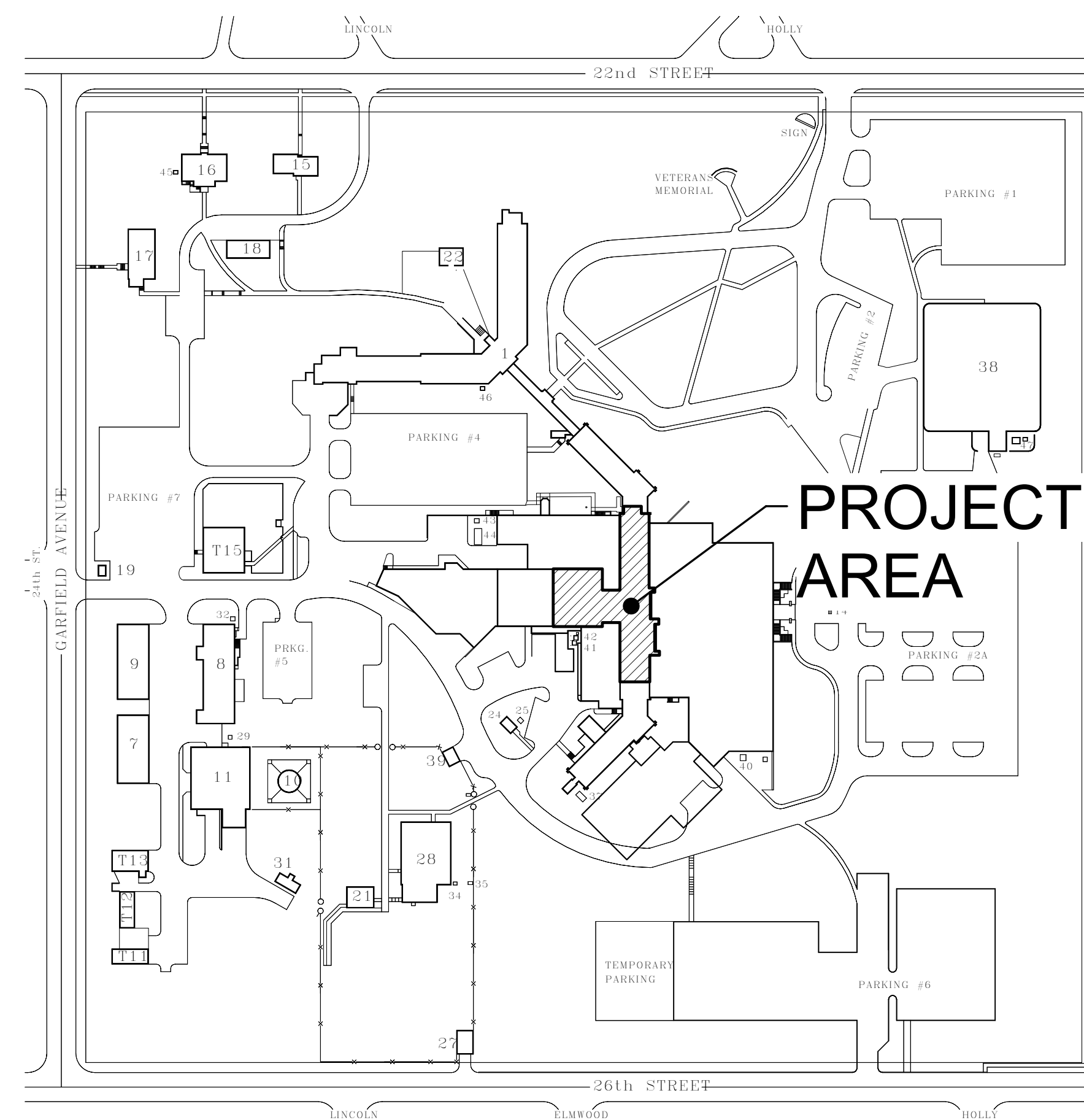


V.A. HEALTH CARE SYSTEM SIOUX FALLS, SOUTH DAKOTA 438-15-201 RENOVATE 5TH FLOOR SURGERY



PROJECT LOCATION



BUILDING SCHEDULE

No.	Buildings
1	N.H.C.U.
5	HOSPITAL BUILDING
7	UTILITY SHOPS
8	LAUNDRY
9	STATION GARAGE
10	WATER TANK
11	BOILER PLANT
14	FLAGPOLE
15	HOTEL BUILDING
16	MENTAL HEALTH & BLDG. MGMT.
17	ENGINEERING and A & MM
18	GARAGE
19	GAS METER HOUSE
21	RECREATION SHELTER - HOSPITAL
22	RECREATION SHELTER - N.H.C.U.
24	AUXILIARY POWER UNIT
25	PAD MOUNT TRANSFORMER
27	ELECTRICAL SWITCHGEAR
28	RESEARCH BUILDING
29	PAD MOUNT TRANSFORMER
31	SALT STORAGE BASIN
32	PAD MOUNT TRANSFORMER
34	PAD MOUNT TRANSFORMER
35	PAD MOUNT TRANSFORMER
37	A/C PAD - L.C.U.
38	REGIONAL OFFICE BUILDING
39	OXYGEN STORAGE PAD
40, 41	PAD MOUNT TRANSFORMER
42, 43	PAD MOUNT TRANSFORMER
45, 46	PAD MOUNT TRANSFORMER
47	PAD MOUNT TRANSFORMER
44	COOLING TOWER PAD
T11	STORAGE BUILDING
T12	STORAGE BUILDING
T13	STORAGE BUILDING
T15	CHILD DAYCARE

V.A.M.R.O.C. SITE PLAN
SIOUX FALLS, SOUTH DAKOTA
Scale: 1" = 50' feet

DRAWING SHEET INDEX

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5-GI001	PHASING PLANS	2	60
STRUCTURAL			
5-S1	EXISTING ROOF FRAMING PLAN AT FIFTH FLOOR	3	60
ARCHITECTURAL			
5-AD100	FOURTH FLOOR DEMOLITION PLANS	4	60
5-AD101	FIFTH FLOOR DEMOLITION PLAN	5	60
5-AD102	FIFTH FLOOR REFLECTED CEILING DEMOLITION PLAN	6	60
5-AI100	FIFTH FLOOR CODE PLAN	7	60
5-AI101	FOURTH FLOOR PLANS	8	60
5-AI102	FIFTH FLOOR REMODEL PLAN	9	60
5-AI103	FIFTH FLOOR REFLECTED CEILING PLAN	10	60
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5-AI201	INTERIOR ELEVATIONS	13	60
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5-AI500	CASEWORK DETAILS	15	60
5-AI501	MISCELLANEOUS DETAILS	16	60
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5-PL101	PLUMBING PLAN - FOURTH FLOOR	31	60
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SHEET NUMBER	SHEET NAME	PAGE NUMBER	OF
MECHANICAL			
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5-MD102	DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR	37	60
5-MD103	DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE	38	60
5-MD104	DEMOLITION HVAC PIPING PLAN - FIFTH FLOOR	39	60
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5-MH001	MECHANICAL SYMBOLS SHEET	41	60
5-MH002	MECHANICAL ABBREVIATIONS AND GENERAL NOTES	42	60
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5-MH103	HVAC VENTILATION PLAN - PENTHOUSE	45	60
5-MH501	MECHANICAL DETAILS	46	60
5-MH502	MECHANICAL DETAILS	47	60
5-MH501	HVAC SCHEDULES	48	60
5-MP101	HVAC PIPING PLAN - FOURTH FLOOR	49	60
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COORDINATING
DRAWING
30-10A-44 p 45

100% CONSTRUCTION
DRAWINGS

Revisions:	Date	CONSULTANTS:		ARCHITECT:		Drawing Title		Project Title		Project Number		Office of Construction and Facilities Management		
		 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND		 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax: (605) 743-2513		 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539		COVER SHEET		V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY			438-15-201	
						Approved: Project Director		Location		Drawing Number		Department of Veterans Affairs		
								SIOUX FALLS, SOUTH DAKOTA		5-GI000				
								Date October 11, 2017		Checked DGS		Drawn AAD		Dwg. 1 of 60

PHASING NOTES:

The Medical Center must maintain its operation 24 hours a day 7 days a week. Therefore, any interruption in service must be scheduled and coordinated with the COR to ensure that no lapses in operation occur. It is the CONTRACTOR'S responsibility to develop a work plan and schedule detailing, at a minimum, the procedures to be employed, the equipment and materials to be used, the interim life safety measure to be used during the work, and a schedule defining the duration of the work with milestone subtasks. The work to be outlined shall include, but not be limited to:

To insure such executions, Contractor shall furnish the COR with a schedule of approximate phasing dates on which the Contractor intends to accomplish work in each specific area of site, building or portion thereof. In addition, Contractor shall notify the COR two weeks in advance of the proposed date of starting work in each specific area of site, building or portion thereof. Arrange such phasing dates to insure accomplishment of this work in successive phases mutually agreeable to COR and Contractor, as follows:

RENOVATE 5TH FLOOR SURGERY - PHASING SCHEDULE
 Standard work hours for the medical center are Monday-Friday, 7:00 a.m. to 4:30 p.m. After hours work may be required by the contractor pending noise, vibration or other construction impacts that would limit care to patients.

- Phase I:**
- This Project is divided into THREE SEPARATE PHASES. Phase 1 work shall be completed prior to commencing Phase 2 work. Phase 2 work shall be completed prior to commencing Phase 3 work. The contractor shall provide adequate work forces to complete all work in each Phase within the contracted time frame.
 - Coordinate with Contracting Officers Representative (COR) to assure that all items to be removed or relocated from the spaces by the VA have been so removed.
 - Construct required construction barriers. Construct 1 hour fire barrier and temporary fire door as indicated prior to beginning demolition and asbestos abatement.
 - Perform Phase 1 asbestos and demolition activities. After hours work may be required by the contractor pending noise, vibration or other construction impacts that limits care to patients.
 - After demolition and asbestos abatement activities are completed for Phase 1, convene a meeting with Contracting Officers Representative (COR) and Architect/Engineer to review conflicts.
 - Install new walls, doors, ceilings, casework, and equipment in an order most workable to the General Contractor for Phase 1 Area.
 - Coordinate installation of plumbing, electrical and mechanical equipment for Phase 1 Area.
 - Complete wall and floor finishes within individual work areas for Phase 1 Area.
 - Remove temporary construction barriers and doors at completion of Phase 1 work.
 - For each Phase and Area, complete final cleanup for final inspection by Contracting Officers Representative (COR) and Architect/Engineer.
 - After Phase 1 activities are completed convene a meeting with Contracting Officers Representative (COR) and Architect/Engineer to review conflicts.

- Phase II:**
- Provide 14 calendar day window between final completion of Phase 1 and the beginning of Phase 2 for the VA to move out of the Phase 2 Area.
 - Coordinate with Contracting Officers Representative (COR) to assure that all items to be removed or relocated from the spaces by the VA have been so removed.
 - Construct required construction barriers. Construct 1 hour fire barrier and temporary fire door as indicated on Sheet G1001 Phasing Plans prior to beginning demolition and asbestos abatement.
 - Perform Phase 2 asbestos abatement and demolition activities. After hours work may be required by the contractor pending noise, vibration or other construction impacts that limits care to patients.
 - After demolition and asbestos abatement activities are completed for Phase 2, convene a meeting with Contracting Officers Representative (COR) and Architect/Engineer to review conflicts.
 - Install new walls, doors, ceilings, casework, and equipment in an order most workable to the General Contractor for Phase 2 Area.
 - Coordinate installation of plumbing, electrical and mechanical equipment for Phase 2 Area.
 - Complete wall and floor finishes within individual work areas for Phase 2 Area.
 - Remove temporary construction barriers and doors at completion of Phase 2 work.
 - For each Phase and Area, complete final cleanup for final inspection by Contracting Officers Representative (COR) and Architect/Engineer.
 - After Phase 2 activities are completed, convene a meeting with Contracting Officers Representatives (COR) and Architect/Engineer to review conflicts.

- Phase III:**
- Demolition may proceed in Phase 3 in an order most suitable to the General Contractor, however Phase 1 and 2 shall be 100% complete prior to any work on Phase 3.
 - Work for Phase 3 will need to occur in conjunction with continued hospital operations. The contractor shall coordinate work during this phase closely with the VA and provide protection for VA employees and patients during this phase. After hours work may be required by the contractor pending noise, vibration or other construction impacts that limits care to patients.
 - After demolition activities are completed for Phase 3, convene a meeting with Contracting Officers Representative (COR) and Architect/Engineer to review conflicts.
 - Install new walls, doors, ceilings, casework, and equipment in an order most workable to the General Contractor, for Phase 3 Area.
 - Coordinate installation of plumbing, electrical and mechanical equipment for Phase 3 items.
 - Complete wall and floor finishes within individual work areas for Phase 3 items.
 - For each Phase and Area, complete final cleanup for final inspection by Contracting Officers Representative (COR) and Architect/Engineer.

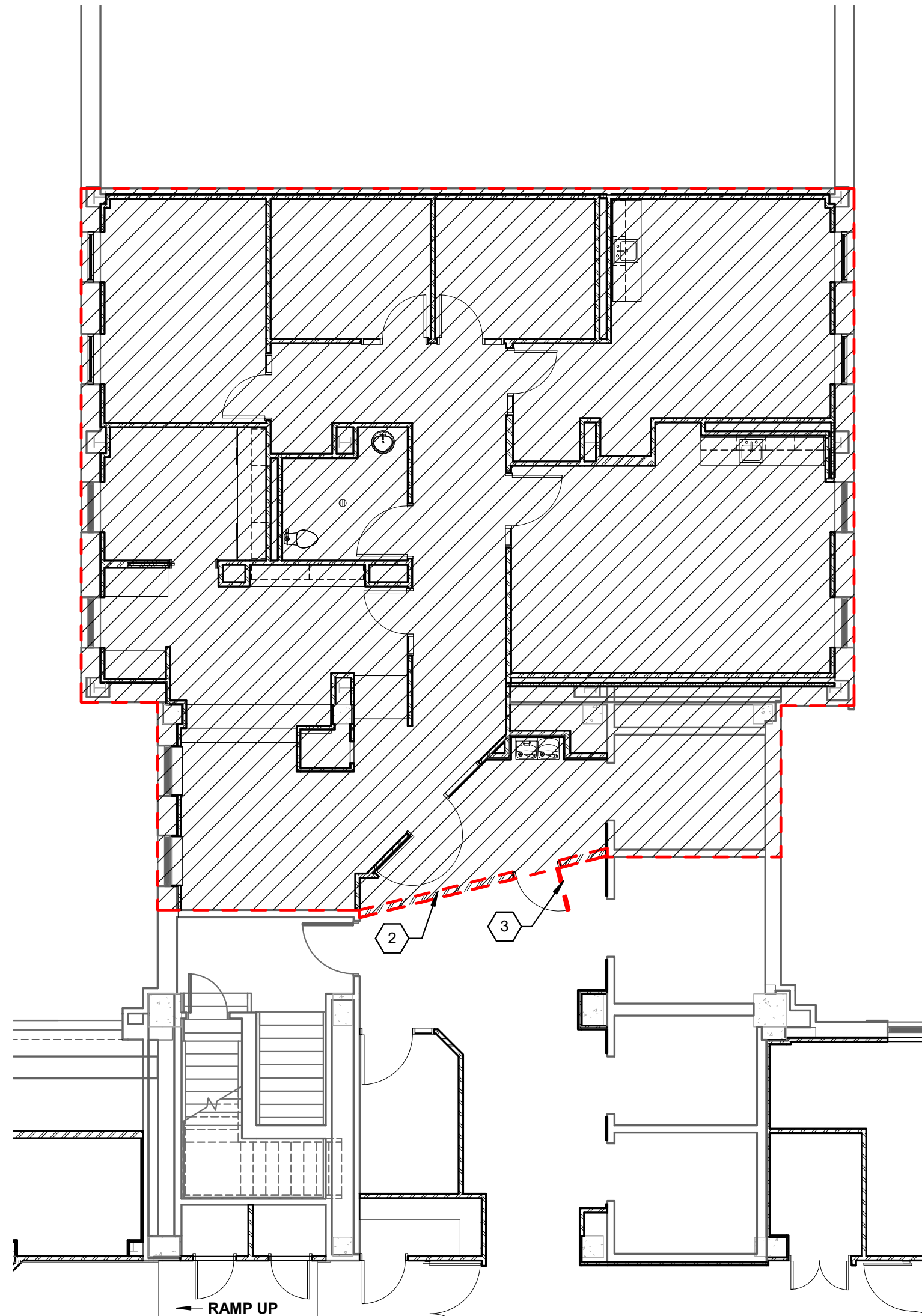
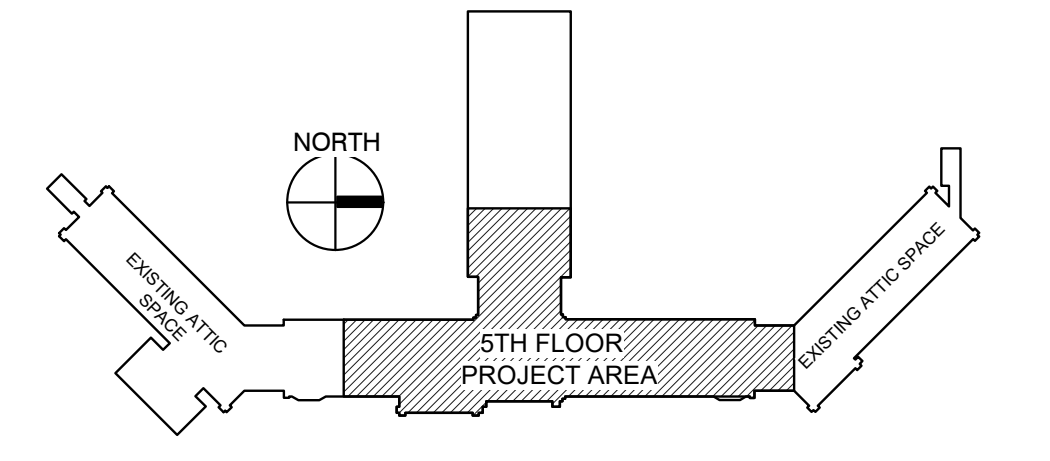
KEYNOTES:

- TEMPORARY 1 HOUR FIRE RATED CONSTRUCTION PARTITION. REMOVE PARTITION AT COMPLETION OF PHASE 1
- TEMPORARY 1 HOUR FIRE RATED CONSTRUCTION PARTITION. REMOVE PARTITION AT COMPLETION OF PHASE 2
- TEMPORARY 1 HOUR FIRE RATED DOOR

GENERAL NOTES:

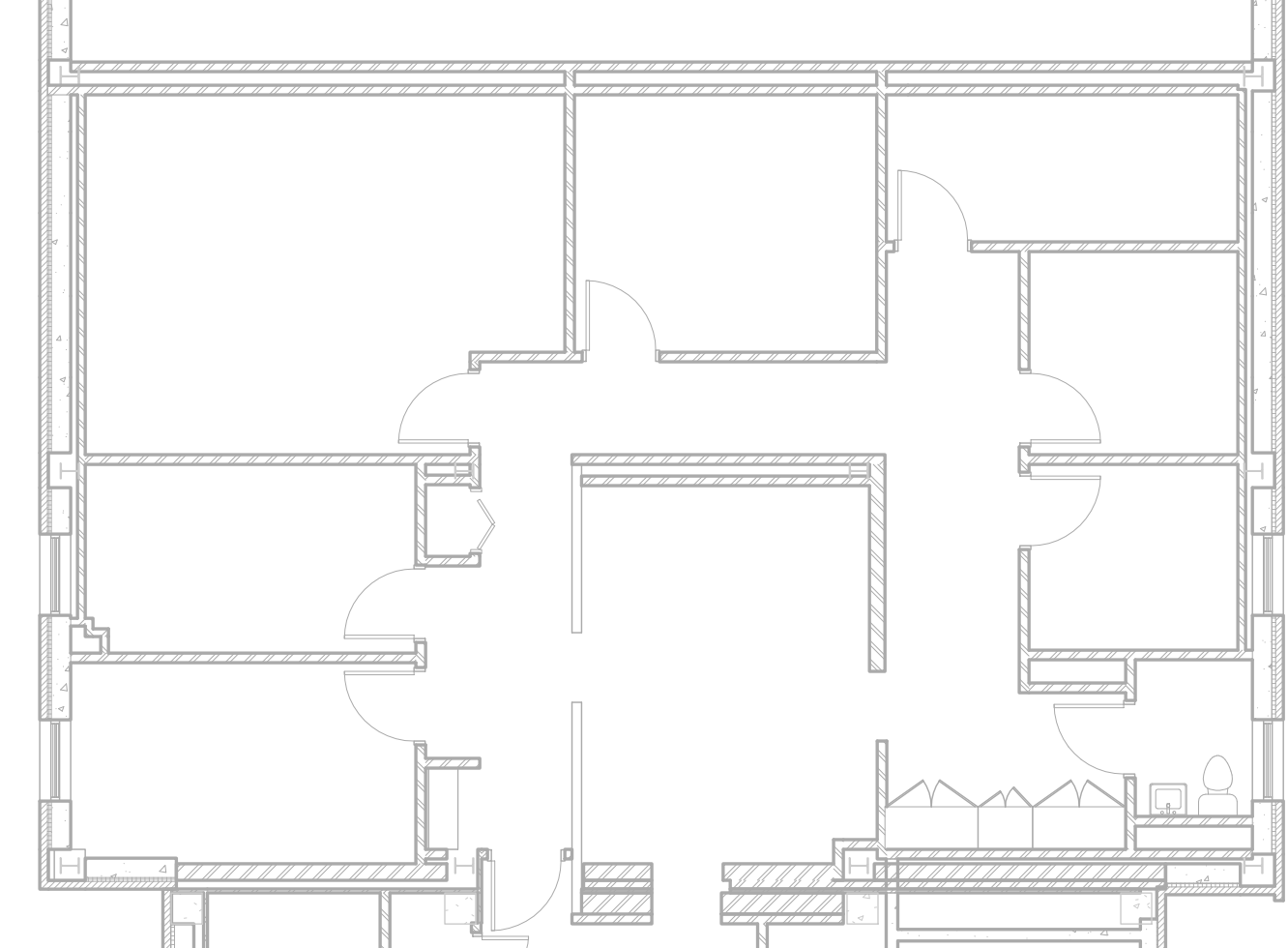
- CONTRACTOR SHALL BE ABLE TO ACCESS THE PROJECT VIA ONLY ONE ELEVATOR. COORDINATE WITH THE VA REGARDING WHICH ELEVATOR WILL BE ALLOWED ACCESS TO THE 5TH FLOOR DURING CONSTRUCTION. THREE OF THE FOUR ELEVATORS WILL HAVE 5TH FLOOR ACCESS ELIMINATED DURING CONSTRUCTION.
- DAMAGE TO THE ELEVATOR USED FOR CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR PRIOR TO SUBSTANTIAL COMPLETION.
- PROVIDE TEMPORARY COOLING IN THE ELEVATOR LOBBY DURING BOTH PHASE 1 AND PHASE 2 CONSTRUCTION.

KEY PLAN:



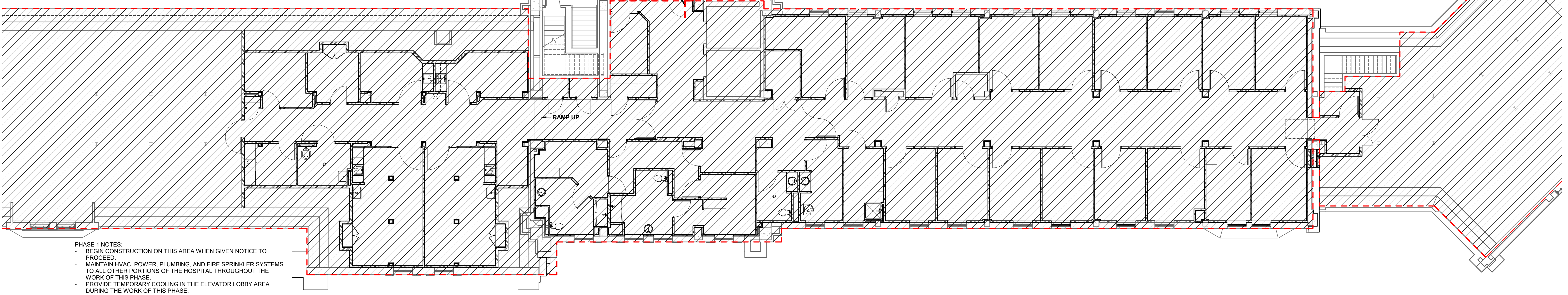
2 PHASE TWO PLAN
 SCALE: 1/8" = 1'-0"

- PHASE 2 NOTES:**
- BEGIN CONSTRUCTION ON THIS AREA 14 CALENDAR DAYS AFTER FINAL COMPLETION OF PHASE 1.
 - MAINTAIN HVAC, POWER, PLUMBING, AND FIRE SPRINKLER SYSTEMS TO ALL OTHER PORTIONS OF THE HOSPITAL THROUGHOUT THE WORK OF THIS PHASE.
 - PROVIDE TEMPORARY COOLING IN THE ELEVATOR LOBBY AREA DURING THE WORK OF THIS PHASE.
 - MAINTAIN TEMPORARY PARTITION AND TEMPORARY DOOR THROUGHOUT THIS PHASE OF CONSTRUCTION.



3 PHASE THREE PLAN
 SCALE: 1/8" = 1'-0"

- PHASE THREE NOTES:**
- PHASE THREE WORK - FINAL FLOOR, WALL AND CEILING FINISHES THROUGHOUT THIS AREA.
 - PHASE THREE WORK MAY BEGIN AS SOON AS PHASE TWO CONSTRUCTION IS COMPLETED AND TEMPORARY WALL AND DOOR HAS BEEN REMOVED.
 - PHASE THREE WORK WILL REQUIRE CLOSE COORDINATION WITH THE VA DUE TO ONGOING OPERATIONS THROUGHOUT THIS FLOOR.
 - CONTRACTOR IS REQUIRED TO WORK AFTER NORMAL BUSINESS HOURS AND/OR ON WEEKENDS WHEN PERFORMING ALL DEMOLITION WORK AND PRELIMINARY AND FINAL FLOOR, WALL, AND CEILING FINISHES THROUGHOUT THIS AREA.



1 PHASE ONE PLAN
 SCALE: 1/8" = 1'-0"

- PHASE 1 NOTES:**
- BEGIN CONSTRUCTION ON THIS AREA WHEN GIVEN NOTICE TO PROCEED.
 - MAINTAIN HVAC, POWER, PLUMBING, AND FIRE SPRINKLER SYSTEMS TO ALL OTHER PORTIONS OF THE HOSPITAL THROUGHOUT THE WORK OF THIS PHASE.
 - PROVIDE TEMPORARY COOLING IN THE ELEVATOR LOBBY AREA DURING THE WORK OF THIS PHASE.
 - MAINTAIN TEMPORARY PARTITION AND TEMPORARY DOOR THROUGHOUT THIS PHASE OF CONSTRUCTION.

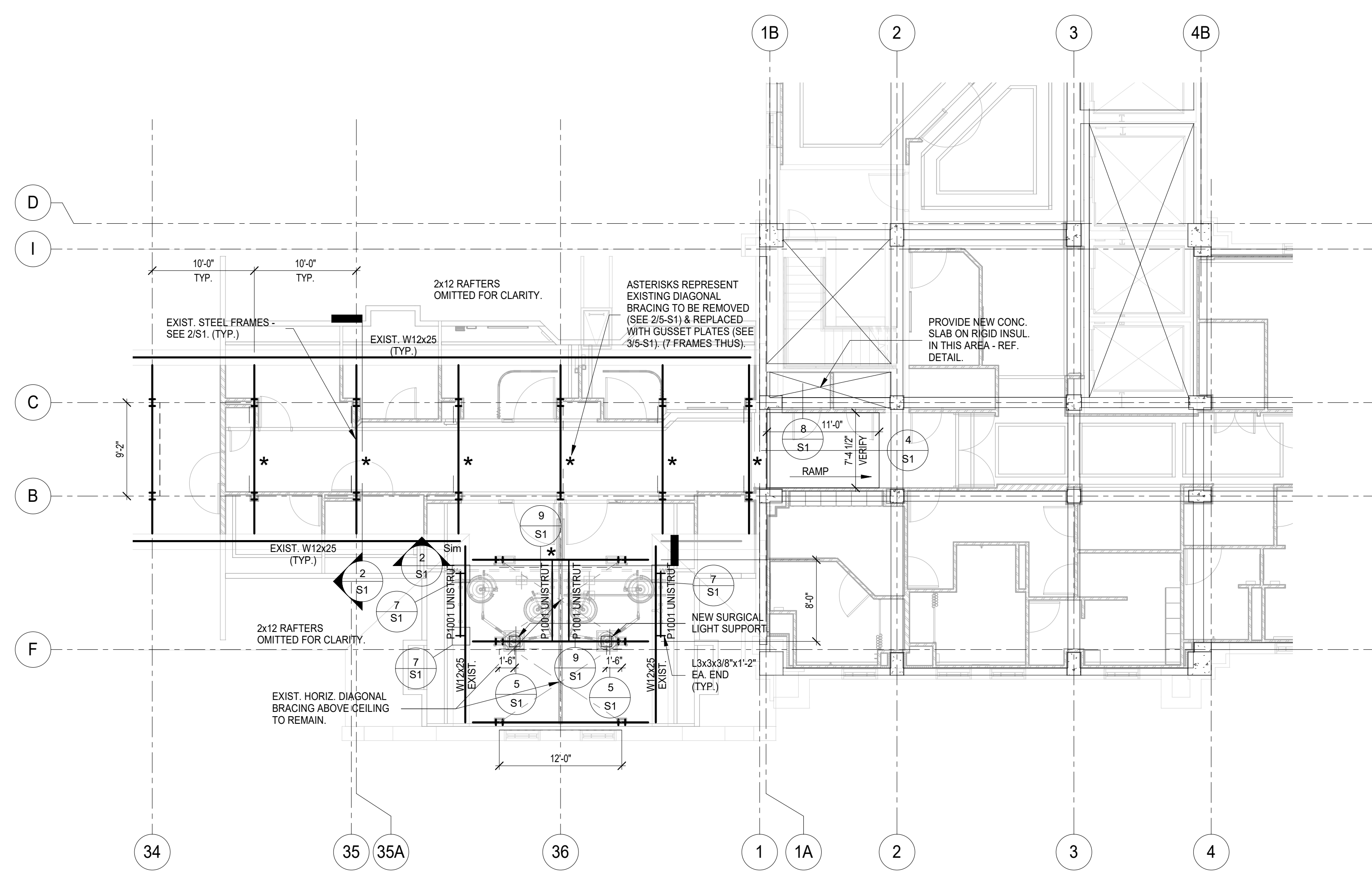
100% CONSTRUCTION DRAWINGS	
Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY	Project Number 438-15-201
Location SIoux FALLS, SOUTH DAKOTA	Building Number 5
Date OCTOBER 11, 2017	Drawing Number 5-G1001
Checked Checker	Drawn Author
Dwg. 2 of 60	

Office of Construction and Facilities Management

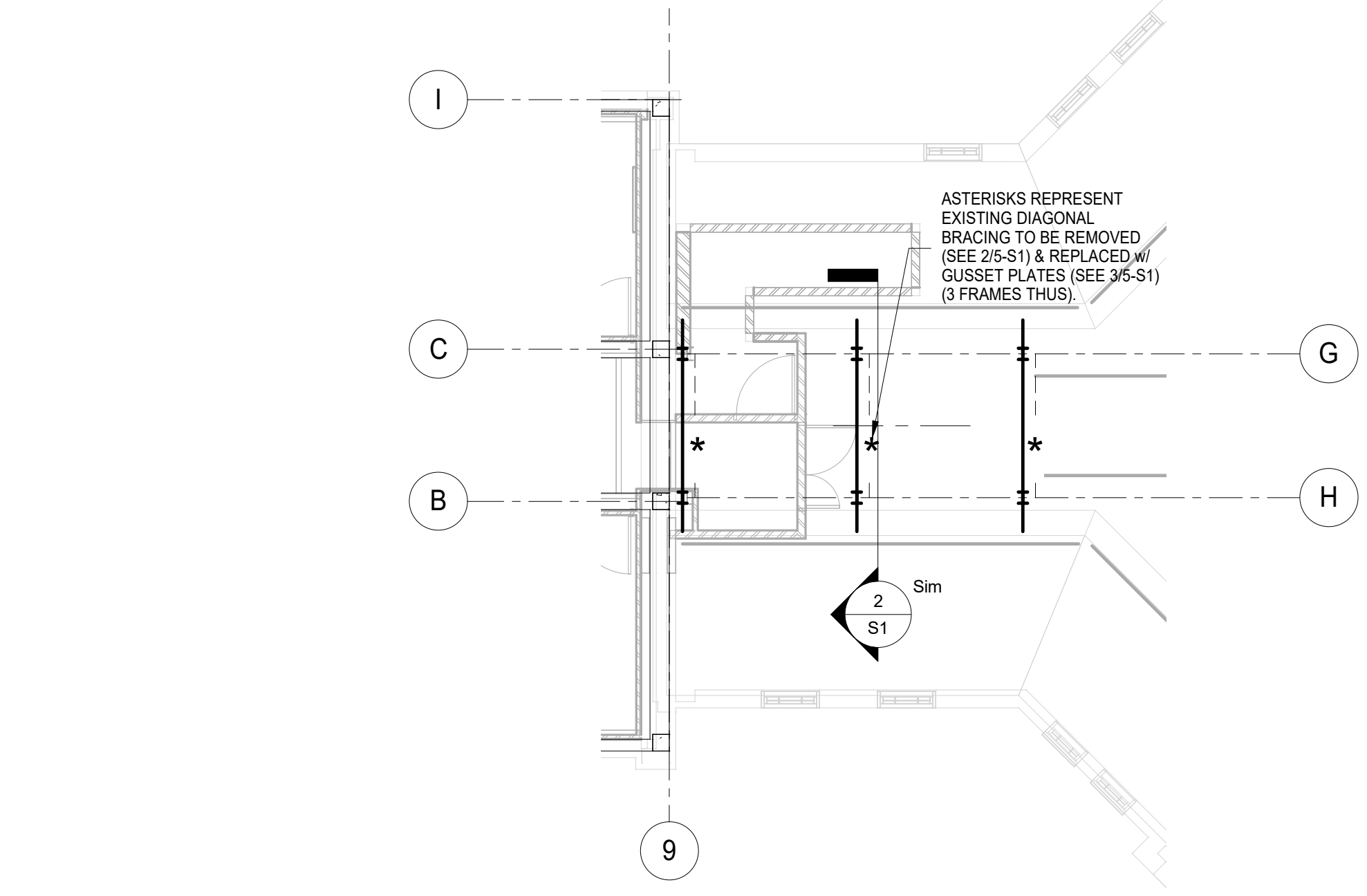
Revisions: _____ Date: _____	CONSULTANTS: 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND	SEAL: 	ARCHITECT: 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539	Drawing Title PHASING PLANS Approved: Project Director
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one foot = three inches
 one foot = one and one half inches
 one foot = one inch
 one foot = three quarters inch
 one foot = three eighths inch
 one foot = one quarter inch
 one foot = one eighth inch

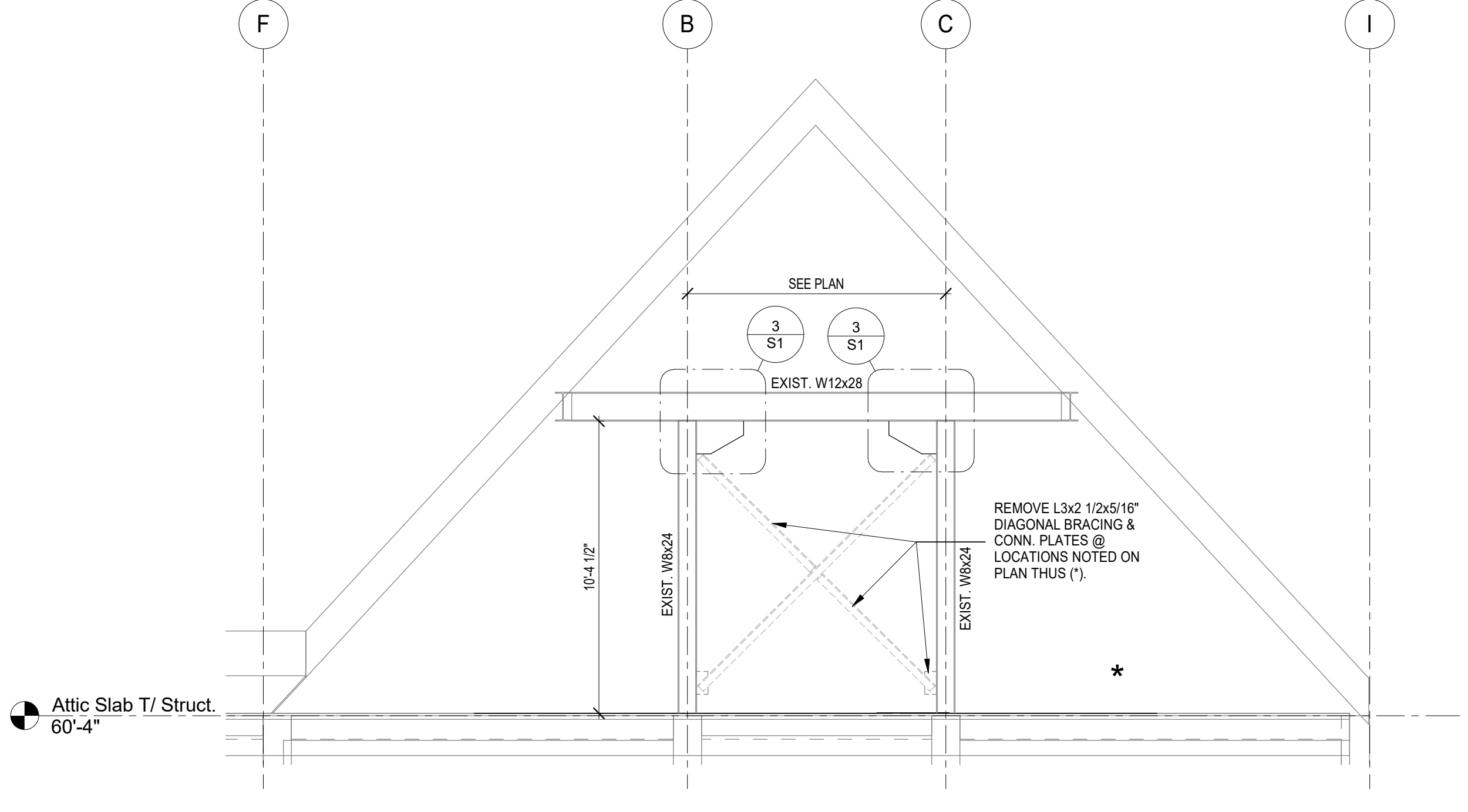
A
 B
 C
 D
 E
 F



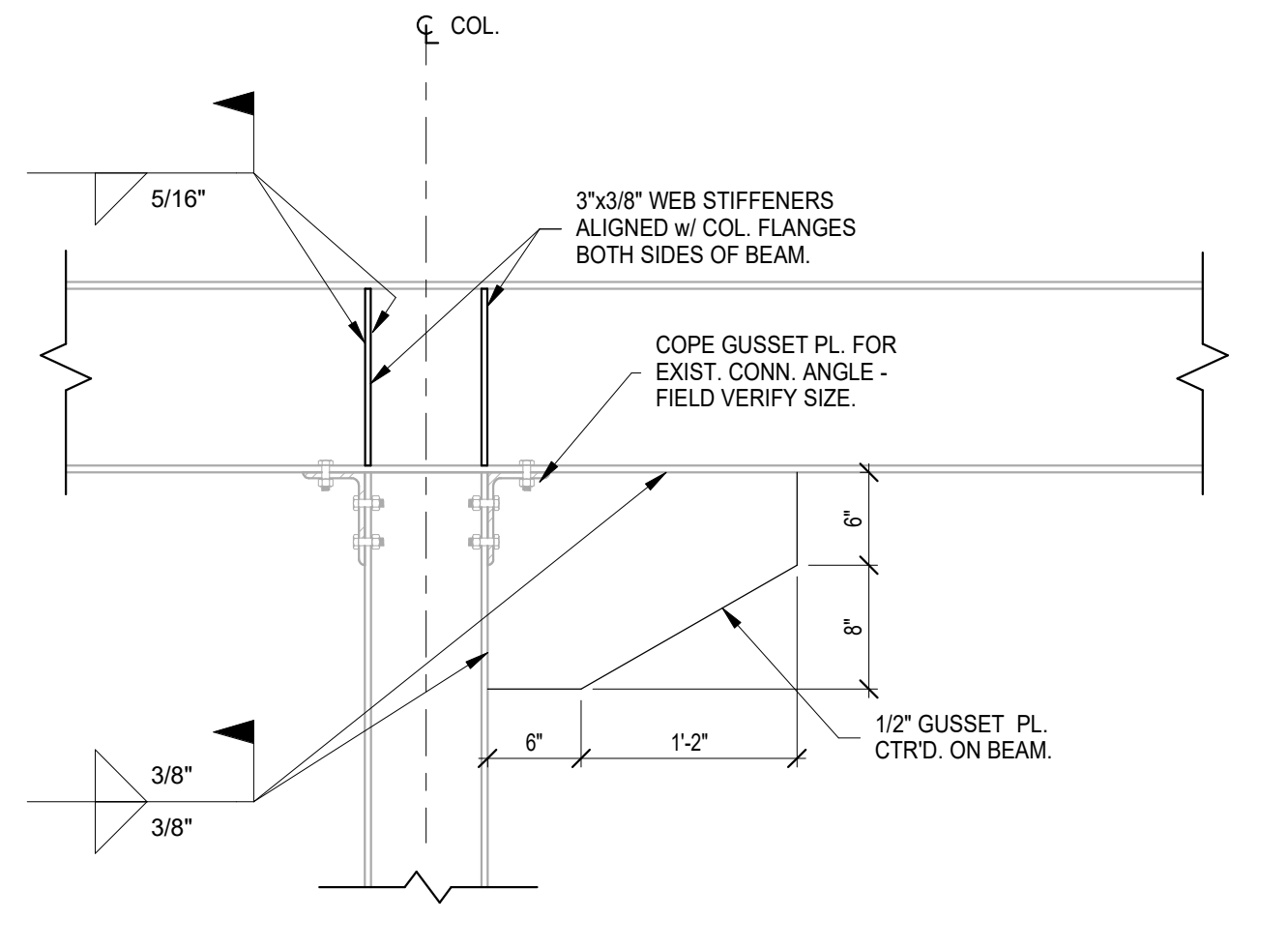
1 EXISTING ROOF FRAMING PLAN AT FIFTH FLOOR - SOUTH END
1/8" = 1'-0"



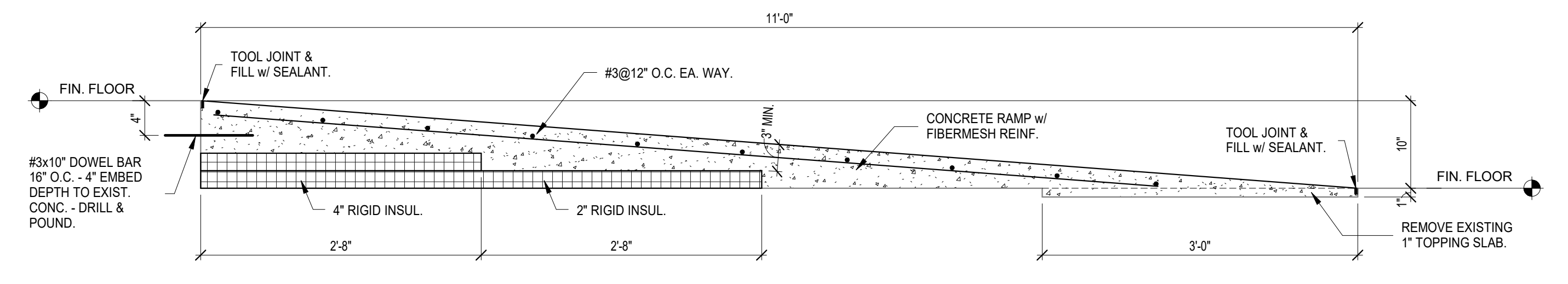
6 EXISTING ROOF FRAMING PLAN AT FIFTH FLOOR - NORTH END
1/8" = 1'-0"



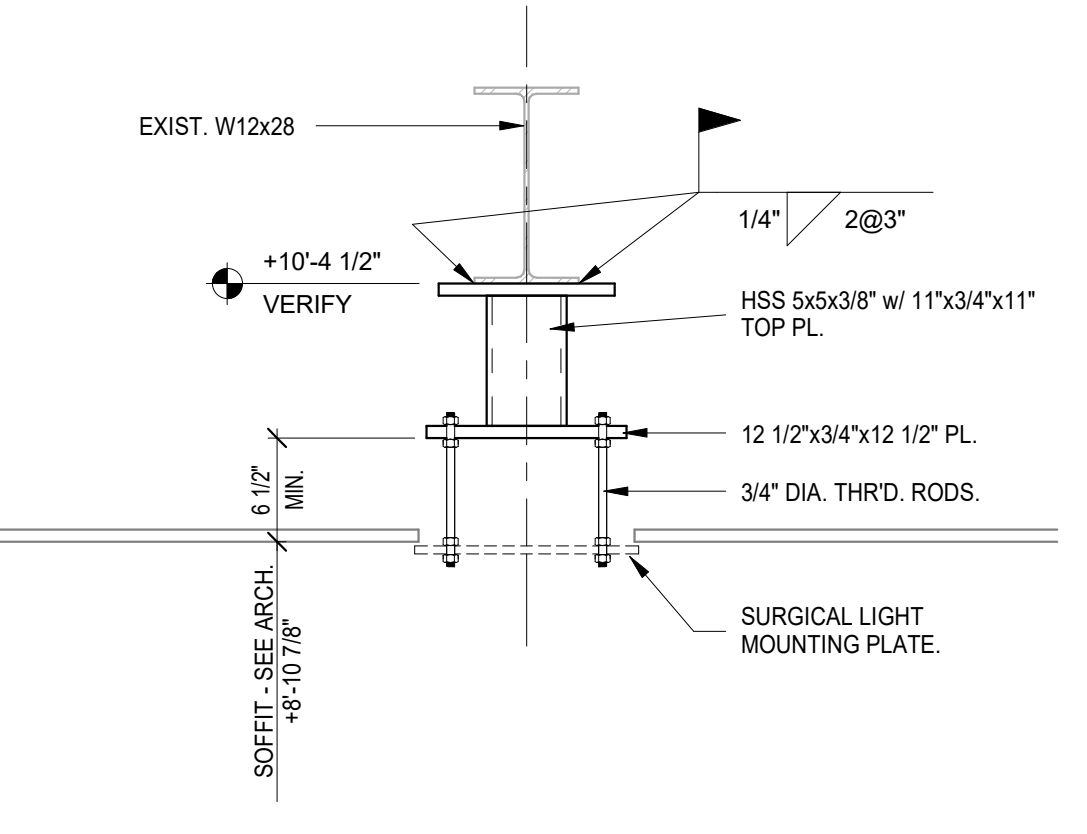
2 EXISTING ATTIC FRAMING SECTION
1/4" = 1'-0"



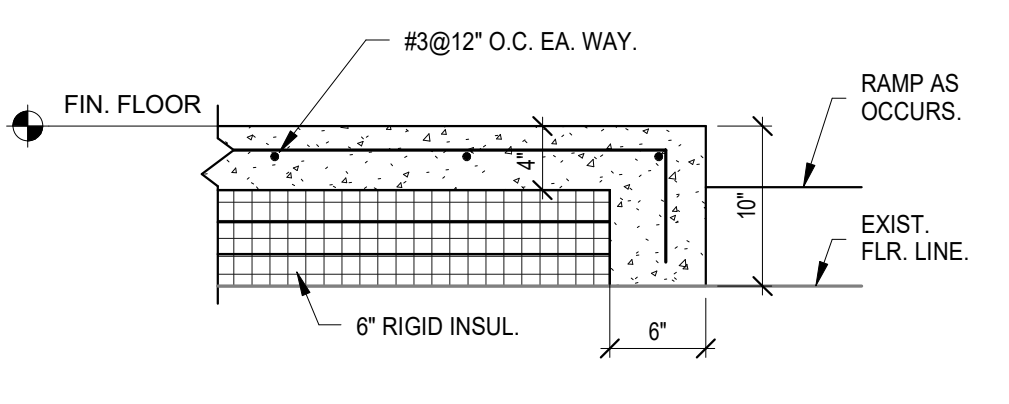
3 BRACE DETAIL
1" = 1'-0"



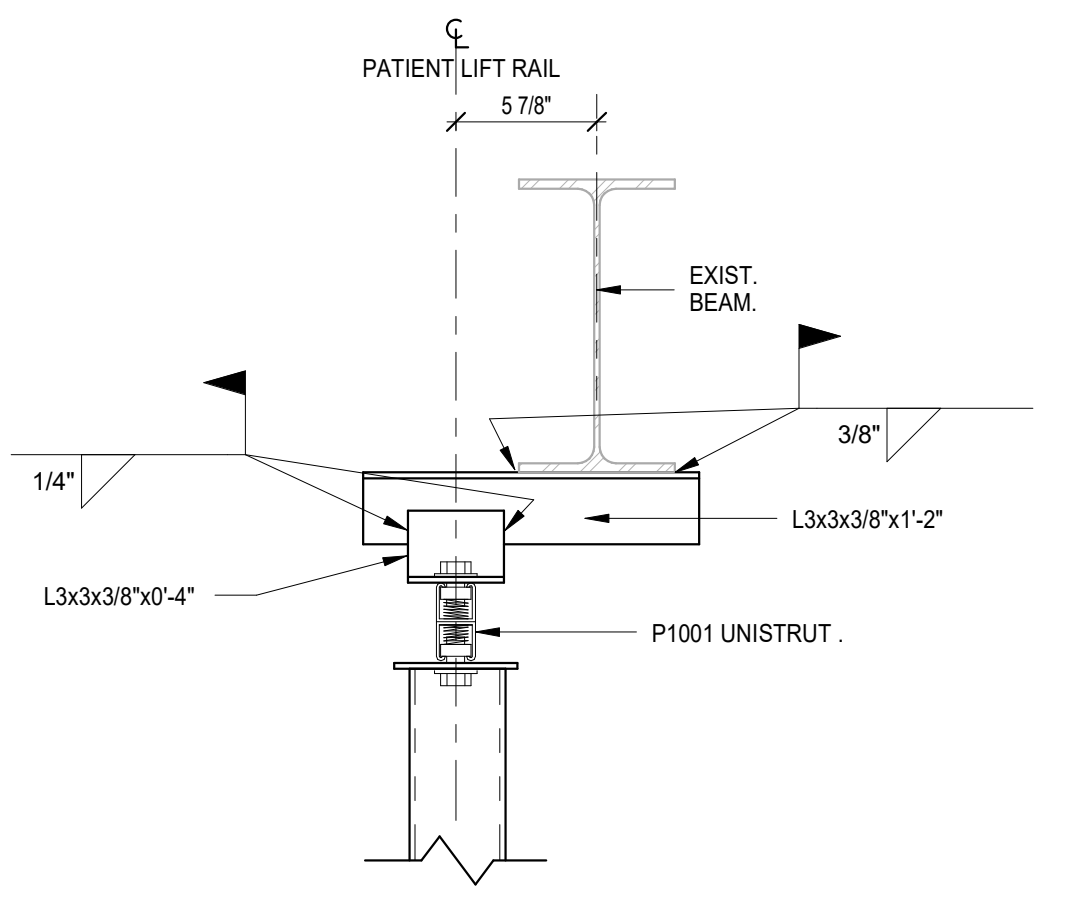
4 RAMP SECTION
1" = 1'-0"



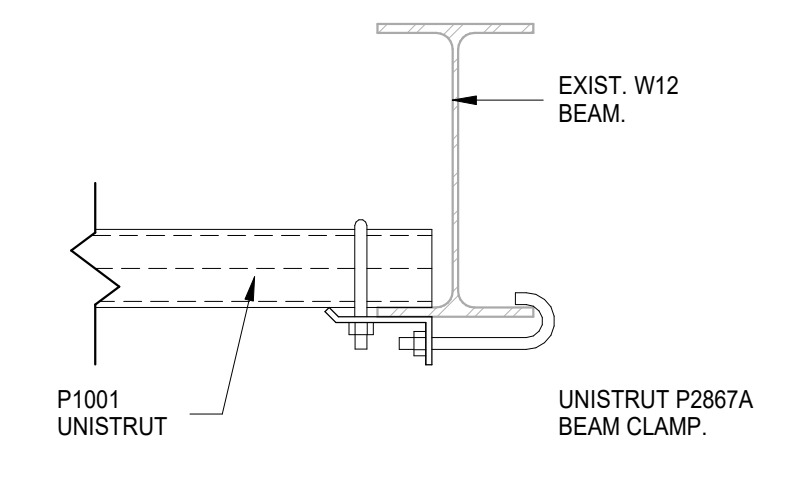
5 SURGICAL LIGHT SUPPORT
1" = 1'-0"



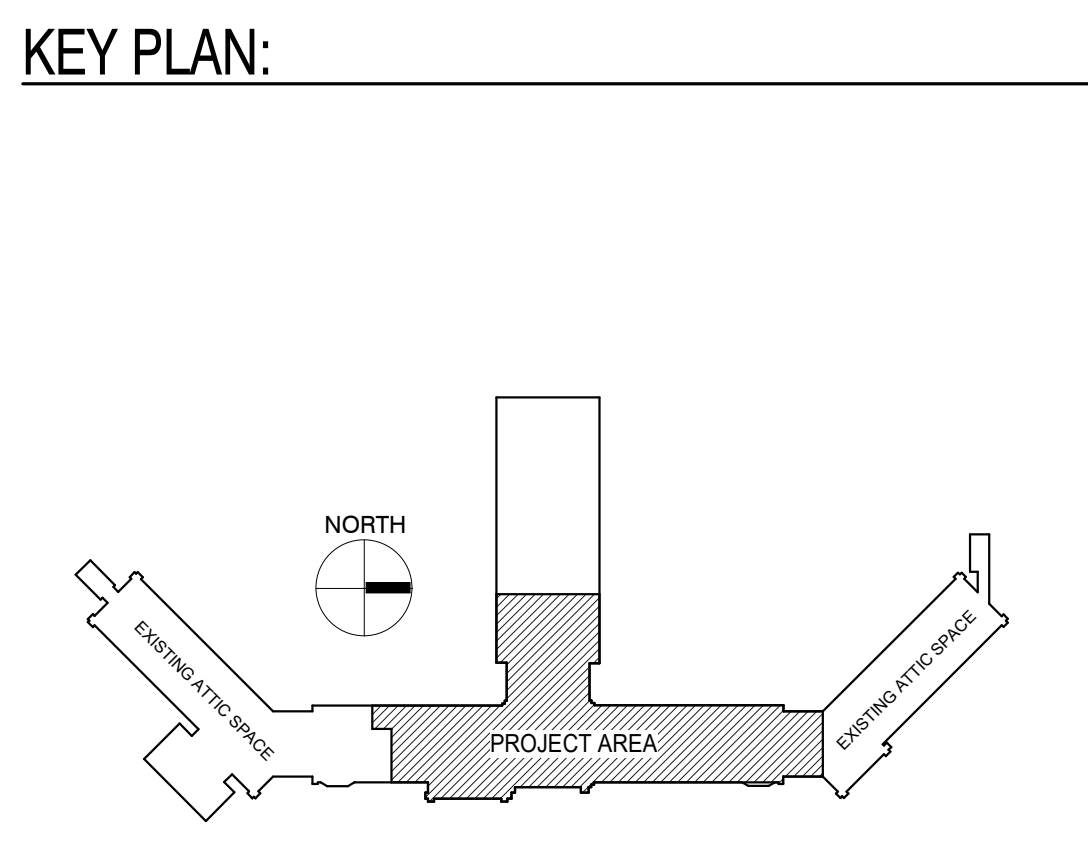
8 RAISED FLOOR DETAIL
1" = 1'-0"



7 CONN. DETAIL w/ ANGLE
1 1/2" = 1'-0"



9 CONN. DETAIL @ BEAM
1 1/2" = 1'-0"



KEY PLAN:

GENERAL CONTRACTOR SHALL VERIFY EXISTING DIMENSIONS & ELEVATIONS NOTED ON STRUCTURAL PLAN. NOTIFY A/E IMMEDIATELY OF ANY DISCREPANCIES.

100% CONSTRUCTION DRAWINGS	
Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY	Project Number 438-15-201
Location SIoux FALLS, SOUTH DAKOTA	Building Number 5
Date OCTOBER 17, 2017	Checked KAQ
Drawn KMS	Drawing Number 5-S1
Dwg. 3 of 60	

CONSULTANTS:

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4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106
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WWW.WESTPLAINSENGINEERING.COM
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RISE STRUCTURAL ASSOCIATES INC.
101 Railroad Ave. - PO Box 39
Harrisburg, SD 57032
(605) 743-2510
fax (605) 743-2513

SEAL:

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 11152
JUSTIN CHRISTENSEN
SIOUX FALLS, SD
10/17/2017

ARCHITECT:

MSH ARCHITECTS
625 S. MINNESOTA AVENUE, SUITE 204
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TELE: (605) 332-7850 FAX: (605) 332-3539

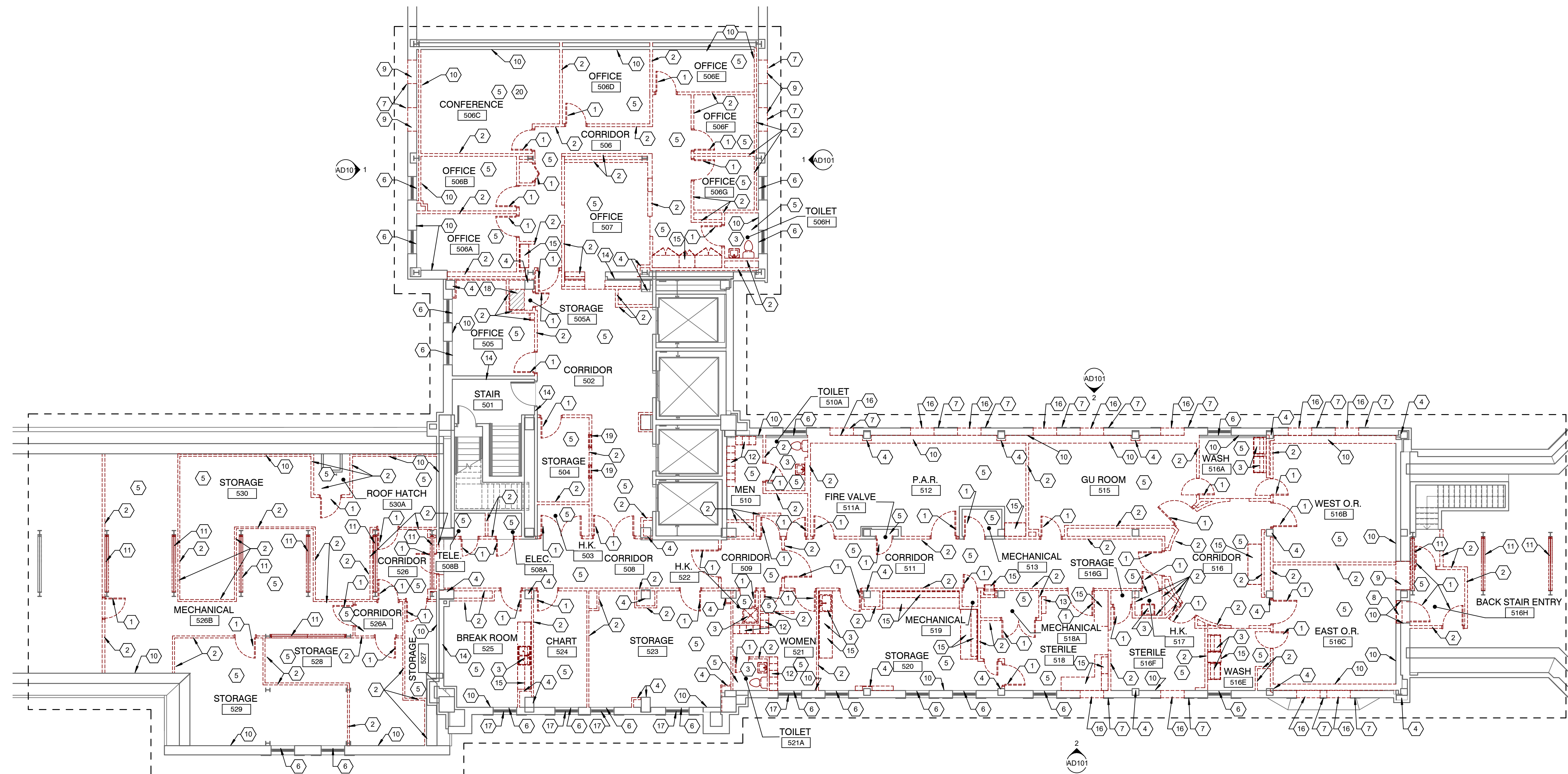
Drawing Title
EXISTING ROOF FRAMING PLAN AT FIFTH FLOOR

Approved: Project Director

Office of Construction and Facilities Management
Department of Veterans Affairs

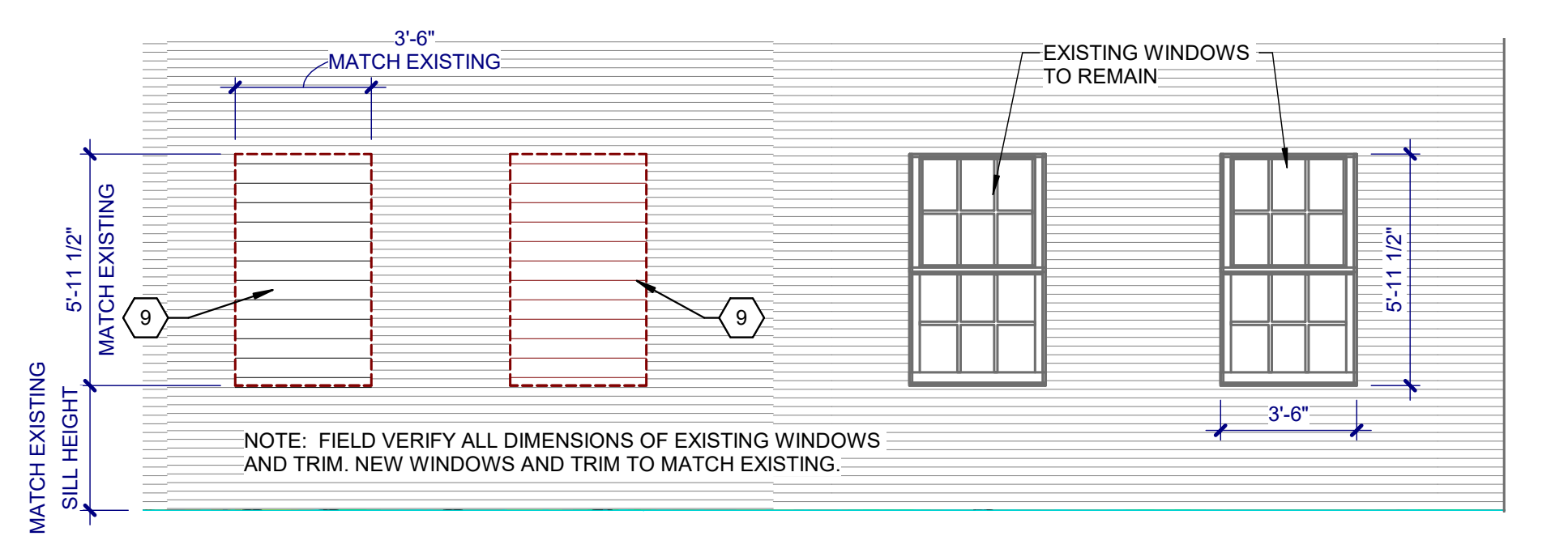
three inches = one foot
one and one half inches = one foot
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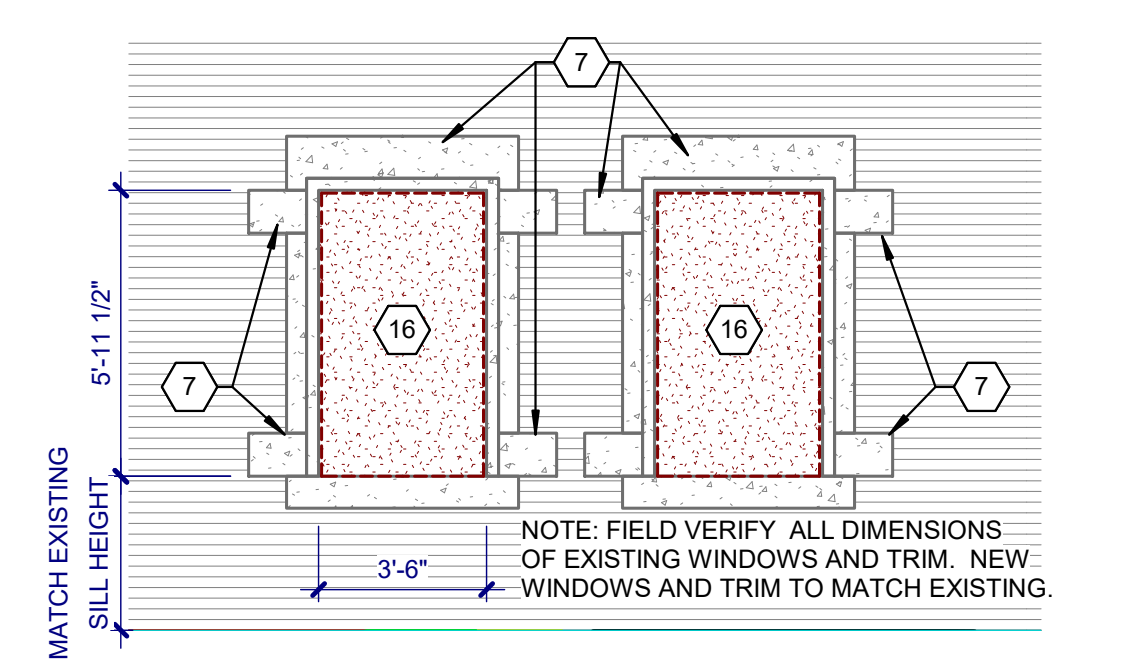
FLOOR PLAN DEMOLITION

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



1 TYPICAL OPENING DEMOLITION ELEVATION

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



2 TYPICAL INFILL DEMOLITION ELEVATION

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

DEMOLITION KEYNOTES:

- 1 REMOVE DOOR, FRAME AND HARDWARE
- 2 REMOVE WALL
- 3 REMOVE WATER CLOSETS, SINKS, WATER COOLER, AND ANY ASSOCIATED ACCESSORIES. SEE PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION
- 4 REMOVE GYPSUM BOARD/PLASTER AND FURRING AROUND COLUMNS
- 5 REMOVE FLOOR COVERING IN THIS AREA
- 6 REMOVE WINDOW SILL AND ANY ASSOCIATED TRIM BELOW
- 7 EXTERIOR STONE TRIM TO REMAIN, PROTECT FROM DAMAGE DURING WALL INFILL DEMOLITION
- 8 REMOVE CONCRETE STEP UP TO ATTIC LANDING AS NEEDED TO INFILL WALL
- 9 REMOVE PORTION OF WALL FOR NEW OPENING
- 10 REMOVE EXISTING WALL FINISHES, PLASTER AND FRAMING BACK TO EXISTING CLAY TILE WALL. PREP WALLS FOR NEW SPRAY FOAM INSULATION
- 11 REMOVE STRUCTURAL CROSS BRACING (SEE STRUCTURAL DRAWINGS)
- 12 REMOVE AND SALVAGE METAL LOCKERS FOR OWNER
- 13 REMOVE AND SALVAGE MEDICAL EQUIPMENT FOR OWNER
- 14 EXISTING WALL TO REMAIN
- 15 REMOVE CASEWORK AND COUNTERTOP
- 16 REMOVE WALL INFILL FOR INSTALLATION OF NEW WINDOWS
- 17 REMOVE GLAZING IN WINDOW AT THIS LOCATION. TO BE REPLACED WITH NEW FROSTED OBSCURED GLAZING.
- 18 EXISTING LAUNDRY CHUTE TO REMAIN
- 19 REMOVE WINDOW GLAZING AND FRAME
- 20 REMOVE AND SALVAGE ALL AV EQUIPMENT IN THIS ROOM. TURN ALL EQUIPMENT OVER TO THE VA FOR FUTURE INSTALLATION IN THE NEW CONFERENCE ROOM.

DEMOLITION GENERAL NOTES:

- A. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
- B. ALL SURFACES OR FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER AND SHALL MATCH ADJACENT MATERIALS.
- C. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION NOTES.
- D. CUT EXISTING CONCRETE FLOOR AS NECESSARY TO ACCOMMODATE NEW PIPING, CONDUIT, OR OTHER WORK. PATCH BACK TO MATCH.
- E. ADJUST STUDS SO THAT FACE OF GYPSUM WALL BOARD WILL ALIGN WITH ADJACENT WALL.
- F. SAW CUT AND REMOVE MASONRY TO ACCOMMODATE NEW OPENINGS. BRACE OPENING UNTIL NEW LINTELS ARE INSTALLED.

ASBESTOS CONTAINING MATERIAL

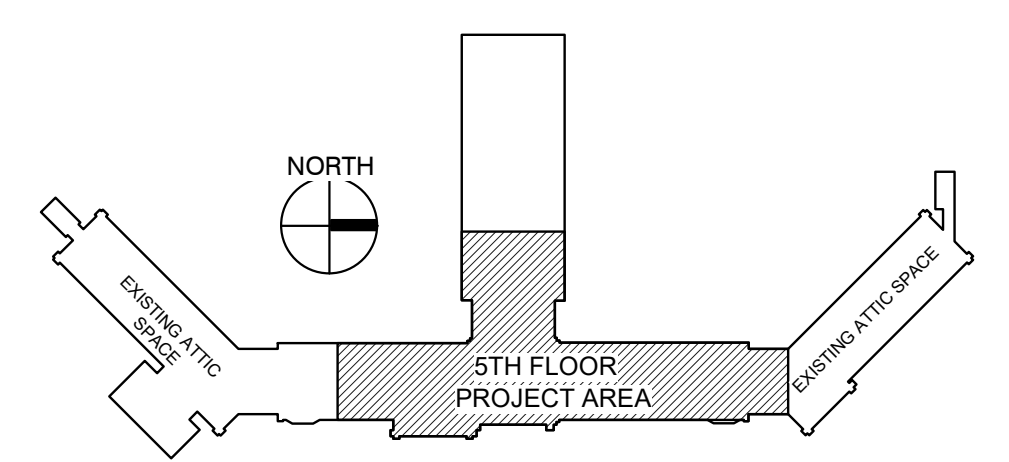
THE FOLLOWING AREAS ARE KNOWN TO BE ACM AND MUST BE ABATED IF ACM MATERIALS ARE DISTURBED OR ENCOUNTERED:

- RADIATOR TRANSIT AND PIPE INSULATION AT ALL EXISTING RADIATORS AND OTHER PIPE AND PIPE FITTING LOCATIONS.

CONFIRM THESE WITH THE ASBESTOS REPORT INCLUDED IN THE PROJECT MANUAL.

REMOVAL OF ASBESTOS CONTAINING MATERIAL (ACM) SHALL COMPLY WITH ALL CITY, STATE, AND FEDERAL REGULATIONS. REMOVAL OF ACM SHALL CONFORM TO THE LATEST EDITION OF ALL APPLICABLE OSHA AND AHERA REGULATIONS ALSO COMPLY WITH SOUTH DAKOTA OF ENVIRONMENTAL AND NATURAL RESOURCES AND NESHAPS (40 CFR 60 & 62). WORK PRACTICES SHALL CONFORM TO NIOSH GUIDANCE / WORK PRACTICES FOR THE REMOVAL OF ASBESTOS. IF ANY ADDITIONAL ACM OR POTENTIAL ACM IS IDENTIFIED DURING DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IMMEDIATELY. ANY CONFIRMED ACM SHALL BE ABATED BY THE CONTRACTOR PER THE ABOVE REQUIREMENTS.

KEY PLAN:



100% CONSTRUCTION DRAWINGS		Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		Project Number 438-15-201	
		Building Number 5		Drawing Number 5-AD101	
Location SIoux FALLS, SOUTH DAKOTA		Date OCTOBER 11, 2017	Checked DGS	Drawn RTG	Dwg. 5 of 60
Office of Construction and Facilities Management 					

CONSULTANTS: 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND		SEAL: 		ARCHITECT: 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539	
Drawing Title FIFTH FLOOR DEMOLITION PLAN		Approved: Project Director		Date OCTOBER 11, 2017	

BUILDING CODE ANALYSIS

BUILDING CODE: 2016 NFPA 101 LIFE SAFETY CODE
 VA FIRE PROTECTION DESIGN MANUAL
 2016 INTERNATIONAL FIRE CODE
 2016 INTERNATIONAL BUILDING CODE
 ABAMA BARRIER FREE DESIGN GUIDE
 2012 ANSI 117.1 - ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

OCCUPANCY CLASSIFICATION: NFPA 101.6 OCCUPANCY CLASSIFICATIONS:
 AMBULATORY HEALTHCARE
 BUSINESS

OCCUPANT LOAD: NFPA 101.7.3.1.2
 AMBULATORY HEALTHCARE 62
 HEALTH CARE TREATMENT AREAS 64
 ACCESSORY STORAGE/MECH. 16
 TOTAL THIS FLOOR 146

FIRE SPRINKLER SYSTEMS: NFPA 13 SYSTEM THROUGHOUT

MEANS OF EGRESS: NFPA 101.21.2.3.2
 THE CLEAR WIDTH OF ANY CORRIDOR OR PASSAGEWAY REQUIRED FOR EXIT ACCESS SHALL NOT BE LESS THAN 44 INCHES. 82 INCH WIDE CORRIDORS MINIMUM ARE PROVIDED IN ALL PATIENT AREAS. 54 INCH WIDE CORRIDORS MINIMUM ARE PROVIDED IN ALL NON-PATIENT AREAS.

MEANS OF EGRESS: NFPA 101.21.2.3.4
 THE MINIMUM CLEAR WIDTH FOR DOORS IN THE MEANS OF EGRESS SHALL NOT BE LESS THAN 32 INCHES WIDE
 EXITS REQUIRED: 2@ 32.0"
 EXITS PROVIDED: 2@ 40.5"

MEANS OF EGRESS: NFPA 101.7.2.13.3
 EVERY FLOOR SERVED BY THE ELEVATOR SHALL HAVE AN ELEVATOR LOBBY. BARRIERS FORMING THE ELEVATOR LOBBY SHALL HAVE A MINIMUM 1 HOUR FIRE RESISTANCE RATINGS AND SHALL BE ARRANGED AS A SMOKE BARRIER.

TRAVEL DISTANCES: NFPA 101.21.2.5.2
 DEAD END CORRIDORS SHALL NOT EXCEED 50 FEET. ACTUAL MAXIMUM DEAD END CORRIDOR LENGTH = 80 FEET. SEE NOTE ON PLAN.

TRAVEL DISTANCES: NFPA 101.21.2.5.3.1
 COMMON PATH OF TRAVEL SHALL NOT EXCEED 100 FEET ON A STORY PROTECTED THROUGHOUT BY AN APPROVED AUTOMATIC SPRINKLER SYSTEM. ACTUAL MAXIMUM COMMON PATH OF TRAVEL DISTANCE = 89 FT.

TRAVEL DISTANCES: NFPA 101.21.2.6.2.1 & 101.21.2.6.2.2
 THE MAXIMUM TRAVEL DISTANCE BETWEEN ANY POINT IN A ROOM AND AN EXIT SHALL NOT EXCEED 200 FEET IF BUILDING IS PROTECTED THROUGHOUT BY AN APPROVED AUTOMATIC SPRINKLER SYSTEM. ACTUAL MAXIMUM TRAVEL DISTANCE = 118 FT.

INTERIOR FINISHES: NFPA 101.10.2 AND 101.21.3.3.2
 INTERIOR WALL AND CEILING FINISHES IN EXITS AND EXIT ACCESS CORRIDORS SHALL BE CLASS A OR B. IN AREAS OTHER THAN EXITS INTERIOR WALL AND CEILING FINISHES SHALL BE CLASS A, B, OR C. INTERIOR FLOOR FINISHES IN EXIT ENCLOSURES SHALL BE CLASS I OR CLASS II.

CORRIDOR SEPARATIONS: NFPA 101.20.2.6.1
 WHERE ACCESS TO EXITS IS PROVIDED BY CORRIDORS, SUCH CORRIDORS SHALL BE SEPARATED FROM OTHER AREAS BY 1 HOUR FIRE BARRIERS UNLESS THE BUILDING IS PROTECTED BY AND APPROVED SUPERVISED AUTOMATIC SPRINKLER SYSTEM. THIS SPACE WILL BE PROVIDED WITH A SUPERVISED AUTOMATIC SPRINKLER SYSTEM. CORRIDOR WALLS ARE DESIGNED AS SMOKE PARTITIONS WITH 1/2 HOUR FIRE RESISTANCE RATING.

CORRIDOR SEPARATIONS: NFPA 101.20.2.6.1
 WHERE ACCESS TO EXITS IS PROVIDED BY CORRIDORS, SUCH CORRIDORS SHALL BE SEPARATED FROM OTHER AREAS BY 1 HOUR FIRE BARRIERS UNLESS THE BUILDING IS PROTECTED BY AND APPROVED SUPERVISED AUTOMATIC SPRINKLER SYSTEM. THIS SPACE WILL BE PROVIDED WITH A SUPERVISED AUTOMATIC SPRINKLER SYSTEM. CORRIDOR WALLS ARE DESIGNED AS SMOKE PARTITIONS WITH 1/2 HOUR FIRE RESISTANCE RATING.

NOTE: THIS RAMP DOES NOT COMPLY WITH CODE REQUIREMENTS FOR CONTINUITY OF HANDRAILS ON BOTH SIDES NFPA 101 - 7.2.2.4.2. HANDRAILS ON ONE SIDE ARE INTERRUPTED BY DOORS TO DATA AND ELECTRICAL ROOMS. THE VA HAS INDICATED THAT THIS NON-COMPLIANT CODE CONDITION IS ACCEPTABLE.

NOTE: A SIGN SHALL BE INSTALLED AT THIS DOOR THAT STATES "THIS DOOR IS NOT AN EXIT."

NOTE: DEAD END CORRIDOR IS APPROXIMATELY 80' LONG. THE VA HAS INDICATED THAT THIS CONDITION IS ACCEPTABLE.

CODE ANALYSIS

NUMBER	ROOM NAME	USE CLASSIFICATION	AREA **	OLF	OCCUPANT LOAD	TOTAL EGRESS WIDTH	NUMBER OF EXITS
500	ENTRY LOBBY	Business	772 SF	100 SF	8	1.54	1
500A	STAIR	Business	197 SF	100 SF	2	0.39	1
500B	CLEAN CORE	Ambulatory Healthcare	523 SF	100 SF	5	1.05	1
500C	CORRIDOR	Business	938 SF	100 SF	9	1.82	1
500D	CRASH CART ALCOVE	Accessory Storage/Mech.	40 SF	500 SF	1	0.15	1
500E	LINEN ALCOVE	Accessory Storage/Mech.	6 SF	500 SF	1	0.15	1
500F	FIRE VALVE	Accessory Storage/Mech.	6 SF	500 SF	1	0.20	1
501	WAITING ROOM	Assembly Unconcentrated	174 SF	15 SF	12	1.74	1
501A	CORRIDOR	Business	100 SF	100 SF	3	0.52	1
502	RECEPTION	Business	201 SF	100 SF	2	0.40	1
502A	WORKROOM	Business	105 SF	100 SF	1	0.21	1
503	TOILET	Accessory Storage/Mech.	69 SF	500 SF	1	0.20	1
504	OFFICE	Business	168 SF	100 SF	2	0.34	1
505	OFFICE	Business	100 SF	100 SF	1	0.20	1
506	OFFICE	Business	100 SF	100 SF	1	0.20	1
507	STAFF LOUNGE	Assembly Unconcentrated	281 SF	15 SF	19	2.81	1
508	CONFERENCE ROOM	Assembly Unconcentrated	348 SF	15 SF	23	3.48	1
509	PATIENT INTAKE	Business	75 SF	100 SF	1	0.20	1
510	CORRIDOR	Business	123 SF	100 SF	1	0.25	1
510A	WOMEN'S LOCKER ROOM	Ambulatory Healthcare	136 SF	50 SF	3	0.41	1
510B	WOMEN'S TOILET	Accessory Storage/Mech.	102 SF	500 SF	1	0.20	1
510C	MEN'S LOCKER ROOM	Ambulatory Healthcare	98 SF	50 SF	2	0.29	1
510D	MEN'S TOILET	Accessory Storage/Mech.	98 SF	500 SF	1	0.20	1
511	MINOR PROCEDURE OR 2	Health Care Inpatient Treatment	295 SF	240 SF	1	0.24	1
512	MINOR PROCEDURE OR 1	Health Care Inpatient Treatment	285 SF	240 SF	1	0.24	1
513	SOILED ROOM	Accessory Storage/Mech.	70 SF	500 SF	1	0.15	1
514	MEDICATION ROOM	Ambulatory Healthcare	72 SF	100 SF	1	0.20	1
516	STERILE STORAGE	Accessory Storage/Mech.	105 SF	500 SF	1	0.15	1
517	CLEAN ROOM	Accessory Storage/Mech.	88 SF	500 SF	1	0.15	1
518	EXAM ROOM	Health Care Inpatient Treatment	108 SF	240 SF	1	0.20	1
519	EXAM ROOM	Health Care Inpatient Treatment	130 SF	240 SF	1	0.20	1
520	DATA	Accessory Storage/Mech.	17 SF	500 SF	1	0.20	1
521	ELECTRICAL	Accessory Storage/Mech.	38 SF	500 SF	1	0.20	1
522	LINEN ALCOVE	Accessory Storage/Mech.	34 SF	500 SF	1	0.15	1
523	STRETCHER CLOSET	Accessory Storage/Mech.	53 SF	500 SF	1	0.15	1
524	EQUIPMENT STORAGE	Accessory Storage/Mech.	159 SF	500 SF	1	0.15	1
525	OFFICE	Business	148 SF	100 SF	1	0.29	1
526	OFFICE	Business	176 SF	100 SF	2	0.35	1
527	MECHANICAL/ELECTRICAL	Accessory Storage/Mech.	24 SF	500 SF	1	0.20	1
528	OFFICE	Business	137 SF	100 SF	1	0.27	1

CODE ANALYSIS

NUMBER	ROOM NAME	USE CLASSIFICATION	AREA **	OLF	OCCUPANT LOAD	TOTAL EGRESS WIDTH	NUMBER OF EXITS
529	OFFICE	Business	130 SF	100 SF	1	0.26	1
530	OFFICE	Business	127 SF	100 SF	1	0.25	1
531	OFFICE	Business	131 SF	100 SF	1	0.26	1
532	OFFICE	Business	128 SF	100 SF	1	0.25	1
533	OFFICE	Business	125 SF	100 SF	1	0.25	1
534B	BACK STAIR	Business	113 SF	100 SF	1	0.23	1
535	OFFICE	Business	132 SF	100 SF	1	0.26	1
536	COMPUTER	Business	107 SF	100 SF	1	0.21	1
537	OFFICE	Business	134 SF	100 SF	1	0.27	1
538	OFFICE	Business	123 SF	100 SF	1	0.25	1
539	OFFICE	Business	124 SF	100 SF	1	0.25	1
540	OFFICE	Business	124 SF	100 SF	1	0.25	1
541	OFFICE	Business	122 SF	100 SF	1	0.24	1
542	OFFICE	Business	100 SF	100 SF	1	0.20	1
543	JANITOR	Accessory Storage/Mech.	94 SF	500 SF	1	0.20	1
544	TOILET	Accessory Storage/Mech.	105 SF	500 SF	1	0.20	1
545	TOILET	Accessory Storage/Mech.	60 SF	500 SF	1	0.20	1
			8814 SF		139	24.53	

CODE PLAN KEYNOTES:

- SEMI-RECESSED FIRE EXTINGUISHER AND CABINET
- CONTINUE R21 URETHANE INSULATION INSIDE CHASE ON EXTERIOR WALL AND AROUND STRUCTURAL COLUMNS.
- 6'-0" W x 8'-0" L PENTHOUSE LIFT ACCESS
- REPAIR ALL PENETRATIONS INTO EXISTING WALLS INDICATED AS FIRE WALLS WITH APPROPRIATE FIRE STOPPING MATERIALS MEETING THE INDICATED RATINGS
- REMOVABLE RAMP

SYMBOL LEGEND

- 72" DOOR WIDTH PROVIDED
- 34.5" EXIT WIDTH PROVIDED
- 32" EXIT WIDTH REQUIRED
- DIRECTION OF EGRESS
- FE FIRE EXTINGUISHER
- ACCESSIBLE ROUTE / PATH OF TRAVEL
- MOST REMOTE ACCESSIBLE ROUTE / PATH OF TRAVEL

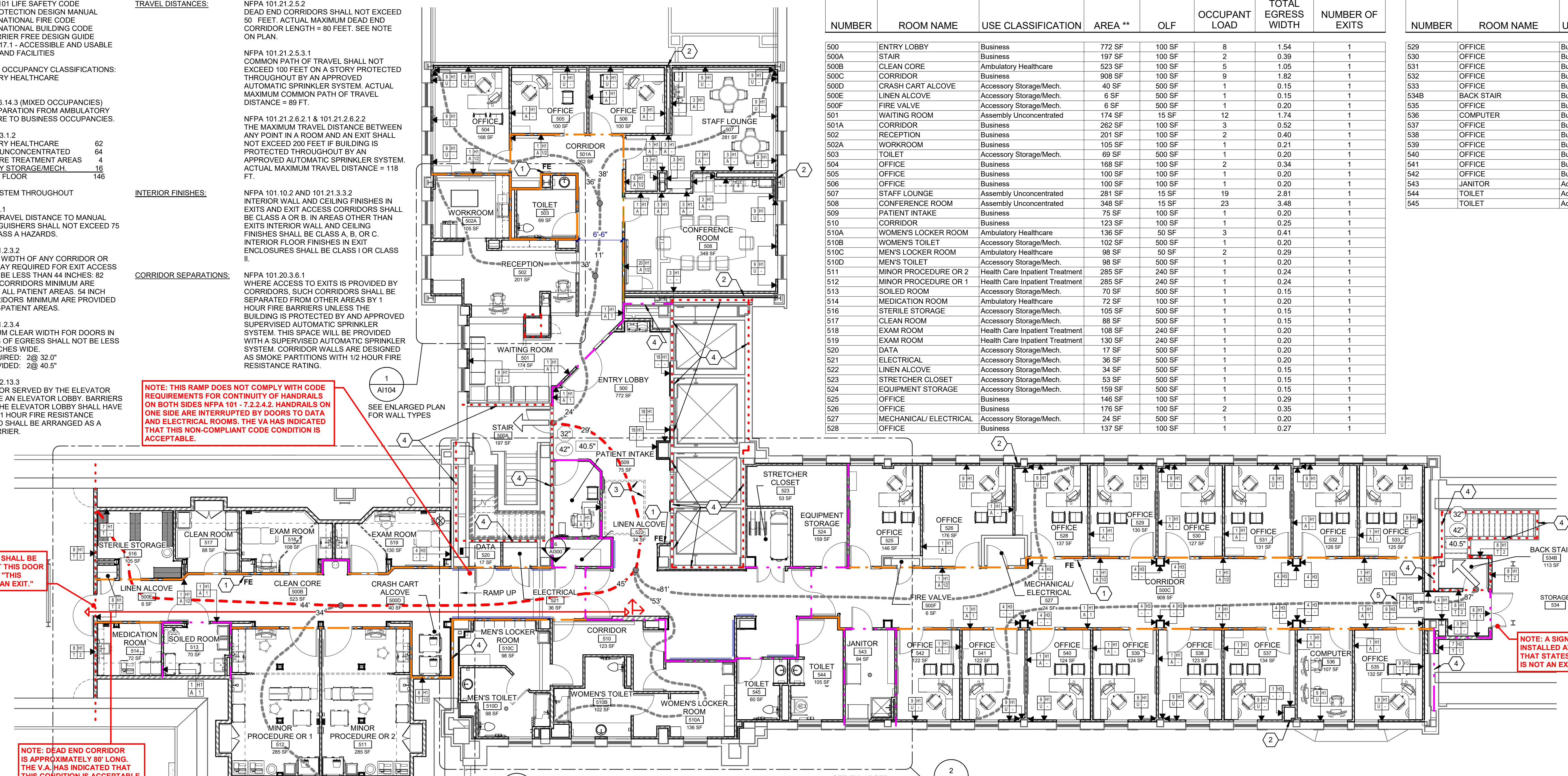
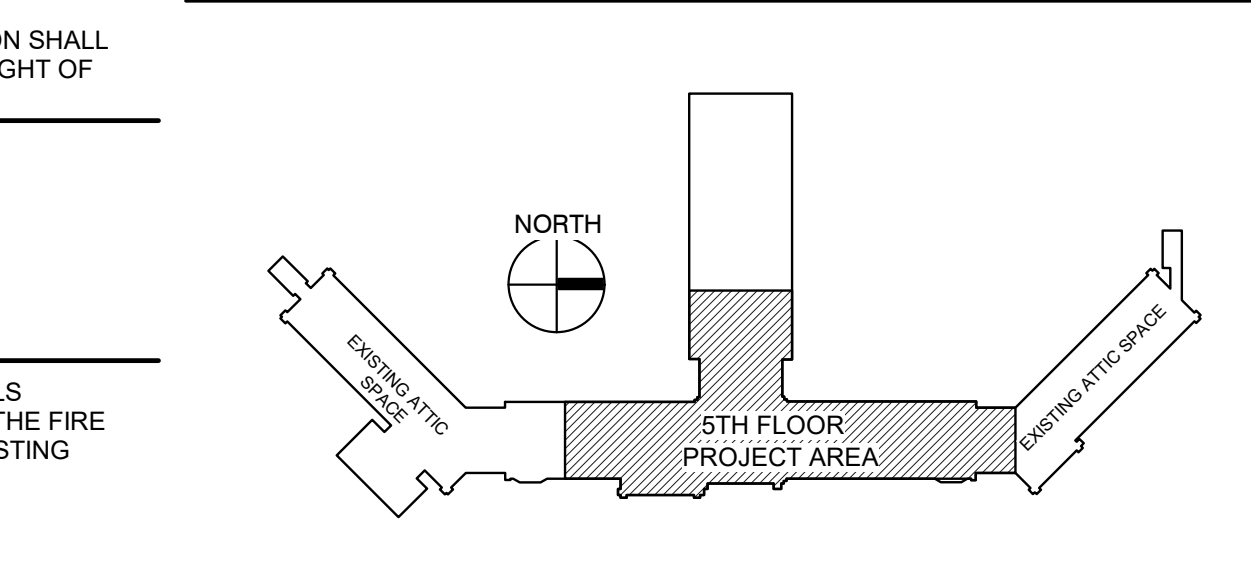
RATED WALLS:

- EXISTING DENOTES 2-HOUR FIRE WALL & SMOKE BARRIER WALL:
 - WALL EXTENDS FROM FLOOR TO DECK ABOVE
 - ALL DUCT PENETRATIONS ARE PROTECTED BY COMBINATION FIRE AND SMOKE DAMPERS
 - SMOKE DAMPERS ARE NOT REQUIRED WHERE ADJACENT SMOKE COMPARTMENTS ARE PROTECTED BY QUICK RESPONSE SPRINKLERS THROUGHOUT EACH COMPARTMENT
 - ALL PENETRATIONS ARE SEALED WITH MATERIALS APPROPRIATE FOR PROTECTING 2-HOUR FIRE AND SMOKE WALL ASSEMBLIES
 - ALL DOORS ARE 1 1/2-HOUR LABELED, SELF-CLOSING AND POSITIVE LATCHING. (LSC 18.3.6.3 & 8.3.3.1)
- EXISTING DENOTES MINIMUM 1-HOUR FIRE WALL & SMOKE BARRIER WALL:
 - WALL EXTENDS FROM FLOOR TO DECK ABOVE
 - ALL DUCT PENETRATIONS ARE PROTECTED BY COMBINATION FIRE AND SMOKE DAMPERS
 - SMOKE DAMPERS ARE NOT REQUIRED WHERE ADJACENT SMOKE COMPARTMENTS ARE PROTECTED BY QUICK RESPONSE SPRINKLERS THROUGHOUT EACH COMPARTMENT
 - ALL PENETRATIONS ARE SEALED WITH MATERIALS APPROPRIATE FOR PROTECTING 1-HOUR FIRE AND SMOKE WALL ASSEMBLIES
 - ALL DOORS ARE 3/4-HOUR LABELED, SELF-CLOSING AND POSITIVE LATCHING. (LSC 18.3.6.3 & 8.3.3.1)
- EXISTING DENOTES SUITE SEPARATION/CORRIDOR WALL AND SMOKE PARTITION:
 - WALL SHALL BE PERMITTED TO TERMINATE AT THE CEILING WHERE THE CEILING IS CONSTRUCTED TO LIMIT THE TRANSFER OF SMOKE
 - 1/2 HOUR FIRE RESISTANCE RATING IS REQUIRED
 - WALL SHALL FORM A BARRIER TO LIMIT THE TRANSFER OF SMOKE
 - ALL AIR TRANSFER OPENINGS ARE PROTECTED BY SMOKE DAMPERS (PER LSC 8.4.6.2 & IBC 711.7)
 - ALL PENETRATIONS ARE SEALED WITH MATERIALS APPROPRIATE FOR RESISTING THE PASSAGE OF SMOKE
 - ALL DOORS SHALL BE CONSTRUCTED TO RESIST THE PASSAGE OF SMOKE AND BE 20 MIN RATED
 - DOORS SHALL BE REQUIRED TO MEET THE REQUIREMENTS FOR SMOKE AND DRAFT CONTROL DOOR ASSEMBLIES. (TESTED IN ACCORDANCE WITH UL 1784) (IBC 711.5.2)
 - A CLEARANCE BETWEEN THE BOTTOM OF THE DOOR AND THE FLOOR COVERING NOT EXCEEDING ONE INCH SHALL BE PERMITTED
 - DOORS SHALL BE PROVIDED WITH POSITIVE LATCHING HARDWARE
 - DOORS SHALL NOT BE HELD OPEN BY DEVICES OTHER THAN THOSE THAT RELEASE WHEN THE DOOR IS PUSHED OR PULLED
 - DOORS SHALL BE SELF OR AUTOMATIC CLOSING. (PER LSC 8.4.3.5 AND IBC 711.5.3)

RATED WALLS GENERAL NOTES:

- WHERE MORE THAN ONE WALL TYPE IS SHOWN, THE MOST RESTRICTIVE REQUIREMENTS OF THE WALLS ARE REQUIRED (FOR EXAMPLE, A FIRE BARRIER MAY BE COMBINED WITH A SMOKE BARRIER - 2 HOUR F.R. CONSTRUCTION WITH 1 1/2 HOUR F.R. DOORS, COMBINATION FIRE & SMOKE DAMPERS, 2 HOUR PENETRATIONS)
- NOTE THAT DUCTS AND PIPE OR CONDUIT PENETRATIONS DO NOT TYPICALLY OCCUR AT SHAFTS OR STAIR ENCLOSURES BECAUSE THEY ARE PROHIBITED EXCEPT WHERE THEY ARE SPECIFICALLY SERVING THAT COMPONENT.

KEY PLAN:



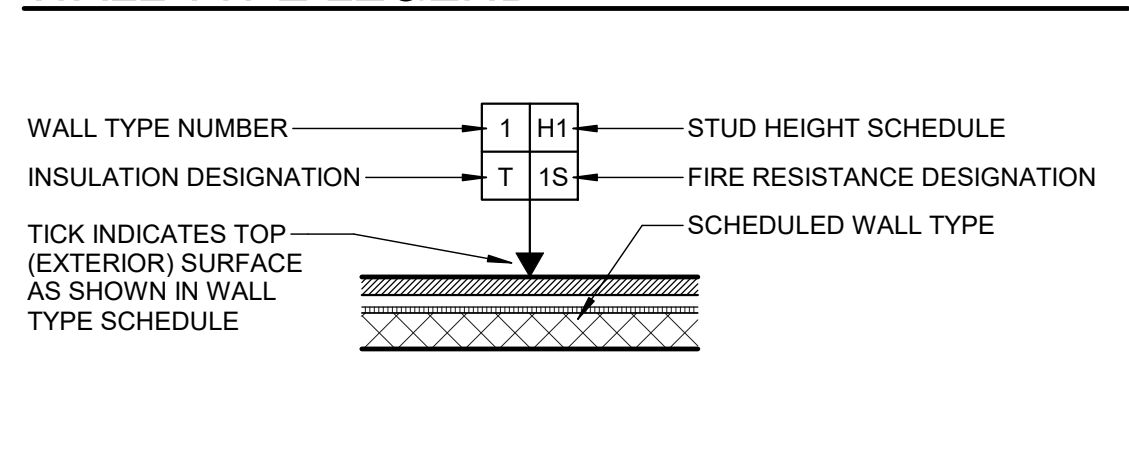
CODE FLOOR PLAN

SCALE: 1/8" = 1'-0"
 AREA OF WORK 10,072 SQFT.

WALL TYPE SCHEDULE (SEE WALL TAG FOR INSULATION AND FIRE RATING)

1	2	3	4	5	6	7	8	9	10	11	12
<p>5/8" GYPSUM BOARD EACH SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>ACOUSTIC BATT INSULATION WHERE INDICATED</p> <p>3/8" METAL STUDS</p> <p>STC RATING OF 45-49 PER GA. # WP1072</p> <p>1 HR. FIRE AND SMOKE RATED (WHERE INDICATED) UL U419</p> <p>1/2 HR. FIRE & SMOKE RATED (WHERE INDICATED) UL U407</p>	<p>1" X 24" GYPSUM SHAFT LINER PANELS.</p> <p>2 1/2" METAL CT STUDS AT 24" O.C.</p> <p>ACOUSTIC BATT INSULATION WHERE INDICATED</p> <p>2 LAYERS 5/8" TYPE X IMPACT RESISTANT GYPSUM WALL BOARD.</p> <p>2 HR. FIRE RATED BARRIER WALL. UL U497</p>	<p>5/8" GYPSUM BOARD ONE SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>ACOUSTIC BATT INSULATION WHERE INDICATED</p> <p>3 5/8" METAL STUDS</p> <p>1/2 HR. FIRE & SMOKE RATED (WHERE INDICATED) UL U407</p> <p>1 HR. FIRE AND SMOKE RATED (WHERE INDICATED) UL U419</p>	<p>5/8" GYPSUM BOARD ONE SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>ACOUSTIC BATT INSULATION WHERE INDICATED</p> <p>1 1/2" METAL STUD FURRING</p> <p>EXISTING WALL OR COLUMN</p> <p>1/2 HR. FIRE & SMOKE RATED (WHERE INDICATED) UL U407</p> <p>1 HR. FIRE AND SMOKE RATED (WHERE INDICATED) UL U419</p>	<p>5/8" GYPSUM BOARD EACH SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>ACOUSTIC BATT INSULATION WHERE INDICATED</p> <p>1" METAL STUDS</p> <p>STC RATING OF 45-49 PER GA. # WP1072</p> <p>1 HR. FIRE AND SMOKE RATED (WHERE INDICATED) UL U419</p>	<p>5/8" GYPSUM BOARD EACH SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>VAPOR RETARDER ON WARM SIDE (AT THERMAL INSULATION)</p> <p>ACOUSTIC OR THERMAL BATT INSULATION WHERE INDICATED</p> <p>6" METAL STUDS</p> <p>STC RATING OF 45-49 PER GA. # WP1072</p> <p>1 HR. FIRE AND SMOKE RATED (WHERE INDICATED) UL U419</p>	<p>5/8" GYPSUM BOARD ONE SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>VAPOR RETARDER ON WARM SIDE (AT THERMAL INSULATION)</p> <p>ACOUSTIC BATT INSULATION WHERE INDICATED</p> <p>6" METAL STUDS</p> <p>1 HR. FIRE AND SMOKE RATED (WHERE INDICATED) UL U419</p> <p>1/2 HR. FIRE & SMOKE RATED (WHERE INDICATED) UL U407</p>	<p>2 LAYERS 5/8" TYPE X GYPSUM BOARD EACH SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>1" METAL STUD OFFSET FROM EXISTING WALL</p> <p>R-21 SPRAY URETHANE INSULATION ENCAPSULATES BACK OF METAL STUD TO CREATE THERMAL BREAK</p> <p>EXISTING EXTERIOR WALL</p> <p>INSULATION</p> <p>2 HR. FIRE AND SMOKE RATED UL U411</p>	<p>5/8" GYPSUM BOARD ONE SIDE</p> <p>THIN SET MORTAR</p> <p>5/8" TILE BACKER (EXTEND TO TILE HEIGHT) 5/8" GYPSUM WALL BOARD ABOVE</p> <p>ACOUSTIC BATT INSULATION WHERE INDICATED</p> <p>3/8" METAL STUD FRAMING AT 16" O.C.</p> <p>5/8" TILE BACKER (EXTEND TO TILE HEIGHT) 5/8" GYPSUM WALL ABOVE</p> <p>THIN SET MORTAR</p> <p>CERAMIC TILE</p> <p>GYPSUM BOARD MUST EXTEND FROM FLOOR TO ROOF DECK TO COMPLETELY COVER URETHANE INSULATION</p>	<p>5/8" GYPSUM BOARD ONE SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>2 1/2" METAL STUDS</p> <p>1 1/2" METAL STUD FURRING</p> <p>EXISTING WALL OR COLUMN</p> <p>STC RATING OF 45-49 PER GA. # WP1072</p> <p>1/2 HR. FIRE & SMOKE RATED (WHERE INDICATED) UL U407</p>	<p>CERAMIC TILE</p> <p>THIN SET MORTAR</p> <p>5/8" TILE BACKER, EXTEND TO TILE HEIGHT, 5/8" GYPSUM WALL BOARD ABOVE</p> <p>5/8" TILE BACKER, EXTEND TO TILE HEIGHT, 5/8" GYPSUM WALL BOARD ABOVE, ONE SIDE ONLY</p> <p>ACOUSTIC BATT INSULATION WHERE INDICATED</p> <p>3/8" METAL STUD FRAMING AT 16" O.C.</p> <p>5/8" GYPSUM WALL BOARD</p>	<p>5/8" GYPSUM BOARD ONE SIDE</p> <p>INSTALL GYPSUM BOARD UP 1/2" OFF CONCRETE SUBFLOOR</p> <p>2 1/2" METAL STUDS</p> <p>1 1/2" METAL STUD FURRING</p> <p>EXISTING WALL OR COLUMN</p> <p>STC RATING OF 45-49 PER GA. # WP1072</p> <p>1/2 HR. FIRE & SMOKE RATED (WHERE INDICATED) UL U407</p>

WALL TYPE LEGEND



INSULATION DESIGNATION

T = THERMAL INSULATION FILL STUD CAVITY
 U = ACOUSTIC INSULATION FILL STUD CAVITY
 A = URETHANE SPRAY FOAM THERMAL INSULATION

FIRE RESISTANCE DESIGNATION

1 = ONE HOUR & SMOKE SEALED
 2 = TWO HOUR & SMOKE SEALED
 12 = 30 MIN. & SMOKE SEALED

STUD HEIGHT SCHEDULE

H1 = FLOOR TO BOTTOM OF ROOF OR FLOOR DECK
 H2 = INFILL EXISTING OPENING
 H3 = FLOOR TO 6" ABOVE CEILING

100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WEST PLAINS ENGINEERING</p> <p>4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISHOPARCK, ND</p>	<p>SEAL:</p> <p>REGISTERED ARCHITECT REG. NO. 3907 ROBIN J. MCLELLAN SOUTH DAKOTA</p>	<p>ARCHITECT:</p> <p>MSH ARCHITECTS</p> <p>625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title</p> <p>FIFTH FLOOR CODE PLAN</p> <p>Approved: Project Director</p>	<p>Project Title</p> <p>V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 11, 2017</p> <p>Checked DGS</p> <p>Drawn AAD</p>	<p>Office of Construction and Facilities Management</p> <p>Department of Veterans Affairs</p>
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KEYNOTES:

- 1 REINSTALL SALVAGED ACOUSTIC TILE CEILING IN THIS AREA AFTER ABOVE CEILING WORK IS COMPLETE.
- 2 PATCH AND REPLACE GYPSUM BOARD INTO EXISTING CEILING IN THIS AREA AND REPAINT ENTIRE CEILING FOR THIS ROOM.
- 3 REINSTALL EXISTING LIGHTS, DIFFUSERS AND OTHER HVAC AND ELECTRICAL EQUIPMENT IN CEILING GRID WHEN ABOVE CEILING WORK IS COMPLETE. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR EXACT LOCATIONS. FIELD VERIFY EXISTING CONDITIONS FOR OTHER CEILING HUNG EQUIPMENT.
- 4 REINSTALL SALVAGED ADHEARED 12" X 12" CEILING TILE IN THIS AREA AFTER ABOVE CEILING WORK IS COMPLETE.
- 5 WALL MOUNTED ALUMINUM CAGE ACCESS LADDER WITH PLATFORM AND RETURN
- 6 INFILL OPENING BEHIND SPEAKER GRILL WITH 2 HOUR SHAFTWALL. PAINT AUDITORIUM SIDE OF SHAFTWALL WHITE.
- 7 PATCH WALL BELOW CEILING WHERE NEW PLUMBING LINES ARE INSTALLED IN CHASE. COORDINATE SIZE OF PATCH AREA WITH MECHANICAL AND PLUMBING CONTRACTORS. REPAINT ENTIRE WALL TO NEAREST CORNER TO MATCH EXISTING.

