

ADDENDUM NO. 5
TO THE
DRAWINGS AND PROJECT MANUAL
FOR
**NORTH SHORE MULTI-USE INDOOR FACILITY
GALENA PARK INDEPENDENT SCHOOL DISTRICT
HOUSTON, TEXAS**



10/23/2025

VLK
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5.1 GENERAL

- A. This addendum modifies the drawings and project manual, dated October 1, 2025, as noted within and shall become part of the Contract Documents.
- B. Each holder of proposal documents registered with the Architect will receive a copy of the addendum. Each prime proposer is responsible for distribution of information conveyed by this addendum to its sub-proposers and suppliers.
- C. Proposers shall acknowledge receipt of this addendum in the space provided on the proposal form. Failure to do so may subject proposer to disqualification.

5.2 REVISED DRAWINGS

- A. Sheet Nos. S2.22D, S6.03, M2.08D, M3.01, M3.02, M6.01, P2.05D and P6.01, dated October 23, 2025 and attached hereto, are revised drawings and are hereby made a part of this addendum.

END OF ADDENDUM NO. 5



North Shore Multi-Use Indoor Facility
Galena Park ISD
Houston, Texas

October 23, 2025

STRUCTURAL ADDENDUM NO. 5 ITEMS

1. SHEET S2.22D – ROOF FRAMING PLAN - UNIT D

- A. Roof beams updated
- B. Posts supporting roof louvers added
- C. Section cuts for roof edge detail updated

2. SHEET S6.03 – ROOF DETAILS

- A. Detail – 11, 12, 13, 15 added

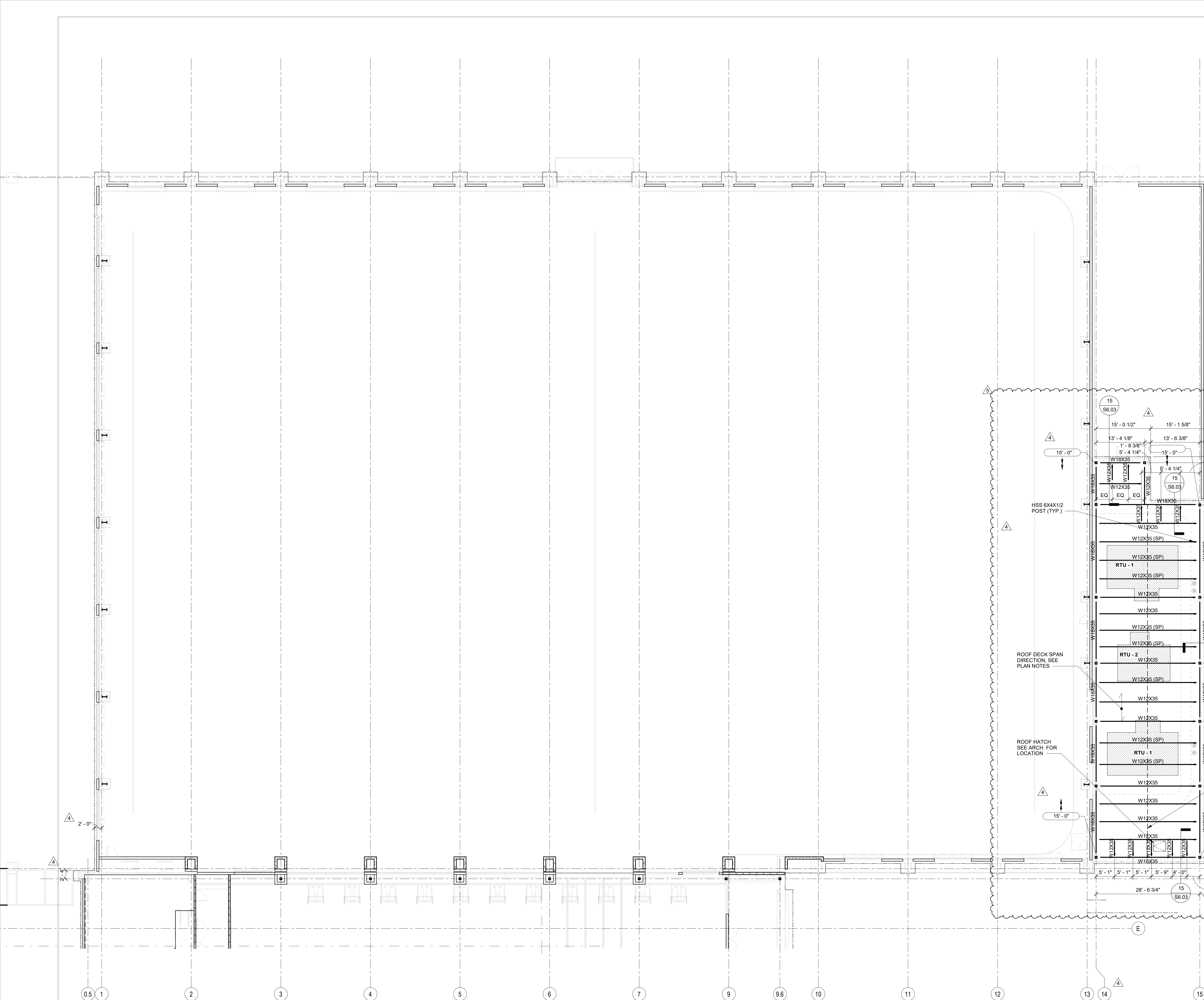
END OF MATRIX STRUCTURAL ENGINEER'S ADDENDUM ITEMS

Matrix Structural Engineers
TBPE Firm Registration No. F-2640



10/23/2025

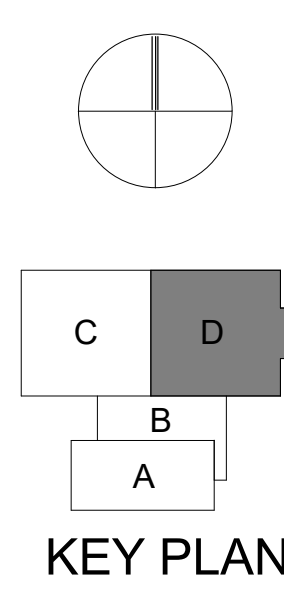
Havish V Reddy
Graduate Engineer
Matrix Structural Engineers



- ROOF FRAMING PLAN NOTES:**
- LOCATIONS SHOWN THUS: INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
 - LOCATIONS SHOWN THUS: C=3/4" INDICATES UPWARD CAMBER AT MID SPAN OF BEAM AS 3/4".
 - FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
 - JOISTS SHALL BE DESIGNED FOR ADDITIONAL LOADS RESULTING FROM RTU'S AND OTHER MECHANICAL EQUIPMENT ON THE ROOF OR SUSPENDED FROM THE ROOF STRUCTURE. SEE ARCHITECTURAL AND MEP DRAWINGS FOR LOCATIONS.
 - SHADED AREA IS DESIGNATED TO RECEIVE MECHANICAL EQUIPMENT - ASSUME 2000# UNIT (TO BE SUPPORTED BY 2 JOISTS, 1000# DL PER JOIST W/ 400# REVERSIBLE WIND LOAD PER JOIST). EACH JOIST SHALL BE DESIGNED FOR ADDITIONAL LOAD OF ONE SUCH UNIT PLACED ANYWHERE ALONG THE SPAN (IN SHADED AREA). A MAX. OF (2) UNITS SHALL BE LOCATED PER BAY. GIRDERS SHALL BE DESIGNED FOR (2) UNITS LOCATED ANYWHERE WITHIN THE SHADED AREA.
 - SPACE JOISTS EQUALLY, U.N.O.
 - PROVIDE 3/16" CLOSURE PLATES AT ALL TUBE BEAMS.
 - REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
 - ROOF SHALL BE 1.58, 22GA DECK AS MANUFACTURED BY VULCRAFT OR EQUIVALENT. SEE ARCHITECTURAL DRAWINGS FOR INSULATION, ROOFING, ETC. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS.
a. PERPENDICULAR BEARING: 36/7 PATTERN.
b. PARALLEL BEARINGS AND EDGE: AT 6" O.C.
c. SIDE SEAMS: #10 TEK SCREWS AT 12" O.C.
 - IN LIEU OF THE DECK ATTACHMENT SHOWN ABOVE, ALTERNATE DECK ATTACHMENT SHALL BE AS FOLLOWS:
a. REPLACE EACH 5/8"Ø WELD WITH ONE HILTI X-HSN 24 FASTENER FOR BASE STEEL FLANGE THICKNESS (t) ≤ 3/8" AT THICKER BASE STEEL USE ONE HILTI X-ENP-19-L15 TYPE FASTENER.
b. REPLACE EACH SIDE SEAM #10 SCREW WITH ONE HILTI S-SLC 01 M HWH FASTENER FOR DECK THICKNESS LESS THAN OR EQUAL TO 20 GAUGE.
c. ATTACHMENTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
 - = MOMENT CONNECTION
 - B.F.B. INDICATES BOTTOM FLANGE BRACE, SEE 1/S5.01 FOR DETAIL.
 - V = 'K' K INDICATES ULTIMATE STRENGTH BEAM SHEAR REACTIONS IN KIPS (LRFD) AT THE END OF THE BEAM SHOWN, WHERE INDICATED, THIS VALUE SHALL SUPERCEDE THE CRITERIA IN THE CHART ABOVE.
 - M = 'K' K-FT INDICATES ULTIMATE STRENGTH BEAM MOMENT REACTIONS IN KIP-FEET (LRFD) AT THE END OF THE BEAM SHOWN.
 - JOIST SUPPORTING RTU TO BE DESIGNED FOR ADDITION LOADS.
 - INDICATES SLIP CRITICAL CONNECTION. DESIGN CONNECTION FOR AXIAL TENSION/COMPRESSION ULTIMATE FORCE (LRFD) AS SHOWN IN THE PLAN. SEE 14/S4.01 FOR CONNECTION DETAILS.

- MEZZANINE FRAMING PLAN NOTES:**
- TOP OF CONCRETE ELEVATION = SEE PLAN
 - LOCATIONS SHOWN THUS: (12) C=3/4" INDICATES NUMBER OF SHEAR CONNECTORS AS 12 AND UPWARD CAMBER AT MID SPAN OF BEAM AS 3/4".
 - SPACE JOISTS EQUALLY U.N.O.
 - PROVIDE END PLATES AT ALL TUBE BEAMS.
 - FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
 - HSS 6X6X5/8 FOR ALL COLUMN SIZES NOT SHOWN.
 - = MOMENT CONNECTION
 - ALL LOWER TUBE BEAM ELEVATIONS TO BE VERIFIED WITH ARCHITECT DRAWINGS.
 - FLOOR SHALL BE 3 1/2" NORMAL WEIGHT CONCRETE OVER THE FLUTES OF 2' x 18 GA TYPE VLI STEEL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT TO TOTAL THICKNESS = 5 1/2". REINFORCE CONCRETE WITH #3 AT 18" O.C. EACH WAY. PLACE REBAR PERPENDICULAR TO BEAMS (PARALLEL TO DECK) IN THE OUTSIDE LAYER. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS.
a. PERPENDICULAR BEARING: 36/4 PATTERN.
b. PARALLEL BEARING AND EDGE: AT 12" O.C.
c. SIDE SEAMS: SEAM WELDS AT 12" O.C.
 - SEE 19/S5.01 FOR ADDITIONAL SLAB REINFORCING AT ALL BEAMS & GIRDERS.
 - SEE 13/S5.01 & 20/S5.01 FOR ADDITIONAL SLAB REINFORCING AT OPENINGS AND EDGES.
 - SEE 11/S5.01 & 15/S5.01 FOR ADDITIONAL STEEL ANGLES AND REINFORCING AT STEEL COLUMNS.
 - AT SLOPED FLOOR LOCATIONS ON ELEVATED FLOORS WHERE OVERALL SLAB THICKNESS IS LESS THAN 5 1/2", SPRAY FIREPROOFING SHALL BE APPLIED TO THE UNDERSIDE OF THE DECK IN SLOPED AREA TO MEET REQUIRED FIRE RATING. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE RATING.

1 ROOF FRAMING PLAN - UNIT D
SCALE: 3/32" = 1'-0"





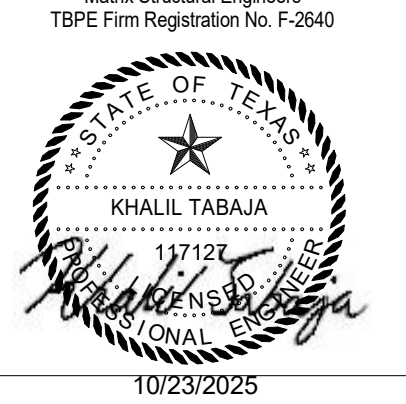
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HOUSTON, TEXAS

North Shore Multi-use Indoor Facility

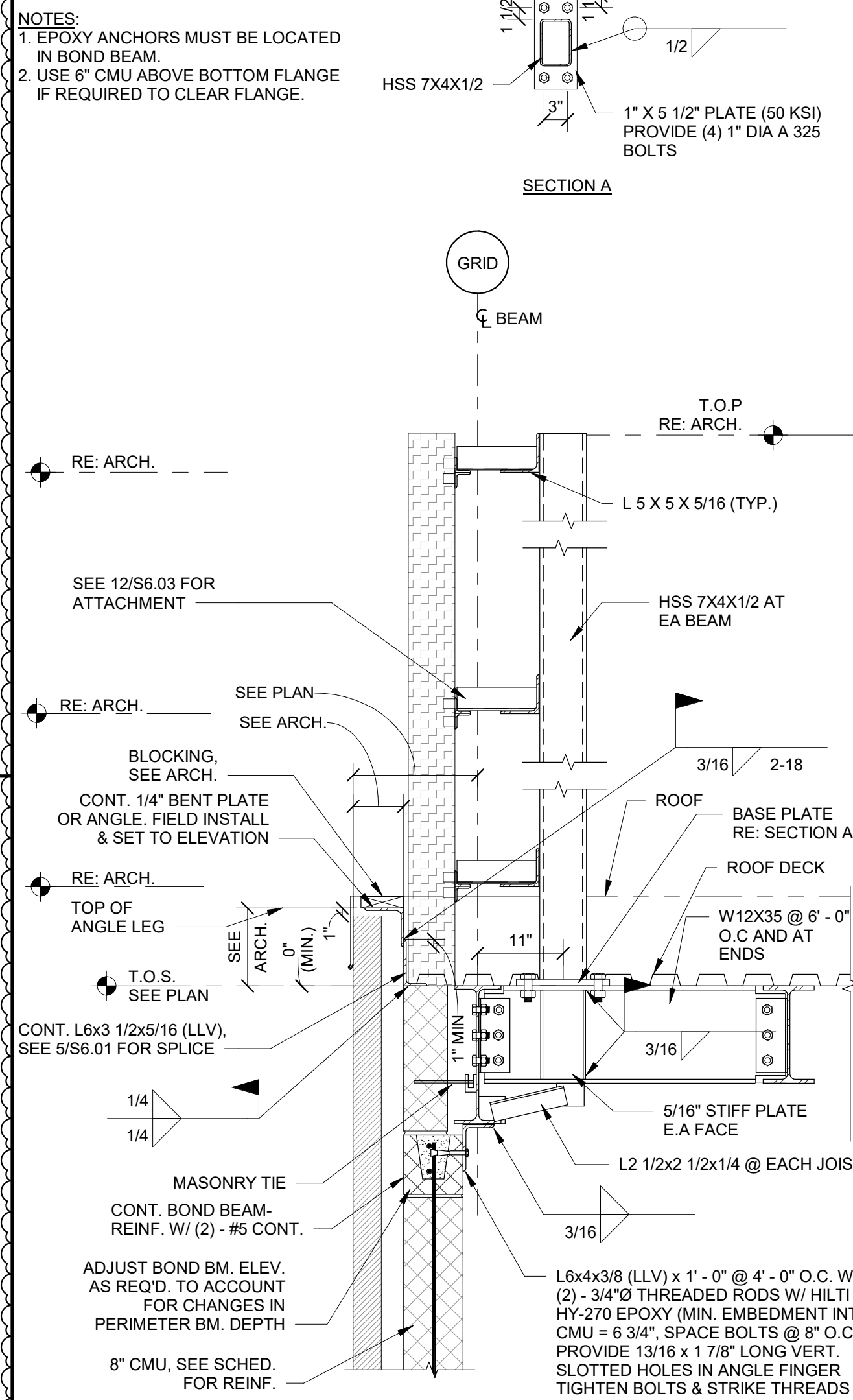
Matrix Structural Engineers
TBP#E Firm Registration No. F-2640



