

MIDDLE SCHOOL ADDITIONS

421 MO-124 E
HALLSVILLE MO, 65255

FOR:
HALLSVILLE SCHOOL DISTRICT

BY A/E FIRM:
KLINGNER & ASSOCIATES P.C.
907 East Ash Street
Columbia, Missouri 65201
Phone: (573) 355-5988



PROJECT LOCATION



GENERAL NOTES

- THE CONTRACTOR(S) SHALL CONFIRM CONDITIONS DESCRIBED HEREIN AND TELL THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES AND INTERFERENCES ENCOUNTERED PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR(S) SHALL FIELD VERIFY EXISTING DIMENSIONS AND CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES AND INTERFERENCES ENCOUNTERED PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR(S) SHALL MEET ALL APPLICABLE CODES INCLUDING BUT NOT LIMITED TO:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2017 NATIONAL ELECTRIC CODE
ADA ACCESSIBILITY GUIDELINES WITH 2010 UPDATES
- THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR OSHA COMPLIANCE AND JOB SITE SAFETY.
- CONTRACTOR(S) SHALL FIELD VERIFY LOCATIONS OF ALL UTILITIES AT THE SITE BEFORE BEGINNING EXCAVATION OR CONSTRUCTION. ITEMS WILL BE MARKED AND PROTECTED.
- KLINGNER & ASSOCIATES, P.C. PERFORMED AN ASBESTOS INSPECTION IN THE BUILDING AREAS PROPOSED FOR RENOVATION ON MARCH 29, 2019. NO ASBESTOS CONTAINING BUILDING MATERIALS WERE IDENTIFIED DURING THE INSPECTION. AN ELECTRONIC COPY OF THE ASBESTOS INSPECTION REPORT WILL BE PROVIDED UPON REQUEST. THE CONTRACTOR(S) SHALL REPORT ANY SUSPICIOUS (POTENTIALLY HAZARDOUS) MATERIALS AT THE SITE IMMEDIATELY TO THE OWNER FOR FURTHER ACTION. UNLESS NOTED SPECIFICALLY ON THE DRAWINGS OR PROJECT MANUAL, THE ARCHITECT/ENGINEER IS NOT AWARE OF ANY HAZARDOUS MATERIALS AND HAS NOT BEEN HIRED BY THE OWNER TO DEAL WITH SUCH.
- CONTRACTOR(S) SHALL TAKE PRECAUTIONS NECESSARY TO PROTECT ADJACENT PROPERTY FROM DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES.

NOTATION AND SYMBOL DISIGNATIONS

	View Name 1/8" = 1'-0"		CENTER LINE
	SIM		ROOM NAME A101 150 SF
	DETAIL INDICATOR		ROOM INDICATOR
	SECTION INDICATOR		DOOR INDICATOR
	EXTERIOR ELEVATION INDICATOR		WALL TYPE INDICATOR
	INTERIOR ELEVATION INDICATOR		WINDOW TYPE INDICATOR
			NOTE INDICATOR
			BUILDING GRID INDICATOR

SHEET INDEX

SHEET NUMBER	SHEET NAME
G001	COVER SHEET
G101	FIRST FLOOR CODE PLAN & REVIEW
G102	CAMPUS FIRE PLAN
CD101	EXISTING CONDITIONS & SITE DEMOLITION PLAN
C101	SITE DIMENSIONAL PLAN
C201	GRADING & EROSION CONTROL PLAN
C301	SITE UTILITY PLAN
C501	SITE DETAILS
C502	SITE DETAILS
AD101	ARCHITECTURAL DEMOLITION PLAN
A001	PARTITION TYPES & STANDARD MOUNTING HEIGHTS
A100	EXISTING CAMPUS PLAN
A101	MAIN LEVEL FLOOR PLAN
A120	ROOF PLAN
A201	INTERIOR FINISH PLAN & ELEVATIONS
A202	ENLARGED PLANS, ELEVATIONS & DETAILS
A301	REFLECTED CEILING PLAN - FIRST FLOOR
A501	EXTERIOR BUILDING ELEVATIONS
A601	BUILDING SECTIONS
A701	WALL SECTIONS
S001	STRUCTURAL NOTES
S002	STRUCTURAL NOTES
S003	STRUCTURAL NOTES
S101	FOUNDATION PLAN
S201	ROOF FRAMING PLAN
S202	CONCRETE MASONRY, HEADER & LINTEL PLAN
S301	FRAMING ELEVATIONS
S401	STAIR/LADDER SECTIONS & DETAILS
S501	STRUCTURAL DETAILS
S502	STRUCTURAL DETAILS
S503	STRUCTURAL DETAILS
S601	STRUCTURAL SCHEDULES
MEP001	MEP SYMBOLS LIST
FP100	FIRE PROTECTION PLAN
P101	BELOW FLOOR PLUMBING PLAN
P102	ABOVE FLOOR PLUMBING PLAN
P501	PLUMBING DETAILS
P601	PLUMBING SCHEDULES
M101	MECHANICAL HYDRONIC PLAN
M102	MECHANICAL DUCTWORK PLAN
M103	MECHANICAL ROOF PLAN
M201	MECHANICAL ROOM ISOMETRIC
M401	AIR FLOW DIAGRAM
M501	MECHANICAL DETAILS
M601	MECHANICAL EQUIPMENT SCHEDULES
M701	CONTROLS SEQUENCE OF OPERATION
M702	CONTROLS SEQUENCE OF OPERATION
M703	CONTROLS SEQUENCE OF OPERATION
E100	POWER PLAN
E101	LIGHTING PLAN
E102	LOW VOLTAGE PLAN
E701	ONE-LINE DIAGRAM

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REVISION HISTORY			
NO.	DESCRIPTION	DATE	APPR.

ISSUED FOR: 10/14/2022

DESIGN DEVELOPMENT

PRELIMINARY
NOT FOR CONSTRUCTION

HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO, 65255

Non-Reduced Sheet Size 30" x 42"
Full sized plans have been prepared using standard scales.
Reduced sized plans may not conform to standard scales.

DESIGNED	HMC	DRAWN	JRT
FIELD	HMC	FIELD BOOK	JRT
CHECKED	HMC	CHECK DATE	

SHEET TITLE
COVER SHEET

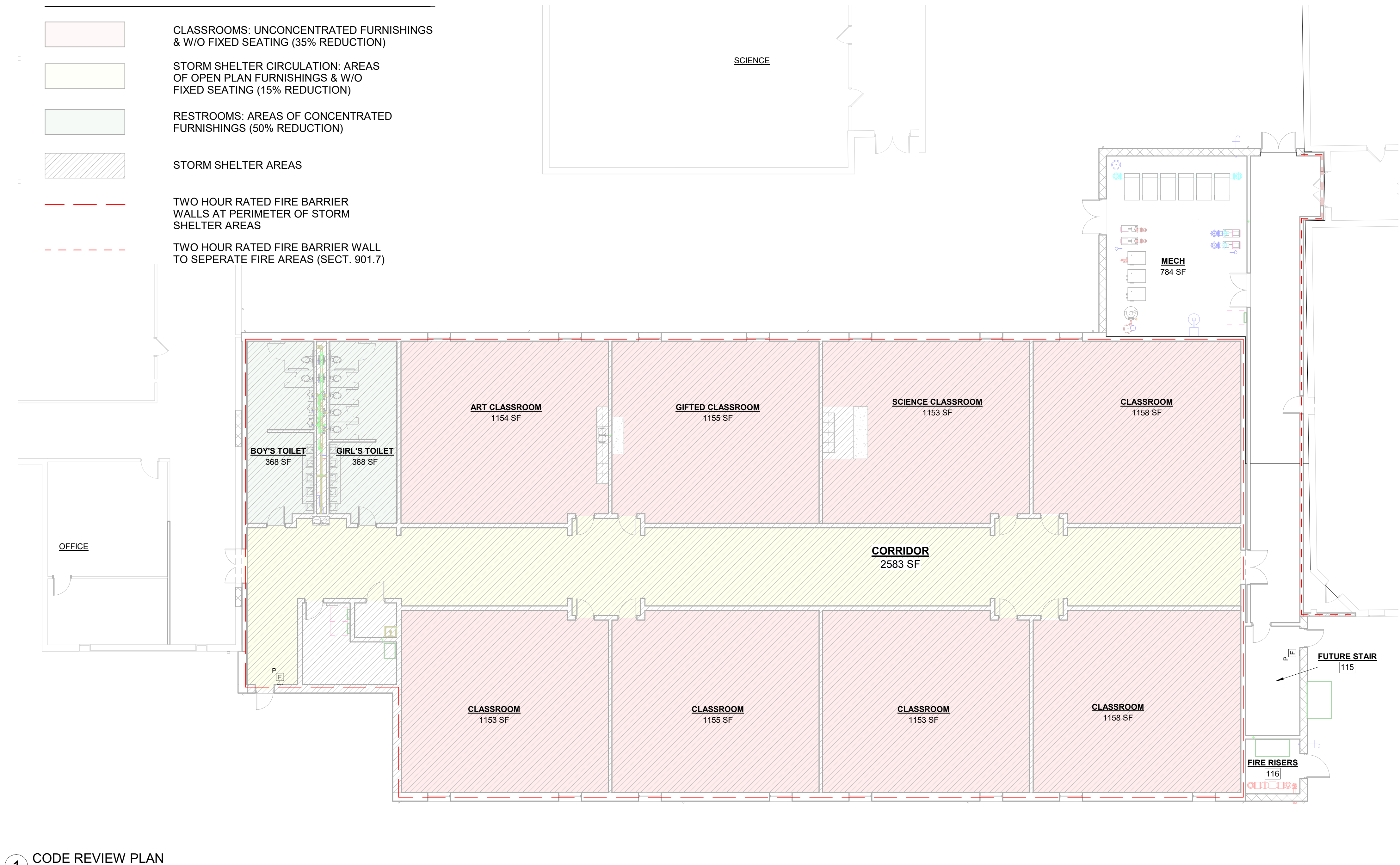
PROJECT NO.
21-0922
DRAWING ISSUED DATE:
10/14/2022
SHEET
G001

CODE REVIEW INFORMATION

JURISDICTION:	BOONE COUNTY, MO		
APPLICABLE CODES:	2015 INTERNATIONAL BUILDING CODE 2015 INTERNATIONAL FIRE CODE 2015 INTERNATIONAL PLUMBING CODE 2015 INTERNATIONAL MECHANICAL CODE 2017 NATIONAL ELECTRIC CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE		
BUILDING CODE INFORMATION (2018 I.B.C.):			
CODE SECTION / TABLE	CODE ALLOWABLE	PROPOSED ACTUAL	COMMENTS
CHAPTER 3 - USE & OCCUPANCY CLASSIFICATION SECT. 305 - EDUCATION	E	E	
CHAPTER 4 - SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY SECT. 423 - STORM SHELTERS: SEE "STORM SHELTER CODE REVIEW INFORMATION" THIS SHEET SECT. 423.4 - GROUP E OCCUPANCIES - ALL GROUP E OCCUPANCIES WITH AN AGGREGATE OCCUPANT LOAD OF 50 OR MORE SHALL HAVE A STORM SHELTER CONSTRUCTED IN ACCORDANCE WITH ICC 500			
CHAPTER 5 - GENERAL BUILDING HEIGHTS & AREAS TABLE 504.3 - ALLOWABLE BUILDING HEIGHT TABLE 504.4 - ALLOWABLE NUMBER OF STORIES TABLE 506.2 - ALLOWABLE AREA	75'-0" 3 STORIES 58,000 S.F.	LESS THAN 75'-0" 1 STORY 15,311 S.F.	S = SPRINKLERED
CHAPTER 6 - TYPES OF CONSTRUCTION SECT. 602.2 - TYPES 1 AND 2 TABLE 601 - FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS - PRIMARY STRUCTURAL FRAME - BEARING WALL, EXTERIOR INTERIOR - NONBEARING WALLS & PARTITIONS EXTERIOR INTERIOR - ROOF CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS	TYPE 2B 0 HR. 0 HR. 0 HR. 0 HR.	TYPE 2B 0 HR. 0 HR. 0 HR. 0 HR.	
CHAPTER 9 - FIRE PROTECTION SYSTEMS SECT. 903.2.3 - AUTOMATIC SPRINKLER SYSTEM SECT. 905 - STANDPIPE SYSTEMS	YES NO	YES NO	TOTAL BUILDING AREA EXCEEDS 12,000 S.F. (EXIST. BUILDING IS SPRINKLERED)
CHAPTER 10 - MEANS OF EGRESS TABLE 1004.1.2 - CLASSROOMS SECT. 1005 - EGRESS SIZING; SECT. 1005.3.2 - OTHER EGRESS COMPONENTS, EXCEPTION 1 TABLE 1006.2.1 - SPACES WITH ONE EXIT - MAX. COMMON PATH OF EGRESS TRAVEL DISTANCE TABLE 1006.3.1 - MIN. NUMBER OF EXITS BASED ON OCCUPANT LOAD TABLE 1017.2 - EXIT ACCESS TRAVEL DISTANCE SECT. 1020.4.2 - DEAD ENDS	20 NET S.F. / OCCUPANT 15" PER OCCUPANT; 68" TOTAL EGRESS WIDTH REQUIRED 75'-0" MAX. 2 MIN. 250'-0" MAX. 50'-0" MAX.	458 OCCUPANTS (2) DOUBLE DOOR OPENING EXITS AT 67' EA. OPENING; TOTAL OF 134' EGRESS WIDTH LESS THAN 75'-0" 2 EXITS PROVIDED LESS THAN 250'-0" LESS THAN 50'-0"	
CHAPTER 29 - PLUMBING SYSTEMS TABLE 2902.1 - MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES - WATER CLOSETS (1 per 50) - LAVATORIES (1 per 50) - DRINKING FOUNTAINS (1 per 100)	FOR EACH SEX: 5 W.C.'S (FOR MALES, URINALS CAN BE SUBSTITUTED FOR 67% OF W.C.'S) 5 LAV'S EA. SEX	5 W.C.'S PROVIDED FOR FEMALE AND 2 W.C.'S & 3 URINALS FOR MALES 5 LAV'S PROVIDED FOR FOR EACH SEX	

LEGEND

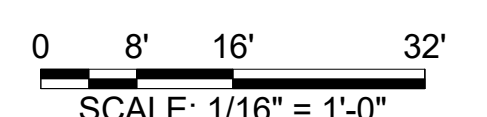
- CLASSROOMS: UNCONCENTRATED FURNISHINGS & W/O FIXED SEATING (35% REDUCTION)
- STORM SHELTER CIRCULATION; AREAS OF OPEN PLAN FURNISHINGS & W/O FIXED SEATING (15% REDUCTION)
- RESTROOMS: AREAS OF CONCENTRATED FURNISHINGS (50% REDUCTION)
- STORM SHELTER AREAS
- TWO HOUR RATED FIRE BARRIER WALLS AT PERIMETER OF STORM SHELTER AREAS
- TWO HOUR RATED FIRE BARRIER WALL TO SEPERATE FIRE AREAS (SECT. 901.7)





1 CODE REVIEW PLAN
3/32" = 1'-0"

STORM SHELTER CODE REVIEW INFORMATION

CODE SECTION / TABLE	CODE ALLOWABLE	PROPOSED ACTUAL	COMMENTS
2018 INTERNATIONAL BUILDING CODE SPECIAL DETAILED REQUIREMENTS BASED ON USE & OCCUPANCY - SECTION 423 STORM SHELTERS SECTION 423.4 GROUP E OCCUPANCIES: GROUP E OCCUPANCIES WITH AN AGGREGATE OCCUPANT LOAD OF 50 OR MORE SHALL HAVE STORM SHELTER IN COMPLIANCE WITH ICC 500	SECT. 423.4.1 - EXCEPTION 1: WHERE A NEW BUILDING IS BEING ADDED ON AN EXISTING GROUP 'E' SITE - THE STORM SHELTER SHALL AT A MINIMUM ACCOMMODATE THE REQUIRED OCCUPANT CAPACITY FOR THE NEW BUILDING	CAPACITY SHALL HOLD A TOTAL OCCUPANCY OF NEW ADDITION AT A MINIMUM	
BUILDING CODE INFORMATION (ICC 500 - 2014): CHAPTER 5 - OCCUPANCY, MEANS OF EGRESS, ACCESS AND ACCESSIBILITY TABLE 501.1.1 - OCCUPANT DENSITY - COMMUNITY SHELTERS SECTION 501.1.2.1 - CALCULATION OF USABLE FLOOR AREA SECTION 501.1.3 - WHEELCHAIR SPACES SECTION 601 - FIRE-RESISTANT CONSTRUCTION	STANDING OR SEATED: 5 S.F. / OCC. WHEELCHAIR: 10 S.F. / OCC. A MINIMUM OF 466 OCCUPANTS THERE SHALL ONE WHEELCHAIR SPACE FOR EVERY 200 OCCUPANTS STORM SHELTER SHALL HAVE MIN. TWO HOUR SEPARATION FROM OTHER BUILDING AREAS	STANDING OR SEATED: 5 S.F. / OCC. WHEELCHAIR: 10 S.F. / OCC. ACTUAL OCCUPANT CAPACITY: 1,693 9 WHEELCHAIR SPACES ARE PROVIDED STORM AREA WILL HAVE TWO HOUR RATED SEPARATION	SEE CODE REVIEW FLOOR PLAN FOR BREAKDOWN OF INDIVIDUAL USABLE FLOOR AREAS TO BE OCCUPIED



DEMOLITION LEGEND

-  REMOVALS BY CONTRACTOR
-  SAWCUT

DEMOLITION NOTES

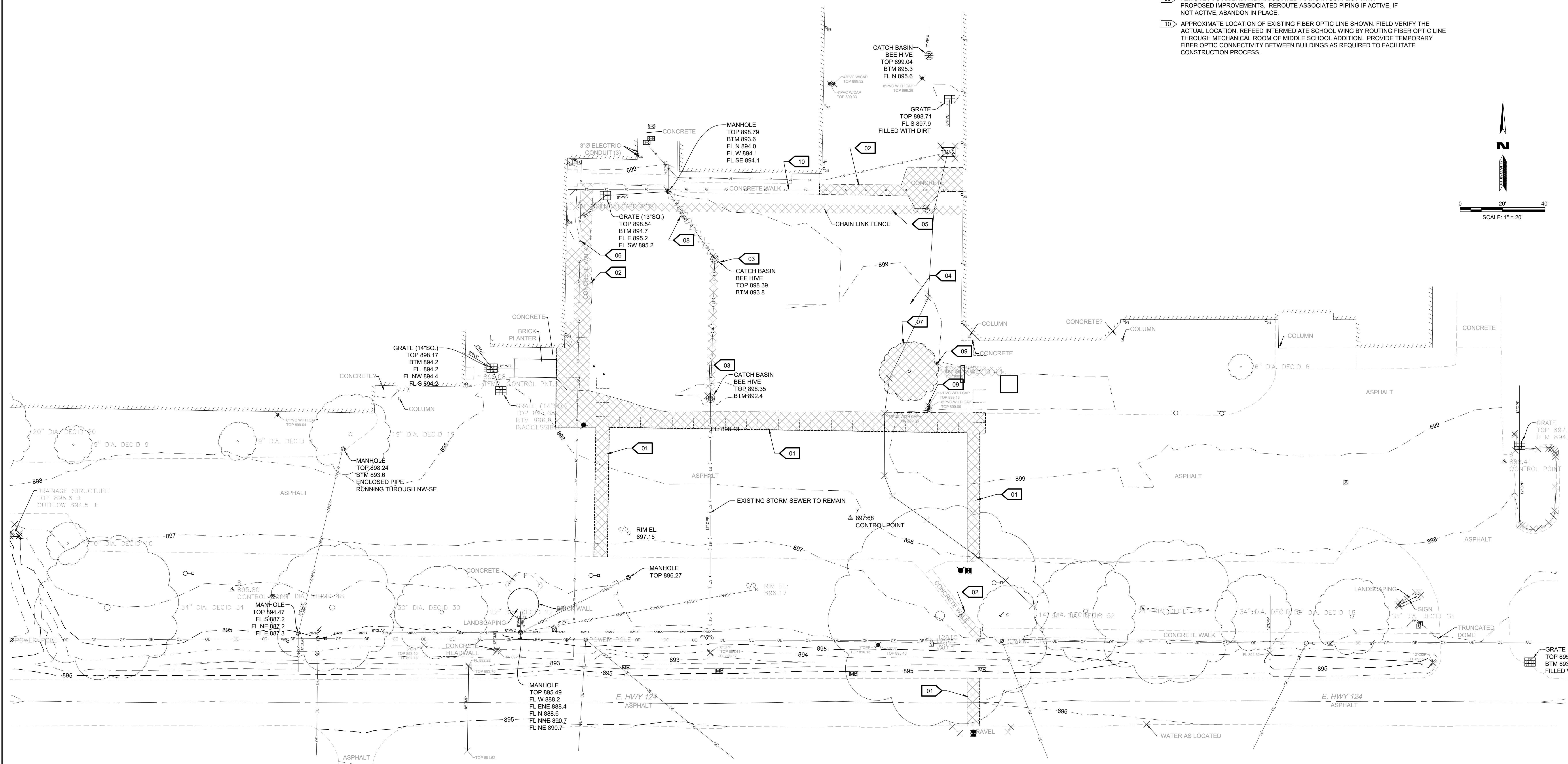
1. REMOVE ALL EXISTING PAVEMENTS, CURBS, WALLS, LANDSCAPING, AND ALL OTHER EXISTING SITE FEATURES IN CONFLICT WITH PROPOSED IMPROVEMENTS.
2. COORDINATE UTILITY REMOVALS AND/OR RELOCATIONS WITH THE RESPECTIVE UTILITY COMPANIES AND/OR THE CITY OF HALLSVILLE.
3. DEMOLITION SHALL INCLUDE REMOVAL & PROPER DISPOSAL OF MATERIALS.
4. CONTRACTOR TO PAY ALL PERMIT & DISPOSAL FEES.

SITE DEMOLITION KEY NOTES:

- 01 > REMOVE PAVEMENT, SAWCUT AT REMOVAL LIMITS TO PROVIDE UNIFORM EDGE.
- 02 > REMOVE SIDEWALK TO NEAREST JOINT.
- 03 > REMOVE INLET. SALVAGE FRAME & GRATE TO OWNER.
- 04 > REMOVE PRIMARY ELECTRIC.
- 05 > REMOVE CHAIN LINK FENCE.
- 06 > RELOCATE EXISTING FIBEROPTIC LINE ?? FEET BELOW GRADE TO AVOID INTERFERENCE WITH FOUNDATION FOOTING. COORDINATE WITH BLUEBIRD NETWORK.
- 07 > REMOVE TREE, STUMP AND ROOT BALL.
- 08 > REMOVE STORM SEWER.
- 09 > REMOVE PVC RISERS AND ASSOCIATED PIPING IN CONFLICT WITH PROPOSED IMPROVEMENTS. REROUTE ASSOCIATED PIPING IF ACTIVE, IF NOT ACTIVE, ABANDON IN PLACE.
- 10 > APPROXIMATE LOCATION OF EXISTING FIBER OPTIC LINE SHOWN. FIELD VERIFY THE ACTUAL LOCATION. REFERRED IN INTERMEDIATE SCHOOL WING BY ROUTING FIBER OPTIC LINE THROUGH MECHANICAL ROOM OF MIDDLE SCHOOL. ADDITION, PROVIDE TEMPORARY FIBER OPTIC CONNECTIVITY BETWEEN BUILDINGS AS REQUIRED TO FACILITATE CONSTRUCTION PROCESS.

REVISION HISTORY

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HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO, 65255

BENCHMARKS:
 2. SOUTHEAST CORNER CONCRETE PAD FOR ELECTRIC TRANSFORMER
 SOUTHEAST CORNER BASEBALL FIELD - ELEV 899.84 (FROM TOPOGRAPHIC
 SURVEY BY ALLSTATE CONSULTANTS, P.C. JOB #04345.01)
 5. CHISELED "x" SOUTH FLANGE BOLT FIRE HYDRANT IN ISLAND EAST OF
 SCHOOL - ELEV 902.32

Non-Reduced Sheet Size 30" x 42"
 Full sheet plans have been prepared using standard scales.
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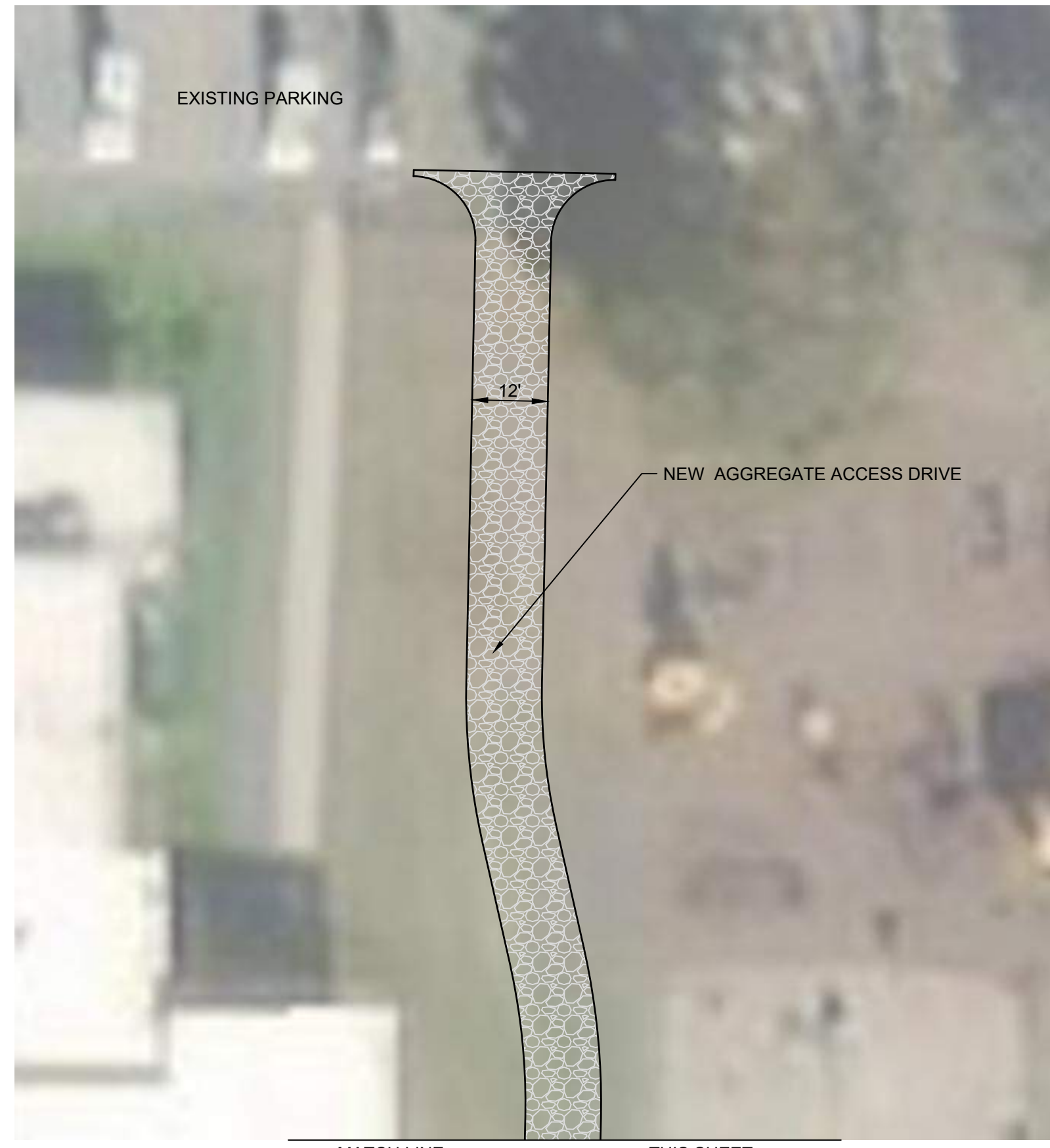
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CHECKED	CSW	FIELD BOOK	MOB0505
		CHECK DATE	

SHEET TITLE
EXISTING CONDITIONS & SITE DEMOLITION PLAN

PROJECT NO.
21-0982

DRAWING ISSUED DATE:
10/14/2022

SHEET
CD101



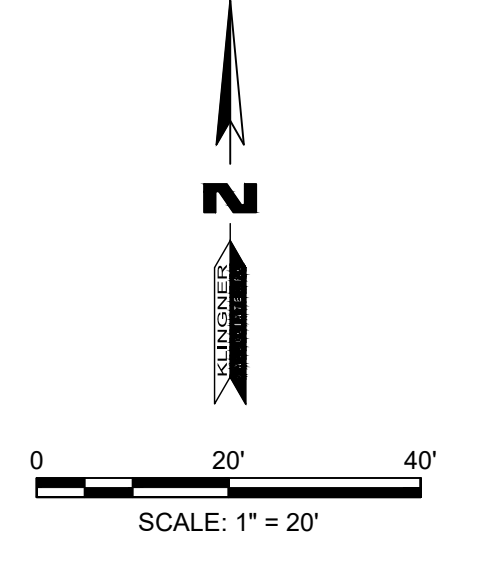
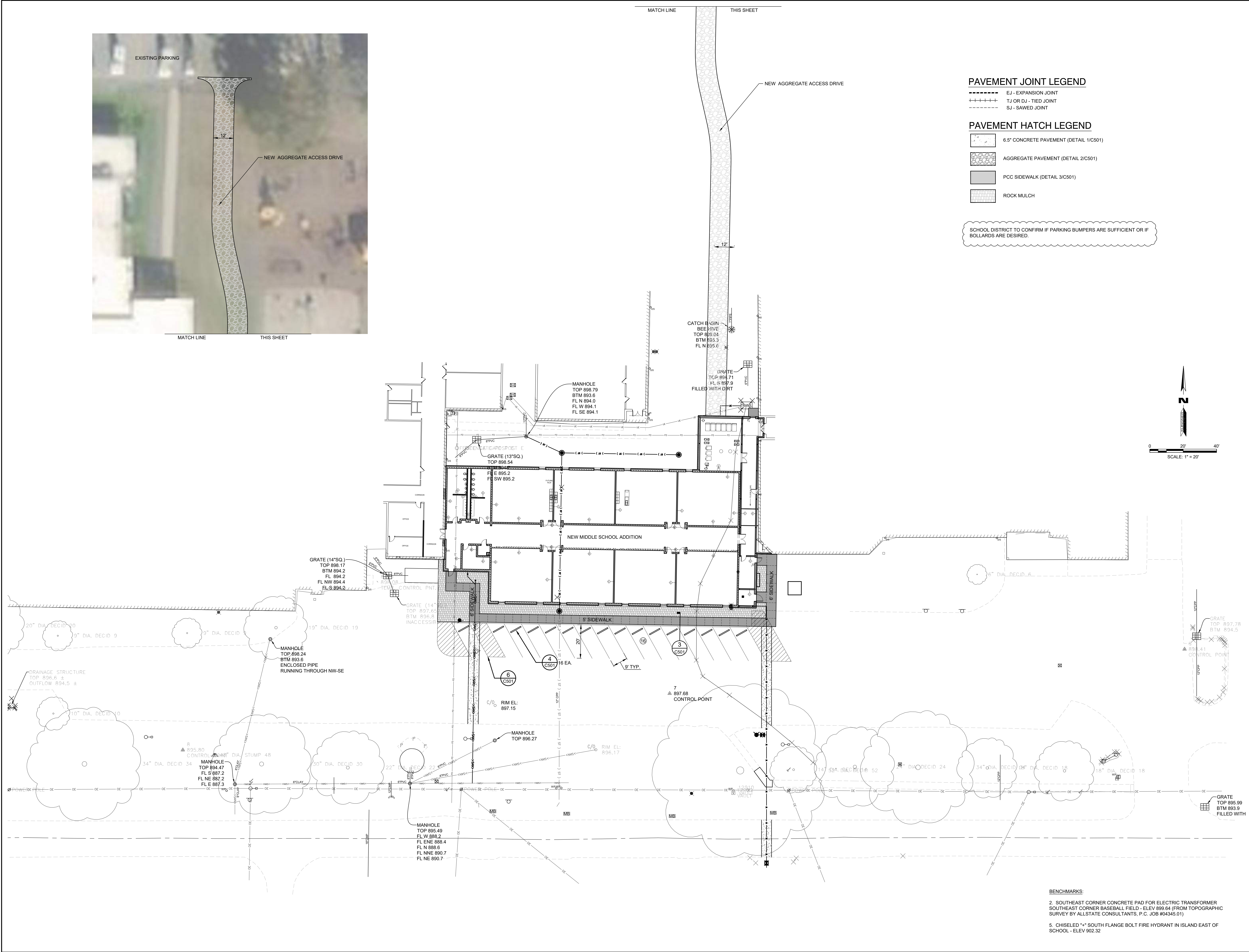
PAVEMENT JOINT LEGEND

- EJ - EXPANSION JOINT
- ++++ TJ OR DJ - TIED JOINT
- SJ - SAWED JOINT

PAVEMENT HATCH LEGEND

- 6.5" CONCRETE PAVEMENT (DETAIL 1/C501)
- AGGREGATE PAVEMENT (DETAIL 2/C501)
- PCC SIDEWALK (DETAIL 3/C501)
- ROCK MULCH

SCHOOL DISTRICT TO CONFIRM IF PARKING BUMPERS ARE SUFFICIENT OR IF BOLLARDS ARE DESIRED.



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 HALLSVILLE MO, 65255

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DCD	DCD
FIELD	FIELD BOOK
ECB/MCP	MOB/BS
CHECKED	CHECK DATE
CSW	

SHEET TITLE
SITE DIMENSIONAL PLAN

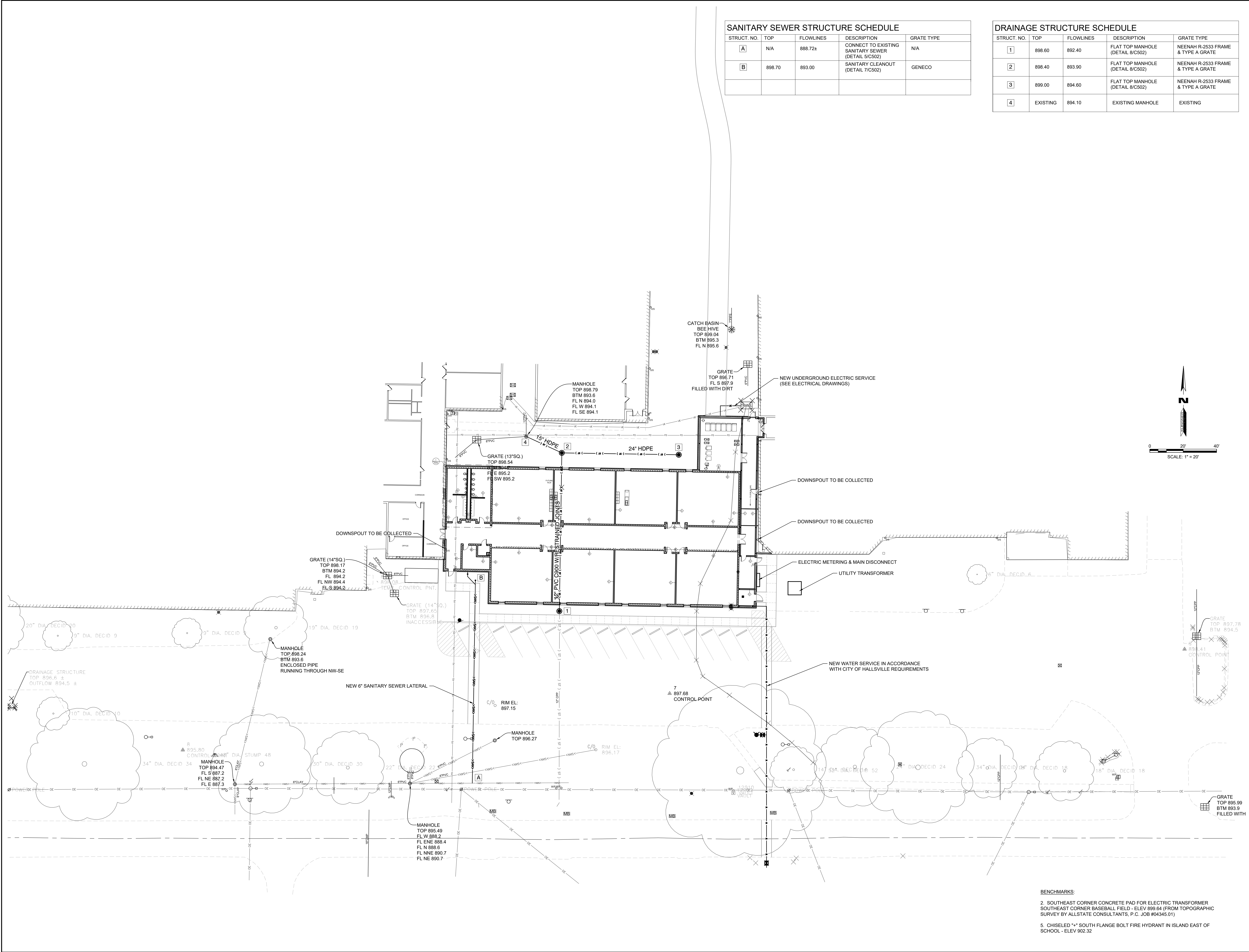
PROJECT NO.
 21-0922
 DRAWING ISSUED DATE:
 10/14/2022
 SHEET

C101

BENCHMARKS:
 2. SOUTHEAST CORNER CONCRETE PAD FOR ELECTRIC TRANSFORMER
 SOUTHEAST CORNER BASEBALL FIELD - ELEV 899.84 (FROM TOPOGRAPHIC
 SURVEY BY ALLSTATE CONSULTANTS, P.C. JOB #04345.01)
 5. CHISELED "S" SOUTH FLANGE BOLT FIRE HYDRANT IN ISLAND EAST OF
 SCHOOL - ELEV 902.32

SANITARY SEWER STRUCTURE SCHEDULE				
STRUCT. NO.	TOP	FLOWLINES	DESCRIPTION	GRATE TYPE
A	N/A	888.72±	CONNECT TO EXISTING SANITARY SEWER (DETAIL 5/C502)	N/A
B	898.70	893.00	SANITARY CLEANOUT (DETAIL 7/C502)	GENECO

DRAINAGE STRUCTURE SCHEDULE				
STRUCT. NO.	TOP	FLOWLINES	DESCRIPTION	GRATE TYPE
1	898.60	892.40	FLAT TOP MANHOLE (DETAIL 8/C502)	NEENAH R-2533 FRAME & TYPE A GRATE
2	898.40	893.90	FLAT TOP MANHOLE (DETAIL 8/C502)	NEENAH R-2533 FRAME & TYPE A GRATE
3	899.00	894.60	FLAT TOP MANHOLE (DETAIL 8/C502)	NEENAH R-2533 FRAME & TYPE A GRATE
4	EXISTING	894.10	EXISTING MANHOLE	EXISTING



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REVISION HISTORY		
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1		

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APPROVED		CHECK DATE	

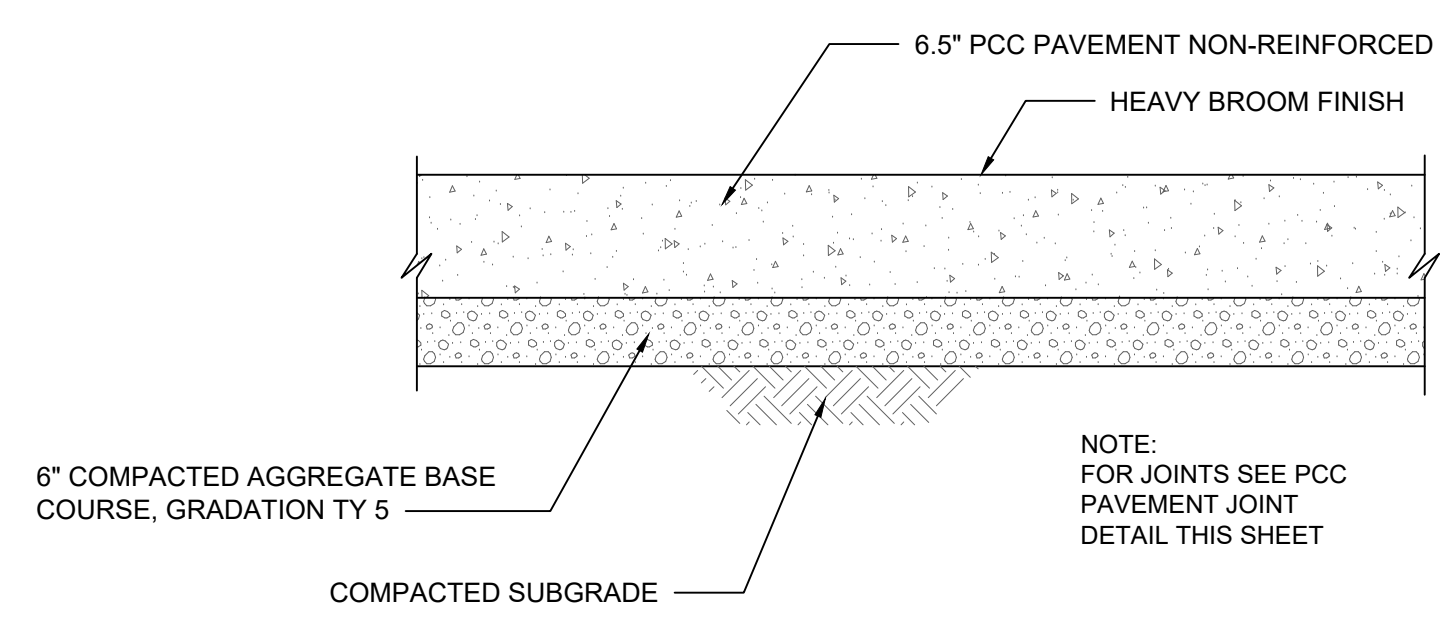
SHEET TITLE
 SITE UTILITY PLAN

PROJECT NO.
 21-0922

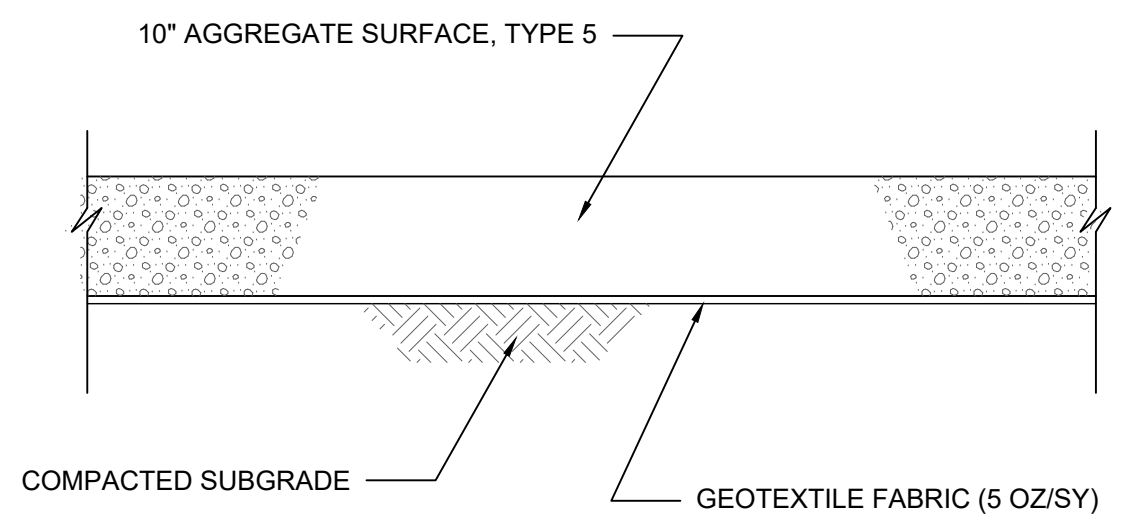
DRAWING ISSUED DATE:
 10/14/2022

SHEET
C301

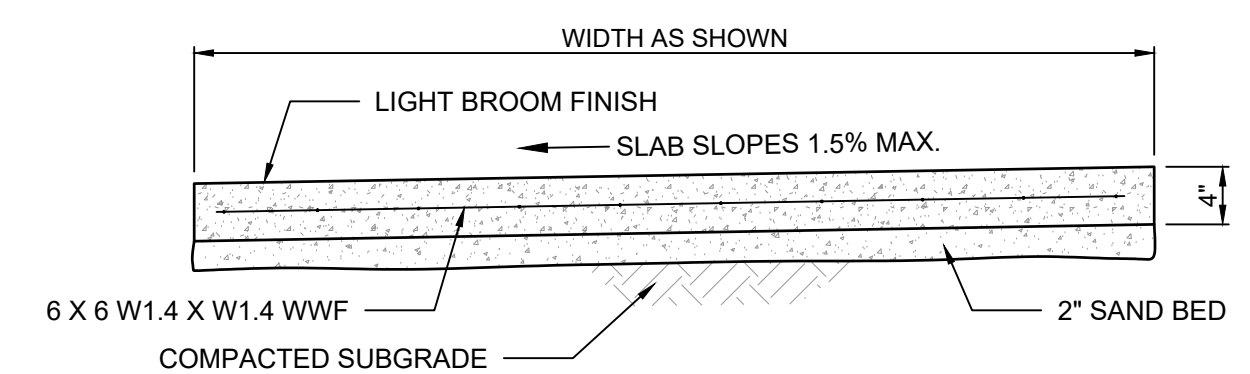
BENCHMARKS:
 2. SOUTHEAST CORNER CONCRETE PAD FOR ELECTRIC TRANSFORMER
 SOUTHEAST CORNER BASEBALL FIELD - ELEV 899.04 (FROM TOPOGRAPHIC SURVEY BY ALLSTATE CONSULTANTS, P.C. JOB #04345.01)
 5. CHISELED 1" SOUTH FLANGE BOLT FIRE HYDRANT IN ISLAND EAST OF SCHOOL - ELEV 902.32



1 PCC PAVING DETAIL
N.T.S.

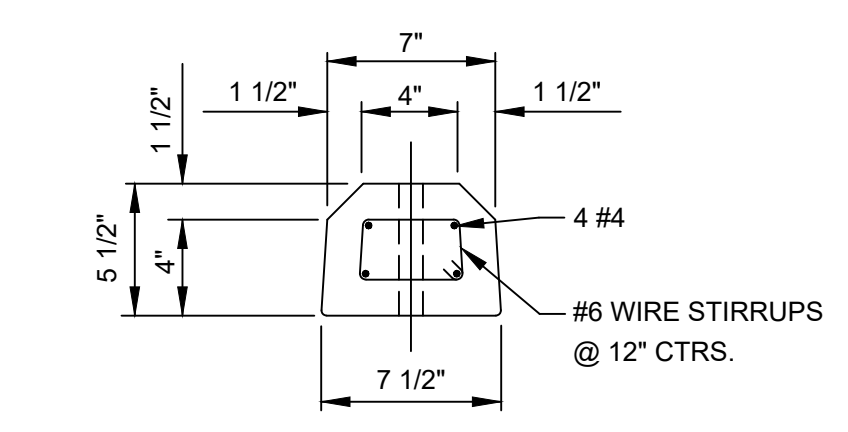


2 AGGREGATE PAVING DETAIL
N.T.S.

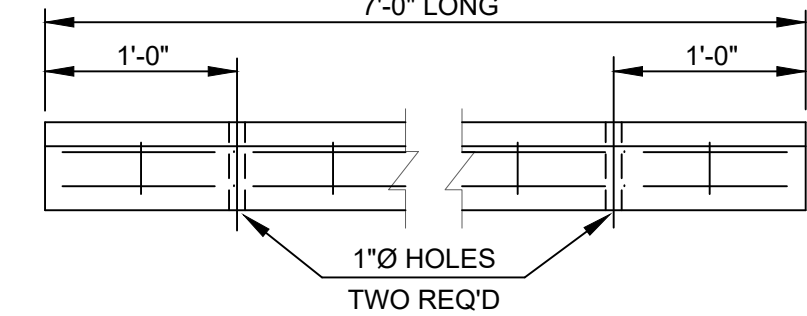


NOTES:
ALL SIDEWALK JOINTS SHALL BE TOOLED OR EDGED, MAX. SPACING = WIDTH OF SIDEWALK.
1/2" EXP. JTS. W/ POLYURETHANE SEALER AT MAX. 50' INTERVALS.
SEE PLAN FOR SIDEWALK WIDTH.
MAXIMUM LONGITUDINAL SLOPE SHALL NOT EXCEED 5%.

