

MARY L PASSAGE MIDDLE SCHOOL

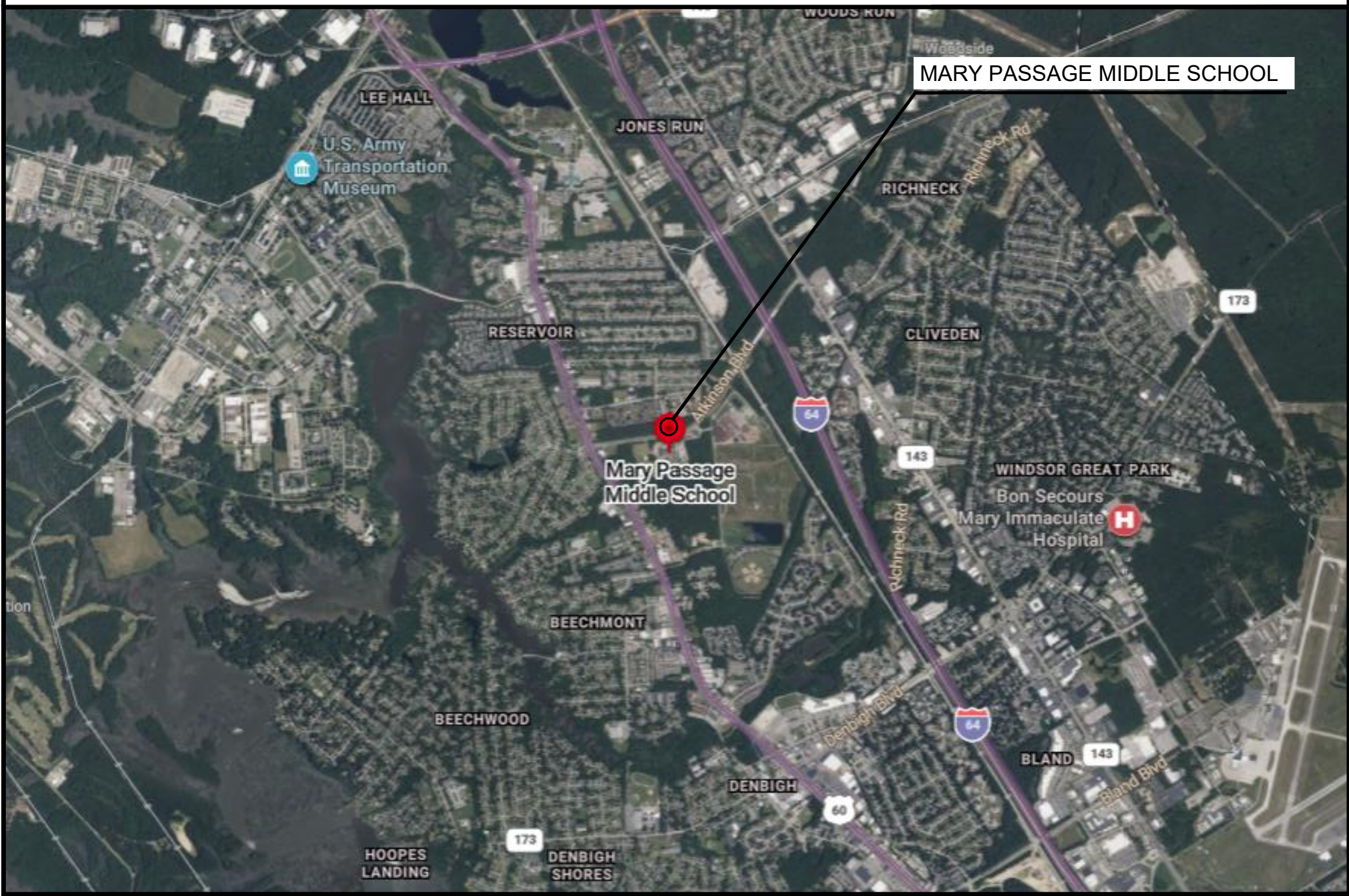
HVAC REPLACEMENT

NEWPORT NEWS PUBLIC SCHOOLS

NEWPORT NEWS, VIRGINIA
IFB #014-0-2024/SNB

THOMPSON CONSULTING ENGINEERS PROJECT NO. 22-113

AREA MAP



BUILDING CODE SUMMARY

- CURRENT BUILDING CODE: VIRGINIA UNIFORM STATEWIDE BUILDING CODE 2018 EDITION.
- CURRENT CONSTRUCTION CODE: VIRGINIA CONSTRUCTION CODE 2018 EDITION.
- CURRENT BUILDING CODE: VIRGINIA EXISTING BUILDING CODE 2018 EDITION. LEVEL 1 ALTERATION.
- TOTAL GROSS FLOOR AREA: 138,760 SF.
- USE GROUP CLASSIFICATION: EDUCATION GROUP E AND ASSEMBLY GROUP A3.
- CONSTRUCTION TYPE: TYPE 2A, NONCOMBUSTIBLE - FULLY SPRINKLERED AND TYPE 3A, ORDINARY - FULLY SPRINKLERED.

VICINITY MAP



DRAWING INDEX

SHEET NO.	DRAWING TITLES
T0.1	TITLE SHEET
G0.1	GENERAL SITE PLAN
CP1.1	FIRST FLOOR REFLECTED CEILING PLAN - AREA "A" - DEMOLITION AND NEW WORK
CP1.2	FIRST FLOOR REFLECTED CEILING PLAN - AREA "B" - DEMOLITION AND NEW WORK
CP1.3	FIRST FLOOR REFLECTED CEILING PLAN - AREA "C" - DEMOLITION AND NEW WORK
CP1.4	FIRST FLOOR REFLECTED CEILING PLAN - AREA "D" - DEMOLITION AND NEW WORK
CP1.5	SECOND FLOOR REFLECTED CEILING PLAN - AREA "E" - DEMOLITION AND NEW WORK
CP1.6	SECOND FLOOR REFLECTED CEILING PLAN - AREA "F" - DEMOLITION AND NEW WORK
CP1.7	SECOND FLOOR REFLECTED CEILING PLAN - AREA "G" - DEMOLITION AND NEW WORK
M0.1	GENERAL NOTES, LEGEND AND ABBREVIATIONS
M0.2	MECHANICAL SCHEDULES
M0.3	MECHANICAL SCHEDULES
M0.4	MECHANICAL SCHEDULES
M0.5	VENTILATION CALCULATIONS
M0.6	VENTILATION CALCULATIONS
MD1.1	FIRST FLOOR PLAN - AREA "A" - MECHANICAL - DEMOLITION
MD1.2	FIRST FLOOR PLAN - AREA "B" - MECHANICAL - DEMOLITION
MD1.3	FIRST FLOOR PLAN - AREA "C" - MECHANICAL - DEMOLITION
MD1.4	FIRST FLOOR PLAN - AREA "D" - MECHANICAL - DEMOLITION
MD1.5	SECOND FLOOR PLAN - AREA "E" - MECHANICAL - DEMOLITION
MD1.6	SECOND FLOOR PLAN - AREA "F" - MECHANICAL - DEMOLITION
MD1.7	SECOND FLOOR PLAN - AREA "G" - MECHANICAL - DEMOLITION
MD1.8	ROOF PLAN - MECHANICAL - DEMOLITION
MD2.1	FIRST FLOOR PLAN - AREA "A" - PIPING - DEMOLITION
MD2.2	FIRST FLOOR PLAN - AREA "B" - PIPING - DEMOLITION
MD2.3	FIRST FLOOR PLAN - AREA "C" - PIPING - DEMOLITION
MD2.4	FIRST FLOOR PLAN - AREA "D" - PIPING - DEMOLITION
MD2.5	SECOND FLOOR PLAN - AREA "E" - PIPING - DEMOLITION
MD2.6	SECOND FLOOR PLAN - AREA "F" - PIPING - DEMOLITION
MD2.7	SECOND FLOOR PLAN - AREA "G" - PIPING - DEMOLITION
MD3.1	ENLARGED FLOOR PLAN - MECHANICAL ROOM - DEMOLITION

DRAWING INDEX

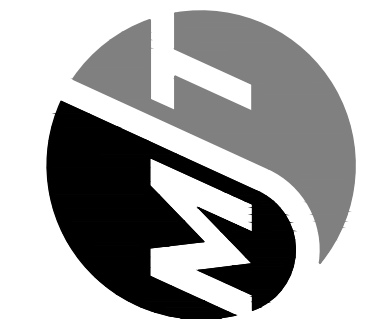
SHEET NO.	DRAWING TITLES
MD3.2	ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - DEMOLITION
MD3.3	ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - DEMOLITION
MD4.1	CHILLED / CONDENSER WATER PIPING DIAGRAMS - DEMOLITION AND NEW WORK
MD4.2	HOT WATER PIPING DIAGRAMS - DEMOLITION AND NEW WORK
MD5.1	FIELD PICTURES - MECHANICAL
MD5.2	FIELD PICTURES - MECHANICAL
M1.1	FIRST FLOOR PLAN - AREA "A" - MECHANICAL - NEW WORK
M1.2	FIRST FLOOR PLAN - AREA "B" - MECHANICAL - NEW WORK
M1.3	FIRST FLOOR PLAN - AREA "C" - MECHANICAL - NEW WORK
M1.4	FIRST FLOOR PLAN - AREA "D" - MECHANICAL - NEW WORK
M1.5	SECOND FLOOR PLAN - AREA "E" - MECHANICAL - NEW WORK
M1.6	SECOND FLOOR PLAN - AREA "F" - MECHANICAL - NEW WORK
M1.7	SECOND FLOOR PLAN - AREA "G" - MECHANICAL - NEW WORK
M1.8	ROOF PLAN - MECHANICAL - NEW WORK
M2.1	FIRST FLOOR PLAN - AREA "A" - PIPING - NEW WORK
M2.2	FIRST FLOOR PLAN - AREA "B" - PIPING - NEW WORK
M2.3	FIRST FLOOR PLAN - AREA "C" - PIPING - NEW WORK
M2.4	FIRST FLOOR PLAN - AREA "D" - PIPING - NEW WORK
M2.5	SECOND FLOOR PLAN - AREA "E" - PIPING - NEW WORK
M2.6	SECOND FLOOR PLAN - AREA "F" - PIPING - NEW WORK
M2.7	SECOND FLOOR PLAN - AREA "G" - PIPING - NEW WORK
M3.1	ENLARGED FLOOR PLAN - MECHANICAL ROOM - NEW WORK
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M3.3	ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - NEW WORK
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M4.2	MECHANICAL DETAILS
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M5.3	AUTOMATIC TEMPERATURE CONTROLS
M5.4	AUTOMATIC TEMPERATURE CONTROLS
M5.5	AUTOMATIC TEMPERATURE CONTROLS
M5.6	AUTOMATIC TEMPERATURE CONTROLS
M5.7	EXISTING AUTOMATIC TEMPERATURE CONTROLS
M5.8	EXISTING AUTOMATIC TEMPERATURE CONTROLS

DRAWING INDEX

SHEET NO.	DRAWING TITLES
M5.9	EXISTING AUTOMATIC TEMPERATURE CONTROLS
M6.1	CONTROL RISER DIAGRAMS
M6.2	CONTROL RISER DIAGRAMS
E0.1	ELECTRICAL LEGEND, ABBREVIATIONS, NOTES
ED1.1	PARTIAL FIRST FLOOR PLAN - AREA 'A' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK
ED1.2	PARTIAL FIRST FLOOR PLAN - AREA 'B' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK
ED1.3	PARTIAL FIRST FLOOR PLAN - AREA 'C' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK
ED1.4	PARTIAL FIRST FLOOR PLAN - AREA 'D' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK
ED1.5	PARTIAL SECOND FLOOR PLAN - AREA 'E' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK
ED1.6	PARTIAL SECOND FLOOR PLAN - AREA 'F' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK
ED1.7	PARTIAL SECOND FLOOR PLAN - AREA 'G' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK
ED2.1	PARTIAL FIRST FLOOR PLAN - AREA 'A' - HVAC POWER - DEMOLITION
ED2.2	PARTIAL FIRST FLOOR PLAN - AREA 'B' - HVAC POWER - DEMOLITION
ED2.3	PARTIAL FIRST FLOOR PLAN - AREA 'C' - HVAC POWER - DEMOLITION
ED2.4	PARTIAL FIRST FLOOR PLAN - AREA 'D' - HVAC POWER - DEMOLITION
ED2.5	PARTIAL SECOND FLOOR PLAN - AREA 'E' - HVAC POWER - DEMOLITION
ED2.6	PARTIAL SECOND FLOOR PLAN - AREA 'F' - HVAC POWER - DEMOLITION
ED2.7	PARTIAL SECOND FLOOR PLAN - AREA 'G' - HVAC POWER - DEMOLITION
ED2.8	ROOF PLAN - HVAC POWER - DEMOLITION
E1.1	PARTIAL FIRST FLOOR PLAN - AREA 'A' - HVAC POWER - NEW WORK
E1.2	PARTIAL FIRST FLOOR PLAN - AREA 'B' - HVAC POWER - NEW WORK
E1.3	PARTIAL FIRST FLOOR PLAN - AREA 'C' - HVAC POWER - NEW WORK
E1.4	PARTIAL FIRST FLOOR PLAN - AREA 'D' - HVAC POWER - NEW WORK
E1.5	PARTIAL FIRST FLOOR PLAN - AREA 'E' - HVAC POWER - NEW WORK
E1.6	PARTIAL FIRST FLOOR PLAN - AREA 'F' - HVAC POWER - NEW WORK
E1.7	PARTIAL FIRST FLOOR PLAN - AREA 'G' - HVAC POWER - NEW WORK
E1.8	ROOF PLAN - HVAC POWER - NEW WORK



THOMPSON
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HAMPTON, VA 23666
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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

TITLE SHEET

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

T0.1

DATE: 01/26/2024



SITE PLAN NOTES (THIS SHEET ONLY)	
NO.	DESCRIPTION
1	CONTRACTOR SHALL BE GRANTED ACCESS TO THE LIMITS OF CONSTRUCTION MONDAY THROUGH FRIDAY 7:00 AM TO 4:00 PM DURING THE CONSTRUCTION PERIOD. ACCESS TO THE BUILDING AFTER NORMAL WORKING HOURS SHALL BE ALLOWED WITH OWNER'S (NNPS) PRIOR APPROVAL AND COORDINATION.
2	STAFF PARKING, NO CONTRACTOR PARKING PERMITTED OUTSIDE DESIGNATED AREA.
3	KEEP DRIVEWAYS AND ENTRANCES SERVING THE PREMISES CLEAR AND AVAILABLE TO THE OWNER, THE OWNER'S EMPLOYEES, TEACHERS AND STAFF AND EMERGENCY VEHICLES AT ALL TIMES.
4	REFER TO THE PROJECT MANUAL SPECIFICATION SECTION 018000 "CODE OF CONDUCT" FOR ADMINISTRATIVE AND PROCEDURAL REQUIREMENTS WHILE WORKING ON SCHOOL PREMISES. REFER TO OTHER PROJECT MANUAL SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
5	RECOMMENDED CRANE LOCATION. CONTRACTOR SHALL COORDINATE ACTUAL CRANE LOCATION WITH WORK REQUIRED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL DAMAGE TO SOD, ACCESS ROAD, AND SITE. REPAIR DAMAGE TO PRE-CONSTRUCTION CONDITIONS.
6	CONTRACTOR SHALL USE AREA AS INDICATED FOR PARKING AND STAGING OF EQUIPMENT/MATERIALS. ALL MATERIAL STORED ONSITE SHALL BE SECURED IN CONTRACTORS LOCKED CONSTRUCTION TRAILER. ALL OTHER PARKING AREAS SHALL NOT BE USED WITHOUT OWNER'S PRIOR APPROVAL.
7	ANY POWER OUTAGES AFFECTING THIS AREA SHALL ONLY TAKE PLACE DURING WEEKEND HOURS AND MUST BE COORDINATED WITH OWNER AT LEAST 7 DAYS PRIOR TO SCHEDULED OUTAGE.

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VIRGINIA

SITE PLAN

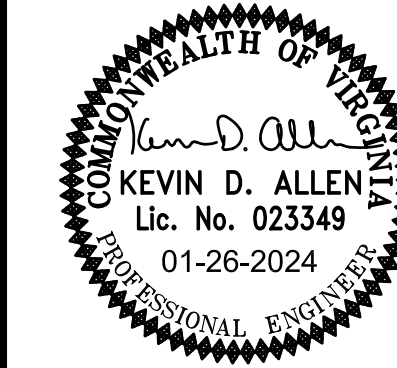
COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

G0.1

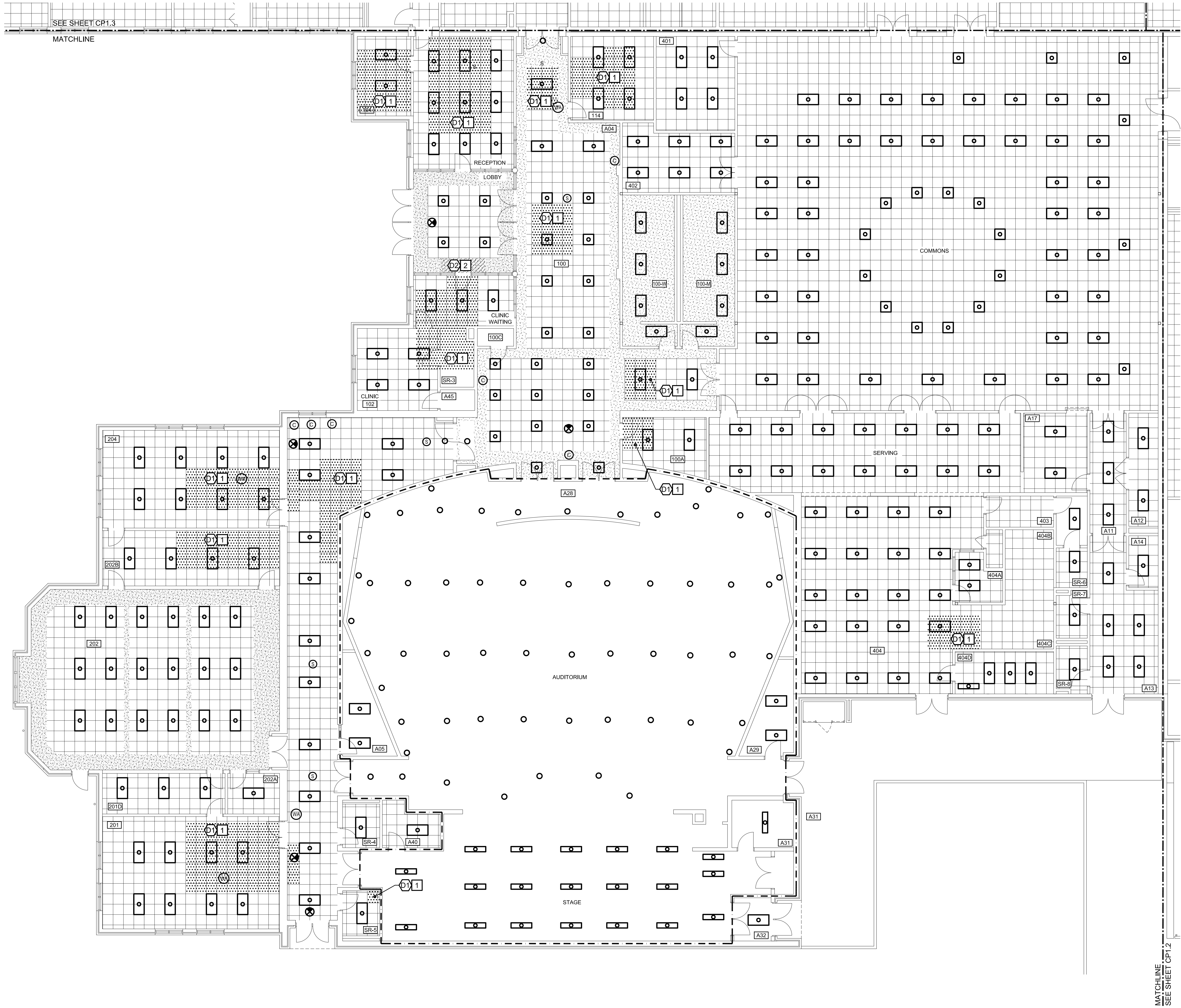
DATE: 01/26/2024



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PROJECT NUMBER: 22-113



SITE PLAN
NO SCALE



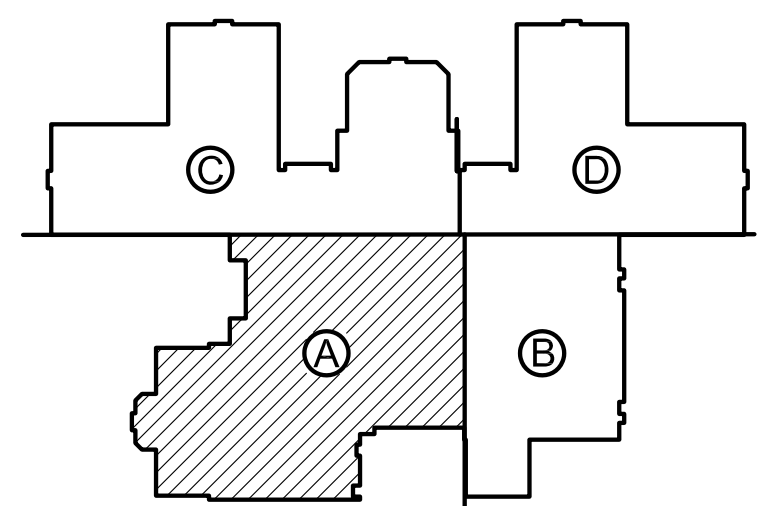
FIRST FLOOR CEILING PLAN - AREA "A" - MECHANICAL - DEMOLITION AND NEW WORK
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
D1	CAREFULLY REMOVE LIMITED PORTIONS OF CEILING GRID AND CEILING TILES AS REQUIRED FOR REMOVAL OF MECHANICAL PIPING, DUCTWORK, AND EQUIPMENT. PROVIDE ADDITIONAL GRID SUPPORTS WHERE DEMOLITION OCCURS TO AVOID SAGGING OF REMAINING CEILING GRID.
D2	CAREFULLY REMOVE PLASTER OR DRYWALL CEILING AS SHOWN.

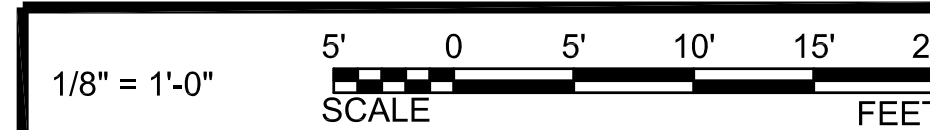
NEW WORK NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
1	AFTER INSTALLATION OF NEW WORK, PROVIDE AND INSTALL NEW CEILING TILES. REINSTALL GRID AND LIGHT FIXTURES RETAINED FROM DEMOLITION. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHT FIXTURE REQUIREMENTS. CEILING GRID AND LIGHT FIXTURES SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION. CONTRACTOR SHALL SURVEY THE CEILING TO DETERMINE SIZE AND QUANTITY OF TILES.
2	PATCH ALL PLASTER CEILINGS TO PRE-CONSTRUCTION CONDITIONS.

- GENERAL DEMOLITION NOTES:** (SHEET CP1.1 THRU CP1.7)
- THE CONTRACTORS SHALL FIELD VERIFY ALL REFLECTED CEILING GRID ELEVATIONS, ORIENTATIONS, AND POSITIONS. REFLECTED CEILING GRID MAY VARY FROM THAT SHOWN ON THIS DRAWING. INVENTORY ALL ACOUSTIC CEILING TILES BEFORE DEMOLITION.
 - THE CONTRACTOR SHALL STORE AND PROTECT ALL REMOVED CEILING GRID FOR RE-INSTALLATION WHERE INDICATED.
 - IMPROPERLY STORED AND HANDLED MATERIALS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
 - UPON INSTALLATION, PROVIDE TILES OF LIKE APPEARANCE TO PRESENT A UNIFORM CEILING FINISH.
 - CONTRACTOR SHALL COORDINATE EXACT QUANTITY AND LOCATION OF CEILING TILES, GRID, AND ELECTRICAL FIXTURES TO BE REMOVED WITH NEW WORK. REFER TO ELECTRICAL SHEETS FOR FIXTURES REQUIRING REMOVAL.

- LEGEND:** (SHEET CP1.1 THRU CP1.7)
- CEILING GRID AND 48" x 24" ACOUSTIC CEILING TILE TO REMAIN.
 - EXTENT OF CEILING GRID AND ACOUSTIC CEILING TILE REMOVAL (DEMOLITION), EXTENT OF CEILING GRID AND ACOUSTIC TILE REINSTALLATION (NEW WORK).
 - EXTENT OF PLASTER CEILING AND BULKHEAD REMOVAL (DEMOLITION), EXTENT OF NEW PLASTER CEILING AND BULKHEAD REINSTALLATION (NEW WORK).
 - PLASTER CEILING TO REMAIN
 - EXTENT OF AREA WITH NO CEILING, STRUCTURE IS EXPOSED
 - 2' x 4' RECESSED LIGHT FIXTURES
 - 1' x 4' RECESSED LIGHT FIXTURES
 - 2' x 2' RECESSED LIGHT FIXTURE
 - SUPPLY AIR DIFFUSER
 - RETURN AIR GRILLE
 - 2' x 2' CEILING ACCESS DOOR
 - LINEAR SUPPLY DIFFUSER
 - SPEAKER
 - MOTION DETECTOR
 - WIRELESS ACCESS POINT
 - EXIT LIGHT
 - DOWN LIGHT
 - CEILING MOUNTED LCD PROJECTOR



KEY PLAN
NOT TO SCALE



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

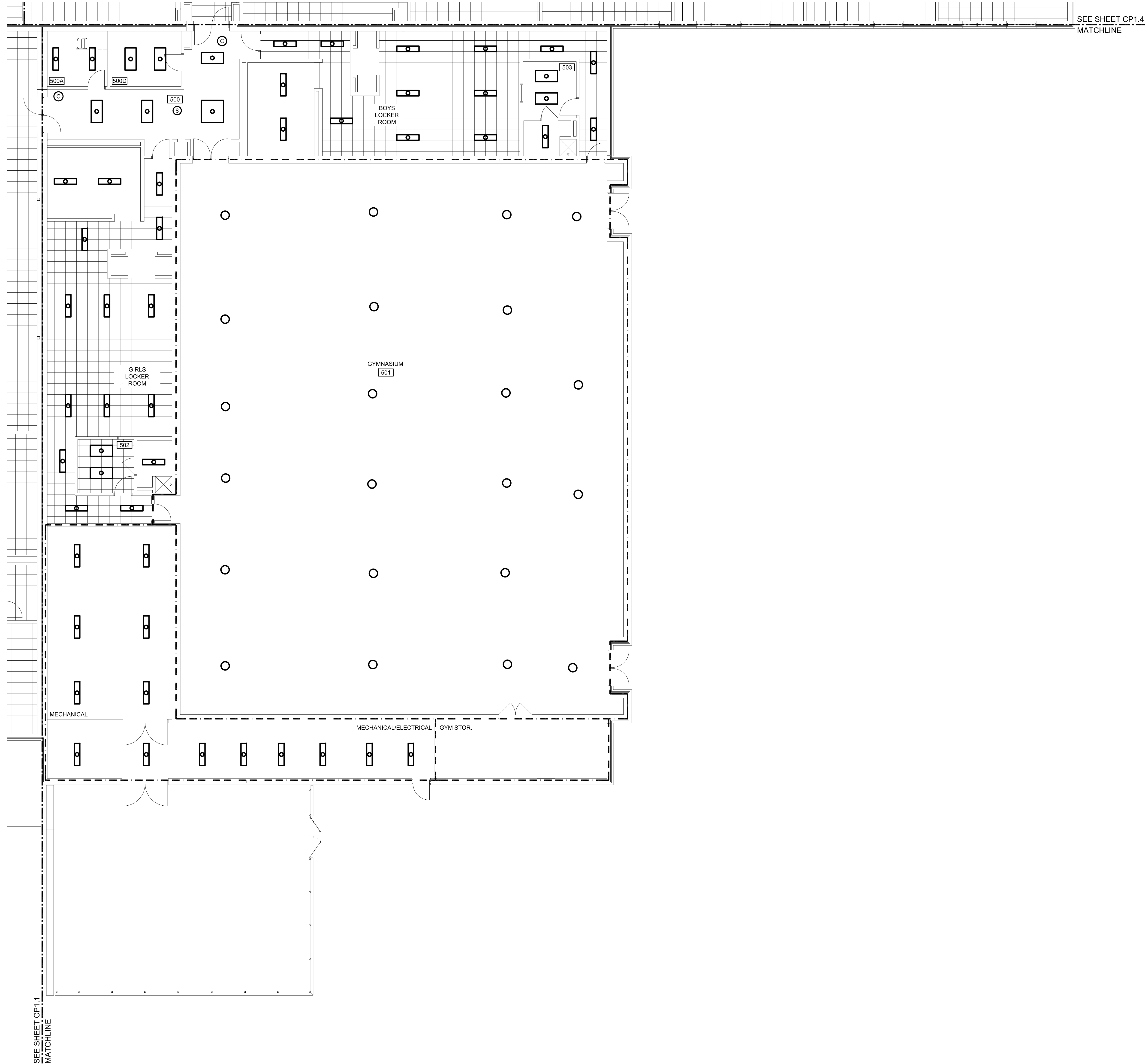
NEWPORT NEWS

FIRST FLOOR CEILING PLAN - AREA "A" - MECHANICAL - DEMOLITION AND NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

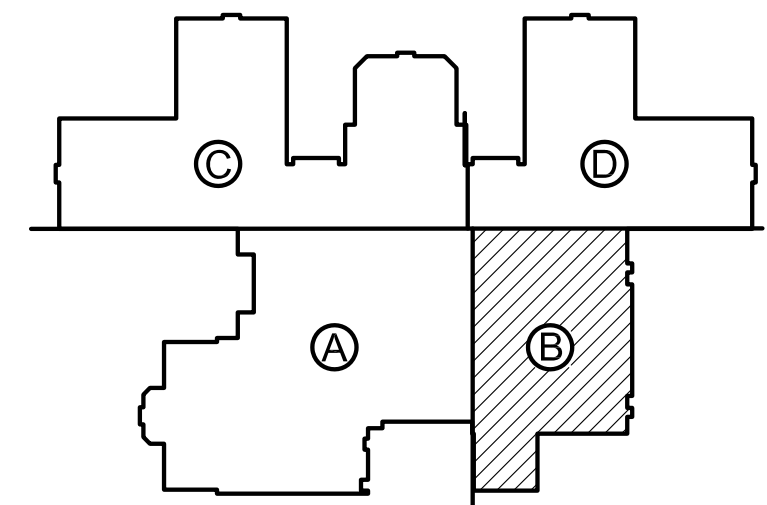
CP1.1

DATE: 01/26/2024

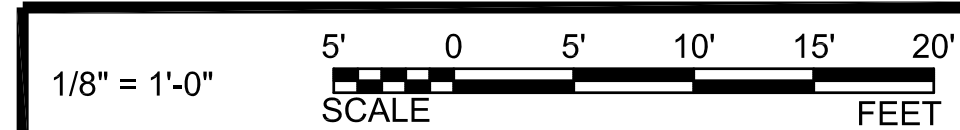


FIRST FLOOR CEILING PLAN - AREA "B" - MECHANICAL - DEMOLITION AND NEW WORK

SCALE: 1/8" = 1'-0"



KEY PLAN
NOT TO SCALE



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PROJECT NUMBER: 22-113



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NEWPORT NEWS PUBLIC SCHOOLS

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NEWPORT NEWS

FIRST FLOOR CEILING PLAN - AREA "B" - MECHANICAL - DEMOLITION AND NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

CP1.2

DATE: 01/26/2024

LEGEND: (SHEET CP1.1 THRU CP1.7)

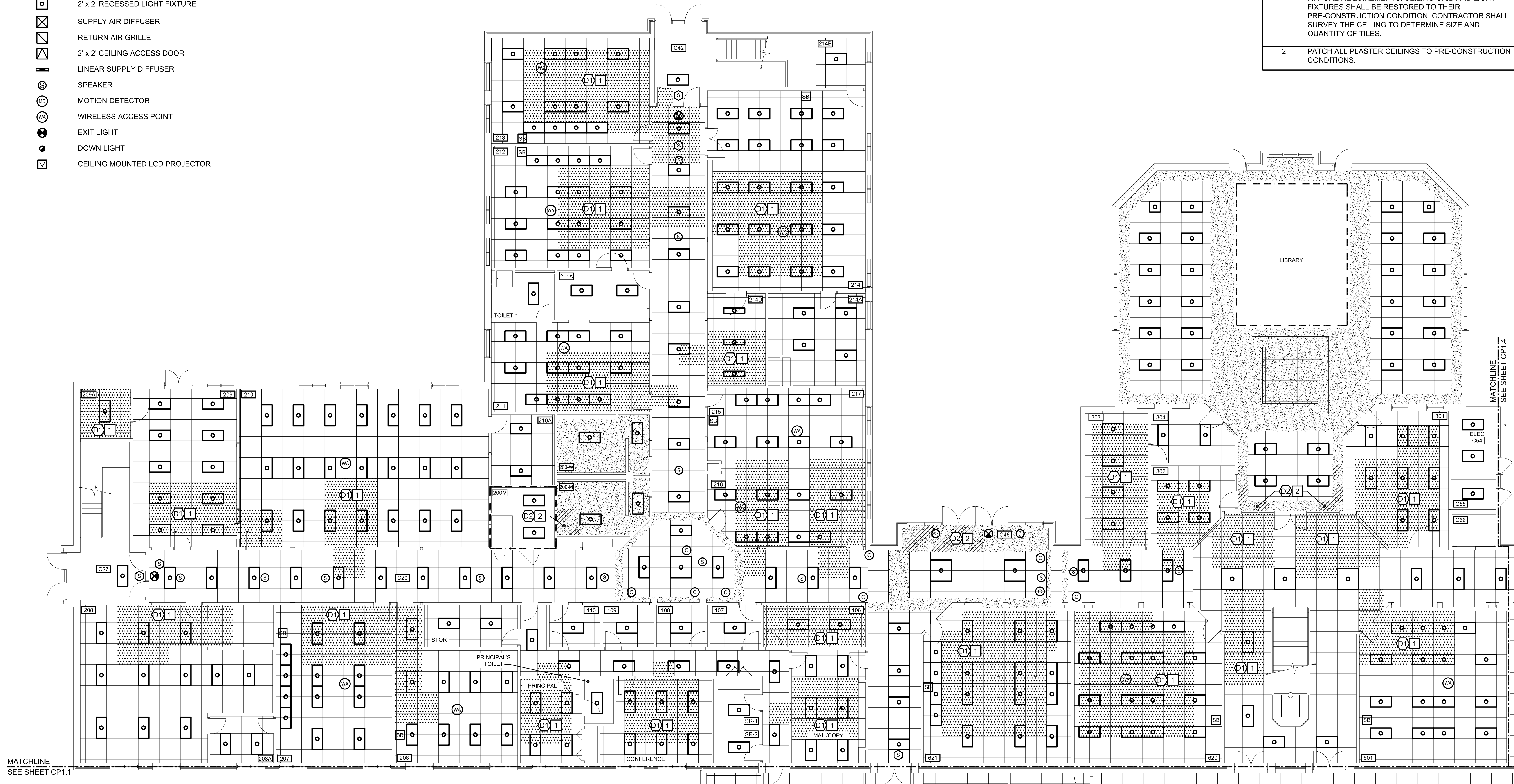
- CEILING GRID AND 48" x 24" ACOUSTIC CEILING TILE TO REMAIN.
- EXTENT OF CEILING GRID AND ACOUSTIC CEILING TILE REMOVAL (DEMOLITION). EXTENT OF CEILING GRID AND ACOUSTIC TILE REINSTALLATION (NEW WORK).
- EXTENT OF PLASTER CEILING AND BULKHEAD REMOVAL (DEMOLITION). EXTENT OF NEW PLASTER CEILING AND BULKHEAD REINSTALLATION (NEW WORK).
- PLASTER CEILING TO REMAIN
- EXTENT OF AREA WITH NO CEILING, STRUCTURE IS EXPOSED
- 2' x 4' RECESSED LIGHT FIXTURES
- 1' x 4' RECESSED LIGHT FIXTURES
- 2' x 2' RECESSED LIGHT FIXTURE
- SUPPLY AIR DIFFUSER
- RETURN AIR GRILLE
- 2' x 2' CEILING ACCESS DOOR
- LINEAR SUPPLY DIFFUSER
- SPEAKER
- MOTION DETECTOR
- WIRELESS ACCESS POINT
- EXIT LIGHT
- DOWN LIGHT
- CEILING MOUNTED LCD PROJECTOR

GENERAL DEMOLITION NOTES: (SHEET CP1.1 THRU CP1.7)

- THE CONTRACTORS SHALL FIELD VERIFY ALL REFLECTED CEILING GRID ELEVATIONS, ORIENTATIONS, AND POSITIONS. REFLECTED CEILING GRID MAY VARY FROM THAT SHOWN ON THIS DRAWING. INVENTORY ALL ACOUSTIC CEILING TILES BEFORE DEMOLITION.
- THE CONTRACTOR SHALL STORE AND PROTECT ALL REMOVED CEILING GRID FOR RE-INSTALLATION WHERE INDICATED.
- IMPROPERLY STORED AND HANDLED MATERIALS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- UPON INSTALLATION, PROVIDE TILES OF LIKE APPEARANCE TO PRESENT A UNIFORM CEILING FINISH.
- CONTRACTOR SHALL COORDINATE EXACT QUANTITY AND LOCATION OF CEILING TILES, GRID, AND ELECTRICAL FIXTURES TO BE REMOVED WITH NEW WORK. REFER TO ELECTRICAL SHEETS FOR FIXTURES REQUIRING REMOVAL.

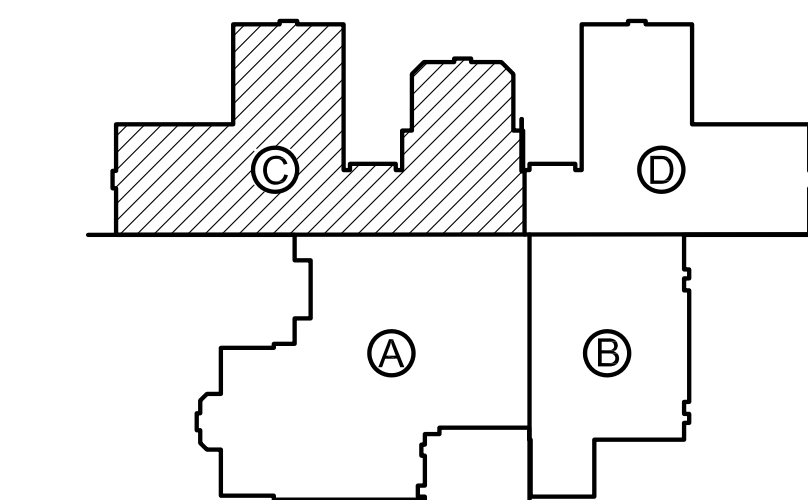
DEMOLITION NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
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D1	CAREFULLY REMOVE LIMITED PORTIONS OF CEILING GRID AND CEILING TILES AS REQUIRED FOR REMOVAL OF MECHANICAL PIPING, DUCTWORK, AND EQUIPMENT. PROVIDE ADDITIONAL GRID SUPPORTS WHERE DEMOLITION OCCURS TO AVOID SAGGING OF REMAINING CEILING GRID.
D2	CAREFULLY REMOVE PLASTER OR DRYWALL CEILING AS SHOWN.

NEW WORK NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
1	AFTER INSTALLATION OF NEW WORK, PROVIDE AND INSTALL NEW CEILING TILES. REINSTALL GRID AND LIGHT FIXTURES RETAINED FROM DEMOLITION. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHT FIXTURE REQUIREMENTS. CEILING GRID AND LIGHT FIXTURES SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION. CONTRACTOR SHALL SURVEY THE CEILING TO DETERMINE SIZE AND QUANTITY OF TILES.
2	PATCH ALL PLASTER CEILINGS TO PRE-CONSTRUCTION CONDITIONS.

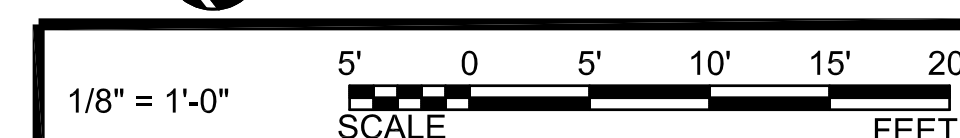


FIRST FLOOR CEILING PLAN - AREA "C" - MECHANICAL - DEMOLITION AND NEW WORK

SCALE: 1/8" = 1'-0"



KEY PLAN
NOT TO SCALE



THOMPSON
Consulting Engineers



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

NEWPORT NEWS

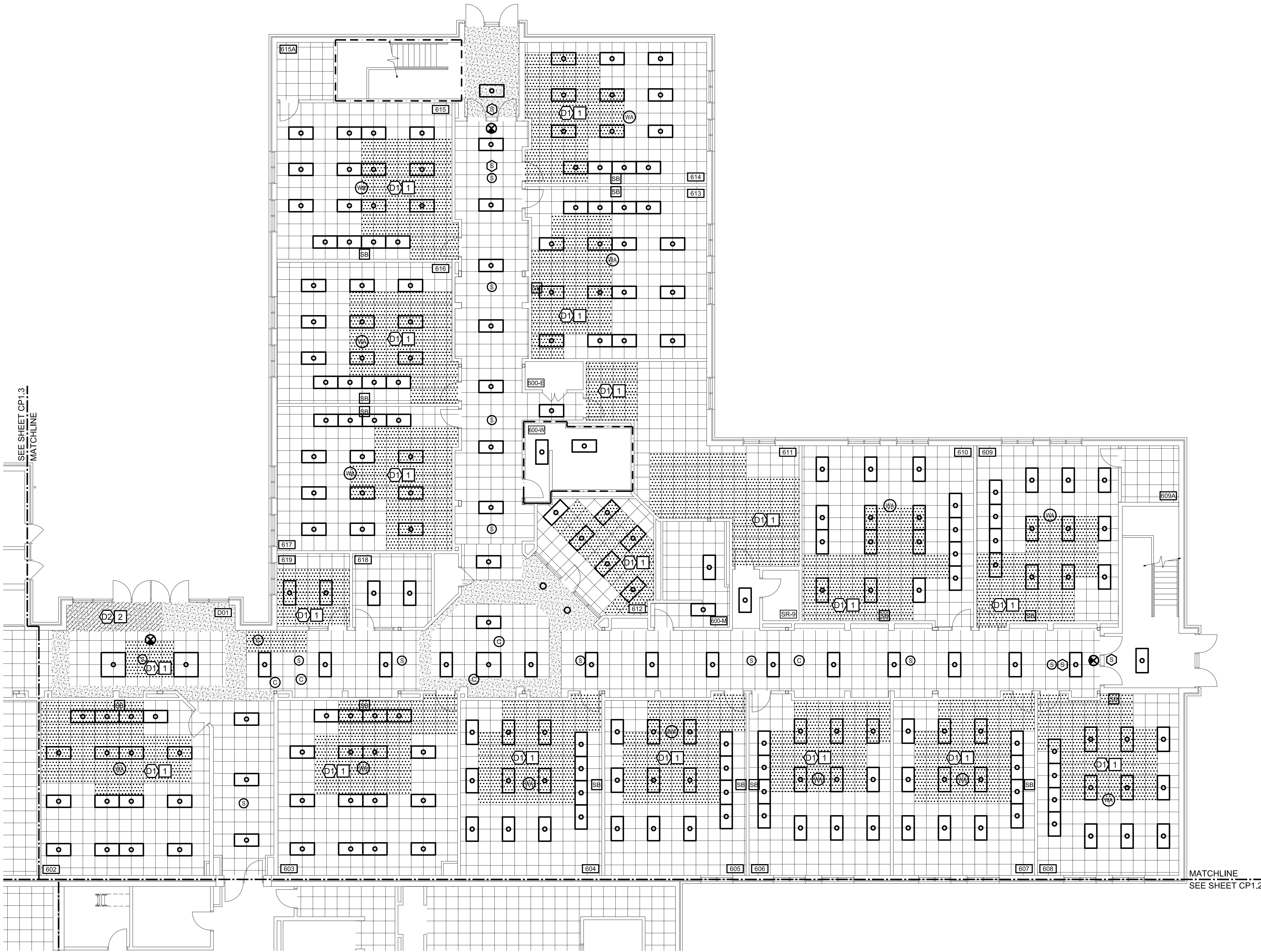
VIRGINIA

FIRST FLOOR CEILING PLAN - AREA "C" - MECHANICAL - DEMOLITION AND NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

CP1.3

DATE: 01/26/2024



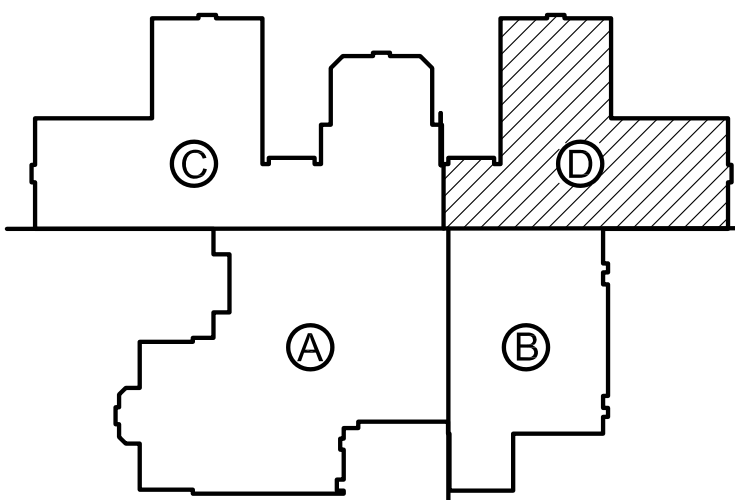
FIRST FLOOR CEILING PLAN - AREA "D" - MECHANICAL - DEMOLITION AND NEW WORK
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
D1	CAREFULLY REMOVE LIMITED PORTIONS OF CEILING GRID AND CEILING TILES AS REQUIRED FOR REMOVAL OF MECHANICAL PIPING, DUCTWORK, AND EQUIPMENT. PROVIDE ADDITIONAL GRID SUPPORTS WHERE DEMOLITION OCCURS TO AVOID SAGGING OF REMAINING CEILING GRID.
D2	CAREFULLY REMOVE PLASTER OR DRYWALL CEILING AS SHOWN.

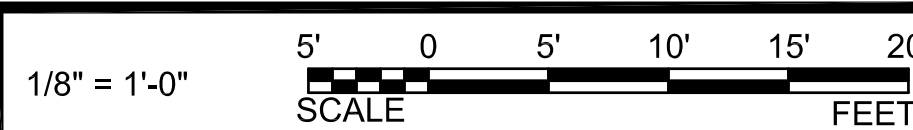
NEW WORK NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
1	AFTER INSTALLATION OF NEW WORK, PROVIDE AND INSTALL NEW CEILING TILES, REINSTALL GRID AND LIGHT FIXTURES RETAINED FROM DEMOLITION. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHT FIXTURE REQUIREMENTS. CEILING GRID AND LIGHT FIXTURES SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION. CONTRACTOR SHALL SURVEY THE CEILING TO DETERMINE SIZE AND QUANTITY OF TILES.
2	PATCH ALL PLASTER CEILINGS TO PRE-CONSTRUCTION CONDITIONS.

- GENERAL DEMOLITION NOTES:** (SHEET CP1.1 THRU CP1.7)
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 - THE CONTRACTOR SHALL STORE AND PROTECT ALL REMOVED CEILING GRID FOR RE-INSTALLATION WHERE INDICATED.
 - IMPROPERLY STORED AND HANDLED MATERIALS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
 - UPON INSTALLATION, PROVIDE TILES OF LIKE APPEARANCE TO PRESENT A UNIFORM CEILING FINISH.
 - CONTRACTOR SHALL COORDINATE EXACT QUANTITY AND LOCATION OF CEILING TILES, GRID, AND ELECTRICAL FIXTURES TO BE REMOVED WITH NEW WORK. REFER TO ELECTRICAL SHEETS FOR FIXTURES REQUIRING REMOVAL.

- LEGEND:** (SHEET CP1.1 THRU CP1.7)
- CEILING GRID AND 48" x 24" ACOUSTIC CEILING TILE TO REMAIN.
 - EXTENT OF CEILING GRID AND ACOUSTIC CEILING TILE REMOVAL (DEMOLITION), EXTENT OF CEILING GRID AND ACOUSTIC TILE REINSTALLATION (NEW WORK).
 - EXTENT OF PLASTER CEILING AND BULKHEAD REMOVAL (DEMOLITION), EXTENT OF NEW PLASTER CEILING AND BULKHEAD REINSTALLATION (NEW WORK).
 - PLASTER CEILING TO REMAIN
 - EXTENT OF AREA WITH NO CEILING, STRUCTURE IS EXPOSED
 - 2' x 4' RECESSED LIGHT FIXTURES
 - 1' x 4' RECESSED LIGHT FIXTURES
 - 2' x 2' RECESSED LIGHT FIXTURE
 - SUPPLY AIR DIFFUSER
 - RETURN AIR GRILLE
 - 2' x 2' CEILING ACCESS DOOR
 - LINEAR SUPPLY DIFFUSER
 - SPEAKER
 - MOTION DETECTOR
 - WIRELESS ACCESS POINT
 - EXIT LIGHT
 - DOWN LIGHT
 - CEILING MOUNTED LCD PROJECTOR



KEY PLAN
NOT TO SCALE



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

FIRST FLOOR CEILING PLAN - AREA "D" - MECHANICAL - DEMOLITION AND NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

CP1.4

DATE: 01/26/2024

GENERAL DEMOLITION NOTES:

1. THE CONTRACTORS SHALL FIELD VERIFY ALL REFLECTED CEILING GRID ELEVATIONS, ORIENTATIONS, AND POSITIONS. REFLECTED CEILING GRID MAY VARY FROM THAT SHOWN ON THIS DRAWING. INVENTORY ALL ACOUSTIC CEILING TILES BEFORE DEMOLITION.

2. THE CONTRACTOR SHALL STORE AND PROTECT ALL REMOVED CEILING GRID FOR RE-INSTALLATION WHERE INDICATED.
3. IMPROPERLY STORED AND HANDLED MATERIALS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

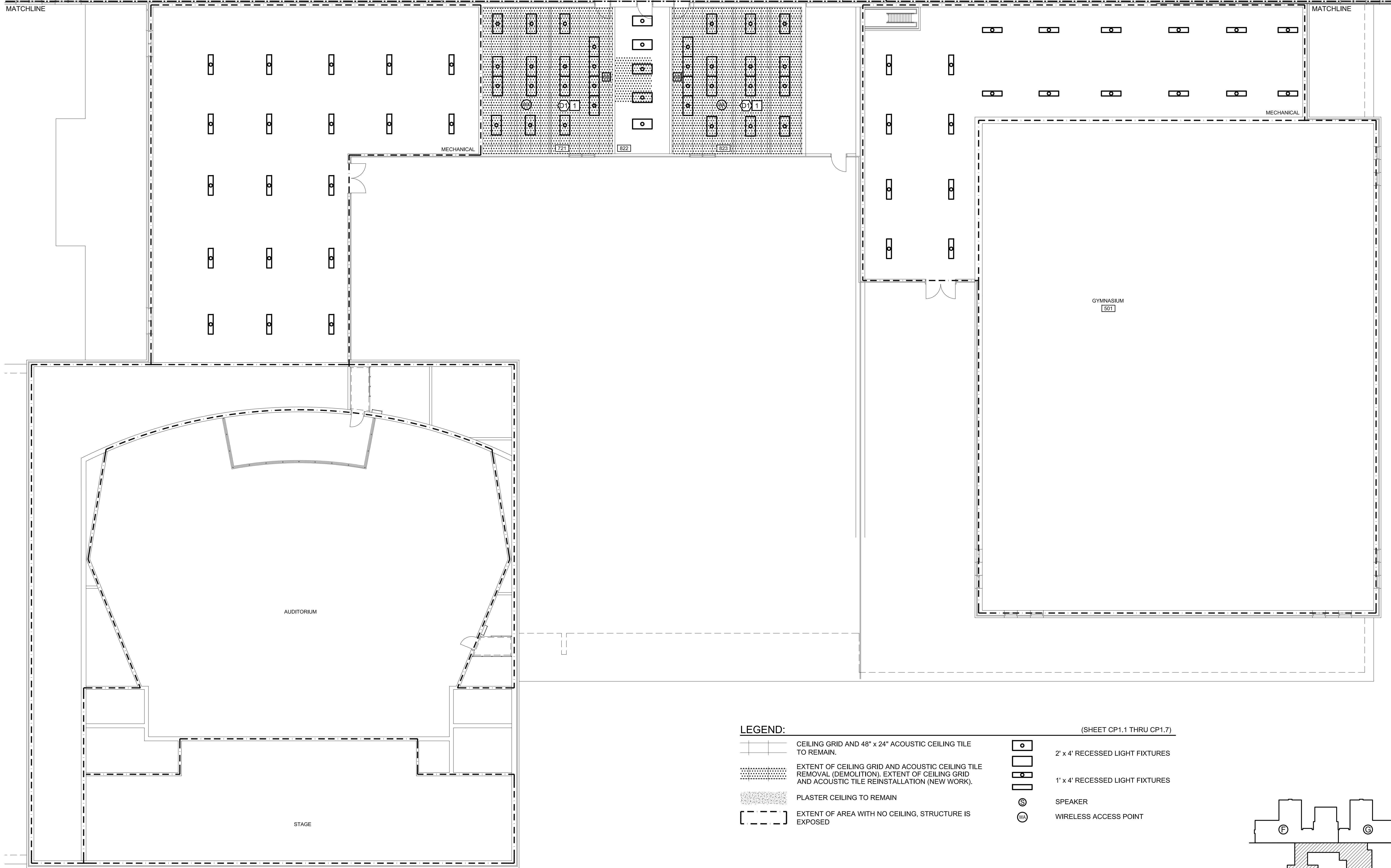
4. UPON INSTALLATION, PROVIDE TILES OF LIKE APPEARANCE TO PRESENT A UNIFORM CEILING FINISH.
5. CONTRACTOR SHALL COORDINATE EXACT QUANTITY AND LOCATION OF CEILING TILES, GRID, AND ELECTRICAL FIXTURES TO BE REMOVED WITH NEW WORK. REFER TO ELECTRICAL SHEETS FOR FIXTURES REQUIRING REMOVAL.

(SHEET CP1.1 THRU CP1.7)

DEMOLITION NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
D1	CAREFULLY REMOVE LIMITED PORTIONS OF CEILING GRID AND CEILING TILES AS REQUIRED FOR REMOVAL OF MECHANICAL PIPING, DUCTWORK, AND EQUIPMENT. PROVIDE ADDITIONAL GRID SUPPORTS WHERE DEMOLITION OCCURS TO AVOID SAGGING OF REMAINING CEILING GRID.

NEW WORK NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
1	AFTER INSTALLATION OF NEW WORK, PROVIDE AND INSTALL NEW CEILING TILES. REINSTALL GRID AND LIGHT FIXTURES RETAINED FROM DEMOLITION. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHT FIXTURE REQUIREMENTS. CEILING GRID AND LIGHT FIXTURES SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION. CONTRACTOR SHALL SURVEY THE CEILING TO DETERMINE SIZE AND QUANTITY OF TILES.

SEE SHEET CP1.6
MATCHLINE



SECOND FLOOR CEILING PLAN - AREA "E" - MECHANICAL - DEMOLITION AND NEW WORK
SCALE: 1/8" = 1'-0"

LEGEND:

- CEILING GRID AND 48" x 24" ACOUSTIC CEILING TILE TO REMAIN.

EXTENT OF CEILING GRID AND ACOUSTIC CEILING TILE REMOVAL (DEMOLITION). EXTENT OF CEILING GRID AND ACOUSTIC TILE REINSTALLATION (NEW WORK).

PLASTER CEILING TO REMAIN

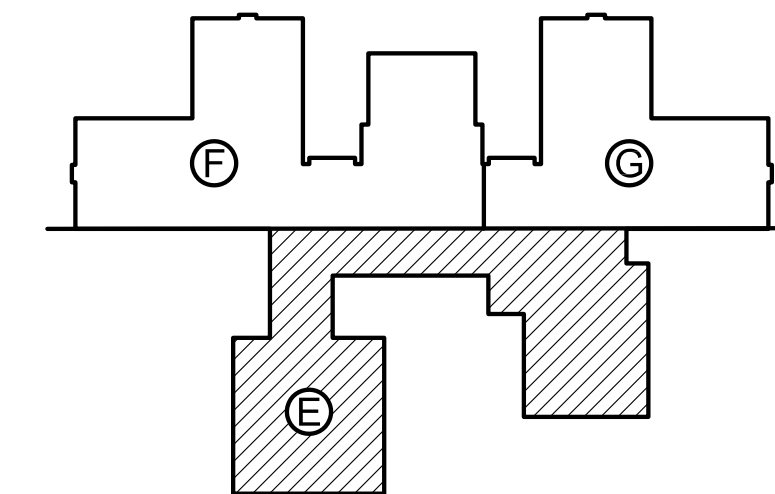
EXTENT OF AREA WITH NO CEILING, STRUCTURE IS EXPOSED
- 2' x 4' RECESSED LIGHT FIXTURES

1' x 4' RECESSED LIGHT FIXTURES

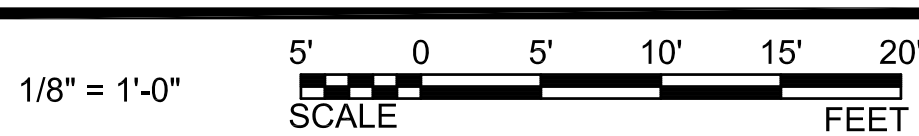
SPEAKER

WIRELESS ACCESS POINT

(SHEET CP1.1 THRU CP1.7)



KEY PLAN
NOT TO SCALE



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NEWPORT NEWS

SECOND FLOOR CEILING PLAN - AREA "E" - MECHANICAL - DEMOLITION AND NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

CP1.5

DATE: 01/26/2024

GENERAL DEMOLITION NOTES:

1. THE CONTRACTORS SHALL FIELD VERIFY ALL REFLECTED CEILING GRID ELEVATIONS, ORIENTATIONS, AND POSITIONS. REFLECTED CEILING GRID MAY VARY FROM THAT SHOWN ON THIS DRAWING. INVENTORY ALL ACOUSTIC CEILING TILES BEFORE DEMOLITION.
2. THE CONTRACTOR SHALL STORE AND PROTECT ALL REMOVED CEILING GRID FOR RE-INSTALLATION WHERE INDICATED.
3. IMPROPERLY STORED AND HANDLED MATERIALS SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. UPON INSTALLATION, PROVIDE TILES OF LIKE APPEARANCE TO PRESENT A UNIFORM CEILING FINISH.
5. CONTRACTOR SHALL COORDINATE EXACT QUANTITY AND LOCATION OF CEILING TILES, GRID, AND ELECTRICAL FIXTURES TO BE REMOVED WITH NEW WORK. REFER TO ELECTRICAL SHEETS FOR FIXTURES REQUIRING REMOVAL.

(SHEET CP1.1
THRU CP1.7)

LEGEND:

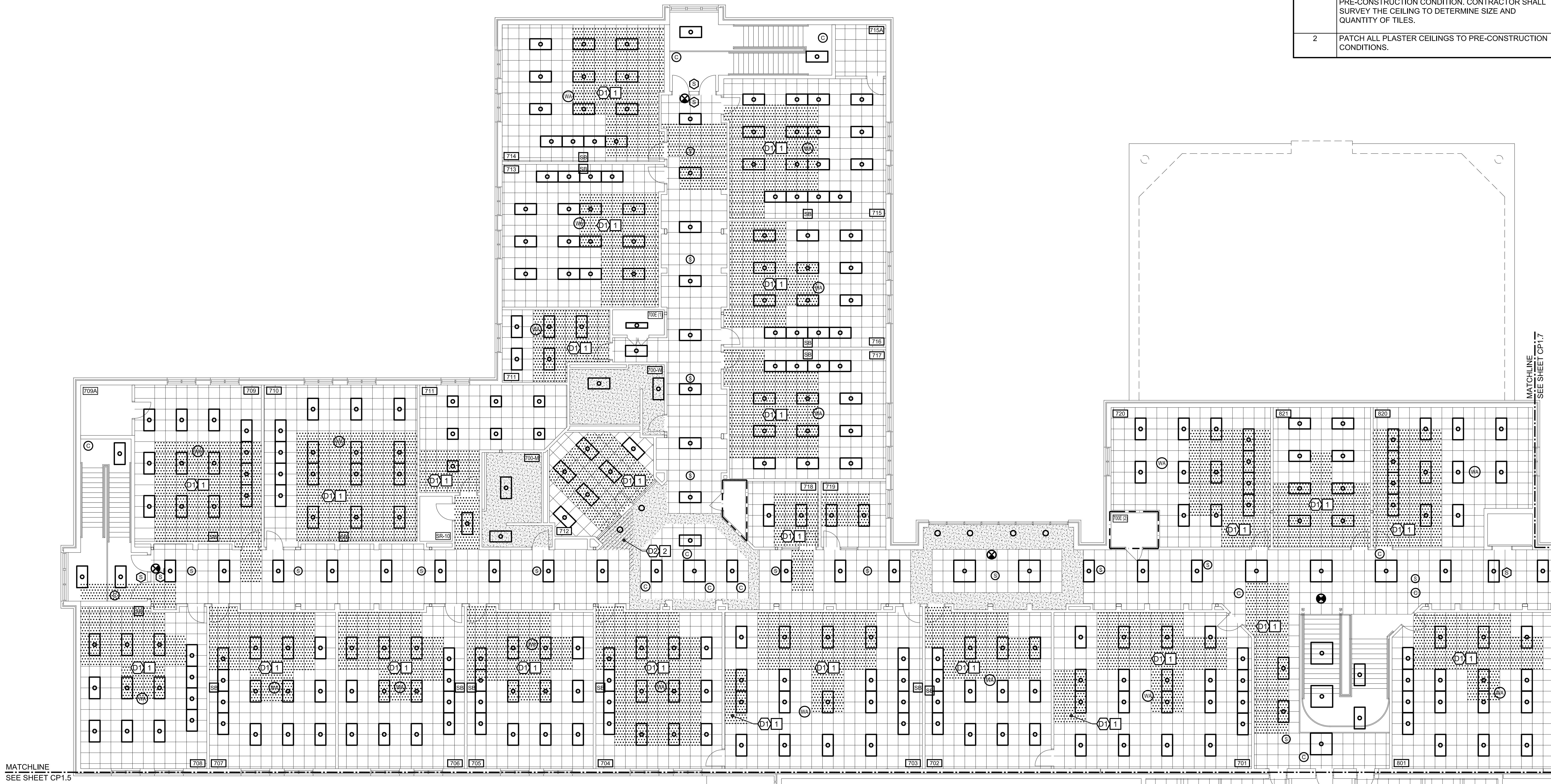
- CEILING GRID AND 48" x 24" ACOUSTIC CEILING TILE TO REMAIN.
- EXTENT OF CEILING GRID AND ACOUSTIC CEILING TILE REMOVAL (DEMOLITION). EXTENT OF CEILING GRID AND ACOUSTIC TILE REINSTALLATION (NEW WORK).
- EXTENT OF PLASTER CEILING AND BULKHEAD REMOVAL (DEMOLITION). EXTENT OF NEW PLASTER CEILING AND BULKHEAD REINSTALLATION (NEW WORK).
- PLASTER CEILING TO REMAIN
- EXTENT OF AREA WITH NO CEILING, STRUCTURE IS EXPOSED
- 2' x 4' RECESSED LIGHT FIXTURES

- 1' x 4' RECESSED LIGHT FIXTURES
- 2' x 2' RECESSED LIGHT FIXTURE
- SUPPLY AIR DIFFUSER
- RETURN AIR GRILLE
- 2' x 2' CEILING ACCESS DOOR
- LINEAR SUPPLY DIFFUSER
- SPEAKER
- MOTION DETECTOR
- WIRELESS ACCESS POINT
- EXIT LIGHT
- DOWN LIGHT
- CEILING MOUNTED LCD PROJECTOR

(SHEET CP1.1 THRU CP1.7)

DEMOLITION NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
D1	CAREFULLY REMOVE LIMITED PORTIONS OF CEILING GRID AND CEILING TILES AS REQUIRED FOR REMOVAL OF MECHANICAL PIPING, DUCTWORK, AND EQUIPMENT. PROVIDE ADDITIONAL GRID SUPPORTS WHERE DEMOLITION OCCURS TO AVOID SAGGING OF REMAINING CEILING GRID.
D2	CAREFULLY REMOVE PLASTER OR DRYWALL CEILING AS SHOWN.

NEW WORK NOTES (SHEET CP1.1 THRU CP1.7 ONLY)	
NO.	DESCRIPTION
1	AFTER INSTALLATION OF NEW WORK, PROVIDE AND INSTALL NEW CEILING TILES. REINSTALL GRID AND LIGHT FIXTURES RETAINED FROM DEMOLITION. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL LIGHT FIXTURE REQUIREMENTS. CEILING GRID AND LIGHT FIXTURES SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION. CONTRACTOR SHALL SURVEY THE CEILING TO DETERMINE SIZE AND QUANTITY OF TILES.
2	PATCH ALL PLASTER CEILINGS TO PRE-CONSTRUCTION CONDITIONS.

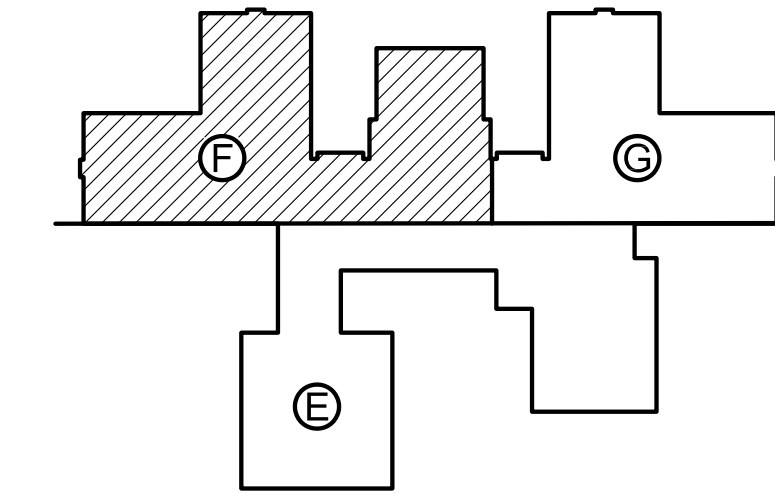


MATCHLINE
SEE SHEET CP1.5

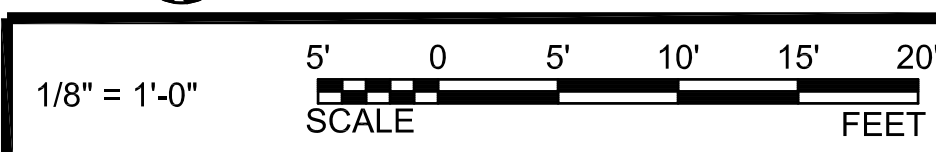
MATCHLINE
SEE SHEET CP1.7

SECOND FLOOR CEILING PLAN - AREA "F" - MECHANICAL - DEMOLITION AND NEW WORK

SCALE: 1/8" = 1'-0"



KEY PLAN
NOT TO SCALE



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT

NEWPORT NEWS PUBLIC SCHOOLS

NEWPORT NEWS

VIRGINIA

SECOND FLOOR CEILING PLAN - AREA "F" - MECHANICAL - DEMOLITION AND NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

CP1.6

DATE: 01/26/2024

GENERAL DEMOLITION NOTES

1.

WHERE EQUIPMENT IS INDICATED TO BE REMOVED, IT SHALL MEAN COMPLETE REMOVAL OF EQUIPMENT, INCLUDING CURBS, SUPPORTS, GUYS, ANCHORS, BRACKETS, CONTROLS AND INCIDENTAL ITEMS CONNECTED OR FASTENED TO EQUIPMENT. OWNER MAINTAINS THE OWNERSHIP OF ALL ITEMS TAGGED OR IDENTIFIED.
2.

WHERE PIPING IS INDICATED TO BE REMOVED, IT SHALL MEAN COMPLETE REMOVAL OF PIPING, INCLUDING VALVES, FITTINGS, INSULATION, SUPPORTS, HANGERS, BRACKETS, CONTROLS AND INCIDENTAL ITEMS CONNECTED OR FASTENED TO THE PIPING. PIPING IS DIAGRAMMATIC AND INDICATES THE GENERAL EXTENT OF WORK. NO ATTEMPT IS MADE TO SHOW EVERY ELL, TEE, OFFSET, FITTING AND VALVE. REMOVE PIPING AS INDICATED AND SPECIFIED.
3.

WHERE DUCTWORK IS INDICATED TO BE REMOVED, IT SHALL MEAN COMPLETE REMOVAL OF DUCTWORK, INCLUDING FITTINGS, INSULATION, SUPPORTS, BRACKETS, CONTROLS AND INCIDENTAL ITEMS CONNECTED OR FASTENED TO THE DUCTWORK. DUCTWORK IS DIAGRAMMATIC AND INDICATES THE GENERAL EXTENT OF WORK. NO ATTEMPT IS MADE TO SHOW EVERY ELL, TEE, OFFSET AND FITTING. REMOVE DUCTWORK AS INDICATED AND SPECIFIED.
4.

REFER TO REFLECTED CEILING PLANS FOR DEMOLITION AND NEW WORK RELATED TO CEILINGS.
5.

CONTRACTOR SHALL RECLAIM AND DISPOSE OF ALL REFRIGERANT IN ACCORDANCE WITH ALL STATE AND LOCAL CODES PRIOR TO REMOVING THE EXISTING UNIT.

GENERAL NOTES

1.

CONTRACTOR SHALL VISIT JOB SITE TO DETERMINE EXTENT OF WORK INVOLVED PRIOR TO BIDDING THE PROJECT.
2.

THE MECHANICAL SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
3.

COORDINATE LOCATION OF ALL DUCTWORK, SUPPLY AND RETURN DEVICES, EXHAUST FANS, THERMOSTATS AND OTHER WALL OR CEILING MOUNTED EQUIPMENT WITH REFLECTED CEILING PLANS, LIGHT FIXTURES, SPRINKLER SYSTEMS AND ACCESSORIES INSTALLED BY OTHER TRADES SO AS TO PRESENT A NEAT AND ATTRACTIVE INSTALLATION THROUGHOUT THE BUILDING.
4.

ALL PIPING, VALVES, DUCTWORK, ETC., SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
5.

PIPING ARRANGEMENTS ARE DIAGRAMMATIC.
6.

PIPING PASSING THROUGH WATERPROOF MEMBRANES SHALL BE MADE WATERTIGHT.
7.

ARRANGE PIPING AND DUCTWORK PARTICULARLY ABOVE CEILING AS REQUIRED TO CLEAR STRUCTURE, CONDUIT, LIGHTS, ETC., ALLOWING SPACE FOR HANGERS, INSULATION, ETC.
8.

SEAL AROUND AND MAKE AIRTIGHT ALL DUCTS AND PIPES PENETRATING INSULATED CEILINGS AND WALLS.
9.

DUCT DIMENSIONS MAY BE MODIFIED AS APPROVED BY ENGINEER.
10.

DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS.
11.

MAINTAIN PROPER CLEARANCES PER ELECTRICAL CODE ON ALL VAV BOXES AND OTHER EQUIPMENT. COORDINATE WITH ALL TRADES TO ENSURE CLEARANCES ARE NOT OBSTRUCTED.
12.

INSTALL ALL VAV BOXES BETWEEN 6 INCHES MINIMUM AND 24 INCHES MAXIMUM ABOVE CEILING.
13.

FINAL LOCATION OF SPACE THERMOSTATS, HUMIDISTATS, AND SENSORS SHALL BE APPROVED BY ENGINEER.
14.

INSTALL ALL WALL MOUNTED SENSORS IN EXISTING SENSOR LOCATIONS.
15.

ALL ROUND BRANCH DUCTS TO DIFFUSERS SHALL MATCH NECK SIZES SHOWN ON SCHEDULE, UNLESS OTHERWISE NOTED.
16.

ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE SIZED TO HAVE A MINIMUM FREE AREA OF 70% AND MEET PERFORMANCE CRITERIA SCHEDULED.

SCHEDULING NOTES:

1.

DUE TO EXTENDED CHILLER LEAD TIMES, CHILLER REPLACEMENT AND ASSOCIATED WORK MAY BE COMPLETED IN THE WINTER PHASE. IF TIME ALLOWS FOR CHILLER TO BE INSTALLED DURING SUMMER CONSTRUCTION PERIOD, IT MAY BE DONE THEN AS WELL.
2.

ALL OTHER WORK SHALL BE SCHEDULED FOR COMPLETION DURING THE SUMMER OF 2024.

ABBREVIATIONS

ø	DIAMETER
o	OVAL
ADS	AIR/DIRT ELIMINATOR
AFF	ABOVE FINISHED FLOOR
(AHU-x)	EXISTING AIR HANDLING UNIT DESIGNATION
AMP	AMPERE
B-x	BOILER DESIGNATION
(B)	EXISTING BOILER DESIGNATION
C-x	CHILLER DESIGNATION
(C)	EXISTING CHILLER DESIGNATION
CF	CHEMICAL FEEDER
CFM	CUBIC FEET PER MINUTE
CO	CARBON MONOXIDE
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
(CT)	EXISTING COOLING TOWER DESIGNATION
CUH-x	CABINET UNIT HEATER DESIGNATION
(CUH)	EXISTING CABINET UNIT HEATER DESIGNATION
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	DRY BULB
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROLS
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF-x	EXHAUST FAN DESIGNATION
(EF)	EXISTING EXHAUST FAN DESIGNATION
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE

°F	DEGREES FAHRENHEIT
FD	FLOOR DRAIN
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
GPM	GALLONS PER MINUTE
H	HUMIDISTAT
HP	HEIGHT
HP	HORSEPOWER
(HWC)	EXISTING DUCT HOT WATER COIL DESIGNATION
HWC-x	DUCT HOT WATER COIL DESIGNATION
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
IN	INCH/INCHES
KEF-x	KITCHEN HOOD EXHAUST FAN DESIGNATION
(KEF)	EXISTING KITCHEN HOOD EXHAUST FAN DESIGNATION
(KH-x)	EXISTING KITCHEN HOOD DESIGNATION
KMAU-x	KITCHEN HOOD SUPPLY FAN DESIGNATION
(KMAU)	EXISTING KITCHEN HOOD SUPPLY FAN DESIGNATION
KAIC	KILO AMPS INTERRUPTING CAPACITY
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MIN	MINIMUM
MOCP	MAXIMUM OVER CURRENT PROTECTION
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NO	NORMALLY OPEN

OA	OUTSIDE AIR
ΔP	PRESSURE DIFFERENTIAL
P-x	PUMP DESIGNATION
(P)	EXISTING PUMP DESIGNATION
PD	PRESSURE DROP
PH	PHASE
RA	RETURN AIR
(RE)	EXISTING ROOF EXHAUST HOOD DESIGNATION
RE-x	ROOF EXHAUST HOOD DESIGNATION
(RI)	EXISTING ROOF INTAKE HOOD DESIGNATION
RG	REFRIGERANT GAS
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DETECTOR
SENS	SENSIBLE
SF	SQUARE FEET
T	THERMOSTAT OR TEMPERATURE SENSOR
TYP	TYPICAL
V	VOLTS
VAV-x,XX	VARIABLE AIR VOLUME BOX DESIGNATION
(VB)	EXISTING VARIABLE AIR VOLUME BOX DESIGNATION
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W	WIDTH
WB	WET BULB
WC	WATER COLUMN
WPD	WATER PRESSURE DROP

LEGEND

	FIRE DAMPER
	VOLUME DAMPER
	SMOKE DETECTOR LOCATION
	CARBON MONOXIDE DETECTOR
	BALANCE EXISTING AIR TERMINAL TO CFM INDICATED
	DIFFUSER, REGISTER, AND GRILLE, CFM AS INDICATED
	HUMIDISTAT OR HUMIDITY SENSOR
	FAN SWITCH
	BOILER STOP PUSH BUTTON
	THERMOSTAT OR TEMPERATURE SENSOR, CONTROLLING UNIT AS INDICATED
	SENSOR WITH GUARD
	LINEAR DIFFUSER
	90° DUCT ELBOW - TURNED DOWN
	DUCT ELBOW WITH TURNING VANES
	DUCT SECTION - RETURN/EXHAUST
	DUCT SECTION - SUPPLY
	90° DUCT ELBOW - TURNED UP
	90° DUCT ELBOW - TURNED UP
	90° DUCT ELBOW - TURNED DOWN
	TRANSFER DUCT ABOVE CEILING
	TRANSFER GRILLE, SIZE AS INDICATED
	RECTANGULAR / OVAL DUCT TRANSITION
	SQUARE TO ROUND DUCT TRANSITION
	DUCT HEATING COIL
	ROOF MOUNTED EXHAUST FAN
	ROOF MOUNTED INTAKE HOOD
	ROOF MOUNTED EXHAUST OR RELIEF HOOD
	CEILING MOUNTED EXHAUST FAN
	SUPPLY AIR DEVICE
	RETURN AIR DEVICE
	CEILING GRILLE AND TRANSFER DUCT
	VARIABLE AIR VOLUME TERMINAL UNIT
	VARIABLE FREQUENCY DRIVE PANEL
	ROUND DUCT
	DIRECTION OF AIRFLOW
	SINGLE WALL DUCTWORK WITH 2" EXTERNALLY WRAPPED BLANKET INSULATION
	SINGLE WALL DUCTWORK WITH 3" INTERNALLY LINED INSULATION

	POINT OF CONNECTION FOR NEW WORK
	REMOVE EXISTING TO THIS POINT
	DEMOLITION NOTE
	(X"/X") EXISTING SIZES AS INDICATED
	NEW WORK NOTE
	REVISION DESIGNATION
	ENLARGED PLAN; NUMBER "1" SEE SHEET MXXX
	SECTION: LETTER "A" SEE SHEET MXXX
	PHOTO: NUMBER "X" SEE SHEET MXXX
	EXISTING TO REMAIN
	NEW WORK
	EXISTING TO BE REMOVED
	PIPE CAP
	FLANGE CONNECTION
	BRAIDED FLANGED FLEXIBLE CONNECTION
	PRESSURE GAUGE
	PRESSURE GAUGE WITH VALVE
	PRESSURE/TEMPERATURE TEST PORT
	RUBBER FLEXIBLE CONNECTION
	STRAINER
	STRAINER WITH BLOWDOWN VALVE
	THERMOMETER WITH SEPARABLE WELL
	THREADED UNION
	DIRECTION OF FLOW IN PIPE
	HEAT TRACE TAPE
	PIPE DOWN
	PIPE TEE DOWN
	PIPE TEE UP
	PIPE UP
	PIPE BELOW GRADE OR HIDDEN
	STROBE ALARM
	HORN ALARM
	CHILLER EMERGENCY STOP BUTTON

	CHILLED WATER RETURN PIPING
	CHILLED WATER SUPPLY PIPING
	CONDENSER WATER RETURN PIPING
	CONDENSER WATER SUPPLY PIPING
	DRAIN PIPING
	EXISTING PIPING TO REMAIN
	EXISTING PIPING BELOW OR HIDDEN
	GAS PIPING
	HOT WATER RETURN PIPING
	HOT WATER SUPPLY PIPING
	NEW PIPING
	PIPING TO BE REMOVED
	REFRIGERANT LIQUID PIPING
	REFRIGERANT GAS PIPING
	DIRECTION OF PITCH FOR PIPING OR DUCTWORK
	PIPE SLEEVE
	AUTOMATIC FLOW CONTROL VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	AUTOMATIC AIR VENT
	DIFFERENTIAL PRESSURE SENSOR
	BUTTERFLY VALVE
	BALANCING VALVE
	CHECK VALVE
	EXISTING GAS COCK
	GAS PRESSURE REGULATOR
	GAS SHUT-OFF VALVE
	EXISTING GATE VALVE
	GATE VALVE
	PRESSURE RELIEF VALVE
	HOSE BIBB

ASBESTOS DISCLOSURE STATEMENT

AN ASBESTOS INSPECTION HAS NOT BEEN PERFORMED. ASBESTOS-CONTAINING MATERIAL FOUND IN AREAS OF NEW CONSTRUCTION SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED. CONTACT NEWPORT NEWS PUBLIC SCHOOL SYSTEM UPON DISCOVERY OF ADDITIONAL AREAS CONTAINING ASBESTOS MATERIAL. ASBESTOS ABATEMENT SHALL BE HANDLED BY NEWPORT NEWS PUBLIC SCHOOL SYSTEM. PLEASE ALLOW A MINIMUM OF 3 DAYS TO COMPLETE ASBESTOS ABATEMENT.

LEAD PAINT PROVISION

NNPS'S UNDERSTANDING OF LEAD PAINT ISSUES WHICH MAY ARISE DURING THE PROJECT IS THAT PROPERLY TRAINED CONTRACTORS AND SUBCONTRACTORS SHOULD BE ABLE TO SAFELY PERFORM WORK EVEN IF LEAD PAINT MAY BE PRESENT AT SOME LOCATIONS. NNPS WILL PROVIDE TESTING FOR LEAD BASED PAINT USING AN X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER. THE CONTRACTOR AND ITS SUB-CONTRACTORS SHALL CONDUCT ANY FURTHER TESTING NECESSARY TO BE IN COMPLIANCE WITH THE OSHA LEAD IN CONSTRUCTION STANDARD CONSISTENT WITH 29 CFR 1926.62. IT IS NOT CURRENTLY ANTICIPATED THAT THE WORK WILL REQUIRE APPLICATION OF THE EPA RENOVATE REPAIR AND PAINT (RRP) RULE FOR PRE-1978 CHILD OCCUPIED FACILITIES. HOWEVER, IF, FOLLOWING COMPLETION OF DESIGN, IT IS DETERMINED THAT THE SCOPE OF WORK AT ANY OF THE SITES WILL RESULT IN APPLICATION OF THE RRP RULE, THE CONTRACTOR AND ITS SUBCONTRACTORS WILL PROMPTLY COMPLY WITH THE REQUIREMENTS OF RRP WHERE SUCH REQUIREMENTS ARE APPLICABLE. NO PROHIBITED WORK PRACTICES, AS DEFINED IN RRP, WILL BE USED WHEN DISTURBING ANY PAINTED SURFACE WITH DETECTABLE LEAD USING AN XRF SPECTRUM ANALYZER AND THE OSHA LEAD IN CONSTRUCTION STANDARD SHALL APPLY. NNPS AND THE CONTRACTOR SHALL AGREE THAT THERE IS NO PRESENT BELIEF THAT THERE WILL BE A NEED TO ABATE LEAD PAINT DURING THE PROJECT. IF LEAD ABATEMENT BECOMES A REQUIREMENT, NNPS AND THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE COURSE OF ACTION WHICH MAY INCLUDE ABATEMENT OR REMOVAL OF AN AREA FROM THE SCOPE OF SERVICES.

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

NEWPORT NEWS

VIRGINIA

LEGEND, NOTES, AND ABBREVIATIONS



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PROJECT NUMBER: 22-113
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COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M0.1

DATE: 01/26/2024

WATER COOLED CENTRIFUGAL CHILLER SCHEDULE																				
UNIT NO.	DESCRIPTION	CAPACITY (TONS)	EVAPORATOR				CONDENSER			COMPRESSOR		ELECTRICAL					SELECTION BASED ON "JOHNSON CONTROLS"	REFRIGERANT	OPERATING WEIGHT	REMARKS
			GPM	PD (FT)	EW T (°F)	LWT (°F)	GPM	PD (FT)	EW T (°F)	QUANTITY	TOTAL KW	MCA	MOCP	FLA	VOLTS	PH				
C-1	WATER COOLED CENTRIFUGAL	450	972	27.0	57	44	1343	11.2	85.0	1	233.9	404	700	323.0	460	3	YZ_MA058AN045P078NA	R-1233ZD(E)	28276	①②③④⑤⑥⑦⑧
<div>REMARKS:</div> <div><div>① PROVIDE WITH 65 KAIC SCCR.</div><div>② PROVIDE COMPRESSOR WITH VARIABLE SPEED DRIVE.</div><div>③ LISTED CAPACITY IS NET REFRIGERATION CAPACITY.</div><div>④ PROVIDE WITH 3-PASS EVAPORATOR AND 2-PASS CONDENSER CONFIGURATION.</div><div>⑤ PROVIDE WITH SINGLE POINT POWER CONNECTION.</div><div>⑥ PROVIDE WITH MANUFACTURER'S VIBRATION ISOLATION.</div><div>⑦ INSTALLATION OF NEW CHILLER WILL REQUIRE CONCRETE PAD EXTENSION. REFER TO NEW WORK NOTE 44 ON DRAWING M3.1 FOR DETAILS.</div><div>⑧ PROVIDE WITH INTEGRAL DISCONNECT SWITCH, REMOTE START, AND REMOTE STOP AND EMERGENCY STOP CAPABILITIES.</div></div>																				

ROOF EXHAUST HOOD SCHEDULE							
MARK	EQUIPMENT SERVED	ROOF OPENING	CFM	ESP (IN.)	UNIT WEIGHT (LBS.)	SELECTION BASED ON "GREENHECK"	REMARKS
RE-1	EF-2	12" x 24"	1200	0.1	48	WRH-12x24	① ②
RE-2	EF-6	12" x 24"	1200	0.1	48	WRH-12x24	① ②
RE-3	EF-7	12" x 24"	1200	0.1	48	WRH-12x24	① ②
REMARKS: ① PROVIDE WITH BIRD SCREEN AND BACKDRAFT DAMPER. ② PAINT EXHAUST HOOD TO MATCH ROOF COLOR.							

EXHAUST FAN SCHEDULE																
UNIT NO.	TYPE	ARRANGEMENT	WHEEL	DRIVE	CFM	ESP (IN. WC)	FAN (RPM)	MAX. TIP SPEED	OUTLET VELOCITY FPM	MOTOR DATA			CONTROL METHOD	MAX. SONES	SELECTION BASED ON "GREENHECK"	REMARKS
										HP	V	PH				
EF-1	INLINE	CENTRIFUGAL	BACKWARD INCLINED	DIRECT	1200	0.38	1140	3917	561	1/4	115	1	HOOD SWITCH	6.8	SQ-130	①②⑤
EF-2	INLINE	CENTRIFUGAL	BACKWARD INCLINED	DIRECT	1200	0.25	1140	3917	603	1/4	115	1	WALL SWITCH	7.1	SQ-130	①②③④⑤
EF-3	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	1200	0.25	817	3128	909	1/4	115	1	WALL SWITCH	6.4	G-140-VG	①②③④⑤⑥⑧⑨
EF-4	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	1200	0.25	817	3128	909	1/4	115	1	WALL SWITCH	6.4	G-140-VG	①②③④⑤⑥⑧⑨
EF-5	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	1200	0.25	817	3128	909	1/4	115	1	WALL SWITCH	6.4	G-140-VG	①②③④⑤⑥⑧⑨
EF-6	INLINE	CENTRIFUGAL	BACKWARD INCLINED	DIRECT	1200	0.25	1140	3917	603	1/4	115	1	WALL SWITCH	7.1	SQ-130	①②③④⑤
EF-7	INLINE	CENTRIFUGAL	BACKWARD INCLINED	DIRECT	1200	0.25	1140	3917	603	1/4	115	1	WALL SWITCH	7.1	SQ-130	①②③④⑤
EF-8	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	1200	0.25	817	3128	909	1/4	115	1	WALL SWITCH	6.4	G-140-VG	①②③④⑤⑥⑧⑨
EF-9	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	1200	0.25	817	3128	909	1/4	115	1	WALL SWITCH	6.4	G-140-VG	①②③④⑤⑥⑧⑨
EF-10	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	1200	0.25	817	3128	909	1/4	115	1	WALL SWITCH	6.4	G-140-VG	①②③④⑤⑥⑧⑨
EF-11	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	650	0.25	1579	4495	929	1/10	115	1	WALL SWITCH	7.7	G-090-VG	①②③④⑤⑥⑧⑨
EF-12	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	600	0.25	1495	4255	857	1/10	115	1	WALL SWITCH	6.9	G-090-VG	①②③④⑤⑥⑧⑨
EF-13	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	1050	0.50	1725	5053	1112	1/4	115	1	THERMOSTAT	12.9	G-099-A	①⑤⑥⑦
EF-15	INLINE	CENTRIFUGAL	BACKWARD INCLINED	BELT	4000	0.38	855	4784	748	1	115	1	REFRIGERANT SENSOR	13.2	BSQ-200	①⑤
EF-16	ROOF MOUNTED	CENTRIFUGAL DOWNBLAST	BACKWARD INCLINED	DIRECT	1200	0.25	817	3128	909	1/4	115	1	WALL SWITCH	6.4	G-140-VG	①②③④⑤⑥⑧⑨
REMARKS: ① REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. ② PROVIDE AND INSTALL SWITCH IN EXISTING SWITCH LOCATION FOR FAN OPERATION. ③ WALL SWITCH ON A 60-MINUTE TIMER. ④ PROVIDE WITH BACKDRAFT DAMPER. ⑤ PROVIDE WITH FAN MOUNTED DISCONNECT SWITCH. ⑥ PROVIDE WITH CURB ADAPTER WHERE REQUIRED. ⑦ LINE VOLTAGE THERMOSTAT SET TO 95°F. ⑧ PROVIDE WITH EC MOTOR. ⑨ PROVIDE WITH SOLID STATE SPEED CONTROLLER.																

BOILER SCHEDULE												
UNIT NO.	DESCRIPTION	INPUT (MBH)	OUTPUT (MBH)	FUEL TYPE	GPM	LWT (°F)	INTAKE SIZE (INCHES)	EXHAUST SIZE (INCHES)	ELECTRICAL		SELECTION BASED ON "LOCHINVAR"	REMARKS
B-1	GAS FIRED CONDENSING BOILER	2500	2400	NATURAL GAS	152	140	8	9	208	3	FB-2501	①②③④
B-2	GAS FIRED CONDENSING BOILER	2500	2400	NATURAL GAS	152	140	8	9	208	3	FB-2501	①②③④
REMARKS: ① PROVIDE WITH PVC INTAKE. ② PROVIDE STAINLESS STEEL "AL29-4C" EXHAUST FLUE. ③ PROVIDE WITH CONDENSATE DRAIN TRAP ASSEMBLY AND NEUTRALIZATION TANK BY BOILER MANUFACTURER. ④ PROVIDE WITH NEOPRENE ISOLATION PADS.												

DUCT HEATING COIL SCHEDULE											
UNIT NO.	CFM	EAT (°F)	LAT (°F)	HOT WATER HEATING COIL PERFORMANCE					SELECTION BASED ON "JOHNSON CONTROLS"	REMARKS	
				CAPACITY TOTAL (MBH)	GPM	EW T (°F)	LWT (°F)	WPD (FT.)			SIZE H" x W"
HWC-1	6976	55.0	85.2	220.1	12.0	140.0	102.7	2.5	35" x 60"	BDW LOOSE COIL	① ②
HWC-2	353	55.0	80.1	9.6	0.5	140.0	100.9	0.2	12" x 12"	LOOSE BOOSTER COIL	① ②
HWC-3	330	55.0	80.2	9.0	0.5	140.0	103.3	0.2	12" x 12"	LOOSE BOOSTER COIL	① ②
HWC-4	230	55.0	82.6	6.9	0.5	140.0	112.0	0.2	9" x 9"	LOOSE BOOSTER COIL	① ②
REMARKS: ① PROVIDE WITH DUCT FLANGE AND TRANSITION TO EXISTING DUCT SIZE AS REQUIRED. ② UNIT CONTROLLED BY DDC SYSTEM.											

KITCHEN HOOD AND MAKEUP AIR UNIT SCHEDULE																											
HOOD DATA			EXHAUST FAN DATA											SELECTION BASED ON "GREENHECK"	SUPPLY FAN DATA										SELECTION BASED ON "GREENHECK"	REMARKS	
MARK	SIZE	DESCRIPTION	MARK	CFM	DRIVE	ESP	RPM	TIP SPEED	HP	MCA	MOCP	VOLTS	PH		MARK	CFM	DRIVE	ESP	RPM	TIP SPEED	HP	MCA	MOCP	VOLTS	PH		
KEH-1	14'0" X 6'0"	EXISTING HOOD TO REMAIN	KEF-1	4900	BELT	1.25	1013	6498	2	4.4	15	460	3	CUBE-240HP-VGD	KMAU-1	2550	BELT	0.5	785	2468	1	2.6	15	460	3	SAF-112	①②③④⑤
KEH-2	14'0" X 6'0"	EXISTING HOOD TO REMAIN	KEF-2	4900	BELT	0.9	999	6410	2	4.4	15	460	3	CUBE-220HP-VGD	KMAU-2	2550	BELT	0.5	785	2468	1	2.6	15	460	3	SAF-112	①②③④⑤
<div>REMARKS:</div> <div><div>① EXHAUST FAN AND SUPPLY FAN SHALL BE CONNECTED TO EXISTING KITCHEN HOOD SYSTEMS AND CONTROLLED BY SWITCH PER EXISTING UNIT CONTROLS.</div><div>② MOUNT ON EXISTING KITCHEN EXHAUST/SUPPLY FAN COMBINED ROOF CURB WITH DUCT EXTENSION.</div><div>③ EXHAUST FAN SHALL COMPLY WITH UL-762 AND BE SUITABLE FOR INSTALLATION IN KITCHEN EXHAUST APPLICATIONS WITH GREASE-LADEN EXHAUST AIR.</div><div>④ VERIFY UNIT CONNECTION TO EXISTING FIRE SUPPRESSION SYSTEM.</div><div>⑤ BELT DRIVEN FANS SHALL BE INTERNALLY ISOLATED. EXHAUST FAN WHEEL IS CENTRIFUGAL, BACKWARD INCLINED ALUMINUM. SUPPLY FAN WHEEL IS CENTRIFUGAL, FORWARD CURVED GALVANIZED STEEL.</div></div>																											

PUMP SCHEDULE										
UNIT NO.	TYPE	SYSTEM	GPM	HEAD	MOTOR DATA				SELECTION BASED ON "BELL & GOSSETT"	REMARKS
					HP	RPM	V	PH		
P-1	BASE MOUNTED END SUCTION	HEATING HOT WATER	303	115	20	1750	460	3	E-1510-3E	⑦③
P-2	BASE MOUNTED END SUCTION	HEATING HOT WATER (STANDBY)	303	115	20	1750	460	3	E-1510-3E	⑦③
P-3	BASE MOUNTED END SUCTION	CHILLED WATER	972	135	40	1729	460	3	E-1510-4GC	①②③④⑤⑥
P-4	BASE MOUNTED END SUCTION	CHILLED WATER (STANDBY)	972	135	40	1729	460	3	E-1510-4GC	①②③④⑤⑥
P-5	BASE MOUNTED END SUCTION	CONDENSER WATER	704	115	40	1667	460	3	E-1510-4GC	①②④⑤⑥⑧
P-6	BASE MOUNTED END SUCTION	CONDENSER WATER	704	115	40	1667	460	3	E-1510-4GC	①②④⑤⑥⑧
REMARKS: ① PROVIDE MATCHED SUCTION DIFFUSER BY PUMP MANUFACTURER. ⑤ PROVIDE WITH FULL SIZE IMPELLER.										
② REFER TO SPECIFICATION SECTION 230900 FOR VFD REQUIREMENTS. EACH DRIVE SHALL HAVE A SEPARATE POWER CONNECTION BY DIVISION 26. REFER TO ELECTRICAL DRAWINGS FOR DETAILS. ⑥ INSTALL PUMP ON EXISTING PUMP PACKAGE FRAME AND GROUT TO CONCRETE PAD.										
③ PUMP VFD REPLACED IN A DIFFERENT PROJECT; WILL BE EXISTING TO REMAIN. ⑦ PUMP IS EXISTING TO REMAIN. PERFORMANCE FOR INFORMATION PURPOSES ONLY BASED ON EXISTING UNIT SUBMITTALS AND NEW EQUIPMENT HOT WATER FLOW REQUIREMENTS.										
④ PROVIDE WITH PREMIUM EFFICIENCY INVERTER DUTY MOTOR WITH AEGIS GROUNDING RING. ⑧ PUMP SIZED FOR FULL COOLING TOWER FLOW REQUIREMENTS PER EXISTING DRAWINGS (1408 GPM TOTAL). CHILLER CONDENSER SELECTED AT 1343 GPM TOTAL.										

HOT WATER CABINET UNIT HEATER SCHEDULE													
MARK	UNIT CONFIGURATION	CFM HI/LOW	HEATING			GPM	WPD (FT.)	MOTOR DATA			SELECTION BASED ON "AIREDALE"	REMARKS	
			MBH	EAT (°F)	EWT (°F)			HP	VOLTS	PH			
CUH-1	FLOOR MOUNTED CABINET	638/491	35.8/ 29.4	70.0	140.0	3.0	1.4	1/4	115	1	FC 006	①②③	
CUH-2	FLOOR MOUNTED CABINET	638/491	35.8/ 29.4	70.0	140.0	3.0	1.4	1/4	115	1	FC 006	①②③	
CUH-3	FLOOR MOUNTED CABINET	638/491	35.8/ 29.4	70.0	140.0	3.0	1.4	1/4	115	1	FC 006	①②③	
CUH-4	FLOOR MOUNTED CABINET	638/491	35.8/ 29.4	70.0	140.0	3.0	1.4	1/4	115	1	FC 006	①②③	
REMARKS:													
① PROVIDE WITH 24 VOLT CONTROL INTERLOCKED WITH DDC.													
② PROVIDE WITH UNIT MOUNTED AND WIRED DISCONNECT SWITCH.													
③ PROVIDE WITH FACTORY MOUNTED PIPING PACKAGE AND ACCESSORIES COMPLETE.													