ISSUED: OCTOBER 1, 2025

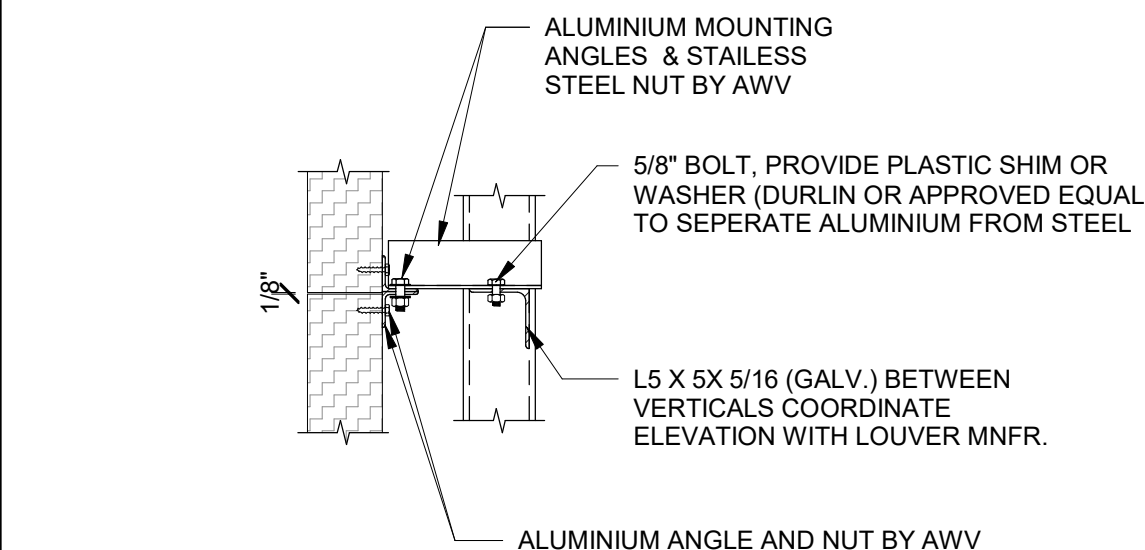
REVISIONS	
Revision No.	Revision Date
4 Addendum 4	10-21-2025
5 Addendum 5	10-22-2025

Director	Monika Castillo
Proj. Arch.	Tam Quang
Designer	HR
Drawn By	RJC
PROJECT NO.	
25-0056.00	
SHEET TITLE	
ROOF FRAMING PLAN - UNIT D	
SHEET NO.	
S2.22D	
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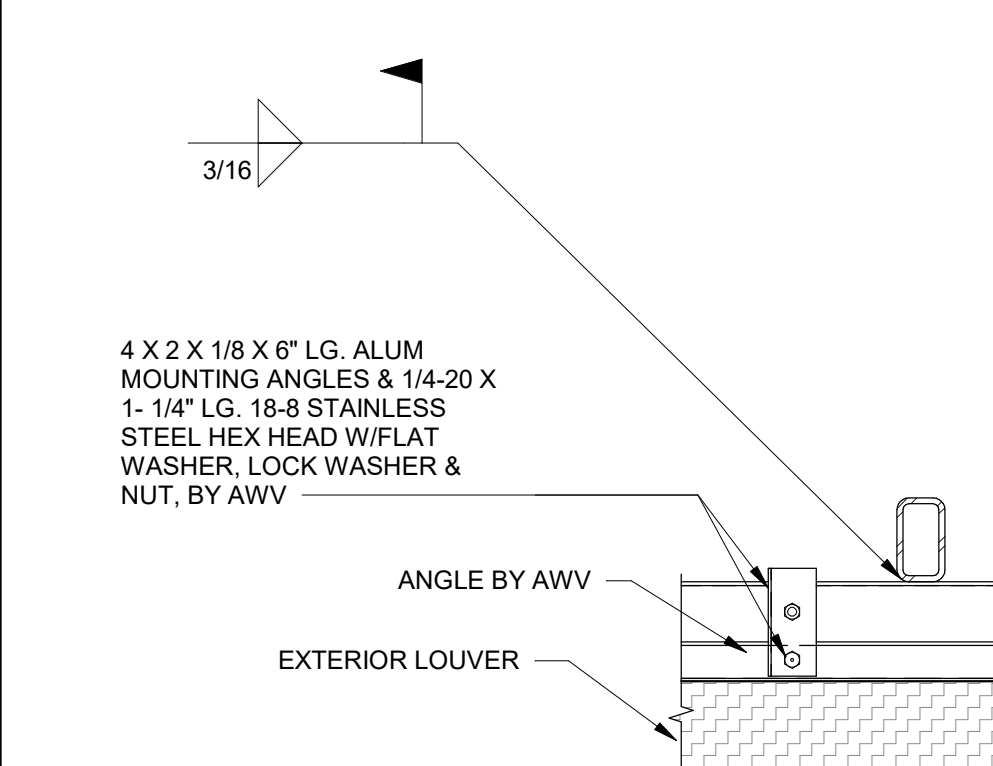
TYPICAL DETAIL
EXTERIOR EDGE AT ROOF LOUVERS

15 SCALE: 3/4" = 1'-0"



ROOF LOUVERS ATTACHMENT

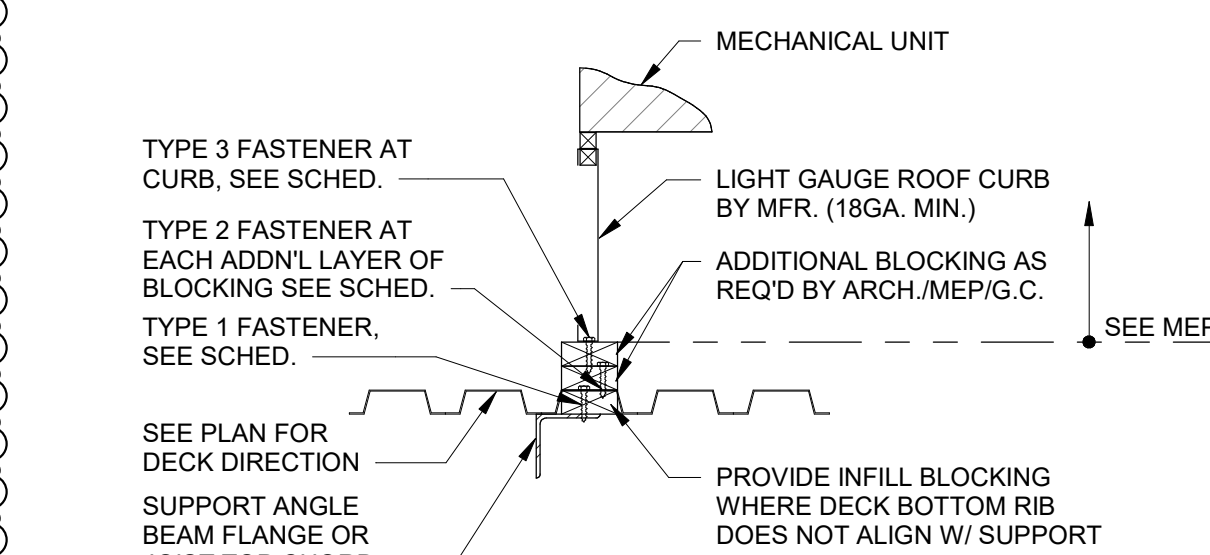
12 SCALE: 3/4" = 1'-0"



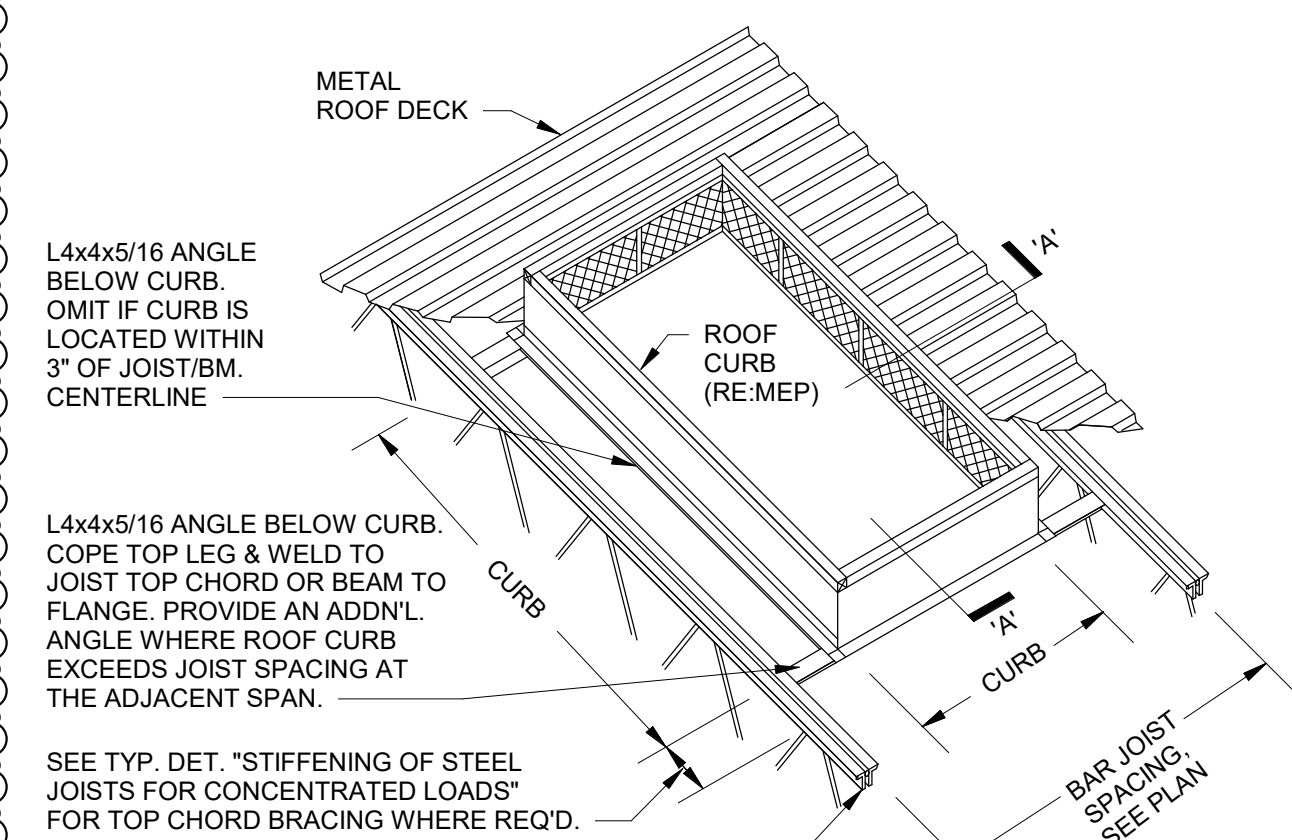
ROOF LOUVERS ATTACHMENT

11 SCALE: 3/4" = 1'-0"

NOTE:
SIZES SHOWN ARE VALID ONLY FOR JOIST / BEAM SPACING ≤ 6' - 0" O.C.



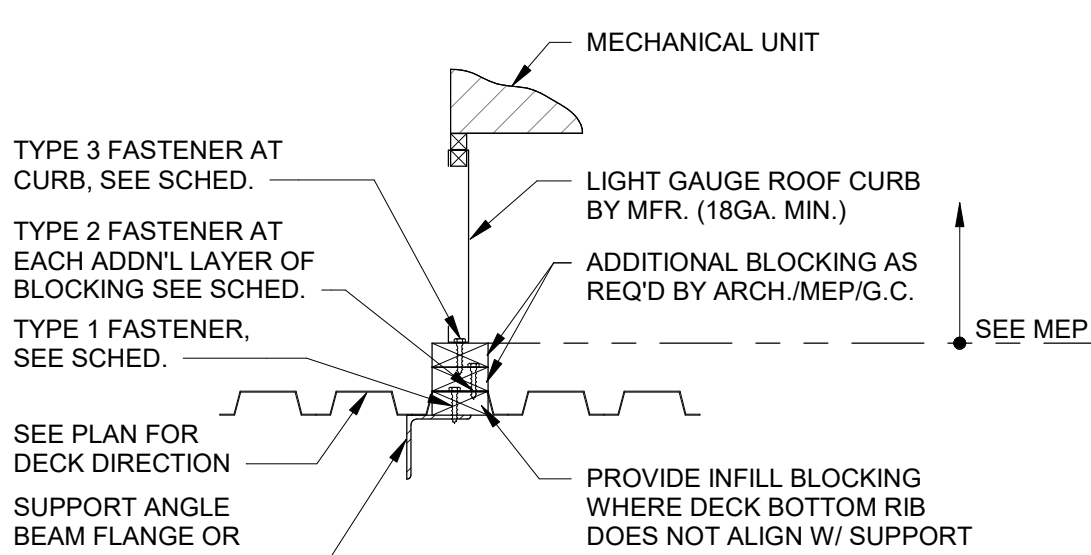
SECTION 'A'



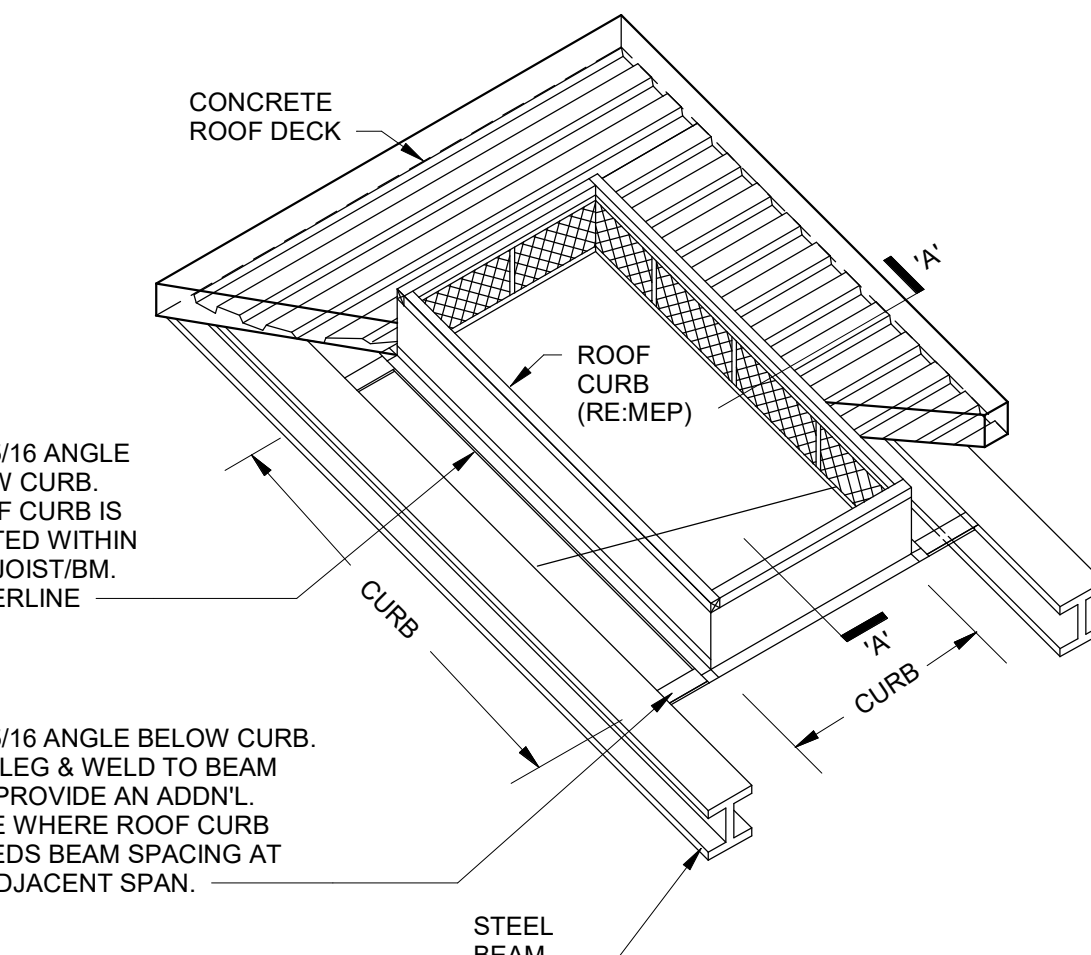
TYPICAL DETAIL
ROOF CURB AT MECHANICAL UNITS

7 SCALE: 1" = 1'-0"

NOTE:
SIZES SHOWN ARE VALID ONLY FOR JOIST / BEAM SPACING ≤ 6' - 0" O.C.