3 TYPICAL SIDEWALK
N.T.S.

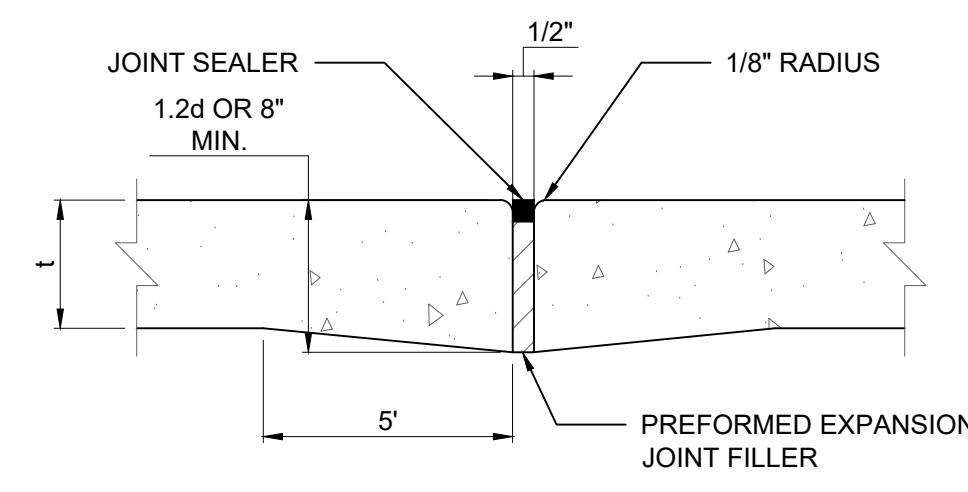


SCALE 1 1/2" = 1'-0"
USE TWO #6 X 24" LONG REINFORCING RODS TO ANCHOR EACH BUMPER IN PLACE

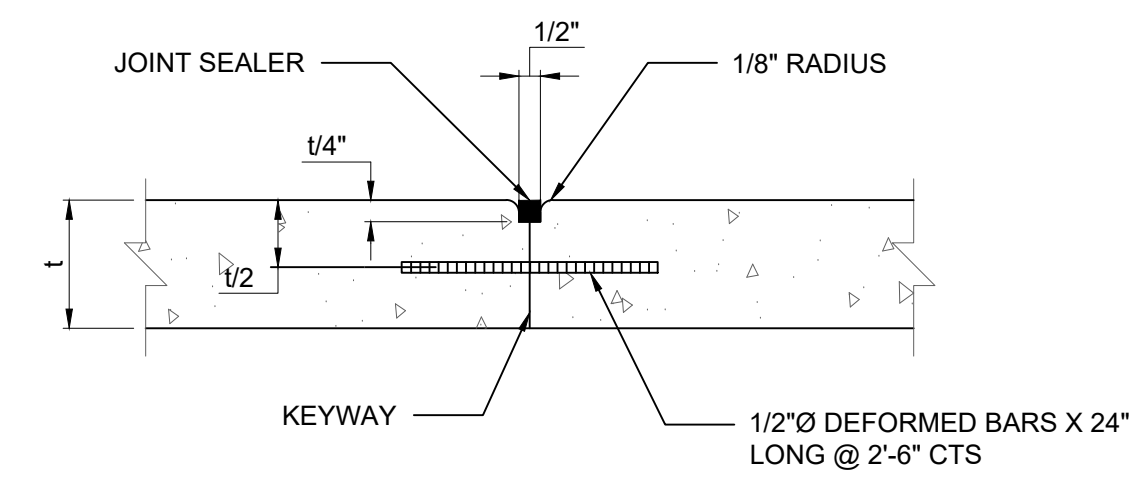


SCALE 1" = 1'-0"

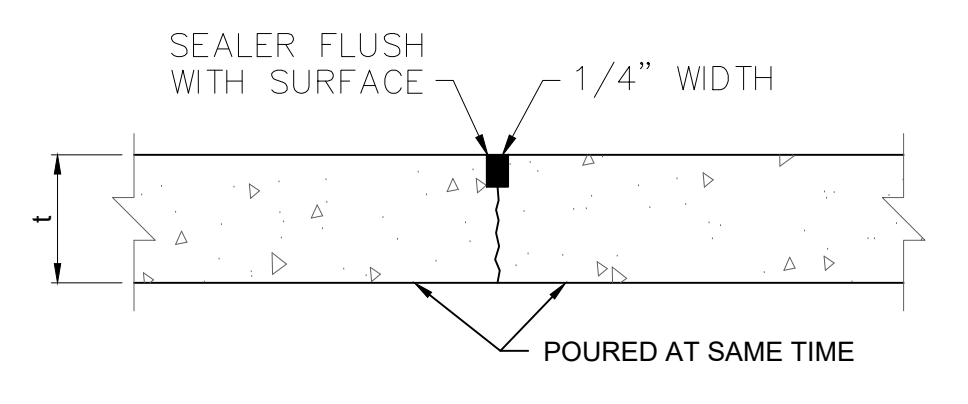
4 CONCRETE PARKING BLOCK



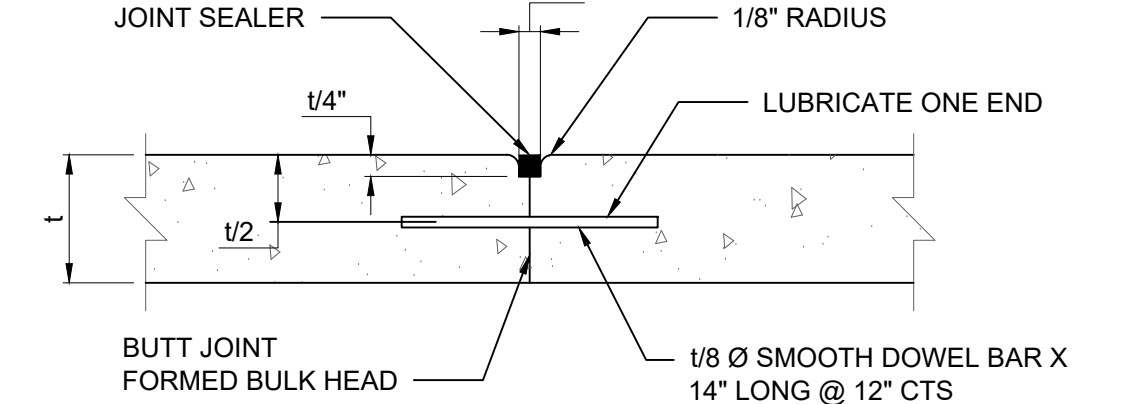
TYPE A
EXPANSION JOINT



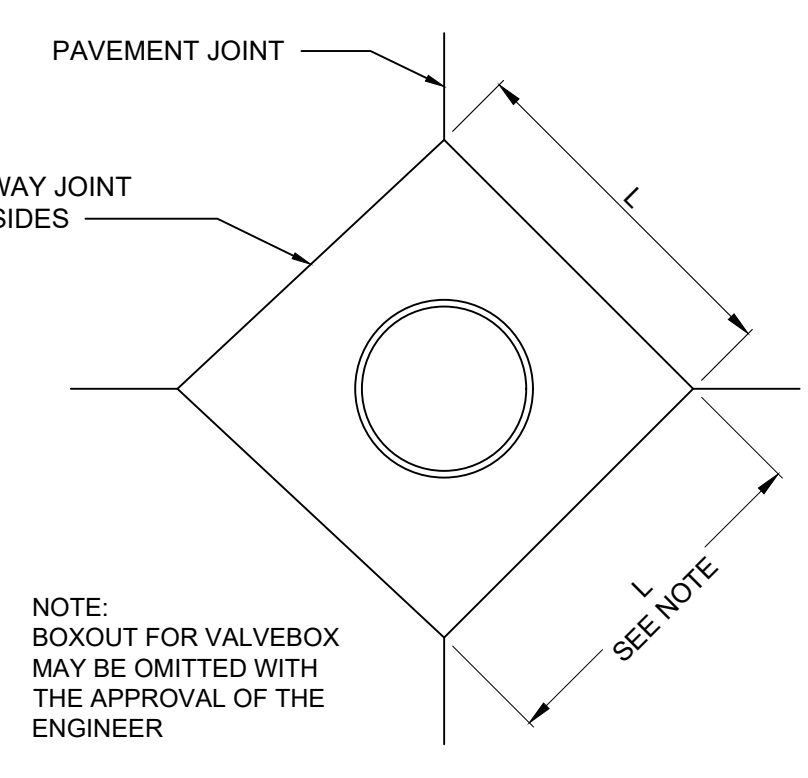
TYPE C
TIED LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT



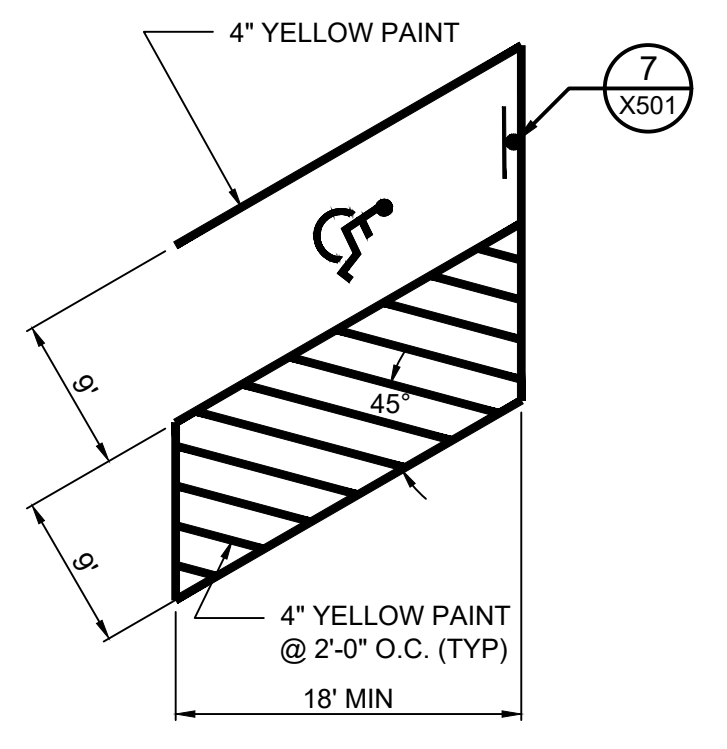
TYPE D
SAWED LONGITUDINAL OR TRANSVERSE



TYPE E
ALTERNATE TRANSVERSE CONSTRUCTION JOINT AT NORMAL SPACING



TYPICAL UTILITY BOXOUT
JOINTS ALL CORNERS

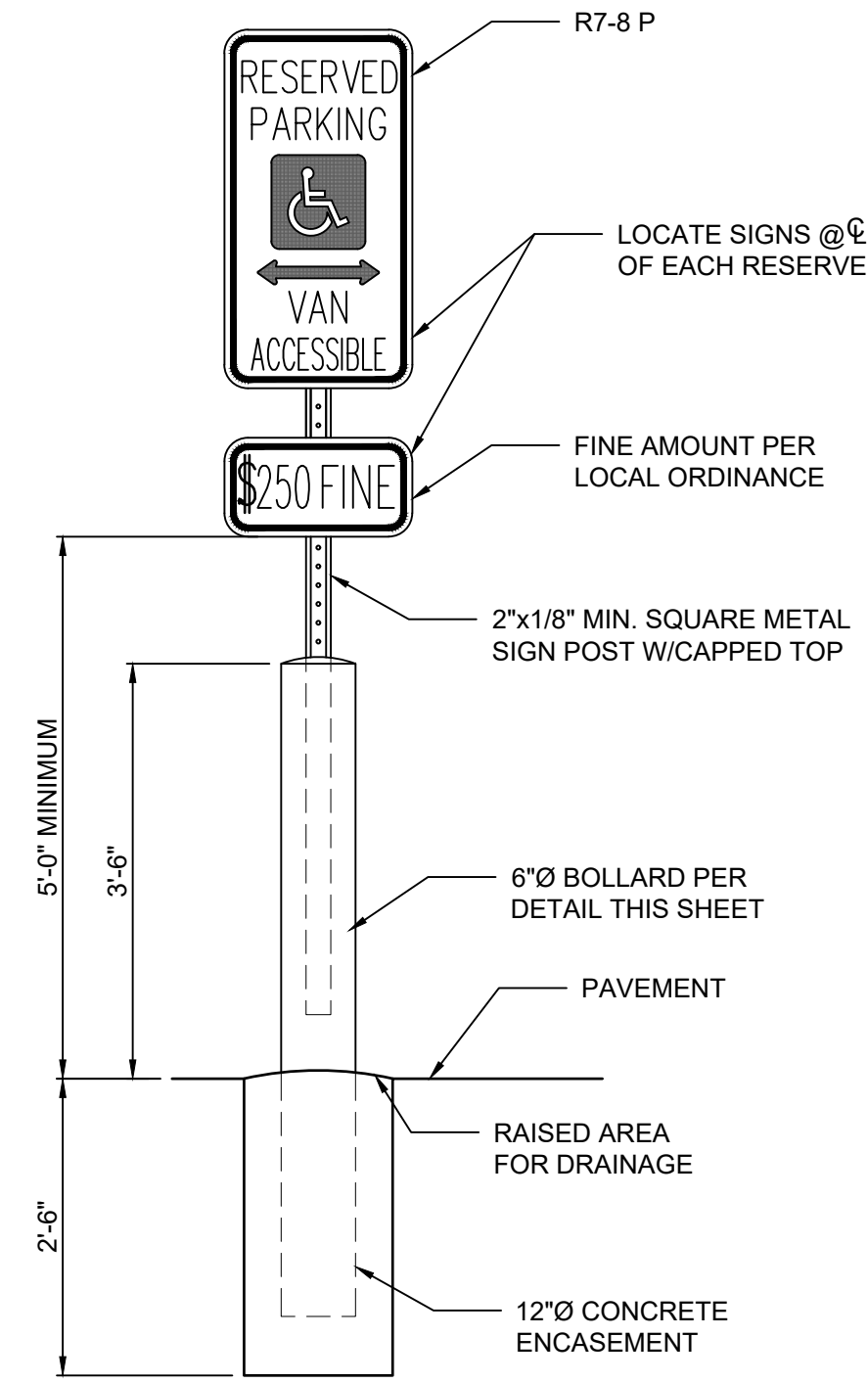


6 60° ACCESSIBLE STALL DETAILS
N.T.S.

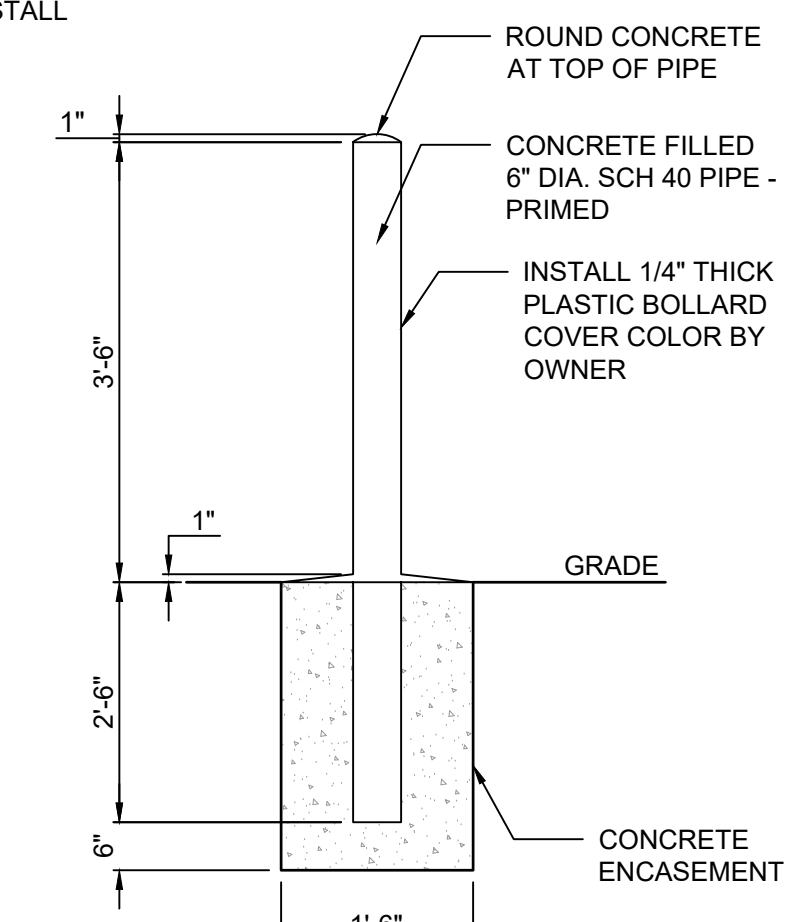
NOTES

- AT INLETS, MANHOLES, OR OTHER STRUCTURES TRANSVERSE JOINTS SHALL BE SHORTENED ONE OR MORE PANELS EITHER SIDE OF THE STRUCTURE TO PERMIT JOINTS TO FALL AT THE CORNERS OF THE BOXOUT. ONE OR BOTH 1" DIMENSIONS OF THE BOX OUT MAY BE ADJUSTED TO PROVIDE FOR INTERSECTION OF LONGITUDINAL JOINTS AT BOX OUT CORNERS.
- ALL TRANSVERSE JOINTS MUST EXTEND THROUGH CURBS AND MUST BE CONTINUOUS ACROSS PAVEMENT, EXCEPT TIED TRANSVERSE CONSTRUCTION JOINTS. EXPANSION JOINTS WILL BE REQUIRED AS SHOWN ON PLANS.
- MAXIMUM TRANSVERSE JOINT SPACING SHALL BE 15 FEET, UNLESS OTHERWISE SPECIFIED.
- PAVEMENT JOINTS SHALL BE SEALED WITH HOT POUR MATERIAL MEETING THE REQUIREMENTS OF SECTION 1057.50 (A.S.T.M. DESIGNATION: D6690, TY II).
- DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF A.A.S.H.T.O., M-31 OR M-53 GRADE 60 SHALL BE USED FOR THE TIE BARS.
- SUPPORT PINS FOR THE TIE BARS, WHEN REQUIRED, SHALL BE OF A SIZE AND STRENGTH SUFFICIENT TO FIRMLY HOLD THE BAR IN PLACE.

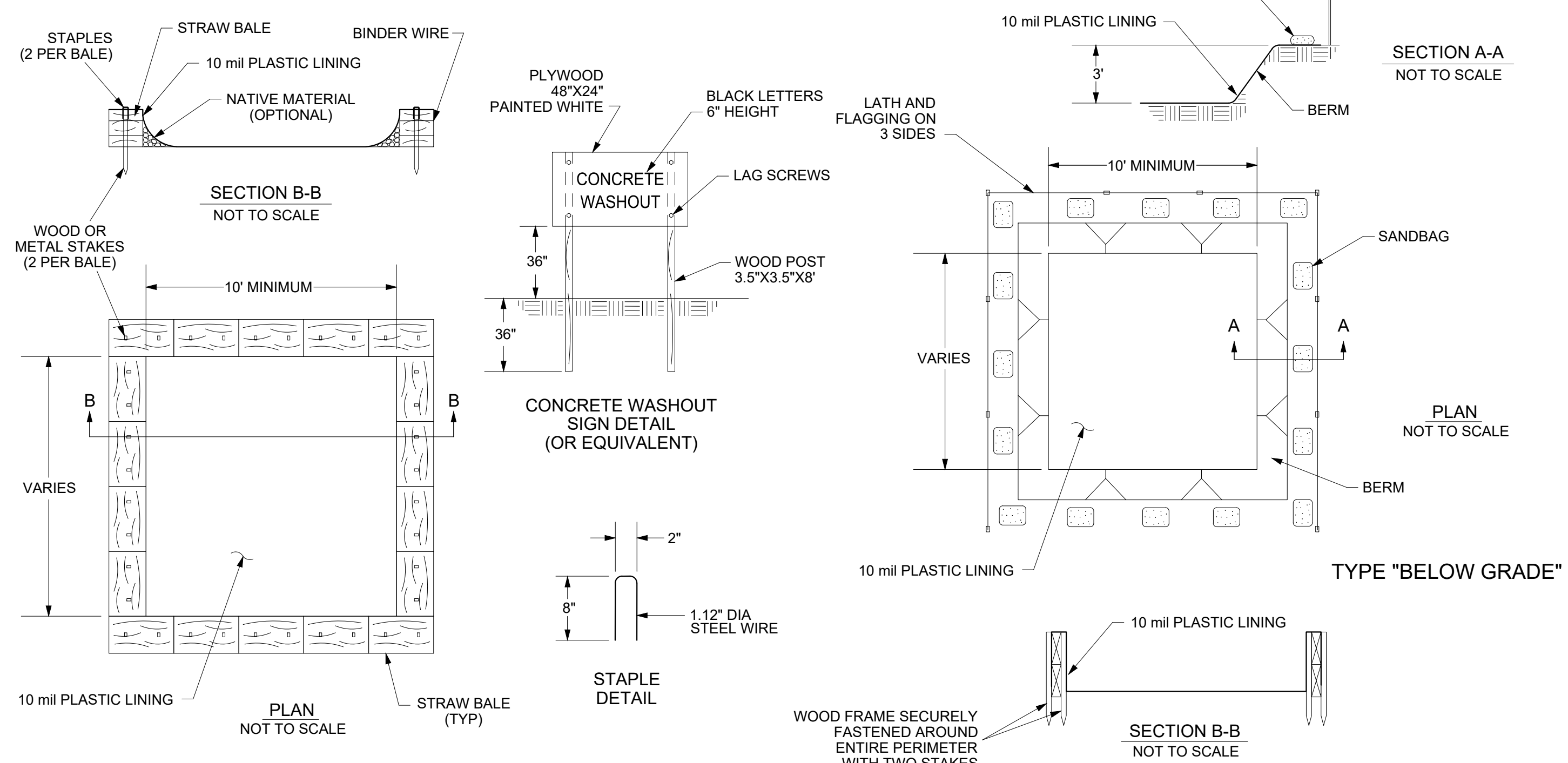
5 PCC PAVING DETAIL
N.T.S.



7 ACCESSIBLE PARKING SIGN
N.T.S.



8 BOLLARD
N.T.S.



NOTES

- ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
- A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
- MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
- HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

9 CONCRETE WASH OUT DETAIL
N.T.S.

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REVISION HISTORY		
DESCRIPTION	DATE	APPR

ISSUED FOR: 10/14/2022

DESIGN DEVELOPMENT

PRELIMINARY
NOT FOR CONSTRUCTION

HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO, 65255

Non-Reduced Sheet Size 30" x 42"
Full sheet plans have been prepared using standard scales.
Reduced sheet plans may not conform to standard scales.

DESIGNED	DRAWN
DCD	DCD
ECB/MCP	FIELD BOOK
CHECKED	MOB/SS
CSW	CHECK DATE

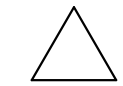
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



SITE DETAILS

PROJECT NO. 21-0922

DRAWING ISSUED DATE: 10/14/2022

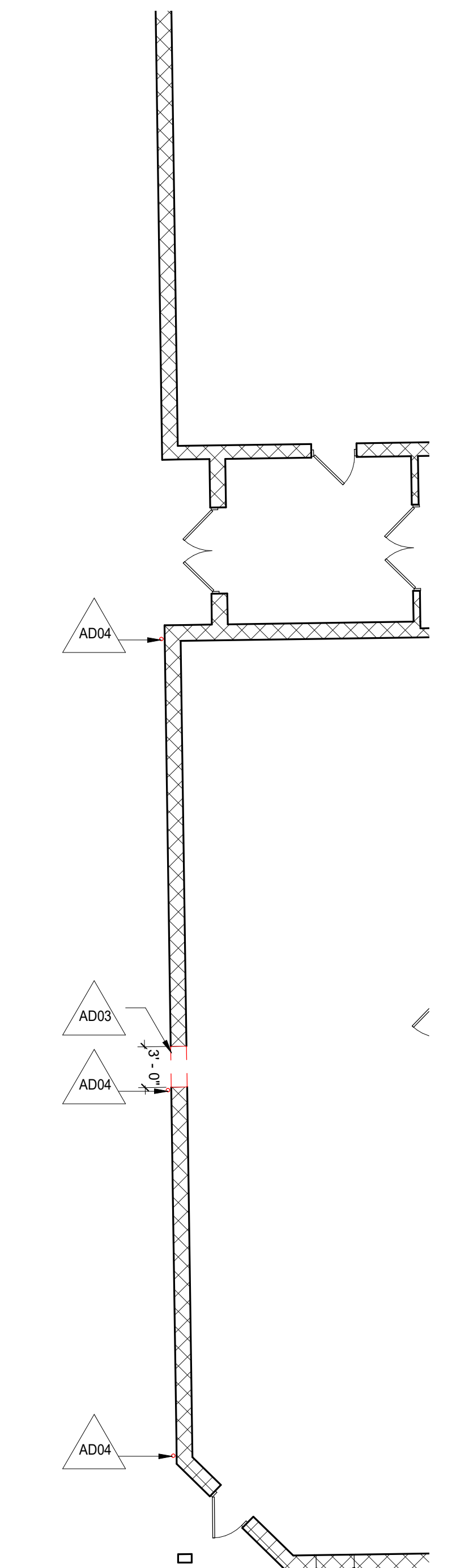
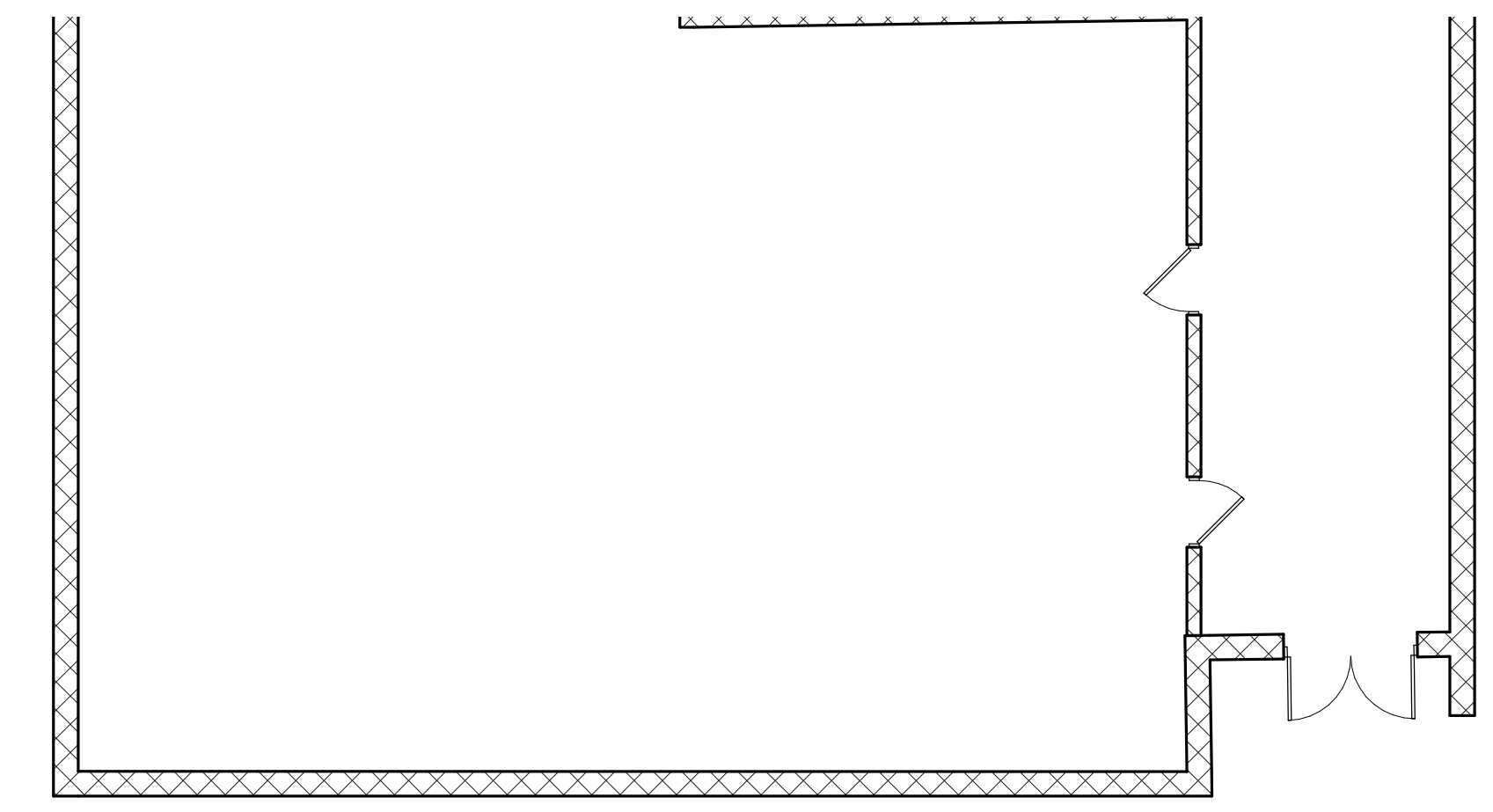
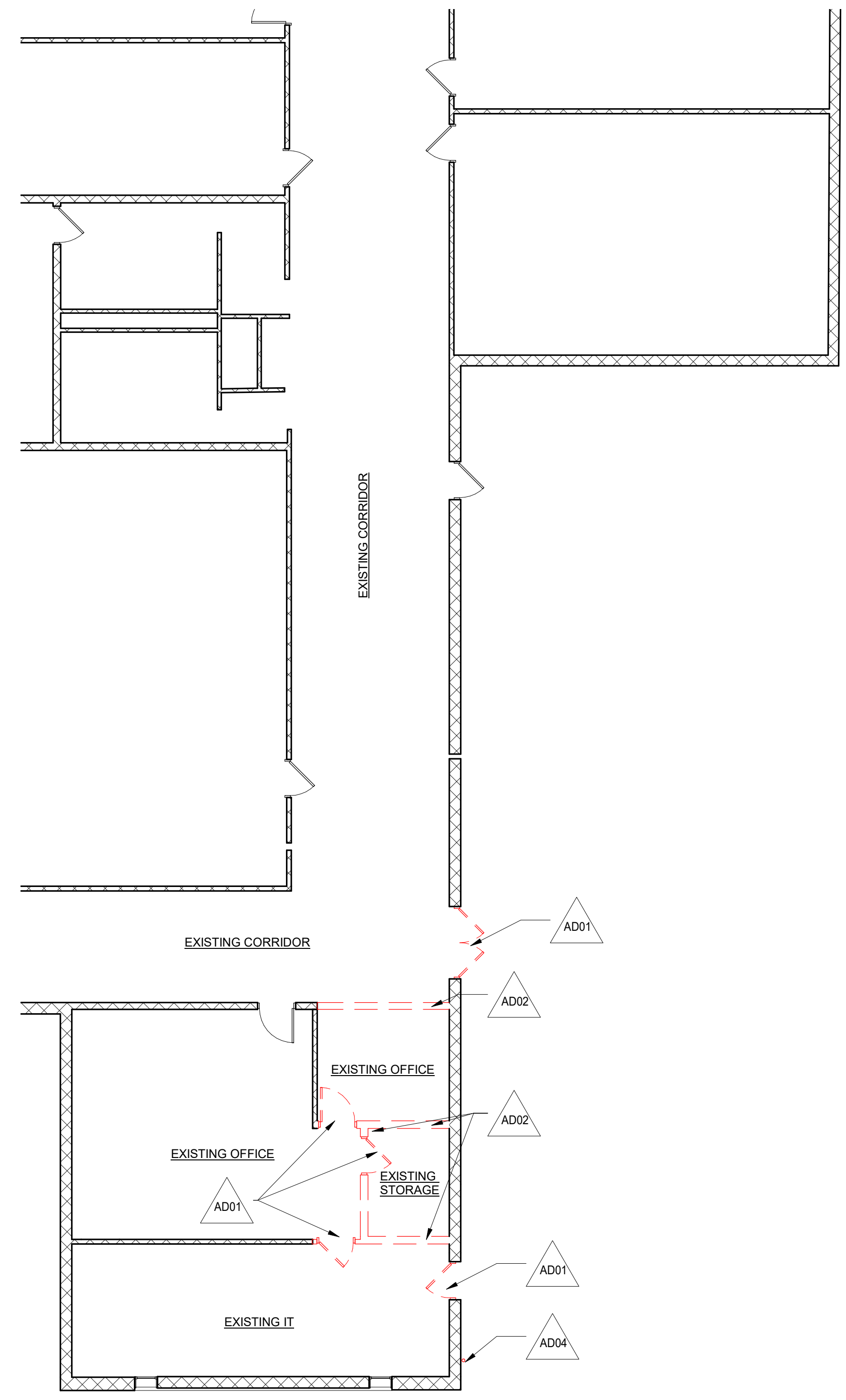
SHEET C501

DEMOLITION NOTES:  INDICATES DEMOLITION NOTES KEYNOTED ON FLOOR PLAN

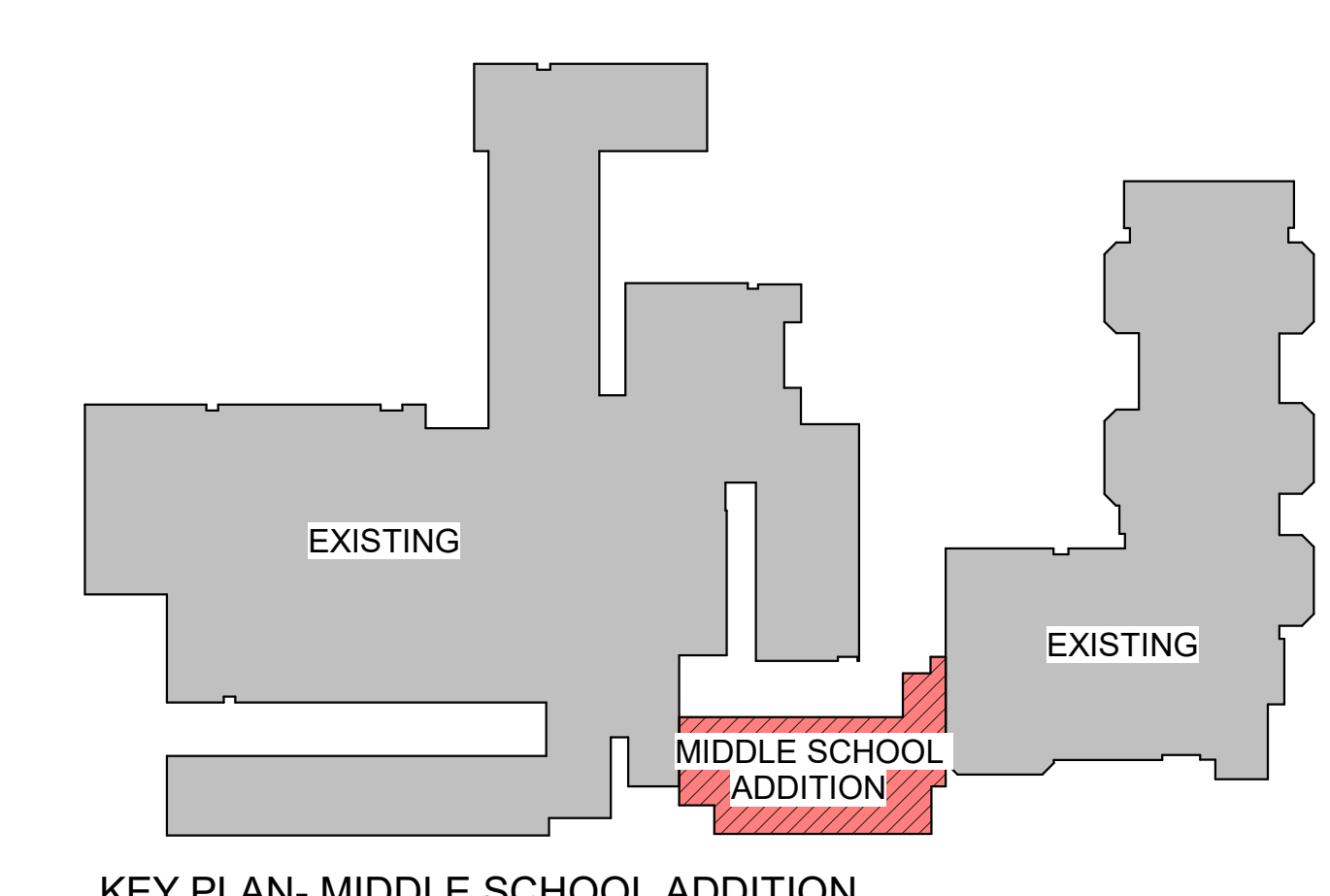
-  01 REMOVE EXISTING HOLLOW METAL DOOR AND FRAME.
-  02 REMOVE EXISTING WALL.
-  03 REMOVE PORTION OF EXISTING EXTERIOR CMU WALL.
-  04 REMOVE EXISTING DOWNSPOUT.