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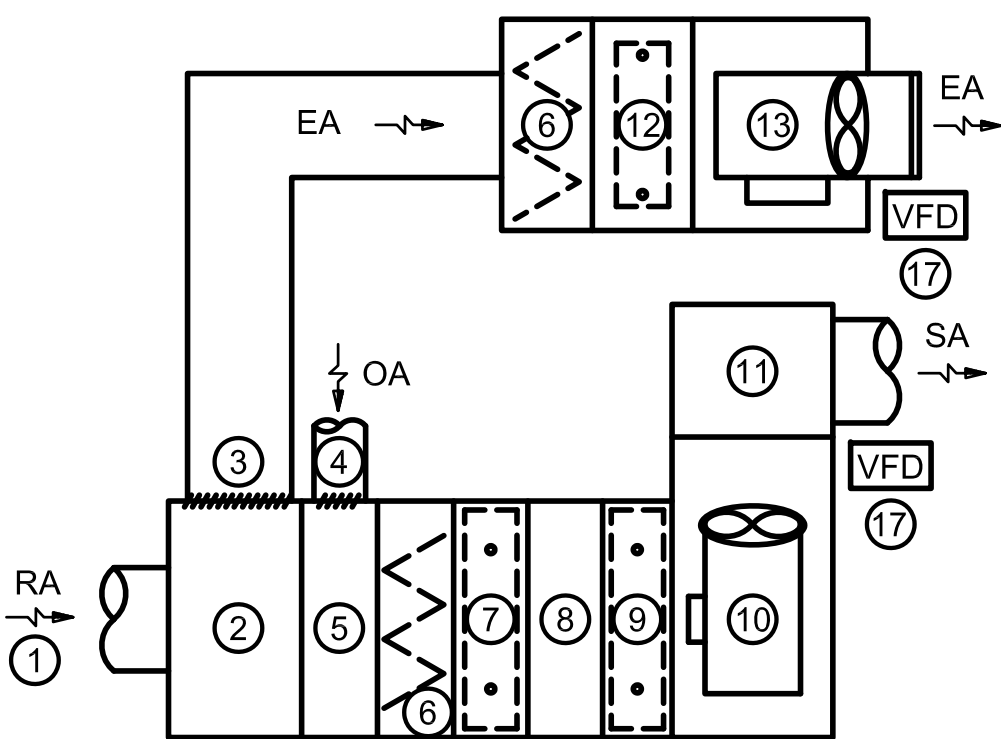
MECHANICAL SCHEDULES

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

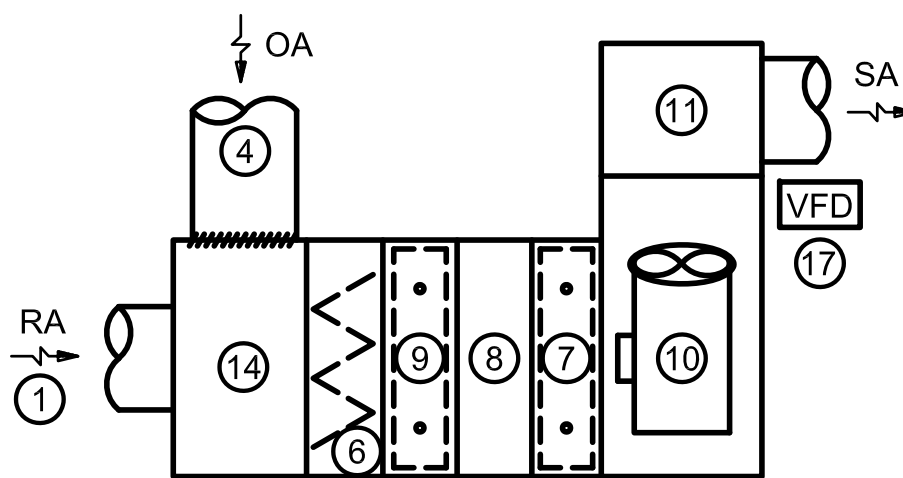
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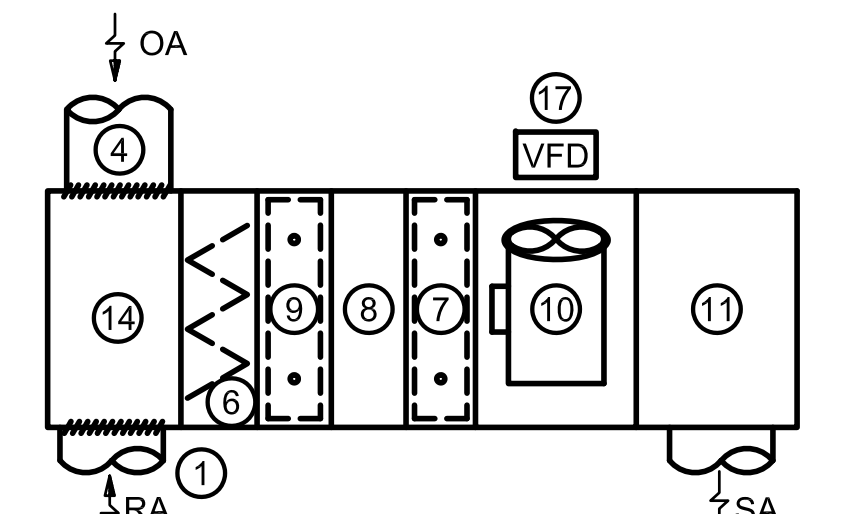
AIR HANDLING UNIT SCHEDULE (FOR INTERNAL COMPONENT REPLACEMENT AND BALANCING PURPOSES)																																							
UNIT NO.	TOTAL CFM	OA CFM	SUPPLY FAN							RETURN/EXHAUST FAN							CHILLED WATER COOLING COIL PERFORMANCE											HOT WATER REHEAT COIL PERFORMANCE											REMARKS
			TOTAL CFM	ESP (IN.)	QTY	HP	VOLTS	PH	FAN RPM	CFM	ESP	QTY	HP	VOLTS	PH	FAN RPM	COIL ROWS	CAPACITY TOTAL (MBH)	SENS (MBH)	DB(°F)	WB(°F)	DB(°F)	WB(°F)	APD (IN.)	GPM	EWT (°F)	LWT (°F)	WPD (FT)	CFM	MIN F.A. (SF)	CAPACITY TOTAL (MBH)	EAT DB(°F)	LAT DB(°F)	APD (IN.)	GPM	EWT (FT.)	LWT (°F)	WPD (FT.)	
AHU-1	30575	18950														8	2208.0	1271.5	88.2	73.0	49.3	48.5	0.83	342	44.0	56.8	11.1	26605	81.0	790.6	32.0	57.6	0.26	50	140	110	0.7	①②③④⑥	
AHU-1A	18950	-	-	-	-	-	-	-	-	18950	1.5	1	15	460	3	916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	①②③④
AHU-2	27015	13300	27015	4.0	2	25	460	3	1162	-	-	-	-	-	-	8	1483.0	874.0	85.4	71.7	55.0	55.0	1.0	223	44.0	57.3	9.4	27015	50.6	825	41.9	69.4	0.26	30	140	85	0.4	①②③④⑥	
AHU-2A	13300	-	-	-	-	-	-	-	-	13300	1.5	1	10	460	3	1144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	①②③④
AHU-3	7120	4180	7120	0.5	2	5	460	3	1361	7120	0.6	1	3	460	3	1381	10	511.2	218.1	87.2	72.7	55.2	55.2	1.49	72	44.0	58.2	5.7	7120	16.5	225	36.9	65.1	0.03	9	140	90	0.4	①②③④⑥
AHU-4	9275	3615	9275	0.5	1	10	460	3	957	-	-	-	-	-	-	5	438.0	281.9	83.4	70.6	55.3	55.3	0.76	60	44.0	58.6	3.7	9275	20.3	240	47.3	70.4	0.03	12	140	100	0.9	①②③④	
AHU-5	8640	3750	8640	0.5	2	7.5	460	3	1191	8640	0.25	1	5	460	3	1144	12	632.2	272.4	84.2	71.1	55.0	55.0	1.38	109	44.0	55.6	8.1	8640	20.3	220	45.0	67.8	0.03	11	140	100	0.9	①②③④⑥
AHU-7	7525	3690	7525	2.5	2	7.5	460	3	1789	7525	0.1	1	2	460	3	722	8	406.4	237.7	84.5	71.2	55.2	55.2	1.26	64	44.0	56.7	7.0	7525	14.6	180	42.0	63.5	0.12	6	140	80	0.1	①②③④⑥
AHU-8	8200	4825	8200	0.75	2	5	460	3	922	5260	0.8	1	5	460	3	1436	10	553.8	283.4	87.2	72.7	55.2	55.2	1.41	78	44.0	58.2	7.1	8200	14.6	261.2	36.8	65.3	0.05	9.5	140	85	0.5	①②③④⑤
AHU-9	2820	TRHU GYM	2820	0.35	1	3	460	3	1042	-	-	-	-	-	-	12	148.8	83.2	82.4	70.1	55.1	55.1	1.41	24	44.0	56.4	5.8	2820	5.5	67.5	50.0	71.4	0.04	3	140	95	0.2	①②③④	
AHU-10	-	-	-	-	-	-	-	-	-	8835	1.5	1	7.5	460	3	1392	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	①②③④
REMARKS: ① UNIT CASING EXISTING TO REMAIN. PROVIDE AND INSTALL REPLACEMENTS IN KIND OF ALL SUPPLY AND EXHAUST FANS. ALL UNIT COILS. ALL CONTROL DAMPERS AND ACTUATORS. ALL COIL PIPING PACKAGES, AND FILTERS. PROVIDE SUPPLY FANS, "GREENHECK" MODEL QE1 OR APPROVED EQUAL. WHERE VERTICAL CENTRIFUGAL BARRY BLOWERS ARE INSTALLED EXISTING. ② SCHEDULE INFORMATION PROVIDED FOR THE PERFORMANCE REQUIREMENTS OF INTERNAL COMPONENTS TO BE REPLACED AND BALANCING PURPOSES ONLY. ③ CONTRACTOR TO FIELD VERIFY DIMENSIONS OF ALL EXISTING AND NEW COMPONENTS PRIOR TO ORDERING. ALL NEW COMPONENTS SHALL FIT IN EXISTING UNIT CASING. ④ COIL PERFORMANCES BASED ON THE FOLLOWING TEMPERATURES: AMBIENT SUMMER - 95°F DB/78°F WB, WINTER - 15°F DB/14°F WB. RETURN SUMMER - 76°F DB/66°F WB, WINTER - 68°F DB/54°F WB. ⑤ SUPPLY FANS REPLACED IN 2023. SUPPLY FANS ARE EXISTING TO REMAIN. "GREENHECK" MODEL QE1-15. ⑥ WHERE "GREENHECK" MODEL QE1-15 OR APPROVED EQUAL SUPPLY FANS ARE INSTALLED, PROVIDE AND INSTALL NEW FLEXIBLE CONNECTIONS BETWEEN FAN AND SUPPLY AIR PLENUM SECTION. NO SPECIALTY MOUNTING EQUIPMENT IS REQUIRED. REUSE EXISTING FAN BASE AND ISOLATION SPRINGS.																																							



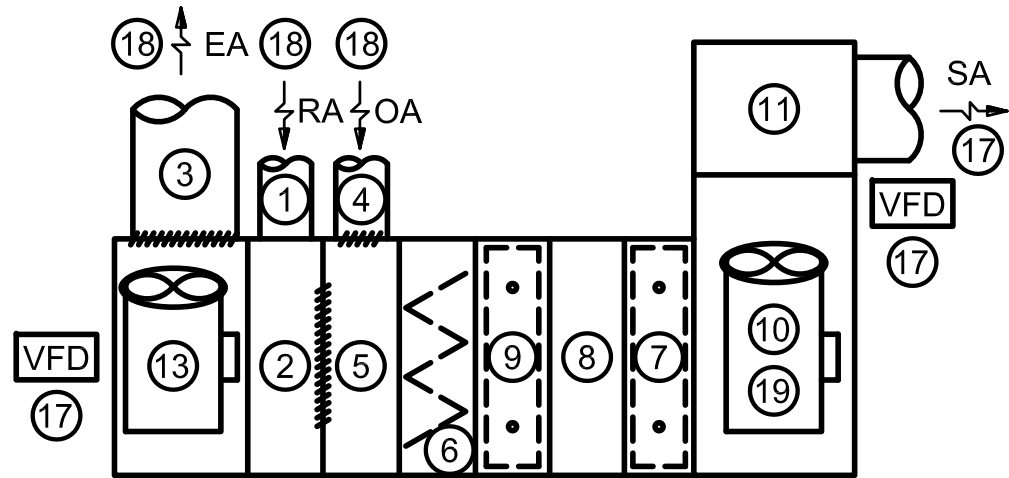
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NOT TO SCALE



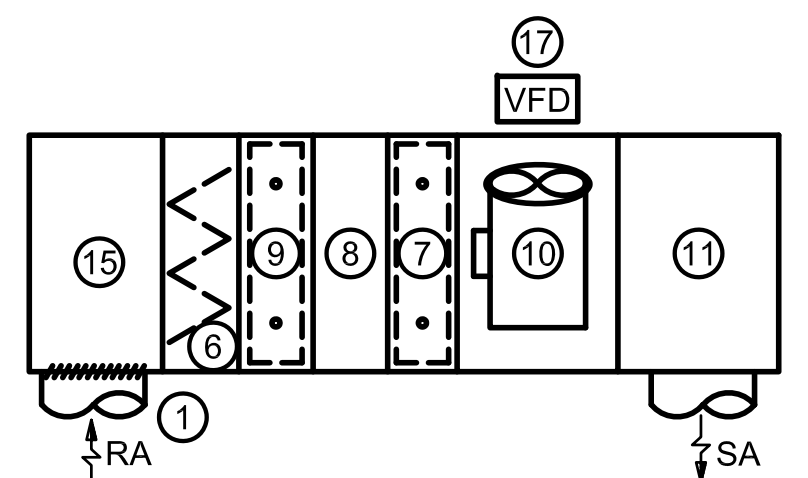
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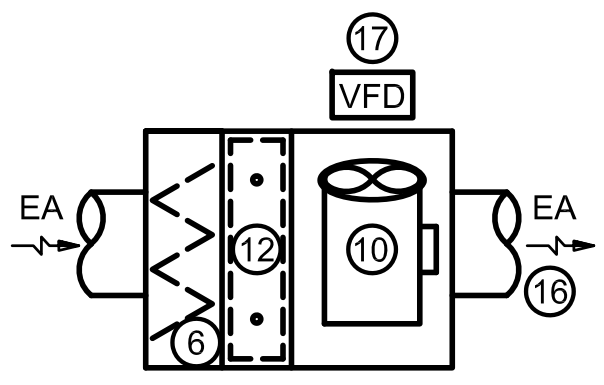
AHU-4
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AHU-5, 7, & 8
NOT TO SCALE



AHU-9
NOT TO SCALE



AHU-10
NOT TO SCALE

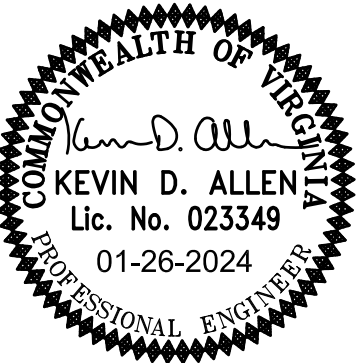
AHU COMPONENTS

- ① PROVIDE AND INSTALL NEW RETURN AIR DAMPERS AND ACTUATORS.
- ② RETURN/EXHAUST AIR SECTION.
- ③ PROVIDE AND INSTALL NEW EXHAUST AIR DAMPERS AND ACTUATORS.
- ④ PROVIDE AND INSTALL NEW OUTDOOR AIR INTAKE DAMPERS AND ACTUATORS.
- ⑤ OUTDOOR AIR SECTION. PROVIDE AND INSTALL NEW OUTDOOR AIRFLOW MONITORS.
- ⑥ PROVIDE AND INSTALL NEW FILTERS IN FILTER RACK SECTION.
- ⑦ PROVIDE AND INSTALL NEW HOT WATER COIL AND ACCESSORIES COMPLETE. REFER TO SCHEDULE FOR PERFORMANCE REQUIREMENTS.

- ⑧ ACCESS SECTIONS.
- ⑨ PROVIDE AND INSTALL NEW CHILLED WATER COIL AND ACCESSORIES COMPLETE. REFER TO SCHEDULE FOR PERFORMANCE REQUIREMENTS.
- ⑩ PROVIDE AND INSTALL NEW SUPPLY FANS, "GREENHECK" MODEL QE1 OR APPROVED EQUAL. REFER TO SCHEDULE FOR PERFORMANCE REQUIREMENTS AND QUANTITY. REMOVAL OF FANS REQUIRES REMOVAL OF UNIT PANEL.
- ⑪ SUPPLY AIR DISCHARGE PLENUM.
- ⑫ RUNAROUND LOOP COIL TO BE REMOVED

- ⑬ PROVIDE AND INSTALL NEW EXHAUST FAN, "GREENHECK" MODEL QE1 OR APPROVED EQUAL. REFER TO SCHEDULE FOR PERFORMANCE REQUIREMENTS AND QUANTITY. REMOVAL OF FANS REQUIRES REMOVAL OF UNIT PANEL.
- ⑭ MIXING BOX SECTION.
- ⑮ RETURN AIR SECTION.
- ⑯ EXHAUST THROUGH BUILDING LOUVER.
- ⑰ NEW FAN VARIABLE FREQUENCY DRIVE PROVIDED BY CONTROLS CONTRACTOR.
- ⑱ REFER TO DRAWINGS FOR DUCTWORK CONNECTION LOCATIONS.
- ⑲ AHU-8 SUPPLY FANS REPLACED 2023. WILL BE EXISTING TO REMAIN. "GREENHECK"

MODEL QE1-15.



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HAMPTON, VA 23666
GLEN ALLEN, VA 23060
PROJECT NUMBER: 22-113



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NEWPORT NEWS

MECHANICAL SCHEDULES

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M0.3

DATE: 01/26/2024

SERIES FAN POWERED VAV BOX SCHEDULE																	
UNIT NO.	INLET VALVE			FAN DATA			HOT WATER HEATING COIL DATA				MOTOR DATA		NC RAD	NC DISCH.	SELECTION BASED ON "GREENHECK"	REMARKS	
	MAX. CFM	MIN. CFM	SIZE (IN.)	SIZE	CFM	ESP	EAT (°F)	LAT (°F)	CAPACITY (MBH)	WPD (°F)	GPM	VOLTS	HP				
VAV-1.01	355	300	8	8	495	0.35	61.7	82.4	11.1	0.01	1.0	277	1/3	30	20	XG-FCI	①②③⑥
VAV-1.02	570	560	8	8	800	0.35	60.7	94.6	29.3	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.03	1140	960	12	12	1600	0.35	61.7	90.5	49.7	0.34	2.5	277	1	40	31	XG-FCI	①②③④
VAV-1.04	725	615	10	10	1020	0.35	61.7	90.6	31.8	0.11	1.5	277	1/3	34	27	XG-FCI	①②③⑤
VAV-1.05	760	645	10	10	1070	0.35	61.7	88.8	31.3	0.11	1.5	277	1/3	33	26	XG-FCI	①②③⑤
VAV-1.06	1015	860	10	10	1430	0.35	61.7	95.3	51.8	0.24	2.5	277	1	40	31	XG-FCI	①②③⑤
VAV-1.07	860	725	10	10	1210	0.35	61.7	92.2	39.8	0.20	2.0	277	1	39	29	XG-FCI	①②③⑤
VAV-1.08	930	930	10	10	1160	0.35	59.6	83.7	30.2	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.09	685	575	10	10	960	0.35	61.7	102.5	42.3	0.16	1.5	277	1	30	22	XG-FCI	①②③⑤
VAV-1.10	845	710	10	10	1185	0.35	61.7	92.5	39.3	0.20	2.0	277	1	32	25	XG-FCI	①②③⑥
VAV-1.11	570	480	8	8	800	0.35	61.7	95.5	29.2	0.11	1.5	277	1/3	28	18	XG-FCI	①②③⑤
VAV-1.12	625	530	8	8	880	0.35	61.7	92.4	29.2	0.11	1.5	277	1/3	30	19	XG-FCI	①②③⑤
VAV-1.13	875	875	8	8	970	0.35	58.6	88.3	31.1	0.11	1.5	277	1/3	26	18	XG-FCI	①②③⑤
VAV-1.14	220	185	6	6	310	0.35	61.8	93.4	10.6	0.01	0.5	277	1/3	30	18	XG-FCI	①②③④
VAV-1.15	320	315	8	8	450	0.35	60.7	83.3	11.0	0.01	1.0	277	1/3	28	19	XG-FCI	①②③⑤
VAV-1.16	345	290	8	8	480	0.35	61.7	96.6	18.1	0.07	1.0	277	1/3	26	18	XG-FCI	①②③⑤
VAV-1.17	380	320	8	8	530	0.35	61.7	82.0	11.6	0.01	1.0	277	1/3	30	18	XG-FCI	①②③⑤
VAV-1.18	400	335	8	8	560	0.35	61.8	96.8	21.2	0.05	1.0	277	1/3	28	19	XG-FCI	①②③⑤
VAV-1.19	200	170	4	4	280	0.35	61.7	92.1	9.2	0.01	0.5	277	1/3	28	18	XG-FCI	①②③④
VAV-1.20	975	820	10	10	1370	0.35	61.8	95.9	50.6	0.24	2.5	277	1	40	31	XG-FCI	①②③⑤
VAV-1.21	940	790	10	10	1320	0.35	61.8	96.3	49.2	0.24	2.5	277	1	40	31	XG-FCI	①②③⑤
VAV-1.22	235	200	6	6	330	0.35	61.7	92.5	11.0	0.01	0.5	277	1/3	29	18	XG-FCI	①②③⑤
VAV-1.23	570	560	8	8	800	0.35	60.7	94.5	29.2	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.24	715	715	8	8	840	0.35	59.1	92.0	29.8	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤
VAV-1.25	555	470	8	8	780	0.35	61.7	96.3	29.1	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.26	690	690	8	8	860	0.35	59.6	92.0	30.1	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤
VAV-1.27	655	555	8	8	920	0.35	61.7	92.3	30.4	0.11	1.5	277	1/3	32	24	XG-FCI	①②③⑤
VAV-1.28	555	470	8	8	780	0.35	61.7	96.1	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.29	585	495	8	8	820	0.35	61.7	94.9	29.4	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.30	585	495	8	8	820	0.35	61.7	94.9	29.4	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.31	615	515	8	8	860	0.35	61.7	93.3	29.3	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.32	605	510	8	8	850	0.35	61.7	94.2	29.8	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤
VAV-1.33	555	470	8	8	780	0.35	61.7	96.1	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.34	220	185	6	6	310	0.35	61.8	93.7	10.7	0.01	0.5	277	1/3	28	18	XG-FCI	①②③④
VAV-1.35	785	660	10	10	1100	0.35	61.7	88.2	31.4	0.11	1.5	277	1/3	33	26	XG-FCI	①②③⑤
VAV-1.36	420	355	8	8	590	0.35	61.7	95.5	21.5	0.05	1.0	277	1/3	28	20	XG-FCI	①②③⑤
VAV-1.37	600	505	8	8	840	0.35	61.7	94.6	29.8	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤
VAV-1.38	600	505	8	8	840	0.35	61.7	94.6	29.8	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤
VAV-1.39	620	525	8	8	870	0.35	61.7	93.9	30.2	0.11	1.5	277	1/3	32	24	XG-FCI	①②③⑤
VAV-1.40	570	480	8	8	800	0.35	61.7	95.5	29.2	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.41	570	480	8	8	800	0.35	61.7	95.5	29.2	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.42	115	100	4	4	160	0.35	61.5	97.9	6.3	0.02	0.5	277	1/3	26	16	XG-FCI	①②③⑤
VAV-1.43	795	670	10	10	1115	0.35	61.7	97.2	42.7	0.16	2.0	277	1	40	31	XG-FCI	①②③⑤
VAV-1.44	570	480	8	8	800	0.35	61.7	95.5	29.2	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.45	500	420	8	8	700	0.35	61.7	87.9	19.8	0.05	1.0	277	1/3	33	20	XG-FCI	①②③⑤
VAV-1.46	570	480	8	8	800	0.35	61.7	95.6	29.3	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.47	700	700	8	8	820	0.35	59.1	92.5	29.6	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤
VAV-1.48	1120	945	12	12	1575	0.35	61.7	96.1	58.4	0.35	3.5	277	1	40	31	XG-FCI	①②③⑤
VAV-1.49	1165	980	12	12	1635	0.35	61.7	95.3	59.2	0.35	3.0	277	1	40	31	XG-FCI	①②③⑤
REMARKS: ① PROVIDE WITH 1" FOIL FACED INSULATION. ③ PROVIDE WITH FACTORY MOUNTED TOGGLE DISCONNECT. ⑤ PROVIDE WITH 3-ROW HEATING COIL. ② PROVIDE WITH EC MOTOR. ④ PROVIDE WITH 2-ROW HEATING COIL. ⑥ PROVIDE WITH 4-ROW HEATING COIL.																	

SERIES FAN POWERED VAV BOX SCHEDULE																	
UNIT NO.	INLET VALVE			FAN DATA			HOT WATER HEATING COIL DATA				MOTOR DATA		NC RAD	NC DISCH.	SELECTION BASED ON "GREENHECK"	REMARKS	
	MAX. CFM	MIN. CFM	SIZE (IN.)	SIZE	CFM	ESP	EAT (°F)	LAT (°F)	CAPACITY (MBH)	WPD (°F)	GPM	VOLTS	HP				
VAV-6.01	350	245	6	6	350	0.35	63.7	90.49	10.7	0.03	1.0	277	1/3	25	18	XG-FCI	①②③⑤
VAV-6.02	675	475	8	8	675	0.35	63.7	104.7	20.9	0.05	1.0	277	1/3	26	19	XG-FCI	①②③⑤
VAV-6.03	730	510	8	8	730	0.35	63.7	104.4	28.3	0.11	1.5	277	1/3	29	21	XG-FCI	①②③⑤
VAV-6.04	300	170	6	6	300	0.35	63.7	103.7	9.1	0.01	0.5	277	1/3	26	18	XG-FCI	①②③④
VAV-6.05	400	285	6	6	400	0.35	63.7	102.9	15.0	0.06	1.0	277	1/3	30	18	XG-FCI	①②③⑤
VAV-6.06	560	400	6	6	560	0.35	63.7	90.1	11.1	0.01	1.0	277	1/3	30	20	XG-FCI	①②③⑤
VAV-6.07	560	400	6	6	560	0.35	63.7	104.0	18.4	0.07	1.0	277	1/3	26	18	XG-FCI	①②③⑤
VAV-6.08	300	215	6	6	300	0.35	63.7	100.7	7.11	0.02	0.5	277	1/3	26	16	XG-FCI	①②③⑥
REMARKS: ① PROVIDE WITH 1" FOIL FACED INSULATION. ③ PROVIDE WITH FACTORY MOUNTED TOGGLE DISCONNECT. ⑤ PROVIDE WITH 3-ROW HEATING COIL. ② PROVIDE WITH EC MOTOR. ④ PROVIDE WITH 2-ROW HEATING COIL. ⑥ PROVIDE WITH 4-ROW HEATING COIL.																	

SERIES FAN POWERED VAV BOX SCHEDULE																		
UNIT NO.	INLET VALVE			FAN DATA			HOT WATER HEATING COIL DATA					MOTOR DATA		NC RAD	NC DISCH.	SELECTION BASED ON "GREENHECK"	REMARKS	
	MAX. CFM	MIN. CFM	SIZE (IN.)	SIZE	CFM	ESP	EAT (°F)	LAT (°F)	CAPACITY (MBH)	WPD (°F)	GPM	VOLTS	HP					
VAV-2.01	820	540	8	8	820	0.35	63.7	101.0	29.9	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤	
VAV-2.02	780	515	8	8	780	0.35	63.7	102.4	29.3	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.03	780	515	8	8	780	0.35	63.7	102.4	29.3	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.04	780	515	8	8	780	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.05	780	515	8	8	780	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.06	780	550	8	8	780	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.07	780	515	8	8	780	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.08	400	260	6	6	400	0.35	63.7	93.5	11.6	0.01	1.0	277	1/3	30	19	XG-FCI	①②③⑥	
VAV-2.09	920	600	8	8	920	0.35	63.7	99.3	30.7	0.11	1.5	277	1/3	32	24	XG-FCI	①②③⑤	
VAV-2.10	175	115	4	4	175	0.35	63.7	104.8	6.4	0.02	0.5	277	1/3	26	16	XG-FCI	①②③⑤	
VAV-2.11	780	515	8	8	780	0.35	63.7	102.8	29.1	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.12	780	515	8	8	780	0.35	63.7	102.4	29.3	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.13	950	630	8	8	950	0.35	63.7	99.8	30.4	0.11	1.5	277	1/3	32	24	XG-FCI	①②③⑤	
VAV-2.14	780	515	8	8	780	0.35	63.7	102.6	29.2	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.15	780	515	8	8	780	0.35	63.7	101.8	29.5	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.16	380	255	6	6	380	0.35	63.7	101.2	10.6	0.01	0.5	277	1/3	28	18	XG-FCI	①②③⑤	
VAV-2.17	360	230	6	6	360	0.35	63.7	101.2	10.6	0.01	0.5	277	1/3	28	18	XG-FCI	①②③⑤	
VAV-2.18	780	515	8	8	780	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.19	840	555	8	8	840	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.20	820	540	8	8	820	0.35	63.7	101.3	29.8	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤	
VAV-2.21	800	530	8	8	800	0.35	63.7	101.9	29.5	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤	
VAV-2.22	800	530	8	8	800	0.35	63.7	101.9	29.5	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤	
VAV-2.23	780	515	8	8	780	0.35	63.7	101.9	29.5	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤	
VAV-2.24	780	515	8	8	780	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.25	820	700	8	8	820	0.35	63.7	101.7	29.6	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑤	
VAV-2.26	780	515	8	8	780	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.27	175	115	4	4	175	0.35	63.7	103.6	6.6	0.02	0.5	277	1/3	26	16	XG-FCI	①②③⑤	
VAV-2.28	1175	770	8	8	1175	0.35	63.7	100.9	30.0	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤	
VAV-2.29	820	540	8	8	820	0.35	63.7	101.2	29.8	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤	
VAV-2.30	800	525	8	8	800	0.35	63.7	101.3	29.8	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤	
VAV-2.31	940	620	8	8	940	0.35	63.7	98.3	31.1	0.11	1.5	277	1/3	32	25	XG-FCI	①②③⑤	
VAV-2.32	820	540	8	8	820	0.35	63.7	101.2	29.8	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤	
VAV-2.33	780	515	8	8	780	0.35	63.7	102.6	29.2	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.34	450	290	6	6	450	0.35	63.7	90.5	10.7	0.03	1.0	277	1/3	25	18	XG-FCI	①②③⑤	
VAV-2.35	450	290	6	6	450	0.35	63.7	90.5	10.7	0.03	1.0	277	1/3	25	18	XG-FCI	①②③⑤	
VAV-2.36	780	515	8	8	780	0.35	63.7	102.9	29.0	0.11	1.5	277	1/3	30	22	XG-FCI	①②③⑥	
VAV-2.37	820	540	8	8	820	0.35	63.7	101.4	29.7	0.11	1.5	277	1/3	31	23	XG-FCI	①②③⑤	
REMARKS:	① PROVIDE WITH 1" FOIL FACED INSULATION.						③ PROVIDE WITH FACTORY MOUNTED TOGGLE DISCONNECT.						⑤ PROVIDE WITH 3-ROW HEATING COIL.					
	② PROVIDE WITH EC MOTOR.						④ PROVIDE WITH 2-ROW HEATING COIL.						⑥ PROVIDE WITH 4-ROW HEATING COIL.					

AHU-1 VENTILATION CALCULATION - IAQ PROCEDURE

AHU-2 VENTILATION CALCULATION - IAQ PROCEDURE

AHU-3 VENTILATION CALCULATION - IAQ PROCEDURE

AHU-4 VENTILATION CALCULATION - IAQ PROCEDURE

AHU-5 VENTILATION CALCULATION - IAQ PROCEDURE

AHU-6 VENTILATION CALCULATION - IAQ PROCEDURE



THOMPSON
Consulting Engineers

22 ENTERPRISE PARKWAY
4323 COX ROAD
HAMPTON, VA 23666
GLENN ALLEN, VA 23060



PRIMARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT	
NEWPORT NEWS PUBLIC SCHOOLS	
NEWPORT NEWS	VIRGINIA
VENTILATION CALCULATIONS	

COMM. NO: 22-11
DESIGNED BY: CE
DRAWN BY: CE
CHECKED BY: KD

M0.5

DATE: 01/26/202

System Area	Aa	sqft	9754.34	Condition Analyzed	Heating	AHU-7 VENTILATION CALCULATION																
System Population	Ps	people	220.00	Method to determine Ev	Appendix A	Based on VMC 2018 - 403																
Sum of Zone Population	sum of Ps	people	220.00	Minimum Ev	0.78																	
Occupant Diversity	D		1.00	Critical Zone	7.03 - 202B - STORAGE																	
Uncorrected outdoor air Intake	Vou	cfm	2887	System Ventilation Efficiency	0.78																	
System primary airflow	Vsa	cfm	4969	Outdoor air Intake flow required	3684																	
Average outdoor air fraction	Zs		0.58	Outdoor air Intake flow provided	3690	0.4903554 7525 0																
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	
VAV Box Number	Zone Name	Occupancy Category	Area	Default Population	Zone Population	People Outdoor Air Rate	Area Outdoor Air Rate	Occupancy Breathing Zone Airflow	Area Breathing Zone Airflow	Breathing Zone Airflow	Zone Air Distribution Effectiveness	Zone Outdoor Airflow	Zone Discharge Airflow	Zone Primary Airflow	Primary Outdoor Air Fraction	Zone Secondary Recirculation Fraction	Zone Primary Air Fraction	Supply Air Fraction	Mixed Air Fraction	Outdoor Air Fraction	Zone Ventilation Efficiency	
			Az sqft	Yes/No	Pz people	Rp cfm/person	Ra cfm/sqft	Pz * Rp cfm	Az * Ra cfm	Vbz cfm	Ez	Voz cfm	Vdz cfm	Zpz cfm	Zpz	Er	Ep	Fa	Fa	Fc	Fc	Evt
7.01	100- ENTRY CORRIDOR	Corridor	1968.2	Yes	0.0	0	0.06	0.00	117.79	117.79	0.8	147.24	780	490	0.30	1.00	0.63	1.00	0.62	1.00	1.17	
	100W - WOMENS RESTROOM	CORRIDOR	301.5	Yes	0.0	0	0.06	0.00	18.09	18.09	0.8	22.61	50	31	0.72	1.00	0.63	1.00	0.62	1.00	0.91	
	100M - MENS RESTROOM	CORRIDOR	300.3	Yes	0.0	0	0.12	0.00	18.02	18.02	0.8	22.52	50	31	0.72	1.00	0.63	1.00	0.62	1.00	0.91	
	100C - STORAGE	STORAGE	23.94	Yes	0.0	0	0.12	0.00	2.87	2.87	0.8	3.59	25	16	0.23	1.00	0.63	1.00	0.62	1.00	1.20	
	100A - STORAGE	STORAGE	167.3	Yes	0.0	0	0.12	0.00	20.10	20.10	0.8	25.13	50	31	0.80	1.00	0.63	1.00	0.62	1.00	0.86	
7.02	204 - CLASSROOM	CLASSROOM 9+	644	Yes	23.0	10	0.12	230.00	77.28	307.28	0.8	384.10	680	535	0.72	1.00	0.79	1.00	0.78	1.00	0.89	
	202B - STORAGE	STORAGE	364.8	Yes	0.0	0	0.12	0.00	43.72	43.72	0.8	54.65	80	65	0.84	1.00	0.82	1.00	0.81	1.00	0.78	
	202 - BAND	MUSIC ROOM	1662	Yes	59.0	10	0.06	590.00	99.72	689.72	0.8	862.15	1300	1062	0.81	1.00	0.82	1.00	0.81	1.00	0.81	
	2010 - STORAGE	STORAGE	184.8	Yes	0.0	0	0.12	0.00	22.18	22.18	0.8	27.72	75	61	0.45	1.00	0.82	1.00	0.81	1.00	1.10	
	202A - STORAGE	STORAGE	78.1	Yes	0.0	0	0.12	0.00	9.37	9.37	0.8	11.72	75	61	0.19	1.00	0.82	1.00	0.81	1.00	1.31	
7.04	201 - CHORUS/DRAMA	MUSIC ROOM	740.3	Yes	26.0	10	0.06	260.00	44.43	304.43	0.8	380.54	640	538	0.71	1.00	0.84	1.00	0.84	1.00	0.89	
	1/2 OF STAGE	STAGE	789.5	Yes	56.0	10	0.06	560.00	47.37	607.37	0.8	759.21	1515	833	0.91	1.00	0.55	1.00	0.55	1.00	1.12	
	A32 - VESTIBULE	CORRIDOR	59.7	Yes	0.0	0	0.06	0.00	3.58	3.58	0.8	4.48	290	180	0.03	1.00	0.55	1.00	0.55	1.00	1.30	
7.07	1/2 OF STAGE	STAGE	789.5	Yes	56.0	10	0.06	560.00	47.37	607.37	0.8	759.21	1515	833	0.91	1.00	0.55	1.00	0.55	1.00	0.82	
	CORRIDOR	CORRIDOR	1322	Yes	0.0	0	0.06	0.00	79.32	79.32	0.8	99.15	200	110	0.90	1.00	0.55	1.00	0.55	1.00	0.82	
	STORAGE	STORAGE	144.6	Yes	0.0	0	0.12	0.00	17.35	17.35	0.8	21.69	75	41	0.53	1.00	0.55	1.00	0.55	1.00	1.03	
	STORAGE	STORAGE	83.8	Yes	0.0	0	0.12	0.00	10.06	10.06	0.8	12.57	75	41	0.30	1.00	0.55	1.00	0.55	1.00	1.15	
	SR-4 - SINGLE RESTROOM	CORRIDOR	65.8	Yes	0.0	0	0.06	0.00	3.95	3.95	0.8	4.94	25	14	0.36	1.00	0.55	1.00	0.55	1.00	1.12	
	SR-3 - SINGLE RESTROOM	CORRIDOR	69.3	Yes	0.0	0	0.06	0.00	4.16	4.16	0.8	5.20	25	14	0.38	1.00	0.55	1.00	0.55	1.00	1.11	

AHU-7 VENTILATION CALCULATION - IAQ PROCEDURE

AHU-8 VENTILATION CALCULATION															Based on VMC 2018 - 403		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O			
System Number	System Name	Condition Analyzed	Occupancy Category	Area	Default Population	Zone Population	People Outdoor Air Rate	Area Outdoor Air Rate	Occupancy Breathing Zone Airflow	Area Breathing Zone Airflow	Breathing Zone Airflow	Zone Air Distribution Effectiveness	Zone Outdoor Airflow	Outdoor Air Intake Flow Provided			
				Az sqft	Yes/No	Pz people	Rp cfm/person	Ra cfm/sqft	Pz * Rp cfm	Az * Ra cfm	Vbz cfm	Ez	Voz cfm	cfm			
AHU-8	COMMONS	Heating	CAFETERIA	5895	No	300.00	7.5	0.18	2250.00	1061.10	3311.10	0.8	4138.88				
	402	Heating	OFFICE	259.5	Yes	1.30	5	0.06	6.49	15.57	22.06	0.8	27.57				
	401	Heating	OFFICE	275	Yes	1.38	5	0.06	6.88	16.50	23.38	0.8	29.22				
TOTAL:													4195.67	4825			

AHU-8 VENTILATION CALCULATION - IAQ PROCEDURE

AHU-9 VENTILATION CALCULATION															Based on VMC 2018 - 403		
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O			
System Number	System Name	Condition Analyzed	Occupancy Category	Area	Default Population	Zone Population	People Outdoor Air Rate	Area Outdoor Air Rate	Occupancy Breathing Zone Airflow	Area Breathing Zone Airflow	Breathing Zone Airflow	Zone Air Distribution Effectiveness	Zone Outdoor Airflow	Outdoor Air Intake Flow Provided			
				Az sqft	Yes/No	Pz people	Rp cfm/person	Ra cfm/sqft	Pz * Rp cfm	Az * Ra cfm	Vbz cfm	Ez	Voz cfm	cfm			
AHU-9	GIRLS LOCKER ROOM	Heating	CORRIDOR	1071.3	Yes	0.00	0	0.06	0.00	64.28	64.28	0.8	80.35				
AHU-9	GIRLS LOCKER ROOM OFFICE	Heating	OFFICE	98.1	Yes	0.49	5	0.06	2.45	5.89	8.34	0.8	10.42				
AHU-9	OFFICE RR-1	Heating	CORRIDOR	60.2	Yes	0.00	0	0.06	0.00	3.61	3.61	0.8	4.52				
AHU-9	500W - WOMENS RESTROOM	Heating	CORRIDOR	237.7	Yes	0.00	0	0.06	0.00	14.26	14.26	0.8	17.83				
AHU-9	500	Heating	CORRIDOR	492.8	Yes	0.00	0	0.06	0.00	29.57	29.57	0.8	36.96				
AHU-9	500M - MENS RESTROOM	Heating	CORRIDOR	237.9	Yes	0.00	0	0.06	0.00	14.27	14.27	0.8	17.84				
AHU-9	BOYS LOCKER ROOM	Heating	CORRIDOR	1021.3	Yes	0.00	0	0.06	0.00	61.28	61.28	0.8	76.60				
AHU-9	BOYS LOCKER ROOM OFFICE	Heating	OFFICE	98.1	Yes	0.49	5	0.06	2.45	5.89	8.34	0.8	10.42				
AHU-9	OFFICE RR-2	Heating	CORRIDOR	60	Yes	0.00	0	0.06	0.00	3.60	3.60	0.8	4.50				
AHU-9	500A	Heating	STORAGE	108.3	Yes	0.00	0	0.06	0.00	15.40	15.40	0.8	19.25				
AHU-9	500D	Heating	STORAGE	128.3	Yes	0.00	0	0.06	0.00	15.40	15.40	0.8	19.25				
TOTAL:													294.94	1090			

AHU-9 VENTILATION CALCULATION - IAQ PROCEDURE



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Consulting Engineers



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

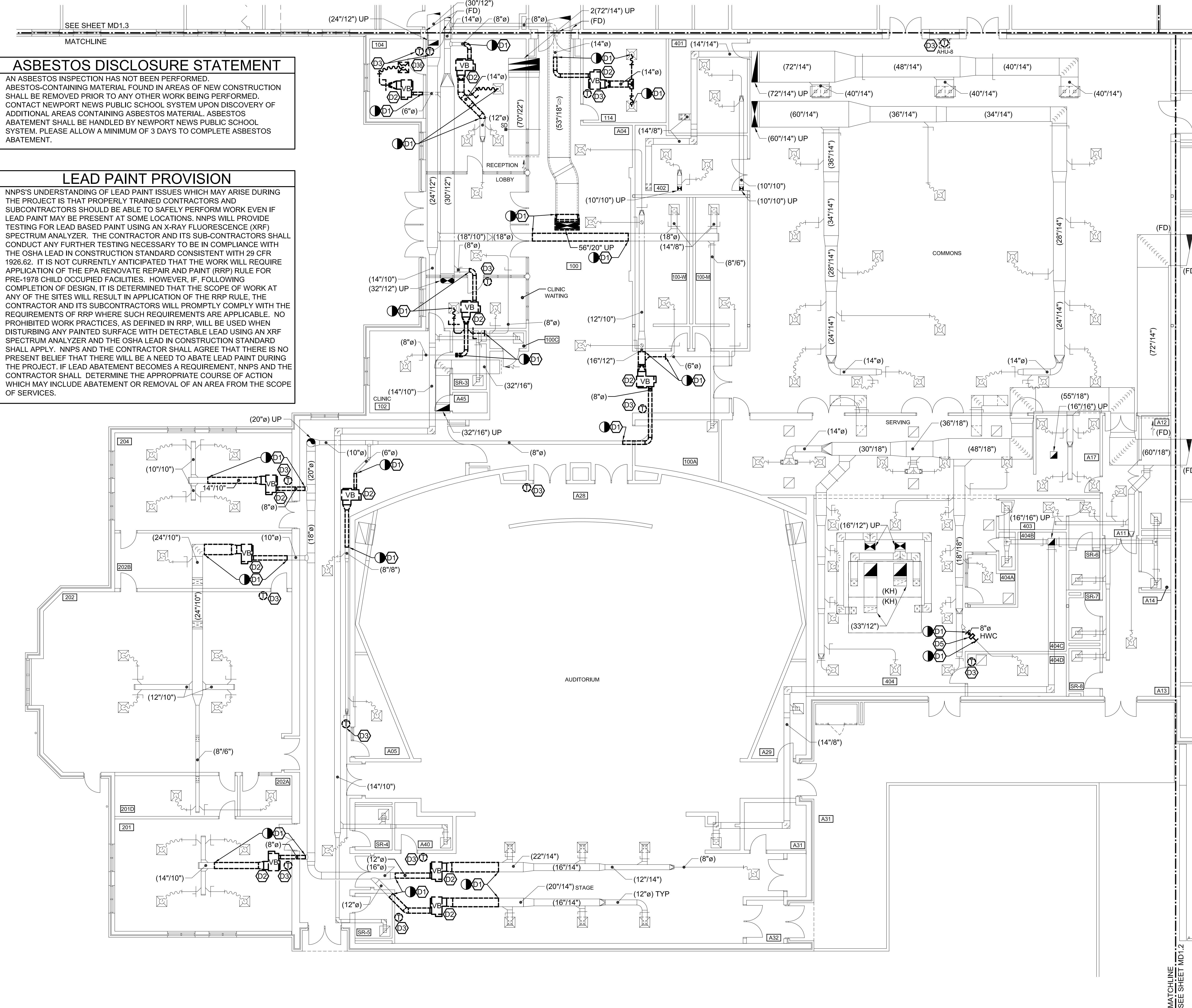
NEWPORT NEWS

VENTILATION CALCULATIONS

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: CEP
CHECKED BY: KDA

M0.6

DATE: 01/26/2024



ASBESTOS DISCLOSURE STATEMENT

AN ASBESTOS INSPECTION HAS NOT BEEN PERFORMED. ASBESTOS-CONTAINING MATERIAL FOUND IN AREAS OF NEW CONSTRUCTION SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED. CONTACT NEWPORT NEWS PUBLIC SCHOOL SYSTEM UPON DISCOVERY OF ADDITIONAL AREAS CONTAINING ASBESTOS MATERIAL. ASBESTOS ABATEMENT SHALL BE HANDLED BY NEWPORT NEWS PUBLIC SCHOOL SYSTEM. PLEASE ALLOW A MINIMUM OF 3 DAYS TO COMPLETE ASBESTOS ABATEMENT.

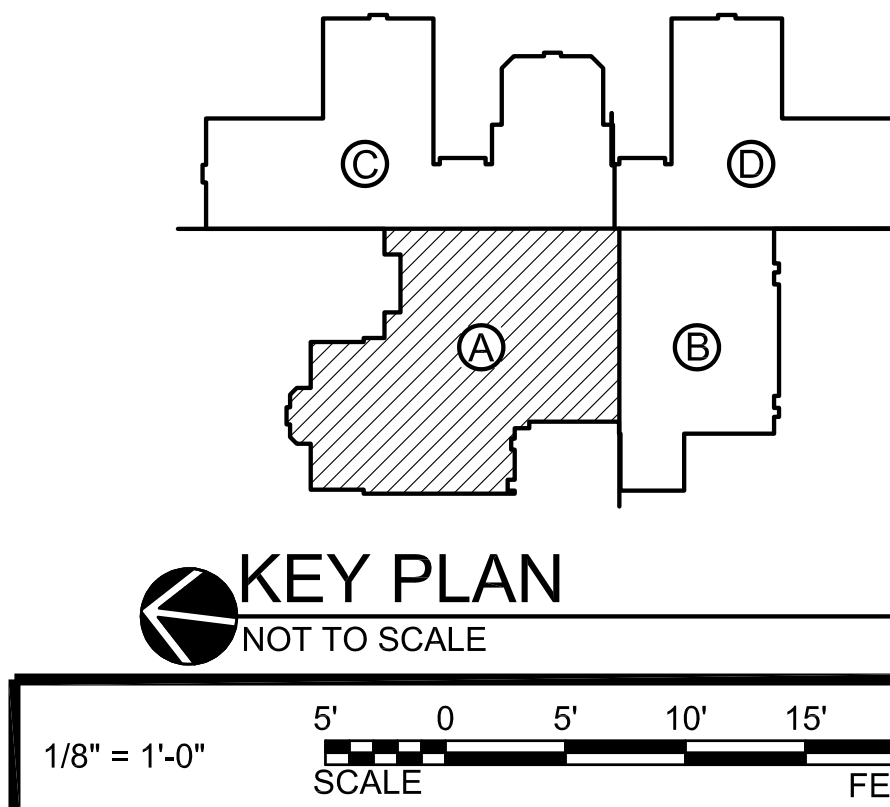
LEAD PAINT PROVISION

NNPS'S UNDERSTANDING OF LEAD PAINT ISSUES WHICH MAY ARISE DURING THE PROJECT IS THAT PROPERLY TRAINED CONTRACTORS AND SUBCONTRACTORS SHOULD BE ABLE TO SAFELY PERFORM WORK EVEN IF LEAD PAINT MAY BE PRESENT AT SOME LOCATIONS. NNPS WILL PROVIDE TESTING FOR LEAD BASED PAINT USING AN X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER. THE CONTRACTOR AND ITS SUB-CRONTACTORS SHALL CONDUCT ANY FURTHER TESTING NECESSARY TO BE IN COMPLIANCE WITH THE OSHA LEAD IN CONSTRUCTION STANDARD CONSISTENT WITH 29 CFR 1926.62. IT IS NOT CURRENTLY ANTICIPATED THAT THE WORK WILL REQUIRE APPLICATION OF THE EPA RENOVATE REPAIR AND PAINT (RRP) RULE FOR PRE-1978 CHILD OCCUPIED FACILITIES. HOWEVER, IF, FOLLOWING COMPLETION OF DESIGN, IT IS DETERMINED THAT THE SCOPE OF WORK AT ANY OF THE SITES WILL RESULT IN APPLICATION OF THE RRP RULE, THE CONTRACTOR AND ITS SUBCONTRACTORS WILL PROMPTLY COMPLY WITH THE REQUIREMENTS OF RRP WHERE SUCH REQUIREMENTS ARE APPLICABLE. NO PROHIBITED WORK PRACTICES, AS DEFINED IN RRP, WILL BE USED WHEN DISTURBING ANY PAINTED SURFACE WITH DETECTABLE LEAD USING AN XRF SPECTRUM ANALYZER AND THE OSHA LEAD IN CONSTRUCTION STANDARD SHALL APPLY. NNPS AND THE CONTRACTOR SHALL AGREE THAT THERE IS NO PRESENT BELIEF THAT THERE WILL BE A NEED TO ABATE LEAD PAINT DURING THE PROJECT. IF LEAD ABATEMENT BECOMES A REQUIREMENT, NNPS AND THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE COURSE OF ACTION WHICH MAY INCLUDE ABATEMENT OR REMOVAL OF AN AREA FROM THE SCOPE OF SERVICES.

FIRST FLOOR PLAN - AREA "A" - MECHANICAL - DEMOLITION
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES	
NO.	DESCRIPTION
D1	DISCONNECT AND REMOVE EXISTING DUCTWORK TO EXTENT REQUIRED TO FACILITATE INSTALLATION OF NEW WORK. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHELENE SHEETING DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR REMAINING DUCTWORK WHERE REMOVAL OF CONNECTED UNIT REQUIRES.
D2	REMOVE VARIABLE AIR VOLUME TERMINAL BOX, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.
D3	REMOVE THERMOSTAT/TEMPERATURE SENSOR, WIRING, AND ACCESSORIES COMPLETE.
D5	REMOVE DUCT MOUNTED HOT WATER COIL, CONTROLS, AND ACCESSORIES COMPLETE. REMOVE DUCTWORK TO EXTENT REQUIRED FOR INSTALLATION OF NEW WORK.
D36	REMOVE EXISTING GRILLES, REGISTERS, AND DIFFUSERS AS INDICATED.

NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.



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PROJECT NUMBER: 22-113

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS
NEWPORT NEWS
VIRGINIA
FIRST FLOOR PLAN - AREA "A" - MECHANICAL - DEMOLITION

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD1.1

DATE: 01/26/2024

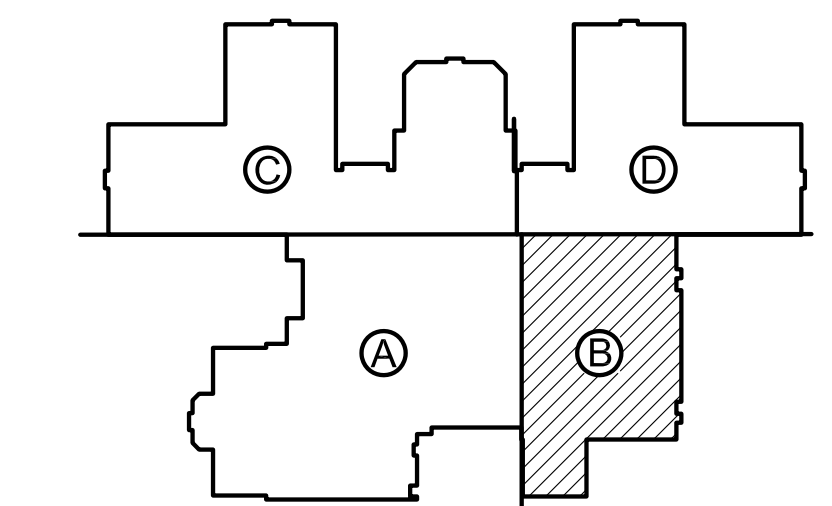


VIRGINIA

FIRST FLOOR PLAN - AREA "B" - MECHANICAL - DEMOLITION

MD1.2

DATE: 01/26/2024



KEY PLAN
NOT TO SCALE

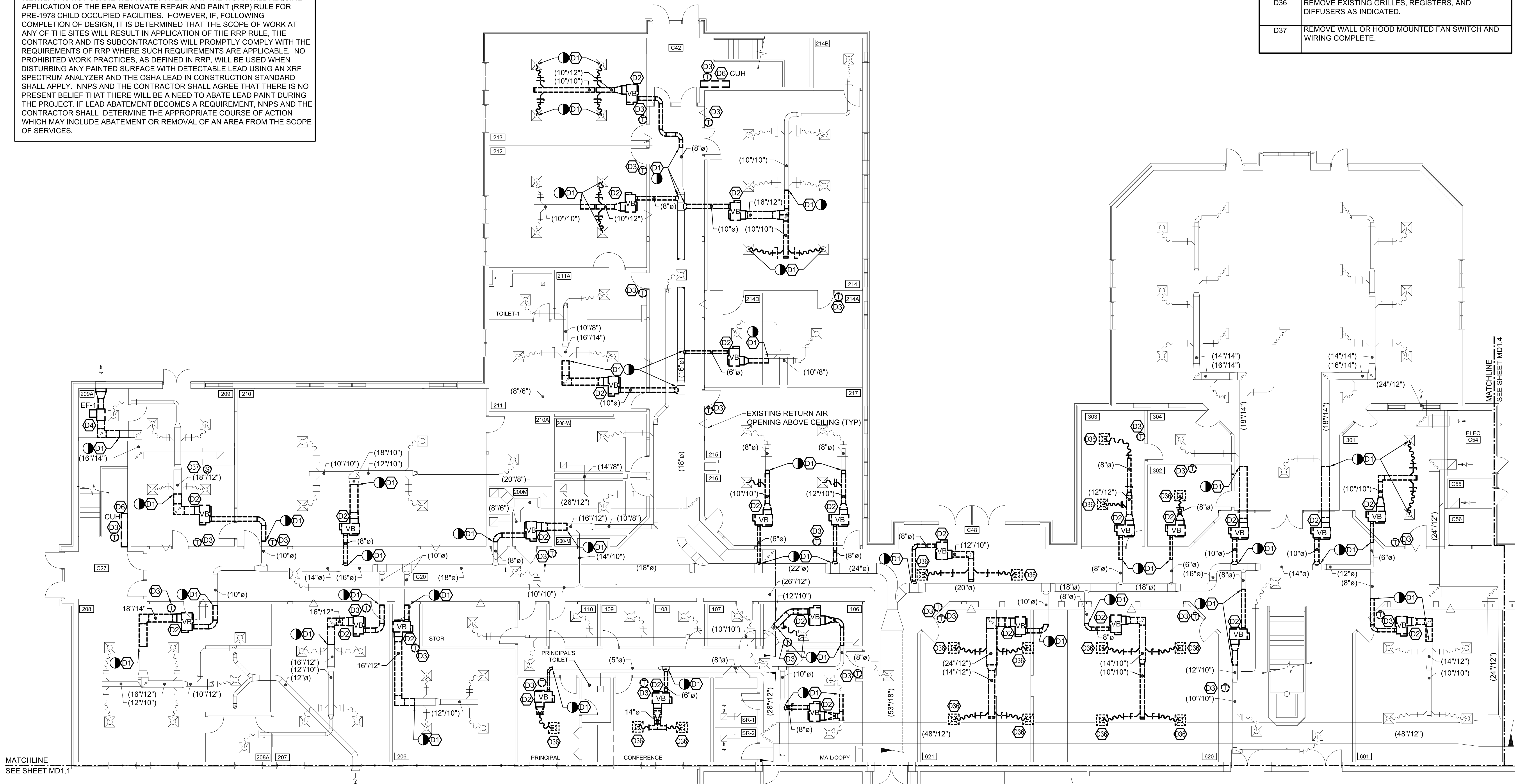


ASBESTOS DISCLOSURE STATEMENT

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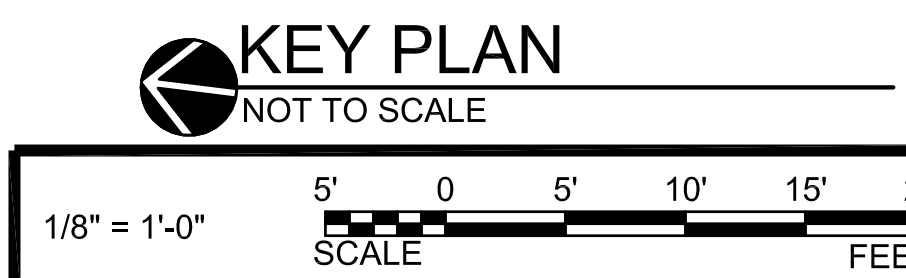
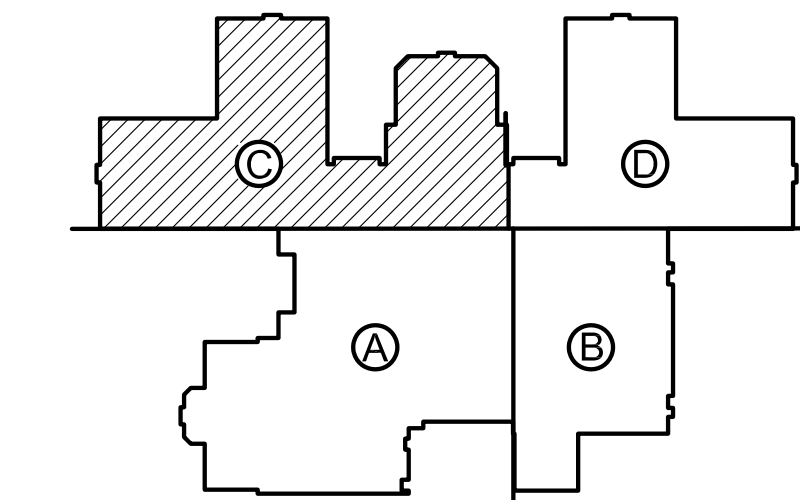
LEAD PAINT PROVISION

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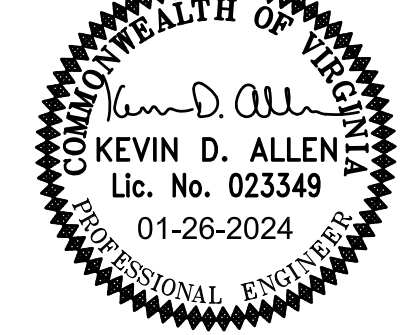


FIRST FLOOR PLAN - AREA "C" - MECHANICAL - DEMOLITION
SCALE: 1/8" = 1'-0"

NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.

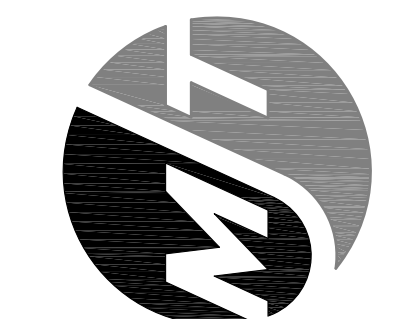


DEMOLITION NOTES	
NO.	DESCRIPTION
D1	DISCONNECT AND REMOVE EXISTING DUCTWORK TO EXTENT REQUIRED TO FACILITATE INSTALLATION OF NEW WORK. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHELENE SHEETING DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR REMAINING DUCTWORK WHERE REMOVAL OF CONNECTED UNIT REQUIRES.
D2	REMOVE VARIABLE AIR VOLUME TERMINAL BOX, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.
D3	REMOVE THERMOSTAT/TEMPERATURE SENSOR, WIRING, AND ACCESSORIES COMPLETE.
D4	REMOVE EXHAUST FAN, SUPPORTS, ACCESSORIES, AND CONTROLS COMPLETE.
D6	REMOVE CABINET UNIT HEATER, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.
D36	REMOVE EXISTING GRILLES, REGISTERS, AND DIFFUSERS AS INDICATED.
D37	REMOVE WALL OR HOOD MOUNTED FAN SWITCH AND WIRING COMPLETE.



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

NEWPORT NEWS

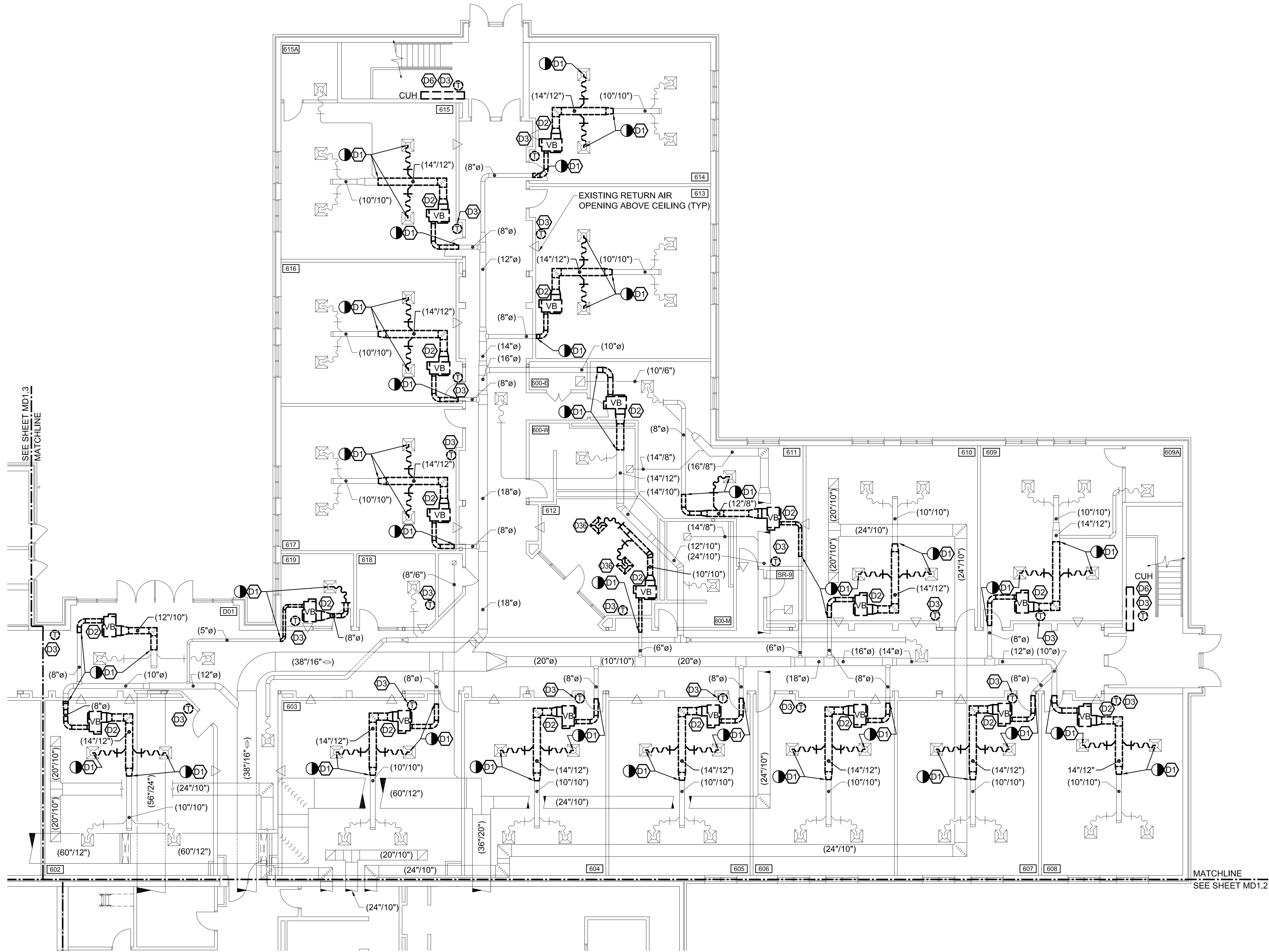
VIRGINIA

FIRST FLOOR PLAN - AREA "C" - MECHANICAL - DEMOLITION

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD1.3

DATE: 01/26/2024



FIRST FLOOR PLAN - AREA "D" - MECHANICAL - DEMOLITION
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES	
NO.	DESCRIPTION
D1	DISCONNECT AND REMOVE EXISTING DUCTWORK TO EXTENT REQUIRED TO FACILITATE INSTALLATION OF NEW WORK. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR REMAINING DUCTWORK WHERE REMOVAL OF CONNECTED UNIT REQUIRES.
D2	REMOVE VARIABLE AIR VOLUME TERMINAL BOX, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.
D3	REMOVE THERMOSTAT/TEMPERATURE SENSOR, WIRING, AND ACCESSORIES COMPLETE.
D6	REMOVE CABINET UNIT HEATER, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.
D36	REMOVE EXISTING GRILLES, REGISTERS, AND DIFFUSERS AS INDICATED.

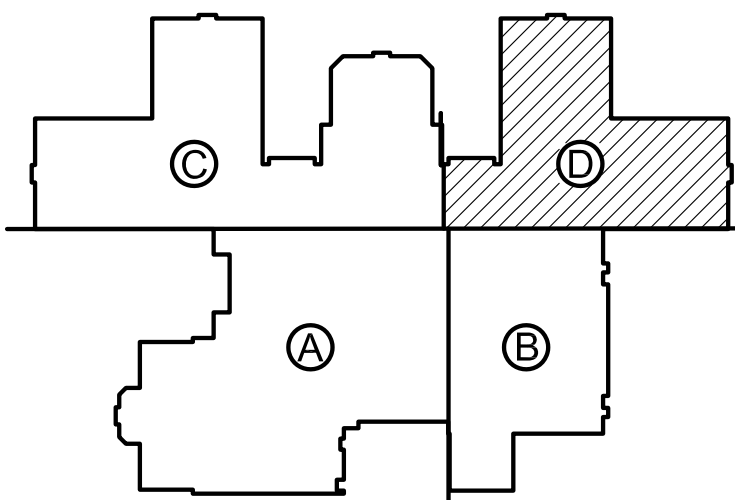
ASBESTOS DISCLOSURE STATEMENT

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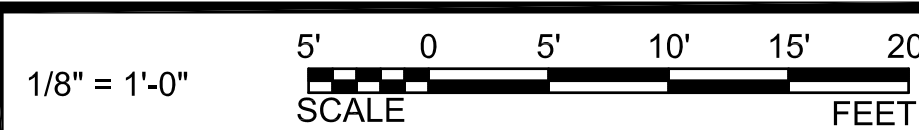
LEAD PAINT PROVISION

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KEY PLAN
NOT TO SCALE



THOMPSON
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GLEN ALLEN, VA 23060
PROJECT NUMBER: 22-113
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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

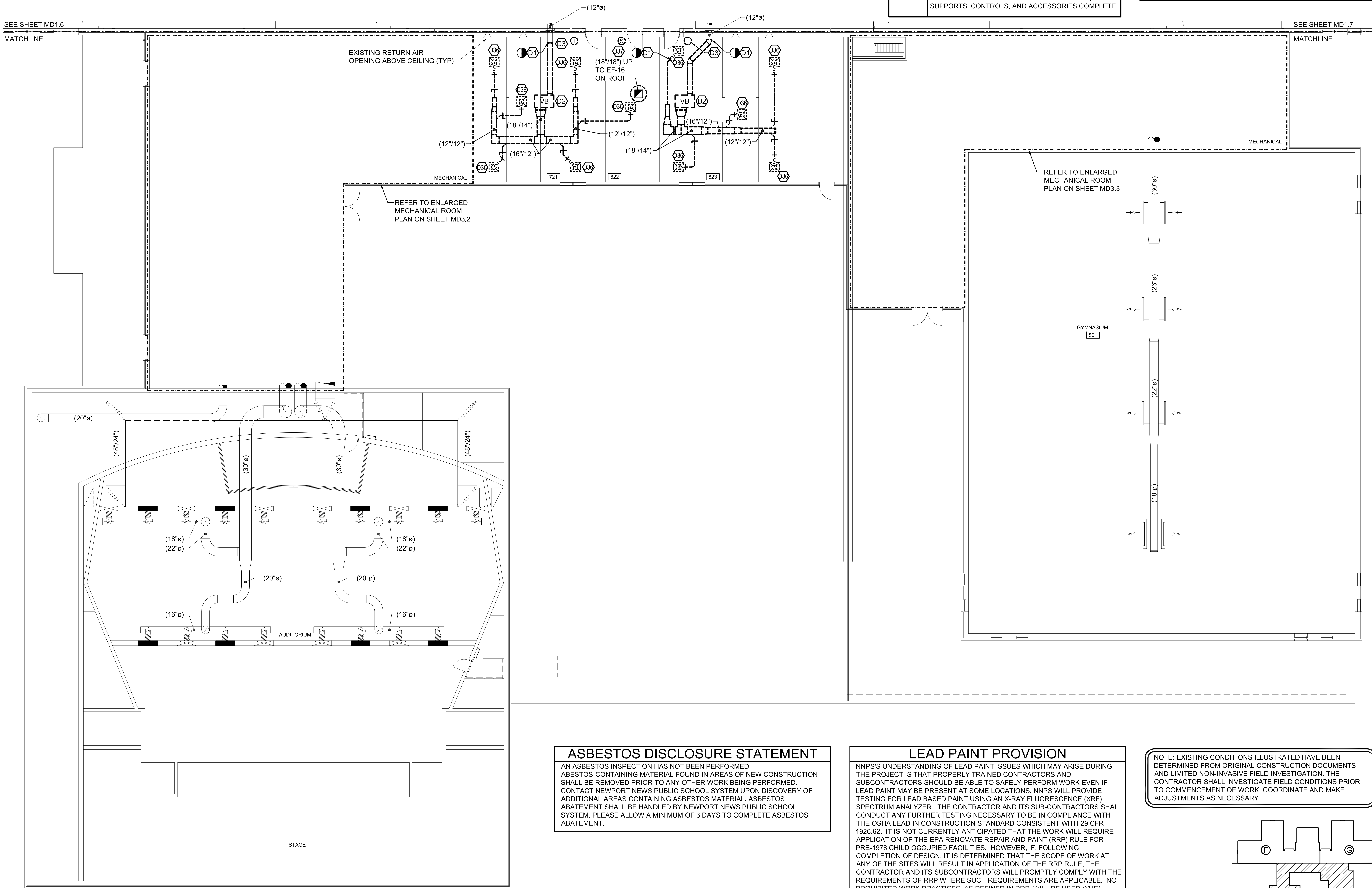
FIRST FLOOR PLAN - AREA "D" - MECHANICAL - DEMOLITION

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD1.4

DATE: 01/26/2024

SEE SHEET MD1.6
MATCHLINE



SECOND FLOOR PLAN - AREA "E" - MECHANICAL - DEMOLITION
SCALE: 1/8" = 1'-0"

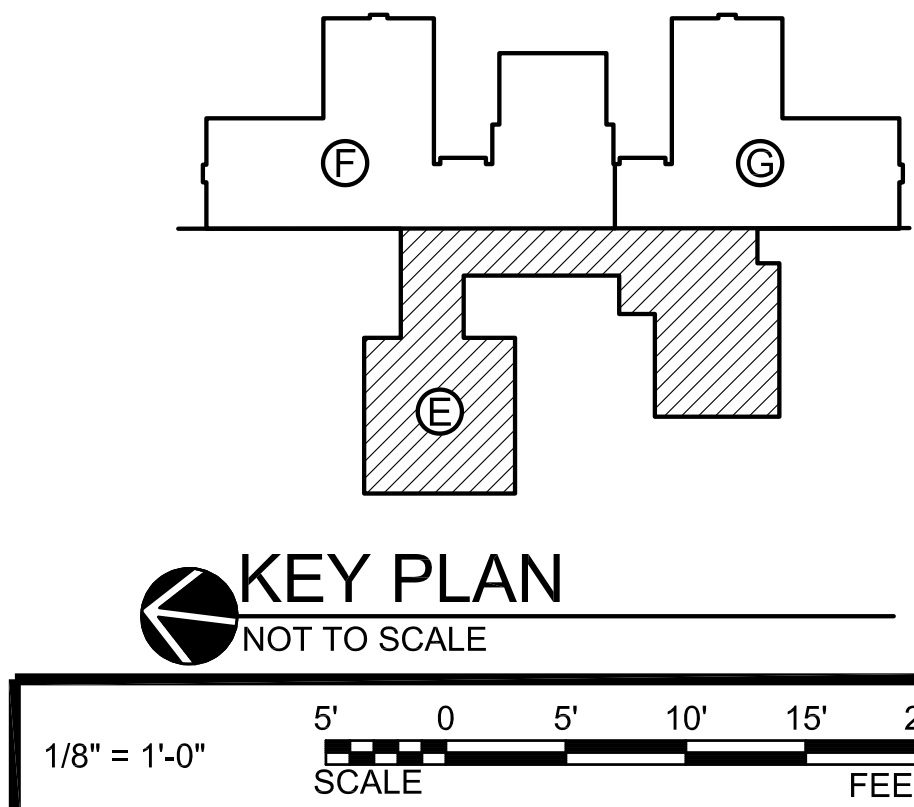
ASBESTOS DISCLOSURE STATEMENT

AN ASBESTOS INSPECTION HAS NOT BEEN PERFORMED. ASBESTOS-CONTAINING MATERIAL FOUND IN AREAS OF NEW CONSTRUCTION SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED. CONTACT NEWPORT NEWS PUBLIC SCHOOL SYSTEM UPON DISCOVERY OF ADDITIONAL AREAS CONTAINING ASBESTOS MATERIAL. ASBESTOS ABATEMENT SHALL BE HANDLED BY NEWPORT NEWS PUBLIC SCHOOL SYSTEM. PLEASE ALLOW A MINIMUM OF 3 DAYS TO COMPLETE ASBESTOS ABATEMENT.

LEAD PAINT PROVISION

NNPS'S UNDERSTANDING OF LEAD PAINT ISSUES WHICH MAY ARISE DURING THE PROJECT IS THAT PROPERLY TRAINED CONTRACTORS AND SUBCONTRACTORS SHOULD BE ABLE TO SAFELY PERFORM WORK EVEN IF LEAD PAINT MAY BE PRESENT AT SOME LOCATIONS. NNPS WILL PROVIDE TESTING FOR LEAD BASED PAINT USING AN X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER. THE CONTRACTOR AND ITS SUB-CONTRACTORS SHALL CONDUCT ANY FURTHER TESTING NECESSARY TO BE IN COMPLIANCE WITH THE OSHA LEAD IN CONSTRUCTION STANDARD CONSISTENT WITH 29 CFR 1926.62. IT IS NOT CURRENTLY ANTICIPATED THAT THE WORK WILL REQUIRE APPLICATION OF THE EPA RENOVATE REPAIR AND PAINT (RRP) RULE FOR PRE-1978 CHILD OCCUPIED FACILITIES. HOWEVER, IF, FOLLOWING COMPLETION OF DESIGN, IT IS DETERMINED THAT THE SCOPE OF WORK AT ANY OF THE SITES WILL RESULT IN APPLICATION OF THE RRP RULE, THE CONTRACTOR AND ITS SUBCONTRACTORS WILL PROMPTLY COMPLY WITH THE REQUIREMENTS OF RRP WHERE SUCH REQUIREMENTS ARE APPLICABLE. NO PROHIBITED WORK PRACTICES, AS DEFINED IN RRP, WILL BE USED WHEN DISTURBING ANY PAINTED SURFACE WITH DETECTABLE LEAD USING AN XRF SPECTRUM ANALYZER AND THE OSHA LEAD IN CONSTRUCTION STANDARD SHALL APPLY. NNPS AND THE CONTRACTOR SHALL AGREE THAT THERE IS NO PRESENT BELIEF THAT THERE WILL BE A NEED TO ABATE LEAD PAINT DURING THE PROJECT. IF LEAD ABATEMENT BECOMES A REQUIREMENT, NNPS AND THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE COURSE OF ACTION WHICH MAY INCLUDE ABATEMENT OR REMOVAL OF AN AREA FROM THE SCOPE OF SERVICES.

NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.



DEMOLITION NOTES	
NO.	DESCRIPTION
D1	DISCONNECT AND REMOVE EXISTING DUCTWORK TO EXTENT REQUIRED TO FACILITATE INSTALLATION OF NEW WORK. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHELENE SHEETING DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR REMAINING DUCTWORK WHERE REMOVAL OF CONNECTED UNIT REQUIRES.
D2	REMOVE VARIABLE AIR VOLUME TERMINAL BOX, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.

DEMOLITION NOTES	
NO.	DESCRIPTION
D3	REMOVE THERMOSTAT/TEMPERATURE SENSOR, WIRING, AND ACCESSORIES COMPLETE.
D36	REMOVE EXISTING GRILLES, REGISTERS, AND DIFFUSERS AS INDICATED.
D37	REMOVE WALL OR HOOD MOUNTED FAN SWITCH AND WIRING COMPLETE.



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PROJECT NUMBER: 22-113

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

SECOND FLOOR PLAN - AREA "E" - MECHANICAL - DEMOLITION


COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD1.5

DATE: 01/26/2024

AN ASBESTOS INSPECTION HAS NOT BEEN PERFORMED. ASBESTOS-CONTAINING MATERIAL FOUND IN AREAS OF NEW CONSTRUCTION SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED. CONTACT NEWPORT NEWS PUBLIC SCHOOL SYSTEM UPON DISCOVERY OF ADDITIONAL AREAS CONTAINING ASBESTOS MATERIAL. ASBESTOS ABATEMENT SHALL BE HANDLED BY NEWPORT NEWS PUBLIC SCHOOL SYSTEM. PLEASE ALLOW A MINIMUM OF 3 DAYS TO COMPLETE ASBESTOS ABATEMENT.

NNPS'S UNDERSTANDING OF LEAD PAINT ISSUES WHICH MAY ARISE DURING THE PROJECT IS THAT PROPERLY TRAINED CONTRACTORS AND SUBCONTRACTORS SHOULD BE ABLE TO SAFELY PERFORM WORK EVEN IF LEAD PAINT MAY BE PRESENT AT SOME LOCATIONS. NNPS WILL PROVIDE INFORMATION REGARDING LEAD PAINT TO ALL X-RAY ANALYSTS (XRF) AND SPECTRUM ANALYZERS. THE CONTRACTOR AND ITS SUB CONTRACTORS SHALL CONDUCT ANY FURTHER TESTING NECESSARY TO BE IN COMPLIANCE WITH THE OSHA LEAD IN CONSTRUCTION STANDARD CONSISTENT WITH 29 CFR 1926.62. IT IS NOT CURRENTLY ANTICIPATED THAT THE WORK WILL REQUIRE APPLICATION OF THE EPA RENOVATE REPAIR AND PAINT (RRP) RULE FOR PRE-1978 CHILD OCCUPIED FACILITIES. HOWEVER, IF, FOLLOWING COMPLETION OF DESIGN, IT IS DETERMINED THAT THE SCOPE OF WORK AT ANY OF THE SITES WILL RESULT IN APPLICATION OF THE RRP RULE, THE CONTRACTOR AND ITS SUBCONTRACTORS WILL PROMPTLY COMPLY WITH THE REQUIREMENTS OF RRP WHERE SUCH REQUIREMENTS ARE APPLICABLE. NO PROHIBITED WORK PRACTICES, AS DEFINED IN RRP, WILL BE USED WHEN DISTURBING AND PAINTED SURFACE WITH A DETECTABLE LEAD USING AN XRF AND SPECTRUM ANALYZER. THE OSHA AND THE CONSTRUCTION STANDARD SHALL APPLY. NNPS AND THE CONTRACTOR SHALL AGREE THAT THERE IS NO PRESENT BELIEF THAT THERE WILL BE A NEED TO ABATE LEAD PAINT DURING THE PROJECT. IF LEAD ABATEMENT BECOMES A REQUIREMENT, NNPS AND THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE COURSE OF ACTION WHICH MAY INCLUDE ABATEMENT OR REMOVAL OF AN AREA FROM THE SCOPE OF SERVICES.

DEMOLITION NOTES 	
NO.	DESCRIPTION
D1	DISCONNECT AND REMOVE EXISTING DUCTWORK TO EXTENT REQUIRED TO FACILITATE INSTALLATION OF NEW WORK. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR REMAINING DUCTWORK WHERE REMOVAL OF CONNECTED UNIT REQUIRES.
D2	REMOVE VARIABLE AIR VOLUME TERMINAL BOX, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.
D3	REMOVE THERMOSTAT/TEMPERATURE SENSOR, WIRING, AND ACCESSORIES COMPLETE.
D4	REMOVE EXHAUST FAN, SUPPORTS, ACCESSORIES, AND CONTROLS COMPLETE.
D36	REMOVE EXISTING GRILLES, REGISTERS, AND DIFFUSERS AS INDICATED.
D37	REMOVE WALL OR HOOD MOUNTED FAN SWITCH AND WIRING COMPLETE.



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

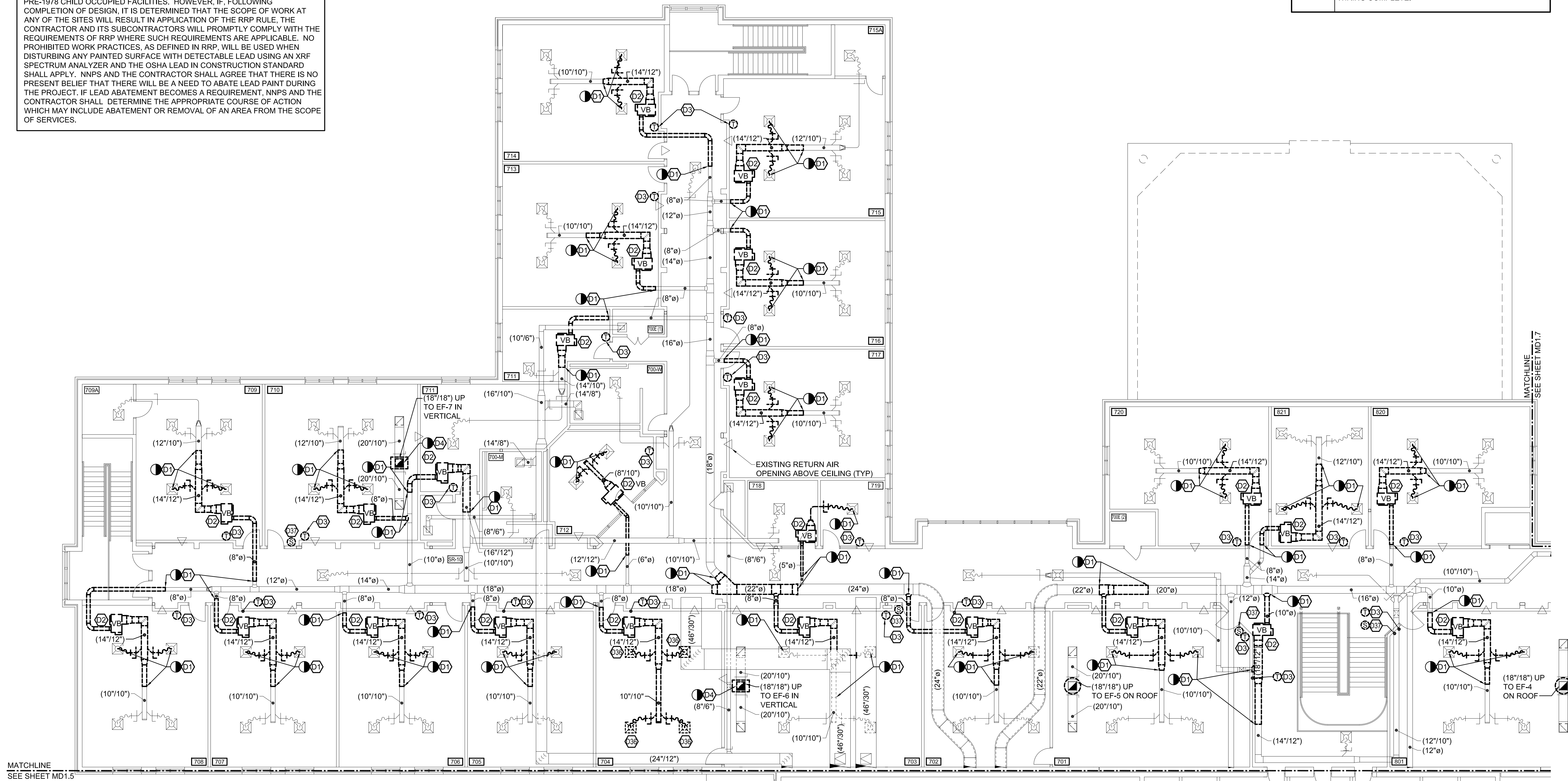
SECOND FLOOR PLAN - AREA "F" - MECHANICAL - DEMOLITION

NEWPORT NEWS

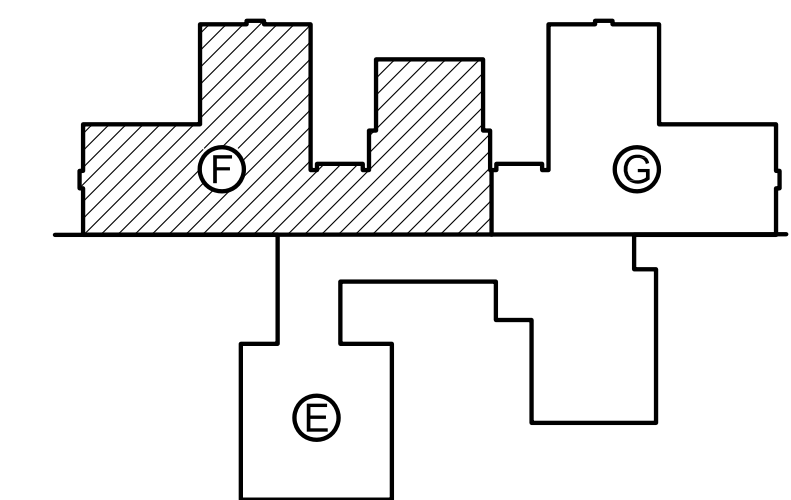
COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD1.6

DATE: 01/26/2024

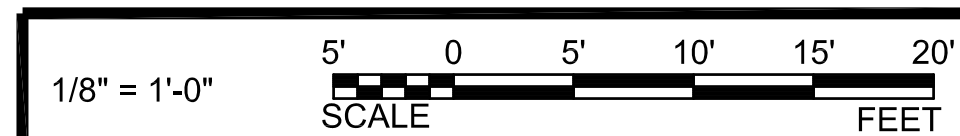


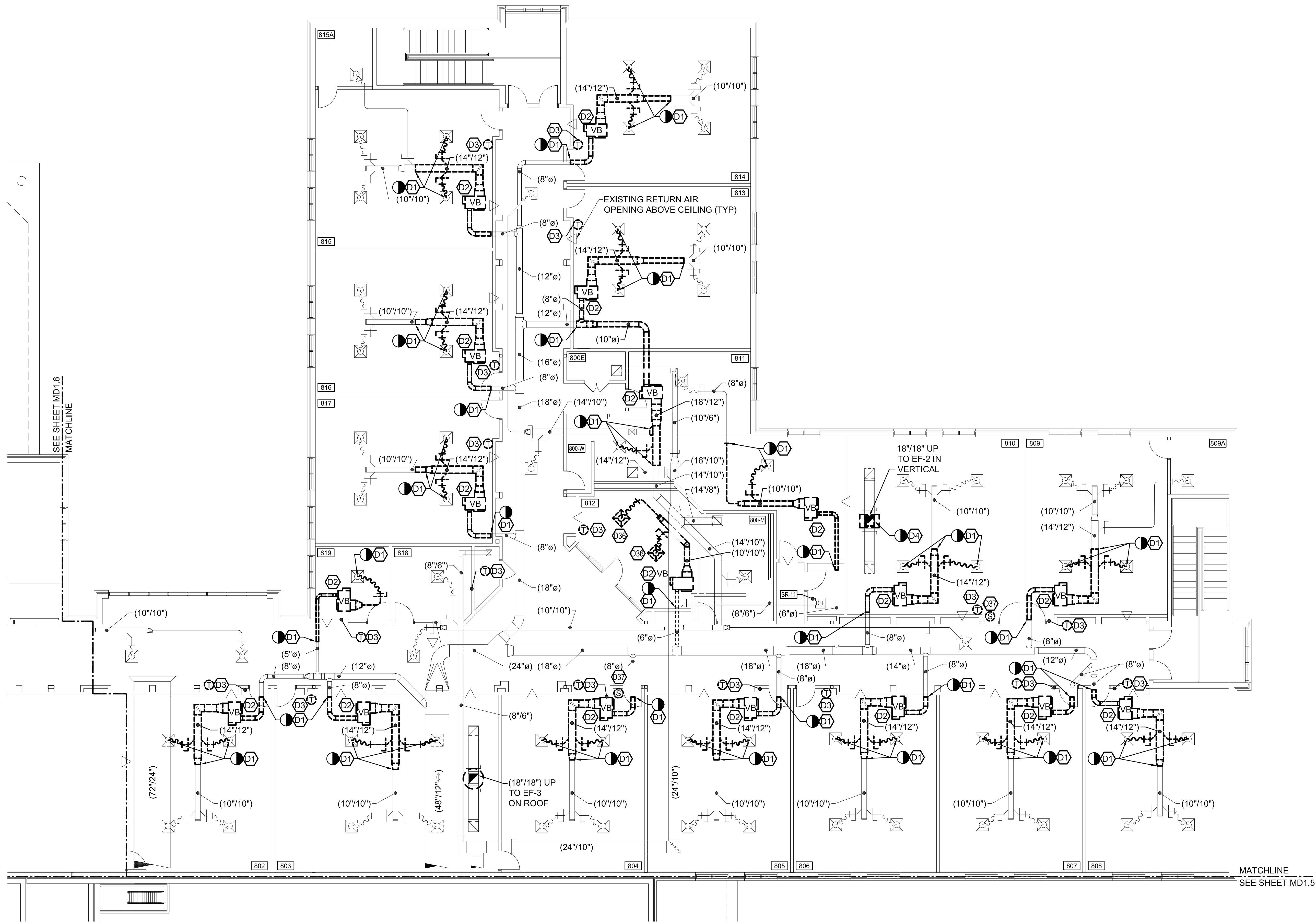
NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.



 KEY PLAN
NOT TO SCALE

SCALE: 1/8" = 1'-0"





SECOND FLOOR PLAN - AREA "G" - MECHANICAL - DEMOLITION
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES	
NO.	DESCRIPTION
D1	DISCONNECT AND REMOVE EXISTING DUCTWORK TO EXTENT REQUIRED TO FACILITATE INSTALLATION OF NEW WORK. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHELENE SHEETING DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR REMAINING DUCTWORK WHERE REMOVAL OF CONNECTED UNIT REQUIRES.
D2	REMOVE VARIABLE AIR VOLUME TERMINAL BOX, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.
D3	REMOVE THERMOSTAT/TEMPERATURE SENSOR, WIRING, AND ACCESSORIES COMPLETE.
D36	REMOVE EXISTING GRILLES, REGISTERS, AND DIFFUSERS AS INDICATED.
D37	REMOVE WALL OR HOOD MOUNTED FAN SWITCH AND WIRING COMPLETE.

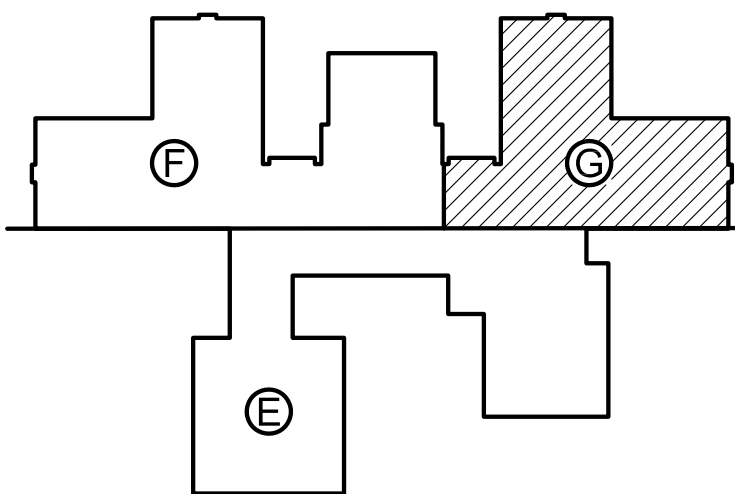
ASBESTOS DISCLOSURE STATEMENT

AN ASBESTOS INSPECTION HAS NOT BEEN PERFORMED. ASBESTOS-CONTAINING MATERIAL FOUND IN AREAS OF NEW CONSTRUCTION SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED. CONTACT NEWPORT NEWS PUBLIC SCHOOL SYSTEM UPON DISCOVERY OF ADDITIONAL AREAS CONTAINING ASBESTOS MATERIAL. ASBESTOS ABATEMENT SHALL BE HANDLED BY NEWPORT NEWS PUBLIC SCHOOL SYSTEM. PLEASE ALLOW A MINIMUM OF 3 DAYS TO COMPLETE ASBESTOS ABATEMENT.

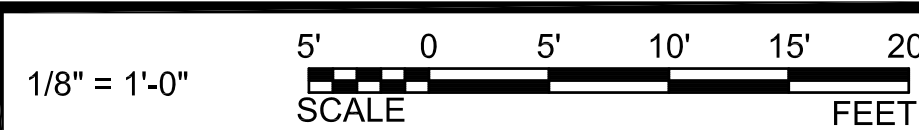
LEAD PAINT PROVISION

NNPS'S UNDERSTANDING OF LEAD PAINT ISSUES WHICH MAY ARISE DURING THE PROJECT IS THAT PROPERLY TRAINED CONTRACTORS AND SUBCONTRACTORS SHOULD BE ABLE TO SAFELY PERFORM WORK EVEN IF LEAD PAINT MAY BE PRESENT AT SOME LOCATIONS. NNPS WILL PROVIDE TESTING FOR LEAD BASED PAINT USING AN X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER. THE CONTRACTOR AND ITS SUB-CONTRACTORS SHALL CONDUCT ANY FURTHER TESTING NECESSARY TO BE IN COMPLIANCE WITH THE OSHA LEAD IN CONSTRUCTION STANDARD CONSISTENT WITH 29 CFR 1926.62. IT IS NOT CURRENTLY ANTICIPATED THAT THE WORK WILL REQUIRE APPLICATION OF THE EPA RENOVATE REPAIR AND PAINT (RRP) RULE FOR PRE-1978 CHILD OCCUPIED FACILITIES. HOWEVER, IF, FOLLOWING COMPLETION OF DESIGN, IT IS DETERMINED THAT THE SCOPE OF WORK AT ANY OF THE SITES WILL RESULT IN APPLICATION OF THE RRP RULE, THE CONTRACTOR AND ITS SUBCONTRACTORS WILL PROMPTLY COMPLY WITH THE REQUIREMENTS OF RRP WHERE SUCH REQUIREMENTS ARE APPLICABLE. NO PROHIBITED WORK PRACTICES, AS DEFINED IN RRP, WILL BE USED WHEN DISTURBING ANY PAINTED SURFACE WITH DETECTABLE LEAD USING AN XRF SPECTRUM ANALYZER AND THE OSHA LEAD IN CONSTRUCTION STANDARD SHALL APPLY. NNPS AND THE CONTRACTOR SHALL AGREE THAT THERE IS NO PRESENT BELIEF THAT THERE WILL BE A NEED TO ABATE LEAD PAINT DURING THE PROJECT. IF LEAD ABATEMENT BECOMES A REQUIREMENT, NNPS AND THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE COURSE OF ACTION WHICH MAY INCLUDE ABATEMENT OR REMOVAL OF AN AREA FROM THE SCOPE OF SERVICES.

NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.



KEY PLAN
NOT TO SCALE



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

SECOND FLOOR PLAN - AREA "G" - MECHANICAL - DEMOLITION

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD1.7

DATE: 01/26/2024

ASBESTOS DISCLOSURE STATEMENT

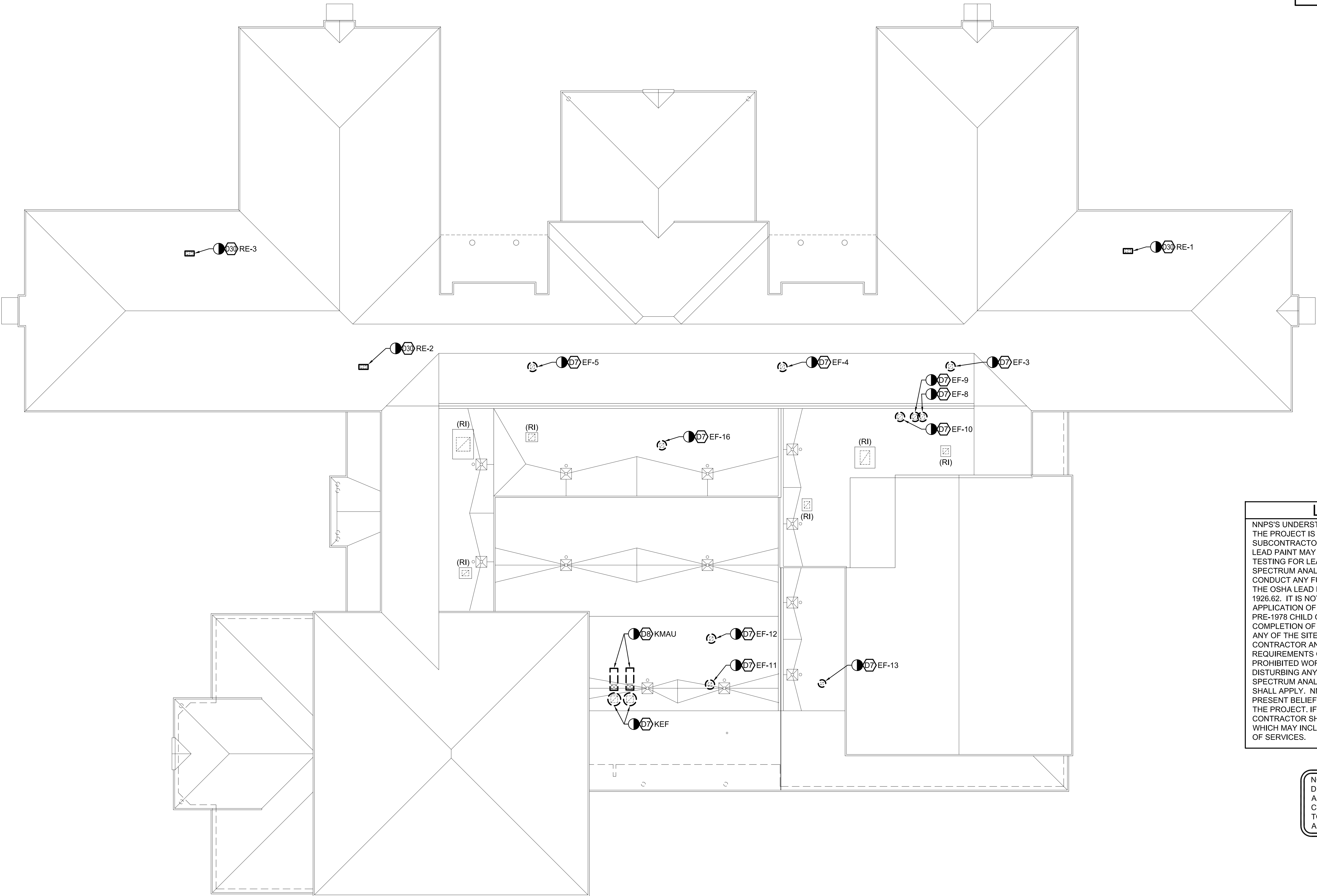
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DEMOLITION NOTES	
NO.	DESCRIPTION
D7	REMOVE EXISTING ROOF MOUNTED EXHAUST FAN, ACCESSORIES, AND CONTROLS COMPLETE. ROOF CURB TO REMAIN. PROVIDE 1/2" PLYWOOD TEMPORARY COVER FOR REMAINING DUCT OPENING.
D8	DISCONNECT DUCTWORK AND REMOVE KITCHEN SUPPLY FAN, CONTROLS, AND ACCESSORIES COMPLETE. ROOF CURB TO REMAIN. PROVIDE 1/2" PLYWOOD TEMPORARY COVER AND TARP FOR REMAINING DUCT OPENING AND ENTIRE ROOF CURB UNTIL NEW UNIT IS PLACED.
D30	REMOVE EXISTING ROOF EXHAUST HOOD AND DUCTWORK CONNECTION TO EXISTING EXHAUST FAN TO BE REMOVED. ROOF CURB TO REMAIN. PROVIDE 1/2" PLYWOOD TEMPORARY COVER FOR REMAINING DUCT OPENING.



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Consulting Engineers

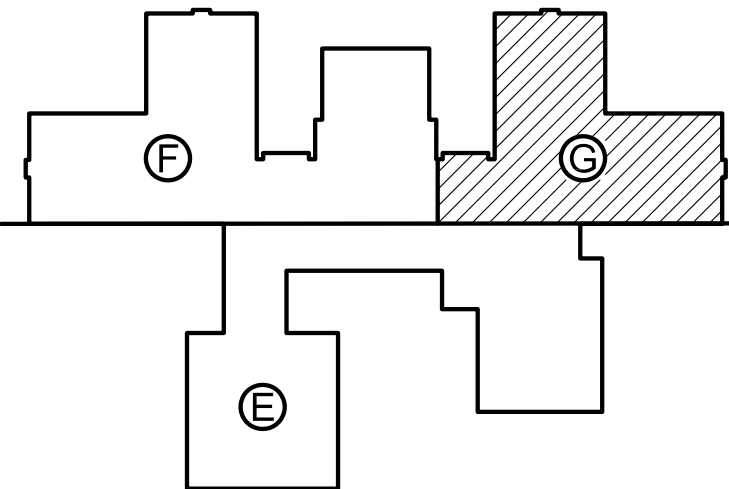
22 ENTERPRISE PARKWAY
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HAMPDEN, VA 23666
GLEN ALLEN, VA 23060
TELEPHONE: (757) 599-4415
PROJECT NUMBER: 22-113



LEAD PAINT PROVISION

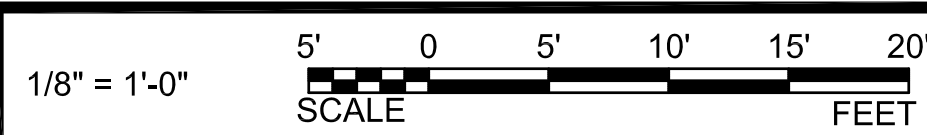
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NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.



ROOF PLAN - MECHANICAL - DEMOLITION
SCALE: 1/16" = 1'-0"

KEY PLAN
NOT TO SCALE



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

ROOF PLAN - MECHANICAL - DEMOLITION

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD1.8

DATE: 01/26/2024

ASBESTOS DISCLOSURE STATEMENT

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LEAD PAINT PROVISION

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FIRST FLOOR PLAN - AREA "A" - PIPING - DEMOLITION
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES	
NO.	DESCRIPTION
D11	ISOLATE AND DISCONNECT UNIT FROM HWR/S PIPING. REMOVE PIPING TO EXTENT REQUIRED FOR INSTALLATION OF NEW WORK.



