





BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
Civil Engineer

PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant

AON FIRE PROTECTION ENGINEERING  
Building Security

HWA PARKING  
Parking Consultant

ARUP  
Geotechnical Consultant

HLB LIGHTING DESIGN, INC.  
Lighting Consultant

CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant

MORRISON HERSHFELD  
Curtain Wall Consultant

ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant

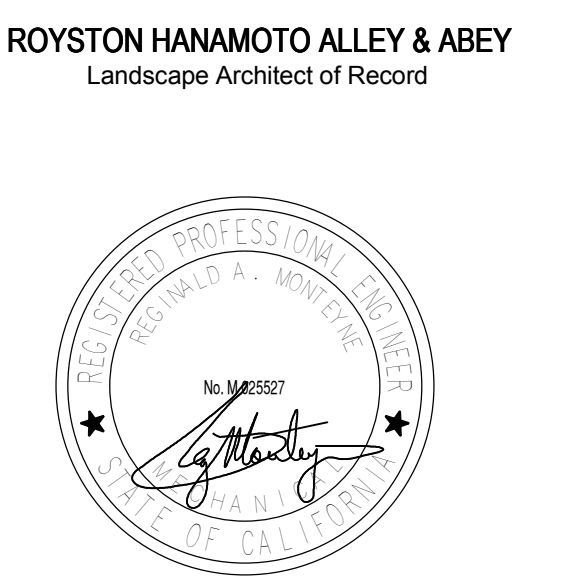
HMA CONSULTING  
Building Management and Controls Engineer

C.S. CALLIKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower, San Francisco. Includes HVAC SYSTEM DETAILS and FIELD INSPECTION ENERGY CHECKLIST tables.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower, San Francisco. Includes HVAC SYSTEM DETAILS and FIELD INSPECTION ENERGY CHECKLIST tables.

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MECHANICAL MANDATORY MEASURES: NONRESIDENTIAL MECH-MM. Project Name: Transbay Tower, San Francisco. Includes Equipment and System Efficiencies, Controls, and Ventilation sections.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower, San Francisco. Includes HVAC SYSTEM DETAILS and FIELD INSPECTION ENERGY CHECKLIST tables.

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San Francisco Green Building Ordinance Compliance

In compliance with the San Francisco Green Building Ordinance the project intends to demonstrate a minimum energy efficiency compliance (+15% over code) via the defined alternate compliance method.

The project has been registered with the United States Green Building Council (USGBC) under the LEED 2009 rating system. The project intends to demonstrate energy efficiency via a detailed E1c1 submittal. Accordingly, a computer model has been prepared and will shortly undergo final USGBC verification (certification that the SF DBI will accept), based on final project design. The model (similar to that currently submitted for Title 24, but using the published LEED 2009 rules) will demonstrate that the proposed building has an annual energy cost at least 15% less than a LEED baseline building (based on ASHRAE 90.1-2007). This analysis includes a detailed accounting of all on-site building energy use, including all exterior and security lighting, elevators, all process loads and receptacle loads.

Applicable documentation, including this computer model, will be retained in the records of the project and will encompass the complete information required for USGBC Green Building Certification Institute LEED certification.

Table with columns: NO., DATE, ISSUE. Includes revision history and drawing title: TITLE 24 COMPLIANCE FORMS. Project No: S12.10250.00, Drawing Number: M0.02.





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CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 4 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. Table with columns for TEST DESCRIPTION, MECH-12A, MECH-13A, MECH-14A, MECH-15A, and Test Performed By.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 2 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. Discrepancies section.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. GENERAL INFORMATION, HVAC SYSTEM DETAILS, and FIELD INSPECTION ENERGY CHECKLIST.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. GENERAL INFORMATION, HVAC SYSTEM DETAILS, and FIELD INSPECTION ENERGY CHECKLIST.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 3 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. Required Acceptance Tests, Designer, Building Departments, and TEST DESCRIPTION table.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. GENERAL INFORMATION, HVAC SYSTEM DETAILS, and FIELD INSPECTION ENERGY CHECKLIST.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. GENERAL INFORMATION, HVAC SYSTEM DETAILS, and FIELD INSPECTION ENERGY CHECKLIST.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 3 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. Required Acceptance Tests, Designer, Building Departments, and TEST DESCRIPTION table.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. GENERAL INFORMATION, HVAC SYSTEM DETAILS, and FIELD INSPECTION ENERGY CHECKLIST.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 4) MECH-1C. Project Name: Transbay Tower. Date: 12/12/2013. GENERAL INFORMATION, HVAC SYSTEM DETAILS, and FIELD INSPECTION ENERGY CHECKLIST.

Revision table with columns for NO., DATE, and ISSUE.

NO. DATE ISSUE

000 FILENAME

DRAWING TITLE

TITLE 24 COMPLIANCE FORMS

PROJECT NO. S12.10250.00 DRAWING NUMBER M0.04



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AIR SYSTEM REQUIREMENTS (Part 1 of 2) MECH-2C. Project Name: Transbay Tower, Date: 12/12/2013. Includes tables for Item or System Tags, Mandatory Measures, and Prescriptive Measures.

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CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 4 of 4) MECH-1C. Project Name: Transbay Tower, Date: 12/12/2013. Table with columns for TEST DESCRIPTION, MECH-12A, MECH-13A, MECH-14A, and MECH-15A.

AIR SYSTEM REQUIREMENTS (Part 1 of 2) MECH-2C. Project Name: Transbay Tower, Date: 12/12/2013. Includes tables for Item or System Tags, Mandatory Measures, and Prescriptive Measures.

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AIR SYSTEM REQUIREMENTS (Part 1 of 2) MECH-2C. Project Name: Transbay Tower, Date: 12/12/2013. Includes tables for Item or System Tags, Mandatory Measures, and Prescriptive Measures.



Revision table with columns for NO., DATE, and ISSUE. Contains three entries for permit revisions.

DRAWING TITLE

TITLE 24 COMPLIANCE FORMS

PROJECT NO. S12.10250.00 DRAWING NUMBER M0.05



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Revision table with columns for NO., DATE, and ISSUE. Includes entries for GMP ADDENDUM #3 PERMIT REVISION, BID ADDENDUM #2, and BID AND ADDENDUM #3 PERMIT.

DRAWING TITLE

TITLE 24 COMPLIANCE FORMS

MECH-3C MECHANICAL VENTILATION AND REHEAT. Table with columns for AREA BASIS, OCCUPANCY BASIS, REHEAT LIMITATION, and VAV MINIMUM. Includes summary rows for Totals and Column I Total Design Ventilation Air.

MECH-3C MECHANICAL VENTILATION AND REHEAT. Table with columns for AREA BASIS, OCCUPANCY BASIS, REHEAT LIMITATION, and VAV MINIMUM. Includes summary rows for Totals and Column I Total Design Ventilation Air.

MECH-3C MECHANICAL VENTILATION AND REHEAT. Table with columns for AREA BASIS, OCCUPANCY BASIS, REHEAT LIMITATION, and VAV MINIMUM. Includes summary rows for Totals and Column I Total Design Ventilation Air.

AIR SYSTEM REQUIREMENTS (Part 1 of 2) MECH-2C. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

PRESCRIPTIVE MEASURES. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

WATER SIDE SYSTEM REQUIREMENTS (Part 2 of 2) MECH-2C. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

Service Hot Water, Pool Heating. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

AIR SYSTEM REQUIREMENTS (Part 1 of 2) MECH-2C. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

PRESCRIPTIVE MEASURES. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

AIR SYSTEM REQUIREMENTS (Part 1 of 2) MECH-2C. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

PRESCRIPTIVE MEASURES. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

AIR SYSTEM REQUIREMENTS (Part 1 of 2) MECH-2C. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

PRESCRIPTIVE MEASURES. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

AIR SYSTEM REQUIREMENTS (Part 1 of 2) MECH-2C. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.

PRESCRIPTIVE MEASURES. Table with columns for Item or System Tags, Indicate Air Systems Type, and Indicate Page Reference on Plans or Schedule.



MECHANICAL EQUIPMENT DETAILS (Part 1 of 2) MECH-5C
Project Name: Transbay Tower
Date: 12/12/2013
CHILLER AND TOWER SUMMARY
PUMPS
Equipment Name, Type, Qty, Efficiency, Tons, Qty, GPM, BHP, Pump Control
DHW / BOILER SUMMARY
System Name, Type, Distribution, Qty, Rated Input, Vol. (Gals), Energy Factor or FE, Standby Loss or Pilot, Tank Ext. R-Value, Status
MULTI-FAMILY CENTRAL WATER HEATING DETAILS
Control, Qty, HP, Type, In Plenum, Outside, Buried, Add % Insulation
CENTRAL SYSTEM RATINGS
System Name, Type, Qty, Output, HEATING Aux. kW, Efficiency, Output, COOLING Efficiency, Status
FCU-3-x (BOH Offices)
Lobby AHU-2-2 and Roof Fan
FCU-1-1 (Public Lobby)
FCU-1-1 (Future Retail)
ACDU-1-1 (FDC)
FCU-1-1 (Valve and Deck Office)
FCU-1-2 (Mail Room)
CENTRAL SYSTEM FAN SUMMARY
System Name, Fan Type, Economizer Type, SUPPLY FAN CFM, BHP, RETURN FAN CFM, BHP
FCU-2-x (BOH Offices)
Lobby AHU-2-2 and Roof Fan
FCU-1-1 (Public Lobby)
FCU-1-1 (Future Retail)
ACDU-1-1 (FDC)
FCU-1-1 (Valve and Deck Office)
FCU-1-2 (Mail Room)
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 74 of 80

MECHANICAL VENTILATION AND REHEAT MECH-3C
Project Name: Transbay Tower
Date: 12/12/2013
MECHANICAL VENTILATION (#121(b)2) REHEAT LIMITATION (#144(d))
AREA BASIS OCCUPANCY BASIS VAV MINIMUM
A B C D E F G H I J K L M N
Zone/System Condition Area (ft²) CFM per ft² Min CFM by Area B X C Number of People CFM per Person Min CFM by Occupant E X F Max of D or G Design Ventilation Air CFM 50% of Design Zone Supply CFM B X D X CFM / ft² Max of Columns H, J, K, or 300 CFM Design Minimum Air Setpoint Transfer Air
MPOE
Telecom MPOE
Totals
Column I Total Design Ventilation Air
C Minimum ventilation rate per Section #121, Table 121-A.
E Based on fixed seat or the greater of the expected number of occupants and 50% of the CBC occupant load for areas purposes for spaces without fixed seating.
H Required Ventilation Air (REQD V.A.) is the larger of the ventilation rates calculated on an AREA BASIS or OCCUPANCY BASIS (Column D or G).
I Must be greater than or equal to H or use Transfer Air (column N) to make up the difference.
J Design fan supply CFM (Fan CFM) x 50%, or the design zone outdoor airflow rate per #121.
K Condition area (ft²) x 0.4 CFM / ft² or
L Maximum of Columns H, J, K, or 300 CFM
M This must be less than or equal to Column L and greater than or equal to the sum of Columns H plus N.
N Transfer Air must be provided where the Required Ventilation Air (Column H) is greater than the Design Minimum Air (Column M). Where required, transfer air must be greater than or equal to the difference between the Required Ventilation Air (Column H) and the Design Minimum Air (Column M).
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 71 of 80

MECHANICAL VENTILATION AND REHEAT MECH-3C
Project Name: Transbay Tower
Date: 12/12/2013
MECHANICAL VENTILATION (#121(b)2) REHEAT LIMITATION (#144(d))
AREA BASIS OCCUPANCY BASIS VAV MINIMUM
A B C D E F G H I J K L M N
Zone/System Condition Area (ft²) CFM per ft² Min CFM by Area B X C Number of People CFM per Person Min CFM by Occupant E X F Max of D or G Design Ventilation Air CFM 50% of Design Zone Supply CFM B X D X CFM / ft² Max of Columns H, J, K, or 300 CFM Design Minimum Air Setpoint Transfer Air
2-Skin-E
2-Skin-W
2-Skin-N
2-Skin
4-Office Interior 1
4-Office Interior 2
3-Skin-E
3-Skin-W
3-Skin-N
3-Skin
3-Office Interior 1
3-Office Interior 2
3-Office
3-Central Plant
Totals
Column I Total Design Ventilation Air
C Minimum ventilation rate per Section #121, Table 121-A.
E Based on fixed seat or the greater of the expected number of occupants and 50% of the CBC occupant load for areas purposes for spaces without fixed seating.
H Required Ventilation Air (REQD V.A.) is the larger of the ventilation rates calculated on an AREA BASIS or OCCUPANCY BASIS (Column D or G).
I Must be greater than or equal to H or use Transfer Air (column N) to make up the difference.
J Design fan supply CFM (Fan CFM) x 50%, or the design zone outdoor airflow rate per #121.
K Condition area (ft²) x 0.4 CFM / ft² or
L Maximum of Columns H, J, K, or 300 CFM
M This must be less than or equal to Column L and greater than or equal to the sum of Columns H plus N.
N Transfer Air must be provided where the Required Ventilation Air (Column H) is greater than the Design Minimum Air (Column M). Where required, transfer air must be greater than or equal to the difference between the Required Ventilation Air (Column H) and the Design Minimum Air (Column M).
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 68 of 80

MECHANICAL EQUIPMENT DETAILS (Part 1 of 2) MECH-5C
Project Name: Transbay Tower
Date: 12/12/2013
CHILLER AND TOWER SUMMARY
PUMPS
Equipment Name, Type, Qty, Efficiency, Tons, Qty, GPM, BHP, Pump Control
DHW / BOILER SUMMARY
System Name, Type, Distribution, Qty, Rated Input, Vol. (Gals), Energy Factor or FE, Standby Loss or Pilot, Tank Ext. R-Value, Status
MULTI-FAMILY CENTRAL WATER HEATING DETAILS
Control, Qty, HP, Type, In Plenum, Outside, Buried, Add % Insulation
CENTRAL SYSTEM RATINGS
System Name, Type, Qty, Output, HEATING Aux. kW, Efficiency, Output, COOLING Efficiency, Status
FCU-1-1 (MPOE)
CENTRAL SYSTEM FAN SUMMARY
System Name, Fan Type, Economizer Type, SUPPLY FAN CFM, BHP, RETURN FAN CFM, BHP
FCU-1-1 (MPOE)
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 76 of 80

MECHANICAL EQUIPMENT DETAILS (Part 1 of 2) MECH-5C
Project Name: Transbay Tower
Date: 12/12/2013
CHILLER AND TOWER SUMMARY
PUMPS
Equipment Name, Type, Qty, Efficiency, Tons, Qty, GPM, BHP, Pump Control
DHW / BOILER SUMMARY
System Name, Type, Distribution, Qty, Rated Input, Vol. (Gals), Energy Factor or FE, Standby Loss or Pilot, Tank Ext. R-Value, Status
MULTI-FAMILY CENTRAL WATER HEATING DETAILS
Control, Qty, HP, Type, In Plenum, Outside, Buried, Add % Insulation
CENTRAL SYSTEM RATINGS
System Name, Type, Qty, Output, HEATING Aux. kW, Efficiency, Output, COOLING Efficiency, Status
FCU-83-1 (High Rise and Service Elevator)
Passive System
AHU-1-1/2/3/7/8/11
AHU-1-2/4/6/10/12
Future Tenant Sup. Cooling (24/7 Fan Coil)
FCU-17-1/2 (Elevator)
FCU-33-1/2 (Elevator)
CENTRAL SYSTEM FAN SUMMARY
System Name, Fan Type, Economizer Type, SUPPLY FAN CFM, BHP, RETURN FAN CFM, BHP
FCU-83-1 (High Rise and Service Elevator)
Passive System
AHU-1-1/2/3/7/8/11
AHU-1-2/4/6/10/12
Future Tenant Sup. Cooling (24/7 Fan Coil)
FCU-17-1/2 (Elevator)
FCU-33-1/2 (Elevator)
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 72 of 80

MECHANICAL VENTILATION AND REHEAT MECH-3C
Project Name: Transbay Tower
Date: 12/12/2013
MECHANICAL VENTILATION (#121(b)2) REHEAT LIMITATION (#144(d))
AREA BASIS OCCUPANCY BASIS VAV MINIMUM
A B C D E F G H I J K L M N
Zone/System Condition Area (ft²) CFM per ft² Min CFM by Area B X C Number of People CFM per Person Min CFM by Occupant E X F Max of D or G Design Ventilation Air CFM 50% of Design Zone Supply CFM B X D X CFM / ft² Max of Columns H, J, K, or 300 CFM Design Minimum Air Setpoint Transfer Air
3-Central Plant
2-Public EMR
2-Public Elevator
2-Shuttle EMR
2-Shuttle Elevator
2-BOH Offices
2-BOH Corridors
2-81 Tower Rooms
2-81 Mechanical/Electrical
2-81 Other
2-81 Support
1-Lobby
1-Lobby
1-Public Lobby
Totals
Column I Total Design Ventilation Air
C Minimum ventilation rate per Section #121, Table 121-A.
E Based on fixed seat or the greater of the expected number of occupants and 50% of the CBC occupant load for areas purposes for spaces without fixed seating.
H Required Ventilation Air (REQD V.A.) is the larger of the ventilation rates calculated on an AREA BASIS or OCCUPANCY BASIS (Column D or G).
I Must be greater than or equal to H or use Transfer Air (column N) to make up the difference.
J Design fan supply CFM (Fan CFM) x 50%, or the design zone outdoor airflow rate per #121.
K Condition area (ft²) x 0.4 CFM / ft² or
L Maximum of Columns H, J, K, or 300 CFM
M This must be less than or equal to Column L and greater than or equal to the sum of Column H plus N.
N Transfer Air must be provided where the Required Ventilation Air (Column H) is greater than the Design Minimum Air (Column M). Where required, transfer air must be greater than or equal to the difference between the Required Ventilation Air (Column H) and the Design Minimum Air (Column M).
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 68 of 80

MECHANICAL EQUIPMENT DETAILS (Part 2 of 2) MECH-5C
Project Name: Transbay Tower
Date: 12/12/2013
ZONE SYSTEM SUMMARY
SYSTEM VAV Fan
Zone Name, System Name, Type, Qty, Heating, Cooling, Min CFM Ratio, Reheat Coil, CFM, BHP, Outside Air
63-High Rise Elev. Mech. Room
63-Serv. Elev. Mech. Room
81 E
81 S
81 W
81 N
81 Interior Zone
81 Interior Zone
81-60 S
81-60 W
81-60 N
81-60 Int-Outside Core
81-60 Int-Inside Core
81-60 Int-Outside Core
81-60 Int-Inside Core
81-60 Serv. Ten. Cng.
Low Rise Elev. Mech. Room
Mid-Low Rise Elev. Mech. Room
Mid-High Rise Elev. Mech. Room
EXHAUST FAN SUMMARY
EXHAUST FAN EXHAUST FAN
Room Name, Qty, CFM, BHP, Room Name, Qty, CFM, BHP, Room Name, Qty, CFM, BHP
Toilet Rooms
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 76 of 80

MECHANICAL EQUIPMENT DETAILS (Part 1 of 2) MECH-5C
Project Name: Transbay Tower
Date: 12/12/2013
CHILLER AND TOWER SUMMARY
PUMPS
Equipment Name, Type, Qty, Efficiency, Tons, Qty, GPM, BHP, Pump Control
DHW / BOILER SUMMARY
System Name, Type, Distribution, Qty, Rated Input, Vol. (Gals), Energy Factor or FE, Standby Loss or Pilot, Tank Ext. R-Value, Status
MULTI-FAMILY CENTRAL WATER HEATING DETAILS
Control, Qty, HP, Type, In Plenum, Outside, Buried, Add % Insulation
CENTRAL SYSTEM RATINGS
System Name, Type, Qty, Output, HEATING Aux. kW, Efficiency, Output, COOLING Efficiency, Status
FCU-14-1/2 (Elevator)
AHU-1-1 and -2 (Future Retail)
LS Generator Transfer Fan (T-stat control)
AC-3-1 and 2
Central Plant Fan (T-stat control)
FCU-2-3 (Public Elevator)
FCU-2-3 (Shuttle Elevator)
CENTRAL SYSTEM FAN SUMMARY
System Name, Fan Type, Economizer Type, SUPPLY FAN CFM, BHP, RETURN FAN CFM, BHP
FCU-14-1/2 (Elevator)
AHU-1-1 and -2 (Future Retail)
LS Generator Transfer Fan (T-stat control)
AC-3-1 and 2
Central Plant Fan (T-stat control)
FCU-2-3 (Public Elevator)
FCU-2-3 (Shuttle Elevator)
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 73 of 80

MECHANICAL VENTILATION AND REHEAT MECH-3C
Project Name: Transbay Tower
Date: 12/12/2013
MECHANICAL VENTILATION (#121(b)2) REHEAT LIMITATION (#144(d))
AREA BASIS OCCUPANCY BASIS VAV MINIMUM
A B C D E F G H I J K L M N
Zone/System Condition Area (ft²) CFM per ft² Min CFM by Area B X C Number of People CFM per Person Min CFM by Occupant E X F Max of D or G Design Ventilation Air CFM 50% of Design Zone Supply CFM B X D X CFM / ft² Max of Columns H, J, K, or 300 CFM Design Minimum Air Setpoint Transfer Air
1-Public Lobby
1-Retail
1-Public Corridor
1-Public Corridor
1-FDC
1-FDC
1-BOH Corridors
1-Mechanical/Electrical
1-Other
1-Support
Garage Offices
Garage
Mailroom
Mailroom
Totals
Column I Total Design Ventilation Air
C Minimum ventilation rate per Section #121, Table 121-A.
E Based on fixed seat or the greater of the expected number of occupants and 50% of the CBC occupant load for areas purposes for spaces without fixed seating.
H Required Ventilation Air (REQD V.A.) is the larger of the ventilation rates calculated on an AREA BASIS or OCCUPANCY BASIS (Column D or G).
I Must be greater than or equal to H or use Transfer Air (column N) to make up the difference.
J Design fan supply CFM (Fan CFM) x 50%, or the design zone outdoor airflow rate per #121.
K Condition area (ft²) x 0.4 CFM / ft² or
L Maximum of Columns H, J, K, or 300 CFM
M This must be less than or equal to Column L and greater than or equal to the sum of Columns H plus N.
N Transfer Air must be provided where the Required Ventilation Air (Column H) is greater than the Design Minimum Air (Column M). Where required, transfer air must be greater than or equal to the difference between the Required Ventilation Air (Column H) and the Design Minimum Air (Column M).
EnergyPro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page 70 of 80

BOSTON PROPERTIES / HINES Owner

PELLI CLARKE PELLI ARCHITECTS Design Architect

KENDALL/HEATON ASSOCIATES, INC. Architect of Record

MAGNUSSON KLEMENCIC ASSOCIATES Structural Engineer

WSP MEPFP Engineer

PWP LANDSCAPE ARCHITECTURE Landscape Architect

BKF ENGINEERS Civil Engineer

PERSON/HANN ASSOCIATES, INC. Elevator Consultant

AON FIRE PROTECTION ENGINEERING Building Security

HWA PARKING Parking Consultant

ARUP Geotechnical Consultant

HLB LIGHTING DESIGN, INC. Lighting Consultant

CERAMI AND ASSOCIATES, INC. Acoustical Consultant

MORRISON HERSHFIELD Curtain Wall Consultant

ENVIRONMENTAL BUILDING STRATEGIES LEED Consultant

HMA CONSULTING Building Management and Controls Engineer

C.S. CAULKINS CO., INC. Window Washing Consultant

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ROYSTON HANAMOTO ALLEY & ABEY Landscape Architect of Record

TITLE 24 COMPLIANCE FORMS

PROJECT NO. S12.10250.00 DRAWING NUMBER M0.07

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C Transbay Tower 12/12/2013

System Name	Zone Name	Occupancy Type	Floor Area (sqft)	Inst. LPD (W/sqft)	Crit. Credits (W/sqft)	Allowed LPD (W/sqft)	Proc. Loads (W/sqft)
G-Corridor	Office <= 250 sqft		2,764	*0.136			1,000
G-Mechanical/Electrical	Office <= 250 sqft		11,109	*0.136			
G-Other	Condnr/Restroom/Support		30,920	*0.136			
Mainroom	Office <= 250 sqft		371	*0.234			
Telecom MPOE	MPOE	Electrical, Mechanical Room	766	*0.234			2,000

Notes: 1. See LTG-10 (Items marked with asterisk, see LTG-10-C by other).

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PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C Transbay Tower 12/12/2013

System Name	Zone Name	Occupancy Type	Floor Area (sqft)	Inst. LPD (W/sqft)	Crit. Credits (W/sqft)	Allowed LPD (W/sqft)	Proc. Loads (W/sqft)
6-60 UFAD level (AHU-X-2)	6-60 In-Outside Core	Tenant Lease Space	499,714	*0.830			
6-60 In-Inside Core	6-60 In-Inside Core	Tenant Lease Space	7,865	*0.830			
6-60 Sup Ten Clng	6-60 Sup Ten Clng	Tenant Lease Space	1	*0.234			30,200
Low Rise Elev Mach Room	Low Rise Elev Mach Room	Electrical, Mechanical Room	291	*0.234			60,800
Mid - Low Rise Elev Mach Rm	Mid-Low Rise Elev Mach Rm	Electrical, Mechanical Room	300	*0.234			232,700
Mid-High Rise Elev Mach Rm	Mid-High Rise Elev Mach Rm	Electrical, Mechanical Room	300	*0.234			272,500
5-Retail	Retail Skin - E	Retail Sales, Wholesale	149	*0.234			
	Retail Skin - S	Retail Sales, Wholesale	149	*0.234			
	Retail Skin - W	Retail Sales, Wholesale	149	*0.234			
	Retail Skin - N	Retail Sales, Wholesale	149	*0.234			
	5-Retail	Retail Sales, Wholesale	16,345	*0.234			
3/4 Elev Gen	3/4 Elev Gen	Electrical, Mechanical Room	10,742	*0.234			1,000
4-Skin	4-Skin-E	Tenant Lease Space	149	*0.234			
	4-Skin-W	Tenant Lease Space	149	*0.234			
	4-Skin-N	Tenant Lease Space	149	*0.234			
4-Office	4-Office Interior 1	Office > 250 sqft	6,457	*0.234			
	4-Office Interior 2	Office > 250 sqft	6,457	*0.234			
3-Skin	3-Skin-E	Tenant Lease Space	149	*0.234			
	3-Skin-W	Tenant Lease Space	149	*0.234			
	3-Skin-N	Tenant Lease Space	149	*0.234			

Notes: 1. See LTG-10 (Items marked with asterisk, see LTG-10-C by other).

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PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C Transbay Tower 12/12/2013

System Name	Zone Name	Occupancy Type	Floor Area (sqft)	Inst. LPD (W/sqft)	Crit. Credits (W/sqft)	Allowed LPD (W/sqft)	Proc. Loads (W/sqft)
3-Office	3-Office Interior 1	Office > 250 sqft	6,457	*0.234			
	3-Office Interior 2	Office > 250 sqft	6,457	*0.234			
2-Central Plant	2-Central Plant	Electrical, Mechanical Room	5,633	*0.234			10,000
2 Public Elevator	2 Shuttle Elevator	Electrical, Mechanical Room	36	*0.234			30,000
2-50W Offices	2-50W Offices	Office > 250 sqft	6,618	*0.234			
2-61 Tenant Corridors	2-61 Tenant Corridors	Condnr/Restroom/Support	77,927	*0.234			
2-61 Support	2-61 Toilet Rooms	Condnr/Restroom/Support	33,660	*0.234			
	2-61 Mechanical/Electrical	Electrical, Mechanical Room	45,218	*0.234			1,478
	2-61 Other	Condnr/Restroom/Support	32,373	*0.234			
1-Lobby	1 Lobby	Lobby, Main Entry	5,441	*0.234			0,500
1 Public Lobby	1 Public Lobby	Lobby, Main Entry	333	*0.234			0,500
1-Retail	1-Retail	Retail Sales, Wholesale	6,783	*0.234			
1 Public Corridors	1 Public Corridors	Condnr/Restroom/Support	2,233	*0.234			
1 FCC	1 FCC	Office <= 250 sqft	188	*0.234			1,500
1 Support	1-BCH Corridors	Condnr/Restroom/Support	400	*0.234			
	1-Mechanical/Electrical	Electrical, Mechanical Room	268	*0.234			1,447
	1-Other	Condnr/Restroom/Support	868	*0.234			
Garage	Garage Offices	Office <= 250 sqft	413	*0.234			
	Garage	Parking Garage, Parking Area	89,773	*0.130			

Notes: 1. See LTG-10 (Items marked with asterisk, see LTG-10-C by other).

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PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERF-1C Transbay Tower 12/12/2013

Energy Component	Standard Design	Proposed Design	Compliance Margin
Space Heating	18.16	9.07	9.11
Space Cooling	27.64	28.51	-0.86
Indoor Fans	42.62	35.63	6.99
Heat Rejection	13.19	6.20	6.99
Pumps & Misc.	8.33	2.39	5.97
Domestic Hot Water	14.03	14.71	-0.22
Lighting	60.05	43.88	16.16
Receptacle	72.94	72.94	0.00
Process	18.40	18.40	0.00
Process Lighting	0.00	0.00	0.00
TOTALS	276.39	232.05	44.34

Percent better than Standard: 16.0% ( 17.2% excluding process)

**BUILDING COMPLIES**

GENERAL INFORMATION

Building Orientation	(NE) 45 deg	Conditioned Floor Area	1,342,564 sqft.
Number of Stories	63	Unconditioned Floor Area	135,456 sqft.
Number of Systems	387	Conditioned Footprint Area	0 sqft.
Number of Zones	730	Natural Gas Available On Site	Yes

Orientation	Gross Area	Glazing Area	Glazing Ratio
Front Elevation	(NE) 130,388 sqft.	62,139 sqft.	63.0%
Left Elevation	(SE) 724,626 sqft.	79,999 sqft.	64.1%
Rear Elevation	(SW) 128,273 sqft.	81,713 sqft.	63.7%
Right Elevation	(NW) 514,299 sqft.	226,275 sqft.	62.7%
Total	868,933 sqft.	349,087 sqft.	62.3%
Roof		0 sqft.	0.0%

Standard	Proposed	Prescriptive Values for Comparison only. See LTG-1C for allowed LPD.
Prescriptive Lighting Power Density	0.650 W/sqft	0.667 W/sqft
Prescriptive Envelope TDV Energy	20.620(045)	20.659(027)

Remarks:

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C Transbay Tower 12/12/2013

System Name	Zone Name	Occupancy Type	Floor Area (sqft)	Inst. LPD (W/sqft)	Crit. Credits (W/sqft)	Allowed LPD (W/sqft)	Proc. Loads (W/sqft)
63	63-High Rise Elev Mach Room	Electrical, Mechanical Room	1,000	*0.234			86,000
	63-Serv Elev Mach Room	Electrical, Mechanical Room	1,000	*0.234			19,200
62	62 Corridor	Condnr/Restroom/Support	300	*0.185			
	62 Mechanical/Electrical	Electrical, Mechanical Room	501	*0.185			1,006
	62 Other	Condnr/Restroom/Support	39	*0.185			
62	62 Corridor	Condnr/Restroom/Support	347	*0.234			1,059
	62 Mechanical/Electrical	Electrical, Mechanical Room	2,267	*0.234			
	62 Other	Condnr/Restroom/Support	1,548	*0.234			
61 Skin (AHU-X-5)	61 E	Tenant Lease Space	123	*0.234			
	61 S	Tenant Lease Space	123	*0.234			
61 Skin (AHU-X-6)	61 W	Tenant Lease Space	123	*0.234			
	61 N	Tenant Lease Space	123	*0.234			
61 UFAD (AHU-X-1)	61 Interior Zone	Tenant Lease Space	6,250	*0.234			
61 UFAD (AHU-X-2)	61 Interior Zone	Tenant Lease Space	6,250	*0.234			
6-60 Skin (AHU-X-1, 3, 5, 7, 8)	6-60 E	Tenant Lease Space	7,953	*0.830			
	6-60 S	Tenant Lease Space	7,953	*0.830			
6-60 Skin (AHU-X-2, 4, 6, 8)	6-60 W	Tenant Lease Space	7,953	*0.830			
	6-60 N	Tenant Lease Space	7,953	*0.830			
6-60 UFAD level (AHU-X-1)	6-60 In-Outside Core	Tenant Lease Space	499,714	*0.830			
	6-60 In-Inside Core	Tenant Lease Space	7,865	*0.830			

Notes: 1. See LTG-10 (Items marked with asterisk, see LTG-10-C by other).

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justifications, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

MECHANICAL EQUIPMENT DETAILS (Part 2 of 2) MECH-5C Transbay Tower 12/12/2013

Zone Name	System Name	Type	Qty	Heating	Cooling	Min CFM Ratio	Reheat Coil	CFM	BHP	Other	Outside Air
2 Public EMB	CAV	VAV Box	1	0	0	100%	None				
2 Shuttle EMB	CAV	VAV Box	1	0	0	100%	None				
2-20W Offices	CAV	VAV Box	1	0	0	100%	None				
2-61 Tenant Corridors	D flow	VAV Box	58	0	0	0%	None				
2-61 Toilet Rooms	D flow	VAV Box	58	0	0	0%	None				
2-61 Mechanical/Electrical	D flow	VAV Box	58	0	0	0%	None				
2-61 Other	D flow	VAV Box	58	0	0	0%	None				
1 Public Lobby	CAV	VAV Box	1	0	0	100%	None				
1-FCC	CAV	VAV Box	1	0	0	100%	None				
Garage Offices	CAV	VAV Box	1	0	0	100%	None				
Mailroom	CAV	VAV Box	1	0	0	100%	None				
MPOE	CAV	VAV Box	2	0	0	100%	None				

EXHAUST FAN SUMMARY

Room Name	Qty.	CFM	BHP	Room Name	Qty.	CFM	BHP	Room Name	Qty.	CFM	BHP

Energy/Pro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page: 27 of 80

PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERF-1C Transbay Tower 12/12/2013

Project Name: Transbay Tower  
Project Address: San Francisco  
Climate Zone: CA Climate Zone 03  
Total Cond. Floor Area: 1,342,564  
Addition Floor Area: n/a

GENERAL INFORMATION

Building Type:  Nonresidential  High-Rise Residential  Hotel/Motel Guest Room  
 Detachable - indicate  specific climate zone  all climates  
Phase of Construction:  New Construction  Addition  Alteration

STATEMENT OF COMPLIANCE

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a building using the performance compliance approach. The documentation author hereby certifies that the documentation is accurate and complete.

Documentation Author: Hayley Dada  
Signature: Hayley Dada  
Date: 12/12/2013  
Address: 1025 5th Street, Suite A, San Francisco, CA 94105  
Phone: (415) 897-6400

The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:

ENW, LTG, MECH.

I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or a licensed architect.

I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.

I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Principal Envelope Designer: Rolie D. Childers  
Signature: Rolie D. Childers  
Date: Dec. 13, 2013  
Address: 3050 Post Oak Blvd, Houston, TX 77056  
License #: E-15472  
Phone: 713-877-1192

Principal Mechanical Designer: Marcus Riey  
Signature: Marcus Riey  
Date:  
Address: WSP, 405 Howard Street, Suite 500, San Francisco, CA 94105  
License #:  
Phone: 415-398-3833

Principal Lighting Designer: Robert Hixdorf  
Signature: Robert Hixdorf  
Date:  
Address: WSP, 405 Howard Street, Suite 500, San Francisco, CA 94105  
License #:  
Phone: 415-398-3833

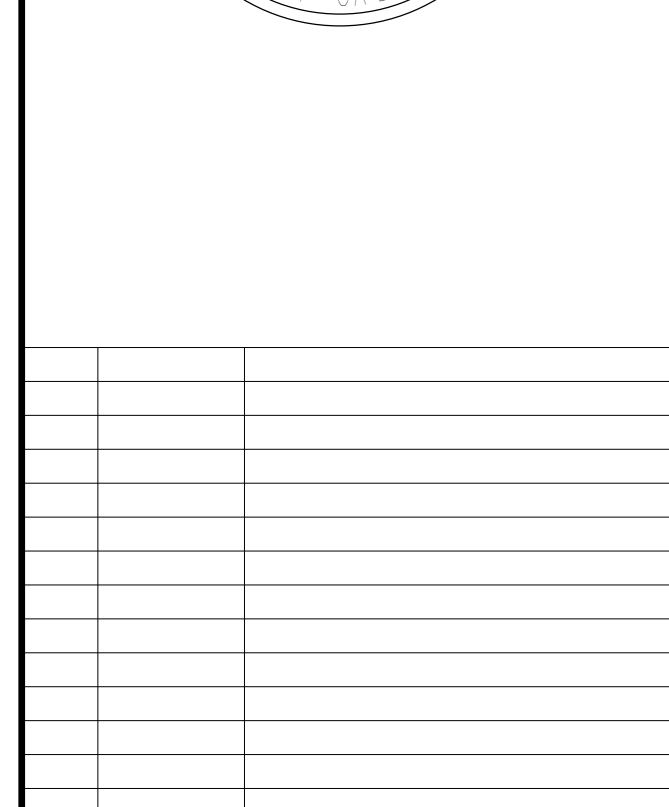
INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)

ENW-10 Certificate of Compliance. Required on plans.  MECH-10 Certificate of Compliance. Required on plans.  
 LTG-1C Certificate of Compliance. Required on plans.  MECH-2C Air/Water Side/Service Hot Water & Pool Requirements.  
 LTG-2C Lighting Controls Credit Worksheet.  MECH-3C Mechanical Ventilation and Exhaust.  
 LTG-3C Indoor Lighting Power Allowance.  MECH-5C Mechanical Equipment Details.

Energy/Pro 5.1 by EnergySoft User Number: 0000 RunCode: 2013-12-12T10:08:42 ID: 13179 Page: 3 of 80



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE

# TITLE 24 COMPLIANCE FORMS











- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
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Structural Engineer
- WSP  
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Landscape Architect of Record

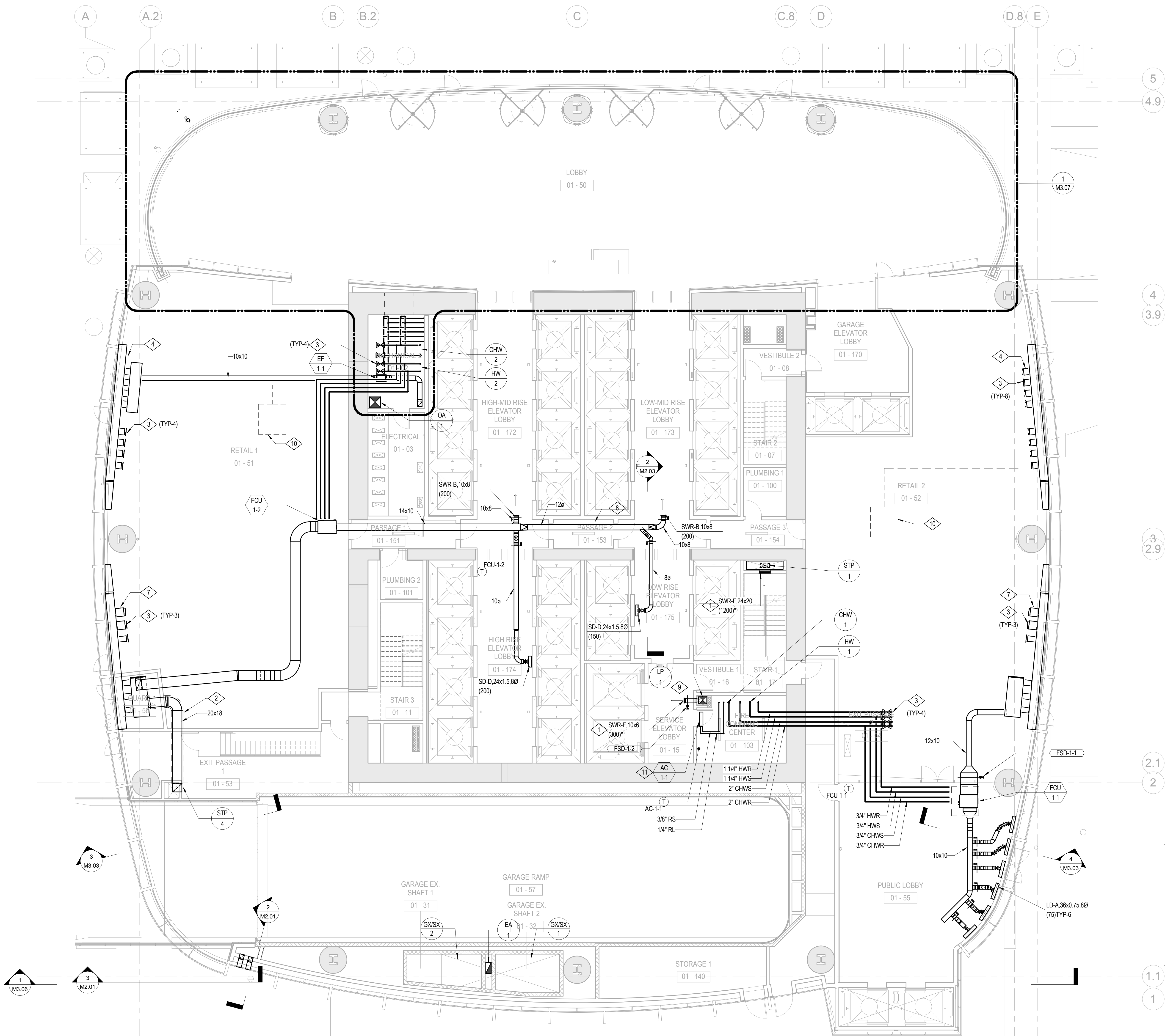


**SHEET NOTES**

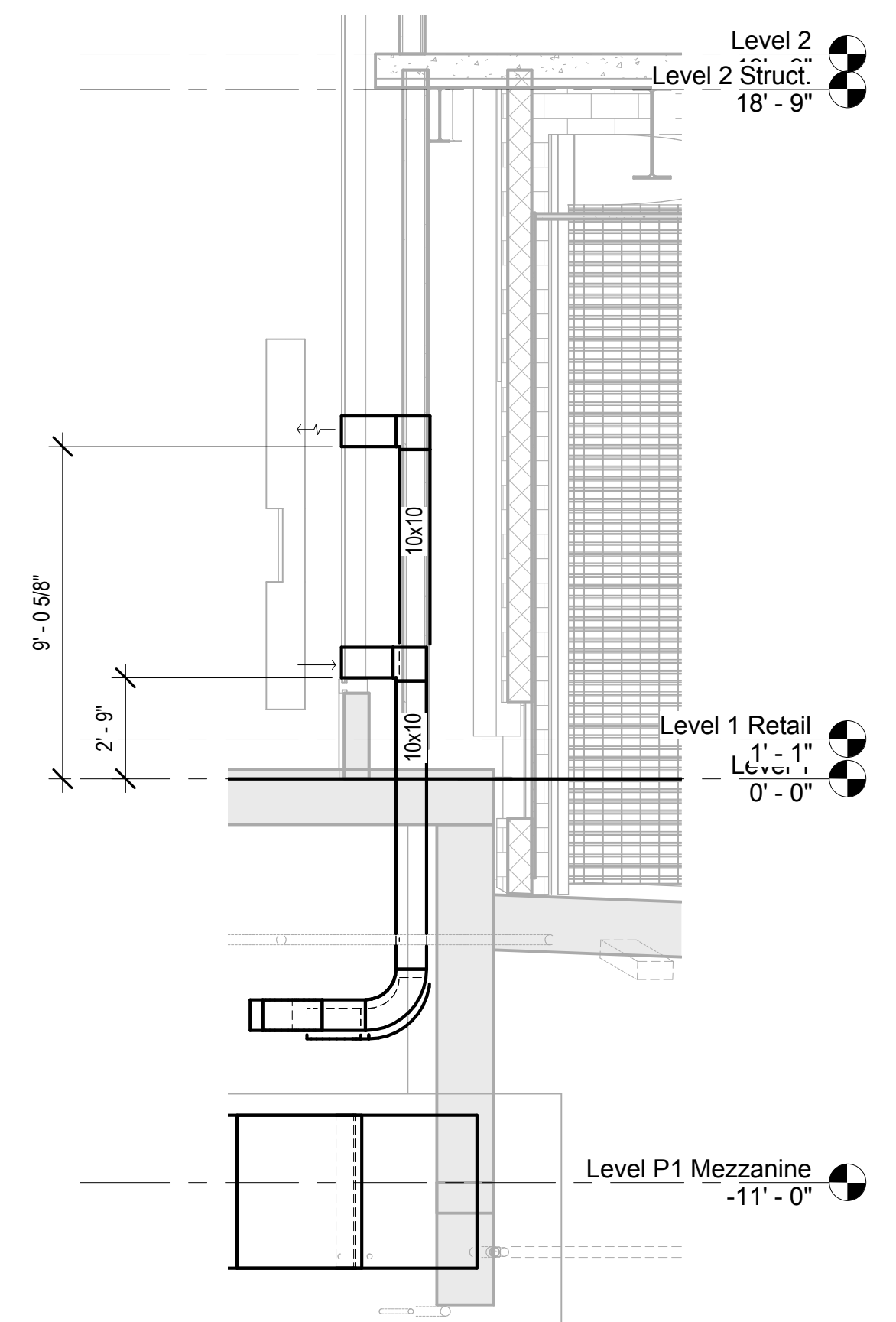
A REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

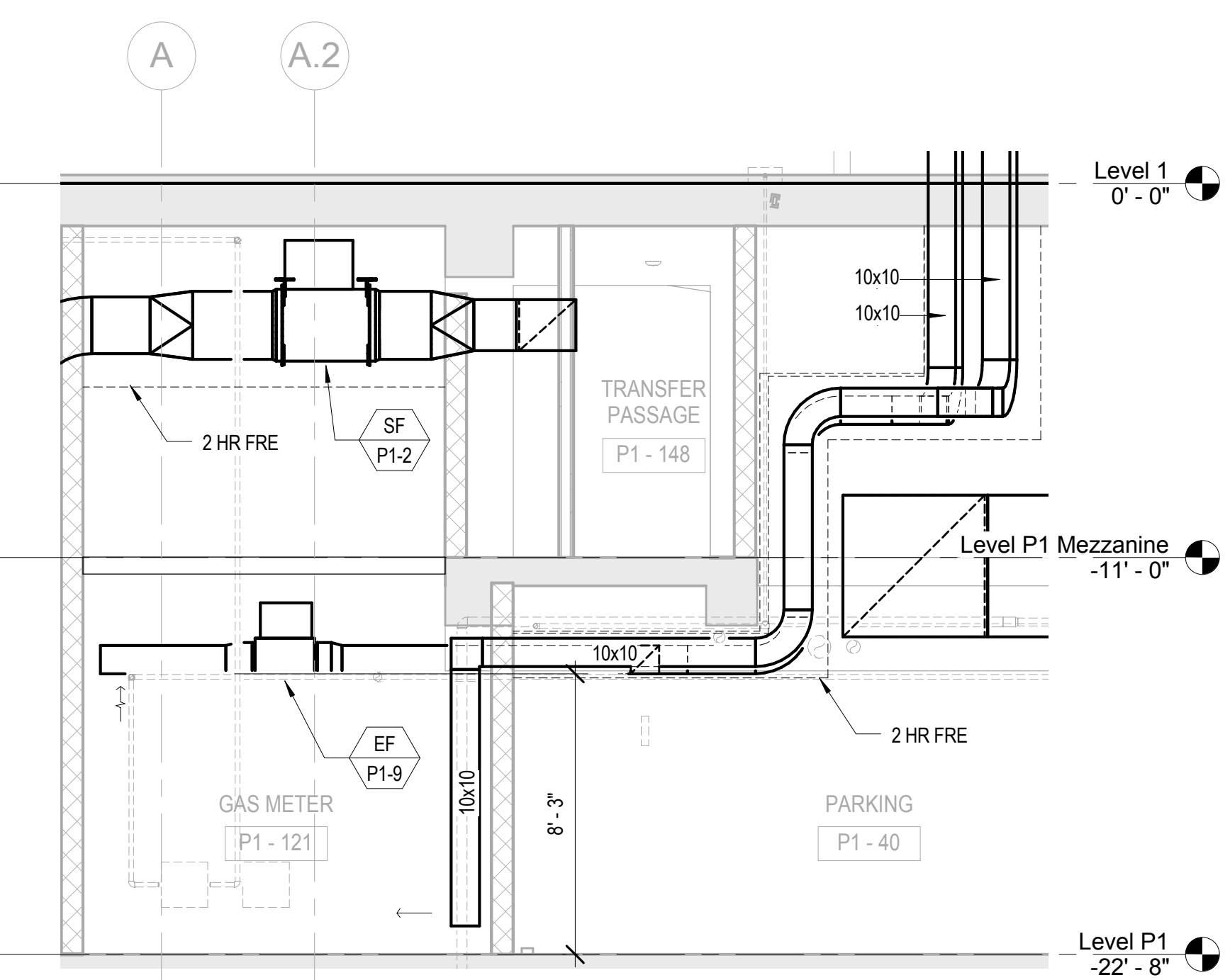
- 1 FOR AIRFLOW REFER TO AIR RISER DIAGRAMS ON SHEETS M4.01 THROUGH M4.03
- 2 ARCHITECTURAL RATED ENCLOSURE.
- 3 CAP FOR FUTURE.
- 4 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"Lx18"Wx24"H PLENUM (TYP-4)
- 6 36x12 ACD (TYP-8)
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 TERMINATE REMOTE CABLE OPERATORS AT PASSAGE 2 CEILING.
- 9 24x24 ACCESS PANEL BY OTHERS.
- 10 FUTURE TENANT GREASE/ODOR/SMOKE EXHAUST SYSTEM
- 11 PROVIDE WITH LITTLE GIANT VCMA-20 SERIES (OR APPROVED EQUAL) CONDENSATE PUMP.



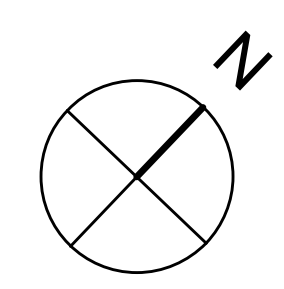
1 MECHANICAL LEVEL 1 PLAN  
1/8" = 1'-0"



2 GAS METER EXHAUST LOUVER SECTION  
1/4" = 1'-0"



3 GAS METER ROOM SECTION  
1/4" = 1'-0"



1/8" = 1'-0"

NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE

**MECHANICAL LEVEL 1 PLAN**

PROJECT NO. S12.10250.00 DRAWING NUMBER M2.01



BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
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BKF ENGINEERS  
Civil Engineer

PERSOHN/HAHN ASSOCIATES, INC.  
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ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant

HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record

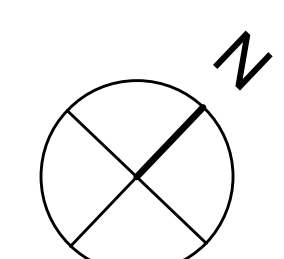
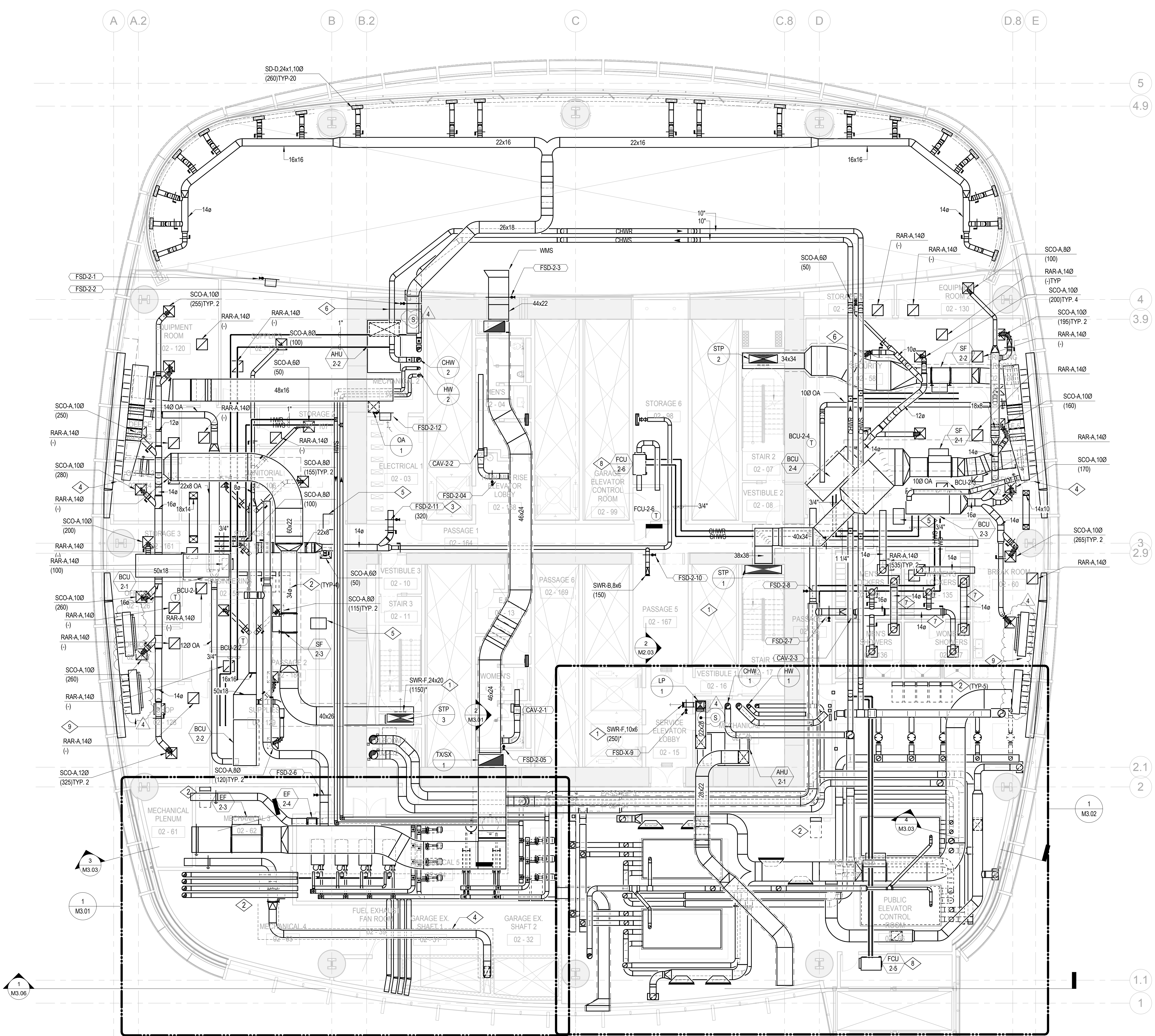


**SHEET NOTES**

- 4 A REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

- 1 NOT USED.
- 2 FAN VFD WITH 36" ELECTRICAL CLEARANCE.
- 3 PROVIDE WITH WIRE MESH SCREEN AT EACH OPEN END.
- 4 ARCHITECTURAL RATED ENCLOSURE.
- 5 24x24 TRANSFER AIR DUCT.
- 6 RATED SEPERATION.
- 7 ALL STAINLESS STEEL DUCT DOWNSTREAM OF CAV BOX, SLOPED TOWARD REGISTER.
- 8 PROVIDE WITH LITTLE GIANT VCMA-20 SERIES (OR APPROVED EQUAL) CONDENSATE PUMP.
- 4 9 96"Lx18"Wx24"H PLENUM (TYP-4).



1/8" = 1'-0"

**MECHANICAL LEVEL  
2 PLAN**

NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

NO. DATE ISSUE

DWG FILENAME

DRAWING NUMBER

PROJECT NO. **S12.10250.00** DRAWING NUMBER **M2.02**

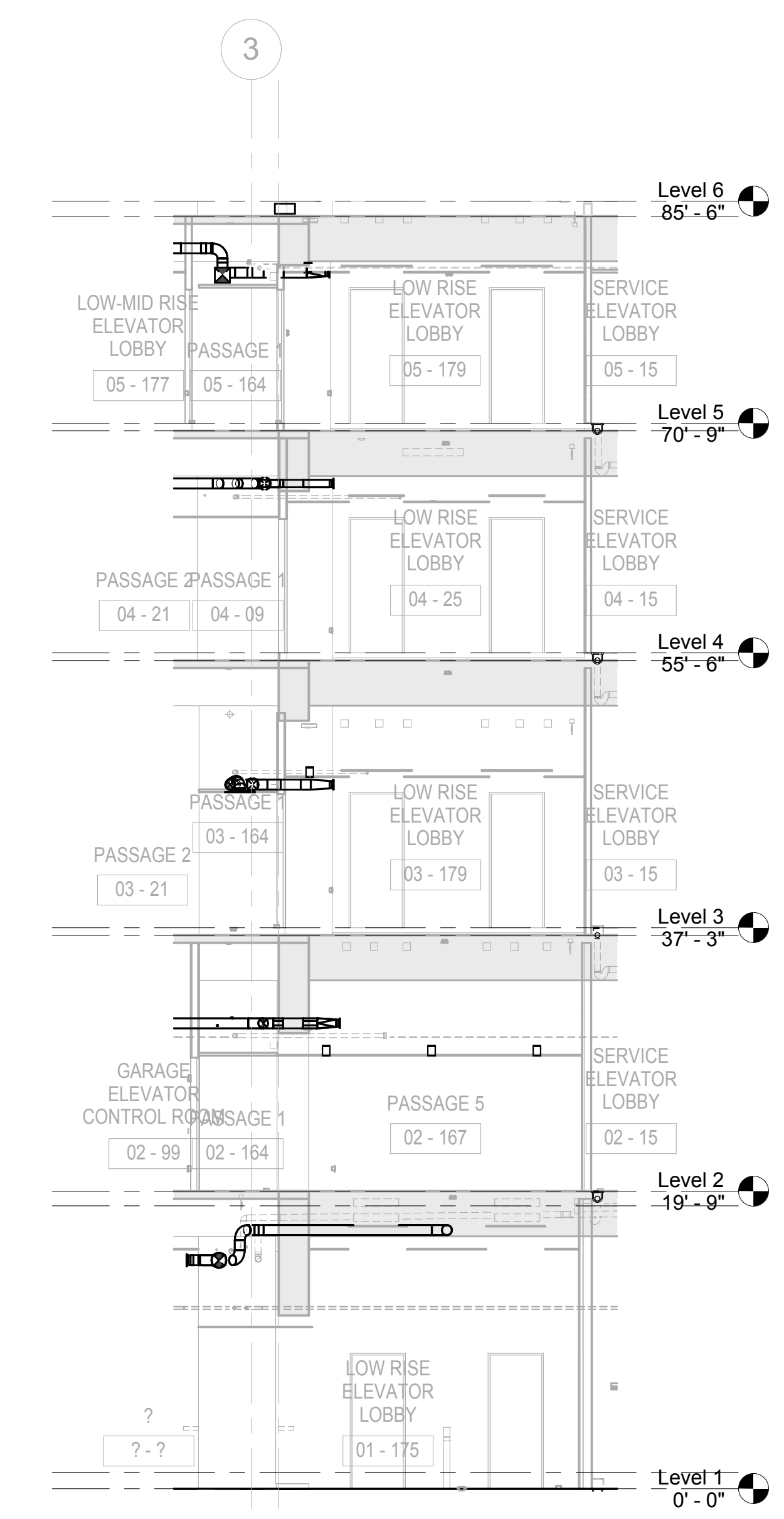
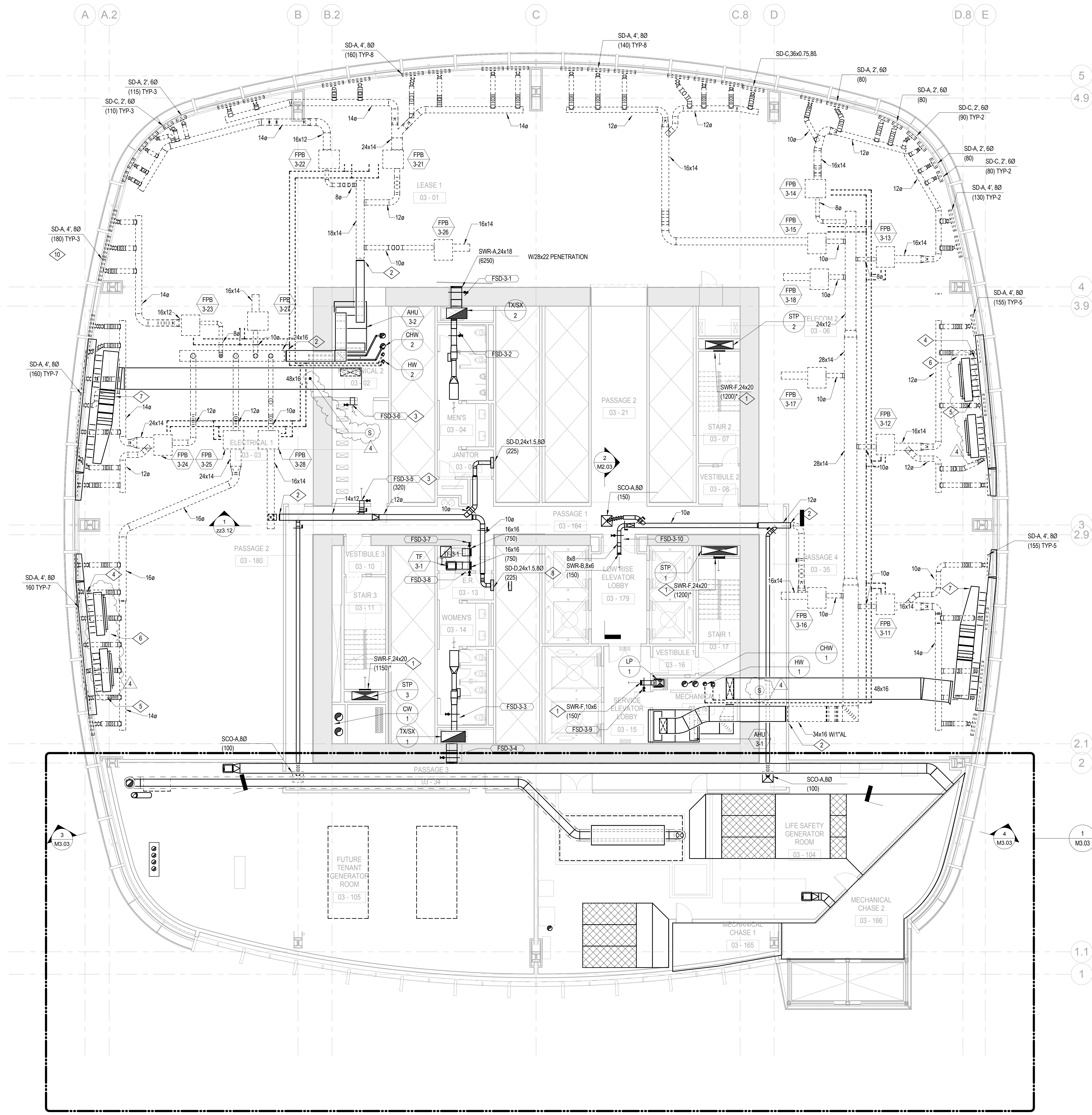


**SHEET NOTES**

- A. DASHED LINES DENOTE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C. PROVIDE VOLUME DAMPER ON EVERY DIFFUSER BRANCH DUCT FOR BALANCE.
- D. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

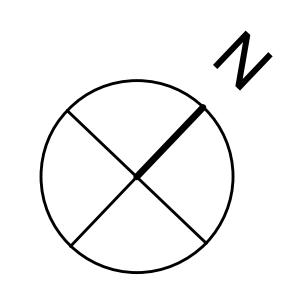
**NUMBERED NOTES**

- 1 FOR AIRFLOW REFER TO AIR RISER DIAGRAMS ON SHEETS M4.01 THROUGH M4.03.
- 2 CAP FOR FUTURE.
- 3 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"Lx18"Wx24"H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 HIGH THROW TYPE SD-D LINEAR DIFFUSER WITH PLENUM (225 CFM).
- 9 PROVIDE DUCT TRANSITIONS FROM FPB DISCHARGE OPENING TO THE DOWNSTREAM SUPPLY DUCT, TYPICAL.
- 10 LOCATE SD-A & SD-C 2'-0" DIFFUSERS ON CURVED WALL ALTERNATIVELY.



1 MECHANICAL LEVEL 3 PLAN  
1/8" = 1'-0"

2 MECHANICAL SECTION  
1/8" = 1'-0"



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
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Parking Consultant
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- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
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- C.S. CAULKINS CO., INC.  
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- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

NO.	DATE	ISSUE
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DWG FILENAME

DRAWING TITLE

**MECHANICAL LEVEL 3 PLAN**

DATE

PROJECT NO.

S12.10250.00

DRAWING NUMBER

**M2.03**

1/8" = 1'-0"



**SHEET NOTES**

- A. DASHED LINES DENOTE TENANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C. PROVIDE VOLUME DAMPER ON EVERY DIFFUSER BRANCH DUCT FOR BALANCE.
- D. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

- 1. FOR AIRFLOW REFER TO AIR RISER DIAGRAMS ON SHEETS M4.01 THROUGH M4.03.
- 2. CAP FOR FUTURE.
- 3. 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4. 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5. 96"X18"Wx24"H PLENUM (TYP-4).
- 6. 72"x18" ACD (TYP-4).
- 7. 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8. PROVIDE DUCT TRANSITIONS FROM FPB DISCHARGE OPENING TO THE DOWNSTREAM SUPPLY DUCT, TYPICAL.
- 9. LOCATE SD-A & SD-C 2'-0" DIFFUSERS ON CURVED WALL ALTERNATIVELY.

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Structural Engineer
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MEFP Engineer
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Landscape Architect
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Landscape Architect of Record



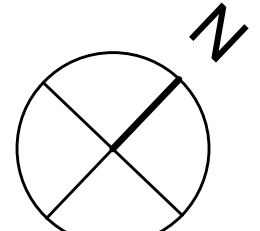
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2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

NO.	DATE	ISSUE
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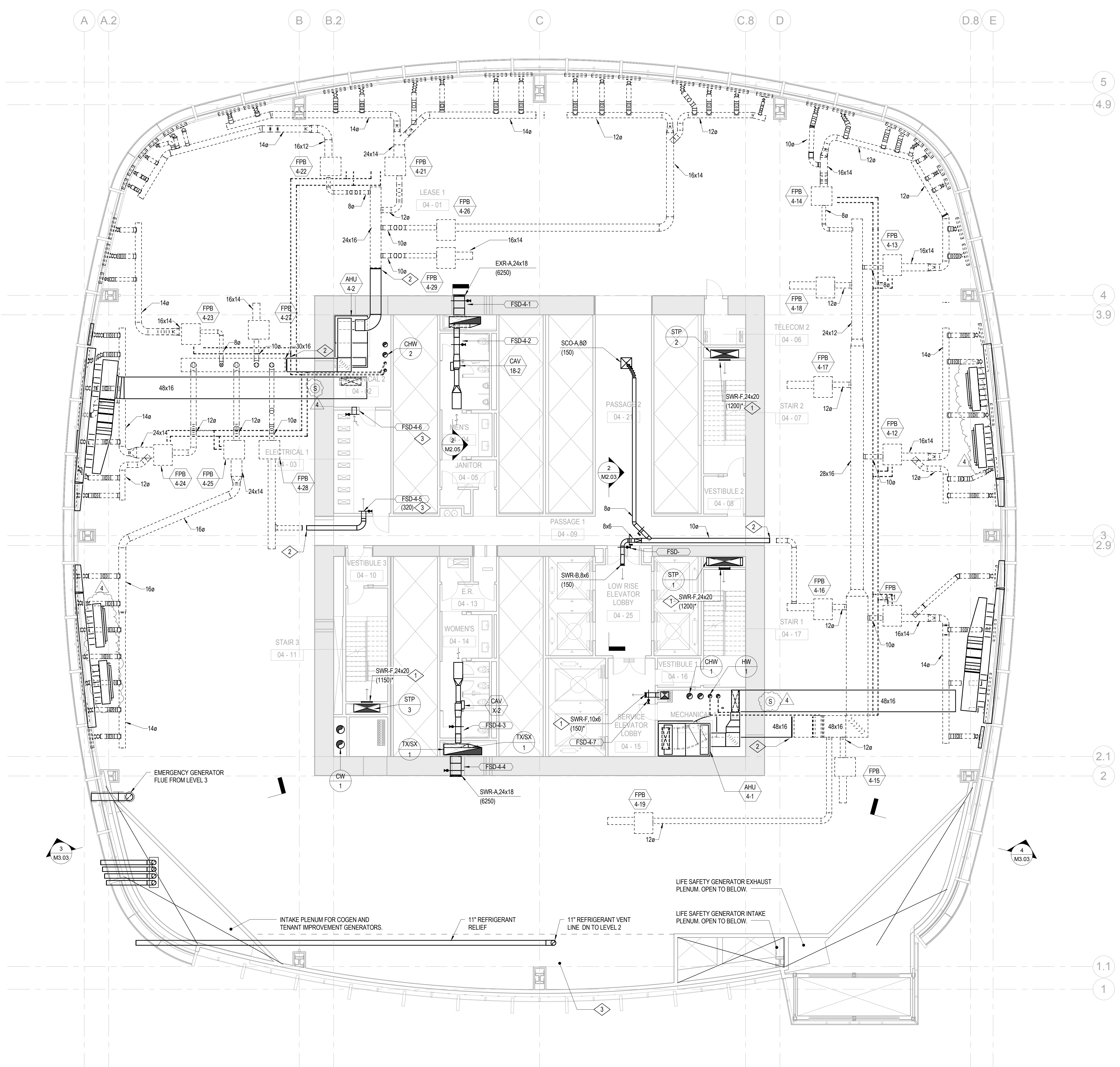
DRAWING TITLE

**MECHANICAL LEVEL 4 PLAN**

PROJECT NO. S12.10250.00 DRAWING NUMBER **M2.04**



1/8" = 1'-0"



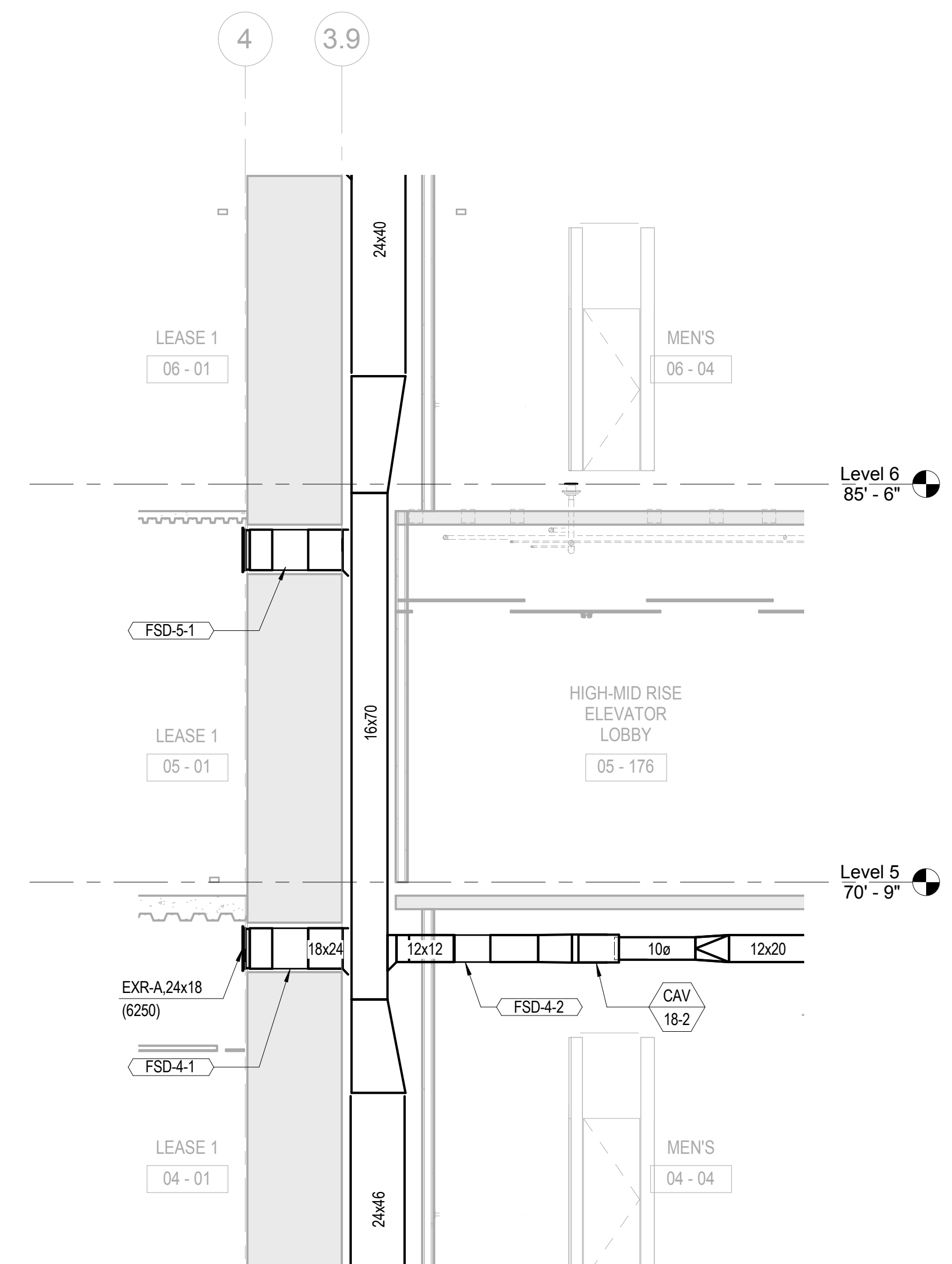
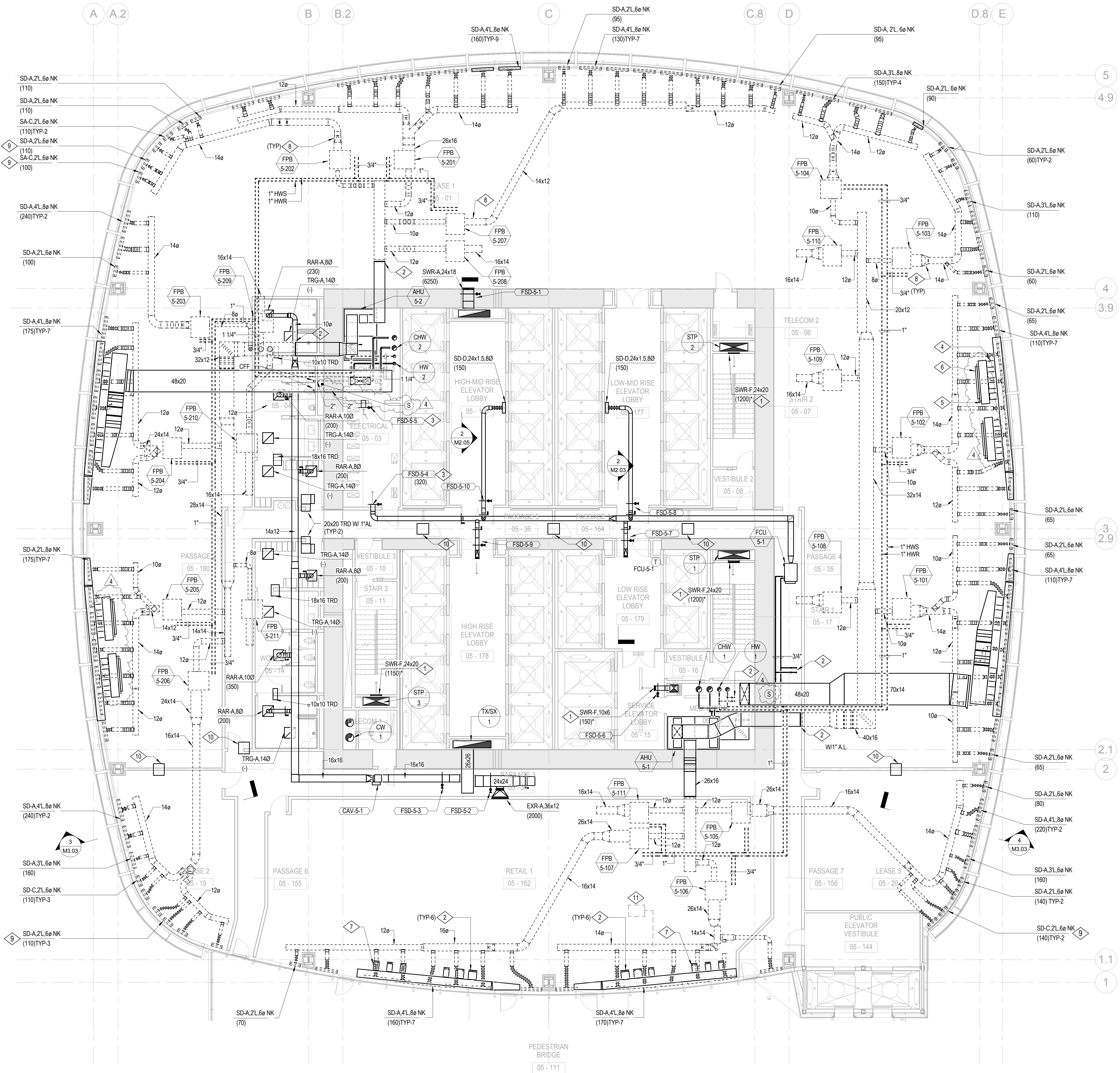


**SHEET NOTES**

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**NUMBERED NOTES**

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- 2 CAP FOR FUTURE.
- 3 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH WMS AT EACH OPEN SIDE.
- 4 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"Lx18"Wx24"H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 PROVIDE DUCT TRANSITION FROM FPB DISCHARGE OPENING TO THE DOWNSTREAM SUPPLY DUCT, TYPICAL.
- 9 LOCATE SD-A & SD-C 2'-0" DIFFUSERS ON CURVED WALL ALTERNATIVELY.
- 10 24x24 TRANSFER AIR DUCT W/1" AL.
- 11 FUTURE TENANT GREASE/ODOR/SMOKE EXHAUST SYSTEM.