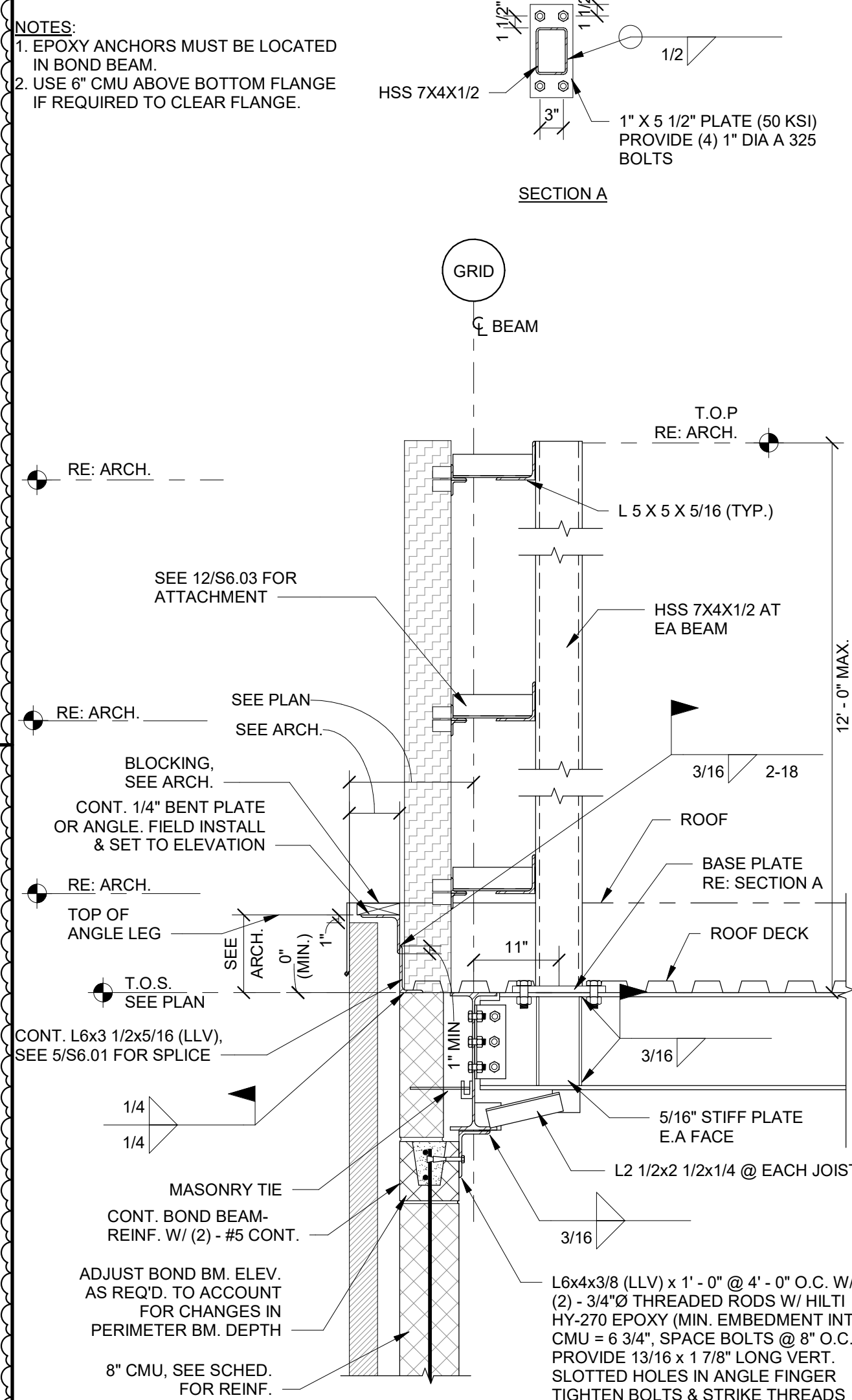


SECTION 'A'



TYPICAL DETAIL ROOF CURB AT MECHANICAL UNITS AND DUCT PENETRATIONS

3 SCALE: 1" = 1'-0"

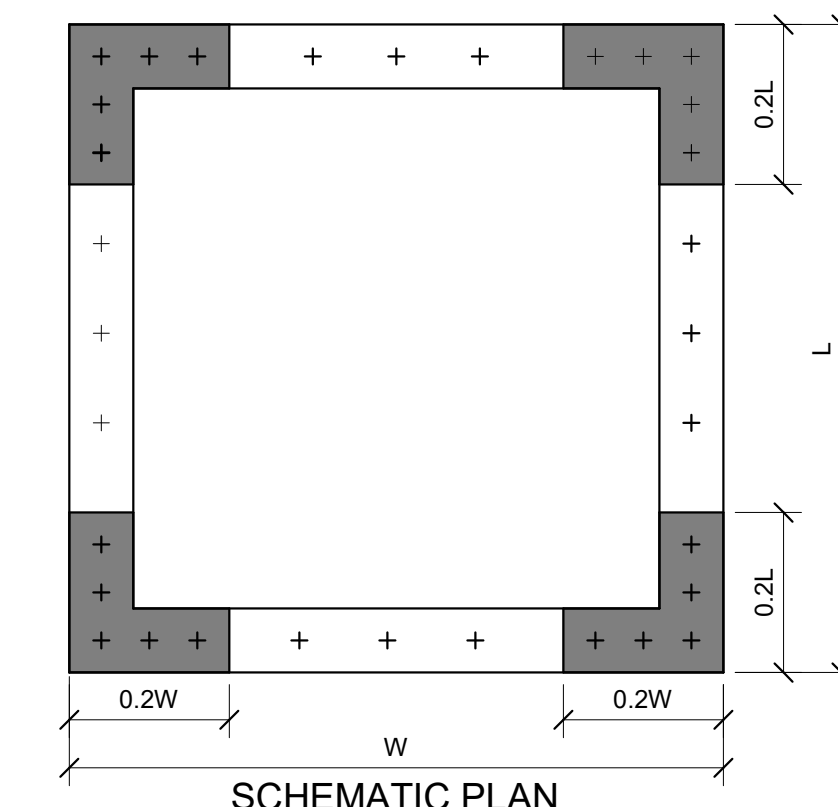


TYPICAL DETAIL
EXTERIOR EDGE AT ROOF LOUVERS

13 SCALE: 3/4" = 1'-0"

FASTENER SCHEDULE			
TYPE	MINIMUM FASTENER SIZE	TYPICAL	CORNER
1	#8 SELF TAPPING SCREW	16" O.C.	6" O.C.
2	#10 SCREW*	12" O.C.	4" O.C.
3	#10 SCREW*	12" O.C.	4" O.C.

*SCREW SHALL EMBED 1" MIN. INTO WOOD BLOCKING

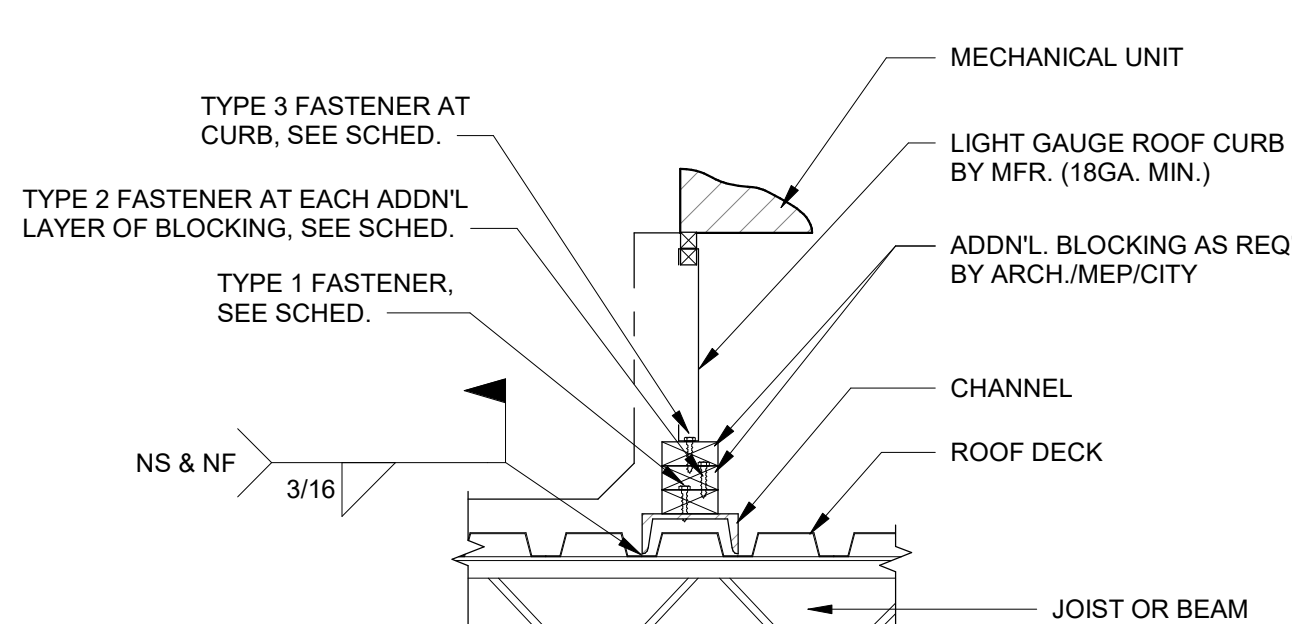
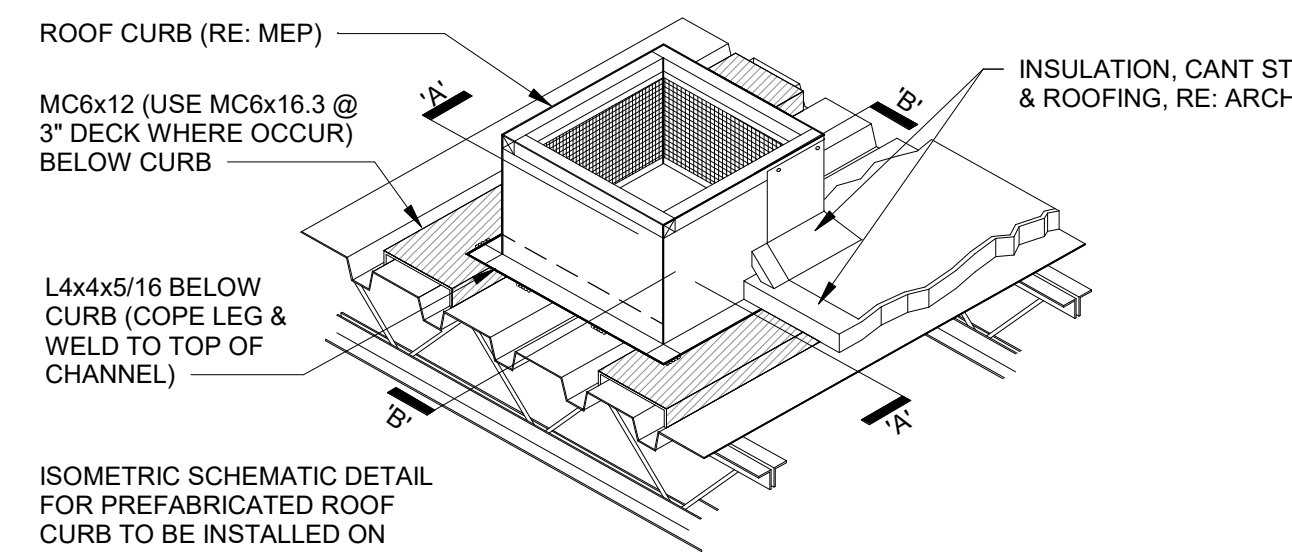


NOTES:
1. FASTENING SCHEDULE SHALL ONLY APPLY UNDER THE FOLLOWINGS CONDITIONS.
a. MEAN ROOF HEIGHT IS ≤ 60' - 0"
b. MECHANICAL EQUIPMENT IS LESS THAN 6'-0" TALL
c. MECHANICAL UNIT HEIGHT TO WIDTH RATIO IS ≤ 1.5
d. WIND SPEED IS LESS THAN OR EQUAL TO 140mph(V_{ULT}) OR 110mph (V₅₀). SEE GEN. NOTES FOR DESIGN WIND SPEED.
2. REFER TO MEP/MFR. FOR W & L DIMENSIONS.

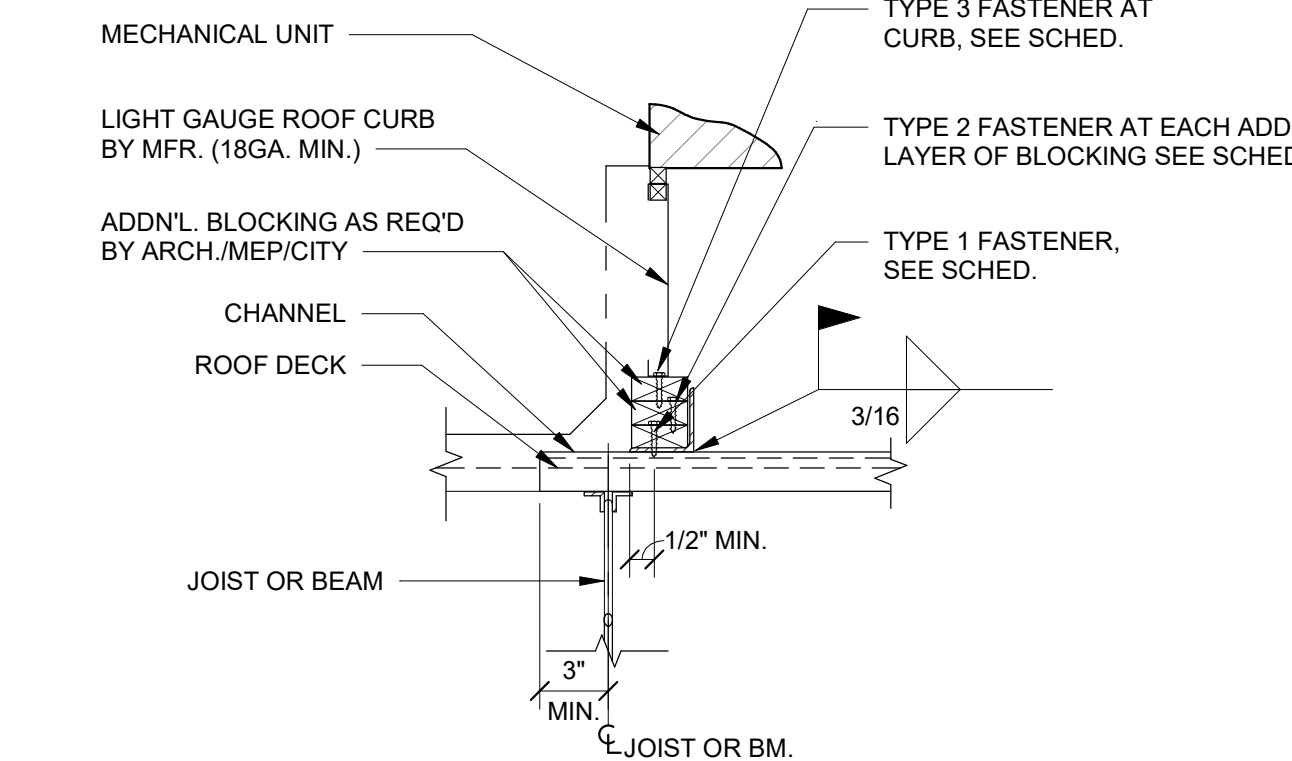
TYPICAL DETAIL FASTENER
SCHEDULE AT MECHANICAL UNITS

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

NOTE:
SIZES SHOWN ARE VALID ONLY FOR JOIST / BEAM SPACING ≤ 6' - 0" O.C.