GENERAL DEMOLITION NOTES:

- 01 DASHED LINES INDICATE ITEMS TO BE REMOVED.
- 02 ALL MATERIALS NOTED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY FROM SITE UNLESS RETAINED FOR OWNER (SEE GENERAL NOTE 03 THIS SHEET). ALL WASTE MATERIALS SHALL BE TRANSPORTED AND APPROPRIATELY DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL LAWS.
- 03 CONTRACTOR TO OFFER OWNER RIGHT OF FIRST REFUSAL FOR ALL ITEMS NOTED TO BE REMOVED, INCLUDING BUT NOT LIMITED TO: PLUMBING FIXTURES, LIGHT FIXTURES, OPERABLE PARTITION, TOILET ROOM ACCESSORIES, STEEL RAILINGS, ETC.



1 DEMO PLAN
1/8" = 1'-0"



0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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REVISION HISTORY		
DESCRIPTION	DATE	APPR

ISSUED FOR: 10/14/2022
DESIGN DEVELOPMENT

PRELIMINARY
NOT FOR CONSTRUCTION

HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO, 65255

Non-Reduced Sheet Size 30" x 42"
Full sized plans have been prepared using standard scales.
Reduced sized plans may not conform to standard scales.

DESIGNED	HMC	DRAWN	JRT
FIELD	HMC	FIELD BOOK	JRT
CHECKED	HMC	CHECK DATE	

SHEET TITLE
ARCHITECTURAL DEMOLITION PLAN

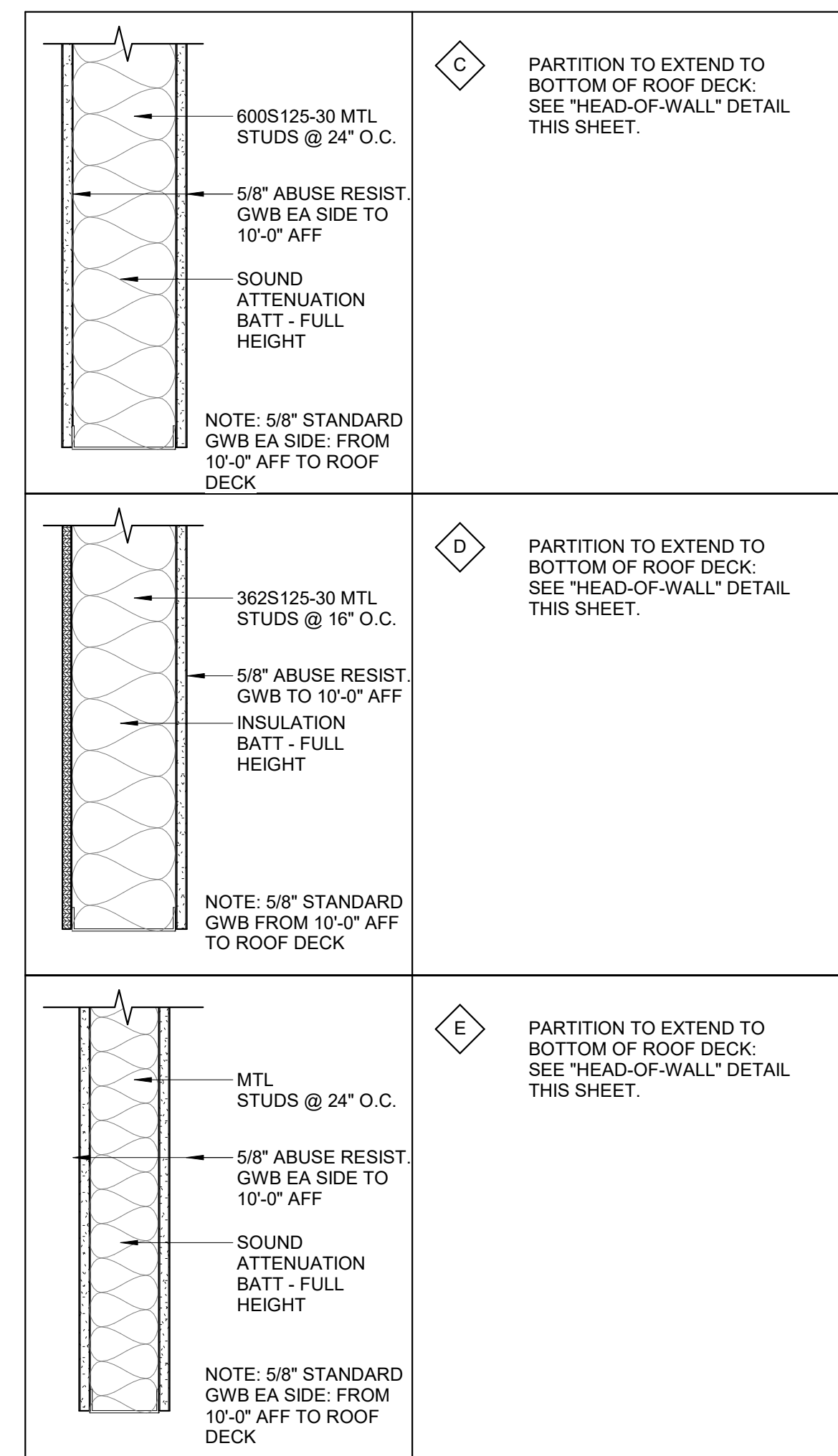
PROJECT NO.
21-4982

DRAWING ISSUED DATE:
10/14/2022

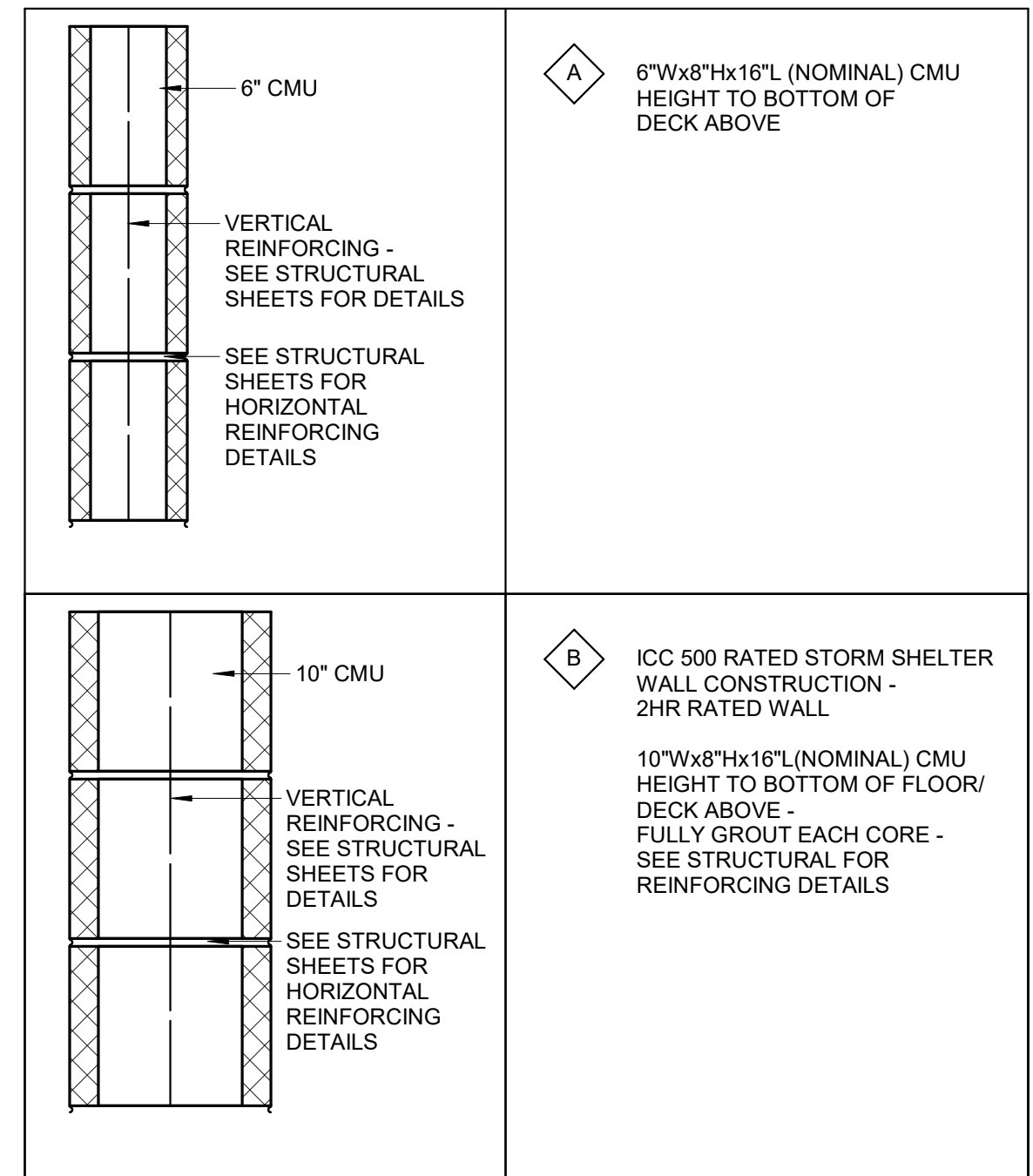
SHEET
AD101

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METAL STUD PARTITION TYPES

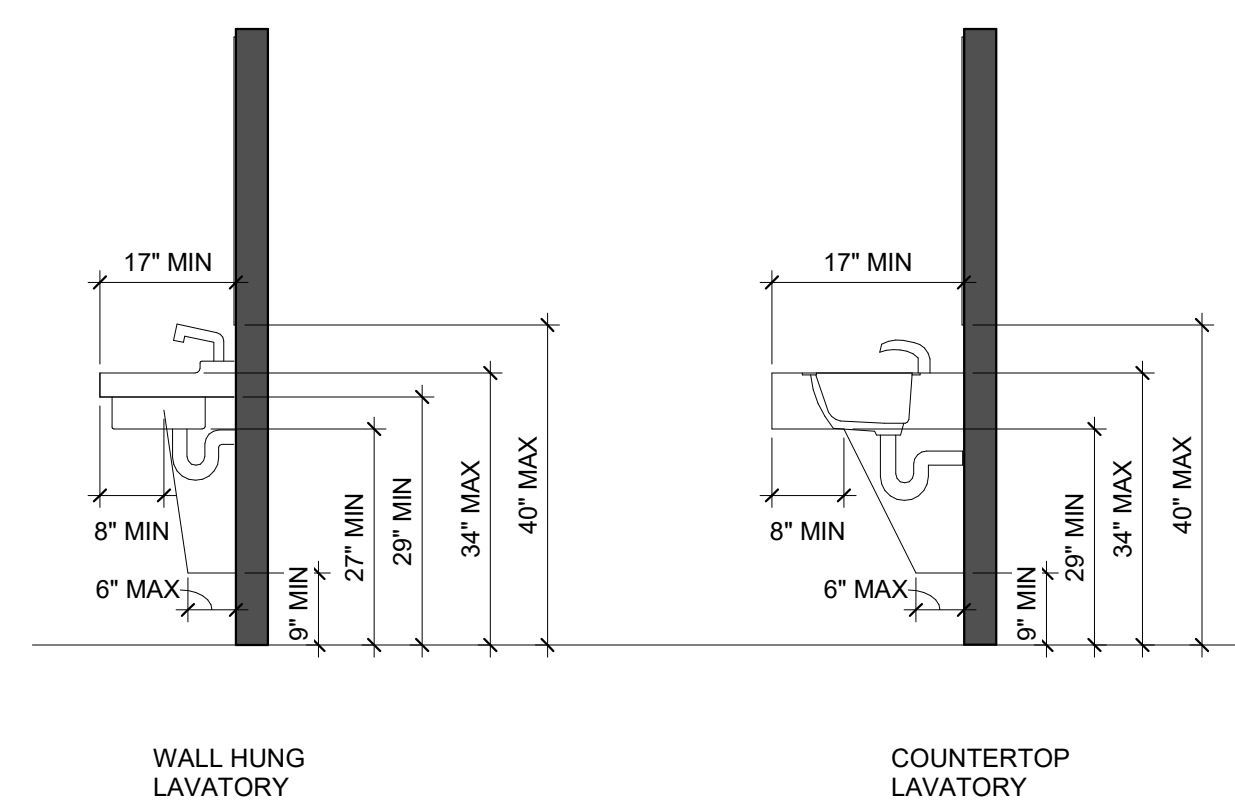


MASONRY PARTITION TYPES

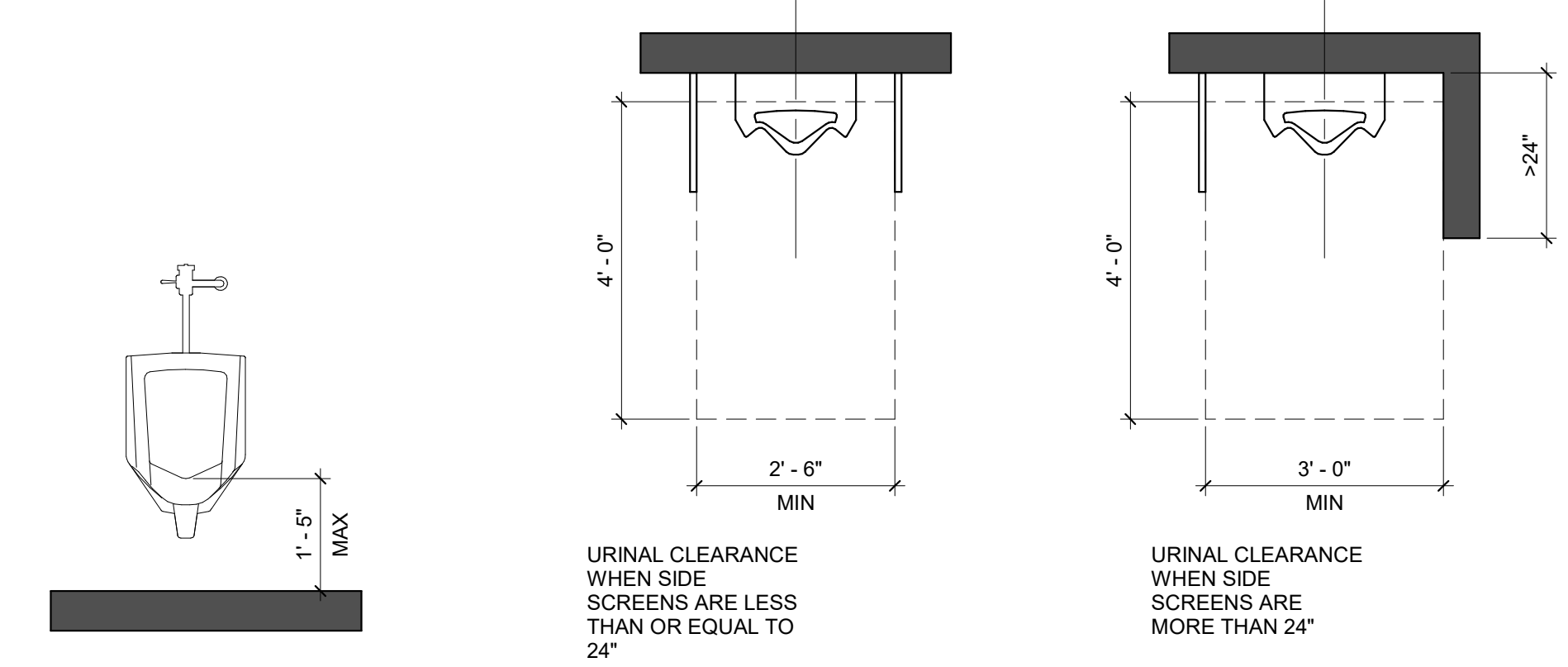


GENERAL NOTES (PARTITION TYPES)

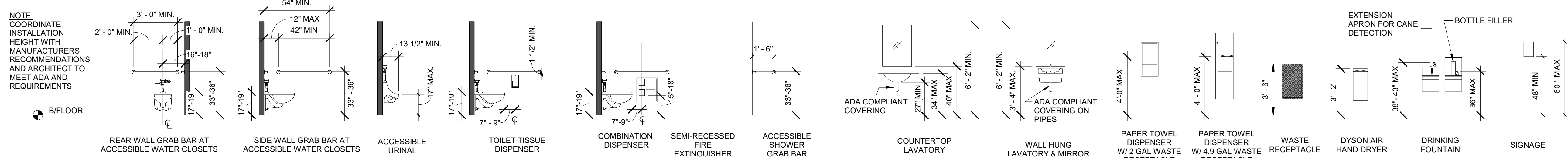
1. PROVIDE BEAD OF ACOUSTICAL SEALANT AT JOINT WHERE GYPSUM BOARD MEETS FLOOR SURFACE AND WHERE GYPSUM BOARD MEETS DISSIMILAR SURFACE (EACH SIDE OF PARTITION WALL).
2. PROVIDE LEVEL 1\"/>



LAVATORY CLEARANCES
1/2\"/>



URINAL ADA CLEARANCES
1/2\"/>



ADA MOUNTING HEIGHTS
1/4\"/>

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DESIGN DEVELOPMENT

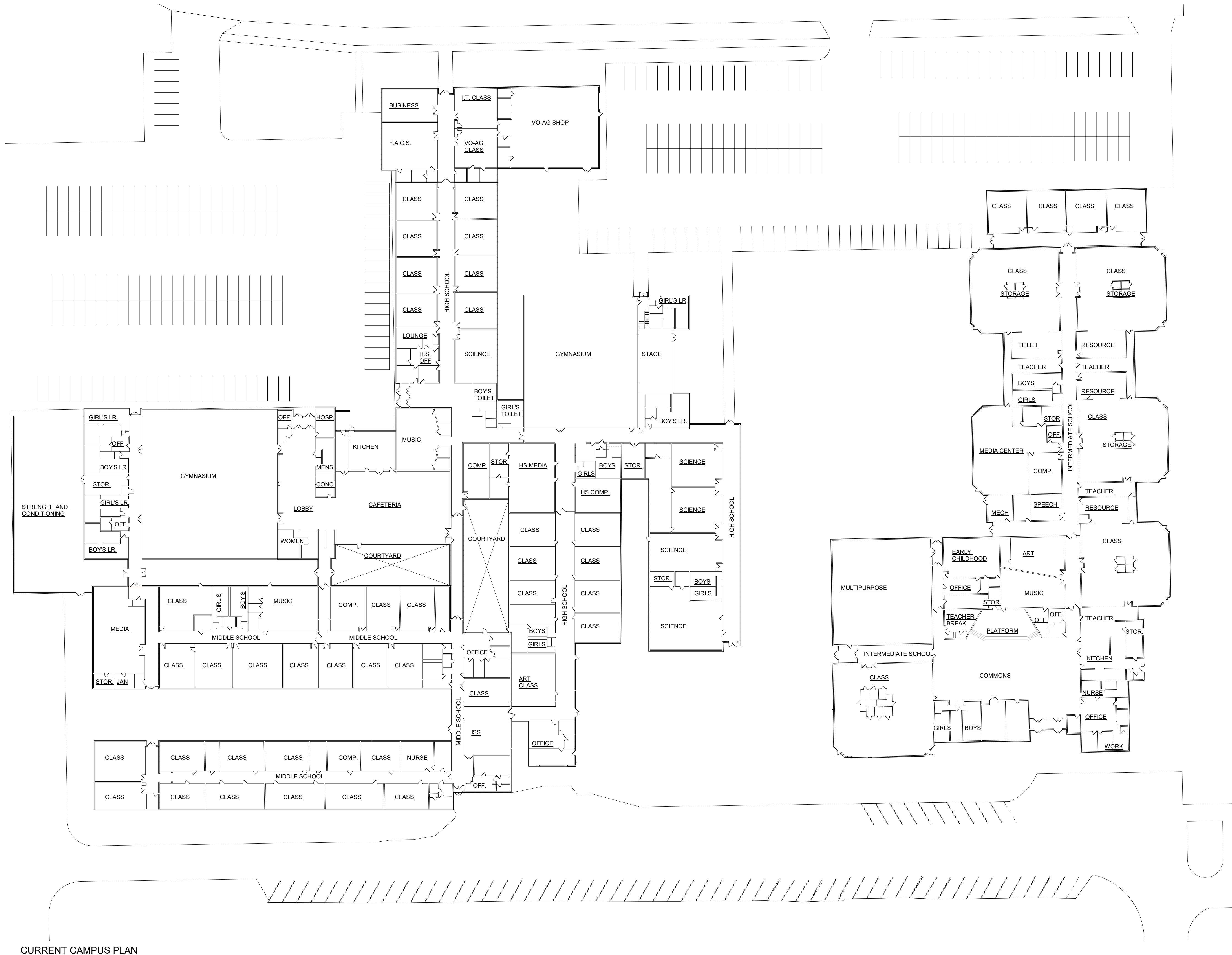
PRELIMINARY
NOT FOR CONSTRUCTION

HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO, 65255

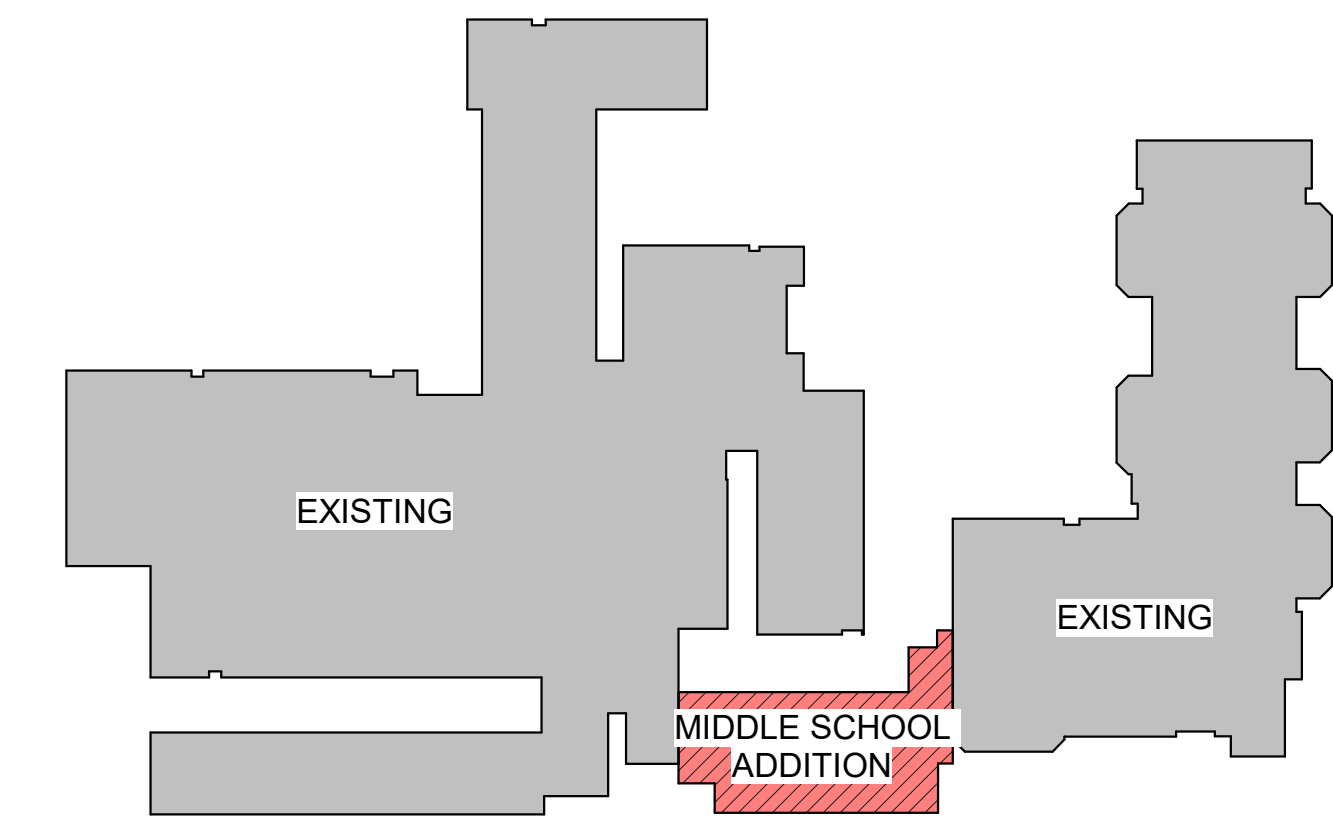
Non-Reduced Sheet Size 30" x 42"
Full sized plans have been prepared using standard scales.
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FIELD: HMC	FIELD BOOK: JRT
CHECKED: HMC	CHECK DATE: JRT
SHEET TITLE: PARTITION TYPES & STANDARD MOUNTING HEIGHTS	
PROJECT NO: 21-5022	
DRAWING ISSUED DATE: 10/14/2022	
SHEET: A001	

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CURRENT CAMPUS PLAN
1/32" = 1'-0"



KEY PLAN- MIDDLE SCHOOL ADDITION

0 8' 16' 32'
SCALE: 1/16" = 1'-0"

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HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO, 65255

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DESIGNED	JRT	DRAWN	JRT
FIELD	JRT	FIELD BOOK	JRT
CHECKED	HMC	CHECK DATE	
SHEET TITLE			

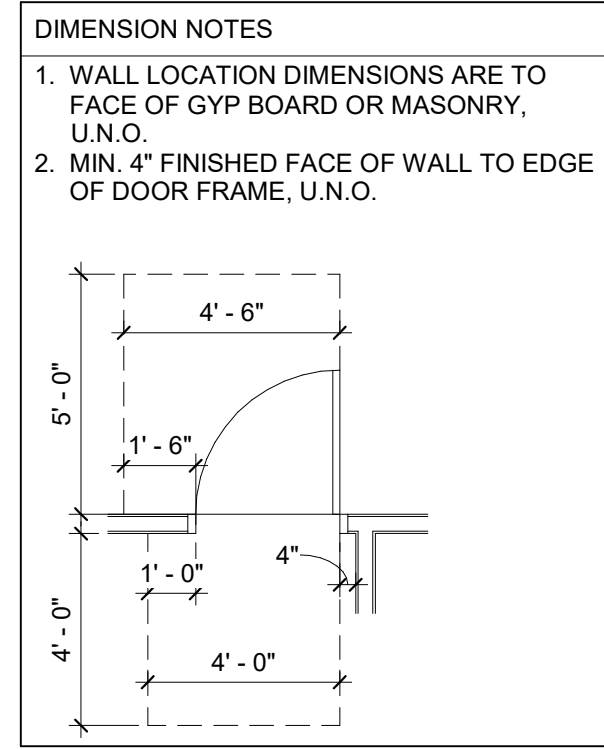
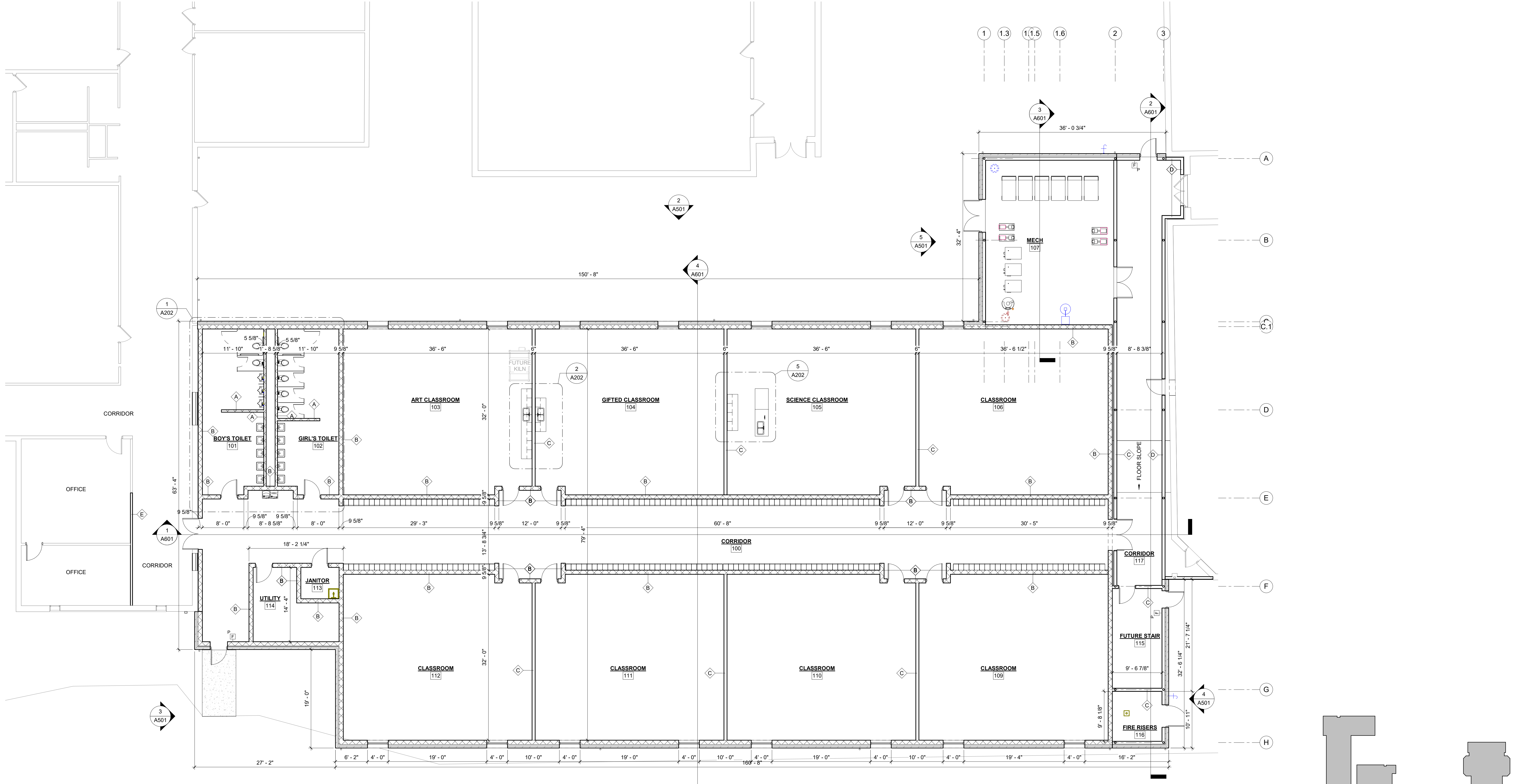
EXISTING CAMPUS PLAN

PROJECT NO.
21-5022

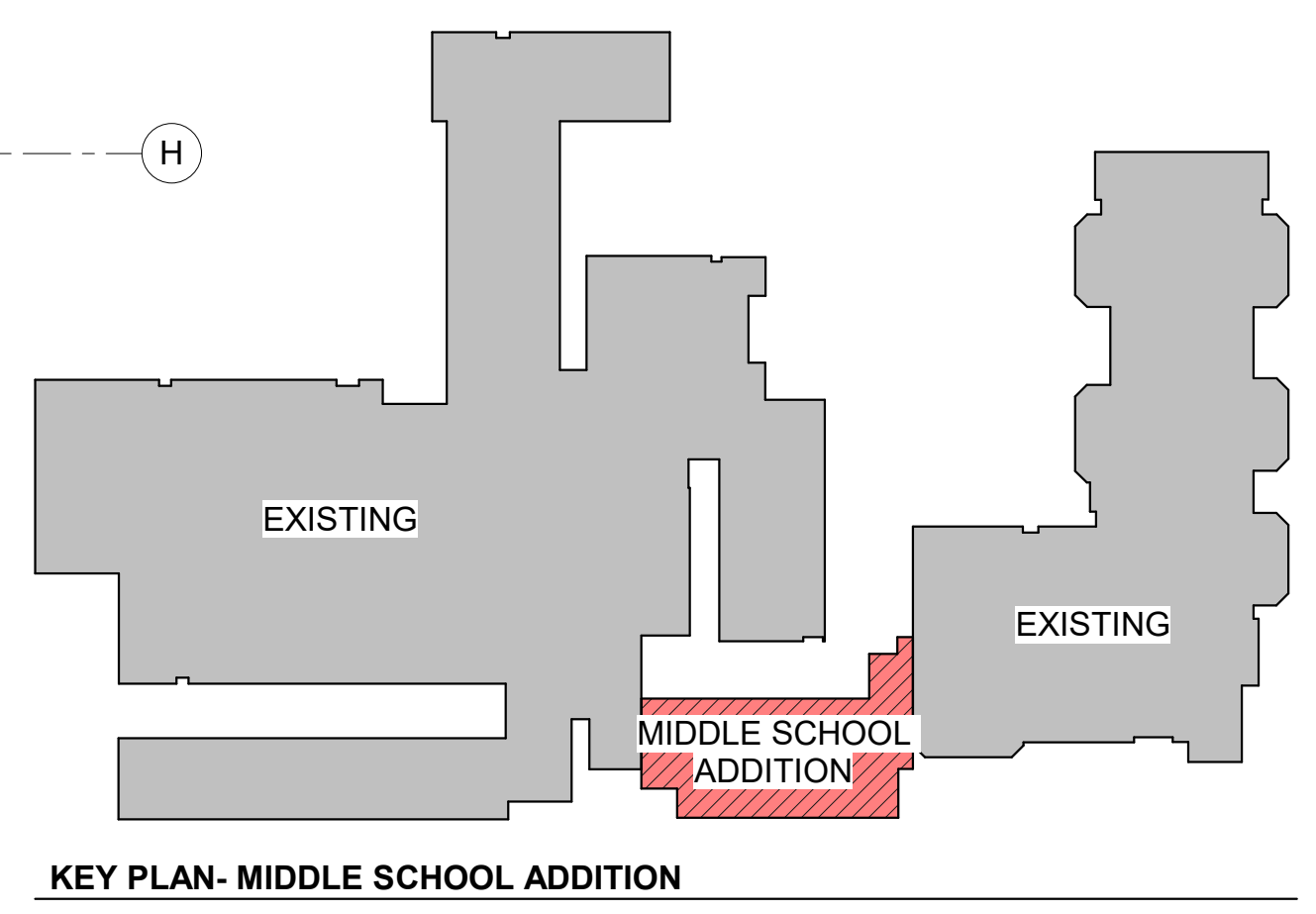
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10/14/2022

SHEET
A100

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1 MAIN FLOOR PLAN
 1/8" = 1'-0"



0 4' 8' 16'
 SCALE: 1/8" = 1'-0"

KLINGNER & ASSOCIATES, P.C.
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REVISION HISTORY

NO.	DESCRIPTION	DATE	APPR.
1			

ISSUED FOR: 10/14/2022
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 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO, 65255

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DESIGNED	DRAWN
JRT	JRT

FIELD	FIELD BOOK
JRT	JRT

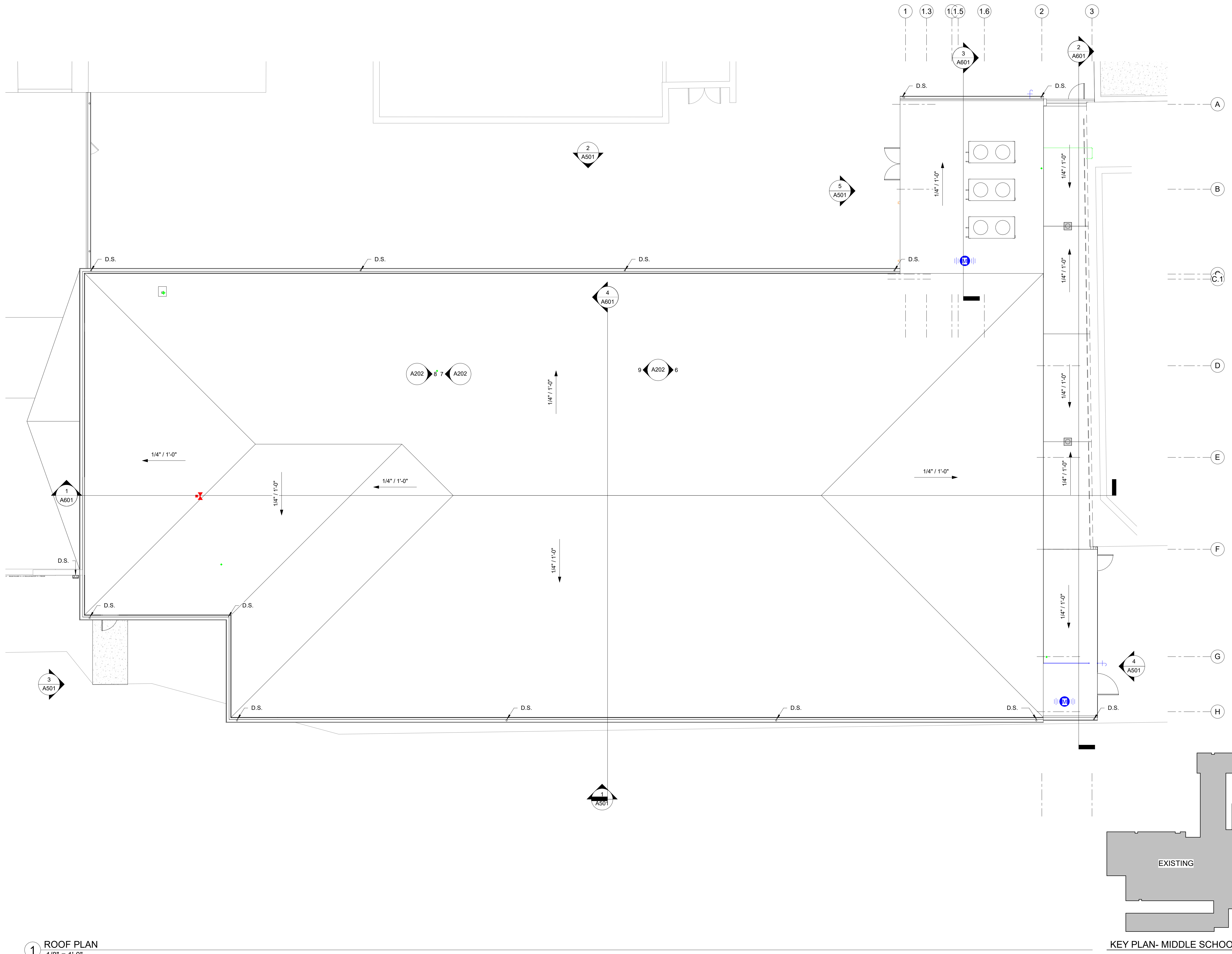
CHECKED	CHECK DATE
HMC	

SHEET TITLE

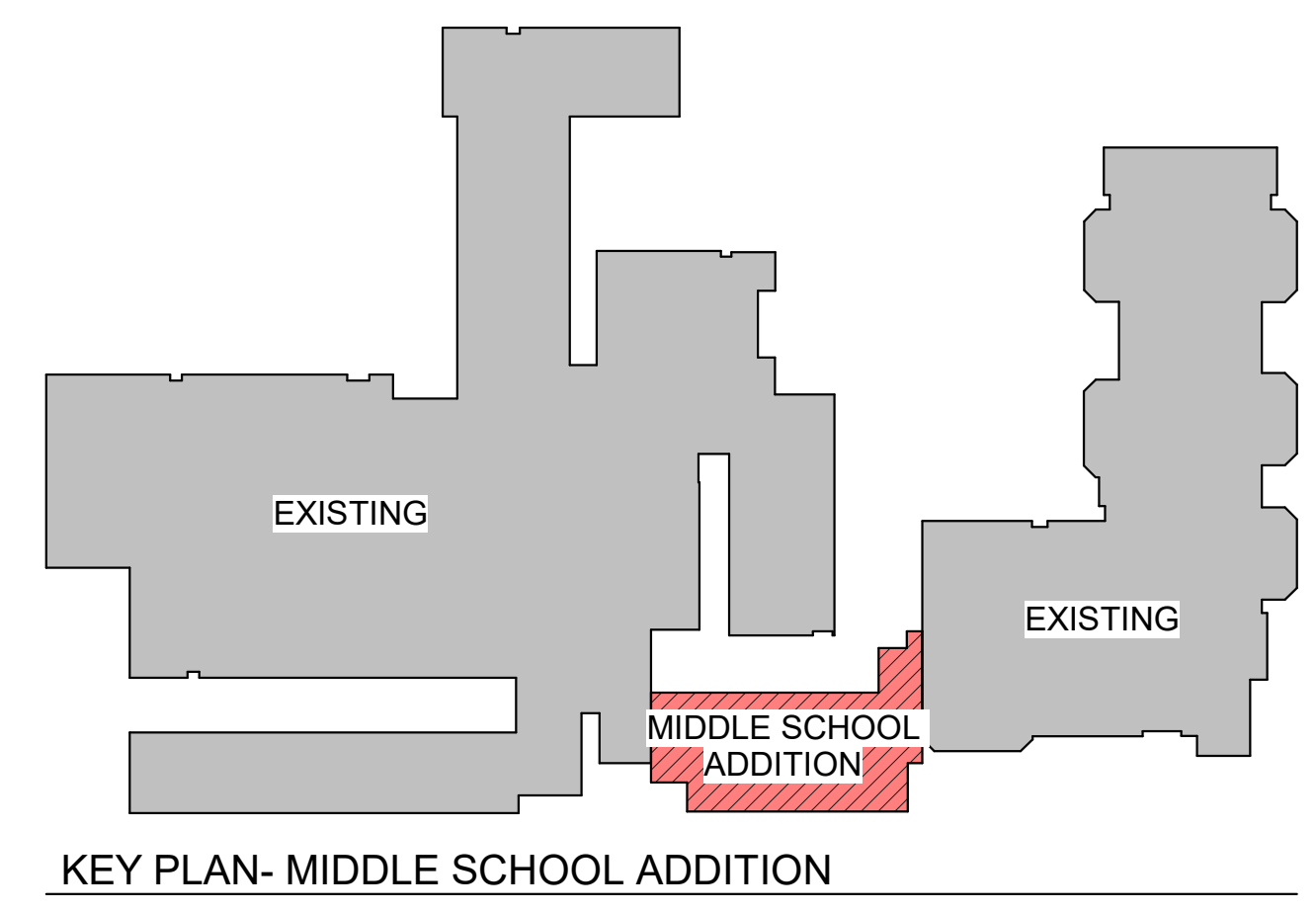
MAIN LEVEL FLOOR PLAN

PROJECT NO.
 21-5022
 DRAWING ISSUED DATE:
 10/14/2022
 SHEET
A101

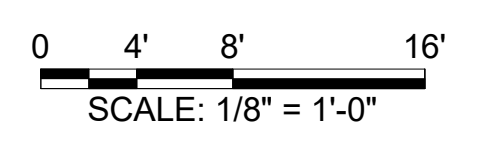
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1 ROOF PLAN
1/8" = 1'-0"



KEY PLAN- MIDDLE SCHOOL ADDITION



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HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO, 65255

Non-Reduced Sheet Size 30" x 42"	
Full sized plans have been prepared using standard scales. Reduced sized plans may not conform to standard scales.	
DESIGNED: HMC	DRAWN: JRT
FIELD: HMC	FIELD BOOK:
CHECKED: HMC	CHECK DATE:
SHEET TITLE	
ROOF PLAN	
PROJECT NO. 21-5032	
DRAWING ISSUED DATE: 10/14/2022	
SHEET	
A120	

