTAIN TO REMAIN, PROTECT DURING CONSTRUCTION.

E. REFER TO ELECTRICAL PLANS FOR INFORMATION ON ELECTRICAL, TELECOMMUNICATIONS AND FIRE ALARM DEVICES TO REMAIN, TO BE DEMOLISHED, AND TO BE REPLACED WITH NEW.

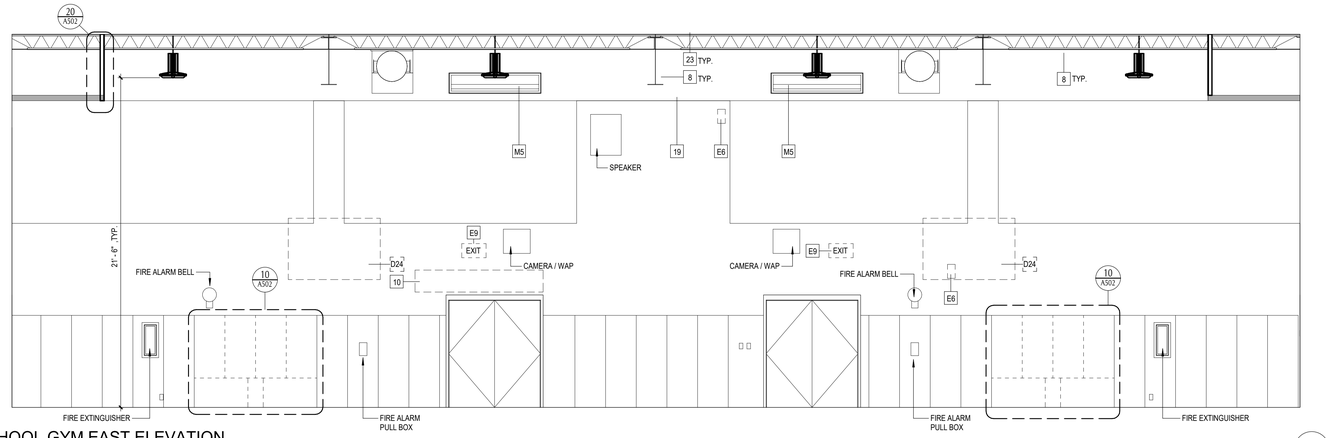
F. PATCH AND REPLACE EXISTING HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION

G. REFER TO MEP AND ASBESTOS DRAWINGS AND SPECS FOR ADDITIONAL REMOVAL INFORMATION

H. GC TO PROVIDE TEMPORARY SHORING OR ACCESS TO PLASTER SOFFIT FOR INSTALLATION OF ROOF DRAINS AND MECHANICAL DUCTWORK.

KEY NOTES

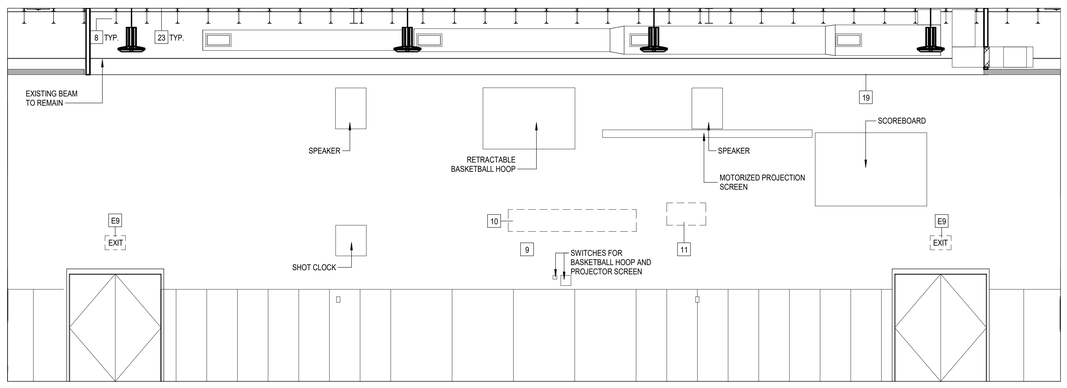
8	EXISTING STRUCTURE TO REMAIN SCRAPE, PREP, AND PAINT WITH RUST INHIBITING PAINT.
9	SCRAPE, PATCH, PREP, AND PAINT EXISTING WALLS FROM TOP OF EXISTING WALL PADS TO UNDERSIDE OF SOFFIT, INCLUDING EXISTING CONDUIT. PROTECT EXISTING DEVICES, WALL PADS, AND FLOOR.
10	PATCH AND REPAIR EXISTING MASONRY WALL, APPROXIMATELY 5 SF AT EACH LOCATION.
11	REMOVE COVER, PATCH MASONRY OPENING.
13	REMOVE, REFURBISH, AND REINSTALL EXISTING WINDOW GRATES IN EXISTING MASONRY OPENINGS. SCRAPE, PREP, AND PAINT GRATES TO MATCH WALL COLOR. REMOVE EXISTING MASONRY ANCHORS, REPAIR WALL, AND PROVIDE NEW EPOXY SET HILITI MASONRY ANCHORS, TYP. ALL LOCATIONS.
19	GWB WALL AT EXISTING PLASTER SOFFIT.
23	PAINT UNDERSIDE OF DECK, CONDUIT, AND SHEETMETAL DUCTWORK.
24	CUT, PATCH, AND REPAIR EXISTING MASONRY WALL TO ACCOMODATE PANEL REPLACEMENT, CONDUIT REROUTING, AND SWITICH RECONFIGURATION. PROVIDE ALLOWANCE FOR 15 SF.
D24	REMOVE EXISTING STATIONARY BASKETBALL BACKBOARDS, MOUNTING FRAMES, WOOD BLOCKING AND MASONRY ANCHORS. REPAIR MASONRY WALL AND PAINT, TYPICAL ALL (4) LOCATIONS.
E3	ELECTRICAL CONTRACTOR TO REMOVE EXISTING COVER AND PROVIDE NEW COVER.
E4	ELECTRICAL CONTRACTOR TO REMOVE EXISTING TRIM AND DOOR AND PROVIDE NEW TRIM AND DOOR ON EXISTING BOX.
E5	ELECTRICAL CONTRACTOR TO REMOVE EXISTING BOX, TRIM, AND DOOR AND PROVIDE NEW BOX, TRIM AND DOOR AT EXISTING MASONRY OPENING.
E6	ELECTRICAL CONTRACTOR TO REMOVE ABANDONED DEVICE, REFER TO ELECTRICAL DRAWINGS FOR REMOVALS.
E7	ELECTRICAL CONTRACTOR TO REPLACE EXIT SIGN AND SEPARATE EMERGENCY LIGHT WITH COMBINATION EXIT SIGN AND EMERGENCY LIGHT CENTERED OVER DOOR.
E9	ELECTRICAL CONTRACTOR TO REPLACE EXIT SIGN AND MOUNT IN SAME LOCATION.
M5	NEW MECHANICAL RETURN GRILLE, SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.



MIDDLE SCHOOL GYM EAST ELEVATION

1/4" = 1'-0"

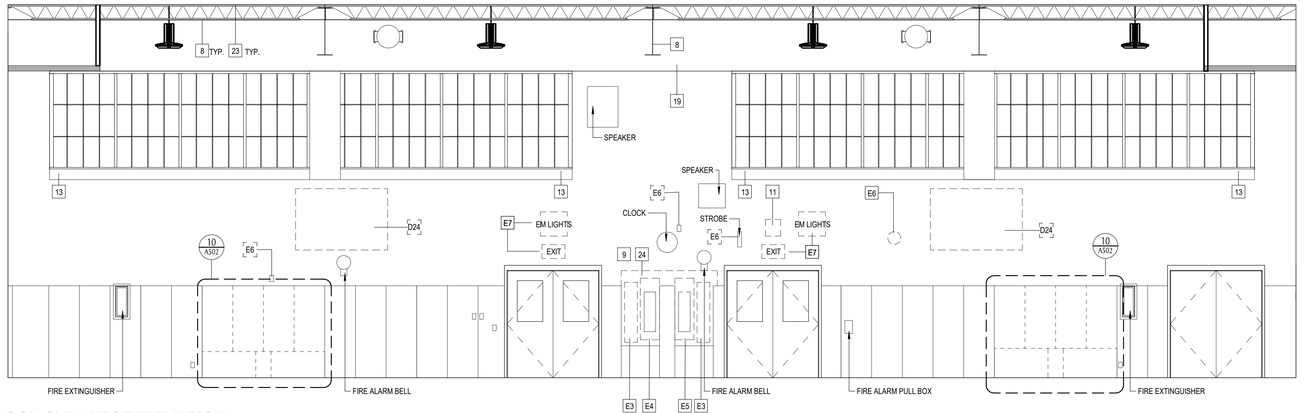
40



MIDDLE SCHOOL GYM NORTH ELEVATION

1/4" = 1'-0"

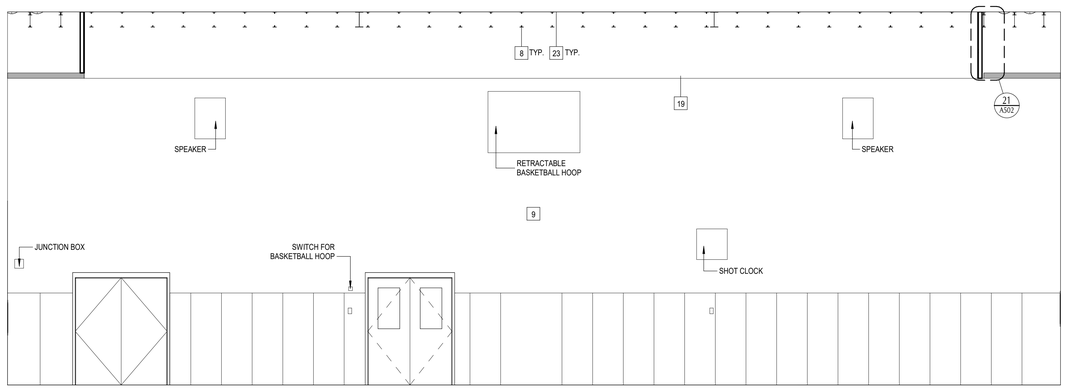
30



MIDDLE SCHOOL GYM WEST ELEVATION

1/4" = 1'-0"

20



MIDDLE SCHOOL GYM SOUTH ELEVATION

1/4" = 1'-0"

10

EASTCHESTER UNION FREE SCHOOL DISTRICT

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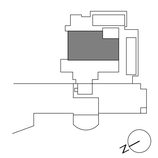
KEY PLAN



SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

INTERIOR GYM ELEVATIONS

MS A202

SHEET NOTES

A. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION

B. WALL MOUNTED DEVICES ARE TO REMAIN U.O.N.

C. GC TO REPAIR MASONRY WALL WHERE ABANDONNED DEVICES AND EQUIPMENT HAVE BEEN REMOVED.

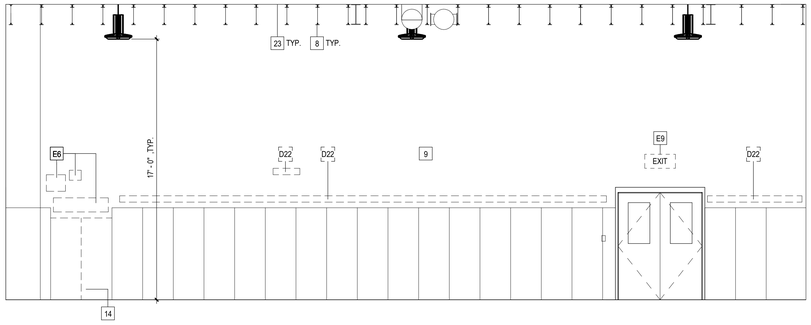
D. REFER TO ELECTRICAL PLANS FOR INFORMATION ON ELECTRICAL, TELECOMMUNICATIONS AND FIRE ALARM DEVICES TO REMAIN, TO BE DEMOLISHED, AND TO BE REPLACED WITH NEW.

E. PATCH AND REPLACE EXISTING HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION

F. REFER TO MEP AND ASBESTOS DRAWINGS AND SPECS FOR ADDITIONAL REMOVAL INFORMATION

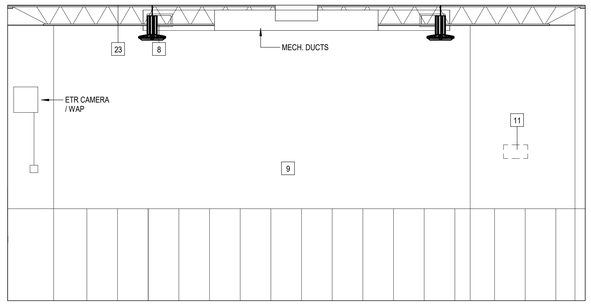
KEY NOTES

8	EXISTING STRUCTURE TO REMAIN SCRAPE, PREP, AND PAINT WITH RUST INHIBITING PAINT.
9	SCRAPE, PATCH, PREP, AND PAINT EXISTING WALLS FROM TOP OF EXISTING WALL PADS TO UNDERSIDE OF SOFFIT, INCLUDING EXISTING CONDUIT. PROTECT EXISTING DEVICES, WALL PADS, AND FLOOR.
11	REMOVE COVER. PATCH MASONRY OPENING.
14	REMOVE EXISTING WALL PADS AND REPLACE WITH FULL HEIGHT PADS TO MATCH ADJACENT.
15	EXTEND WALL TO UNDERSIDE OF DECK.
23	PAINT UNDERSIDE OF DECK, CONDUIT, AND SHEETMETAL DUCTWORK.
D22	REMOVE ABANDONED ATHLETIC EQUIPMENT WALL ANCHORS AND CEILING ANCHORS.
E6	ELECTRICAL CONTRACTOR TO REMOVE ABANDONED DEVICE, REFER TO ELECTRICAL DRAWINGS FOR REMOVALS.
E9	ELECTRICAL CONTRACTOR TO REPLACE EXIT SIGN AND MOUNT IN SAME LOCATION.
ETR	EXISTING TO REMAIN



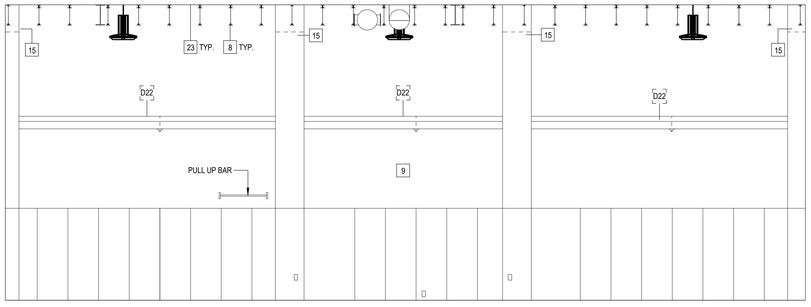
MIDDLE SCHOOL SMALL GYMNASIUM NORTH ELEVATION 40

1/4" = 1'-0"



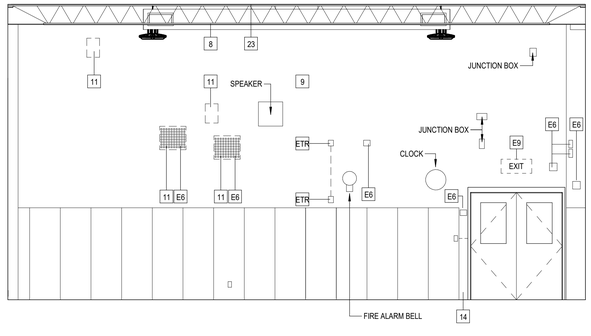
MIDDLE SCHOOL SMALL GYMNASIUM EAST ELEVATION 30

1/4" = 1'-0"



MIDDLE SCHOOL SMALL GYMNASIUM SOUTH ELEVATION 20

1/4" = 1'-0"



MIDDLE SCHOOL SMALL GYMNASIUM WEST ELEVATION 10

1/4" = 1'-0"

EASTCHESTER UNION FREE SCHOOL DISTRICT

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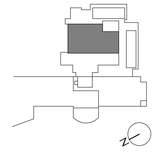
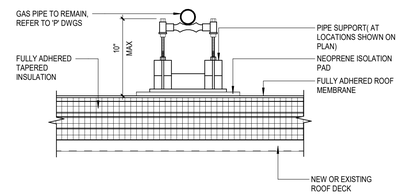


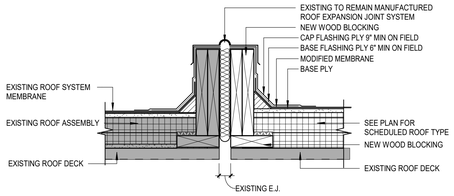
SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

INTERIOR SMALL GYM ELEVATIONS

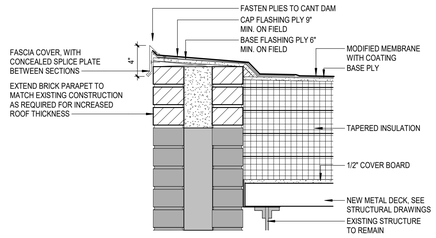
MS A203



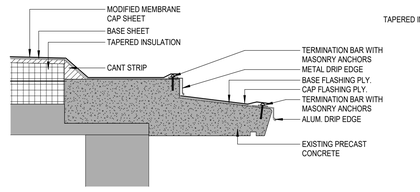
PIPE SUPPORT DETAIL 44
1 1/2" = 1'-0"



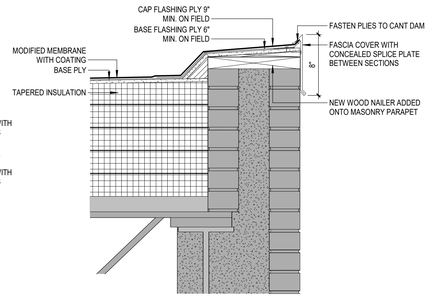
EXPANSION JOINT DETAIL 43
1 1/2" = 1'-0"



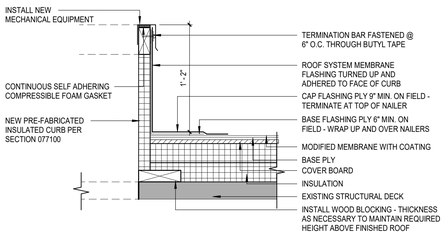
ROOF DD EDGE DETAIL 42
1 1/2" = 1'-0"



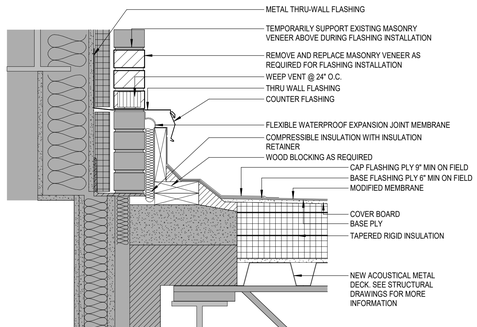
ROOF JJ DRIP EDGE DETAIL 41
1 1/2" = 1'-0"



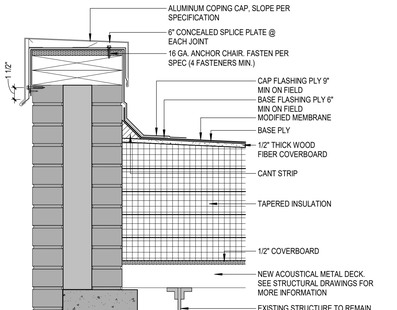
ROOF Z PARAPET DETAIL 40
1 1/2" = 1'-0"



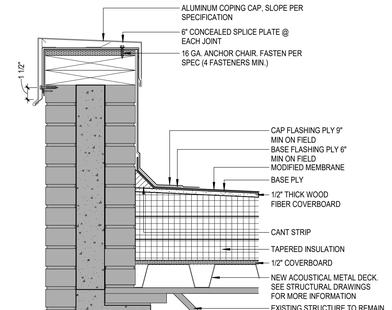
NEW EQUIP CURB ON EXST. DECK 34
1 1/2" = 1'-0"



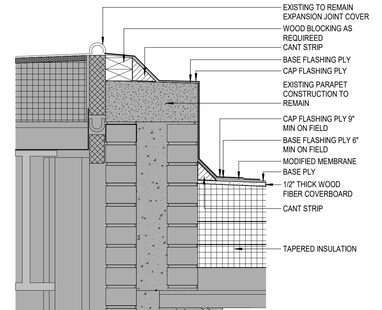
ROOF DD THROUGH WALL FLASHING DETAIL 33
1 1/2" = 1'-0"



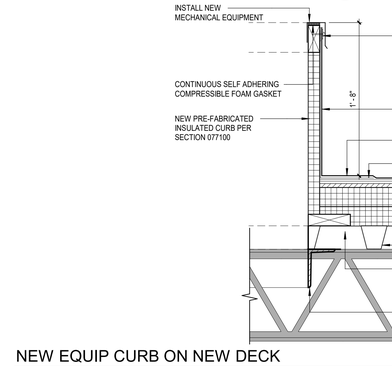
ROOF CC PARAPET DETAIL 32
1 1/2" = 1'-0"



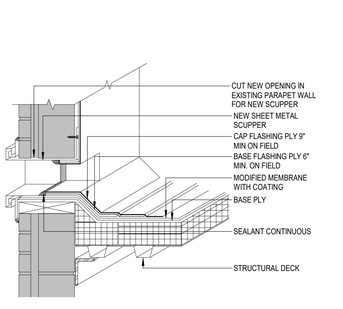
ROOF CC PARAPET DETAIL 31
1 1/2" = 1'-0"



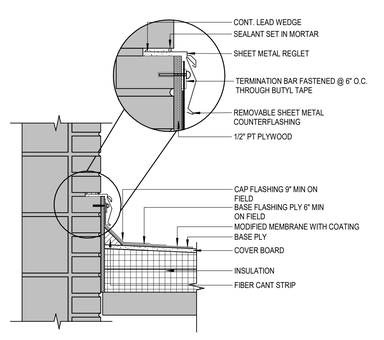
ROOF Z EXPANSION JOINT DETAIL 30
1 1/2" = 1'-0"



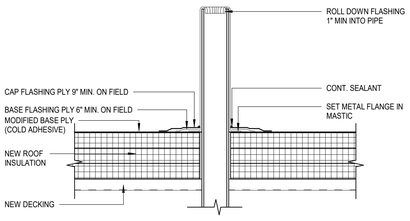
NEW EQUIP CURB ON NEW DECK 24
1 1/2" = 1'-0"



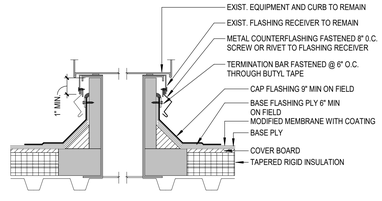
OVERFLOW SCUPPER DETAIL 23
1 1/2" = 1'-0"



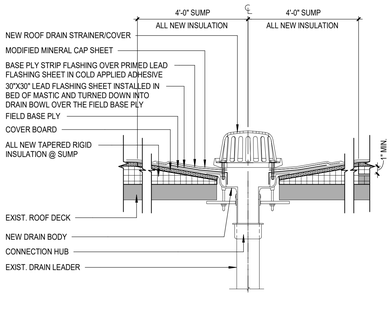
REGLET DETAIL NEW ROOF 22
1 1/2" = 1'-0"



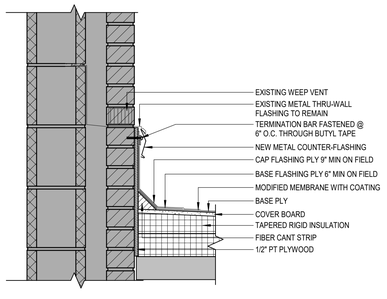
EXST. ROOF VENT PIPE PENETRATION 21
1 1/2" = 1'-0"



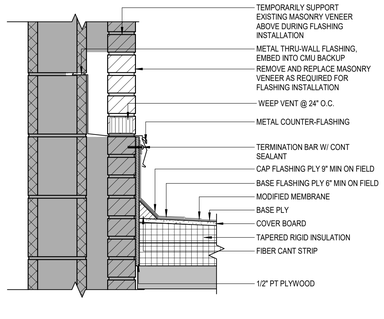
CURB AT EXISTING MECH. UNIT 20
1 1/2" = 1'-0"



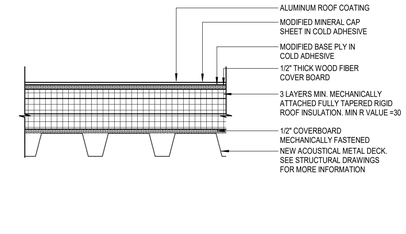
NEW ROOF DRAIN DETAIL 14
1 1/2" = 1'-0"



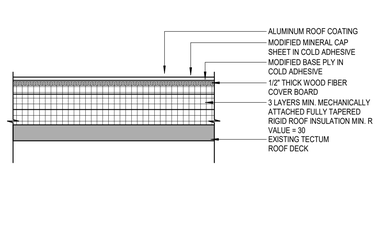
CAVITY WALL BASE FLASHING DETAIL 13
1 1/2" = 1'-0"



RAISED THROUGH-WALL FLASHING 12
1 1/2" = 1'-0"



"CC & DD" ROOFING COMPOSITION 11
1 1/2" = 1'-0"



"Z & JJ" ROOFING COMPOSITION 10
1 1/2" = 1'-0"

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENTS PROJECT

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REILLY TARANTINO ENGINEERING
1000 PARK BOULEVARD, #209
MASSAPEQUA PARK, NY 11762
631.724.7888

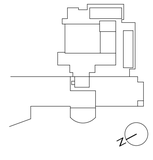
MEP CONSULTANT
STANTEC
30 OAK STREET, SUITE 400
STAMFORD, CT 06905
203.352.1717

HAZARDOUS MATERIALS CONSULTANT
WSP
96 MORTON STREET, 8TH FLOOR
NEW YORK, NY 10014
212.612.7924

SEAL

ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021
ISSUE	DATE

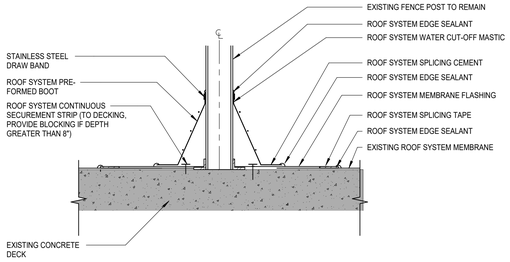
KEY PLAN



SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

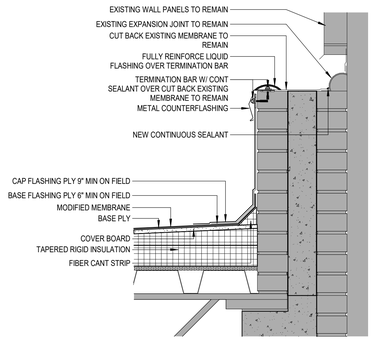
ROOF DETAILS

MS A501



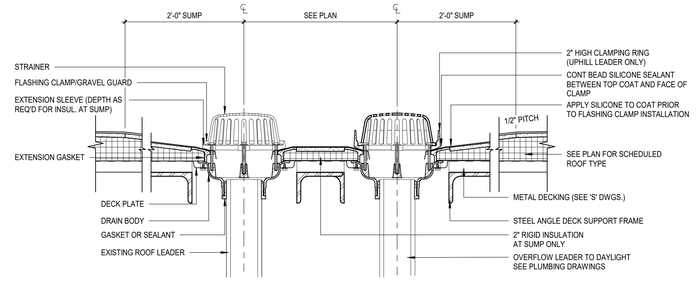
FENCE POST FLASHING DETAILDETAIL 43

1 1/2" = 1'-0"



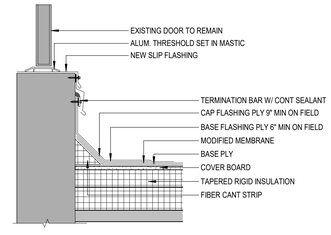
ROOF CC EXPANSION JOINT DETAIL 42

1 1/2" = 1'-0"



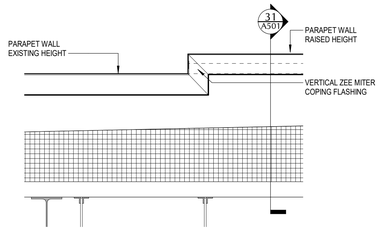
DUAL ROOF DRAIN DETAIL 41

1 1/2" = 1'-0"



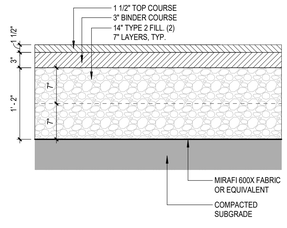
ROOF DOOR THRESHOLD DETAIL 40

1 1/2" = 1'-0"



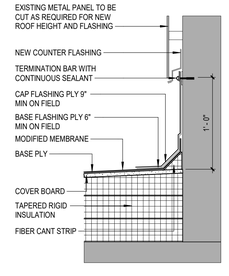
CHANGE IN HEIGHT OF PARAPET WALL DETAIL 33

1" = 1'-0"



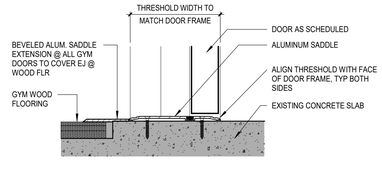
ADD ALT # 1 ASPHALT PAVING DETAIL 32

1" = 1'-0"



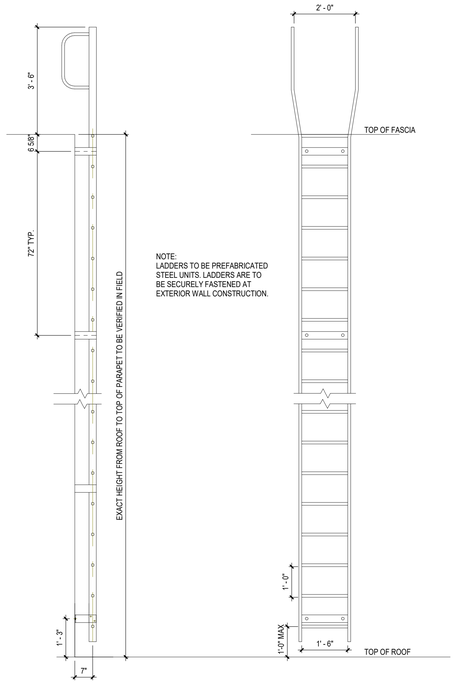
WALL FLASHING AT METAL PANEL 31

1 1/2" = 1'-0"



GYM DOORS THRESHOLD DETAIL 30

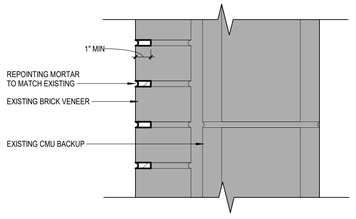
3" = 1'-0"



LADDER DETAIL

1/2" = 1'-0"

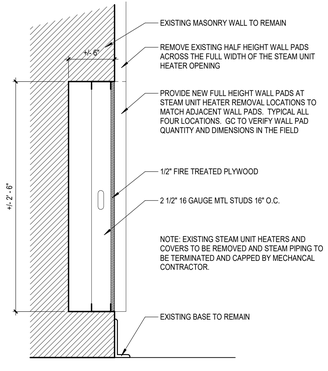
13



JOINT REPOINTING

3" = 1'-0"

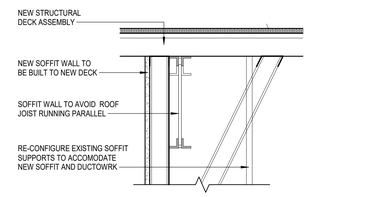
22



THRESHOLD DETAIL

1 1/2" = 1'-0"

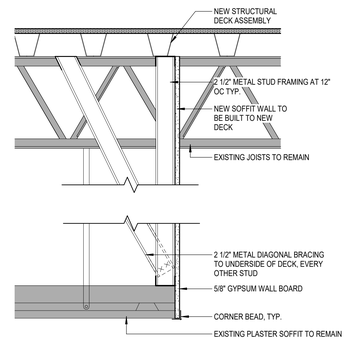
12



SOFFIT DETAIL 1

1 1/2" = 1'-0"

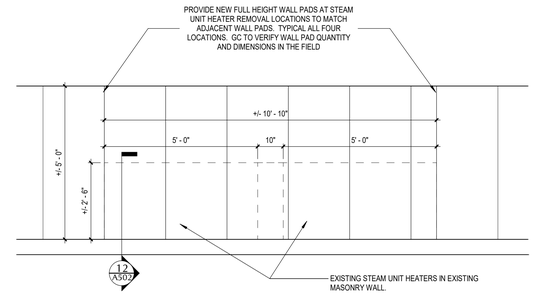
21



SOFFIT DETAIL

1 1/2" = 1'-0"

20



TYPICAL ELEVATION AT STEAM UNIT HEATER REMOVAL

1/2" = 1'-0"

10

EASTCHESTER UNION FREE SCHOOL DISTRICT

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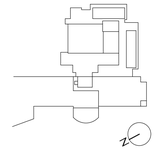


SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

DETAILS

MS A502

GENERAL STRUCTURAL NOTES

1. ALL WORK SHALL CONFORM TO THE CODE & REFERENCE STANDARDS LISTED BELOW.

2. THE STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH THE ARCHITECTURAL, M/E/P/S DRAWINGS (INCLUDING ALL CONTRACT SHOP DRAWINGS) AND EQUIPMENT MANUFACTURERS TO ENSURE THAT OPENINGS, ANCHORS, INSERTS, SLEEVES, ATTACHMENTS, ETC. ARE PROVIDED AS REQUIRED. SOME OF THE DETAILS OF THE WORK ARE SHOWN ON THESE DRAWING SHOULD BE CAREFULLY REVIEWED BY THE CONTRACTOR TO FULLY COMPREHEND THE FULL SCOPE OF WORK.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND COORDINATING ALL DIMENSIONS WITH THE ARCHITECTURAL AND M/E/P/S DRAWINGS. IN CASE OF CONFLICT, THE CONTRACTOR SHALL IMMEDIATELY REQUEST A CLARIFICATION FROM THE ARCHITECT/ENGINEER.

