S T A T E O F M I C H I G A N

BOARD OF COMMISSIONERS OF THE COUNTY OF ALLEGAN

COURTHOUSE CONSTRUCTION DESIGN/RELEASE REQUEST FOR PROPOSAL

WHEREAS, on June 13, 2019, the Board of Commissioners (Board) authorized County Administration to engage the County's architectural and engineering firm (GMB) to design and provide cost estimates on various components of the Courthouse e.g. entrance, sally port; and

WHEREAS, on August 22, 2019, the Board authorized the County Administrator to proceed in the design of a central security entrance for the courthouse entitled "New Main Central Entry", additional holding cells and the improvement of existing holding cells to ensure appropriate security, separation and sanitary conditions and proceed with the design of a sally port located at the north side of the building of the courthouse; and

WHEREAS, on June 25, 2020, GMB (architect) presented design plans that would be used to release a request for proposal to complete the construction at the Courthouse as directed by the Board.

THEREFORE BE IT RESOLVED that the Board authorizes GMB to release a request for proposal under the direction of the County Administrator; and

BE IT FURTHER RESOLVED that the final award be brought back to the Board for approval.

ALLEGAN COUNTY
REQUEST FOR ACTION FORM

Completed RFA form must be attached to a work order request through the Track-It System. If you have any questions regarding this process, please contact Administration @ ext. 2633.

RFA#: 192-205

Date: 6/10/20

Request Type	Routine Items
Department Requesting	Administration
Submitted By	Steve Sedore
Contact Information	ssedore@allegancounty.org

Select a Request Type to reveal and complete required form.

Description

In accordance with the Courthouse Construction schedule, I would like to present the construction documents at the June 25 Board meeting to gain support by the Board for GMB to use these designs to release in an RFP for a construction company to bid.

ALLEGAN COUNTY COURTHOUSE

CONSTRUCTION PROJECT

June 25, 2020

GMB ARCHITECTURE + ENGINEERING

ALLEGAN COUNTY COURTHOUSE

June 13, 2019 Board Resolution:

- *Authorize Administration to engage the County's architectural and engineering firm (GMB) to design and cost estimate the following utilizing previous studies as well as the recent information sessions:*

1. *An improved courthouse entrance / security solution,*
2. *A sally port and holding cell(s) solution for the courthouse in a location best suited to meet the immediate needs of the building,*
3. *Enhanced shared spaces e.g. conference/restrooms,*
4. *A non-court services corridor option,*
5. *An updated Courthouse Master Plan.*

ALLEGAN COUNTY COURTHOUSE

On August 22, 2019, the Board more specifically passed the following resolutions:

Resolution #1"...Proceed in the design of a central security entrance for the courthouse entitled "New Main Central Entry" as presented within the GMB presentation."

- All options presented provide a new clear central entrance to the courthouse with necessary support spaces and circulation.

Resolution #2 "...Proceed with the design of a sally port located at the north side of the building of the courthouse."

- All options presented provide a new two vehicle sallyport located off of the NorthEast corner of the existing courthouse with two new holding cells and necessary circulation.

Resolution #3 "...Proceed with the design of additional holding cells and the improvement of existing holding cells to ensure appropriate security, separation and sanitary conditions.

- All options show interiors renovations that bring the existing holding cells up to current code and standards.

ALLEGAN COUNTY COURTHOUSE

VISION FOR EXISTING COURTHOUSE:

Building Entry

- Clear Common building central entry
- Clean efficient connection to the public corridor

Building Security

- Overwatch station & entry security

Sally Port

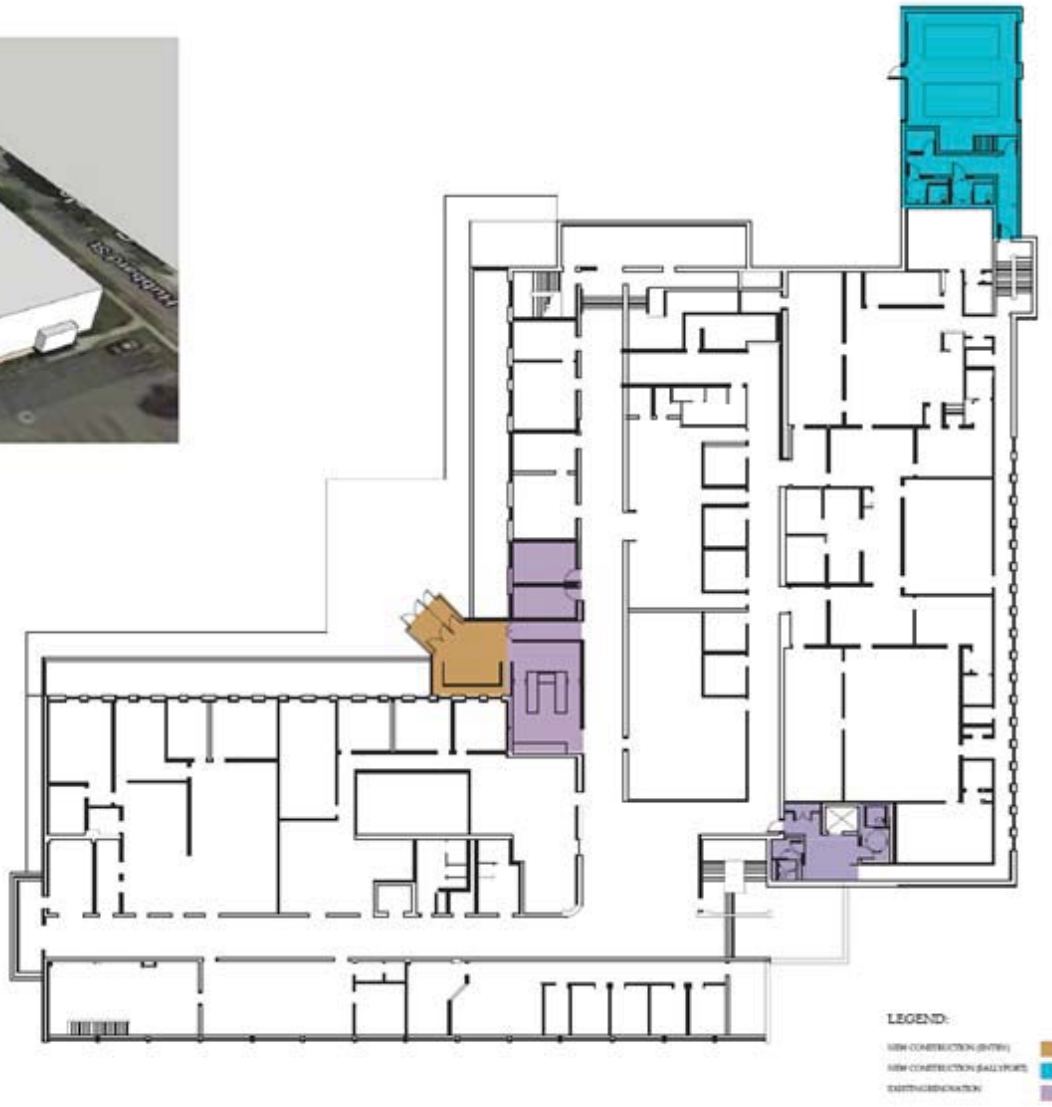
- Access to secure corridor

Holding Cells

- Improved holding cells
- Connection to secure corridor
- Access to Sally Port

ALLEGAN COUNTY COURTHOUSE

ALLEGAN COUNTY COURTHOUSE

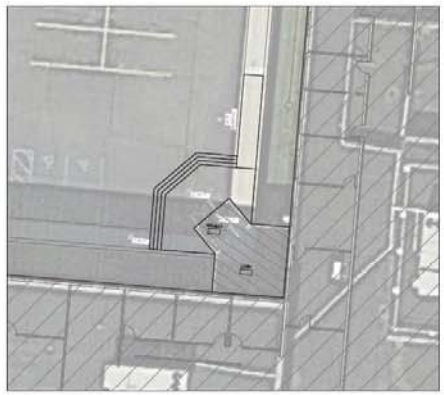


FLOOR PLAN

GMB ARCHITECTURE + ENGINEERING

SITE PLAN

ENLARGED SALLY PORT PLAN



ENLARGED ENTRY PLAN

GMB ae
ARCHITECTURE + ENGINEERING

PERSPECTIVE RENDERING

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ARCHITECTURE + ENGINEERING

PERSPECTIVE RENDERING

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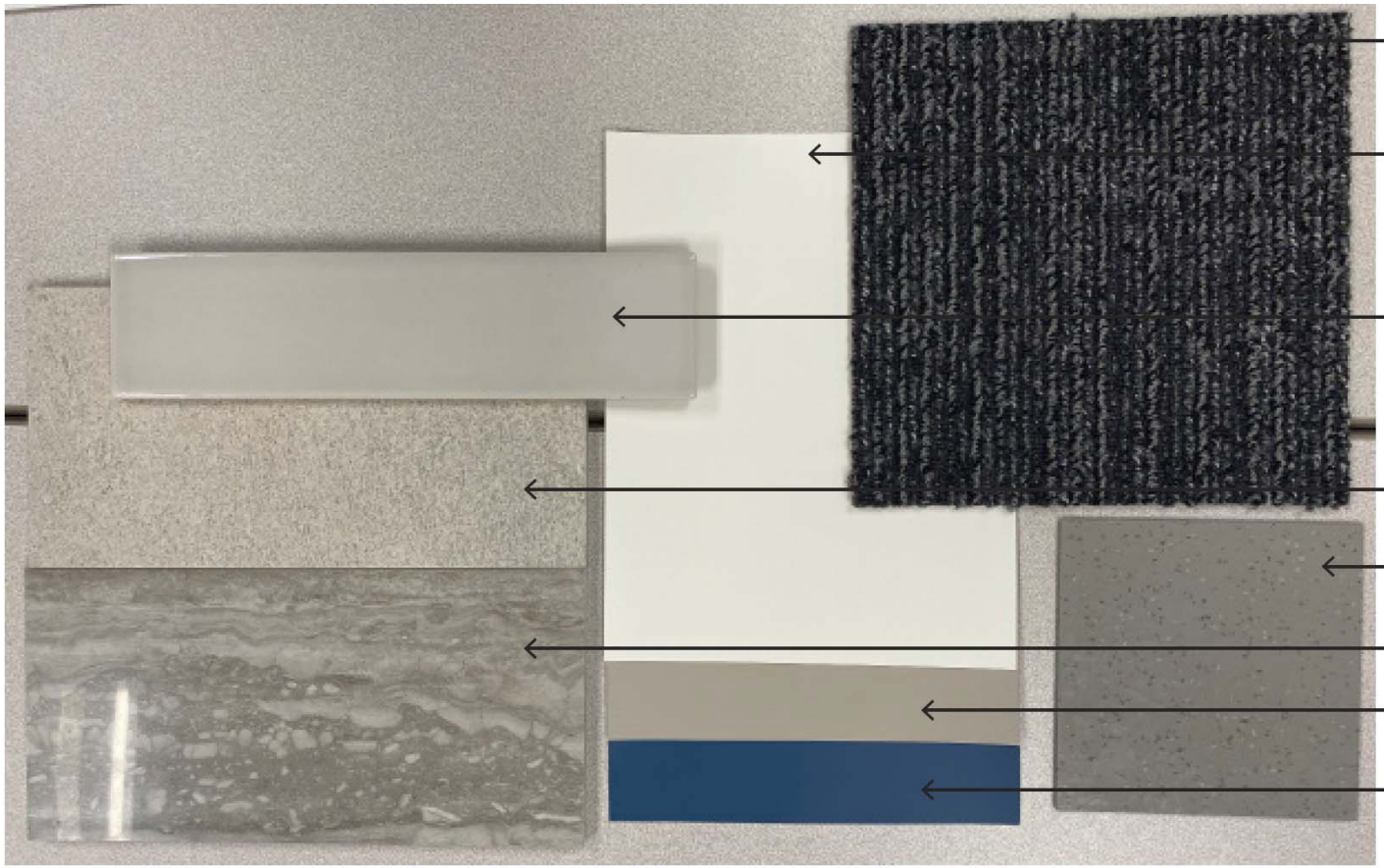
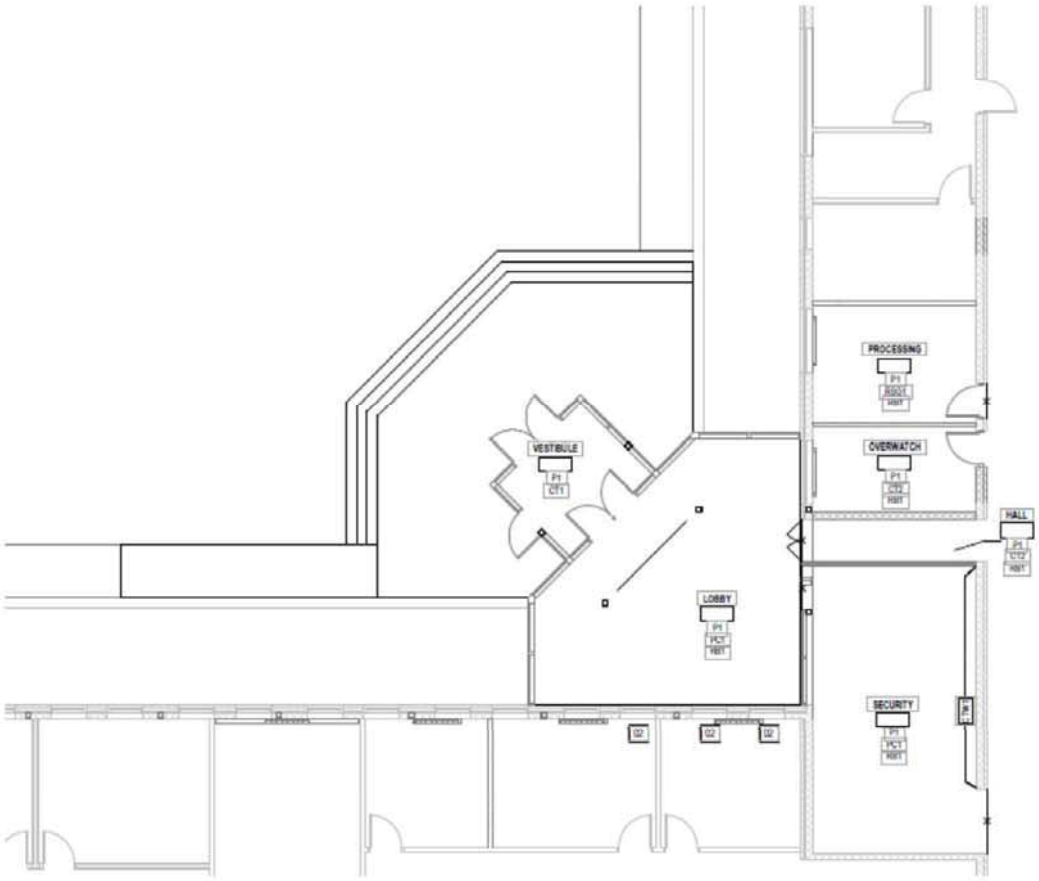
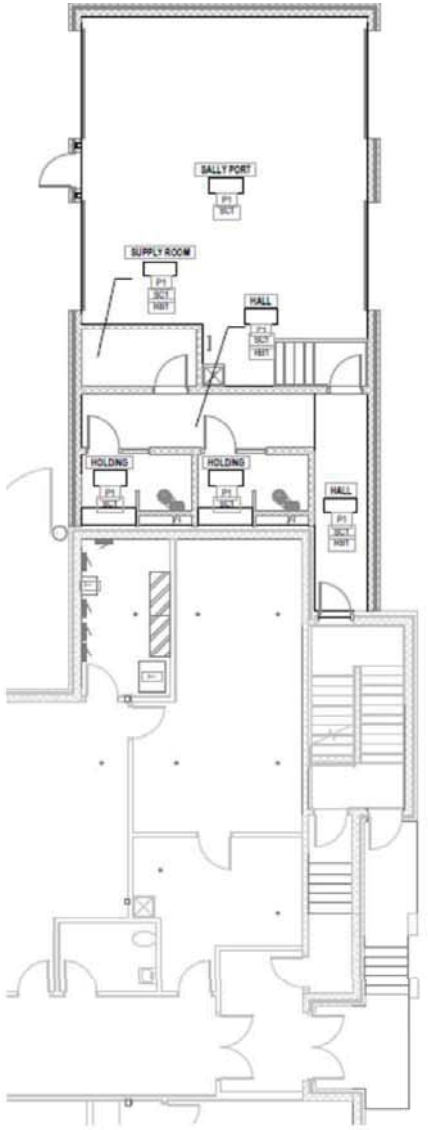

WALK-OFF CARPET
GENERAL PAINT
SECURITY WALL TILE
ENTRY WALL TILE (ACCENT)
RESILIENT FLOORING
RUBBER
ENTRY WALL TILE (GENERAL)
ACCENT PAINT
ACCENT PAINT

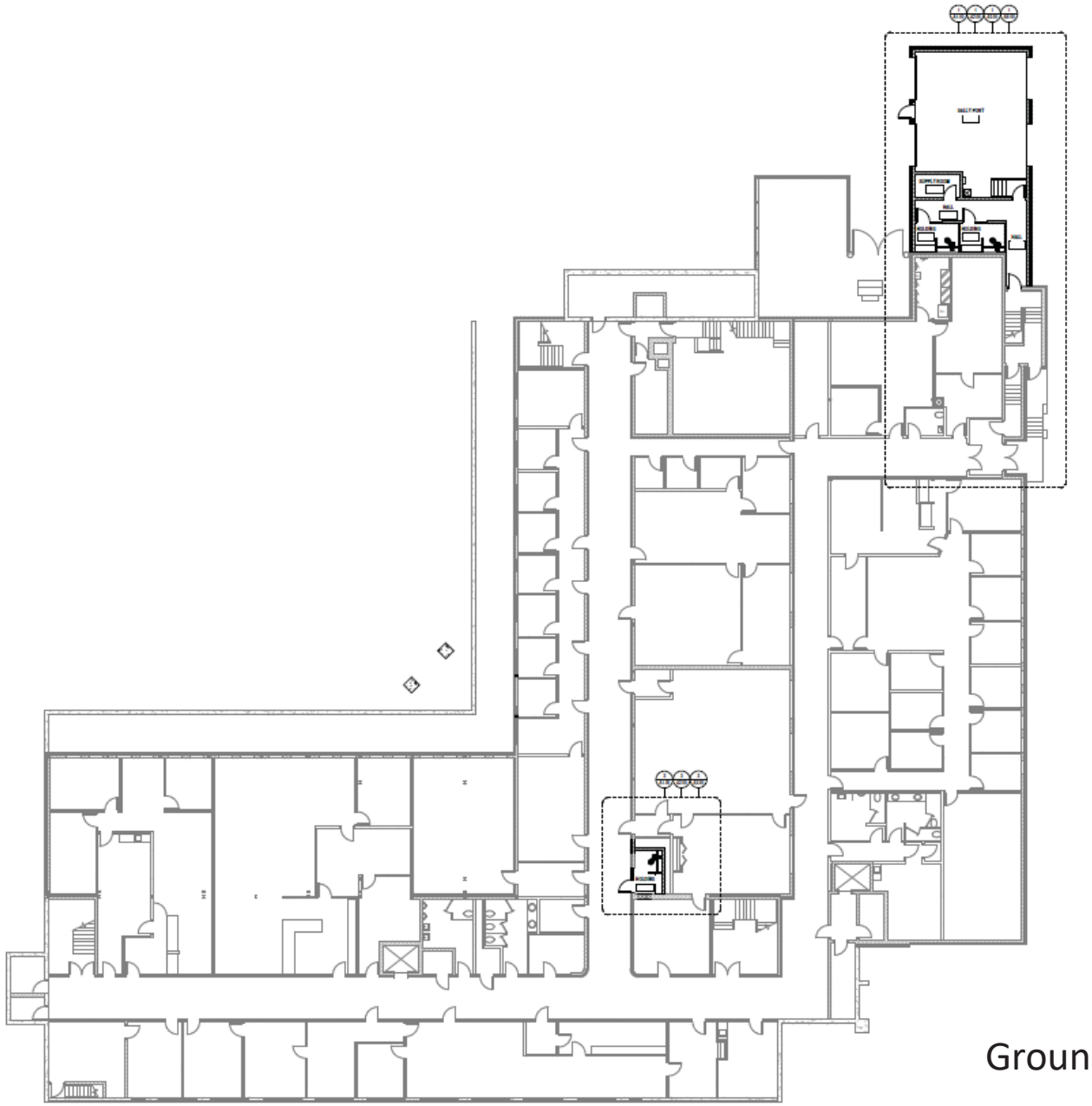


MAIN ENTRY ADDITION PARTIAL FLOOR FINISH PLAN



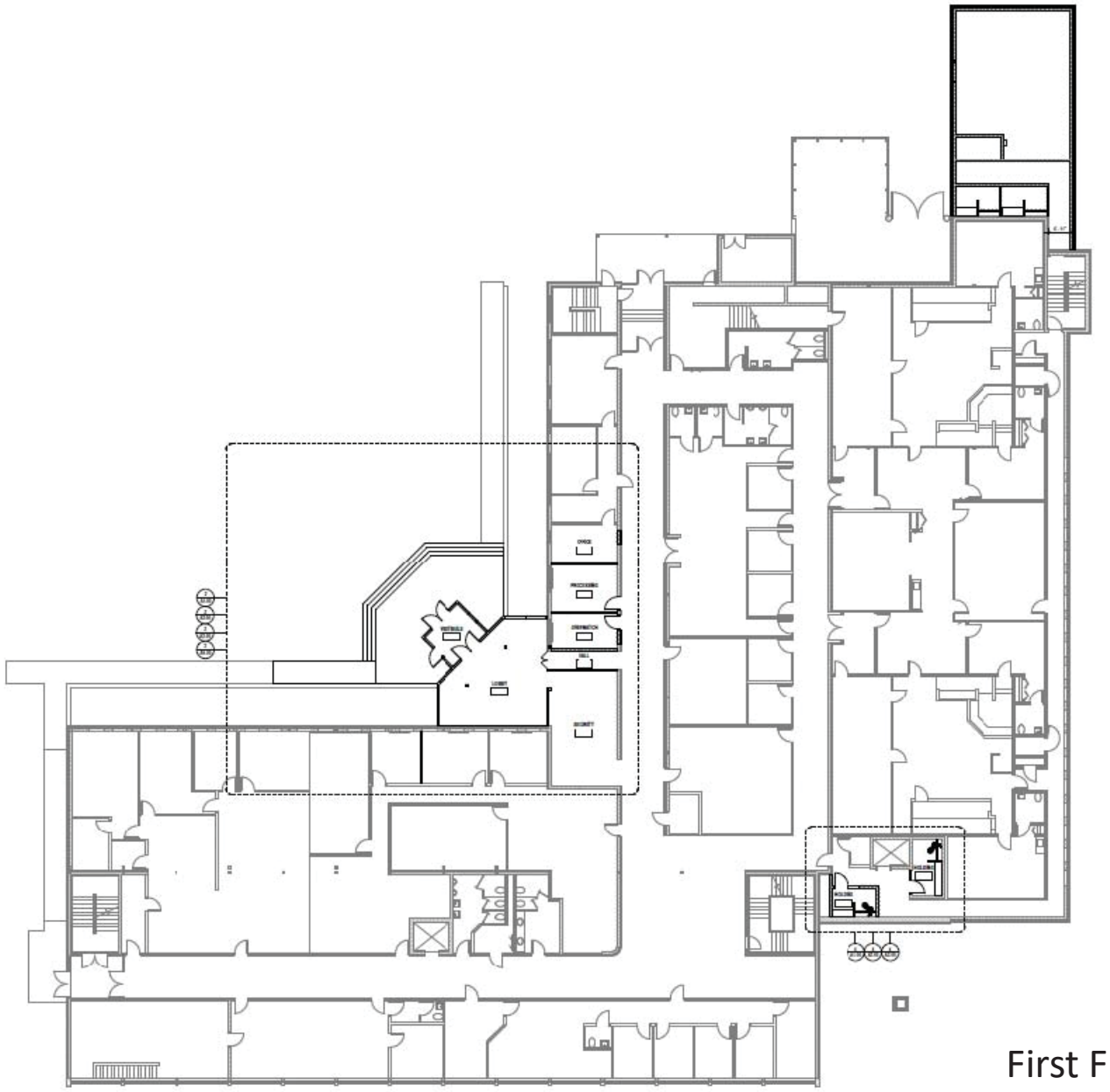
SALLY PORT ADDITION PARTIAL FLOOR FINISH PLAN

GMB ARCHITECTURE + ENGINEERING

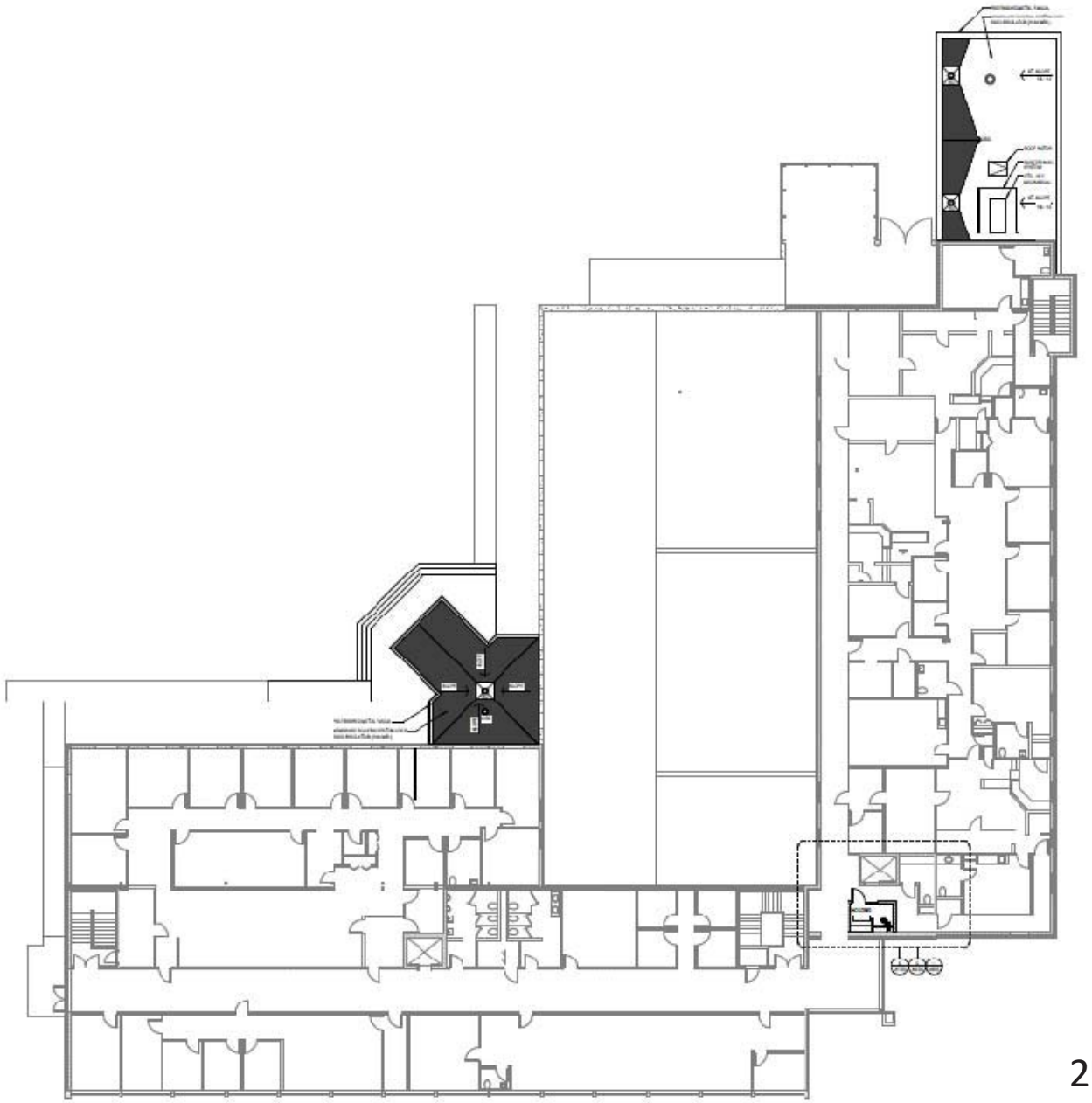


OVERALL LOWER LEVEL FLOOR PLAN

Ground Floor



First Floor



2nd Floor

GMB Opinion of Probable Cost from March 2020

- 2020 Capital Allocation was set at $1,000,000 -

March	Entry	Sally Port & Holding Cells	Holding Cells
Size *(sqft)*	Renovation = 853 sqft Construction = 427 sqft	Construction = 1,400 sqft	Renovation = 530 sqft
Cost	$411,000	$335,500	$85,500
TOTAL	$832,000 *(didn't include contingency, permits or bonds ~ $941,500)*		

Independent Construction Company Estimate

June	Entry	Sally Port & Holding Cells	Holding Cells
Size *(sqft)*	Renovation = 823 sqft Construction = 650 sqft	Construction = 1,476 sqft	Renovation = 530 sqft
Cost	Construction = $484,618 Permits & Bonds = $6,000 Contingency = $40,000 $530,618	Construction = $518,770 Permits & Bonds = $6,400 Contingency = $40,000 $565,170	Construction = $159,625 Permits & Bonds = $2,100 Contingency = $15,000 $176,725
TOTAL	$1,272,513 *(estimate)*		

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ARCHITECTURE + ENGINEERING

ALLEGAN COUNTY COURTHOUSE ADDITIONS & RENOVATIONS

ALLEGAN COUNTY

113 CHESTNUT STREET
ALLEGAN, MICHIGAN

SCHEMATIC DESIGN
04.24.2020
GMB Project # 5-5140

VICINITY MAP

OWNER

ALLEGAN COUNTY
113 Chestnut Street, Allegan, Michigan, 49010
P. 269.673.0205 www.allegancounty.org

ARCHITECT + ENGINEER

GMB ARCHITECTURE + ENGINEERING
85 East Eighth Street, Suite 200, Holland, MI 49423
P. 616.796.0200 F. 616.796.0201 www.gmb.com

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GENERAL FLOOR PLAN NOTES

1. DIMENSIONS GIVEN ARE TO THE FACE OF MASONRY UNITS OR TO THE FINISHED FACE OF METAL STUD PARTITION WALLS.
2. REFERENCE STRUCTURAL DRAWINGS FOR CONCRETE SLAB SIZES AND SLAB RELATED INFORMATION.
3. INTERIOR STUD WALLS ARE TO USE 3 5/8" METAL STUD FRAMING UNLESS OTHERWISE NOTED.
4. TURN UP VAPOR RETARDER MATERIAL AT JOINTS BETWEEN FLOOR SLAB AND FOUNDATION WALL UNLESS NOTED OTHERWISE.
5. SEE FOUNDATION PLANS FOR FLOOR SLAB RECESSES FOR TILE, WOOD FLOOR, ETC. (VERIFY RECESS REQUIRED BY MFR.)
6. EXTEND ALL INTERIOR WALL PARTITIONS (MASONRY OR STUDS) TO BOTTOM OF DECK ABOVE UNLESS NOTED OTHERWISE.
7. REFERENCE STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL FOR ITEMS NOT SHOWN. COORDINATE AS REQUIRED INCLUDING NECESSARY FRAMING, BLOCKING, ETC.
8. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF ANY CABINETRY, FRAMES, STRUCTURAL ITEMS, ETC.
9. PROVIDE PAINTED ACCESS PANELS IN WALLS AND CEILINGS TO PROVIDE ACCESS TO CONCEALED ITEMS INCLUDING BUT NOT LIMITED TO VALVES, CONTROLS, MECH. EQUIPMENT ETC. ACCESS PANELS MAY NOT ALWAYS BE SHOWN ON PLANS. IT IS THE SUB CONTRACTOR RESPONSIBILITY TO DETERMINE LOCATIONS. COORDINATE LOCATIONS WITH OTHER GENERAL CONTRACTOR / SITE SUPERVISOR.
10. COORDINATE WALLS WITH COLUMNS AND OTHER ENCASED ITEMS. COLUMNS ARE TO BE CONTAINED WITHIN WALLS. THE FRAMING CONTRACTOR SHALL INCREASE FRAMING SIZE TO ACCOMMODATE COLUMNS, DRAIN LEADERS, PIPING, ELECTRICAL PANELS, ETC. WHERE WALLS REQUIRE EXTRA WIDTH THE ENTIRE WALL SHALL BE WIDENED UNLESS APPROVED BY ARCHITECT.
11. ALL GUARDRAILS AND HANDRAILS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE 2015 M.B.C., ANSI ICC A117.1-2009 & AMERICANS WITH DISABILITIES ACT GUIDELINES. THE MOST STRINGENT SHALL PREVAIL.
12. PROVIDE MINIMUM CLEARANCES AT ALL DOORS PER DETAILS. SEE G0.01 FOR REQUIREMENTS.
13. FOR ALL CABINETRY, SEE INTERIOR ELEVATIONS FOR LAYOUTS. FIELD VERIFY CLEAR WIDTHS PRIOR TO FABRICATION.
14. ALL EXTERIOR BLOCK CORNERS ARE TO BE BULLNOSE BLOCK EXCEPT CONCRETE BLOCK COLUMNS, PIERS AND WALLS TO RECEIVE TILE - UNLESS NOTED OTHERWISE.
15. CONTRACTOR TO MAINTAIN / REPAIR RATING OF EXISTING PARTITIONS AS AFFECTED BY DEMOLITION / NEW CONSTRUCTION. TYPICAL THROUGHOUT.
16. SEAL ALL PENETRATIONS IN FIRE RATED FLOORS AND WALLS WITH APPROVED FIRESTOPPING.
17. WHERE SPECIALTY BLOCK IS REQUIRED AT THE SAME HEIGHT ON BOTH SIDES OF A WALL USE (2) SPECIALTY BLOCKS BACK TO BACK TO MAINTAIN THE FINISHED WALL APPEARANCE BOTH SIDES OF THE WALL. COORDINATE WITH STRUCTURE FOR LINTELS CONDITIONS PER SPECIFICATIONS.
18. WALLS TO BE PATCHED WITH LIKE MATERIALS WHERE EXISTING WALLS HAVE BEEN COMPROMISED FROM DEMOLITION. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO REMOVAL AND REINSTALLATION OF CASEWORK AND WALL MOUNTED EQUIPMENT IN ORDER TO ACHIEVE SAID PATCH. IN AREAS WHERE BLOCK OR BRICK HAVE BEEN USED, NEW MASONRY TO BE TOOTHED IN AND MATCH EXISTING. AREAS AND FINISHES IN QUESTION SHALL BE COORDINATED WITH ARCHITECT.
19. SEE STRUCTURAL FRAMING PLANS FOR ADDITIONAL WALL REINFORCING REQUIREMENTS. MINIMUM REINFORCING (FOR ALL WALLS NOT OTHERWISE NOTED ON STRUCTURAL PLANS):
    A. ALL BEARING WALLS SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.
    B. ALL EXTERIOR WALLS SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.
    C. ALL INTERIOR NON-BEARING WALLS OVER 16'-0" HIGH SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.

GENERAL PROJECT NOTES:

1. FINISH FLOOR ELEVATION = XXX.XX = 100'-0"
2. DRAWINGS ARE NOT TO BE SCALED WHEN A DIMENSION IS IN QUESTION. VERIFY W/ ARCHITECT.
3. DETAILS SHOWN BUT NOT CALLED OUT STILL APPLY, UNLESS OTHERWISE NOTED.
4. GENERAL TRADES CONTRACTOR SHALL COORDINATE ALL TRADES INCLUDING OWNER FURNISHED EQUIPMENT, INCLUDING DIMENSIONS OF SUCH AS THEY RELATE TO HIS/HER OWN WORK.
5. ALL EXPOSED SURFACES SHALL BE FINISHED. CONTACT ARCHITECT FOR DIRECTION IF FINISH IS NOT LISTED.
6. NO UTILITIES INCLUDING BUT NOT LIMITED TO, PIPING AND CONDUIT SHALL BE EXPOSED UNLESS APPROVED BY ARCHITECT.
7. GYPSUM BOARD WALLS AND BULKHEADS SHALL HAVE CONTROL JOINTS AT A 20'-0" O.C. MAXIMUM AND AS SHOWN ON DRAWINGS.
8. ANY CONTRACTOR IS TO STOP WORK IMMEDIATELY IN AREA IF ABATEMENT MATERIAL(S) ARE ENCOUNTERED. NOTIFY GENERAL CONTRACTOR OF SUSPECTED AREA SO PROPER ABATEMENT CAN BE DONE. (UNDER A SEPARATE ABATEMENT CONTRACT AS NEGOTIATED BY OWNER.)
9. AT ALL AREAS OF WORK WHERE EXISTING MASONRY BLOCK AND BRICK WALLS ARE BEING MODIFIED OR CONNECTED TO NEW MASONRY AND/OR BRICK MUST BE TOOTHED, UNLESS NOTED OTHERWISE ON DRAWINGS.
10. CONTRACTOR SHALL VERIFY LOCATIONS OF UTILITIES PRIOR TO EXCAVATION, TRENCHING, ETC. AND SHALL REPAIR OR REPLACE ANY DAMAGED UTILITIES AS A RESULT OF CONSTRUCTION.
11. ALL TRADES ARE TO COORDINATE ANY DEMOLITION, CAPPING OR ABANDONMENT OF EXISTING MECHANICAL, ELECTRICAL, PLUMBING OR ARCHITECTURAL ITEMS.
12. ANY DEMOLITION OR CONSTRUCTION WHICH DAMAGES ADJACENT SURFACES IS TO BE REPAIRED TO MATCH THE EXISTING SURFACE DAMAGED (MATERIALS & FINISHES) AND ALL REPAIR WORK IS TO BE COORDINATED WITH NEW CONSTRUCTION.
13. CONTRACTOR IS TO PROVIDE TEMPORARY SHORING AND BRACING FOR EXISTING ROOF/FLOOR STRUCTURE AS REQUIRED UNTIL PERMANENT WALLS & LINTELS ARE INSTALLED.
14. SITE SECURITY AND SAFETY ARE THE CONTRACTORS RESPONSIBILITY. SITE SHALL BE SECURED (FENCED IF REQUIRED) BY CONTRACTOR.
15. ALL ITEMS TO BE SAVED AND/OR RELOCATED ARE TO BE STORED IN A PROPER MANNER SO NO DAMAGE WILL OCCUR TO THESE ITEMS DURING THEIR STORAGE PERIOD.
16. ALL CONSTRUCTION AND MATERIALS ARE TO BE INSTALLED BY THE MANUFACTURERS SPECIFICATIONS AND/OR RECOMMENDATIONS UNLESS DIRECTED OTHERWISE BY ARCHITECT.
17. SEE SPECIFICATIONS FOR STEEL LINTEL SIZES FOR WALL OPENINGS NOT DETAILED (e.g. HVAC DUCTS, ETC.).
18. REFER TO GENERAL INFORMATION SHEET G0.01 FOR TYPICAL BARRIER FREE AND ACCESSIBLE DIMENSIONS.
19. SEE FLOOR PLANS FOR WALL REINFORCING REQUIRED. (SEE WALL REINFORCING SCHEDULE)
20. FURNISH & INSTALL 2x12 HORIZONTAL WOOD BLOCKING BETWEEN STUDS WHERE REQUIRED FOR MOUNTING OF UPPER CABINETS, GRAB BARS OR OTHER EQUIPMENT AS REQUIRED FOR PROPER SUPPORT.
21. COORDINATE ALL CONSTRUCTION PRACTICE TOLERANCES WITH OTHER TRADES WHOSE WORK MAY BE AFFECTED, DIRECTLY OR INDIRECTLY, WITH YOUR SPECIFIC TRADE. IN ALL CASES, THE MOST STRINGENT TOLERANCE SHALL APPLY AND SHALL BE COORDINATED THRU THE GENERAL CONTRACTOR, JOB SUPERINTENDENT AND/OR CONSTRUCTION MANAGER AND FIELD OBSERVATION PERSON AS APPLICABLE.
22. REFER TO FLOOR PLANS, SCHEDULES AND EXTERIOR ELEVATIONS FOR WINDOW FRAME TYPES.
23. REFER TO FLOOR PLANS, SCHEDULES AND INTERIOR ELEVATIONS FOR BORROWED LITE FRAME TYPES.
24. AT MASONRY CAVITY WALL LOCATION, PROVIDE APPROPRIATE SEPARATION IN REGARDS TO INTERIOR AIR EXFILTRATION AND EXTERIOR AIR AND WATER INFILTRATION THRU WALL. PROVIDE NECESSARY AIR AND WATER BARRIERS REQUIRED, INCLUDING DAMS, TO PREVENT WALL LEAKAGE.