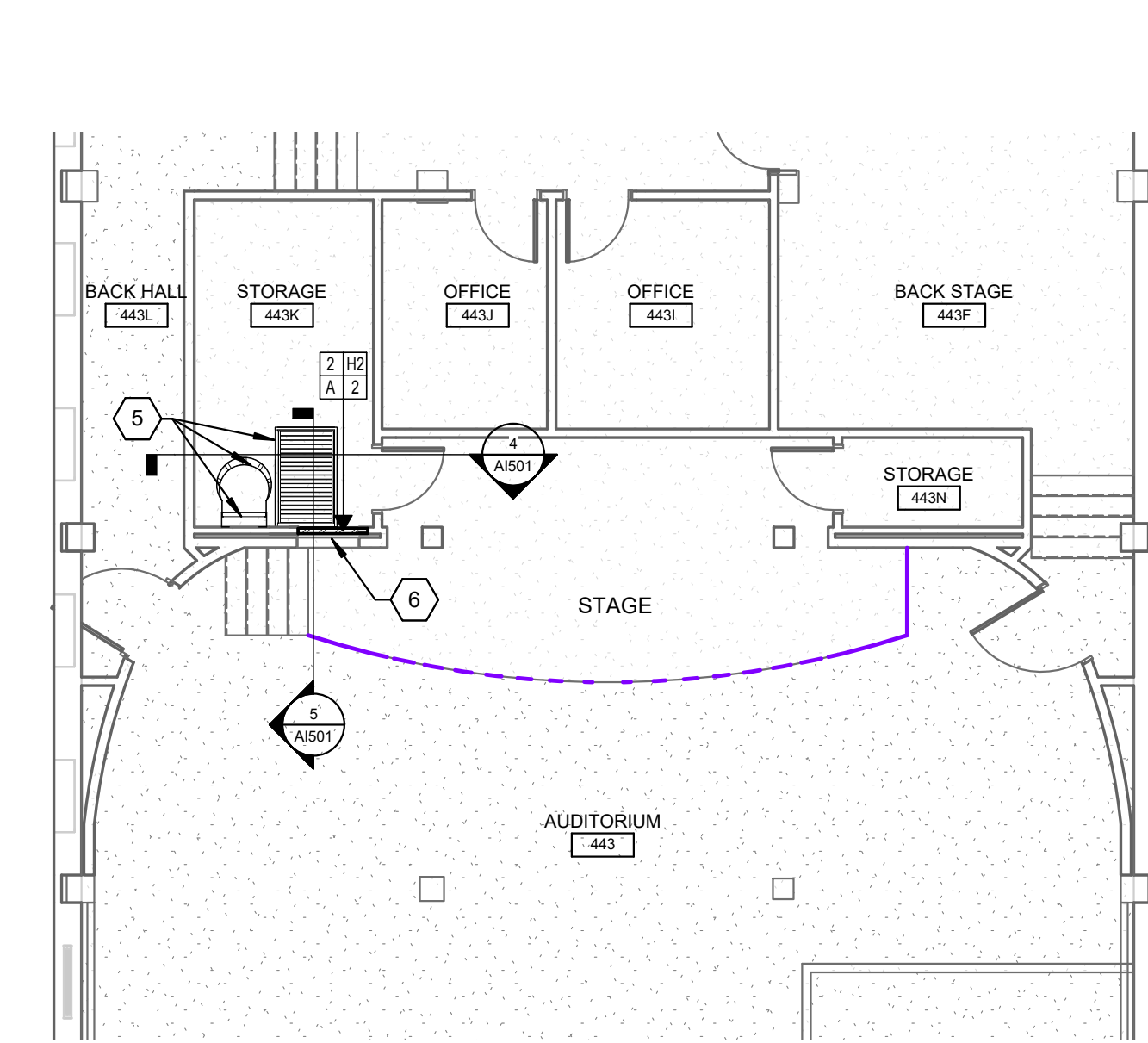
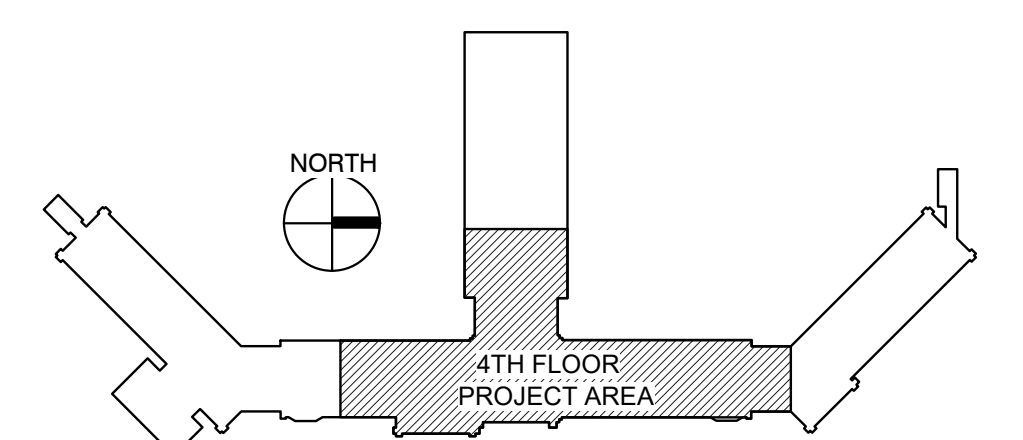
CEILING LEGEND

- 2 x 2' SUSPENDED ACOUSTICAL CEILING GRID
- GYPSUM BOARD CEILING / SOFFIT
- DIFFUSER
- RETURN
- 2x4 TROFFER LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- RADIANT CEILING PANEL

GENERAL NOTES:

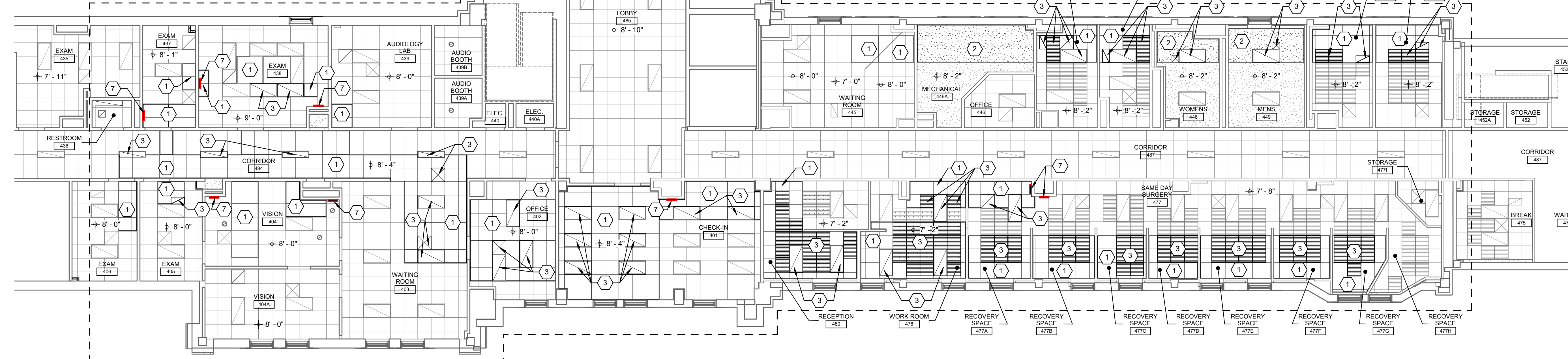
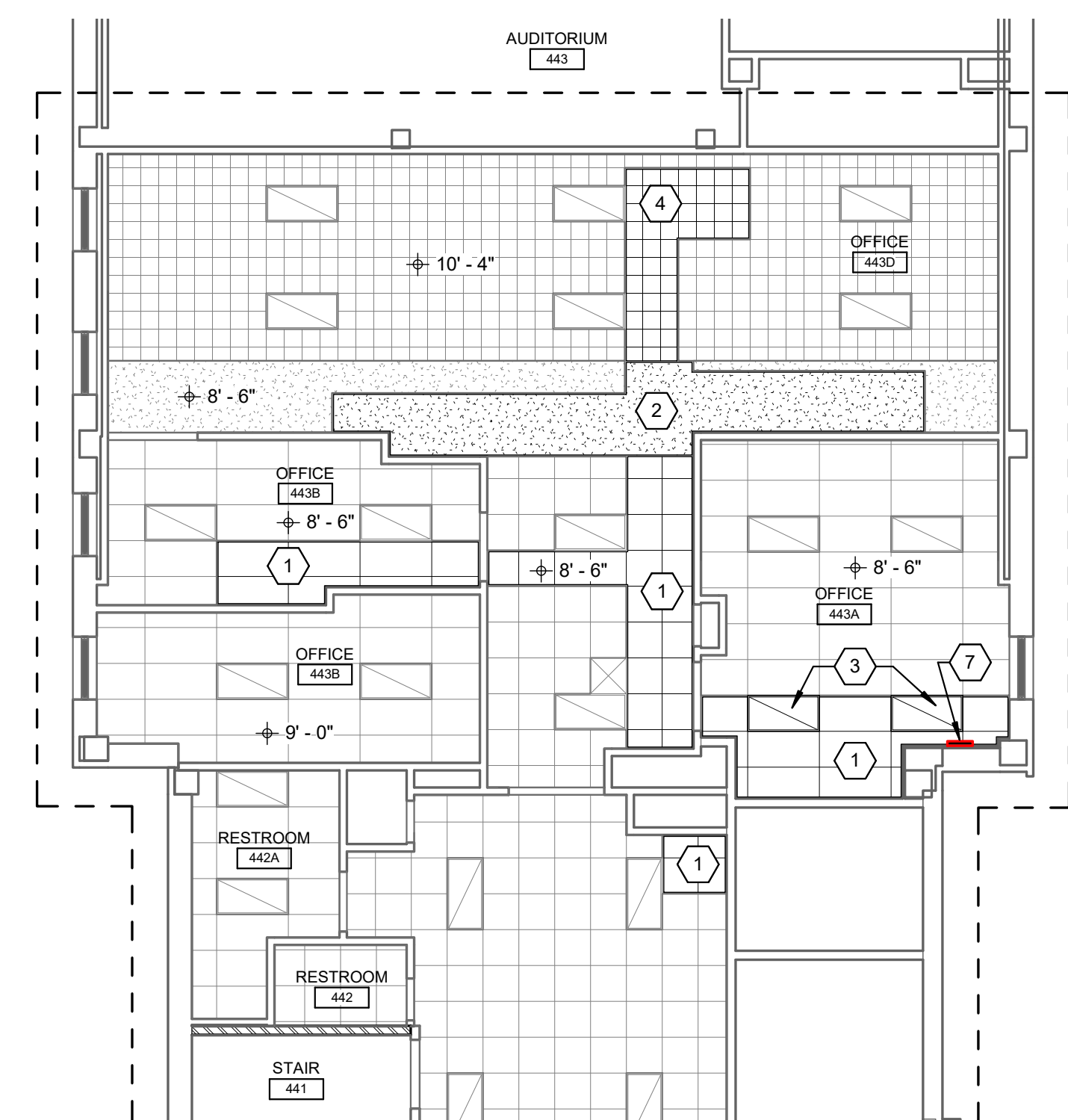
- A. VERIFY ALL UTILITIES AND CONNECTION LOCATIONS.
- B. PROVIDE BLOCKING AND BACKING AS REQUIRED FOR EQUIPMENT AND ACCESSORIES.
- C. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
- D. ALL SURFACES OR FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND SHALL MATCH ADJACENT MATERIALS.
- E. WORK ON THIS FLOOR MUST BE CLOSELY COORDINATED WITH THE VA TO ALLOW FOR CONTINUED OPERATIONS ON THIS FLOOR. (AFTER HOURS WORK MAY BE REQUIRED)
- F. CONTRACTOR SHALL TAKE ALL MEASURES AND PROVIDE ALL MATERIAL NECESSARY FOR PROTECTING EXISTING EQUIPMENT AND PROPERTY IN AFFECTED AREAS OF CONSTRUCTION AGAINST DUST AND DEBRIS, SO THAT EQUIPMENT AND AFFECTED AREAS TO BE USED IN THE MEDICAL CENTERS OPERATIONS WILL NOT BE HINDERED. CONTRACTOR SHALL PERMIT ACCESS TO DEPARTMENT OF VETERANS AFFAIRS PERSONNEL AND PATIENTS THROUGH OTHER CONSTRUCTION AREAS WHICH SERVE AS ROUTES OF ACCESS TO SUCH AFFECTED AREAS AND EQUIPMENT. THESE ROUTES WHETHER ACCESS OR EGRESS SHALL BE ISOLATED FROM THE CONSTRUCTION AREA BY TEMPORARY PARTITIONS AND HAVE WALKING SURFACES. LIGHTING ETC TO FACILITATE PATIENT AND STAFF ACCESS. COORDINATE ALTERATION WORK IN AREAS OCCUPIED BY DEPARTMENT OF VETERANS AFFAIRS SO THAT MEDICAL CENTER OPERATIONS WILL CONTINUE DURING THE CONSTRUCTION PERIOD. COORDINATE WITH SPECIFICATIONS SECTION 01 0000 - GENERAL REQUIREMENTS AND 01 0100 - MEDICAL CENTER REQUIREMENTS FOR WORK ON THIS FLOOR.
- G. PATCH EXISTING WALLS TO REMAIN WHERE EXISTING PLUMBING AND MECHANICAL DUCTWORK ARE BEING REMOVED. COORDINATE LOCATIONS AND SIZE OF PATCH AREA WITH MECHANICAL AND PLUMBING CONTRACTORS. REPAINT ENTIRE WALL TO NEAREST CORNER TO MATCH EXISTING.

KEY PLAN:



FOURTH FLOOR AUDITORIUM SPACE PLAN

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



FOURTH FLOOR REFLECTED CEILING PLAN

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

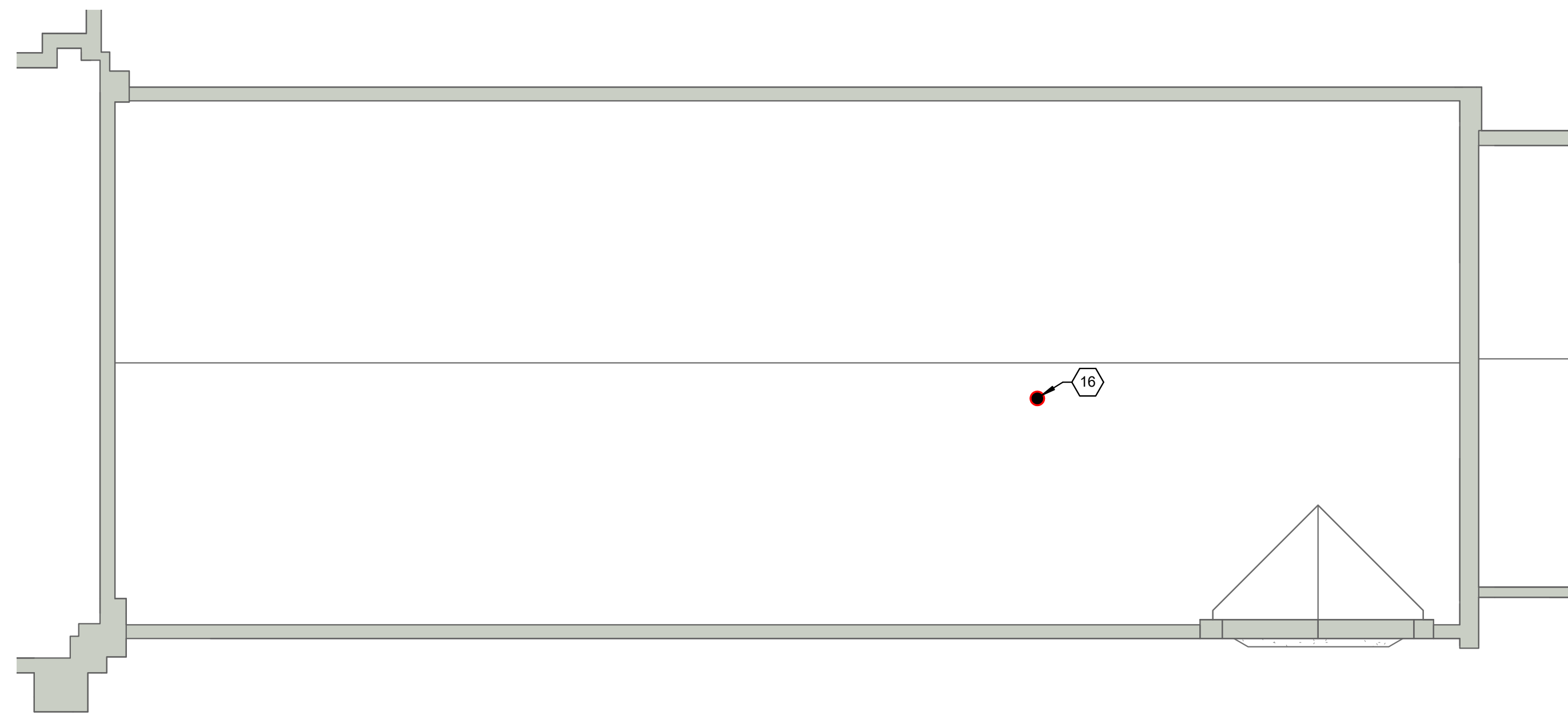
PHASING NOTE:
WORK ON THIS FLOOR MUST BE CLOSELY COORDINATED WITH THE VA TO ALLOW FOR CONTINUED OPERATIONS ON THIS FLOOR. (AFTER HOURS WORK MAY BE REQUIRED)

--- DENOTES PROJECT LIMITS LINE



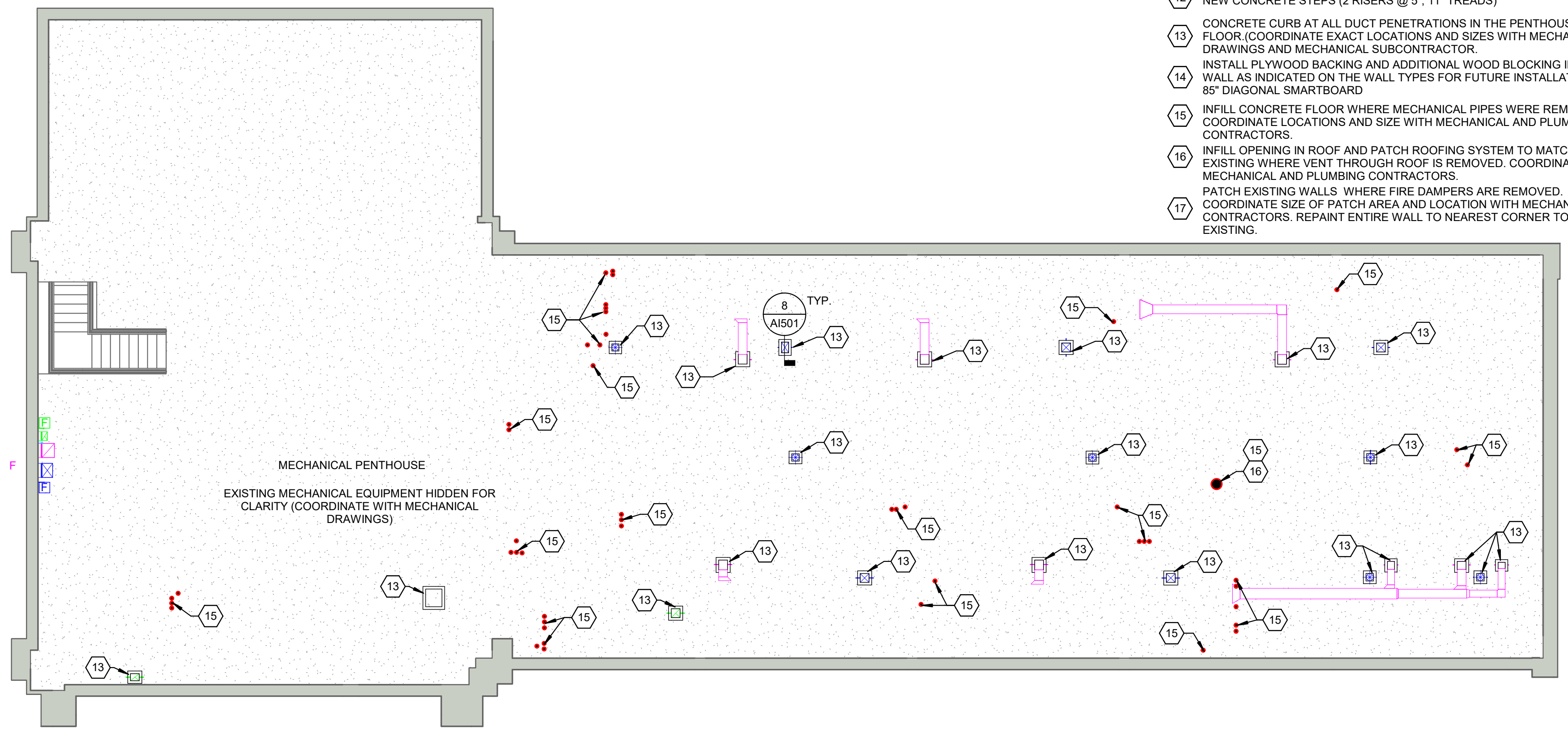
100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>		<p>SEAL:</p>		<p>ARCHITECT:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>		<p>Drawing Title FOURTH FLOOR PLANS</p> <p>Approved: Project Director</p>		<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Drawing Number 5-A1101</p> <p>Dwg. 8 of 60</p>		<p>Office of Construction and Facilities Management</p> <p>Department of Veterans Affairs</p>							
<p>Revisions:</p> <table border="1"> <tr> <th>No.</th> <th>Description</th> <th>Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>		No.	Description	Date				<p>Date</p>		<p>Date OCTOBER 11, 2017</p> <p>Checked DGS</p> <p>Drawn RTG</p>		<p>Location SIOUX FALLS, SOUTH DAKOTA</p>		<p>Checked DGS</p> <p>Drawn RTG</p>		<p> </p>	
No.	Description	Date															



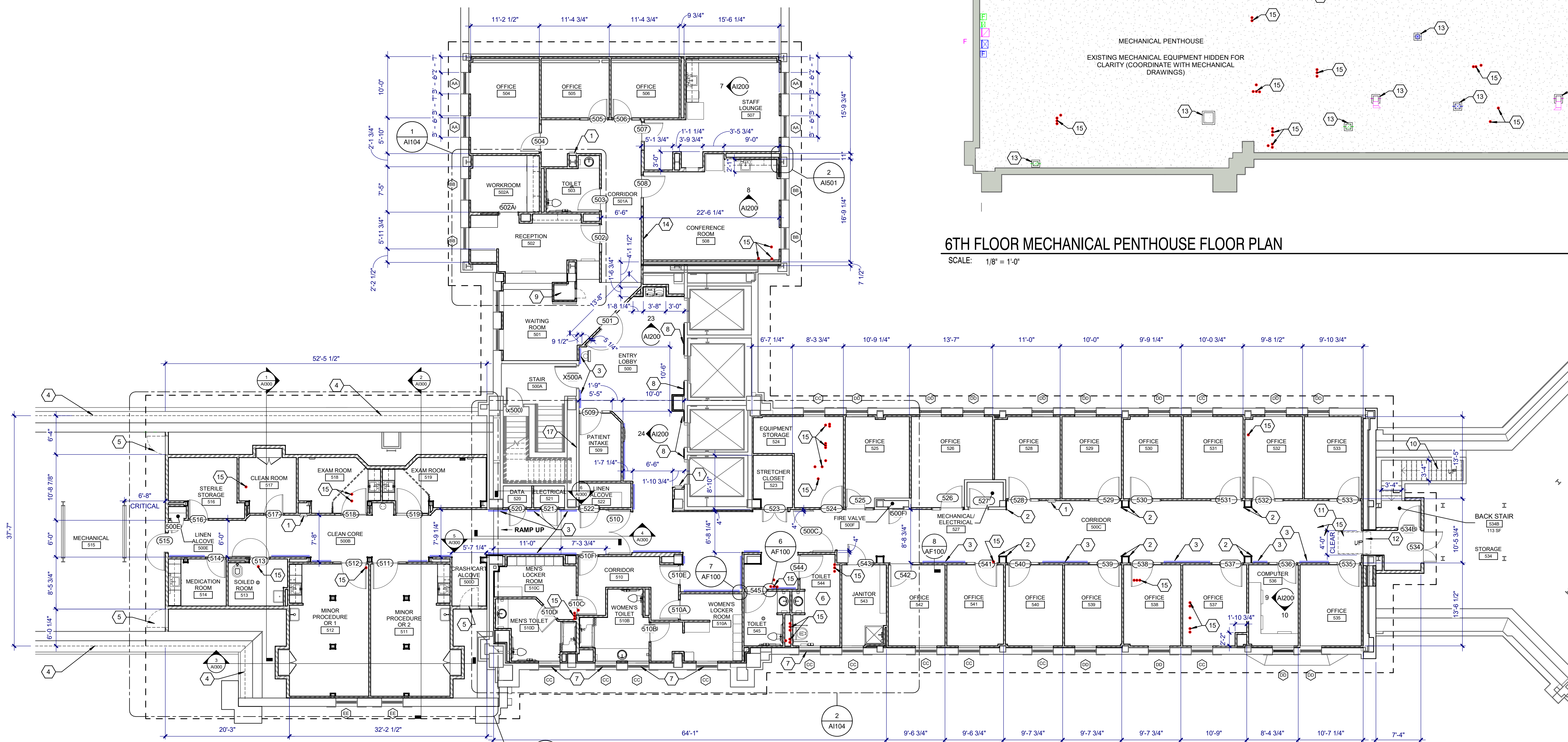
PARTIAL ROOF PLAN

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



6TH FLOOR MECHANICAL PENTHOUSE FLOOR PLAN

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



FLOOR PLAN

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

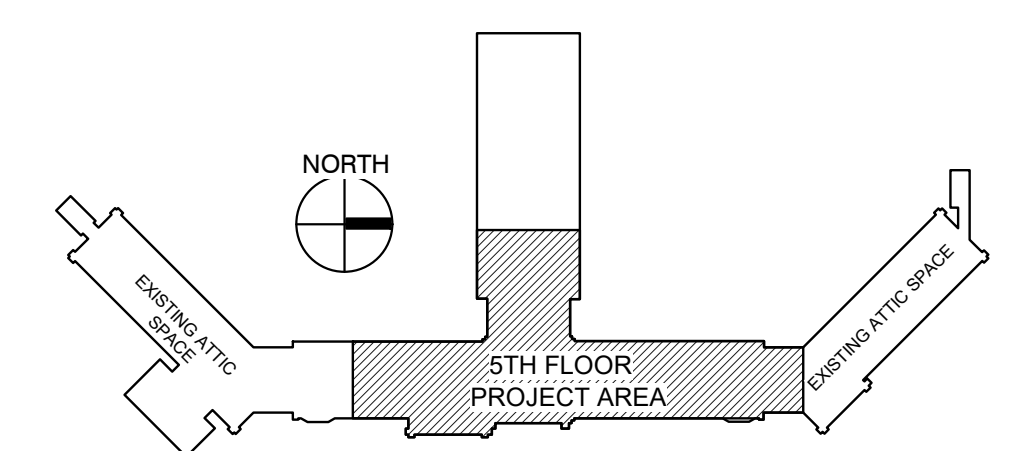
KEYNOTES:

- 1 SEMI-RECESSED FIRE EXTINGUISHER CABINET
- 2 RESILIENT CORNER GUARD
- 3 HANDRAIL
- 4 EXTERIOR WALL BELOW ROOF STRUCTURE
- 5 36" x 36" ACCESS PANEL (COORDINATE RATING WITH ASSOCIATED WALL TYPE)
- 6 ALL BLOCKING AND BACKING IN THIS ROOM SHALL SUPPORT UP TO 800 LBS.
- 7 REPLACE GLAZING IN THIS WINDOW WITH NEW FROSTED OBSCURED GLAZING (SEE WINDOW TYPES ON A103) FOR SIZE
- 8 EXTEND ELEVATOR CONTROLS BOX TO ACCOUNT FOR NEW WALL FINISHES
- 9 EXISTING LAUNDRY CHUTE
- 10 VINYL TREADS (13) AND RISERS (14) INSTALLED ON EXISTING METAL TREADS
- 11 REMOVABLE RAMP
- 12 NEW CONCRETE STEPS (2 RISERS @ 5", 11" TREADS)
- 13 CONCRETE CURB AT ALL DUCT PENETRATIONS IN THE PENTHOUSE FLOOR (COORDINATE EXACT LOCATIONS AND SIZES WITH MECHANICAL DRAWINGS AND MECHANICAL SUBCONTRACTOR)
- 14 INSTALL PLYWOOD BACKING AND ADDITIONAL WOOD BLOCKING IN THIS WALL AS INDICATED ON THE WALL TYPES FOR FUTURE INSTALLATION OF 85° DIAGONAL SMARTBOARD
- 15 INFILL CONCRETE FLOOR WHERE MECHANICAL PIPES WERE REMOVED. COORDINATE LOCATIONS AND SIZE WITH MECHANICAL AND PLUMBING CONTRACTORS
- 16 INFILL OPENING IN ROOF AND PATCH ROOFING SYSTEM TO MATCH EXISTING WHERE VENT THROUGH ROOF IS REMOVED. COORDINATE WITH MECHANICAL AND PLUMBING CONTRACTORS
- 17 PATCH EXISTING WALLS WHERE FIRE DAMPERS ARE REMOVED. COORDINATE SIZE OF PATCH AREA AND LOCATION WITH MECHANICAL CONTRACTORS. REPAINT ENTIRE WALL TO NEAREST CORNER TO MATCH EXISTING.

GENERAL NOTES:

- A. VERIFY ALL UTILITIES AND CONNECTION LOCATIONS.
- B. PROVIDE BLOCKING AND BACKING AS REQUIRED FOR EQUIPMENT AND ACCESSORIES.
- C. ALL SIGNAGE WILL BE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR. COORDINATE WITH OWNER.
- D. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
- E. ALL SURFACES OR FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND SHALL MATCH ADJACENT MATERIALS.
- F. ALL WORK MUST BE COORDINATED CLOSELY WITH THE VA PROJECT ENGINEER TO NOT ADVERSELY AFFECT OPERATIONS OUTSIDE OF THE WORK AREA. TEMPORARY 1-HOUR FIRE RATED CONSTRUCTION PARTITIONS WILL BE REQUIRED WHEN THE WORK AREA EXTENDS INTO AND AFFECTS EXISTING AREAS AND OPERATIONS.
- G. REFER TO SHEET AF600 FOR FINISH MATERIALS SCHEDULE
- H. PATCH EXISTING WALLS TO REMAIN WHERE EXISTING PLUMBING AND MECHANICAL DUCTWORK ARE BEING REMOVED. COORDINATE LOCATIONS AND SIZE OF PATCH AREA WITH MECHANICAL AND PLUMBING CONTRACTORS. REPAINT ENTIRE WALL TO NEAREST CORNER TO MATCH EXISTING.

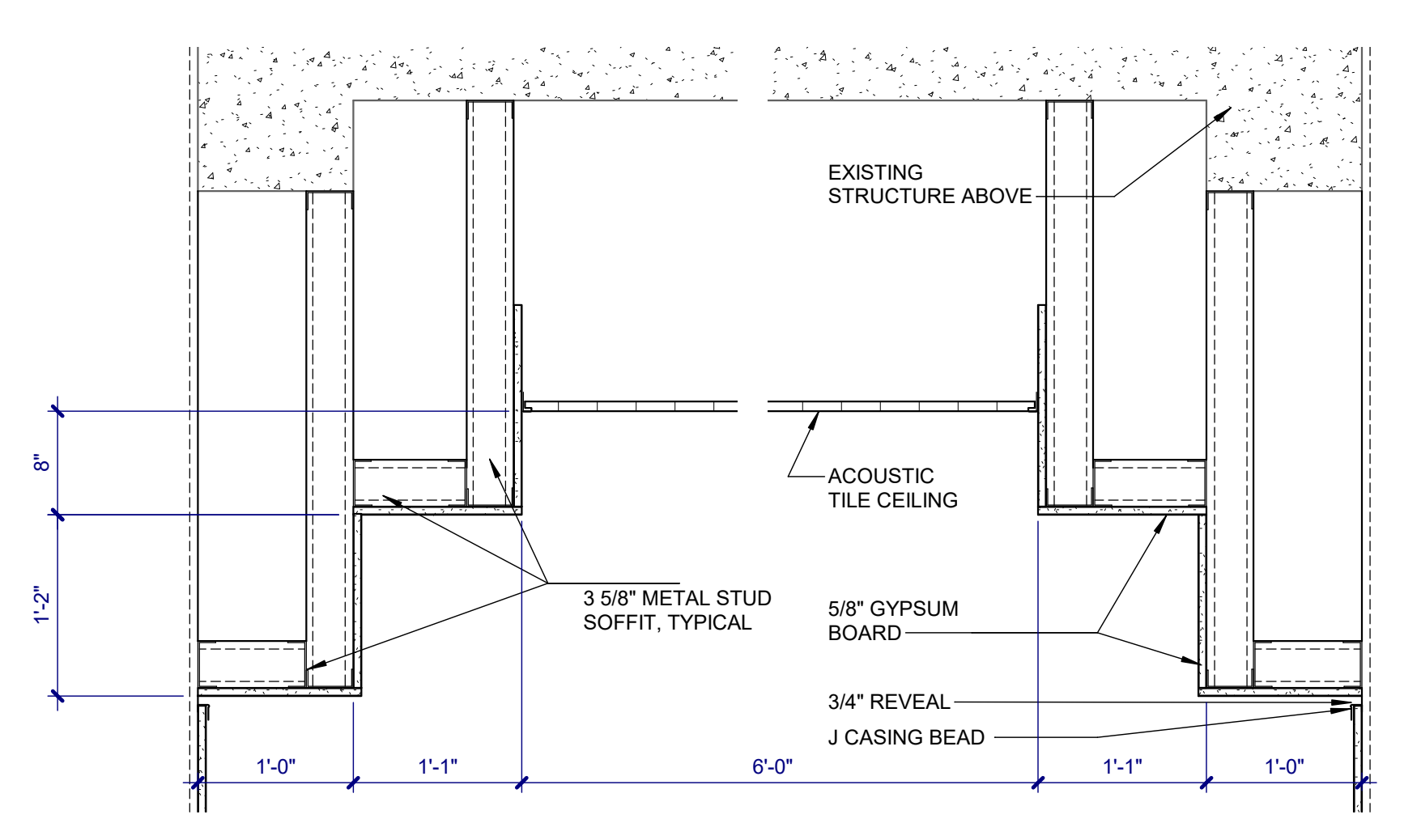
KEY PLAN:



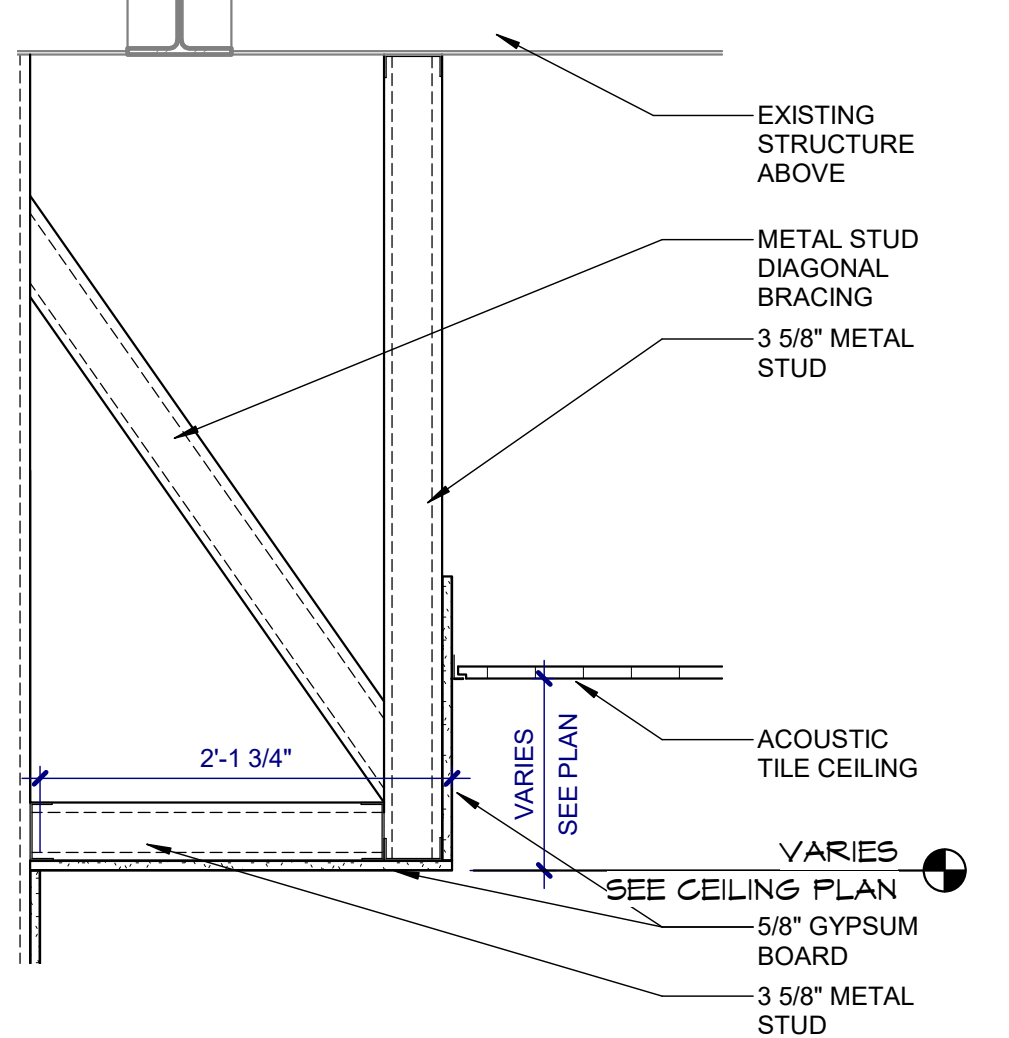
100% CONSTRUCTION DRAWINGS

CONSULTANTS: WPE WEST PLAINS ENGINEERING 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARK, ND	SEAL: RISE STRUCTURAL ASSOCIATES INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605)743-2510 fax:(605)743-2513	ARCHITECT: MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539	Drawing Title FIFTH FLOOR REMODEL PLAN	Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY	Project Number 438-15-201	Office of Construction and Facilities Management Department of Veterans Affairs
			Approved: Project Director	Location SIOUX FALLS, SOUTH DAKOTA	Building Number 5	
Date OCTOBER 11, 2017	Checked DGS	Drawn AAD	Dwg. 9 of 60			

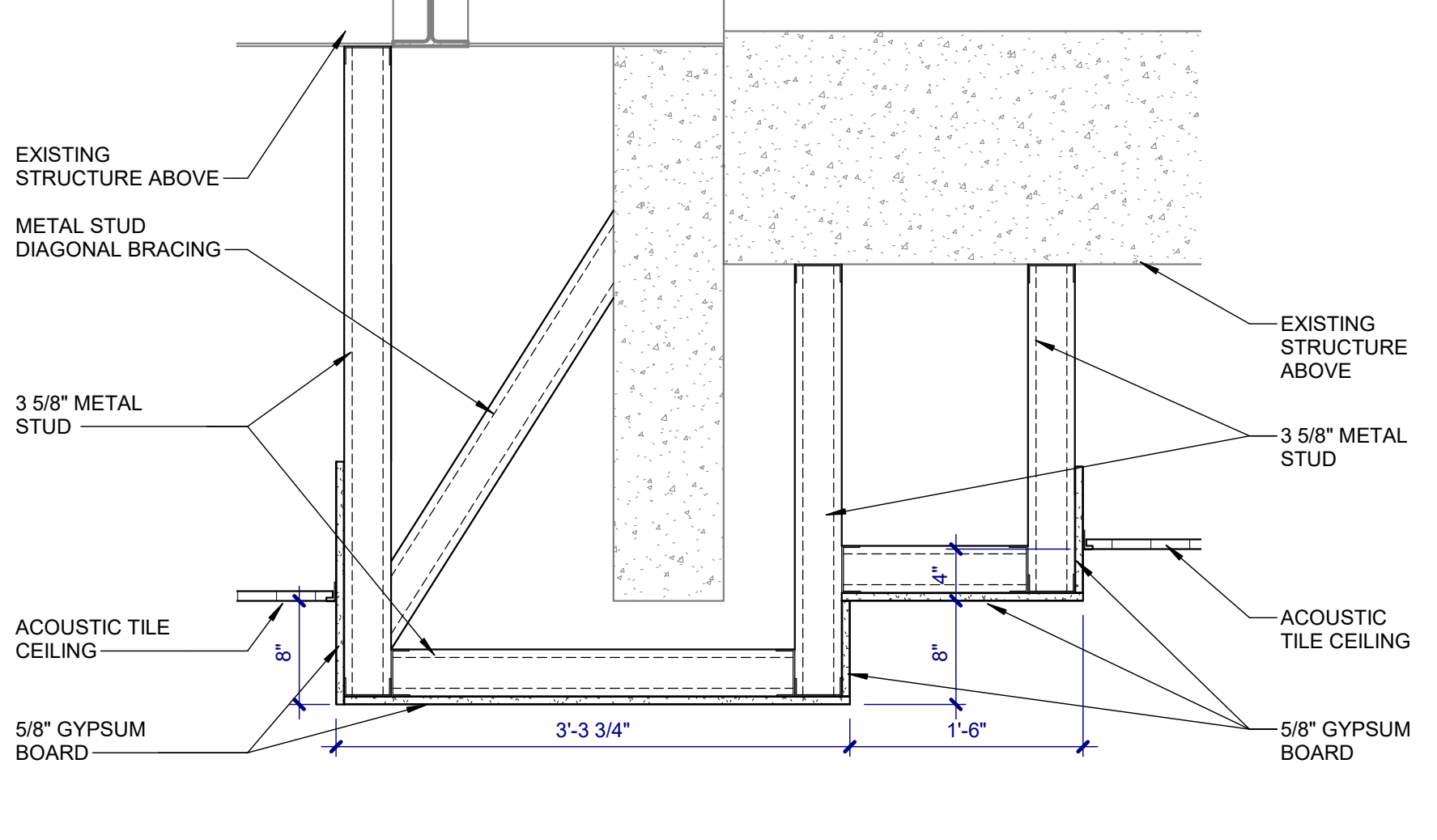
A
 three inches = one foot
 one and one half inches = one foot
 B
 one inch = one foot
 one and one half inches = one foot
 C
 one quarter inch = one foot
 one half inch = one foot
 D
 three quarters inch = one foot
 E
 one half inch = one foot
 F
 three eighths inch = one foot
 G
 one quarter inch = one foot
 H
 one eighth inch = one foot
 I
 one eighth inch = one foot
 J
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 K
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 S
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 Z
 one eighth inch = one foot



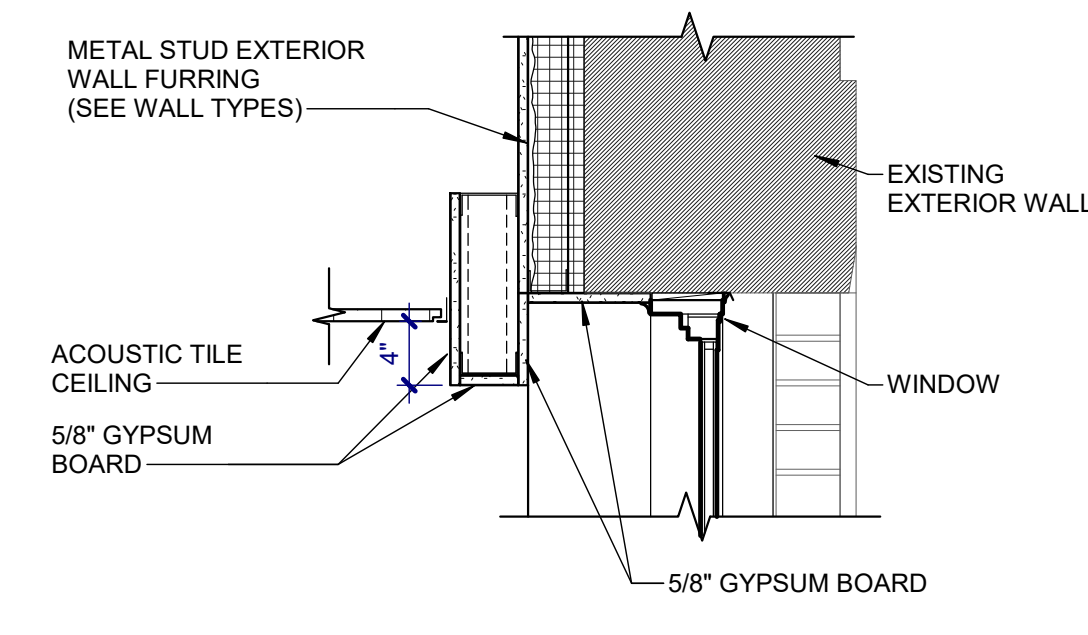
SOFFIT DETAIL
SCALE: 1" = 1'-0"



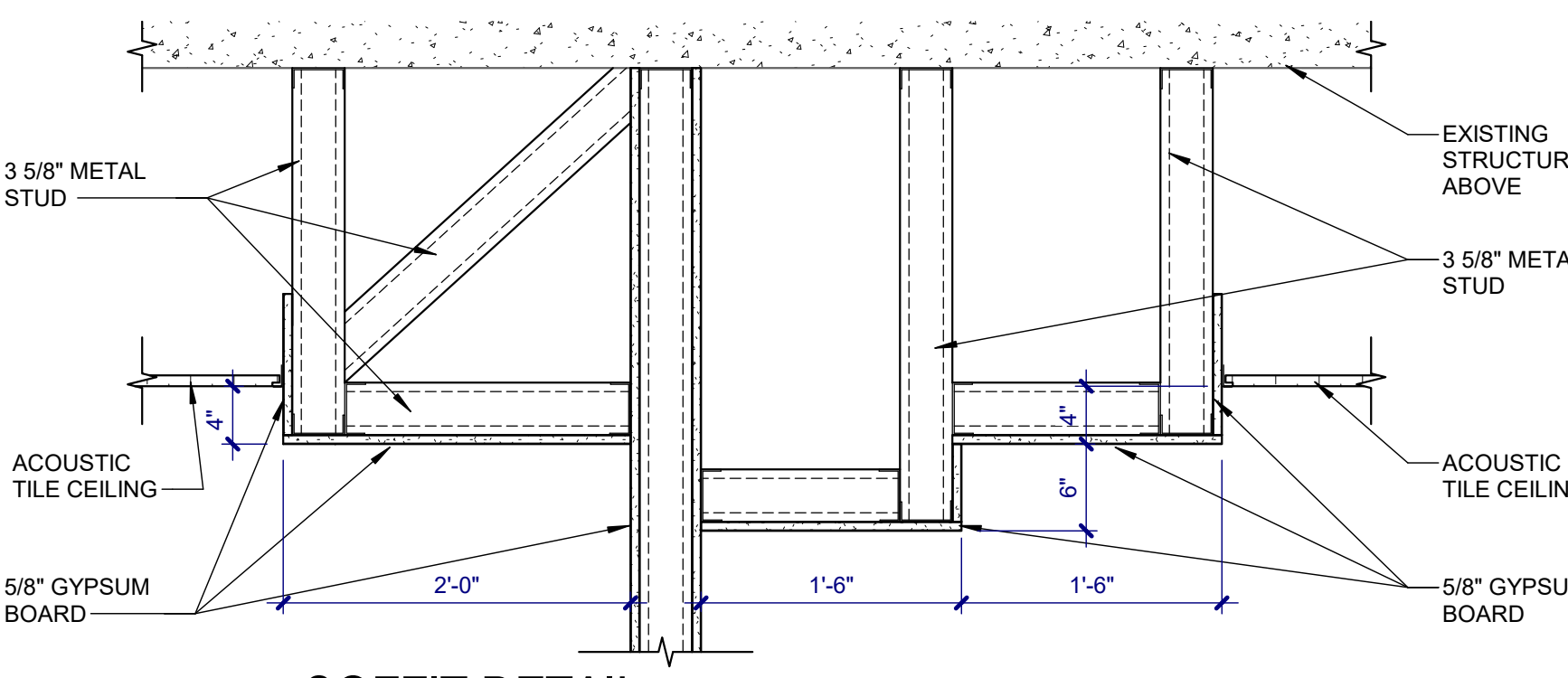
TYPICAL SOFFIT DETAIL
SCALE: 1" = 1'-0"



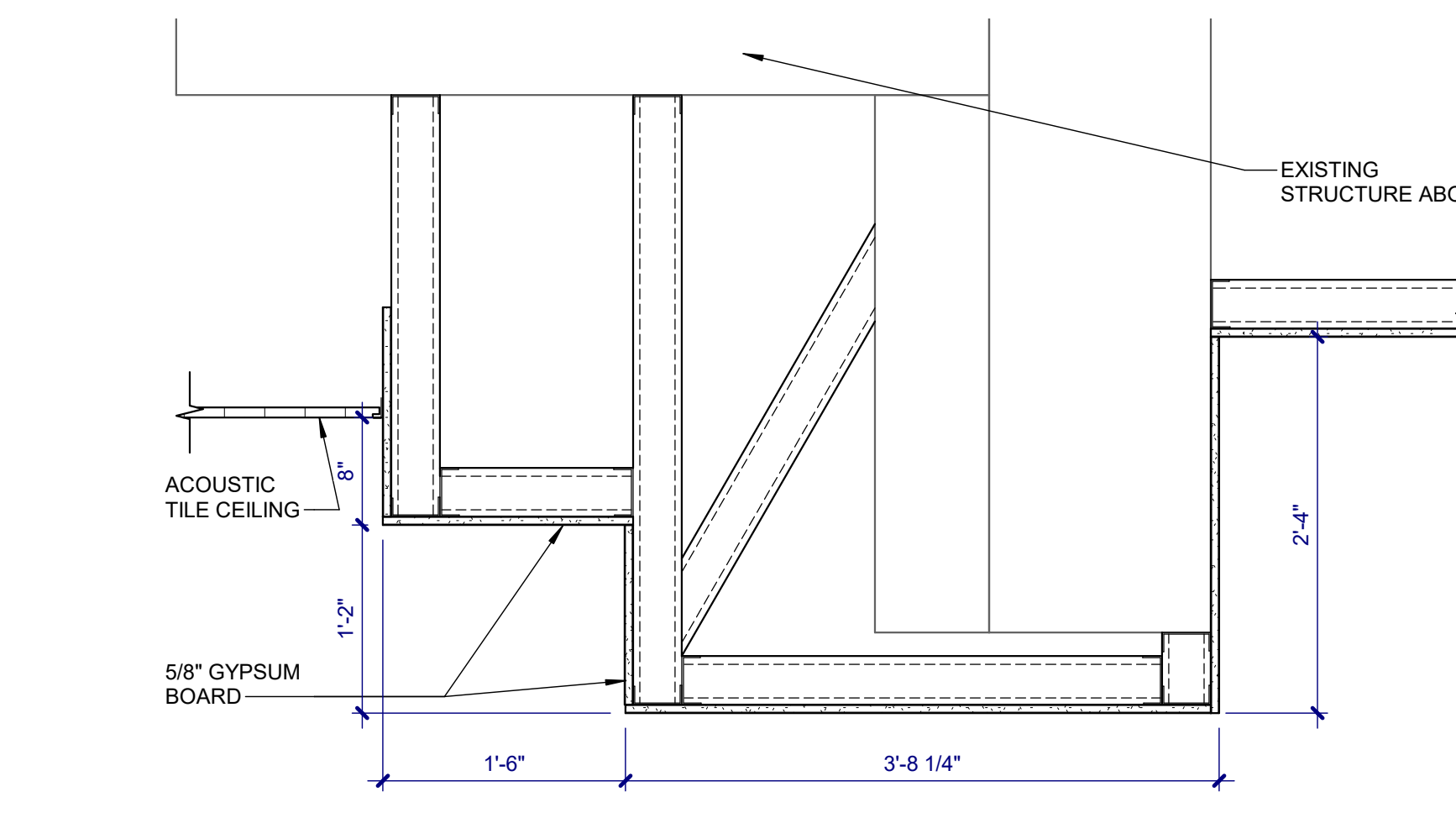
SOFFIT DETAIL
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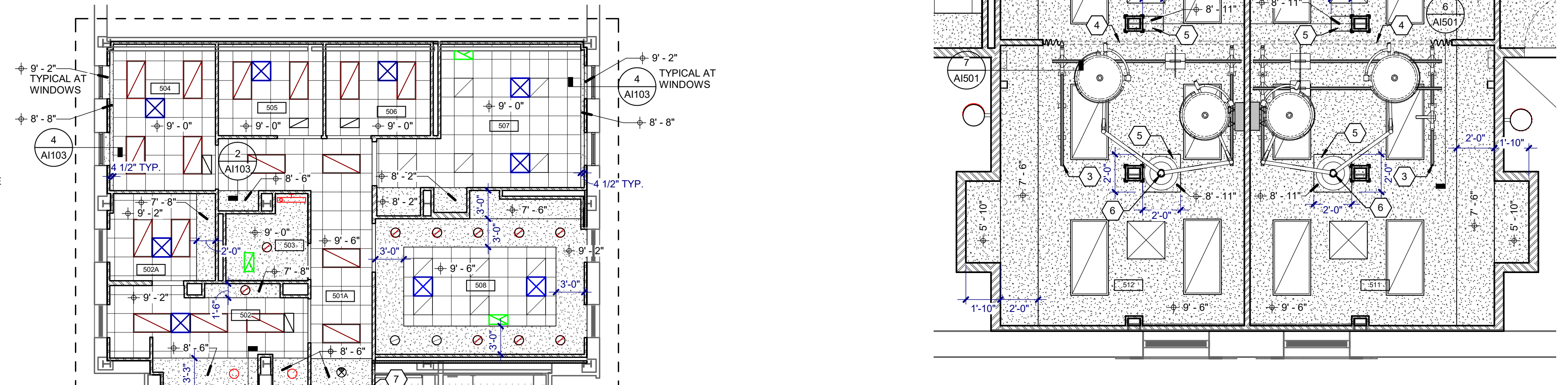
TYPICAL SOFFIT AT WINDOW
SCALE: 1" = 1'-0"



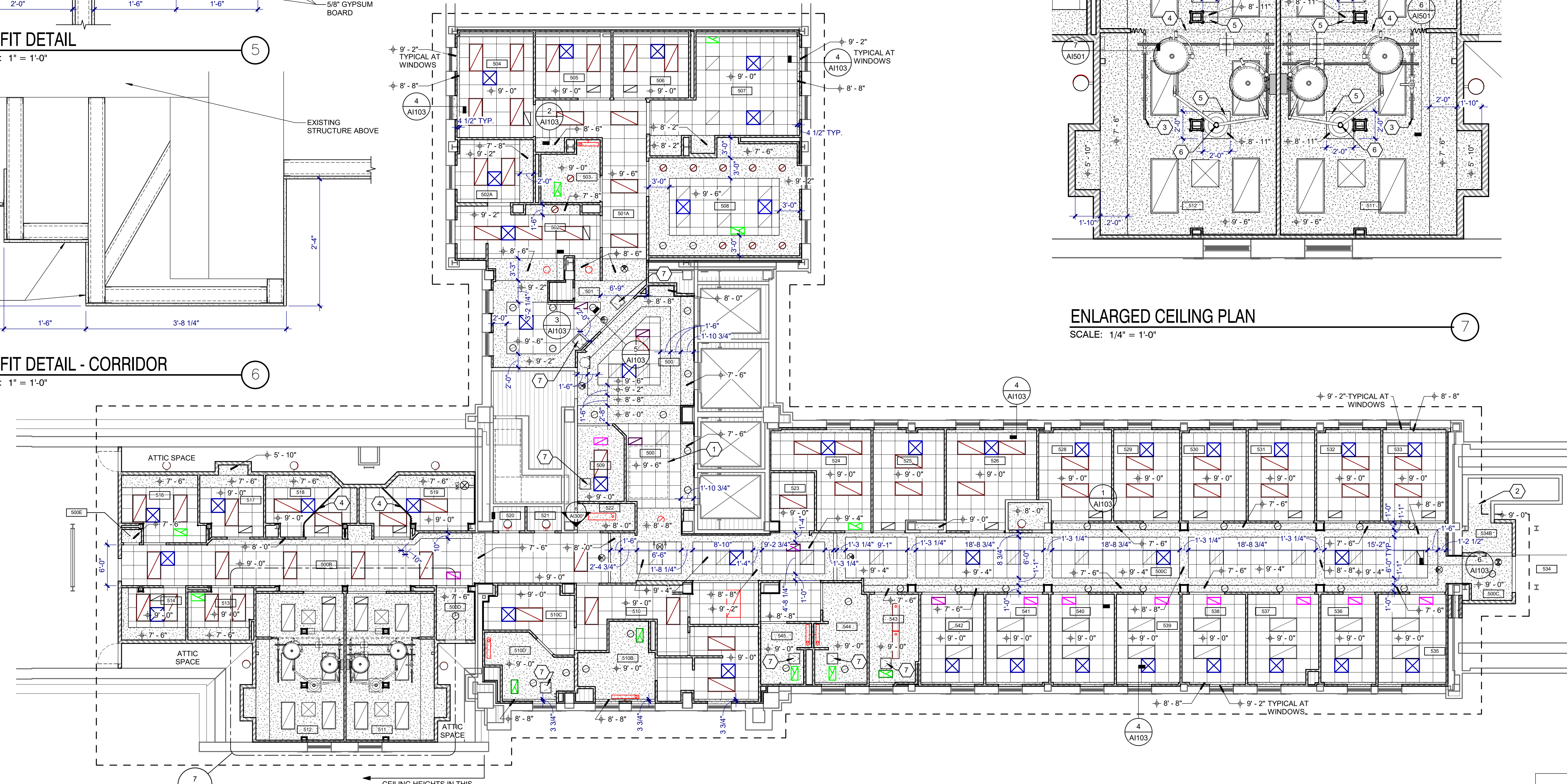
SOFFIT DETAIL
SCALE: 1" = 1'-0"



SOFFIT DETAIL - CORRIDOR
SCALE: 1" = 1'-0"



ENLARGED CEILING PLAN
SCALE: 1/4" = 1'-0"

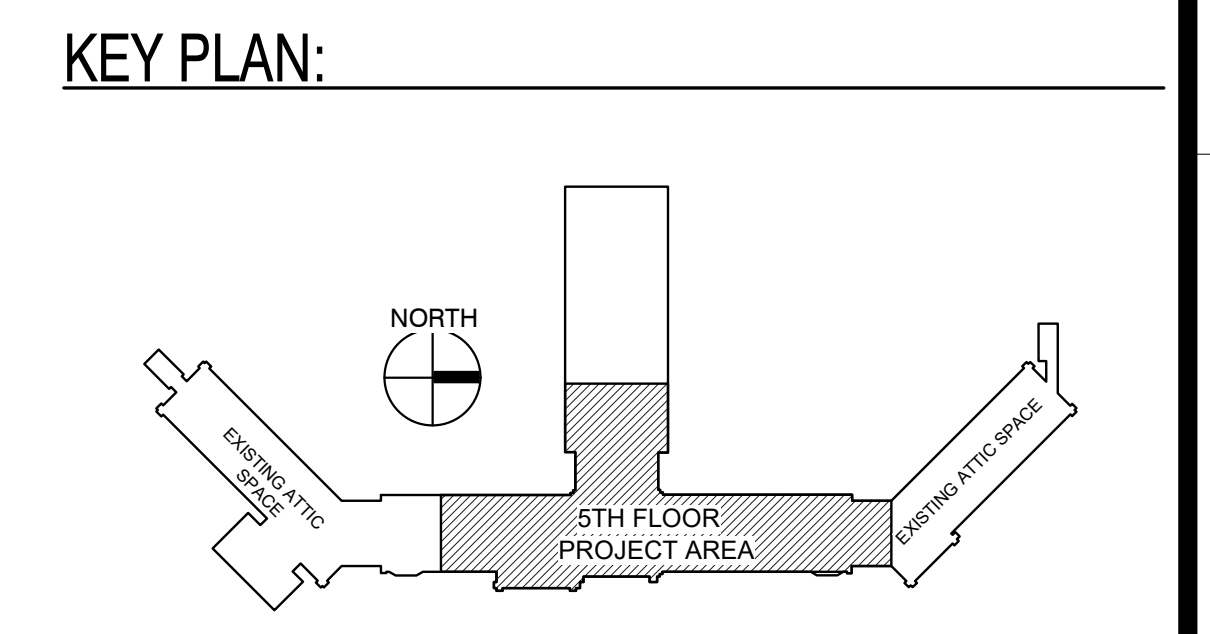


REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

- KEYNOTES:**
- CEILING GRID AND TILES TO BE REMOVED IN THIS AREA TO ALLOW FOR CEILING ACCESS
 - PATCH NEW GYPSUM BOARD CEILING INTO EXISTING CEILING IN THIS AREA AND REPAINT ENTIRE STAIR ENCLOSURE
 - CEILING MOUNTED OVERHEAD PATIENT LIFT AND TRACK
 - PRIVACY CURTAIN AND TRACK
 - SOFFITS TO ENCLOSE STRUCTURAL BRACING MEMBERS
 - OPERATING ROOM BOOM LIGHT SALVAGED FROM EXISTING OPERATING ROOMS
 - 18" X 18" CEILING MOUNTED ACCESS PANEL

- CEILING LEGEND**
- 2' x 2' SUSPENDED ACOUSTICAL CEILING GRID
 - GYPSUM BOARD CEILING / SOFFIT
 - DIFFUSER
 - RETURN
 - EXHAUST
 - 2x4 TROFFER LIGHT FIXTURE
 - 2x2 TROFFER LIGHT FIXTURE
 - DOWN LIGHT FIXTURE
 - SURFACE MOUNTED LIGHT FIXTURE
 - FIRE ALARM WITH VISUAL SIGNAL
 - FIRE ALARM WITH VISUAL SIGNAL AND HORN

- GENERAL NOTES:**
- VERIFY ALL UTILITIES AND CONNECTION LOCATIONS.
 - PROVIDE BLOCKING AND BACKING AS REQUIRED FOR EQUIPMENT AND ACCESSORIES.
 - CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
 - ALL SURFACES OR FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND SHALL MATCH ADJACENT MATERIALS.
 - ALL WORK MUST BE COORDINATED CLOSELY WITH THE VA PROJECT ENGINEER TO NOT ADVERSELY AFFECT OPERATIONS OUTSIDE OF THE WORK AREA. TEMPORARY 1-HOUR FIRE RATED CONSTRUCTION PARTITIONS WILL BE REQUIRED WHEN THE WORK AREA EXTENDS INTO AND AFFECTS EXISTING AREAS AND OPERATIONS.
 - REFER TO SHEET AF600 FOR FINISH MATERIALS

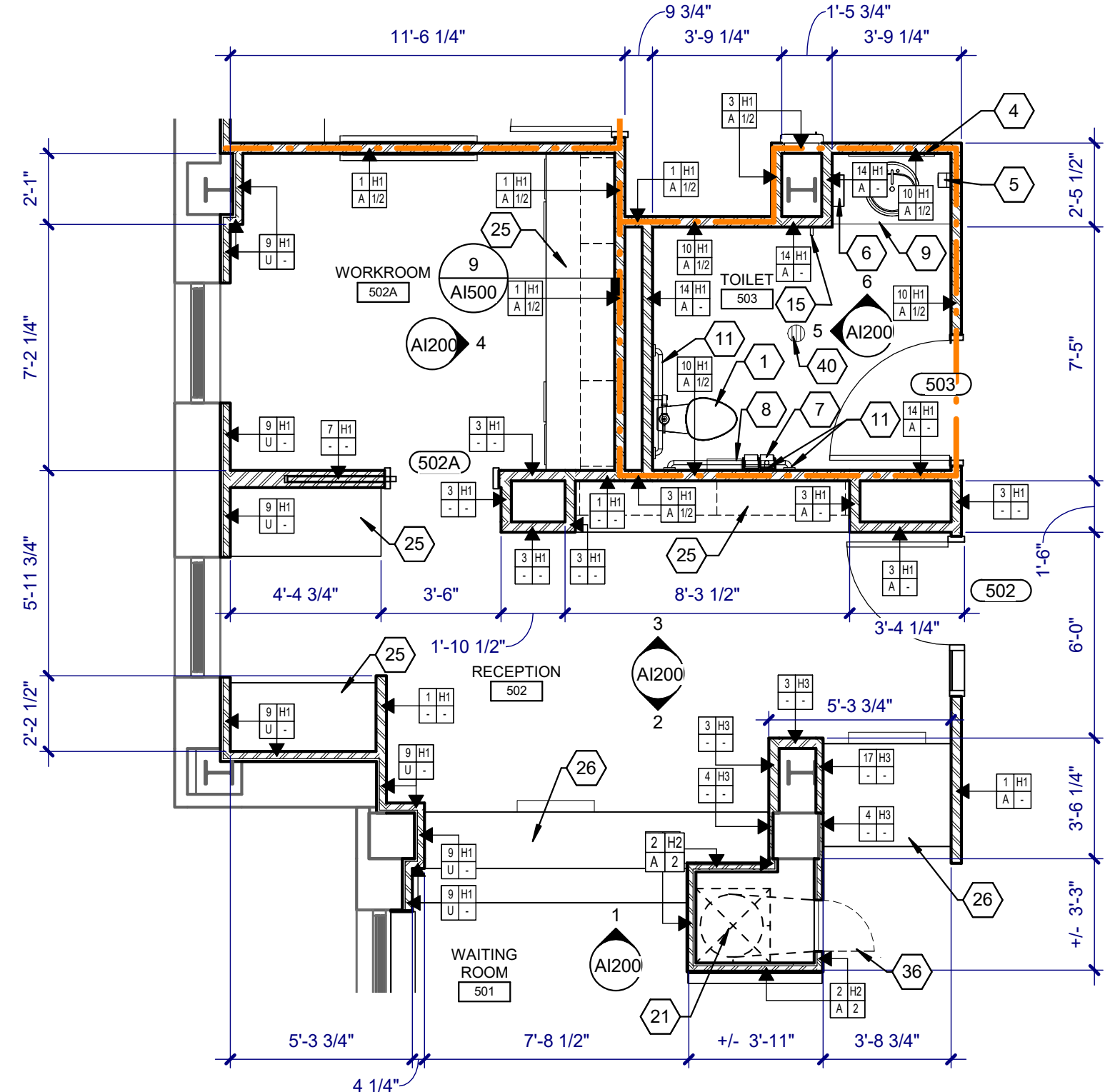


100% CONSTRUCTION DRAWINGS

Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		Project Number 438-15-201		Office of Construction and Facilities Management
Location SIoux FALLS, SOUTH DAKOTA		Building Number 5		
Date OCTOBER 11, 2017		Drawing Number 5-A1103		Department of Veterans Affairs
Checked DGS		Drawn AAD		

Dwg. 10 of 60

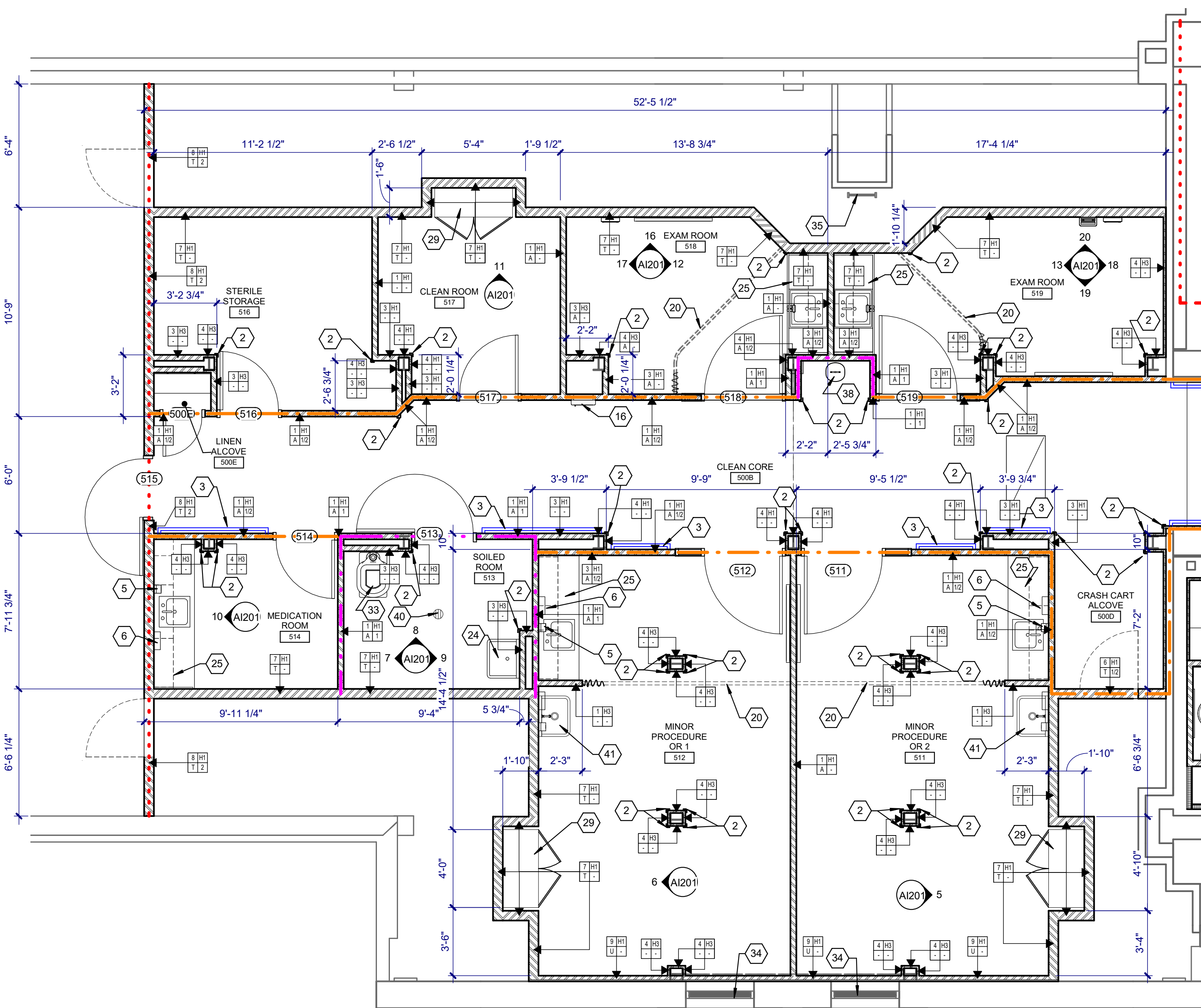
<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>SEAL:</p>	<p>ARCHITECT:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title FIFTH FLOOR REFLECTED CEILING PLAN</p> <p>Approved: Project Director</p>
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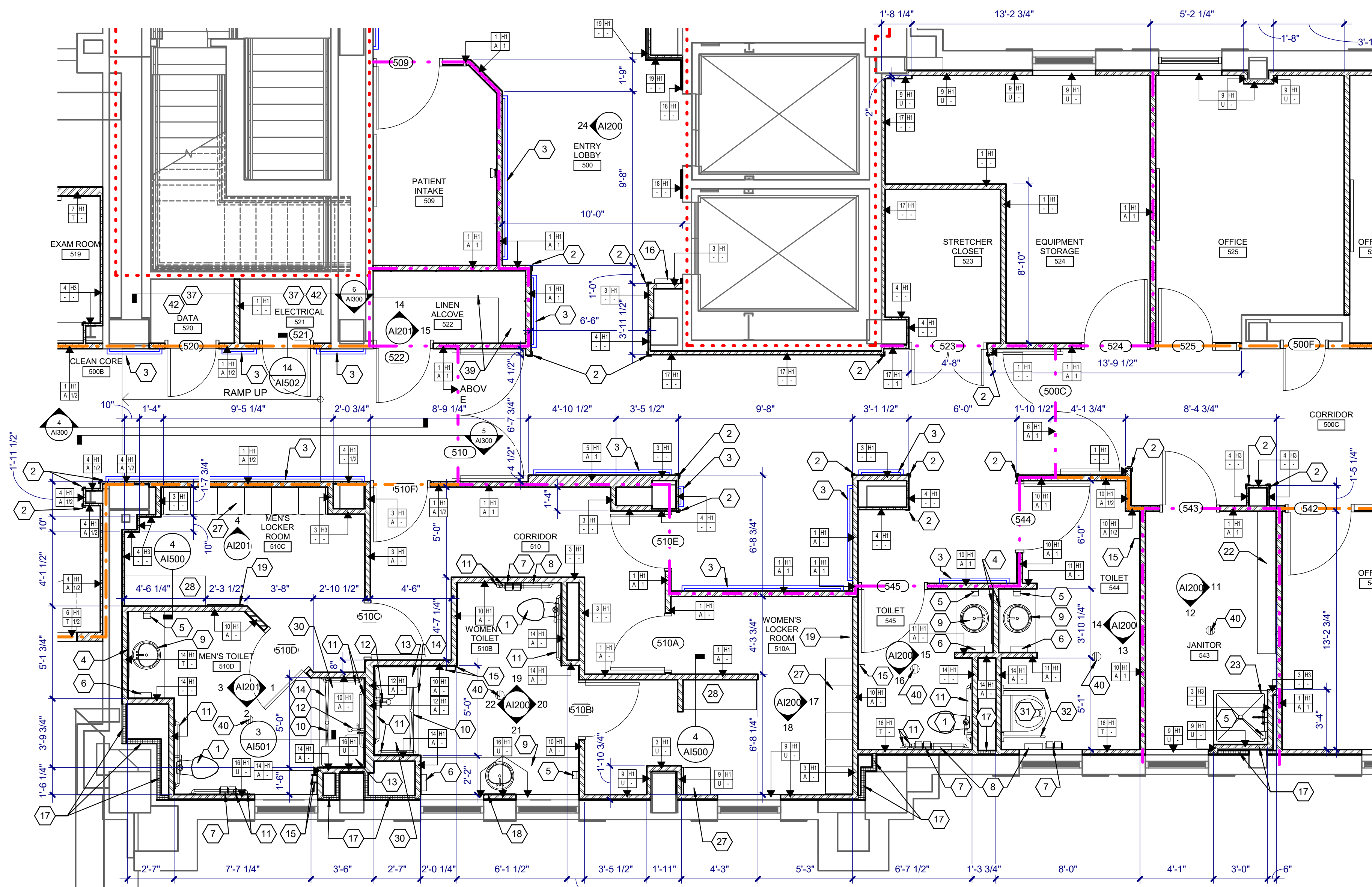
ENLARGED RECEPTION AND TOILET PLAN
SCALE: 1/4" = 1'-0"

KEYNOTES:

- 1 FLOOR MOUNTED FLUSH VALVE WATER CLOSET. SEE PLUMBING
- 2 CORNER GUARD
- 3 HANDRAIL
- 4 30" X 42" MIRROR
- 5 SOAP DISPENSER, FURNISHED BY OWNER, INSTALLED BY GENERAL CONTRACTOR
- 6 PAPER TOWEL DISPENSER, FURNISHED BY OWNER, INSTALLED BY GENERAL CONTRACTOR
- 7 TOILET PAPER DISPENSER, FURNISHED BY OWNER, INSTALLED BY GENERAL CONTRACTOR
- 8 HYGIENE PRODUCT DISPOSAL, FURNISHED BY OWNER, INSTALLED BY GENERAL CONTRACTOR
- 9 SOLID SURFACE VANITY WITH INTEGRAL LAVATORY SINK. SEE PLUMBING
- 10 SHOWER TILE FLOORING AND MEMBRANE, GRIND FLOOR TO PROVIDE PROPER SLOPE TO DRAIN
- 11 1 1/2" DIAMETER GRAB BAR, SEE STRUCTURAL FOR MOUNTING DETAIL, PROVIDE BACKING AS REQUIRED
- 12 ADA HANDHELD ADJUSTABLE SHOWER HEAD. SEE PLUMBING
- 13 ADA WALL-MOUNTED FOLDING SHOWER SEAT, PROVIDE BACKING AS REQUIRED
- 14 SHOWER ROD, CURTAIN AND HOOKS
- 15 COAT/TOWEL HOOK
- 16 SEMI RECESSED FIRE EXTINGUISHER CABINET AND EXTINGUISHER
- 17 CONTINUE R21 URETHANE INSULATION INSIDE CHASE ON EXTERIOR WALL AND AROUND STRUCTURAL COLUMNS.
- 18 20" X 42" MIRROR
- 19 24" X 72" MIRROR
- 20 PRIVACY CURTAIN AND TRACK
- 21 EXISTING LINEN CHUTE TO REMAIN
- 22 12" DEEP ADJUSTABLE PLASTIC LAMINATE SHELVING ON STANDARD WALL BRACKETS
- 23 MOP SINK. SEE PLUMBING
- 24 SERVICE SINK. SEE PLUMBING
- 25 CABINETS AND COUNTERTOP
- 26 COUNTERTOP
- 27 18" WIDE X 18" DEEP X 72" HIGH DOUBLE TIER PREFINISHED METAL LOCKER WITH INTEGRAL BASE AND SLOPED TOP
- 28 BENCH
- 29 CABINET
- 30 WATERPROOF MEMBRANE UNDER TILE AT SHOWER FLOORS AND WALLS
- 31 FLOOR MOUNTED, 600 LB CAPACITY, FLUSH VALVE, ADA COMPLIANT, ANTIMICROBIAL ENAMEL COATED STAINLESS STEEL BARIATRIC WATER CLOSET
- 32 600 LB CAPACITY, HEAVY DUTY STAINLESS STEEL, SWING UP STYLE GRAB BAR
- 33 FLOOR MOUNTED CLINICAL FLUSHING RIM SINK (SEE PLUMBING)
- 34 INSTALL WHITE OUT FILM TO GLASS (INTERIOR SIDE). FILL CAVITY WITH BATT INSULATION.
- 35 EXISTING ROOF ACCESS LADDER
- 36 REPLACE EXISTING LINEN CHUTE DOOR AND FRAME (FIELD VERIFY SIZE)
- 37 RAISED WOOD FLOORING
- 38 EMERGENCY EYEWASH SINK (SEE PLUMBING DRAWINGS)
- 39 18" DEEP ADJUSTABLE PLASTIC LAMINATE SHELVING ON STANDARD WALL BRACKETS
- 40 FLOOR DRAIN (SEE PLUMBING DRAWINGS)
- 41 STAINLESS STEEL WALL MOUNTED SCRUB/HANDWASH SINK WITH FOOT CONTROL VALVE (SEE PLUMBING DRAWINGS)
- 42 GYPSUM WALL BOARD SHALL EXTEND FROM FLOOR TO BOTTOM OF 6TH FLOOR SLAB IN THESE ROOMS. PROVIDE ADDITIONAL 5/8" GYPSUM BOARD AT TOP OF EXISTING WALLS WHERE NEEDED TO MEET THIS REQUIREMENT.



ENLARGED MINOR PROCEDURE OR PLAN
SCALE: 1/4" = 1'-0"



ENLARGED TOILET AND LOCKER ROOM PLANS
SCALE: 1/4" = 1'-0"

100% CONSTRUCTION DRAWINGS

Revisions:	Date

CONSULTANTS:

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4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106
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Harrisburg, SD 57022
(605) 743-2510
fax (605) 743-2513

SEAL:

REGISTERED ARCHITECT
3907
ROBIN J. MILLER
SOUTH DAKOTA

ARCHITECT:

MSH ARCHITECTS
625 S. MINNESOTA AVENUE, SUITE 204
SIOUX FALLS, SOUTH DAKOTA 57104-4873
TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title
ENLARGED FLOOR PLANS

Approved: Project Director

Project Title
V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY

Project Number
438-15-201

Building Number
5

Location
SIOUX FALLS, SOUTH DAKOTA

Date
OCTOBER 11, 2017

Checked
DGS

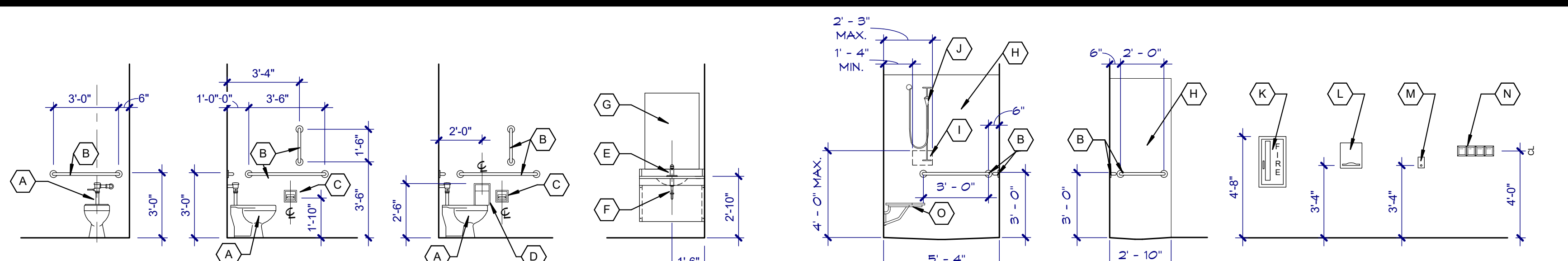
Drawn
AAD

Drawing Number
5-A1104

Dwg. 11 of 60

Office of Construction and Facilities Management

Department of Veterans Affairs

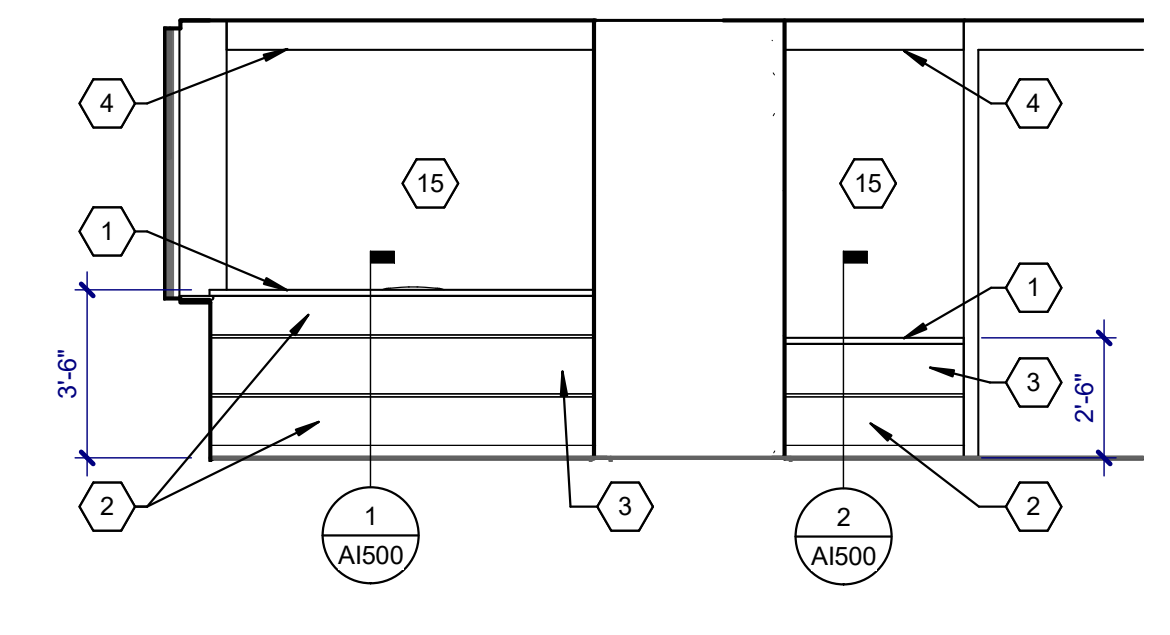


- A FLOOR-MOUNTED HIC WATER CLOSET WITH FLUSH VALVE
- B 1 1/2" DIAMETER GRAB BAR, SEE STRUCTURAL FOR MOUNTING DETAIL.
- C TOILET PAPER DISPENSER
- D HYGIENE PRODUCT DISPOSAL
- E INTEGRAL LAVATORY (SINGLE LEVER HANDLE FAUCET)
- F VANITY COUNTERTOP AND SKIRT
- G MIRROR WITH BOTTOM OF REFLECTING SURFACE NO HIGHER THAN 40"
- H SHOWER ENCLOSURE
- I SHOWER CONTROL AREA
- J ADJUSTABLE SHOWER HEAD WITH 60" HOSE
- K FIRE EXTINGUISHER CABINET
- L PAPER TOWEL DISPENSER
- M SOAP DISPENSER
- N MEDICAL GAS OUTLETS (SEE FLOOR PLAN FOR ROOM LOCATION AND OUTLET ORDER)
- O SHOWER BENCH

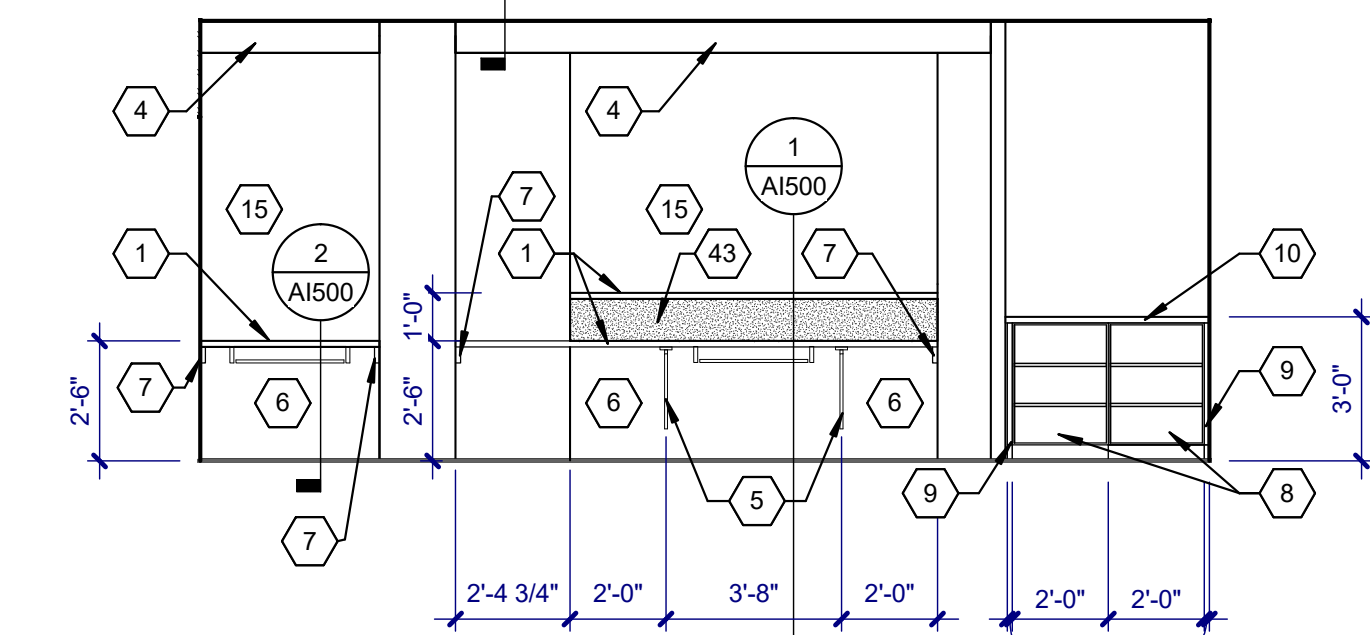
* PROVIDE BLOCKING FOR ALL GRAB BARS AND RESTROOM ACCESSORIES.
 * COORDINATE WITH V.A. CONTRACTING OFFICER'S REPRESENTATIVE FOR PLACEMENT OF V.A. FURNISHED ACCESSORIES TO BE INSTALLED BY CONTRACTOR

TYPICAL ACCESSIBLE ELEMENTS

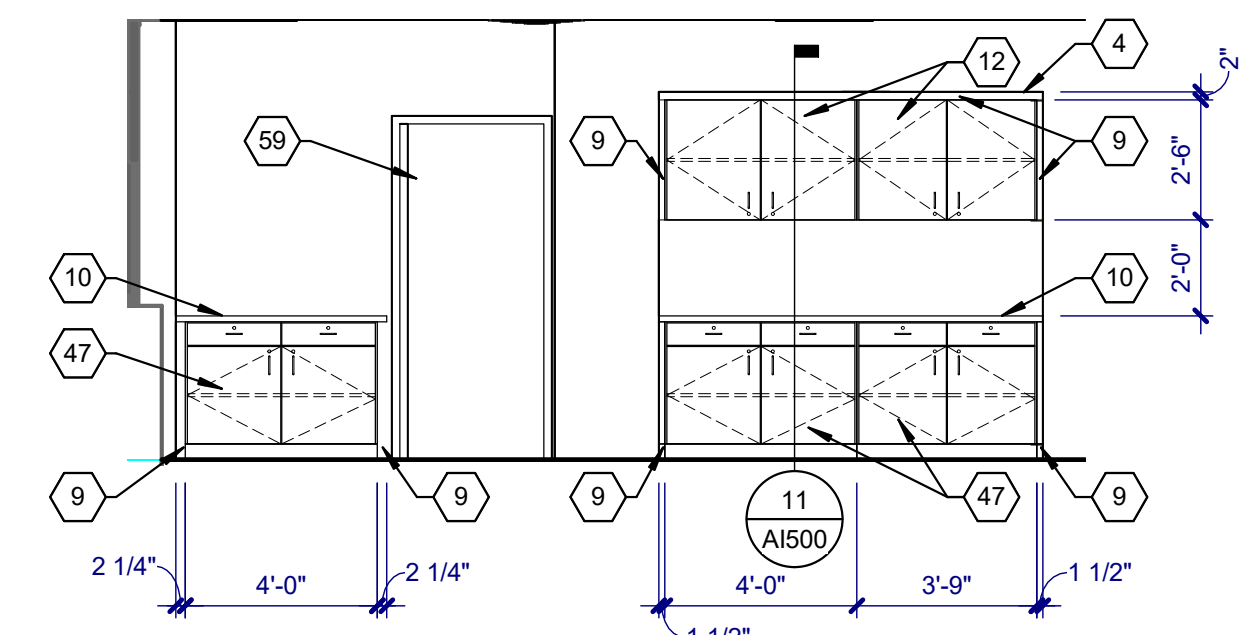
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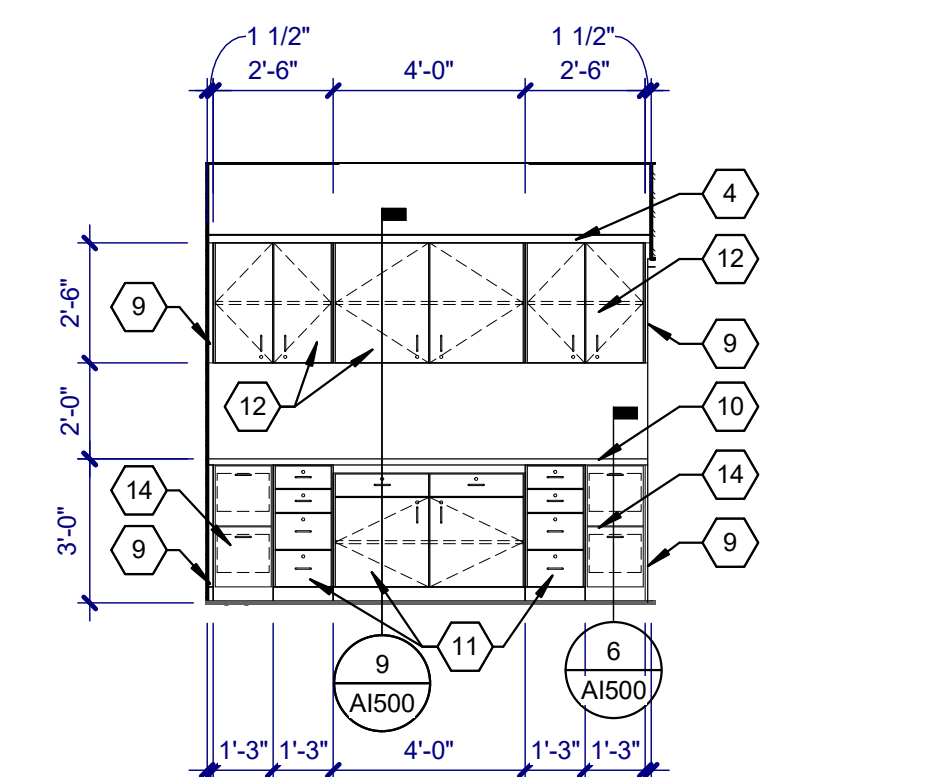
WAITING ROOM 501 WEST
SCALE: 1/4" = 1'-0"



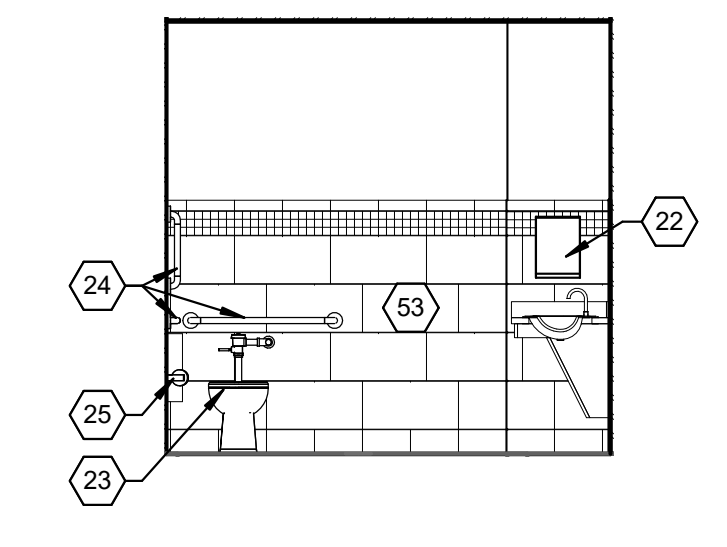
RECEPTION 502 EAST
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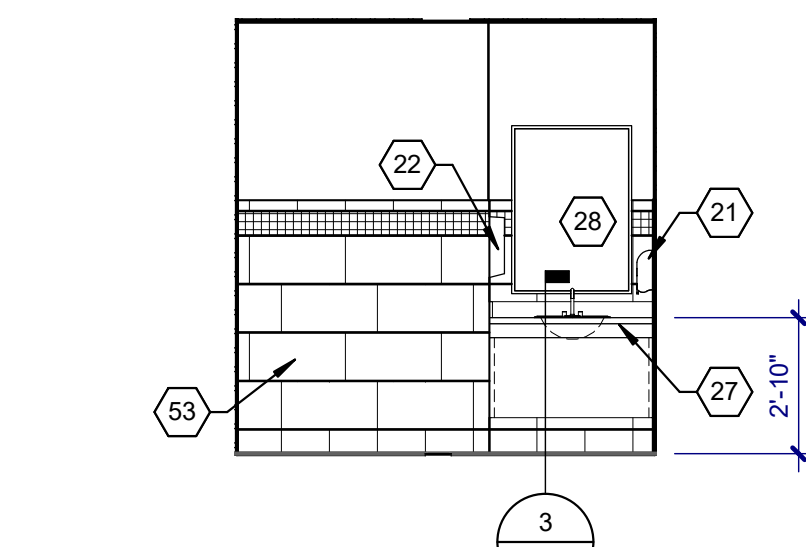
RECEPTION 502 WEST
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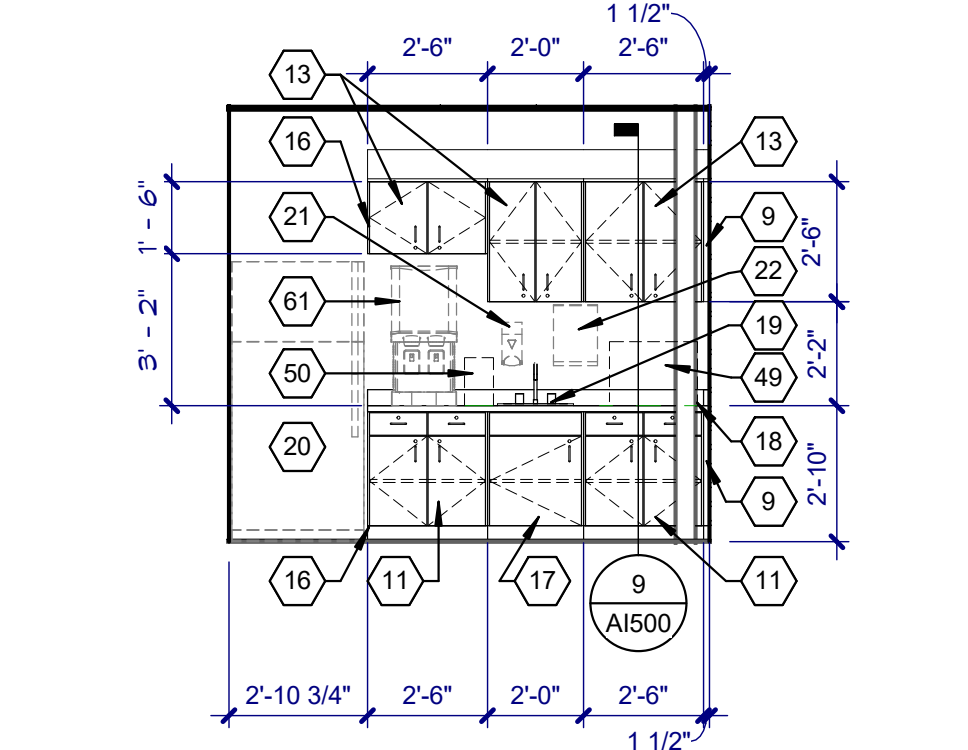
WORK ROOM 502A NORTH
SCALE: 1/4" = 1'-0"



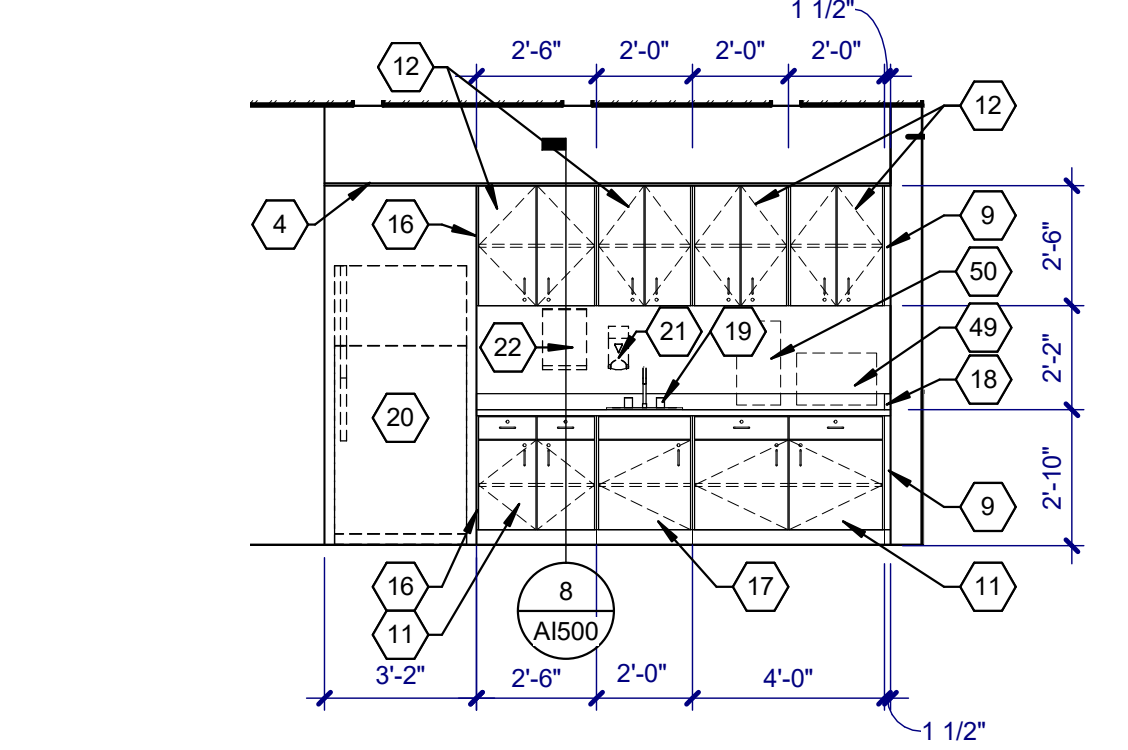
TOILET 503 SOUTH
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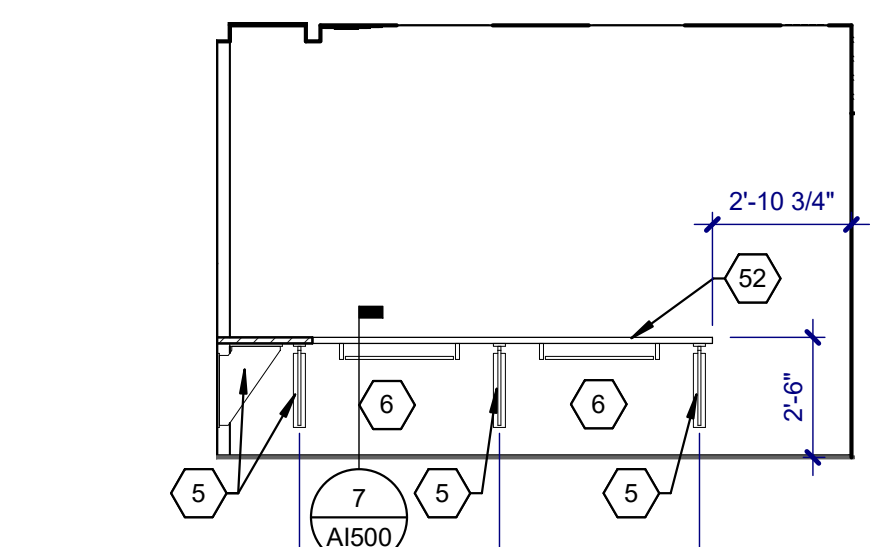
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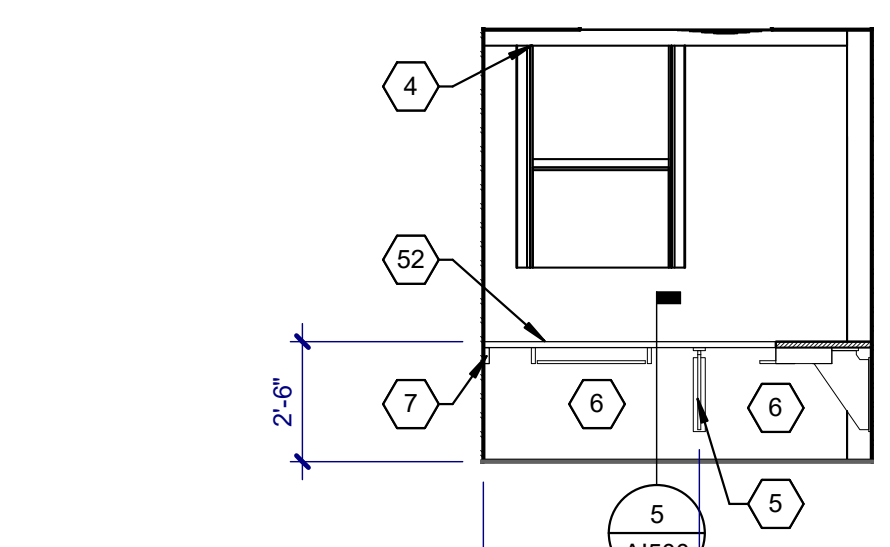
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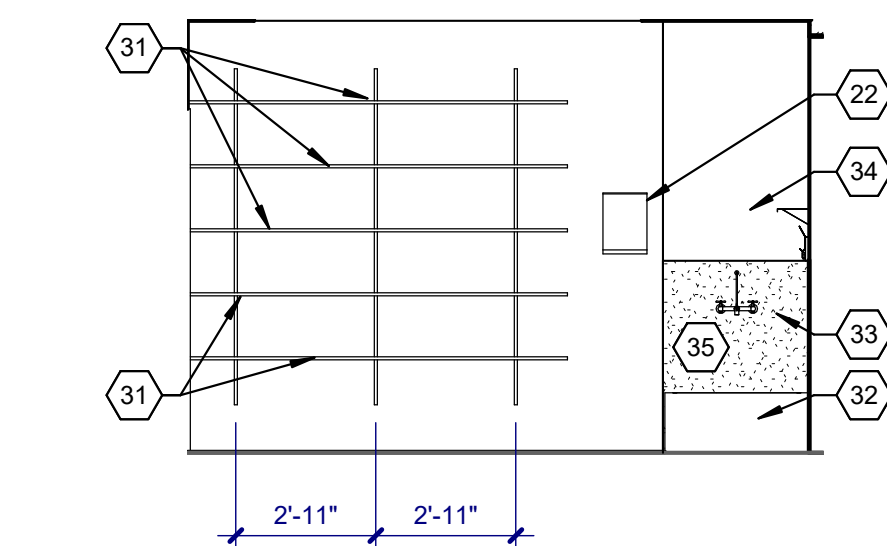
CONFERENCE ROOM 508 WEST
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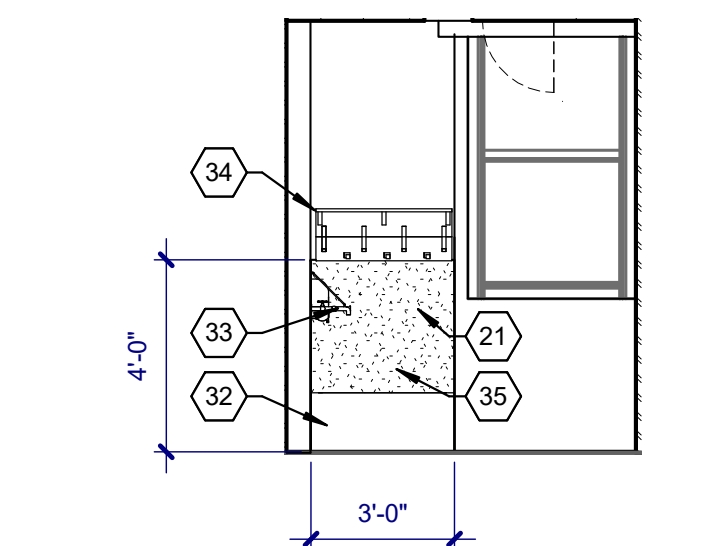
COMPUTER 536 SOUTH
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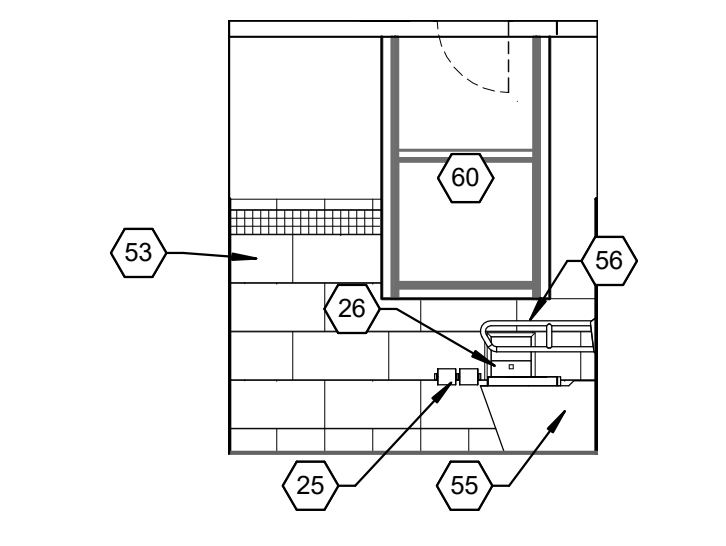
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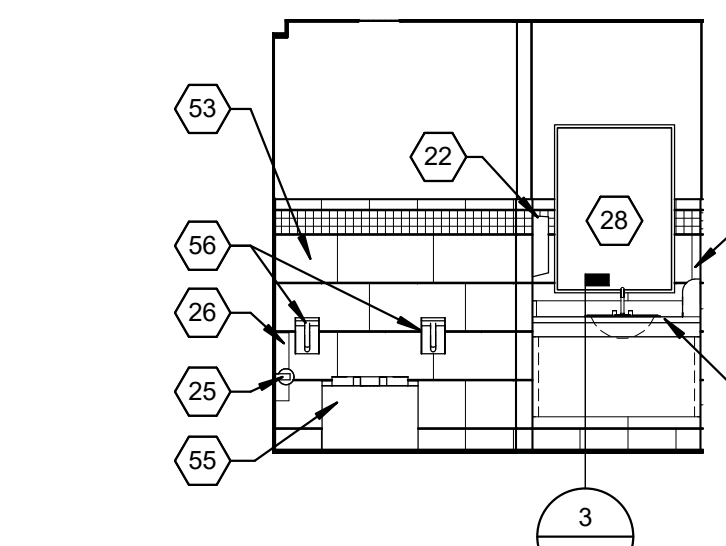
JANITOR 543 NORTH
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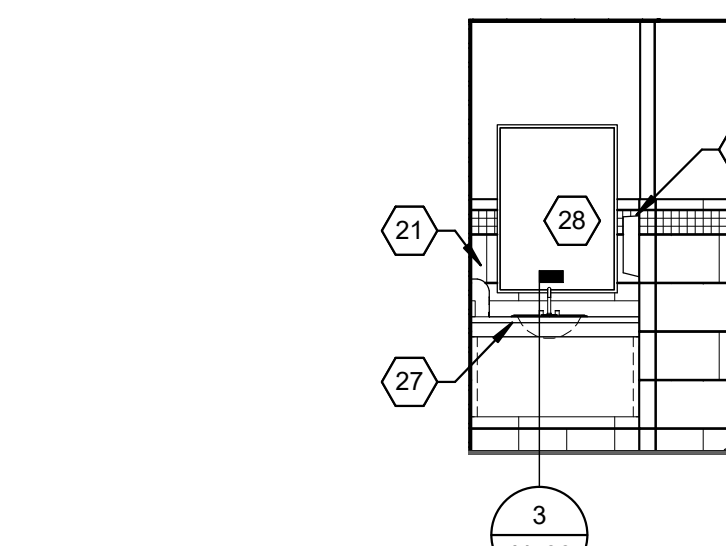
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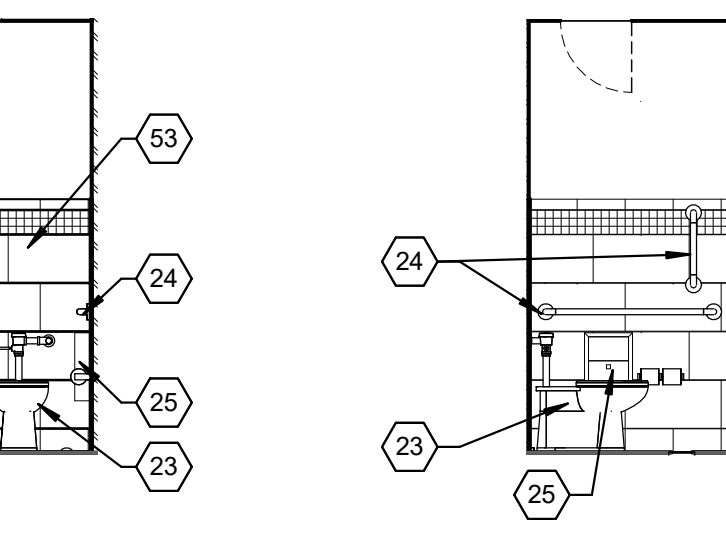
WOMEN'S TOILET 544 EAST
SCALE: 1/4" = 1'-0"



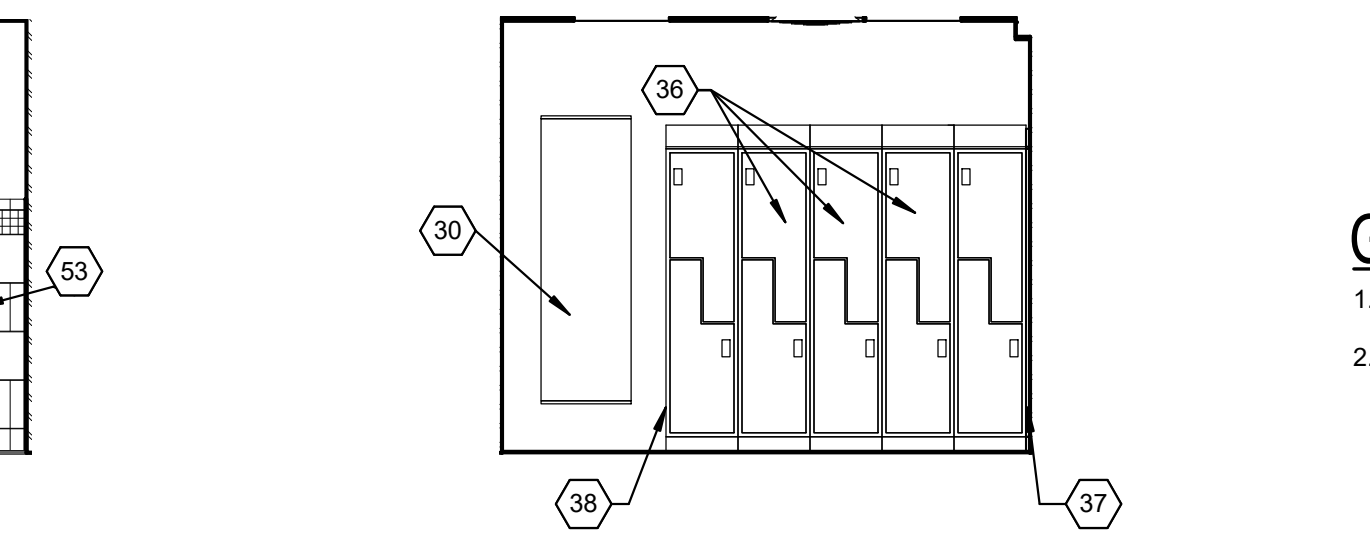
WOMEN'S TOILET 544 SOUTH
SCALE: 1/4" = 1'-0"



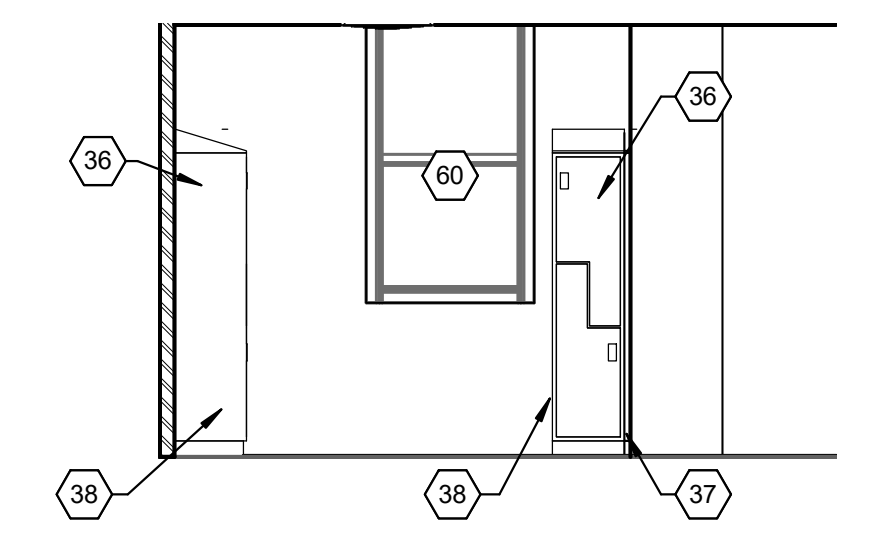
MEN'S TOILET 545 NORTH
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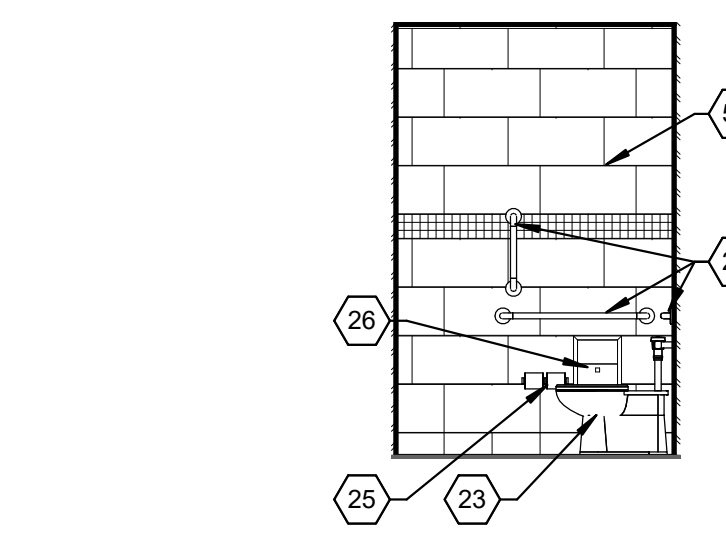
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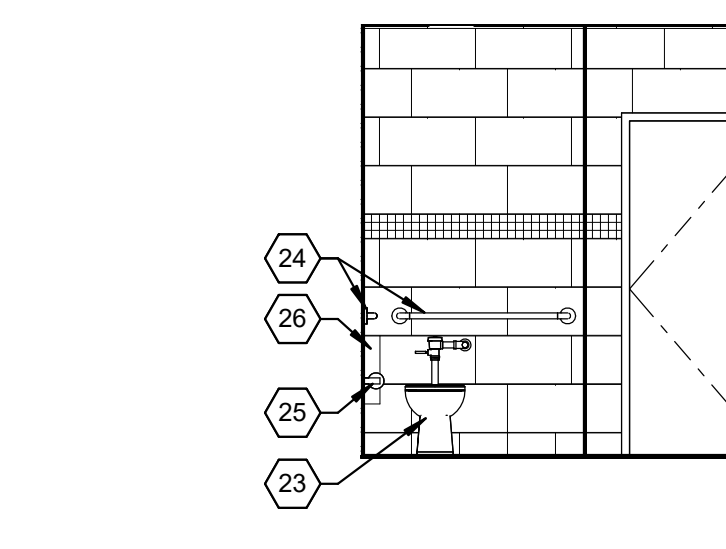
WOMEN'S LOCKER ROOM 510A NORTH
SCALE: 1/4" = 1'-0"



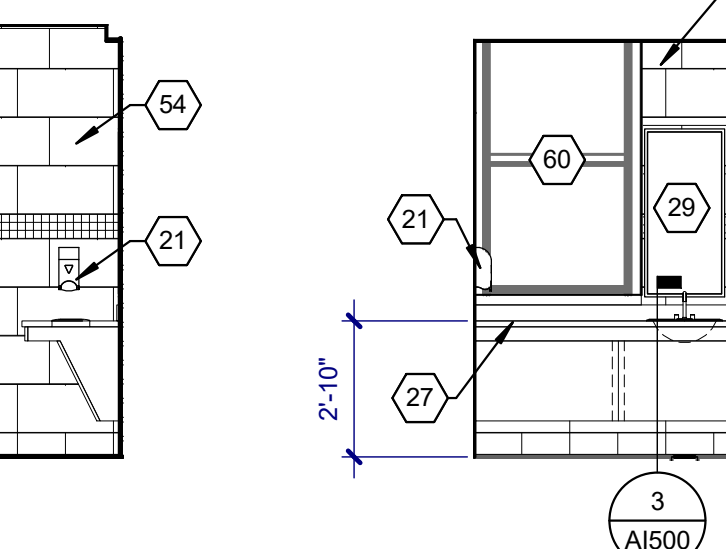
WOMEN'S LOCKER ROOM 510A EAST
SCALE: 1/4" = 1'-0"



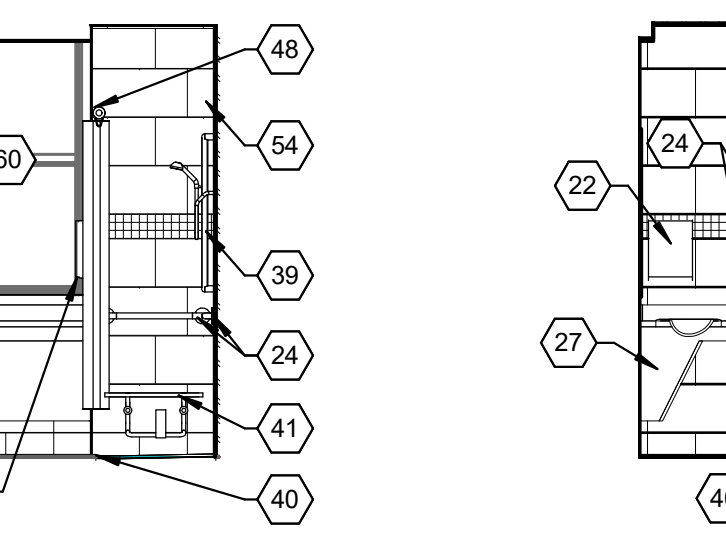
WOMEN'S TOILET 510B WEST
SCALE: 1/4" = 1'-0"



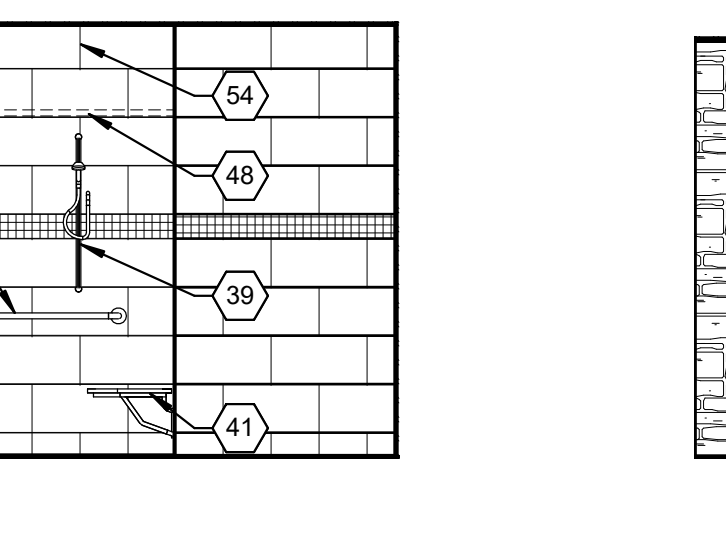
WOMEN'S TOILET 510B NORTH
SCALE: 1/4" = 1'-0"



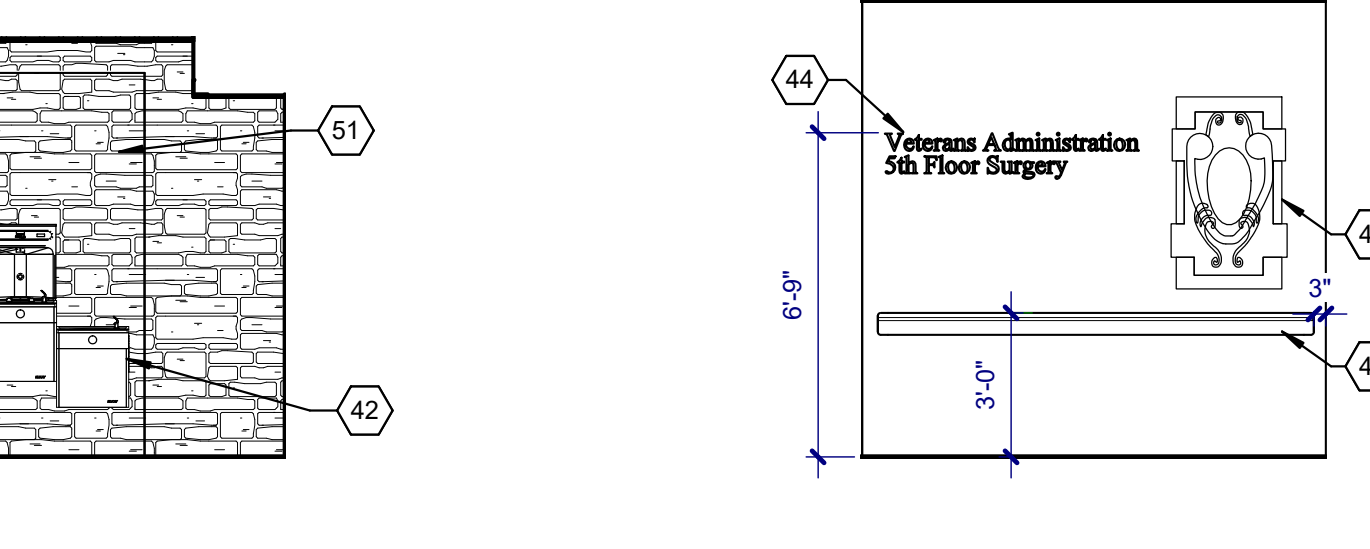
WOMEN'S TOILET 510B EAST
SCALE: 1/4" = 1'-0"



WOMEN'S TOILET 510B SOUTH
SCALE: 1/4" = 1'-0"



ENTRY LOBBY 500 WEST
SCALE: 1/4" = 1'-0"



ENTRY LOBBY 500 SOUTH
SCALE: 1/4" = 1'-0"

KEYNOTES:

- 1 SOLID SURFACE COUNTERTOP, SCRIBE TO WALL
- 2 PLASTIC LAMINATE PANEL ON PLYWOOD
- 3 TRANSLUCENT RESIN PANEL
- 4 GYPSUM BOARD SOFFIT
- 5 METAL COUNTERTOP BRACE
- 6 OPEN BELOW, PAINTED GYPSUM BOARD BEYOND
- 7 PLASTIC LAMINATE COUNTERTOP CLEAT
- 8 24" DEEP PLASTIC LAMINATE OPEN BASE CABINET WITH ADJUSTABLE SHELVES
- 9 PLASTIC LAMINATE FILLER PANEL, SCRIBE TO WALL
- 10 PLASTIC LAMINATE COUNTERTOP, SCRIBE TO WALL
- 11 24" DEEP PLASTIC LAMINATE BASE CABINET WITH WIRE PULLS, KEYED LOCKS, ADJUSTABLE SHELVING AND/OR DRAWERS
- 12 12" DEEP PLASTIC LAMINATE UPPER CABINET WITH WIRE PULLS, KEYED LOCKS, AND ADJUSTABLE SHELVING
- 13 12" DEEP PLASTIC LAMINATE UPPER CABINET WITH WIRE PULLS, KEYED LOCKS, ADJUSTABLE SHELVING, AND PLASTIC LAMINATE SLOPED TOP
- 14 24" DEEP PLASTIC LAMINATE BASE CABINET WITH WIRE PULLS AND FILE DRAWERS
- 15 OPEN BEYOND
- 16 PLASTIC LAMINATE FINISH PANEL
- 17 24" DEEP PLASTIC LAMINATE SINK BASE CABINET WITH WIRE PULLS, KEYED LOCKS, AND ADJUSTABLE SHELVING
- 18 PLASTIC LAMINATE COUNTERTOP WITH BACKSPLASH AND SIDESPLASH, SCRIBE TO WALL
- 19 HANDSINK, SEE PLUMBING
- 20 REFRIGERATOR, FURNISHED AND INSTALLED BY OWNER
- 21 SOAP DISPENSER, FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
- 22 PAPER TOWEL DISPENSER, FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
- 23 FLOOR MOUNTED FLUSH VALVE WATER CLOSET, SEE PLUMBING
- 24 1 1/2" DIAMETER GRAB BAR, SEE STRUCTURAL FOR MOUNTING DETAIL, PROVIDE BACKING AS REQUIRED
- 25 TOILET PAPER DISPENSER, FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
- 26 HYGIENE PRODUCT DISPOSAL, FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
- 27 SOLID SURFACE VANITY WITH INTEGRAL LAVATORY SINK
- 28 30" WIDE X 42" MIRROR WITH TRIM
- 29 20" WIDE X 42" MIRROR WITH TRIM
- 30 24" WIDE X 72" MIRROR WITH TRIM
- 31 12" DEEP ADJUSTABLE PLASTIC LAMINATE SHELVING ON STANDARD WALL BRACKETS
- 32 MOP SINK, SEE PLUMBING
- 33 FAUCET, SEE PLUMBING
- 34 MOP AND BROOM HOLDER WITH INTEGRAL STAINLESS STEEL SHELF
- 35 FIBERGLASS REINFORCED PLASTIC PANEL
- 36 18" WIDE X 18" DEEP X 72" HIGH DOUBLE TIER "Z" CONFIGURATION PLASTIC LOCKER WITH INTEGRAL BASE AND SLOPED TOP
- 37 PREFINISHED METAL LOCKER FILLER PANEL, SCRIBE TO WALL
- 38 PREFINISHED METAL LOCKER FINISHED END
- 39 ADA HANDHELD ADJUSTABLE SHOWER HEAD, SEE PLUMBING
- 40 SHOWER TILE FLOORING AND MEMBRANE, SLOPE FLOOR TO PROVIDE PROPER SLOPE TO DRAIN
- 41 ADA WALL-MOUNTED FOLDING SHOWER SEAT, PROVIDE BACKING AS REQUIRED
- 42 DUAL-HEIGHT ACCESSIBLE DRINKING FOUNTAIN WITH BOTTLE FILLER
- 43 FABRIC COVERED CORK TACK SURFACE
- 44 4 1/2" DIMENSIONAL LETTER SIGNAGE
- 45 HANDRAIL
- 46 ARTWORK FURNISHED AND INSTALLED BY OWNER
- 47 18" DEEP PLASTIC LAMINATE BASE CABINET WITH WIRE PULLS, KEYED LOCKS, ADJUSTABLE SHELVING AND/OR DRAWERS
- 48 SHOWER ROD, CURTAIN AND HOOKS
- 49 COUNTER MICROWAVE, FURNISHED AND INSTALLED BY OWNER
- 50 COFFEE MAKER, FURNISHED AND INSTALLED BY OWNER
- 51 LEDGE STONE TILE VENEER
- 52 PLASTIC LAMINATE COUNTERTOP WITH SUPPORT BRACKET AND WIRE MANAGEMENT
- 53 TILE WALL - SEE 2/AF-100
- 54 TILE WALL - SEE 3/AF-100
- 55 FLOOR MOUNTED, 600 LB CAPACITY, FLUSH VALVE, ADA COMPLIANT, ANTIMICROBIAL ENAMEL COATED STAINLESS STEEL BARIATRIC WATER CLOSET, SEE PLUMBING
- 56 600 LB CAPACITY, HEAVY DUTY STAINLESS STEEL SWING UP STYLE GRAB BAR
- 57 CUBICLE CURTAIN, TRACK AND HOOKS
- 58 MEDICAL GAS STATION (SEE MECHANICAL DRAWINGS)
- 59 POCKET DOOR
- 60 REPLACE GLAZING IN THIS WINDOW WITH NEW FROSTED OBSCURED GLAZING (SEE WINDOW TYPES ON A1503) FOR SIZE
- 61 ICE MACHINE FURNISHED AND INSTALLED BY OWNER (SEE PLUMBING DRAWINGS FOR CONNECTIONS TO BE INSTALLED BY CONTRACTOR)

GENERAL NOTES:

1. PROVIDE PLASTIC LAMINATE FINISHED END PANELS AND FACES ON ALL EXPOSED CABINETS
2. INSTALL A WATERPROOF MEMBRANE UNDER TILE AT SHOWER FLOORS AND WALLS.