4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN FIELD PRIOR TO THE FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER.

5. IF ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS AND/OR CONDITIONS SPECIFIED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER AND SHALL NOT PROCEED WITH ANY WORK THAT WOULD BE AFFECTED UNTIL FORMALLY DIRECTED BY THE ARCHITECT/ENGINEER ON HOW TO PROCEED.

6. THE CONTRACTOR SHALL MAKE NO DEVIATION FROM THE DESIGN DRAWINGS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT/ENGINEER.

7. IN CASE OF CONFLICT BETWEEN NOTES, DETAILS AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.

8. THIS STRUCTURE HAS BEEN DESIGNED TO BE SELF-SUPORTING AND STABLE AFTER CONSTRUCTION OF THE STRUCTURE HAS BEEN COMPLETED. THE STABILITY OF THE STRUCTURE PRIOR TO COMPLETION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. LACK OF COMMENT BY THE ARCHITECT/ENGINEER IS NOT TO BE INTERPRETED AS APPROVAL OF THOSE ASPECTS OF WORK.

9. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISALIGNED OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. IF FAULTY CONSTRUCTION PROCEDURES OR MATERIALS RESULT IN DEFECTIVE WORK THAT REQUIRES ADDITIONAL ENGINEERING TIME TO DEVISE CORRECTIVE MEASURE, PROFESSIONAL FEES MAY BE CHARGED TO THE CONTRACTOR AT THE STANDARD HOURLY RATE OF ADDITIONAL SERVICES. SUCH FEES MAY BE WITHHELD FROM THE GENERAL CONTRACTOR'S PAYMENT.

10. DO NOT SCALE DRAWINGS.

BUILDING CODE & REFERENCED STANDARDS

1. 2020 NEW YORK STATE BUILDING CODE.
2. ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.

DESIGN CRITERIA

1. DEAD LOADS — PER MATERIAL

2. FLOOR LIVE LOADS
- ROOF LIVE LOAD — 20 PSF

3. SNOW LOADS

GROUND SNOW LOAD, Pg =	30 PSF
SNOW EXPOSURE FACTOR, Ce =	0.9
SNOW LOAD IMPORTANCE FACTOR, Is =	1.0
THERMAL FACTOR, Ct =	1.0
DRIFT SURCHARGE LOAD, Pd =	N/A
WIDTH OF SNOW DRIFT, w =	N/A
FLAT-ROOF SNOW LOAD, Pf =	24 PSF

4. WIND LOADS

ULTIMATE DESIGN WIND SPEED, Vult. =	125 MPH
RISK CATEGORY =	III
EXPOSURE CATEGORY =	B
INTERNAL PRESSURE COEFFICIENT =	0.0018
COMPONENT & CLADDING PRESSURE =	35 PSF
ROOF UPLIFT PRESSURE =	20 PSF

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHAPES SHALL HAVE THE FOLLOWING PROPERTIES:

WIDE FLANGE	ASTM A992	(Fy= 50 KSI)
ANGLES & CHANNELS	ASTM A36	(Fy= 36 KSI)
PLATES	ASTM A36	(Fy= 36 KSI)
HOLLOW STRUCTURAL SHAPES	ASTM A500, Gr. C	(Fy= 50 KSI)

2. SHOP DRAWINGS PREPARED UNDER THE SUPERVISION OF A LICENSED STRUCTURAL ENGINEERING, INCLUDING COMPLETE DETAILS FOR THE FABRICATION AND ASSEMBLY OF STRUCTURAL STEEL MEMBERS, PROCEDURES AND DIAGRAMS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE STEEL FABRICATOR SHALL BE AISC QUALITY CERTIFIED CATEGORY 1 OR 2.

3. ALL BOLTS SHALL BE ¾" ø MIN. TYPE-x U.N.O. AND CONFORM TO ASTM A325. BOLTS SHALL BE HEAVY HEX WIT HEAVY HEX NUTS AND PLAIN HARDENED WASHERS CONFORMING TO ASTM F436.

4. WHERE CONNECTIONS ARE NOT SPECIFICALLY DETAILED ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED BY THE STEEL DETAILER FOR THE FOLLOWING REACTIONS:
MOMENT:
LRFD: ø*Zxx*Fy (KIP-IN) ASD: Sxx*Fy/Ω
SHEAR:
LRFD & ASD: Z*Zxx*FY/(Ω*BEAM LENGTH)

5. WHERE STEEL MEMBERS ARE SPECIFIED TO BE SPLICED, THE SPLICE SHALL BE DESIGNED BY THE STEEL DETAILER TO DEVELOP THE FULL CAPACITY OF THE SECTION UNLESS FORCES AT THE SPLICE LOCATION ARE SPECIFIED ON THE DRAWINGS. SUCH SPLICES SHALL NOT INTERFERE WITH ANY ARCHITECTURAL OR MECHANICAL CLEARANCES. ALL SPLICE DETAILS AND LOCATIONS SHALL BE SHOWN ON THE SHOP DRAWINGS. WHERE SPLICES NOT SPECIFIED ON THE DRAWINGS AR PROPOSED BY THE CONTRACTOR, THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE ENGINEER.

6. ALL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AND AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITIONS.

7. ALL BOLTING SHALL CONFORM TO THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS" SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITIONS.

8. ALL WELDING SHALL CONFORM TO AWS CODE D1.1 "STRUCTURAL WELDING CODE - STEEL", LATEST EDITION.

9. ALL STRUCTURAL STEEL SHALL BE CLEANED IN ACCORDANCE WITH THE STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION SP-3-82 FOR POWER TOOL CLEANING AND PAINTED TO A MINIMUM DRY FILM THICKNESS OF 2 MILS WITH A SHOP COAT OF TNEMEC #10-99 ALKYD RUST INHIBITIVE PRIMER AS MANUFACTURED BY TNEMEC COMPANY, INC. KANSAS CITY, MO, OR APPROVED EQUAL.

10. ALL STRUCTURAL STEEL PLATES, BOLTS, NUTS, WASHERS, ETC. AS PART OF EXPOSED EXTERIOR STEEL DUNNAGE OR OTHER MEMBERS NOTED ON THE DRAWINGS TO BE GALVANIZED SHALL BE HOT-DIP GALVANZIED AFTER FABRICATION CONFORMING TO ASTM A123 AND A153. TRIMMED ENDS OF STEEL AND DISTURBED SURFACES SHALL RECEIVE A BASE COAT OF Z.R.C. COLD GALVANIZING COMPOUND MANUFACTURED BY Z.R.C. CHEMICAL PRODUCTS INC., QUINCY, MA, OR EQUAL AND A TOP COAT OF ALUMINUM BASED PAINT.

11. ALL GROUT FOR BASE PLATES AND ANCHOR BOLTS SHALL BE NON-METALLIC AND OF NON-SHRINKAGE TYPE WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS.

12. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION CONFORMING TO ASTM A123 & A153.

13. ALL BEAMS AND COLUMNS ADJACENT TO MASONRY SHALL HAVE DOVETAIL ANCHORS AT 1'-4" O.C. MAXIMUM OR THE EQUIVALENT INSTALLED UNLESS OTHERWISE NOTED ON THE DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.

14. REFER TO THE ARCHITECTURAL AND M/E/P/S DRAWINGS FOR OTHER REQUIRED MISCELLANEOUS STEEL.

15. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY GUYING AND BRACING ALL STRUCTURAL STEEL TO MAINTAIN SAFETY, STABILITY AND ALIGNMENT DURING ALL PHASES OF CONSTRUCTION, AND SPECIFICALLY DURING CONCRETE OPERATIONS. SUCH BUYING AND BRACING SHALL REMAIN IN PLACE UNTIL THE STRUCTURE HAS ATTAINED ADEQUATE STRENGTH.

16. ALL STRUCTURAL STEEL WORK SHALL BE INSPECTED BY A LICENSED CERTIFIED TESTING AGENCY HIRED BY THE OWNER. ALL INSPECTIONS SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND GENERALLY ACCEPTED INDUSTRY PRACTICE. THE CONTRACTOR SHALL PROVIDE CERTIFIED LABORATORY MATERIAL CERTIFICATES FOR EACH DELIVERY OF MATERIAL BROUGHT TO THE SITE. CERTIFIED REPORTS PREPARED BY THE TESTING AGENCY SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW THAT ATTEST TO THE COMPLETENESS AND ADHERENCE OF THE WORK TO THE CONTRACT DOCUMENTS BY THE CONTRACTOR.

STEEL DECK

1. STEEL DECK SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE CURRENT SPECIFICATION OF THE STEEL DECK INSTITUTE.

2. ALL STEEL DECK SHALL BE MANUFACTURED BY UNITED STEEL DECK, INC., OR APPROVED EQUAL. REFER TO HE DRAWINGS FOR TYPE, GAGE AND DEPTH OF DECKING AS WELL AS TOTAL SLAB THICKNESS (WHERE CONCRETE COVER IS SPECIFIED).

3. THE STEEL DECK SHALL BE SUPPLIED IN MINIMUM LENGTHS AS REQUIRED TO PROVIDE A "2-SPAN" CONDITION UNLESS OTHERWISE NOTED OR SHOWN ON PLAN. PROVIDE ALL CLOSURES, ROOF SUMPS, POUR STOPS AND ALL OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.

4. PROVIDE HEAVIER GAGE STEEL DECK THAN THAT SPECIFIED IF REQUIRED FOR HEAVIER CONSTRUCTION LOADING.

5. UNLESS OTHERWISE NOTED ON THE DRAWINGS, STEEL FLOOR AND ROOF DECK SHALL BE WELDED TO SUPPORTING STEEL WITH ⅝" ø PUDDLE WELDS AT 1'-0" O.C. INTERMEDIATE SIDE CONNECTIONS SHALL BE MADE WITH #10 SELF-TAPPING SCREWS AT A MIDSPAN OR 3'-0" O.C., WHICHEVER IS SMALLER. THE DECK MANUFACTURER'S RECOMMENDATION FOR FASTENING SHALL GOVERN IF MORE STRINGENT AND APPROVED BY THE ENGINEER.

6. STEEL DECK SHALL BE PROTECTED BEFORE AND AFTER ERECTION AND ALL DEBRIS SHALL BE CLEANED FROM ITS SURFACE WHERE CONCRETE WILL BE POURED OR ROOFING/INSULATION IS TO BE PLACED.

7. SHOP DRAWINGS INDICATING THE GAGE, SIZE, TYPE, LENGTH AND SHOWING THE LAYOUT OF EACH PIECE OF DECKING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. SHOP DRAWINGS SHALL CLEARLY SHOW ALL FASTENING/WELDING DETAILS TO SUPPORTING STRUCTURAL MEMBERS. SIDE LAP CONNECTION DETAILS, SUPPLEMENTARY SUPPORT/REINFOREMENT STEEL AND THE LOCATION OF ALL REQUIRED DECK OPENING/PENETRATIONS AS REQUIRED.

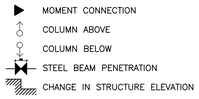
8. COORDINATE DECKING WITH ARCHITECTURAL AND M/E/P/S DRAWINGS AND REQUIREMENTS.

9. UNLESS OTHERWISE DIRECTED ON PLAN, ALL AREAS WITH EXPOSED CEILINGS SHALL HAVE ACOUSTICAL DECK TO MATCH PROPERTIES OF DECK SPECIFIED.

STRUCTURAL ABBREVIATIONS

-A.B. = ANCHOR BOLT
-B. = BOTTOM
-BM. = BEAM
-BRG. = BEARING
-BLK. = BLOCK
-B.O.F. = BOTTOM OF FOUNDATION
-BOT. = BOTTOM
-B.P. = BASE PLATE
-BRKT. = BRACKET
-C.I.P. = CAST-IN-PLACE
-CLR. = CLEAR
-COL. = COLUMN
-CONC. = CONCRETE
-C.M.U. = CONCRETE MASONRY UNIT
-CONST. JT. = CONSTRUCTION JOINT
-CONT. = CONTINUOUS
-C.J. = CONTROL JOINT
-DEPR. = DEPRESSION
-DET. = DETAIL
-D.L. = DEVELOPMENT LENGTH
-DIA. = DIAMETER
-DIM. = DIMENSION
-DIR. = DIRECTION
-DWLS. = DOWELS
-EA. = EACH
-E.E. = EACH END
-E.F. = EACH FACE
-E.J. = EXPANSION JOINT
-E.S. = EACH SIDE
-EQ. = EQUAL
-E.W. = EACH WAY
-EXIST. = EXISTING
-EXST. = EXISTING
-EXP. BOLT = EXPANSION BOLT
-EXP. JT. = EXPANSION JOINT
-F.F. = FAR FACE
-FT. = FOOT OR FEET
-FIN. = FINISH
-FL. = FLOOR
-FTG. = FOOTING
-FND. = FOUNDATION
-GALV. = GALVANIZED
-GA. = GAUGE
-GR. = GRADE
-G.B. = GRADE BEAM
-G.P. = GUSSET PLATE
-HT. = HEIGHT
-H.P. = HIGH POINT
-H.S. = HIGH STRENGTH
-H.E.F. = HORIZONTAL EACH FACE
-H.I.F. = HORIZONTAL INSIDE FACE
-H.O.F. = HORIZONTAL OUTSIDE FACE
-HOR. = HORIZONTAL
-IN. = INCH
-I.D. = INSIDE DIAMETER
-INV. = INVERT
-JT. = JOINT
-JST. = JOIST
-K. = KIP (1000 POUNDS)
-L.W. = LIGHT WEIGHT
-L.W.C. = LIGHT WEIGHT CONCRETE
-L.L.V. = LONG LEG VERTICAL
-L.P. = LOW POINT
-MAS. = MASONRY
-MTL. = METAL
-NF. = NEAR FACE
-N.W.C. = NORMAL WEIGHT CONCRETE
-N.I.C. = NOT IN CONTRACT
-O.C. = ON CENTER
-O.D. = OUTSIDE DIAMETER
-OPNG. = OPENING
-P.C. = PILE CAP
-PL. = PLATE
-PT. = POINT
-P.T. = PRESSURE-TREATED
-PVC. = POLYVINYL CHLORIDE
-PSF. = POUNDS PER SQUARE FOOT
-PSI. = POUNDS PER SQUARE INCH
-R. = RADIUS
-REINF. = REINFORCED
-RETG. = RETAINING
-RET. = RETURN
-R.E. = RIGHT END
-SECT. = SECTION
-S.C. = SHEAR CONNECTOR
-SHT. = SHEET
-S.L.V. = SHORT LEG VERTICAL
-SIM. = SIMILAR
-S.O.G. = SLAB ON GRADE
-SJL. = SPLICE LENGTH
-SQ. = SQUARE
-STD. = STANDARD
-STL. = STEEL
-S.D.I. = STEEL DECK INSTITUTE
-S.F. = STEP FOOTING OR SQUARE FOOT
-STIFF. = STIFFENER
-STR. = STRUCTURAL
-SUP. = SUPPORT
-SYM. = SYMMETRICAL
-THK. = THICK OR THICKNESS
-THRD. = THREADED
-T&B. = TOP AND BOTTOM
-T. = TOP
-T/ = TOP OF
-TO. = TOP OF
-T.O.C. = TOP OF CONCRETE
-T.O.F. = TOP OF FOUNDATION
-T.O.S. = TOP OF STEEL
-T.O.W. = TOP OF WALL
-TYP. = TYPICAL
-U.N.O. = UNLESS NOTED OTHERWISE
-US. = UNDERSIDE
-V.E.F. = VERTICAL EACH FACE
-V.I.F. = VERIFY IN FIELD
-V.O.F. = VERTICAL OUTSIDE FACE
-W.W.F. = WELDED WIRE FABRIC
-W/ = WITH
-W.P. = WORKING POINT

STRUCTURAL SYMBOLS



EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

ARCHITECT + ENGINEER
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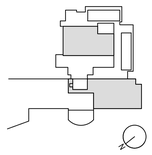
SEAL

ISSUE	DATE
ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021

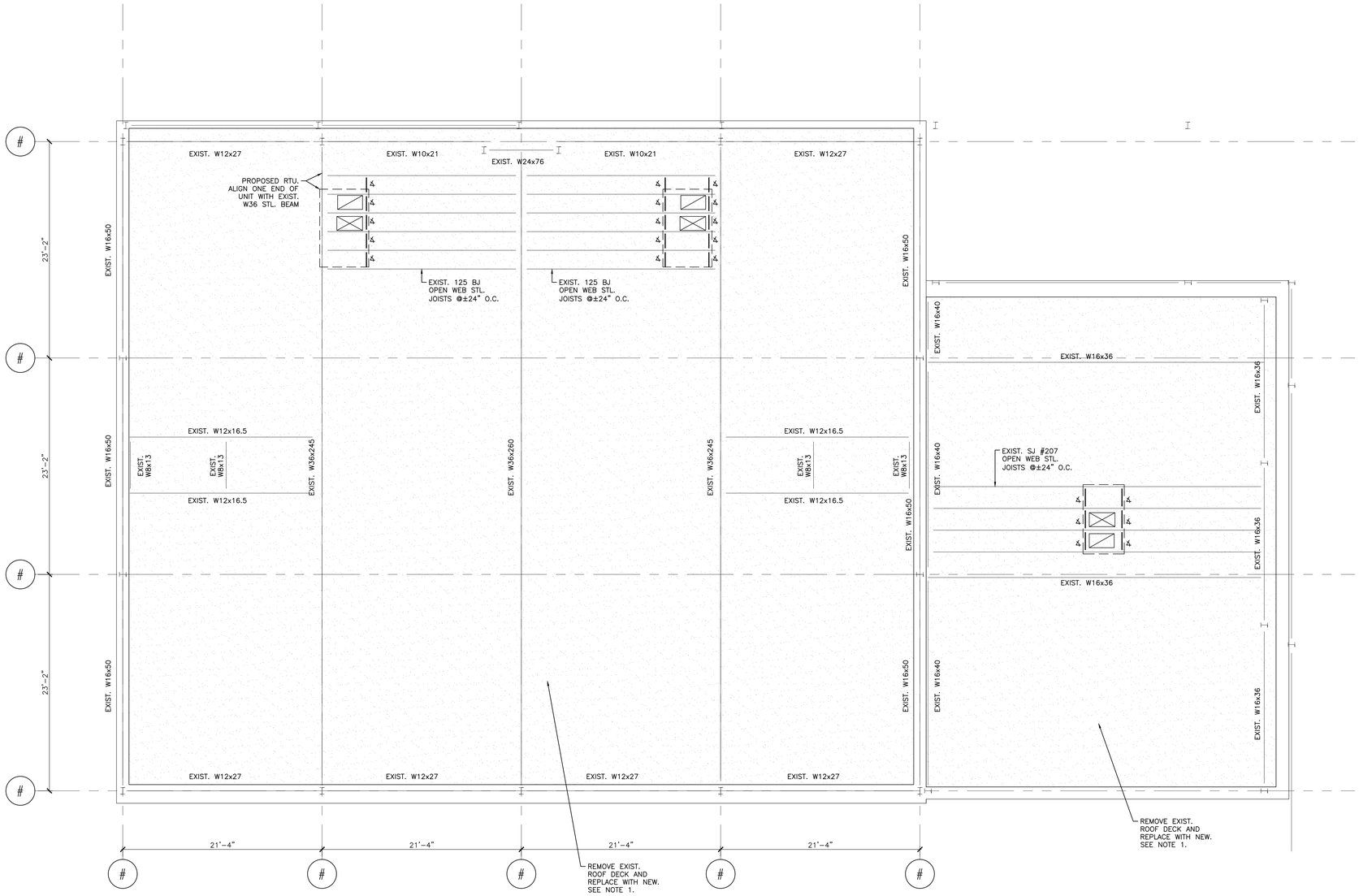
KEY PLAN



SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

STRUCTURAL GENERAL NOTES

MS SD-001

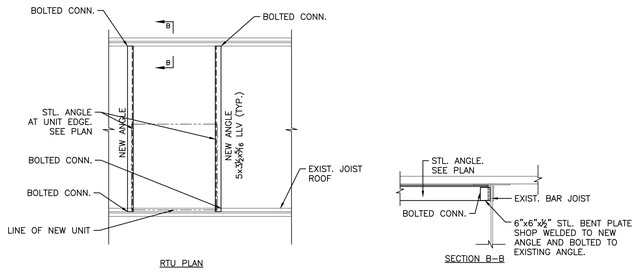


1 SD-100 GYM ROOF FRAMING PLAN

SCALE: 3/16" = 1'-0"

NOTES:

1. PROPOSED METAL DECK SHALL BE 3" DEEP CELLULAR DECK, VULCRAFT 3NPA OR SIMILAR.
2. CONNECT DECK USING 36/4 PATTERN, UNLESS NOTED OTHERWISE.
3. DECK CONNECTIONS SHALL BE DESIGNED FOR 20 PSF. UPLIFT WITHIN 10 FT. OF ROOF EDGE, AND 5 PSF. ELSEWHERE.
4. ▲ INDICATES 5x3½"x5/16" STL. ANGLE. SEE 2/SD-100 FOR ADDITIONAL INFORMATION.



2 SD-100 TYPICAL RTU SUPPORT DETAIL AT PENETRATION

SCALE: N.T.S.

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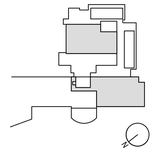
KEY PLAN



SED PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

ROOF FRAMING PLAN & DETAILS

MS SD-100

PLUMBING NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND JOB CONDITIONS AND SHALL REPORT TO ENGINEER ANY DISCREPANCIES OR OMISSIONS THAT WOULD INTERFERE WITH SATISFACTORY COMPLETION OF THE WORK.
2. CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS PRIOR TO THE BEGINNING OF CONSTRUCTION.
3. IN THE EVENT OF ANY DISCREPANCY BETWEEN THE DEMOLITION PLAN AND THE CONSTRUCTION PLANS, CONSTRUCTION PLANS AND INTENT SHALL GOVERN.
4. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND FUNCTIONAL.
5. NOTIFY BUILDING MANAGER AT LEAST 48 HOURS BEFORE NEW WORK OR BEFORE SHUT DOWN OF EXISTING SERVICES. RISER SHUT DOWNS SHALL BE PERFORMED AT DESIGNATED TIMES UNDER BUILDING MANAGER'S SUPERVISION AND ONLY WITH THEIR APPROVAL.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING WITH BUILDING MANAGEMENT FOR HANDLING MATERIALS, AS WELL AS FOR ALLOWABLE WORKING HOURS AND DELIVERIES.
7. PLUMBING CONTRACTOR SHALL COORDINATE ALL WORK WITH RESPECT TO ALL OTHER TRADES, INCLUDING STRUCTURE AND CEILING HEIGHTS. CONTRACTOR SHALL COORDINATE ALL WORK WITH ARCHITECTURAL LAYOUTS, INCLUDING CEILING HEIGHTS.
8. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS AND MANUFACTURERS' CUTS AND SAMPLES TO ARCHITECT AND PLUMBING ENGINEER PRIOR TO COMMENCEMENT OF SUCH WORK.
9. DRAWINGS ARE NOT TO BE SCALED.
10. CONTRACTOR SHALL EXERCISE EXTREME CARE IN PROTECTING AREAS ADJACENT TO CONSTRUCTION AREAS, SHALL FULLY PROTECT THEM FROM ANY DAMAGE RESULTING FROM CONTRACTOR'S WORKMEN, SUBCONTRACTORS OR AGENTS, AND SHALL BE RESPONSIBLE FOR REPAIRING, CLEANING OR REPLACING ANY SUCH DAMAGE.
11. ALL DIMENSIONS GIVEN ARE FINISH DIMENSIONS UNLESS OTHERWISE STATED.
12. UNLESS SPECIFICALLY STATED OTHERWISE, CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, APPURTENANCES, EQUIPMENT AND SERVICES TO COMPLETE ALL WORK AS INDICATED ON DRAWINGS AND/OR SPECIFIED ON NOTES.
13. UNLESS SPECIFICALLY STATED OTHERWISE, CONTRACTOR SHALL FOLLOW MANUFACTURERS' DIRECTIONS WITH APPLICABLE CODES, INSTRUCTIONS AND RECOMMENDATIONS FOR ALL MATERIALS AND PROCESSES USED IN THIS CONTRACT.PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
14. UPON COMPLETION OF THE WORK, COMPLETELY CLEAN THE CONSTRUCTION AREA SUITABLE FOR THE OWNER'S USE, INCLUDING REMOVAL OF ALL LABELS (AFTER ARCHITECT'S INSPECTION), CLEANING OF ALL THE EQUIPMENT, CONSTRUCTION WORK, WINDOWS AND OTHER WORK, NEW AND OLD, IN THAT CONSTRUCTION AREA. MAINTENANCE MANUAL SHALL BE PROVIDED TO THE OWNER.
15. BUILDING DEPARTMENT APPROVED PLANS SHALL BE TURNED OVER TO OWNER AT THE COMPLETION OF THE JOB.
16. CONTRACTOR SHALL GUARANTEE ALL WORK PERFORMED UNDER THIS CONTRACT FOR ONE YEAR, STARTING FROM DATE OF FINAL COMPLETION OF ALL WORK.
17. PROVIDE CLEANOUTS FOR CHANGES IN DIRECTION FOR ALL SANITARY PIPING.
18. CONTRACTOR SHALL COORDINATE ALL FLOOR CORING SLEEVES AND FLOOR OPENINGS WITH STRUCTURAL DRAWINGS.
19. ALL EXPOSED PIPING PENETRATIONS THROUGH WALLS OR CEILINGS SHALL BE PROVIDED WITH APPROPRIATE FIRE RETARDANT SEALANT AND ESCUTCHEONS.
20. THE CONTRACTOR MUST MAKE ALLOWANCE FOR NECESSARY MODIFICATIONS TO EXISTING CONDITIONS TO PERFORM WORK.
21. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE EXACT LOCATION OF ALL EXISTING MAIN STACKS AND RISERS AND CONNECTIONS FROM EXISTING FIXTURES PRIOR TO NEW WORK.
22. THE EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF ALL NEW WORK. THE EXISTING SYSTEM SHALL REMAIN IN WORKING CONDITION DURING CONSTRUCTION.
23. COORDINATE THE NEW STORM PIPING CONNECTION TO THE EXISTING. THE CONTRACTOR SHALL MAKE THE NECESSARY PIPING MODIFICATIONS REQUIRED TO ACCOMMODATE THE CONNECTIONS.
24. PLATFORMS, CURBS, AND FLASHINGS FOR PLUMBING EQUIPMENT SHALL BE AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL PLANS, UNLESS NOTED OTHERWISE. COORDINATE EXACT SIZES OF REQUIRED OPENINGS AND SUPPORTS FOR FURNISHED EQUIPMENT.
25. PROVIDE DRAIN DRIP PANS UNDER ALL PLUMBING DRAINAGE PIPING TO BE INSTALLED WITHIN THE ELECTRICAL AND TELEPHONE EQUIPMENT, KITCHEN, PANTRY OR FOOD PREPARATION AND DINING ROOM CEILINGS. PROVIDE TELLTALE DRAINAGE PIPE AND SPILL OVER CLOSET FLOOR DRAIN OR SERVICE SINK.
26. THE CONTRACTOR SHALL MAKE THE FINAL CONNECTION TO ALL GAS FIRED EQUIPMENT/APPLIANCES, REGARDLESS OF WHO PROVIDED THE EQUIPMENT/APPLIANCE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO TO HVAC EQUIPMENT, COOKING EQUIPMENT/APPLIANCES, EMERGENCY GENERATORS AND DOMESTIC WATER HEATERS. EACH PIECE OF EQUIPMENT/APPLIANCE SHALL BE PROVIDED WITH A DIRT LEG, LUBRICATED PLUG VALVE, UNION AND PRESSURE REGULATOR (WHERE REQUIRED).