WALLS			
TAG	MANUFACTURER	PRODUCT DESCRIPTION	REMARKS
CT-1	DAL TILE	BASIS OF DESIGN PRODUCT: INVOKE; SIZE: 6" X 24"; COLOR: COPPER HAZE; INSTALL PATTERN: 33% OFFSET; GROUT: MAPEI 11 SAHARA BEIGE; GROUT WIDTH: 3/16" MAXIMUM	WET WALL BATHROOM TILE - FLOOR TO CEILING INSTALL LONG DIMENSION VERTICAL
PNT-0	SHERWIN WILLIAMS	COLOR: SW 7002 DOWNY	GYP CEILING PAINT
PNT-1	SHERWIN WILLIAMS	COLOR: SW 7016 MINDFUL GRAY	CLASSROOM PAINT
PNT-2	SHERWIN WILLIAMS	COLOR: SW 7013 IVORY LACE	CORRIDOR PAINT
PNT-3	SHERWIN WILLIAMS	COLOR: SW 7047 PORPOISE	METAL DOOR FRAMES

WALL BASE			
TAG	MANUFACTURER	PRODUCT DESCRIPTION	REMARKS
RES-1	JOHNSONITE	BASIS OF DESIGN PRODUCT: 4" RUBBER COVE BASE; COLOR: 29 MOON ROCK	

FLOORING SCHEDULE			
TAG	MANUFACTURER	PRODUCT DESCRIPTION	REMARKS
CT-1	ATLAS CONCORDE USA	BASIS OF DESIGN PRODUCT: SIGN; COLOR: CREAM; SIZE: 12" X 24"; INSTALLATION PATTERN: STACKED; GROUT: MAPEI 35 NAVAJO BROWN	TILE FOR BATHROOM FLOORS
LVT-1	TARKETT	BASIS OF DESIGN PRODUCT: TARKETT; ID LATTITUDE WOOD; COLOR: CHAMOIS OAK 3806; SIZE: 6" X 48"; EMBOSS OPTION: ST; PROVIDE TANDUS CENTIVA METAL EDGE TRANSITION FOR LVT TO CPTW/LK NORTH AND SOUTH.	INSTALL 33% OFFSET FOR LVT RUNNING PROJECT NORTH AND SOUTH.
LVT-2	TANDUS-CENTIVA	BASIS OF DESIGN PRODUCT: TARKETT; ID LATTITUDE WOOD COLOR: TACS OAK; SIZE: 6" X 36"; EMBOSS OPTION: ST; PROVIDE TANDUS CENTIVA METAL EDGE TRANSITION FOR LVT TO CPTW/LK TRANSITIONS.	INSTALL 33% OFFSET FOR LVT RUNNING PROJECT NORTH AND SOUTH.
SC-1	BASF	BASIS OF DESIGN PRODUCT: MASTERKURE CC1315 WB	APPLY TWO (2) COATS MIN

SURFACES - HORIZONTAL			
TAG	MANUFACTURER	PRODUCT DESCRIPTION	REMARKS
LAM-1	WILSONART	BASIS OF DESIGN PRODUCT: RUSTIC SLATE 4888-38	CLASSROOM COUNTERTOPS
SS-1	CORIAN	BASIS OF DESIGN PRODUCT: SORREL	

SURFACES - VERTICAL			
TAG	MANUFACTURER	PRODUCT DESCRIPTION	REMARKS
LAM-1	WILSONART	BASIS OF DESIGN PRODUCT: PASADENA OAK 7986-38	CABINETS @ CLASSROOMS

MISCELLANEOUS INTERIOR FINISH SCHEDULE			
TAG	MANUFACTURER	PRODUCT DESCRIPTION	REMARKS
CG-1	INPRO	BASIS OF DESIGN PRODUCT: 160 SERIES HIGH IMPACT CORNER GUARD; COLOR: SHARKSKIN 0350; SIZE: 9"0" X 2" WING	USE ON WALLS WITH PAINT PNT-1
WG-1	INPRO	BASIS OF DESIGN PRODUCT: 1500 SERIES WALL GUARD; COLOR: SHARKSKIN 0350; SIZE: 5"	USE ON WALLS WITH PAINT PNT-1

SIGN TYPE SCHEDULE		
SIGN TYPE	DESCRIPTION	Count
A	BASIS OF DESIGN PRODUCT: INPRO SIGNSCAPE; COLLECTION: MANHATTAN; MATERIAL: RIGID VINYL; ROOM ID W WINDOW INSERT; SIZE: 6" W X 6" H; FACE PLATE: SANTA ROSA 0532; BACK PLATE: BRUSHED SILVER SE025; ACCENT: BLACK; FONT: ADA AVENIR; TEXT COLOR: BLACK 0152	9
B	BASIS OF DESIGN PRODUCT: INPRO SIGNSCAPE; COLLECTION: MANHATTAN; MATERIAL: RIGID VINYL; ROOM NUMBER SIGN; SIZE: 6" W X 4" H; FACE PLATE: SANTA ROSA 0532; BACK PLATE: BRUSHED SILVER SE025; ACCENT: BLACK; FONT: ADA AVENIR; TEXT COLOR: BLACK 0152	3
C	BASIS OF DESIGN PRODUCT: INPRO SIGNSCAPE; COLLECTION: MANHATTAN; MATERIAL: RIGID VINYL; REGULATORY SIGN ID; SIZE: 8" W X 10" H; FACE PLATE: SANTA ROSA 0532; BACK PLATE: BRUSHED SILVER SE025; ACCENT: BLACK; FONT: ADA AVENIR; TEXT COLOR: BLACK 0152; PICTOGRAM: MEN P4	1
D	BASIS OF DESIGN PRODUCT: INPRO SIGNSCAPE; COLLECTION: MANHATTAN; MATERIAL: RIGID VINYL; REGULATORY SIGN ID; SIZE: 8" W X 10" H; FACE PLATE: SANTA ROSA 0532; BACK PLATE: BRUSHED SILVER SE025; ACCENT: BLACK; FONT: ADA AVENIR; TEXT COLOR: BLACK 0152; PICTOGRAM: WOMEN P2	1

SIGN TYPE

SIGN TYPE - A SIGN TYPE - B SIGN TYPE - C SIGN TYPE - D

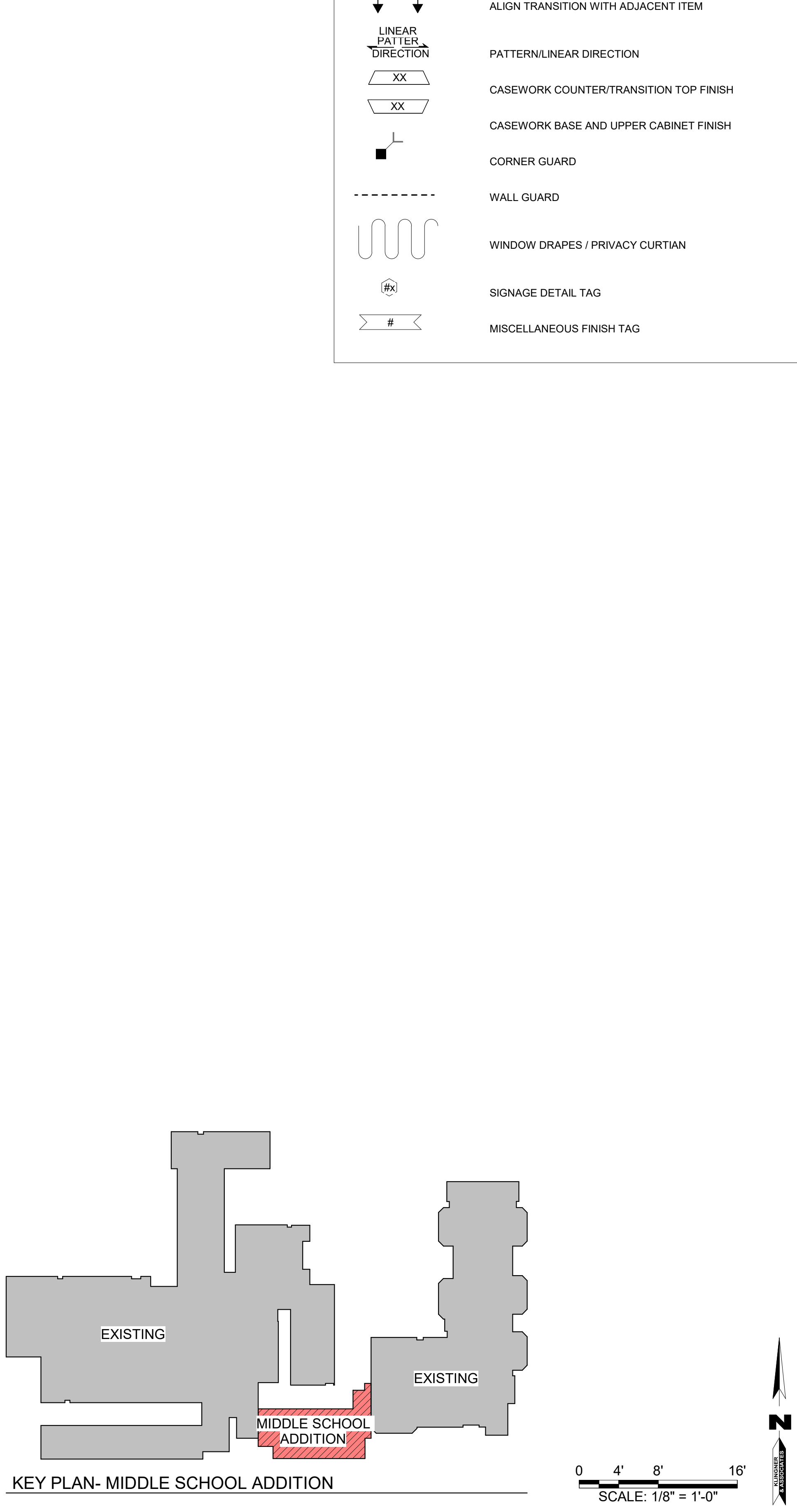
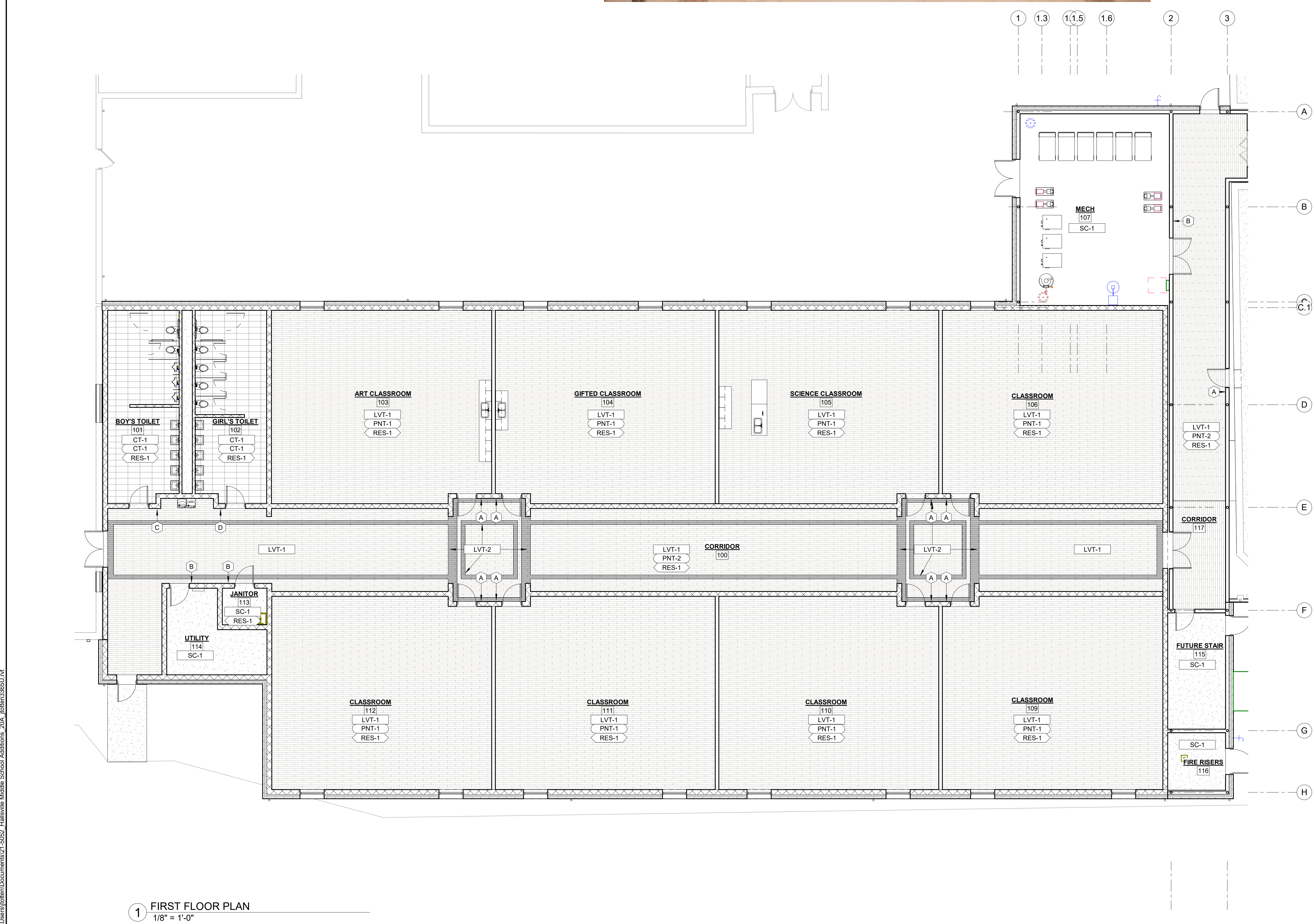
INTERIOR FINISH LEGEND	
ACP	ACOUSTICAL CEILING PANELS
AP	ACOUSTICAL WALL PANEL
CG	CORNER GUARD
CJ	CONTROL JOINT
CMU	CONCRETE MASONRY UNIT
CPT	CARPET
CT	CERAMIC TILE
EPOXY	EPOXY PAINT
E/S/C	EXPOSED STRUCTURE/COLUMNS
E/S/B	EXPOSED STRUCTURE/BEAMS
EXIST	EXISTING
EW	END WALL PROTECTOR
FRP	FIBERGLASS REINFORCED PANELS
GLS	GLASS
GYP	GYP SUM WALL BOARD
PNT	PAINT
PLAM	PLASTIC LAMINATE
RES	RESILIENT WALL BASE
RSN	RESINOUS FLOORING
SC	SEALED CONCRETE
SHWR	SHOWER UNIT
SS	SOLID SURFACE
SSTL	STAINLESS STEEL
STC	STAINED CONCRETE
TPT	TOILET PARTITION
TS	TRANSITION STRIP
VCT	VINYL COMPOSITION TILE
VET	VINYL ENHANCED TILE
VWC	VINYL WALL COVERING
WD	WOOD
WLK	WALK-OFF CARPET

GENERAL NOTES-INTERIOR

1. BASIS-OF-DESIGN PRODUCT: WHERE SPECIFICATIONS OR DRAWINGS NAME A PRODUCT AND MANUFACTURER, PROVIDE THE SPECIFIED PRODUCT/MANUFACTURER. "EQUAL" PRODUCTS MAY BE SUBMITTED FOR ARCHITECT APPROVAL. DRAWINGS AND SPECIFICATIONS INDICATE SIZES, PROFILES, DIMENSIONS, AND OTHER CHARACTERISTICS THAT ARE BASED ON THE PRODUCT NAMED. INSTALL PRODUCT COMPLETE WITH ALL REQUIRED ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, INSTRUCTION AND DETAILS.
2. ALL CONTRACTORS TO FIELD VERIFY ALL CONDITIONS AND DIMENSIONS.
3. ALL FLOOR TRANSITIONS THAT CHANGE MATERIALS TO RECEIVE TRANSITION STRIP.
4. ALL FLOOR FINISHES TO EXTEND BENEATH CASEWORK.
5. DISSIMILAR FLOOR MATERIALS SHALL MEET UNDER CENTER OF DOOR LEAF WHEN IN CLOSED POSITION, UNLESS OTHERWISE NOTED OR SHOWN.
6. REMARKS COLUMN ON ROOM AND PRODUCT FINISH SCHEDULE INDICATES GENERAL COMMENTS ONLY. SEE INTERIOR FINISH PLANS AND SPECIFICATIONS FOR LOCATIONS AND DETAILS.
7. ALL WALLS SHALL BE PNT-1, UNLESS OTHERWISE NOTED OR SHOWN.
8. ALL METAL DOORS, DOOR FRAMES, AND WINDOW FRAMES SHALL BE PNT-9, UNLESS OTHERWISE NOTED OR SHOWN.
9. ALL WALL BASE SHALL BE RES-1, UNLESS OTHERWISE NOTED OR SHOWN.
10. ALL FRP-1 TO BE 4'-0" W X 4'-0" H AT MOP SINKS, UNLESS OTHERWISE NOTED OR SHOWN.



FINISH PLAN SYMBOL LEGEND	
XX	WALL FINISH TAG
XX	ACCENT WALL FINISH
XX	WALL BASE TAG
XX	FLOOR FINISH TAG
XX	FLOOR MATERIAL TRANSITION
ALIGN	ALIGN TRANSITION WITH ADJACENT ITEM
LINEAR PATTERN DIRECTION	PATTERN/LINEAR DIRECTION
XX	CASEWORK COUNTER/TRANSITION TOP FINISH
XX	CASEWORK BASE AND UPPER CABINET FINISH
■	CORNER GUARD
---	WALL GUARD
Wavy line	WINDOW DRAPES / PRIVACY CURTAIN
(M)	SIGNAGE DETAIL TAG
#	MISCELLANEOUS FINISH TAG



KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
Columbia, Missouri
907 East Ash St.
St. Louis, MO 63101
www.klingner.com
907.955.5988

ISSUED FOR: 10/14/2022
DESIGN DEVELOPMENT
PRELIMINARY
NOT FOR CONSTRUCTION

HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO, 65255

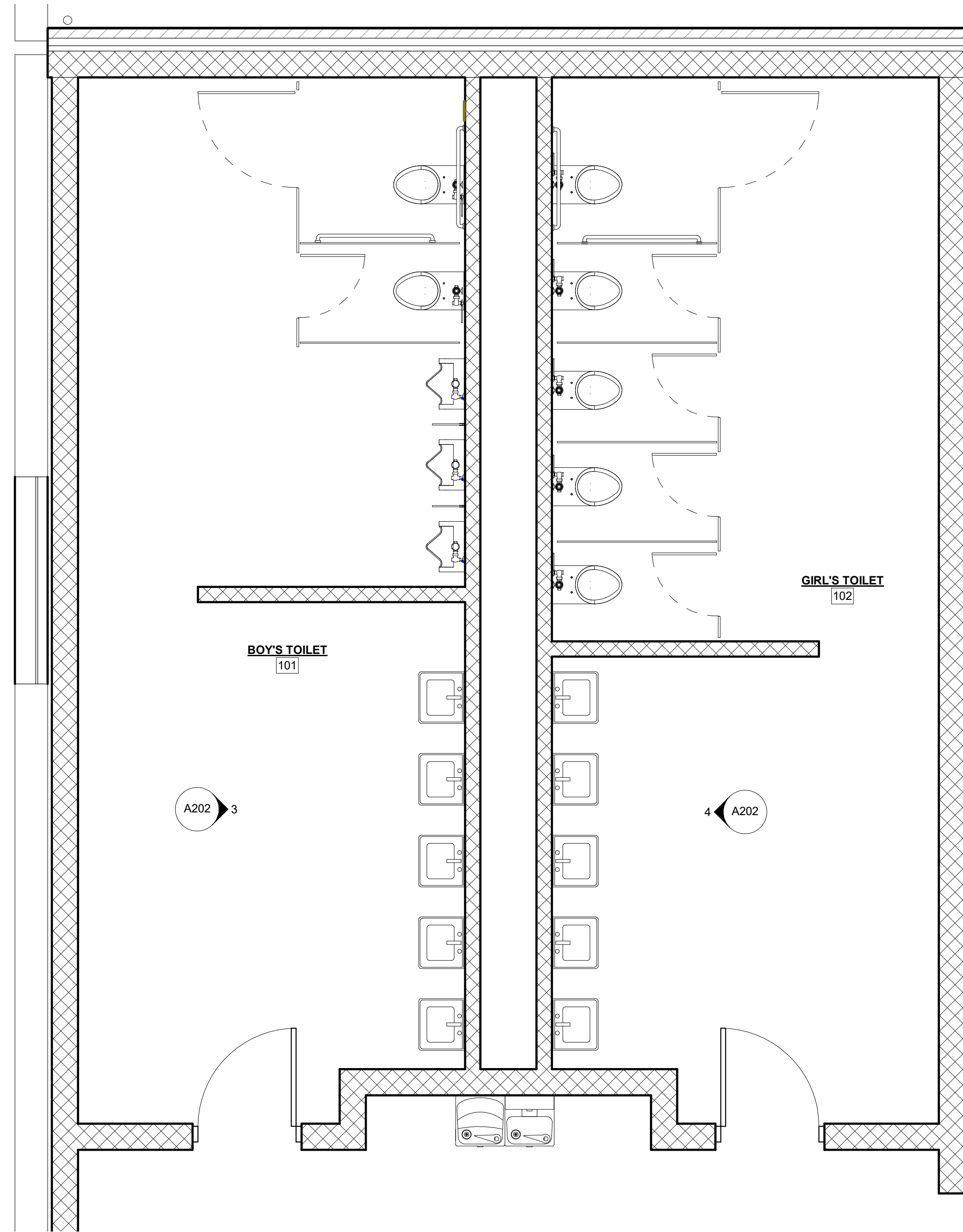
Non-Reduced Sheet Size 30" x 42"
Full sized plans have been prepared using standard scales.
Reduced sized plans may not conform to standard scales.

DESIGNED	JRT	JRT
DRAWN	JRT	JRT
CHECKED	HMC	HMC

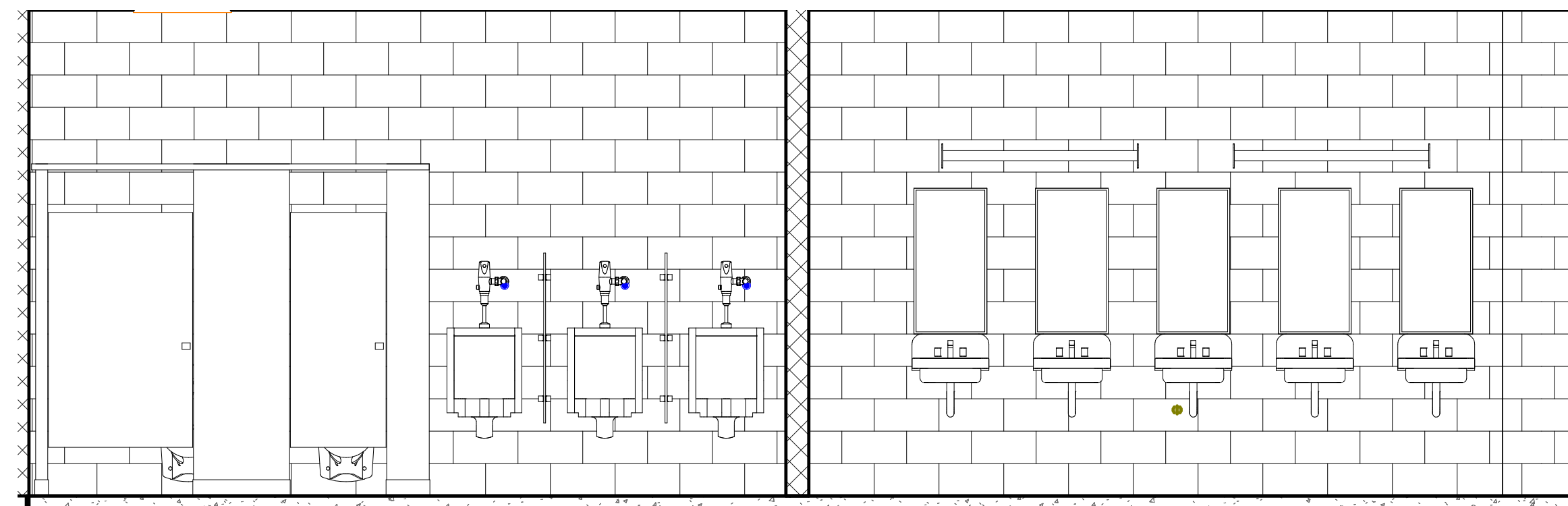
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PROJECT NO: 21-0922
DRAWING ISSUED DATE: 10/14/2022
SHEET: A201

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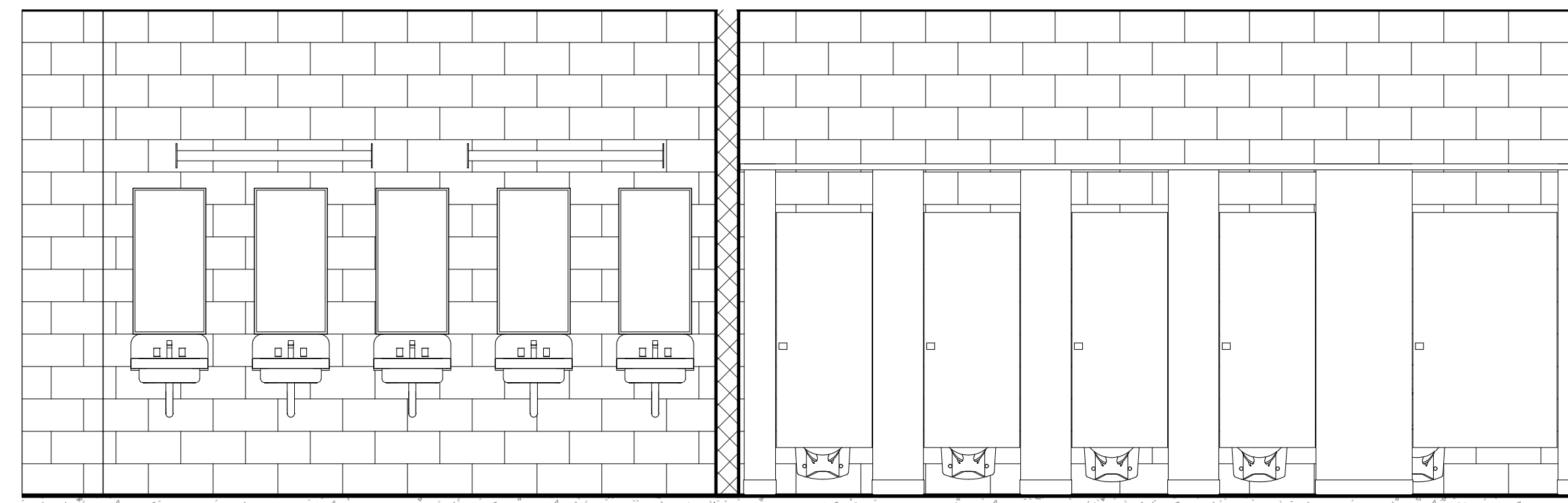
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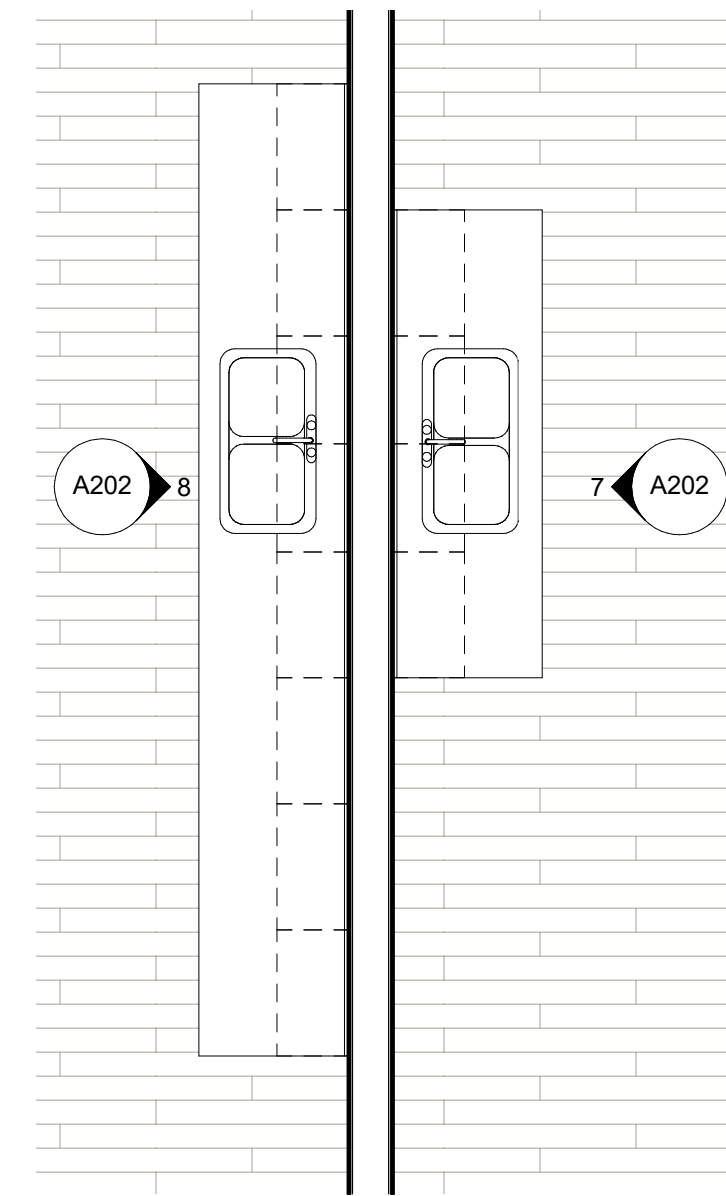
1 ENLARGED RESTROOM PLAN
 3/8" = 1'-0"



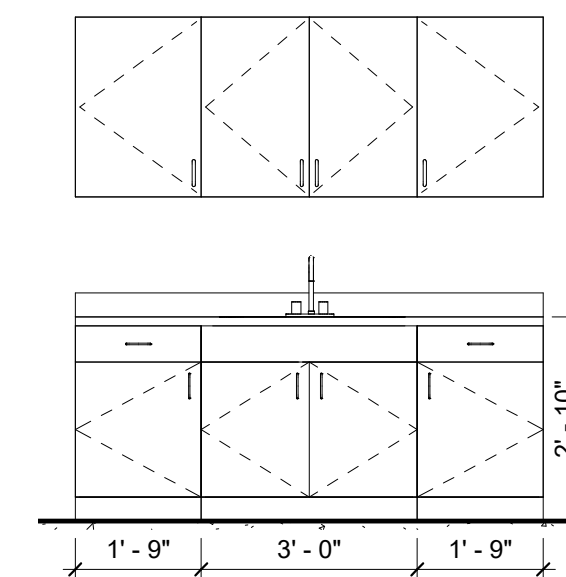
3 MEN'S TOILET ROOM
 3/8" = 1'-0"



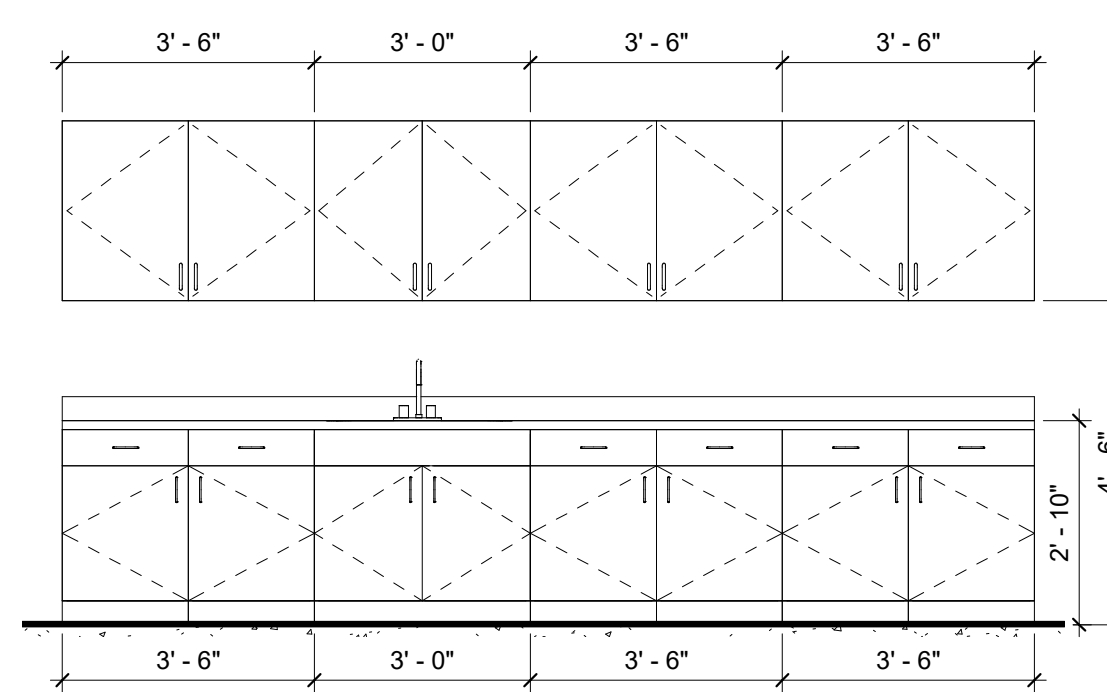
4 WOMEN'S TOILET ROOM
 3/8" = 1'-0"



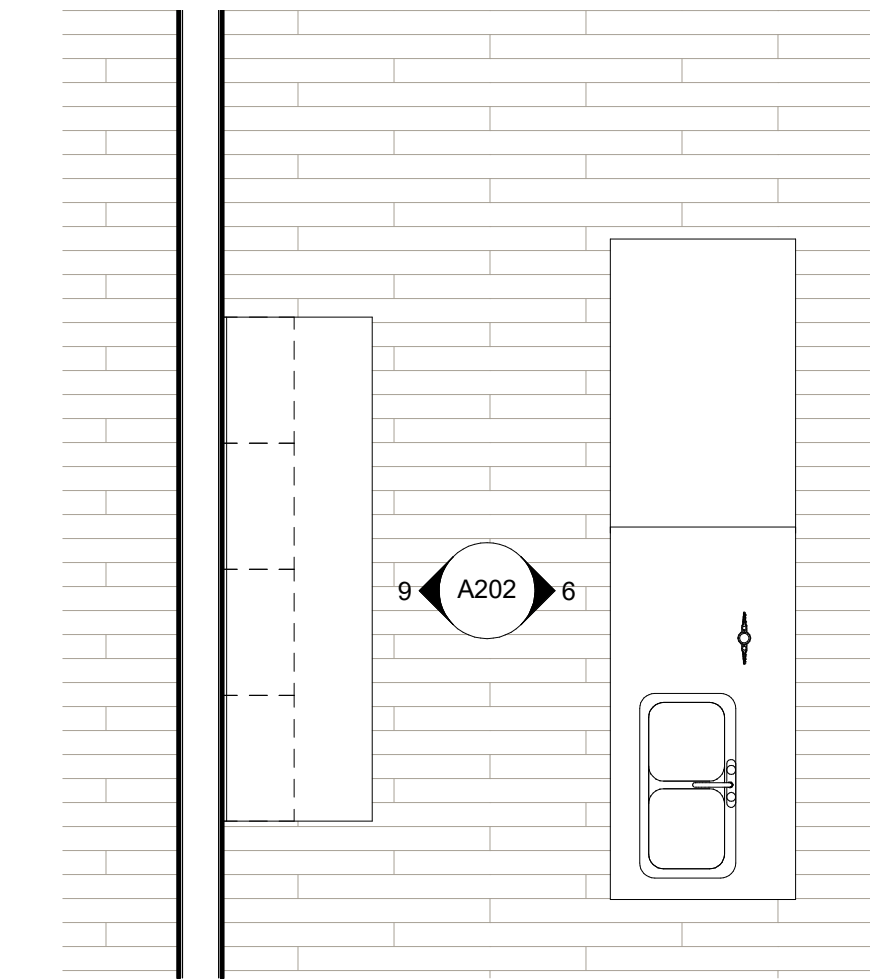
2 ART & GIFTED CLASSROOM CABINERY
 3/8" = 1'-0"



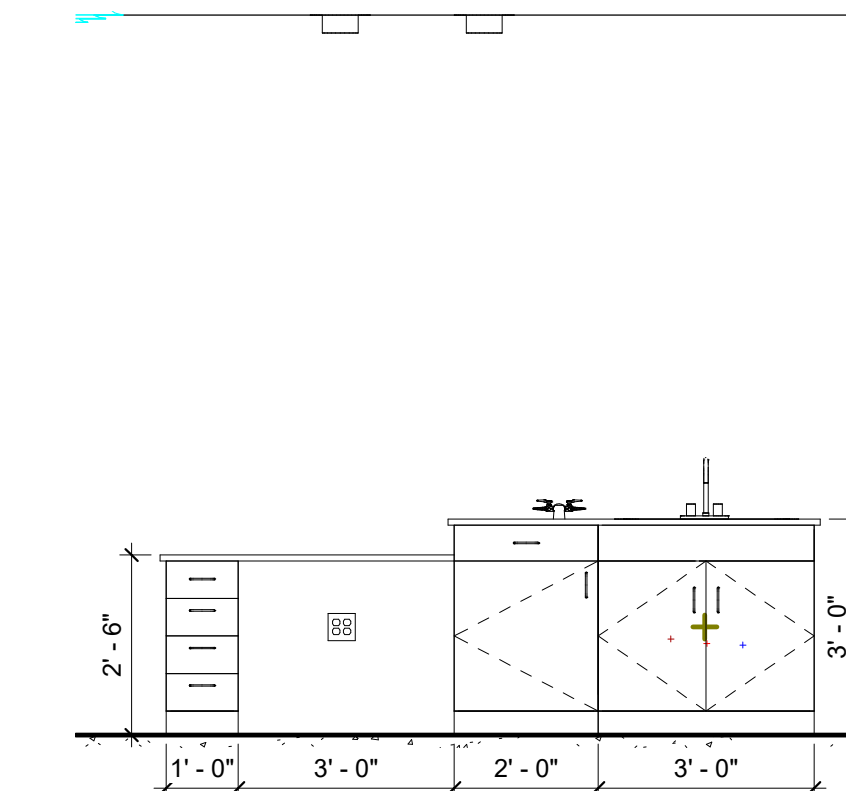
7 Elevation 2 - a
 3/8" = 1'-0"



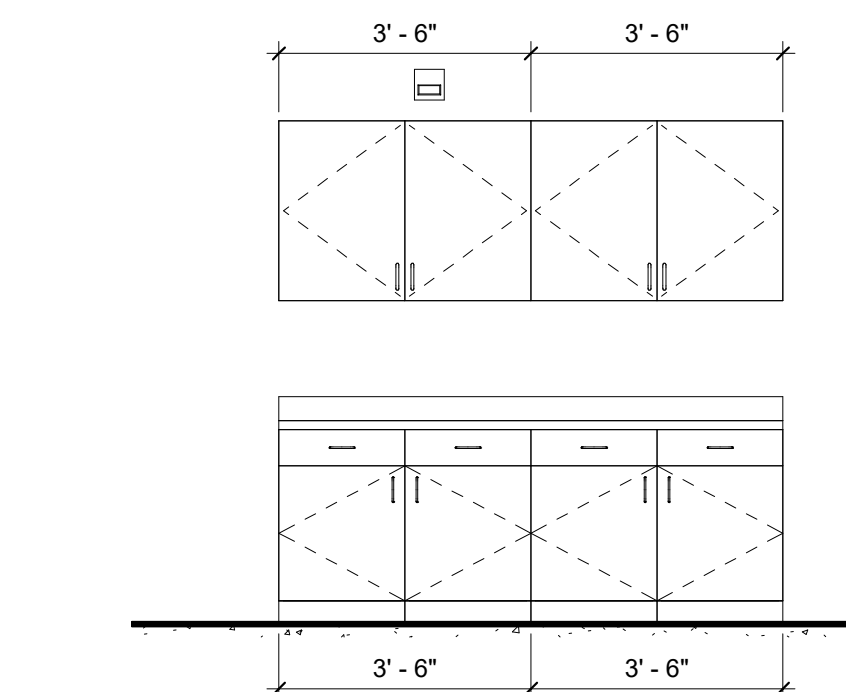
8 Elevation 3 - a
 3/8" = 1'-0"



5 SCIENCE CLASSROOM CABINERY
 3/8" = 1'-0"



6 Elevation 1 - c
 3/8" = 1'-0"



9 Elevation 4 - a
 3/8" = 1'-0"



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REVISION HISTORY			
NO.	DESCRIPTION	DATE	APPR.

ISSUED FOR: 10/14/2022

DESIGN DEVELOPMENT

PRELIMINARY
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HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO, 65255

Non-Reduced Sheet Size 30" x 42"
 Full sized plans have been prepared using standard scales.
 Reduced sized plans may not conform to standard scales.