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PROJECT NUMBER: 22-113

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

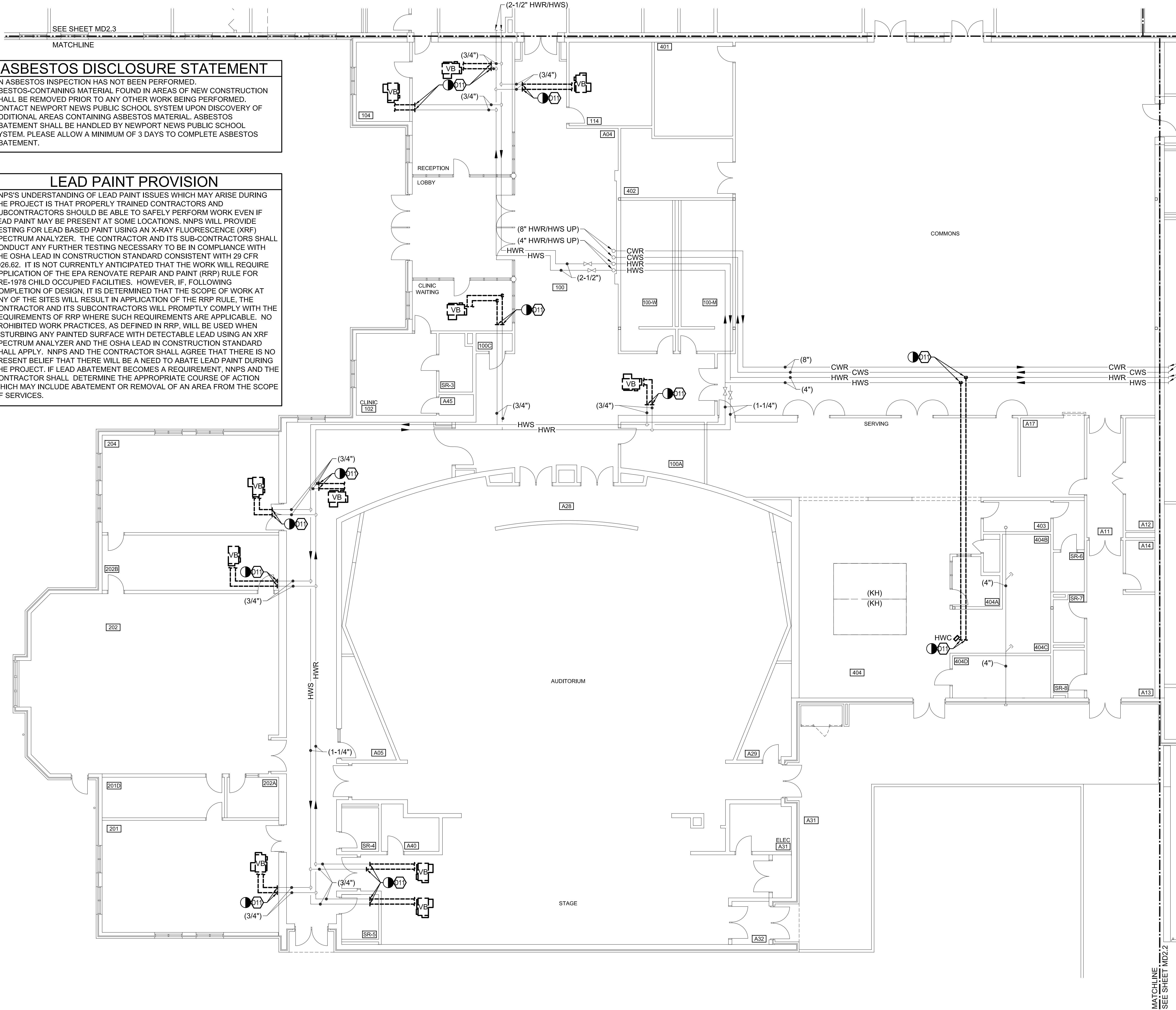
NEWPORT NEWS

FIRST FLOOR PLAN - AREA "A" - PIPING - DEMOLITION

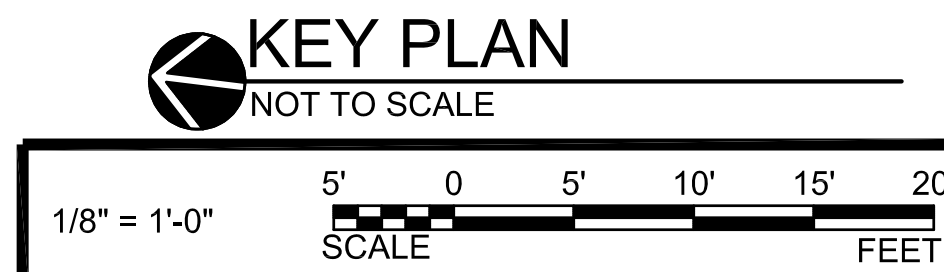
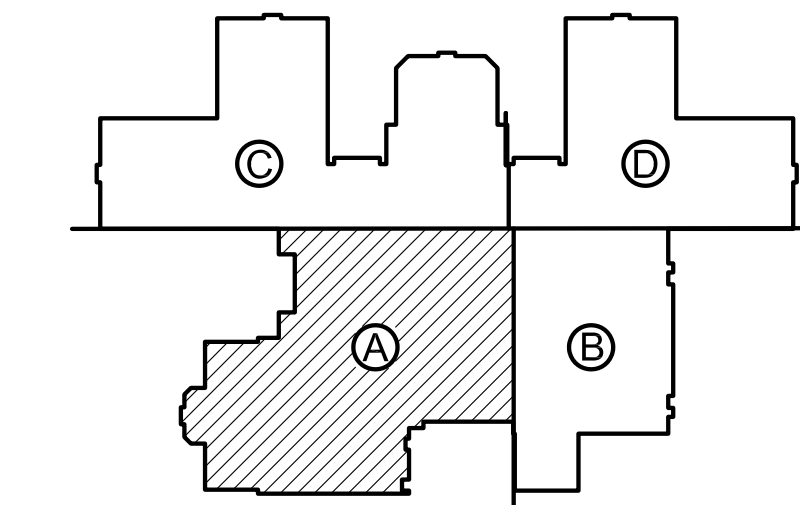
COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

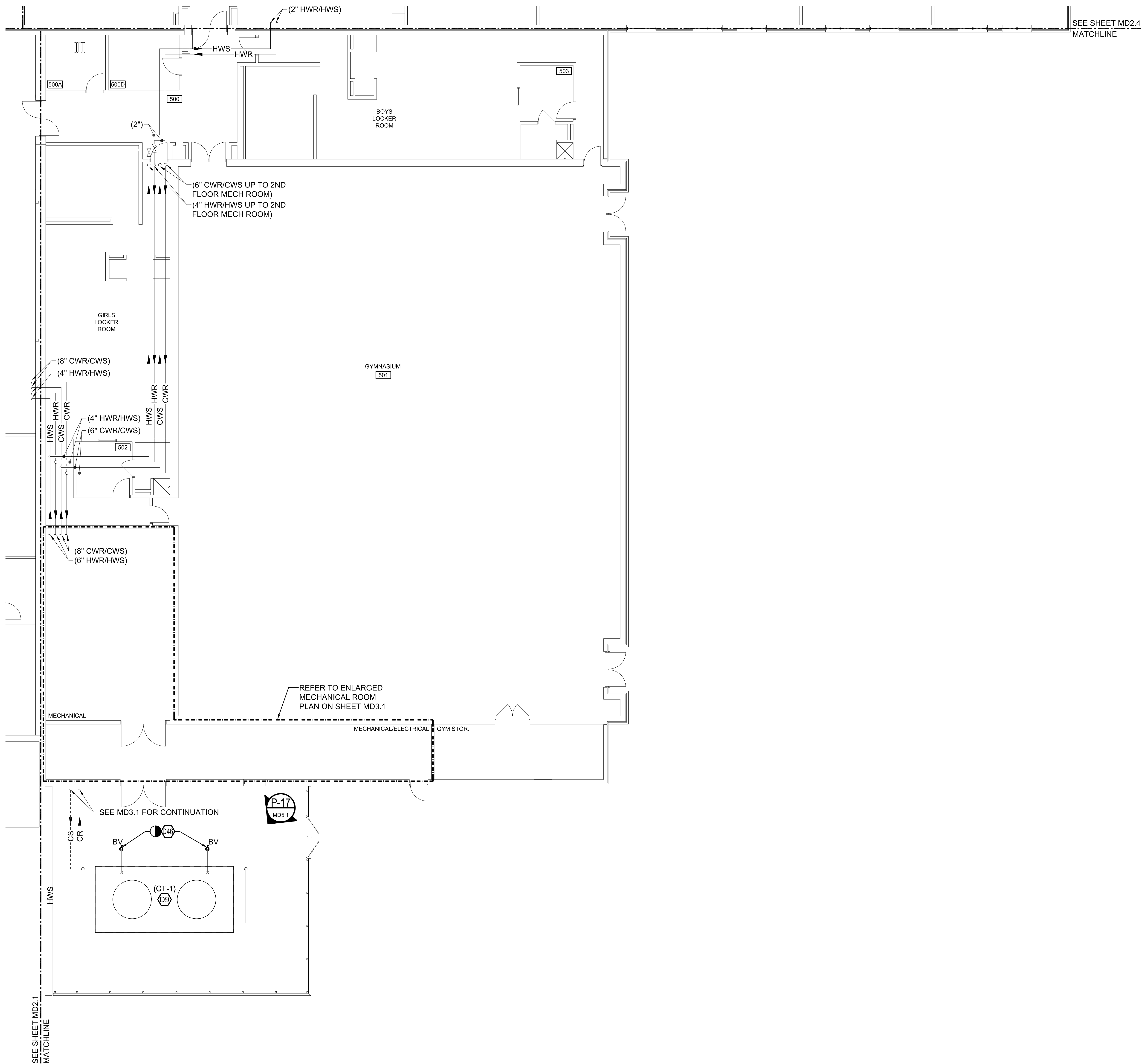
MD2.1

DATE: 01/26/2024



NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.





FIRST FLOOR PLAN - AREA "B" - MECHANICAL - DEMOLITION
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES	
NO.	DESCRIPTION
D9	EXISTING COOLING TOWER TO REMAIN.
D46	DISCONNECT AND REMOVE THREE-WAY BALANCING VALVE AND ACTUATOR COMPLETE AT COOLING TOWER BYPASS. TEMPORARILY CAP PIPING DURING CONSTRUCTION TO PREVENT CONTAMINATION OF THE CONDENSER WATER SYSTEM.

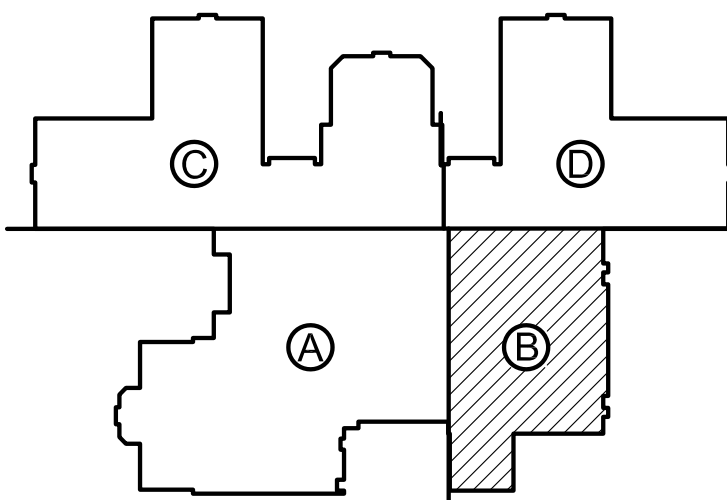
ASBESTOS DISCLOSURE STATEMENT

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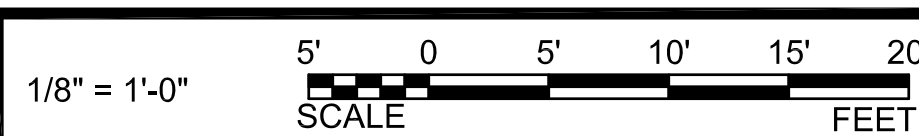
LEAD PAINT PROVISION

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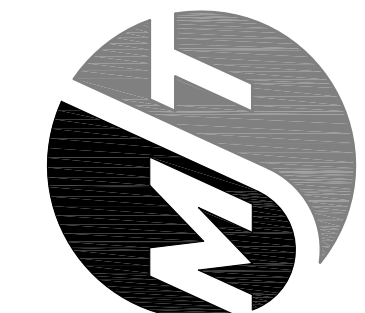
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KEY PLAN
NOT TO SCALE



THOMPSON
Consulting Engineers



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PROJECT NUMBER: 22-113

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

FIRST FLOOR PLAN - AREA "B" - PIPING - DEMOLITION

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD2.2

DATE: 01/26/2024

ASBESTOS DISCLOSURE STATEMENT

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LEAD PAINT PROVISION

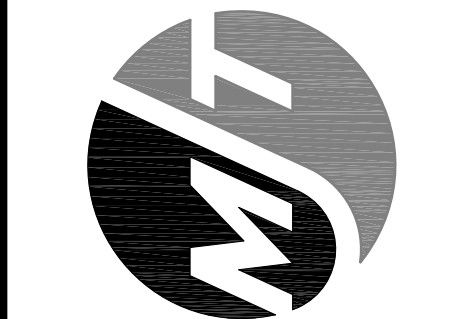
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DEMOLITION NOTES	
NO.	DESCRIPTION
D11	ISOLATE AND DISCONNECT UNIT FROM HWR/S PIPING. REMOVE PIPING TO EXTENT REQUIRED FOR INSTALLATION OF NEW WORK.



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PROJECT NUMBER: 22-113

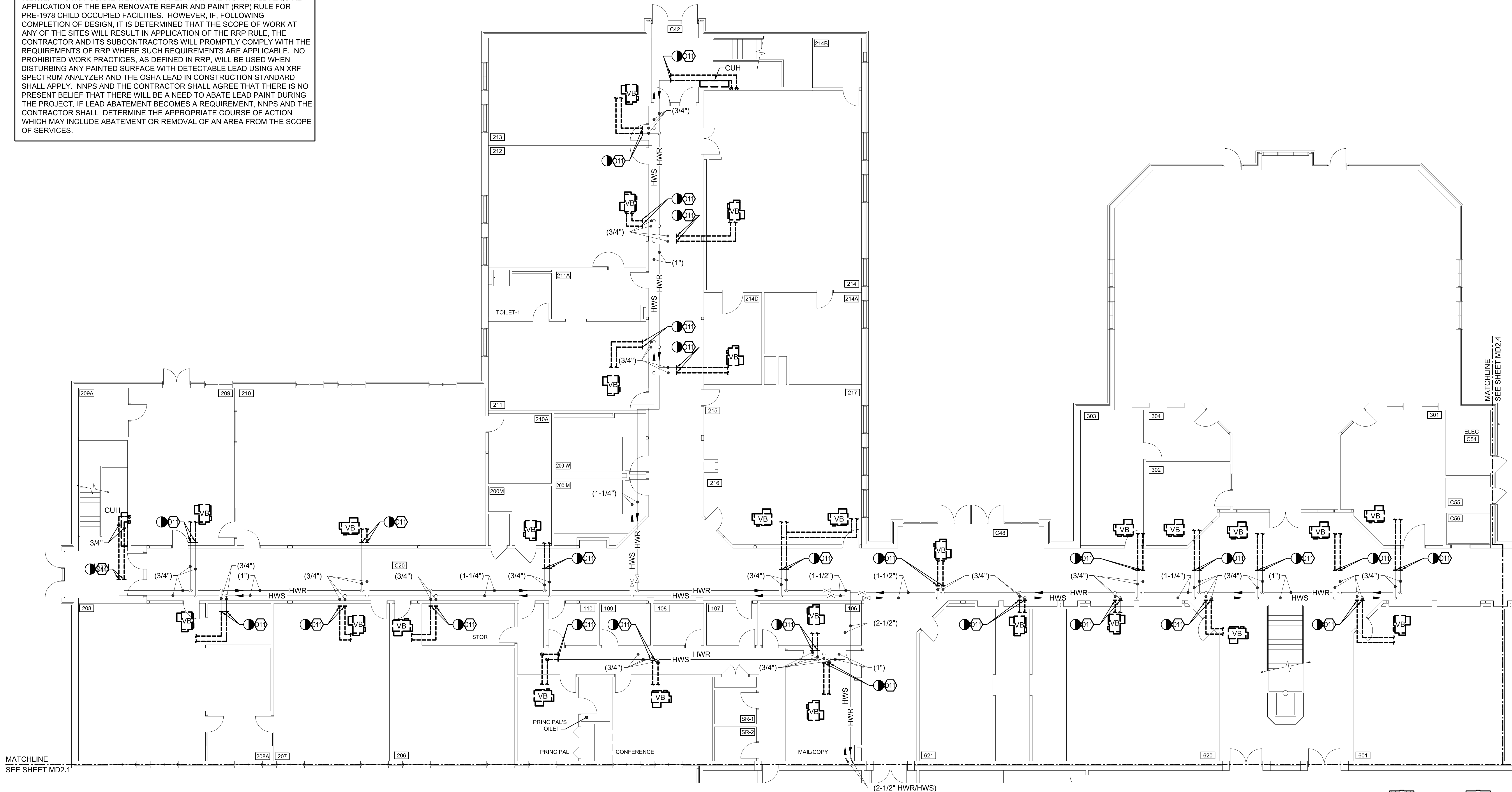


MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

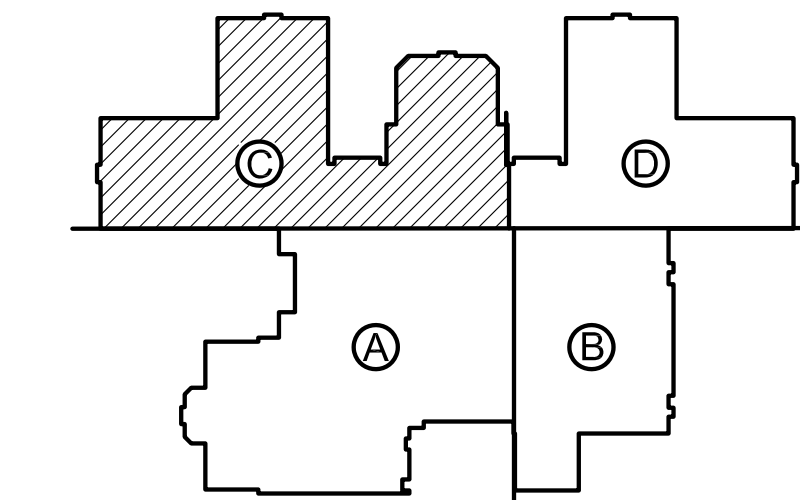
NEWPORT NEWS

FIRST FLOOR PLAN - AREA "C" - PIPING - DEMOLITION

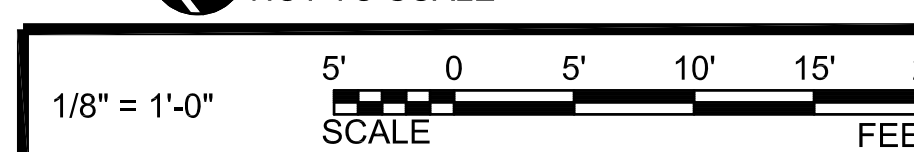


FIRST FLOOR PLAN - AREA "C" - PIPING - DEMOLITION
SCALE: 1/8" = 1'-0"

NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.



KEY PLAN
NOT TO SCALE



COMM. NO. 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD2.3

DATE: 01/26/2024

DEMOLITION NOTES	
NO.	DESCRIPTION
D11	ISOLATE AND DISCONNECT UNIT FROM HWR/S PIPING. REMOVE PIPING TO EXTENT REQUIRED FOR INSTALLATION OF NEW WORK.



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

FIRST FLOOR PLAN - AREA "D" - PIPING - DEMOLITION

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD2.4

DATE: 01/26/2024

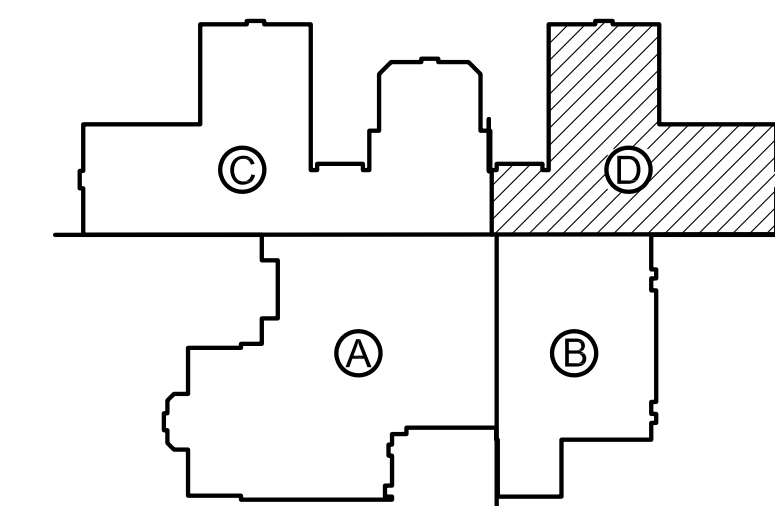
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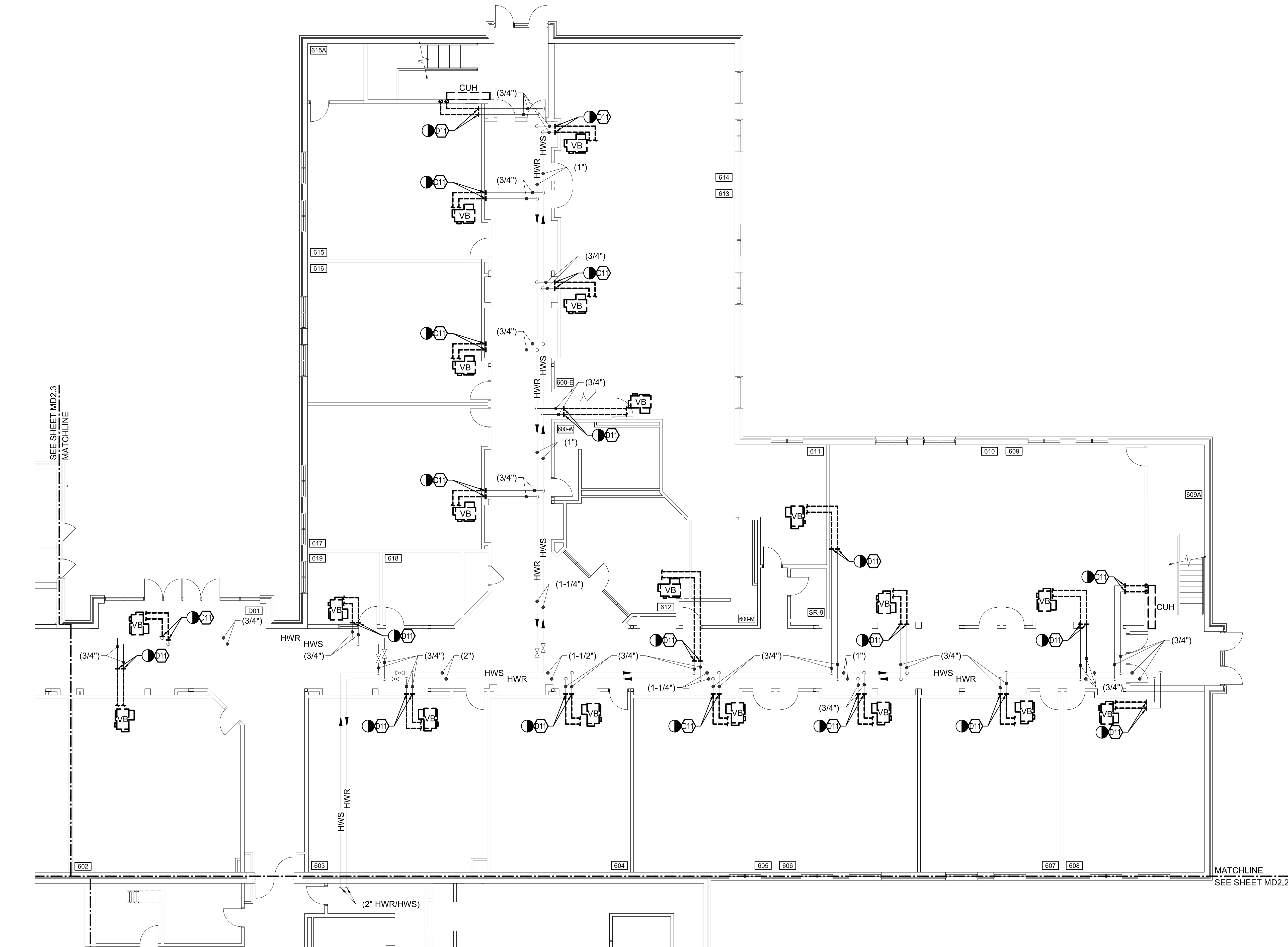
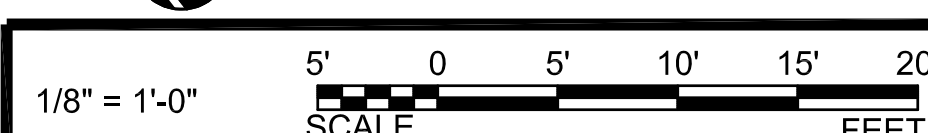
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KEY PLAN
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FIRST FLOOR PLAN - AREA "D" - PIPING - DEMOLITION

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES	
NO.	DESCRIPTION
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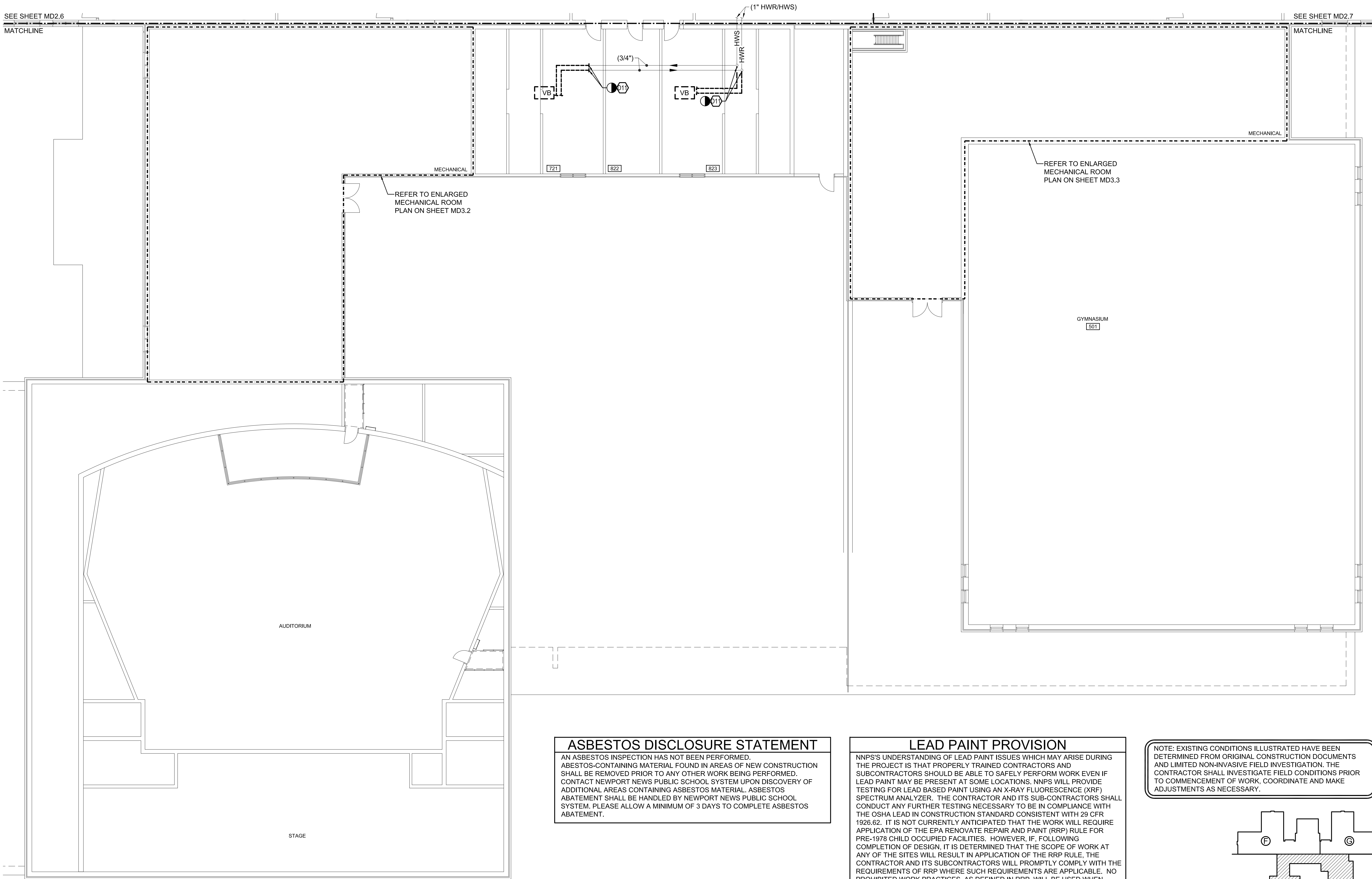
NEWPORT NEWS

COMM. NO. 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD2.5

DATE: 01/26/2024

SECOND FLOOR PLAN - AREA "E" - PIPING - DEMOLITION



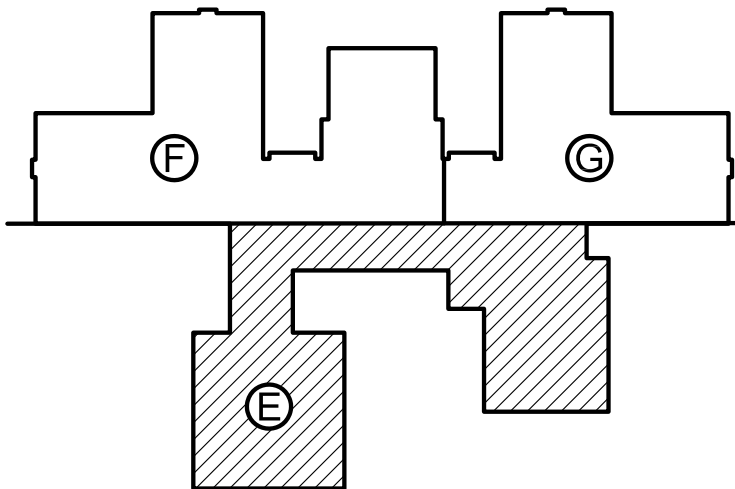
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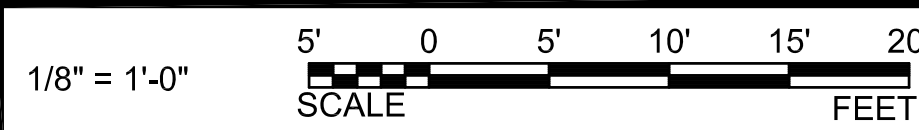
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SECOND FLOOR PLAN - AREA "E" - PIPING - DEMOLITION
SCALE: 1/8" = 1'-0"

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DEMOLITION NOTES	
NO.	DESCRIPTION
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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

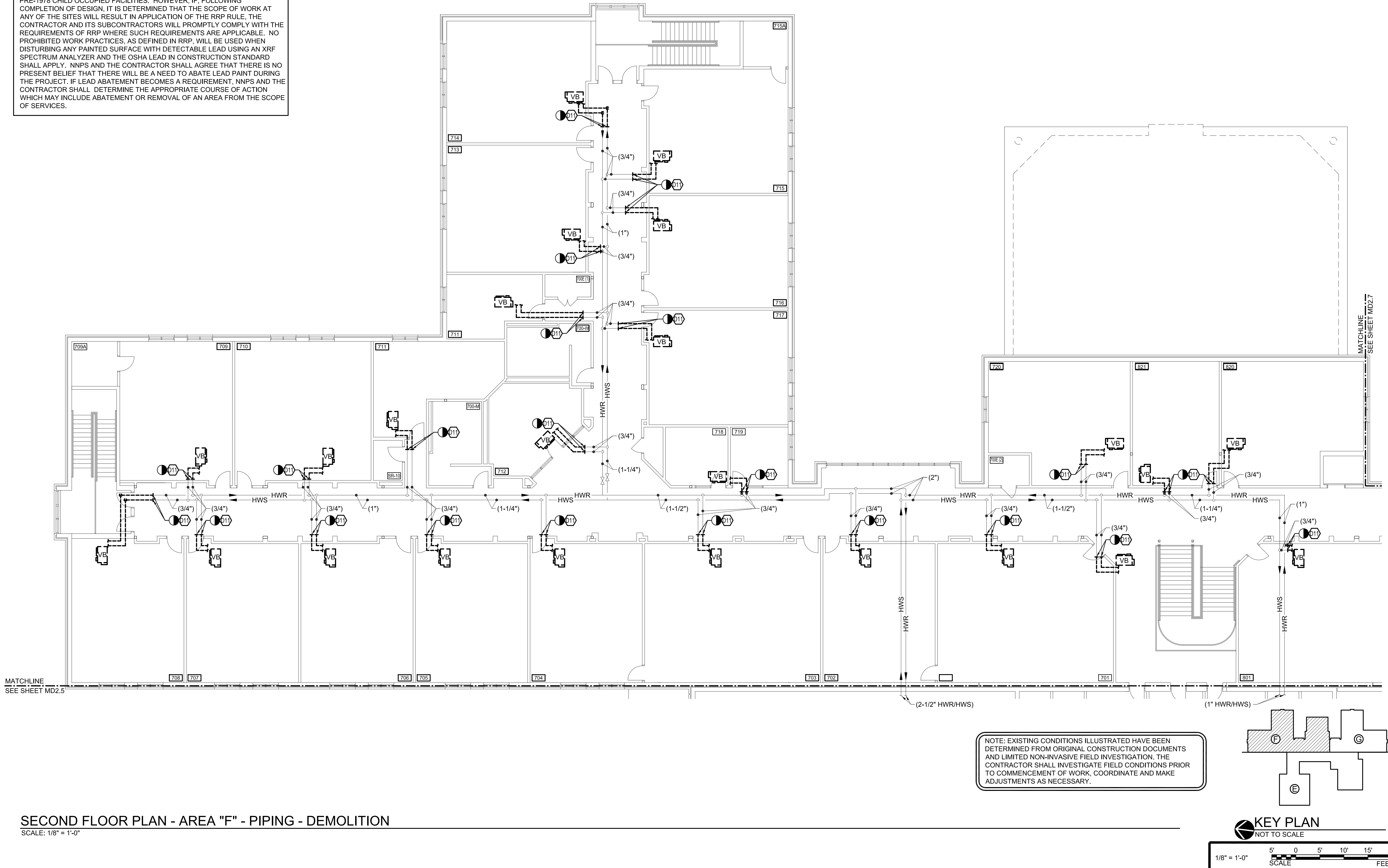
NEWPORT NEWS

SECOND FLOOR PLAN - AREA "F" - PIPING - DEMOLITION

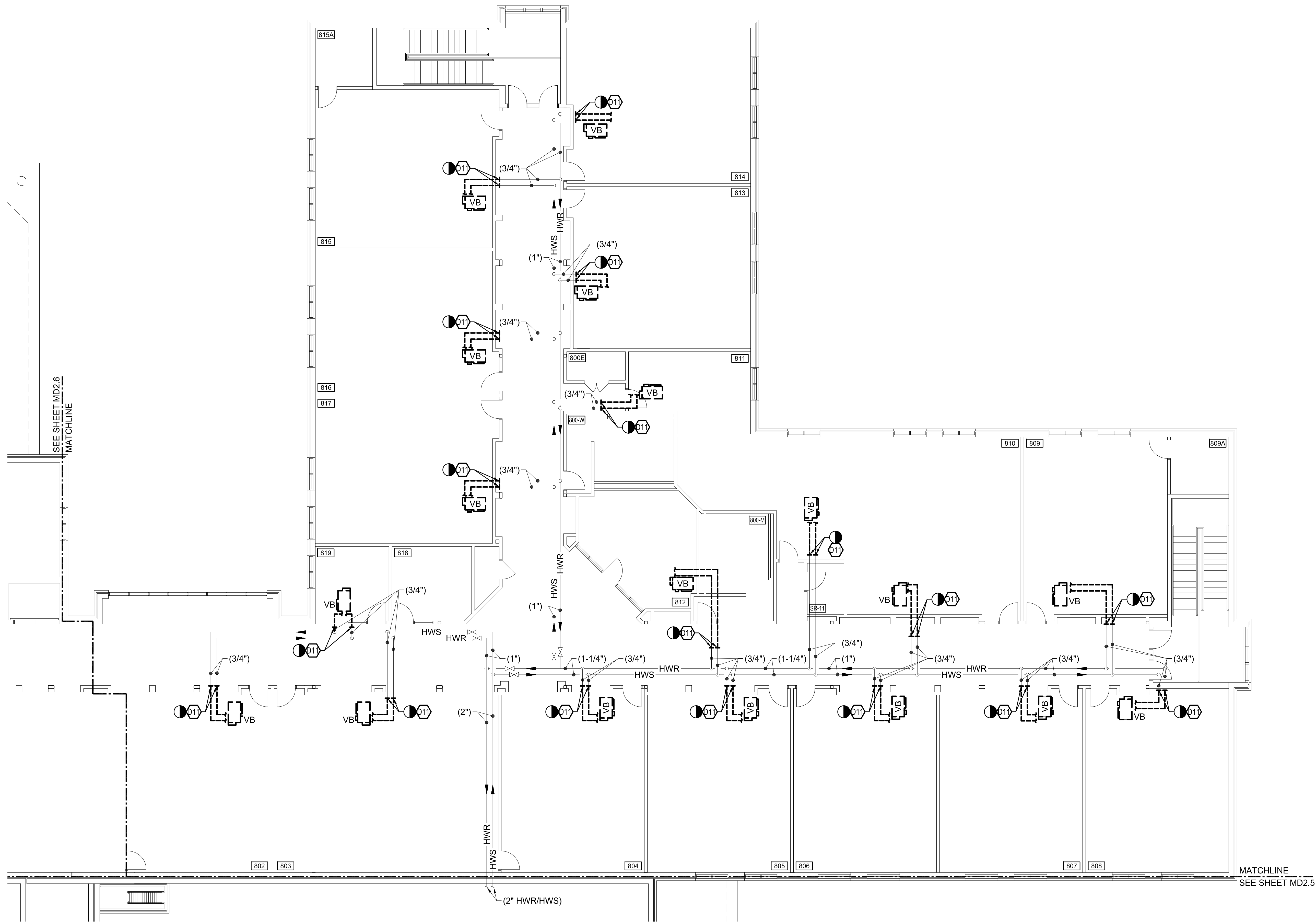
COMM. NO. 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD2.6

DATE: 01/26/2024



SECOND FLOOR PLAN - AREA "F" - PIPING - DEMOLITION
SCALE: 1/8" = 1'-0"



SECOND FLOOR PLAN - AREA "G" - PIPING - DEMOLITION
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES	
NO.	DESCRIPTION
D11	ISOLATE AND DISCONNECT UNIT FROM HWR/S PIPING. REMOVE PIPING TO EXTENT REQUIRED FOR INSTALLATION OF NEW WORK.

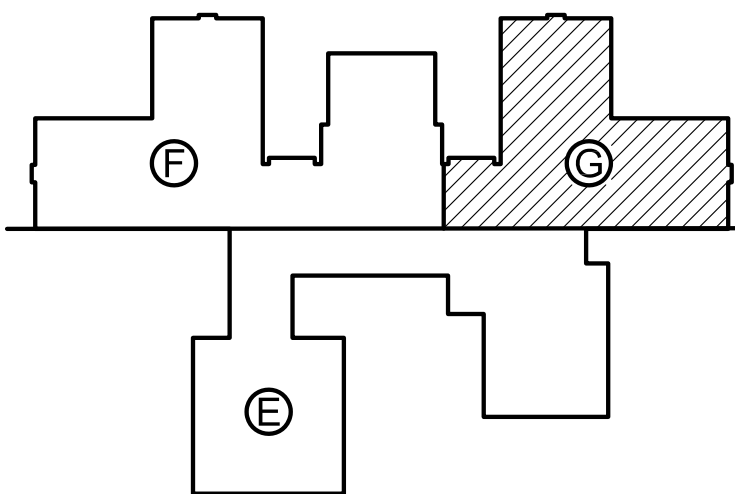
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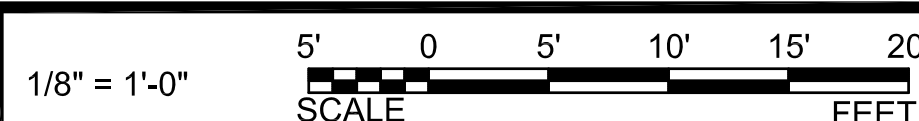
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KEY PLAN
NOT TO SCALE



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PROJECT NUMBER: 22-113

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

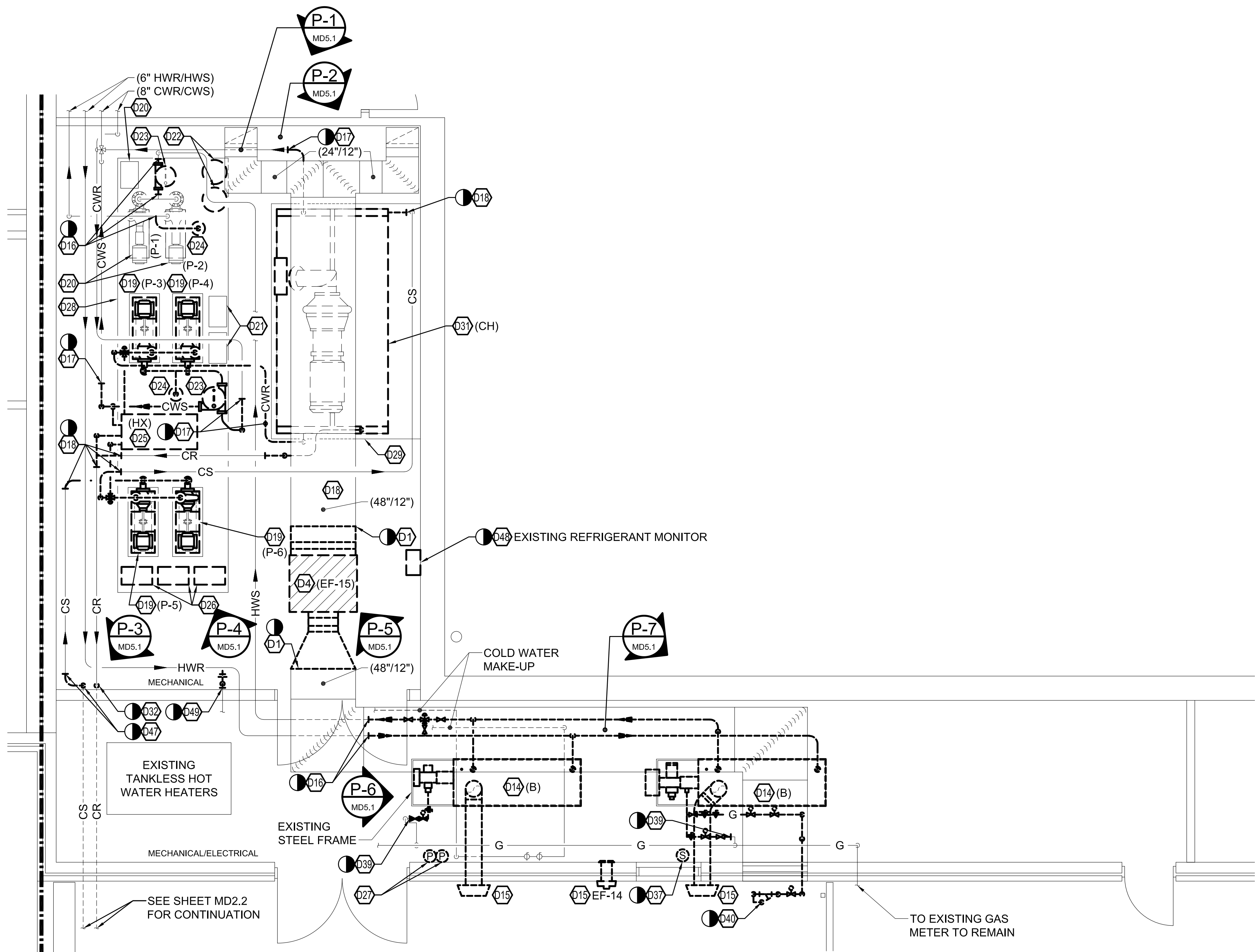
NEWPORT NEWS

SECOND FLOOR PLAN - AREA "G" - PIPING - DEMOLITION

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD2.7

DATE: 01/26/2024



ENLARGED FLOOR PLAN - MECHANICAL ROOM - DEMOLITION
SCALE: 1/4" = 1'-0"

DEMOLITION NOTES	
NO.	DESCRIPTION
D1	DISCONNECT AND REMOVE EXISTING DUCTWORK TO EXTENT REQUIRED TO FACILITATE INSTALLATION OF NEW WORK. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR REMAINING DUCTWORK WHERE REMOVAL OF CONNECTED UNIT REQUIRES.
D4	REMOVE EXHAUST FAN, SUPPORTS, ACCESSORIES, AND CONTROLS COMPLETE.
D14	REMOVE BOILER, CONTROLS, ACCESSORIES, AND ASSOCIATED VENT THROUGH EXTERIOR WALL COMPLETE.
D15	REMOVE WALL MOUNTED EXHAUST OR INDUCTION FAN, CONTROLS, AND SUPPORTS COMPLETE. COVER AND PROTECT EXTERIOR WALL OPENING DURING CONSTRUCTION.
D16	DISCONNECT AND REMOVE EXISTING HWR/S PIPING TO POINT REQUIRED FOR INSTALLATION OF NEW WORK.
D17	DISCONNECT AND REMOVE EXISTING CWR/S PIPING TO POINT REQUIRED FOR INSTALATION OF NEW WORK.
D18	DISCONNECT AND REMOVE EXISTING CR/S PIPING TO POINT REQUIRED FOR INSTALLATION OF NEW WORK.
D19	DISCONNECT AND REMOVE BASE MOUNTED SUCTION PUMP, CONTROLS, VFD, AND ACCESSORIES COMPLETE. EXISTING PUMP PACKAGE AND CONCRETE BASE TO REMAIN.
D20	HOT WATER PUMP AND VFD CONTROLS REPLACED 2023 IS EXISTING TO REMAIN; NOT IN THIS CONTRACT.

DEMOLITION NOTES	
NO.	DESCRIPTION
D21	VFD CONTROLS OF CHILLED WATER PUMPS REPLACED 2023 ARE EXISTING TO REMAIN; NOT IN THIS CONTRACT.
D22	REMOVE EXPANSION TANK AND ACCESSORIES COMPLETE.
D23	REMOVE AIR DIRT SEPARATOR, SUPPORTS, AND ACCESSORIES COMPLETE.
D24	REMOVE CHEMICAL SHOT FEEDER, SUPPORTS, AND ACCESSORIES COMPLETE.
D25	REMOVE HEAT EXCHANGER, SUPPORTS, AND ACCESSORIES COMPLETE.
D26	REMOVE CONDENSER WATER PUMP CONTROLS AND VFD COMPLETE. FRAMING EXISTING TO REMAIN.
D27	REMOVE EXISTING BOILER STOP PUSH STATIONS, WIRING, AND ACCESSORIES COMPLETE.
D28	CONCRETE-FILLED PUMP PACKAGE FRAMING EXISTING TO REMAIN. CONTRACTOR SHALL REPAIR ALL DAMAGED CONCRETE TO PROVIDE A SMOOTH SURFACE FOR NEW EQUIPMENT.
D29	CHILLER CONCRETE HOUSEKEEPING PAD IS EXISTING TO REMAIN. CONTRACTOR SHALL REPAIR ALL DAMAGED CONCRETE TO PROVIDE A SMOOTH SURFACE FOR NEW EQUIPMENT.
D31	REMOVE EXISTING CHILLER, CONTROLS, ACCESSORIES, AND SUPPORTS COMPLETE DURING WINTER PHASE OF THE PROJECT.
D32	DISCONNECT AND REMOVE CR PIPING AND O-RING IN THE VERTICAL RUN TO EXTENT REQUIRED FOR THE INSTALLATION OF AN ISOLATION VALVE AND Y-TYPE STRAINER AT AN EASILY ACCESSIBLE HEIGHT.
D37	REMOVE WALL OR HOOD MOUNTED FAN SWITCH AND WIRING COMPLETE.
D39	DISCONNECT AND REMOVE EXISTING GAS PIPING TO POINT REQUIRED FOR INSTALLATION OF NEW WORK. ALL GAS REGULATOR VENT PIPING SHALL REMAIN.
D40	ISOLATE AND REMOVE EXISTING DIGESTER GAS PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. REMOVE TO VALVE AT GROUND PENETRATION IN MECHANICAL YARD AND CAP. PATCH EXTERIOR WALL PENETRATIONS.
D47	DISCONNECT AND REMOVE CS ELBOW AND O-RING AT METAL-PLASTIC CONNECTION POINT. TEMPORARILY CAP PIPING DURING CONSTRUCTION TO PREVENT CONTAMINATION OF THE CONDENSER WATER SYSTEM.
D48	DISCONNECT AND REMOVE EXISTING REFRIGERANT MONITOR, WIRING, AND CONTROLS COMPLETE.
D49	ISOLATE WATER PIPING AND HOSE BIBB. DISCONNECT AND REMOVE PIPING, SUPPORTS, HOSE BIB, AND ACCESSORIES COMPLETE TO POINT INDICATED.

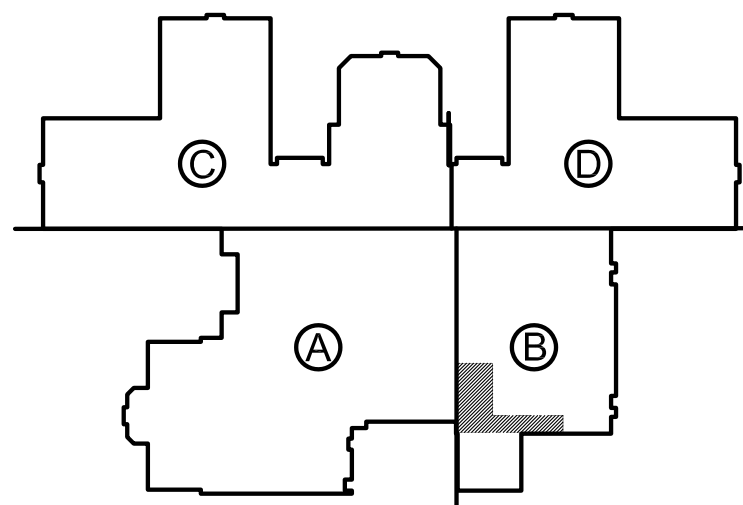
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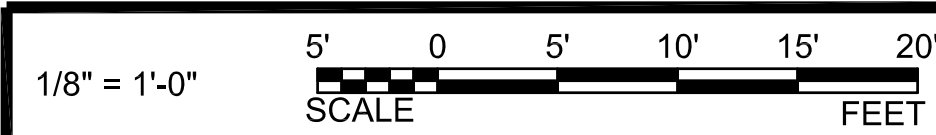
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NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.



KEY PLAN
NOT TO SCALE



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

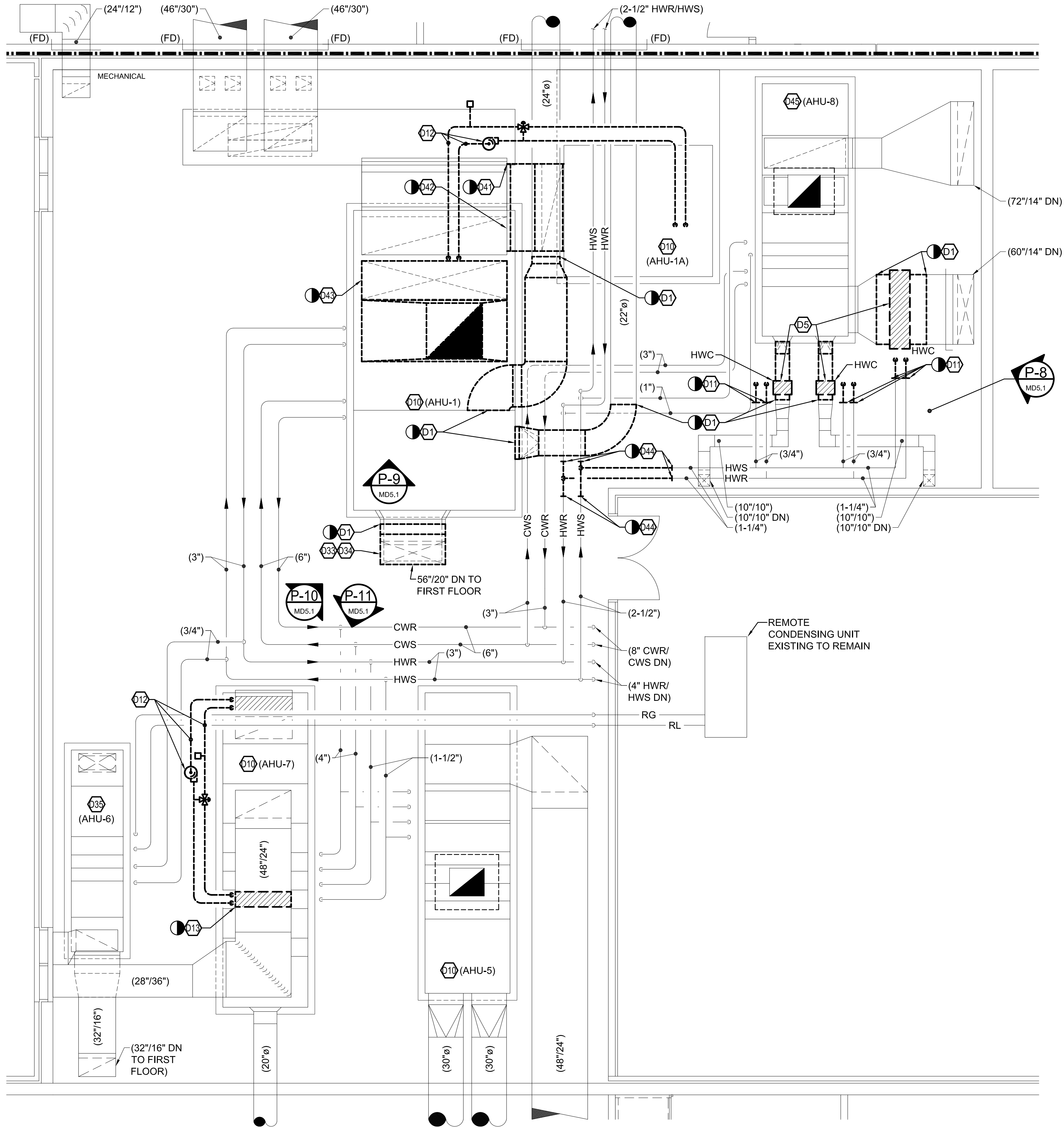
NEWPORT NEWS

ENLARGED FLOOR PLAN - MECHANICAL ROOM - DEMOLITION

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD3.1

DATE: 01/26/2024



ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - DEMOLITION

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

DEMOLITION NOTES	
NO.	DESCRIPTION
D1	DISCONNECT AND REMOVE EXISTING DUCTWORK TO EXTENT REQUIRED TO FACILITATE INSTALLATION OF NEW WORK. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION. PROVIDE TEMPORARY SUPPORTS FOR REMAINING DUCTWORK WHERE REMOVAL OF CONNECTED UNIT REQUIRES.
D5	REMOVE DUCT MOUNTED HOT WATER COIL, CONTROLS, AND ACCESSORIES COMPLETE. REMOVE DUCTWORK TO EXTENT REQUIRED FOR INSTALLATION OF NEW WORK.
D10	AIR HANDLING UNIT TO BE REFURBISHED. UNIT CASING EXISTING TO REMAIN. DISCONNECT AND REMOVE SUPPLY AND EXHAUST FANS AND FLEXIBLE CONNECTIONS, UNIT COILS AND COIL PIPING PACKAGES, UNIT CONTROLS, CONTROL DAMPERS AND ACTUATORS, AND ENERGY WHEELS WHERE APPLICABLE. SUPPLY FAN ISOLATED BASERAILS SHALL BE EXISTING TO REMAIN.
D11	ISOLATE AND DISCONNECT UNIT FROM HWR/S PIPING. REMOVE PIPING TO EXTENT REQUIRED FOR INSTALLATION OF NEW WORK.
D12	REMOVE INLINE PUMP, EXPANSION TANK, AND VALVES ASSOCIATED WITH RUNAROUND COIL TO BE REMOVED.
D13	DISCONNECT AND REMOVE RUNAROUND COIL, PIPING, CONTROLS AND ACCESSORIES COMPLETE. REMOVE DUCTWORK TO EXTENT REQUIRED FOR REMOVAL. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION.
D33	WHEN DISCONNECTING DUCTWORK, MAINTAIN OWNER'S PULLEY SYSTEM FOR MAINTENANCE PURPOSES INTACT. TEMPORARILY REMOVE AND STORE DURING CONSTRUCTION.

DEMOLITION NOTES	
NO.	DESCRIPTION
D34	REMOVE DUCTWORK THROUGH FLOOR TO FIRST FLOOR.
D35	UNIT TO BE REPLACED SEPARATELY. NOT IN THIS CONTRACT.
D41	DISCONNECT AND REMOVE EXHAUST DUCTWORK BETWEEN UNITS AHU-1 AND AHU-1A. TEMPORARILY COVER EXHAUST OPENINGS WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION.
D42	REMOVE SIDE PANEL OF AHU-1 EXHAUST SECTION BETWEEN UNITS AHU-1 AND AHU-1A UNITS. TEMPORARILY COVER OPENING WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION.
D43	DISCONNECT AND REMOVE DAMAGED PORTION OF OUTSIDE AIR DUCTWORK. TEMPORARILY COVER OPENING WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION.
D44	DISCONNECT AND REMOVE PORTION OF HWR/S PIPING REQUIRED FOR THE ADJUSTMENT OF BRANCH CONNECTION TO COME OFF OF THE BOTTOM OF THE MAIN PIPES.
D45	AIR HANDLING UNIT TO BE REFURBISHED. UNIT CASING EXISTING TO REMAIN. DISCONNECT AND REMOVE EXHAUST FANS, UNIT COILS AND COIL PIPING PACKAGES, UNIT CONTROLS, CONTROL DAMPERS, AND ACTUATORS. SUPPLY FANS PREVIOUSLY REPLACED BY OWNER AND ARE NOT IN SCOPE OF THIS PROJECT.

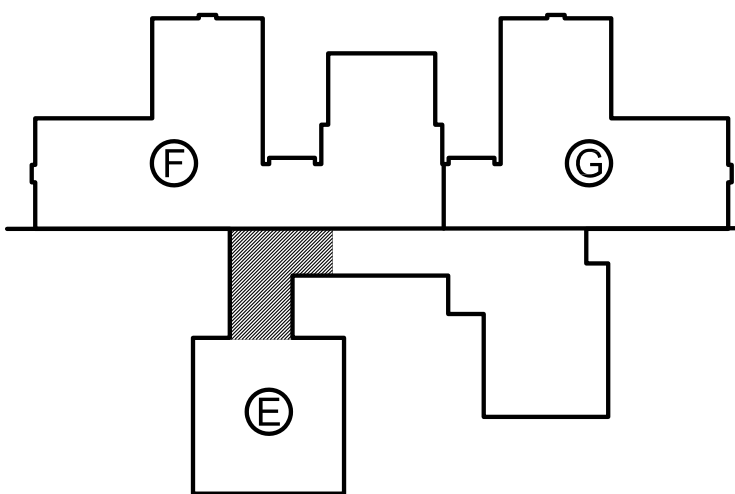
ASBESTOS DISCLOSURE STATEMENT

AN ASBESTOS INSPECTION HAS NOT BEEN PERFORMED. ASBESTOS-CONTAINING MATERIAL FOUND IN AREAS OF NEW CONSTRUCTION SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED. CONTACT NEWPORT NEWS PUBLIC SCHOOL SYSTEM UPON DISCOVERY OF ADDITIONAL AREAS CONTAINING ASBESTOS MATERIAL. ASBESTOS ABATEMENT SHALL BE HANDLED BY NEWPORT NEWS PUBLIC SCHOOL SYSTEM. PLEASE ALLOW A MINIMUM OF 3 DAYS TO COMPLETE ASBESTOS ABATEMENT.

LEAD PAINT PROVISION

NNPS'S UNDERSTANDING OF LEAD PAINT ISSUES WHICH MAY ARISE DURING THE PROJECT IS THAT PROPERLY TRAINED CONTRACTORS AND SUBCONTRACTORS SHOULD BE ABLE TO SAFELY PERFORM WORK EVEN IF LEAD PAINT MAY BE PRESENT AT SOME LOCATIONS. NNPS WILL PROVIDE TESTING FOR LEAD BASED PAINT USING AN X-RAY FLUORESCENCE (XRF) SPECTRUM ANALYZER. THE CONTRACTOR AND ITS SUB-CONTRACTORS SHALL CONDUCT ANY FURTHER TESTING NECESSARY TO BE IN COMPLIANCE WITH THE OSHA LEAD IN CONSTRUCTION STANDARD CONSISTENT WITH 29 CFR 1926.62. IT IS NOT CURRENTLY ANTICIPATED THAT THE WORK WILL REQUIRE APPLICATION OF THE EPA RENOVATE REPAIR AND PAINT (RRP) RULE FOR PRE-1978 CHILD OCCUPIED FACILITIES. HOWEVER, IF, FOLLOWING COMPLETION OF DESIGN, IT IS DETERMINED THAT THE SCOPE OF WORK AT ANY OF THE SITES WILL RESULT IN APPLICATION OF THE RRP RULE, THE CONTRACTOR AND ITS SUBCONTRACTORS WILL PROMPTLY COMPLY WITH THE REQUIREMENTS OF RRP WHERE SUCH REQUIREMENTS ARE APPLICABLE. NO PROHIBITED WORK PRACTICES, AS DEFINED IN RRP, WILL BE USED WHEN DISTURBING ANY PAINTED SURFACE WITH DETECTABLE LEAD USING AN XRF SPECTRUM ANALYZER AND THE OSHA LEAD IN CONSTRUCTION STANDARD SHALL APPLY. NNPS AND THE CONTRACTOR SHALL AGREE THAT THERE IS NO PRESENT BELIEF THAT THERE WILL BE A NEED TO ABATE LEAD PAINT DURING THE PROJECT. IF LEAD ABATEMENT BECOMES A REQUIREMENT, NNPS AND THE CONTRACTOR SHALL DETERMINE THE APPROPRIATE COURSE OF ACTION WHICH MAY INCLUDE ABATEMENT OR REMOVAL OF AN AREA FROM THE SCOPE OF SERVICES.

NOTE: EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK, COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.



KEY PLAN
NOT TO SCALE



THOMPSON
Consulting Engineers



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

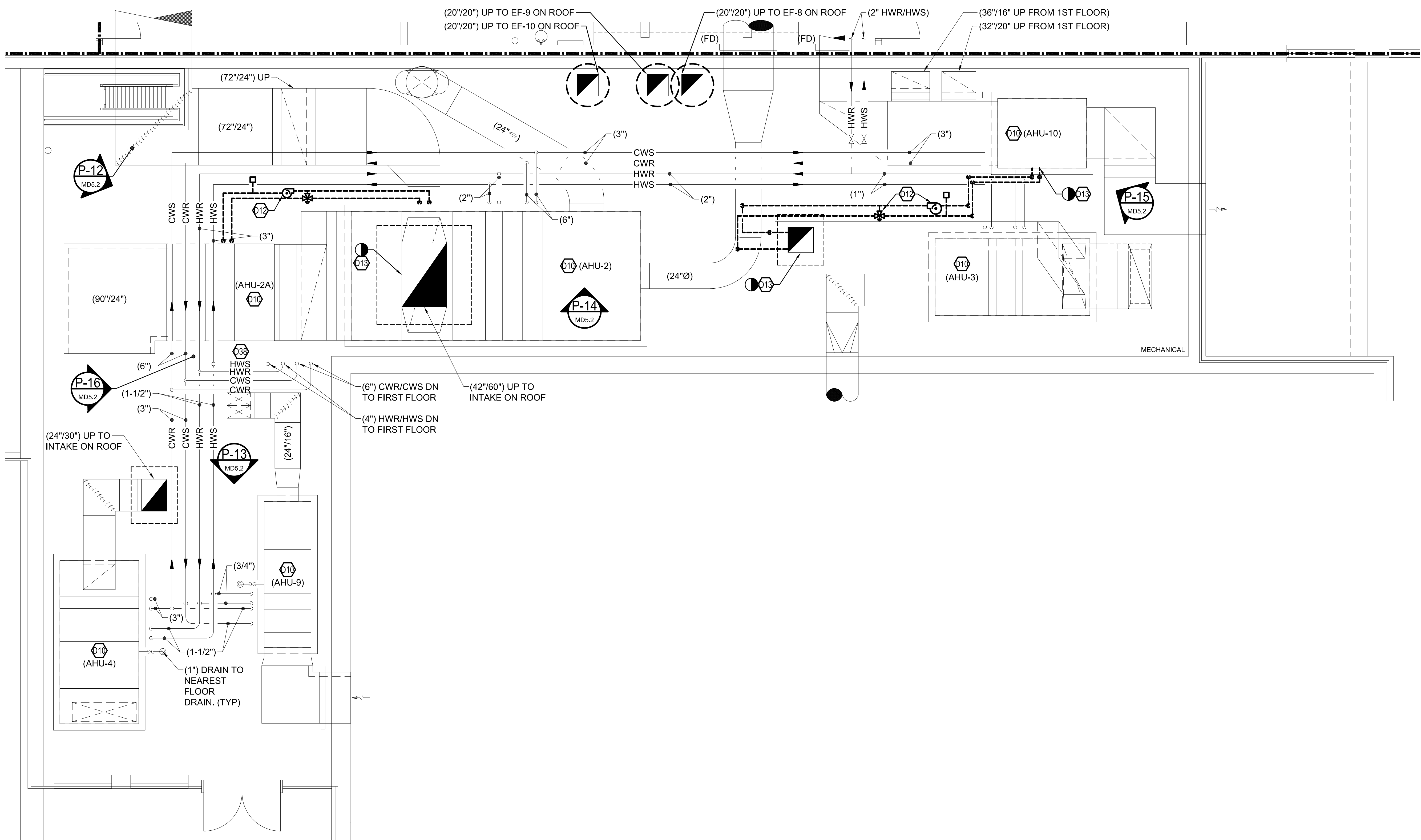
NEWPORT NEWS

ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - DEMOLITION

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD3.2

DATE: 01/26/2024



DEMOLITION NOTES	
NO.	DESCRIPTION
D10	AIR HANDLING UNIT TO BE REFURBISHED. UNIT CASING EXISTING TO REMAIN. DISCONNECT AND REMOVE SUPPLY AND EXHAUST FANS AND FLEXIBLE CONNECTIONS, UNIT COILS AND COIL PIPING PACKAGES, UNIT CONTROLS, CONTROL DAMPERS AND ACTUATORS, AND ENERGY WHEELS WHERE APPLICABLE. SUPPLY FAN ISOLATED BASERAILS SHALL BE EXISTING TO REMAIN.
D12	REMOVE INLINE PUMP, EXPANSION TANK, AND VALVES ASSOCIATED WITH RUNAROUND COIL TO BE REMOVED.
D13	DISCONNECT AND REMOVE RUNAROUND COIL, PIPING, CONTROLS AND ACCESSORIES COMPLETE. REMOVE DUCTWORK TO EXTENT REQUIRED FOR REMOVAL. TEMPORARILY COVER OPEN ENDS OF DUCTWORK WITH 6-MIL POLYETHYLENE SHEETING DURING CONSTRUCTION.
D38	REMOVE EXISTING HOT WATER PIPING INSULATION AND INSERTS WHERE DAMAGED. TYPICAL THROUGHOUT THE MECHANICAL ROOMS. SEE PHOTO P-16 ON DRAWING MD5.2 FOR A TYPICAL EXAMPLE OF POOR INSULATION CONDITION REQUIRING REPLACEMENT.

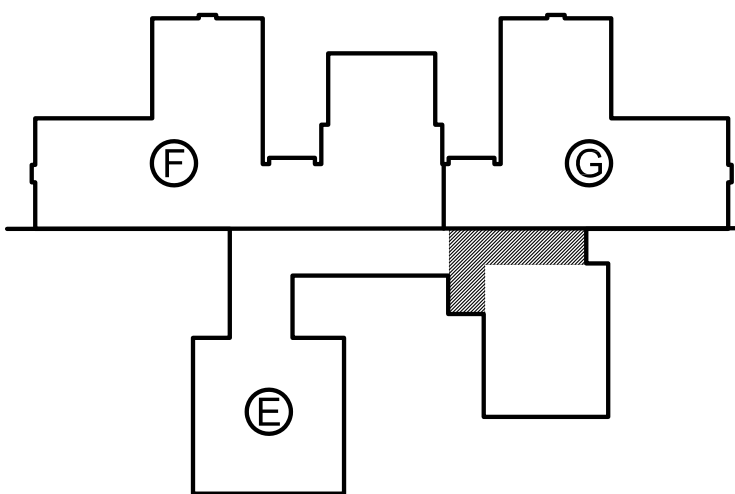
ASBESTOS DISCLOSURE STATEMENT

AN ASBESTOS INSPECTION HAS NOT BEEN PERFORMED. ASBESTOS-CONTAINING MATERIAL FOUND IN AREAS OF NEW CONSTRUCTION SHALL BE REMOVED PRIOR TO ANY OTHER WORK BEING PERFORMED. CONTACT NEWPORT NEWS PUBLIC SCHOOL SYSTEM UPON DISCOVERY OF ADDITIONAL AREAS CONTAINING ASBESTOS MATERIAL. ASBESTOS ABATEMENT SHALL BE HANDLED BY NEWPORT NEWS PUBLIC SCHOOL SYSTEM. PLEASE ALLOW A MINIMUM OF 3 DAYS TO COMPLETE ASBESTOS ABATEMENT.

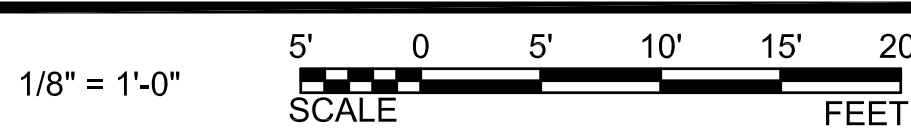
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KEY PLAN
NOT TO SCALE



ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - DEMOLITION

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



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

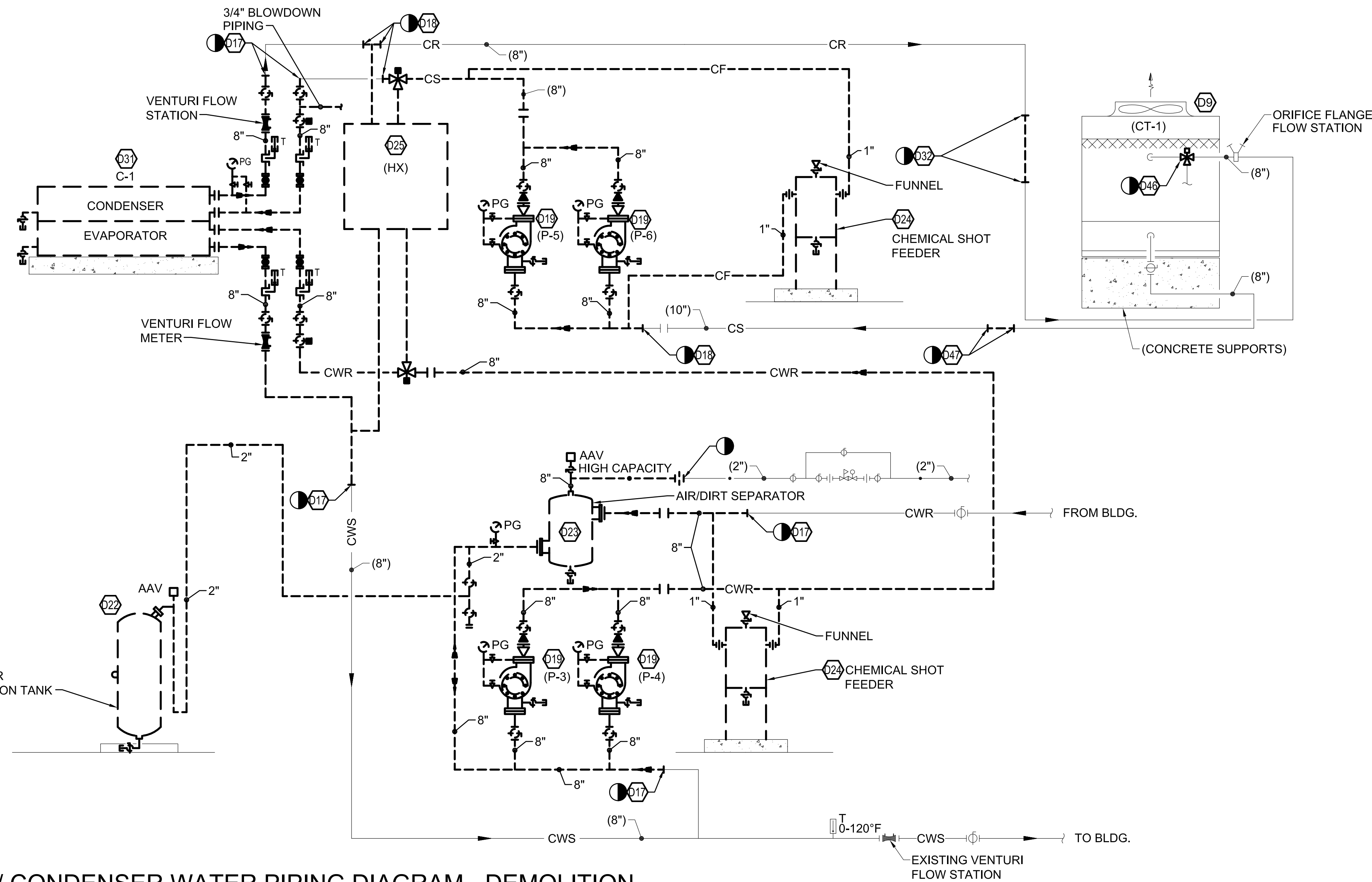
NEWPORT NEWS

ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - DEMOLITION

COMM. NO: 22-113
DESIGNED BY: CEP
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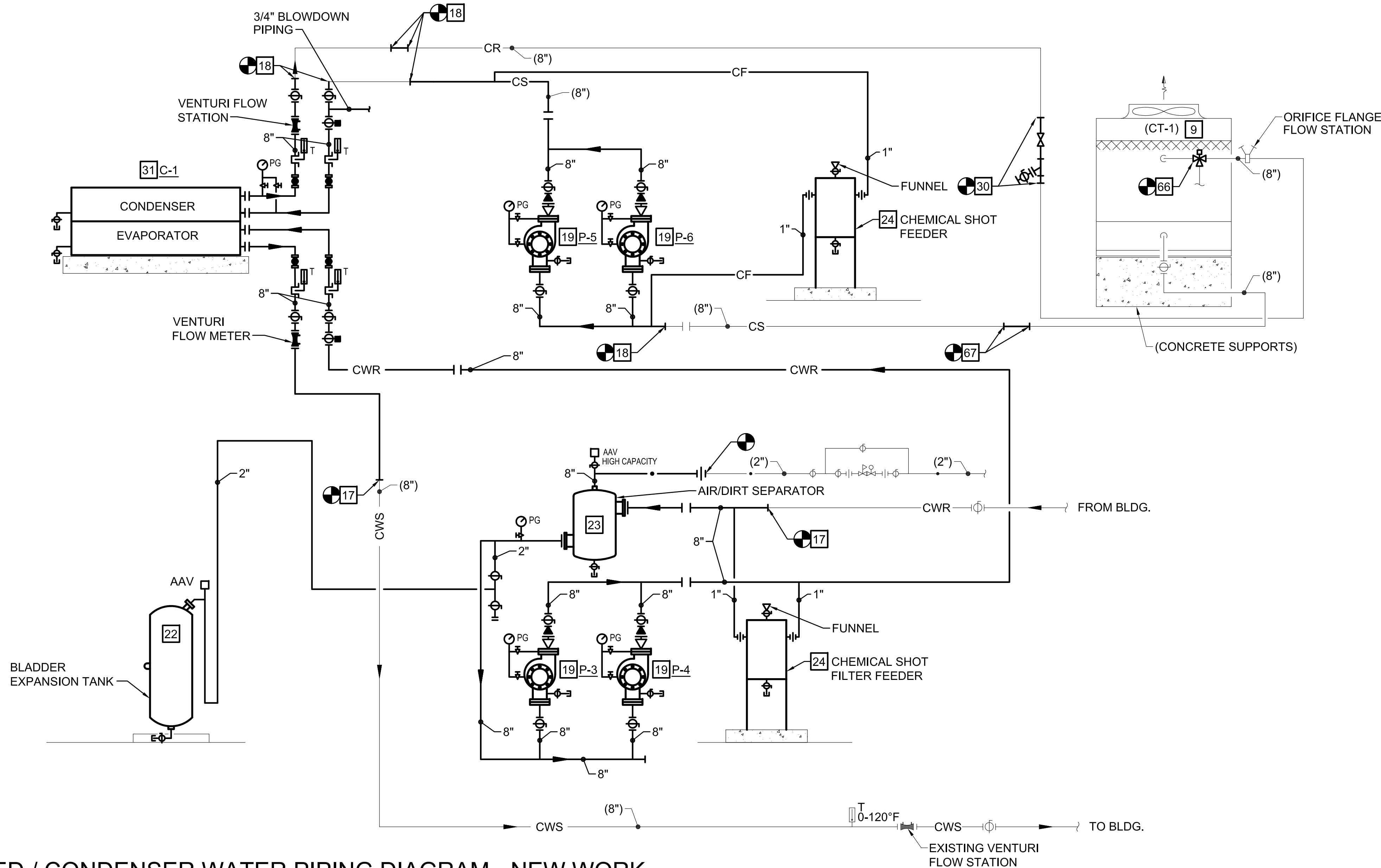
MD3.3

DATE: 01/26/2024



CHILLED / CONDENSER WATER PIPING DIAGRAM - DEMOLITION

NOT TO SCALE



CHILLED / CONDENSER WATER PIPING DIAGRAM - NEW WORK

NOT TO SCALE

DEMOLITION NOTES	
NO.	DESCRIPTION
D9	EXISTING COOLING TOWER TO REMAIN.
D17	DISCONNECT AND REMOVE EXISTING CWR/S PIPING TO POINT REQUIRED FOR INSTALATION OF NEW WORK.
D18	DISCONNECT AND REMOVE EXISTING CR/S PIPING TO POINT REQUIRED FOR INSTALLATION OF NEW WORK.
D19	DISCONNECT AND REMOVE BASE MOUNTED SUCTION PUMP, CONTROLS, VFD, AND ACCESSORIES COMPLETE. EXISTING PUMP PACKAGE AND CONCRETE BASE TO REMAIN.
D22	REMOVE EXPANSION TANK AND ACCESSORIES COMPLETE.
D23	REMOVE AIR DIRT SEPARATOR, SUPPORTS, AND ACCESSORIES COMPLETE.
D24	REMOVE CHEMICAL SHOT FEEDER, SUPPORTS, AND ACCESSORIES COMPLETE.
D25	REMOVE HEAT EXCHANGER, SUPPORTS, AND ACCESSORIES COMPLETE.
D31	REMOVE EXISTING CHILLER, CONTROLS, ACCESSORIES, AND SUPPORTS COMPLETE DURING WINTER PHASE OF THE PROJECT.
D32	DISCONNECT AND REMOVE CR PIPING AND O-RING IN THE VERTICAL RUN TO EXTENT REQUIRED FOR THE INSTALLATION OF AN ISOLATION VALVE AND Y-TYPE STRAINER AT AN EASILY ACCESSIBLE HEIGHT.
D46	DISCONNECT AND REMOVE THREE-WAY BALANCING VALVE AND ACTUATOR COMPLETE AT COOLING TOWER BYPASS. TEMPORARILY CAP PIPING DURING CONSTRUCTION TO PREVENT CONTAMINATION OF THE CONDENSER WATER SYSTEM.
D47	DISCONNECT AND REMOVE CS ELBOW AND O-RING AT METAL-PLASTIC CONNECTION POINT. TEMPORARILY CAP PIPING DURING CONSTRUCTION TO PREVENT CONTAMINATION OF THE CONDENSER WATER SYSTEM.

NEW WORK NOTES	
NO.	DESCRIPTION
9	PROVIDE AND INSTALL ROOF MOUNTED EXHAUST FAN, ACCESSORIES, AND CONTROLS COMPLETE. MOUNT ON EXISTING ROOF CURB AND EXTEND DUCTWORK OR PROVIDE CURB ADAPTER AS REQUIRED.
17	PROVIDE AND INSTALL CWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN CWR/S PIPING THROUGHOUT BUILDING. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW CWR/S PIPING SHALL BE WELDED.
18	PROVIDE AND INSTALL CR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN CR/S PIPING THROUGHOUT BUILDING. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW CR/S PIPING SHALL BE WELDED.
19	PROVIDE AND INSTALL BASE MOUNTED SUCTION PUMP, CONTROLS, AND ACCESSORIES COMPLETE ON EXISTING PUMP PACKAGE BASE. NEW PUMP BASES SHALL BE GROUTED TO EXISTING PUMP PACKAGE BASE AFTER ALL CONCRETE HAS BEEN REPAIRED TO PROVIDE A SMOOTH SURFACE.
22	PROVIDE AND INSTALL NEW PRE-CHARGED BLADDER EXPANSION TANK WITH HEAVY DUTY REPLACEABLE BLADDER, RING BASE, LIFTING RINGS, AND NPT SYSTEM CONNECTION SIZED AT A MAXIMUM PRESSURE OF 125 PSI.
23	PROVIDE AND INSTALL AIR DIRT SEPARATOR. SPIROTHERM MODEL VDN OR APPROVED EQUAL SIZED TO SUPPORT THE FULL FLOW VOLUME.
24	PROVIDE AND INSTALL 5-GALLON CHEMICAL SHOT FILTER FEEDER WITH FUNNEL.
30	PROVIDE AND INSTALL ISOLATION VALVE AND Y-TYPE STRAINER WITH BLOWDOWN VALVE IN CONDENSER WATER RETURN PIPING AND NEW O-RING AT METAL TO PLASTIC CONNECTION. CONNECT TO EXISTING PIPING.
31	PROVIDE AND INSTALL CHILLER, ACCESSORIES, AND CONTROLS COMPLETE ON EXISTING CONCRETE HOUSEKEEPING PAD DURING WINTER PHASE OF PROJECT.
66	PROVIDE AND INSTALL THREE WAY VALVE, ACTUATOR, AND ACCESSORIES COMPLETE AT COOLING TOWER BYPASS.
67	PROVIDE AND INSTALL NEW CR PIPING AND O-RING AT METAL TO PLASTIC CONNECTION. CONNECT TO EXISTING PIPING WHERE INDICATED.



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

CHILLED / CONDENSER WATER PIPING DIAGRAMS - DEMOLITION AND NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

MD4.1

DATE: 01/26/2024



NEW WORK NOTES	
NO.	DESCRIPTION
14	PROVIDE AND INSTALL CONDENSING BOILER, FLUE PIPING THROUGH EXTERIOR WALL, CONTROLS, AND ACCESSORIES COMPLETE. PROVIDE AND INSTALL NEOPRENE ISOLATION PADS FOR BOILER MOUNTING ON HOUSEKEEPING PAD. REFER TO "BOILER VENTING DETAIL" ON DRAWING M6.2.
16	PROVIDE AND INSTALL HWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN HWRS PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.
20	HOT WATER PUMP AND VFD CONTROLS REPLACED 2023 IS EXISTING TO REMAIN; NOT IN THIS CONTRACT.
22	PROVIDE AND INSTALL NEW PRE-CHARGED BLADDER EXPANSION TANK WITH HEAVY DUTY REPLACEABLE BLADDER, RING BASE, LIFTING RINGS, AND NPT SYSTEM CONNECTION SIZED AT A MAXIMUM PRESSURE OF 125 PSI.
23	PROVIDE AND INSTALL AIR DIRT SEPARATOR, SPIROTHERM MODEL VDN OR APPROVED EQUAL SIZED TO SUPPORT THE FULL FLOW VOLUME.
24	PROVIDE AND INSTALL 5-GALLON CHEMICAL SHOT FILTER FEEDER WITH FUNNEL.
42	PROVIDE NEW SCHEDULE 40 STEEL GAS PIPING. CONNECT TO EXISTING GAS PIPING AT LOCATION INDICATED.
43	PROVIDE CONDENSATE NEUTRALIZATION KIT. INSTALL IN ACCORDANCE WITH BOILER MANUFACTURER'S INSTRUCTIONS.
45	PROVIDE 8" SYSTEM STRAINER WITH 30 MESH SCREEN. "METRAFLEX" MODEL LPD OR EQUAL.



HOT WATER PIPING DIAGRAMS - DEMOLITION AND NEW WORK

MD4.2

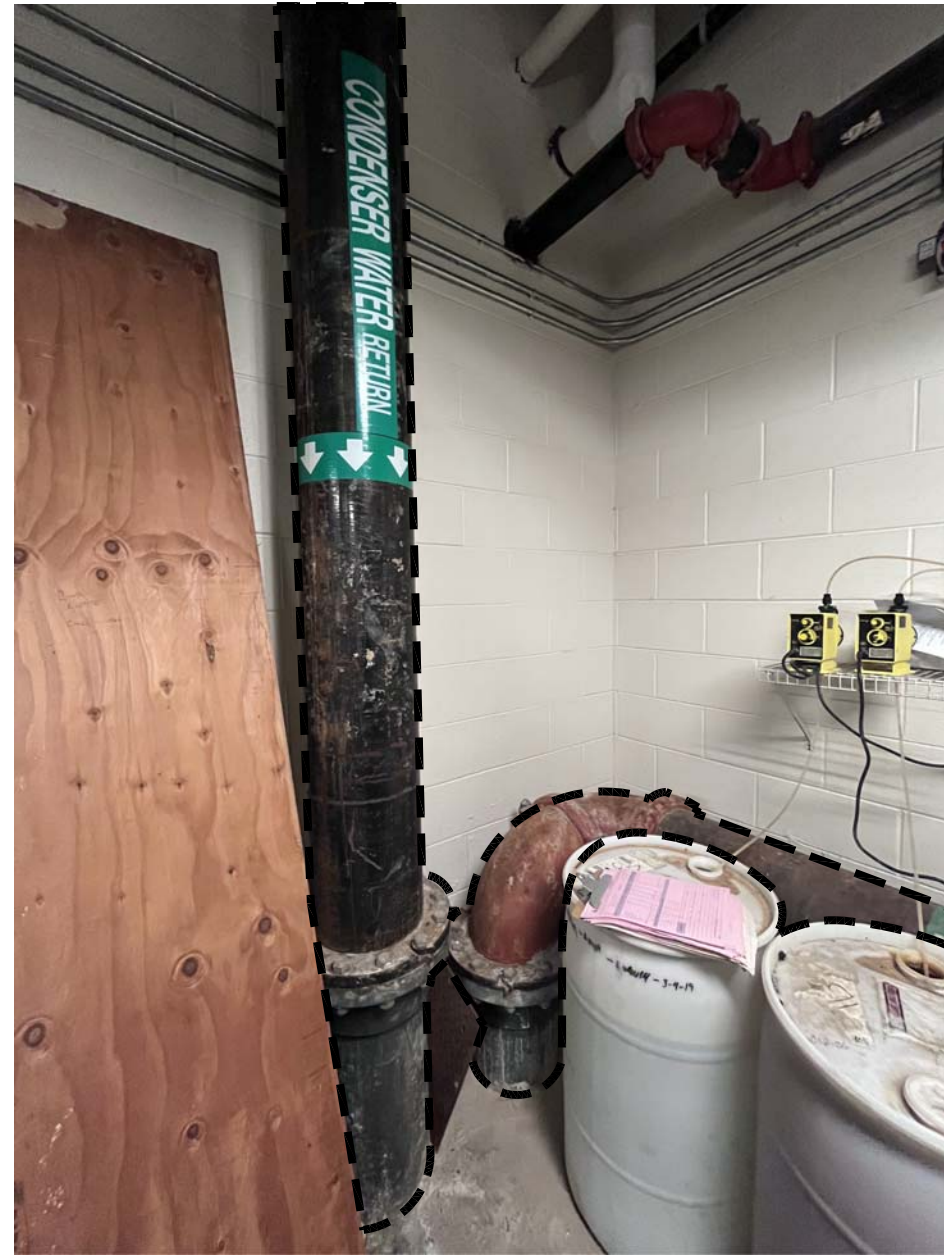
DATE: 01/26/2024



P1 PUMP PACKAGE EXISTING CONDITIONS
MD3.1



P2 CHILLER EXISTING CONDITIONS
MD3.1



LOCATION FOR CONDENSER
P3 WATER ISOLATION VALVE AND STRAINER
MD3.1



P4 PUMP PACKAGE EXISTING CONDITIONS
MD3.1



P5 PUMP AND CHILLER ROOM EXISTING CONDITIONS
MD3.1



P6 BOILER EXISTING CONDITIONS
MD3.1



P7 BOILER EXISTING CONDITIONS
MD3.1



AHU-8 DUCT HOT WATER
P8 COILS EXISTING CONDITIONS
MD3.2



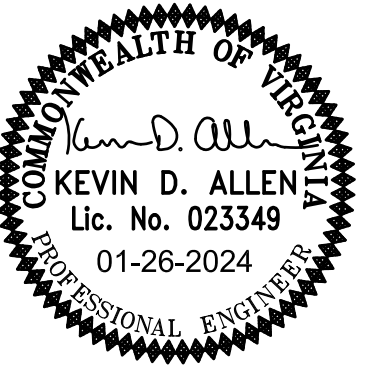
AHU-1 FAN
P9 EXISTING CONDITIONS
MD3.2



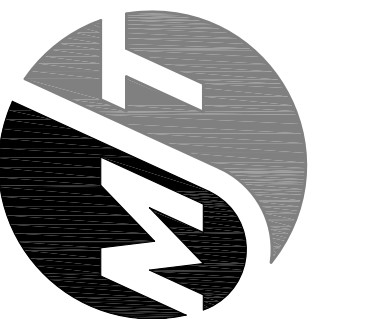
AHU-1 SUPPLY DUCT
P10 EXISTING CONDITIONS
MD3.2



P11 AHU-7 EXISTING CONDITIONS
MD3.2



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
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FIELD PICTURES - MECHANICAL

NEWPORT NEWS

COMM. NO.: 22-113
DESIGNED BY: CEP
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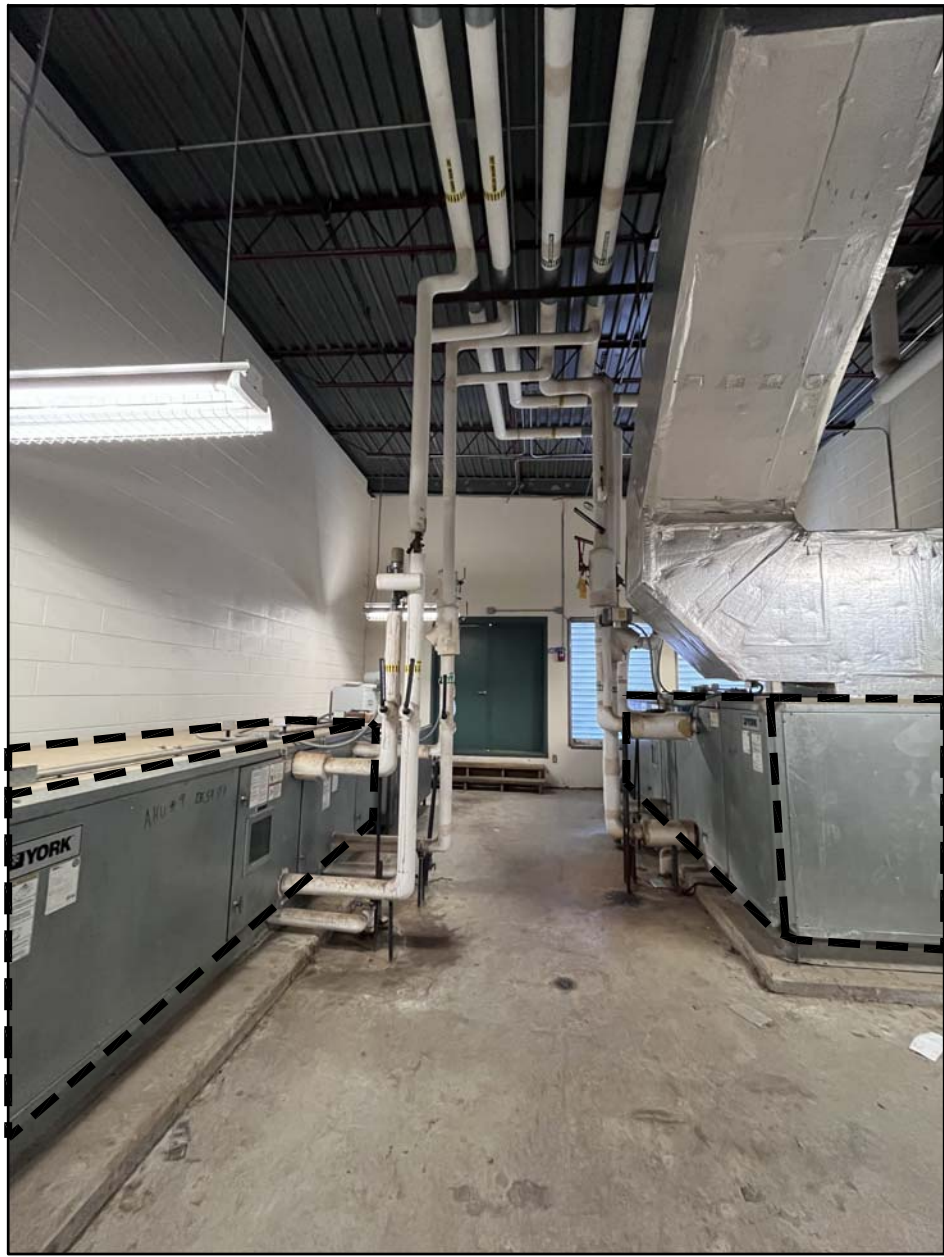
MD5.1

DATE: 01/26/2024



P12 AHU-2 AND AHU-2A EXISTING CONDITIONS

MD3.3



P13 AHU-4 AND AHU-9 EXISTING CONDITIONS

MD3.3



P14 AHU-2 FAN EXISTING CONDITIONS

MD3.3



P15 AHU-10 EXISTING CONDITIONS

MD3.3



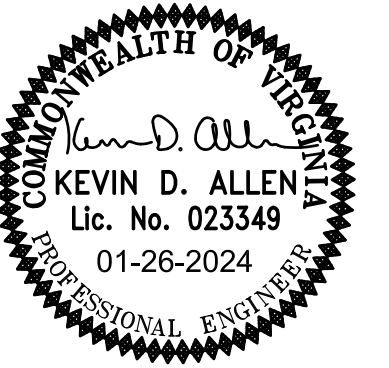
P16 DAMAGED HOT WATER PIPE INSULATION (TYP)

MD3.3



P17 COOLING TOWER EXISTING CONDITIONS

MD2.2



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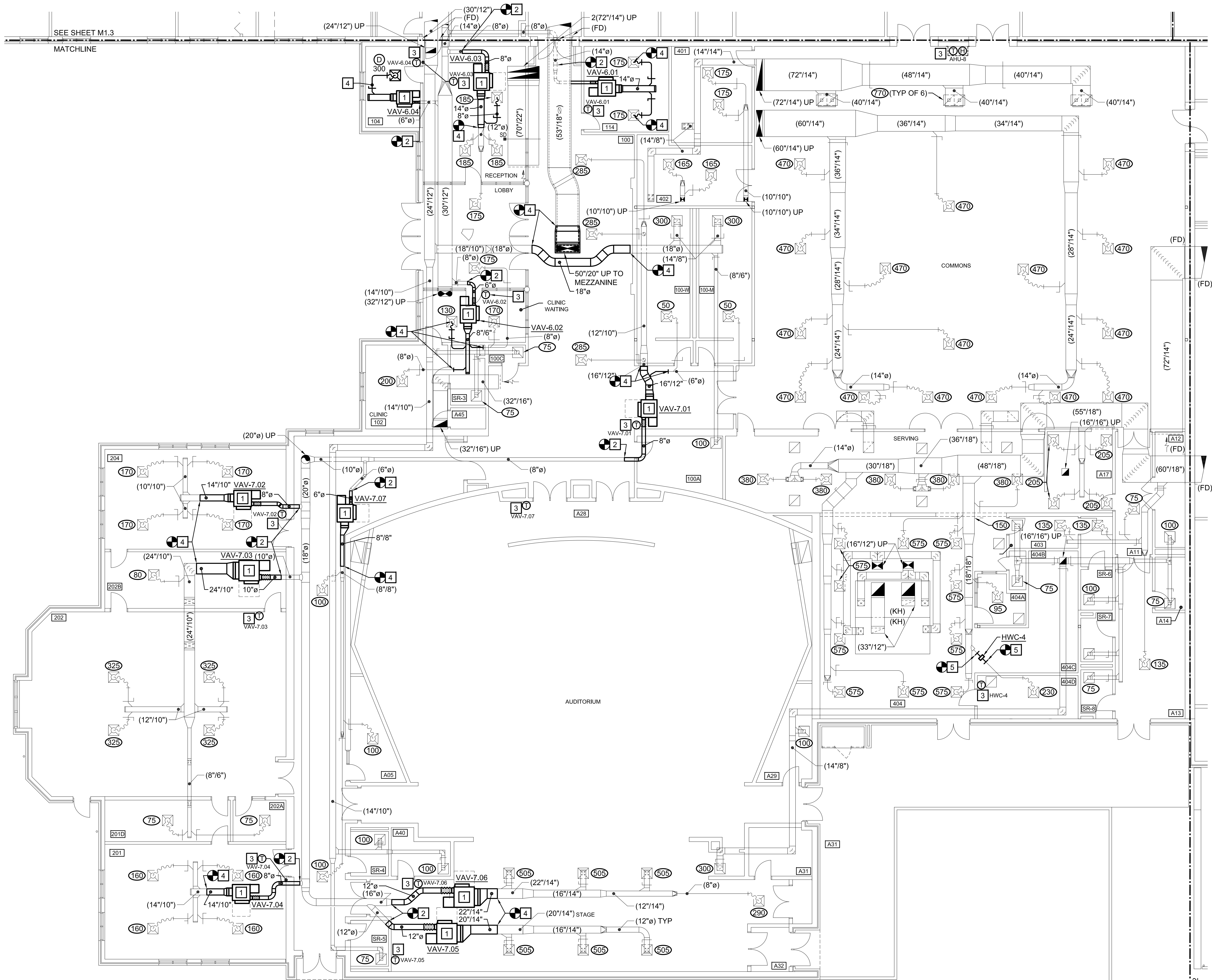
FIELD PICTURES - MECHANICAL

NEWPORT NEWS

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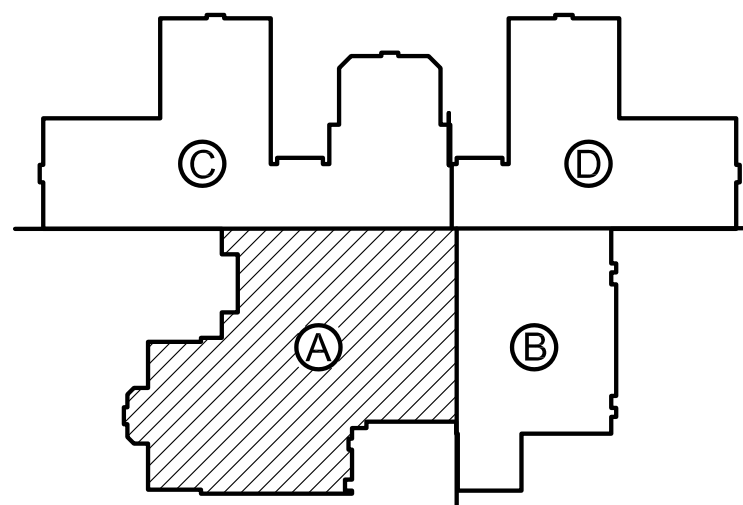
DATE: 01/26/2024



NEW WORK NOTES	
NO.	DESCRIPTION
1	PROVIDE AND INSTALL SERIES FAN POWERED VARIABLE AIR VOLUME TERMINAL UNIT, CONTROLS, SUPPORTS, AND ACCESSORIES COMPLETE. MAINTAIN ALL REQUIRED UNIT CLEARANCES.
2	CONNECT TO EXISTING MEDIUM PRESSURE PRIMARY AIR DUCTWORK.
3	PROVIDE AND INSTALL THERMOSTAT/HUMIDISTAT, WIRING, AND ACCESSORIES COMPLETE IN EXISTING SENSOR LOCATION. PROVIDE AND INSTALL LOCKABLE CLEAR PLASTIC COVER WHERE INDICATED. ROOM THERMOSTATS SHALL BE VIEW ONLY WITH NO USER CONTROLS.
4	PROVIDE AND INSTALL DUCTWORK, DIFFUSERS, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING DIFFUSERS AS INDICATED.
5	PROVIDE AND INSTALL DUCT HEATING COIL, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE. CONNECT TO EXISTING DUCTWORK WHERE INDICATED.