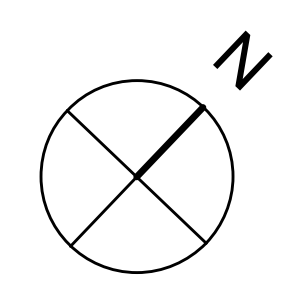


- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
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Civil Engineer
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Curtain Wall Consultant
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Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
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3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL LEVEL 5 PLAN**



1/8" = 1'-0"



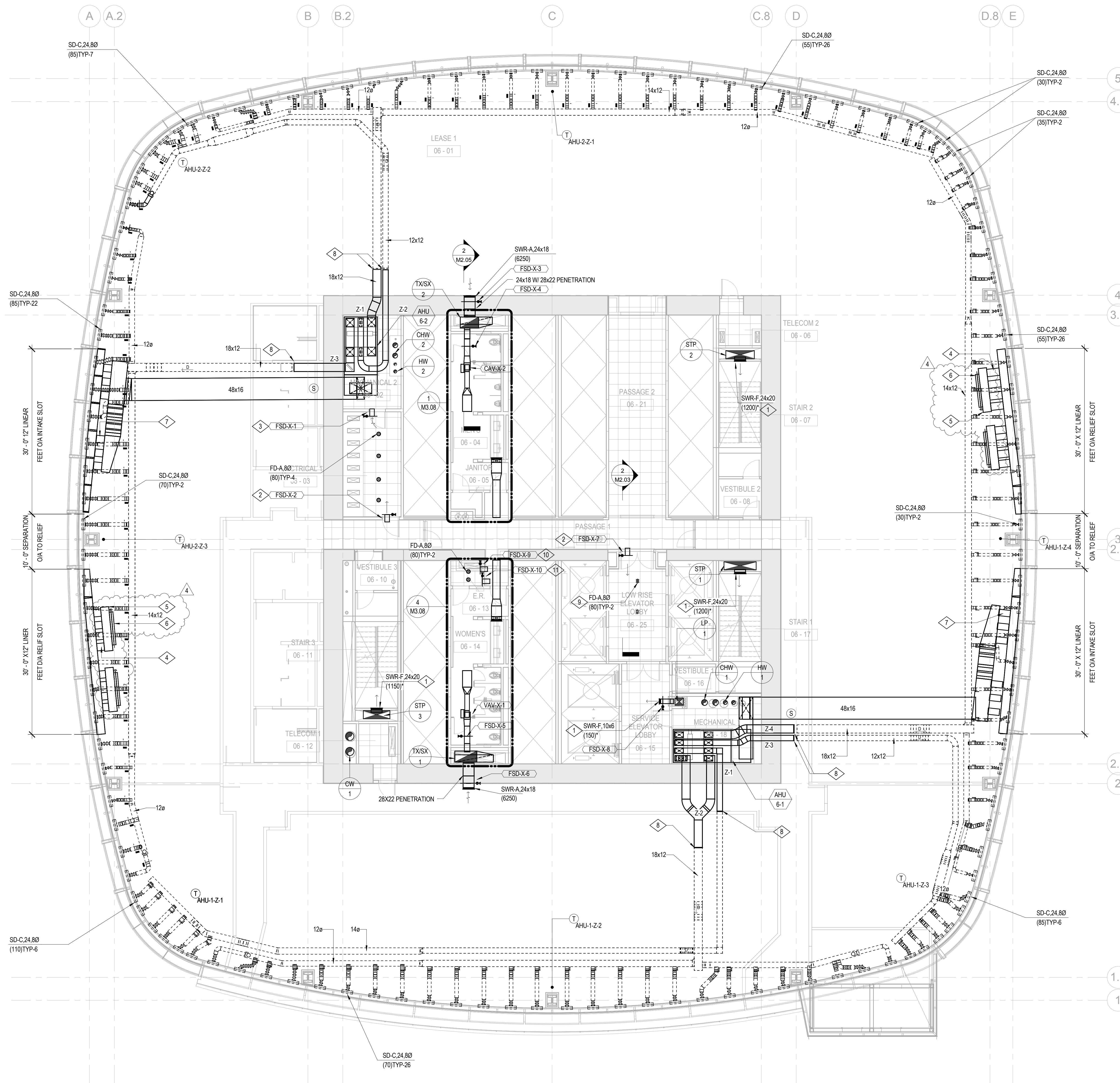


**SHEET NOTES**

- A DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

- 1 FOR AIRFLOW REFER TO SHEETS M4.01 THROUGH M4.03.
- 2 10x8 TRANSFER DUCT UNDERFLOOR WITH FSD.
- 3 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"Lx18"Wx24"H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 10x8 TRANSFER DUCT UNDERFLOOR WITH FSD. TYPICAL OF LEVELS 7, 12, 17, 22, 27, 32.
- 11 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH WMS AT EACH SIDE OF WALL. TYPICAL OF LEVELS 7, 12, 17, 22, 27, 32.



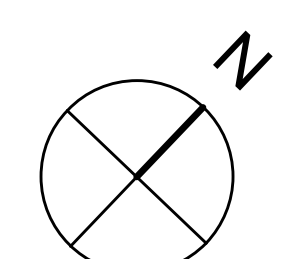
- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
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Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
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Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
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1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

CAD FILENAME: \_\_\_\_\_  
DRAWING TITLE: \_\_\_\_\_

**MECHANICAL  
TYPICAL PLAN -  
LEVELS 6-16**



1/8" = 1'-0"



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
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Building Management and Controls Engineer
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Aerial Tram Consultant
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Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

CAD FILENAME  
DRAWING TITLE

**MECHANICAL LEVEL  
17 PLAN**

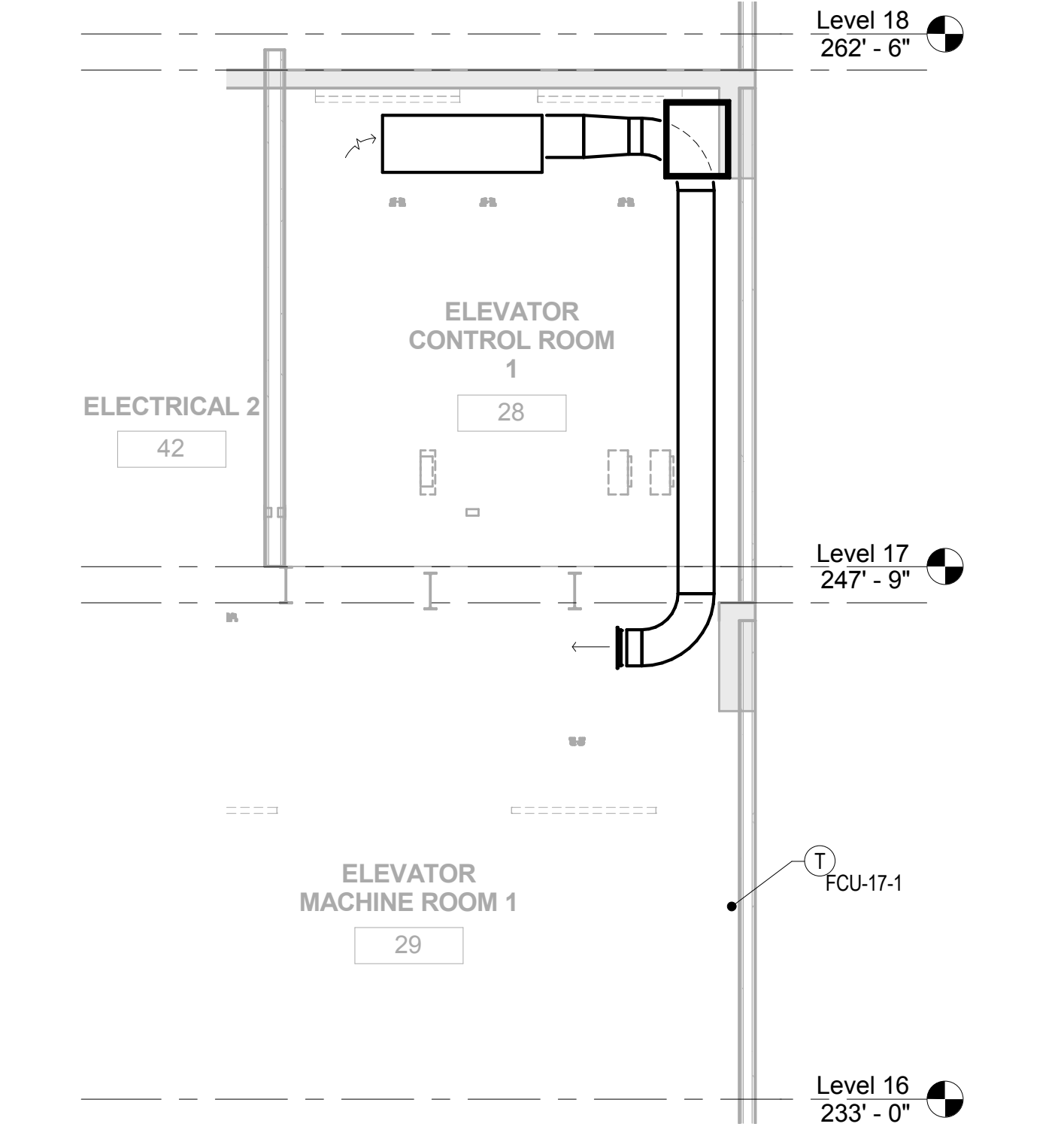
PROJECT NO. S12.10250.00  
DRAWING NUMBER M2.17

**SHEET NOTES**

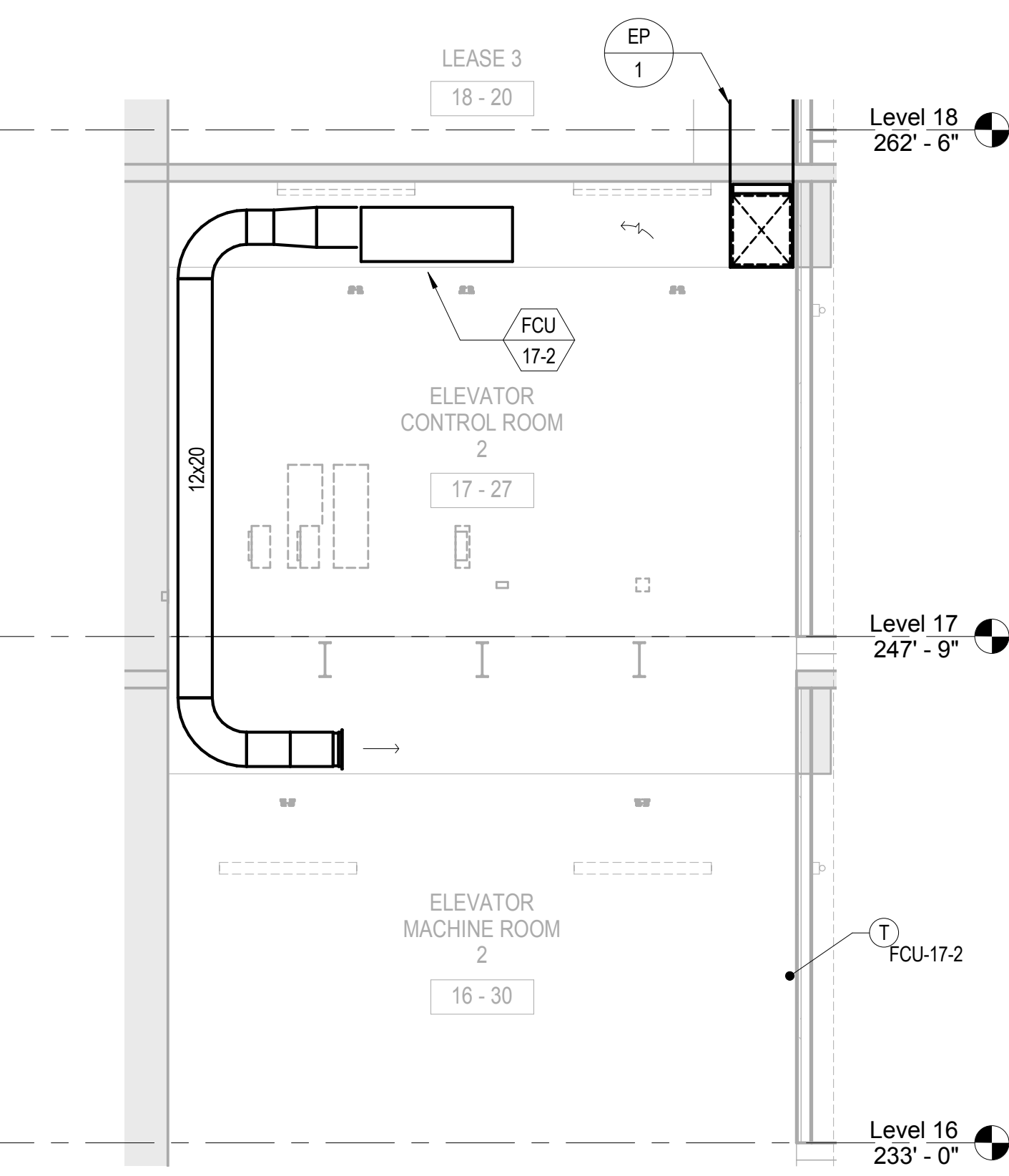
- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
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**NUMBERED NOTES**

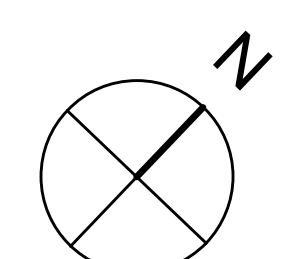
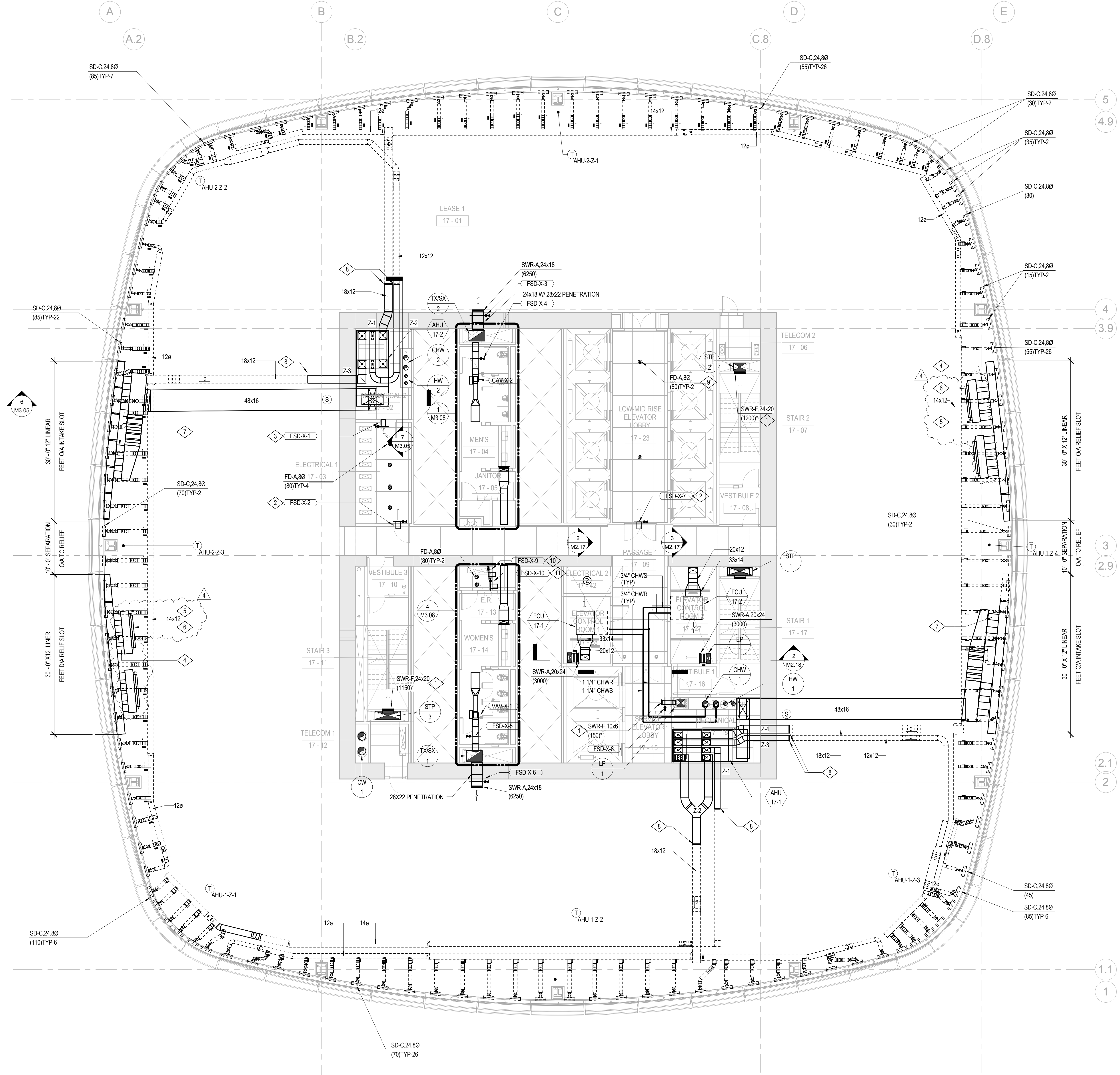
- 1 FOR AIRFLOW REFER TO SHEETS M4.01 THROUGH M4.03.
- 2 10x8 TRANSFER DUCT UNDERFLOOR WITH FSD.
- 3 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"Lx18"Wx24"H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 10X8 TRANSFER DUCT UNDERFLOOR WITH FSD. TYPICAL OF LEVELS 7, 12, 17, 22, 27, 32.
- 11 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH WMS AT EACH SIDE OF WALL. TYPICAL OF LEVELS 7, 12, 17, 22, 27, 32.



2 MECHANICAL SECTION ELEVATOR CONTROL ROOM 1  
1/4" = 1'-0"



3 MECHANICAL SECTION ELEVATOR CONTROL ROOM 2 17-27  
1/4" = 1'-0"



1/8" = 1'-0"

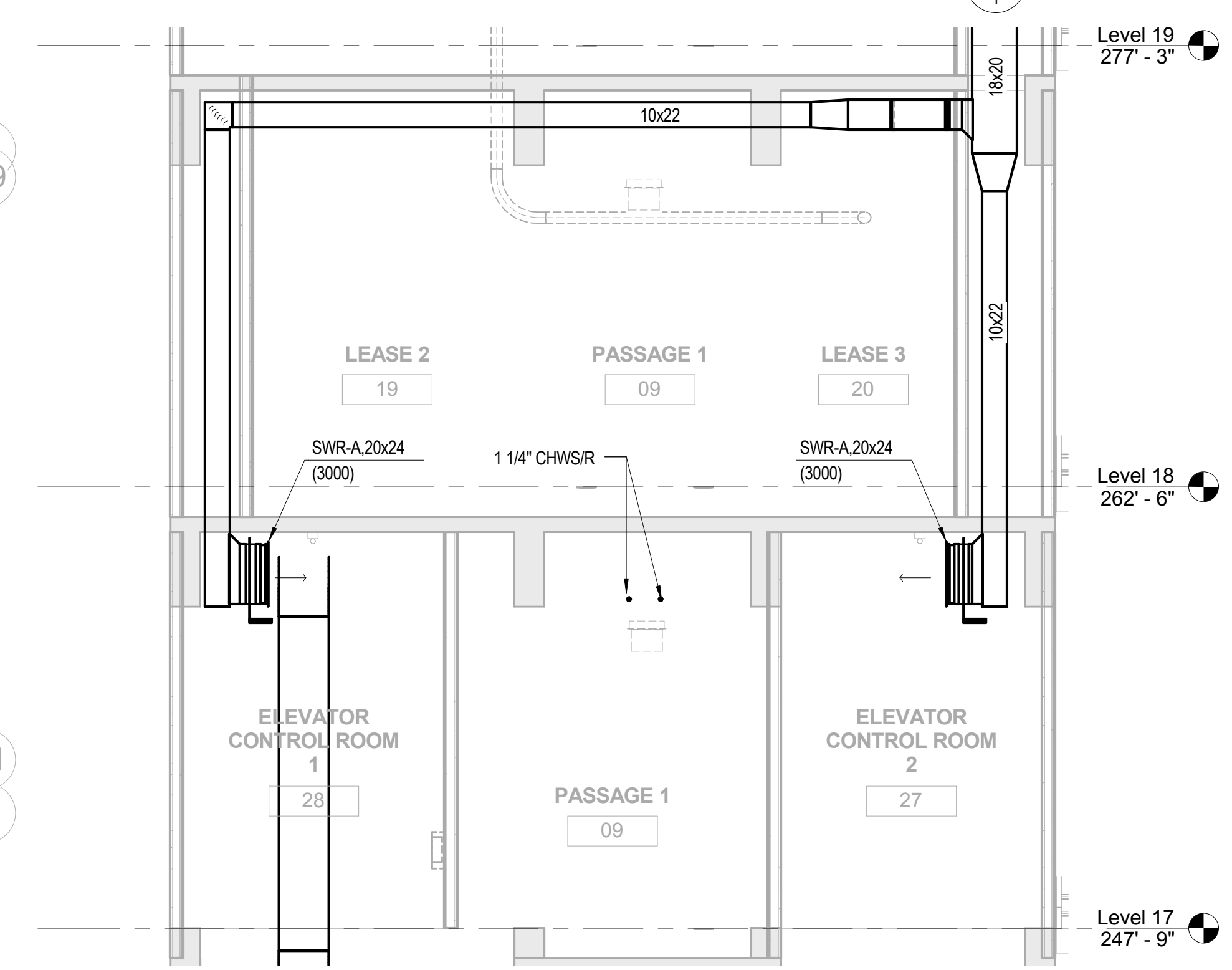
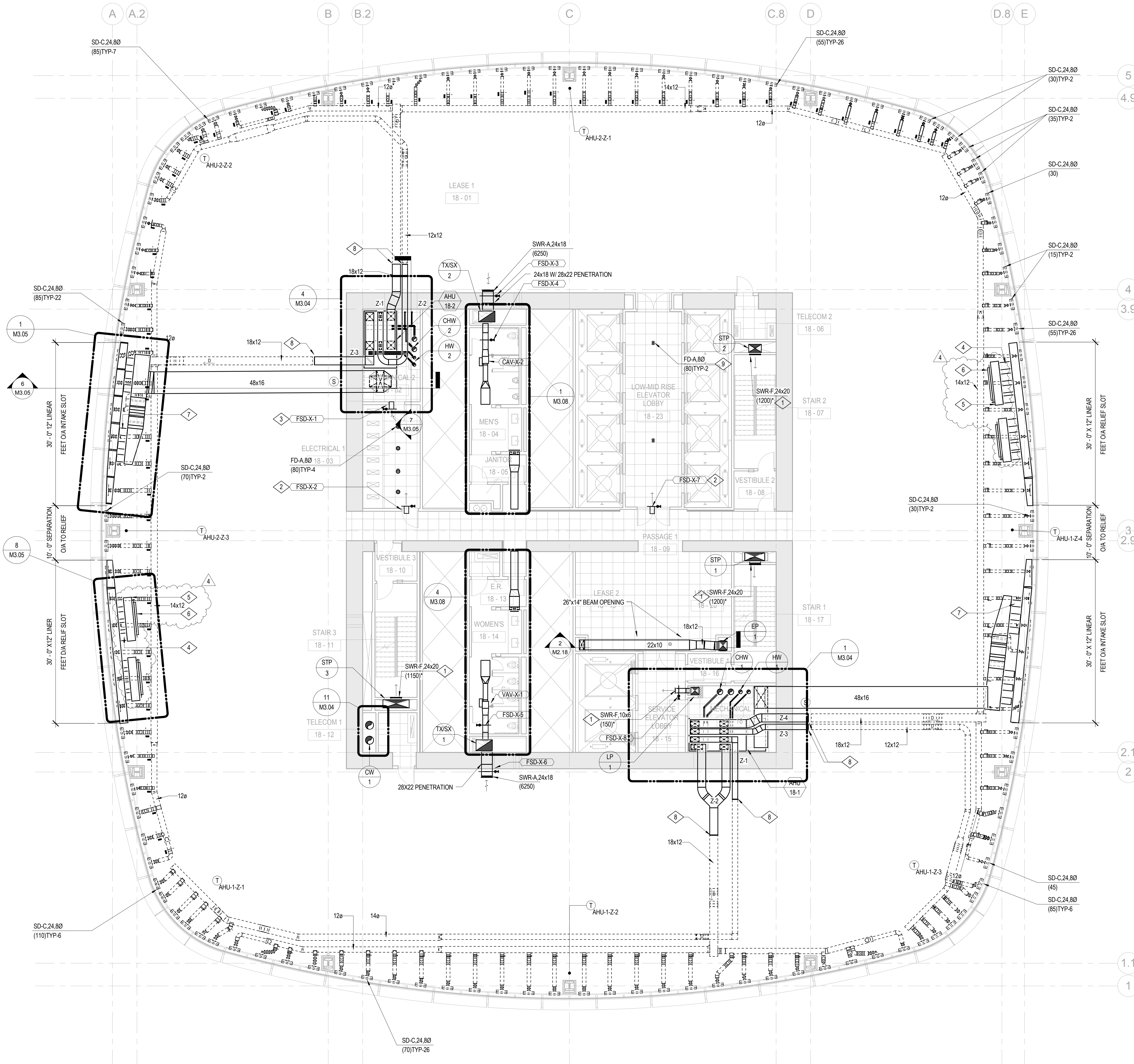


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- 4 16Ø RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"X18"Wx24"H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 16Ø OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.



- BOSTON PROPERTIES / HINES  
Owner
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DRAWING TITLE  
**MECHANICAL LEVEL 18 PLAN**

SCALE: 1/8" = 1'-0"  
 PROJECT NO. S12.10250.00  
 DRAWING NUMBER: **M2.18**

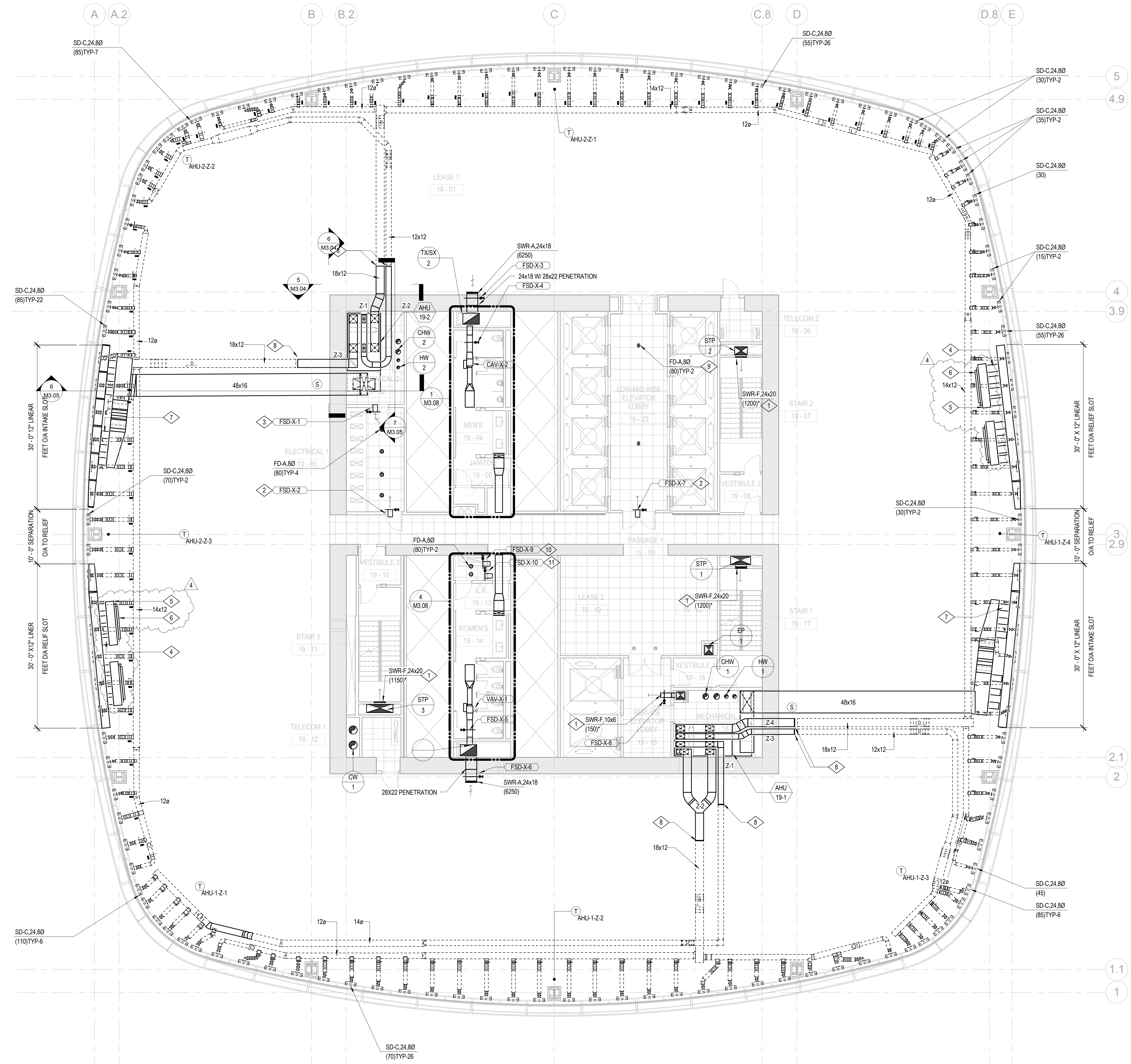


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- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 10X8 TRANSFER DUCT UNDERFLOOR WITH FSD. TYPICAL OF LEVELS 7, 12, 17, 22, 27, 32.
- 11 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH WMS AT EACH SIDE OF WALL. TYPICAL OF LEVELS 7, 12, 17, 22, 27, 32.



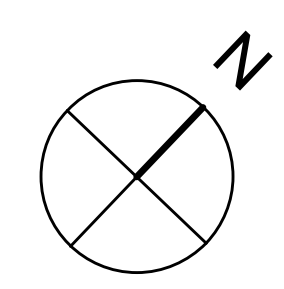
- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL TYPICAL PLAN - LEVELS 19-30**

PROJECT NO. S12.10250.00  
DRAWING NUMBER **M2.19**



1/8" = 1'-0"

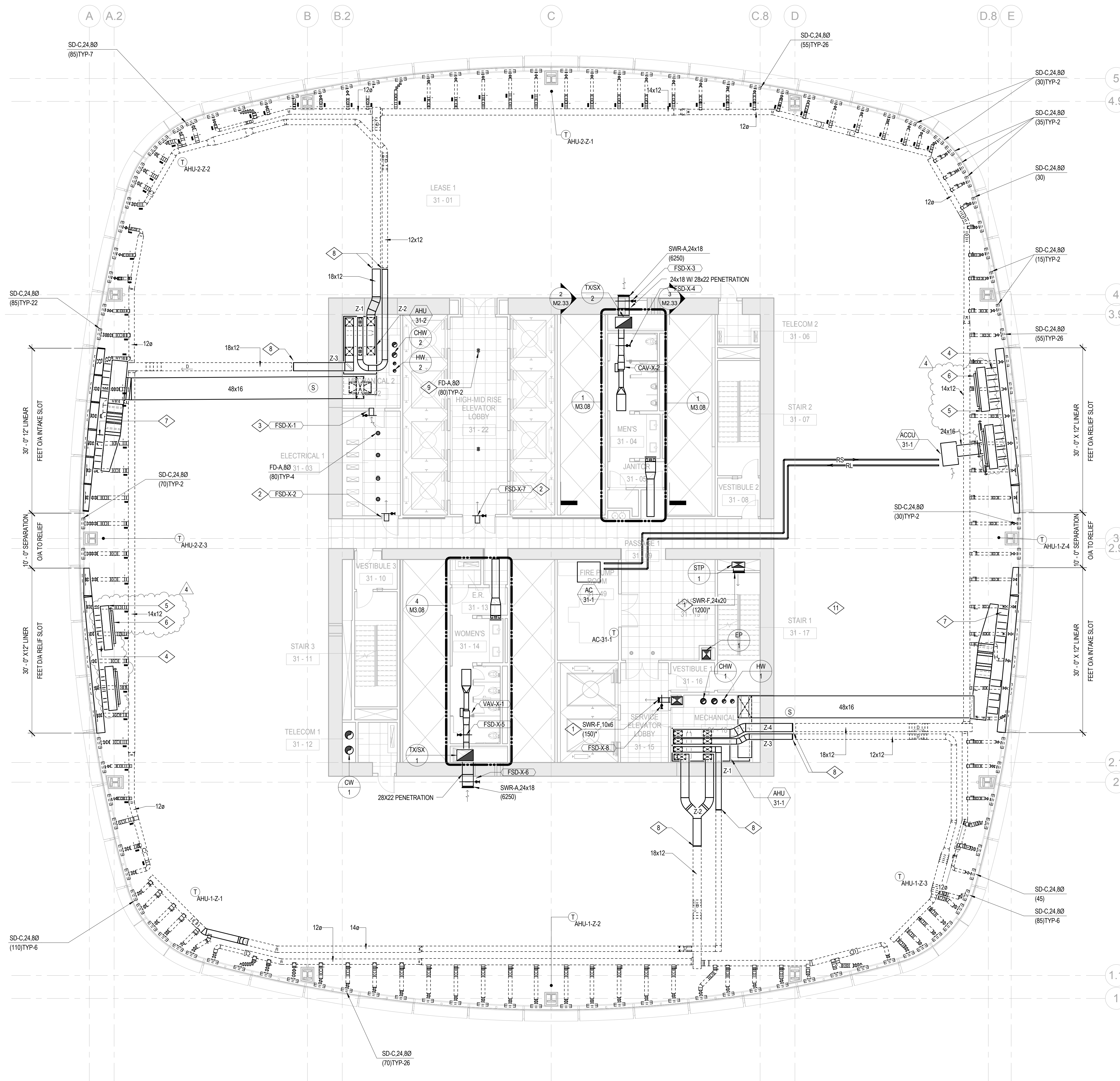


**SHEET NOTES**

- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
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**NUMBERED NOTES**

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- 2 10x8 TRANSFER DUCT UNDERFLOOR WITH FSD.
- 3 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4 16Ø RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"X18"Wx24"H PLENUM (TYP-4).
- 6 72"X18" ACD (TYP-4).
- 7 16Ø OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
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Building Security
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Parking Consultant
- ARUP  
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Lighting Consultant
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- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
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Window Washing Consultant
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Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record

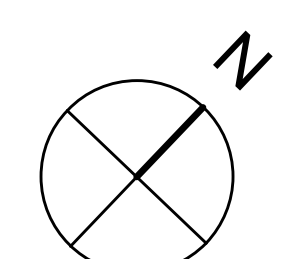


NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

CAD FILENAME  
DRAWING TITLE

**MECHANICAL LEVEL  
31 PLAN**

PROJECT NO. S12.10250.00  
DRAWING NUMBER M2.31



1/8" = 1'-0"

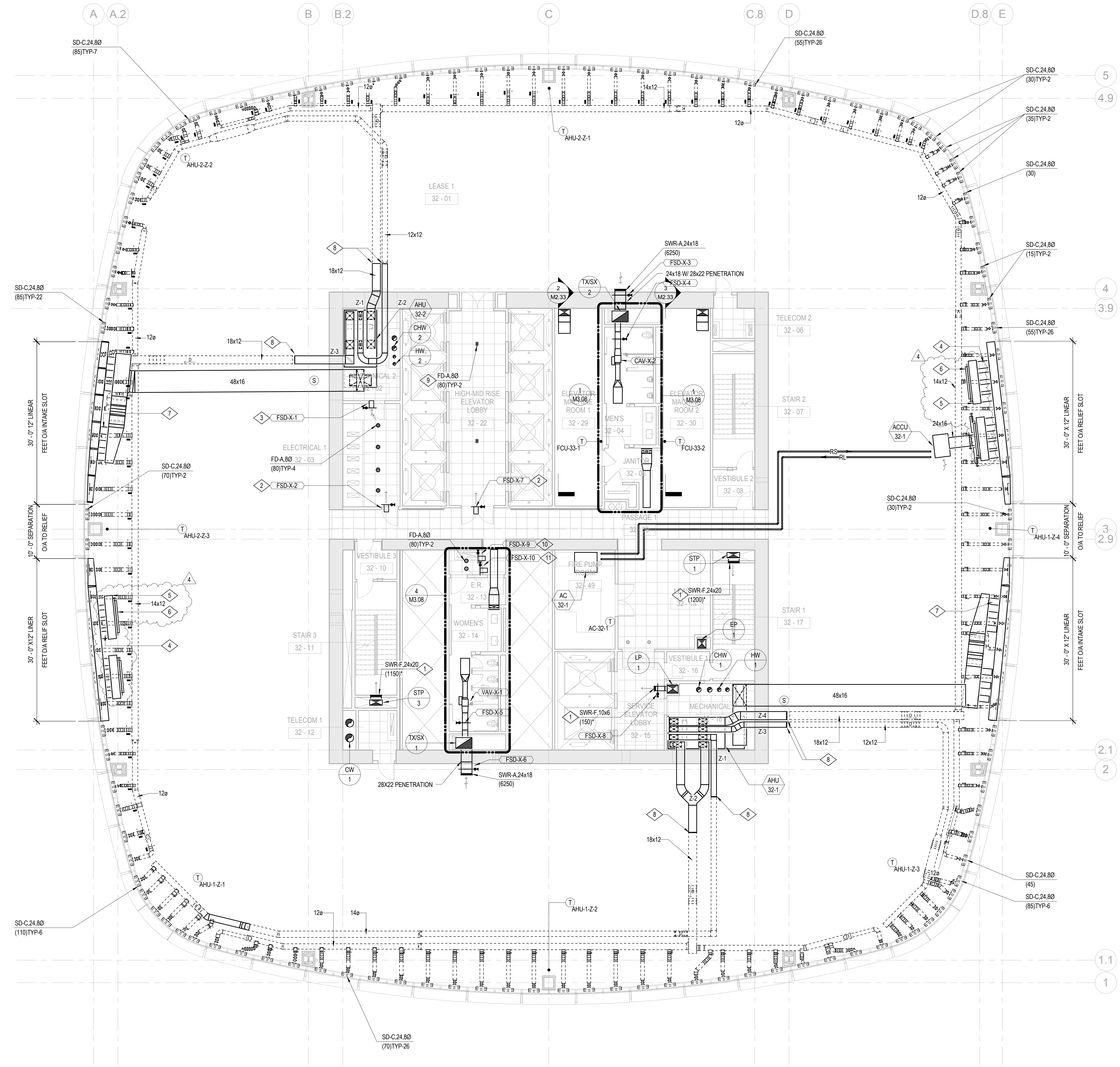


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- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
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- 5 96"X18"Wx24"H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 16Ø OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 10X8 TRANSFER DUCT UNDERFLOOR WITH FSD. TYPICAL OF LEVELS 7, 12, 17, 22, 27, 32.
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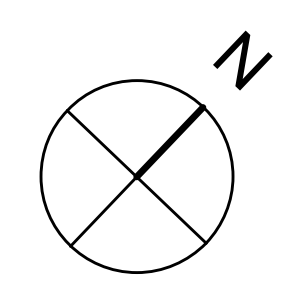
- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
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Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
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Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
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2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL LEVEL 32 PLAN**

PROJECT NO. S12.10250.00  
DRAWING NUMBER **M2.32**



1/8" = 1'-0"

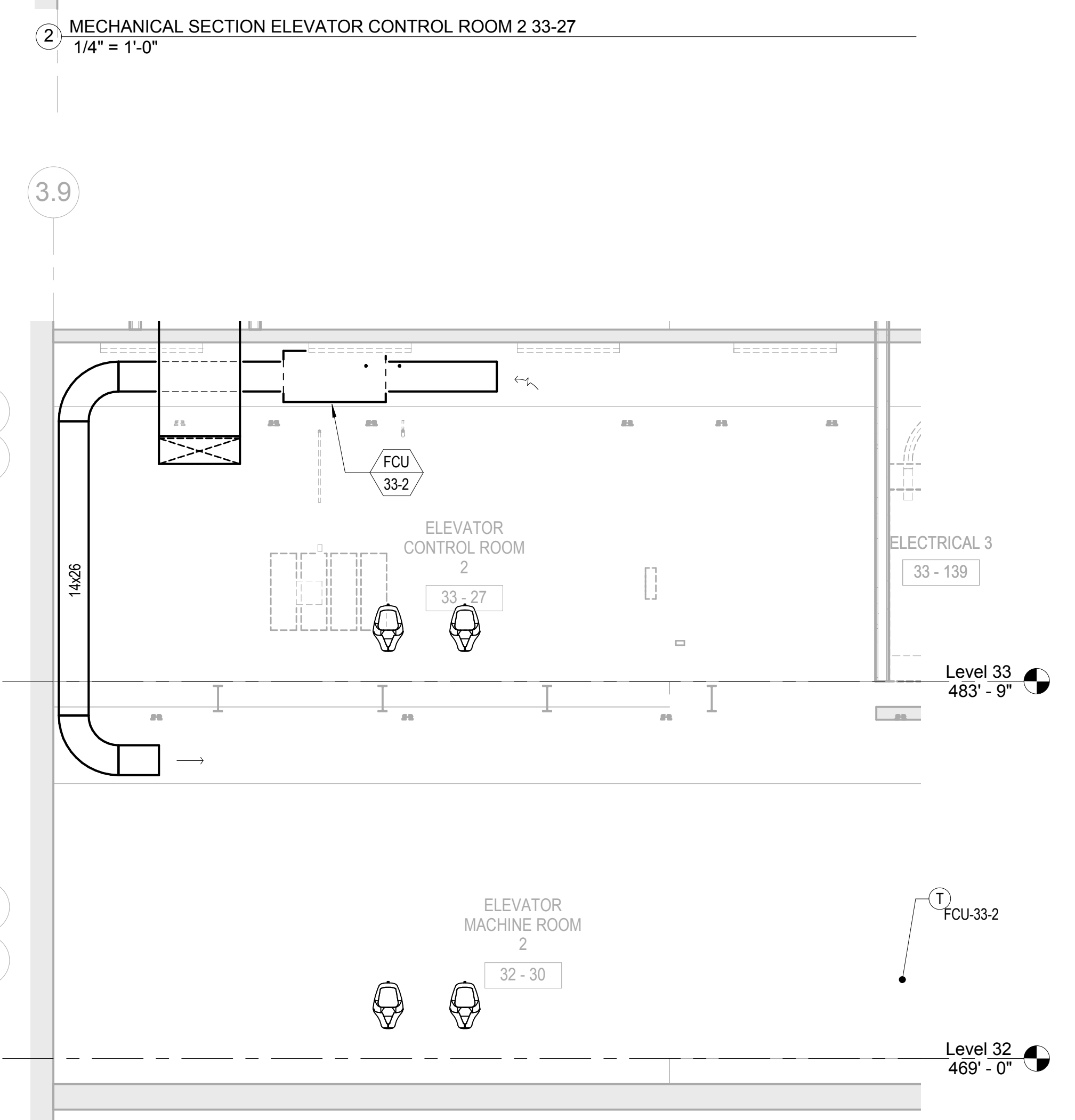
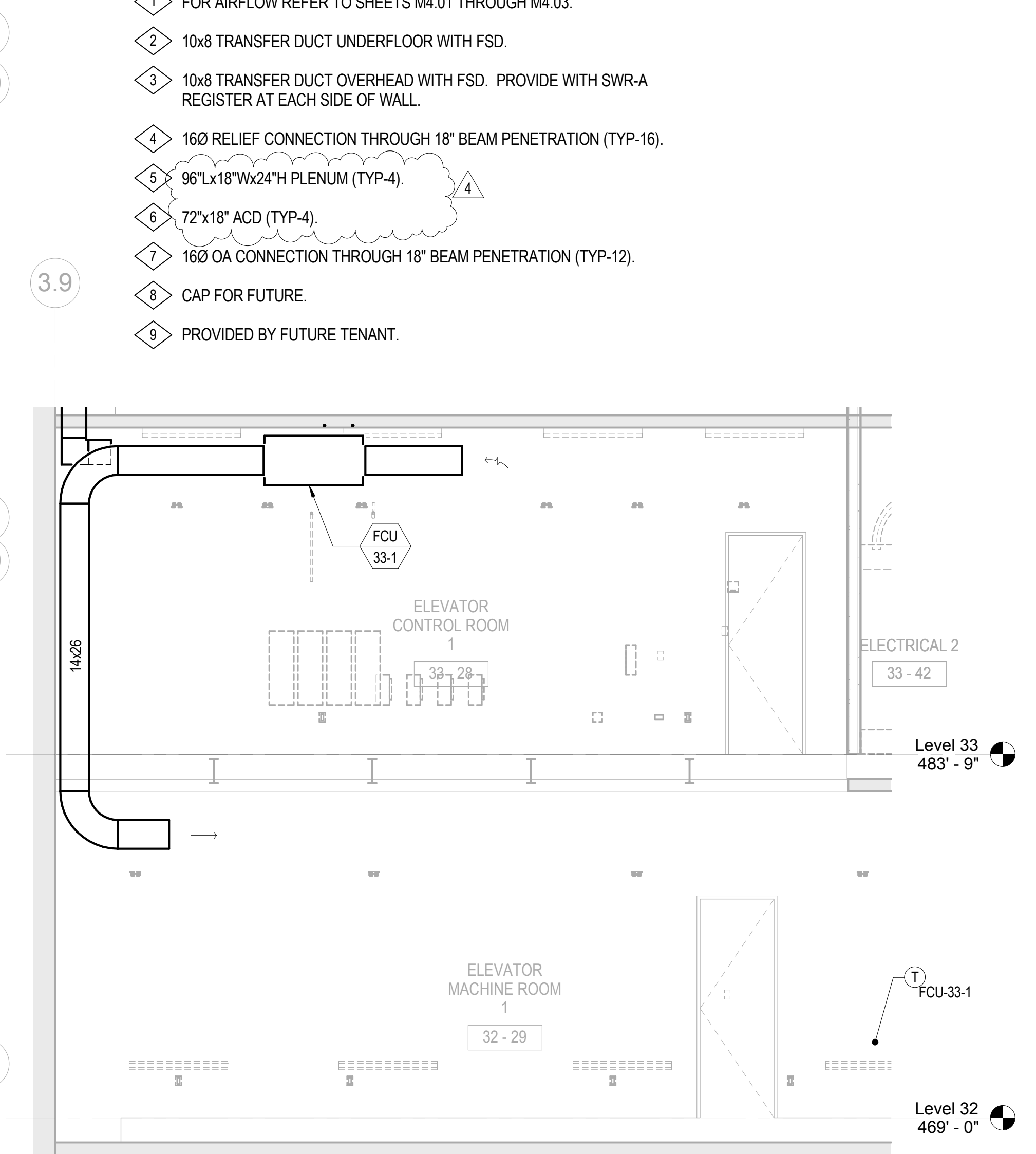
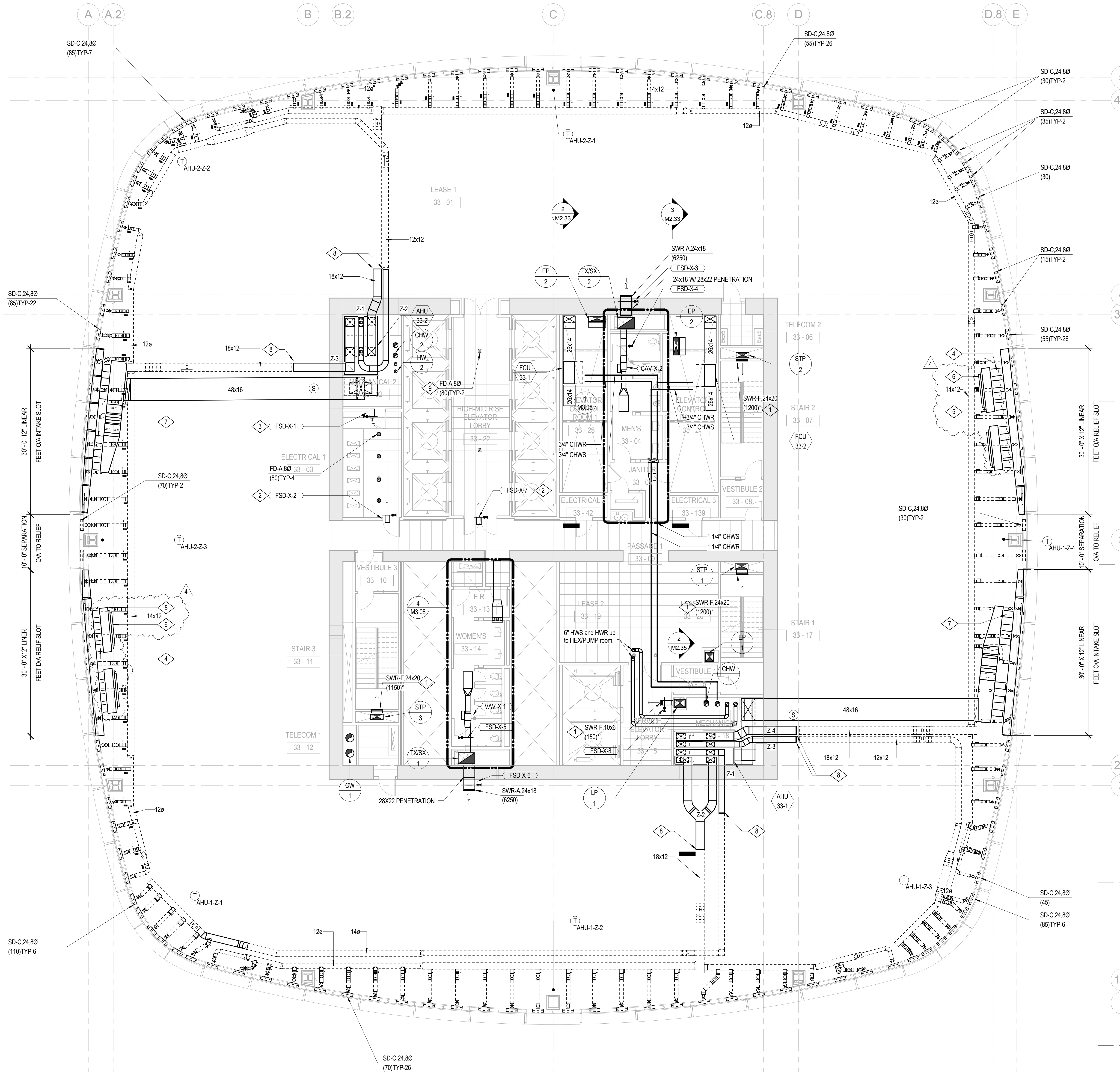


**SHEET NOTES**

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- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
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- 4 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"x18" Wx24" H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.



3 MECHANICAL SECTION ELEVATOR CONTROL ROOM 2 331  
1/4" = 1'-0"

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
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Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
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Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
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3	24 FEB 14	BID ADDENDUM #2
2	10 FEB 14	BID ADDENDUM #1
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DWG FILENAME  
DRAWING TITLE

**MECHANICAL LEVEL 33 PLAN**

PROJECT NO. S12.10250.00  
DRAWING NUMBER M2.33

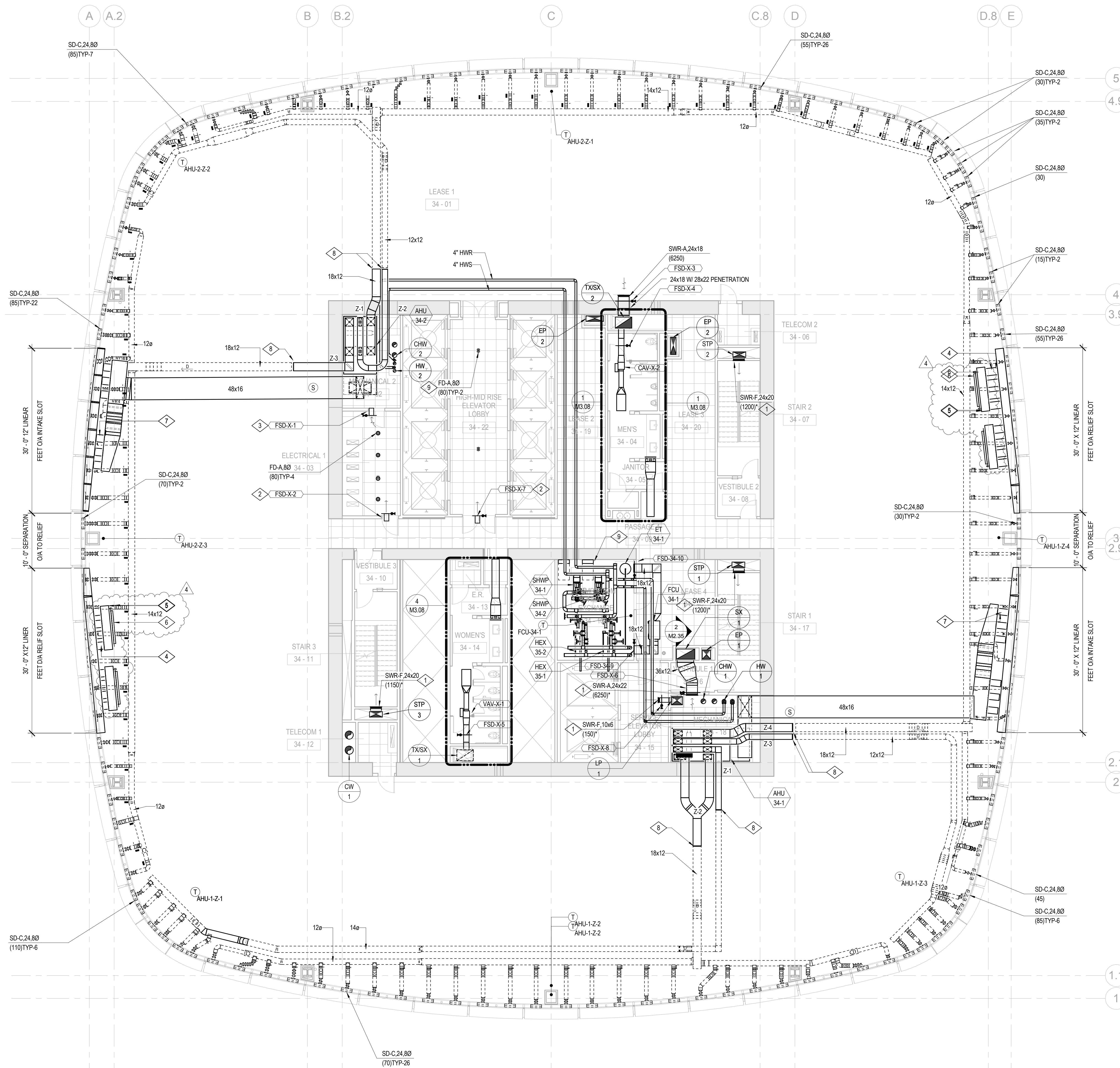


**SHEET NOTES**

- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

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- 3 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"X18"Wx24"H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 PUMP VFD WITH 36" ELECTRICAL CLEARANCE (TYP.)



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record

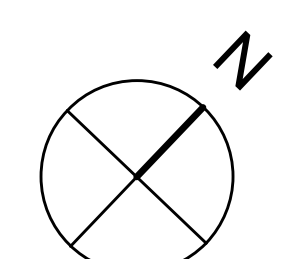


NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

CAD FILENAME  
DRAWING TITLE

**MECHANICAL LEVEL  
34 PLAN**

PROJECT NO. S12.10250.00  
DRAWING NUMBER M2.34



1/8" = 1'-0"



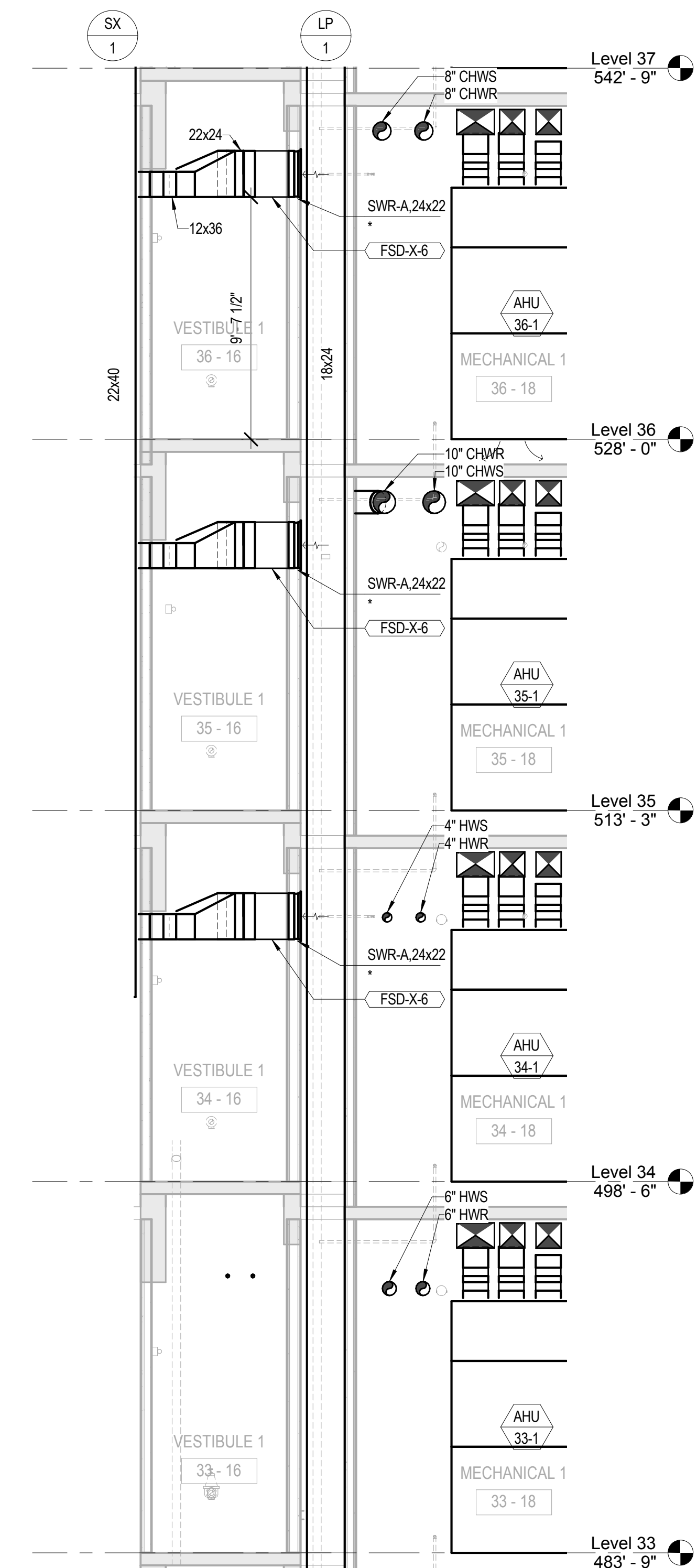
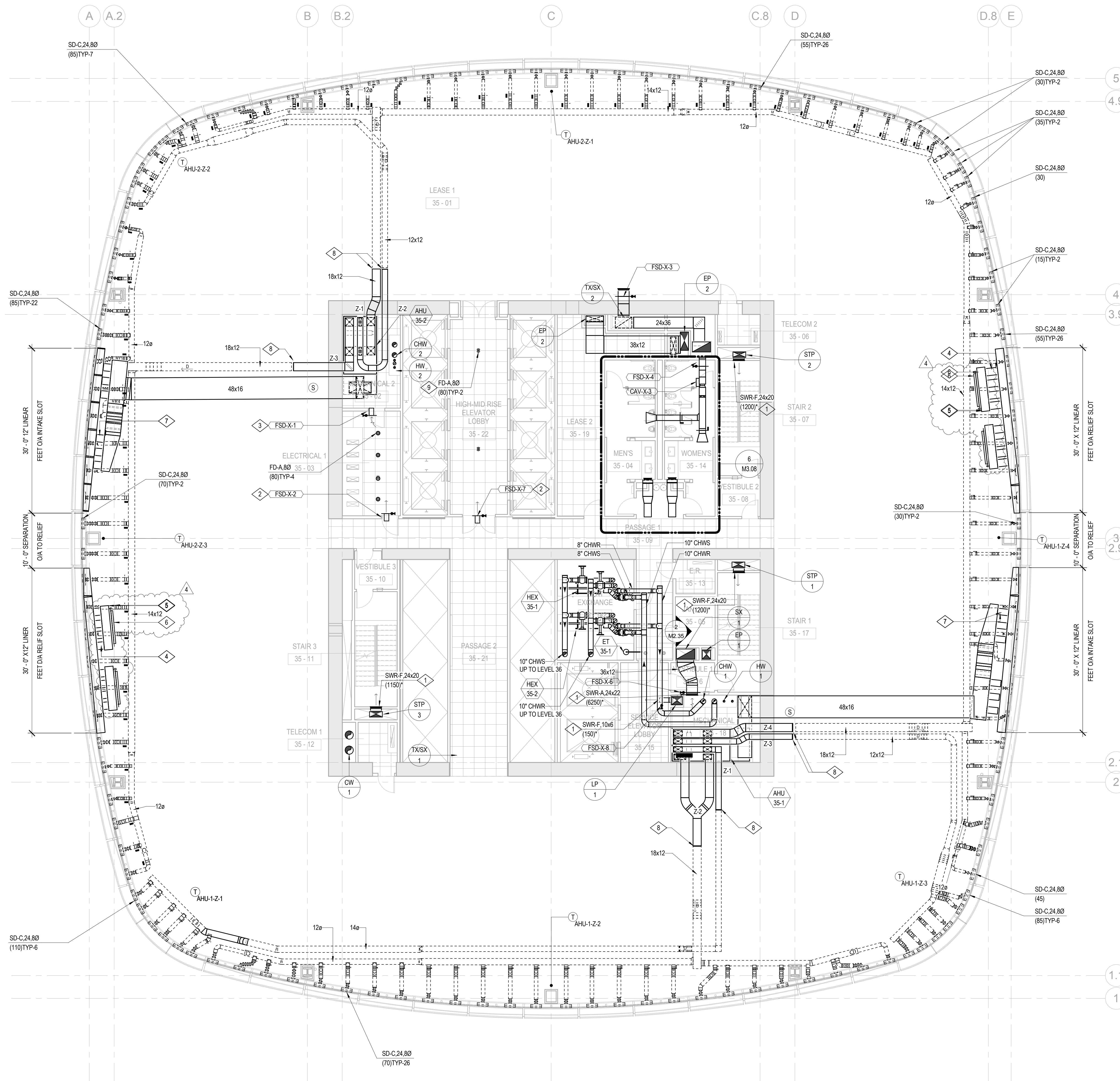


**SHEET NOTES**

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- 6 72"x18" ACD (TYP-4).
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.



2 TYPICAL SX-1 SMOKE EXHAUST CONNECTION LEVELS 35-61  
1/4" = 1'-0"

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
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Elevator Consultant
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Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



4	02 MAY 14	GMP	ADDENDUM #3 PERMIT REVISION
3	24 FEB 14	NO. 1	ADDENDUM #3 PERMIT
2	10 FEB 14	BID ADDENDUM #2	
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT	

NO.	DATE	ISSUE

CAD FILENAME

DRAWING TITLE

**MECHANICAL LEVEL 35 PLAN**

1/8" = 1'-0"

PROJECT NO. S12.10250.00

DRAWING NUMBER **M2.35**

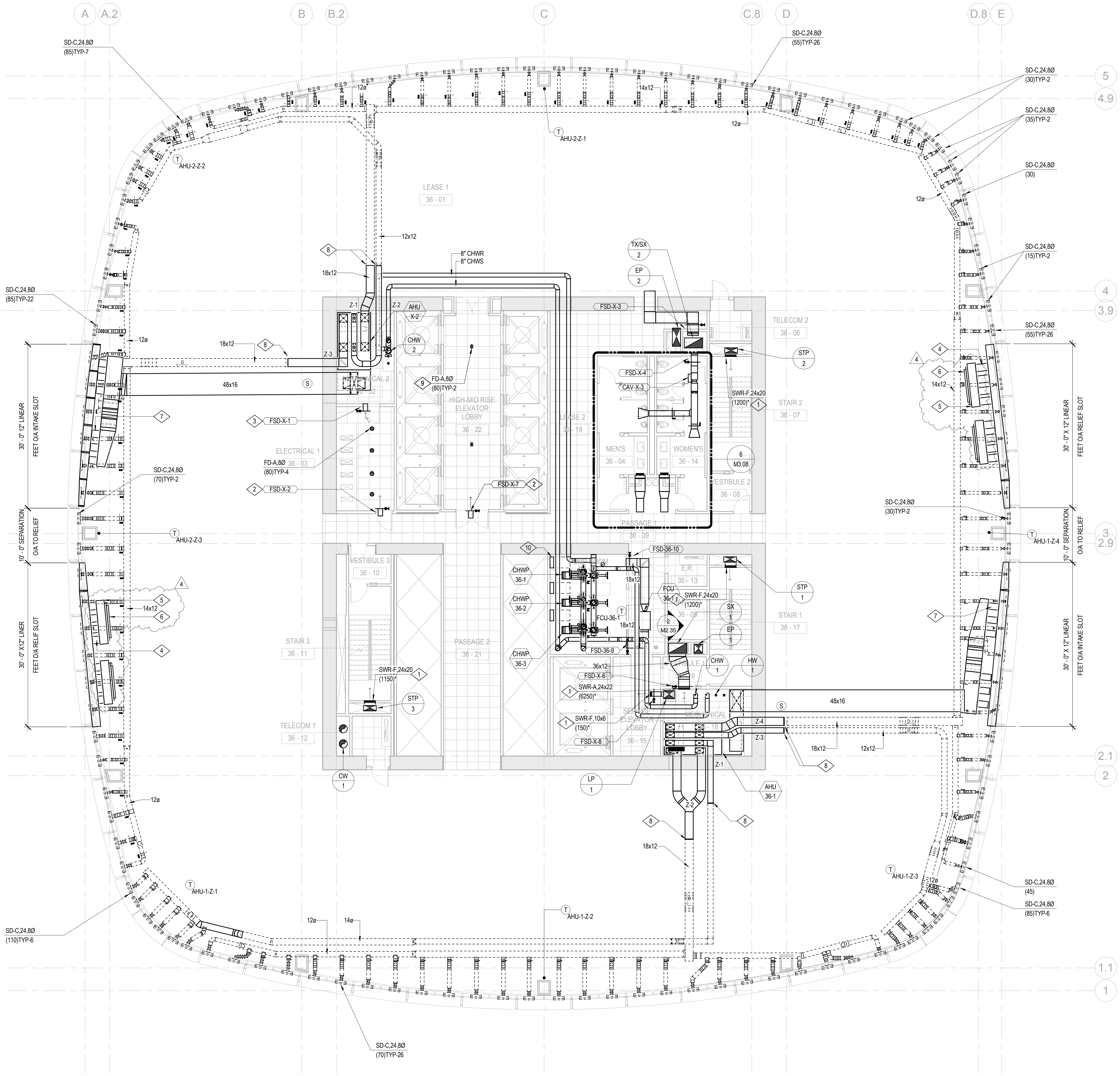


**SHEET NOTES**

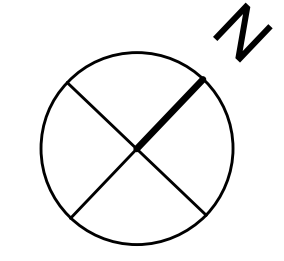
- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
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- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 PUMP VFD WITH 36" ELECTRICAL CLEARANCE (TYP.)



1 MECHANICAL LEVEL 36 PLAN  
1/8" = 1'-0"



1/8" = 1'-0"

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
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Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
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1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL LEVEL 36 PLAN**

PROJECT NO. S12.10250.00 DRAWING NUMBER **M2.36**

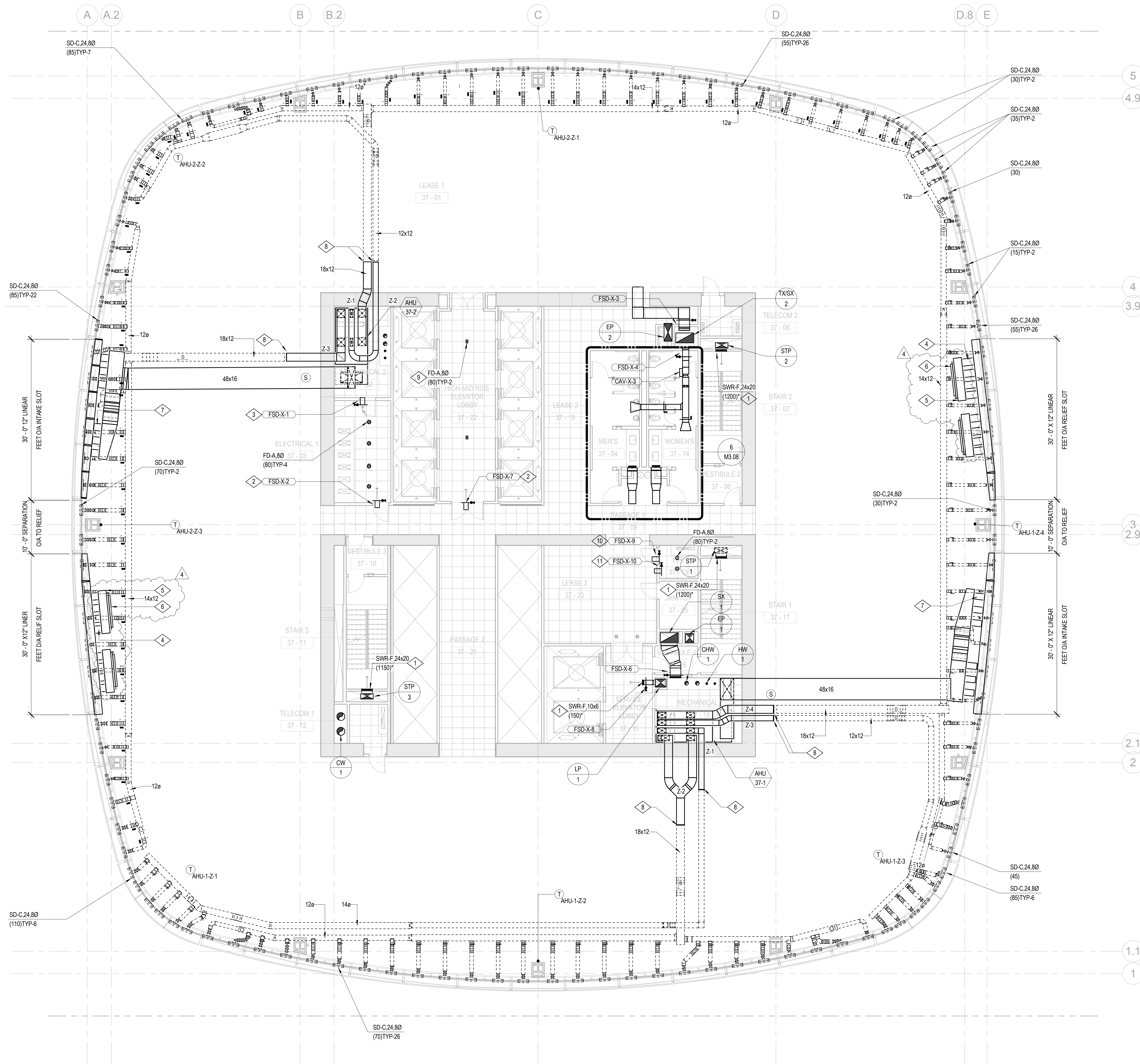


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- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 10X8 TRANSFER DUCT UNDERFLOOR WITH FSD. TYPICAL OF LEVELS 37, 42, 47, 52, 57.
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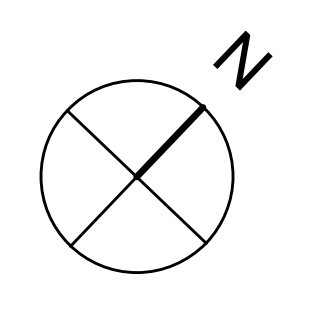
- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
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MEFPF Engineer
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Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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DRAWING TITLE  
**MECHANICAL TYPICAL PLAN - LEVELS 37-48**

PROJECT NO. S12.10250.00  
DRAWING NUMBER M2.37



1/8" = 1'-0"



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL LEVEL 49 PLAN**

PROJECT NO.  
S12.10250.00

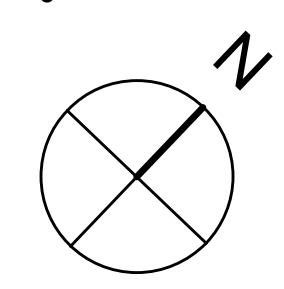
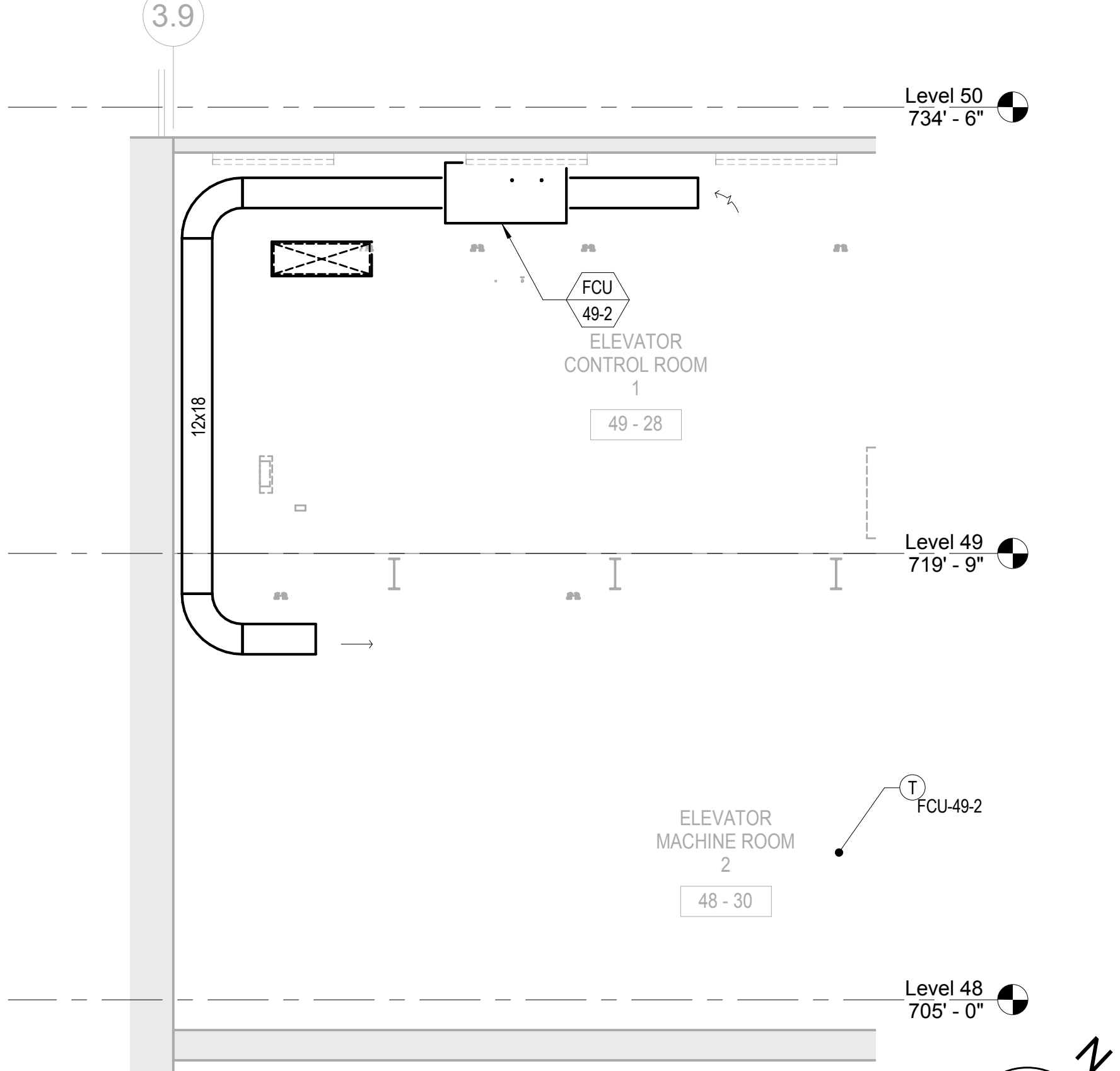
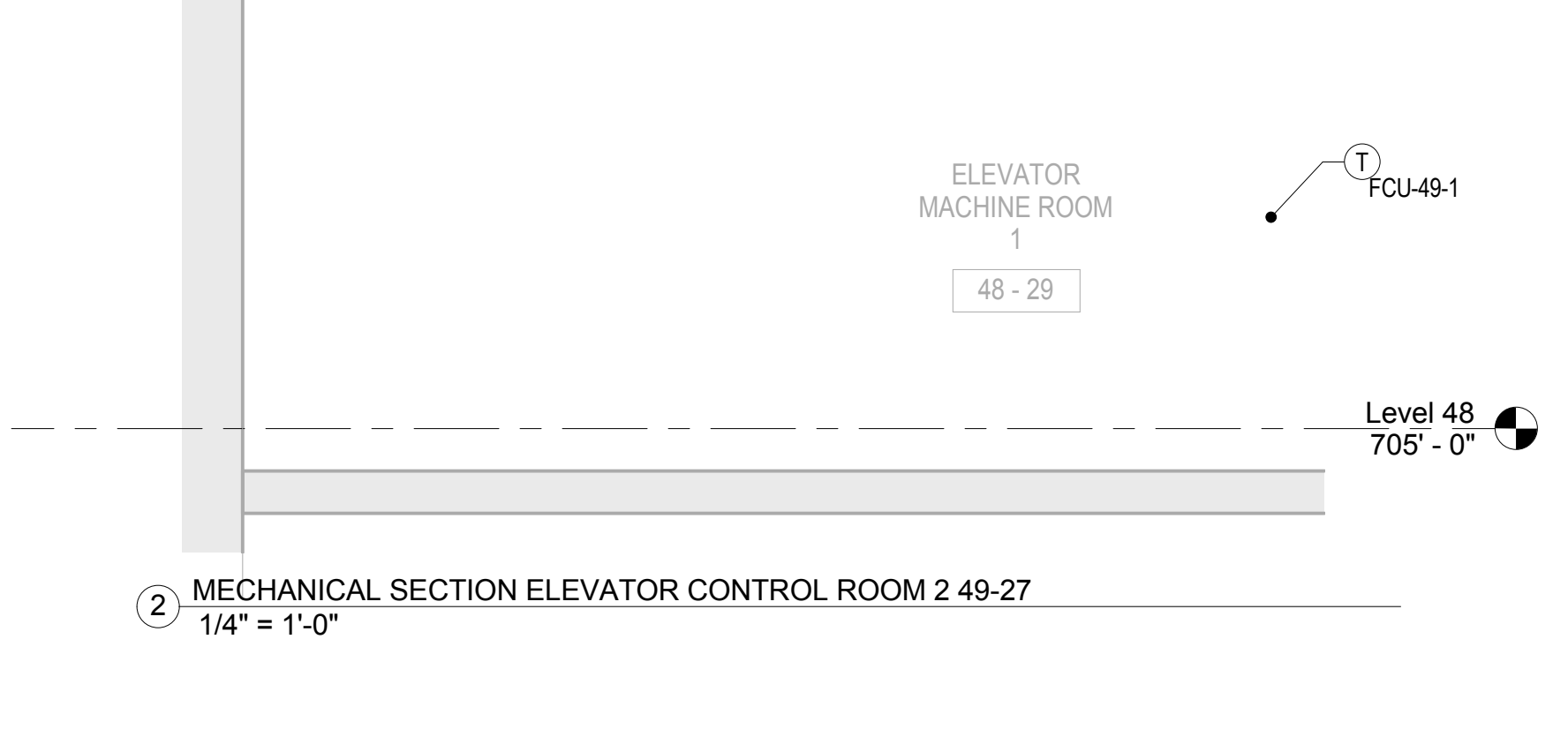
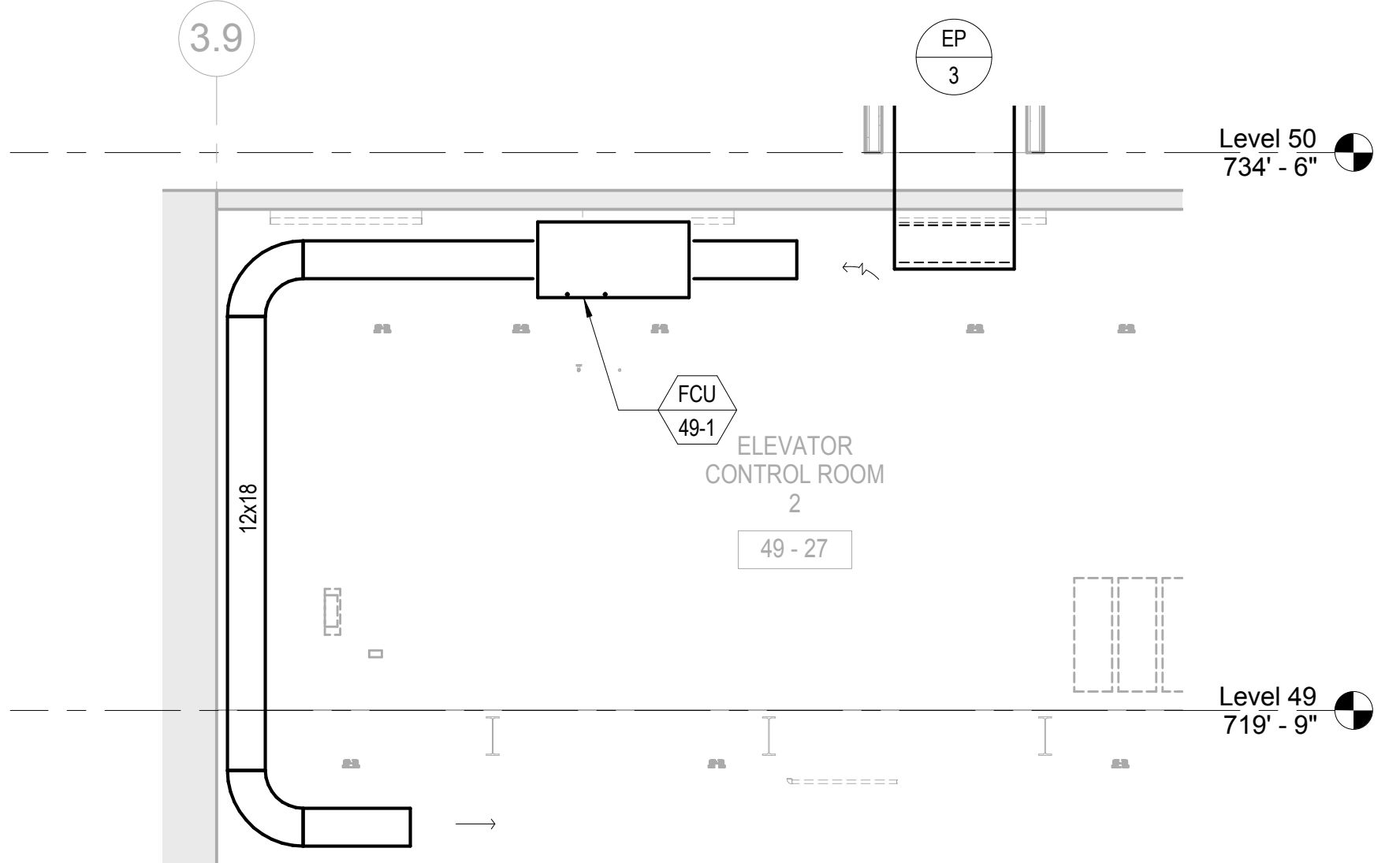
DRAWING NUMBER  
**M2.49**

**SHEET NOTES**

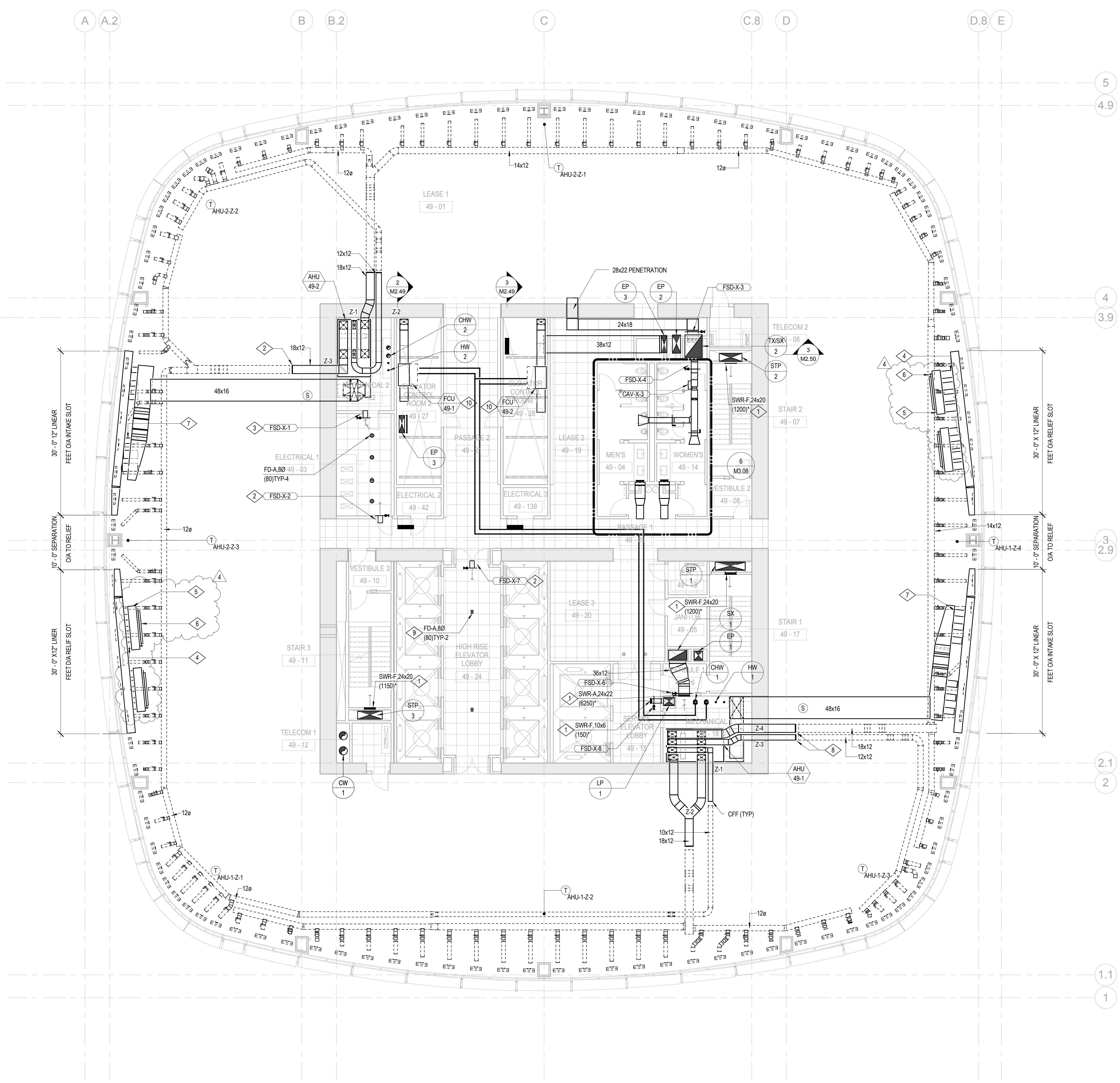
- A. DASHED LINES DENOTE FUTURE TENANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

- 1 FOR AIRFLOW REFER TO SHEETS M4.01 THROUGH M4.03.
- 2 10x8 TRANSFER DUCT UNDERFLOOR WITH FSD.
- 3 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5 96"Lx18"Wx24"H PLENUM (TYP-4).
- 6 72"x18" ACD (TYP-4).
- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 PROVIDE WITH LITTLE GIANT VCMA-20 SERIES (OR APPROVED EQUAL) CONDENSATE PUMP.