DESIGNED	HMC	DRAWN	JRT
FIELD	HMC	FIELD BOOK	JRT
CHECKED	HMC	CHECK DATE	

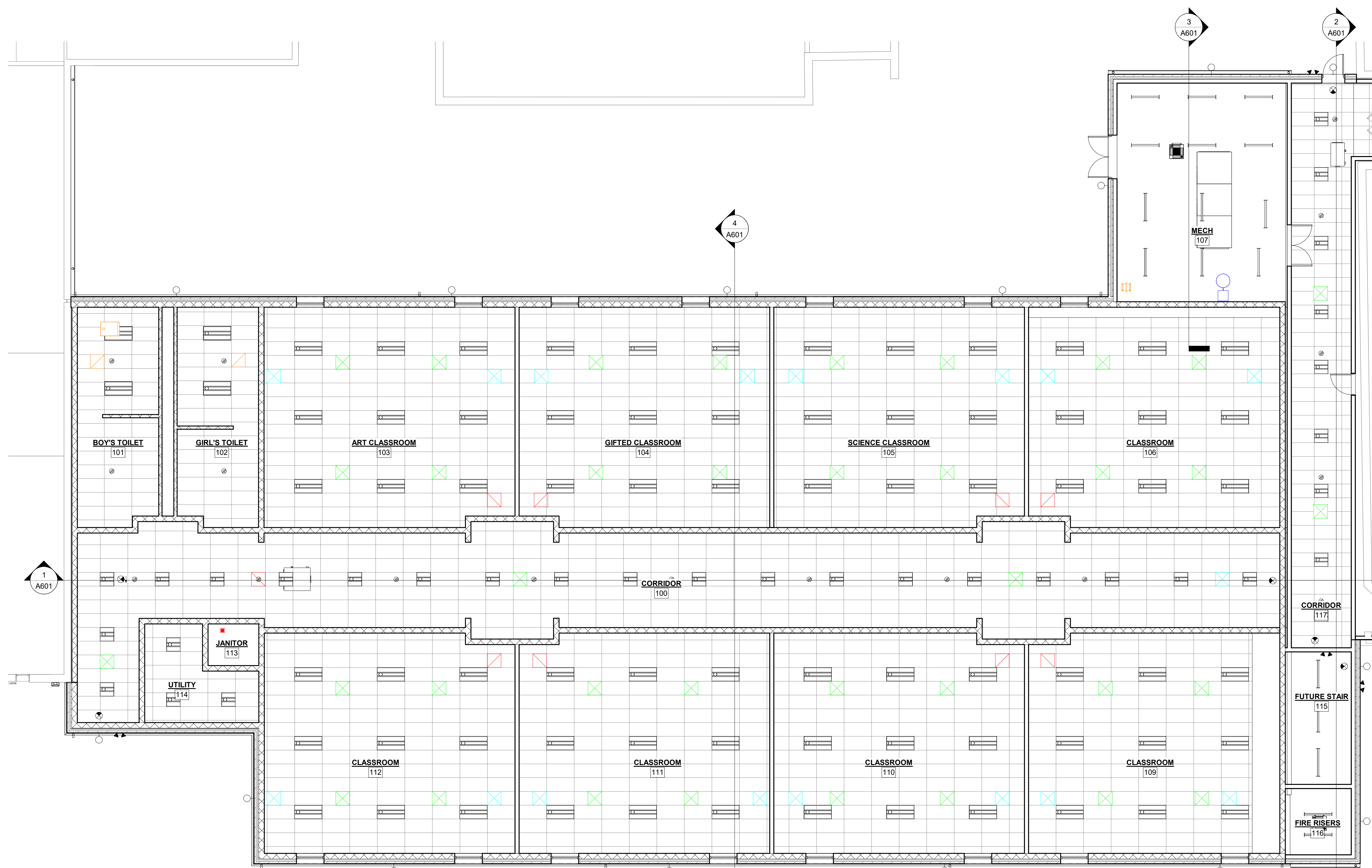
SHEET TITLE
ENLARGED PLANS, ELEVATIONS & DETAILS

PROJECT NO.
 21-5022

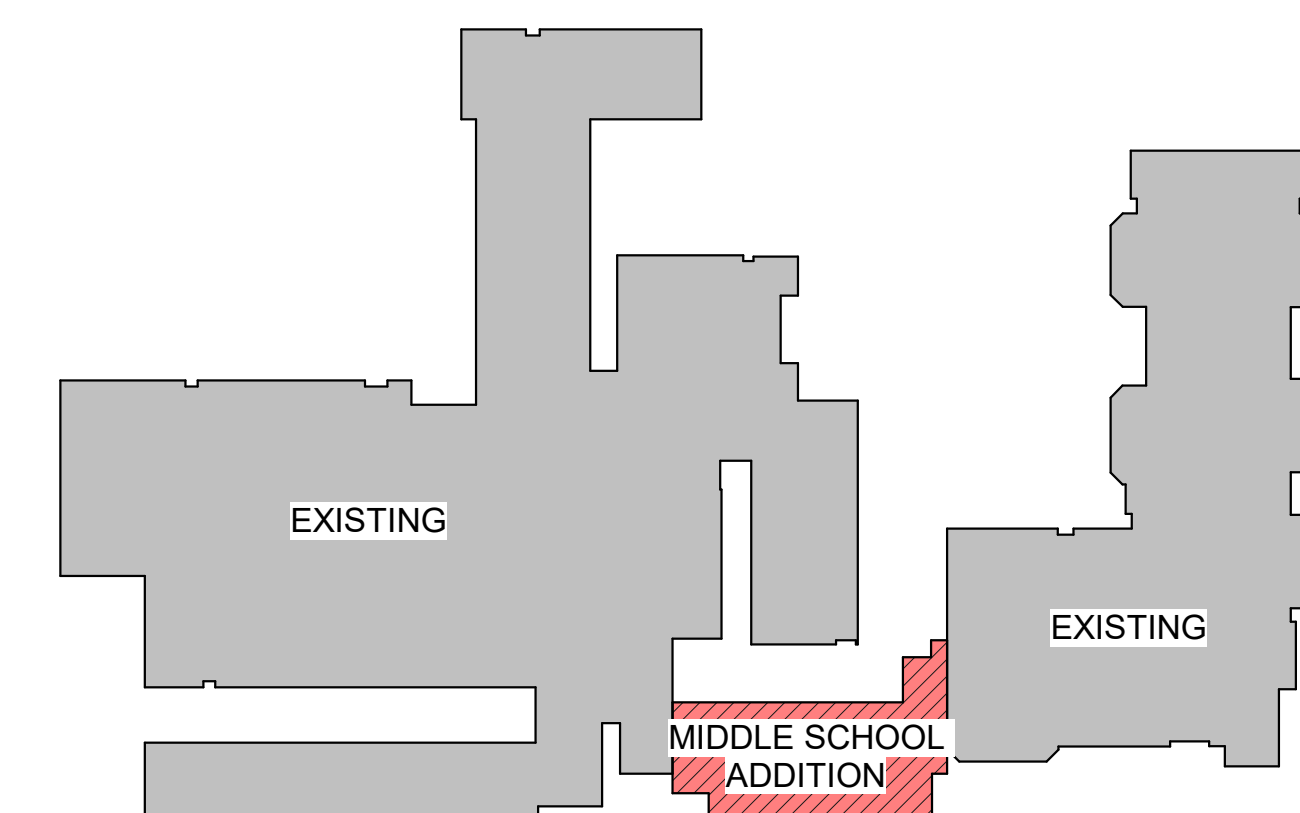
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 10/14/2022

SHEET
A202

10/14/2022 4:10:46 PM
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1 REFLECTED CEILING PLAN
 1/8" = 1'-0"



KEY PLAN- MIDDLE SCHOOL ADDITION

0 4' 8' 16'
 SCALE: 1/8" = 1'-0"

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DESIGN DEVELOPMENT

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HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO, 65255

Non-Reduced Sheet Size 30" x 42"
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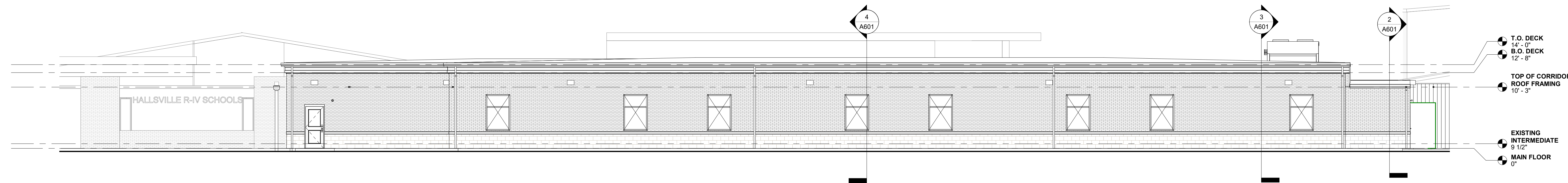
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FIELD	HMC	FIELD BOOK	HMC
CHECKED	HMC	CHECK DATE	

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 REFLECTED CEILING PLAN - FIRST FLOOR

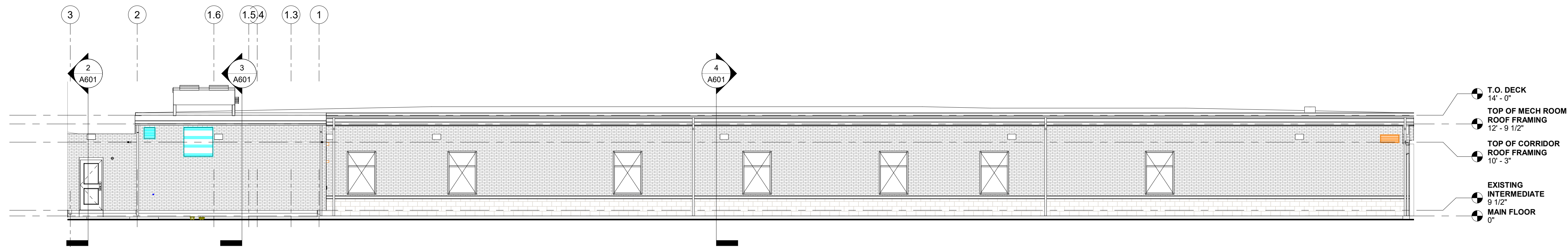
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 DRAWING ISSUED DATE:
 10/14/2022

SHEET
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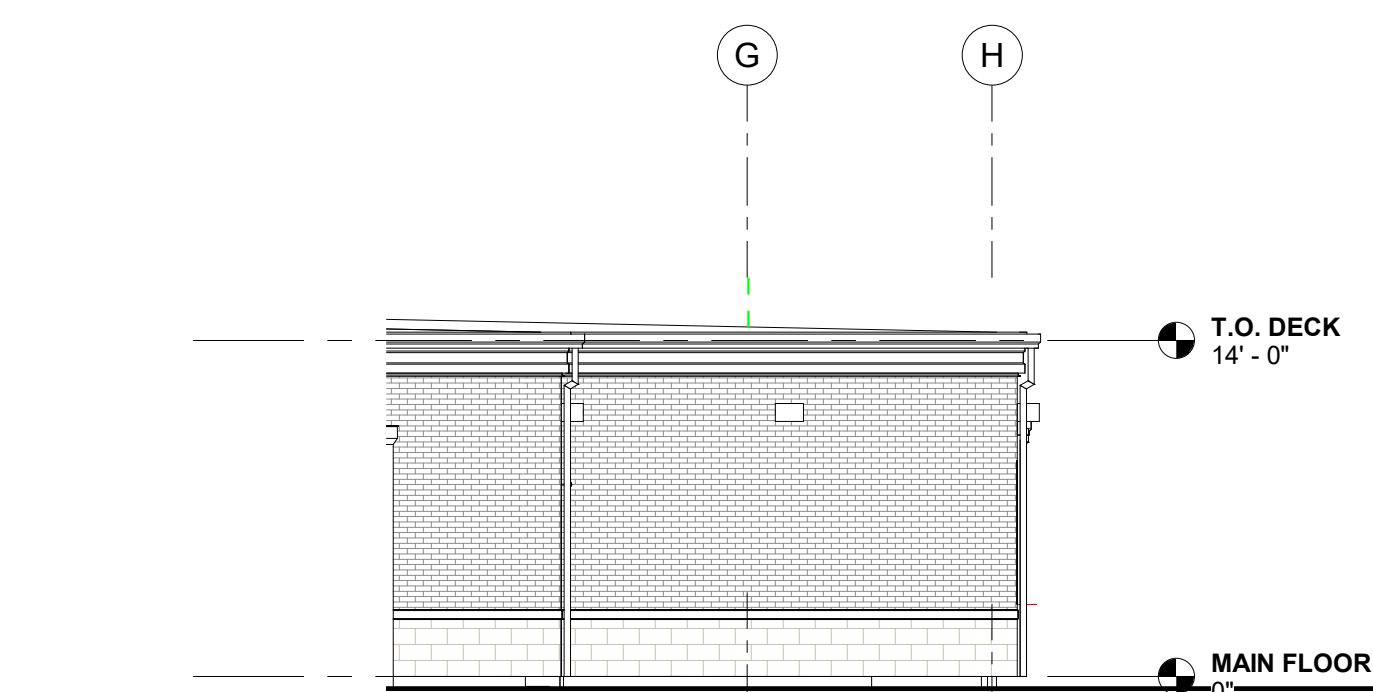
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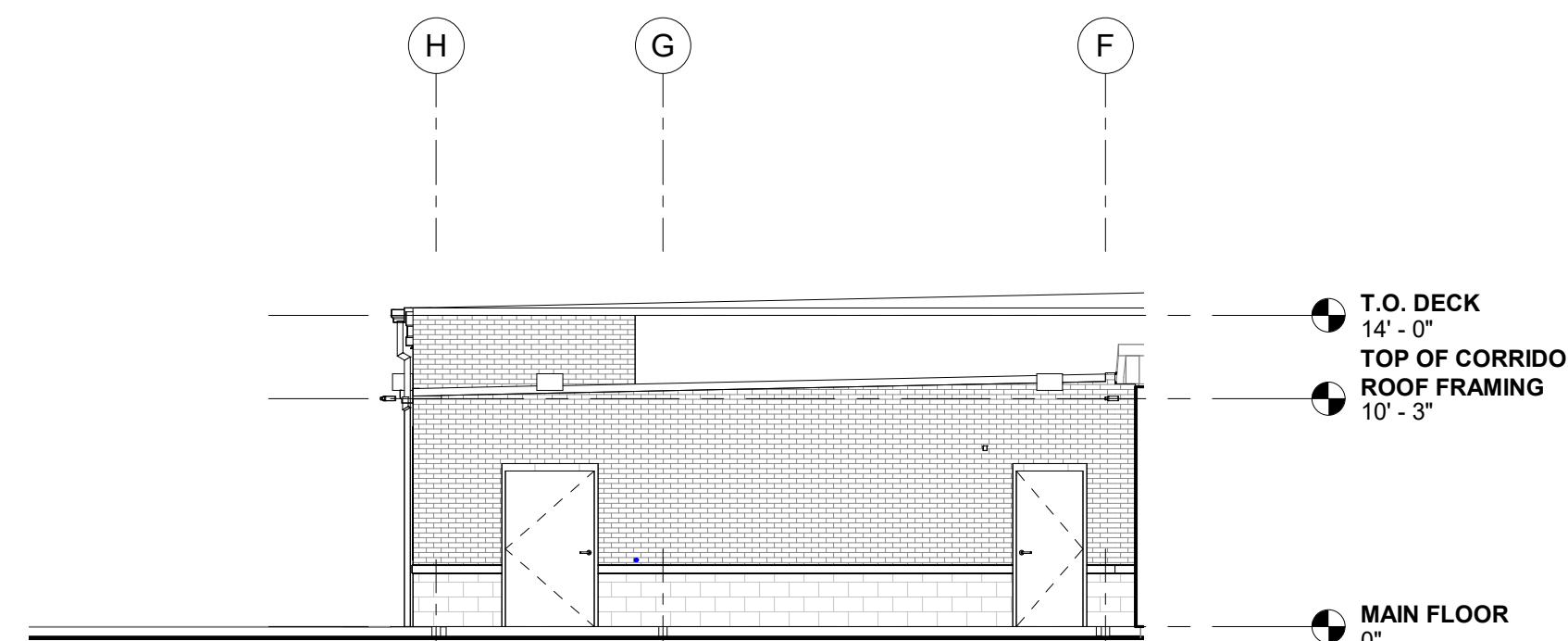
1 NORTH ELEVATION
 1/8" = 1'-0"



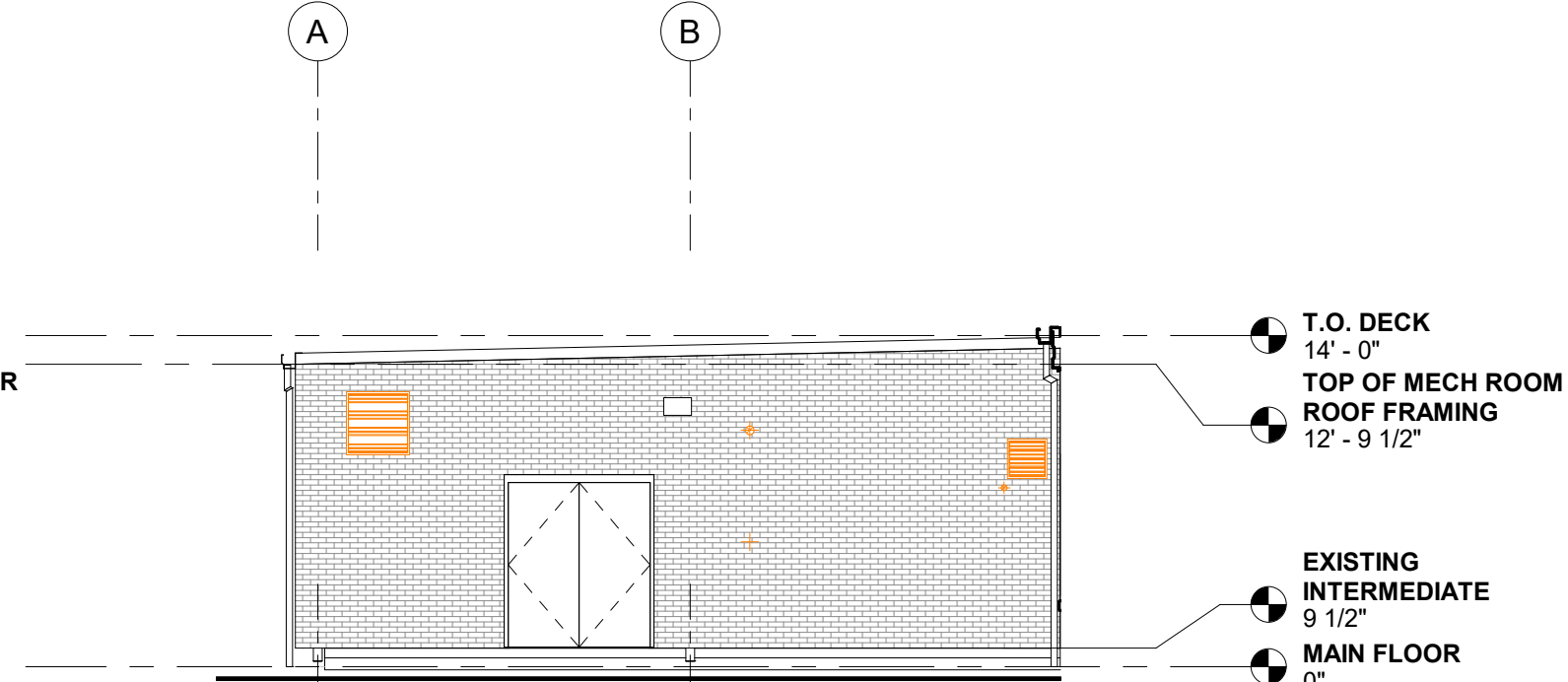
2 SOUTH ELEVATION
 1/8" = 1'-0"



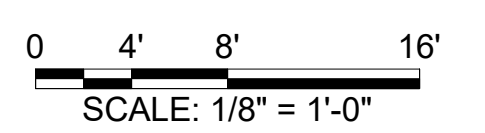
3 EAST ELEVATION
 1/8" = 1'-0"



4 WEST ELEVATION
 1/8" = 1'-0"



5 EAST ELEVATION 2
 1/8" = 1'-0"



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NO.	DESCRIPTION	DATE	APPR.

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DESIGN DEVELOPMENT

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HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO, 65255

Non-Reduced Sheet Size 30" x 42"
 Full sized plans have been prepared using standard scales.
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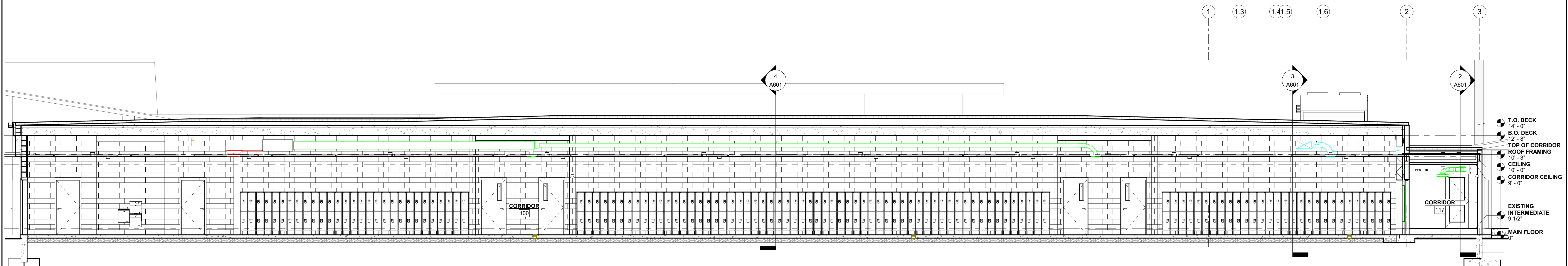
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FIELD	HMC	FIELD BOOK	
CHECKED	HMC	CHECK DATE	

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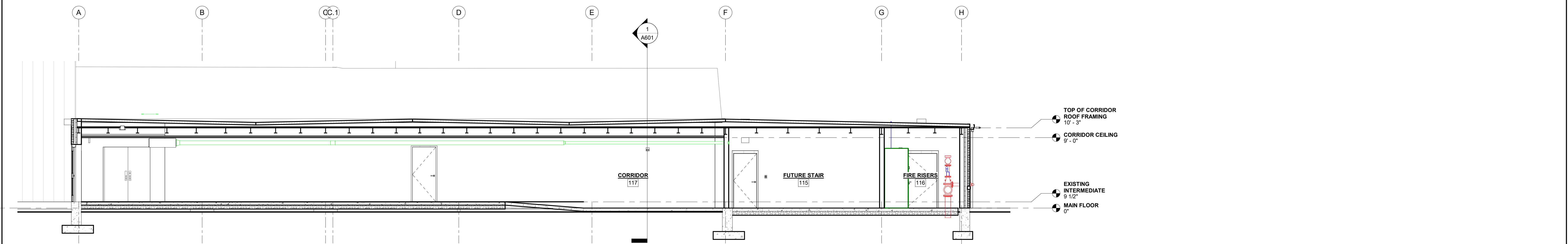
PROJECT NO.
 21-5032

DRAWING ISSUED DATE:
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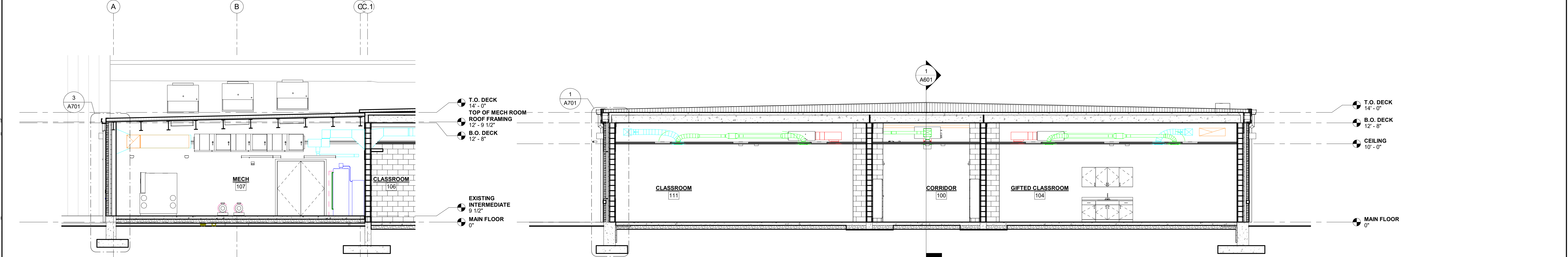
SHEET
A501



1 SECTION A
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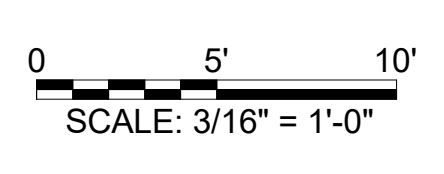


2 SECTION B
 3/16" = 1'-0"



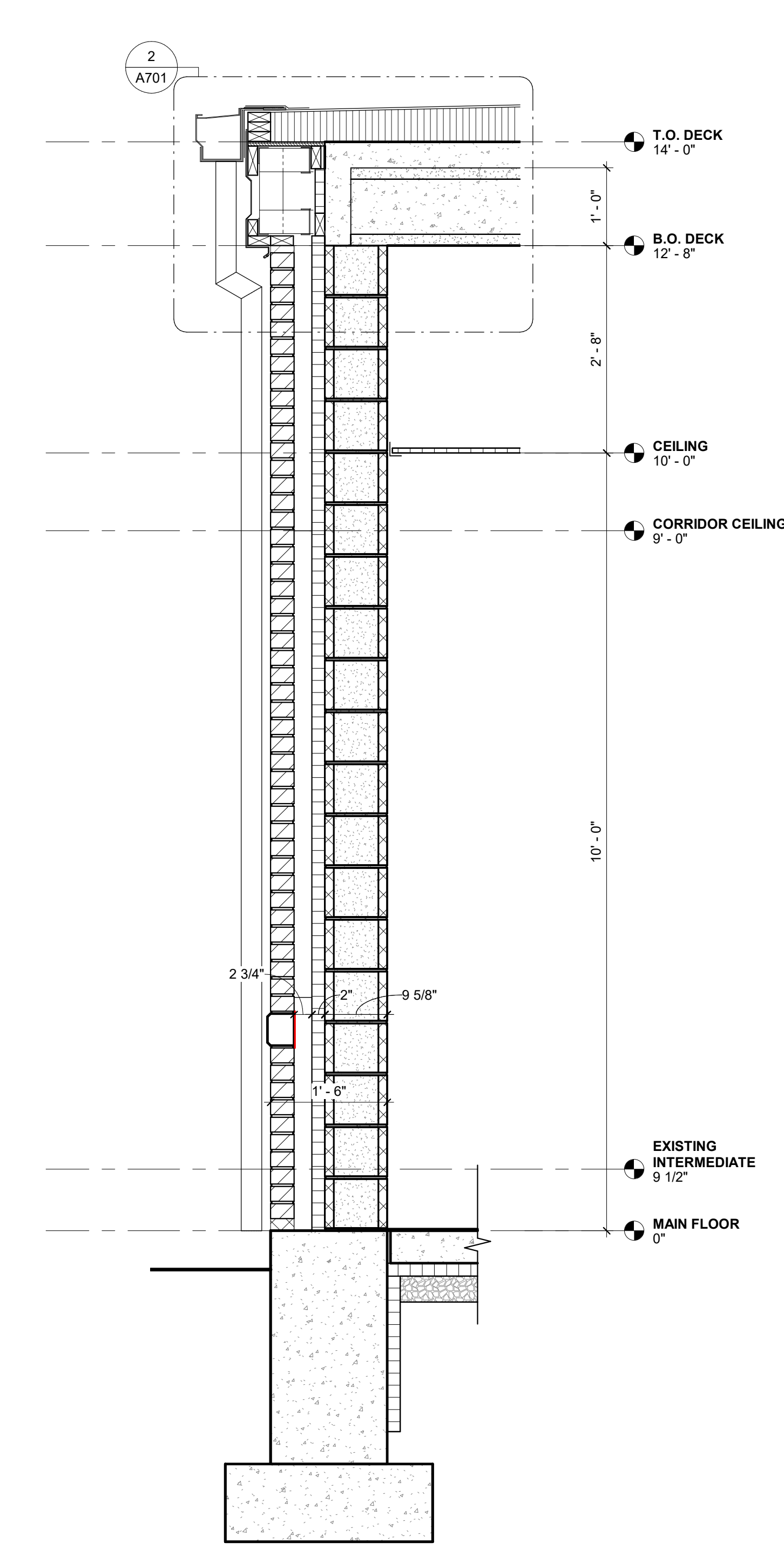
3 SECTION C
 3/16" = 1'-0"

4 SECTION D
 3/16" = 1'-0"

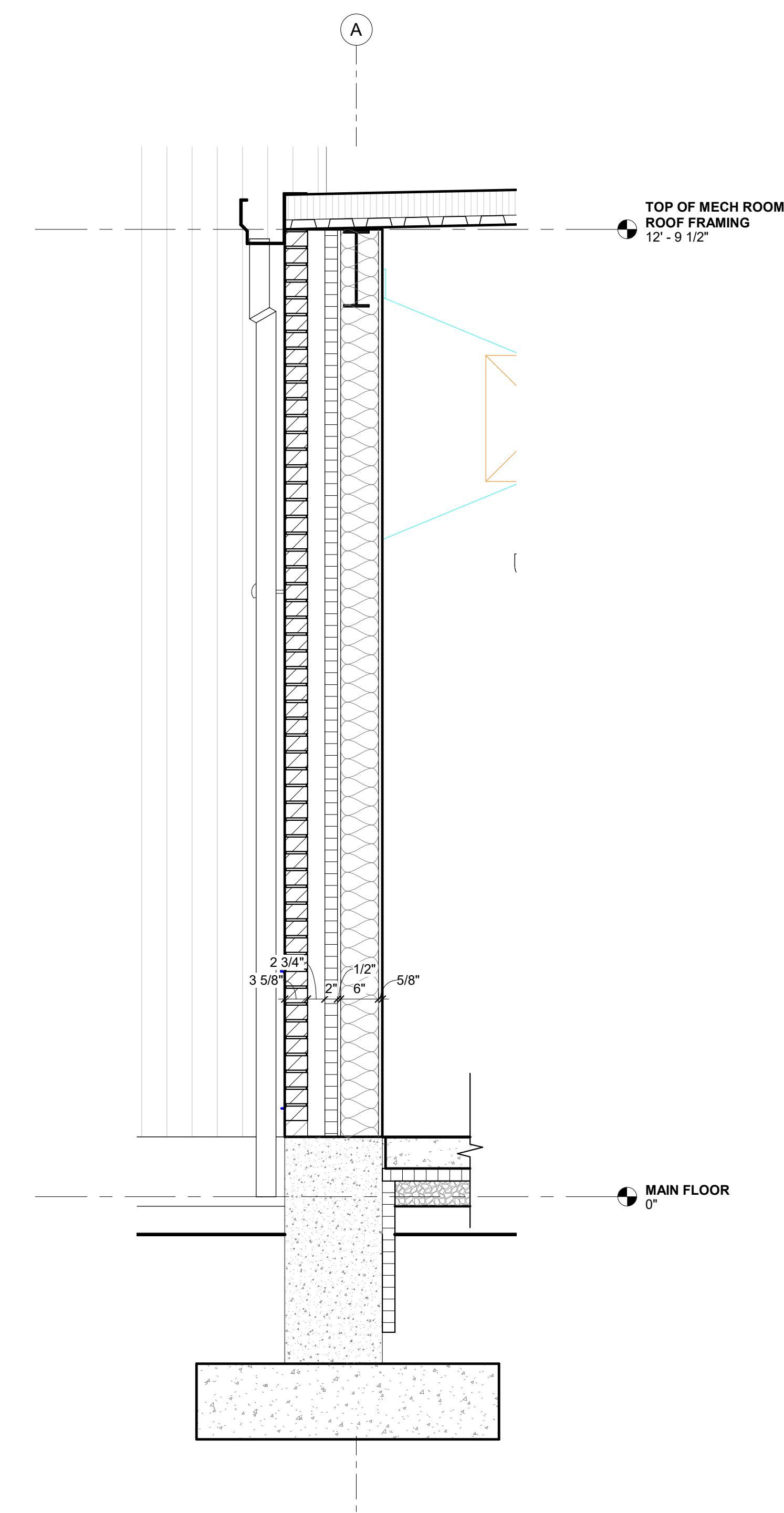


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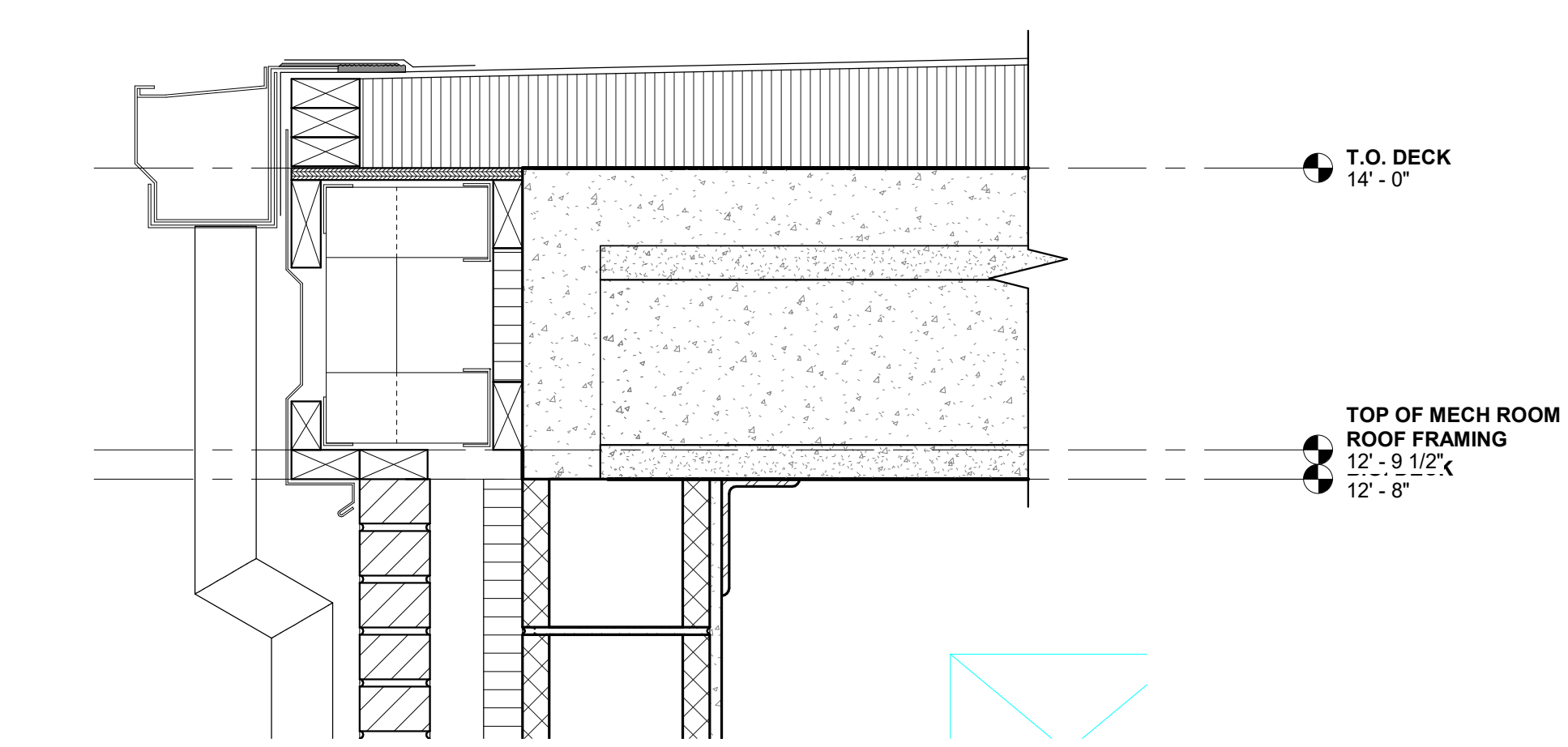
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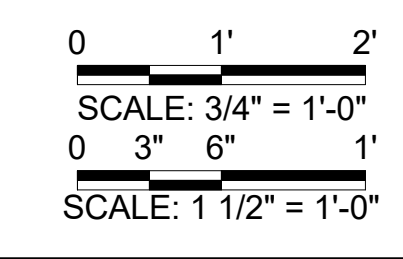
1 TYPICAL EXTERIOR STORM SHELTER WALL SECTION
3/4" = 1'-0"



3 TYPICAL EXTERIOR METAL STUD WALL SECTION
3/4" = 1'-0"



2 ENLARGED TYPICAL EXTERIOR WALL SECTION
1 1/2" = 1'-0"



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DESIGN DEVELOPMENT

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HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO, 65255

Non-Reduced Sheet Size 30" x 42"
Full sized plans have been prepared using standard scales.
Reduced sized plans may not conform to standard scales.

DESIGNED	HMC	DRAWN	JRT
FIELD	HMC	FIELD BOOK	JRT
CHECKED	JRT	CHECK DATE	

SHEET TITLE
WALL SECTIONS

PROJECT NO.
21-5032
DRAWING ISSUED DATE:
10/14/2022

SHEET
A701

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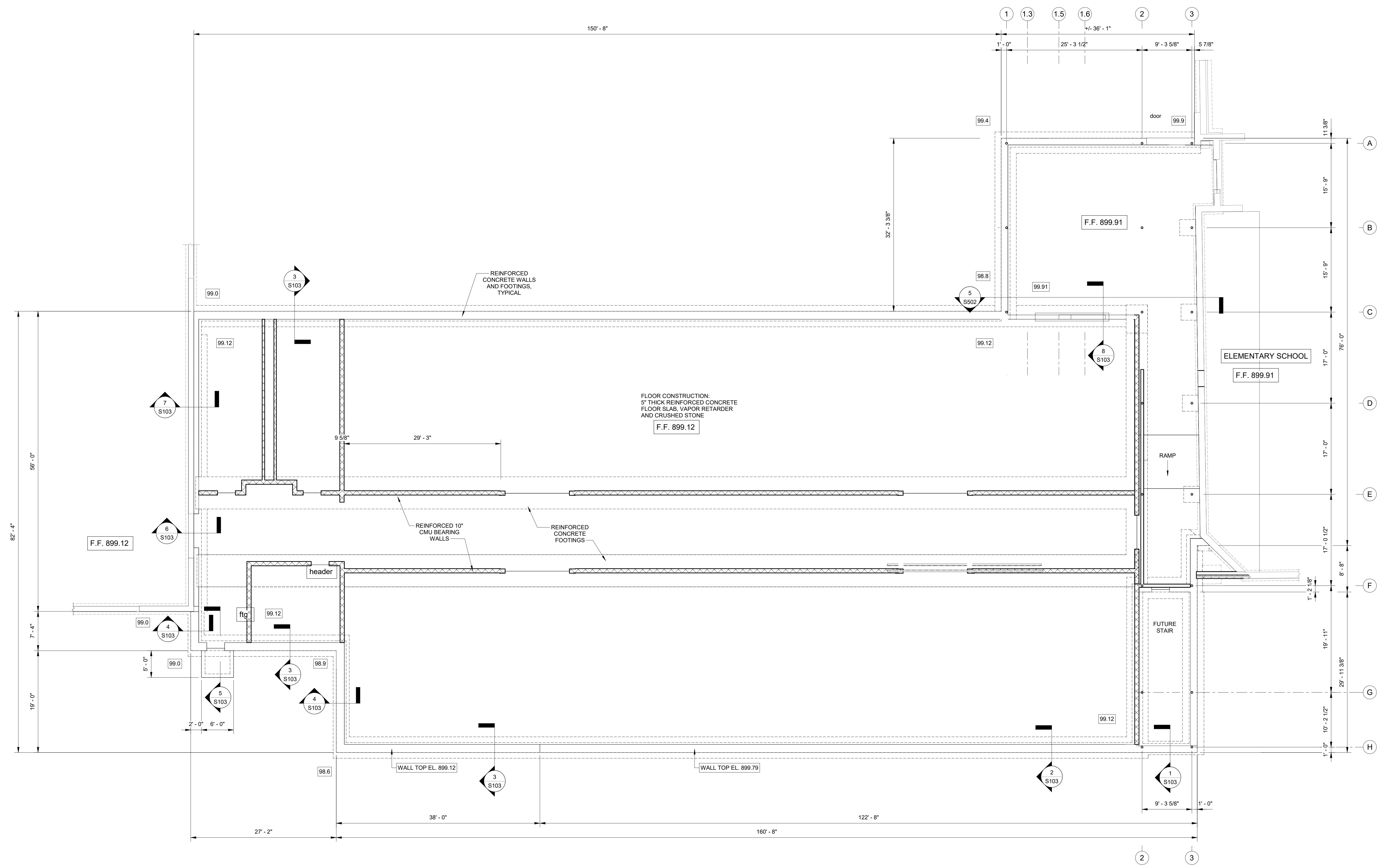
HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO. 65255