PLUMBING DEMOLITION NOTES

1. EACH BIDDER SHALL VISIT THE SITE AND BECOME INFORMED AS TO THE CONDITION OF THE PREMISES AND THE EXTENT AND CHARACTER OF WORK REQUIRED. NO ADDITIONAL COMPENSATION WILL BE APPROVED DUE TO FIELD CONDITIONS.
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT.
3. VERIFY ALL GOVERNING DIMENSIONS, PIPE SIZES AND LOCATION OF THE PIPING AND EQUIPMENT TO BE REMOVED.
4. NOTIFY BUILDING OWNER AND CONSTRUCTION MANAGER AT LEAST 48 HOURS BEFORE DEMOLITION WORK OR BEFORE SHUT DOWN OF EXISTING SERVICES. RISER SHUT DOWNS SHALL BE PERFORMED AT TENANT'S COST, AT DESIGNATED TIMES UNDER BUILDING MANAGER'S SUPERVISION AND ONLY WITH HIS APPROVAL..
5. ALL FIXTURES, EQUIPMENT, PIPING, ETC. TO BE REMOVED, SHALL BE DISPOSED OF, RELOCATED, TURNED OVER TO THE OWNER OR SALVAGE AS DIRECTED BY THE ARCHITECT.
6. UPON COMPLETION OF ALL NEW WORK NO ABANDONED PIPING SHALL REMAIN.
7. THE EXISTING SYSTEM SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF ALL WORK.
8. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE. EXACT SIZE AND LOCATIONS OF ALL EXISTING PIPING SHALL BE VERIFIED AT THE SITE.
9. NO REMOVED EXISTING PIPING FITTINGS, VALVES, FIXTURES, ETC. SHALL BE REUSED UNLESS OTHERWISE APPROVED BY THE ENGINEER.
10. REFER TO ARCHITECTURAL DRAWINGS FOR ALL CEILING HEIGHTS.
11. UNDER NO CIRCUMSTANCES WILL THIS CONTRACTOR OR HIS WORKPEOPLE BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP, EXCEPT PART DESIGNATED BY THE OWNER FOR SUCH PURPOSES.
12. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL FROM THE PREMISES ALL DEBRIS RESULTING FROM PLUMBING WORK, UNNECESSARY NOISE SHALL BE AVOIDED AT ALL TIMES AND NECESSARY NOISE SHALL BE REDUCED TO A MINIMUM.
13. ANY AND ALL REQUIRED DEMOLITION WORK TO BE PERFORMED ABOVE EXISTING SUSPENDED CEILING AND FURRED OUT WALLS SHALL BE DONE AT THE TIME WHEN THE EXISTING CEILING AND FURRED OUT WALLS ARE REMOVED BY THE GENERAL CONTRACTOR.
14. ALL EQUIPMENT AND INSTALLATIONS MUST BE EQUAL TO THE STANDARDS OF THE BASE BUILDING. ANY DEVIATION FROM BUILDING STANDARDS WILL BE PERMITTED ONLY IF INDICATED OR SPECIFIED ON THESE PLANS AND SPECIFICATIONS AND APPROVED.
15. TO ENSURE CONTINUOUS OPERATION, MAKE ALL NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING ALL COST RESULTING FROM TEMPORARY SHUTDOWNS SHALL BE BORNE BY THE CONTRACTOR.

NEW YORK STATE CODES & STANDARDS

- 2020 BUILDING CODE OF NEW YORK STATE
- 2020 FIRE CODE OF NEW YORK STATE
- 2020 PLUMBING CODE OF NEW YORK STATE
- 2020 MECHANICAL CODE OF NEW YORK STATE
- 2020 FUEL GAS CODE OF NEW YORK STATE
- 2020 NYS UNIFORM CODE SUPPLEMENT
- NYS EDUCATION DEPARTMENT 1998 MANUAL OF PLANNING STANDARDS

NEW YORK STATE ENERGY CODES

- 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE

REFERENCED STANDARDS

APPLICABLE REFERENCE STANDARDS SHALL BE AS REFERENCED BY ALL STATE CODES. THE LIST BELOW IS FOR QUICK REFERENCE AND DOES NOT INCLUDE ALL APPLICABLE REFERENCE STANDARDS.

- 2016 NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
- 2016 NFPA 14 - STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS
- 2016 NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
- 2017 NFPA 70 - NATIONAL ELECTRICAL CODE
- 2016 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE

GENERAL NOTES

1. ALL REFERENCES HEREIN TO THE CONTRACTOR SHALL REFER TO THE PLUMBING CONTRACTOR UNLESS OTHERWISE NOTED.
2. THE ENTIRE INSTALLATION SHALL BE COORDINATED WITH THE WORK OF ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION. THE CONTRACTOR SHALL VERIFY, IN THE FIELD, THE EXACT LOCATION OF ALL EXISTING PLUMBING SYSTEMS PRIOR TO MAKING NEW CONNECTIONS TO EXISTING LINES. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS, OFFSETS, AND TRANSITIONS REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
3. DO NOT SCALE FROM THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK WITHIN A DISTANCE OF FIVE FEET FROM THE BUILDING PERIMETER.
5. DO NOT MAKE ANY CHANGES OR SUBSTITUTIONS WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER.
6. THE CONTRACTOR SHALL REFER TO WRITTEN SPECIFICATION IN CONJUNCTION WITH THESE DRAWINGS FOR FULL PROJECT SCOPE.
7. ANY DISCREPANCIES OR INADEQUACIES WITHIN BID DOCUMENTS, BETWEEN THESE BID DOCUMENTS AND RELATED HVAC, FIRE PROTECTION, ELECTRICAL, STRUCTURAL, ARCHITECTURAL, INTERIOR DECOR, AND STRUCTURAL BID DOCUMENTS, OR BETWEEN THESE BID DOCUMENTS AND FIELD CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO BID SUBMISSION.
8. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF RECORD "AS BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT, CONCEALED OR EMBEDDED PIPING, EXPOSED PIPING, PIPING CONNECTIONS, AND ACCESS PANELS/DOORS. THESE DRAWINGS SHALL INCLUDE ALL CHANGES AND DEVIATIONS FROM CONSTRUCTION DOCUMENTS.
9. THE CONTRACTOR SHALL SCHEDULE ALL WORK TO AVOID INTERFERENCE WITH FIRE PROOFING WORK.
10. THE CONTRACTOR SHALL COORDINATE ALL UNDERGROUND PIPING LOCATIONS AND INVERTS WITH ALL UTILITIES.
11. THE CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND ELECTRICAL CONTRACTOR. THE CONTRACTOR SHALL FURNISH PLUMBING EQUIPMENT WIRED FOR THE VOLTAGES SHOWN IN CONTRACT DOCUMENTS AND COORDINATED WITH ELECTRICAL CONTRACTOR.
12. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS, TRANSITIONS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
13. THE CONTRACTOR SHALL SUBMIT, PRIOR TO ANY FABRICATION OR INSTALLATION, ALL NECESSARY DRAWINGS, EQUIPMENT/MATERIAL PRODUCT DATA, DOCUMENTATION, AND CALCULATIONS REQUIRED TO COMPLETE THE WORK OUTLINED IN THE CONTRACT DOCUMENTS.
14. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION PRIOR TO ANY FABRICATION OR INSTALLATION. ALL FEES FOR PERMITS AND INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
15. ALL ABOVE GRADE PIPING SHALL BE PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE. NO PIPING SHALL REST ON CEILING TILES OR CEILING STRUCTURE.
16. ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT AND IN THE MOST INCONSPICUOUS LOCATION POSSIBLE. VERTICAL DROPS SHOULD BE KEPT TO A MINIMUM AND SHOULD BE LOCATED WITHIN CHASES, WALLS, AND SOFFITS WITH OTHER MECHANICAL PIPING AND ELECTRICAL CONDUITS WHEN POSSIBLE. ALL SUCH LOCATION ARE TO BE REVIEWED WITH THE ARCHITECT PRIOR TO INSTALLATION.
17. WATER METER SHALL BE IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS AND SHALL BE PROVIDED WITH REMOTE READING.
18. THE CONTRACTOR SHALL PROVIDE ALL CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS, AND GUIDES AS NECESSARY TO PREVENT STRESS ON PIPING.
19. THE CONTRACTOR SHALL COORDINATE ALL ROOF PENETRATIONS AND ASSOCIATED FLASHING REQUIREMENTS WITH OTHER TRADES.
20. THE CONTRACTOR SHALL PROVIDE INSULATION ON ALL COLD WATER, HOT WATER, AND HOT WATER RECIRCULATION PIPING. THE CONTRACTOR SHALL PROVIDE INSULATION ON ALL HORIZONTAL STORM WATER PIPING.
21. ALL PLUMBING FIXTURES/APPLIANCES SHALL HAVE THEIR OWN SHUTOFF VALVES INSTALLED IN AN EASILY ACCESSIBLE AND CONVENIENT LOCATION.
22. THE CONTRACTOR SHALL PROVIDE ACCESS PANELS/DOORS FOR ALL CLEANOUTS, VALVES, AND ANY OTHER EQUIPMENT LOCATED WITHIN WALLS, PARTITIONS, OR CEILINGS THAT REQUIRE ACCESS FOR MAINTENANCE AND/OR OPERATION.
23. THE CONTRACTOR SHALL INSTALL TRAP SEAL PRIMERS ON ALL FLOOR UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE NECESSARY COLD WATER CONNECTION TO ALL TRAP SEAL PRIMERS.
24. THE CONTRACTOR SHALL PROVIDE CLEANOUTS AT THE BASE OF ALL SANITARY, WASTE, STORM, AND VENT STACKS. CLEANOUT DECK PLATES PLATES MUST ALSO BE PROVIDED ON ALL BURIED SANITARY, WASTE, AND STORM PIPING AT INTERVALS OUTLINED IN APPLICABLE CODE.
25. NO DRAINAGE BRANCH SHALL BE CONNECTED TO A SANITARY OR WASTE STACK WITHIN TWO FEET ABOVE OR BELOW A HORIZONTAL OFFSET EXCEPT WHERE NO OTHER DRAINAGE BRANCH IS CONNECTED TO THE STACK AT A HIGHER STORY.
26. THE CONTRACTOR SHALL PROVIDE REDUCING FITTING AT ALL CHANGES IN DIAMETER OF SANITARY, WASTE, AND STORM PIPING.
27. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SERVICE CONNECTIONS TO ALL EQUIPMENT AND FIXTURE INDICATED ON THE ARCHITECTURAL AND PLUMBING DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SERVICE CONNECTIONS TO HVAC AND FIRE PROTECTION EQUIPMENT.
28. UPON COMPLETION, EXISTING SYSTEM SHALL BE IN WORKING ORDER.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING PLUMBING WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL LAYOUTS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE REMOVED BACK TO ACTIVE LINES.
2. THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE TO FUNCTIONING PLUMBING SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
3. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
4. THE CONTRACTOR SHALL REMOVE ALL PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS AS NECESSARY.
5. PORTIONS OF MAINS TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ACTIVE, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED.
6. THE CONTRACTOR SHALL NOTIFY THE BUILDING OWNER AND CONSTRUCTION MANAGER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS.
7. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE PLUMBING CONTRACTOR, AS DIRECTED BY THE OWNER.
8. THE SHUTDOWN OF EXISTING BUILDING PLUMBING SERVICES SHALL BE COORDINATED WITH THE BUILDING OWNER AND CONSTRUCTION MANAGER. MAKE ARRANGEMENTS AT LEAST 5 BUSINESS DAYS PRIOR TO A SHUTDOWN.
9. NO ABANDONED PIPING SHALL REMAIN.

OPENING / SLEEVE SCHEDULE

UNINSULATED SANITARY, WASTE, VENT, STORM, AND GAS PIPING

PIPE DIAMETER	WALL / FLOOR SLEEVE DIAMETER	BEAM OPENING DIAMETER
1½"	3"	3"
2"	4"	3½"
2½"	4"	4"
3"	5"	4½"
4"	6"	5½"
5"	8"	6½"

PLUMBING DRAWING LIST

SHEET NUMBER	SHEET TITLE
MS P001	COVER SHEET
MS P101	PART PLANS

PLUMBING SYMBOL LIST

SYMBOL	DESCRIPTION
– X— — X— — X— — X— –	EXISTING PIPING TO BE REMOVED
ST	STORM DRAINAGE PIPING (ST)
ST	EXISTING STORM DRAINAGE PIPING (ST)
OD	OVERFLOW STORM DRAINAGE PIPING (OD)
OD	EXISTING OVERFLOW STORM DRAINAGE PIPING (OD)
G	GAS PIPING (G)
— — — — G — — — —	EXISTING GAS PIPING (G)
P	SANITARY OR PLUMBING RISER
XXX / 400	DETAIL REFERENCE IN 400 SERIES
ST	STORM STACK
	POINT OF DISCONNECT
	CONNECT NEW PIPING TO EXISTING
	CLEANOUT (CO)
	AREA, FLOOR OR ROOF DRAIN
	GAS VALVE
	DIRECTION OF FLOW
	PIPE UP
	PIPE DROP OR DOWN
	TOP CONNECTION
	BOTTOM CONNECTION
	CAPPED CONNECTION
	TRAP
	BREAK
	NEW TEE CONNECTION
	NEW ELBOW CONNECTION
	NEW CONNECTION POINT
	UNION
	VALVE ON RISE

SYMBOLS LIST IS PROVIDED FOR CONVENIENCE ONLY. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED IN THIS PROJECT.

PLUMBING ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
BOP	BOTTOM OF PIPE
CL	CENTERLINE
CLG	CEILING
CO	CLEAN OUT
DFU	DRAINAGE FIXTURE UNIT
DIP	DUCTILE IRON PIPE
DN	DOWN
DR	DRAIN
DWG	DRAWING
EHCI	EXTRA HEAVY CAST IRON
EL	ELEVATION
EX	EXISTING
FD	FLOOR DRAIN
FT	FOOT, FEET
FU	FIXTURE UNITS
G	GAS
HR	HOUR
HVAC	HEATING, VENTILATION & AIR CONDITIONING
L, LDR	LEADER
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OD	OVERFLOW DRAIN
RD	ROOF DRAIN
SF	SQUARE FEET
TBR	TO BE REMOVED
TYP	TYPICAL
VTR	VENT THROUGH ROOF
WSFU	WATER SUPPLY FIXTURE UNIT
XHCI	EXTRA HEAVY CAST IRON

ABBREVIATIONS LIST IS PROVIDED FOR CONVENIENCE ONLY. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED IN THIS PROJECT.

DRAIN SCHEDULE

			BODY																STRAINER																							REMARKS
DESIGNATION	REQUIRED	ZURN SERIES NO.	CAST IRON	LACQUER COATED	STAINLESS STEEL	ALL BRONZE	NICKEL BRONZE	POLYMER CONCRETE	BOTTOM OUTLET	45 OUTLET	SIDE OUTLET	OTHER OUTLET	CLAMPING DEVICE	BACK WATER VALVE	THREADED OUTLET	NO HUB	R.D. RECIEVER PLATE	ACID RESISTANT COATED	INSIDE GASKET	CAST IRON	LACQUER COATED	STAINLESS STEEL	DUCTILE IRON	SEDIMENT BUCKET	SECONDARY STRAINER	BRONZE	NICKEL BRONZE	CHROME PLATED	POLISHED FINISH	SATIN FINISH (STAINLESS STEEL)	TRACTOR GRATE	SOLID COVER	HEEL PROOF GRATE	FLAT TOP	HIGH DOME	LOW DOME	EXTENSION PIECE	VERTICAL ADJUSTMENT	TOP SIZE	ANGLE TYPE	RAISED LIP	MESH SCREEN OVER DOME	GENERAL AREA OR LOCATION
RD	●	Z-100	●	●					●				●			●			●	●				●	●											●		●	15"				ROOF

NOTES:
1. ALL FLOOR DRAINS IN FINISHED AREAS AND ALL ROOF DRAINS SHALL BE LOCATED AS PER THE ARCHITECTURAL DRAWINGS.
2. THE CONTRACTOR SHALL VERIFY THE COMPATIBILITY OF THE DRAINS WITH THE APPROVED ROOFING AND/OR WATER PROOFING SYSTEMS PRIOR TO SUBMITTING SHOP DRAWINGS.

MATERIAL SCHEDULE

PIPE

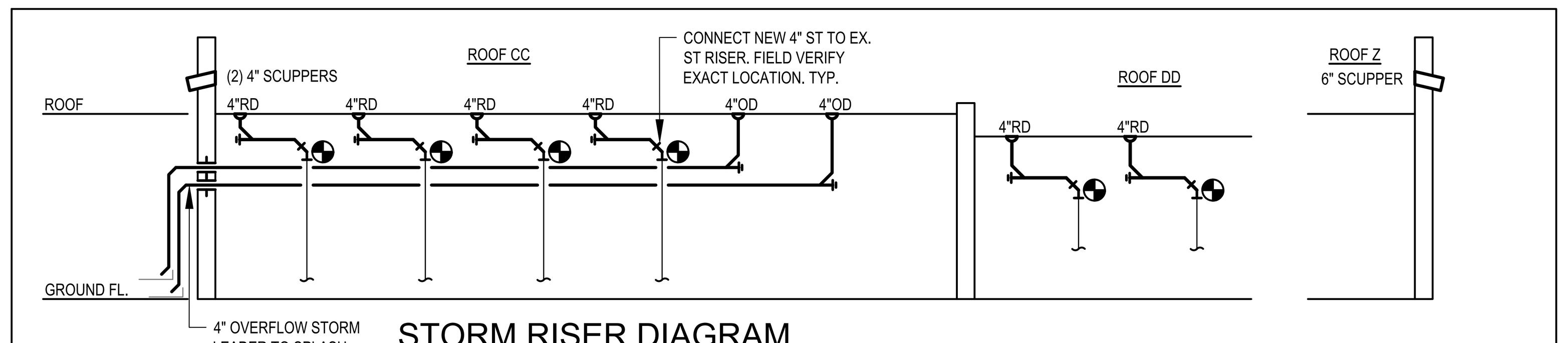
SYSTEMS	EXTRA HEAVY CAST IRON (E.H.C.I.)	CAST IRON SOIL PIPE (C.I.S.P.)	DUCTILE IRON AWWA/C151	SCH. 40, 316 STAINLESS STL	SCH. 40, 304 STAINLESS STL	DURION A.R.C.I.	SCHEDULE 40 BLACK STEEL	SCHEDULE 40 GALVANIZED STEEL	TYPE "K" COPPER TUBING	TYPE "L" COPPER TUBING	TYPE "M" COPPER TUBING	D.I.W.P. (CEMENT LINED)	D.I.W.P. (GROOVED ENDS)	GLASS	POLYPROPYLENE P.P.	C.P.V.C. SCHEDULE 80
LEADERS STACKS (10" & SMALLER)		●														
LEADER RUNOUTS		●														
LEADER DRAINS		●														

FITTINGS

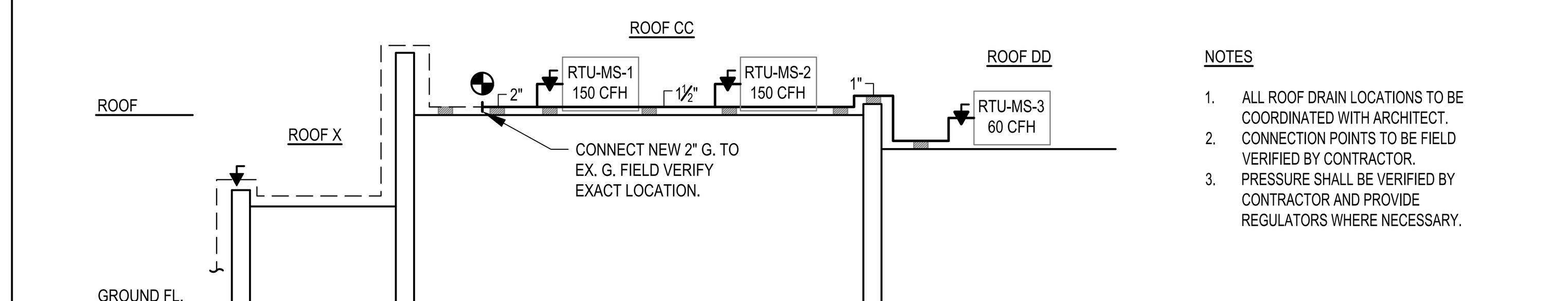
SYSTEMS	C.I. NO-HUB	EXTRA HEAVY CAST IRON (E.H.C.I.)	C.I. SOIL	DUCTILE IRON AWWA C110/C153	DUCTILE IRON (GROOVED ENDS)	DUCTILE IRON CLASS 350 (LINED)	STD.C.I.-175# W.W.P.	EX. H. C.I. 400# W.W.P.	STD. C.I. FLG.-175# W.W.P.	STD. MALL.-300# W.W.P.	DURION A.R.C.I.	CAST BRONZE-175# W.W.P.	CAST BRONZE-400# W.W.P.	POLYPROPYLENE P.P.	SOLDER FITTINGS	C.P.V.C. SCHEDULE 80	GLASS	SCH. 40 BLACK STEEL	SCHEDULE 40 GALVANIZED	SCHEDULE 40 STAINLESS STEEL
LEADERS STACKS (10" & SMALLER)	●																			
LEADER RUNOUTS	●																			
LEADER DRAINS			●																	

JOINTS

SYSTEMS	CAULKED	THREADED	SCH. 40 WELDED	SOLDERED 95-5 (LEAD FREE)	GALVANIZED GROOVED	PUSH-ON JOINT - AWWA C11	S.S. COUPLING	BRAZED	SCH. 40 GROOVED STAINLESS STEEL	NO-HUB S.S. COUPLING (HEAVY DUTY)	GASKET	SOLVENT WELDED
LEADERS STACKS (10" & SMALLER)										●		
LEADER RUNOUTS										●		
LEADER DRAINS											●	

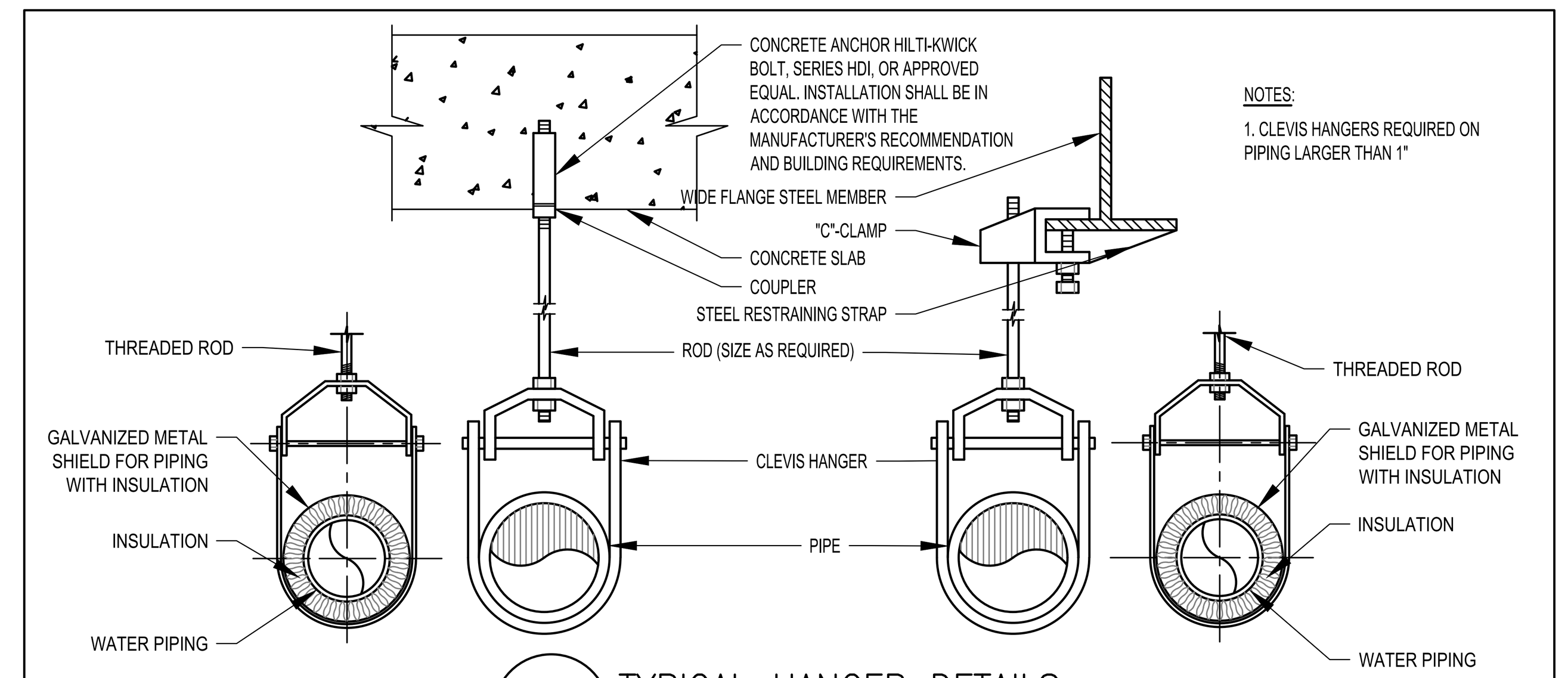


STORM RISER DIAGRAM
SCALE: NTS



NOTES
1. ALL ROOF DRAIN LOCATIONS TO BE COORDINATED WITH ARCHITECT.
2. CONNECTION POINTS TO BE FIELD VERIFIED BY CONTRACTOR.
3. PRESSURE SHALL BE VERIFIED BY CONTRACTOR AND PROVIDE REGULATORS WHERE NECESSARY.