1/8" = 1'-0"



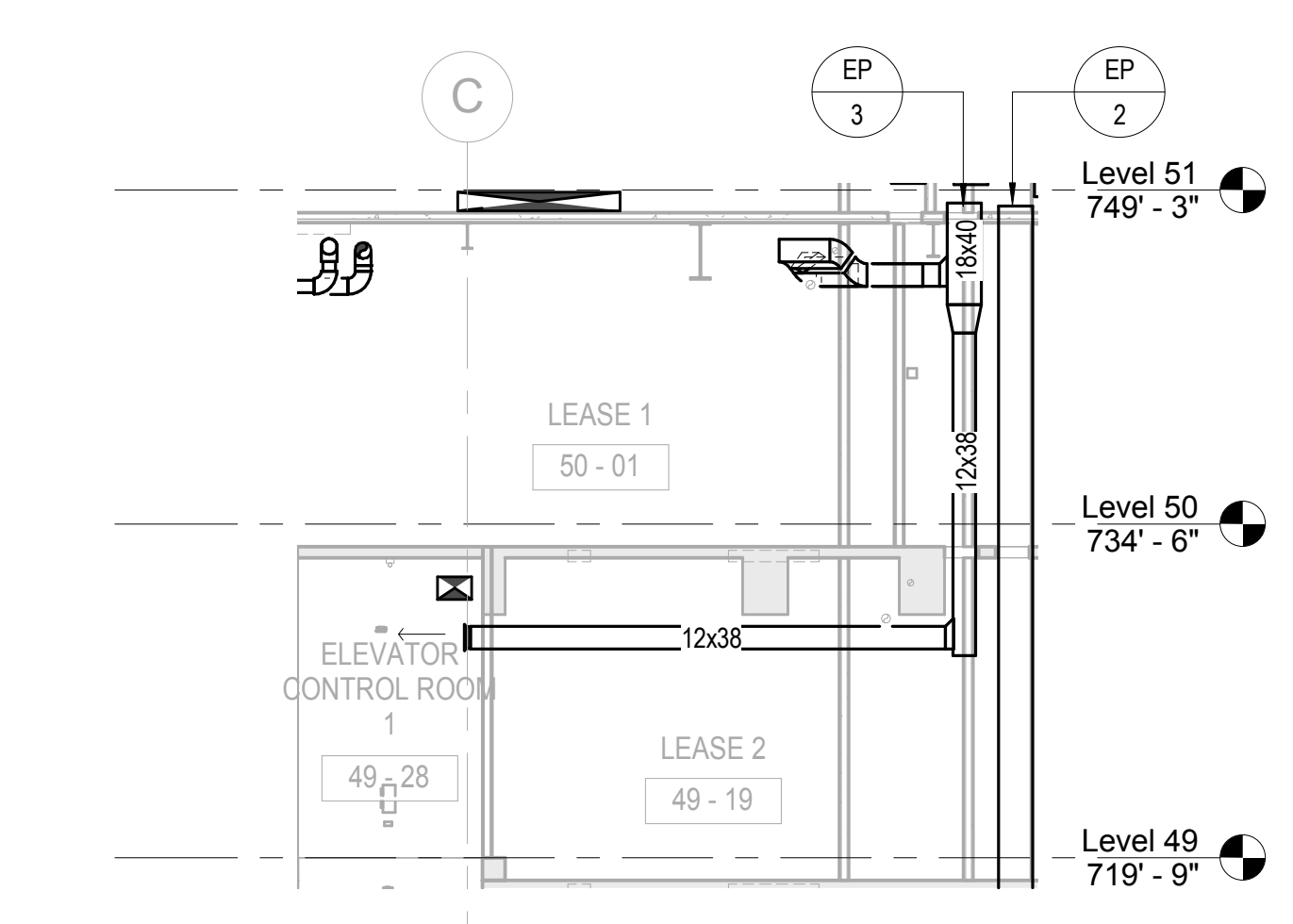
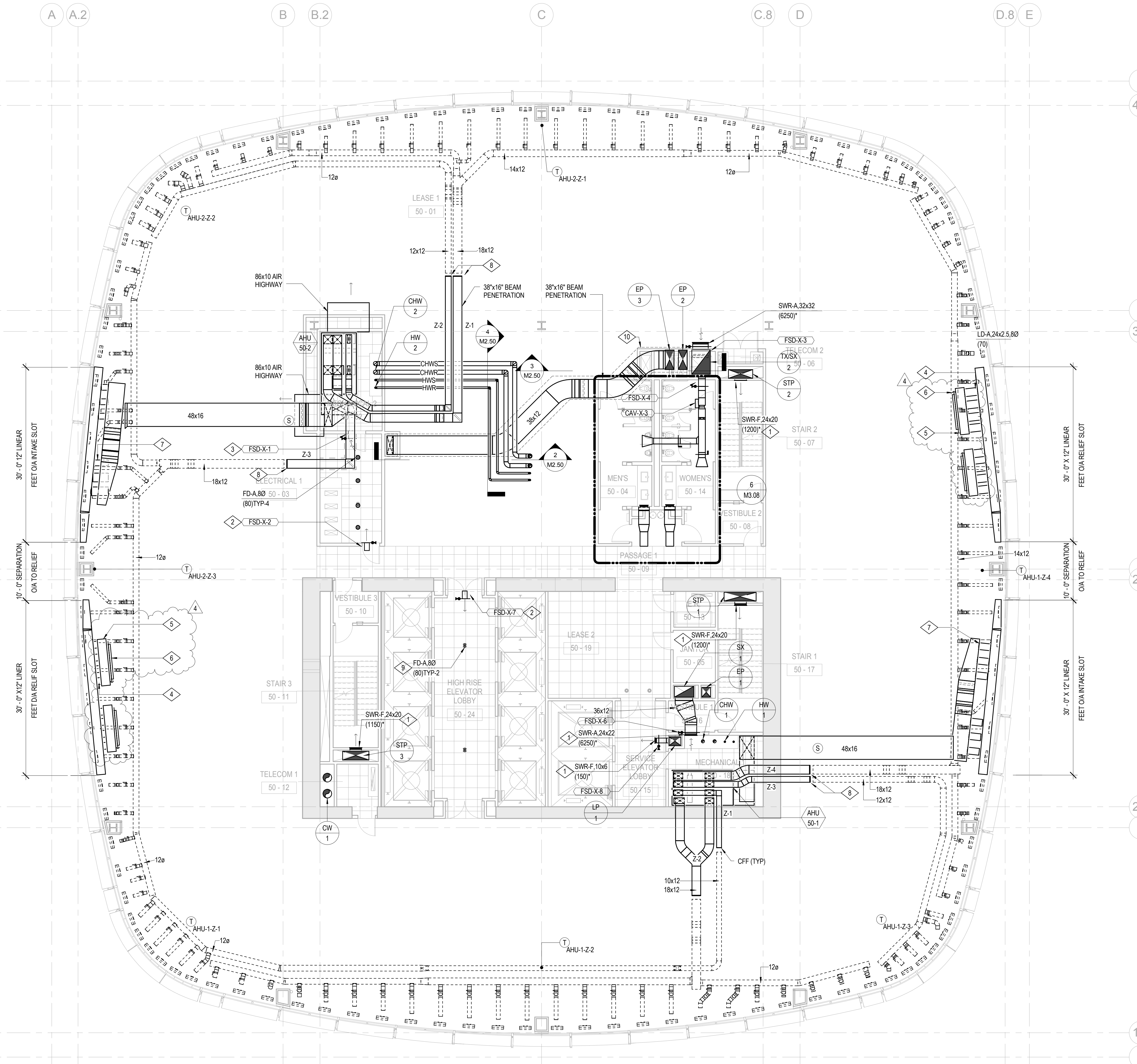


**SHEET NOTES**

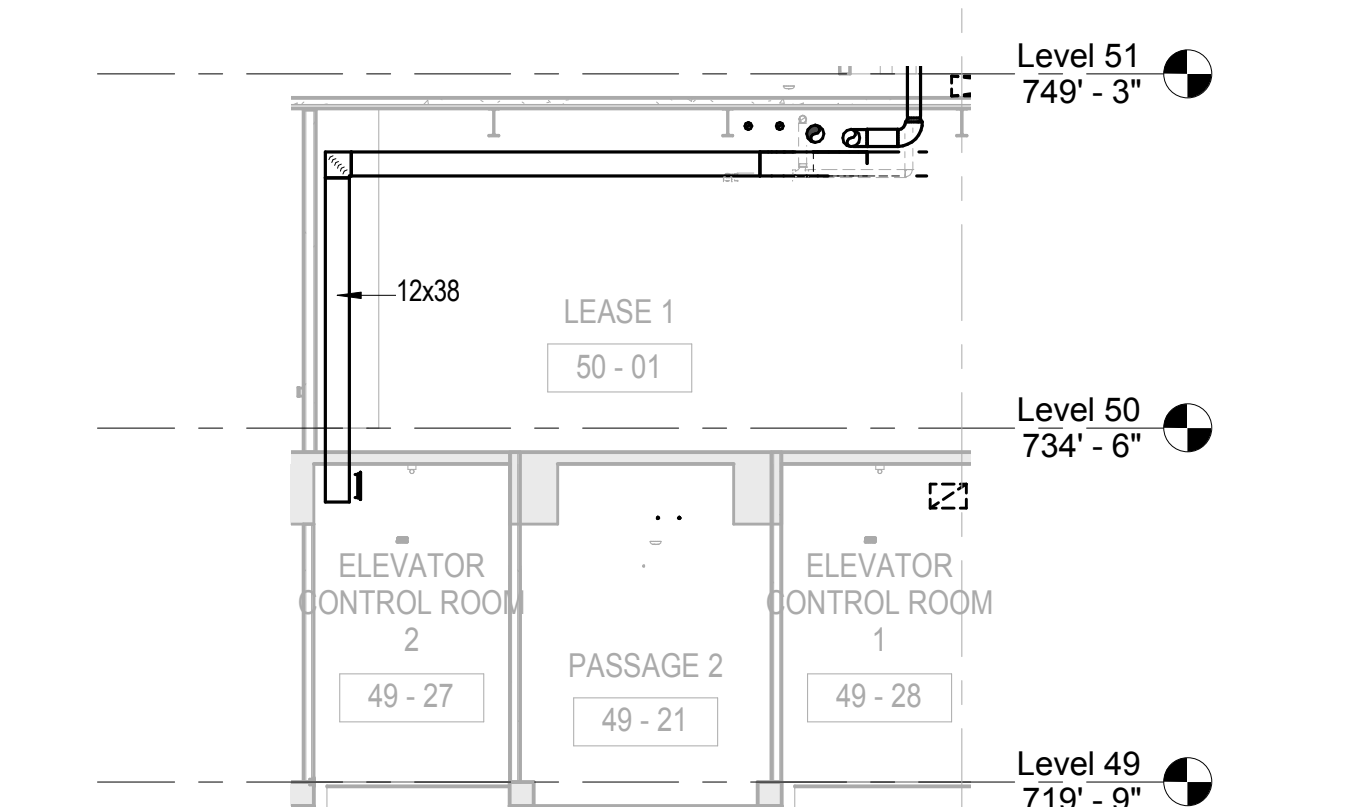
- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

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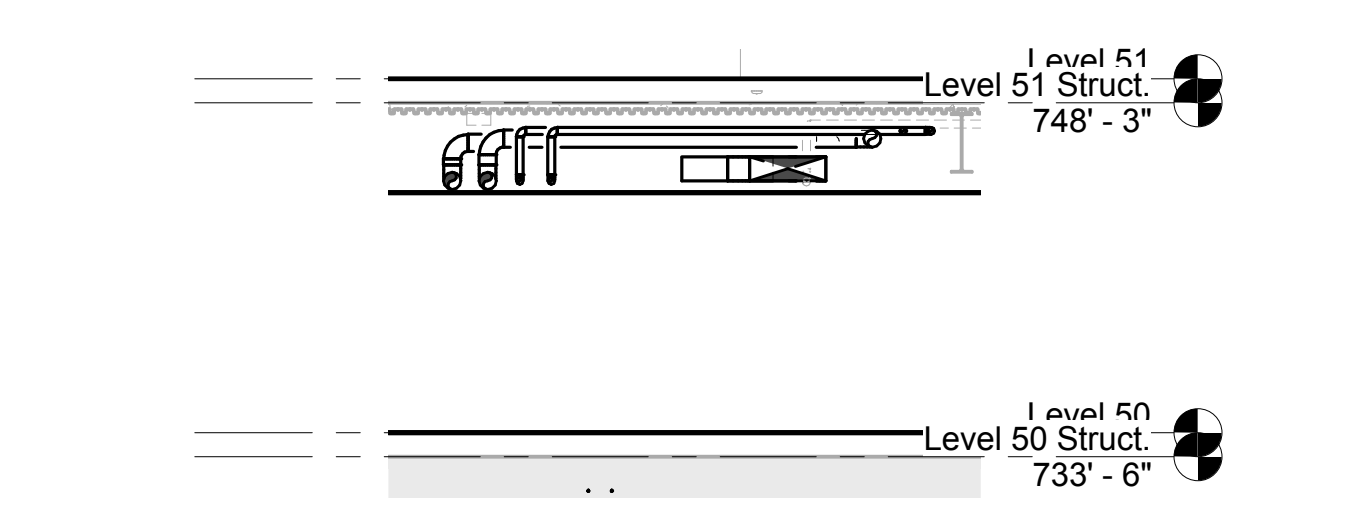
- 1. FOR AIRFLOW REFER TO SHEETS M4.01 THROUGH M4.03.
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- 5. 96"X18"Wx24"H PLENUM (TYP-4).
- 6. 72"x18" ACD (TYP-4).
- 7. 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8. CAP FOR FUTURE.
- 9. PROVIDED BY FUTURE TENANT.
- 10. ARCHITECTURAL RATED ENCLOSURE.



3. HIGH-MID RISE EMR PRESSURIZATION TRANSITION 2  
1/8" = 1'-0"



2. HIGH-MID RISE EMR PRESSURIZATION TRANSITION  
1/8" = 1'-0"



4. LEVEL 50 PIPE TRANSITION SECTION  
1/8" = 1'-0"

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
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Civil Engineer
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Curtain Wall Consultant
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LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record

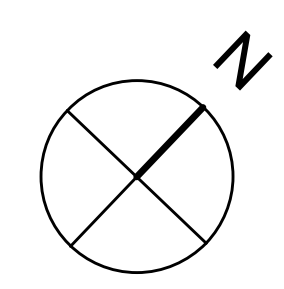


NO.	DATE	ISSUE
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3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE

**MECHANICAL LEVEL 50 PLAN**

PROJECT NO. **S12.10250.00** DRAWING NUMBER **M2.50**



1/8" = 1'-0"

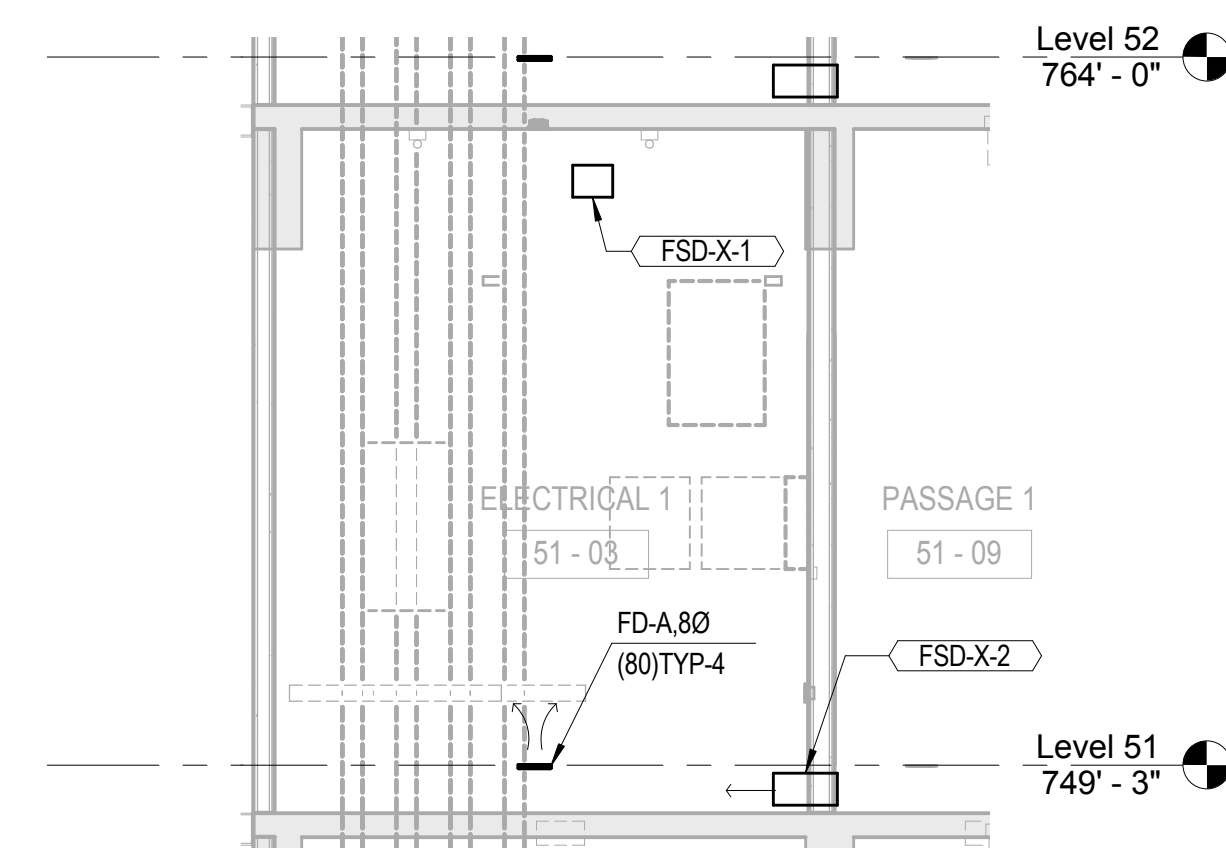


**SHEET NOTES**

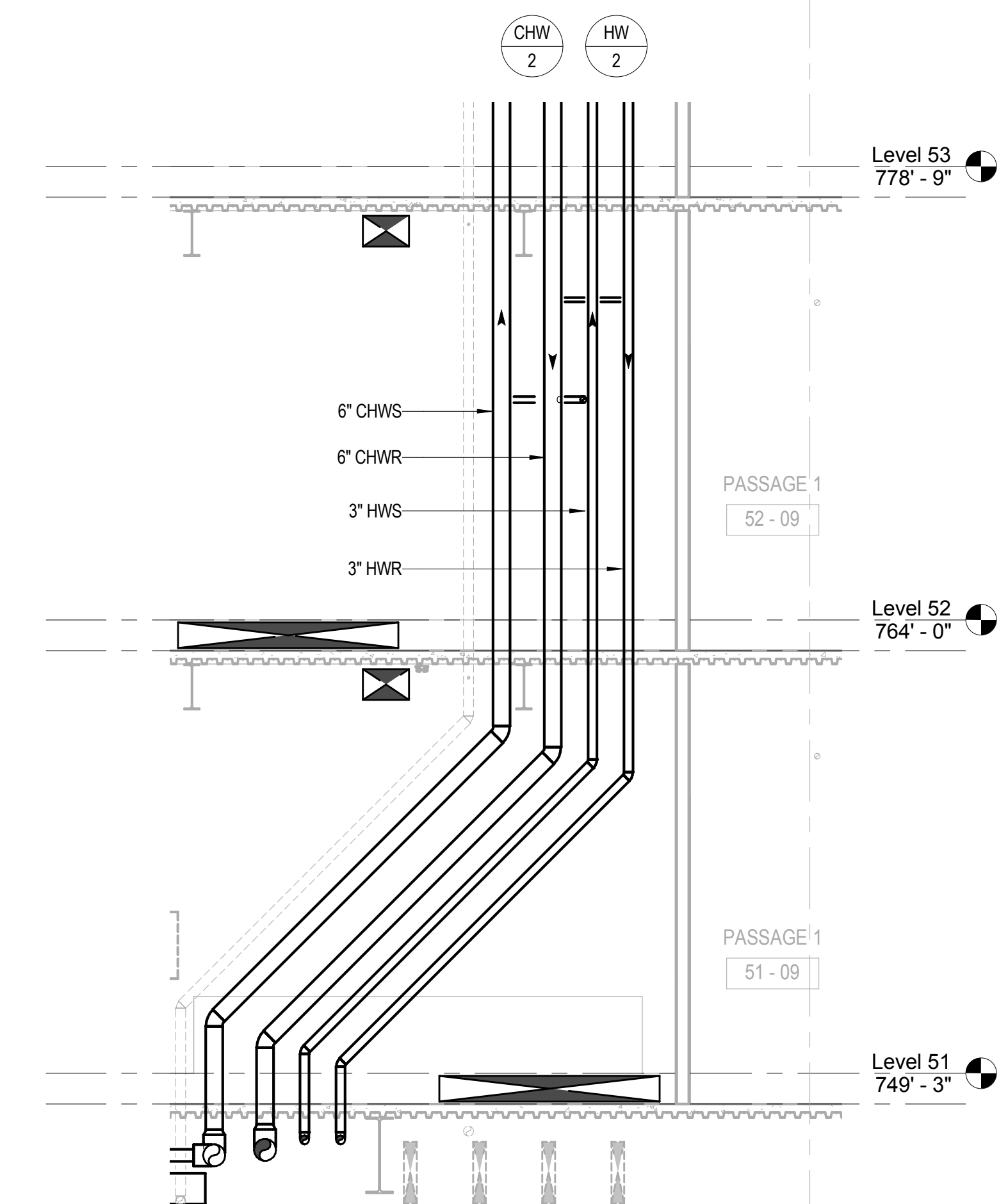
- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

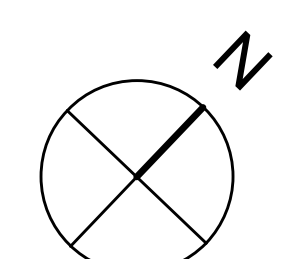
- 1. FOR AIRFLOW REFER TO SHEETS M4.01 THROUGH M4.03.
- 2. 10x8 TRANSFER DUCT UNDERFLOOR WITH FSD.
- 3. 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4. 160 RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5. 96" Lx18"Wx24"H PLENUM (TYP-4).
- 6. 72"x18" ACD (TYP-4).
- 7. 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8. CAP FOR FUTURE.
- 9. PROVIDED BY FUTURE TENANT.



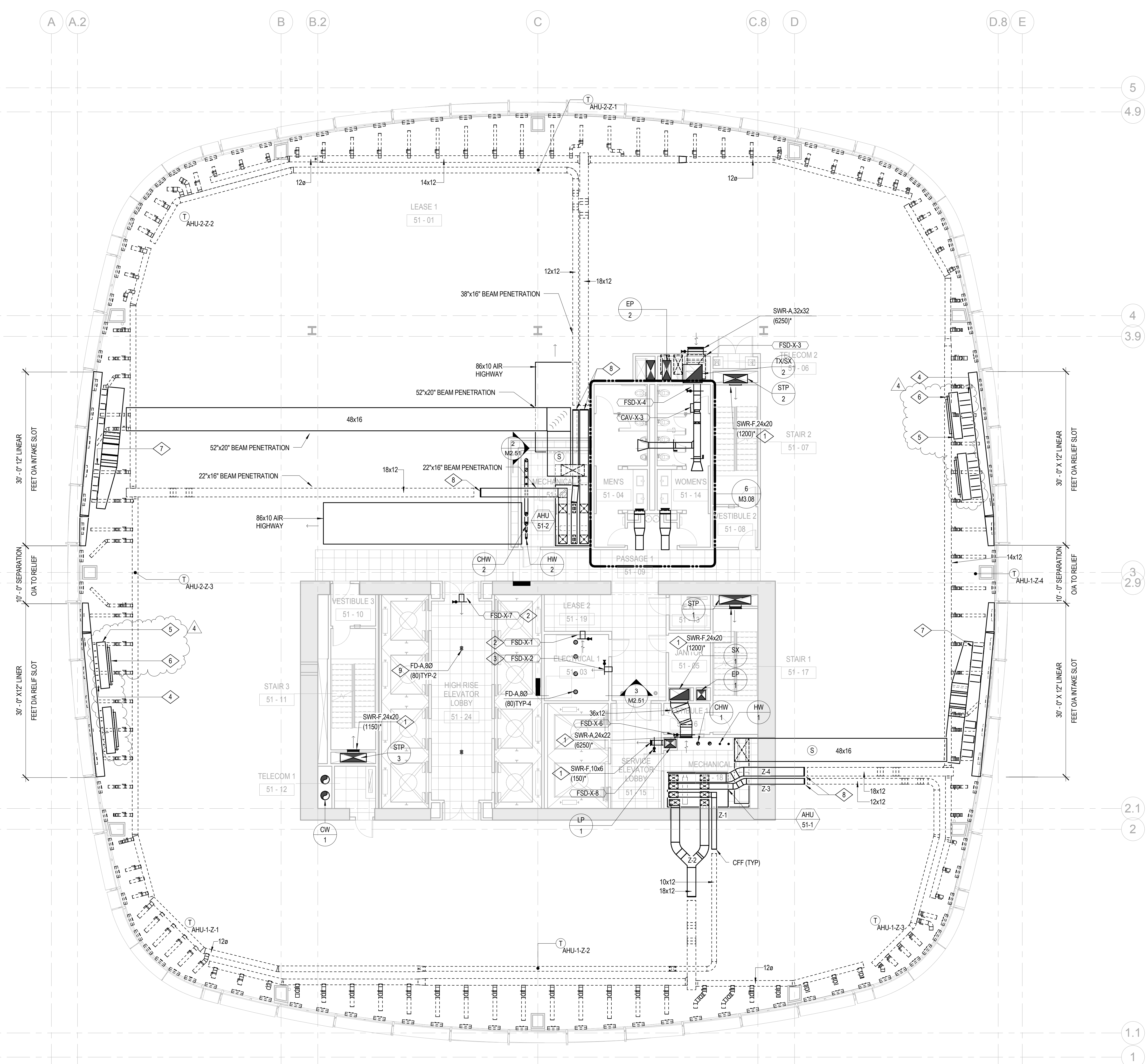
3. TYPICAL ELECTRICAL ROOM SECTION  
1/4" = 1'-0"



2. LEVEL 51 PIPING RISER TRANSITION  
1/4" = 1'-0"



1/8" = 1'-0"



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
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Civil Engineer
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Window Washing Consultant
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Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DWG FILENAME	DRAWING TITLE	DWG NUMBER
	<b>MECHANICAL LEVEL 51 PLAN</b>	<b>M2.51</b>

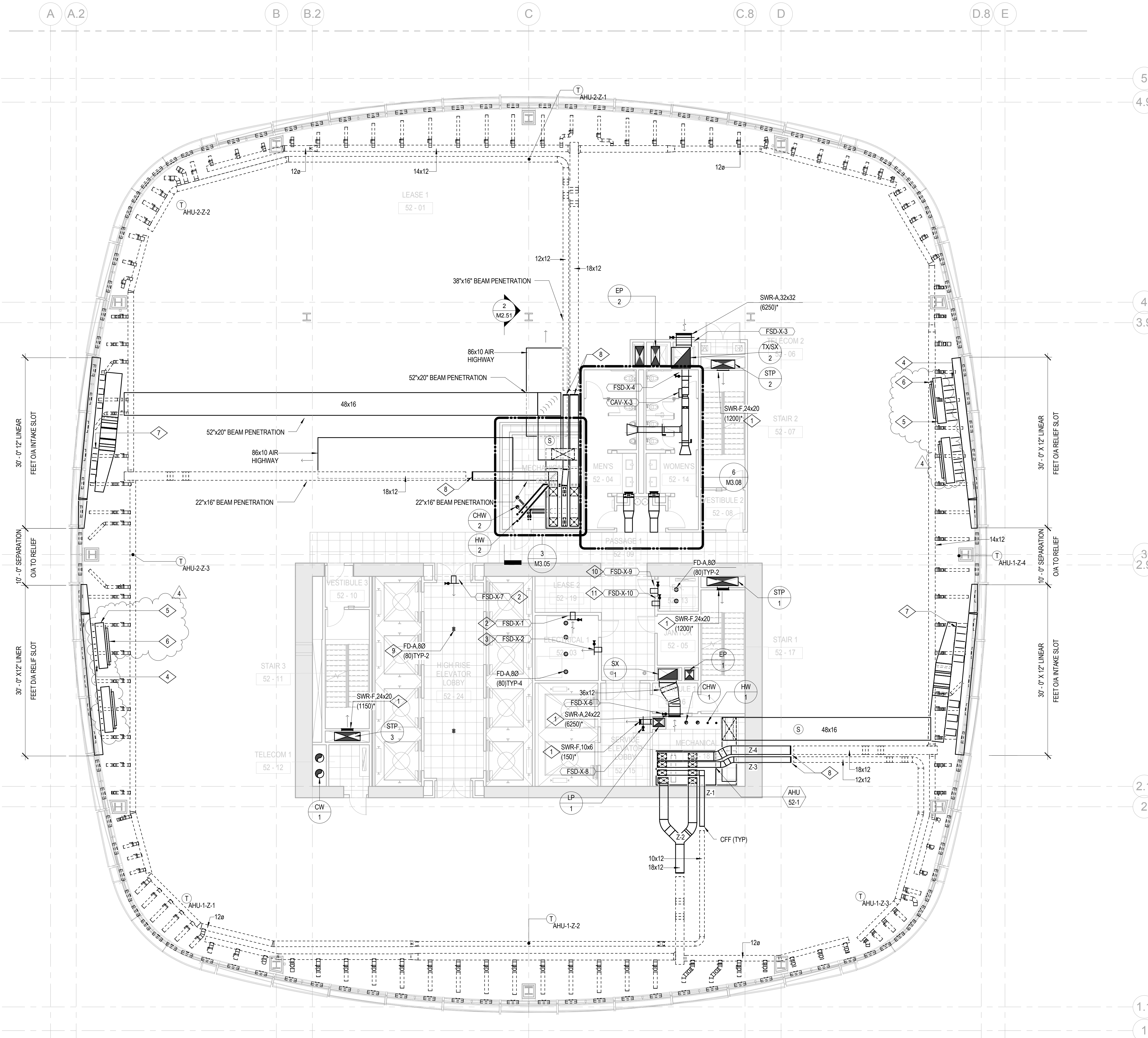


**SHEET NOTES**

- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

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- 3. 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4. 16Ø RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-16).
- 5. 96" Lx18" Wx24" H PLENUM (TYP-4).
- 6. 72"x18" ACD (TYP-4).
- 7. 16Ø OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8. CAP FOR FUTURE.
- 9. PROVIDED BY FUTURE TENANT.
- 10. 10x8 TRANSFER DUCT UNDERFLOOR WITH FSD. TYPICAL OF LEVELS 37, 42, 47, 52, 57, 62.
- 11. 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH WMS AT EACH SIDE OF WALL. TYPICAL OF LEVELS 37, 42, 47, 52, 57, 62.



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
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Architect of Record
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Structural Engineer
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MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
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Elevator Consultant
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Building Security
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Parking Consultant
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Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
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Acoustical Consultant
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Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
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Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



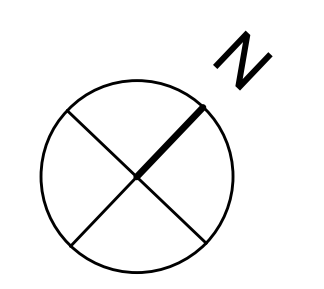
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

NO.	DATE	ISSUE

DRAWING TITLE

**MECHANICAL  
TYPICAL PLAN -  
LEVELS 52-54**

PROJECT NO. **S12.10250.00** DRAWING NUMBER **M2.52**



1/8" = 1'-0"

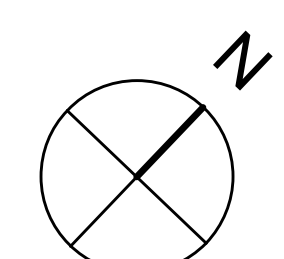
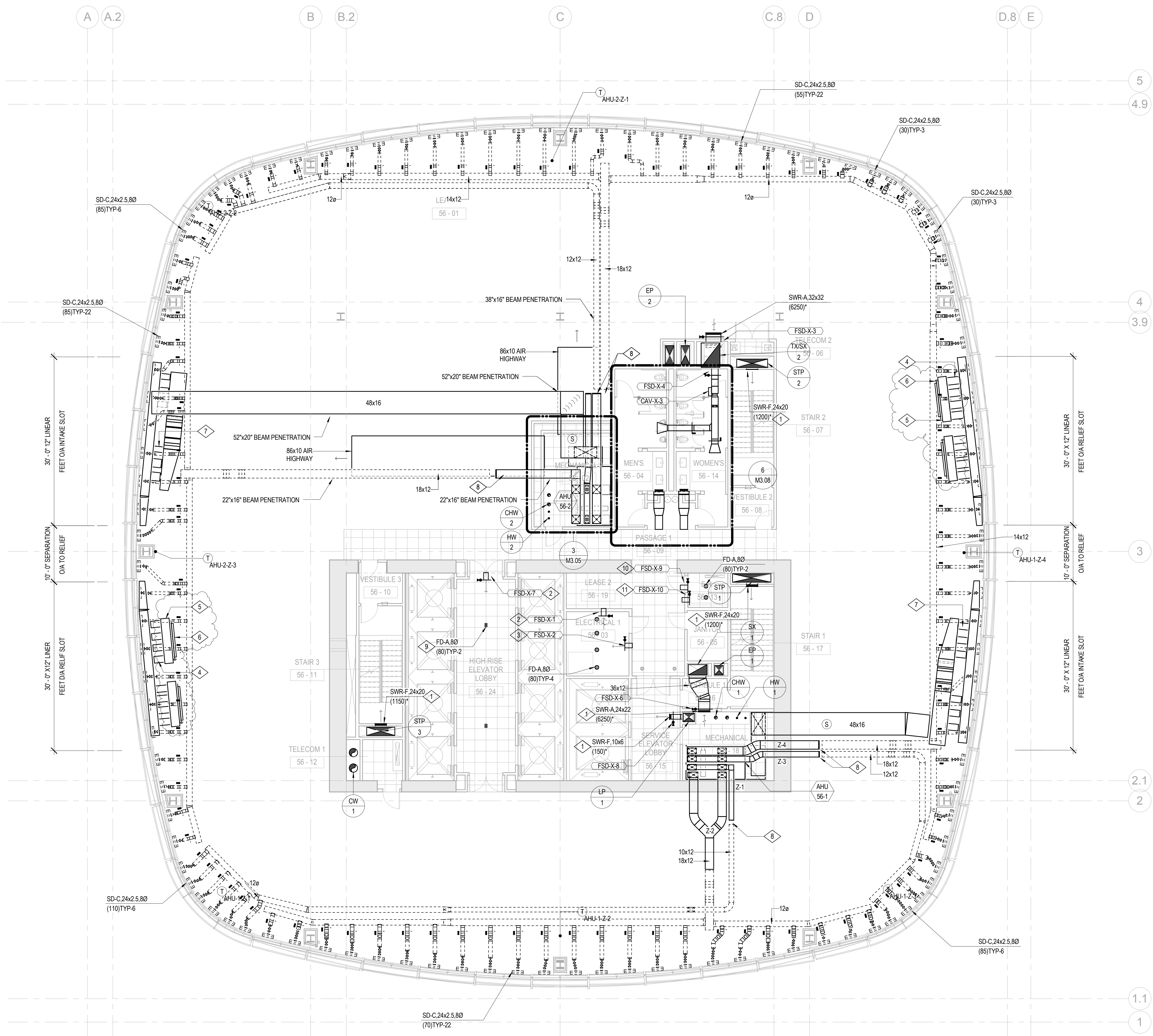


**SHEET NOTES**

- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- C. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

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- 6 72"x18" ACD (TYP-4).
- 7 16Ø OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.
- 10 10X8 TRANSFER DUCT UNDERFLOOR WITH FSD. TYPICAL OF LEVELS 37, 42, 47, 52, 57.
- 11 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH WMS AT EACH SIDE OF WALL. TYPICAL OF LEVELS 37, 42, 47, 52, 57.



1/8" = 1'-0"

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
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- MORRISON HERSHFIELD  
Curtain Wall Consultant
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LEED Consultant
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Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL TYPICAL PLAN - LEVELS 55-58**

PROJECT NO. 112.10250.00  
DRAWING NUMBER **M2.55**





**SHEET NOTES**

- A. DASHED LINES DENOTE FUTURE TENNANT SCOPE OF WORK. BID ALTERNATE M-16.
- B. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
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- 7 160 OA CONNECTION THROUGH 18" BEAM PENETRATION (TYP-12).
- 8 CAP FOR FUTURE.
- 9 PROVIDED BY FUTURE TENANT.

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEPFP Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
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Building Security
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- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
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Landscape Architect of Record



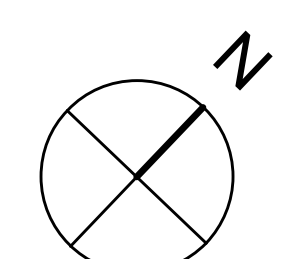
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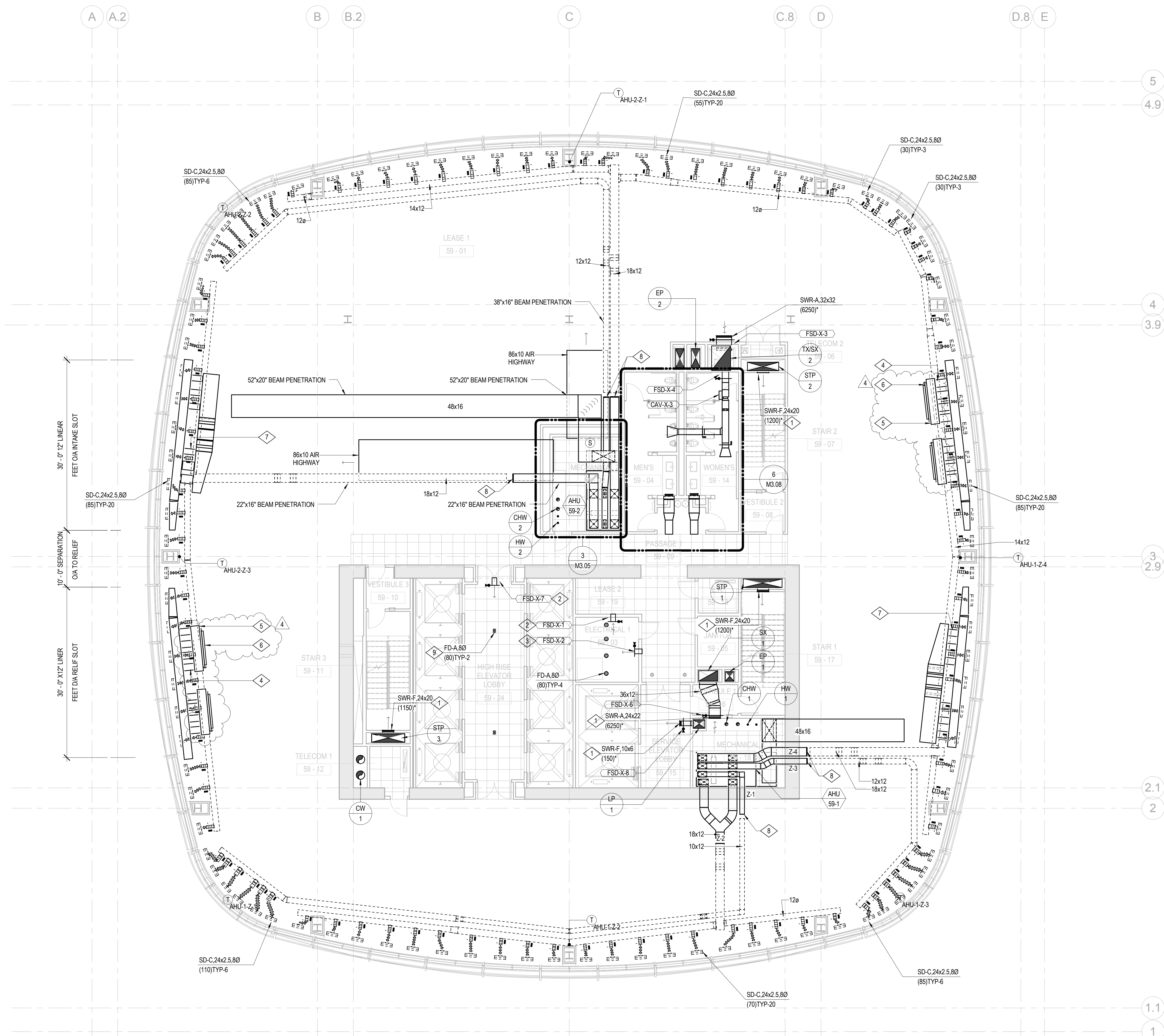
DRAWING TITLE

**MECHANICAL  
TYPICAL PLAN -  
LEVELS 59-60**

PROJECT NO. S12.10250.00 DRAWING NUMBER **M2.59**



1/8" = 1'-0"



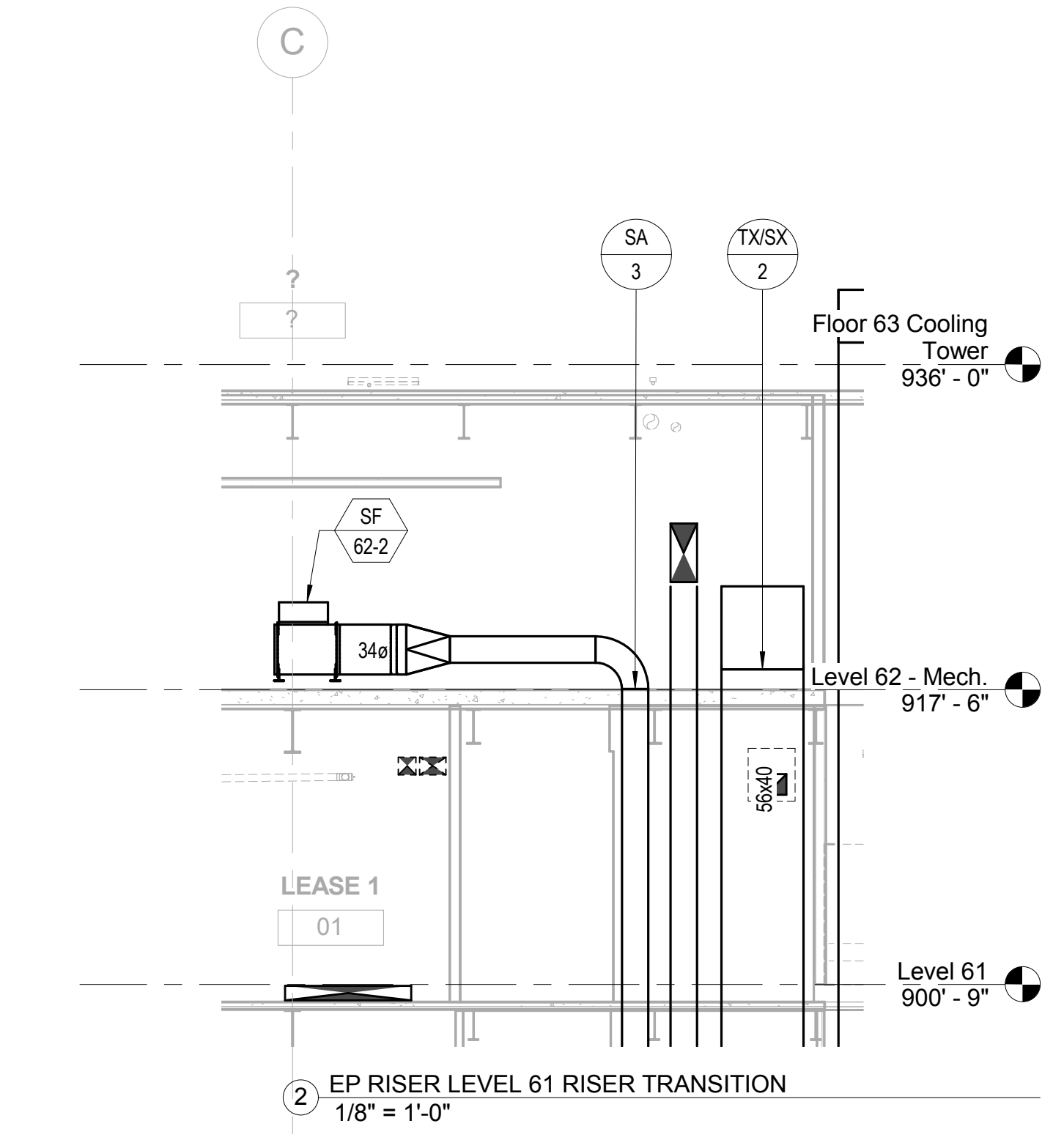
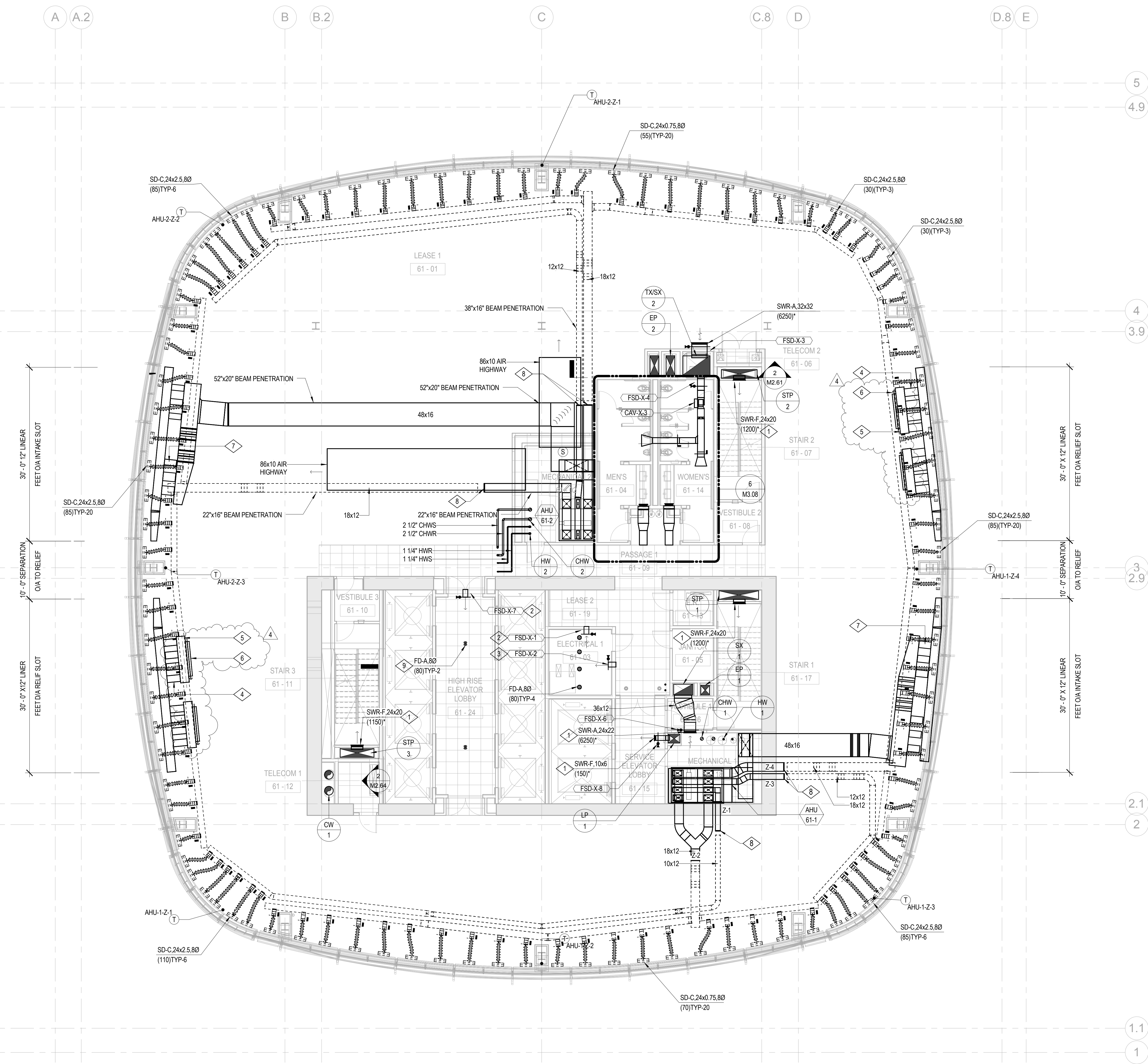


**SHEET NOTES**

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- 9. PROVIDED BY FUTURE TENANT.



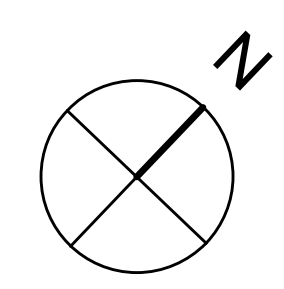
- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
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Architect of Record
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- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL LEVEL 61 PLAN**

DATE PROJECT NO. 5/12/2014 4:07:20 PM  
DRAWING NUMBER: **M2.61**



1/8" = 1'-0"



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record

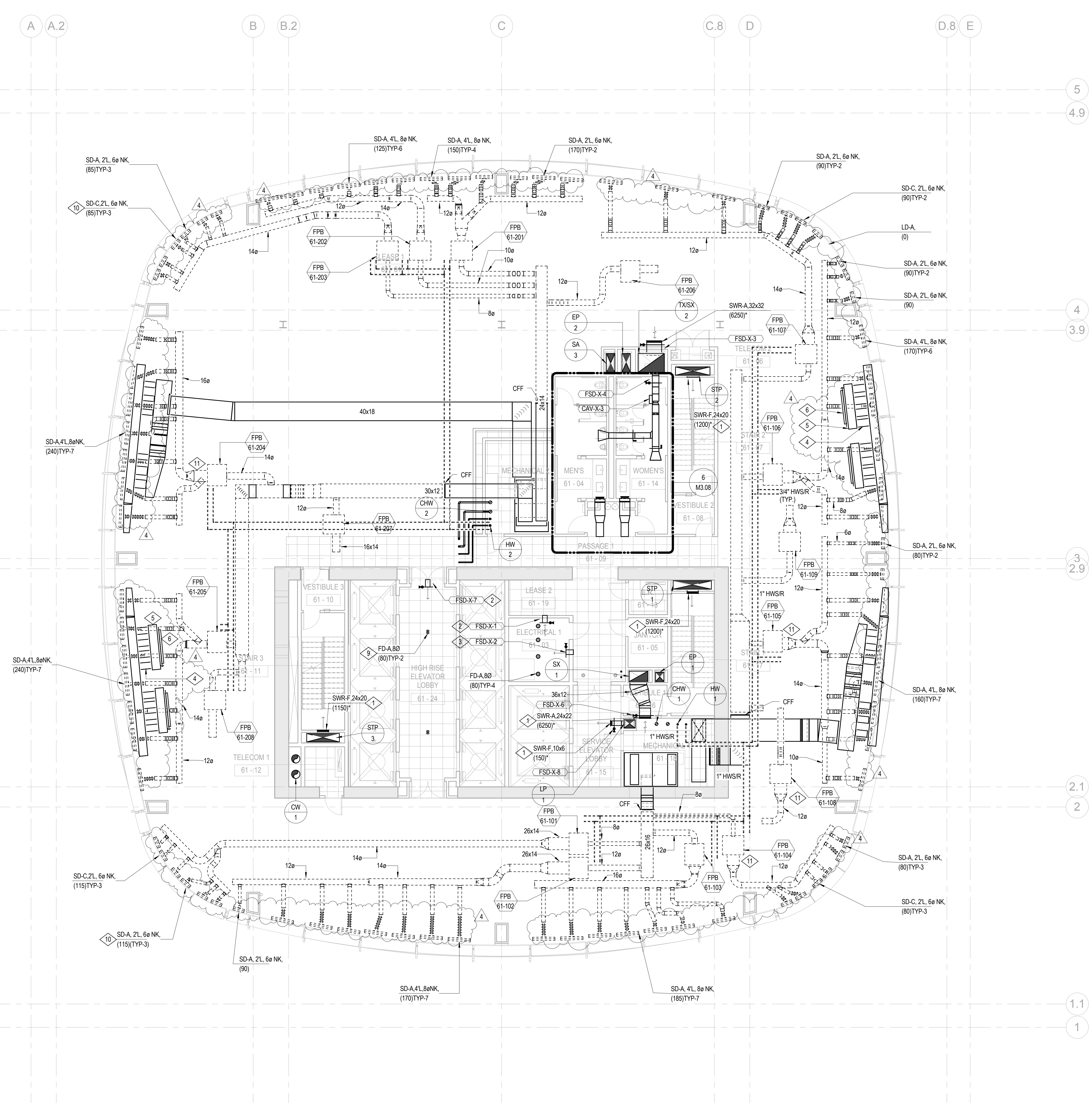


**SHEET NOTES**

- A. AHU ZONE THERMOSTATS SHOWN FOR INFORMATION ONLY. DIVISION 25 SPECIFICATION IDENTIFIES SCOPE.
- B. PROVIDE VOLUME DAMPER ON EVERY DIFFUSER BRANCH DUCT FOR BALANCE.
- C. REFER TO DETAILS ON M3.05 FOR INTAKE AND RELIEF PLENUM CONNECTION DETAILS.

**NUMBERED NOTES**

- 1 FOR REGISTER AIRFLOW AND LOCATIONS, REFER TO SHEETS M.01 THROUGH M4.03.
- 2 NOT USED.
- 3 10x8 TRANSFER DUCT OVERHEAD WITH FSD. PROVIDE WITH SWR-A REGISTER AT EACH SIDE OF WALL.
- 4 160Z RELIEF CONNECTION THROUGH 18" BEAM PENETRATION (TYP-8).
- 5 96"X18"WX24"H PLENUM (TYP-2).
- 6 72X18 ACD (TYP-4).
- 7 140 OA CONNECTION THROUGH 18" BEAM PENETRATIONS (TYP-6).
- 8 NOT USED.
- 9 PROVIDED BY FUTURE TENANT.
- 10 LOCATE SD-A, SD-C DIFFUSERS ALTERNATIVELY ON THE CURVED WALL.
- 11 PROVIDE DUCT TRANSITIONS FROM FPB DISCHARGE OPENING TO THE DOWNSTREAM SUPPLY DUCT, TYPICAL.



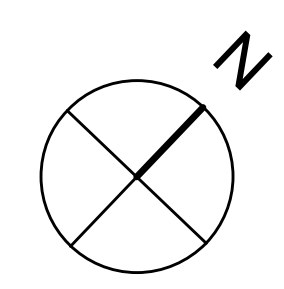
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NO.	DATE	ISSUE

CAD FILENAME  
DRAWING TITLE

**MECHANICAL LEVEL  
61 ALTERNATE PLAN**

DATE: 5/12/2014 4:07:29 PM  
PROJECT NO.: S12.10250.00  
DRAWING NUMBER: M2.61A



1/8" = 1'-0"



- BOSTON PROPERTIES / HINES**  
Owner
- PELLI CLARKE PELLI ARCHITECTS**  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.**  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES**  
Structural Engineer
- WSP**  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE**  
Landscape Architect
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Civil Engineer
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Parking Consultant
- ARUP**  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.**  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.**  
Acoustical Consultant
- MORRISON HERSHFIELD**  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES**  
LEED Consultant
- HMA CONSULTING**  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.**  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP**  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN**  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY**  
Landscape Architect of Record



NO.	DATE	ISSUE
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2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL LEVEL 62 PLAN**

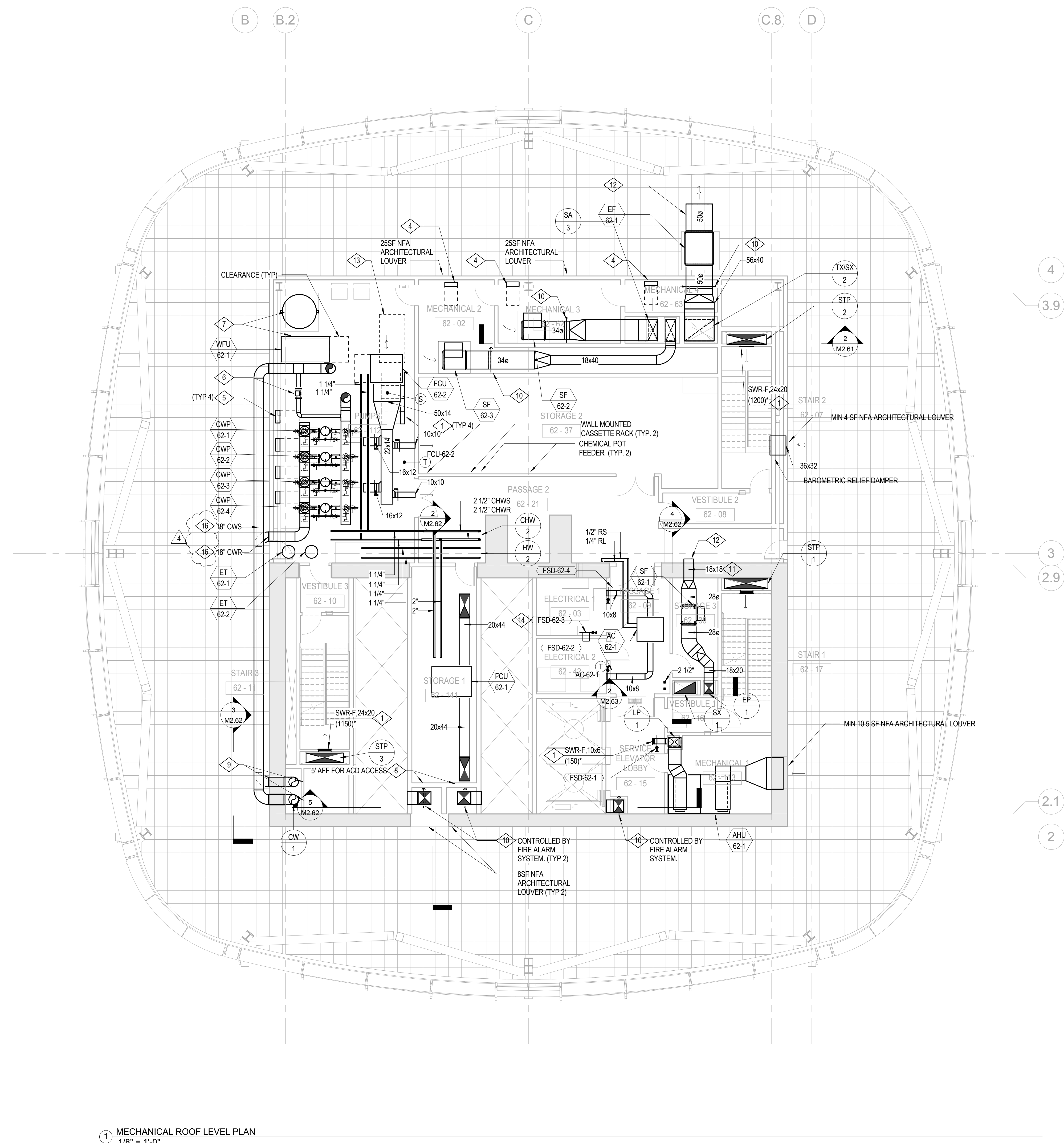
DATE PROJECT NO. **S12.10250.00** DRAWING NUMBER **M2.62**

**SHEET NOTES**

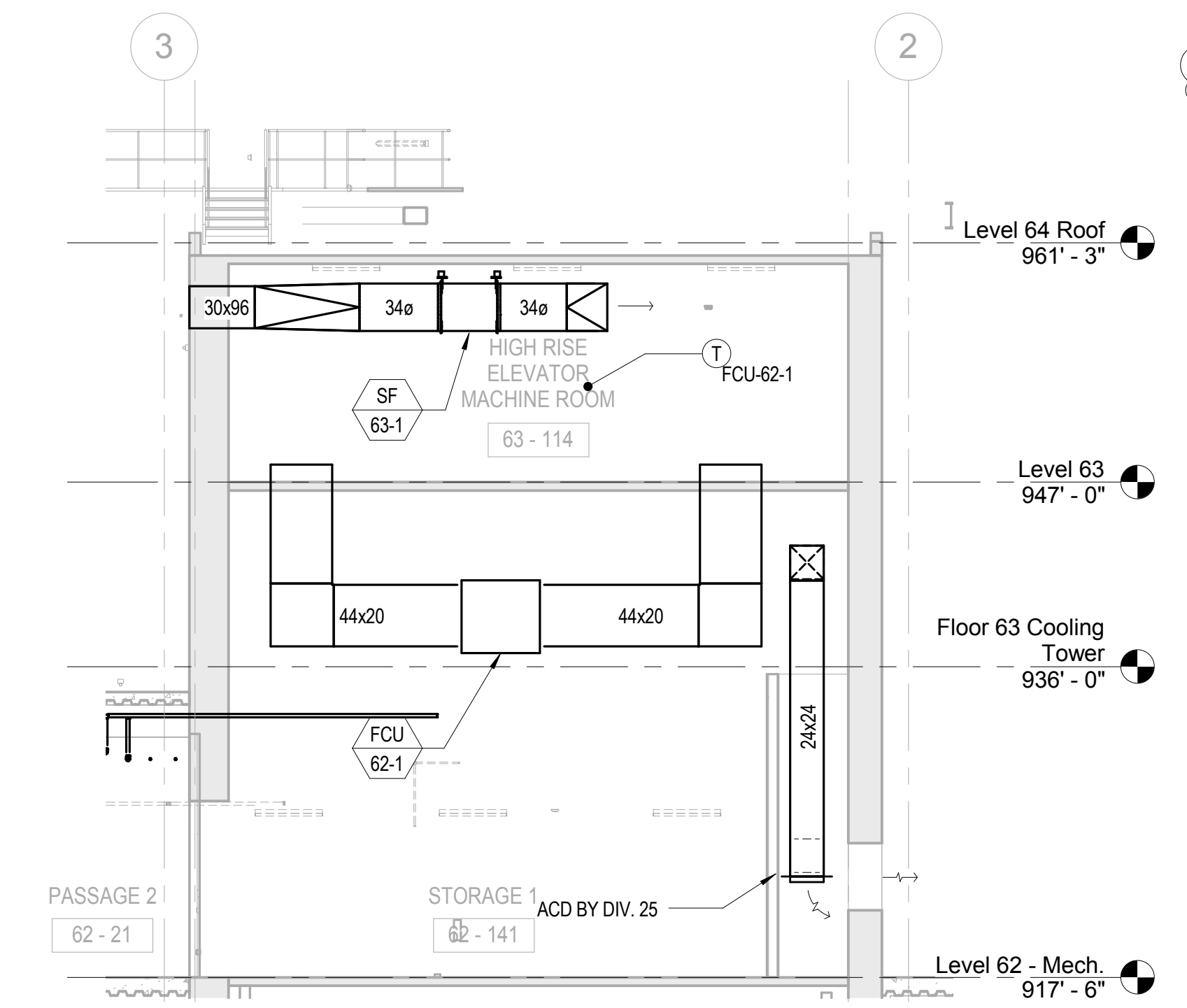
A. OUTDOOR DUCTWORK ON ROOF SHALL BE STAINLESS STEEL.

**NUMBERED NOTES**

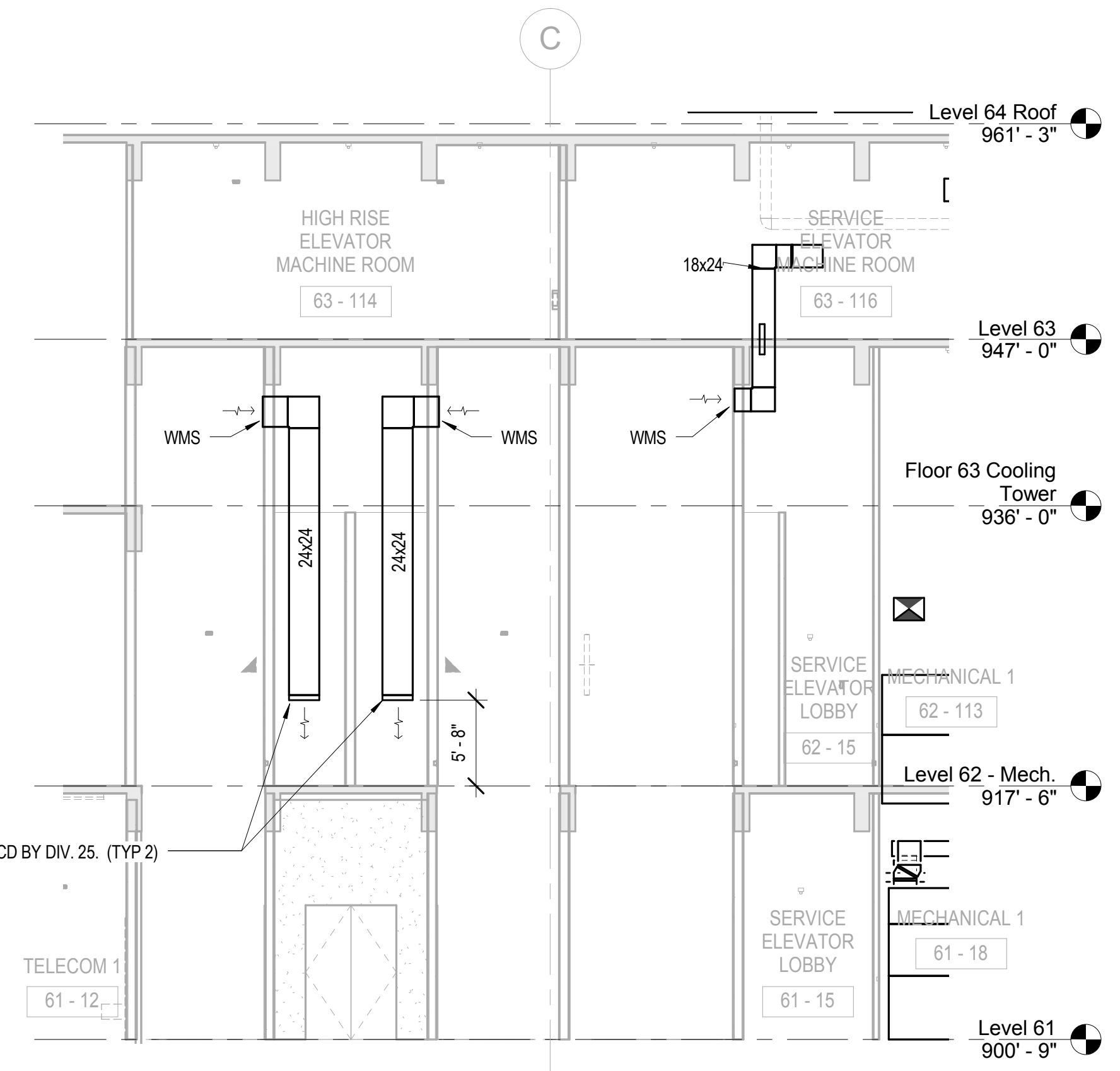
- 1 COOLING TOWER VFD WITH 36" ELECTRICAL CLEARANCE (TYP.)
- 2 PUMPS ON 4" CONCRETE HOUSE KEEPING PAD.
- 3 ELEVATOR RELIEF DUCT UP TO LEVEL 63.
- 4 FAN VFD WITH 36" ELECTRICAL CLEARANCE (TYP.)
- 5 PUMP VFD WITH 36" ELECTRICAL CLEARANCE (TYP.)
- 6 6" CW BYPASS PER DIV. 25.
- 7 COOLING TOWER FILTRATION SYSTEM AND HOLDING TANK
- 8 24"x24" ACCESS DOOR PER ARCHITECTURAL DRAWINGS.
- 9 24"x24" ACCESS DOOR 1" AFF PER ARCHITECTURAL DRAWINGS. ALTERNATE SIDES EVERY OTHER FLOOR FOR PIPE RISER ISOLATOR ACCESS. REFER TO PIPE RISER DIAGRAMS ON SHEETS M4.05 THROUGH M4.07 FOR LOCATIONS.
- 10 ACD BY DIVISION 25.
- 11 SF-62-1 INTAKE IS LOCATED ABOVE ROOF OF LEVEL 62 BELOW STAIRS. REFER TO FAN SECTION.
- 12 PROVIDE 45 DEGREE OVERHANG AT END OF DUCT WITH GALVANIZED WMS.
- 13 SPACE ALLOCATION FOR CONDENSER WATER TREATMENT PER DETAIL M6.03.
- 14 FSD 1" ABOVE FINISHED FLOOR.
- 15 PROVIDE WITH LITTLE GIANT VMA-20 SERIES (OR APPROVED EQUAL) CONDENSATE PUMP.
- 16 OUTDOOR CONDENSER WATER PIPING SHALL HAVE SEALED STAINLESS STEEL JACKETING OVER INSULATION.