DESIGNED	NRM	EAW
FIELD	KTH	FIELD BOOK
CHECKED	KTH	CHECK DATE
SHEET TITLE		

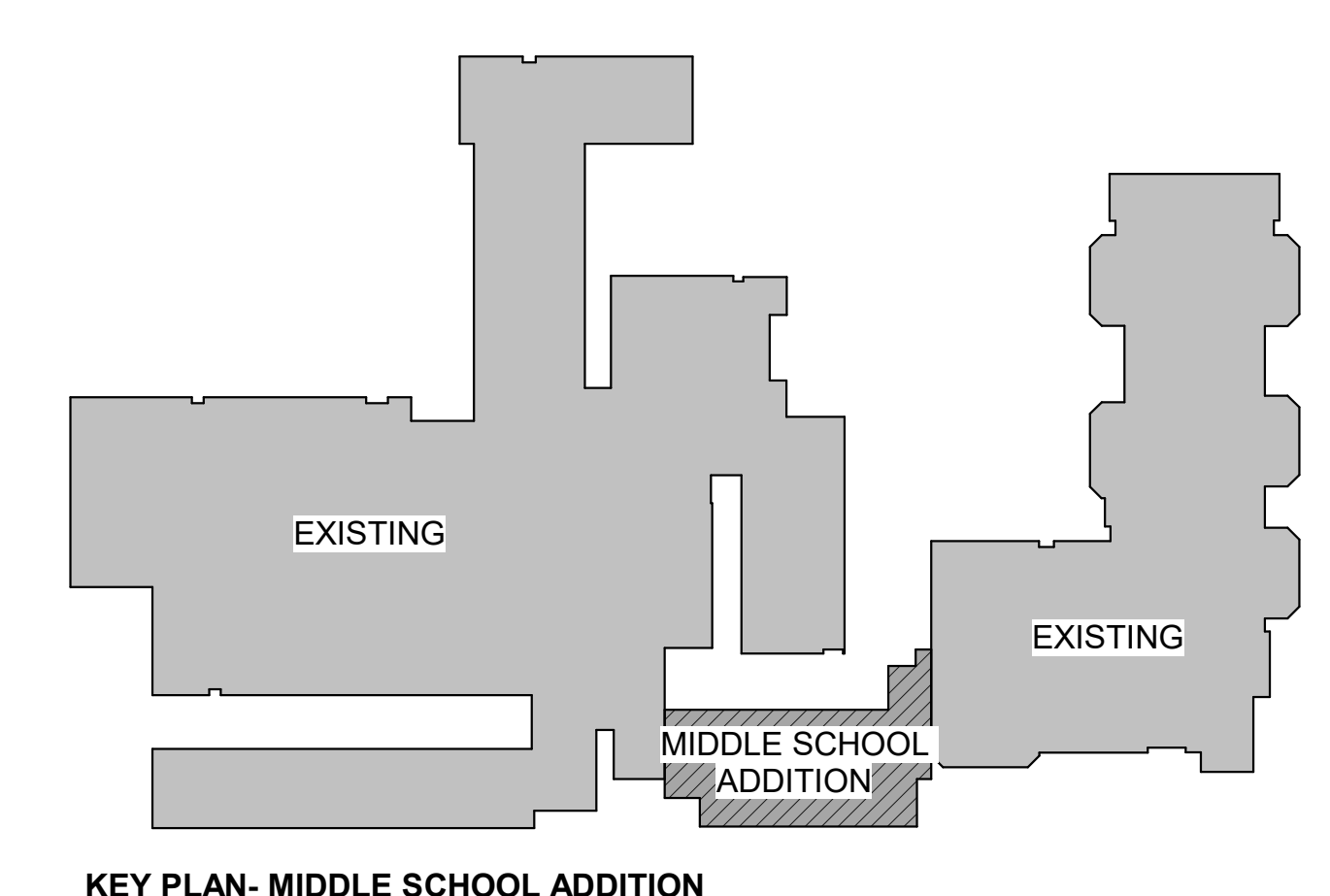
FOUNDATION PLAN

PROJECT NO. 21-0982
 DRAWING ISSUED DATE: 10/14/22

SHEET
S101

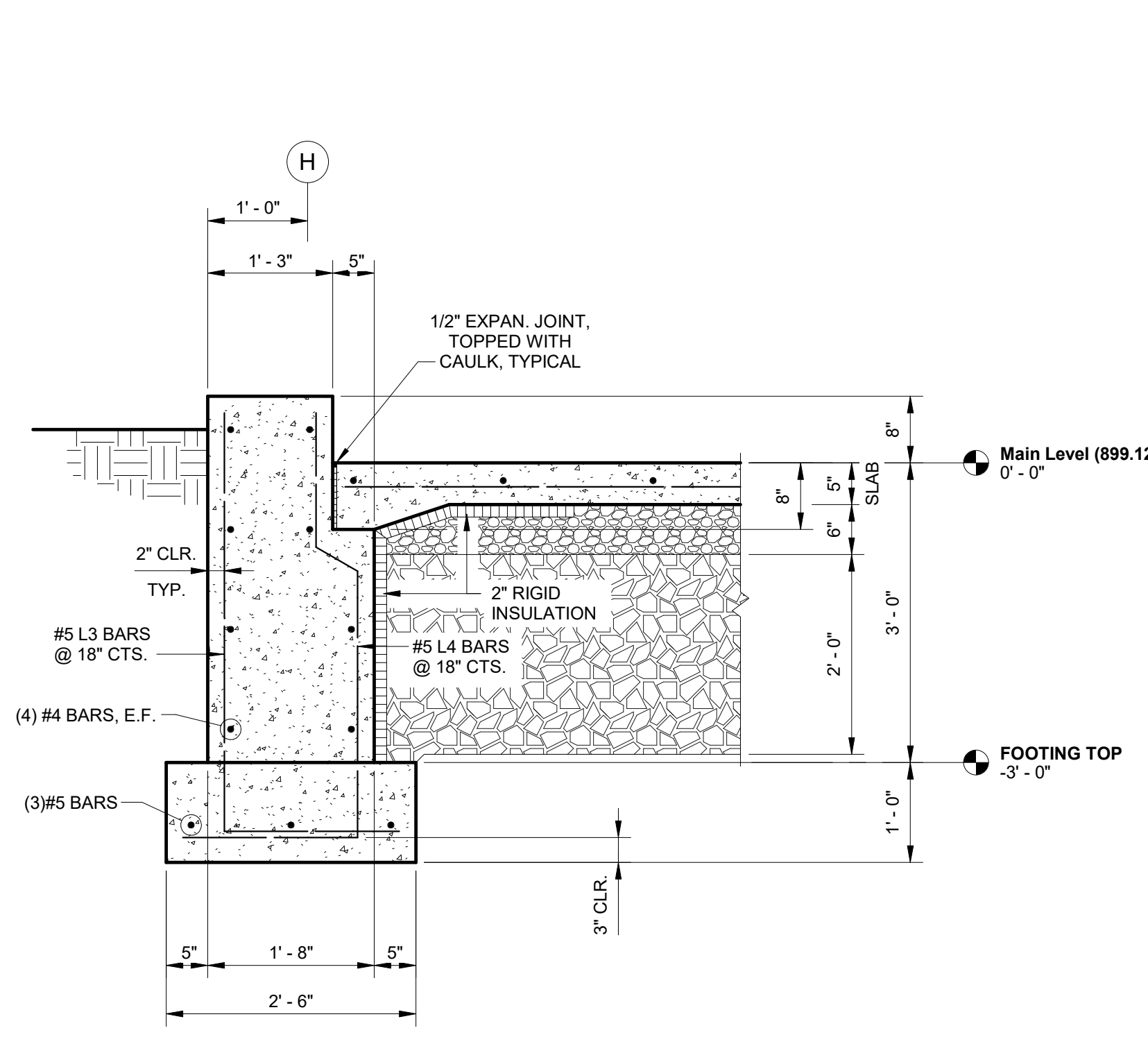


1 FOUNDATION PLAN
 1/8" = 1'-0"

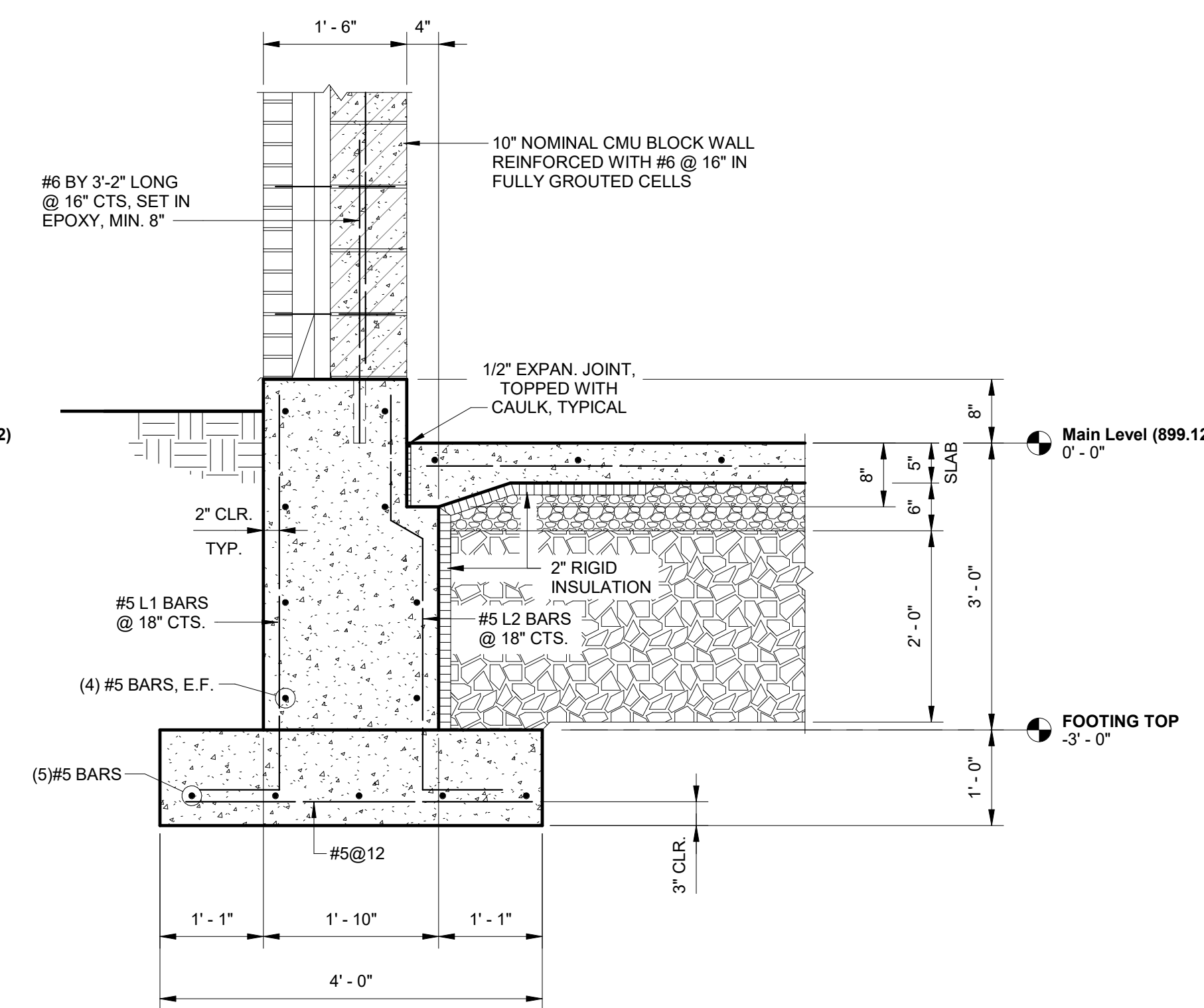


SCALE: 1/8" = 1'-0"

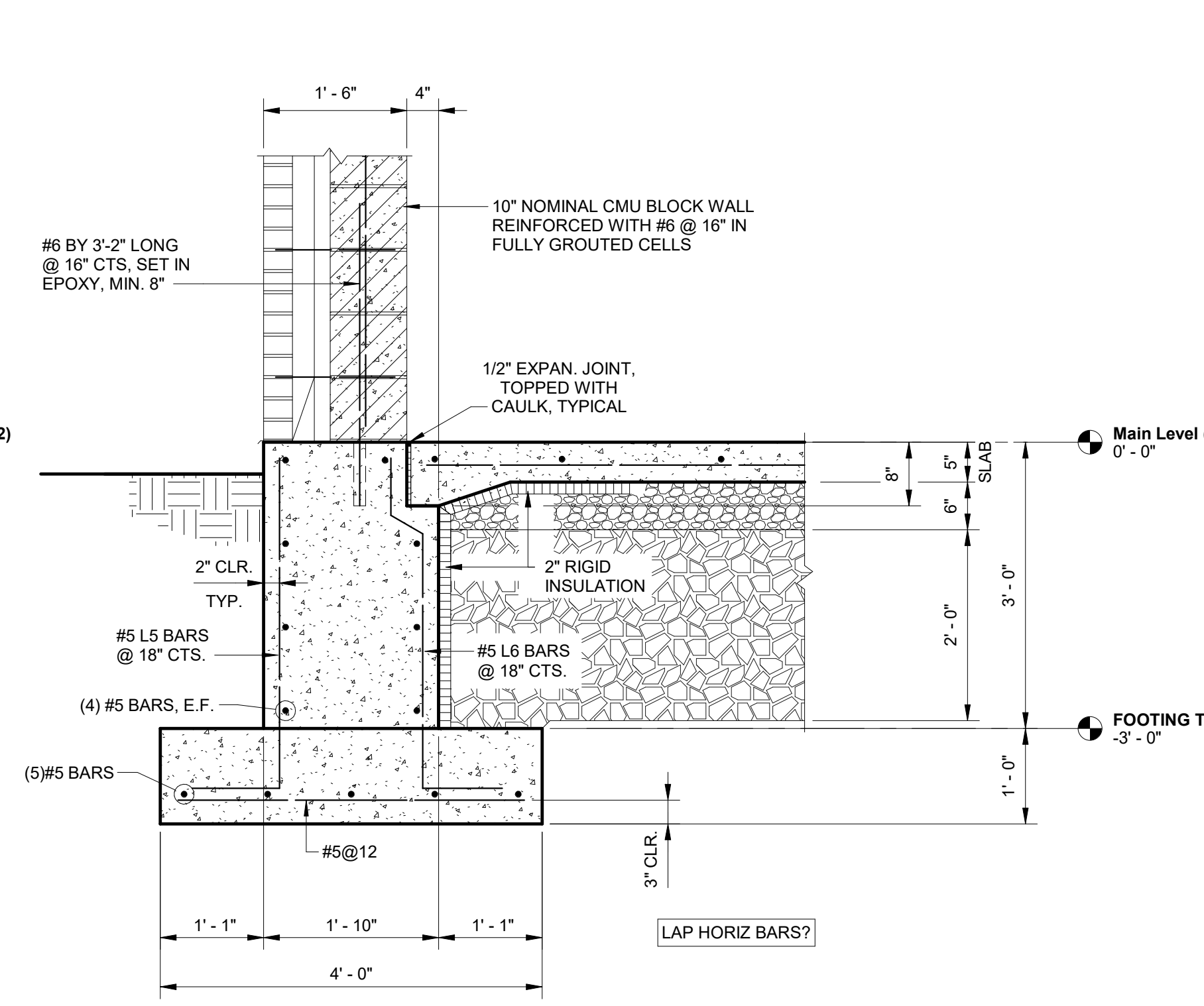
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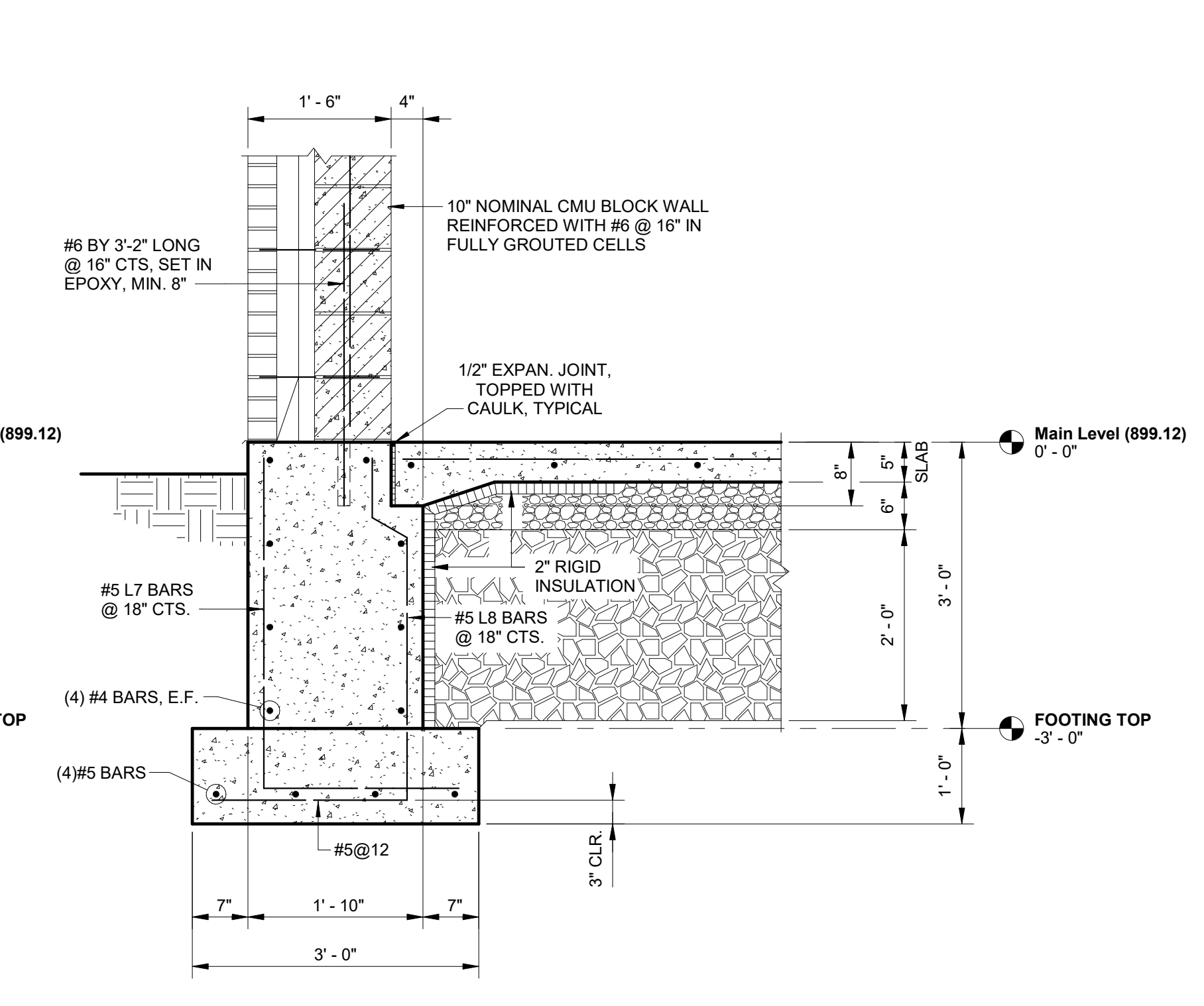
1 SECTION
 3/4" = 1'-0"



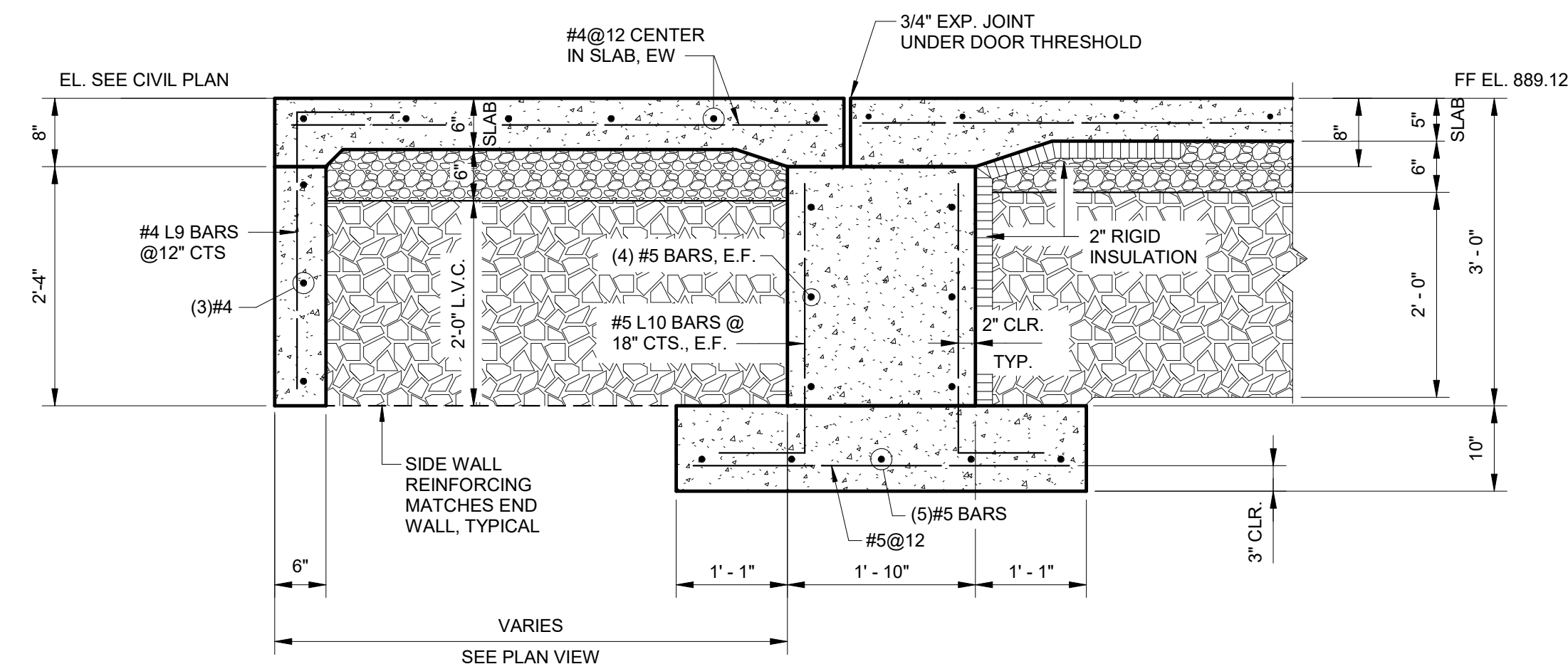
2 SECTION
 3/4" = 1'-0"



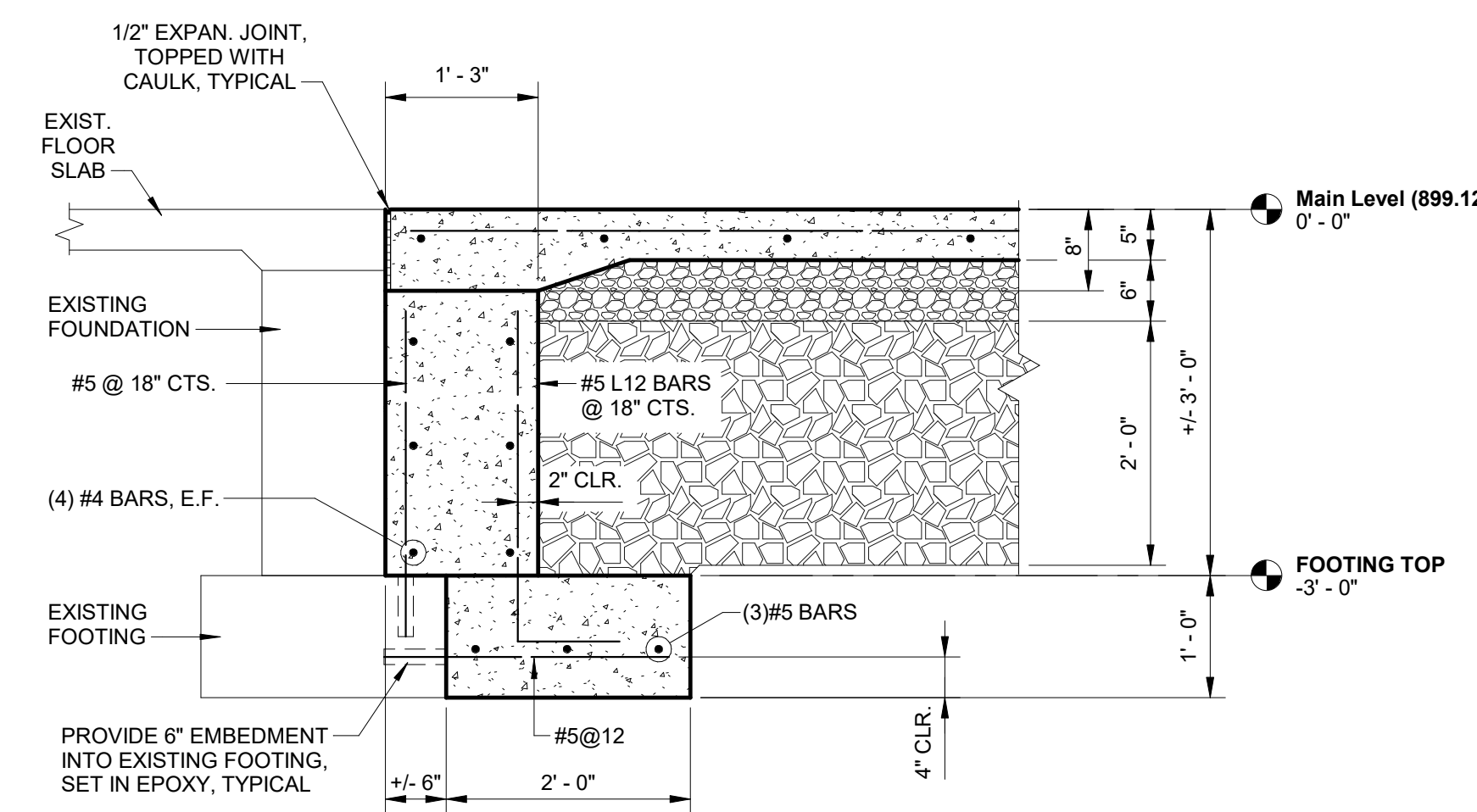
3 SECTION
 3/4" = 1'-0"



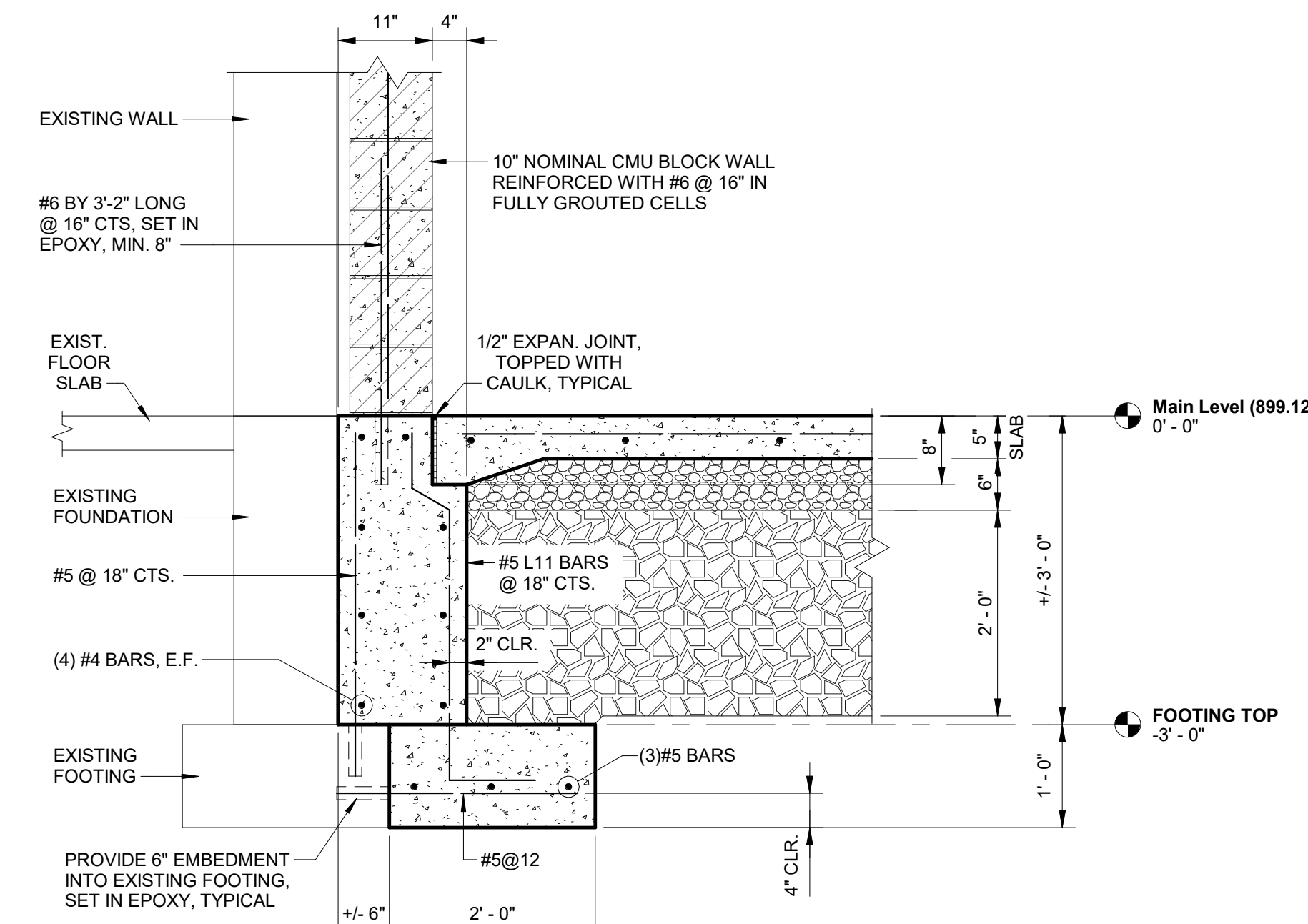
4 SECTION
 3/4" = 1'-0"



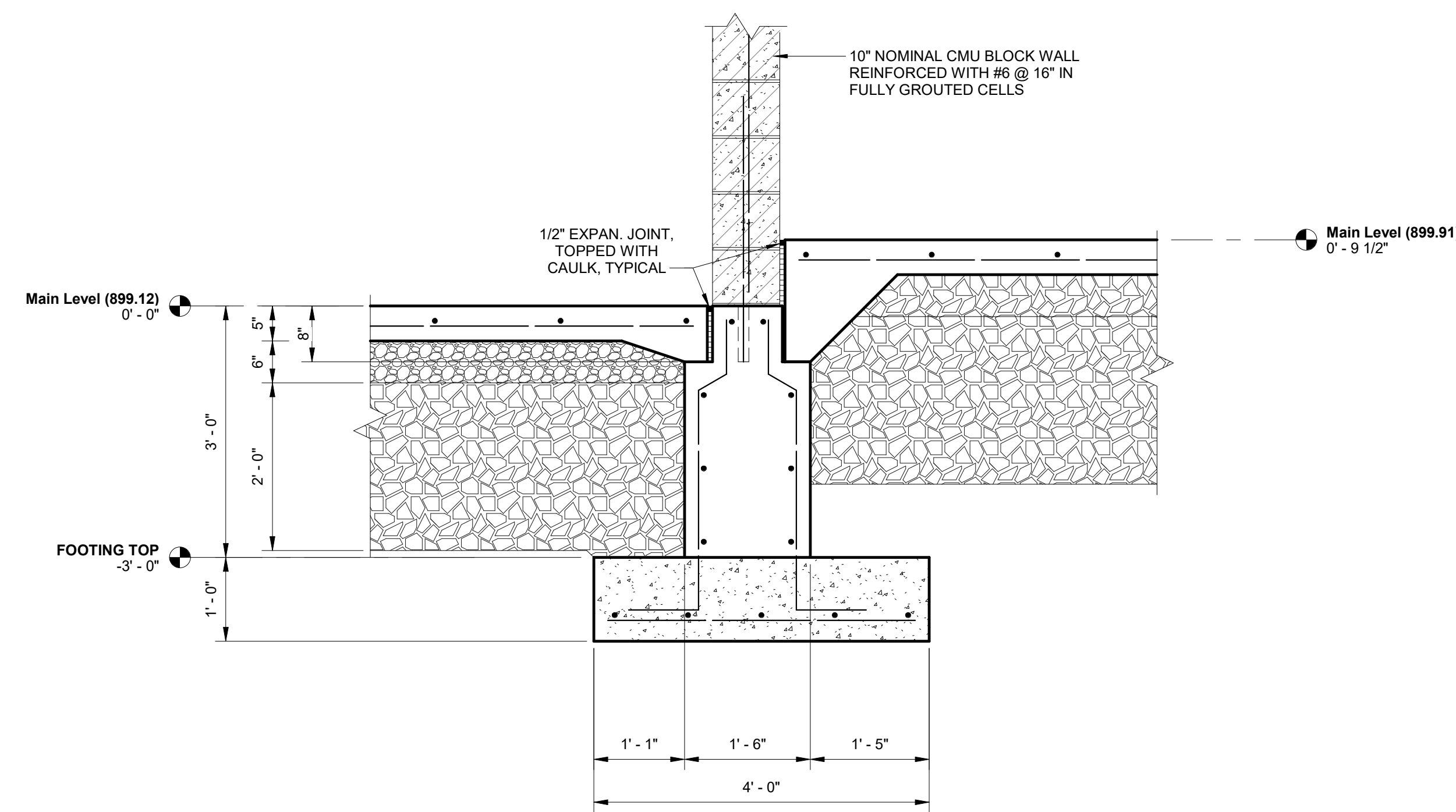
5 SECTION
 3/4" = 1'-0"



6 SECTION
 3/4" = 1'-0"



7 SECTION
 3/4" = 1'-0"



8 SECTION
 3/4" = 1'-0"

0 1' 2'
 SCALE: 3/4" = 1'-0"

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REVISION HISTORY		
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DESIGN DEVELOPMENT

PRELIMINARY
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HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO. 65255

Non-Reduced Sheet Size 30" x 42"
 Full sized plans have been prepared using standard scales.
 Reduced sized plans may not conform to standard scales.

DESIGNED	NRM	EAW
DRAWN	NRM	FIELD BOOK
CHECKED	NRM/KTH	CHECK DATE

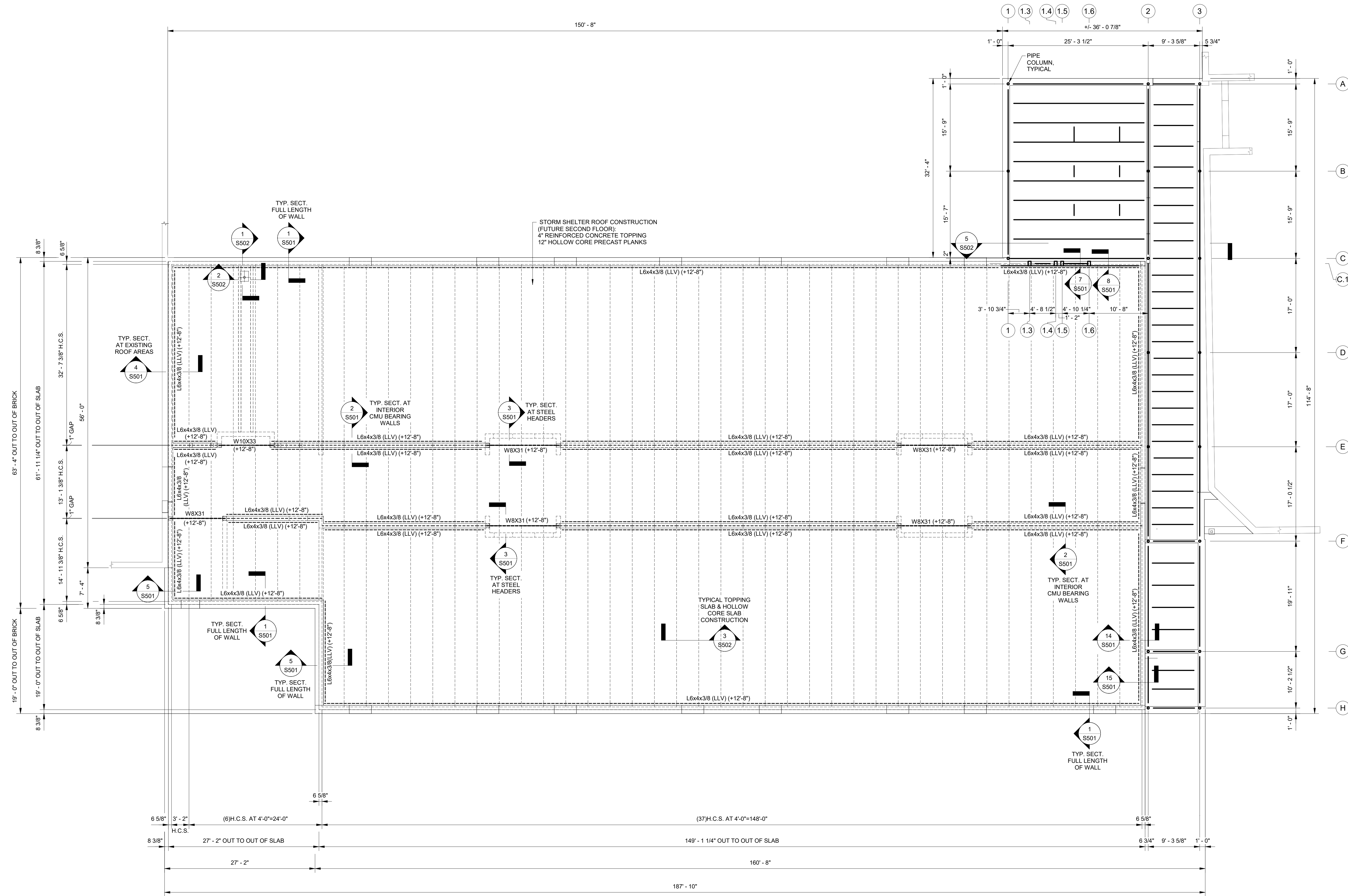
SHEET TITLE
FOUNDATION DETAILS

PROJECT NO.
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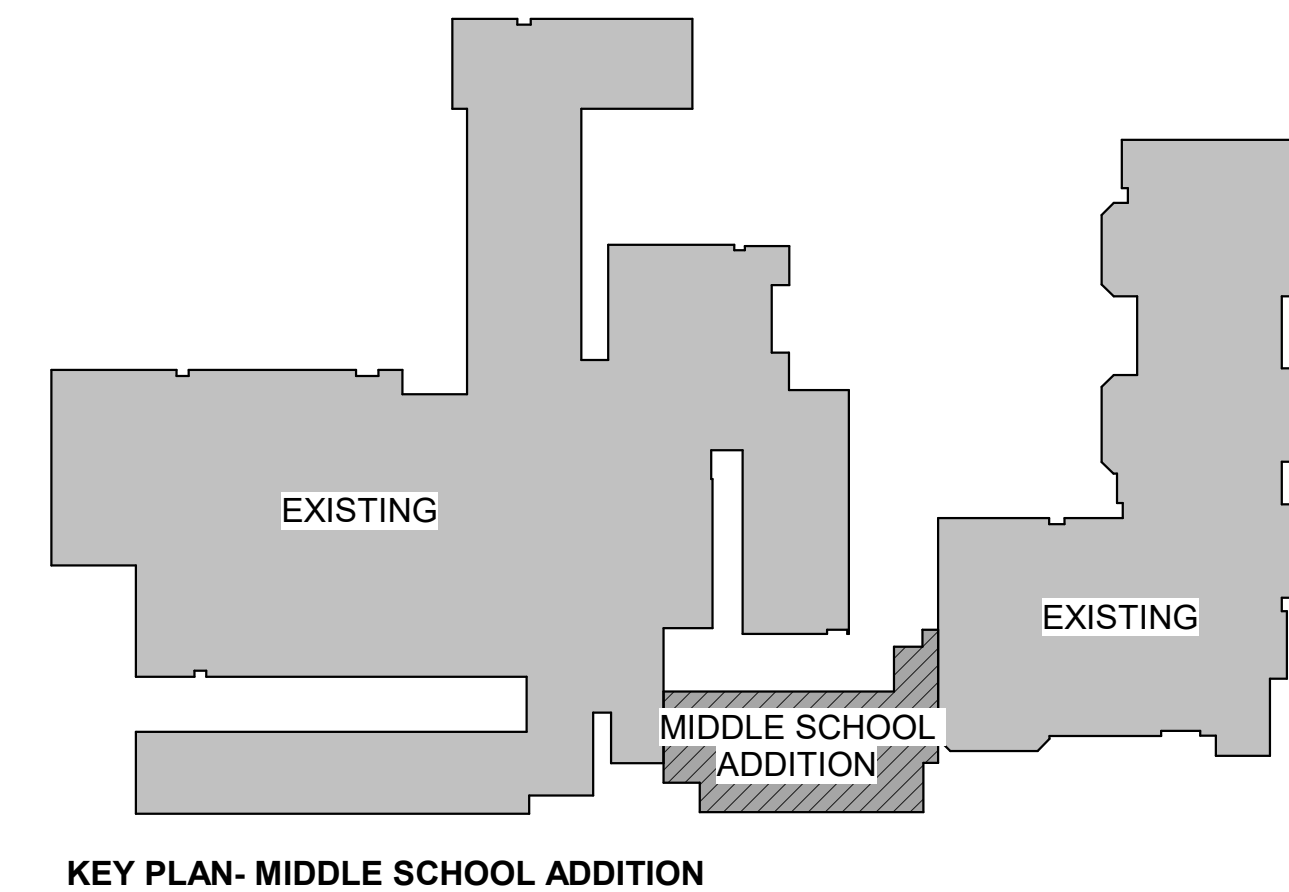
DRAWING ISSUED DATE:
 10/14/22

SHEET
S103

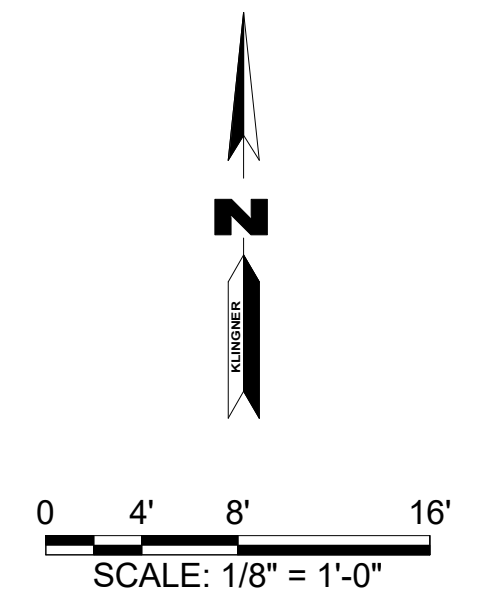
10/14/2022 12:09:58 PM C:\Users\new KLINGNER\Documents\SSD_21-5052 HALLSVILLE MIDDLE SCHOOL ADDITIONS.dwg



1 ROOF FRAMING PLAN
1/8" = 1'-0"



KEY PLAN- MIDDLE SCHOOL ADDITION



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REVISION HISTORY			
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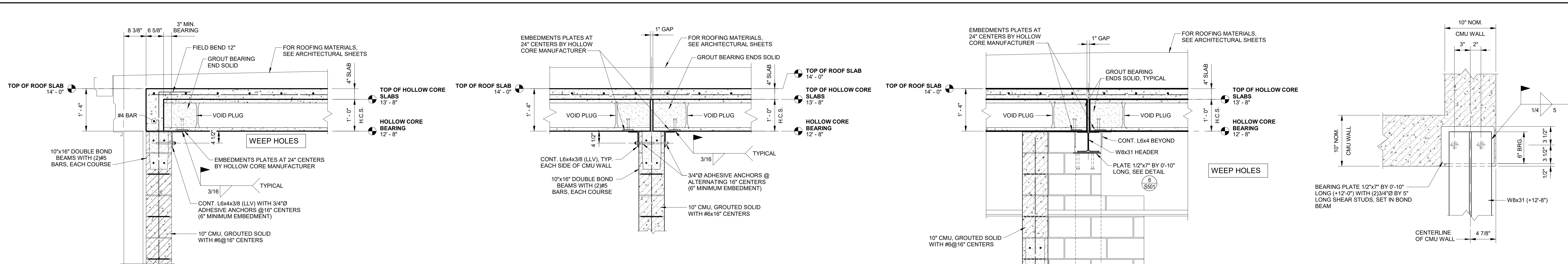
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 DESIGN DEVELOPMENT

PRELIMINARY
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HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO. 65255

Non-Reduced Sheet Size 30" x 42"
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DESIGNED	NRM	DRAWN	EAW
FIELD	NRM/KTH	CHECK DATE	
SHEET TITLE			
ROOF FRAMING PLAN			
PROJECT NO. 21-5052			
DRAWING ISSUED DATE: 10/14/22			
SHEET			
S201			