GAS RISER DIAGRAM
SCALE: NTS



1 TYPICAL HANGER DETAILS
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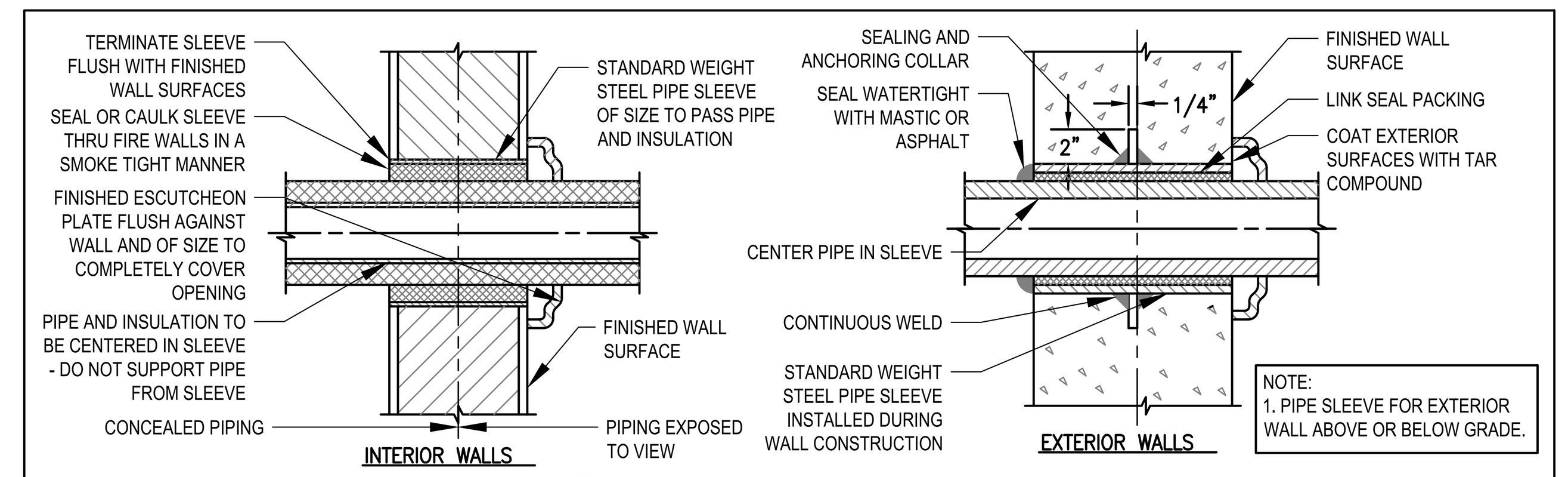
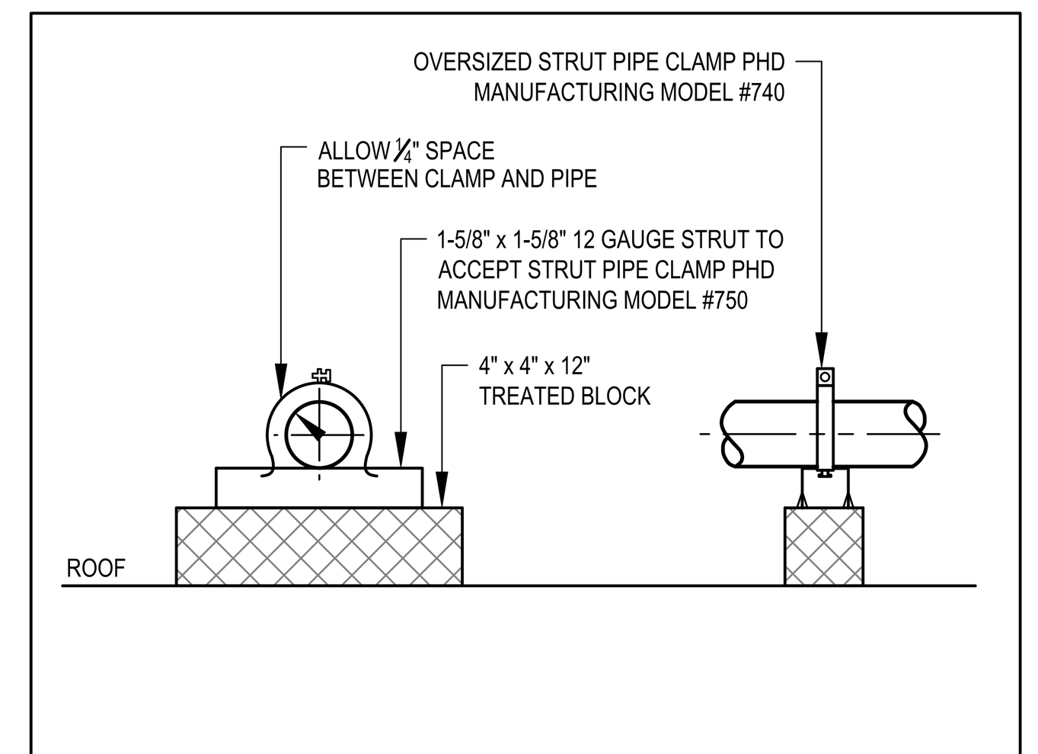


2 PIPE SLEEVES THRU WALL
MS P-001 SCALE: NOT TO SCALE



3 GAS PIPING SUPPORT ON ROOF
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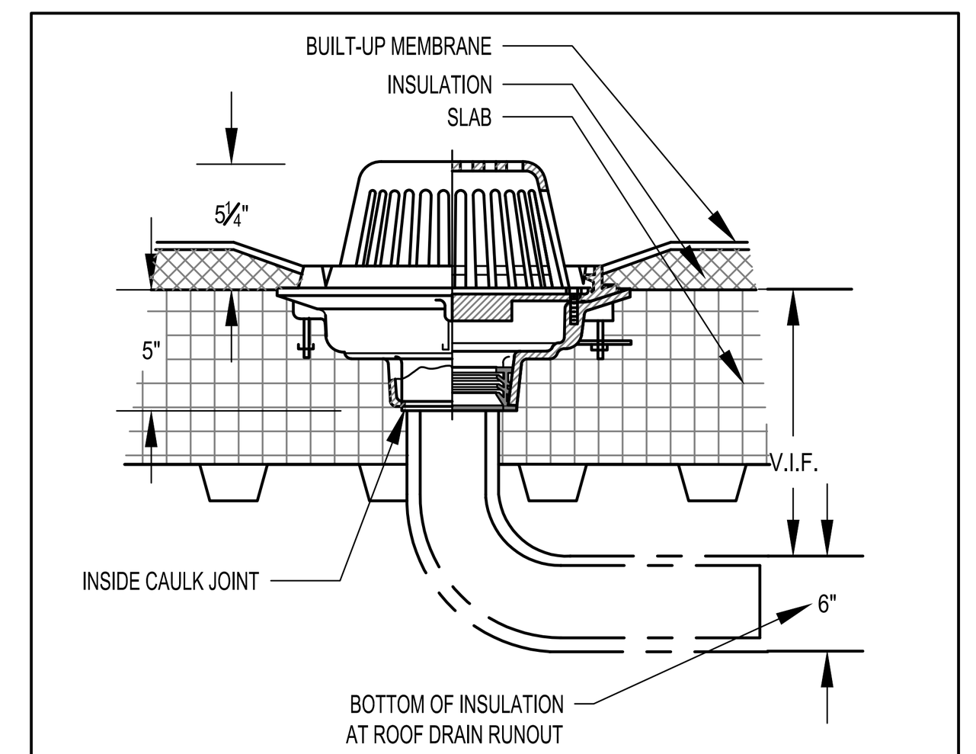
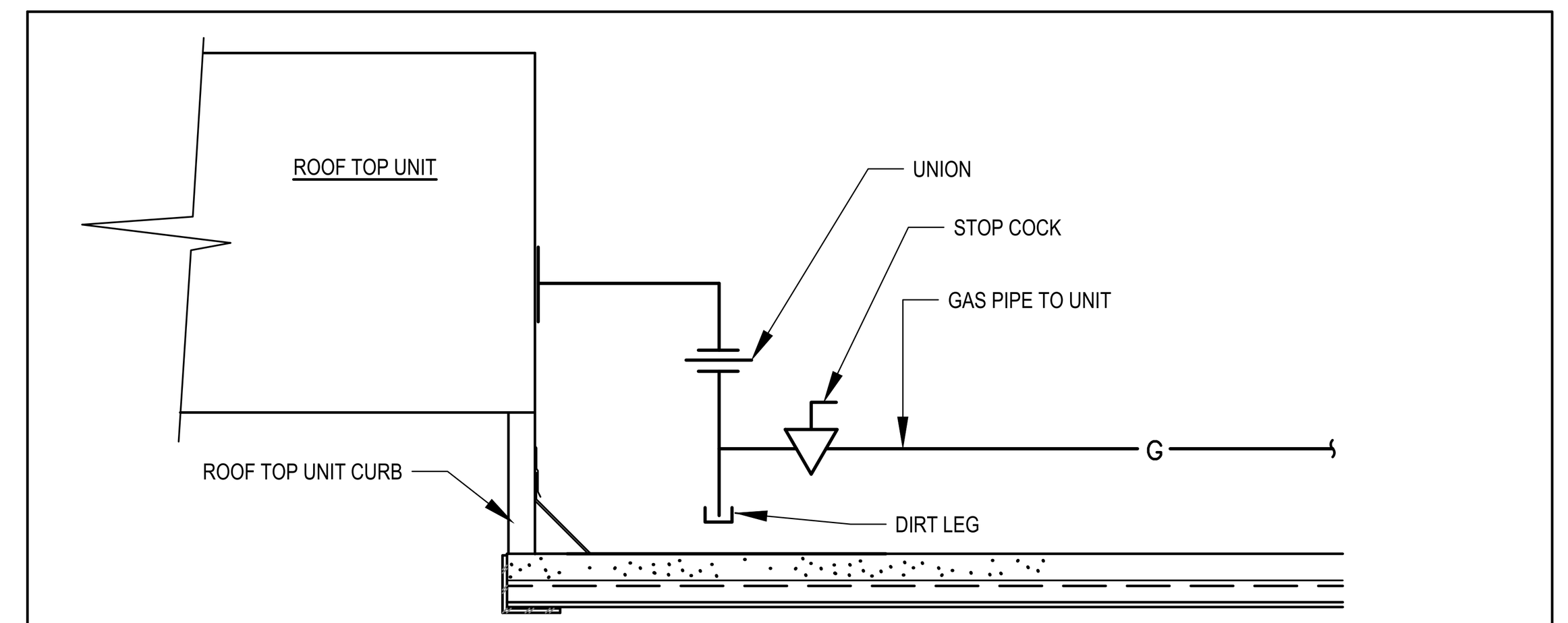
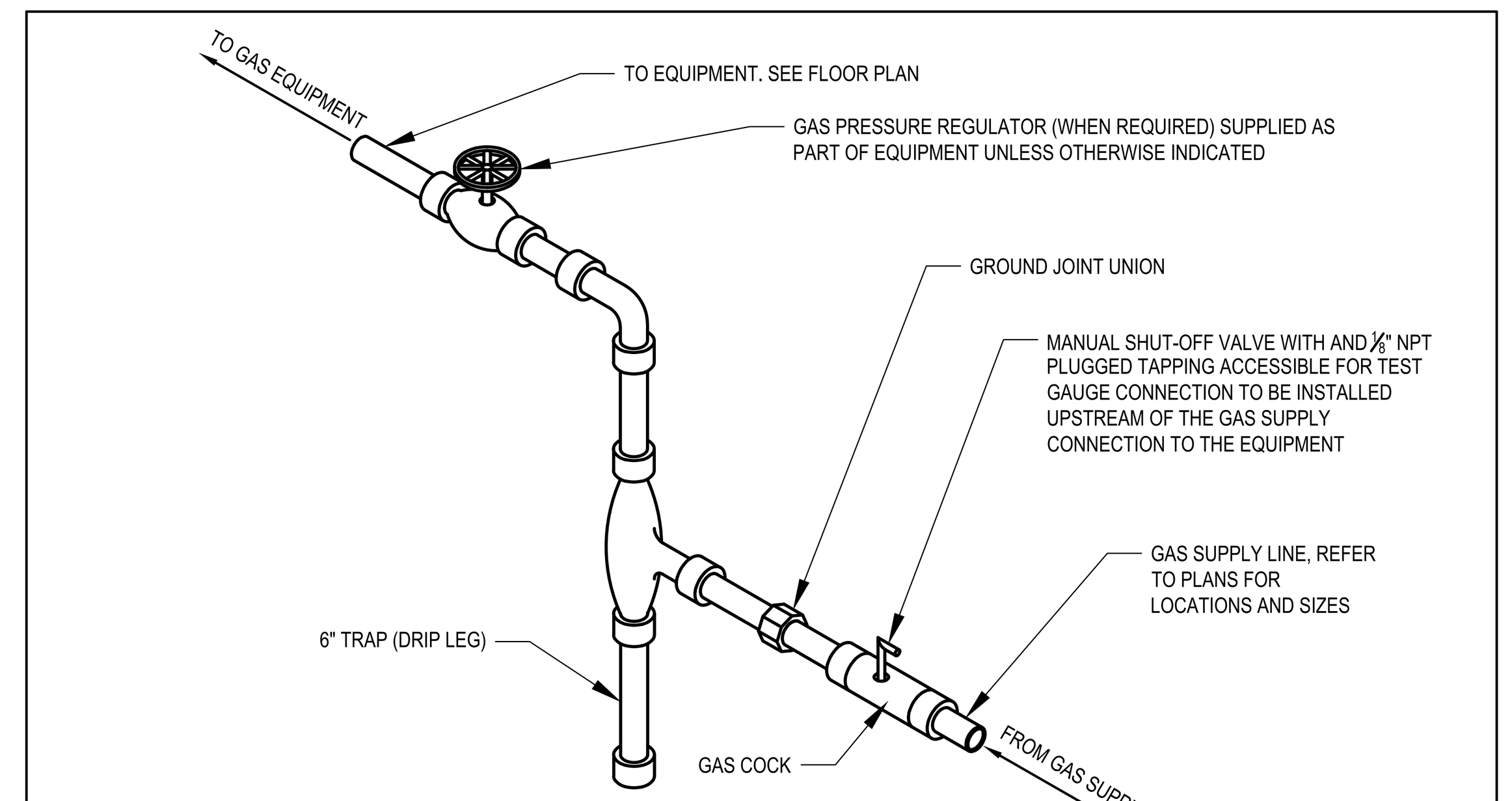


4 ROOF DRAIN DETAIL
MS P-001 SCALE: NOT TO SCALE



5 TYP. GAS CONNECTION TO ROOFTOP EQUIPMENT
MS P-001 SCALE: NOT TO SCALE



6 TYP. GAS CONNECTION TO EQUIPMENT CONNECTION DETAIL
MS P-001 SCALE: NOT TO SCALE

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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HAZARDOUS MATERIALS CONSULTANT
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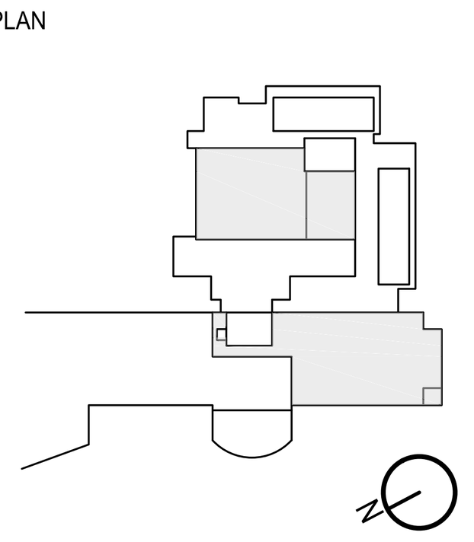
NEW YORK, NY 10014
212.612.7924

SEAL

ISSUE	DATE
ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021

KEY PLAN



PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

COVER SHEET

MS P001

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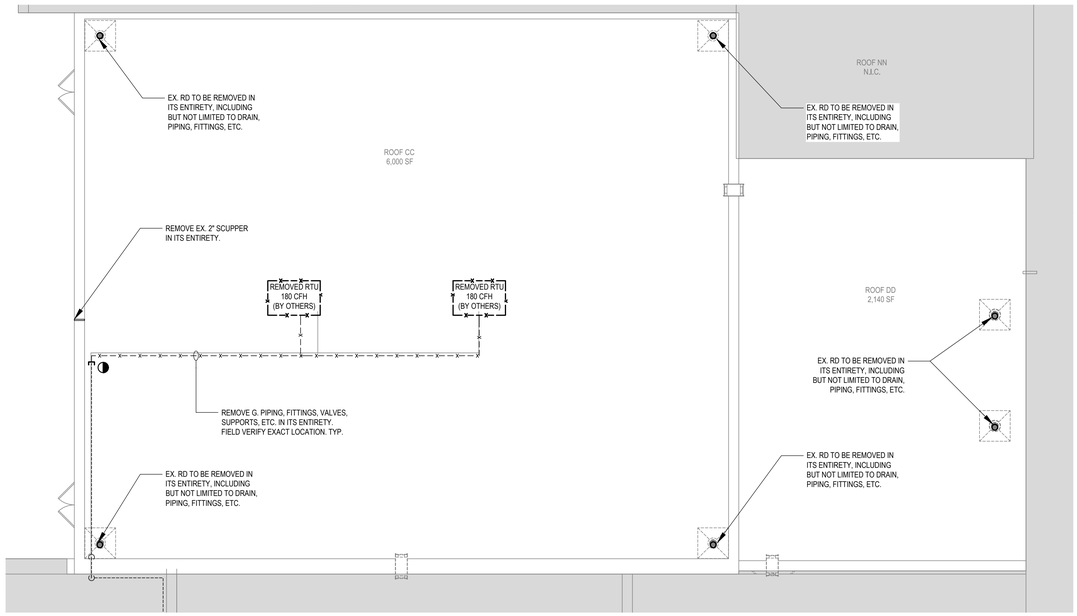
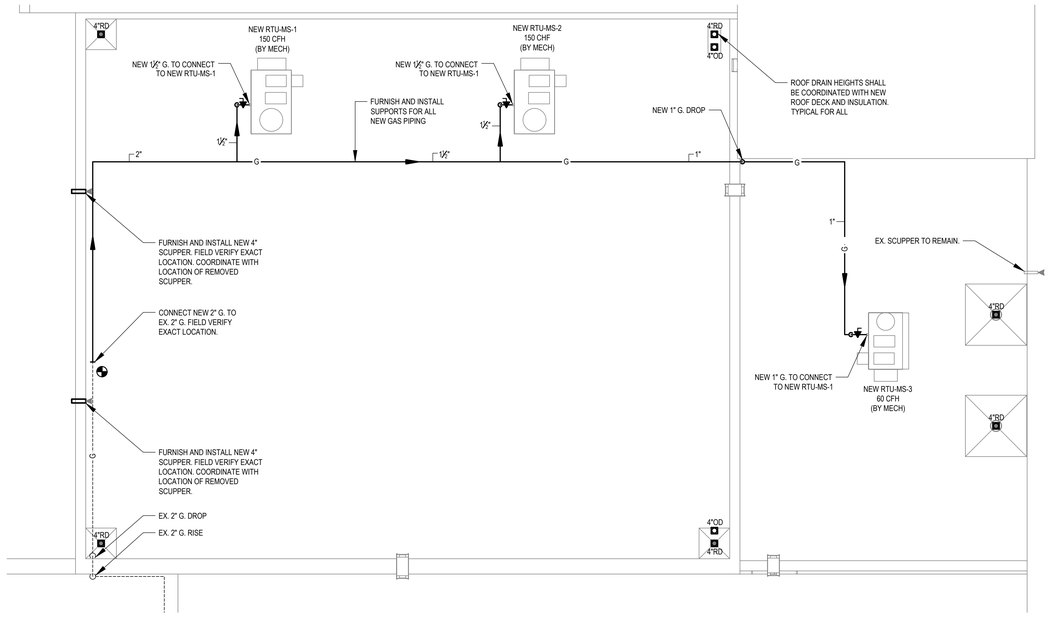
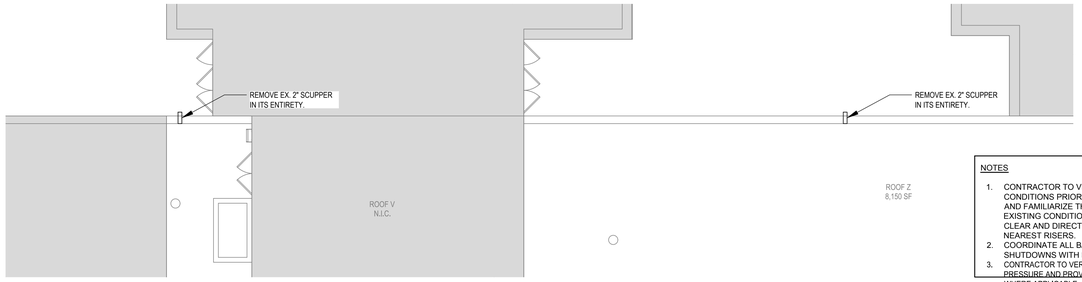
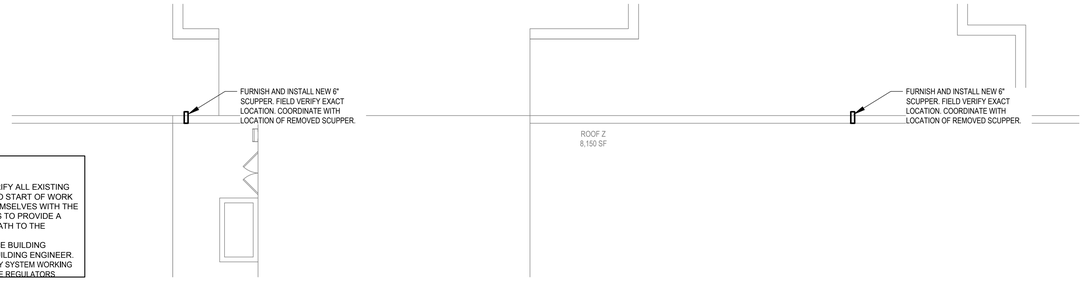






NOTES

1. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS TO PROVIDE A CLEAR AND DIRECT PATH TO THE NEAREST RISERS.
2. COORDINATE ALL BASE BUILDING SHUTDOWNS WITH BUILDING ENGINEER.
3. CONTRACTOR TO VERIFY SYSTEM WORKING PRESSURE AND PROVIDE REGULATORS WHERE APPLICABLE.



DEMOLITION PART PLAN - ROOF

1/8" = 1'-0"

PART PLAN - ROOF

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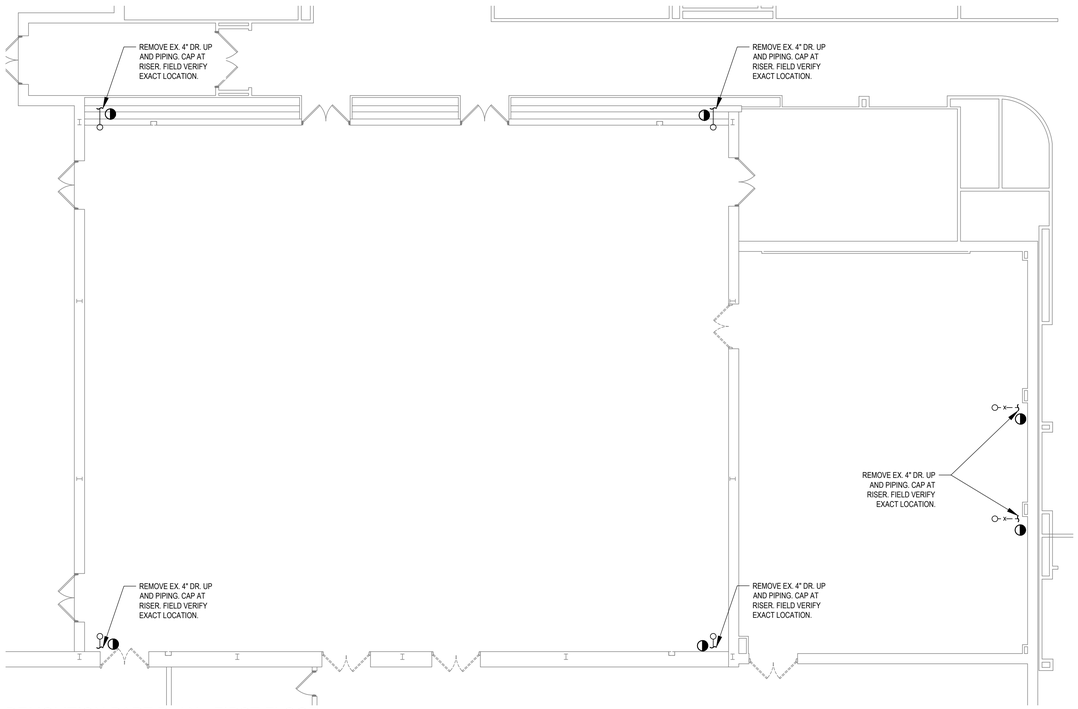
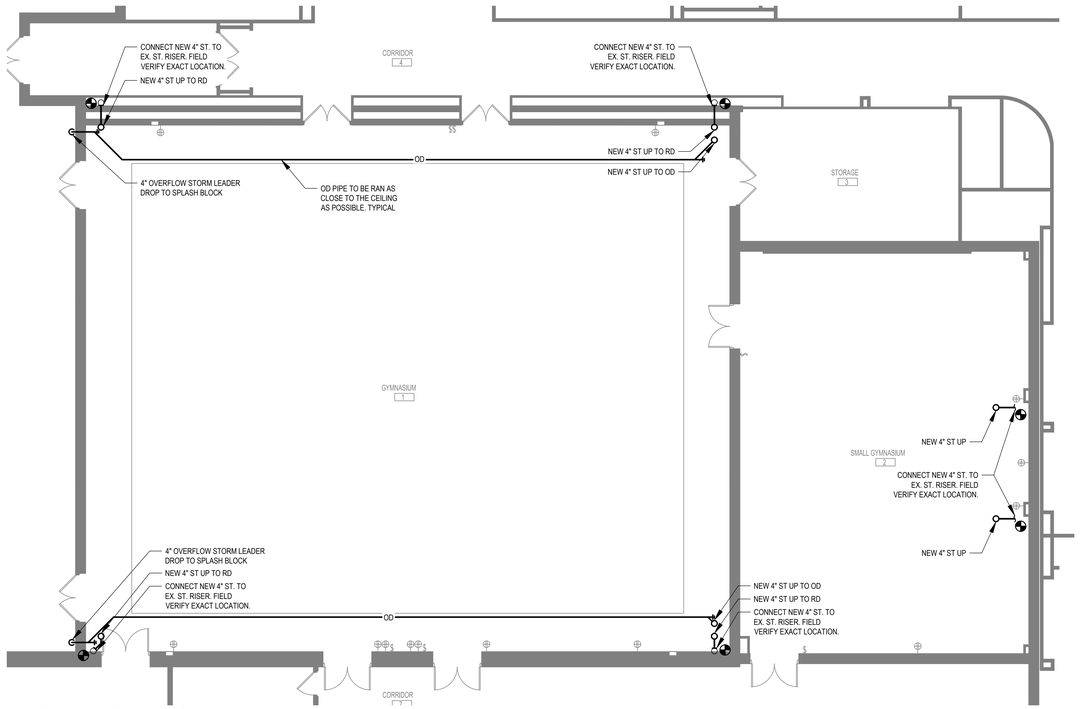


DEMOLITION PART PLAN - FIRST FLOOR

1/8" = 1'-0"



PART PLAN - FIRST FLOOR

1/8" = 1'-0"

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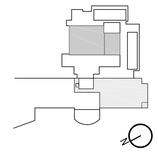

PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

PART PLANS

MS P101

MECHANICAL SYMBOLS - GENERAL

———	NEW PIPING, DUCTWORK, OR EQUIPMENT
———	EXISTING PIPING, DUCTWORK, OR EQUIPMENT TO REMAIN
- - - - - - - -	EXISTING PIPING, DUCTWORK, OR EQUIPMENT TO BE REMOVED
	NEW EQUIPMENT
ER	EXISTING EQUIPMENT TO BE REMOVED
E	EXISTING EQUIPMENT TO REMAIN
ERR	EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED
RE	RELOCATED POSITION OF EXISTING EQUIPMENT
	CONTINUATION FOR DUCTWORK OR PIPING
AHU-1	TYPE OF EQUIPMENT (AIR HANDLING UNIT) UNIT NUMBER
	POINT OF CONNECTION (OF NEW WORK TO EXISTING WORK) OR POINT OF DISCONNECTION (TO REMOVE AND PATCH EXISTING WORK)
#	DRAWING NOTE TAG
1	REVISION SYMBOL
A B	SECTION DESIGNATION ON DRAWING WHERE SECTION IS CUT A - SECTION DESIGNATION B - DRAWING NO.
T	THERMOSTAT (HAS DISPLAY, OCCUPANT ADJUSTMENT, OR BOTH) TO BE WALL MOUNTED. REFER TO PLANS FOR LOCATION.
TS	TEMPERATURE SENSOR (HAS NO DISPLAY OR OCCUPANT ADJUSTMENT) TO BE WALL OR DUCT MOUNTED. REFER TO PLANS FOR LOCATION.
SD	DUCT MOUNTED SMOKE DETECTOR

MECHANICAL ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AHU	AIR HANDLING UNIT
ATC	AUTOMATIC TEMPERATURE CONTROL
BMS	BUILDING MANAGEMENT SYSTEM
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CV	CONSTANT VOLUME
DX	DIRECT EXPANSION
EAT	ENTERING AIR TEMPERATURE
ER	EXISTING EQUIPMENT TO REMOVED
ERR	EXISTING EQUIPMENT TO REMOVED AND RELOCATED
EWT	ENTER WATER TEMPERATURE
FLA	FULL LOAD AMPS
FPI	FIN PER INCH
FTR	FIN TUBE RADIATION
GPM	GALLONS PER MINUTE
HX	HEAT EXCHANGER
HZ	HERTZ
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPS
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NK	NECK SIZE
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OED	OPEN END DUCT
PH	PHASE
PSI	POUND PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
RE	RELOCATED POSITION OF EXISTING EQUIPMENT
RE:	REFER TO...
TYP	TYPICAL
VN	VENT
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
WMS	WIRE MESH SCREEN

MECHANICAL SYMBOLS - DUCTWORK

18X12	DUCT SIZE (FIRST FIGURE INDICATES HORIZONTAL SIZE)
18Ø	ROUND DUCT DIAMETER
	SUPPLY OR OUTSIDE AIR INTAKE DUCT UP
	SUPPLY OUTSIDE AIR INTAKE DUCT DOWN
	RETURN OR EXHAUST DUCT UP
	RETURN OR EXHAUST DUCT DOWN
	ACOUSTICAL LINING IN DUCT
	TRANSITION FROM RECTANGULAR TO ROUND OR OVAL DUCT
AD	ACCESS DOOR IN DUCT
R	SLOPING RISE IN DUCT IN DIRECTION OF ARROW
D	SLOPING DROP IN DUCT IN DIRECTION OF ARROW
	MITERED ELBOW WITH TURNING VANES
	RADIUS ELBOW (INNER RADIUS = WIDTH)
	DUCT SPLIT
	90° BRANCH TAP (USE 45° BOOT, OR CONICAL TAP FOR BRANCH SERVING A SINGLE DIFFUSER/REGISTER ONLY)
	45° BRANCH TAP
	SPLIT (SUPPLY) OR CONVERGENCE (RETURN/EXHAUST) RADIUS ELBOW TYPE
	SPLIT (SUPPLY) OR CONVERGENCE (RETURN/EXHAUST) MITERED ELBOW TYPE WITH TURNING VANES
	SPLIT (SUPPLY) OR CONVERGENCE (RETURN/EXHAUST) BULLHEAD TYPE
	OFFSET (WITH RADIUS ELBOWS)
	SUPPLY REGISTER
	RETURN OR EXHAUST REGISTER
VD	VOLUME DAMPER
FXC	FLEXIBLE CONNECTION
VD	BRANCH TAKEOFF TO CEILING DIFFUSER/REGISTER
CD-B(500)	DIFFUSER TYPE AND CFM (CUBIC FEET PER MINUTE). REFER TO SCHEDULE.
	RETURN CEILING GRILLE OR REGISTER
SA	SUPPLY AIR DUCT
RA	RETURN AIR DUCT