SECTION 'A'

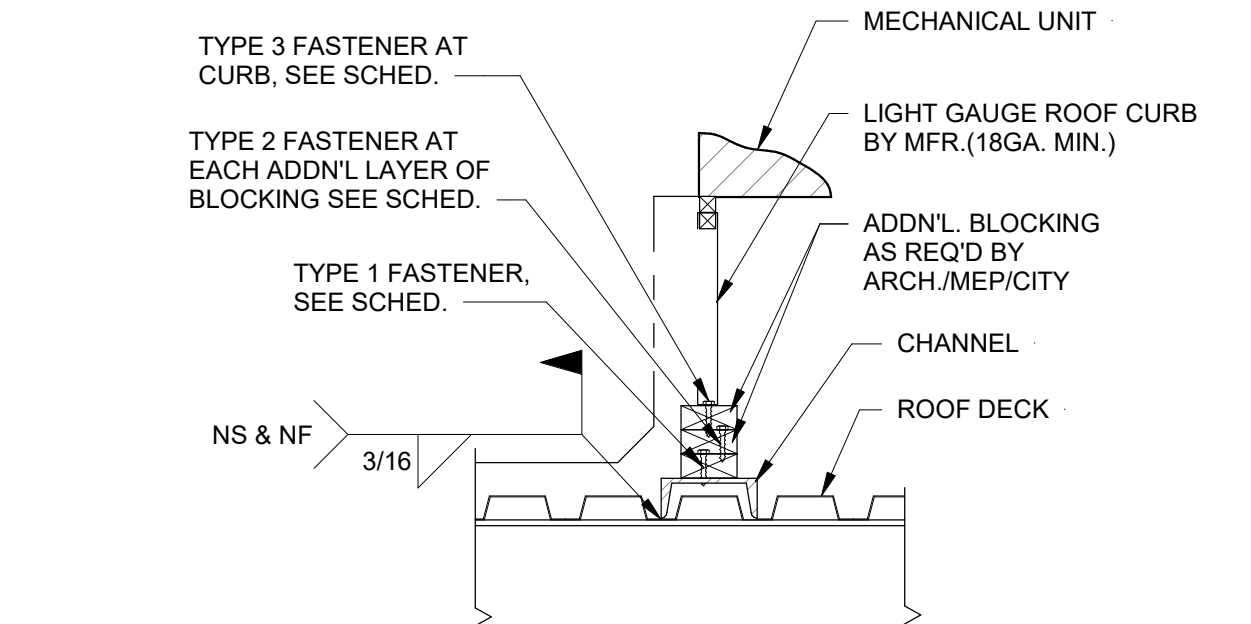
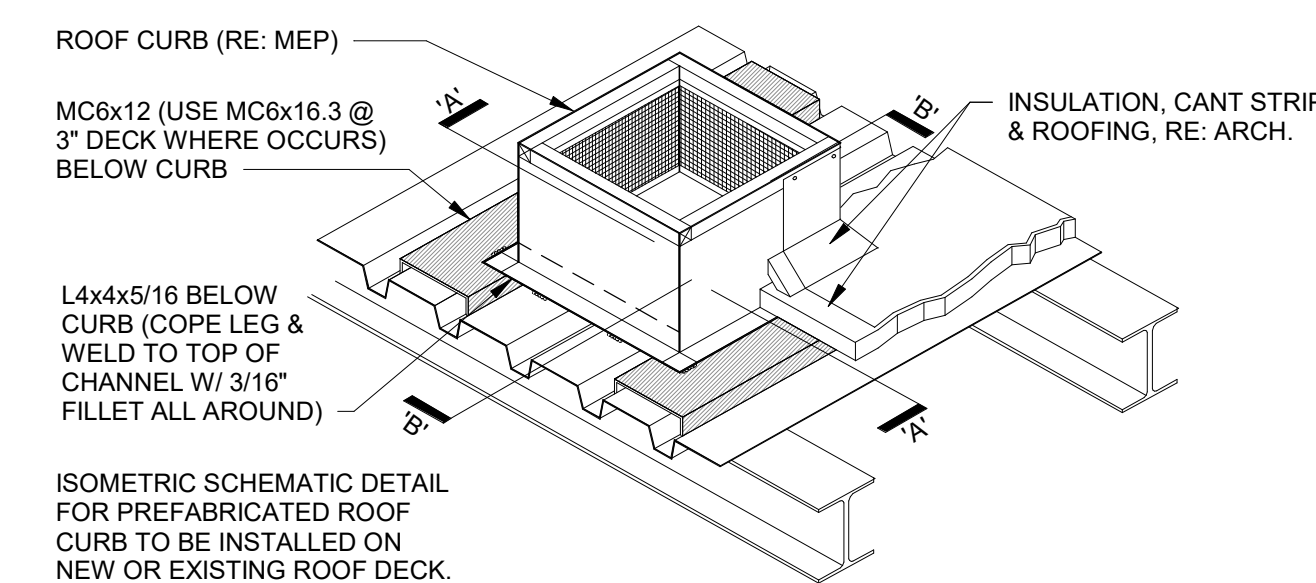


SECTION 'B'

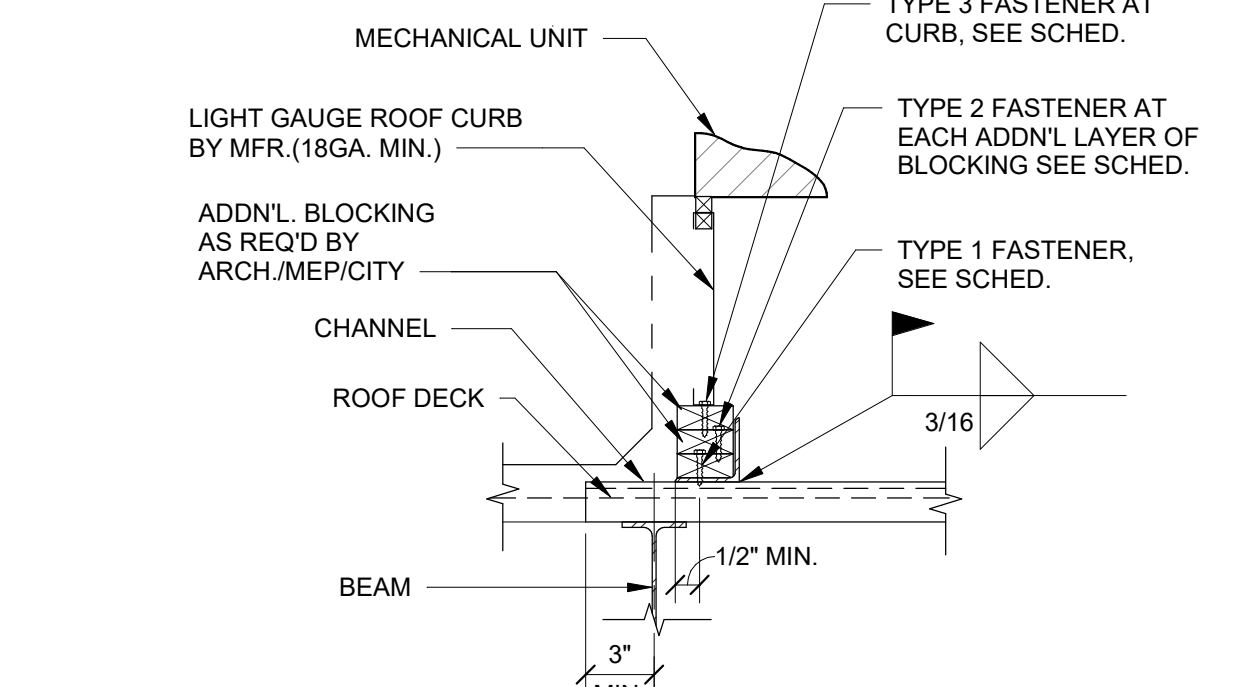
ALTERNATE DETAIL SUPPORT AT ROOFTOP MECHANICAL EQUIPMENT

5 SCALE: 1" = 1'-0"

NOTE:
SIZES SHOWN ARE VALID ONLY FOR BEAM SPACING ≤ 12'-0" O.C.



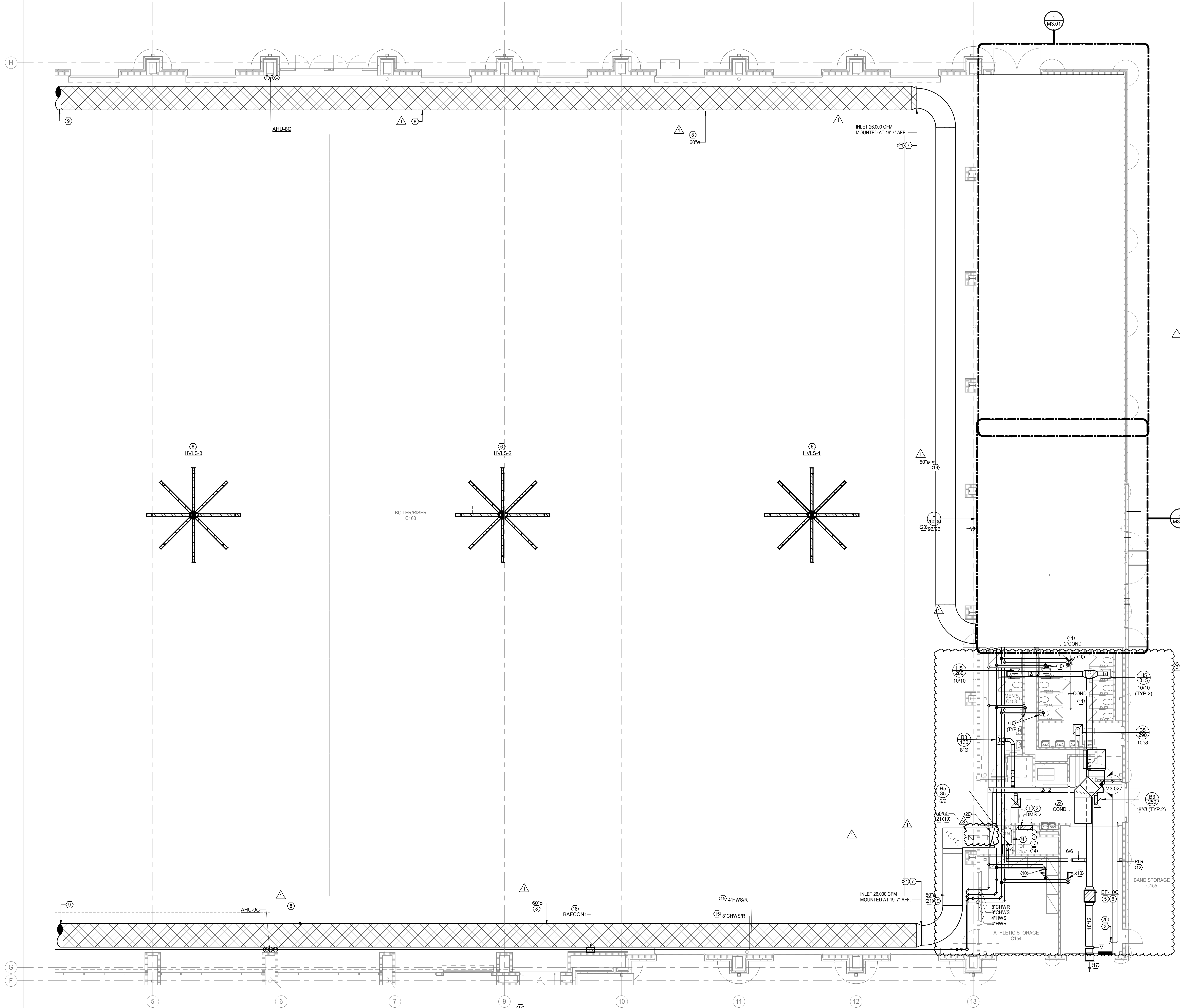
SECTION 'A'



SECTION 'B'

ALTERNATE DETAIL SUPPORT AT ROOFTOP MECHANICAL EQUIPMENT

1 SCALE: 1" = 1'-0"



MECHANICAL GENERAL NOTES	
1	THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2	ALL DUCT SIZES ARE INSIDE CLEAR, INCREASE ACCORDINGLY WHERE INTERIOR LINER IS SHOWN OR SPECIFIED.
3	MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4	COORDINATE IN THE FIELD THE EXACT LOCATION OF ALL CEILING MOUNTED GRILLES AND DIFFUSERS WITH LIGHT FIXTURES AND (ARCHITECT'S) REFLECTED CEILING PLAN.
5	THERMOSTATS SHALL BE MOUNTED AT "48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.

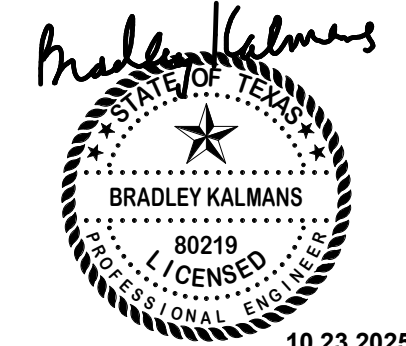
MECHANICAL KEYED NOTES	
1	VERIFY SERVICE CLEARANCE FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER.
2	COORDINATE UNIT LOCATION WITH ALL TRADES NOT TO OBSTRUCT. BOTTOM OF HIGH WALL UNIT SHALL BE MOUNTED ABOVE 7'-3" A.F.F.
3	ROUTE REFRIGERANT PIPING UP TO ASSOCIATED OUTDOOR UNIT ON ROOF ABOVE. INSTALL PER MANUFACTURER RECOMMENDATIONS. PIPING SHOWN SINGLE LINE FOR CLARITY. RE: M5.02 FOR DETAILS.
4	ROUTE FULL SIZE CONDENSATE DRAIN LINE AS HIGH AS POSSIBLE AND GRAVITY DRAIN TO MOP SINK. INSTALL TRAP AND PIPE SIZING PER MANUFACTURER. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION.
5	SUSPEND UNIT WITH THREADED HANGER RODS ATTACHED TO UNISTRUT RUNNERS SECURED TO STRUCTURE. PROVIDE SPRING ISOLATION. REFER TO MANUFACTURER FOR MORE DETAILS.
6	VERIFY SERVICE CLEARANCE AND COORDINATE WITH ALL TRADES NOT TO OBSTRUCT. INSTALL PER MANUFACTURER GUIDELINES.
7	TRANSITION FROM METAL DUCTWORK TO FABRIC DUCT AS INDICATED. REFER TO FABRIC DUCT SPECIFICATIONS AND MANUFACTURER FOR MORE INFORMATION.
8	PROVIDE FABRIC DUCT AND SUSPENSION SYSTEM AS SPECIFIED. REFER TO MANUFACTURER FOR FINAL SIZE, DISTRIBUTION AND INSTALLATION REQUIREMENTS.
9	RE: M2.06C.1 FOR CONTINUATION.
10	ROUTE CHWS&R AND HWS&R UP TO UNITS THROUGH ROOF. RE: 2M3.01 FOR CONTINUATION AND M5.02 FOR DETAILS.
11	ROUTE FULL SIZE CONDENSATE DRAIN LINE AS HIGH AS POSSIBLE AND GRAVITY DRAIN TO FLOOR DRAIN IN THE BOILER/RISER ROOM. INSTALL TRAP AND PIPE SIZING PER MANUFACTURER. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION.
12	INSULATE PIPING PER SPECIFICATION.
13	PROVIDE HARD WIRED THERMOSTAT
14	PROVIDE THERMOSTAT FOR BMSC MONITOR.
15	ROUTE CHWS&R AND HWS&R AS INDICATED. PROVIDE PIPE SUPPORTS. RE: M5.02 FOR DETAILS.
16	RE: M2.03A FOR CONTINUATION.
17	PROVIDE 24" W X 24" EXHAUST LOUVER, RUSKIN MODEL HZ700 OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 1.77 SQ. FEET. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT. RE: 5M5.03 FOR DETAIL.
18	PROVIDE LABELS ON SWITCHES AND CONTROLLERS TO ASSOCIATED EQUIPMENT.
19	PROVIDE DOUBLE WALL ACOUSTICALLY TREATED WITH ANNULAR SPACE PACKED WITH 1.0 PCF, 1-INCH-THICK FIBERGLASS INSULATION. PAINTABLE GALVANIZED STEEL EXTERIOR CONSTRUCTION WITH A PERFORATED METAL LINER TO PROVIDE SPECIFIC ACOUSTIC IMPEDANCE. UNITED MCGILL ACOUST-K27 SPIRAL LOCKSEAM OR APPROVED EQUAL.
20	RE: 2M3.01 FOR CONTINUATION.
21	COORDINATE FINAL DUCT ELEVATION AND FINISH COLOR WITH ARCHITECT.
22	ROUTE CONDENSATE DRAIN PIPE DOWN TO FLOOR SINK AT THE ICE MACHINE. SIZE PER MANUFACTURER. SLOPE PIPING TO ALLOW FOR GRAVITY DRAINAGE. INSTALL TRAP AS RECOMMENDED BY MANUFACTURER. REFER TO PLUMBING PLANS FOR EXACT LOCATION OF FLOOR SINK.



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Salas O'Brien Project Number: 2550-01455-00



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MECHANICAL ENGINEER
10.23.2025

ISSUED: OCTOBER 1, 2025

REVISIONS	
Revision No.	Revision Date
1 Addendum 1	10/08/2025
2 Addendum 4	10/22/2025
3 Addendum 5	10/23/2025

Director
Proj. Arch.
Designer
Drawn By

Monika Castillo
Tam Quang
Designer
Author

PROJECT NO.
25-0056.00

SHEET TITLE
**MECHANICAL FLOOR PLAN
- LEVEL ONE - UNIT D**

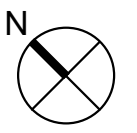
SHEET NO.
M2.08D

C
D
B
A

GALENA PARK ISD
HOUSTON, TEXAS

North Shore Multi-Use Indoor Facility

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 **1 MECHANICAL FLOOR PLAN - LEVEL ONE - UNIT D**
Scale: 1/8" = 1'-0"



M.E.P. ENGINEER

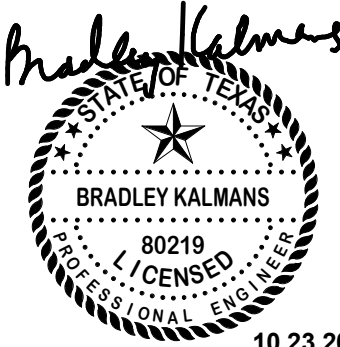
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2500-01465-00

GALENA PARK ISD
HOUSTON, TEXAS

North Shore Multi-Use Indoor Facility



10.23.2025

ISSUED: OCTOBER 1, 2025

REVISIONS

Revision No.	Revision Date
1 Addendum 1	10/08/2025
2 Addendum 4	10/22/2025
3 Addendum 5	10/23/2025

Director Monika Castillo
Proj. Arch. Tam Quang
Designer Designer
Drawn By Author

PROJECT NO.

25-0056.00

SHEET TITLE

MECHANICAL ENLARGED PLAN

SHEET NO.