100% CONSTRUCTION DRAWINGS

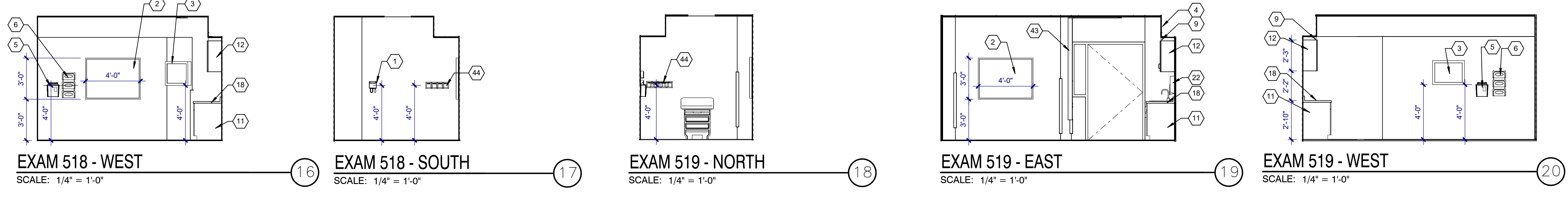
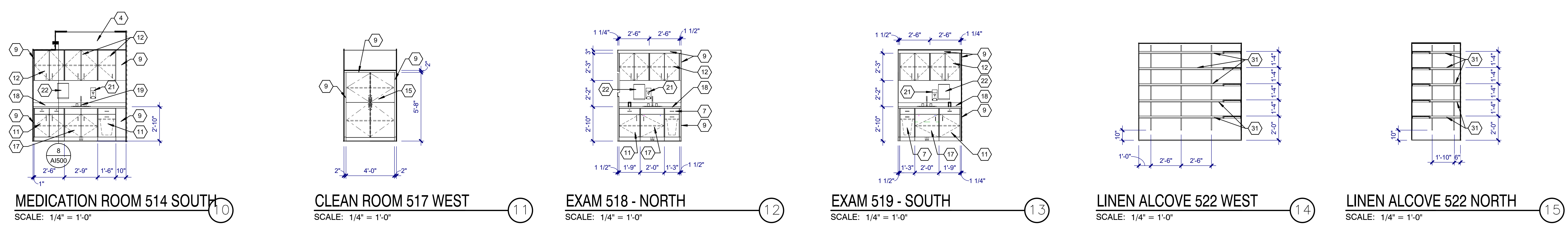
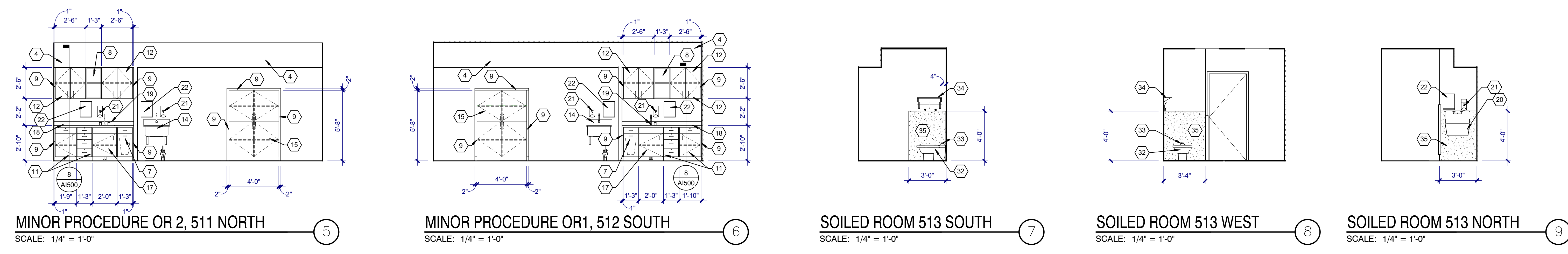
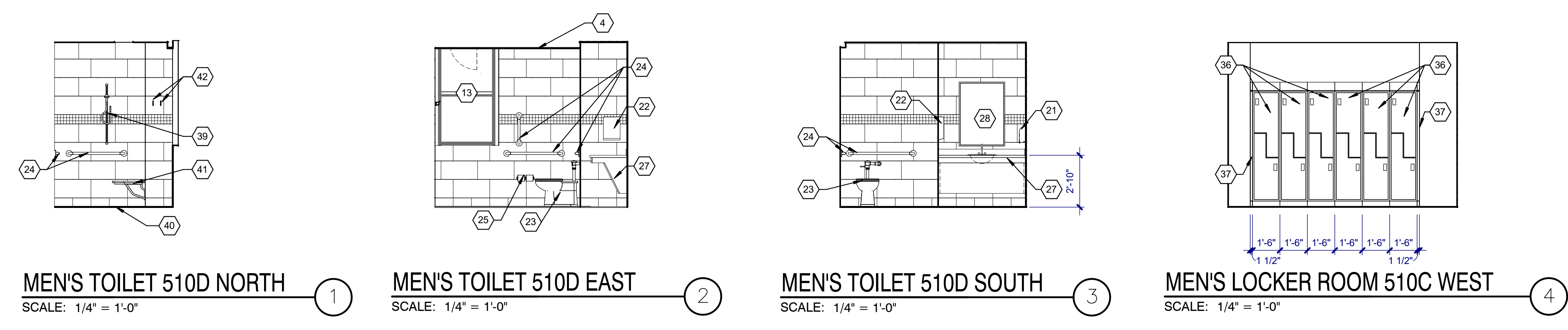
CONSULTANTS: 		SEAL: 		ARCHITECT: 		Drawing Title INTERIOR ELEVATIONS		Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		Project Number 438-15-201		Office of Construction and Facilities Management	
4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND		101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax: (605) 743-2513		625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539		Approved: Project Director		Location SIOUX FALLS, SOUTH DAKOTA		Building Number 5		Drawing Number 5-AI200	
Revisions: _____ Date _____								Date OCTOBER 11, 2017		Checked DGS		Drawn AAD	
										Dwg. 12 of 60			

one eighth inch = one foot
 one quarter inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one inch = one foot
 one and one half inches = one foot
 two inches = one foot
 three inches = one foot
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 one hundred inches = one foot

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 one quarter inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one eighth inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot

- KEYNOTES:**
- 1 BLOOD PRESSURE
 - 2 FABRIC COVERED CORK TACK SURFACE
 - 3 X-RAY
 - 4 GYPSUM BOARD SOFFIT
 - 5 SHARPS CONTAINER
 - 6 GLOVE HOLDERS
 - 7 24" DEEP PLASTIC LAMINATE BASE CABINET WITH WIRE PULLS, KEYED LOCKS, AND GARBAGE DRAWER
 - 8 12" DEEP PLASTIC LAMINATE OPEN UPPER CABINET WITH ADJUSTABLE SHELVES
 - 9 PLASTIC LAMINATE FILLER PANEL. SCRIBE TO WALL
 - 10 GLOVE HOLDERS
 - 11 24" DEEP PLASTIC LAMINATE BASE CABINET WITH WIRE PULLS, KEYED LOCKS, AND ADJUSTABLE SHELVING AND/OR DRAWERS
 - 12 12" DEEP PLASTIC LAMINATE UPPER CABINET WITH WIRE PULLS, KEYED LOCKS, ADJUSTABLE SHELVING AND/OR DRAWERS
 - 13 REPLACE GLAZING IN THIS WINDOW WITH NEW FROSTED OBSCURED GLAZING (SEE WINDOW TYPES ON A1033) FOR SIZE.
 - 14 STAINLESS STEEL WALL MOUNTED SCRUBHANDWASH SINK WITH FOOT CONTROL VALVE (SEE PLUMBING DRAWINGS)
 - 15 68" TALL X 48" WIDE X 22" DEEP DOUBLE DOOR PLASTIC LAMINATE CABINET WITH WIRE PULLS, KEYED LOCKS, AND ADJUSTABLE SHELVING
 - 16 NOT USED THIS SHEET
 - 17 24" DEEP PLASTIC LAMINATE SINK BASE CABINET WITH FOOT PEDAL MIXING VALVE, WIRE PULLS, KEYED LOCKS, AND ADJUSTABLE SHELVING
 - 18 PLASTIC LAMINATE COUNTERTOP WITH BACKSPLASH. SCRIBE TO WALL
 - 19 HANDSINK. SEE PLUMBING
 - 20 SERVICE SINK. SEE PLUMBING
 - 21 SOAP DISPENSER. FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
 - 22 PAPER TOWEL DISPENSER. FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
 - 23 FLOOR MOUNTED FLUSH VALVE WATER CLOSET. SEE PLUMBING
 - 24 1 1/2" DIAMETER GRAB BAR. SEE STRUCTURAL FOR MOUNTING DETAIL. PROVIDE BACKING AS REQUIRED
 - 25 TOILET PAPER DISPENSER. FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
 - 26 NOT USED THIS SHEET
 - 27 SOLID SURFACE VANITY WITH INTEGRAL LAVATORY SINK.
 - 28 30" WIDE X 42" HIGH MIRROR
 - 29 NOT USED THIS SHEET
 - 30 NOT USED THIS SHEET
 - 31 18" DEEP ADJUSTABLE PLASTIC LAMINATE SHELVING ON STANDARD WALL BRACKETS
 - 32 MOP SINK. SEE PLUMBING
 - 33 FAUCET. SEE PLUMBING
 - 34 MOP AND BROOM HOLDER WITH INTEGRAL SHELF
 - 35 FIBERGLASS REINFORCED PLASTIC PANEL
 - 36 18" WIDE X 18" DEEP X 72" HIGH DOUBLE TIER 2" CONFIGURATION. PLASTIC LOCKER WITH INTEGRAL BASE AND SLOPED TOP
 - 37 PREFINISHED METAL LOCKER FILLER PANEL
 - 38 NOT USED THIS SHEET
 - 39 ADA HANDHELD ADJUSTABLE SHOWER HEAD. SEE PLUMBING
 - 40 SHOWER TILE FLOORING AND MEMBRANE. SLOPE FLOOR TO PROVIDE PROPER SLOPE TO DRAIN
 - 41 ADA WALL-MOUNTED FOLDING SHOWER SEAT. PROVIDE BACKING AS REQUIRED
 - 42 COAT/TOWEL HOOK
 - 43 CUBICLE CURTAIN, TRACK AND HOOKS
 - 44 MEDICAL GAS STATION (SEE MECHANICAL DRAWINGS)

- GENERAL NOTES:**
1. PROVIDE PLASTIC LAMINATE FINISHED END PANELS AND FACES ON ALL EXPOSED CABINETS.
 2. INSTALL A WATERPROOF MEMBRANE UNDER TILE AT SHOWER FLOORS AND WALLS.

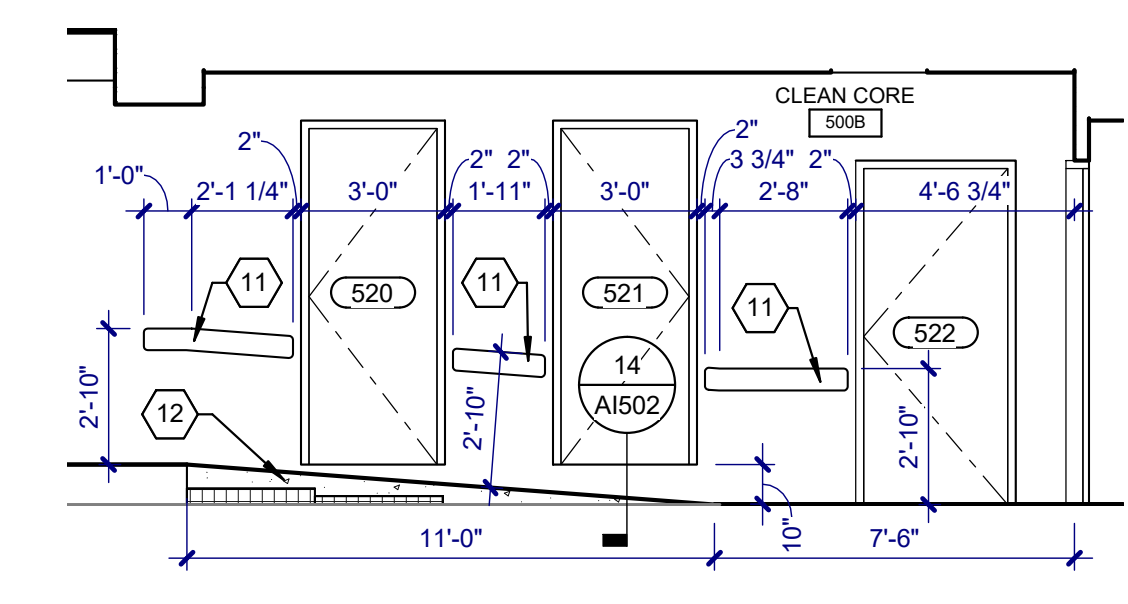


100% CONSTRUCTION DRAWINGS

Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		Project Number 438-15-201	
Location SIOUX FALLS, SOUTH DAKOTA		Building Number 5	
Date OCTOBER 11, 2017		Drawing Number 5-A1201	
Checked DGS		Drawn AAD	
Dwg. 13 of 60		Department of Veterans Affairs	

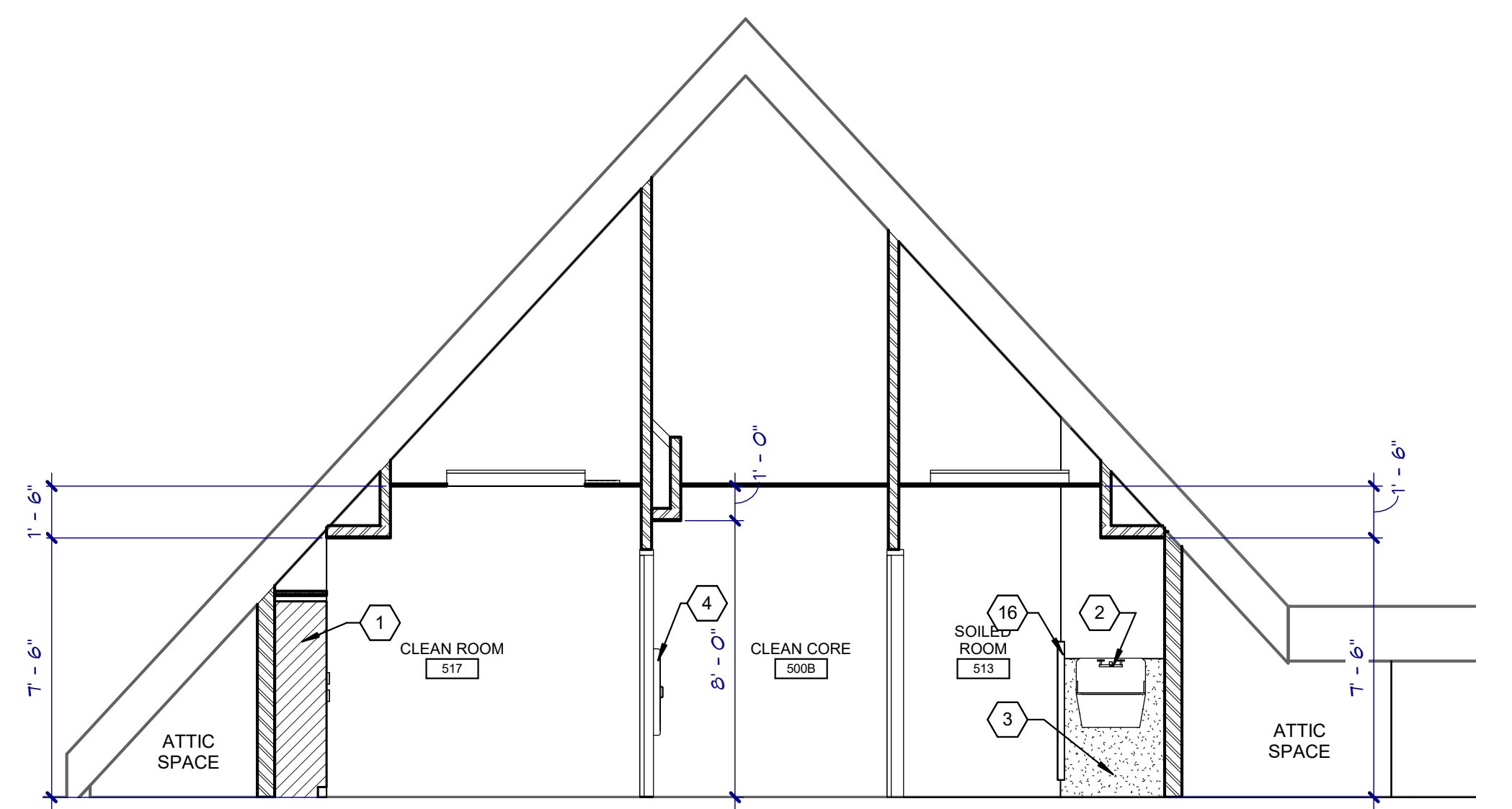
Revisions: _____ _____ _____	Date: _____	CONSULTANTS: 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND	SEAL: ROBIN J. MILLER REGISTERED ARCHITECT REG. NO. 3907 SOUTH DAKOTA	ARCHITECT: 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539	Drawing Title INTERIOR ELEVATIONS Approved: Project Director
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three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
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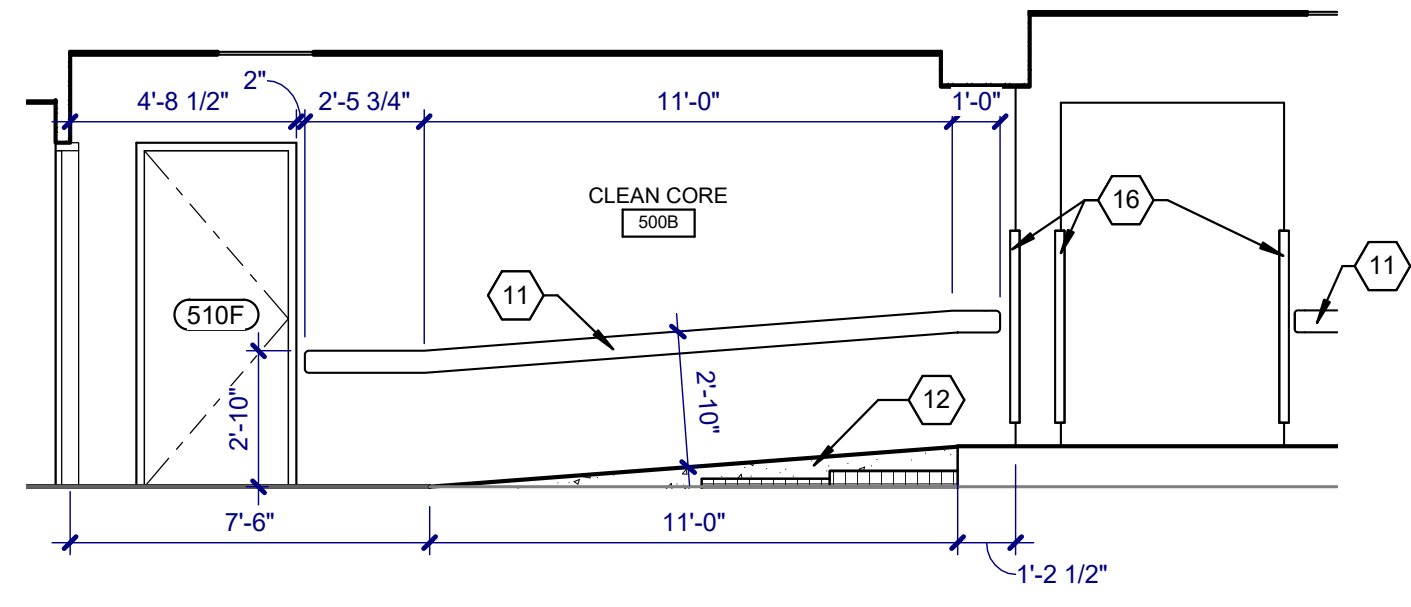


NOTE: THIS RAMP DOES NOT COMPLY WITH CODE REQUIREMENTS FOR CONTINUITY OF HANDRAILS ON BOTH SIDES NFPA 101 - 7.2.2.4.2. HANDRAILS ON THIS SIDE ARE INTERRUPTED BY DOORS TO DATA AND ELECTRICAL ROOMS. THE VA HAS INDICATED THAT THIS NON-COMPLIANT CODE CONDITION IS ACCEPTABLE.

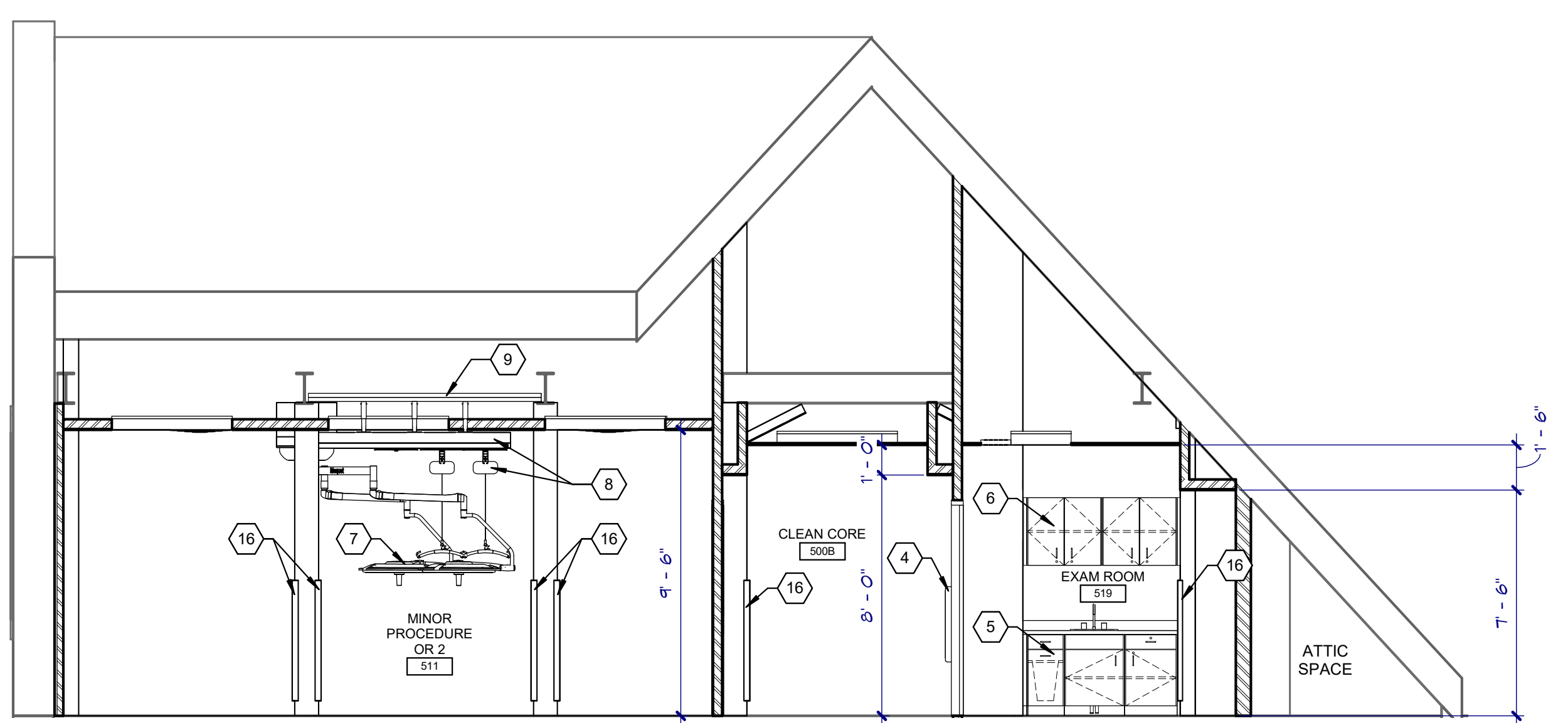
BUILDING SECTION - FLOOR LEVEL CHANGE
 SCALE: 1/4" = 1'-0"



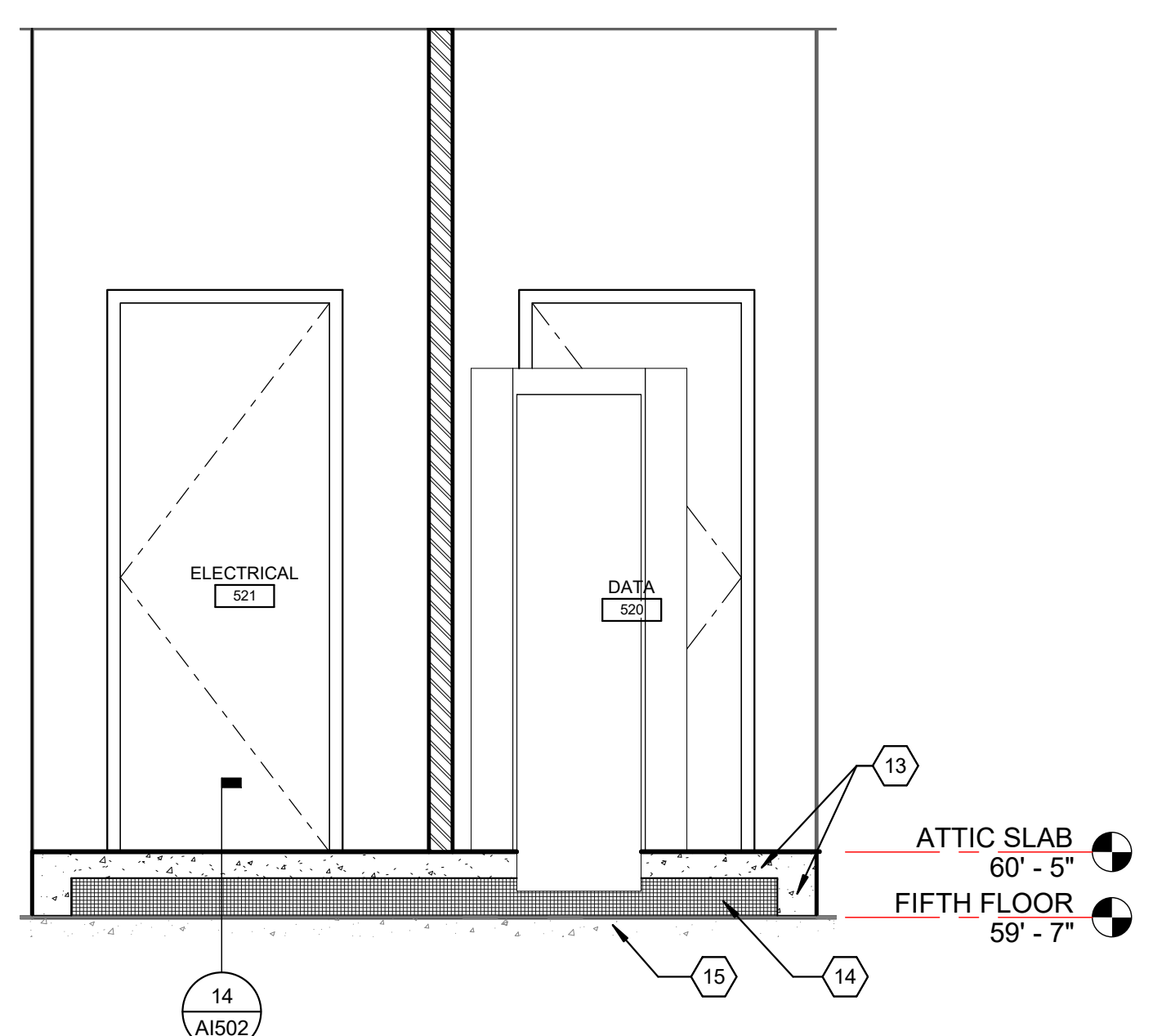
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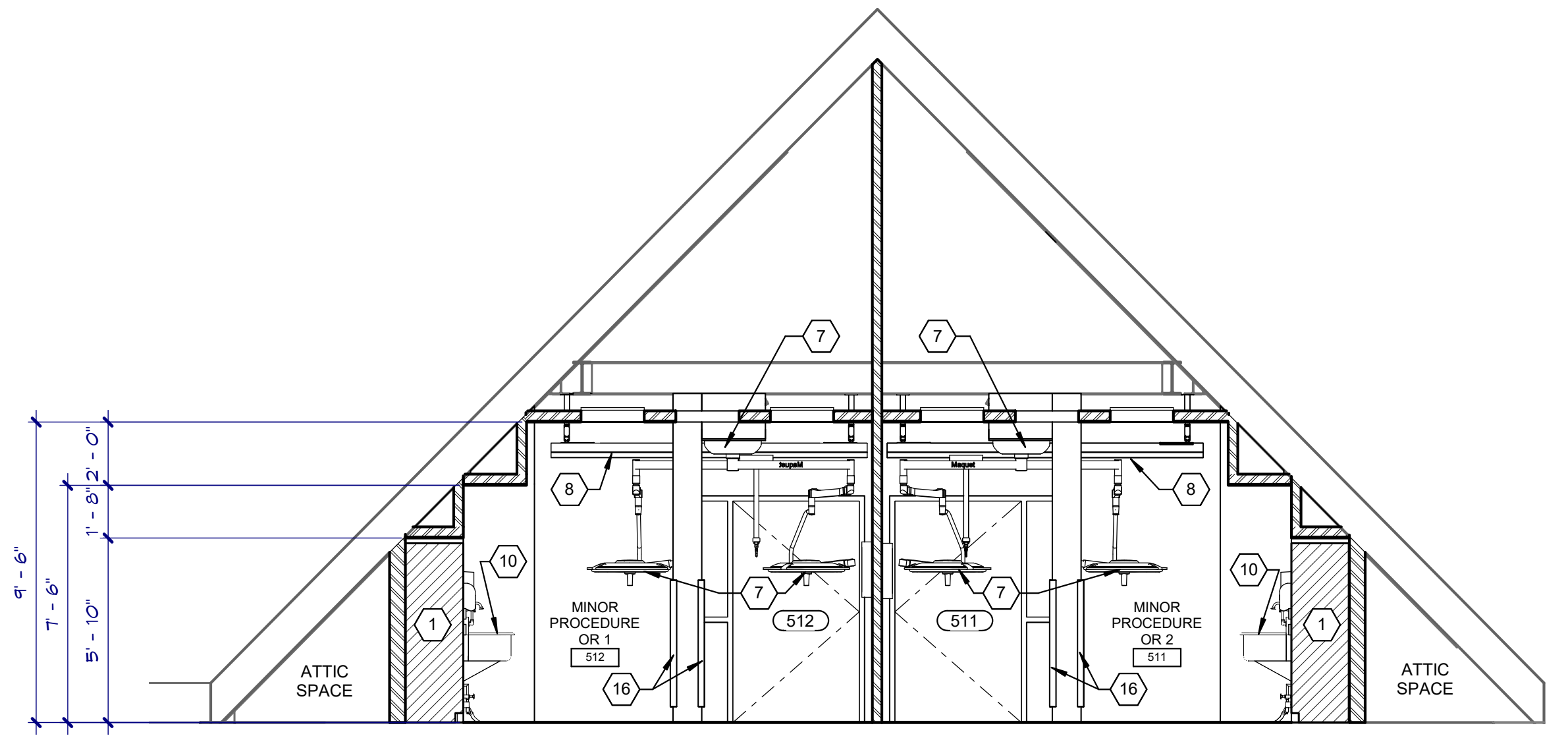
BUILDING SECTION - FLOOR LEVEL CHANGE
 SCALE: 1/4" = 1'-0"



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



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



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

- KEYNOTES:**
- 1 68" TALL X 48" WIDE X 22" DEEP DOUBLE DOOR PLASTIC LAMINATE CABINET WITH WIRE PULLS, KEYPED LOCKS, AND ADJUSTABLE SHELVING
 - 2 SERVICE SINK (SEE PLUMBING)
 - 3 FIBERGLASS REINFORCED PLASTIC PANEL
 - 4 SEMI-RECESSED FIRE EXTINGUISHER CABINET
 - 5 24" DEEP PLASTIC LAMINATE BASE CABINETS
 - 6 12" DEEP PLASTIC LAMINATE UPPER CABINETS
 - 7 OPERATING ROOM BOOM LIGHT SALVAGED FROM EXISTING OPERATING ROOMS
 - 8 CEILING MOUNTED OVERHEAD PATIENT LIFT AND TRACK
 - 9 P1001 UNISTRUT (SEE STRUCTURAL)
 - 10 STAINLESS STEEL WALL MOUNTED SCRUB/HANDWASH SINK WITH FOOT CONTROL VALVE (SEE PLUMBING)
 - 11 HANDRAIL
 - 12 CONCRETE RAMP (SEE STRUCTURAL)
 - 13 CAST IN PLACE CONCRETE FLOOR (SEE STRUCTURAL)
 - 14 RIGID INSULATION (SEE STRUCTURAL)
 - 15 EXISTING CONCRETE FLOOR
 - 16 RESILIENT CORNER GUARD

100% CONSTRUCTION DRAWINGS

Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		Project Number 438-15-201	
Location SIoux FALLS, SOUTH DAKOTA		Building Number 5	
Date OCTOBER 11, 2017	Checked DGS	Drawn AAD	Drawing Number 5-AI300
Approved: Project Director		Dwg. 14 of 60	

Office of Construction and Facilities Management
 Department of Veterans Affairs

CONSULTANTS:

WPE WEST PLAINS ENGINEERING
 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106
 PHONE: (605) 362-3753 • FAX: (605) 362-3759
 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND

RISE STRUCTURAL ASSOCIATES INC.
 101 Railroad Ave. - PO Box 39
 Harrisburg, SD 57032
 (605) 743-2510 fax (605) 743-2513

SEAL:

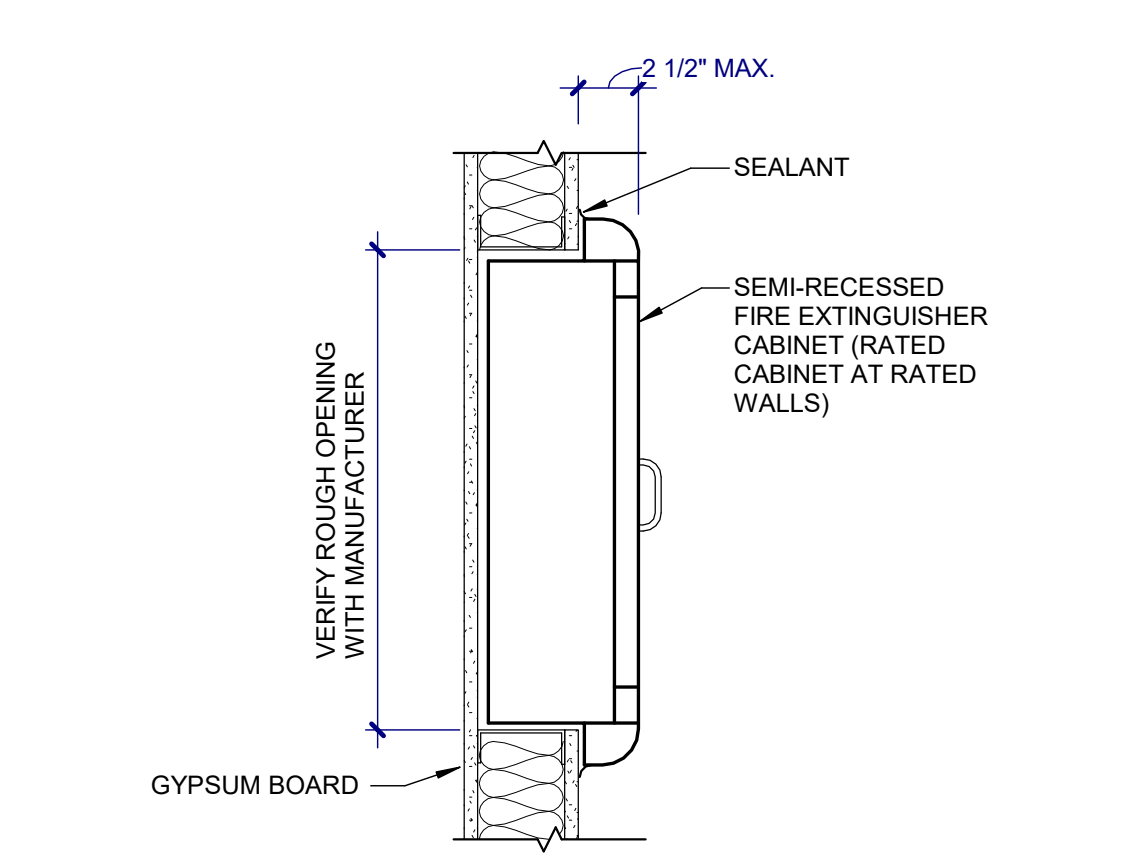
REGISTERED ARCHITECT
 REG. NO. 3907
 ROBIN J. MILLER
 SOUTH DAKOTA

ARCHITECT:

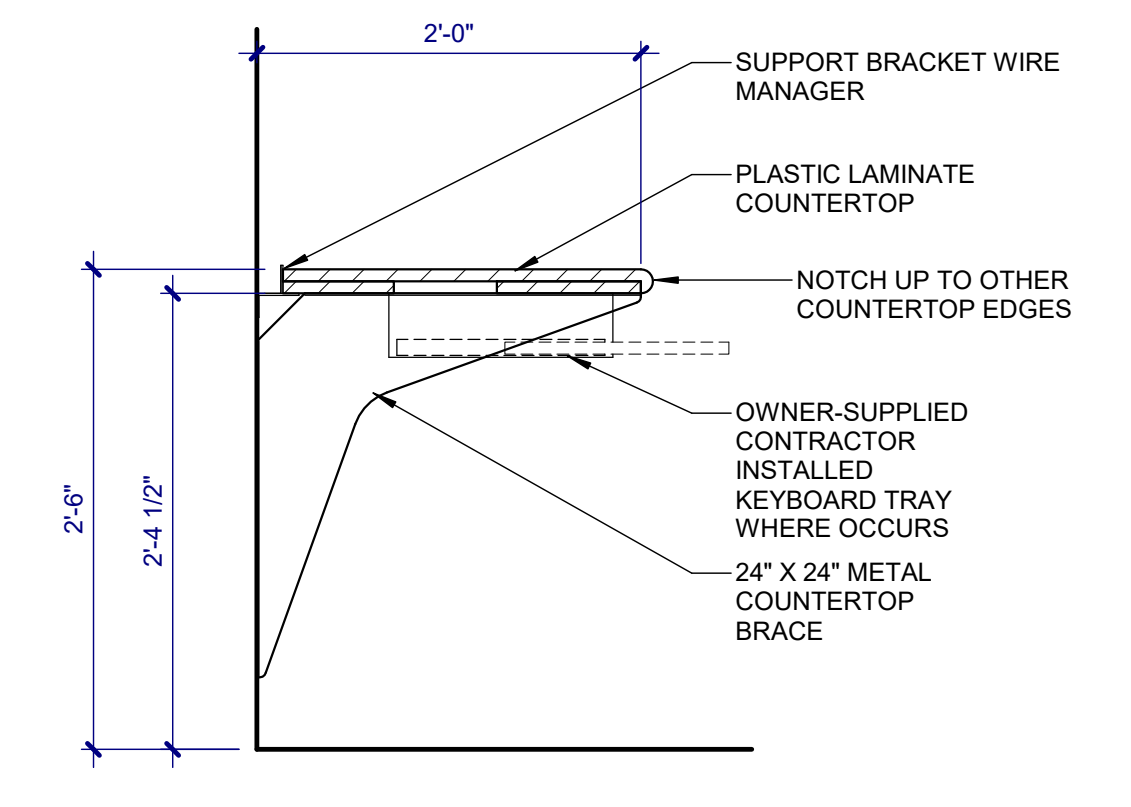
MSH ARCHITECTS
 625 S. MINNESOTA AVENUE, SUITE 204
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 TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title
BUILDING SECTIONS

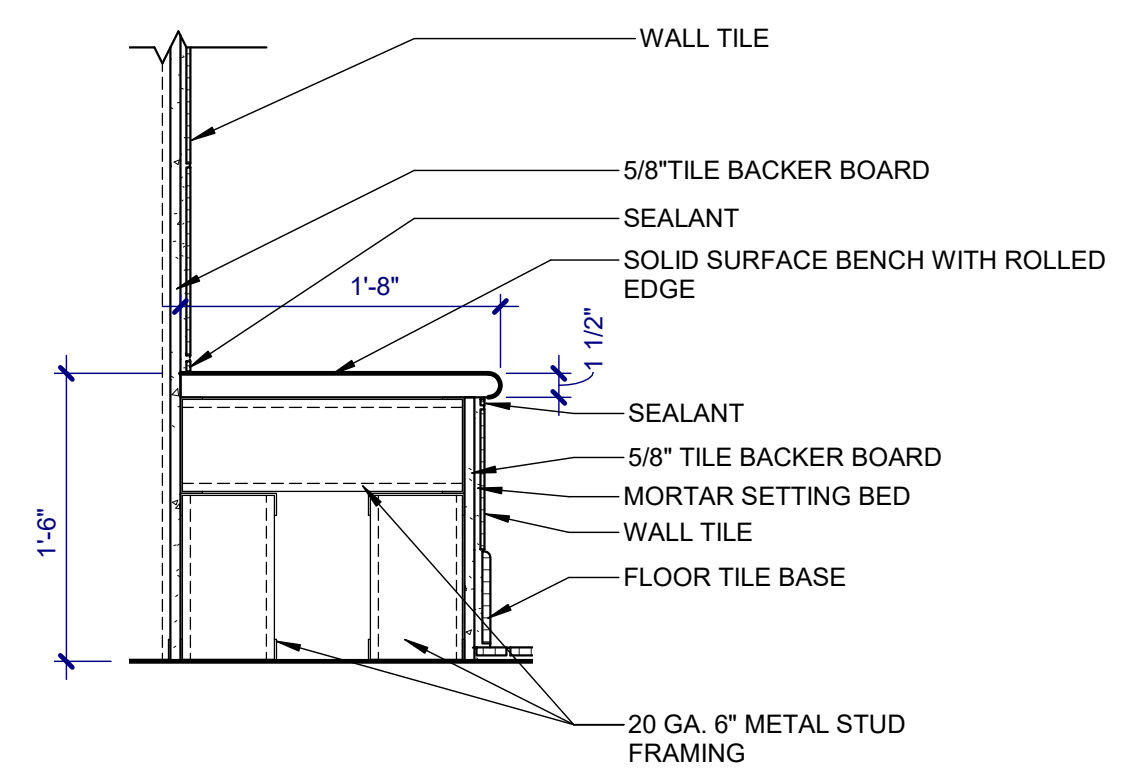
three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 one quarter inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one eighth inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot
 one eighth inch = one foot



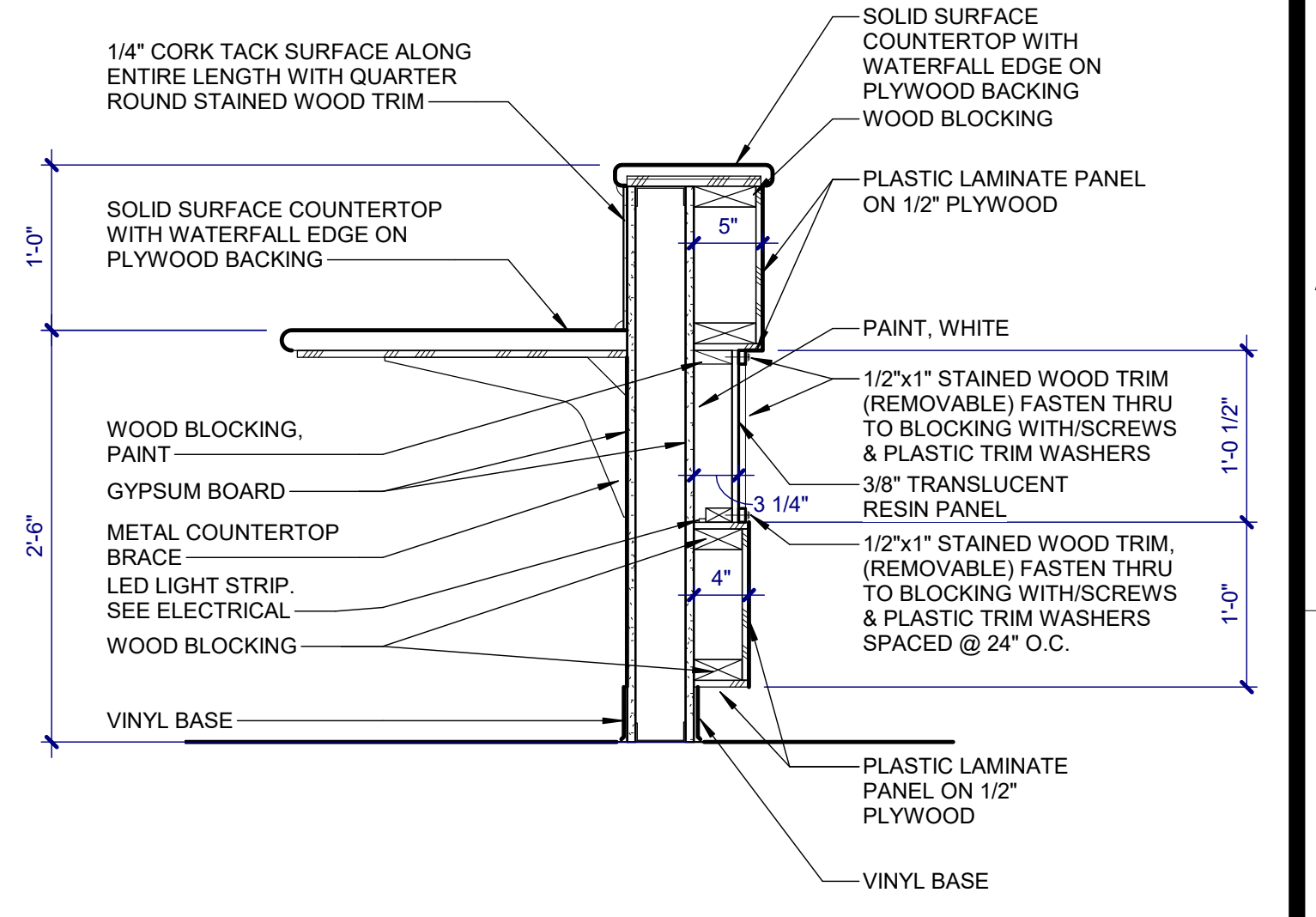
FIRE EXTINGUISHER
 SCALE: 1 1/2" = 1'-0"



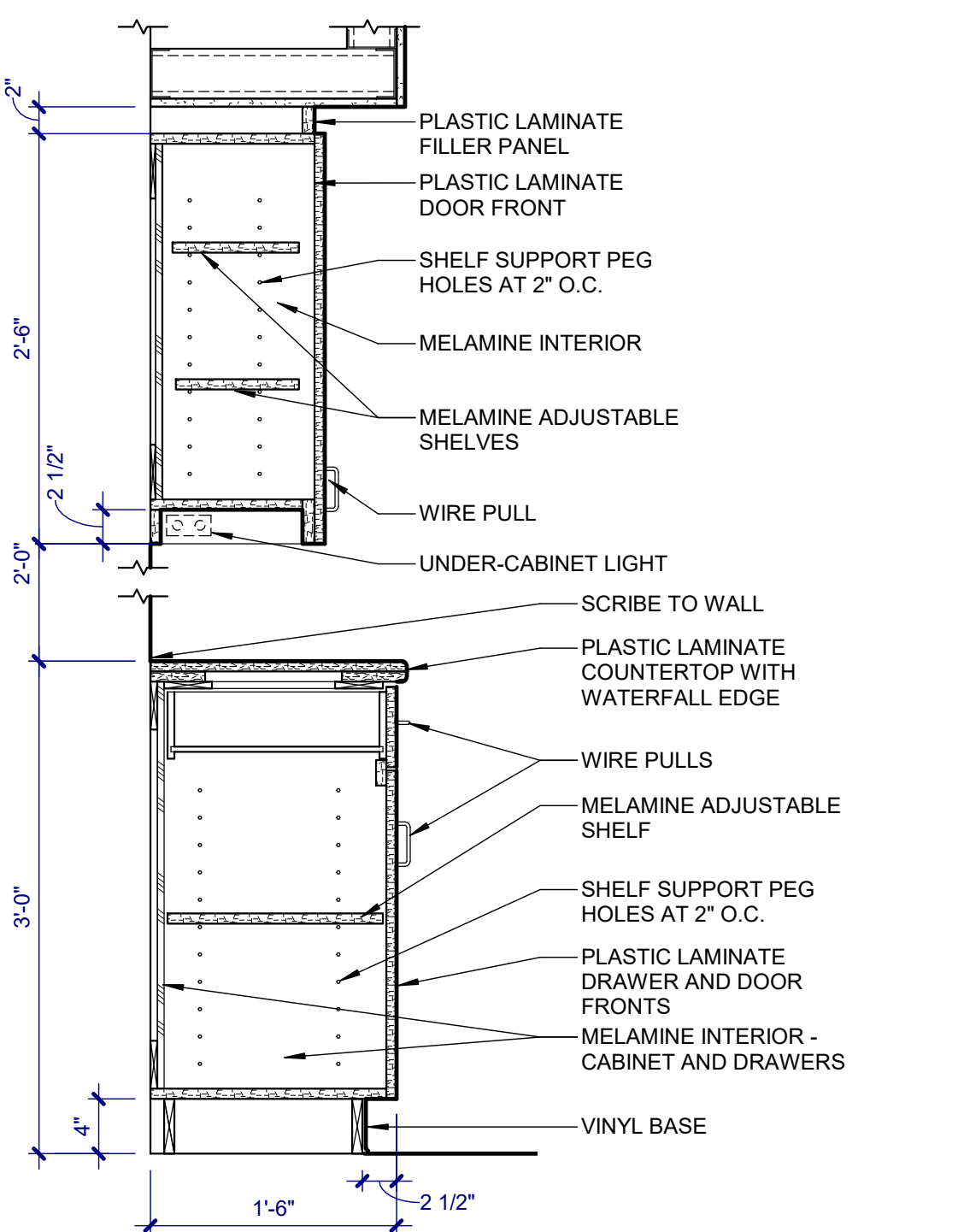
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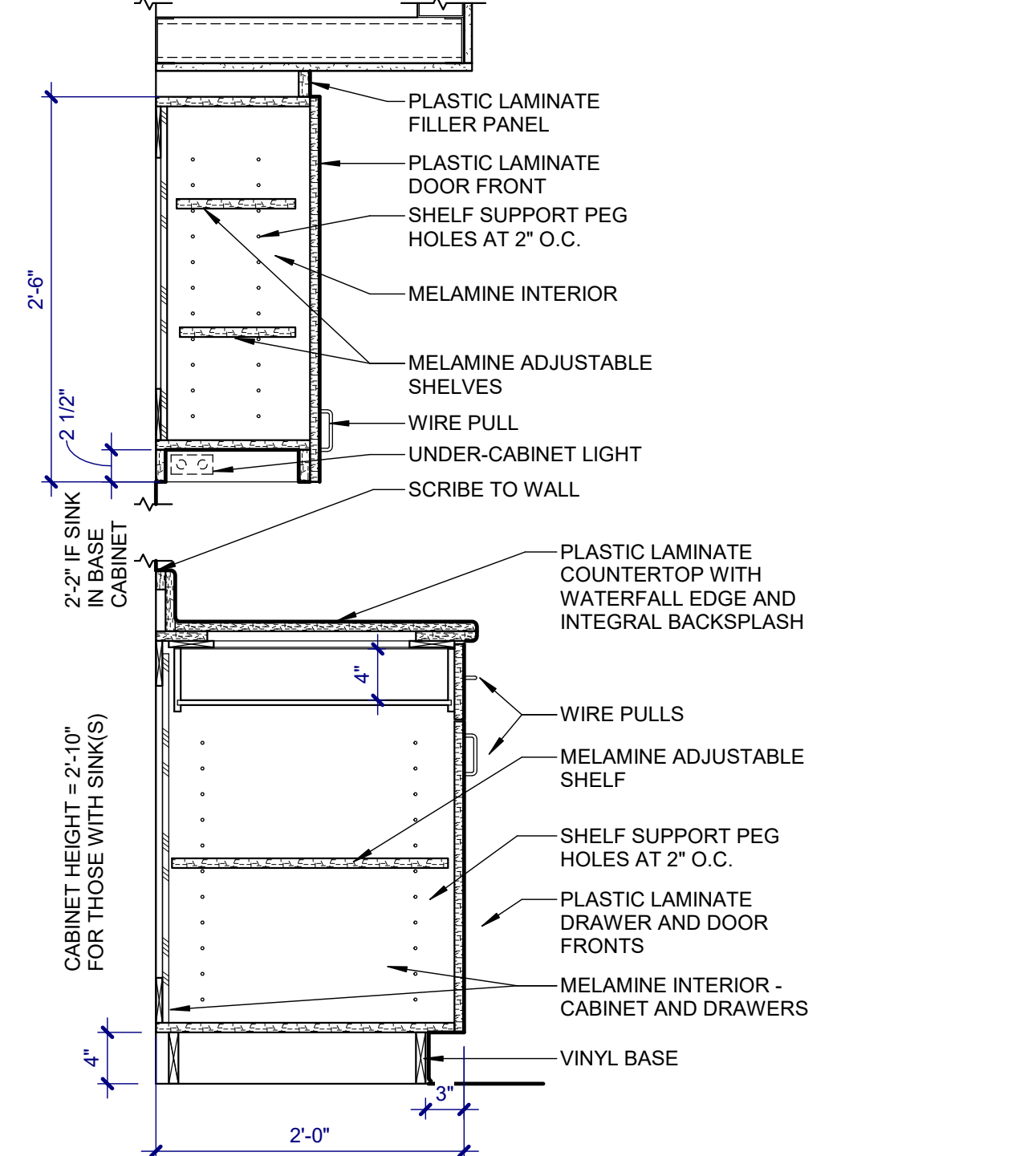
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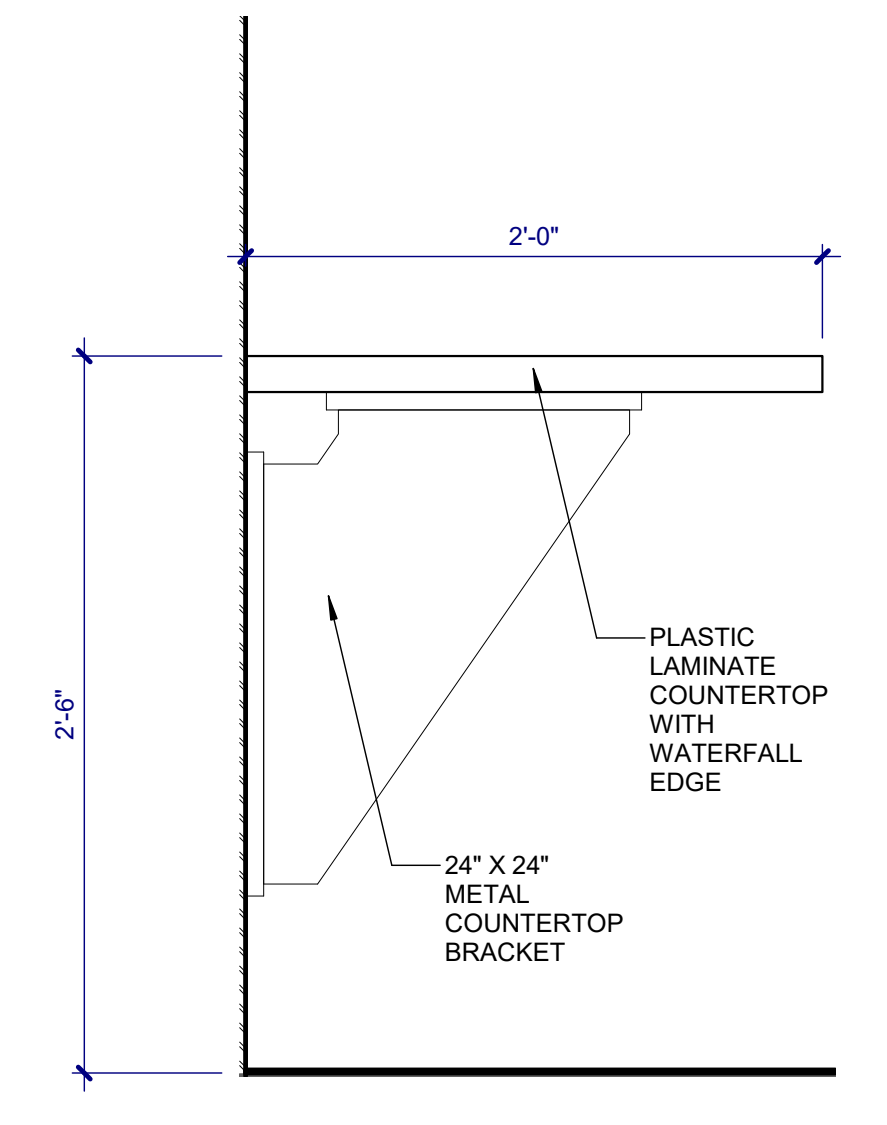
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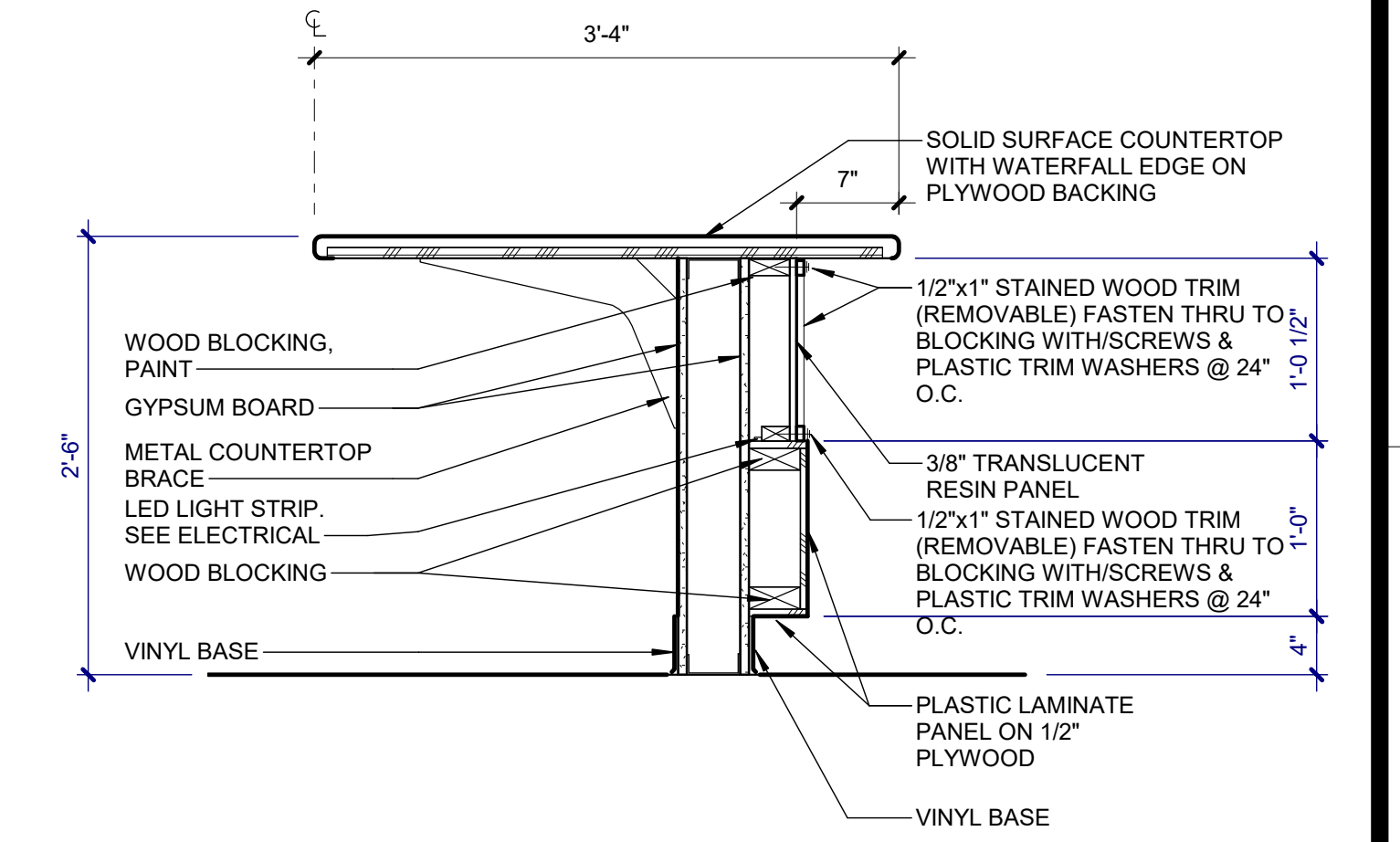
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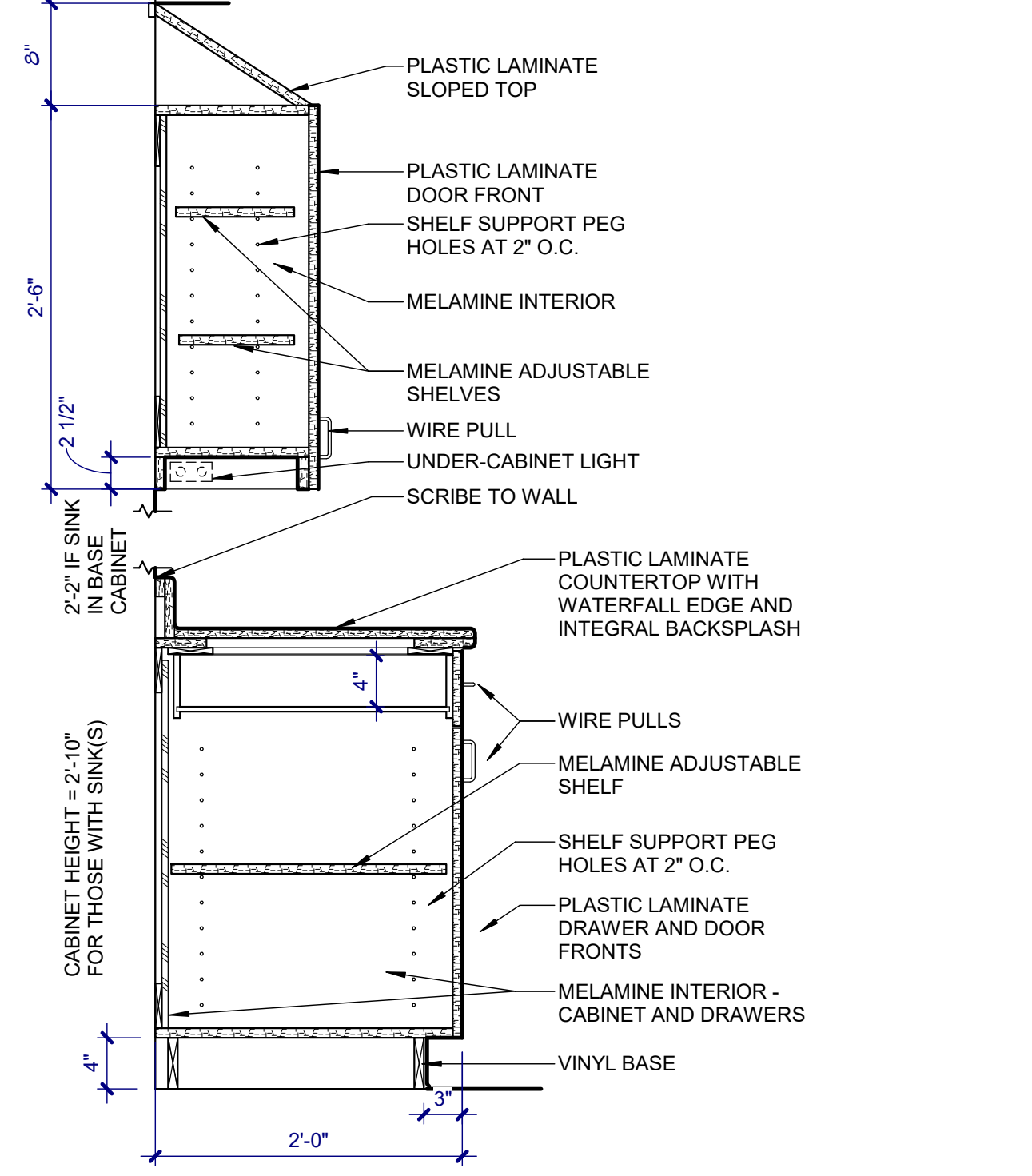
TYPICAL UPPERS AND BASE CABINET 2'-0\"/>



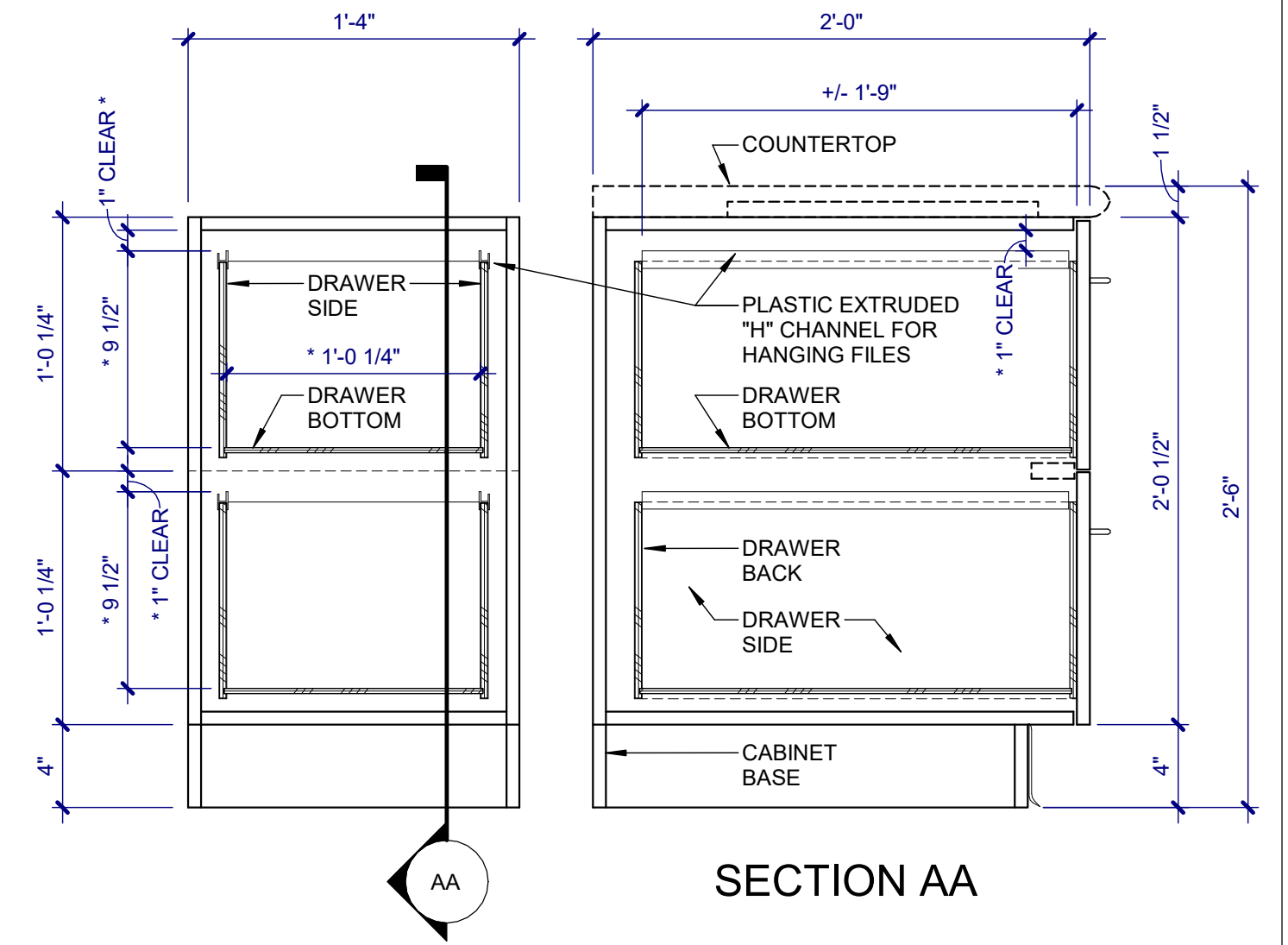
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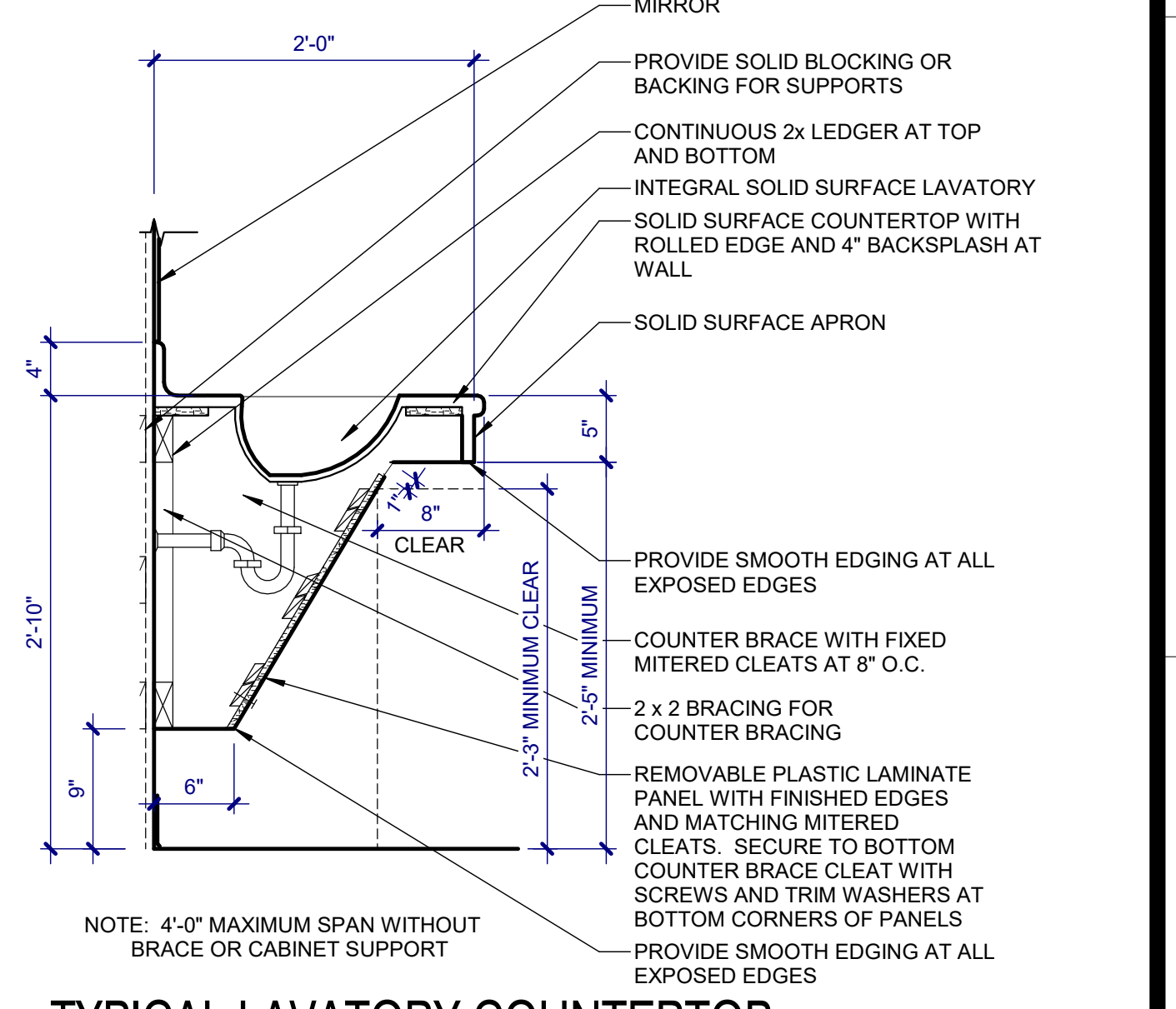
DETAIL
 SCALE: 1" = 1'-0"



TYPICAL UPPERS AND BASE CABINET 2'-0\"/>



TYPICAL FILE DRAWER SECTION
 SCALE: 1 1/2" = 1'-0"



TYPICAL LAVATORY COUNTERTOP
 SCALE: 1" = 1'-0"

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SEAL:

REGISTERED ARCHITECT
 REG. NO. 3907
 ROBIN J. MCLELLAN
 SIOUX FALLS, SD

ARCHITECT:

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Drawing Title
CASEWORK DETAILS

Approved: Project Director

Project Title
V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY

Project Number
438-15-201

Building Number
5

Drawing Number
5-A1500

Date
OCTOBER 11, 2017

Checked
DGS

Drawn
RTG

Dwg. 15 of 60

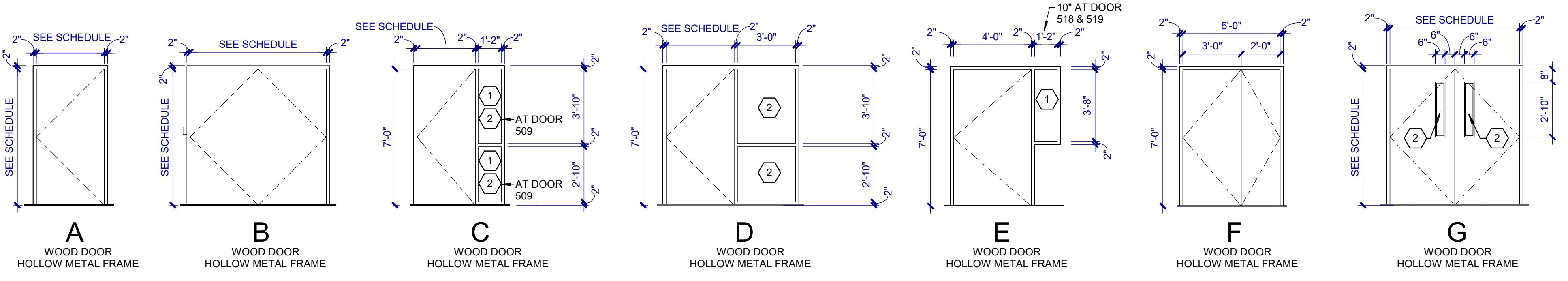
Office of Construction and Facilities Management

Department of Veterans Affairs

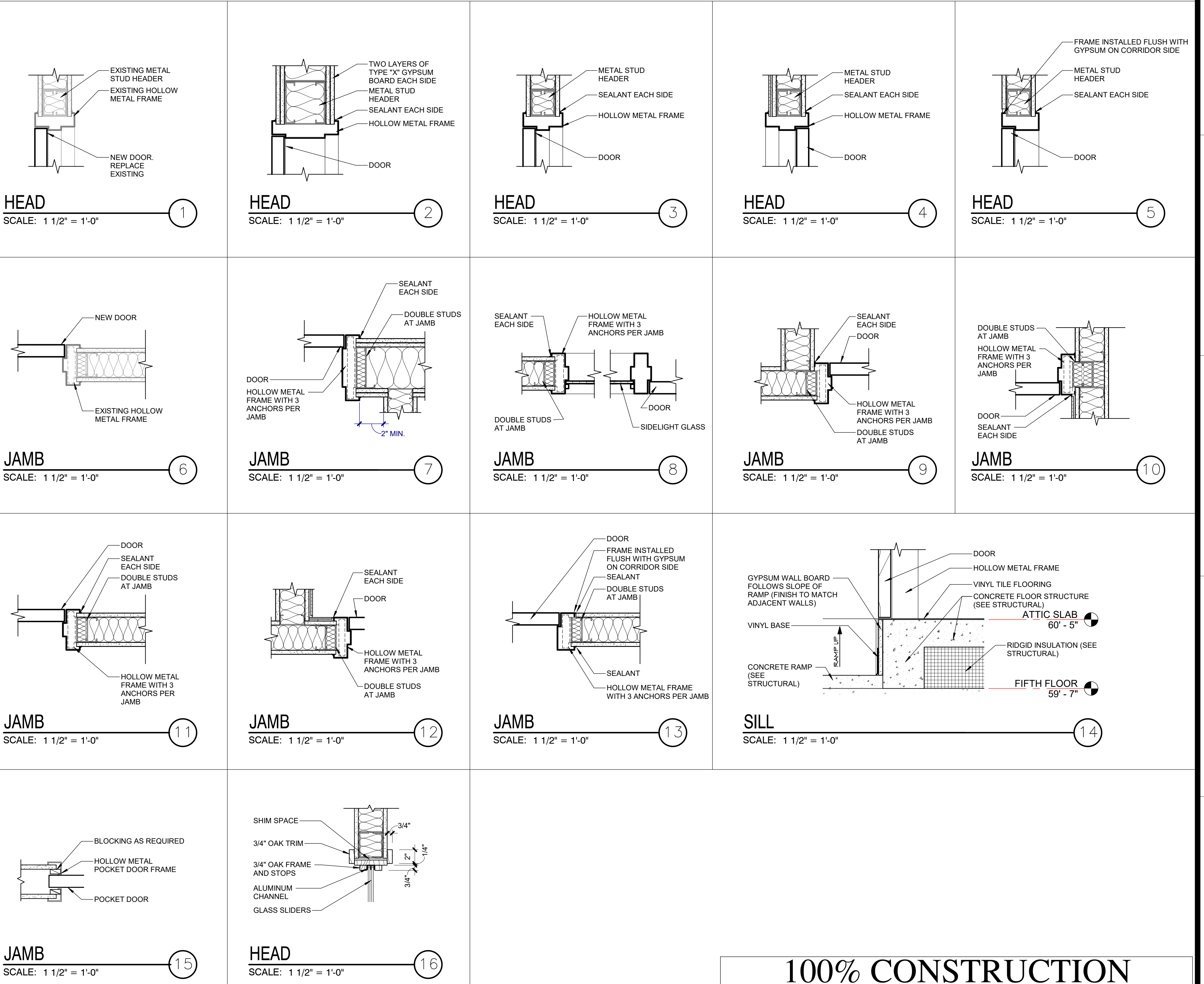
KEYNOTES:
 ① 20 MINUTE FIRE RESISTANT GLASS WHERE INDICATED ON SCHEDULE
 ② 45 MINUTE FIRE RESISTANT GLASS WHERE INDICATED ON SCHEDULE

MAR K	DOOR			DOOR GLAZING	CORE	MATERIAL	FINISH	EL	FRAME		FIRE RATING LABEL	HDW. GROUP	NOTES
	WIDTH	HEIGHT	THICK						SIDE GLAZING	HEAD JAMB			
500C	PAIR OF 3'-4"	7'-0"	1 3/4"	WOOD STAIN SOLID	45 MIN	H.M.	PAINT	G	-	3/AI502 9/AI502	45 MIN	18	DOUBLE EGRESS, SELF CLOSING, POSITIVE LATCHING, MAGNETIC HOLD OPEN
500E	2'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 11/AI502	20 MIN	15	SELF CLOSING, POSITIVE LATCHING
500F	2'-4"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	1/AI502 6/AI502	20 MIN	15	REMOVE AND REPLACE DOOR PANEL ONLY, EXISTING HOLLOW METAL FRAME TO REMAIN
501	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	D	45 MIN	3/AI502 8/AI502	45 MIN	06	180 DEGREE SWING, 36 INCH SIDELIGHT, MAGNETIC HOLD OPEN
502	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	NR	3/AI502 8/AI502	-	20	14 INCH SIDELIGHT
502A	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	16/AI502 13/AI502	-	24	POCKET DOOR
503	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 12/AI502	20 MIN	03	
504	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	21	14 INCH SIDELIGHT
505	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
506	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
507	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	01	14 INCH SIDELIGHT
508	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	07	14 INCH SIDELIGHT
509	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	45 MIN	3/AI502 8/AI502	45 MIN	21	SELF CLOSING, POSITIVE LATCHING, 14" SIDELIGHT
510	PAIR OF 3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	45 MIN	H.M.	PAINT	G	-	3/AI502 9/AI502	45 MIN	12	SELF CLOSING, POSITIVE LATCHING, AUTOMATIC DOOR OPENER, CARD READER IN BOTH DIRECTIONS
510A	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 9/AI502	-	01	
510B	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	4/AI502 12/AI502	-	02	
510C	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 9/AI502	-	01	
510D	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	4/AI502 12/AI502	-	02	
510E	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 9/AI502	45 MIN	16	SELF CLOSING, POSITIVE LATCHING, CARD READER WITH AUTOMATIC DOOR LATCH
510F	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 9/AI502	20 MIN	13	
511	4'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	E	20 MIN	3/AI502 8/AI502	20 MIN	22	
512	4'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	E	20 MIN	3/AI502 8/AI502	20 MIN	22	
513	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 9/AI502	45 MIN	23	180 DEGREE SWING, SELF CLOSING, POSITIVE LATCHING
514	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 9/AI502	20 MIN	23	
515	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	2/AI502 7/AI502	90 MIN	09	SELF CLOSING, SELF LATCHING
516	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 9/AI502	20 MIN	23	
517	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 11/AI502	20 MIN	23	
518	4'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	E	20 MIN	3/AI502 9/AI502	20 MIN	19	10 INCH SIDELIGHT
519	4'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	E	20 MIN	3/AI502 9/AI502	20 MIN	19	10 INCH SIDELIGHT
520	2'-8"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	5/AI502 13/AI502	20 MIN	25	CARD READER WITH AUTOMATIC DOOR LATCH, SILL DETAIL 14/AI502
521	2'-8"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	5/AI502 13/AI502	20 MIN	25	CARD READER WITH AUTOMATIC DOOR LATCH, SILL DETAIL 14/AI502
522	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 9/AI502	45 MIN	05	SELF CLOSING, POSITIVE LATCHING
523	PAIR OF 2'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	B	-	3/AI502 11/AI502	45 MIN	10	SELF CLOSING, POSITIVE LATCHING
524	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 11/AI502	45 MIN	08	SELF CLOSING, POSITIVE LATCHING
525	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
526	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	21	14 INCH SIDELIGHT
527	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	1/AI502 6/AI502	20 MIN	14	REMOVE AND REPLACE DOOR PANEL ONLY, EXISTING HOLLOW METAL FRAME TO REMAIN
528	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
529	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
530	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
531	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
532	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
533	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
534	1'-3/4" x 3'-4" x 1'-2'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	F	-	3/AI502 9/AI502	45 MIN	11	SELF CLOSING, POSITIVE LATCHING, DOUBLE UNEVEN
534B	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	2/AI502 7/AI502	90 MIN	17	SELF CLOSING, SELF LATCHING
535	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
536	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	04	14 INCH SIDELIGHT
537	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
538	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
539	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
540	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
541	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
542	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	C	20 MIN	3/AI502 8/AI502	20 MIN	20	14 INCH SIDELIGHT
543	3'-0"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 11/AI502	45 MIN	08	SELF CLOSING, POSITIVE LATCHING
544	3'-8"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 10/AI502	45 MIN	03	SELF CLOSING, POSITIVE LATCHING
545	3'-6"	7'-0"	1 3/4"	WOOD STAIN SOLID	-	H.M.	PAINT	A	-	3/AI502 10/AI502	45 MIN	03	SELF CLOSING, POSITIVE LATCHING

NOTE: ALL DOORS AND FRAMES SHALL HAVE AN ACOUSTIC RATING OF STC 38 MINIMUM.



DOOR AND FRAME TYPES
 SCALE: 1/4" = 1'-0"



Scale bars for various dimensions: three inches = one foot, one and one half inches = one foot, one inch = one foot, three quarters inch = one foot, one half inch = one foot, three eighths inch = one foot, one quarter inch = one foot, one eighth inch = one foot.