FIRST FLOOR PLAN - AREA "A" - MECHANICAL - NEW WORK

SCALE: 1/8" = 1'-0"



KEY PLAN
NOT TO SCALE



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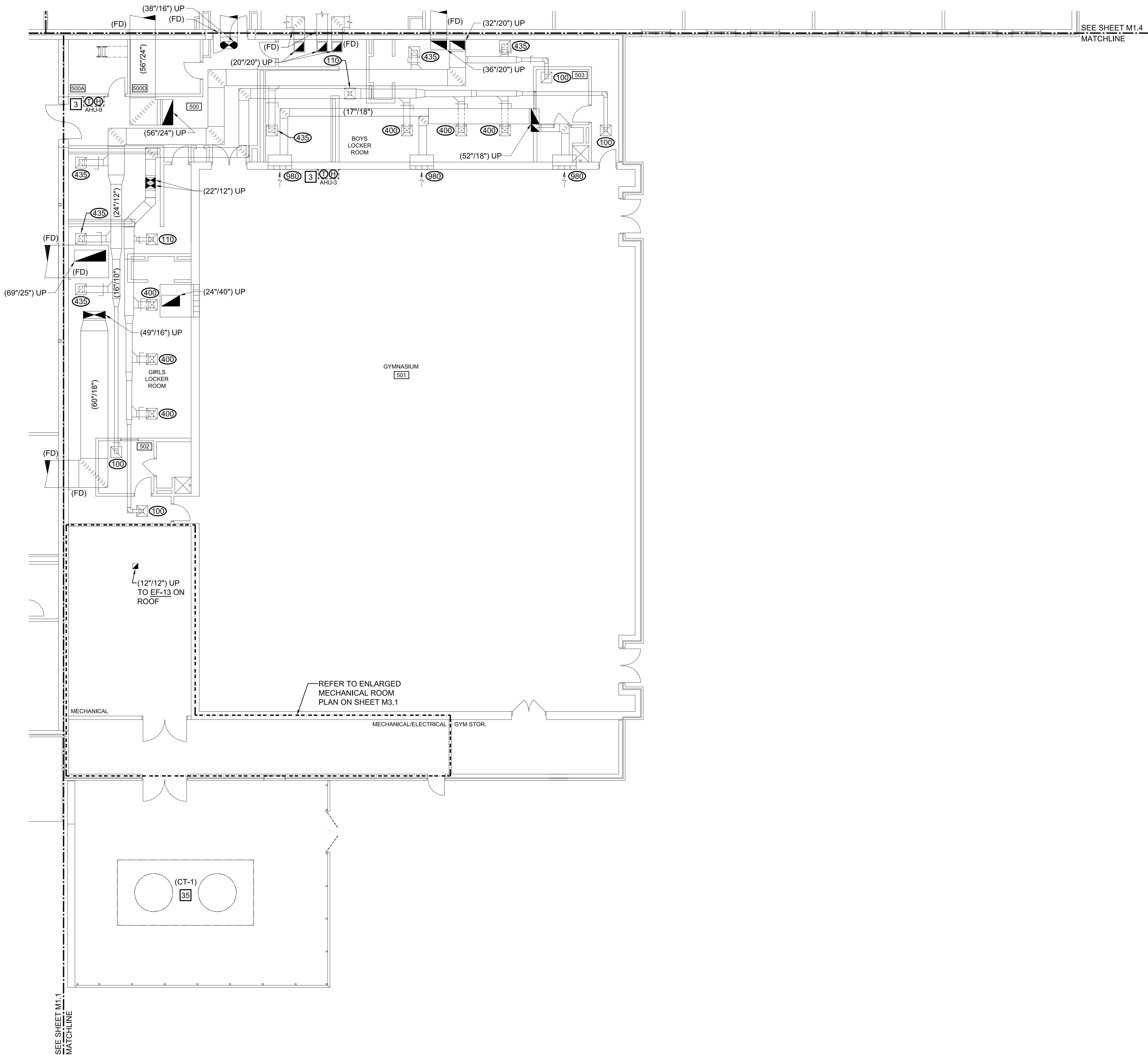
NEWPORT NEWS

FIRST FLOOR PLAN - AREA "A" - MECHANICAL - NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M1.1

DATE: 01/26/2024



FIRST FLOOR PLAN - AREA "B" - MECHANICAL - NEW WORK
SCALE: 1/8" = 1'-0"

NEW WORK NOTES	
NO.	DESCRIPTION
3	PROVIDE AND INSTALL THERMOSTAT/HUMIDISTAT, WIRING, AND ACCESSORIES COMPLETE IN EXISTING SENSOR LOCATION. PROVIDE AND INSTALL LOCKABLE CLEAR PLASTIC COVER WHERE INDICATED. ROOM THERMOSTATS SHALL BE VIEW ONLY WITH NO USER CONTROLS.
35	COOLING TOWER IS EXISTING TO REMAIN; NOT IN THIS CONTRACT.



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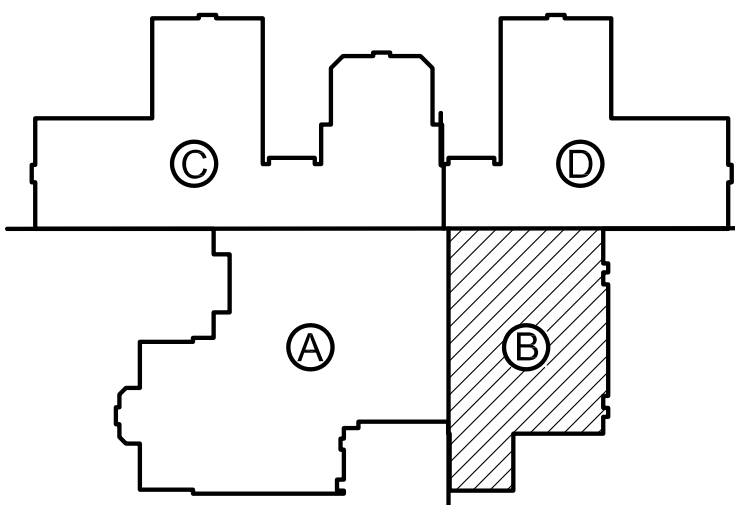
22 ENTERPRISE PARKWAY
4332 COX ROAD
HAMPDEN, VA 23666
GLEN ALLEN, VA 23060
TELEPHONE: (757) 599-4415
PROJECT NUMBER: 22-113

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS
NEWPORT NEWS
VIRGINIA
FIRST FLOOR PLAN - AREA "B" - MECHANICAL - NEW WORK

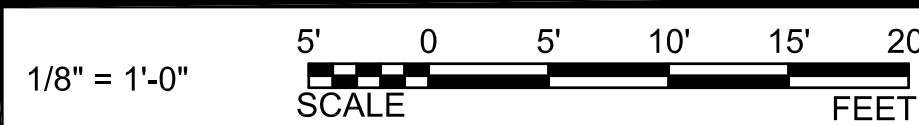
COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

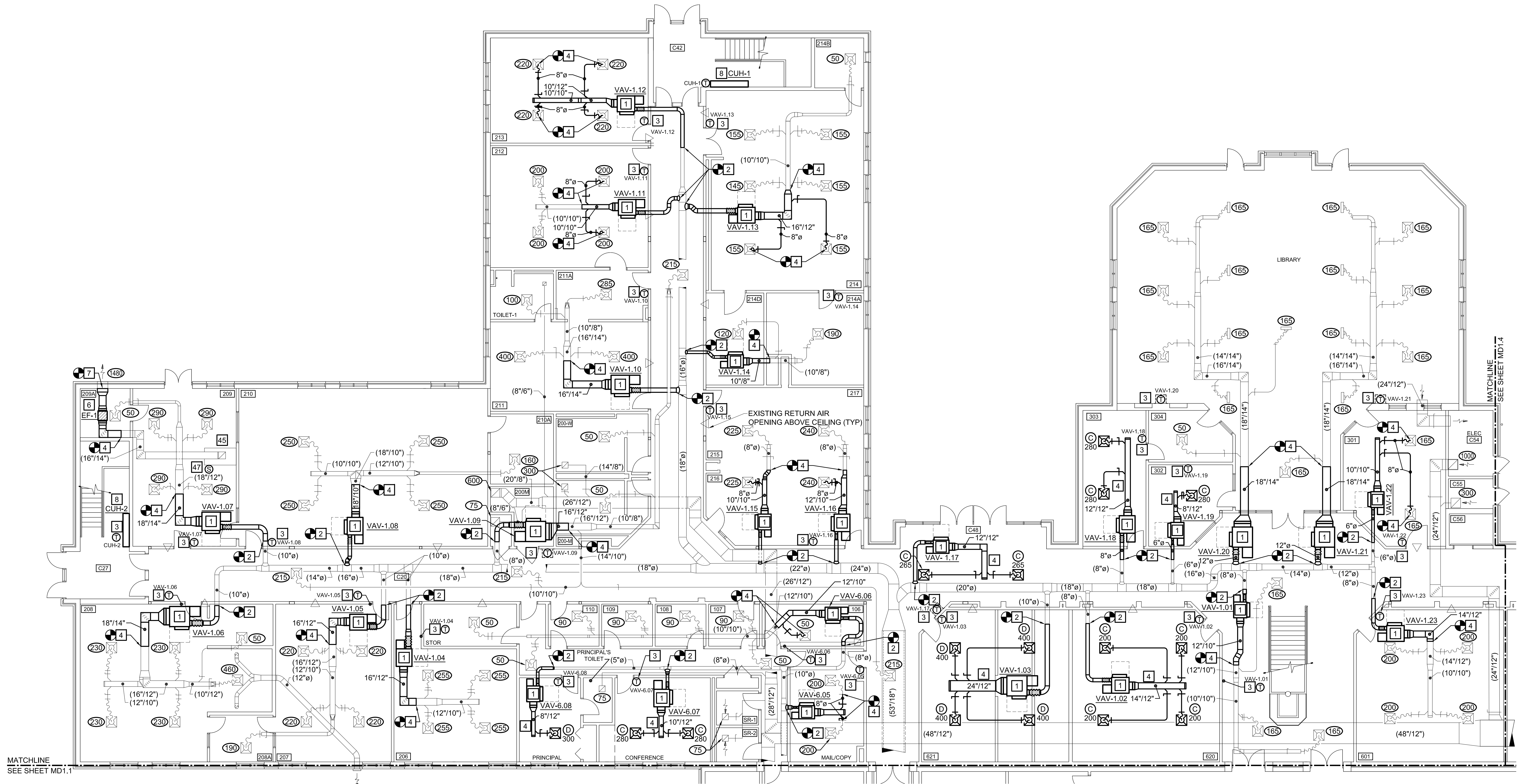
M1.2

DATE: 01/26/2024

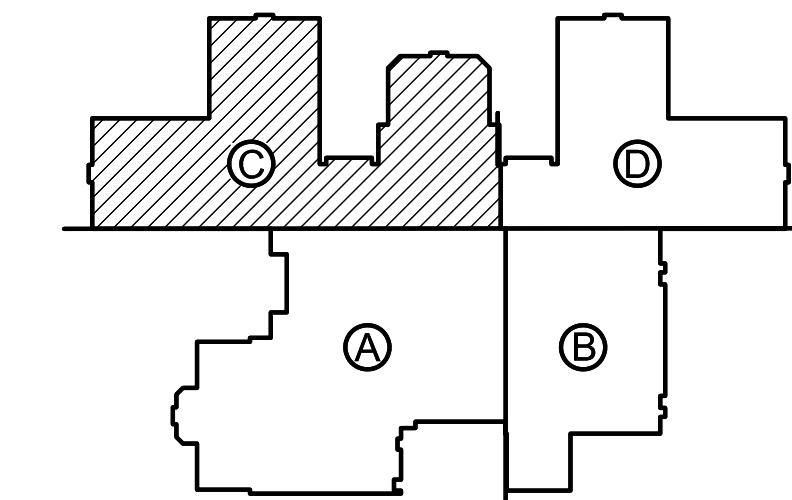


KEY PLAN
NOT TO SCALE

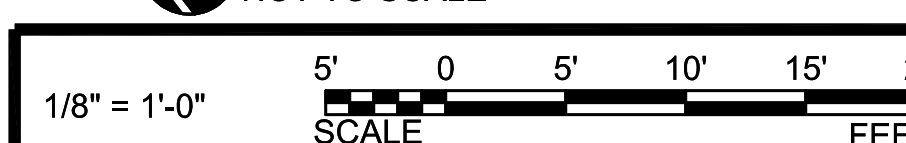




FIRST FLOOR PLAN - AREA "C" - MECHANICAL - NEW WORK
SCALE: 1/8" = 1'-0"



KEY PLAN
NOT TO SCALE

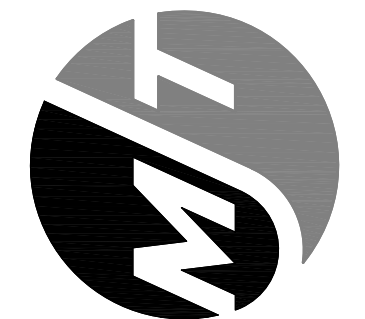


NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
1	PROVIDE AND INSTALL SERIES FAN POWERED VARIABLE AIR VOLUME TERMINAL UNIT, CONTROLS, SUPPORTS, AND ACCESSORIES COMPLETE. MAINTAIN ALL REQUIRED UNIT CLEARANCES.
2	CONNECT TO EXISTING MEDIUM PRESSURE PRIMARY AIR DUCTWORK.
3	PROVIDE AND INSTALL THERMOSTAT/HUMIDISTAT, WIRING, AND ACCESSORIES COMPLETE IN EXISTING SENSOR LOCATION. PROVIDE AND INSTALL LOCKABLE CLEAR PLASTIC COVER WHERE INDICATED. ROOM THERMOSTATS SHALL BE VIEW ONLY WITH NO USER CONTROLS.
4	PROVIDE AND INSTALL DUCTWORK, DIFFUSERS, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING DIFFUSERS AS INDICATED.

NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
6	PROVIDE AND INSTALL INLINE EXHAUST FAN, CONTROLS, AND SUPPORTS COMPLETE. PROVIDE FLEXIBLE CONNECTIONS TO FAN, VIBRATION ISOLATION, AND CONNECT TO EXISTING DUCTWORK WHERE INDICATED.
7	CONNECT TO EXISTING EXHAUST LOUVER AT WALL. CLEAN DUCTWORK AND EXTERIOR LOUVER.
8	PROVIDE AND INSTALL FLOOR MOUNTED CABINET UNIT HEATER, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.
45	EXISTING HOOD TO BE INTERLOCKED WITH EF-1.
47	PROVIDE AND INSTALL NEW WALL OR HOOD MOUNTED FAN SWITCH, WIRING, AND CONTROLS COMPLETE. RE-USE EXISTING SWITCH LOCATION AND CONDUIT.



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NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

FIRST FLOOR PLAN - AREA "C" - MECHANICAL - NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M1.3

DATE: 01/26/2024

NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
1	PROVIDE AND INSTALL SERIES FAN POWERED VARIABLE AIR VOLUME TERMINAL UNIT, CONTROLS, SUPPORTS, AND ACCESSORIES COMPLETE. MAINTAIN ALL REQUIRED UNIT CLEARANCES.
2	CONNECT TO EXISTING MEDIUM PRESSURE PRIMARY AIR DUCTWORK.
3	PROVIDE AND INSTALL THERMOSTAT/HUMIDISTAT, WIRING, AND ACCESSORIES COMPLETE IN EXISTING SENSOR LOCATION. PROVIDE AND INSTALL LOCKABLE CLEAR PLASTIC COVER WHERE INDICATED. ROOM THERMOSTATS SHALL BE VIEW ONLY WITH NO USER CONTROLS.
4	PROVIDE AND INSTALL DUCTWORK, DIFFUSERS, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING DIFFUSERS AS INDICATED.
8	PROVIDE AND INSTALL FLOOR MOUNTED CABINET UNIT HEATER, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE.



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT

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VIRGINIA

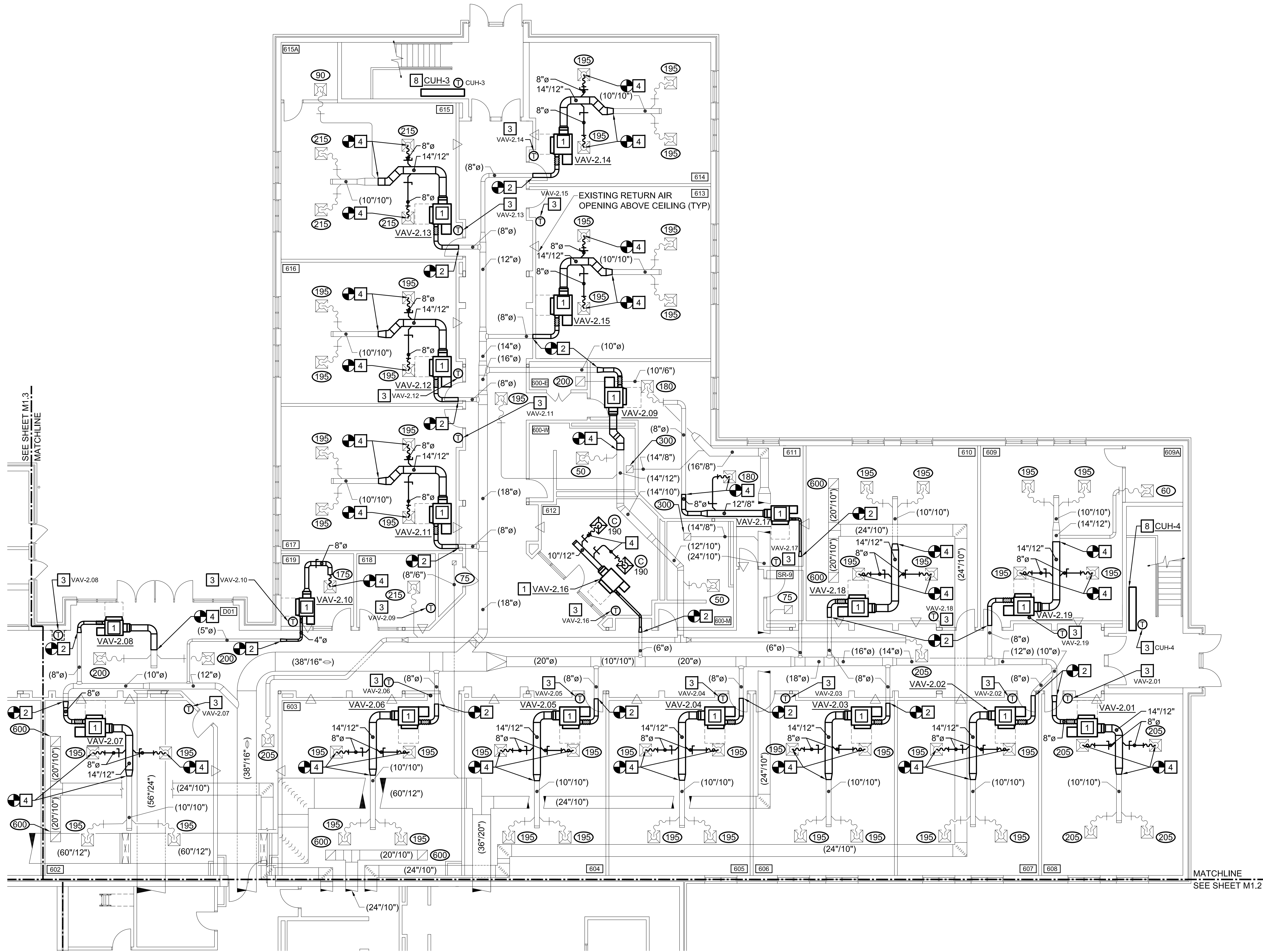
NEWPORT NEWS

FIRST FLOOR PLAN - AREA "D" - MECHANICAL - NEW WORK

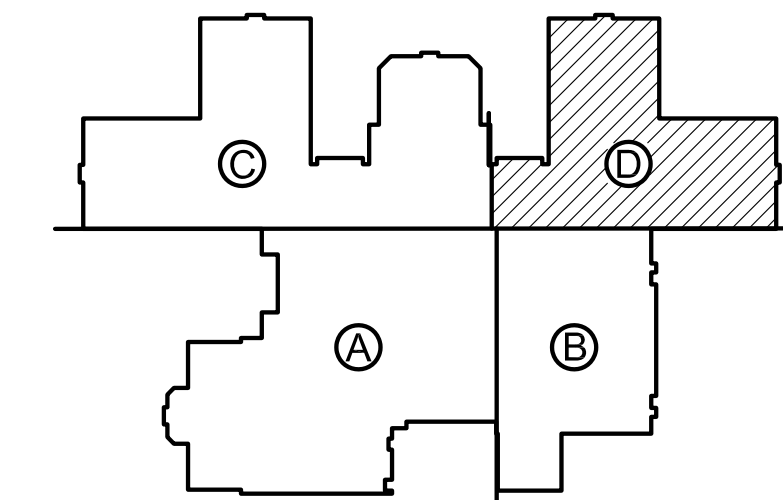
COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M1.4

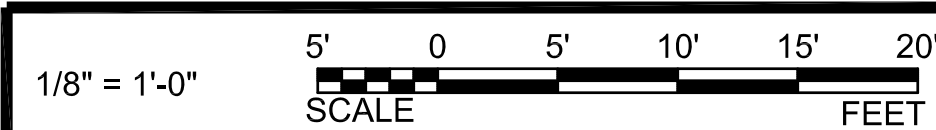
DATE: 01/26/2024



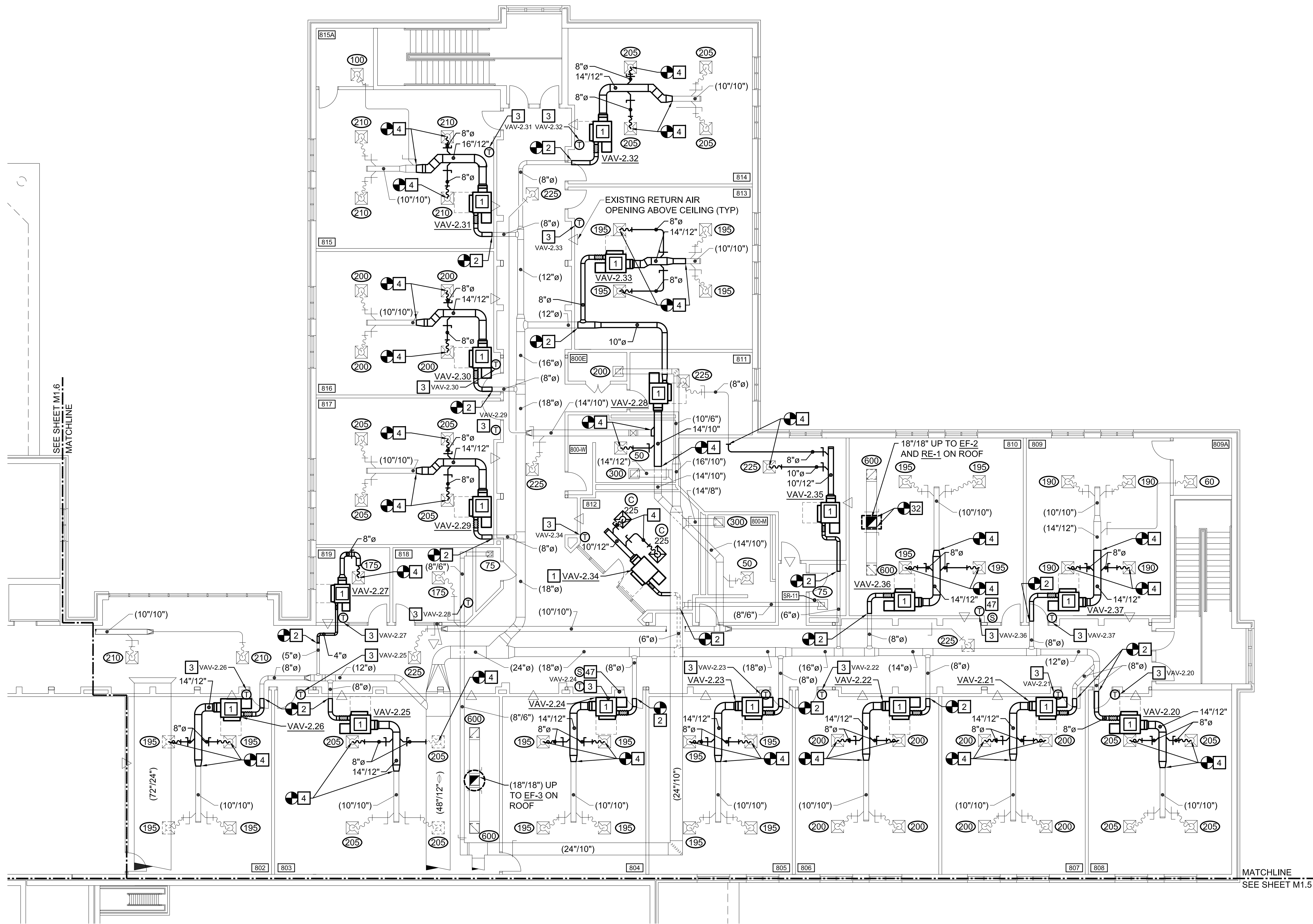
FIRST FLOOR PLAN - AREA "D" - MECHANICAL - NEW WORK
SCALE: 1/8" = 1'-0"



KEY PLAN
NOT TO SCALE

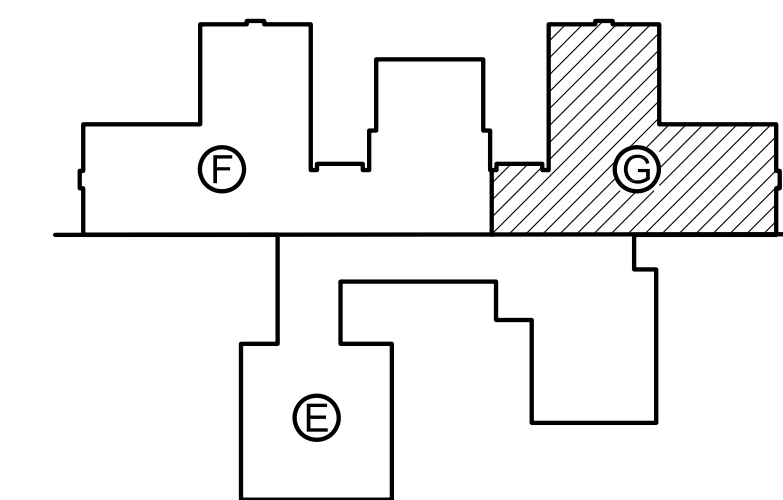






SECOND FLOOR PLAN - AREA "G" - MECHANICAL - NEW WORK
SCALE: 1/8" = 1'-0"

NEW WORK NOTES	
NO.	DESCRIPTION
1	PROVIDE AND INSTALL SERIES FAN POWERED VARIABLE AIR VOLUME BOX, CONTROLS, SUPPORTS, AND ACCESSORIES COMPLETE. MAINTAIN ALL REQUIRED UNIT CLEARANCES.
2	CONNECT TO EXISTING MEDIUM PRESSURE PRIMARY AIR DUCTWORK.
3	PROVIDE AND INSTALL THERMOSTAT/HUMIDISTAT, WIRING, AND ACCESSORIES COMPLETE IN EXISTING SENSOR LOCATION. PROVIDE AND INSTALL LOCKABLE CLEAR PLASTIC COVER WHERE INDICATED. ROOM THERMOSTATS SHALL BE VIEW ONLY WITH NO USER CONTROLS.
4	PROVIDE AND INSTALL DUCTWORK, DIFFUSERS, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING DIFFUSERS AS INDICATED.
32	PROVIDE AND INSTALL INLINE EXHAUST FAN, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE. PROVIDE AND INSTALL VIBRATION ISOLATION, FLEXIBLE CONNECTIONS, AND DUCTWORK REQUIRED FOR RECONNECTION TO EXISTING DUCTWORK AND ROOF EXHAUST HOOD.
47	PROVIDE AND INSTALL NEW WALL OR HOOD MOUNTED FAN SWITCH, WIRING, AND CONTROLS COMPLETE. RE-USE EXISTING SWITCH LOCATION AND CONDUIT.



KEY PLAN
NOT TO SCALE



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NEWPORT NEWS

SECOND FLOOR PLAN - AREA "G" - MECHANICAL - NEW WORK



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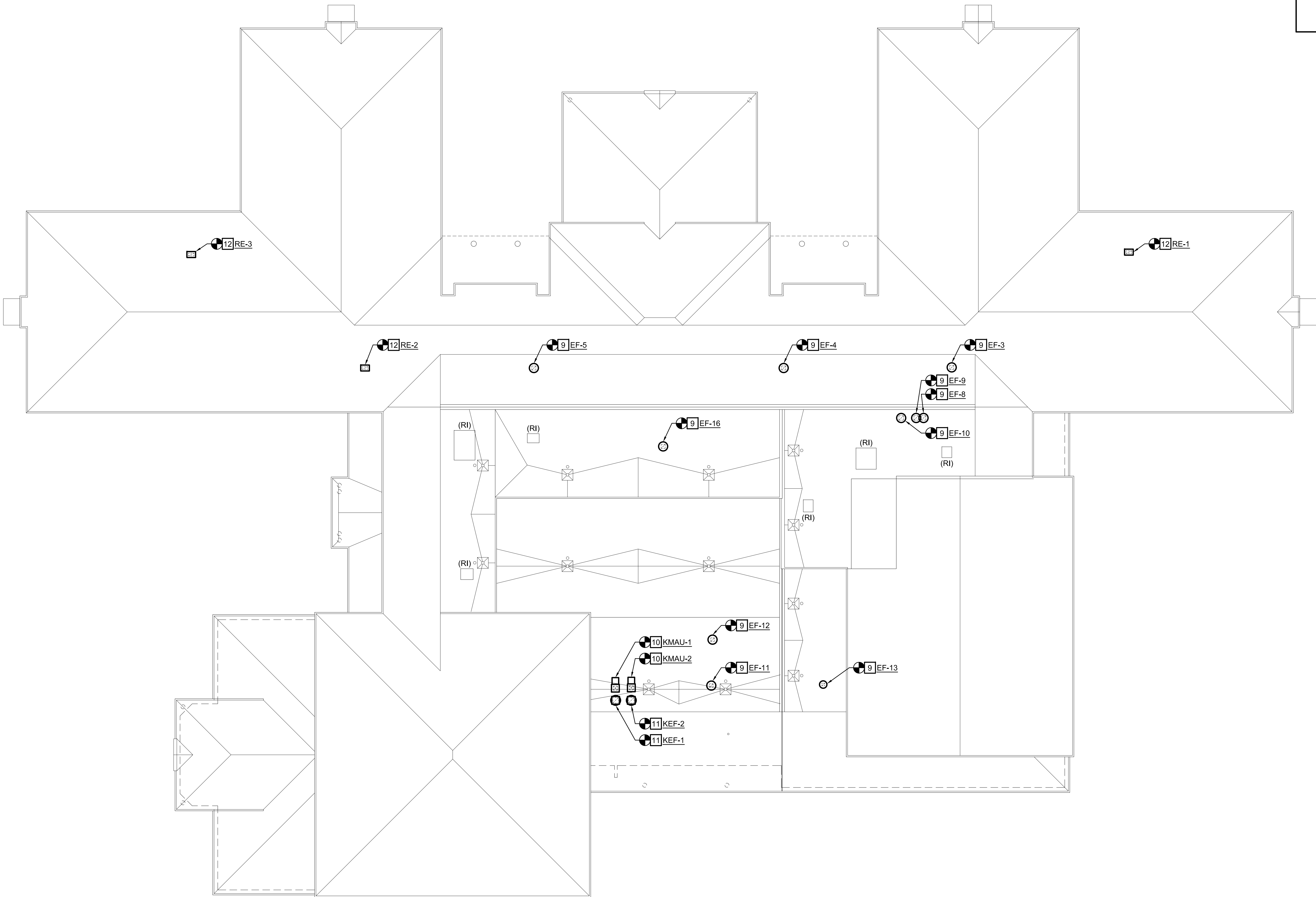
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PROJECT NUMBER: 22-113
TELEPHONE: (757) 599-4415



COMM. NO.: 22-113
DESIGNED BY: CEP
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CHECKED BY: KDA

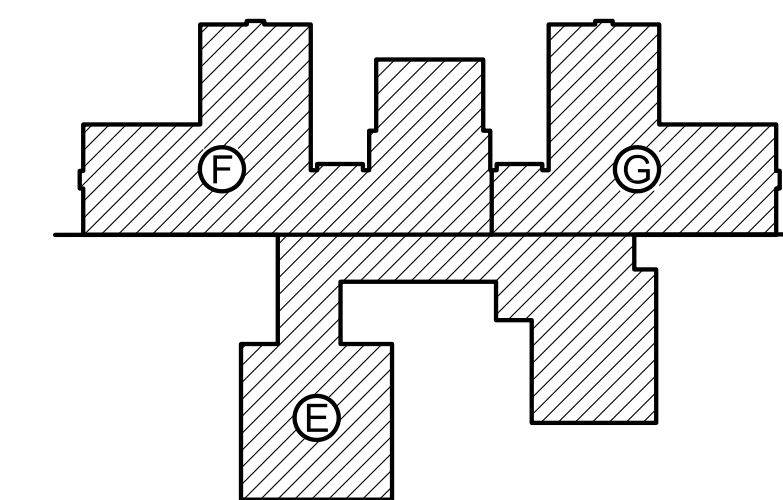
M1.7

DATE: 01/26/2024

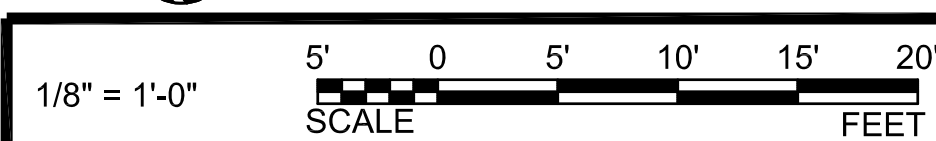


NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
9	PROVIDE AND INSTALL ROOF MOUNTED EXHAUST FAN, ACCESSORIES, AND CONTROLS COMPLETE. MOUNT ON EXISTING ROOF CURB AND EXTEND DUCTWORK OR PROVIDE CURB ADAPTER AS REQUIRED.
10	PROVIDE AND INSTALL KITCHEN HOOD MAKEUP AIR UNIT AND SUPPLY FAN, ACCESSORIES, AND CONTROLS COMPLETE. MOUNT ON EXISTING DUCTWORK OR PROVIDE CURB ADAPTER AS REQUIRED.
11	PROVIDE AND INSTALL KITCHEN EXHAUST FAN, ACCESSORIES, AND CONTROLS COMPLETE. MOUNT ON EXISTING ROOF CURB AND EXTEND DUCTWORK OR PROVIDE CURB ADAPTER AS REQUIRED.
12	PROVIDE AND INSTALL ROOF EXHAUST HOOD. MOUNT ON EXISTING ROOF CURB AND EXTEND DUCTWORK OR PROVIDE CURB ADAPTER AS REQUIRED. EXTEND DUCTWORK TO EXHAUST FAN DISCHARGE CONNECTION AT SECOND FLOOR.

ROOF PLAN - MECHANICAL - NEW WORK
SCALE: 1/16" = 1'-0"



KEY PLAN
NOT TO SCALE



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NEWPORT NEWS PUBLIC SCHOOLS

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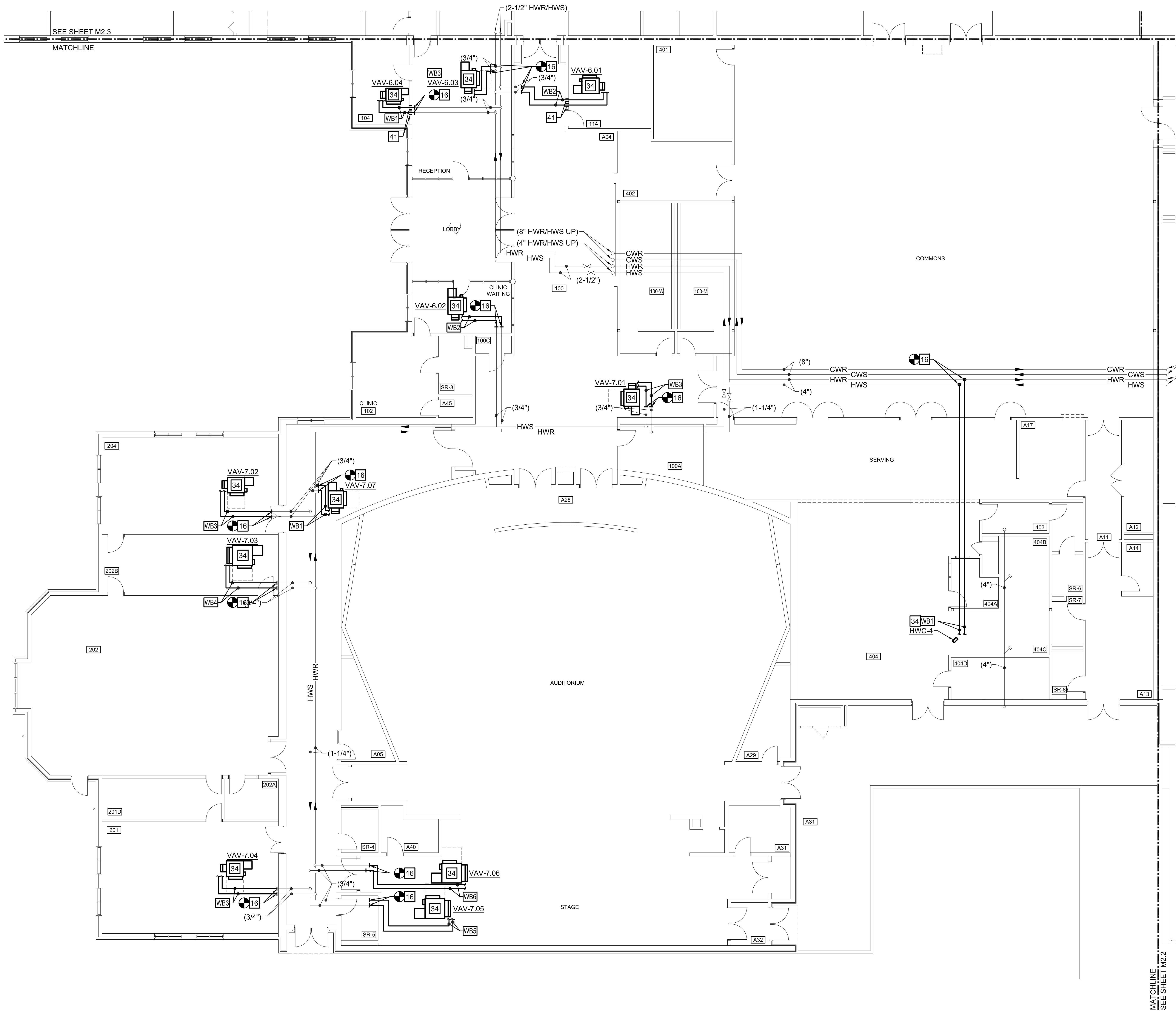
NEWPORT NEWS

ROOF PLAN - MECHANICAL - NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M1.8

DATE: 01/26/2024



NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
16	PROVIDE AND INSTALL HWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN HWR/S PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.
34	PROVIDE AND INSTALL NEW VALVE PACKAGE AND PIPING TO CONNECT TO UNIT. REFER TO PIPING DIAGRAM FOR VALVE PACKAGE COMPONENTS.
41	CORE DRILL AND SLEEVE ALL HOLES IN BLOCK WALLS. PIPE PENETRATION FIRE RATING SHALL MATCH RATING OF WALL.

WATER BALANCE NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
WB1	3/4" HWR/S (0.5 GPM)
WB2	3/4" HWR/S (1.0 GPM)
WB3	3/4" HWR/S (1.5 GPM)
WB5	3/4" HWR/S (2.5 GPM)
WB6	3/4" HWR/S (3.0 GPM)



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PROJECT NUMBER: 22-113

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

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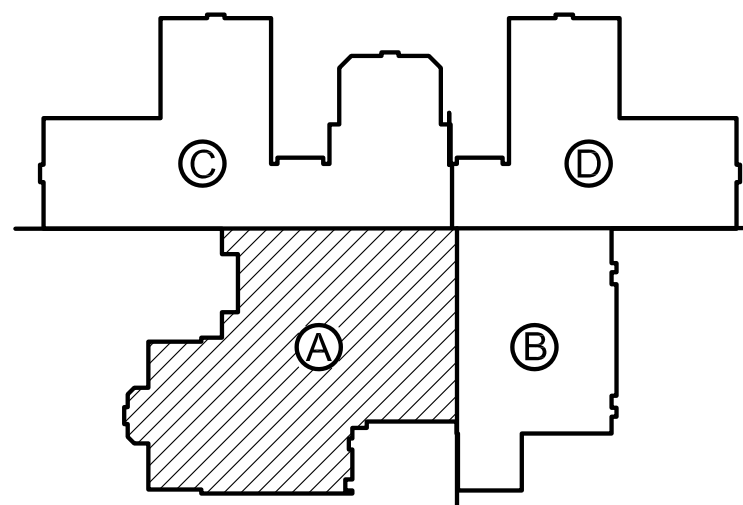
NEWPORT NEWS

FIRST FLOOR PLAN - AREA "A" - PIPING - NEW WORK

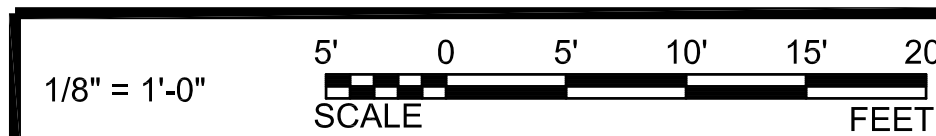
COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M2.1

DATE: 01/26/2024

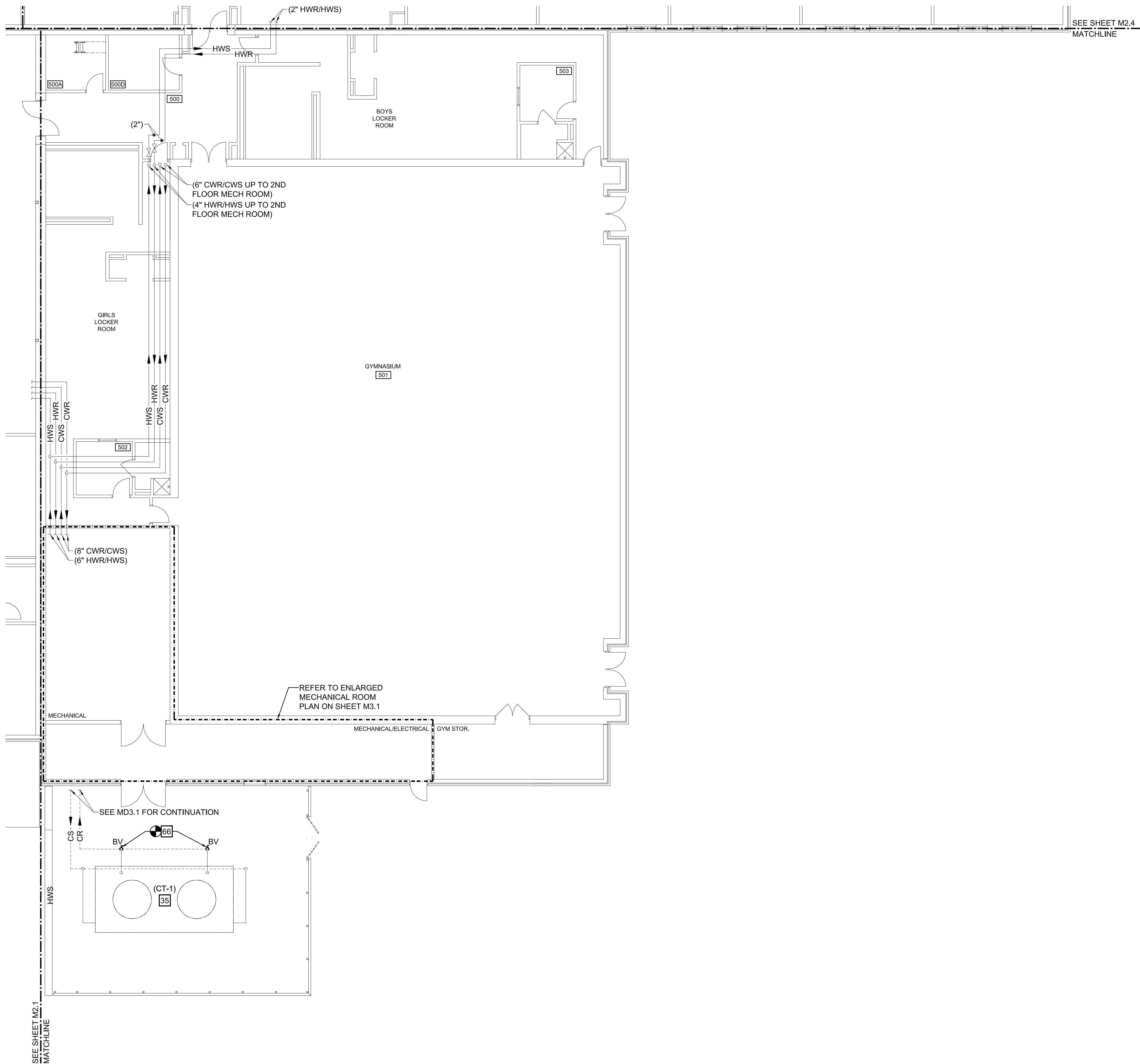


KEY PLAN
NOT TO SCALE



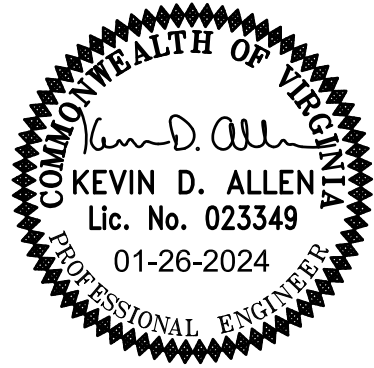
FIRST FLOOR PLAN - AREA "A" - PIPING - NEW WORK

SCALE: 1/8" = 1'-0"



FIRST FLOOR PLAN - AREA "B" - PIPING - NEW WORK
SCALE: 1/8" = 1'-0"

NEW WORK NOTES	
NO.	DESCRIPTION
35	COOLING TOWER IS EXISTING TO REMAIN; NOT IN THIS CONTRACT.
66	PROVIDE AND INSTALL THREE WAY VALVE, ACTUATOR, AND ACCESSORIES COMPLETE AT COOLING TOWER BYPASS.



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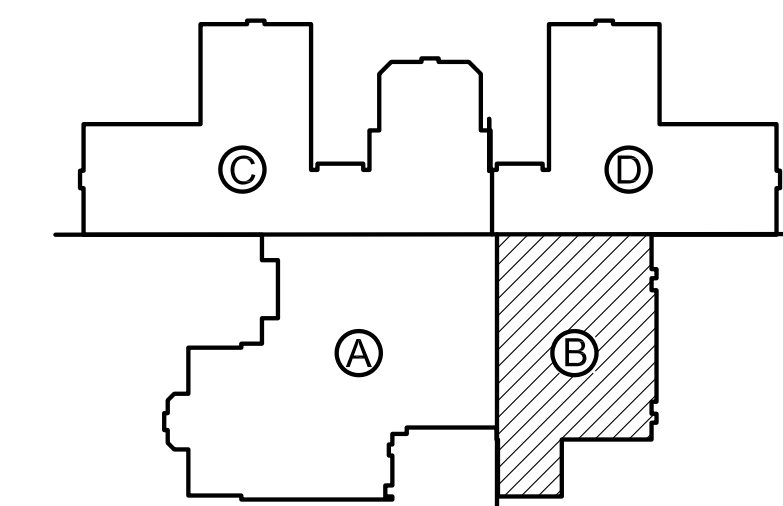
HAMPTON, VA 23666
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PROJECT NUMBER: 22-113

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NEWPORT NEWS PUBLIC SCHOOLS

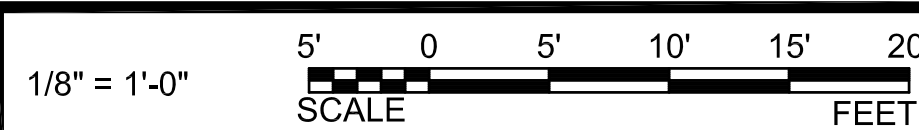
VIRGINIA

NEWPORT NEWS

FIRST FLOOR PLAN - AREA "B" - PIPING - NEW WORK



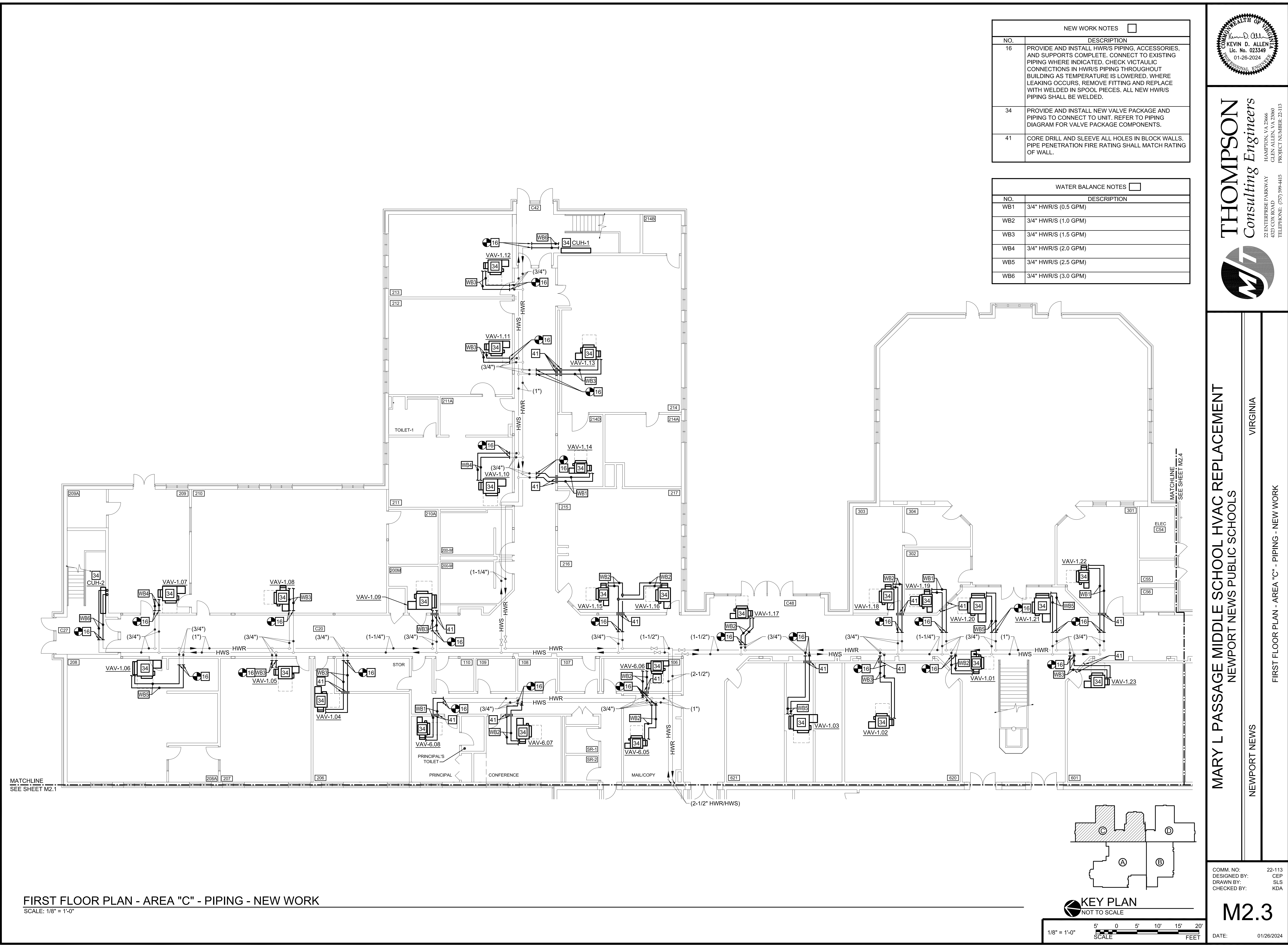
KEY PLAN
NOT TO SCALE

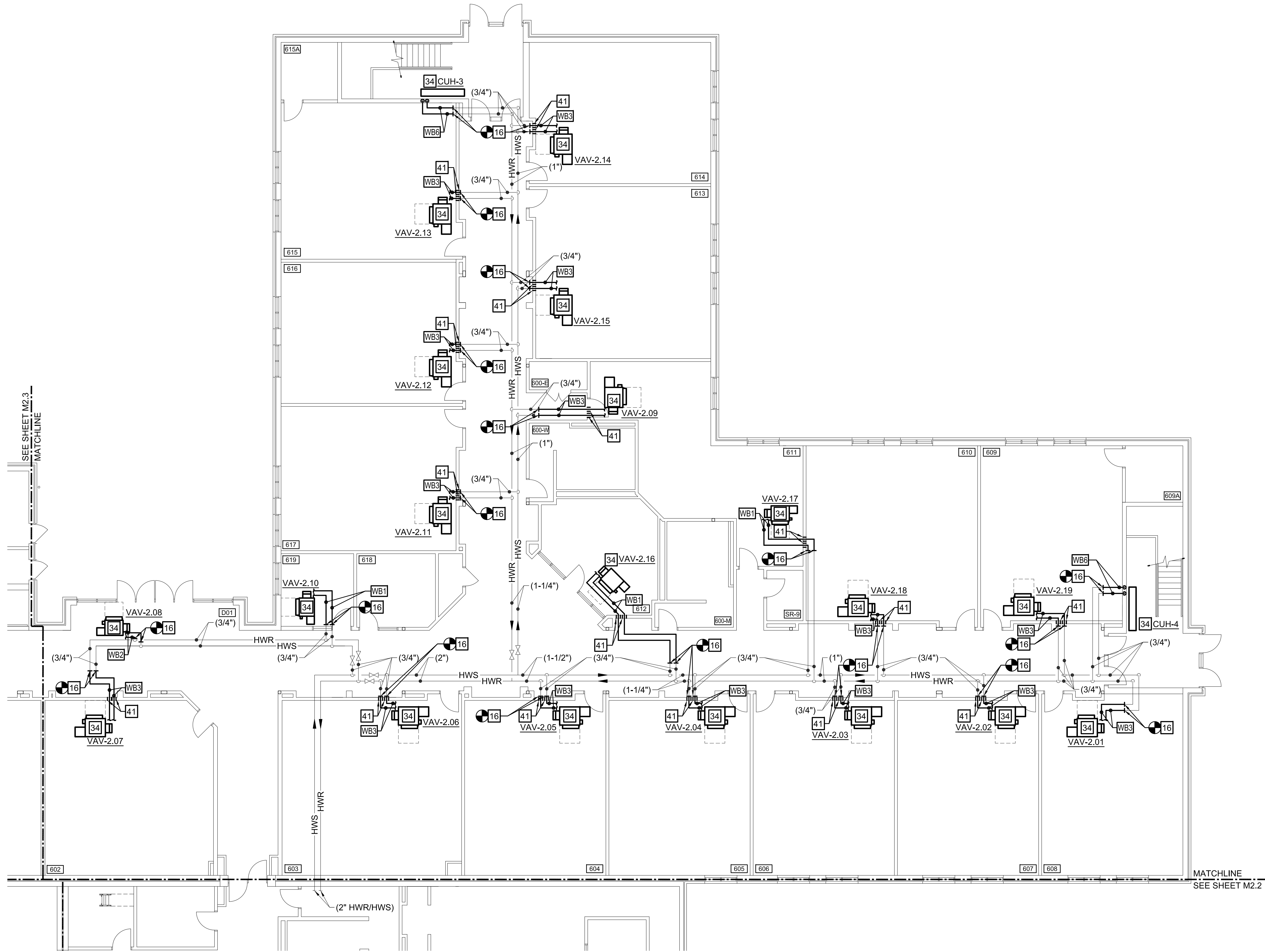


COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M2.2

DATE: 01/26/2024

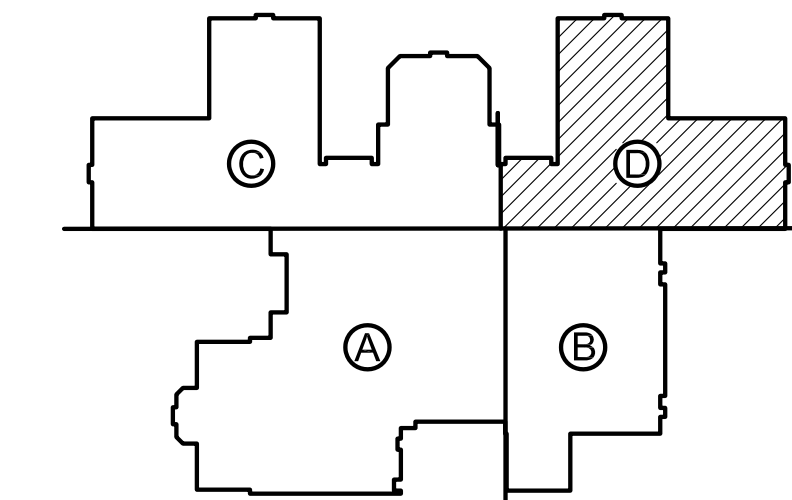




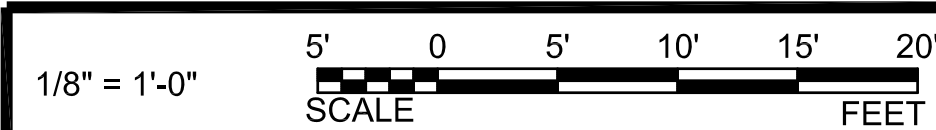
FIRST FLOOR PLAN - AREA "D" - PIPING - NEW WORK
SCALE: 1/8" = 1'-0"

NEW WORK NOTES	
NO.	DESCRIPTION
16	PROVIDE AND INSTALL HWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN HWR/S PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.
34	PROVIDE AND INSTALL NEW VALVE PACKAGE AND PIPING TO CONNECT TO UNIT. REFER TO PIPING DIAGRAM FOR VALVE PACKAGE COMPONENTS.
41	CORE DRILL AND SLEEVE ALL HOLES IN BLOCK WALLS. PIPE PENETRATION FIRE RATING SHALL MATCH RATING OF WALL.

WATER BALANCE NOTES	
NO.	DESCRIPTION
WB1	3/4" HWR/S (0.5 GPM)
WB2	3/4" HWR/S (1.0 GPM)
WB3	3/4" HWR/S (1.5 GPM)
WB6	3/4" HWR/S (3.0 GPM)



KEY PLAN
NOT TO SCALE



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

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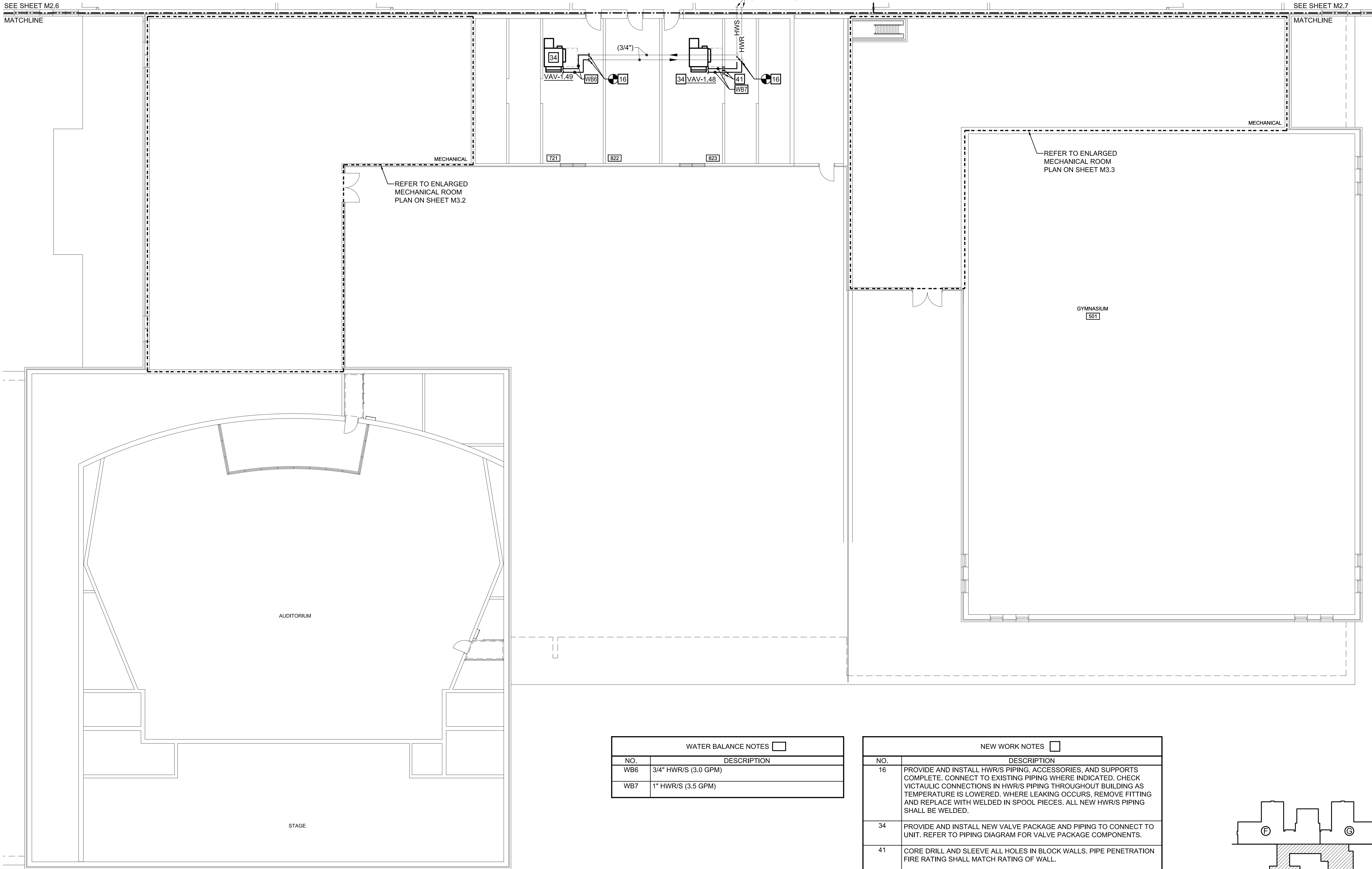
NEWPORT NEWS

FIRST FLOOR PLAN - AREA "D" - PIPING - NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

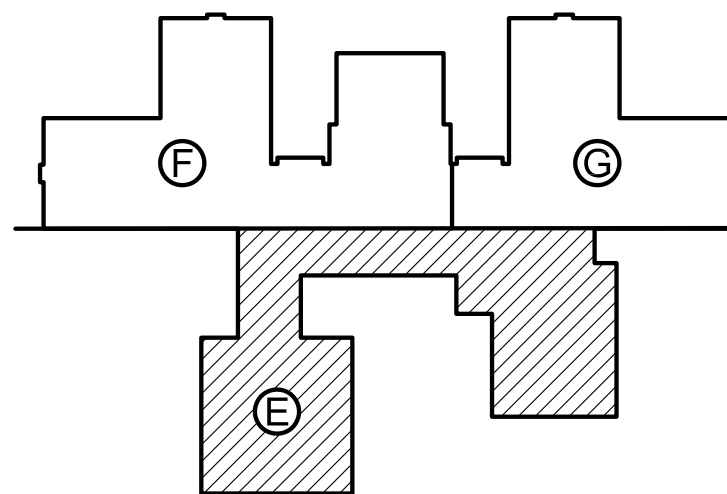
M2.4

DATE: 01/26/2024

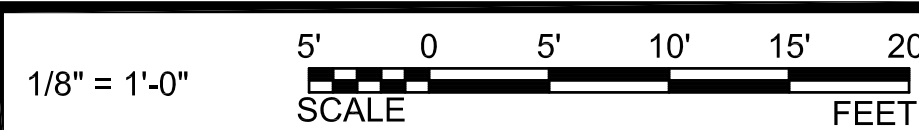


WATER BALANCE NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
WB6	3/4" HWR/S (3.0 GPM)
WB7	1" HWR/S (3.5 GPM)

NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
16	PROVIDE AND INSTALL HWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN HWR/S PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.
34	PROVIDE AND INSTALL NEW VALVE PACKAGE AND PIPING TO CONNECT TO UNIT. REFER TO PIPING DIAGRAM FOR VALVE PACKAGE COMPONENTS.
41	CORE DRILL AND SLEEVE ALL HOLES IN BLOCK WALLS. PIPE PENETRATION FIRE RATING SHALL MATCH RATING OF WALL.



KEY PLAN
NOT TO SCALE



SECOND FLOOR PLAN - AREA "E" - PIPING - NEW WORK
SCALE: 1/8" = 1'-0"



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

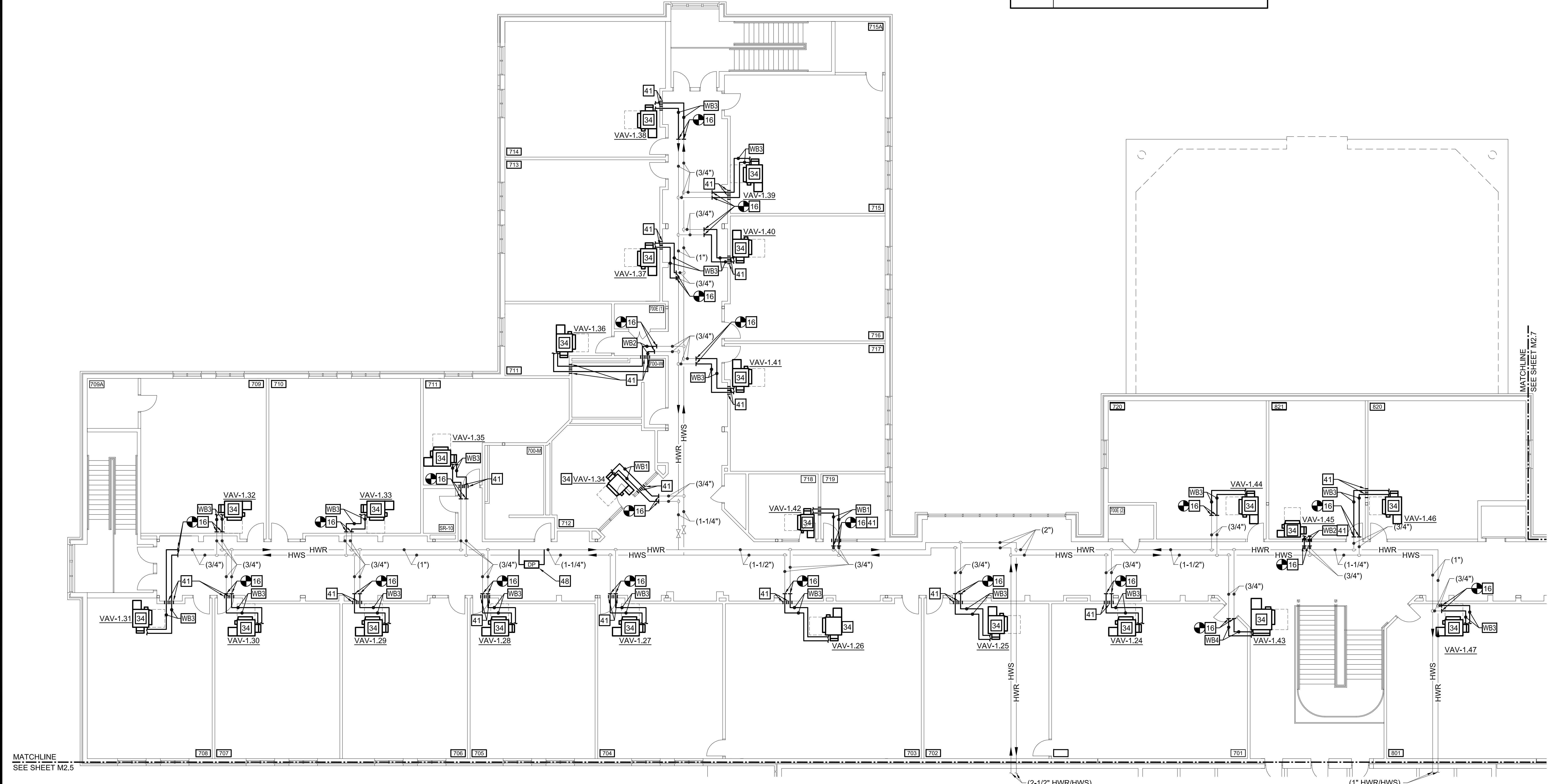
NEWPORT NEWS

SECOND FLOOR PLAN - AREA "E" - PIPING - NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M2.5

DATE: 01/26/2024



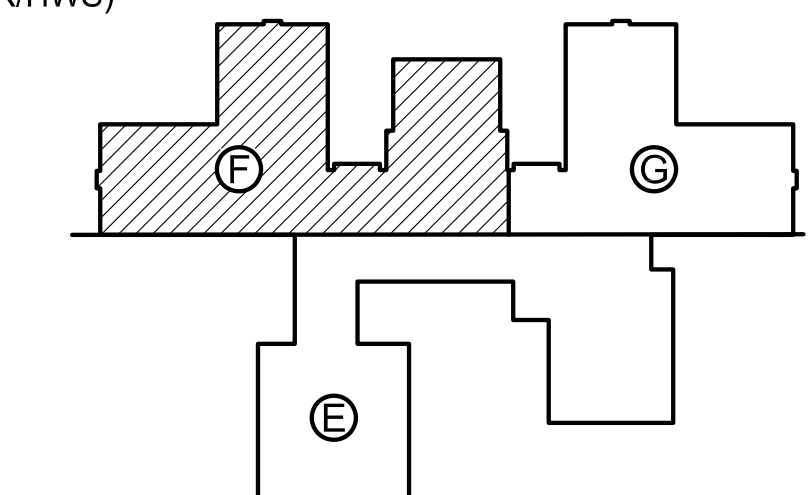
NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
16	PROVIDE AND INSTALL HWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN HWR/S PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.
34	PROVIDE AND INSTALL NEW VALVE PACKAGE AND PIPING TO CONNECT TO UNIT. REFER TO PIPING DIAGRAM FOR VALVE PACKAGE COMPONENTS.
41	CORE DRILL AND SLEEVE ALL HOLES IN BLOCK WALLS. PIPE PENETRATION FIRE RATING SHALL MATCH RATING OF WALL.
48	PROVIDE AND INSTALL REMOTE DIFFERENTIAL PRESSURE SENSOR AND CONTROLS COMPLETE IN HOT WATER PIPING BETWEEN SUPPLY AND RETURN PIPING WHERE INDICATED. DIFFERENTIAL PRESSURE SENSOR FOR USE IN HOT WATER SYSTEM CONTROLS.

WATER BALANCE NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
WB1	3/4" HWR/S (0.5 GPM)
WB2	3/4" HWR/S (1.0 GPM)
WB3	3/4" HWR/S (1.5 GPM)
WB4	3/4" HWR/S (2.0 GPM)

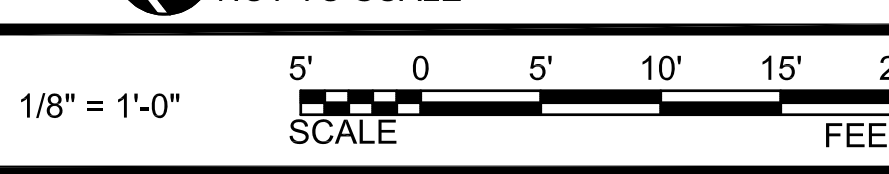
MATCHLINE
SEE SHEET M2.5

MATCHLINE
SEE SHEET M2.7

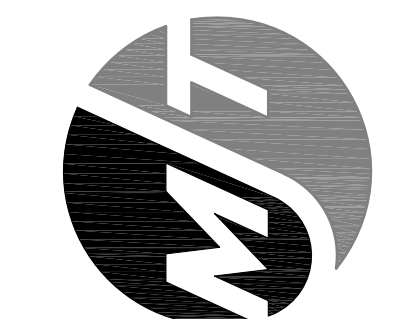
SECOND FLOOR PLAN - AREA "F" - PIPING - NEW WORK
SCALE: 1/8" = 1'-0"



KEY PLAN
NOT TO SCALE



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NEWPORT NEWS PUBLIC SCHOOLS

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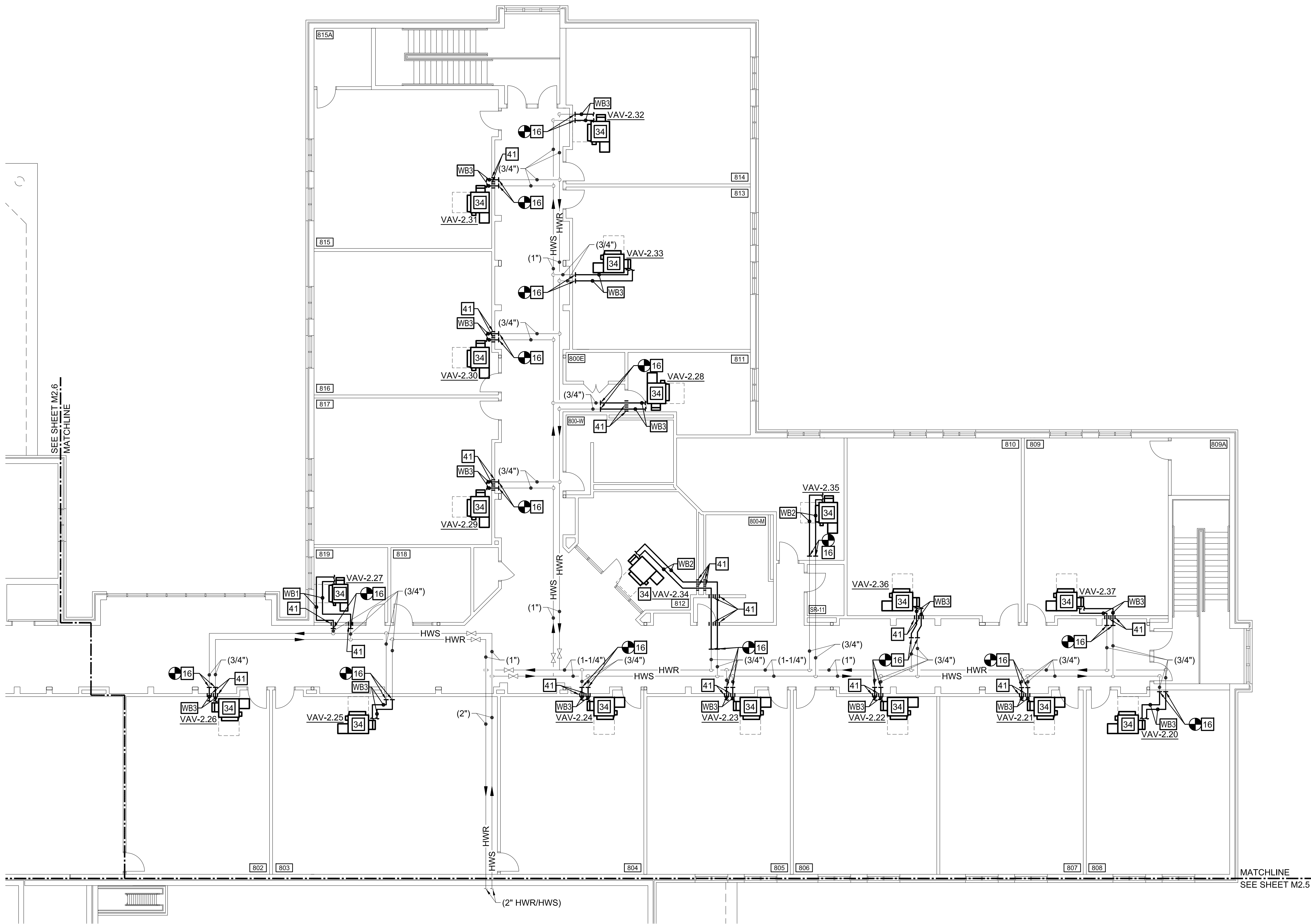
NEWPORT NEWS

SECOND FLOOR PLAN - AREA "F" - PIPING - NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M2.6

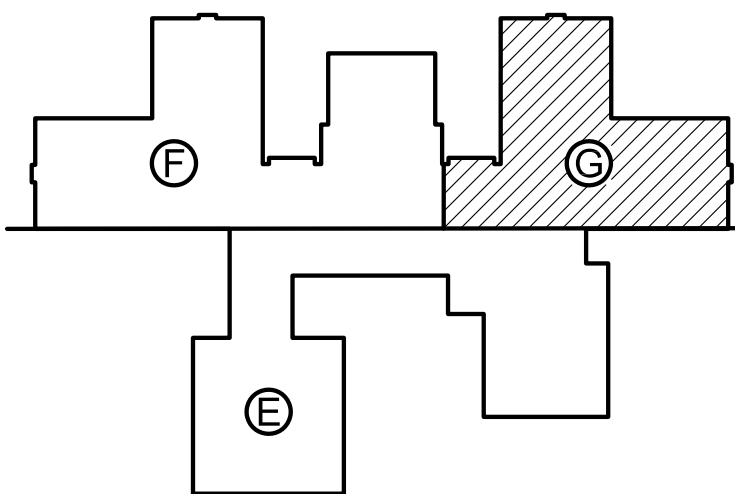
DATE: 01/26/2024



SECOND FLOOR PLAN - AREA "G" - PIPING - NEW WORK
SCALE: 1/8" = 1'-0"

NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
16	PROVIDE AND INSTALL HWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN HWR/S PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.
34	PROVIDE AND INSTALL NEW VALVE PACKAGE AND PIPING TO CONNECT TO UNIT. REFER TO PIPING DIAGRAM FOR VALVE PACKAGE COMPONENTS.
41	CORE DRILL AND SLEEVE ALL HOLES IN BLOCK WALLS. PIPE PENETRATION FIRE RATING SHALL MATCH RATING OF WALL.

WATER BALANCE NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
WB1	3/4" HWR/S (0.5 GPM)
WB2	3/4" HWR/S (1.0 GPM)
WB3	3/4" HWR/S (1.5 GPM)



KEY PLAN
NOT TO SCALE



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22 ENTERPRISE PARKWAY
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TELEPHONE: (757) 599-4415
PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

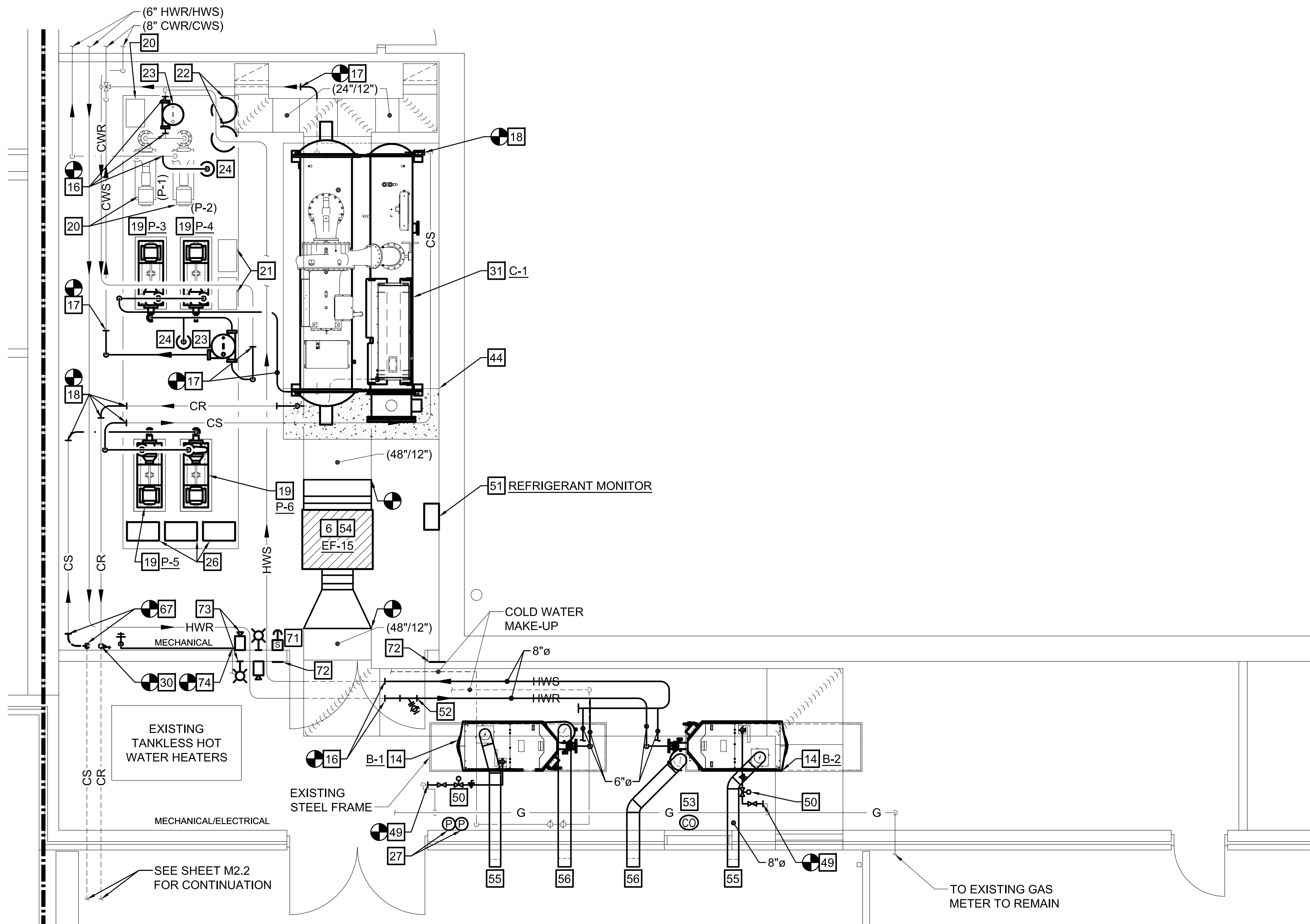
NEWPORT NEWS

SECOND FLOOR PLAN - AREA "G" - PIPING - NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M2.7

DATE: 01/26/2024

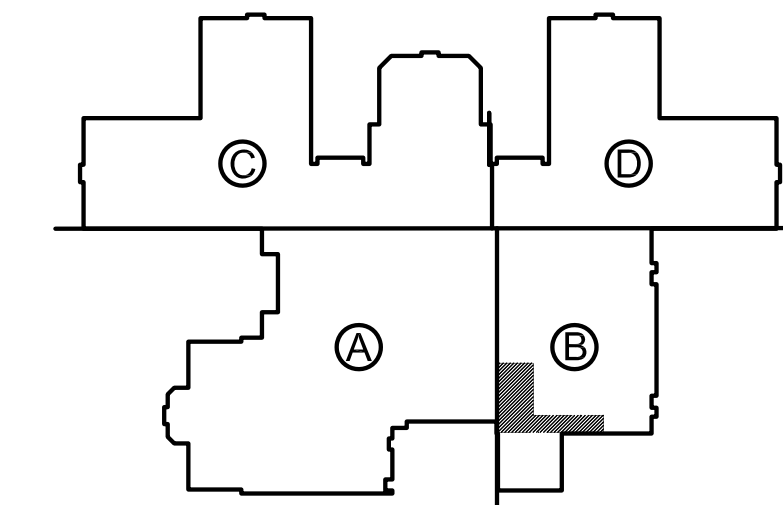


ENLARGED FLOOR PLAN - MECHANICAL ROOM - NEW WORK
SCALE: 1/4" = 1'-0"

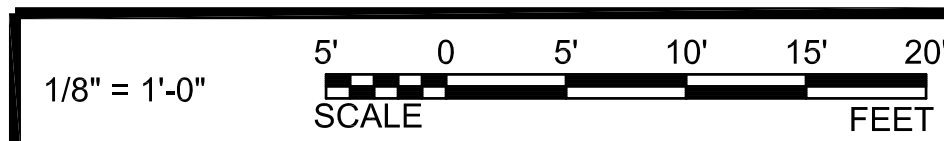
NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
6	PROVIDE AND INSTALL INLINE EXHAUST FAN, CONTROLS, AND SUPPORTS COMPLETE. PROVIDE FLEXIBLE CONNECTIONS TO FAN, VIBRATION ISOLATION, AND CONNECT TO EXISTING DUCTWORK WHERE INDICATED.
13	REFER TO "PIPE HANGER SUPPORT DETAIL" ON DRAWING M4.1 AND "PIPING SUPPORT DETAIL" ON DRAWING M4.2.
14	PROVIDE AND INSTALL CONDENSING BOILER, INTAKE AND FLUE PIPING THROUGH EXTERIOR WALL, CONTROLS, AND ACCESSORIES COMPLETE. PROVIDE AND INSTALL NEOPRENE ISOLATION PADS FOR BOILER MOUNTING ON EXISTING STEEL FRAME. REFER TO "BOILER VENTING DETAIL" ON DRAWING M4.2.
16	PROVIDE AND INSTALL HWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN HWR/S PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.
17	PROVIDE AND INSTALL CWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN CWR/S PIPING THROUGHOUT BUILDING. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW CWR/S PIPING SHALL BE WELDED.
18	PROVIDE AND INSTALL CR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN CR/S PIPING THROUGHOUT BUILDING. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW CR/S PIPING SHALL BE WELDED.
19	PROVIDE AND INSTALL BASE MOUNTED SUCTION PUMP, CONTROLS, AND ACCESSORIES COMPLETE ON EXISTING PUMP PACKAGE BASE. NEW PUMP BASES SHALL BE GROUTED TO EXISTING PUMP PACKAGE BASE AFTER ALL CONCRETE HAS BEEN REPAIRED TO PROVIDE A SMOOTH SURFACE.

NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
20	HOT WATER PUMP AND VFD CONTROLS REPLACED 2023 IN ARE EXISTING TO REMAIN; NOT IN THIS CONTRACT.
21	VFD CONTROLS OF CHILLED WATER PUMPS REPLACED IN 2023 ARE EXISTING TO REMAIN; NOT IN THIS CONTRACT.
22	PROVIDE AND INSTALL NEW PRE-CHARGED BLADDER EXPANSION TANK WITH MINIMUM 53 GALLON ACCEPTANCE. HEAVY DUTY REPLACEABLE BLADDER, RING BASE, LIFTING RINGS, AND NPT SYSTEM CONNECTION SIZED AT A MAXIMUM PRESSURE OF 125 PSI. HOT WATER AND CHILLED WATER EXPANSION TANKS "BELL & GOSSETT" MODEL B-200 OR APPROVED EQUAL.
23	PROVIDE AND INSTALL AIR DIRT SEPARATOR, SPIROTERM MODEL VDN OR APPROVED EQUAL SIZED TO SUPPORT THE FULL FLOW VOLUME.
24	PROVIDE AND INSTALL 5-GALLON CHEMICAL SHOT FILTER FEEDER WITH FUNNEL.
26	PROVIDE AND INSTALL CONDENSER WATER PUMP CONTROLS AND VFD COMPLETE. MOUNT VFDS AND CONTROL PANELS FOR PUMPS ON EXISTING PUMP PACKAGE FRAMEWORK. REFER TO PHOTOS P1 AND P4 ON DRAWING MD5.1 FOR FRAMEWORK EXISTING CONDITIONS.
27	PROVIDE AND INSTALL BOILER STOP PUSH STATIONS, WIRING, AND ACCESSORIES COMPLETE.
30	PROVIDE AND INSTALL ISOLATION VALVE AND Y-TYPE STRAINER WITH BLOWDOWN VALVE IN CONDENSER WATER RETURN PIPING AND NEW O-RING AT METAL TO PLASTIC CONNECTION. CONNECT TO EXISTING PIPING.
31	PROVIDE AND INSTALL CHILLER, ACCESSORIES, AND CONTROLS COMPLETE ON EXISTING CONCRETE HOUSEKEEPING PAD DURING WINTER PHASE OF PROJECT.
44	PROVIDE AND INSTALL EXTENSION OF 4" THICK HOUSEKEEPING PAD. TIE INTO EXISTING PAD FOR A CONTINUOUS INSTALLATION. REFER TO "HOUSE KEEPING PAD EXTENSION DETAIL" ON DRAWING M4.2.

NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
49	PROVIDE AND INSTALL NEW 2" DIAMETER SCHEDULE 40 STEEL GAS PIPING, SUPPORTS, ACCESSORIES, AND CONTROLS COMPLETE. CONNECT TO EXISTING GAS PIPING WHERE INDICATED.
50	PROVIDE AND INSTALL 10" WC LINE PRESSURE GAS REGULATOR AND VENT AS REQUIRED BY THE MANUFACTURER. CONNECT TO EXISTING BOILER REGULATOR VENT PIPING.
51	PROVIDE AND INSTALL NEW REFRIGERANT MONITORING SYSTEM AS REQUIRED TO PROPERLY MONITOR REFRIGERANT R-12332D(E) AS INSTALLED IN NEW CHILLER DURING WINTER PHASE OF PROJECT TO INCLUDE VISUAL AND AUDIBLE ALARMS. TEST AND VERIFY PROPER FUNCTION OF REFRIGERANT MONITOR, INCLUDING VISUAL AND AUDIBLE ALARMS AND INTEGRATION WITH NEW BAS SYSTEM.
52	PROVIDE AND INSTALL 8" SYSTEM STRAINER WITH 30 MESH SCREEN. "METRAFLEX" MODEL LPD OR APPROVED EQUAL.
53	PROVIDE AND INSTALL WALL-MOUNTED, BAS-NETWORKABLE GAS DETECTOR FOR MONITORING CARBON MONOXIDE CONCENTRATION. PROVIDE WALL-MOUNTED ANNUNCIATOR PANEL AND INTERLOCK WITH GAS DETECTOR IN SPACE.
54	FAN SHALL BE CONTROLLED BY REFRIGERANT MONITOR. VERIFY PROPER CONNECTION AND INTEGRATION OF FAN AND REFRIGERANT MONITOR.
55	BOILER INTAKE THROUGH EXTERIOR WALL. RE-USE EXISTING PENETRATION WHERE POSSIBLE. EXPAND OR FILL PENETRATION AS REQUIRED. INTAKE PIPE SHALL BE 8" DIAMETER SCHEDULE 40 PVC PIPE. REFER TO "BOILER VENTING DETAIL" ON DRAWING M4.2.
56	BOILER FLUE VENT THROUGH EXTERIOR WALL. RE-USE EXISTING PENETRATION WHERE POSSIBLE. EXPAND OR FILL PENETRATION AS REQUIRED. FLUE GAS VENT SHALL BE 9" DIAMETER AL29-4C STAINLESS STEEL OR OTHER UL-1738 APPROVED EXHAUST VENT MATERIAL. REFER TO "BOILER VENTING DETAIL" ON DRAWING M4.2.
67	PROVIDE AND INSTALL NEW CR PIPING AND O-RING AT METAL TO PLASTIC CONNECTION. CONNECT TO EXISTING PIPING WHERE INDICATED.
71	PROVIDE CHILLER EMERGENCY STOP PUSH BUTTON AT EACH ENTRANCE TO THE MECHANICAL ROOM.
72	PROVIDE NFPA 704 HAZARD SIGN AND REFRIGERANT MACHINERY ROOM SIGN MOUNTED ON OR NEAR ALL DOORS LEADING INTO THE MECHANICAL ROOM. REFER TO DETAILS ON DRAWING M4.2.
73	PROVIDE REFRIGERANT MONITOR ALARMS AT EACH ENTRANCE. INTERLOCK WITH REFRIGERANT MONITOR.
74	PROVIDE AND INSTALL NEW PIPING, HOSE BIB, SUPPORTS, AND ACCESSORIES COMPLETE IN LOCATION TO ALLOW FOR INSTALLATION OF NEW ELECTRICAL PANELS AND TRANSFORMER. INSTALL HOSE BIB AT SAME ELEVATION AS ORIGINAL INSTALL. MATCH EXISTING PIPING SIZES AND MATERIALS.



KEY PLAN
NOT TO SCALE



THOMPSON
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HAMPTON, VA 23666
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PROJECT NUMBER: 22-113
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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

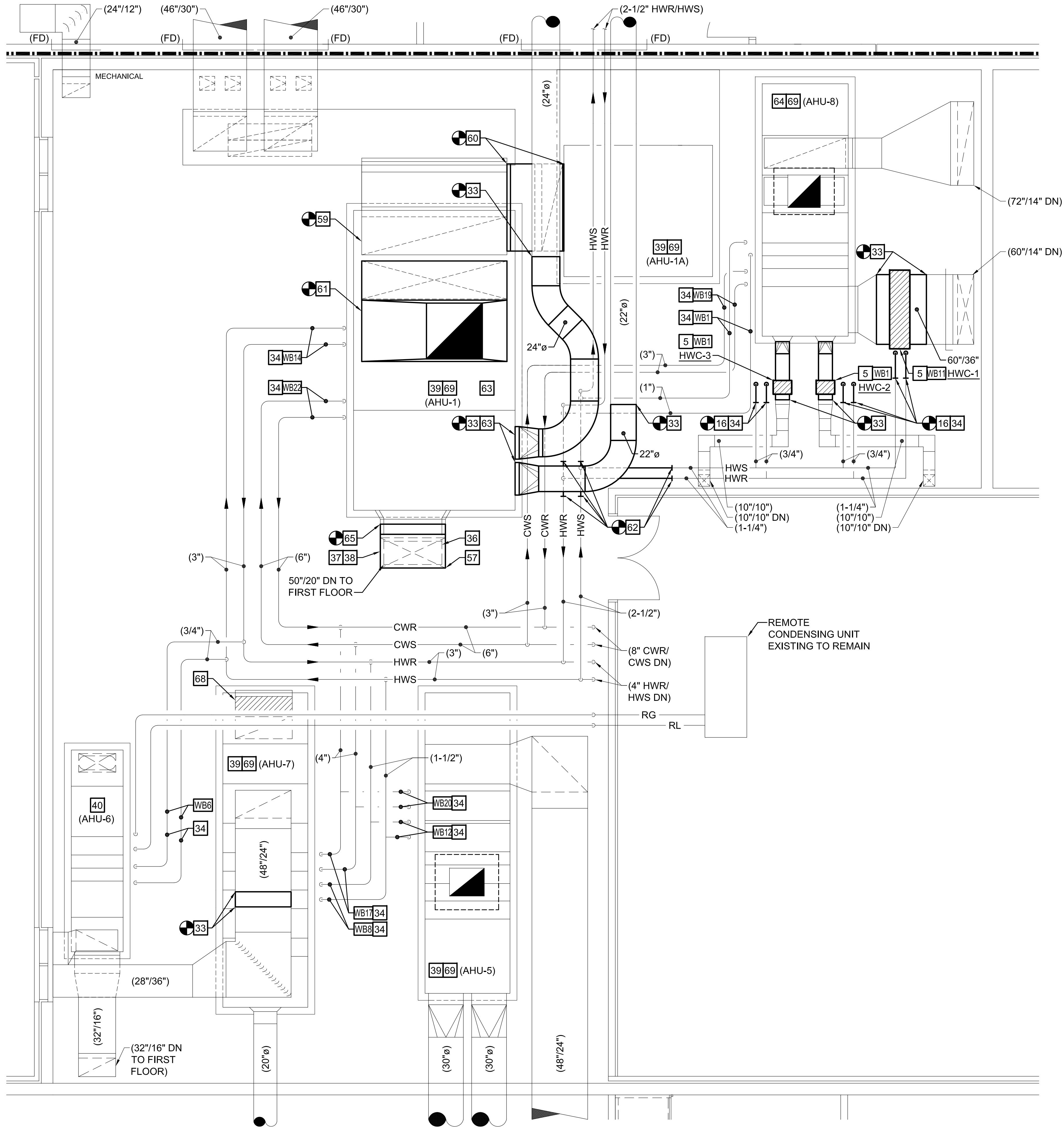
NEWPORT NEWS

ENLARGED FLOOR PLAN - MECHANICAL ROOM - NEW WORK

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M3.1

DATE: 01/26/2024

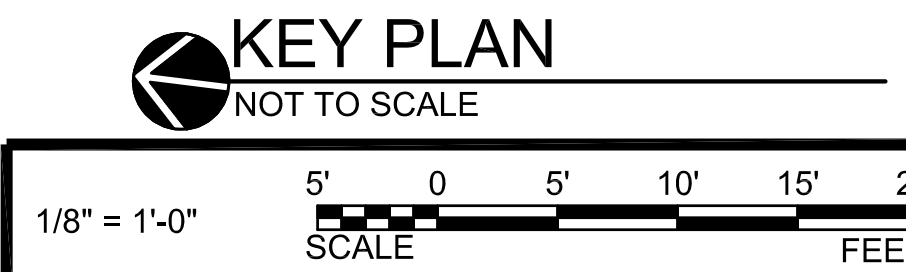
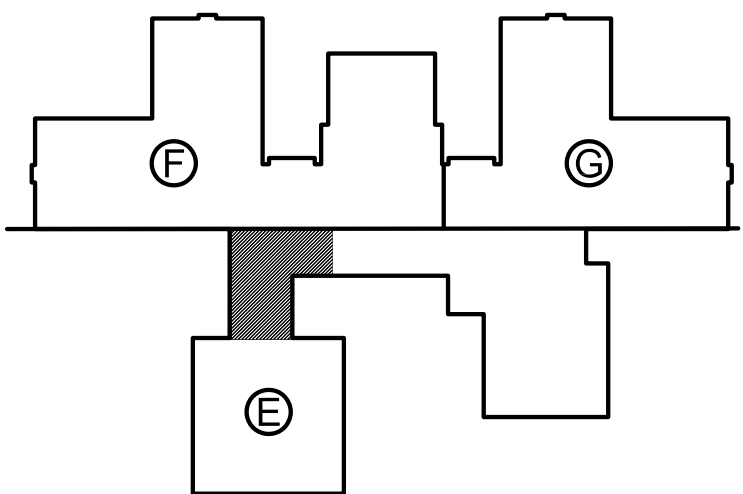


ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - NEW WORK
SCALE: 1/4" = 1'-0"

NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
5	PROVIDE AND INSTALL DUCT HEATING COIL, SUPPORTS, CONTROLS, AND ACCESSORIES COMPLETE. CONNECT TO EXISTING DUCTWORK WHERE INDICATED.
16	PROVIDE AND INSTALL HWR/S PIPING, ACCESSORIES, AND SUPPORTS COMPLETE. CONNECT TO EXISTING PIPING WHERE INDICATED. CHECK VICTAULIC CONNECTIONS IN HWR/S PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.
33	PROVIDE AND INSTALL NEW DUCTWORK AND SUPPORTS COMPLETE. CONNECT TO EXISTING DUCTWORK WHERE INDICATED. MATCH EXISTING DUCTWORK CONSTRUCTION.
34	PROVIDE AND INSTALL NEW VALVE PACKAGE AND PIPING TO CONNECT TO UNIT. REFER TO PIPING DIAGRAM FOR VALVE PACKAGE COMPONENTS.
36	PATCH EXISTING OPENING WHERE SUPPLY DUCT WAS REMOVED.
37	SAW CUT CONCRETE FLOOR FOR NEW SUPPLY DUCTWORK PENETRATION DOWN TO FIRST FLOOR.
38	REINSTALL OWNER'S PULLEY SYSTEM FOR MAINTENANCE THAT WAS STORED DURING CONSTRUCTION. REFER TO PHOTO P10 ON DRAWING MDS.1 FOR AHU-1 SUPPLY DUCT EXISTING CONDITIONS INCLUDING PULLEY SYSTEM.
39	PROVIDE AND INSTALL AIR HANDLING UNIT INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, HEATING AND COOLING COILS, SUPPLY AND EXHAUST FANS, AND FILTERS. CLEAN AND COAT UNIT INTERNAL DRAIN PANS WITH PROTECTANT SEAL TO PREVENT CONTINUED DETERIORATION. REFER TO SCHEDULE ON DRAWING M0.3 FOR PERFORMANCE REQUIREMENTS AND AHU DIAGRAMS FOR INTERNAL COMPONENTS. WHERE EXISTING SUPPLY FANS ARE VERTICAL BARRY BLOWERS, MOUNT NEW FANS ON EXISTING ISOLATED BASERAIL AND PROVIDE AND INSTALL NEW FLEXIBLE CONNECTION TO SUPPLY PLENUM AHU SECTION. WHERE NEW FAN HEIGHT IS GREATER THAN EXISTING, FLEXIBLE CONNECTION CAN BE SECURED TO THE INSIDE OF THE SUPPLY PLENUM SECTION RATHER THAN THE TOP OF THE SUPPLY FAN SECTION PER EXISTING INSTALLATION.
40	UNIT REPLACEMENT NOT IN THIS CONTRACT.
57	PROVIDE AND INSTALL 6" HIGH CONCRETE DAM AROUND FLOOR PENETRATION TO PREVENT WATER SEEPAGE THROUGH TO FIRST FLOOR. REFER TO "CONCRETE PAD DETAIL" ON DRAWING M4.2.

NEW WORK NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
59	PROVIDE AND INSTALL PANEL MATCHING CONSTRUCTION OF AHU-1 TO CLOSE ORIGINAL EXHAUST SECTION OPENING AT THE TOP OF UNIT.
60	PROVIDE AND INSTALL DOUBLE WALL PLENUM BOX BETWEEN UNITS AHU-1 AND AHU-1A WITH DUCT AND FLEXIBLE CONNECTION BETWEEN BOX AND UNIT EXHAUST SECTION OPENINGS.
61	PROVIDE AND INSTALL OUTSIDE AIR DUCTWORK TO MATCH EXISTING CONSTRUCTION. CONNECT TO EXISTING DUCTWORK WHERE INDICATED.
62	PROVIDE AND INSTALL HWR/S PIPING AND ACCESSORIES WITH BRANCH CONNECTION OFF OF BOTTOM OF PIPING MAIN TO COORDINATE WITH DUCTWORK RELOCATION. RECONNECT TO EXISTING PIPING WHERE INDICATED.
63	CAP OPENING OF EXISTING SUPPLY DUCT PLENUM WHERE SUPPLY DUCTWORK CONNECTION HAS BEEN RELOCATED.
64	PROVIDE AND INSTALL AIR HANDLING UNIT INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, HEATING AND COOLING COILS, EXHAUST FANS, AND FILTERS. CLEAN AND COAT UNIT INTERNAL DRAIN PANS WITH PROTECTANT SEAL TO PREVENT CONTINUED DETERIORATION. REFER TO SCHEDULE ON DRAWING M0.3 FOR PERFORMANCE REQUIREMENTS AND AHU DIAGRAMS FOR INTERNAL COMPONENTS. SUPPLY FANS REPLACED BY OWNER IN PREVIOUS PROJECT AND ARE NOT IN THE SCOPE OF THIS PROJECT.
65	PROVIDE AND INSTALL NEW DOUBLE WALL DUCTWORK WITH 2" INTERNAL INSULATION. CONNECT TO EXISTING SUPPLY PLENUM BOX WHERE INDICATED.
68	PROVIDE AND INSTALL NEW DUCTWORK AND INSULATION COMPLETE WHERE REMOVED FOR REMOVAL OF RUNAROUND COIL OR DAMAGED.
69	RE-SEAL ALL DUCTWORK CONNECTIONS AT AIR HANDLING UNIT FOR MINIMUM OF FIVE FEET FROM UNIT CONNECTION.