CODE NOTES:

1. FIRE DEPARTMENT ACCESS AND WATER SUPPLY SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF VERTICAL CONSTRUCTION.
2. FIRE STOP ALL INTERCONNECTIONS BETWEEN VERTICAL AND HORIZONTAL SPACES AND CONCEALED WALL SPACES AT THE CEILING, FLOOR, AND ROOF LEVELS.
3. INSTALL SOLID BLOCK BEHIND ALL RECESSED WALL UNITS AS REQUIRED TO MAINTAIN FIRE RATINGS.
4. ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS, AND SMOKE PARTITIONS SHALL BE IDENTIFIED WITH STENCILING AT INTERVALS NOT TO EXCEED 30'. REFER TO CODE PLAN FOR WALLS REQUIRED TO BE PROTECTED.
5. ALL PENETRATIONS AT SMOKE AND FIRE RATED WALLS, FLOORS, CEILINGS, ETC. SHALL BE PROTECTED, SEALED OR DAMPERED USING ONLY U.L. AND / OR I.C.B.O. APPROVED METHODS, MATERIALS AND INSTALLATION.
6. SEE REFLECTED CEILING PLANS AND LIGHTING PLANS FOR EXIT SIGNAGE LOCATIONS.
7. ALL EXITS TO BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF KEY OR SPECIAL KNOWLEDGE.
8. PANIC HARDWARE TO BE PROVIDED AT EACH EXIT DOOR FROM ROOMS WITH AN OCCUPANT LOAD 50 OR MORE INCLUDING MAIN CORRIDOR EXIT DOORS.
9. ALL ELEVATORS SHALL COMPLY WITH A.D.A., A.D.A.G.G. AND A.N.S.I. REQUIREMENTS.
10. SPECIAL STRUCTURAL INSPECTIONS ARE REQUIRED. REVIEW GENERAL STRUCTURAL NOTES AND SPECIFICATIONS FOR REQUIREMENTS.
11. FIRE SPRINKLERS AND FIRE ALARM SYSTEM SHALL BE PROVIDED PER NFPA NO. 13, 70 & 72. SUBMIT ALL REQUIRED DRAWING AND INFORMATION TO THE AUTHORITY HAVING JURISDICTION FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY RELATED WORK. OBTAIN APPROVAL OF COMPLETED SYSTEMS PRIOR TO FINAL ACCEPTANCE.

ACCESSIBILITY NOTES:

1. PUBLIC ENTRANCES: AT LEAST 60% SHALL BE ACCESSIBLE.
2. ACCESSIBLE ENTRANCES TO THE BUILDING SHALL BE IDENTIFIED BY THE INTERNATIONAL SIGN OF ACCESSIBILITY.
3. AN ACCESSIBLE ROUTE OF NOT LESS THAN 3 FT. WIDE MUST BE PROVIDED TO ALL PORTIONS OF THE BUILDING AND BETWEEN THE BUILDING AND THE PUBLIC WAY. ACCESSIBLE ROUTES SHALL HAVE A MAXIMUM SLOPE OF 1:20 AND A MAXIMUM CROSS SLOPE OF 1:50.
4. ACCESSIBLE ROUTE SHALL BE WITHOUT STEPS OR CHANGES IN LEVEL GREATER THAN 1/2" WITHOUT AN APPROVED RAMP.
5. ACCESSIBLE RAMPS THAT ARE REQUIRED BY ANSI A 117.1 SHALL NOT HAVE A SLOPE THAT EXCEEDS 1FT. IN 12 FEET. RAMPS AND GROUND SURFACES SHALL BE OF A SLIP RESISTANT SURFACE.
6. THRESHOLDS MUST BE 1/2" OR LESS IN HEIGHT.
7. ALL ACCESSIBLE PARKING SPACES MUST HAVE A SIGN THAT INCLUDES THE INTERNATIONAL SIGN OF ACCESSIBILITY. PARKING SPACE WILL BE OUTLINED IN A CONTRASTING COLOR WITH THE INTERNATIONAL SIGN OF ACCESSIBILITY PAINTED IN THE CENTER.
8. ALL ALARMS TO MEET ACCESSIBILITY REQUIREMENTS.

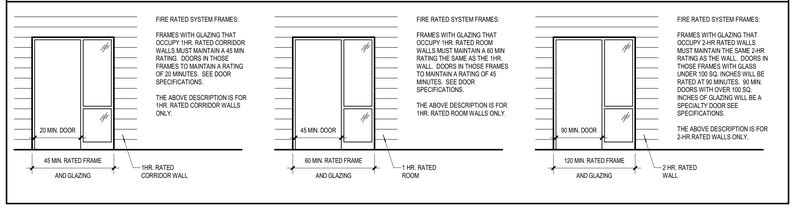
STRUCTURAL NOTES:

1. CONSTRUCTION AND/OR CONTROL JOINTS IN CONCRETE SHALL BE ON A 12'-0" SQUARE GRID (MAX.) UNLESS OTHERWISE NOTED. ALL CONSTRUCTION JOINTS SHALL BE DOWELED W/ 1/2" SMOOTH DOWELS AT 24" O.C. SEE DETAILS.
2. PROVIDE CONTINUOUS U-BLOCK BOND BEAMS AT THE LOCATIONS INDICATED ON WALL SECTIONS OR DETAILS. FILL U-BLOCKS WITH CONCRETE AND REINFORCE WITH (2) #5 BARS CONTINUOUS UNLESS NOTED OTHERWISE ON DRAWINGS.

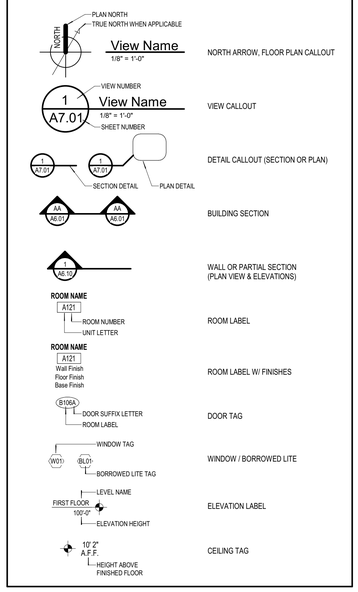
ABBREVIATIONS

A.D.A.	=	AMERICANS WITH DISABILITY ACT	MFR.	=	MANUFACTURER
A.F.F.	=	ABOVE FINISHED FLOOR	MAX.	=	MAXIMUM
ALT.	=	ALTERNATE	M.B.	=	MARKER BOARD
ALUM.	=	ALUMINUM	M.B.C.	=	MICHIGAN BUILDING CODE
BD.	=	BOARD	MECH.	=	MECHANICAL
B.F.	=	BARRIER FREE	MIN.	=	MINIMUM
BATT.	=	BATTEN INSULATION	MISC.	=	MISCELLANEOUS
B.O.	=	BOTTOM OF	M.J.	=	MASONRY JOINT
BRG.	=	BEARING	M.O.	=	MASONRY OPENING
C.J.	=	CONTROL JOINT	MTL.	=	METAL
CLG.	=	CEILING	N.I.C.	=	NOT IN CONTRACT
CONC.	=	CONCRETE	NOM.	=	NOMINAL
CONT.	=	CONTINUOUS	O.C.	=	ON CENTER
CONF.	=	CONFERENCE	OPP.	=	OPPOSITE
CORR.	=	CORRIDOR	P.LAM	=	PLASTIC LAMINATE
DIA.	=	DIAMETER	P.T.	=	PRESSURE TREATED
DIM.	=	DIMENSION	REQ.	=	REQUIRED
DW.	=	DISHWASHER	REINF.	=	REINFORCING
D.F.	=	DRINKING FOUNTAIN	R.D.	=	ROOF DRAIN
DN.	=	DOWN	SIM.	=	SIMILAR TO
DS.	=	DOWNSPOUT	SPEC.	=	SPECIFICATION
EQ.	=	EQUAL	STD.	=	STANDARD
EL.	=	ELEVATION	STOR.	=	STORAGE
EX.	=	EXISTING	S.S.	=	STAINLESS STEEL
EXP.	=	EXPANSION	T.	=	TOILET
F.D.	=	FLOOR DRAIN	T.B.	=	TACK BOARD
F.E.	=	FIRE EXTINGUISHER	T&G	=	TONGUE AND GROOVE
F.E.C.	=	FIRE EXTINGUISHER CABINET	T.O.F.	=	TOP OF FOOTING
F.E.R.C.	=	FIRE EXT. RECESSED CABINET	T.O.M.	=	TOP OF MASONRY
F.E.S.C.	=	FIRE EXT. SEMI-RECESSED CABINET	T.O.W.	=	TOP OF WALL
FIN.	=	FINISHED	TYP.	=	TYPICAL
FLR.	=	FLOOR	U.N.O.	=	UNLESS NOTED OTHERWISE
GA.	=	GAUGE	V.I.F.	=	VERIFY IN FIELD
GYP.	=	GYPSUM BOARD	VERT.	=	VERTICAL
H.D.	=	HAND DRYER	VEST.	=	VESTIBULE
HORIZ.	=	HORIZONTAL	W/	=	WITH
H.S.S.	=	HOLLOW STRUCT. SECTION	W.W.F.	=	WELDED WIRE FABRIC
ISO.	=	ISOCYANURATE			
INSUL.	=	INSULATION			

FIRE RATED FRAMES



GENERAL ANNOTATION LEGEND



NON-LOAD BEARING COLD-FORMED METAL FRAMING SCHEDULE

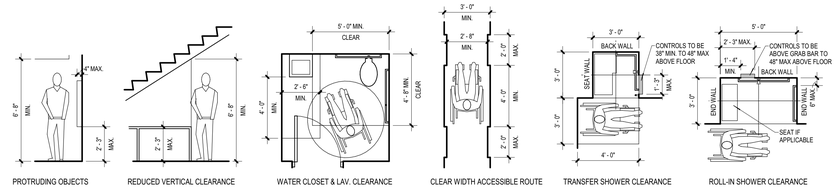
	DEPTH	GAUGE (33 KSI)	FLANGE WIDTH	IDENTIFICATION AISI S100/S200	LOCATION / USE
STUDS & JOISTS	2 1/2"	20	1 1/4"	250S125-30	BULKHEADS & MISC. FRAMING
	3 5/8"	20	1 1/4"	362S125-30	INTERIOR WALLS & BULKHEADS
	6"	18	1 5/8"	600S162-43	
	3 5/8"	20	1 5/8"	362S162-33	INTERIOR JAMBS
	6"	20	1 5/8"	600S162-43	
	6"	16	1 5/8"	600S162-54	EXTERIOR WALLS
TRACK	2 1/2"	20	1 1/4"	250T125-30	BULKHEADS & MISC. FRAMING
	3 5/8"	20	1 1/4"	362T125-30	INTERIOR WALLS & BULKHEADS
	3 5/8"	20	2 1/2"	362T250-33	DEFLECTION TRACK
	6"	18	1 1/4"	600T125-43	INTERIOR WALLS & BULKHEADS
	6"	16	1 1/2"	600T150-54	EXTERIOR WALLS
FURRING (HAT)	7/8"	20	N/A	087F125-33	WHERE NOTED
	1 1/2"	20	N/A	150F125-33	WHERE NOTED

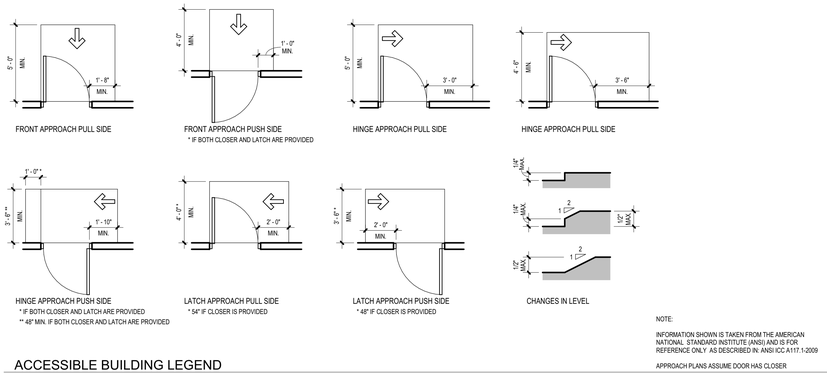
NOTE: ALL MEMBERS IN THIS SCHEDULE ARE SIZED FOR MAXIMUM 15' TALL WALLS
SEE COLD-FORMED METAL HEADER SCHEDULE FOR SPECIFIC JAMB & HEADER REQUIREMENTS

INTERIOR, NON-LOAD BEARING COLD-FORMED METAL HEADER SCHEDULE

ROUGH OPENING	MATERIAL	HEADER SHAPE
6'-0" MAX.	HEADER: (2) 362S162-33 JOISTS (2) 362T125-33 TRACKS JAMBS: (1) 362S162-33 STUD EACH END (1) 362T125-33 TRACK	
10'-0" MAX.	HEADER: (2) 600S162-33 JOISTS (2) 362T125-33 TRACKS JAMBS: (2) 362S162-33 STUDS EACH END (1) 362T125-33 TRACK	
12'-0" MAX.	HEADER: (2) 1000S162-43 JOISTS (1) 362S162-33 HORIZONTAL (3) 362T125-33 TRACKS JAMBS: (2) 362S162-33 STUDS EACH END (1) 362T125-33 TRACK	

ALL HEADERS IN THIS SCHEDULE ARE SIZED FOR INTERIOR, NON-LOAD BEARING WALLS ONLY
BASED ON 12' WALL HEIGHT / 5 psf INTERNAL LOAD / 50 plf VERTICAL DEAD LOAD

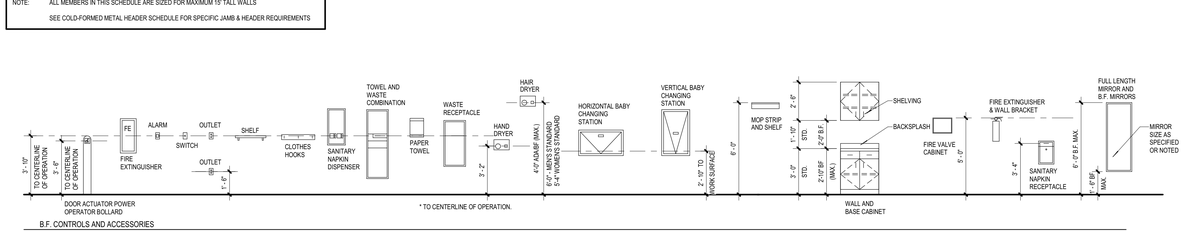


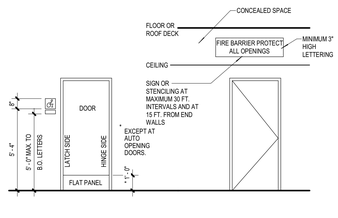


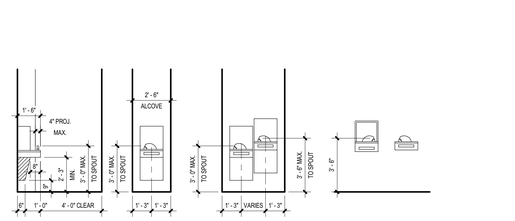
NOTE:
INFORMATION SHOWN IS TAKEN FROM THE AMERICAN NATIONAL STANDARD INSTITUTE (ANSI) AND IS FOR REFERENCE ONLY. AS DESCRIBED IN: ANSI ICC A117.1-2009
APPROACH PLANS ASSUME DOOR HAS CLOSER

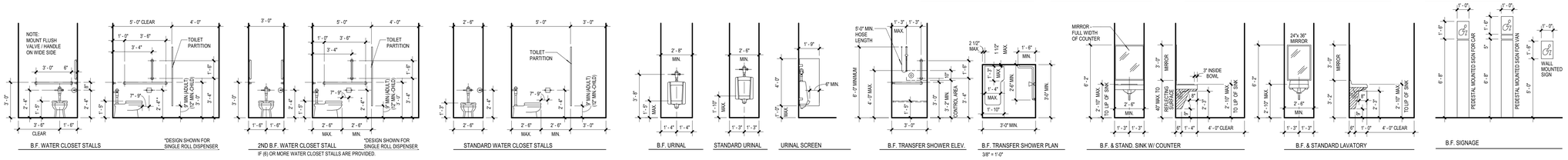
ACCESSIBLE BUILDING LEGEND

1/4" = 1'-0"









BARRIER FREE ADA DIMENSIONS

1/4" = 1'-0"

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PRELIMINARY NOT FOR CONSTRUCTION

ALLEGAN COUNTY COURTHOUSE ADDITIONS & RENOVATIONS

ALLEGAN COUNTY

ALLEGAN, MICHIGAN

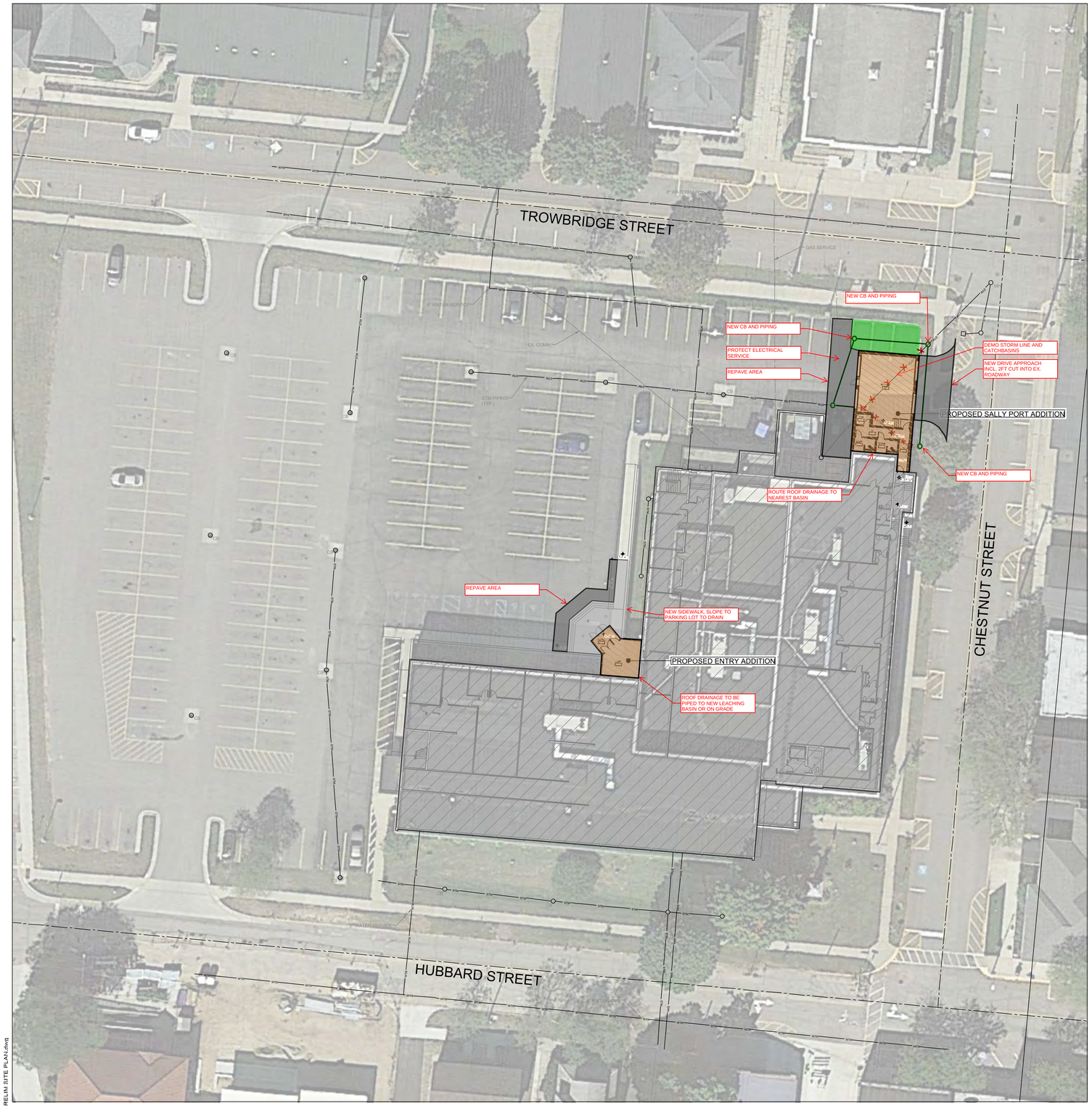
ISSUANCES

04.24.2020	SCHEMATIC DESIGN

DRAWN	BE
REVIEWED	AH
PROJECT NO.	5-5140

GENERAL NOTES
DIMENSIONS AND LEGENDS

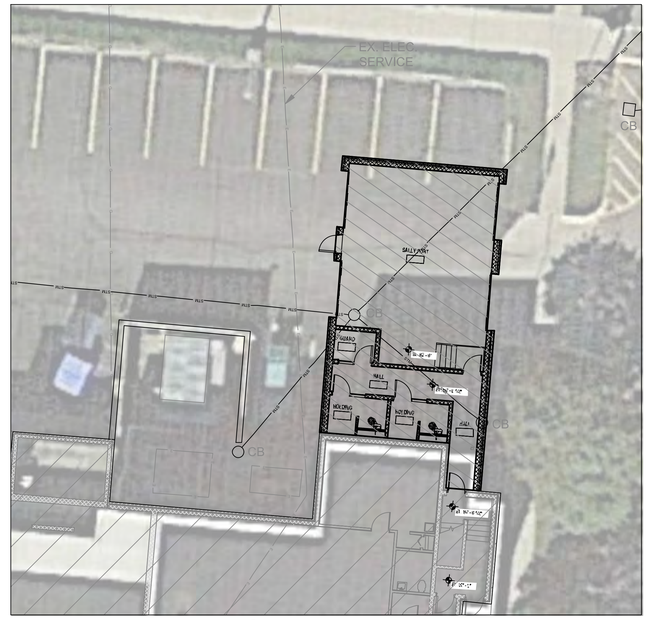
G0.01



NORTH

PRELIMINARY SITE PLAN

SCALE: 1" = 20'



NORTH

ENGLARGED SALLY PORT PLAN

SCALE: 1" = 10'

NORTH

ENLARGED ENTRY PLAN

SCALE: 1" = 10'

811 Know what's below. Call before you dig.

P:\5-4140\CAD\5-4140 PRELIM SITE PLAN.dwg
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PRELIMINARY NOT FOR CONSTRUCTION

COUNTY COURTHOUSE ADDITIONS

ALLEGAN COUNTY

ALLEGAN, MICHIGAN

ISSUANCES	
04.08.2020	FOR PROPOSAL

DRAWN	TV
REVIEWED	TV
PROJECT NO.	5-4150

PRELIMINARY SITE PLAN

ABBREVIATIONS

A/E	ARCHITECT / ENGINEER	HT	HEIGHT
ABV	ABOVE	ID	INSIDE DIAMETER
AFF	ABOVE FINISHED FLOOR	IF	INSIDE FACE
ALT	ALTERNATE	INT	INTERIOR
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	LLH	LONG LEG HORIZONTAL
		LLV	LONG LEG VERTICAL
ARCH	ARCHITECT	LW	LONG WAY
B.O.	BOTTOM OF	MAX	MAXIMUM
BFF	BELOW FINISHED FLOOR	MBC	MICHIGAN BUILDING CODE
BLDG	BUILDING	MECH	MECHANICAL
BLW	BELOW	MFR	MANUFACTURER
BP	BEARING PLATE	MIN	MINIMUM
BRG	BEARING	MISC	MISCELLANEOUS
C/C	CENTER-TO-CENTER	NIC	NOT IN CONTRACT
CANT	CANTILEVER	NOM	NOMINAL
CBP	COLUMN BASE PLATE	NTS	NOT TO SCALE
CIP	CAST-IN-PLACE	O/O	OUT-TO-OUT
CJP	COMPLETE JOINT PENETRATION WELD	OC	ON CENTER
		OD	OUTSIDE DIAMETER
CL	CENTERLINE	OF	OUTSIDE FACE
CLG	CEILING	OPP	OPPOSITE HAND
CLR	CLEAR	PAR	PARALLEL
COL	COLUMN	PEMB	PRE-ENGINEERED METAL BUILDING
CONC	CONCRETE		
CONN	CONNECTION	PERP	PERPENDICULAR
CONT	CONTINUOUS	PL	PLATE
COORD	COORDINATE	RAD	RADIUS
DA	DECK ANGLE	REQ	REQUIRED
DBE	DECK BEARING ELEVATION	REINF	REINFORCE
DIA	DIAMETER	RD	ROOF DRAIN
DIM	DIMENSION	RXN	REACTION
DP	DECK PLATE	SC	SLIP CRITICAL
EA	EACH	SF	STEP FOOTING
EF	EACH FACE	SIM	SIMILAR
EL	ELEVATION	SOG	SLAB ON GRADE
EQ	EQUAL	SPEC	SPECIFICATION
ES	EACH SIDE	STD	STANDARD
EW	EACH WAY	STL	STEEL
EX	EXISTING	SW	SHORT WAY
EXP	EXPANSION	T.O.	TOP OF
EXT	EXTERIOR	T&B	TOP AND BOTTOM
FD	FLOOR DRAIN	TYP	TYPICAL
FDN	FOUNDATION	UNO	UNLESS NOTED OTHERWISE
FLR	FLOOR		
GA	GAUGE	VERT	VERTICAL
GALV	GALVANIZED	VIF	VERIFY IN FIELD
GYP	GYPSUM BOARD	W/	WITH
HD	HOLD DOWN ANCHOR	W/O	WITHOUT
HORIZ	HORIZONTAL	WWF	WELDED WIRE FABRIC

LIGHT GAUGE METAL FRAMED WALL NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND DETAIL ALL LIGHT GAUGE FRAMING AND CONNECTIONS IN ACCORDANCE WITH THE CURRENT LOCAL BUILDING CODE AND AISI'S STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS THAT INDICATE FULL DESIGN AND CALCULATIONS FOR ALL EXTERIOR WALL AND HEADER CONDITIONS INCLUDING FASTENERS AND CLIPS. ALL WALLS 14' OR TALLER AND ALL OPENINGS 10' OR WIDER ALSO REQUIRE SUBMITTED CALCULATIONS. SHOP DRAWINGS SHALL BE SEALED BY A REGISTERED ENGINEER IN THE STATE OF MICHIGAN FOR ARCHITECTS REVIEW.
3. LIGHT GAUGE METAL SIZES SHOWN ON PLANS AND DETAILS ARE BASED ON METAL STUD INDUSTRY STANDARDS.
4. WHERE STUD DEPTH, WIDTH, OR THICKNESS IS INDICATED ON DRAWINGS IT SHALL BE CONSIDERED A MINIMUM REQUIREMENT.
5. WHERE METAL STUDS PROVIDE BACKUP FOR METAL PANEL OR OTHER SPECIALTY FINISH MATERIAL, COORDINATE STUD GAUGE THICKNESS WITH THE SUPPLIER OF THE WALL FINISH MATERIAL. THE SUPPLIER MAY HAVE MINIMUM THICKNESS REQUIREMENTS TO BE MET.
6. AT OPENINGS IN FRAMED WALLS, ALL HEADERS, SILLS, JAMB STUDS, AND RELATED CONNECTIONS SHALL BE DESIGNED TO TRANSFER WIND AND GRAVITY LOADS TO THE SUPPORTING PRIMARY STRUCTURE.
7. STUDS SHALL BE SECURELY ATTACHED TO TRACK COMPONENTS AT THE TOP AND BOTTOM OF THE WALL ASSEMBLY.
8. PLYWOOD/OSB SHEATHING SHALL BE FASTENED TO STUDS WITH NO. 6 FLAT HEAD SCREWS WITH A MINIMUM HEAD DIAMETER OF 0.292 INCHES.
9. METAL FRAMING SHALL BE FASTENED TOGETHER WITH MINIMUM #8 WAFER HEAD SELF DRILLING SCREWS.
10. UNLESS NOTED OTHERWISE, INSTALL 1/2" DIAMETER ANCHOR BOLTS IN BOTTOM TRACK AT 2'-6" ON CENTER WITH MINIMUM OF TWO BOLTS PER LENGTH OF WALL.

COMPOSITE FLOOR CONSTRUCTION NOTES

1. SHEAR CONNECTORS ARE 3/4"ø ASTM A108, GRADE 1015 HEADED STUDS. STUD LENGTH SHALL BE AS REQUIRED TO PROVIDE 1 1/2" PROJECTION ABOVE DECK. STUDS SHALL BE RESISTANCE-WELDED THROUGH THE DECKING TO THE SUPPORTING STEEL BY CONTRACTOR HAVING AT LEAST 3 YEARS OF SUCCESSFUL INSTALLATION EXPERIENCE ON SIMILAR PROJECTS.
2. STUD SPACING ON BEAMS SHALL BE GUIDED BY THE FOLLOWING, UNLESS NOTED.
   A. IF THE NUMBER OF STUDS IS LESS THAN THE NUMBER OF DECK RIBS, START AT BEAM ENDS AND PLACE A SINGLE SUD IN EVERY OTHER FLUTE, WORK TOWARD THE CENTER OF THE BEAM. IF STUDS REMAIN, FILL IN EMPTY RIBS, AGAIN STARTING AT BEAM ENDS AND WORKING TOWARD THE CENTER.
   B. IF THE NUMBER OF STUDS IS MORE THAN THE NUMBER OF DECK RIBS, AND IF MORE THAN ONE STUD PER RIB IS REQUIRED, PLACE A DOUBLE OR TRIPLE ROW AS NEEDED, STARTING FROM BEAM END AND WORKING TOWARD THE CENTER OF THE BEAM.
   C. IN GENERAL, IF STUDS CANNOT BE PLACED WITH A UNIFORM SPACING ALONG THE BEAM, THE GREATEST NUMBER OF STUDS SHOULD OCCUR AT THE ENDS.
3. PLACE STUDS ON GIRDERS AS FOLLOWS: STARTING AT THE GIRDER ENDS, PLACE THE FIRST STUD AT APPROXIMATELY 12" FROM THE COLUMN CENTER LINE (OR FACE OF WALL) AND WORK TOWARD THE CENTER OF THE GIRDER WITH UNIFORM SPACES BETWEEN THE STUDS. IF A DOUBLE ROW OF STUDS IS REQUIRED, IT IS BETTER TO PLACE THEM IN A STAGGERED PATTERN RATHER THAN SIDE BY SIDE. STUD SPACING BETWEEN FLOOR BEAMS MAY BE DIFFERENT FROM THE SPACING AT GIRDER ENDS.
4. TEST STUD ATTACHMENT TO BEAMS PER AWS D1.1, BUT NOT LESS THAN THE FOLLOWING.
   A. VISUALLY INSPECT STUDS FOR UNIFORM WELD ALL AROUND.
   B. TAP EACH STUD WITH HAMMER TO VERIFY BY SOUND.
   C. BEND EVERY TENTH STUD TO A SLOPE OF 15 DEGREES FROM VERTICAL, AWAY FROM SUPPORT WITHOUT LOSING STRENGTH OF ATTACHMENT, WHERE ATTACHMENT IS LOST, TEST AT LEAST TWO STUDS EACH SIDE OF FAILED STUD.
5. REPLACE ALL FAILED STUDS. NOTIFY ARCHITECT TO COORDINATE FINAL REVIEW PRIOR TO CONCRETE PLACEMENT.
6. PLACE REINFORCING BARS ACROSS GIRDERS ON SUPPORTS TO MAINTAIN POSITION AT TOP OF SLAB.
7. CLEAN DECK OF DUST, RUBBLE AND OTHER MATERIALS THAT COULD INTERFERE WITH THE BOND OF THE DECK AND THE CONCRETE.
8. WHEN PLACING CONCRETE, SCREED TO A LEVEL SURFACE. THIS MAY REQUIRE PLACING CONCRETE IN ADJACENT AREAS PRIOR TO FINAL SCREEDING, SO THAT STEELWORK AND DECK DEFLECTION WILL BE INCLUDED IN THE FINAL ELEVATION. IT IS LIKELY THAT MORE CONCRETE WILL BE REQUIRED TO COMPENSATE FOR DEFLECTION.
9. SUBMIT CONSTRUCTION JOINT LOCATIONS FOR ARCHITECT/ENGINEER REVIEW.
10. APPLY CURING METHOD AS SOON AS POSSIBLE AFTER FINISHING.

FRAMING LEGEND

U8 / L1	DENOTES LINTEL TYPE (SEE SCHEDULE)
BP1	DENOTES BEARING PLATE TYPE (SEE SCHEDULE)
CBP1	DENOTES COLUMN BASE PLATE TYPE (SEE SCHEDULE)
W16x36 (S)	DENOTES BEAM WITH STUDS ON TOP FLANGE (MINIMUM 3/4" DIA.)
TOS	DENOTES TOP OF STEEL ELEVATION
BOS	DENOTES BOTTOM OF STEEL ELEVATION
BOD	DENOTES BOTTOM OF DECK ELEVATION
	MOMENT CONNECTION
EOD	EDGE OF DECK
TCX	TOP CHORD EXTENSION
BCX	BOTTOM CHORD EXTENSION
1/4	DENOTES STRUCTURE SLOPES DOWN & PITCH
EX W16x36	THE "EX" DENOTES EXISTING STEEL TO REMAIN (ALL OTHER MEMBERS NOT NOTED WITH AN "EX." SHALL BE NEW & FURNISHED AS PART OF THIS CONTRACT)
VIF	VERIFY IN FIELD
T-1	DENOTES ENGINEERED WOOD TRUSS TYPE (SEE SCHEDULE)

FOUNDATION LEGEND

TOW	DENOTES TOP OF WALL ELEVATION
TOP	DENOTES TOP OF PIER ELEVATION
TOL	DENOTES TOP OF LEDGE ELEVATION
TOF	DENOTES TOP OF FOOTING ELEVATION
FF	DENOTES TOP OF SLAB / FINISH FLOOR ELEVATION
SF	STEP FOOTING (SEE TYP DETAIL)
F3x3 (66'-0")	FOOTING MARK (TOF ELEV).- SEE SCHEDULE FOR SIZE & REINFORCING
P2 (99'-4")	PIER MARK (TOP ELEV) SEE SCHEDULE FOR SIZE & REINFORCING
	CONCRETE FOUNDATION WALL & FOOTING
	MASONRY WALL & CONCRETE FOOTING

METAL DECK ATTACHMENT

USE THE FOLLOWING GUIDELINES FOR SECURING THE METAL ROOF DECK TO ITS SUPPORTING STRUCTURE.

1. ALL 1.5 B DECK - USE 5/8" PUDDLE WELDS ON 36/4 PATTERN WITH #10 SCREW SIDELAP FASTENERS MINIMUM 2 PER SPAN, OR USE HILTI FASTENERS PER 05 31 00 ON 36/4 PATTERN WITH #10 SCREW SIDELAP FASTENERS MIN. 2 PER SPAN EXCEPT AT AUDITORIUM AND STAGE ROOF USE 36/7 PATTERN WITH SIDELAP FASTENERS @ 24" OC.
2. ALL 3N AND 3NA DECK - USE #12 SCREWS ON 24/4 PATTERN WITH #10 SIDELAP FASTENERS AT 18" OC. OR USE HILTI X-ENP-19 L15 POWDER ACTUATED FASTENERS ON 24/4 PATTERN WITH #10 SCREW SIDELAP FASTENERS AT 18" OC. ROOF USE 36/7 PATTERN WITH SIDELAP FASTENERS @ 24" OC.

FLOOR & ROOF LEGEND

1.5B##	1 1/2" WIDE RIB DECK - ## INDICATES GAUGE
1.5BA##	1 1/2" WIDE RIB ACOUSTICAL DECK - ## INDICATES GAUGE
3N##	3" DEEP RIB DECK - ## INDICATES GAUGE
3NA##	3" DEEP RIB ACOUSTICAL DECK - ## INDICATES GAUGE
1.5C## / T	1 1/2" FORM DECK - ## INDICATES GAUGE "T" INDICATES TOTAL SLAB THICKNESS
2VL## / T	2" COMPOSITE DECK - ## INDICATES GAUGE "T" INDICATES TOTAL SLAB THICKNESS
##PC+T	PRECAST PLANK - ## INDICATES THICKNESS "T" INDICATES TOPPING THICKNESS

FLOOR FRAMING PLAN NOTES

1. UNO ON PLANS, FLOOR SLAB SHALL BE: 5" (TOTAL) NORMAL WEIGHT CONCRETE (3" CONCRETE OVER TOP OF DECK). REINFORCE SLAB WITH 6X6-W2.9XW2.9 WWF. LOCATE WWF IN TOP 1/3 OF SLAB. ELEVATION(S) ARE AS FOLLOWS:

LEVEL	T.O. SLAB	T.O. STEEL
SECOND FLOOR	14'-0"	13'-7"

2. FLOOR DECK:
   A. UNO, FLOOR SHALL BE 2" COMPOSITE, 18 GA., GALVANIZED METAL DECK, 3 SPAN CONTINUOUS (OR EQUIVALENT)
   B. FOR ALL DECK TYPES WITH INTERLOCKING SIDELAPS, REPLACE SCREWS WITH BUTTON PUNCHING OR WELDS.
   C. UNO, AT BEARING ENDS OF DECK, ATTACH DECK EDGES TO SUPPORTS AT EACH DECK RIB, BUT FASTENER SPACING NEED NOT BE LESS THAN 6" O.C.
   D. UNO, AT DECK EDGES WHERE DECK RUNS PARALLEL, PROVIDE (2) FASTENERS AT EACH JOIST OR BEAM. WHERE A CONTINUOUS STEEL SUPPORT HAS BEEN PROVIDED, FASTEN TO SUPPORTING MEMBER AT 12" O.C.
3. UNO ON PLANS, BEAMS OR JOISTS ARE EQUALLY SPACED BETWEEN COLUMNS OR ALONG GIRDERS.