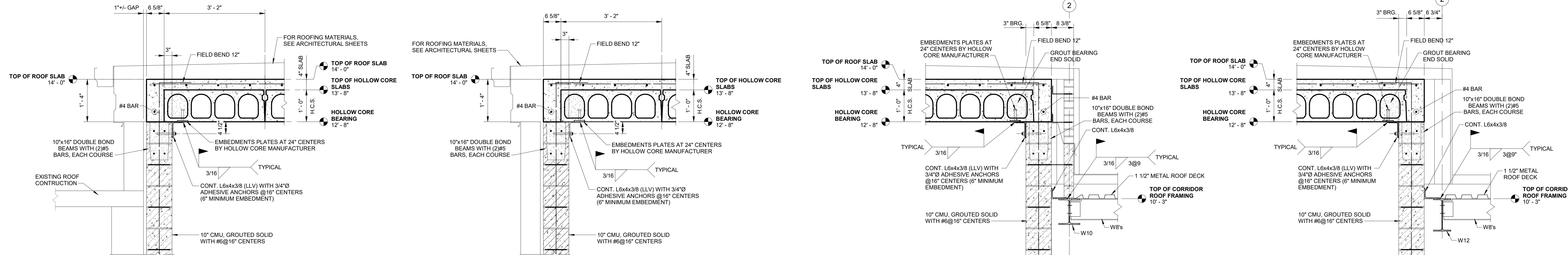


1 SECTION
3/4" = 1'-0"

2 SECTION
3/4" = 1'-0"

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

6 BEARING PLATE DETAIL
1 1/2" = 1'-0"

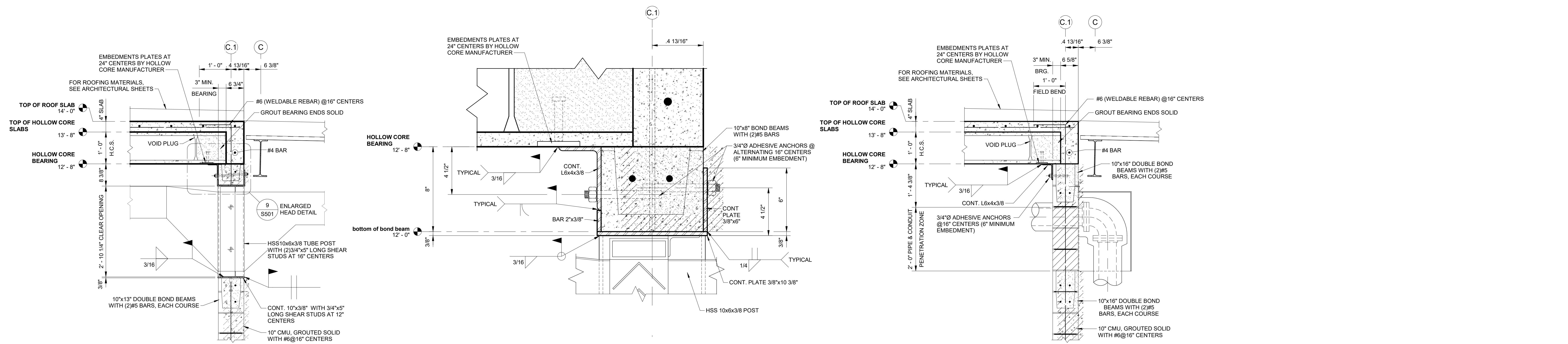


4 SECTION
3/4" = 1'-0"

5 SECTION
3/4" = 1'-0"

15 SECTION
3/4" = 1'-0"

14 SECTION
3/4" = 1'-0"



7 SECTION
3/4" = 1'-0"

9 ENLARGED LOUVER HEAD DETAIL
3" = 1'-0"

8 SECTION
3/4" = 1'-0"

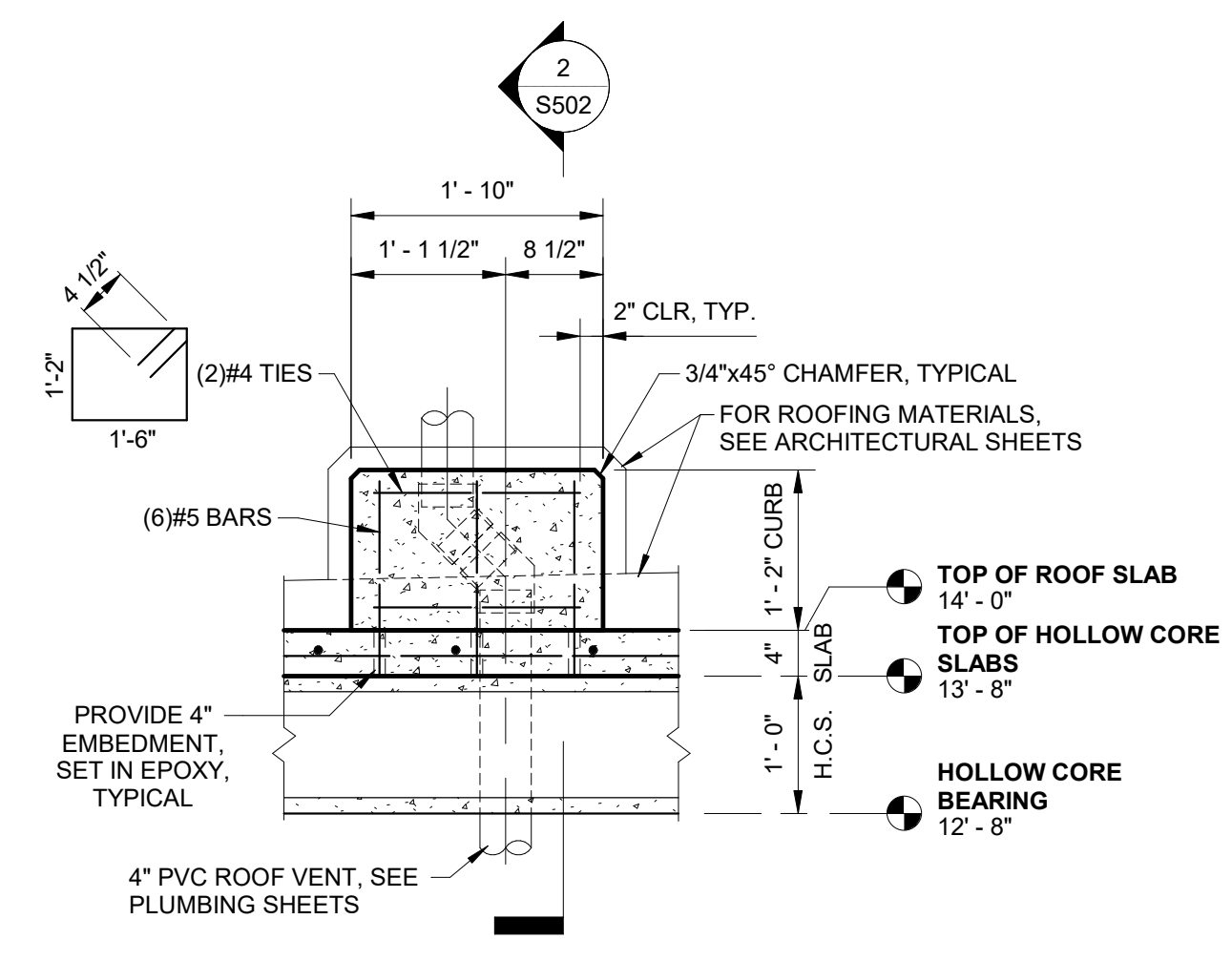
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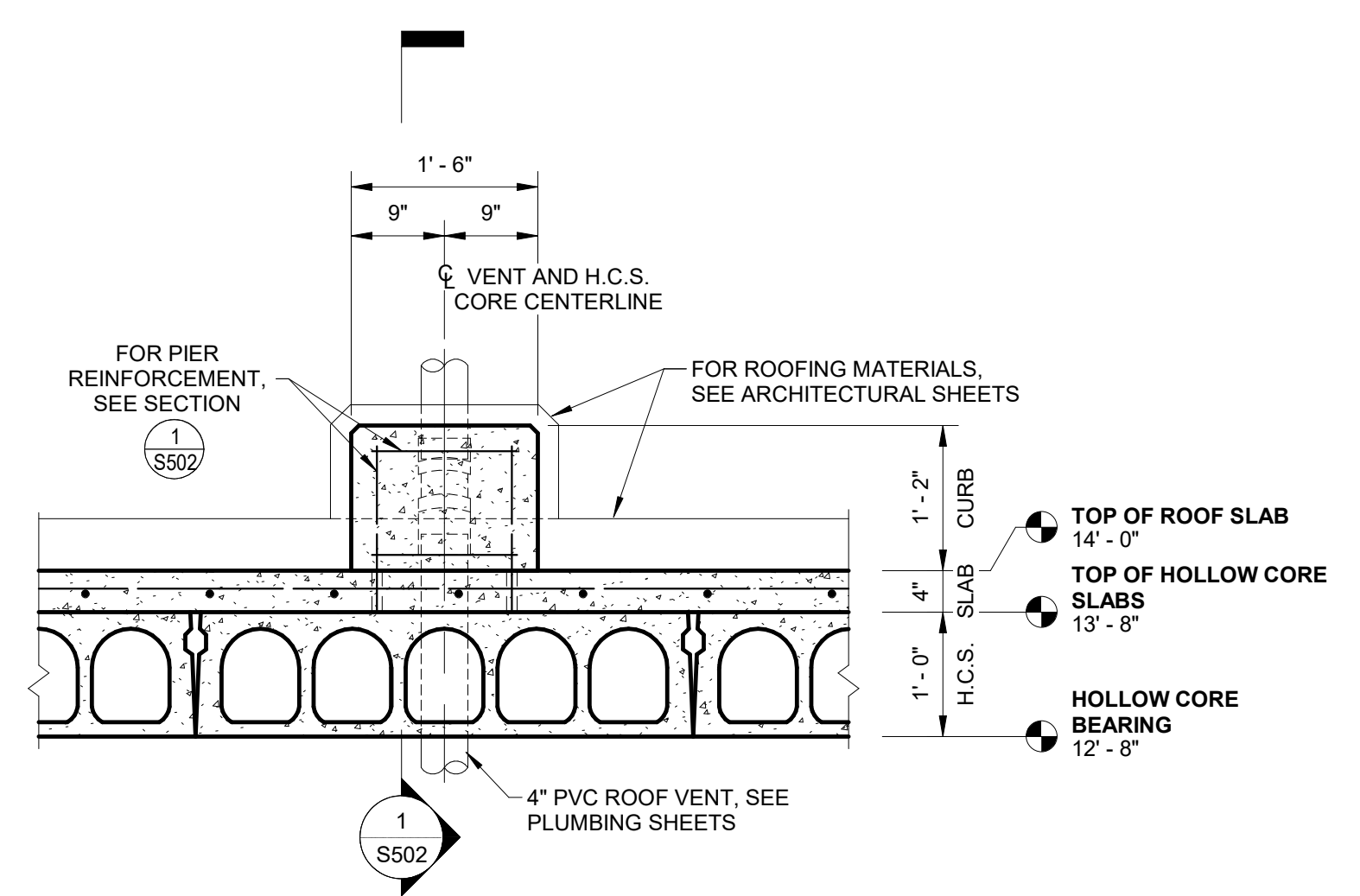
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HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE MO. 65255

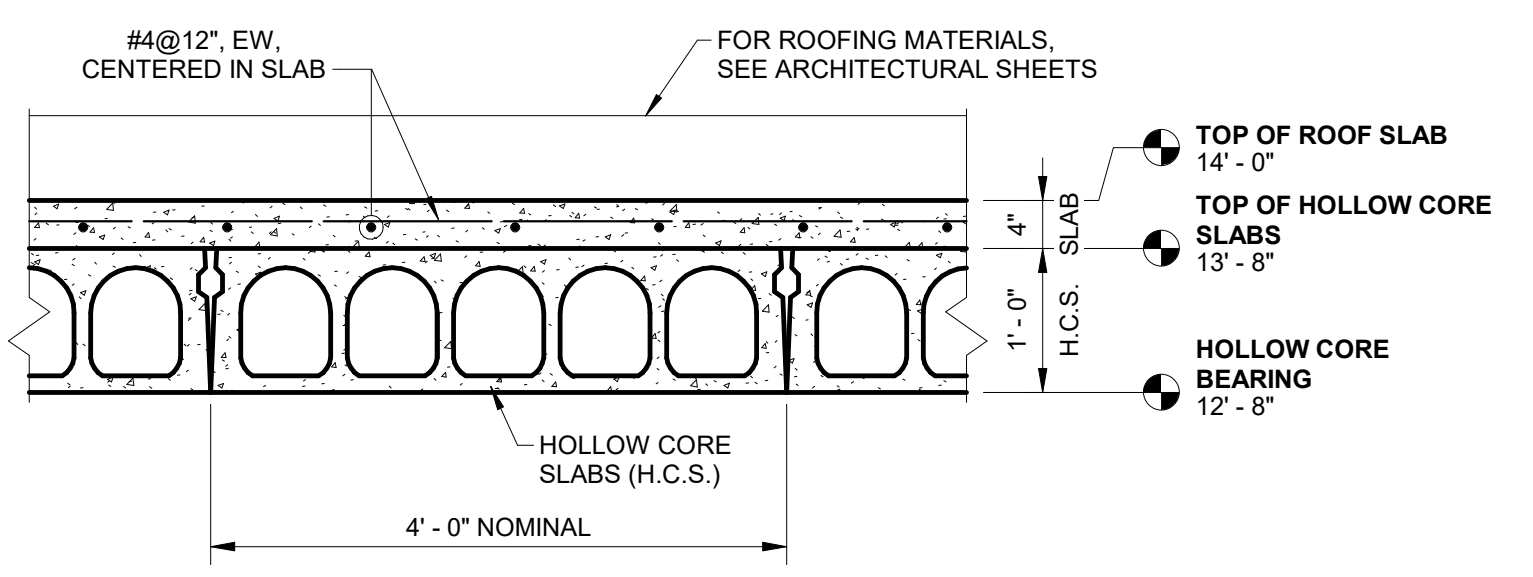
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CHECKED	NRM	CHECK DATE	
SHEET TITLE			
STRUCTURAL DETAILS			
PROJECT NO. 21-0922			
DRAWING ISSUED DATE: 10/14/22			
SHEET			
S501			



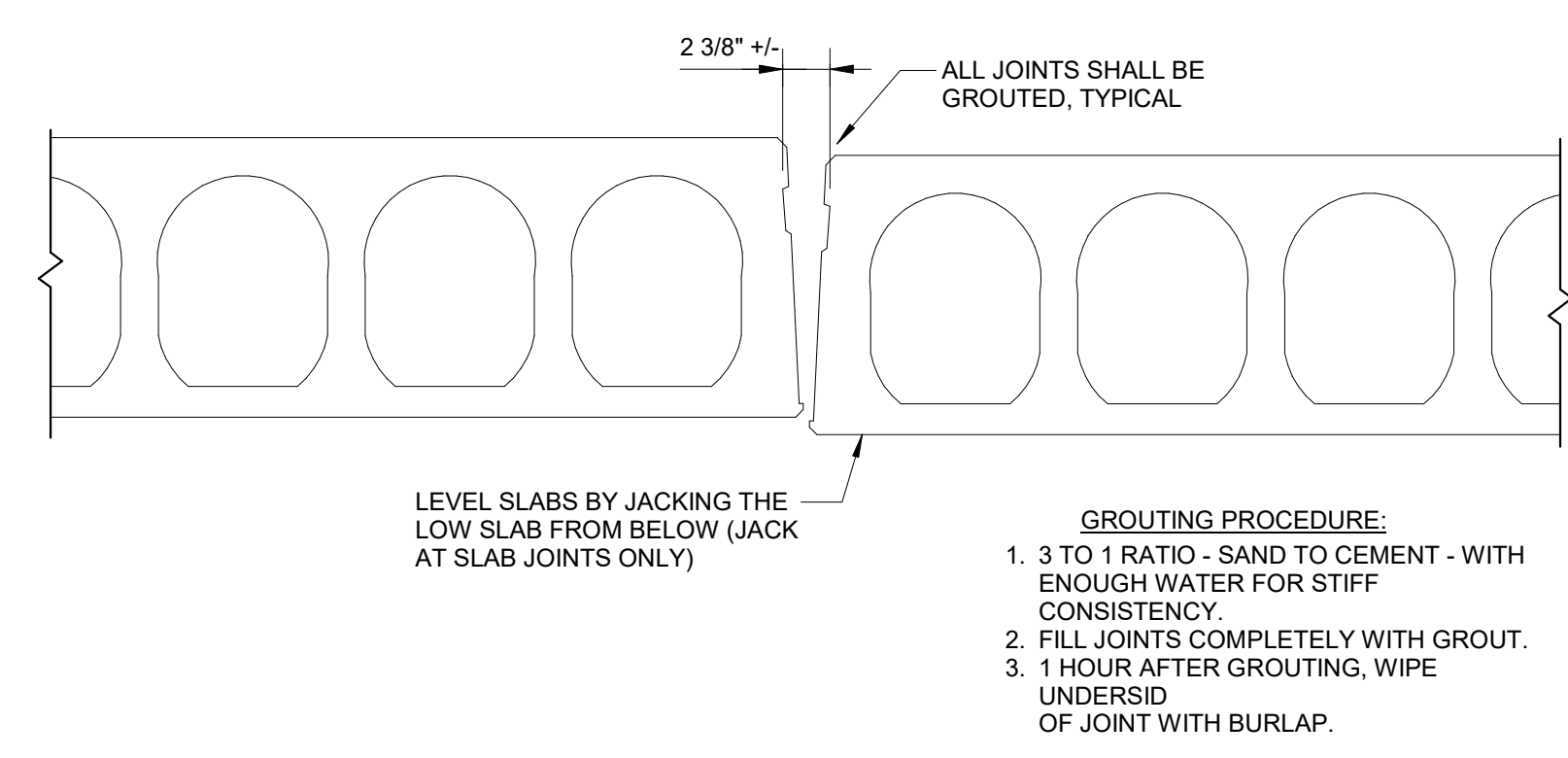
1 SECTION THROUGH VENT CURB - LOOKING NORTH
 3/4" = 1'-0"



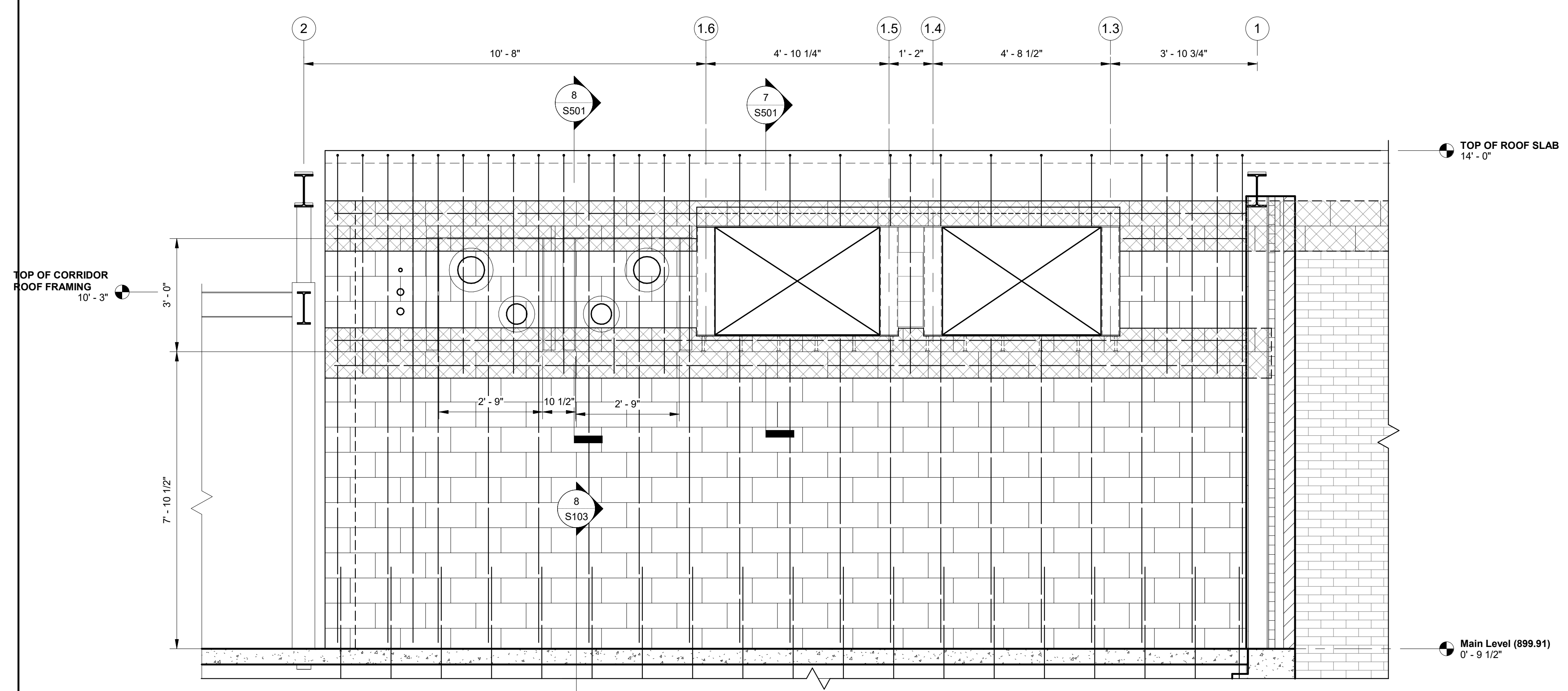
2 SECTION THROUGH VENT CURB - LOOKING WEST
 3/4" = 1'-0"



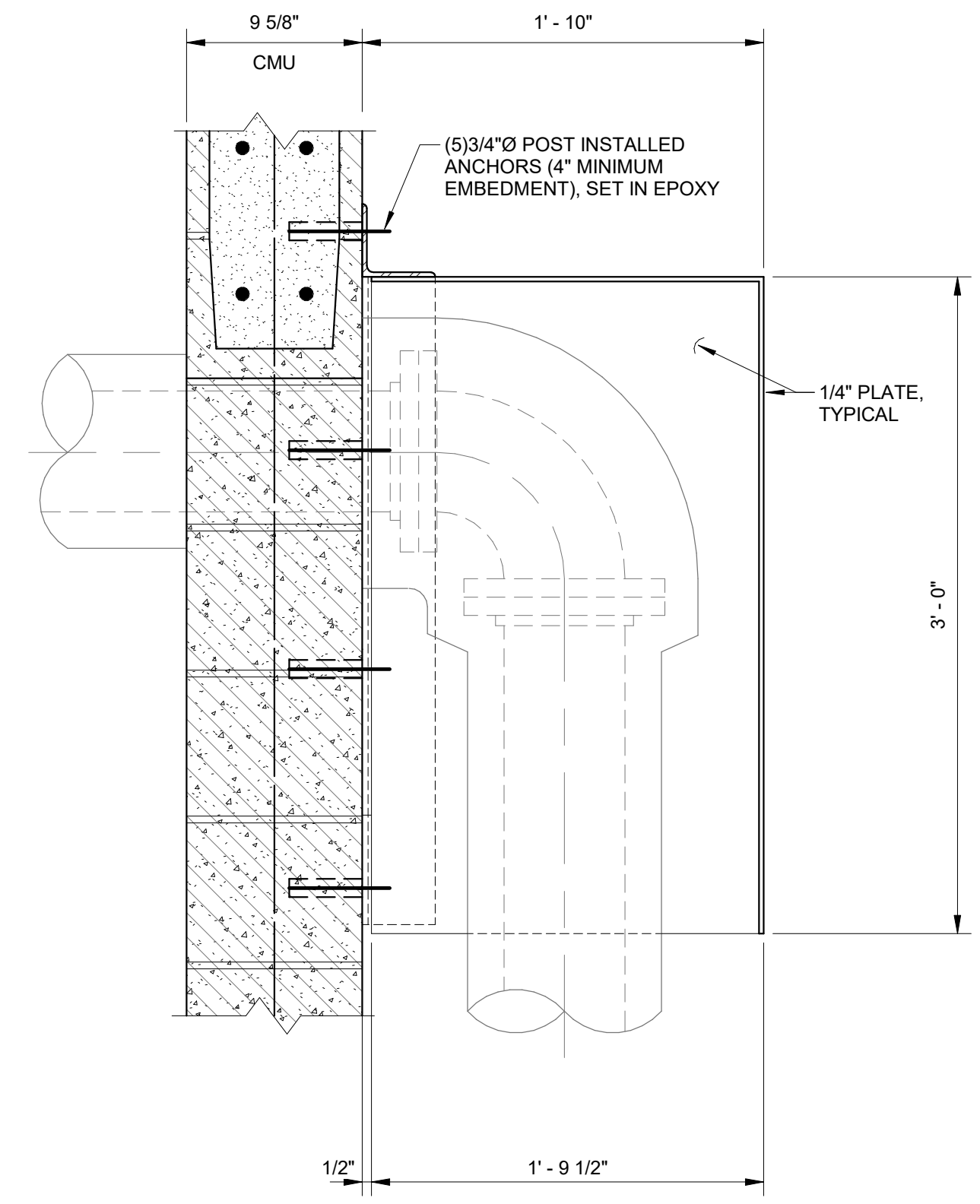
3 TYPICAL ROOF SLAB DETAIL
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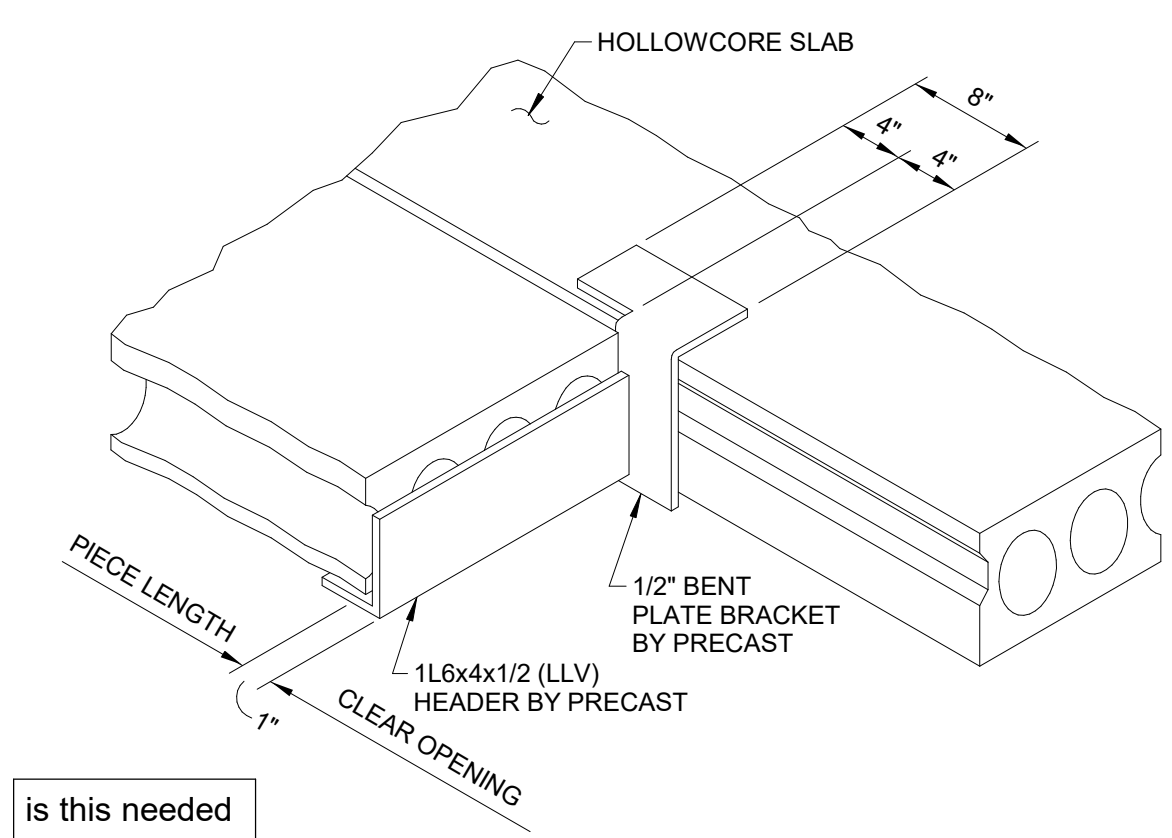
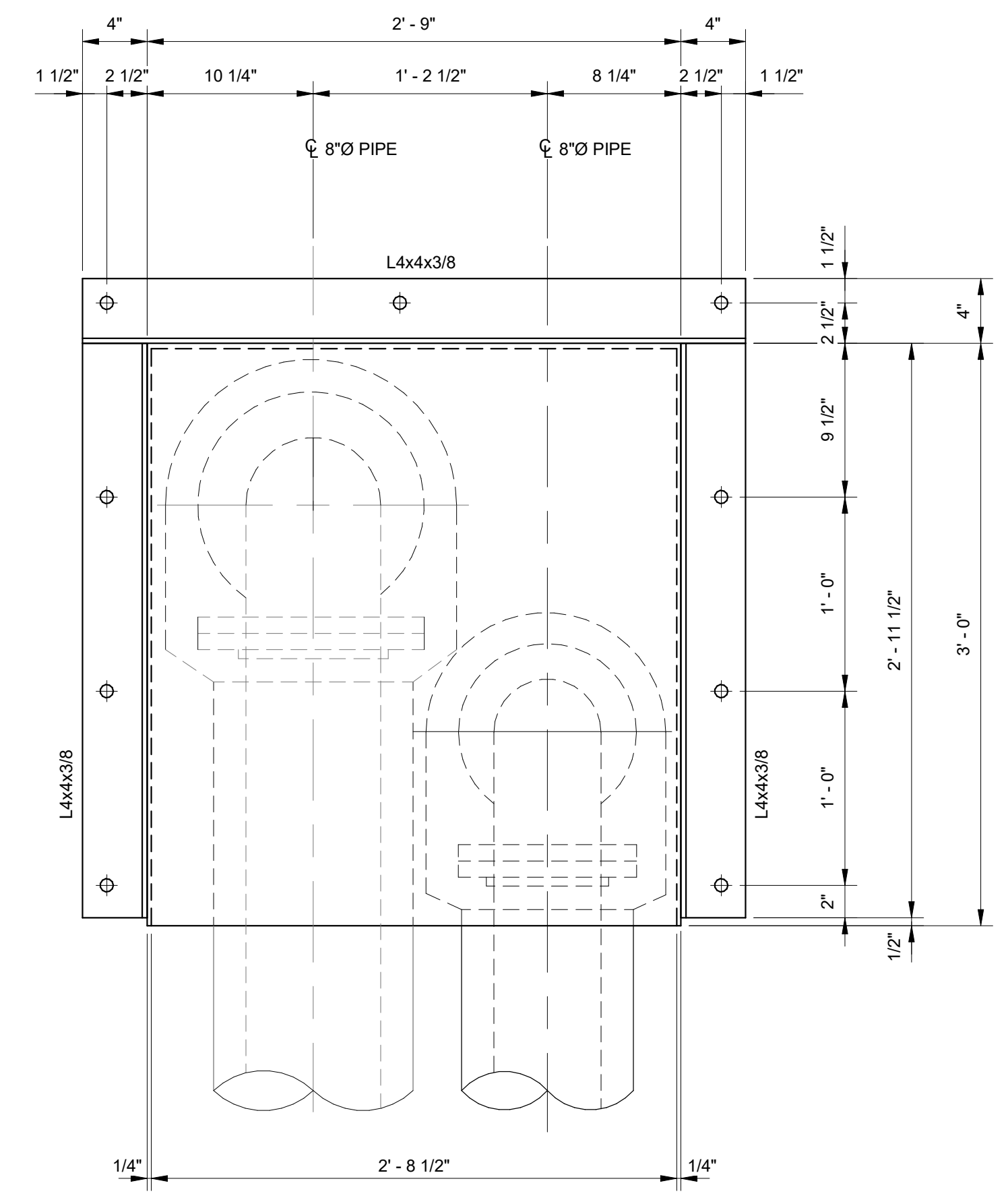
4 TYPICAL H.C. JOINT
 3/4" = 1'-0"



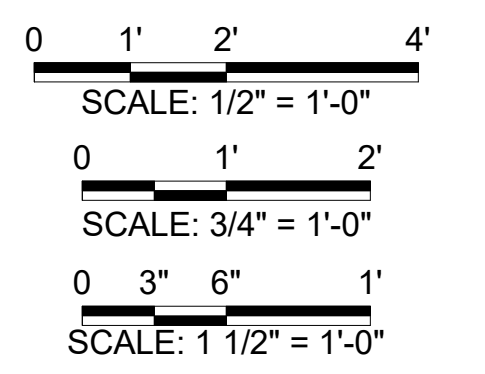
5 SECTION
 1/2" = 1'-0"



6 STORM GUARD DETAIL
 1 1/2" = 1'-0"



10 HOLLOW CORE PANEL HEADER DETAIL
 3/4" = 1'-0"



ISSUED FOR: 10/14/22
 DESIGN DEVELOPMENT

PRELIMINARY
 NOT FOR CONSTRUCTION

HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO. 65255

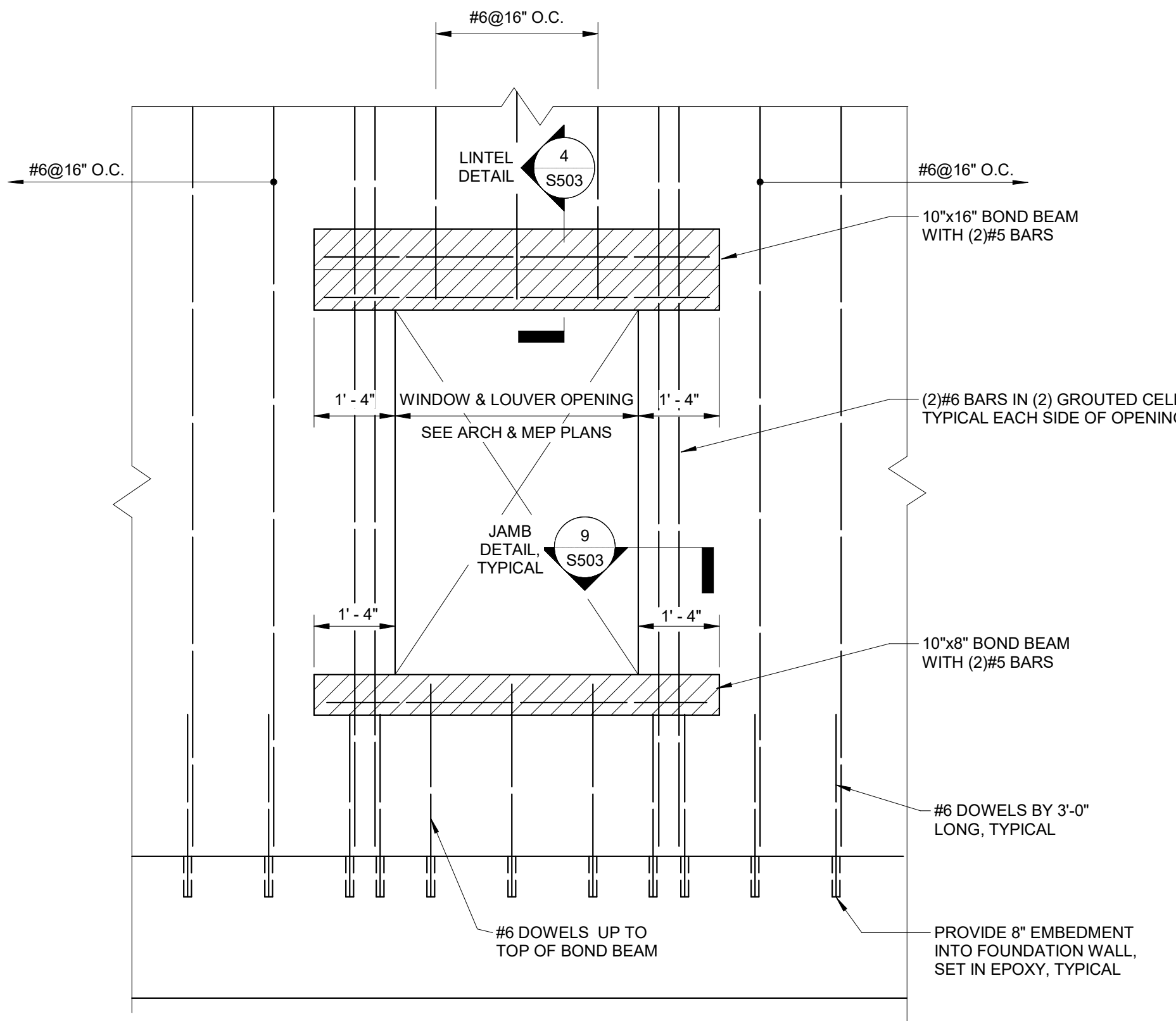
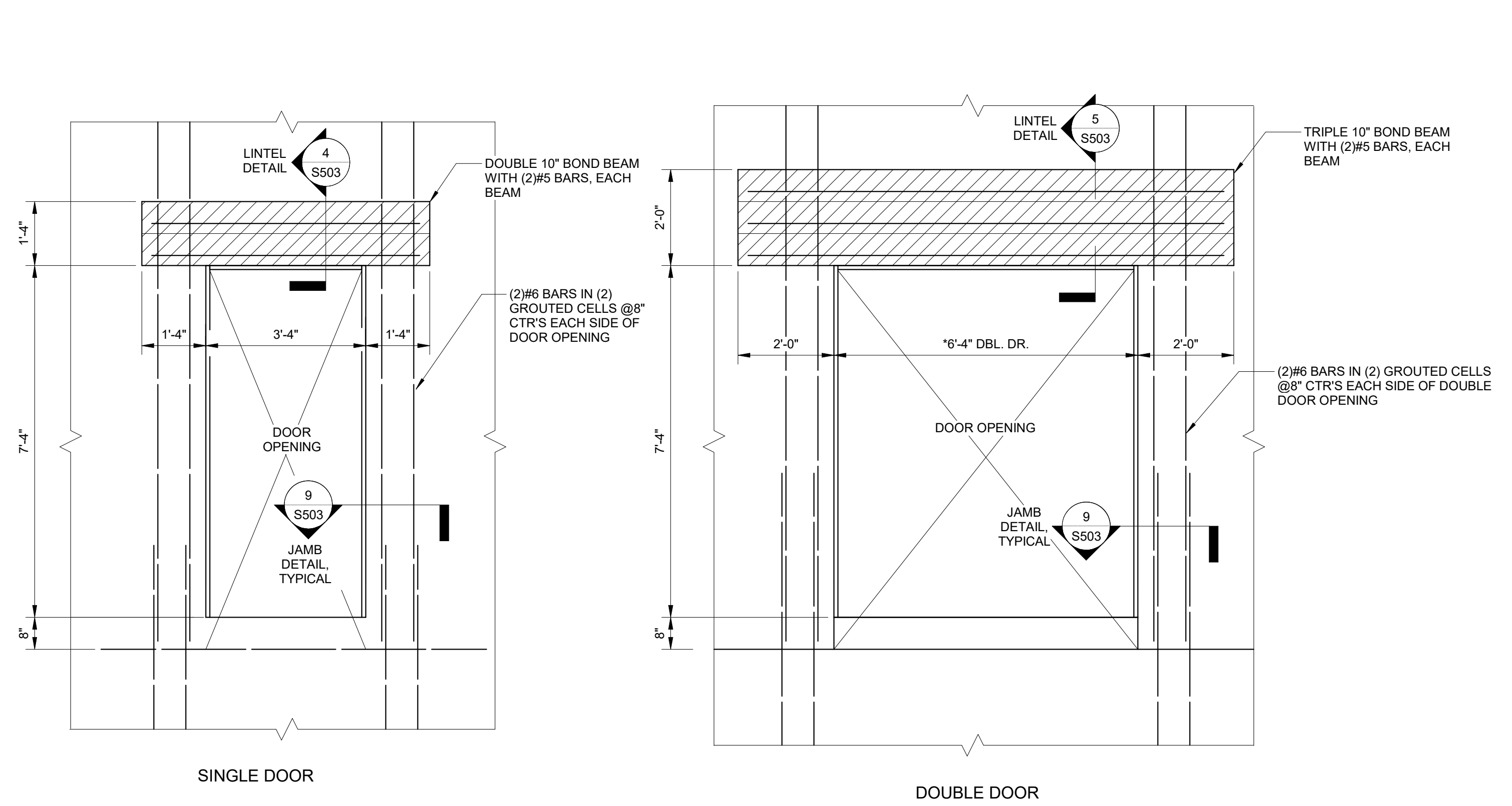
Non-Reduced Sheet Size 30" x 42"
 Full sized plans have been prepared using standard scales.
 Reduced sized plans may not conform to standard scales.