MECHANICAL GENERAL NOTES

1. THESE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE SCOPE OF WORK AS WELL AS INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, DUCTWORK AND PIPING. THE CONTRACTOR SHALL ADHERE TO THESE DRAWINGS AS CLOSELY AS POSSIBLE. HOWEVER, THE RIGHT IS RESERVED TO VARY THE RUNS OF DUCTWORK AND PIPING AND TO MAKE OFFSETS, WHERE NECESSARY, TO ACCOMMODATE CONDITIONS ARISING AT THE JOB SITE. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL NO WORK SHALL BE PERFORMED PRIOR TO RECEIPT OF EQUIPMENT, DUCTWORK, AND PIPING FABRICATION SHOP DRAWING APPROVAL.
2. THE DRAWINGS AND SPECIFICATIONS SHALL BE INTERPRETED SO AS TO REQUIRE THE MOST SUBSTANTIAL AND COMPREHENSIVE PERFORMANCE OF THE WORK, CONSISTENT WITH THE INTENT AND REQUIREMENTS OF THE CONTRACT DOCUMENTS, AND SUCH WORK SHALL BE PERFORMED BY THE CONTRACTOR WITHOUT EXTRA COST TO THE OWNER. IN THE CASE OF A DISCREPANCY WITHIN THE CONTRACT DOCUMENTS, THE WORST CASE OR HIGHEST COST SHALL APPLY FOR BIDDING PURPOSES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY VIA RFI PRIOR TO PERFORMING THE ASSOCIATED WORK.
3. ANY MATERIAL, WORK, OR INCIDENTAL ACCESSORIES OR MINOR DETAILS NOT SHOWN BUT NECESSARY TO MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SHOWN ON THE DRAWINGS, SHALL BE PROVIDED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
4. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. WHERE ACOUSTICALLY LINED DUCT IS SPECIFIED, OUTER DUCT DIMENSIONS SHALL BE INCREASED TO ACCOMMODATE LINING.
5. WHERE WORK IS INDICATED TO BE BY OTHER CONTRACTORS, FOR EXAMPLE: "BY GENERAL CONSTRUCTION CONTRACTOR", THIS WORK IS NOT IN THE HVAC/MECHANICAL CONTRACT. EACH CONTRACTOR WILL BE RESPONSIBLE FOR CLOSE COORDINATION WITH OTHER CONTRACTORS' WORK.
6. REFER TO APPROPRIATE SPECIFICATION SECTION FOR EQUIPMENT SELECTION PARAMETERS WHERE DRAWINGS DO NOT CONTAIN EQUIPMENT SCHEDULES.
7. FOR AIR SYSTEMS, THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING BRANCH VOLUME DAMPERS FOR ALL SUPPLY, RETURN, AND EXHAUST BRANCH DUCTWORK, REGARDLESS IF VOLUME DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL VOLUME DAMPERS SHALL BE ADJUSTABLE HANDLE TYPE FOR LAY-IN ACCESSIBLE CEILING OR CABLE OPERATED FOR CONCEALED TYPE OF CEILING. ALL BRANCH DUCT VOLUME DAMPERS SERVING DIFFUSERS IN GYPSUM BOARD CEILINGS (OR OTHERWISE INACCESSIBLE) SHALL BE REMOTELY (CORD OR CABLE) OPERABLE THROUGH THE FACE OF THE DIFFUSER.
8. INSTALL THERMOSTATS, FAN SPEED CONTROLLERS, AND OTHER ROOM OCCUPANT ADJUSTABLE CONTROLS WITH TOP OF DEVICE 4'-0" ABOVE FINISHED FLOOR OR AS DIRECTED OTHERWISE BY ARCHITECT. COORDINATE EXACT LOCATIONS WITH THE ARCHITECTURAL PLANS. DEVICE COLORS TO BE SELECTED BY THE ARCHITECT. MANUFACTURER'S LOGO SHALL NOT BE EXPOSED.
9. WHERE PIPING CONNECTIONS FOR EQUIPMENT SUCH AS PUMPS, AC UNITS, COILS, ETC. DIFFER FROM THE LINE SIZE PIPING, IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FURNISH AND INSTALL THE NECESSARY REDUCER/EXPANDER FITTINGS TO ENABLE CONNECTION BETWEEN THE PIPING SYSTEM AND THE EQUIPMENT.
10. PROVIDE UL LISTED AND LABELED FIRE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS, REGARDLESS IF FIRE DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. PROVIDE 1-1/2 HOUR RATED FIRE DAMPERS AT WALLS/FLOORS WITH 2 HOUR OR LESS RATING. PROVIDE 3 HOUR RATED FIRE DAMPERS AT WALLS/FLOORS WITH 3 HOUR OR MORE RATING. ALL FIRE DAMPERS SHALL BE TYPE "B" WITH SHUTTER OUT OF AIRSTREAM, AND SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS 2,000 FT/MIN AND 4.0 IN-WC. PROVIDE ACCESS DOORS IN DUCTWORK, 18"x18" UNLESS OTHERWISE NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR LOCATIONS AND SIZES OF ACCESS DOORS IN GENERAL CONSTRUCTION.
11. PROVIDE UL LISTED AND LABELED COMBINATION FIRE/SMOKE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FIRE AND SMOKE RATED WALLS AND FLOORS, REGARDLESS IF FIRE DAMPERS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL COMBINATION FIRE/SMOKE DAMPERS SHALL BE PROVIDED WITH AN END SWITCH FOR STATUS SIGNAL TO THE BMS AND FIRE SMOKE CONTROL PANEL. ALL COMBINATION FIRE/SMOKE DAMPERS SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS 2,000 FT/MIN AND 4.0 IN-WC. PROVIDE ACCESS DOORS IN DUCTWORK, 18"x18" UNLESS OTHERWISE NOTED. COORDINATE WITH GENERAL CONTRACTOR FOR LOCATIONS AND SIZES OF ACCESS DOORS IN GENERAL CONSTRUCTION.
12. PROVIDE FIRESTOPPING FOR ALL DUCT, PIPE, AND CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS.
13. WHERE DUCTS AND PIPES PENETRATE FIRE AND/OR SMOKE RATED WALLS, LEAVE A MINIMUM OF 2 INCHES CLEAR ABOVE THE DUCTS AND PIPES, SUCH THAT THE GENERAL CONTRACTOR CAN SEAL THE WALL ABOVE THE DUCTS. DO NOT INSTALL FLEXIBLE DUCTWORK THROUGH FIRE AND/OR SMOKE RATED WALLS.
14. PROVIDE ESCUTCHEON PLATES WHERE DUCTS OR PIPES PENETRATE CEILINGS, WALLS, OR FLOORS WHERE EXPOSED TO VIEW IN FINISHED AREAS. ESCUTCHEONS FOR DUCTS SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS DUCT. PIPE ESCUTCHEONS SHALL BE CHROME-PLATED BRASS.
15. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING THERMOSTATS FOR ANY EQUIPMENT THAT REQUIRES CONTROL, SUCH AS VAV BOXES, FCU, FANS, HEATERS, FINNED TUBE RADIATION, RTU'S, ETC., REGARDLESS IF THERMOSTATS ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL THERMOSTATS SHALL BE DIRECT DIGITAL PROGRAMMABLE TYPE, UNLESS OTHERWISE NOTED. PROVIDE ONE THERMOSTAT FOR EACH FAN COIL UNIT, FAN UNIT, VAV, FPB, ENTRANCE HEATER, BASEBOARD RADIATION, ETC. THERMOSTAT LOCATIONS SHALL BE AS SHOWN ON PLANS AND/OR WHERE DIRECTED AND APPROVED BY THE ARCHITECT AND ENGINEER.
16. ALL DUCTWORK AND PIPING REQUIRING FIRE RATING AND WHERE SHOWN ON PLANS SHALL BE PROVIDED WITH UL LISTED FIRE-RATED DUCT WRAP WITH APPROPRIATE FIRE RATING (1-HOUR, 2-HOUR, ETC.), UNLESS A FIRE-RATED ARCHITECTURAL ENCLOSURE IN THAT LOCATION IS SPECIFIED WITHIN DRAWINGS AND SPECIFICATIONS FOR ANOTHER TRADE.
17. ALL LINEAR DIFFUSERS ARE TO BE COORDINATED WITH ARCHITECTURAL PLANS FOR EXACT LENGTHS AND LOCATIONS. ACTIVE PLENUM SECTIONS SHALL BE OF THE SIZES AS SHOWN ON PLANS. EACH BRANCH TAP SERVING THE LINEAR DIFFUSER SHALL BE PROVIDED WITH A VOLUME DAMPER WHICH SHALL BE OPERABLE THROUGH THE DIFFUSER FACE. ACTIVE SUPPLY SECTION OF LINEAR DIFFUSER SHALL BE PROVIDED WITH PATTERN CONTROL DEVICES AND EQUALIZING GRIDS. ACTIVE OR INACTIVE RETURN SECTIONS SHALL NOT BE FURNISHED WITH PATTERN CONTROL OR EQUALIZING GRIDS.
18. BORDER TYPES AND METHOD OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES, AND REGISTERS SHALL BE COORDINATED WITH THE ARCHITECTURAL CEILING DETAILS AND SPECIFICATIONS.
19. REFER TO SPECIFICATIONS FOR ACOUSTIC LINING REQUIREMENTS NOT SHOWN ON THE DRAWINGS.
20. FOR WATER SYSTEMS: THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING BALL TYPE SHUT-OFF VALVES AND SEPARATE BALANCING VALVE FOR ALL BRANCH PIPING REGARDLESS IF VALVES ARE NOT SHOWN IN CONTRACT DOCUMENTS. ALL SHUT-OFF VALVES SHALL BE FULL PORT AND PRESSURE RATED FOR SYSTEM PRESSURE. THE BALANCING VALVE SHALL BE SIMILAR TO B&G CIRCUIT SETTER PLUS CALIBRATED BALANCE VALVE, UNLESS OTHERWISE NOTED.
21. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING SECONDARY DRAIN PANS FOR ALL AIR CONDITIONING CEILING HUNG EQUIPMENT REGARDLESS IF DRAIN PANS ARE NOT SHOWN IN CONTRACT DOCUMENTS. REFER TO DETAIL FOR INSTALLATION OF DRAIN PANS. IF NO DETAIL IS SHOWN, CONTRACTOR MUST REQUEST DRAIN PAN DETAIL THRU RFI PROCESS DURING BIDDING.

MECHANICAL GENERAL NOTES (CONT.)

22. THE MECHANICAL CONTRACTOR SHALL INCLUDE IN BID PRICING SUPPLYING AND INSTALLING CONDENSATE PIPING FOR ALL COOLING TYPE EQUIPMENT REGARDLESS IF CONDENSATE PIPING IS NOT SHOWN IN CONTRACT DOCUMENTS. ALL CONDENSATE PIPING SHALL BE INSULATED AND ROUTED TO NEAREST DRAIN OR JANITORS CLOSET. IF NO CONDENSATE PIPING IS SHOWN, CONTRACTOR MUST REQUEST CONDENSATE PIPING ROUTING THRU RFI PROCESS DURING BIDDING.
23. GENERAL NOTES, SYMBOLS, ABBREVIATIONS, AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
24. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT.
25. COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
26. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL, EXCEPT IN WAY OF STRUCTURAL STEEL, DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
27. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
28. PROVIDE HINGED ACCESS DOORS IN DUCTWORK IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS FOR ALL CONCEALED EQUIPMENT THAT REQUIRES PERIODIC SERVICE, INCLUDING AIR CONDITIONING UNITS, FANS, CONDENSATE PUMPS, FIRE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, AND DUCT MOUNTED SMOKE DETECTORS.
29. WHERE EQUIPMENT OR A DUCT ACCESS DOOR IS LOCATED ABOVE A HARD (INACCESSIBLE) CEILING, PROVIDE AN ACCESS DOOR IN CEILING, MINIMUM SIZE 24"X24", OR 6" LONGER/WIDER THAN EQUIPMENT OR DUCT ACCESS DOOR ABOVE CEILING, OR IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S RECOMMENDATIONS, WHICHEVER IS LARGEST. ACCESS DOOR SHALL BE MILCOR STYLE DW, MOD. 3203-019 OR APPROVED EQUAL, UNLESS OTHERWISE NOTED. SUBMIT ACCESS DOOR AND COLOR CHART FOR ARCHITECTURAL APPROVAL, ALONG WITH A FLOOR PLAN INDICATING LOCATIONS AND SIZES OF ALL PROPOSED ACCESS DOORS.
30. PROVIDE HANGERS, INSERTS, ANCHORS, SUPPLEMENTAL STEEL & SUPPORTS AS REQUIRED TO SUPPORT DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURE.
31. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.
32. COORDINATE ALL ROOF PENETRATIONS WITH THE WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS. COORDINATE ALL ROOF PENETRATION LOCATIONS WITH THE OWNER. NOTIFY THE OWNER PRIOR TO STARTING WORK AND VERIFY COMPLIANCE WITH BOND AND WARRANTY OF THE ROOF.
33. RUN DUCTS AND PIPING CONCEALED, UNLESS OTHERWISE SPECIFIED, AND CLEAR OF CEILING INSERTS.
34. PROVIDE CLEARANCE IN FRONT OF ALL ELECTRIC CONTROL PANELS PER N.E.C. AND EQUIPMENT MANUFACTURERS' REQUIREMENTS.
35. PRIOR TO SUBMISSION OF SHOP DRAWINGS, COORDINATE WITH ELECTRICAL CONTRACTOR TO VERIFY VOLTAGES AVAILABLE FOR MECHANICAL EQUIPMENT.
36. MOTOR STARTERS AND VARIABLE FREQUENCY DRIVES FOR HVAC EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED/WIRED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. COORDINATE AND VERIFY WITH ELECTRICAL CONTRACTOR PRIOR TO SHOP DRAWING SUBMISSION.
37. ALL DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE FURNISHED, INSTALLED, AND WIRED BY THE ELECTRICAL CONTRACTOR, UNLESS INTEGRAL TO HVAC EQUIPMENT OR OTHERWISE NOTED. COORDINATE AND VERIFY WITH ELECTRICAL CONTRACTOR PRIOR TO SHOP DRAWING SUBMISSION.
38. USE FLAT TRANSVERSE SEAM FOR DUCTWORK WHERE SPACE AVAILABLE DICTATES.
39. BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND REGISTERS SHALL BE THE SAME SIZE AS THE DIFFUSER OR REGISTER NECK, UNLESS OTHERWISE NOTED.
40. ALL DUCTWORK AND PIPING SHALL BE INSTALLED TIGHT TO BOTTOM OF STRUCTURAL MEMBERS UNLESS OTHERWISE NOTED OR ABSOLUTELY REQUIRED BY FIELD CONDITIONS.
41. DO NOT INSTALL DUCTWORK OR PIPING DIRECTLY UNDER AND PARALLEL TO THE WEB OF STRUCTURAL MEMBERS. OFFSET IN ORDER TO ALLOW FUTURE DUCTWORK AND PIPING TO CROSS OVER IN BETWEEN STRUCTURAL MEMBERS.
42. BRANCH DUCTS TO INDIVIDUAL DIFFUSERS AND REGISTERS SHALL BE PROVIDED WITH VOLUME DAMPERS, WHETHER OR NOT THE VOLUME DAMPERS ARE SHOWN ON PLAN.
43. VOLUME DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS SHALL BE CABLE OPERATED TYPE, WITH CABLE OPERATORS LOCATED IN ACCESSIBLE LOCATIONS AND CLEARLY LABELED FOR DIFFUSER OR REGISTER SERVED.
44. UNLESS OTHERWISE NOTED, ALL EXPOSED DUCTWORK IN FINISHED SPACES SHALL BE SPIRAL ROUND OR FLAT OVAL TYPE, WITH SOLID OUTER WALL, PERFORATED INNER WALL, AND 1 INCH THICK INTERSTITIAL ACOUSTICAL LINING.
45. CONDENSATE DRAIN (CD) AND CONDENSATE PUMP DISCHARGE (PD) PIPING SHALL BE RIGID COPPER, TYPE L, MINIMUM 3/4" NOMINAL PIPE SIZE, BRAZED OR SOLDERED, WITH 1" INSULATION, UNLESS OTHERWISE NOTED ON DRAWINGS.
46. NEW AND EXISTING PERMANENT HVAC AIR EQUIPMENT MAY BE USED BY CONTRACTORS DURING CONSTRUCTION FOR TEMPORARY HEATING, COOLING, AND VENTILATION, ONLY UNDER THE FOLLOWING CONDITIONS:
    - 46.1. CONTRACTOR TO PROVIDE TEMPORARY FILTERS IN EACH UNIT DURING CONSTRUCTION, WHICH SHALL BE REPLACED WITH NEW CLEAN FILTERS AFTER GENERAL CONSTRUCTION IS COMPLETED.
    - 46.2. CONTRACTOR TO PROVIDE FILTER FABRIC AT ALL RETURN AND EXHAUST REGISTERS, GRILLES, AND OPENINGS DURING CONSTRUCTION.
    - 46.3. THE WARRANTY PERIOD FOR ALL EQUIPMENT SHALL NOT BEGIN UNTIL CONSTRUCTION IS COMPLETED. IF THE EQUIPMENT MANUFACTURER'S WARRANTY PERIOD BEGINS WHILE THE UNIT USED DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH EXTENDING THE WARRANTY TO PROVIDE THE FULL PERIOD OF COVERAGE TO THE OWNER.
    - 46.4. IF NEW PERMANENT HVAC AIR EQUIPMENT INSTALLED UNDER THIS PROJECT WILL NOT BE OPERATED BY THE CONTRACTOR DURING CONSTRUCTION, ALL OPEN OR INCOMPLETE DUCTWORK SHALL BE CAPPED AIRTIGHT WITH WITH HEAVY POLYETHYLENE PLASTIC. AFTER THE INSTALLATION OF DUCTWORK, REGISTERS, GRILLES, AND DIFFUSERS, THE CONTRACTOR SHALL BLANK OFF ALL REGISTERS, GRILLES, AND DIFFUSERS WITH HEAVY POLYETHYLENE PLASTIC AND TAPE AIR TIGHT, IN AREAS THAT ARE UNDER CONSTRUCTION, UNTIL WORK IS COMPLETE IN THOSE AREAS.
    - 46.5. IF THE ABOVE CONDITIONS ARE NOT MET, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY HEATING, COOLING, AND VENTILATION EQUIPMENT, DUCTWORK, CONTROLS, PIPING, AND POWER AT HIS OWN EXPENSE.
    - 46.6. IF PERMANENT HVAC EQUIPMENT IS USED DURING CONSTRUCTION BUT NOT PROPERLY PROTECTED AS DESCRIBED ABOVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OUT DUST AND DEBRIS FROM DUCTWORK AND EQUIPMENT, AS WELL AS ANY NECESSARY REPAIR OR REPLACEMENT OF DAMAGED EQUIPMENT AT HIS OWN EXPENSE.
    - 46.7. WHEN GENERAL CONSTRUCTION IS COMPLETE, VACUUM CLEAN ALL DIFFUSERS, REGISTERS, GRILLES, AND HVAC EQUIPMENT IN THE PROJECT AREA OR SERVING THE PROJECT AREA. REMOVE ANY CONSTRUCTION DEBRIS.

MECHANICAL DEMOLITION GENERAL NOTES

1. DEMOLITION NOTES, SYMBOL LIST, AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
2. ALL PIPING IN WALLS AND FLOORS NOT TO BE REUSED WILL BE PLUGGED OR CAPPED, AND CUTTING AND PATCHING WILL BE PERFORMED TO RESTORE SURFACE TO ORIGINAL CONDITION BY THIS CONTRACTOR.
3. AFTER REMOVING PIPE THROUGH THE FLOOR SLABS, PACK OPENING WITH APPROVED FIRE-RATED PACKING.
4. THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL COSTS ASSOCIATED WITH REMOVALS AND RELOCATIONS OF HVAC WORK AS DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE OWNER/ENGINEER.
5. THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING HVAC SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
6. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR, OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
7. THE CONTRACTOR SHALL REMOVE ALL DUCT AND PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS NECESSARY.
8. ALL PIPING WHICH BECOMES EXPOSED DURING THE ALTERATION WORK SHALL BE REAVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
9. PORTIONS OF PIPING AND DUCTWORK TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ACTIVE, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED, AND RECONNECTED.
10. THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE, SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS.
11. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE HVAC CONTRACTOR, AS DIRECTED BY THE OWNER.
12. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVER TIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
13. THE SHUTDOWN OF EXISTING BUILDING HVAC SERVICES SHALL BE COORDINATED WITH WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO A SHUTDOWN.
14. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.
15. WHERE THE DEMOLITION OF EXISTING PNEUMATIC CONTROL EQUIPMENT, THERMOSTATS, OR TUBING IS INDICATED IN THE PLANS, THE CONTRACTOR SHALL CAP THE ENDS OF ALL EXISTING TO REMAIN PNEUMATIC LINES AIRTIGHT UNLESS OTHERWISE NOTED. IF ADDITIONAL PNEUMATIC LINES OR DEVICES ARE DISCOVERED BY THE CONTRACTOR INSIDE WALLS OR ABOVE CEILINGS DURING DEMOLITION, THE CONTRACTOR SHALL INFORM THE DESIGN TEAM PRIOR TO REMOVAL OF THESE LINES OR DEVICES.

NEW YORK STATE CODES & STANDARDS

- 2020 BUILDING CODE OF NEW YORK STATE
- 2020 FIRE CODE OF NEW YORK STATE
- 2020 PLUMBING CODE OF NEW YORK STATE
- 2020 MECHANICAL CODE OF NEW YORK STATE
- 2020 FUEL GAS CODE OF NEW YORK STATE
- 2020 NYS UNIFORM CODE SUPPLEMENT
- NYS EDUCATION DEPARTMENT 1998 MANUAL OF PLANNING STANDARDS

NEW YORK STATE ENERGY CODES

- 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE
- 2016 ASHRAE 90.1

REFERENCED STANDARDS

APPLICABLE REFERENCE STANDARDS SHALL BE AS REFERENCED BY ALL STATE CODES. THE LIST BELOW IS FOR QUICK REFERENCE AND DOES NOT INCLUDE ALL APPLICABLE REFERENCE STANDARDS.

- 2016 NPFA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
- 2016 NFPA 14 – STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS
- 2016 NFPA 20 – STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
- 2017 NFPA 70 – NATIONAL ELECTRICAL CODE
- 2016 NFPA 72 – NATIONAL FIRE ALARM AND SIGNALING CODE

MECHANICAL DRAWING LIST

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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PROJECT NUMBER: 223030768

HAZARDOUS MATERIALS CONSULTANT
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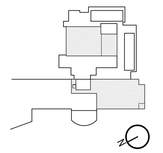
NEW YORK, NY 10014
212.612.7924

SEAL

ISSUE	DATE
ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021

KEY PLAN



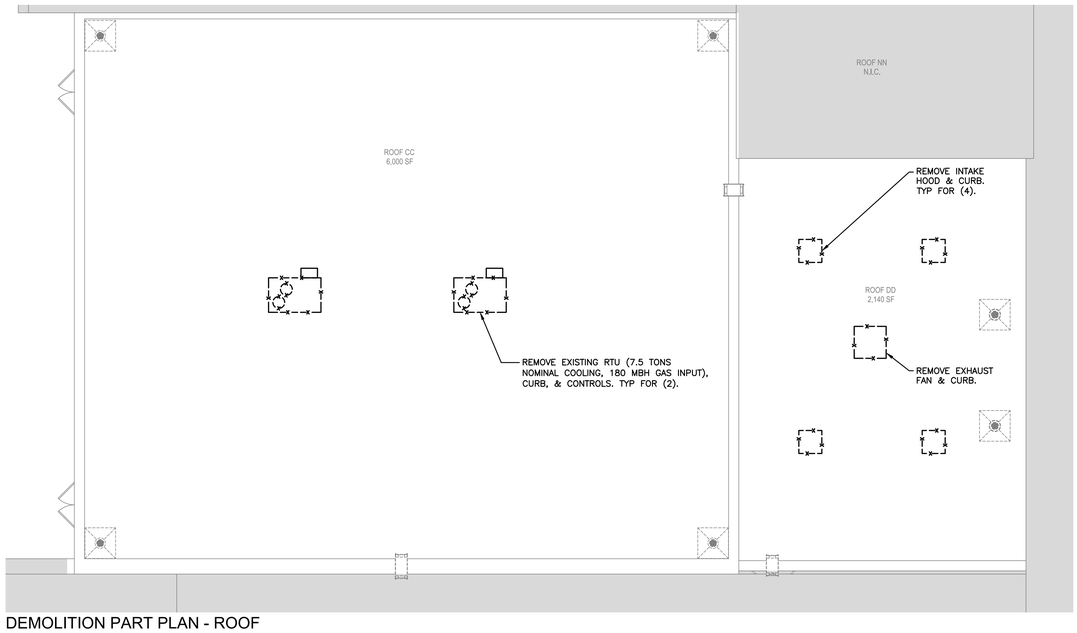
PROJECT NO. 66-03-01-03-0-003-028
MEMASI PROJECT NO. 102-2101

COVER SHEET

MS M001

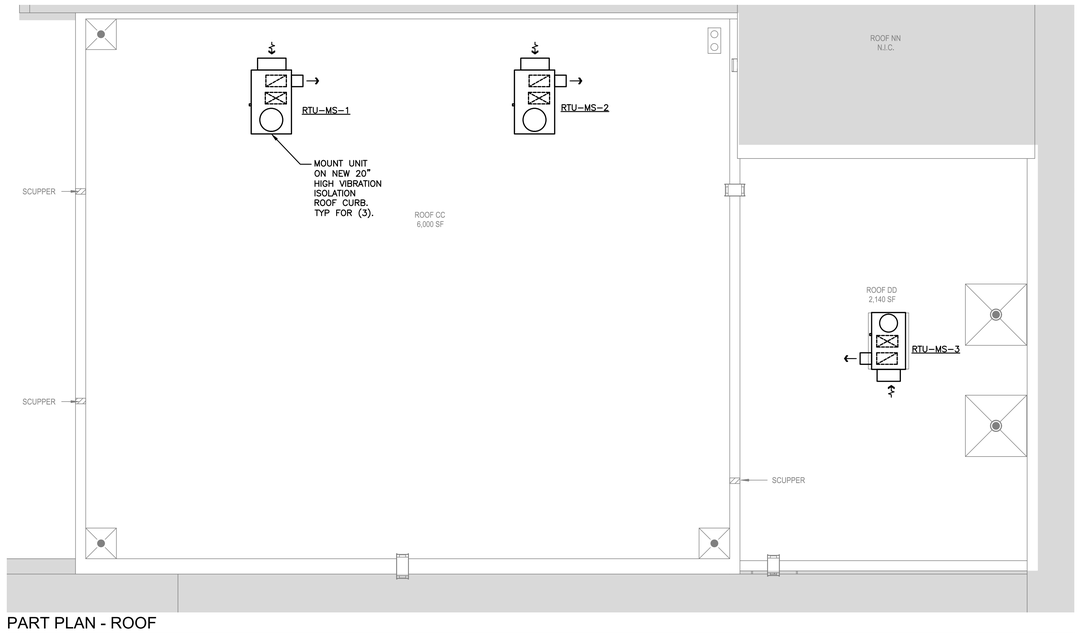
PLAN NOTES:

1. ALL DUCTWORK SHALL BE INSTALLED TIGHT TO BOTTOM OF STRUCTURE UNLESS OTHERWISE NOTED OR ABSOLUTELY REQUIRED BY FIELD CONDITIONS.
2. DO NOT INSTALL DUCTWORK DIRECTLY UNDER AND PARALLEL TO THE WEB OF STRUCTURAL MEMBERS. OFFSET IN ORDER TO ALLOW FUTURE DUCTWORK AND PIPING TO CROSS OVER IN BETWEEN STRUCTURAL MEMBERS.
3. ALL EXPOSED DUCTWORK IN FINISHED SPACES INDICATED TO BE ROUND OR FLAT OVAL (F.O.) SHALL BE SPIRAL TYPE, WITH SOLID OUTER WALL, PERFORATED INNER WALL, AND 1 INCH THICK INTERSTITIAL ACOUSTICAL LINING. NO EXTERNAL INSULATION.
4. ALL EXPOSED DUCTWORK IN FINISHED SPACES INDICATED TO BE RECTANGULAR SHALL BE PROVIDED WITH 1 INCH THICK INTERSTITIAL ACOUSTICAL LINING. NO EXTERNAL INSULATION.
5. ALL EXPOSED DUCTWORK IN FINISHED SPACES SHALL BE PROVIDED WITH SURFACE FINISH SUITABLE FOR FIELD PAINTING BY GENERAL CONTRACTOR. PRIOR TO FIELD PAINTING, MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING DUCT SURFACE INCLUDING REMOVAL OF DUST, GREASE, FINGERPRINTS, MARKINGS, AND CONSTRUCTION DEBRIS.
6. DUCT SIZE INDICATED ON PLAN IS THE INSIDE CLEAR DIMENSION UNLESS OTHERWISE NOTED. OVERALL DIMENSIONS OF DUCTWORK SHALL BE INCREASED TO ACCOMMODATE THE THICKNESS OF INTERNAL ACOUSTICAL LINING.