GENERAL FOUNDATION NOTES

EDIT TEXT

1. PLAN ELEVATION 100'-0" = SITE DATUM PER CIVIL
2. FOUNDATIONS WILL BE PLACED IN BOTH THE NATIVE SOIL AND NEW SAND FILL. PRIOR TO PLACING CONCRETE THE BEARING SURFACE SHALL BE COMPACTED TO A DENSITY OF 95.0 PERCENT OF ITS MAXIMUM DENSITY AS DETERMINED BY ASTM D1557. REFERENCE THE SOILS REPORT FOUND IN THE SPECIFICATIONS FOR ADDITIONAL RECOMMENDATIONS.
3. ON SITE EXCAVATED SOILS MAY BE USED FOR BACKFILLING OF FOUNDATIONS EXCEPT AT RETAINING WALLS WHERE CLEAN SAND MEETING MDOT CLASS I I STANDARDS SHALL BE USED. THE WATER CONTENT OF ALL CLAY MATERIALS BEING PLACED SHALL BE 15.0 PERCENT OR LESS. FOLLOW THE RECOMMENDED INSTALLATION AND COMPACTION PROCEDURES FOR FILL AS OUTLINED IN THE SPECIFICATIONS AND SOILS REPORT.
4. INSTALL 2" RIGID INSULATION ON ALL PERIMETER FOUNDATION WALLS TO A MINIMUM DEPTH OF 2'-0" BELOW GRADE.
5. STEP FOOTINGS AT A MINIMUM 3 UNITS HORIZONTAL TO ONE (1) UNIT VERTICAL, WITH MAXIMUM 24" VERTICAL STEP. SEE TYP STEPPED FOOTING DETAIL.
6. LAP CONTINUOUS REINFORCING PER SCHEDULE. PROVIDE CORNER BARS FOR HORIZONTAL REINFORCING OF SAME SIZE.
7. SET FOUNDATION SLEEVES ON TOP OF FOOTING UNLESS NOTED OTHERWISE.
8. INSTALL UNDERGROUND DRAINAGE AROUND PERIMETER FOUNDATIONS AS SHOWN IN TYPICAL FOUNDATION DRAIN DETAIL. PROVIDE POSITIVE DRAINAGE OUTLET TO SITE STORM SYSTEM.
9. ON SITE WITH CLAY SOIL CONDITIONS, PROVIDE PVC WEEP HOLE SLEEVES THRU BOTTOM OF FOUNDATION WALL AT APPROXIMATELY 50 FOOT CENTERS TO DRAIN INTERIOR FILL.
10. NOTE 1" DIFFERENCE BETWEEN TYPICAL FOUNDATION WALL WIDTH AS COMPARED TO TYPICAL ARCHITECTURAL WALL WIDTH. SEE FOUNDATION WALL WITH VENEER DETAIL FOR MORE INFORMATION.

GENERAL SLAB NOTES

CONSIDER 5" FOR ALL FLOORS IN CASE SLAB IS POURED BEFORE FRAMING COMPLETED (ROUGHLY $2.50 / SF OVER 4" SLAB)

1. FLOOR SLABS ON GRADE SHALL BE MINIMUM 4" THICK CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT PER SPECIFICATIONS. SLABS AT RADIANT FLOORS, AT GYMNASIUM, THE COMMONS AREAS, AND STAGE SHALL BE MINIMUM 5" THICK. SEE PLANS FOR WHERE WWF IS REQUIRED.
2. ALL FLOOR SLABS ON GRADE SHALL BE PLACED ON 10 MIL VAPOR BARRIER OVER MINIMUM 8" COMPACTED CLEAN SAND FILL MEETING MDOT CLASS I I STANDARDS PLACED ON COMPACTED SUITABLE SUB-GRADE.
3. INSTALL CONSTRUCTION AND/OR CONTROL JOINTS FOR SLABS ON GRADE ON A MAXIMUM "3 X THICKNESS" SQUARE GRID (EG - 12'-0" FOR 4" SLAB) OR AS SHOWN ON THE FLOOR FINISH PLANS. REFERENCE TYP CONSTRUCTION AND CONTROL JOINT DETAILS. FLOOR SLABS AT BOTH GYMNASIUM AND STAGE SHALL BE MONOLITHIC POURS WITHOUT ANY JOINTS.
4. SLAB EDGE DETAIL. PROVIDE BOND BREAKER AT ALL SLAB TO WALL LOCATIONS. SEE SPECIFICATION.

FOUNDATION ELEVATIONS

(UNLESS OTHERWISE NOTED ON PLANS)

TOP OF FOUNDATION WALLS = EL. 99'-4"

TOP OF CONCRETE PIERS = EL. 99'-4"

TOP OF EXTERIOR FOOTINGS = EL. 96'-4"

TOP OF INTERIOR FOOTINGS = EL. 99'-4"

GENERAL STRUCTURAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION, AND WITH THE ARCHITECT'S APPROVAL MAKE ANY AND ALL NECESSARY MODIFICATIONS TO ENSURE A PROPER FIT.
2. COORDINATE ALL WORK INCLUDING DEMOLITION WITH ALL OTHER TRADES AND WITH THE REQUIREMENTS FOUND IN THE CONSTRUCTION DOCUMENTS.
3. THE EXISTING STRUCTURAL PLANS ARE DIAGRAMMATIC AND ARE BASED ON EXISTING OWNER DOCUMENTS AND LIMITED FIELD INVESTIGATION. VARYING & HIDDEN CONDITIONS MAY EXIST. IF DISCREPANCIES ARE FOUND, NOTIFY THE ARCHITECT & ENGINEER FOR DIRECTION / RESOLUTION BEFORE CONTINUING WORK IN THOSE AREAS.

STRUCTURAL DESIGN DATA

BUILDING CODE: MICHIGAN BUILDING CODE 2015 & ASCE 7-10

1. RISK CATEGORY: I I I
2. FLOOR LIVE LOAD:

CLASSROOMS & LABS	40 psf
LOBBIES, STAIRS & EXITS	100 psf
CORRIDORS	100 psf
CORRIDORS ABOVE 1ST FLOOR	80 psf
MECHANICAL & MAINTENANCE ROOMS	150 psf
STORAGE ROOMS	125 psf
CATWALK	40 psf + 300 # point load

   FLOOR DEAD LOAD:

PRECAST MEZZANINE	
6" PRECAST	56 psf
3" TOPPING	38 psf
FLOORING	2 psf
CEILING	2 psf
MEP / FIRE PROTECTION	5 psf
MISC	2 psf
	7 psf
	105 psf
CONCRETE ON METAL DECK (SECOND FLOOR & FUTURE SECOND FLOOR)	
5" CONCRETE ON 1.5" MTL DECK	55 psf
EXTRA CONCRETE	13 psf
FLOORING	2 psf
CEILING	3 psf
MEP / FIRE PROTECTION	5 psf
MISC	2 psf
STRUCTURE	5 psf
	85 psf

3. ROOF SNOW LOAD:

GROUND SNOW LOAD (Pg)	35 psf
FLAT ROOF SNOW LOAD (Pf)	27 psf
SNOW EXPOSURE FACTOR (Ce)	1.0
SNOW LOAD IMPORTANCE FACTOR (Is)	1.1
THERMAL FACTOR (Ct)	1.0

   ADDITIONAL SNOW DRIFT LOAD:

   ALL STRUCTURAL FRAMING INCLUDING JOISTS & TRUSSES HAVE BEEN DESIGNED FOR ADDITIONAL DRIFTING SNOW IN COMPLIANCE WITH THE BUILDING CODE AND ASCE 7-10

   ROOF DEAD LOAD:

ROOF FRAMING (NO FUTURE FLOOR)	
ROOF DECK	3 psf
ROOFING	2 psf
INSULATION	2 psf
STRUCTURE	4 psf
MEP / FIRE PROTECTION	5 psf
MISC	2 psf
CEILING	2 psf
	20 psf
HANGING ATHLETIC EQUIP (GYM ONLY - BOT CHORD)	10 psf

4. WIND LOAD:

ULTIMATE WIND SPEED (3 SEC. GUST)	120 mph
WIND EXPOSURE	C
INTERNAL PRESSURE COEFFICIENT (Gcpi)	0.18

   COMPONENTS & CLADDING PRESSURE (aed):

FLAT ROOFS (BASED ON 20 SF)	
UPLIFT WITHIN 10' OF CORNER	47 psf
UPLIFT WITHIN 10' OF EDGE	32 psf
UPLIFT INTERIOR	22 psf
WALLS	23 psf

   COMPONENTS & CLADDING PRESSURE (uft):

FLAT ROOFS (BASED ON 20 SF)	
UPLIFT WITHIN 10' OF CORNER	76 psf
UPLIFT WITHIN 10' OF EDGE	55 psf
UPLIFT INTERIOR	36 psf
WALLS	38 psf

5. SEISMIC DESIGN:

SEISMIC IMPORTANCE FACTOR (Ie)	1.25
SPECTRAL RESPONSE:	
Ss	0.0749
S1	0.045
Sds	0.08
Sd1	0.072
SITE CLASS	D
SEISMIC DESIGN CATEGORY	B

   SEISMIC FORCE-RESISTING SYSTEM: ORDINARY REINFORCED MASONRY SHEAR WALLS

SEISMIC RESPONSE COEFFICIENT (Cs)	0.05
RESPONSE MODIFICATION FACTOR (R)	2.0

   ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

   DESIGN BASE SHEAR:

   UNIT A = 26 KIPS
   UNIT B = 130 KIPS
   UNIT C = 130 KIPS
   UNIT D = 98 KIPS
   UNIT E = 98 KIPS
   UNIT F = 98 KIPS

   DESIGN SOIL BEARING CAPACITY (ASSUMED / SEE REPORT):

COLUMN FOOTINGS	2000 psf
WALL FOOTINGS	2000 psf

6. DESIGN STRESSES:

CONCRETE	
FOOTINGS & FOUNDATIONS	f'c = 3500 psi
SLABS-ON-GRADE	f'c = 4000 psi
ELEVATED SLABS & TOPPINGS	f'c = 4000 psi
PRECAST	f'c = 5000 psi
REINF. STEEL	Fy = 60,000 psi
STEEL	
W SHAPES	Fy = 50,000 psi
RECT HSS SHAPES	Fy = 50,000 psi
ROUND HSS & PIPE SHAPES	Fy = 46,000 psi
ALL OTHER SHAPES	Fy = 36,000 psi
WELDING ELECTRODE	E70XX
MASONRY	
CMU	2800 psi units f'm = 2300 psi
GROUT	f'c = 2300 psi
LUMBER	
DIMENSIONAL (SPF#2 OR BETTER)	Fb = 850 psi Fv = 135 psi
ENGINEERED (LVL)	Fb = 2600 psi Fv = 285 psi E = 1900 ksi

GENERAL STEEL FRAMING NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS STEEL REQUIRED NOT LIMITED TO ANGLES, PLATES, CHANNELS, RAILINGS, AND POSTS.
2. MASONRY CORES SHALL BE GROUTED FULL 3 COURSES DOWN MINIMUM BELOW ALL LINTEL, BEAM AND JOIST BEARING LOCATIONS ON BOTH NEW AND EXISTING MASONRY. POCKET WALL AS NECESSARY, GROUT, AND PATCH WALL TO MATCH ADJACENT MATERIAL.
3. ROOF DECK TO BE 1.5B 20GA. PAINTED - WELDED 36/4 PATTERN (12" OC) WITH (2) SIDE LAP FASTENERS PER SPAN UNLESS NOTED OTHERWISE. ALL CANOPY ROOF DECK TO BE GALVANIZED.
4. FURNISH & INSTALL 20 GA. FLAT PLATE FILLERS & COVERS AT DECK EDGES AND AT TRANSITION LINES OF ORIENTATION CHANGES AS REQ'D.
5. FURNISH & INSTALL ALL JOIST BRIDGING & BRACING AS NOTED OR AS REQUIRED BY THE STEEL JOIST INSTITUTE (SJI).
6. PROVIDE FRAMES FOR ROOF SUMPS AND FOR ALL OTHER ROOF OPENINGS REQUIRED ON PLANS PER TYPICAL ROOF FRAME DETAILS.
7. STEEL MEMBERS EXPOSED TO EXTERIOR CONDITIONS (INCLUDING LINTELS) REQUIRE GALVANIZING. ALL CANOPY STEEL TO BE GALVANIZED EVEN WHERE NOT LEFT EXPOSED TO VIEW.
8. DESIGN JOISTS FOR A NET WIND UPLIFT FORCE OF 25 PSF AND FOR ANY MECHANICAL LOADS AS INDICATED ON PLANS.
9. ALL COLUMN, BASE PLATE, AND ANCHOR BOLTS BELOW GRADE MUST BE ENCASED IN CONCRETE OR COATED W/ BITUMINOUS MATERIAL.
10. PROVIDE BEARING PLATE WITH SLOTTED HOLES PER LINTEL SCHEDULE AT ONE END OF ALL STEEL BEAMS WHERE THE BEAM RUNS PARALLEL TO THE CMU WALLS SUPPORTING IT.
11. COORDINATE AND FIELD VERIFY ALL MECHANICAL EQUIPMENT & OPENING LOCATIONS & SIZES FOR SUPPORTS & FRAMES.
12. IT IS THE FABRICATOR'S RESPONSIBILITY TO DESIGN AND DETAIL ALL MOMENT CONNECTIONS IN ACCORDANCE WITH CURRENT AISC STANDARDS AND SPECIFICATIONS BASED ON THE LOADS PROVIDED. SHOP DRAWINGS (THAT INDICATE ALL CONNECTION REQUIREMENTS) AND CALCULATIONS SHALL BE SEALED BY A REGISTERED ENGINEER IN THE STATE OF MICHIGAN AND SUBMITTED FOR REVIEW.
13. IT IS THE FABRICATOR'S RESPONSIBILITY TO DESIGN AND DETAIL ALL STEEL STAIRS IN ACCORDANCE WITH CURRENT AISC STANDARDS AND SPECIFICATIONS BASED ON THE LOADS PROVIDED. SHOP DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A REGISTERED ENGINEER IN THE STATE OF MICHIGAN AND SUBMITTED FOR REVIEW. SEE STRUCT & ARCH DRAWINGS FOR DESIGN INTENT.
14. IT IS THE FABRICATOR'S RESPONSIBILITY TO DESIGN AND DETAIL ALL STEEL BEAM SPLICES (WHETHER INDICATED IN DRAWINGS OR PROVIDED FOR ERECTION REASONS) IN ACCORDANCE WITH CURRENT AISC STANDARDS AND SPECIFICATIONS BASED ON THE LOADS PROVIDED. SHOP DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A REGISTERED ENGINEER IN THE STATE OF MICHIGAN AND SUBMITTED FOR REVIEW. SEE SPEC FOR ADDITIONAL INFO.
15. UNO, DESIGN FOR MIN 10K SHEAR REACTION

GMB
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PRELIMINARY NOT FOR CONSTRUCTION

57TH DISTRICT COURTHOUSE ADDITIONS & RENOVATIONS

ALLEGAN COUNTY

ALLEGAN, MICHIGAN

ISSUANCES

04.24.2020	SCHEMATIC DESIGN

DRAWN	MRC
REVIEWED	PMB
PROJECT NO.	5-5140

STRUCTURAL GENERAL INFORMATION

S0.01

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CMU WALL CONTROL JOINTS

NOTE:

SPACE MASONRY WALL CONTROL JOINTS A MAXIMUM OF 3-TIMES THE WALL HEIGHT EXCEPT AS LIMITED TO LENGTHS GIVEN IN THE PLAN DETAIL BELOW.

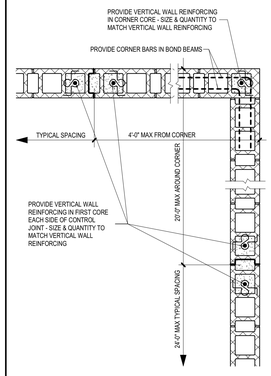
PROVIDE CONTROL JOINTS AT:
- CHANGES IN WALL HEIGHT OR THICKNESS;
- AT CONSTRUCTION JOINTS IN FOUNDATION WALLS, ROOFS AND FLOORS;
- AT COLUMNS;
- AT RETURN ANGLES IN L-SHAPED, T-SHAPED, AND U-SHAPED STRUCTURES;

DO NOT LOCATE CONTROL JOINTS WITHIN 2'-0" OF AN ADJACENT OPENING.

GROUT, CONCRETE, REINFORCING BARS, HORIZONTAL JOINT REINFORCEMENT, AND BOND BEAMS SHALL BE DISCONTINUOUS AT CONTROL JOINTS FOR FULL HEIGHT OF WALL EXCEPT AT ROOF LEVEL, FLOOR LEVELS, AND TOP OF WALLS.

EXTEND CONTROL JOINTS THRU FACING IF IT IS RIGIDLY BONDED TO MASONRY. CONTROL JOINTS NEED NOT EXTEND THRU FACING WHEN BOND IS FLEXIBLE (SUCH AS WITH METAL VENEER TIES).

MASONRY CONTROL JOINTS NEED NOT ALIGN WITH VENEER MOVEMENT JOINTS.



WALL PLAN DETAIL

CMU WALL REINFORCING SCHEDULE

MARK	NUMBER OF BARS	BAR SIZE (GRADE 60)	BAR SPACING	REMARKS
R1-5-48	ONE	#5	48" OC	CENTER IN CORE
R1-7-48	ONE	#7	48" OC	CENTER IN CORE
R2-7-32	TWO	#7	32" OC	CENTER IN CORE
R2-9-8	TWO	#9	8" OC	CENTER IN CORE
R2-9-24	TWO	#9	24" OC	CENTER IN CORE

NOTE:

MINIMUM REINFORCING (FOR ALL WALLS NOT OTHERWISE NOTED) :
ALL BEARING WALLS SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.
ALL EXTERIOR WALLS SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.
ALL INTERIOR NON-BEARING WALLS OVER 16'-0" HIGH SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.

VERTICAL REINFORCING BARS SHALL EXTEND INTO THE CONTINUOUS BOND BEAM AT THE TOP OF THE WALL

ALL MASONRY PIERS SHALL RECEIVE A MINIMUM REINFORCING OF (4) #5 BARS FULL HEIGHT IN GROUTED CORES.

ALL BAR LAPS TO BE PER "MINIMUM MASONRY REINFORCEMENT LAP LENGTH" SCHEDULE.

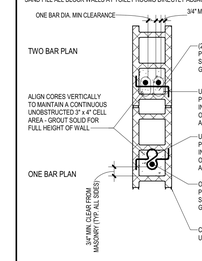
BLOCK CORES WITH VERTICAL REINFORCING SHALL BE GROUTED SOLID FOR FULL HEIGHT OF WALL

16" CMU MASONRY WALL MUST BE 16" CMU (NOT 2@8")

VERTICAL REINFORCING SHALL BE REQUIRED ON BOTH SIDES OF ALL WALL OPENINGS.

WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL BLOCK CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL IN 6 VERTICAL. DOWELS MAY BE GROUTED INTO A CELL ADJACENT TO THE VERTICAL WALL REINFORCING.

SAND FILL ALL BLOCK WALLS AT TOILET ROOMS DIRECTLY ADJACENT TO CLASSROOMS.



WALL REINFORCING DETAIL

MASONRY OPENING REQUIREMENTS

01 FOUNDATION DOWELS PER DRAWINGS

02 LINTEL - MASONRY OR STEEL PER PLANS & SCHEDULE

03 CONTINUE VERTICAL WALL REINFORCING IN KNEE WALL BELOW OPENING (WHERE APPLICABLE)

04 CONTINUE VERTICAL WALL REINFORCING OVER OPENING (AT MASONRY LINTEL, ANCHOR WITH STD. ACI 90 DEGREE HOOK)

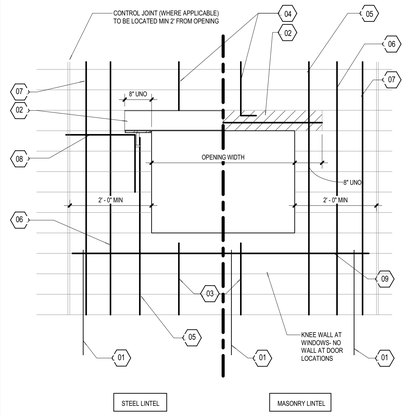
05 ADD (1) #5 VERT. BAR IN GROUTED FIRST CORE AT JAMBS- RUN FULL HEIGHT OF WALL EXCEPT AT CONTROL JOINT OR STEEL LINTEL LOCATIONS WHERE BAR TERMINATES AT LINTEL BOTTOM

06 AT OPENING WIDTHS OF 4'-1" THRU 8'-0" ADD (1) #5 VERT. BAR IN GROUTED SECOND CORE AT JAMBS - RUN FULL HEIGHT OF WALL (IN ADDITION TO SCHEDULED REINFORCING)

07 AT OPENING WIDTHS OVER 8'-1" ADD (1) #5 VERT. BAR IN GROUTED THIRD CORE AT JAMBS - RUN FULL HEIGHT OF WALL (IN ADDITION TO SCHEDULED REINFORCING)

08 AT TERMINATED VERTICAL REINFORCING PROVIDE #4 DOWELS (20"x20") GROUTED INTO ADJACENT CORES.

09 PROVIDE LADDER JOINT REINFORCING IN BED JOINT OF FIRST COURSE BELOW THE SILL- RUN FROM CONTROL JOINT TO CONTROL JOINT



LINTEL SCHEDULE

MARK	MATERIAL	SHAPE
U8	(1) COURSE MASONRY LINTEL (MATCH WALL THICKNESS) W/ (2) #5 BARS AND CONCRETE FILL	
U16	(2) COURSE MASONRY LINTEL (MATCH WALL THICKNESS) W/ (2) #5 BARS AND CONCRETE FILL	
U24	(3) COURSE MASONRY LINTEL (MATCH WALL THICKNESS) W/ (2) #5 BARS AND CONCRETE FILL	
L1	L3 1/2" x 3 1/2" x 1/4" (ONE FOR EACH 4" OF MASONRY)	8" WALL
L2	L5" x 3 1/2" x 1/4" LLV (ONE FOR EACH 4" OF MASONRY)	12" WALL
L3	W8x10 + 3/8" BOT PLATE	
L4	W8x18 + 3/8" BOT PLATE	
L5	W8x24 + 3/8" BOT PLATE	
L6	W16x26 + 3/8" BOT PLATE	
L7	W16x36 + 3/8" BOT PLATE (NO PL REQ'D FOR 8" WALL)	
L8	HSS8x4x1/4 + 3/8" BOT PLATE	
L9	HSS16x4x5/16 + 3/8" BOT PLATE	

ALL STEEL LINTELS IN EXTERIOR WALLS SHALL BE GALVANIZED.

ALL MASONRY LINTELS ARE TO HAVE THEIR ENTIRE DEPTH FILLED IN A SINGLE POUR (NO COLD JOINTS)

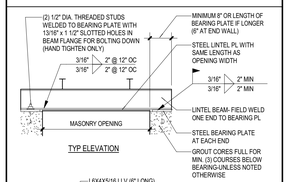
COPE BOT FLANGE OF LINTEL TO 6" WIDTH WHERE REQ'D TO FIT ON BEARING PLATE.

SEE DETAIL BELOW FOR ADDITIONAL REQUIREMENTS.

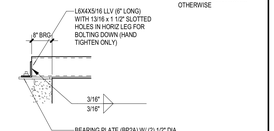
AT ELEVATOR SHAFTS, LINTEL TO EXTEND ACROSS ENTIRE LENGTH OF WALL (NOT JUST THE DOOR OPENING ITSELF)

AT W16 OR LARGER, PROVIDE WELD ON VENEER ANCHORS & ADJUSTABLE TIES AT 16" O.C. (BOTH FACES)

FOR OPENINGS NOT SHOWN, PROVIDE L1 FOR OPENINGS UP TO 4'-0" AND L2 FOR OPENINGS UP TO 6'-0". CONTACT ARCH / EGR FOR LARGER OPENINGS.



TYP ELEVATION



HSS LINTEL - SLIP END CONNECTION

SECTION

NON LOAD BEARING LINTEL SCHEDULE

MASONRY OPENING	WALL TYPE	LINTEL
0'-0" TO 4'0"	4" BRICK	L1
	6" / 8" / 10" / 12" CMU	U8 or L1
4'-0" TO 6'-6"	4" BRICK	L2
	6" CMU	L5 x 5 x 5/16
	8" CMU	L2
	10" / 12" CMU	L3
6'-6" TO 10'-0"	4" BRICK	L6 x 3 1/2 x 1/2 LLV
	6" CMU	L3
	8" / 10" / 12" CMU	L4
10'-0" TO 14'0"	4" BRICK	-
	6" / 8" / 10" / 12" CMU	L4

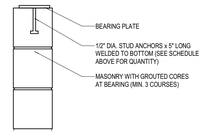
BEARING PLATE SCHEDULE

MARK	MATERIAL
BP1	3/8" x 4" x 8" STEEL PLATE W/ 1 ANCHOR
BP2	3/8" x 7" x 7" STEEL PLATE W/ 1 ANCHOR
BP2A	3/8" x 7" x 12" STEEL PLATE W/ 1 ANCHOR (USED AT ONE END OF HSS LINTELS)
BP3	1/2" x 6" x 9" STEEL PLATE W/ 1 ANCHOR
BP4	3/4" x 7" x 12" STEEL PLATE W/ 2 ANCHORS
BP5	1" x 7" x 12" STEEL PLATE W/ 2 ANCHORS
BP6	1" x 11" x 11" STEEL PLATE W/ 4 ANCHORS
BP7	1 1/2" x 7" x 20" STEEL PLATE W/ 4 ANCHORS

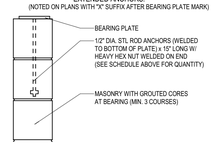
UNO, PROVIDE
- BP2 AT ALL K JOIST, LINTEL & BEAM BEARING LOCATIONS
- BP3 AT LH JOIST BEARING LOCATIONS

UNO:
- BEAMS ARE TO EXTEND TO WITHIN 1/2" OF FAR SIDE OF BEARING PLATE
- AT BEAMS, PROVIDE MIN 2" OF 3/16" WELD EACH SIDE OF FLANGE TO PLATE
- AT JOISTS, WELD TO PLATE PER SJI REQUIREMENTS

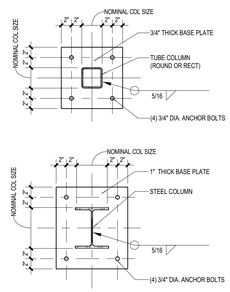
STANDARD ANCHORS:



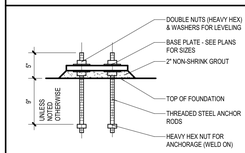
EXTENDED ANCHORS:
(NOTED ON PLANS WITH "X" SUFFIX AFTER BEARING PLATE MARK)



COLUMN BASE PLATE SCHEDULE



CBP1 (TYP UNO)



ALTERNATE: 1/4" LEVELING PLATE MAY BE USED IN LIEU OF DOUBLE NUTS

CONCRETE REINFORCEMENT LAP SCHEDULE

BAR SIZE	VERTICAL BARS & HORIZONTAL BTM. BARS: DEVELOPMENT LENGTH	VERTICAL BARS & HORIZONTAL BTM. BARS: SPLICE LENGTH	HORIZONTAL TOP BARS: DEVELOPMENT LENGTH	HORIZONTAL TOP BARS: SPLICE LENGTH
#3	15"	19"	19"	25"
#4	19"	25"	25"	33"
#5	24"	31"	31"	41"
#6	29"	37"	37"	49"
#7	42"	54"	54"	71"

- HORIZONTAL BOTTOM BARS ARE THOSE PLACED WITH 12" OR LESS OF FRESH CONCRETE CAST BELOW THE BAR.
- HORIZONTAL TOP BARS ARE THOSE PLACED WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THE BAR.

FOOTING SCHEDULE

MARK	SIZE: WIDTH	SIZE: LENGTH	SIZE: THK.	REINFORCING
F18	18"	CONT.	12"	(2)#5 BARS CONT.
F24	24"	CONT.	12"	(2)#5 BARS CONT.
F30	30"	CONT.	12"	(2)#5 BARS CONT.
F36	36"	CONT.	12"	(3)#5 BARS CONT.
F48	48"	CONT.	14"	(4)#5 BARS LONG WAY #5 BARS @ 18" OC SHORT WAY
F48R	48"	CONT.	14"	(4)#5 BARS LONG WAY #5 BARS @ 12" OC SHORT WAY
F60	60"	CONT.	14"	(6)#5 BARS LONG WAY #5 BARS @ 12" OC SHORT WAY
F3x3	3'-0"	3'-0"	12"	(3)#5 BARS EACH WAY
F4x4	4'-0"	4'-0"	12"	(5)#5 BARS EACH WAY
F4x5	4'-0"	5'-0"	12"	(5)#5 BARS LONG WAY (6)#5 BARS SHORT WAY
F4x6	4'-0"	6'-0"	16"	(5)#5 BARS LONG WAY (7)#5 BARS SHORT WAY
F5x5	5'-0"	5'-0"	14"	(6)#5 BARS EACH WAY
F6x6	6'-0"	6'-0"	16"	(7)#6 BARS EACH WAY
F6x6(x24)	6'-0"	6'-0"	24"	(7)#6 BARS EACH WAY
F7x7	7'-0"	7'-0"	18"	(7)#7 BARS EACH WAY
F7x9	7'-0"	9'-0"	20"	(9)#7 BARS LONG WAY (9)#7 BARS SHORT WAY
F8x8	8'-0"	8'-0"	20"	(8)#7 BARS EACH WAY
F9x9	9'-0"	9'-0"	24"	(9)#7 BARS EACH WAY
F10x10	10'-0"	10'-0"	24"	(10)#7 BARS EACH WAY
F11x11	11'-0"	11'-0"	28"	(10)#8 BARS EACH WAY
F12x12	12'-0"	12'-0"	30"	(12)#8 BARS EACH WAY
TS	2x WALL WIDTH	CONT.	8"	(2)#5 BARS CONTINUOUS (SEE TYP THICKENED SLAB DETAIL)

UNLESS NOTED OTHERWISE, SEE TYPICAL WALL FOOTING AND TYPICAL COLUMN FOOTING DETAILS FOR ADDITIONAL INFORMATION. THICKENED SLAB REQUIRED UNDER ALL NEW NON-BEARING CMU WALLS (8" OR LARGER BLOCK).

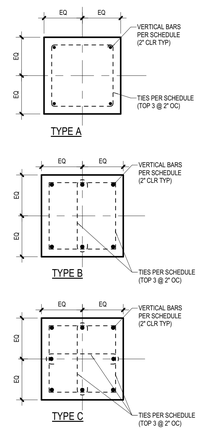
PIER SCHEDULE

MARK	SIZE: WIDTH	SIZE: LENGTH	SIZE: HEIGHT	TYPE	REINFORCING
P1	18"	18"	VARIES	A	(4) #5 BARS VERTICAL & #3 TIES
P2	22"	22"	VARIES	A	(4) #7 BARS VERTICAL & #3 TIES
P3	24"	24"	VARIES	A	(4) #7 BARS VERTICAL & #3 TIES
P4	32"	32"	VARIES	C	(8) #7 BARS VERTICAL & #3 TIES
P5	24"	48"	VARIES	C	(8) #8 BARS VERTICAL (DOWEL INTO FOOTING) & (2) #3 TIES
P6	32"	48"	VARIES	C	(8) #8 BARS VERTICAL (DOWEL INTO FOOTING) & (2) #3 TIES

UNLESS NOTED OTHERWISE, SEE TYPICAL PIER DETAIL FOR ADDITIONAL INFO.

PROVIDE TOP (3) TIES @ 2" OC, REMAINDER @ 12" OC.

PROVIDE DOWELS INTO FOOTING TO MATCH VERTICAL REINF.

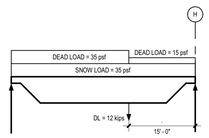


PIER DETAILS

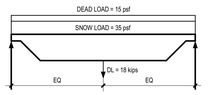
JOIST LOADING SCHEDULE

JOIST / JOIST GIRDER	UNIFORM DEAD LOAD (psf)	UNIFORM SNOW LOAD (psf)	MAX SNOW DRIFT LOAD(psf)	WIDTH OF SNOW DRIFT(ft)	HANGER LOAD "H" (lb)
32LHSP1	35	35	-	-	-
32LHSP2	35	35	117	23	23
32LHSP3	35	35	108	21	21
32LHSP4	DIAGRAM	DIAGRAM	-	-	-
32LHSP5	DIAGRAM	DIAGRAM	-	-	-

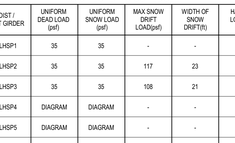
NOTES:
1. SEE PLAN FOR TRIBUTARY WIDTH OF EACH JOIST.
2. DESIGN JOIST & JOIST GIRDER TOP & BOT CHORDS FOR (2) 1000# HANGING LOADS SPACED 10'-0" OC ANYWHERE ALONG CHORD WITHOUT THE NEED FOR PANEL POINT REINFORCING. HANGING LOADS AT TOP & BOT CHORD NEED NOT BE CONCURRENT.
3. * ON PLAN INDICATES JOIST OR JOIST GIRDER THAT IS PART OF A MOMENT FRAME. REFER TO DETAIL & MOMENT CONNECTION SCHEDULE FOR ADDTL INFO.
4. ALL JOISTS & JOIST GIRDERS TO BE DESIGNED FOR MAX LIVE LOAD DEFLECTION OF SPAN/360.



32LHSP4
CASE 1 - LOADING AS 32LHSP1
CASE 2 - LOADING PER SKETCH



32LHSP5
CASE 1 - LOADING AS 32LHSP1
CASE 2 - LOADING PER SKETCH



MINIMUM MASONRY REINFORCEMENT LAP LENGTHS

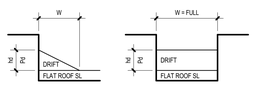
BAR SIZE	VERTICAL BARS IN TENSION- SINGLE BARS IN CORE: 8" CMU- SINGLE BAR	VERTICAL BARS IN TENSION- SINGLE BARS IN CORE: 12" CMU- SINGLE BAR	VERTICAL BARS IN TENSION- DOUBLE BARS IN CORE: 8" CMU- DOUBLE BAR	VERTICAL BARS IN TENSION- DOUBLE BARS IN CORE: 12" CMU- DOUBLE BAR
#4	25"	25"	25"	25"
#5	25"	25"	25"	25"
#6	38"	25"	50"	28"
#7	54"	34"	72"	40"
#8	82"	52"	116"	64"

- MECHANICAL SPLICES MAY BE USED IN LIEU OF LAPPED SPLICES. MECH SPLICE MUST DEVELOP 125% OF BAR TENSION STRENGTH

MOVE TO SNOW DRIFT PLAN & CMU REINF PLAN LOCATIONS FOR YOUR PARTICULAR PROJECT (IE - DON'T KEEP THESE ON S0.02)

DRIFT LOAD SCHEDULE

MARK	TYPE	DRIFT: hd (feet)	DRIFT: Pd (psf)	DRIFT: W (feet)
A1	T	2.8	50	11.2
A2	T	2.8	50	11.2
A3	F	2.8	50	FULL
B1	T	2.8	50	11.2
C1	T	2.8	50	11.2



DRIFT TYPE 'T' DRIFT TYPE 'F'

DENOTES ADDITIONAL WALL REINFORCING REQUIRED:

J2 (2)#5 VERT. BARS IN GROUTED CORES FROM TOP OF FOUNDATION TO BOTTOM OF LINTEL

J3 PROVIDE BARS THAT MATCH WALL REINFORCING IN EACH OF FIRST (3) CORES ADJACENT TO OPENING

J4 (4)#5 VERT. BARS w/ #2 TIES @ 8"OC IN GROUTED CORES FROM TOP OF FOUNDATION TO BOTTOM OF LINTEL

SB GROUTED ALL CORES SOLID FROM TOP OF FOUNDATION TO BOTTOM OF BEAM FOR FULL LENGTH OF SPREADER BEAM

H DOWEL ADDITIONAL REINFORCING BARS AT JAMBS INTO FOOTING

NOTE:

REINFORCING NOTATION APPLIES TO ENTIRE LENGTH OF WALL (NOT JUST THE SECTION OF WALL WHERE THE NOTE HAPPENS TO BE) INCLUDING ABOVE AND BELOW OPENINGS WITHIN THE WALL NOTED.

SHEAR WALLS:

REQUIRE 2 VERTICAL BARS IN END CORES GROUTED FULL HEIGHT AND DOWELED INTO FOUNDATION. INDICATED AS THUS ON PLAN.