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Drawing Title
DOOR SCHEDULE, DOOR AND WINDOW FRAMES AND DETAILS

Project Title
V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY

Project Number
438-15-201

Building Number
5

Drawing Number
5-AI502

Location
SIOUX FALLS, SOUTH DAKOTA

Date
OCTOBER 11, 2017

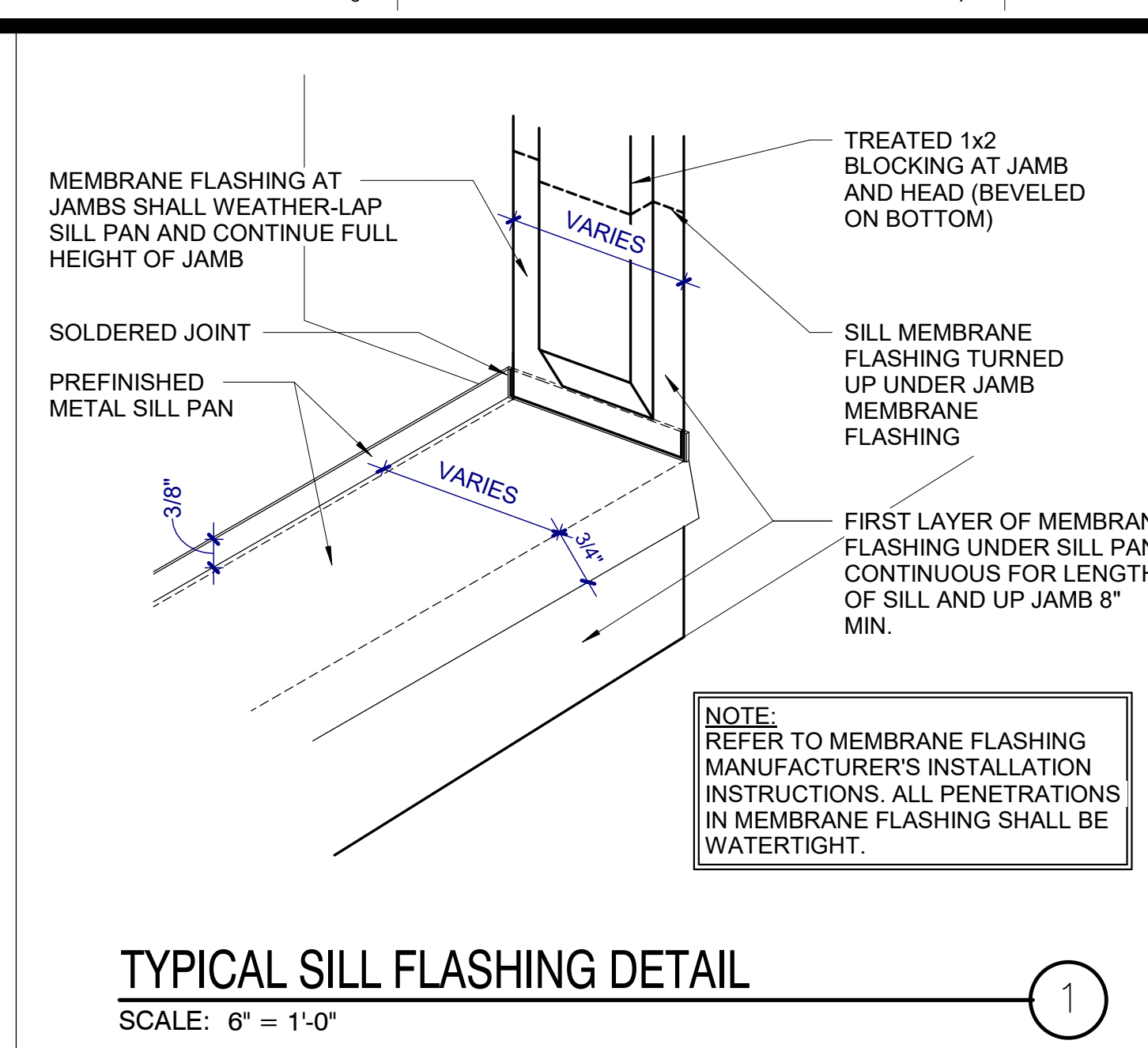
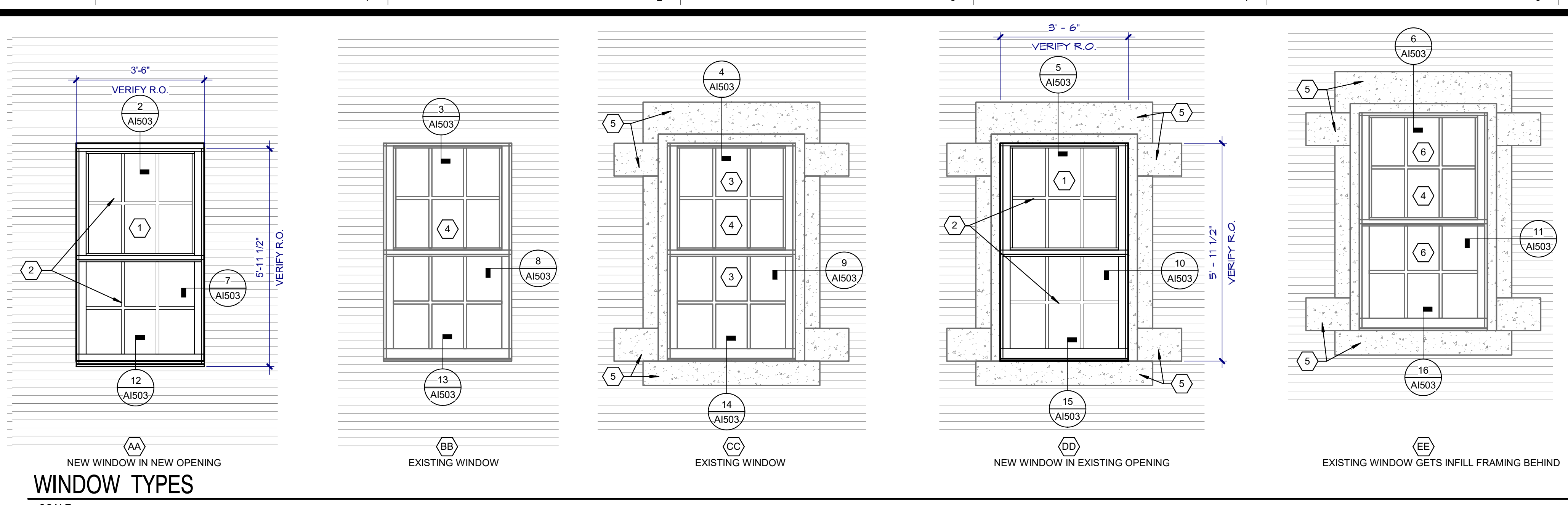
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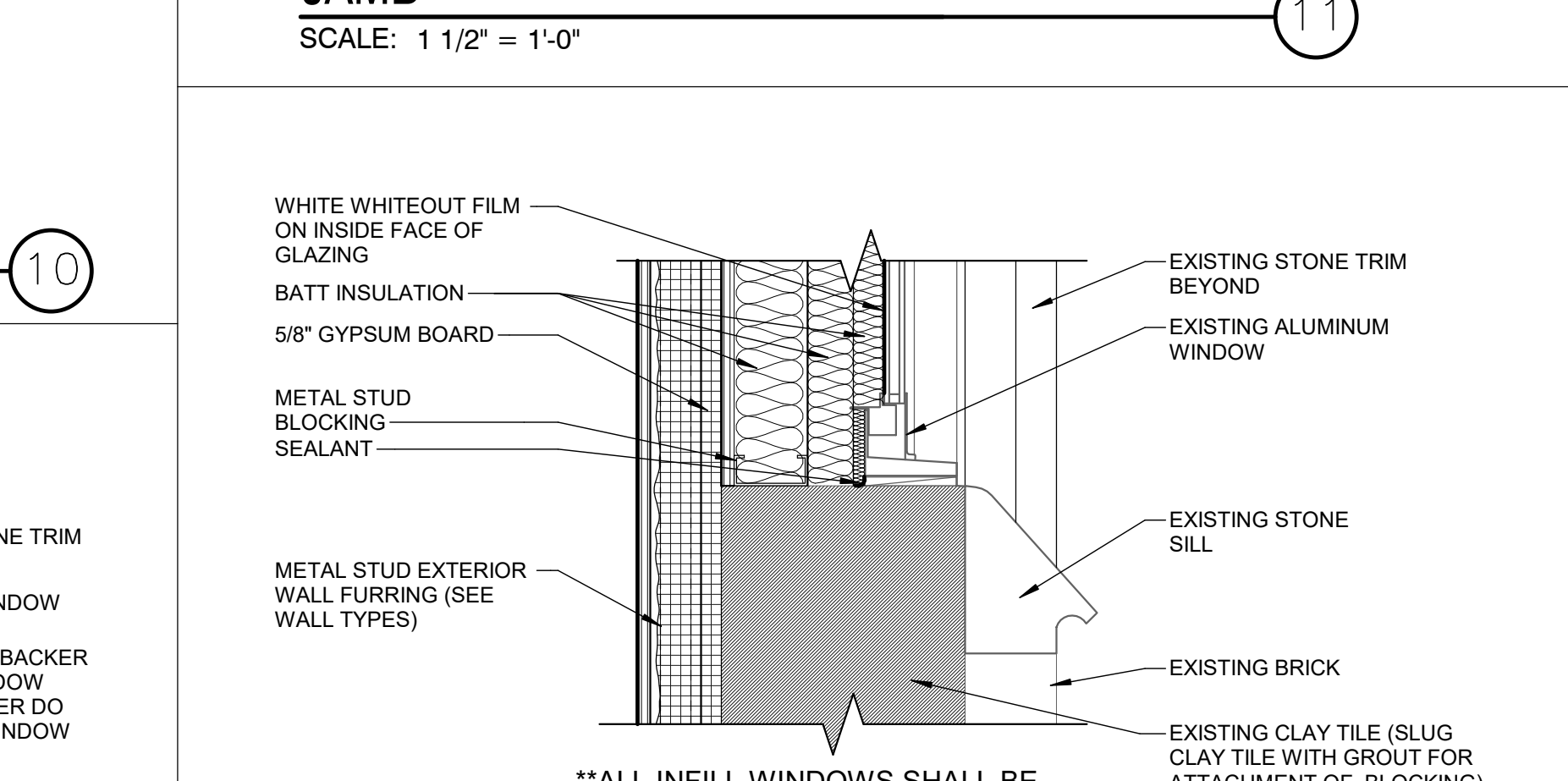
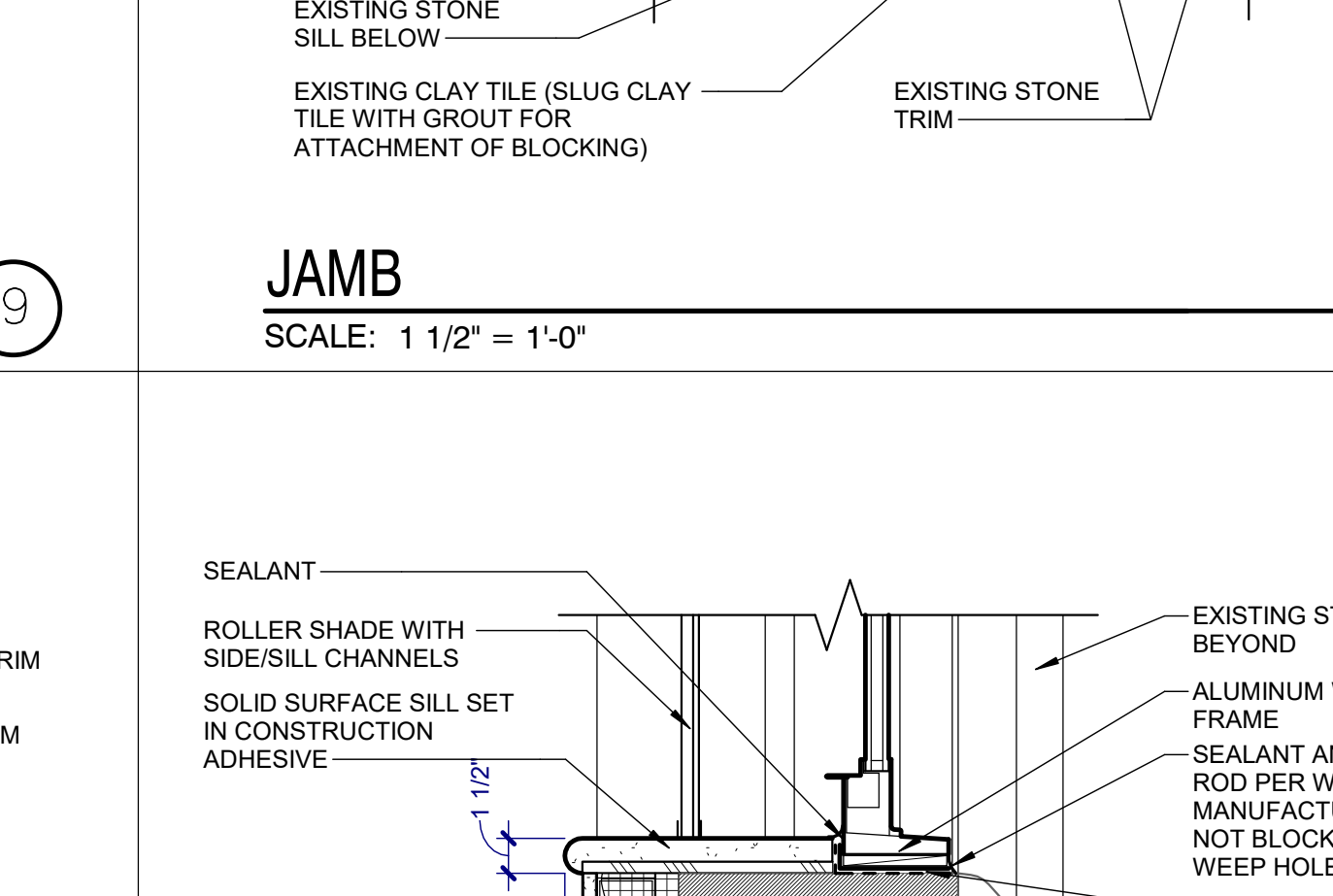
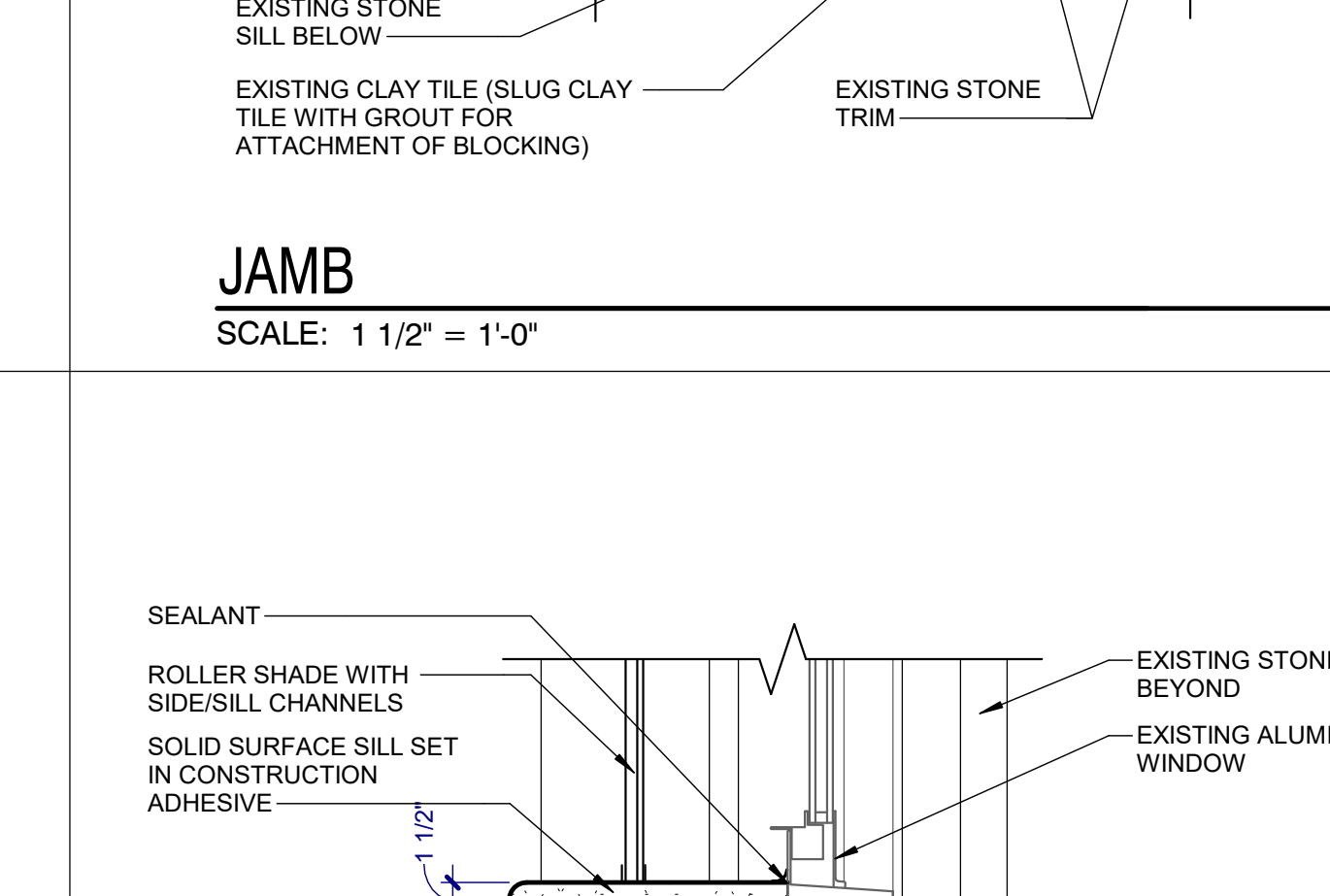
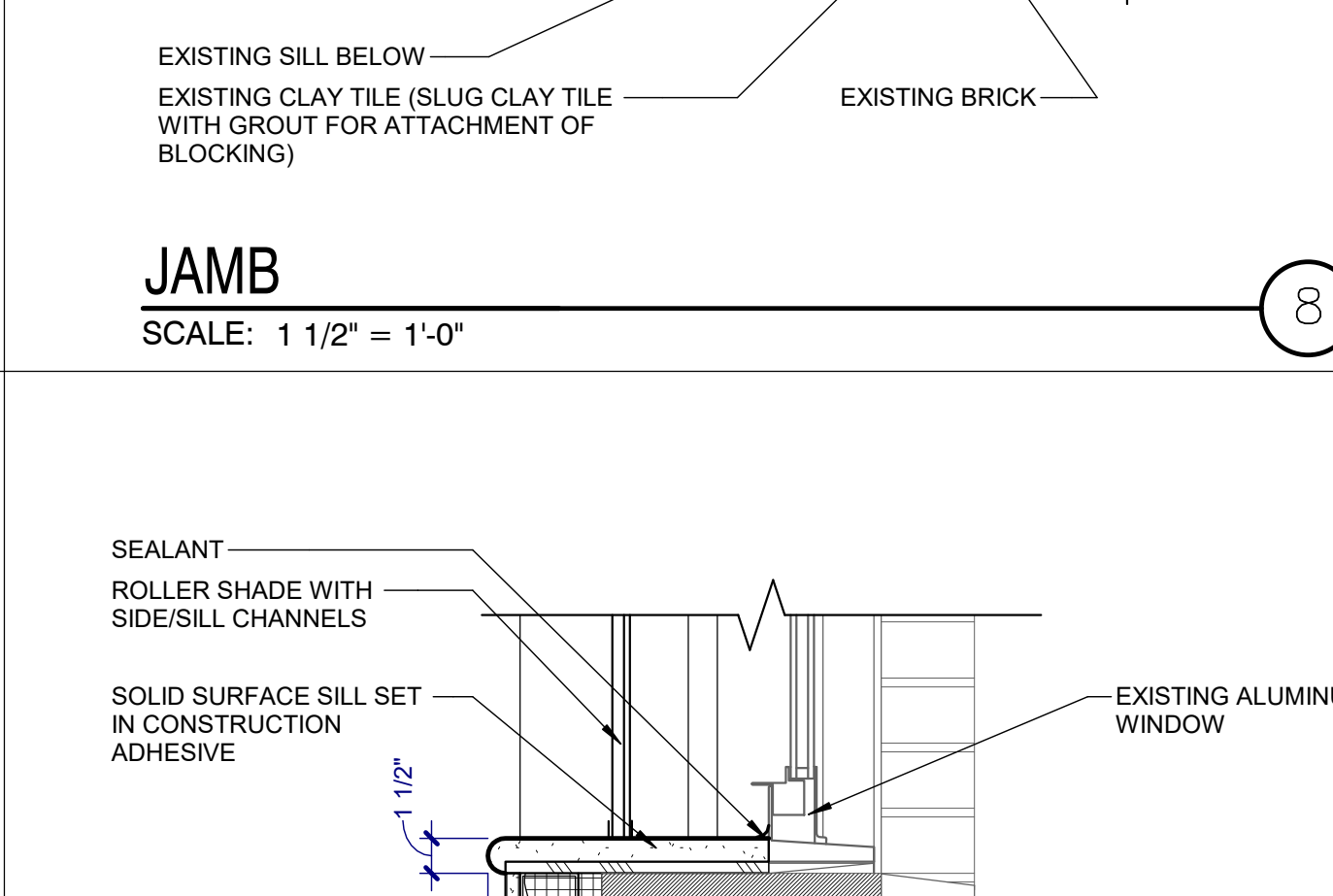
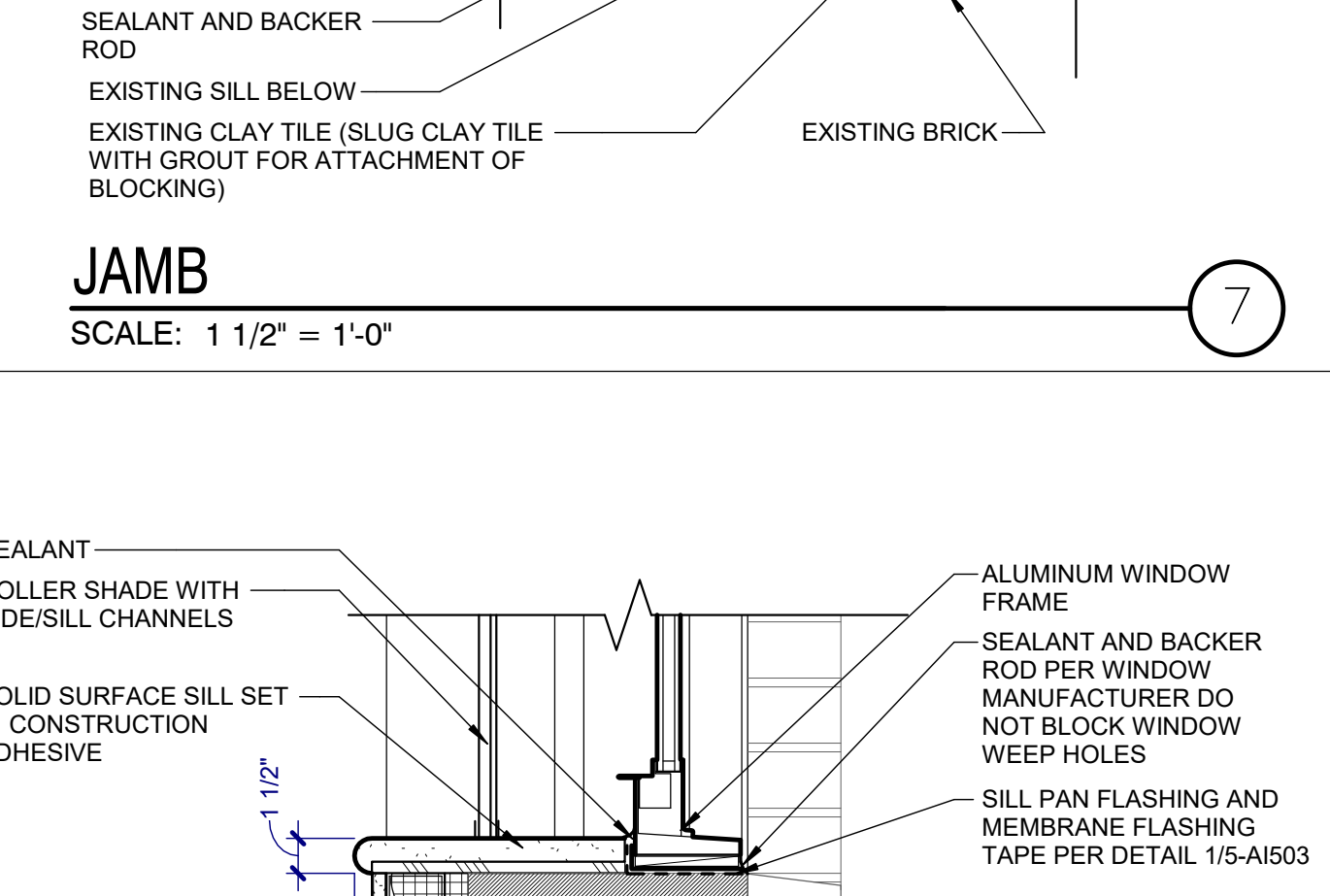
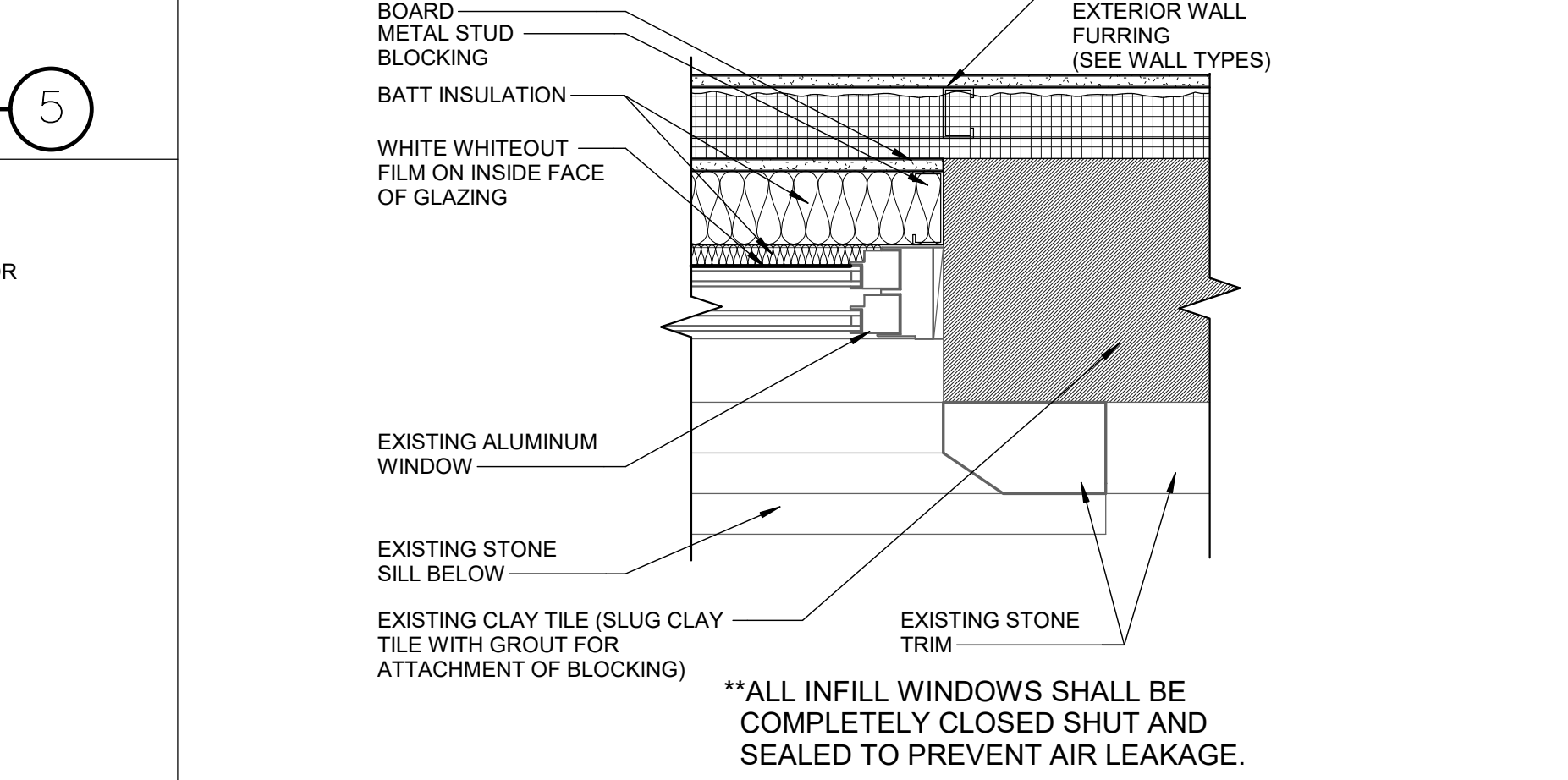
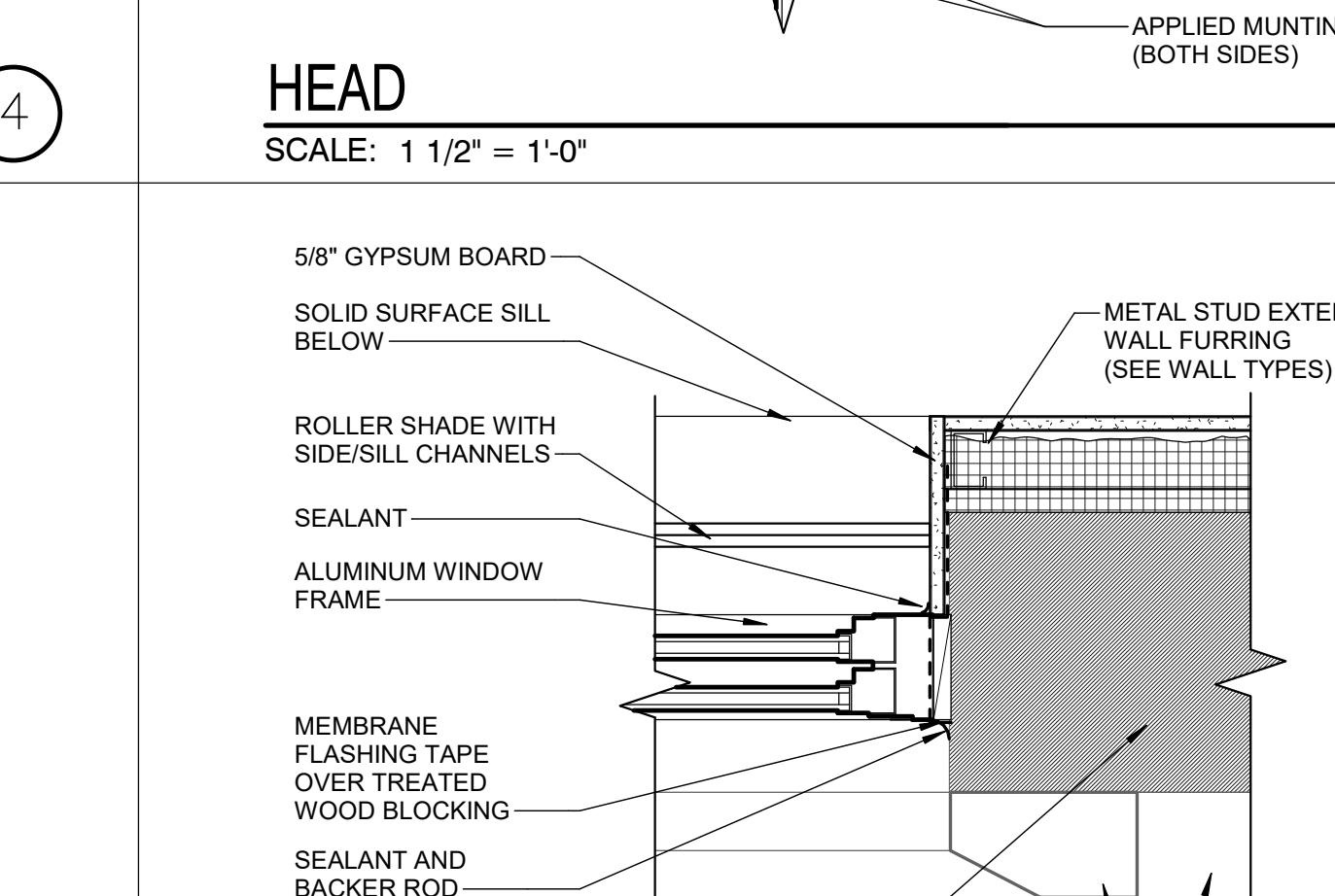
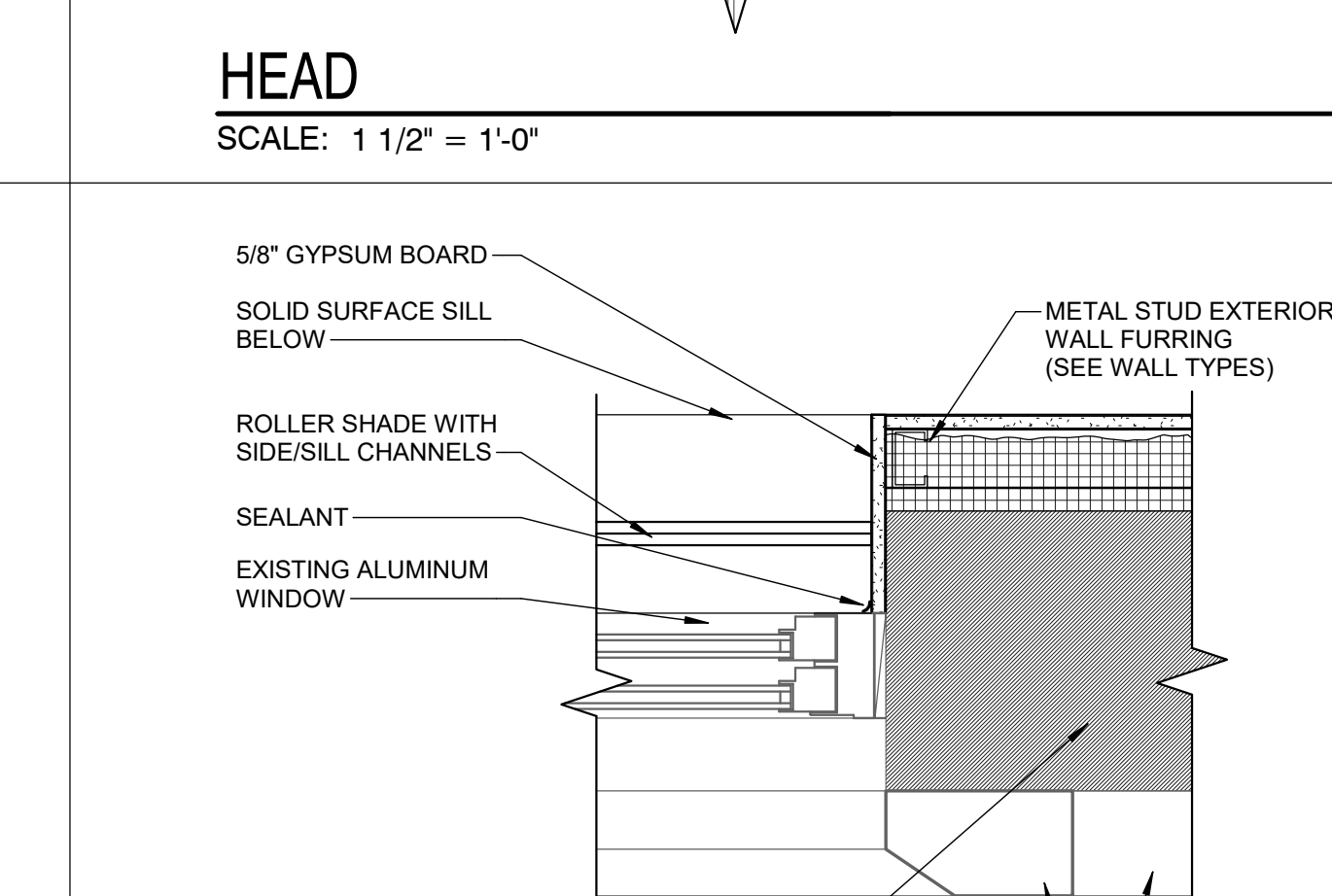
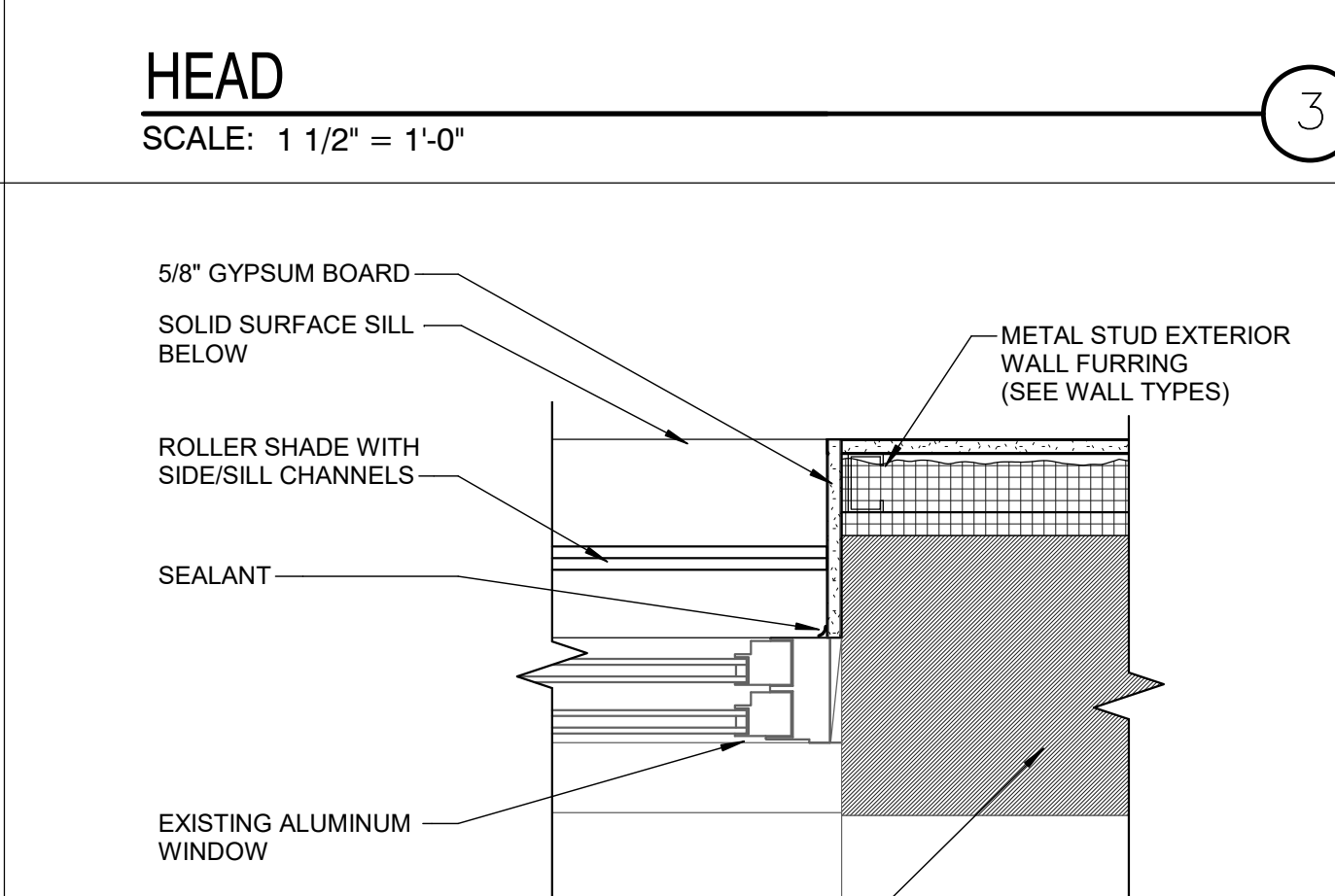
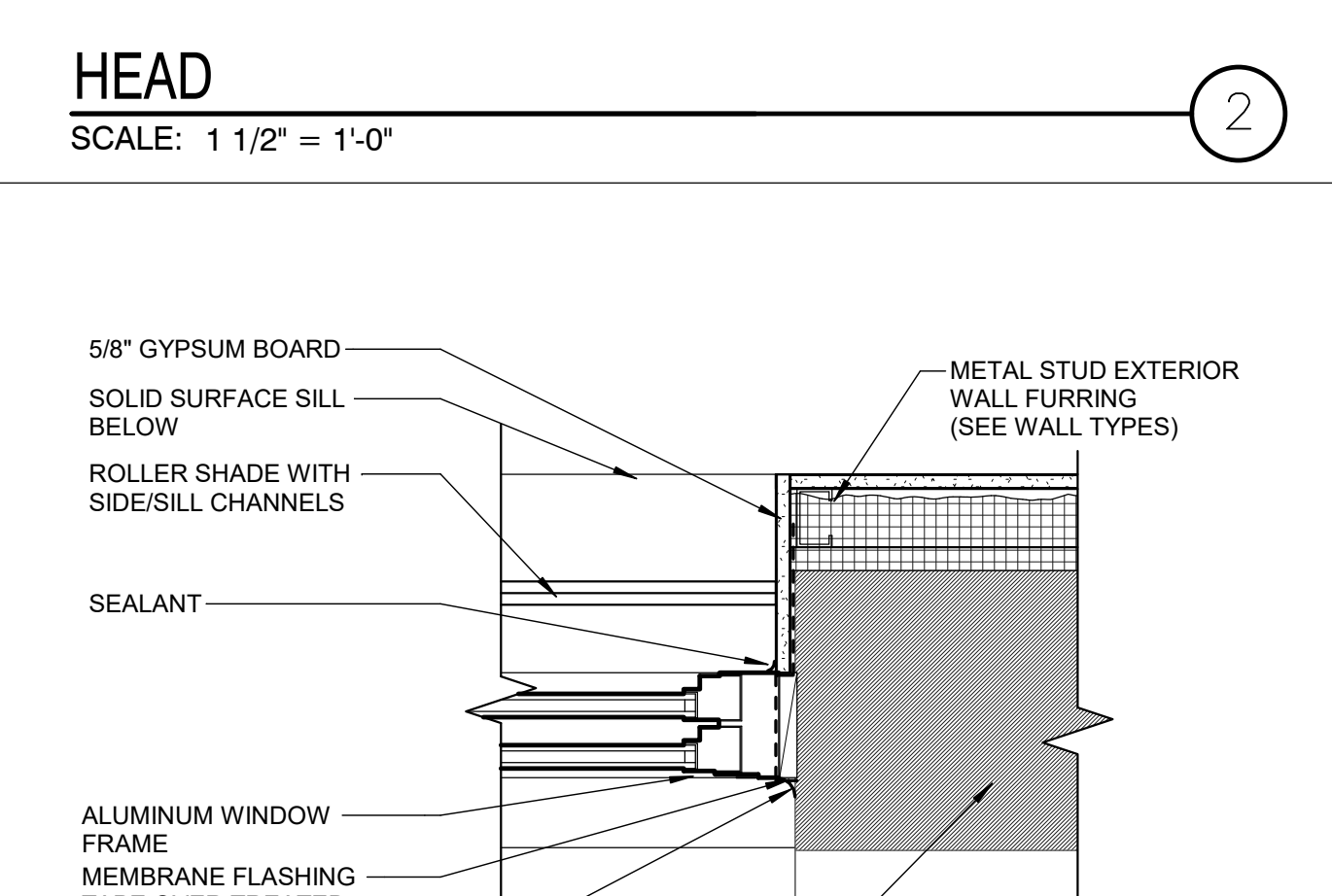
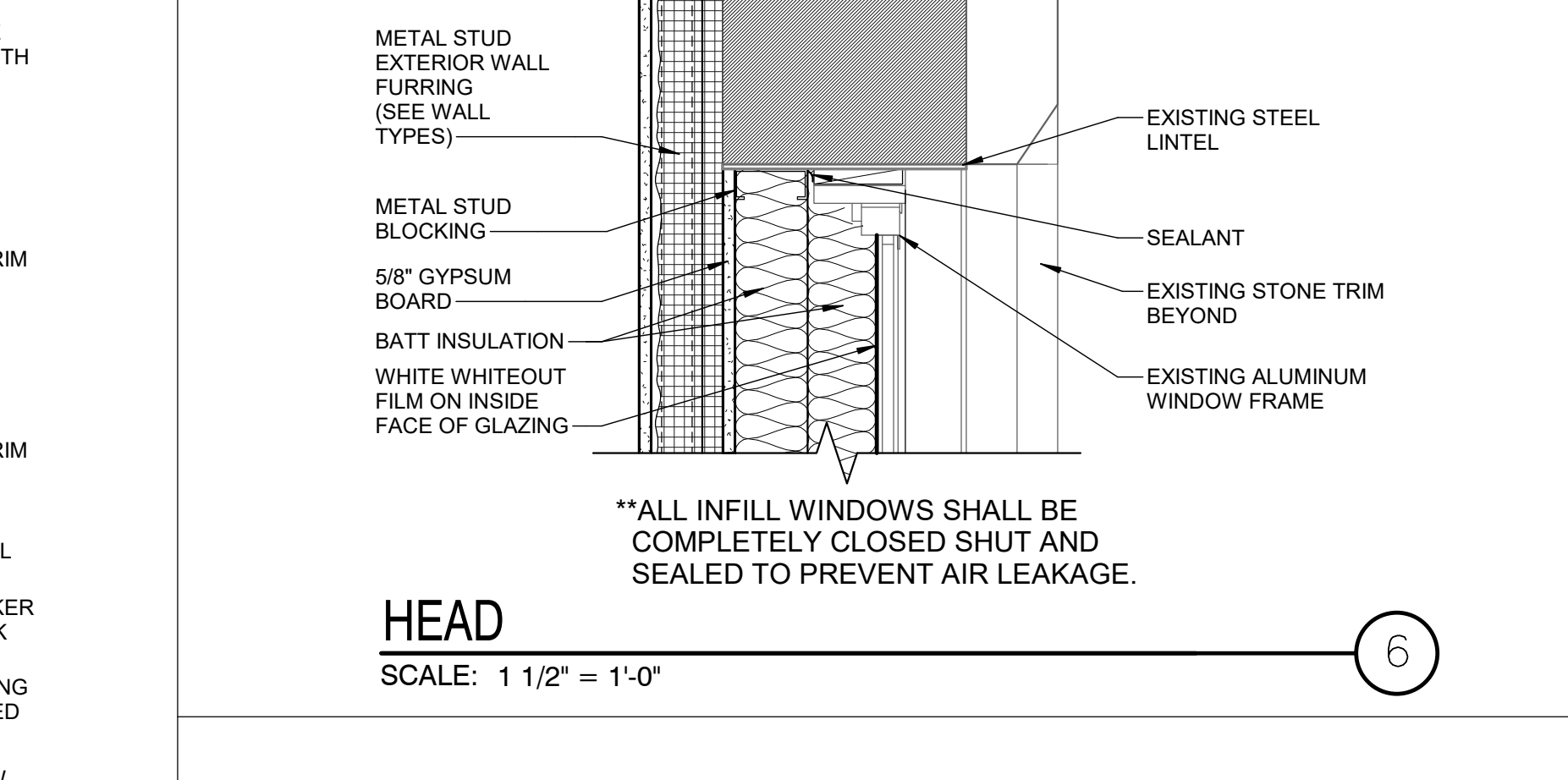
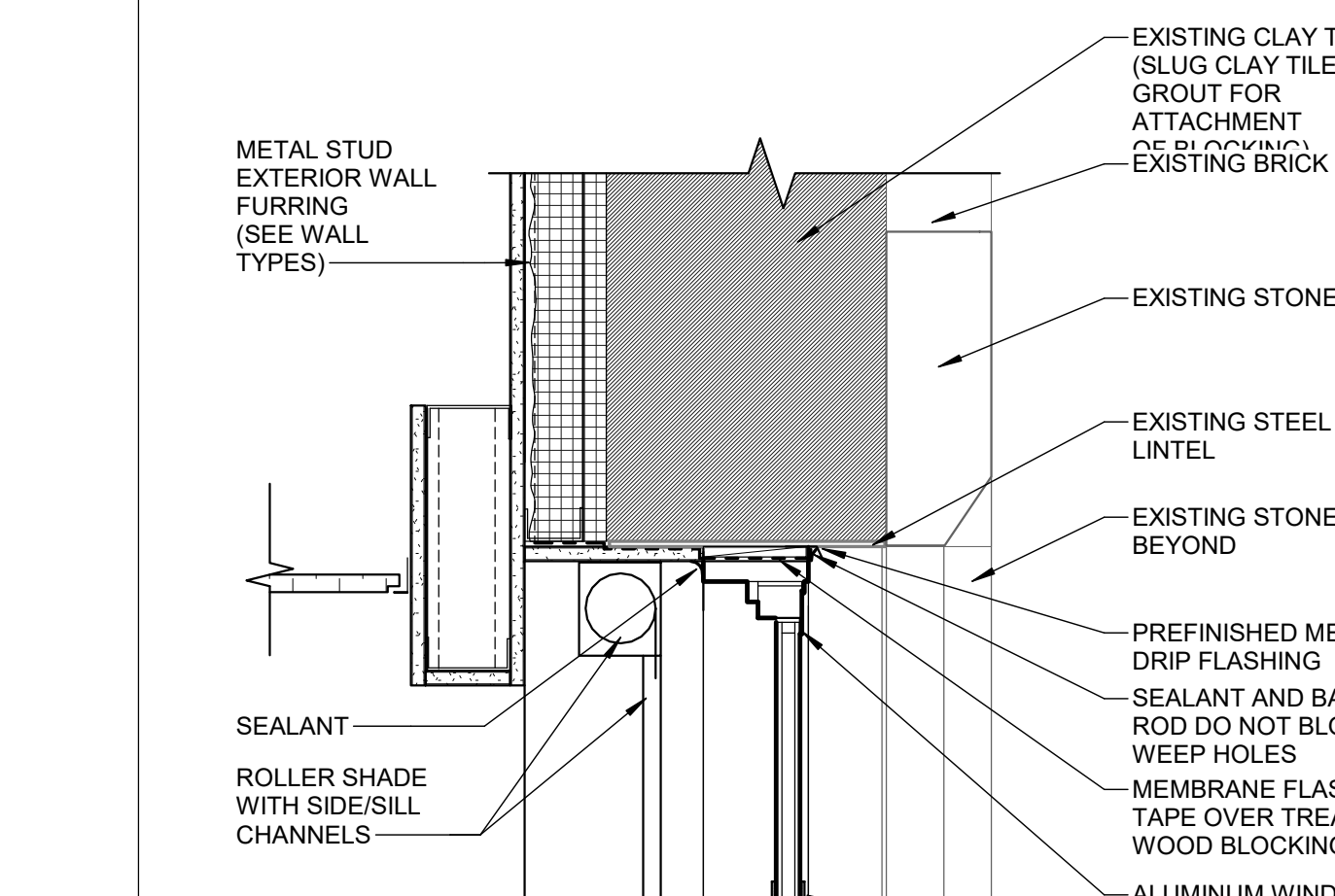
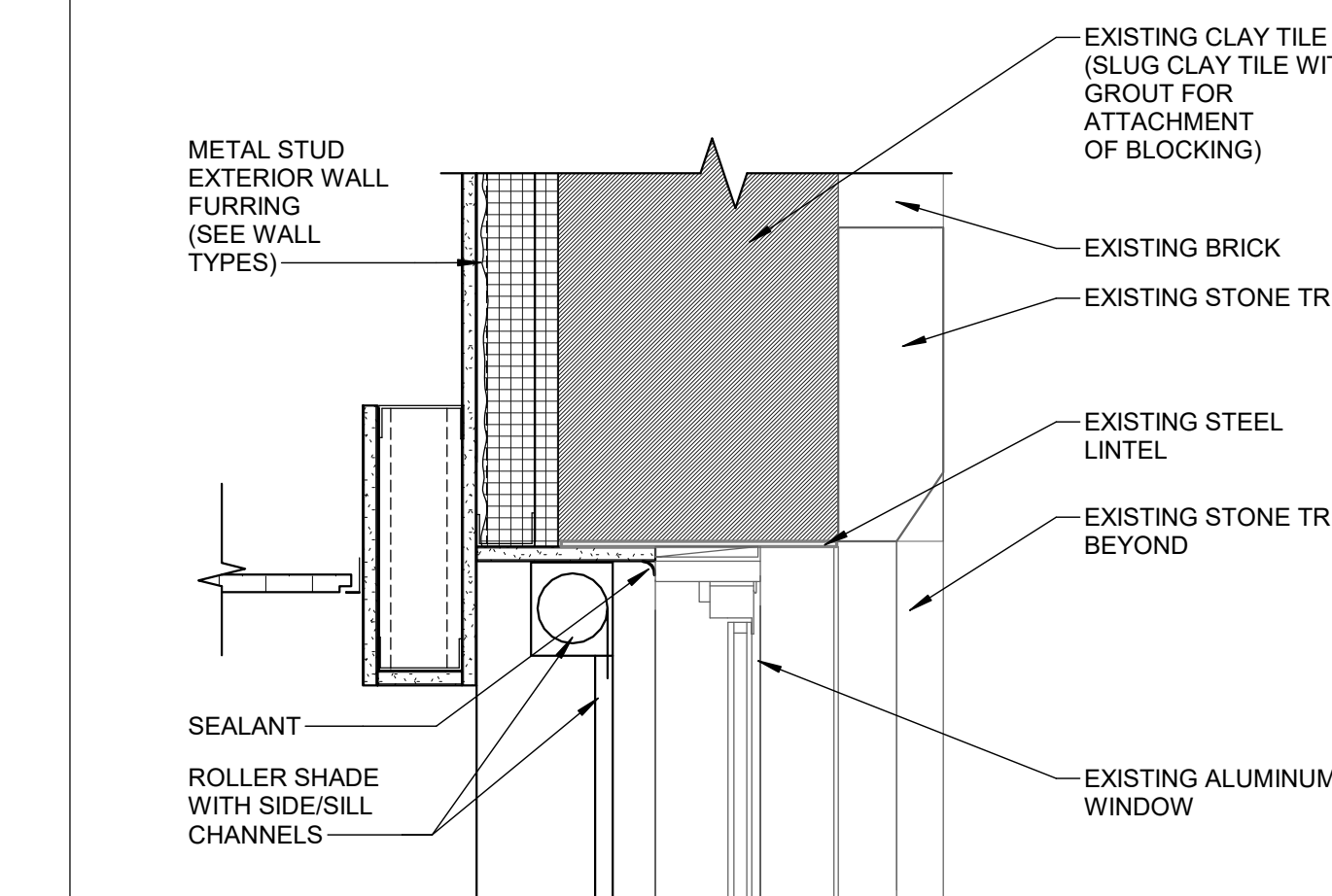
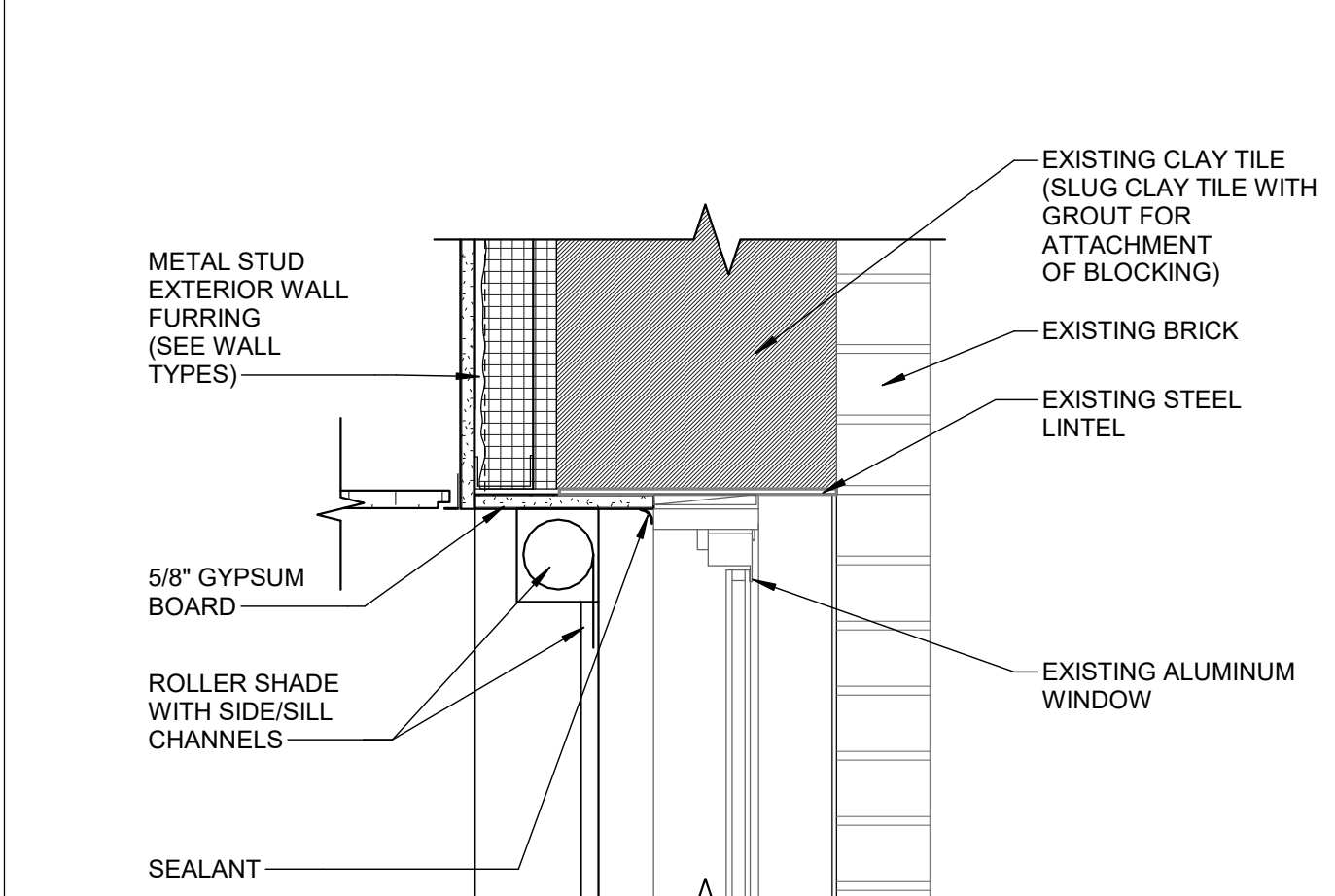
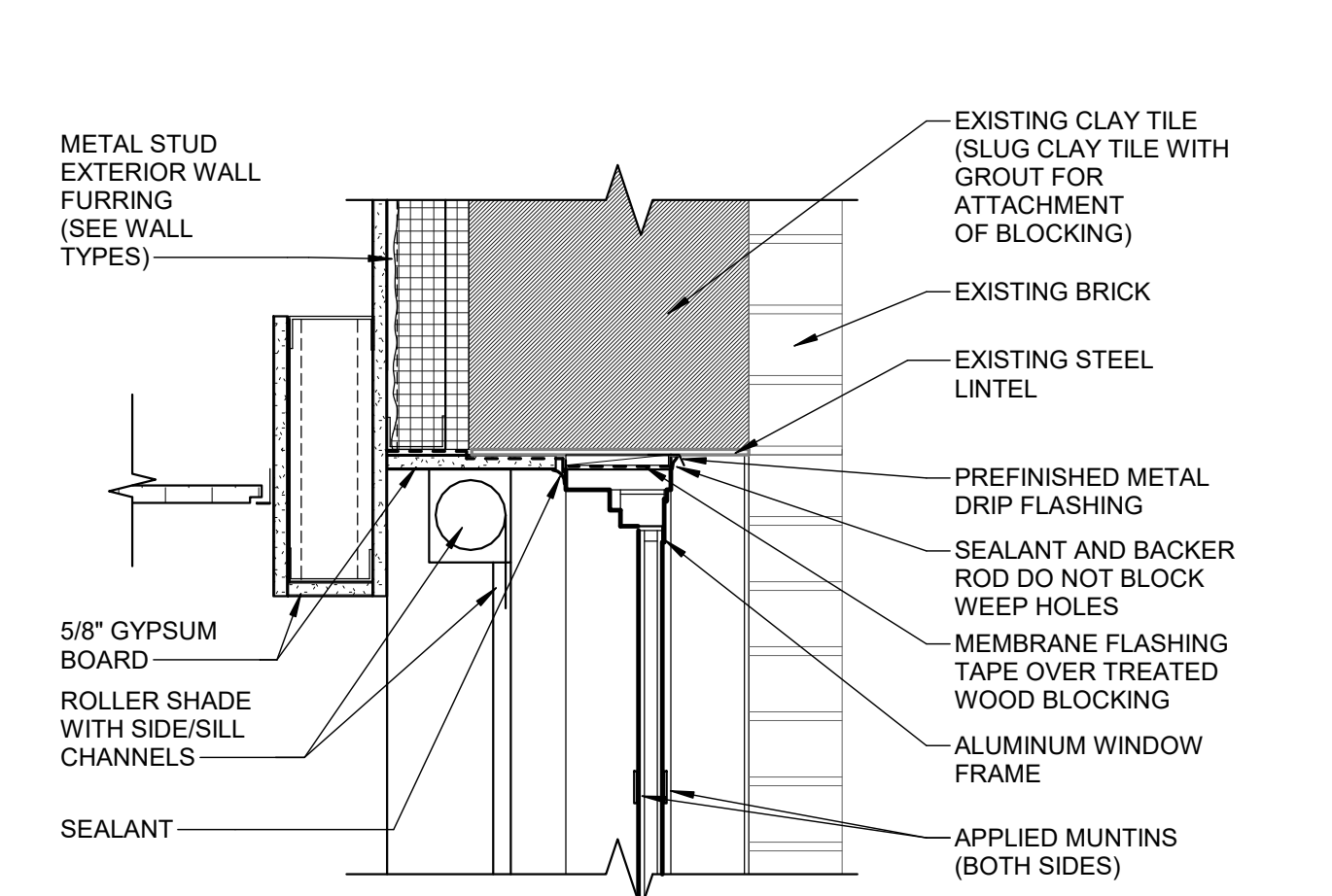
Dwg. 17 of 60

Office of Construction and Facilities Management
 Department of Veterans Affairs

100% CONSTRUCTION DRAWINGS



- KEYNOTES:**
- 1" TINTED LOW-E INSULATED GLASS
 - FACTORY APPLIED FLAT MUNTIN BARS ON #1 AND #4 SURFACE OF INSULATED GLASS UNIT (MATCH EXISTING WINDOWS)
 - REPLACE GLAZING IN EXISTING WINDOW WITH FROSTED, OBTURATED 1" TINTED LOW-E INSULATED GLASS UNIT IN ROOMS 544, 510A, 510A, 510B X 2, AND 510D
 - EXISTING ALUMINUM WINDOW
 - EXISTING STONE TRIM
 - ADD WHITE WHITEOUT FILM ON INSIDE FACE OF GLAZING



100% CONSTRUCTION DRAWINGS

Project Title: V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY
Project Number: 438-15-201
Building Number: 5
Drawing Number: 5-AI503
Dwg. 18 of 60

Location: SIOUX FALLS, SOUTH DAKOTA
Date: OCTOBER 11, 2017
Checked: DGS
Drawn: RTG

Office of Construction and Facilities Management
Department of Veterans Affairs

Revisions:

Revisions:	Date

CONSULTANTS:

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SEAL:

REGISTERED ARCHITECT
REG. NO. 3907
ROBIN J. MCLELLAN
SOUTH DAKOTA

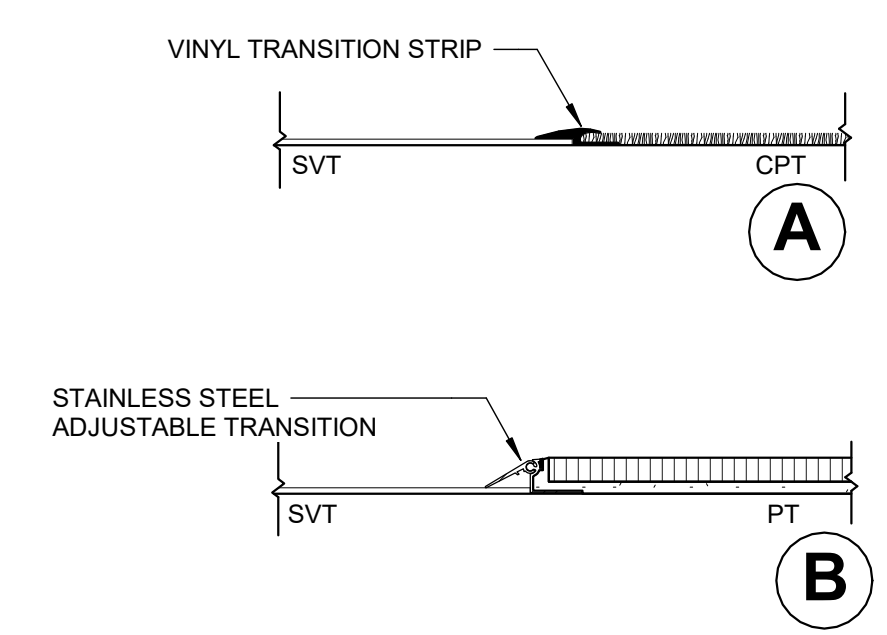
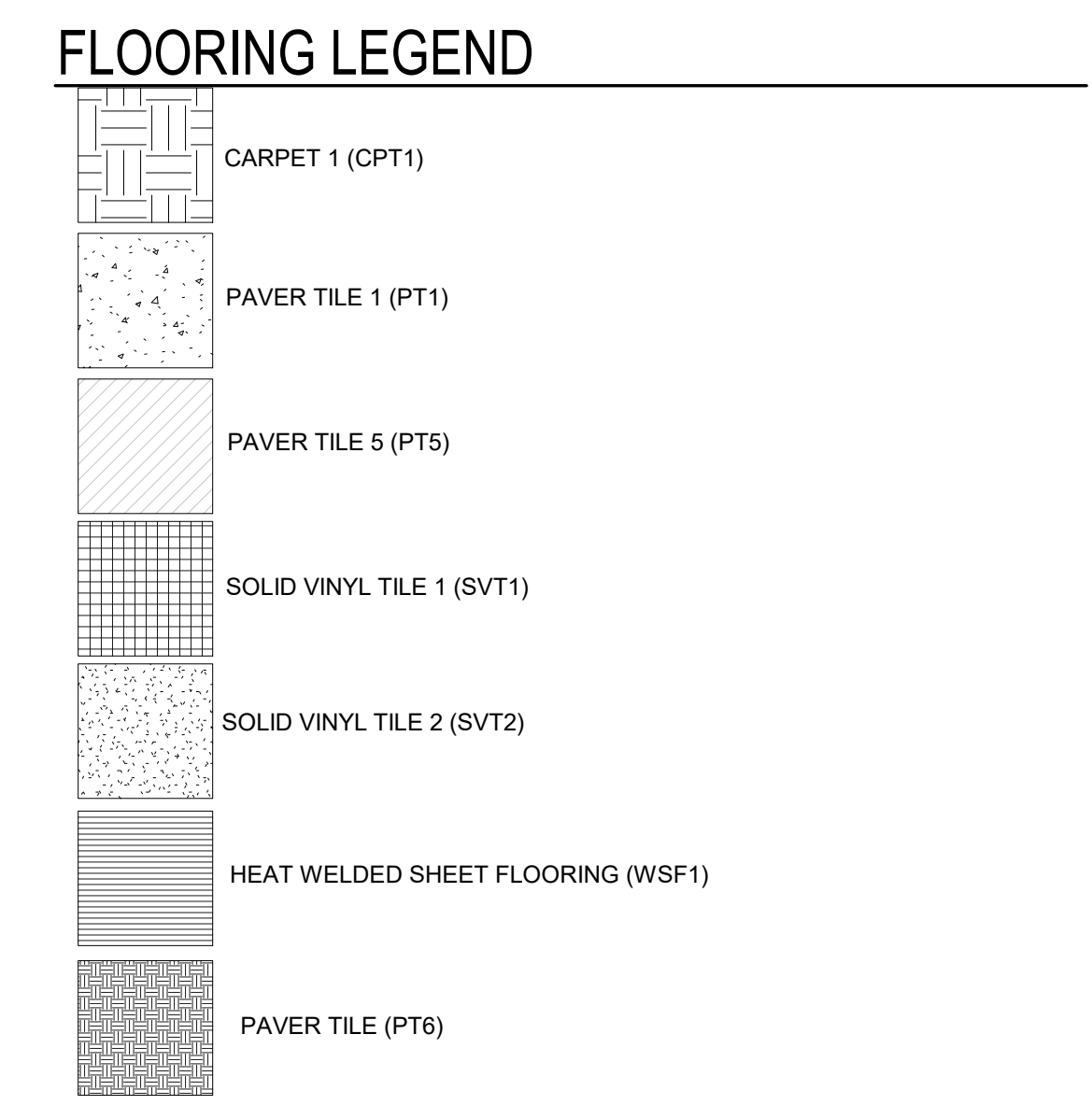
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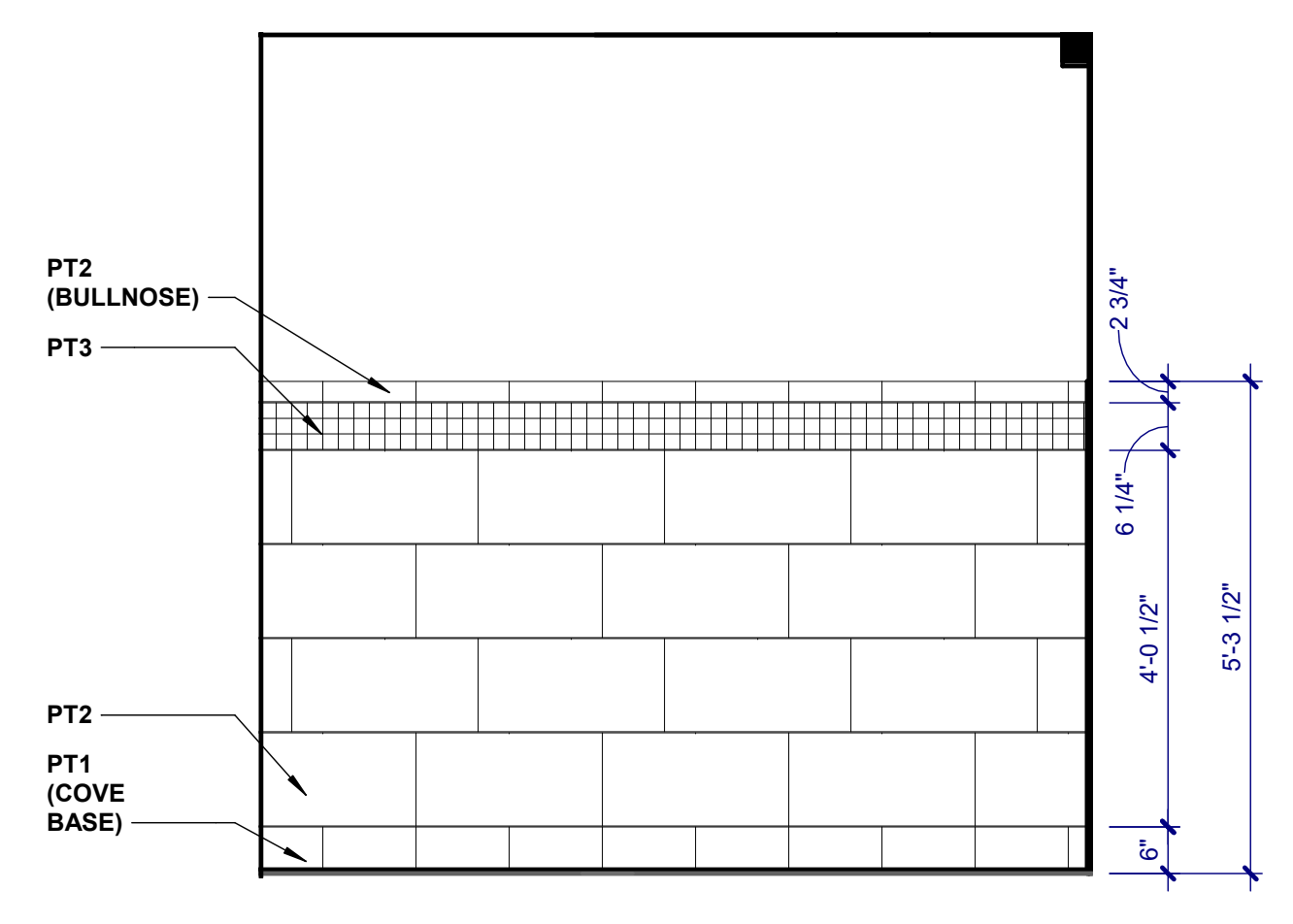
Drawing Title: **WINDOW FRAME ELEVATIONS AND DETAILS**
Approved: Project Director

one foot = one foot
 three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 one quarter inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one eighth inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot

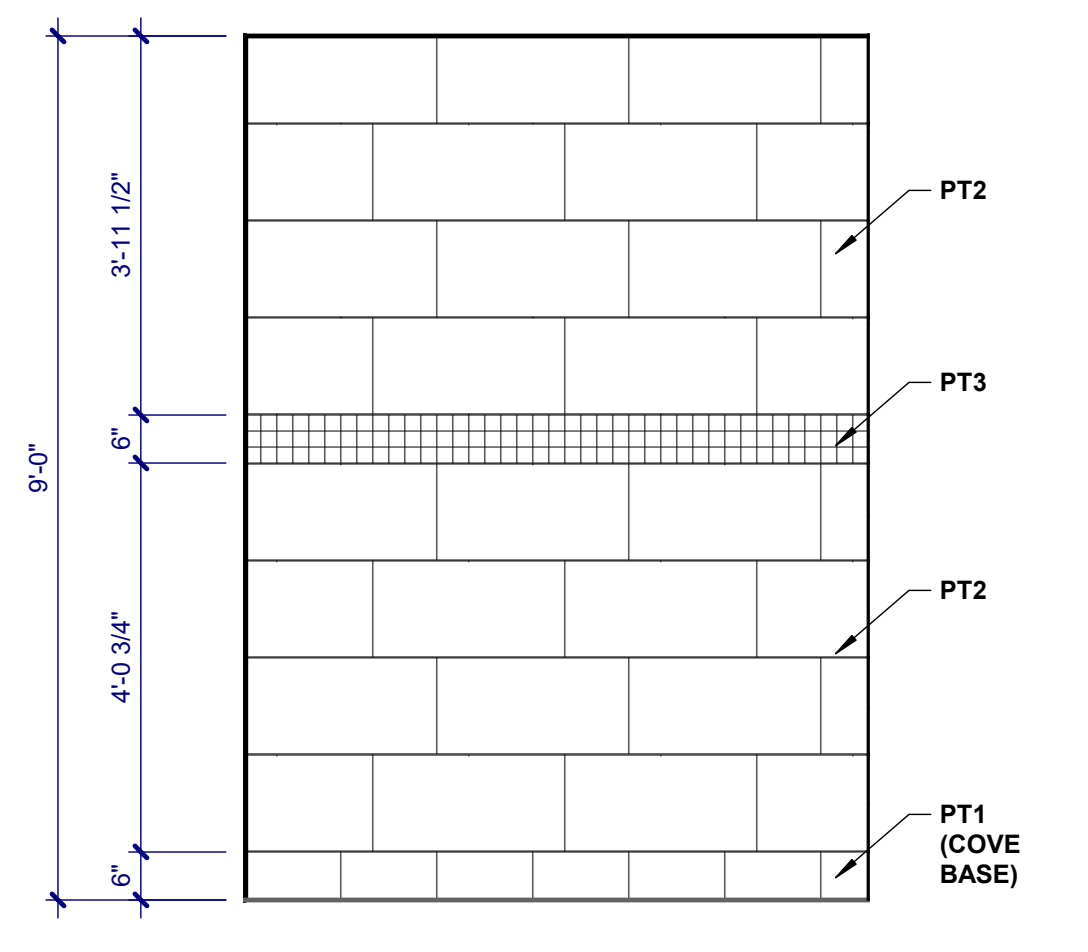
- KEYNOTES:**
- 1 FLOORING TRANSITION (SEE TYPICAL DETAILS)
 - 2 VINYL TREADS (13) AND RISERS (14) INSTALLED ON EXISTING METAL TREADS.
 - 3 VINYL NOSING



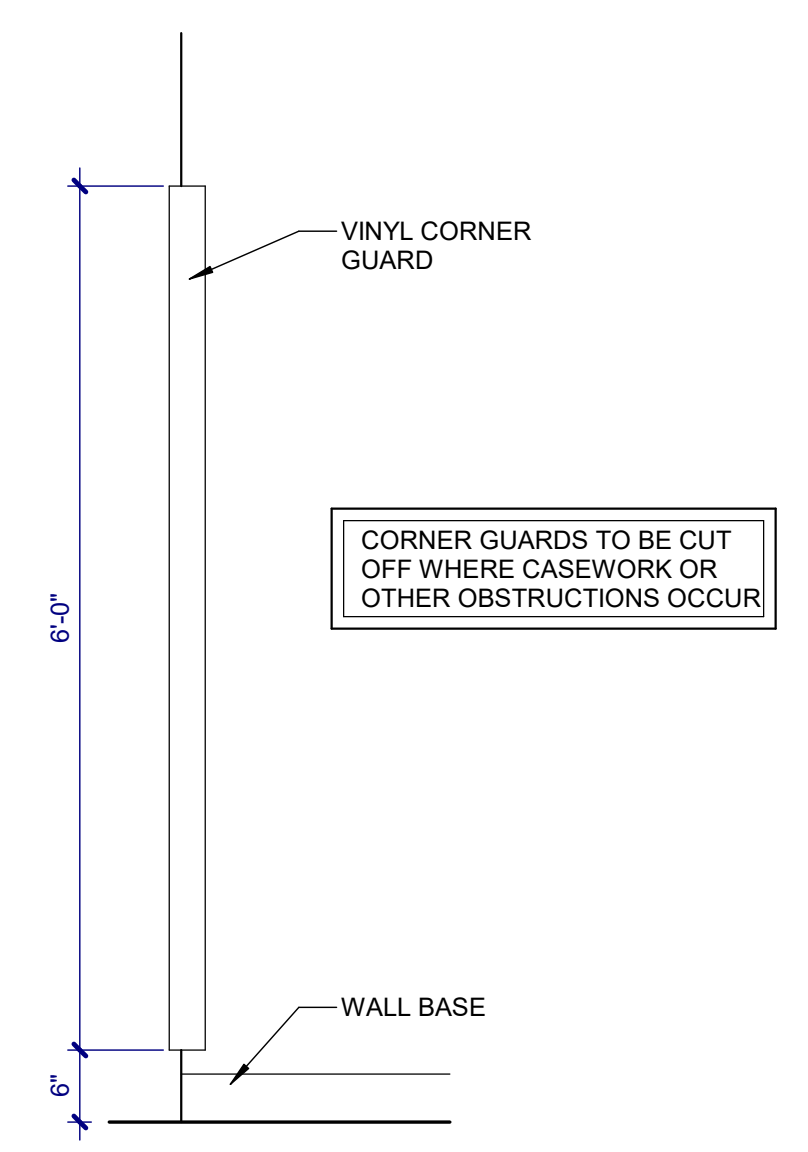
TYPICAL FLOORING TRANSITIONS
 SCALE: 3" = 1'-0"



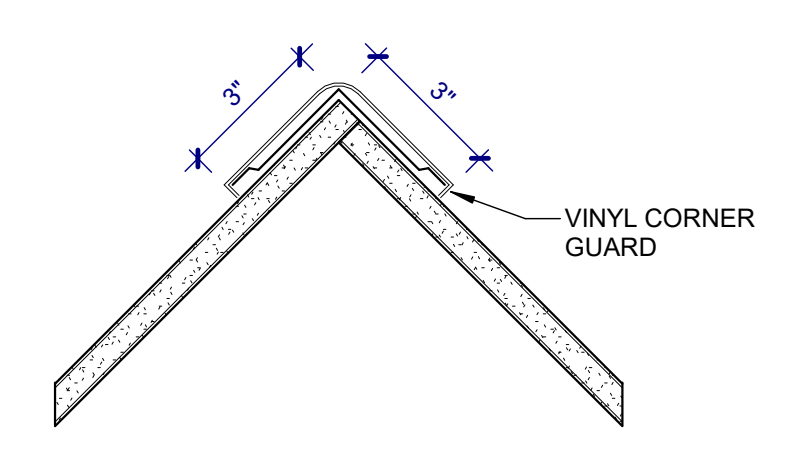
TYPICAL TOILET ROOM WALL TILE
 SCALE: 1/2" = 1'-0"



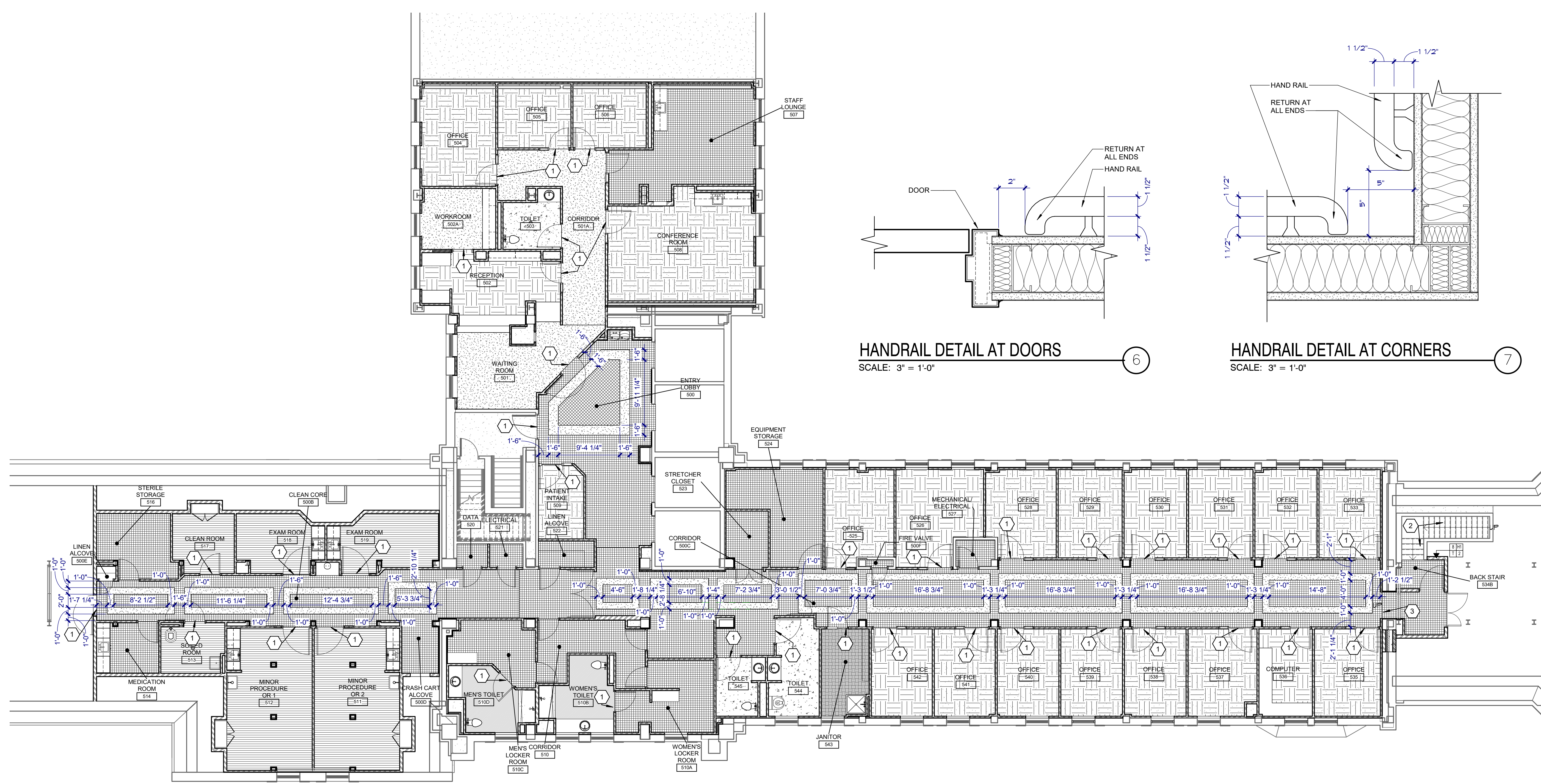
TYPICAL WALL TILE
 SCALE: 1/2" = 1'-0"



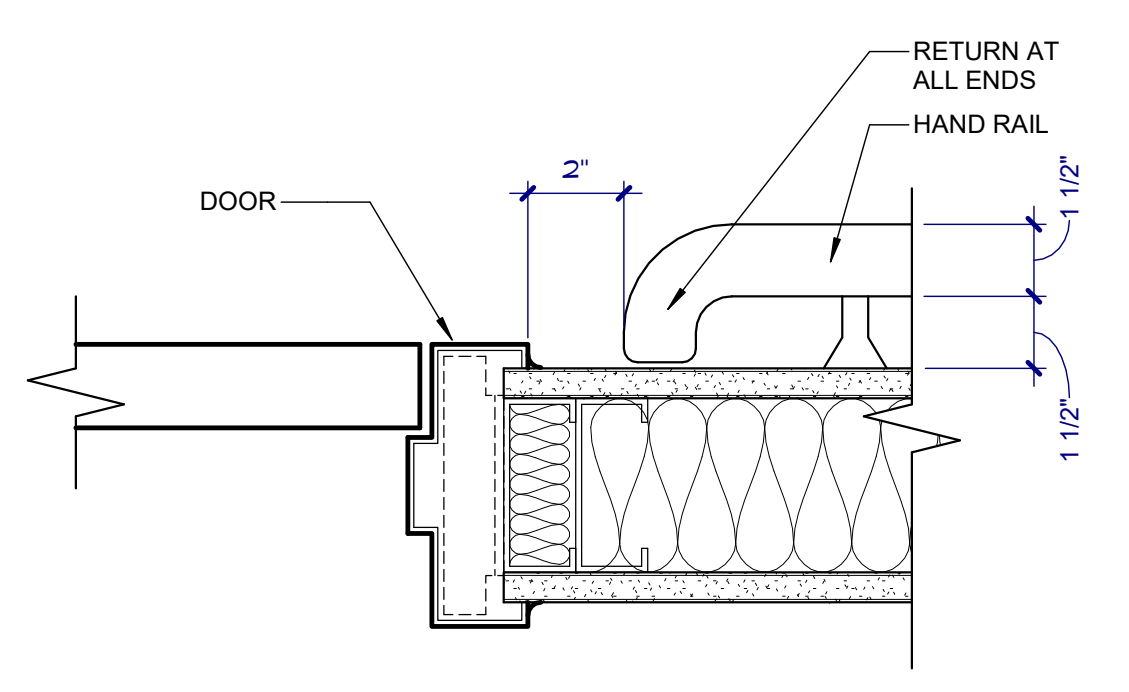
TYPICAL CORNER GUARD ELEVATION
 SCALE: 3/4" = 1'-0"



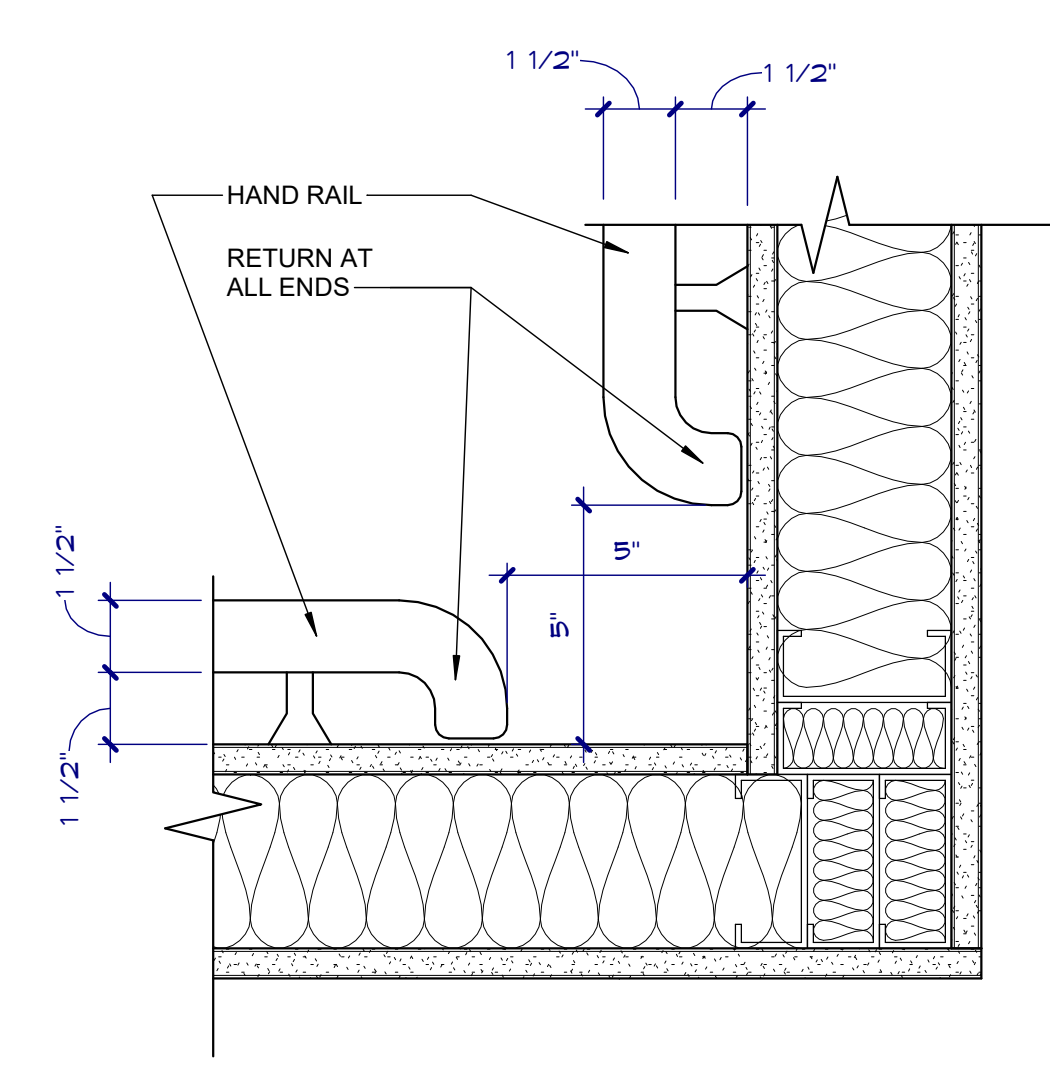
TYPICAL CORNER GUARD DETAIL
 SCALE: 3" = 1'-0"



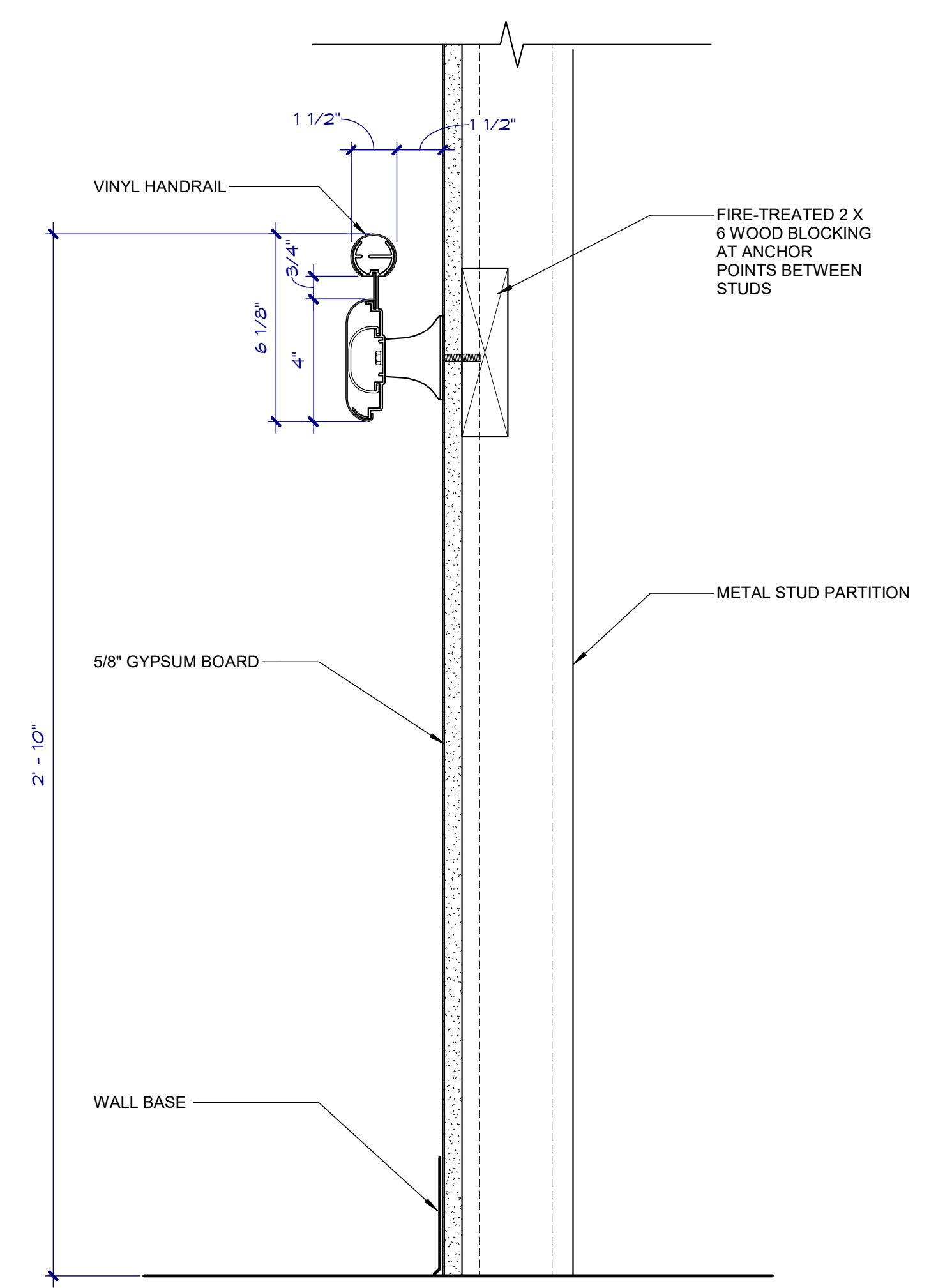
FINISH FLOOR PLAN
 SCALE: 1/8" = 1'-0"



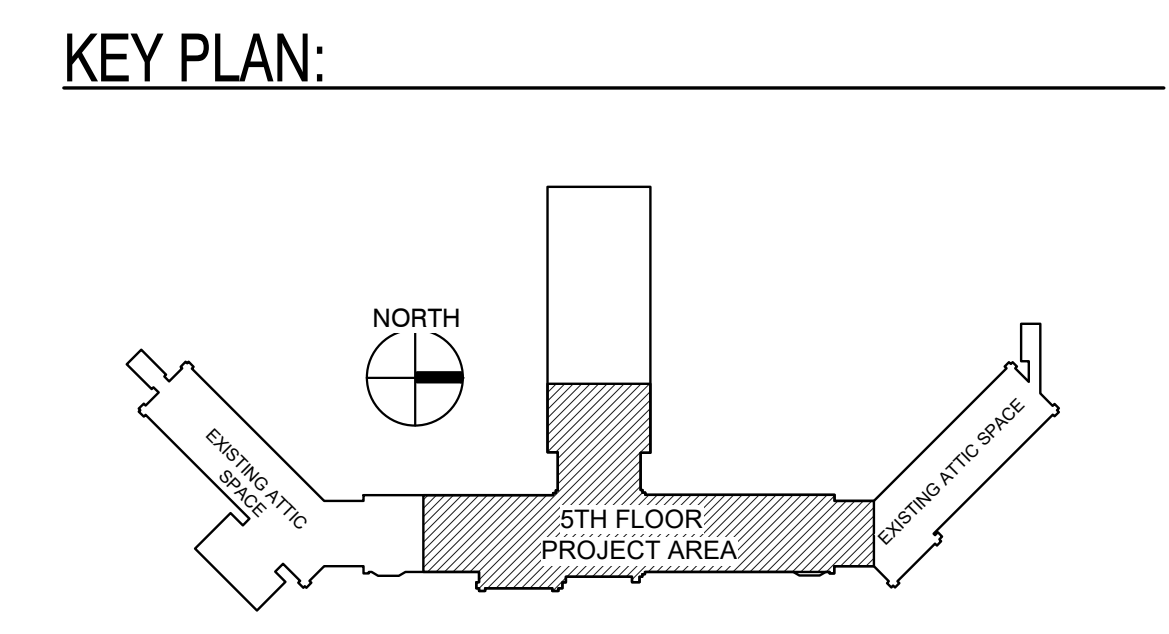
HANDRAIL DETAIL AT DOORS
 SCALE: 3" = 1'-0"



HANDRAIL DETAIL AT CORNERS
 SCALE: 3" = 1'-0"



TYPICAL HANDRAIL DETAIL
 SCALE: 3" = 1'-0"



100% CONSTRUCTION DRAWINGS

Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		Project Number 438-15-201		Office of Construction and Facilities Management
Location SIoux FALLS, SOUTH DAKOTA		Building Number 5		
Date OCTOBER 11, 2017		Checked DGS	Drawn RTG	Drawing Number 5-AF100
Approved: Project Director		Dwg. 19 of 60		

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Drawing Title
FIFTH FLOOR FINISH PLAN

Approved: Project Director

FINISH MATERIAL SCHEDULE

MARK	MATERIAL	COMPONENT	MANUFACTURER	PRODUCT NAME	PRODUCT NO.	SIZE	FINISH	PATTERN	COLOR	COLOR NO.	REMARKS
AT1	ACOUSTICAL CEILING	PANELS	ARMSTRONG	CORTEGA	704A	2'x2'x5/8"		ANGLED TEGULAR	WHITE		
AT1	ACOUSTICAL CEILING	EXPOSED SUSPENSION SYSTEM	ARMSTRONG	PRELUDE		15/16"			WHITE		
AT2	ACOUSTICAL CEILING	PANELS	ARMSTRONG	ULTIMA HEALTH ZONE	1447	2'X2'X1"		BEVELED TEGULAR	WHITE		
AT2	ACOUSTICAL CEILING	EXPOSED SUSPENSION SYSTEM	ARMSTRONG	PRELUDE PLUS XL ALUMINUM		15/16"			WHITE		
CPT1	CARPET TILE		SHAW	PRAIRIE TILE 59525	23201	24" x 24"		BRICK	CHICORY 23201		
CG1	CORNER GUARD		INPRO	STYLE 150BN	0351		3", INSTALL AS INDICATED ON DRAWINGS		RIVER ROCK, VELVET FINISH		
CC1	CUBICLE CURTAIN		INPRO / ARC-COM	JULEP	AC-32886		RAILROADED, INSTALL AT 8" AFF.	WHISPER CUBE TRACK	BEACH #7		FLUSH GRID CLIP AND ALL ACCESSORIES, CE9038 CARRIER
EP1	EPOXY PAINT	MAIN	DIAMOND VOGEL		0232		SATIN/EGGSHELL		FROND		
EP2	EPOXY PAINT	CEILING	DIAMOND VOGEL		0023		FLAT		SHELL TINT		
FRP	FIBERGLASS REINFORCED PLASTIC	MOP SINK SURROUND	KEMILITE/GLASBOARD			4' HIGH	TOP CAP, INSIDE/OUTSIDE CORNERS		WHITE		
HR1	HANDRAIL		INPRO	STYLE 3055	0351		THUMB GRIP INSERT 5037 BRUSHED ALUMINUM		RIVER ROCK, VELVET FINISH		
L1	LOCKER	PLASTIC Z LOCKERS	SCRANTON PRODUCT	Z LOCKERS		18" X 18" X 72"	DOUBLE TIER	SLOPED TOP	TO BE SELECTED		
P1	PAINT	MAIN COLOR	DIAMOND VOGEL		0232		SATIN/EGGSHELL		FROND		
P2	PAINT	ACCENT, CONFERENCE, STAFF	DIAMOND VOGEL		0478		SATIN/EGGSHELL		SINGING IN THE SUN		
P3	PAINT	METAL DOORS AND FRAMES	DIAMOND VOGEL		0213		SATIN/EGGSHELL		COASTAL FOG		
P4	PAINT	EXAM ROOMS	DIAMOND VOGEL		0380		SATIN/EGGSHELL		MIRRORED WILLOW		
P5	PAINT	CEILING	DIAMOND VOGEL		0023		FLAT		SHELL TINT		
P6	PAINT	SOFFITS / BULKHEADS	DIAMOND VOGEL		0231		FLAT		DESERT MIRAGE		
PLAM1	PLASTIC LAMINATE	VERTICAL SURFACES	WILSONART		7935-07				SHAKER CHERRY		
PLAM1A	PLASTIC LAMINATE	VERTICAL SURFACES ACCENT	WILSONART		7953-38				HARVEST MAPLE		
PLAM2	PLASTIC LAMINATE	COUNTERTOPS	WILSONART		4872-60				WESTERN STORM		
PT1	PORCELAIN TILE	FLOOR TILE	CERAMIC TILE WORKS: IRIS	MATRIX		12 X 24 X 1/8" JT.	GROUT: EPOXY, TEC SABLE	1/3 ASHLAR BRICK	TAUPE BLEND		RUN TILE SAME DIRECTION, BASE: 6" X 12" COVE
PT2	PORCELAIN TILE	WALL TILE	CERAMIC TILE WORKS: IRIS	MATRIX		12 X 24 X 1/8" JT.	GROUT: EPOXY, TEC LIGHT SMOKE	1/3 ASHLAR BRICK	CLASSIC TAN		RUN TILE SAME DIRECTION, 3" X 24" BULLNOSE TILE AT WAINSCOT
PT3	PORCELAIN TILE	WALL TILE ACCENT STRIP	CERAMIC TILE WORKS: IRIS	MATRIX		2" X 2" X 1/8" JT.	GROUT: EPOXY, TEC LIGHT SMOKE	GRID	TAUPE BLEND		RUN TILE SAME DIRECTION, SEE ELEVATIONS
PT4	PORCELAIN TILE	ACCENT WALL AT ELEVATOR LOBBY	RAGNO	CALIBRIA		MOSAIC	GROUT: EPOXY, TEC SABLE	RANDOM STRIP	AK35		
PT5	PORCELAIN TILE	SHOWER ROOM FLOOR TILE	CERAMIC TILE WORKS: IRIS	MATRIX		2" X 2" X 1/8" JT.	GROUT: EPOXY, TEC SABLE	GRID	TAUPE BLEND		RUN TILE SAME DIRECTION, BASE: 6" X 12" COVE
PT6	PORCELAIN TILE	JANITOR FLOOR	FLORIM USA	ISTONE		6" X 6" X 1/8" JT.	GROUT: EPOXY, TEC SABLE	GRID	GREY		BULLNOSE BASE 3" X 12"
RS1	ROLLER SHADE	ROLLER SHADE	HUNTER DOUGLAS	FR PREMIUM	SHEERWEAVE	1% OPENNESS	MANUAL, INSIDE MOUNT, FASCIA, TOP, BOTTOM	SHEERWEAVE	TAUPE		
RS1	ROLLER SHADE						COVERS, BLOCKOUT, FABRIC WRAPPED HEM				
RS1	ROLLER SHADE						BAR, SUN CONTROL FABRIC				
S1	SOLID SURFACE	COUNTERTOP	LG HI MACS	VENUS	T001				VENUS		
S2	SOLID SURFACE	INTEGRAL BOWL TOILET ROOMS	LG HI MACS	IVORY WHITE	S29	#1612			IVORY WHITE		
SVT1	SOLID VINYL TILE	MAIN COLOR	TANDUS CENTIVA		CMS 0618 FR	12" X 36" X 3MM	SQUARE EDGE, FROST	STAGGERED	VOLGA		
SVT2	SOLID VINYL TILE	ACCENT COLOR	TANDUS CENTIVA		CMS 0608 FR	12" X 36" X 3MM	SQUARE EDGE, FROST	STAGGERED	MOCHA		
STA	STAINLESS STEEL ACCESSORY	OUTSIDE CORNERS AT ALL TILE	SCHLUTER	ECK-E	ECK-E		STAINLESS STEEL	ALL OUTSIDE CORNERS			
TR1	TRANSITION		JOHNSONITE				VINYL		FAWN		
TRP1	TRANSLUCENT RESIN PANEL	SCREEN WALL PANEL	3 FORM	VARIA		3/8" THICK	PATINA (BOTH SIDES)	FOSSIL LEAF RANDOM			
RB1	VINYL BASE	WALL BASE	JOHNSONITE	COVE BASE	80	4", 1/8" GAUGE	VINYL		FAWN		
RTR	VINYL TREADS AND RISERS	VINYL TREADS AND RISERS	JOHNSONITE	HD SQUARE NOSE	HD	TO FIT	VINYL		FAWN		
W1	VINYL WALLCOVERING		DL COUCH, LANARK	BOARDWALK	R2-BK-13		TYPE 2, 20 OUNCE LINEAR YARD		SKEE-BALL		
WSF1	WELDED SHEET FLOORING	HEAT WELDED	MANNINGTON	BIOSPEC MD	15203	6' ROLL	2.03 MM, WELD ROD: COLOR TO MATCH		SANDRIFT LC		V95 ADHESIVE
WSFB1	WELDED SHEET FLOORING BASE	6" INTEGRAL FLASH COVERED BASE	MANNINGTON	BIOSPEC MD	15203	6' ROLL	TAPERED VINYL TRIM CAP, HEAT WELDED		SANDRIFT LC		V95 ADHESIVE
ST1	WOOD STAIN		OLD MASTERS				SEMI TRANSPARENT		CEDAR		

FIFTH FLOOR ROOM FINISH SCHEDULE

NO.	NAME	FLOOR		WALL				CEILING FINISH	REMARKS
		FINISH	BASE	NORTH	EAST	SOUTH	WEST		
500	ENTRY LOBBY	SVT1.2	RB1	PT4	P1	P1	P1	AT1 / P6	4,6
500B	CLEAN CORE	SVT1.2	RB1	P1	P1	P1	P1	AT1/P6	4,6
500D	CRASH CART ALCOVE	SVT1	RB1	P1	P1	P1	P1	AT1/P6	4,6
500E	LINEN ALCOVE	SVT1	RB1	P1	P1	P1	P1	P5	
500F	FIRE VALVE	SVT1	RB1	P1	P1	P1	P1	P5	
501	WAITING ROOM	SVT2	RB1	W1	W1	W1	W1	AT1 / P6	1,9
502	RECEPTION	CPT1	RB1	P1	P1	P1	P1	AT1 / P6	1,9
502A	WORKROOM	SVT2	RB1	P1	P1	P1	P1	AT1 / P5	1
503	TOILET	PT1	PT1	PT2.3 / EP1	PT2.3 / EP1	PT2.3 / EP1	PT2.3 / EP1	EP2	2, 8, 10
504	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
505	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
506	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
507	STAFF LOUNGE	SVT1	RB1	P1	P1	P2	P2	AT1/P5	1,9
508	CONFERENCE ROOM	CPT1	RB1	P1	P2	P1	P1	AT1/P6	1,9
509	PATIENT INTAKE	CPT1	RB1	P1	P1	P2	P1	P5	9
510A	WOMEN'S LOCKER ROOM	SVT1	RB1	EP1	EP1	EP1	EP1	AT2	
510B	WOMEN'S TOILET	PT5	PT1	PT2.3	PT2.3	PT2.3	PT2.3	EP2	1, 2, 8, 11
510C	MEN'S LOCKER ROOM	SVT1	RB1	EP1	EP1	EP1	EP1	AT2	
510D	MEN'S TOILET	PT5	PT1	PT2.3	PT2.3	PT2.3	PT2.3	EP2	1, 2, 8, 11
511	MINOR PROCEDURE OR 2	WSF1	WSFB1	EP1	EP1	EP1	EP1	EP2	5, 9
512	MINOR PROCEDURE OR 1	WSF1	WSFB1	EP1	EP1	EP1	EP1	EP2	5, 9
513	SOILED ROOM	WSF1	WSFB1	EP1	EP1	EP1 / FRP	EP1 / FRP	AT2 / EP2	3
514	MEDICATION ROOM	SVT1	RB1	P1	P1	P1	P1	AT1	
516	STERILE STORAGE	SVT1	RB1	P1	P1	P1	P1	AT1 / P5	
517	CLEAN ROOM	WSF1	WSFB1	EP1	EP1	EP1	EP1	AT2 / EP2	
518	EXAM ROOM	WSF1	RB1	P1	P1	P4	P4	AT1 / P6	5
519	EXAM ROOM	WSF1	RB1	P1	P1	P4	P4	AT1 / P6	5
520	DATA	SVT1	RB1	P1	P1	P1	P1	-	
521	ELECTRICAL	SVT1	RB1	P1	P1	P1	P1	-	
522	LINEN ALCOVE	SVT1	RB1	P1	P1	P1	P1	P5	
523	STRETCHER CLOSET	SVT1	RB1	P1	P1	P1	P1	AT1	
524	EQUIPMENT STORAGE	SVT1	RB1	P1	P1	P1	P1	AT1	
525	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
526	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
528	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
529	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
530	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
531	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
532	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
533	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
534	STORAGE	SVT1	RB1	P1	P1	P1	P1	P5	
534B	BACK STAIR	SVT1, RTR	RB1	P1	P1	P1	P1	P5	
535	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
536	COMPUTER	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
537	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
538	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
539	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
540	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
541	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
542	OFFICE	CPT1	RB1	P1	P1	P1	P1	AT1	1,9
543	JANITOR	PT6	PT6	P1 / FRP	P1 / FRP	P1	P1	P5	3
544	TOILET	PT1	PT1	PT2.3 / EP1	PT2.3 / EP1	PT2.3 / EP1	PT2.3 / EP1	EP2	2, 8, 10
545	TOILET	PT1	PT1	PT2.3 / EP1	PT2.3 / EP1	PT2.3 / EP1	PT2.3 / EP1	EP2	2, 8, 10

FOURTH FLOOR ROOM FINISH SCHEDULE

NO.	NAME	WALL				CEILING FINISH	REMARKS
		NORTH	EAST	SOUTH	WEST		
401	CHECK-IN						
402	OFFICE						
403	WAITING ROOM						
404	VISION						
404A	VISION						
405	EXAM						
406	EXAM						
408	AUDIOLOGY						
435	EXAM						
435A	EXAM						
436	RESTROOM						
437	EXAM						
438	EXAM						
439	AUDIOLOGY LAB						
439A	AUDIO BOOTH						
439B	AUDIO BOOTH						
441	STAIR						
443	AUDITORIUM						
443A	OFFICE						
443AA	STORAGE						
443B	OFFICE						
443D	OFFICE						
443K	STORAGE	EXIST.	PAINT MATCH EXIST.	EXIST.	EXIST.	EXIST.	7
443O	OFFICE						
443V	MULTIPURPOSE						
443W	STORAGE						
443X	OFFICE						
443Y	OFFICE						
443Z	STORAGE						
445	WAITING ROOM						
446	OFFICE						
446A	MECHANICAL						
447	EXAM						
447A	EXAM						
448	WOMENS						
449	MENS						
450	EXAM						
451	EXAM						
477	SAME DAY SURGERY						
477A	RECOVERY SPACE						
477B	RECOVERY SPACE						
477C	RECOVERY SPACE						

FOURTH FLOOR ROOM FINISH SCHEDULE

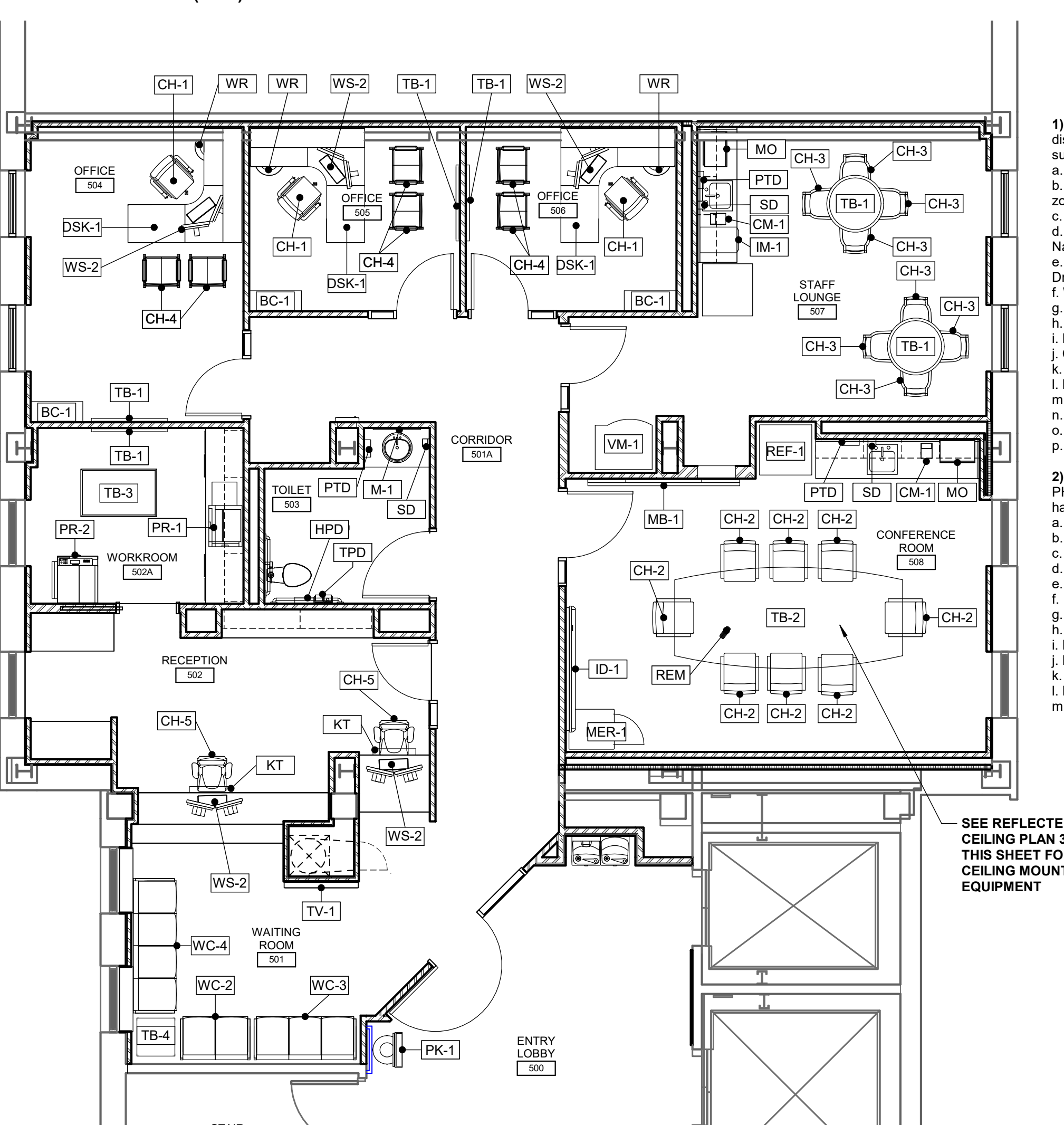
NO.	NAME	WALL				CEILING FINISH	REMARKS
		NORTH	EAST	SOUTH	WEST		
477D	RECOVERY SPACE						
477E	RECOVERY SPACE						
477F	RECOVERY SPACE						

TYPE	DESCRIPTION	MANUFACTURER	MODEL NUMBER	OWNER FURNISHED CODE	COMMENTS
AUD	OVERHEAD AUDIENCE MICROPHONE SYSTEM	TO BE SELECTED	XXX-XXX-XXX	VV	SEE REQUIRED SALIENT CHARACTERISTICS FOR MIC ON THIS PAGE
CAM-1	VEEL SYSTEM CAMERA	CISCO	CTS-PHD-1080P12 X	VV	SEE REQUIRED SALIENT CHARACTERISTICS FOR CAM-1 ON THIS PAGE
CC-1	CRASH CART	TO BE SELECTED	XXX-XXX-XXX	VV	
CM-1	10 CUP COFFEE MAKER	TO BE SELECTED	XXX-XXX-XXX	VV	
ES-1	BLOOD PRESSURE AND EXAM EQUIPMENT	TO BE SELECTED	XXX-XXX-XXX	VV	
ET-1	EXAM TABLE	TO BE SELECTED	XXX-XXX-XXX	VV	
GC-1	STRETCHER	TO BE SELECTED	XXX-XXX-XXX	VV	
GD	GAS CYLINDER STORAGE	TO BE SELECTED	XXX-XXX-XXX	VV	
GS	GLOVE DISPENSER	TO BE SELECTED	XXX-XXX-XXX	VV	
HC-1	MOBILE HOUSEKEEPING CART	TO BE SELECTED	XXX-XXX-XXX	VV	
HPD	HYGIENE PRODUCT DISPOSAL	TO BE SELECTED	XXX-XXX-XXX	VV	
ID-1	85" DIAGONAL INTERACTIVE DISPLAY	SMART TECHNOLOGIES	8085I	VV	SEE REQUIRED SALIENT CHARACTERISTICS FOR ID-1 ON THIS PAGE
IM-1	ICE MACHINE / DISPENSER	SCOTSMAN	HID312 MERIDIAN	VV	SEE PLUMBING DRAWINGS FOR CONNECTIONS
KT	KEYBOARD TRAY	TO BE SELECTED	XXX-XXX-XXX	VC	
L-1	LOCKER	PER SPECIFICATIONS	PER SPECIFICATIONS	CC	SEE INTERIOR ELEVATIONS FOR SIZE
M-1	MIRROR	PER SPECIFICATIONS	PER SPECIFICATIONS	CC	SEE INTERIOR ELEVATIONS FOR SIZE AND MOUNTING HEIGHTS
M-2	MIRROR	PER SPECIFICATIONS	PER SPECIFICATIONS	CC	SEE INTERIOR ELEVATIONS FOR SIZE AND MOUNTING HEIGHTS
MB-1	MARKERBOARD WITH SLIDING PANELS	TO BE SELECTED	XXX-XXX-XXX	VC	
MC-1	MOBILE CART	TO BE SELECTED	XXX-XXX-XXX	VV	
MC-2	MOBILE CART	TO BE SELECTED	XXX-XXX-XXX	VV	
MC-3	MOBILE WIRE SHELVING	TO BE SELECTED	XXX-XXX-XXX	VV	
MCM	MOBILE CARDIAC MONITOR ON CART	TO BE SELECTED	XXX-XXX-XXX	VV	
MED-1	MEDICATION DISPENSING SYSTEM	TO BE SELECTED	XXX-XXX-XXX	VV	
MED-2	SECURE MEDICATION STORAGE/DISPENSING "OMNICELL"	TO BE SELECTED	XXX-XXX-XXX	VV	
MER-1	MOBILE AUDIO VISUAL EQUIPMENT RACK	TO BE SELECTED	XXX-XXX-XXX	VV	SEE REQUIRED SALIENT CHARACTERISTICS FOR MER-1 ON THIS PAGE
MH-1	MOP AND BROOM HOLDER	PER SPECIFICATIONS	PER SPECIFICATIONS	CC	SEE INTERIOR ELEVATIONS FOR SIZE AND MOUNTING HEIGHTS
MH-2	MOP AND BROOM HOLDER	PER SPECIFICATIONS	PER SPECIFICATIONS	CC	SEE INTERIOR ELEVATIONS FOR SIZE AND MOUNTING HEIGHTS
MIC	MEDICAL INSTRUMENT CART	TO BE SELECTED	XXX-XXX-XXX	VV	
MO	MICROWAVE OVEN	TO BE SELECTED	XXX-XXX-XXX	VV	
MPTT	MINOR PROCEDURE TREATMENT TABLE	TO BE SELECTED	XXX-XXX-XXX	VV	
ORL-1	OPERATING ROOM BOOM LIGHT	SKYTRON	SALVAGED FROM EXISTING OPERATING ROOM	VC	SALVAGED FROM EXISTING OPERATING ROOMS SEE REFLECTED CEILING PLAN AND ELECTRICAL DRAWINGS FOR LOCATION
PK-1	PATIENT CHECK-IN KIOSK	VECNIA	MFG-10201	VV	
PLS-1	CEILING MOUNTED LIFT SYSTEM	HILLROM LKORALL	SINGLE OVERHEAD LIFT	CC	550 LB CAPACITY TRAVERSE RAIL LIFT SYSTEM
PLS-2	CEILING MOUNTED LIFT SYSTEM	HILLROM LKORALL	TWIN OVERHEAD LIFT	CC	1100 LB CAPACITY TRAVERSE RAIL LIFT SYSTEM
PR-1	COLOR LASER PRINTER	TO BE SELECTED	XXX-XXX-XXX	VV	
PR-2	COPY/PRINT/LASER/FAX MACHINE	TO BE SELECTED	XXX-XXX-XXX	VV	
PTD	PAPER TOWEL DISPENSER	TO BE SELECTED	XXX-XXX-XXX	VC	
REF-1	REFRIGERATOR	TO BE SELECTED	XXX-XXX-XXX	VV	
REM	AUDIO VISUAL REMOTE CONTROL	TO BE SELECTED	XXX-XXX-XXX	VV	SEE REQUIRED SALIENT CHARACTERISTICS FOR REM ON THIS PAGE
RMP-1	PORTABLE RAMP	TO BE SELECTED	PER SPECIFICATIONS	CC	10" HIGH X 42" WIDE X 60" LONG
SC	SHARPS DISPOSAL CONTAINER	TO BE SELECTED	XXX-XXX-XXX	VV	
SC-1	SHOWER ROD AND CURTAIN	PER SPECIFICATIONS	PER SPECIFICATIONS	CC	SHOWER CURTAIN SUPPLIED BY VA, SHOWER ROD BY CONTRACTOR
SCA	PATIENT MEDICAL SCALE	TO BE SELECTED	XXX-XXX-XXX	VV	
SD	SOAP DISPENSER	TO BE SELECTED	XXX-XXX-XXX	VC	
SR-1	WIRE STORAGE RACK 60" X 18"	TO BE SELECTED	XXX-XXX-XXX	VV	
SR-2	WIRE STORAGE RACK 48" X 18"	TO BE SELECTED	XXX-XXX-XXX	VV	
SS	ADA SHOWER SEAT	PER SPECIFICATIONS	PER SPECIFICATIONS	CC	SEE DETAILS FOR MOUNTING HEIGHT
TB-1	BULLETIN TACK BOARD	TO BE SELECTED	XXX-XXX-XXX	VV	
TPD	TOILET PAPER DISPENSER	TO BE SELECTED	XXX-XXX-XXX	VC	
TV-1	43" WALL MOUNTED TELEVISION	TO BE SELECTED	XXX-XXX-XXX	VV	
UC-1	UTILITY CART	TO BE SELECTED	XXX-XXX-XXX	VV	
VM-1	VENDING MACHINE	TO BE SELECTED	XXX-XXX-XXX	VV	
WC	WALL CLOCK	TO BE SELECTED	XXX-XXX-XXX	VC	
XRV	X-RAY VIEWER	TO BE SELECTED	XXX-XXX-XXX	VV	

** COORDINATE ALL QUANTITIES WITH DRAWINGS AND AS DIRECTED BY THE VA CONTRACTING OFFICERS REPRESENTATIVE (COR)

TYPE	DESCRIPTION	MANUFACTURER	MODEL NUMBER	OWNER FURNISHED CODE	COMMENTS
ART-1	HISTORICAL CARTOUCHE ARTWORK	NA	SALVAGED	VC	HEAVY CONCRETE CARTOUCHE WILL REQUIRE ADDITIONAL BLOCKING FOR SUPPORT
BC-1	BOOKCASE	TO BE SELECTED	XXX-XXX-XXX	VV	
CH-1	OFFICE CHAIR	TO BE SELECTED	XXX-XXX-XXX	VV	
CH-2	CONFERENCE CHAIR	TO BE SELECTED	XXX-XXX-XXX	VV	
CH-3	DINING CHAIR	TO BE SELECTED	XXX-XXX-XXX	VV	
CH-4	OFFICE SIDE CHAIR	TO BE SELECTED	XXX-XXX-XXX	VV	
CH-5	RECEPTION DESK CHAIR	TO BE SELECTED	XXX-XXX-XXX	VV	
DSK-1	MODULAR WORK STATION OFFICE	TO BE SELECTED	XXX-XXX-XXX	VV	
DSK-2	INTAKE DESK	TO BE SELECTED	XXX-XXX-XXX	VV	
DSK-3	MODULAR WORK STATION EXAM	TO BE SELECTED	XXX-XXX-XXX	VV	

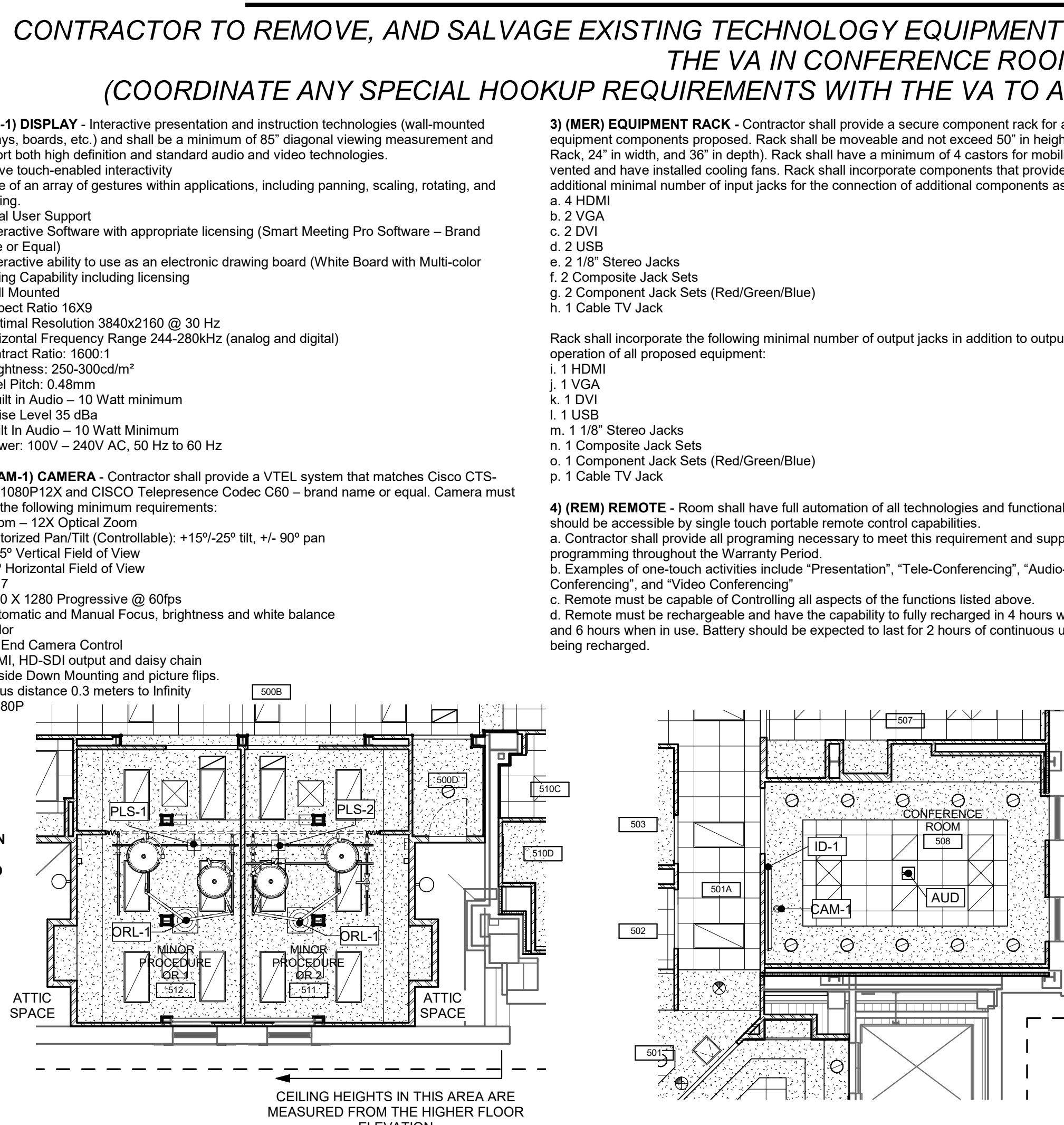
** COORDINATE ALL QUANTITIES WITH DRAWINGS AND AS DIRECTED BY THE VA CONTRACTING OFFICERS REPRESENTATIVE (COR)



EQUIPMENT FLOOR PLAN SCALE: 3/16" = 1'-0"

TYPE	DESCRIPTION	MANUFACTURER	MODEL NUMBER	OWNER FURNISHED CODE	COMMENTS
LH-1	MOBILE LINEN HAMPER	TO BE SELECTED	XXX-XXX-XXX	VV	
ST	EXAM STOOL	TO BE SELECTED	XXX-XXX-XXX	VV	
TB-1	36" ROUND TABLE	TO BE SELECTED	XXX-XXX-XXX	VV	
TB-2	CONFERENCE TABLE	TO BE SELECTED	XXX-XXX-XXX	VV	
TB-3	30" X 48" TABLE	TO BE SELECTED	XXX-XXX-XXX	VV	
TB-4	WAITING ROOM SIDE TABLE	TO BE SELECTED	XXX-XXX-XXX	VV	
WC	FOLD-UP WHEEL CHAIR	TO BE SELECTED	XXX-XXX-XXX	VV	
WC-2	WAITING ROOM CHAIR DOUBLE	TO BE SELECTED	XXX-XXX-XXX	VV	
WC-3	WAITING ROOM CHAIR TRIPLE	TO BE SELECTED	XXX-XXX-XXX	VV	
WC-4	WAITING ROOM CHAIR QUAD	TO BE SELECTED	XXX-XXX-XXX	VV	
WR	WASTEBASKET	TO BE SELECTED	XXX-XXX-XXX	VV	
WS-2	COMPUTER WORKSTATION	TO BE SELECTED	XXX-XXX-XXX	VV	

** COORDINATE ALL QUANTITIES WITH DRAWINGS AND AS DIRECTED BY THE VA CONTRACTING OFFICERS REPRESENTATIVE (COR)



REFLECTED CEILING PLAN SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- ALL FURNITURE AND EQUIPMENT SHOWN ON THIS SHEET IS FOR CONTRACTORS GENERAL INFORMATION.
- PROVIDE BLOCKING AND BACKING AS REQUIRED FOR ALL FURNITURE AND EQUIPMENT SHOWN. SOME LOCATIONS MAY NOT BE INDICATED ON THE DRAWINGS. CONTRACTOR TO COORDINATE WITH ALL TRADES AND WITH VA CONTRACTING OFFICERS REPRESENTATIVE (COR) REGARDING ALL LOCATIONS FOR INSTALLATION OF BACKING.
- COORDINATE ALL UTILITIES AND CONNECTION LOCATIONS WITH EQUIPMENT MANUFACTURER.
- CONTRACTOR TO COORDINATE ALL QUANTITIES WITH THE DRAWINGS AND WITH THE VA CONTRACTING OFFICERS REPRESENTATIVE (COR).