M3.01

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MECHANICAL GENERAL NOTES

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- ALL DUCT SIZES ARE INSIDE CLEAR. INCREASE ACCORDINGLY WHERE INTERIOR LINER IS SHOWN OR SPECIFIED.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
- COORDINATE IN THE FIELD THE EXACT LOCATION OF ALL CEILING MOUNTED GRILLES AND DIFFUSERS WITH LIGHT FIXTURES AND (ARCHITECTS) REFLECTED CEILING PLAN.
- THERMOSTATS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.

MECHANICAL KEYED NOTES

- VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
- PROVIDE TRASH SCREEN FOR CHILLER.
- PROVIDE PIPE STAND AT LOCATION SHOWN. RE: 9M-5.02 FOR DETAIL.
- PAINT AND INSULATE OUTDOOR PIPING PER SPECIFICATIONS.
- BOTTOM OF ALL PIPING IN THE CHILLER YARD TO BE MINIMUM 1'-6" ABOVE GRADE.
- PROVIDE 12Wx24H" CONCRETE RUNNER TO SPAN LENGTH OF AIR-COOLED CHILLERS. TYPICAL (2) PER CHILLER. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- REFER TO M4.01 FOR MORE INFORMATION.
- PROVIDE REDUNDANT VFD IN CASE #1 VFD FAILS.
- CONDENSING UNIT SHALL BE MOUNTED ON ROOF SUPPORT. RE: 8M5.03 FOR DETAIL.
- PROVIDE PIPE SUPPORT. RE: M5.02 FOR DETAILS.
- ROUTE REFRIGERANT PIPING FROM CONDENSING UNIT TO ASSOCIATED INDOOR UNIT THROUGH ROOF. PIPING SHOWN SINGLE LINE FOR CLARITY. PROVIDE PIPE SUPPORT AND INSTALL PER MANUFACTURER. RE: M5.03 FOR DETAILS.
- PROVIDE NEW CARBON MONOXIDE MONITOR SYSTEM. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO INSTALLATION.
- PROVIDE 4" CONCRETE HOUSEKEEPING PAD.
- RE: 1M5.02 FOR CHEMICAL FEEDER SUPPORT DETAIL.
- RE: 2M5.02 FOR AIR DIRT SEPARATOR SUPPORT DETAIL.
- PROVIDE END SUCTION PUMP. RE: 3M5.02 FOR DETAIL.
- INSTALL BOILER CIRCULATOR PUMP PROVIDED BY BOILER MANUFACTURER.
- PROVIDE DOUBLE WALL BOILER FLUE UP THROUGH ROOF TO STAINLESS STEEL STACK CAP. PROVIDE CAT IV (SCHEBLER E-VENT) STACK SYSTEM CONSISTING OF AL-294C INNER LINER RATED FOR POSITIVE PRESSURE AND FLUE CONDENSATION. VERIFY FLUE DUCT SIZE WITH MANUFACTURER. RE: 7M5.02.
- PROVIDE COMBUSTION AIR INTAKE. ROUTE THROUGH ROOF. VERIFY AIR INTAKE DUCT SIZE WITH MANUFACTURER. RE: 8M5.02 FOR DETAIL.
- UNIT SHALL ENERGIZE WHEN TEMPERATURE DROPS BELOW 40°F.
- PROVIDE ISOLATION VALVE AT LOCATION SHOWN.
- UNIT SHALL BE SUSPENDED WITH UNISTRUT RUNNERS AND PLATFORM SECURED TO STRUCTURE WITH THREADED HANGER RODS. INSTALL PER MANUFACTURER. COORDINATE WITH ALL OTHER TRADES NOT TO OBSTRUCT.
- ROUTE CONDENSATE DRAIN PIPE DOWN THROUGH ROOF ABOVE 1ST FLOOR CEILING. SIZE PER MANUFACTURER. TO FLOOR SINK IN THE BOILER ROOM. SLOPE PIPING TO ALLOW FOR GRAVITY DRAINAGE. INSTALL TRAP AS RECOMMENDED BY MANUFACTURER. REFER TO PLUMBING PLANS FOR EXACT LOCATION OF FLOOR SINK.
- VERIFY SERVICE CLEARANCE FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
- PROVIDE SHEET METAL PLENUM, FULL SIZE OF RETURN AIR OPENING, LENGTH AS REQUIRED FOR ALL DUCT CONNECTIONS SHOWN.
- PROVIDE DUCT MOUNTED SMOKE DETECTOR. REFER TO LOCAL CODES FOR MORE INFORMATION.
- ROOF MOUNTED EQUIPMENT SHALL BE MOUNTED ON ROOF CURB. RE: DETAIL 7M5.03 TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO EQUIPMENT ON ROOF.
- ROUTE FULL SIZE CHILLED AND HOT WATER PIPING DOWN TO FIRST FLOOR ABOVE CEILING TO CONNECT TO MAIN CHILLED AND HOT WATER PIPING. RE: M5.02 FOR DETAILS AND 1M2.08D FOR CONTINUATION.
- PROVIDE MODEL PHP-D DUCT SUPPORT FOR HIGH WIND APPLICATION. PROVIDE THREADED RODS AND ADHESIVE ANCHORS, WITH ROD EMBEDDED AT LEAST 1-3/4 INCHES (44 MM) INTO CONCRETE. REFER TO MANUFACTURER INSTALLATION INSTRUCTION FOR ADDITIONAL INFORMATION.
- TRANSITION DUCTWORK AS REQUIRED TO CONNECT TO EQUIPMENT ON ROOF.
- PROVIDE PRESSURE REDUCING VALVE ON CHILLED WATER RETURN PIPE SIDE.
- ROUTE CONDENSATE DRAIN PIPE, SIZE AS INDICATED, TO FLOOR SINK. SLOPE PIPING TO ALLOW FOR GRAVITY DRAINAGE. INSTALL TRAP AS RECOMMENDED BY MANUFACTURER. REFER TO PLUMBING PLANS FOR EXACT LOCATION OF FLOOR SINK.
- REFER TO PIPING DIAGRAM SHEET (M4.01) FOR PIPE SIZES.
- RE: 1M2.08D FOR CONTINUATION.
- PROVIDE PHP MODEL PP-10 ON ROOF WITH ROLLER AND FULLY ADJUSTABLE HEIGHT THROUGHOUT PIPE RUN EVERY 6'-0" ON CENTER AND EVERY CHANGE IN DIRECTION. RE: M5.02 FOR DETAILS.
- INSTALL PER MANUFACTURER'S GUIDELINES.
- INSULATE PER SPECIFICATION.
- RE: 3M5.01 FOR CONTINUATION.
- ROUTE CONDENSATE DRAIN PIPE DOWN THROUGH ROOF ABOVE 1ST FLOOR CEILING. SIZE PER MANUFACTURER. TO FLOOR SINK AT THE ICE MACHINE. SLOPE PIPING TO ALLOW FOR GRAVITY DRAINAGE. INSTALL TRAP AS RECOMMENDED BY MANUFACTURER. REFER TO PLUMBING PLANS FOR EXACT LOCATION OF FLOOR SINK.
- RE: 6 / M3.02 FOR LOUVER AND RETURN AIR DUCTWORK BOTTOM ELEVATION AFF. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
- RE: 5 / M3.02 FOR DUCTWORK BOTTOM ELEVATION AFF. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.

2 ENLARGED MECHANICAL ROOF PLAN - AREA D
Scale: 1/4" = 1'-0"

1 MECHANICAL PLAN - MECHANICAL YARD - LEVEL ONE
Scale: 1/4" = 1'-0"

3 MECHANICAL PLAN - BOILER / PUMP ROOM - LEVEL ONE
Scale: 1/4" = 1'-0"

REVISIONS	
Revision No.	Revision Date
1 Addendum 1	10/08/2025
2 Addendum 3	10/17/2025
3 Addendum 4	10/22/2025
4 Addendum 5	10/23/2025

Director Monika Castillo
Proj. Arch. Tam Quang
Designer Designer
Drawn By Author

PROJECT NO.
25-0056.00

SHEET TITLE
MECHANICAL ENLARGED PLAN

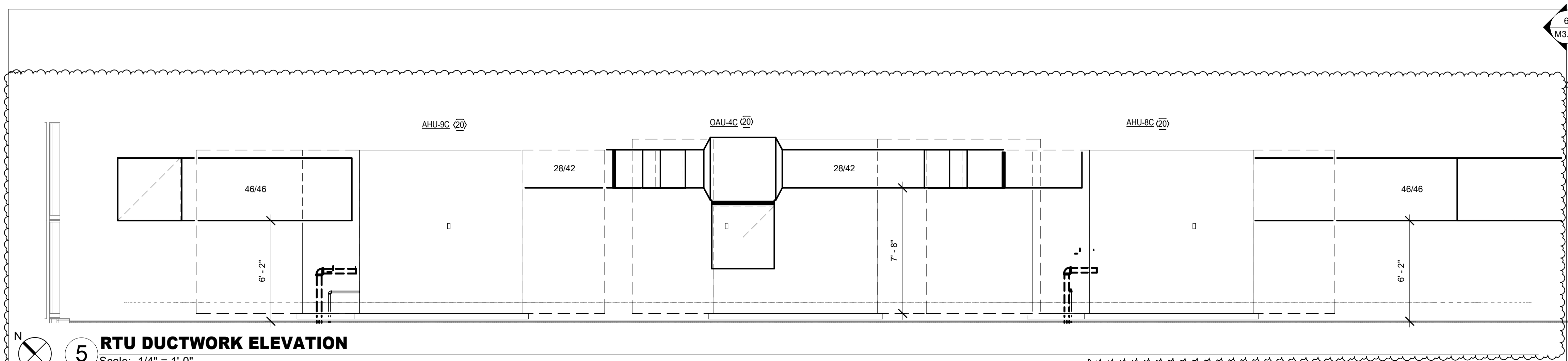
SHEET NO.

SYMBOL LEGEND	
	POINT OF CONNECTION TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

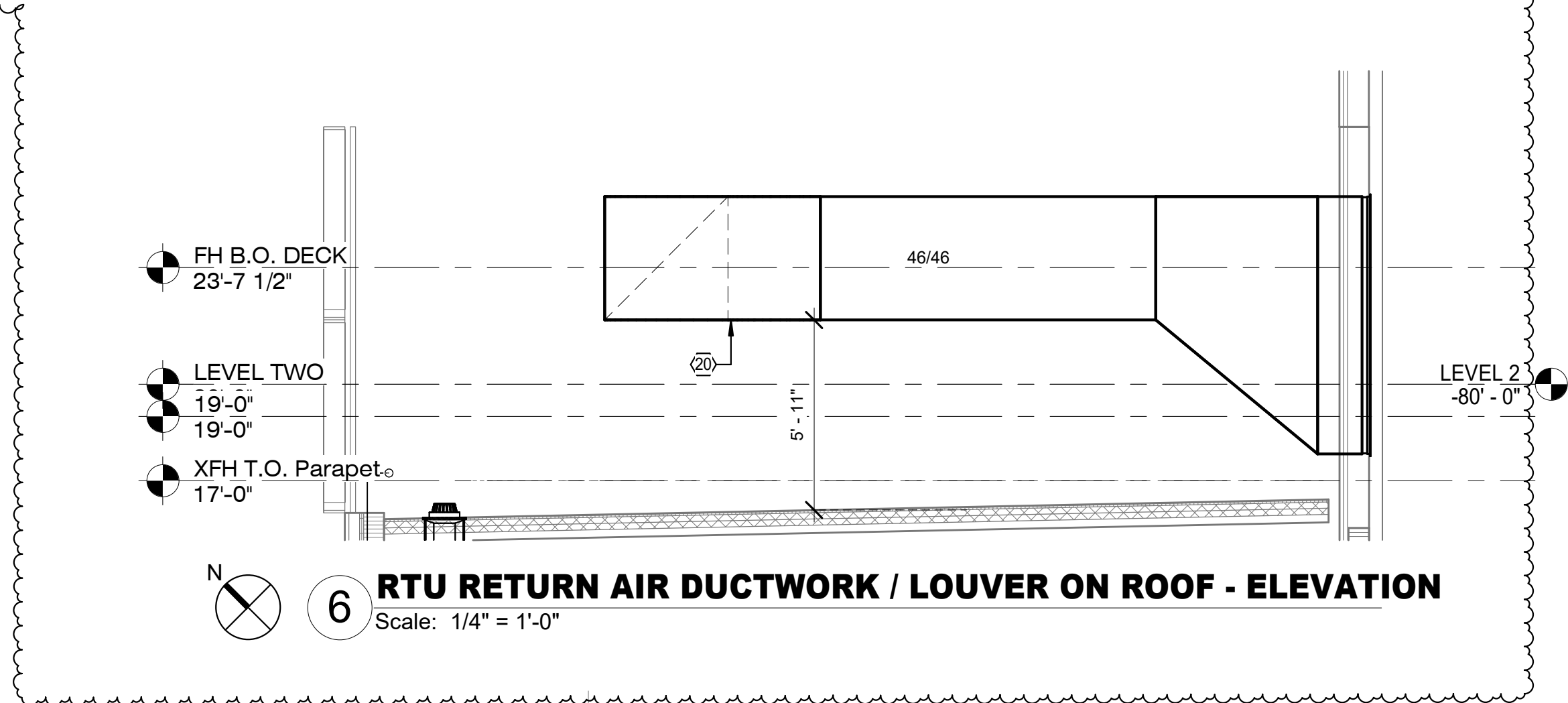
MECHANICAL GENERAL NOTES	
1	THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2	ALL DUCT SIZES ARE INSIDE CLEAR, INCREASE ACCORDINGLY WHERE INTERIOR LINER IS SHOWN OR SPECIFIED.
3	MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4	COORDINATE IN THE FIELD THE EXACT LOCATION OF ALL CEILING MOUNTED GRILLES AND DIFFUSERS WITH LIGHT FIXTURES AND (ARCHITECT'S) REFLECTED CEILING PLAN.
5	THERMOSTATS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.

MECHANICAL DEMOLITION GENERAL NOTES	
1	THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2	ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING DRAWINGS AND PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3	OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO EVAPORATIVE FLUID COOLER, PIPE STANDS, VALVES, AND BOILERS.