SHEAR WALL

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57TH DISTRICT COURTHOUSE ADDITIONS & RENOVATIONS

ALLEGAN COUNTY

ALLEGAN, MICHIGAN

ISSUANCES

04.24.2020 SCHEMATIC DESIGN

DRAWN MRC

REVIEWED PMB

PROJECT NO. 5-5140

STRUCTURAL SCHEDULES

S0.02

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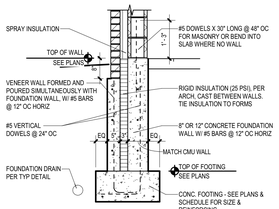
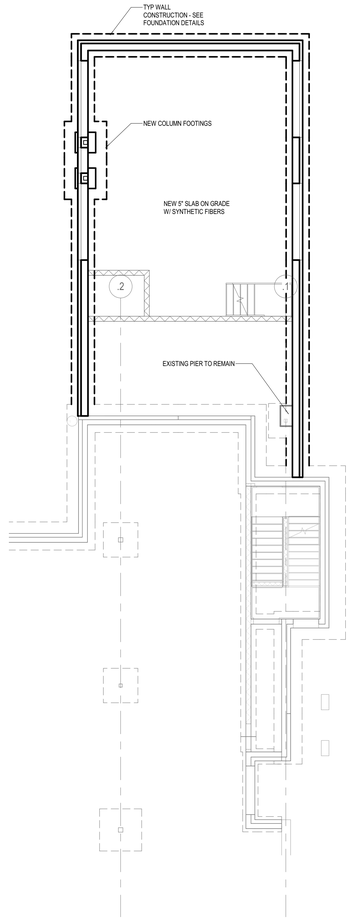


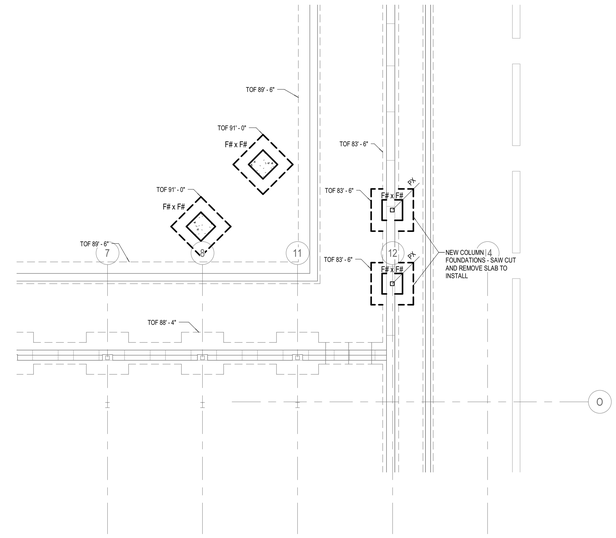
3 / S2.1 FOUNDATION WALL WITH VENEER

1/2" = 1'-0"



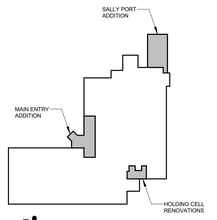
SALLY PORT FOUNDATION PLAN

1/8" = 1'-0"



MAIN ENTRY ADDITION FOUNDATION PLAN

1/8" = 1'-0"



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57TH DISTRICT COURTHOUSE ADDITIONS & RENOVATIONS

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FOUNDATION PLANS

S2.1

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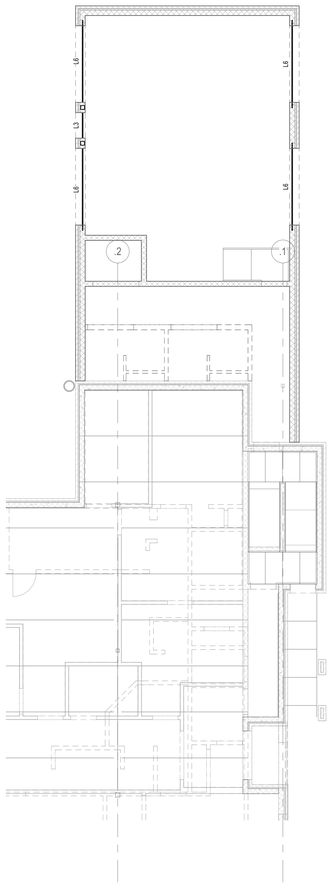
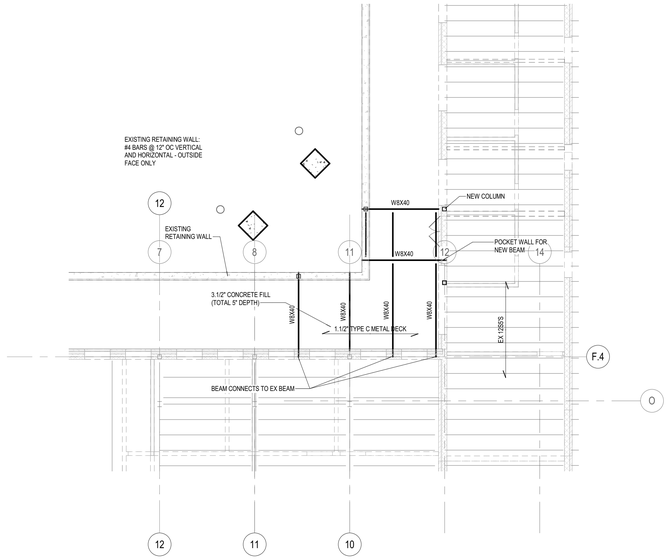


NORTH

SALLY PORT - LINTEL PLAN

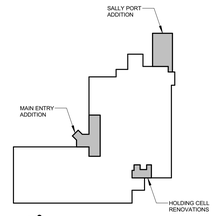
1/8" = 1'-0"



NORTH

MAIN ENTRY ADDITION - FLOOR FRAMING PLAN

1/8" = 1'-0"



NORTH

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FLOOR FRAMING & LINTEL PLAN

S3.1

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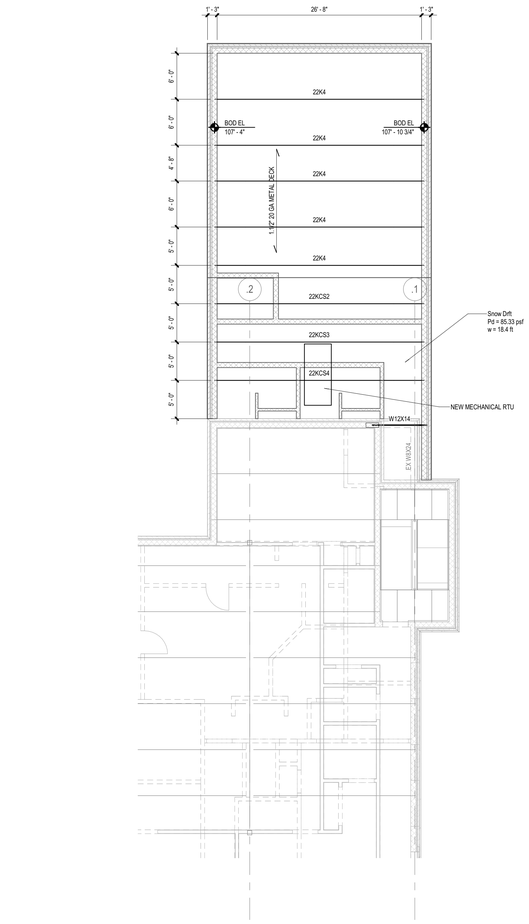
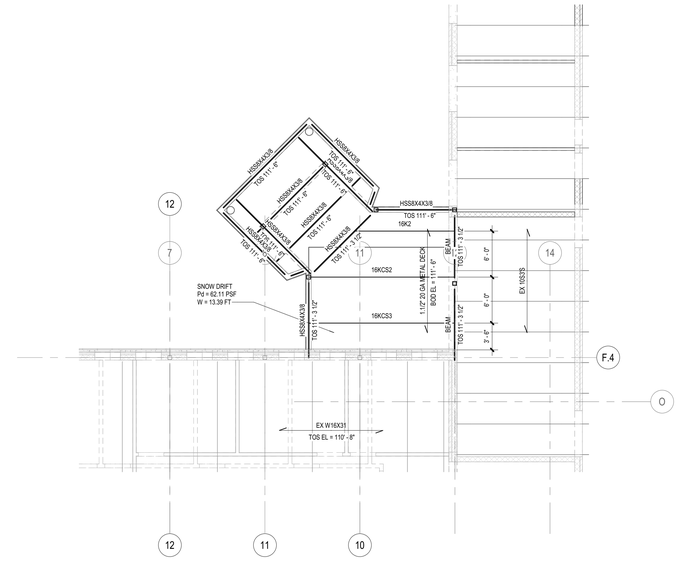
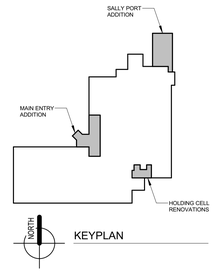


SALLY PORT ADDITION - ROOF FRAMING PLAN
1/8" = 1'-0"



MAIN ENTRY ADDITION - ROOF FRAMING PLAN
1/8" = 1'-0"



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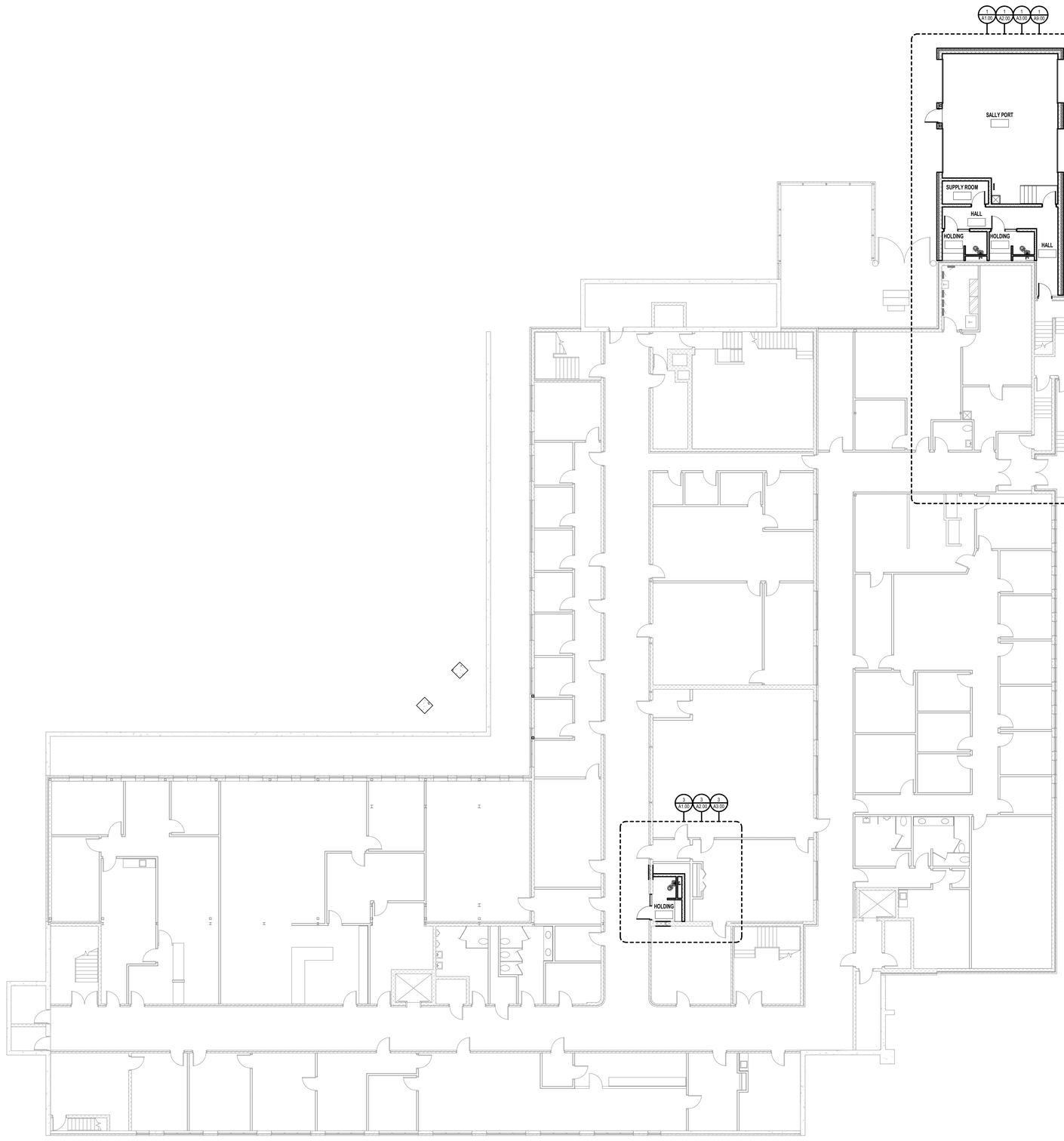
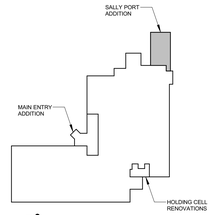
ROOF FRAMING PLANS

S3.2



OVERALL LOWER LEVEL FLOOR PLAN
3/32" = 1'-0"



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OVERALL LOWER LEVEL FLOOR PLAN

A0.00

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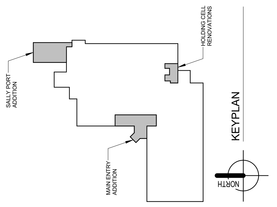
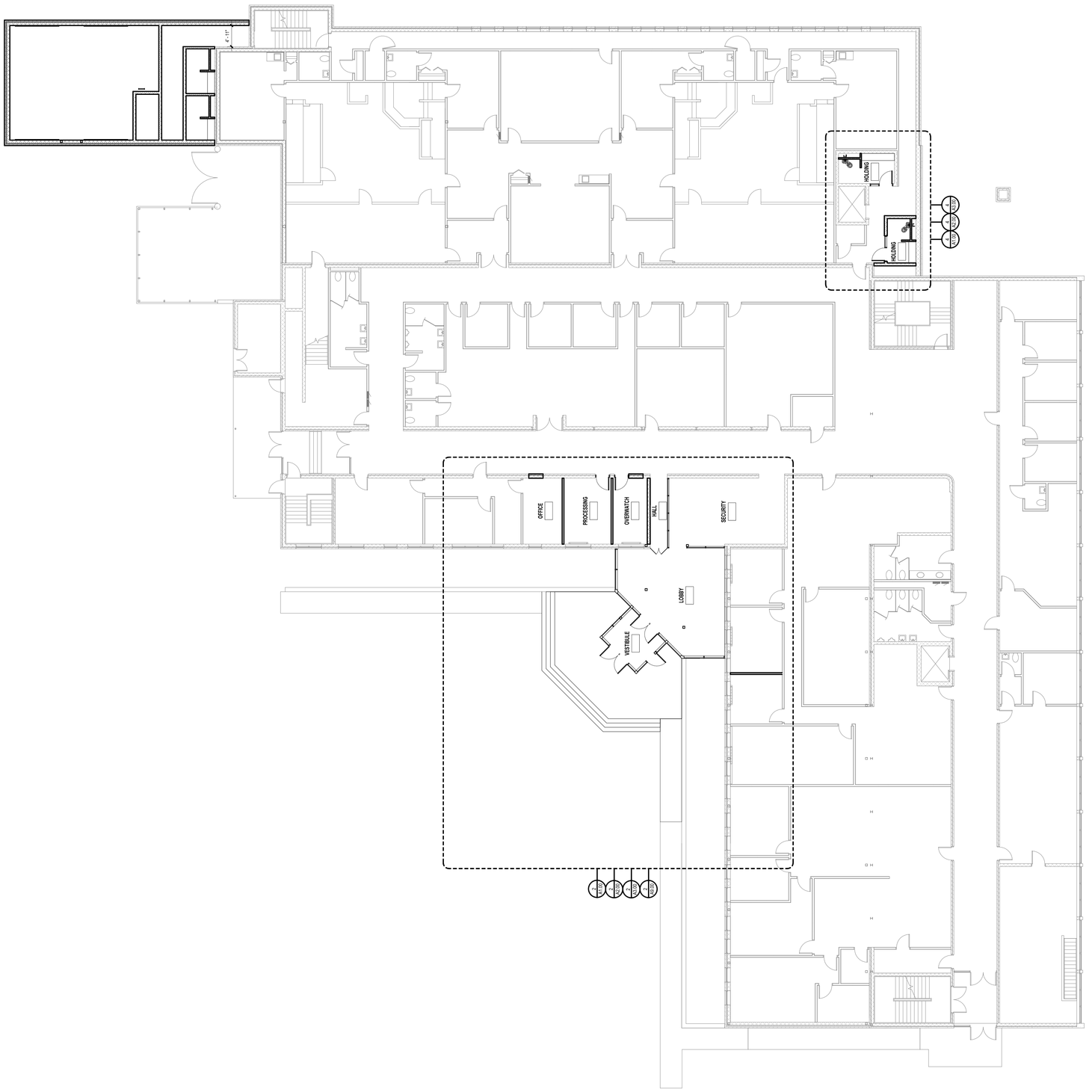
OVERALL FIRST FLOOR PLAN

A0.01





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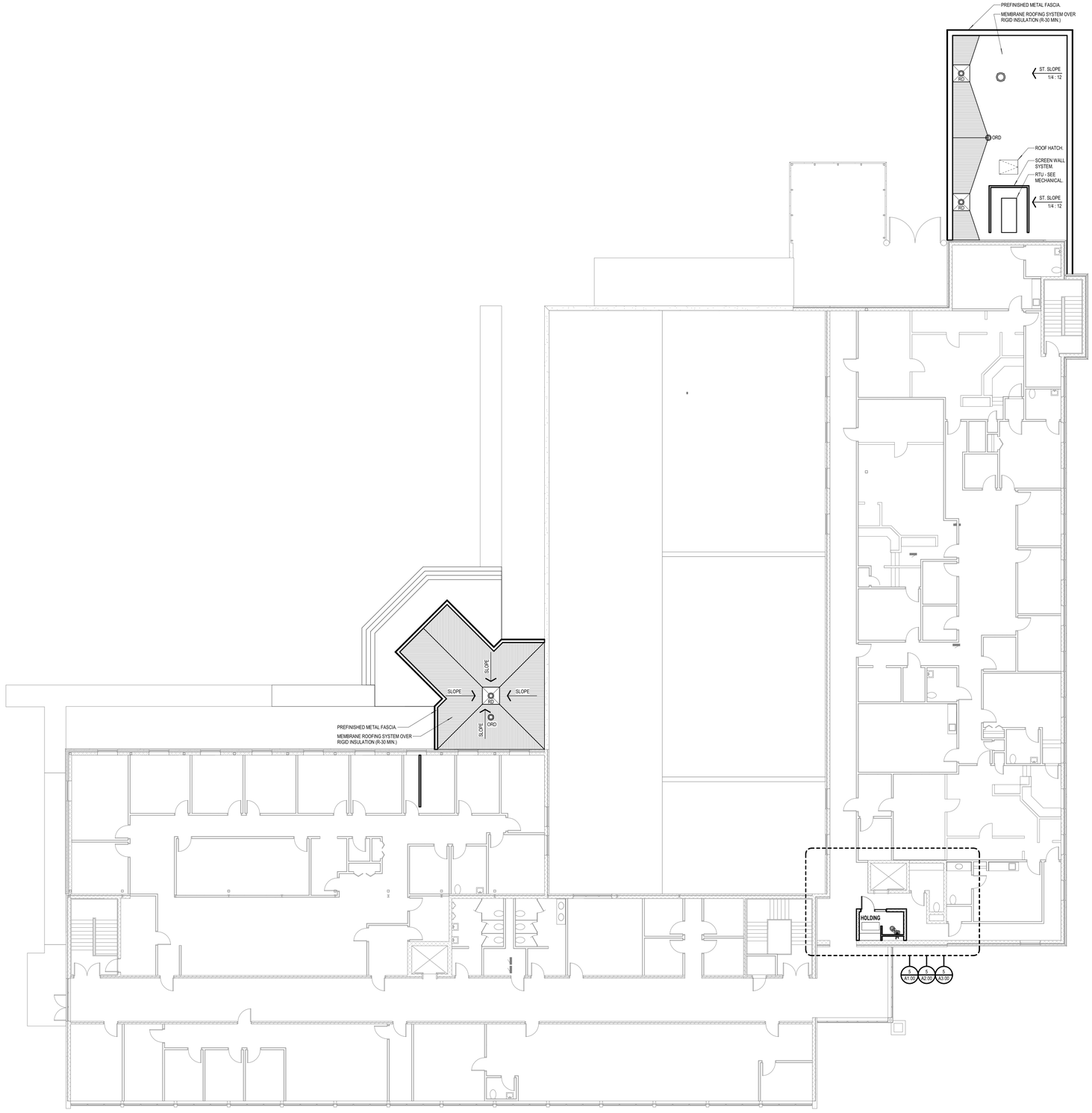


OVERALL SECOND FLOOR PLAN

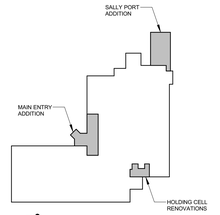
3/32" = 1'-0"

ROOF PLAN NOTES

1. ALL ROOF DETAILS - LOCATED ON SHEET A7.01.
2. REFER TO PLUMBING DRAWINGS FOR LOCATION AND NUMBER OF PLUMBING VENTS THRU ROOF.
3. REFER TO MECHANICAL DRAWINGS TO COORDINATE ALL ROOF PENETRATIONS & LOCATIONS.
4. PROVIDE 1/2" TAPERED CRICKETS AT ALL ROOF HATCHES AND MECHANICAL ROOF PENETRATIONS UNLESS OTHERWISE NOTED. TAPER SHALL PROVIDE DRAINAGE AROUND HATCH AND EQUIPMENT.
5. SEE SPECIFICATION FOR ROOFING SYSTEM TO BE USED AND ROOF PLAN FOR LOCATIONS OF TAPERED INSULATION AND OR SLOPE CHANGES OF ROOF.
6. CONTRACTOR RESPONSIBLE TO FIELD VERIFY ALL SQUARE FOOTAGE VALUES NOTED ON PLANS.
7. SCUPPER LOCATIONS TO BE COORDINATED SO THAT THEY DO NOT APPEAR OVER DOORS, WINDOWS OR MECHANICAL LOUVERS.
8. STANDARD ROOF ABBREVIATIONS
   RD = ROOF DRAIN
   ORD = OVERFLOW ROOF DRAIN
   EF = EXHAUST FAN
   IV = INTAKE VENT
   RTU = ROOF TOP UNIT
   RV = RELIEF VENT

ROOF PLAN LEGEND

- TAPERED RIGID INSULATION (4" SECTIONS) 1/4" PER FOOT SLOPE UNLESS OTHERWISE NOTED
- TAPERED RIGID INSULATION (4" SECTIONS @ 1/2" SLOPE PER FOOT AT CRICKETS) CRICKETS SLOPE TO ROOF DRAINS.
- ST. SLOPE — DIRECTION OF STRUCTURAL ROOF SLOPE. (SEE STRUCTURAL PLANS FOR ROOF FRAMING SLOPES).
- SLOPE — DIRECTION OF ROOF SLOPE WITH TAPERED INSULATION.
- STANDARD ROOF DRAIN.
- + 7 1/4" — THICKNESS OF TAPERED INSULATION AT PERIMETER OR DRAIN (NOT INCLUDING BASE INSULATION THICKNESS).
- ROOF HATCH.
- ROOF WALKWAY PAD (SEE SPEC. FOR MATERIAL).



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OVERALL SECOND FLOOR PLAN

A0.02

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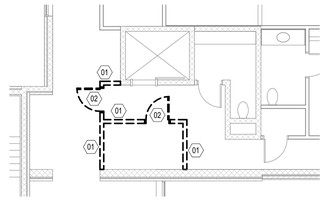
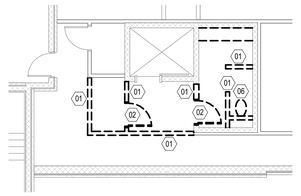
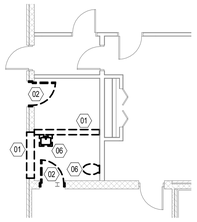


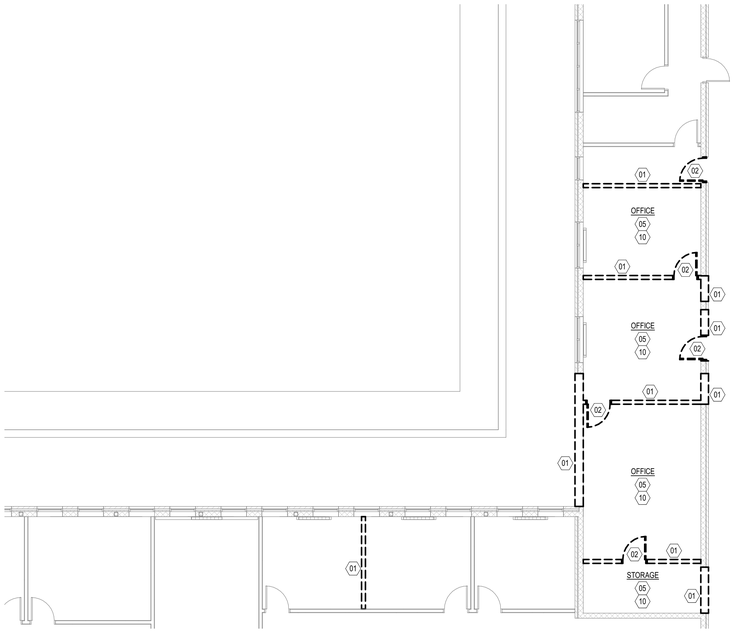
5 A1.00 SECOND FLOOR HOLDING CELLS PARTIAL DEMOLITION PLAN
1/8" = 1'-0"



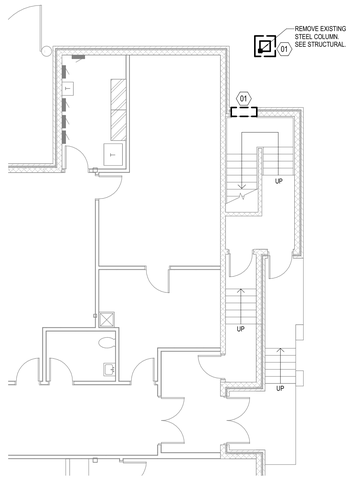
4 A1.00 FIRST FLOOR HOLDING CELLS PARTIAL DEMOLITION PLAN
1/8" = 1'-0"



3 A1.00 LOWER LEVEL HOLDING CELL PARTIAL DEMOLITION PLAN
1/8" = 1'-0"



2 A1.00 MAIN ENTRY ADDITION PARTIAL DEMOLITION PLAN
1/8" = 1'-0"



1 A1.00 SALLY PORT ADDITION PARTIAL DEMOLITION PLAN
1/8" = 1'-0"

DEMOLITION LEGEND

- EXISTING WALL TO BE DEMOLISHED.
- PORTION OF EXISTING WALL TO BE DEMOLISHED.
- EXISTING OBJECT TO BE DEMOLISHED.
- AREA OF FLOOR CUTTING.
- EXISTING WALL TO REMAIN.
- EXISTING OBJECT TO REMAIN.
- XX DEMOLITION TAG: SEE DEMOLITION NOTES.

DEMOLITION NOTES

- DEMOLITION CONTRACTOR IS TO STOP WORK IMMEDIATELY IN AREA IF ASBESTOS IS ENCOUNTERED. NOTIFY CONSTRUCTION MANAGER OF SUSPECTED AREA SO PROPER ABATEMENT CAN BE DONE. (UNDER A SEPARATE ASBESTOS ABATEMENT CONTRACT AS NEGOTIATED BY OWNER.)
- ALL MASONRY BLOCK AND BRICK WALLS TO BE REMOVED MUST BE TOOTHED TO RECEIVE NEW MASONRY, UNLESS NOTED OTHERWISE ON DRAWINGS.
- DEMOLITION CONTRACTOR IS TO PROVIDE TEMPORARY SHORING AND BRACING FOR EXISTING ROOF/FLOOR STRUCTURE AS REQUIRED UNTIL PERMANENT WALLS & LINTELS ARE INSTALLED. REFER TO STRUCT. & ARCH. DWGS. FOR BEARING CONDITIONS.
- ALL TRADES ARE TO COORDINATE ANY DEMOLITION, CAPPING OR ABANDONMENT OF EXISTING MECHANICAL, ELECTRICAL, PLUMBING OR ARCHITECTURAL ITEMS.
- ALL ITEMS TO BE SAVED AND/OR RELOCATED ARE TO BE STORED IN A PROPER MANNER SO NO DAMAGE WILL OCCUR TO THESE ITEMS DURING THEIR STORAGE PERIOD.
- ALL DEMOLITION WHICH DAMAGES ADJACENT SURFACES IS TO BE REPAIRED TO MATCH THE EXISTING SURFACE DAMAGED (MATERIALS & FINISHES) AND ALL REPAIR WORK IS TO BE COORDINATED WITH NEW CONSTRUCTION. FOR NEW OPENINGS IN EXISTING WALLS, COORDINATE NEW LINTELS W/ MASONRY CONTRACTOR.
- PATCH WALLS & ROOF TO MATCH EXISTING CONSTRUCTION BEHIND REMOVAL OF WALL LOUVERS, EXHAUST FANS, INTAKE HOODS & CABINET HEATERS. VERIFY SEQUENCE OF REMOVAL W/ CONSTRUCTION MANAGER. SEE MECHANICAL AND ELECTRICAL DEMO SHEETS FOR WALL, ROOF & FLOOR OPENINGS TO BE PATCHED.
- ALL TRADES ARE TO COORDINATE THE REMOVAL OF EXISTING LOOSE EQUIPMENT WITH ARCHITECT AND/OR OWNER. ADDITIONAL EQUIPMENT FOUND THAT IS NOT NOTED ON DEMOLITION PLAN SHALL BE REMOVED AS PART OF GENERAL DEMOLITION AFTER VERIFICATION WITH ARCHITECT/OWNER.

01 REMOVE EXISTING WALL INCLUDING DOORS, WINDOWS, BORROWED LITES, AND ANY EQUIPMENT OR FURNISHINGS ATTACHED TO WALL OR PORTION OF EXISTING WALL AS SHOWN ON FLOOR PLAN (MIN. 4" BELOW FLOOR SLAB) AND AS REQUIRED FOR NEW CONSTRUCTION. FLOOR SURFACE TO BE PATCHED AS REQUIRED TO RECEIVE NEW FLOOR MATERIAL. WALL SURFACE TO BE PATCHED AS REQUIRED TO RECEIVE NEW WALL FINISH. SEE MECHANICAL & ELECTRICAL DEMOLITION NOTES FOR RELATED ITEMS. SUPPORT UNBRACED SECTIONS OF WALL OR ROOF AS REQUIRED.

02 REMOVE EXISTING BORROWED LITE OR DOOR & DOOR FRAME. (DOOR LINTEL TO REMAIN UNLESS OTHERWISE NOTED ON PLAN. -SEE STRUCTURAL FOR ADDITIONAL INFORMATION). WHERE DOOR FRAMES ARE TO REMAIN, PROTECT FRAMES FROM DAMAGE. SAND AND PREP FOR NEW PAINT FINISH UNDER SECTION 09 91 00. SEE DOOR SCHEDULE FOR REQUIRED NEW DOORS AND FRAMES OR ONLY NEW DOORS.

03 SAW CUT AND REMOVE FLOOR OR PORTION OF EXISTING FLOOR SLAB AS SHOWN OR DIMENSIONED ON FLOOR PLAN. EXCAVATE, FILL & COMPACT SOIL AS REQUIRED FOR NEW SLAB. COORDINATE WITH MECHANICAL/ ELECTRICAL DEMOLITION NOTES FOR RELATED ITEMS & LOCATIONS. INSTALL NEW SLAB TO MATCH EXIST. ELEVATION. SEE STRUCTURAL FOR ADDITIONAL INFORMATION REGARDING SLAB REMOVAL.

04 REMOVE EXISTING CASEWORK/MILLWORK, COUNTER TOPS & BACK SPLASH. SAVE ITEMS AT OWNER'S REQUEST.

05 REMOVE EXISTING SUSPENDED/PLASTER CEILING-INCLUDING ALL FRAMING, TILES, TEES, HANGERS & WIRES USED TO SUPPORT THAT CEILING. REPLACE PER REFL. CEILING PLANS.

06 SEE MECHANICAL DEMOLITION NOTES FOR REMOVAL OF EXIST. PLUMBING/MECHANICAL (i.e. LAVATORIES, SINKS, WATER CLOSETS, URINALS, FIN TUBE, MECH. DUCTWORK, UNIT VENTS, ETC.)

07 REMOVE EXISTING WINDOW, WINDOW WALL WITH ALUMINUM FRAMING WITH METAL PANELS BELOW WINDOW. FRAME, SILL & GLAZING INCLUDING ALL EXISTING WOOD BLOCKING AND FRAMING ABOVE WINDOWS TO ROOF AND/OR MASONRY TIES AT BRICK PIERS AND SIDE WALLS.

08 REMOVE EXISTING EQUIPMENT OR FURNISHINGS SECURED TO FLOOR, WALL OR CEILING AND STORE FOR REUSE BY OWNER.

09 REMOVE EXISTING CHALK, TACK OR WHITE BOARD. REMOVE ALL GLUE RESIDUE, ETC. FROM BLOCK BEHIND BOARD AND PREPARE SURFACE FOR NEW FINISH MATERIALS WHERE REQUIRED.

10 REMOVE EXISTING FLOOR COVERING AND BASE, INCLUDING ALL GLUE RESIDUE, MUDBEDS, ETC. FROM FLOORS & WALLS AND PREPARE SURFACE FOR NEW FINISH MATERIALS, INCLUDING GRINDING, PATCHING AND/OR SELF-LEVELING COMPOUND AS REQUIRED. WALL & FLOOR SURFACE TO RECEIVE NEW FINISH MATERIAL & PATCH TO MATCH EXISTING.

11 REMOVE PORTION OF EXISTING ROOF & STRUCTURE (AS SHOWN ON DEMOLITION PLAN). PROVIDE TEMPORARY WEATHER PROTECTION AS NEEDED AROUND PERIMETER OF ROOF REMOVAL AS REQUIRED. PROVIDE TEMPORARY SHORING & BRACING AS REQUIRED.

12 REMOVE EXISTING TOILET PARTITION, DISPENSERS AND/OR TOILET ACCESSORIES AND REPAIR ADJACENT SURFACES TO RECEIVE NEW FINISHES.

13 REMOVE EXISTING LOCKERS AND LOCKER BASE. CUT SLOPED LOCKER TOP & BASE AS NECESSARY. RE-USE/RELOCATE EXISTING END PANEL AS REQUIRED. REVISE & PREPARE FOR NEW FINISHES.

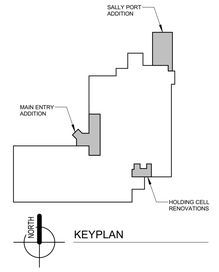
14 REMOVE EXISTING MEZZANINE INCLUDING ALL SUPPORT FRAMING, FLOOR DECK, HANGERS AND ALL ADDITIONAL RELATED MATERIALS. REPAIR WALL TO MATCH ADJACENT WALL MATERIALS AND FINISH.

15 REMOVE EXISTING TERRAZZO FLOORING, CONCRETE SLAB AND COVED BASE. REFER TO ROOM FINISH SCHEDULE FOR NEW FLOORING.

16 REMOVE EXISTING BASKETBALL BACKBOARD AND ALL RELATED HANGERS, FASTENERS AND FRAMING TO STRUCTURE ABOVE.

17 REMOVE EXISTING WALL TILE AND TILE BASE. INCLUDING ALL GLUE RESIDUE, ETC. FROM FLOOR & WALLS AND PREPARE SURFACE FOR NEW FINISH MATERIALS. WALL & FLOOR SURFACE TO RECEIVE NEW FINISH MATERIAL & PATCH TO MATCH EXISTING.

18 REMOVE EXISTING DOOR LEAF AND ALL RELATED HARDWARE. EXISTING DOOR FRAME TO REMAIN IN PLACE. PREPARE EXISTING FRAME TO RECEIVE NEW DOOR LEAF AND FINISH HARDWARE. SEE FLOOR PLAN AND DOOR SCHEDULE.