SALIENT CHARACTERISTICS FOR AUDIO VISUAL IN CONFERENCE ROOM 508:

CONTRACTOR TO REMOVE, AND SALVAGE EXISTING TECHNOLOGY EQUIPMENT IN CONFERENCE ROOM 506C FOR REINSTALLATION BY THE VA IN CONFERENCE ROOM 508.

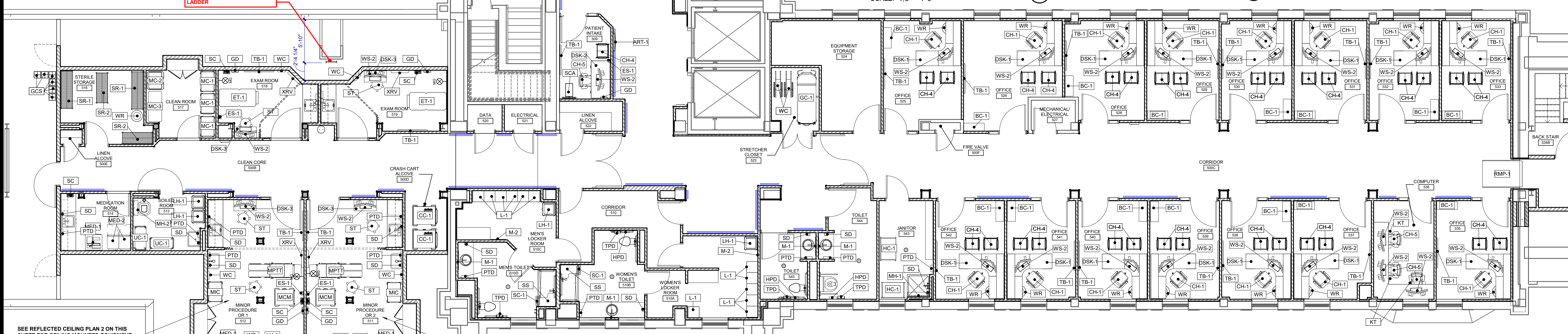
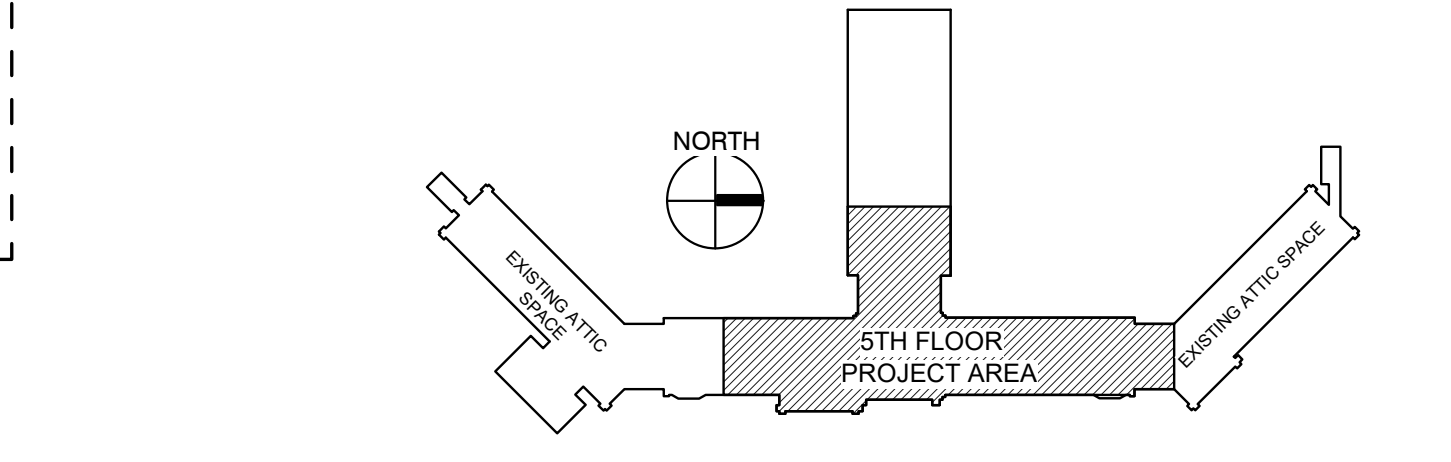
(COORDINATE ANY SPECIAL HOOKUP REQUIREMENTS WITH THE VA TO ALLOW FOR A COMPLETE FUNCTIONING SYSTEM)

- ID-1 DISPLAY** - Interactive presentation and instruction technologies (wall-mounted displays, boards, etc.) and shall be a minimum of 85" diagonal viewing measurement and support both high definition and standard audio and video technologies.
 - Have touch-enabled interactivity
 - Use of an array of gestures within applications, including panning, scaling, rotating, and zooming
 - Dual User Support
 - Interactive Software with appropriate licensing (Smart Meeting Pro Software - Brand Name or Equal)
 - Interactive ability to use as an electronic drawing board (White Board with Multi-color Drawing Capability including licensing)
 - Wall Mounted
 - Aspect Ratio 16:9
 - Optimal Resolution 3840x2160 @ 30 Hz
 - Horizontal Frequency Range 244-280kHz (analog and digital)
 - Contract Ratio: 1800:1
 - Brightness: 250-300cd/m²
 - Pixel Pitch: 0.48mm
 - Built in Audio - 10 Watt minimum
 - Noise Level: 55 db
 - Built In Audio - 10 Watt Minimum
 - Power: 100V - 240V AC, 50 Hz to 60 Hz
- CAM-1 CAMERA** - Contractor shall provide a VTEL system that matches Cisco CTS-PHD-1080P12X and CISCO Telepresence Codec C60 - brand name or equal. Camera must have the following minimum requirements:
 - Zoom - 12X Optical Zoom
 - Motorized Pan/Tilt (Controllable) - +15/-25° tilt, +/- 90° pan
 - 43.8" Vertical Field of View
 - 7.2" Horizontal Field of View
 - F1.7
 - 1920 X 1280 Progressive @ 60fps
 - Automatic and Manual Focus, brightness and white balance
 - Color
 - Far End Camera Control
 - HDMI, HD-SDI output and daisy chain
 - Upside Down Mounting and picture flips
 - Focus distance 0.3 meters to Infinity
 - 1080P
- MER EQUIPMENT RACK** - Contractor shall provide a secure component rack for all media equipment components proposed. Rack shall be moveable and not exceed 50" in height (Floor to Top of Rack, 24" in width, and 36" in depth). Rack shall have a minimum of 4 castors for mobility. Rack shall be ventilated and have installed cooling fans. Rack shall incorporate components that provide the following additional minimal number of input jacks for the connection of additional components as necessary:
 - 4 HDMI
 - 2 VGA
 - 2 DVI
 - 2 USB
 - 2 1/8" Stereo Jacks
 - 2 Composite Jack Sets
 - 2 Component Jack Sets (Red/Green/Blue)
 - 1 Cable TV Jack
 Rack shall incorporate the following minimal number of output jacks in addition to outputs required for operation of all proposed equipment:
 - 1 HDMI
 - 1 VGA
 - 1 DVI
 - 1 USB
 - 1 1/8" Stereo Jacks
 - 1 Composite Jack Sets
 - 2 Component Jack Sets (Red/Green/Blue)
 - 1 Cable TV Jack
- AUD VIDEO CONFERRING & AUDIO INPUT/OUTPUT** - Contractor shall provide a system for teleconferencing, video conferencing, web meetings, audio/video streaming, online connectivity, Conferencing Systems Audio and Video must be compatible with existing VA Equipment and meet all VA Information Technology Security Requirements. Contractor shall provide overhead audience microphone systems to work with entire system (Audio, Video, Presentation, etc.)
 - Provided Noise/Feedback canceling
 - Type: Condenser (electret bias)
 - Frequency Response: 50 - 17000 Hz
 - Output Configuration: active balanced
 - Sensitivity (at 1 kHz, open circuit voltage): Cardioid: -35 dBV/Pa (18 mV), Supercardioid: -34 dBV/Pa (21 mV) 1 Pascal/94 dB SPL
 - Maximum SPL (1 kHz at 1% THD, 1kQ load): Cardioid: 124 dB, Supercardioid: 123 dB
 - Equivalent Output Noise (A-weighted): Cardioid: 28 dB SPL, Supercardioid: 27 dB SPL
 - Signal-to-Noise Ratio (referenced at 94 dB SPL at 1 kHz): Cardioid: 66 dB, Supercardioid: 68 dB
 - Dynamic Range (1 kQ load at 1kHz): 66 dB
 - Common Mode Rejection (10 Hz to 100 kHz): 45 dB minimum
 - Preamplifier Output Clipping Level (1% THD): -6 dBV (0.5 V)
 - Polarity: Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector
 - Microphones shall not exceed 1.5" in diameter
 - Provide in ceiling speaker system for all equipment provided under this contract
 - Coaxially mounted 4" woofer and 1/2" titanium-coated tweeter, providing high-fidelity full-range sound over an extremely wide coverage area. Includes a multi-tap transformer for 70V or 100V systems. Speaker size shall not exceed 5"
 - Ceiling Mounted.

OWNER FURNISHED ITEMS ABBREVIATION REFERENCE

- VV = VA SUPPLIED AND VA INSTALLED.
- VC = VA SUPPLIED AND CONTRACTOR INSTALLED.
- CC = CONTRACTOR SUPPLIED AND CONTRACTOR INSTALLED.
- * WHERE NO ABBREVIATION IS INDICATED THE CONTRACTOR IS TO SUPPLY AND INSTALL THE EQUIPMENT

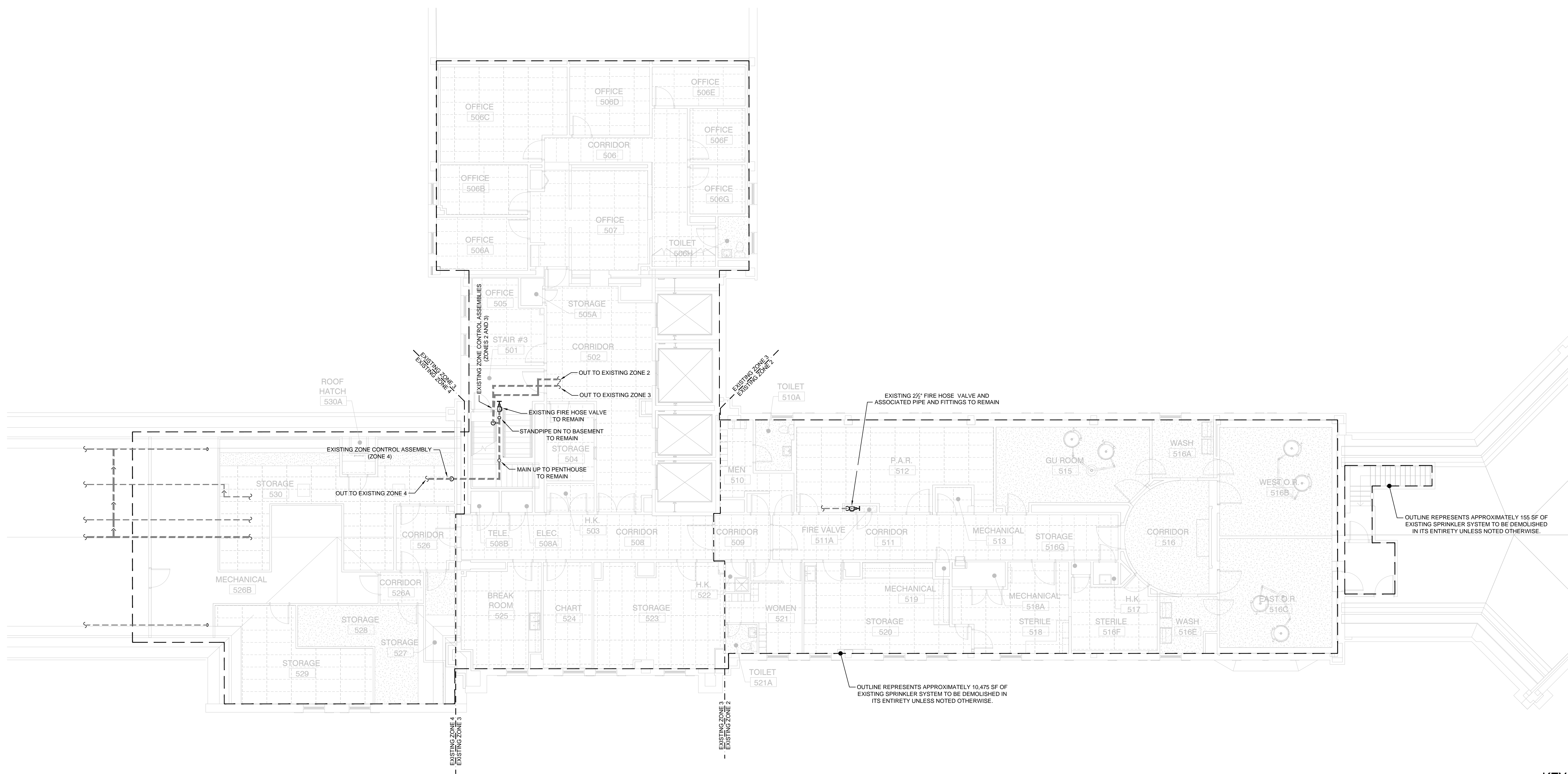
KEY PLAN:



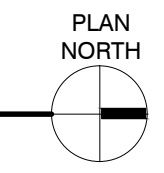
EQUIPMENT FLOOR PLAN SCALE: 3/16" = 1'-0"

CONSULTANTS: WPE WEST PLAINS ENGINEERING 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND		SEAL: 		ARCHITECT: MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539		Drawing Title EQUIPMENT PLAN Approved: Project Director		Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY Project Number 438-15-201 Building Number 5 Drawing Number 5-IF101 Dwg. 21 of 60		Office of Construction and Facilities Management Department of Veterans Affairs	
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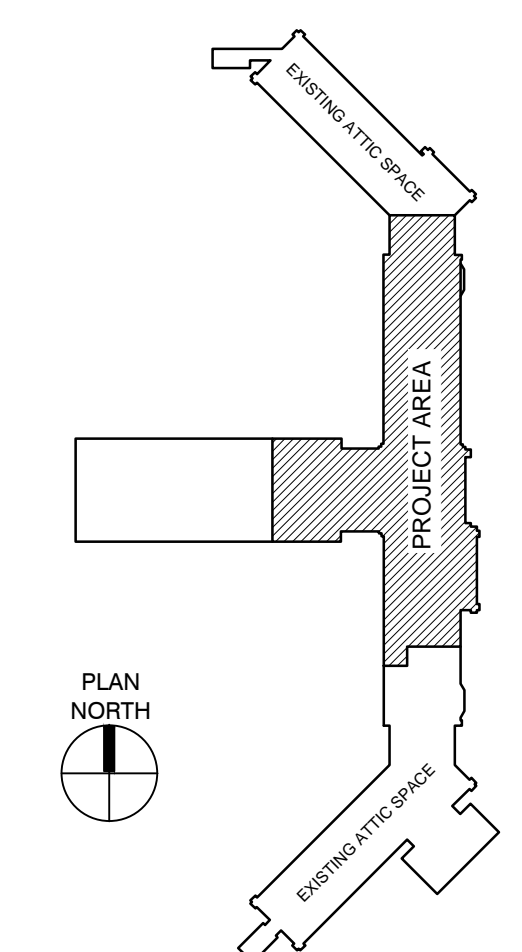
A
three inches = one foot
B
one and one half inches = one foot
C
one inch = one foot
D
three quarters inch = one foot
E
one half inch = one foot
F
three eighths inch = one foot
G
one quarter inch = one foot
H
one eighth inch = one foot



DEMOLITION FIRE PROTECTION PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"



KEY PLAN:



100% CONSTRUCTION DRAWINGS	
Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY	Project Number 438-15-201
Location SIoux FALLS, SOUTH DAKOTA	Building Number 5
Date OCTOBER 17, 2017	Checked CRT
Drawn RAK	Drawing Number 5-FD101
Dwg. 22 of 60	

CONSULTANTS:

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FIRE PROTECTION ENGINEERING CONSULTANTS

SEAL:

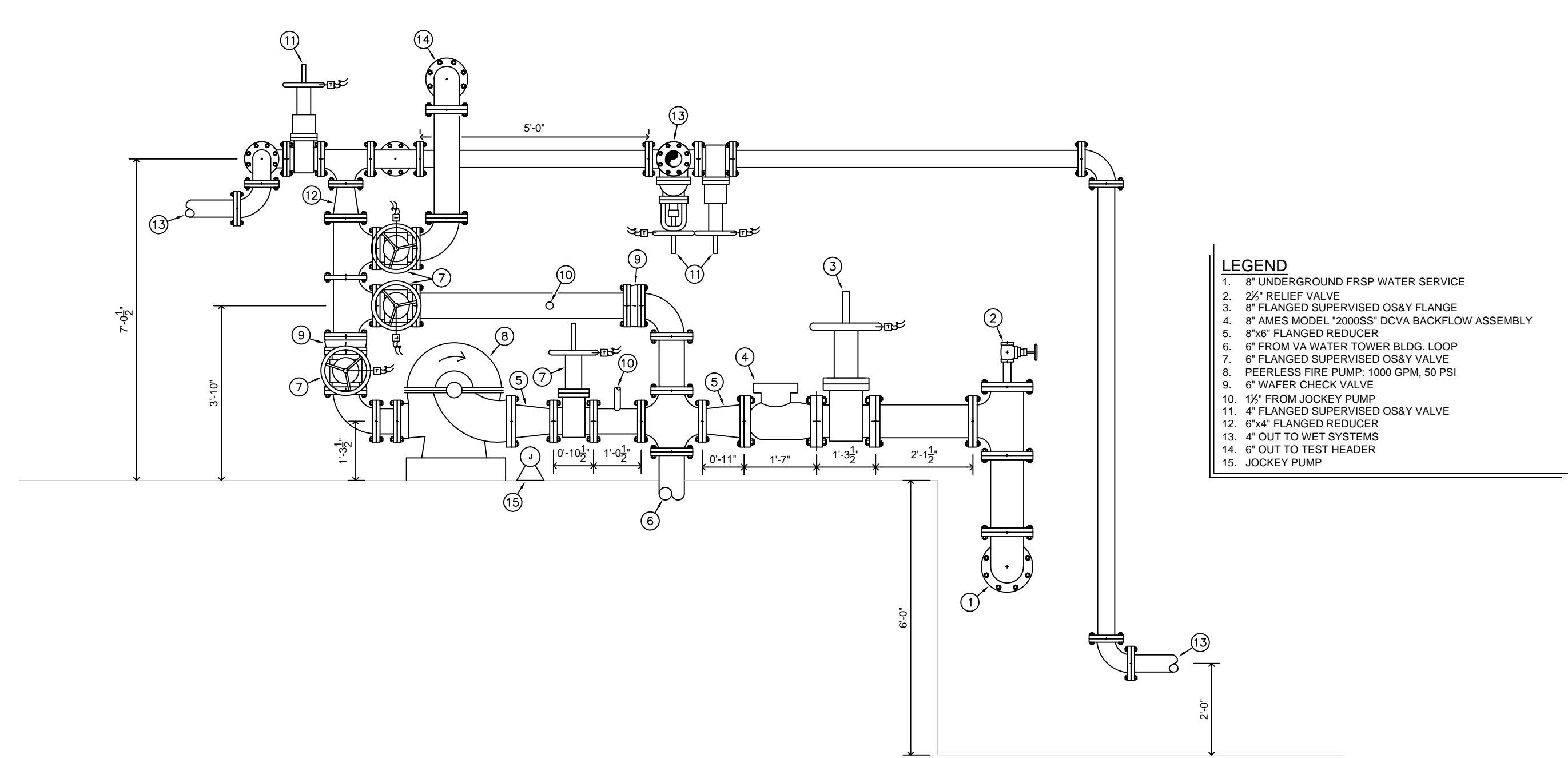
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Drawing Title
DEMOLITION FIRE PROTECTION PLAN - FIFTH FLOOR

Approved: Project Director

Office of Construction and Facilities Management
Department of Veterans Affairs

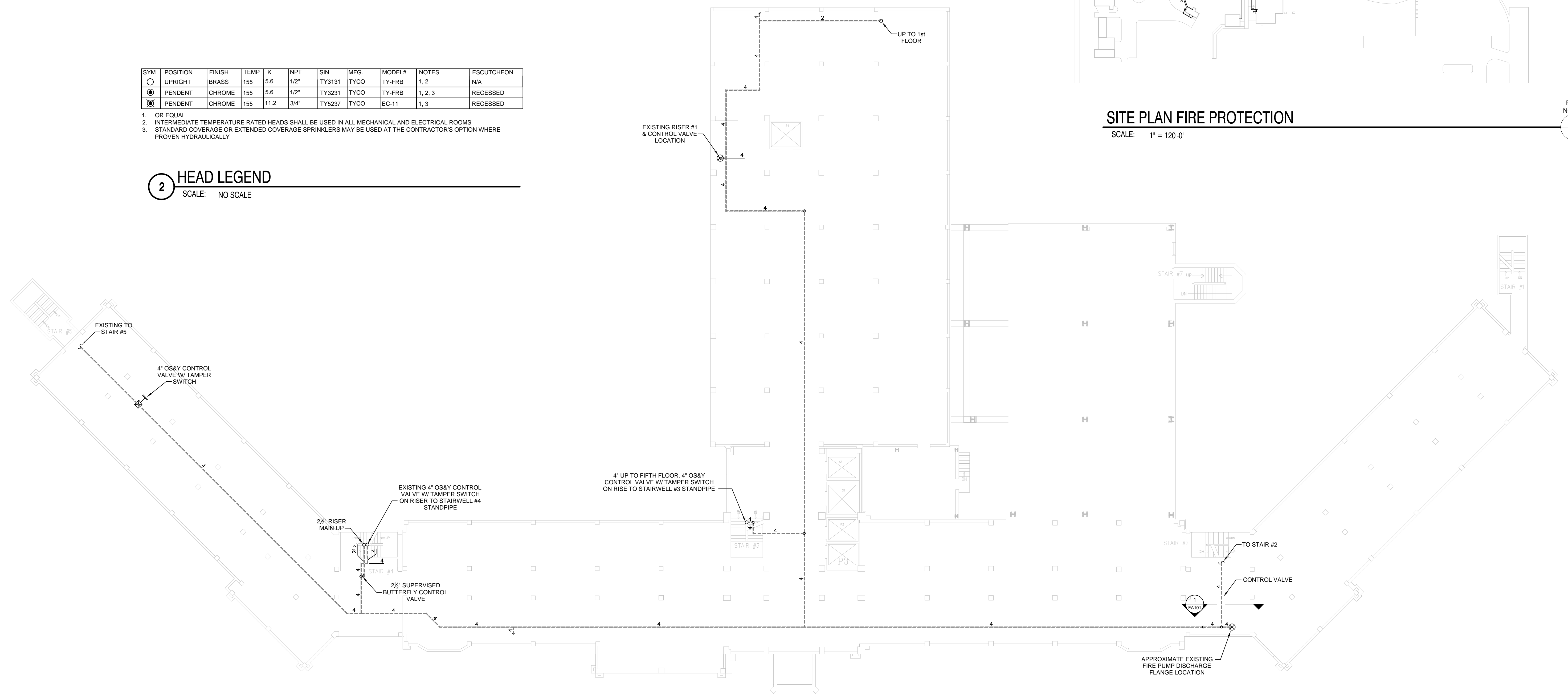


1 EXISTING FIRE PUMP DETAIL
SCALE: 1/2" = 1'-0"

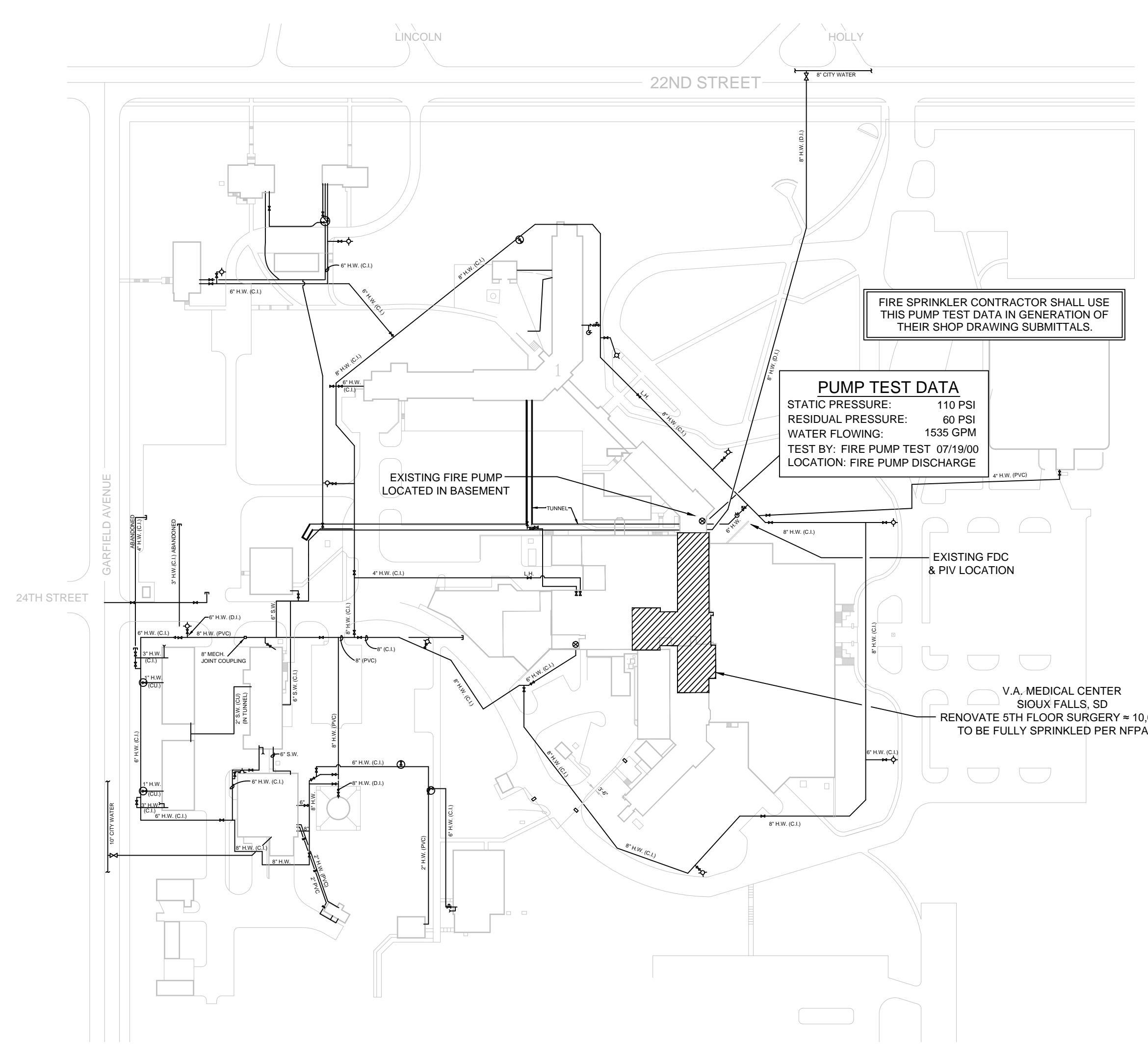
SYM	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	NOTES	ESCUTCHEON
○	UPRIGHT	BRASS	155	5.6	1/2"	TY3131	TYCO	TY-FRB	1, 2	N/A
●	PENDENT	CHROME	155	5.6	1/2"	TY3231	TYCO	TY-FRB	1, 2, 3	RECESSED
⊗	PENDENT	CHROME	155	11.2	3/4"	TY3237	TYCO	EC-11	1, 3	RECESSED

- OR EQUAL
- INTERMEDIATE TEMPERATURE RATED HEADS SHALL BE USED IN ALL MECHANICAL AND ELECTRICAL ROOMS
- STANDARD COVERAGE OR EXTENDED COVERAGE SPRINKLERS MAY BE USED AT THE CONTRACTOR'S OPTION WHERE PROVEN HYDRAULICALLY

2 HEAD LEGEND
SCALE: NO SCALE

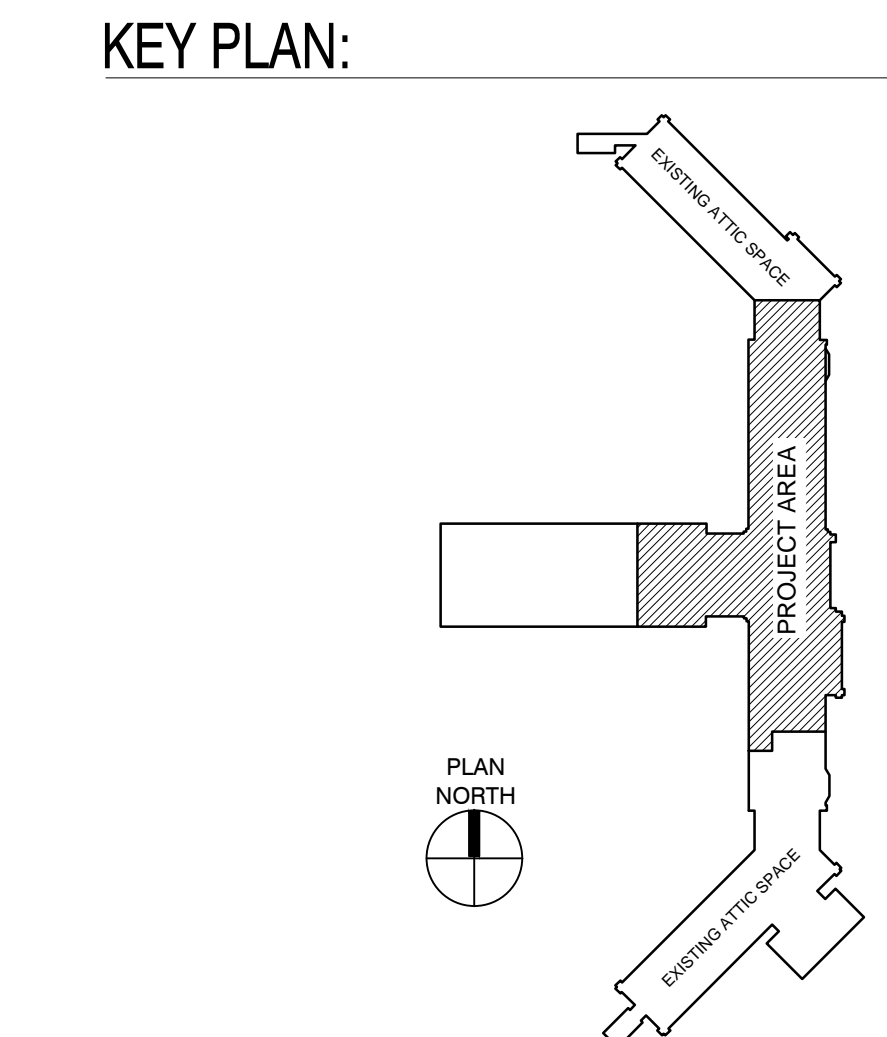


BASEMENT FIRE PROTECTION PLAN - SUPPLY
SCALE: 1/16" = 1'-0"



SITE PLAN FIRE PROTECTION
SCALE: 1" = 120'-0"

- GENERAL NOTES:**
- THIS PROJECT INCLUDES THE DESIGN AND INSTALLATION OF WET FIRE SPRINKLER SYSTEMS FOR REMODELED AREAS OF THE EXISTING BUILDING PER NFPA 13 (2013 ed.), LOCAL BUILDING CODES, AND THE VA FIRE PROTECTION DESIGN MANUAL (SIXTH ed.). THE FIRE SPRINKLER SYSTEMS ARE SUPPLIED BY AN EXISTING UNDERGROUND WATER SERVICE SUPPLIED BY THE CITY WATER SYSTEM THAT IS SUPPLEMENTED BY AN EXISTING FIRE PUMP.
 - FINAL PIPE SIZING AND LOCATION IS TO BE DETERMINED BY THE FIRE SPRINKLER CONTRACTOR AND IS SUBJECT TO APPROVAL BY THE ENGINEER. NOT ALL REQUIRED PIPING IS SHOWN.
 - REFER TO SPECIFICATION SECTIONS 210800, 211200, AND 211313 FOR ADDITIONAL FIRE SPRINKLER SYSTEM INFORMATION.
 - ALL SPRINKLERS IN LIGHT HAZARD OCCUPANCIES ARE TO BE OF THE QUICK RESPONSE TYPE.
 - ALL SPRINKLER SHALL BE UL LISTED AND FM APPROVED PER THE VA FIRE PROTECTION DESIGN MANUAL.
 - SPRINKLERS ARE REQUIRED TO BE PROTECTED DURING PAINTING.
 - SPRINKLERS SHALL BE LOCATED IN THE CENTER POINT OF SQUARE CEILING TILES AND ALLOWED TO BE IN THE QUARTERS AND/OR CENTER POINTS OF RECTANGULAR CEILING TILES.
 - HEAD GUARDS ARE TO BE INSTALLED ON ALL EXPOSED SPRINKLERS ELEVATED BELOW 7'-0". SIDEWALL SPRINKLERS LOCATED BELOW OVERHEAD DOORS, AND THROUGHOUT AREAS WHERE SPRINKLERS ARE EXPOSED TO INTERFERENCE DAMAGE.
 - ALL SYSTEMS PIPING AND FITTINGS SHALL MEET THE REQUIREMENTS OF NFPA 13.
 - REQUIRED SYSTEM TESTING IS THE RESPONSIBILITY OF THE FIRE SPRINKLER CONTRACTOR PER NFPA 25.
 - NOT ALL REQUIRED SPRINKLERS AND PIPING ARE SHOWN. CONSIDERATION OF ADDITIONAL SPRINKLERS, PIPING, AND FITTINGS DUE TO INTERFERENCE WITH OTHER TRADES, OBSTRUCTIONS, IMPROVED AESTHETICS, OR OWNER/HAU REQUESTS SHALL BE MADE PRIOR TO BID BY THE FIRE SPRINKLER CONTRACTOR.
 - FIRE SPRINKLER CONTRACTOR TO PROVIDE ALL NECESSARY MATERIAL, INCLUDING BUT NOT LIMITED TO, SPRINKLERS, PIPING, VALVES, AND LABOR TO PROVIDE COMPLETE SYSTEMS TO COMPLY WITH NFPA 13, LOCAL BUILDING CODES, AND THE VA FIRE PROTECTION DESIGN MANUAL. ALL HYDRAULIC CALCULATIONS AND PIPE SIZING ARE THE RESPONSIBILITY OF THE FIRE SPRINKLER CONTRACTOR. ANY AND ALL CLARIFICATIONS TO BID DOCUMENTS SHALL BE MADE PRIOR TO BID.
 - UPRIGHT SPRINKLERS TO HAVE A BRASS FINISH THROUGHOUT.
 - ALL GROOVED STEEL PIPING SHALL BE SCHEDULE 10 MINIMUM.
 - ALL THREADED STEEL PIPING SHALL BE SCHEDULE 40.
 - ALL THREADED FITTINGS SHALL BE SCHEDULE 40.
 - ALL LISTED FLEX PIPING TO PENDENT HEADS IN CEILING IS ALLOWED FOR THIS PROJECT WHERE PROVEN HYDRAULICALLY.
 - CPVC IS NOT ALLOWED FOR THIS PROJECT.
 - ALL MATERIAL BEING INSTALLED MUST BE NEW AND LISTED FOR USE.
 - THE FIRE SPRINKLER CONTRACTOR SHALL VERIFY LOCATIONS AND ROUTING OF PIPE PRIOR TO BID. NO ALLOWANCES FOR EXTRA FITTINGS, PIPING, SPRINKLERS, ETC. WILL BE ALLOWED AFTER AWARD OF CONTRACT.
 - PIPING SHOWN ON THESE PLANS IS CONCEPTUAL, BUT IS TO BE CLOSELY FOLLOWED BY THE FIRE SPRINKLER CONTRACTOR. ANY MAJOR CHANGES TO WHAT IS BEING INDICATED ON THESE PLANS SHALL FIRST BE APPROVED BY THE ARCHITECT AND ENGINEER.
 - ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, & ELECTRICAL FEATURES INDICATED ON THE P.P. SHEETS SHALL BE VERIFIED BY CONSULTING THE ASBME SHEETS.
 - ALL SPRINKLERS LOCATED NEAR HEAT PRODUCING DEVICES SHALL BE PROVIDED WITH THE APPROPRIATE TEMPERATURE RATING PER THE REQUIREMENTS OF NFPA 13.
 - THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING SPRINKLER SYSTEM COMPONENTS SHOWN ON THESE PLANS PRIOR TO BID.
 - SHOULD ANY EXISTING SYSTEM DEFICIENCIES NOT INDICATED ON THESE PLANS BE DISCOVERED AS PART OF CONDUCTING THE WORK INCLUDED IN THIS SCOPE, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
 - THESE PLANS SHALL BE USED AS A GENERAL GUIDE IN THE GENERATION OF THE FIRE SPRINKLER CONTRACTOR'S BID AND ARE NOT INTENDED TO INDICATE THE ENTIRE EXTENT OF SPRINKLER PROTECTION REQUIRED. ANY AREAS REQUIRED TO BE PROTECTED PER NFPA 13 THAT MAY OR MAY NOT BE SHOWN WITH PROTECTION ON THESE PLANS SHALL BE INCLUDED IN THE CONTRACTOR'S BID. NO ALLOWANCES FOR EXTRAS WILL BE ALLOWED AFTER AWARD OF CONTRACT.
- OCCUPANCY HAZARD CLASSIFICATIONS:**
- SEE PLAN FOR HAZARD NOTATIONS. ALL AREAS TO BE DESIGNED AS LIGHT HAZARD UNLESS NOTED OTHERWISE.
 - LIGHT HAZARD OCCUPANCIES
 - 0.10 GPM/SQ FT PER MOST DEMANDING 1500 SQ FT.
 - (OHT) - ORDINARY HAZARD GROUP 1 OCCUPANCIES
 - 0.15 GPM/SQ FT PER MOST DEMANDING 1500 SQ FT.
 - REMOTE AREA REDUCTIONS WILL BE ALLOWED PER NFPA 13
 - REMOTE AREA INCREASES SHALL BE APPLIED WHERE REQUIRED BY NFPA 13
 - HOSE ALLOWANCES SHALL BE APPLIED AS PER NFPA 13
 - MINIMUM 10 PSI OR 10% SAFETY FACTOR, WHICHEVER IS GREATER, SHALL BE PROVIDED



KEY PLAN:

CONSULTANTS:

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Drawing Title
FIRE PROTECTION LEGEND & DETAILS

Approved: Project Director

Project Title
V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY

Project Number
438-15-201

Building Number
5

Drawing Number
5-FA101

Date
OCTOBER 17, 2017

Checked
CRT

Drawn
RAK

Dwg. 23 of 60

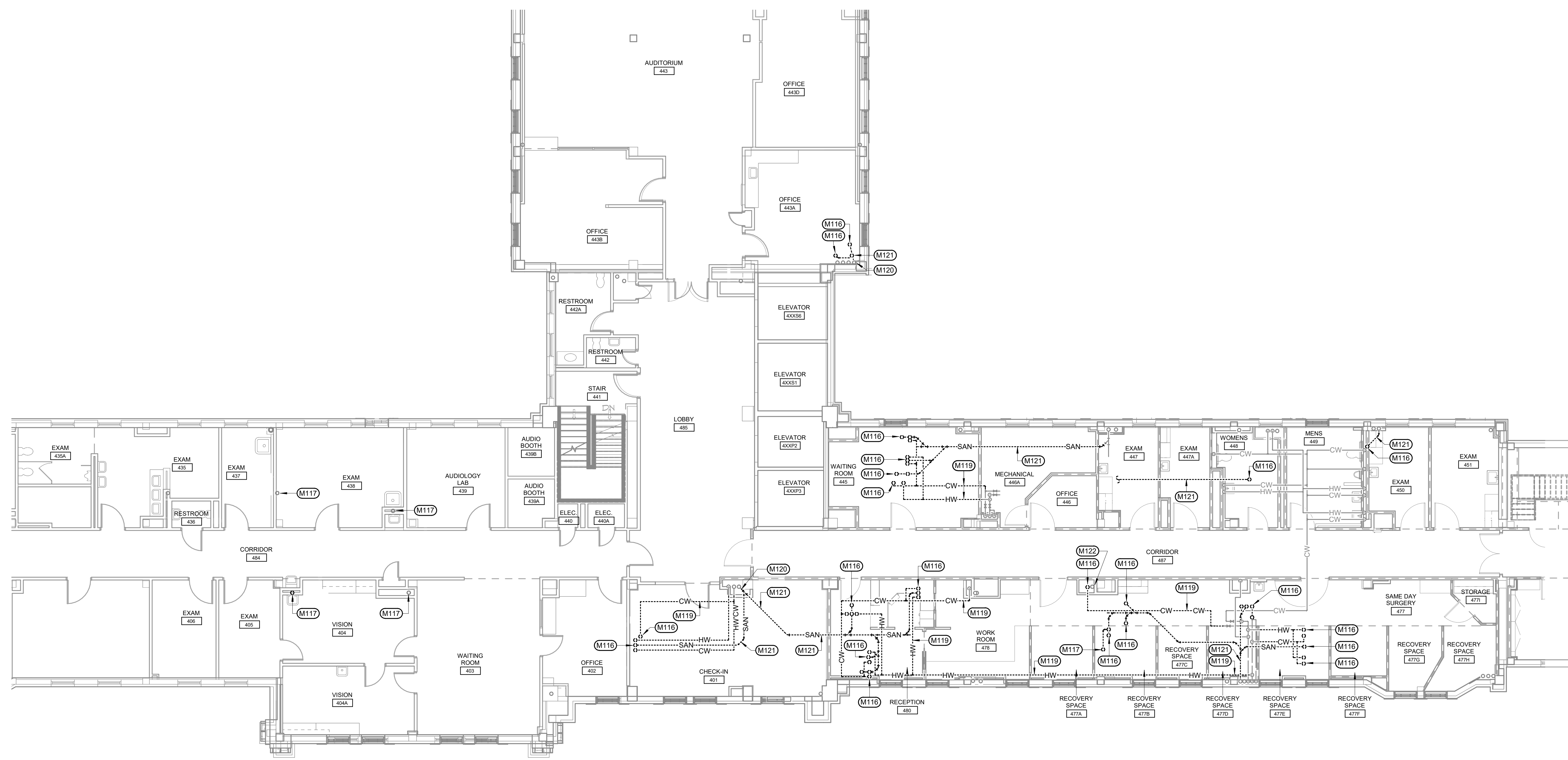
Office of Construction and Facilities Management

Department of Veterans Affairs

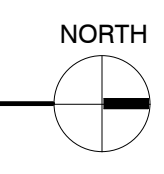
Scale bars for various drawing sections: 1/2" = 1'-0", 1" = 120'-0", NO SCALE, 1/16" = 1'-0".

KEYNOTES:

- M116** REMOVE EXISTING WASTE AND WATER UP THRU FLOOR TO EXISTING PLUMBING FIXTURE INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION OF EXISTING. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. COORDINATE CHASE REPAIR WITH GENERAL CONTRACTOR.
- M117** REMOVE EXISTING VENT UP THRU FLOOR. PREPARE REMAINING VENT FOR RECONNECTION WITH NEW VENT. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. SEE PLUMBING PLAN - FOURTH FLOOR FOR NEW VENT ROUTING.
- M119** REMOVE EXISTING CW/HW/V BACK TO NEAREST MAIN. CAP AT MAIN.
- M120** PREPARE EXISTING WASTE PIPING FOR NEW CONNECTION. SEE PLUMBING PLAN - FOURTH FLOOR FOR NEW WASTE ROUTING. COORDINATE CHASE REPAIR WITH GENERAL CONTRACTOR.
- M121** REMOVE EXISTING WASTE BACK TO NEAREST MAIN. CAP AT MAIN.
- M122** REMOVE EXISTING WASTE UP THRU FLOOR TO DRINKING FOUNTAIN. PREPARE REMAINING PIPING FOR NEW CONNECTION. EXISTING WASTE PIPING TRANSITIONS TO VENT FOR REMAINING DRINKING FOUNTAINS ON LOWER LEVELS. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. COORDINATE CHASE REPAIR WITH GENERAL CONTRACTOR. SEE PLUMBING PLAN - FOURTH FLOOR FOR NEW VENT ROUTING.



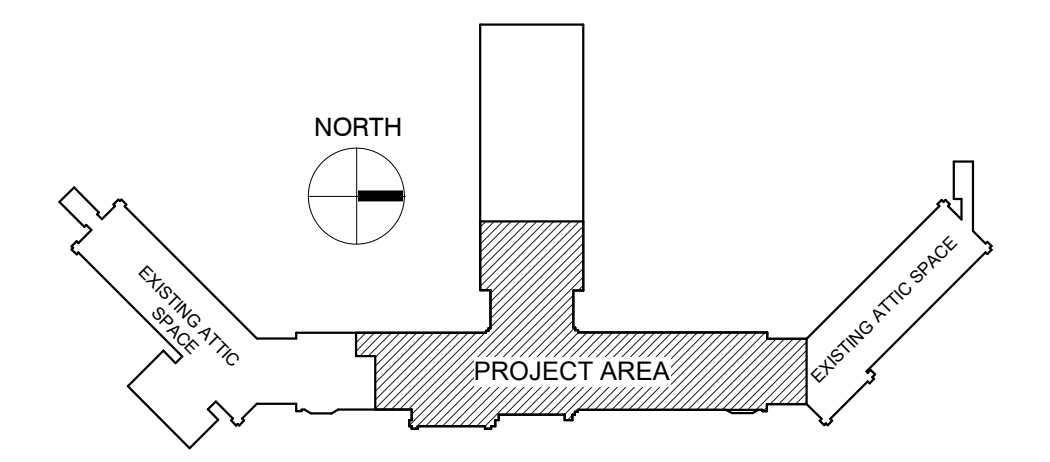
DEMOLITION PLUMBING PLAN - FOURTH FLOOR
 SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
- B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
- C DUCT SIZES ARE NET INSIDE DIMENSIONS.
- D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
- E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
- F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



PHASING PLAN NOTE:
 SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

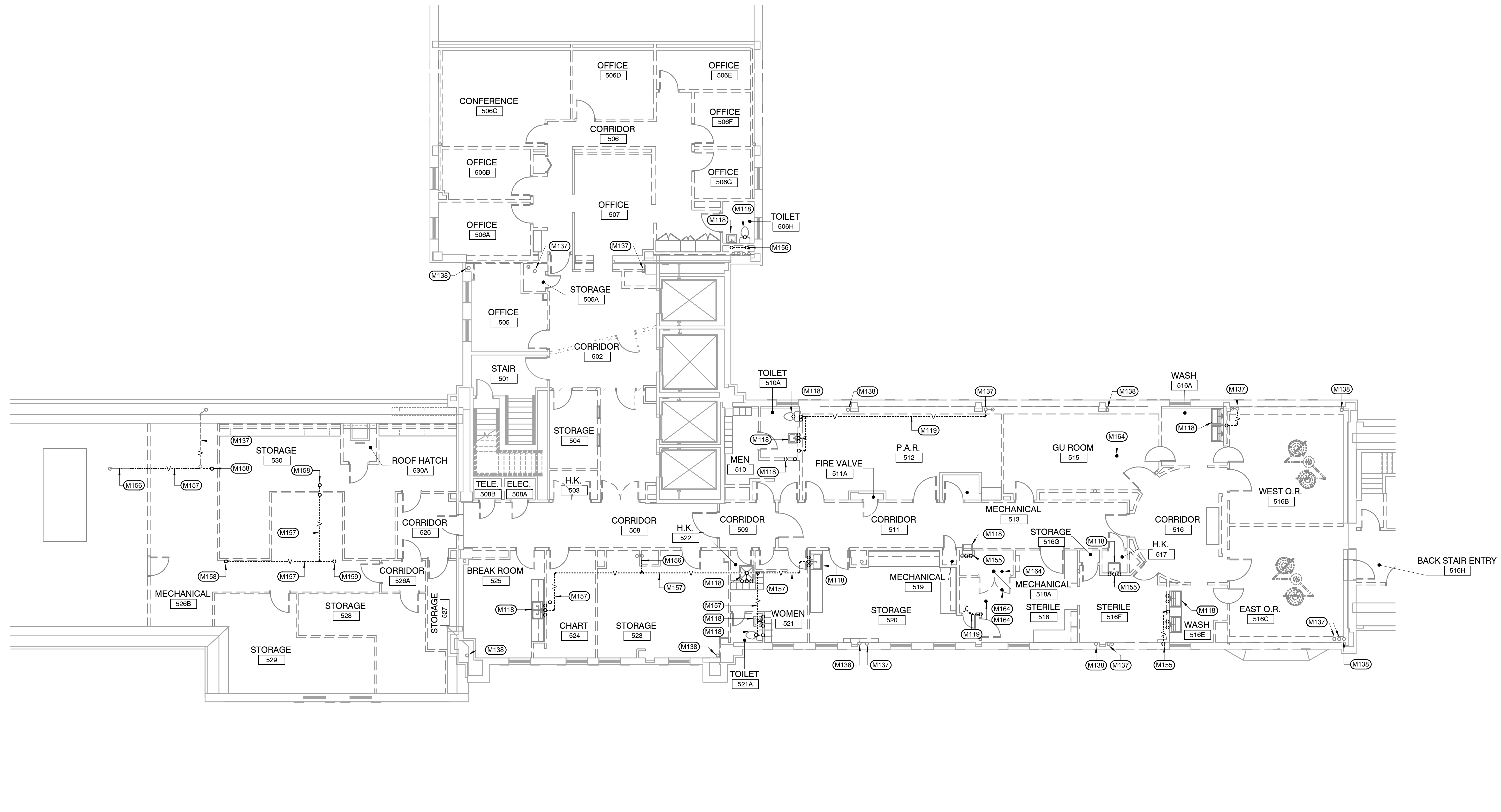
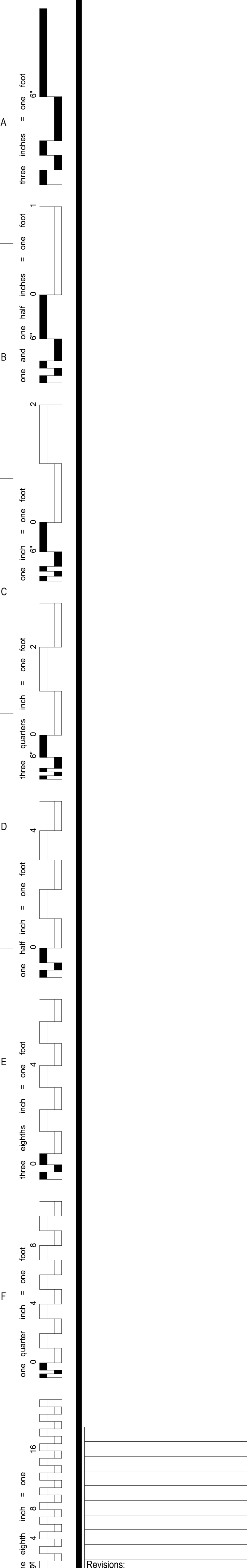
100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title DEMOLITION PLUMBING PLAN - FOURTH FLOOR</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p>	<p>Project Number 438-15-201</p>	<p>Office of Construction and Facilities Management</p>
			<p>Approved: Project Director</p>	<p>Location SIOUX FALLS, SOUTH DAKOTA</p>	<p>Building Number 5</p>	
<p>Revisions:</p>	<p>Date</p>	<p>Date OCTOBER 17, 2017</p>	<p>Checked WM</p>	<p>Drawn DNT</p>	<p>Dwg. 25 of 60</p>	

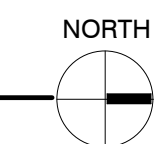
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 one eighth inch = one foot

KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M118 REMOVE EXISTING PLUMBING FIXTURE. REMOVE PIPING BACK TO NEAREST MAIN. CAP AT MAIN. ABOVE CEILING, BELOW FLOOR OR IN WALL.
 - M119 REMOVE EXISTING CW/HW/V BACK TO NEAREST MAIN. CAP AT MAIN.
 - M137 EXISTING PLUMBING VENT TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M138 EXISTING DOWNSPOUT TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M155 REMOVE EXISTING VENT PIPING UP THRU FLOOR. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. SEE DEMOLITION PLUMBING PLAN - PENTHOUSE FOR CONTINUATION.
 - M156 PREPARE EXISTING VENT PIPING FOR NEW CONNECTION. SEE PLUMBING PLAN - FIFTH FLOOR FOR NEW VENT ROUTING.
 - M157 REMOVE EXISTING VENT INDICATED AS DASHED.
 - M158 REMOVE EXISTING VENT DN THRU FLOOR. SEE DEMOLITION PLUMBING PLAN - FOURTH FLOOR FOR CONTINUATION.
 - M159 REMOVE EXISTING VENT DN THRU FLOOR AND UP TO VENT THRU ROOF. PREPARE EXISTING VENT THRU ROOF FOR NEW CONNECTION. SEE DEMOLITION PLUMBING PLAN - FOURTH FLOOR FOR CONTINUATION. SEE PLUMBING PLAN - FIFTH FLOOR FOR NEW VENT PIPE ROUTING.
 - M164 REMOVE EXISTING FLOOR DRAIN AND ASSOCIATED WASTEVENT UP THRU FLOOR. CAP WASTE BELOW FLOOR ABOVE FOURTH FLOOR CEILING. REMOVE VENT TO 5TH FLOOR CEILING. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. SEE DEMOLITION PLUMBING PLAN - FOURTH FLOOR.



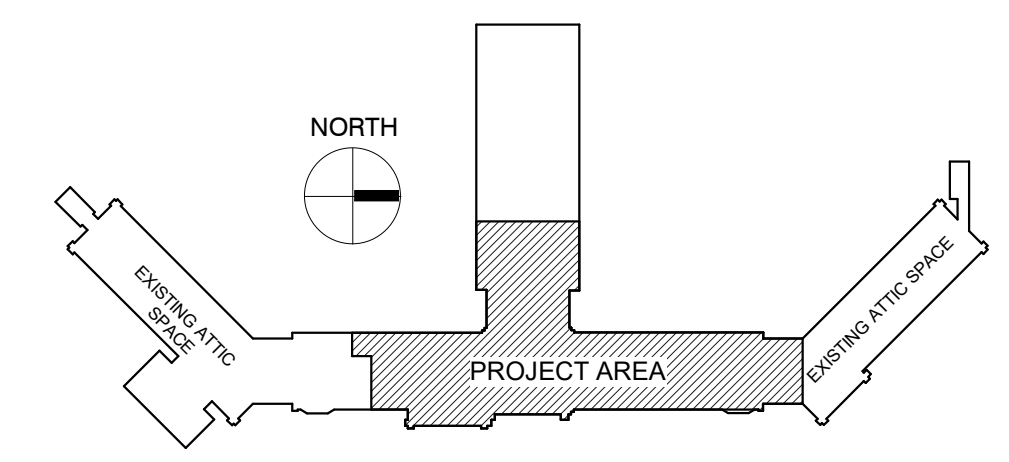
DEMOLITION PLUMBING PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

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- F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS 'BR' ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 15%;">Description</th> <th style="width: 10%;">Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	Description	Date				<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title DEMOLITION PLUMBING PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked WM</p> <p>Drawn DNT</p>	<p>Drawing Number 5- PD102</p> <p>Dwg. 26 of 60</p>	<p>Office of Construction and Facilities Management</p>
No.	Description	Date											

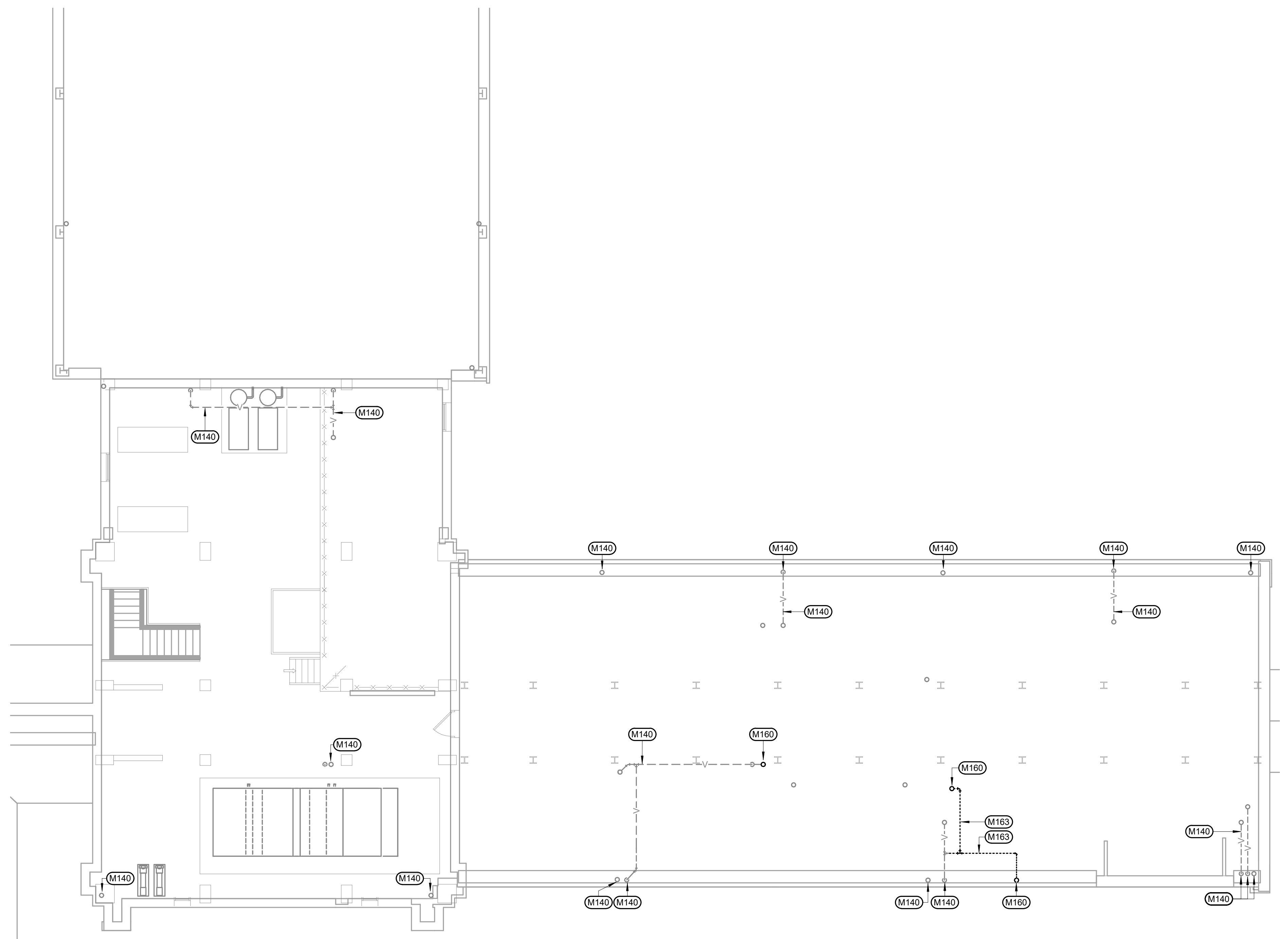
KEYNOTES:

M **MECHANICAL SPECIFIC NOTES**

M140 EXISTING PLUMBING TO REMAIN. VERIFY EXACT SIZE AND LOCATION.

M160 REMOVE EXISTING VENT DN THRU FLOOR. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. SEE DEMOLITION PLUMBING PLAN - FIFTH FLOOR FOR CONTINUATION.

M163 REMOVE EXISTING VENT BACK TO NEAREST MAIN. CAP AT MAIN.



DEMOLITION PLUMBING PLAN - PENTHOUSE
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

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C DUCT SIZES ARE NET INSIDE DIMENSIONS.

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E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.

F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.

G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.

H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.

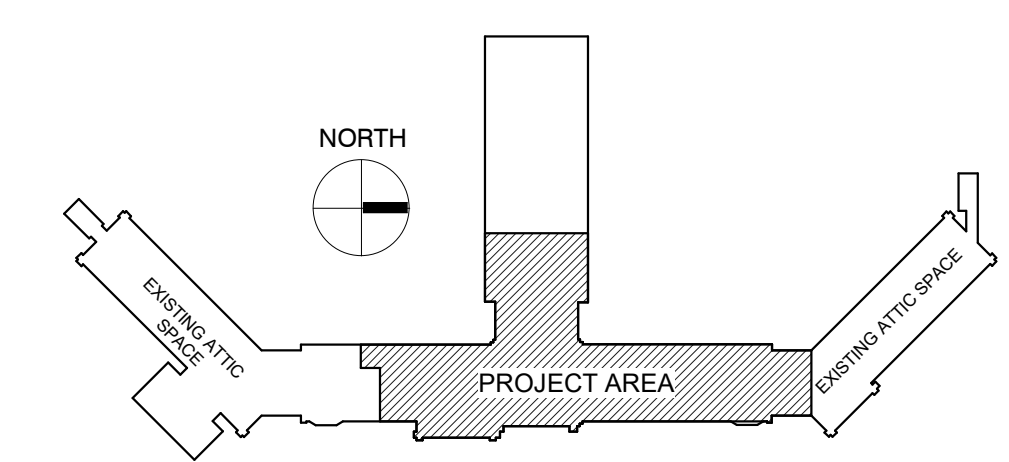
I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.

J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.

K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.

L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

Revisions:	Date

CONSULTANTS:

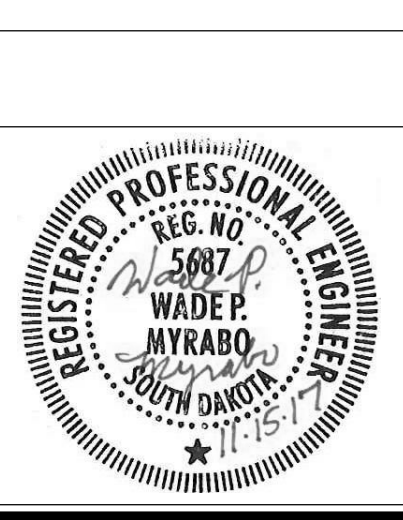
WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052

4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106
PHONE: (605) 362-3753 • FAX: (605) 362-3759
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RISE STRUCTURAL ASSOCIATES, INC.

101 Railroad Ave. - PO Box 39
Harrisburg, SD 57032
(605) 743-2510
fax(605) 743-2513



ARCHITECTS/ ENGINEERS:

MSH ARCHITECTS

625 S. MINNESOTA AVENUE, SUITE 204
SIOUX FALLS, SOUTH DAKOTA 57104-4873
TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title
DEMOLITION PLUMBING PLAN - PENTHOUSE

Approved: Project Director

Project Title
V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY

Project Number
438-15-201

Building Number
5

Location
SIOUX FALLS, SOUTH DAKOTA

Date
OCTOBER 17, 2017

Checked
WM

Drawn
DNT

Drawing Number
5-PD103

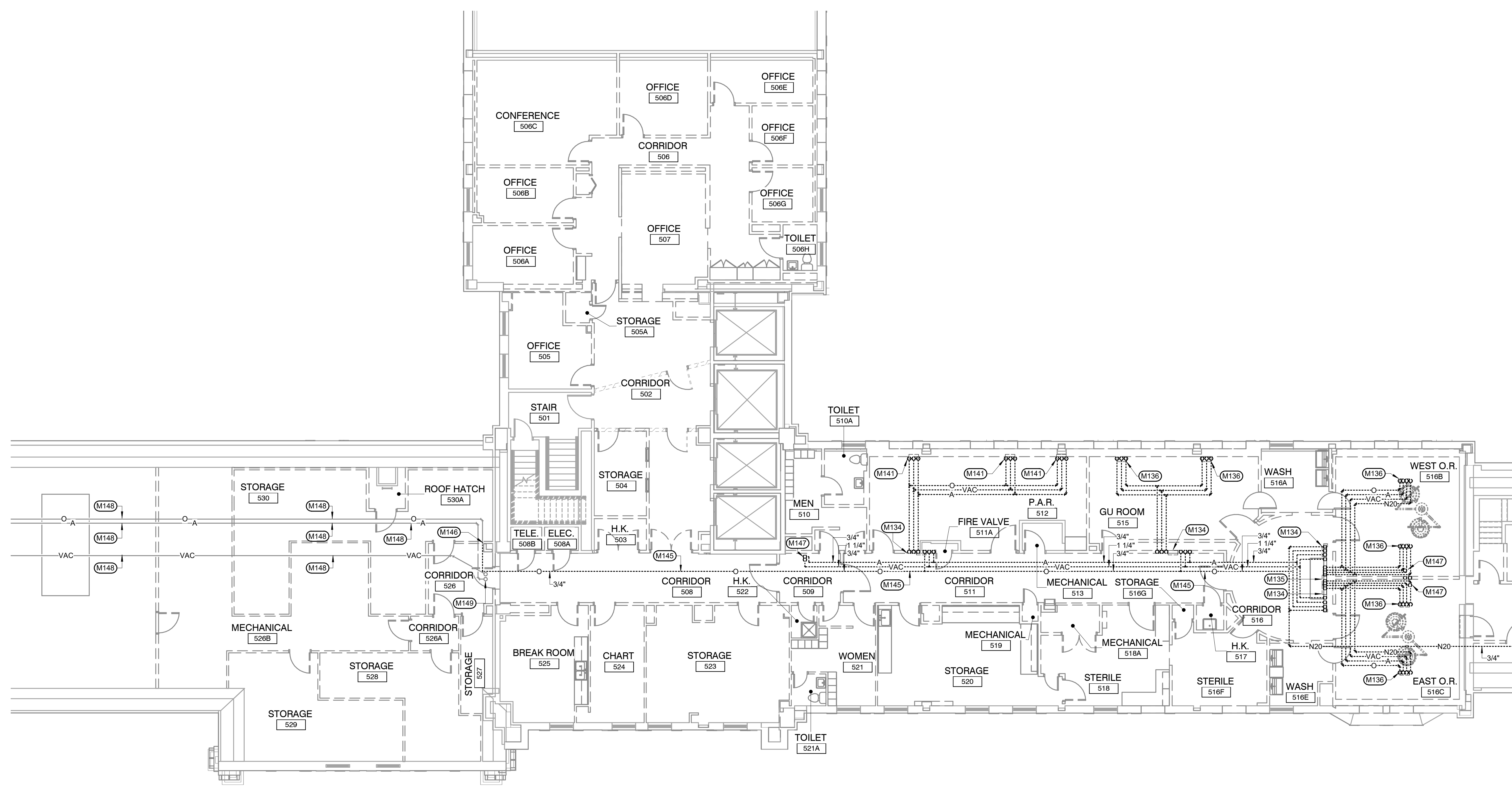
Dwg. 27 of 60

Office of Construction and Facilities Management

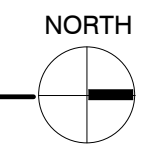
KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M134 REMOVE EXISTING MEDICAL GAS ZONE VALVE BOX AND ALL ASSOCIATED PIPING UPSTREAM TO MEDICAL GAS OUTLETS. VERIFY EXACT LOCATION OF EXISTING PIPING TO BE REMOVED.
 - M135 REMOVE EXISTING MEDICAL GAS ALARM PANEL. VERIFY EXACT LOCATION OF EXISTING.
 - M136 REMOVE EXISTING MEDICAL GAS CEILING OUTLETS AND ALL ASSOCIATED PIPING BACK TO EXISTING ZONE VALVE BOX. VERIFY EXACT LOCATION OF EXISTING PIPING TO BE REMOVED.
 - M141 REMOVE EXISTING MEDICAL GAS WALL OUTLETS AND ALL ASSOCIATED PIPING BACK TO EXISTING ZONE VALVE BOX. VERIFY EXACT LOCATION OF EXISTING PIPING TO BE REMOVED.
 - M145 REMOVE EXISTING MEDICAL GAS PIPING AS INDICATED AS DASHED. VERIFY EXACT LOCATION OF EXISTING.
 - M146 PREPARE EXISTING OXYGEN PIPE FOR RECONNECTION TO NEW. SEE MEDICAL GAS PIPING PLAN - FIFTH FLOOR FOR NEW PIPE ROUTING.
 - M147 REMOVE EXISTING MEDICAL GAS PIPING UP THRU FLOOR INTO PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. SEE DEMOLITION MEDICAL GAS PLAN - PENTHOUSE FOR CONTINUATION.
 - M148 EXISTING MEDICAL GAS PIPING TO REMAIN. VERIFY EXACT LOCATION OF EXISTING.
 - M149 EXISTING MEDICAL GAS PIPING UP THRU FLOOR INTO PENTHOUSE TO REMAIN. SEE DEMOLITION MEDICAL GAS PLAN - PENTHOUSE FOR CONTINUATION.

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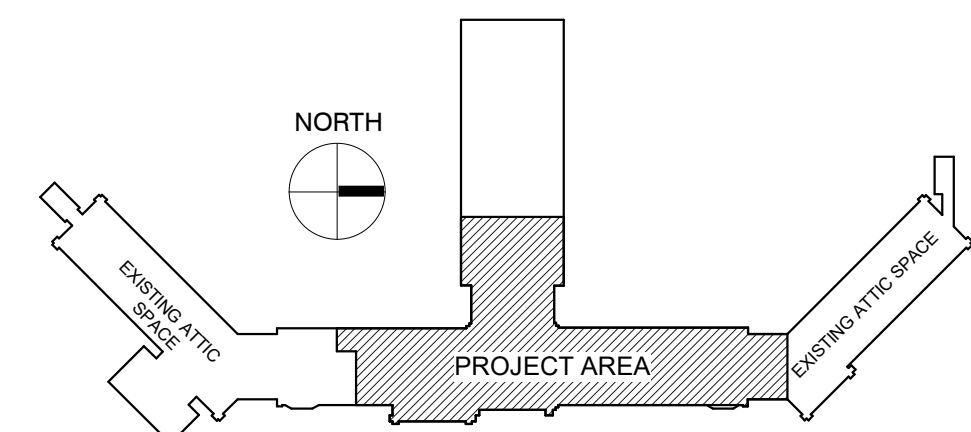
DEMOLITION MEDICAL GAS PLAN - FIFTH FLOOR
 SCALE: 1/8" = 1'-0"



GENERAL NOTES:

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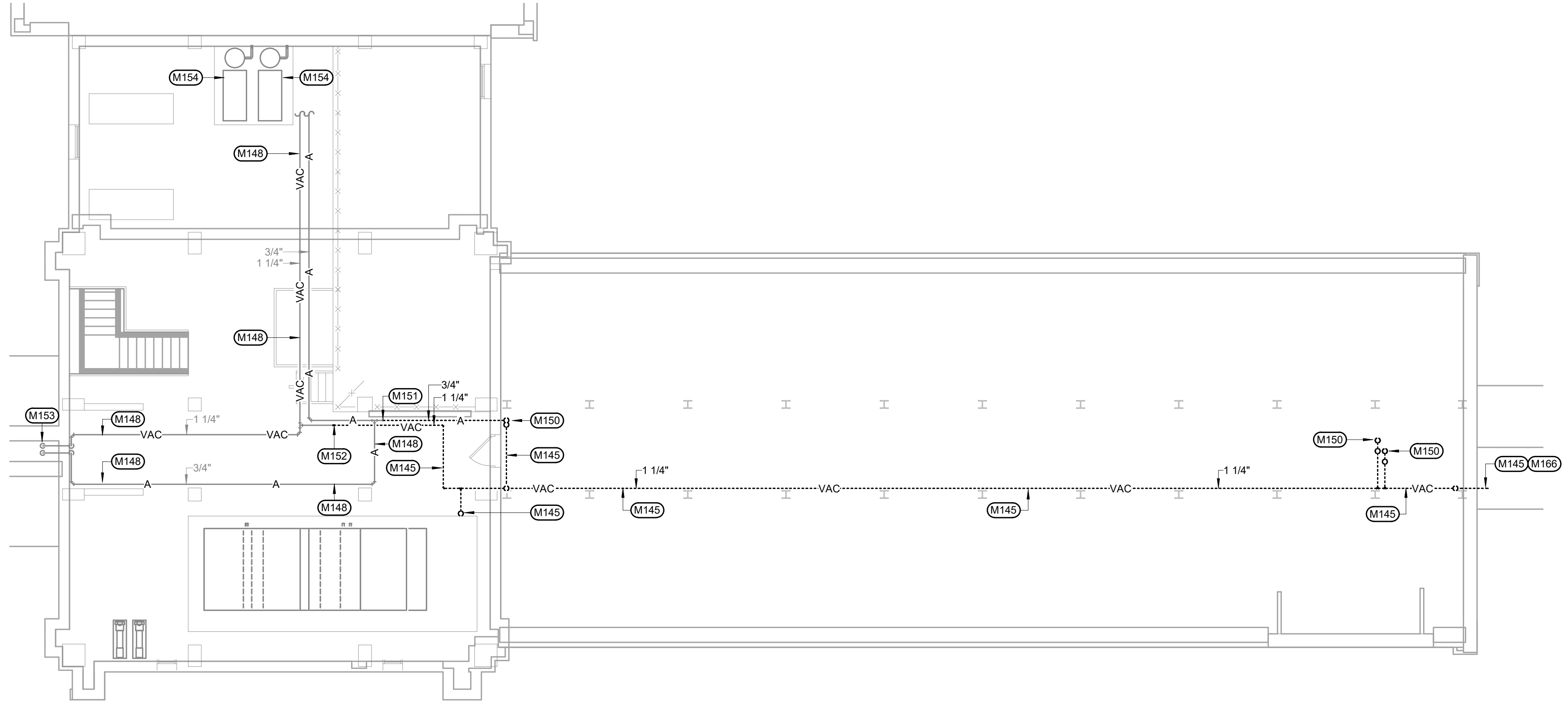


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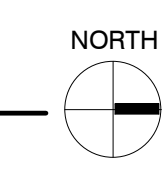
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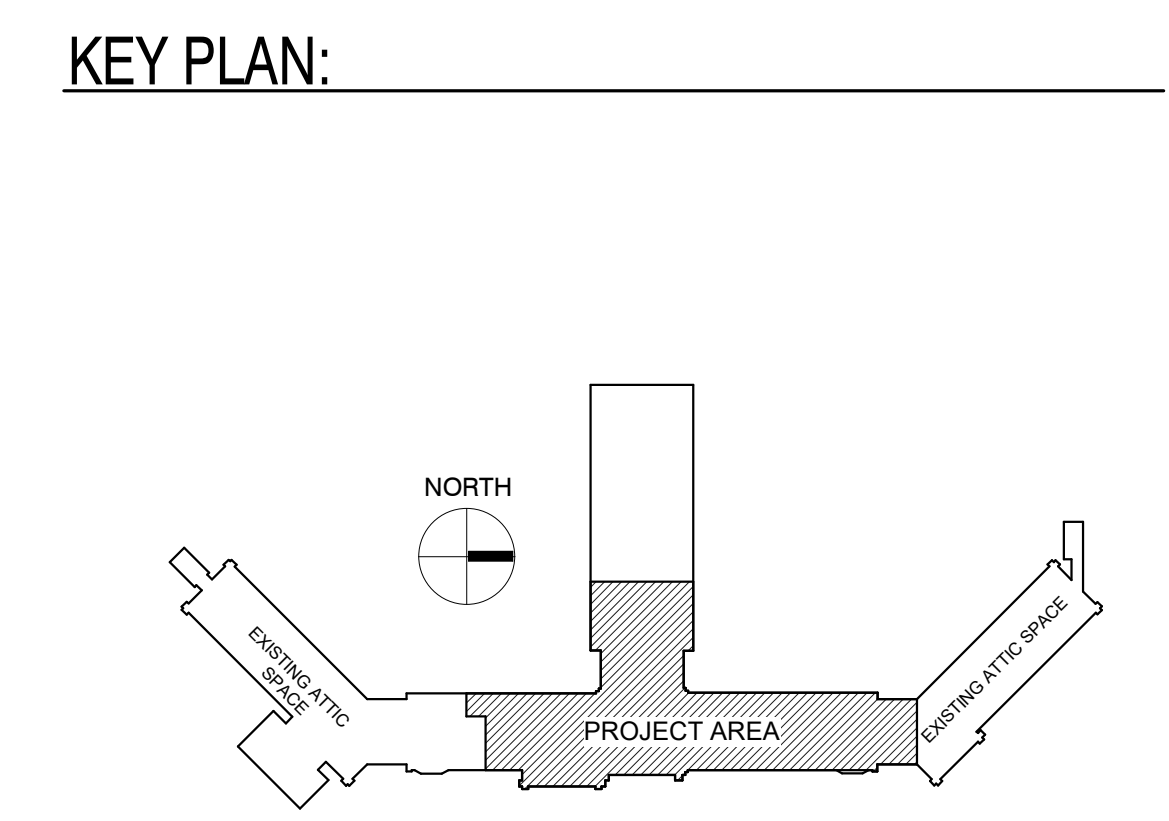
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- M145 REMOVE EXISTING MEDICAL GAS PIPING AS INDICATED AS DASHED. VERIFY EXACT LOCATION OF EXISTING.
 - M148 EXISTING MEDICAL GAS PIPING TO REMAIN. VERIFY EXACT LOCATION OF EXISTING.
 - M150 REMOVE EXISTING MEDICAL GAS PIPING DN THRU FLOOR. SEE DEMOLITION MEDICAL GAS PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M151 CAP EXISTING MEDICAL AIR PIPING AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING.
 - M152 CAP EXISTING MEDICAL VACUUM PIPING AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING.
 - M153 EXISTING MEDICAL GAS PIPING ON THRU FLOOR TO REMAIN. SEE DEMOLITION MEDICAL GAS PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M154 EXISTING MEDICAL GAS EQUIPMENT TO REMAIN.
 - M166 REMOVE EXISTING MEDICAL VACUUM PIPING THAT IS CAPPED ABOVE STAIR TOWER THIS AREA. PATCH WALL TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING.



DEMOLITION MEDICAL GAS PLAN - PENTHOUSE
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PLUMBING ABBREVIATIONS

A/E	ARCHITECT / ENGINEER
AD	AREA DRAIN/ACCESS DOOR
AF	ABOVE FINISH FLOOR
AFS	ABOVE FINISH GRADE
AG	AIR GAP
AP	ACCESS PANEL
AS	AUTOMATIC SPRINKLER
ASD	ADJUSTABLE SPEED DRIVES
ASD	AUTOMATIC SPRINKLER DRAIN
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS
ASR	AUTOMATIC SPRINKLER RISER
AV	ACID VENT
AW	ACID WASTE
BFP	REDUCED PRESSURE BACKFLOW PREVENTER
BHP	BREAK HORSEPOWER
BSP	BLACK STEEL PIPE
BT	BATHTUB
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CELSIUS
CA	COMPRESSED AIR
CGA	COMPRESSED GAS ASSOCIATION
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CO	CLEANOUT
CS	CLINICAL SINK
CV	CONTROL VALVE
DCW	DOMESTIC COLD WATER
DFU	DRAINAGE FIXTURE UNITS
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DHWS	DOMESTIC HOT WATER SUPPLY
DI	DEIONIZED WATER
DN	DOWN
DOE	DEPARTMENT OF ENERGY
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWR	DRINKING WATER RETURN
DWS	DRINKING WATER SUPPLY
DVV	DRAIN WASTE VENT

EL	ELEVATION
EMCS	ENERGY MONOSERRAT
AND	CENTRAL SYSTEM
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPACT	ENERGY POLICY ACT
ESC	ESOUTCHEON
ESH	EMERGENCY SHOWER
ET	EXPANSION TANK
EWH	ELECTRIC WATER HEATER
EWS	EYE WASH STATION
EWS/SH	EYE WASH/DRENCH SHOWER
EX	EXISTING
F	FAHRENHEIT
FC	FAN COIL
FCO	FLOOR CLEANOUT
FCW	FILTERED COLD WATER
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT (HOSE) CONNECTION
FM	FLOW METER
FOP	FUEL OIL PUMP
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FS	FLOOR SINK
FS	FLOW SWITCH
FU	FIXTURE UNITS

PLUMBING ABBREVIATIONS

GAL	GALLON
GCO	GRADE CLEANOUTS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GRS	GAS REGULATOR STATION
GT	GREASE TRAP
GVTR	GAS VENT THROUGH ROOF
GWH	GAS FIRED WATER HEATER
H&W	HOT AND COLD WATER
HB	HOSE BIBB
HD	HUB DRAIN
HEX	HEAT EXCHANGER
HP	HORSEPOWER
HS	HAND SINK
HST	HOT WATER STORAGE TANK (DOMESTIC)
HWB	HOT WATER BOILER
HWCP	HOT WATER CIRCULATING PUMP
HWP	HOT WATER PUMP
HYD	HYDRANT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
ICW	INDUSTRIAL COLD WATER
IHW	INDUSTRIAL HOT WATER
INV	INVERT
IPC	INTERNATIONAL PLUMBING CODE
IRW	IRRIGATION WATER
IW	INDIRECT WASTE
IWH	INSTANTANEOUS WATER HEATER
IWR	INDUSTRIAL WATER RETURN
IWS	INDUSTRIAL WATER SUPPLY
KW	KILOWATT
KWH	KILOWATT-HOUR
L/S	LITER PER SECOND
LA	LABORATORY AIR
LAV	LAVATORY
LEHR	POUNDS PER HOUR
LCW	LABORATORY COLD WATER
LHW	LABORATORY HOT WATER
LNG	LIQUID NATURAL GAS
LOX	LIQUID OXYGEN
LV	LABORATORY VACUUM
LW	LOW WATER

M	METER
MA	MEDICAL AIR
MAY	MANUAL AIR VENT
MBH	1000 BTUH
MED	MEDICAL
MER	MECHANICAL EQUIPMENT ROOM
MH	MANHOLE
MOU	MEMORANDUM OF UNDERSTANDING
MSS	MOP SERVICE BASIN
MV	MEDICAL VACUUM
N2	NITROGEN
N2O	NITROUS OXIDE
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPW	NON POTABLE WATER
NTS	NOT TO SCALE
O2	OXYGEN
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFD	OVERFLOW DRAIN
OR	OPERATING ROOM
OSD	OVERFLOW STORM DRAIN
OVFL	OVERFLOW

PLUMBING ABBREVIATIONS

IPC	INTERNATIONAL PLUMBING CODE
PA	PASCAL
PD	PRESSURE DROP OR DIFFERENCE
PDI	PLUMBING AND DRAINAGE INSTITUTE
PG	PRESSURE GAGE
PP	PLUMBING PUMP
PPM	PARTS PER MILLION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ATMOSPHERE
PSIG	POUNDS PER SQUARE INCH GAGE
PTRV	PRESSURE TEMPERATURE RELIEF VALVE
PW	POTABLE WATER
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
RL	ROOF LEADER
RP	RECIRCULATION PUMP
RO	REVERSE OSMOSIS WATER
RWL	RAIN WATER LEADER
SAN	SANITARY SEWER
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SCFM	STANDARD CUBIC FOOT/MINUTE
SCW	SOFTENED COLD WATER
SDMH	STORM DRAIN MANHOLE
SMH	SANITARY MANHOLE
SP	SUMP PUMP
SPR	SPRINKLER LINE
SQFT/SF	SQUARE FEET
SS	STAINLESS STEEL
ST	STORAGE TANK
SW	STORM WATER
TCV	TEMPERATURE CONTROL VALVE
TD	TEMPERATURE DIFFERENCE
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TSTAT	THERMOSTAT
TWR	TEMPERED WATER RETURN
TWS	TEMPERED WATER SUPPLY
TYP	TYPICAL

V	VENT
VAC	VACUUM
VB	VACUUM BREAKER
VCO	VACUUM CLEANER OUTLET
VP	VACUUM PUMP
VS	VENT STACK
VSD	VARIABLE SPEED DRIVE
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WG	WATER GAGE
WH	WATER HEATER
WHA	WATER HAMMER ARRESTER
WL	WATER LINE
WM	WATER METER
WPD	WATER PRESSURE DROP
WS	WASTE STACK
WSFU	WATER SUPPLY FIXTURE UNITS
YCO	YARD CLEANOUT
YH	YARD HYDRANT

PLUMBING PIPING SYMBOLS

— — — — —	DOMESTIC COLD WATER, COLD WATER
— — — — —	DOMESTIC HOT WATER, HOT WATER
— — — — —	DOMESTIC HOW WATER RETURN, HOT WATER RETURN
— MA — MA — MA —	MEDICAL AIR
— MV — MV — MV —	MEDICAL VACUUM
— LA — LA — LA —	LABORATORY AIR
— LV — LV — LV —	LABORATORY VACUUM
— OA — OA — OA —	ORAL EVACUATION
— IA — IA — IA —	INDUSTRIAL AIR
— D — D — D —	DRAIN
— SAN — SAN — SAN —	SANITARY SEWER
— SS — SS — SS —	SANITARY SEWER (OPTIONAL)
— SAN — SAN — SAN —	SANITARY SEWER, BELOW GRADE
— SD — SD — SD —	STORM WATER
— SD — SD — SD —	STORM WATER, BELOW GRADE
— OSD — OSD — OSD —	OVERFLOW STORM WATER
— SCW — SCW — SCW —	SOFTEN COLD WATER
— FCW — FCW — FCW —	FILTERED COLD WATER
— DWS — DWS — DWS —	DRINKING WATER SUPPLY
— DWR — DWR — DWR —	DRINKING WATER RETURN
— TWS — TWS — TWS —	TEMPERED WATER SUPPLY
— TWR — TWR — TWR —	TEMPERED WATER RETURN
— N2 — N2 — N2 —	NITROUS OXIDE
— O — O — O —	OXYGEN
— N — N — N —	NITROGEN
— NG — NG — NG —	NATURAL GAS
— NG — NG — NG —	NATURAL GAS, BELOW GRADE
— FOD — FOD — FOD —	FUEL OIL DISCHARGE
— FOS — FOS — FOS —	FUEL OIL SUPPLY
— FOV — FOV — FOV —	FUEL OIL VENT
— FOR — FOR — FOR —	FUEL OIL RETURN

GENERAL PLUMBING SYMBOLS

	DIRECTION OF PIPE PITCH (DOWN)
	DIRECTION OF FLOW
	ANCHOR
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	TOP CONNECTION, 45° OR 90°
	BOTTOM CONNECTION, 45° OR 90°
	SIDE CONNECTION
	CAPPED OUTLET
	RISE OR DROP IN PIPE
	UNION
	PIPE UP
	PIPE DOWN
	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	LIMIT OF DEMOLITION
	INVERTED BUCKET TRAP SET INCLUDING PIPING ACCESSORIES
	FLOAT & THERMOSTATIC TRAP SET INCLUDING PIPING ACCESSORIES
	STRAINER
	THERMOMETER
	PRESSURE GAGE
	FLOW ELEMENT
	CLEAN OUT
	HOSE BIB

PLUMBING VALVE SYMBOLS

	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	ANGLE GLOBE VALVE
	BUTTERFLY VALVE
	BALL VALVE
	MODULATING CONTROL VALVE
	TWO POSITION CONTROL VALVE
	THREE-WAY MODULATING CONTROL VALVE
	THREE-WAY TWO POSITION CONTROL VALVE
	PRESSURE REGULATING VALVE
	PRESSURE RELIEF VALVE
	MANUAL AIR VENT
	TEST PLUG (PRESSURE/TEMPERATURE)
	AUTOMATIC AIR VENT

DRAWING SYMBOLS

	DETAIL NUMBER
	DRAWING NUMBER WHERE DRAWN
	SECTION LETTER
	DRAWING NUMBER WHERE SHOWN
	BUILDING NO. WHERE EQUIPMENT IS LOCATED.
	EQUIPMENT ABBREVIATION (SUPPLY FAN)
	SUPPLY FAN NO. 3 IN BUILDING NO. 26
	TYPICAL UNIT NO.
	BUILDING NO. WHERE EQUIPMENT IS LOCATED
	ITEM (TERMINAL UNIT SHOWN)
	ITEM NUMBER (TERMINAL UNIT NO. 1)
	SERVED BY AIR HANDLER UNIT NO. 1

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Drawing Title	
MECHANICAL PLUMBING SYMBOLS AND ABBREVIATIONS	
Approved: Project Director	

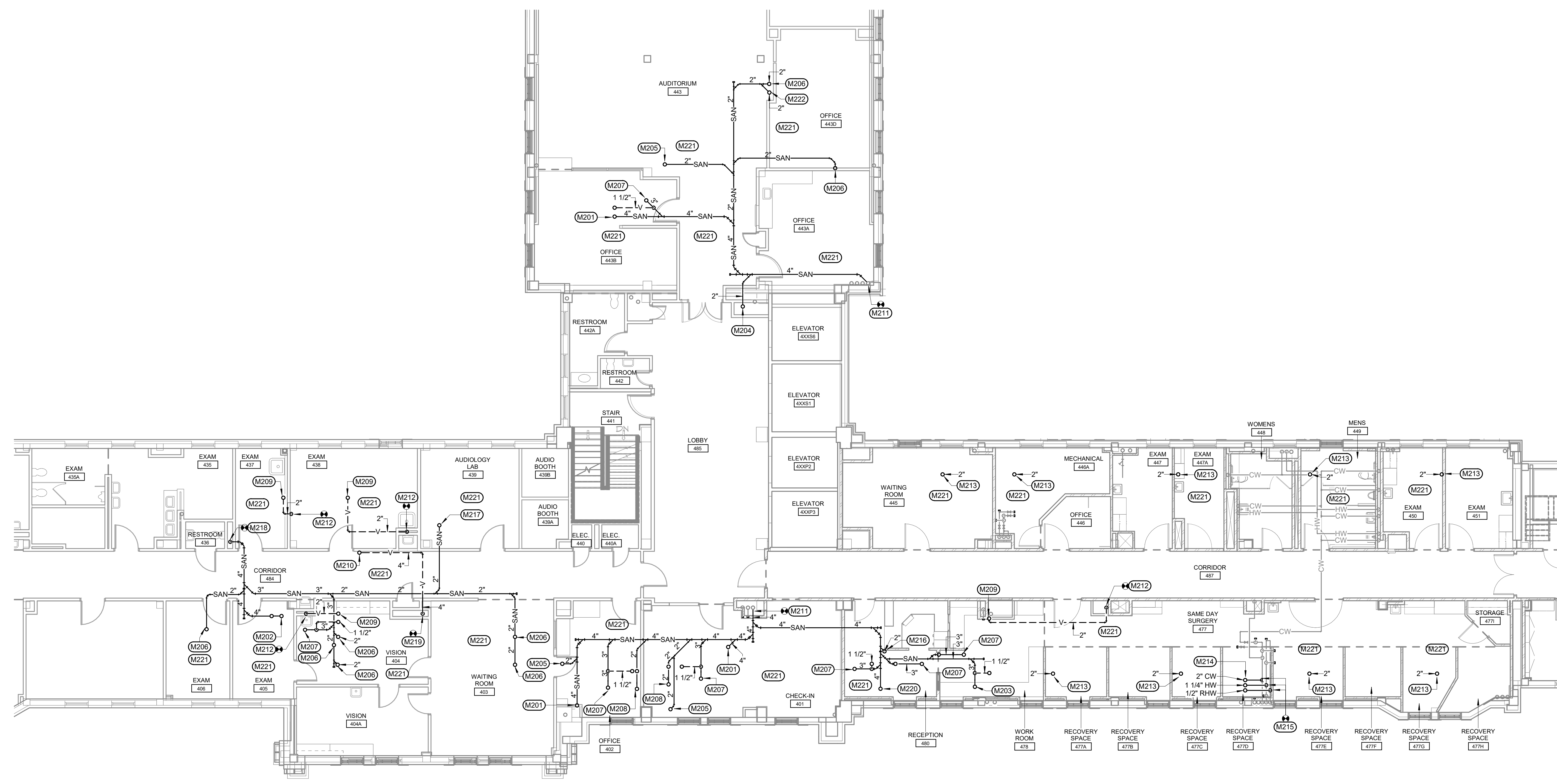
100% CONSTRUCTION DRAWINGS

Project Title		Project Number	
V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		438-15-201	
Location		Building Number	
SIOUX FALLS, SOUTH DAKOTA		5	
Date		Drawing Number	
OCTOBER 17, 2017		5- PL001	
Checked	Drawn	Dwg. 30 of 60	
WM	DNT		

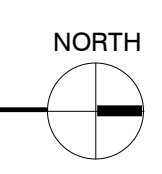
Office of Construction and Facilities Management



three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot
 one eighth inch = one foot



PLUMBING PLAN - FOURTH FLOOR
 SCALE: 1/8" = 1'-0"



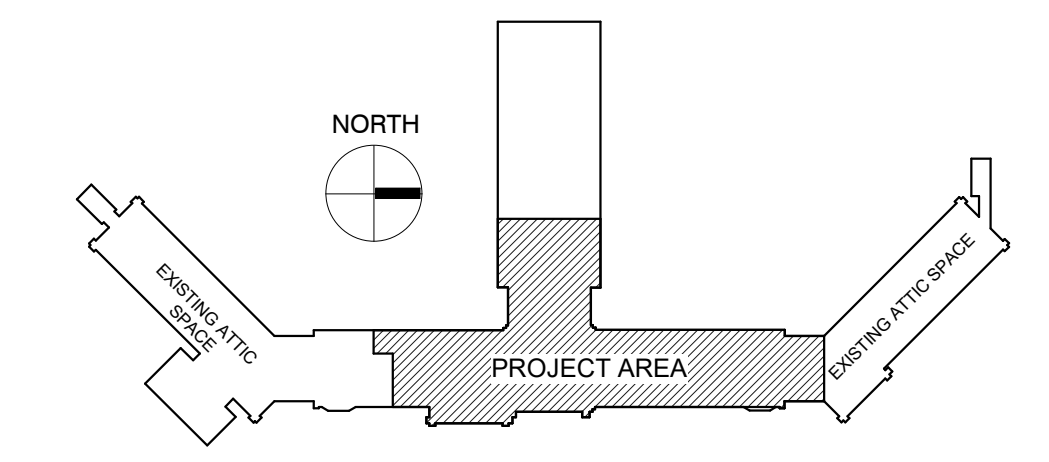
KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M201 4" WASTE UP TO WATER CLOSET
 - M202 4" WASTE UP TO CLINICAL SERVICE SINK. ROUTE 2" VENT UP AT LOCATION SHOWN.
 - M203 3" WASTE UP TO MOP SINK. ROUTE 1-1/2" VENT UP AT LOCATION SHOWN.
 - M204 2" WASTE UP TO ELECTRIC WATER COOLER.
 - M205 2" WASTE UP TO LAVATORY.
 - M206 2" WASTE UP TO SINK.
 - M207 3" WASTE UP TO FLOOR DRAIN. ROUTE 1-1/2" VENT UP AT LOCATION SHOWN.
 - M208 2" WASTE UP TO SHOWER. ROUTE 1-1/2" VENT UP AT LOCATION SHOWN.
 - M209 2" VENT UP. SEE PLUMBING PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M210 4" VENT UP. SEE PLUMBING PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M211 CONNECT NEW 4" WASTE TO EXISTING 4" MAIN. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE, LOCATION, INVERT ELEVATION AND DIRECTION OF FLOW OF EXISTING PRIOR TO CONNECTION. PATCH WALL TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR.
 - M212 CONNECT NEW 2" VENT TO EXISTING 2" VENT. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION. PATCH WALL TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR.
 - M213 CAP 2" WASTE BELOW FIFTH FLOOR. FLOOR STRUCTURE. FOR FUTURE EXAM ROOM BUILD OUT ON FIFTH FLOOR. PIPING TO BE OMITTED UNDER ALTERNATE #1.
 - M214 2" CW, 1-1/4" HW, AND 1/2" RHW UP THRU FLOOR. SEE PLUMBING PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M215 CONNECT NEW 2" CW, 1-1/4" HW, AND 1/2" RHW TO EXISTING CW, HW, AND RHW IN THIS AREA. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION EXISTING PRIOR TO CONNECTION.
 - M216 2" WASTE UP TO BACK TO BACK LAVATORIES.
 - M217 2" WASTE UP TO BACK TO BACK SINKS.
 - M218 4" WASTE DN IN EXISTING CHASE. CONNECT NEW 4" WASTE TO EXISTING 4" WASTE IN CHASE. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE, LOCATION, INVERT ELEVATION AND DIRECTION OF FLOW OF EXISTING PRIOR TO CONNECTION. PATCH WALL TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR.
 - M219 CONNECT NEW 4" VENT TO EXISTING 4" VENT. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION. PATCH WALL TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR.
 - M220 4" WASTE UP TO BACK TO BACK WATER CLOSETS.
 - M221 REMOVE AND REINSTALL EXISTING CEILING AS REQUIRED FOR INSTALLATION OF NEW PIPING. COORDINATE WITH GENERAL CONTRACTOR. IF TILE IS DAMAGED DURING CONSTRUCTION, IT SHALL BE REPLACED AT NO ADDITIONAL COST TO PROJECT.
 - M222 2" WASTE UP TO OUTLET BOX FOR ICE MAKER.