WATER BALANCE NOTES <input type="checkbox"/>	
NO.	DESCRIPTION
WB1	3/4" HWR/S (0.5 GPM)
WB6	3/4" HWR/S (3.0 GPM)
WB8	1" HWR/S (6.0 GPM)
WB10	1-1/4" HWR/S (10.0 GPM)
WB11	1-1/4" HWR/S (12.0 GPM)
WB12	1-1/2" HWR/S (16.0 GPM)
WB14	2-1/2" HWR/S (39.0 GPM)
WB17	3" CWR/S (64.0 GPM)
WB19	3" CWR/S (78.0 GPM)
WB20	4" CWR/S (109.0 GPM)
WB22	6" CWR/S (342.0 GPM)



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

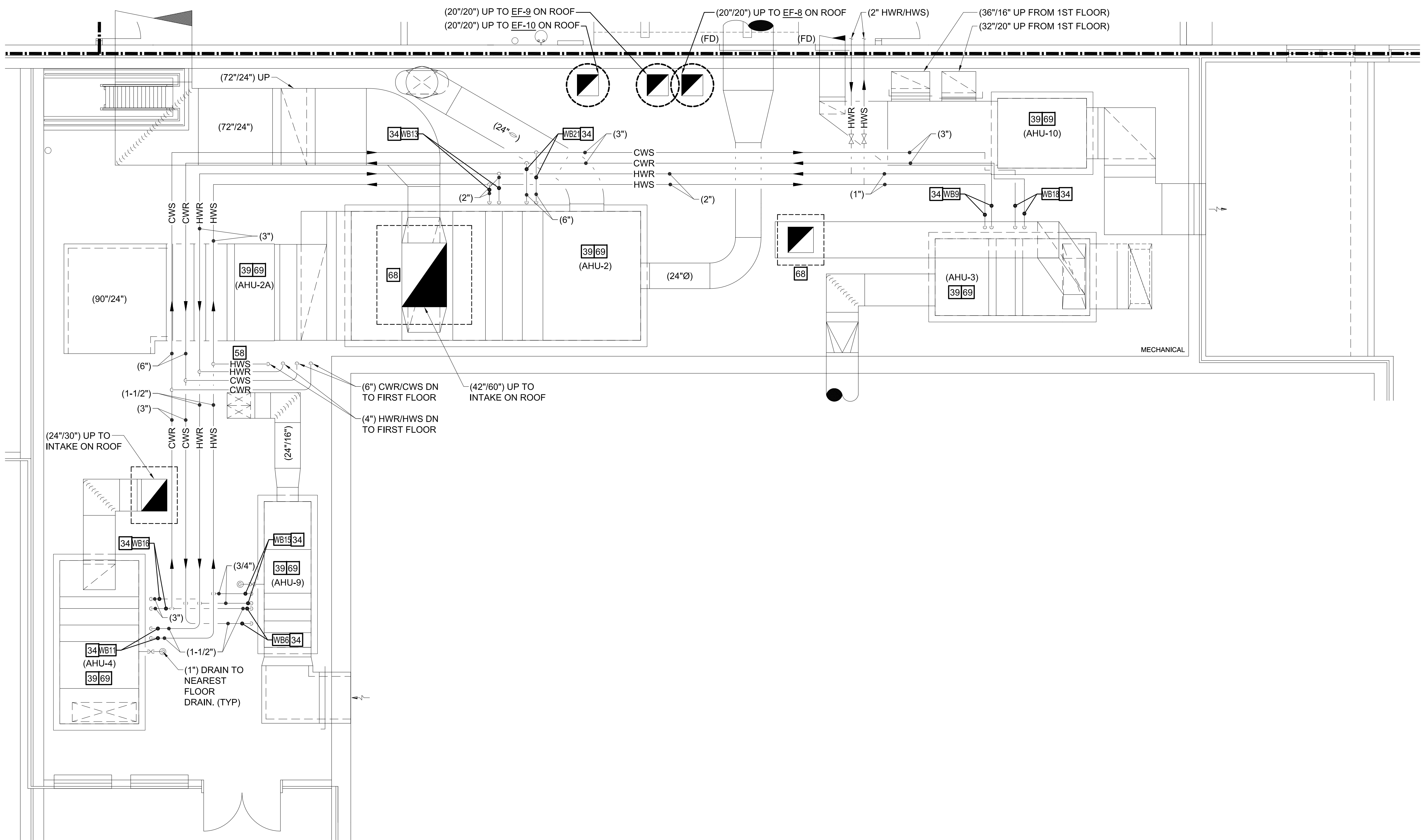
NEWPORT NEWS

ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - NEW WORK

COMM. NO. 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M3.2

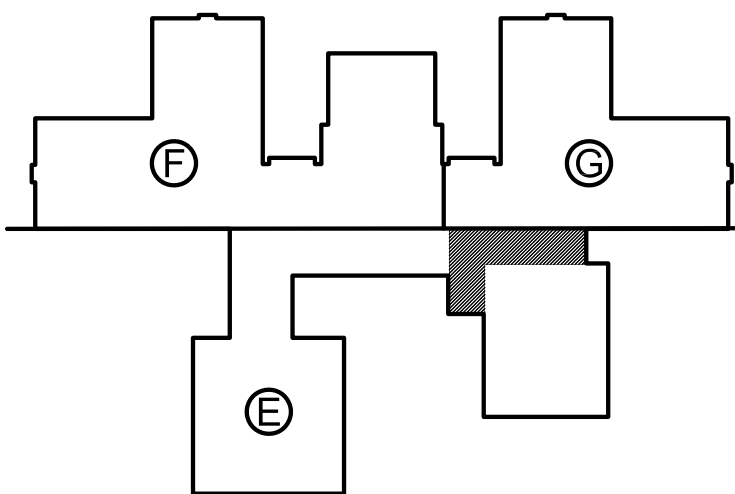
DATE: 01/26/2024



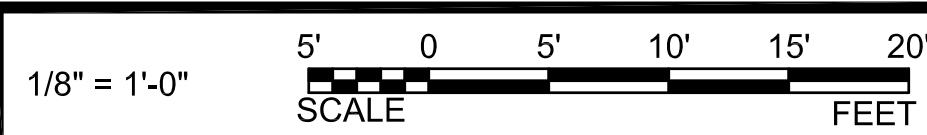
ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - NEW WORK
SCALE: 1/4" = 1'-0"

NEW WORK NOTES	
NO.	DESCRIPTION
34	PROVIDE AND INSTALL NEW VALVE PACKAGE AND PIPING TO CONNECT TO UNIT. REFER TO PIPING DIAGRAM FOR VALVE PACKAGE COMPONENTS.
39	PROVIDE AND INSTALL AIR HANDLING UNIT INTERNAL COMPONENTS, INCLUDING BUT NOT LIMITED TO, HEATING AND COOLING COILS, SUPPLY AND EXHAUST FANS, AND FILTERS. CLEAN AND COAT UNIT INTERNAL DRAIN PANS WITH PROTECTANT SEAL TO PREVENT CONTINUED DETERIORATION. REFER TO SCHEDULE ON DRAWING M0.3 FOR PERFORMANCE REQUIREMENTS AND AHU DIAGRAMS FOR INTERNAL COMPONENTS. WHERE EXISTING SUPPLY FANS ARE VERTICAL BARRY BLOWERS, MOUNT NEW FANS ON EXISTING ISOLATED BASERAIL, AND PROVIDE AND INSTALL NEW FLEXIBLE CONNECTION TO SUPPLY PLENUM AHU SECTION. WHERE NEW FAN HEIGHT IS GREATER THAN EXISTING, FLEXIBLE CONNECTION CAN BE SECURED TO THE INSIDE OF THE SUPPLY PLENUM SECTION RATHER THAN THE TOP OF THE SUPPLY FAN SECTION PER EXISTING INSTALLATION.
58	REPLACE DAMAGED HOT WATER SUPPLY AND RETURN PIPING INSULATION WHERE REMOVED IN DEMOLITION. MATCH EXISTING INSULATION THICKNESS, TYPE, AND APPEARANCE. FULLY SEAL INSULATION; PROVIDE AND INSTALL REPLACEMENT PIPE JACKETS OR SHIELDS TO MATCH EXISTING WHERE DAMAGED.
68	PROVIDE AND INSTALL NEW DUCTWORK AND INSULATION COMPLETE WHERE REMOVED FOR REMOVAL OF RUNAROUND COIL OR DAMAGED.
69	RE-SEAL ALL DUCTWORK CONNECTIONS AT AIR HANDLING UNIT FOR MINIMUM OF FIVE FEET FROM UNIT CONNECTION.
70	CHECK VICTAULIC CONNECTIONS IN HWR/S PIPING THROUGHOUT BUILDING AS TEMPERATURE IS LOWERED. WHERE LEAKING OCCURS, REMOVE FITTING AND REPLACE WITH WELDED IN SPOOL PIECES. ALL NEW HWR/S PIPING SHALL BE WELDED.

WATER BALANCE NOTES	
NO.	DESCRIPTION
WB6	3/4" HWR/S (3.0 GPM)
WB9	1-1/4" HWR/S (9.0 GPM)
WB11	1-1/4" HWR/S (12.0 GPM)
WB13	2" HWR/S (24.0 GPM)
WB15	2" CWR/S (24.0 GPM)
WB16	3" CWR/S (60.0 GPM)
WB18	3" CWR/S (72.0 GPM)
WB21	6" CWR/S (223.0 GPM)



KEY PLAN
NOT TO SCALE



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

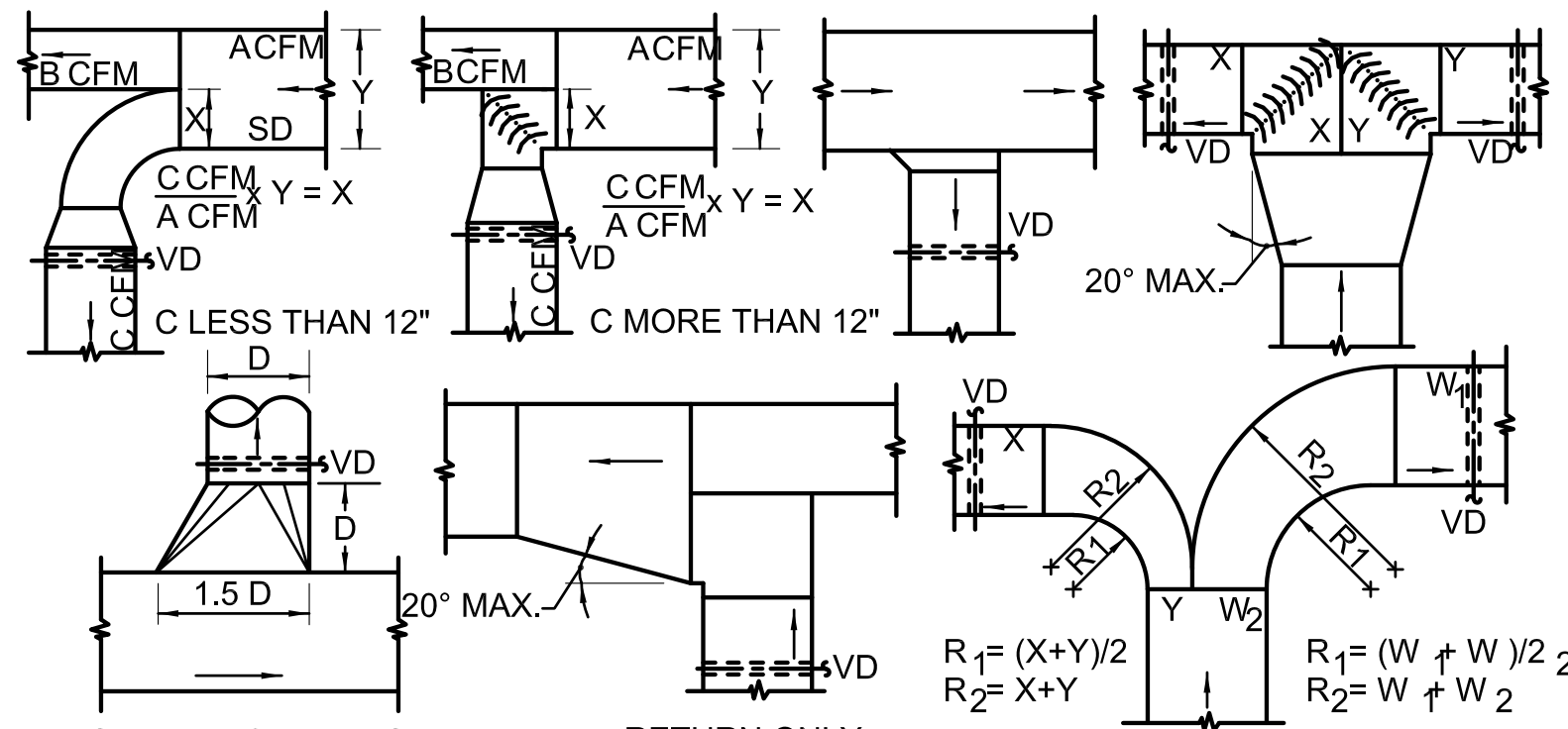
NEWPORT NEWS

ENLARGED FLOOR PLAN - MECHANICAL MEZZANINE - NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M3.3

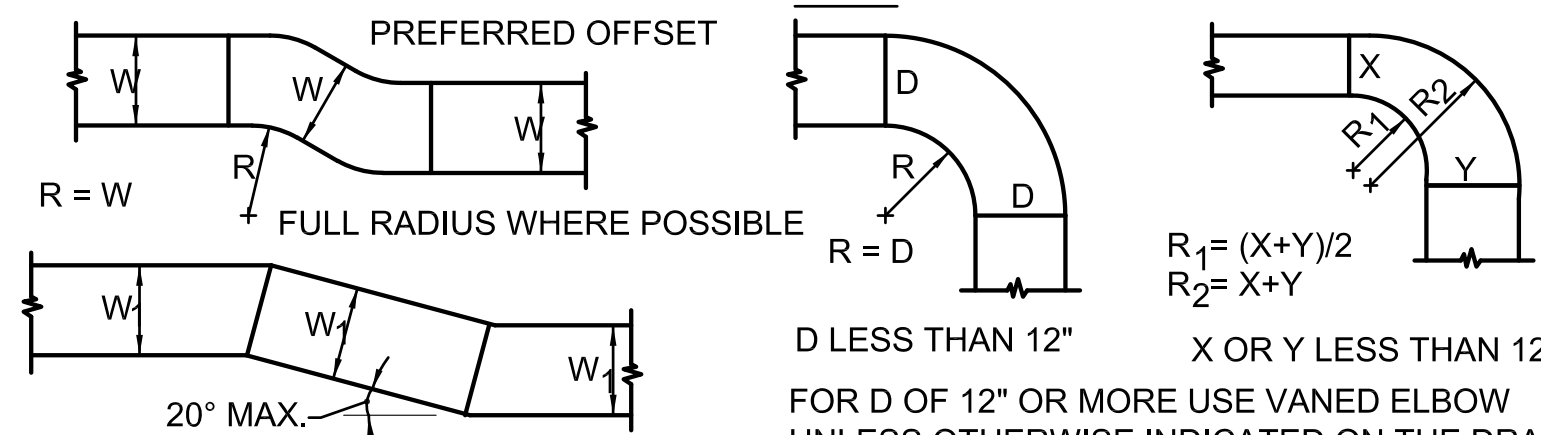
DATE: 01/26/2024



BRANCH TAKEOFFS

90° TEES

NOTE: ABOVE APPLY TO SUPPLY AND RETURN



OFFSETS

90° RADIUS ELBOWS

LOW VELOCITY SINGLE WALL RECTANGULAR DUCTWORK DETAILS

NOT TO SCALE REFER TO DUCTWORK CONSTRUCTION REQUIREMENTS

NEW WORK NOTES:

- PROVIDE "GLOBAL PLASMA SOLUTIONS" MODEL "GPS-IMOD" BIPOLAR IONIZATION GENERATOR FOR RTU-1 THRU 5 AND RTU-7 THRU 9. IMOD SHALL BE MOUNTED UPSTREAM OF THE COOLING COIL AT THE TOP OF THE FINNED SURFACE AREA OF THE COIL. REFER TO FIGURE 1 FOR EXAMPLE. PROVIDE SUFFICIENT QUANTITY OF 6" IMOD SECTIONS TO MATCH THE WIDTH OF THE COOLING COIL. VERIFY THAT ALL MODULAR SECTIONS OF THE IMOD ARE ATTACHED SNUGLY TOGETHER IN ACCORDANCE WITH FIGURE 2.
- PROVIDE "GLOBAL PLASMA SOLUTIONS" 15 WATT POWER SUPPLY WITH MULTI-VOLTAGE INPUT FOR EACH ROOFTOP UNIT. WIRE POWER SUPPLY TO IMOD UTILIZING 6'-0" FLEXIBLE POWER CABLE PROVIDED WITH IMOD. MOUNT POWER SUPPLY ON INSIDE OF ROOFTOP UNIT CABINET AND CONNECT TO UNIT POWER.

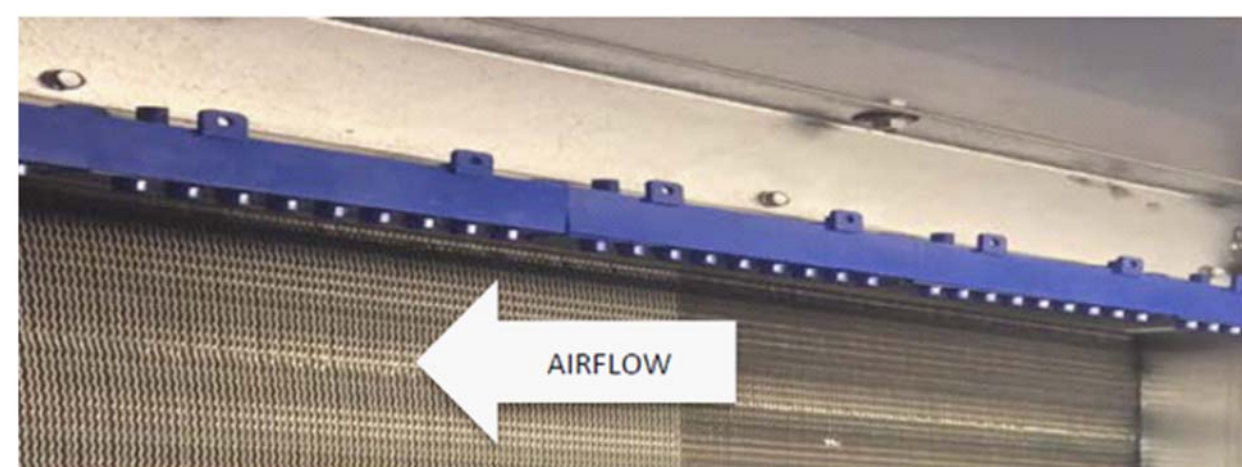


FIGURE 1: BI DEVICE MOUNTING LOCATION

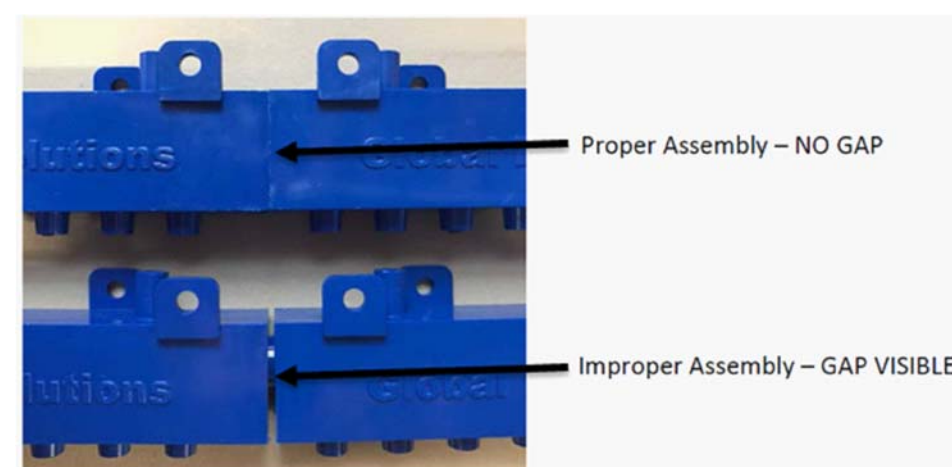
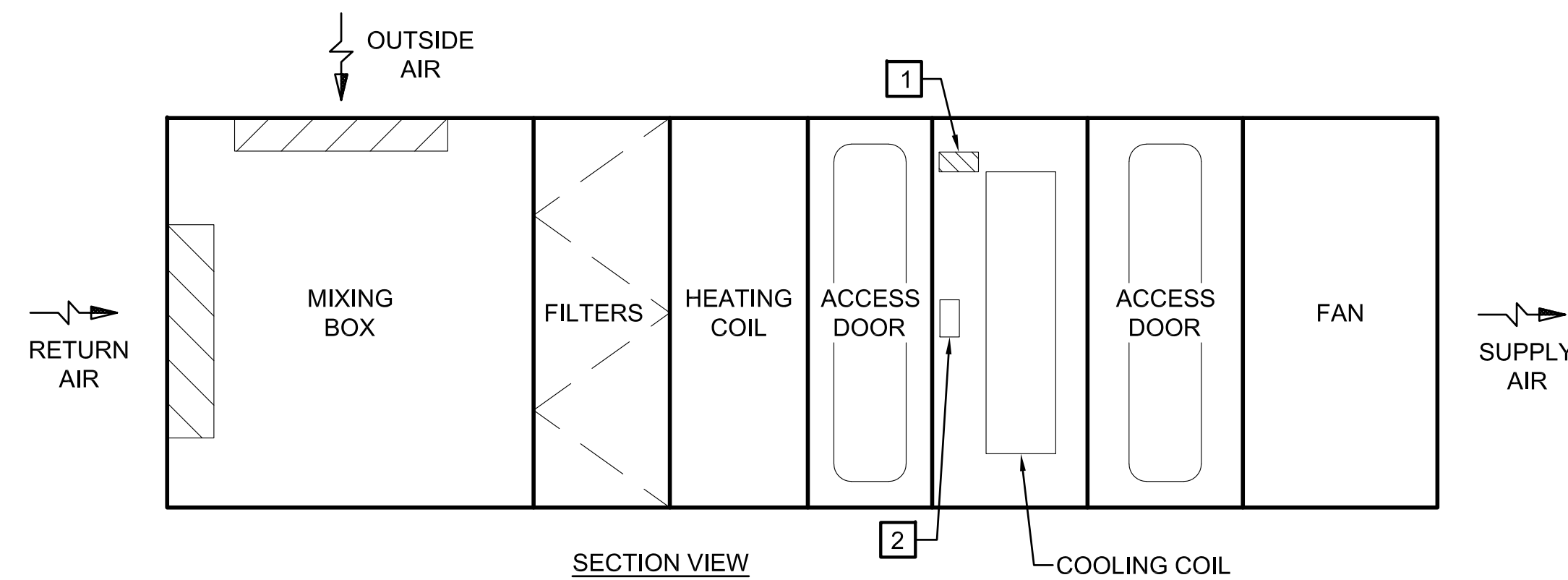
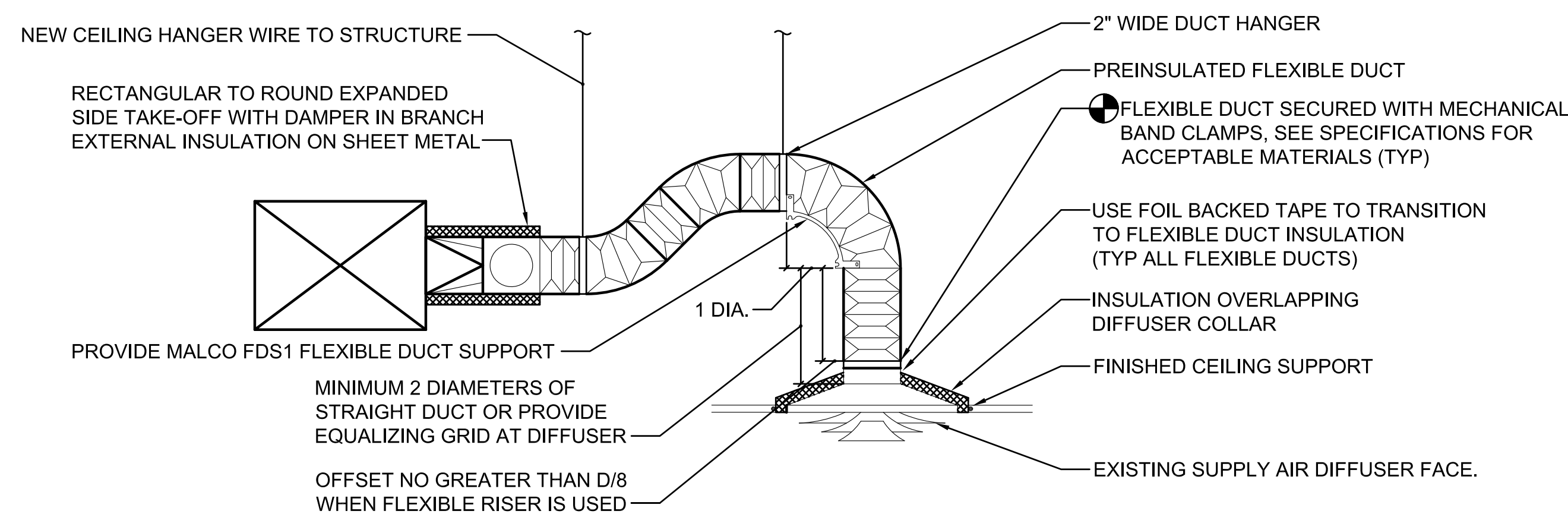


FIGURE 2: BI DEVICE MODULE ASSEMBLY



ROOFTOP & AIR HANDLING UNIT BIPOLAR IONIZATION INSTALLATION DIAGRAM

(TYPICAL FOR AHU-1, 2, 3, 4, 5, 7, 8, AND 9)



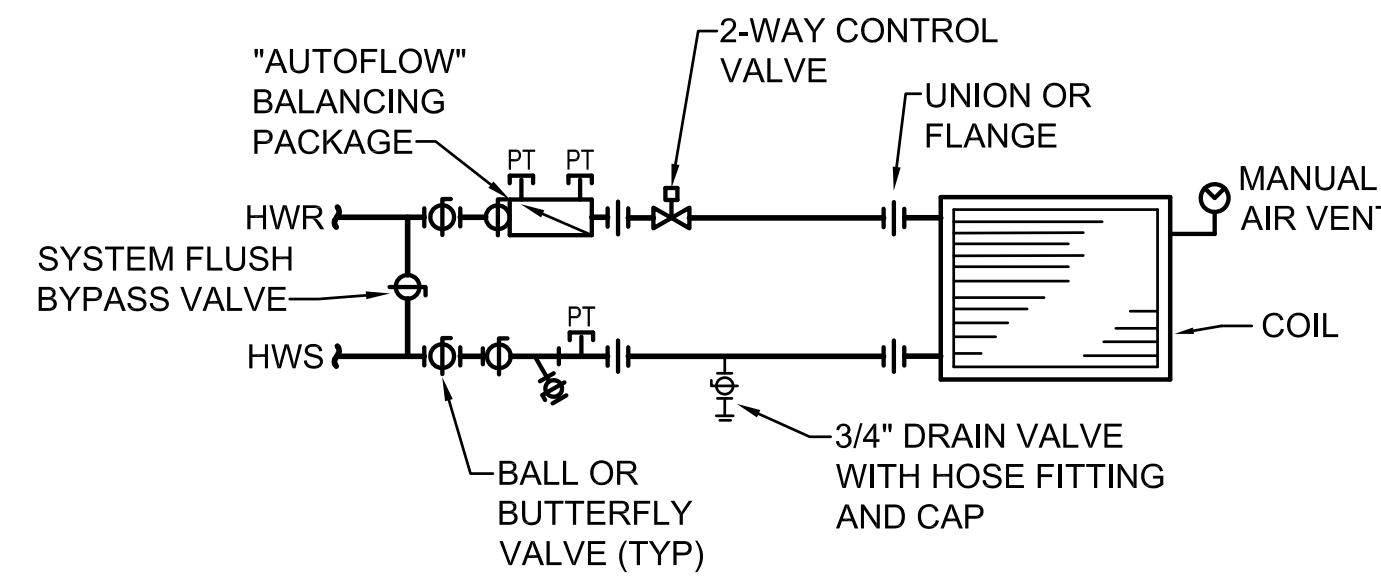
TYPICAL CEILING DIFFUSER DUCT CONNECTION INSTALLATION DETAIL

NOT TO SCALE

DUCTWORK CONSTRUCTION REQUIREMENTS

SYSTEM	PRESSURE CLASS	SEAL CLASS	LEAKAGE CLASS
SUPPLY AIR	+2.5" WG	CLASS A	RECTANGULAR - 4 ROUND - 2
RETURN AIR	-1.0" WG	CLASS A	RECTANGULAR - 8 ROUND - 4
EXHAUST AIR	-1.0" WG	CLASS A	RECTANGULAR - 8 ROUND - 4
TRANSFER AIR	N/A	NOT REQUIRED	-

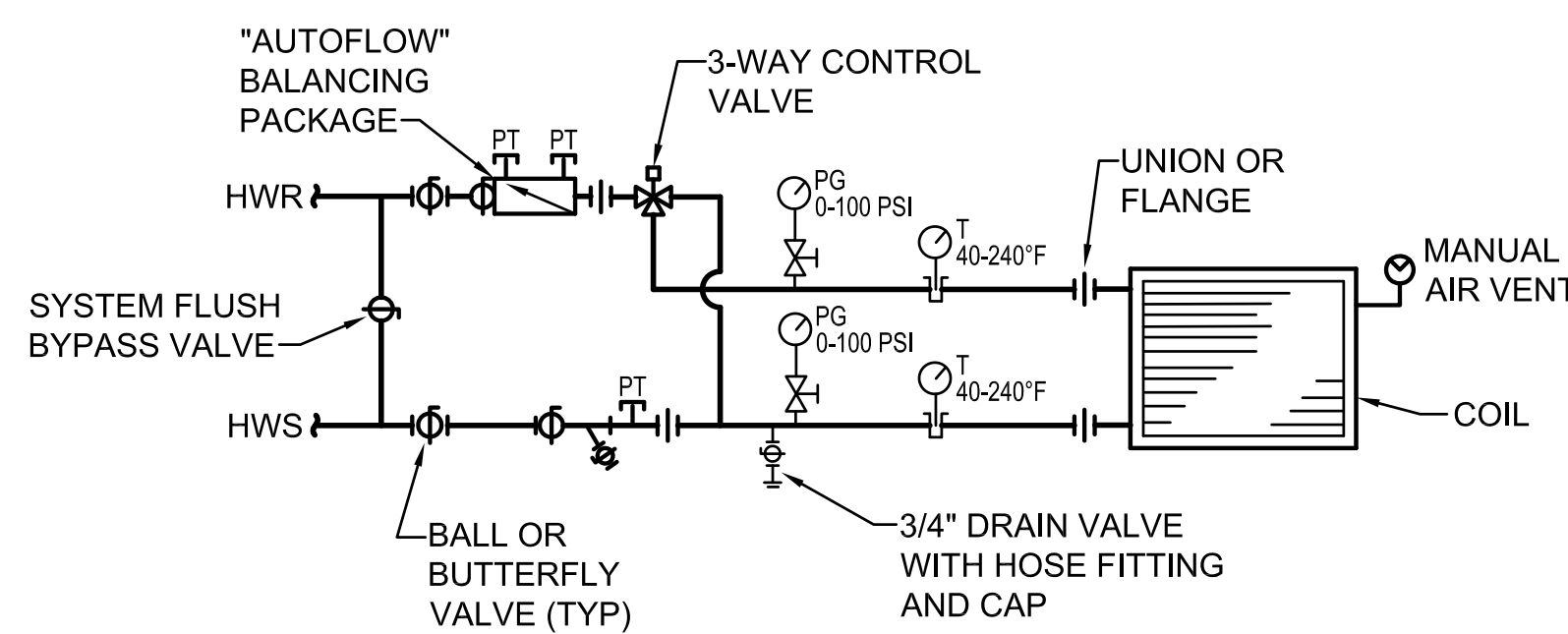
- NOTE:
- CONSTRUCT ALL DUCTWORK IN ACCORDANCE WITH "SMACNA" HVAC DUCT CONSTRUCTION STANDARDS.
 - ALL RECTANGULAR AND MITERED ELBOWS SHALL BE PROVIDED WITH TURNING VANES.
 - REFER TO SMACNA HVAC DUCT LEAKAGE MANUAL FIGURE 5-1 FOR LEAKAGE RATES.
 - ALL MEDIUM PRESSURE DUCTWORK SHALL BE LEAK TESTED (DALT) AS SPECIFIED.



- NOTES:
- PROVIDE FOR VAV TERMINALS, CABINET UNIT HEATERS UNIT HEATERS, AND DUCT MOUNTED HEATING COILS.

HOT WATER COIL PIPING DIAGRAM - 2 WAY VALVE

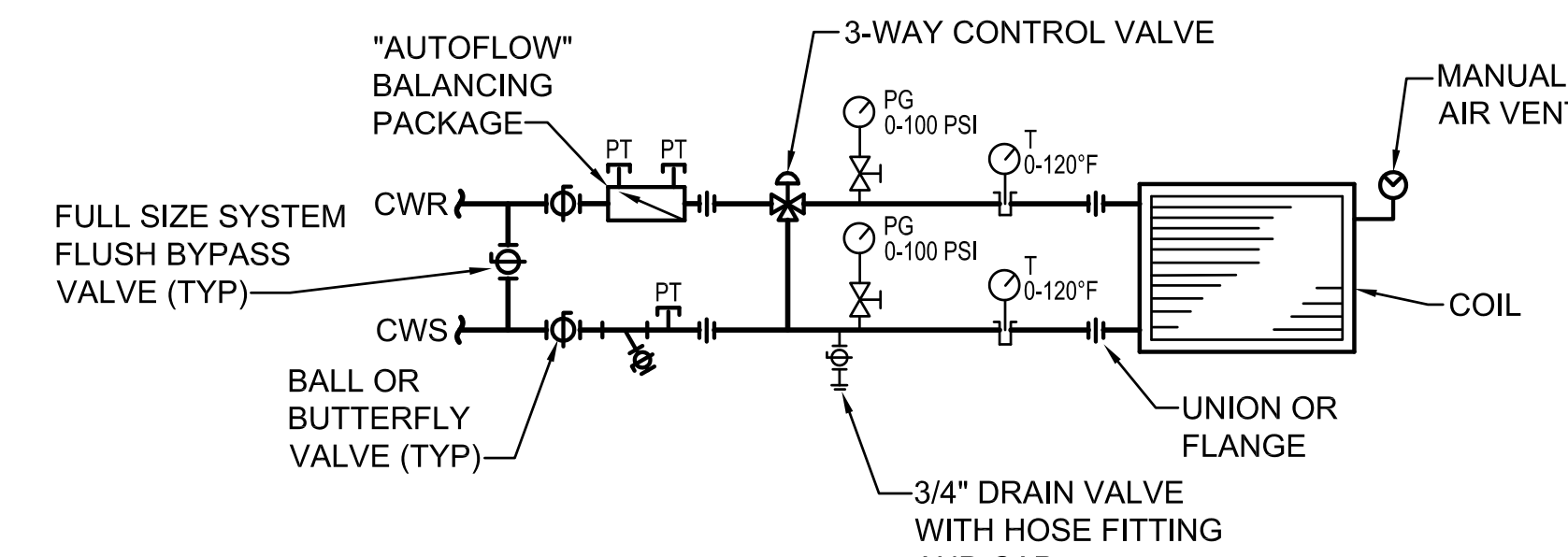
NOT TO SCALE



- NOTES:
- PROVIDE FOR ALL AIR HANDLING UNITS.
 - ARRANGE PIPING TO PERMIT REMOVAL OF COIL IN AHU'S.

HOT WATER COIL PIPING DIAGRAM - 3 WAY VALVE

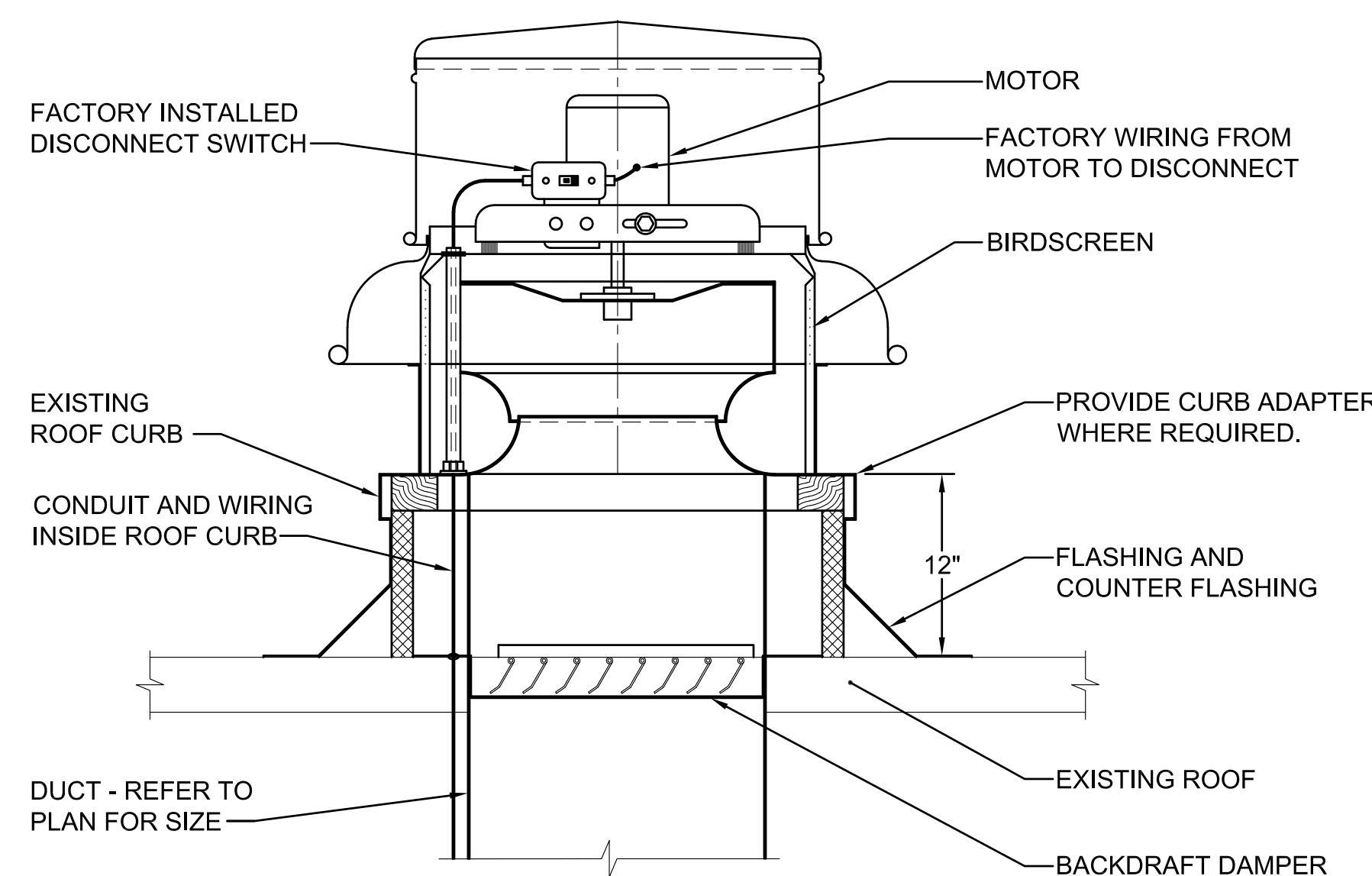
NOT TO SCALE



- NOTES:
- PROVIDE FOR ALL AIR HANDLING UNIT COILS.
 - ARRANGE PIPING TO PERMIT REMOVAL OF COIL IN AHU'S.

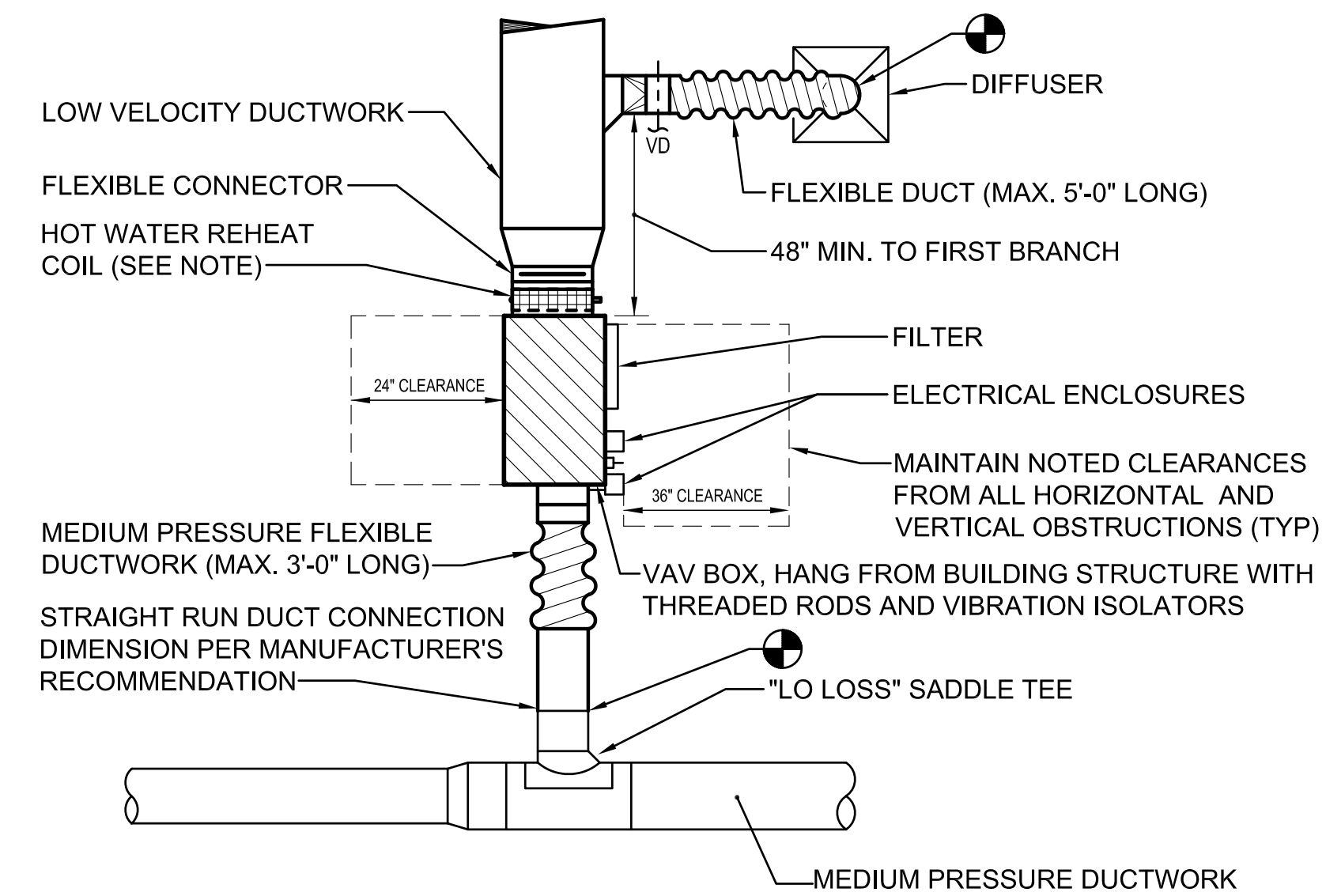
CHILLED WATER COIL PIPING DIAGRAM - 3 WAY VALVE

NOT TO SCALE



ROOF EXHAUST FAN DETAIL

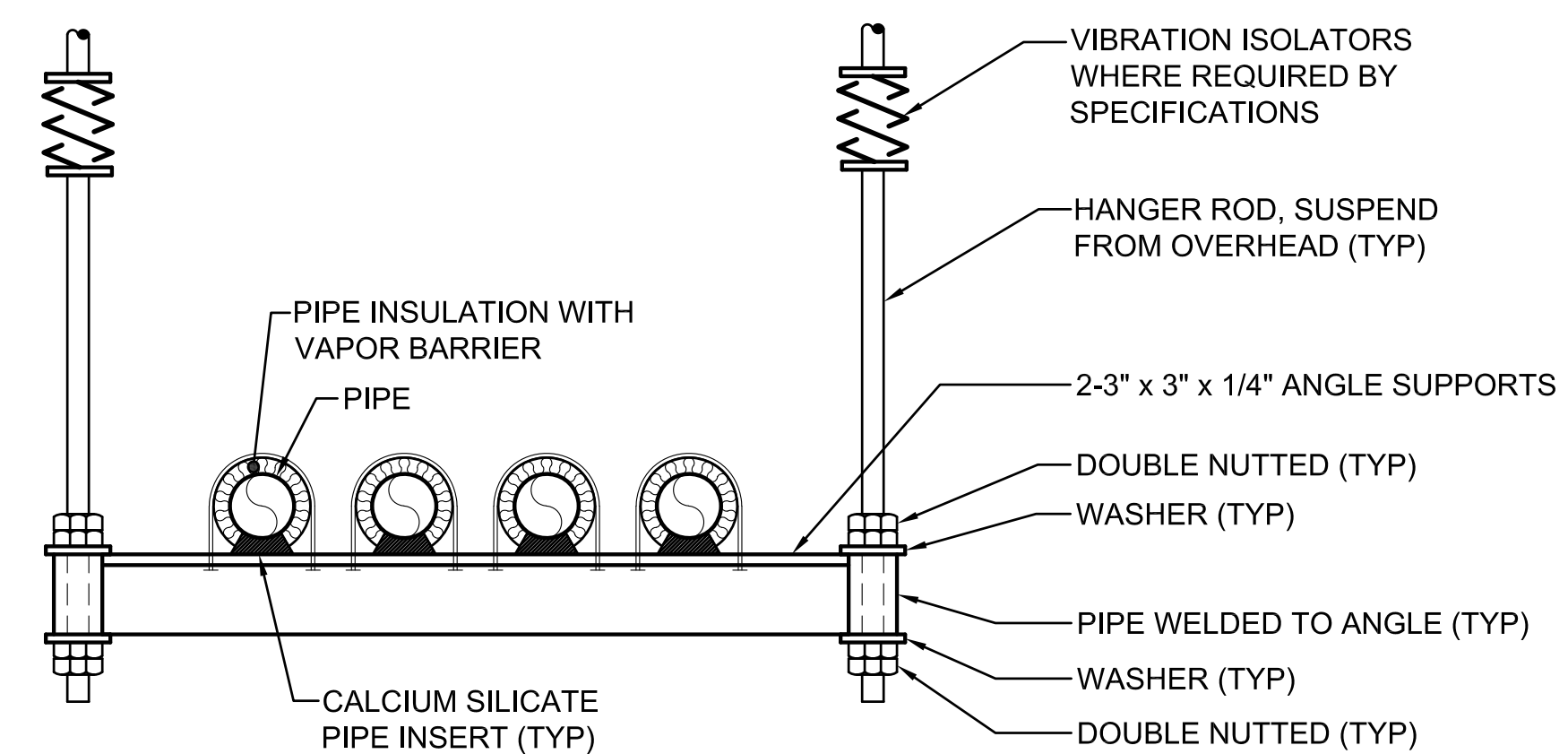
NOT TO SCALE



NOTE: EXTERNALLY INSULATE HOT WATER RE-HEAT COIL AND COIL PIPING CONNECTIONS TO PREVENT CONDENSATION ON PIPING AND U-BENDS WHEN CONTROL VALVE IS CLOSED.

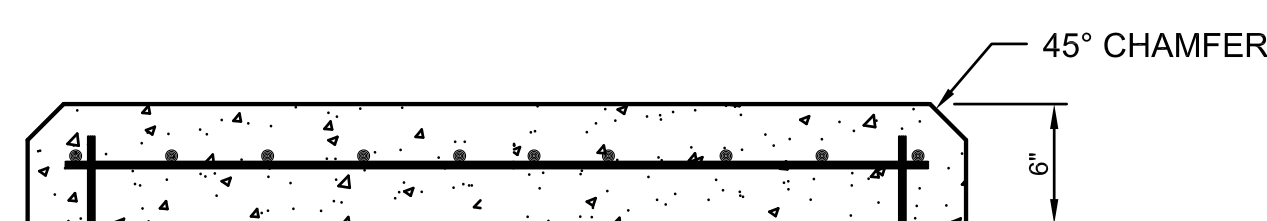
TYPICAL SERIES FAN POWERED VAV BOX (WITH HOT WATER RE-HEAT COIL) INSTALLATION DETAIL

NOT TO SCALE



PIPE HANGER SUPPORT DETAIL

NOT TO SCALE

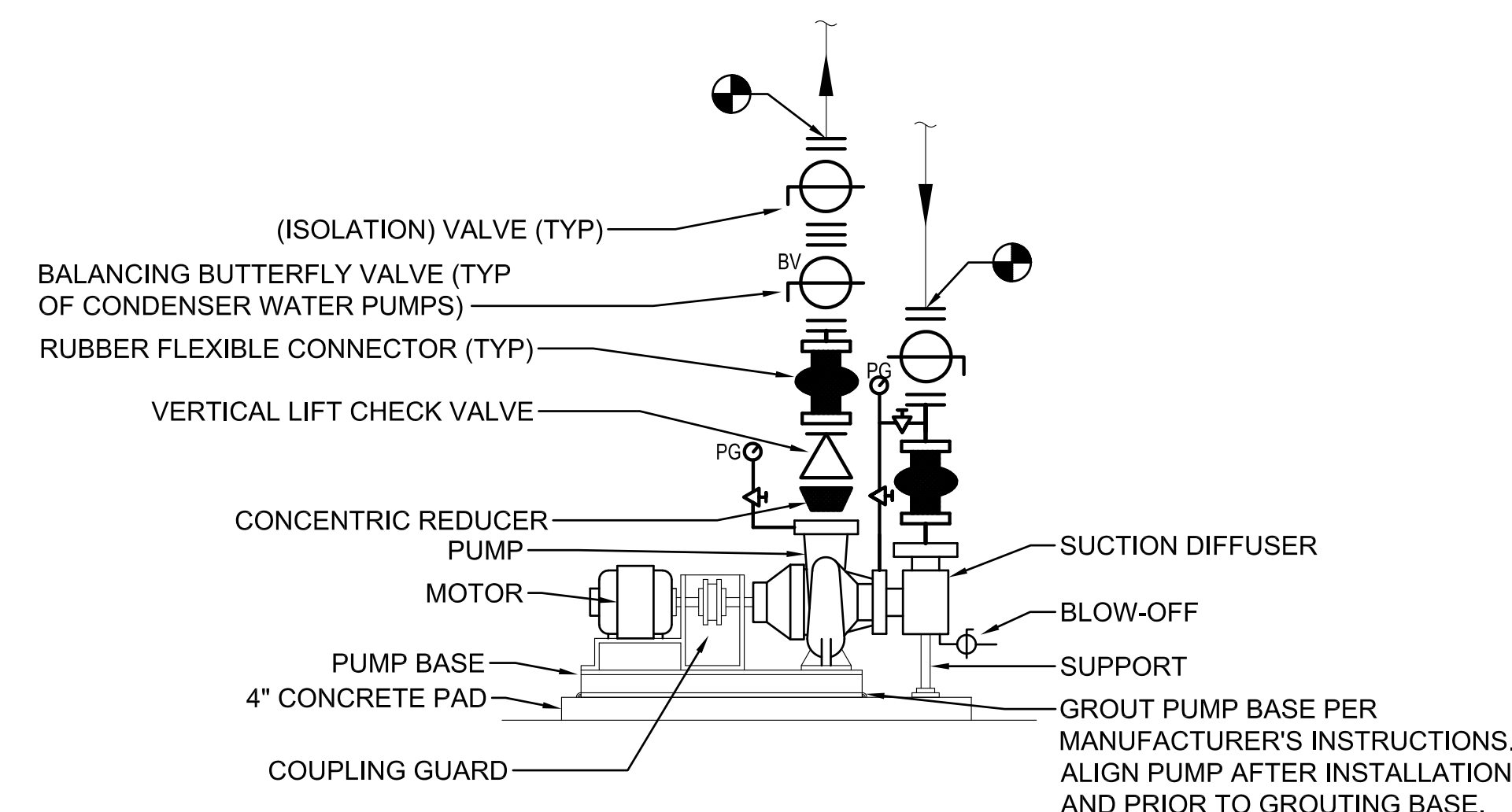


NOTES:

- DOWEL PAD INTO EXISTING FLOOR IN FOUR CORNERS.
- PROVIDE 6" THICK 3500 - PSI AIR-ENTRAINED FIBER REINFORCED CONCRETE. PROVIDE #4 EPOXY COATED BARS AT 12" ON CENTER EACH WAY. PROVIDE WITH 45 DEGREE CHAMFERED EDGES. BROOM FINISH.
- REMOVE FORMING, GROUT VOIDS.

CONCRETE PAD DETAIL

NOT TO SCALE



BASE MOUNTED END SUCTION PUMP PIPING DETAIL



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

MECHANICAL DETAILS

NEWPORT NEWS

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: KDA

M4.1

DATE: 01/26/2024



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
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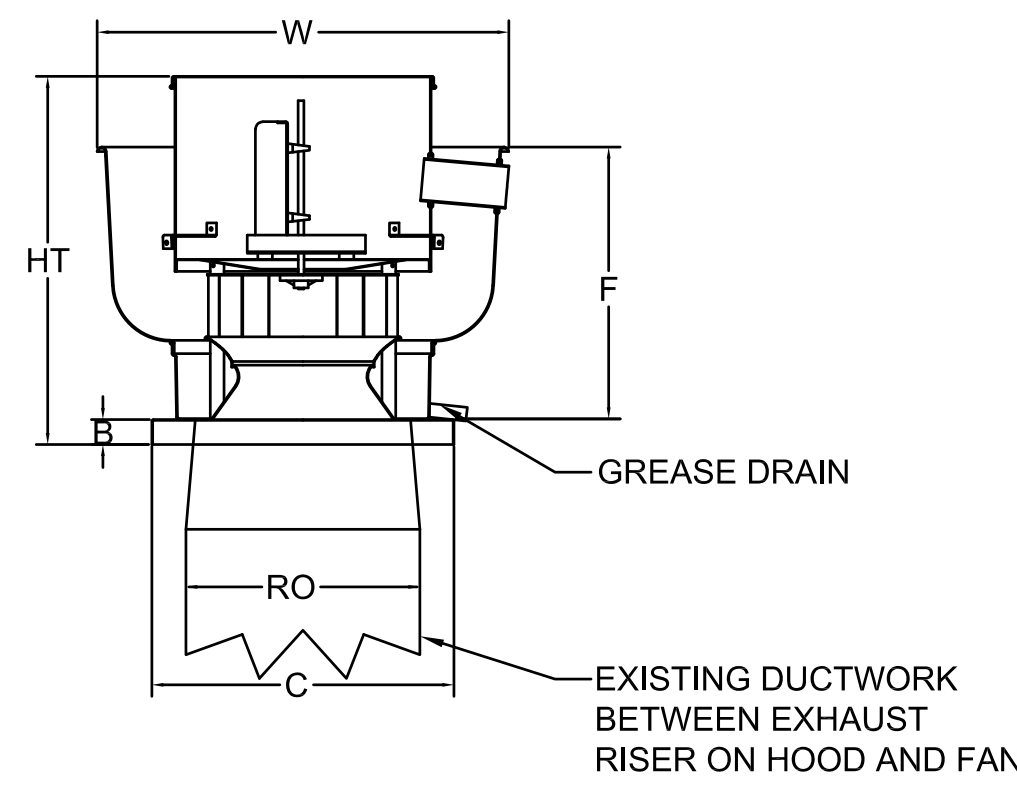
NEWPORT NEWS

MECHANICAL DETAILS

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: SLS
CHECKED BY: -

M4.2

DATE: 01/26/2024

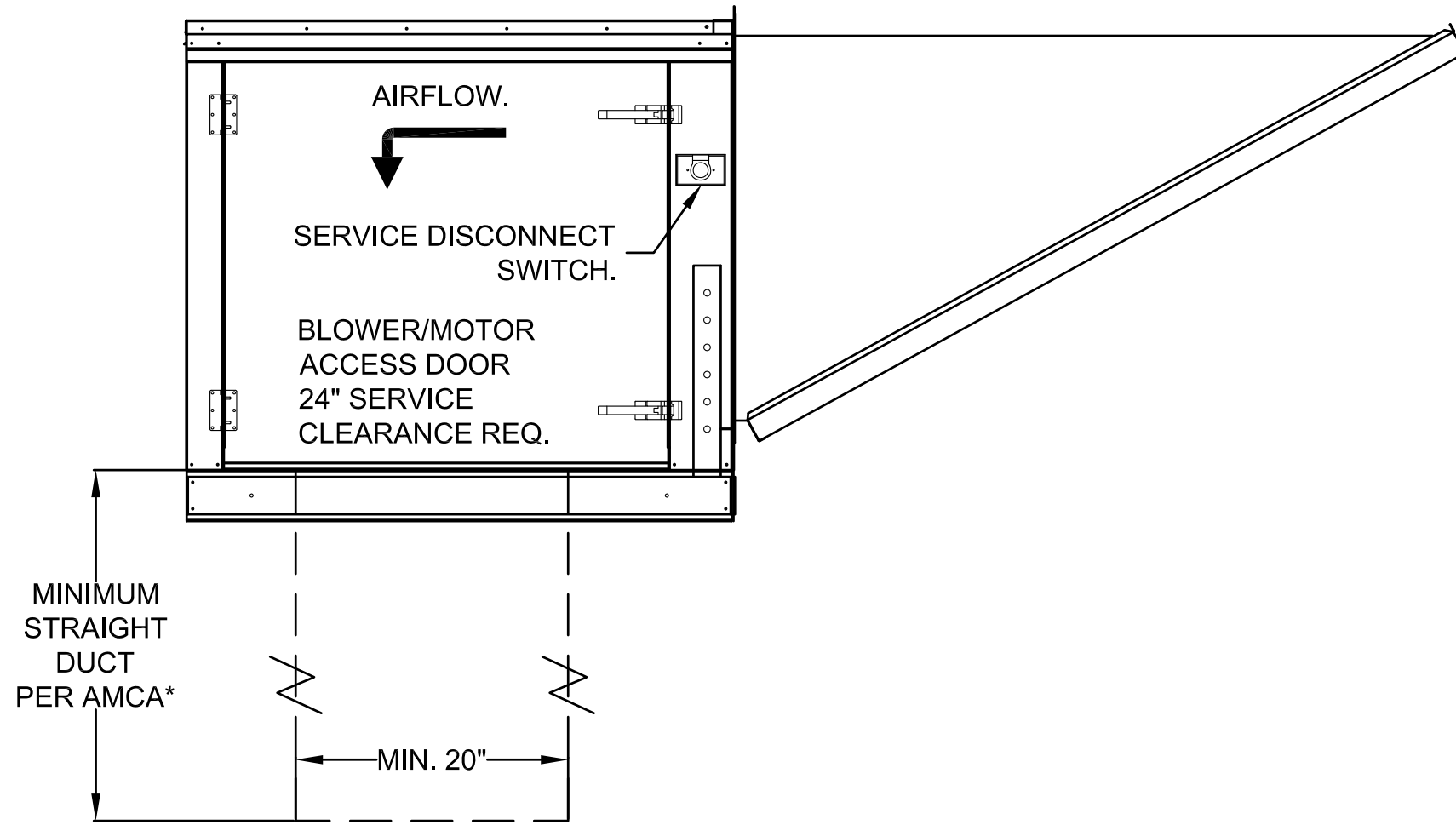


NCAFA BELT DRIVE
CENTRIFUGAL UP-BLAST EXHAUST FANS DIMENSIONAL DATA

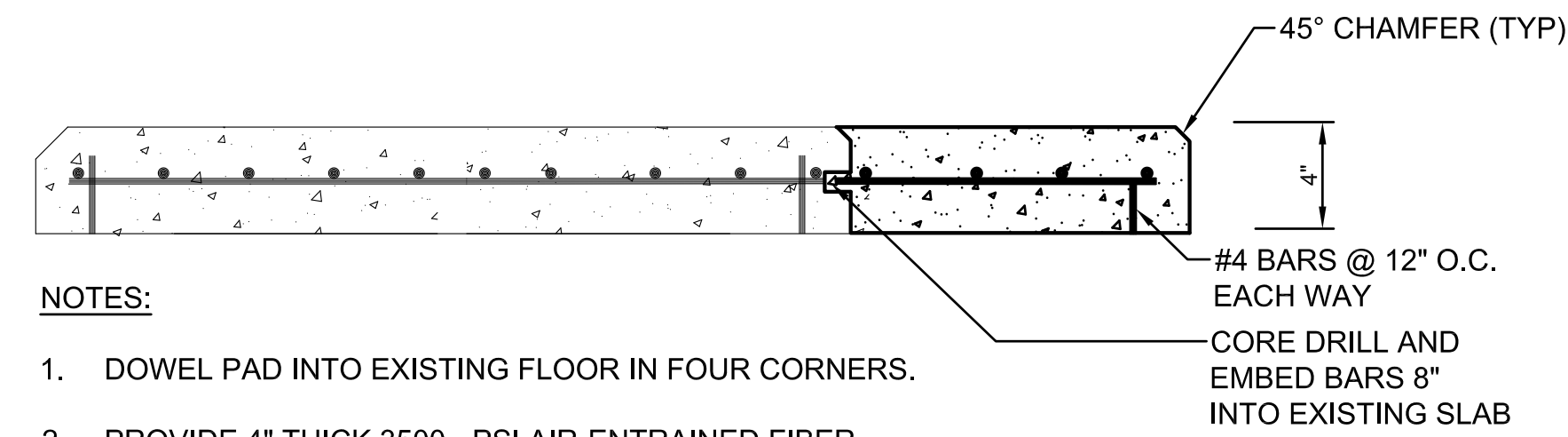
CUBE-240HP-VGD	HT	W	B	C	F	RO	WEIGHT LB.
DIMENSIONS	33-3/8"	43"	2"	34"	29-1/2"	24"	156

KITCHEN MAU AND EXHAUST FAN DETAIL

NOT TO SCALE



(KMAU-1, 2 AND KEF-1, 2)



NOTES:

1. DOWEL PAD INTO EXISTING FLOOR IN FOUR CORNERS.
2. PROVIDE 4" THICK 3500 - PSI AIR-ENTRAINED FIBER REINFORCED CONCRETE. PROVIDE #4 EPOXY COATED BARS AT 12" ON CENTER EACH WAY. FRAME CORNERS WITH 1-1/2" ANGLE TO MATCH EXISTING HOUSEKEEPING PADS. BROOM FINISH. PROVIDE WITH 45 DEGREE CHAMFERED EDGES.
3. REMOVE FORMING, GROUT VOIDS.

CONCRETE HOUSEKEEPING PAD EXTENSION DETAIL

NOT TO SCALE



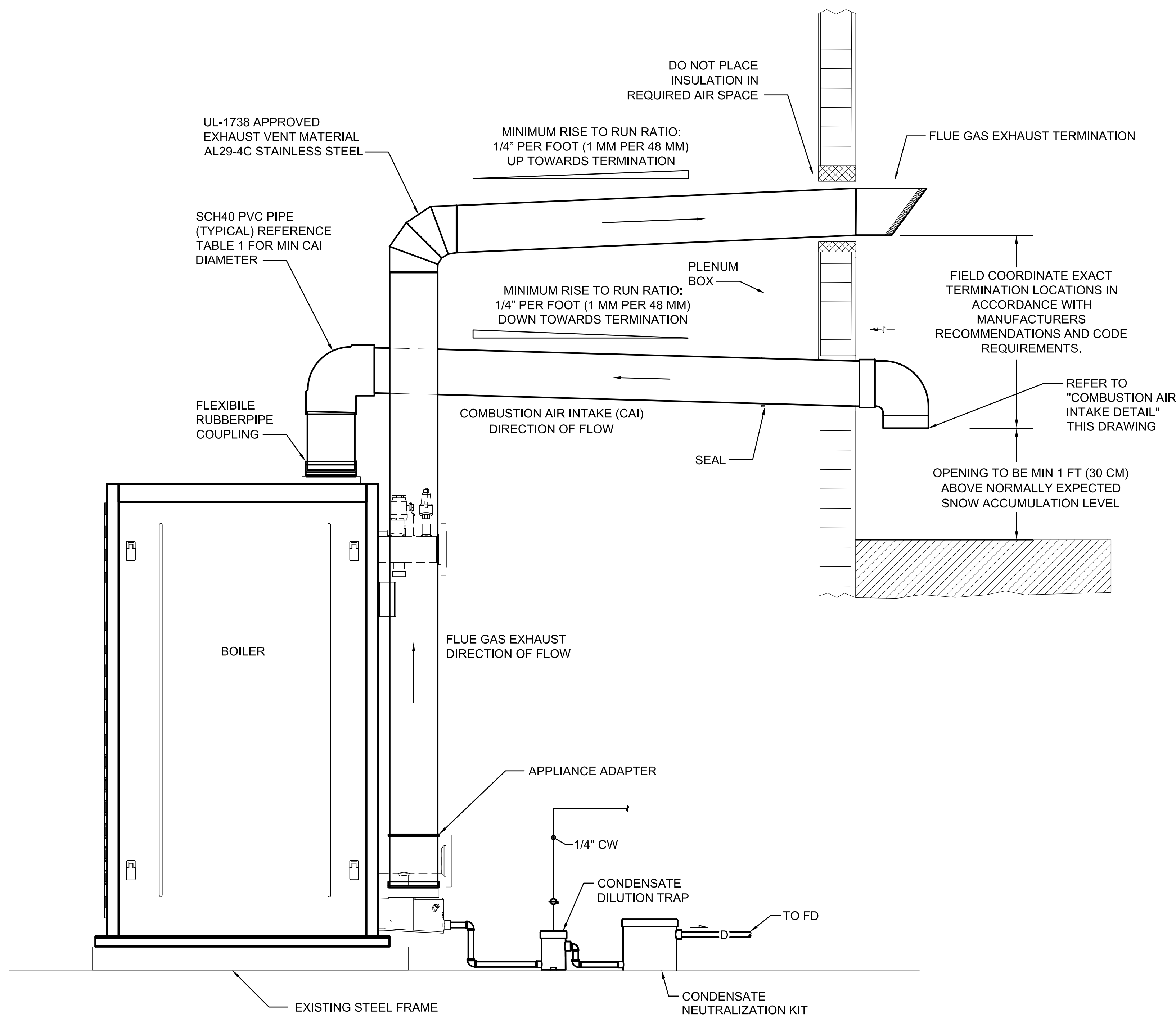
REFRIGERATION MACHINERY ROOM SIGN

NOT TO SCALE



REFRIGERANT LEAK WARNING SIGN

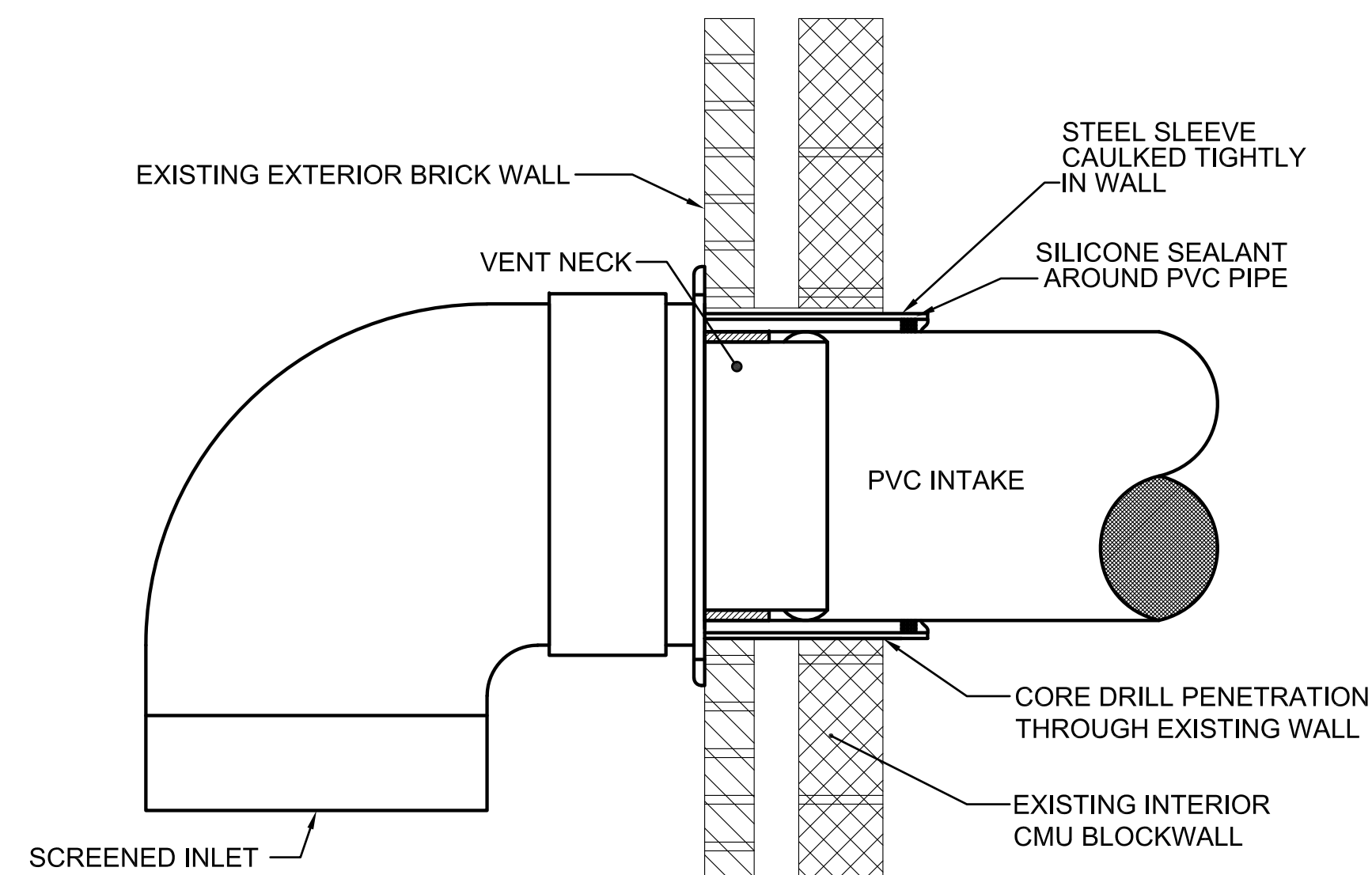
NOT TO SCALE



BOILER VENTING DETAIL

NOT TO SCALE

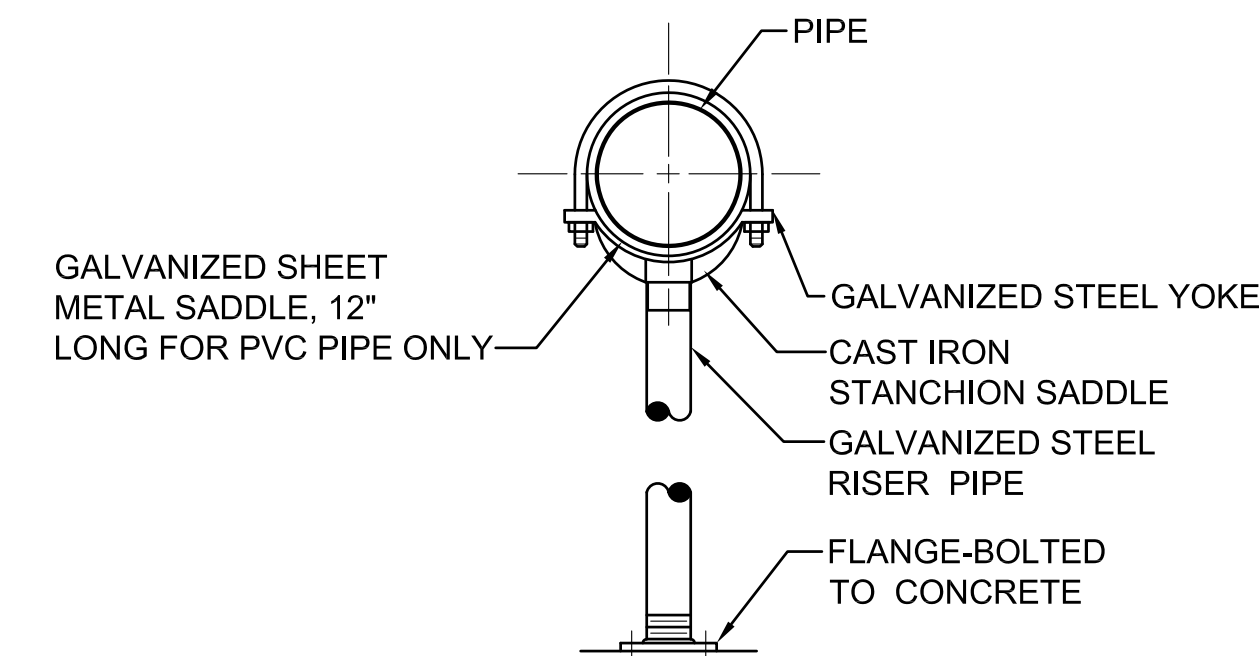
(TYPICAL FOR B-1 AND B-2)



COMBUSTION AIR INTAKE DETAIL

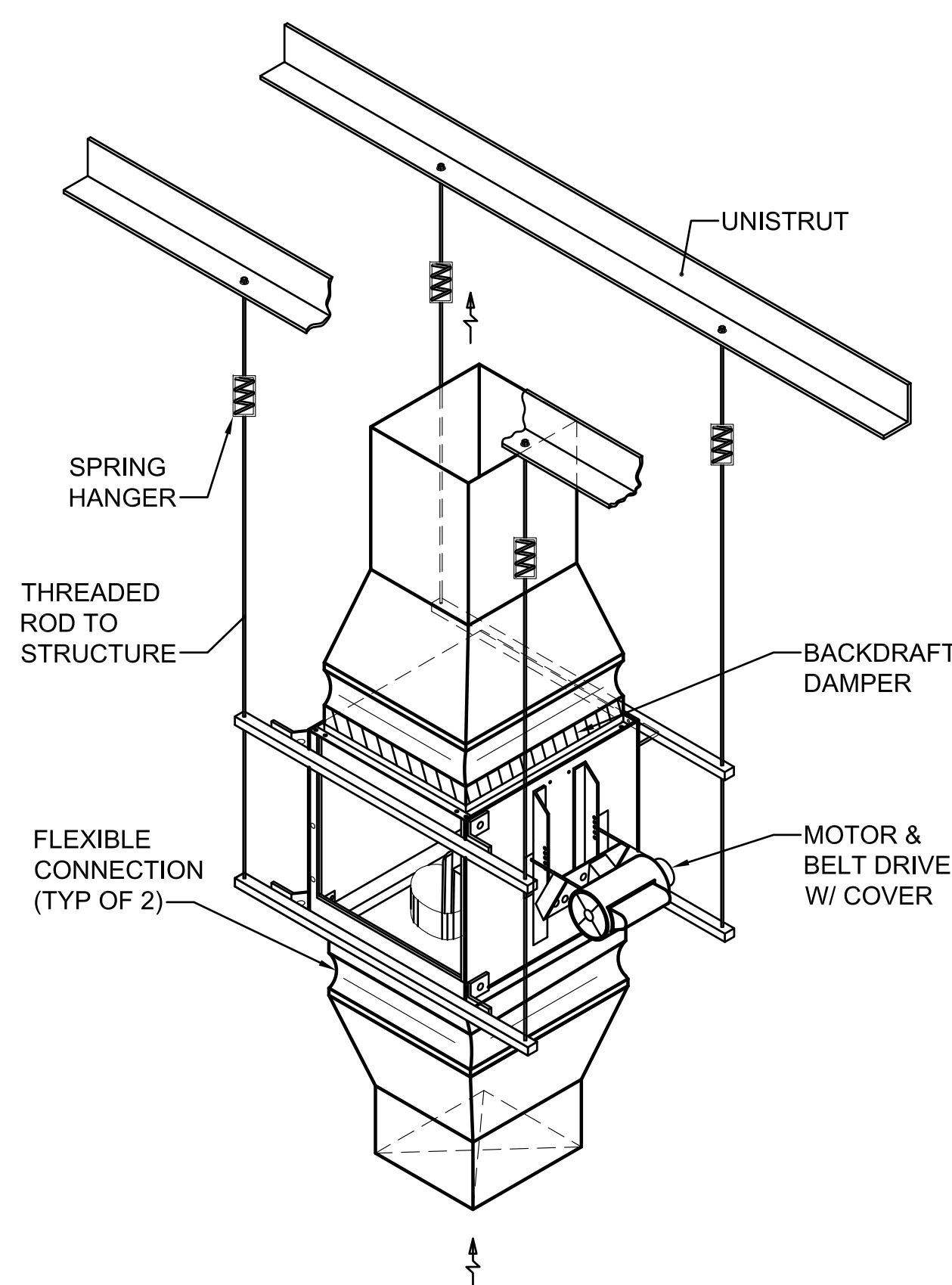
NOT TO SCALE

(TYP. B-1 AND B-2, ALL SCHOOLS)



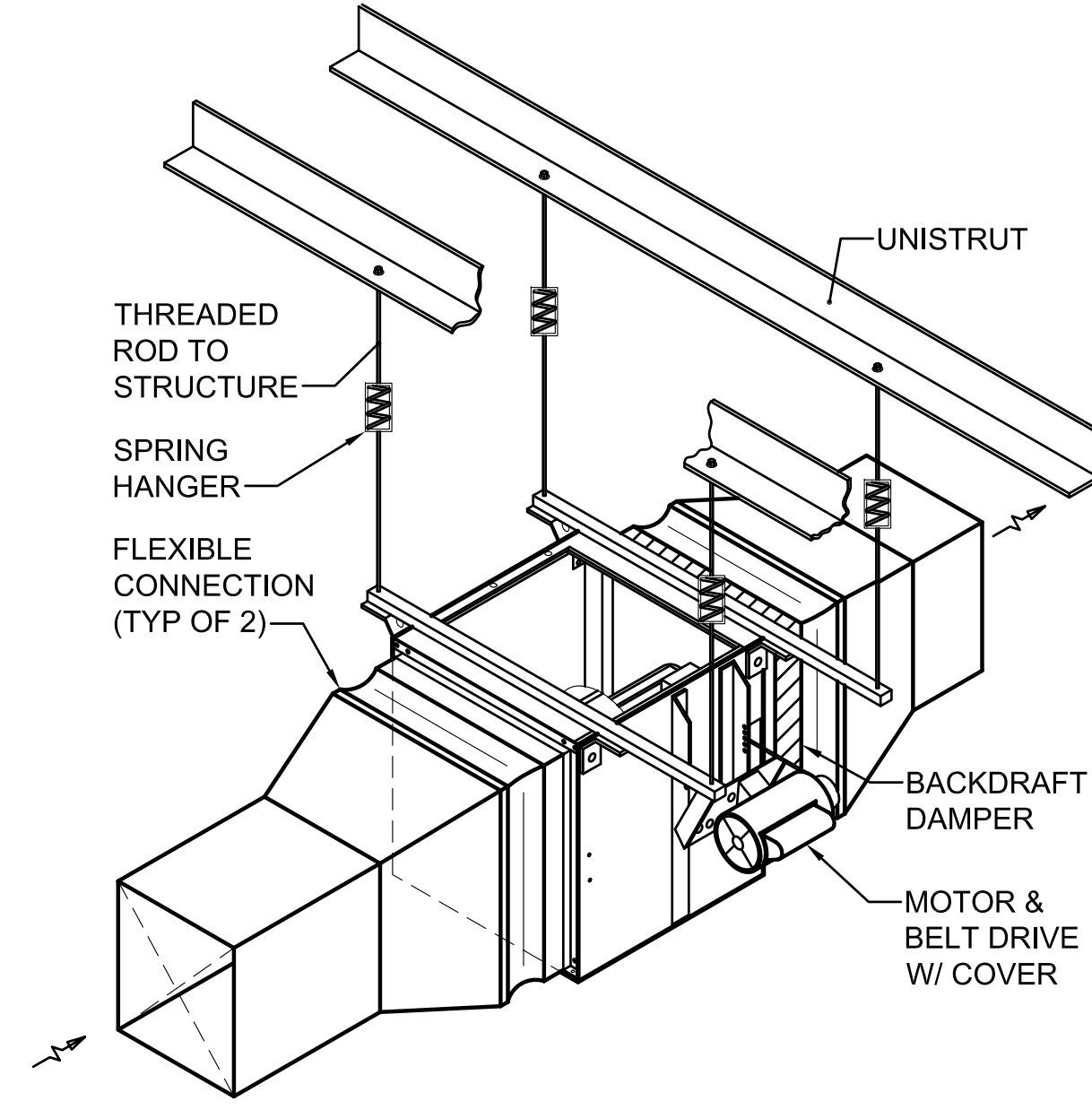
PIPE SUPPORT DETAIL

NOT TO SCALE



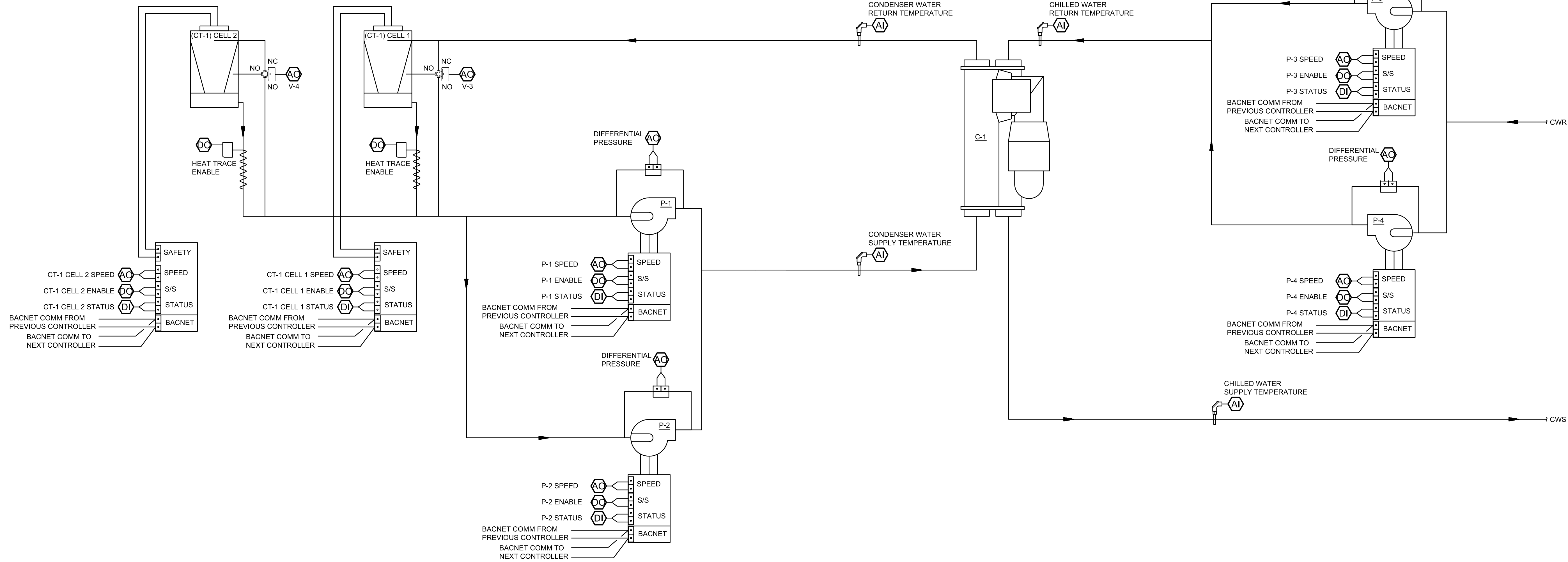
IN-LINE EXHAUST FAN DETAIL

NOT TO SCALE



IN-LINE EXHAUST FAN DETAIL

NOT TO SCALE



CHILLED WATER PLANT DIAGRAM
NOT TO SCALE

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS		TREND	ALARM	SHOW ON GRAPHIC
	AI	AO	DI	DO	AV	DV			
CW SYSTEM ENABLE						X			X
OUTSIDE AIR TEMP	X						X		X
CONDENSER WATER RETURN TEMP	X						X	X	X
CONDENSER WATER SUPPLY TEMP	X						X	X	X
CT-1 FAN 1 START/STOP				X					X
CT-1 FAN 1 STATUS			X				X		X
CT-1 FAN 1 FAULT			X					X	X
CT-1 FAN 1 SPEED	X						X		X
CT-1 FAN 2 START/STOP				X					X
CT-1 FAN 2 STATUS			X				X		X
CT-1 FAN 2 FAULT			X					X	X
CT-1 FAN 2 SPEED	X						X		X
CHILLED WATER RETURN TEMP	X						X	X	X
CHILLED WATER SUPPLY TEMP	X						X	X	X
P-1 START/STOP				X			X		X
P-1 STATUS			X				X	X	X
P-1 SPEED					X		X		X
P-1 DIFFERENTIAL PRESSURE	X						X	X	X
P-1 RUNTIME	X							X	X
P-2 START/STOP				X			X		X
P-2 STATUS			X				X	X	X
P-2 SPEED					X		X		X
P-2 DIFFERENTIAL PRESSURE	X						X	X	X
P-2 RUNTIME	X							X	X
P-3 START/STOP				X			X		X
P-3 STATUS			X				X	X	X
P-3 SPEED					X		X		X
P-3 DIFFERENTIAL PRESSURE	X						X	X	X
P-3 RUNTIME	X							X	X
P-4 START/STOP				X			X		X
P-4 STATUS			X				X	X	X
P-4 SPEED					X		X		X
P-4 DIFFERENTIAL PRESSURE	X						X	X	X
P-3 RUNTIME	X							X	X
V-3 POSITION	X						X		X
V-4 POSITION	X						X		X
CHILLED WATER FLOW	X						X		X
CW SUPPLY TEMP SETPOINT RESET		X					X		X
CHILLER STATUS			X				X		X
CHILLER ENABLE				X					X
CHILLED WATER FLOW SETPOINT					X		X		X
CHILLER FAILURE						X		X	X
CHILLER RUNNING IN LOCAL MODE						X		X	X
CHILLER RUNTIME	X							X	X
HIGH CW SUPPLY TEMP					X			X	X
LOW CW SUPPLY TEMP					X			X	X
LOW CHILLED WATER FLOW					X			X	X
HEAT TRACE - ENABLE				X				X	X

NOTE: THE GRAPHICS SHALL INCLUDE THE SETPOINT DISPLAY FOR EACH CONTROLLED OR MONITORED VARIABLE.

CHILLED WATER PLANT DDC POINTS LIST

CHILLED WATER PLANT SEQUENCE OF OPERATION

THE CONDENSER/CHILLED WATER SYSTEM SHALL FUNCTION ACCORDING TO THE EXISTING SEQUENCES OF OPERATION, FULLY INTEGRATING ALL NEW EQUIPMENT. THE FOLLOWING SEQUENCE HAS BEEN GATHERED FROM EXISTING CONTROLS DRAWINGS. WHERE THE BELOW SEQUENCE VARIES FROM THE EXISTING SEQUENCE, THE EXISTING SEQUENCE SHALL BE FOLLOWED. THE CONTRACTOR SHALL ALERT THE ENGINEER TO ANY SIGNIFICANT VARIATIONS IN THE EXISTING SEQUENCE AS COMPARED TO THE SEQUENCE ENUMERATED BELOW.

CHILLED WATER SYSTEM CONTROLS:

CHILLER 1 (C-1): UPON A RISE IN OUTSIDE AIR TEMPERATURE ABOVE A PREDETERMINED SETPOINT (54°F ADJ.) AS DETERMINED BY THE OUTSIDE AIR TEMPERATURE SENSOR LOCATED IN THE OUTDOOR AIR INTAKE OF AHU-6, AND UPON A CALL FOR COOLING BY ANY AIR HANDLING UNIT WITH A FAN STATUS OF "ON", THE BAS WILL ISSUE A START COMMAND TO THE PACKAGED PUMPING SYSTEM. THE PUMPING SYSTEM WILL OPERATE UNDER ITS OWN CONTROLS TO SATISFY THE REQUIREMENTS OF THE CHILLER AND AIR HANDLING UNITS. WHEN WATER FLOW IS ESTABLISHED AS DETERMINED BY PUMP STATUS DIFFERENTIAL PRESSURE SWITCHES, THE BAS WILL ISSUE A START COMMAND TO THE CHILLER, AND COOLING TOWER WILL BE ENABLED. THE CHILLER WILL THEN START ACCORDING TO ITS OWN SELF-CONTAINED CONTROL SYSTEM AND WILL LOAD IN ACCORDANCE WITH "CHILLER LOADING AND UNLOADING". THE COOLING TOWERS WILL BE CONTROLLED IN ACCORDANCE WITH "COOLING TOWER" BELOW. UPON A FALL IN OUTSIDE AIR TEMPERATURE BELOW SETPOINT (44°F ADJ.), THE BAS WILL ISSUE A STOP COMMAND TO THE CHILLER AND A FREE COOLING COMMAND TO THE PACKAGED PUMPING SYSTEM.

CHILLER LOADING AND UNLOADING:

CHILLERS WILL BE EQUIPPED FROM THE FACTORY TO LOAD AND UNLOAD BASED ON A 4-20mA SIGNAL PROVIDED BY THE BAS. THE BAS WILL, ON A RISE IN CHILLED WATER TEMPERATURE ABOVE SETPOINT (44°F ADJ.), LOAD THE CHILLER TO MAINTAIN LEAVING WATER TEMPERATURE. CHILLED WATER SUPPLY TEMPERATURE WILL BE AS SENSED BY A TEMPERATURE SENSOR LOCATED IN CWS PIPING. THE CHILLER WILL CONTINUE TO OPERATE UNTIL ISSUED A STOP COMMAND UNDER CHILLED WATER SYSTEM.

COOLING TOWER (CT-1):

GENERAL: THE COOLING TOWERS WILL MAINTAIN CONDENSER WATER TEMPERATURE AT SETPOINT (85°F ADJ.). IF CONDENSER WATER PUMPS ARE OFF, COOLING TOWER FANS WILL BE OFF AND THE BYPASS VALVES WILL BE IN THE BYPASS POSITION.

SYSTEM START-UP:

THE SYSTEM WILL RUN AS DETERMINED BY THE OFF-AUTO SWITCHES LOCATED ON THE VFD CONTROL CABINETS. THESE TWO MODES WILL BE EXECUTED AS FOLLOWS:

OFF: CONDENSER WATER PUMPS OFF, COOLING TOWER FANS OFF, AND THE BYPASS VALVES IN THE BYPASS POSITION.

AUTO: THIS POSITION WILL ALLOW FULLY AUTOMATIC OPERATION OF THE FAN SYSTEM AS DIRECTED BY THE BAS. THIS IS THE NORMAL AND PREFERRED METHOD OF OPERATION.

MECHANICAL COOLING (CHILLER) OPERATION:

ALTERNATE CELL OPERATION: ONLY ONE CELL IS REQUIRED TO OPERATE DURING MECHANICAL COOLING OPERATION. TOWER CELLS WILL ALTERNATE OPERATION EVERY 14 DAYS. IF ONE OF THE TOWER CELLS SHOULD FAIL TO OPERATE FOR ANY REASON, THE BAS WILL START THE REMAINING CELL WHICH WILL OPERATE INDEPENDENTLY, INCLUDING OPERATION OF SPRAY VALVES AND FANS, AS NEEDED TO MAINTAIN CONDENSER WATER SUPPLY TEMPERATURE. AN ALARM WILL BE SENT TO THE HEAD END STATING THAT ONE OF THE CELLS HAS FAILED TO OPERATE.

FREE COOLING WATER TEMPERATURE CONTROL:

IF FREE COOLING WATER SUPPLY TEMPERATURE RISES ABOVE SETPOINT (40°F ADJ.) AS SENSED BY THE TEMPERATURE SENSOR IN THE CONDENSER WATER SUPPLY PIPING LOCATED IN THE CHILLER ROOM, THE BAS WILL MODULATE THE LEAD CELL DIVERTING VALVE CAUSING WATER TO FLOW OVER THE TOWER FILL. IF THE WATER TEMPERATURE CONTINUES TO RISE, THE BAS WILL MODULATE THE LAG CELL DIVERTING VALVE CAUSING WATER TO FLOW OVER THE TOWER FILL. ON A CONTINUED RISE IN WATER TEMPERATURE, THE LEAD CELL FAN WILL START. THE TEMPERATURE SENSOR WILL FUNCTION AS INPUT TO THE BAS (AND THUS TO THE VFD) SUCH THAT A RISE IN CONDENSER SUPPLY TEMPERATURE WILL RESULT IN A PROPORTIONAL INCREASE IN LEAD CELL FAN SPEED TO MAINTAIN SETPOINT. ONCE THE FAN IN CELL ONE HAS REACHED ITS MAXIMUM SPEED, THE BAS WILL START THE LAG CELL. A CONTINUED RISE IN CONDENSER WATER SUPPLY TEMPERATURE WILL RESULT IN A PROPORTIONAL INCREASE IN LAG CELL FAN SPEED TO MAINTAIN SETPOINT. ON A FALL IN FREE COOLING WATER SUPPLY TEMPERATURE, THE REVERSE WILL OCCUR.

CHILLED WATER AND CONDENSER WATER PUMPS:

THE BAS WILL MONITOR AND REPORT PUMP STATUS, SPEED, AND FLOW RATE TO THE HEAD END.

REFRIGERANT SENSOR:

SENSOR TO CONTROL CHILLER ROOM EXHAUST FAN AND ALARM BACK TO THE BAS. SENSOR WILL MONITOR AND RECORD LONG TERM REFRIGERANT LEVELS.

CHILLER:

ALL CONTROL PANEL DISPLAY LANGUAGE SHALL REPORT BACK TO THE BAS HEAD END.

EMERGENCY PROCEDURES:

LOSS OF NETWORK COMMUNICATION: ON A LOSS OF NETWORK COMMUNICATION, THE CHILLED WATER AND CONDENSER WATER SYSTEM CONTROLLERS SHALL DEFAULT TO THE OFF MODE (USER SELECTABLE BETWEEN ENABLE OR OFF MODE) AND OPERATE AS A STAND ALONE UNIT.

LOSS OF POWER: UPON RESTORATION OF POWER, THE SYSTEM MAIN JACE CONTROLLER WILL POLL INDIVIDUAL CONTROLLERS TO VERIFY COMMUNICATION. IF THE CONTROLLER IS ONLINE AND COMMUNICATING, THAN THE MAIN JACE CONTROLLER WILL UPDATE EACH CONTROLLER AND RESUME NORMAL OPERATION. CONTROLLERS WHICH DO NOT COMMUNICATE WITH THE MAIN JACE CONTROLLER WILL BE NOTED AS BEING OFFLINE.

SEQUENCE OF OPERATION

- A. THE BOILER MANUFACTURER'S CONTROLS WILL CONTROL THE STAGING OF THE BOILERS BASED ON LOAD DEMAND. THE DDC WILL START HEATING WATER PUMPS AND ENABLE THE BOILERS THROUGH THE BOILER MANUFACTURER'S SEQUENCING PANEL, AND PROVIDE A SIGNAL TO THE MANUFACTURER'S CONTROL PANEL TO CONTROL THE HEATING WATER SUPPLY TEMPERATURE TO THE BUILDING. BOILERS WILL OPERATE IN SEQUENCE AND MAINTAIN LEAVING HEATING WATER TEMPERATURE THROUGH THEIR OWN CONTROLS BASED ON AN EXTERNAL HEATING WATER TEMPERATURE CONTROL SIGNAL FROM THE DDC SYSTEM. IF THE SYSTEM LOAD SHOULD BEGIN TO FALL BELOW THE LOAD CAPACITY OF THE BOILERS, THE BOILER MANUFACTURER'S SEQUENCING CONTROL PANEL WILL SEQUENCE OFF BOILERS SO THAT NO MORE BOILERS ARE IN OPERATION THAN IS REQUIRED TO MEET THE REDUCED LOAD. THE BOILER MANUFACTURER'S SEQUENCING CONTROL PANEL WILL ALTERNATE LEAD AND LAG BOILERS ON A WEEKLY BASIS. THE DDC CONTROLS WILL ENABLE AND DISABLE THE BOILER SEQUENCING CONTROL PANEL, MONITOR HEATING WATER SUPPLY AND RETURN TEMPERATURE, AND MONITOR BOILER ALARM STATUS. THE BOILER SEQUENCING CONTROL PANEL WILL OPEN THE MOTORIZED ISOLATION VALVE PRIOR TO ENABLING ANY BOILER AND CLOSE THE VALVE AFTER ANY BOILER IS DISABLED.

B. HEATING WATER PUMP CONTROL (TYPICAL FOR EXISTING PUMPS P-1 AND P-2):

 - THE DDC CONTROL SYSTEM FOR THE HOT WATER PUMPS SHALL BE DESIGNED TO START AND STOP THE PUMPS AND MODULATE THEIR SPEED AS REQUIRED BY SYSTEM DEMANDS. THE SYSTEM SHALL MAINTAIN DIFFERENTIAL PRESSURE AT A REMOTE LOCATION FOR THE HOT WATER SYSTEM AS INDICATED ON THE PLANS. THE SETPOINT SHALL BE USED TO PROPERLY CONTROL THE PRESSURE IN THE SYSTEM AND OPTIMIZE THE PUMP OPERATION AND SYSTEM OPERATION. THE DDC CONTROLLER SHALL HAVE FIELD PROGRAMMABLE INDEPENDENT SETPOINTS, THE VALUE OF WHICH SHALL BE THE OPTIMUM DIFFERENTIAL PRESSURE AS DESIGNED FOR EACH REMOTE LOCATION AND AS SHOWN ON THE PLANS, PROVIDED MORE THAN ONE IS REQUIRED.
 - DOWNSTREAM DIFFERENTIAL PRESSURE CONTROL: AFTER THE LEAD HEATING WATER PUMP (P-1) HAS STARTED, AS PREVIOUSLY DESCRIBED, THE DDC WILL CONTROL PUMP SPEED TO MAINTAIN DOWNSTREAM HEATING WATER DIFFERENTIAL PRESSURE AT ITS SETPOINT. THE DOWNSTREAM DIFFERENTIAL PRESSURE TRANSMITTER WILL INPUT THE DOWNSTREAM HEATING WATER DIFFERENTIAL PRESSURE TO THE DDC. SHOULD THE DOWNSTREAM HEATING WATER DIFFERENTIAL PRESSURE BEGIN TO FALL BELOW ITS SETPOINT, THE DDC WILL SIGNAL THE PUMP VFD TO INCREASE PUMP SPEED, ON A CONTINUED FALL IN DIFFERENTIAL PRESSURE, WHEN THE LEAD HOT WATER PUMP (P-1) HAS REACHED ITS MAXIMUM FLOW, THE DDC SHALL START THE LAG HOT WATER PUMP (P-2). UPON PROOF OF LAG HOT WATER PUMP OPERATION, THE DDC SHAL MODULATE BOTH EXISTING PUMPS P-1 AND P-2 TO MAINTAIN HOT WATER DIFFERENTIAL PRESSURE. SHOULD THE DOWNSTREAM HEATING WATER DIFFERENTIAL PRESSURE BEGIN TO RISE ABOVE ITS SETPOINT, THE REVERSE SHALL OCCUR. THE MINIMUM SPEED ALLOWABLE AT EACH PUMP VFD SHALL BE 20 HZ.
- C. BOILER CONTROL:

 - THE BOILER SYSTEM CONTROLS SHALL BE INTEGRATED TO THE BUILDING DDC SYSTEM THROUGH BACNET MS/TP INTERFACE FOR MONITORING. ALL CONTROL WIRING WILL BE VIA HARD WIRED CONNECTIONS.
 - AFTER THE DDC HAS STARTED THE LEAD HEATING WATER PUMPS, AS PREVIOUSLY DESCRIBED, THE DDC WILL ENABLE THE LEAD BOILER THROUGH THE BOILER MANUFACTURER'S SEQUENCING CONTROL PANEL. THE LEAD BOILER WILL START AND OPERATE TO MAINTAIN LEAVING HEATING WATER TEMPERATURE AT ITS SETPOINT THROUGH ITS OWN CONTROLS.
 - THE BOILER MANUFACTURER'S SEQUENCING CONTROL PANEL SHALL SELECT A DIFFERENT BOILER WEEKLY TO ACT AS THE MAIN, INDEXING THE OTHER BOILER AS LAG BOILER.
 - THE BOILER MANUFACTURER'S SEQUENCING CONTROL PANEL SHALL STAGE THE BOILERS TO MAXIMIZE TIME SPENT AT THE LOWEST FIRING RATE, MAXIMIZING EFFICIENCIES.