DEMOLITION PART PLAN - ROOF

1/8" = 1'-0"



PART PLAN - ROOF

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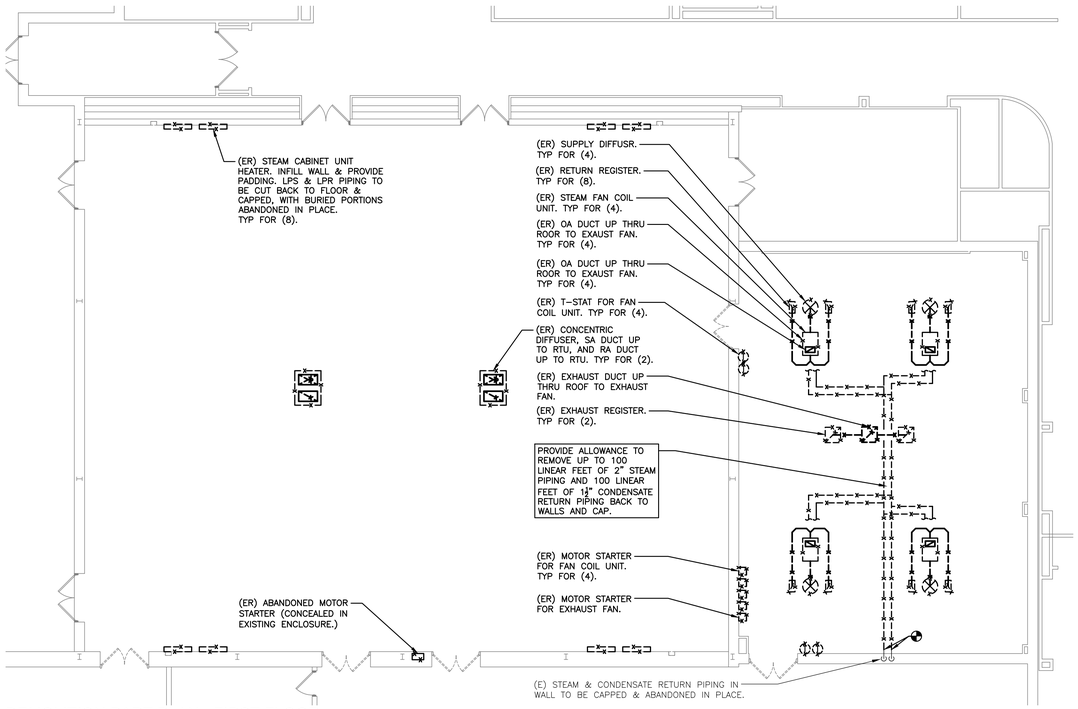
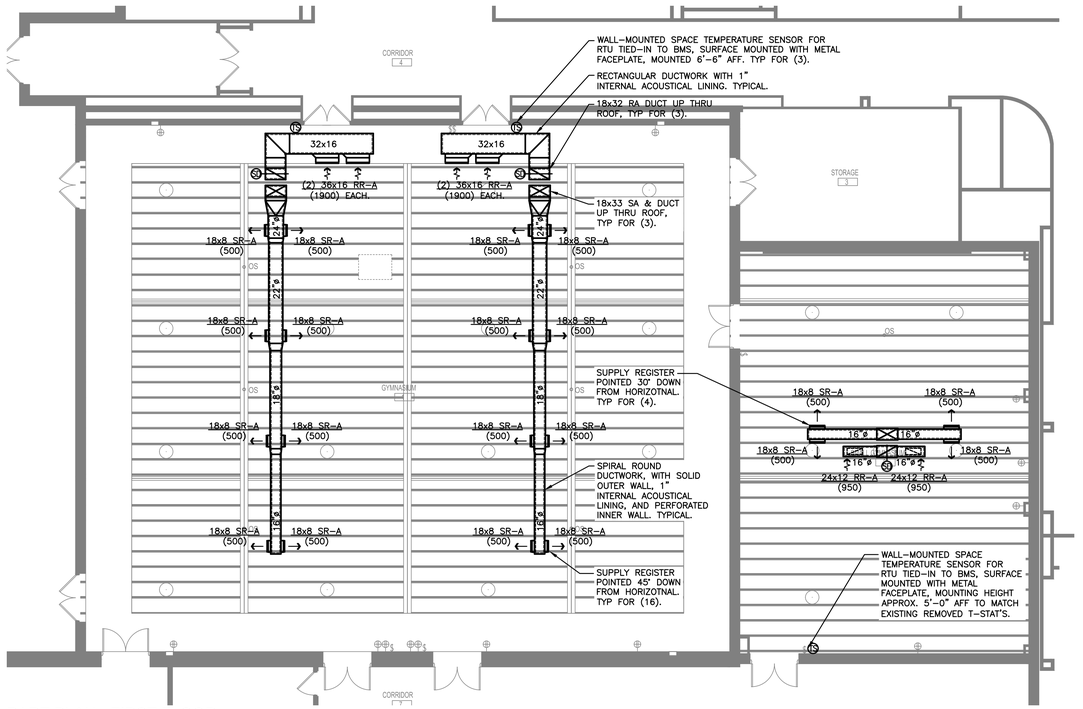


DEMOLITION PART PLAN - FIRST FLOOR

1/8" = 1'-0"



PART PLAN - FIRST FLOOR

1/8" = 1'-0"

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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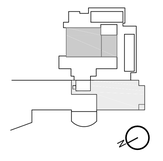

PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

PART PLANS

MS M101

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PACKAGED ROOFTOP UNIT SCHEDULE (PART 1 OF 2)

DESIGNATION	LOCATION	AREA SERVED	NOMINAL COOLING CAPACITY (TONS)	DUCT CONNECTIONS		SUPPLY FAN DATA												POWER EXHAUST FAN DATA										DX COOLING DATA															FURNACE HEATING DATA												
				SUPPLY	RETURN	SUPPLY AIRFLOW (CFM)	MIN. OUTSIDE AIRFLOW	ESP (IN W.C.)	NO. OF FANS	NO. OF MOTORS	HP (PER MOTOR)	BHP (PER MOTOR)	FAN TYPE	DRIVE TYPE	STARTER TYPE	STARTER LOCATION	SPEED CONTROL	RETURN OR EXHAUST	NO. OF FANS	NO. OF MOTORS	HP (PER MOTOR)	FAN TYPE	DRIVE TYPE	STARTER TYPE	STARTER LOCATION	SPEED CONTROL	REFRIG. TYPE	EER AT AHRI COND.	IEER AT AHRI COND.	DESIGN AMBIENT TEMP. DB (°F)	NO. OF COMPR.	NO. OF REFRIG. CKTS.	CAPACITY CONTROL	NO. OF COND. FANS	GROSS TOT. MBH	GROSS SENS. MBH	NET TOT. MBH	NET SENS. MBH	E.A.T. DB (°F)	E.A.T. WB (°F)	COIL L.A.T. DB (°F)	COIL L.A.T. WB (°F)	UNIT L.A.T. DB (°F)	UNIT L.A.T. WB (°F)	FUEL TYPE	INLET SIZE (IN)	MIN PRESSURE (IN-WC)	MAX PRESSURE (IN-WC)	NO. OF STAGES	INPUT CAPACITY (MBH)	OUTPUT CAPACITY (MBH)	OUTPUT CAPACITY W/ FAN HEAT (MBH)	EFF. (%)	E.A.T. (°F)	L.A.T. (°F)
RTU-MS-1	ROOF	GYMNASIUM	10	DOWNFLOW	DOWNFLOW	4,000	920	1.25	1	1	2.75	1.43	PLENUM	DIRECT	CONST. SPD.	UNIT MTD.	CONST. SPD.	EXHAUST	1	1	0.87	FC CENTRIFUGAL	DIRECT	CONST. SPD.	UNIT MTD.	CONST. SPD.	R-410A	12.6	14.7	95	2	2	3-STAGE	1	114	94	110	90	80	67	58	57	60	58	NAT. GAS	3/4	4.5	14.0	2	150	120	124	80	55	84
RTU-MS-2	ROOF	GYMNASIUM	10	DOWNFLOW	DOWNFLOW	4,000	920	1.25	1	1	2.75	1.43	PLENUM	DIRECT	CONST. SPD.	UNIT MTD.	CONST. SPD.	EXHAUST	1	1	0.87	FC CENTRIFUGAL	DIRECT	CONST. SPD.	UNIT MTD.	CONST. SPD.	R-410A	12.6	14.7	95	2	2	3-STAGE	1	114	94	110	90	80	67	58	57	60	58	NAT. GAS	3/4	4.5	14.0	2	150	120	124	80	55	84
RTU-MS-3	ROOF	SMALL GYMNASIUM	5	DOWNFLOW	DOWNFLOW	2,000	635	1.10	1	1	1	1.22	PLENUM	DIRECT	CONST. SPD.	UNIT MTD.	CONST. SPD.	EXHAUST	1	1	0.33	FC CENTRIFUGAL	DIRECT	CONST. SPD.	UNIT MTD.	CONST. SPD.	R-410A	11.9	14.2	95	2	2	3-STAGE	1	114	94	110	90	80	67	58	57	60	58	NAT. GAS	1/2	4.5	14.0	2	60	48	52	80	55	79

REGISTER, GRILLE, AND DIFFUSER SCHEDULE

DESIGNATION	SERVICE	TYPE	NOMINAL OVERALL DIMENSION (IN)	NECK SIZE (IN)	CFM RANGE	CONFIGURATION	BORDER TYPE	MATERIAL OF CONSTRUCTION	EQUALIZING GRID IN NECK	OPPOSED BLADE DAMPER IN NECK	FILTER RACK	FINISH COLOR	MANUFACTURER	MODEL	REMARKS
RR-A	RETURN	SIDEWALL REGISTER	RE: PLAN	RE: PLAN	0-100	LOUVERED FACE, 1/2" BLADE SPACING, 45° FIXED DEFLECTION	LAY-IN OR SURFACE MOUNTED	STEEL	NO	YES	NO	WHITE	PRICE	535	SEE NOTES BELOW
SR-A	SUPPLY	CEILING/SIDEWALL REGISTER	RE: PLAN	RE: PLAN	RE: PLAN	INDIVIDUALLY ADJUSTABLE BLADES, 3/4" BLADE SPACING, DOUBLE DEFLECTION	LAY-IN OR SURFACE MOUNTED	STEEL	NO	YES	NO	WHITE	PRICE	520	SEE NOTES BELOW

NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.
2. ALL FINISH COLORS ARE SUBJECT TO APPROVAL BY THE ARCHITECT. SUBMIT COLOR CHART FOR REVIEW.
3. COORDINATE BORDER TYPES WITH ARCHITECTURAL CEILING SPECIFICATIONS.

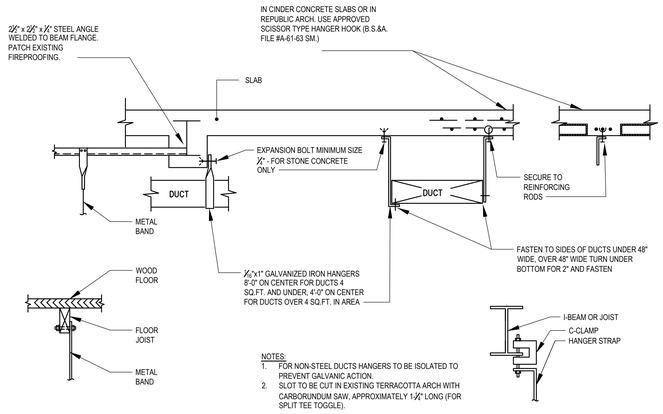
VENTILATION SCHEDULE

AIR HANDLING SYSTEM DATA			ROOM DATA					OUTSIDE VENTILATION AIRFLOW REQUIRED PER THE 2020 NEW YORK STATE MECHANICAL CODE - SECTION 403					OUTSIDE VENTILATION AIRFLOW REQUIRED PER THE NYSED 1998 MANUAL OF PLANNING STANDARDS - SECTION S606-3-A				
AIR HANDLING SYSTEM DESIGNATION	DESIGN SUPPLY AIRFLOW (CFM)	DESIGN OUTSIDE VENTILATION AIRFLOW (CFM)	ROOM NUMBER	ROOM NAME	FLOOR AREA	NUMBER OF PEOPLE	DESIGN SUPPLY AIRFLOW (CFM)	DESIGN MINIMUM OUTSIDE VENTILATION AIRFLOW (CFM)	OUTSIDE VENTILATION AIRFLOW PER PERSON (CFM / PERSON)	OUTSIDE VENTILATION AIRFLOW PER SQUARE FOOT (CFM / SF)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ROOM OUTSIDE VENTILATION AIRFLOW (CFM)	ROOM DESIGN OUTSIDE VENTILATION AIRFLOW MEETS OR EXCEEDS CODE REQUIREMENT (YES / NO)	OUTSIDE VENTILATION AIRFLOW PER PERSON (CFM / PERSON)	OUTSIDE VENTILATION AIRFLOW PER SQUARE FOOT (CFM / SF)	ROOM OUTSIDE VENTILATION AIRFLOW (CFM)	ROOM DESIGN OUTSIDE VENTILATION AIRFLOW MEETS OR EXCEEDS NYSED REQUIREMENT (YES / NO)
RTU-1 & RTU-2	8,000	1,840	1	GYMNASIUM	5,768	40	8,000	1,840	20	0.18	1.0	1,838	YES	15	0.00	600	YES
RTU-3	2,000	635	2	SMALL GYMNASIUM	1,961	14	2,000	635	20	0.18	1.0	633	YES	15	0.00	210	YES

PACKAGED ROOFTOP UNIT SCHEDULE (PART 2 OF 2)

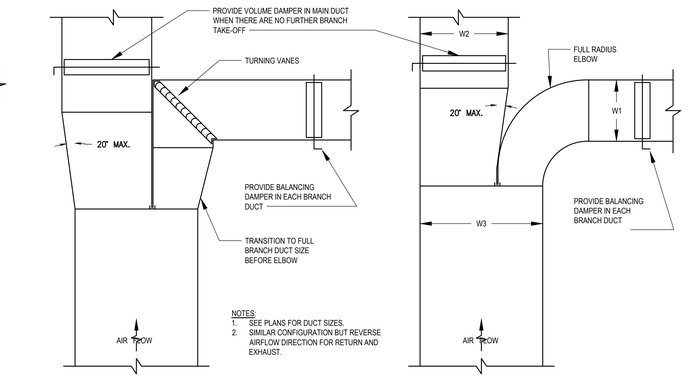
DESIGNATION	ELECTRICAL DATA										FILTERS		BASE DIMENSIONS (IN)		OVERALL DIMENSIONS INCLUDING HOODS AND ACCESSRIES (IN)			OPERATING WEIGHT (LBS)			MANUFACTURER	MODEL	REMARKS
	VOLTS	PH	Hz	MCA	MOP	BY E.C OR MANUF.	DISCONNECT LOCATION	DISCONNECT TYPE	DISCONNECT ENCL. TYPE	EMER. PWR. (Y/N)	PRE-FILTER	MAIN FILTER	WIDTH	LENGTH OR DEPTH	HEIGHT	WIDTH	LENGTH OR DEPTH	UNIT ONLY	ROOF CURB	TOTAL			
RTU-MS-1	208	3	60	48.0	60	MANUF.	UNIT MTD.	NON-FUSED	NEMA 3R	N	N/A	2" MERV-13	63	100	52	85	116	1,610	300	1,910	TRANE	YCH-120	SEE NOTES BELOW
RTU-MS-2	208	3	60	48.0	60	MANUF.	UNIT MTD.	NON-FUSED	NEMA 3R	N	N/A	2" MERV-13	63	100	52	85	116	1,610	300	1,910	TRANE	YCH-120	SEE NOTES BELOW
RTU-MS-3	208	3	60	26.0	40	MANUF.	UNIT MTD.	NON-FUSED	NEMA 3R	N	N/A	2" MERV-13	53	89	41	75	105	1,000	250	1,250	TRANE	YCH-060	SEE NOTES BELOW

NOTES:
1. PROVIDE THE FOLLOWING FACTORY SUPPLIED FEATURES AND OPTIONS FOR EACH UNIT:
   1.1. UNIT (INCLUDING ACCESS DOORS) SHALL BE CONSTRUCTED TO WITHSTAND WIND SPEED OF 125 MPH IN ACCORDANCE WITH STANDARD ASCE 7.
   1.2. DIGITAL PROGRAMMABLE CONTROLLER WITH BACNET COMMUNICATIONS INTERFACE FOR BMS TIE-IN.
   1.3. DUAL ENTHALPY AIRSIDE ECONOMIZER WITH FULLY MODULATING OUTSIDE AIR / RETURN AIR DAMPERS AND BAROMETRIC EXHAUST DAMPERS.
   1.4. 2" FIXED DEFLECTION VIBRATION ISOLATION ROOF CURB, MINIMUM 20" HIGH INCLUDING VIBRATION ISOLATION RAILS AND CLIPS, CONSTRUCTED AND INSTALLED TO WITHSTAND A WIND SPEED OF 125 MPH IN ACCORDANCE STANDARD ASCE 7, SEISMIC RATED.
   1.5. MODULATING REFRIGERANT HOT GAS REHEAT FOR DEHUMIDIFICATION.
   1.6. FACTORY-SUPPLIED UNIT-MOUNTED POWER EXHAUST FAN WITH INTEGRAL STARTER, DISCONNECT, GRAVITY BACKDRAFT DAMPER, RAIN HOOD, AND BIRDSCREEN.



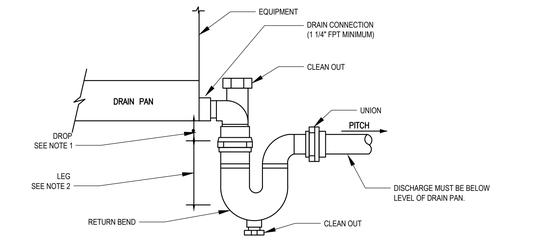
NOTES:
1. FOR NON-STEEL DUCTS HANGERS TO BE ISOLATED TO PREVENT GALVANIC ACTION.
2. SLOT TO BE CUT IN EXISTING TERRACOTTA ARCH WITH CARBORUNDUM SAW, APPROXIMATELY 1½" LONG (FOR SPLIT TEE TOGGLE).

TYPICAL DUCT HANGING DETAIL
N.T.S.



NOTES:
1. SEE PLANS FOR DUCT SIZES.
2. SIMILAR CONFIGURATION BUT REVERSE AIRFLOW DIRECTION FOR RETURN AND EXHAUST.

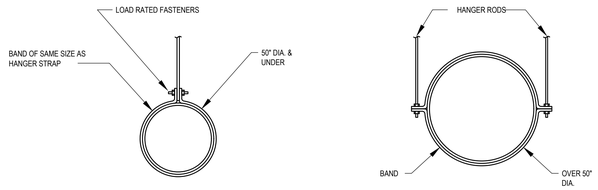
DETAIL OF LOW PRESSURE SUPPLY AIR DUCT NECK CONNECTIONS
N.T.S.



NOTES:
1. 1" MIN. DROP REQUIRED USE OF STANDARD FITTINGS SHOWN EXCEEDS THIS MINIMUM.
2. X/2"+1"=LEG FOR DRAW THRU UNIT WHERE X= NEGATIVE STATIC PRESSURE AT FAN INLET (MIN. 5")
3. ADD STRUCTURAL STEEL TO RAISE THE BOTTOM OF THE UNIT TO ACCOMMODATE TRAP HEIGHT.
4. PITCH DRAIN FOR PROPER RUN-OFF AND DISCHARGE TO APPROVED RECEPTACLE.
5. SUPPORT DRAIN LINES TO PREVENT SAG AND CONDENSATE OVERFLOW.
6. MANUALLY PRIME FILL TRAP BEFORE START-UP TO FORM INITIAL DRAIN SEAL.

PIPE SIZE	MAX. COOLING LOAD
¾"	<=20 TONS
1"	20 TONS TO 40 TONS
1 ¼"	40 TONS TO 90 TONS
1 ½"	90 TONS TO 125 TONS
2"	>125 TONS TO 250 TONS

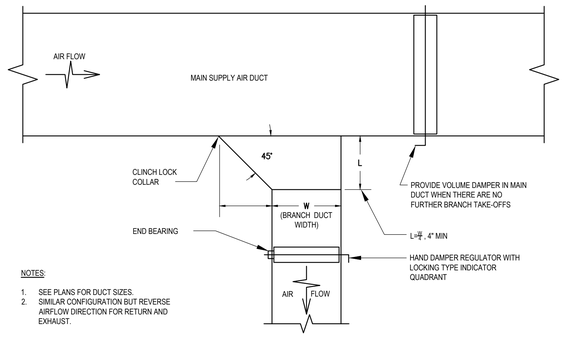
TYPICAL CONDENSATE DRAIN PIPING DETAIL (DRAW THROUGH)
N.T.S.



HANGER STRAPS OR RODS			
MAX. CUT DIAMETER	HANGER	MAX. LOAD LBS	MAX. SPACING FT.
26"	ONE 1" X 22 GA STRAP	260	12
36"	ONE 1" X 18 GA STRAP	420	12
50"	ONE 1" X 16 GA STRAP	700	12
60"	TWO ½" DIA. RODS	1320	12
84"	TWO ½" DIA. RODS	2500	12

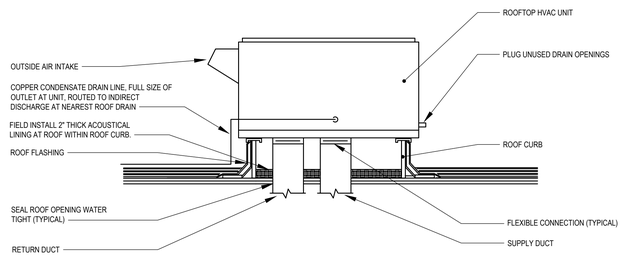
NOTES:
1. TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.
2. INSULATION AROUND HANGER.

ROUND DUCTWORK HANGERS
N.T.S.



NOTES:
1. SEE PLANS FOR DUCT SIZES.
2. SIMILAR CONFIGURATION BUT REVERSE AIRFLOW DIRECTION FOR RETURN AND EXHAUST.

TYPICAL DETAIL OF RECTANGULAR SUPPLY AIR DUCT TAP
N.T.S.



ROOFTOP UNIT INSTALLATION DETAIL - CURB MOUNTED
N.T.S.

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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PROJECT NUMBER: 223030768

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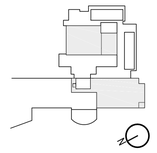
SEAL

ISSUED FOR BID	12/10/2021
SED SUBMISSION	10/06/2021
ISSUE	DATE

KEY PLAN



PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

SCHEDULES AND DETAILS

MS M201

ELECTRICAL SYMBOL LIST

(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)

SYMBOL	DESCRIPTION
	20A, 125V DECORA STYLE DUPLEX RECEPTACLE – FLUSH WALL MOUNTED
USB	20A, 125V DECORA STYLE DUPLEX RECEPTACLE WITH DUAL USB PORTS
	20A, 125V SINGLE RECEPTACLE – FLUSH WALL MOUNTED
	20A, 125V DECORA STYLE QUADRUPLEX RECEPTACLE – FLUSH WALL MOUNTED
	20A, 125V DECORA STYLE GFCI TYPE DUPLEX RECEPTACLE – FLUSH WALL MOUNTED
WP	20A, 125V GFCI TYPE WEATHER RESISTANT DUPLEX RECEPTACLE IN WEATHER PROOF ENCLOSURE
	SPECIAL PURPOSE RECEPTACLE – FLUSH WALL MOUNTED
	2 HOUR RATED FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE
J	CEILING MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
J	FLUSH WALL MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
J	FLUSH FLOOR MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT CONNECTION
	UNFUSED DISCONNECT SWITCH
100A / 60A	FUSED DISCONNECT SWITCH – 100 AMP SWITCH, 60 AMP FUSE, UNFUSED (EXCEPT WHERE FUSE SIZE IS INDICATED) 3–POLE (EXCEPT WHERE NOTED)
	COMBINATION MOTOR CONTROLLER AND DISCONNECT SWITCH FURNISHED BY MECHANICAL CONTRACTOR INSTALLED BY ELECTRICAL CONTRACTOR. COOR. LOCATION W/MECH. CONT.
CB 100A / 60A	CIRCUIT BREAKER 100A FRAME/60A TRIP, 3 POLE, U.O.N. ST – SHUNT TRIP
VFD	VARIABLE FREQUENCY DRIVE (VFD), FURNISHED BY MECHANICAL CONTRACTOR INSTALLED BY ELECTRICAL CONTRACTOR. COORD. LOCATION WITH MECH. CONTRACTOR
M	MOTOR
	PULLBOX, SIZED PER NEC
T	DRY TYPE 480–208V TRANSFORMER DELTA–WYE WITH GROUNDED SECONDARY SIDE, UON.
	FLUSH MOUNTED PANELBOARD
	SURFACE MOUNTED PANELBOARD
GND	GROUND BAR
	2#12+1#12G–3/4"C FOR ONE CKT. HOMERUN, U.O.N.
	3#12+1#12G–3/4"C FOR TWO CKT. HOMERUN, U.O.N.
	4#12+1#12G–3/4"C FOR THREE CKT. HOMERUN, U.O.N.
	3#12+1#12G–3/4"C HOMERUN, U.O.N.
	CONCEALED CONDUIT
	CONDUIT TURNING UP
	CAPPED CONDUIT
	FLEXIBLE EQUIPMENT CONNECTION
	GROUND CONNECTION
$T	MANUAL STARTER – TOGGLE TYPE WITH THERMAL ELEMENT – 250V HP RATED, FURNISHED BY ELEC CONTRACTOR

LIGHTING CONTROL SYMBOL LIST

(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)

SYMBOL	DESCRIPTION
$	SINGLE POLE LINE VOLTAGE SWITCH
$3	3-WAY LINE VOLTAGE SWITCH
$K	KEY ACTIVATED LINE VOLTAGE SWITCH
OS	DUAL TECHNOLOGY OCCUPANCY SENSOR, WALL MTD.
OSOS	DUAL TECHNOLOGY HIGH BAY OCCUPANCY SENSOR, PENDANT MTD.

FIRE ALARM SYMBOL LIST

(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)

SYMBOL	DESCRIPTION
S	CEILING MOUNTED ADDRESSABLE SMOKE DETECTOR
D	DUCT SMOKE DETECTOR
F	COMBINATION FIRE ALARM BELL/STROBE LIGHT UNIT - FLUSH WALL MOUNTED (WITH ADJUSTABLE CANDELA RATING)
F	FIRE ALARM PULL STATION
R	FIRE ALARM RELAY

LIGHTING SCHEDULE

	FIXTURE ID	DESCRIPTION	MANUFACTURER	MODEL	WATTS	BALLAST
	F1	GYMNASIUM HIGH BAY	HOLOPHANE	PHZ 35000LM MDFR MVOLT 40K 80CRI PM DWHXD WGX	254	LED DRIVER
	F2	2' X 7" LINEAR LED	ECLIPSE LIGHTING	PHZ 35000LM MDFR MVOLT 40K 80CRI PM DWHXD WGX	254	LED DRIVER
	LEC	EXTERIOR LED WALL PACK	NEW ENGLAND LIGHTING	DC200L-56W-30K-OC-PC	56	LED DRIVER
	EM1	EMERGENCY/EXIT COMBO	LITHONIA	LHQM LED R SD ELA WG3	4.3	LED DRIVER

ELECTRICAL ABBREVIATIONS

(NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED ON THIS PROJECT)

A	AMPERE	KCM	THOUSAND CIRCULAR MILS
AC	ABOVE COUNTER	KV	KILOVOLT
AFF	ABOVE FINISHED FLOOR	KVA	KILOVOLT AMPERE
AHJ	AUTHORITY HAVING JURISDICTION	KW	KILOWATT
AIC	AMP INTERRUPTING CAPACITY	KWH	KILOWATT HOUR
ATS	AUTOMATIC TRANSFER SWITCH	LTG	LIGHTING
AUTO	AUTOMATIC	MAX	MAXIMUM
AWG	AMERICAN WIRE GAUGE	MCB	MAIN CIRCUIT BREAKER
BLDG	BUILDING	MCC	MOTOR CONTROL CENTER
C	CONDUIT	MIN	MINIMUM
CB	CIRCUIT BREAKER	MTD	MOUNTED
CCTV	CLOSED CIRCUIT TELEVISION	N	NEUTRAL
CKT	CIRCUIT	NIC	NOT IN CONTRACT
CO	CARBON MONOXIDE	NTS	NOT TO SCALE
COMM	COMMUNICATION	OC	ON CENTER
CT	CURRENT TRANSFORMER	P	POLE
CU	COPPER	# or PH	PHASE
DEG	DEGREE	PNL	PANEL
DGP	DATA GATHERING PANEL	PWR	POWER
DISC	DISCONNECT	R	RELOCATED
DN	DOWN	RECEPT	RECEPTACLE
DWG	DRAWING	TEL	TELEPHONE
E/EX	EXISITNG TO REMAIN	TOS	TOP OF SHAFT
EC	ELECTRICAL CONTRACTOR	TV	TELEVISION
EM	EMERGENCY	TYP	TYPICAL
ER	EXISTING TO BE REMOVED	UON	UNLESS OTHERWISE NOTED
ERR	EXISTING TO BE REMOVED AND RELOCATED	V	VOLT OR VOLTAGE
FA	FIRE ALARM	VA	VOLT AMPERE
FACP	FIRE ALARM CONTROL PANEL	VIF	VERIFY IN FIELD
FL	FLOOR	W	WATT
FT	FEET OR FOOT	WP	WEATHERPROOF
GRD	GROUND	WT	WATERTIGHT
GFI	GROUND FAULT INTERRUPTER	XP	EXPLOSION PROOF
HID	HIGH INTENSITY DISCHARGE		
HP	HORSE POWER		
HZ	HERTZ		
JB	JUNCTION BOX		

NEW YORK STATE CODES & STANDARDS

- 2020 BUILDING CODE OF NEW YORK STATE
- 2020 FIRE CODE OF NEW YORK STATE
- 2020 PLUMBING CODE OF NEW YORK STATE
- 2020 MECHANICAL CODE OF NEW YORK STATE
- 2020 FUEL GAS CODE OF NEW YORK STATE
- 2020 NYS UNIFORM CODE SUPPLEMENT
- NYS EDUCATION DEPARTMENT 199B MANUAL OF PLANNING STANDARDS

NEW YORK STATE ENERGY CODES

- 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE
- 2016 ASHRAE 90.1

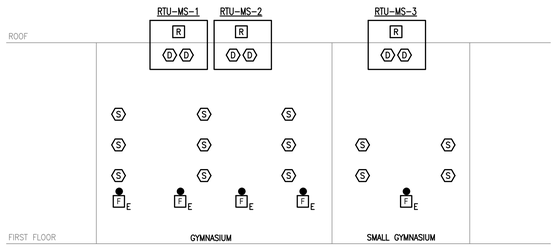
REFERENCED STANDARDS

APPLICABLE REFERENCE STANDARDS SHALL BE AS REFERENCED BY ALL STATE CODES. THE LIST BELOW IS FOR QUICK REFERENCE AND DOES NOT INCLUDE ALL APPLICABLE REFERENCE STANDARDS.

- 2016 NFPA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
- 2016 NFPA 14 – STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS
- 2016 NFPA 20 – STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
- 2017 NFPA 70 – NATIONAL ELECTRICAL CODE
- 2016 NFPA 72 – NATIONAL FIRE ALARM AND SIGNALING CODE

ELECTRICAL DRAWING LIST

SHEET NUMBER	SHEET TITLE
MS E001	COVER SHEET
MS E002	GENERAL NOTES
MS E101	PART PLANS - POWER
MS E102	PART PLANS (ROOF) - POWER
MS E201	PART PLANS - LIGHTING
MS E601	PANEL SCHEDULES
MS E701	DETAILS



PARTIAL FIRE ALARM RISER

N.T.S.

FIRE ALARM GENERAL NOTES:

1. PROVIDE ALL EQUIPMENT, PROGRAMMING & WIRING REQUIRED FOR A COMPLETE CODE COMPLIANT SYSTEM.
2. PROVIDE ALL FILING, PERMIT & FIRE DEPARTMENT INSPECTION FEES.
3. ALL NOTIFICATION AND SIGNAL LINE CIRCUITS SHALL BE CLASS B WIRING WITHOUT T–TAPPING OF CIRCUITS.
4. COORDINATE WITH THE LOCAL AUTHORITY HAVING JURISDICTION FOR THE EXACT SEQUENCE OF OPERATIONS.
5. SMOKE DETECTORS SHALL BE A MINIMUM OF 3 FEET FROM ALL SUPPLY DIFFUSERS.
6. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT WHEN RUN EXPOSED IN MECHANICAL ROOMS. PROVIDE CONDUIT CONCEALED IN WALLS UP TO ACCESSIBLE CEILING WITH INSULATING BUSHING FOR ALL WALL MOUNTED FIRE ALARM DEVICES.
7. ALL FIRE ALARM EQUIPMENT SHALL BE APPROVED BY LOCAL AHJ PRIOR TO ORDERING.
8. FIRE ALARM RISER IS A DIAGRAMMATIC REPRESENTATION OF THE SYSTEM. REFER TO FLOOR PLANS FOR DEVICE QUANTITY AND LOCATIONS.
9. ALL FIRE ALARM CABLING SHALL BE PLENUM RATED AND MEET PATHWAY SURVIVABILITY LEVEL 2.
10. ALL FIRE ALARM ANNUNCIATING DEVICES SHALL BE "RED".
11. PROVIDE A CONTROL MODULE AND RELAY FOR ALL FIRE SMOKE DAMPERS. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND QUANTITIES. PROVIDE DUCT SMOKE DETECTORS TO ACTIVATE FIRE SMOKE DAMPERS AS REQUIRED.
12. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS THAT INCLUDE MANUFACTURER'S CUT SHEETS WITH EQUIPMENT MODEL NUMBERS, BATTERY CALCULATIONS, CONDUCTOR TYPE AND SIZES, AND VOLTAGE DROP CALCULATIONS.
13. REMOVE EXISTING FIRE ALARM DEVICES IN SCOPE OF WORK AREA WHERE NEW DEVICES ARE INDICATED.
14. ALL NEW FIRE ALARM DEVICES SHALL BE TIED INTO EXISTING ADDRESSABLE FIRE ALARM LOOPS. PROVIDE ADDITIONAL ADDRESSABLE CARDS/AMPLIFIER/POWER SUPPLY/WIRING AND CONDUIT AS REQUIRED.