GENERAL NOTES:

- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
- B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
- C DUCT SIZES ARE NET INSIDE DIMENSIONS.
- D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
- E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
- F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7' (175MM) ABOVE FINISHED FLOOR.
- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- L PROVIDE WATER HAMMER ARRESTORS WITH INLET ISOLATION VALVES AT EACH NEW SINK AND LAVATORY HOT WATER AND COLD WATER BRANCH AND BOTH NEW WATER CLOSETS.
- M ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:

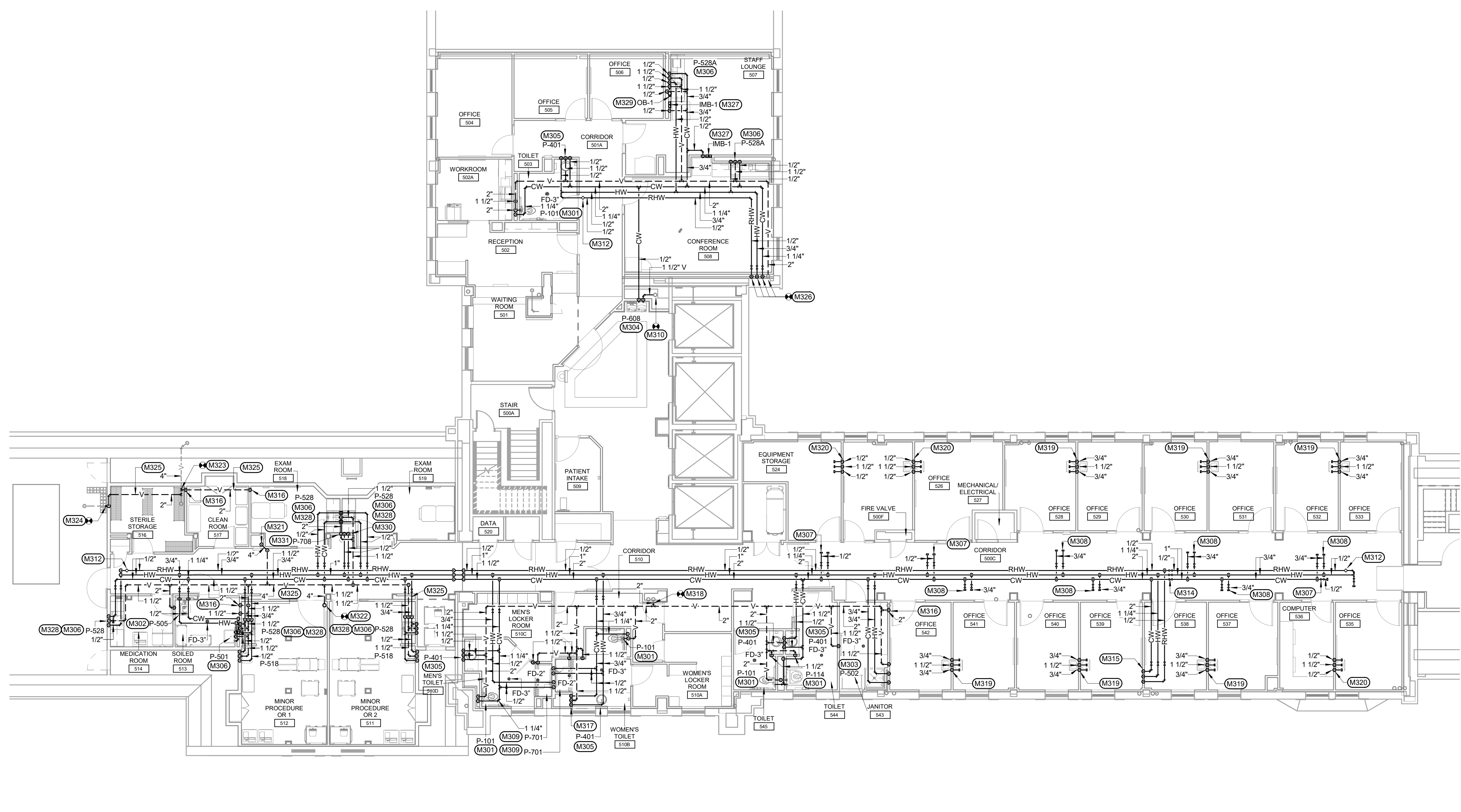


PHASING PLAN NOTE:
 SEE ARCHITECTURAL PLANS
 FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title PLUMBING PLAN - FOURTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p>	<p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Drawing Number 5-PL101</p> <p>Dwg. 31 of 60</p>	<p>Office of Construction and Facilities Management</p>						
						<p>Revisions:</p> <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>					

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 B one and one half inches = one foot
 C one inch = one foot
 D three quarters inch = one foot
 E one half inch = one foot
 F three eighths inch = one foot
 G one quarter inch = one foot
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PLUMBING PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"

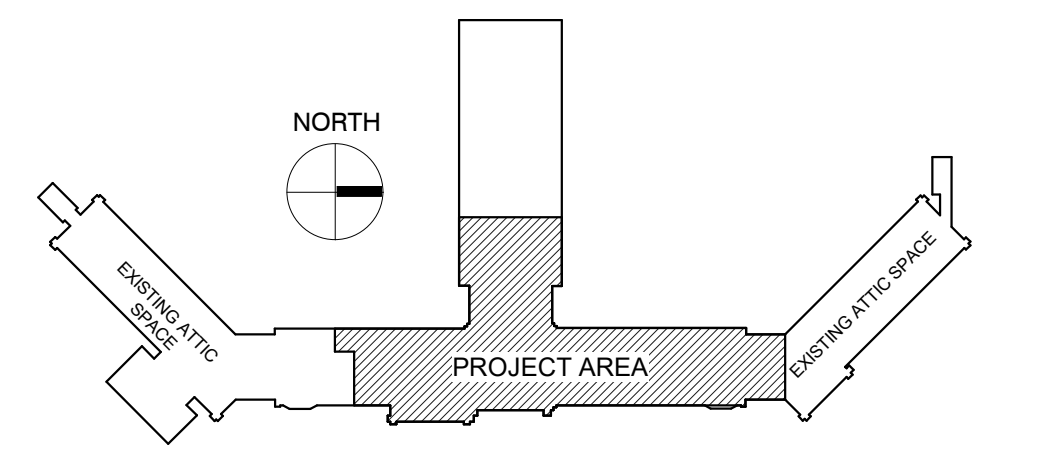
KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M301 1-1/4" CW, 4" WASTE, 2" VENT TO WATER CLOSET.
 - M302 3/4" CW, 3/4" HW, 4" WASTE, AND 2" VENT TO CLINICAL SERVICE SINK. 1-1/4" CW TO FLUSH VALVE.
 - M303 3/4" CW, 3/4" HW, 3" WASTE, 1-1/2" VENT TO MOP SINK.
 - M304 1/2" CW, 2" WASTE, 1-1/2" VENT TO ELECTRIC WATER COOLER.
 - M305 1/2" CW, 1/2" HW, 2" WASTE, 1-1/2" VENT TO LAVATORY.
 - M306 1/2" CW, 1/2" HW, 2" WASTE, 1-1/2" VENT TO SINK.
 - M307 1/2" CW, 1/2" HW CAPPED FOR FUTURE CONNECTION. PROVIDE ISOLATION VALVE ABOVE CEILING IN ACCESSIBLE LOCATION. VALVE MUST BE INSTALLED NO MORE THAN 6" OFF MAIN. PIPING TO BE OMITTED UNDER ALTERNATE #1.
 - M308 3/4" CW, 1/4" HW CAPPED FOR FUTURE CONNECTION. PROVIDE ISOLATION VALVE ABOVE CEILING IN ACCESSIBLE LOCATION. VALVE MUST BE INSTALLED NO MORE THAN 6" OFF MAIN. PIPING TO BE OMITTED UNDER ALTERNATE #1.
 - M309 1/2" CW, 1/2" HW DN TO SHOWER.
 - M310 CONNECT NEW 1-1/2" VENT TO EXISTING 4" VENT. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M312 INSTALL MANUAL BALANCING VALVE ABOVE CEILING IN ACCESSIBLE LOCATION. BALANCE TO 0.5GPM.
 - M314 PIPING DOWN STREAM OF SHUT OFF VALVES TO BE OMITTED UNDER ALTERNATE #1.
 - M315 2" CW, 1-1/4" HW, AND 1/2" RHW DN THRU FLOOR. SEE PLUMBING PLAN - FOURTH FLOOR FOR CONTINUATION.
 - M316 2" VENT DN THRU FLOOR. SEE PLUMBING PLAN - FOURTH FLOOR FOR CONTINUATION.
 - M317 1/2" CW, 1/2" HW, AND 1-1/2" VENT DN IN CHASE. ROUTE PIPING BELOW COUNTERTOP TO LAVATORY.
 - M318 CONNECT NEW 2" VENT TO EXISTING 4" VENT IN CHASE. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M319 3/4" CW, 3/4" HW, 1-1/2" VENT, AND 2" WASTE ROUGH-IN FOR FUTURE BACK TO BACK EXAM ROOM SINKS. CAP WATER AND VENT PIPING ABOVE THE CEILING. CAP WASTE PIPING BELOW FLOOR. SEE PLUMBING PLAN - FOURTH FLOOR FOR CONTINUATION. VERIFY EXACT LOCATION. PIPING TO BE OMITTED UNDER ALTERNATE #1.
 - M320 1/2" CW, 1/2" HW, 1-1/2" VENT, AND 2" WASTE ROUGH-IN FOR FUTURE EXAM ROOM SINK. CAP WATER AND VENT PIPING ABOVE THE CEILING. CAP WASTE PIPING BELOW FLOOR. SEE PLUMBING PLAN - FOURTH FLOOR FOR CONTINUATION. VERIFY EXACT LOCATION. PIPING TO BE OMITTED UNDER ALTERNATE #1.
 - M321 4" VENT DN THRU FLOOR. COORDINATE 4" VENT ROUTING WITH EXISTING STRUCTURE. SEE PLUMBING PLAN - FOURTH FLOOR FOR CONTINUATION.
 - M322 CONNECT NEW 4" VENT TO EXISTING 5" VENT THRU ROOF. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M323 CONNECT (2) NEW 2" VENT TO EXISTING 4" VENT. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M324 CONNECT NEW 2" VENT TO EXISTING 2" VENT. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M325 ROUTE NEW PIPING THRU SOFIT.
 - M326 CONNECT NEW 2" VENT, 1-1/4" CW, 3/4" HW, AND 1/2" RHW TO EXISTING VENT, CW, HW, AND RHW. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M327 1/2" CW DN TO ICE MAKER FOR REFRIGERATOR. INSTALL SHUT-OFF VALVE AND COMPRESSION FITTING FOR CONNECTION TO OWNER-PROVIDED REFRIGERATOR. PROVIDE PRESSURE REDUCING VALVE AS REQUIRED. MAXIMUM PRESSURE SERVING ICE MAKE SHALL BE 40PSI.
 - M328 PROVIDE FOOT PEDAL CONTROLS AT SINK. SEE DOUBLE FAUCET CONTROL DETAIL 2/PL01.
 - M329 1/2" CW, 1-1/2" VENT, AND 2" WASTE TO OUTLET BOX FOR ICE MAKER. INSTALL SHUT-OFF VALVE AND COMPRESSION FITTING ON CW FOR CONNECTION TO OWNER-PROVIDED ICE MAKER. PROVIDE PRESSURE REDUCING VALVE AS REQUIRED. MAXIMUM PRESSURE SERVING ICE MAKE SHALL BE 40PSI. ROUTE DRAIN FROM OWNER PROVIDED ICE MAKER TO OUTLET BOX.
 - M330 1/2" HW, 1/2" CW DN TO THERMOSTATIC MIXING VALVE. ROUTE 1/2" TEMPERED WATER FROM THERMOSTATIC MIXING VALVE DN TO EMERGENCY EYE/FACE WASH.
 - M331 2" TEMPERED WATER, 1-1/2" VENT, AND 2" WASTE TO EMERGENCY EYE/FACE WASH. ROUTE 2" WASTE LOW THRU WALL AND CONNECT TO 2" WASTE RISER FOR SINKS.

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- B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
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- F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
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- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7' (175MM) ABOVE FINISHED FLOOR.
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KEY PLAN:



PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

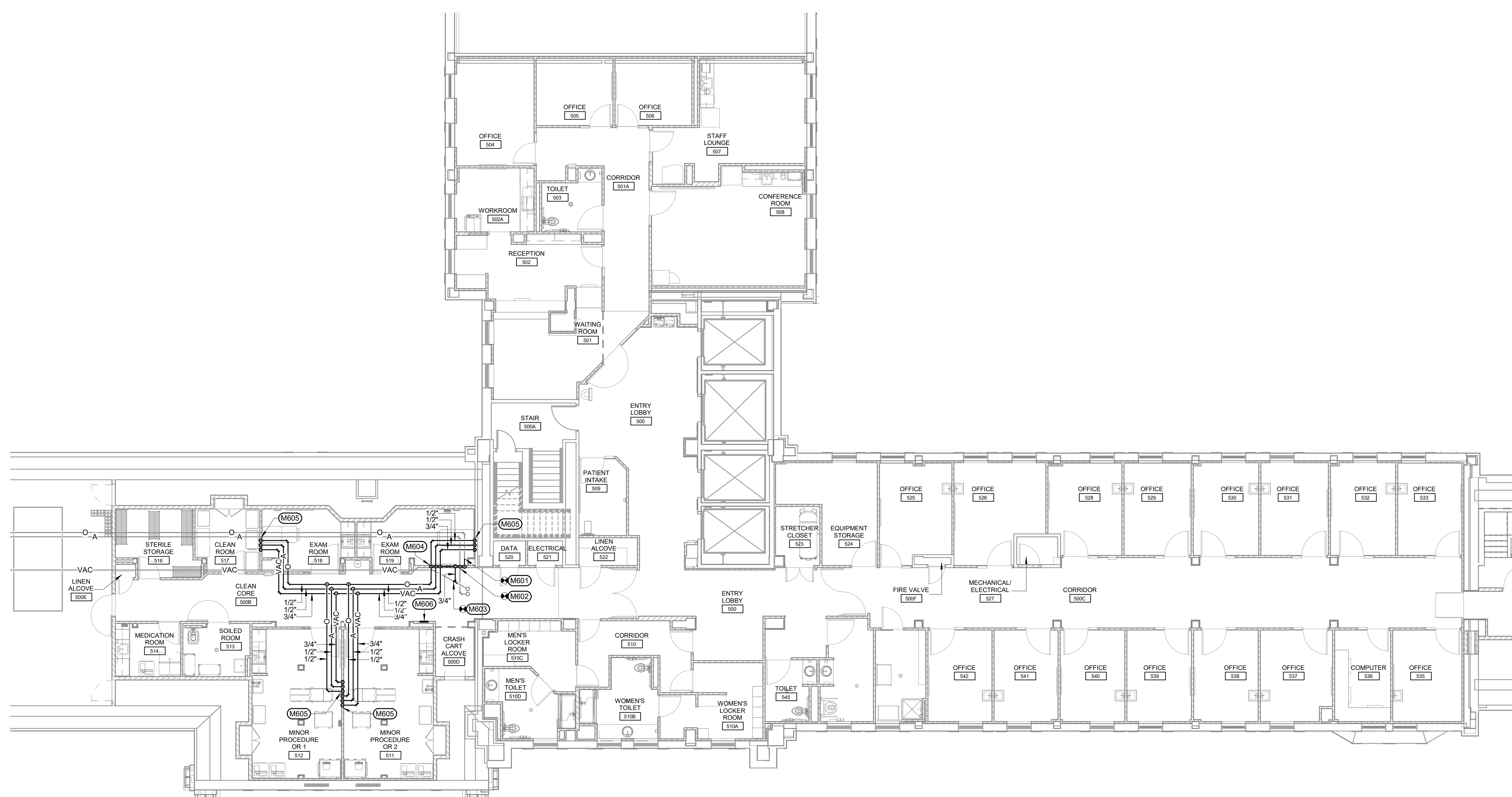
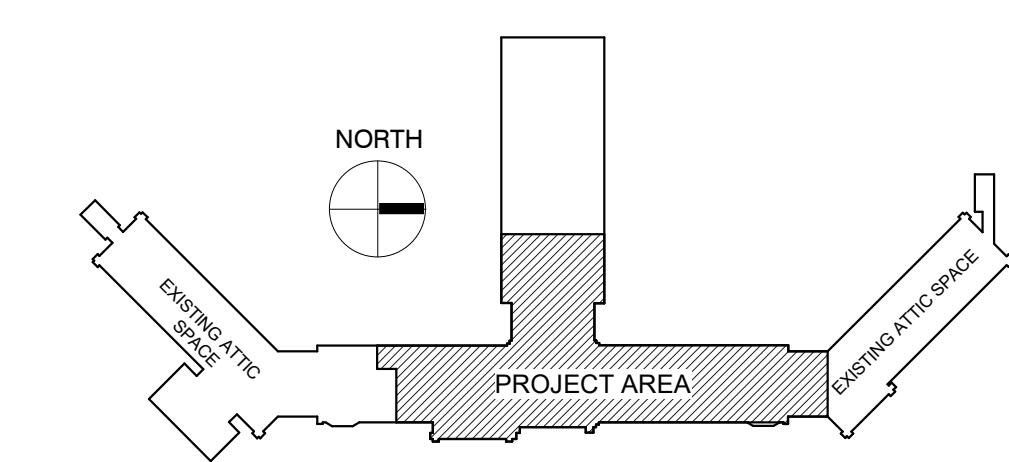
100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title PLUMBING PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Drawing Number 5-PL102</p> <p>Dwg. 32 of 60</p>	<p>Office of Construction and Facilities Management</p>
<p>Revisions: _____ Date _____</p>		<p>Date: OCTOBER 17, 2017</p>		<p>Checked: WM Drawn: DNT</p>	

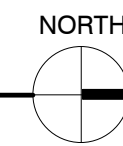
- KEYNOTES:**
- MECHANICAL SPECIFIC NOTES**
- M601 CONNECT NEW 1/2" OXYGEN TO EXISTING OXYGEN AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M602 CONNECT NEW 1/2" MEDICAL AIR TO EXISTING MEDICAL AIR AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M603 CONNECT NEW 3/4" VACUUM TO EXISTING VACUUM AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M604 ROUTE 3/4" VACUUM, 1/2" MEDICAL AIR, AND 1/2" OXYGEN DN TO MEDICAL GAS ZONE VALVE BOX. COORDINATE EXACT LOCATION WITH OWNER.
 - M605 ROUTE 3/4" VACUUM, 1/2" MEDICAL AIR, AND 1/2" OXYGEN DN TO MEDICAL GAS WALL OUTLETS. COORDINATE WITH ARCHITECTURAL PLANS.
 - M606 MEDICAL GAS ALARM PANEL. VERIFY EXACT LOCATION WITH OWNER. COORDINATE WITH ELECTRICAL CONTRACTOR.

- GENERAL NOTES:**
- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
 - B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
 - C DUCT SIZES ARE NET INSIDE DIMENSIONS.
 - D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
 - E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
 - F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
 - G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
 - H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
 - J WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
 - K REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
 - L ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
 - M INSTALLATION OF MEDICAL GAS SYSTEM SHALL FOLLOW STANDARD OPERATING PROCEDURES AS REQUIRED BY THE DEPARTMENT OF VETERAN AFFAIRS AND AS PER NFPA 99.
 - N PROVIDE OHMEDA STYLE OUTLETS. COORDINATE OUTLET TYPES WITH OWNER.

KEY PLAN:



MEDICAL GAS PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"



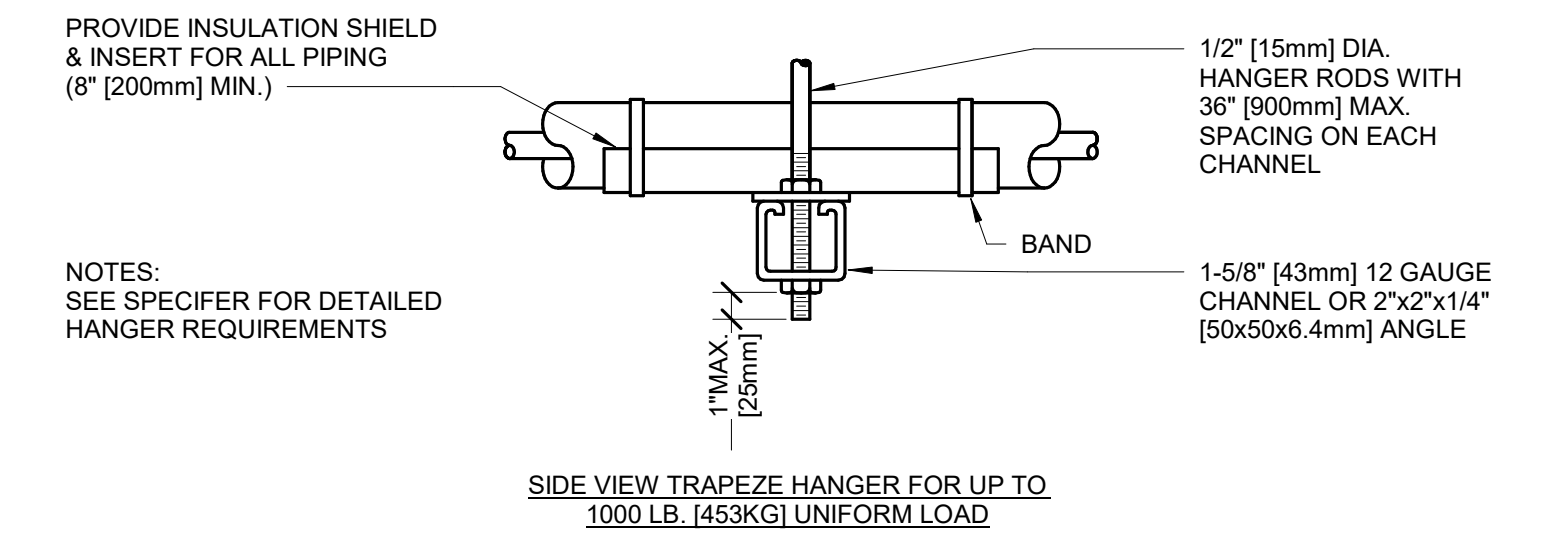
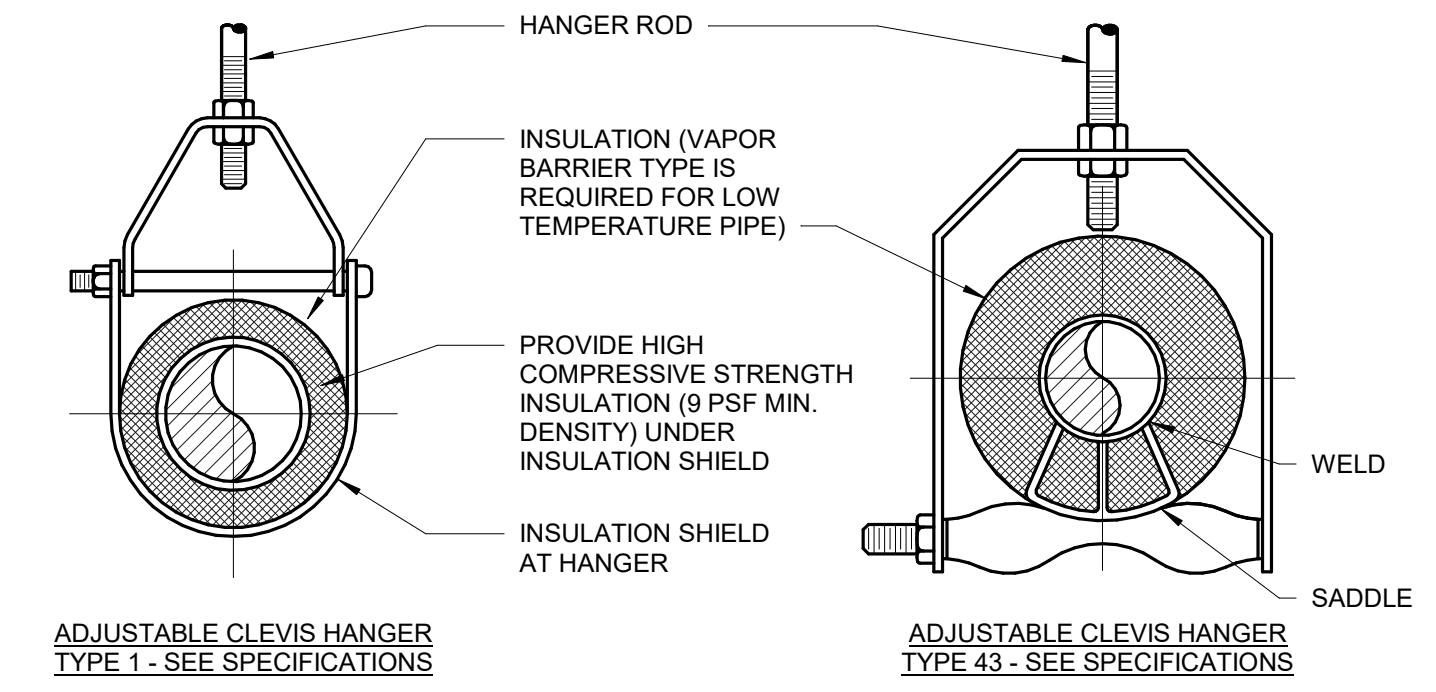
PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 15%;">Description</th> <th style="width: 10%;">Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	Description	Date				<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title MEDICAL GAS PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked WM</p> <p>Drawn DNT</p>	<p>Drawing Number 5-PL103</p> <p>Dwg. 33 of 60</p>	<p>Office of Construction and Facilities Management</p>
No.	Description	Date											

MEDICAL GAS ALARM PANEL SCHEDULE

LOCATION	TYPE OF PANEL	GAGES	SERVICE INDICATOR LIGHTS
BOILER PLANT CONTROL OFFICE -OR- ENGINEERING CONTROL CENTER (ECC) -OR- OTHER LOCATION WITH ENGINEERING PERSONNEL SUPERVISION -AND- INTENSIVE CARE NURSING -OR- FIRE STATION -OR- PHONE SWITCHBOARD -OR- SECURITY OFFICE	MASTER (SYSTEM) ALARM PANEL	NO	LIQUID OXYGEN LEVEL LOW OXYGEN RESERVE SWITCHOVER OXYGEN RESERVE IN USE OXYGEN RESERVE LOW LIQUID LEVEL OXYGEN RESERVE PRESSURE LOW OXYGEN MAIN LINE PRESSURE LOW OXYGEN MAIN LINE PRESSURE HIGH NITROUS OXIDE CHANGE OVER TO SECONDARY NITROUS OXIDE RESERVE IN USE NITROUS OXIDE MAIN LINE PRESSURE LOW NITROUS OXIDE MAIN LINE PRESSURE HIGH NITROGEN CHANGE OVER TO SECONDARY NITROGEN RESERVE IN USE NITROGEN MAIN LINE PRESSURE LOW NITROGEN MAIN LINE PRESSURE HIGH MEDICAL AIR DEWPOINT HIGH MA COMPRESSOR MALFUNCTION MEDICAL AIR MAIN LINE PRESSURE LOW MEDICAL AIR MAIN LINE PRESSURE HIGH MA SYSTEM CARBON MONOXIDE HIGH DESICCANT DRYER MALFUNCTION DESICCANT DRYER POST FILTER DIRTY DESICCANT DRYER INLET FILTER DIRTY MAIN LINE FILTER BANK DIRTY MA REFRIGERATED DRYER POST FILTER DIRTY AFTER COOLER HIGH AIR TEMPERATURE MEDICAL VACUUM LINE VACUUM LOW MEDICAL VACUUM FILTER BACK PRESSURE TEST BUTTON
SURGERY CONTROL ROOM	AREA ALARM PANEL	YES	OXYGEN LINE PRESSURE ABNORMAL NITROUS OXIDE LINE PRESSURE ABNORMAL NITROGEN LINE PRESSURE ABNORMAL MEDICAL AIR LINE PRESSURE ABNORMAL MEDICAL VACUUM LINE VACUUM LOW TEST BUTTON
RECOVERY ROOMS CRITICAL CARE AREAS EMERGENCY AREAS PATIENT AREAS	AREA (ZONE) ALARM PANEL	YES	OXYGEN LINE PRESSURE ABNORMAL NITROUS OXIDE LINE PRESSURE ABNORMAL NITROGEN LINE PRESSURE ABNORMAL MEDICAL AIR LINE PRESSURE ABNORMAL MEDICAL VACUUM LINE VACUUM LOW TEST BUTTON



NOM. SIZE		MAXIMUM PIPE/TUBING SUPPORT SPACING																																
FT.	[mm]	THRU 3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24															
		THRU [20]	[25]	[32]	[40]	[50]	[65]	[75]	[100]	[125]	[150]	[200]	[250]	[300]	[350]	[400]	[450]	[500]	[600]															
PIPE	[mm]	[2100]	[2100]	[2100]	[2700]	[3000]	[3400]	[3700]	[4100]	[4900]	[5200]	[5800]	[6700]	[7000]	[7800]	[8200]	[8500]	[9100]	[9600]															
TUBING	[mm]	[1500]	[1800]	[2100]	[2400]	[2400]	[2700]	[3000]	[3700]	[4000]	[4100]	[4900]																						

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

1 PIPE HANGERS

SCALE: NO SCALE

MEDICAL GAS SYSTEM: DETAILS AND NOTES

MEDICAL GAS PIPING

PIPING LAYOUT IS DIAGRAMMATIC ONLY. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION AND COORDINATION OF ACTUAL LOCATIONS AND COORDINATE WITH OTHER TRADES.

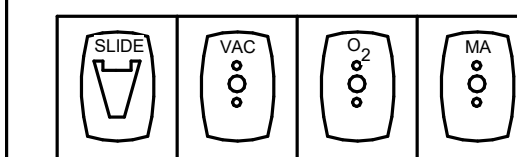
ALL PRESSURE GAS PIPING SHALL BE INSTALLED BY THE PLUMBING CONTRACTOR AND SHALL BE HARD-DRAWN SEAMLESS TYPE "K" OR "L" COPPER TUBING (ASTM B-819) AND BEAR ONE OF THE FOLLOWING MARKING: OXY, MED, OXY/MED, ACR/OXY, OR ACR/MED. TYPE "K" ONLY FOR NITROGEN SYSTEMS.

ALL VACUUM PIPING SHALL BE INSTALLED BY THE PLUMBING CONTRACTOR AND SHALL BE HARD-DRAWN SEAMLESS TYPE "M" COPPER TUBING (ASTM B98) OR TYPE "L" COPPER MEDICAL GAS TUBING (ASTM B-819).
SUPPORT PIPING AS FOLLOWS:

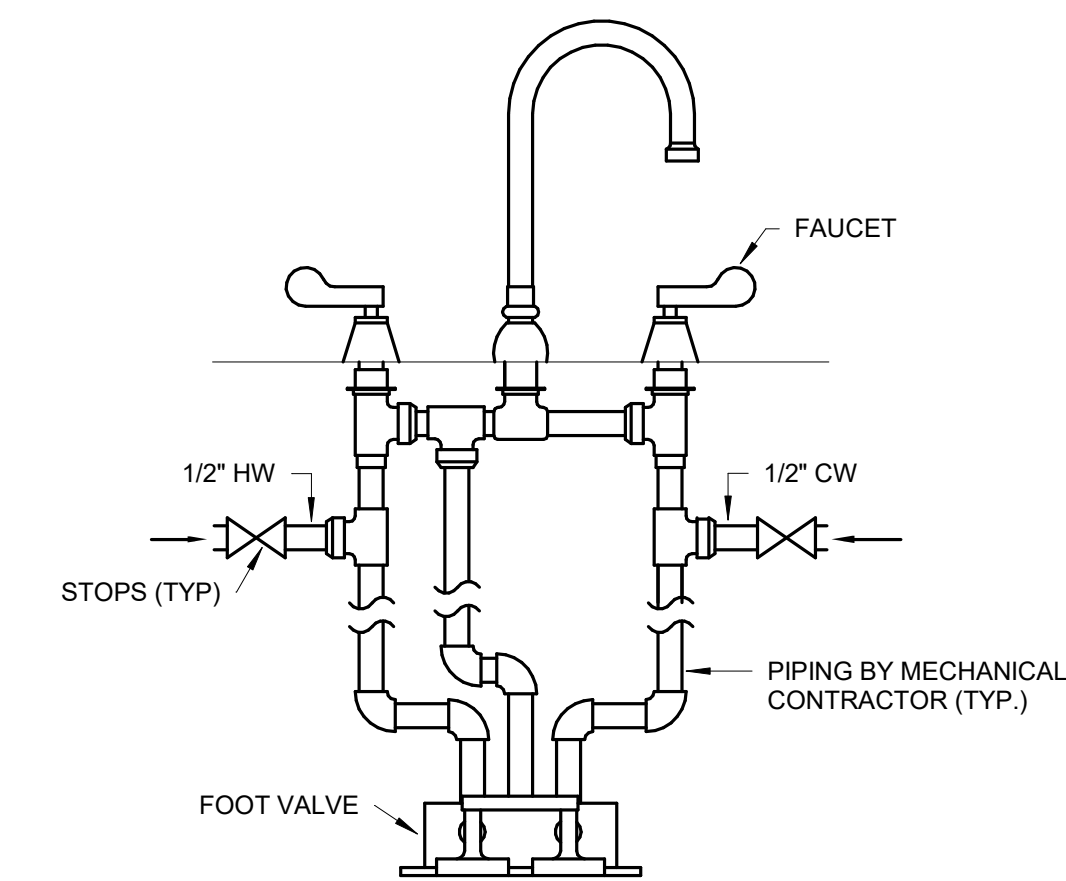
1/2"	6 FT
3/4"	7 FT
1"	9 FT
1-1/4"	9 FT
1-1/2" AND LARGER	10 FT

ALL MEDICAL GAS EQUIPMENT SHALL BE PROVIDED BY A SINGLE SOURCE SUPPLIER WITH A MINIMUM 10 YEARS EXPERIENCE WITH MEDICAL GAS SYSTEM MAINTENANCE, CERTIFICATION AND TESTING OF MEDICAL GAS SYSTEMS AND EQUIPMENT AND MUST BE FACTORY TRAINED TO WARRANTY SUCH MEDICAL GAS SYSTEMS.

MEDICAL GAS SUPPLIER SHALL BE AN I.T.C. AND P.I.P.E. APPROVED CERTIFIER.



ROOMS #511, 512, 518, 519
48" AFF



2 DOUBLE FAUCET CONTROL DETAIL

SCALE: NO SCALE

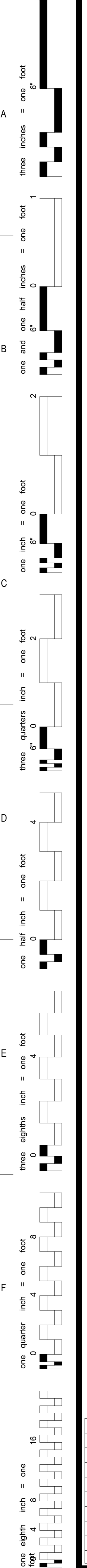
100% CONSTRUCTION DRAWINGS

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Revisions: _____ Date _____				Date OCTOBER 17, 2017		Checked WM		Drawn DNT		Drawing Number 5-PL501		Dwg. 34 of 60					

PLUMBING FIXTURE SCHEDULE

UNIT TYPE	UNIT NUMBER	MANUFACTURER	MODEL	FIXTURE TYPE	WASTE	VENT	SUPPLY		TRIM/REMARKS
							GW	HW	
FD	2"	ZURN	415B	2" OUTLET FLOOR DRAIN	2"	1 1/2"			1
FD	3"	ZURN	415B	3" OUTLET FLOOR DRAIN	3"	1 1/2"			2
IMB	1	GUY-GRAY	BIM875	ICE MAKER BOX			1/2"		3
OB	1	GUY-GRAY	B-200	OUTLET BOX	2"	1 1/2"	1/2"	1/2"	4
P	101	ZURN	Z5645-BWL	WATER CLOSET (FLOOR MOUNTED FLUSH VALVE - BACK OUTLET) 1.6 GPF, ADA	4"	2"	1 1/4"		5
P	114	ACORN	2125-A	BARIATRIC WATER CLOSET (FLOOR MOUNTED FLUSH VALVE - BACK OUTLET) 1.6 GPF, ADA	4"	2"	1 1/4"		6
P	401	ZURN	Z831B4-XL	LAV INTERGRAL WITH COUNTERTOP, FAUCET ONLY	2"	1 1/2"	1/2"	1/2"	7
P	501	ZURN	Z5888	CAST IRON SERVICE SINK 22"x18"	2"	1 1/2"	1/2"	1/2"	8
P	502	ZURN	Z1996-24	MOP SERVICE SINK	3"	1 1/2"	1/2"	1/2"	8
P	505	ZURN	Z5420	CLINIC SERVICE SINK	4"	1 1/2"	3/4"	3/4"	10
P	518	ELKAY	EWS2520FC	SINGLE COMPARTMENT SS WALL MOUNTED SCRUB SINK WITH DOUBLE PEDAL FOOT VALVE	2"	1 1/2"	1/2"	1/2"	11
P	528	ELKAY	LRAD221965	SINGLE COMPARTMENT SS COUNTERTOP SINK, 1.5 GPM LAMINAR FLOW WITH FOOT PEDAL CONTROLS	2"	1 1/2"	1/2"	1/2"	12
P	528A	ELKAY	LRAD221965	SINGLE COMPARTMENT SS COUNTERTOP SINK, 1.5 GPM LAMINAR FLOW	2"	1 1/2"	1/2"	1/2"	13
P	608	ELKAY	EZ5TLWWSLK	WATER CHILLER WITH BOTTLE FILLER (SPLIT LEVEL) ADA	2"	1 1/2"	1/2"		14
P	701	ZURN	Z7300-SS-HW-MT	ADA SHOWER ASSEMBLY W/ SLIDE BAR AND HANDWALL SHOWER 2.5 GPM			1/2"	1/2"	15
P	708	BRADLEY	S19-220FW	EYEFACE WASH FIXTURE WITH WALL BRACKET AND P-TRAP	2"	1 1/2"	1/2"	1/2"	16

- COMMENTS:**
- ZURN 415B CAST IRON FLOOR DRAIN WITH TYPE B POLISHED NICKEL BRONZE, LIGHT DUTY STRAINER AND 2" PIPE OUTLET SIZE.
 - ZURN 415B CAST IRON FLOOR DRAIN WITH TYPE B POLISHED NICKEL BRONZE, LIGHT DUTY STRAINER AND 3" PIPE OUTLET SIZE.
 - RECESSED ICE MAKER BOX WITH 1/2" SUPPLY GATE VALVE, CAPPED FOR FUTURE CONNECTION, FIXTURE MOUNTING HEIGHT 48" A.F.F.
 - PROVIDE WITH 1/2" WATER CONNECTION AND 2" WASTE CONNECTION.
 - BEMIS 1955C WHITE OPEN FRONT SEAT WITH SS CHECK HINGE, VITREOUS CHINA ELONGATED BOWL SIPHON JET, DUAL FLUSH VALVE, 1.6 GPF.
 - ACORN BARIATRIC FLOOR MOUNTED, TOP SUPPLY, BACK WASTE OUTLET FLUSH VALVE TOILET, OPEN FRONT, 1200 LBS RATED HINGED SEAT LESS COVER, DUAL FLUSH VALVE, 1.6 GPF.
 - ZURN Z831B4-XL CHROME PLATED RIGID GOOSENECK FAUCET WITH 4" WRIST BLADE HANDLES AND VANDAL RESISTANT 1.5 GPM LAMINAR FLOW OUTLET. PROVIDE WITH 17 GAUGE CHROME PLATED P TRAP, LA12K SUPPLY KIT WITH KEYED ANGLED STOP VALVE AND TUBE RISERS, GRID DRAIN, TRUEBRO LAV PIPING SHIELD (WHITE), PROVIDE POWERS LFE480 THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES (SET TEMP. TO 110 DEG. F. MAX), ADA COMPLIANT.
 - ZURN Z643M4-RC ROUGH CHROME PLATED FAUCET, ZURN TS2904IP2 ADJUSTABLE 2" CAST IRON BODY P-TRAP W/ CHROME PLATED BRONZE STRAINER, GASKET, AND CLEAN OUT PLUG.
 - ZURN Z843M4-RC, (BC) STAINLESS STEEL BUMPER GAURD, (HH) HOSE AND HOSE BRACKET, (SDL) 3" STAINLESS STEEL DRAIN WITH DOME STRAINER, (WG) STAINLESS STEEL WALL GUARD.
 - SIPHON JET, VITREOUS CHINA, FLOOR MOUNTED, WITH ACORN CSB TERRAZZO CLINIC SINK BASE, ZURN Z6084KAV-BWN BEDPAN WASHER FLUSH VALVE AND SERVICE SINK FAUCET WITH BEDPAN WASHER.
 - STAINLESS STEEL WALL MOUNTED, SINGLE STATION SCRUB SINK WITH ELKAY LK398C FOOT PEDAL VALVE, ELKAY 8-3/16" RIGID GOOSENECK SPOUT WITH AE19A VANDAL RESISTANT ANTI-HOSE AERATOR. PROVIDE WITH ELKAY LK188 STAINLESS STEEL STRAINER WITH INTEGRAL TAILPIECE, P-TRAP, AND SUPPLY KIT WITH KEYED ANGLED STOP VALVE AND TUBE RISERS. PROVIDE POWERS LFE480 THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES (SET TEMP. TO 110 DEG. F. MAX).
 - SINGLE COMPARTMENT STAINLESS STEEL COUNTERTOP SINK, DRAIN OUTLET IN CENTER OF BASIN, HOLE DRILLING CONFIGURATION 3 (3 HOLES AT 4" OC). PROVIDE WITH ZURN Z831B4-XL CHROME PLATED RIGID GOOSENECK FAUCET WITH 4" WRIST BLADE HANDLES AND VANDAL RESISTANT 1.5 GPM LAMINAR FLOW OUTLET. PROVIDE ZURN Z85500-XL DOUBLE FOOT PEDAL VALVE PROVIDE WITH 17 GAUGE CHROME PLATED P TRAP, EBC 588H STRAINER, AND LA12K SUPPLY KIT WITH KEYED ANGLED STOP VALVE AND TUBE RISERS. PROVIDE POWERS LFE480 THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES (SET TEMP. TO 110 DEG. F. MAX), SEE ARCHITECTURAL PLANS FOR COUNTERTOP ELEVATIONS, COORDINATE SINK OPENING WITH COUNTERTOP MILLWORK.
 - SINGLE COMPARTMENT STAINLESS STEEL COUNTERTOP SINK, DRAIN OUTLET IN CENTER OF BASIN, HOLE DRILLING CONFIGURATION 3 (3 HOLES AT 4" OC). PROVIDE WITH ZURN Z831B4-XL CHROME PLATED RIGID GOOSENECK FAUCET WITH 4" WRIST BLADE HANDLES AND VANDAL RESISTANT 1.5 GPM LAMINAR FLOW OUTLET. PROVIDE WITH 17 GAUGE CHROME PLATED P TRAP, EBC 588H STRAINER, AND LA12K SUPPLY KIT WITH KEYED ANGLED STOP VALVE AND TUBE RISERS. PROVIDE POWERS LFE480 THERMOSTATIC MIXING VALVE WITH INTEGRAL CHECK VALVES (SET TEMP. TO 110 DEG. F. MAX), SEE ARCHITECTURAL PLANS FOR COUNTERTOP ELEVATIONS, COORDINATE SINK OPENING WITH COUNTERTOP MILLWORK.
 - WATER COOLER WITH ELECTRONIC SENSOR OPERATED BOTTLE FILLER, PROVIDE WITH 17 GAUGE P TRAP AND EBC VA12K KEYED ANGLED STOP VALVE.
 - SHOWER TRIM, LEVER VOLUME CONTROL HANDLE, THERMOSTATIC VALVE CARTRIDGE, PERSONAL HAND HELD SHOWER S1701, 60 FLEXIBLE METAL HOSE HAND SPRAYER
 - PROVIDE WITH STAINLESS STEEL BASIN, EYEFACE WASH, STAINLESS STEELHANDLE AND FOOT ACTIVATION ACTVATION, DUST/BAR COVER, STAINLESS STEEL BALL VALVE, SCALD PROTECTION VALVE, MIXING VALVE AND INLINE STRAINER. PROVIDE WITH BRADLEY S19-2000 EFX8 EMERGENCY THERMOSTATIC MIXING VALVE.



100% CONSTRUCTION DRAWINGS

Revisions:	Date

CONSULTANTS:

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Drawing Title
PLUMBING SCHEDULES

Approved: Project Director

Project Title
**V.A. HEALTH CARE SYSTEM
 RENOVATE 5TH FLOOR SURGERY**

Project Number
438-15-201

Building Number
5

Location
SIOUX FALLS, SOUTH DAKOTA

Date
OCTOBER 17, 2017

Checked
WM

Drawn
DNT

Drawing Number
5- PL601

Dwg. 35 of 60

Office of
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 and Facilities
 Management

KEYNOTES:

M165 MECHANICAL SPECIFIC NOTES
 M165 REMOVE EXISTING EXHAUST DUCT UP THRU FLOOR, AND CAP AT EXISTING EXHAUST DUCT THIS LOCATION. PATCH FLOOR TO MATCH EXISTING. PATCH CHASE WALLS TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. SEE HVAC VENTILATION PLAN - FOURTH FLOOR FOR NEW WORK THIS AREA.

one inch = one foot
 three eighths inch = one foot
 one and one half inches = one foot
 one inch = one foot
 one and one half inches = one foot
 three quarters inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 one quarter inch = one foot
 one eighth inch = one foot
 one eighth inch = one foot

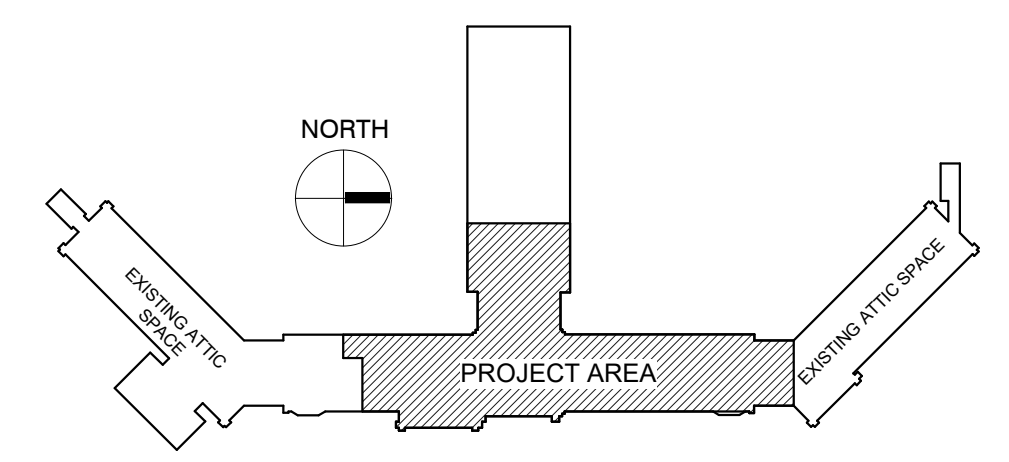


DEMOLITION HVAC VENTILATION PLAN - FOURTH FLOOR
 SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
- B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
- C DUCT SIZES ARE NET INSIDE DIMENSIONS.
- D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
- E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
- F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:

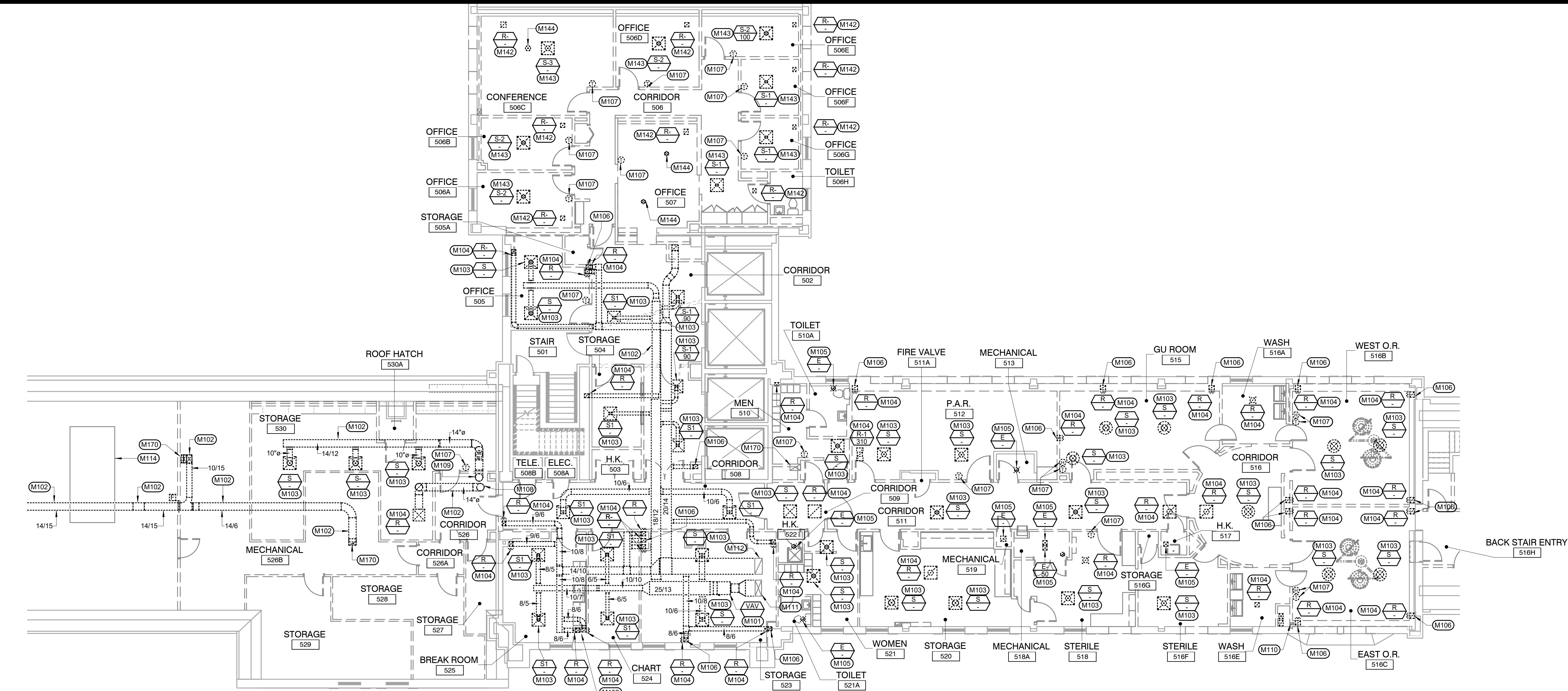


PHASING PLAN NOTE:
 SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

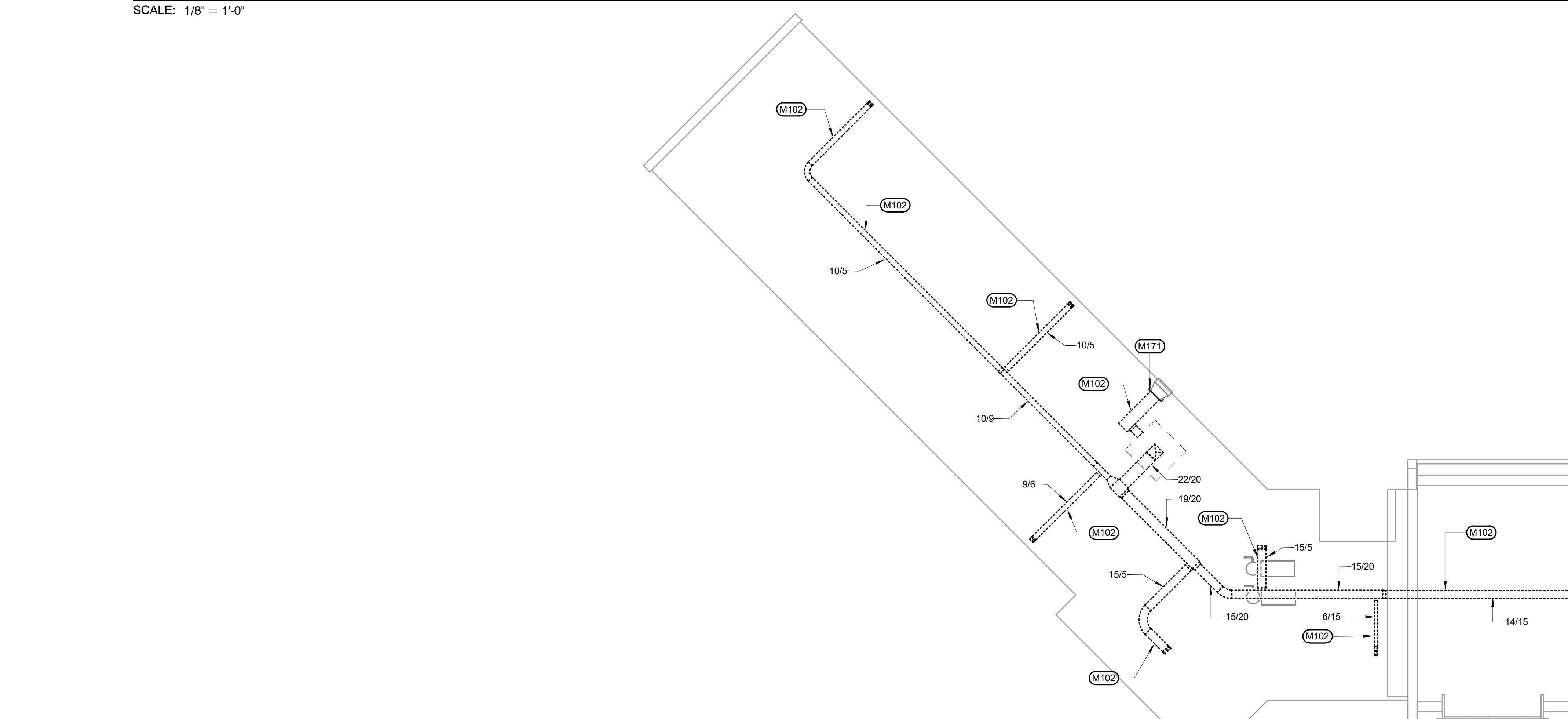
100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title DEMOLITION HVAC VENTILATION PLAN - FOURTH FLOOR</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p>	<p>Project Number 438-15-201</p>	<p>Office of Construction and Facilities Management</p>
			<p>Approved: Project Director</p>	<p>Location SIOUX FALLS, SOUTH DAKOTA</p>	<p>Building Number 5</p>	
<p>Revisions:</p>	<p>Date</p>	<p>Date OCTOBER 17, 2017</p>	<p>Checked WM</p>	<p>Drawn DNT</p>	<p>Dwg. 36 of 60</p>	

three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 one quarter inch = one foot
 three eighths inch = one foot
 one eighth inch = one foot
 one eighth inch = one foot



DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR
 SCALE: 1/8" = 1'-0"



DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR - EXISTING ATTIC SPACE
 SCALE: 3/32" = 1'-0"

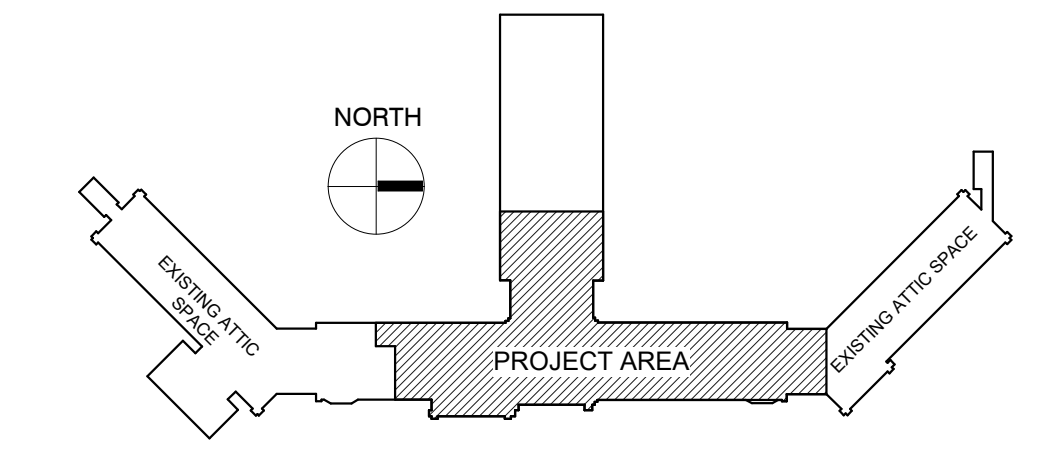
KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M101 REMOVE EXISTING VAV BOX AND ASSOCIATED CONTROLS. VERIFY EXACT SIZE AND LOCATION.
 - M102 REMOVE EXISTING DUCTWORK INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M103 REMOVE EXISTING DIFFUSER. REMOVE EXISTING RUNOUTS BACK TO MAIN OR REMOVE UP THRU FLOOR TO MAIN IN PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M104 REMOVE EXISTING RETURN AIR GRILLE REMOVE EXISTING RUNOUTS BACK TO MAIN OR REMOVE UP THRU FLOOR TO MAIN IN PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M105 REMOVE EXISTING EXHAUST AIR GRILLE REMOVE EXISTING RUNOUTS BACK TO MAIN OR REMOVE UP THRU FLOOR TO MAIN IN PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M106 REMOVE EXISTING RETURN DUCTWORK DOWN IN WALL. VERIFY EXACT SIZE AND LOCATION.
 - M107 REMOVE EXISTING CONTROLS. AND EXISTING WIRING AND TUBING WHERE APPLICABLE. VERIFY EXACT SIZE AND LOCATION.
 - M108 REMOVE EXISTING RETURN DUCTWORK UP THRU FLOOR TO PENTHOUSE ABOVE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M109 REMOVE EXISTING SUPPLY DUCTWORK UP THRU FLOOR TO PENTHOUSE ABOVE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M110 EXISTING EXHAUST DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M111 EXISTING SUPPLY DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M112 EXISTING RETURN DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M114 EXISTING AIR HANDLING UNIT TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M142 REMOVE EXISTING RETURN AIR GRILLE. REMOVE EXISTING DUCTWORK UP THRU LID. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION.
 - M143 REMOVE EXISTING DIFFUSER. REMOVE EXISTING DUCTWORK UP THRU LID. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION.
 - M144 REMOVE EXISTING DUCTWORK UP THRU LID. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION.
 - M170 REMOVE EXISTING EXHAUST RUNOUT DUCTWORK FROM MAIN DN THRU FLOOR TO FOURTH FLOOR BELOW. CAP DUCTWORK AT MAIN. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FOURTH FLOOR FOR CONTINUATION.
 - M171 PROVIDE A SHEET METAL INSULATED CAP AT THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING DUCTWORK.

GENERAL NOTES:

- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
- B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
- C DUCT SIZES ARE NET INSIDE DIMENSIONS.
- D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
- E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
- F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS 'BR' ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:

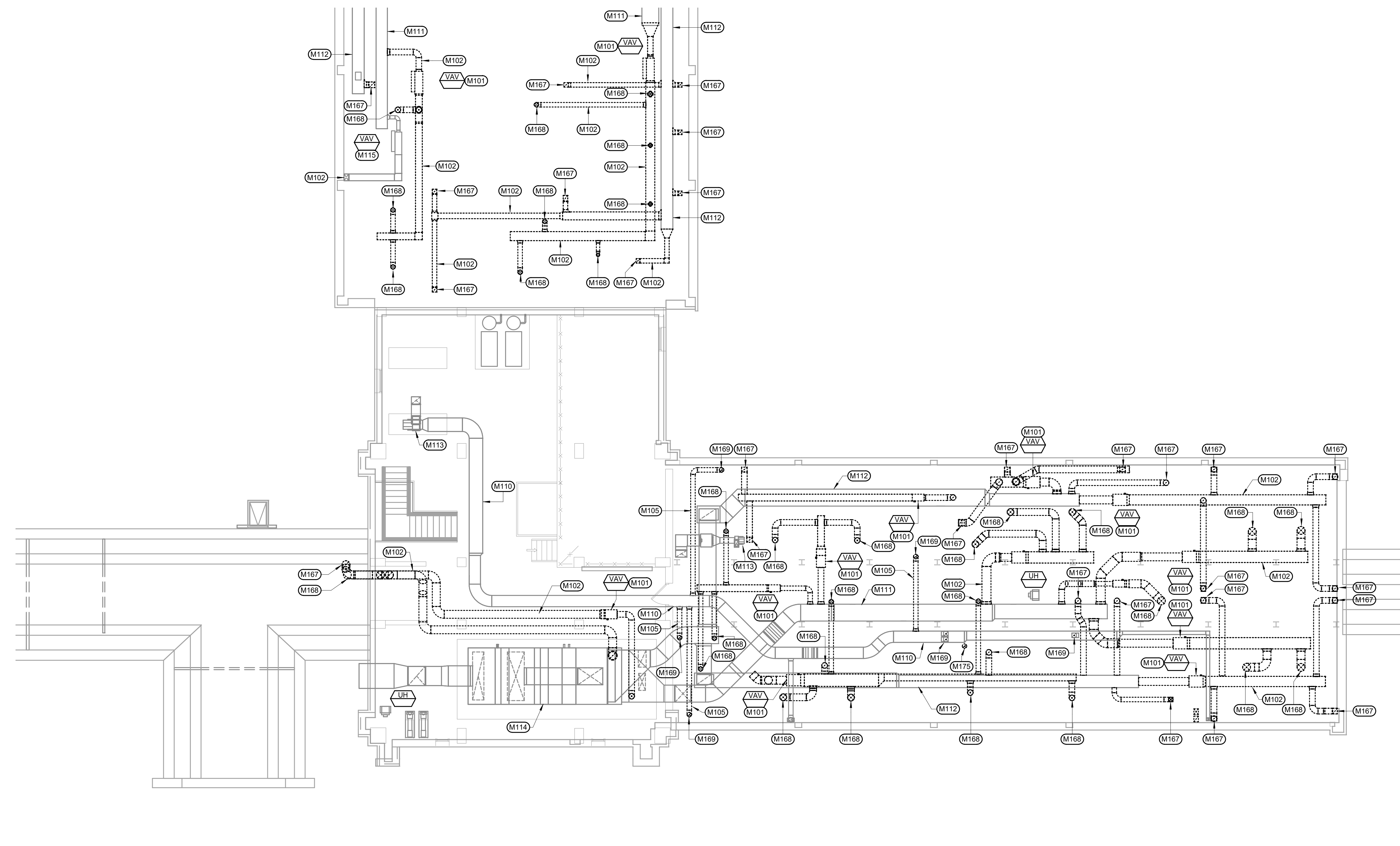


PHASING PLAN NOTE:
 SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

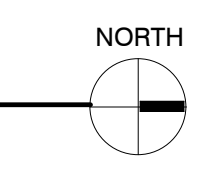
100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>		<p>ARCHITECTS/ ENGINEERS:</p> <p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>		<p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>		<p>Drawing Title DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>		<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Drawing Number 5-MD102</p> <p>Dwg. 37 of 60</p>		<p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked WM</p> <p>Drawn DNT</p>		<p>Office of Construction and Facilities Management</p>	
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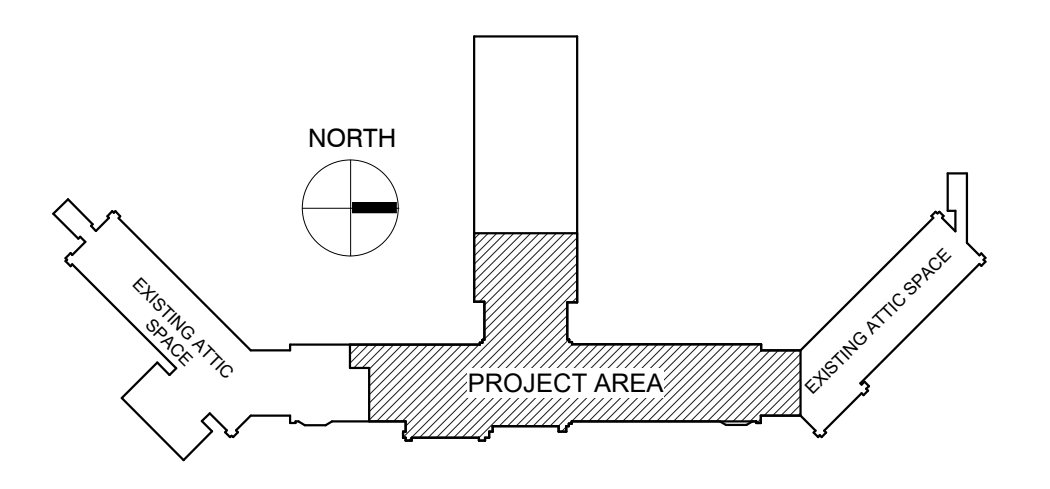
DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE
SCALE: 1/8" = 1'-0"



- KEYNOTES:**
- M101 REMOVE EXISTING VAV BOX AND ASSOCIATED CONTROLS. VERIFY EXACT SIZE AND LOCATION.
 - M102 REMOVE EXISTING DUCTWORK INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M105 REMOVE EXISTING EXHAUST AIR GRILLE. REMOVE EXISTING RUNOUTS BACK TO MAIN OR REMOVE UP THRU FLOOR TO MAIN IN PENTHOUSE. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION.
 - M110 EXISTING EXHAUST DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M111 EXISTING SUPPLY DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M112 EXISTING RETURN DUCTWORK TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M113 EXISTING EXHAUST FAN TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M114 EXISTING AIR HANDLING UNIT TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M115 EXISTING VAV BOX TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M167 REMOVE EXISTING RETURN RUNOUT DUCTWORK FROM MAIN DN THRU FLOOR TO FIFTH FLOOR BELOW. CAP DUCTWORK AT MAIN. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M168 REMOVE EXISTING SUPPLY RUNOUT DUCTWORK FROM MAIN DN THRU FLOOR TO FIFTH FLOOR BELOW. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M169 REMOVE EXISTING EXHAUST RUNOUT DUCTWORK FROM MAIN DN THRU FLOOR TO FIFTH FLOOR BELOW. CAP DUCTWORK AT MAIN. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M175 REMOVE EXISTING EXHAUST STACK DUCTWORK FROM UP THRU ROOF, TO DOWN THRU PENTHOUSE FLOOR TO FIFTH FLOOR BELOW. PATCH PENTHOUSE FLOOR TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR FOR FLOOR AND ROOF REPAIR. SEE ARCHITECTURAL PLANS. ALSO SEE ARCHITECTURAL PLANS FOR ASBESTOS REMOVE ON THIS DUCTWORK. VERIFY EXACT SIZE AND LOCATION. SEE DEMOLITION HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.

- GENERAL NOTES:**
- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
 - B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
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 - E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
 - F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
 - G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
 - H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
 - I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
 - J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
 - K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
 - L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

Revisions:	Date

CONSULTANTS:

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Harrisburg, SD 57032
(605) 743-2510
fax (605) 743-2513



ARCHITECTS/ ENGINEERS:

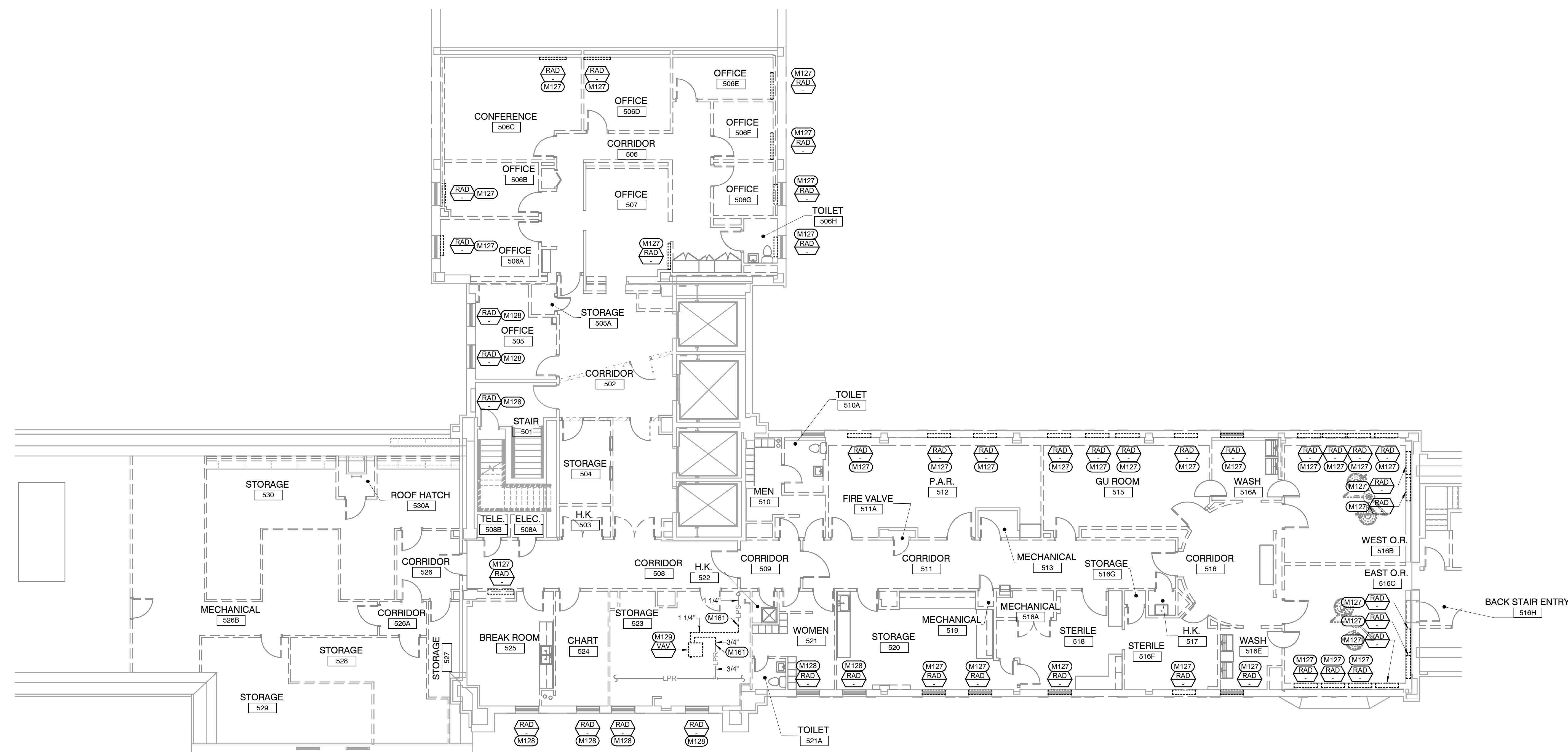
MSH ARCHITECTS
625 S. MINNESOTA AVENUE, SUITE 204
SIOUX FALLS, SOUTH DAKOTA 57104-4873
TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title	DEMOLITION HVAC VENTILATION PLAN - PENTHOUSE		
Approved: Project Director			

Project Title	V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY		
Project Number	438-15-201		
Building Number	5		
Drawing Number	5-MD103		
Date	Checked	Drawn	Dwg. 38 of 60
OCTOBER 17, 2017	WM	DNT	

Office of Construction and Facilities Management

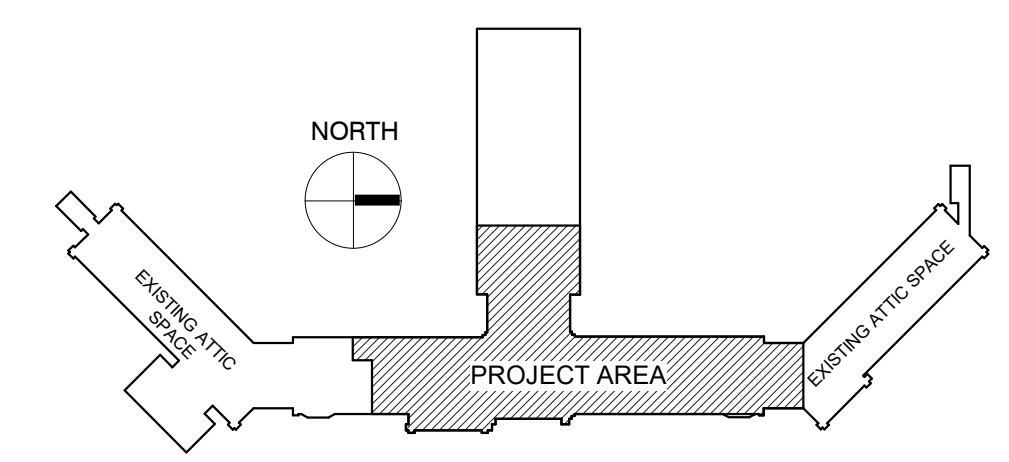
- KEYNOTES:**
- M127 REMOVE EXISTING CONVECTOR, CAP PIPING IN WALLS. VERIFY EXACT SIZE AND LOCATION. COORDINATE WITH GENERAL CONTRACTOR.**
- M128 EXISTING CONVECTOR TO REMAIN. VERIFY EXACT SIZE AND LOCATION.**
- M129 REMOVE EXISTING VAV BOX AND ASSOCIATED STEAM PIPING INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION.**
- M161 REMOVE EXISTING STEAM PIPING INDICATED AS DASHED BACK TO THIS LOCATION. PREPARE REMAINING STEAM PIPING FOR NEW CONNECTION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.**



DEMOLITION HVAC PIPING PLAN - FIFTH FLOOR
 SCALE: 1/8" = 1'-0"

- GENERAL NOTES:**
- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
 - B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
 - C DUCT SIZES ARE NET INSIDE DIMENSIONS.
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 - E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
 - F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
 - G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
 - H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
 - I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
 - J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
 - K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
 - L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



PHASING PLAN NOTE:
 SEE ARCHITECTURAL PLANS
 FOR PHASING OF PROJECT

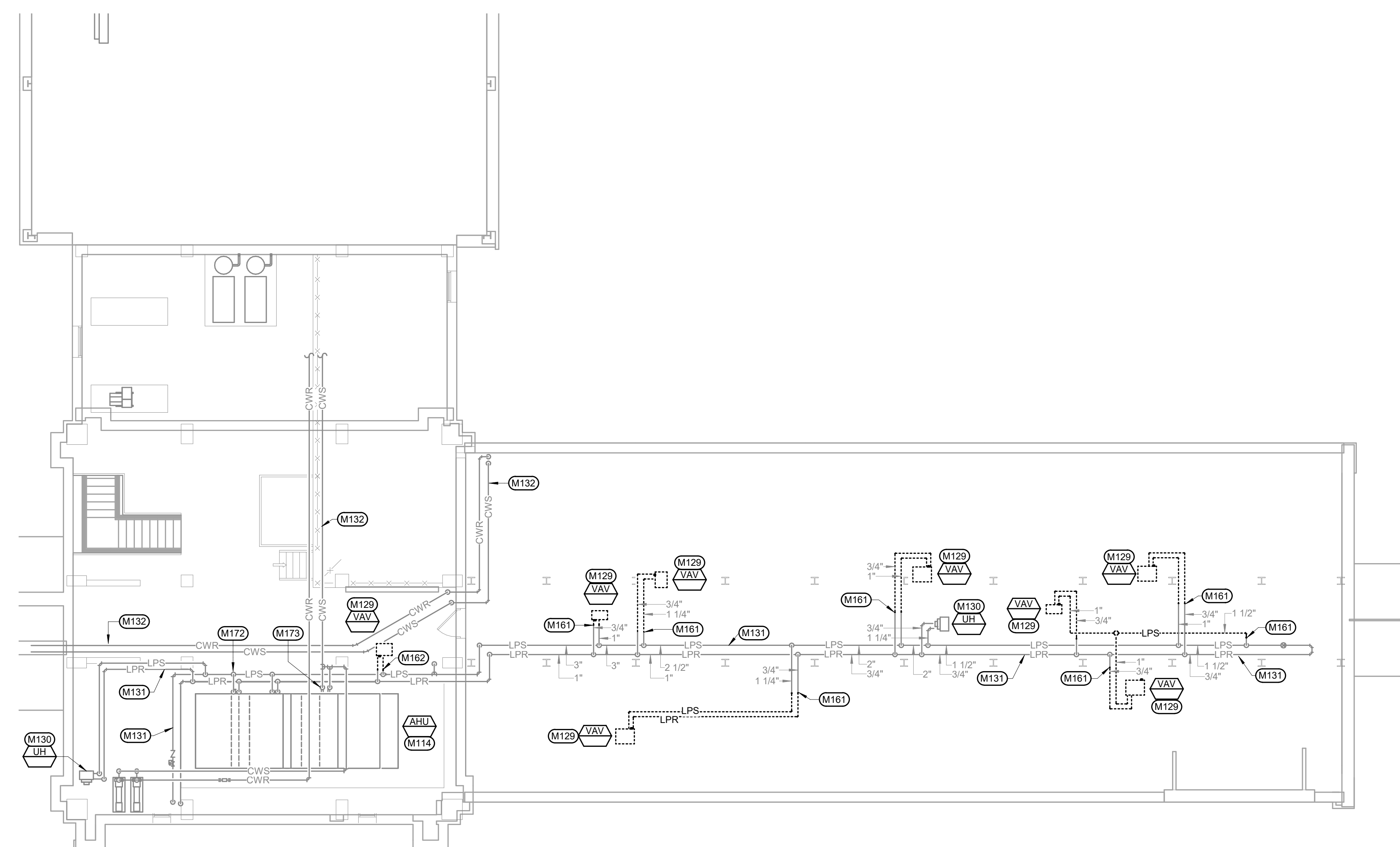
100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 15%;">Description</th> <th style="width: 10%;">Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	Description	Date				<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. <small>WPE #: BS15052</small> 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 <small>WWW.WESTPLAINSENGINEERING.COM</small> RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>RISE STRUCTURAL ASSOCIATES, INC. <small>101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</small></p>	<p>MSH ARCHITECTS <small>625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</small></p>	<p>Drawing Title DEMOLITION HVAC PIPING PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p>	<p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Drawing Number 5-MD104</p> <p>Dwg. 39 of 60</p>	<p>Office of Construction and Facilities Management</p>
No.	Description	Date											

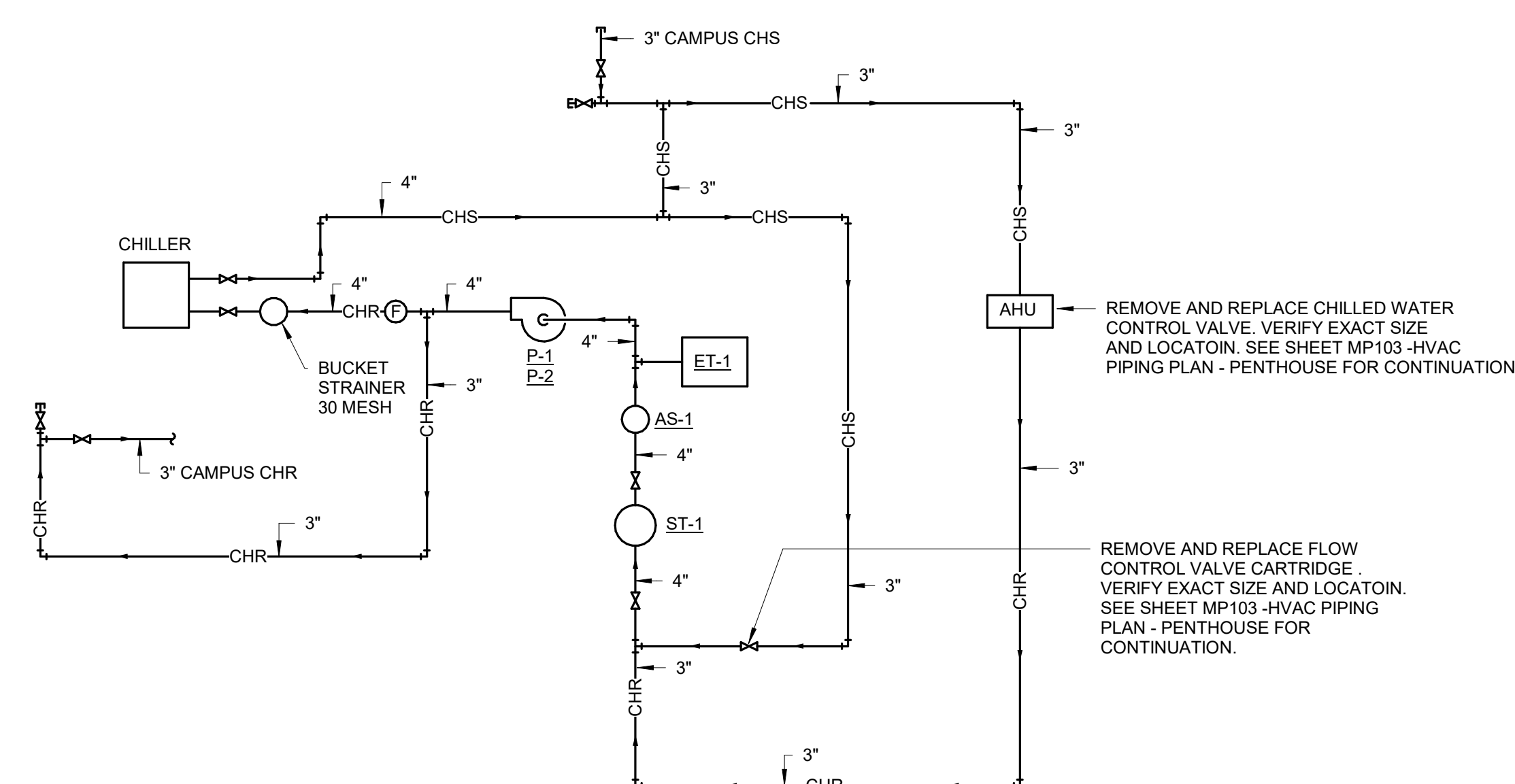
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KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M114 EXISTING AIR HANDLING UNIT TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M129 REMOVE EXISTING VAV BOX AND ASSOCIATED STEAM PIPING INDICATED AS DASHED. VERIFY EXACT SIZE AND LOCATION.
 - M130 EXISTING UNIT HEATER TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M131 EXISTING LPR AND LPS PIPING TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M132 EXISTING CHILLED WATER PIPING TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M161 REMOVE EXISTING STEAM PIPING INDICATED AS DASHED BACK TO THIS LOCATION. PREPARE REMAINING STEAM PIPING FOR NEW CONNECTION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M162 REMOVE EXISTING STEAM PIPING INDICATED AS DASHED BACK TO MAIN. CAP EXISTING LPR AT MAIN. PREPARE EXISTING LPS FOR NEW CONNECTION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M172 REMOVE AND REPLACE STEAM CONTROL VALVE. VERIFY EXACT SIZE AND LOCATION. SEE SHEET MP103 -HVAC PIPING PLAN - PENTHOUSE FOR CONTINUATION.
 - M173 REMOVE AND REPLACE CHILLED WATER CONTROL VALVE. VERIFY EXACT SIZE AND LOCATION. SEE SHEET MP103 -HVAC PIPING PLAN - PENTHOUSE FOR CONTINUATION.



DEMOLITION HVAC PIPING PLAN - PENTHOUSE
SCALE: 1/8" = 1'-0"



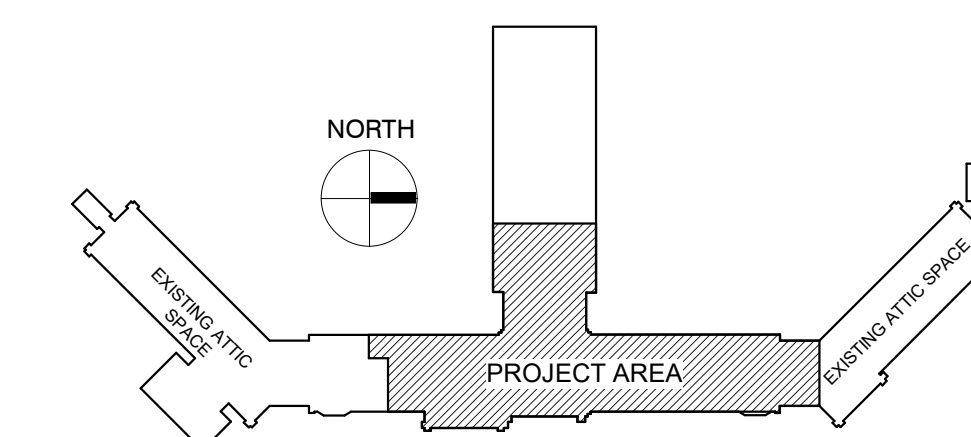
2 CHILLED WATER PIPING SCHEMATIC - DEMOLITION
SCALE: NO SCALE

PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

GENERAL NOTES:

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- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
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KEY PLAN:



100% CONSTRUCTION DRAWINGS

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<p>Revisions: _____ Date _____</p>		<p>Date: OCTOBER 17, 2017 Checked: WM Drawn: DNT</p>		<p>Location: SIOUX FALLS, SOUTH DAKOTA</p>	

PIPING SYMBOLS

Table listing piping symbols such as HPS (High Pressure Steam), HPR (High Pressure Steam Condensate Return), MPS (Medium Pressure Steam), etc.

PIPING SYMBOLS

Table listing piping symbols such as FWPD (Feedwater Pump Discharge), FWPS (Feedwater Pump Suction), CTPD (Condensate Transfer Pump Discharge), etc.

GENERAL PIPING SYMBOLS

Table listing general piping symbols such as DIRECTION OF PIPE PITCH (DOWN), DIRECTION OF FLOW, ANCHOR, etc.

VALVE SYMBOLS

Table listing valve symbols such as GATE VALVE - THREADED/FLANGED, GLOBE VALVE - THREADED/FLANGED, CHECK VALVE, etc.

CONTROLS SYMBOLS

Table listing controls symbols such as ROOM THERMOSTAT/TRANSMITTER - WALL MOUNT, ROOM HUMIDISTAT (MOISTURE)/TRANSMITTER - WALL MOUNT, etc.

CONTROLS SYMBOLS

Table listing controls symbols such as PRESSURE SWITCH HIGH, PRESSURE SWITCH LOW, ELECTRONIC TO PNEUMATIC TRANSDUCER, etc.

CONTROLS SYMBOLS

Table listing controls symbols such as TEMPERATURE SENSING ELEMENT FOR TRANSMITTING TEMPERATURE TO EMCS, SENSOR WITH AVERAGING ELEMENT TO TRANSMIT TEMPERATURE TO EMCS, etc.

AIR TERMINAL SYMBOLS

Table listing air terminal symbols such as TERMINAL UNIT WITH REHEAT COIL, DOUBLE DUCT MIXING BOX, FAN POWERED VARIABLE VOLUME TERMINAL UNIT WITH HEATING COIL, etc.

TERMINAL UNIT SYMBOLS

Table listing terminal unit symbols such as CONVECTOR OR RADIATOR (RECESSED), CONVECTOR OR RADIATOR (WALL HUNG), FLOOR MOUNTED VERTICAL RECESSED FAN COIL UNIT, etc.

DUCTWORK SYMBOLS

Table listing ductwork symbols such as COMBINATION FIRE/SMOKE DAMPER, POINT OF CHANGE IN DUCT CONSTRUCTION BY STATIC PRESSURE CLASS, AUTOMATIC CONTROL DAMPER MODULATING, etc.

DUCTWORK SYMBOLS

Table listing ductwork symbols such as FLEXIBLE CONNECTION, EQUIPMENT, VIBRATION, OR SEISMIC, VANED ELBOW (PROVIDE ALL SQUARE OR RECTANGULAR ELBOWS WITH VANES), etc.

DUCTWORK SYMBOLS

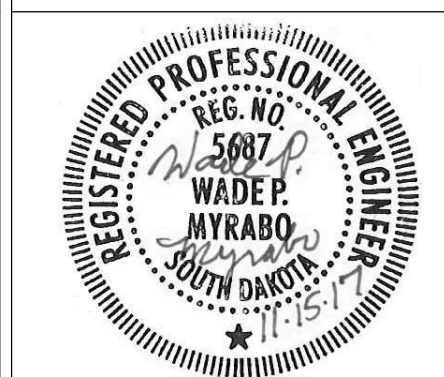
Table listing ductwork symbols such as SUPPLY DUCT (UP & DOWN), EXHAUST DUCT (UP & DOWN), RETURN DUCT (UP & DOWN), etc.

DRAWING SYMBOLS

Table listing drawing symbols such as DETAIL NUMBER, DRAWING NUMBER WHERE DRAWN, SECTION LETTER, DRAWING NUMBER WHERE SHOWN, etc.

CONSULTANTS: WPE WEST PLAINS ENGINEERING, INC. 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106

RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Hamburg, SD 57032



ARCHITECTS/ ENGINEERS: MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873

Drawing Title: MECHANICAL SYMBOLS SHEET Approved: Project Director

Project Title: V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY Project Number: 438-15-201 Building Number: 5 Drawing Number: 5-MH001

Office of Construction and Facilities Management

100% CONSTRUCTION DRAWINGS

Vertical scale markings on the left margin: three inches = one foot, one and one half inches = one foot, one inch = one foot, three quarters inch = one foot, one half inch = one foot, three eighths inch = one foot, one quarter inch = one foot, one eighth inch = one foot.

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 H
 one eighth inch = one foot



KEYNOTES:

MECHANICAL SPECIFIC NOTES

M401 EA UP. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION.

M438 EXHAUST AIR DUCT UP THRU FLOOR. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.

M439 EXHAUST AIR DUCT CONNECTED TO EXISTING EXHAUST GRILLE. VERIFY EXACT SIZE AND LOCATION.

M441 CONNECT NEW EXHAUST DUCT TO EXISTING EXHAUST DUCT IN CHASE. VERIFY EXACT SIZE AND LOCATION. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION. PATCH WALL TO MATCH EXISTING. COORDINATE WITH GENERAL CONTRACTOR.

GENERAL NOTES:

A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.

B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.

C DUCT SIZES ARE NET INSIDE DIMENSIONS.

D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.

E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.

F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.

G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.

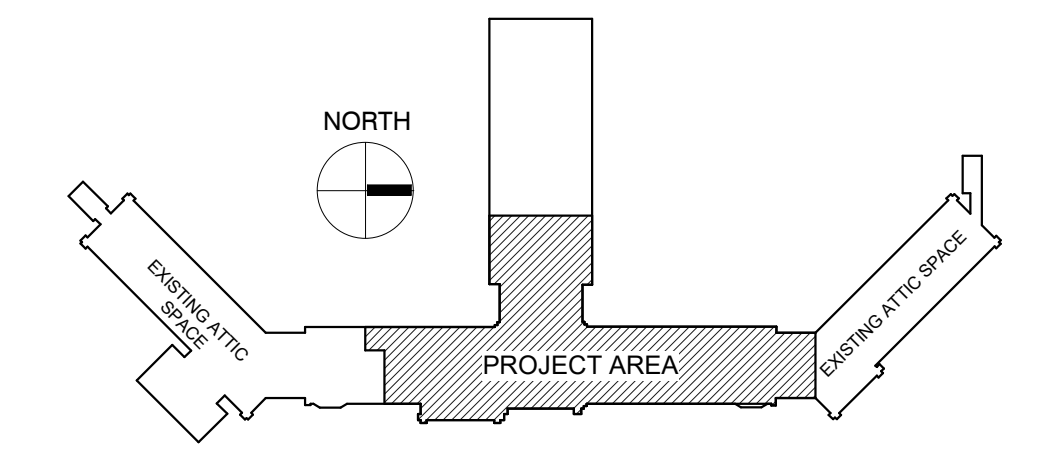
H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.

I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.

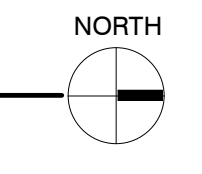
J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.

K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.

KEY PLAN:



HVAC VENTILATION PLAN - FOURTH FLOOR
SCALE: 1/8" = 1'-0"



PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

CONSULTANTS: WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND		 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513		ARCHITECTS/ ENGINEERS: 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539		Drawing Title HVAC VENTILATION PLAN - FOURTH FLOOR Approved: Project Director		Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY Project Number 438-15-201 Building Number 5 Location SIOUX FALLS, SOUTH DAKOTA Date OCTOBER 17, 2017 Checked WM Drawn DNT		Drawing Number 5-MH101 Dwg. 43 of 60 Office of Construction and Facilities Management	
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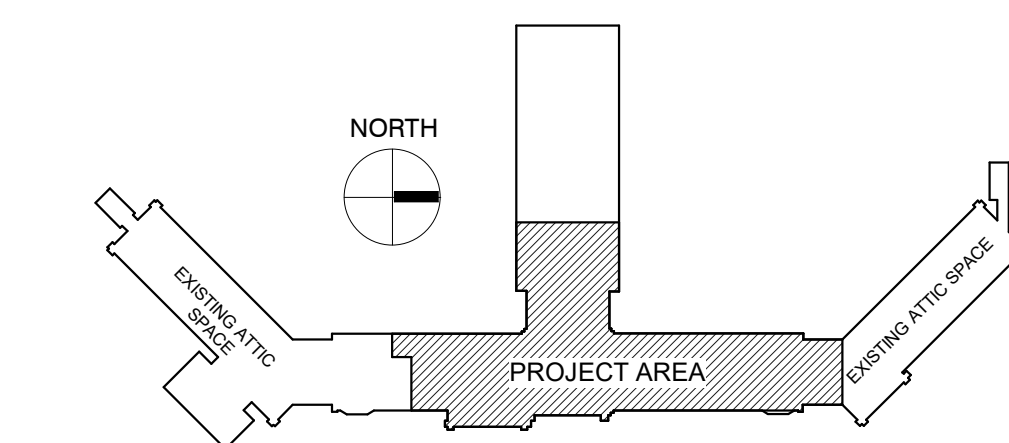
KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M404 RETURN AIR DUCT UP THRU FLOOR. SEE HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION.
 - M405 MOUNT VAV BOX IN ACCESSIBLE LOCATION. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE. PROVIDE DUCT ACCESS DOOR FOR ACCESS TO REHEAT COIL. ACCESS DOOR SHALL BE LOCATED TO ALLOW FOR MAXIMUM ACCESSIBILITY. SEE DUCT CONNECTIONS - AIR TERMINAL UNITS DETAIL 1/1MH501. SUPPLY DUCT TAKEOFF - AIR TERMINAL UNIT 3MH502. ALTERNATE SUPPLY DUCT TAKEOFF - AIR TERMINAL UNIT 2MH501.
 - M406 SUPPLY AIR DUCT UP THRU FLOOR. SEE HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M407 EXHAUST AIR DUCT UP THRU FLOOR. SEE HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M408 CONNECT NEW SUPPLY AIR DUCT TO EXISTING SUPPLY AIR DUCT IN THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING. PROVIDE FIRE DAMPER AT FLOOR. SEE VERTICAL DETAIL FIRE DAMPER DETAIL 1/1MH501 AND SECTION THRU FIRE DAMPER INSTALLATION DETAIL 1/1MH502. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M409 CONNECT NEW RETURN AIR DUCT TO EXISTING RETURN AIR DUCT IN THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M410 VOLUME DAMPER. TYPICAL.
 - M411 EXHAUST AIR DUCT UP THRU CEILING LID. SEE HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M412 SUPPLY AIR DUCT UP THRU CEILING LID. SEE HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M413 RETURN AIR DUCT UP THRU CEILING LID. SEE HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M414 EXHAUST AIR DUCT DN THRU FLOOR. SEE HVAC VENTILATION PLAN - FOURTH FLOOR FOR CONTINUATION. PROVIDE FIRE DAMPER AT FLOOR. SEE VERTICAL DETAIL FIRE DAMPER DETAIL 1/1MH501 AND SECTION THRU FIRE DAMPER INSTALLATION DETAIL 1/1MH502. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M415 PROVIDE FIRE DAMPER AT WALL. SECTION THRU FIRE DAMPER INSTALLATION DETAIL 1/1MH501.
 - M418 PROVIDE TRANSFER DUCT AS HIGH AS POSSIBLE ABOVE CEILING. SEE RETURN AIR TRANSFER DUCT DETAIL 6MH502.
 - M419 SUPPLY AIR DUCT, RETURN AIR DUCT, AND EXHAUST AIR DUCT THRU WALL INTO PENTHOUSE ABOVE. SEE HVAC VENTILATION PLAN - PENTHOUSE FOR CONTINUATION. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M433 DDC THERMOSTAT BY TO CONTRACTOR. TYPICAL.
 - M434 PROVIDE SMOKE DAMPER AT WALL. SEE SMOKE DAMPER CONTROL DIAGRAM DETAIL 12/MH501.
 - M435 PROVIDE COMBINATION FIRE-SMOKE DAMPER AT WALL. SEE FIRE AND SMOKE DAMPER DETAIL 7/MH502.
 - M436 ROUTE DUCT AS SHOWN TO AVOID STRUCTURE REQUIRED FOR BOOM LIGHT IN THIS ROOM. COORDINATE EXACT LOCATION WITH GENERAL CONTRACTOR.
 - M437 ACCESS PANEL TO BE INSTALLED IN HARD CEILING FOR ACCESS TO DAMPER. SEE ARCHITECTURAL PLANS FOR LOCATION OF ACCESS PANEL.
 - M440 EXISTING EXHAUST DUCT REROUTED AT CEILING LEVEL TO WALL AND DOWN THRU FLOOR TO FOURTH FLOOR CEILING. COORDINATE ALL WALL, CEILING AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
- TEMPERATURE CONTROL NOTE:**
PROVIDE ROOM DIFFERENTIAL PRESSURE MONITORS THAT READ BACK TO THE METASYS BAS SYSTEM.
- FOR ROOMS:**
POSITIVE PRESSURE - STERILE STORAGE 516, CLEAN ROOM 517, MEDICATION ROOM 518
NEGATIVE PRESSURE - SOILED ROOM 513
PROVIDE CRITICAL CONTROLS PANEL FOR MINOR PROCEDURE 511 AND MINOR PROCEDURE 512.

GENERAL NOTES:

- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
- B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
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- E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
- F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.
- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.

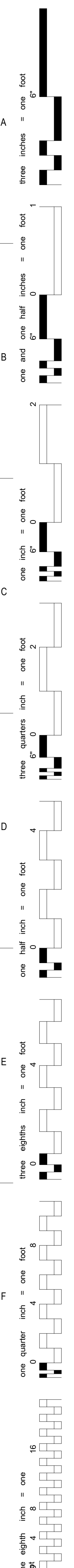
KEY PLAN:



PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

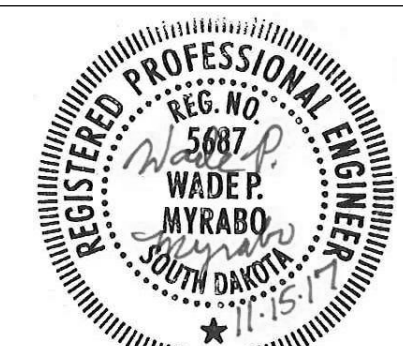
HVAC VENTILATION PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"



CONSULTANTS:

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SIOUX FALLS, SOUTH DAKOTA 57104-4873
TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title
HVAC VENTILATION PLAN - FIFTH FLOOR
Approved: Project Director

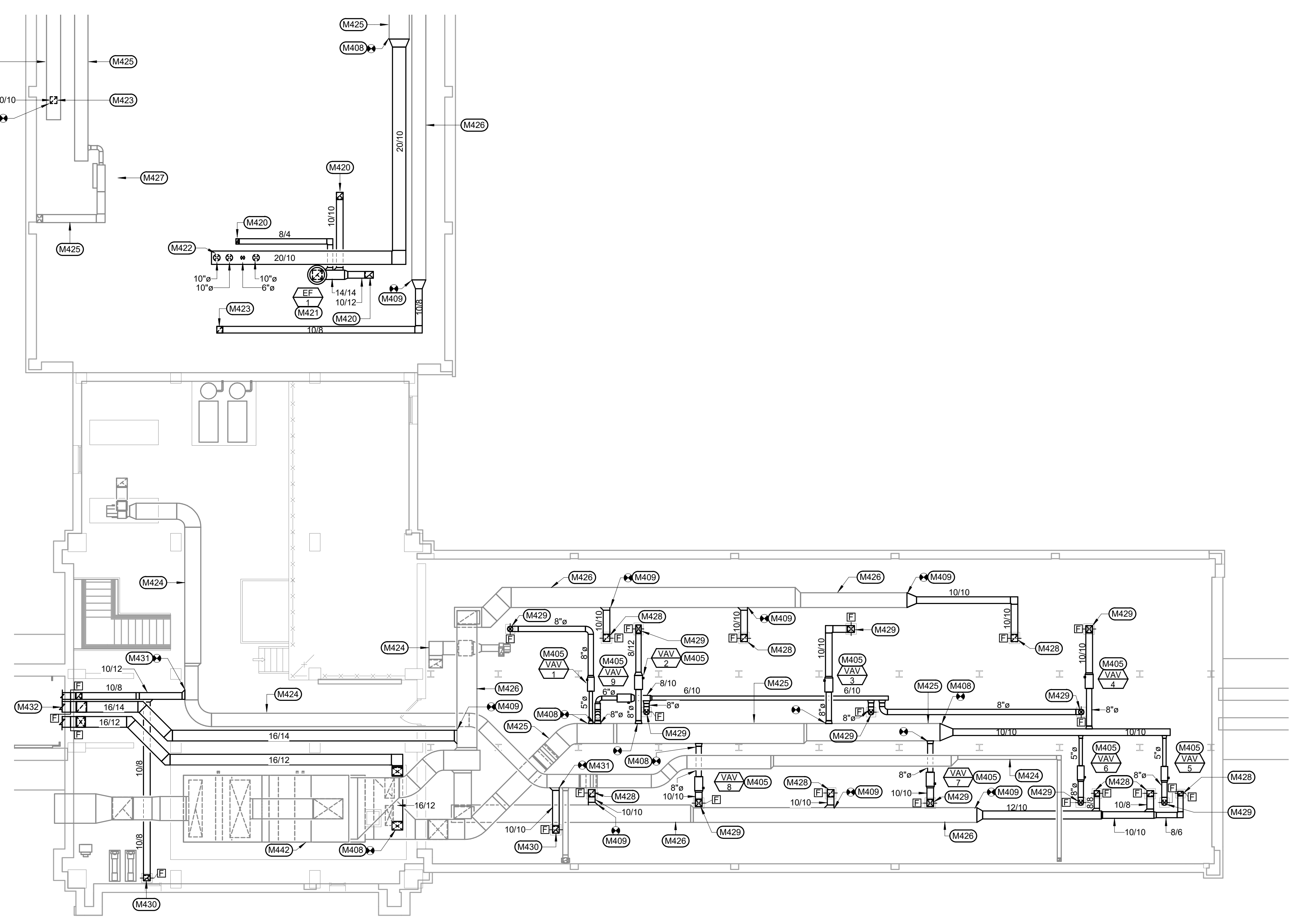
Project Title
V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY
Project Number
438-15-201
Building Number
5
Drawing Number
5-MH102
Dwg. 44 of 60

Office of Construction and Facilities Management



KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M405 MOUNT VAV BOX IN ACCESSIBLE LOCATION. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCE. PROVIDE DUCT ACCESS DOOR FOR ACCESS TO REHEAT COIL. ACCESS DOOR SHALL BE LOCATED TO ALLOW FOR MAXIMUM ACCESSIBILITY. SEE DUCT CONNECTIONS - AIR TERMINAL UNITS DETAIL 3MH501. SUPPLY DUCT TAKEOFF - AIR TERMINAL UNIT 3MH502. ALTERNATE SUPPLY DUCT TAKEOFF - AIR TERMINAL UNIT 2MH501.
 - M408 CONNECT NEW SUPPLY AIR DUCT TO EXISTING SUPPLY AIR DUCT IN THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING. PROVIDE FIRE DAMPER AT FLOOR. SEE VERTICAL DUCT FIRE DAMPER DETAIL 11MH501 AND SECTION THRU FIRE DAMPER INSTALLATION DETAIL 11MH502. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M409 CONNECT NEW RETURN AIR DUCT TO EXISTING RETURN AIR DUCT IN THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M420 EXHAUST AIR DUCT DN THRU CEILING LID. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M421 14/14 UP TO EXHAUST FAN LOCATED ON ROOF. TRANSITION UP TO FULL SIZE OPENING AS REQUIRED. SEE EXHAUST FAN DETAIL 6MH502.
 - M422 SUPPLY AIR DUCT DN THRU CEILING LID. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M423 RETURN AIR DUCT DN THRU CEILING LID. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M424 EXISTING EXHAUST DUCTWORK TO REMAIN.
 - M425 EXISTING SUPPLY DUCTWORK TO REMAIN.
 - M426 EXISTING RETURN DUCTWORK TO REMAIN.
 - M427 EXISTING VAV BOX TO REMAIN.
 - M428 RETURN AIR DUCT DN THRU FLOOR. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. PROVIDE FIRE DAMPER AT FLOOR. SEE VERTICAL DUCT FIRE DAMPER DETAIL 11MH501 AND SECTION THRU FIRE DAMPER DETAIL INSTALLATION 11MH502. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M429 SUPPLY AIR DUCT DN THRU FLOOR. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. PROVIDE FIRE DAMPER AT FLOOR. SEE VERTICAL DUCT FIRE DAMPER DETAIL 11MH501 AND SECTION THRU FIRE DAMPER DETAIL INSTALLATION 11MH502. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M430 EXHAUST AIR DUCT DN THRU FLOOR. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. PROVIDE FIRE DAMPER AT FLOOR. SEE VERTICAL DUCT FIRE DAMPER DETAIL 11MH501 AND SECTION THRU FIRE DAMPER DETAIL INSTALLATION 11MH502. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M431 CONNECT NEW EXHAUST AIR DUCT TO EXISTING EXHAUST AIR DUCT IN THIS LOCATION. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M432 SUPPLY AIR DUCT, RETURN AIR DUCT, AND EXHAUST AIR DUCT DN ALONG WALL AND THRU WALL INTO FIFTH FLOOR CEILING SPACE. SEE HVAC VENTILATION PLAN - FIFTH FLOOR FOR CONTINUATION. PROVIDE FIRE DAMPER AT EACH WALL PENETRATION. SEE VERTICAL DUCT FIRE DAMPER DETAIL 11MH501 AND SECTION THRU FIRE DAMPER DETAIL INSTALLATION 11MH502. COORDINATE ALL WALL, CEILING, AND FLOOR CUTTING AND PATCHING WITH GENERAL CONTRACTOR. VERIFY EXACT SIZE AND LOCATION OF EXISTING.
 - M442 PROVIDE SHEET METAL BLANK OFF SECTION ON ONE RETURN FAN SECTION AND PROVIDE SHEET METAL BLANK OFF SECTION ON ONE SUPPLY FAN SECTION. CONTACT AIR HANDLING UNIT MANUFACTURER FOR BOLT PATTERN ON THE SUPPLY AND RETURN FAN BLANK OFF. VERIFY EXACT SIZE AND LOCATION OF BLANK OFF SECTION.