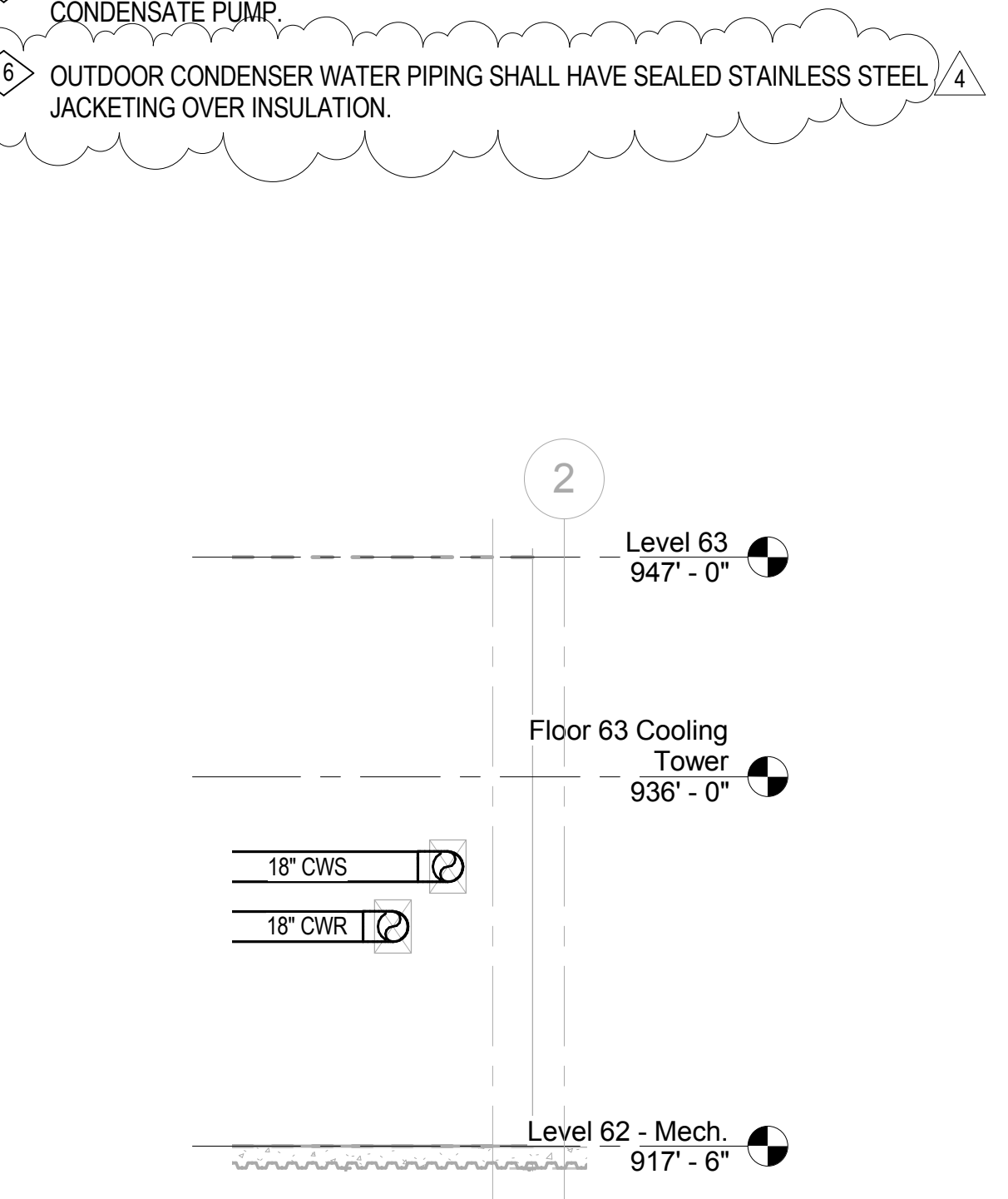
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1/8" = 1'-0"



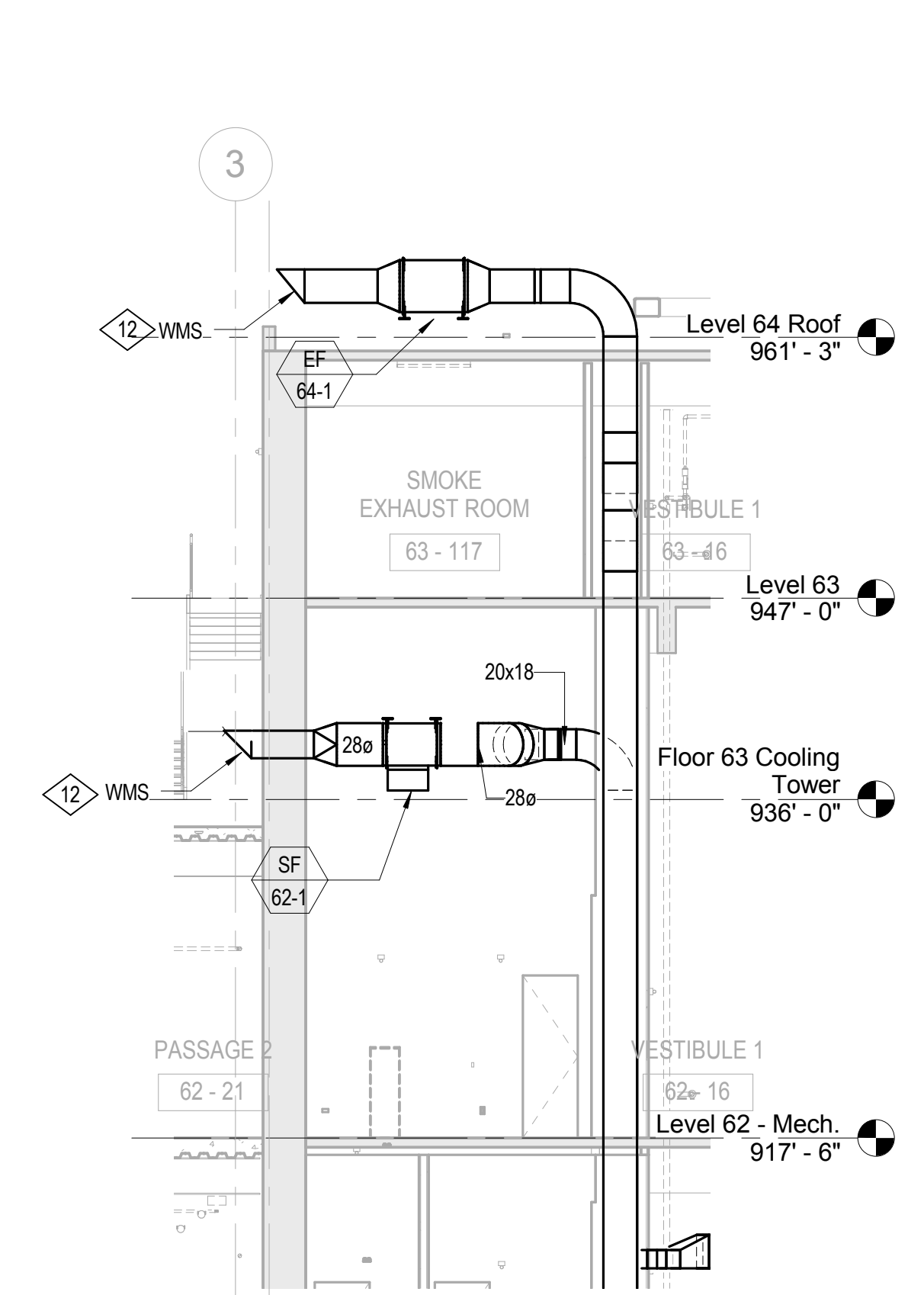
2 MECHANICAL HIGH RISE EMR SECTION  
1/8" = 1'-0"



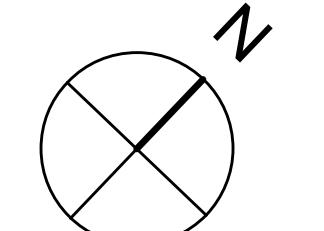
5 ELEVATOR LOBBY RELIEF VENT SECTION  
1/8" = 1'-0"



3 MECHANICAL CW PENETRATION  
1/8" = 1'-0"



4 SX AND EP RISER FAN SECTION  
1/8" = 1'-0"



1/8" = 1'-0"



**SHEET NOTES**

A. OUTDOOR DUCTWORK ON ROOF SHALL BE STAINLESS STEEL. <sup>4</sup>

**NUMBERED NOTES**

- 1 FAN VFD WITH 36" ELECTRICAL CLEARANCE (TYP.)
- 2 SF-62-1 INTAKE IS LOCATED ABOVE ROOF OF LEVEL 62 BELOW STAIRS. REFER TO FAN SECTION.
- 3 PROVIDE 45 DEGREE OVERHANG AT END OF DUCT WITH WMS.
- 4 24X24 RELIEF AIR DUCT UP TO ROOF.
- 5 CONDENSER UNIT ON ROOF UNDER STAIRS.
- 6 OUTDOOR CONDENSER WATER PIPING SHALL HAVE SEALED STAINLESS STEEL JACKETING OVER INSULATION. <sup>4</sup>

BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
Civil Engineer

PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant

AON FIRE PROTECTION ENGINEERING  
Building Security

HWA PARKING  
Parking Consultant

ARUP  
Geotechnical Consultant

HLB LIGHTING DESIGN, INC.  
Lighting Consultant

CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant

MORRISON HERSHFIELD  
Curtain Wall Consultant

ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant

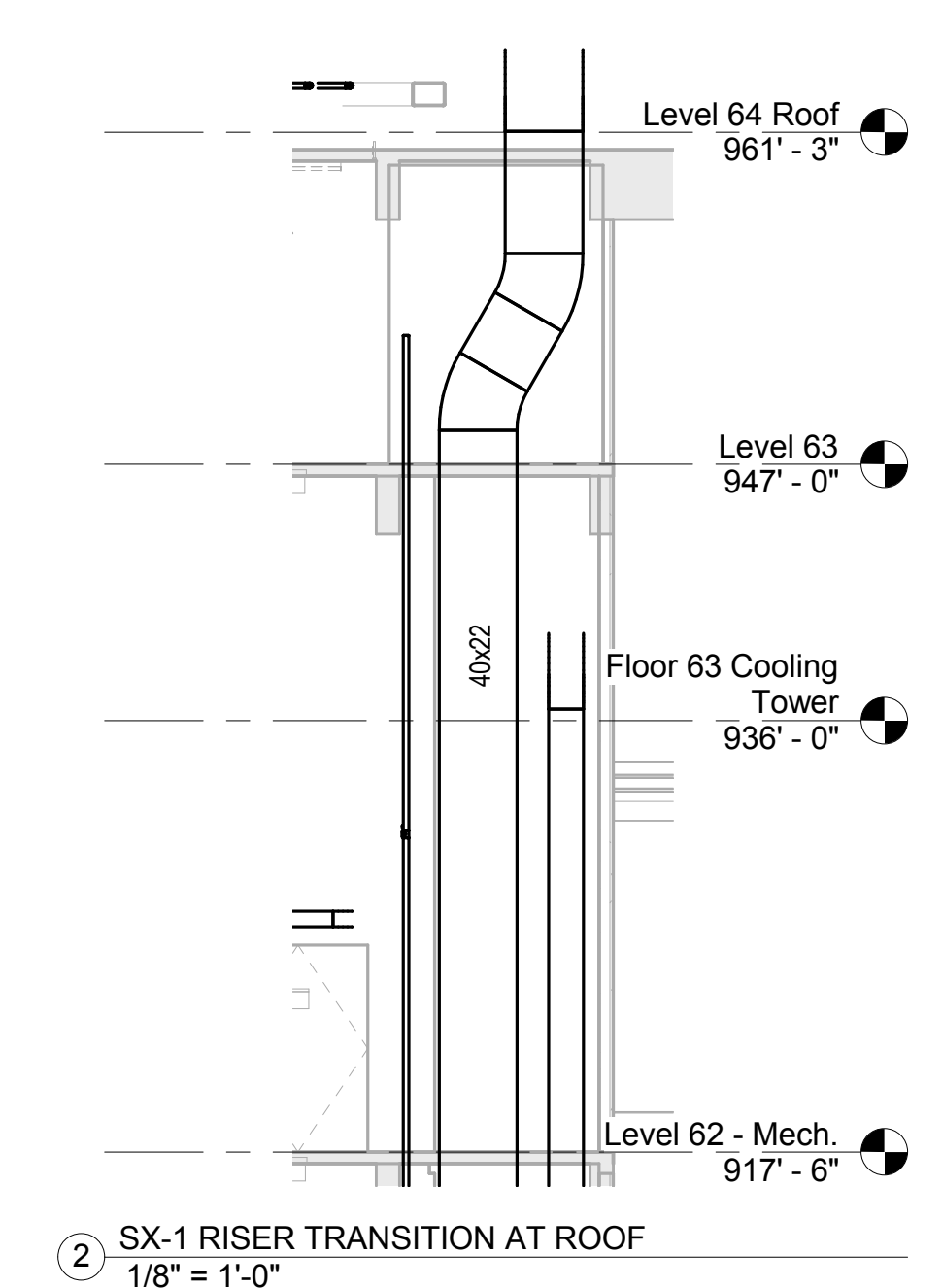
HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

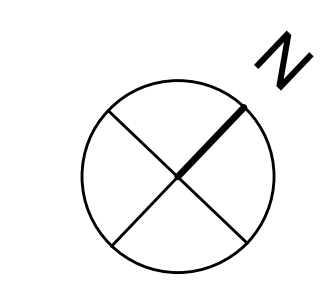
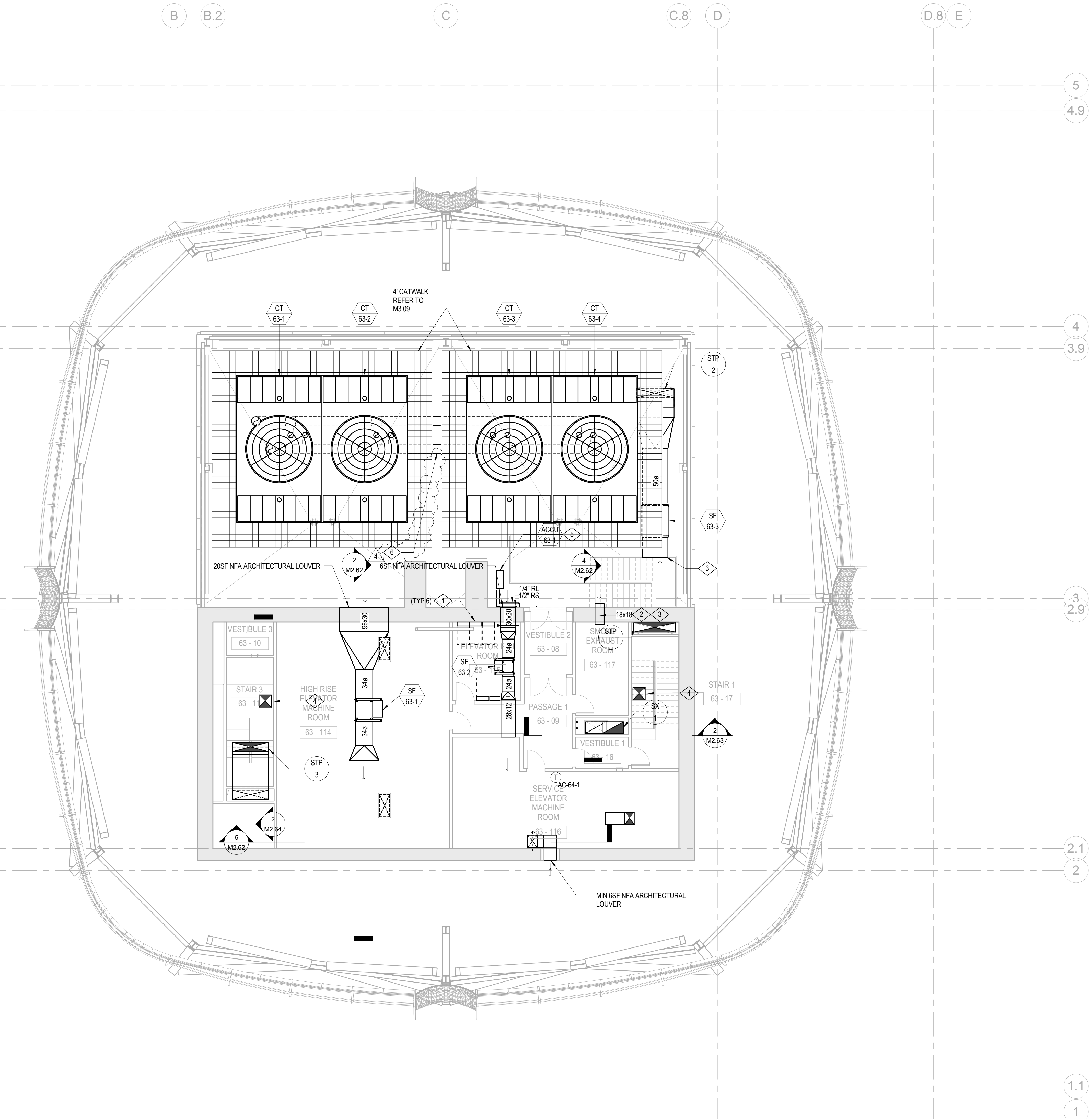
ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



2 SX-1 RISER TRANSITION AT ROOF  
1/8" = 1'-0"



**MECHANICAL LEVEL  
63 PLAN**

NO.	DATE	ISSUE
4	02 MAY 14	GMP
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2	10 FEB 14	BID ADDENDUM #2
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PROJECT NO. S12.10250.00  
DRAWING NUMBER: **M2.63**

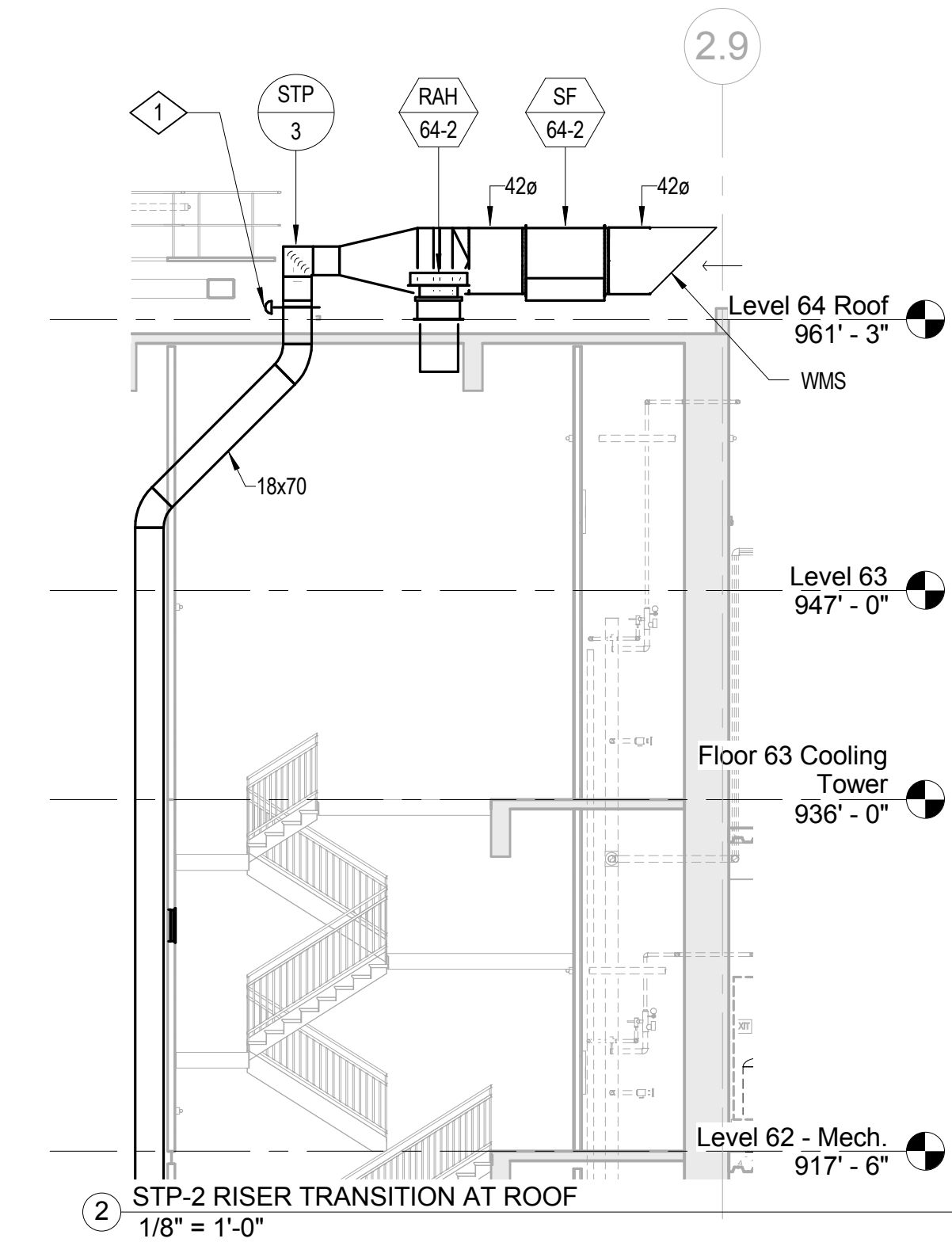
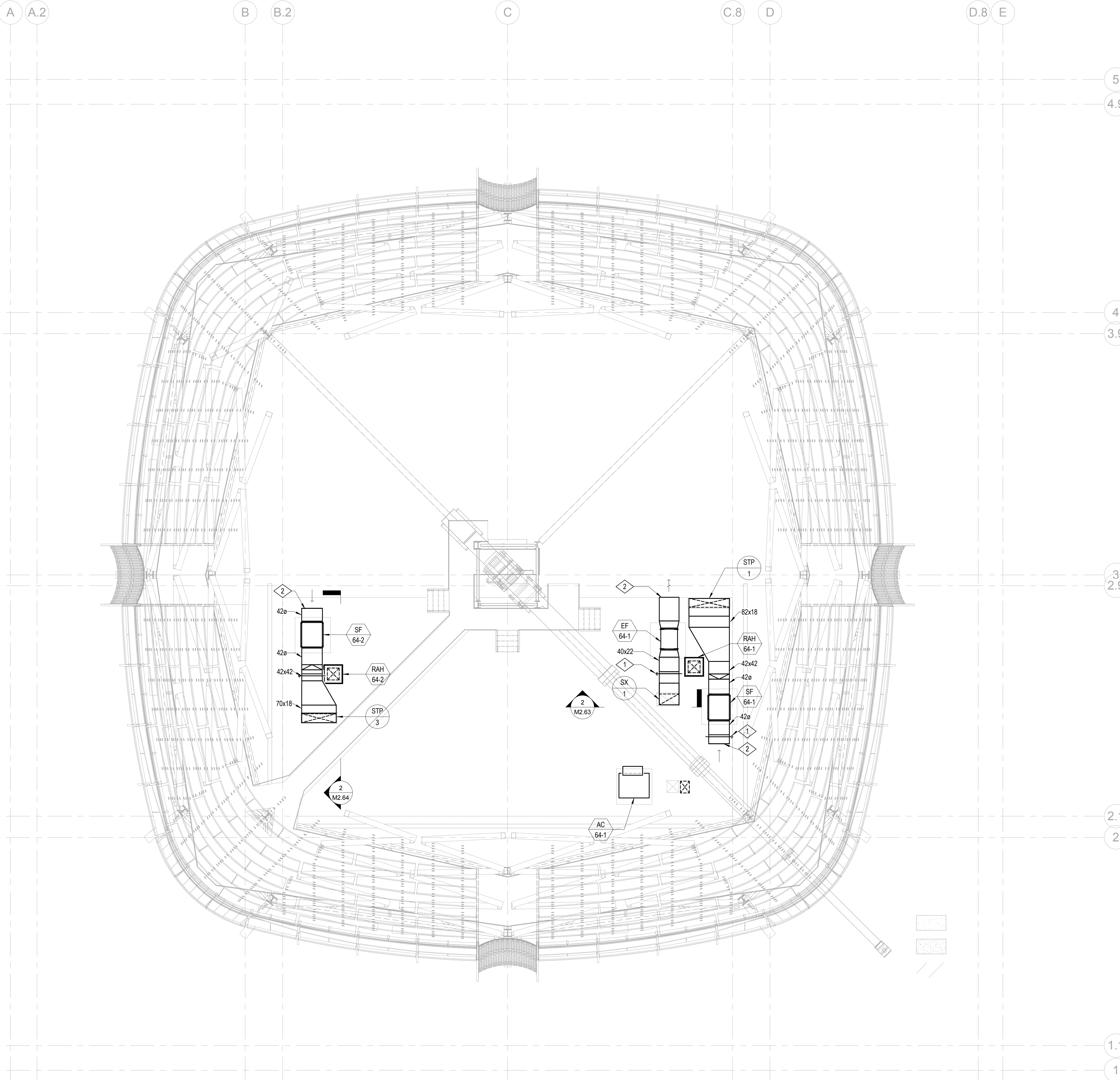


**SHEET NOTES**

A. OUTDOOR DUCTWORK ON ROOF SHALL BE STAINLESS STEEL.

**NUMBERED NOTES**

- 1 ACD BY DIVISION 25.
- 2 PROVIDE 45 DEGREE OVERHANG AT END OF DUCT WITH WMS.



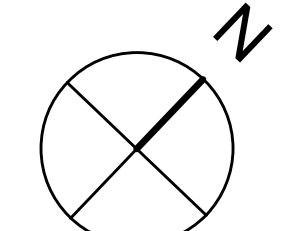
- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSSON KLEMENCIC ASSOCIATES  
Structural Engineer
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MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
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Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
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Acoustical Consultant
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Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

CAD FILENAME  
DRAWING TITLE

**MECHANICAL LEVEL  
64 ROOF PLAN**





BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
Civil Engineer

PERSOHN/HAHN ASSOCIATES, INC.  
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Building Security

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Parking Consultant

ARUP  
Geotechnical Consultant

HLB LIGHTING DESIGN, INC.  
Lighting Consultant

CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant

MORRISON HERSHFIELD  
Curtain Wall Consultant

ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant

HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record

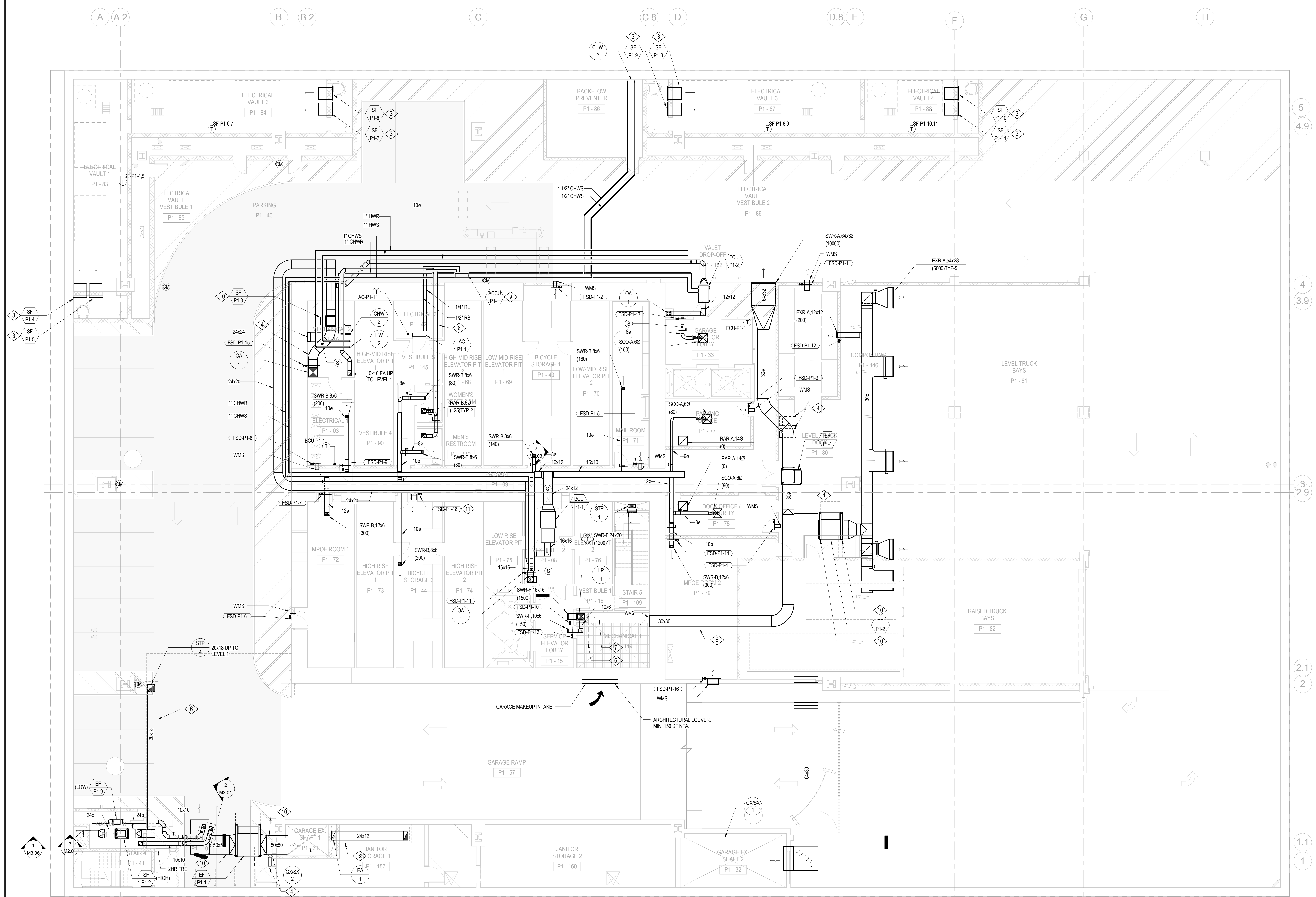


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1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE

# MECHANICAL PARKING LEVEL 1 PLAN

PROJECT NO. S12.10250.00  
DRAWING NUMBER M2.P1



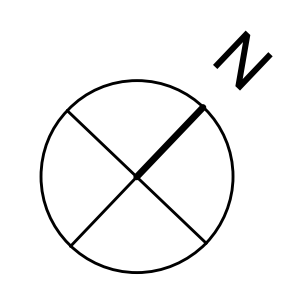
**SHEET NOTES:**

A.

**NUMBERED NOTES:**

- 1 CARBON MONOXIDE SENSORS FOR GARAGE EXHAUST CONTROL WITH 40 FOOT RADIUS COVERAGE (TYPICAL).
- 2 REFER TO AIR DIAGRAMS ON SHEETS M4.01 THROUGH M4.03 FOR AIRFLOW.
- 3 TRANSFORMER VAULT VENTILATION FANS.
- 4 FAN VFD WITH 36" ELECTRICAL CLEARANCE, TYP.
- 5 30" CLEARANCE (TYPICAL).
- 6 ARCHITECTURAL RATED ENCLOSURE.
- 7 REFRIGERANT LINES UP/DOWN TO FCU-1-1 & ACCU-P2-1.

- 8 PROVIDE FLEX DUCT CONNECTION ON FAN INLET AND OUTLET.
- 9 CONDENSER SUSPENDED FROM WALL 14'-0" AFF. MIN 6" CLEARANCE FROM WALL.
- 10 PROVIDE FLEX DUCT CONNECTION ON FAN INLET AND OUTLET.
- 11 WMS ON BOTH SIDES OF FSD.



1/8" = 1'-0"

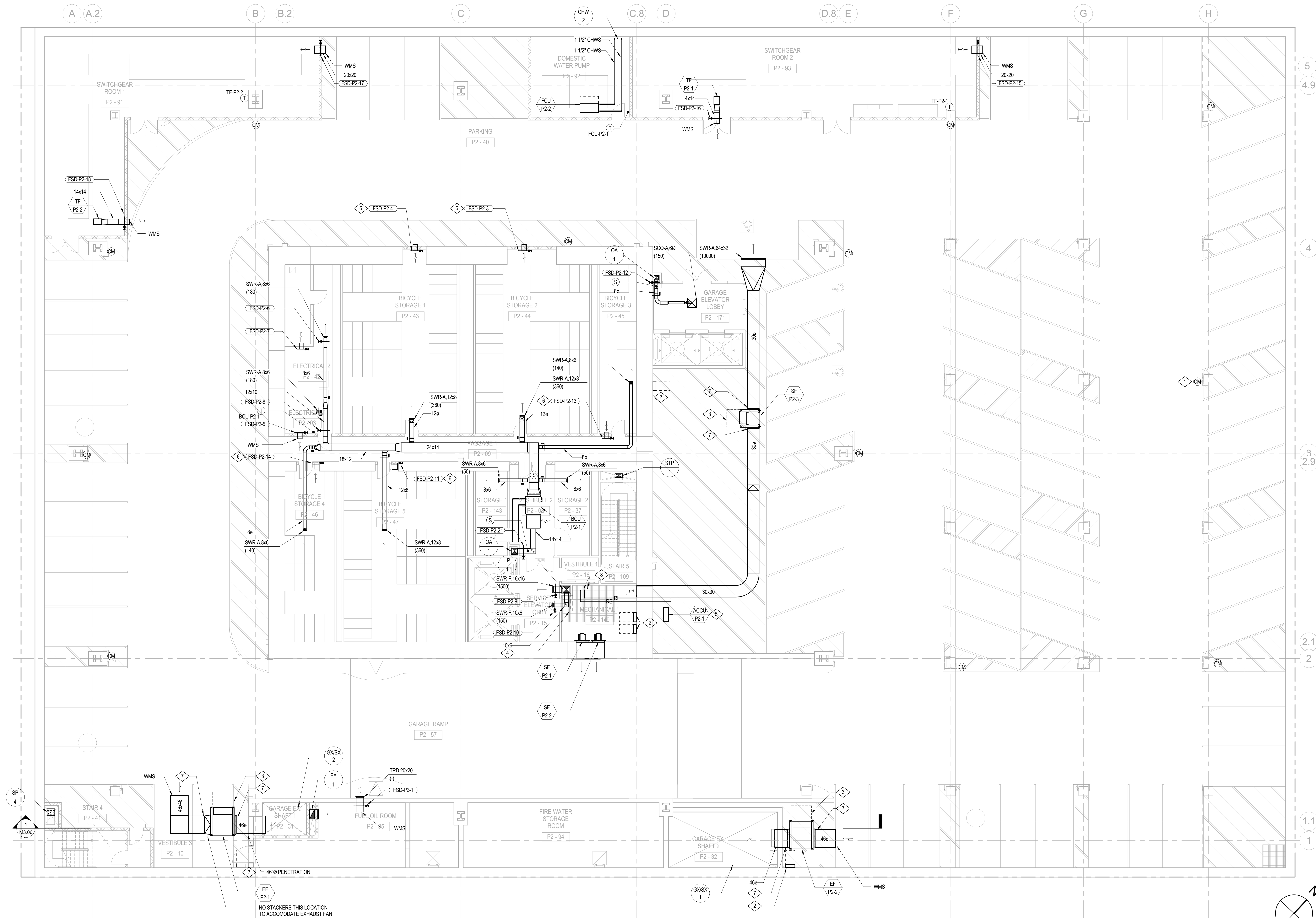


NUMBERED NOTES

- 1 CARBON MONOXIDE SENSORS FOR GARAGE EXHAUST WITH 40 FOOT RADIUS COVERAGE (TYPICAL).
- 2 FAN VFD WITH 36" ELECTRICAL CLEARANCE, TYP.
- 3 30" CLEARANCE (TYPICAL).
- 4 ARCHITECTURAL RATED ENCLOSURE.
- 5 CONDENSER HUNG FROM WALL 11'-0" AFF, MIN 6" CLEARANCE FROM WALL.
- 6 WMS ON BOTH SIDES OF FSD.

NUMBERED NOTES

- 7 PROVIDE FLEX DUCT CONNECTION ON FAN INLET AND OUTLET.
- 8 REFRIGERANT LINES UP TO ACCU-P1-1 ON M2.01.



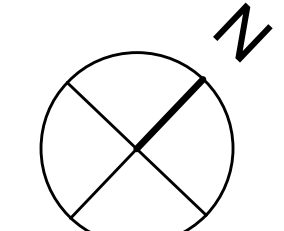
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4.9  
4  
3  
2.9  
2.1  
2  
1.1  
1

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
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Building Security
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LEED Consultant
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- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
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Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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MECHANICAL  
PARKING LEVEL 2  
PLAN



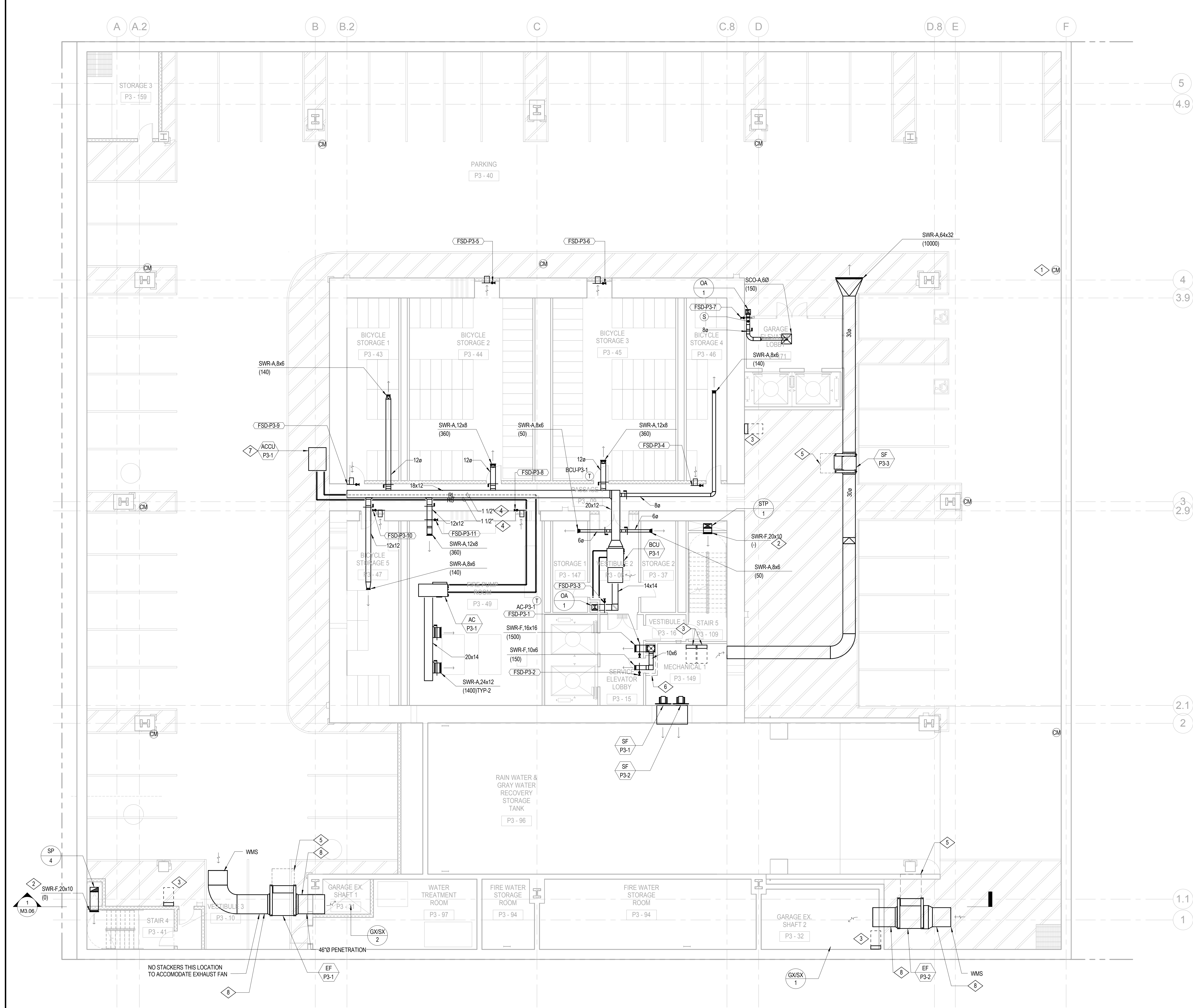
1/8" = 1'-0"





NUMBERED NOTES

- 1 CARBON MONOXIDE SENSORS FOR GARAGE EXHAUST WITH 40 FOOT RADIUS COVERAGE (TYPICAL).
- 2 REFER TO AIR DIAGRAMS ON SHEET M4.01 THROUGH M4.03 FOR AIRFLOW.
- 3 FAN VFD WITH 36" ELECTRICAL CLEARANCE, TYP.
- 4 CONFIRM REFRIGERANT LINE SIZES WITH EQUIPMENT MANUFACTURER RECOMMENDATION.
- 5 30" CLEARANCE (TYPICAL).
- 6 ARCHITECTURAL RATED ENCLOSURE.
- 7 UNIT SUSPENDED OVERLOAD.
- 8 PROVIDE FLEX DUCT CONNECTION ON FAN INLET AND OUTLET.



BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
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PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant

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HLB LIGHTING DESIGN, INC.  
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MORRISON HERSHFIELD  
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HMA CONSULTING  
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Graphic Design Consultant

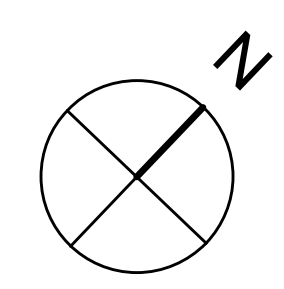
ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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DRAWING TITLE  
**MECHANICAL PARKING LEVEL 3 PLAN**

PROJECT NO. S12.10250.00  
DRAWING NUMBER **M2.P3**



1/8" = 1'-0"



BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
Civil Engineer

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MORRISON HERSHFIELD  
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ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant

HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

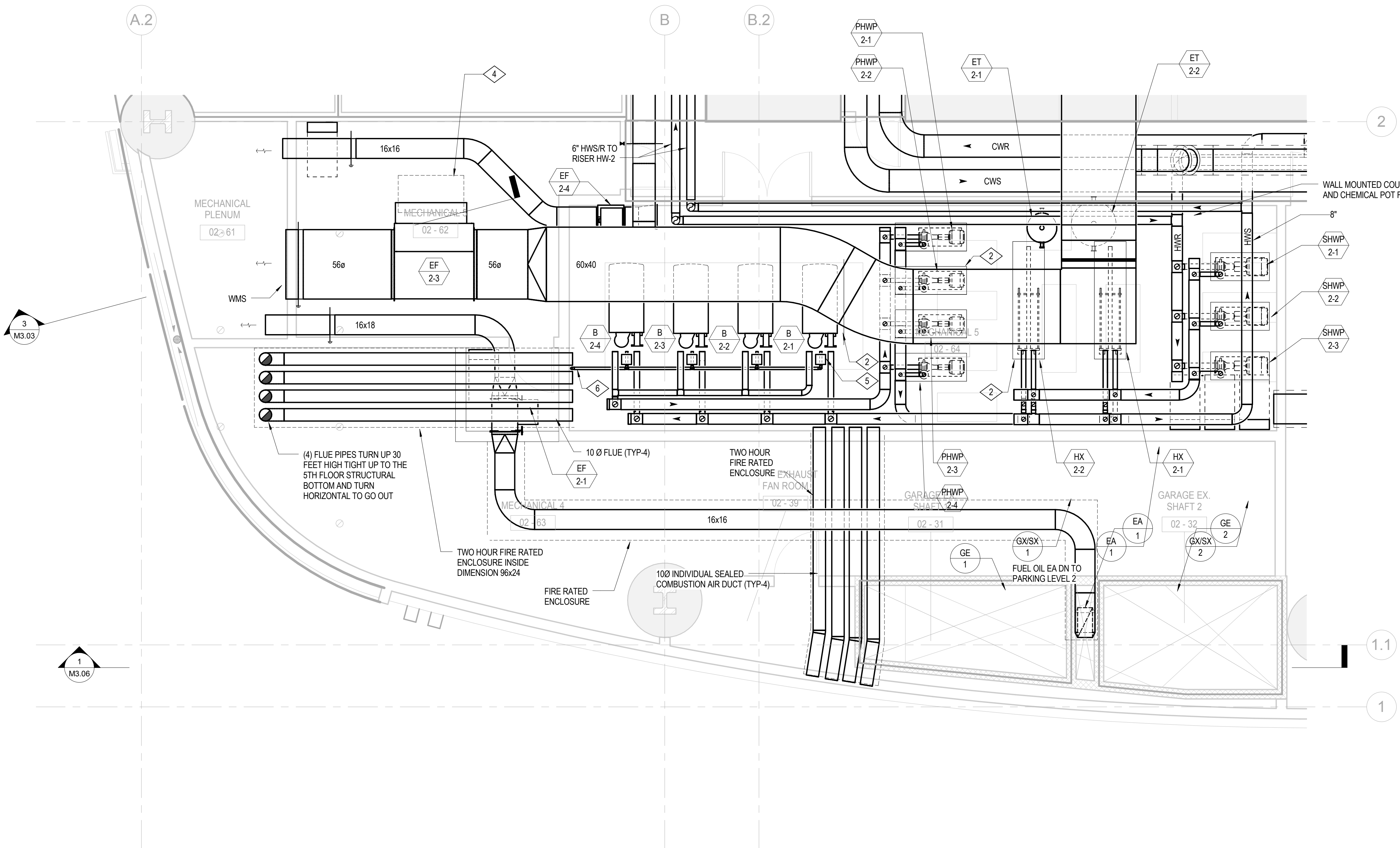
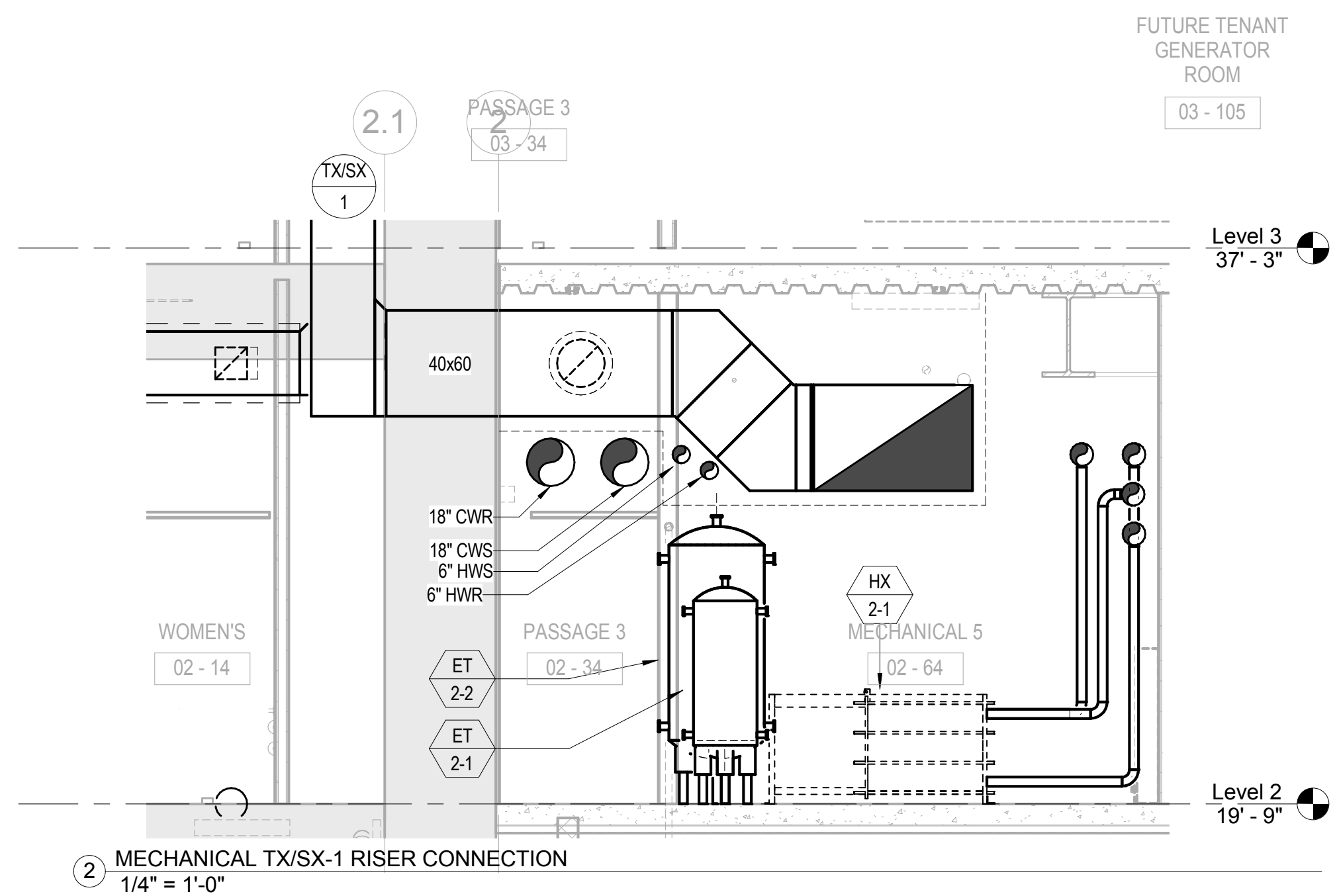
DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NUMBERED NOTES

- 1 6" CONCRETE HOUSE KEEPING PAD TYPICAL.
- 2 4'-0" CLEAR SERVICE ACCESS TYPICAL.
- 3 CHILLER TUBE PULL CLEARANCE TYPICAL.
- 4 30" CLEARANCE.
- 5 BOILER CONDENSATE NEUTRALIZER KIT (TYP).
- 6 1-1/2" BOILER CONDENSATE DRAIN LINE TO PLUMBING FLOOR SINK.



1 MECHANICAL BOILER PLANT ENLARGED PLAN  
1/4" = 1'-0"

NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL BOILER PLANT ENLARGED PLAN**

PROJECT NO. S12.10250.00  
DRAWING NUMBER **M3.01**

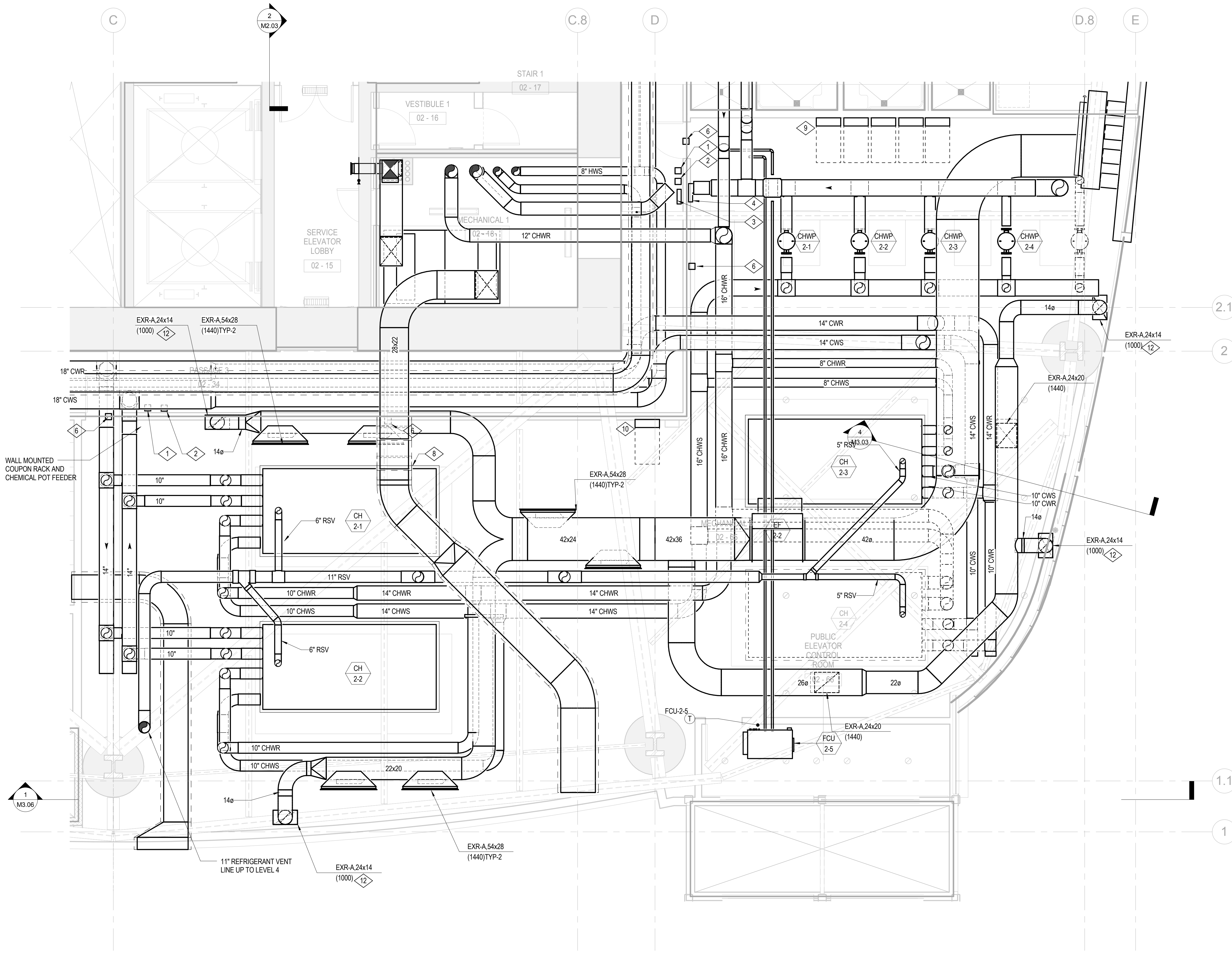


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Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NUMBERED NOTES

- 1 BREAK-GLASS SWITCH FOR OFF-ONLY CONTROL OF CHILLERS AND PUMPS BY DIV 25.
- 2 BREAK-GLASS SWITCH FOR ON-ONLY ACTIVATION OF EF-2. EMERGENCY PERGE BY DIV 25.
- 3 3-POSITION KEY SWITCH FAN CONTROL PANEL FOR EF-2 HIGH/AUTO/OFF OPERATION.
- 4 REFRIGERANT LEAK DETECTION PANEL.
- 5 REFRIGERANT LEAK DETECTION SAMPLE LOCATION.
- 6 HORN STROBE LOCATION.
- 7 LOW DIFFUSERS AT 1'-0" ABOVE FINISHED FLOOR.
- 8 6" CONCRETE PAD TYPICAL.
- 9 CHWP VFD WITH 36" ELECTRICAL CLEARANCE. TYP-5.
- 10 FAN VFD WITH 36" ELECTRICAL CLEARANCE. TYP-2.
- 11 NOT USED.
- 12 LOW EXHAUST, 16" ABOVE FINISH FLOOR.



1 MECHANICAL CHILLER PLANT ENLARGED PLAN  
1/4" = 1'-0"

REFRIGERATION MACHINERY ROOM VENTILATION CALCULATIONS PER CA MECH. CODE SECTION 1108.0

<b>Design Information:</b>		<b>Chiller Room Equivalent Leakage Area</b>	
Quantity of Centrifugal Chillers	= 4	Awalls (sq. ft.) = perimeter * wall height * 0.001	
Quantity of Pumps	= 4	Awalls (sq. ft.) = 2.24	
Quantity of Fans	= 1		
Largest Chiller Refrigerant Charge	= 1620 lb	Afloor (sq. ft.) = area * 2 * 0.0005	
Heat Load Centrifugal Chiller	= 67000 Btu/h	Afloor (sq. ft.) = 3.4	
Heat Load Pump/VFD	= 40111 Btu/h		
Heat Load Fan	= 201 Btu/h	Ae (sq. ft.) = Awalls + Afloor	
Chiller Room Area	= 3400 sf	Ae (sq. ft.) = 5.64	
Chiller Perimeter Length	= 128 ft		
Chiller Room Height	= 17.5 ft		
Chiller Room Max Temperature Setpoint	= 104 deg. F		
Outside Air Temperature	= 78.0 deg. F		
Wall U value	= 0.091 Btu/h-F-R2		

Equation 11-1:  
 $Q_c = 2510 * A_e * \sqrt{dP}$   
 $Q_c = 3,292$

Equation 11-2:  
 $Q_c = 0.5 * Agf$   
 $Q_c = 1,700$

Equation 11-3:  
 $Q_c = \text{Total Heat Load} / (1.08 * \Delta T)$   
 $Q_c = 15,265$

Equation 11-4:  
 $Q_c = 100 * \text{sqft} (G)$   
 $Q_c = 4,025$

Key:  
 $q$  = Btu/h of all heat-producing equipment within room  
 $Q$  = Airflow rate (CFM)  
 $dP$  = Pressure Difference inside to outside (inches WG) = 0.05  
 $A_e$  = Equivalent Leakage Area of Room (sqft)  
 $\Delta T$  = Temperature Difference between Machinery Room and Supply Air (deg. F)  
 $G$  = Refrigerant Mass in Largest System (lbs)  
 $Agf$  = Gross Area of the Refrigeration Machinery Room (sqft)

Normal chiller room ventilation is determined by the largest of Equations 11-1, 11-2 and 11-3  
 This value is 15265 CFM.

Emergency purge ventilation is determined by Equation 11-4.  
 This value is 4025 CFM.

The system will be designed to exhaust a minimum 1900 CFM at all times. The fan will be ramped up to a maximum of 3900 CFM to maintain a maximum space temperature setpoint of 103F. When refrigerant detection exceeds allowable threshold, fan will ramp up to 2700 CFM.

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CAD FILE NAME

DRAWING TITLE

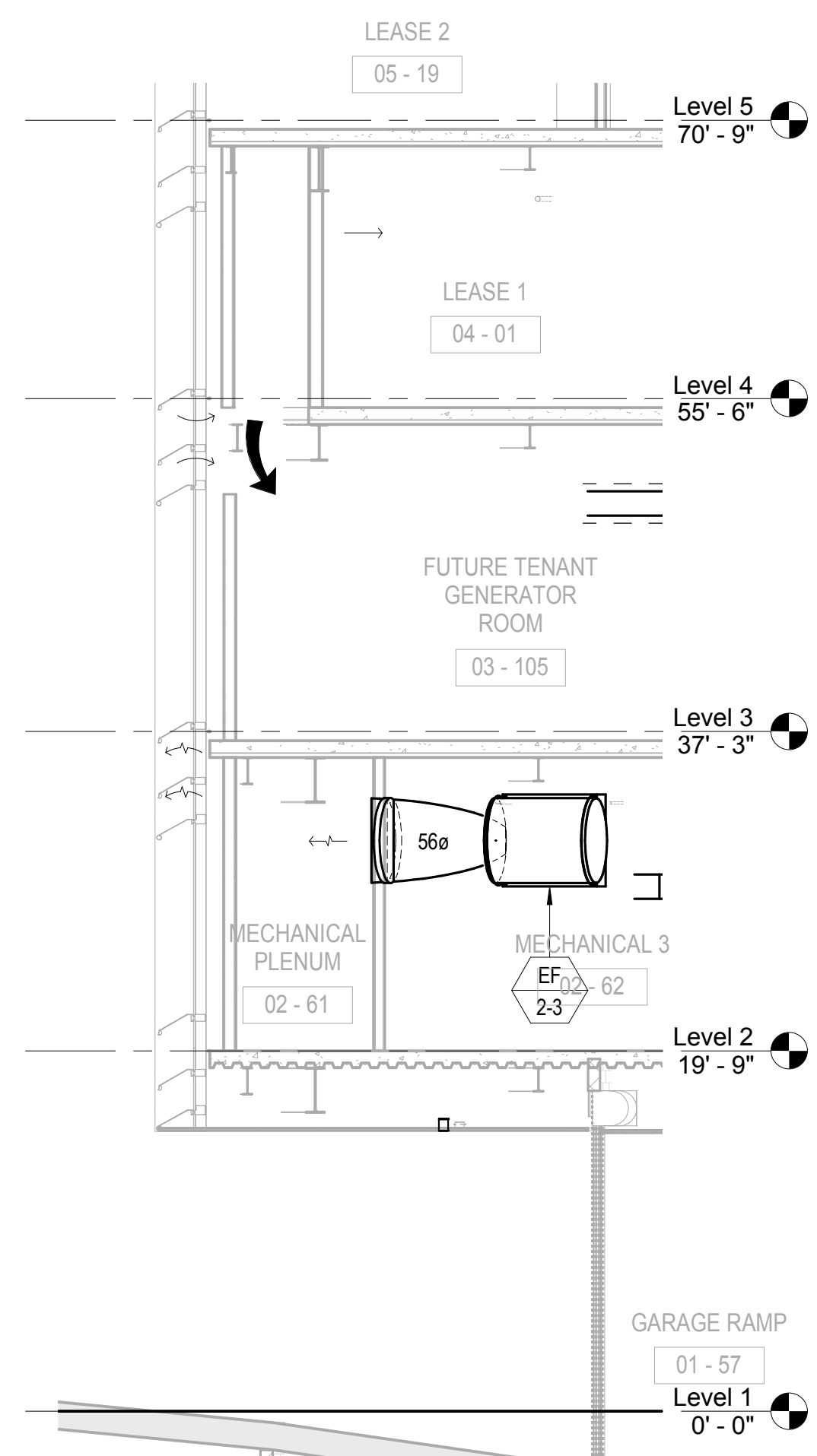
**MECHANICAL  
CHILLER PLANT  
ENLARGED PLAN**



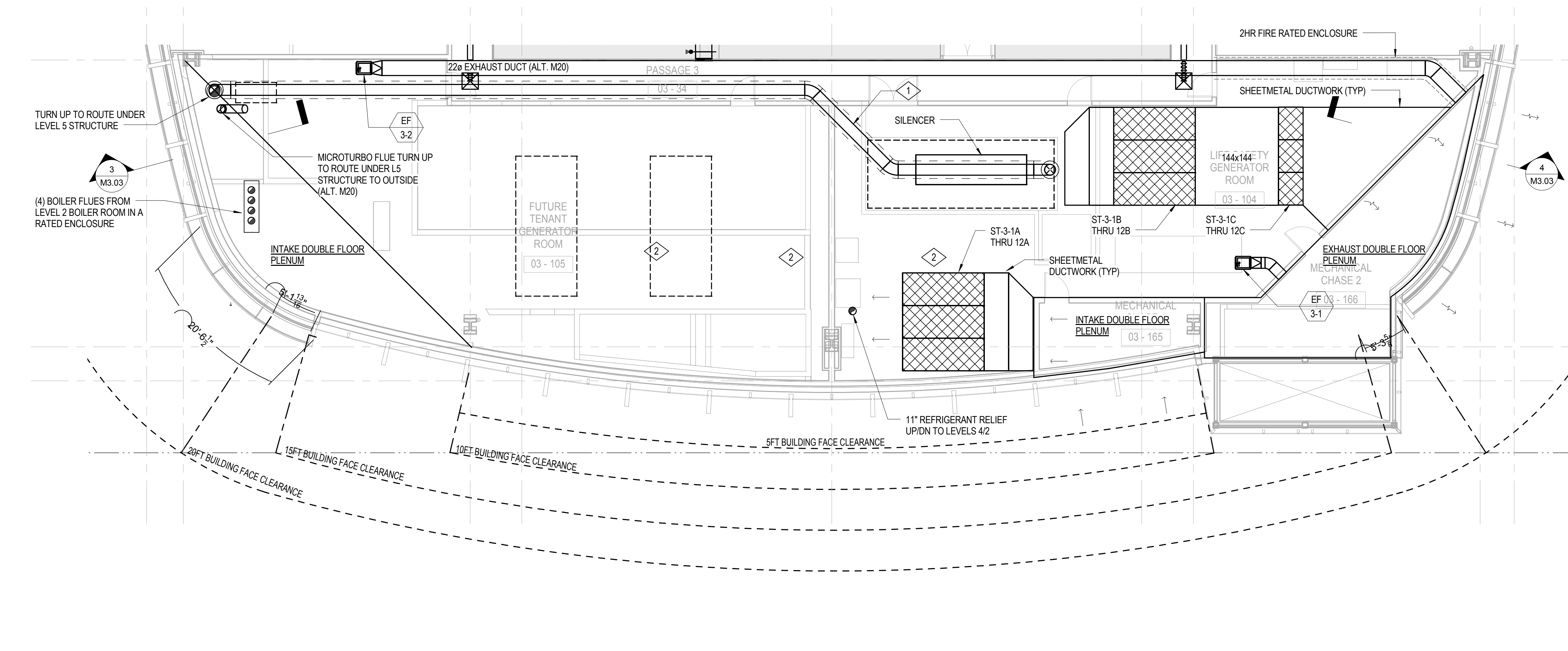
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Landscape Architect of Record

**NUMBERED NOTES**

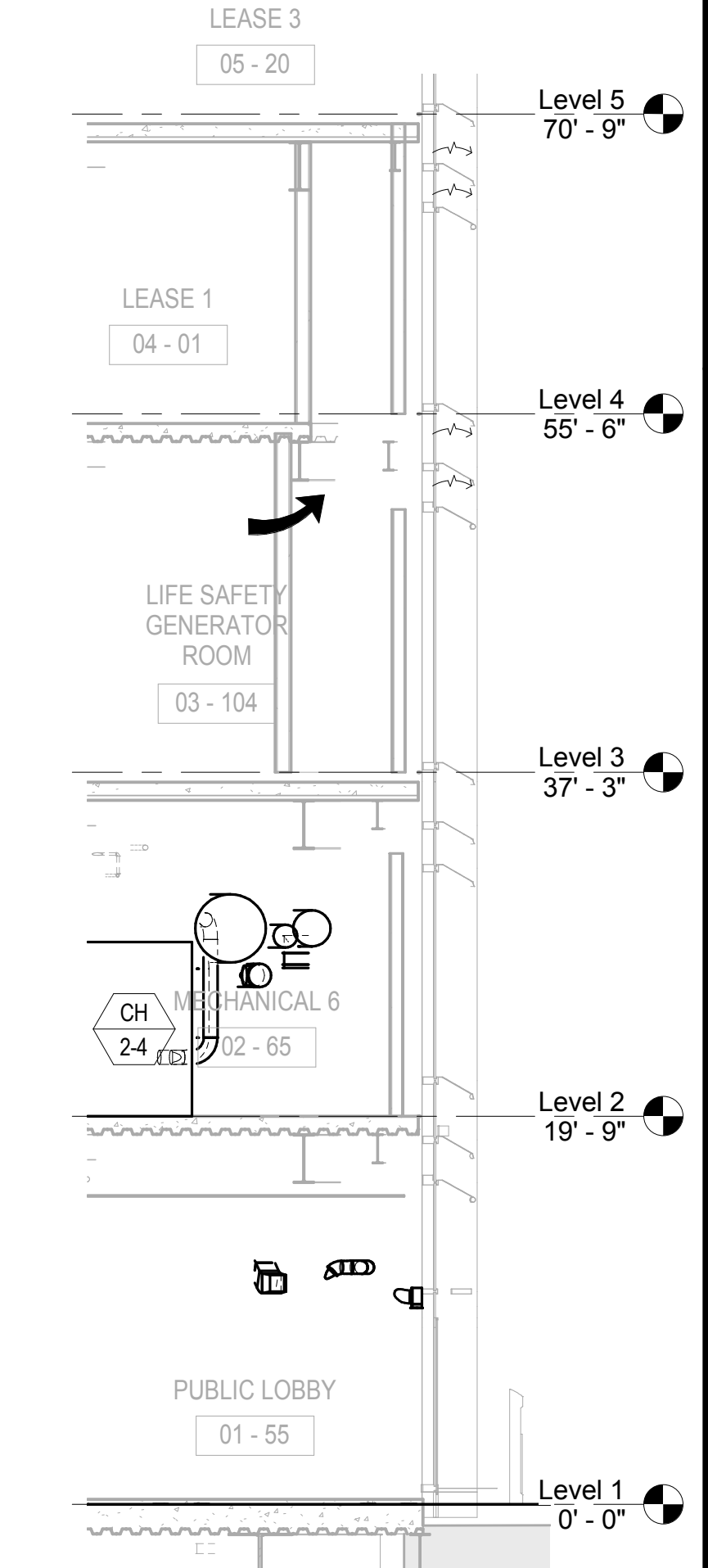
- 1 16" WELDED STEEL DIESEL EXHAUST WITH 4.5" CALCIUM SILICATE INSULATION WITH STAINLESS STEEL JACKET (TYPICAL).
- 2 FUTURE TENANT GENERATORS: DIESEL EXHAUST FLUES TO TERMINATE AT SAME LOCATION AS LIFE-SAFETY GENERATOR.