D. HEATING WATER RESET CONTROL:

 - THE BOILER MANUFACTURER'S SEQUENCING CONTROL PANEL SHALL RESET THE HEATING WATER SUPPLY TEMPERATURE INVERSELY WITH RESPECT TO THE OUTSIDE AIR TEMPERATURE AS MONITORED BY THE DDC SYSTEM BY CONTROLLING THE BOILER SUPPLY WATER TEMPERATURE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE: WHEN THE OUTSIDE AIR TEMPERATURE IS 20°F (ADJ.), THE HEATING WATER SUPPLY TEMPERATURE SHALL BE 140°F AND WHEN THE OUTSIDE AIR TEMPERATURE IS 65°F (ADJ.), THE HEATING WATER SUPPLY TEMPERATURE SHALL BE 110°F.
 - SHOULD THE HEATING WATER SUPPLY TEMPERATURE BEGIN TO FALL BELOW ITS CALCULATED SETPOINT, THE BOILER MANUFACTURER'S SEQUENCING CONTROL PANEL SHALL SEQUENCE ON ADDITIONAL BOILER AS REQUIRED TO MAINTAIN HEATING WATER RESET SETPOINT. SHOULD THE HEATING WATER SUPPLY TEMPERATURE BEGIN TO RISE ABOVE ITS CALCULATED SETPOINT, THE REVERSE WILL OCCUR.

E. THE BOILER POWER SUPPLY SHALL BE HARD WIRED TO AN EMERGENCY STOP BUTTON. WHEN THE BUTTON IS ENABLED, ALL BOILERS SHALL LOSE POWER AND STOP. THE GAS SOLENOID VALVES WITHIN THE BOILER SHALL CLOSE.

F. WHEN RUNTIME OF ONE BOILER OR PUMP EXCEEDS THAT OF THE OTHER BOILER OR PUMP BY 400 HOURS (ADJ.), THE DDC SYSTEM SHALL ISSUE AN ALARM.

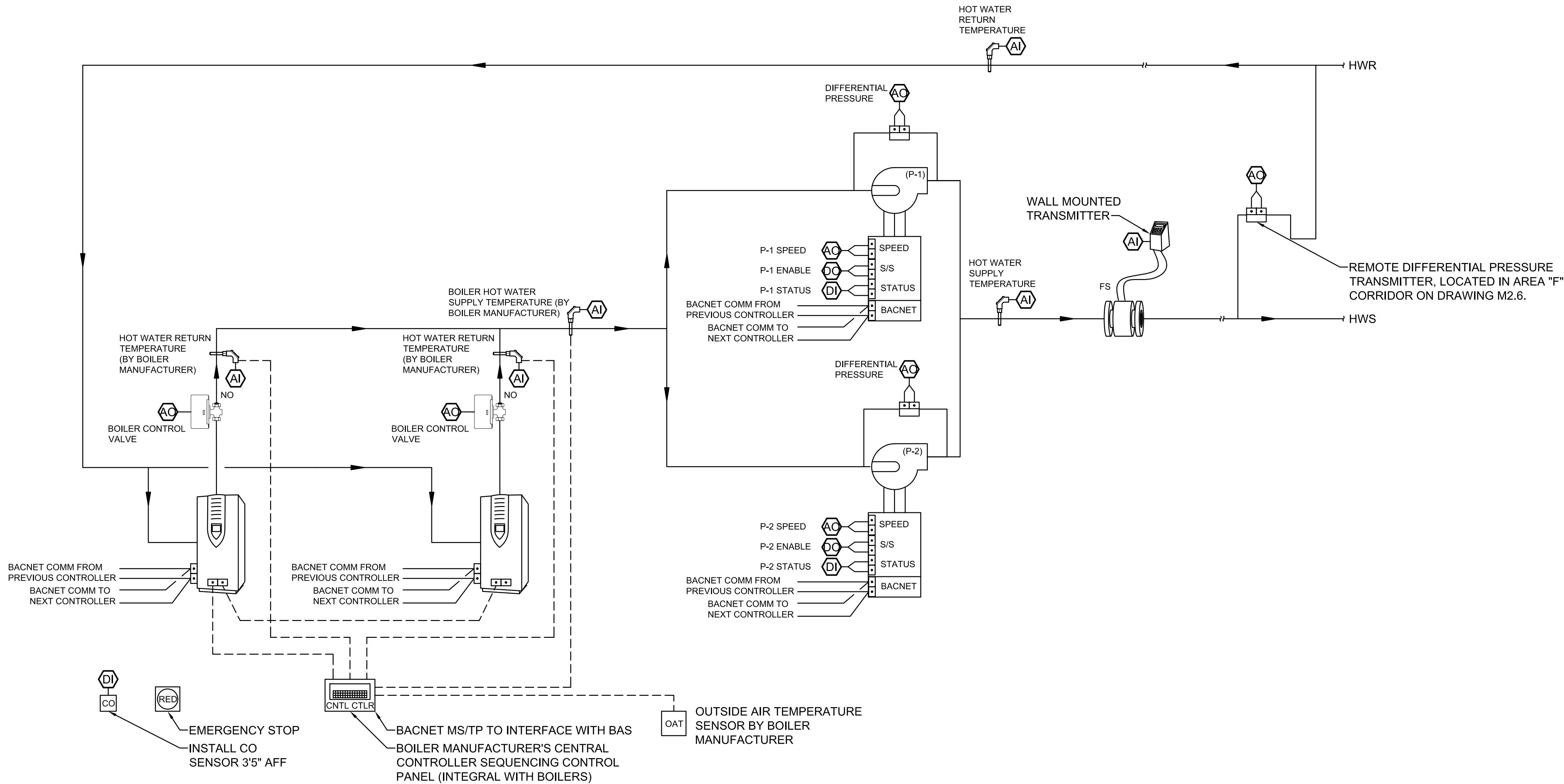
G. UPON DETECTION OF CARBON MONOXIDE CONCENTRATION OVER THE ACCEPTABLE LIMIT (10 PPM), THE BAS SHALL DISABLE THE BOILERS. AN AUDIBLE ALARM SHALL BE GENERATED FROM ANNUNCIATOR PANELS LOCATED IN THE MECHANICAL ROOM AND AN ALARM SHALL BE GENERATED AT THE OWNER'S WORKSTATION.

H. THE BAS SHALL ALTERNATE LEAD AND LAG PUMPS ON A WEEKLY BASIS.

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS		TREND	ALARM	SHOW ON GRAPHIC
	AI	AO	BI	BO	AV	BV			
HW SYSTEM ENABLE					X	X			X
OUTSIDE AIR TEMP					X		X		X
HW RETURN TEMP	X						X	X	X
HW SUPPLY TEMP	X						X	X	X
BOILER ENABLE COMMAND (TYP OF 2)				X					X
BOILER STATUS (TYP OF 2)			X				X		X
BOILER FAULT (TYP OF 2)			X					X	X
B-1 ISOLATION VALVE POSITION				X					X
B-2 ISOLATION VALVE POSITION				X					X
P-1 START/STOP				X					X
P-1 STATUS			X				X		X
P-1 SPEED			X					X	X
P-1 VFD FAULT			X					X	X
P-1 RUNTIME	X							X	X
P-1 FAILURE					X			X	X
P-2 START/STOP				X					X
P-2 STATUS				X			X		X
P-2 SPEED			X				X	X	X
P-2 VFD FAULT			X					X	X
P-2 RUNTIME	X							X	X
P-2 FAILURE					X			X	X
CARBON MONOXIDE ALARM	X		X		X	X	X	X	X
BOILER LOW WATER LEVEL (TYP OF 2)			X		X	X	X	X	X
BOILER ALARM STATUS (TYP OF 2)			X			X	X	X	X
BOILER RUNNING IN HAND (TYP OF 2)			X		X		X	X	X
BOILER RUNTIME (TYP OF 2)	X							X	X
BOILER FIRING RATE (TYP OF 2)				X					X
HIGH PRIMARY HWS TEMP (TYP OF 2)	X							X	X
LOW PRIMARY HWS TEMP (TYP OF 2)	X							X	X
HIGH HW DIFFERENTIAL PRESSURE	X							X	X
HIGH HOT WATER SUPPLY TEMP	X							X	X
LOW HW DIFFERENTIAL PRESSURE	X							X	X

NOTE: THE GRAPHICS SHALL INCLUDE THE SETPOINT DISPLAY FOR EACH CONTROLLED OR MONITORED VARIABLE. ALL POINTS INCLUDED IN THE BOILER MANUFACTURER'S CONTROL PANEL SHALL BE ACCESSIBLE FROM THE OWNER'S GRAPHICAL WORKSTATION.

HOT WATER SYSTEM POINTS LIST



HOT WATER HEATING CONTROL DIAGRAM



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

NEWPORT NEWS

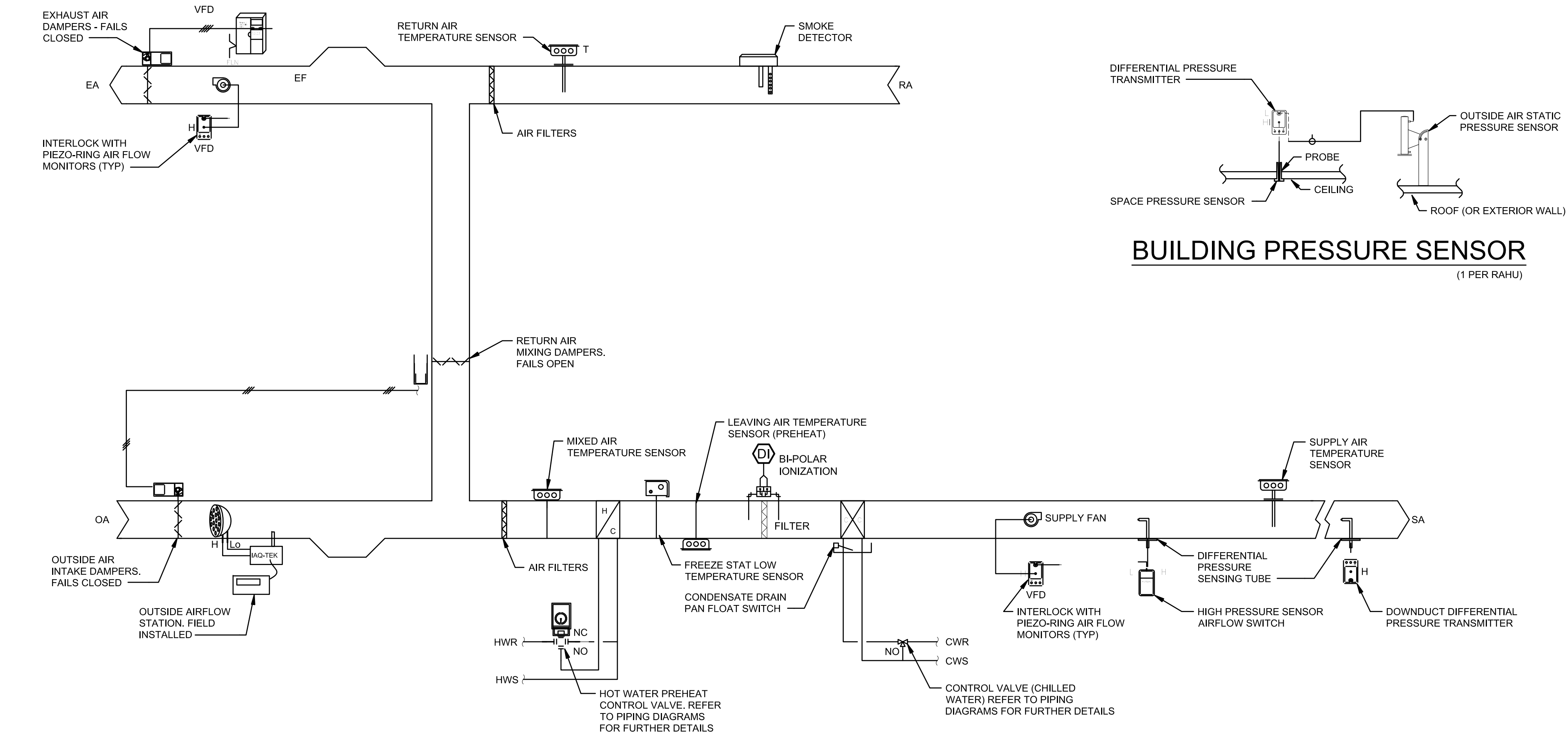
VIRGINIA

AUTOMATIC TEMPERATURE CONTROLS

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

M5.2

DATE: 01/26/2024



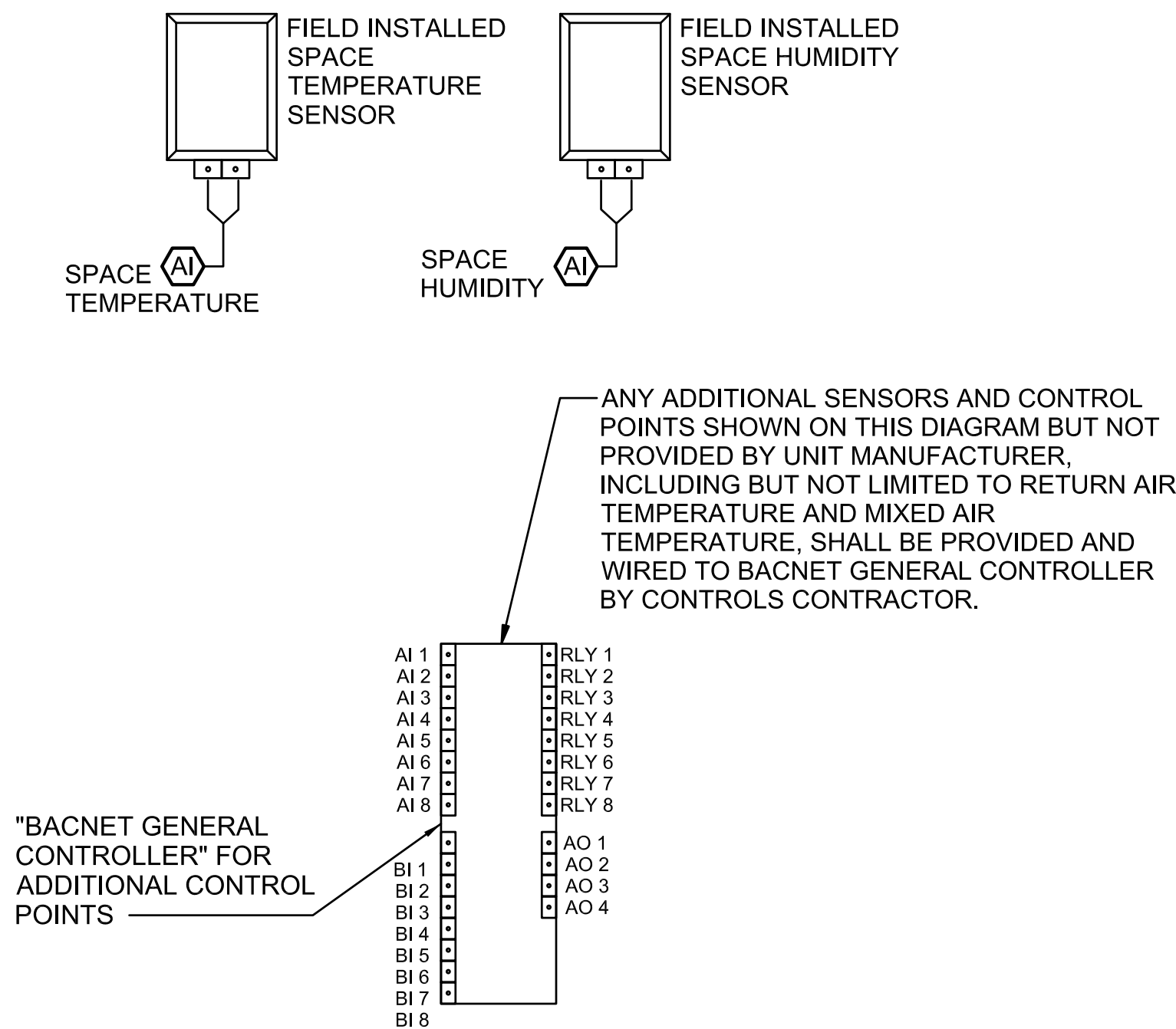
AHU 1, 2, AND 7 DDC CONTROLS DIAGRAM
NOT TO SCALE

GRAPHICAL USER INTERFACE MAIN SCREEN										
POINT NAME	HARDWARE POINTS				SOFTWARE POINTS			ALARMS		SHOW ON GRAPHIC
	AI	AO	DI	DO	AV	DV	TREND	NON-CRITICAL ALARM RENO	CRITICAL ALARM RENO	
OUTSIDE AIR DAMPER		X					X			X
RETURN AIR DAMPER		X					X			X
MIXING DAMPER		X					X			X
EXHAUST AIR DAMPER		X					X			X
OUTSIDE AIR CFM	X						X			X
EXHAUST FAN CFM	X						X			X
SUPPLY FAN CFM	X						X			X
MIXED AIR TEMPERATURE	X						X		X	X
SUPPLY FAN SPEED		X					X			X
EXHAUST FAN START/STOP				X			X			X
EXHAUST FAN STATUS			X				X			X
EXHAUST FAN VFD FAULT			X				X		X	X
EXHAUST FAN SPEED		X					X			X
DOWN DUCT STATIC PRESSURE	X						X	X		X
SUPPLY STATIC PRESSURE HIGH LIMIT			X				X		X	X
BUILDING STATIC PRESSURE	X						X			X
LOW LIMIT THERMOSTAT			X				X		X	X
SMOKE DETECTION			X				X		X	X
BIPOLAR IONIZATION MONITORING			X				X	X		X
SUPPLY STATIC PRESSURE SETPOINT					X		X			X
SUPPLY AIR TEMPERATURE SETPOINT					X		X			X
PREHEAT AIR TEMPERATURE SETPOINT					X		X			X
FAILED POINTS					X			X		X
LOW TEMPERATURE DISCHARGE (+/- 5 FROM SETPOINT)					X			X		X
ROOM TEMPERATURE DEVIATION FROM SETPOINT					X			X		X
CONDENSATE OVERFLOW PROTECTION			X				X		X	X

NOTE: 1. THE GRAPHICS SHALL INCLUDE THE SETPOINT DISPLAY FOR EACH CONTROLLED VARIABLE.
2. EXHAUST FANS LOCATED IN EACH AIR HANDLER ZONE SHALL BE SHOWN ON THE AIR HANDLER GRAPHIC PAGE.

AHU 1, 2, AND 7 POINTS LIST

NOTE: PROVIDE AND INSTALL NEW CONTROL AND VFD CABINETS ON UNITS ALONG WITH NEW CONTROLLER. REMOVE EXISTING CONTROL AND VFD CABINETS. DO NOT REUSE.



VAV AIR HANDLING UNIT

- A. AT OCCUPANCY TIME, THE DDC CONTROLLER SHALL MODULATE THE OUTSIDE AIR DAMPER OPEN TO MAINTAIN A MINIMUM OUTSIDE AIR CFM AS MEASURED BY THE AIRFLOW STATION, CLOSING THE RETURN AIR DAMPER A PROPORTIONAL AMOUNT.
- B. ON A FALL IN PREHEAT DISCHARGE TEMPERATURE TO THE SETPOINT OF THE DDC CONTROLLER, THE DDC CONTROLLER SHALL MODULATE THE HOT WATER HEATING COIL CONTROL VALVE TO MAINTAIN SETPOINT.
- C. ON A RISE IN SUPPLY AIR TEMPERATURE TO THE SETPOINT OF THE DDC CONTROLLER, THE DDC CONTROLLER SHALL MODULATE THE HOT WATER VALVE CLOSED. ON A FURTHER RISE IN DISCHARGE AIR TEMPERATURE, THE DDC SHALL CLOSE THE HOT WATER VALVE. ON A FURTHER RISE IN DISCHARGE AIR TEMPERATURE THE DDC CONTROLLER SHALL MODULATE THE OUTSIDE AIR DAMPER OPEN CLOSING THE RETURN AIR DAMPER A PROPORTIONAL AMOUNT FOR FREE COOLING. WHENEVER THE SETTING OF THE MIXED AIR TEMPERATURE LOW LIMIT IS REACHED, THE DDC CONTROLLER SHALL MODULATE THE OUTSIDE AIR DAMPER CLOSED TO ITS PRESET MINIMUM POSITION OPENING THE RETURN AIR DAMPER A PROPORTIONAL AMOUNT. WHENEVER THE OUTSIDE AIR TEMPERATURE RISES ABOVE THE SETPOINT OF THE DDC CONTROLLER, THE DDC CONTROLLER SHALL DISABLE THE ECONOMIZER CYCLE. ON A FURTHER RISE IN SUPPLY AIR TEMPERATURE, THE DDC CONTROLLER SHALL MODULATE THE CHILLED WATER VALVE OPEN TO THE COIL.
- D. AT OCCUPANCY TIME THE SUPPLY FAN SHALL BE ENABLED. THE DDC CONTROLLER SHALL SUPPLY A VOLTAGE INPUT TO THE SUPPLY AIR FAN VARIABLE FREQUENCY DRIVES (VFD) TO MAINTAIN DUCT STATIC PRESSURE SETPOINT AS MEASURED BY THE STATIC SENSOR LOCATED IN THE SUPPLY AIR DUCT. THE DDC CONTROLLER SHALL CONTINUOUSLY MONITOR THE PRIMARY AIR VALVE POSITION ON ALL TERMINAL VAV BOXES AND RESET THE SUPPLY DUCT STATIC PRESSURE SETPOINT SO THAT AT LEAST ONE TERMINAL VAV BOXES PRIMARY AIR VALVE IS AT LEAST 95% OPEN. WHENEVER THE DISCHARGE STATIC PRESSURE RISES ABOVE THE STATIC HIGH-PRESSURE SETPOINT, AS SENSED BY THE STATIC PRESSURE FAN SWITCH LOCATED IN THE FAN DISCHARGE, THE SUPPLY AND EXHAUST FAN SHALL BE DISABLED AND A MANUAL RESET WILL BE REQUIRED.
- E. ON A RISE IN SPACE PRESSURE TO THE SETPOINT OF THE DDC CONTROLLER, THE DDC CONTROLLER SHALL OPEN THE EXHAUST AIR DAMPER ENABLING THE EXHAUST FAN VFD TO MAINTAIN SPACE PRESSURE SETPOINT AS MEASURED BY THE STATIC PRESSURE SENSOR LOCATED IN THE SPACE. ON A FALL IN SPACE PRESSURE TO THE SETPOINT OF THE DDC CONTROLLER, THE REVERSE SEQUENCE SHALL OCCUR.
- F. FREEZE PROTECTION: SHOULD THE AIR TEMPERATURE INSIDE THE UNIT CABINET DROP TO 40°F (ADJ.) OR BELOW, THE LOW LIMIT THERMOSTAT SHALL DISABLE THE SUPPLY FAN, THE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL CLOSE, THE RETURN DAMPER SHALL OPEN, AND AN ALARM GENERATED. THE HOT WATER CONTROL VALVES SHALL MODULATE OPEN TO MAINTAIN MINIMUM CABINET TEMPERATURE.
- G. ON DETECTION OF PRODUCTS OF COMBUSTION, THE SMOKE DETECTOR SHALL STOP THE UNIT SUPPLY AIR FAN AND EXHAUST FAN, AND SEND A SIGNAL TO ALL ASSOCIATED VAV BOXES TO DISABLE THE BOX FANS.
- H. UNOCCUPIED MODE: WHEN THE BUILDING IS INDEXED FOR UNOCCUPIED OPERATION, THE DDC SHALL DISABLE THE SUPPLY AND EXHAUST FANS, CLOSE THE CHILLED WATER CONTROL VALVE, CLOSE THE OUTSIDE AIR AND EXHAUST AIR DAMPERS AND OPEN THE RETURN AIR DAMPER.
- I. NIGHT SET-BACK: WHEN THE BUILDING IS INDEXED FOR UNOCCUPIED OPERATION, THE DDC SHALL DISABLE THE SUPPLY AND EXHAUST FANS, MODULATE THE HOT WATER CONTROL VALVE IN ACCORDANCE WITH PARAGRAPH F ABOVE, CLOSE THE OUTSIDE AIR AND EXHAUST AIR DAMPERS AND OPEN THE RETURN AIR DAMPER. WHEN THE SPACE TEMPERATURE FALLS BELOW 60°F (ADJ.), THE DDC SHALL CYCLE THE LOCAL FAN POWERED TERMINAL UNITS TO MAINTAIN SPACE TEMPERATURE.
- J. NIGHT SET-UP: WHEN THE SPACE TEMPERATURE RISES TO 85°F (ADJ.) OR ABOVE, THE DDC SHALL ENABLE THE SUPPLY FAN AND MODULATE THE CHILLED WATER CONTROL VALVE TO MAINTAIN COOLING SETPOINT. WHEN THE SPACE TEMPERATURE FALLS TO 80°F (ADJ.), THE DDC SHALL DISABLE THE SUPPLY FAN AND CLOSE THE CHILLED WATER CONTROL VALVE.
- K. WARM-UP: WHEN THE OPTIMAL START PROGRAM CALLS FOR WARM-UP OPERATION, THE DDC SHALL ENABLE THE SUPPLY FAN AND MODULATE THE HOT WATER HEATING COIL VALVE FULLY OPEN, THE UNIT SHALL OPERATE WITH 100% RETURN AIR UNTIL SETPOINT IS REACHED.
- L. COOL-DOWN: WHEN THE OPTIMAL START PROGRAM CALLS FOR COOL-DOWN OPERATION, THE DDC SHALL ENABLE THE SUPPLY FAN AND MODULATE THE CHILLED WATER CONTROL VALVE TO MAINTAIN SUPPLY COOLING SET POINT. THE UNIT SHALL OPERATE WITH 100% RETURN AIR UNTIL SETPOINT IS REACHED.



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VIRGINIA

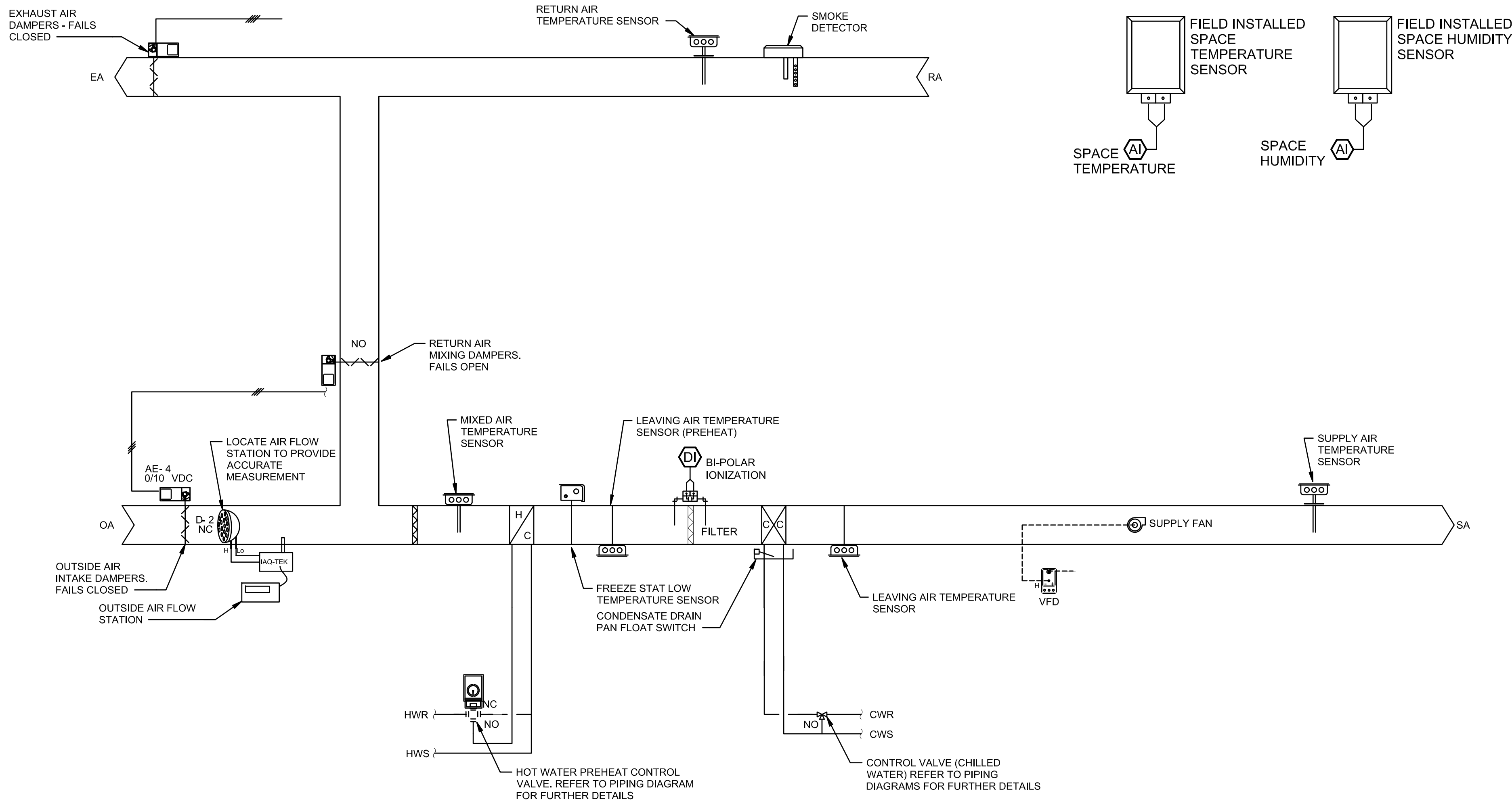
NEWPORT NEWS

AUTOMATIC TEMPERATURE CONTROLS

COMM. NO.: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

M5.3

DATE: 01/26/2024



AHU-3, 5, 8, 9, AND 10 DDC CONTROL DIAGRAM
NOT TO SCALE

GRAPHICAL USER INTERFACE MAIN SCREEN													
POINT NAME	HARDWARE POINTS				SOFTWARE POINTS			ALARMS				SHOW ON GRAPHIC	
	AI	AO	DI	DO	AV	DV	TREND	NON-CRITICAL ALARM PRIORITY 6	NON-CRITICAL ALARM PRIORITY 5	RENO LESS CRITICAL ALARM PRIORITY 4	RENO CRITICAL ALARM PRIORITY 3		
MIXED AIR DAMPER		X					X					X	
EXHAUST AIR DAMPER		X					X					X	
OUTSIDE AIR CFM	X						X					X	
SUPPLY FAN CFM	X						X					X	
MIXED AIR TEMPERATURE	X						X		X			X	
PREHEAT TEMPERATURE	X						X					X	
RETURN AIR TEMPERATURE	X						X					X	
HOT WATER VALVE		X					X					X	
CHILLED WATER VALVE		X					X					X	
SUPPLY TEMPERATURE	X						X					X	
SUPPLY FAN START/STOP				X			X					X	
SUPPLY FAN STATUS			X				X				X	X	
SUPPLY FAN VFD FAULT			X				X				X	X	
SUPPLY FAN SPEED		X					X					X	
LOW LIMIT THERMOSTAT			X				X				X	X	
SMOKE DETECTION			X				X				X	X	
BIPOLAR IONIZATION MONITORING			X				X		X			X	
SPACE CO2	X						X		X			X	
SPACE TEMPERATURE	X						X					X	
SPACE TEMPERATURE OVERRIDE SETPOINT					X		X					X	
SPACE TEMPERATURE SETPOINT					X		X					X	
SPACE HUMIDITY	X						X					X	
SPACE HUMIDITY SETPOINT					X		X					X	
HEAT TRACE (RAHU-4 ONLY)			X								X	X	
FAILED POINTS					X			X				X	
LOW TEMPERATURE DISCHARGE (+/-5 FROM SETPOINT)					X							X	
ROOM TEMPERATURE DEVIATION (+/-5 FROM SETPOINT)					X							X	
CONDENSER OVERFLOW PROTECTION			X								X	X	

NOTE: 1. THE GRAPHICS SHALL INCLUDE THE SETPOINT DISPLAY FOR EACH CONTROLLED VARIABLE.
2. EXHAUST FANS LOCATED IN EACH AIR HANDLER ZONE SHALL BE SHOWN ON THE AIR HANDLER GRAPHIC PAGE.

AHU-3, 5, 8, 9, AND 10 POINTS LIST

NOTE: PROVIDE AND INSTALL NEW CONTROL AND VFD CABINETS ON UNITS ALONG WITH NEW CONTROLLER. REMOVE EXISTING CONTROL AND VFD CABINETS. DO NOT REUSE.

CONSTANT VOLUME AIR HANDLING UNIT CONTROL (AHU-3, 5, 8, 9, AND 10)

- A. OCCUPIED MODE: WHEN THE BUILDING IS INDEXED FOR OCCUPIED OPERATION, AND IF THE UNIT IS NOT RUNNING ON WARM-UP, COOL-DOWN, OR OVERRIDE, THE DDC WILL OPEN THE OUTDOOR AIR DAMPER AND ENABLE THE SUPPLY FAN. THE DDC SHALL OPEN THE EXHAUST AIR DAMPER. THE UNIT 'S OUTSIDE AIR DAMPER SHALL BE OPENED TO THE " OCCUPIED " POSITION. DAMPER POSITIONS SHALL BE DETERMINED BY THE TAB CONTRACTOR.
- B. TEMPERATURE CONTROL: ON A FALL IN SPACE TEMPERATURE BELOW SETPOINT, THE DDC SHALL MODULATE THE HOT WATER PREHEAT COIL CONTROL VALVE OPEN. ON A CONTINUED FALL IN TEMPERATURE THE DDC SHALL MODULATE THE HOT WATER PREHEAT CONTROL VALVE OPEN. ON A RISE IN SPACE TEMPERATURE, THE DDC SHALL MODULATE THE CONTROL VALVE CLOSED. ON A FURTHER RISE IN THE SPACE TEMPERATURE ABOVE SETPOINT (ADJ.), THE DDC SHALL MODULATE THE CHILLED WATER CONTROL VALVE FULLY OPEN. ON A FALL IN SPACE TEMPERATURE, THE REVERSE SHALL OCCUR.
- C. FREEZE PROTECTION: SHOULD THE AIR TEMPERATURE INSIDE THE UNIT CABINET DROP TO 40°F OR BELOW, THE LOW LIMIT THERMOSTAT SHALL DISABLE THE SUPPLY FAN, THE OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL CLOSE, THE RETURN DAMPER SHALL OPEN, AND AN ALARM GENERATED. THE HOT WATER CONTROL VALVES SHALL MODULATE OPEN TO MAINTAIN MINIMUM CABINET TEMPERATURE.
- D. SMOKE CONTROL: SHOULD PRODUCTS OF COMBUSTION BE DETECTED, THE SUPPLY FAN WILL BE DISABLED, THE OUTDOOR AIR AND EXHAUST AIR DAMPERS WILL BE CLOSED, AND AN ALARM GENERATED.
- E. HUMIDITY CONTROL: ON A RISE IN SPACE HUMIDITY TO THE SETPOINT OF THE SPACE HUMIDISTAT SENSOR, THE DDC CONTROLLER SHALL MODULATE THE COOLING COIL CONTROL VALVE TO MEET HUMIDITY SETPOINT. SHOULD THE DEHUMIDIFICATION PROCESS CAUSE THE SPACE TO OVERCOOL, THE DDC CONTROLLER SHALL MODULATE THE SUPPLY FAN VFD TO SLOW THE FAN. ONCE THE FAN HAS REACHED EITHER THE 30% WIDE OPEN POSITION, OR THE SCHEDULED MINIMUM VENTILATION RATE, WHICHEVER IS HIGHER, THEN THE DDC CONTROLLER SHALL MODULATE THE HOT WATER REHEAT COIL VALVE TO MAINTAIN THE SPACE TEMPERATURE SETPOINT.
- F. UNOCCUPIED MODE: WHEN THE BUILDING IS INDEXED FOR UNOCCUPIED OPERATION, THE DDC SHALL DISABLE THE SUPPLY FAN, CLOSE THE CHILLED WATER AND HOT WATER CONTROL VALVES, CLOSE THE OUTSIDE AIR AND EXHAUST AIR DAMPERS, AND OPEN THE RETURN AIR DAMPER.
- G. NIGHT SET-BACK: WHEN THE SPACE TEMPERATURE FALLS BELOW SCHEDULED UNOCCUPIED HEATING SETPOINT (ADJ.), THE DDC SHALL ENABLE THE SUPPLY FAN AND MODULATE THE HOT WATER HEATING COIL CONTROL VALVE OPEN. WHEN THE SPACE TEMPERATURE RISES TO 65°F (ADJ.), THE DDC SHALL MODULATE THE HOT WATER CONTROL VALVE CLOSED AND DISABLE THE SUPPLY FAN.
- H. NIGHT SET-UP: WHEN THE SPACE TEMPERATURE RISES TO 5 DEG F ABOVE SCHEDULED UNOCCUPIED COOLING SETPOINT (ADJ.) OR ABOVE, THE DDC SHALL ENABLE THE SUPPLY FAN AND MODULATE OPEN THE CHILLED WATER CONTROL VALVE TO MAINTAIN SUPPLY COOLING SET POINT. WHEN THE SPACE TEMPERATURE FALLS TO BELOW SCHEDULED UNOCCUPIED COOLING SETPOINT (ADJ.), THE DDC SHALL DISABLE THE SUPPLY FAN AND CLOSE THE CHILLED WATER CONTROL VALVE.
- I. WARM-UP: WHEN THE OPTIMAL START PROGRAM CALLS FOR WARM-UP OPERATION, THE DDC SHALL ENABLE THE SUPPLY FAN AND MODULATE THE HOT WATER CONTROL VALVE TO MAINTAIN SUPPLY HEATING SETPOINT. THE UNIT SHALL OPERATE WITH 100% RETURN AIR UNTIL SETPOINT IS REACHED.
- J. COOL-DOWN: WHEN THE OPTIMAL START PROGRAM CALLS FOR COOL-DOWN OPERATION, THE DDC SHALL ENABLE THE SUPPLY FAN AND MODULATE OPEN THE CHILLED WATER CONTROL VALVE TO MAINTAIN COOLING SETPOINT. THE UNIT SHALL OPERATE WITH 100% RETURN AIR UNTIL SETPOINT IS REACHED.



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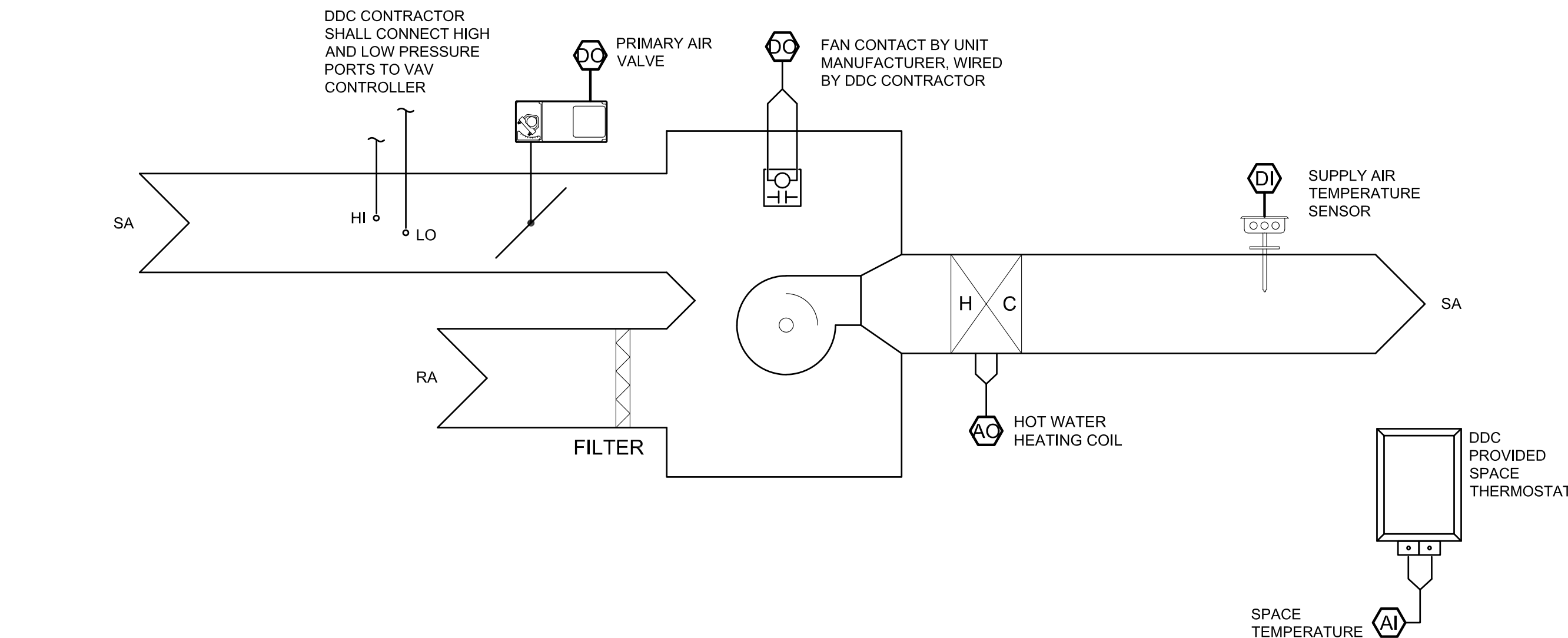
NEWPORT NEWS

AUTOMATIC TEMPERATURE CONTROLS

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CHECKED BY: KDA

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SERIES FAN POWERED TERMINAL UNIT CONTROL DIAGRAM

NOT TO SCALE

FAN POWERED SERIES VAV BOX WITH HOT WATER RE-HEAT

1. BUILDING AUTOMATION SYSTEM INTERFACE:

- a. THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED AND UNOCCUPIED COMMANDS. THE BAS MAY ALSO SEND A HEAT/COOL MODE, PRIORITY SHUTDOWN COMMANDS, SPACE TEMPERATURE AND/OR SPACE TEMPERATURE SETPOINT. IF COMMUNICATION IS LOST WITH THE BAS, THE VAV CONTROLLER SHALL OPERATE USING ITS LOCAL SETPOINTS.

2. OCCUPANCY MODE:

- a. THE OCCUPANCY MODE SHALL BE COMMUNICATED OR HARDWIRED TO THE VAV VIA A BINARY INPUT. VALID OCCUPANCY MODES FOR THE VAV SHALL BE:
- (1) OCCUPIED: NORMAL OPERATING MODE FOR OCCUPIED SPACES OR DAYTIME OPERATION. WHEN THE UNIT IS IN THE OCCUPIED MODE THE VAV SHALL MAINTAIN THE SPACE TEMPERATURE AT THE ACTIVE OCCUPIED HEATING OR COOLING SETPOINT. APPLICABLE VENTILATION AND AIRFLOW SETPOINTS SHALL BE ENFORCED. THE OCCUPIED MODE SHALL BE THE DEFAULT MODE OF THE VAV.
- (2) UNOCCUPIED: NORMAL OPERATING MODE FOR UNOCCUPIED SPACES OR NIGHTTIME OPERATION. WHEN THE UNIT IS IN UNOCCUPIED MODE THE VAV CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE AT THE STORED UNOCCUPIED HEATING OR COOLING SETPOINT REGARDLESS OF THE PRESENCE OF A HARDWIRED OR COMMUNICATED SETPOINT. WHEN THE SPACE TEMPERATURE EXCEEDS THE ACTIVE UNOCCUPIED SETPOINT THE VAV SHALL MODULATE FULLY CLOSED.
- (3) OCCUPIED BYPASS: MODE USED TO TEMPORARILY PLACE THE UNIT INTO THE OCCUPIED OPERATION. TENANTS SHALL BE ABLE TO OVERRIDE THE UNOCCUPIED MODE FROM THE SPACE SENSOR. THE OVERRIDE SHALL LAST FOR A MAXIMUM OF 4 HOURS (ADJ.). THE TENANTS SHALL BE ABLE TO CANCEL THE OVERRIDE FROM THE SPACE SENSOR AT ANY TIME. DURING THE OVERRIDE THE UNIT SHALL OPERATE IN OCCUPIED MODE.

3. HEAT/COOL MODE:

- a. THE HEAT/COOL MODE SHALL BE SET BY A COMMUNICATED VALUE OR AUTOMATICALLY BY THE VAV. IN STANDALONE OR AUTO MODE THE VAV SHALL COMPARE THE PRIMARY AIR TEMPERATURE WITH THE CONFIGURED AUTO CHANGEOVER SETPOINT TO DETERMINE IF THE AIR IS "HOT" OR "COLD". HEATING MODE SHALL COMMAND THE VAV TO HEAT ONLY; IT IMPLIES THE PRIMARY AIR TEMPERATURE IS HOT. COOLING MODE SHALL COMMAND THE VAV TO COOL ONLY; IT IMPLIES THE PRIMARY AIR TEMPERATURE IS COLD.

4. HEAT/COOL SETPOINT:

- a. THE SPACE TEMPERATURE SETPOINT SHALL BE DETERMINED EITHER BY A LOCAL (E.G., THUMBWHEEL) SETPOINT, THE VAV DEFAULT SETPOINT OR A COMMUNICATED VALUE. THE VAV SHALL USE THE LOCALLY STORED DEFAULT SETPOINTS WHEN NEITHER A LOCAL SETPOINT NOR COMMUNICATED SETPOINT IS PRESENT. IF BOTH A LOCAL SETPOINT AND COMMUNICATED SETPOINT EXIST, THE VAV SHALL USE THE COMMUNICATED VALUE.

5. COOLING MODE:

- a. WHEN THE UNIT IS IN COOLING MODE, THE VAV CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE AT THE ACTIVE COOLING SETPOINT BY MODULATING THE AIRFLOW BETWEEN THE ACTIVE COOLING MINIMUM AIRFLOW SETPOINT TO THE MAXIMUM COOLING AIRFLOW SETPOINT, BASED ON THE VAV CONTROLLER OCCUPANCY MODE, THE ACTIVE COOLING SETPOINT SHALL BE ONE OF THE FOLLOWING:

SETPOINT	DEFAULT VALUE
OCCUPIED COOLING SETPOINT	74.0 DEG. F
UNOCCUPIED COOLING SETPOINT	85.0 DEG. F
OCCUPIED STANDBY COOLING SETPOINT	78.0 DEG. F
OCCUPIED MIN COOLING AIRFLOW SETPOINT	SEE VAV SCHEDULE

OCCUPIED MAX COOLING AIRFLOW SETPOINT SEE VAV SCHEDULE

- b. THE VAV SHALL USE THE MEASURED SPACE TEMPERATURE AND THE ACTIVE COOLING SETPOINT TO DETERMINE THE REQUESTED COOLING CAPACITY OF THE UNIT. THE OUTPUTS WILL BE CONTROLLED BASED ON THE UNIT CONFIGURATION AND THE REQUESTED COOLING CAPACITY.

6. HEATING MODE:

- a. WHEN THE UNIT IS IN HEATING MODE, THE VAV CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE AT THE ACTIVE HEATING SETPOINT BY MODULATING THE AIRFLOW BETWEEN THE ACTIVE HEATING MINIMUM AIRFLOW SETPOINT TO THE MAXIMUM HEATING AIRFLOW SETPOINT, BASED ON THE VAV CONTROLLER OCCUPANCY MODE, THE ACTIVE HEATING SETPOINT SHALL BE ONE OF THE FOLLOWING:

SETPOINT	DEFAULT VALUE
OCCUPIED HEATING SETPOINT	71.0 DEG. F
UNOCCUPIED HEATING SETPOINT	60.0 DEG. F
OCCUPIED STANDBY HEATING SETPOINT	67.0 DEG. F
OCCUPIED MIN HEATING AIRFLOW SETPOINT	SEE VAV SCHEDULE
OCCUPIED MAX HEATING AIRFLOW SETPOINT	SEE VAV SCHEDULE

- b. THE VAV CONTROLLER SHALL USE THE MEASURED SPACE TEMPERATURE AND THE ACTIVE HEATING SETPOINT TO DETERMINE THE REQUESTED HEATING CAPACITY OF THE UNIT. THE OUTPUTS WILL BE CONTROLLED BASED ON THE UNIT CONFIGURATION AND THE REQUESTED HEATING CAPACITY.

7. CONTINUOUS FAN CONTROL:

- a. THE VAV FAN SHALL OPERATE CONTINUOUSLY IN ALL OCCUPIED MODES. DURING THE UNOCCUPIED MODE, THE PRIMARY AIR VALVE SHALL MODULATE FULLY CLOSED. THE TERMINAL FAN AND HEAT SHALL CYCLE AS NEEDED TO MAINTAIN A REDUCED SPACE TEMPERATURE.

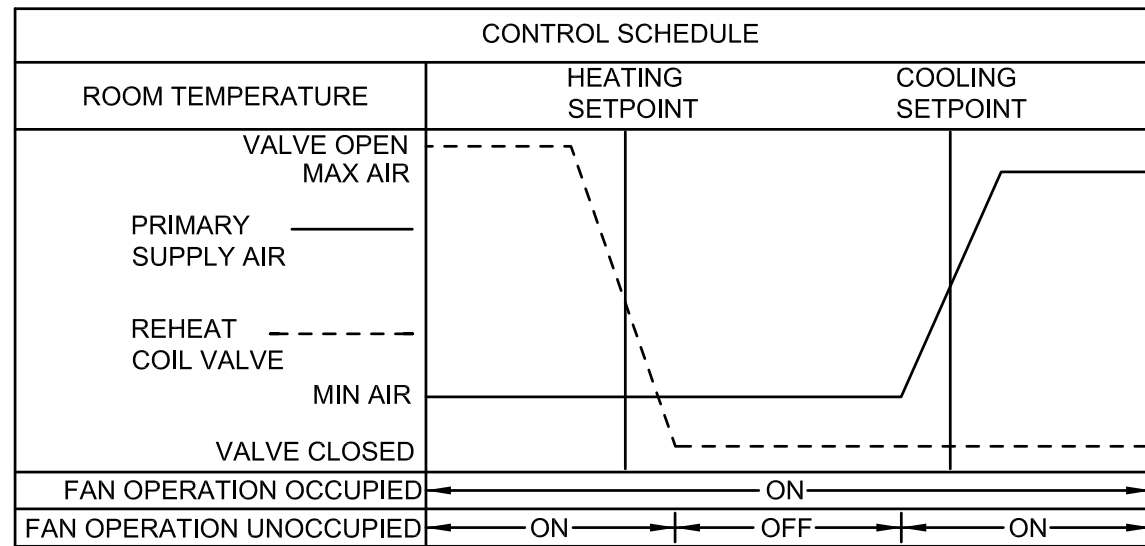
8. REHEAT CONTROL:

- a. REHEAT SHALL ONLY BE ALLOWED WHEN THE PRIMARY AIR TEMPERATURE IS 5.0 DEG. F BELOW THE CONFIGURED REHEAT ENABLE SETPOINT OF 70.0 DEG. F (ADJ.). THE REHEAT SHALL BE ENABLED WHEN THE SPACE TEMPERATURE DROPS BELOW THE ACTIVE COOLING SETPOINT AND THE AIRFLOW IS AT THE MINIMUM COOLING AIRFLOW SETPOINT, DURING REHEAT THE VAV SHALL OPERATE AT ITS MINIMUM HEATING AIRFLOW SETPOINT AND ENERGIZE THE HEAT AS FOLLOWS:

- b. HOT WATER REHEAT: IF THE SPACE TEMPERATURE FALLS BELOW THE HEATING SETPOINT, THE HOT WATER REHEAT VALVE SHALL BE MODULATED OPEN AS REQUIRED TO MAINTAIN THE ACTIVE HEATING SETPOINT.

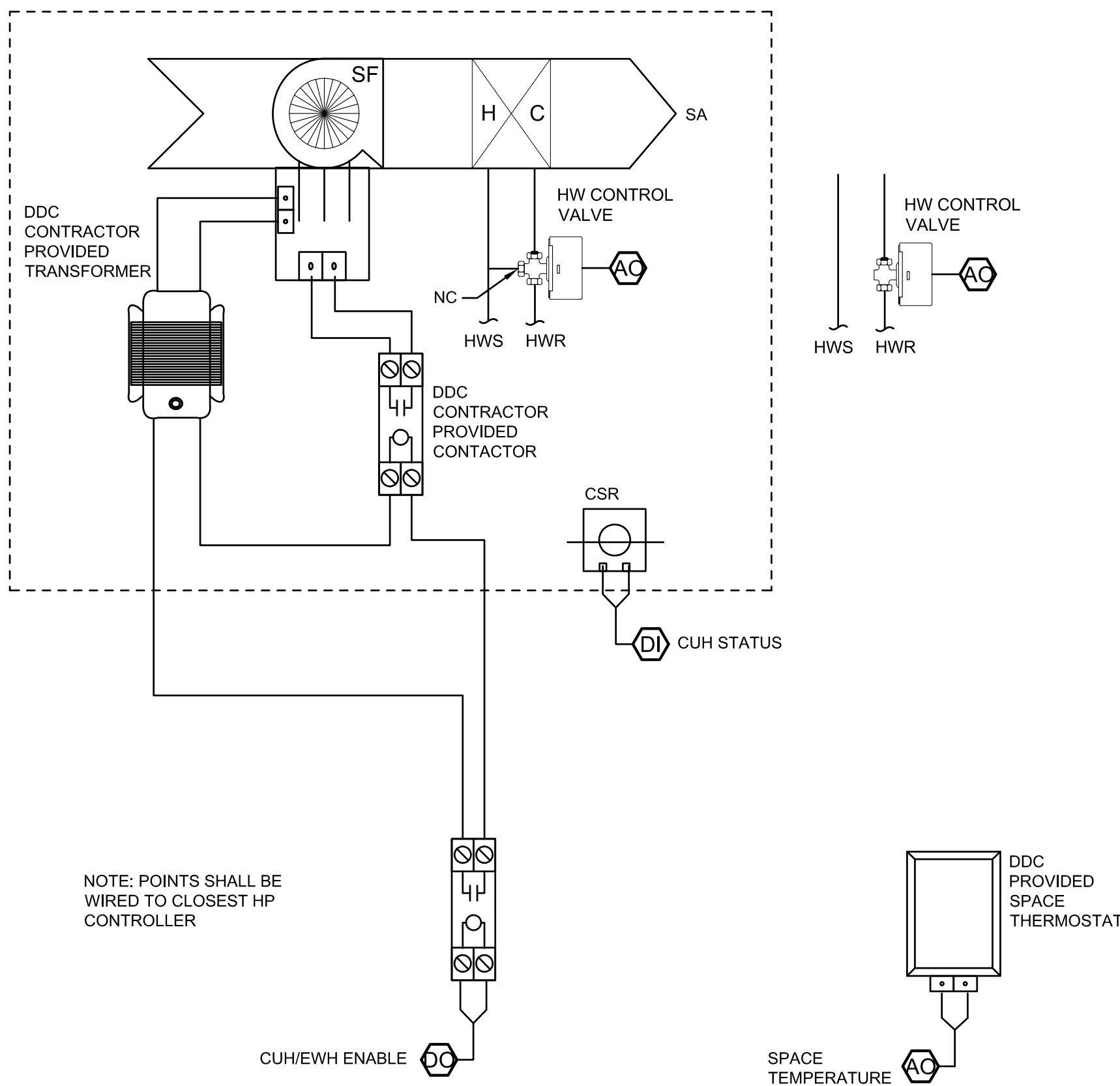
9. SPACE SENSOR FAILURE:

- a. IF THERE IS A FAULT WITH THE OPERATION OF THE ZONE SENSOR AN ALARM SHALL BE ANNUNCIATED AT THE BAS. SPACE SENSOR FAILURE SHALL CAUSE THE VAV TO DRIVE THE DAMPER TO MINIMUM AIR FLOW IF THE VAV IS IN THE OCCUPIED MODE, OR DRIVE IT CLOSED IF THE VAV IS IN THE UNOCCUPIED MODE. THE SERIES FAN SHALL BE ENABLED AND THE REHEAT WILL BE DISABLED.



POINT NAME	Hardware Points				Software Points		Trend	Alarm	Show on Graphic	DEFAULT VALUE
	AI	AO	DI	DO	AV	DV				
SPACE TEMPERATURE	X						X	X	X	
SPACE SETPOINT					X		X		X	
DISCHARGE AIR TEMPERATURE	X						X	X	X	
FAN			X				X	X	X	
HOT WATER VALVE				X			X	X	X	
PRIMARY AIR CFM	X								X	
BIPOLAR IONIZATION MONITORING			X				X	X	X	
OCCUPANCY						X				
OCCUPIED COOLING SETPOINT					X					74°F
OCCUPIED HEATING SETPOINT					X					71°F
UNOCCUPIED COOLING SETPOINT					X					85°F
UNOCCUPIED HEATING SETPOINT					X					60°F

NOTE: THE GRAPHICS SHALL INCLUDE THE SETPOINT DISPLAY FOR EACH CONTROLLED OR MONITORED VARIABLE.



HOT WATER CABINET UNIT HEATER/UNIT HEATER

NOT TO SCALE

UNIT HEATERS	Hardware Points				Software Points		TREND	ALARM	SHOW ON GRAPHIC
POINT NAME	AI	AO	DI	DO	AV	DV			
ENABLE/DISABLE SETPOINT		X		X			X	X	X
SPACE TEMPERATURE	X						X	X	X

UNIT HEATERS

- A. UNIT HEATERS SHALL BE CONTROLLED BY [WALL-MOUNTED THERMOSTATS], ON A FALL IN SPACE TEMPERATURE BELOW SETPOINT, THE FAN SHALL BE STARTED AND THE FAN SHALL BE STARTED AND THE HOT WATER HEATING COIL CONTROL VALVE SHALL FULLY OPEN. ON A RISE IN SPACE TEMPERATURE, THE REVERSE SHALL OCCUR. THE INITIAL SETPOINT SHALL BE 65°F. THE DDC SHALL PROVIDE A DO POINT(S) FOR ENABLING/DISABLING THE UNIT FANS.



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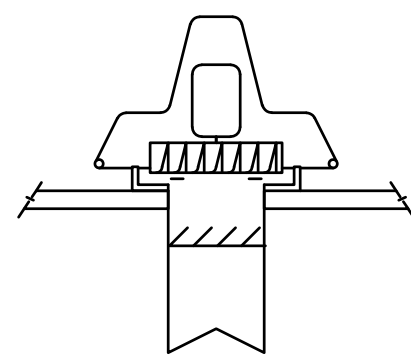
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AUTOMATIC TEMPERATURE CONTROLS

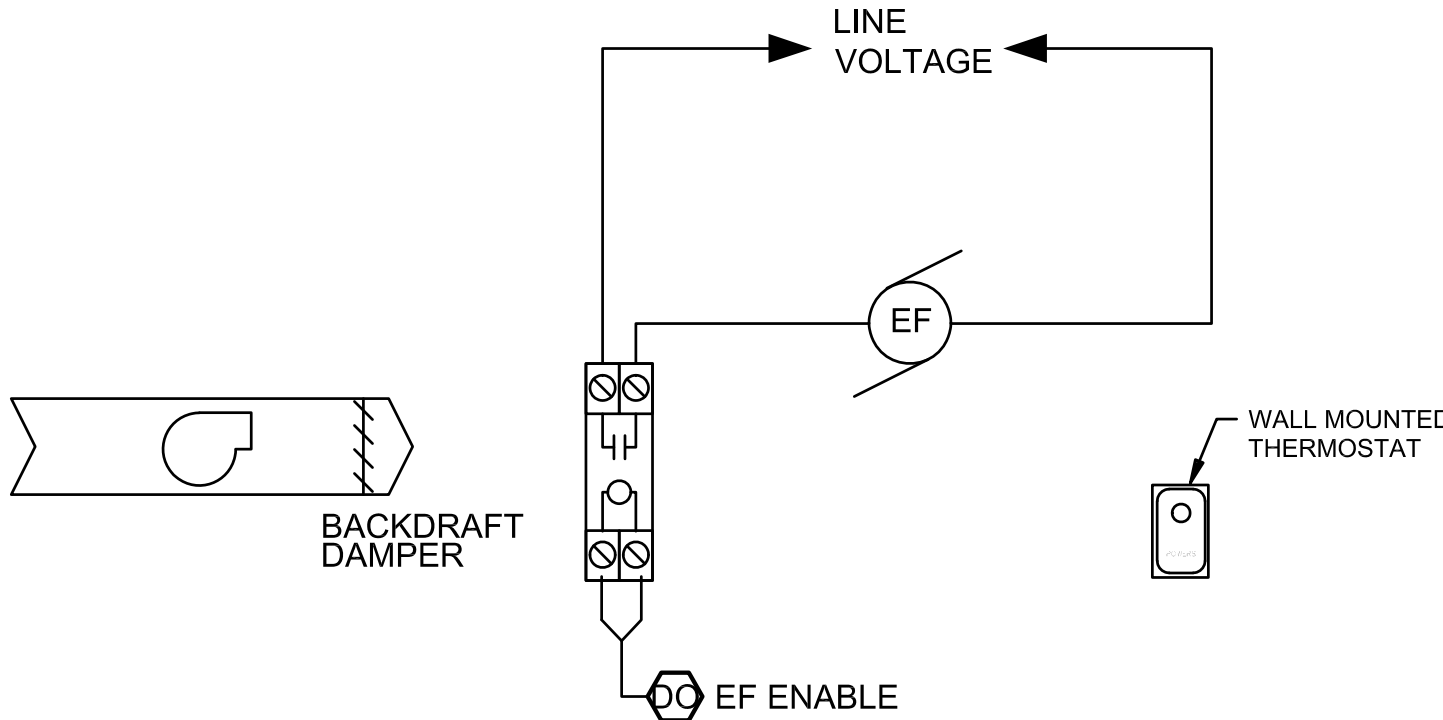
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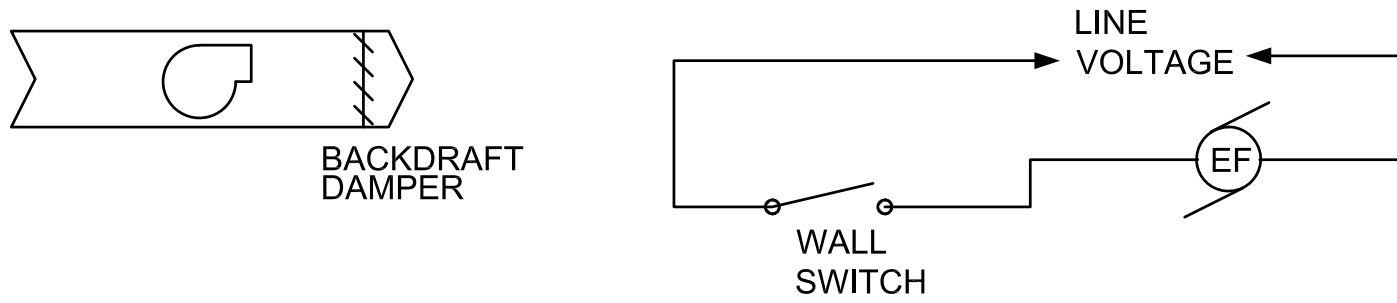
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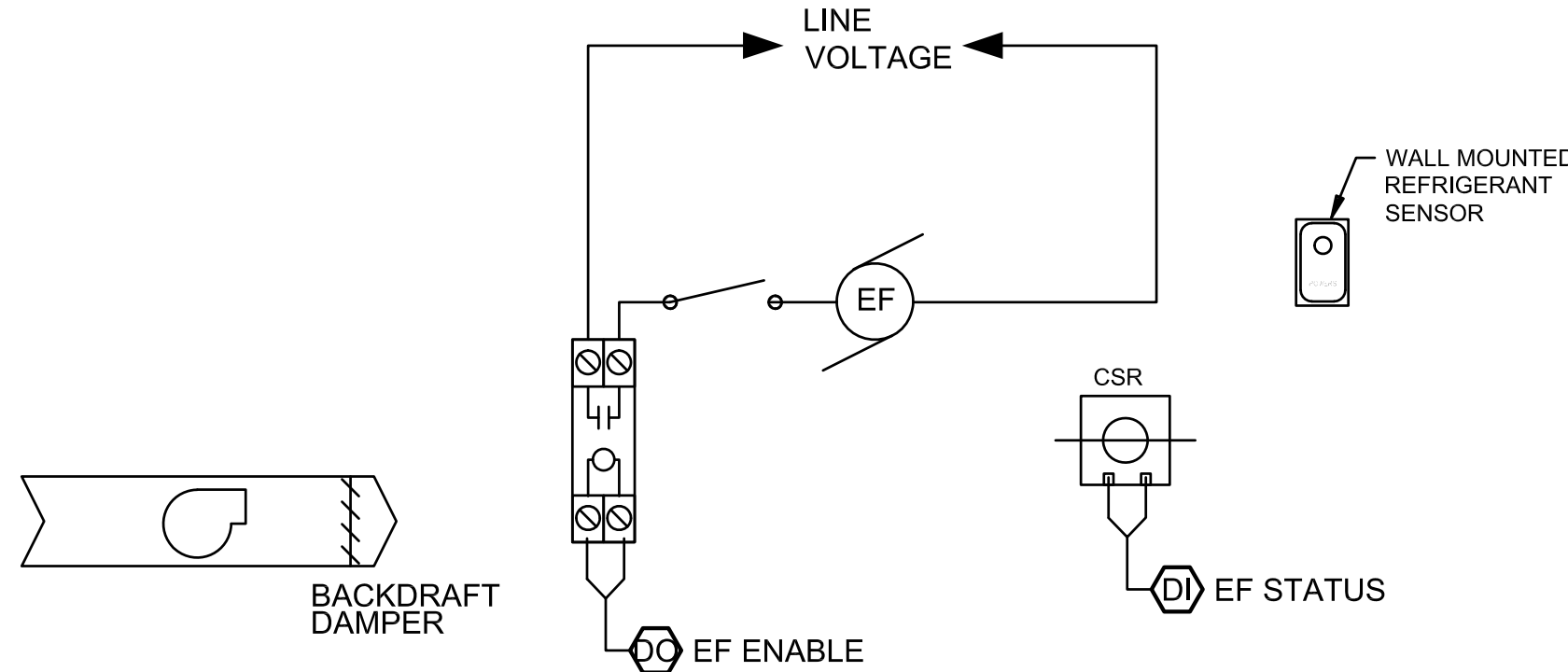
EF-3, 4, 5, 8 THRU 12, AND 16 DIAGRAM
NOT TO SCALE



EF-13 DIAGRAM
NOT TO SCALE



EF-1, 2, 6, AND 7 DIAGRAM
NOT TO SCALE



EF-15 DIAGRAM
NOT TO SCALE

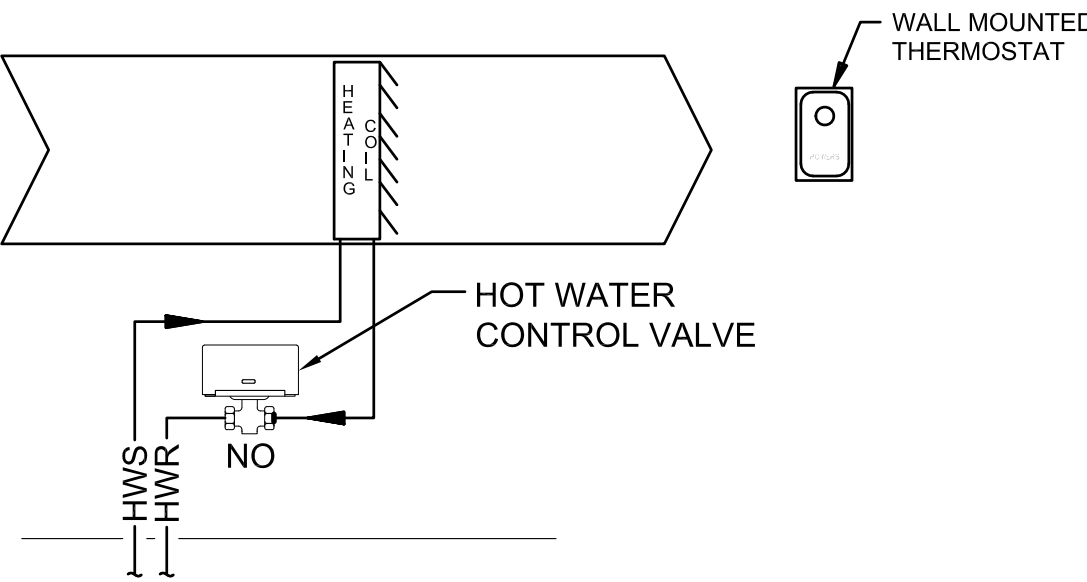
GENERAL EXHAUST FANS

- A. EXHAUST FANS 1 THROUGH 12 AND 16 SHALL BE CONTROLLED BY WALL MOUNTED SWITCHES ON A 60 MINUTE TIMER.
- B. EXHAUST FAN 13 SHALL BE CONTROLLED BY A LINE VOLTAGE THERMOSTAT SET TO 95°F.
- C. EXHAUST FAN 15 SHALL BE CONTROLLED BY THE REFRIGERANT SENSOR MOUNTED IN THE MECHANICAL ROOM BY THE CHILLER. AN ALARM SHALL BE SENT TO THE DDC SYSTEM AND AUDIO AND VISUAL ANNUNCIATORS WHEN THE FAN IS ENABLED.

MISCELLANEOUS	Hardware Points				Software Points		TREND	ALARM	SHOW ON GRAPHIC
	AI	AO	DI	DO	AV	BV			
EXHAUST FANS									X
ENABLE/DISABLE				X			X	X (EF-15)	X
STATUS			X				X	X	X

EXHAUST FAN DIAGRAMS CONTROLS DIAGRAMS
NOT TO SCALE

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS			ALARMS				SHOW ON GRAPHIC
	AI	AO	DI	DO	AV	DV	TREND	NON-CRITICAL ALARM PRIORITY 6	NON-CRITICAL ALARM PRIORITY 5	RENO LESS CRITICAL ALARM PRIORITY 4	RENO CRITICAL ALARM PRIORITY 3	
DUCT MOUNTED HEATING COIL				X								X



DUCT MOUNTED HEATING COIL

- A. THE DUCT HEATING COIL IS CONTROLLED BY A WALL MOUNTED LINE VOLTAGE THERMOSTAT. THE DDC SHALL HAVE A RELAY TO DISABLE HEAT OPERATION.

HOT WATER DUCT HEATING COIL
NOT TO SCALE



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT

NEWPORT NEWS PUBLIC SCHOOLS

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VIRGINIA

AUTOMATIC TEMPERATURE CONTROLS

COMM. NO: 22-113
DESIGNED BY: CEP
DRAWN BY: JAR
CHECKED BY: KDA

M5.6

DATE: 01/26/2024

BILL OF MATERIAL AHU-6			
TAG	PART NUMBER	DESCRIPTION	QTY
MZ*	MZ2-1E	MICROZONE2 DDC CONTROLLER	2
FZ-1	W-FS-53	LOW LIMIT	1
TS-1	TS-8422	22' AVG. ELEM. TEMP SENSOR	1
HS-*	HS-3004	SPACE HUMIDITY SENSOR	2
R-*	P-125-3-1	SPDT RELAY 24V COIL	5
R-*	P-100-4	BASE FOR P-127-X-X RELAYS	5
	ENCL-100	ENCLOSURE	1
PS-1	P-200-1-L-1	24VDC POWER SUPPLY	1
M-1	MS40-NF24	SPG. RET. DAMPER ACTUATOR	2
XFMR-1	T-201	120VP/24VS 50VA XFMR	1
XFMR-2	T-201	120VP/24VS 50VA XFMR	1
SP-1	PP-2408	STATIC PRESSURE SENSOR	1
SP-2	PP-2408	STATIC PRESSURE SENSOR	1
TS-4	TS-8201	TEMP SENSOR, BALCOQ (Q/A)	1
TS-2, TS-3	TS-8405	5' AVG. ELEM. TEMP SENSOR	2

- GENERAL DEMOLITION NOTES: (THIS SHEET ONLY)
- EXISTING POINTS LIST, DIAGRAMS, AND SEQUENCES OF OPERATION FROM 2016 CHESAPEAKE CONTROLS, INC.
 - EXISTING CONTROLS INFORMATION PROVIDED ON THIS SHEET TO BE USED FOR NEW CONTROLLERS INSTALLED ON ALL EXISTING TO REMAIN EQUIPMENT NOT MODIFIED DURING THIS PROJECT.



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
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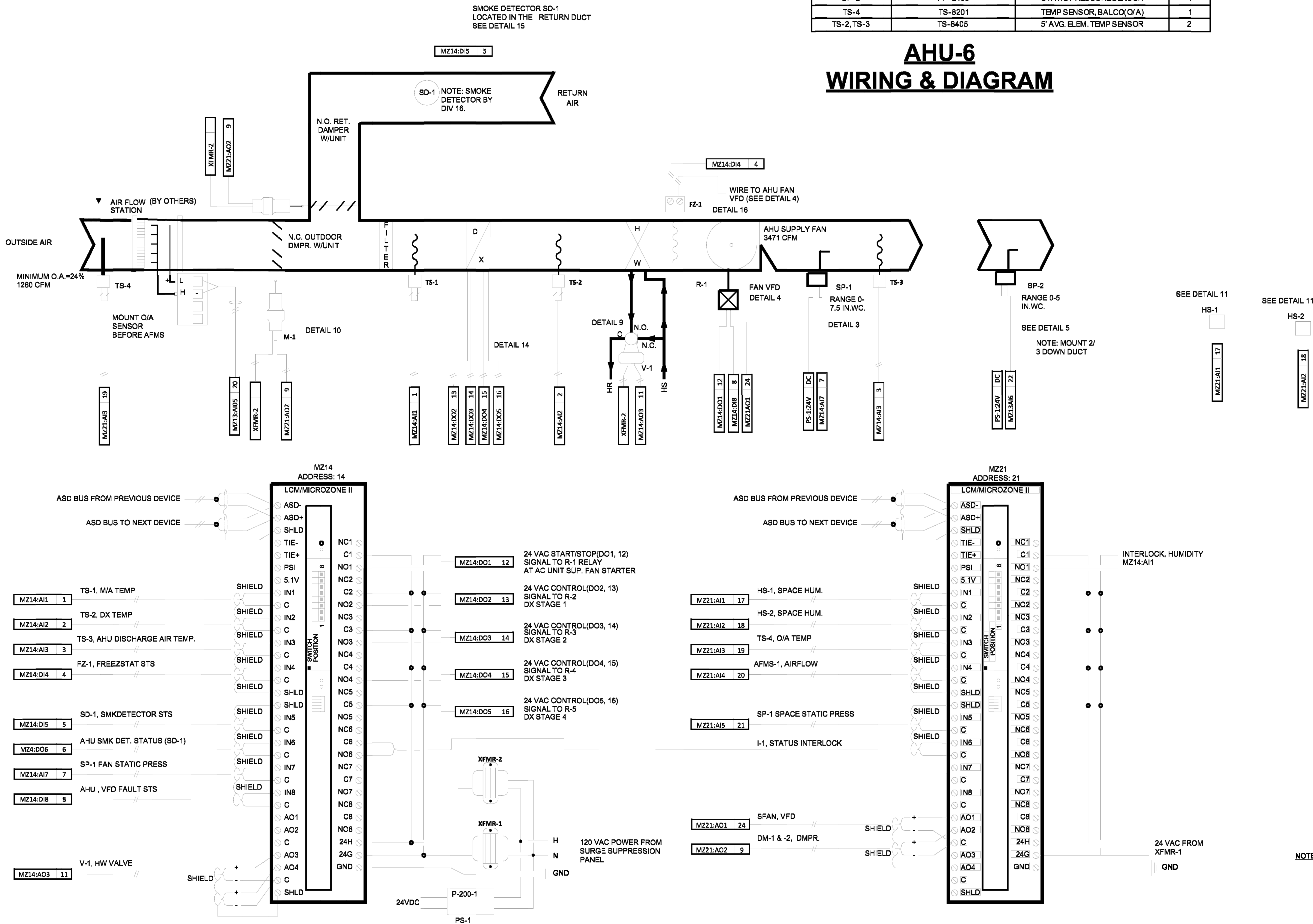
EXISTING AUTOMATIC TEMPERATURE CONTROLS

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CHECKED BY: KDA

M5.7

DATE: 01/26/2024

AHU-6 WIRING & DIAGRAM



- NOTES:**
- OBSERVE POLARITY ON ALL 24VAC POWER WIRING
 - OBSERVE POLARITY ON ASD BUS WIRING
 - *=ADDITIONAL MISC. PARTS REQUIRED TO COMPLETE INSTALLATION
 - UNLESS OTHERWISE NOTED ALL WIRING IS 2 COND. TWISTED/SHIELDED PAIR

SEQUENCE OF OPERATION AHU-6

AHU-6 GENERAL:

AHU-6 IS A VARIABLE AIR VOLUME SYSTEM. SPEED OF THE FAN MOTOR WILL BE CONTROLLED BY ELECTRONIC VARIABLE FREQUENCY DRIVE UNITS (VFD). THE BAS WILL SIGNAL THE VFD TO MAINTAIN FAN RPM AS LOW AS POSSIBLE. ACTION ON THE SUPPLY FAN WILL BE DETERMINED BASED ON THE NEEDS OF THE VARIABLE VOLUME TERMINAL BOXES (VB'S) ON THE SYSTEM. AHU-6 WILL HAVE OUTDOOR AIR MONITORING CAPABILITY AND WILL MAINTAIN THE QUANTITY OF OUTDOOR AIR SPECIFIED IN THE AIR HANDLING UNIT SCHEDULE ON THE DRAWINGS. WHEN THE SUPPLY FAN IS NOT IN OPERATION, THE CONDENSING UNIT WILL BE OFF AND ALL DAMPERS WILL BE CLOSED. REHEAT COIL CONTROL VALVE WILL BE OPEN. AHU-6 IS EQUIPPED WITH A DX COIL. WHEN THE SUPPLY FAN IS IN OPERATION, THE RELIEF DAMPER WILL OPEN. THE RETURN DAMPER WILL TRACK PROPORTIONALLY WITH THE OUTSIDE AIR DAMPER SUCH THAT WHEN THE OUTSIDE AIR DAMPER IS 100% OPEN THE RETURN DAMPER WILL BE CLOSED.

AHU-6 SYSTEM STARTUP:

THE SYSTEM WILL RUN AS DETERMINED BY THE OFF-AUTO SWITCHES LOCATED ON THE VFD CONTROL CABINET. THESE TWO MODES WILL BE EXECUTED AS FOLLOWS:
1. **OFF:** THE CONDENSING UNIT WILL BE OFF AND ALL DAMPERS WILL BE CLOSED. THE REHEAT COIL CONTROL VALVE WILL BE OPEN.
2. **AUTO:** THIS POSITION WILL ALLOW FULLY AUTOMATIC OPERATION OF THE FAN SYSTEMS DIRECTED BY THE BUILDING AUTOMATION SYSTEM (BAS). THIS IS THE NORMAL AND PREFERRED METHOD OF OPERATION. WHEN THE SYSTEM IS TURNED ON BY THE BAS THE OUTDOOR AIR DAMPER WILL REMAIN CLOSED DURING INITIAL BUILDING WARM-UP/COOL-DOWN. AHU-6'S VFD WILL ENERGIZE THE SUPPLY AIR FAN AND BEGIN AUTOMATICALLY TO CONTROL FREQUENCY AS REQUIRED TO MAINTAIN DOWN-DUCT STATIC PRESSURE AT THE MINIMUM REQUIRED TO SATISFY THE NEEDS OF THE CRITICAL ZONE. THE CONDENSING UNIT WILL BE ENABLED. AFTER MORNING WARM-UP/COOL-DOWN THE OUTDOOR AIR DAMPER WILL MODULATE TO MAINTAIN MINIMUM OUTDOOR AIR.

AHU-6 SUPPLY FAN SPEED CONTROL:

A STATIC PRESSURE SENSOR WILL BE LOCATED AT A POINT 2/3'S OF THE DISTANCE FROM THE SUPPLY FAN TO THE END OF THE LONGEST TRUNK DUCT. LOCATIONS WHICH RESULT IN EXTREME VARIATIONS IN STATIC PRESSURE DUE TO TERMINAL BOX OPERATION WILL BE AVOIDED. THE STATIC PRESSURE SENSOR WILL FUNCTION AS THE CONTROL INPUT TO THE BAS DISTRIBUTED PROCESSOR (AND THUS TO THE VFD) SUCH THAT A FALL IN DOWN-DUCT STATIC PRESSURE WILL RESULT IN A PROPORTIONAL INCREASE IN SUPPLY FAN SPEED TO MAINTAIN SETPOINT. THE STATIC PRESSURE SETPOINT WILL BE DETERMINED IN ACCORDANCE WITH THE NEXT PARAGRAPH. ON A RISE IN DOWN-DUCT STATIC PRESSURE, THE REVERSE WILL OCCUR. INITIAL MAXIMUM STATIC PRESSURE SETPOINT WILL BE 1.0 INCHES W.G. AND WILL BE ADJUSTABLE.

DOWN DUCT STATIC PRESSURE SETPOINT: THE BUILDING AUTOMATION SYSTEM WILL CONTINUOUSLY MONITOR THE DAMPER POSITION OF ALL VARIABLE AIR VOLUME TERMINAL DISTRIBUTION BOXES (VB'S). WHEN ANY DAMPER OPENS BEYOND THE MAXIMUM SETPOINT (INITIALLY 85%), THE BAS WILL RESET THE DOWN-DUCT STATIC PRESSURE SETPOINT UPWARD BY 5 % (ADJUSTABLE) OF THE MAXIMUM STATIC PRESSURE SETPOINT. THIS WILL OCCUR AT 10 MINUTE (ADJUSTABLE) INTERVALS UNTIL NO DAMPER IS MORE THAN 85% OPEN, OR THE STATIC PRESSURE HAS RESET TO THE SYSTEM MAXIMUM SETTING, OR THE VFD'S ARE AT THEIR MAXIMUM SETTING. WHEN ALL DAMPERS ARE OPENED LESS THAN THE MINIMUM SETPOINT (INITIALLY 85%), THE BAS WILL RESET THE DOWN-DUCT STATIC PRESSURE SETPOINT DOWNWARD BY 5% (ADJUSTABLE) OF THE MAXIMUM SYSTEM STATIC PRESSURE SETPOINT. THIS WILL OCCUR AT 10 MINUTE INTERVALS (ADJUSTABLE) UNTIL ANY DAMPER IS MORE THAN 85% OPEN, OR THE VFD'S ARE AT THEIR MINIMUM SETTING.

A SECOND STATIC PRESSURE SENSOR LOCATED IN THE SUPPLY FAN DISCHARGE DUCT WILL FUNCTION AS A SAFETY INPUT TO THE DISTRIBUTED PROCESSOR. AN INCREASE IN FAN DISCHARGE STATIC PRESSURE ABOVE SETPOINT (INITIALLY 3 INCHES W.G.) WILL CAUSE THE DISTRIBUTED PROCESSOR TO STOP THE FAN. AN ALARM WILL BE SENT TO THE BAS THAT THE UNIT HAS BEEN SHUT DOWN DUE TO FAN OVER-SPEED.

AHU-6 SUPPLY FAN DISCHARGE AIR TEMPERATURE CONTROL:

OCCUPIED: ON A RISE IN DISCHARGE AIR TEMPERATURE, THE BAS WILL START CONDENSING UNIT 1 AND WILL STAGE THE COMPRESSORS ON AS REQUIRED TO MAINTAIN SETPOINT (INITIALLY 54 Deg.F.). CONDENSING UNIT # 1 WILL BE EQUIPPED WITH HOT GAS BYPASS FOR PART LOAD OPERATION. ON A SUBSEQUENT FALL IN DISCHARGE AIR TEMPERATURE THE REVERSE WILL OCCUR.

ON A CONTINUED FALL IN UNIT DISCHARGE AIR TEMPERATURE TO 2 Deg.F. BELOW SETPOINT THE BAS WILL MODULATE THE REHEAT COIL CONTROL VALVE OPEN TO MAINTAIN 2 Deg.F. BELOW SETPOINT. ON A RISE TO 2 Deg.F. BELOW SETPOINT, THE VALVE WILL CLOSE.

UNOCCUPIED: ON A RISE IN DISCHARGE AIR TEMPERATURE, THE BAS WILL START CONDENSING UNIT 1 AND WILL STAGE THE COMPRESSORS ON AS REQUIRED TO MAINTAIN SETPOINT (INITIALLY 54 Deg.F.). CONDENSING UNIT # 1 WILL BE EQUIPPED WITH HOT GAS BYPASS FOR PART LOAD OPERATION. ON A SUBSEQUENT FALL IN DISCHARGE AIR TEMPERATURE THE REVERSE WILL OCCUR.

ON A CONTINUED FALL IN UNIT DISCHARGE AIR TEMPERATURE TO 2 Deg.F. BELOW SETPOINT THE BAS WILL MODULATE THE REHEAT COIL CONTROL VALVE OPEN TO MAINTAIN 2 Deg.F. BELOW SETPOINT. ON A RISE TO 2 Deg.F. BELOW SETPOINT, THE VALVE WILL CLOSE.

AHU-6 OCCUPIED/UNOCCUPIED:

OCCUPANCY TIMES: WILL BE DETERMINED BY BUILDING OCCUPANTS AND SUBSEQUENTLY PROGRAMMED INTO THE BAS.
OCCUPIED: THE BAS WILL KEEP THE OUTDOOR AIR DAMPER OPEN TO ITS MINIMUM REQUIRED POSITION, AS DEFINED BELOW.
UNOCCUPIED: THE BAS WILL CLOSE THE OUTDOOR AIR DAMPER.

AHU-6 OUTDOOR AIR DAMPER CONTROL:

MINIMUM OUTDOOR AIR:

OCCUPIED MODE: THE BAS WILL INSTITUTE A MINIMUM OUTDOOR AIR SETPOINT AS REQUIRED BY THE AIR HANDLING UNIT SCHEDULE ON THE DRAWINGS. THE AIRFLOW MEASURING STATION IN THE OUTDOOR AIR INTAKE WILL ACT AS AN INPUT TO THE BAS WHICH WILL IN TURN MODULATE THE OUTDOOR AIR DAMPER. IF THE OUTDOOR AIR FLOW FALLS BELOW SETPOINT, THE OUTDOOR AIR DAMPER WILL MODULATE OPEN. THIS WILL CONTINUE UNTIL SETPOINT IS ACHIEVED. IF THE OUTDOOR AIRFLOW INCREASES ABOVE SETPOINT THE REVERSE WILL OCCUR.

UNOCCUPIED MODE: THE BAS WILL INSTITUTE A ZERO CFM MINIMUM SETPOINT.

AHU-6 HUMIDITY CONTROL:

DEHUMIDIFICATION: ON A RISE IN THE AVERAGE READING OF TWO SPACE RELATIVE HUMIDITY SENSORS ABOVE SETPOINT (INITIALLY 55%), THE BAS WILL START CONDENSING UNIT #1 AND STAGE THE COMPRESSORS TO MAINTAIN THE DEHUMIDIFICATION SETPOINT (INITIALLY 50 Deg.F.). ON A SUBSEQUENT FALL IN THE AVERAGE HUMIDITY TO SETPOINT, THE BAS WILL RETURN DISCHARGE AIR TEMPERATURE TO ITS NORMAL SETPOINT.

AHU-6 FREEZE PROTECTION:

IF REHEAT COIL DISCHARGE AIR TEMPERATURE FALLS TO THE FREEZESTAT SETPOINT (INITIALLY 35 Deg.F.), AHU-6 THE SUPPLY FAN WILL BE STOPPED AND AN ALARM WILL BE SENT TO THE BAS. THIS FUNCTION WILL BE AUTOMATICALLY RESET.

AHU-6 LIFE SAFETY:

A SMOKE DETECTOR LOCATED IN THE RETURN AIR DUCT WILL, UPON DETECTION OF PRODUCTS OF COMBUSTION, SIGNAL THE BUILDING FIRE ALARM SYSTEM (WHICH WILL SUBSEQUENTLY SHUT DOWN THE FANS). THIS FUNCTION MUST BE MANUALLY RESET FROM THE AHU AND WILL BE SO IDENTIFIED ON THE HEAD END GRAPHICS. AN ALARM WILL ALSO BE PROVIDED TO THE BAS HEAD END.

AHU-6 SYSTEM SAFETY:

WHEN EVER THE FAN IS STOPPED OR AIR FLOW CEASES FOR ANY REASON (AS SENSED BY THE MOTOR STATUS SENSING CIRCUIT), POWER TO THE REHEAT COIL HOT WATER CONTROL VALVE WILL BE REMOVED AND THE VALVE WILL POSITION OPEN. THE OUTDOOR AIR DAMPER WILL BE POSITIONED CLOSED. THE MOTOR STATUS SENSING CIRCUIT IS DESCRIBED SPECIFICATION SECTION 15975. IN ALL MODES OF OPERATION, COMMANDED POSITION VALUES FOR ALL CONTROL DEVICES (CONDENSING UNITS, DAMPERS, VALVES, ETC.) WILL BE READABLE FROM THE HEAD END.

AHU-6 VB BOX CONTROL:

COOLING:

ON A RISE IN SPACE TEMPERATURE AS SENSED BY THE BAS, THE VARIABLE AIR VOLUME TERMINAL DISTRIBUTION BOX (VB) WILL MODULATE FROM ITS MINIMUM POSITION TO ITS MAXIMUM POSITION AS NEEDED TO MAINTAIN SETPOINT AS FOLLOWS:

OCCUPIED (INITIALLY 75 Deg.F.) THE VB WILL BE AT MINIMUM POSITION AT 75 Deg.F. AND FULL OPEN AT 77 Deg.F. THE HEATING COIL CONTROL VALVE WILL BE CLOSED.

UNOCCUPIED (INITIALLY 85 Deg.F.) THE VB WILL BE AT MINIMUM POSITION AT 85 Deg.F. AND FULL OPEN AT 87 Deg.F. THE HEATING VALVE WILL BE CLOSED.

HEATING:

HOT WATER COIL CONTROL: ON A FALL IN SPACE TEMPERATURE AS SENSED BY THE BAS, THE VB WILL MODULATE TO ITS MINIMUM POSITION, AND THE HEATING COIL CONTROL VALVE WILL MODULATE OPEN AS REQUIRED TO MAINTAIN SETPOINT AS FOLLOWS:

OCCUPIED (INITIALLY 70 Deg.F.) THE VALVE WILL BE CLOSED AT 77 Deg.F. AND FULL OPEN AT 68 Deg.F

UNOCCUPIED (INITIALLY 65 Deg.F.) THE VALVE WILL BE CLOSED AT 65 Deg.F AND FULL OPEN AT 63 Deg.F.

FAN CONTROL:

OCCUPIED: THE FAN WILL RUN CONTINUOUSLY.

UNOCCUPIED: FAN WILL CYCLE TO MAINTAIN SPACE TEMPERATURE.

EMERGENCY PROCEDURES:

LOSS OF NETWORK COMMUNICATION:

ON A LOSS OF NETWORK COMMUNICATION MZ14 AND MZ21 WILL DEFAULT TO THE UNOCCUPIED MODE(USER SELECTABLE BETWEEN OCCUPIED OR UNOCCUPIED MODE) AND OPERATE AS A STAND ALONE UNIT.

LOSS OF POWER:

UPON RESTORATION OF POWER THE GLOBAL CONTROL MODULE(GCM) WILL POLL INDIVIDUAL CONTROLLERS TO VERIFY COMMUNICATION. IF THE CONTROLLER IS ON-LINE AND COMMUNICATING THEN THE GCM WILL UPDATE EACH CONTROLLER AND RESUME NORMAL OPERATION. CONTROLLERS WHICH DO NOT COMMUNICATE WITH THE GCM WILL BE NOTED AS BEING OFF-LINE.

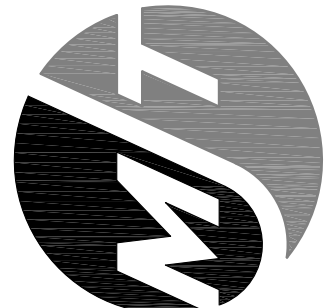
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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
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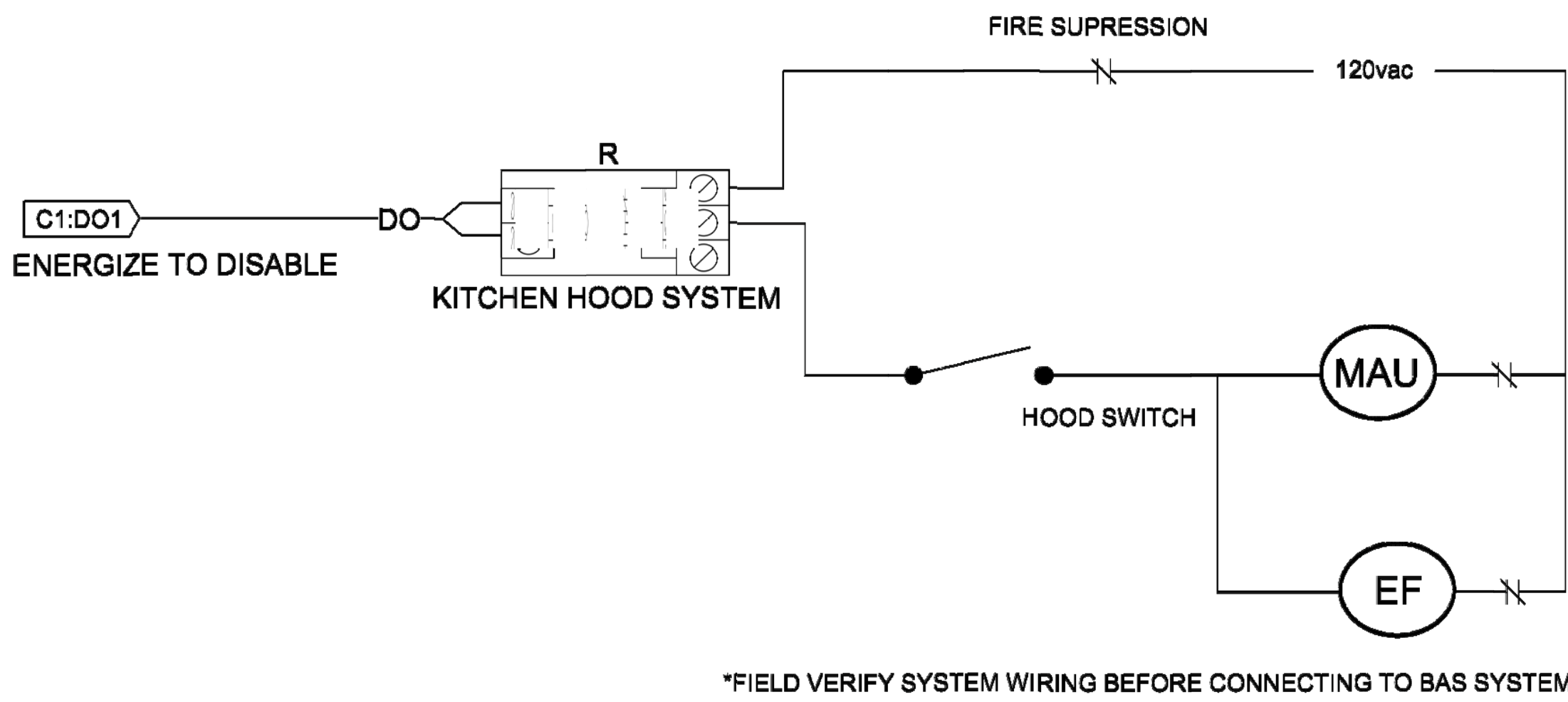
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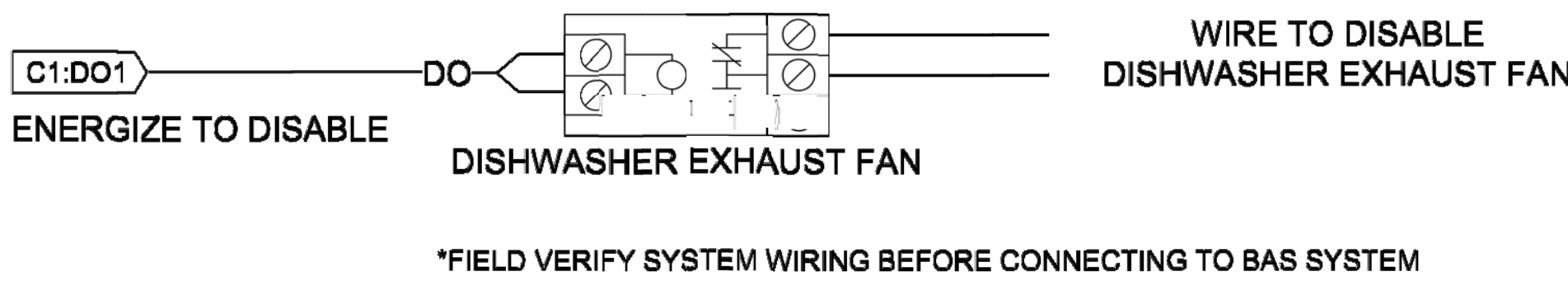
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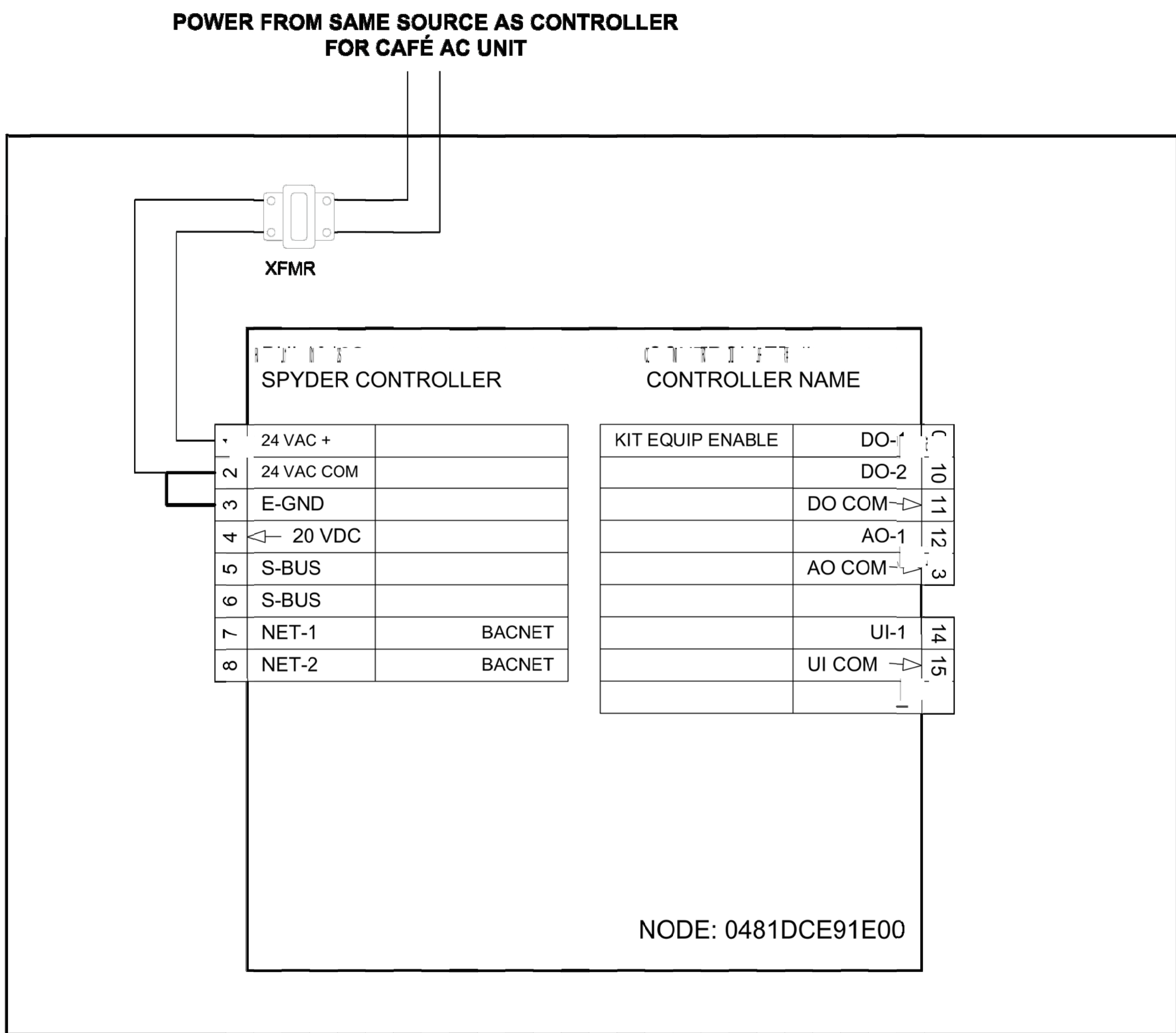
KITCHEN EQUIPMENT DIAGRAM



KITCHEN HOOD SYSTEM



DISHWASHER EXHAUST FAN



BILL OF MATERIAL KITCHEN EQUIPMENT				
TAG	DESCRIPTION	MANUFACTURER	PART NUMBER	QTY
2	RELAY	FUNCTIONAL DEVICES	RIB24P30	2
1	ENCLOSURE	SAGINAW	SCE-12N1204LP	1
1	BACK PANEL	SAGINAW	SCE-12N12MP	1
1	480/277/240/208/120/24VAC TRANSFORMER	FUNCTIONAL DEVICES	TR50VA004	1
1	LON CONTROLLER	HONEYWELL	PUL1012S	1

KITCHEN HOOD & EXHAUST SYSTEM

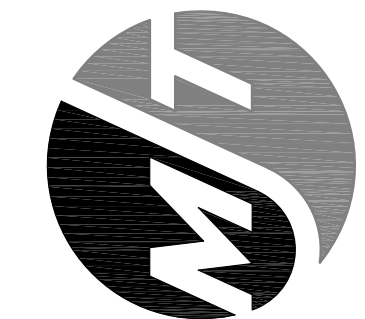
KITCHEN HOOD AND EXHAUST SYSTEMS WILL BE ENABLED BASED ON A TIME OF DAY SCHEDULE AND BASED ON CALENDAR EVENTS. SCHEDULE DETERMINED BY OWNER

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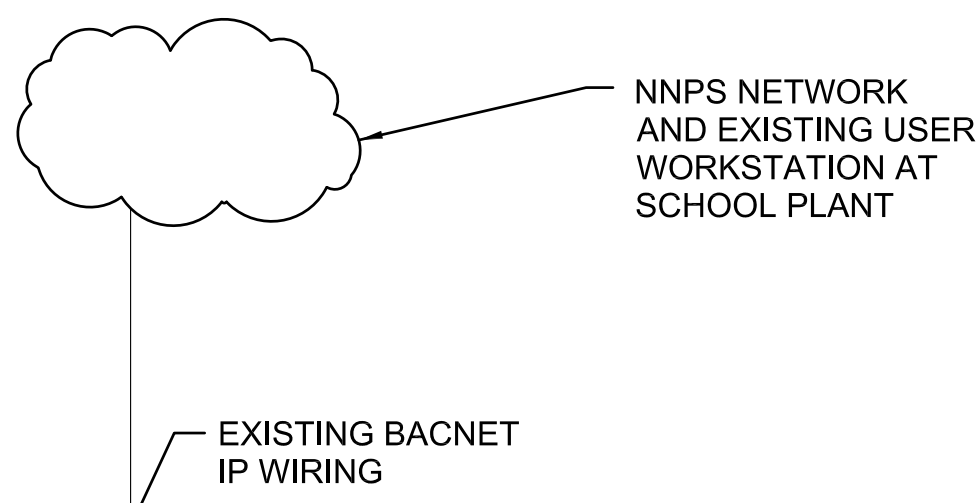
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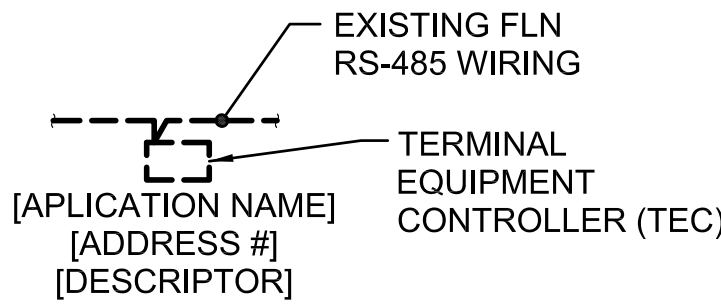
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DATE: 01/26/2024



LEGEND

NOT TO SCALE



NOTE: CONTROLS DRAWING HAS BEEN RECREATED BASED ON EXISTING CONTROLLER LIST PROVIDED BY INVENSYS BUILDING SYSTEMS. CONTROLS CONTRACTOR SHALL FIELD VERIFY BRANCH ORDER, CONTROLLER ORDER AND QUANTITIES, AND ALL WIRING TYPES.