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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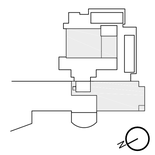

PROJECT NO. 66-03-01-03-0-003-028

MEMASI PROJECT NO. 102-2101

COVER SHEET

MS E001

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ELECTRICAL GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF THE NATIONAL ELECTRIC CODE, BUILDING DEPARTMENT, BUILDING MANAGEMENT, ALL AUTHORITIES HAVING JURISDICTION, AND APPLICABLE NATIONAL, STATE, AND LOCAL CODES. LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK SHALL BE INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS. CONTRACTOR IS TO INFORM THE ENGINEER OF ANY EXISTING WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION OF LAWS AND REGULATIONS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE BY THIS CONTRACTOR AND AT NO EXPENSE TO THE OWNER.

2. PRIOR TO SUBMISSION OF BID, THIS CONTRACTOR SHALL VISIT THE JOB SITE TO ASCERTAIN THE ACTUAL FIELD CONDITIONS AS THEY RELATED TO THE WORK AS INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. DISCREPANCIES, IF ANY, SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO SUBMISSION OF BID, AND, IF NOT RESOLVED TO SATISFACTION, SHALL BE SUBMITTED AS A WRITTEN QUALIFICATION OF THE BID. SUBMISSION OF A BID SHALL BE EVIDENCE THAT SITE VERIFICATION HAS BEEN PERFORMED AS DESCRIBED ABOVE.

3. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF WORK AND APPROXIMATE LOCATION OF EQUIPMENT. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND COORDINATE FINAL LOCATIONS OF SWITCHES, LIGHT FIXTURES, RECEPTACLES, ETC. WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICTS. IF A CONFLICT OCCURS IN THE SPECIFICATIONS AND/OR ON THE DRAWINGS, THE MORE STRINGENT SITUATION SHALL APPLY.

4. PRIOR TO SUBMISSION OF BID, THIS CONTRACTOR SHALL REVIEW ALL DRAWINGS OF THE ENTIRE PROJECT INCLUDING GENERAL CONSTRUCTIONS, DEMOLITION, ARCHITECTURAL, MECHANICAL, ELECTRICAL, TELECOM/AV/SECURITY, PLUMBING, AND FIRE PROTECTION AND SHALL INCLUDE ANY WORK REQUIRED IN THE BID WHICH IS INDICATED OR IMPLIED TO BE PERFORMED BY THIS TRADE IN OTHER SECTIONS OF THE WORK.

5. ANY EQUIPMENT, PARTS, MATERIALS, ACCESSORIES, OR LABOR THAT IS NECESSARY FOR PROPER PERFORMANCE OF THE ELECTRICAL WORK, ALTHOUGH NOT SPECIFICALLY MENTIONED HEREIN, OR SHOWN ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED AS IF CALLED FOR IN DETAIL WITHOUT ADDITIONAL COST.

6. THIS CONTRACTOR SHALL SUBMIT FOR APPROVAL, A PLAN INDICATING THE SIZE AND LOCATION OF ALL ACCESS DOORS REQUIRED FOR OPERATION AND MAINTENANCE OF ALL CONCEALED EQUIPMENT, DEVICES, JUNCTION BOXES, PULL BOXES, ETC. THIS CONTRACTOR SHALL ARRANGE FOR FURNISHING AND INSTALLATION OF ALL ACCESS DOORS IN FINISHED CONSTRUCTION AND INCLUDE COSTS IN THE BID.

7. REMOVAL, TEMPORARY CONNECTIONS, AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE INSTALLATION OF THE NEW SYSTEMS. ALL EXISTING CONDITIONS ARE NOT COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND MAKE ALL NECESSARY CHANGES REQUIRED BASED ON EXISTING CONDITIONS FOR PROPER INSTALLATION OF NEW WORK.

8. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO ENSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE ORGANIZED WITH BUILDING MANAGEMENT. PROVIDE TEMPORARY FEEDERS, CIRCUITRY, ETC., AS REQUIRED TO MINIMIZE DOWNTIME.

9. DISCONNECTS SHALL BE 'QUICK-BREAK' HEAVY DUTY TYPE IN NEMA 1 ENCLOSURE FUSED OR UN-FUSED AS INDICATED ON THE DRAWINGS. FUSES FOR SWITCHES SHALL BE CURRENT LIMITING TYPE WITH AN INTERRUPTING CAPACITY OF 200,000 RMS AMPERES AND OF THE CONTINUOUS CURRENT RATING AS SHOWN ON THE DRAWINGS.

10. CIRCUIT BREAKERS SHALL BE 'THERMAL MAGNETIC' TYPE, QUICK-MAKE, QUICK-BREAK WITH NON-WELDING CONTACTS COMPENSATED FOR AMBIENT TEMPERATURES AND SHALL HAVE A MINIMUM SHORT CIRCUIT RATING OF 10,000 AMPERES SYMMETRICAL FOR 120/208V PANELS AND 14,000 AMPERES SYMMETRICAL FOR 277/480V PANELS OR HIGHER WHERE NOTES.

11. CONDUIT SHALL BE RIGID THREADED REGARDLESS OF SIZE.

12. ALL CONDUCTORS SHALL BE COPPER, TYPE THHN/THWN INSULATED. ALL CONDUCTORS SHALL HAVE 600 VOLT RATED INSULATION, UNLESS OTHERWISE NOTED. UNLESS SPECIFIED ALL WIRE #10 AWG AND SMALLER SHALL BE SOLID CONDUCTORS AND 8 AWG AND LARGER SHALL BE STRANDED.

13. BRANCH CIRCUIT WIRE SIZE: THE MINIMUM WIRE SIZE FOR BRANCH CIRCUITS SHALL BE NO. 12 AWG EXCEPT 120V CIRCUITS OVER 80 FEET IN LENGTH SHALL BE 10 AWG.

14. PULL BOXES, JUNCTION BOXES, AND OUTLET BOXES SHALL BE MANUFACTURED FROM GALVANIZED INDUSTRY STANDARD SHALL STEEL.

15. PROVIDE PULL BOXES AND JUNCTION BOXES IN LONG STRAIGHT RUNS OF RACEWAY TO ASSURE THAT CABLES ARE NOT DAMAGED WHEN THEY ARE PULLED, TO FULFILL REQUIREMENTS AS TO THE NUMBER OF BENDS PERMITTED IN RACEWAY BETWEEN CABLE ACCESS POINTS, THE ACCESSIBILITY OF CABLE JOINTS AND SPLICES, AND THE APPLICATION OF CABLE SUPPORTS.

16. PULL BOXES AND JUNCTION BOXES SHALL BE SIZED SO THAT THE MINIMUM BENDING RADIUS CRITERIA SPECIFIED FOR THE WIRES AND CABLE ARE MAINTAINED.

17. ALL EQUIPMENT, DEVICE BOXES, JUNCTION BOXES, PULL BOXES, AND OUTLET BOXES SHALL BE INSTALLED SO AS TO ALLOW ACCESS TO THE BOX. IF NECESSARY AND APPROVED BY OWNER/ENGINEER, PROVIDE ACCESS DOOR OR COVER PLATES IN AREAS WHERE UNOBSTRUCTED ACCESS IS NOT POSSIBLE.

18. OPENINGS AROUND ELECTRICAL PENETRATION THROUGH FIRE RESISTANCE RATED WALL, PARTITIONS, FLOOR OR CEILING SHALL BE FIRE STOPPED USING APPROVED METHODS. SEALANT SHALL BE RATED FOR THREE (3) HOURS.

19. HEIGHTS OF OUTLETS FROM FINISHED FLOOR TO CENTERLINE OF OUTLET:

• RECEPTACLES AND TELEPHONES	1' 6"
• GENERALLY	3' 6"
• OVER WORK BENCHES	COORDINATE WITH ARCHITECT
• WALL SWITCHES	COORDINATE WITH ARCHITECT
• WALL FIXTURES	6' 0"
• MOTOR CONTROLLERS	5' 0"
• FIRE ALARM PULL STATIONS	4' 0"
• FIRE ALARM HORN/SPEAKER/STROBES	6' 8" AFF OR 6" BELOW CEILING (WHICHEVER IS GREATER)

EXCEPTIONS: AT JUNCTION BOXES OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE REQUIREMENTS, AS NOTED OR DIRECTED.

20. PROVIDE WEIGHTS, LOCATIONS, AND DIMENSIONS OF EQUIPMENT IN EXCESS OF 200 LBS. SUPPORTED ON FLOOR OR HUNG FROM BUILDING STRUCTURE TO BASE BUILDING STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

21. THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH HVAC, PLUMBING, FIRE PROTECTION, TELECOM/AV/SECURITY, AND OTHER TRADES FOR EXACT LOCATION OF ALL MOTOR AND CONTROL DEVICES, BACK BOXES, AND CONDUIT REQUIREMENTS. LOCATIONS AS SHOWN ON ELECTRICAL DRAWINGS ARE APPROXIMATE.

22. EXTERIOR RECEPTACLES SHALL BE PROVIDED WITH WEATHERPROOF "WHILE IN USE" COVERS.

23. ALL FIRE ALARM SPEAKER/STROBES, SPEAKERS AND STROBE ONLY DEVICES SHALL BE "RED."

ELECTRICAL LIGHTING NOTES

A. FOR EXACT ELEVATION, LOCATION, QUANTITY AND SPECIFICATIONS OF LIGHTING FIXTURES AND SWITCHES REFER TO ARCHITECTURAL DRAWINGS AND COORDINATE WITH ARCHITECT IN THE FIELD.

B. LIGHTING FIXTURES SHALL BE CIRCUITED IN ACCORDANCE WITH CIRCUIT NUMBER INDICATED ADJACENT TO EACH FIXTURE. CIRCUITRY MAY BE SHOWN IN CERTAIN INSTANCES.

C. ALL JUNCTION OR OUTLET BOXES SHALL BE INSTALLED SO AS TO ALLOW ACCESS TO COVER. PROVIDE ARCHITECT APPROVED ACCESS DOORS OR PLATES AS REQUIRED IN AREAS WHERE UNOBSTRUCTED ACCESS TO BOX OR OUTLET IS NOT POSSIBLE.

D. PRIOR TO ORDERING LIGHTING FIXTURES, COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. IF DISCREPANCIES EXIST BETWEEN ARCHITECTURAL AND ENGINEERING INFORMATION OBTAIN CLARIFICATION PRIOR TO PROCEEDING.

E. CIRCUIT NUMBERS ARE INDICATED FOR INTENT ONLY. THE ELECTRICAL CONTRACTOR SHALL ADJUST ACCORDINGLY IN THE FIELD TO BALANCE THE CIRCUITS EVENLY ON ALL PHASES.

F. MULTIPLE SWITCHES SHOWN IN SAME LOCATION SHALL BE GANGED TOGETHER WITH A COMMON FACEPLATE.

G. ALL LIGHTING FIXTURES CONTROLLED BY DIMMER SWITCHES SHALL BE PROVIDED WITH DEDICATED NEUTRAL CONDUCTOR.

H. ALL LIGHT FIXTURES DESIGNATED WITH "EM" SHALL BE PROVIDED WITH EMERGENCY BATTERY PACK CAPABLE OF FULL LIGHT OUTPUT FOR MINIMUM 90 MINUTES.

I. EXTERIOR LIGHTING SHALL BE CONTROLLED BY PHOTOCELLS AND TIMECLOCKS WITH A MANUAL OVERRIDE SWITCHES LOCATED IN ELECTRICAL ROOMS.

ELECTRICAL DEMOLITION NOTES

1. GENERAL

1.1. SEE ARCHITECTURAL DEMOLITION DRAWINGS FOR NUMBER OF LIGHTING FIXTURES AND DEVICES TO BE REMOVED AND OR RELOCATED.

1.2. SEE HVAC DRAWINGS FOR HVAC EQUIPMENT TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUIT, WIRE, SWITCHES, BOXES ASSOCIATED WITH EQUIPMENT TO BE REMOVED.

1.3. SEE PLUMBING DRAWINGS FOR PLUMBING EQUIPMENT TO BE REMOVED.

1.4. FOR EQUIPMENT TO BE REMOVED DISCONNECT POWER AND REMOVED CONDUIT/WIRING BACK TO PANEL.

1.5. REMOVE ALL DRYWALL MOUNTED DUPLEX RECEPTACLES AND ASSOCIATED CIRCUITING. WHERE OUTLETS ARE REMOVED AND THROUGH CIRCUITING SERVE OTHER OUTLETS BEYOND THE DEMOLITION AREA, RESTORE OR MAINTAIN THROUGH CIRCUITING.

1.6. CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS AS REQUIRED TO BUNDLE, NEATEN, AND CLEAN UP EXISTING LOOSE CABLING INCLUDING BUT NOT LIMITED TO LOW VOLTAGE CABLING, FIRE ALARM CABLING, MC CABLING, ETC. WHERE CEILINGS ARE EXPOSED, CONTRACTOR SHALL REINSTALL ALL EXISTING CABLING IN EMT CONDUIT AS CLOSE TO UNDERSIDE OF STRUCTURE AS POSSIBLE.

1.7. REMOVE ALL CLIPS AND HANGERS FROM CEILING SLAB AND REPAIR IF REQUIRED.

2. EXISTING CONDUIT

2.1. THIS CONTRACTOR SHALL REMOVE ALL WALL CONDUITS, BOXES, CEILING CONDUITS LEFT AFTER WALL DEMOLITION. REMOVE ALL WIRING BACK TO EXISTING PANELS.

3. EXISTING ELECTRICAL PANELS

3.1. CONTRACTOR SHALL USE CARE IN DISCONNECTING WIRING FROM PANELS AND CIRCUIT BREAKERS. CAREFULLY STORE ALL PANEL COVERS AS CONTRACTOR WILL BE RESPONSIBLE FOR COMPLETE USABLE PANEL INSTALLATION.

4. EXISTING HEADERDUCT

4.1. CLEAN OUT EXISTING HEADERDUCT FROM ALL EXISTING WIRING, TAKING CARE NOT TO DISCONNECT ANY LIGHTING CIRCUITS.

4.2. CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCHHEADER ACCESS COVER PLATES, GASKETS AND SCREW WHICH WILL HAVE TO BE REPLACED IF LOST AS PART OF THIS WORK.

4.3. ELECTRICAL CONTRACTOR SHALL REMOVE ALL EXISTING TELEPHONE AND ELECTRICAL CABLING FROM FLOOR CELLS AND HEADERDUCT BACK TO THEIR RESPECTIVE TELEPHONE AND ELECTRIC CLOSETS. REPLACE AND SECURE ALL COVER PLATES.

5. EXISTING LIGHTING FIXTURES

5.1. REMOVE AND/OR RELOCATE LIGHTING FIXTURES AND DETERMINED IF BALLAST CONTAIN PCB. AS DIRECTED TURN OVER TO OWNER ALL FIXTURES OR DISPOSE OF THEM IN AN APPROVED MANNER. IF FIXTURES CONTAIN BALLASTS WITH PCB REMOVE BALLASTS FROM FIXTURES AND DISPOSE OF IN AN APPROVED MANNER.

5.2. CONTRACTOR SHALL PULL OUT ALL WIRING AND REMOVE ALL CONDUIT. FOR OVERHEAD LIGHTING CIRCUITS RUN IN CELLULAR DECK REMOVE WIRING AND PROPERLY BLANK OFF OUTLET BOXES.

5.3. REMOVE ALL ASSOCIATED CONDUIT, WIRE, SWITCHES, BOXES ASSOCIATED WITH EQUIPMENT TO BE REMOVED.

5.4. DISCONNECT POWER AND REMOVE CONDUIT/WIRING BACK TO PANEL FOR EQUIPMENT TO BE REMOVED.

6. EXISTING FIRE ALARM

6.1. NO EXISTING SMOKE DETECTOR, PUBLIC ADDRESS SPEAKER, FIRE ALARM BOX OR SIMILAR SERVICES INCLUDING THE ASSOCIATED WIRING SHALL BE DAMAGED DURING DEMOLITION AND SUBSEQUENT CONSTRUCTION.

6.2. NO ACTIVE SMOKE DETECTOR SHALL BE COVERED OR OTHERWISE RENDERED INEFFECTIVE FOR ITS INTENDED PURPOSE.

6.3. ALL ACTIVE SMOKE DETECTION, PUBLIC ADDRESS AND FIRE ALARM SYSTEM SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION. ANY DAMAGES TO THESE SYSTEMS AS A RESULT OF CONSTRUCTION, SHALL BE REPAIRED BY THE CONTRACTOR IMMEDIATELY. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER AND CONSTRUCTION MANAGER.

6.4. DURING DEMOLITION WORK CONTRACTOR IS TO PROTECT FIRE ALARM DEVICES AGAINST DUST AND OTHER PARTICLES.

7. TEMPORARY LIGHTING AND POWER

7.1. FURNISH AND INSTALL WIRING FOR ADEQUATE LIGHT AND SMALL POWER TOOLS FOR THE PROJECT.

7.2. MAINTAIN THE SYSTEM IN GOOD AND ADEQUATE WORKING CONDITIONS AT ALL TIMES.

7.3. FURNISH AND INSTALL ALL LAMPS, BREAKERS, AND FUSING, AS IS NECESSARY.

7.4. REPLACE BURNED OUT LAMPS, DEFECTIVE BREAKERS, OR BLOWN FUSES.

7.5. TEMPORARY MAINTENANCE FOR THE ABOVE SHALL BE BASED ON OPERATION 1/2 HOUR BEFORE START OF FIRST TRADE THROUGH 1/2 HOUR AFTER END OF LAST TRADE NORMAL WORK DAY.

7.6. TEMPORARY LIGHT AND POWER SHALL BE INSTALLED IN ACCORDANCE WITH CODES AND AUTHORITIES HAVING JURISDICTION.

ELECTRICAL POWER NOTES

A. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL DRAWINGS AND ARCHITECT IN FIELD FOR EXACT LOCATION, QUANTITY AND ELEVATION OF POWER AND TELEPHONE/DATA OUTLETS PRIOR TO INSTALLATION.

B. RECEPTACLES SHALL BE CIRCUITED IN ACCORDANCE WITH CIRCUIT NUMBER INDICATED ADJACENT TO EACH DEVICE. CIRCUITRY MAY BE SHOWN IN CERTAIN INSTANCES.

C. CIRCUIT NUMBERS ARE INDICATED FOR INTENT ONLY. THE ELECTRICAL CONTRACTOR SHALL ADJUST ACCORDINGLY IN THE FIELD, TO BALANCE THE CIRCUITS EVENLY ON ALL PHASES.

D. EXACT LOCATIONS FOR ALL MECHANICAL EQUIPMENT SHALL BE DETERMINED FROM THE MECHANICAL DRAWINGS. COORDINATE WITH MECHANICAL CONTRACTOR IN FIELD.

E. WHERE APPLICABLE, RUN 1" EMPTY CONDUIT TO NEAREST ACCESSIBLE HUNG CEILING WITH GROMMET END FITTINGS FOR TELEPHONE/DATA & PROVIDE DRAG LINES FOR PULLING CABLE.

F. COORDINATE THE HARDWARE REQUIREMENTS FOR THE DOORS WITH THE ARCHITECT & SECURITY CONSULTANT PRIOR TO INSTALLATION (I.E. ELECTRIC HINGES, CARD READERS, ELECTRIC STRIKES, MAGNETIC SWITCHES, POWER SUPPLIES, ETC.) PROVIDE A BACKBOX WITH 1" CONDUIT WITH DRAG LINES STUBBED UP ABOVE CEILING FOR ALL LOW VOLTAGE DEVICES SUCH AS CARD READERS, MAGNETIC LOCKS, ELECTRIC LOCKSET, ELECTRIC STRIKE, ETC.

G. ALL BRANCH CIRCUIT HOME RUNS SHALL BE 2#12 & 1#12 GND IN 3/4" CONDUIT OR MC CABLE TO PANEL & CIRCUIT INDICATED. MAXIMUM OF THREE HOME RUNS PER CONDUIT.

H. MULTIWIRE BRANCH CIRCUITS SUPPLYING POWER TO FURNITURE PARTITIONS SHALL BE PROVIDED WITH MEANS TO DISCONNECT POWER SIMULTANEOUSLY.

I. ELECTRICAL CONTRACTOR SHALL PROVIDE A BACKBOX AND 1" EMPTY CONDUIT WITH DRAG LINE FOR ALL IN-WALL WIRED KEYPADS AND TOUCHSCREENS. REFER TO LOW VOLTAGE DRAWINGS FOR EXACT LOCATIONS AND SPECIFICATIONS.

J. ELECTRICAL CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS, PLUMBING DRAWINGS, AND COORDINATE WITH MECHANICAL CONTRACTOR AND PLUMBING CONTRACTOR FOR EXACT LOCATION OF MECHANICAL AND PLUMBING EQUIPMENT. PROVIDE DISCONNECT SWITCHES AND CIRCUITING SIZED PER THEIR EQUIPMENT SCHEDULES. HEAT TRACE CIRCUITS SHALL BE PROTECTED BY 30mA GROUND FAULT TYPE CIRCUIT BREAKERS. PROVIDE (3) FIRE ALARM MONITOR MODULES FOR EACH HEAT TRACE CONTROLLER SERVING SPRINKLER PIPES. PROVIDE (4) MONITOR MODULES FOR EACH DRY PIPE COMPRESSOR.

K. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH AUDIO/VISUAL, TELECOM, AND SECURITY DRAWINGS AND CONTRACTORS FOR ANY ADDITIONAL BACKBOX, CONDUIT, AND POWER REQUIREMENTS.

L. ELECTRICAL CONTRACTOR SHALL FIELD COORDINATE THE VOLTAGE, PHASE, AND HORSEPOWER OF ALL ELECTRICAL EQUIPMENT PURCHASED AND SUPPLIED TO THE SITE. ELECTRICAL CONTRACTOR SHALL SUPPLY FUSES OR CIRCUIT BREAKERS PER MANUFACTURER'S RECOMMENDATIONS WHERE NECESSARY.

M. ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE TYPEWRITTEN PANEL SCHEDULE DIRECTORY AT PROJECT COMPLETION OF ALL CIRCUITS UTILIZED, IDENTIFYING THE LOADS THAT THEY ARE SERVING.

N. ALL JUNCTION BOXES AND DISCONNECT SWITCH LOCATIONS SHALL BE COORDINATED IN THE FIELD. JUNCTION BOXES AND DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT ABOVE CEILINGS SHALL BE INSTALLED SO THAT THEY ARE ACCESSIBLE FROM ACCESS PANELS. COORDINATE WITH MECHANICAL CONTRACTOR.

O. ELECTRICAL CONTRACTOR SHALL INSTALL ALL STARTERS, AND VARIABLE FREQUENCY DRIVES (FURNISHED BY MECHANICAL CONTRACTOR) AND PROVIDE CONDUIT AND WIRING TO AND FROM STARTERS AND VFDs TO MECHANICAL EQUIPMENT AND/OR ITS ASSOCIATED DISCONNECT SWITCHES. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS AND REQUIREMENTS.

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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SEAL

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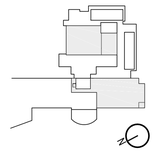
KEY PLAN

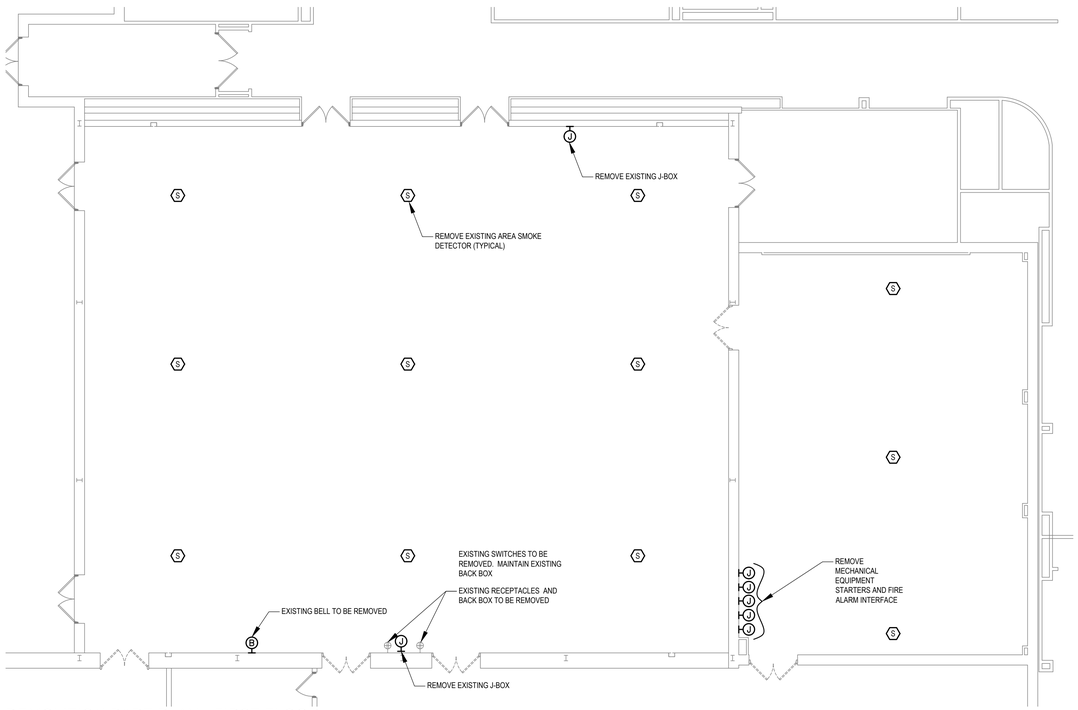


PROJECT NO. 66-03-01-03-0-003-028

MEMASI PROJECT NO. 102-2101

GENERAL NOTES

MS E002

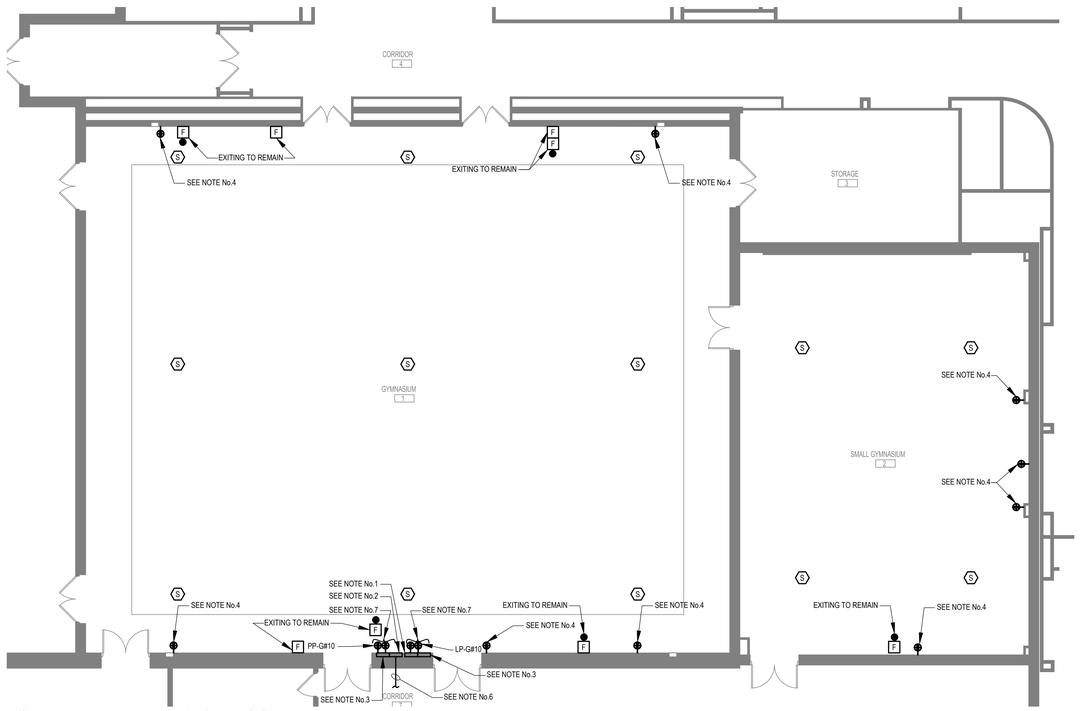


DEMOLITION PART PLAN - FIRST FLOOR

1/8" = 1'-0"

ELECTRICAL DEMOLITION PLAN NOTES:

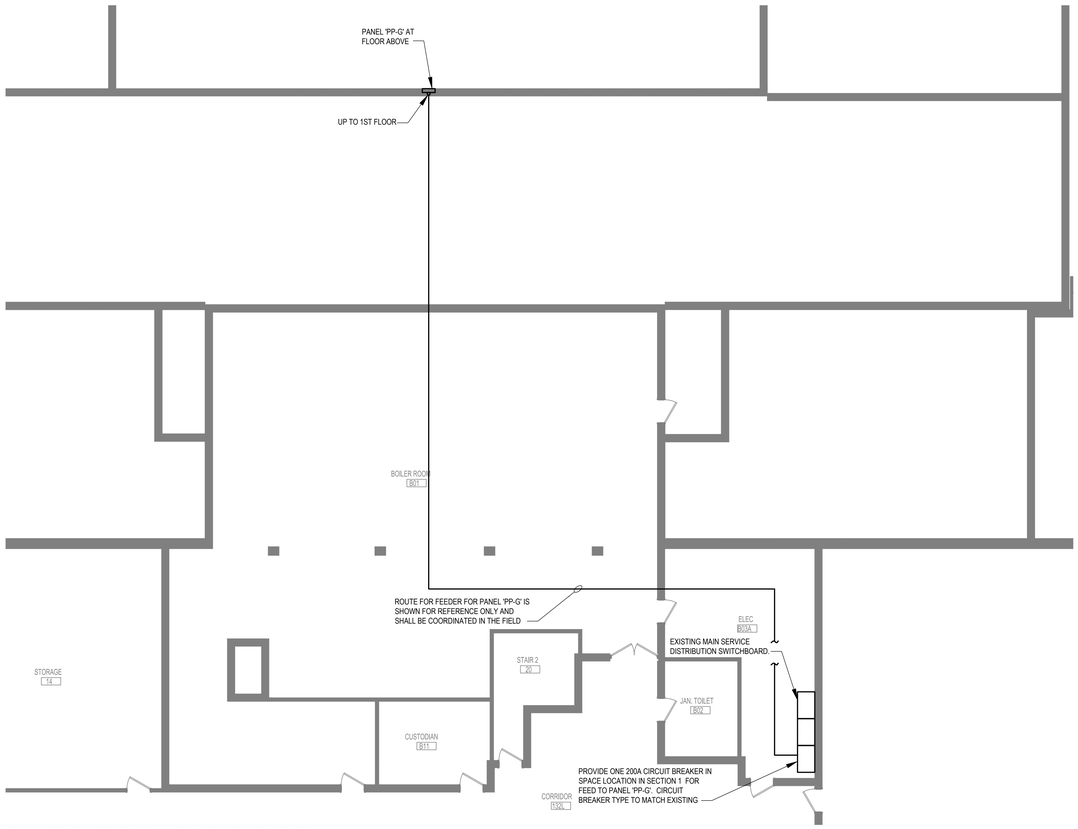
1. ALL EXISTING ELECTRICAL FEEDS, CONTROLS AND CONNECTIONS TO HVAC EQUIPMENT SHALL BE REMOVED BACK TO THE SOURCE PANELS AND CONTROL BOXES. REFER TO THIS DRAWING AND MECHANICAL DRAWINGS FOR EQUIPMENT TO BE REMOVED.
2. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES ASSOCIATED SWITCHES, LIGHTING CONTROL DEVICES, CONDUIT, AND WIRING BACK TO THE SOURCE.
3. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED AND UNUSED CONDUIT, JUNCTION BOXES, WIRING, ETC. THROUGHOUT ENTIRE CEILING, STRUCTURE AND WALLS IN BOTH GYMNASIUMS. PATCH REPAIR AND PAINTING BY GENERAL CONTRACTOR.
4. UNLESS OTHERWISE NOTED ALL FIRE ALARM DEVICES SHALL BE REMOVED BACK TO THE FIRE ALARM CONTROL PANEL.
5. MAINTAIN AND PROTECT ALL WALL MOUNTED FIRE ALARM DEVICES.
6. ITS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN CIRCUIT CONTINUITY FOR ALL FIXTURES, OUTLETS, AND THE LIKES THAT ARE TO REMAIN.
7. REMOVE ALL CONDUIT THAT IS HOUSING ABANDONED OR CABLE CUT IN PLACE.
8. REMOVE EXISTING SUPPLEMENTAL AC UNITS, HEATING UNITS, AIR COMPRESSORS, PUMPS, ETC. REMOVE AC UNIT CONTROL WIRING BACK TO THE BMS AND/OR THERMOSTAT.
9. REFER TO ARCHITECTURAL, MECHANICAL, DRAWINGS FOR ANY ADDITIONAL ELECTRICAL BASED EQUIPMENT TO BE REMOVED.