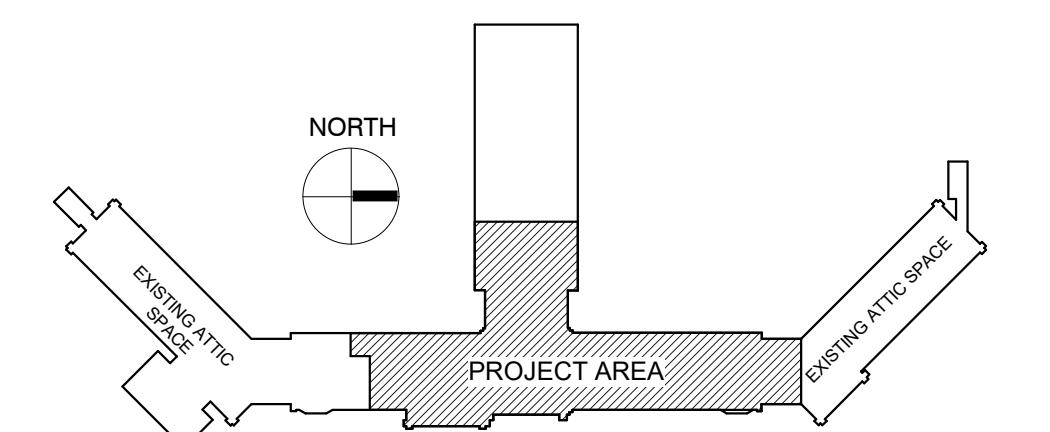


HVAC VENTILATION PLAN - PENTHOUSE
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

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KEY PLAN:

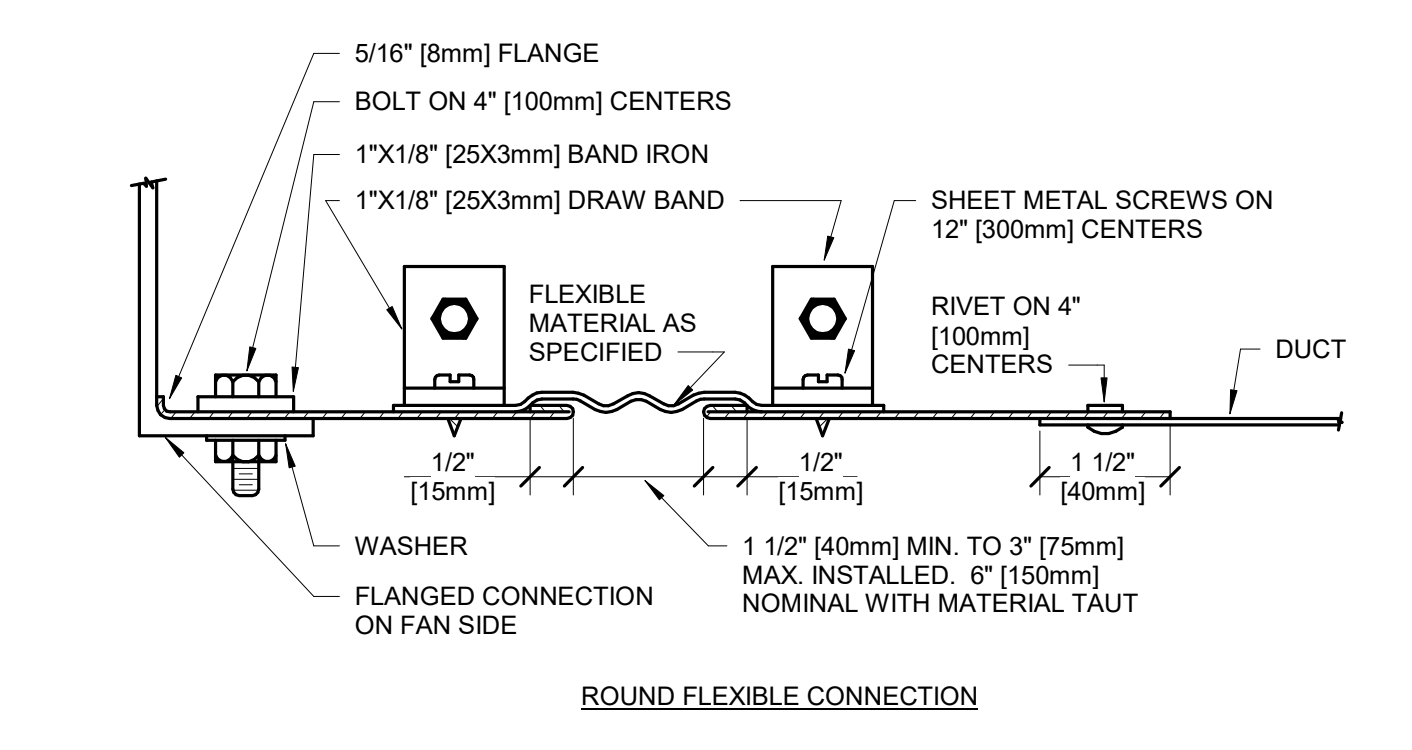
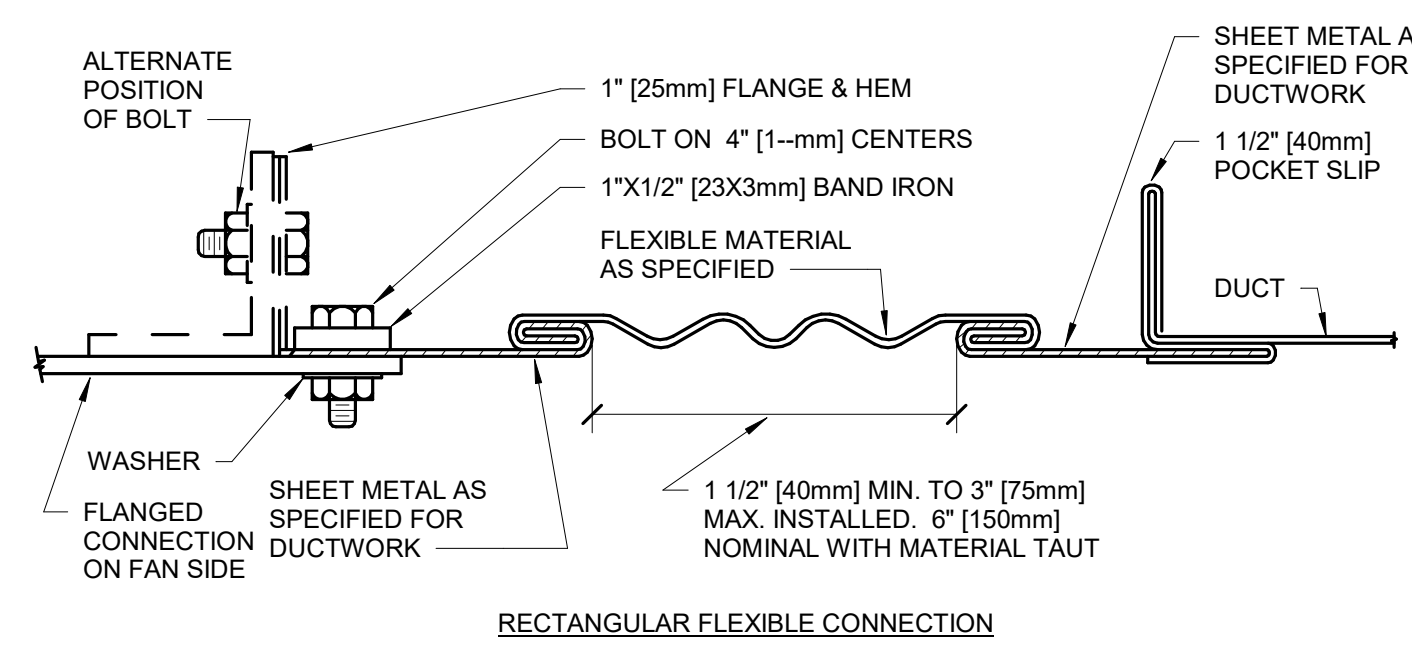


PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

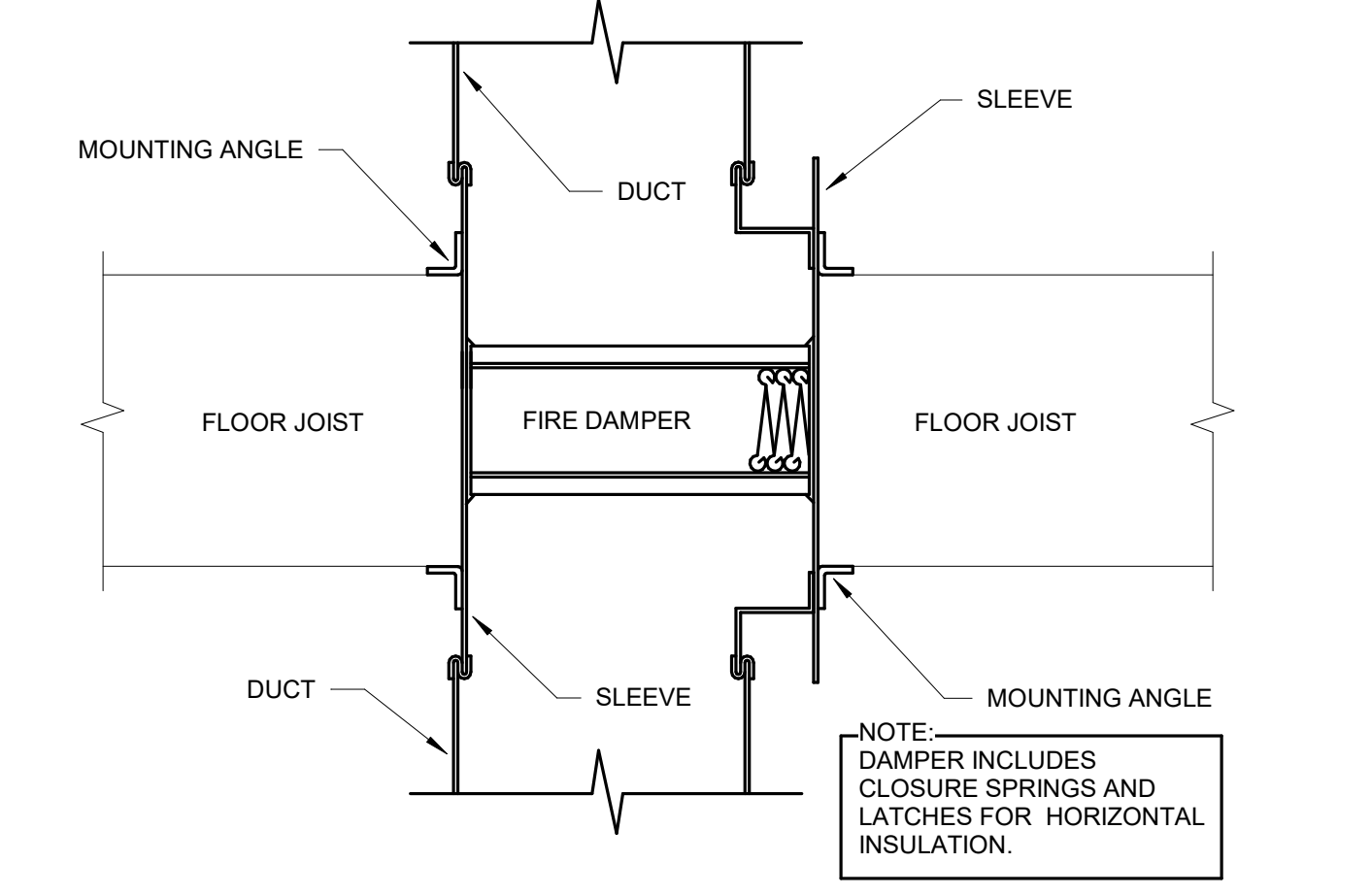
100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50px; height: 20px;"> </td> <td style="width: 50px; height: 20px;"> </td> </tr> <tr> <td style="width: 50px; height: 20px;"> </td> <td style="width: 50px; height: 20px;"> </td> </tr> <tr> <td style="width: 50px; height: 20px;"> </td> <td style="width: 50px; height: 20px;"> </td> </tr> <tr> <td style="width: 50px; height: 20px;"> </td> <td style="width: 50px; height: 20px;"> </td> </tr> </table>									<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title HVAC VENTILATION PLAN - PENTHOUSE</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked WM</p> <p>Drawn DNT</p> <p>Drawing Number 5-MH103</p> <p>Dwg. 45 of 60</p>	<p>Office of Construction and Facilities Management</p>

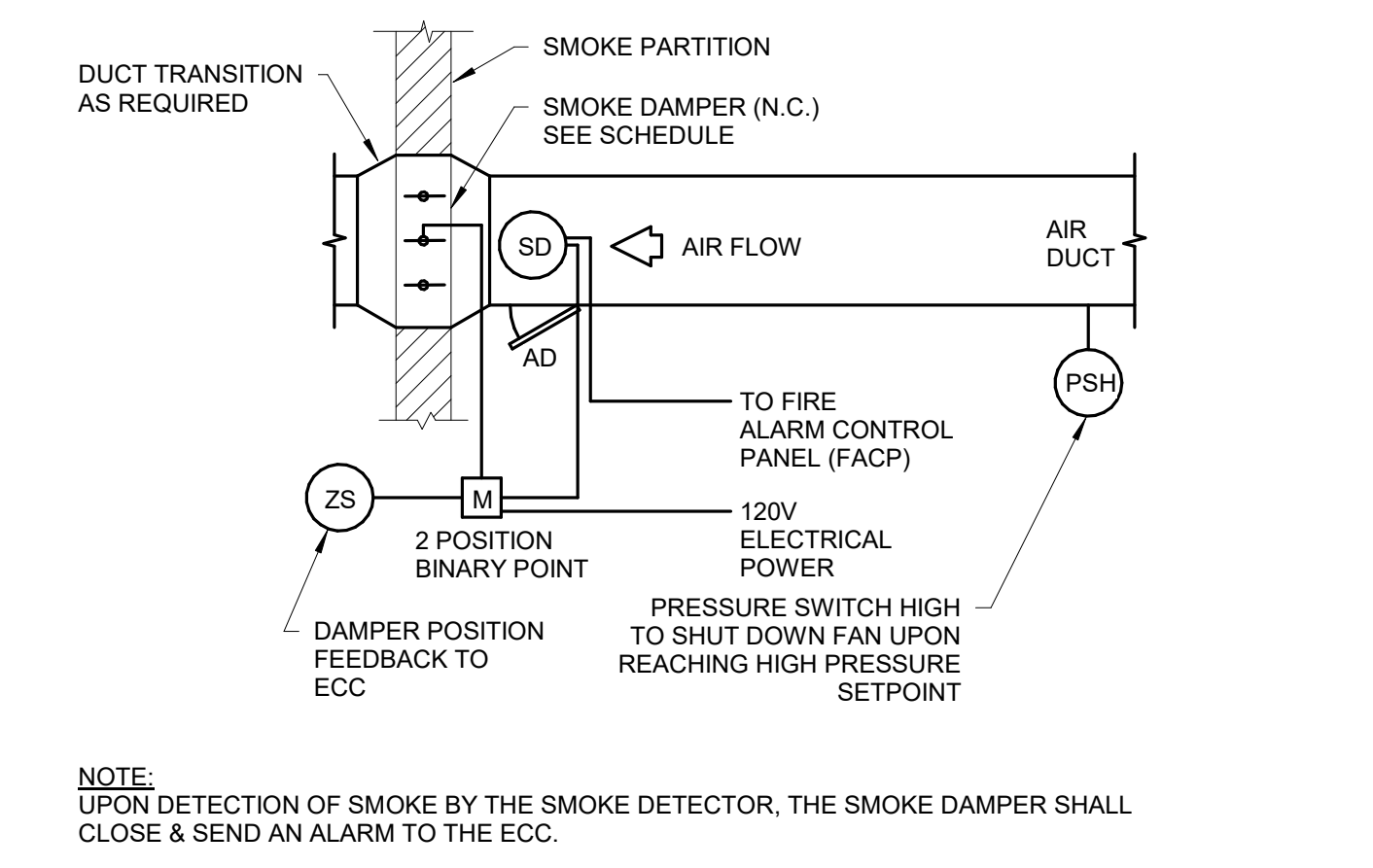
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 Y one eighth inch = one foot
 Z one eighth inch = one foot



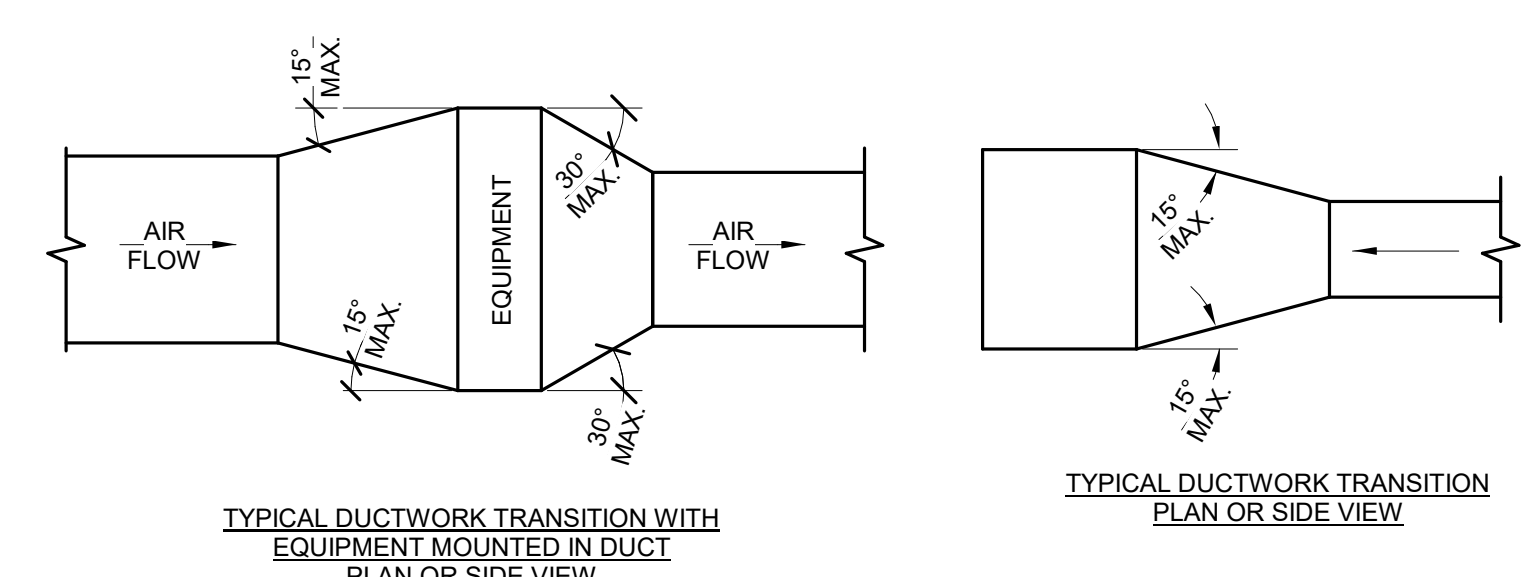
10 FLEXIBLE DUCT CONNECTIONS
SCALE: NO SCALE



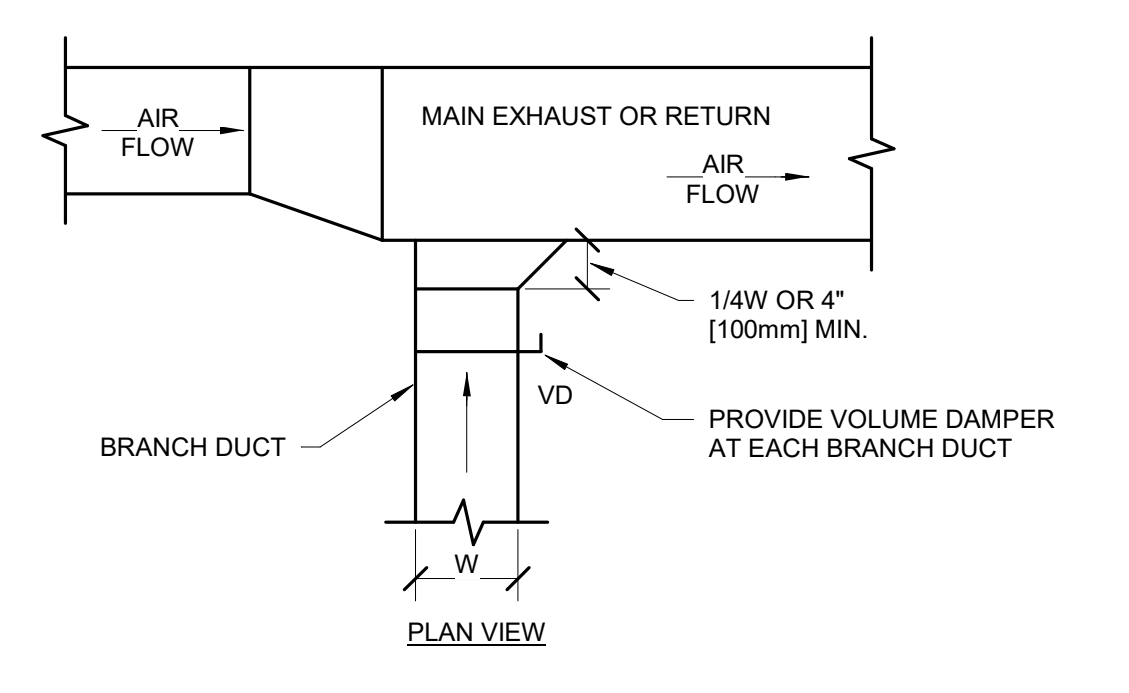
11 VERTICAL DUCT FIRE DAMPER DETAIL
SCALE: NO SCALE



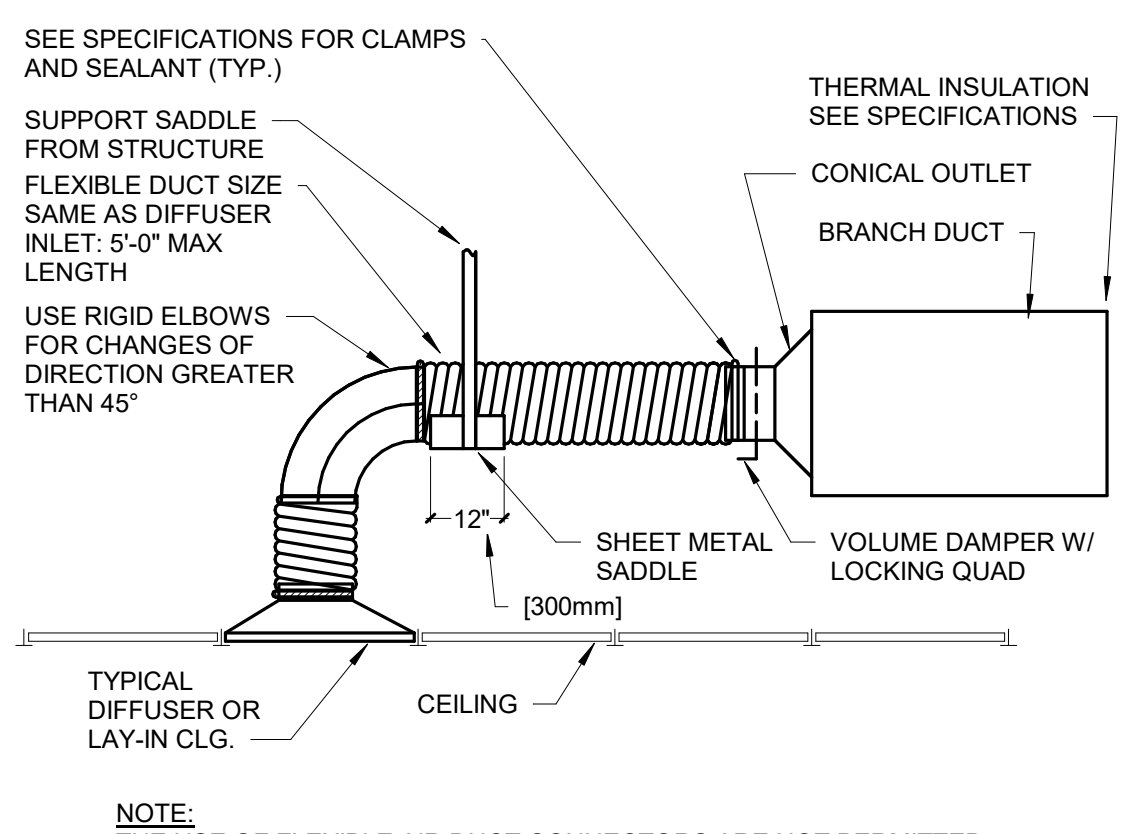
12 SMOKE DAMPER CONTROL DIAGRAM
SCALE: NO SCALE



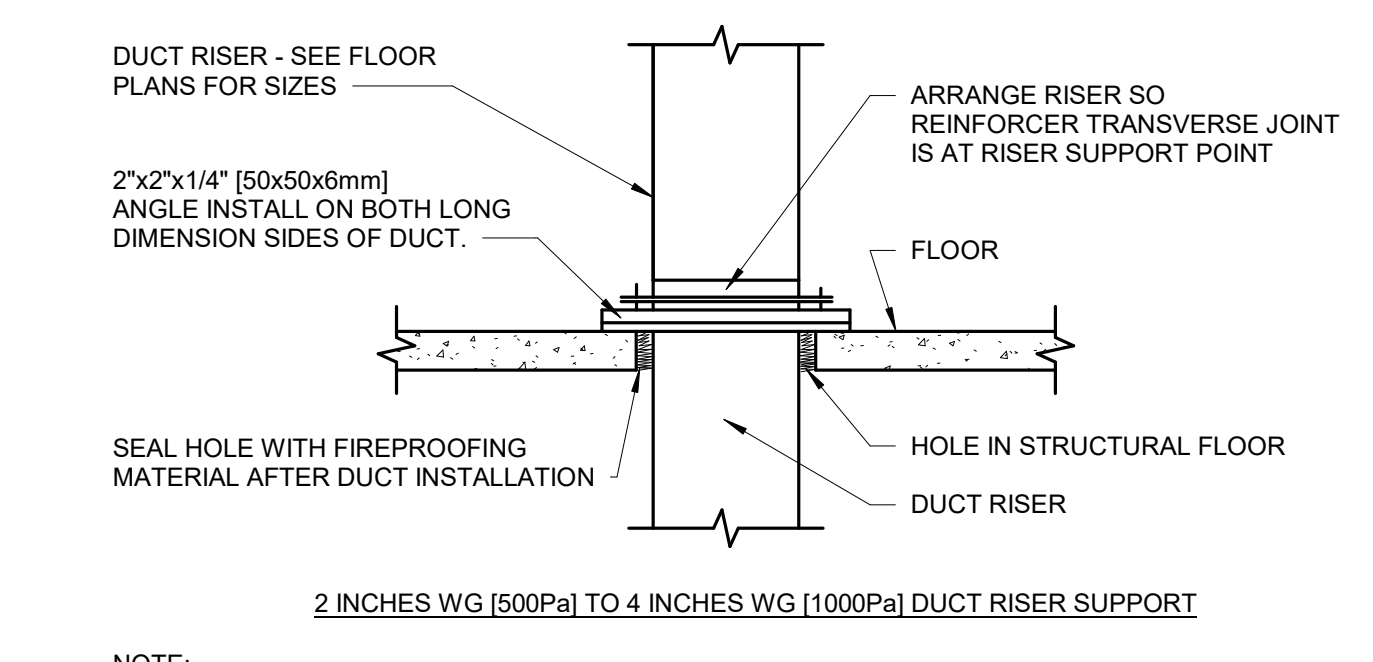
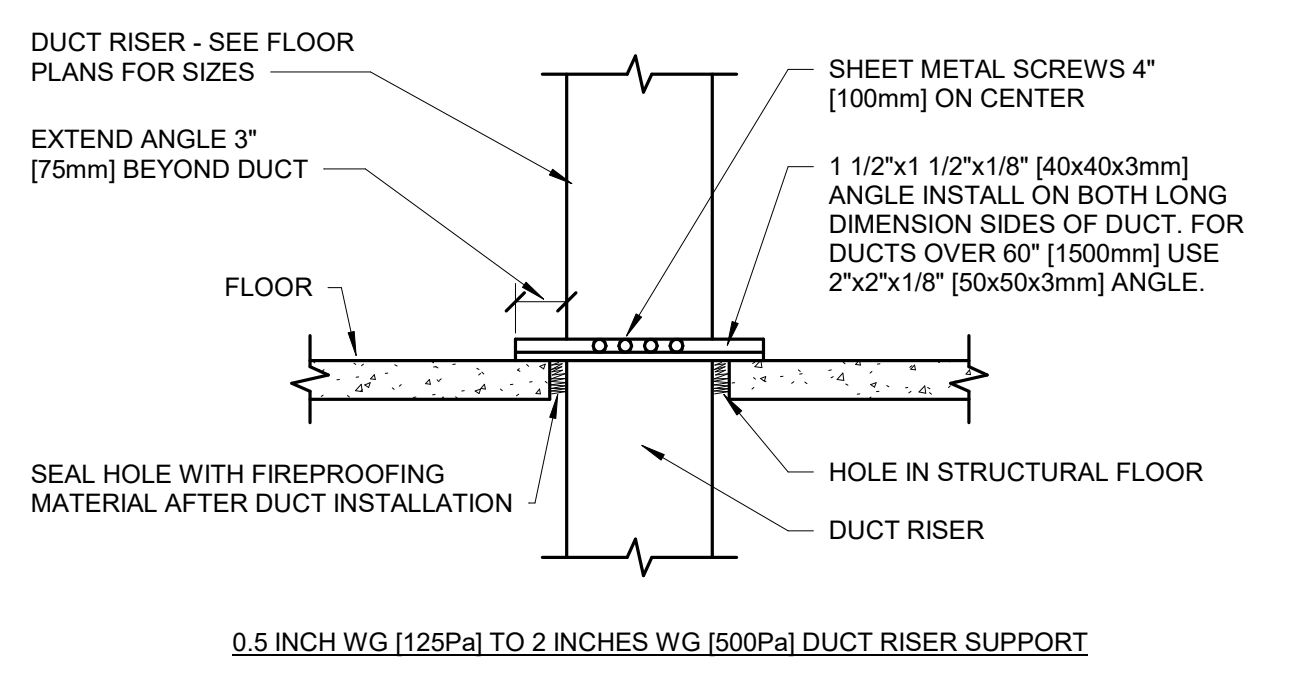
7 DUCTWORK TRANSITIONS (WITH EQUIPMENT MOUNTED IN DUCT)
SCALE: NO SCALE



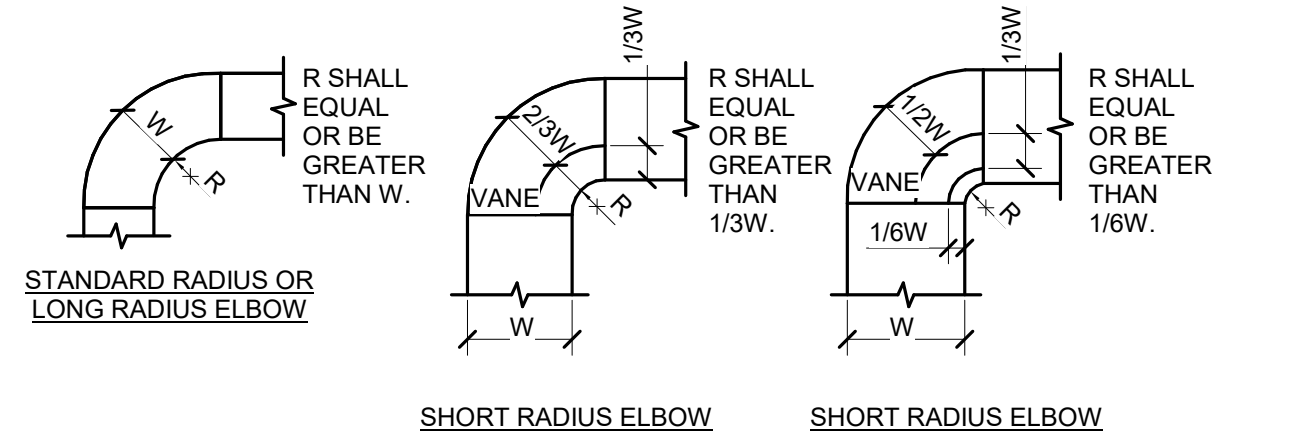
8 EXHAUST OR RETURN BRANCH DUCTWORK
SCALE: NO SCALE



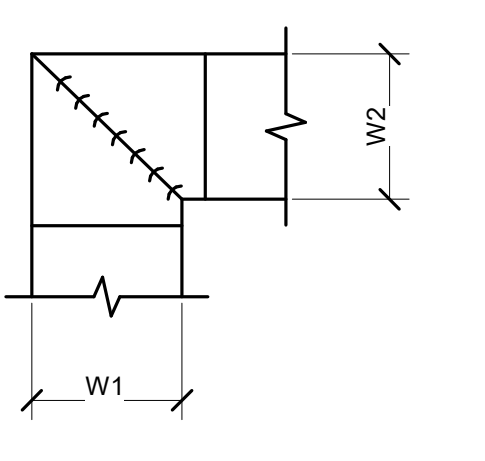
9 FLEXIBLE AIR DUCT CONNECTOR
SCALE: NO SCALE



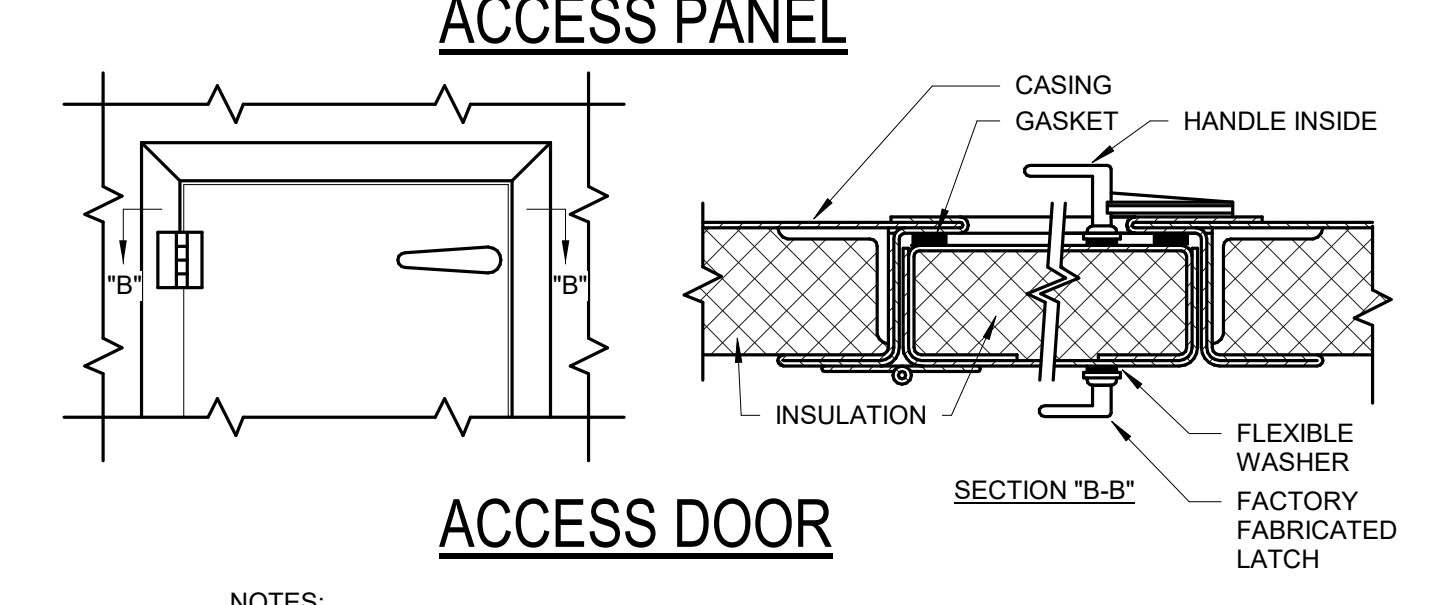
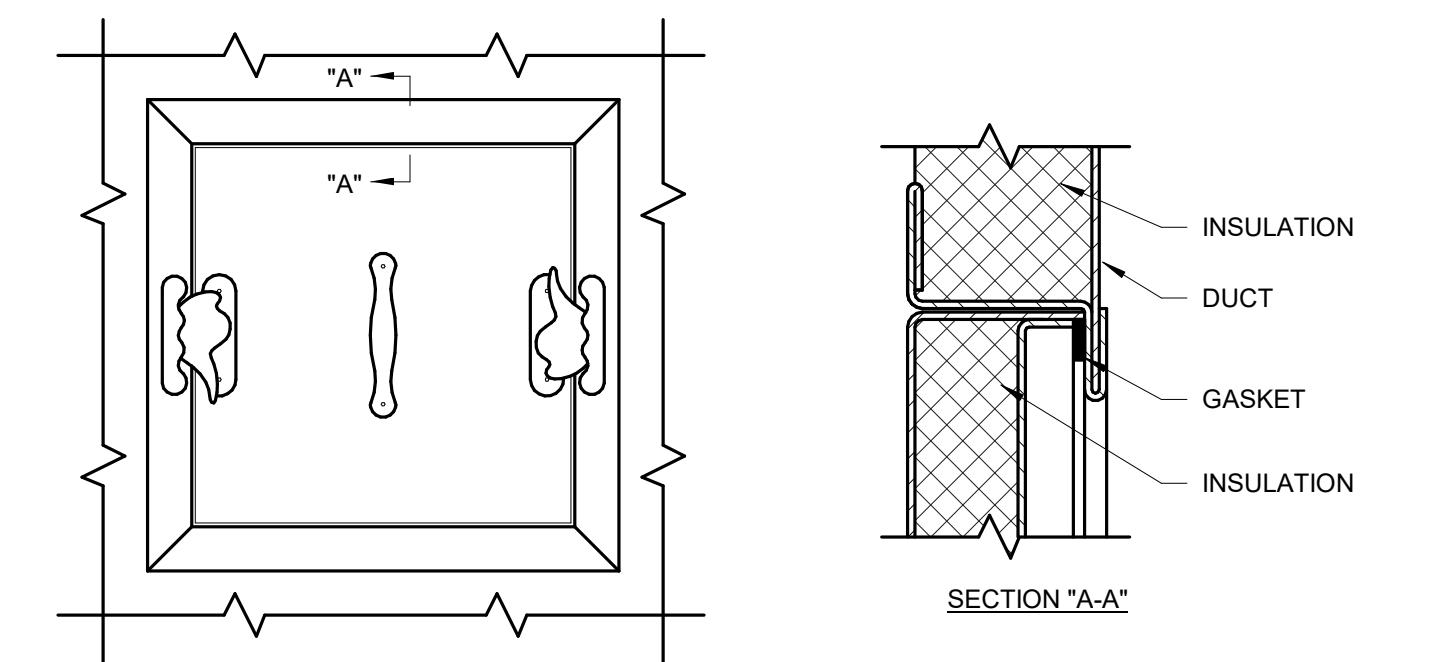
4 DUCT RISER SUPPORTS
SCALE: NO SCALE



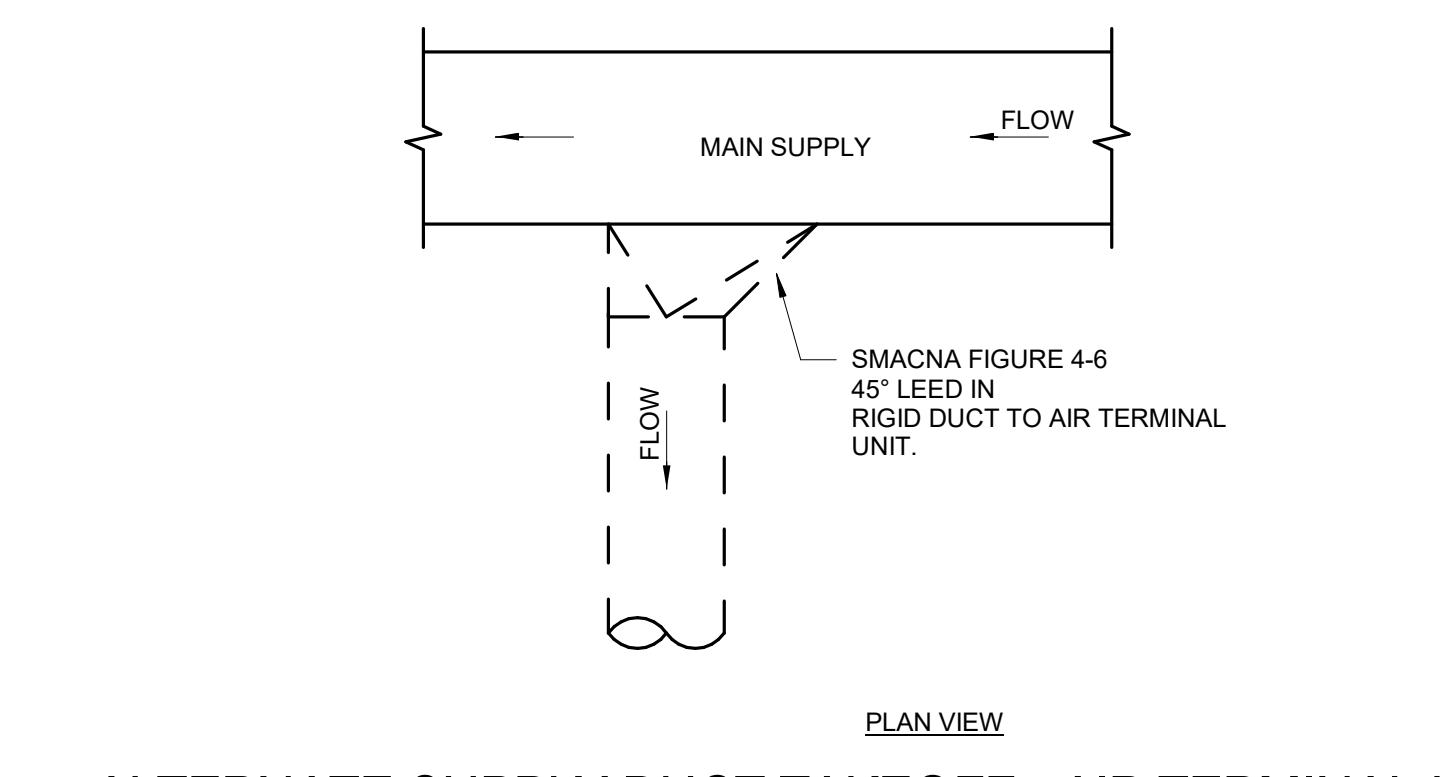
5 DUCTWORK RADIUS ELBOWS
SCALE: NO SCALE



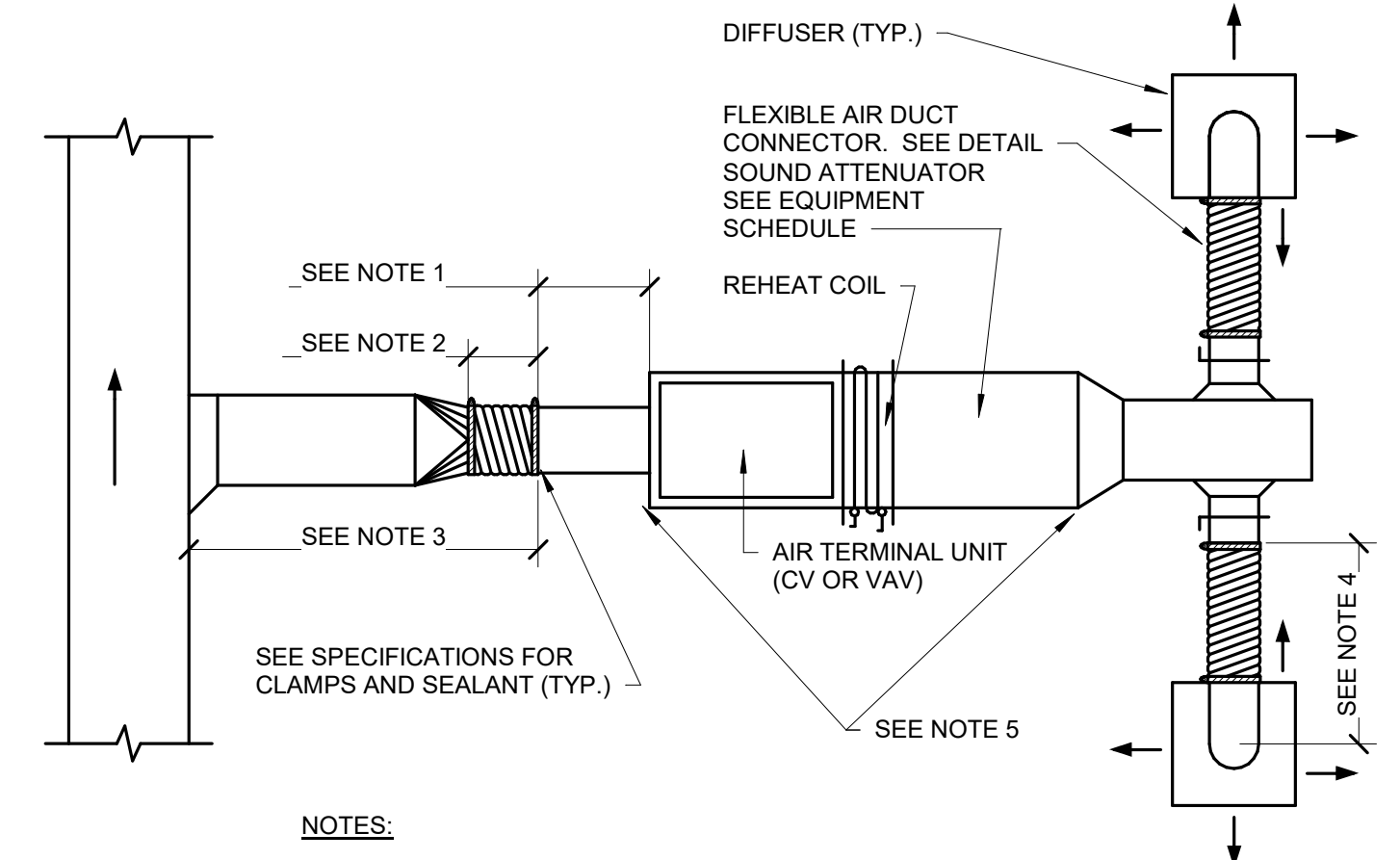
6 DUCTWORK SQUARE VANE ELBOWS
SCALE: NO SCALE



1 ACCESS PANEL AND DOOR DETAIL
SCALE: NO SCALE



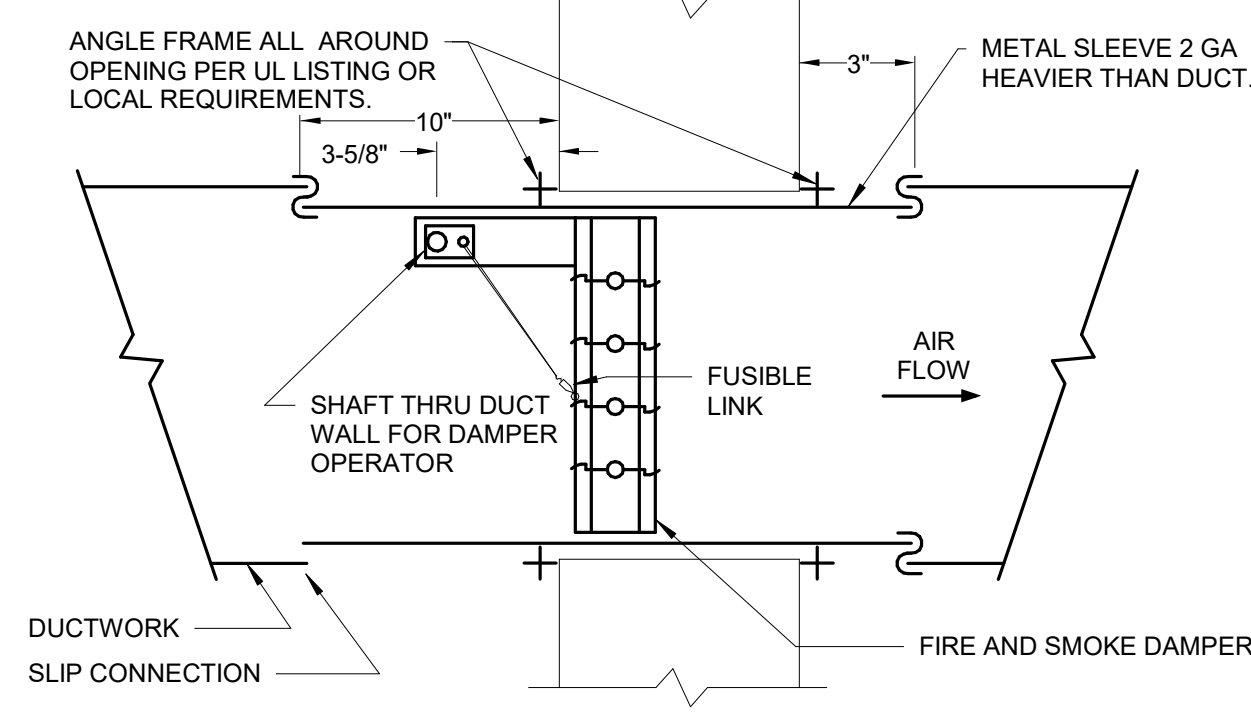
2 ALTERNATE SUPPLY DUCT TAKEOFF - AIR TERMINAL UNITS
SCALE: NO SCALE



3 DUCT CONNECTIONS - AIR TERMINAL UNITS
SCALE: NO SCALE

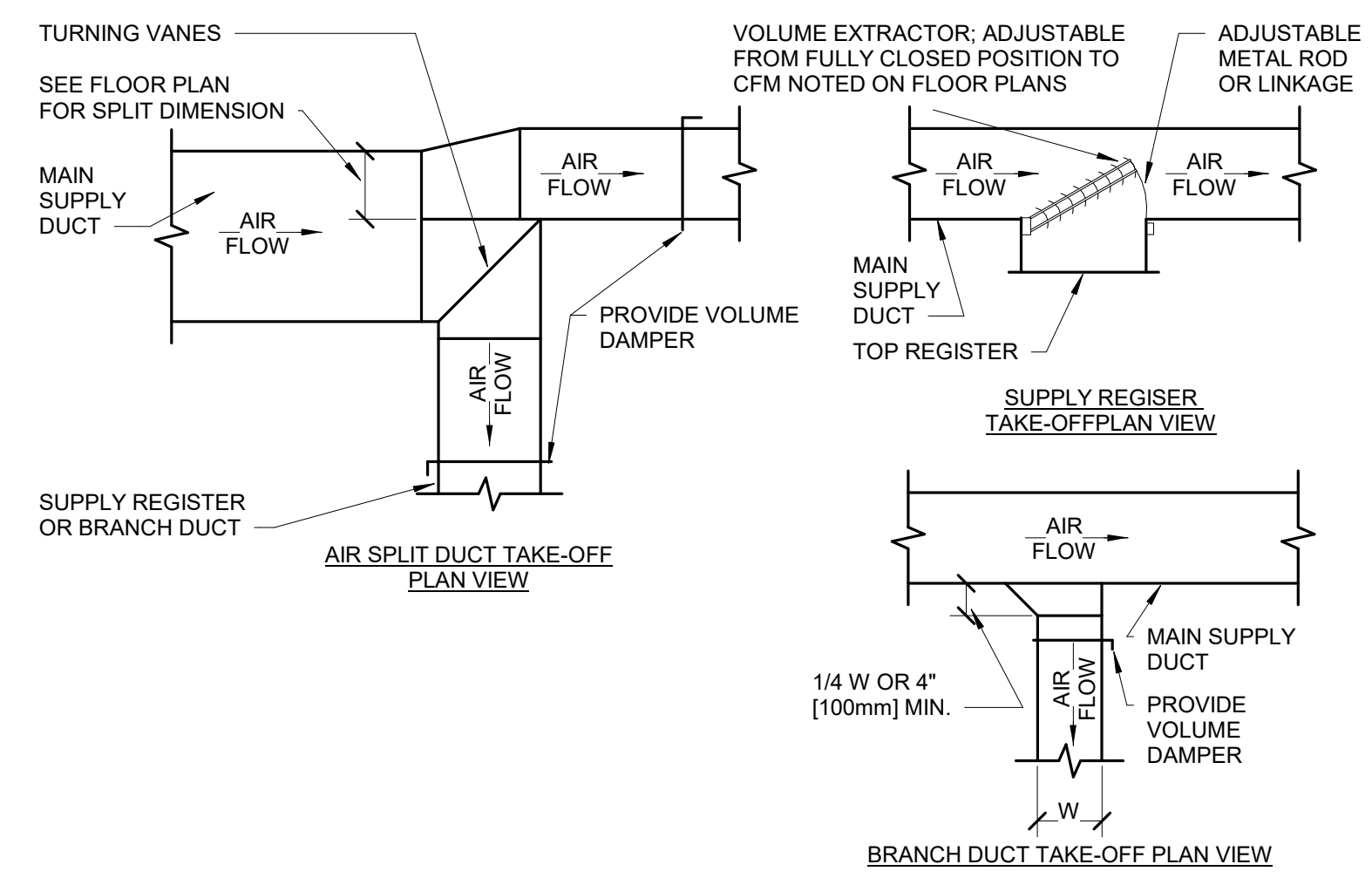
100% CONSTRUCTION DRAWINGS

CONSULTANTS: WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND		ARCHITECTS/ ENGINEERS: STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. • PO Box 39 Harrisburg, SD 57033 (605) 743-2510 fax(605) 743-2513				MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539		Drawing Title MECHANICAL DETAILS Approved: Project Director		Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY Project Number 438-15-201 Building Number 5 Drawing Number 5-MH501 Dwg. 46 of 60		Location SIOUX FALLS, SOUTH DAKOTA Date OCTOBER 17, 2017 Checked WM Drawn DNT Office of Construction and Facilities Management	
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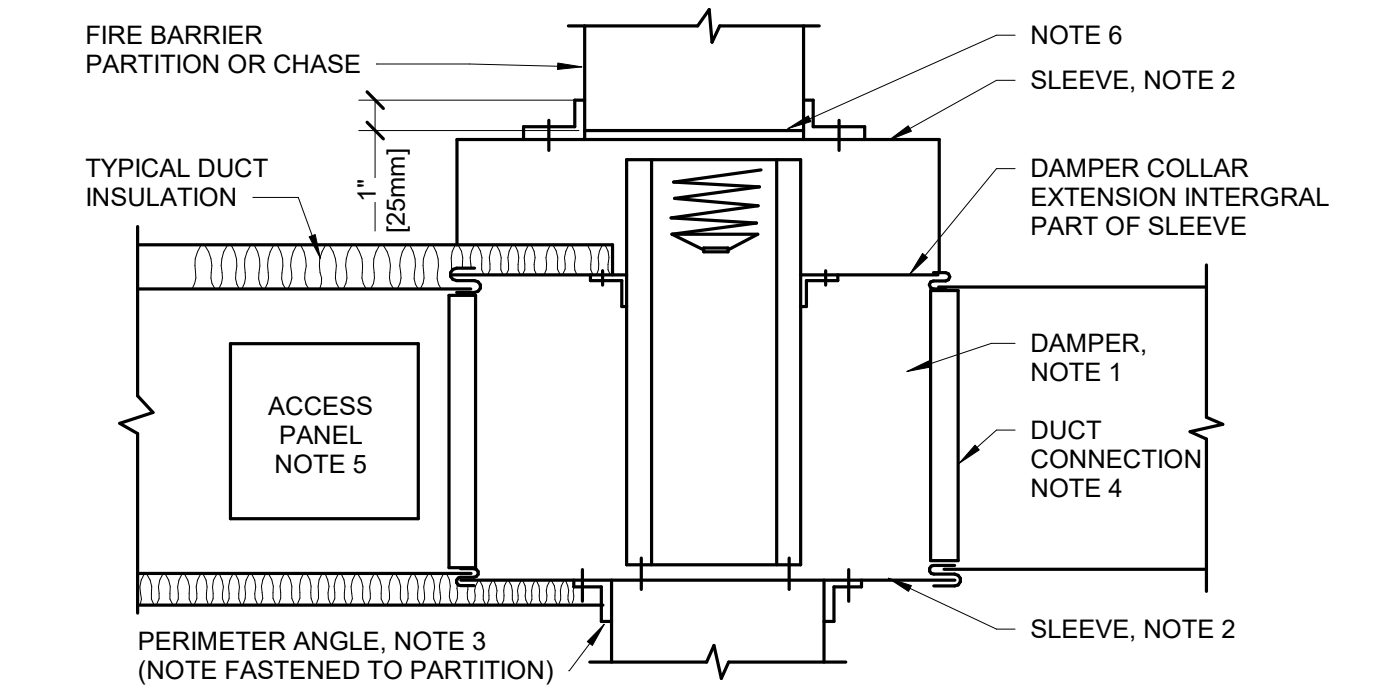


- NOTE:**
1. WALL MOUNTING ANGLES AND SLEEVES SHALL BE SECURED TO DAMPER FRAME BY WELDING AT 6" O.C. OR 1/4" BOLTS AND NUTS AT 8" O.C.
 2. FUSIBLE LINK SHALL BE ACCESSIBLE THRU ACCESS DOOR.
 3. THIS DETAIL REPRESENTS TYPICAL INSTALLATION REQUIREMENTS. INSTALL DAMPERS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FURNISHED W/ EACH RESPECTIVE DAMPER.
 4. FOR INSTALLATION IN SHEET ROCK/STUD WALLS PROVIDE STUD WALL FRAMING AND SHEET ROCK AS REQUIRED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

7 FIRE AND SMOKE DAMPER DETAIL
SCALE: NO SCALE

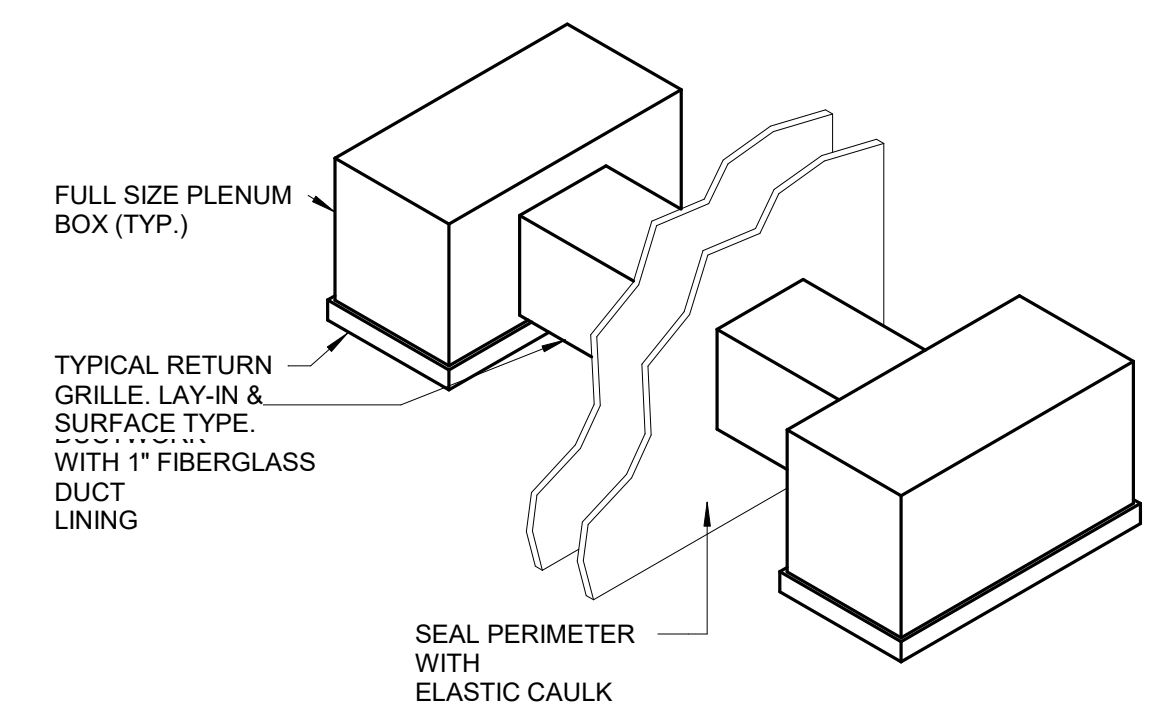


4 SUPPLY DUCTWORK TAKE-OFFS
SCALE: NO SCALE

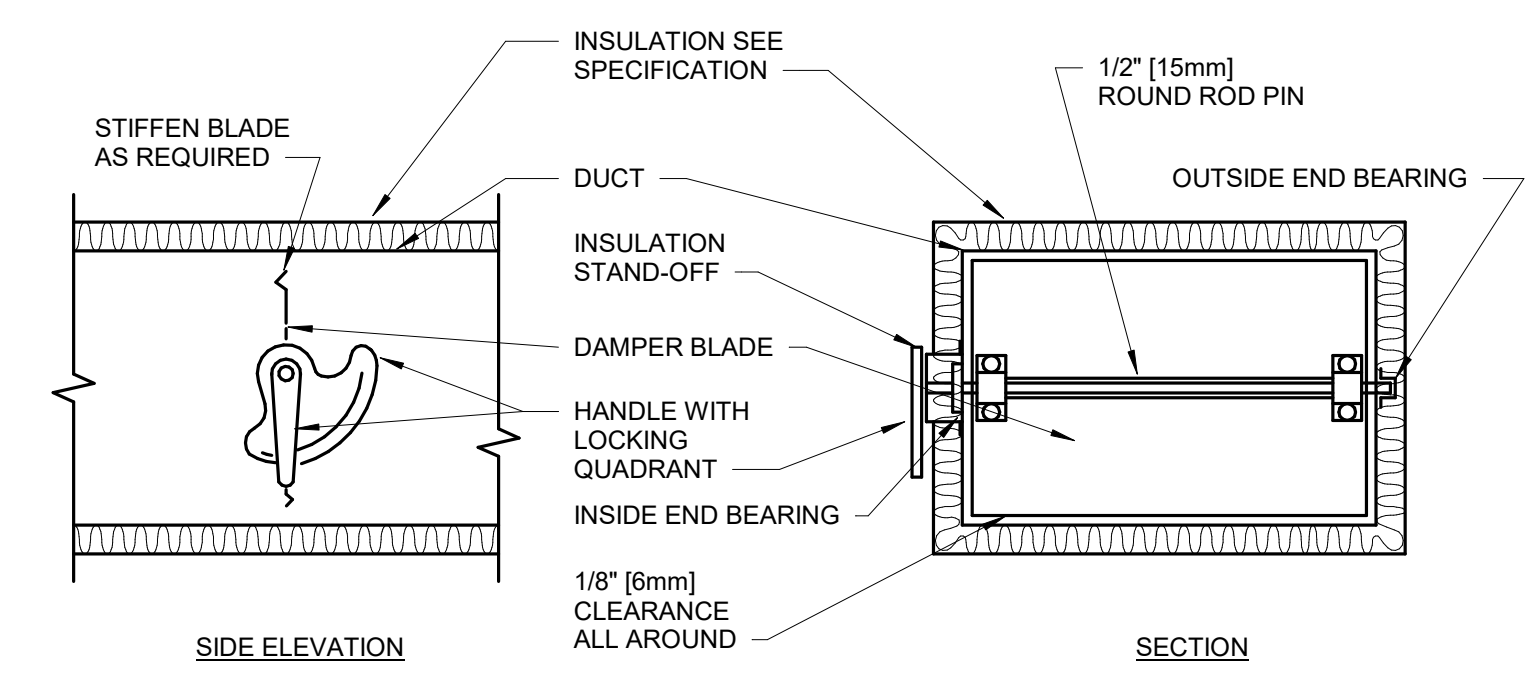


- NOTE:**
1. A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION, IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND PERIMETER ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION.
 2. GALVANIZED SLEEVE. GAGE NOT LESS THAN CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
 3. PERIMETER ANGLE IS GALVANIZED STEEL. NOT LESS THAN 1 1/2"x1 1/2" (40x40mm), 14 GAGE, TO PROVIDE 1" (25mm) MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES.
 4. BREAKAWAY DUCT CONNECTION: CONTRACTOR'S OPTION OF TYPES SHOWN IN SMACNA.
 5. ACCESS PANELS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS.
 6. PROVIDE 1/4" TO 1/2" (6 TO 15mm) CLEARANCE ON HEIGHT AND WIDTH. FILL OPEN SPACE WITH ROCK WOOL FIRESTOP FIBER.
 7. ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THRU ATTIC FLOORS AND MECHANICAL ROOM FLOORS, SHALL BE PROVIDED WITH 3" (75mm) HIGH CONCRETE CURB AROUND OPENING FOR DUCT.

1 SECTION THRU FIRE DAMPER INSTALLATION
SCALE: NO SCALE

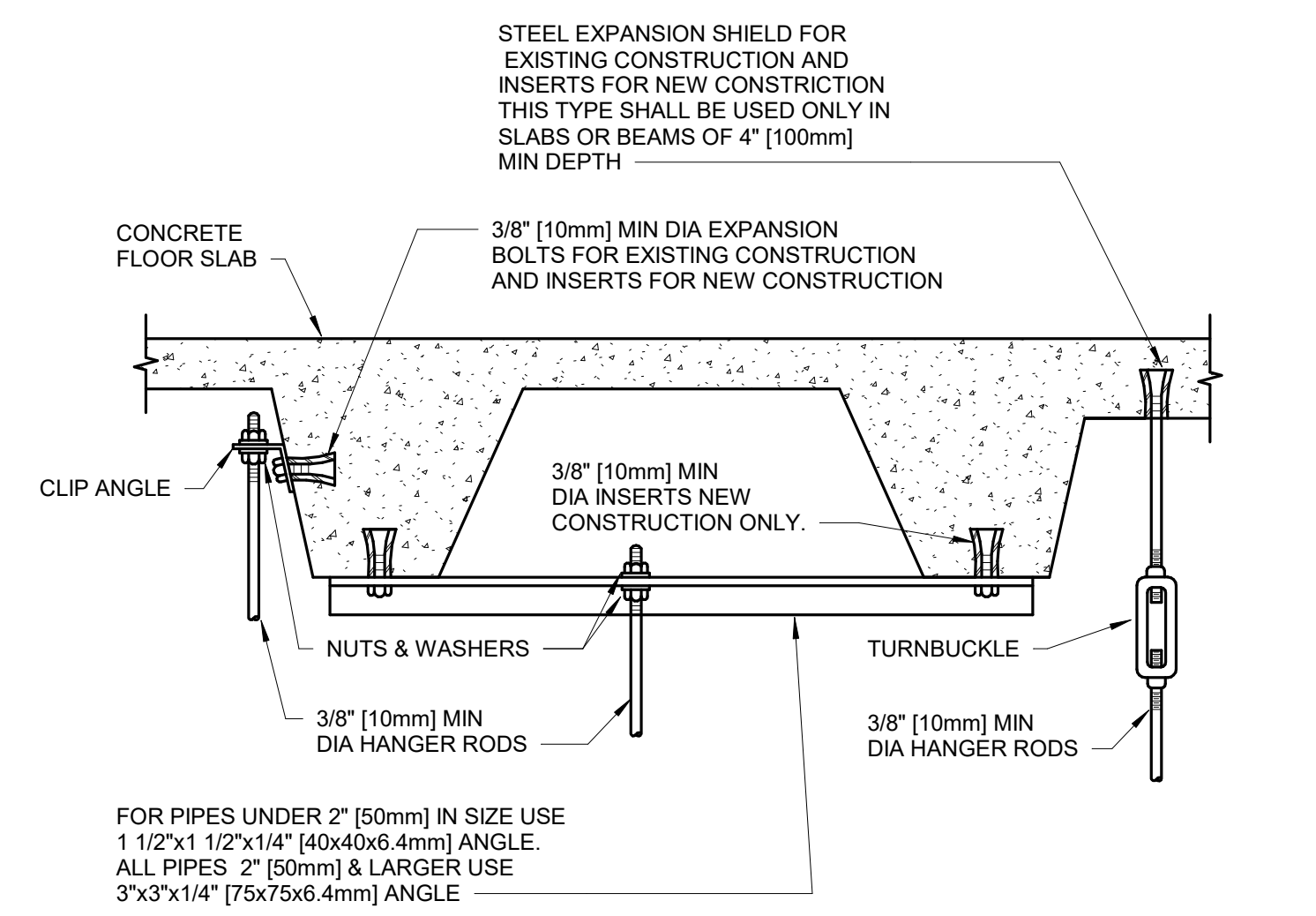


8 RETURN AIR TRANSFER DUCT DETAIL
SCALE: NO SCALE

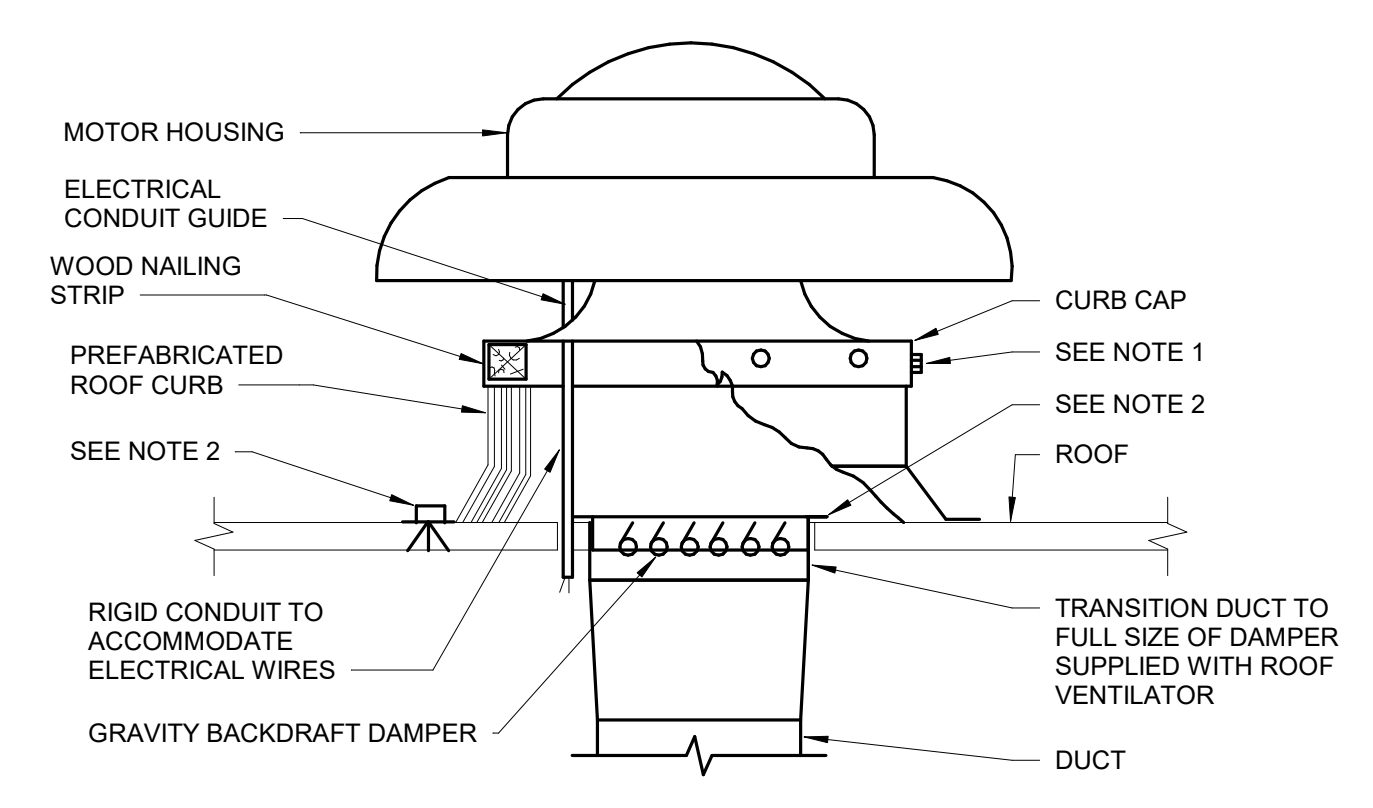


- NOTE:**
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
 2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

5 VOLUME DAMPER DETAIL
SCALE: NO SCALE

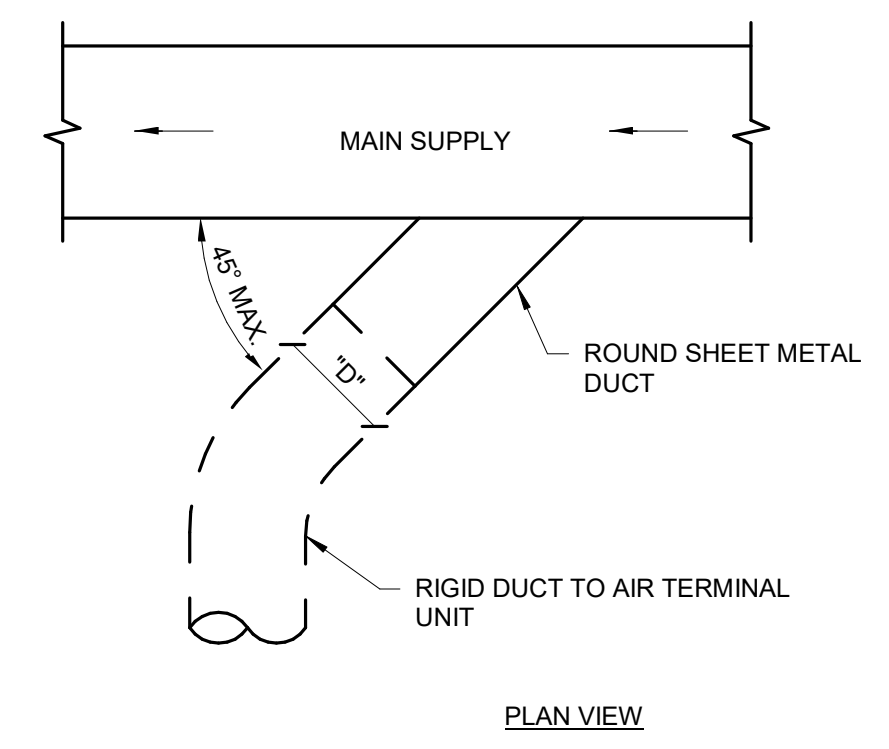


2 SECURING HANGER RODS IN CONCRETE
SCALE: NO SCALE



- NOTES:**
1. SECURE CURB CAP TO WOOD NAILING STRIP WITH 3/8" (10mm) CADMIUM PLATED LAG BOLTS NOT OVER 12" (300mm) ON CENTER.
 2. SECURE ROOF CURB, DUCTWORK AND DAMPER TO ROOF WITH EXPANSION BOLTS (CONCRETE ROOF) OR RUST RESISTANT BOLTS (METAL DECK AND BAR JOIST ROOF).
 3. RUN ELECTRICAL LINES THROUGH CLEARANCE HOLE PROVIDED IN GRAVITY DAMPER, THEN THROUGH VENTILATOR ELECTRICAL CONDUIT GUIDE.
 4. INSTALLATION SHALL BE WEATHER TIGHT.
 5. MONITORED BY TEMPERATURE CONTROL SYSTEM.

6 POWER ROOF VENTILATOR
SCALE: NO SCALE



3 SUPPLY DUCT TAKEOFF - AIR TERMINAL UNIT
SCALE: NO SCALE

100% CONSTRUCTION DRAWINGS

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VAV - SINGLE DUCT TERMINAL UNIT SCHEDULE - ELECTRIC HEAT COIL																						
UNIT TYPE	UNIT NUMBER	MANUFACTURER	MODEL	SIZE		CFM			STATIC PRESSURE			NC LEVELS		ELECTRIC HEAT COIL					COMMENTS			
				UNIT	OUTLET	MAX	MIN	INLET	DOWN	MIN	RAD	DIS	CFM	KW	VOLTS	PHASES	STEPS	EAT		LAT	MCA	MOP
VAV	14	TITUS	DESV	8"	12X10	540	315	1.00	0.25	0.02	20	18	315	3.5	208	3	CONTROL S INCLUDED	55	90.1	12.1	15	1.2,3,4,5,6,7
VAV	15	TITUS	DESV	8"	12X10	440	265	1.00	0.25	0.02	18	17	265	3	208	3	CONTROL S INCLUDED	55	90.8	10.4	15	1.2,3,4,5,6,7
VAV	16	TITUS	DESV	8"	12X10	200	120	1.00	0.25	0.02	15	18	120	1.5	208	3	CONTROL S INCLUDED	55	94.5	5.2	15	1.2,3,4,5,6,7
VAV	17	TITUS	DESV	8"	12X10	265	150	1.00	0.25	0.02	20	24	265	3.5	208	3	CONTROL S INCLUDED	55	96.7	12.1	15	1.2,3,4,5,6,7

COMMENTS:
1 SELECTIONS ARE BASED ON TITUS AS MANUFACTURER.
2 ALL PERFORMANCE BASED ON TESTS CONDUCTED IN ACCORDANCE WITH ASHRAE 130-2008 AND AHRI 880-2008.
3 ALL NC LEVELS DETERMINED USING AHRI 885-2008 APPENDIX E.
4 ALL AIRFLOW, PRESSURE LOSSES AND HEATING PERFORMANCE VALUES HAVE BEEN CORRECTED FOR ALTITUDE.
5 UNITS OF MEASURE: DIMENSIONS (IN), AIRFLOW (CFM), WATER FLOW (GPM), AIR PRESSURE (IN WG), WATER HEAD LOSSES (FT) AND TEMPERATURES (DEGF).
6 IN THE 'STEPS' COLUMN, CODE 'S' DENOTES A MODULATING COIL HEATER.
7 THE MINIMUM SUPPLY CIRCUIT AMPACITY (MCA) AND MAXIMUM OVERCURRENT PROTECTION (MOP) RATINGS WERE CALCULATED IN ACCORDANCE WITH UL STANDARDS BASED ON MOTOR AND ELECTRIC COIL FULL LOAD CURRENT RATINGS.

FAN SCHEDULE													
UNIT TYPE	UNIT NUMBER	MANUFACTURER	MODEL	LOCATION	SERVICE	VIBRATION ISOLATION	CFM	S.P.D.	MAX RPM	HP	MOTOR ELEC.	SONES	COMMENTS
EF	1	AEROVENT	ACXD 120BE	ROOF	EXHAUST	---	1080	0.50 in-wg	1447	0.5	BY TEMP. CONTROL	12.5	1.2,3,4,5

COMMENTS:
1 PROVIDE WITH ECM MOTOR, 0-10 VDC LEAD - FACTORY INSTALLED, STANDARD PREWIRED DISCONNECT.
2 PROVIDE WITH THERMAL OVERLOAD.
3 PROVIDE WITH 18" ROOF CURB, MOTORIZED BACKDRAFT DAMPER, GALVANIZED BIRDSCREEN.
4 ATC CONTRACTOR TO PROVIDE EXHAUST DUCT STATIC PRESSURE SENSOR AND MODULATE FAN TO MAINTAIN DUCT STATIC SETPOINT.
5 FAN SHALL BE DIRECT DRIVE.

VAV - SINGLE DUCT TERMINAL UNIT SCHEDULE - STEAM HEAT COIL																							
UNIT TYPE	UNIT NUMBER	MANUFACTURER	MODEL	SIZE		CFM			STATIC PRESSURE			NC LEVELS		STEAM HEAT COIL					COMMENTS				
				UNIT	OUTLET	MAX	MIN	INLET	DOWN	MIN	RAD	DIS	CFM	MBH	EAT	EWT	LAT	APD		LBS/HR	Rows	PSI	FPI
VAV	1	TITUS	DESV	5"	12X8	120	95	1.75	0.25	0.02	-	17	95	8.46	55	180	137.15	0.01	9	1-RH	5	10	1.2,3,4,5,6
VAV	2	TITUS	DESV	6"	12X10	410	360	1.75	0.25	0.06	18	23	390	22.27	55	180	107.64	0.08	23	1-RH	5	10	1.2,3,4,5,6
VAV	3	TITUS	DESV	8"	12X10	450	360	1.75	0.25	0.05	20	24	360	21.30	55	180	109.57	0.07	22	1-RH	5	10	1.2,3,4,5,6
VAV	4	TITUS	DESV	8"	12X10	450	360	1.75	0.25	0.05	20	24	360	21.30	55	180	109.57	0.07	22	1-RH	5	10	1.2,3,4,5,6
VAV	5	TITUS	DESV	5"	12X8	150	120	1.75	0.25	0.02	13	19	120	9.85	55	180	130.68	0.01	10	1-RH	5	10	1.2,3,4,5,6
VAV	6	TITUS	DESV	5"	12X8	200	100	1.75	0.25	0.03	18	23	100	8.75	55	180	135.72	0.01	9	1-RH	5	10	1.2,3,4,5,6
VAV	7	TITUS	DESV	8"	12X10	450	360	1.75	0.25	0.05	20	24	360	21.30	55	180	109.57	0.07	22	1-RH	5	10	1.2,3,4,5,6
VAV	8	TITUS	DESV	8"	12X10	450	360	1.75	0.25	0.05	20	24	360	21.30	55	180	109.57	0.07	22	1-RH	5	10	1.2,3,4,5,6
VAV	9	TITUS	DESV	6"	12X8	300	90	1.75	0.25	0.08	20	23	90	8.17	55	180	138.67	0.01	8	1-RH	5	10	1.2,3,4,5,6
VAV	10	TITUS	DESV	8"	12X10	500	425	1.75	0.25	0.06	22	25	425	23.33	55	180	105.61	0.09	24	1-RH	5	10	1.2,3,4,5,6
VAV	11	TITUS	DESV	8"	12X10	500	425	1.75	0.25	0.06	22	25	425	23.33	55	180	105.61	0.09	24	1-RH	5	10	1.2,3,4,5,6
VAV	12	TITUS	DESV	5"	12X8	180	180	1.75	0.25	0.04	15	20	180	12.65	55	180	119.80	0.02	13	1-RH	5	10	1.2,3,4,5,6
VAV	13	TITUS	DESV	6"	12X8	240	240	1.75	0.25	0.08	18	21	240	14.96	55	180	112.46	0.03	16	1-RH	5	10	1.2,3,4,5,6
VAV	18	TITUS	DESV	8"	12X10	445	145	1.75	0.25	0.02	20	24	145	12.33	55	180	133.39	0.01	13	1-RH	5	10	1.2,3,4,5,6
VAV	19	TITUS	DESV	6"	12X8	360	110	1.75	0.25	0.12	23	27	110	10.27	55	180	141.11	0.01	11	1-RH	5	10	1.2,3,4,5,6

COMMENTS:
1 SELECTIONS ARE BASED ON TITUS AS MANUFACTURER.
2 ALL PERFORMANCE BASED ON TESTS CONDUCTED IN ACCORDANCE WITH ASHRAE 130-2008 AND AHRI 880-2008.
3 ALL NC LEVELS DETERMINED USING AHRI 885-2008 APPENDIX E.
4 ALL AIRFLOW, PRESSURE LOSSES AND HEATING PERFORMANCE VALUES HAVE BEEN CORRECTED FOR ALTITUDE.
5 UNITS OF MEASURE: DIMENSIONS (IN), AIRFLOW (CFM), WATER FLOW (GPM), AIR PRESSURE (IN WG), WATER HEAD LOSSES (FT) AND TEMPERATURES (DEGF).
6 WATER PRESSURE DROP (WPD) UNITS IS IN FT. WATER.

REGISTER GRILLES AND DIFFUSER SCHEDULE													
UNIT TYPE	UNIT NUMBER	MANUFACTURER	MODEL	NOMINAL SIZE		THROAT SIZE		MAX CFM	THROW	S.P.D.	NC	FRAME	COMMENTS
				WIDTH	LENGTH	WIDTH	LENGTH						
E	1	KRUEGER	EGC15	12"	24"	10"	22"	600	N/A	0.02 in-wg	15	LAY-IN	1
R	1	KRUEGER	EGC15	12"	24"	10"	22"	600	N/A	0.02 in-wg	15	LAY-IN	1
S	1	KRUEGER	1400A	24"	24"			6"	100	0.09 in-wg	24	LAY-IN	1
S	2	KRUEGER	1400A	24"	24"			8"	240	0.11 in-wg	29	LAY-IN	1
S	3	KRUEGER	1400A	24"	24"			10"	370	0.10 in-wg	28	LAY-IN	1
T	1	KRUEGER	EGC15	24"	12"	22"	10"	600	N/A	0.02 in-wg	15	LAY-IN	1

COMMENTS:
1 COORDINATE FRAME STYLE WITH CEILING AND/OR WALL.

EXHAUST - SINGLE DUCT TERMINAL UNIT SCHEDULE														
UNIT TYPE	UNIT NUMBER	MANUFACTURER	MODEL	SIZE		CFM			STATIC PRESSURE			NC LEVELS		COMMENTS
				UNIT	OUTLET	MAX	MIN	INLET	DOWN	MIN	NC	DIS		
VAV	E1	TITUS	DECV	8"	7.9	440	265	0.33	0.15	0.06	-	22	-	1.2,3,4,5,6
VAV	E2	TITUS	DECV	8"	7.9	540	315	0.33	0.15	0.09	14	19	-	1.2,3,4,5,6
VAV	E3	TITUS	DECV	6"	5.9	100	100	0.33	0.15	0.01	-	-	-	1.2,3,4,5,6
VAV	E4	TITUS	DECV	8"	7.9	400	100	0.33	0.15	0.09	14	22	-	1.2,3,4,5,6
VAV	E5	TITUS	DECV	8"	7.9	400	100	0.33	0.15	0.09	14	22	-	1.2,3,4,5,6

COMMENTS:
1 SELECTIONS ARE BASED ON TITUS AS MANUFACTURER.
2 ALL PERFORMANCE BASED ON TESTS CONDUCTED IN ACCORDANCE WITH ASHRAE 130-2008 AND AHRI 880-2008.
3 ALL NC LEVELS DETERMINED USING AHRI 885-2008 APPENDIX E.
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5 UNITS OF MEASURE: DIMENSIONS (IN), AIRFLOW (CFM), WATER FLOW (GPM), AIR PRESSURE (IN WG), WATER HEAD LOSSES (FT) AND TEMPERATURES (DEGF).
6 WATER PRESSURE DROP (WPD) UNITS IS IN FT. WATER.

100% CONSTRUCTION DRAWINGS

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Approved: Project Director		Location SIOUX FALLS, SOUTH DAKOTA		Drawing Number 5- MH601		Date OCTOBER 17, 2017		Checked WM		Drawn DNT		Dwg. 48 of 60					

A three inches = one foot
 B one and one half inches = one foot
 C one inch = one foot
 D three quarters inch = one foot
 E three eighths inch = one foot
 F one eighth inch = one foot

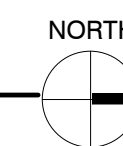
KEYNOTES:

MECHANICAL SPECIFIC NOTES

M509 3/4" LPR UP. SEE HVAC PIPING PLAN - FIFTH FLOOR FOR CONTINUATION. CONNECT NEW 3/4" LPR TO EXISTING LPR PIPING ON THIS FLOOR. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING PRIOR TO CONNECTION.



HVAC PIPING PLAN - FOURTH FLOOR
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.

B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.

C DUCT SIZES ARE NET INSIDE DIMENSIONS.

D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.

E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.

F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.

G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.

H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.

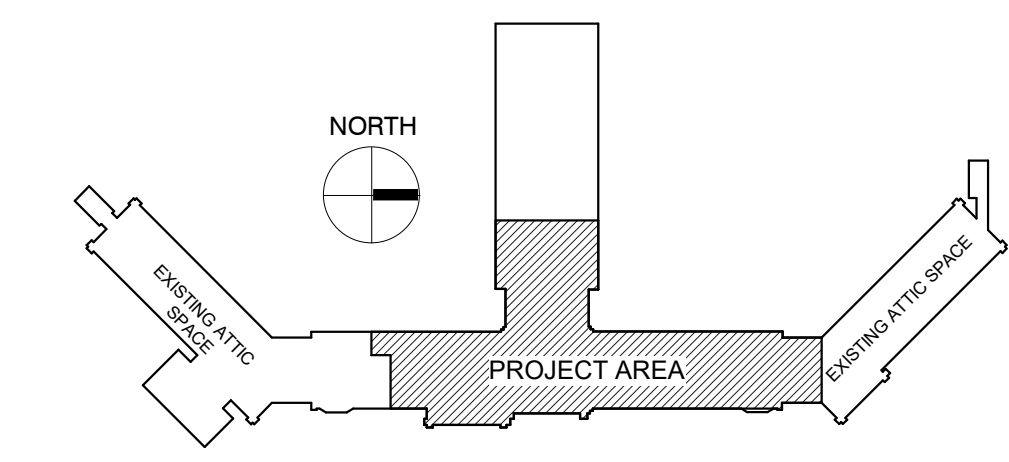
I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7" (175MM) ABOVE FINISHED FLOOR.

J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.

K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.

L ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

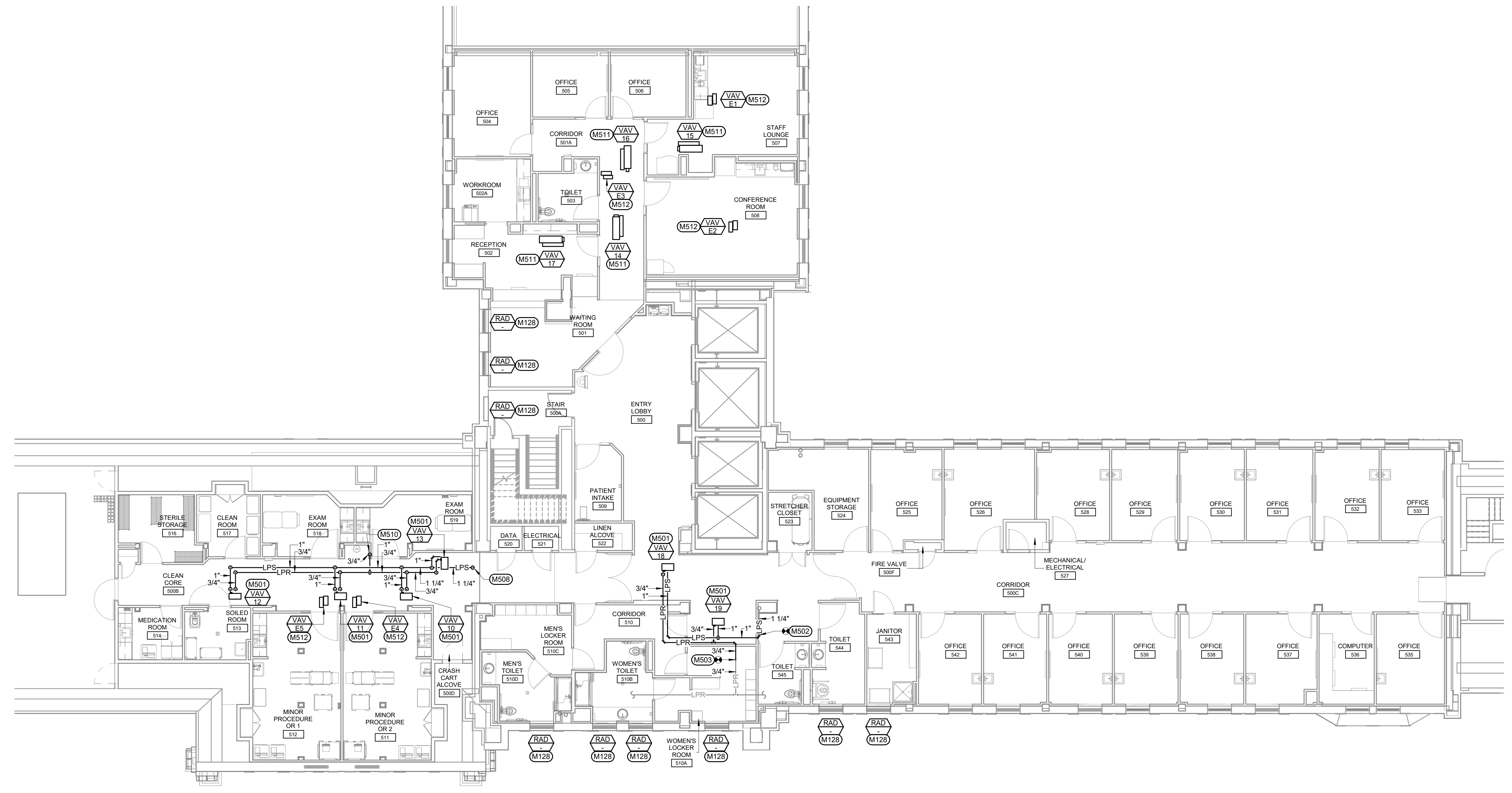
100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>		<p>STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>		<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>		<p>Drawing Title HVAC PIPING PLAN - FOURTH FLOOR</p> <p>Approved: Project Director</p>		<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Drawing Number 5-MP101</p> <p>Dwg. 49 of 60</p>		<p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked WM</p> <p>Drawn DNT</p>		<p>Office of Construction and Facilities Management</p>	
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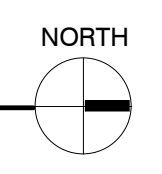
one eighth inch = one foot
one quarter inch = one foot
three eighths inch = one foot
one half inch = one foot
one and one half inches = one foot
three inches = one foot
one inch = one foot
one and one half inches = one foot
three quarters inch = one foot
one inch = one foot
one and one half inches = one foot
three quarters inch = one foot
one half inch = one foot
one quarter inch = one foot
one eighth inch = one foot

- KEYNOTES:**
- M128 EXISTING CONVECTOR TO REMAIN. VERIFY EXACT SIZE AND LOCATION.
 - M501 1" LPS, 3/4" LPR TO STEAM HEATING COIL. SEE STEAM COIL - PIPING CONNECTIONS DETAIL 4/MP901.
 - M502 CONNECT NEW 1" LPS TO EXISTING LPS AT THIS LOCATION. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M503 CONNECT NEW 3/4" LPR TO EXISTING LPR AT THIS LOCATION. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M508 1-1/4" LPS UP. SEE HVAC PIPING PLAN - PENTHOUSE FOR CONTINUATION.
 - M510 3/4" LPR DN IN CHASE. SEE HVAC PIPING PLAN - FOURTH FLOOR FOR CONTINUATION.
 - M511 ELECTRIC HEAT VAV ONLY. SHOWN FOR CLARIFICATION.
 - M512 EXHAUST VAV ONLY. SHOWN FOR CLARIFICATION.

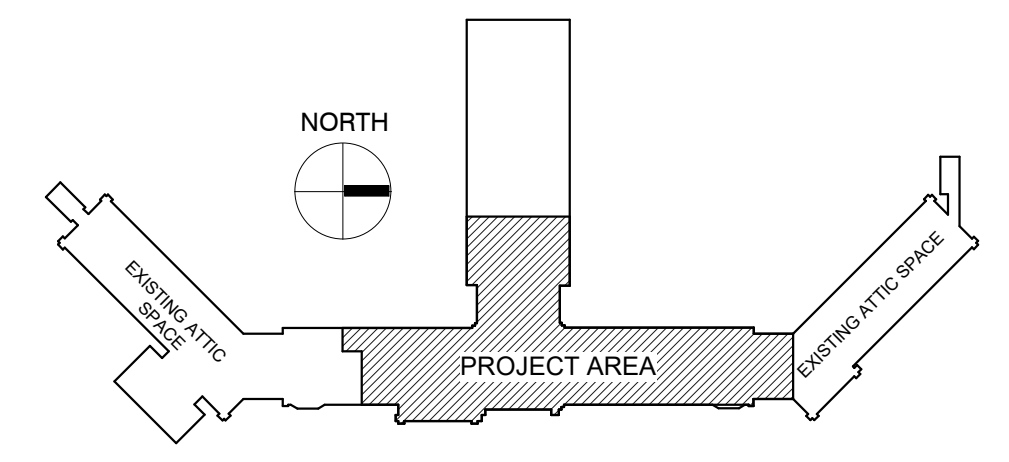
- A three inches = one foot
- B one and one half inches = one foot
- C one inch = one foot
- D three quarters inch = one foot
- E one half inch = one foot
- F three eighths inch = one foot
- G one quarter inch = one foot
- H one eighth inch = one foot
- I one eighth inch = one foot



HVAC PIPING PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"



- GENERAL NOTES:**
- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
 - B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
 - C DUCT SIZES ARE NET INSIDE DIMENSIONS.
 - D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
 - E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
 - F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
 - G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
 - H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
 - I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7' (175MM) ABOVE FINISHED FLOOR.
 - J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
 - K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
 - L PROVIDE WATER HAMMER ARRESTORS WITH INLET ISOLATION VALVES AT EACH NEW SINK AND LAVATORY HOT WATER AND COLD WATER BRANCH AND BOTH NEW WATER CLOSETS.
 - M ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.
- KEY PLAN:**



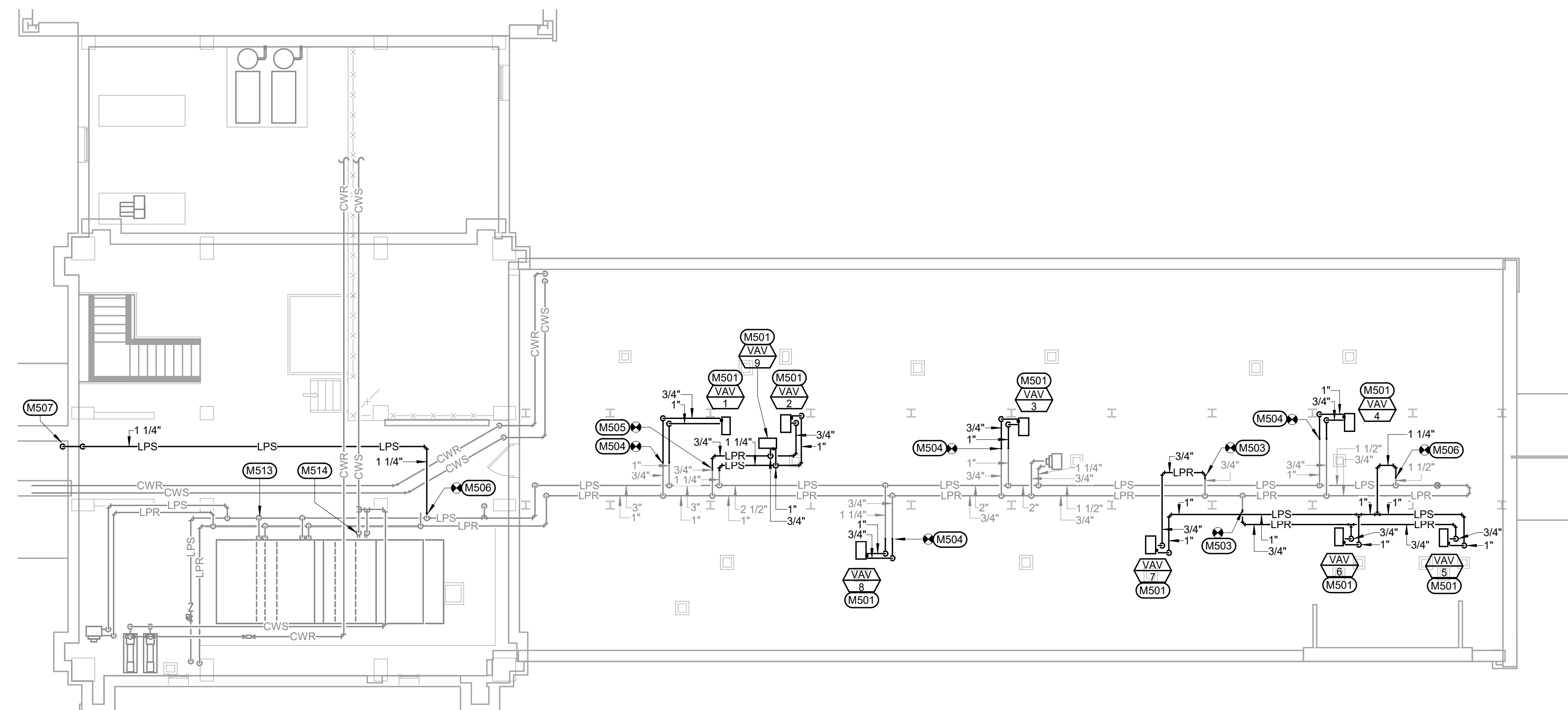
PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title HVAC PIPING PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked WM</p> <p>Drawn DNT</p>	<p>Drawing Number 5- MP102</p> <p>Dwg. 50 of 60</p>	<p>Office of Construction and Facilities Management</p>
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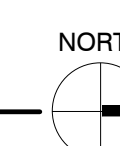
KEYNOTES:

- MECHANICAL SPECIFIC NOTES**
- M501 1" LPS, 3/4" LPR TO STEAM HEATING COIL. SEE STEAM COIL - PIPING CONNECTIONS DETAIL 4/MP501.
 - M503 CONNECT NEW 3/4" LPR TO EXISTING LPR AT THIS LOCATION. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M504 CONNECT NEW 3/4" LPR AND 1" LPS TO EXISTING LPR AND LPS AT THIS LOCATION. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M505 CONNECT NEW 3/4" LPR AND 1-1/4" LPS TO EXISTING LPR AND LPS AT THIS LOCATION. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M506 CONNECT NEW 1-1/4" LPS TO EXISTING LPS AT THIS LOCATION. CONTRACTOR SHALL FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PRIOR TO CONNECTION.
 - M507 1-1/4" LPS DN ALONG WALL AND THRU INTO ATTIC SPACE. SEE HVAC PIPING PLAN - FIFTH FLOOR FOR CONTINUATION.
 - M513 INSTALL NEW STEAM CONTROL VALVE. CONTROL VALVE PROVIDED BY JCI. INSTALLED BY PLUMBING CONTRACTOR. COORDINATE WITH JCI.
 - M514 INSTALL NEW CHILLED WATER CONTROL VALVE. 50 GPM. CONTROL VALVE PROVIDED BY JCI. INSTALLED BY PLUMBING CONTRACTOR. COORDINATE WITH JCI.



HVAC PIPING PLAN - PENTHOUSE

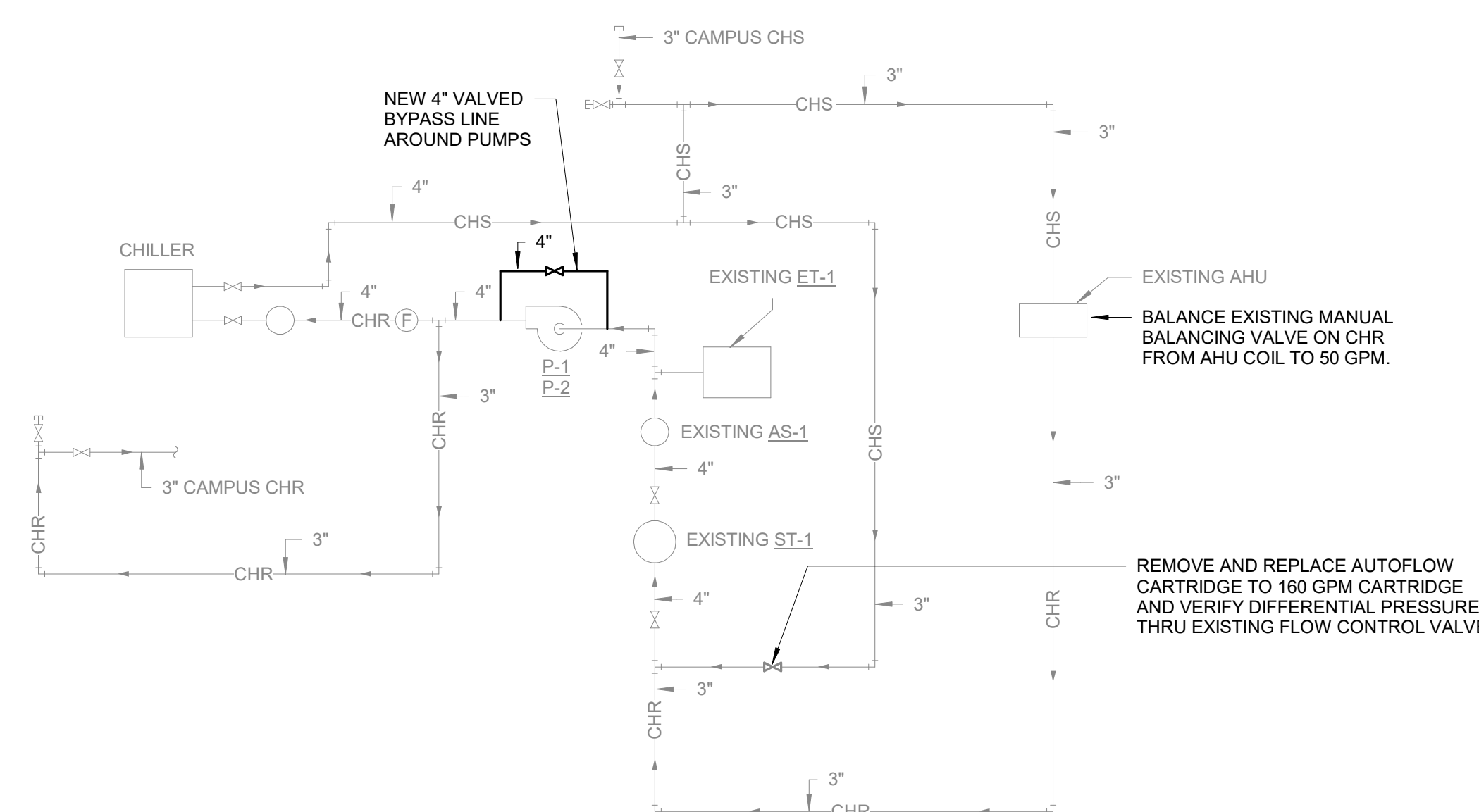
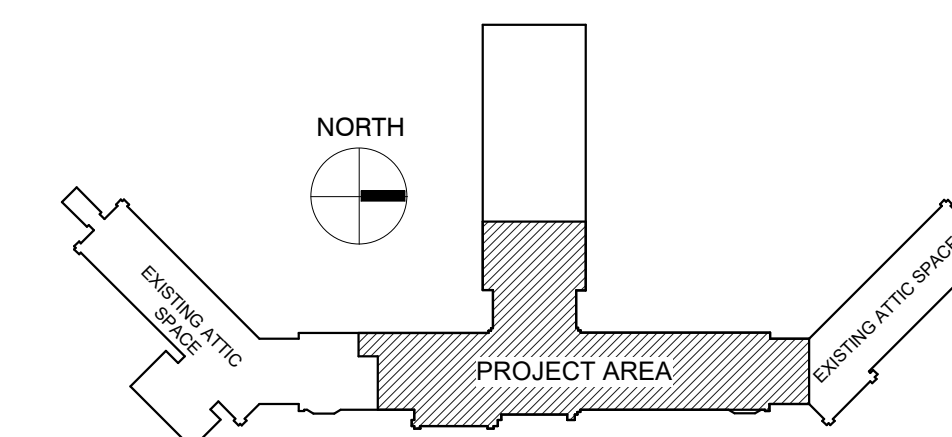
SCALE: 1/8" = 1'-0"



GENERAL NOTES:

- A ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD SUSPENDED CEILING.
- B THE FIRST FIGURE OF DUCT SIZE INDICATES DIMENSION OF FACE SHOWN OR INDICATED.
- C DUCT SIZES ARE NET INSIDE DIMENSIONS.
- D ACCESS PANELS IN HARD SUSPENDED CEILINGS ARE REQUIRED FOR ALL VALVES, TRAPS, DAMPERS, CLEANOUTS, CONTROLS, ETC. ACCESS PANELS SHALL BE FURNISHED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS.
- E TOTAL STATIC PRESSURE NOTED IN THE SCHEDULES INCLUDES DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
- F FOR TYPICAL STEAM AND WATER PIPING CONNECTIONS TO EQUIPMENT, SEE STANDARD EQUIPMENT DETAILS.
- G DIFFUSER, REGISTER AND GRILLE SIZES SHOWN ON FLOOR PLANS ARE NECK SIZES.
- H WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE TO PROVIDE COUNTER FLOW BETWEEN WATER AND AIR.
- I WALL TYPE EXHAUST REGISTERS NOTED AS "BR" ON DRAWINGS ARE TO BE INSTALLED WITH BOTTOM ELEVATION OF REGISTER AT 7' (175MM) ABOVE FINISHED FLOOR.
- J REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF CEILING DIFFUSERS, REGISTERS, AND GRILLES.
- K ALL PRESSURES LISTED ARE GAGE PRESSURE UNLESS OTHERWISE NOTED.
- L PROVIDE WATER HAMMER ARRESTORS WITH INLET ISOLATION VALVES AT EACH NEW SINK, AND LAVATORY HOT WATER AND COLD WATER BRANCH, AND BOTH NEW WATER CLOSETS.
- M ALL PIPE PENETRATIONS THROUGH FLOOR OR MASONRY WALLS SHALL BE CORE DRILLED. SEE SPECIFICATIONS.

KEY PLAN:



2 CHILLED WATER PIPING SCHEMATIC

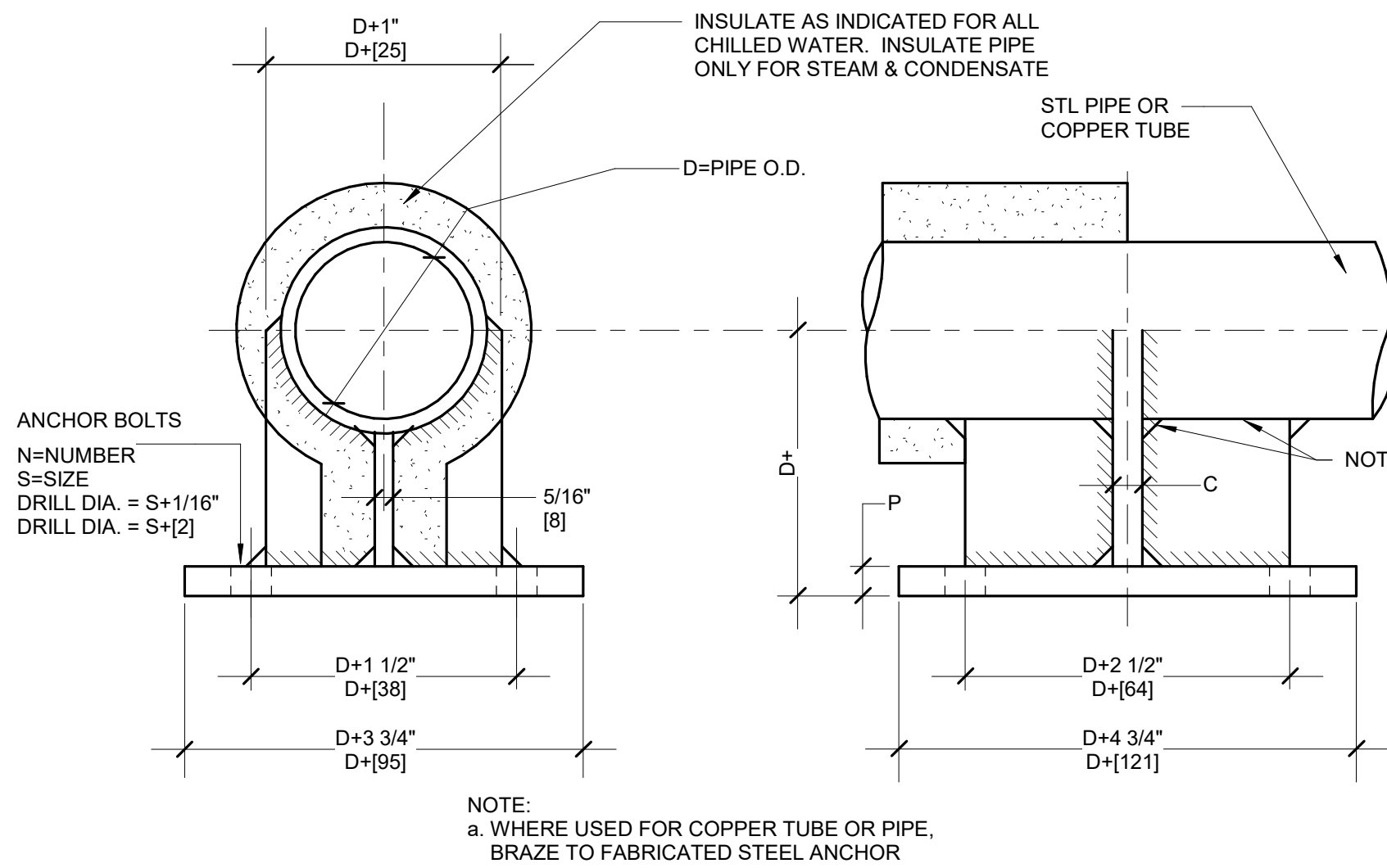
SCALE: NO SCALE

PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

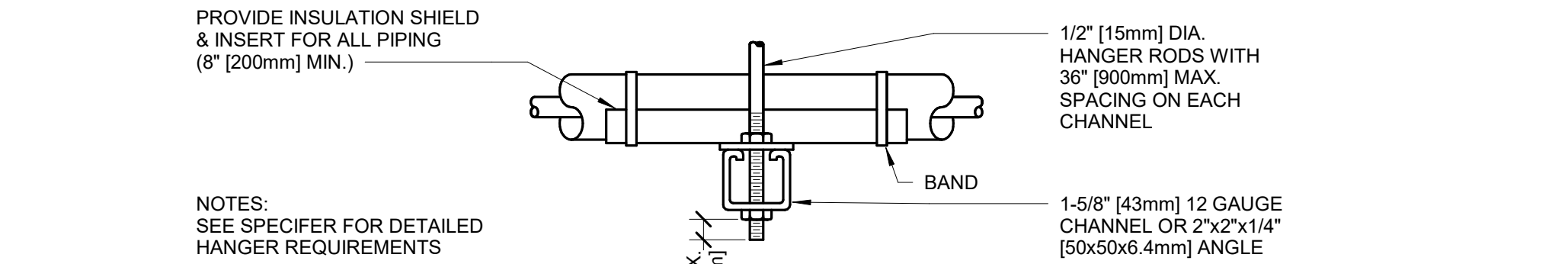
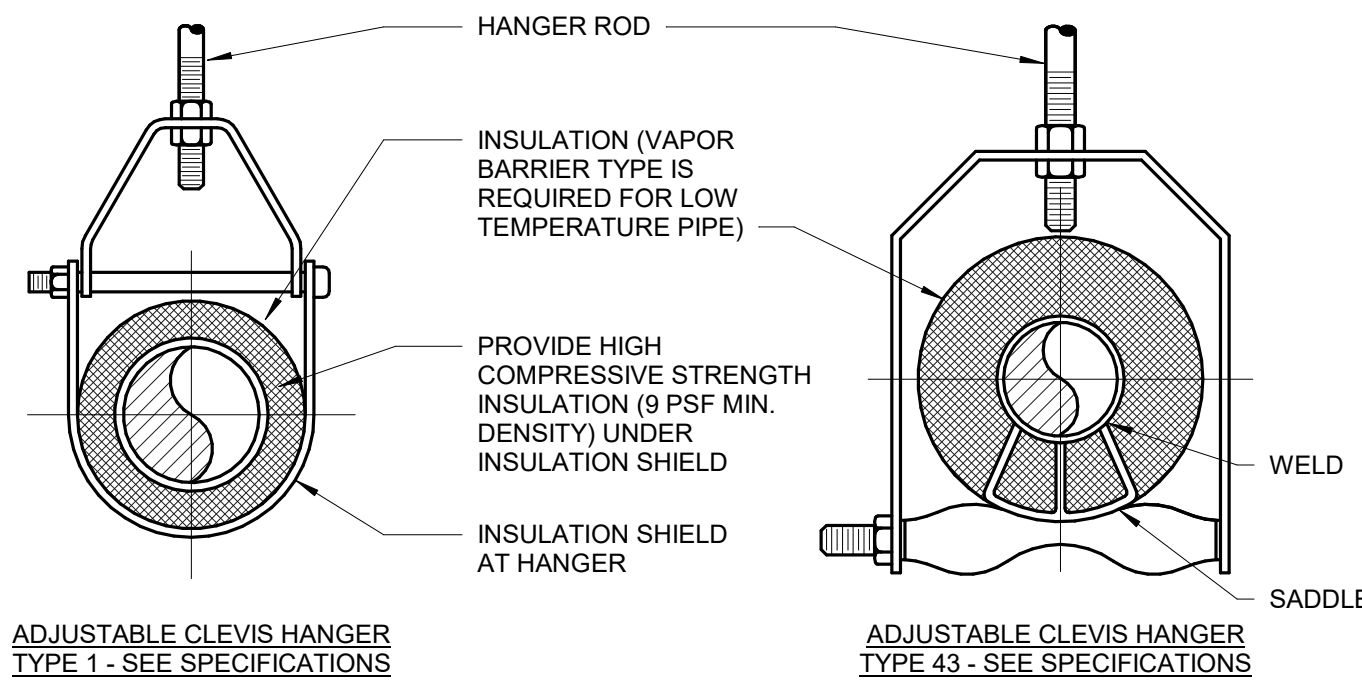
100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">No.</th> <th style="width: 15%;">Description</th> <th style="width: 10%;">Date</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	Description	Date				<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title HVAC PIPING PLAN - PENTHOUSE</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked WM</p> <p>Drawn DNT</p>	<p>Drawing Number 5- MP103</p> <p>Dwg. 51 of 60</p> <p style="text-align: center;">Office of Construction and Facilities Management</p>
No.	Description	Date									

PIPE ANCHOR SCHEDULE									
D	P		C		N		S		BOLT PATTERN
	IN	MM	IN	MM	IN	MM	IN	MM	
4"	102	5/8"	16	3/4"	19	4"	102	3/4"	19
3"	78	1/2"	13	1/2"	13	4"	102	5/8"	16
2 1/2"	64	3/8"	10	3/8"	10	4"	102	5/8"	16
2"	51	3/8"	10	3/8"	10	4"	102	5/8"	16
1 1/2"	38	3/8"	10	1/4"	6	4"	102	1/2"	13



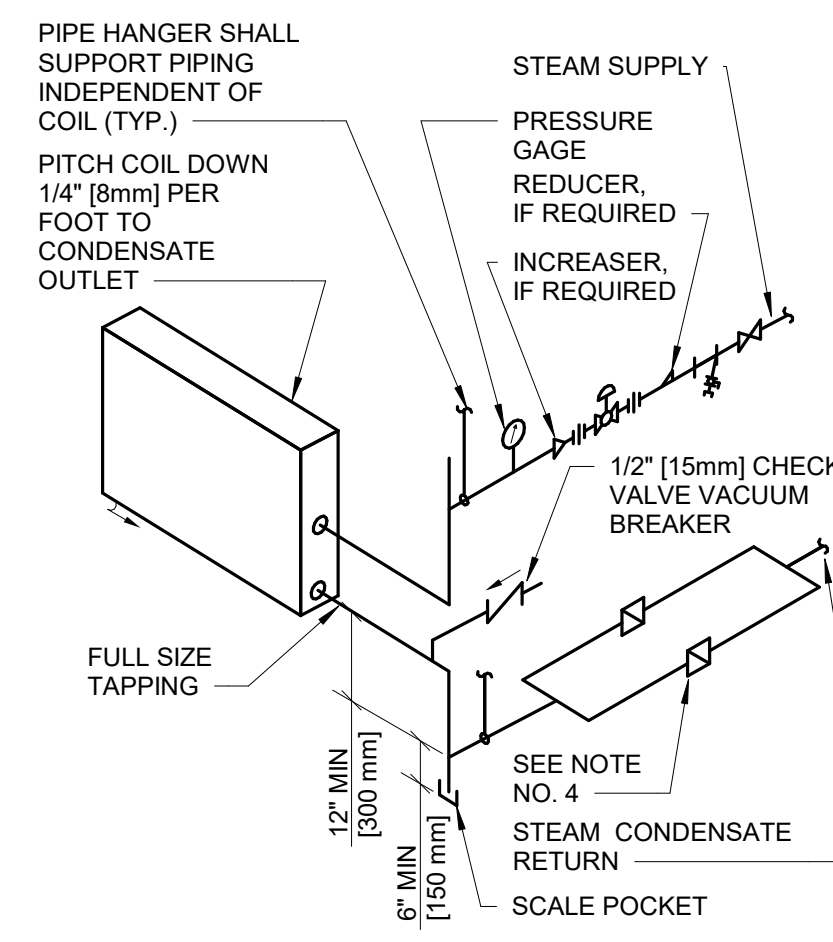
6 SMALL PIPE ANCHOR 1 1/2" - 4"
SCALE: NO SCALE



MAXIMUM PIPE/TUBING SUPPORT SPACING												
NOM. SIZE	FT. [mm]	THRU 3/4" THRU [20]	1 [25]	1 1/4 [32]	1 1/2 [40]	2 [50]	2 1/2 [65]	3 [75]	4 [100]	5 [125]	6 [150]	8 [200]
PIPE	FT. [mm]	7 [2100]	7 [2100]	7 [2100]	9 [2700]	10 [3000]	11 [3300]	12 [3600]	14 [4200]	16 [4800]	17 [5100]	19 [5700]
TUBING	FT. [mm]	5 [1500]	6 [1800]	7 [2100]	8 [2400]	8 [2400]	9 [2700]	10 [3000]	12 [3600]	13 [3900]	14 [4200]	16 [4800]

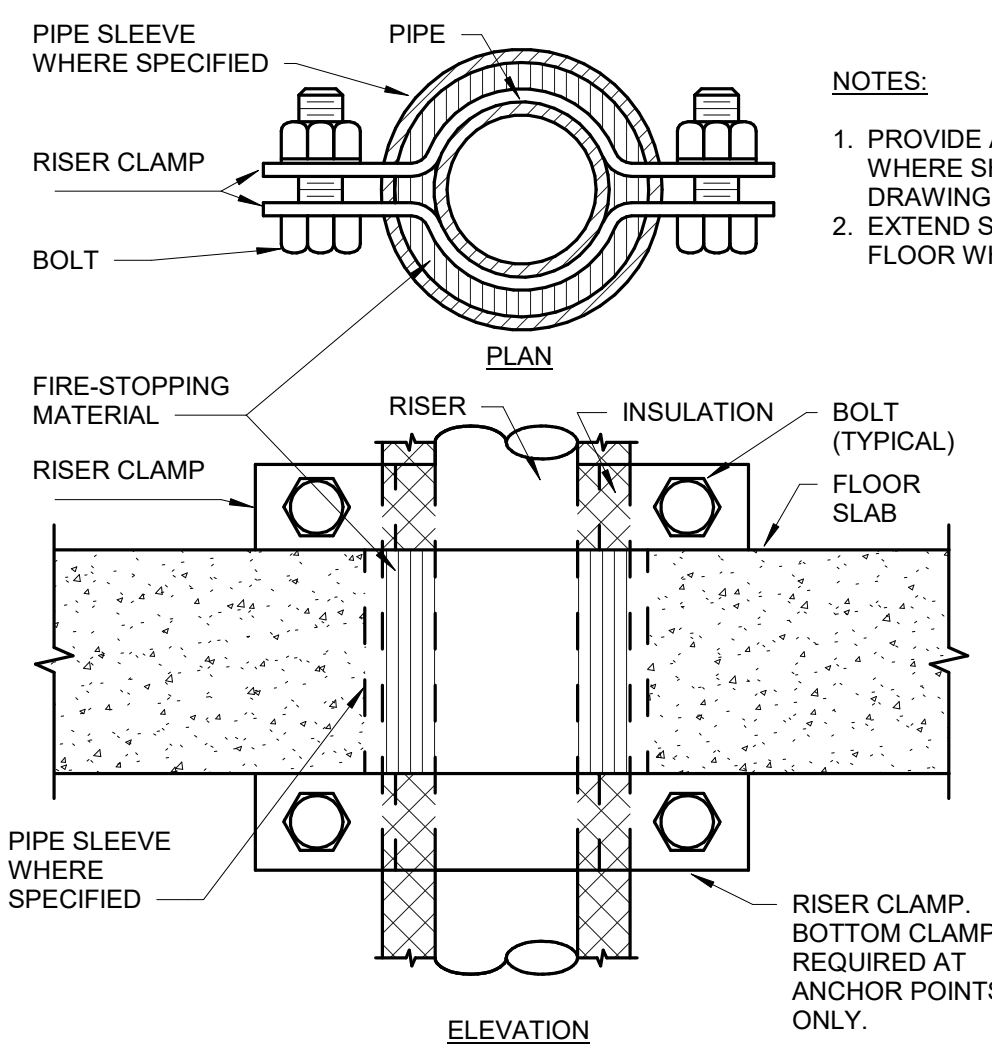
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.