NOTE: DISCONNECTION POINTS OF EXISTING BACNET TRUNK WIRING IN ORDER TO ACCOMMODATE NEW EQUIPMENT CONTROLLERS ARE ESTIMATES BASED ON BUILDING FLOOR PLAN AND EXISTING CONTROL DRAWINGS. CONTROLS CONTRACTOR SHALL MODIFY CONNECTION POINTS AS NECESSARY TO PROVIDE A LOGICAL ORDER OF DEVICES ON THE BACNET TRUNK.

DEMOLITION NOTES	
NO.	DESCRIPTION
D1	BAS CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING BARBER-COLMAN MBC LOCATED IN MECHANICAL ROOM ON WALL NEAR BOILER B-1. OWNER SHALL MAINTAIN FIRST RIGHT OF REFUSAL FOR CONTROLLER.
D2	BAS CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING TERMINAL EQUIPMENT CONTROLLER FROM RS485 TRUNK. OWNER SHALL MAINTAIN FIRST RIGHT OF REFUSAL FOR CONTROLLER.
D3	EXISTING FLN RS-485 WIRING TO BE FULLY REMOVED. INCLUDE WIRING AND CONDUIT COMPLETE.

DEMOLITION NOTES	
NO.	DESCRIPTION
D4	EXISTING LON WIRING TO BE FULLY REMOVED INCLUDING WIRING AND CONDUIT COMPLETE.
D5	BAS CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING TERMINAL EQUIPMENT CONTROLLER FROM LON TRUNK. OWNER SHALL MAINTAIN FIRST RIGHT OF REFUSAL FOR CONTROLLER.
D6	BAS CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING HONEYWELL WEB-600 CONTROLLER CONNECTED TO EXISTING BARBER-COLMAN MBC AND ASSOCIATED UNIT CONTROLLER. OWNER SHALL MAINTAIN FIRST RIGHT OF REFUSAL FOR CONTROLLER.
D7	DISCONNECT EXISTING KW METER FROM EXISTING LON TRUNK. STORE AND PROTECT METER FOR RECONNECTION TO NEW CONTROLLER.



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CONTROL RISER DIAGRAMS

COMM. NO.:
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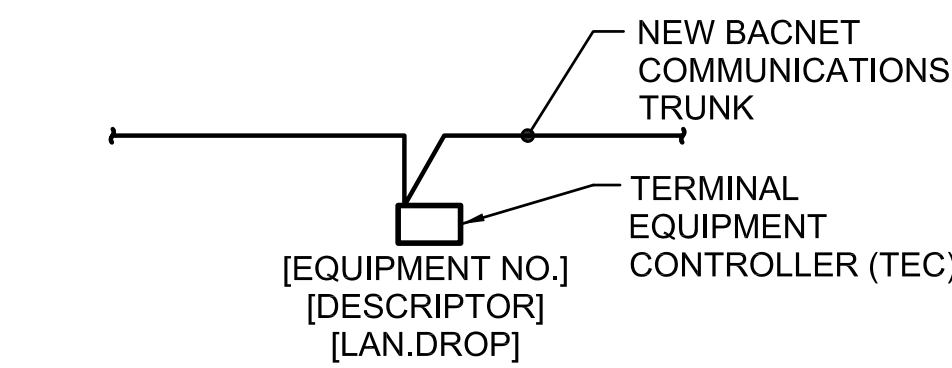
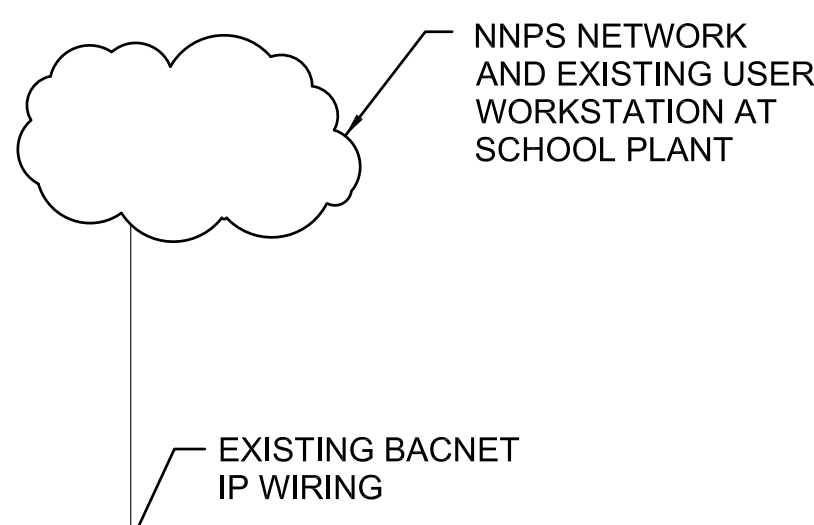
22-113
CEP
JAR
KDA

M6.1

DATE: 01/26/2024

BUILDING AUTOMATION SYSTEM RISER - DEMOLITION

NOT TO SCALE



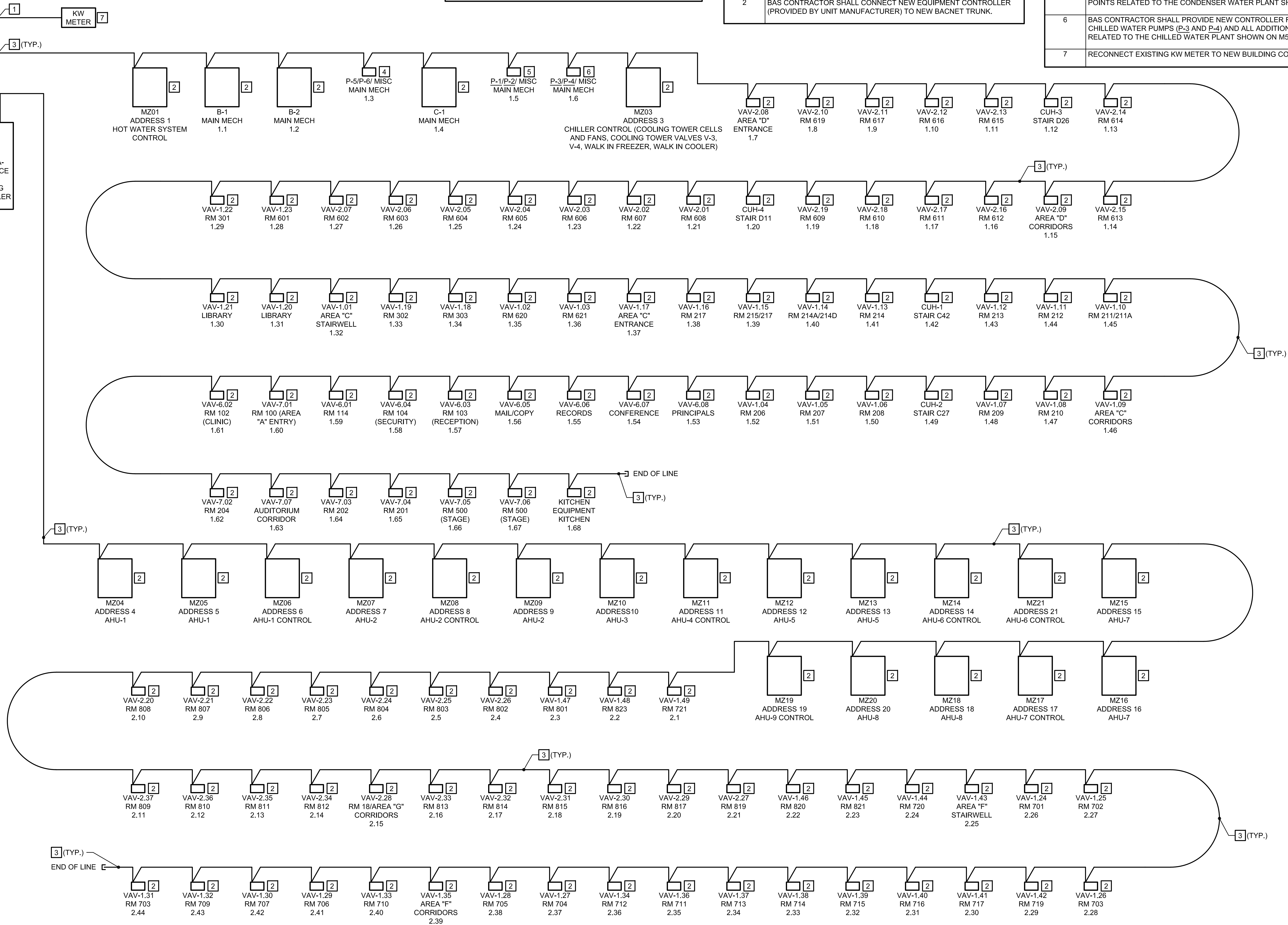
LEGEND
NOT TO SCALE

NOTE: CONTROLS DRAWING HAS BEEN RECREATED BASED ON EXISTING CONTROL LIST PROVIDED BY INVENSYS BUILDING SYSTEMS. CONTROLS CONTRACTOR SHALL FIELD VERIFY BRANCH ORDER, CONTROLLER ORDER AND QUANTITIES, AND ALL WIRING TYPES.

NOTE: DISCONNECTION POINTS OF EXISTING BACNET TRUNK WIRING IN ORDER TO ACCOMMODATE NEW EQUIPMENT CONTROLLERS ARE ESTIMATES BASED ON BUILDING FLOOR PLAN AND EXISTING CONTROL DRAWINGS. CONTROLS CONTRACTOR SHALL MODIFY CONNECTION POINTS AS NECESSARY TO PROVIDE A LOGICAL ORDER OF DEVICES ON THE BACNET TRUNK.

NEW WORK NOTES	
NO.	DESCRIPTION
1	BAS CONTRACTOR SHALL PROVIDE NEW NIAGARA-BASED BUILDING CONTROLLER ("JACE") TO REPLACE EXISTING BARBER-COLMAN NETWORK 8000 GCM-1 (SIM-YORK) AND HONEYWELL WEB-600 CONTROLLER. JACE MUST BE OPEN LICENSE WITH NO ADDITIONAL FEES REQUIRED AND MUST CONTAIN BACNET DRIVER. ALL GLOBAL LOGIC AND ANY EXISTING SEQUENCES OF OPERATION LOCATED IN MBC AND ALL CONTROLLERS DOWNSTREAM SHALL BE REWRITTEN AND MIGRATED INTO NEW JACE. JACE SHALL OPERATE ON TRIDIUM NIAGARA TOOLSET TO EFFECTIVELY COMMUNICATE WITH OWNER'S FRONT END.
2	BAS CONTRACTOR SHALL CONNECT NEW EQUIPMENT CONTROLLER (PROVIDED BY UNIT MANUFACTURER) TO NEW BACNET TRUNK.

NEW WORK NOTES	
NO.	DESCRIPTION
3	BAS CONTRACTOR SHALL RUN NEW BACNET COMMUNICATIONS TRUNK BETWEEN EACH NEW NIAGARA-BASED CONTROLLER FOLLOWING THE SAME ROUTE AS EXISTING REMOVED CONTROLS WIRING.
4	BAS CONTRACTOR SHALL PROVIDE NEW CONTROLLER FOR EXISTING HOT WATER PUMPS (P-5 AND P-6) AND ALL ADDITIONAL POINTS RELATED TO THE NEW HOT WATER PLANT SHOWN ON M5.6.
5	BAS CONTRACTOR SHALL PROVIDE NEW CONTROLLER FOR NEW CONDENSER WATER PUMPS (P-1 AND P-2) AND ALL ADDITIONAL POINTS RELATED TO THE CONDENSER WATER PLANT SHOWN ON M5.2.
6	BAS CONTRACTOR SHALL PROVIDE NEW CONTROLLER FOR NEW CHILLED WATER PUMPS (P-3 AND P-4) AND ALL ADDITIONAL POINTS RELATED TO THE CHILLED WATER PLANT SHOWN ON M5.2.
7	RECONNECT EXISTING KW METER TO NEW BUILDING CONTROLLER.



ELECTRICAL LEGEND

LIGHTING:

	EXISTING 2' X 2' LIGHT FIXTURE.
	EXISTING 2' X 4' LIGHT FIXTURE.
	EXISTING 1' X 4' LIGHT FIXTURE.
	EXISTING 4' X 4' LIGHT FIXTURE.
	EXISTING DOWNLIGHT FIXTURE.
	EXISTING DOWNLIGHT/PENDANT MOUNTED LIGHT FIXTURE.
	EXISTING EXIT LIGHT FIXTURE.
	ROOM NUMBER INDICATOR.
	NEW WORK NOTE INDICATOR.
	DEMOLITION NOTE INDICATOR.

POWER:

	EXISTING WALL/CEILING MOUNTED TELEVISION.
	EXISTING DRY TYPE TRANSFORMER.
	ELECTRICAL CONNECTION TO EQUIPMENT.
	ELECTRICAL CONNECTION TO EXHAUST FAN.
	JUNCTION BOX, SIZE AS REQUIRED.
	PANELBOARD, 480Y/277 VOLT.
	PANELBOARD, 208Y/120 VOLT.
	EXISTING DUPLEX RECEPTACLE, 20A, 120V. "GFI" WHEN USED INDICATES TAMPER PROOF GROUND FAULT CIRCUIT INTERRUPTER. "WP" WHEN USED INDICATES TAMPER PROOF WEATHER RESISTANT RECEPTACLE WITH WEATHERPROOF WHILE IN USE ENCLOSURE.
	EXISTING CEILING MOUNTED DUPLEX RECEPTACLE.
	CONDUIT RUN CONCEALED ABOVE CEILING.
	HOMERUNS TO PANEL. PANEL & CIRCUIT DESIGNATIONS AS INDICATED.
	BRANCH CIRCUIT OR FEEDER WIRING IN CONDUIT. NO TICK MARKS INDICATES 2 #12 CONDUCTORS & 1 #12 GND IN 1/2" CONDUIT U.O.N. TICK MARKS, WHEN SHOWN, INDICATE NUMBER OF CONDUCTORS IF OTHER THAN THREE; (7) INDICATES GROUNDING CONDUCTOR. SEE NOTES ON DRAWINGS FOR CONDUCTOR SIZES LARGER THAN #12.
	DISCONNECT SWITCH, 600V, U.O.N.: 3P = NUMBER OF POLES, 60 = SWITCH RATING, 40 = FUSE RATING. 3R = NEMA 3R ENCLOSURE.
	EXISTING EMERGENCY BOILER AND WATER HEATER STOP STATION.
	VARIABLE FREQUENCY DRIVE.
	MOTOR RATED SNAP SWITCH, SINGLE POLE, 20A, 120V.
	PLAN CALLOUT INDICATOR.

FIRE ALARM SYSTEMS:

	EXISTING FIRE ALARM CONTROL PANEL.
	EXISTING FIRE ALARM SYSTEM SMOKE DETECTOR.

TELECOMMUNICATIONS SYSTEMS:

	EXISTING INTERCOM SYSTEM SPEAKER.
	EXISTING WIRELESS ACCESS POINT DEVICE.
	EXISTING SMART BOARD.
	EXISTING IDF / MDF RACK.

SECURITY SYSTEMS:

	EXISTING CEILING MOUNTED CCTV CAMERA.
	EXISTING CEILING MOUNTED MOTION DETECTOR.

THE CONTRACTOR SHALL INCLUDE IN HIS/HER BID THE HIRING OF THE "SEAM GROUP" TO PROVIDE SHORT CIRCUIT, COORDINATION STUDY, AND ARC FLASH HAZARD ANALYSIS. THE CONTRACTOR SHALL CONTACT JUSTIN SANDERS jsanders@seamgroup.com (1-765-416-7112) AT THE "SEAM GROUP" PRIOR TO PROCURING A CONTRACT FOR THIS PROJECT. THE SHORT CIRCUIT, COORDINATION STUDY, AND ARC FLASH HAZARD ANALYSIS SHALL BE PROVIDED FOR ALL NEW POWER DISTRIBUTION EQUIPMENT, ALL HVAC EQUIPMENT, AND ALL EXISTING POWER DISTRIBUTION EQUIPMENT AFFECTED BY THE SCOPE OF THIS CONTRACT. THE ARC FLASH EQUIPMENT LABELS SHALL BE FURNISHED BY THE SEAM GROUP, INSTALLED ON THE EQUIPMENT BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE SEAM GROUP AND PROVIDE THE REQUIRED DATA (POWER EQUIPMENT SHOP DRAWINGS, FEEDERS INFORMATION [TYPE, LENGTH, AND SIZES] TO THE SEAM GROUP TO PERFORM THE STUDY AND ARC FLASH ANALYSIS. THE CONTRACTOR SHALL SUBMIT THE STUDY AND ANALYSIS ALONG WITH THE SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL SUBMIT A HARD COPY OF THE FINAL STUDY TO THE OWNER.

GENERAL FIRE ALARM NOTES:

- ALL FIRE ALARM WORK, NEW, REMOVAL, AND REINSTALLATION OF EXISTING (WIRING DEVICES AND CONNECTING DEVICES) SHALL BE PERFORMED BY CERTIFIED BOSCH / RADIONICS INSTALLER. DOCUMENTATION OF CERTIFICATION BY COMPANY AND INSTALLER SHALL BE PROVIDED.
- NNPS TECHNOLOGY STAFF WILL PROVIDE ADDRESSING AND VERBAL GUIDANCE ON THE ALARM CONNECTIVITY. IF QUESTIONS COME UP DURING THE PROJECT CONTACT NNPS TECHNOLOGY.
- NNPS TECHNOLOGY STAFF WILL PROVIDE THE FIRE ALARM PANEL PROGRAMMING.
- PRIOR TO THE PROJECT STARTING GENERAL CONTRACTOR FOREMAN AND ASSISTANT FOREMAN NAMES AND TELEPHONE NUMBERS SHOULD BE PROVIDED TO NNPS TECHNOLOGY SO THAT ALARM CODES CAN BE CREATED AND THE ABILITY OF PLACING THE ALARM SYSTEMS ON TEST
- PRIOR TO ANY DISTURBANCE OF THE ALARM SYSTEMS THE SYSTEM(S) SHOULD BE PLACED ON TEST WITH OUR ALARM MONITORING CENTER
- NO T-TAPPING SHALL BE USED ON THE FIRE ALARM SYSTEM. CONTRACTOR SHALL REQUEST AS-BUILTS FROM OWNER FOR CURRENT CIRCUITRY.
- IF ANY MODIFICATIONS OR DEVICE REMOVAL/REINSTALLATIONS ARE NEEDED A CITY PERMIT MUST BE PULLED FOR THE FIRE ALARM SYSTEM.
- PROVIDE FIRE ALARM DEVICES, CABLING AND ACCESSORIES THAT ARE COMPATIBLE WITH THE EXISTING RADIONICS FIRE ALARM PANEL. ALL NEW FIRE ALARM CABLING SHALL BE RED IN COLOR AND PLENUM RATED. PROVIDE PLENUM RATED TIE WRAPS TO SUPPORT CABLES ABOVE CEILING.

ABBREVIATIONS

A	AMP
AHU	AIR HANDLING UNIT
AV	AUDIO / VISUAL
B	BOILER
C	CHILLER
CCTV	CLOSED CIRCUIT TELEVISION
CIRC. OR CKT.	CIRCUIT
CUH	CABINET UNIT HEATER
DF	DRAFT INDUCTION FAN
EF	EXHAUST FAN
ELEC.	ELECTRICAL
FACP	FIRE ALARM CONTROL PANEL
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
IDF	INTERMEDIATE DISTRIBUTION FRAME
KAIC	KILO-AMPERE INTERRUPTING CAPACITY
KEF	KITCHEN EXHAUST FAN
KMAU	KITCHEN MAKE-UP AIR UNIT
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDF	MAIN DISTRIBUTION FRAME
MECH.	MECHANICAL
MLO	MAIN LUGS ONLY
MDS	MAIN DISTRIBUTION SWITCHBOARD
MTD.	MOUNTED
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NO.	NUMBER
NNPS	NEWPORT NEWS PUBLIC SHCOOLS
P	POLE OR PUMP
SPD	SURGE PROTECTIVE DEVICE
UL	UNDERWRITER'S LABORATORIES
U.O.N.	UNLESS OTHERWISE NOTED
V	VOLT
VAV	VARIABLE AIR VOLUME
VB	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
XFMR	TRANSFORMER
Y	WYE

GENERAL DEMOLITION NOTES:

- DISCONNECT AND REMOVE ALL ELECTRICAL MATERIAL, EQUIPMENT AND ELECTRICAL CONNECTIONS TO HVAC UNITS SHOWN ON ELECTRICAL DEMOLITION DRAWINGS, U.O.N.
- PROVIDE ALL ELECTRICAL DEMOLITION WORK NECESSARY TO INSTALL NEW WORK. CONTRACTOR SHALL REROUTE AND RECONNECT ANY CIRCUIT THAT WILL REMAIN IN USE BUT INTERFERES WITH NEW CONSTRUCTION.
- MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN OR PORTIONS THEREOF AFFECTED BY NEW WORK.
- EXISTING CONDITIONS ILLUSTRATED HAVE BEEN DETERMINED FROM ORIGINAL CONSTRUCTION DOCUMENTS AND LIMITED NON-INVASIVE FIELD INVESTIGATION. THE CONTRACTOR SHALL INVESTIGATE FIELD CONDITIONS PRIOR TO COMMENCEMENT OF WORK. COORDINATE AND MAKE ADJUSTMENTS AS NECESSARY.
- ANY POWER OUTAGE THAT WILL AFFECT THE MAIN DISTRIBUTION SWITCHBOARD (MDS) AND POWER TO THE WHOLE BUILDING SHALL BE COORDINATED IN ADVANCE WITH NNPS PLANT SERVICES/ELECTRIC SHOP. A 48 HOUR NOTICE SHALL BE PROVIDED.
- BEFORE BEGINNING ANY WORK, FIELD VERIFY THE WORKING CONDITION OF ALL AUXILIARY SYSTEM EQUIPMENT/DEVICES (WIRELESS ACCESS POINTS, PROJECTORS, SMOKE DETECTORS, MOTION DETECTORS, FIRE ALARM NOTIFICATION DEVICES, PHONES, PRINTERS, COMPUTERS, MONITORS, KEYBOARDS, ETC.) SCHEDULED FOR REMOVAL. SCHEDULE WITH WILLIAM CHAMBERS WITH NNPS FOR TESTING AND WALK-THROUGH. NOTIFY THE OWNER OF ANY DEFECTIVE EQUIPMENT. AFTER REINSTALLATION OF AUXILIARY SYSTEMS EQUIPMENT/DEVICES SAVED DURING DEMOLITION IS COMPLETE, RE-VERIFY THE WORKING CONDITION OF EACH. REPLACE ALL EQUIPMENT/DEVICES FOUND DEFECTIVE AFTER REINSTALLATION WHICH WAS WORKING PRIOR TO REMOVAL WITH NEW EQUIPMENT/DEVICES TO MATCH EXISTING AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL REQUIRE A WALK THROUGH WITH NNPS TECH STAFF TO ENSURE A FULL WORKING SYSTEM PRIOR TO REMOVAL.
- DURING REMOVAL OF THE EXISTING LAY-IN CEILING PANELS, SUPPORT ALL EXISTING AUXILIARY SYSTEMS CABLES (DATA, TELEPHONE, CCTV, FIRE ALARM, MOTION DETECTORS, CATV, ETC.) ORIGINATING FROM MDF OR IDF EQUIPMENT FROM EXISTING STRUCTURE ABOVE EXISTING CEILING. ADJUST ROUTING OF THESE CABLE TO ACCOMMODATE THE INSTALLATION OF NEW HVAC SYSTEM EQUIPMENT AND DUCTWORK. RE-VERIFY THE WORKING CONDITION OF THESE CABLES AND REPLACE ALL CABLES FOUND DEFECTIVE AFTER REINSTALLATION, WHICH WERE WORKING PRIOR TO REMOVAL WITH CABLES TO MATCH EXISTING AT NO ADDITIONAL COST TO OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MOVING, REROUTING OR SECURING ALL AUXILIARY SYSTEMS CABLES DURING CONSTRUCTION IF ANY CEILINGS ARE TO BE REMOVED. IF ANY WIRING HAS TO BE DISCONNECTED TO BE REROUTED, THE CONTRACTOR SHALL COORDINATE WITH NNPS.
- PRIOR TO THE START OF CONSTRUCTION, THE ELECTRICAL SUB-CONTRACTOR SHALL VERIFY THE OPERATION OF ALL OCCUPANCY SENSORS SHOWN TO BE REMOVED AND REINSTALLED. NOTIFY THE ENGINEER IF ANY OCCUPANCY SENSORS ARE NOT IN PROPER WORKING CONDITION.
- ALL AUXILIARY DEVICES SHALL BE BASED AND SUSPENDED ABOVE CEILING PRIOR TO CEILING REMOVAL ANY DEVICES NOT EFFECTED BY CONSTRUCTION SHALL BE PROTECTED FROM DUST AND DEBRIS.

GENERAL NEW WORK NOTES:

- WHERE INDIVIDUAL 120V HOMERUN CIRCUITS ARE SHOWN ON THE DRAWINGS, THEY MAY BE COMBINED AS FOLLOWS:
 - NO MORE THAN THREE (3) PHASE CONDUCTORS PLUS THREE NEUTRALS AND ONE (1) GROUND PER CONDUIT, EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
 - NO TWO OF THE SAME PHASE CONDUCTOR PER CONDUIT.
 - PROVIDE 120V CIRCUIT WITH INDIVIDUAL NEUTRALS PER CIRCUIT. NEUTRALS MAY NOT BE SHARED BETWEEN PHASES.
- COORDINATE WITH MECHANICAL DRAWINGS FOR EXACT LOCATION OF EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS INCLUDING EXACT POINT OF ELECTRICAL CONNECTION. MAKE ADJUSTMENTS TO NEW AND EXISTING CONDUIT ROUTING, PLACEMENT OF DISCONNECTS AND STARTERS AS REQUIRED.
- PROVIDE NEW TYPED PANEL INDEXES FOR ALL PANELS WHERE CHANGES BROUGHT ON BY THIS PROJECT OCCUR.
- IN AREAS WHERE NO OTHER TRADES ARE INVOLVED, THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF EXISTING CEILING TILES AS REQUIRED TO INSTALL NEW CIRCUITRY. REINSTALL EXISTING CEILING TILES AFTER COMPLETION OF WORK. REPLACE ALL CEILING TILES DAMAGED DURING THIS PROJECT WITH NEW TILES TO MATCH EXISTING TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
- EXERCISE CARE IN REMOVING MATERIAL AND EQUIPMENT DURING DEMOLITION. REPAIR ALL DAMAGE TO EXISTING SURFACES OR EXISTING EQUIPMENT TO REMAIN TO THE SATISFACTION OF THE ARCHITECT AND OWNER AT NO COST TO THE OWNER.
- ALL MATERIAL REMOVED DURING DEMOLITION (AND NOT CALLED OUT TO BE REINSTALLED) SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE JOB SITE, UNLESS OTHERWISE NOTED. THE OWNER RESERVES THE RIGHT TO SALVAGE ANY OR ALL EXISTING MATERIAL AND/OR EQUIPMENT NOT SCHEDULED TO BE REINSTALLED.
- VERIFY ALL CIRCUITS SAVED DURING DEMOLITION AS TO WIRE SIZE AND POINT OF ORIGIN.
- WHERE THE TERM "BRANCH CIRCUITRY" IS USED ON THESE DRAWINGS, IT IS TO BE CONSTRUED TO MEAN CONDUIT AND CONDUCTORS.
- INSTALL DEVICES SHOWN ON DRAWINGS IN ACCORDANCE WITH MOUNTING HEIGHTS SHOWN IN THE ELECTRICAL LEGEND AND/OR THE PROJECT SPECIFICATIONS.
- SEAL AROUND ALL EXISTING AND NEW CONDUIT PENETRATIONS THROUGH WALLS WITH FIRE RETARDANT SEALANT THAT MEETS OR EXCEEDS THE FIRE RATING OF THE WALL.ALL OTHER THRU WALL PENETRATIONS SHALL BE GROUTED OR SEALED WITH CAULK. ALL PENETRATIONS SHALL BE CORE DRILLED OR DRILLED WITH PROPER TOOLS. HAMMERS SHALL NOT BE USED TO CREATE PENETRATIONS IN WALLS. REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL NEW AUXILIARY SYSTEMS (FIRE ALARM, INTERCOM, DATA, AND ACCESS CONTROL) CABLING INSTALLED ABOVE CEILING WITHOUT CONDUIT SHALL BE PLENUM RATED.
- SPICES, KINKS, TWISTS AND DEFECTS OF ANY NATURE WILL NOT BE ACCEPTED BY NNPS TECHNOLOGY STAFF AND THE CONTRACTOR MUST, AT ITS OWN EXPENSE, REPLACE ALL SECTION OF CABLE IDENTIFIED BY NNPS.
- NNPS TECHNOLOGY STAFF SHOULD BE CONSULTED BY CONTRACTOR FOR CHANGES THAT WILL BE MADE AND FOR GUIDANCE.
- HARD AND ELECTRONIC COPIES OF AS-BUILT DRAWINGS SHALL BE PROVIDED TO NNPS TECHNOLOGY STAFF THAT SHOWS CABLE PATH, ZONE NUMBER FOR ANY NEW DEVICES,LOCATION OF DEVICES, ETC.
- PROVIDE BUSHINGS ON ALL CONDUITS AND RACEWAYS.
- ALL AUXILIARY SYSTEMS CABLES INSTALLED ABOVE CEILINGS SHALL BE INSTALLED IN EXISTING PATHWAYS WHERE AVAILABLE. PROVIDE J-HOOKS 12" ON CENTER IN AREAS WHERE EXISTING PATHWAYS ARE NOT AVAILABLE.
- ANY MODIFICATION TO THE INTERCOM SYSTEM SHALL BE PERFORMED BY A CERTIFIED BOGEN REPRESENTATIVE.



THOMPSON
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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

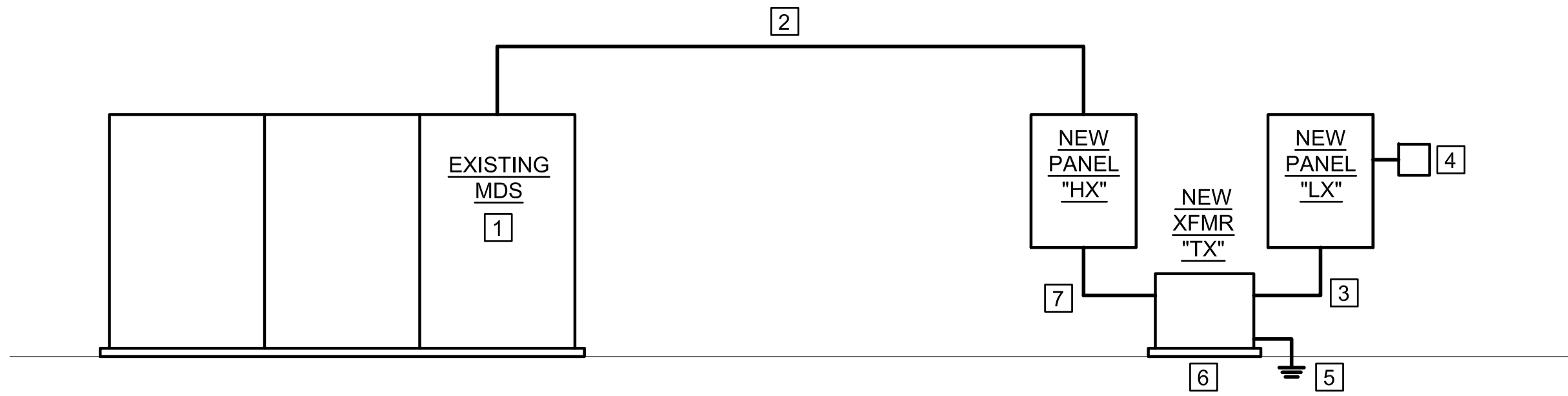
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ELECTRICAL LEGEND, ABBREVIATIONS, NOTES

COMM. NO: 22-113
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CHECKED BY: KC

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DATE: 01/26/2024



PARTIAL POWER RISER DIAGRAM

NOT TO SCALE

POWER RISER DIAGRAM NOTES:

- 1 EXISTING 400A-3P CIRCUIT BREAKER WITH 250A RATING PLUG IN SPACE 12 IN EXISTING "MDS" TO REMAIN. REMOVE 250A RATING PLUG. PROVIDE NEW 400A RATING PLUG, PART NUMBER 'SRPG400A400', IN EXISTING 400A-3P CIRCUIT BREAKER. CONNECT BRANCH CIRCUITRY FROM NOTE 2 TO EXISTING CIRCUIT BREAKER.
- 2 PROVIDE 3-600KCMIL, 1-600KCMIL NEUTRAL AND 1 #3 GROUND IN 4" CONDUIT.
- 3 PROVIDE 3 #6 AND 1 #6 NEUTRAL AND 1 #8 GROUND IN 1-1/4" CONDUIT.
- 4 PROVIDE SPD IN ACCORDANCE WITH SPECIFICATION SECTION 264313. PROVIDE 4 #10 AND 1 #10 GROUND IN 1/2" CONDUIT. TERMINATE IN 30A-3P CIRCUIT BREAKER.
- 5 PROVIDE 1 #8 GROUNDING ELECTRODE CONDUCTOR. INSTALL IN ACCORDANCE WITH ARTICLE 250 OF THE N.E.C.
- 6 PROVIDE CONCRETE HOUSEKEEPING PAD IN ACCORDANCE WITH SPECIFICATION SECTION 262200.
- 7 PROVIDE 3 #10 AND 1 #10 GROUND IN 1/2" CONDUIT.

NEW PANEL "HX" 400AMP 480Y/277V, 3ø, 4W, M.L.O., SURFACE MTD.																							
LOAD SERVED	LOAD (AMPS)			CKT.BKR.		WIRE SIZE	CKT. NO.	PHASE			CKT. NO.	WIRE SIZE	CKT.BKR.		LOAD (AMPS)			LOAD SERVED					
	A	B	C	KAIC	TRIP			A	B	C			KAIC	TRIP	A	B	C						
PUMP P-1	52			10	90	3	1				2	3	10	90	52			PUMP P-2					
		52					3				4					52							
			52				5				6						52						
PUMP P-3	52				90	3	7				8	3		90	52			PUMP P-4					
		52					9				10					52							
			52				11				12						52						
SPARE	-				20	-	13				14	-		20	-			SPARE					
SPARE	-				20	-	15				16	-		20	-			SPARE					
SPARE	-				20	-	17				18	-		20	-			SPARE					
SPACE	-				-	-	19				20	-		-	-			SPACE					
SPACE	-				-	-	21				22	-		-	-			SPACE					
SPACE	-				-	-	23				24	-		-	-			SPACE					
SPACE	-				-	-	25				26	10		25	20			PANEL "LX" VIA XFMR "TX"					
SPACE	-				-	-	27				28					20							
SPACE	-				-	-	29				30						20						

NEW PANEL "LX" 60AMP 208Y/120V, 3ø, 4W, M.C.B., SURFACE MTD.																				
LOAD SERVED	LOAD (AMPS)			CKT.BKR.		WIRE SIZE	CKT. NO.	PHASE			CKT. NO.	WIRE SIZE	CKT.BKR.		LOAD (AMPS)	LOAD (AMPS)			LOAD SERVED	
	A	B	C	KAIC	TRIP			A	B	C			KAIC	TRIP		A	B	C		
BOILER B-1 ①	4.5			10	20	12	1				2	12	10	20	4.5			BOILER B-2 ①		
		4.5					3				4					4.5				
			4.5				5				6						4.5			
	—						7				8	—		—	—					
EF-15		16			30	10	9				10	—		—	—			SPACE		
SPARE			—		20	—	11				12	—					—	SPACE		
SPACE	—				—	—	13				14	—		—	—			SPACE		
SPACE		—			—	—	15				16	—		—	—			SPACE		
SPACE			—		—	—	17				18	—		—			—	SPACE		
SPACE		—			—	—	19				20	10		30	1			SPD		
SPACE			—		—	—	21				22					1				
SPACE			—		—	—	23				24						1			

- NOTE:
1. PROVIDE SHUNT TRIP TYPE CIRCUIT BREAKER.

TRANSFORMER SCHEDULE							
TRANSF. No.	KVA	PRIMARY	SECONDARY	ROOM NUMBER	APPROX. WT.	MOUNTING	REMARKS
XFMR "TX"	15	480V	208Y/120	MECH. RM.	330 LBS.	FLOOR	K4 RATED



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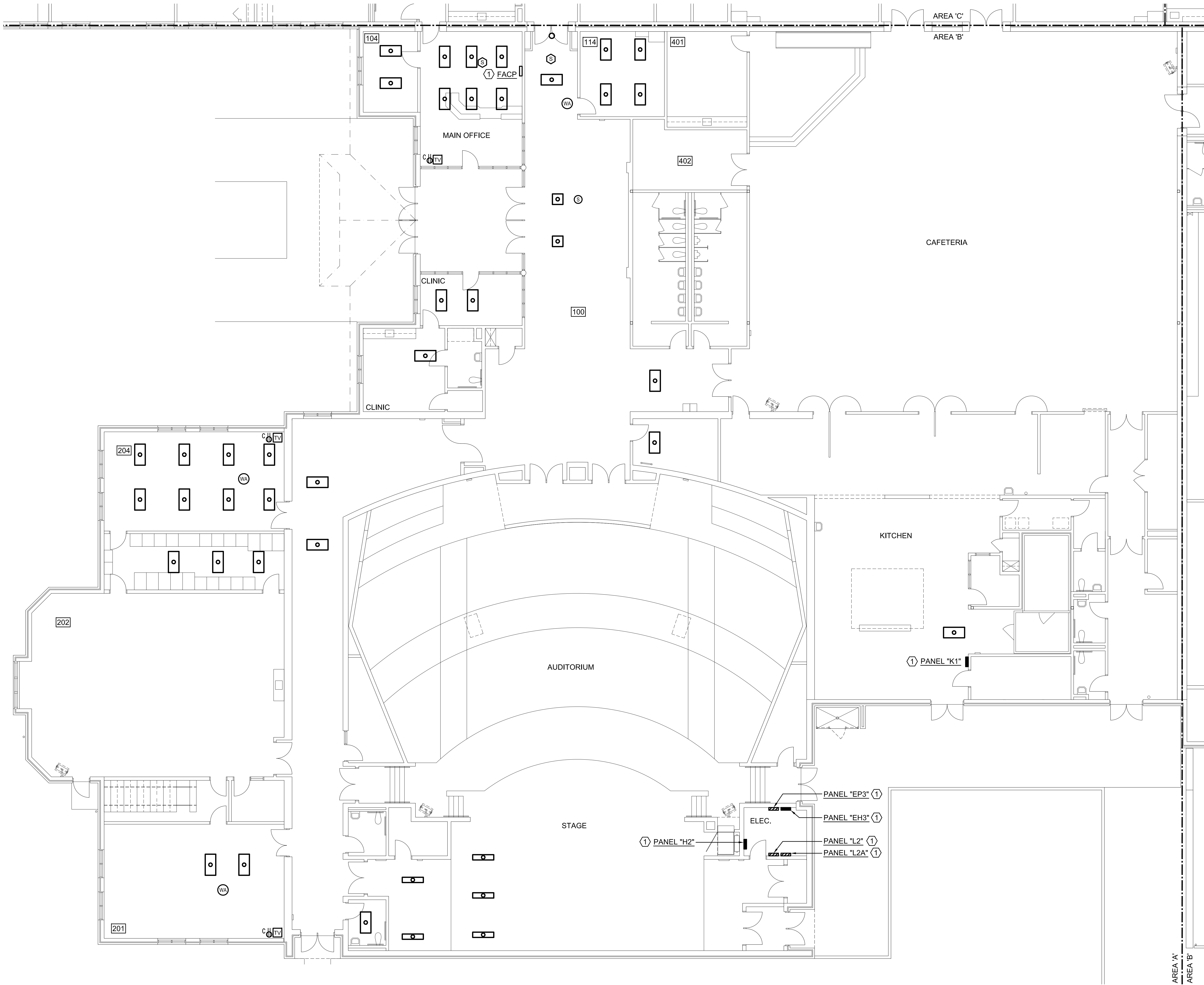
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POWER RISER DIAGRAM & PANELBOARD SCHEDULES

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PARTIAL FIRST FLOOR PLAN - AREA 'A' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK 2 3 4 5 1 2

SCALE: 1/8" = 1'-0"

NEW WORK NOTES: (THIS DRAWING ONLY)

- 1 REINSTALL ALL LIGHT FIXTURES, SPEAKERS AND WIRELESS ACCESS DEVICES SAVED DURING DEMOLITION ON EXISTING CEILING AND RECONNECT TO EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED. PROVIDE NEW ANNEALED, LIGHT ZINC-COATED FINISH, 12-GAUGE WIRE FROM ALL FOUR CORNERS TIED TO BUILDING STRUCTURAL MEMBERS FOR ALL RECESSED LIGHT FIXTURES. SECURING SAFETY WIRES TO BRIDGING IS NOT ACCEPTABLE. THE SUPPORTING WIRES SHALL BE DISTINGUISHABLE BY COLOR OR TAGGING. ALL SURFACE MOUNTED LIGHT FIXTURES SHALL BE ROD HUNG. ROD HANGERS SHALL BE A MINIMUM .25" DIAMETER. COORDINATE NEW LIGHT FIXTURE SUPPORTS WITH NEW DUCTWORK AND PIPING AND ADJUST AS DIRECTED BY THE MECHANICAL CONTRACTOR.
- 2 REINSTALL THE FOLLOWING EQUIPMENT/DEVICES SAVED DURING DEMOLITION AND CONNECT TO EXISTING POWER AND AUXILIARY SYSTEM CABLING:

 - ALL COMPUTERS INCLUDING ASSOCIATED MONITORS, TOWERS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL AND DESK MOUNTED TELEPHONE INSTRUMENTS, INCLUDING PATCH CABLES.
 - ALL PRINTERS INCLUDING ASSOCIATED POWER CORDS AND DATA PATCH CABLES.
 - ALL WIRELESS ACCESS POINTS DEVICES.
 - ALL CEILING MOUNTED OR CART MOUNTED PROJECTORS INCLUDING ASSOCIATED MOUNTING PLATES, CEILING MOUNTED RECEPTACLES, CEILING MOUNTED DATA OUTLETS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.

DEMOLITION NOTES: (THIS DRAWING ONLY)

- 1 EXISTING TO REMAIN.

2 DISCONNECT AND REMOVE ALL LIGHT FIXTURES, SPEAKERS AND WIRELESS ACCESS DEVICES SHOWN ON THIS DRAWING AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT, AND SAVE FOR REUSE. LABEL EACH EQUIPMENT/DEVICE WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH EQUIPMENT/DEVICE IS INSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. SAVE ASSOCIATED BRANCH CIRCUITRY FOR REUSE. RELOCATE AND EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED TO ACCOMMODATE THE REMOVAL AND INSTALLATION OF NEW MECHANICAL EQUIPMENT AND DUCTWORK. COORDINATE MECHANICAL WORK WITH THE MECHANICAL CONTRACTOR. COORDINATE FIRE ALARM AND SECURITY WORK WITH THE OWNER.

3 TEMPORARILY BAG AND SUPPORT ALL CEILING MOUNTED SMOKE DETECTORS SHOWN ON THIS DRAWING FROM EXISTING ROOF STRUCTURE TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF EXISTING CEILING. REINSTALL ALL EXISTING CEILING MOUNTED SMOKE DETECTORS SAVED DURING DEMOLITION IN EXISTING CEILING IN ORIGINAL LOCATIONS. IN AREAS THAT CEILINGS ARE NOT DISTURBED, PROVIDE DUST CAPS ON ALL DEVICES.

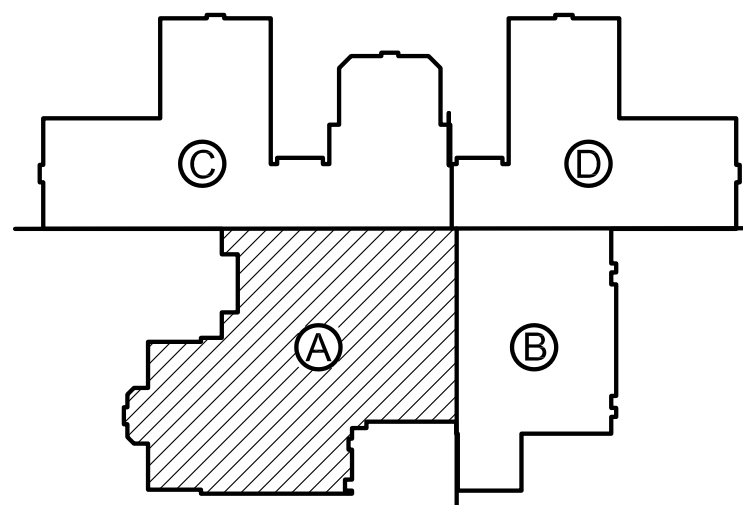
4 DISCONNECT, REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING EQUIPMENT/DEVICES IN ALL SPACES WHERE CEILINGS ARE REMOVED/REINSTALLED AND WITH HVAC SYSTEM DEMOLITION/NEW WORK:

 - ALL COMPUTERS INCLUDING ASSOCIATED MONITORS, TOWERS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL AND DESK MOUNTED TELEPHONE INSTRUMENTS, INCLUDING PATCH CABLES.
 - ALL PRINTERS INCLUDING ASSOCIATED POWER CORDS AND DATA PATCH CABLES.
 - ALL WIRELESS ACCESS POINTS DEVICES.
 - ALL CEILING MOUNTED OR CART MOUNTED PROJECTORS INCLUDING ASSOCIATED MOUNTING PLATES, CEILING MOUNTED RECEPTACLES, CEILING MOUNTED DATA OUTLETS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.

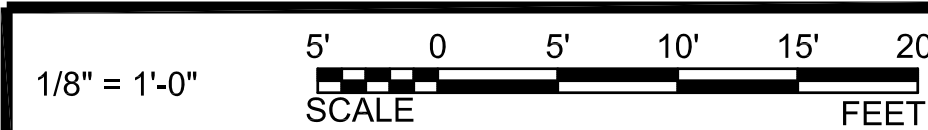
LABEL ALL EQUIPMENT/DEVICES WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH ITEM IS REINSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. ALL ITEMS SHALL BE SECURELY STORED IN A TEMPERATURE AND HUMIDITY CONTROLLED LOCATION AND AWAY FROM ALL CONSTRUCTION. COORDINATE THE IDENTIFICATION OF EACH ITEM WITH THE OWNER PRIOR TO REMOVAL AND PROVIDE DOCUMENTATION IDENTIFYING EACH ITEM TYPE AND QUANTITY.

5 DISCONNECT AND REMOVE FROM SITE, ALL WALL MOUNTED TELEVISIONS SHOWN ON THIS DRAWING, INCLUDING WALL MOUNTED TELEVISION BRACKETS, POWER AND AV PATCH CABLES. EXISTING POWER AND AV OUTLET BOXES TO REMAIN.

6 REFER TO CP DRAWINGS FOR CEILING BEING REMOVED AND SYSTEMS BEING EFFECTED.



KEY PLAN
NOT TO SCALE



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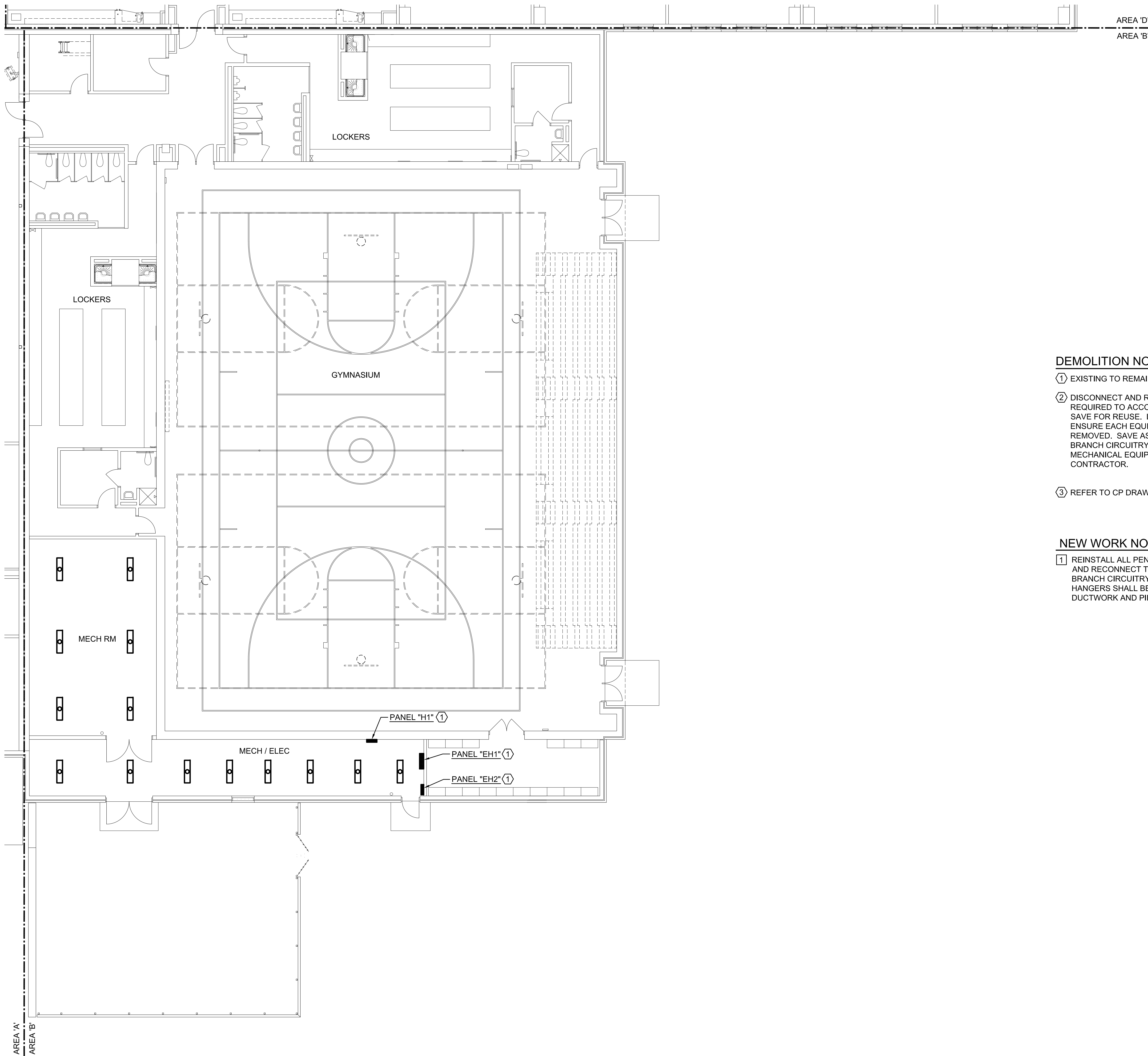
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PARTIAL FIRST FLOOR PLAN - AREA 'A' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK

COMM. NO: 22-113
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DATE: 01/26/2024



PARTIAL FIRST FLOOR PLAN - AREA 'B' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK ② ①

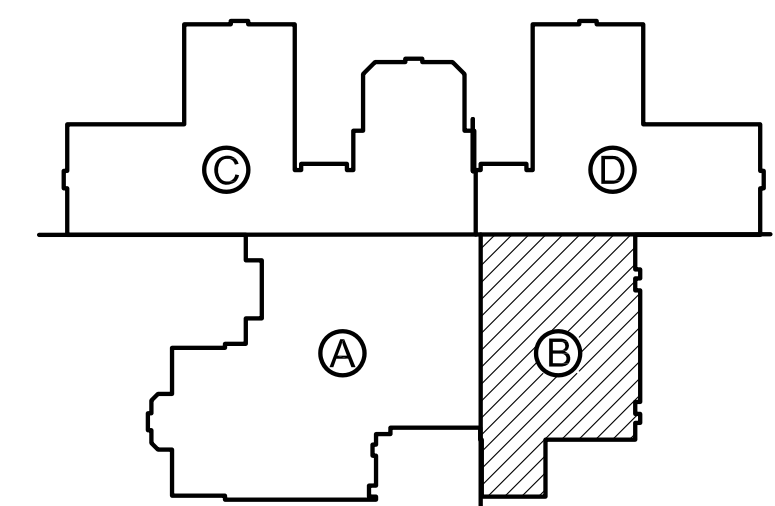
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

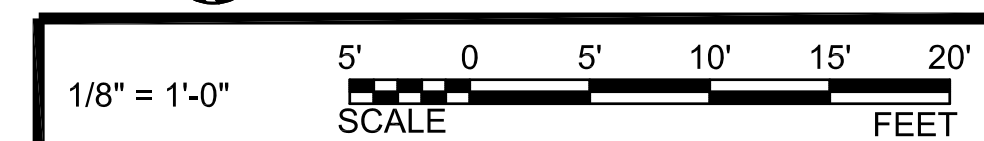
- ① EXISTING TO REMAIN.
- ② DISCONNECT AND REMOVE ALL PENDANT MOUNTED LIGHT FIXTURES SHOWN ON THIS DRAWING AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT AND SAVE FOR REUSE. LABEL EACH LIGHT FIXTURE WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH EQUIPMENT/DEVICE IS INSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. SAVE ASSOCIATED BRANCH CIRCUITRY FOR REUSE. RELOCATE AND EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED TO ACCOMMODATE THE REMOVAL AND INSTALLATION OF NEW MECHANICAL EQUIPMENT AND DUCTWORK. COORDINATE MECHANICAL WORK WITH THE MECHANICAL CONTRACTOR.
- ③ REFER TO CP DRAWINGS FOR CEILING BEING REMOVED AND SYSTEMS BEING EFFECTED.

NEW WORK NOTES: (THIS DRAWING ONLY)

- ① REINSTALL ALL PENDANT MOUNTED LIGHT FIXTURES SAVED DURING DEMOLITION ON EXISTING CEILING AND RECONNECT TO EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED. ALL SURFACE MOUNTED LIGHT FIXTURES SHALL BE ROD HUNG. ROD HANGERS SHALL BE A MINIMUM .25" DIAMETER. COORDINATE NEW LIGHT FIXTURE SUPPORTS WITH NEW DUCTWORK AND PIPING AND ADJUST AS DIRECTED BY THE MECHANICAL CONTRACTOR.



KEY PLAN
NOT TO SCALE



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VIRGINIA

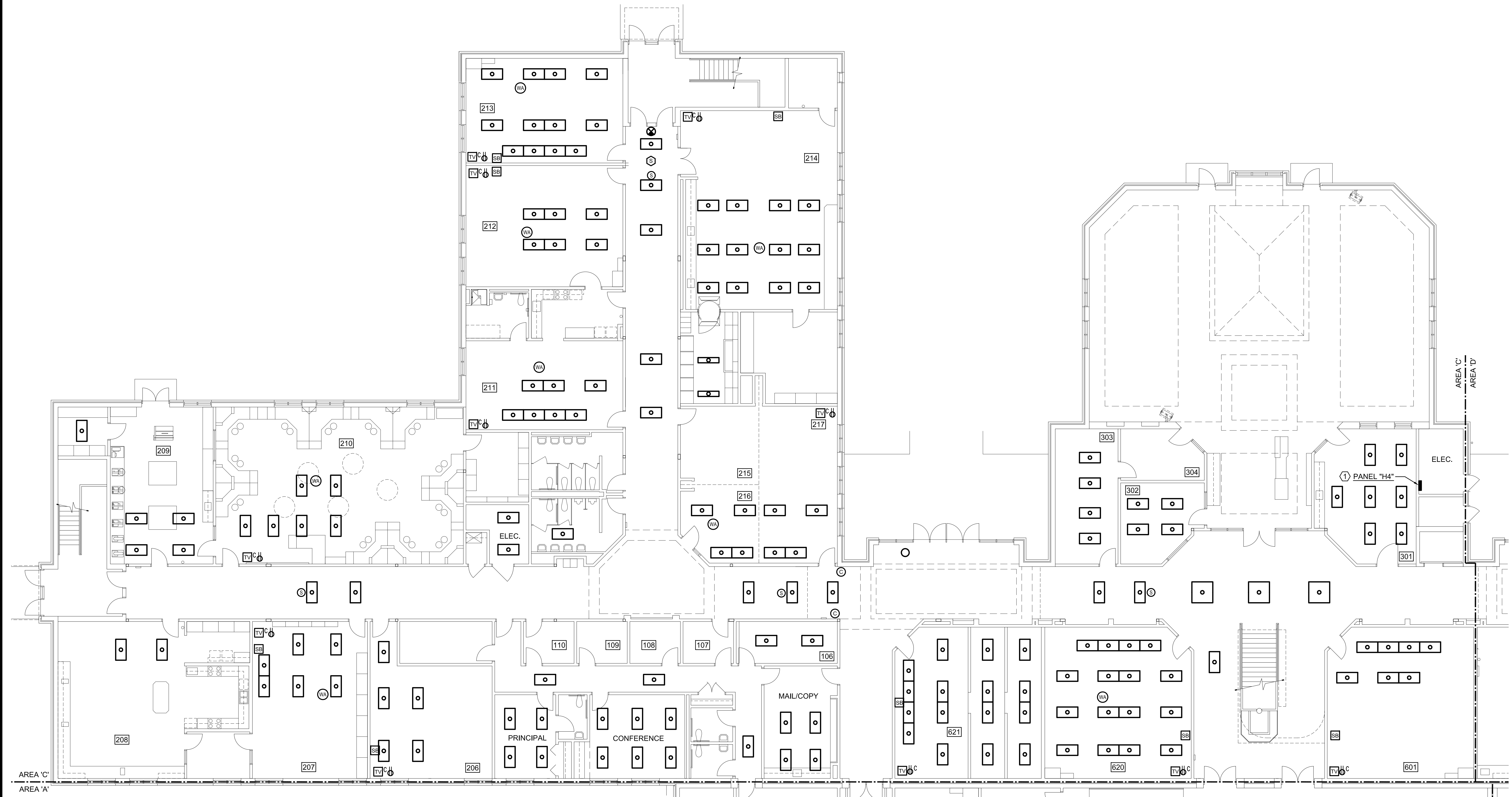
PARTIAL FIRST FLOOR PLAN - AREA 'B' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK

COMM. NO.:
DESIGNED BY:
DRAWN BY:
CHECKED BY:

22-113
CAB
CAB
1

ED1.2

DATE: 01/26/2024



PARTIAL FIRST FLOOR PLAN - AREA 'C' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK 23456 123

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

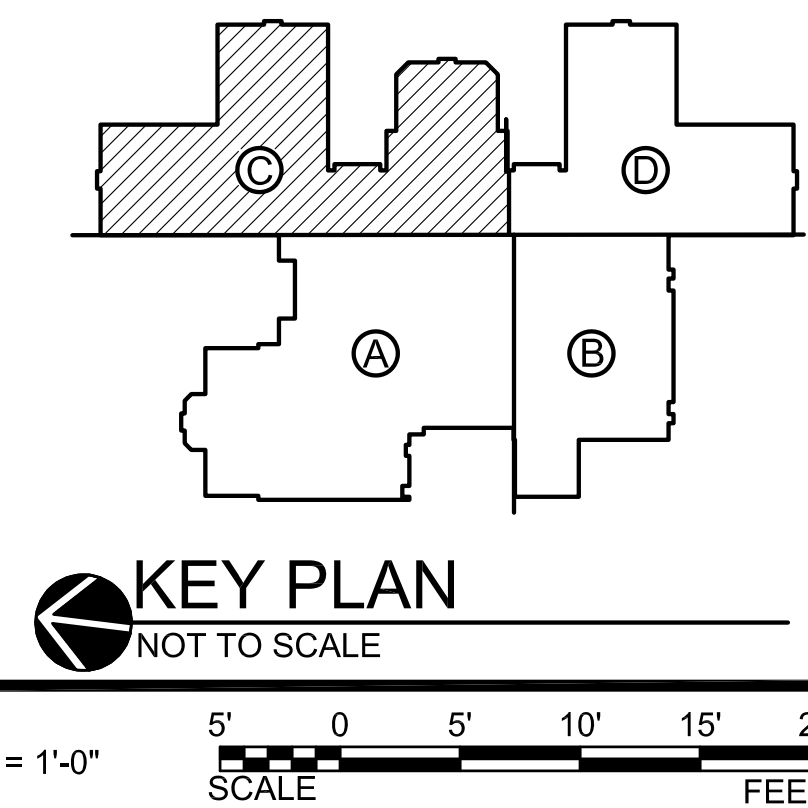
- EXISTING TO REMAIN.
- DISCONNECT AND REMOVE ALL CEILING MOUNTED EXIT LIGHTS, LIGHT FIXTURES, SPEAKERS AND WIRELESS ACCESS DEVICES SHOWN ON THIS DRAWING AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT, AND SAVE FOR REUSE. LABEL EACH EQUIPMENT/DEVICE WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH EQUIPMENT/DEVICE IS INSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. SAVE ASSOCIATED BRANCH CIRCUITRY FOR REUSE. RELOCATE AND EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED TO ACCOMMODATE THE REMOVAL AND INSTALLATION OF NEW MECHANICAL EQUIPMENT AND DUCTWORK. COORDINATE MECHANICAL WORK WITH THE MECHANICAL CONTRACTOR. COORDINATE FIRE ALARM AND SECURITY WORK WITH THE OWNER.
- TEMPORARILY BAG AND SUPPORT ALL CEILING MOUNTED SMOKE DETECTORS SHOWN ON THIS DRAWING FROM EXISTING ROOF STRUCTURE TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF EXISTING CEILING. REINSTALL ALL EXISTING CEILING MOUNTED SMOKE DETECTORS SAVED DURING DEMOLITION IN EXISTING CEILING IN ORIGINAL LOCATIONS. IN AREAS THAT CEILINGS ARE NOT DISTURBED, PROVIDE DUST CAPS ON ALL DEVICES.
- DISCONNECT AND REMOVE ALL CEILING MOUNTED CCTV CAMERAS SHOWN ON THIS DRAWING. AND SAVE FOR REUSE. SAVE ASSOCIATED CABLES FOR REUSE. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:
 - LABEL AND DOCUMENT EACH CCTV CAMERA LOCATION.
 - ORIENTATION OF THE CAMERA NOTATED.
 - T-GRID HANGER BRACKET AND BOX WITH THE SCREWS SHALL BE KEPT AND BE REUSED AT TIME OF REINSTALLATION.
 - CAMERAS SHOULD BE INSTALLED IN THE SAME AREA AND IN THE SAME ORIENTATION AS ORIGINAL.
 - CAMERA REINSTALLATION SHOULD TAKE INTO ACCOUNT ANY NEW OBSTRUCTIONS THAT IMPACT THE LOCATION AND/OR THE VIEWABLE AREA OF THE CAMERA SUCH AS LIGHTS AND EXIT SIGNS.
 - IF CAMERA LENS NEEDS TO BE ADJUSTED, THE CONTRACTOR SHALL WORK WITH NNPS TECHNOLOGY STAFF TO REALIGN.

- DISCONNECT, REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING EQUIPMENT/DEVICES IN ALL SPACES WHERE CEILINGS ARE REMOVED/REINSTALLED AND WITH HVAC SYSTEM DEMOLITION/NEW WORK:
 - ALL COMPUTERS INCLUDING ASSOCIATED MONITORS, TOWERS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL AND DESK MOUNTED TELEPHONE INSTRUMENTS, INCLUDING PATCH CABLES.
 - ALL PRINTERS INCLUDING ASSOCIATED POWER CORDS AND DATA PATCH CABLES.
 - ALL WIRELESS ACCESS POINTS DEVICES.
 - ALL CEILING MOUNTED OR CART MOUNTED PROJECTORS INCLUDING ASSOCIATED MOUNTING PLATES, CEILING MOUNTED RECEPTACLES, CEILING MOUNTED DATA OUTLETS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.

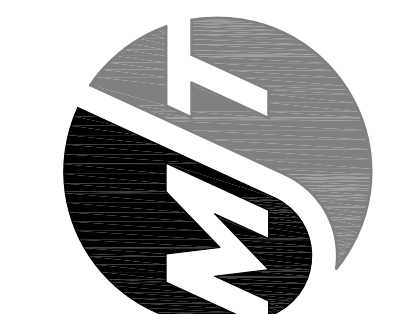
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- DISCONNECT AND REMOVE FROM SITE, ALL WALL MOUNTED TELEVISIONS SHOWN ON THIS DRAWING, INCLUDING WALL MOUNTED TELEVISION BRACKETS, POWER AND AV PATCH CABLES. EXISTING POWER AND AV OUTLET BOXES TO REMAIN.
- REFER TO CP DRAWINGS FOR CEILING BEING REMOVED AND SYSTEMS BEING EFFECTED.

NEW WORK NOTES: (THIS DRAWING ONLY)

- REINSTALL ALL CEILING MOUNTED EXIT LIGHTS, LIGHT FIXTURES, SPEAKERS AND WIRELESS ACCESS DEVICES SAVED DURING DEMOLITION ON EXISTING CEILING AND RECONNECT TO EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED. PROVIDE NEW ANNEALED, LIGHT ZINC-COATED FINISH, 12-GAUGE WIRE FROM ALL FOUR CORNERS TIED TO BUILDING STRUCTURAL MEMBERS FOR ALL RECESSED LIGHT FIXTURES. SECURING SAFETY WIRES TO BRIDGING IS NOT ACCEPTABLE. THE SUPPORTING WIRES SHALL BE DISTINGUISHABLE BY COLOR OR TAGGING. COORDINATE NEW LIGHT FIXTURE SUPPORTS WITH NEW DUCTWORK AND PIPING AND ADJUST AS DIRECTED BY THE MECHANICAL CONTRACTOR.
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 - ALL PRINTERS INCLUDING ASSOCIATED POWER CORDS AND DATA PATCH CABLES.
 - ALL WIRELESS ACCESS POINTS DEVICES.
 - ALL CEILING MOUNTED OR CART MOUNTED PROJECTORS INCLUDING ASSOCIATED MOUNTING PLATES, CEILING MOUNTED RECEPTACLES, CEILING MOUNTED DATA OUTLETS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

NEWPORT NEWS

PARTIAL FIRST FLOOR PLAN - AREA 'C' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CAB
DRAWN BY: CAB
CHECKED BY: 1

ED1.3

DATE: 01/26/2024



PARTIAL FIRST FLOOR PLAN - AREA 'D' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

1 EXISTING TO REMAIN.

2 DISCONNECT AND REMOVE ALL CEILING MOUNTED EXIT LIGHTS, LIGHT FIXTURES, MOTION DETECTORS, SPEAKERS AND WIRELESS ACCESS DEVICES SHOWN ON THIS DRAWING AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT, AND SAVE FOR REUSE. LABEL EACH EQUIPMENT/DEVICE WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH EQUIPMENT/DEVICE IS INSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. SAVE ASSOCIATED BRANCH CIRCUITRY FOR REUSE. RELOCATE AND EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT AND DUCTWORK. COORDINATE MECHANICAL WORK WITH THE MECHANICAL CONTRACTOR. COORDINATE FIRE ALARM AND SECURITY WORK WITH THE OWNER.

3 DISCONNECT AND REMOVE ALL CEILING MOUNTED CCTV CAMERAS SHOWN ON THIS DRAWING. AND SAVE FOR REUSE. SAVE ASSOCIATED CABLES FOR REUSE. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING:

- LABEL AND DOCUMENT EACH CCTV CAMERA LOCATION.
- ORIENTATION OF THE CAMERA NOTATED.
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- IF CAMERA LENS NEEDS TO BE ADJUSTED, THE CONTRACTOR SHALL WORK WITH NNPS TECHNOLOGY STAFF TO REALIGN.

4 DISCONNECT, REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING EQUIPMENT/DEVICES IN ALL SPACES WHERE CEILINGS ARE REMOVED/REINSTALLED AND WITH HVAC SYSTEM DEMOLITION/NEW WORK:

- ALL COMPUTERS INCLUDING ASSOCIATED MONITORS, TOWERS, POWER CORDS AND DATA PATCH CABLES.
- ALL WALL AND DESK MOUNTED TELEPHONE INSTRUMENTS, INCLUDING PATCH CABLES.
- ALL PRINTERS INCLUDING ASSOCIATED POWER CORDS AND DATA PATCH CABLES.
- ALL WIRELESS ACCESS POINTS DEVICES.
- ALL CEILING MOUNTED OR CART MOUNTED PROJECTORS INCLUDING ASSOCIATED MOUNTING PLATES, CEILING MOUNTED RECEPTACLES, CEILING MOUNTED DATA OUTLETS, POWER CORDS AND DATA PATCH CABLES.
- ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.

LABEL ALL EQUIPMENT/DEVICES WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH ITEM IS REINSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. ALL ITEMS SHALL BE SECURELY STORED IN A TEMPERATURE AND HUMIDITY CONTROLLED LOCATION AND AWAY FROM ALL CONSTRUCTION. COORDINATE THE IDENTIFICATION OF EACH ITEM WITH THE OWNER PRIOR TO REMOVAL AND PROVIDE DOCUMENTATION IDENTIFYING EACH ITEM TYPE AND QUANTITY.

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6 REFER TO CP DRAWINGS FOR CEILING BEING REMOVED AND SYSTEMS BEING EFFECTED.

NEW WORK NOTES: (THIS DRAWING ONLY)

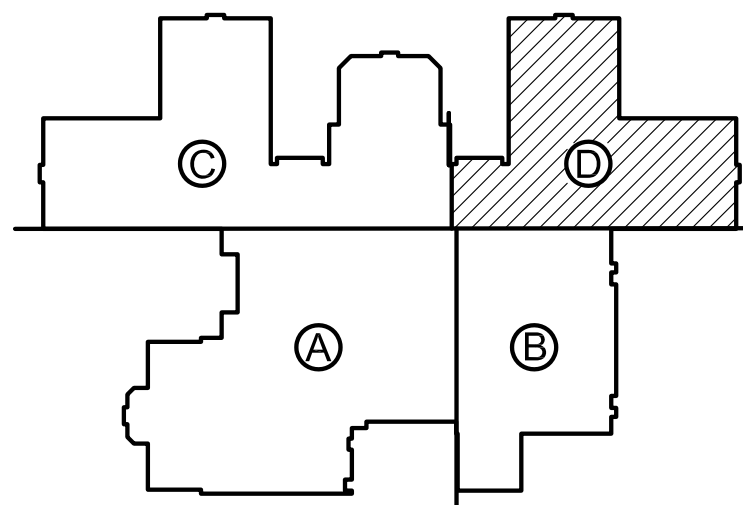
1 REINSTALL ALL WALL MOUNTED OCCUPANCY SENSORS, CEILING MOUNTED EXIT LIGHTS, LIGHT FIXTURES, MOTION DETECTORS, SPEAKERS AND WIRELESS ACCESS DEVICES SAVED DURING DEMOLITION ON EXISTING CEILING AND RECONNECT TO EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED. PROVIDE NEW ANNEALED, LIGHT ZINC-COATED FINISH, 12-GAUGE WIRE FROM ALL FOUR CORNERS TIED TO BUILDING STRUCTURAL MEMBERS FOR ALL RECESSED LIGHT FIXTURES. SECURING SAFETY WIRES TO BRIDGING IS NOT ACCEPTABLE. THE SUPPORTING WIRES SHALL BE DISTINGUISHABLE BY COLOR OR TAGGING. COORDINATE NEW LIGHT FIXTURE SUPPORTS WITH NEW DUCTWORK AND PIPING AND ADJUST AS DIRECTED BY THE MECHANICAL CONTRACTOR.

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KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET



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MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

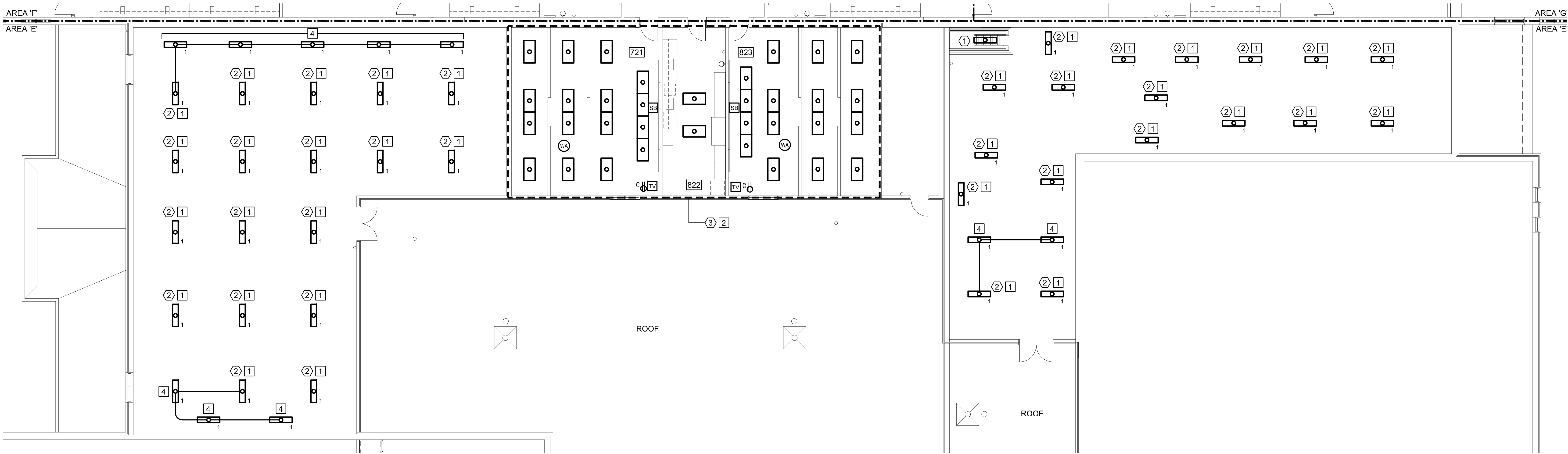
NEWPORT NEWS

PARTIAL FIRST FLOOR PLAN - AREA 'D' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK

COMM. NO: 22-113
DESIGNED BY: CAB
DRAWN BY: CAB
CHECKED BY: 1

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DATE: 01/26/2024



PARTIAL SECOND FLOOR PLAN - AREA 'E' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK ④⑤⑥ ③

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

- ① EXISTING TO REMAIN.
- ② DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE. SAVE BRANCH CIRCUITRY FOR REUSE.
- ③ DISCONNECT AND REMOVE ALL CEILING MOUNTED LIGHT FIXTURES AND WIRELESS ACCESS DEVICES SHOWN IN THIS AREA AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT, AND SAVE FOR REUSE. LABEL EACH EQUIPMENT/DEVICE WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH EQUIPMENT/DEVICE IS INSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. SAVE ASSOCIATED BRANCH CIRCUITRY FOR REUSE. RELOCATE AND EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT AND DUCTWORK. COORDINATE MECHANICAL WORK WITH THE MECHANICAL CONTRACTOR. COORDINATE FIRE ALARM AND SECURITY WORK WITH THE OWNER.
- ④ DISCONNECT, REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING EQUIPMENT/DEVICES IN ALL SPACES WHERE CEILINGS ARE REMOVED/REINSTALLED AND WITH HVAC SYSTEM DEMOLITION/NEW WORK:
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- ⑤ DISCONNECT AND REMOVE FROM SITE, ALL WALL MOUNTED TELEVISIONS SHOWN ON THIS DRAWING, INCLUDING WALL MOUNTED TELEVISION BRACKETS, POWER AND AV PATCH CABLES. EXISTING POWER AND AV OUTLET BOXES TO REMAIN.
- ⑥ REFER TO CP DRAWINGS FOR CEILING BEING REMOVED AND SYSTEMS BEING EFFECTED.

NEW WORK NOTES: (THIS DRAWING ONLY)

- ① INSTALL NEW LIGHT FIXTURE IN SAME LOCATION AND SAME MOUNTING HEIGHT AS LIGHT FIXTURE REMOVED DURING DEMOLITION AND CONNECT TO EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION.
- ② REINSTALL ALL LIGHT FIXTURES AND WIRELESS ACCESS DEVICES SHOWN IN THIS AREA, AND SAVED DURING DEMOLITION ON EXISTING CEILING AND RECONNECT TO EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED. PROVIDE NEW ANNEALED, LIGHT ZINC-COATED FINISH, 12-GAUGE WIRE FROM ALL FOUR CORNERS TIED TO BUILDING STRUCTURAL MEMBERS FOR ALL RECESSED LIGHT FIXTURES. SECURING SAFETY WIRES TO BRIDGING IS NOT ACCEPTABLE. THE SUPPORTING WIRES SHALL BE DISTINGUISHABLE BY COLOR OR TAGGING. COORDINATE NEW LIGHT FIXTURE SUPPORTS WITH NEW DUCTWORK AND PIPING AND ADJUST AS DIRECTED BY THE MECHANICAL CONTRACTOR.
- ③ REINSTALL THE FOLLOWING EQUIPMENT/DEVICES SAVED DURING DEMOLITION AND CONNECT TO EXISTING POWER AND AUXILIARY SYSTEM CABLING:
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 - ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.
- ④ PROVIDE AND CONNECT NEW LIGHT FIXTURE TO EXISTING LIGHTING BRANCH CIRCUITRY AS INDICATED.

LIGHT FIXTURE SCHEDULE						
TYPE	MANUFACTURER'S CATALOG No.	VOLT	LUMENS	WATTAGE	MOUNTING	REMARKS
1	DAY-BRITE FSH45SL835-UNV	UNV	5400	40.3W	PENDANT	SEE NOTE 1

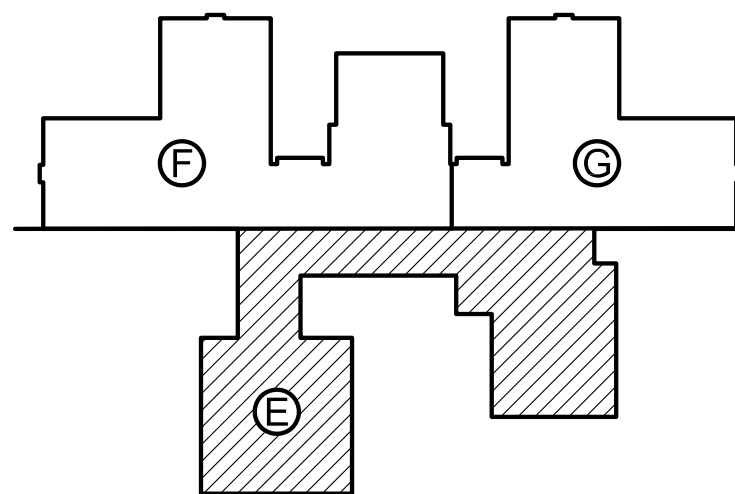
LIGHT FIXTURE SCHEDULE NOTES:

GENERAL:

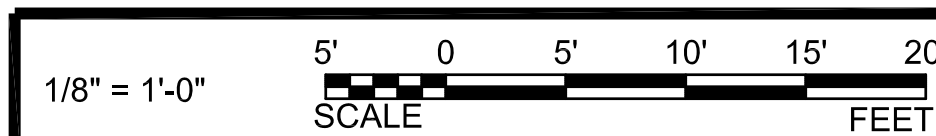
- MATCH MOUNTING HARDWARE AND FRAME WITH CEILING TYPE OR CONSTRUCTION IN WHICH FIXTURE IS TO BE INSTALLED. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS AND FINISH SCHEDULES
- SEE SPECIFICATION SECTION 265100 FOR ADDITIONAL LED INFORMATION.

SPECIFIC:

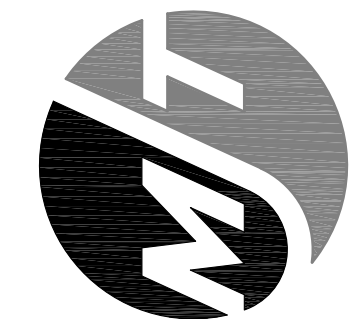
- PROVIDE PENDANT LENGTH AS REQUIRED TO INSTALL LIGHT FIXTURE +8'-0" A.F.F. TO BOTTOM OF FIXTURE, U.O.N. COORDINATE NEW LIGHT FIXTURE LOCATION AND SUPPORTS WITH NEW DUCTWORK AND PIPING AND ADJUST AS DIRECTED BY THE MECHANICAL CONTRACTOR.



KEY PLAN
NOT TO SCALE



THOMPSON
Consulting Engineers



HAMPTON, VA 23666
GLEN ALLEN, VA 23060
PROJECT NUMBER: 22-113

MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS

VIRGINIA

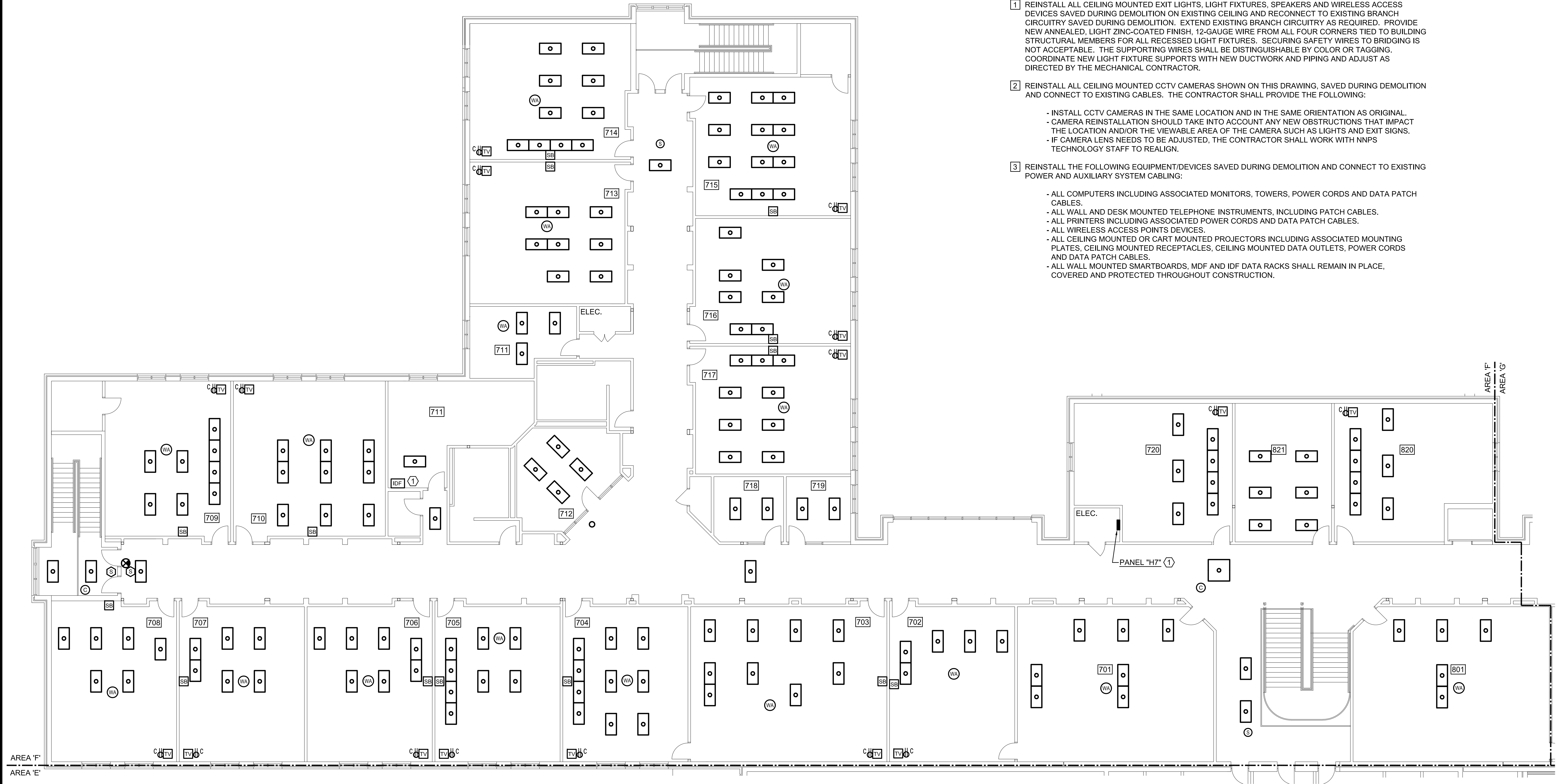
NEWPORT NEWS

PARTIAL SECOND FLOOR PLAN - AREA 'E' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK

COMM. NO.: 22-113
DESIGNED BY: CAB
DRAWN BY: CAB
CHECKED BY: 1

ED1.5

DATE: 01/26/2024



NEW WORK NOTES: (THIS DRAWING ONLY)

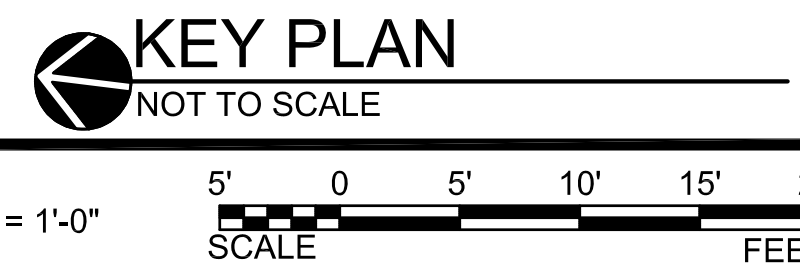
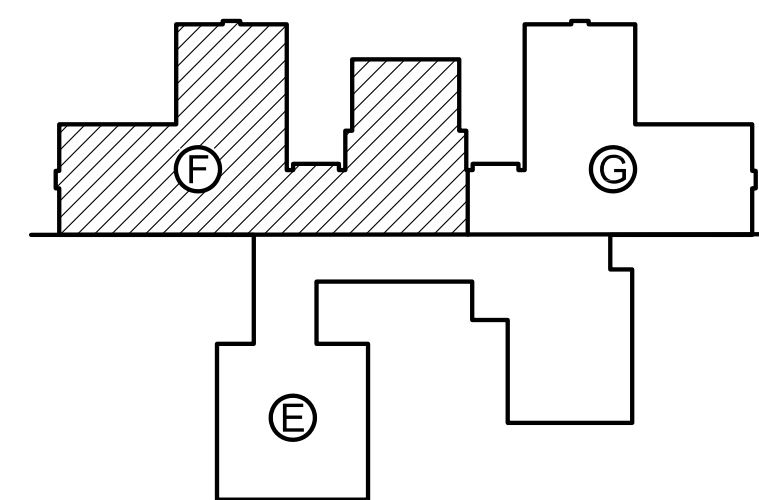
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 - ALL WALL AND DESK MOUNTED TELEPHONE INSTRUMENTS, INCLUDING PATCH CABLES.
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 - ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.

PARTIAL SECOND FLOOR PLAN - AREA 'F' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK ②③④⑤⑥ ①②③

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

- EXISTING TO REMAIN.
- DISCONNECT AND REMOVE ALL CEILING MOUNTED EXIT LIGHTS, LIGHT FIXTURES, SPEAKERS AND WIRELESS ACCESS DEVICES SHOWN ON THIS DRAWING AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT, AND SAVE FOR REUSE. LABEL EACH EQUIPMENT/DEVICE WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH EQUIPMENT/DEVICE IS INSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. SAVE ASSOCIATED BRANCH CIRCUITRY FOR REUSE. RELOCATE AND EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED TO ACCOMMODATE THE REMOVAL AND INSTALLATION OF MECHANICAL EQUIPMENT AND DUCTWORK. COORDINATE MECHANICAL WORK WITH THE MECHANICAL CONTRACTOR. COORDINATE FIRE ALARM AND SECURITY WORK WITH THE OWNER.
- TEMPORARILY BAG AND SUPPORT ALL CEILING MOUNTED SMOKE DETECTORS SHOWN ON THIS DRAWING FROM EXISTING ROOF STRUCTURE TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF EXISTING CEILING. REINSTALL ALL EXISTING CEILING MOUNTED SMOKE DETECTORS SAVED DURING DEMOLITION IN EXISTING CEILING IN ORIGINAL LOCATIONS. IN AREAS THAT CEILINGS ARE NOT DISTURBED, PROVIDE DUST CAPS ON ALL DEVICES.
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 - ORIENTATION OF THE CAMERA NOTATED.
 - T-GRID HANGER BRACKET AND BOX WITH THE SCREWS SHALL BE KEPT AND BE REUSED AT TIME OF REINSTALLATION.
 - CAMERAS SHOULD BE INSTALLED IN THE SAME AREA AND IN THE SAME ORIENTATION AS ORIGINAL.
 - CAMERA REINSTALLATION SHOULD TAKE INTO ACCOUNT ANY NEW OBSTRUCTIONS THAT IMPACT THE LOCATION AND/OR THE VIEWABLE AREA OF THE CAMERA SUCH AS LIGHTS AND EXIT SIGNS.
 - IF CAMERA LENS NEEDS TO BE ADJUSTED, THE CONTRACTOR SHALL WORK WITH NNPS TECHNOLOGY STAFF TO REALIGN.
- DISCONNECT, REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING EQUIPMENT/DEVICES IN ALL SPACES WHERE CEILINGS ARE REMOVED/REINSTALLED AND WITH HVAC SYSTEM DEMOLITION/NEW WORK:
 - ALL COMPUTERS INCLUDING ASSOCIATED MONITORS, TOWERS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL AND DESK MOUNTED TELEPHONE INSTRUMENTS, INCLUDING PATCH CABLES.
 - ALL PRINTERS INCLUDING ASSOCIATED POWER CORDS AND DATA PATCH CABLES.
 - ALL WIRELESS ACCESS POINTS DEVICES.
 - ALL CEILING MOUNTED OR CART MOUNTED PROJECTORS INCLUDING ASSOCIATED MOUNTING PLATES, CEILING MOUNTED RECEPTACLES, CEILING MOUNTED DATA OUTLETS, POWER CORDS AND DATA PATCH CABLES.
 - ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.
- DISCONNECT AND REMOVE FROM SITE, ALL WALL MOUNTED TELEVISIONS SHOWN ON THIS DRAWING, INCLUDING WALL MOUNTED TELEVISION BRACKETS, POWER AND AV PATCH CABLES. EXISTING POWER AND AV OUTLET BOXES TO REMAIN.
- REFER TO CP DRAWINGS FOR CEILING BEING REMOVED AND SYSTEMS BEING EFFECTED.



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PARTIAL SECOND FLOOR PLAN - AREA 'F' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK

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PARTIAL SECOND FLOOR PLAN - AREA 'G' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK ②③④ 1 2

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

① EXISTING TO REMAIN.

② DISCONNECT AND REMOVE ALL LIGHT FIXTURES, SPEAKERS AND WIRELESS ACCESS DEVICES SHOWN ON THIS DRAWING AS REQUIRED TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF MECHANICAL EQUIPMENT, AND SAVE FOR REUSE. LABEL EACH EQUIPMENT/DEVICE WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH EQUIPMENT/DEVICE IS INSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. SAVE ASSOCIATED BRANCH CIRCUITRY FOR REUSE. RELOCATE AND EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED TO ACCOMMODATE THE REMOVAL AND INSTALLATION OF NEW MECHANICAL EQUIPMENT AND DUCTWORK. COORDINATE MECHANICAL WORK WITH THE MECHANICAL CONTRACTOR. COORDINATE FIRE ALARM AND SECURITY WORK WITH THE OWNER.

③ DISCONNECT, REMOVE AND SAVE FOR REINSTALLATION THE FOLLOWING EQUIPMENT/DEVICES IN ALL SPACES WHERE CEILINGS ARE REMOVED/REINSTALLED AND WITH HVAC SYSTEM DEMOLITION/NEW WORK:

- ALL COMPUTERS INCLUDING ASSOCIATED MONITORS, TOWERS, POWER CORDS AND DATA PATCH CABLES.
- ALL WALL AND DESK MOUNTED TELEPHONE INSTRUMENTS, INCLUDING PATCH CABLES.
- ALL PRINTERS INCLUDING ASSOCIATED POWER CORDS AND DATA PATCH CABLES.
- ALL WIRELESS ACCESS POINTS DEVICES.
- ALL CEILING MOUNTED OR CART MOUNTED PROJECTORS INCLUDING ASSOCIATED MOUNTING PLATES, CEILING MOUNTED RECEPTACLES, CEILING MOUNTED DATA OUTLETS, POWER CORDS AND DATA PATCH CABLES.
- ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.

LABEL ALL EQUIPMENT/DEVICES WITH REGARDS TO ROOM NUMBERS AND LOCATIONS TO ENSURE EACH ITEM IS REINSTALLED IN THE SAME LOCATION FROM WHICH THEY WERE REMOVED. ALL ITEMS SHALL BE SECURELY STORED IN A TEMPERATURE AND HUMIDITY CONTROLLED LOCATION AND AWAY FROM ALL CONSTRUCTION. COORDINATE THE IDENTIFICATION OF EACH ITEM WITH THE OWNER PRIOR TO REMOVAL AND PROVIDE DOCUMENTATION IDENTIFYING EACH ITEM TYPE AND QUANTITY.

④ DISCONNECT AND REMOVE FROM SITE, ALL WALL MOUNTED TELEVISIONS SHOWN ON THIS DRAWING, INCLUDING WALL MOUNTED TELEVISION BRACKETS, POWER AND AV PATCH CABLES. EXISTING POWER AND AV OUTLET BOXES TO REMAIN.

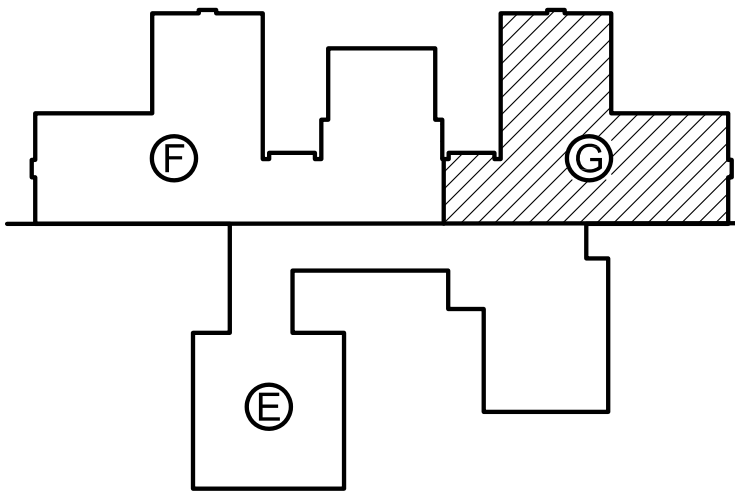
⑤ REFER TO CP DRAWINGS FOR CEILING BEING REMOVED AND SYSTEMS BEING EFFECTED.

NEW WORK NOTES: (THIS DRAWING ONLY)

① REINSTALL ALL LIGHT FIXTURES, SPEAKERS AND WIRELESS ACCESS DEVICES SAVED DURING DEMOLITION ON EXISTING CEILING AND RECONNECT TO EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. EXTEND EXISTING BRANCH CIRCUITRY AS REQUIRED. PROVIDE NEW ANNEALED, LIGHT ZINC-COATED FINISH, 12-GAUGE WIRE FROM ALL FOUR CORNERS TIED TO BUILDING STRUCTURAL MEMBERS FOR ALL RECESSED LIGHT FIXTURES. SECURING SAFETY WIRES TO BRIDGING IS NOT ACCEPTABLE. THE SUPPORTING WIRES SHALL BE DISTINGUISHABLE BY COLOR OR TAGGING. COORDINATE NEW LIGHT FIXTURE SUPPORTS WITH NEW DUCTWORK AND PIPING AND ADJUST AS DIRECTED BY THE MECHANICAL CONTRACTOR.