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PARTIAL DEMOLITION PLANS

A1.00

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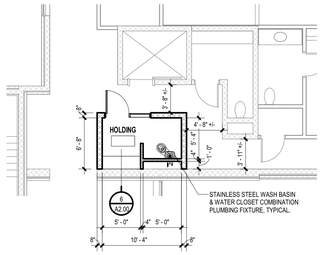
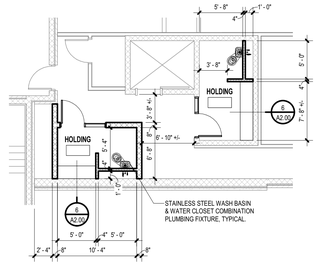


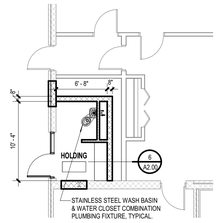
5 A2.00 SECOND FLOOR HOLDING CELLS PARTIAL FLOOR PLAN

1/8" = 1'-0"



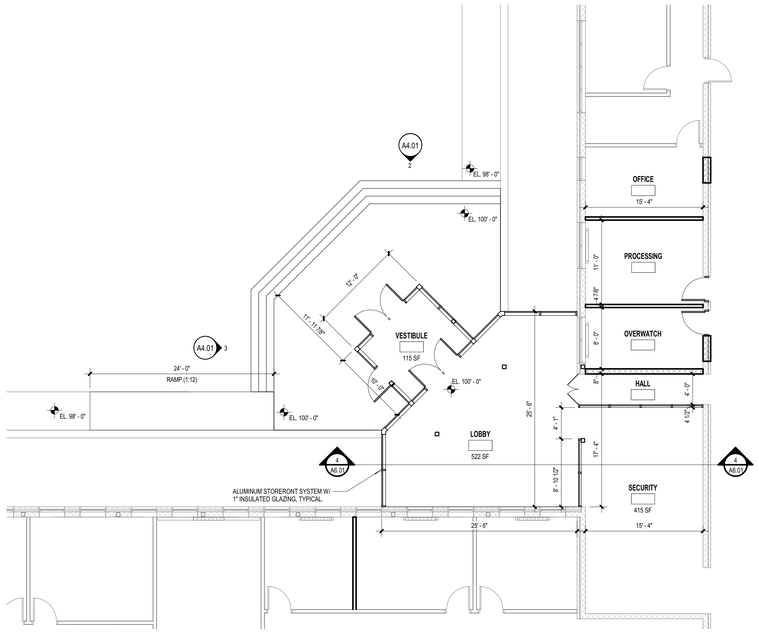
4 A2.00 FIRST FLOOR HOLDING CELLS PARTIAL FLOOR PLAN

1/8" = 1'-0"



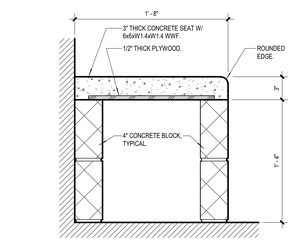
3 A2.00 LOWER LEVEL HOLDING CELL PARTIAL FLOOR PLAN

1/8" = 1'-0"



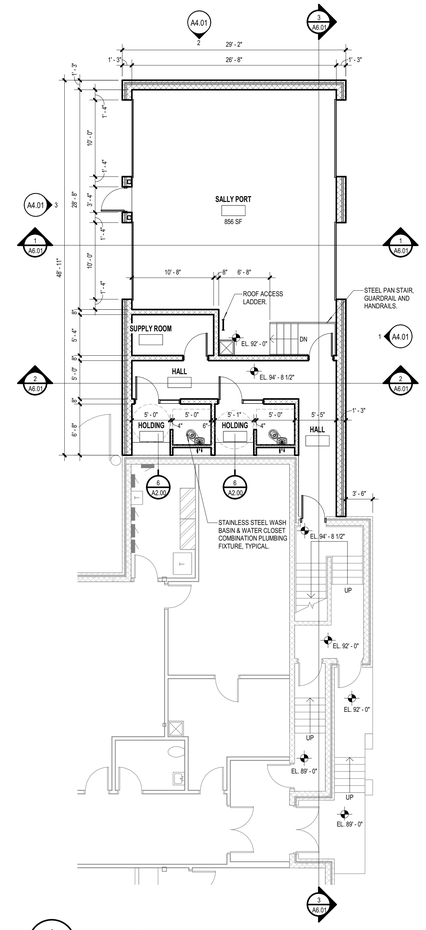
2 A2.00 MAIN ENTRY ADDITION PARTIAL FLOOR PLAN

1/8" = 1'-0"



6 A2.00 HOLDING CELL BENCH DETAIL

1 1/2" = 1'-0"



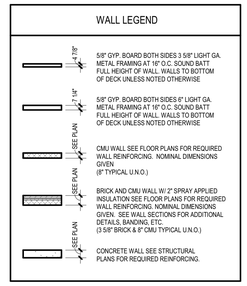
1 A2.00 SALLY PORT ADDITION PARTIAL FLOOR PLAN

1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES

1. DIMENSIONS GIVEN ARE TO THE FACE OF MASONRY UNITS OR TO THE FINISHED FACE OF METAL STUD PARTITION WALLS.
2. REFERENCE STRUCTURAL DRAWINGS FOR CONCRETE SLAB SIZES AND SLAB RELATED INFORMATION.
3. INTERIOR STUD WALLS ARE TO USE 3 5/8" METAL STUD FRAMING UNLESS OTHERWISE NOTED.
4. TURN UP VAPOR RETARDER MATERIAL AT JOINTS BETWEEN FLOOR SLAB AND FOUNDATION WALL UNLESS NOTED OTHERWISE.
5. SEE FOUNDATION PLANS FOR FLOOR SLAB RECESSES FOR TILE, WOOD FLOOR, ETC. (VERIFY RECESS REQUIRED BY MFR.)
6. EXTEND ALL INTERIOR WALL PARTITIONS (MASONRY OR STUDS) TO BOTTOM OF DECK ABOVE UNLESS NOTED OTHERWISE.
7. REFERENCE STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL FOR ITEMS NOT SHOWN. COORDINATE AS REQUIRED INCLUDING NECESSARY FRAMING, BLOCKING, ETC.
8. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF ANY CABINETRY, FRAMES, STRUCTURAL ITEMS, ETC.
9. PROVIDE PAINTED ACCESS PANELS IN WALLS AND CEILINGS TO PROVIDE ACCESS TO CONCEALED ITEMS INCLUDING BUT NOT LIMITED TO VALVES, CONTROLS, MECH. EQUIPMENT ETC. ACCESS PANELS MAY NOT ALWAYS BE SHOWN ON PLANS. IT IS THE SUB CONTRACTOR RESPONSIBILITY TO DETERMINE LOCATIONS. COORDINATE LOCATIONS WITH OTHER GENERAL CONTRACTOR / SITE SUPERVISOR.
10. COORDINATE WALLS WITH COLUMNS AND OTHER ENCASED ITEMS. COLUMNS ARE TO BE CONTAINED WITHIN WALLS. THE FRAMING CONTRACTOR SHALL INCREASE FRAMING SIZE TO ACCOMMODATE COLUMNS, DRAIN LEADERS, PIPING, ELECTRICAL PANELS, ETC. WHERE WALLS REQUIRE EXTRA WIDTH THE ENTIRE WALL SHALL BE WIDENED UNLESS APPROVED BY ARCHITECT.
11. ALL GUARDRAILS AND HANDRAILS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE 2015 M.B.C., ANSI ICC A117.1-2009 & AMERICANS WITH DISABILITIES ACT GUIDELINES. THE MOST STRINGENT SHALL PREVAIL.
12. PROVIDE MINIMUM CLEARANCES AT ALL DOORS PER DETAILS. SEE G0.01 FOR REQUIREMENTS.
13. FOR ALL CABINETRY, SEE INTERIOR ELEVATIONS FOR LAYOUTS. FIELD VERIFY CLEAR WIDTHS PRIOR TO FABRICATION.
14. ALL EXTERIOR BLOCK CORNERS ARE TO BE BULLNOSE BLOCK EXCEPT CONCRETE BLOCK COLUMNS, PIERS AND WALLS TO RECEIVE TILE - UNLESS NOTED OTHERWISE.
15. CONTRACTOR TO MAINTAIN / REPAIR RATING OF EXISTING PARTITIONS AS AFFECTED BY DEMOLITION / NEW CONSTRUCTION. TYPICAL THROUGHOUT.
16. SEAL ALL PENETRATIONS IN FIRE RATED FLOORS AND WALLS WITH APPROVED FIRESTOPPING.
17. WHERE SPECIALTY BLOCK IS REQUIRED AT THE SAME HEIGHT ON BOTH SIDES OF A WALL USE (2) SPECIALTY BLOCKS BACK TO BACK TO MAINTAIN THE FINISHED WALL APPEARANCE BOTH SIDES OF THE WALL. COORDINATE WITH STRUCTURE FOR LINTELS CONDITIONS PER SPECIFICATIONS.
18. WALLS TO BE PATCHED WITH LIKE MATERIALS WHERE EXISTING WALLS HAVE BEEN COMPROMISED FROM DEMOLITION. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO REMOVAL AND REINSTALLATION OF CASEWORK AND WALL MOUNTED EQUIPMENT IN ORDER TO ACHIEVE SAID PATCH. IN AREAS WHERE BLOCK OR BRICK HAVE BEEN USED, NEW MASONRY TO BE TOOTHED IN AND MATCH EXISTING. AREAS AND FINISHES IN QUESTION SHALL BE COORDINATED WITH ARCHITECT.
19. SEE STRUCTURAL FRAMING PLANS FOR ADDITIONAL WALL REINFORCING REQUIREMENTS. MINIMUM REINFORCING (FOR ALL WALLS NOT OTHERWISE NOTED ON STRUCTURAL PLANS) :
    A. ALL BEARING WALLS SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.
    B. ALL EXTERIOR WALLS SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.
    C. ALL INTERIOR NON-BEARING WALLS OVER 16'-0" HIGH SHALL RECEIVE A MINIMUM REINFORCING OF R1-5-48.

WALL LEGEND



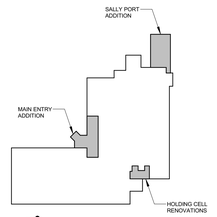
-FIRE RATINGS AS CALLED FOR ON CODE COMPLIANCE PLAN

-DIMENSIONS GIVEN ARE TO THE FINISHED FACE OF CMU OR GYPSUM WALL BOARD UNLESS NOTED OTHERWISE

TOILET ACCESSORIES LEGEND

(SEE SHEET G0.01 FOR MOUNTING HEIGHTS)
(SEE SPECS)

A ELECTRIC HAND DRYER	G NAPKIN DISPOSAL (RECESSED)
B TOILET PAPER DISPENSER	H NAPKIN DISPOSAL (WALL MOUNTED)
C SOAP DISPENSER	J BABY CHANGING STATION
D BARRIER FREE GRAB BARS	K 24" x 60" FRAMED GLASS MIRROR
E 24" x 36" FRAMED GLASS MIRROR	L 24" x 36" TILTABLE (B.F.) FRAMED GLASS MIRROR
F RECESSED NAPKIN DISPENSER	



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ALLEGAN COUNTY

ALLEGAN, MICHIGAN

ISSUANCES

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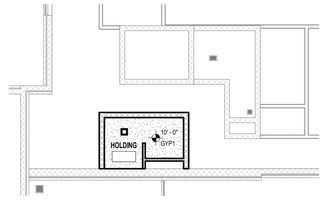
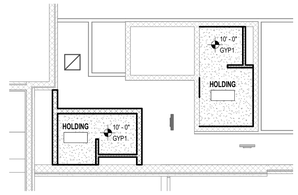
PROJECT NO. 5-5140

PARTIAL FLOOR PLANS

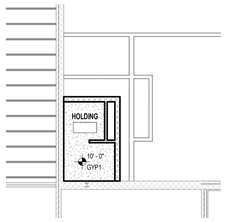
A2.00



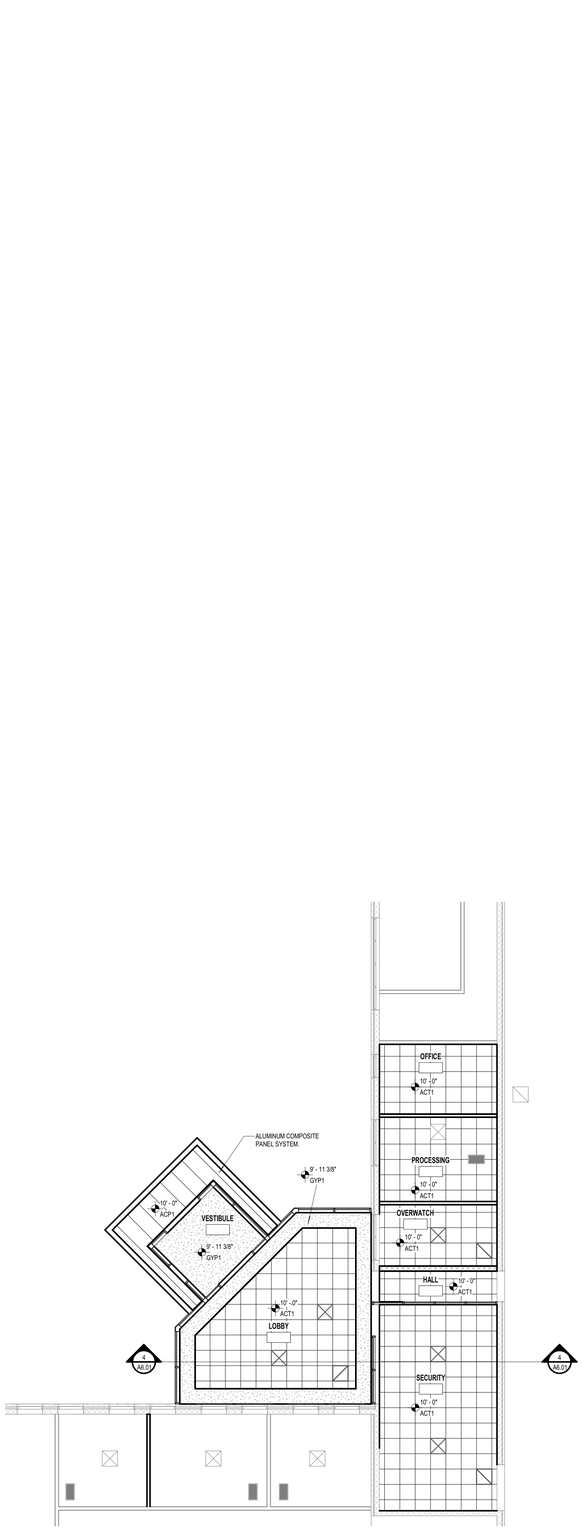
5 A3.00 SECOND FLOOR HOLDING CELLS PARTIAL CEILING PLAN
1/8" = 1'-0"



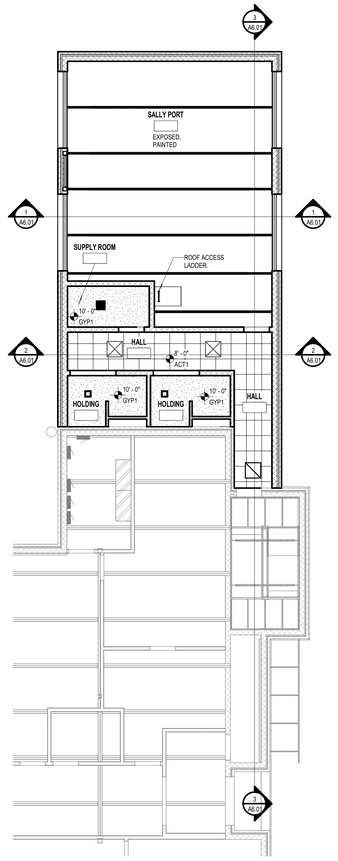
4 A3.00 FIRST FLOOR HOLDING CELLS PARTIAL CEILING PLAN
1/8" = 1'-0"



3 A3.00 LOWER LEVEL HOLDING CELL PARTIAL CEILING PLAN
1/8" = 1'-0"



2 A3.00 MAIN ENTRY ADDITION PARTIAL CEILING PLAN
1/8" = 1'-0"



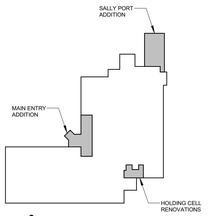
1 A3.00 SALLY PORT ADDITION PARTIAL CEILING PLAN
1/8" = 1'-0"

GENERAL CEILING NOTES:

1. CONTRACTOR SHALL FOLLOW GRID PATTERN ESTABLISHED ON THE REFLECTED CEILING PLAN. ANY VARIATIONS SHALL BE APPROVED BY THE ARCHITECT.
2. CEILING TILE TYPE AS SPECIFIED. CEILING HEIGHTS NOTED ON REFLECTED CEILING PLANS. CEILING ELEVATIONS ARE FROM THAT ROOM'S FINISH FLOOR.
3. WIRE CEILING FROM STRUCTURE ABOVE AND WIRE FOR ADDITIONAL LOAD AT LIGHTS AND CEILING DIFFUSERS.
4. UNLESS OTHERWISE NOTED, CEILING TO BE SUSPENDED METAL TEE AND ACOUSTICAL TILE 2'-0"x 2'-0" OR 2'-0"x 4'-0" TYPICAL. SEE SPECIFICATIONS FOR MANUFACTURER AND STYLE.
5. PENDANT MOUNTED FIXTURES CENTERED ON GRID REQUIRE GRID TO BE CUT AND SUPPORTED ON EACH SIDE.
6. MOUNT SPEAKERS AND SUPPLY AIR DIFFUSERS IN THE CENTER OF WHOLE CEILING PANELS. ADHERE A RIGID PANEL BACKER TO PANELS AT LOCATIONS WHICH INDICATE SPEAKERS, DIFFUSERS, LIGHTS, SMOKE DETECTORS, EXIT LIGHTS AND FIRE PROTECTION SPRINKLERS.
7. PROVIDE 2'-0" CEILING GRID CROSS-TEE AT EACH RETURN AIR GRILLE.
8. PROVIDE AN ADDITIONAL CROSS-TEE AT EACH SLOT DIFFUSER.
9. REFER TO THE MECHANICAL DRAWINGS FOR LOUVERS REQUIRED TO BE FRAMED IN GYPSUM BOARD BULKHEADS.
10. ALL CEILING HEIGHTS ARE SUBJECT TO CHANGE TO ACCOMMODATE UNFORESEEN FIELD CONDITIONS - COORDINATE CHANGES WITH ARCHITECT & AFFECTED DISCIPLINES.
11. SOME CORRIDOR CEILING PANEL LAYOUTS HAVE BEEN ADJUSTED AT A CHANGE IN CORRIDOR DIRECTION TO ACCOMMODATE LIGHTING LAYOUT.

CEILING LEGEND

- DIRECT EXTERIOR FINISH SYSTEM
- GYPSUM BOARD CEILING
- PRE FINISHED VENTED METAL SOFFIT
- RECESSED 2x4 LIGHT FIXTURE
- RECESSED 1x4 LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- SURFACE / PENDANT MOUNT FIXTURE
- PENDANT MOUNT FIXTURE
- SURFACE MOUNT FIXTURE
- SURFACE / PENDANT MOUNT FIXTURE
- FIXTURE IS DESIGNATED FOR EMERGENCY OPERATION
- SINGLE FACE EXIT SIGN
- DOUBLE FACE EXIT SIGN
- WALL-MOUNTED EXIT SIGN
- OCCUPANCY SENSOR
- FIRE ALARM - VISUAL
- FIRE ALARM - AUDIO/VISUAL
- ALUMINUM SOFFIT
- PA SPEAKER
- SMOKE DETECTOR
- SUPPLY GRILLE / DIFFUSER
- RETURN GRILLE / DIFFUSER
- SLOT DIFFUSER
- MECHANICAL EQUIPMENT
- ACCESS DOOR
- CONTINUOUS SOFFIT VENT
- SOFFIT GRILLE (8x16 U.O.N.)
- C.J. CONTROL JOINT
- CUT TILE



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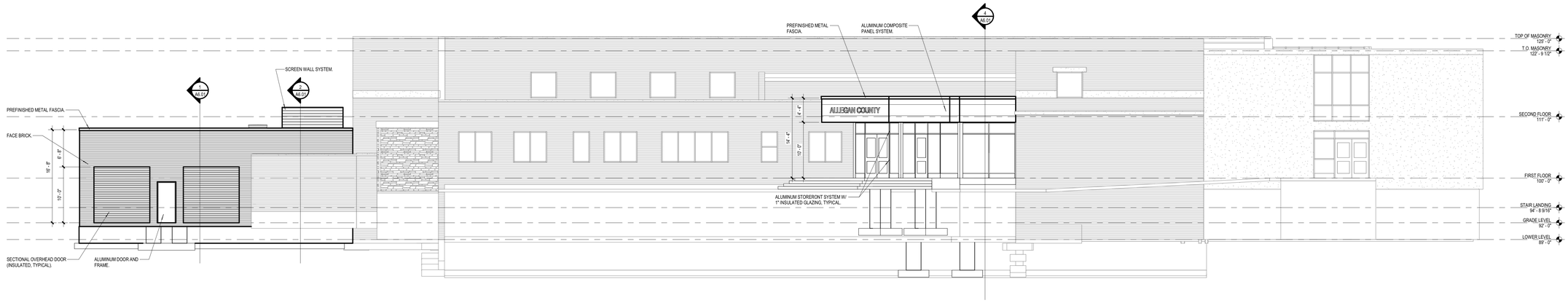
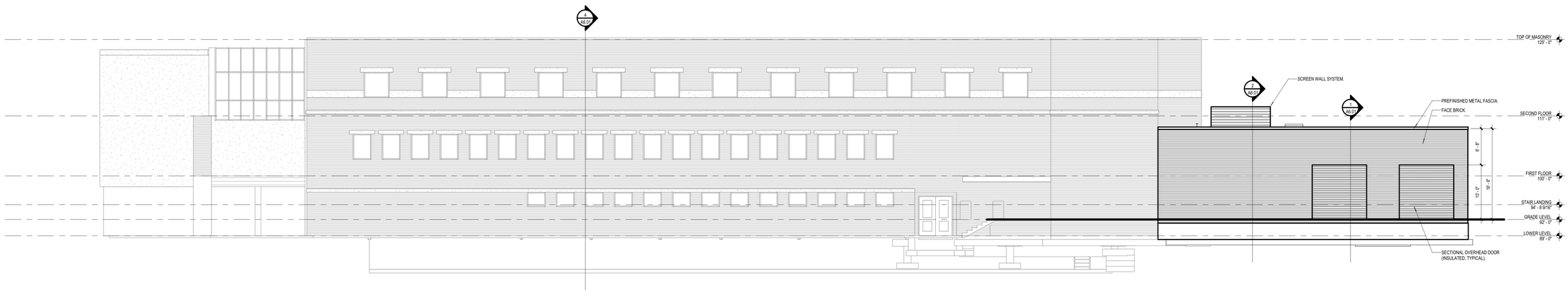
PARTIAL REFLECTED CEILING PLANS

A3.00



3 A4.01 WEST EXTERIOR ELEVATION
1/8" = 1'-0"

2 A4.01 NORTH EXTERIOR ELEVATION
1/8" = 1'-0"



1 A4.01 EAST EXTERIOR ELEVATION
1/8" = 1'-0"

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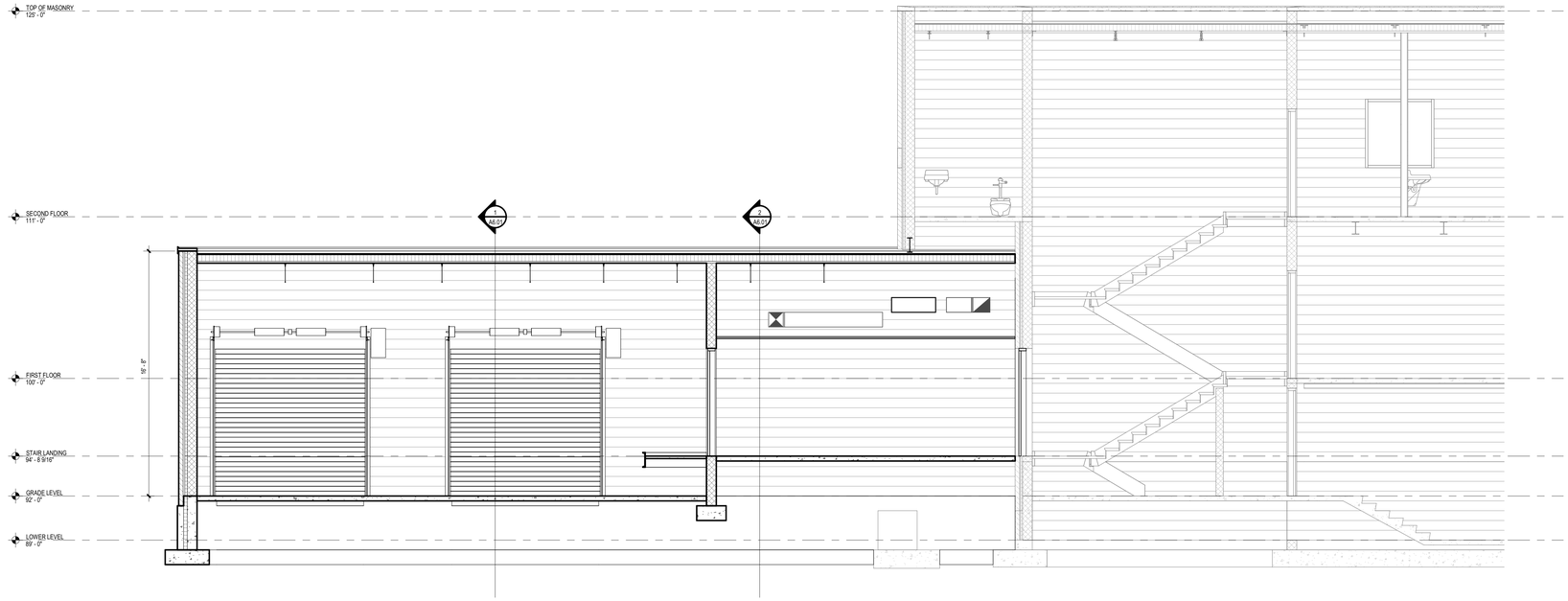
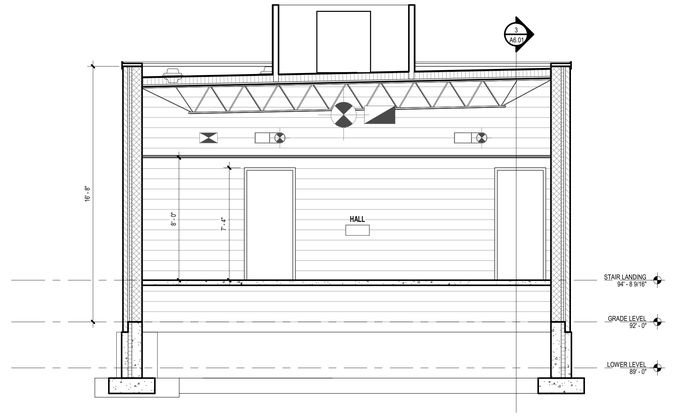
EXTERIOR ELEVATION

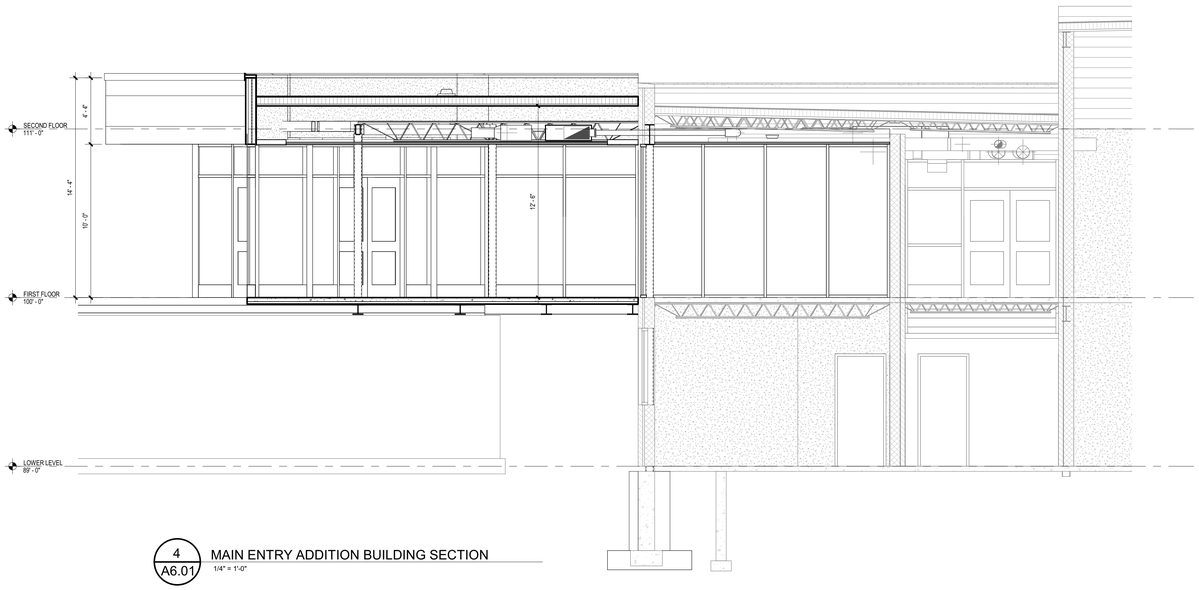
A4.01



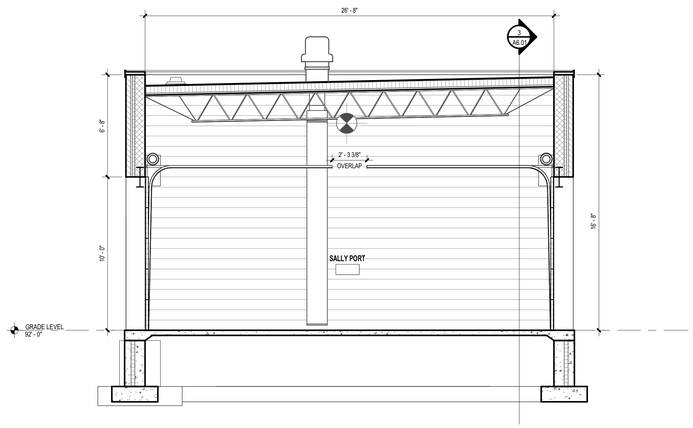
3 A6.01 SALLY PORT ADDITION LONGITUDINAL SECTION
1/4" = 1'-0"



2 A6.01 SALLY PORT ADDITION CROSS SECTION 2
1/4" = 1'-0"



4 A6.01 MAIN ENTRY ADDITION BUILDING SECTION
1/4" = 1'-0"



1 A6.01 SALLY PORT ADDITION CROSS SECTION 1
1/4" = 1'-0"

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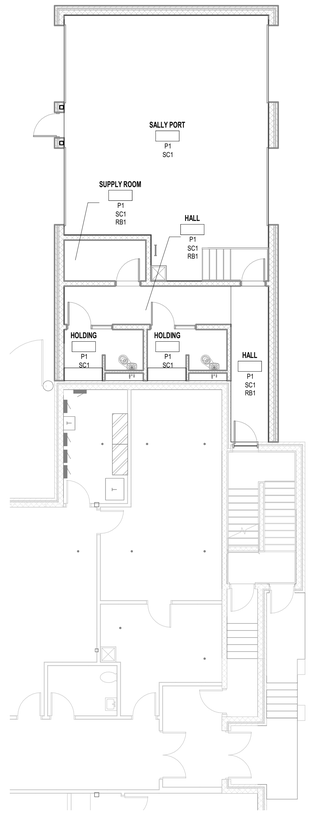
BUILDING SECTIONS

A6.01

NORTH

MAIN ENTRY ADDITION PARTIAL FLOOR FINISH PLAN

1/8" = 1'-0"



NORTH

SALLY PORT ADDITION PARTIAL FLOOR FINISH PLAN

1/8" = 1'-0"

FINISH LEGEND :

ACT1 ACOUSTICAL CEILING TILE
MANF:
STYLE:
COLOR:
SIZE:

CT1 CARPET TILE (WALK-OFF)
MANF: PROVIDE $35/ YD. MATERIAL ALLOWANCE
STYLE:
COLOR:
SIZE:
INSTALLATION:

CT2 CARPET TILE (GENERAL)
MANF: PROVIDE $25/ YD. MATERIAL ALLOWANCE
STYLE:
COLOR:
SIZE:
INSTALLATION:

CTW1 CERAMIC TILE WILL
MANF: PROVIDE $10/ SQ.FT. MATERIAL ALLOWANCE
STYLE:
COLOR:
SIZE:
GROUT:

P1 PAINT (GENERAL)
MANF:
COLOR:
FINISH:

P2 PAINT (FRAME)
MANF:
COLOR:
FINISH:

P3 PAINT (CEILING)
MANF:
COLOR:
FINISH:

P4 PAINT (ACCENT)
MANF:
COLOR:
FINISH:

PC1 POLISHED CONCRETE
GRIND: DEEP
FINISH: NATURAL

RB1 RUBBER BASE
MFR: JOHNSONITE
STYLE:
COLOR:
SIZE: 4"

RSG1 RUBBER SHEET GOODS
MFR: JOHNSONITE
STYLE:
COLOR:
SIZE:

RST1 RUBBER STAIR TREAD
MFR: JOHNSONITE
STYLE:
COLOR:
SIZE:

SC1 SEALED CONCRETE
MFR:
STYLE:
COLOR:

GENERAL FINISH NOTES :

1. ALL AREAS OF VCT, CARPET, LVT, SEALED CONCRETE, OR OTHER RESILIENT FLOORING OT RECEIVE RUBBER BASE; U.N.O. ON FINISH PLANS.
2. IT IS THE RESPONSIBILITY OF ALL TRADES TO COORDINATE PREPARATION OF SURFACES TO RECEIVE FINISH PRODUCT. CONSULT WITH MANUFACTURERS RECOMMENDED PRACTICES.
3. ALL REDUCERS TO COORDINATE APPROPRIATELY WITH ABUTTING MATERIAL HEIGHT.
4. INSTALL 4" H. RUBBER BASE (RB) AT CASEWORK TOE KICKS, INSIDE OF FLOORLESS CASEWORK, AND VERTICAL SUPPORTS.
5. SEE SPECIFICATIONS FOR RESILIENT ACCESSORY INFORMATION.
6. PAINT ALL EXPOSED MECHANICAL AND ELECTRICAL ITEMS INTENDED TO RECEIVE FIELD PAINT TO MATCH ADJACENT SURFACES; U.N.O.
7. DOOR AND WINDOW FRAMES TO BE PAINTED P2; U.N.O.
8. EXPOSED CEILINGS, DECK, DUCTWORK, STRUCTURE AND OTHER MISC. EXPOSED ITEMS TO BE PAINTED; U.N.O. ON INTERIOR ELEVATIONS, CEILING PLANS OR FINISH PLANS.
9. FACE & UNDERSIDE OF BULKHEADS TO BE PAINTED P3; U.N.O. ON FINISH PLANS OR NOTED ON INTERIOR ELEVATIONS.
10. REFER TO CEILING PLANS & CEILING SPECIFICATIONS FOR SPECIAL CEILING DESIGNATIONS AND ACT TYPES.
11. REFER TO INTERIOR ELEVATION SHEETS FOR MORE DETAILED PAINT AND INTERIOR FINISH INFORMATION.
12. MECHANICAL & ELECTRICAL ROOM FINISHES: AS A TYPICAL; PAINT WALLS, DO NOT PAINT EXPOSED STRUCTURE, DO NOT PROVIDE WALL BASE. TYPICAL UNLESS NOTED OTHERWISE ON FINISH PLANS.
13. WHERE SEALED CONCRETE (SC) IS SPECIFIED, REFER TO SPECIFICATION SECTION 09 90 00 PAINTING, FOR SYSTEM TYPE.
14. REFER TO SPECIFICATIONS FOR ALL PAINT TYPES.
15. ALL PAINTED WALLS IN HOLDING ROOMS SHALL RECEIVE EPOXY PAINT.
16. ALL STAIR AND GUARDRAIL RAILINGS, HANDRAILS, STRINGERS, RISERS, ETC ARE TO BE PAINTED; U.N.O.
17. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF OWNER FURNISHED EQUIPMENT, INCLUDED DIMENSIONS OF SUCH AS THEY RELATE TO THEIR OWN WORK.
18. REMOVE, SALVAGE AND RE-INSTALL EXISTING ROOM SIGNAGE PRIOR TO PAINTING WALLS IN AREAS OF WORK, TYP.
19. REMOVE AND SALVAGE ALL WALL MOUNTED FURNISHINGS AND ARTWORK PRIOR TO PAINTING. COORDINATE SALVAGE AND RE-INSTALLATION WITH OWNER.
20. DO NOT PAINT OVER EXISTING GLAZED FACE BLOCK OR EXPOSED BRICK, U.N.O.
21. PROTECT ALL FINISHES DURING CONSTRUCTION.

FINISH SYMBOLS :

ROOM NAME
WALL FINISH
FLOOR FINISH
BASE FINISH

CPT1 / VCT1 — FLOORING TRANSITION

W.P.1 — WORK POINT

FINISH KEYNOTES :

01 MANUAL ROLLER SHADE LOCATION. PROVIDE FULL WIDTH OF WINDOW ASSEMBLY AT EACH LOCATION REFER TO SPECIFICATION

02 PRIVACY WINDOW FILM

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PARTIAL FLOOR FINISH PLAN

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FIRE PROTECTION ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	FDC	FIRE DEPARTMENT CONNECTION
APPROX	APPROXIMATELY	FF	FINISH FLOOR
CLG	CEILING	FLR	FLOOR
CONN	CONNECTION	FP	FIRE PROTECTION
CONT	CONTINUATION	HSS	HOLLOW STRUCTURAL SECTION
CONTR	CONTRACTOR	LOC	LOCATION
DN	DOWN	O.S.& Y	OUTSIDE STEM AND YOUK
DWG	DRAWING	SQ.FT	SQUARE FEET
EA	EACH	TYP	TYPICAL

*REFER TO P0.01 FOR ADDITIONAL ABBREVIATIONS NOT SHOWN ABOVE.

FIRE PROTECTION SPRINKLER HEAD LEGEND

⊘	STANDARD PENDENT SPRINKLER
◉	RECESSED PENDENT SPRINKLER WITH MATCHING 2-PIECE ESCUTCHEON
●	CONCEALED PENDENT SPRINKLER
○	STANDARD UPRIGHT SPRINKLER
◁	HORIZONTAL SIDEWALL SPRINKLER
⊘	EXTENDED COVERAGE PENDENT SPRINKLER
◉	EXTENDED COVERAGE RECESSED PENDENT SPRINKLER WITH MATCHING 2-PIECE ESCUTCHEON
●	EXTENDED COVERAGE CONCEALED SPRINKLER
○	EXTENDED COVERAGE UPRIGHT SPRINKLER
◀	EXTENDED COVERAGE HORIZONTAL SIDEWALL SPRINKLER
◀	DRY HORIZONTAL SIDEWALL SPRINKLER
◑	DRY PENDENT SPRINKLER

⊘ 175 OR ⊘ 200	INTERMEDIATE TEMPERATURE STANDARD PENDENT SPRINKLER
◉ 175 OR ◉ 200	INTERMEDIATE TEMPERATURE RECESSED PENDENT SPRINKLER WITH MATCHING 2-PIECE ESCUTCHEON
● 175 ● 200	INTERMEDIATE TEMPERATURE CONCEALED PENDENT SPRINKLER
○ 175 OR ○ 200	INTERMEDIATE TEMPERATURE UPRIGHT SPRINKLER
◁ 200	INTERMEDIATE TEMPERATURE HORIZONTAL SIDEWALL SPRINKLER
⊘ 286	HIGH TEMPERATURE PENDENT SPRINKLER
◉ 286	HIGH TEMPERATURE RECESSED PENDENT SPRINKLER WITH MATCHIN 2-PIECE ESCUTCHEON
○ 286	HIGH TEMPERATURE UPRIGHT SPRINKLER
◁ 286	HIGH TEMPERATURE HORIZONTAL SIDEWALL SPRINKLER

NOTES:
1. THE FIRE PROTECTION CONTRACTOR SHALL USE THE SYMBOLS IN THIS LEGEND TO INDICATE THE TYPE AND LOCATION OF SPRINKLERS ON THEIR "WORKING PLANS".

FIRE PROTECTION NOTES:

1. FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THEIR WORK WITH ALL OTHER TRADES. ALL WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER.
2. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE FIRE PROTECTION CONTRACTOR IS REMINDED THAT THEY ARE RESPONSIBLE FOR THE FINAL DESIGN OF THE SYSTEM, INCLUDING PIPE SIZING AND LOCATION. THE CONTRACTOR IS FURTHER EXPECTED TO VISIT THE SITE AND VERIFY THE CONDITIONS UNDER WHICH THE WORK SHALL BE PERFORMED.
3. CONTRACTOR SHALL BE PERMITTED TO UTILIZE EXTENDED COVERAGE SPRINKLER HEADS WHERE APPROVED BY THE AUTHORITY HAVING JURISDICTION AND INSTALLED IN ACCORDANCE WITH NFPA 13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF SPRINKLER HEAD SPACING WITH ALL OTHER TRADES.
4. MAXIMUM HANGER SPACING FOR PIPING 3" AND LARGER SHALL BE 12'-0" ON CENTER.

FIRE PROTECTION NOTES:

1. FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THEIR WORK WITH ALL OTHER TRADES. ALL WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER.
2. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE FIRE PROTECTION CONTRACTOR IS REMINDED THAT THEY ARE RESPONSIBLE FOR THE FINAL DESIGN OF THE SYSTEM, INCLUDING PIPE SIZING AND LOCATION. THE CONTRACTOR IS FURTHER EXPECTED TO VISIT THE SITE AND VERIFY THE CONDITIONS UNDER WHICH THE WORK SHALL BE PERFORMED.
3. CONTRACTOR SHALL BE PERMITTED TO UTILIZE EXTENDED COVERAGE SPRINKLER HEADS WHERE APPROVED BY THE AUTHORITY HAVING JURISDICTION AND INSTALLED IN ACCORDANCE WITH NFPA 13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF SPRINKLER HEAD SPACING WITH ALL OTHER TRADES.
4. MAXIMUM HANGER SPACING FOR PIPING 3" AND LARGER SHALL BE 12'-0" ON CENTER.
5. FLOW TEST TAKEN FROM ?? MAIN IN ???????????????? INDICATES THE FOLLOWING: ?? PSI STATIC, ?? PSI RESIDUAL AT ???? GPM. DATE OF TEST ??/??/?. CONTRACTOR SHALL PERFORM FLOW TEST (IN ACCORDANCE WITH NFPA 291) AT THE SITE TO VERIFY ACCURACY OF THE INFORMATION. COPY OF FLOW TEST SHALL BE SUBMITTED TO ARCHITECT.