3 PIPE HANGERS
SCALE: NO SCALE



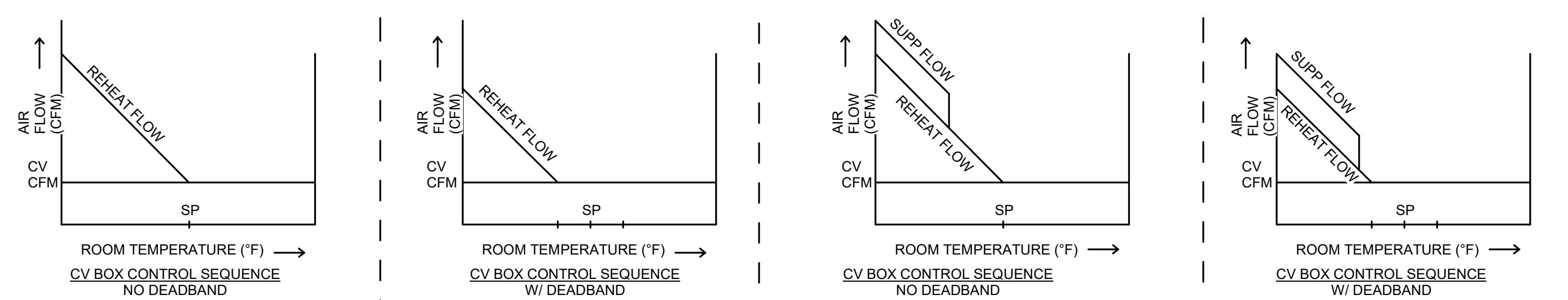
- NOTES:
- WHEN COIL IS INCLUDED IN CASING MOUNTED ON VIBRATION ISOLATOR UNITS, THE RUNOUT PIPING FOR CONNECTIONS TO COIL SHALL BE INSTALLED WITH SWING JOINTS TO ALLOW FOR THE VIBRATION.
 - PIPING SHALL BE INSTALLED IN SUCH MANNER THAT IT WILL NOT BLOCK THE SWING OR USE OF ACCESS DOORS OR PANELS, NEITHER SHALL IT BLOCK THE SERVICING OF FILTERS, VALVES, OR EQUIPMENT.
 - TRAP EACH COIL SEPARATELY WHEN INSTALLED IN A BANK OF TWO OR MORE HIGH. ALSO PROVIDE SEPARATE VACUUM BREAKER FOR EACH COIL. TWO TRAP ASSEMBLIES IN PARALLEL ARE SHOWN. TWO TRAPS REQUIRED WHEN CONDENSATE LOAD IS 5,000 LBS/HR [2400 KG/HR] OR GREATER.
 - SUPPLY & RETURN PIPES ARE SHOWN FROM SAME END. REHEAT COIL MAY HAVE SUPPLY & RETURN PIPES FROM OPPOSITE ENDS.

4 STEAM COIL - PIPING CONNECTIONS
SCALE: NO SCALE

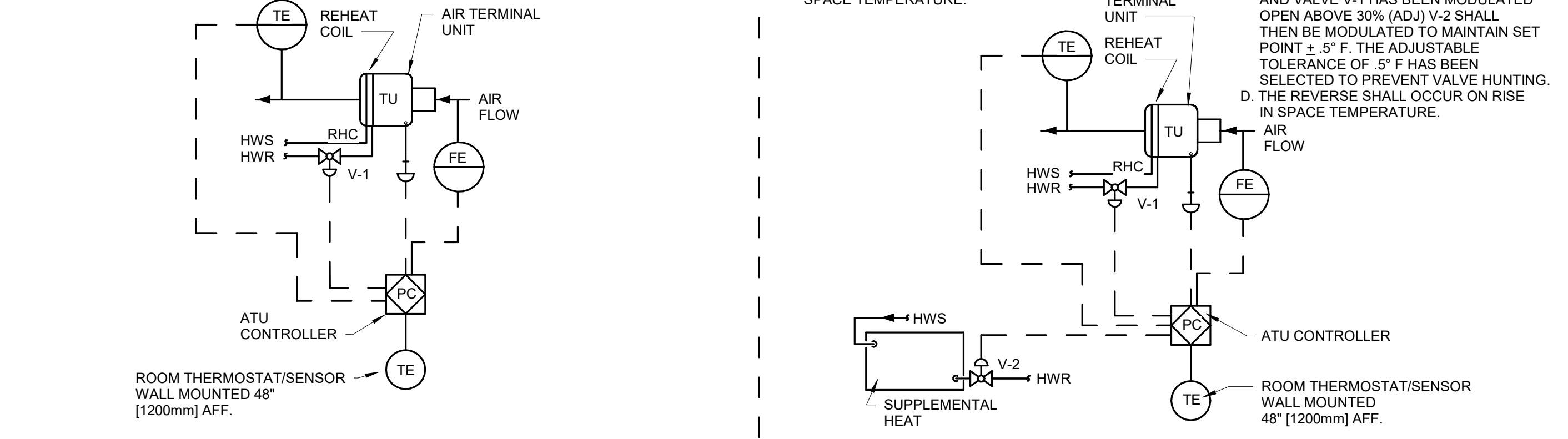


- NOTES:
- PROVIDE ANCHORS ONLY WHERE SHOWN ON DRAWINGS.
 - EXTEND SLEEVE ABOVE FLOOR WHERE SPECIFIED.

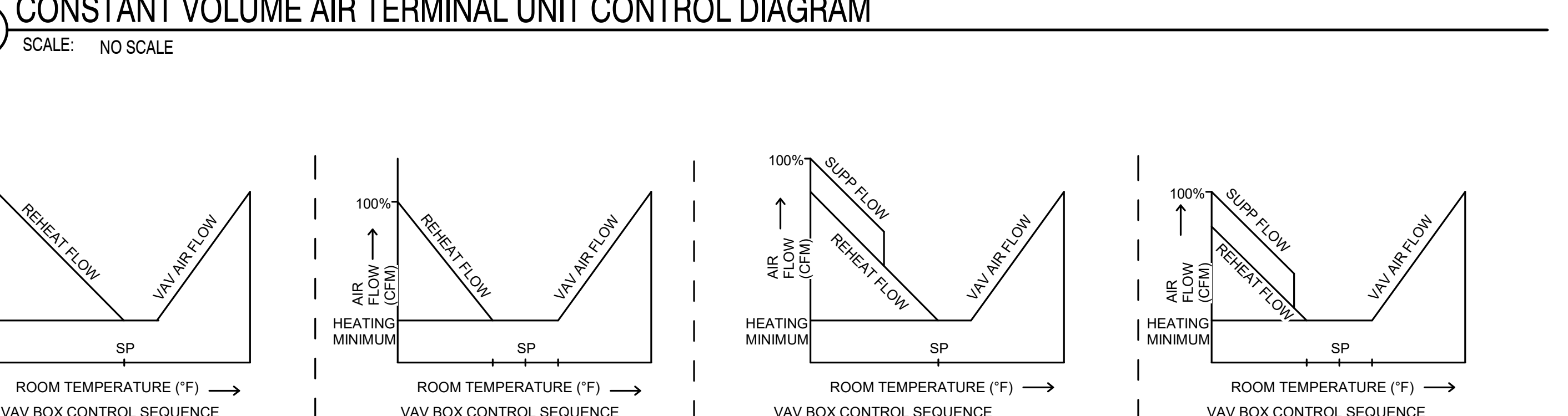
5 SUPPORT/ANCHOR FOR PIPE RISERS
SCALE: NO SCALE



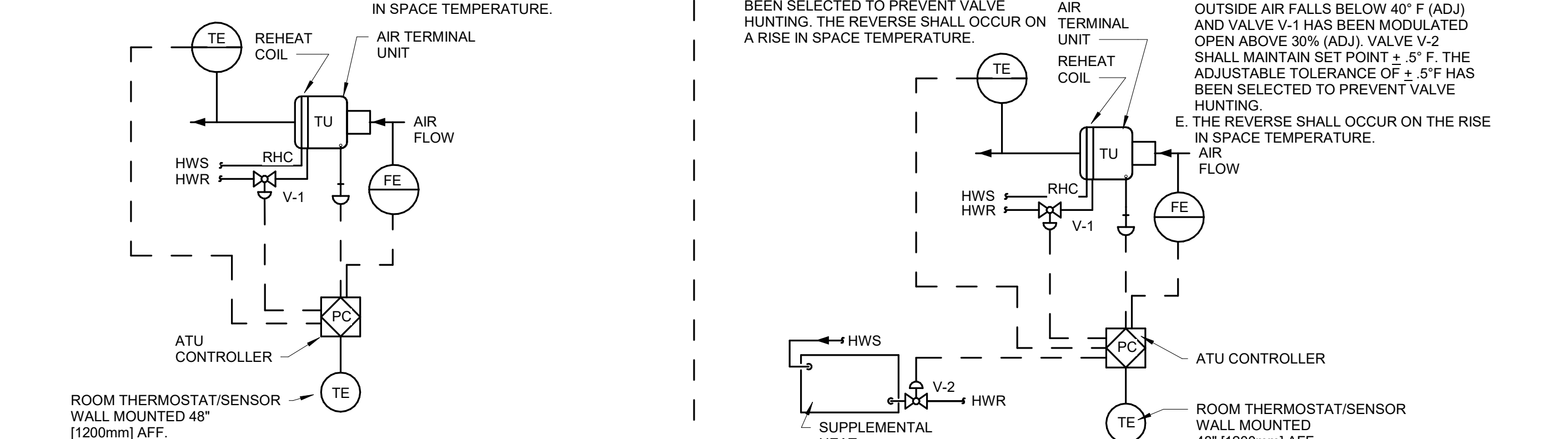
- A. UPON FALL IN SPACE TEMPERATURE BELOW SET POINT VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5°. THE ADJUSTABLE TOLERANCE OF ± 5° HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- B. THE REVERSE SHALL OCCUR ON RISE IN SPACE TEMPERATURE.
- A. SET POINTS SHALL BE AS FOLLOWS: COOLING 75° F (ADJ.) HEATING 70° F (ADJ.) DEADBAND OF 5° F BETWEEN HEATING AND COOLING SET POINT WILL BE MAINTAINED.
- B. UPON FALL IN SPACE TEMPERATURE BELOW SET POINT VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5°. THE ADJUSTABLE TOLERANCE OF ± 5° HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- C. THE REVERSE SHALL OCCUR ON RISE IN SPACE TEMPERATURE.
- A. UPON FALL IN SPACE TEMPERATURE BELOW SET POINT VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5°. THE ADJUSTABLE TOLERANCE OF ± 5° HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- B. VALVE V-2 SHALL BE ENABLED WHEN OUTSIDE AIR FALLS BELOW 40° F (ADJ.) AND VALVE V-1 HAS BEEN MODULATED OPEN ABOVE 30% (ADJ.) V-2 SHALL THEN BE MODULATED TO MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- C. THE REVERSE SHALL OCCUR ON RISE IN SPACE TEMPERATURE.
- A. SET POINTS SHALL BE AS FOLLOWS: COOLING 75° F (ADJ.) HEATING 70° F (ADJ.) DEADBAND OF 5° F BETWEEN HEATING AND COOLING SET POINT WILL BE MAINTAINED.
- B. UPON FALL IN SPACE TEMPERATURE BELOW SET POINT VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5°. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- C. VALVE V-2 SHALL BE ENABLED WHEN OUTSIDE AIR FALLS BELOW 40° F (ADJ.) AND VALVE V-1 HAS BEEN MODULATED OPEN ABOVE 30% (ADJ.) V-2 SHALL THEN BE MODULATED TO MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- D. THE REVERSE SHALL OCCUR ON RISE IN SPACE TEMPERATURE.



1 CONSTANT VOLUME AIR TERMINAL UNIT CONTROL DIAGRAM
SCALE: NO SCALE



- A. UPON FALL IN SPACE TEMPERATURE THE VAV DAMPER WILL MODULATE TO MINIMUM POSITION.
- B. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- C. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- D. THE REVERSE SHALL OCCUR ON THE RISE IN SPACE TEMPERATURE.
- A. SET POINTS SHALL BE SET AS FOLLOWS: COOLING 75° F (ADJ.) HEATING 70° F (ADJ.) DEADBAND OF 5° F BETWEEN HEATING AND COOLING SET POINTS WILL BE MAINTAINED.
- B. UPON FALL IN SPACE TEMPERATURE THE VAV DAMPER WILL MODULATE TO MINIMUM POSITION.
- C. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- D. VALVE V-2 SHALL BE ENABLED WHEN OUTSIDE AIR FALLS BELOW 40° F (ADJ.) AND VALVE V-1 HAS BEEN MODULATED OPEN ABOVE 30% (ADJ.) VALVE V-2 SHALL MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING. THE REVERSE SHALL OCCUR ON A RISE IN SPACE TEMPERATURE.
- A. UPON FALL IN SPACE TEMPERATURE THE VAV DAMPER WILL MODULATE TO MINIMUM POSITION.
- B. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- C. UPON FURTHER DROP IN SPACE TEMPERATURE VALVE V-1 WILL MODULATE TO MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- D. VALVE V-2 SHALL BE ENABLED WHEN OUTSIDE AIR FALLS BELOW 40° F (ADJ.) AND VALVE V-1 HAS BEEN MODULATED OPEN ABOVE 30% (ADJ.) VALVE V-2 SHALL MAINTAIN SET POINT ± 5° F. THE ADJUSTABLE TOLERANCE OF ± 5° F HAS BEEN SELECTED TO PREVENT VALVE HUNTING.
- E. THE REVERSE SHALL OCCUR ON THE RISE IN SPACE TEMPERATURE.



2 VARIABLE VOLUME AIR TERMINAL UNIT CONTROL DIAGRAM
SCALE: NO SCALE

CONSULTANTS:

WPE WEST PLAINS ENGINEERING, INC.

WPE #: BS15052

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REGISTERED PROFESSIONAL ENGINEER

REG. NO. 5807

WADE P. MYRABO

SOUTH DAKOTA

11-25

ARCHITECTS/ ENGINEERS:

MSH ARCHITECTS

625 S. MINNESOTA AVENUE, SUITE 204

SIOUX FALLS, SOUTH DAKOTA 57104-4873

TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title

HVAC PIPING DETAILS

Approved: Project Director

100% CONSTRUCTION DRAWINGS

Project Title

V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY

Project Number

438-15-201

Building Number

5

Location

SIOUX FALLS, SOUTH DAKOTA

Date

OCTOBER 17, 2017

Checked

WM

Drawn

DNT

Drawing Number

5-MP501

Dwg. 52 of 60

Office of Construction and Facilities Management

one eighth inch = one foot

one quarter inch = one foot

one half inch = one foot

one inch = one foot

one and one half inches = one foot

two inches = one foot

three inches = one foot

three and one half inches = one foot

four inches = one foot

four and one half inches = one foot

five inches = one foot

five and one half inches = one foot

six inches = one foot

seven inches = one foot

seven and one half inches = one foot

eight inches = one foot

eight and one half inches = one foot

nine inches = one foot

nine and one half inches = one foot

ten inches = one foot

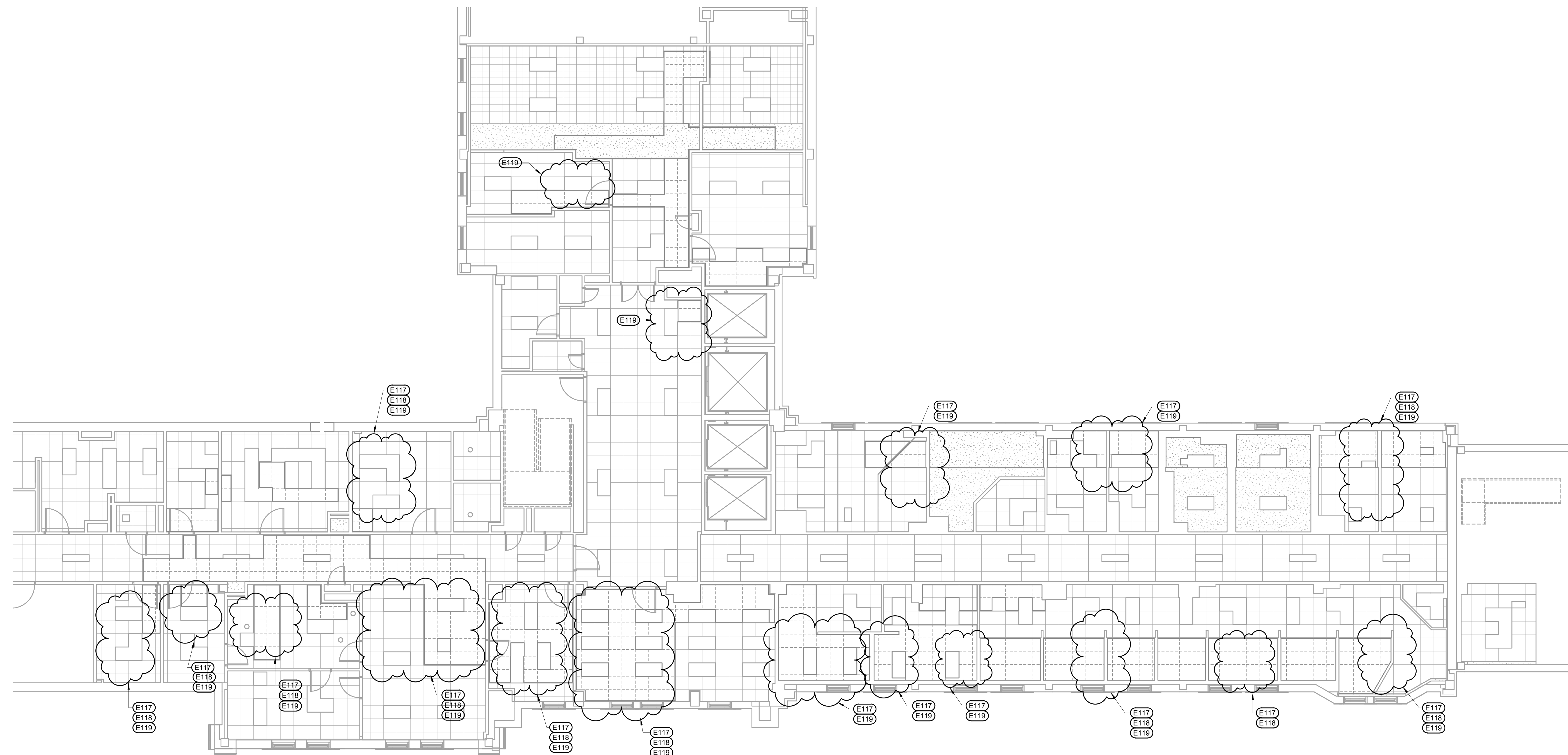
ten and one half inches = one foot

eleven inches = one foot

eleven and one half inches = one foot

twelve inches = one foot

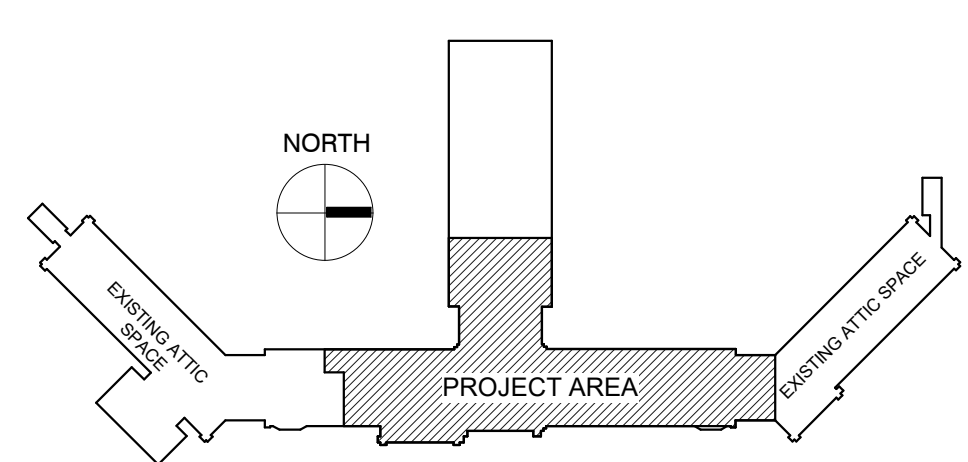
- KEYNOTES:**
- A CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
 - B ALL SURFACES OR FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER AND SHALL MATCH ADJACENT MATERIALS.
 - C ALL EXISTING CONDUIT, WIRE, CABLING, ETC. INCLUDING DATA AND PHONE ETC. NOT REQUIRED FOR SYSTEMS AND OR EQUIPMENT THAT REMAINS SHALL BE REMOVED BACK TO ITS SOURCE.
- ELECTRICAL SPECIFIC NOTES**
- E117 REMOVE "WAP" DURING DEMO AND RECONSTRUCTION WORK IN THIS AREA AND REINSTALL AT THE END OF EACH WORK PERIOD AND WHEN WORK IS COMPLETED.
 - E118 REMOVE DETECTOR DURING DEMO AND RECONSTRUCTION WORK IN THIS AREA AND REINSTALL AT THE END OF EACH WORK PERIOD AND WHEN WORK IS COMPLETED.
 - E119 REMOVE LIGHT FIXTURE DURING DEMO AND RECONSTRUCTION WORK IN THIS AREA AND REINSTALL AT THE END OF EACH WORK PERIOD AND WHEN THE WORK IS COMPLETED.



DEMOLITION CEILING PLAN - FOURTH FLOOR
SCALE: 1/8" = 1'-0"

- GENERAL NOTES:**
- A ALL WORK ON 4TH FLOOR TO BE COORDINATED WITH OWNER'S SCHEDULE AND ALL MATERIALS REMOVED MUST BE REINSTALLED, OPERATIONAL AND CLEANED FOR OWNER'S USE. AS DICTATED BY OWNER'S SCHEDULE.

KEY PLAN:



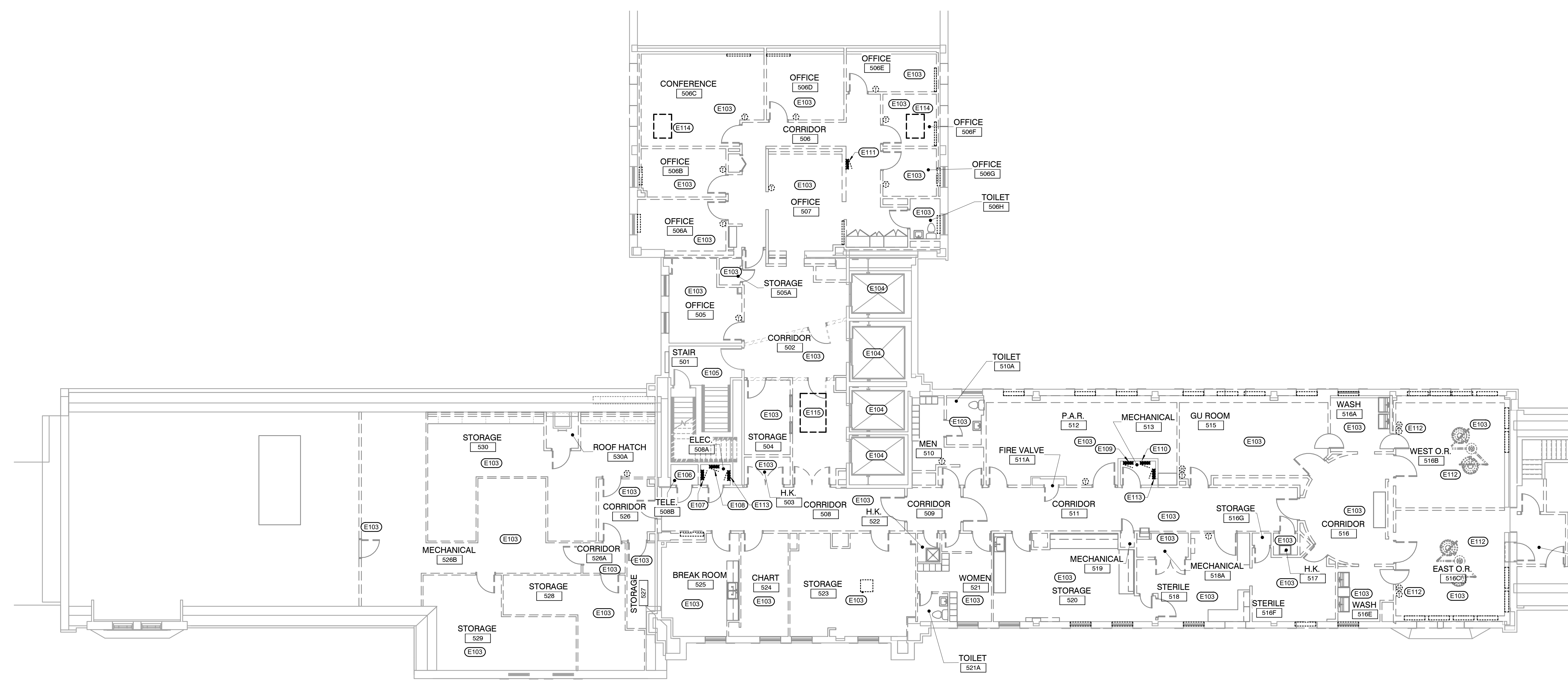
PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50px; height: 20px;"> </td> <td style="width: 50px; height: 20px;"> </td> </tr> <tr> <td style="width: 50px; height: 20px;"> </td> <td style="width: 50px; height: 20px;"> </td> </tr> <tr> <td style="width: 50px; height: 20px;"> </td> <td style="width: 50px; height: 20px;"> </td> </tr> <tr> <td style="width: 50px; height: 20px;"> </td> <td style="width: 50px; height: 20px;"> </td> </tr> </table>									<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax (605) 743-2513</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title DEMOLITION CEILING PLAN - FOURTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked MF</p> <p>Drawn GL</p> <p>Drawing Number 5-ED100</p> <p>Dwg. 53 of 60</p>	<p>Office of Construction and Facilities Management</p>

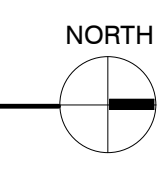
A three inches = one foot
 B one and one half inches = one foot
 C one inch = one foot
 D three quarters inch = one foot
 E one half inch = one foot
 F three eighths inch = one foot
 G one quarter inch = one foot
 H one eighth inch = one foot
 I one eighth inch = one foot

three inches = one foot
 one and one half inches = one foot
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 one eighth inch = one foot



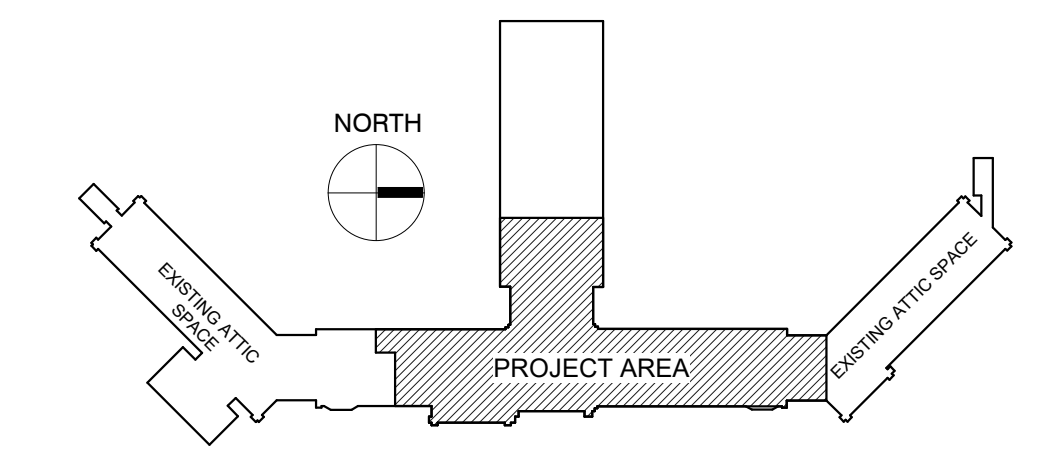
- KEYNOTES:**
- ELECTRICAL SPECIFIC NOTES**
- E103 DISCONNECT AND REMOVE ELECTRICAL SERVICES FROM THIS ROOM BACK TO PANEL SERVING IT.
 - E104 EXISTING ELEVATORS TO REMAIN IN OPERATION.
 - E105 NO DEMOLITION WORK IN STAIR 501.
 - E106 EXISTING TELEPHONE AND DATA ROOM. PROVIDE NEW RACKS AS NEEDED AND BACKBOARDS AND MAINTAIN EXISTING DATA CONNECTIONS NOT TERMINATED ON 5TH FLOOR AND AS NOTED ON SHEET 5-EP102. ALL EXISTING DATA AND TV CABLES THAT TERMINATE ON THE 5TH FLOOR SHALL BE REMOVED FROM THE 4TH FLOOR DATA RACK AND INSTALLED IN THE 5TH FLOOR DATA CLOSET.
 - E107 REMOVE EXISTING PANEL "O". FEEDER TO REMAIN AND RECONNECT TO THE NEW PANEL S#1 SHOWN ON SHEET 5-EP101. POWER FOR THE PANEL IS FROM THE BASEMENT ELECTRICAL ROOM E#1 SWITCHBOARD 5-2 WEST CIRCUIT #38.
 - E108 REMOVE EXISTING EMERGENCY PANEL. FEEDER TO REMAIN AND BE RECONNECTED TO THE NEW SEM PANEL SHOWN ON SHEET 5-EP101. POWER FOR THE PANEL IS FROM THE BASEMENT ELECTRICAL ROOM E#1 EMERGENCY PANEL EL CIRCUIT #19.
 - E109 REMOVE EXISTING PANEL "CP1". FEEDER TO REMAIN AND BE RECONNECTED TO THE NEW S#1 PANEL SHOWN ON SHEET 5-EP101. POWER FOR THE PANEL IS FROM THE BASEMENT ELECTRICAL ROOM E#1 PANEL EL CIRCUIT #16.
 - E110 REMOVE EXISTING PANEL "CP2". FEEDER TO REMAIN AND BE RECONNECTED TO THE NEW S#2 PANEL SHOWN ON SHEET 5-EP101. POWER FOR THE PANEL IS FROM THE BASEMENT ELECTRICAL ROOM E#1 PANEL EL CIRCUIT #18.
 - E111 REMOVE EXISTING PANEL "H". FEEDER TO REMAIN AND BE RECONNECTED TO THE NEW S#2 PANEL SHOWN ON SHEET 5-EP101. MODIFY FEEDER LOCATION TO BE CONCEALED IN THE NEW WALL. POWER FOR THE PANEL IS FROM THE BASEMENT ELECTRICAL ROOM E#1 SWITCHBOARD 5-2 WEST CIRCUIT #18.
 - E112 DISCONNECT AND REMOVE POWER BACK TO SERVICE FOR O. R. LIGHTS AND CONTROLS. PROVIDE NEW CIRCUIT AND RECONNECT TO THE RELOCATED O. R. LIGHTS IN THE NEW MINOR PROCEDURE ROOMS. SEE SHEET EL-101.
 - E113 DISCONNECT AND REMOVE THE POWER AND GROUNDING SYSTEM TO THE ISOLATION GROUND MONITORING SYSTEMS FOR THE OR PANELS BEING REMOVED.
 - E114 DISCONNECT THE POWER TO THE MECHANICAL EQUIPMENT LOCATED ABOVE THE CEILING STRUCTURE. (SEE MECHANICAL PLANS FOR EXACT LOCATION. RETAIN CIRCUIT AND RECONNECT TO THE NEW UNIT WHEN INSTALLED. SEE SHEET 5-EP101 FOR INFORMATION.
 - E115 EXISTING HATCH TO PENTHOUSE. ALL PERMANENTLY INSTALLED CONDUIT AND/OR EQUIPMENT/DEVICES/ETC. SHALL BE INSTALLED SO AS NOT TO CONFLICT WITH THE OWNER'S ABILITY TO USE THIS AREA AND SHALL NOT REQUIRE THE NEED TO DISCONNECT ANY ITEMS IN THE CEILING OR SPACE ABOVE IT.

DEMOLITION ELECTRICAL PLAN - FIFTH FLOOR
 SCALE: 1/8" = 1'-0"



- GENERAL NOTES:**
- A CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
 - B ALL SURFACES OR FINISHES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER AND SHALL MATCH ADJACENT MATERIALS.
 - C ALL EXISTING CONDUIT, WIRE, CABLEING, ETC. INCLUDING DATA AND PHONE ETC. NOT REQUIRED FOR SYSTEMS AND OR EQUIPMENT THAT REMAINS SHALL BE REMOVED BACK TO ITS SOURCE.

KEY PLAN:



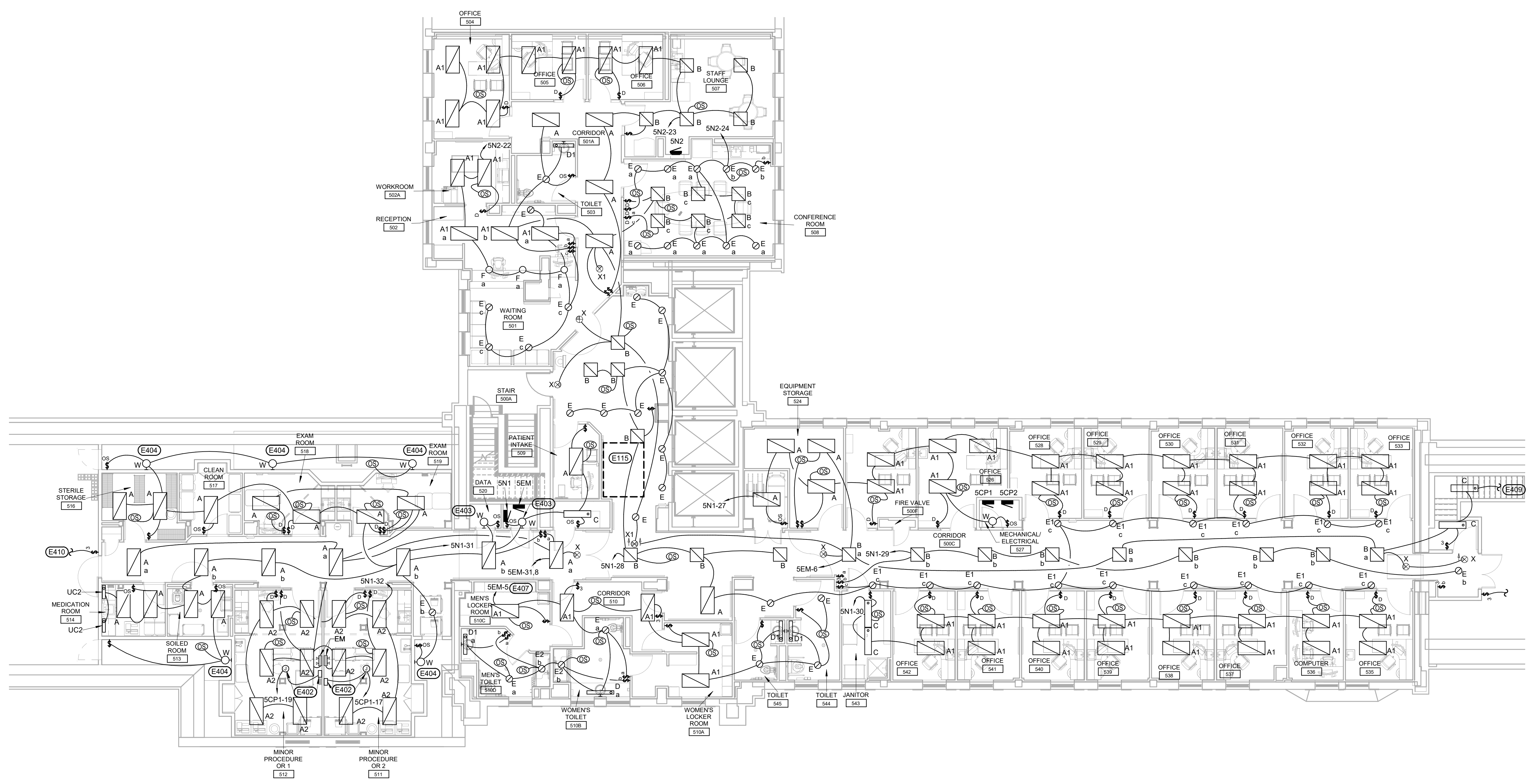
PHASING PLAN NOTE:
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100% CONSTRUCTION DRAWINGS

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KEYNOTES:

- ELECTRICAL SPECIFIC NOTES**
- E115 EXISTING HATCH TO PENTHOUSE. ALL PERMANENTLY INSTALLED CONDUIT AND/OR EQUIPMENT/DEVICES/ETC. SHALL BE INSTALLED SO AS NOT TO CONFLICT WITH THE OWNER'S ABILITY TO USE THIS AREA AND SHALL NOT REQUIRE THE NEED TO DISCONNECT ANY ITEMS IN THE CEILING OR SPACE ABOVE IT.
 - E402 INSTALL EXISTING O. R. LIGHT FIXTURES REMOVED FROM THE EXISTING O. R. AS SHOWN ON SHEET ED-101. COORDINATE WITH OWNER & INSTALL PER MANUFACTURER RECOMMENDATIONS.
 - E403 MOUNT LIGHTS 1' ABOVE DOOR FRAME.
 - E404 MOUNT LIGHTS 1' BELOW TOP OF WALL.
 - E407 LIGHTING CIRCUIT TO BE CONNECTED TO A GFCI CIRCUIT BREAKER. PROVIDE PROPER GROUNDING OF ALL METAL PARTS.
 - E409 PROVIDE AND CONNECT TO 3 WAY SWITCH BELOW.
 - E410 PROVIDE NEW 3 WAY SWITCH AND RECONNECT TO EXISTING LIGHT CIRCUIT.

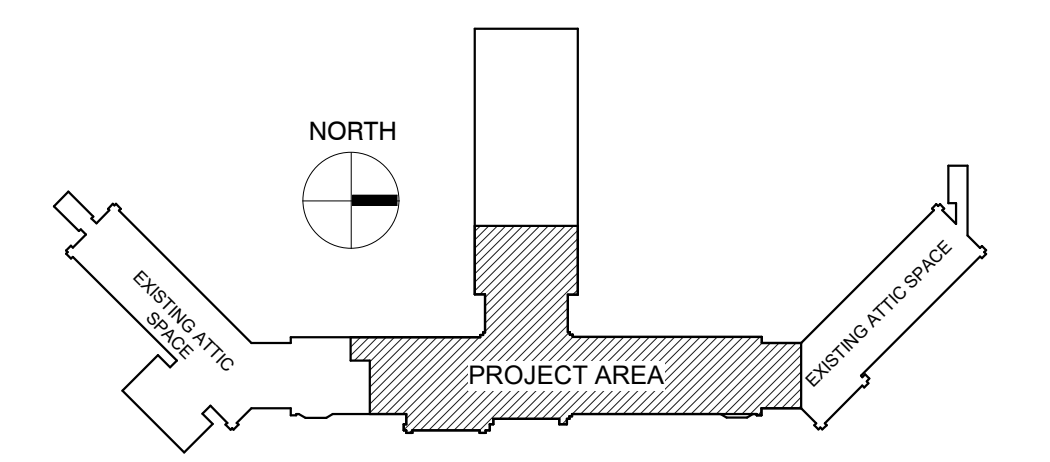


LIGHTING PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- A ALL ELECTRICAL SYSTEMS SHALL HAVE REDUNDANT GROUNDING

KEY PLAN:



PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50px;"> </td> <td style="width: 50px;"> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>									<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title LIGHTING PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked MF</p> <p>Drawn GL</p>	<p>Drawing Number 5-EL101</p> <p>Dwg. 55 of 60</p>	<p>Office of Construction and Facilities Management</p>

one eighth inch = one foot
 one quarter inch = one foot
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 one half inch = one foot
 three quarters inch = one foot
 one inch = one foot
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 three inches = one foot
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ELECTRICAL SYMBOLS

THESE SYMBOLS COMPRISE A STANDARD LIST. NOT ALL SYMBOLS MAY APPEAR ON THIS PROJECT.
 ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE UNLESS INDICATED OTHERWISE. MOUNTING HEIGHTS INDICATED ON ARCH. WALL ELEVATIONS OR AS NOTED SPECIFICALLY ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER MOUNTING HEIGHTS LISTED BELOW.

LIGHTING		SWITCHES	
	CEILING SURFACE MOUNT FIXTURE <small>Circle letter indicates fixture type. Small letter indicates switching. Top for all fixture types.</small>		RECESSED FIXTURE
	EMERGENCY RECESSED FIXTURE		SINGLE POLE SWITCH (40° M.H.)
	WALL FIXTURE		DOUBLE POLE SWITCH (40° M.H.)
	EMERGENCY WALL FIXTURE		THREE-WAY SWITCH (40° M.H.)
	RECESSED FIXTURE		FOUR-WAY SWITCH (40° M.H.)
	EMERGENCY RECESSED FIXTURE		SWITCH WITH PILOT (40° M.H.)
	EXTERIOR POLE LIGHT		KEY OPERATED SWITCH (40° M.H.)
	BOLLARD LIGHT		MOMENTARY CONTACT SWITCH (80° M.H.)
	SURFACE MOUNT FIXTURE		DIMMER SWITCH (40° M.H.)
	EMERGENCY SURFACE MOUNT FIXTURE		TIMER SWITCH (80° M.H.)
	EMERGENCY LIGHTING (BATTERY PACK)		VARIABLE SPEED SWITCH
	CEILING EXIT LIGHT (FACE(S) SHADED, ARROW INDICATES CHEVRON)		FUSED SWITCH
	WALL EXIT LIGHT (FACE(S) SHADED, ARROW INDICATES CHEVRON)		
	OCCUPANCY SENSOR		

LIGHTING FIXTURE SCHEDULE

FIXTURE MARK	FIXTURE TYPE	FIXTURE DIFFUSER	VOLTAGE	LAMP NUMBER AND WATTS	LAMP TYPE	MOUNTING TYPE	MOUNTING HEIGHT	MANUFACTURER	MODEL	COMMENTS
A	2 X 4 RECESSED	ACRYLIC	120	44W 4000 LUMENS	LED 4000K	RECESS	CEILING	CREE OR EQUAL	ZR24	ELECTRONIC DIMMING DRIVER, <20% THD, WHITE FINISH
A1	2 X 4 RECESSED	ACRYLIC	120	44W 4000 LUMENS	LED 4000K	RECESS	CEILING	CREE OR EQUAL	ZR24	ELECTRONIC DIMMING DRIVER, <20% THD, WHITE FINISH
A2	2 X 4 RECESSED	ACRYLIC	120	45W 5000 LUMENS	LED 4000K	RECESS	CEILING	CREE OR EQUAL	ZR24	ELECTRONIC DIMMING DRIVER, <20% THD, WHITE FINISH
B	2 X 2 RECESSED	ACRYLIC	120	34W 3400 LUMENS	LED 4000K	RECESS	CEILING	CREE OR EQUAL	L'R22	ELECTRONIC DIMMING DRIVER, <20% THD, WHITE FINISH
C	1'x4' WRAP	ACRYLIC	UNIV.	35W 3579 LUMENS	LED 4000K	SURFACE	CEILING	LITHONIA OR EQUAL	STL4	ELECTRONIC DRIVER, <10% THD, WHITE FINISH
D	4' WALL BRACKET	ACRYLIC PRISMATIC	120	28.2 W 3251 LUMENS	LED 4000K	WALL	ABOVE MIRROR	COLUMBIA OR EQUAL	WL4	UP & DOWN LIGHT, ELECTRONIC DRIVER, < 10% THD, WHITE FINISH
D1	2' WALL BRACKET	ACRYLIC PRISMATIC	120	21W 2189 LUMENS	LED 4000K	WALL	ABOVE MIRROR	COLUMBIA OR EQUAL	WL2	UP & DOWN LIGHT, ELECTRONIC DRIVER, < 10% THD, WHITE FINISH
E	8" OPEN DOWNLIGHT	SPECULAR CLEAR REFLECTOR	UNIV.	1-18W LED 1000 LUMEN	LED 4000K	RECESS	CEILING	CREE OR EQUAL	KR	WHITE TRIM, ELECTRONIC DRIVER
E1	4" OPEN DOWNLIGHT	SPECULAR CLEAR REFLECTOR	UNIV.	1-18W LED 1100 LUMEN	LED 4000K	RECESS	CEILING	CREE OR EQUAL	KR	WHITE TRIM, ELECTRONIC DRIVER
E2	6" OPEN DOWNLIGHT	SPECULAR CLEAR REFLECTOR	UNIV.	1-30W 1700 LUMEN	LED 4000K	RECESS	CEILING	CREE OR EQUAL	KR	WHITE TRIM, ELECTRONIC DRIVER, SHOWER LIGHT, WET LOCATION
EM	EMERGENCY	SEALED	120	2W - 10LED	LED 5000K	WALL	90°	SURE LITE OR EQUAL	AEL2	CAST ALUMINUM WHITE POWER COAT HOUSING W/ UV STABILIZED POLYCARBONATE LENS, SELF DIAGNOSTIC, BATTERY BACKUP
F	CYLINDER, 4" OPEN	SPECULAR CLEAR REFLECTOR	120	27W 2000LUMENS	LED 4000K	PENDANT	CEILING	GOTHAM OR EQUAL	4" INCITO CYLINDER	WIDE DISTRIBUTION/WHITE HOUSING 4" APERTURE 45 DEGREE BEAM ANGLE 6" X 10" HOUSING
UC2	UNDER COUNTER	MILK WHITE	MULTI	10W 900 LUMENS	LED 4000K	SURFACE	UNDER CABINET	FAIL SAFE OR EQUAL	UCL	WHITE HOUSING
W	SURFACE WALL MOUNT	WHITE ACRYLIC	120	12W 829 LUMENS	LED 4000K	WALL	SEE PLANS	STONCO OR EQUAL	LWL	
X	EXIT SIGN SINGLE FACE	RED	UNIV.	LED	LED	UNIV.	PER PLANS	SURE LITE OR EQUAL	CX	CAST ALUMINUM, WHITE FACE WITH RED LETTERS
X1	EXIT SIGN DOUBLE FACE	RED	UNIV.	LED	LED	UNIV.	PER PLANS	SURE LITE OR EQUAL	CX	CAST ALUMINUM, WHITE FACE WITH RED LETTERS

100% CONSTRUCTION DRAWINGS

Revisions:	Date

CONSULTANTS:

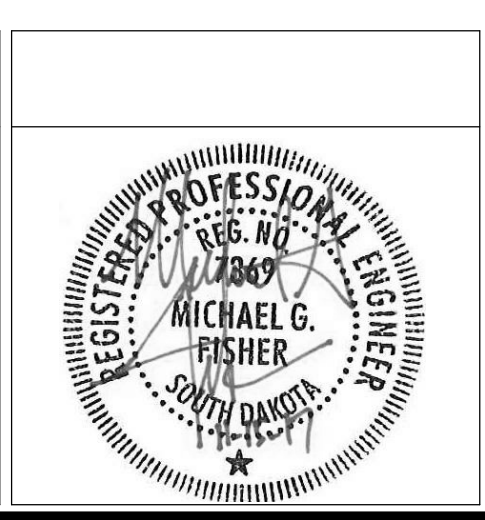
WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052

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 TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title
LIGHTING DETAILS AND SCHEDULES

Approved: Project Director

Project Title
V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY

Project Number
438-15-201

Building Number
5

Location
SIOUX FALLS, SOUTH DAKOTA

Date
OCTOBER 17, 2017

Checked
MF

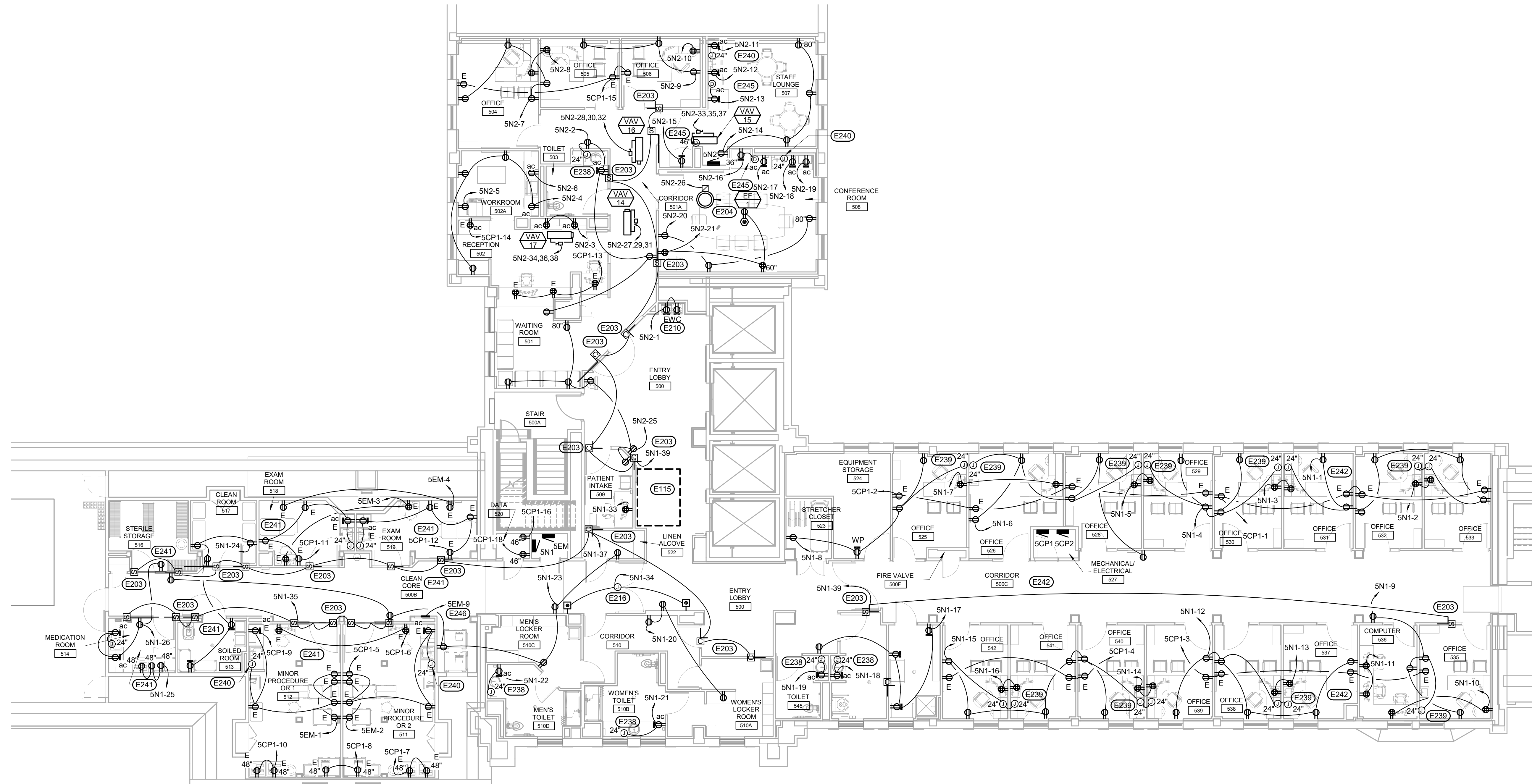
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Drawing Number
5-EL500

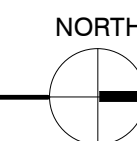
Dwg. 56 of 60

Office of Construction and Facilities Management

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POWER PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"



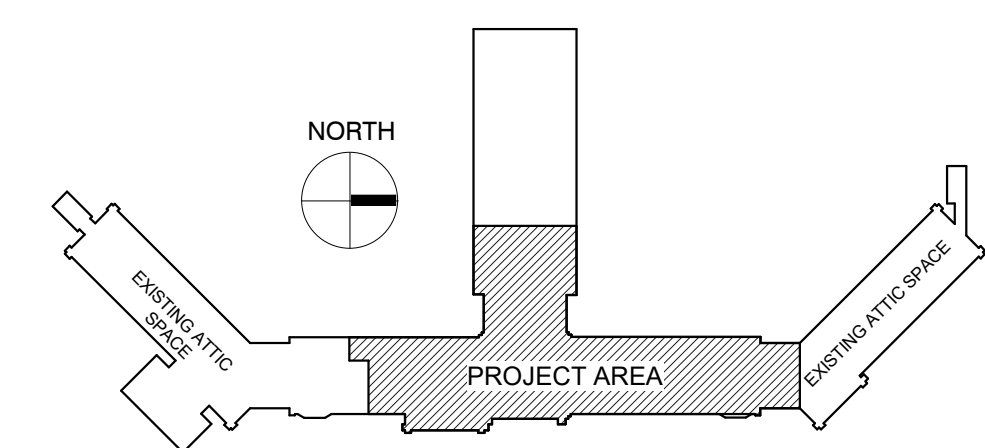
KEYNOTES:

- ELECTRICAL SPECIFIC NOTES**
- E115 EXISTING HATCH TO PENTHOUSE. ALL PERMANENTLY INSTALLED CONDUIT AND/OR EQUIPMENT DEVICES/ETC. SHALL BE INSTALLED SO AS NOT TO CONFLICT WITH THE OWNER'S ABILITY TO USE THIS AREA AND SHALL NOT REQUIRE THE NEED TO DISCONNECT ANY ITEMS IN THE CEILING OR SPACE ABOVE IT.
 - E203 PROVIDE 120V CONNECTION TO SMOKE/COMBINATION DAMPER AND INTERLOCK WITH DUCT DETECTOR AND FIRE ALARM SYSTEM.
 - E204 INTERLOCK EXHAUST FAN WITH MOTORIZED DAMPER.
 - E210 MOUNT RECEPTACLE IN WATER COOLER HOUSING/WASH FOUNTAIN. COORDINATE WITH MECHANICAL CONTRACTOR.
 - E216 POWER ASSIST DOOR PUSHBUTTON STATIONS AND OPERATORS. EQUIPMENT PROVIDED AND INSTALLED BY GC. CONNECTED/POWERED BY EC. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND COORDINATE EXACT REQUIREMENTS WITH ARCHITECTURAL SPECIFICATIONS/SHOP DRAWINGS. PROVIDE NECESSARY CONTROL WIRING FOR INTERLOCK WITH CARD ACCESS CONTROL. COORDINATE EXACT LOCATIONS WITH OWNER AND OTHER TRADES TO MAKE ALL SERVICES FIT IN THIS AREA. TYPICAL.
 - E238 PROVIDE JUNCTION BOX OR RECEPTACLE FOR RESTROOM FIXTURE SENSOR TRANSFORMERS. PROVIDE BOX FOR EACH FIXTURE WITH CONDUIT TO TRANSFORMER LOCATION INDICATED. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR INCLUDING, BUT NOT LIMITED TO NUMBER OF TRANSFORMERS AND SENSORS PER TRANSFORMER.
 - E239 PROVIDE JUNCTION BOX FOR FUTURE CONNECTION TO LAV SENSOR POWER. TYPICAL.
 - E240 PROVIDE JUNCTION BOX AND CONNECTION TO LAV SENSOR POWER.
 - E241 ALL DEVICES IN THE SOUTH WING SHALL BE HOSPITAL GRADE DEVICES. TYPICAL.
 - E242 ALL DEVICES IN THE NORTH WING SHALL BE HOSPITAL GRADE DEVICES. TYPICAL.
 - E245 ALL GFCI RECEPTACLES MUST COMPLY WITH CODE REQUIREMENT FOR A READILY ACCESSIBLE RESET BUTTON.
 - E246 PROVIDE POWER CONNECTION TO MED GAS ALARM PANEL. COORDINATE WITH SYSTEM INSTALLERS.

GENERAL NOTES:

- A ALL ELECTRICAL SYSTEMS SHALL HAVE REDUNDANT GROUNDING.
- B ALL RECEPTACLES SHALL BE HOSPITAL GRADE.

KEY PLAN:



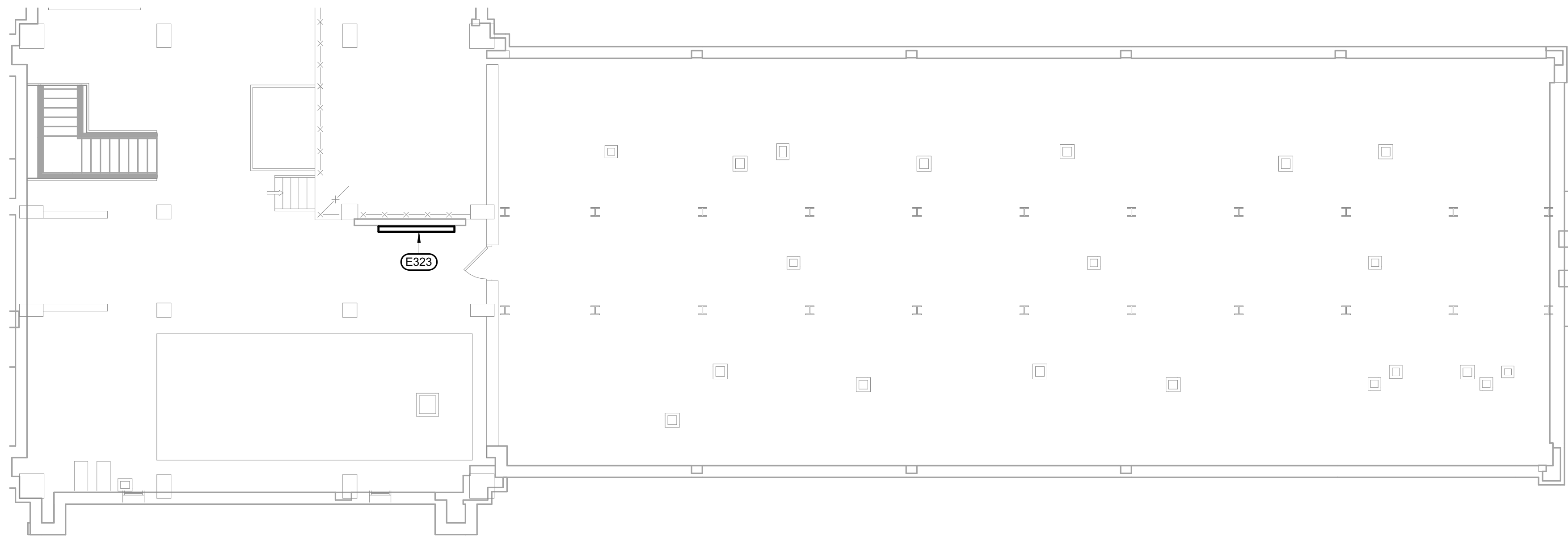
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SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title POWER PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Location SIOUX FALLS, SOUTH DAKOTA</p> <p>Date OCTOBER 17, 2017</p> <p>Checked MF</p> <p>Drawn GL</p>	<p>Drawing Number 5-EP101</p> <p>Dwg. 57 of 60</p>	<p>Office of Construction and Facilities Management</p>
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KEYNOTES:

- ELECTRICAL SPECIFIC NOTES**
- E115 EXISTING HATCH TO PENTHOUSE. ALL PERMANENTLY INSTALLED CONDUIT AND/OR EQUIPMENT DEVICES, ETC. SHALL BE INSTALLED SO AS NOT TO CONFLICT WITH THE OWNER'S ABILITY TO USE THIS AREA AND SHALL NOT REQUIRE THE NEED TO DISCONNECT ANY ITEMS IN THE CEILING OR SPACE ABOVE IT.
 - E301 SMARTBOARD TO COMPUTER PATHWAY - PROVIDE A 2" CONDUIT BETWEEN LOCATIONS WITH 1 HDMI CABLE AND 2 CAT6 CABLES. PROVIDE 6"X6" 4" DEEP JUNCTION BOX. PROVIDE BLANK COVER WITH GROMMETTED OPENING.
 - E304 INTERLOCK WITH FIRE ALARM SYSTEM (DUCT TYPE SMOKE DETECTOR) TO SHUTDOWN UNIT UPON FIRE DETECTION. COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE PROPER INSTALLATION REQUIREMENTS. PROVIDE REMOTE TEST STATION FOR EACH (IF INACCESSIBLE), MOUNT IN ACCESSIBLE SPACE BELOW UNIT. TYPICAL.
 - E305 LOCATE THE DEVICES UNDER THE COUNTER AT 24" AFF IN THE KNEE SPACE. TYPICAL.
 - E306 DURESS ALARM PUSH BUTTON. CONNECT TO THE EXISTING SECURITY PANEL. COORDINATE LOCATION OF PANEL WITH THE OWNER. TYPICAL.
 - E309 PROVIDE NEW NURSE CALL DEVICES AND CONNECT TO THE EXISTING RAULAND 5 NURSE CALL SYSTEM. TYPICAL ROUTE ALL CABLING TO THE DATA CLOSET S20.
 - E310 PROVIDE FLUSH-MOUNT 4 SQUARE BOX WITH SINGLE GANG MUD RING FOR DATA, VOICE, OR VOICE/DATA OUTLET. PROVIDE CONDUIT TO CEILING SPACE PER SPECIFICATIONS. TYPICAL.
 - E314 PROVIDE A SINGLE GANG BOX ON THE WALL AND ONE ON THE CEILING AS SHOWN WITH A 3/4" CONDUIT BETWEEN J-BOXES FOR OWNER'S FUTURE USE. TYPICAL.
 - E315 PROVIDE FLUSH-MOUNT 2 GANG WALL-BOX FOR TV OUTLETS. PROVIDE A 3/4" CONDUIT TO CEILING SPACE. CAT 6 CABLE ROUTED TO THE OWNER'S GIGAHUB IN DATA CLOSET S20.
 - E316 PROVIDE ACCESS CONTROL AND POWER CONNECTIONS AS NEEDED FOR A FULLY OPERATIONAL SYSTEM TO BE COMPATIBLE WITH THE OWNER'S EXISTING SYSTEM. SEE SPECIFICATIONS.
 - E320 CLOCKS SHALL BE BATTERY OPERATED, ATOMIC CORRECTING WIRELESS SYSTEM. CLOCKS SHALL MATCH THE OWNER'S EXISTING SYSTEM. TYPICAL.
 - E321 PROVIDE LAP TIME / TIME CLOCK. SEE SPECIFICATION SECTION 275241 FOR DESCRIPTION.
 - E322 PROVIDE A SINGLE DATA RACK AND PATCH PANELS AS NEEDED WITH A 6 PAIR MULTIMODE FIBER CABLE FROM ROOM 175-5 ON FIRST FLOOR NORTH WING, A 100 PAIR TELECOM BACKBONE FROM ROOM E23-5 WITH 25 PAIR EXTENDING ON TO THE PENTHOUSE. THE CABLES SHALL EXTEND THE HEIGHT OF THE ROOM PLUS 17" OF SLACK FOR THE OWNER'S USE. SEE PARTIAL PLAN ON THIS SHEET FOR LOCATION OF 25 PAIR CABLE TO BE TERMINATED BY THE OWNER.
 - E323 LOCATION OF THE 25 PAIR CABLE BEING EXTENDED TO THE PENTHOUSE FROM THE 5TH FLOOR DATA CLOSET. PROVIDE 9 CAT 6 CABLES FOR THE ELEVATOR CONTROLS FROM THE 5TH FLOOR DTA RACK AND 4 CAT 6 CABLES FROM THE 5TH FLOOR DATA RACK FOR OWNER'S FUTURE USE.

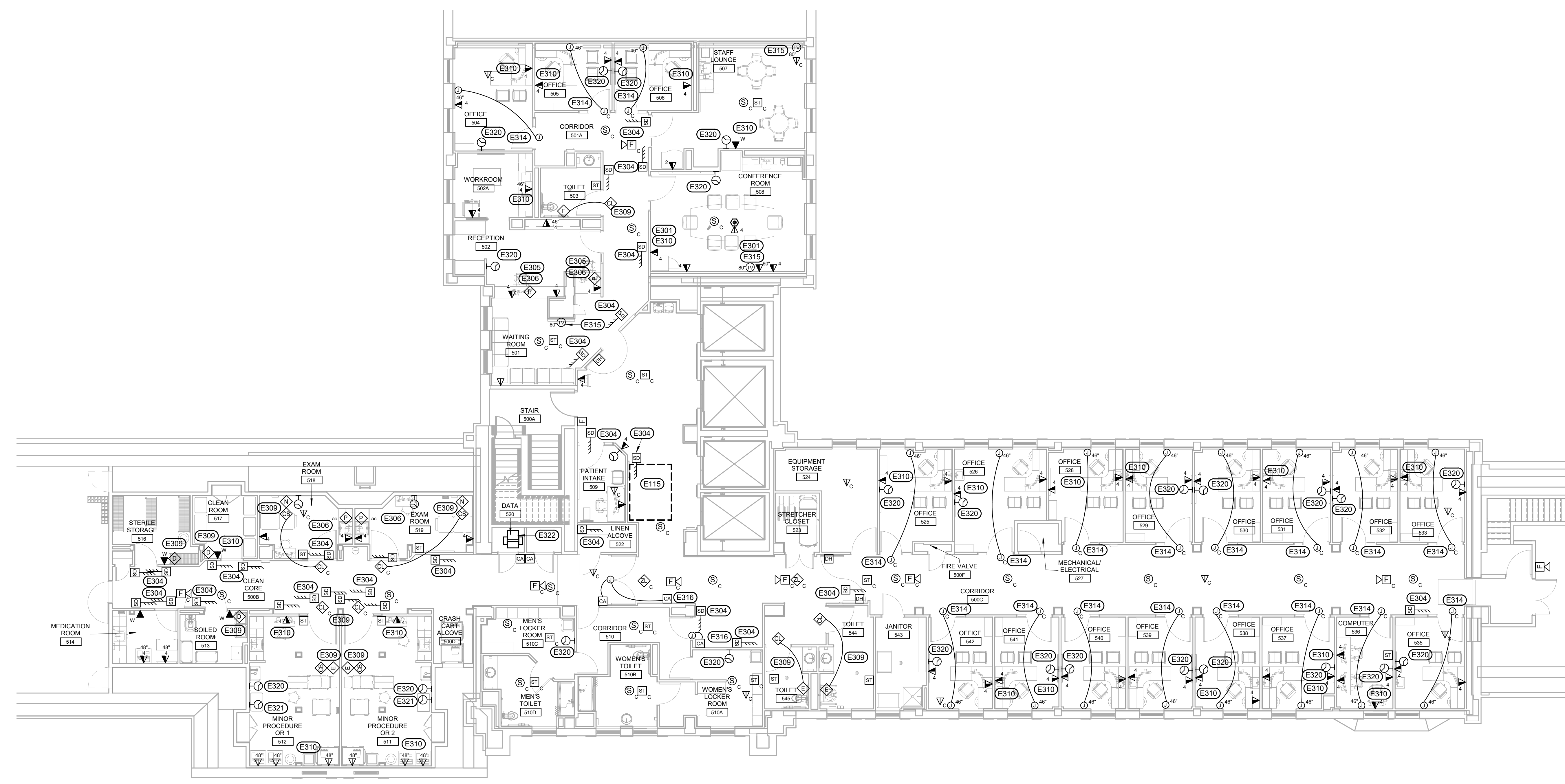
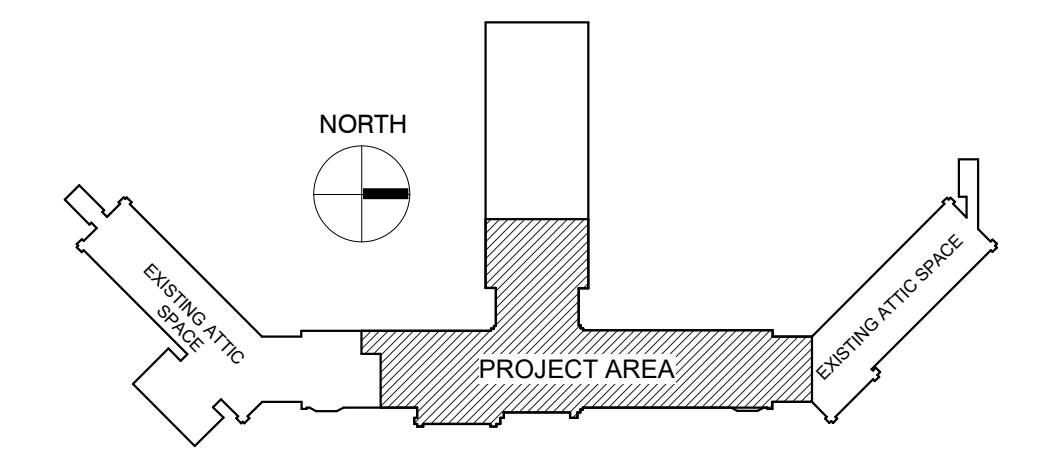


COMMUNICATIONS PLAN - PENTHOUSE
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- A AT END OF PROJECT ALL EXISTING DATA/PHONE/TV CABLE NO LONGER UTILIZED SHALL BE REMOVED BACK TO ITS SOURCE.

KEY PLAN:



COMMUNICATIONS PLAN - FIFTH FLOOR
SCALE: 1/8" = 1'-0"

PHASING PLAN NOTE:
SEE ARCHITECTURAL PLANS FOR PHASING OF PROJECT

100% CONSTRUCTION DRAWINGS

<p>Revisions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50px;">Date</td> <td style="width: 50px;"> </td> </tr> </table>	Date		<p>CONSULTANTS:</p> <p>WPE WEST PLAINS ENGINEERING, INC. WPE #: BS15052 4609 SOUTH TECHLINK CIRCLE • SIOUX FALLS, SD 57106 PHONE: (605) 362-3753 • FAX: (605) 362-3759 WWW.WESTPLAINSENGINEERING.COM RAPID CITY, SD • SIOUX FALLS, SD • CASPER, WY • CEDAR RAPIDS, IA • BISMARCK, ND</p>	<p>RISE STRUCTURAL ASSOCIATES, INC. 101 Railroad Ave. - PO Box 39 Harrisburg, SD 57032 (605) 743-2510 fax(605) 743-2513</p>	<p>ARCHITECTS/ ENGINEERS:</p> <p>MSH ARCHITECTS 625 S. MINNESOTA AVENUE, SUITE 204 SIOUX FALLS, SOUTH DAKOTA 57104-4873 TELE: (605) 332-7850 FAX: (605) 332-3539</p>	<p>Drawing Title COMMUNICATIONS PLAN - FIFTH FLOOR</p> <p>Approved: Project Director</p>	<p>Project Title V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY</p> <p>Project Number 438-15-201</p> <p>Building Number 5</p> <p>Drawing Number 5-EP102</p> <p>Dwg. 58 of 60</p>	<p>Office of Construction and Facilities Management</p>
Date								

one eighth inch = one foot
 one quarter inch = one foot
 three eighths inch = one foot
 one half inch = one foot
 three quarters inch = one foot
 one inch = one foot
 one and one half inches = one foot
 two inches = one foot
 three inches = one foot
 four inches = one foot
 five inches = one foot
 six inches = one foot
 seven inches = one foot
 eight inches = one foot
 nine inches = one foot
 ten inches = one foot
 eleven inches = one foot
 twelve inches = one foot

ELECTRICAL SYMBOLS

THESE SYMBOLS COMPRISE A STANDARD LIST; NOT ALL SYMBOLS MAY APPEAR ON THIS PROJECT. ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE ABOVE FINISHED FLOOR UNLESS INDICATED OTHERWISE. WALL ELEVATIONS GRAB NOTED SPECIFICALLY ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER MOUNTING HEIGHTS LISTED BELOW.

POWER			
⊖	PUSH BUTTON STATION (8" M.H.)	⊖	BLANK OUTLET
⊖	DOUBLE PUSH BUTTON STATION	⊖	JUNCTION BOX
⊖	EMERGENCY SHUTDOWN PUSHBUTTON	⊖	PULL BOX
⊖	ISOLATED GROUND RECEPTACLE (18" M.H.)	⊖	MOTOR
⊖	DOUBLE CONVENIENCE RECEPTACLE (18" M.H.)	⊖	DISCONNECT SWITCH
⊖	SINGLE RECEPTACLE (18" M.H.)	⊖	GENERATOR ANNUNCIATOR PANEL
⊖	DOUBLE DUPLEX CONVENIENCE RECEPTACLE (18" M.H.)	⊖	AUTOMATIC TRANSFER SWITCH
⊖	SPLIT WIRED DUPLEX RECEPTACLE (18" M.H.)	⊖	VARIABLE FREQUENCY DRIVE
⊖	SPECIAL PURPOSE OUTLET OR CONNECTION	⊖	SWITCHBOARD/DISTRIBUTION PANEL SECTION
⊖	CORD REEL	⊖	PANELBOARD OR LOAD CENTER CENTER (EXISTING TO REMAIN)
⊖	CEILING DUPLEX RECEPTACLE	⊖	TRANSIENT VOLTAGE SURGE SUPPRESSOR
⊖	FULL FLOOR DUPLEX RECEPTACLE	⊖	FUSE
⊖	FULL FLOOR DOUBLE DUPLEX RECEPTACLE	⊖	HUMIDISTAT
⊖	FULL FLOOR MULTI-SERVICE OUTLET (WITH SERVICES INDICATED)	⊖	THERMOSTAT
⊖	MULTI-SERVICE POLE (WITH DEVICES INDICATED)		

TELECOM			
⊖	SPECIAL EQUIPMENT CABINET-AS NOTED	⊖	INTERCOM
⊖	TERMINATION BOARD-AS NOTED	⊖	TELEPHONE VOICEDATA OUTLET (18" M.H.)
⊖	CABLE TRAY	⊖	WALL PHONE (48" M.H.)
		⊖	DATA OUTLET (18" M.H.)
		⊖	CEILING MOUNT TELEVISION OUTLET

SOUND AND SECURITY			
⊖	FLUSH SPEAKER	⊖	SURVEILLANCE VIDEO CAMERA-PANTILT/zoom
⊖	SURFACE SPEAKER	⊖	SURVEILLANCE VIDEO MONITOR
⊖	PAGING HORN	⊖	SURVEILLANCE VIDEO RECORDER
⊖	COLUMN CONTROL (48" M.H.)	⊖	SURVEILLANCE VIDEO SWITCHER
⊖	MICROPHONE OUTLET (18" M.H.)	⊖	ALARM CONTROL PANEL
⊖	AUXILIARY OUTLET	⊖	BIOMETER ALARM ANNUNCIATOR
⊖	AMPLIFIER	⊖	ANTENNA (AS NOTED)
⊖	SURVEILLANCE VIDEO CAMERA	⊖	ALARM PANIC SWITCH
⊖	CEILING MOUNTED SURVEILLANCE VIDEO CAMERA		

FIRE ALARM			
⊖	FIRE ALARM MANUAL STATION (48" M.H.)	⊖	MINI FIRE ALARM HORN
⊖	HEAT DETECTOR (RATE OF RISE)	⊖	MINI FIRE ALARM HORN/STROBE
⊖	HEAT DETECTOR (FIXED TEMP. ONLY)	⊖	PROJECTION HORN
⊖	UNITARY TYPE SMOKE DETECTOR	⊖	FIRE ALARM STROBE (80" M.H.)
⊖	SMOKE DETECTOR	⊖	CEILING MOUNT FIRE ALARM STROBE
⊖	DUCT SMOKE DETECTOR	⊖	FIRE ALARM BELL (80" M.H.)
⊖	BEAM DETECTOR TRANSMITTER	⊖	COMBINATION FIRE/SMOKE DAMPER
⊖	BEAM DETECTOR RECEIVER	⊖	CONTROL MODULE
⊖	REMOTE TEST STATION	⊖	FIRE ALARM ANNUNCIATOR PANEL
⊖	COMB HEAT/SMOKE DETECTOR	⊖	FIRE ALARM CONTROL PANEL
		⊖	FIRE ALARM HORN/STROBE (80" M.H.)
		⊖	FIRE FIGHTER PHONE JACK
		⊖	CEILING MOUNT FIRE ALARM HORN/STROBE

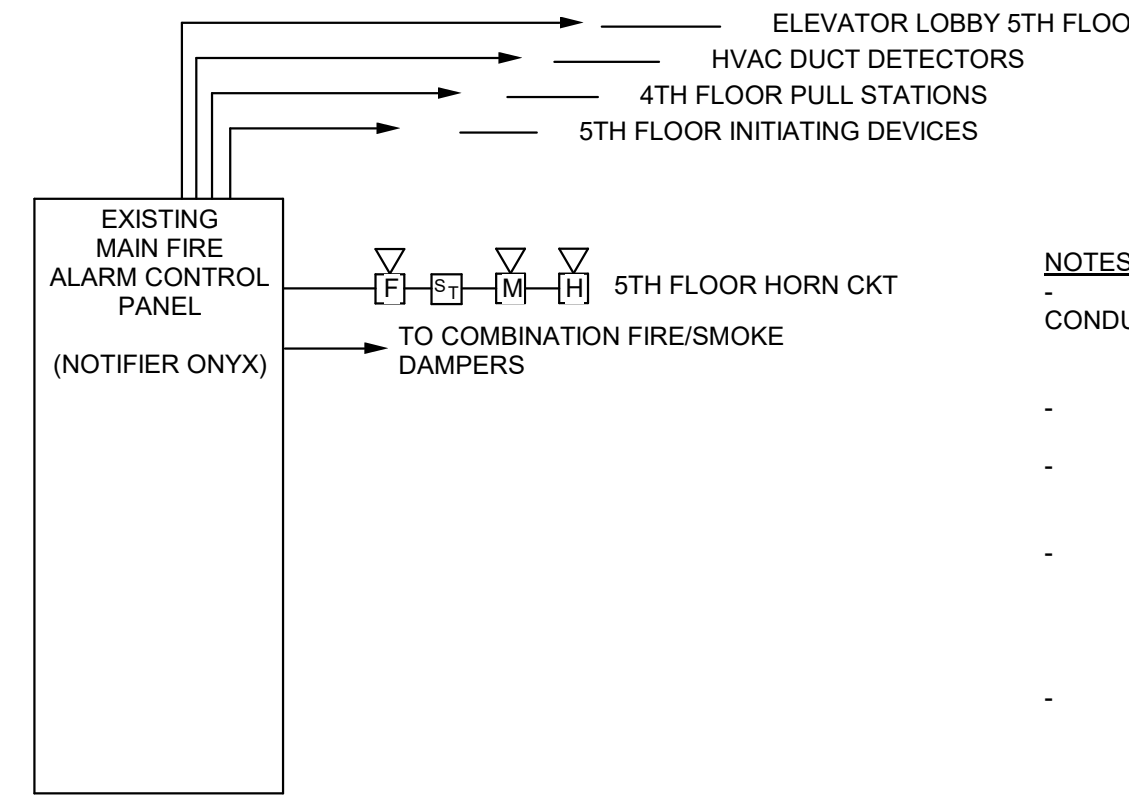
NURSE CALL			
⊖	SINGLE PATIENT NURSE CALL STATION (48" M.H.)	⊖	AREA CONTROL MODULE
⊖	DUAL PATIENT NURSE CALL STATION (48" M.H.)	⊖	CORRIDOR LAMP
⊖	STAFF STATION (48" M.H.)	⊖	DOOR SWITCH
⊖	STAFF EMERGENCY STATION (48" M.H.)	⊖	DUTY STATION (48" M.H.)
⊖	EMERGENCY SHOWER/BATH STATION (48" M.H.)	⊖	ZONE LAMP
⊖	ALARMARE STATION	⊖	CEILING MOUNTED ZONE LAMP
		⊖	DOMELISS CONTROLLER
		⊖	CODE BLUE STATION
		⊖	DURESS

CONTROLS			
⊖	AMMONIA SENSOR	⊖	CONTROL VALVE
⊖	FLOOR LOOP SENSOR	⊖	DOOR LIMIT SWITCH
⊖	HUMIDITY SENSOR	⊖	FLOW METER
⊖	LIMIT SWITCH	⊖	LEVEL INDICATOR
⊖	PRESSURER TRANSMITTER	⊖	LOAD CELL
⊖	SOLENOID VALVE	⊖	REMOTE HVAC SENSOR
		⊖	pH METER
		⊖	SAL SWITCH
		⊖	SEALED MOTOR VALVE
		⊖	VACUUM SWITCH HIGH & LOW

ELECTRICAL ABBREVIATIONS

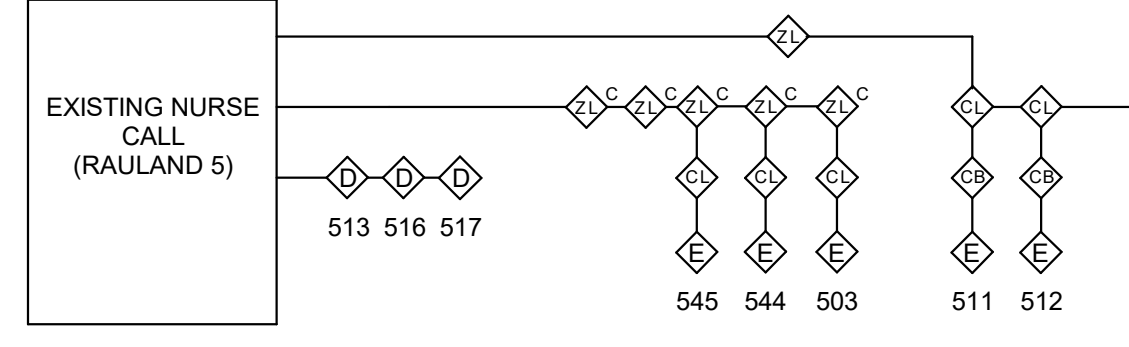
A STANDARD LIST; NOT ALL WORDS APPEAR IN THESE DRAWINGS. SEE SPECIFICATION SECTION "EQUIPMENT" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

A or AMP	AMPERE	LA	LIGHTNING ARRESTOR
AC	AIR CONDITIONING	LT	LIGHT
AC	ARCHITECT & ENGINEER	LTD	LIGHTS
AC	ABOVE COUNTER	LTS	LIGHTS
ADA	AMERICAN WITH DISABILITIES ACT	MC	MECHANICAL CONTRACTOR
AF	ABOVE FINISH FLOOR	MCS	MAIN CIRCUIT BREAKER
AFG	ABOVE FINISH GRADE	MCC	MOTOR CONTROL CENTER
AF or AFCI	AIRC FALTY CIRCUIT INTERRUPTER	MCM	THOUSAND CIRCULAR MILS
AHU	AUTOMATIC HANDLING UNIT	MDF	MAIN DISTRIBUTION PANEL
AI	AMPERES INTERRUPTING CURRENT	MDS	MECHANICAL
AL	ALUMINUM	MH	MAIN FUSE ONLY
ANN	ANNUNCIATOR	MLO	METAL HALIDE
AS	AUTOMATIC SENSORS	MSB	MAIN SWITCHBOARD
AWG	AMERICAN WIRE GAUGE	MTD	MOUNTED
BA	BELOW COUNTER	MTS	MOTOR THERMAL SWITCH
BA	BELOW COUNTER	MV	MERCURY VAPOR
BA	BASKETBALL HOOP OPERATOR	MW	MICROWAVE
BA	BLEACHER ELECTRIC OPERATOR BOARD	NA or N/A	NOT APPLICABLE
BA	BLANK UNIT HEATER	NC	NORMALLY CLOSED
		NEC	NATIONAL ELECTRICAL CODE
		NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
C or COND	CONDUIT	NEU, NEUT or N	NEUTRAL
CB or CB	CIRCUIT BREAKER	NEP	NON-RECESSED
CAT	CATEGORY	NL	NIGHT LIGHT
CCT or CRT	CIRCUIT	NO	NORMALLY OPEN
CO	CARBON MONOXIDE SENSOR	OFF, OF, or OFC	OFFICE
CO	CARBON MONOXIDE	OH	OVERHEAD
COMP	COMBINATION	OHD	OVERHEAD DOOR
CONF	CONFERENCE		
CONP	CILING PROJECTOR	P	POLE
CTC	CABLE TERMINATION CABINET	PA	PUBLIC ADDRESS
CU or CU	COPPER	PB	PUSH BUTTON
CUH	CONSISTING UNIT CABINET UNIT HEATER	PB	PUSH BUTTON
DC	DIRECT CURRENT	PB	PUSH BUTTON
DC	DISTRIBUTION CABINET	PB	PUSH BUTTON
DC	DISTRIBUTION PANEL	PB	PUSH BUTTON
DISC	DISCONNECT	PB	PUSH BUTTON
DISP	DISPENSER	PB	PUSH BUTTON
DL	DOOR LEVELER	PRV	POWER ROOF VENTILATOR
DN or DWN	DOWN	PS	PROJECTION SCREEN
DR	DOOR	PTZ	PANTILT/zoom
DW	DISHWASHER	PVC	POLYVINYL CHLORIDE
DWG	DRAWING	PWR	POWER
EC	ELECTRICAL CONTRACTOR	RCP	REFLECTED CEILING PLAN
EC	ELECTRICAL CABINET	REC or RECEPT	RECEPTACLE
EF	ELECTRICAL HEAT	REF or REFRS	REFRIGERATOR
EH	ELECTRIC OR ELECTRICAL	RH	RADIANT HEAT
ELC	ELECTRIC HAND DRYER	RH	RADIANT HEAT
EM or EMERG	EMERGENCY	RLY	RELAY
EMT	ELECTRICAL METALLIC TUBING	RM	ROOM
ENT	ELECTRICAL NON-METALLIC TUBING	RMS	ROOT MEAN SQUARE
ESH	ELECTRIC UNIT HEATER	SCC	SHORT CIRCUIT CURRENT
EWC	ELECTRIC WATER COOLER	SD	SHOCK DETECTOR
EX	EXISTING	SFR	SAFETY RECEPTACLE
EXP	EXPLOSION PROOF	SHD	SHIELD OR SHIELDED
F or FUS	FUSE OR FUSIBLE	SHD	SHIELD OR SHIELDED
FA	FIRE ALARM	SH	SOLID NEUTRAL
FAFP	FIRE ALARM ANNUNCIATOR PANEL	SP	SUMP PUMP
FAFP	FIRE ALARM CONTROL PANEL	SP	SPEAKER
FBO	FURNISHED BY OTHERS	SP	SPEAKER
FL, FLU or FLUOR	FULL VOLTAGE, NON-REVERSING	SRR	SPLIT WIRE RECEPTACLE
FLA	FULL VOLTAGE, REVERSING	SW	SWITCH
FNR	FULL VOLTAGE, REVERSING	SWB	SWITCH BOARD
GC	GENERAL CONTRACTOR	TC	TEMPERATURE CONTROL
GD	GARBAGE DISPOSAL	TC	TEMPERATURE CONTROL CONTRACTOR
GEN	GENERATOR	TEL	TELEPHONE
GR	GROUND FAULT CIRCUIT INTERRUPTER	TR	TRANSFORMER
GR	GROUNDING	TR	TRANSFORMER
H & AC	HEATING & AIR CONDITIONING	TR	TRANSFORMER
H & V	HEATING & VENTILATING	TTB	TELEPHONE TERMINATION BOARD
HD	HAND DRYER	TV	TELEVISION
HD	HIGH INTENSITY DISCHARGE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
HP	HORSE POWER	TYP	TYPICAL
HPS	HIGH PRESSURE SODIUM	UG	UNDERGROUND
HTG	HEATING	UH	UNIT HEATER
HTR	HEATER	UV	UNIT VENTILATOR
HVAC	HEATING, VENTILATION & AIR CONDITIONING	V	VOLT
HZ	HERTZ (CYCLES/SEC)	VFD	VARIABLE FREQUENCY DRIVE
IC	INTERLOCKING CURRENT	W	WATT
IGR	ISOLATED GROUND RECEPTACLE	W	WATT
INC	INTERMEDIATE METAL CONDUIT	W/O	WITHOUT
INC	INTERMEDIATE METAL CONDUIT	WP	WEATHERPROOF
ISO	ISOLATED OR ISOLATION	WTR or HD	WATER
J, JB or J-BOX	JUNCTION BOX	WS	WINDOW SHADE
KCMIL	THOUSAND CIRCULAR MILS	XMR	TRANSFORMER
KV	KILOVOLT	Y	WYE CONNECTION
KVA	KILOVOLT-AMPERE	φ	PHASE
KVAR	KILOVOLT-AMPERE REACTIVE	Δ	DELTA
KW	KILOWATT		
KWH	KILOWATT-HOUR		

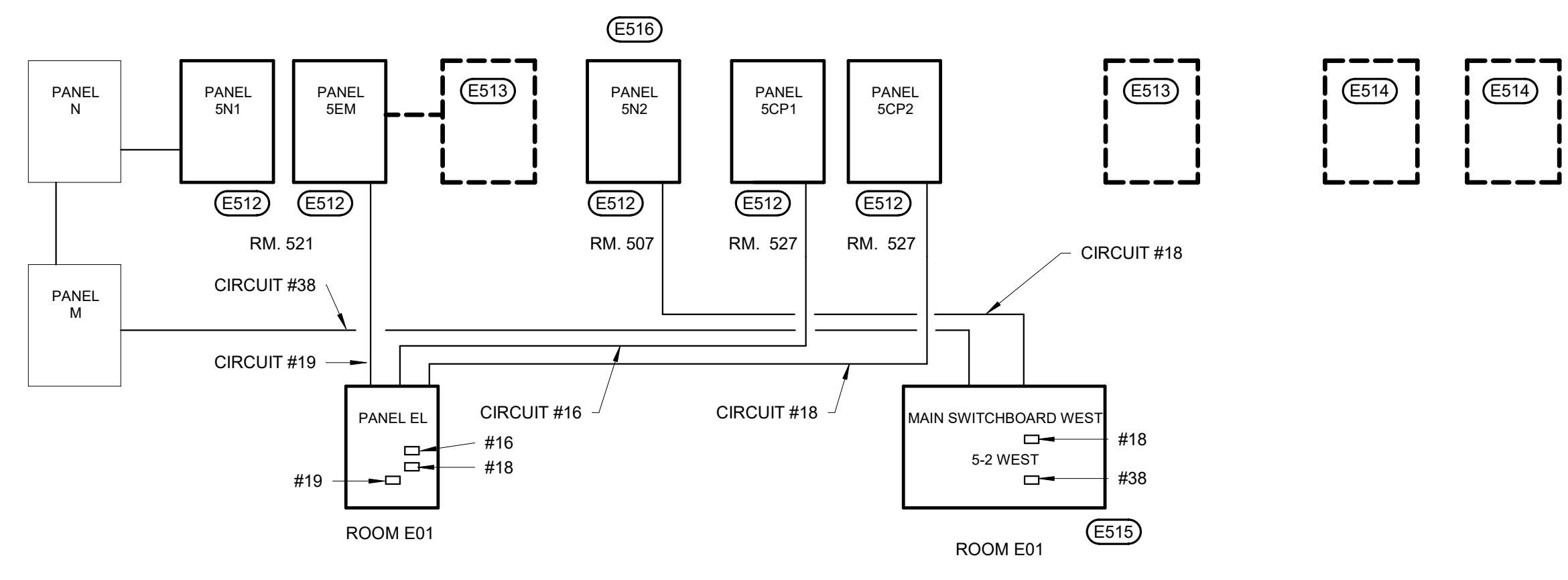


- NOTES:**
- ALL FIRE ALARM WIRING SHALL BE INSTALLED IN METAL CONDUIT, RED OR PAINTED RED UNLESS AN EXCEPTION IS GRANTED BY AHJ.
 - COORDINATE WIRE COUNTS WITH FA SYSTEM SUPPLIER.
 - SEE FLOOR PLANS AND TYPICAL UNIT WIRING PLANS FOR QUANTITIES OF SIGNALING & INITIATING DEVICES.
 - PROVIDE NECESSARY INTERLOCKING TO ELEVATOR CONTROL PANEL, COMBINATION DAMPERS, HVAC SYSTEMS, EXHAUST HOOD SUPPRESSION SYSTEMS (RELAYS, ETC.).
 - SMOKE DETECTORS IN ELEVATOR LOBBIES SHALL BE POWERED SEPARATELY AND HAVE AUXILIARY CONTACT FOR SIGNAL TO ELEVATOR CONTROLLER.
 - PROVIDE POWER TO DOOR HOLD OPENERS AND COMBINATION DAMPERS AS NEEDED.

1 FIRE ALARM RISER NO SCALE



2 NURSE CALL RISER NO SCALE



- ELECTRICAL SPECIFIC NOTES**
- E512 RECONNECT EXISTING FEEDERS TO NEW PANELS.
 - E513 DISCONNECT AND REMOVE MONITORING PANEL.
 - E514 DISCONNECT AND REMOVE O.R. ISOLATION PANELS FROM EMERGENCY PANEL.
 - E515 EXISTING PANEL M,N,O CIRCUIT BREAKER TO BE RELABELLED FOR M,N AND SN1.
 - E516 EXISTING PANEL "H" CIRCUIT BREAKER TO BE RELABELLED FOR PANEL "SN2"

3 POWER RISER DIAGRAM NO SCALE

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MSH ARCHITECTS

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TELE: (605) 332-7850 FAX: (605) 332-3539

Drawing Title

POWER AND COMMUNICATIONS DETAILS

Approved: Project Director

Project Title

V.A. HEALTH CARE SYSTEM RENOVATE 5TH FLOOR SURGERY

Project Number

438-15-201

Building Number

5

Location

SIOUX FALLS, SOUTH DAKOTA

Date

OCTOBER 17, 2017

Checked

MF

Drawn

GL

Drawing Number

5-EP500

Dwg. 59 of 60

Office of Construction and Facilities Management

100% CONSTRUCTION DRAWINGS

VOLTS:		120/208 Wye		PHASES:		3		WIRE:		4		MAIN CAPACITY:		225 A			
AIC RATING:		MOUNTING:		SURFACE		FEEDER SIZE:		LOCATION:		MECHANICAL/ELECTRICAL 527		EXISTING		MAIN CONNECTION:		MLO	
MOUNTING:		SURFACE		FEEDER SIZE:		EXISTING		MAIN TYPE:		TYPE 1		MAIN TYPE:		TYPE 1			
CKT	ITEM FED	WIRE SIZE	AMPS	POLES	A (WATTS)	B (WATTS)	C (WATTS)	POLES	AMPS	WIRE SIZE	ITEM FED	CKT					
1	E RECEP 530.531,532,533	12 20 A	1	720	720			1	20 A	12	RECEP 526,526,538,539	2					
3	E RECEP 535,537,538,539	12 20 A	1			720	540	1	20 A	12	E RECEP 540,541,542	4					
5	RECEP 511	12 20 A	1					1	20 A	12	RECEP 511,512	6					
7	RECEP 511	12 20 A	1	360	360			1	20 A	12	RECEP 511	8					
9	RECEP 512	12 20 A	1			720	360	1	20 A	12	RECEP 512	10					
11	RECEP 518	12 20 A	1					1	20 A	12	RECEP 519	12					
13	E RECEP 502	12 20 A	1	540	360			1	20 A	12	E RECEP 502	14					
15	E RECEP 504,505,506	12 20 A	1			540	360	1	20 A	12	RECEP 500	16					
17	PROC. LT RM 511	12 20 A	1					1	20 A	12	RECEP 500	18					
19	PROC. LT RM 512	12 20 A	1	150	0			1	20 A	12	SPARE	20					
21	SPARE	20 A	1			0	0	1	20 A	12	SPARE	22					
23	SPARE	20 A	1			0	0	1	20 A	12	SPARE	24					
25	SPARE	20 A	1	0	0			1	20 A	12	SPARE	26					
27	SPACE	-- --	--			0	0	-- --	--	--	SPACE	28					
29	SPACE	-- --	--			0	0	-- --	--	--	SPACE	30					
31	SPACE	-- --	--	0	0			-- --	--	--	SPACE	32					
33	SPACE	-- --	--			0	0	-- --	--	--	SPACE	34					
35	SPACE	-- --	--			0	0	-- --	--	--	SPACE	36					
37	SPACE	-- --	--	0	0			-- --	--	--	SPACE	38					
39	SPACE	-- --	--			0	0	-- --	--	--	SPACE	40					
41	SPACE	-- --	--			0	0	-- --	--	--	SPACE	42					
TOTAL CONNECTED LOAD:				3210 W		3240 W		3390 W		AMPS: 27 A		LOAD: 9840 W					

VOLTS:		120/208 Wye		PHASES:		3		WIRE:		4		MAIN CAPACITY:		225 A			
AIC RATING:		MOUNTING:		SURFACE		FEEDER SIZE:		LOCATION:		MECHANICAL/ELECTRICAL 527		EXISTING		MAIN CONNECTION:		MLO	
MOUNTING:		SURFACE		FEEDER SIZE:		EXISTING		MAIN TYPE:		TYPE 1		MAIN TYPE:		TYPE 1			
CKT	ITEM FED	WIRE SIZE	AMPS	POLES	A (WATTS)	B (WATTS)	C (WATTS)	POLES	AMPS	WIRE SIZE	ITEM FED	CKT					
1	SPARE	20 A	1	0	0			1	20 A	12	SPARE	2					
3	SPARE	20 A	1			0	0				SPARE	4					
5	SPARE	20 A	1			0	0				SPARE	6					
7	SPARE	20 A	1	0	0			1	20 A	12	SPARE	8					
9	SPARE	20 A	1			0	0				SPARE	10					
11	SPARE	20 A	1			0	0				SPARE	12					
13	SPARE	20 A	1	0	0			1	20 A	12	SPARE	14					
15	SPARE	20 A	1			0	0				SPARE	16					
17	SPACE	-- --	--			0	0				SPACE	18					
19	SPACE	-- --	--	0	0			-- --	--	--	SPACE	20					
21	SPACE	-- --	--			0	0	-- --	--	--	SPACE	22					
23	SPACE	-- --	--			0	0	-- --	--	--	SPACE	24					
25	SPACE	-- --	--	0	0			-- --	--	--	SPACE	26					
27	SPACE	-- --	--			0	0	-- --	--	--	SPACE	28					
29	SPACE	-- --	--			0	0	-- --	--	--	SPACE	30					
31	SPACE	-- --	--	0	0			-- --	--	--	SPACE	32					
33	SPACE	-- --	--			0	0	-- --	--	--	SPACE	34					
35	SPACE	-- --	--			0	0	-- --	--	--	SPACE	36					
37	SPACE	-- --	--	0	0			-- --	--	--	SPACE	38					
39	SPACE	-- --	--			0	0	-- --	--	--	SPACE	40					
41	SPACE	-- --	--			0	0	-- --	--	--	SPACE	42					
TOTAL CONNECTED LOAD:				0 W		0 W		0 W		AMPS: 0 A		LOAD: 0 W					

VOLTS:		120/208 Wye		PHASES:		3		WIRE:		4		MAIN CAPACITY:		225 A			
AIC RATING:		MOUNTING:		SURFACE		FEEDER SIZE:		LOCATION:		ELECTRICAL 521		EXISTING		MAIN CONNECTION:		MLO	
MOUNTING:		SURFACE		FEEDER SIZE:		EXISTING		MAIN TYPE:		TYPE 1		MAIN TYPE:		TYPE 1			
CKT	ITEM FED	WIRE SIZE	AMPS	POLES	A (WATTS)	B (WATTS)	C (WATTS)	POLES	AMPS	WIRE SIZE	ITEM FED	CKT					
1	RECEP 531,532,533	12 20 A	1	1080	720			1	20 A	12	RECEP 532,533	2					
3	RECEP 530,531	12 20 A	1			720	720	1	20 A	12	RECEP 529,530	4					
5	RECEP	12 20 A	1					1	20 A	12	RECEP 526,528	6					
7	RECEP 525,526	12 20 A	1	720	720			1	20 A	12	RECEP 523,524,524	8					
9	POWER ROOM 536	12 20 A	1			720	720	1	20 A	12	RECEP 535,536	10					
11	RECEP 535,536	12 20 A	1					1	20 A	12	RECEP 537,538,539	12					
13	RECEP 537,538	12 20 A	1	720	720			1	20 A	12	RECEP 539,540	14					
15	RECEP 540,541,542	12 20 A	1			1080	720	1	20 A	12	RECEP 541,542	16					
17	RECEP 528	12 20 A	1					1	20 A	12	RECEP T 544	18					
19	RECEP T 545	12 20 A	1	180	540			1	20 A	12	RECEP 531,567,571	20					
21	RECEP T 510B	12 20 A	1			180	180	1	20 A	12	RECEP T 510D	22					
23	RECEP 500b,510C	12 20 A	1			900	900	1	20 A	12	RECEP 513,517	24					
25	RECEP 514	12 20 A	1	540	720			1	20 A	12	RECEP 514,516	26					
27	LIGHTING	12 20 A	1			1750	1356	1	20 A	12	LIGHTING	28					
29	LIGHTING	12 20 A	1					536	1462	1	LIGHTING	30					
31	LIGHTING	12 20 A	1	1757	84			1	20 A	12	LIGHTING	32					
33	RECEP 509	12 20 A	1			360	0	1	20 A	12	DOOR OPENERS	34					
35	MECH DAMPERS	12 20 A	1					900	0	1	SPARE	36					
37	MECH DAMPERS	12 20 A	1	1000	0			1	20 A	12	SPARE	38					
39	MECH DAMPERS	12 20 A	1			1000	0	1	20 A	12	SPARE	40					
41	SPARE	20 A	1			0	0	1	20 A	12	SPARE	42					
TOTAL CONNECTED LOAD:				9501 W		9506 W		9018 W		AMPS: 78 A		LOAD: 28025 W					

VOLTS:		120/208 Wye		PHASES:		3		WIRE:		4		MAIN CAPACITY:		225 A			
AIC RATING:		MOUNTING:		SURFACE		FEEDER SIZE:		LOCATION:		STAFF LOUNGE 507		EXISTING		MAIN CONNECTION:		MLO	
MOUNTING:		SURFACE		FEEDER SIZE:		EXISTING		MAIN TYPE:		TYPE 1		MAIN TYPE:		TYPE 1			
CKT	ITEM FED	WIRE SIZE	AMPS	POLES	A (WATTS)	B (WATTS)	C (WATTS)	POLES	AMPS	WIRE SIZE	ITEM FED	CKT					
1	EWIC	12 20 A	1	360	720			1	20 A	12	RECEP 501,501A	2					
3	RECEP 502	12 20 A	1			720	720	1	20 A	12	RECEP 502, 502A	4					
5	COPIER 502A	12 20 A	1					180	180	1	COPIER 502A	6					
7	RECEP 504,505	12 20 A	1	720	720			1	20 A	12	RECEP 504,505	8					
9	RECEP 505,506	12 20 A	1			540	360	1	20 A	12	RECEP 506	10					
11	MICRO 507	12 20 A	1					180	180	1	RECEP 507	12					
13	REF 507	12 20 A	1	180	720			1	20 A	12	RECEP 507	14					
15	VENDING MACHINE	12 20 A	1			180	180	1	20 A	12	REF 508	16					
17	RECEP 508	12 20 A	1					180	180	1	RECEP 508	18					
19	MICRO 508	12 20 A	1	180	540			1	20 A	12	RECEP 508	20					
21	RECEP 508	12 20 A	1			360	646	1	20 A	12	LIGHTING	22					
23	LIGHTIN	12 20 A	1														