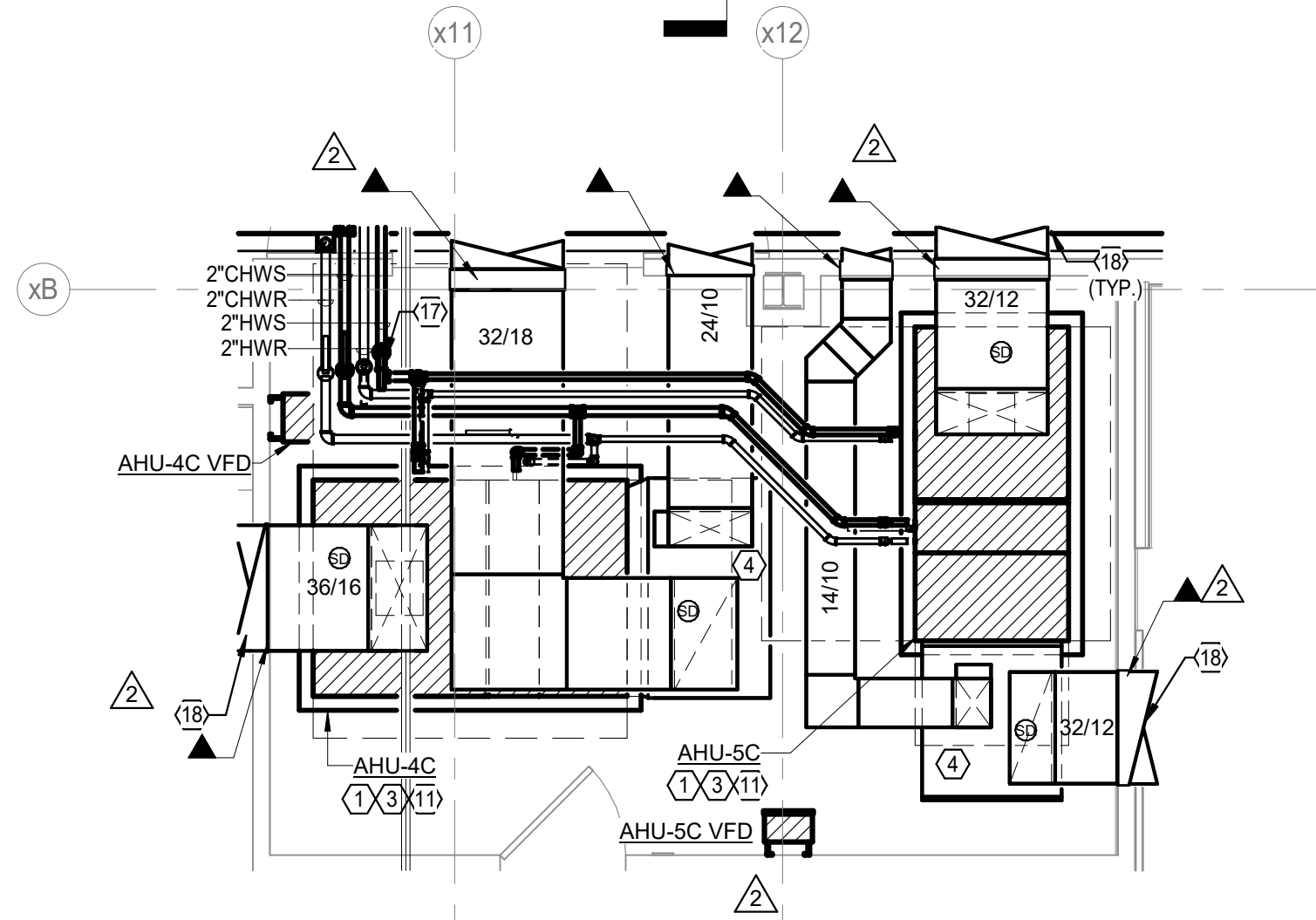
MECHANICAL KEYED NOTES	
1	VERIFY SERVICE CLEARANCE FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER. PROVIDE REQUIRED CLEARANCES FOR PROPER MAINTENANCE AND OPERATION. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2	PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD.
3	ROUTE FULL SIZE CONDENSATE DRAIN PIPE TO FLOOR DRAIN. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION OF FLOOR DRAIN. INSTALL TRAP AS RECOMMENDED BY MANUFACTURER.
4	PROVIDE SHEET METAL PLENUM, FULL SIZE OF UNIT AIR OPENINGS, LENGTH AS REQUIRED FOR ALL DUCT CONNECTIONS AS SHOWN.
5	INTERNALLY LINED RETURN AIR BELOW.
6	ROUTE 10/16 EXHAUST AIR DUCTWORK UP TO RELIEF HOOD ABOVE ON ROOF. TRANSITION EXHAUST DUCT TO CONNECT RELIEF HOOD OPENING.
7	ROUTE 22/16 OUTSIDE AIR DUCTWORK DOWN FROM OUTSIDE AIR INTAKE ABOVE ON ROOF.
8	ROUTE 22/20 EXHAUST AIR DUCTWORK UP TO RELIEF HOOD ON ROOF ABOVE. TRANSITION EXHAUST DUCT TO CONNECT RELIEF HOOD OPENING.
9	ROUTE 26/26 OUTSIDE AIR DUCTWORK DOWN FROM OUTSIDE AIR INTAKE ABOVE ON ROOF.
10	ROUTE 22/22 OUTSIDE AIR DUCTWORK DOWN FROM OUTSIDE AIR INTAKE ABOVE ON ROOF.
11	AHU TO USE EXISTING HOUSEKEEPING PAD.
12	NOT USED.
13	VERIFY SERVICE CLEARANCE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
14	UNIT SHALL BE SUSPENDED WITH UNISTRUT RUNNERS AND PLATFORM SECURED TO STRUCTURE WITH THREADED HANGER RODS. INSTALL PER MANUFACTURER. COORDINATE WITH ALL OTHER TRADES NOT TO OBSTRUCT.
15	RE: 1M2.04B FOR CONTINUATION.
16	ROUTE 22/16 EXHAUST AIR DUCTWORK UP TO RELIEF HOOD ABOVE ON ROOF. TRANSITION EXHAUST DUCT TO CONNECT RELIEF HOOD OPENING.
17	PROVIDE ISOLATION VALVE AT LOCATION SHOWN.
18	RE: 1M2.03A FOR CONTINUATION.
19	ROUTE DUCTWORK DOWN TO FLOOR BELOW. PROVIDE WITH FIRE DAMPER.
20	ROUTE DUCT BOTTOM ELEVATION AT HEIGHT AS SHOWN AFF. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT. RE: 2.1M3.01.



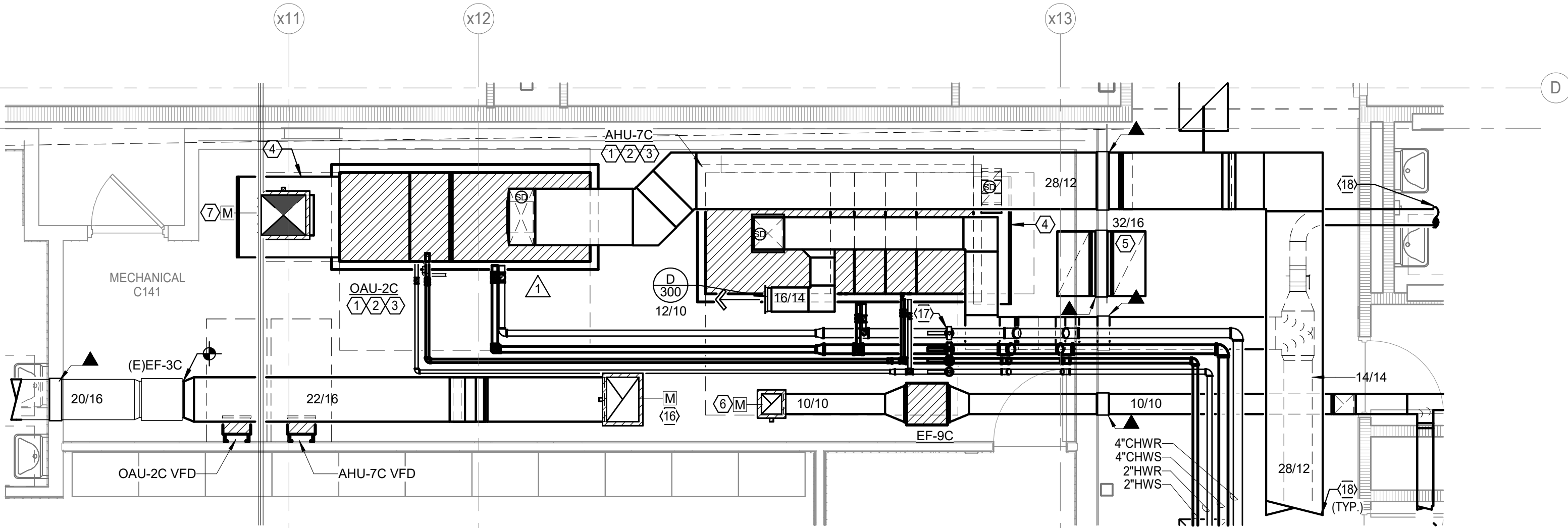
5 RTU DUCTWORK ELEVATION
Scale: 1/4" = 1'-0"



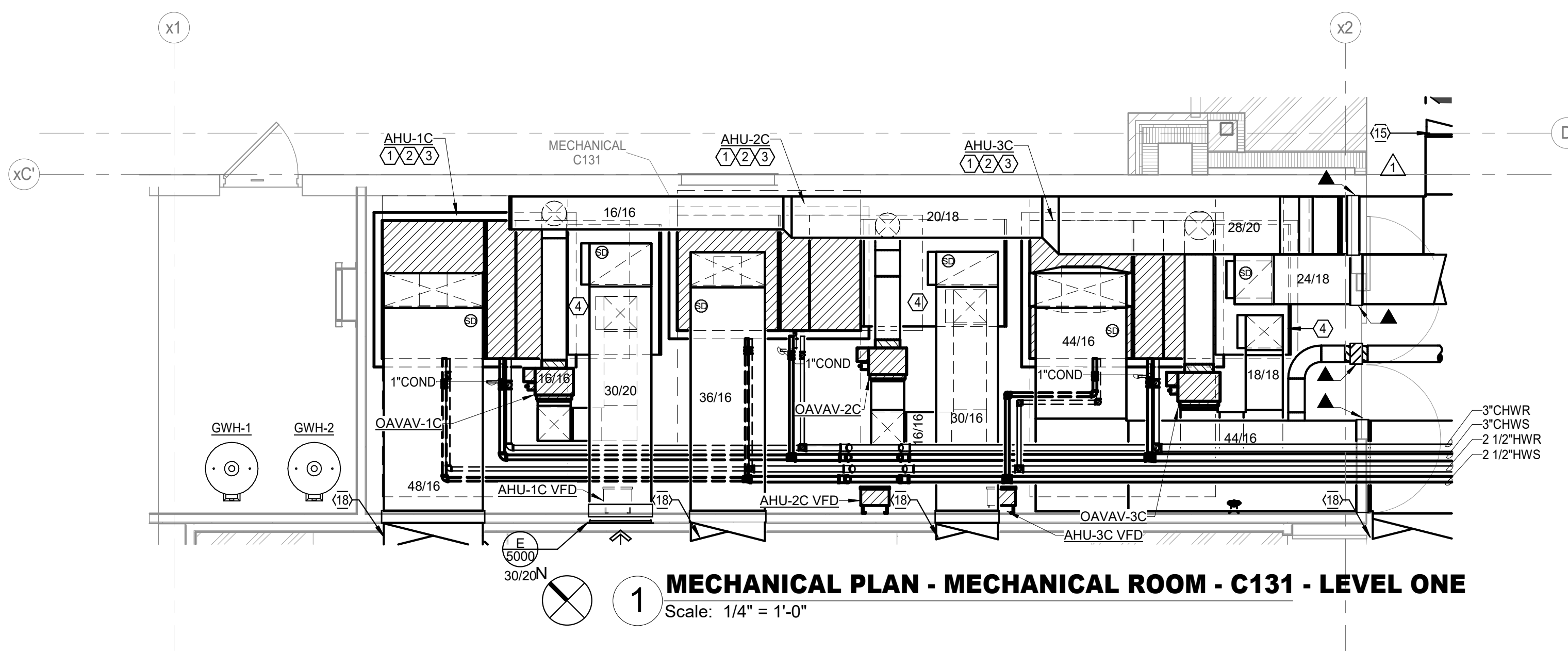
6 RTU RETURN AIR DUCTWORK / LOUVER ON ROOF - ELEVATION
Scale: 1/4" = 1'-0"



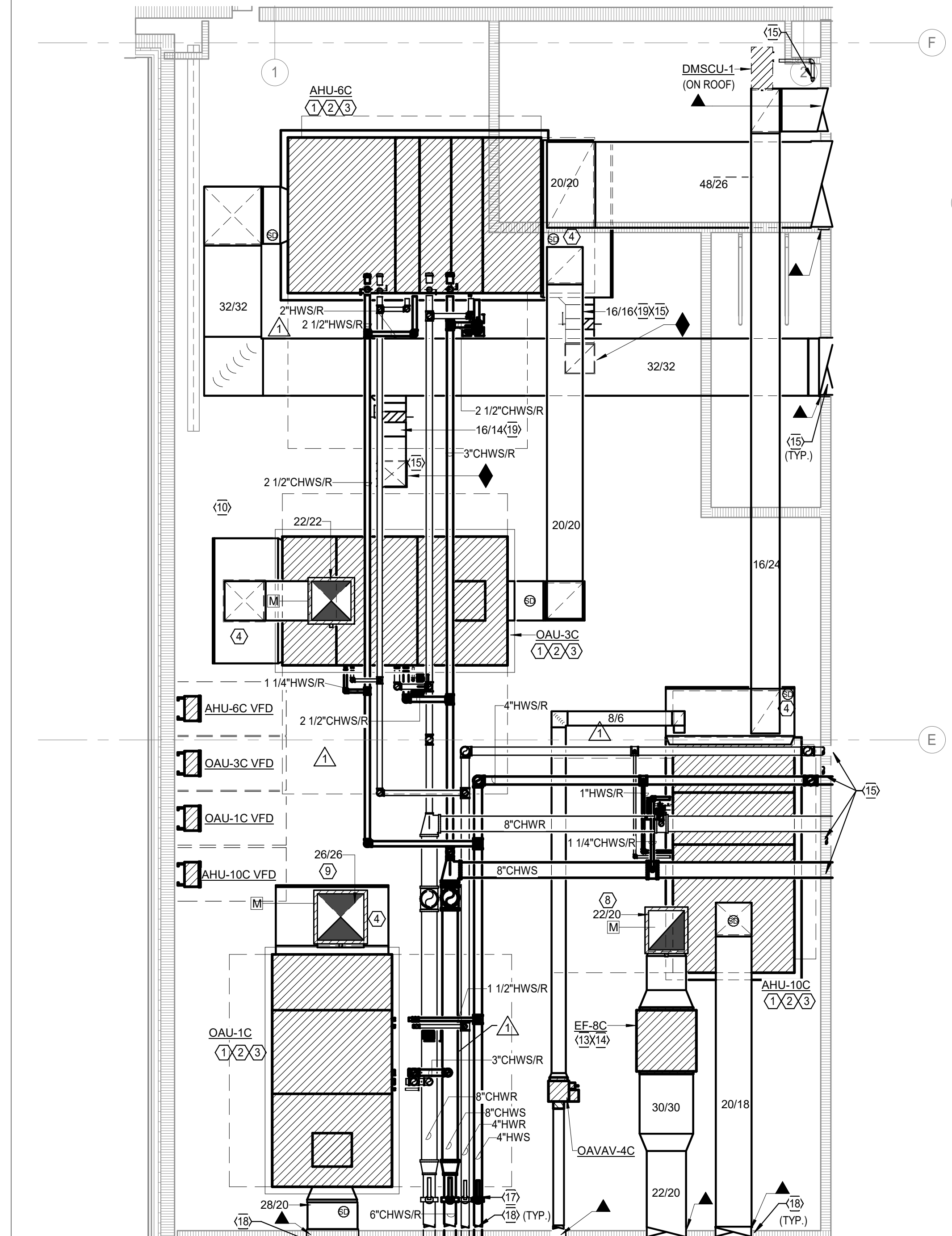
4 MECHANICAL PLAN - MECHANICAL ROOM - C108 - LEVEL ONE
Scale: 1/4" = 1'-0"



2 MECHANICAL PLAN - MECHANICAL ROOM - C141 - LEVEL ONE
Scale: 1/4" = 1'-0"



1 MECHANICAL PLAN - MECHANICAL ROOM - C131 - LEVEL ONE
Scale: 1/4" = 1'-0"

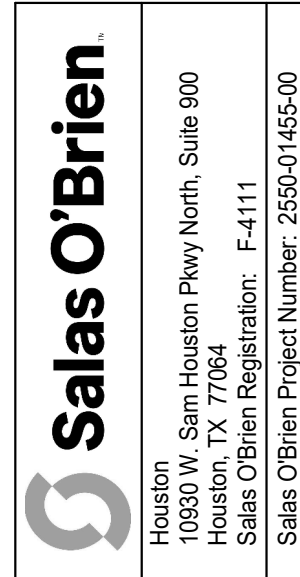


3 MECHANICAL PLAN - MEZZANINE - M2.04B
Scale: 1/4" = 1'-0"



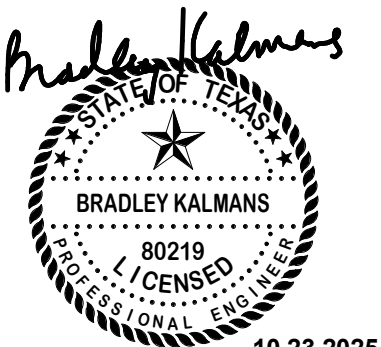
M.E.P. ENGINEER

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GALENA PARK ISD
HOUSTON, TEXAS

North Shore Multi-Use Indoor Facility



ISSUED: OCTOBER 1, 2025

REVISIONS

Revision No.	Revision Date
1 Addendum 1	10/09/2025
2 Addendum 2	10/22/2025
3 Addendum 5	10/23/2025

Director Monika Castillo
Proj. Arch. Tam Quang
Designer Designer
Drawn By Author

PROJECT NO.

25-0056.00

SHEET TITLE

MECHANICAL SCHEDULES

SHEET NO.