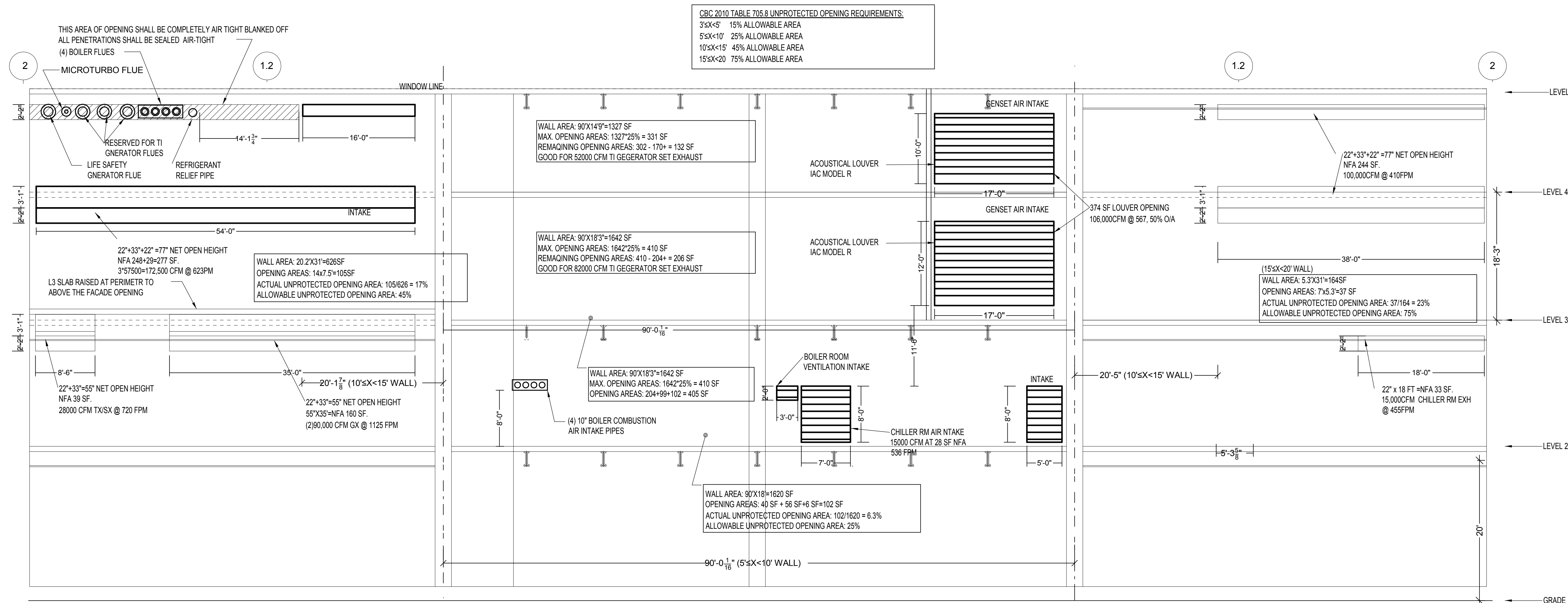
3 WEST FACADE LOUVER SECTION  
1/8" = 1'-0"



1 MECHANICAL LEVEL 3 GENERATOR ENLARGED PLAN  
1/8" = 1'-0"



4 EAST FACADE LOUVER SECTION  
1/8" = 1'-0"



2 MECHANICAL LOUVER ELEVATION  
1/8" = 1'-0"

**IBC 2010 TABLE 705.8 UNPROTECTED OPENING REQUIREMENTS:**  
 3'x5' 15% ALLOWABLE AREA  
 5'x10' 25% ALLOWABLE AREA  
 10'x15' 45% ALLOWABLE AREA  
 15'x20' 75% ALLOWABLE AREA



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DWG FILENAME

DRAWING TITLE

**MECHANICAL GENERATOR PLAN & LOUVER SUMMARY**

PROJECT NO. S12.10250.00 DRAWING NUMBER M3.03



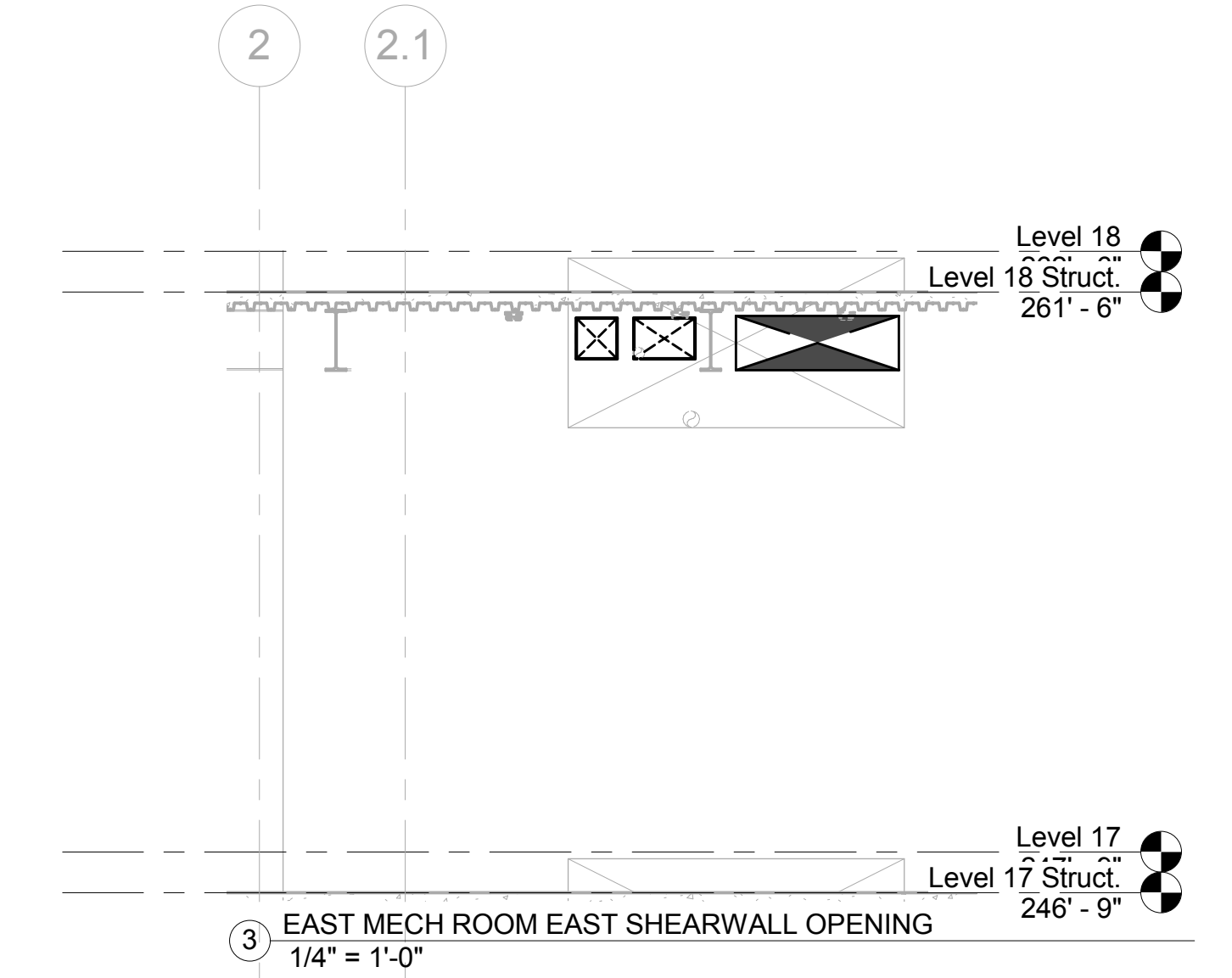
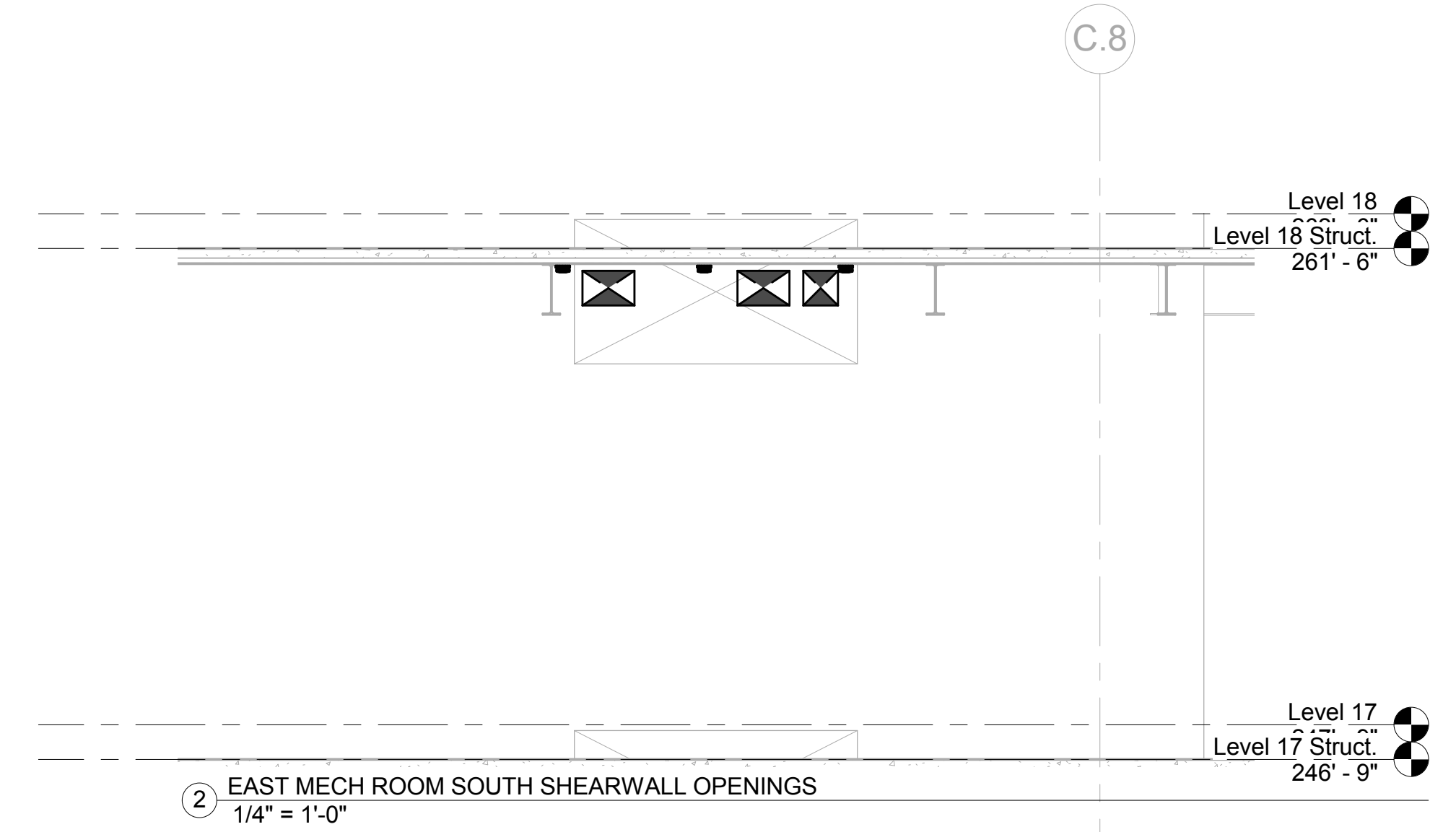
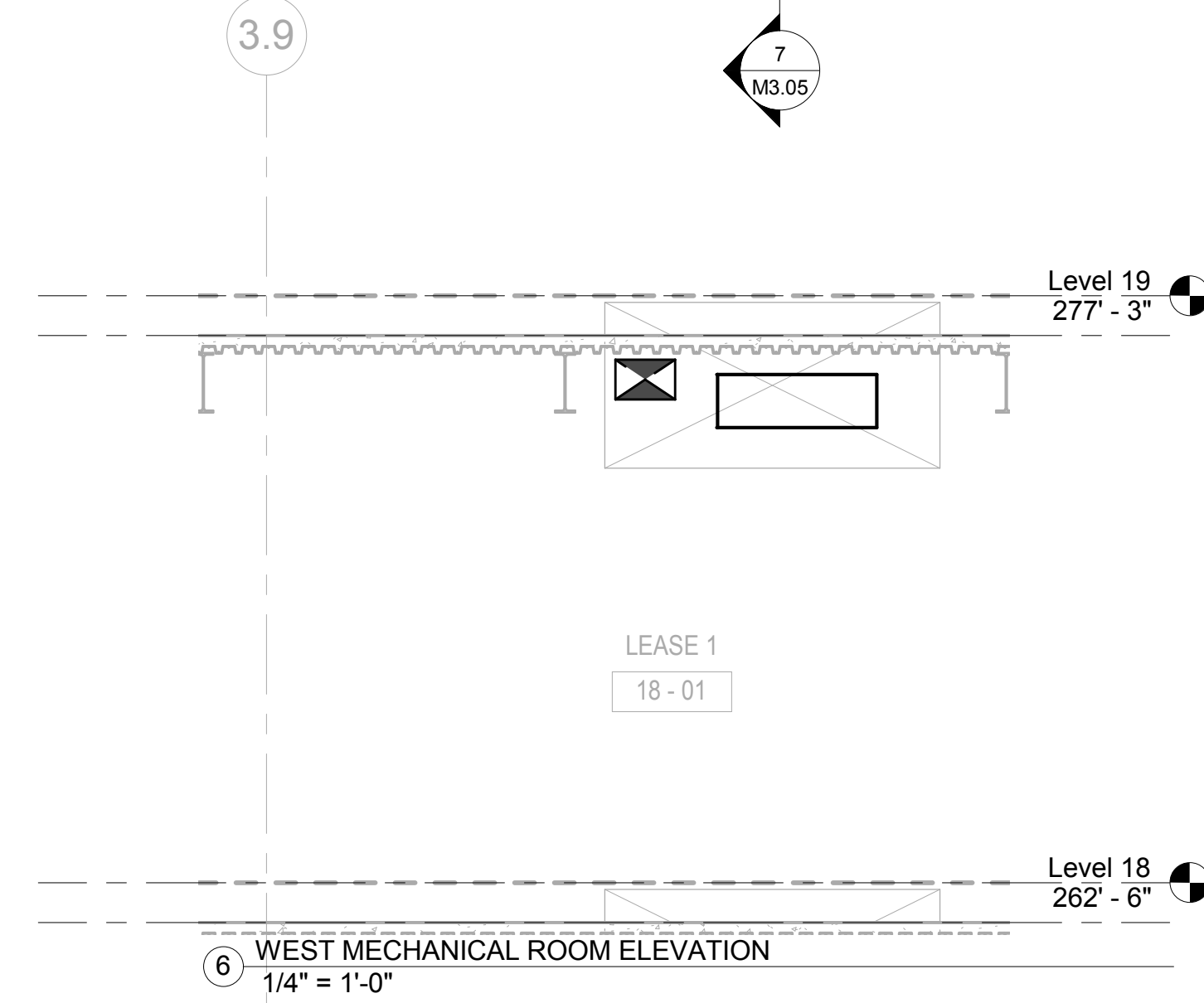
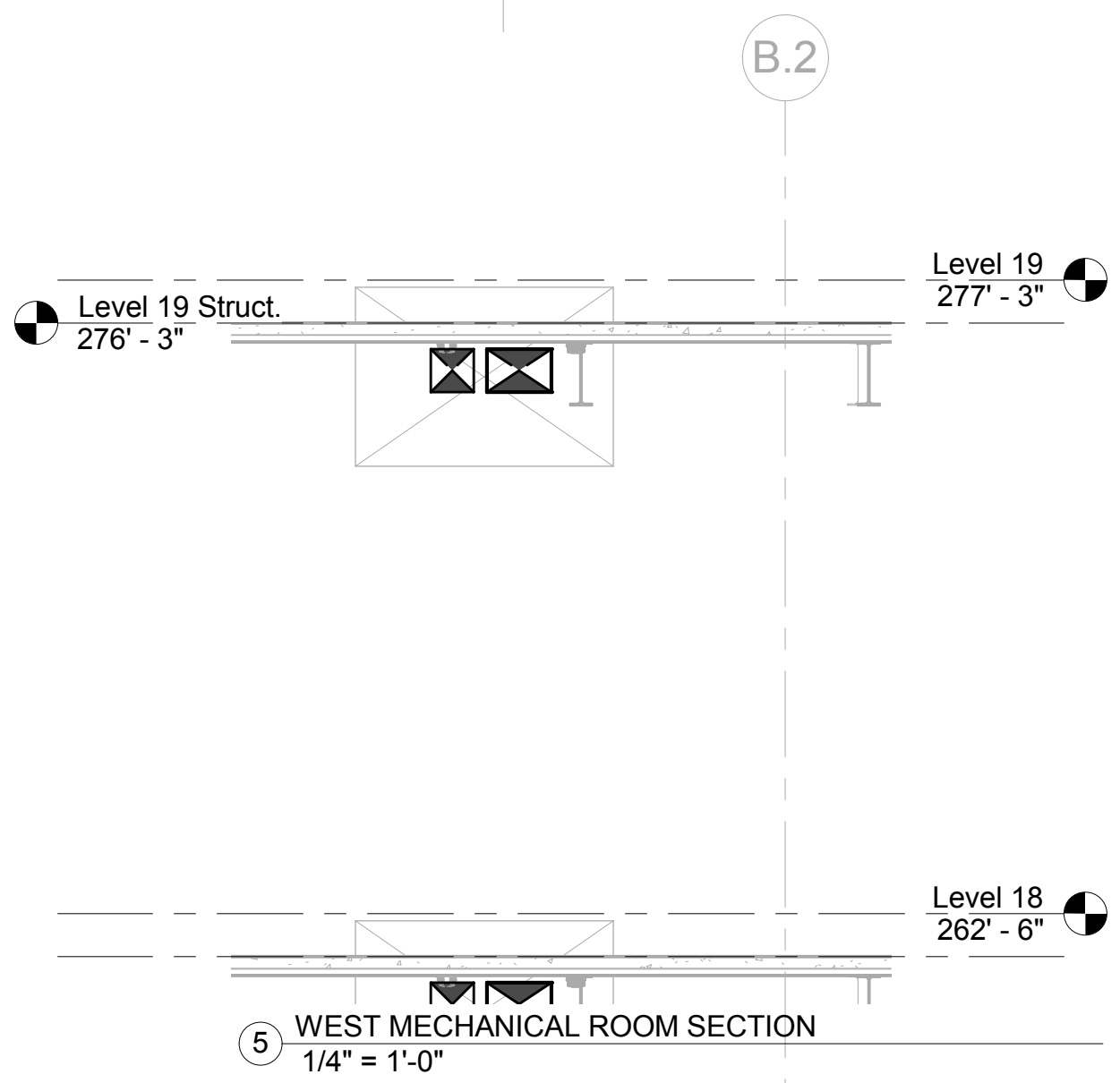
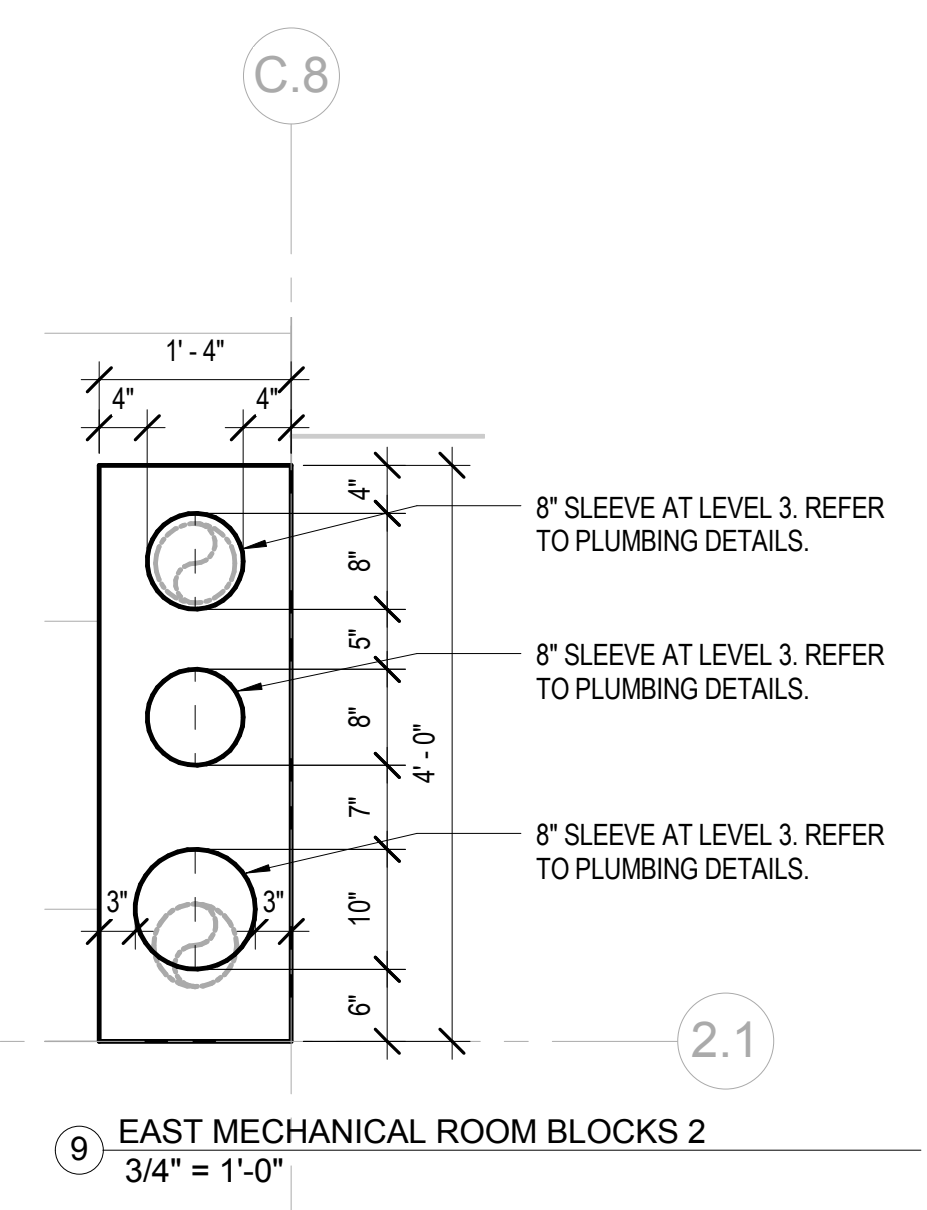
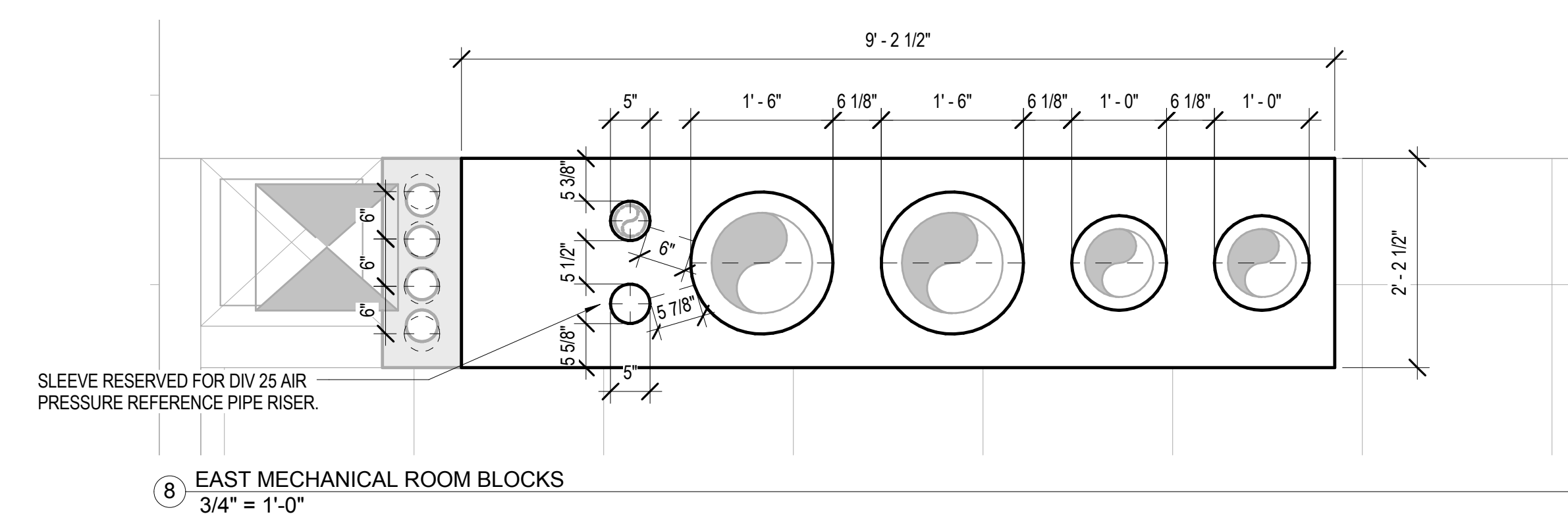
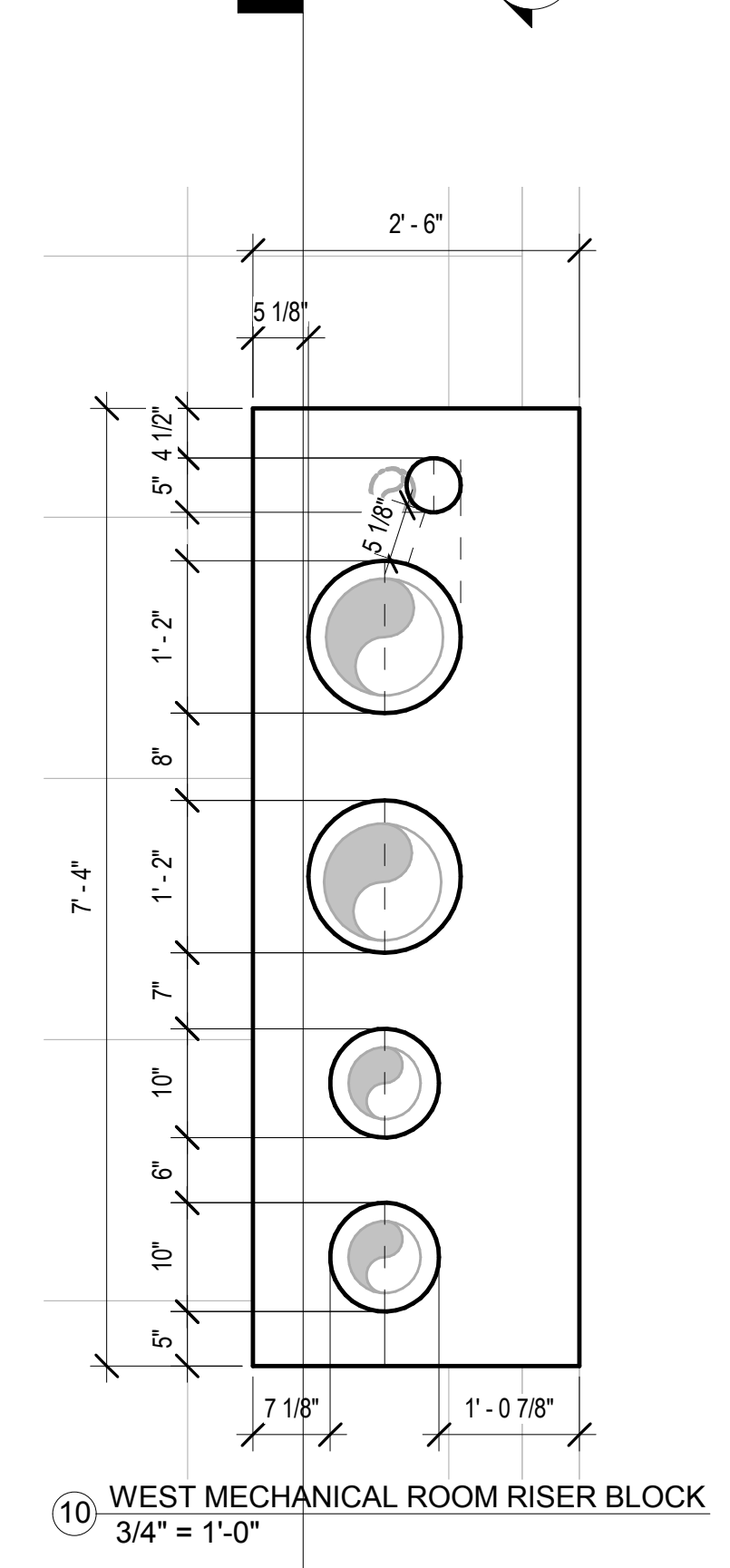
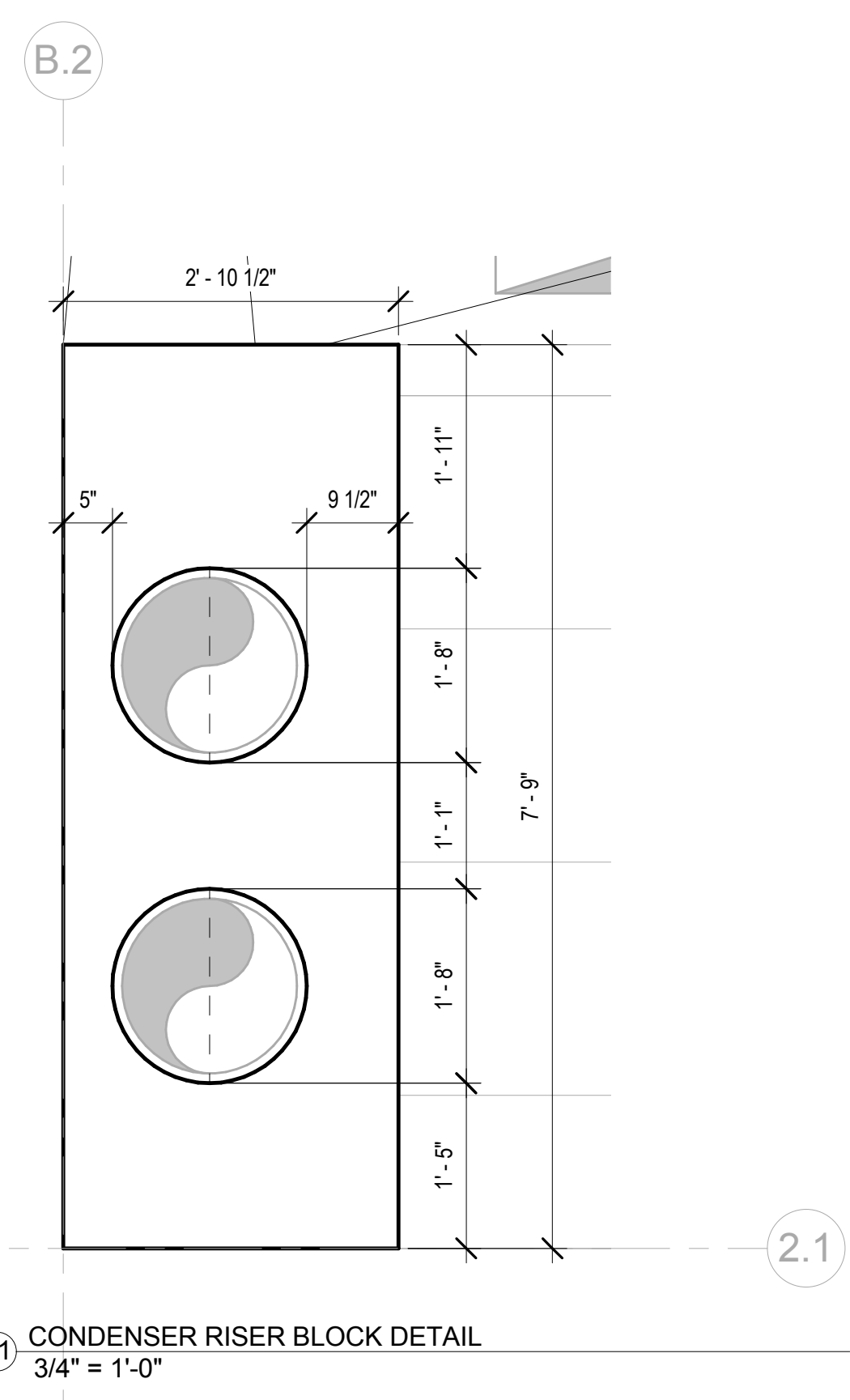
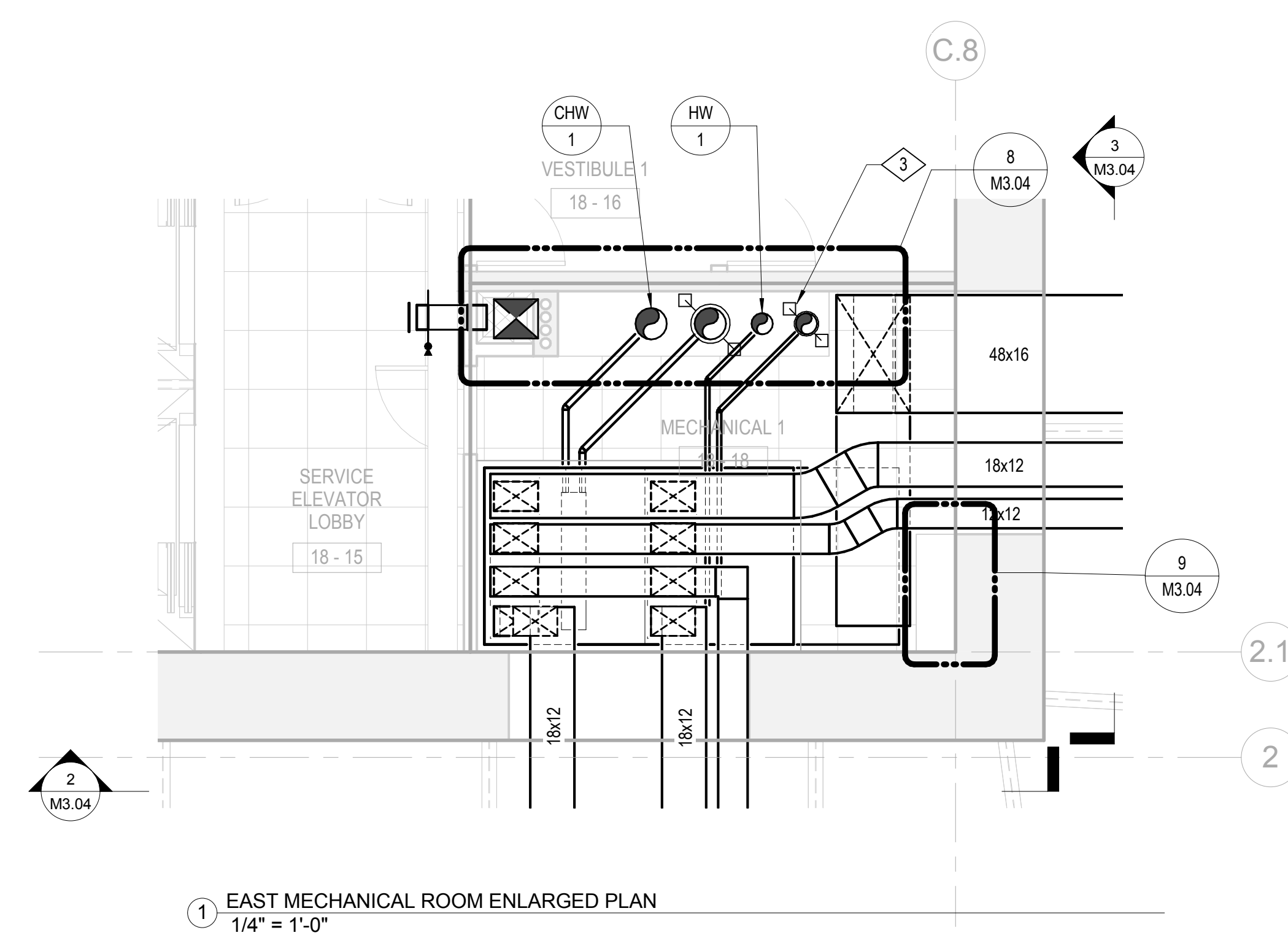
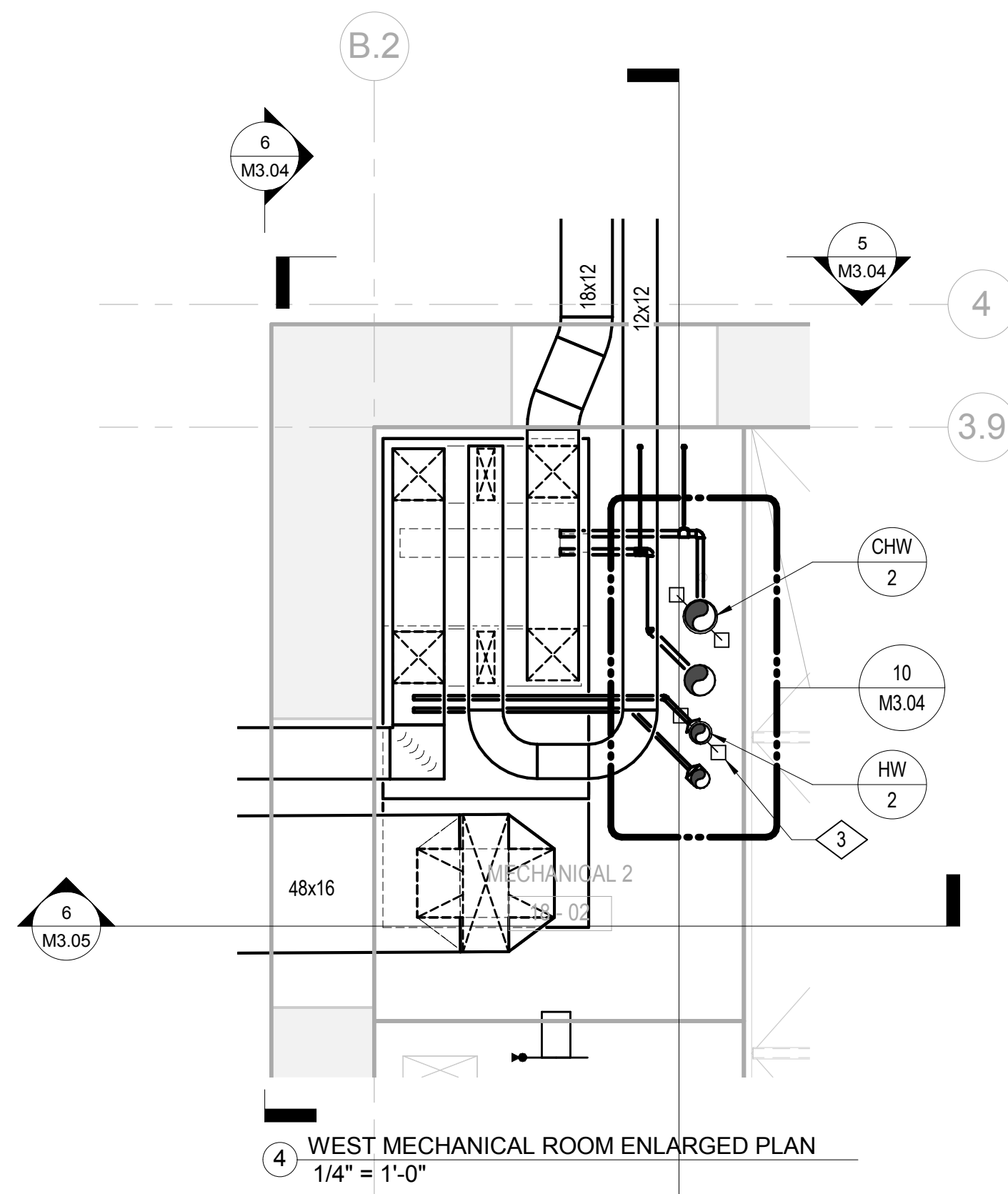
**SHEET NOTES**

A. SLEEVES SHALL EXTEND THROUGH SLAB AND RAISED 12" CONCRETE BLOCKS.

**NUMBERED NOTES**

- 1 FAN VFDs (NEUTRAL DECK, COLD DECK, UNDERFLOOR): 36" ELECTRICAL CLEARANCE.
- 2 30 AHU ACCESS CLEARANCE TYPICAL.
- 3 REFER TO RISER DIAGRAM ON SHEETS M4.04 THROUGH M4.06 AND SPECIFICATIONS FOR PIPE RISER ISOLATOR SUPPORT LOCATIONS. FINAL LOCATIONS TO BE DETERMINED BY MANUFACTURER.

PIPE SLEEVE SIZING CRITERIA			
PIPE DIAMETER (Ø)	PIPE SLEEVE INSIDE DIAMETER		
	HW	CHW	CW
≤ 3/4"	Ø + 3"	Ø + 3"	Ø + 2"
1" - 2"	Ø + 4"	Ø + 3"	Ø + 2"
2 1/2" - 10"	Ø + 4"	Ø + 4"	Ø + 2"
12" +	Ø + 4"	Ø + 5"	Ø + 2"



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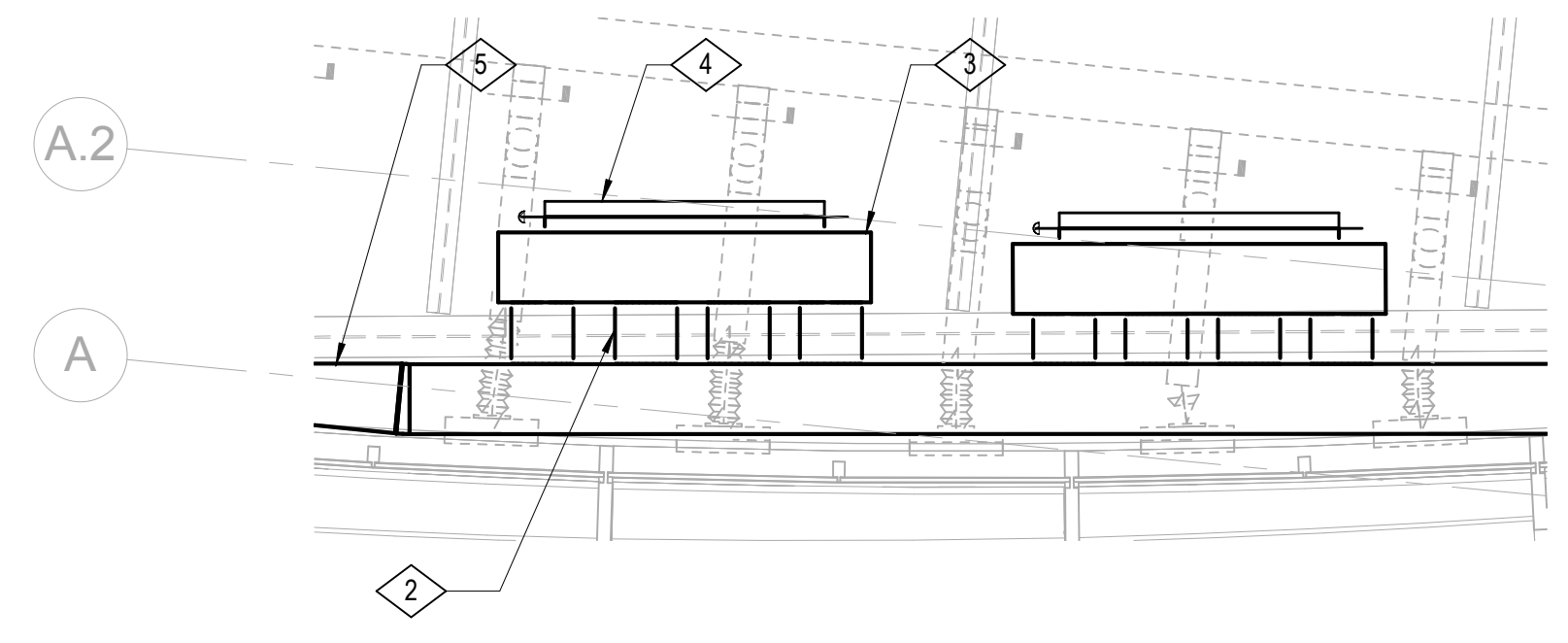
DRAWING TITLE  
**TYPICAL MECHANICAL ROOM DETAILS**

PROJECT NO. S12.10250.00 DRAWING NUMBER M3.04

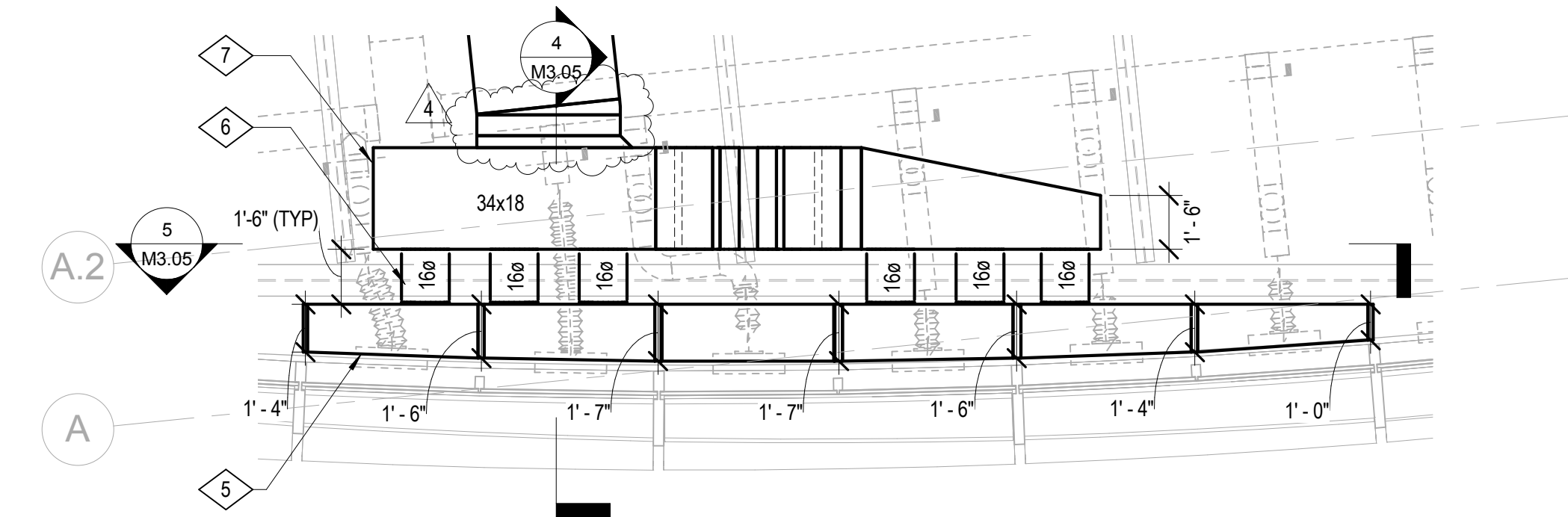


NUMBERED NOTES

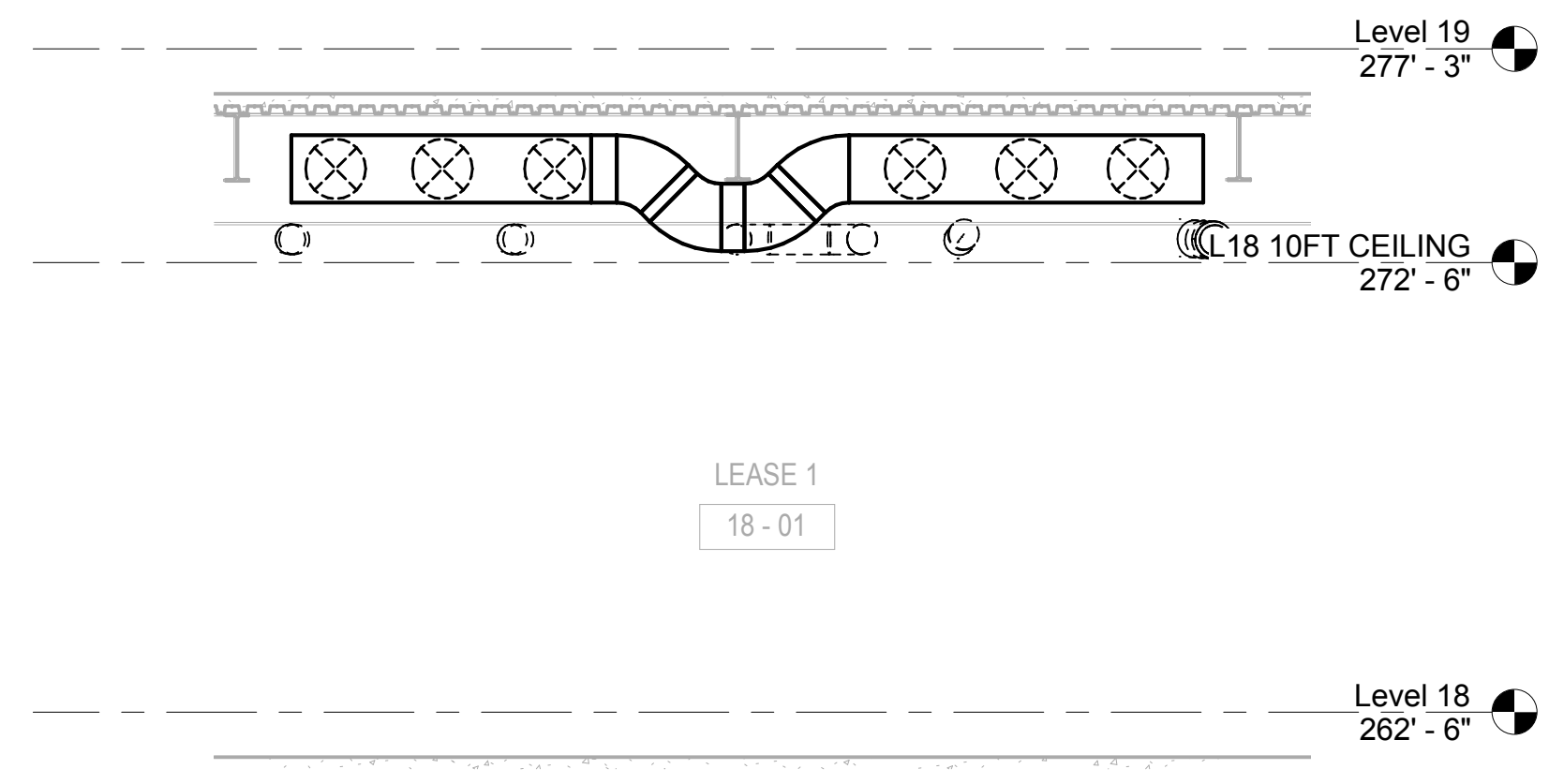
- 1 CAP FOR FUTURE
- 2 16# RELIEF AIR CONNECTION THROUGH 18" BEAM PENETRATION. GALVANIZED WITH EXTERNAL WRAP. (TYP-8)
- 3 96"x18"Wx24"H GALVANIZED INTERIOR PLENUM WITH EXTERNAL WRAP. (TYP-2)
- 4 72"x18" ACD.
- 5 EXTERNAL PLENUM TO BE 304 STAINLESS STEEL. INTERNALLY LINED WITH 3/4" ARMSTRONG ARMAFLEX (OR APPROVED EQUAL). REFERENCE SPECIFICATION SECTION 23 07 00 TYPE "A". LINER SHALL BE GLUED AND MECHANICALLY ATTACHED USING WELDING PINS AND WASHERS, "GRIP-NAILS" OR APPROVED EQUAL PER SPECIFICATION 23 07 00.
- 6 16# OUTSIDE AIR CONNECTION THROUGH 18" BEAM PENETRATION. GALVANIZED WITH EXTERNAL WRAP.
- 7 GALVANIZED INTERIOR PLENUM WITH EXTERNAL WRAP.



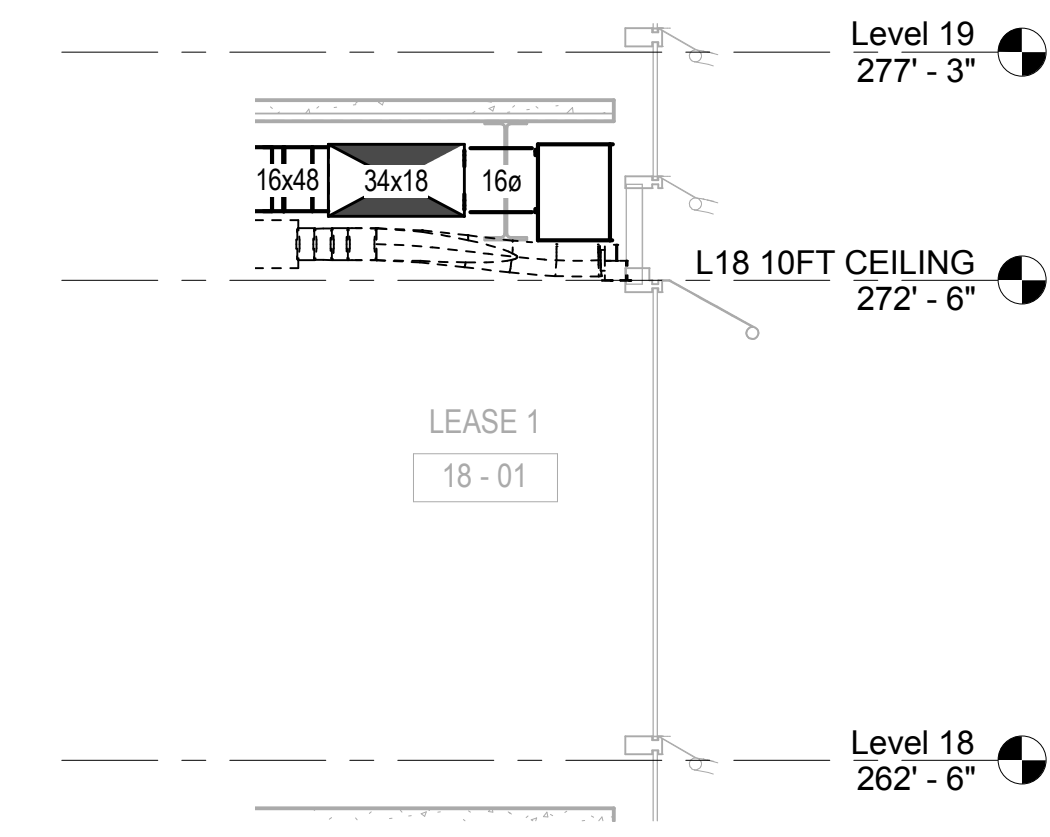
8 TYPICAL FLOOR RELIEF AIR LOUVER CONNECTION  
1/4" = 1'-0"



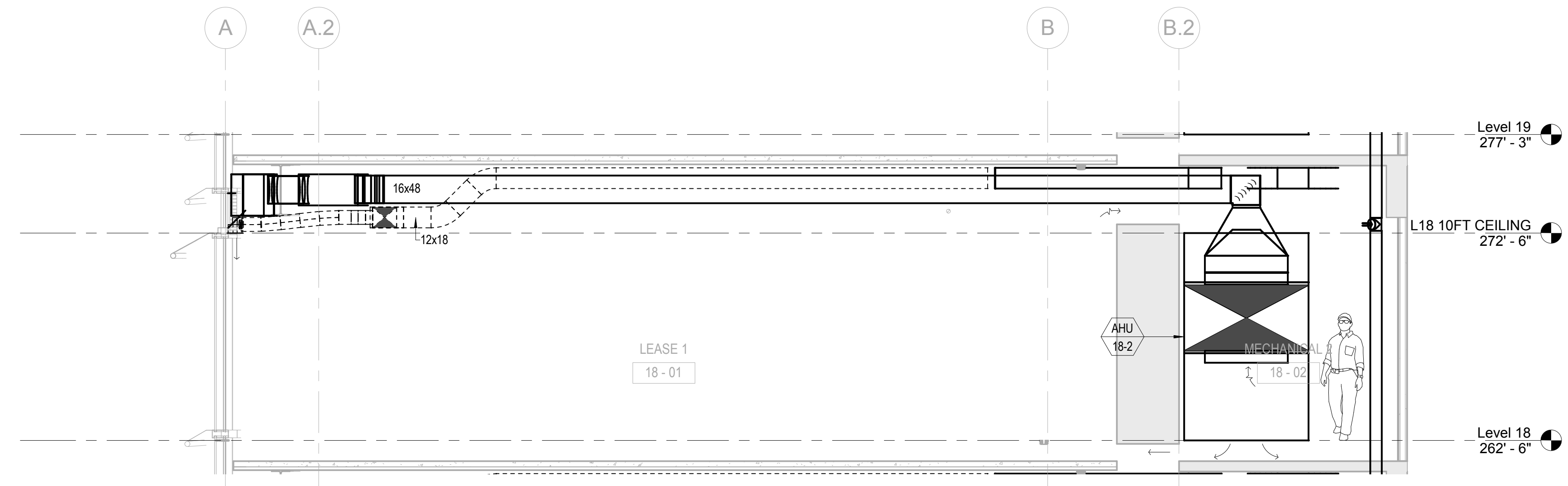
1 TYPICAL FLOOR INTAKE LOUVER CONNECTION  
1/4" = 1'-0"



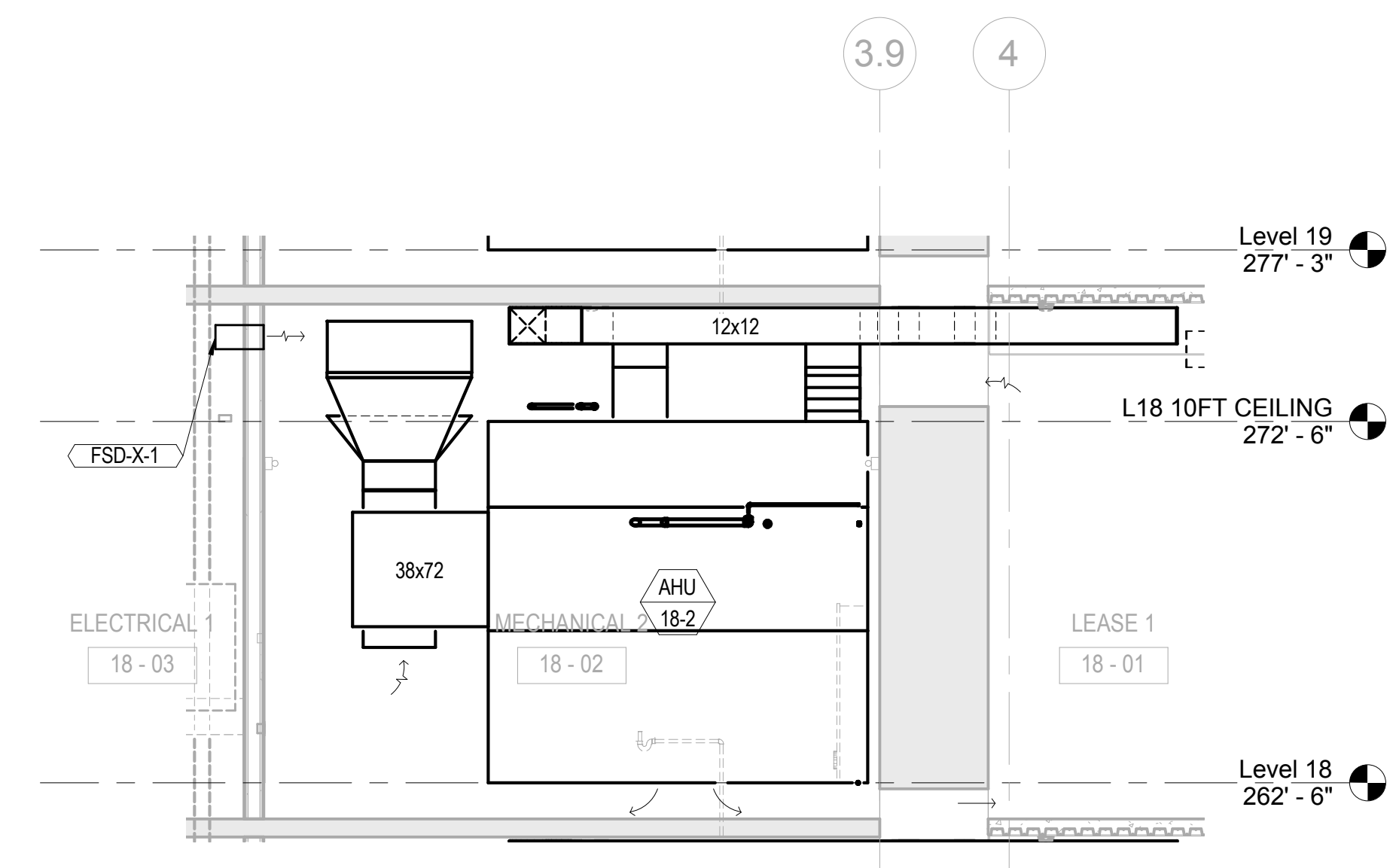
5 TYPICAL INTAKE PLENUM CONNECTION SECTION 1  
1/4" = 1'-0"



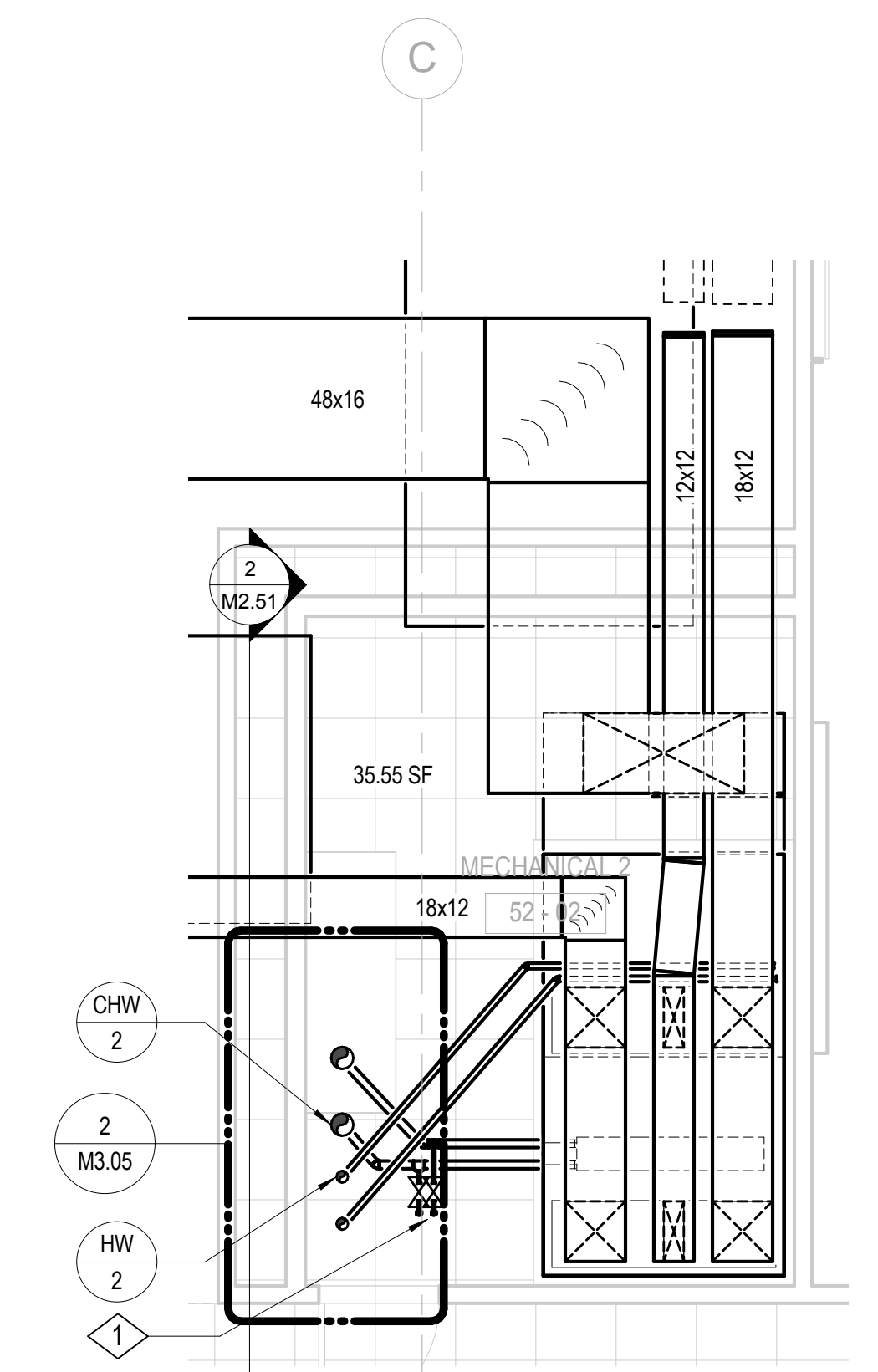
4 TYPICAL INTAKE PLENUM CONNECTION SECTION 4  
1/4" = 1'-0"



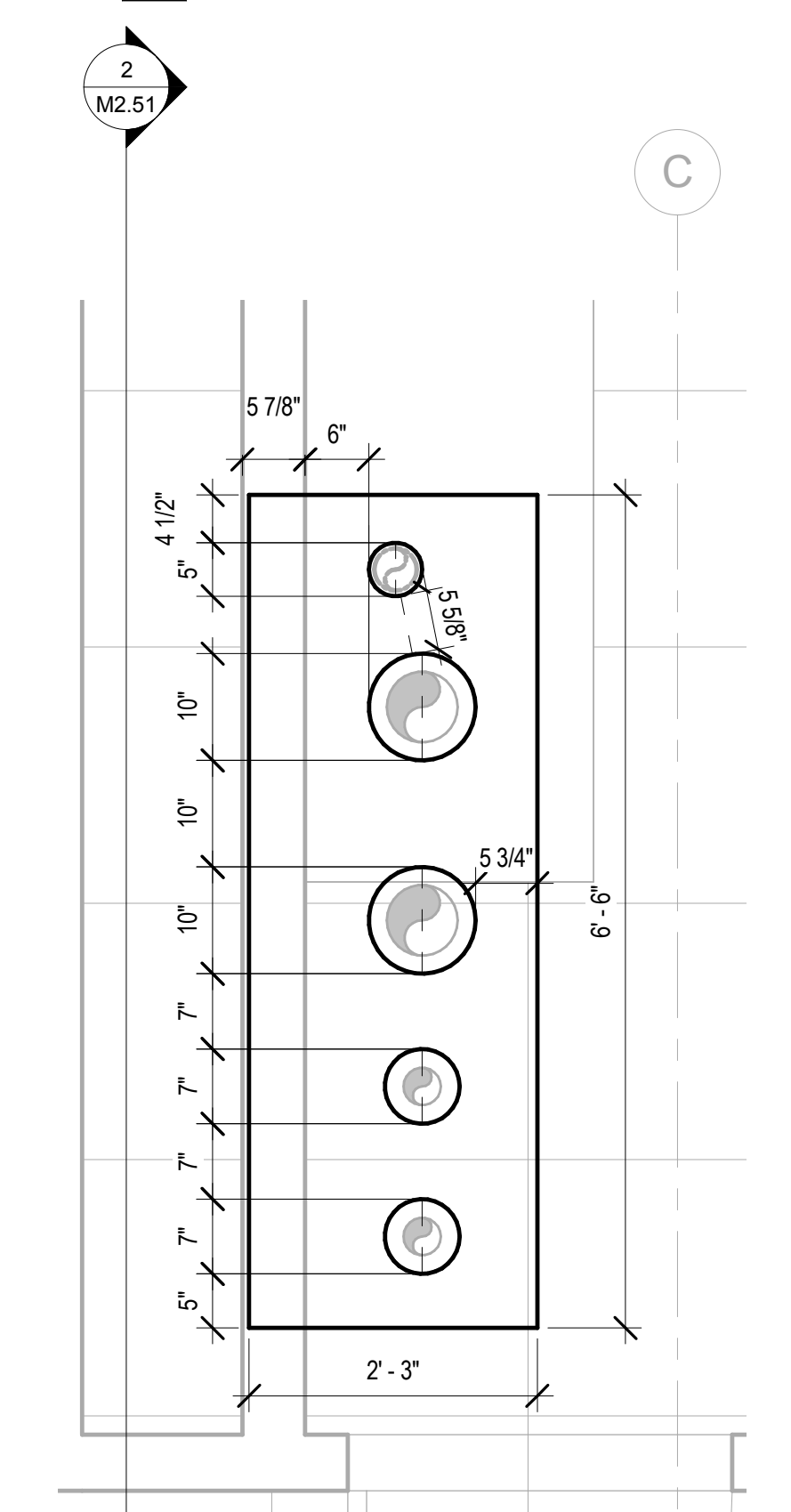
6 TYPICAL AHU-X-2 DUCT SECTION FOR AHU(6-49)-2  
1/4" = 1'-0"



7 TYPICAL WEST MECHANICAL ROOM SECTION FOR AHU(6-49)-2  
1/4" = 1'-0"



3 WEST MECHANICAL ROOM ENLARGED PLAN LEVELS 52-61  
1/4" = 1'-0"



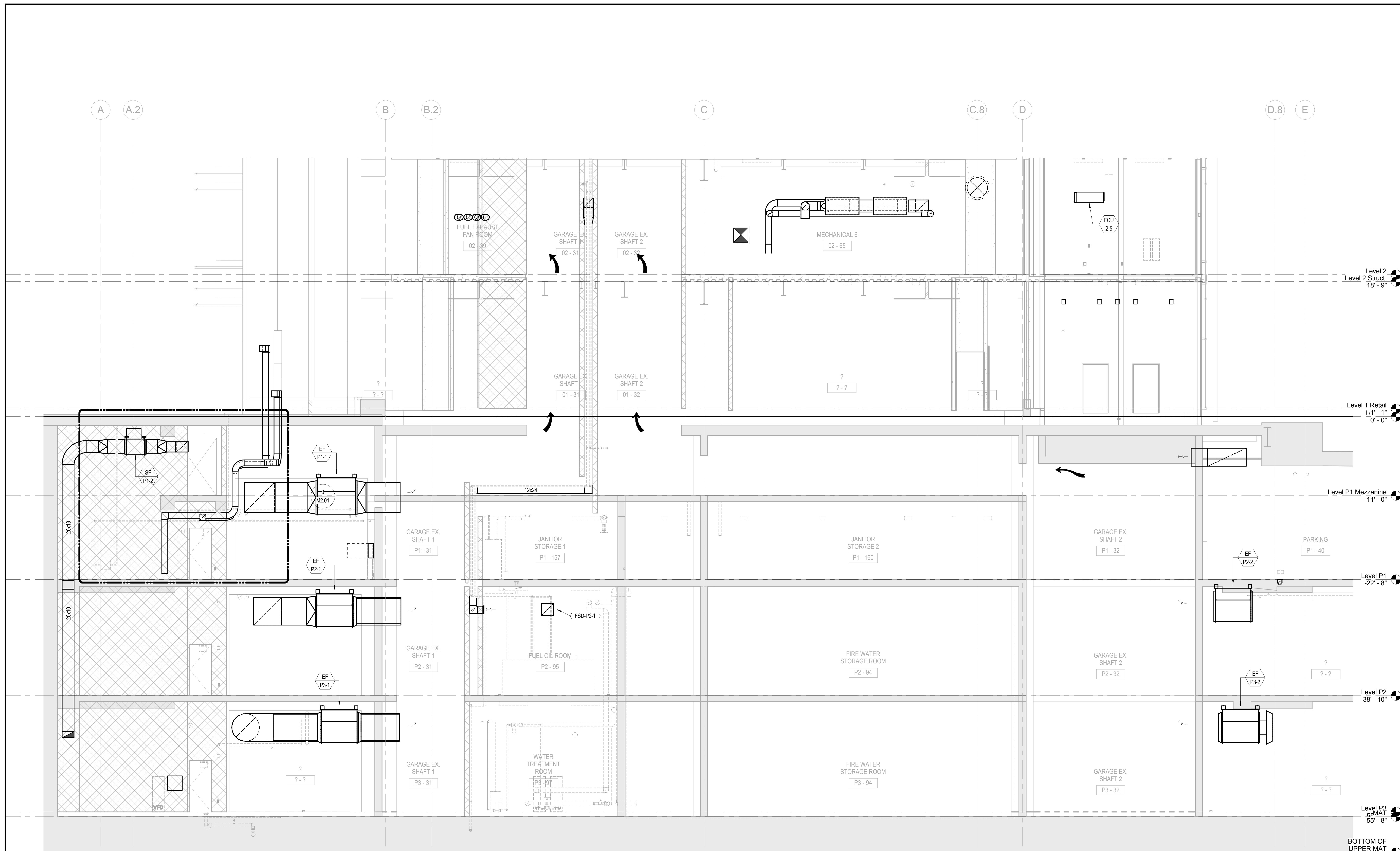
2 WEST MECHANICAL ROOM RISER BLOCKS LEVELS 51-61  
3/4" = 1'-0"

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TYPICAL MECHANICAL ROOM DETAILS



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1 MECHANICAL PARKING GARAGE EXHAUST SHAFT SECTION  
3/16" = 1'-0"

**MECHANICAL  
GARAGE EXHAUST  
SECTION**

5/12/2014 4:08:47 PM



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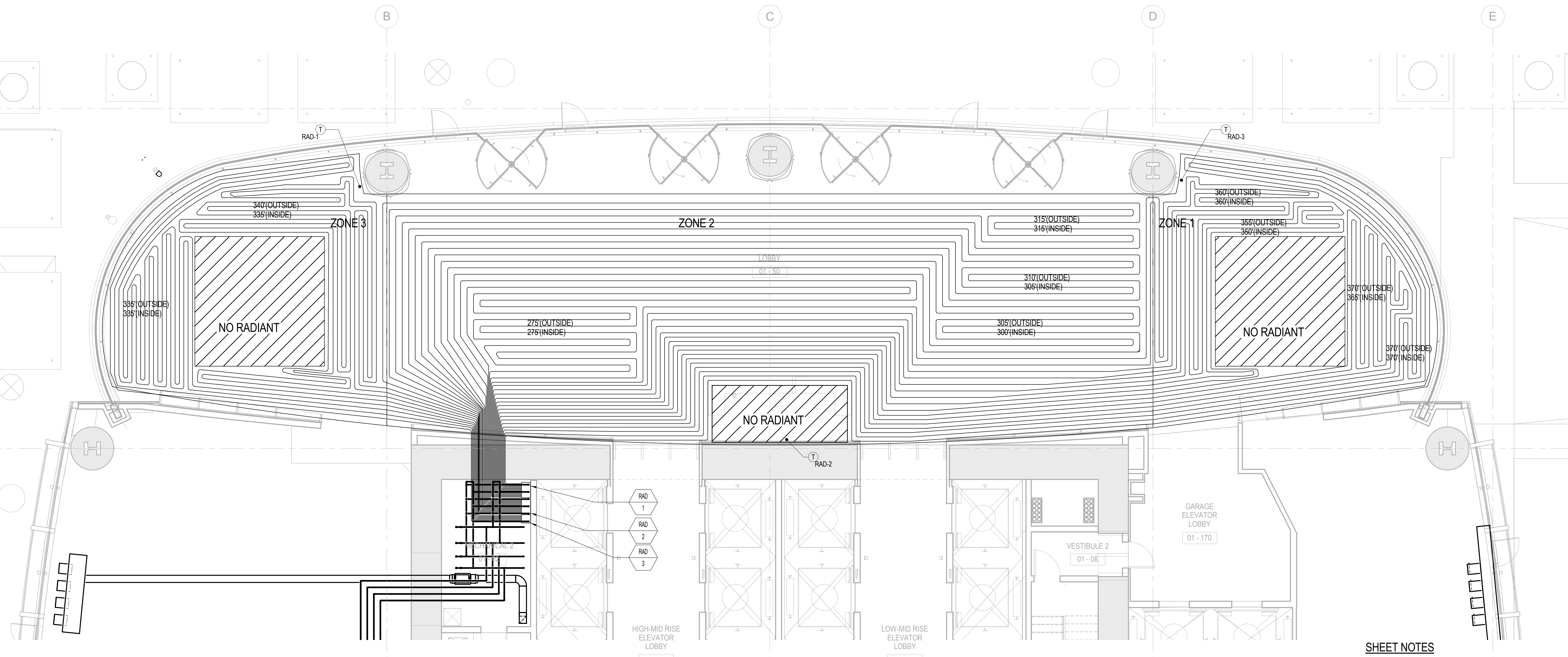
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Building Management and Controls Engineer

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ENGINEERING SPECIALTIES GROUP  
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Graphic Design Consultant

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Landscape Architect of Record



1 LOBBY RADIANT FLOOR PLAN  
3/16" = 1'-0"

SHEET NOTES

A. REFER TO SHEET M7.03 FOR RADIANT FLOOR DETAILS.

NUMBERED NOTES

1 .