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PROJECT NO. 5-5140

FIRE PROTECTION GENERAL INFORMATION & DETAILS

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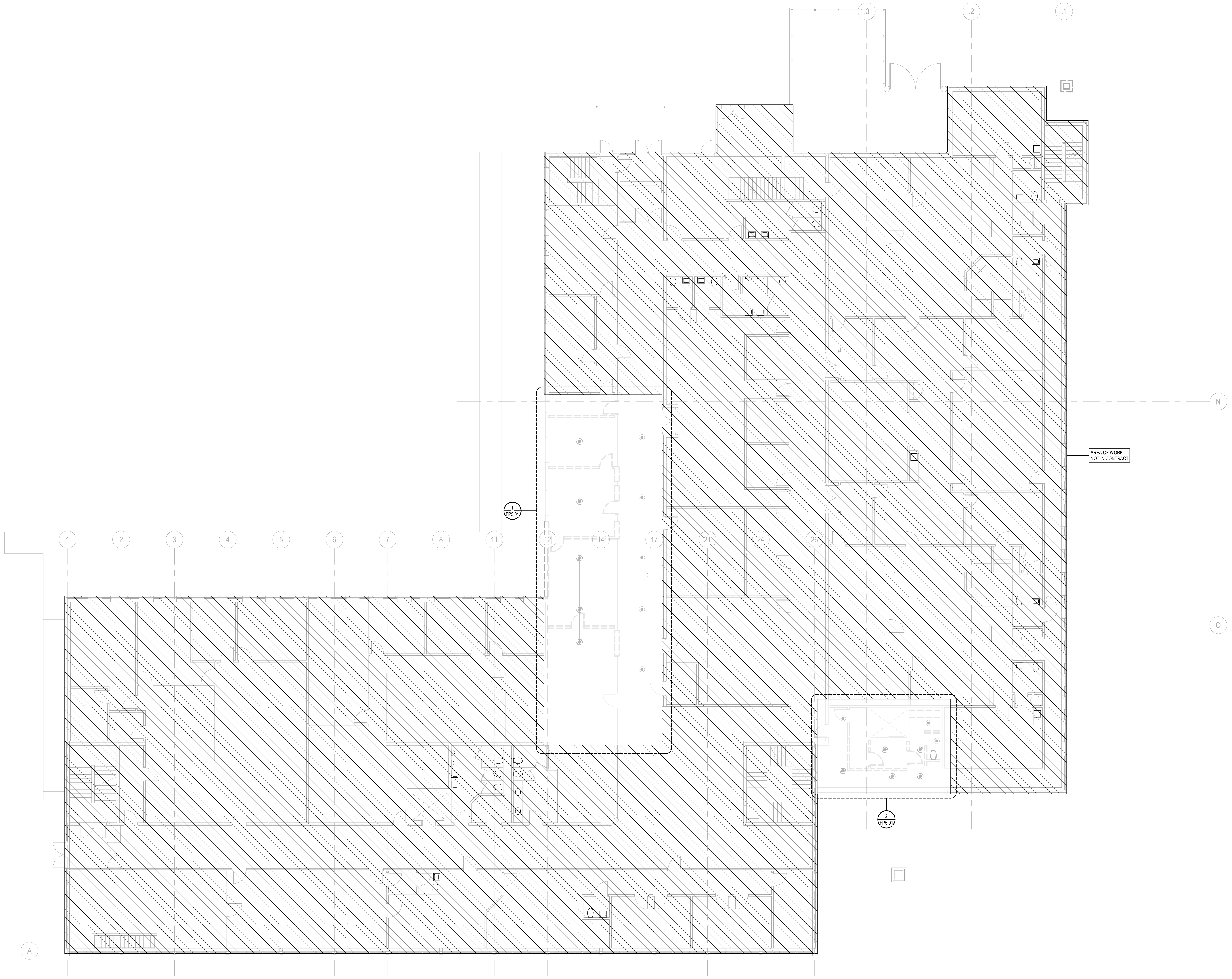
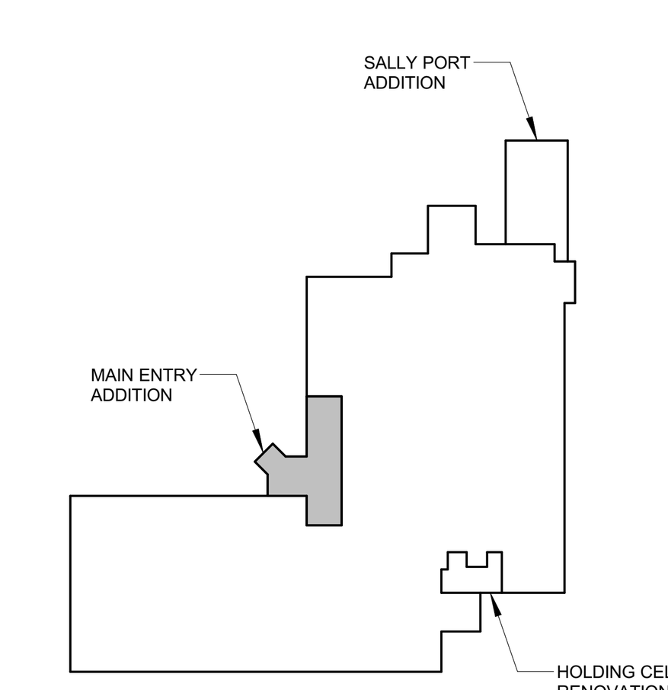


OVERALL FIRST FLOOR FIRE PROTECTION DEMOLITION PLAN
3/32" = 1'-0"



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OVERALL FIRST FLOOR FIRE PROTECTION DEMOLITION PLAN

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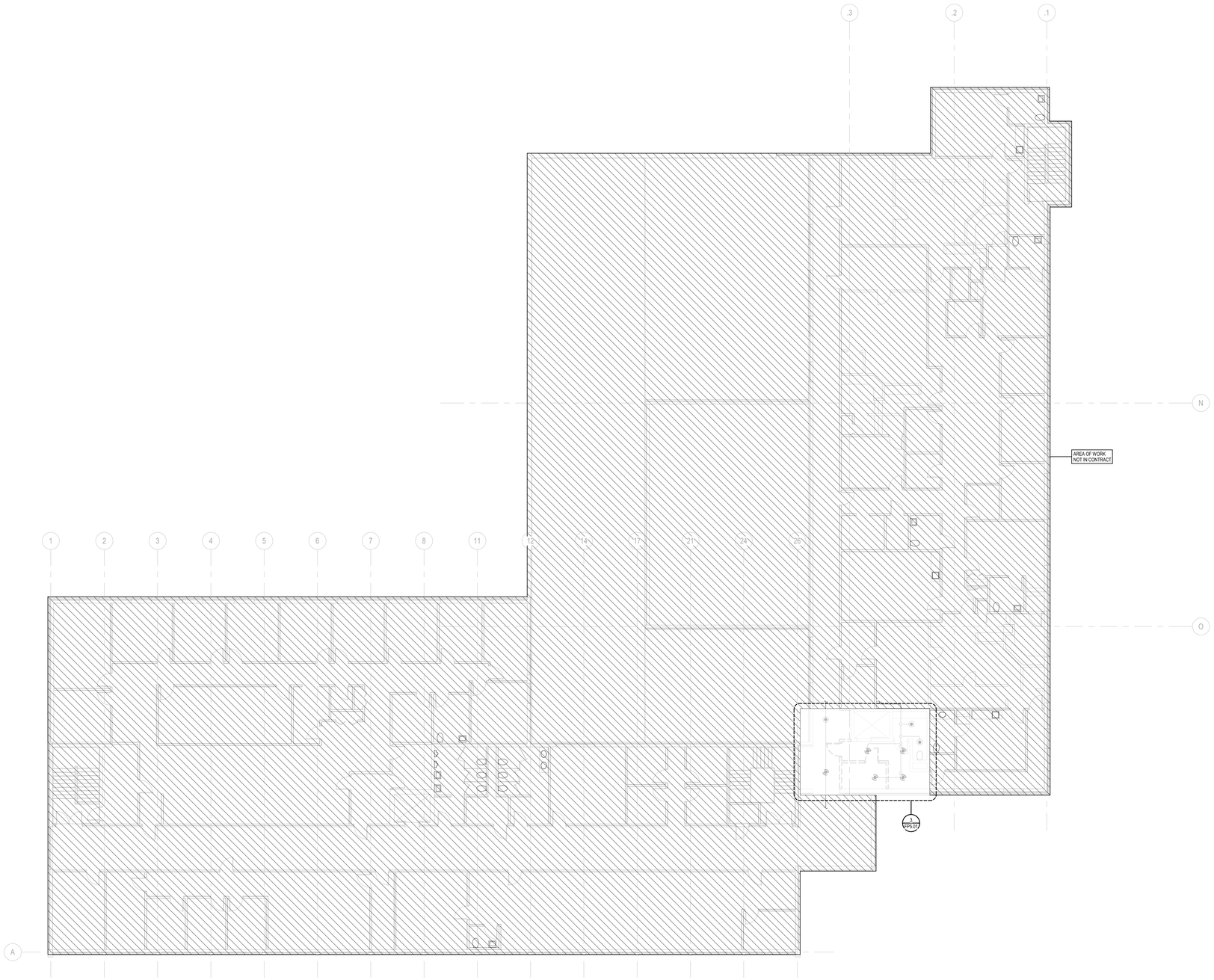
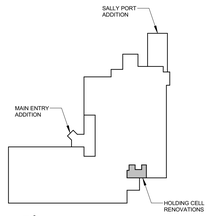


NORTH

OVERALL SECOND FLOOR FIRE PROTECTION DEMOLITION PLAN

3/32" = 1'-0"



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OVERALL SECOND FLOOR FIRE PROTECTION DEMOLITION PLAN

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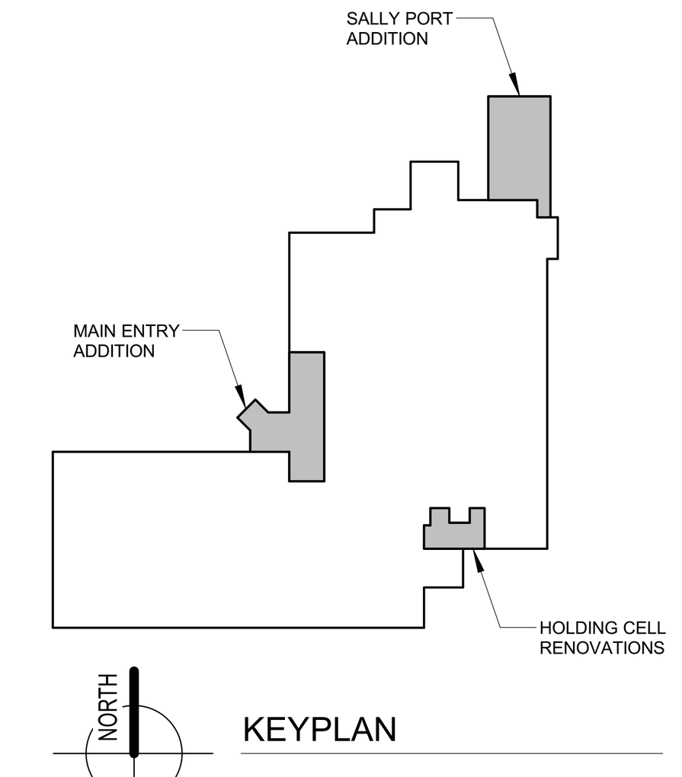
OVERALL FIRST FLOOR FIRE PROTECTION PLAN
3/32" = 1'-0"



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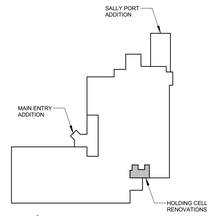
MODIFY EXISTING FIRE PROTECTION SYSTEM

NORTH

OVERALL SECOND FLOOR FIRE PROTECTION PLAN

3/32" = 1'-0"



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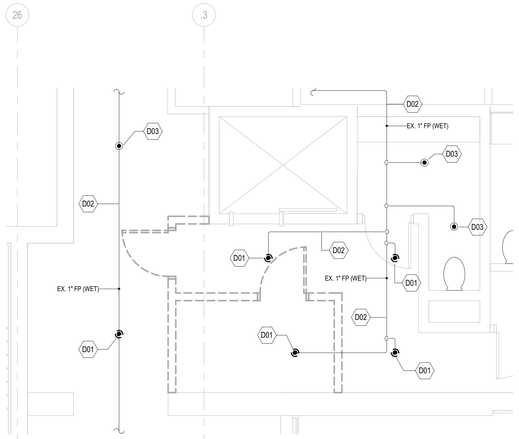
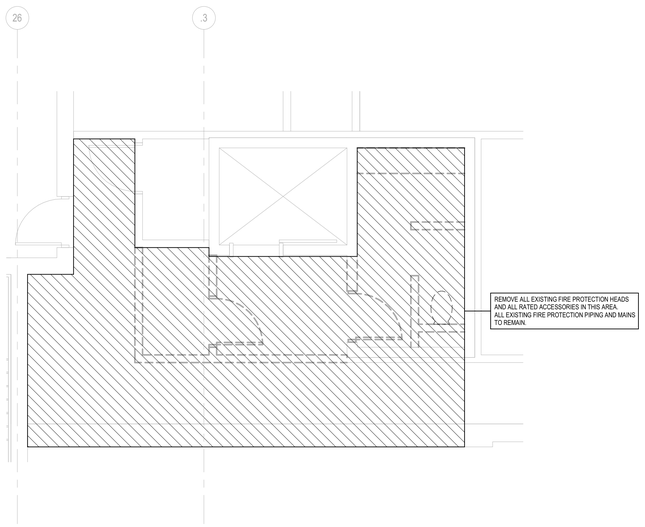
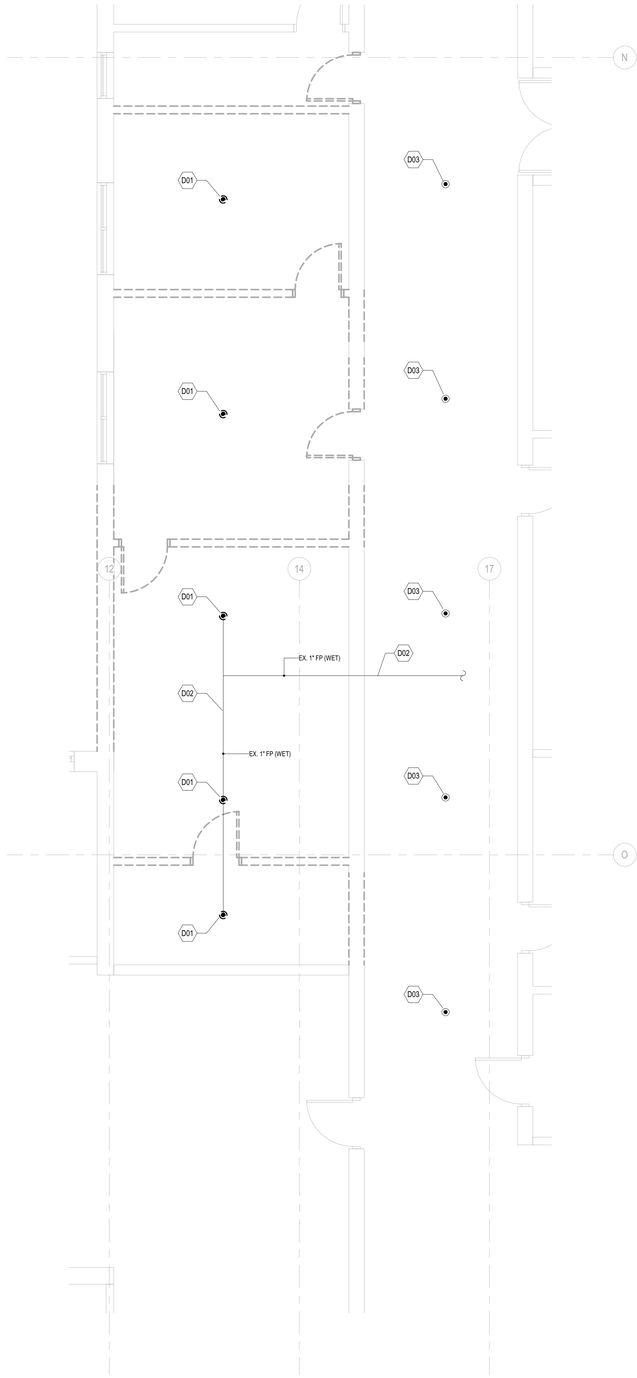


3 FP5.01 PARTIAL ENLARGED SECOND FLOOR HOLDING CELL FIRE PROTECTION DEMOLITION PLAN
1/4" = 1'-0"



2 FP5.01 PARTIAL ENLARGED FIRST FLOOR HOLDING CELL FIRE PROTECTION DEMOLITION PLAN
1/4" = 1'-0"



1 FP5.01 PARTIAL ENLARGED FIRST FLOOR FIRE PROTECTION DEMOLITION PLAN
1/4" = 1'-0"

	FIRE PROTECTION DEMO KEYNOTE LEGEND
D01	REMOVE SPRINKLER HEAD, BRAIDED TYPE FLEXIBLE SPRINKLER HOSE ASSEMBLY AND ALL RELATED ACCESSORIES.
D02	FIRE PROTECTION PIPING, HANGERS, VALVES AND ALL RELATED ACCESSORIES TO REMAIN.
D03	SPRINKLER HEAD AND ALL RELATED ACCESSORIES TO REMAIN.

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PARTIAL ENLARGED FIRE PROTECTION DEMOLITION PLANS

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PLUMBING LINE SERVICE DESIGNATIONS

AV	ACID VENT PIPING
AW	ACID WASTE PIPING ABOVE GROUND
AW U/G	ACID WASTE PIPING UNDERGROUND
CA	COMPRESSED AIR PIPING
COND	CONDENSATE PIPING
CW	DOMESTIC COLD WATER PIPING
G	NATURAL GAS PIPING
GSAN	GREASE LADEN SANITARY DRAIN PIPING
HW	DOMESTIC HOT WATER PIPING
HWR	DOMESTIC HOT WATER RETURN PIPING
OSAN	OIL LADEN SANITARY DRAIN PIPING
SAN	SANITARY DRAIN PIPING ABOVE GROUND
SAN U/G	SANITARY DRAIN PIPING UNDERGROUND
SAN (FM)	SANITARY FORCED MAIN DRAIN PIPING
SCW	SOFTENED DOMESTIC COLD WATER PIPING
ST	STORM DRAIN PIPING ABOVE GROUND
ST U/G	STORM DRAIN PIPING UNDERGROUND
ST(O)	OVERFLOW STORM DRAIN PIPING
V	SANITARY VENT PIPING
	MATCHLINE
	DIRECTION OF FLOW

NOTES:
1. NOT ALL PIPE SERVICES MAY BE PRESENT IN CONSTRUCTION DOCUMENTS.

PLUMBING ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDING UNIT
AV	ACID VENT
AVTR	ACID VENT THROUGH ROOF
AW	ACID WASTE
BFP	BACKFLOW PREVENTER
BT	BATHTUB
CA	COMPRESSED AIR
CBV	CALIBRATED BALANCING VALVE
CLG	CEILING
CN	CONDUCTOR NOZZLE
CO	CLEANOUT
COND	CONDENSATE
CONN	CONNECTION
CONT	CONTINUATION
CONTR	CONTRACTOR
COORD	COORDINATE
CW	DOMESTIC COLD WATER
CWFU	COLD WATER FIXTURE UNITS
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNITS
DN	DOWN
DPB	DOMESTIC WATER PRESSURE BOOSTER
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EX / EXIST	EXISTING
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLR	FLOOR
G	NATURAL GAS
GI	GREASE INTERCEPTOR
GSAN	GREASE LADEN SANITARY
H&C	DOMESTIC HOT AND DOMESTIC COLD WATER
HB	HOSE BIBB
HSS	HOLLOW STRUCTURAL SECTION
HW	DOMESTIC HOT WATER
HWFU	HOT WATER FIXTURE UNITS
HWR	DOMESTIC HOT WATER RETURN
IE	INVERT ELEVATION
IOB	ICE MAKER OUTLET BOX
LOC	LOCATION
LT	LAUNDRY TUB
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MFR	MANUFACTURER
MSB	MOP SERVICE BASIN
MIN	MINIMUM
MV	MIXING VALVE
OA	OUTSIDE AIR
OC	ON CENTER
OD	OVERFLOW ROOF DRAIN
OI	OIL INTERCEPTOR
OSAN	OIL LADEN SANITARY
PEQ	PLUMBING EQUIPMENT
PSI	POUNDS PER SQUARE INCH
RD	ROOF DRAIN
RPCBV	RESTRICTED FLOW CALIBRATED BALANCING VALVE
RH	ROOF HYDRANT
RPZBFP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
SAN	SANITARY
SAN(FM)	SANITARY FORCED MAIN
SCW	SOFTENED DOMESTIC COLD WATER
SH	SHOWER
ST	STORM
ST(O)	STORM OVERFLOW
TD	TRENCH DRAIN
TYP	TYPICAL
U/G	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
USGS	UNITED STATES GEOLOGICAL SURVEY
V	SANITARY VENT
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WMB	WASHING MACHINE OUTLET BOX
WSFU	WATER SUPPLY FIXTURE UNITS

NOTES:
1. NOT ALL ABBREVIATIONS MAY BE PRESENT IN CONSTRUCTION DOCUMENTS.

PLUMBING SYMBOLS LEGEND

	GATE VALVE
	BALL VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	CALIBRATED BALANCING VALVE
	RELIEF / SAFETY VALVE
	BACKFLOW PREVENTER WITH DRIP PAN
	HOSE BIBB / WALL HYDRANT
	PLUG VALVE
	ANGLE VALVE
S	SOLENOID VALVE
	PIPE RISER UP
	PIPE RISER DOWN
	UNION
	CAP
	"Y" STRAINER W/BLOWDOWN
	FLEXIBLE CONNECTOR
	CONNECT TO EXISTING
	CONCENTRIC REDUCER
	THERMOMETER
FS	FLOW SWITCH
PS	PRESSURE SWITCH
PT	PRESSURE TAP
TW	THERMOWELL
PG	PRESSURE GAUGE & SHUT OFF
	COMPRESSED AIR COMB. FILTER, REG. & OILER
	PRESSURE REDUCING VALVE, SELF-CONTAINED
PRV	EXT. PRESSURE REDUCING VALVE

NOTES:
1. NOT ALL SYMBOLS MAY BE PRESENT IN CONSTRUCTION DOCUMENTS.

GENERAL PLUMBING PIPING INSTALLATION NOTES:

1. COORDINATE ROUTING OF PLUMBING PIPING WITH ALL TRADES. ALL SANITARY PIPING TO BE INSTALLED AND VENTED PER PLANS AND ALL APPLICABLE STATE AND LOCAL CODES.
2. REFER TO PROJECT SPECIFICATIONS MANUAL FOR ADDITIONAL REQUIREMENTS.
3. DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE THE GENERAL LOCATION AND ARRANGEMENT OF PIPING SYSTEMS. INDICATED LOCATIONS AND ARRANGEMENTS WERE USED TO SIZE PIPE AND OTHER DESIGN CONSIDERATIONS. INSTALL PIPING AS INDICATED UNLESS DEVIATIONS TO LAYOUT ARE APPROVED ON COORDINATION DRAWINGS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PIPE SLEEVES THROUGH FOUNDATION WALLS WITH OTHER TRADES.
5. INSTALL CLEANOUTS AT THE BASE OF ALL DRAIN PIPE STACKS WITH THE CENTER OF THE PLUG LOCATED AT A MINIMUM OF 12 INCHES ABOVE THE FINISH FLOOR, UNLESS NOTED OTHERWISE. COORDINATE LOCATIONS WITH OTHER BUILDING ELEMENTS TO ENSURE ACCESS.
6. INSTALL PIPING IN CONCEALED LOCATIONS UNLESS INDICATED OTHERWISE OR WHERE LOCATED IN EQUIPMENT ROOMS AND SERVICE AREAS. INSTALL PIPING INDICATED TO BE EXPOSED AND PIPING IN EQUIPMENT ROOMS AND SERVICE AREAS AT RIGHT ANGLES OR PARALLEL TO BUILDING WALLS. DIAGONAL RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE.
7. ROUTE PIPING IN WALLS TO FIXTURE AND EQUIPMENT AT PROPER ELEVATION.
8. INSTALL PIPING ABOVE ACCESSIBLE CEILINGS TO ALLOW SUFFICIENT SPACE FOR CEILING TILE REMOVAL.
9. INSTALL PIPING TO PERMIT VALVE SERVICING, FREE OF SAGS AND BENDS. AT INDICATED SLOPES, INSTALL FITTINGS FOR CHANGES OF DIRECTION AND BRANCH CONNECTIONS, AND TO ALLOW THE APPLICATION OF INSULATION.
10. UNLESS NOTED OTHERWISE ON THE PLUMBING PLANS, INSTALL DRAIN PIPING 2" AND SMALLER SLOPED AT 1/4" PER FOOT (MINIMUM), AND DRAIN PIPING 3" AND LARGER SLOPED AT 1/8" PER FOOT (MINIMUM).
11. INSTALL SANITARY VENT PIPING SLOPED (GRADED) BACK TO THE DRAINAGE SYSTEM.
12. INSTALL OVERSIZED PIPE HANGERS ON ALL PIPING SYSTEMS WITH A CONTINUOUS VAPOR BARRIER. REFER TO SPECIFICATION SECTION 22 07 19.
13. PIPE HANGERS SHALL NOT BE ATTACHED TO THE ROOF DECK UNLESS INDICATED OTHERWISE.

WATER HAMMER ARRESTOR LEGEND

SYMBOL	PDI RATING	FIXTURE UNIT CAP
A	A	1-11
B	B	12-32
C	C	33-60
D	D	61-113
E	E	114-154
F	F	155-330

NOTES:
1. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER PLACEMENT OF WATER HAMMER ARRESTORS. REFER TO SPECIFICATION SECTION 221006 AND MANUFACTURERS RECOMMENDATIONS.

FIXTURE UNIT VALUES

	DRAINAGE (NOTE 1)	SUPPLY (NOTE 2)		
FIXTURE	DFU	HWFU	CWFU	TOTAL
WATER CLOSET (FLUSH VALVE)	4	---	10	10
WATER CLOSET (FLUSH TANK)	4		2	2
URINAL (FLUSH VALVE)	2	---	5	5
LAVATORY	1	1.5	1.5	2
SINK	2	1	1	1.4
SHOWER	2	3	3	4
MOP SERVICE BASIN	2	2.25	2.25	3
WASHING MACHINE OUTLET BOX (WITH STANDPIPE)	2	2.25	2.25	3
WALL HYDRANT / HOSE BIBB	---	---	3	3
ELECTRIC WATER COOLER / DRINKING FOUNTAIN	0.5	---	0.25	0.25
FLOOR DRAIN / FLOOR SINK (2" TRAP)	3	---	---	---
FLOOR DRAIN / FLOOR SINK (3" TRAP)	5	---	---	---
FLOOR DRAIN / FLOOR SINK (4" TRAP)	6	---	---	---
FLOOR DRAIN / FLOOR SINK (EMERGENCY)	---	---	---	---

NOTES:
1. DRAINAGE FIXTURE UNIT VALUES (DFU) TAKEN FROM MICHIGAN PLUMBING CODE / 2015, CHAPTER 7, TABLE 709.1.
2. SUPPLY FIXTURE UNIT VALUES TAKEN FROM MICHIGAN PLUMBING CODE/2015, APPENDIX E TABLE E103.3(2). (PRINTED IN CODE FOR REFERENCE ONLY.)
3. NOT ALL PLUMBING FIXTURES MAY BE PRESENT IN CONSTRUCTION DOCUMENTS.

GENERAL PLUMBING EQUIPMENT INSTALLATION NOTES:

1. REFER TO PROJECT SPECIFICATIONS MANUAL FOR ADDITIONAL REQUIREMENTS.
2. INSTALL PLUMBING EQUIPMENT, TRIM, FITTINGS, AND OTHER COMPONENTS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. INSTALL PLUMBING EQUIPMENT ON CONCRETE BASE WHERE INDICATED.

GENERAL PLUMBING FIXTURE INSTALLATION NOTES:

1. REFER TO PROJECT SPECIFICATIONS MANUAL FOR ADDITIONAL REQUIREMENTS.
2. ASSEMBLE PLUMBING FIXTURES, TRIM, FITTINGS, AND OTHER COMPONENTS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. INSTALL OFF THE FLOOR SUPPORTS AFFIXED TO BUILDING SUBSTRATE FOR WALL MOUNTING FIXTURES. INSTALL BACK OUTLET WALL MOUNTED FIXTURES ONTO WASTE FITTINGS WITH SEALS AND ATTACH TO SUPPORTS. INSTALL WALL MOUNTED FIXTURES WITH TUBULAR WASTE PIPING ATTACHED TO SUPPORTS.
4. INSTALL COUNTER MOUNTED FIXTURES IN AND ATTACHED TO CASEWORK.
5. INSTALL FIXTURES LEVEL AND PLUMB ACCORDING TO ROUGH IN DRAWINGS.
6. INSTALL WATER SUPPLY WITH STOP ON EACH SUPPLY TO EACH FIXTURE TO BE CONNECTED TO WATER DISTRIBUTION PIPING. ATTACH SUPPLIES TO SUPPORTS OR SUBSTRATE WITHIN PIPE SPACES BEHIND FIXTURES. INSTALL STOPS WHERE THEY CAN BE REACHED FOR OPERATION.
7. INSTALL TRAP AND TUBULAR WASTE PIPING ON DRAIN OUTLET OF EACH FIXTURE TO BE DIRECTLY OR INDIRECTLY CONNECTED TO DRAINAGE SYSTEM.
8. INSTALL FLUSHOMETER VALVES FOR ACCESSIBLE WATER CLOSETS AND URINALS WITH THE HANDLE MOUNTED ON THE WIDE SIDE OF THE COMPARTMENT.
9. INSTALL TANKS FOR ACCESSIBLE, TANK TYPE WATER CLOSETS WITH LEVER HANDLE MOUNTED ON THE WIDE SIDE OF THE COMPARTMENT.
10. SET BATHTUBS, SHOWERS, AND MOP SERVICE BASINS IN A LEVELING BED OF CEMENT GROUT.
11. SEAL JOINTS BETWEEN FIXTURES, WALLS, FLOORS, AND COUNTERTOPS USING SANITARY TYPE, ONE PART, MILDEW RESISTANT SILICONE SEALANT. MATCH SEALANT COLOR TO FIXTURE COLOR.

GENERAL DEMOLITION NOTES:

1. ALL EXISTING PLUMBING FIXTURES, EQUIPMENT, AND ASSOCIATED PIPING SHOWN AS DASHED (HEAVY/BOLD) SHALL BE REMOVED. PROTECT EXISTING WORK WHICH IS TO REMAIN IN PLACE FOR REUSE WITH TEMPORARY COVERS, SHORING, BRACING, AND SUPPORTS. EXISTING DOMESTIC COLD, HOT, HOT WATER RETURN, AND NATURAL GAS PIPING LOCATED IN TUNNELS SHALL BE CAPPED AND ABANDONED IN PLACE.
2. THE OWNER RESERVES THE RIGHT OF FIRST REFUSAL IN OWNERSHIP OF ANY EQUIPMENT AND MATERIALS TO BE REMOVED FROM THE BUILDING SITE. ALL EQUIPMENT TO BE REMOVED AND NOT REUSED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE OWNERS PROPERTY.
3. INVESTIGATION OF EXISTING PLUMBING SYSTEMS WILL BE REQUIRED BY THE CONTRACTOR AS PART OF HIS BID PRICE, SO THAT THE EXACT EXTENT OF DEMOLITION CAN BE ACCURATELY DETERMINED. THE CONTRACTOR'S BID PRICE SHALL ALSO COVER REMOVAL OF SOME PORTIONS OF PLUMBING SYSTEMS NOT EXPLICITLY SHOWN ON THE DEMOLITION DRAWINGS, BUT DISCOVERED DURING THE INVESTIGATION PROCESS. THE CONTRACTOR SHALL WORK WITH THE ARCHITECT/ENGINEER AND THE OWNER TO DETERMINE WHICH PORTIONS OF EXISTING SYSTEMS MUST REMAIN ACTIVE AND WHICH PORTIONS MUST BE DEMOLISHED. REMOVE ALL INACTIVE PIPING TO THE NEAREST ACTIVE MAINS AND CAP. ABANDONED PIPING SYSTEMS BENEATH THE BUILDING SHALL BE CAPPED AT BOTH ENDS.
4. DEMOLITION OF AN ITEM SHALL INCLUDE REMOVAL OF ALL RELATED HANGERS, SUPPORTS, PIPING, AND ACCESSORIES. REMOVAL OF POWER WIRING SHALL BE BY OTHERS UNLESS INDICATED OTHERWISE.
5. CONTRACTOR SHALL PROTECT ALL WALLS, CEILINGS, FLOORS, LIGHTS AND OTHER FINISHED SURFACES WHICH ARE NOT SCHEDULED FOR IMMEDIATE REMOVAL. IF SURFACES OR LIGHTS ARE DAMAGED, CONTRACTOR SHALL REPAIR OR REPLACE TO MATCH ORIGINAL CONDITIONS.
6. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR ALL FLOOR, WALL, AND ROOF REPAIR WORK LEFT BY REMOVED ITEMS.

MINIMUM SIZE CONNECTION

FIXTURE	CW	HW	SAN	VENT
WATER CLOSET (FLUSH VALVE)	1-1/4"	----	4"	2"
URINAL (FLUSH VALVE)	3/4"	----	2"	1-1/2"
LAVATORY	1/2"	1/2"	1-1/4"	1-1/4"
SINK	1/2"	1/2"	1-1/2"	1-1/2"
SHOWER	1/2"	1/2"	2"	1-1/2"
MOP SERVICE BASIN	3/4"	3/4"	3"	1-1/2"
WASHING MACHINE OUTLET BOX (WITH STANDPIPE)	3/4"	3/4"	3" (TRAP)	1-1/2"
ICE MAKER OUTLET BOX	1/2"	----	----	----
WALL HYDRANT / HOSE BIBB	3/4"	----	----	----
ELECTRIC WATER COOLER	1/2"	----	1-1/4"	1-1/4"
DRINKING FOUNTAIN	1/2"	----	1-1/4"	1-1/4"
FLOOR DRAIN / FLOOR SINK	----	----	3"	1-1/2"
FLOOR DRAIN / FLOOR SINK (MECHANICAL ROOM)	----	----	4"	2"

NOTES:
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NORTH

OVERALL FIRST FLOOR PLUMBING PLAN
3/32" = 1'-0"

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NORTH

OVERALL SECOND FLOOR PLUMBING PLAN
3/32" = 1'-0"

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OVERALL SECOND FLOOR PLUMBING PLAN

P2.02

GENERAL HYDRONIC PIPING NOTES:

1. ALL DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND ARE INTENDED TO SHOW THE GENERAL LAYOUT OF SYSTEMS AND EQUIPMENT. THE EXACT LOCATIONS OF EQUIPMENT AND THE FINAL PIPING LAYOUTS ARE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE FIELD-DETERMINED. COORDINATE WITH THE BUILDING ARCHITECTURE AND STRUCTURE, AND WITH NEW AND EXISTING MECHANICAL AND ELECTRICAL SYSTEMS. WHERE THE LAYOUT DIFFERS SIGNIFICANTLY FROM DESIGN, COORDINATE WITH THE ARCHITECT/ENGINEER. RECORD ALL DIFFERENCES ON RECORD DRAWINGS.
2. PIPING PLANS DO NOT NECESSARILY INDICATE ALL VALVES, GAUGES, UNIONS AND OTHER ACCESSORIES. REFER TO SCHEMATIC DIAGRAMS AND DETAILS FOR ADDITIONAL INFORMATION.
3. INSTALL ALL THERMOSTATS/SPACE TEMPERATURE SENSORS AT 48 INCHES ABOVE FINISHED FLOOR (TO TOP OF SENSOR). WHERE APPLICABLE, ALIGN WITH LIGHT SWITCHES.
4. ALL THERMOSTATS AND SENSORS LOCATED ON EXTERIOR WALLS SHALL HAVE INSULATED BACKPLATES. PACK ALL WALL OPENINGS WITH FIBERGLASS INSULATION.
5. THE CONTRACTOR SHALL EXAMINE THE CONDITION OF ALL EQUIPMENT PRIOR TO INSTALLATION. DO NOT INSTALL DAMAGED EQUIPMENT.
6. INSTALL PIPING IN A MANNER WHICH ENABLES COMPLETE DRAINAGE OF PIPING AND EQUIPMENT, AND COMPLETE ELIMINATION OF AIR POCKETS. MINIMIZE THE NUMBER OF PIPE RISES AND DROPS. FURNISH AND INSTALL DRAIN VALVES WITH CAPS AT ALL LOW POINTS IN PIPING. FURNISH AND INSTALL MANUAL AIR VENTS AT ALL HIGH POINTS IN PIPING.
7. REFER TO ARCHITECTURAL CODE COMPLIANCE PLANS FOR THE LOCATIONS OF FIRE/SMOKE RATED ASSEMBLIES.
8. REFER TO SPECIFICATION 23 21 13 FOR THE REQUIREMENTS FOR PIPE PENETRATIONS THROUGH BUILDING ASSEMBLIES.
9. WHERE POSSIBLE, INSTALL VALVES, EQUIPMENT AND DEVICES REQUIRING SERVICE OR MAINTENANCE IN ACCESSIBLE LOCATIONS. WHERE NOT POSSIBLE, PROVIDE ACCESS DOORS, SIZED SUITABLY FOR THE REQUIRED PURPOSE. COORDINATE ACCESS DOOR LOCATIONS AND SIZES WITH THE ARCHITECT/ENGINEER.
10. INSTALL VALVES WITH HANDLES ON TOP OR SIDE.
11. PROVIDE MANUFACTURERS' RECOMMENDED CLEARANCES FOR AIR FLOW, ELECTRICAL AND MAINTENANCE AROUND EQUIPMENT. WHERE CLEARANCES ARE ALSO SHOWN ON THE DRAWINGS, PROVIDE THE MORE STRINGENT OF THE REQUIRED CLEARANCES.
12. PROVIDE OVERSIZED PIPE HANGERS ON ALL INSULATED HOT AND COLD PIPING. REFER TO SPECIFICATION 23 07 19.