M6.01

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AIR HANDLING UNIT - FIELD HOUSE

MARK	FAN				COOLING												HEATING				PIPE SIZE TO COIL (IN.)		REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C.)	HORSE POWER	POWER		AIR TEMPERATURE (°F)				COOLING CAPACITY (BTUH)	WATER		ENTERING AIR TEMPERATURE (°F)		MIN HEATING CAPACITY	ENTERING TEMP. (°F)	GPM	PRESSURE DROP (FT.)	CHILLED WATER	HOT WATER		
					V	F	ENTERING DRY BULB	ENTERING WET BULB	LEAVING DRY BULB	LEAVING WET BULB		ENTERING TEMP (°F)	GPM	PRESSURE DROP (FT.)	ENTERING TEMPERATURE (°F)							ENTERING TEMP. (°F)	
AHU-1C	5,000	1,500	2.00	8.0	480	3	60	75.0	62.6	53.0	52.5	145,400	45	24.2	15.0	65.0	135,000	130.0	13.6	10.0	2"	1 1/2"	1.3,4,5,7,8,10,11,12
AHU-2C	3,000	900	2.00	8.0	480	3	60	75.0	62.6	53.0	52.5	87,300	45	14.5	15.0	65.0	81,000	130.0	8.2	10.0	1 1/2"	1 1/4"	1.3,4,5,7,8,10,11,12
AHU-3C	5,505	1,925	2.00	8.0	480	3	60	75.0	62.6	53.0	52.5	160,100	45	26.7	15.0	65.0	148,635	130.0	15.0	10.0	2"	1 1/2"	1.3,4,5,7,8,10,11,12
AHU-4C	4,500	1,350	2.00	8.0	480	3	60	75.0	62.6	53.0	52.5	130,900	45	21.8	15.0	65.0	121,500	130.0	12.3	10.0	2"	1 1/4"	1.3,4,5,7,8,10,11,12
AHU-5C	2,610	750	2.00	4.0	480	3	60	75.0	62.6	53.0	52.5	75,900	45	12.6	15.0	65.0	70,470	130.0	7.1	10.0	1 1/4"	1 1/4"	1.3,4,5,7,8,10,11,12
OAU-1C	4,500	4,500	2.00	8.0	480	3	60	98.0	80.0	53.0	52.5	441,200	45	73.4	15.0	27.0	136,080	130.0	13.7	10.0	3"	1 1/2"	2.3,5,6,7,8,9
OAU-2C	2,700	2,700	2.00	4.0	480	3	60	98.0	80.0	53.0	52.5	264,000	45	43.9	15.0	27.0	81,648	130.0	8.2	10.0	2 1/2"	1 1/4"	3.5,6,7,8,9,10
GENERAL NOTES:																							
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.																							
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.																							
REMARKS:																							
1. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.																							
2. PROVIDE HORIZONTAL UNIT.																							
3. PROVIDE CONSTANT VOLUME UNIT WITH VARIABLE FREQUENCY DRIVE. .																							
4. PROVIDE TOP DISCHARGE.																							
5. PROVIDE TWO-WAY COOLING CONTROL VALVES.																							
6. PROVIDE THREE-WAY HEATING CONTROL VALVES.																							
7. PROVIDE HOT WATER COIL IN REHEAT POSITION.																							
8. PROVIDE UNIT WITH FLAT FILTER SECTION.																							
9. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.																							
10. PROVIDE VERTICAL UNIT.																							
11. PROVIDE TWO-WAY HEATING CONTROL VALVES.																							
12. PROVIDE SINGLE-ZONE VAV CONTROLS, COMPLETE WITH SUPPLY FAN VFD, DISCHARGE AIR TEMPERATURE SENSOR AND PROGRAMMABLE ZONE TEMPERATURE AND RELATIVE HUMIDITY SENSOR.																							

ROOF MOUNTED WEATHERPROOF AIR HANDLING UNIT

MARK	FAN				COOLING								HEATING				PIPE SIZE TO COIL (IN.)		REMARKS				
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C.)	HORSE POWER	AIR TEMPERATURE (°F)				COOLING CAPACITY (BTUH)	WATER			MIN. HEATING CAPACITY	WATER		CHILLED WATER	HOT WATER						
					ENTERING DRY BULB	ENTERING WET BULB	LEAVING DRY BULB	LEAVING WET BULB		ENTERING TEMP (°F)	GPM	PRESSURE DROP (FT.)		ENTERING TEMP (°F)	GPM			PRESSURE DROP (FT.)					
AHU-8C	26,000	12,000	3.00	40	480	3	60	75.0	62.6	53.0	52.5	752,100	45	125.2	15.0	65.0	702,000	130.0	70.9	10.0	4"	3"	1,2,3,4,5,6,7,9,10,12,13,15,16
AHU-9C	26,920	12,000	3.00	40	480	3	60	75.0	62.6	53.0	52.5	783,100	45	130.4	15.0	65.0	726,840	130.0	73.4	10.0	4"	3"	1,2,3,4,5,7,9,10,11,12,13,15,16
OAU-4C	24,000	24,000	2.00	33	480	3	60	98.0	80.0	53.0	52.5	2,353,100	45	391.7	15.0	27.0	725,760	130.0	73.3	10.0	6"	3"	2,3,4,5,6,8,9,10,13,14,15,16
GENERAL NOTES:																							
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.																							
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.																							
REMARKS:																							
1. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.																							
2. PROVIDE HORIZONTAL UNIT.																							
3. PROVIDE CONSTANT VOLUME UNIT WITH A VARIABLE FREQUENCY DRIVE AND ONE A REDUNDANT VFD. THIS UNIT HAS TWO VARIABLE FREQUENCY DRIVES.																							
4. PROVIDE FRONT DISCHARGE.																							
5. PROVIDE TWO-WAY COOLING CONTROL VALVES.																							
6. PROVIDE THREE-WAY HEATING CONTROL VALVES.																							
7. PROVIDE HOT WATER COIL IN REHEAT POSITION.																							
8. PROVIDE HOT WATER COIL IN PRE-HEAT POSITION.																							
9. PROVIDE UNIT WITH FLAT FILTER SECTION.																							
10. PROVIDE UV LIGHT PER SPECIFICATIONS. UV LIGHT SHALL HAVE SEPARATE ELECTRICAL CONNECTION FROM AIR HANDLING UNIT. REFER TO ELECTRICAL DRAWINGS.																							
11. PROVIDE TWO-WAY HEATING CONTROL VALVES.																							
12. PROVIDE SINGLE-ZONE VAV CONTROLS, COMPLETE WITH SUPPLY FAN VFD, DISCHARGE AIR TEMPERATURE SENSOR AND PROGRAMMABLE ZONE TEMPERATURE AND RELATIVE HUMIDITY SENSOR.																							
13. PROVIDE ROOF CURB WITH SOLID BOTTOM TO MEET WITH 150 MPH WINDS, ACoustical TYPE, WITH A MINIMUM OF 2" FIBERGLASS INSULATION.																							
14. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.																							
15. PROVIDE UNIT WITH RETURN AIR AND OUTSIDE AIR INLET ON SIDES OF MIXING BOX AND ACCESS PANEL ON REAR OF MIXING BOX SECTION.																							
16. PROVIDE WITH RETURN AIR AND OUTSIDE AIR INLET ON SIDES OF MIXING BOX AND ACCESS PANEL ON REAR OF MIXING BOX SECTION.																							

100% OUTSIDE AIR HANDLING UNIT - WEIGHT ROOM

MARK	FAN				COOLING										HEATING						PIPE SIZE TO COIL (IN.)		REMARKS
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C.)	HORSE POWER	ELECTRICAL CHARGES				AIR TEMPERATURE (°F)				COOLING CAPACITY	WATER		ENTERING AIR TEMPERATURE (°F)	HEATING CAPACITY	WATER		CHILLED WATER	HOT WATER		
					V	PH	F	ENTERING DRY BULB	ENTERING WET BULB	LEAVING DRY BULB	LEAVING WET BULB	ENTERING TEMP (°F)		GPM	PRESSURE DROP (FT.)			ENTERING TEMP (°F)	GPM			PRESSURE DROP (FT.)	
OAU-3C	3,000	3,000	2.00	5.0	480	3	60	98.0	80.0	53.0	52.5	294,100	45	49.0	15.0	27.0	90,720	130.0	9.2	10.0	2 1/2"	1 1/4"	1,2,3,5,6,7,8,9,10
GENERAL NOTES:																							
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.																							
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.																							
REMARKS:																							
1. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.																							
2. PROVIDE HORIZONTAL UNIT.																							
3. PROVIDE CONSTANT VOLUME UNIT WITH VARIABLE FREQUENCY DRIVE.																							
4. PROVIDE FRONT DISCHARGE.																							
5. PROVIDE TWO-WAY COOLING CONTROL VALVES.																							
6. PROVIDE THREE-WAY HEATING CONTROL VALVES.																							
7. PROVIDE HOT WATER COIL IN PRE-HEAT POSITION.																							
8. PROVIDE UNIT WITH FLAT FILTER SECTION.																							
9. PROVIDE UV LIGHT PER SPECIFICATIONS. UV LIGHT SHALL HAVE SEPARATE ELECTRICAL CONNECTION FROM AIR HANDLING UNIT. REFER TO ELECTRICAL DRAWINGS.																							
10. PROVIDE TOP DISCHARGE.																							

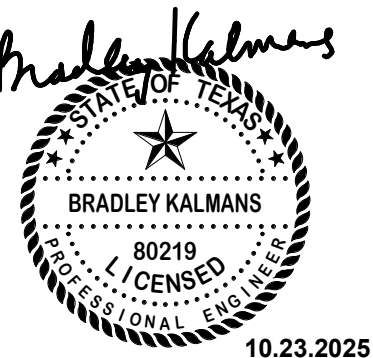
AIR HANDLING UNIT - WEIGHT ROOM

MARK	FAN				COOLING								HEATING				PIPE SIZE TO COIL (IN.)		REMARKS				
	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C.)	HORSE POWER	ELECTRICAL CHARG.		AIR TEMPERATURE (°F)				COOLING CAPACITY (BTUH)	ENTERING TEMP (°F)	WATER GPM	PRESSURE DROP (FT.)	ENTERING AIR TEMPERATURE (°F)	HEATING CAPACITY	ENTERING TEMP (°F)	WATER GPM		PRESSURE DROP (FT.)	CHILLED WATER	HOT WATER	
					V	PH	F	ENTERING DRY BULB	ENTERING WET BULB	LEAVING DRY BULB													LEAVING WET BULB
AHU-6C	10,000	3,000	2.00	15	480	3	60	75.0	62.6	53.0	52.5	289,300	45	48.2	15.0	67.0	248,400	130.0	25.1	10.0	2 1/2"	2"	1,2,3,5,6,7,8,9,10,11
AHU-7C	1,590	600	1.25	5	480	3	60	75.0	62.6	53.0	52.5	46,300	45	7.7	15.0	69.2	35,718	130.0	3.6	10.0	1 1/4"	1"	1,2,3,4,5,6,7,8,10,11
AHU-10C	2,275	175	2.00	5	480	3	60	75.0	62.6	53.0	52.5	66,200	45	11.0	15.0	69.5	50,388	130.0	5.1	10.0	1 1/4"	1"	1,2,3,4,5,6,7,8,10,11
GENERAL NOTES:																							
1. EXTERIOR STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.																							
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.																							
REMARKS:																							
1. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.																							
2. PROVIDE HORIZONTAL UNIT.																							
3. PROVIDE CONSTANT VOLUME UNIT WITH VARIABLE FREQUENCY DRIVE.																							
4. PROVIDE TOP DISCHARGE.																							
5. PROVIDE TWO-WAY COOLING CONTROL VALVES.																							
6. PROVIDE TWO-WAY HEATING CONTROL VALVES.																							
7. PROVIDE HOT WATER COIL IN REHEAT POSITION.																							
8. PROVIDE UNIT WITH FLAT FILTER SECTION.																							
9. PROVIDE FRONT DISCHARGE.																							
10. PROVIDE UV LIGHT PER SPECIFICATIONS. UV LIGHT SHALL HAVE SEPARATE ELECTRICAL CONNECTION FROM AIR HANDLING UNIT. REFER TO ELECTRICAL DRAWINGS.																							
11. PROVIDE SINGLE-ZONE VAV CONTROLS, COMPLETE WITH SUPPLY FAN VFD, DISCHARGE AIR TEMPERATURE SENSOR AND PROGRAMMABLE ZONE TEMPERATURE AND RELATIVE HUMIDITY SENSOR.																							



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ISSUED: OCTOBER 1, 2025

REVISIONS

Revision No.	Revision Date
1 Addendum 4	10/22/2025
2 Addendum 5	10/23/2025

Director Monika Castillo
Proj. Arch. Tam Quang
Designer Designer
Drawn By Author

PROJECT NO.

25-0056.00

SHEET TITLE

PLUMBING UNDERFLOOR
PLAN - UNIT D

SHEET NO.

P2.05D

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North Shore Multi-Use Indoor Facility

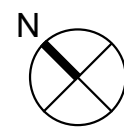
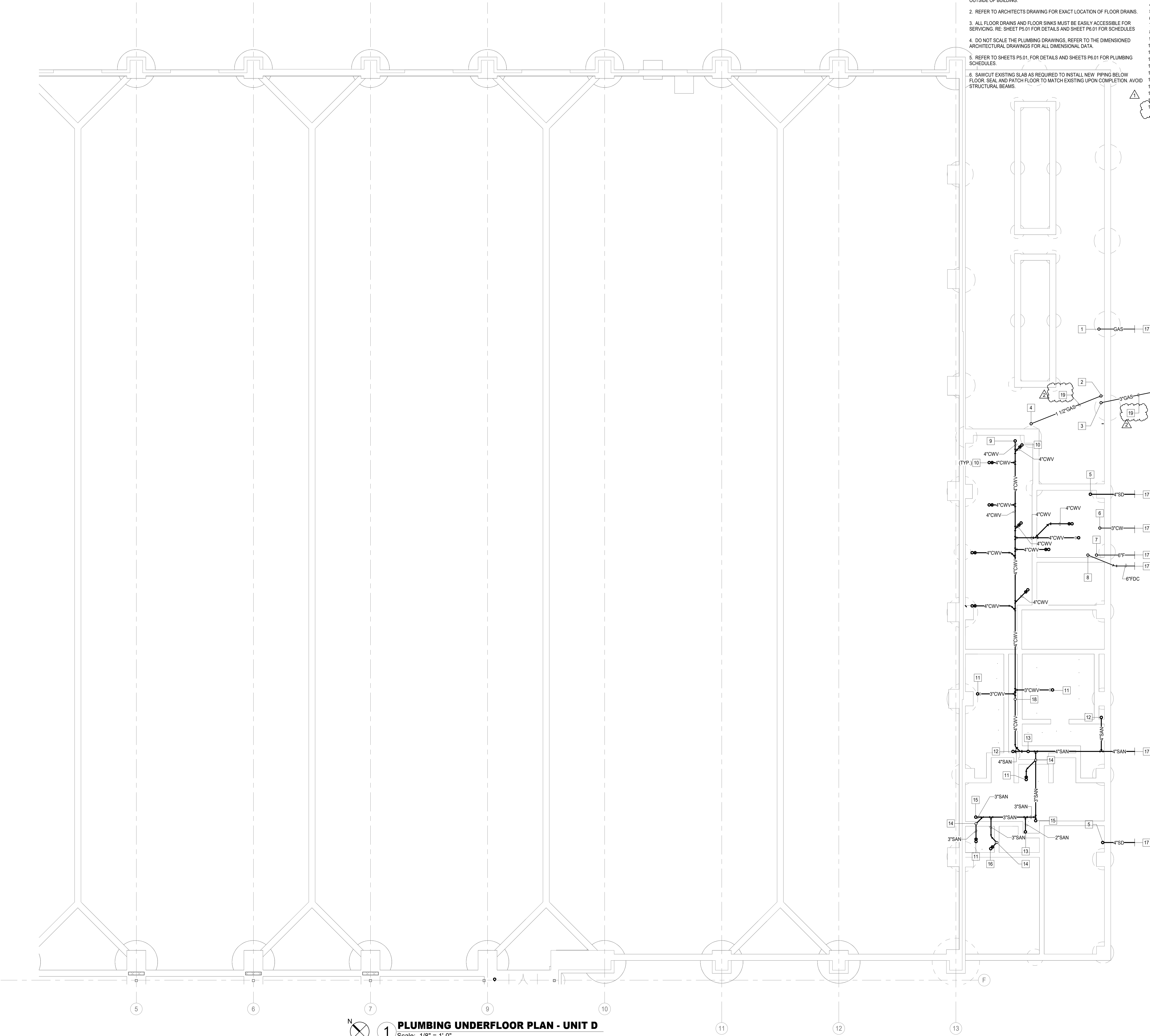
GALENA PARK ISD
HOUSTON, TEXAS

PLUMBING GENERAL NOTES:

- IT IS IMPRACTICAL DUE TO THE STREET SEWER, STRUCTURAL FEATURES AND ARRANGEMENT OF BUILDING TO OBTAIN A SLOPE OF 1/4" PER FOOT PIPING 3" THRU 6" SHALL HAVE A SLOPE OF 1/8" PER FOOT BELOW BUILDING TO 5'-0" OUTSIDE OF BUILDING.
- REFER TO ARCHITECTS DRAWING FOR EXACT LOCATION OF FLOOR DRAINS.
- ALL FLOOR DRAINS AND FLOOR SINKS MUST BE EASILY ACCESSIBLE FOR SERVICING. RE: SHEET P5.01 FOR DETAILS AND SHEET P6.01 FOR SCHEDULES.
- DO NOT SCALE THE PLUMBING DRAWINGS. REFER TO THE DIMENSIONED ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL DATA.
- REFER TO SHEETS P5.01, FOR DETAILS AND SHEETS P6.01 FOR PLUMBING SCHEDULES.
- SAWCUT EXISTING SLAB AS REQUIRED TO INSTALL NEW PIPING BELOW FLOOR. SEAL AND PATCH FLOOR TO MATCH EXISTING UPON COMPLETION. AVOID STRUCTURAL BEAMS.