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NO.	DATE	ISSUE
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DRAWING TITLE

**MECHANICAL  
RADIANT FLOOR  
LAYOUT**

R/A PROJECT NO. **S12.10250.00** DRAWING NUMBER **M3.07**





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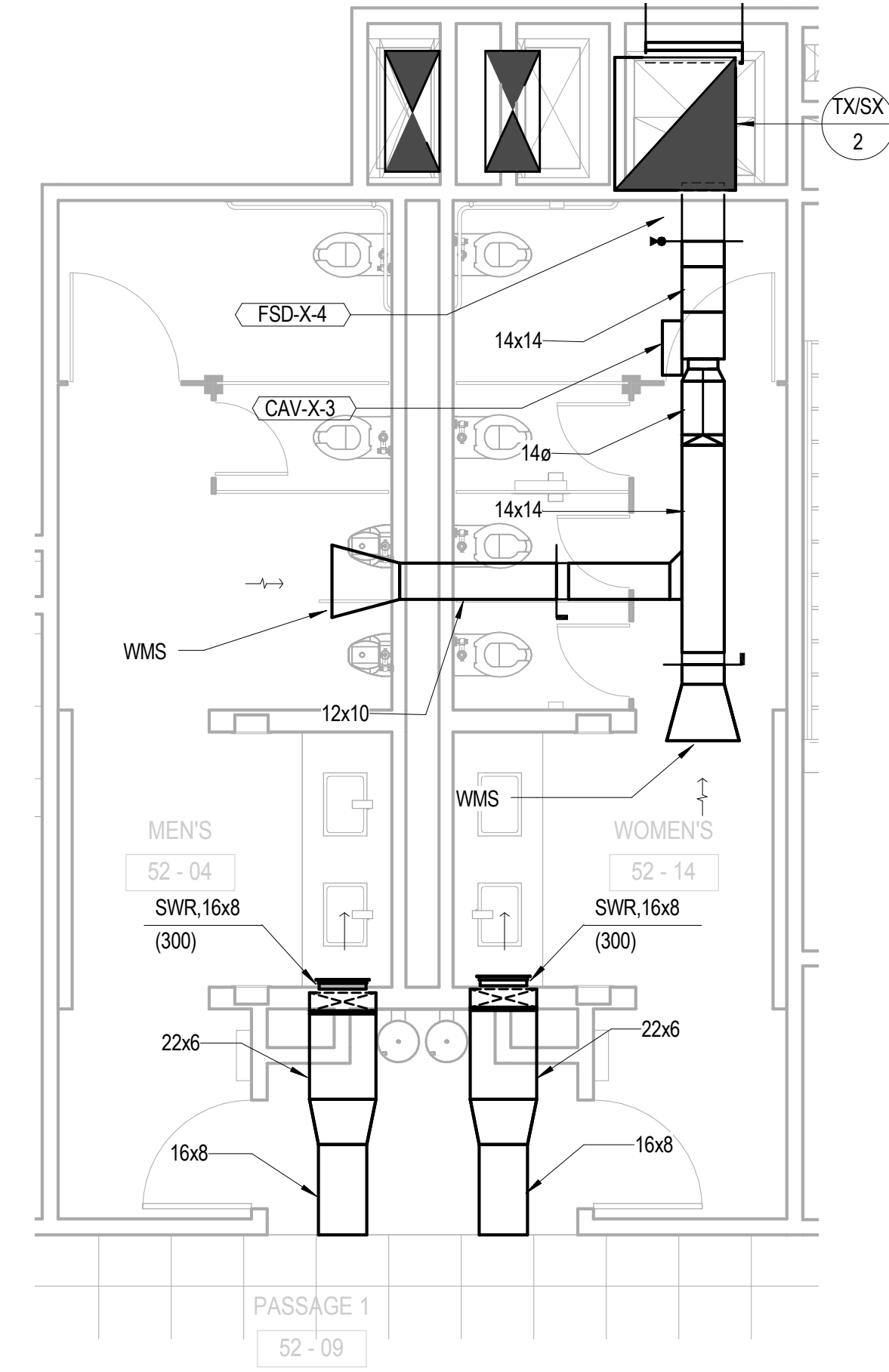
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Window Washing Consultant

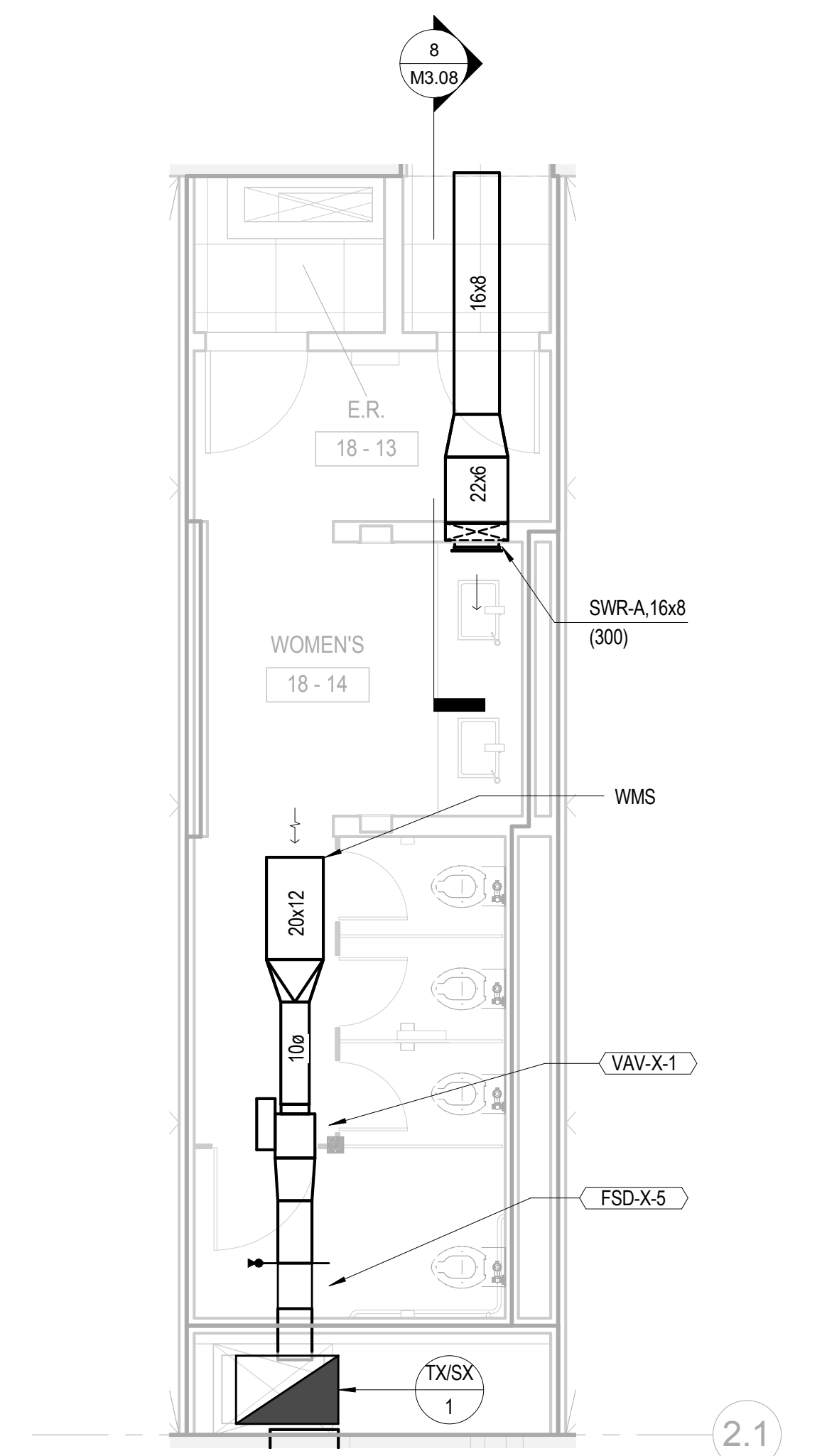
ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

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Graphic Design Consultant

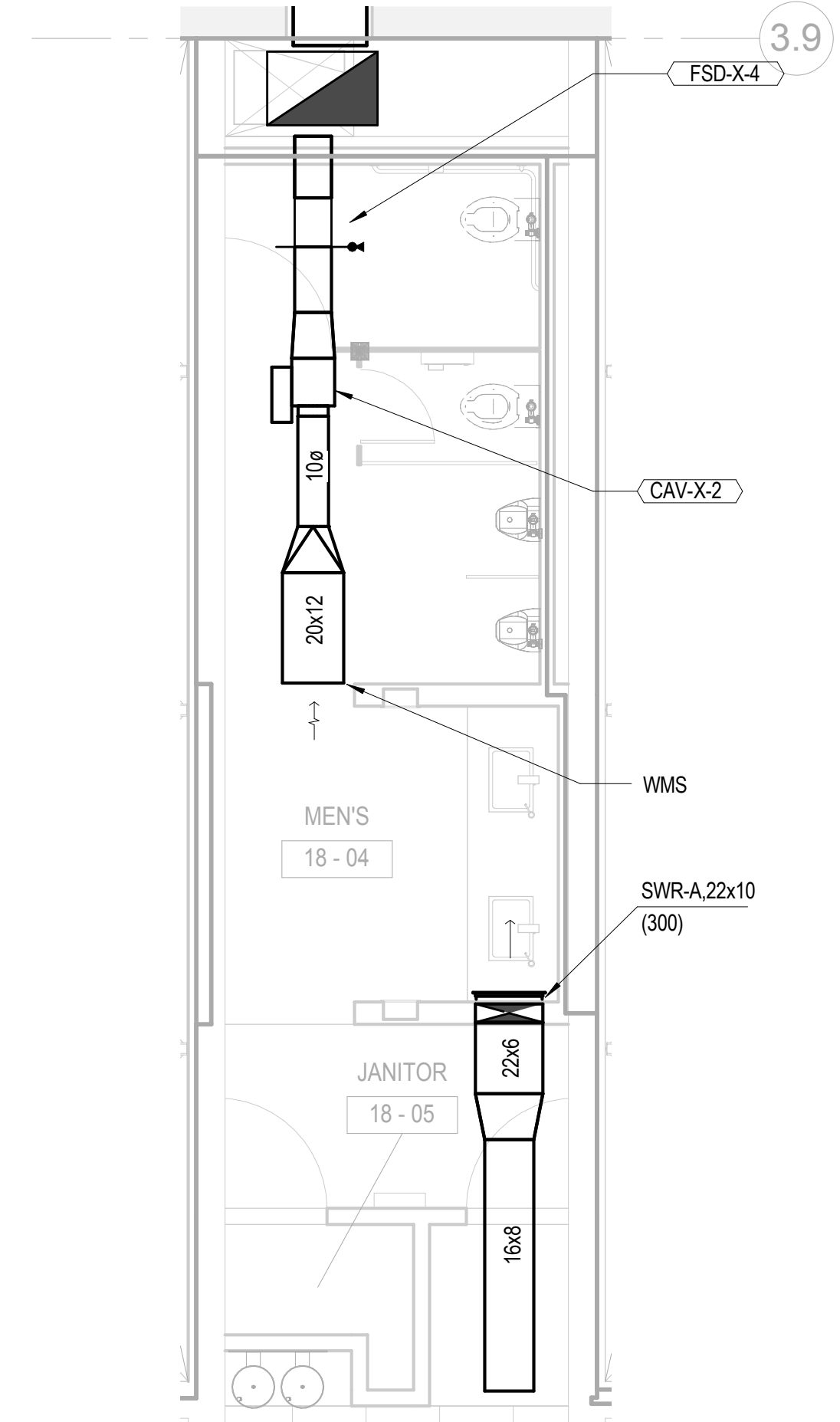
ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



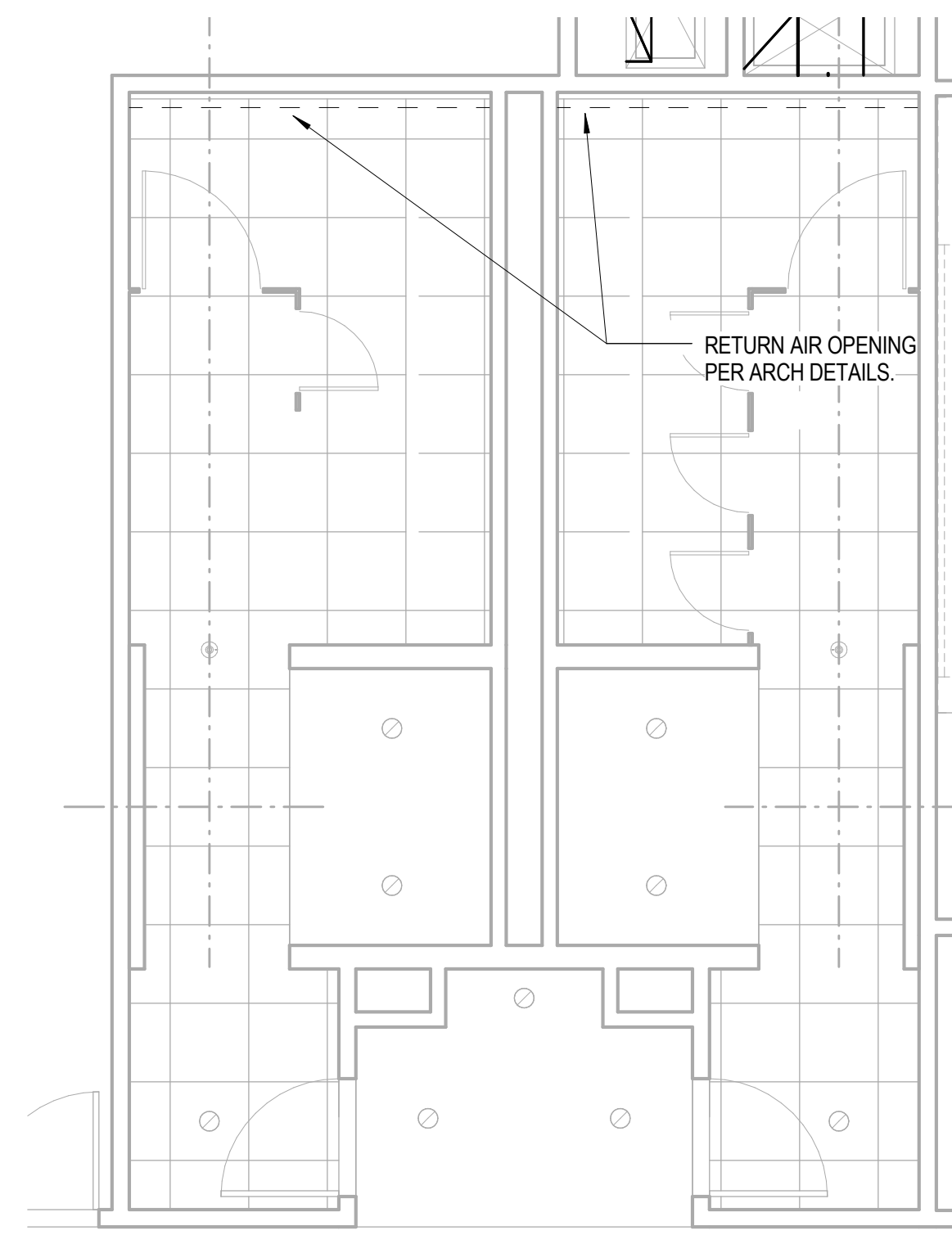
6 TYPICAL MEN'S/WOMEN'S TOILET ROOM LAYOUT 35-61  
1/4" = 1'-0"



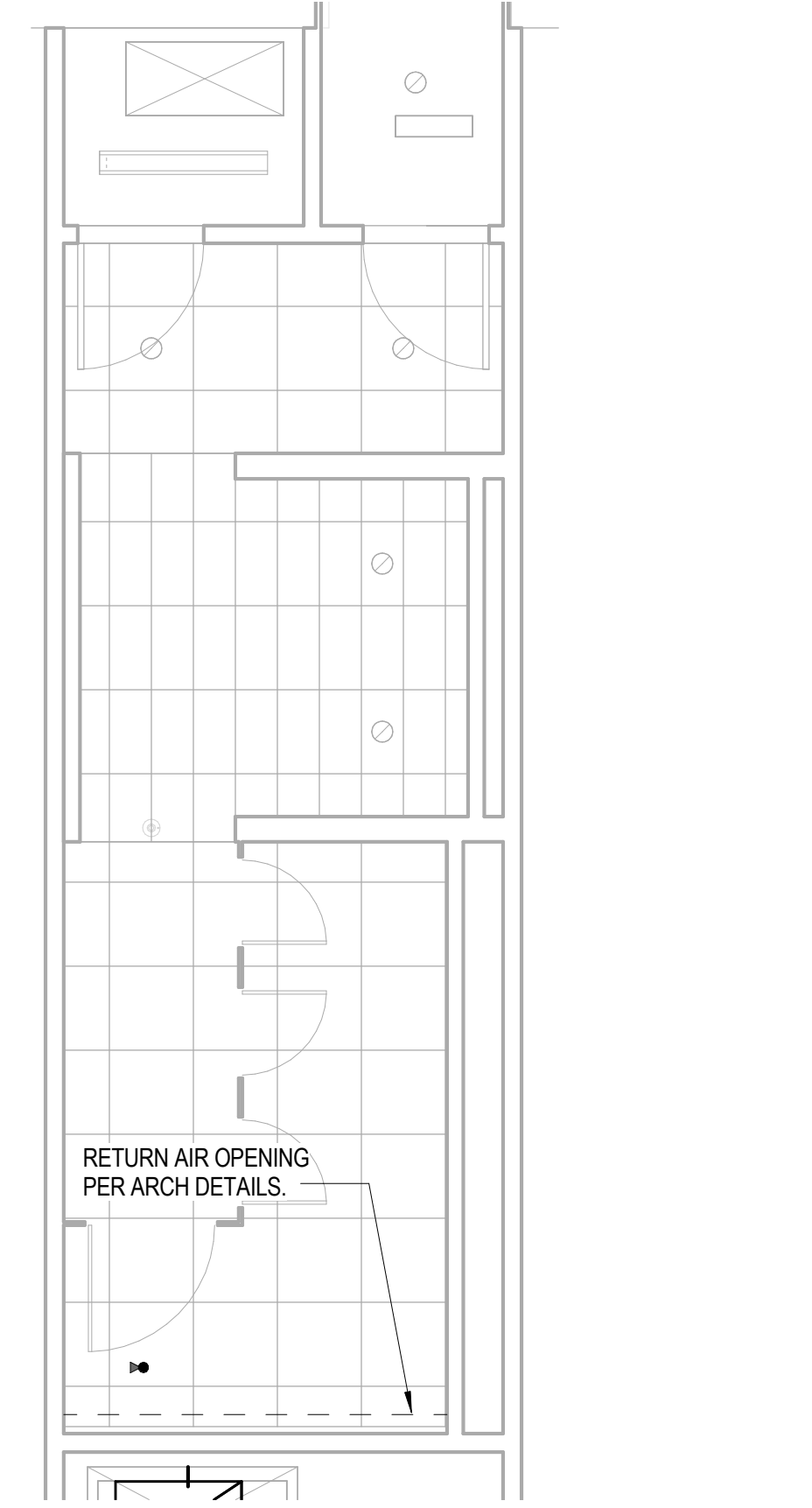
4 TYPICAL WOMEN'S TOILET ROOM LAYOUT LEVELS 6-34  
1/4" = 1'-0"



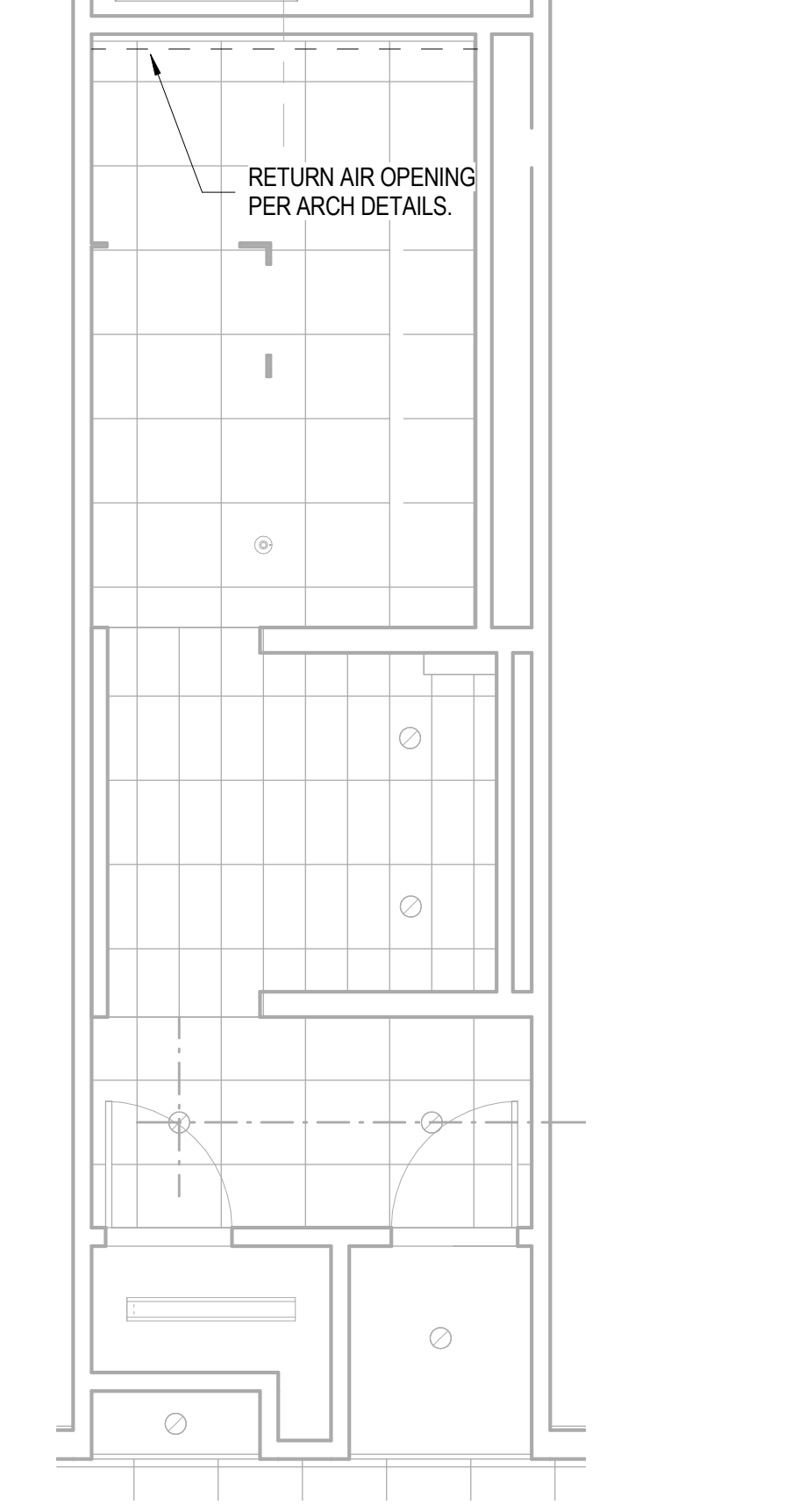
1 TYPICAL MEN'S TOILET ROOM LAYOUT LEVELS 6-34  
1/4" = 1'-0"



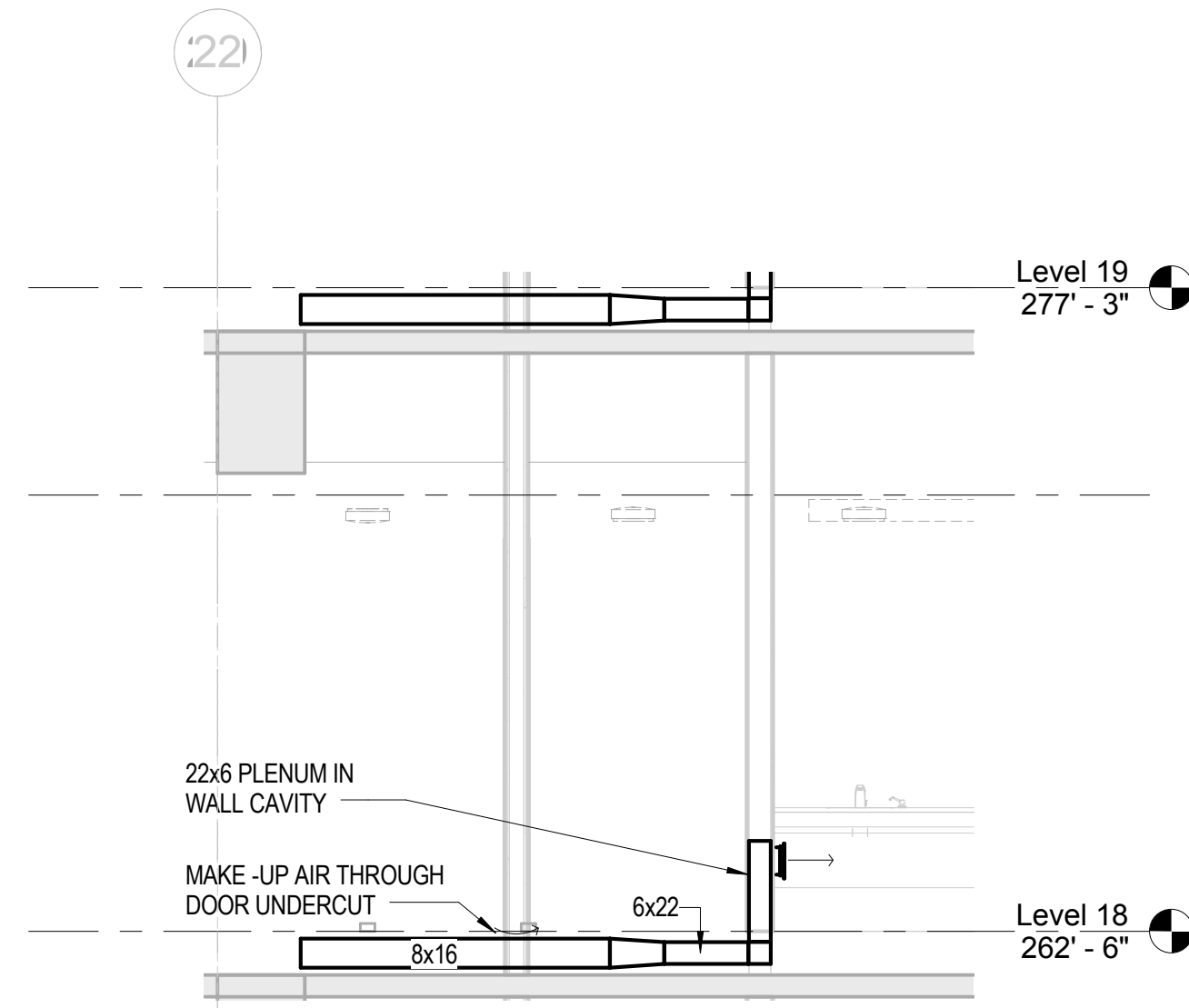
7 TYPICAL MEN'S/WOMEN'S TOILET ROOM RCP LEVELS 35-61  
1/4" = 1'-0"



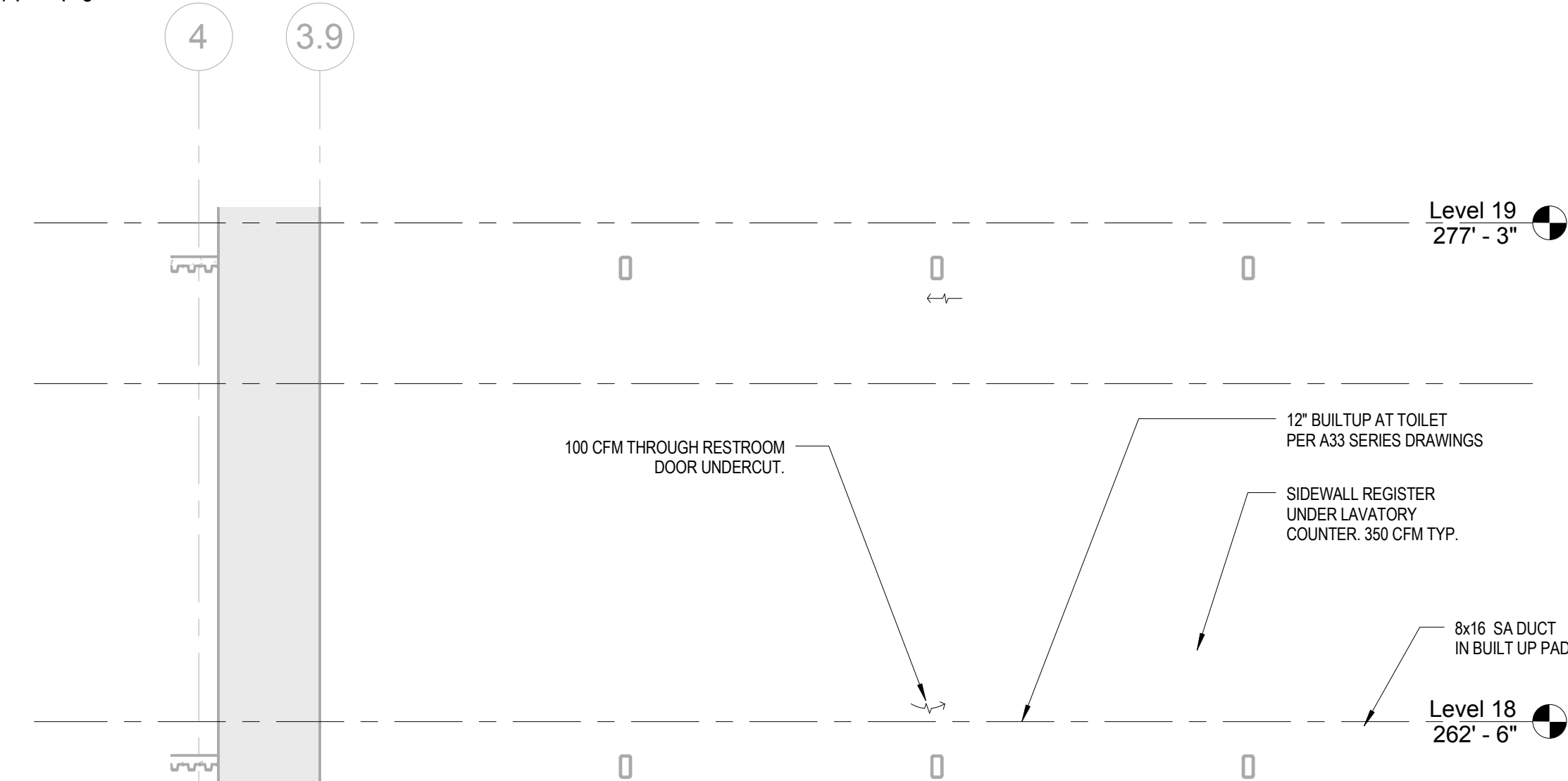
5 TYPICAL WOMEN'S TOILET ROOM RCP  
1/4" = 1'-0"



2 TYPICAL MEN'S TOILET ROOM RCP LEVELS 6-34  
1/4" = 1'-0"



8 RESTROOM MAKEUP AIR SECTION  
1/4" = 1'-0"



3 RESTROOM EXHAUST SECTION  
1/4" = 1'-0"

NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE

**MECHANICAL  
RESTROOM DETAILS**

PROJECT NO. S12.10250.00 DRAWING NUMBER M3.08



BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
Civil Engineer

PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant

AON FIRE PROTECTION ENGINEERING  
Building Security

HWA PARKING  
Parking Consultant

ARUP  
Geotechnical Consultant

HLB LIGHTING DESIGN, INC.  
Lighting Consultant

CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant

MORRISON HERSHFIELD  
Curtain Wall Consultant

ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant

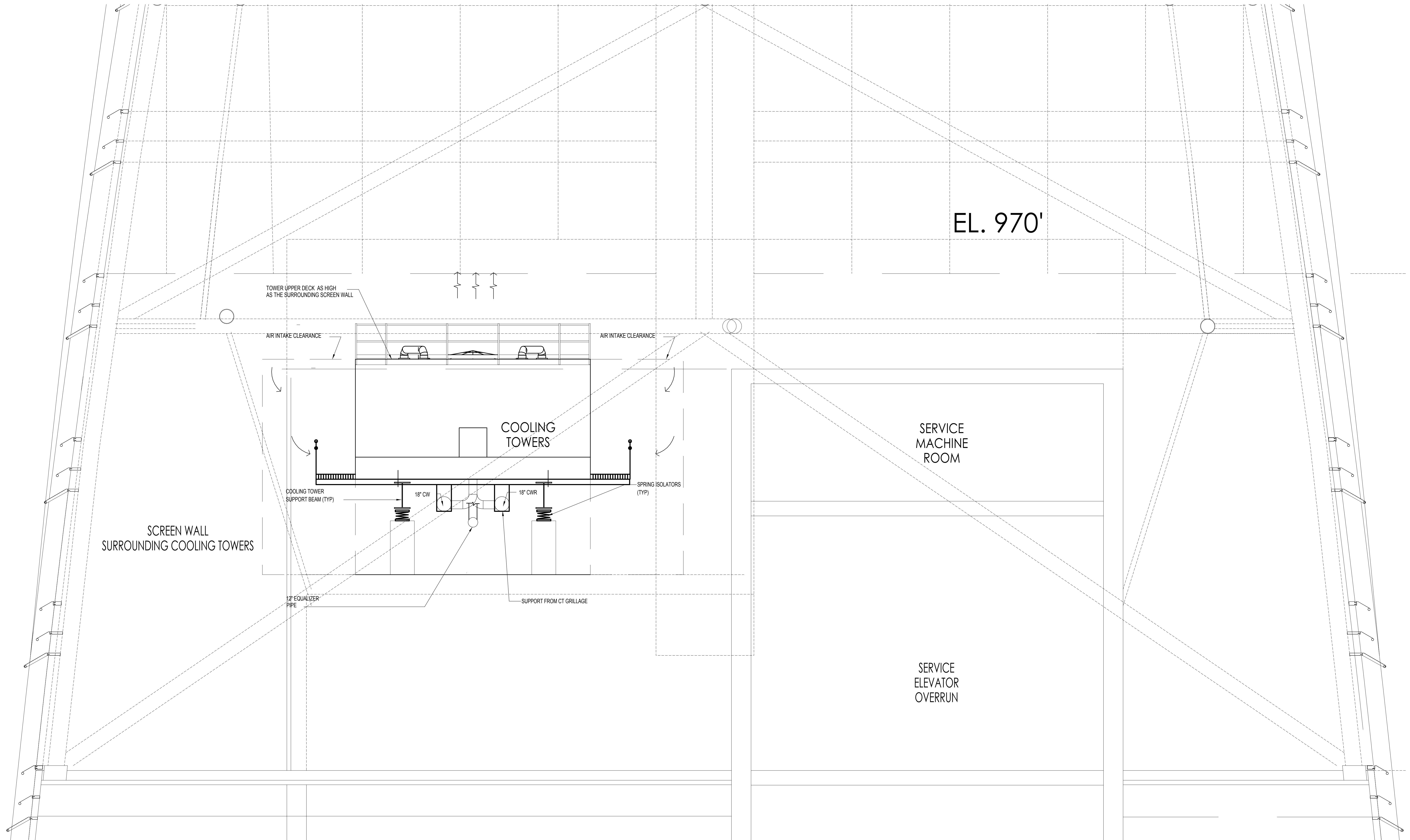
HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



1 COOLING TOWER SECTION  
1/4" = 1'-0"

4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

NO.	DATE	ISSUE
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DRAWING TITLE

**MECHANICAL  
COOLING TOWER  
SECTION**

PROJECT NO. S12.10250.00  
DRAWING NUMBER: M3.09

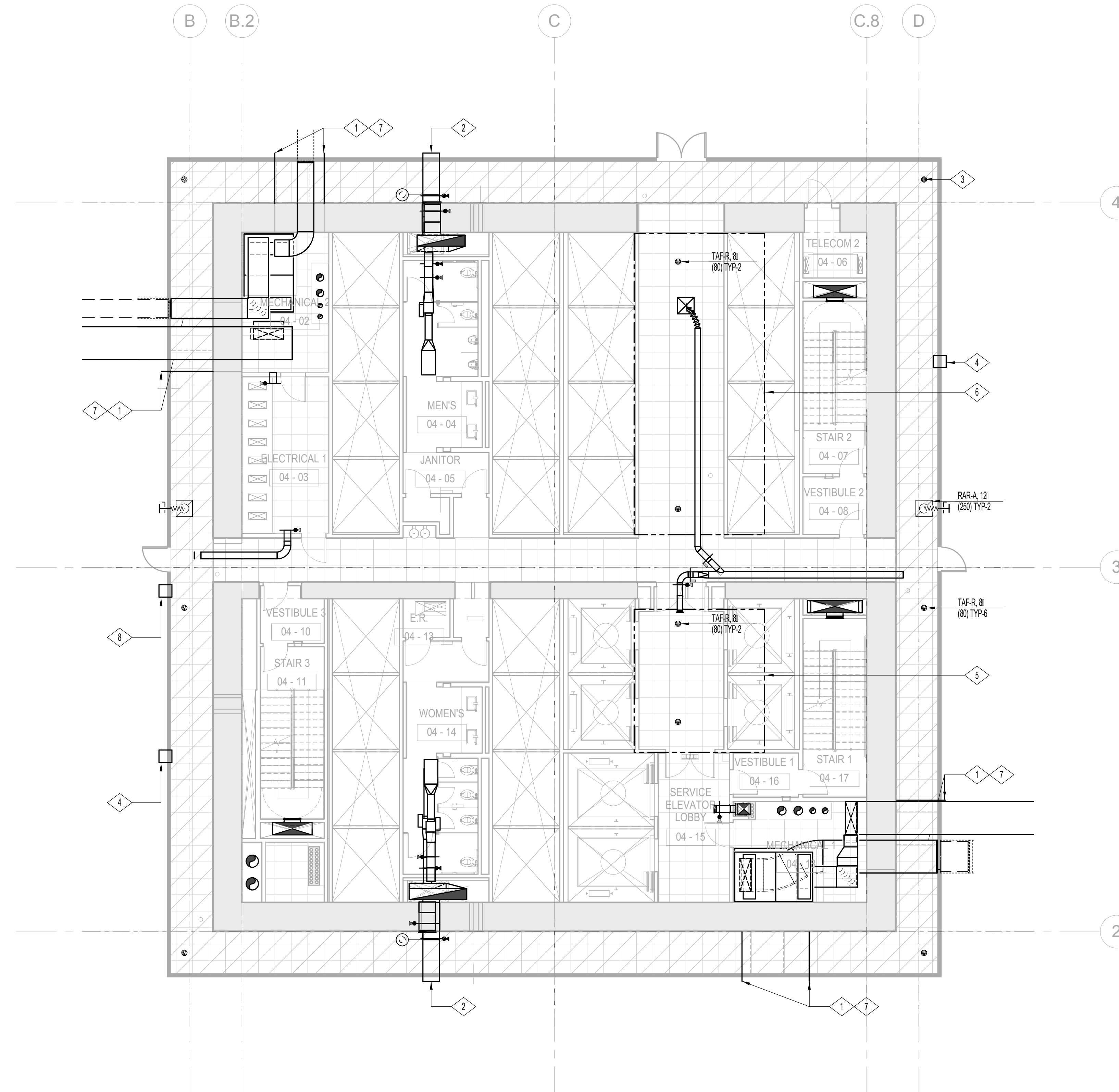


SHEET NOTES

A.

NUMBERED NOTES

- 1 EXTEND UNDERFLOOR PLENUM 5'-0" FROM INTERIOR CORE WALL TO CONNECT TO TENANT SPACE - SEE DETAIL 5 ON SHEET M6.03.
- 2 EXTEND SMOKE EXHAUST DUCT ACROSS CORRIDOR TO CONNECT TO THE TENANT PLENUM SPACE.
- 3 RAISED FLOOR SUPPLY AIR DIFFUSER TYPICAL.
- 4 24"x8" SUPPLY AIR OPENING CELOW THE RAISED FLOOR.
- 5 BID ALTERNATE M-19 - SEE SPECIFICATION SECTION 23 00 20
- 6 BID ALTERNATE M-20 - SEE SPECIFICATION SECTION 23 00 20
- 7 EXTEND THREE SIDED SHEET METAL DUCT (SIZE EQUAL TO RETURN AIR OPENING AT SHEAR WALL) ACROSS CEILING PLENUM TO CONNECT TO TENANT PLENUM. FLOOR SLAB WILL ACT AS FOURTH SIDE OF DUCT EXTENSION.
- 8 24"x12" RETURN AIR OPENING ABOVE CEILING.



MECHANICAL MULTI-TENANT CORRIDOR PLAN - LEVELS 4,  
6-14  
1/8" = 1'-0"

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record

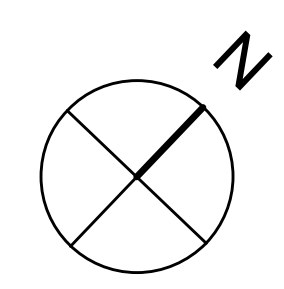


NO.	DATE	ISSUE
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2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DWG FILENAME

DRAWING TITLE  
**MECHANICAL MULTI-TENANT CORRIDOR - LEVELS 4, 6-14**

RVA PROJECT NO. S12.10250.00 DRAWING NUMBER: M3.10



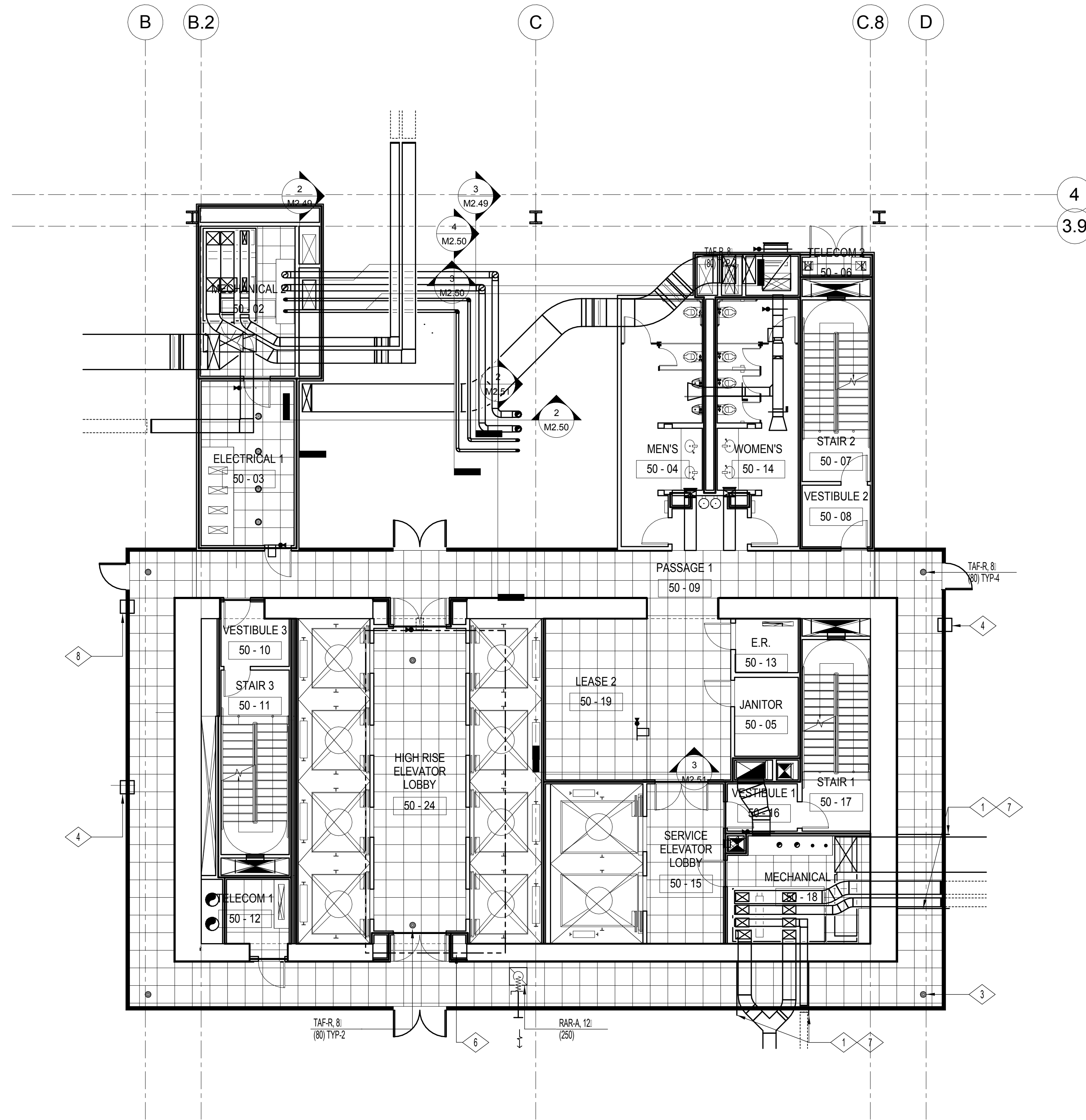


**SHEET NOTES**

A.

**NUMBERED NOTES**

- 1 EXTEND UNDERFLOOR PLENUM 5'-0" FROM INTERIOR CORE WALL TO CONNECT TO TENANT SPACE - SEE DETAIL 5 ON SHEET M6.03.
- 2 NOT USED.
- 3 RAISED FLOOR SUPPLY AIR DIFFUSER TYPICAL.
- 4 24"x8" SUPPLY AIR OPENING BELOW THE RAISED FLOOR.
- 5 NOT USED.
- 6 BID ALTERNATE M-19 - SEE SPECIFICATION SECTION 23 00 20.
- 7 EXTEND THREE SIDED SHEET METAL DUCT (SIZE EQUAL TO RETURN AIR OPENING AT SHEAR WALL) ACROSS CEILING PLENUM TO CONNECT TO TENANT PLENUM. FLOOR SLAB WILL ACT AS FOURTH SIDE OF DUCT EXTENSION.
- 8 24"x12" RETURN AIR OPENING ABOVE CEILING.



- BOSTON PROPERTIES / HINES**  
Owner
- PELLI CLARKE PELLI ARCHITECTS**  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.**  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES**  
Structural Engineer
- WSP**  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE**  
Landscape Architect
- BKF ENGINEERS**  
Civil Engineer
- PERSON/HAHN ASSOCIATES, INC.**  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING**  
Building Security
- HWA PARKING**  
Parking Consultant
- ARUP**  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.**  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.**  
Acoustical Consultant
- MORRISON HERSHFIELD**  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES**  
LEED Consultant
- HMA CONSULTING**  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.**  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP**  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN**  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY**  
Landscape Architect of Record



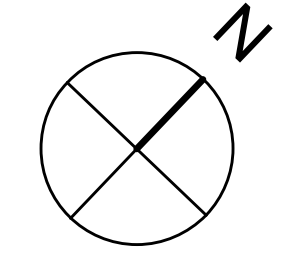
NO.	DATE	ISSUE
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3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

CAD FILENAME

DRAWING TITLE

**MECHANICAL  
MULTI-TENANT  
CORRIDOR PLAN -  
LEVELS 50-61**

PROJECT NO. **S12.10250.00** DRAWING NUMBER: **M3.11**



1/8" = 1'-0"



BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
Civil Engineer

PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant

AON FIRE PROTECTION ENGINEERING  
Building Security

HWA PARKING  
Parking Consultant

ARUP  
Geotechnical Consultant

HLB LIGHTING DESIGN, INC.  
Lighting Consultant

CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant

MORRISON HERSHFIELD  
Curtain Wall Consultant

ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant

HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

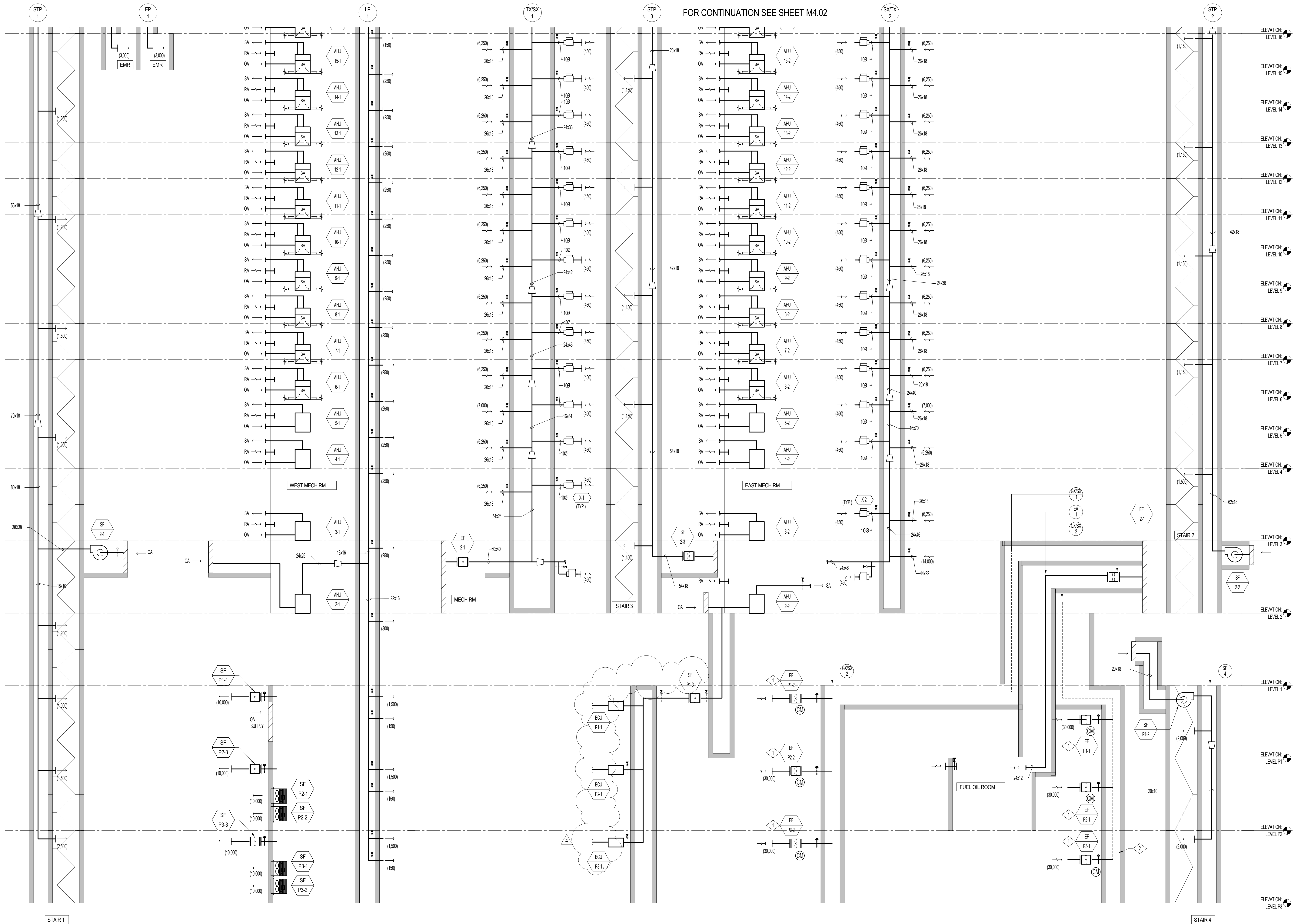
DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record

NUMBERED NOTES

- 1 PROVIDE 2" AL ON ALL DUCTWORK ASSOCIATED WITH GARAGE EXHAUST FANS.
- 2 PROVIDE 20 FT OF 4" AL AT EXHAUST PLENUM UPSTREAM OF EF-P3-1

FOR CONTINUATION SEE SHEET M4.02



4	02 MAY 14	GMP	ADDENDUM #3 PERMIT REVISION
3	24 FEB 14	NO. 1	
2	10 FEB 14	BID ADDENDUM #2	
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT	

NO.	DATE	ISSUE

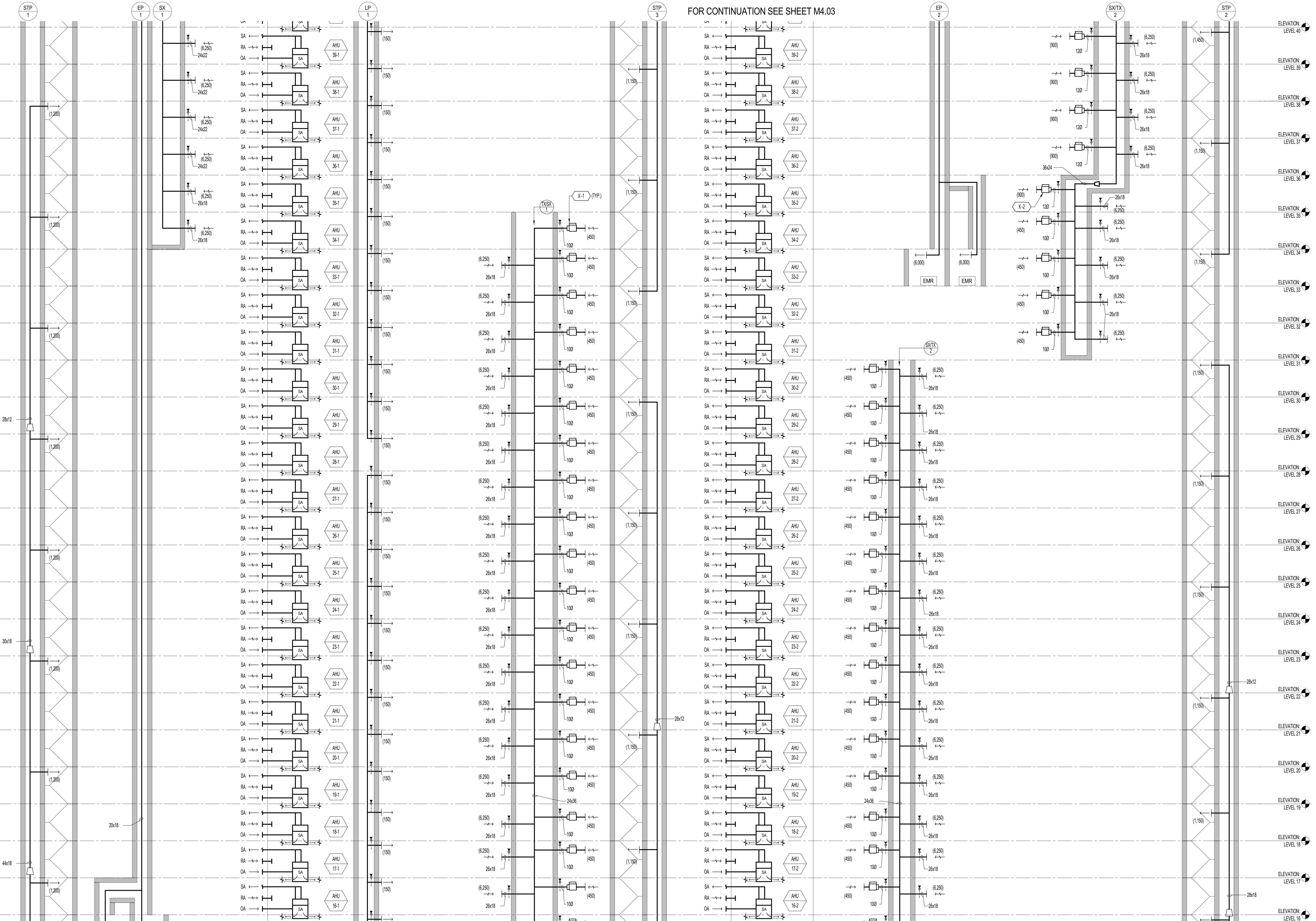
DRAWING TITLE

**MECHANICAL AIR RISER DIAGRAM**

PROJECT NO. S12.10250.00 DRAWING NUMBER **M4.01**



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



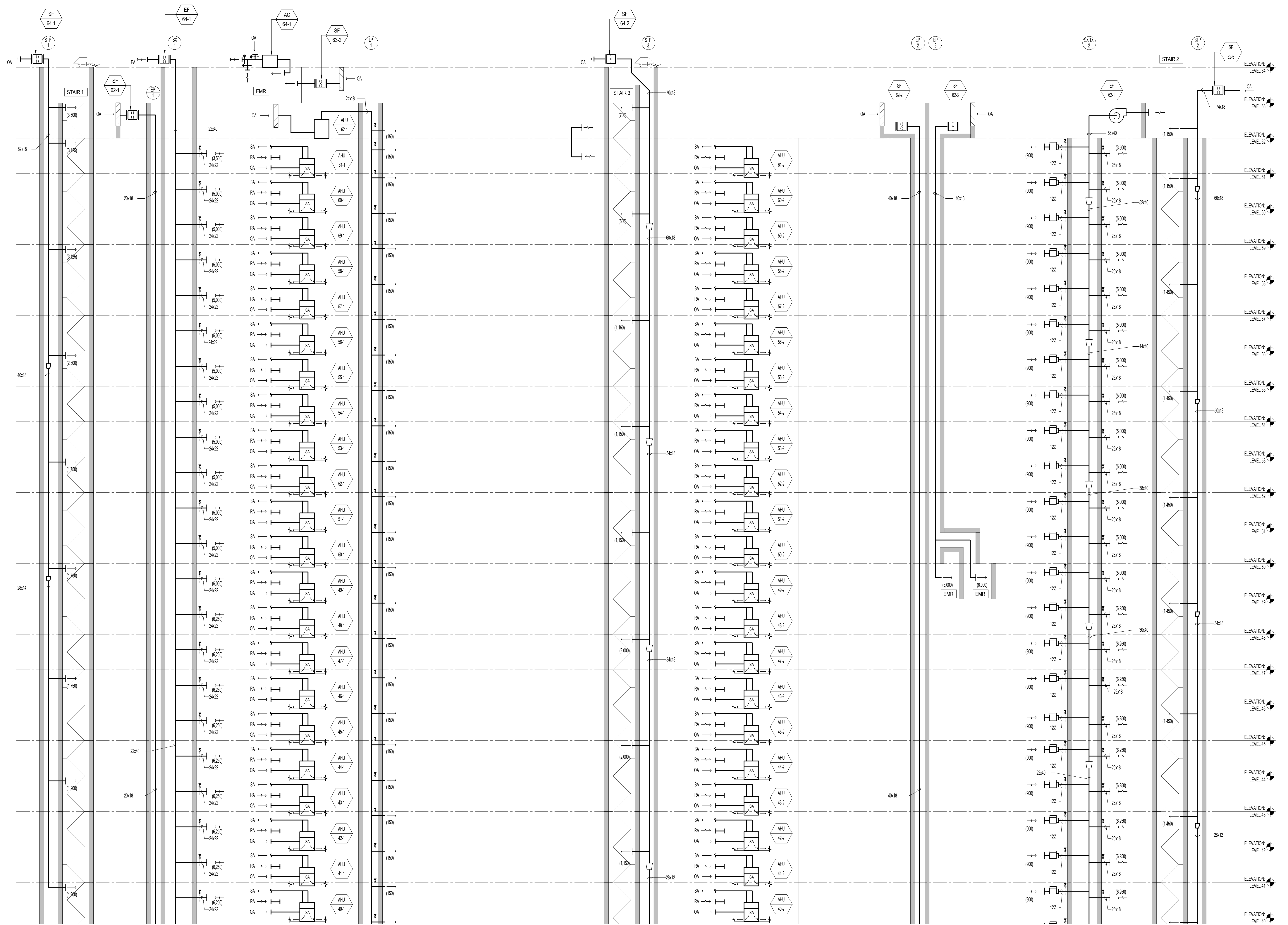
NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL AIR RISER DIAGRAM**

PROJECT NO. S12.10250.00  
DRAWING NUMBER **M4.02**

NUMBERED NOTES

1 AHU-32 LOCATED ON THIRD LEVEL.



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
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Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
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3	24 FEB 14	BID ADDENDUM #2
2	10 FEB 14	BID ADDENDUM #1
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL AIR RISER DIAGRAM**

PROJECT NO. S12.10250.00 DRAWING NUMBER **M4.03**

FOR CONTINUATION SEE SHEET M4.02



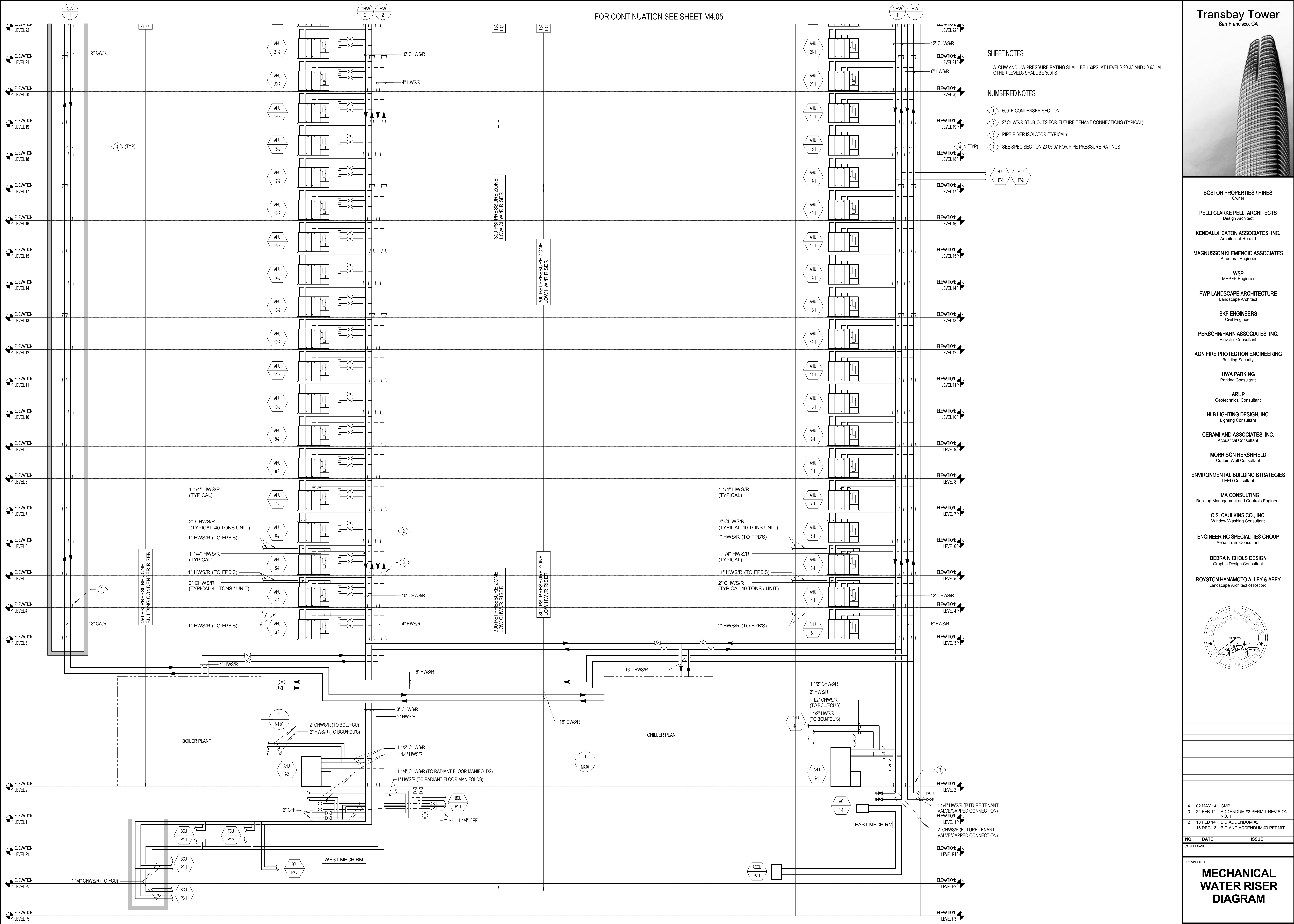
FOR CONTINUATION SEE SHEET M4.05

SHEET NOTES

A. CHW AND HW PRESSURE RATING SHALL BE 150PSI AT LEVELS 20-33 AND 50-63. ALL OTHER LEVELS SHALL BE 300PSI.

NUMBERED NOTES

- 1 500LB CONDENSER SECTION.
- 2 2" CHWS/R STUB-OUTS FOR FUTURE TENANT CONNECTIONS (TYPICAL).
- 3 PIPE RISER ISOLATOR (TYPICAL).
- 4 SEE SPEC SECTION 23.05.07 FOR PIPE PRESSURE RATINGS



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
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2	10 FEB 14	BID ADDENDUM #2
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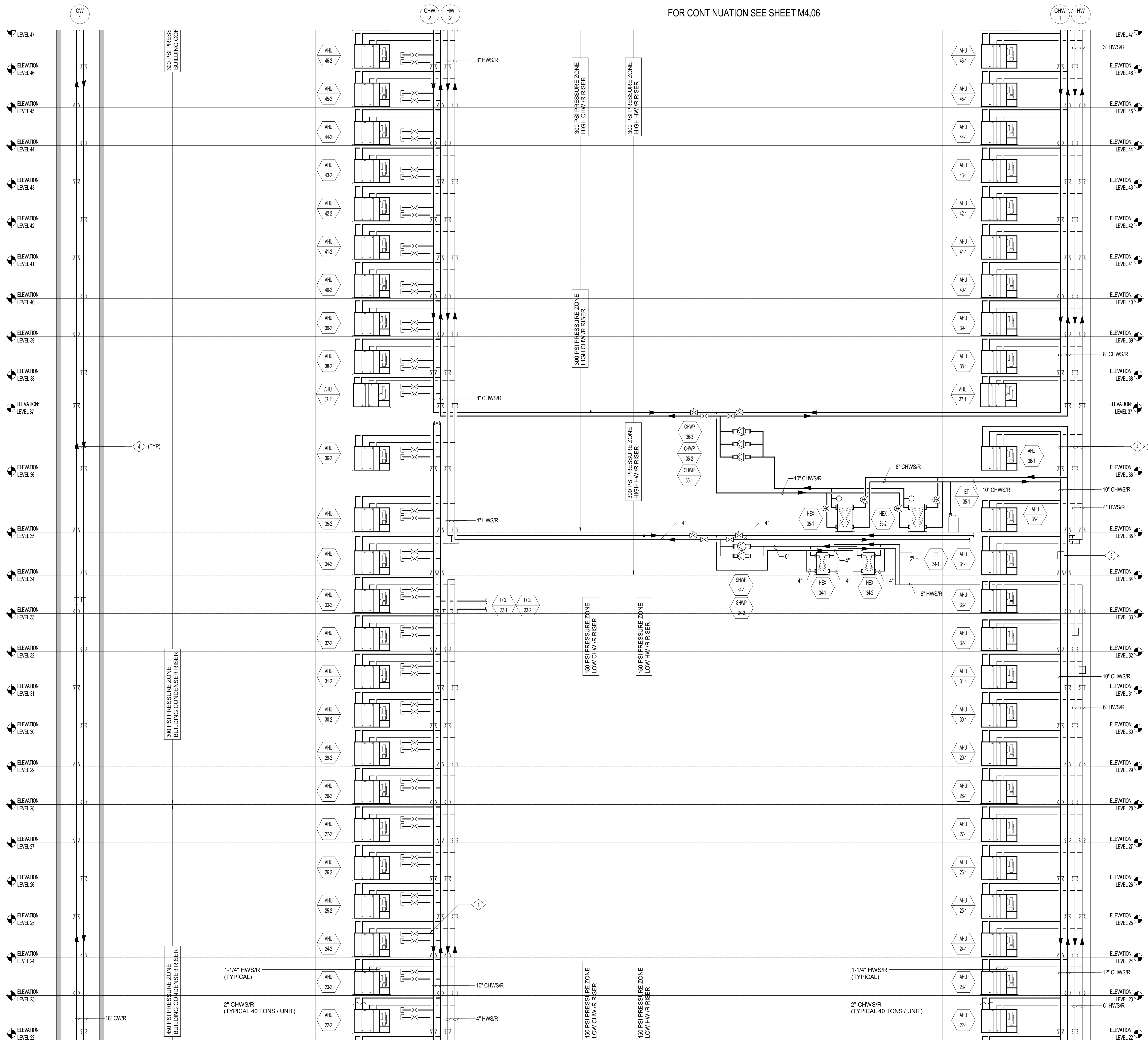
DRAWING TITLE  
**MECHANICAL WATER RISER DIAGRAM**

PROJECT NO. S12.10250.00  
DRAWING NUMBER **M4.04**





FOR CONTINUATION SEE SHEET M4.06



SHEET NOTES

A. CHW AND HW PRESSURE RATING SHALL BE 150PSI AT LEVELS 20-33 AND 50-63. ALL OTHER LEVELS SHALL BE 300PSI.

NUMBERED NOTES

- 1 2" CHWS/R STUB-OUTS FOR FUTURE TENANT CONNECTIONS (TYPICAL)
- 2 PIPE RISER ISOLATOR (TYPICAL)
- 3 EXPANSION COMPENSATION DEVICE (TYP-4)
- 4 SEE SPEC SECTION 23 05 07 FOR PIPE PRESSURE RATINGS
- 5 SEE SPEC SECTION 23 05 07 FOR PIPE PRESSURE RATINGS

M4.05 - MECHANICAL WATER RISER DIAGRAM  
12" = 1'-0"

FOR CONTINUATION SEE SHEET M4.04

- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELL ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



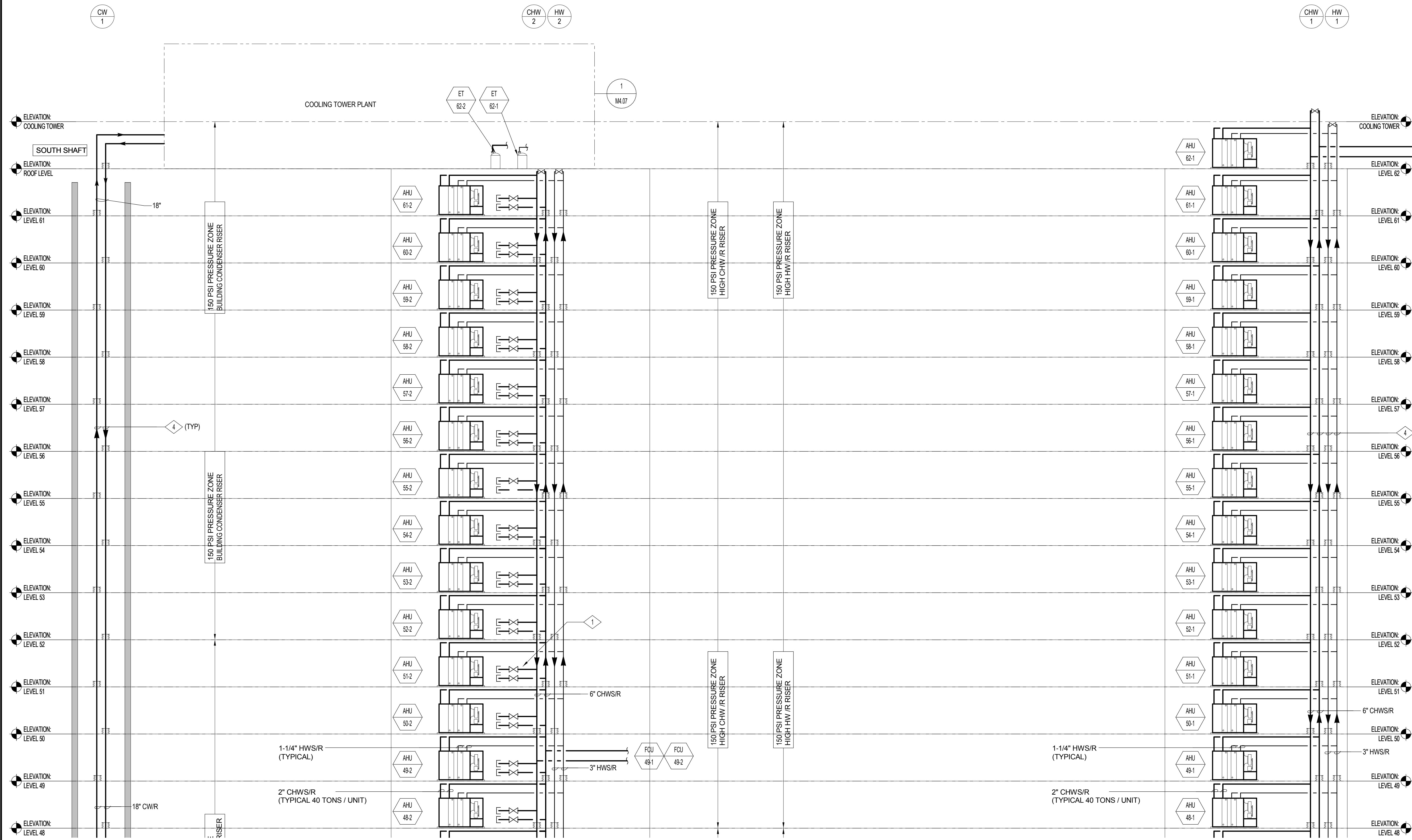
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2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

NO.	DATE	ISSUE
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DRAWING TITLE

**MECHANICAL WATER RISER DIAGRAM**

PROJECT NO. S12.10250.00  
DRAWING NUMBER: **M4.05**



**SHEET NOTES**

A. CHW AND HW PRESSURE RATING SHALL BE 150PSI AT LEVELS 20-33 AND 50-63. ALL OTHER LEVELS SHALL BE 300PSI.

**NUMBERED NOTES**

- 1 2" CHWS/R STUB-OUTS FOR FUTURE TENANT CONNECTIONS (TYPICAL)
- 2 PIPE RISER ISOLATOR (TYPICAL)
- 3 NOT USED
- 4 SEE SPEC SECTION 23 05 07 FOR PIPE PRESSURE RATINGS

FOR CONTINUATION SEE SHEET M4.05

1 M4.06 - MECHANICAL WATER RISER DIAGRAM  
12" = 1'-0"

BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
Civil Engineer

PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant

AON FIRE PROTECTION ENGINEERING  
Building Security

HWA PARKING  
Parking Consultant

ARUP  
Geotechnical Consultant

HLB LIGHTING DESIGN, INC.  
Lighting Consultant

CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant

MORRISON HERSHFIELD  
Curtain Wall Consultant

ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant

HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



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NO.	DATE	ISSUE
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DRAWING TITLE

**MECHANICAL WATER RISER DIAGRAM**



BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

PWP LANDSCAPE ARCHITECTURE  
Landscape Architect

BKF ENGINEERS  
Civil Engineer

PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant

AON FIRE PROTECTION ENGINEERING  
Building Security

HWA PARKING  
Parking Consultant

ARUP  
Geotechnical Consultant

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Lighting Consultant

CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant

MORRISON HERSHFIELD  
Curtain Wall Consultant

ENVIRONMENTAL BUILDING STRATEGIES  
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HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

DEBRA NICHOLS DESIGN  
Graphic Design Consultant

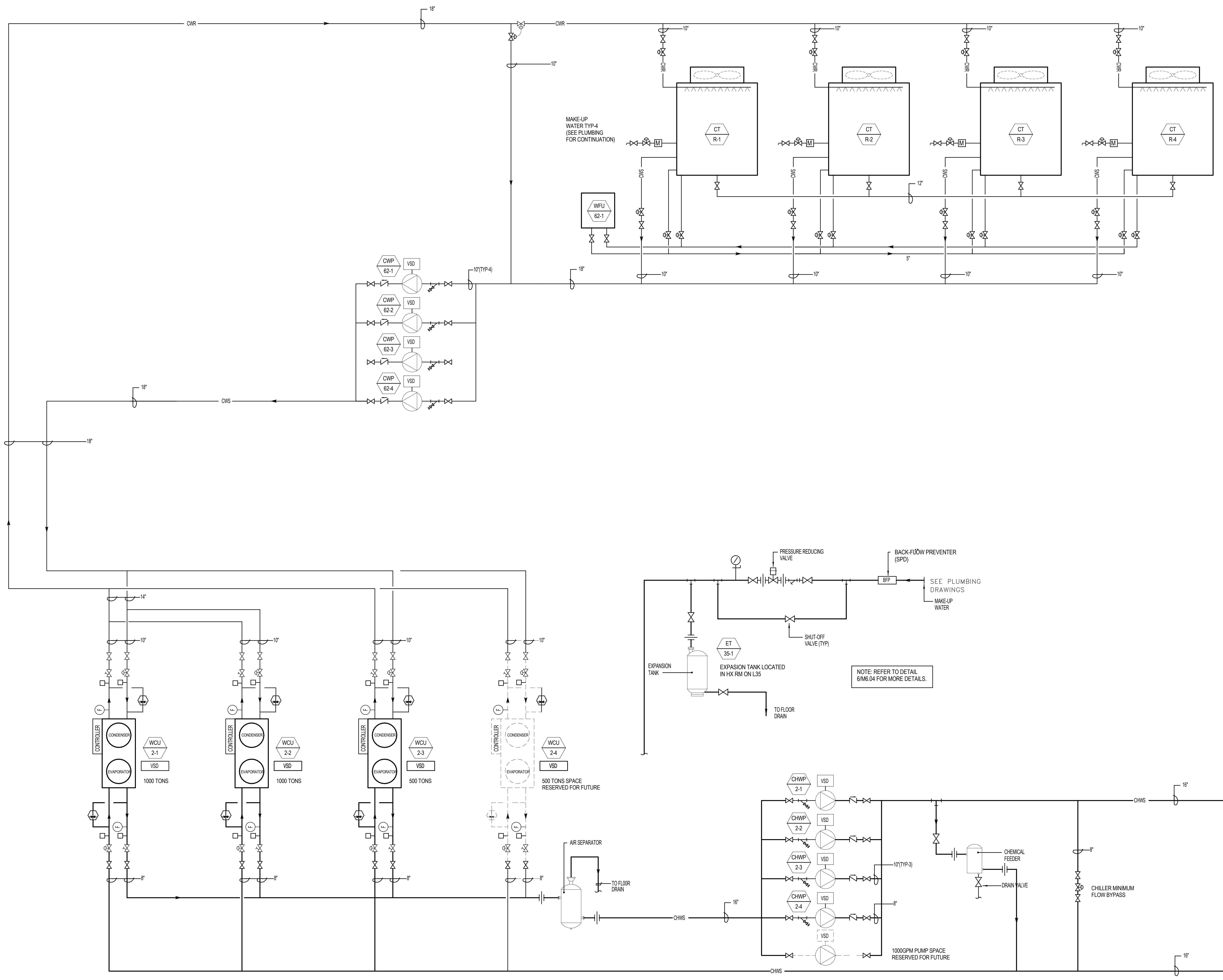
ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



NO.	DATE	ISSUE
4	02 MAY 14	GMP
3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

DRAWING TITLE  
**MECHANICAL CHILLED WATER PLANT FLOW DIAGRAM**

PROJECT NO. S12.10250.00  
DRAWING NUMBER: **M4.07**



**1** MECHANICAL CHILLED WATER PLANT  
SCALE: NONE



- BOSTON PROPERTIES / HINES  
Owner
- PELLI CLARKE PELLI ARCHITECTS  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer
- WSP  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE  
Landscape Architect
- BKF ENGINEERS  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING  
Building Security
- HWA PARKING  
Parking Consultant
- ARUP  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.  
Acoustical Consultant
- MORRISON HERSHFIELD  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES  
LEED Consultant
- HMA CONSULTING  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



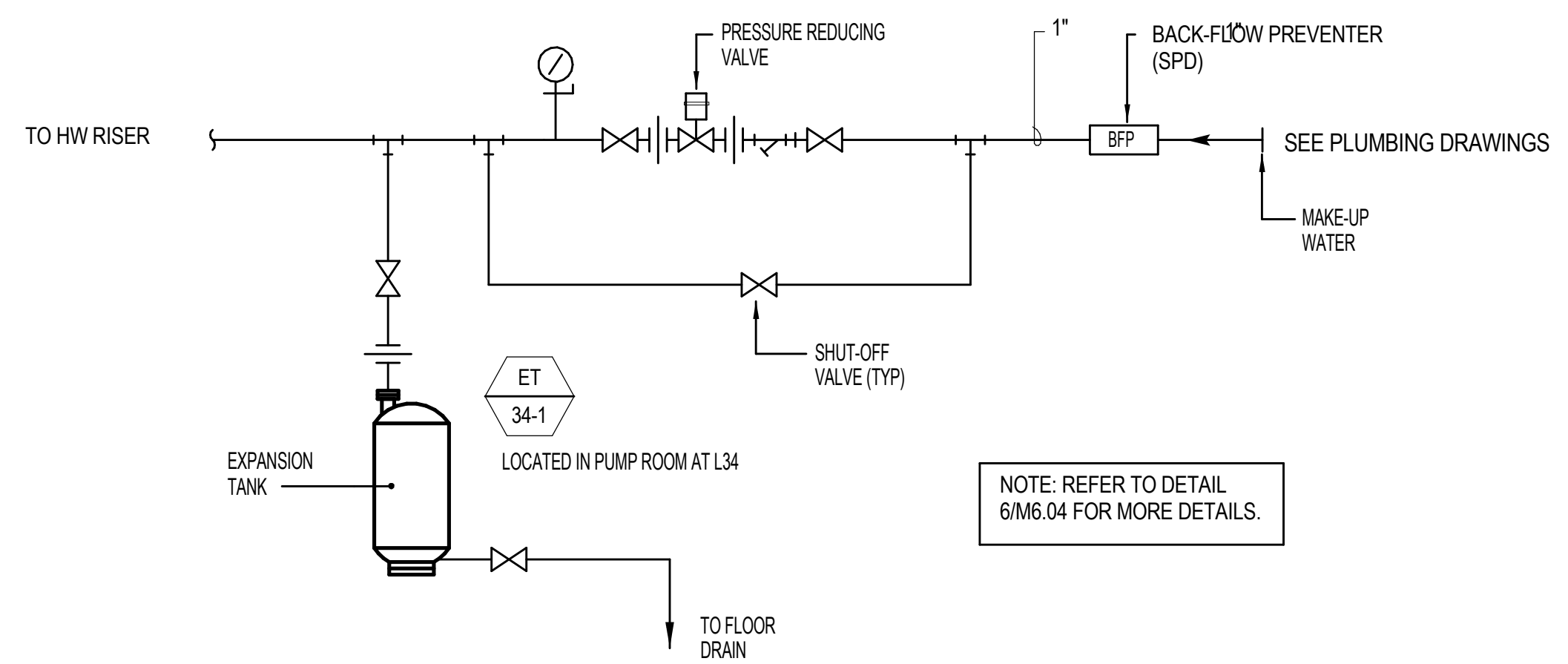
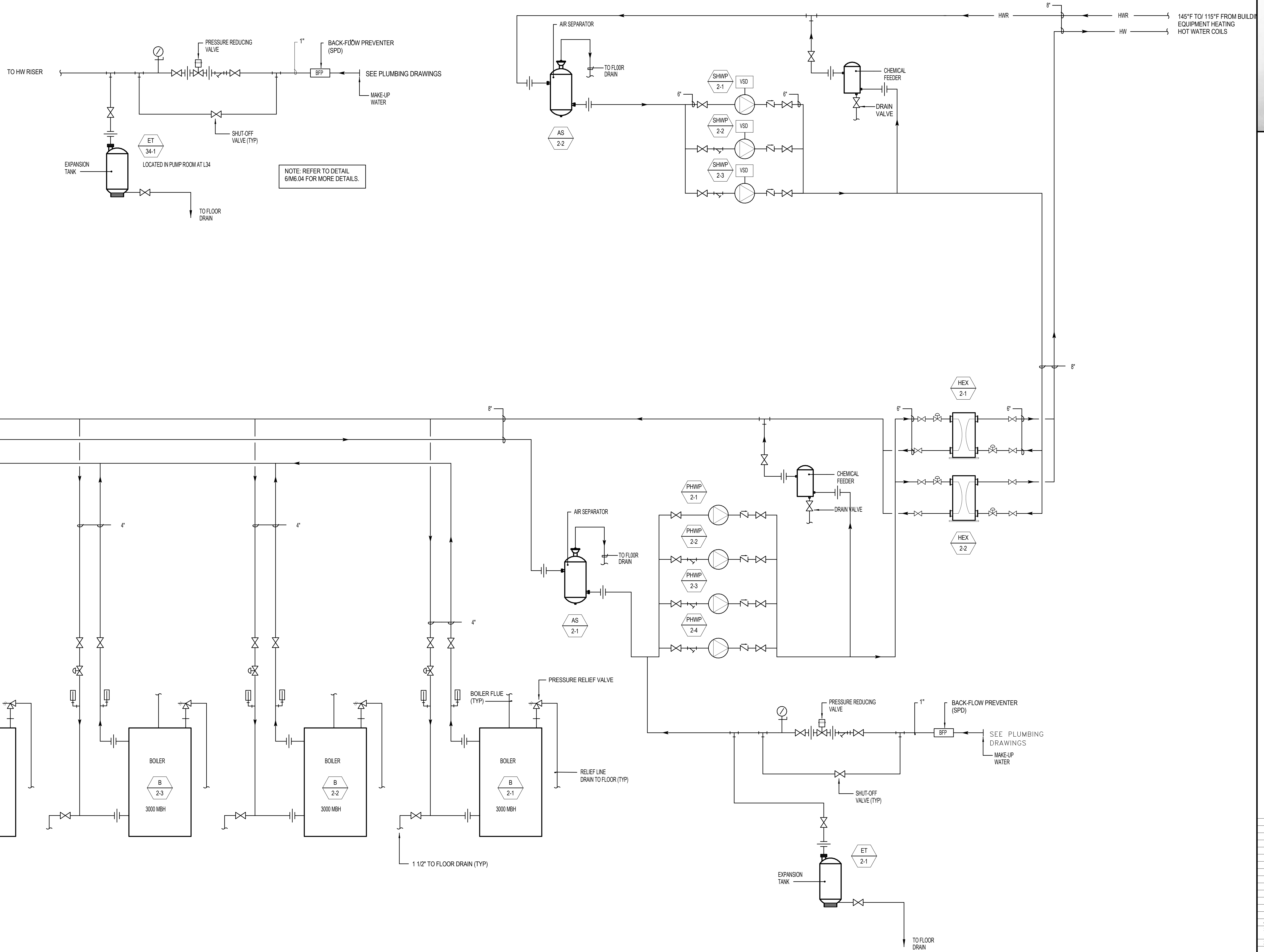
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4	02 MAY 14	GMP
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2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

CAD FILENAME

DRAWING TITLE

**MECHANICAL HEATING PLANT FLOW DIAGRAM**

RVA PROJECT NO. S12.10250.00 DRAWING NUMBER: **M4.08**



**1** MECHANICAL HEATING HOT WATER PLANT  
SCALE: NONE



- BOSTON PROPERTIES / HINES**  
Owner
- PELLI CLARKE PELLI ARCHITECTS**  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.**  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES**  
Structural Engineer
- WSP**  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE**  
Landscape Architect
- BKF ENGINEERS**  
Civil Engineer
- PERSOHN/HAHN ASSOCIATES, INC.**  
Elevator Consultant
- AON FIRE PROTECTION ENGINEERING**  
Building Security
- HWA PARKING**  
Parking Consultant
- ARUP**  
Geotechnical Consultant
- HLB LIGHTING DESIGN, INC.**  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.**  
Acoustical Consultant
- MORRISON HERSHFIELD**  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES**  
LEED Consultant
- HMA CONSULTING**  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.**  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP**  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN**  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY**  
Landscape Architect of Record



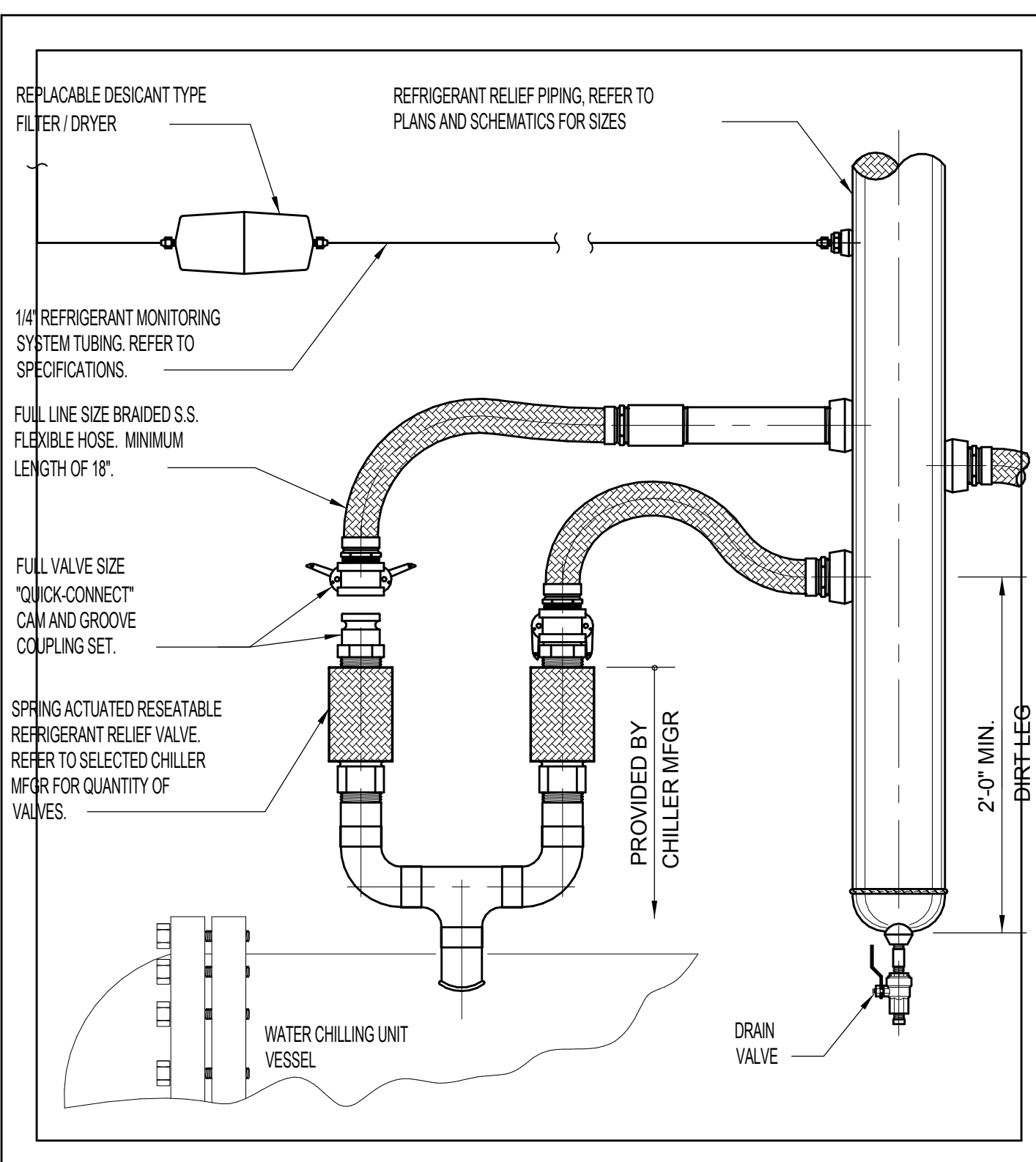
NO.	DATE	ISSUE
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3	24 FEB 14	ADDENDUM #3 PERMIT REVISION NO. 1
2	10 FEB 14	BID ADDENDUM #2
1	16 DEC 13	BID AND ADDENDUM #3 PERMIT