POWER PART PLAN - FIRST FLOOR

1/8" = 1'-0"

1. EXISTING 120/208V PANEL 'LP-G'. REMOVE AND REPLACE EXISTING INTERIOR AND REMOVE AND REPLACE ALL EXISTING ASSOCIATED BRANCH CIRCUIT WIRING. MAINTAIN AND RECONNECT EXISTING PANEL MAIN FEED. CONFIRM EXISTING LOADS CONNECTED TO THE PANEL AND PROVIDE PANEL SCHEDULE REFLECTING THESE LOADS. REPLACE EXISTING PANEL COVER WITH A DOOR-IN-DOOR STYLE PANEL COVER AND LABEL AS REQUIRED.
2. EXISTING 120/208V SPLICE BOX TO BE REMOVED. INSTALL 120/208V, 225A, 24-POLE, PANEL ('PP-G') WITHIN EXISTING SPLICE BOX WALL OPENING. REMOVE ALL EXISTING SPLICES AND EXTEND EXISTING CIRCUITS TO BRANCH CIRCUIT BREAKERS WITHIN PANEL 'LP-G'. PROVIDE A CUSTOM A DOOR-IN-DOOR STYLE PANEL COVER FOR THE PANEL AND THE GAP CREATED BY THE REMOVAL OF THE EXISTING SPLICE BOX. LABEL AS REQUIRED.
3. EXISTING LOW VOLTAGE WIRING ENCLOSURE. MAINTAIN EXISTING BACK BOX AND PROVIDE A MATCHING CUSTOM FULL SIZE CODE GAUGE STEEL SCREW STYLE FINISHED COVER WITH BEVELED EDGES/CORNERS.
4. EXISTING RECEPTACLES TO REPLACED. FIELD VERIFY EXISTING SOURCE PANEL (PP-G OR LP-G) AND REPLACE EXISTING CIRCUIT WIRING WITH #12 THHN TYPE WIRE . FIELD VERIFY AND MODIFY ANY EXISTING CONDUIT WHICH IS DAMAGED AND CONCEAL ANY PRIOR TO INSTALLATION OF WIRE. WHERE CONDUIT AND WIRING ORIGINATES FROM PANEL 'PP-G' EXTEND EXISTING CONDUIT TO PANEL 'LP-G' AS REQUIRED TO PULL WIRING DIRECTLY INTO PANEL. REPLACEMENT RECEPTACLE SHALL BE DECORA AND GREY IN COLOR WITH TAMPER RESISTANT OPTION.
5. ALL BRANCH CIRCUIT WIRING SHALL INCLUDE DEDICATED NEUTRAL AND EQUIPMENT GROUNDS.
6. FURNISH AND INSTALL 4#3/0+1#6G-2"C TO PANEL 'PP-G' FROM THE BUILDING MAIN SERVICE DISTRIBUTION BOARD LOCATED IN THE BASEMENT .
7. MAINTAIN EXISTING FIVE GANG DEVICE BOX BELOW PANELS PP-G AND LP-G. REMOVE EXISTING SWITCHES AND FURNISH AND INSTALL ONE SWITCH PLUS FOUR DUPLEX RECEPTACLES IN EACH LOCATION. CIRCUIT EACH DUPLEX RECEPTACLE TO ABOVE PANEL (CIRCUIT NUMBER AS INDICATED ON PLAN).
8. ALL DEVICE PLATES SHALL BE STAINLESS STEAL.
6. ALL EXPOSED WIRING (REGARDLESS OF VOLTAGE) SHALL BE IN CONDUIT.



POWER PART PLAN - BASEMENT LEVEL

1/8" = 1'-0"

EASTCHESTER UNION FREE SCHOOL DISTRICT

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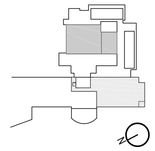
KEY PLAN



PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

PART PLANS - POWER

MS E101

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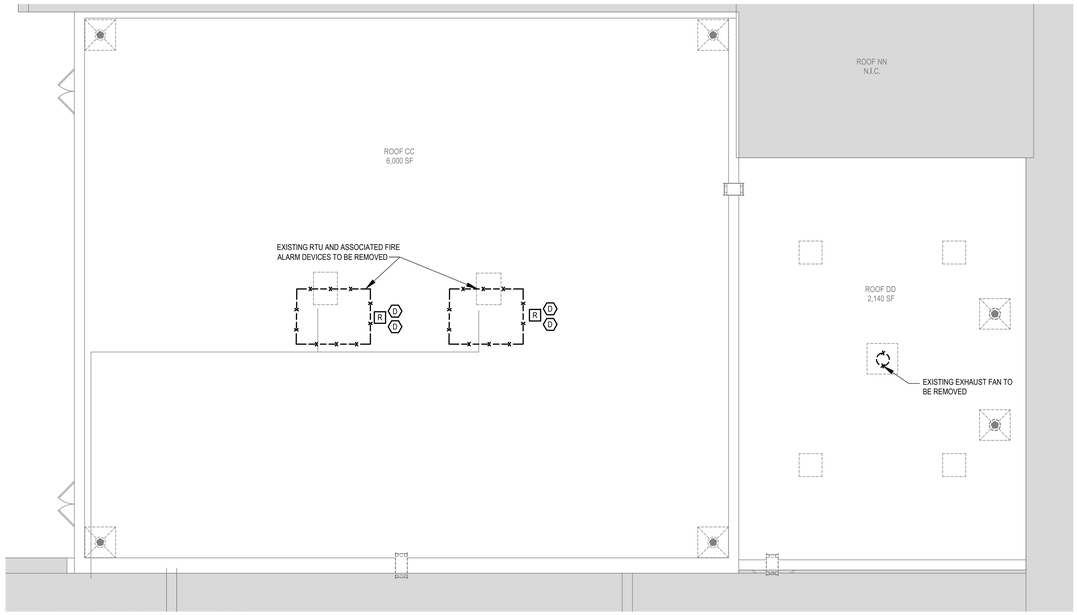
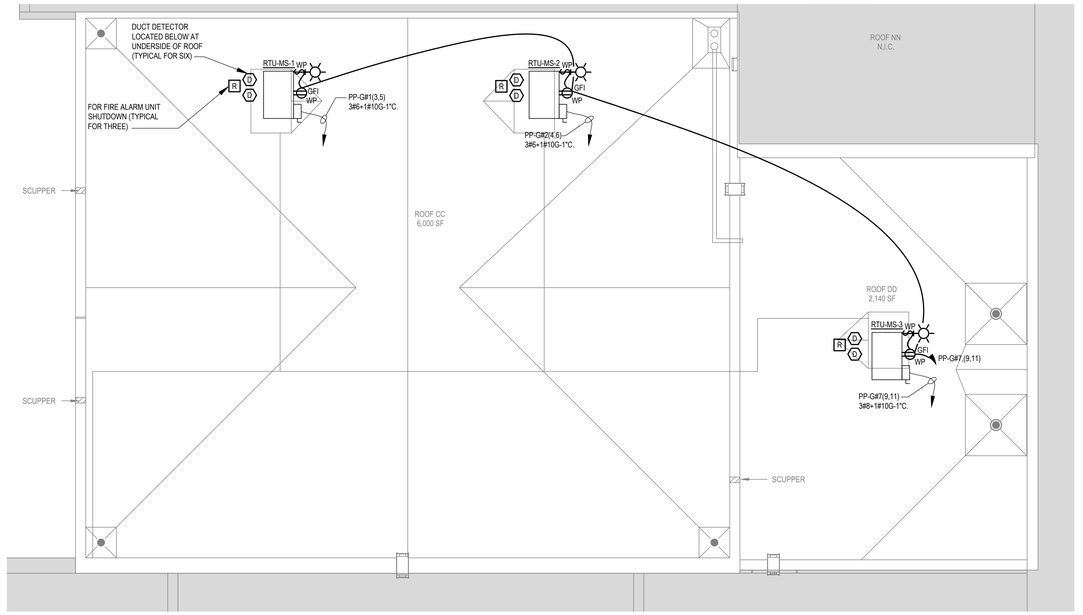


DEMOLITION PART PLAN - ROOF

1/8" = 1'-0"

ELECTRICAL DEMOLITION PLAN NOTES:

1. ALL EXISTING ELECTRICAL FEEDS, CONTROLS AND CONNECTIONS TO HVAC EQUIPMENT SHALL BE REMOVED BACK TO THE SOURCE PANELS AND CONTROL BOXES. REFER TO THIS DRAWING AND MECHANICAL DRAWINGS FOR EQUIPMENT TO BE REMOVED.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED AND UNUSED CONDUIT, JUNCTION BOXES, WIRING, ETC. THROUGHOUT ENTIRE CEILING, STRUCTURE AND WALLS IN BOTH GYMNASIUMS. PATCH REPAIR AND PAINTING BY GENERAL CONTRACTOR.
3. UNLESS OTHERWISE NOTED ALL FIRE ALARM DEVICES SHALL BE REMOVED BACK TO THE FIRE ALARM CONTROL PANEL.
4. ITS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN CIRCUIT CONTINUITY FOR ALL FIXTURES, OUTLETS, AND THE LIKES THAT ARE TO REMAIN.
5. REMOVE ALL CONDUIT THAT IS HOUSING ABANDONED OR CABLE CUT IN PLACE.
6. REMOVE EXISTING SUPPLEMENTAL AC UNITS, HEATING UNITS, AIR COMPRESSORS, PUMPS, ETC. REMOVE AC UNIT CONTROL WIRING BACK TO THE BMS AND/OR THERMOSTAT.
7. REFER TO ARCHITECTURAL, MECHANICAL, DRAWINGS FOR ANY ADDITIONAL ELECTRICAL BASED EQUIPMENT TO BE REMOVED.



POWER PART PLAN - ROOF

1/8" = 1'-0"

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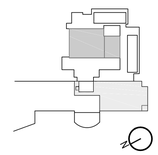
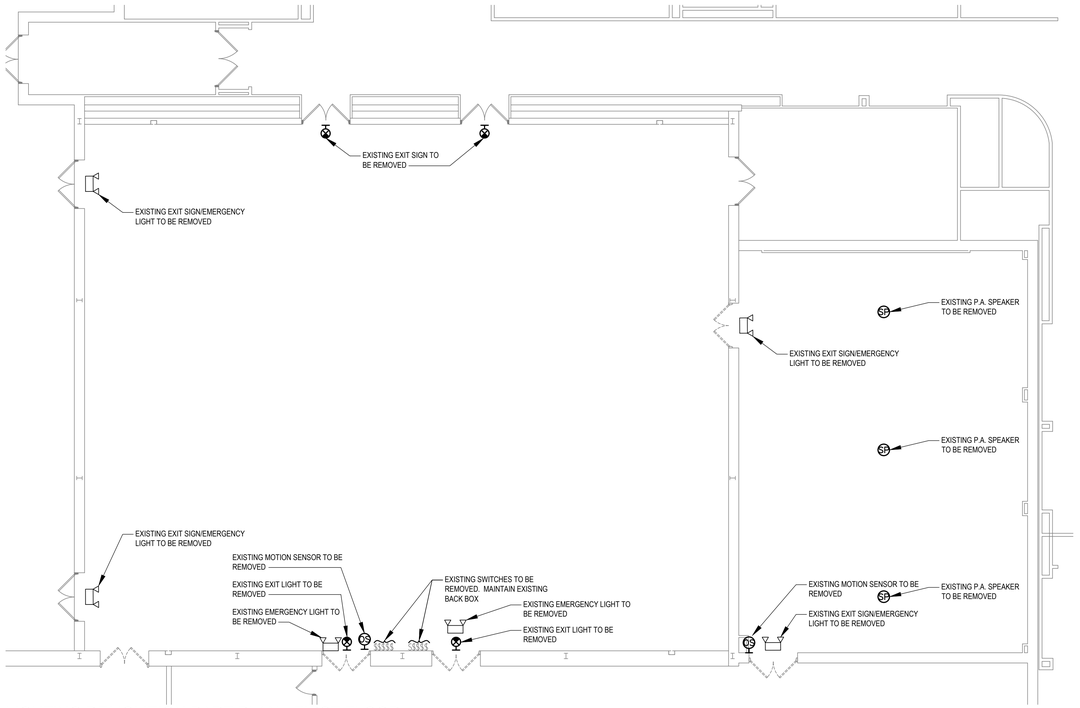


PROJECT NO.	66-03-01-03-0-003-028
MEMASI PROJECT NO.	102-2101

PART PLANS (ROOF) - POWER

MS E102

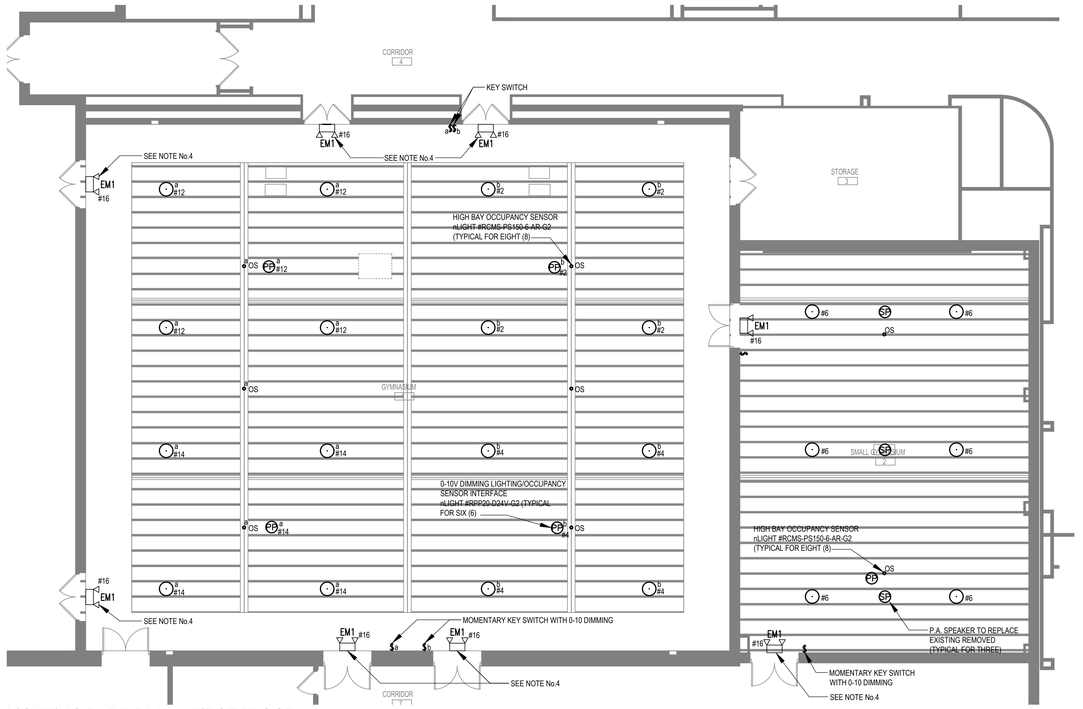


LIGHTING DEMOLITION PART PLAN - FIRST FLOOR

1/8" = 1'-0"

ELECTRICAL DEMOLITION PLAN NOTES:

1. DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND ASSOCIATED SWITCHES, LIGHTING CONTROL DEVICES, CONDUIT, AND WIRING BACK TO THE SOURCE.
2. DISCONNECT AND REMOVE ALL EXISTING EMERGENCY LIGHT FIXTURES AND EXIT SIGNS AND ASSOCIATED CONDUIT, AND WIRING BACK TO THE SOURCE.
3. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED AND UNUSED CONDUIT, JUNCTION BOXES, WIRING, ETC. THROUGHOUT ENTIRE CEILING, STRUCTURE AND WALLS IN BOTH GYMNASIUMS.
4. REFER TO ARCHITECTURAL ELEVATIONS FOR ELECTRICAL DEMOLITION SCOPE. AND EQUIPMENT LOCATIONS.
5. DISCONNECT EXISTING P.A. SPEAKERS AND TIE BACK AND MAINTAIN EXISTING WIRING TO RECONNECT TO REPLACEMENT SPEAKERS.



LIGHTING PART PLAN - FIRST FLOOR

1/8" = 1'-0"

ELECTRICAL LIGHTING PLAN NOTES:

1. REFER TO DRAWING E-001 FOR LIGHTING FIXTURE SCHEDULE.
2. ALL LIGHTING FIXTURES SHALL CIRCUIT TO PANEL LP-G'. CIRCUITS ARE SHOWN WITH "#" ADJACENT TO LIGHTING FIXTURE AND ARE FOR REFERENCE ONLY AND SHALL BE COORDINATED IN THE FIELD.
3. ALL LIGHTING CONTROLS SHALL BE ACHIEVED BY AN NLIGHT WIRELESS CONTROLLER WITH ASSOCIATED RELAYS AND KEYPADS. REFER TO ARCHITECTURAL SPECIFICATIONS FOR SYSTEM CONTROL DETAILS.
4. EXISTING EXIT SIGN TO BE REPLACED WITH A COMBINATION EXIT/EMERGENCY LIGHT UNIT.
5. ALL DEVICE PLATES SHALL BE STAINLESS STEEL .
6. ALL EXPOSED WIRING (REGARDLESS OF VOLTAGE) SHALL BE IN CONDUIT.
7. OCCUPANCY SENSORS SHALL BE PROGRAMMED TO AN AUTO ON OFF OUTSIDE OF SCHEDULED OCCUPIED HOURS.
8. EXTEND/MODIFY EXISTING P.A. SPEAKER WIRING TO REPLACEMENT SPEAKERS IN CONDUIT.

EASTCHESTER UNION FREE SCHOOL DISTRICT

2021-2022 MIDDLE SCHOOL GYMNASIUMS RENOVATIONS AND MIDDLE SCHOOL ROOF REPLACEMENT PROJECT

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SEAL

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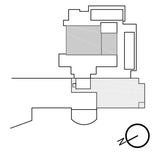

PROJECT NO. 66-03-01-03-0-003-028

MEMASI PROJECT NO. 102-2101

PART PLANS - LIGHTING

MS E201

12/8/2021 2:17 PM Averion, Alvin U:\223030768\D_WORKING_FILES\00_MEP\02_CAD\MEMASI EASTCHESTER MS RTU\SHEETS\223030768-E-201.DWG

PANEL DESIGNATION : **LP-G**

VOLTAGE	208Y/120 V	NEUTRAL	100%	QUANTITY OF POLES	42
PHASE	3 Ø	SCC RATING (SYM)	22 K.A.I.C.	MAIN CIRCUIT BREAKER	200 A
WIRE	4 W + G			MAIN BUS	225 A
EXISTING PANEL	X	NEMA 1 ENCLOSURE	X	GROUND BUS	X
FEED THROUGH LUGS					

REMARKS : REPLACE INTERIORS AND COVER. MATCH CIRCUIT BREAKER RATINGS WITH EXISTING TO REMAIN CIRCUITS

CKT #	TRIP	LOAD DESCRIPTION	ØA (VA)	ØB (VA)	ØC (VA)	LOAD DESCRIPTION	TRIP	CKT #
1	20A	EXISTING	1016			GYM LIGHTING	20A	2
3	20A	EXISTING		1016		GYM LIGHTING	20A	4
5	20A	EXISTING			1524	SMALL GYM LIGHTING	20A	6
7	20A	EXISTING	720			GYM RECEPTACLES	20A	8
9	20A	EXISTING		0		EXISTING	20A	10
11	20A	EXISTING			0	EXISTING	20A	12
13	20A	EXISTING	0			EXISTING	20A	14
15	20A	EXISTING		0		EXISTING	20A	16
17	20A	EXISTING			0	EXISTING	20A	18
19	20A	EXISTING	0			EXISTING	20A	20
21	20A	EXISTING		0		EXISTING	20A	22
23	20A	EXISTING			0	EXISTING	20A	24
25	20A	EXISTING	0			EXISTING	20A	26
27	20A	EXISTING		0		EXISTING	20A	28
29	20A	EXISTING			0	EXISTING	20A	30
31	20A	EXISTING	0			EXISTING	20A	32
33	20A	EXISTING		0		EXISTING	20A	34
35	20A	EXISTING			0	EXISTING	20A	36
37	20A	EXISTING	0			**SPARE**	20A	38
39	20A	EXISTING		0		**SPARE**	20A	40
41	20A	EXISTING			0	**SPARE**	20A	42
		TOTAL CONNECTED LOAD PER PHASE (kVA)	1.74	1.02	1.52			
		TOTAL CONNECTED LOAD	4.28 KVA			11.9 A		
		TOTAL DEMAND LOAD	3.56 KVA			9.9 A		

NOTE: PANEL SCHEDULE IS FOR REFERENCE ONLY AND SHALL BE COORDINATED TO REFLECT INSTALLED FIELD CONDITIONS.

PANEL DESIGNATION : **PP-G**

VOLTAGE	208Y/120 V	NEUTRAL	100%	QUANTITY OF POLES	24
PHASE	3 Ø	SCC RATING (SYM)	42 K.A.I.C.	MAIN CIRCUIT BREAKER	200 A
WIRE	4 W + G			MAIN BUS	225 A
FLUSH MOUNTED	X	NEMA 1 ENCLOSURE	X	GROUND BUS	X
FEED THROUGH LUGS					

REMARKS : PROVIDE INTERIORS AND COVER IN EXISTING BACK BOX

CKT #	TRIP	LOAD DESCRIPTION	ØA (VA)	ØB (VA)	ØC (VA)	LOAD DESCRIPTION	TRIP	CKT #
1			11520					2
3	60A	RTU-MS-1		11520		RTU-MS-2	60A	4
5					11520			6
7			3842			ROOFTOP SERVICE RECEPTACLES AND LIGHTS	20A	8
9	40A	RTU-MS-3		3840		GYM RECEPTACLES	20A	10
11					4136	GYM LIGHTING	20A	12
13	20A	**SPARE**	1016			GYM LIGHTING	20A	14
15	20A	**SPARE**		0		**SPARE**	20A	16
17	20A	**SPARE**			0	**SPARE**	20A	18
19	20A	**SPARE**	0			**SPARE**	20A	20
21	20A	**SPARE**		0		**SPARE**	20A	22
23	20A	**SPARE**			0	**SPARE**	20A	24
		TOTAL CONNECTED LOAD PER PHASE (kVA)	16.38	15.36	15.66			
		TOTAL CONNECTED LOAD	47.39 KVA			131.6 A		
		TOTAL DEMAND LOAD	46.38 KVA			128.7 A		

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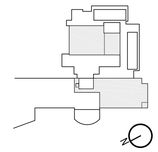

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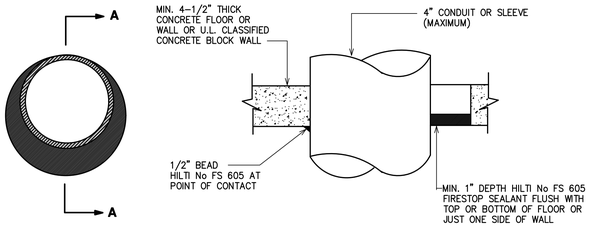
PANEL SCHEDULES

MS E601

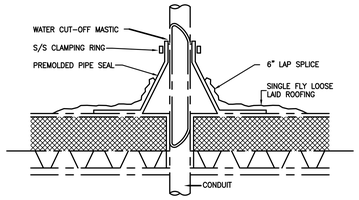


NOTES:

1. CONDUIT MAY BE CENTERED OR OFFSET IN HOLE. MAXIMUM DIAMETER OF HOLE OPENING IS 14 INCHES.
2. TEMPORARY FORMS MAY BE REQUIRED TO SUPPORT THE FIRESTOP SEALANT WHILE IT CURES.
3. FOR CONDUIT SLEEVE INSTALATIONS PROVIDE AROUND CONDUCTORS WITHIN SLEEVE.

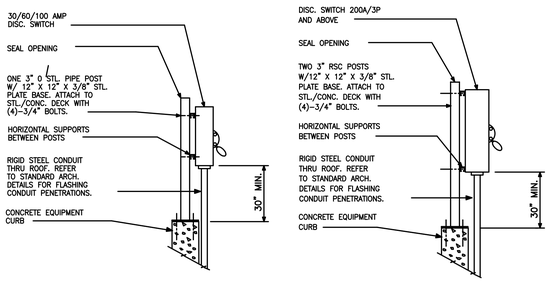
DETAIL OF CONDUIT THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

N.T.S.



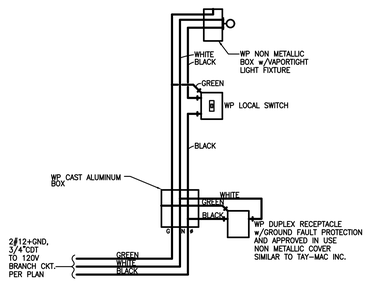
CONDUIT ROOF PENETRATION DETAIL

N.T.S.



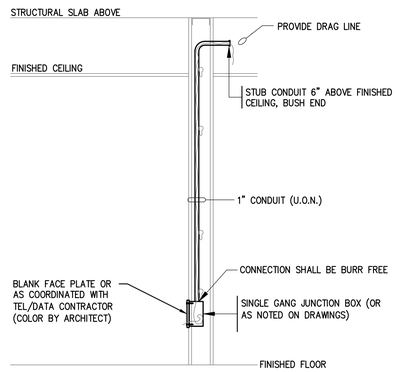
ROOF MOUNTED DISCONNECT SWITCH DETAIL

N.T.S.



ROOF TOP MAINTENENCE UNIT LTG/PWR DETAIL

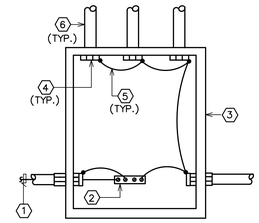
N.T.S.



NOTE: ALL DATA AND TEL. CABLING IS BY OTHERS

COMMUNICATION RECEPTACLE DETAIL (TYPCIAL)

N.T.S.

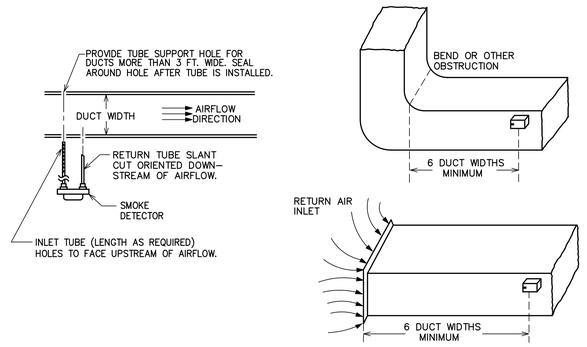


NOTES:

1. SYSTEM EQUIPMENT GROUNDING CONDUCTOR SIZED AS PER NEC TABLE 250.122
2. PANELBOARD EQUIPMENT GROUND BUS
3. SERVICE ENTRANCE EQUIPMENT SWITCHBOARD/ PANELBOARD ENCLOSURE.
4. GROUNDING BUSHING
5. BONDING JUMPER INSTALLED AS PER NEC ARTICLE 250
6. METAL CONDUIT, TYPICAL

RACEWAY EQUIPMENT GROUNDING SYSTEM

N.T.S.



NOTE:
1. DUCT DETECTOR LOCATIONS SHALL BE DETERMINED IN FIELD WITH ENGINEER AND FIRE ALARM VENDOR.

TYPICAL DUCT SMOKE DETECTOR PLACEMENT & INSTALLATION DETAIL (PLAN VIEW)

N.T.S.

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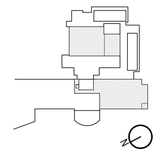

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DETAILS

MS E701