GENERAL HVAC NOTES:

1. ALL DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND ARE INTENDED TO SHOW THE GENERAL LAYOUT OF SYSTEMS AND EQUIPMENT. THE EXACT LOCATIONS OF EQUIPMENT AND THE FINAL DUCTWORK LAYOUTS ARE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE FIELD-DETERMINED. COORDINATE WITH THE BUILDING ARCHITECTURE AND STRUCTURE, AND WITH NEW AND EXISTING MECHANICAL AND ELECTRICAL SYSTEMS. WHERE THE LAYOUT DIFFERS SIGNIFICANTLY FROM DESIGN, COORDINATE WITH THE ARCHITECT/ENGINEER. RECORD ALL DIFFERENCES ON RECORD DRAWINGS.
2. COORDINATE LOCATIONS OF REGISTERS, DIFFUSERS AND GRILLES WITH THE REFLECTED CEILING PLANS. COORDINATE ANY DISCREPANCIES WITH THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.
3. INSTALL ALL THERMOSTATS/SPACE TEMPERATURE SENSORS AT 48 INCHES ABOVE FINISHED FLOOR (TO TOP OF SENSOR). WHERE APPLICABLE, ALIGN WITH LIGHT SWITCHES.
4. ALL THERMOSTATS AND SENSORS LOCATED ON EXTERIOR WALLS SHALL HAVE INSULATED BACKPLATES.
5. WHERE INTERNALLY LINED OR DOUBLE-WALL DUCTWORK IS SHOWN, THE DIMENSIONS SHOWN INDICATE THE REQUIRED INSIDE FREE AREA DIMENSIONS.
6. THE CONTRACTOR SHALL EXAMINE THE CONDITION OF ALL EQUIPMENT PRIOR TO INSTALLATION. DO NOT INSTALL DAMAGED EQUIPMENT.
7. WHERE CONNECTING NEW DUCTWORK TO EXISTING, SEAL JOINTS AIRTIGHT AND REPAIR DAMAGED INSULATION TO MATCH NEW.
8. WHERE DUCTWORK IS EXPOSED, ROUTE AS HIGH AS PRACTICAL IN THE SPACE UNLESS INDICATED OTHERWISE.
9. REFER TO ARCHITECTURAL CODE COMPLIANCE PLANS FOR THE LOCATIONS OF FIRE/SMOKE RATED ASSEMBLIES.
10. PAINT VISIBLE INTERIOR SURFACES OF DUCTS AT REGISTERS, GRILLES, DIFFUSERS AND LOUVERS FLAT BLACK.
11. WHERE POSSIBLE, INSTALL EQUIPMENT AND DEVICES REQUIRING SERVICE OR MAINTENANCE IN ACCESSIBLE LOCATIONS. WHERE NOT POSSIBLE, PROVIDE ACCESS DOORS, SIZED SUITABLY FOR THE REQUIRED PURPOSE. COORDINATE ACCESS DOOR LOCATIONS AND SIZES WITH THE ARCHITECT/ENGINEER.
12. PROVIDE MANUFACTURERS' RECOMMENDED CLEARANCES FOR AIR FLOW, ELECTRICAL AND MAINTENANCE AROUND EQUIPMENT. WHERE CLEARANCES ARE ALSO SHOWN ON THE DRAWINGS, PROVIDE THE MORE STRINGENT OF THE REQUIRED CLEARANCES.
13. FLEXIBLE DUCTWORK CONNECTIONS TO RIGID DUCTWORK, TO AIR TERMINAL UNITS AND TO REGISTERS, GRILLES AND DIFFUSERS SHALL BE CLAMPED AND TAPED. ROUND CONNECTIONS SHALL HAVE VINYL DRAWBANDS AND TAPE. TAPE SHALL MEET THE REQUIREMENTS OF U.L. 181B-FX.

GENERAL MECHANICAL DEMOLITION NOTES:

1. THE OWNER RESERVES THE RIGHT OF FIRST REFUSAL IN OWNERSHIP OF ANY EQUIPMENT ITEMS AND MATERIALS TO BE REMOVED FROM THE BUILDING AND SITE.
2. ALL MATERIALS AND EQUIPMENT REMOVED AND NOT SALVAGED OR RE-USED SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE OWNER'S PROPERTY AND DISPOSED OF PROPERLY.
3. THE DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND ARE BASED ON THE REVIEW OF PREVIOUS DESIGN DRAWINGS (WHERE AVAILABLE) AND ON LIMITED FIELD INVESTIGATION. THE CONTRACTOR IS RESPONSIBLE TO INVESTIGATE THE BUILDING AND SITE TO DETERMINE THE FULL EXTENT OF DEMOLITION WORK REQUIRED. THE CONTRACTOR SHALL FIELD-VERIFY THE ACTUAL LOCATIONS AND SIZES OF EXISTING DUCTWORK, PIPING AND EQUIPMENT. WHERE DISCREPANCIES BETWEEN THE DRAWINGS AND THE EXISTING CONDITIONS RESULT IN AN UNCLEAR DEMOLITION SCOPE, COORDINATE WITH THE ARCHITECT/ENGINEER.
4. WHERE DEMOLITION OF MATERIALS OR EQUIPMENT IS REQUIRED, REMOVE ALL RELATED SUPPORTS, ACCESSORIES, LOW-VOLTAGE WIRING, PNEUMATIC TUBING AND CONTROLS (CONCEALED OR EXPOSED). REMOVE WIRING TO THE NEAREST JUNCTION BOX, AND PNEUMATIC TUBING TO THE NEAREST MAIN. WHERE A PNEUMATIC CONTROL SYSTEM IS TO REMAIN ACTIVE, CAP AND SEAL TUBING AT MAINS.
5. ALL PIPING, DUCTWORK AND EQUIPMENT SHOWN CROSS-HATCHED OR BOLD DASHED SHALL BE REMOVED OR RELOCATED UNLESS OTHERWISE NOTED.
6. VERIFY LOCATION AND PROTECT EXISTING WORK AND UTILITIES WHICH ARE TO REMAIN IN PLACE WITH TEMPORARY COVERS, SHORING, BRACING AND SUPPORTS.
7. ALL MATERIALS AND EQUIPMENT REQUIRING REMOVAL AND REINSTALLATION FOR RE-USE SHALL BE CAREFULLY REMOVED AND STORED TO PREVENT DAMAGE. THE CONTRACTOR IS RESPONSIBLE FOR LOSS OF OR DAMAGE TO STORED MATERIALS AND EQUIPMENT.
8. WHERE ON-SITE STORAGE OF MATERIAL AND EQUIPMENT IS PERMITTED, COORDINATE STORAGE LOCATION(S) WITH THE OWNER.
9. PROTECT THE BUILDING STRUCTURE AND FINISHES AND ALL BUILDING SYSTEMS DURING DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES INCURRED AS A RESULT OF DEMOLITION WORK.
10. UNLESS ASSIGNED TO ANOTHER TRADE, PATCH AND REPAIR ALL WALL, FLOOR AND CEILING OPENINGS DUE TO DEMOLITION WHICH ARE NOT TO BE RE-USED. MATCH EXISTING SURROUNDING CONSTRUCTION, FINISHES, COLORS AND FIRE/SMOKE RATINGS.
11. UNLESS ASSIGNED TO ANOTHER TRADE, PATCH AND REPAIR ROOF IN A MANNER WHICH WILL MAINTAIN THE WATER-TIGHT INTEGRITY OF THE ROOF. WHERE A ROOF WARRANTY EXISTS, PERFORM THE WORK IN A MANNER WHICH WILL MAINTAIN THE WARRANTY.
12. IF MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE ENCOUNTERED, NOTIFY THE OWNER IMMEDIATELY. WHERE REMOVAL OR ENCAPSULATION IS REQUIRED, SUCH WORK WILL BE PERFORMED BY THE OWNER UNDER A SEPARATE CONTRACT.

GENERAL INSTRUMENT SYMBOLS

Symbol	Description
	LOCAL DEVICE
TR / AL	(TR - TREND) BMS CONTROL POINT / FUNCTION (AL - ALARM)
	AVERAGING TEMPERATURE ELEMENT
	AIR FLOW TRANSMITTER
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	BLADE DAMPER
C / C	AIR COIL
	FAN
FILTER	FILTER
	PUMP

LOCAL DEVICE ABBREVIATIONS

CO2	CARBON DIOXIDE LEVEL TRANSMITTER
CO	CARBON MONOXIDE LEVEL TRANSMITTER
ECM	ELECTRICALLY COMMUTATED MOTOR
FSH	FLOW SWITCH HIGH
FSL	FLOW SWITCH LOW
FT	FLOW TRANSMITTER
GCV	GAS CONTROL VALVE
HS	HAND SWITCH (HAND-OFF-AUTO)
HT	HUMIDITY TRANSMITTER
HTG	HEATING ELEMENT
KC	TIME CLOCK CONTROLLING EQPM SCHEDULE
LSL	LEVEL SWITCH LOW
LSH	LEVEL SWITCH HIGH
LT	LEVEL TRANSMITTER
M	MOTOR
MD	MOTORIZED CONTROL DAMPER
OCC	OCCUPANCY SENSOR
PDT	PRESSURE DIFFERENTIAL TRANSMITTER
PDS	PRESSURE DIFFERENTIAL SWITCH
PKG	PACKAGED EQUIPMENT CONTROLLER
PSH	PRESSURE SWITCH HIGH
PSL	PRESSURE SWITCH LOW
PT	PRESSURE TRANSMITTER
SD	SMOKE DETECTOR
SNW	SNOW/ICE SENSOR
TCV	TEMPERATURE CONTROL VALVE
TSL	TEMPERATURE SWITCH LOW (FREEZESTAT)
TSH	TEMPERATURE SWITCH HIGH
TT	TEMPERATURE TRANSMITTER
VCC	VARIABLE CAPACITY COMPRESSOR
VFD	VARIABLE FREQUENCY DRIVE

BMS POINT ABBREVIATIONS

AL	GENERAL ALARM / ALARM LOW LIMIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
CC	EQUIPMENT CAPACITY SIGNAL
CO2	CARBON DIOXIDE LEVEL
CO	CARBON MONOXIDE LEVEL
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
EN	EQUIPMENT ENABLE
FI	FLOW INDICATE
HI	HUMIDITY INDICATE
LI	LEVEL INDICATE
NO2	NITROGEN DIOXIDE LEVEL
O/C	OPEN/CLOSE (2-POS DAMPER OR VALVE)
OI	OCCUPIED/UNOCCUPIED INDICATE
PC	POSITION CONTROL (MODULATING DAMPER OR VALVE)
PI	PRESSURE INDICATE
SC	SPEED CONTROL
SD	SMOKE DETECTOR
SI	STATUS INDICATE
SNWI	SNOW/ICE INDICATE
S/S	START/STOP
STPT	SETPOINT SIGNAL
TI	TEMPERATURE INDICATE
ZI	POSITION INDICATE

MECHANICAL LINE SERVICE DESIGNATIONS

BFW	BOILER FEED WATER
CDGR	CONDENSER GLYCOL RETURN
CDGS	CONDENSER GLYCOL SUPPLY
CHGR	CHILLED GLYCOL RETURN
CHGS	CHILLED GLYCOL SUPPLY
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CTWR	COOLING TOWER WATER RETURN
CTWS	COOLING TOWER WATER SUPPLY
G	NATURAL GAS
GTWR	GEOTHERMAL WATER RETURN
GTWS	GEOTHERMAL WATER SUPPLY
HGR	HOT GLYCOL RETURN
HGS	HOT GLYCOL SUPPLY
HPCR	HIGH PRESSURE CONDENSATE RETURN
HPS	HIGH PRESSURE STEAM
HPWR	HEAT PUMP WATER RETURN
HPWS	HEAT PUMP WATER SUPPLY
HWR	HOT WATER RETURN (HEATING)
HWS	HOT WATER SUPPLY (HEATING)
LPS	LOW PRESSURE STEAM
LPCR	LOW PRESSURE CONDENSATE RETURN
MPS	MEDIUM PRESSURE STEAM
MPCR	MEDIUM PRESSURE CONDENSATE RETURN
RWR	RADIANT WATER RETURN
RWS	RADIANT WATER SUPPLY
SPWR	SWIMMING POOL WATER RETURN
SPWS	SWIMMING POOL WATER SUPPLY
SMR	SNOWMELT RETURN
SMS	SNOWMELT SUPPLY
PCR	PUMPED CONDENSATE RETURN
V	VENT

MECHANICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
CH	CABINET HEATER
CLG	CEILING
CO	CLEAN-OUT
CONN	CONNECTION
CONT	CONTINUATION
CONV	CONVECTOR
DN	DOWN
DWG	DRAWING
EA	EXHAUST AIR
EF	EXHAUST FAN
ETR	EXISTING TO REMAIN
ET	EXPANSION TANK
ERU	ENERGY RECOVERY UNIT
EX.	EXISTING
FLR	FLOOR
MAU	MAKE-UP AIR UNIT
MFR	MANUFACTURER
MAX	MAXIMUM
MIN	MINIMUM
OA	OUTSIDE AIR
RA	RETURN AIR
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SPECS.	SPECIFICATIONS
TOD	TOP OF DUCT
TOG	TOP OF GRILLE
TOP	TOP OF PIPE
TOS	TOP OF STRUCTURE
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VD	VOLUME DAMPER
VTR	VENT THRU ROOF

HVAC SYMBOLS

Symbol	Description
T S	THERMOSTAT / SENSOR
T R	RADIANT FLOOR THERMOSTAT
H	HUMIDISTAT
CO_2	CARBON DIOXIDE SENSOR
	PARALLEL BLADE DAMPER
	OPPOSED BLADE DAMPER
M	MOTOR OPERATED DAMPER
	VOLUME DAMPER
	FIRE DAMPER (THRU FLOOR)
	FIRE DAMPER (THRU WALL)
S	SMOKE DAMPER (THRU FLOOR)
S	SMOKE DAMPER (THRU WALL)
FS	COMBINATION FIRE/SMOKE DAMPER (THRU FLOOR)
FS	COMBINATION FIRE/SMOKE DAMPER (THRU WALL)
SD	DUCT SMOKE DETECTOR
	CONNECT TO EXISTING

HVAC SHEETMETAL SYMBOLS

Symbol	Description
	DUCTWORK / DIFFUSER DEMOLITION
OR	MITERED ELBOW (RECTANGULAR, ROUND & OVAL) TURNING VANES REQUIRED PER SPECIFICATIONS
	RECTANGULAR DUCTWORK RISE
	RECTANGULAR DUCTWORK DROP
	ROUND DUCTWORK RISE
	ROUND DUCTWORK DROP
X"xX" SA	RECTANGULAR DUCTWORK
X"ø SA	ROUND DUCTWORK
X"/X"ø SA	OVAL DUCTWORK
X"xX" LINED SA	LINED RECTANGULAR DUCTWORK
R	DUCTWORK RISE SYMBOL
D	DUCTWORK DROP SYMBOL
	FLEXIBLE DUCTWORK (SUPPLY)
	SUPPLY DIFFUSER (S-X)
	RETURN GRILLE (R-X)
	EXHAUST GRILLE (E-X)
	LINEAR SLOT DIFFUSER (S-X)
	SIDEWALL DIFFUSER OR GRILLE
	RECTANGULAR OR ROUND MANUAL DAMPER
M	RECTANGULAR OR ROUND MOTORIZED DAMPER
F/S	RECTANGULAR OR ROUND FIRE / SMOKE DAMPER
	RECTANGULAR OR ROUND FIRE DAMPER
	VAV TERMINAL BOX

PIPING & INSTR. SYMBOLS

Symbol	Description
	ECCENTRIC REDUCER
	CONCENTRIC REDUCER
T	GENERAL / THERMODYNAMIC TRAP
T	INVERTED BUCKET TRAP
SD	SUCTION DIFFUSER
	UNION
	FLEXIBLE CONNECTOR
	CAP
	BLIND FLANGE
	"Y" STRAINER W/ BLOWDOWN
	AIR VENT
F	COMPRESSED AIR COMB. FILTER, REG. & OILER
FS	FLOW SWITCH
PS	PRESSURE SWITCH
PT	PRESSURE TAP
TW	THERMOWELL
PI	PRESSURE GAUGE & SHUT OFF
PI	PRESSURE GAUGE W/ SIPHON
TI	THERMOMETER
	EMERGENCY EYE WASH / SHOWER
	ANCHOR
	GUIDE
	HIGH CAPACITY AIR VENT
T	FLOAT & THERMOSTATIC TRAP

VALVE SYMBOLS

Symbol	Description
	GATE VALVE
	BALL VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	SWING CHECK VALVE
	TRIPLE-DUTY VALVE
	PLUG VALVE
	DIAPHRAGM VALVE
	NEEDLE VALVE
	ANGLE VALVE
	PRESSURE REDUCING VALVE, SELF-CONTAINED
	EXT. PRESSURE REDUCING VALVE
	RELIEF / SAFETY VALVE
	HOSE BIBB
S	SOLENOID VALVE
	CALIBRATED BALANCING VALVE
	TEMPERATURE CONTROL VALVE
	CONTROL VALVE, 3-WAY
	BACKFLOW PREVENTER WITH DRIP PAN
	CONNECT TO EXISTING
	INDICATES VALVE IS FLANGED (TYP)

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57TH DISTRICT COURTHOUSE ADDITIONS & RENOVATIONS

ALLEGAN COUNTY

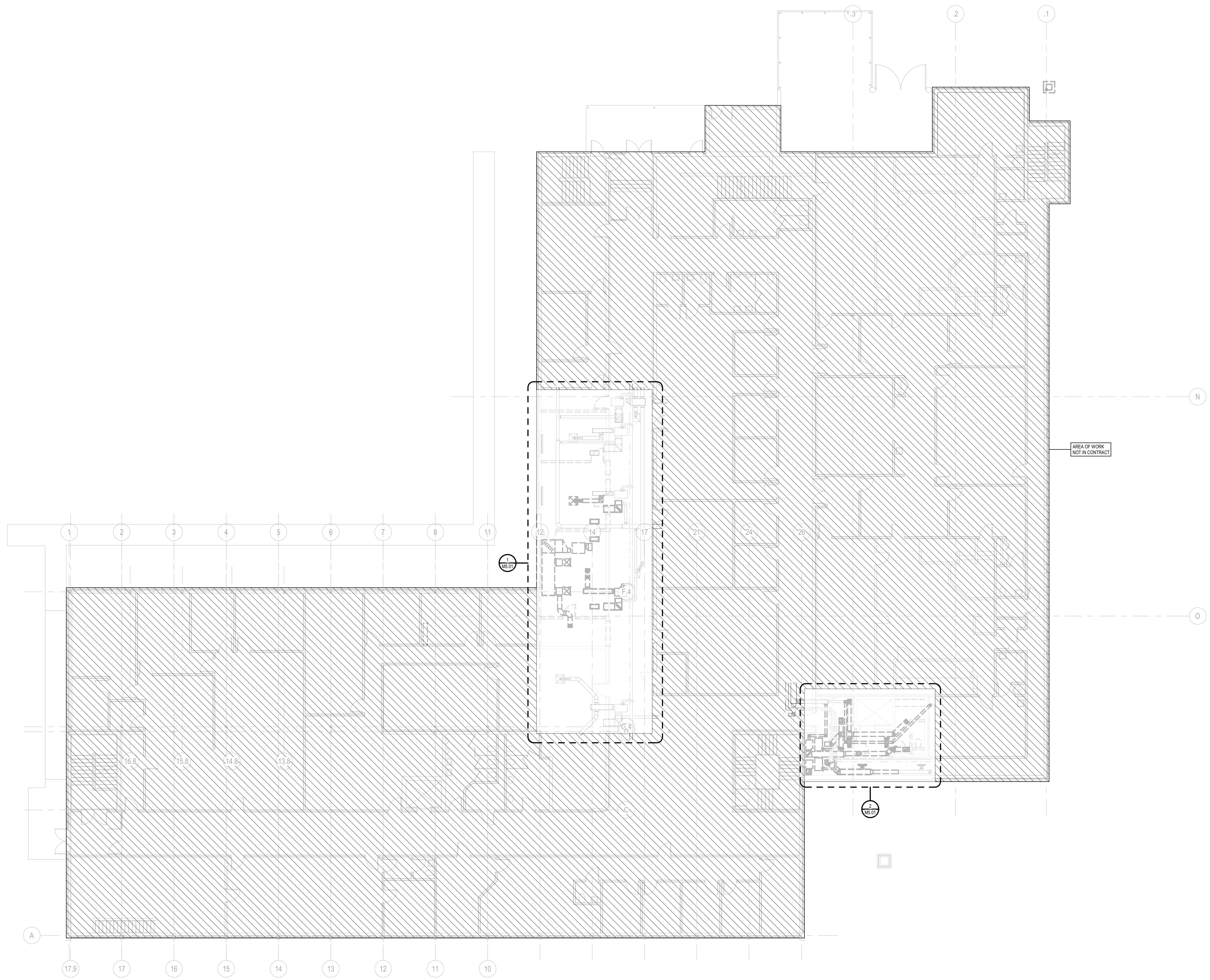
ALLEGAN, MICHIGAN

ISSUANCES	
04.24.2020	SCHEMATIC DESIGN

DRAWN	NVM
REVIEWED	JBH
PROJECT NO.	5-5140

MECHANICAL GENERAL INFORMATION

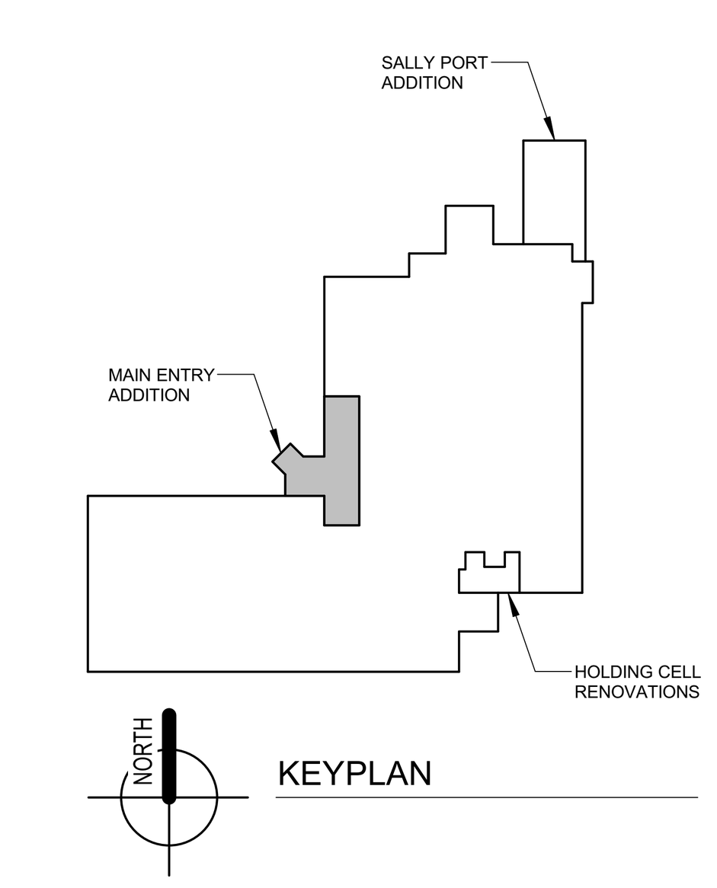
M0.01



NORTH

OVERALL FIRST FLOOR MECHANICAL DEMOLITION PLAN

3/32" = 1'-0"



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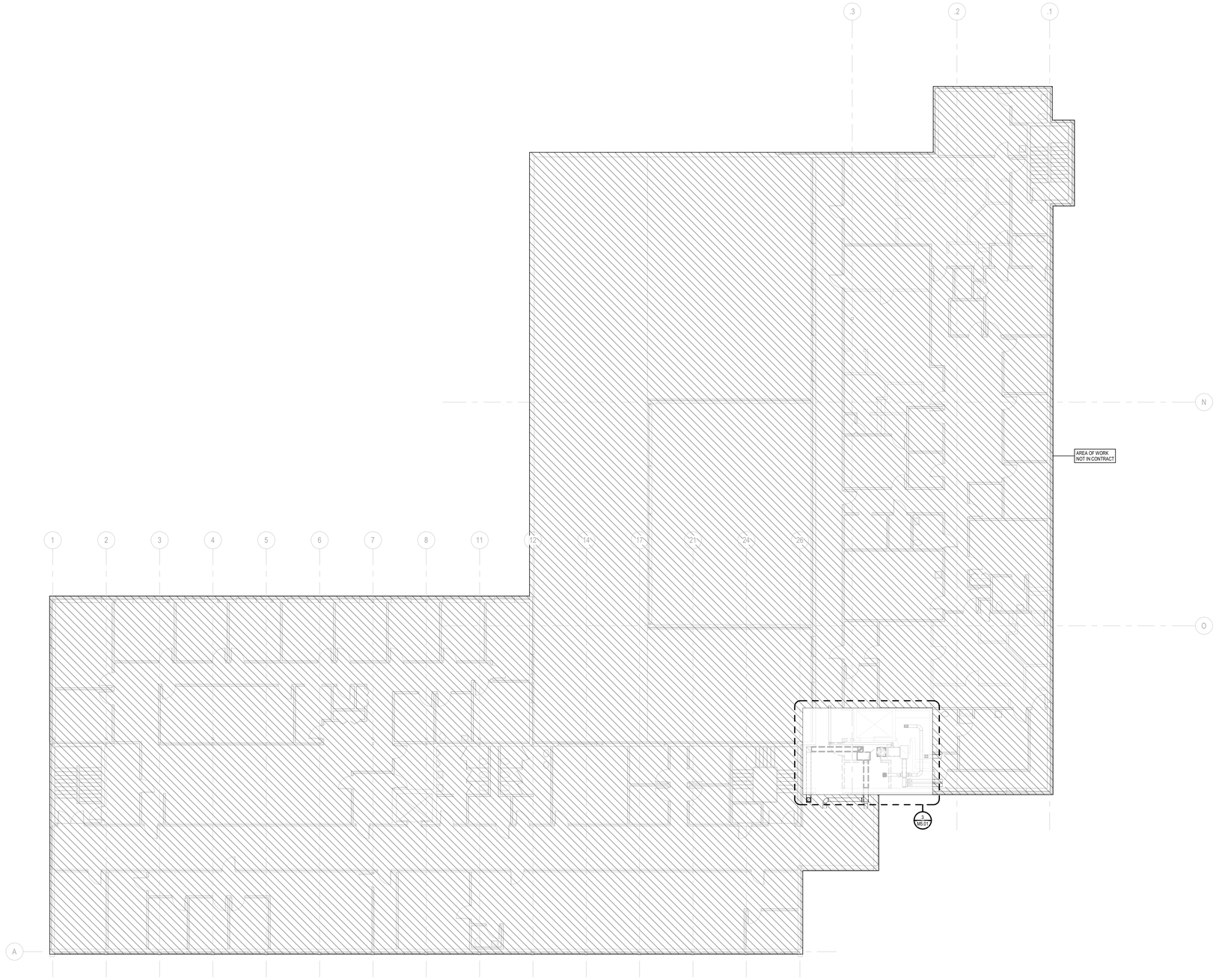
OVERALL FIRST FLOOR MECHANICAL DEMOLITION PLAN

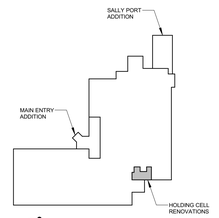
M1.01



NORTH

OVERALL SECOND FLOOR MECHANICAL DEMOLITION PLAN

3/32" = 1'-0"



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OVERALL SECOND FLOOR MECHANICAL DEMOLITION

M1.02

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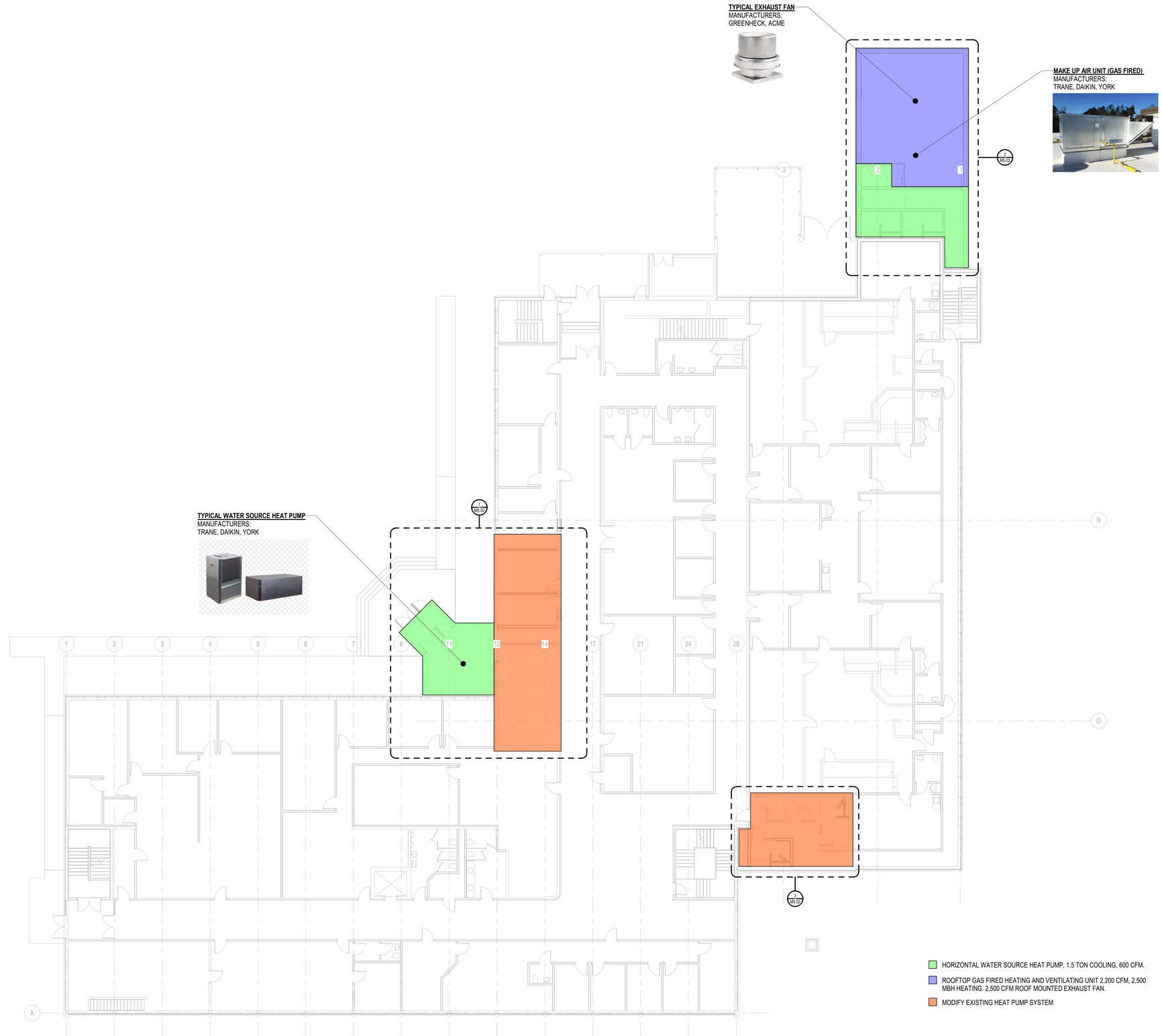

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OVERALL FIRST FLOOR MECHANICAL PLAN

M2.01

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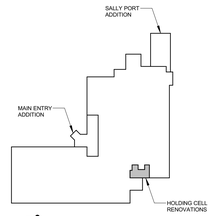
MODIFY EXISTING HEAT PUMP SYSTEM

North

OVERALL SECOND FLOOR MECHANICAL PLAN

3/32" = 1'-0"



North

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OVERALL SECOND FLOOR MECHANICAL PLAN

M2.02

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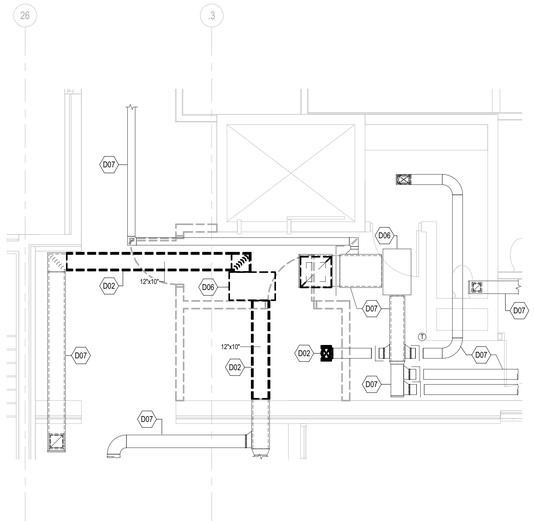
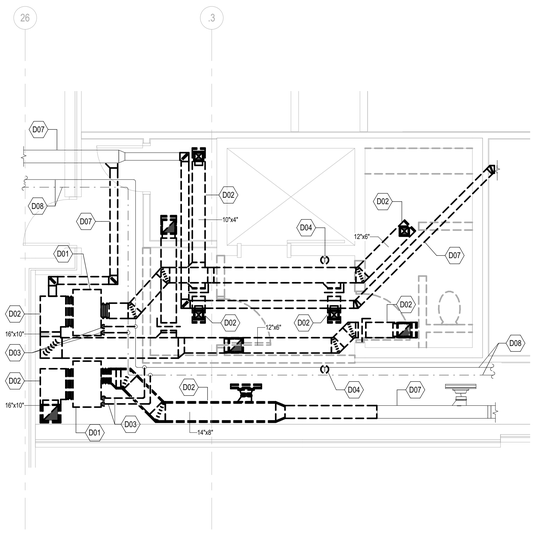
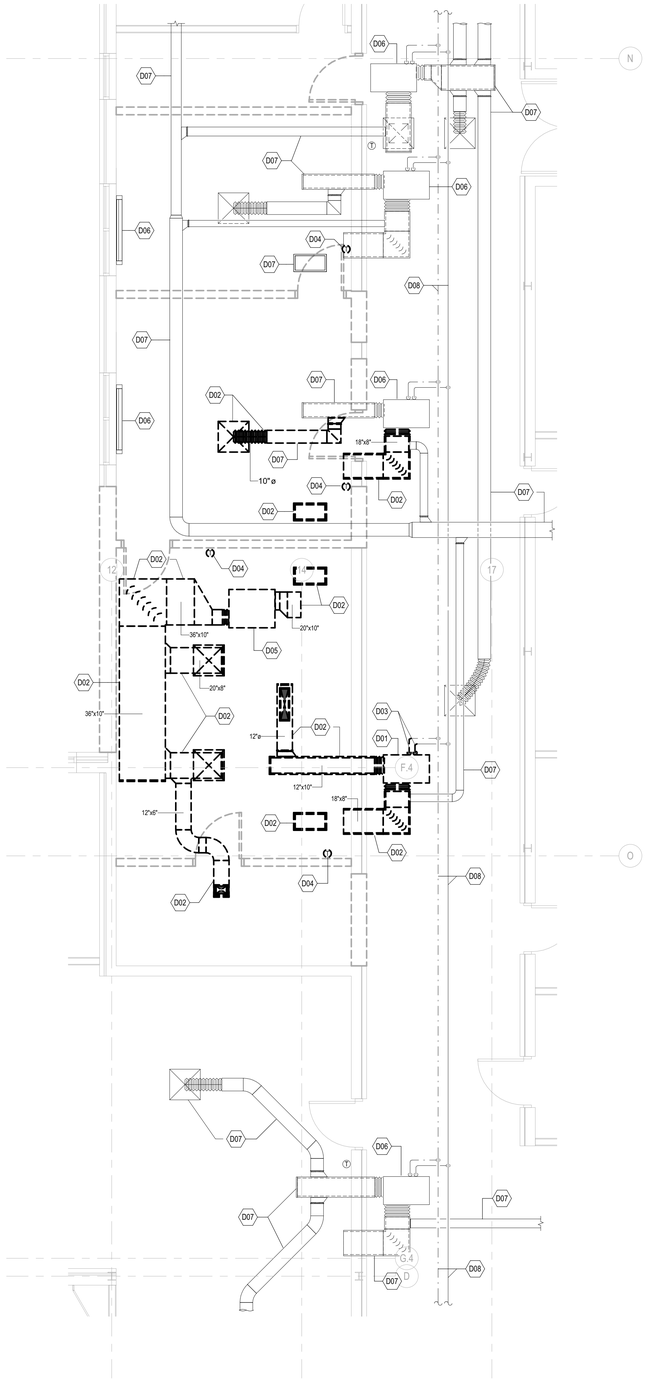


3 M5.01 PARTIAL ENLARGED SECOND FLOOR HOLDING CELL MECHANICAL DEMOLITION PLAN
1/4" = 1'-0"



2 M5.01 PARTIAL ENLARGED FIRST FLOOR HOLDING CELL MECHANICAL DEMOLITION PLAN
1/4" = 1'-0"



1 M5.01 PARTIAL ENLARGED FIRST FLOOR MECHANICAL DEMOLITION PLAN
1/4" = 1'-0"

MECHANICAL DEMO KEYNOTE LEGEND

D01	REMOVE HORIZONTAL HEAT PUMP. DUCTWORK, PIPING, CONTROLS, VALVES, SUPPORTS,INSULATION AND ALL RELATED ACCESSORIES.
D02	REMOVE SUPPLY, EXHAUST AND OUTSIDE AIR DUCTWORK, INSULATION, DIFFUSERS, GRILLES, HANGERS AND ALL RELATED ACCESSORIES.
D03	REMOVE HEAT PUMP WATER PIPING, HANGERS, INSULATION, VALVES AND ALL RELATED ACCESSORIES.
D04	REMOVE TEMPERATURE SENSOR AND CONTROL WIRING BACK TO SOURCE. REUSE WALL BOX FOR NEW TEMPERATURE SENSOR OR CAP WITH ALUMINUM WALL PLATE IF NOT REUSED FOR NEW EQUIPMENT.
D05	REMOVE CEILING MOUNTED AIR CONDITIONING UNIT, DUCTWORK, PIPING, CONTROLS, VALVES, SUPPORTS, CONTROLS AND ALL RELATED ACCESSORIES.
D06	MECHANICAL EQUIPMENT AND ALL RELATED ACCESSORIES TO REMAIN.
D07	SUPPLY, EXHAUST AND OUTSIDE AIR DUCTWORK, INSULATION, DIFFUSERS, GRILLES, HANGERS AND ALL RELATED ACCESSORIES TO REMAIN.
D08	HEAT PUMP WATER PIPING, HANGERS, INSULATION, VALVES AND ALL RELATED ACCESSORIES TO REMAIN.