NO. DATE ISSUE

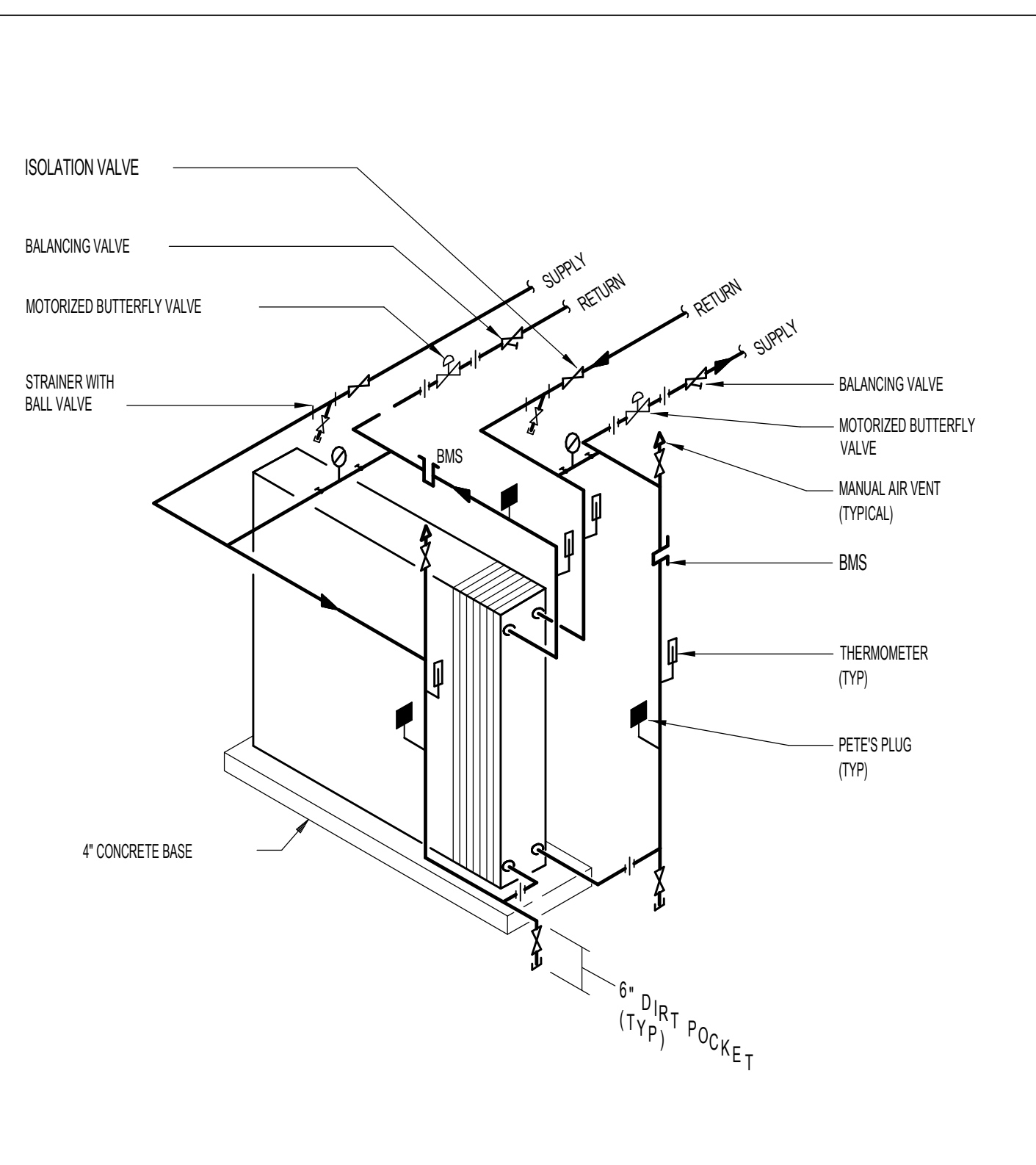
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**MECHANICAL DETAILS**

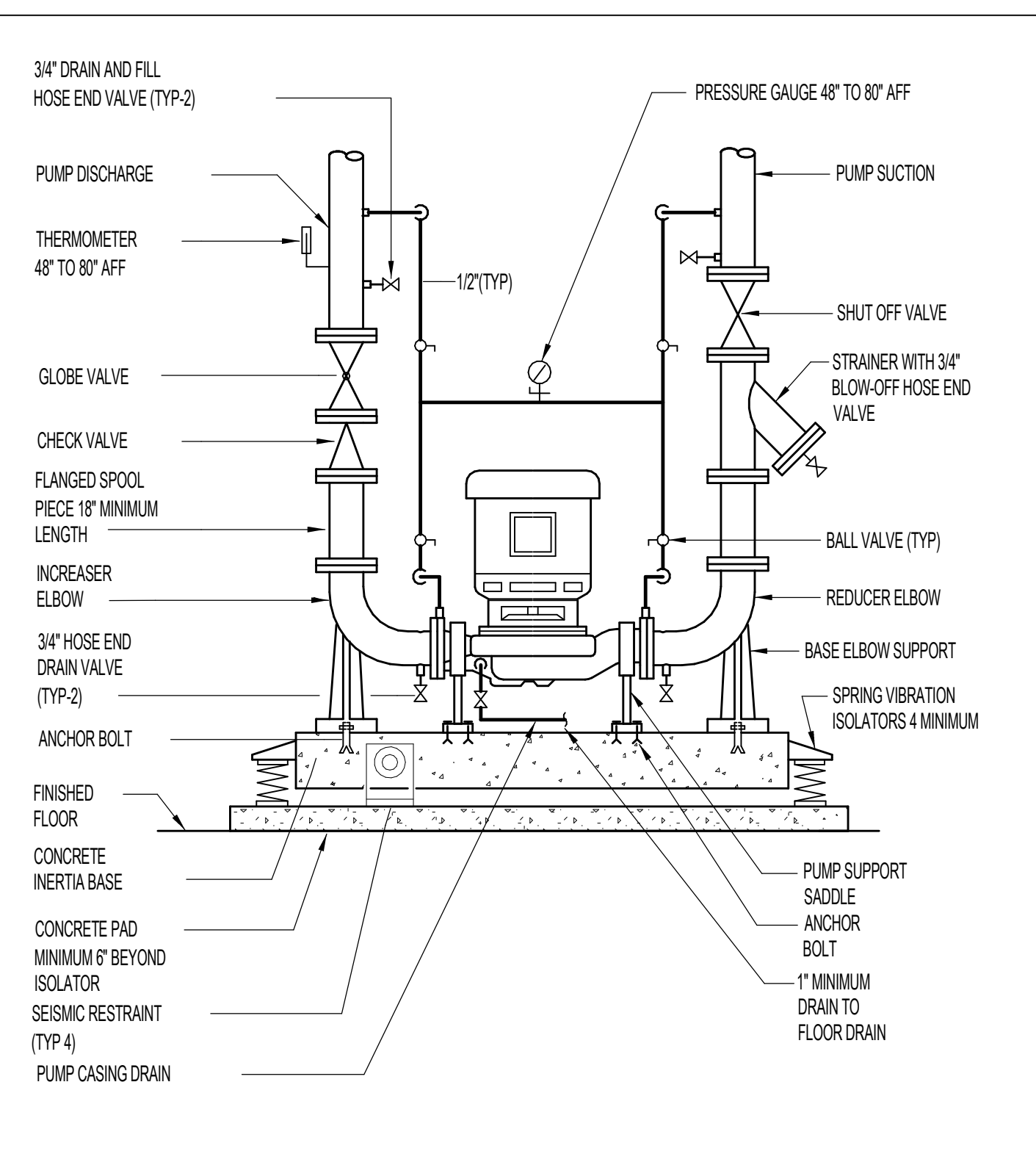
PROJECT NO. S12.10250.00  
DRAWING NUMBER: **M6.01**



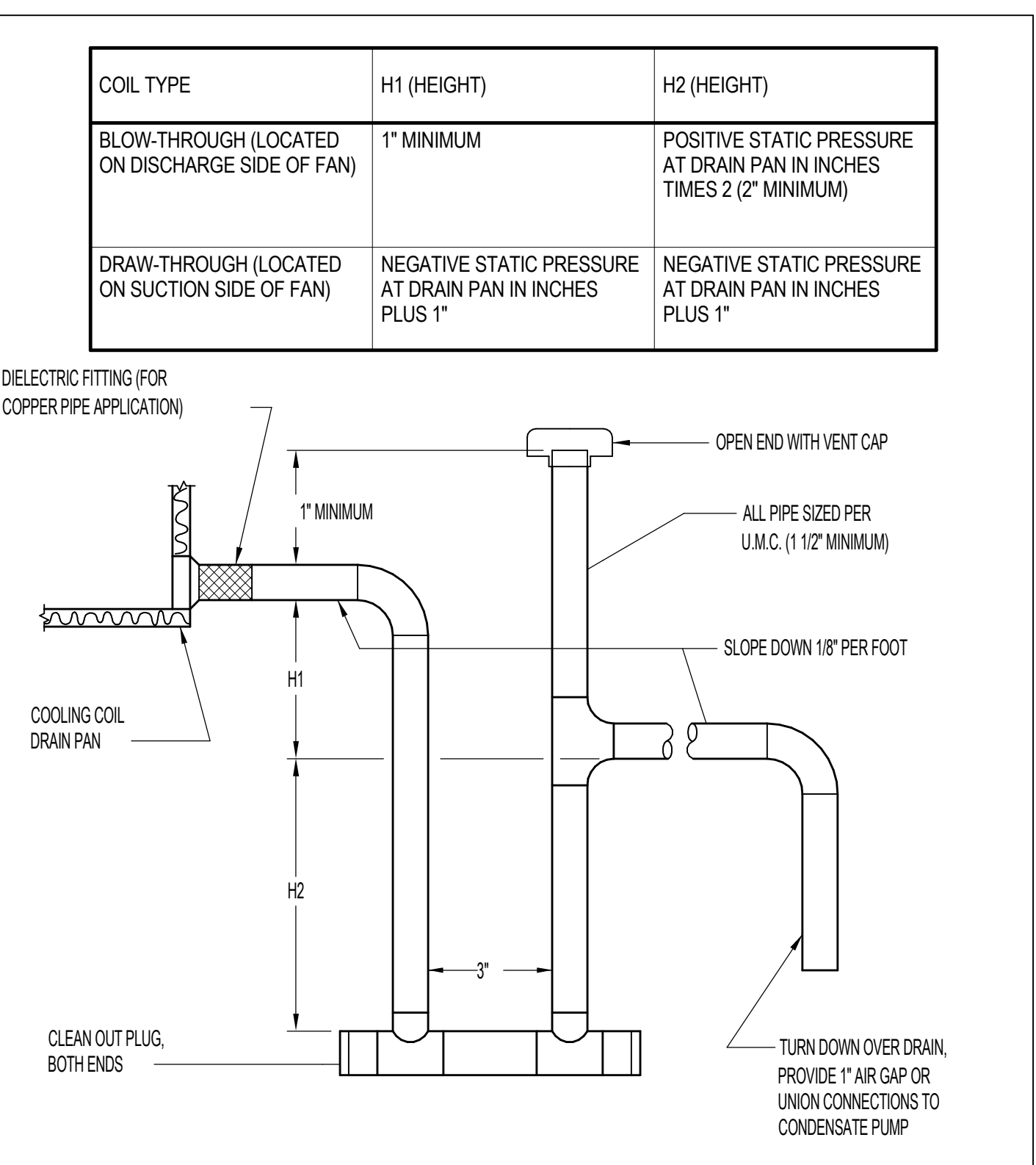
10 REFRIGERANT RELIEF VALVE PIPING NO SCALE



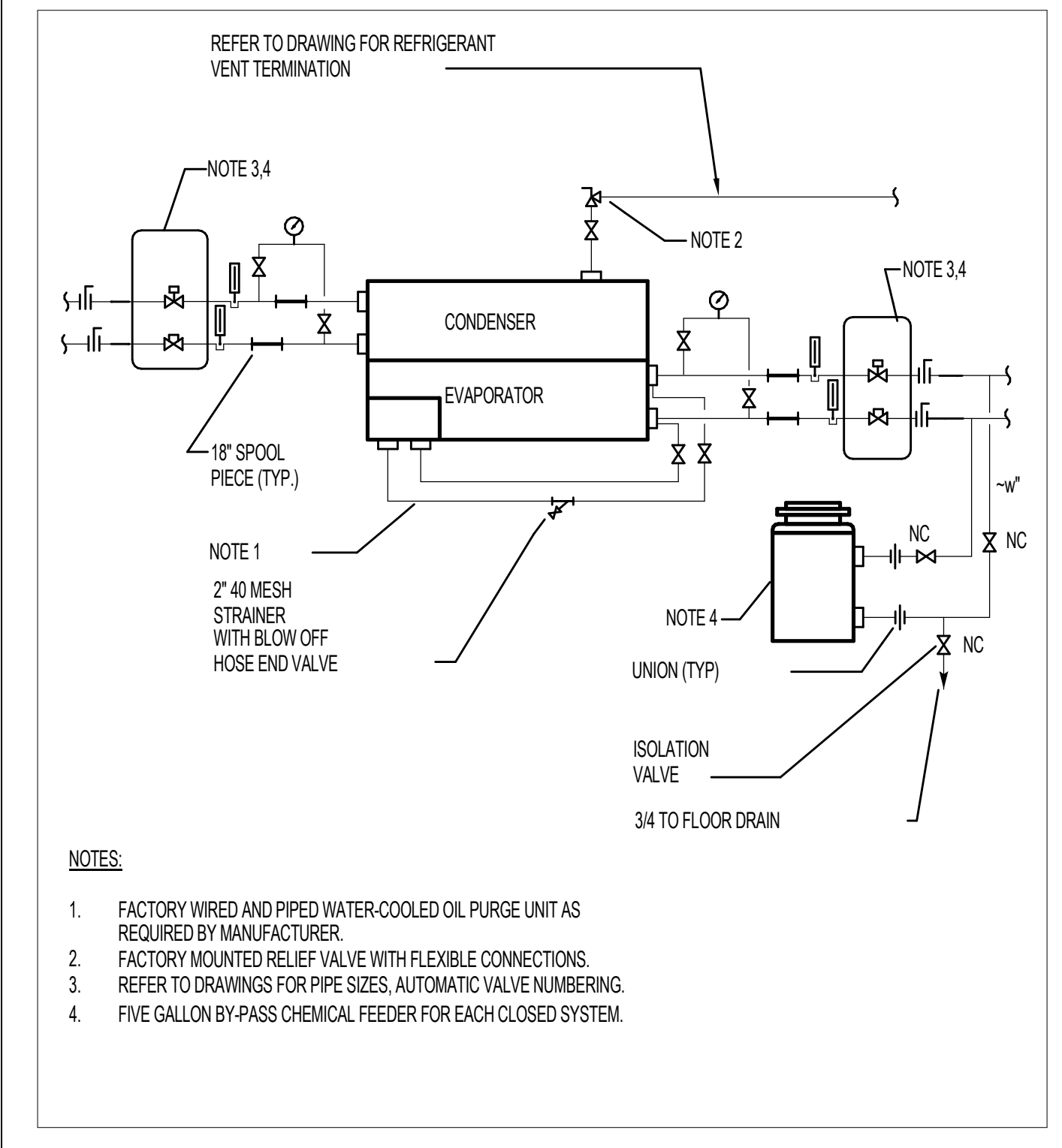
7 WATER-TO-WATER PLATE TYPE HEAT EXCHANGER PIPING NO SCALE



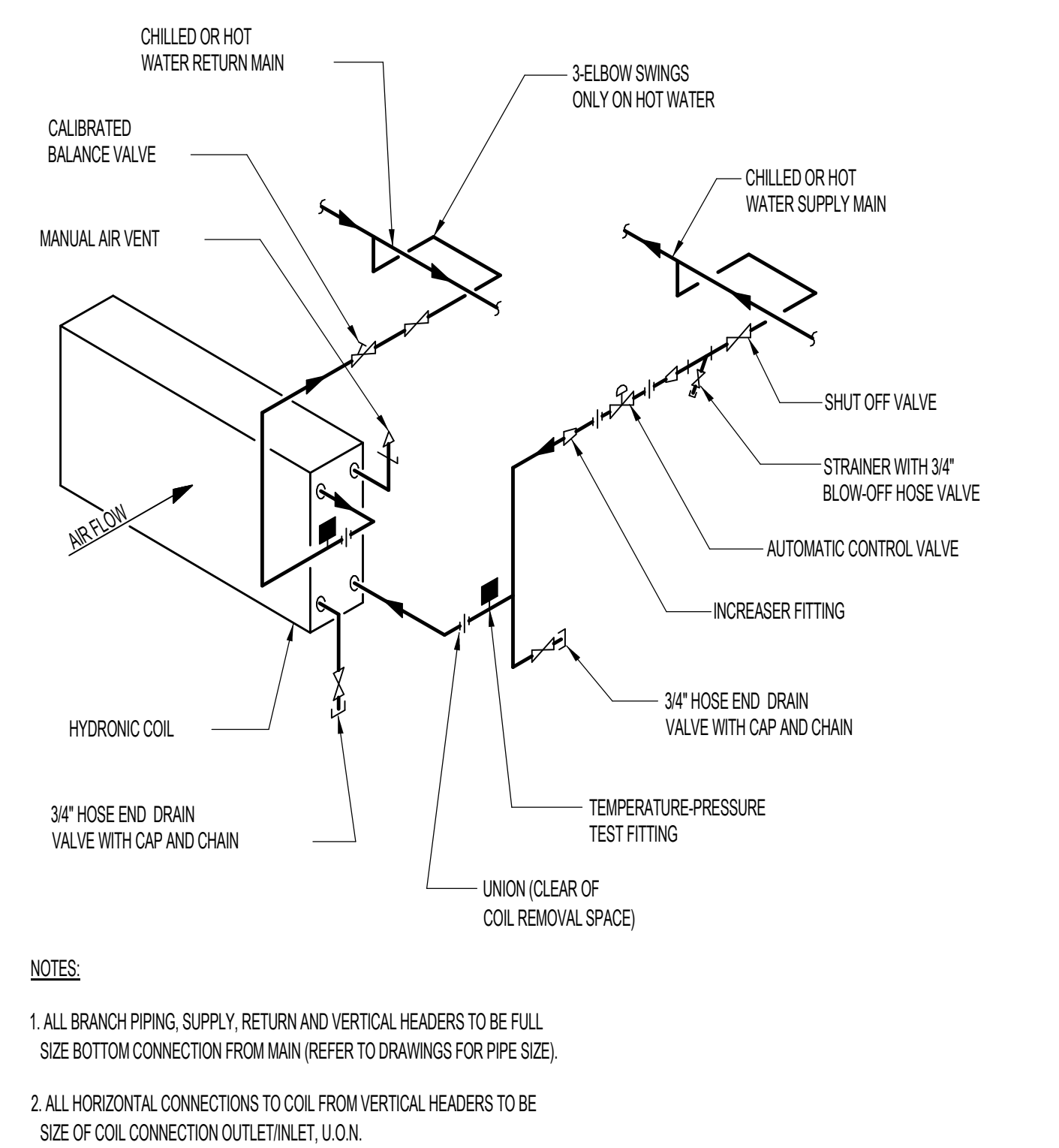
4 VERTICALLY MOUNTED PUMP NO SCALE



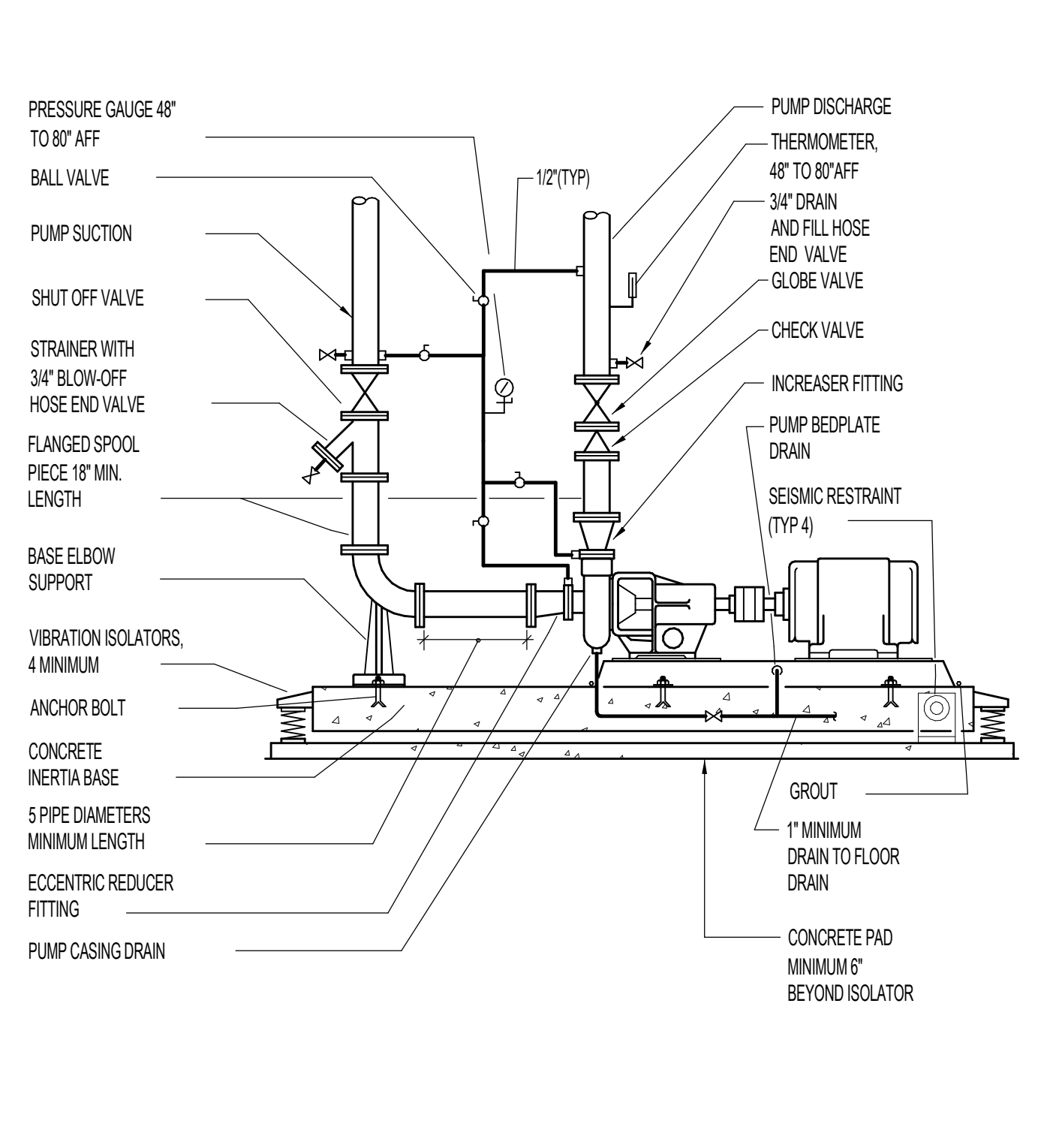
1 COOLING COIL CONDENSATE TRAP NO SCALE



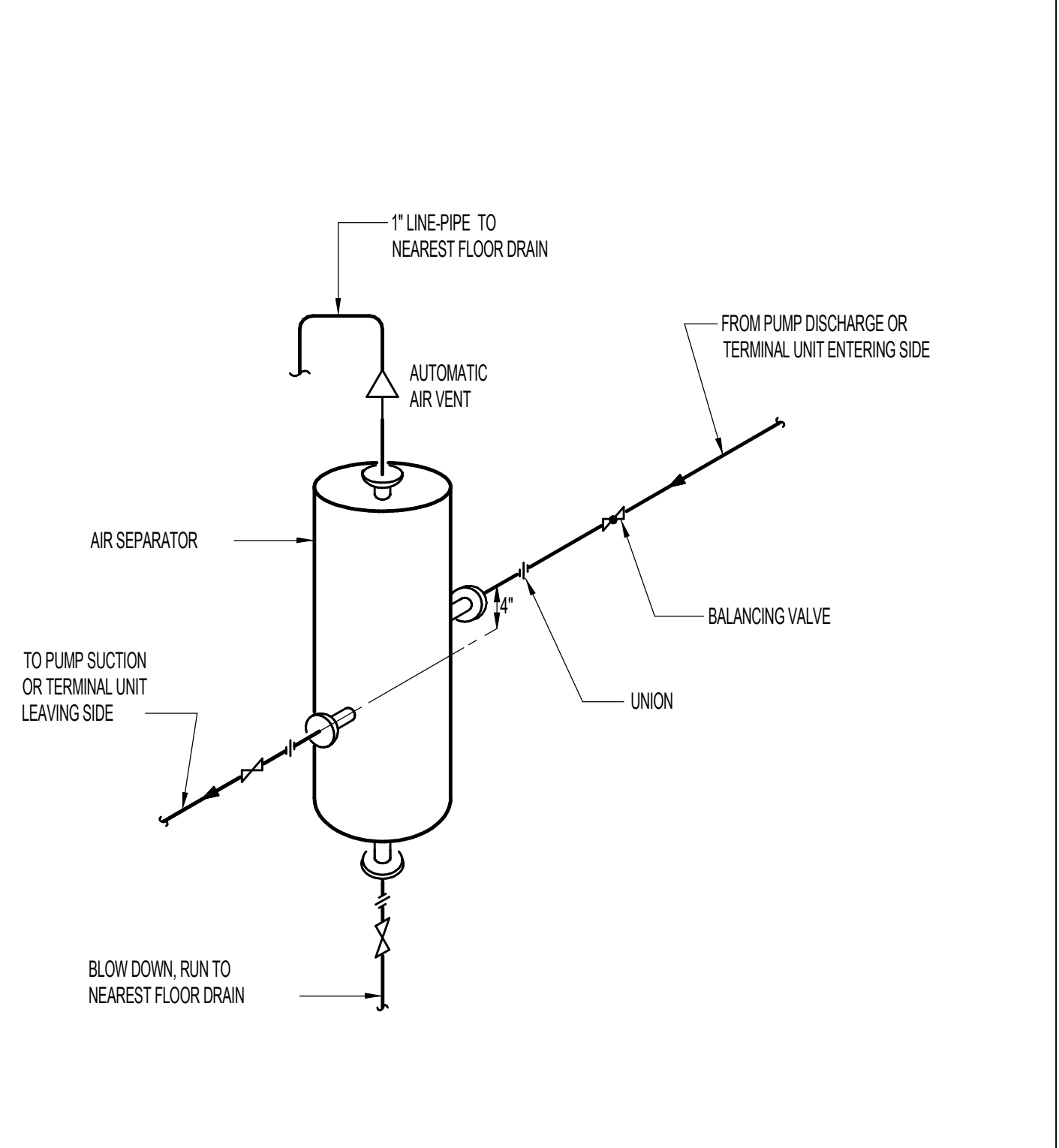
11 CENTRIFUGAL CHILLER PIPING CONNECTIONS NO SCALE



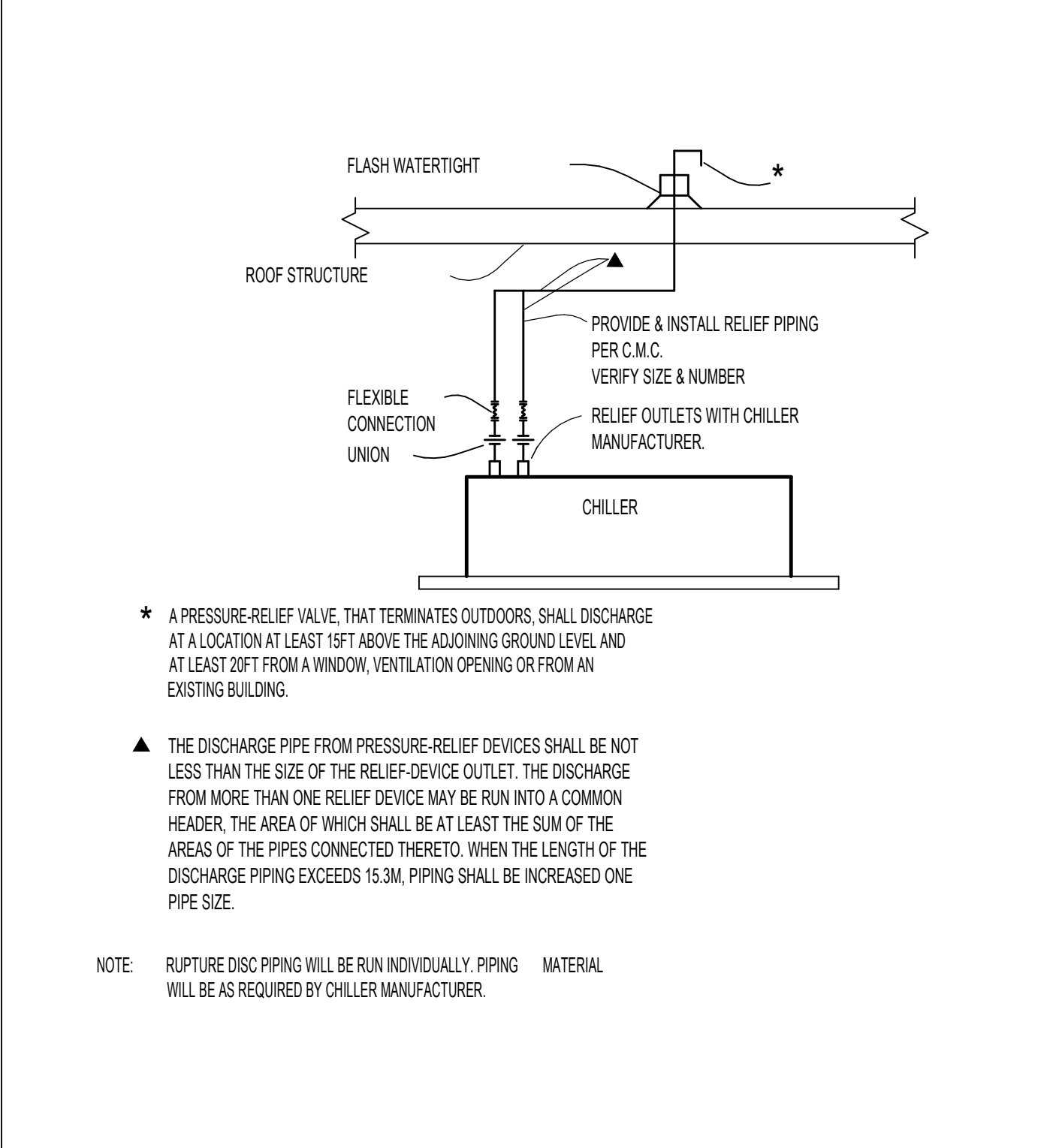
8 SINGLE HYDRONIC COIL PIPING (2-WAY CONTROL VALVE) NO SCALE



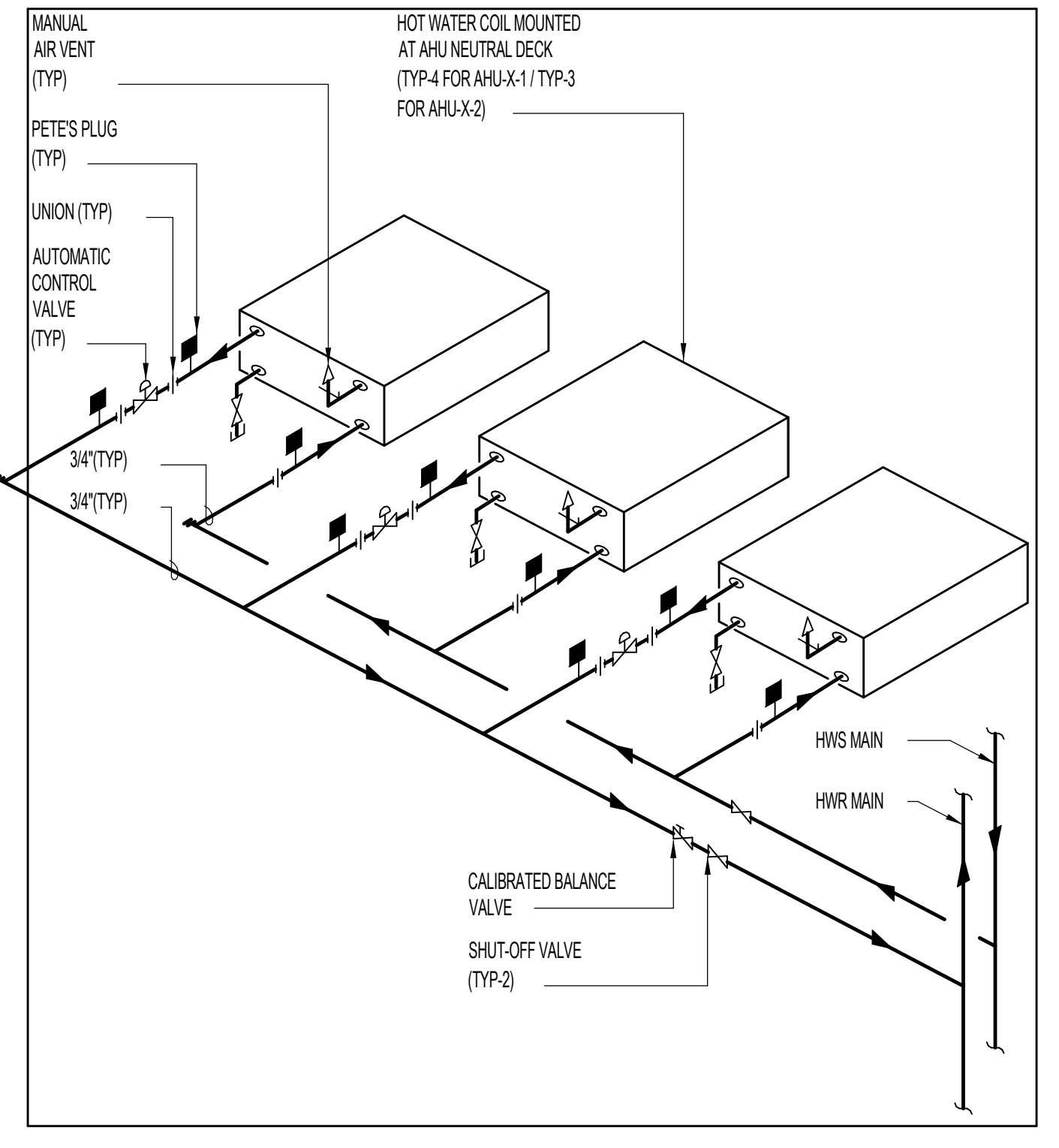
5 END SUCTION PUMP NO SCALE



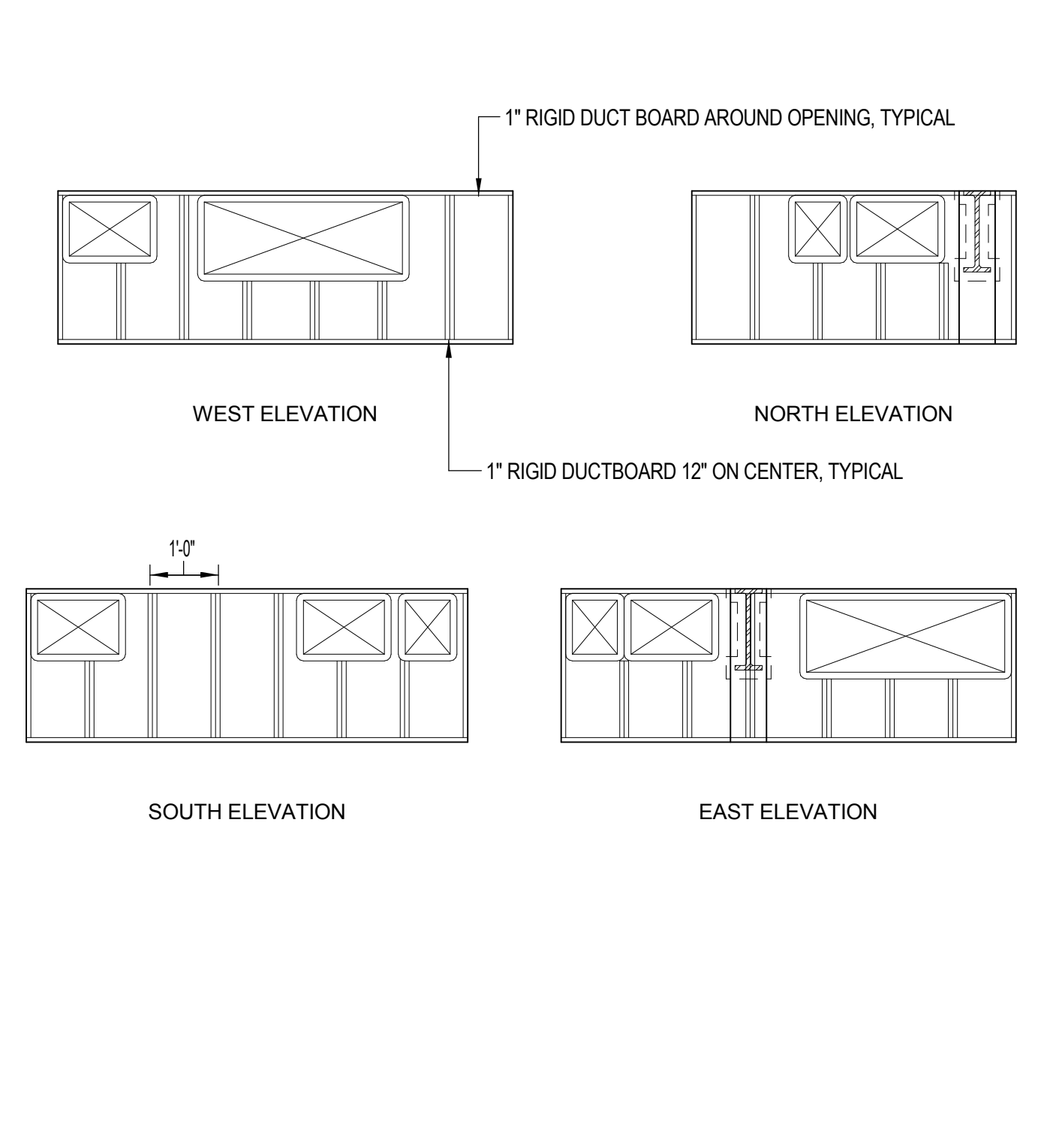
2 BYPASS AIR SEPARATOR NO SCALE



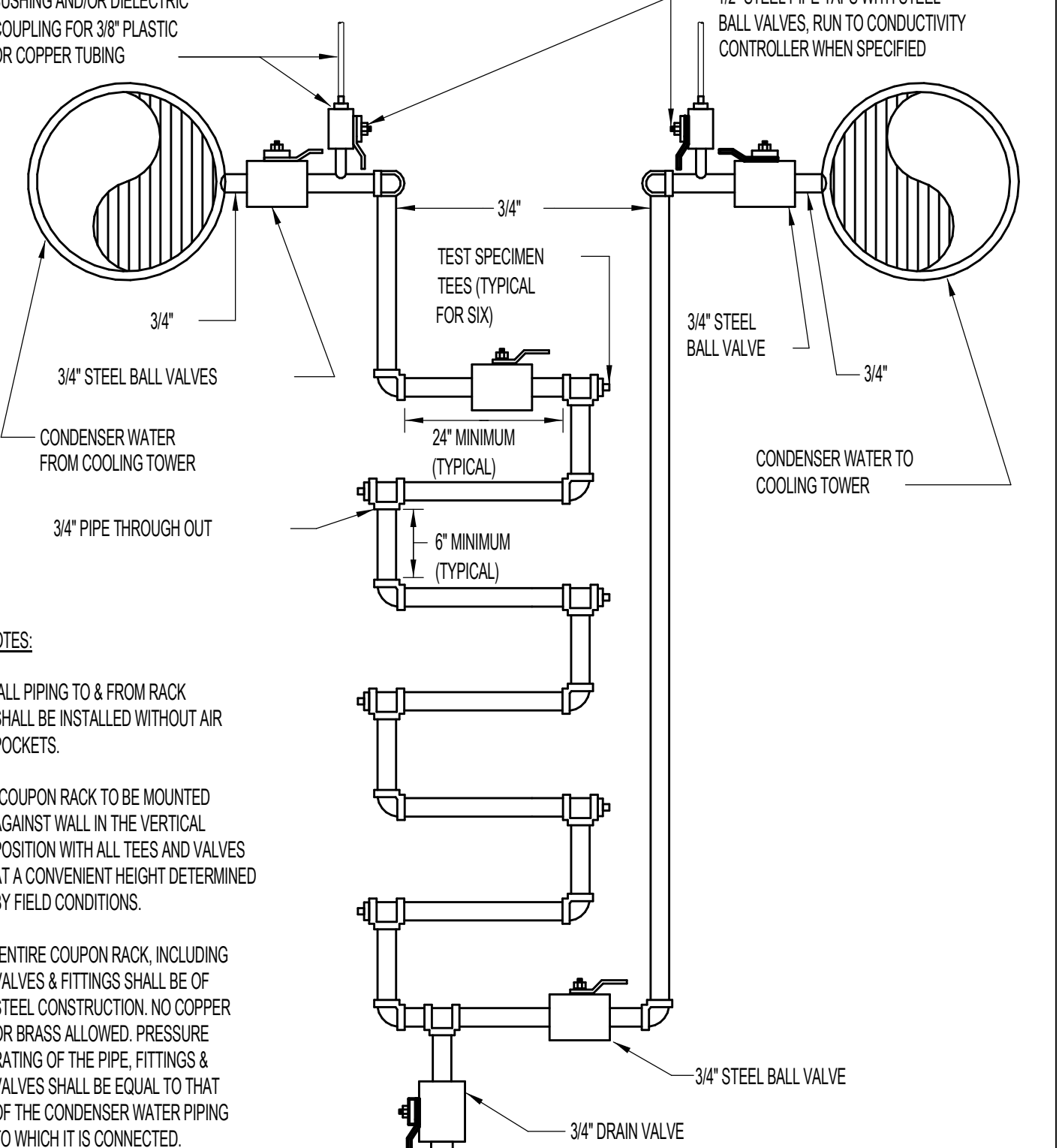
12 PRESSURE-RELIEF DETAIL NO SCALE



9 TRI-PATH AHU HYDRONIC HEATING COIL PIPING NO SCALE



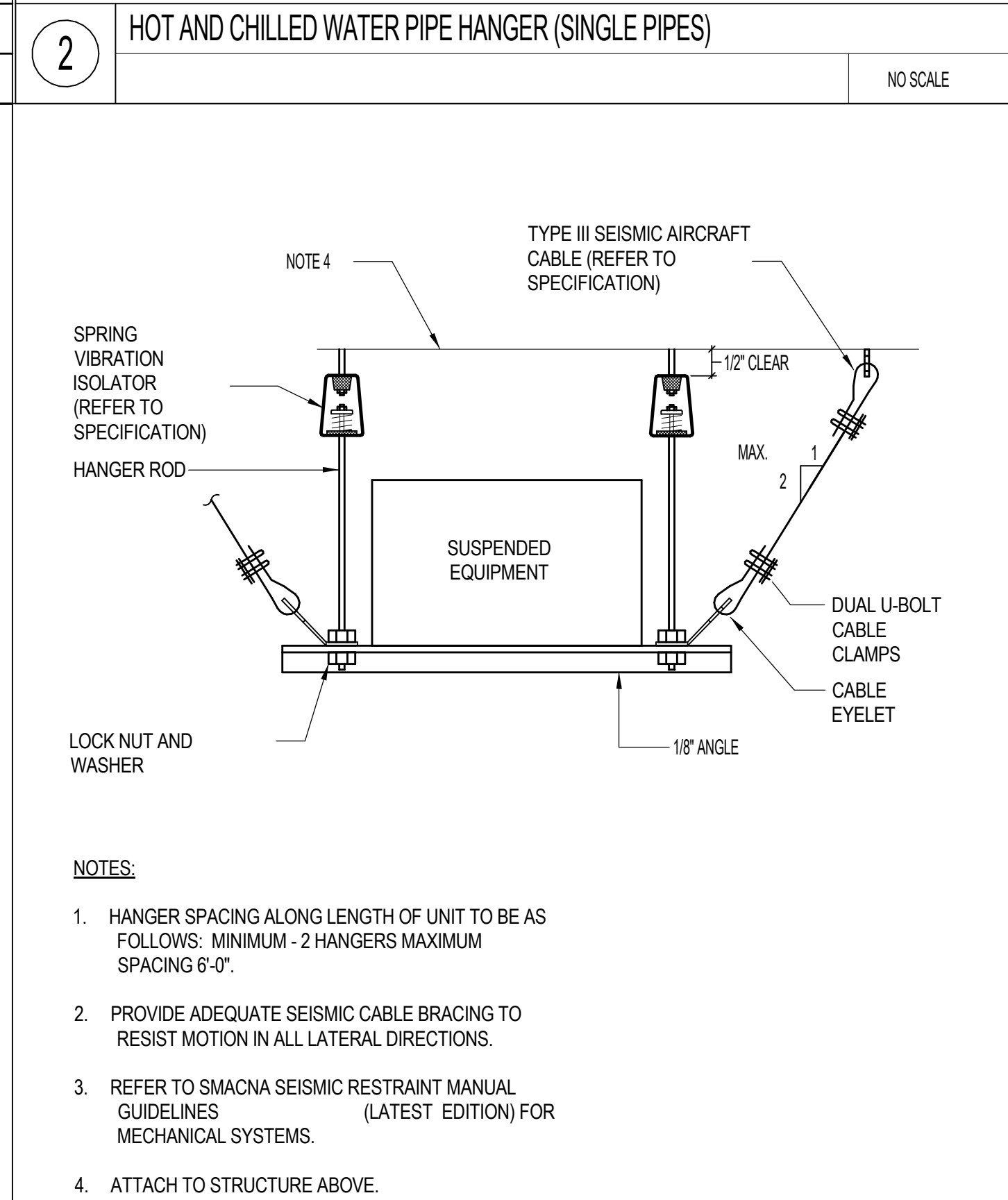
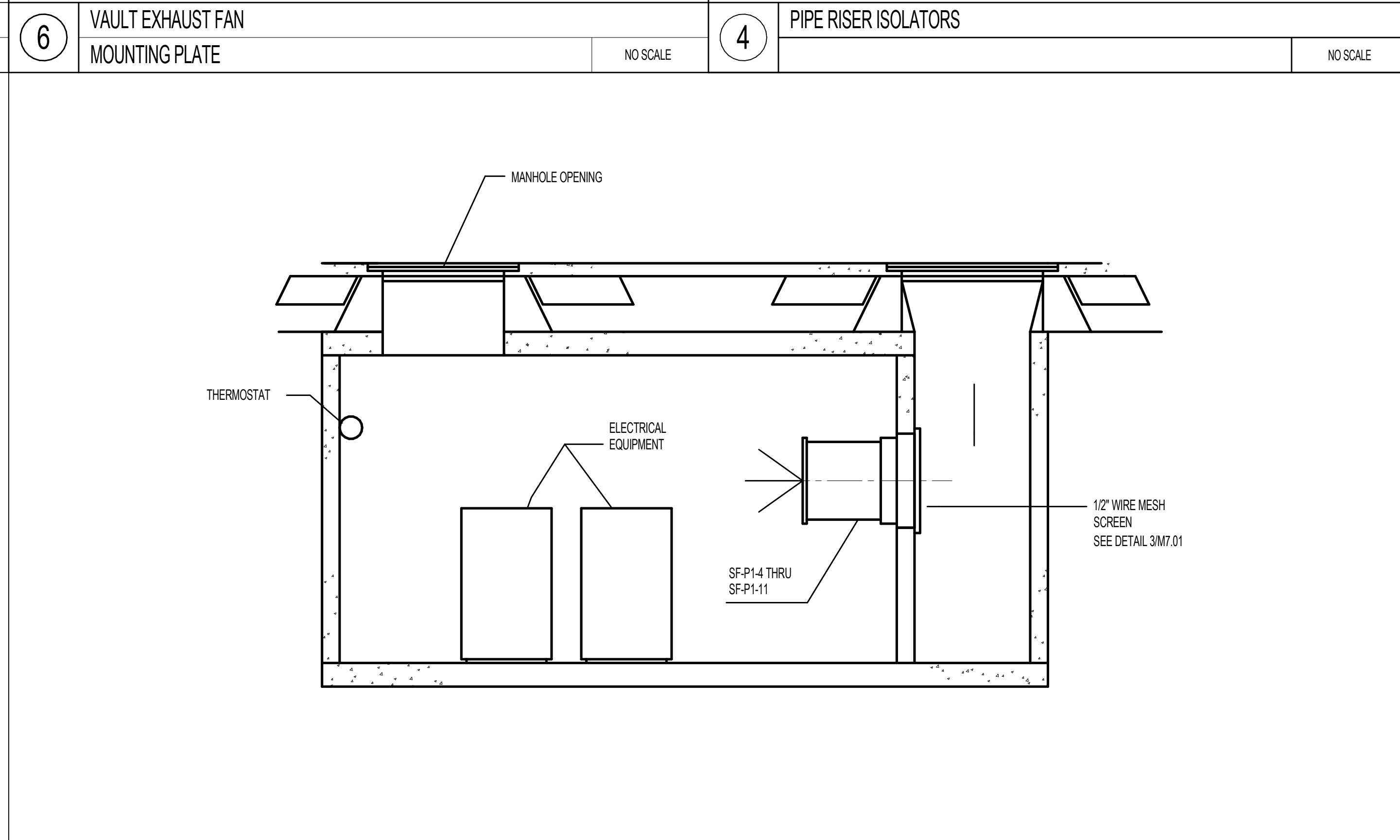
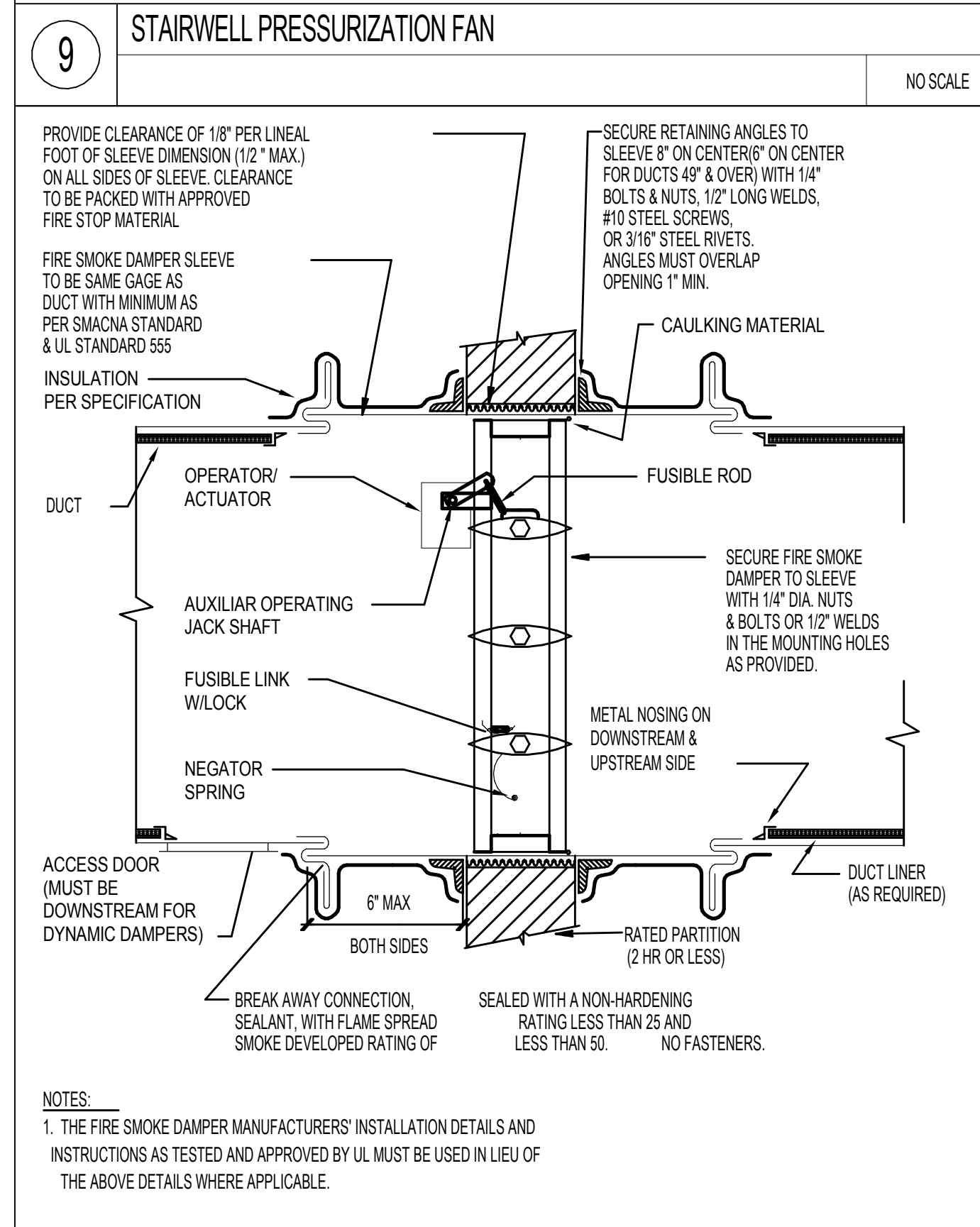
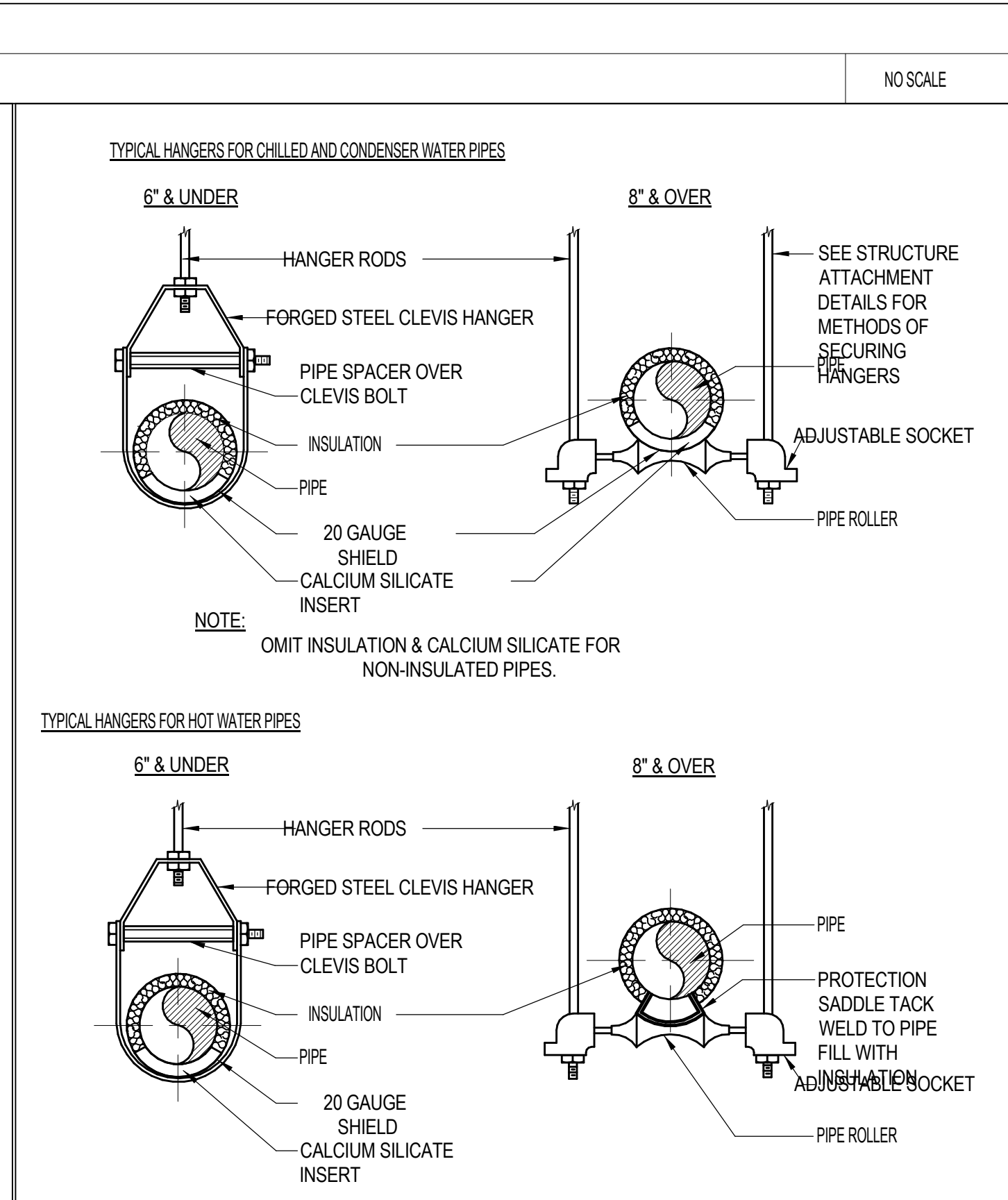
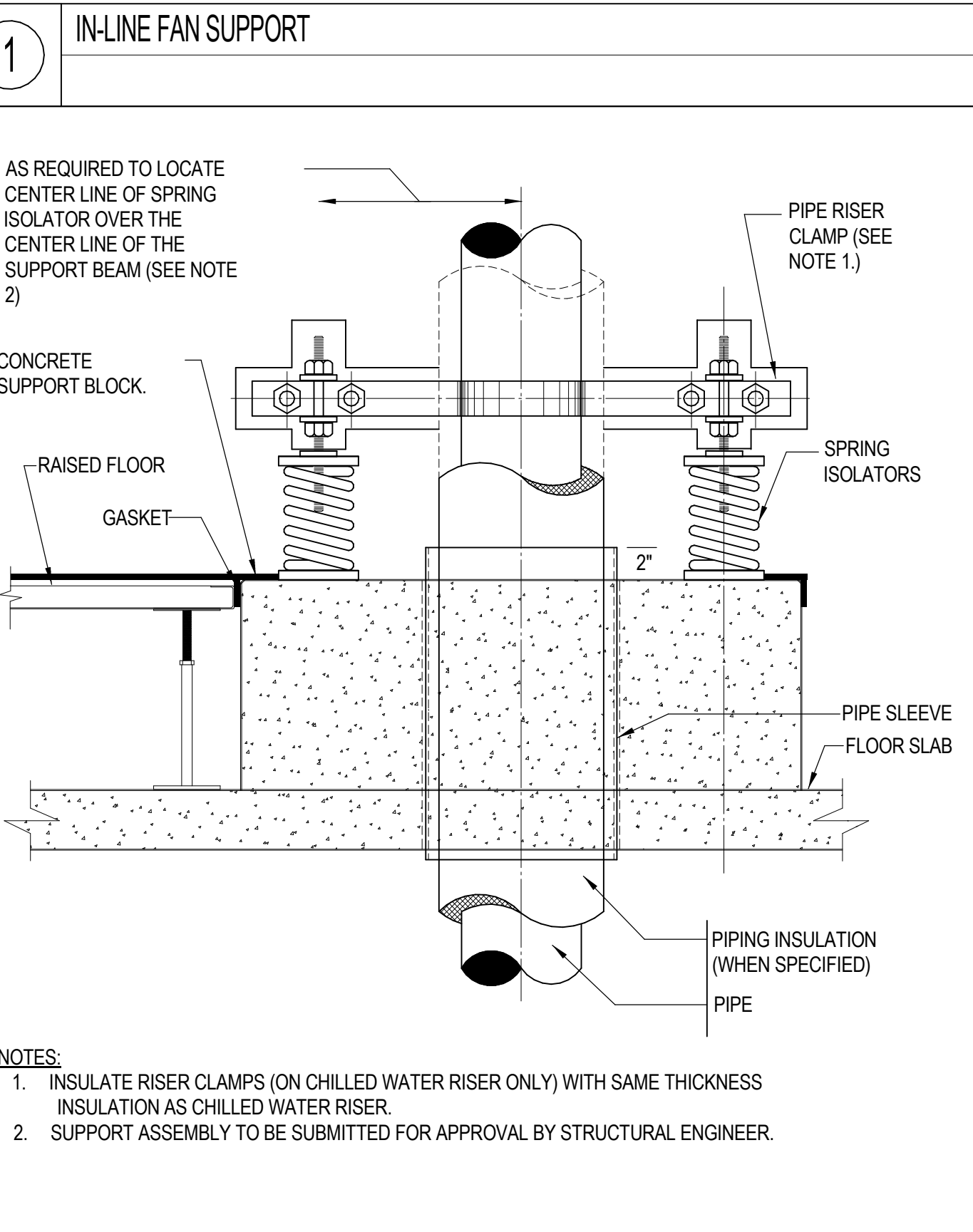
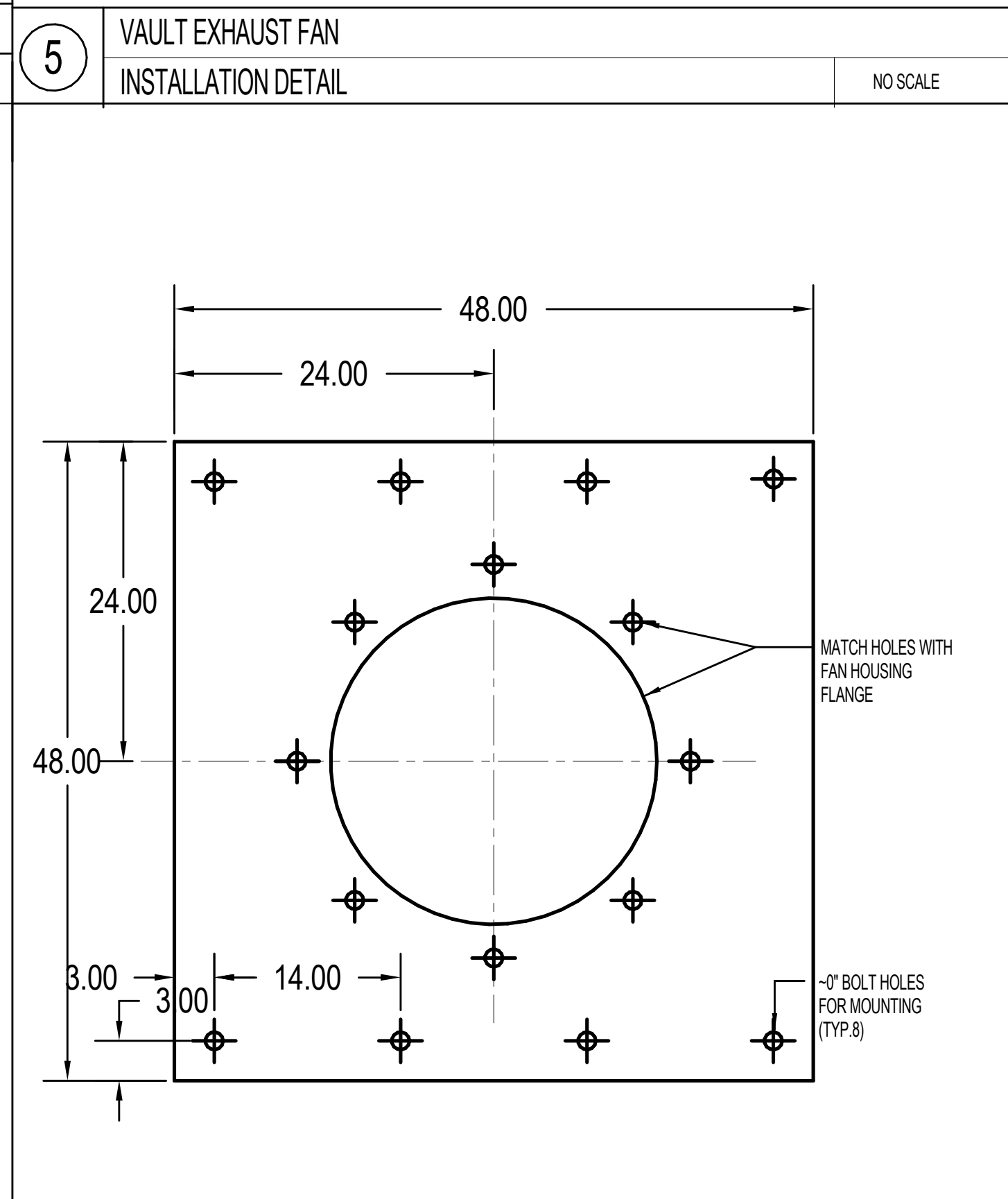
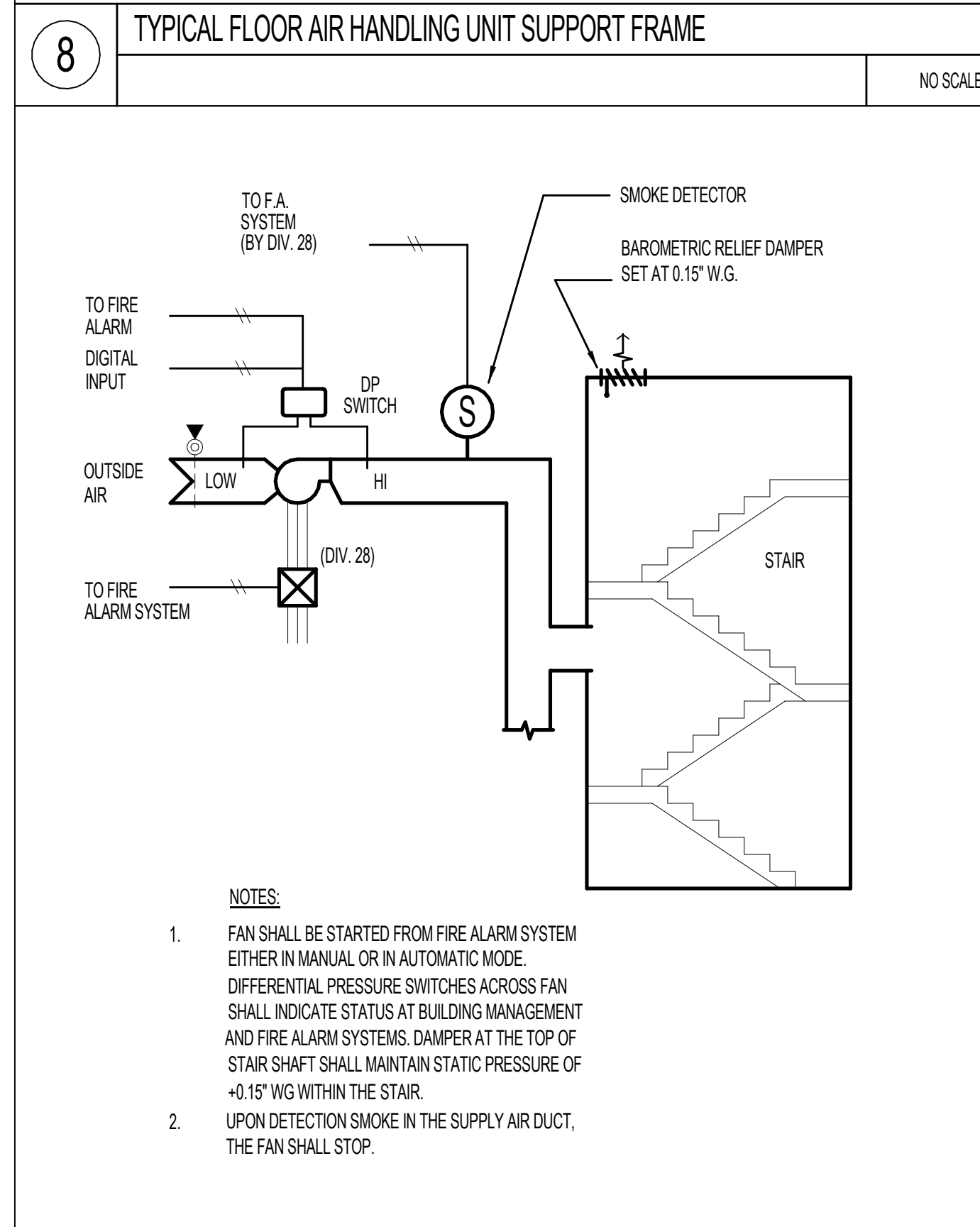
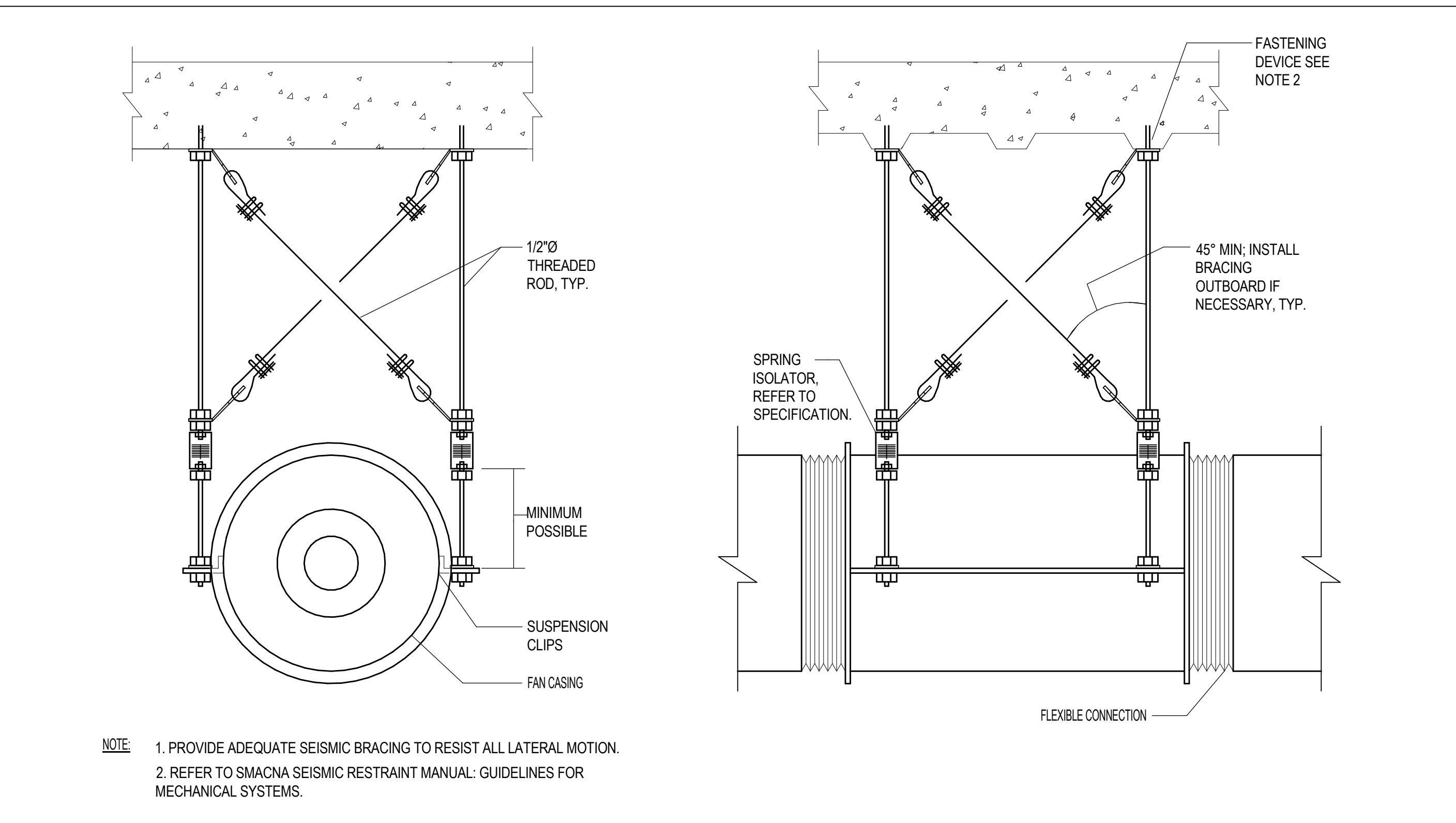
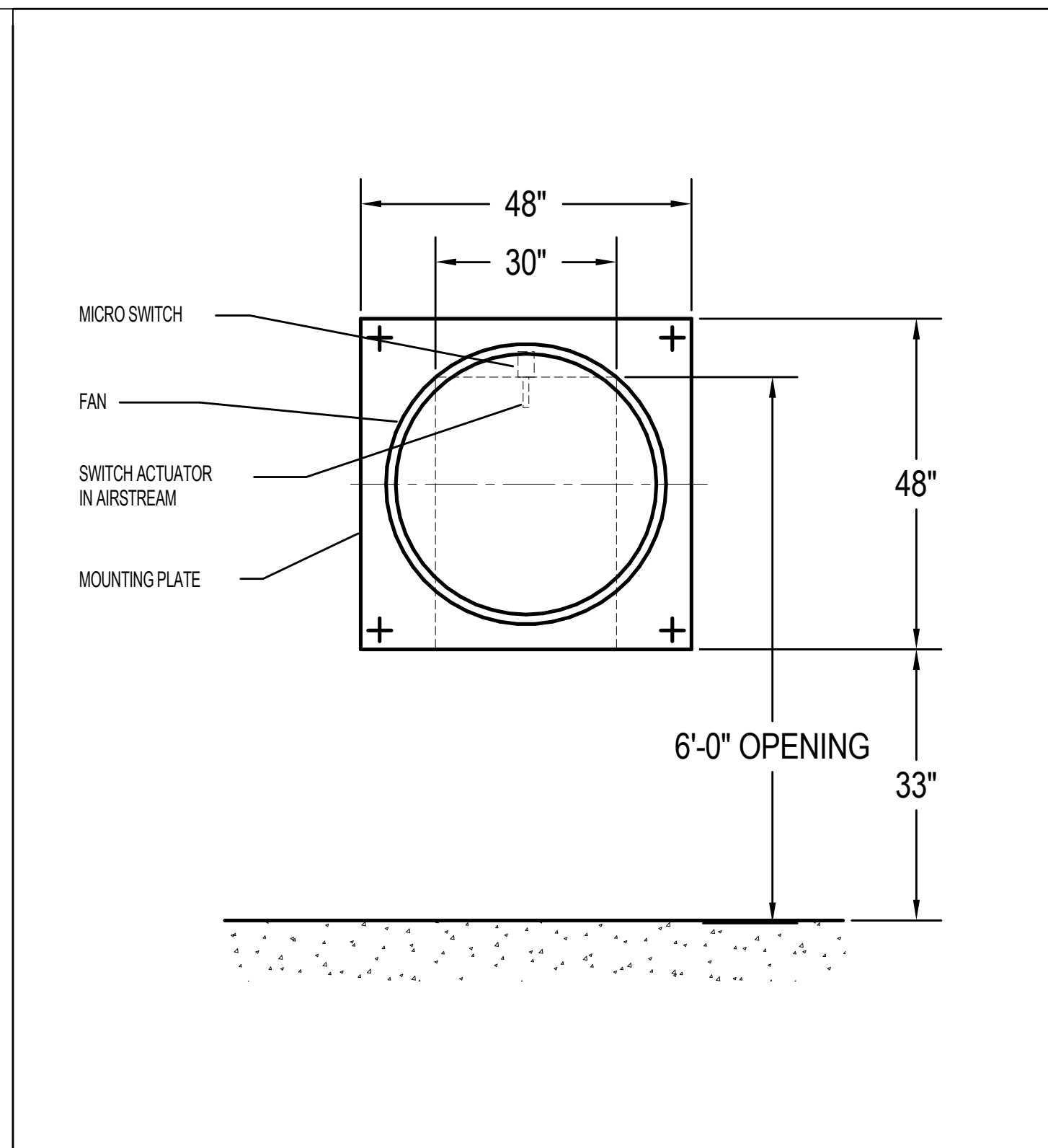
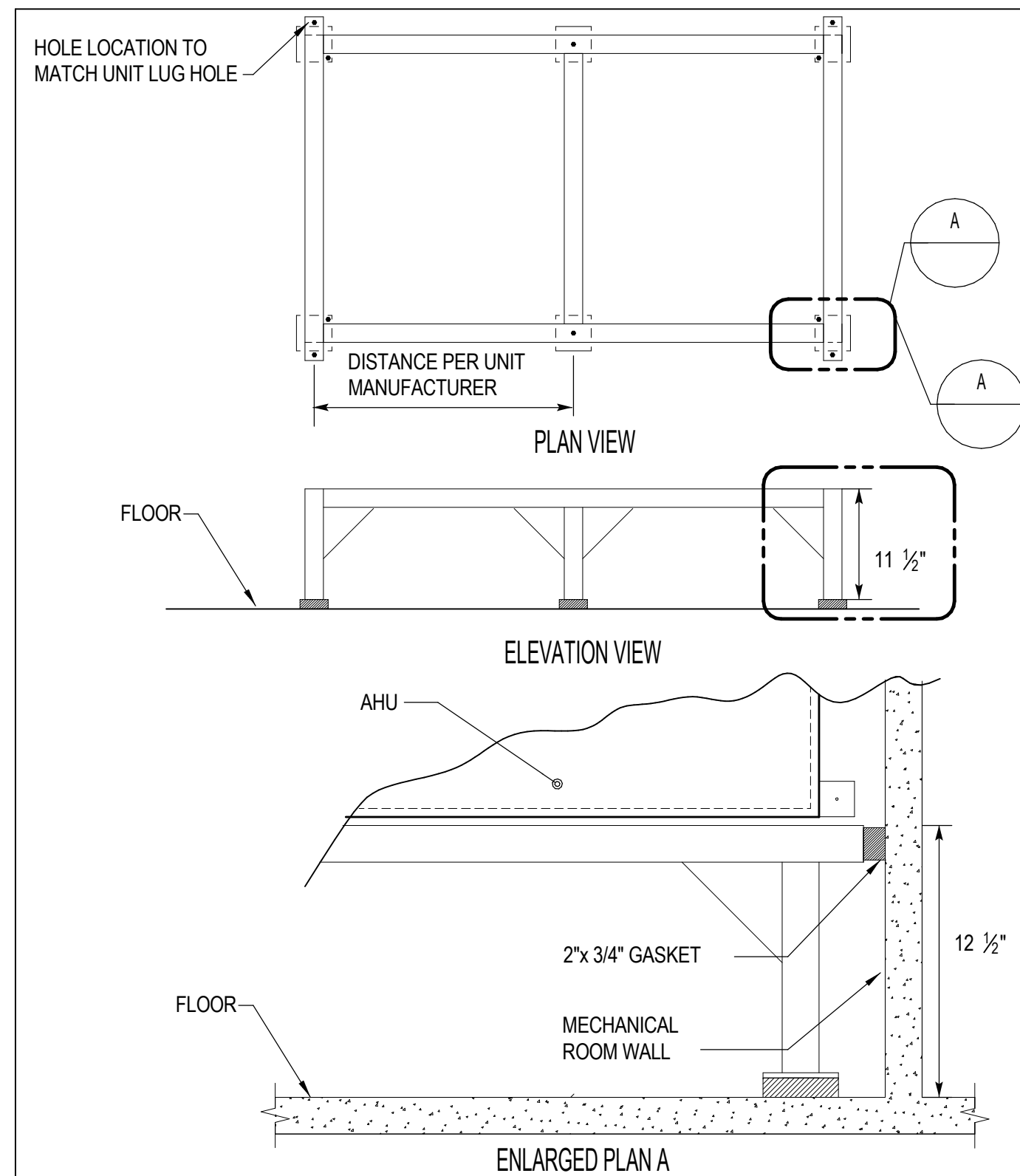
6 TYPICAL MECHANICAL ROOM ACOUSTICAL DETAIL NO SCALE



3 COUPON RACK NO SCALE



- BOSTON PROPERTIES / HINES**  
Owner
- PELLI CLARKE PELLI ARCHITECTS**  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.**  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES**  
Structural Engineer
- WSP**  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE**  
Landscape Architect
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Civil Engineer
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Elevator Consultant
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Building Security
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Lighting Consultant
- CERAMI AND ASSOCIATES, INC.**  
Acoustical Consultant
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Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES**  
LEED Consultant
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Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.**  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP**  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN**  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY**  
Landscape Architect of Record



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NO. DATE ISSUE

DRAWING TITLE

**MECHANICAL DETAILS**

NO. PROJECT NO. DATE

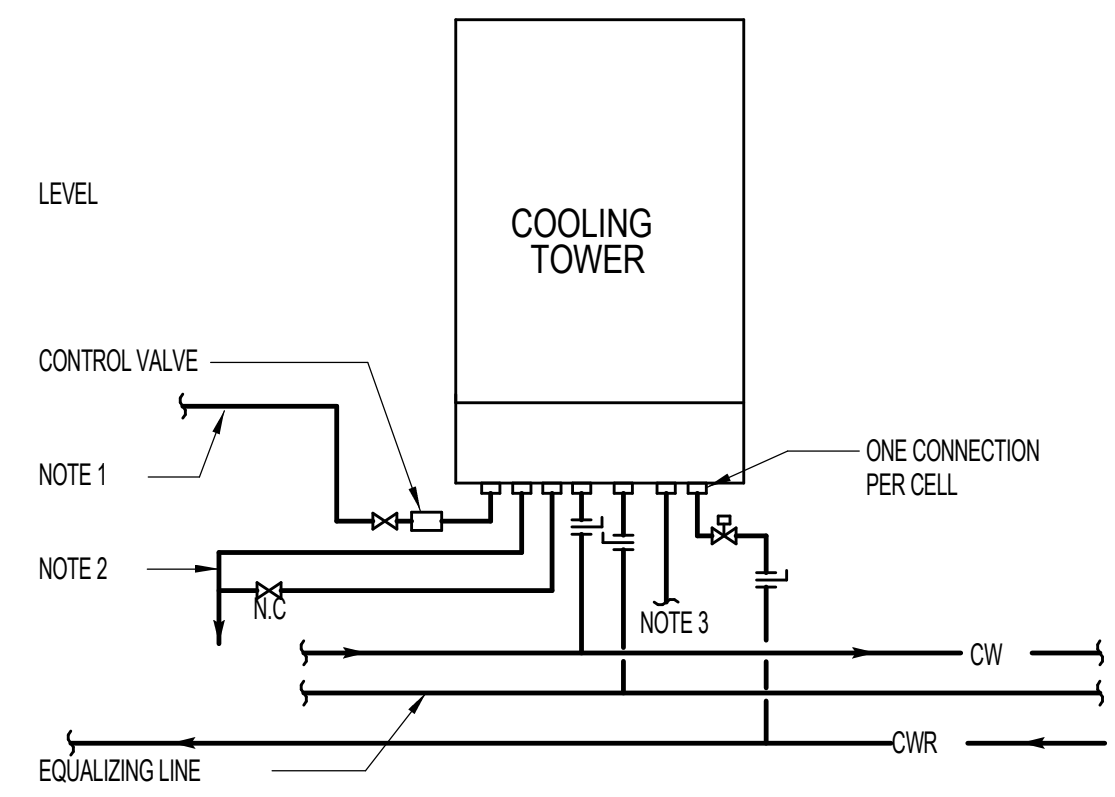
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PROJECT NO. DATE

PROJECT NO. DATE



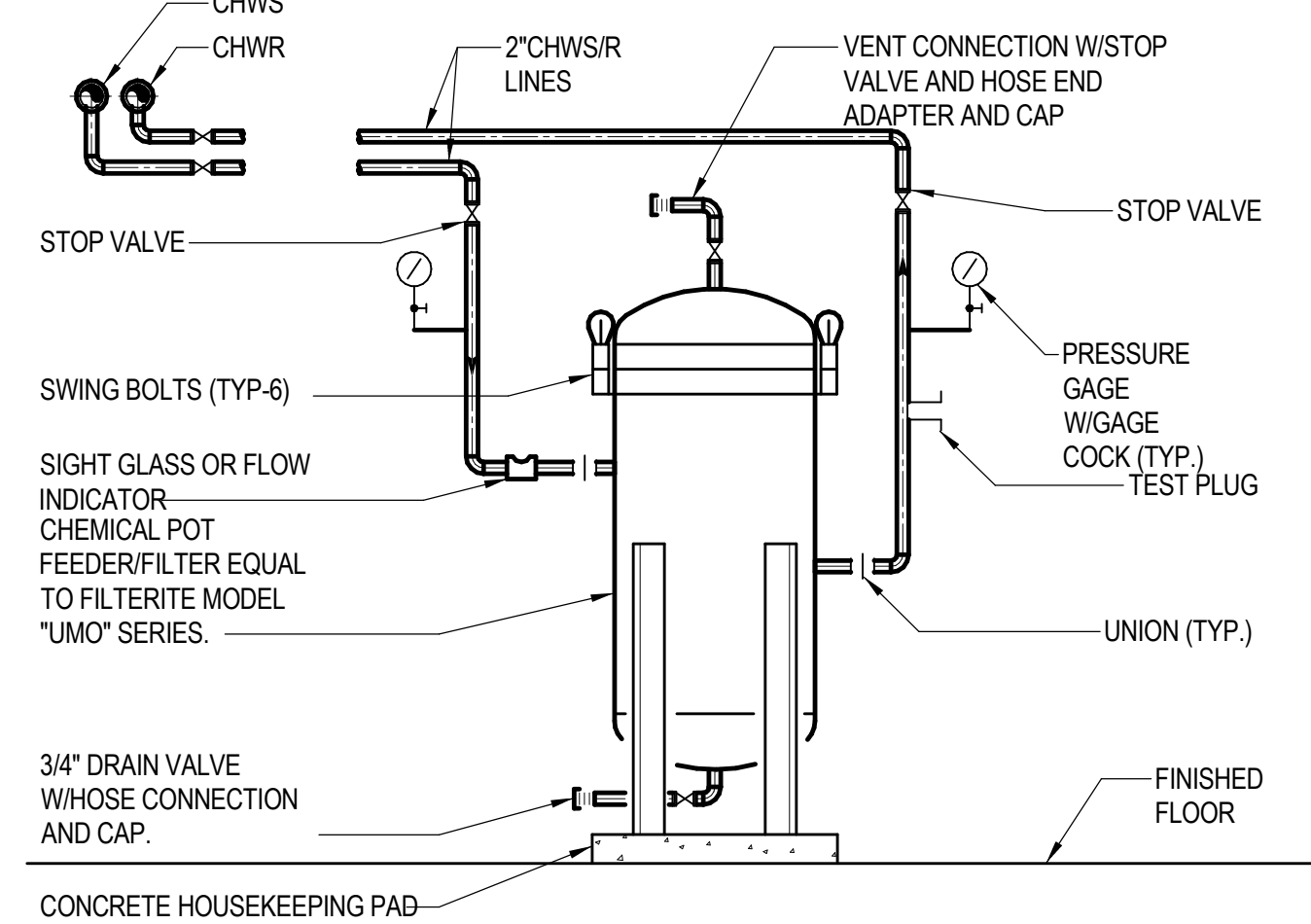
- BOSTON PROPERTIES / HINES**  
Owner
- PELLI CLARKE PELLI ARCHITECTS**  
Design Architect
- KENDALL/HEATON ASSOCIATES, INC.**  
Architect of Record
- MAGNUSON KLEMENCIC ASSOCIATES**  
Structural Engineer
- WSP**  
MEFPF Engineer
- PWP LANDSCAPE ARCHITECTURE**  
Landscape Architect
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Civil Engineer
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Elevator Consultant
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Building Security
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Parking Consultant
- ARUP**  
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- HLB LIGHTING DESIGN, INC.**  
Lighting Consultant
- CERAMI AND ASSOCIATES, INC.**  
Acoustical Consultant
- MORRISON HERSHFIELD**  
Curtain Wall Consultant
- ENVIRONMENTAL BUILDING STRATEGIES**  
LEED Consultant
- HMA CONSULTING**  
Building Management and Controls Engineer
- C.S. CAULKINS CO., INC.**  
Window Washing Consultant
- ENGINEERING SPECIALTIES GROUP**  
Aerial Tram Consultant
- DEBRA NICHOLS DESIGN**  
Graphic Design Consultant
- ROYSTON HANAMOTO ALLEY & ABEY**  
Landscape Architect of Record



- NOTES:**
1. MAKE-UP WATER PIPING. REFER TO PLUMBING DRAWINGS.
  2. 3" OVERFLOW & 2" DRAIN PIPING TO FLOOR DRAIN. OVERFLOW LEVELS ON ALL INTERCONNECTED COOLING TOWERS TO BE IDENTICAL HEIGHT ABOVE COMMON DATUM.
  3. REFER TO DRAWINGS 11M6.04 FOR SAND FILTER PIPING CONNECTION.
  4. REFER TO DRAWINGS FOR PIPE SIZES & AUTOMATIC VALVE LABELING.