② REINSTALL THE FOLLOWING EQUIPMENT/DEVICES SAVED DURING DEMOLITION AND CONNECT TO EXISTING POWER AND AUXILIARY SYSTEM CABLING:

- ALL COMPUTERS INCLUDING ASSOCIATED MONITORS, TOWERS, POWER CORDS AND DATA PATCH CABLES.
- ALL WALL AND DESK MOUNTED TELEPHONE INSTRUMENTS, INCLUDING PATCH CABLES.
- ALL PRINTERS INCLUDING ASSOCIATED POWER CORDS AND DATA PATCH CABLES.
- ALL WIRELESS ACCESS POINTS DEVICES.
- ALL CEILING MOUNTED OR CART MOUNTED PROJECTORS INCLUDING ASSOCIATED MOUNTING PLATES, CEILING MOUNTED RECEPTACLES, CEILING MOUNTED DATA OUTLETS, POWER CORDS AND DATA PATCH CABLES.
- ALL WALL MOUNTED SMARTBOARDS, MDF AND IDF DATA RACKS SHALL REMAIN IN PLACE, COVERED AND PROTECTED THROUGHOUT CONSTRUCTION.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET



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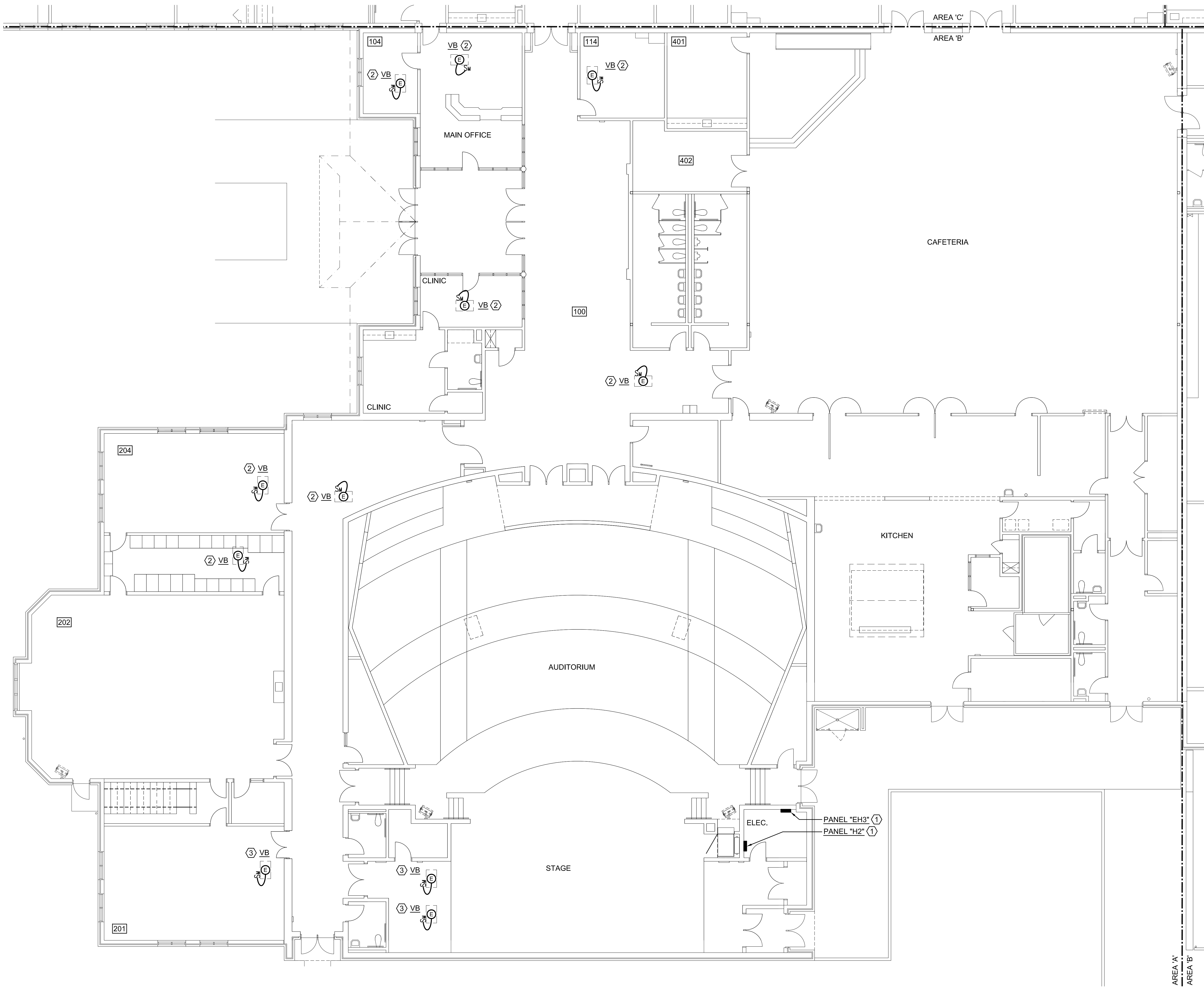
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PARTIAL SECOND FLOOR PLAN - AREA 'G' - LIGHTING & AUXILIARY SYSTEMS - DEMOLITION & NEW WORK

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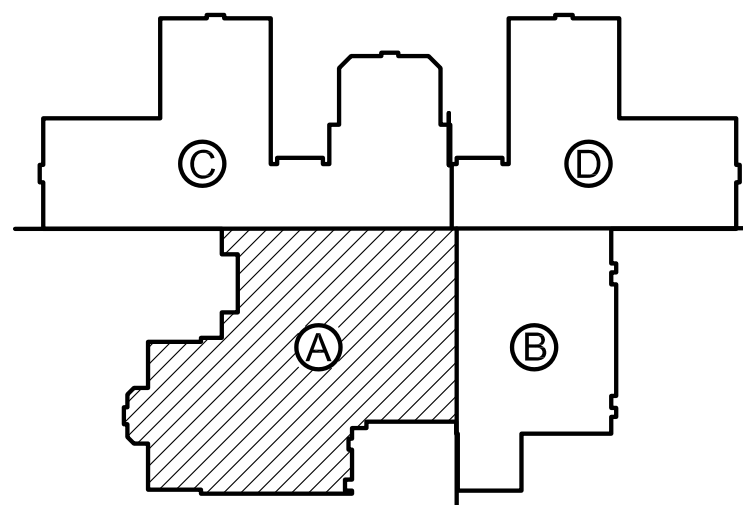


PARTIAL FIRST FLOOR PLAN - AREA 'A' - HVAC POWER - DEMOLITION ④

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

- ① EXISTING TO REMAIN.
- ② DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. SAVE BRANCH CIRCUITRY FOR REUSE.
- ③ DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. REMOVE BRANCH CIRCUITRY BACK TO PANELBOARD.
- ④ SEAL ANY UNUSED PENETRATIONS FROM EXISTING ELECTRICAL CONNECTIONS.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0' 5' 10' 15' 20'
FEET



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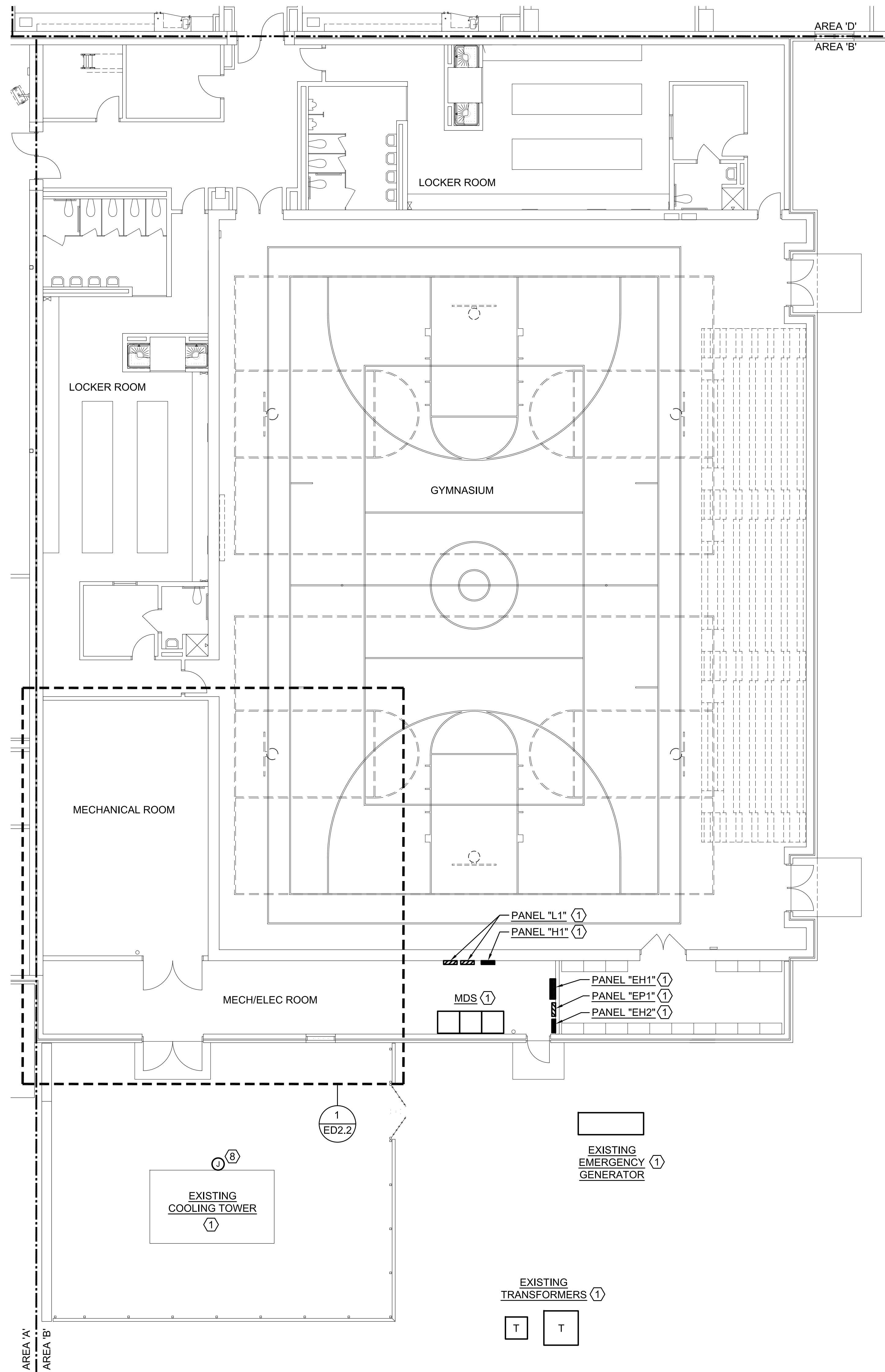
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PARTIAL FIRST FLOOR PLAN - AREA 'A' - HVAC POWER - DEMOLITION

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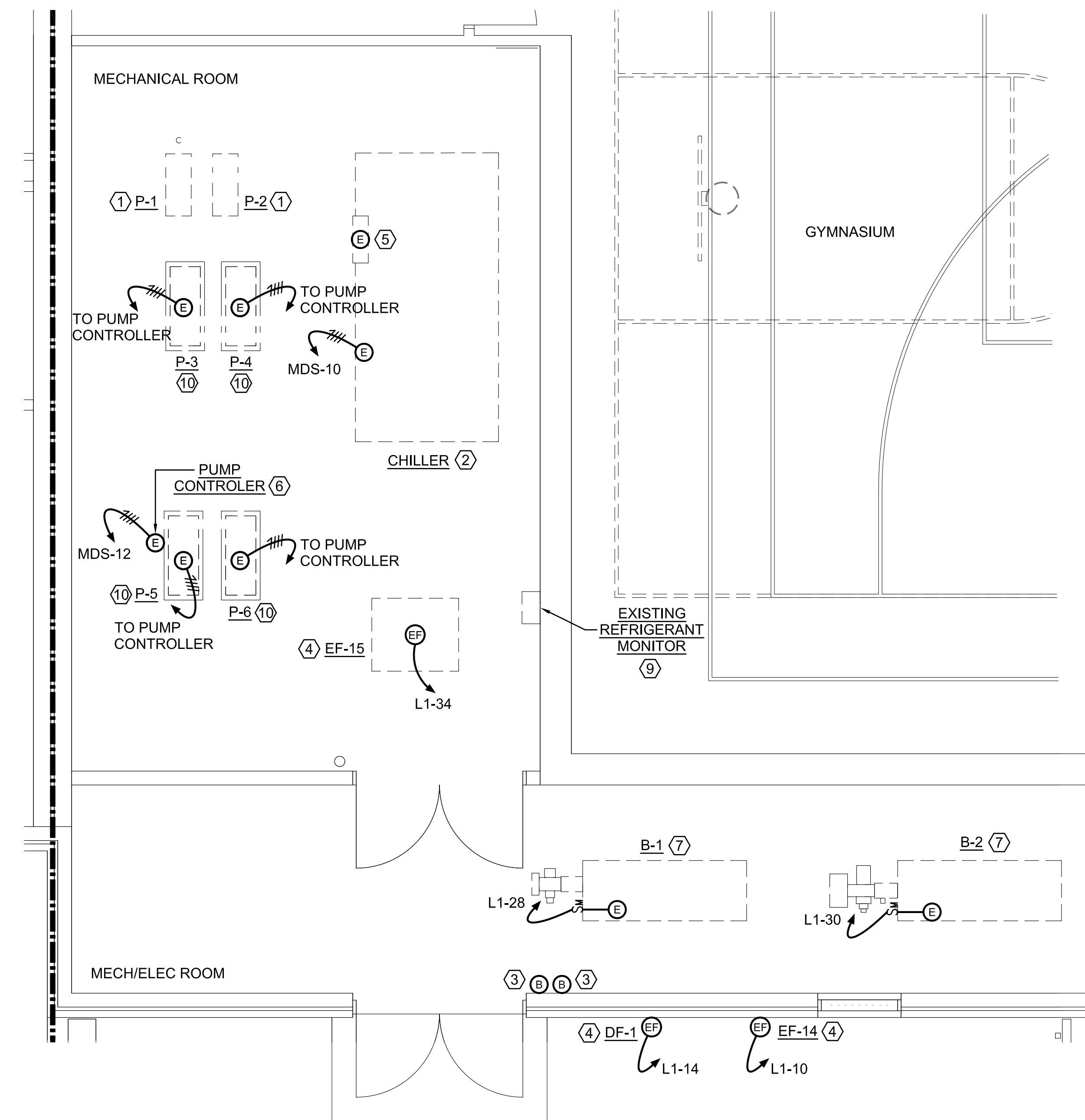
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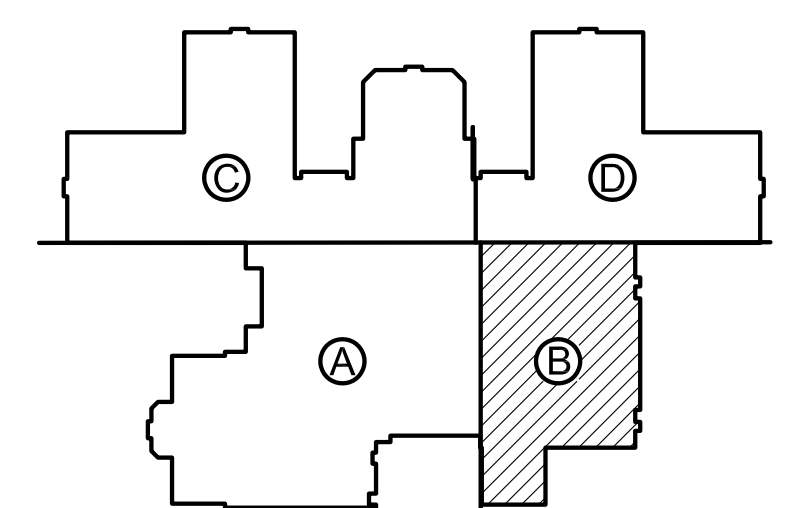
PARTIAL FIRST FLOOR PLAN - AREA 'B' - HVAC POWER - DEMOLITION 11
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

- 1 EXISTING TO REMAIN.
- 2 DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. SAVE BRANCH CIRCUITRY FOR REUSE.
- 3 EXISTING BOILER EMERGENCY SHUT OFF PUSH BUTTON TO REMAIN. REMOVE BRANCH CIRCUITRY BACK TO EMERGENCY PUSH BUTTONS.
- 4 DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE HOMERUN BRANCH CIRCUITRY BACK TO PANELBOARD.
- 5 DISCONNECT ELECTRICAL CONNECTION TO CHILLER CONTROLS. SAVE HOMERUN BRANCH CIRCUITRY FOR REUSE.
- 6 DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE BRANCH CIRCUITRY BACK TO MDS.
- 7 DISCONNECT ELECTRICAL CONNECTION TO BOILER. REMOVE BRANCH CIRCUITRY BACK TO PANELBOARD.
- 8 REMOVE EXISTING JUNCTION BOX AT COOLING TOWER. SAVE BRANCH CIRCUITRY FOR REUSE. PROVIDE NEW 12" X 12" PVC GASKETED BOX AND RECONNECT BRANCH CIRCUITRY.
- 9 DISCONNECT ELECTRICAL CONNECTION TO REFRIGERANT MONITOR. SAVE BRANCH CIRCUITRY FOR REUSE.
- 10 DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE HOMERUN BRANCH CIRCUITRY BACK TO PUMP CONTROLLER.
- 11 SEAL ANY UNUSED PENETRATIONS FROM EXISTING ELECTRICAL CONNECTIONS.

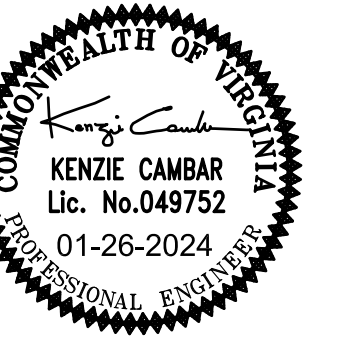


1 ENLARGED MAIN MECHANICAL & ELECTRICAL ROOMS PLAN - HVAC POWER - DEMOLITION 11
SCALE: 1/4" = 1'-0"



KEY PLAN
NOT TO SCALE

1/8" = 1'-0" SCALE 5' 0' 5' 10' 15' 20' FEET



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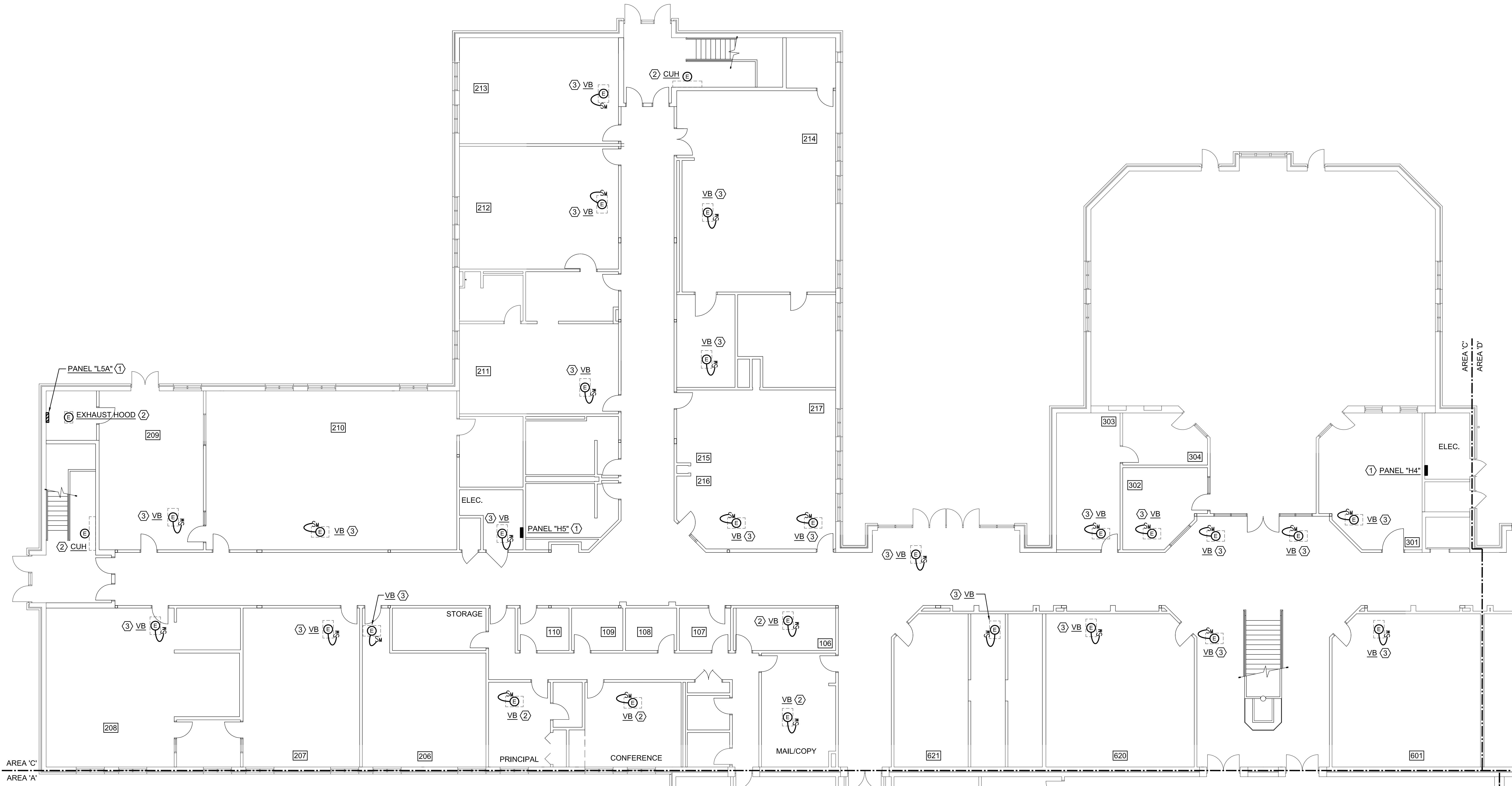
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PARTIAL FIRST FLOOR PLAN - AREA 'C' - HVAC POWER - DEMOLITION

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DATE: 01/26/2024

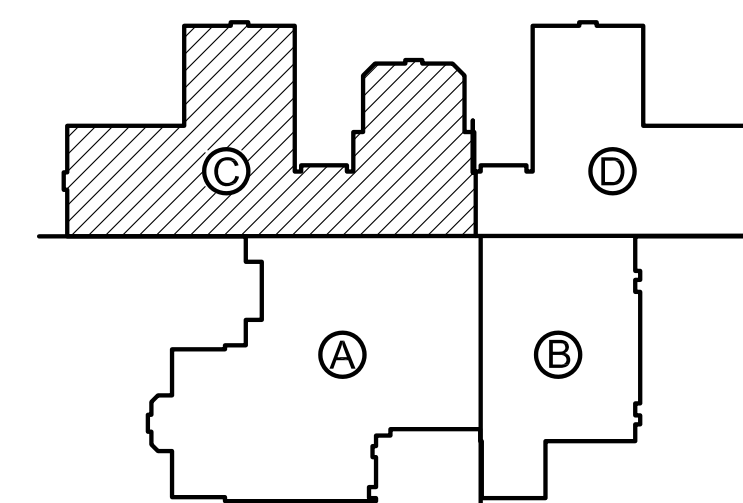


PARTIAL FIRST FLOOR PLAN - AREA 'C' - HVAC POWER - DEMOLITION ④

SCALE: 1/8" = 1'-0"

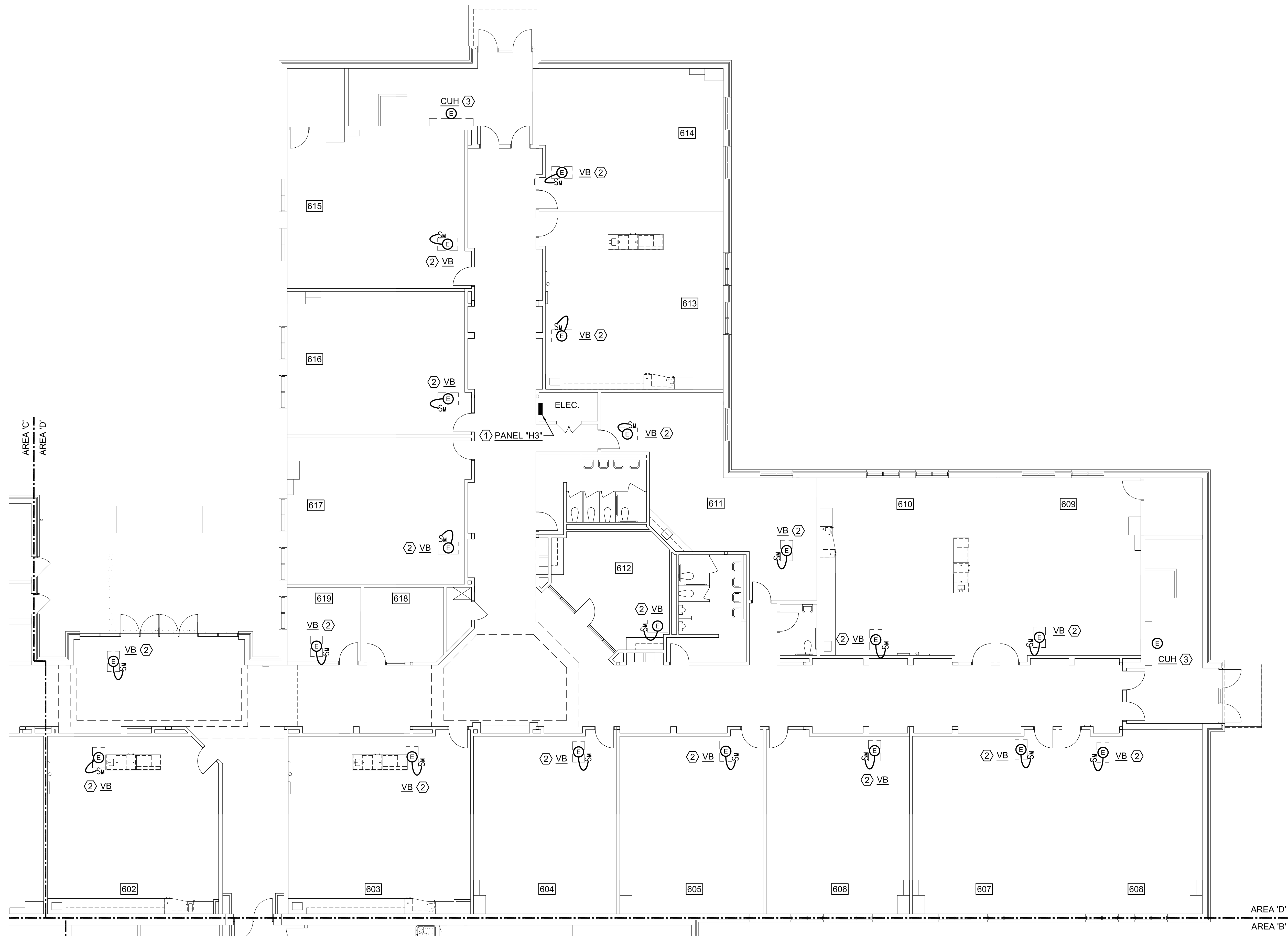
DEMOLITION NOTES: (THIS DRAWING ONLY)

- ① EXISTING TO REMAIN.
- ② DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. SAVE BRANCH CIRCUITRY FOR REUSE.
- ③ DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. REMOVE BRANCH CIRCUITRY BACK TO PANELBOARD.
- ④ SEAL ANY UNUSED PENETRATIONS FROM EXISTING ELECTRICAL CONNECTIONS.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET

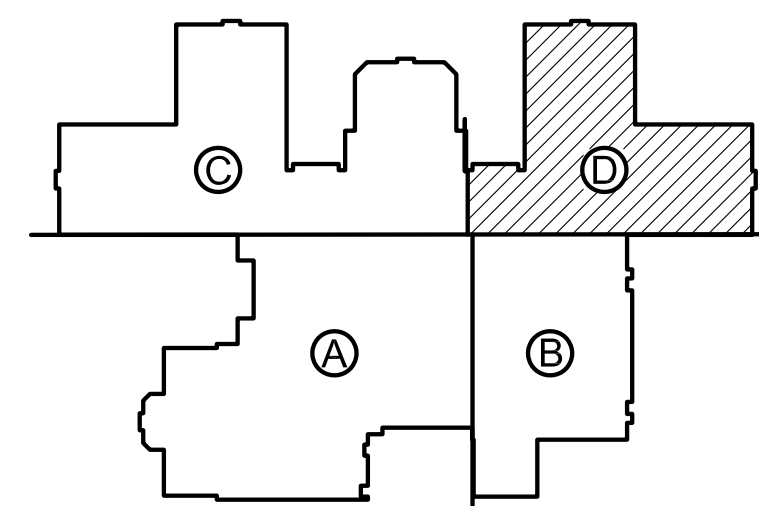


PARTIAL FIRST FLOOR PLAN - AREA 'D' - HVAC POWER - DEMOLITION ④

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

- ① EXISTING TO REMAIN.
- ② DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. SAVE BRANCH CIRCUITRY FOR REUSE.
- ③ DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE BRANCH CIRCUITRY BACK TO LAST RECEPTACLE TO REMAIN.
- ④ SEAL ANY UNUSED PENETRATIONS FROM EXISTING ELECTRICAL CONNECTIONS.



KEY PLAN
NOT TO SCALE



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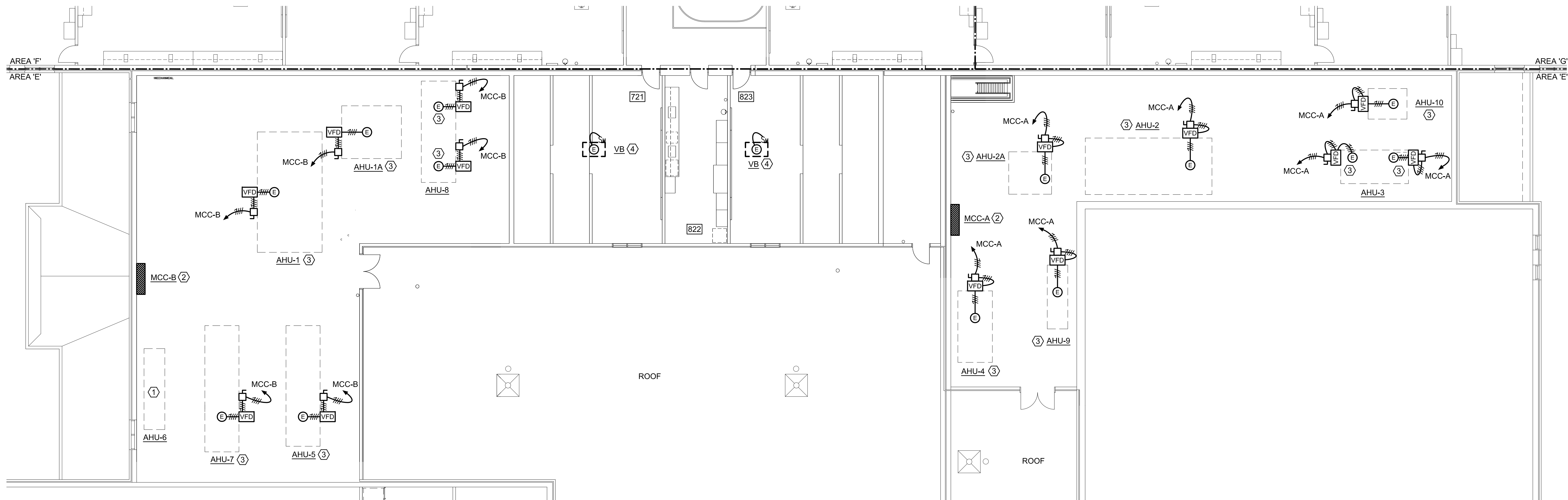
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PARTIAL FIRST FLOOR PLAN - AREA 'D' - HVAC POWER - DEMOLITION

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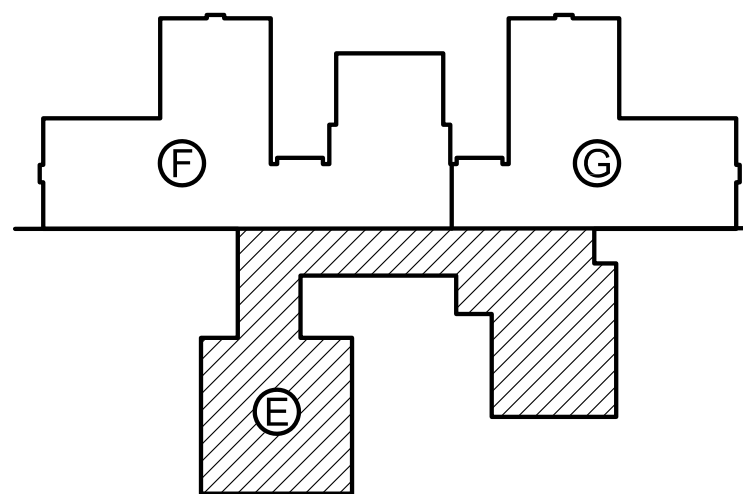


PARTIAL SECOND FLOOR PLAN - AREA 'E' - HVAC POWER - DEMOLITION ⑤

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

- ① EXISTING TO REMAIN - NOT IN CONTRACT.
- ② REMOVE EXISTING MOTOR CONTROL CENTER. SAVE HOMERUN BRANCH FEEDERS TO MOTOR CONTROL CENTER FOR REUSE.
- ③ DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. REMOVE BRANCH CIRCUITRY BACK TO MOTOR CONTROL CENTER.
- ④ DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. REMOVE BRANCH CIRCUITRY BACK TO PANELBOARD.
- ⑤ SEAL ANY UNUSED PENETRATIONS FROM EXISTING ELECTRICAL CONNECTIONS.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE 5' 0 5' 10' 15' 20' FEET



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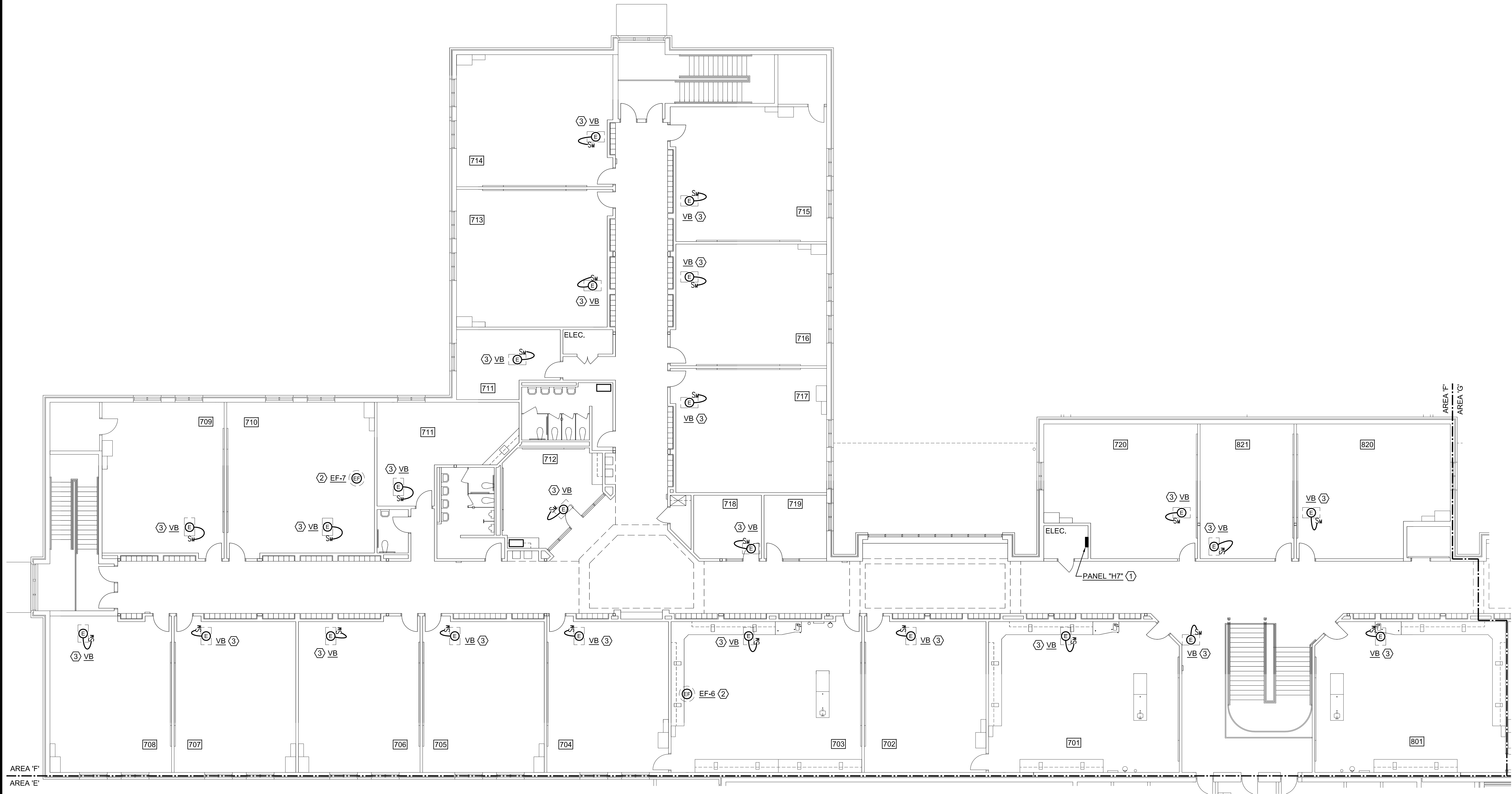
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PARTIAL SECOND FLOOR PLAN - AREA 'E' - HVAC POWER - DEMOLITION

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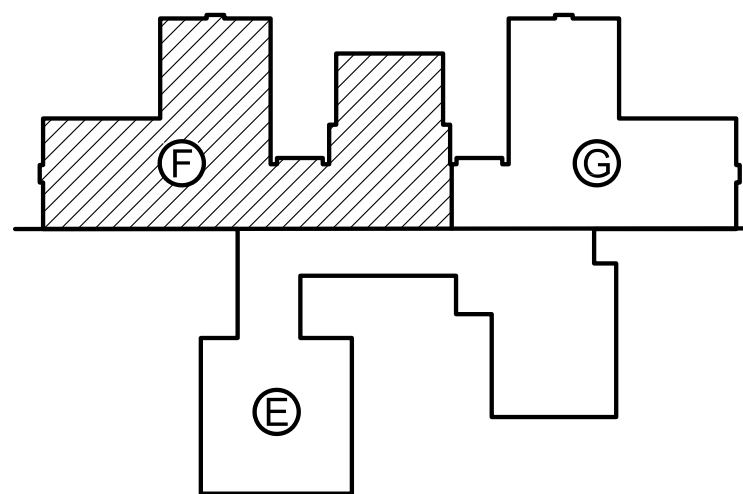


PARTIAL SECOND FLOOR PLAN - AREA 'F' - HVAC POWER - DEMOLITION ④

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

- ① EXISTING TO REMAIN.
- ② DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. SAVE BRANCH CIRCUITRY FOR REUSE.
- ③ DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. REMOVE BRANCH CIRCUITRY BACK TO PANELBOARD.
- ④ SEAL ANY UNUSED PENETRATIONS FROM EXISTING ELECTRICAL CONNECTIONS.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET



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PARTIAL SECOND FLOOR PLAN - AREA 'F' - HVAC POWER - DEMOLITION

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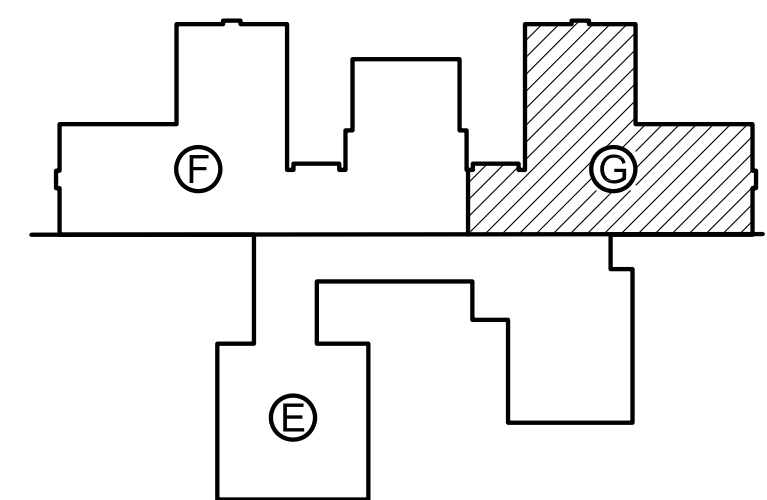


PARTIAL SECOND FLOOR PLAN - AREA 'G' - HVAC POWER - DEMOLITION ④

SCALE: 1/8" = 1'-0"

DEMOLITION NOTES: (THIS DRAWING ONLY)

- ① EXISTING TO REMAIN.
- ② DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. SAVE BRANCH CIRCUITRY FOR REUSE.
- ③ DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. REMOVE BRANCH CIRCUITRY BACK TO PANELBOARD.
- ④ SEAL ANY UNUSED PENETRATIONS FROM EXISTING ELECTRICAL CONNECTIONS.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0" SCALE 5' 0 5' 10' 15' 20' FEET



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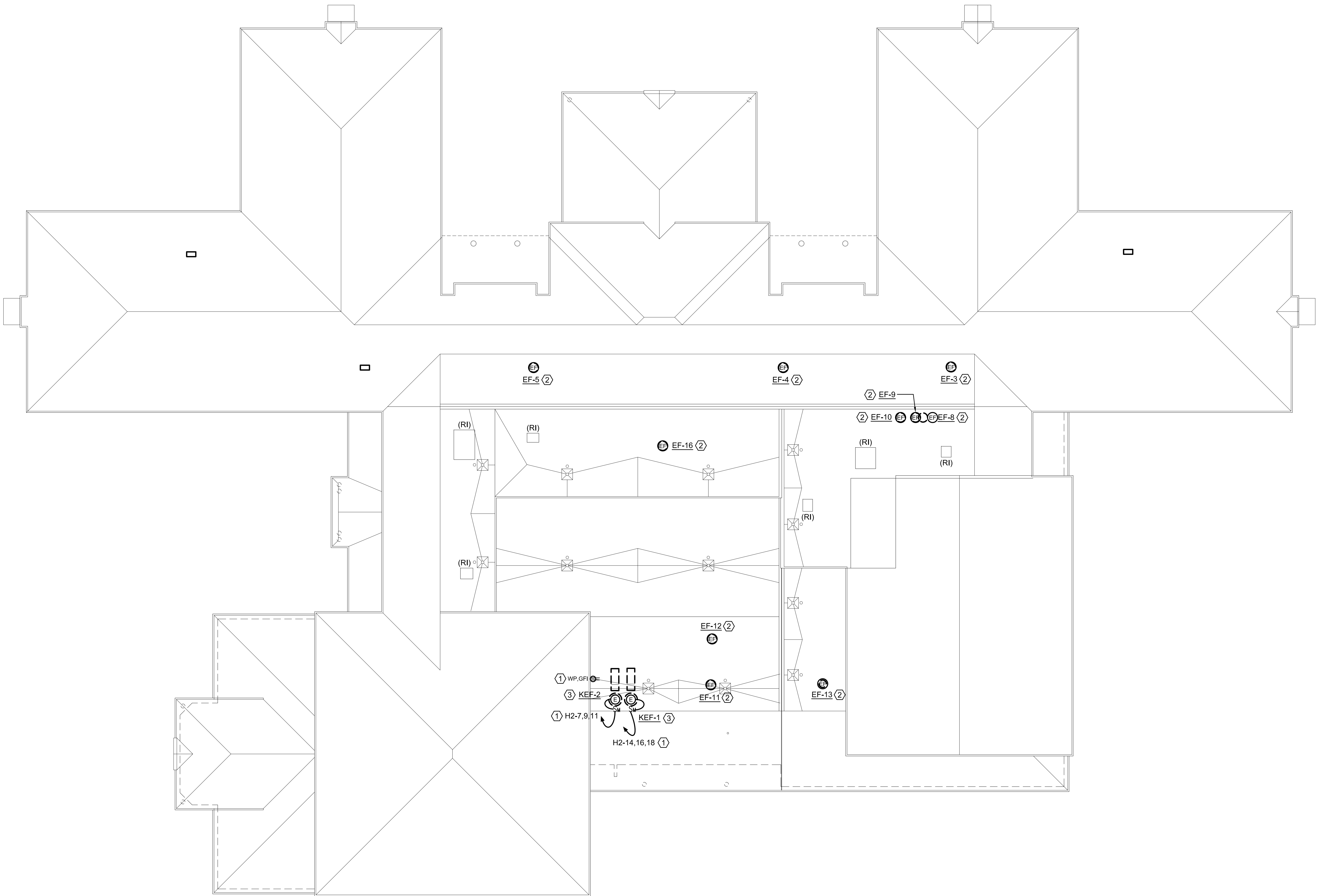
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PARTIAL SECOND FLOOR PLAN - AREA 'G' - HVAC POWER - DEMOLITION

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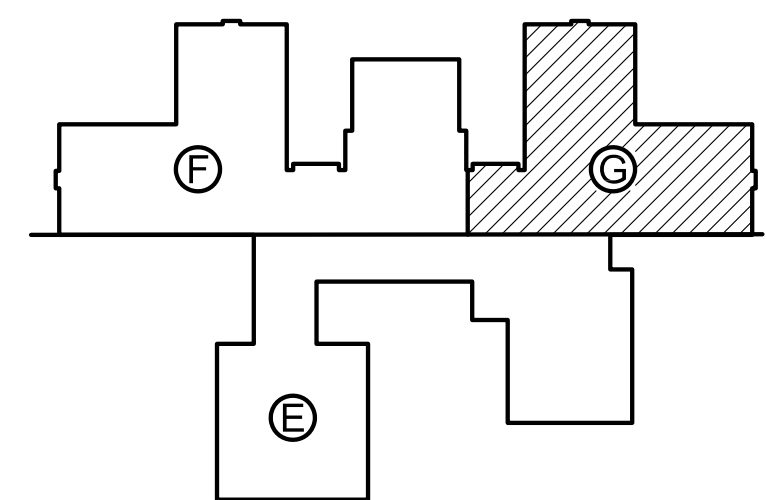


ROOF PLAN - HVAC POWER - DEMOLITION ④

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

DEMOLITION NOTES: (THIS DRAWING ONLY)

- ① EXISTING TO REMAIN.
- ② DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE HOMERUN BRANCH CIRCUITRY TO BELOW ROOF AND SAVE FOR REUSE.
- ③ DISCONNECT ELECTRICAL CONNECTION TO MECHANICAL EQUIPMENT. REMOVE DISCONNECT SWITCH. REMOVE HOMERUN BRANCH CIRCUITRY TO BELOW ROOF AND SAVE FOR REUSE.
- ④ SEAL ANY UNUSED PENETRATIONS FROM EXISTING ELECTRICAL CONNECTIONS.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0' 5' 10' 15' 20'
FEET



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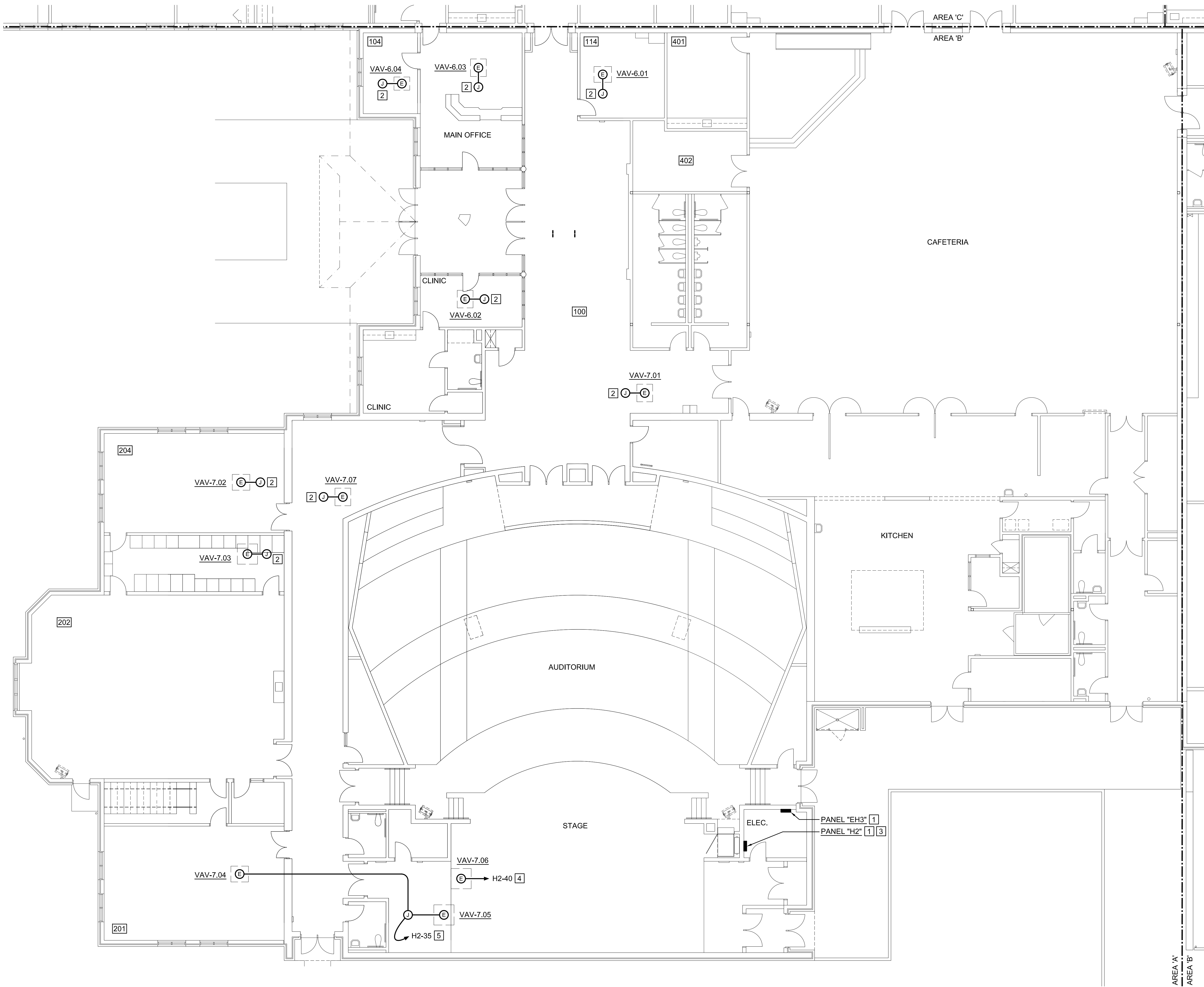
ROOF PLAN - HVAC POWER - DEMOLITION

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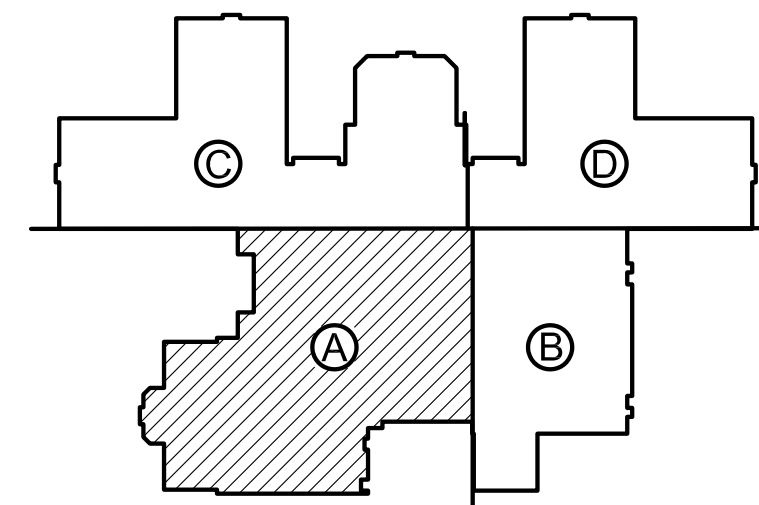


PARTIAL FIRST FLOOR PLAN - AREA 'A' - HVAC POWER - NEW WORK

SCALE: 1/8" = 1'-0"

NEW WORK NOTES: (THIS DRAWING ONLY)

- [1] EXISTING REUSED.
- [2] PROVIDE JUNCTION BOX ON END OF EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. PROVIDE NEW BRANCH CIRCUITRY FROM JUNCTION BOX TO NEW ELECTRICAL CONNECTION.
- [3] REMOVE AND REPLACE EXISTING 20A-1P CIRCUIT BREAKERS IN SPACES 43 AND 45 WITH NEW 15A-1P CIRCUIT BREAKERS AND CONNECT EXISTING CONDUCTORS TO NEW CIRCUIT BREAKERS. EXISTING PANEL "H2" IS A 480Y/277V, 800A, 3-PHASE, 4-WIRE, GENERAL ELECTRIC 'SPECTRA SERIES' PANELBOARD.
- [4] CONNECT HOMERUN TO EXISTING SPARE 20A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED.
- [5] PROVIDE ONE (1) 15A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED. CONNECT HOMERUN BRANCH CIRCUITRY TO NEW CIRCUIT BREAKER.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET



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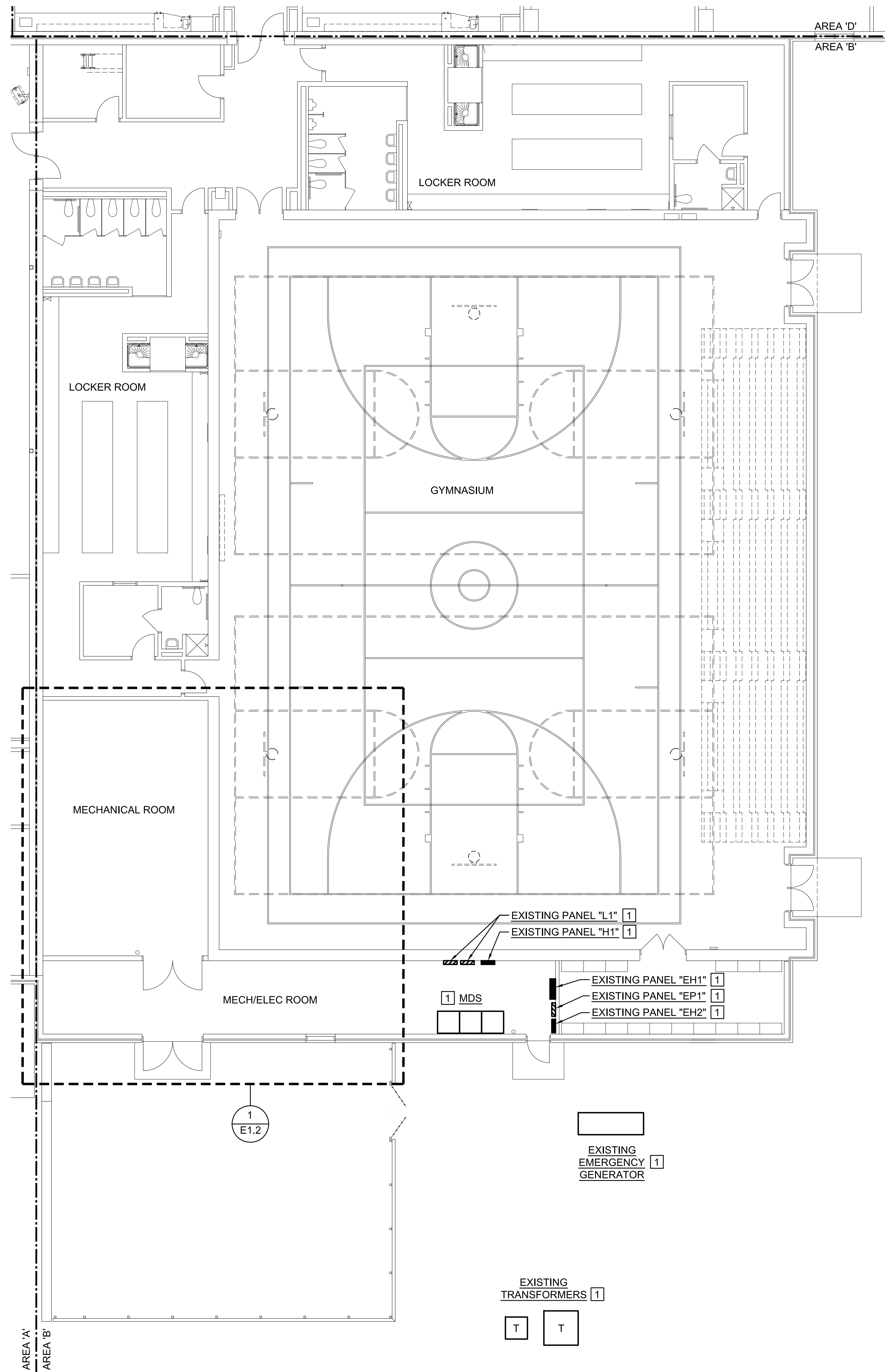
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PARTIAL FIRST FLOOR PLAN - AREA 'A' - HVAC POWER - NEW WORK

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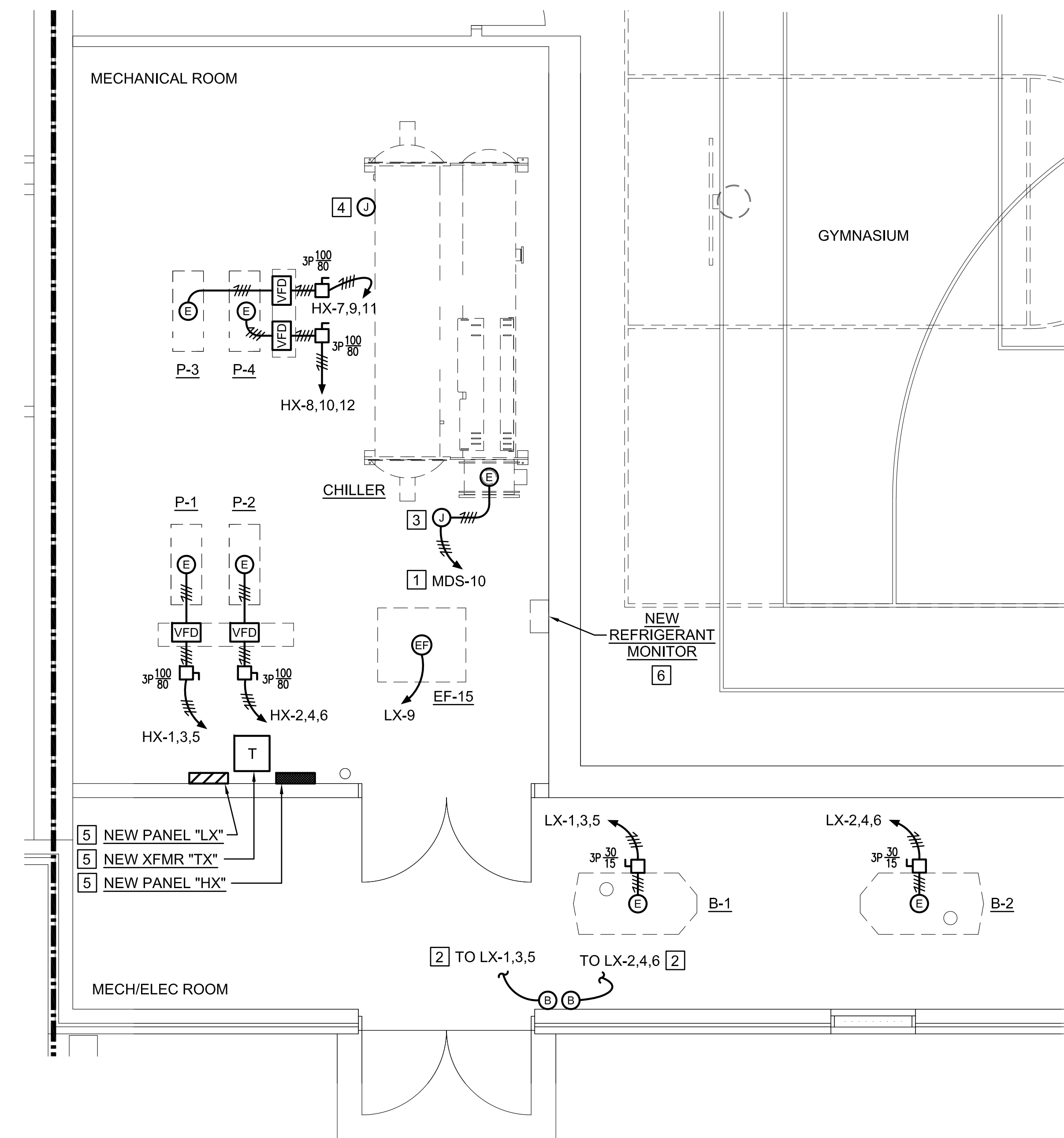
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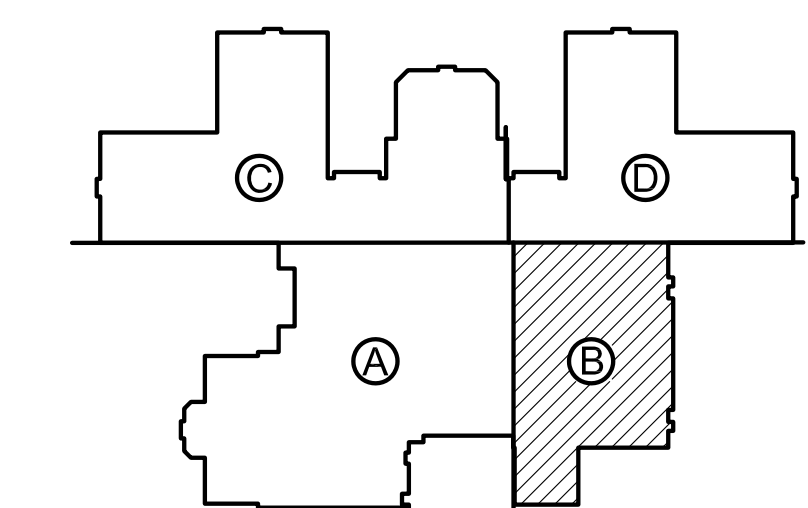
PARTIAL FIRST FLOOR PLAN - AREA 'B' - HVAC POWER - NEW WORK
SCALE: 1/8" = 1'-0"

NEW WORK NOTES: (THIS DRAWING ONLY)

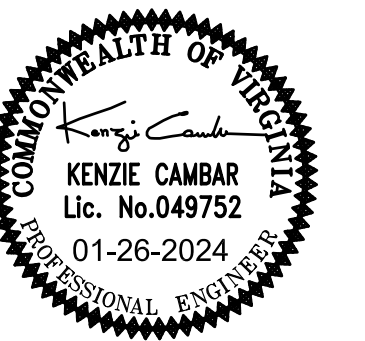
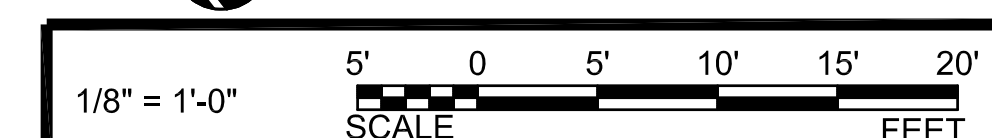
- 1 EXISTING REUSED.
- 2 CONNECT BRANCH CIRCUITRY TO SHUNT TRIP CIRCUIT BREAKERS IN PANEL AND SPACES INDICATED.
- 3 PROVIDE JUNCTION BOX ON END OF EXISTING HOMERUN BRANCH CIRCUITRY SAVED DURING DEMOLITION AND EXTEND EXISTING BRANCH CIRCUITRY TO NEW CHILLER.
- 4 PROVIDE JUNCTION BOX ON END OF EXISTING HOMERUN BRANCH CIRCUITRY SAVED DURING DEMOLITION. PROVIDE 2 #12 AND 1 #12 GROUND IN 3/4" CONDUIT FROM JUNCTION BOX TO NEW CHILLER CONTROLS CABINET.
- 5 PROVIDE NEW EQUIPMENT. SEE "PARTIAL POWER RISER DIAGRAM" ON DRAWING E0.2 FOR ADDITIONAL INFORMATION.
- 6 CONNECT EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION TO NEW REFRIGERANT MONITOR SYSTEM.



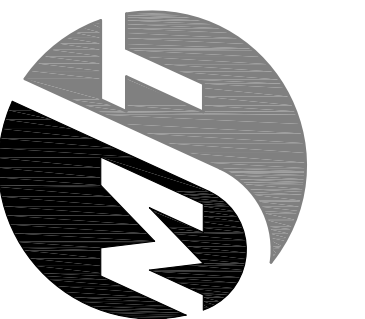
1 ENLARGED MAIN MECHANICAL & ELECTRICAL ROOMS PLAN - HVAC POWER - NEW WORK
E1.2 SCALE: 1/4" = 1'-0"



KEY PLAN
NOT TO SCALE



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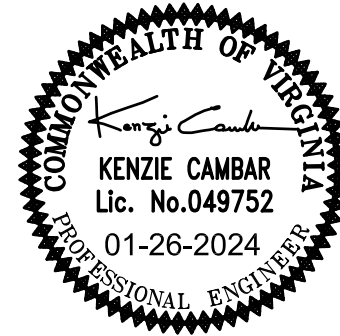
MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
NEWPORT NEWS PUBLIC SCHOOLS
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PARTIAL FIRST FLOOR PLAN - AREA 'B' - HVAC POWER - NEW WORK

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DESIGNED BY: CAB
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CHECKED BY: 1

E1.2

DATE: 01/26/2024



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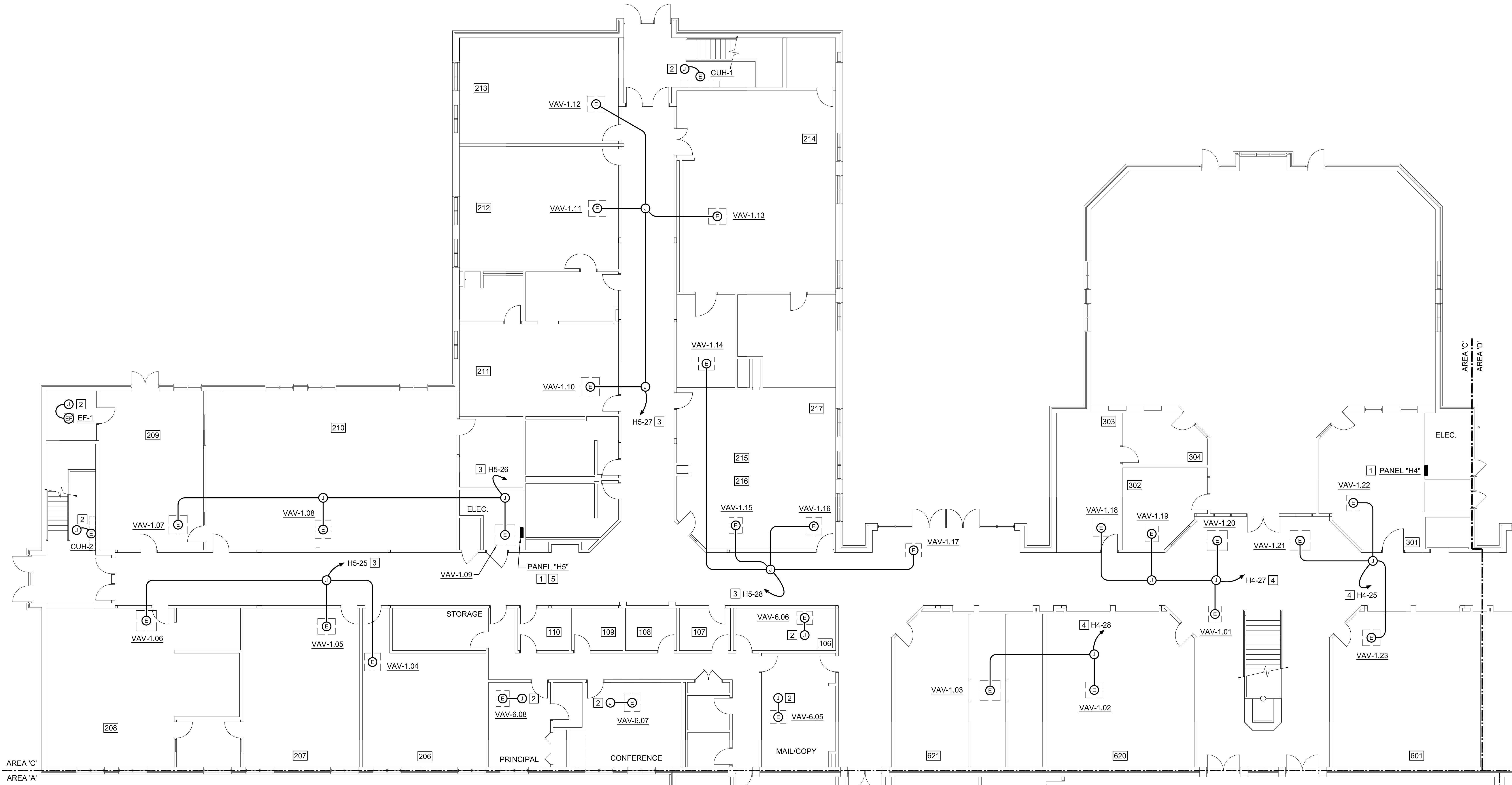
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PARTIAL FIRST FLOOR PLAN - AREA 'C' - HVAC POWER - NEW WORK

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DRAWN BY: CAB
CHECKED BY: J

E1.3

DATE: 01/26/2024

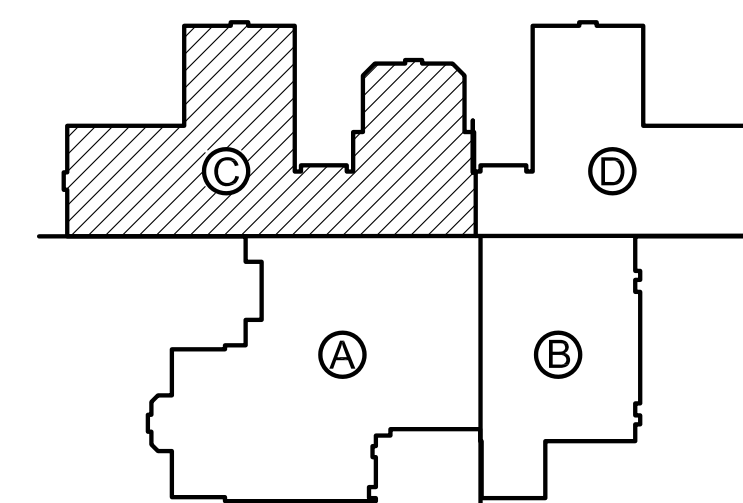


PARTIAL FIRST FLOOR PLAN - AREA 'C' - HVAC POWER - NEW WORK

SCALE: 1/8" = 1'-0"

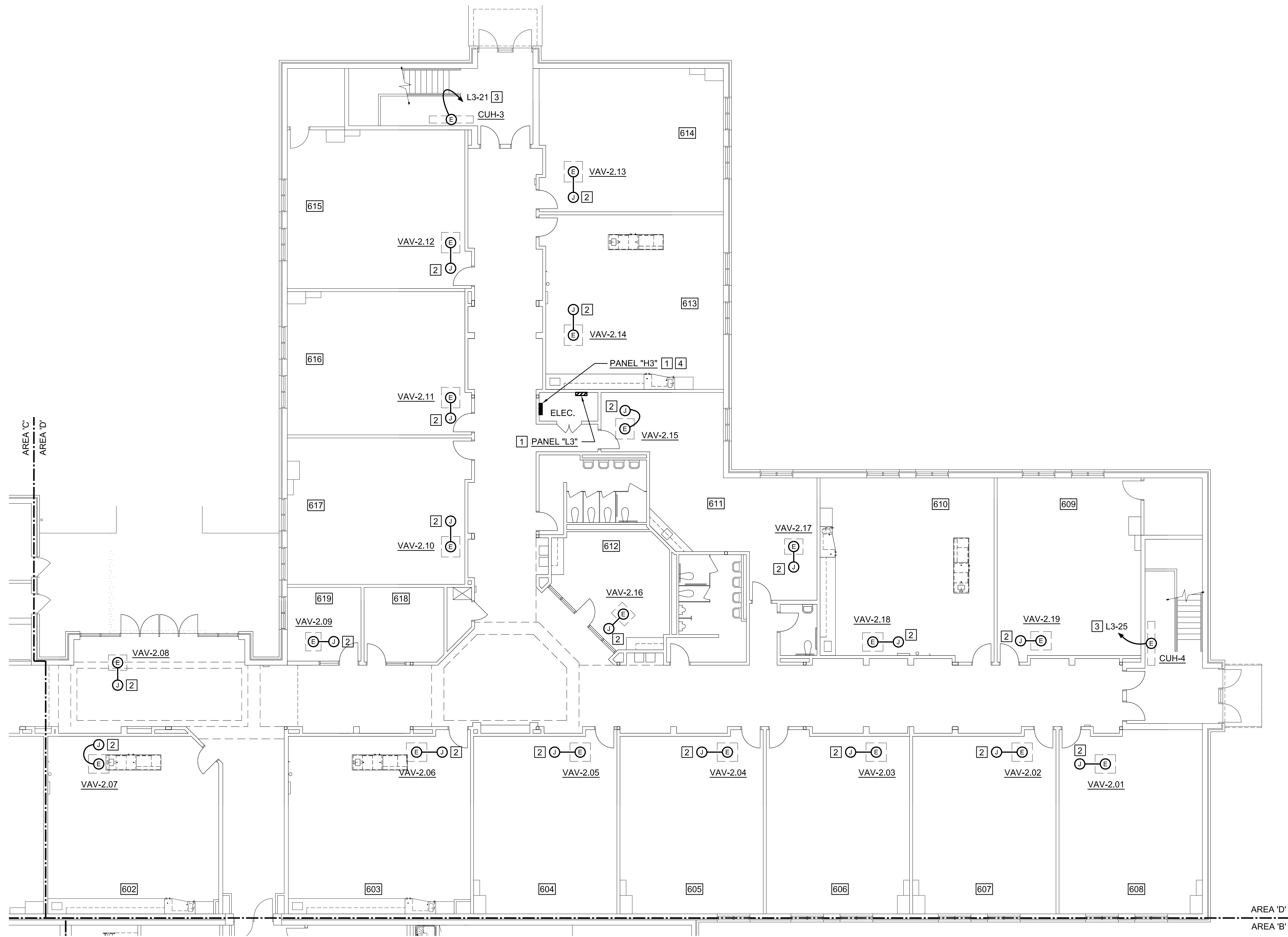
NEW WORK NOTES: (THIS DRAWING ONLY)

- EXISTING REUSED.
- PROVIDE JUNCTION BOX ON END OF EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. PROVIDE NEW BRANCH CIRCUITRY FROM JUNCTION BOX TO NEW ELECTRICAL CONNECTION.
- PROVIDE ONE (1) 15A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED. CONNECT HOMERUN BRANCH CIRCUITRY TO NEW CIRCUIT BREAKER. EXISTING PANEL "H5" IS A 480Y/277V, 600A, 3-PHASE, 4-WIRE, GENERAL ELECTRIC 'A' SERIES PANELBOARD.
- PROVIDE ONE (1) 15A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED. CONNECT HOMERUN BRANCH CIRCUITRY TO NEW CIRCUIT BREAKER. EXISTING PANEL "H4" IS A 480Y/277V, 225A, 3-PHASE, 4-WIRE, GENERAL ELECTRIC 'A' SERIES PANELBOARD.
- DISCONNECT AND REMOVE EXISTING 20A-1P CIRCUIT BREAKER IN SPACE 1. PROVIDE ONE (1) 15A-1P CIRCUIT BREAKER IN SPACE 1 AND CONNECT EXISTING CONDUCTORS TO NEW CIRCUIT BREAKER.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET

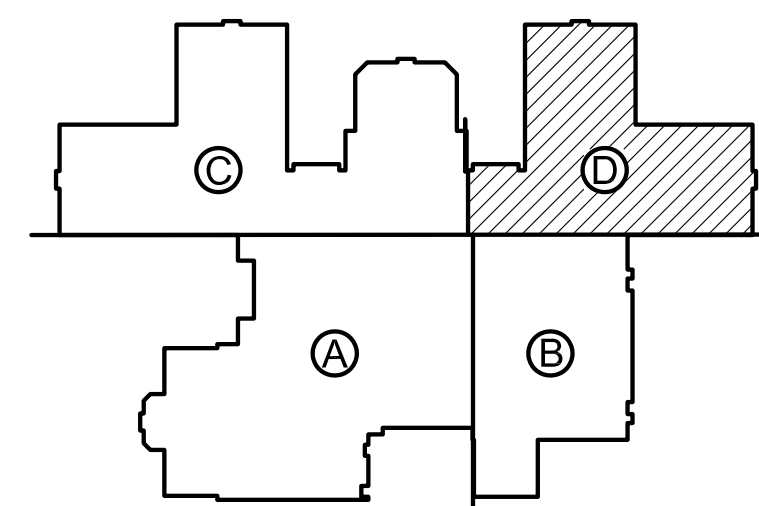


PARTIAL FIRST FLOOR PLAN - AREA 'D' - HVAC POWER - NEW WORK

SCALE: 1/8" = 1'-0"

NEW WORK NOTES: (THIS DRAWING ONLY)

- [1] EXISTING REUSED.
- [2] PROVIDE JUNCTION BOX ON END OF EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. PROVIDE NEW BRANCH CIRCUITRY FROM JUNCTION BOX TO NEW ELECTRICAL CONNECTION.
- [3] CONNECT HOMERUN BRANCH CIRCUITRY TO EXISTING SPARE 20A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED.
- [4] REMOVE AND REPLACE EXISTING 20A-1P CIRCUIT BREAKERS IN SPACES 11, 13, 17, 19 AND 21 WITH 15A-1P CIRCUIT BREAKERS. CONNECT EXISTING BRANCH CIRCUITRY TO NEW CIRCUIT BREAKER. EXISTING PANEL "H3" IS A 480Y/277V, 225A, 3-PHASE, 4-WIRE, GENERAL ELECTRIC 'A' SERIES PANELBOARD.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET



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PARTIAL FIRST FLOOR PLAN - AREA 'D' - HVAC POWER - NEW WORK

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E1.4

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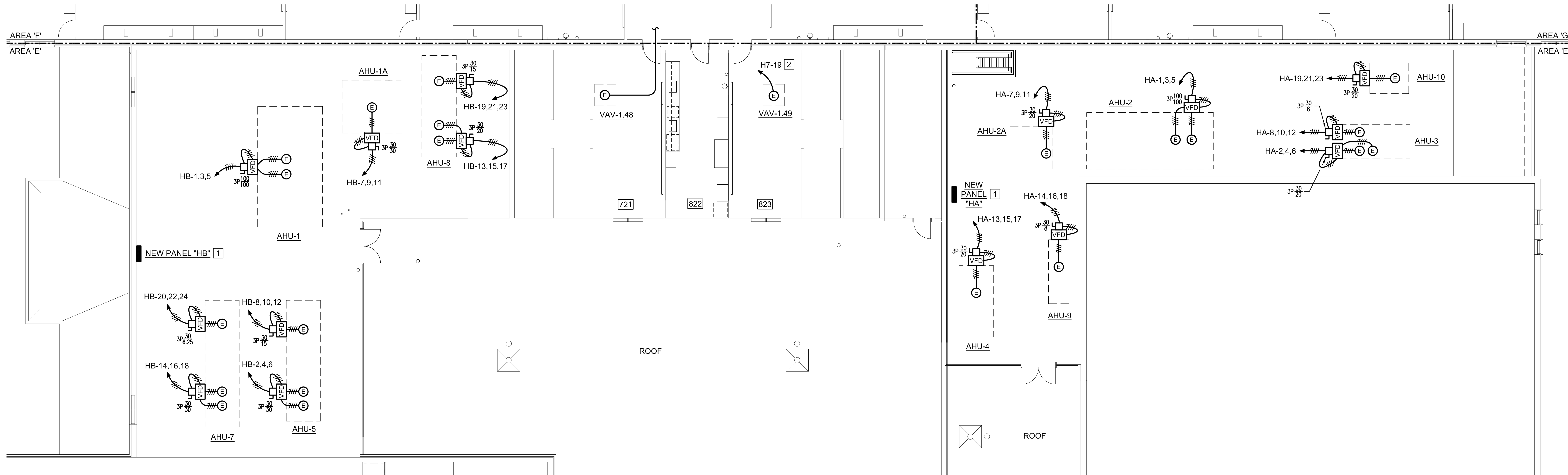
PARTIAL SECOND FLOOR PLAN - AREA 'E' - HVAC POWER - NEW WORK

NEWPORT NEWS

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DATE: 01/26/2024



PARTIAL SECOND FLOOR PLAN - AREA 'E' - HVAC POWER - NEW WORK

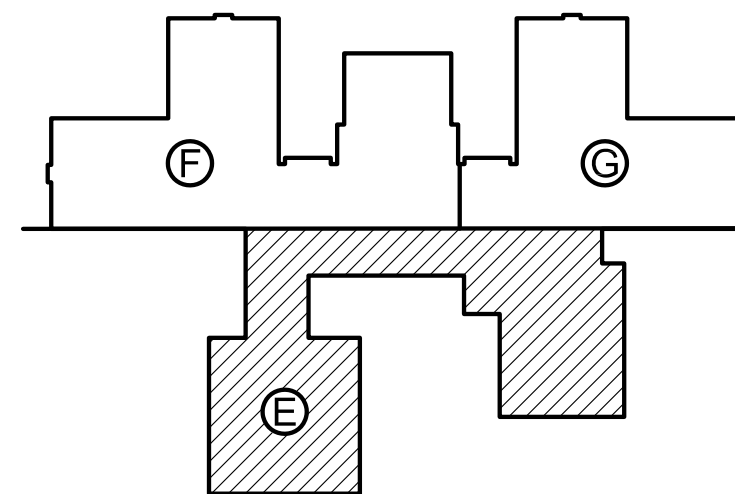
SCALE: 1/8" = 1'-0"

NEW WORK NOTES: (THIS DRAWING ONLY)

- [1] PROVIDE NEW PANEL. REUSE AND EXTEND EXISTING HOMERUN FEEDERS SAVED DURING DEMOLITION TO NEW PANELBOARD. SEE PANELBOARD SCHEDULE ON THIS DRAWING FOR ADDITIONAL INFORMATION.
- [2] CONNECT HOMERUN TO EXISTING SPARE 20A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED. SEE DRAWING E1.6 FOR LOCATION OF PANEL "H7".

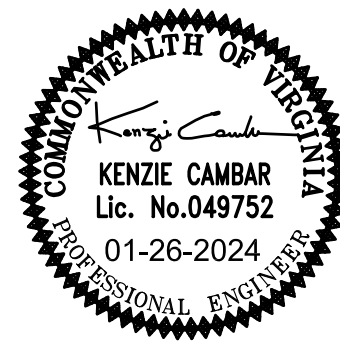
NEW PANEL "HA" 200 AMP 480Y/277V, 3Ø, 4W, M.L.O., SURFACE MTD.																	
LOAD SERVED	LOAD (AMPS)			CKT.BKR. KAIC/ TRIP	WIRE SIZE	CKT. NO.	PHASE			CKT. NO.	WIRE SIZE	CKT.BKR. KAIC/ TRIP	LOAD (AMPS)			LOAD SERVED	
	A	B	C				A	B	C				A	B	C		
AHU-2	68			35	100	3	1				2	10	35	25	15.2		AHU-3 (SUPPLY)
		68					3									15.2	
			68				5										
AHU-2A	14				25	10	7				8	12		15	4.8		AHU-3 (EXHAUST)
		14					9				10				4.8		
			14				11				12					4.8	
AHU-4	14				25	10	13				14	12		15	4.8		AHU-9
		14					15				16				4.8		
			14				17				18					4.8	
AHU-10	11				20	12	19				20	-		-	-		SPACE
		11					21				22	-		-	-		SPACE
			11				23				24	-		-	-		SPACE
SPACE	-			-	-	-	25				26	-		-	-		SPACE
SPACE	-			-	-	-	27				28	-		-	-		SPACE
SPACE	-			-	-	-	29				30	-		-	-		SPACE
SPACE	-			-	-	-	31				32	-		-	-		SPACE
SPACE	-			-	-	-	33				34	-		-	-		SPACE
SPACE	-			-	-	-	35				36	-		-	-		SPACE
SPACE	-			-	-	-	37				38	-		-	-		SPACE
SPACE	-			-	-	-	39				40	-		-	-		SPACE
SPACE	-			-	-	-	41				42	-		-	-		SPACE

NEW PANEL "HB" 300 AMP 480Y/277V, 3ø, 4W, M.L.O., SURFACE MTD.																			
LOAD SERVED	LOAD (AMPS)			CKT.BKR. KAIC TRIP	WIRE SIZE	CKT. NO.	PHASE			CKT. WIRE SIZE	CKT.BKR. KAIC TRIP	LOAD (AMPS)			LOAD SERVED				
	A	B	C				A	B	C			A	B	C					
AHU-1	68			35	100	3	1				2	8	35	40	21			AHU-5 (SUPPLY)	
		68					3									21			
			68					5									21		
AHU-1A	21				40	8	7				8	12		15	7.6			AHU-5 (EXHAUST)	
		21					9				10					7.6			
			21					11				12					7.6		
AHU-8 (SUPPLY)	15.2				25	10	13				14	8		40	21			AHU-7 (SUPPLY)	
		15.2					15				16				21				
			15.2					17				18					21		
AHU-8 (EXHAUST)	7.6				15	12	19				20	12		15	3.4			AHU-7 (EXHAUST)	
		7.6					21				22					3.4			
			7.6					23				24					3.4		
SPACE	-			-	-	-	25				26	-		-	-			SPACE	
SPACE	-			-	-	-	27				28	-		-	-			SPACE	
SPACE	-			-	-	-	29				30	-		-	-			SPACE	
SPACE	-			-	-	-	31				32	-		-	-			SPACE	
SPACE	-			-	-	-	33				34	-		-	-			SPACE	
SPACE	-			-	-	-	35				36	-		-	-			SPACE	
SPACE	-			-	-	-	37				38	-		-	-			SPACE	
SPACE	-			-	-	-	39				40	-		-	-			SPACE	
SPACE	-			-	-	-	41				42	-		-	-			SPACE	

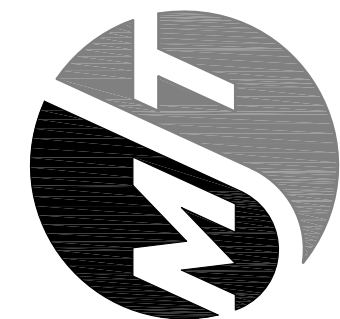


KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET



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PROJECT NUMBER: 22-113



MARY L PASSAGE MIDDLE SCHOOL HVAC REPLACEMENT
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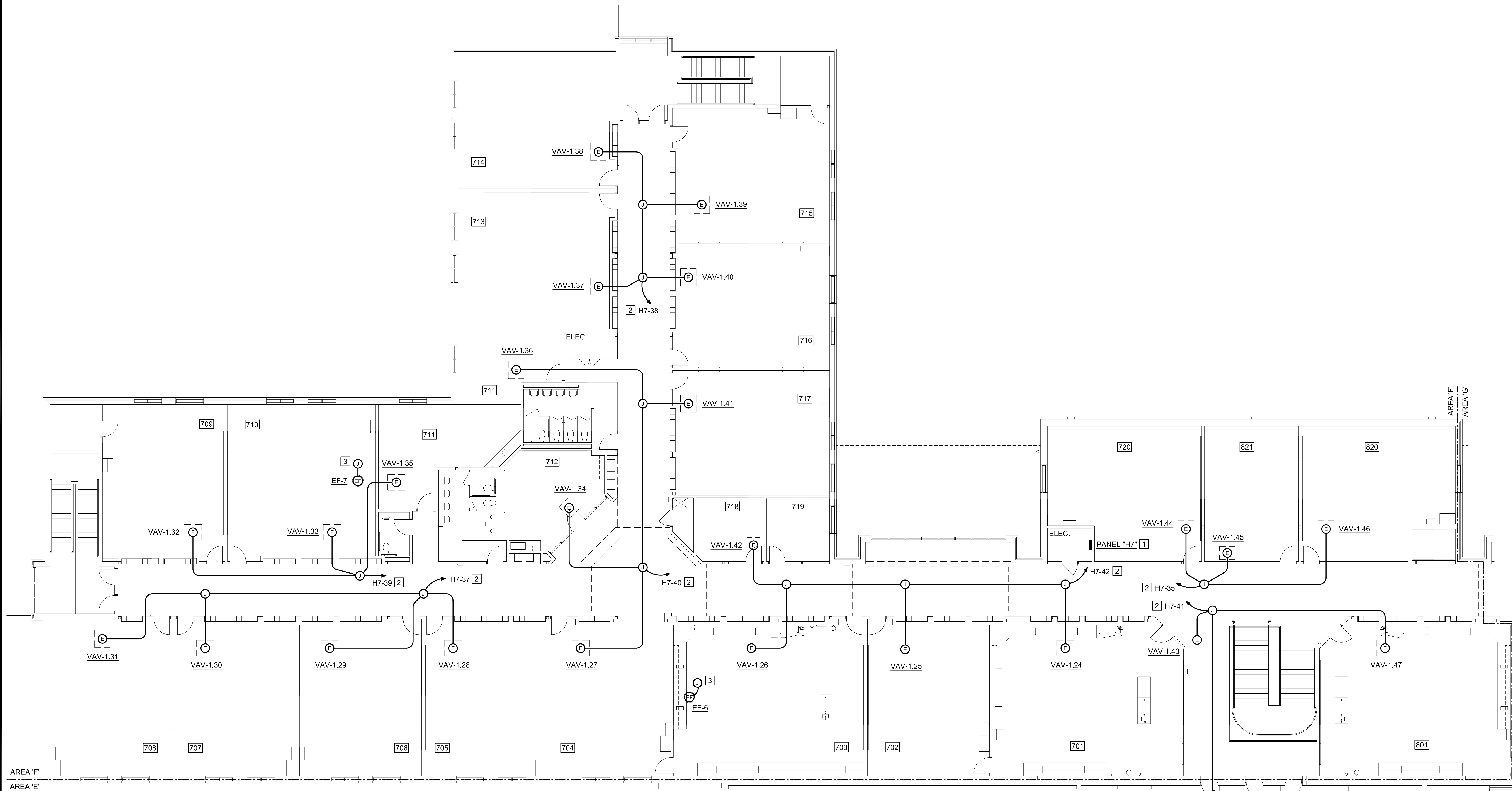
NEWPORT NEWS

PARTIAL SECOND FLOOR PLAN - AREA 'F' - HVAC POWER - NEW WORK

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E1.6

DATE: 01/26/2024

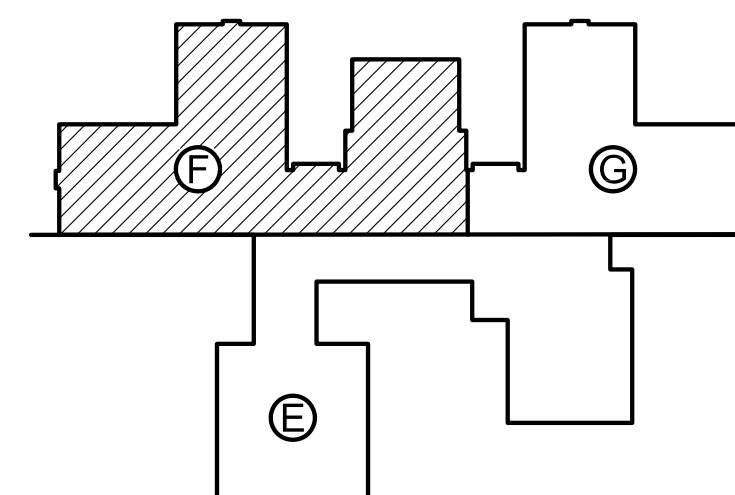


PARTIAL SECOND FLOOR PLAN - AREA 'F' - HVAC POWER - NEW WORK

SCALE: 1/8" = 1'-0"

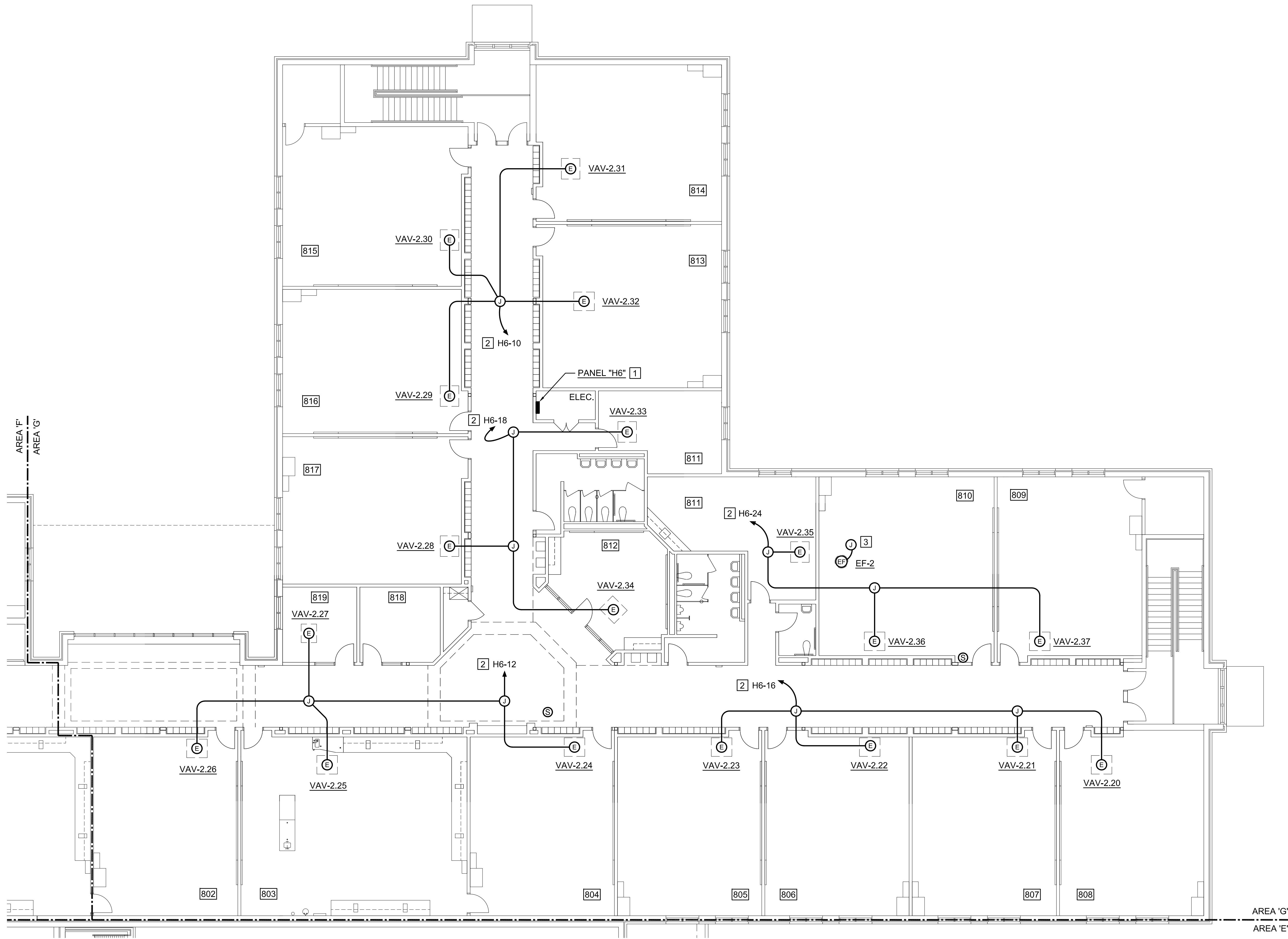
NEW WORK NOTES: (THIS DRAWING ONLY)

- [1] EXISTING REUSED.
- [2] PROVIDE ONE (1) 15A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED. CONNECT HOMERUN BRANCH CIRCUITRY TO NEW CIRCUIT BREAKER. EXISTING PANEL "H7" IS A 480Y/277V, 225A, 3-PHASE, 4-WIRE, GENERAL ELECTRIC 'A' SERIES PANELBOARD.
- [3] PROVIDE JUNCTION BOX ON END OF EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION AND EXTEND BRANCH CIRCUITRY FROM JUNCTION BOX TO NEW ELECTRICAL CONNECTION.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
0 5' 10' 15' 20'
FEET

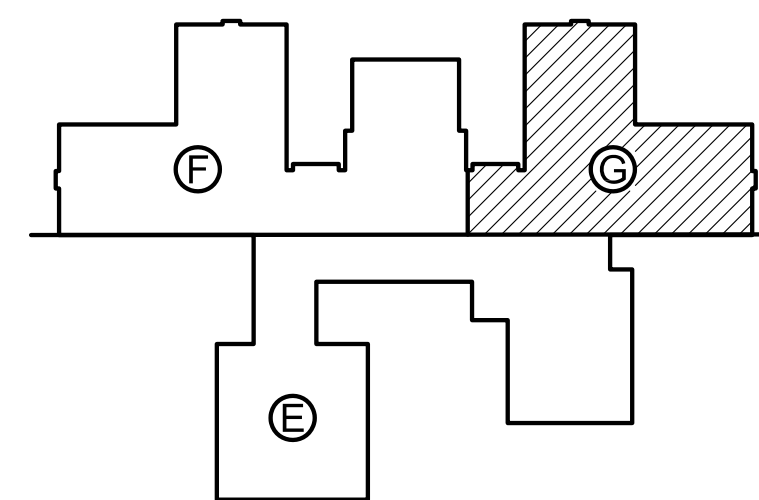


PARTIAL SECOND FLOOR PLAN - AREA 'G' - HVAC POWER - NEW WORK

SCALE: 1/8" = 1'-0"

NEW WORK NOTES: (THIS DRAWING ONLY)

- [1] EXISTING REUSED.
- [2] PROVIDE ONE (1) 15A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED. CONNECT HOMERUN BRANCH CIRCUITRY TO NEW CIRCUIT BREAKER. EXISTING PANEL "H6" IS A 480Y/277V, 125A, 3-PHASE, 4-WIRE, GENERAL ELECTRIC 'A SERIES' PANELBOARD.
- [3] PROVIDE JUNCTION BOX ON END OF EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION AND EXTEND BRANCH CIRCUITRY FROM JUNCTION BOX TO NEW ELECTRICAL CONNECTION.



KEY PLAN
NOT TO SCALE

1/8" = 1'-0"
SCALE
5' 0 5' 10' 15' 20'
FEET



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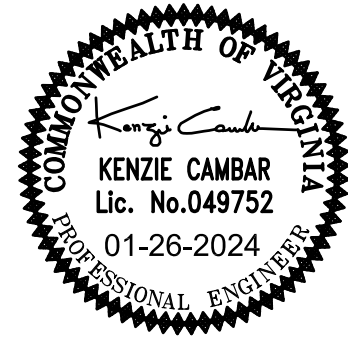
NEWPORT NEWS

PARTIAL SECOND FLOOR PLAN - AREA 'G' - HVAC POWER - NEW WORK

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E1.7

DATE: 01/26/2024



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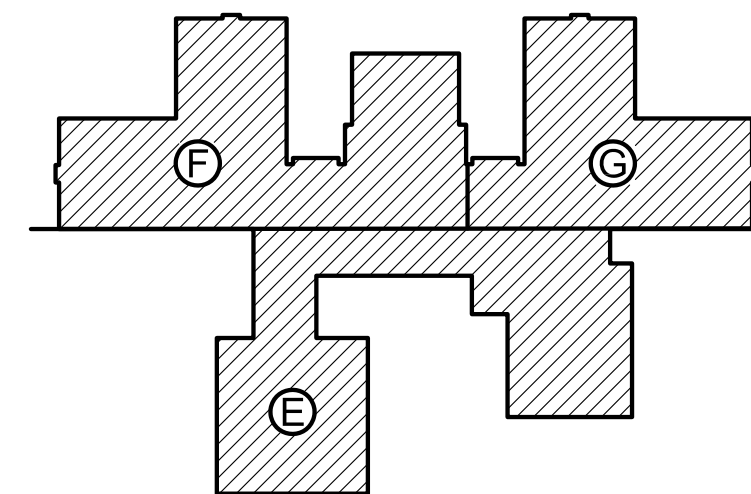
NEWPORT NEWS

ROOF PLAN - HVAC POWER - NEW WORK

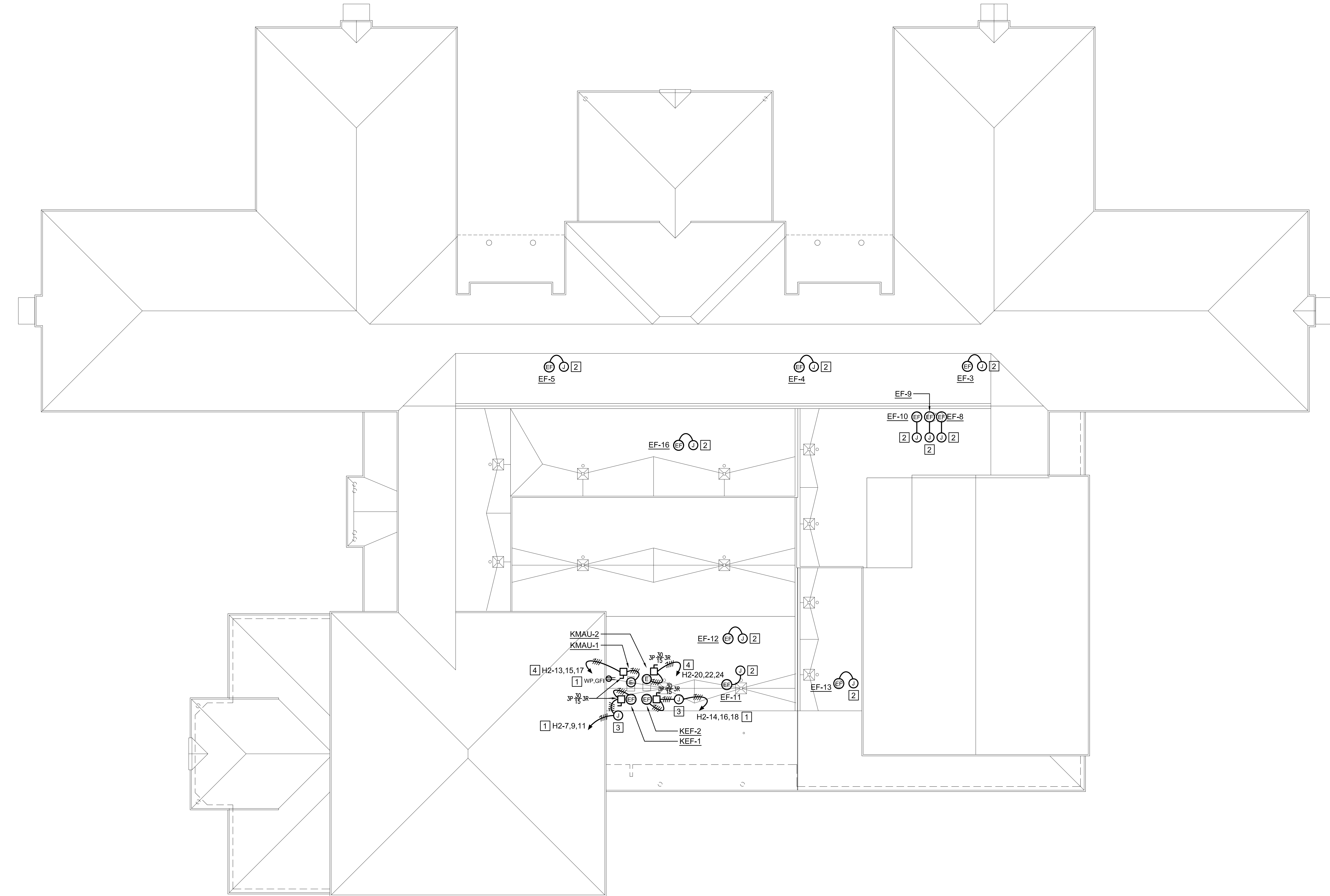
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CHECKED BY: 1

E1.8

DATE: 01/26/2024



KEY PLAN
NOT TO SCALE



ROOF PLAN - HVAC POWER - NEW WORK

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

NEW WORK NOTES: (THIS DRAWING ONLY)

- EXISTING REUSED.
- PROVIDE JUNCTION BOX ON END OF EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. RUN BRANCH CIRCUITRY BELOW ROOF AND UP THROUGH ROOF CURB, FROM JUNCTION BOX TO NEW EXHAUST FAN.
- PROVIDE JUNCTION BOX ON END OF EXISTING BRANCH CIRCUITRY SAVED DURING DEMOLITION. PROVIDE 3 #12 AND 1 #12 GROUND IN 1/2" CONDUIT, RUN BRANCH CIRCUITRY BELOW ROOF AND UP THROUGH ROOF CURB, FROM JUNCTION BOX TO DISCONNECT SWITCH AND FROM DISCONNECT SWITCH TO NEW ELECTRICAL CONNECTION.
- PROVIDE 3 #12 AND 1 #12 GROUND IN 1/2" CONDUIT AND CONNECT TO EXISTING SPARE 20A-1P CIRCUIT BREAKER IN PANEL AND SPACE INDICATED. SEE DRAWING E1.1 FOR LOCATION OF PANEL "H2".