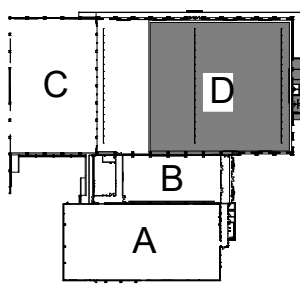
PLUMBING KEYED NOTES "A" "B" "C" "D" "E" "F" "G" "H" "I" "J" "K" "L" "M" "N" "O" "P" "Q" "R" "S" "T" "U" "V" "W" "X" "Y" "Z"

- GAS PIPE SERVICE STUB-UP BY CENTERPOINT ENERGY.
- 1-1/2"(SPSI) GAS FROM ABOVE.
- 3"(SPSI) GAS FROM ABOVE.
- 1-1/2" GAS UP.
- 4" STORM FROM ABOVE.
- 3" COLD WATER UP.
- 6" FIRE SERVICE UP.
- 6" DRY FIRE SERVICE UP.
- 4" WASTE FROM CLEANOUT ABOVE.
- 3" WASTE FROM DRAIN ABOVE. PROVIDE P-TRAP.
- 4" WASTE FROM ABOVE.
- 3" WASTE FROM DRAIN ABOVE. PROVIDE P-TRAP.
- 4" WASTE FROM ABOVE.
- 2" WASTE FROM ABOVE.
- 3" WASTE DOWN, 2" VENT UP.
- 3" WASTE FROM CLEANOUT ABOVE.
- 3" WASTE FROM MOP SINK ABOVE.
- RE: SHEET P1.00 FOR CONTINUATION.
- 4" COLD WATER UP.
- PROVIDE MINIMUM 6" SCHEDULE 40 PVC SLEEVE FOR GAS PIPING BELOW PAVING/CONCRETE.



1

PLUMBING UNDERFLOOR PLAN - UNIT D
Scale: 1/8" = 1'-0"



GAS WATER HEATER SCHEDULE										
BASIS OF DESIGN			STORAGE CAPACITY (GAL)	BTU/HR INPUT	WH GALS. PER HR. RECOVERY RATE 100°F RISE	STORED WATER TEMP	ELECTRICAL CHAR.			
MARK	MANUFACTURER	MODEL					V	P	MCA	MOCP
GWH-1	AO SMITH	BTH-198A	100 GAL	199	256	140 °F	120	1	0	20
GWH-2	AO SMITH	BTH-198A	100 GAL	199	256	140 °F	120	1	0	20
1. INDIVIDUAL VERTICAL 4" CONCENTRIC FLEX VENT FOR EACH WATER HEATER. PROVIDE CONCENTRIC VENT KIT "9081144005" REFER TO DRAWINGS FOR FLEX ROUTING AND LOCATIONS THROUGH ROOF. CONTRACTOR SHALL COORDINATE FLEX LOCATION THROUGH ROOF AND PIPE ROUTING IN CEILING SPACES WITH ALL OTHER DISCIPLINES PRIOR TO CONSTRUCTION.										
2. PROVIDE ACID NEUTRALIZING TANK KIT "5007890092"										

NOTE: PROVIDE HOT WATER EXPANSION TANK DOWNSTEAM OF CHECK VALVE ON COLD WATER SUPPLY. WATTS DET-20

ELECTRIC WATER HEATER SCHEDULE										
BASIS OF DESIGN			STORAGE CAPACITY (GAL)	KW	WH GALS. PER HR. RECOVERY RATE 100°F RISE	STORED WATER TEMP	ELECTRICAL CHAR.			
MARK	MANUFACTURER	MODEL					V	P	MCA	MOCP
792	AO SMITH	DSE-30A	30 GAL	12.3	50	140	480	3	0	20

NOTE: PROVIDE HOT WATER EXPANSION TANK DOWNSTEAM OF CHECK VALVE ON COLD WATER SUPPLY. WATTS DET-20

CIRCULATION PUMP SCHEDULE										
BASIS OF DESIGN			DESCRIPTION	TYPE	GPM	HEAD FEET	HP MIN	V	P	F
MARK	MANUFACTURER	MODEL								
CP-1	GRUNDFOS	MAGNA3 32-120 GF	CIRCULATION PUMP	INLINE BRONZE	4	30'	1/25	120	1	60
CP-2	GRUNDFOS	ALPHA HWR 15-55SF	CIRCULATION PUMP	INLINE BRONZE	5	6'	1/25	120	1	60

NOTE: FACTORY SET PUMP TO AUTO-ADAPT SETTING

SHOCK ARRESTORS

P.D.I. SYMBOL	FIXTURE UNITS	CHAMBER LENGTH	THREADED CONNECTION
	1-11	9.58"	1/2"
	12-32	11.34"	3/4"
	33-60	14.11/16"	1"
	61-113	12.38"	1"
	114-154	15.38"	1"
	155-330	17.38"	1"

PUMPS

ITEM	DESCRIPTION	TYPE	GPM	HEAD FEET	H.P. MIN.	VOLTY PHASE	MAX RPM	MANUFACTURER AND MODEL
FP-1	FIRE PUMP	VERTICAL IN-LINE	500	148'	25	460/360	3525	PATTERSON 5X3 VPI
JP-1	JOCKEY PUMP	VERTICAL IN-LINE MULTISTAGE	5	185'	3/4	460/360	3500	EBARA MODEL:EVY-F2017315
NOTES:								
1. PROVIDE (FC-1) FIRE PUMP CONTROLLER - FIRE-ROLT MODEL:FTT-1000-AM258, STOP START WITH TRANSFER SWITCH								
2. PROVIDE (JC-1) JOCKEY PUMP CONTROLLER - FIRE-ROLT MODEL:FTAF30F-4G304B								

DOMESTIC BOOSTER PUMP

ITEM NO.	DESCRIPTION	TYPE	GPM (EPA)	HEAD FEET (TOTAL)	H.P. MIN. (EPA)	ELECTRICAL REQUIRED (V/PH/2)	MAX RPM	MANUFACTURER AND MODEL
TBP-1	TRIPLEX BOOSTER PUMP	VERTICAL MULTI-STAGE	45	130	3	460/360	3500	GRUNDFOS HYDRO MPC-E 30RE 10-4
PUMP NOTES:								
1. PROVIDE AN 44 GALLON ELBI VTL-170 BLADDER/DIAPHRAGM TANK.								
2. PROVIDE INTEGRAL VFD ON EACH PUMP OR IF EXTERNAL DRIVES THEY SHALL BE CONTAINED WITHIN A SINGLE ELECTRICAL ENCLOSURE (MIN. NEMA 3P UNLESS NOTED OTHERWISE). PANEL SHALL HAVE MAIN DISCONNECT AND SINGLE POINT CONNECTION.								
3. PROVIDE REDUNDANT DISCHARGE PRESSURE TRANSDUCER AND CONTROL CAPABILITY TO MONITOR BOTH SENSOR AND AUTOMATICALLY SWITCH TO SECONDARY SENSOR IN THE EVENT OF A PRIMARY SENSOR FAILURE								
4. PROVIDE SURGE PROTECTION, BATTERY BACKUP, SERVICE DISCONNECTS, INDIVIDUAL PUMP RUN INDICATION, AUDIBLE & VISUAL ALARM, BACNET COMMUNICATION INTERFACE. HEADERS SHALL BE CONSTRUCTED OF 3/16 SS WITH FLANGED CONNECTIONS ON ALL ENDS. PROVIDE SUCTION & DISCHARGE ISOLATION VALVES AND DISCHARGE CHECK VALVES ON EACH PUMP.								
5. CONTRACTOR TO BLEED A PIPE OFF THE SYSTEM DISCHARGE LINE TO THE BLADDER TANK PROVIDING A BLOCK & BUILT PIPING ARRANGEMENT THAT ALLOWS THE TANK TO BE ISOLATED FROM THE SYSTEM AND DRAINED.								
7. WHEN REQUIRED, SYSTEM SUPPLIER TO PROVIDE 150# FLANGED X 150# FLANGED REDUCING FLEX CONNECTORS, OF ALL STAINLESS STEEL CONSTRUCTION (SEE PLANS FOR PIPE CONNECTION SIZES).								
8. FOR PACKAGES BEING FED FROM A BREAK TANK, PACKAGE TO BE WIRED INTO THE LEVEL CONTROL PANELS LOW LEVEL ALARM FOR DRY RUN PROTECTION NOTE: DRY RUN PROTECTION BY SUCTION PRESSURE SENSOR IS NOT ACCEPTABLE).								

GAS PIPING CALCULATIONS

MEASURED LENGTH	=	110'
ADD FOR VALVES AND FITTINGS (10%)	=	11'
TOTAL EQUIVALENT LENGTH	=	121'

DESIGN:
1999 NATIONAL FUEL GAS CODE
TABLE 9.9 - 150' COLUMN

8 OUNCE GAS	
MEASURED LENGTH	= 333'
ADD FOR VALVES AND FITTINGS (10%)	= 33'
TOTAL EQUIVALENT LENGTH	= 366'

DESIGN:
2021 INTERNATIONAL FUEL GAS CODE
TABLE 402.4(1)- 400' COLUMN

PLUMBING PIPING LEGEND

SYMBOLS	DESCRIPTION
---	EXISTING TO BE REMOVED
- - - - -	SANITARY OR WASTE PIPING BELOW SLAB(SAN)
- - - - -	SANITARY OR WASTE PIPING ABOVE SLAB(SAN)
SD	STORM DRAIN PIPING (SD)
OFD	STORM OVERFLOW DRAIN (OFD)
SD	STORM PIPING BELOW SLAB(SD)
- - - - -	ACID WASTE PIPING BELOW SLAB (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSATE DRAIN PIPING (CD)
D	CONDENSATE - INDIRECT DRAIN PIPING (D)
V	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
AIR	COMPRESSED AIR PIPING (A)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
DI	DEMINERALIZATION WATER(DI)
OWS	OIL WATER SEPARATOR
→	FLOW DIRECTIONAL ARROW
↔	SHUT-OFF VALVE
↔	BALANCING VALVE (BV)
↔	SOLENOID VALVE (SV)
↔	BALL VALVE (BV)
↔	BUTTERFLY VALVE
↔	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
↔	HORIZONTAL SWING CHECK
↔	UNION
↔	HORIZONTAL SWING CHECK
↔	REDUCER OR INCREASER
↔	REDUCED PRESSURE BACKFLOW PREVENTER (RPBP)
↓	PIPING DOWN
↑	RISE OR DROP PIPING
↓	PIPING UP -OR- PIPING UP & DOWN
↔	CAP ON END OF PIPE
↔	CLEANOUT (WALL OR CEILING) (CO)
↔	FLOOR CLEANOUT (FCO)
↔	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
↔	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
↔	FIRE DEPARTMENT VALVE AT RISER
↔	FIRE HYDRANT
↔	FIRE DEPARTMENT CONNECTION
↔	PRESSURE REDUCING VALVE (PRV)
↔	BRANCH CONNECTION OUT OF TOP
↔	BRANCH CONNECTION OUT OF BOTTOM
↔	BRANCH CONNECTION OUT OF SIDE
↔	WYE & 18TH BEND BRANCH CONNECTION
↔	WYE BRANCH CONNECTION
↔	HOSE BIBB
↔	PRESSURE GAUGE WITH COCK
↔	THERMOMETER
↔	GAS PRESSURE REGULATOR
↔	TEST COCK
↔	GAS METER
↔	WALL HYDRANT
↔	VALVE IN RISE
↔	ASME TEMPERATURE & PRESSURE RELIEF VALVE
↔	VACUUM RELIEF VALVE
↔	ANGLE VALVE
↔	OSBY VALVE
↔	ROOF DRAIN
↔	REFER TO KEYED NOTE
↔	FLOOR SWITCH
↔	FLOOR SINK (FS)
↔	FLOOR DRAIN (FD)
↔	FLOOR DRAIN WITH P-TRAP (FD)
↔	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
↔	HUB DRAIN (HD)
↔	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
↔	ACCESS PANEL LOCATION SYMBOL
↔	SHOCK ABSORBER
↔	DIAMETER
↔	EXISTING TO REMAIN
↔	EXISTING TO REMAIN
↔	NEW
↔	NORMALLY CLOSED
↔	NORMALLY OPEN
↔	NEW CONNECTION
↔	SQUARE FEET
↔	TYPICAL
↔	VENT THROUGH ROOF
↔	VENT TO ATMOSPHERE
↔	INVERT ELEVATION
↔	QUARTER OF AN INCH SLOPE
↔	1/8TH OF AN INCH SLOPE
↔	1/16TH OF AN INCH SLOPE
↔	DELTA CHANGE SYMBOL

DISREGARD SYMBOLS AND ABBREVIATIONS NOT USED ON CONTRACT DRAWINGS

PLUMBING FIXTURE SCHEDULE

TYPE: DESCRIPTION: WC-1 (T.A.S. COMPLIANT) WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL, WITH 1-1/2" TOP SPUD AND BOLT COVERS, WITH EVERELEAN, AMERICAN STANDARD "AFWALL" 3351.101, ELONGATED OPEN FRONT WHITE PLASTIC SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES, CHURCH 850SSCST	FAUCET: 1.28 GALLON FLUSH CYCLE, EXPOSED, DIAPHRAGM TYPE, POLISHED CHROME CLOSET FLUSHMETER, VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD, SLOAN ROYAL 111-11-28	CARRIER: WADE 311 AND 330 SERIES-AM1	ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: WC-1 (T.A.S. COMPLIANT) WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL, WITH 1-1/2" TOP SPUD AND BOLT COVERS, WITH EVERELEAN, AMERICAN STANDARD "AFWALL" 3351.101, ELONGATED OPEN FRONT WHITE PLASTIC SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES, CHURCH 850SSCST	FAUCET: 1.28 GALLON FLUSH CYCLE, EXPOSED, DIAPHRAGM TYPE, POLISHED CHROME CLOSET FLUSHMETER, VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD, SLOAN ROYAL 111-11-28	CARRIER: EXISTING TO REMAIN	ROUGH-IN: RE-USE EXISTING WASTE, WATER AND VENT ROUGH-INS	TYPE: DESCRIPTION: WC-2 (STANDARD HEIGHT) WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL, WITH 1-1/2" TOP SPUD AND BOLT COVERS, WITH EVERELEAN, AMERICAN STANDARD "AFWALL" 3351.101, ELONGATED OPEN FRONT WHITE PLASTIC SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES, CHURCH 850SSCST	FAUCET: 1.28 GALLON FLUSH CYCLE, EXPOSED, DIAPHRAGM TYPE, POLISHED CHROME CLOSET FLUSHMETER, VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD, SLOAN ROYAL 111-11-28	CARRIER: WADE 311 AND 330 SERIES-AM1	ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: U-1 (T.A.S. COMPLIANT) URINAL, WALL HUNG, WHITE VITREOUS CHINA, 0.5 GALLON PER FLUSH, SIPHON JET ACTION, INTEGRAL TRAP, REMOVABLE DOME STRAINER AMERICAN STANDARD WASHBROOK 6580.001	FLUSH VALVE: 0.5 GALLON FLUSH CYCLE, EXPOSED, DIAPHRAGM TYPE, CHROME PLATED URINAL FLUSHMETER, VACUUM BREAKER, SPUD COUPLING FOR 3/4" TOP SPUD, SLOAN ROYAL 180-54-573-CP CAP	CARRIER: EXISTING TO REMAIN	ROUGH-IN: RE-USE EXISTING WASTE, WATER AND VENT ROUGH-INS	TYPE: DESCRIPTION: L-1 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: CHROME PLATED BRASS DECK MOUNTED LAVATORY FAUCET WITH COVER PLATE, 4-1/8" SPOUT, AND PUSH BUTTON HANDLE INDEKED "PUSH" SELF-CLOSING BALL BEARING, ALUMINUM BALL, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	MIXING VALVE: PROVIDE ASSE 1070 RATED LAWLER MODEL 570-38 POINT OF USE THERMOSTATIC MIXING VALVE AT LAVATORY TO TEMPER OUTLET WATER SUPPLY TO 105° WITH 0.5 GPM FLOW RATE	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-2 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-3 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-4 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-5 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-6 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-7 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-8 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-9 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-10 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-11 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-12 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-13 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-14 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-15 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-16 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-17 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-18 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-19 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-282054BCP	STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TALPREE, MCGUIRE #152A	P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTOCHEN PLATE, MCGUIRE 8872	SUPPLIES: 1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTOCHEN AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS, MCGUIRE 2165K	CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS, WADE 520-48	ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER, REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION: L-20 (T.A.S. COMPLIANT) - HOT AND COLD WATER LAVATORY, WALL HUNG, VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS, AMERICAN STANDARD "LUCERNE" 0355.012	FAUCET: 4" FIXED CENTERS, SINGLE LEVER HOT AND COLD WATER, THERMOSTATIC MIXING FAUCET, CERAMIC CARTRIDGE (ASSE 1070 CERTIFIED) INCLUDES SLOD PROTECTION AND INTEGRAL INLET CHECK VALVES, 0.5 GPM AERATOR, HOT WATER INLET TEMPERATURE 100° - 180°, MAXIMUM FLOW RATE 1.2 GPM, TEMPERATURE OF 105° MINIMUM FLOW RATE, FOR TEMPERATURE LIMITING OF 0.35 GPM, MINIMUM EMERGENCY TEMPERATURE OUT AT COLD WATER FAULTURE, 120° CHICAGO MODEL 720-11-28205
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