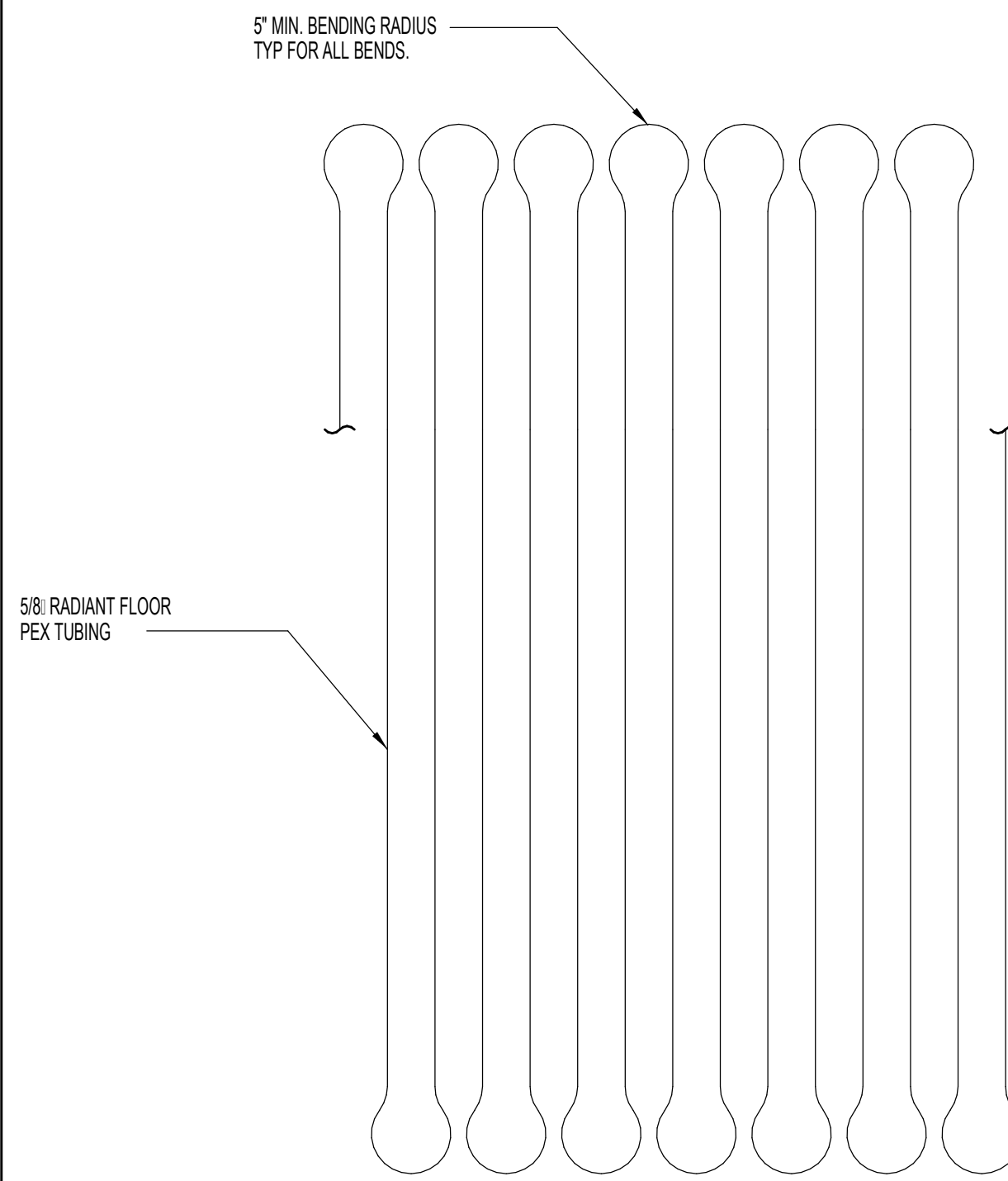
10 COOLING TOWER PIPING CONNECTIONS

NO SCALE



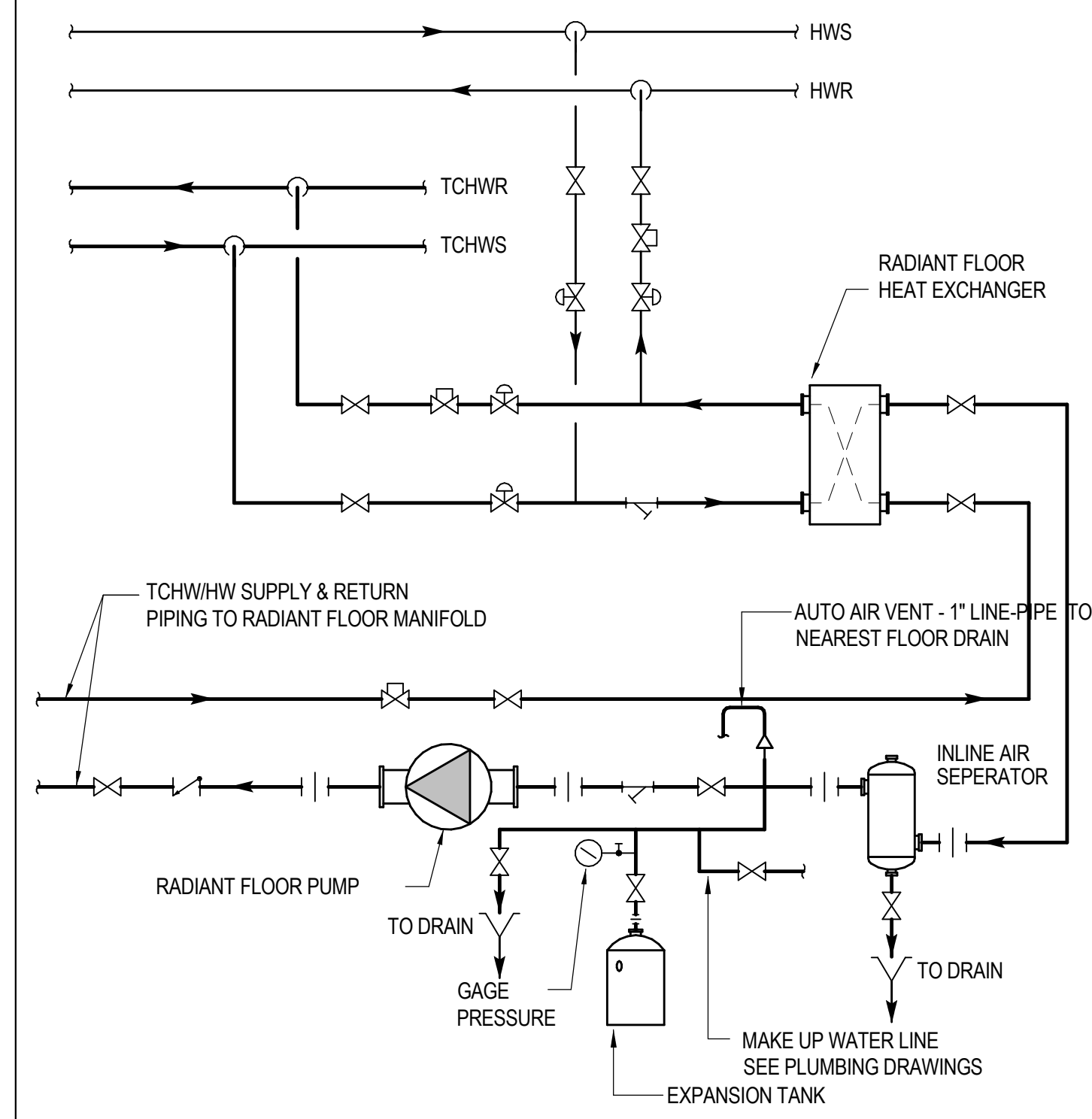
7 CHEMICAL POT FEEDER/FILTER DETAIL

NO SCALE



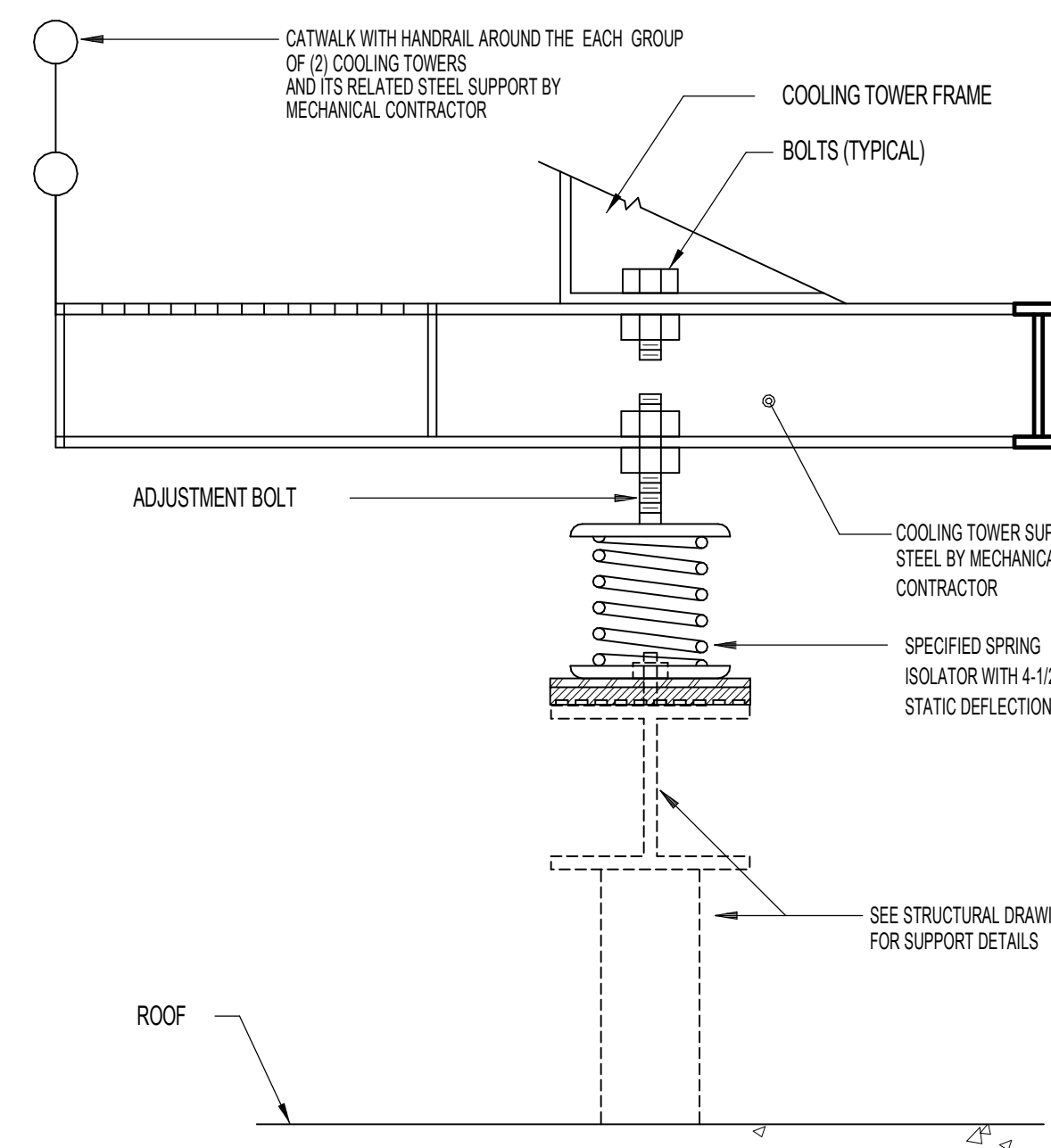
4 RADIANT FLOOR TUBING MIN BEND RADIUS

NO SCALE



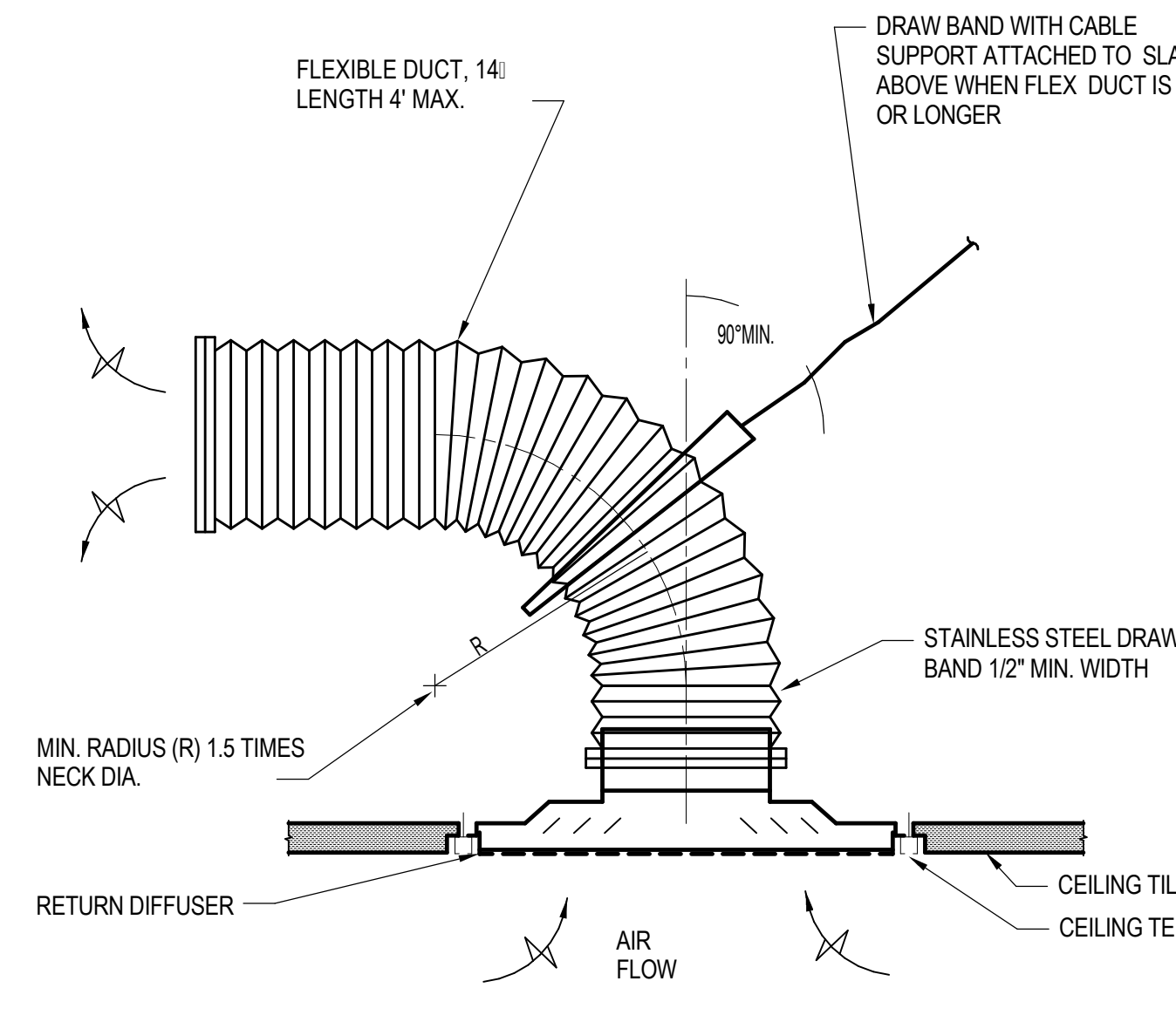
1 RADIANT FLOOR MANIFOLD CLOSET PIPING

NO SCALE



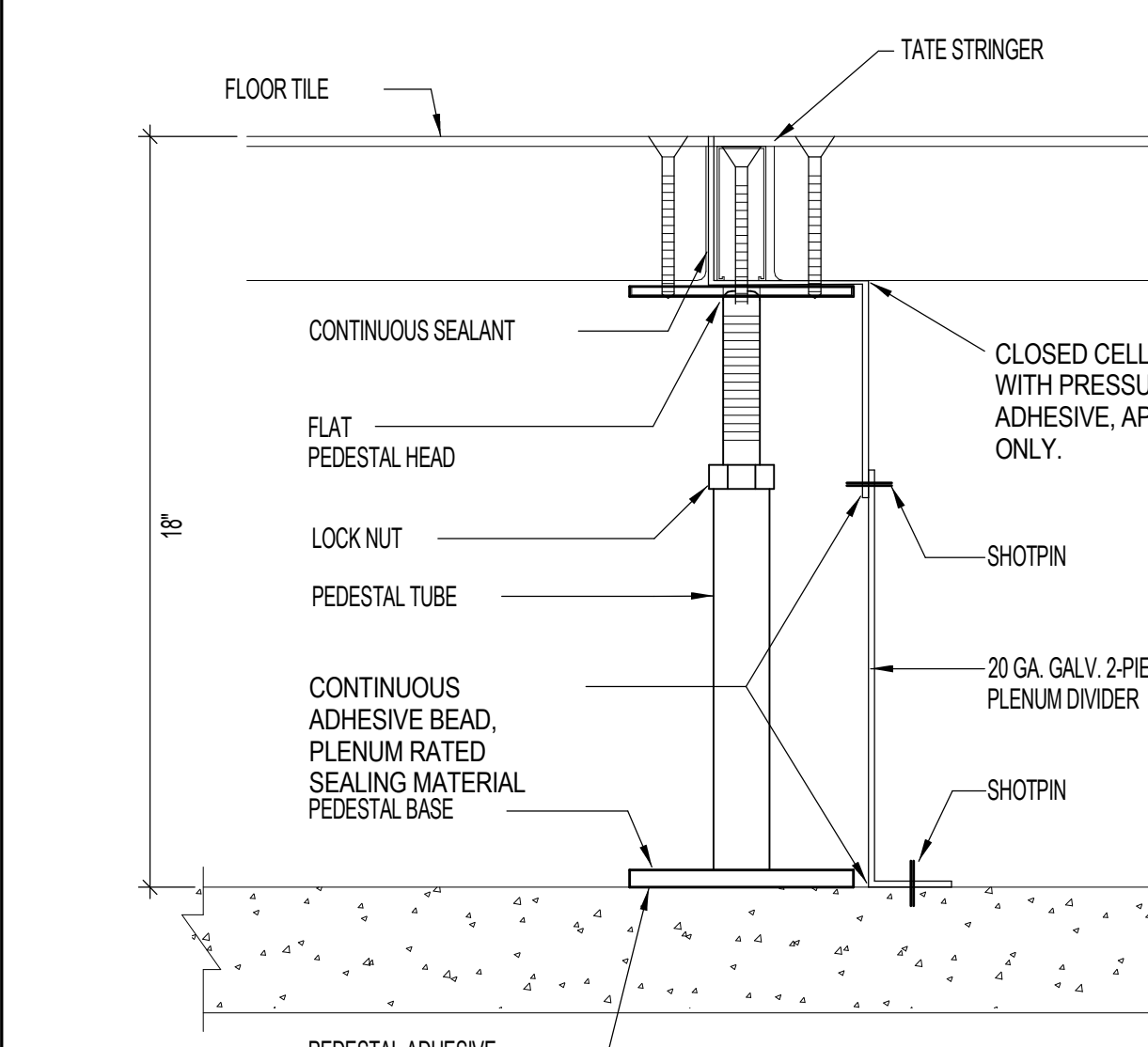
11 COOLING TOWER VIBRATION ISOLATOR

NO SCALE



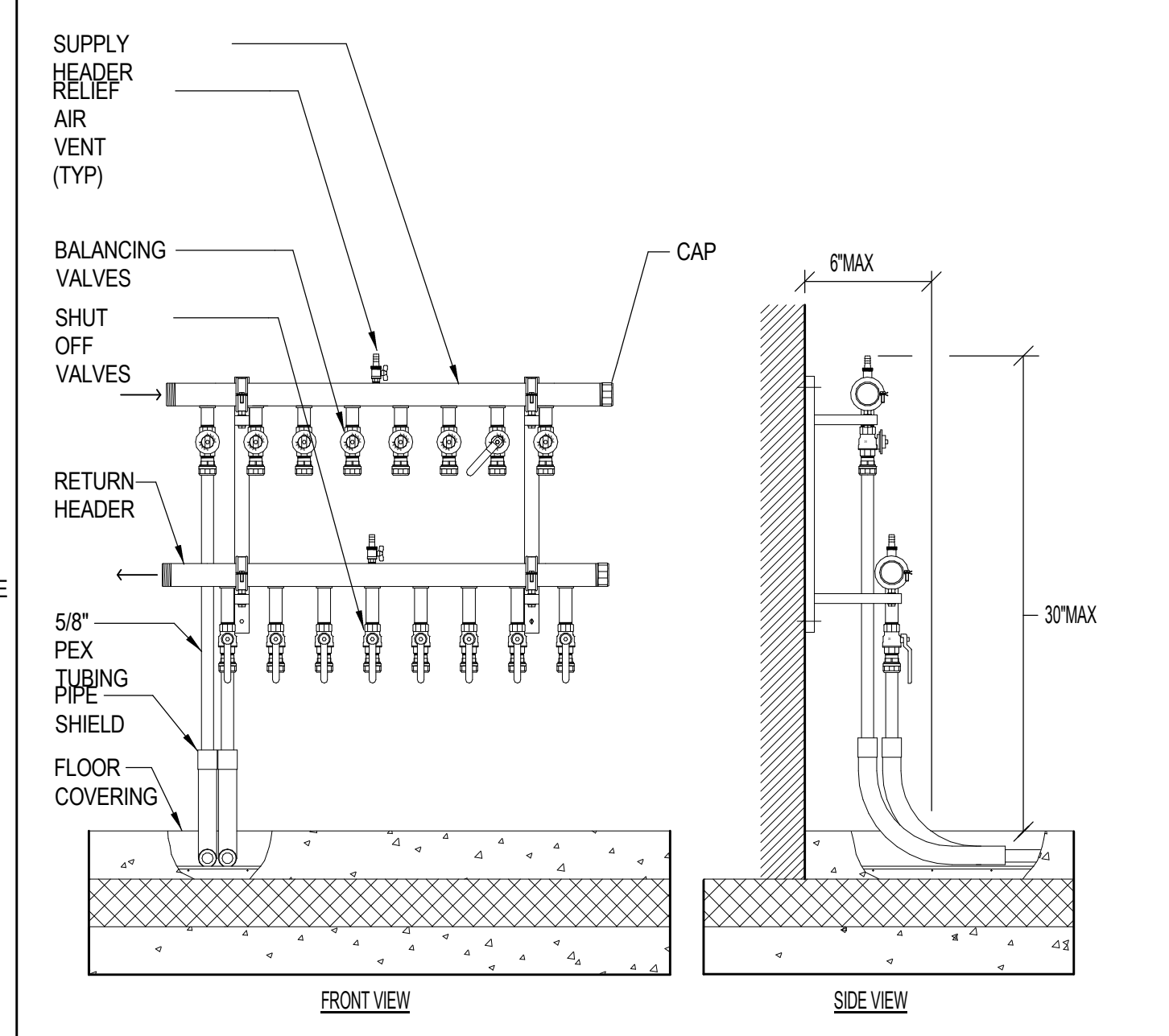
8 ACOUSTA-FLEX ELBOW ON RETURN AIR INLET

NO SCALE



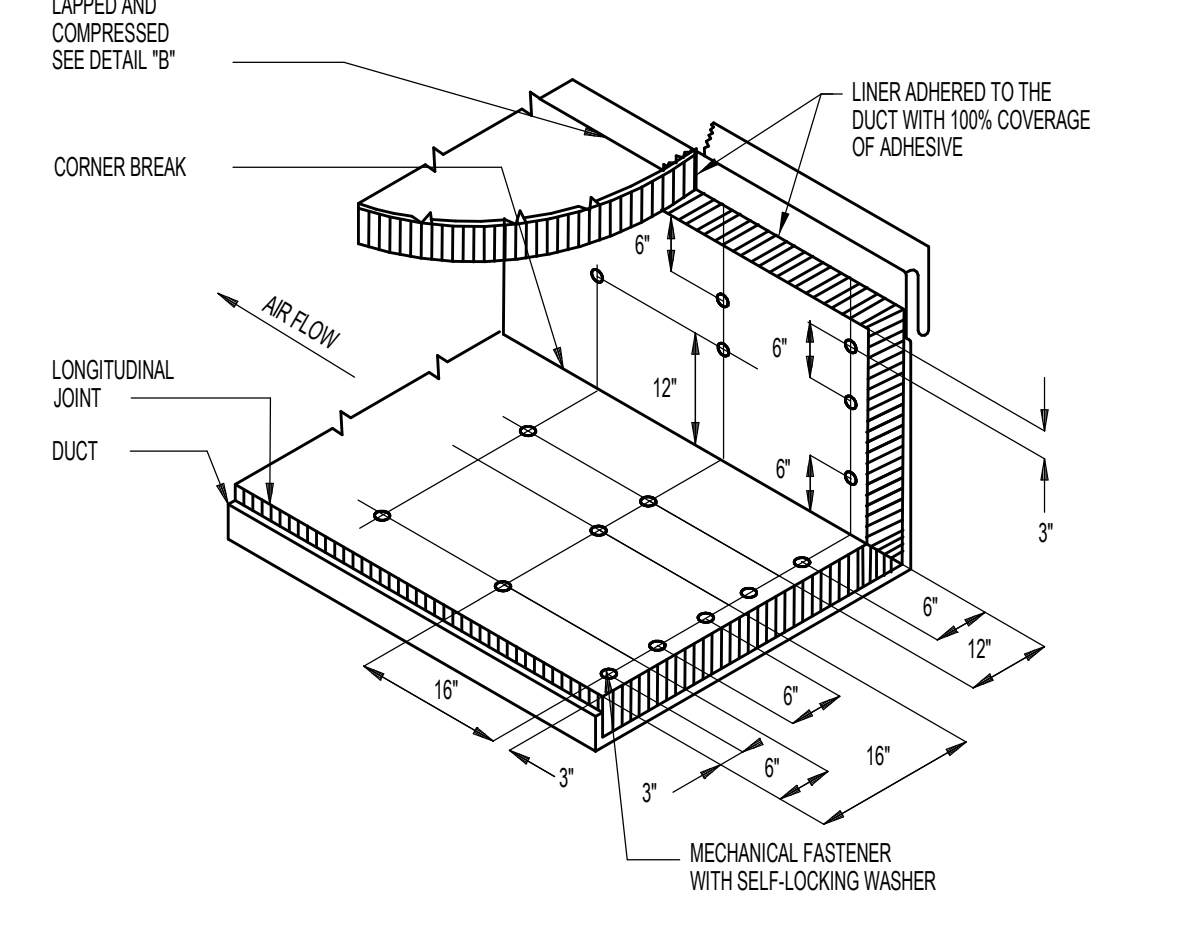
5 DIVISION 23 PLENUM DIVIDER

NOT TO SCALE



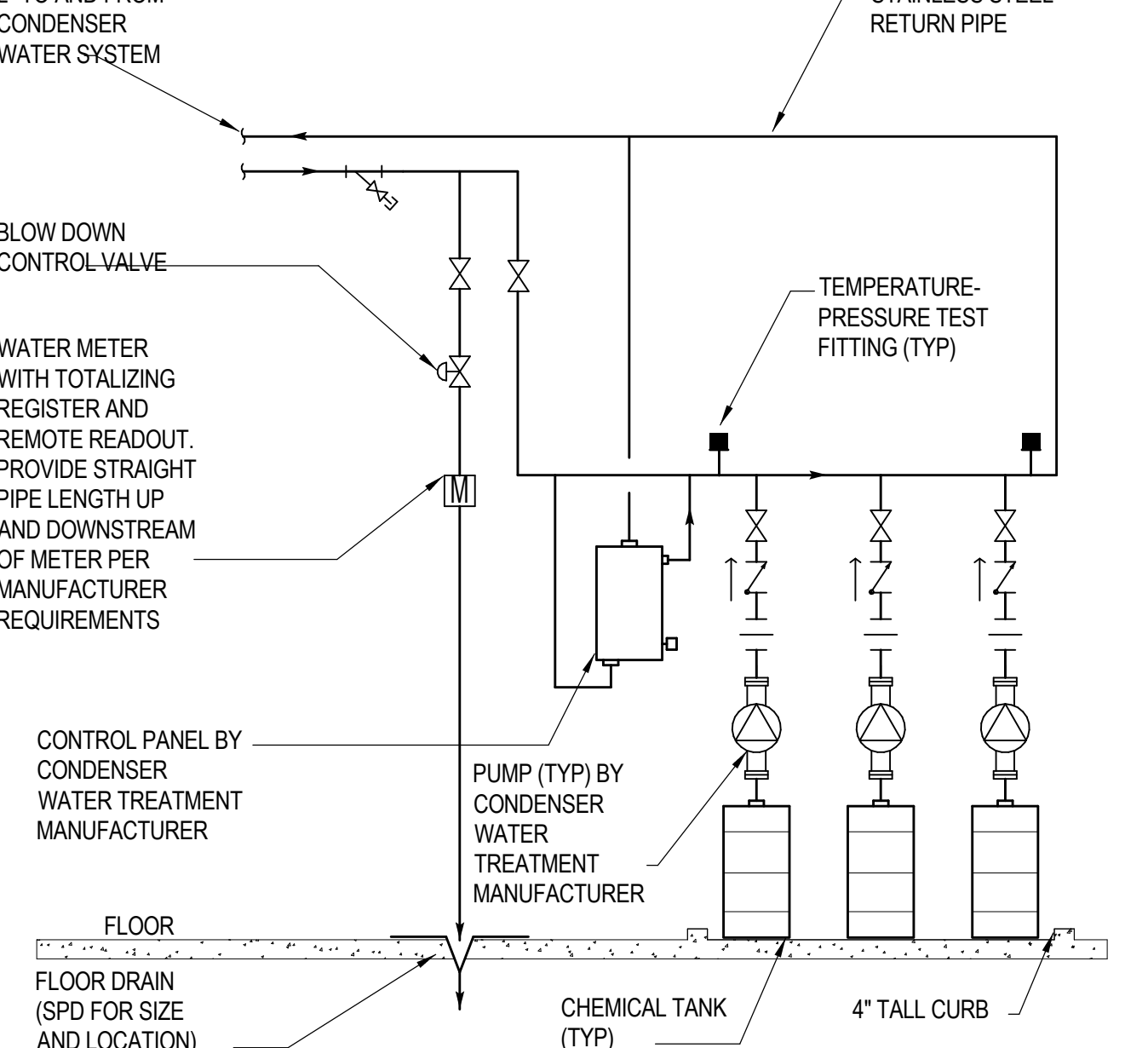
2 RADIANT FLOOR MANIFOLD

NO SCALE



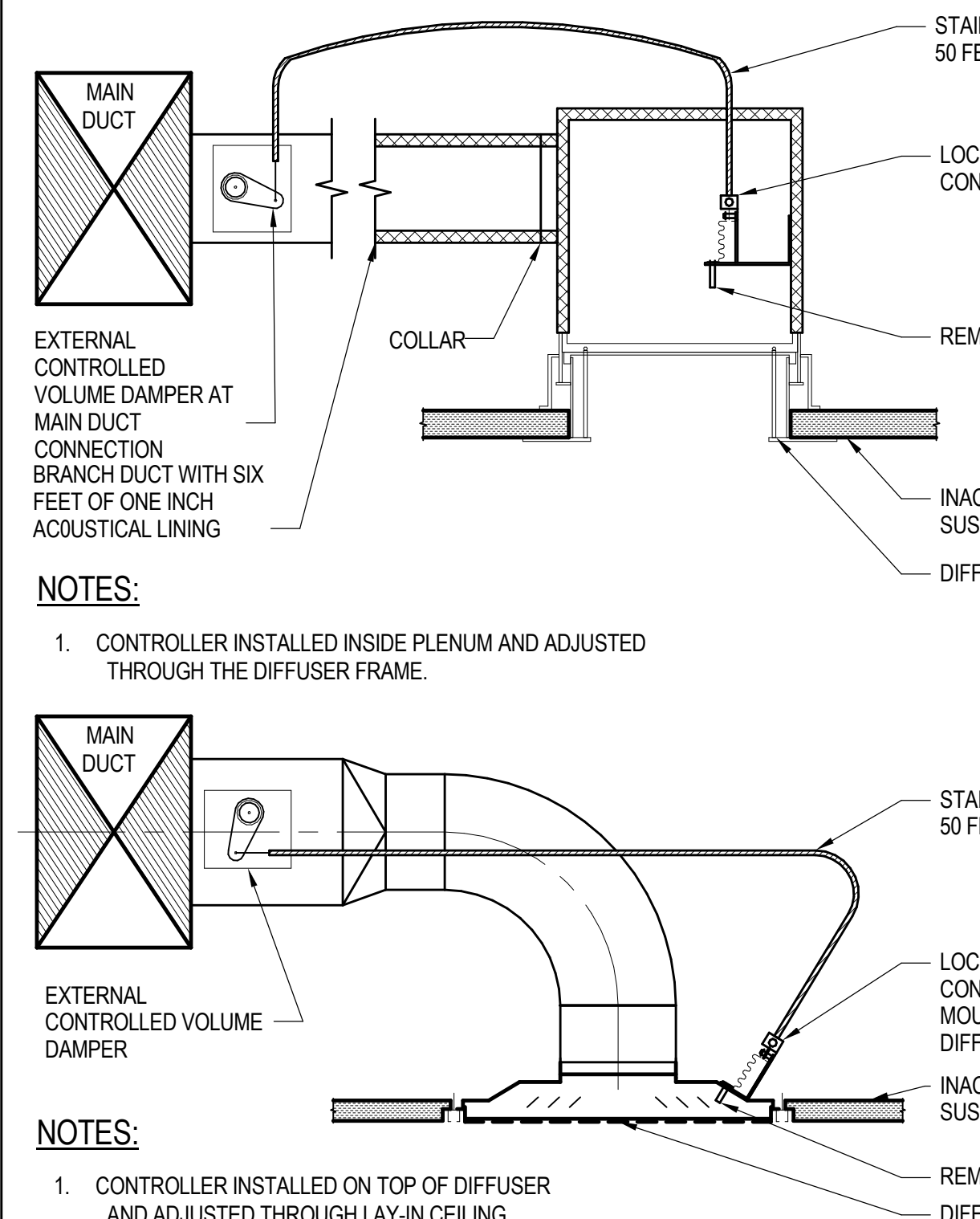
12 ACOUSTICAL DUCT LINING DETAIL

NO SCALE



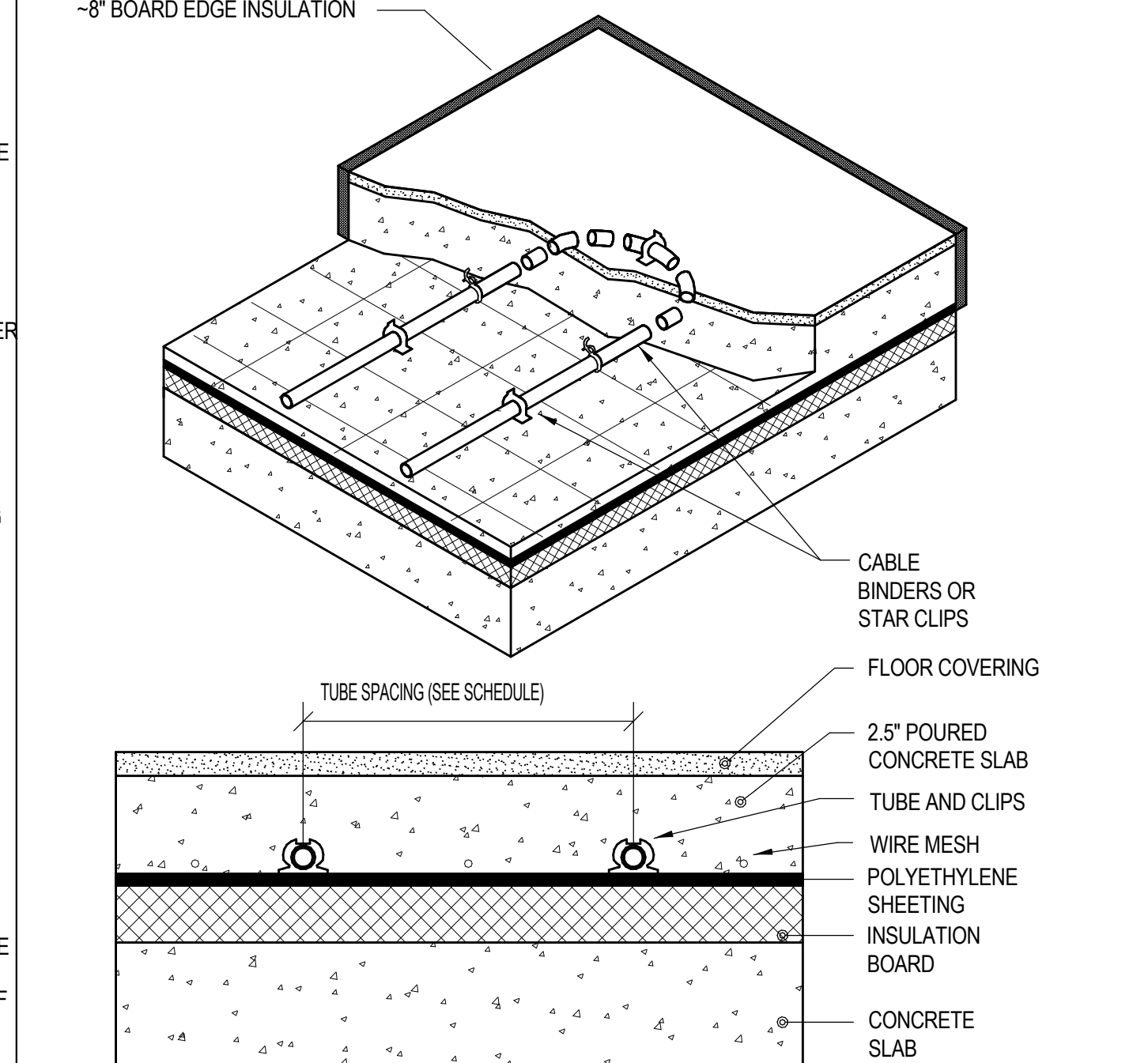
9 CONDENSER WATER TREATMENT SYSTEM

NO SCALE



6 REMOTE CABLE DAMPER CONTROLLER

NO SCALE



3 RADIANT FLOOR CONSTRUCTION

NO SCALE



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DRAWING TITLE

**MECHANICAL DETAILS**

PROJECT NO. **S12.10250.00** DRAWING NUMBER **M6.03**



BOSTON PROPERTIES / HINES  
Owner

PELLI CLARKE PELLI ARCHITECTS  
Design Architect

KENDALL/HEATON ASSOCIATES, INC.  
Architect of Record

MAGNUSON KLEMENCIC ASSOCIATES  
Structural Engineer

WSP  
MEFPF Engineer

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Landscape Architect

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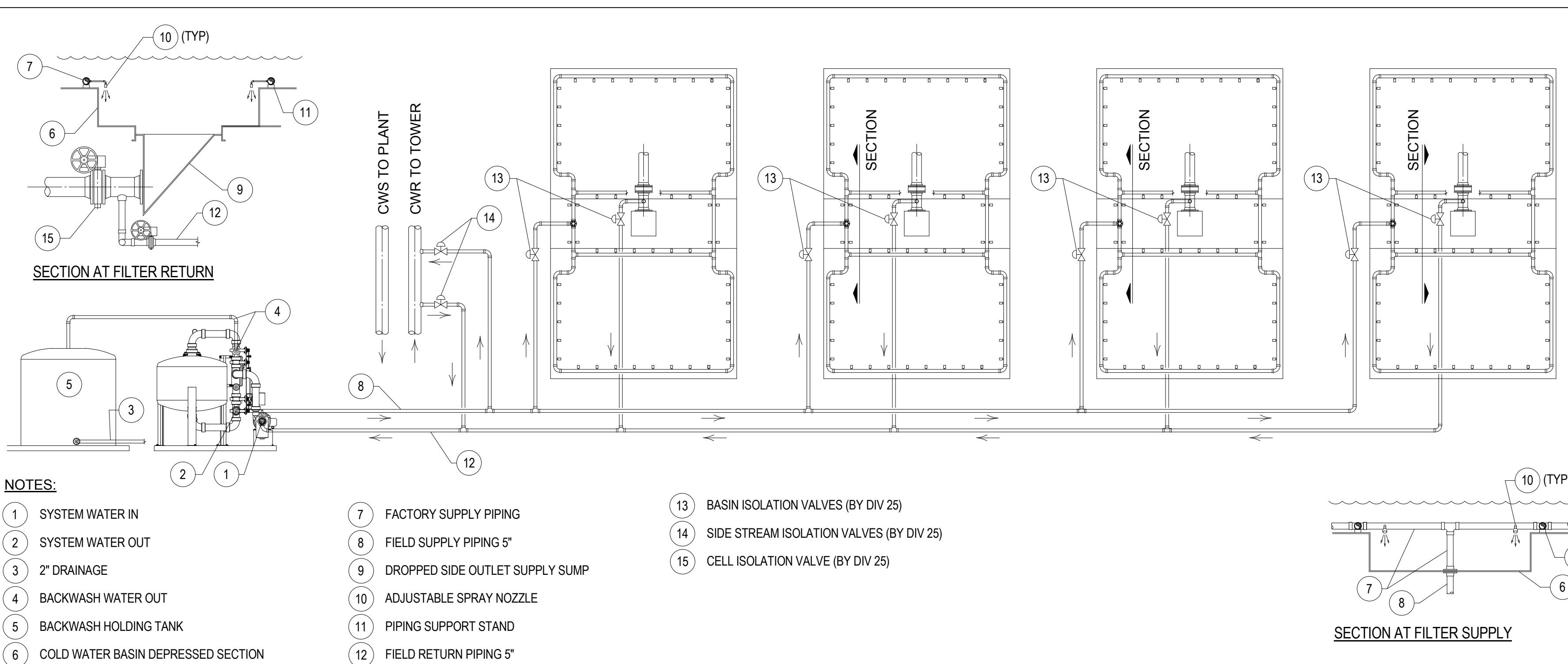
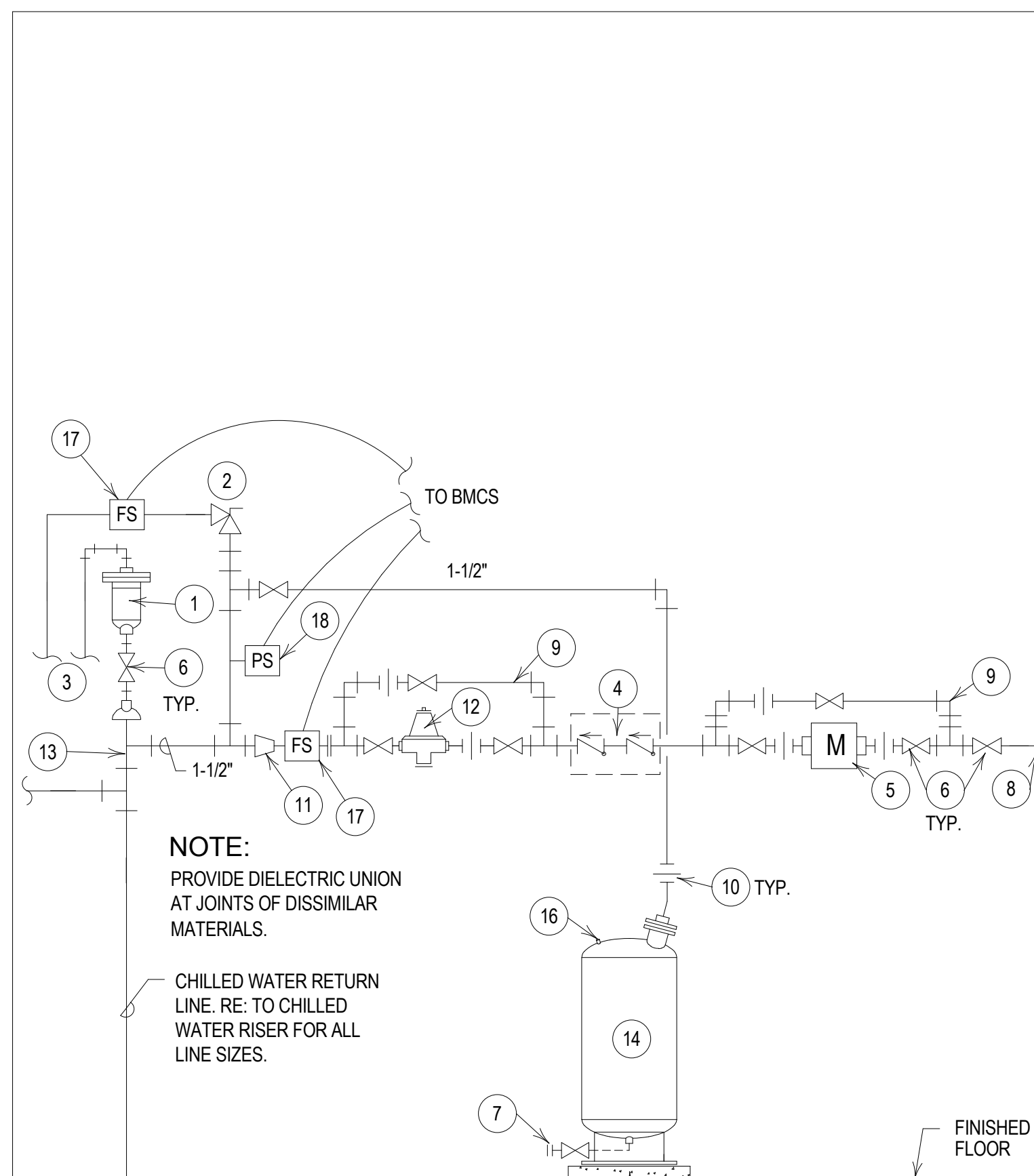
HMA CONSULTING  
Building Management and Controls Engineer

C.S. CAULKINS CO., INC.  
Window Washing Consultant

ENGINEERING SPECIALTIES GROUP  
Aerial Tram Consultant

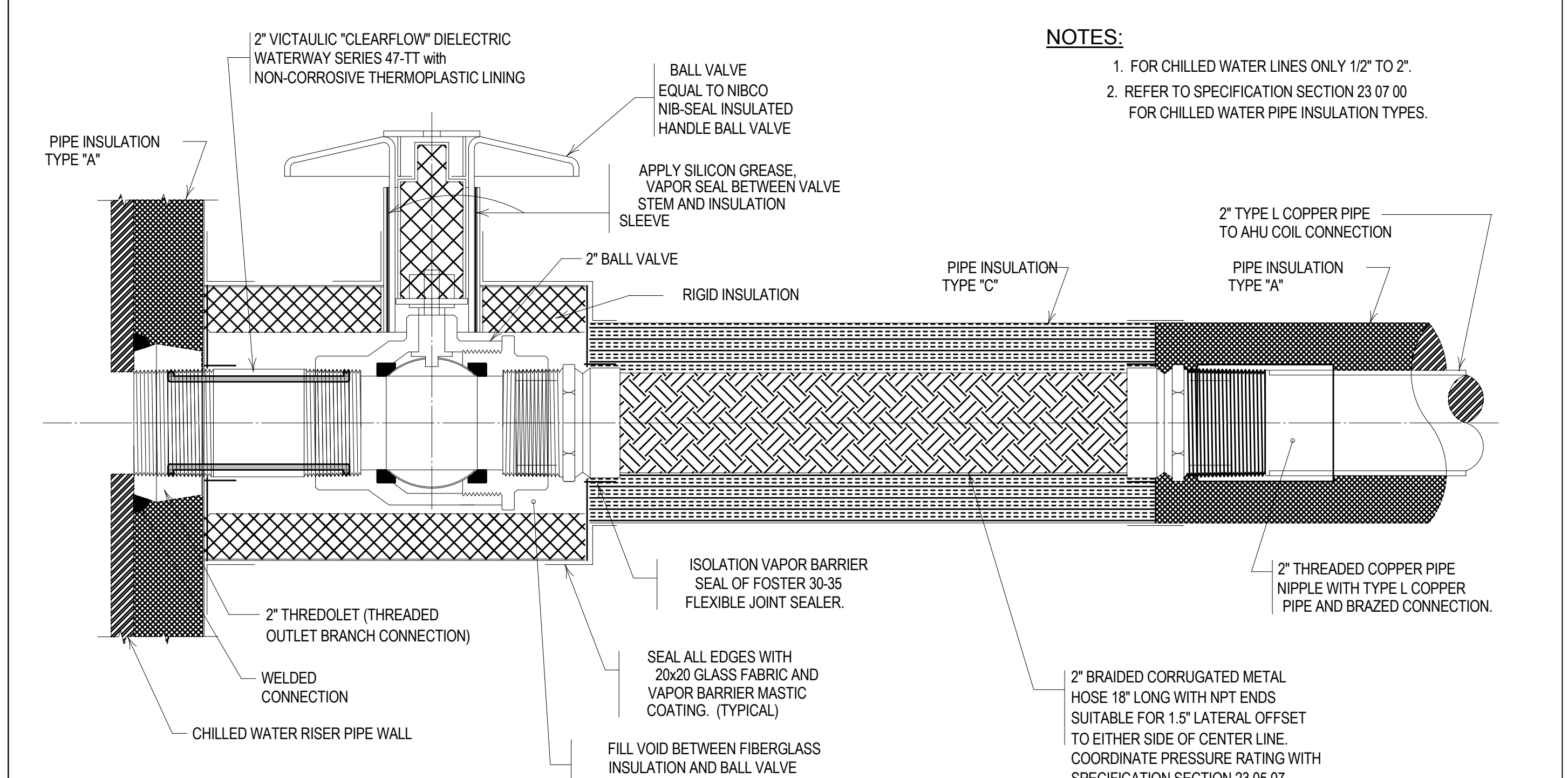
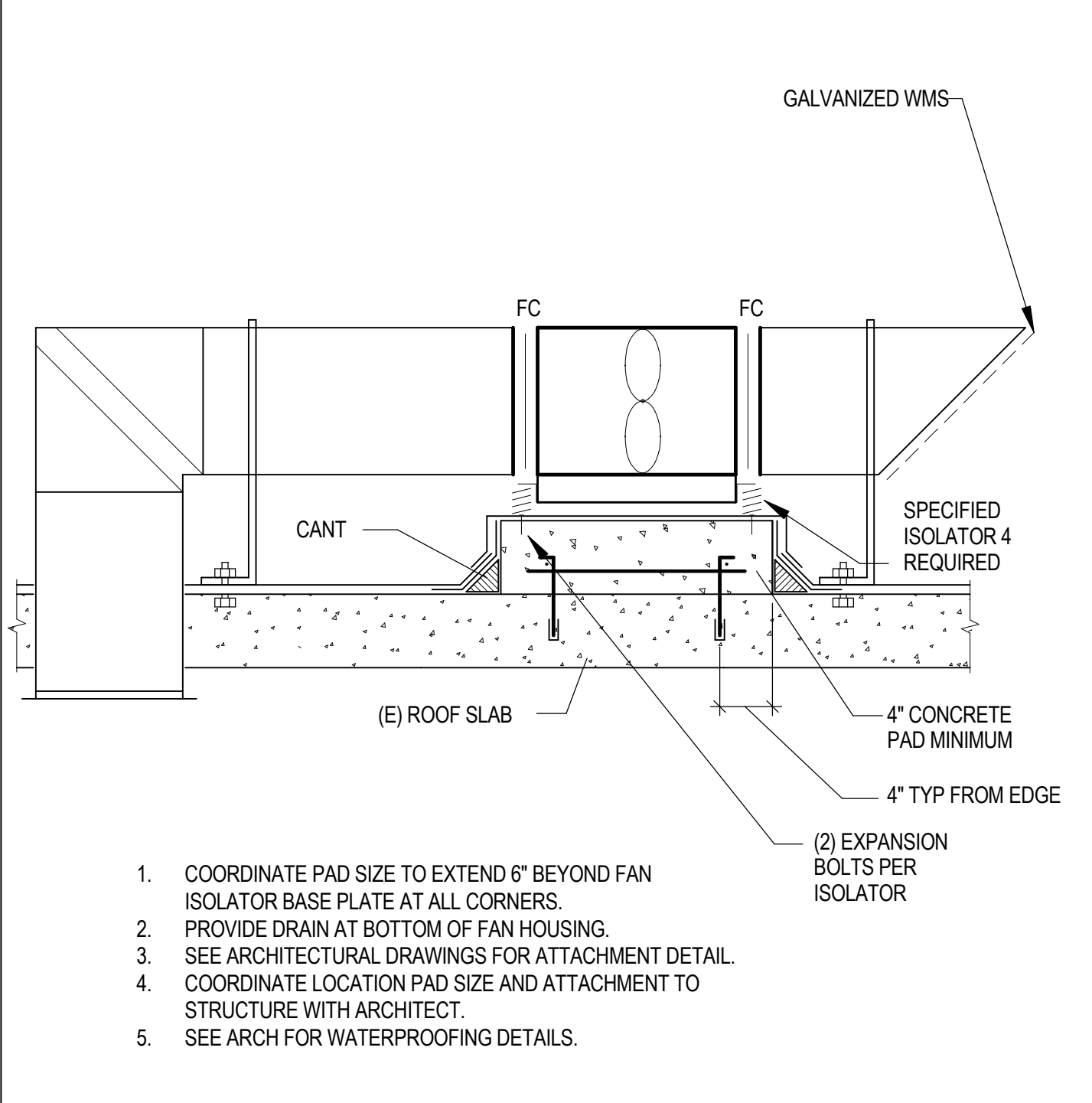
DEBRA NICHOLS DESIGN  
Graphic Design Consultant

ROYSTON HANAMOTO ALLEY & ABEY  
Landscape Architect of Record



1 COOLING TOWER FILTRATION PIPING DETAIL NO SCALE

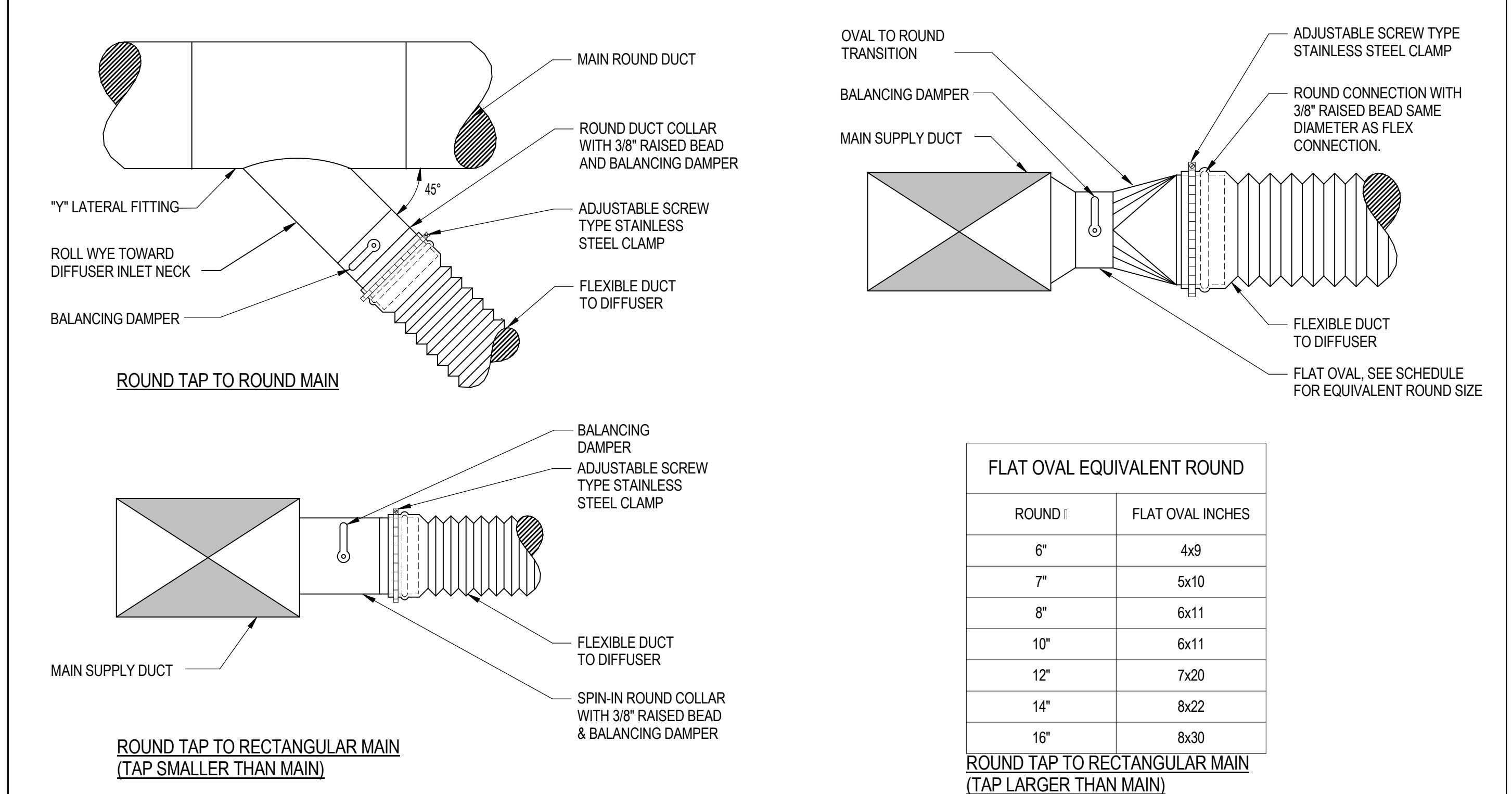
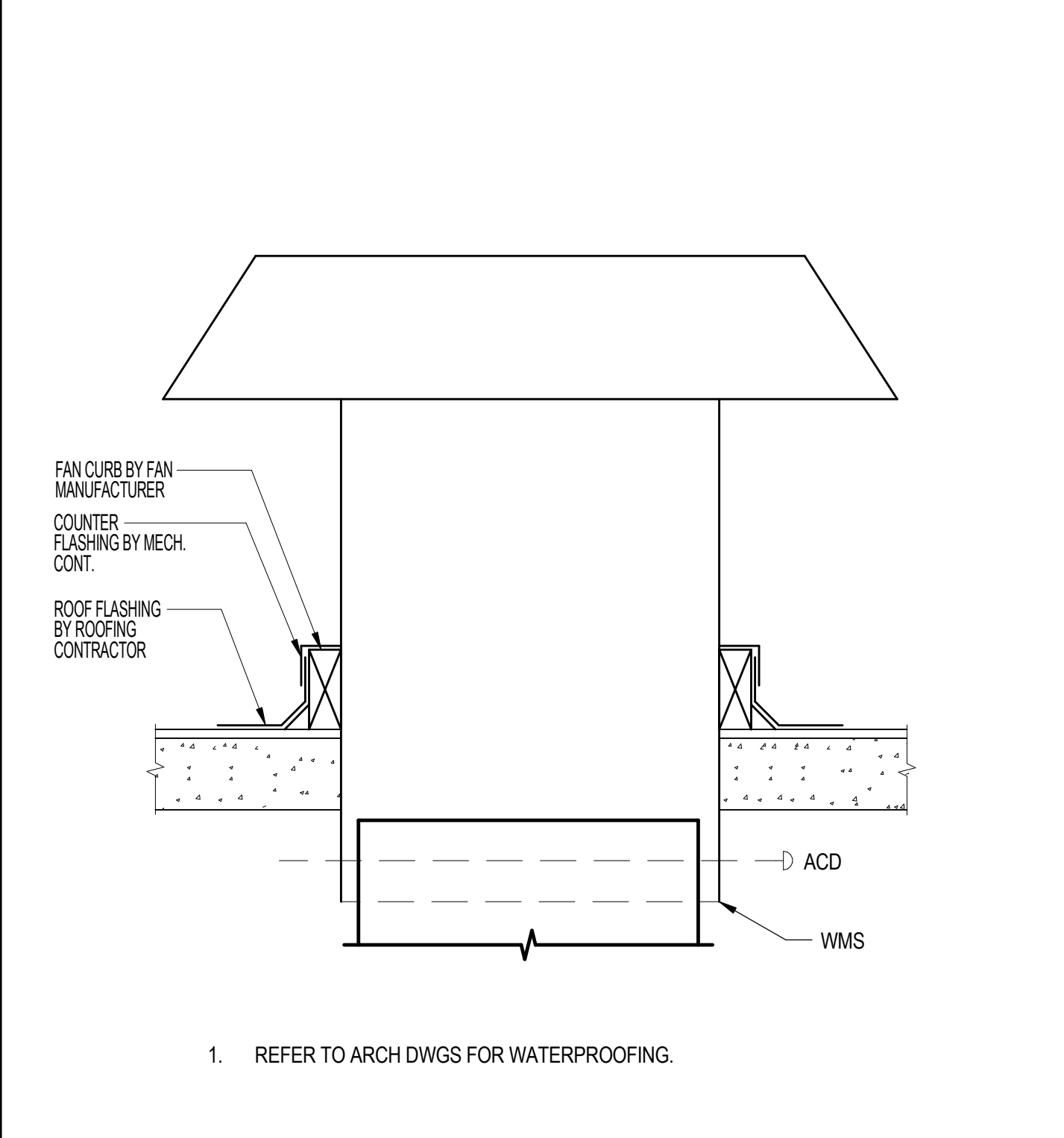
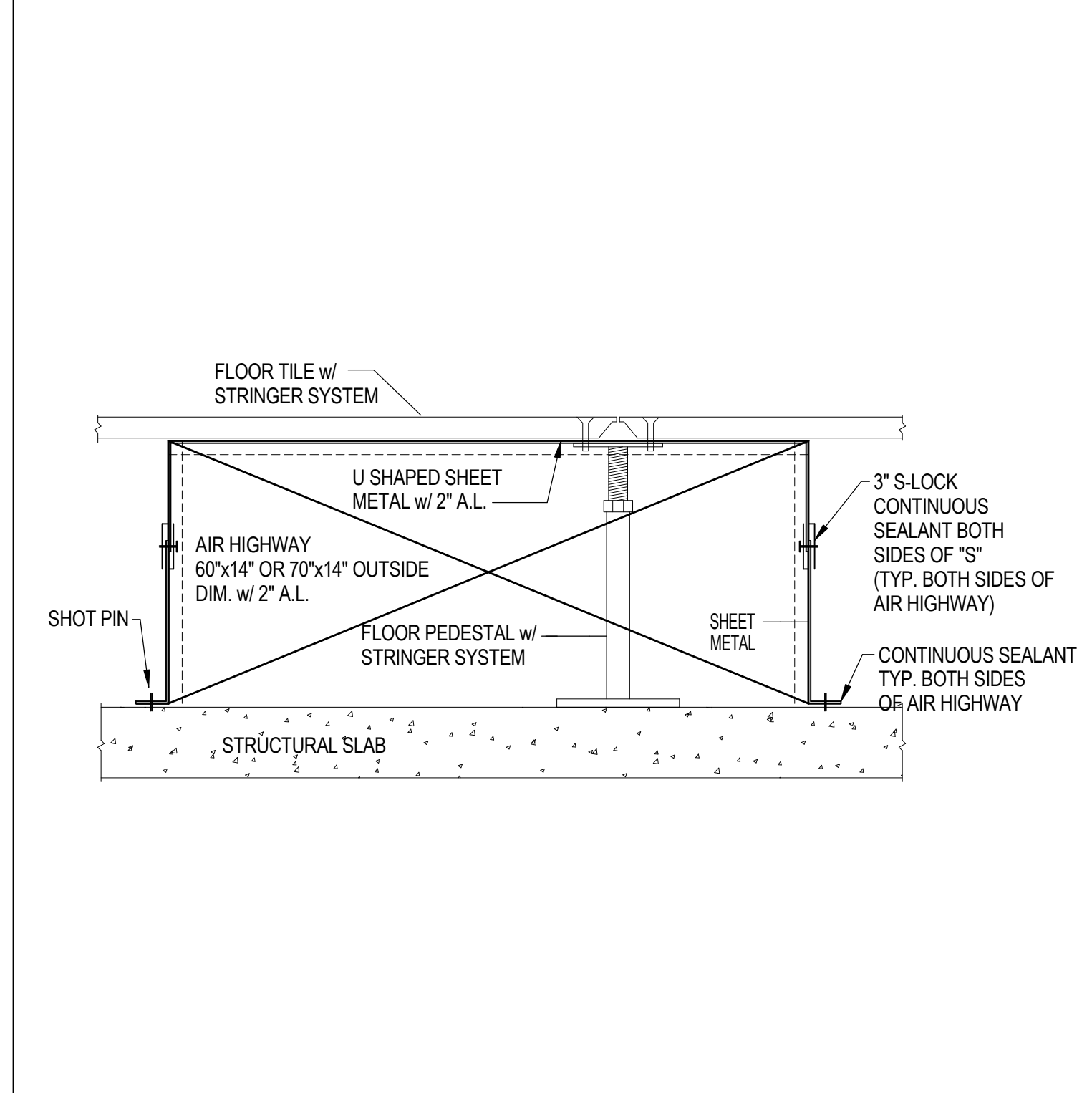
- KEYED NOTES:**
- 1 AUTOMATIC AIR VENT. SEE AUTOMATIC AIR VENT FOR ADDITIONAL INFORMATION.
  - 2 PRESSURE RELIEF VALVE.
  - 3 ROUTE DRAIN LINES TO NEAREST FLOOR DRAIN. REFER TO PLUMBING DRAWINGS.
  - 4 BACK FLOW PREVENTER. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
  - 5 DOMESTIC WATER METER. REFER TO PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
  - 6 STOP VALVE. (FULL PORT BALL VALVE)
  - 7 3/4" VALVED DRAIN LINE WITH HOSE END ADAPTER.
  - 8 DOMESTIC COLD WATER LINE. RE: TO PLUMBING PLANS FOR ADDITIONAL INFORMATION.
  - 9 FULL SIZE BY-PASS LINE.
  - 10 UNION
  - 11 CONCENTRIC REDUCER.
  - 12 DOMESTIC WATER PRESSURE REDUCING VALVE.
  - 13 DO NOT INSTALL VALVES BETWEEN SYSTEM AND RELIEF VALVE.
  - 14 DIAPHRAGM TYPE EXPANSION TANK. SEE SCHEDULE ABOVE FOR CAPACITY.
  - 15 CONCRETE HOUSEKEEPING PAD.
  - 16 AIR CHARGE CONNECTION
  - 17 FLOW SWITCH WITH ALARM OUTPUT FOR BMCS CONNECTION. REFER TO SPECIFICATION.
  - 18 PRESSURE SENSOR BY DIVISION 25 FOR HIGH AND LOW PRESSURE ALARM TO BMCS.



6 CLOSED SYSTEM EXPANSION TANK DETAIL NTS

4 ROOF MOUNTED FAN DETAIL NTS

2 TYPICAL FLOOR CHILLED AND HEATING HOT WATER RISER TAP NO SCALE



7 AIR HIGHWAY SECTION IN TYPICAL MECHANICAL ROOM NO SCALE

5 RELIEF VENT (ROOF MOUNTED) NTS

3 LOW PRESSURE BRANCH DUCT CONNECTIONS NO SCALE

**MECHANICAL DETAILS**