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ALLEGAN COUNTY

ALLEGAN, MICHIGAN

ISSUANCES

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DRAWN	NVM
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PARTIAL ENLARGED MECHANICAL DEMOLITION PLANS

M5.01

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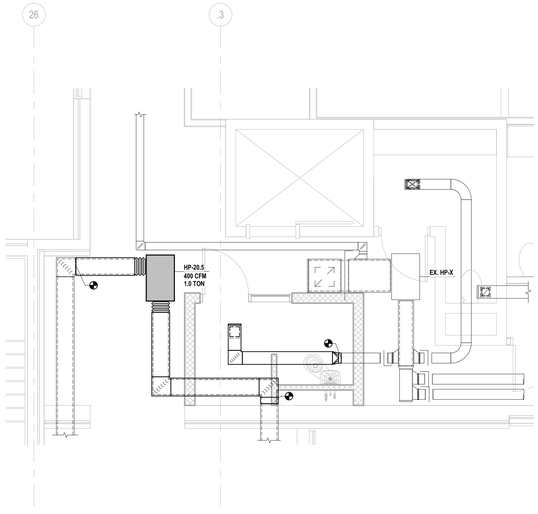
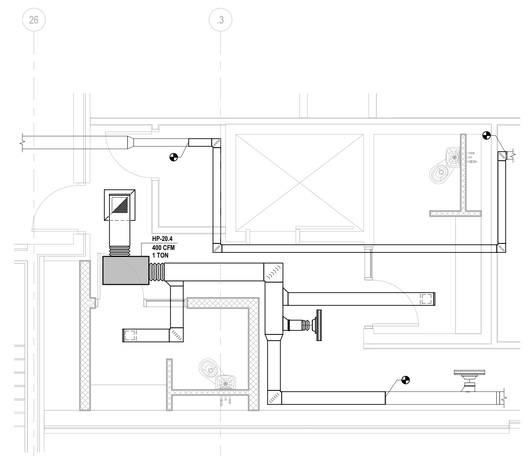
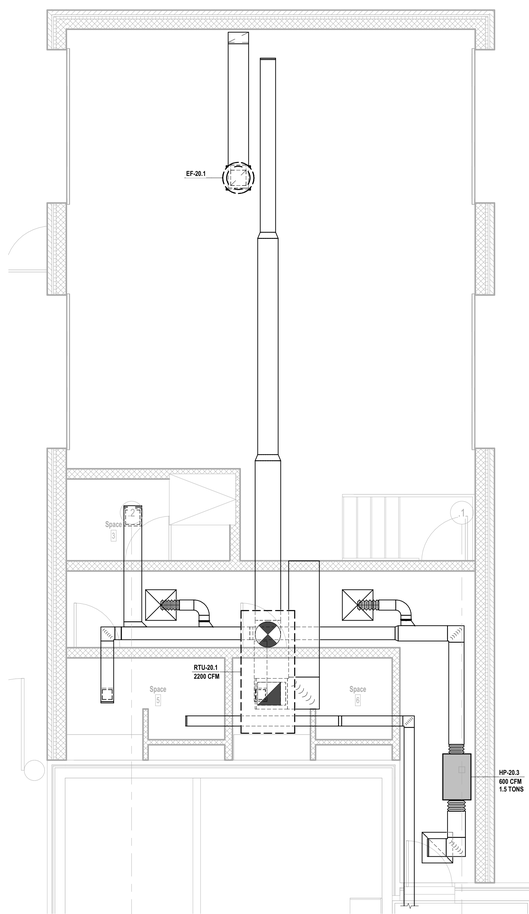


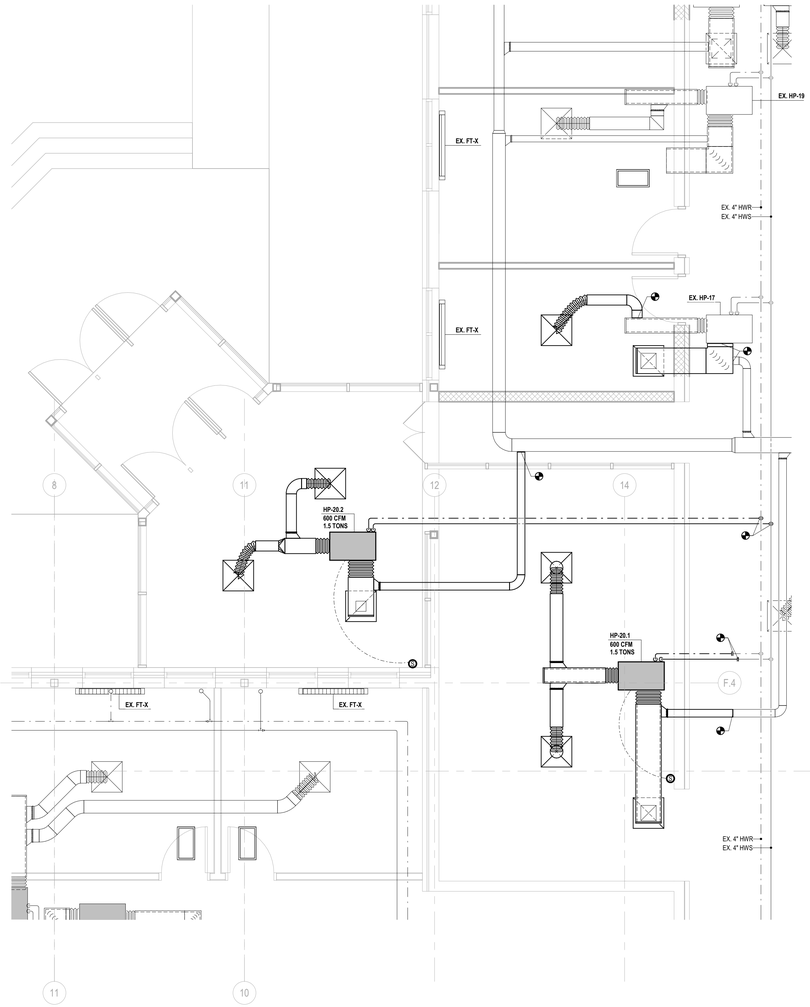
4 M5.02 PARTIAL ENLARGED SECOND FLOOR HOLDING CELL MECHANICAL PLAN
1/4" = 1'-0"



3 M5.02 PARTIAL ENLARGED FIRST FLOOR HOLDING CELL MECHANICAL PLAN
1/4" = 1'-0"



2 M5.02 PARTIAL ENLARGED FIRST FLOOR SALLYPORT MECHANICAL PLAN
1/4" = 1'-0"



1 M5.02 PARTIAL ENLARGED FIRST FLOOR MECHANICAL PLAN
1/4" = 1'-0"

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57TH DISTRICT COURTHOUSE ADDITIONS & RENOVATIONS

ALLEGAN COUNTY

ALLEGAN, MICHIGAN

ISSUANCES

04.24.2020	SCHEMATIC DESIGN

DRAWN	NVM
REVIEWED	JBH
PROJECT NO.	5-5140

PARTIAL ENLARGED MECHANICAL PLANS

M5.02

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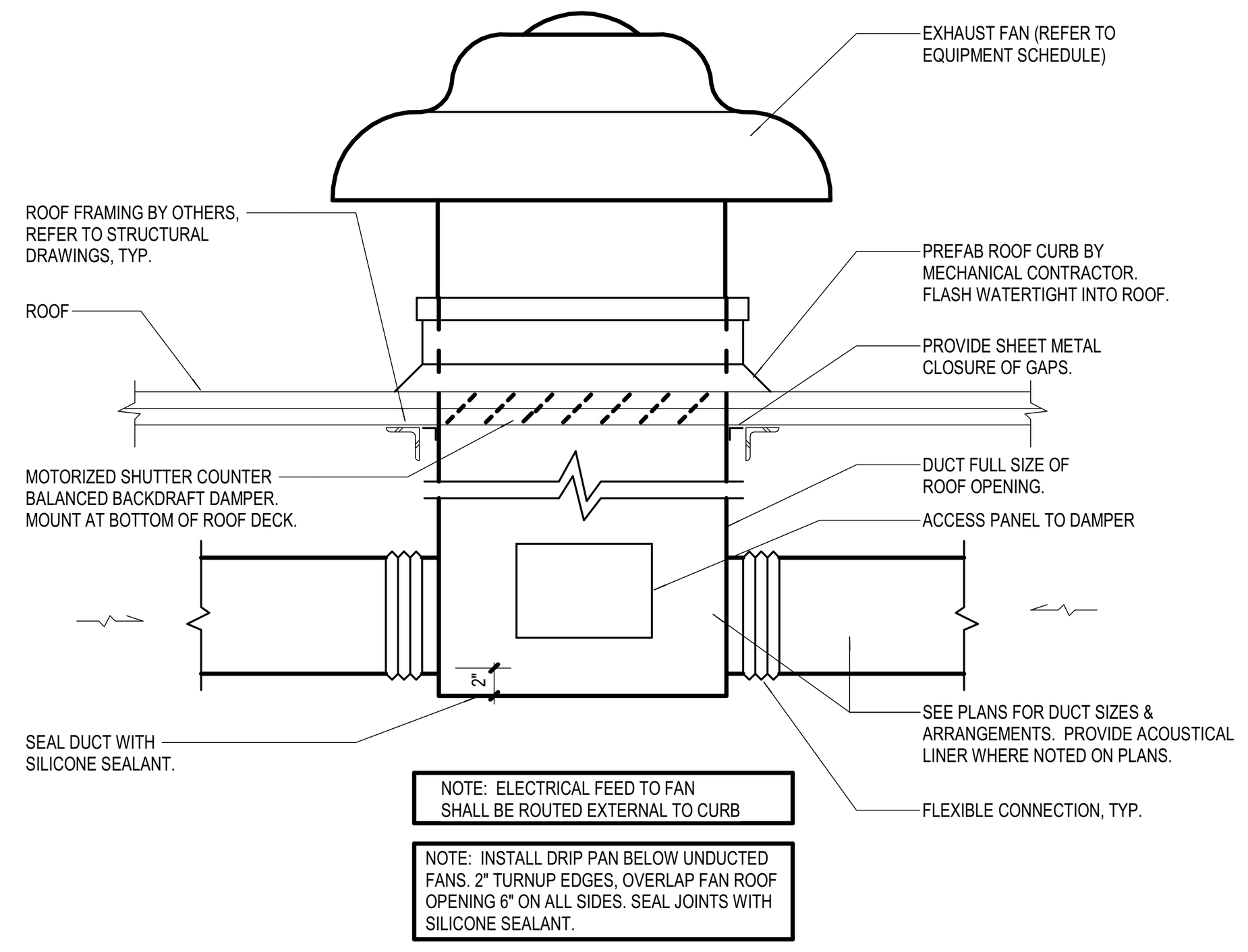
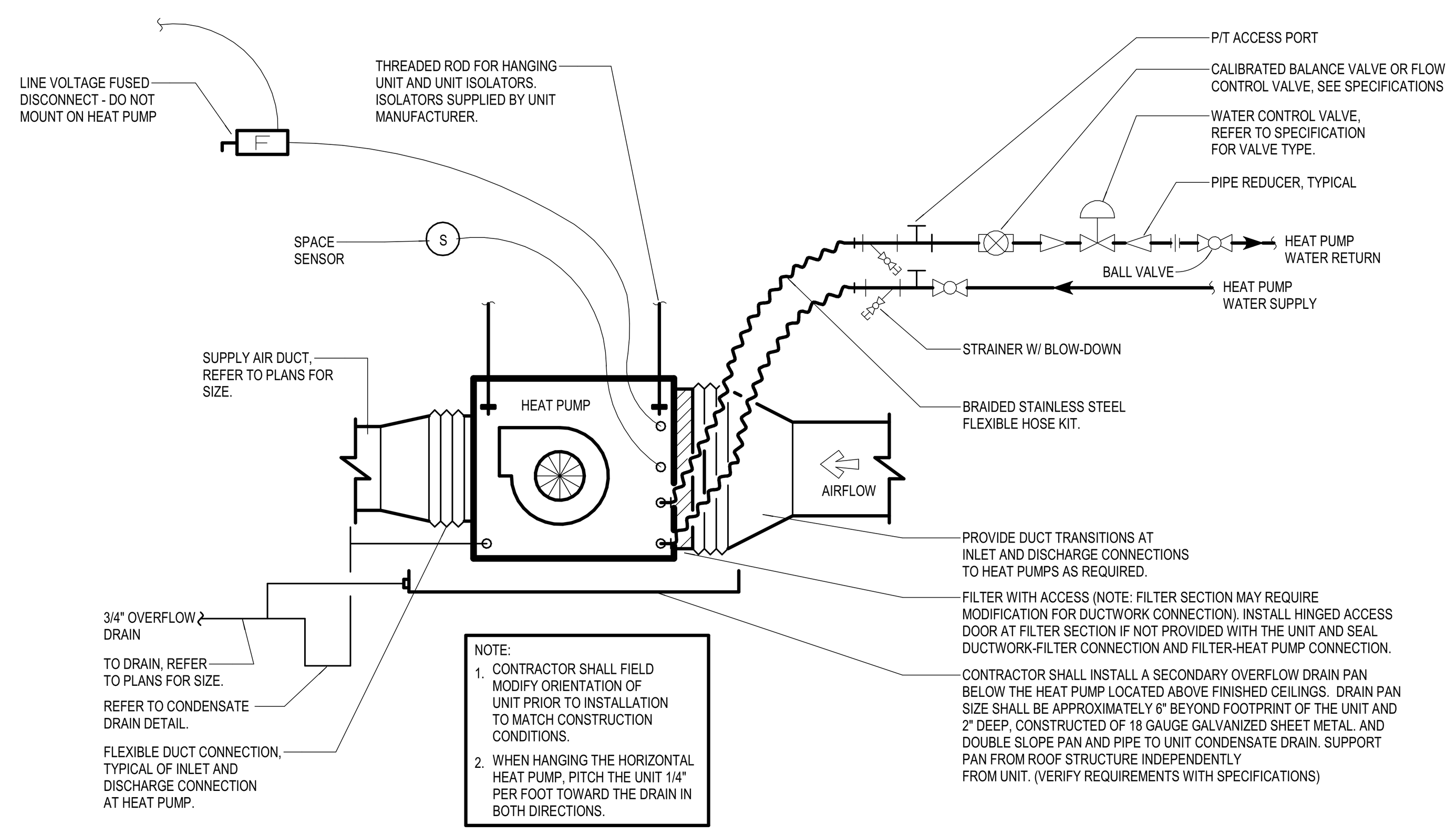
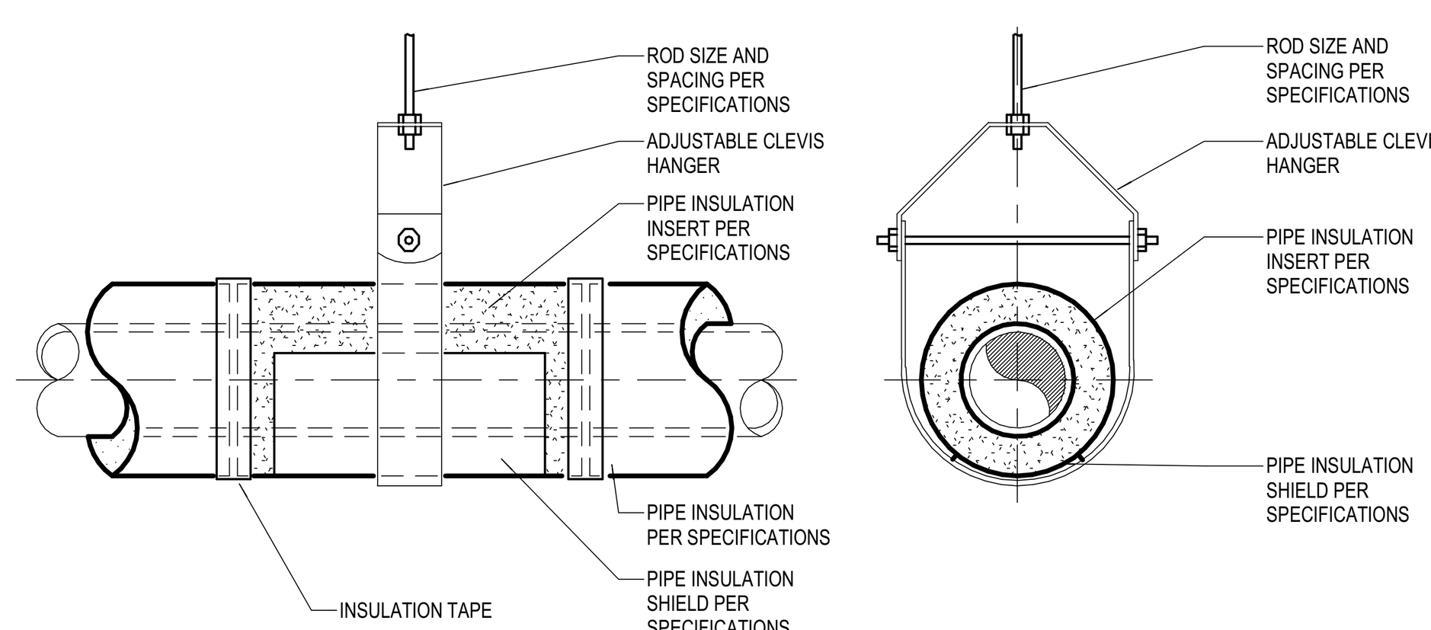


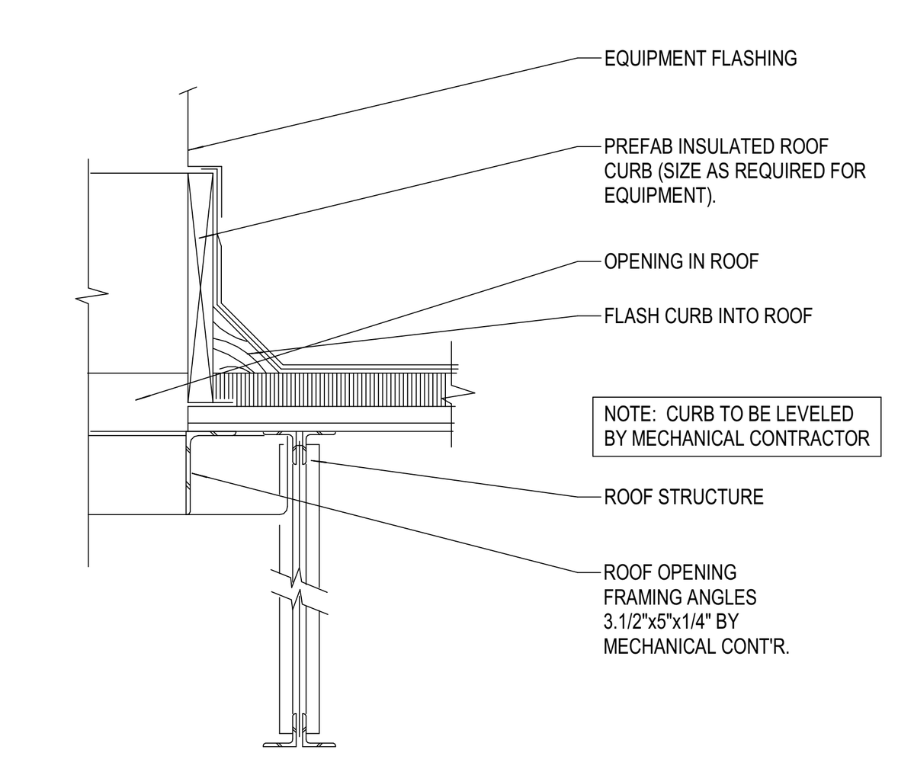
9 / M7.01 ROOF EXHAUST FAN DETAIL
NOT TO SCALE



8 / M7.01 WATER TO AIR HORIZONTAL HEAT PUMP DETAIL
NOT TO SCALE

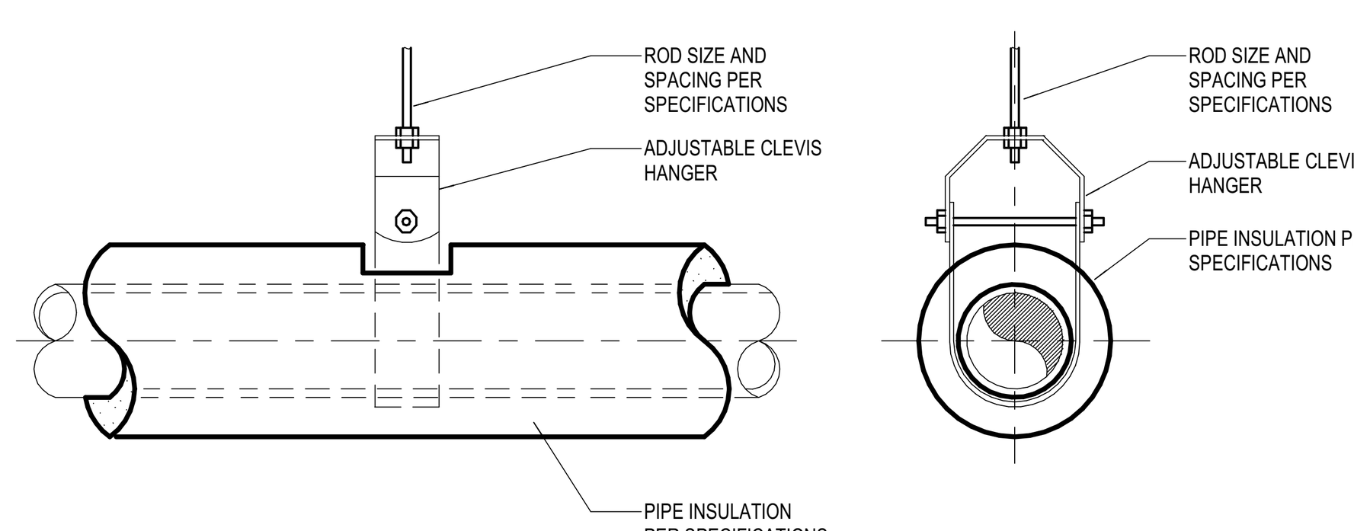


7 / M7.01 CLEVIS HANGER DETAIL - HOT FLUID (GREATER THAN 180F) OR STEAM/STEAM CONDENSATE INSULATED PIPE
NOT TO SCALE

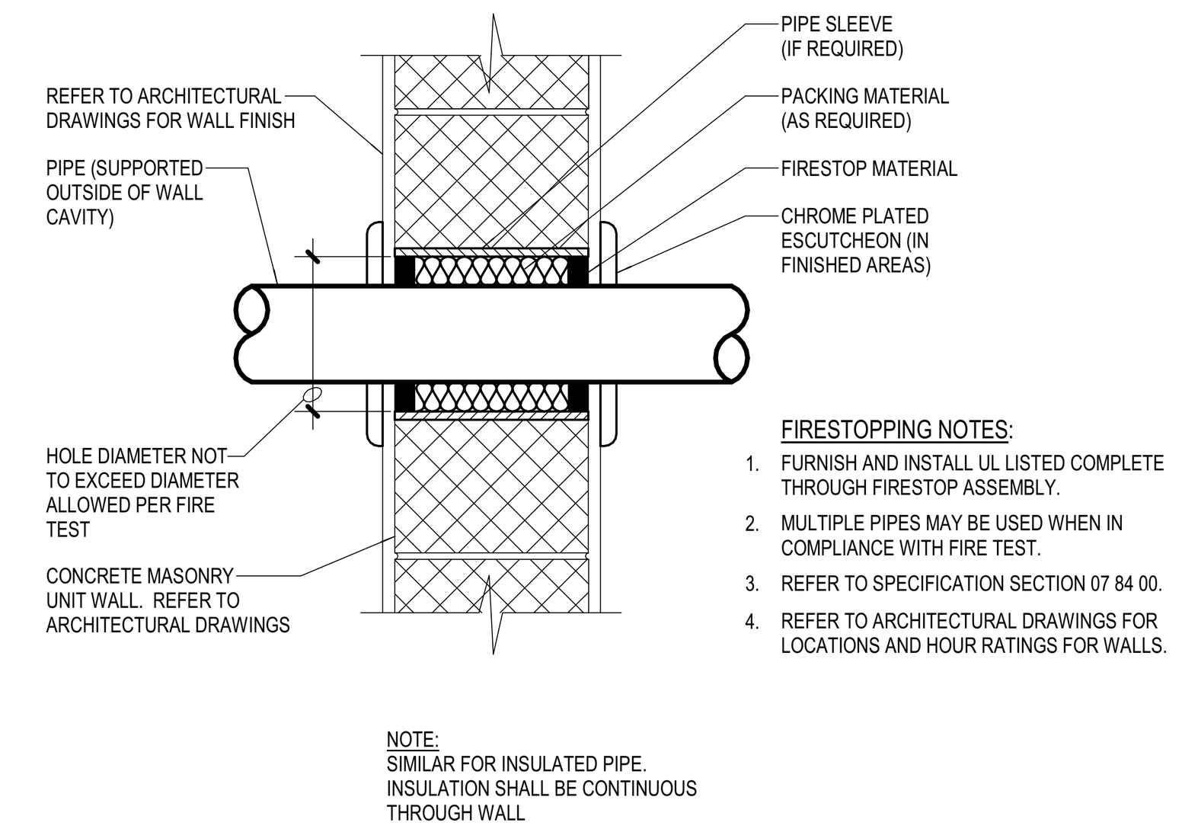


UNLESS AN OPENING IS INDICATED ON THE PLANS OR ON THE PRECAST SHOP DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR CORING AND CUTTING OPENINGS THROUGH THE WALLS, FLOOR, & ROOF FOR DUCTWORK. COORDINATE THE HOLE LOCATIONS TO AVOID PRECAST "TEES" OR JOINTS. ALL OPENINGS SHALL BE NEATLY CUT.

10 / M7.01 TYPICAL EQUIPMENT ROOF CURB DETAIL
NOT TO SCALE



6 / M7.01 CLEVIS HANGER DETAIL - HOT FLUID (180F OR LESS) INSULATED PIPE
NOT TO SCALE

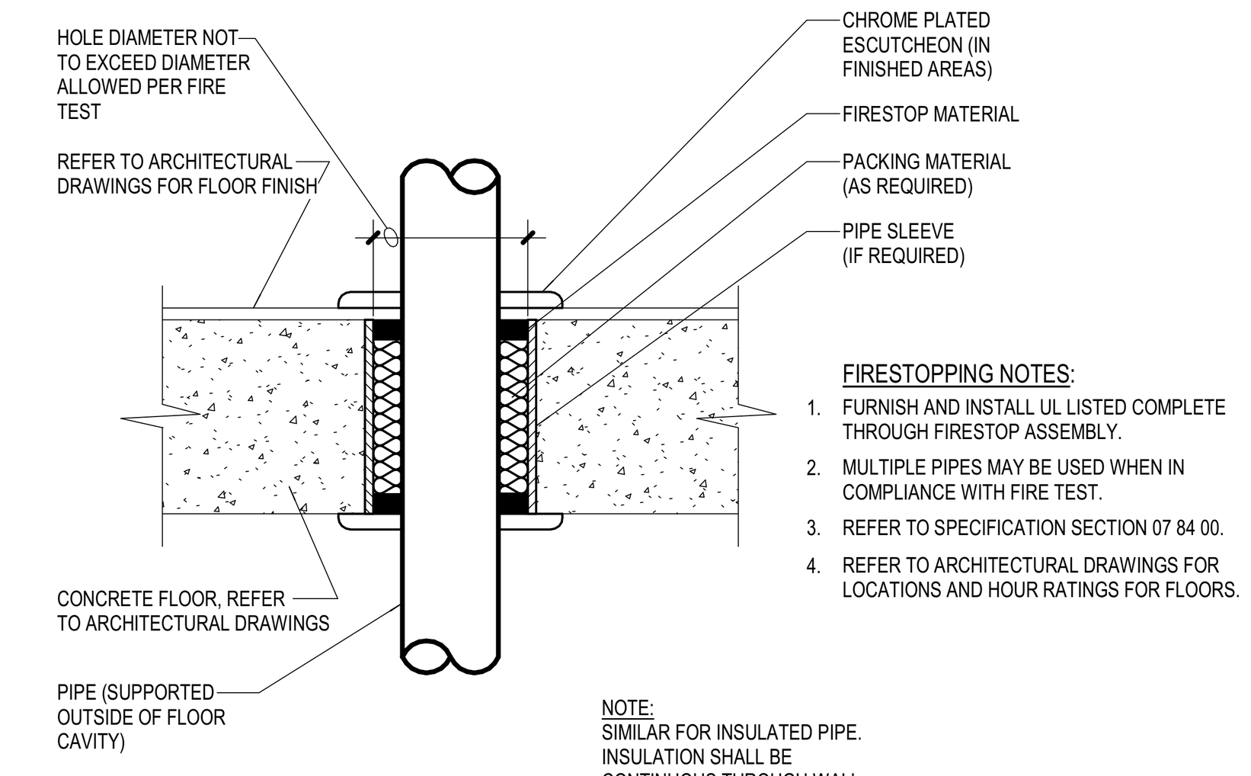


FIRESTOPPING NOTES:

1. FURNISH AND INSTALL UL LISTED COMPLETE THROUGH FIRESTOP ASSEMBLY.
2. MULTIPLE PIPES MAY BE USED WHEN IN COMPLIANCE WITH FIRE TEST.
3. REFER TO SPECIFICATION SECTION 07 84 00.
4. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND HOUR RATINGS FOR WALLS.

NOTE:
SIMILAR FOR INSULATED PIPE. INSULATION SHALL BE CONTINUOUS THROUGH WALL

5 / M7.01 FIRESTOPPING AT BLOCK WALL PENETRATION DETAIL
NOT TO SCALE

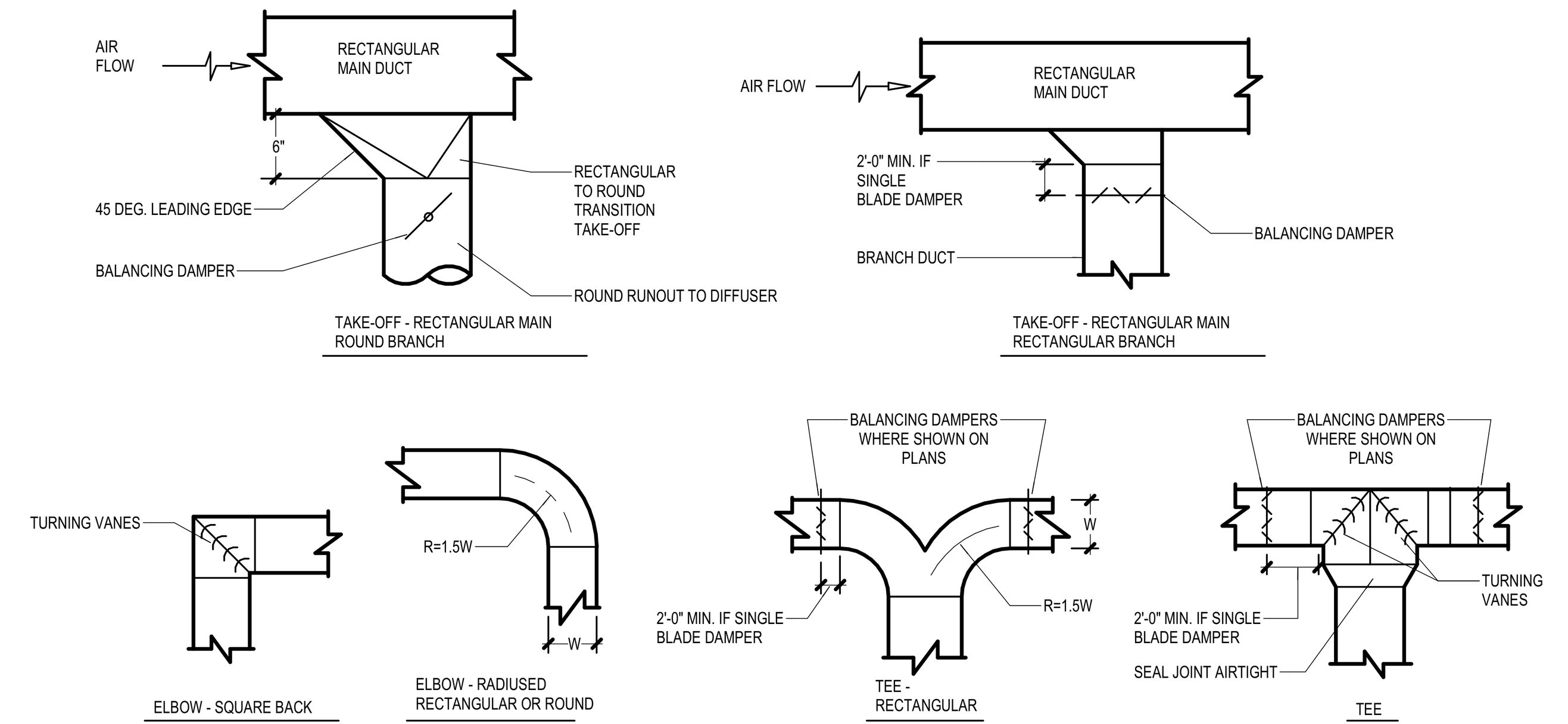


FIRESTOPPING NOTES:

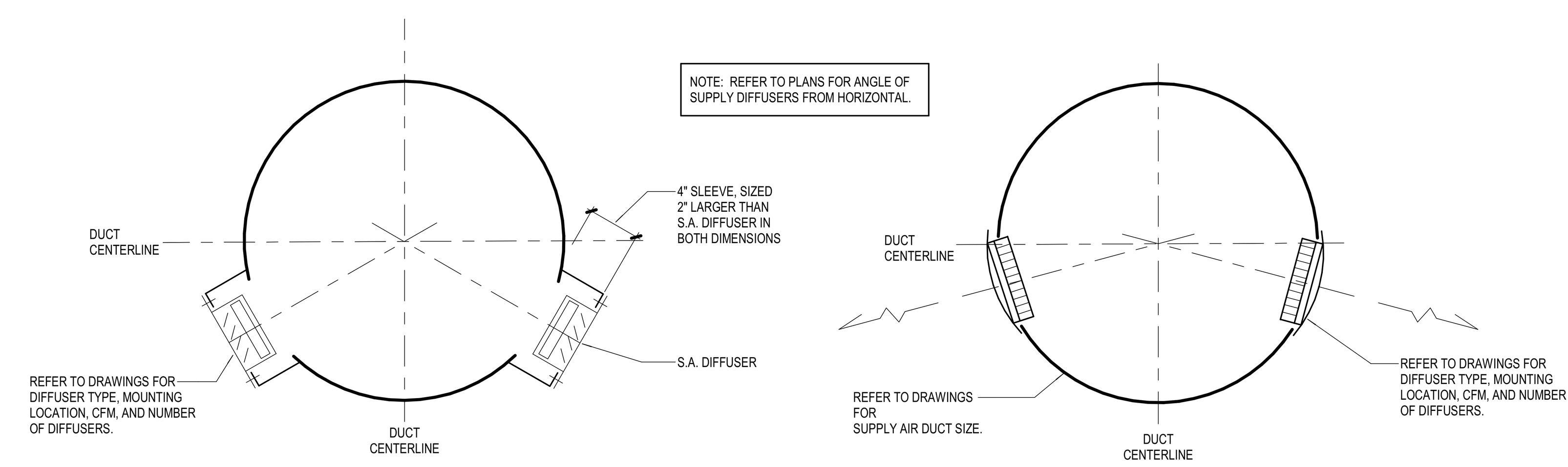
1. FURNISH AND INSTALL UL LISTED COMPLETE THROUGH FIRESTOP ASSEMBLY.
2. MULTIPLE PIPES MAY BE USED WHEN IN COMPLIANCE WITH FIRE TEST.
3. REFER TO SPECIFICATION SECTION 07 84 00.
4. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND HOUR RATINGS FOR FLOORS.

NOTE:
SIMILAR FOR INSULATED PIPE. INSULATION SHALL BE CONTINUOUS THROUGH WALL

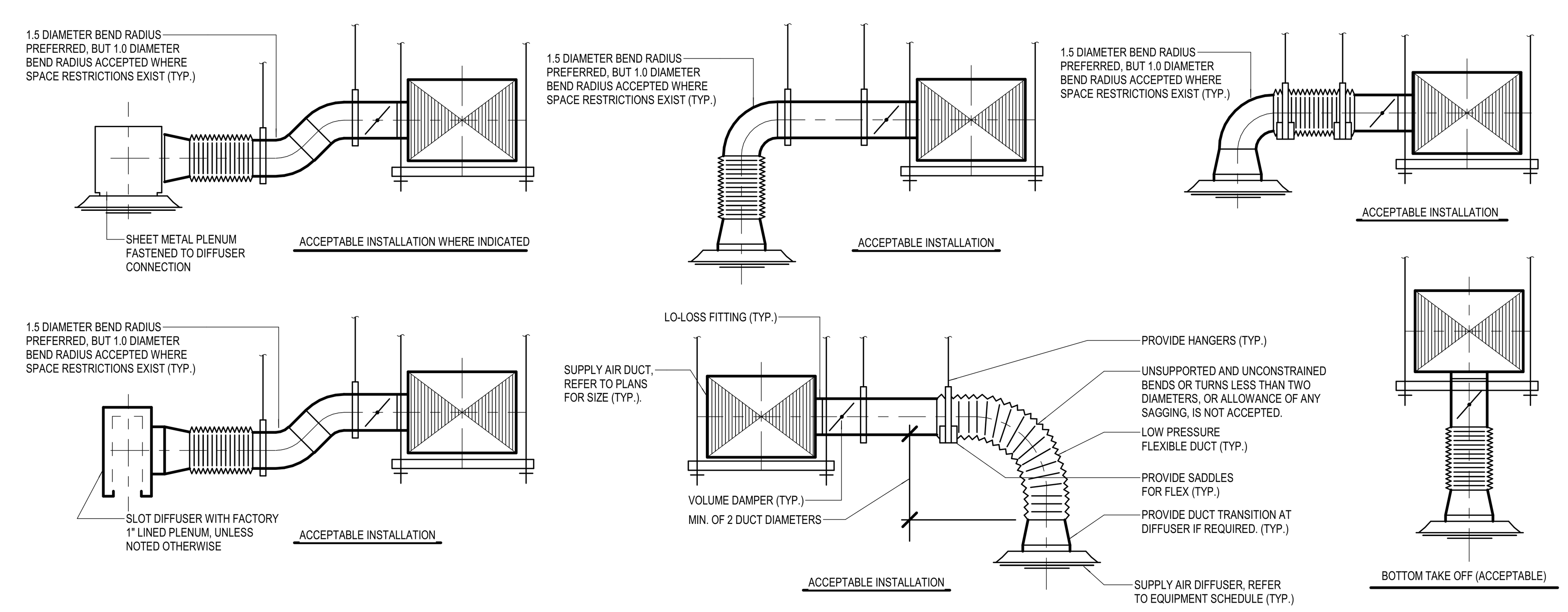
4 / M7.01 FIRESTOPPING AT FLOOR PENETRATION DETAIL
NOT TO SCALE



3 / M7.01 LOW PRESSURE DUCT FITTINGS
NOT TO SCALE



2 / M7.01 DUCT MOUNTED SUPPLY AIR DIFFUSER DETAIL
NOT TO SCALE



NOTE:

1. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'-0" IN LENGTH.
2. THE FLEXIBLE DUCTWORK CORE SHALL BE CLAMPED (ZIP-STRIPS MAY ALSO BE USED) AND TAPED AT ALL CONNECTIONS. ALSO, THE FLEXIBLE DUCTWORK JACKET/INSULATION SHALL BE TAPED AT ALL CONNECTIONS. TAPE SHALL MEET REQUIREMENTS OF UL181B-FX. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. ALL DUCT TAKE-OFFS FROM SUPPLY AND RETURN DUCT MAINS SHALL BE 45" DEGREE LO-LOSS TYPE.

1 / M7.01 CEILING DIFFUSER FLEX CONNECTION
NOT TO SCALE

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ALLEGAN, MICHIGAN

ISSUANCES	
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REVIEWED	JBH
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MECHANICAL DETAILS

M7.01