DESIGNED	DRAWN
NRM	EAW
FIELD	FIELD BOOK
CHECKED	CHECK DATE
NRM/KTH	

SHEET TITLE
STRUCTURAL DETAILS
 PROJECT NO.
 21-4982
 DRAWING ISSUED DATE:
 10/14/22
 SHEET
S502

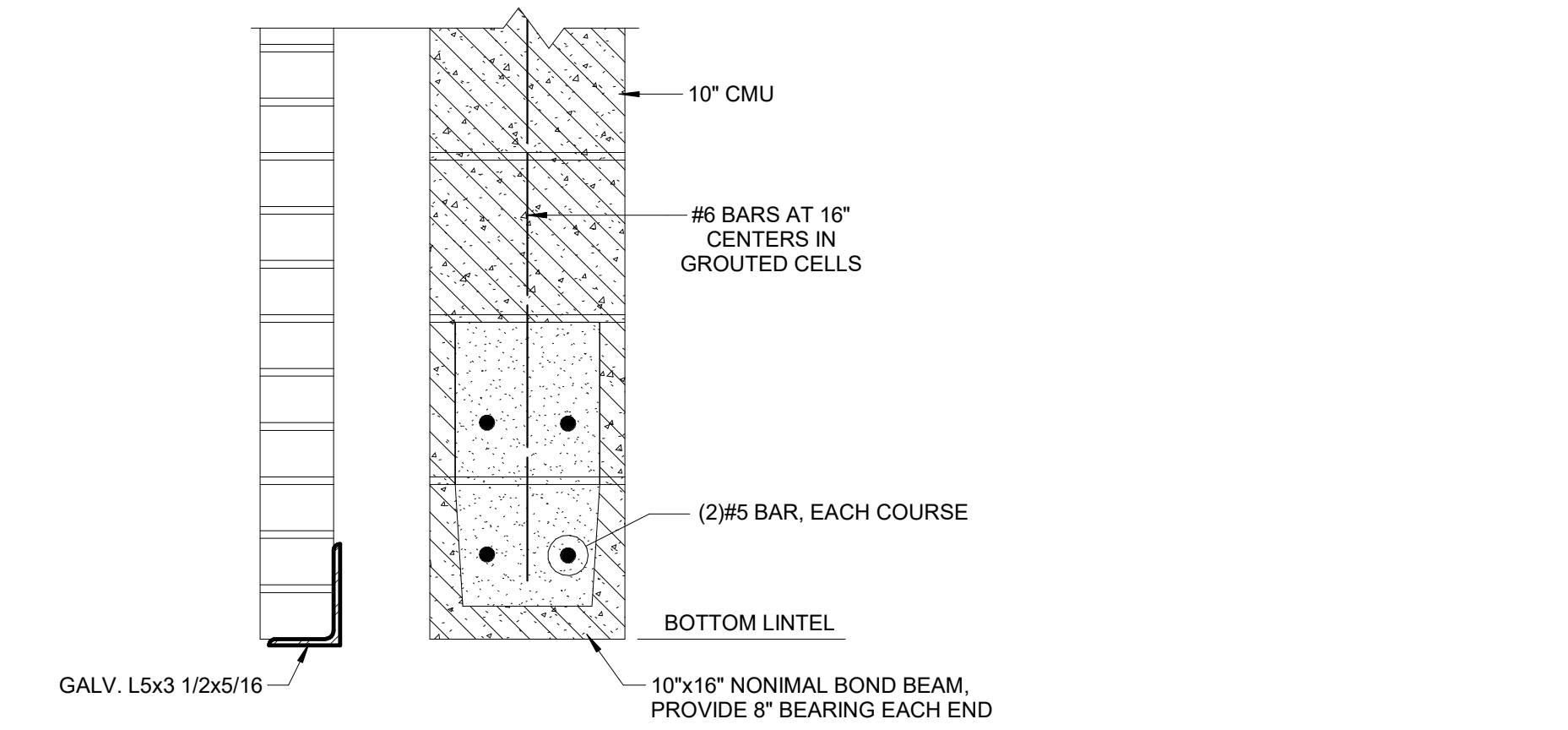
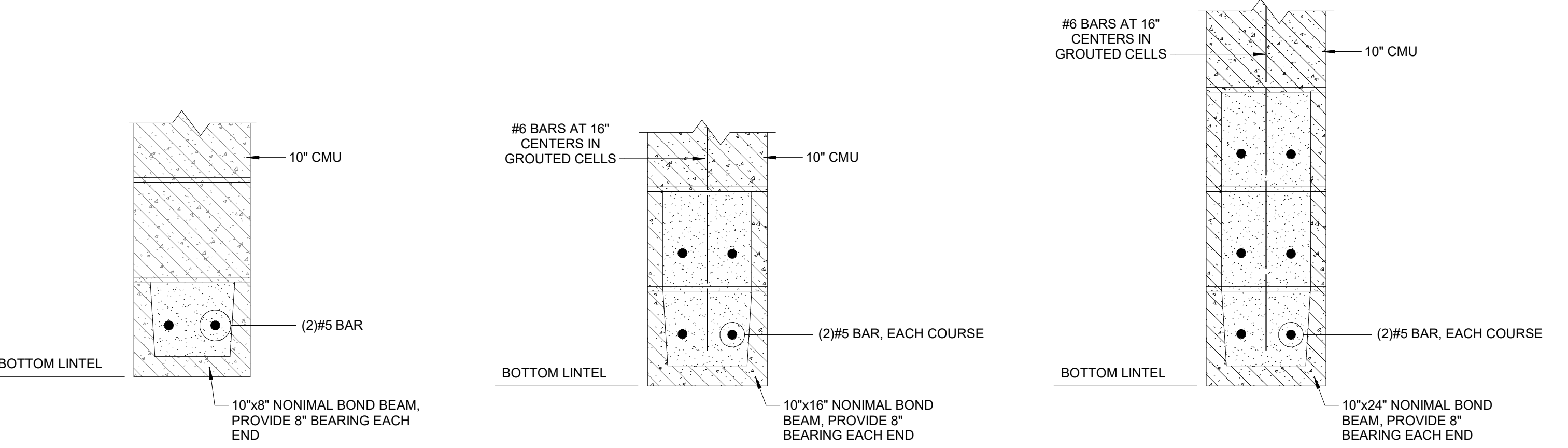
LINTEL SCHEDULE						
LINTEL #	OPENING SIZE	NOM. WALL THICKNESS	WALL TYPE	BOND BEAM SIZE & REINFORCEMENT	ANGLE SIZE	DETAILS
L1	3'-4"	10"	NON LOAD BEARING	10"x8" BOND BEAM WITH (2) #5 BARS	N/A	3/S503
L2	3'-4"	10"	LOAD BEARING STORM SHELTER	10"x16" BOND BEAM WITH (2) #5 BARS, EACH COURSE	N/A	4/S503
L3	6'-4"	10"	LOAD BEARING STORM SHELTER	10"x24" BOND BEAM WITH (2) #5 BARS, EACH COURSE	N/A	5/S503
L4	2'-6"	10"x4" CAVITY WALL	LOAD BEARING STORM SHELTER	10"x16" BOND BEAM WITH (2)#5 BARS, EACH COURSE	(GALV.) L5x3 1/2x5/16 (LLV) W/ 8" BRG.	6/S503
L5	3'-4"	10"x4" CAVITY WALL	LOAD BEARING STORM SHELTER	10"x16" BOND BEAM WITH (2)#4 BAR, EACH COURSE	(GALV.) L5x3 1/2x5/16 (LLV) W/ 8" BRG.	6/S503
L6	4'-0"	10"x4" CAVITY WALL	LOAD BEARING STORM SHELTER	10"x16" BOND BEAM WITH (2)#4 BAR, EACH COURSE	(GALV.) L5x3 1/2x5/16 (LLV) W/ 8" BRG.	6/S503

CMU WALL REINFORCEMENT SCHEDULE			
WALL MARK	WALL TYPE	VERTICAL WALL REINFORCEMENT	HORIZONTAL WALL REINFORCEMENT
M1	6" CMU NON LOAD BEARING	#4 @ 48" CTS	9 GAGE LADDER HOOK & EYE JOINT REINF. @ 16" CTS
M2	10" CMU NON LOAD BEARING	#6 @ 16" CTS	9 GAGE LADDER HOOK & EYE JOINT REINF. @ 16" CTS
M3	10" CMU STORM SHELTER LOAD BEARING	#6 @ 16" CTS. (ALL CELLS FULLY GROUTED)	9 GAGE LADDER HOOK & EYE JOINT REINF. @ 16" CTS
M4	10" CMU NON LOAD BEARING	#6 @ 16" CTS	9 GAGE LADDER HOOK & EYE JOINT REINF. @ 16" CTS
M5	10" CMU STORM SHELTER LOAD BEARING	#6 @ 16" CTS. (ALL CELLS FULLY GROUTED)	9 GAGE LADDER HOOK & EYE JOINT REINF. @ 16" CTS
M6	10" CMU STORM SHELTER LOAD BEARING ADJACENT TO EX. WALL	#6 @ 16" CTS. (ALL CELLS FULLY GROUTED)	9 GAGE LADDER HOOK & EYE JOINT REINF. @ 16" CTS
M7	10" CMU STORM SHELTER LOAD BEARING WITH BRICK	#6 @ 16" CTS. (ALL CELLS FULLY GROUTED)	9 GAGE LADDER HOOK & EYE JOINT REINF. @ 16" CTS



1 TORNADO SHELTER CMU DOOR OPENING
 1/2" = 1'-0"

2 "STORM SHELTER" CMU WINDOW OPENING DETAIL
 1/2" = 1'-0"

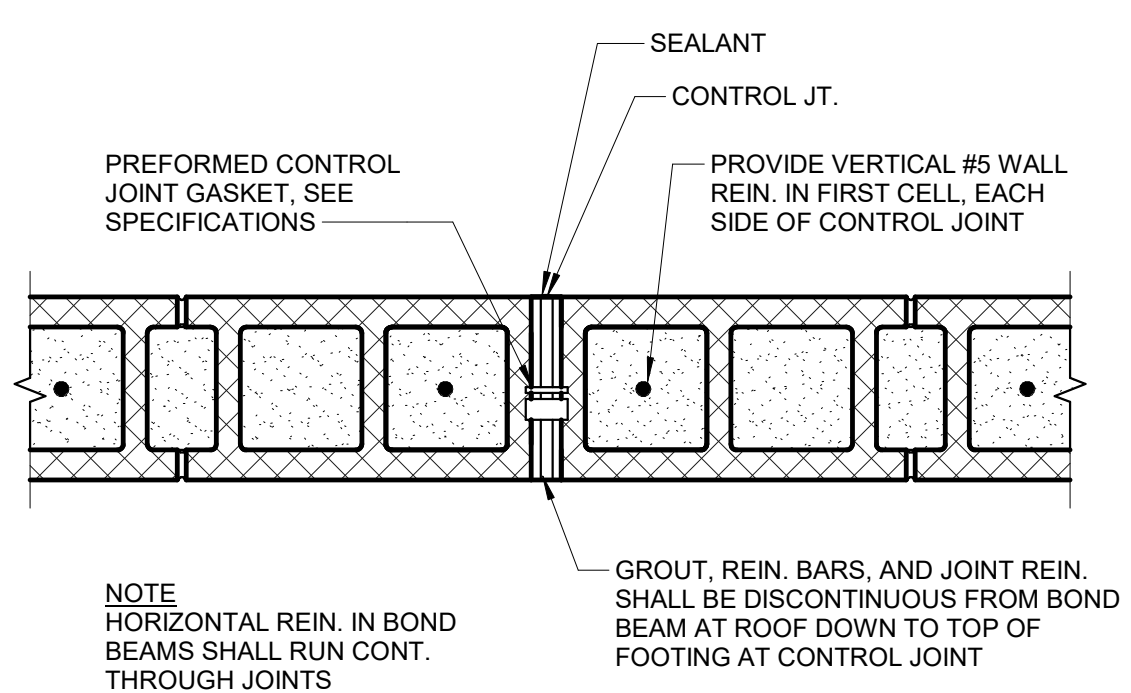
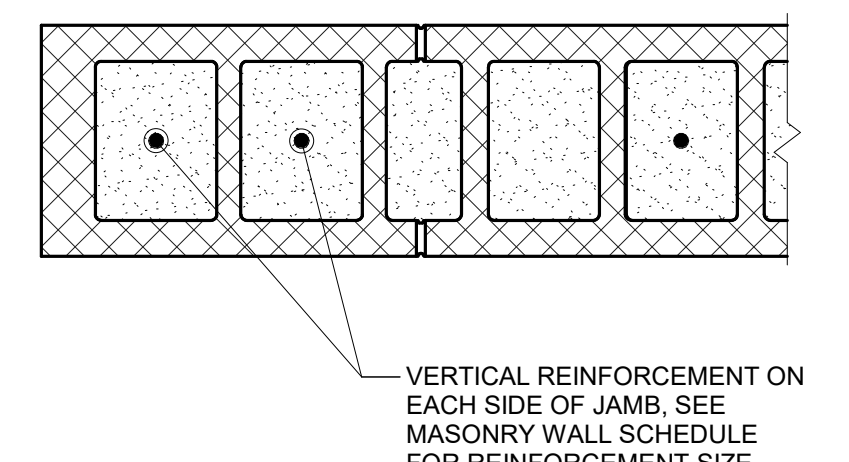
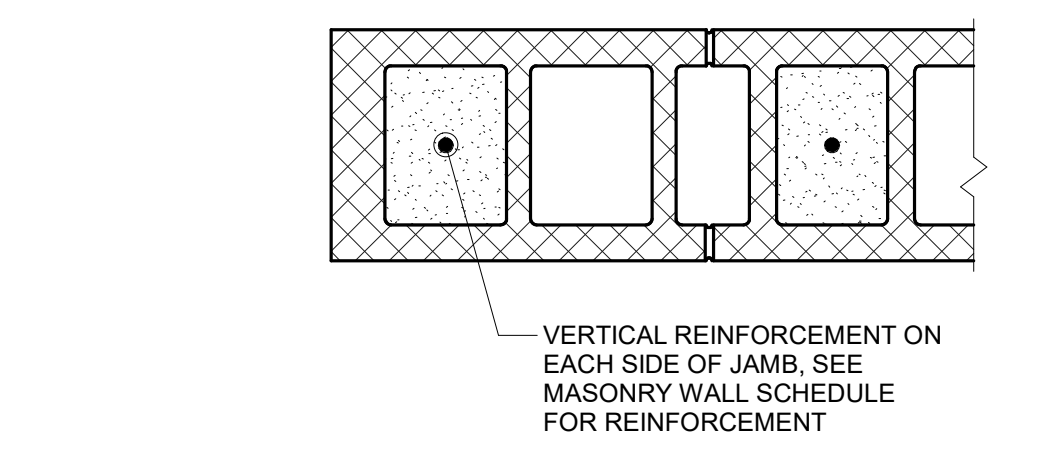


3 LINTEL "L1" DETAIL
 1 1/2" = 1'-0"

4 LINTEL "L2" DETAIL
 1 1/2" = 1'-0"

5 LINTEL "L3" DETAIL
 1 1/2" = 1'-0"

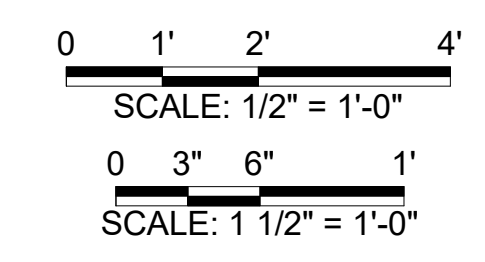
6 LINTEL "L4, L5 & L6" DETAIL
 1 1/2" = 1'-0"



8 NON-LOAD BEARING CMU - JAMB DETAIL
 1 1/2" = 1'-0"

9 STORM SHELTER LOAD BEARING CMU JAMB DETAIL
 1 1/2" = 1'-0"

10 MASONRY CONTROL JOINT
 1 1/2" = 1'-0"



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REVISION HISTORY			
NO.	DESCRIPTION	DATE	APPR.

ISSUED FOR: 10/14/22

DESIGN DEVELOPMENT

PRELIMINARY
 NOT FOR CONSTRUCTION

HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE MO. 65255

Non-Reduced Sheet Size 30" x 42"
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FIELD	NRM/KTH	FIELD BOOK	
CHECKED		CHECK DATE	

SHEET TITLE
STRUCTURAL DETAILS

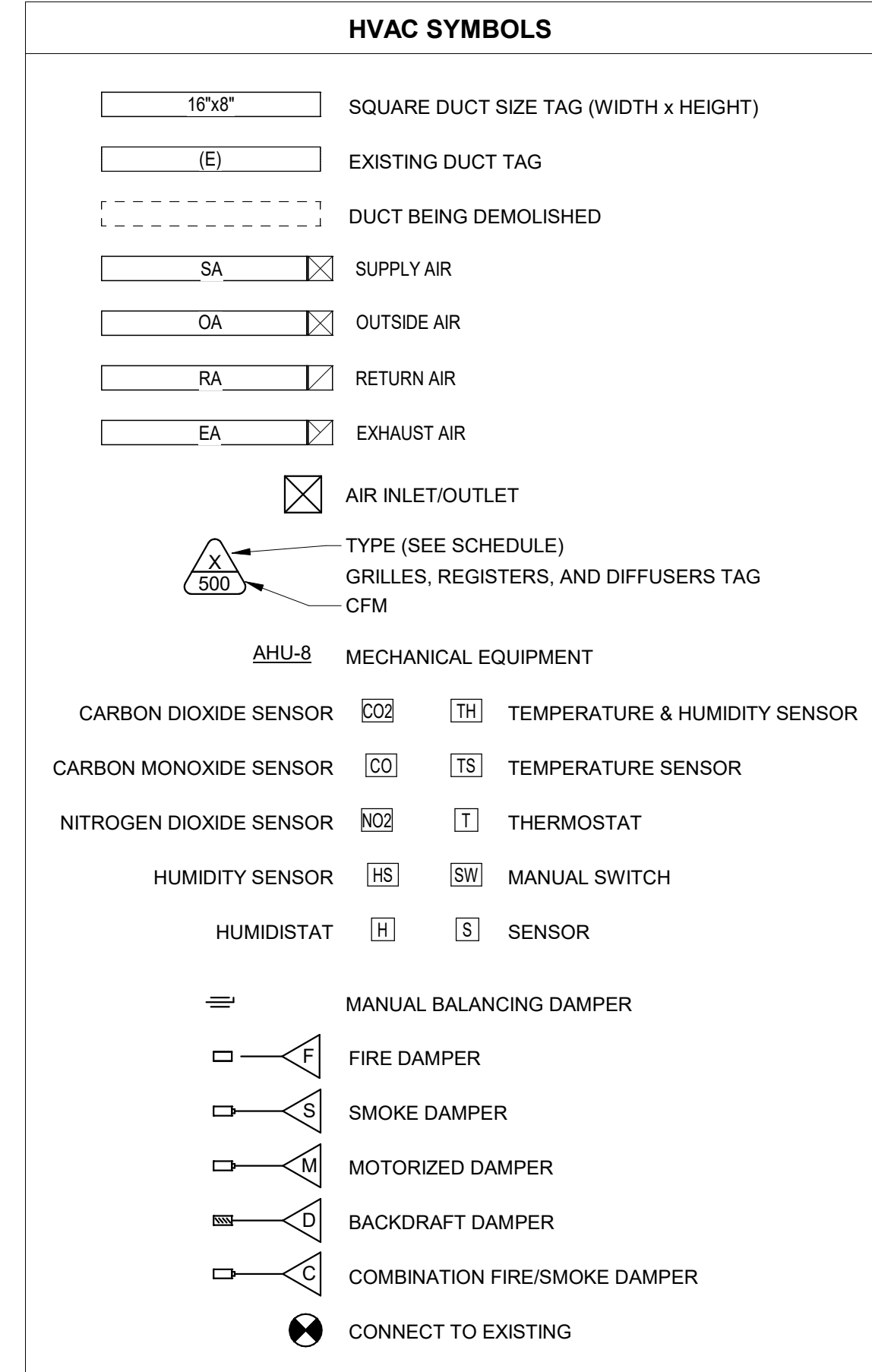
PROJECT NO.
 21-4982

DRAWING ISSUED DATE:
 10/14/22

SHEET
S503

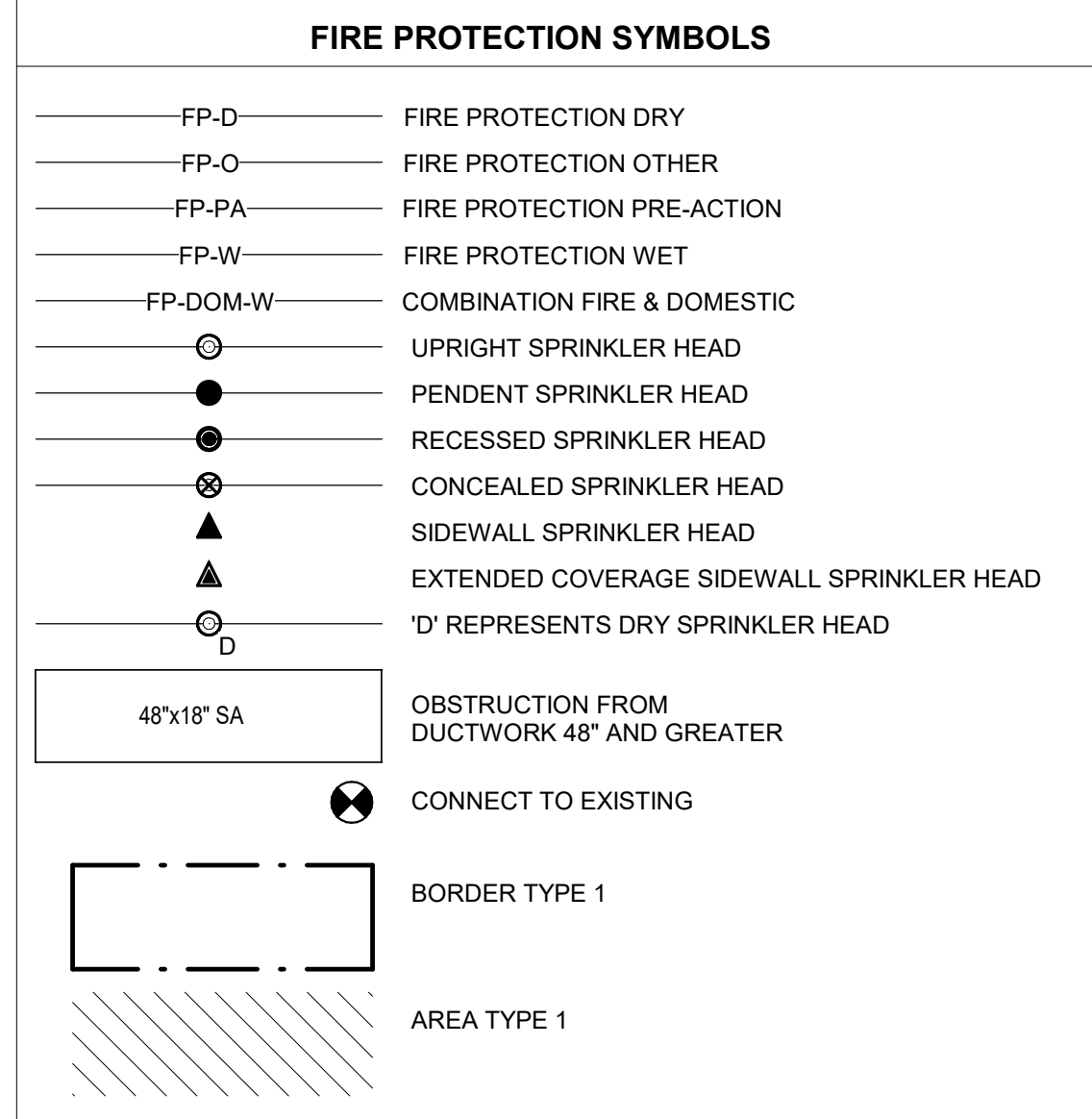
GENERAL HVAC NOTES:

1. ALL MECHANICAL INSTALLATIONS SHALL CONFORM TO NFPA 90A, SMACNA, ASHRAE AND ALL OTHER STATE AND LOCAL CODES.
2. SUPPLY (AS A MINIMUM) FRESH AIR REQUIRED BY ANSIASHRAE STANDARD 62-1989 AS NOTED ON PLANS.
3. UPON COMPLETION OF CONSTRUCTION, REPLACE ALL FILTERS.
4. ALL 90 DEGREE BENDS IN AIR DUCTS SHALL HAVE TURNING VANES. VANES SHALL BE SINGLE THICKNESS WITH RADIUS = 4.5" AND SPACING = 2.25".
5. ALL MAIN AND BRANCH DUCTS SHALL BE RECTANGULAR GALV. STEEL SIZED AS NOTED ON THE PLANS. SIZE SHALL REFER TO UNOBSTRUCTED INTERNAL AIRFLOW AREA. DUCTWORK SHALL BE MOUNTED TIGHT TO JOISTS ABOVE OR RUN IN SPACE BETWEEN JOISTS, U.N.O. CLEARANCES FROM FINISH FLOOR SHALL BE MAXIMIZED WHERE POSSIBLE.
6. ALL RUNOUTS TO DIFFUSERS SHALL HAVE A VOLUME CONTROL DAMPER AT THE CONNECTION TO THE BRANCH OR MAIN DUCT.
7. FLEXIBLE DUCT SHALL BE A MAXIMUM OF FIVE (5) FEET IN LENGTH AND SHALL BE ROUTED TO MINIMIZE LENGTH WITH NO KINKS OR SHARP BENDS.
8. CONTRACTOR SHALL CONNECT RUNOUT TO CONTRACTOR FABRICATED BOOT AS NECESSARY TO ACCOMMODATE DIFFUSER.
9. A FLEXIBLE CONNECTION BETWEEN MECHANICAL UNITS AND BOTH THE SUPPLY AND RETURN AIR DUCTWORK IS REQUIRED FOR VIBRATION ISOLATION AND NOISE REDUCTION.
10. BALANCE ALL MECHANICAL EXHAUST, MAKE-UP AIR, HEATING AND AIR CONDITIONING SYSTEMS WITHIN 10% OF THE FLOWRATES NOTED ON PLANS.
11. INSULATE DUCTWORK AS REQUIRED IN THE SPECIFICATIONS.
12. SERVICE OPENINGS SHALL BE LOCATED IN THE DUCTWORK BEFORE AND AFTER EACH TURNING VANE. SEE SPECIFICATIONS AND NFPA 90A FOR LOCATIONS OF ADDITIONAL ACCESS DOORS AND PANEL REQUIRED THROUGHOUT THE AIR DISTRIBUTION SYSTEM.
13. ROUTE DUCTWORK BETWEEN JOISTS WHERE POSSIBLE TO INCREASE CLEARANCES BELOW.
14. LEAVE ADEQUATE SPACE FOR INSTALLATION OF PLUMBING PIPES. COORDINATE WITH PLUMBING CONTRACTOR.
15. INSTALL/FABRICATE FILTER RACK AND MIXING BOX FOR ALL FURNACES. MIXING SECTION SHALL BE DOWNTHEAM OF THE FILTERS AND FRESH AIR VOLUME SHALL BE CONTROLLED BY A DAMPER AT THE ENTRANCE TO THE BOX.



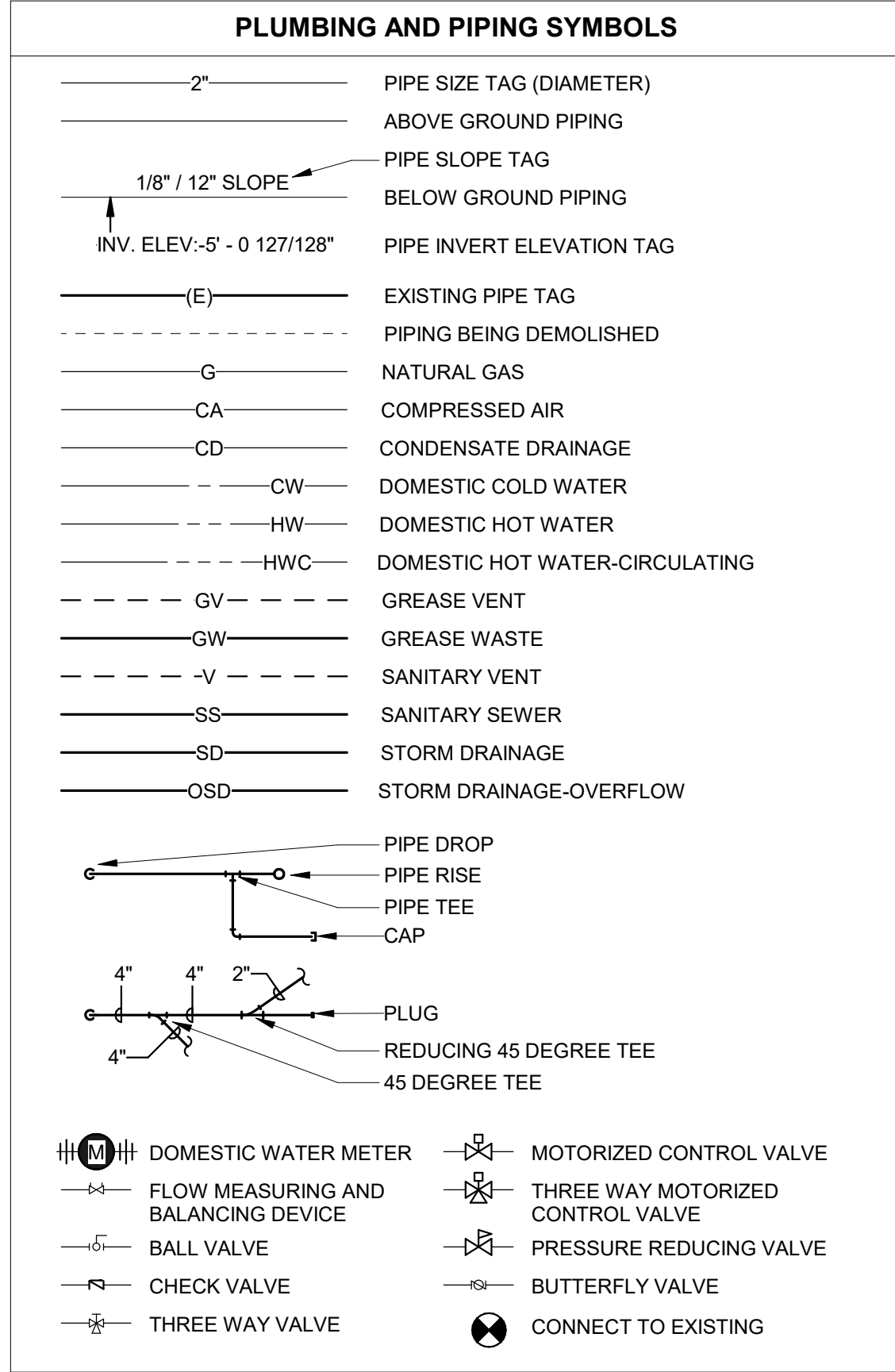
FIRE PROTECTION NOTES:

1. THE INFORMATION PROVIDED ON THE FIRE PROTECTION DRAWINGS IS INTENDED TO SERVE AS THE "PRELIMINARY PLAN" FOR THE PROJECT AS DEFINED BY NFPA 13 FOR THE PURPOSE OF PRELIMINARY BUILDING PERMIT APPROVAL AND CONSTRUCTION BIDDING. "WORKING PLANS" IN ACCORDANCE WITH THE "HYDRAULIC CALCULATION METHODS" DEFINED BY NFPA 13, SHALL BE DEVELOPED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AND THE AUTHORITY HAVING JURISDICTION PRIOR TO PURCHASE OR INSTALLATION OF ANY FIRE PROTECTION SYSTEM EQUIPMENT.
2. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL DRAWINGS ASSOCIATED WITH THE PROJECT TO UNDERSTAND BUILDING COMPONENTS AND ARRANGEMENTS (INCLUDING CONCEALED SPACE THAT COULD IMPACT THE FINAL DESIGN OF THE FIRE SPRINKLER SYSTEM).
3. ALL AREAS OF THE BUILDING SHALL BE PROVIDED WITH SPRINKLERS EXCEPT WHERE SPRINKLER OMISSION IS PERMITTED BY NFPA 13.
4. PRELIMINARY FLOW ANALYSIS HAS DETERMINED THAT A FIRE PUMP IS NOT REQUIRED FOR THE PROPOSED FIRE PROTECTION SYSTEM. CONTRACTOR SHALL NOTIFY THE ENGINEER DURING THE BIDDING PERIOD IF THEY BELIEVE A FIRE PUMP IS REQUIRED.



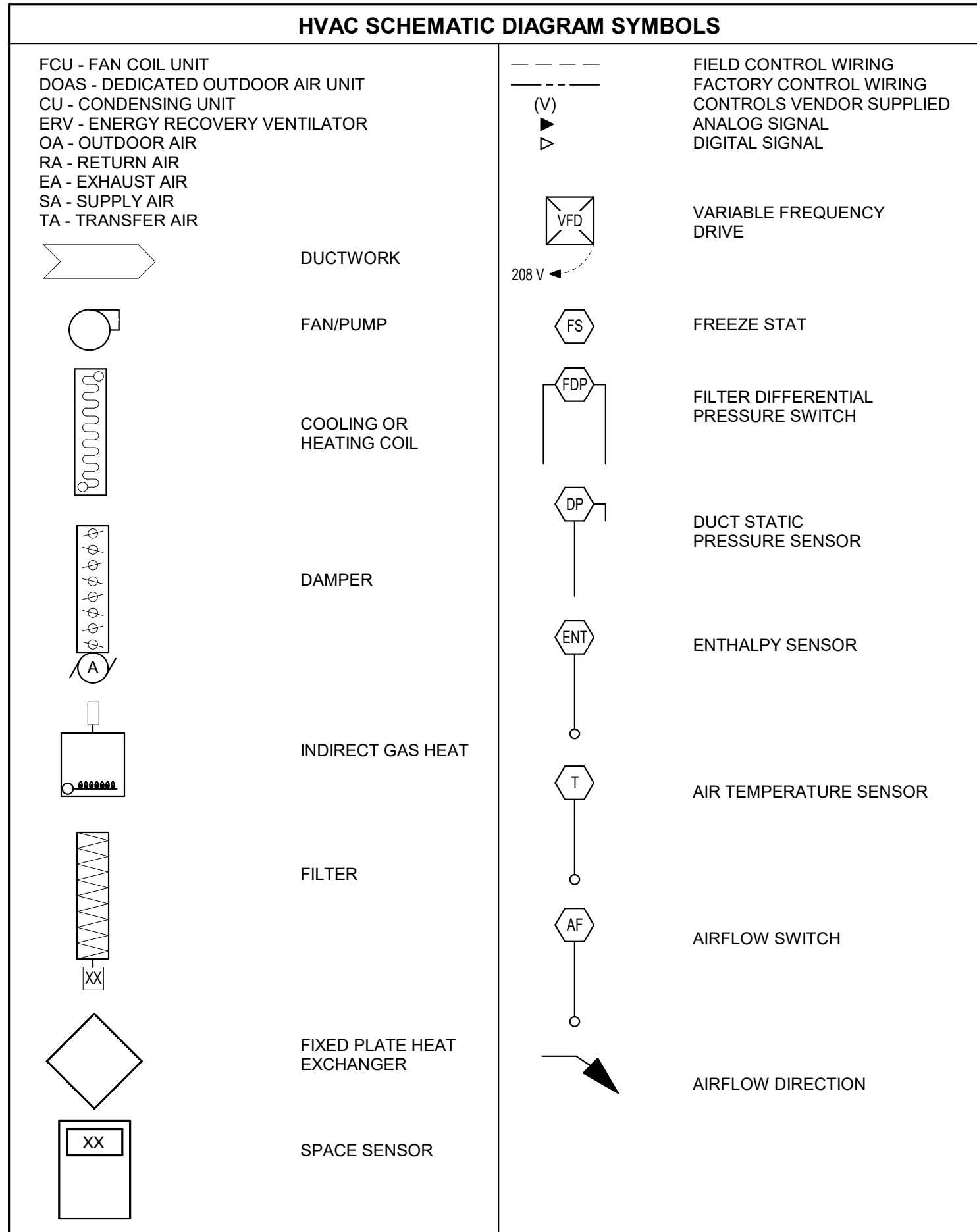
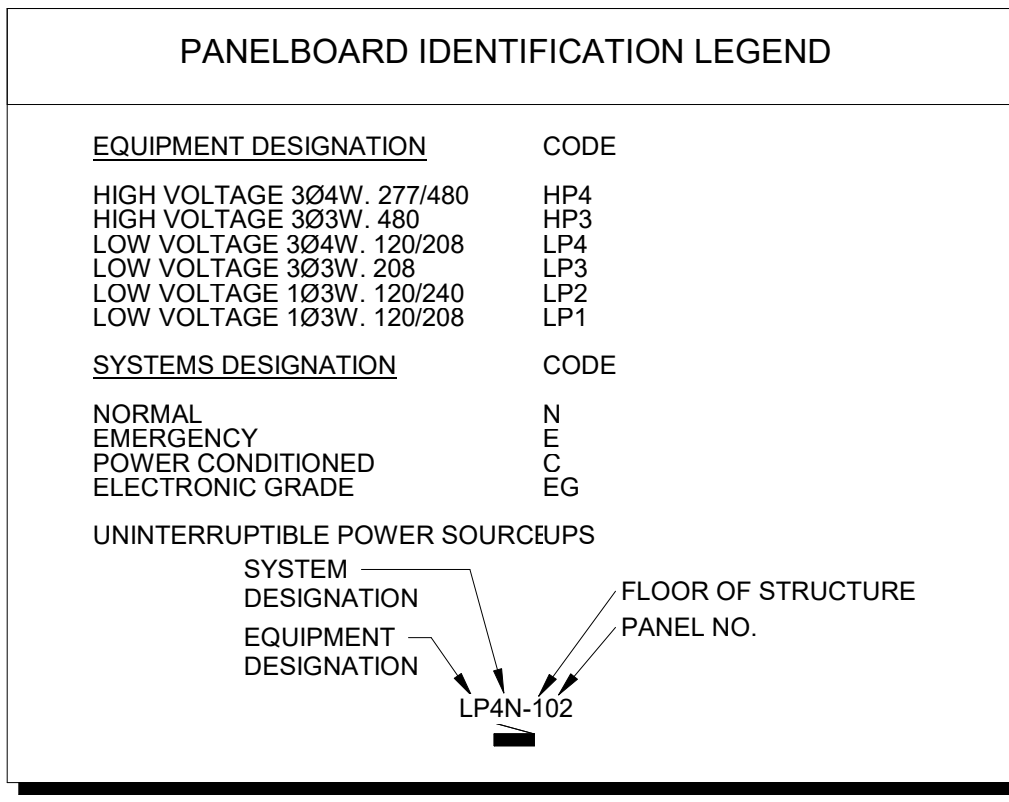
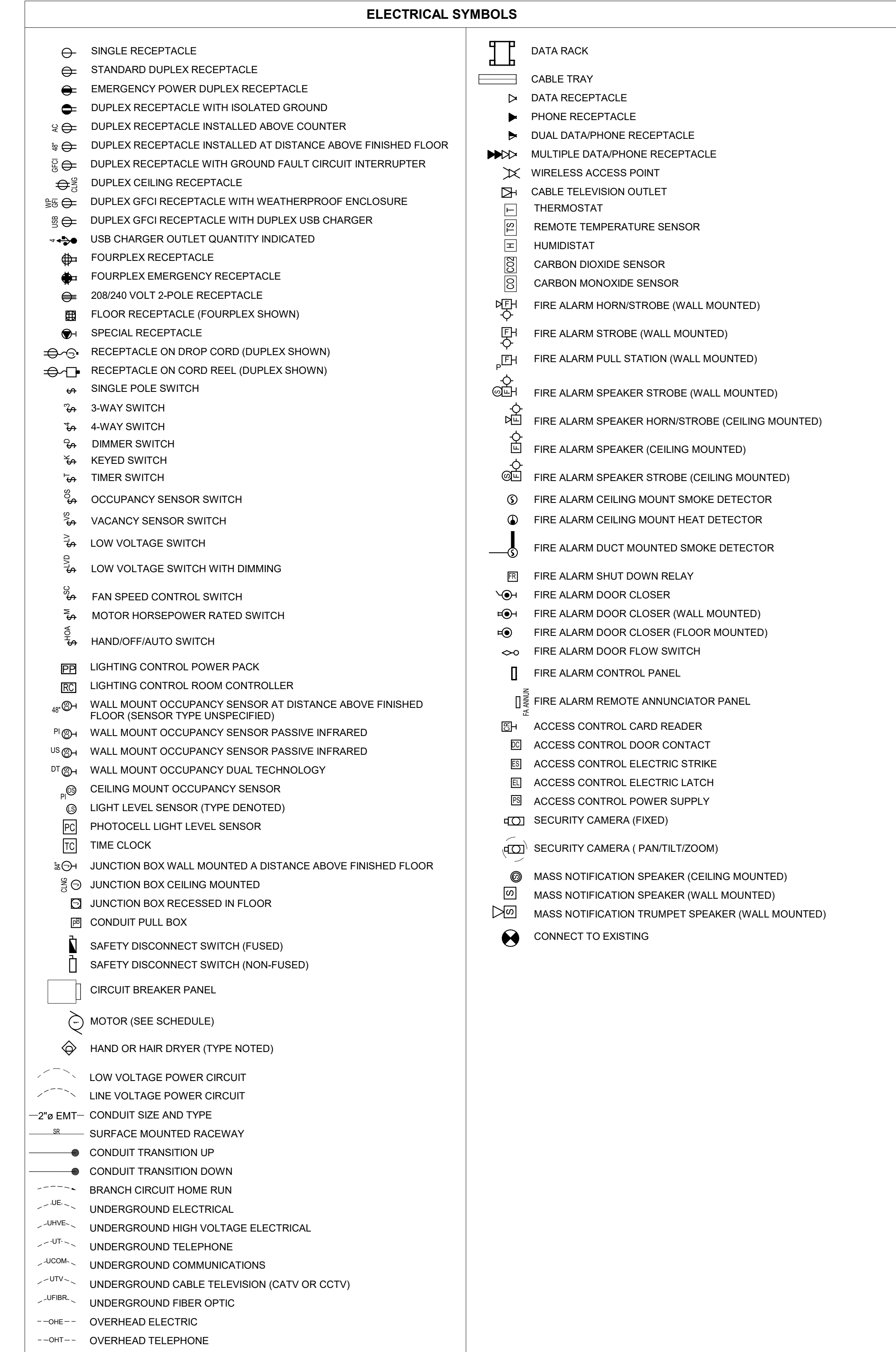
GENERAL PLUMBING NOTES:

1. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND REGULATIONS.
2. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS, ACCESSORIES, TOOLS, EQUIPMENT, TRANSPORTATION, LABOR, SERVICES AND OPERATIONS NECESSARY FOR A COMPLETE PLUMBING SYSTEM INCLUDING FIXTURES, SANITARY SEWERS, CLEANOUTS, WATER SUPPLY PIPING, AND NATURAL GAS PIPING.
3. ALL DOMESTIC WATER HEATING SYSTEMS SHALL BE SET TO MAINTAIN A MINIMUM OF 140°F AND HOT WATER CIRCULATION SYSTEMS SHALL BE SET TO MAINTAIN A RETURN WATER TEMPERATURE OF 130°F UNLESS NOTED OTHERWISE.
4. PLUMBING CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ARRANGE FOR ALL INSPECTIONS REQUIRED BY STATE OR LOCAL AUTHORITIES.
5. MATERIALS MUST BE NEW, IN FIRST CLASS CONDITION.
6. WORK SHALL BE DONE BY TRAINED, EXPERIENCED, SKILLED, JOURNEYMAN UNDER AN APPROVED FULL TIME SUPERVISOR. WORK SHALL BE PERFORMED IN A NEAT WORKLIKE MANNER.
7. PIPE INSTALLATION SHALL BE COORDINATED WITH OTHER TRADES.
8. PIPING SHALL BE SEPARATELY HUNG AND ANCHORED, FREE TO EXPAND AND CONTRACT QUIETLY, WITHOUT IMPOSING STRAINS ON STRUCTURE, PIPING, VALVES, DEVICES, AND EQUIPMENT. PIPING SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.
9. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL BE SEPARATED BY DIELECTRIC COUPLINGS.
10. CONTRACTOR SHALL PERFORM EXCAVATION REQUIRED TO INSTALL HIS WORK.
11. PIPING, ETC., SHALL BE TESTED TO AT LEAST 125 PSI.
12. PIPE HANGERS AND SUPPORTS SHALL MEET THE LOCAL SEISMIC REQUIREMENTS.
13. PROVIDE BALL VALVE ON PIPES TO EACH GROUP OF FIXTURES OR TO EACH PIECE OF EQUIPMENT.
14. PLUMBING CONTRACTOR SHALL INSTALL GAS PIPING TO WITHIN 2" OF EACH APPLIANCE AND TERMINATE WITH A GAS COOK, HVAC CONTRACTOR TO MAKE FINAL CONNECTION.
15. LOCATE ALL SHUT-OFFS, CLEANOUTS, AND OTHER DEVICES REQUIRING ACCESS IN AN EASILY ACCESSIBLE AREA.
16. DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE LOCATIONS OF PIPING. EXACT LOCATIONS SHALL BE COORDINATED BY THE CONTRACTOR AND VERIFIED IN THE FIELD PRIOR TO ROUGH-IN.
17. SEE ARCHITECTURAL SHEET FOR FIRE RATED CONSTRUCTION LOCATIONS. ALL PLUMBING PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE UL LISTED OF EQUAL OR GREATER HOUR RATING.



GENERAL ELECTRICAL NOTES:

1. APPLICABLE STANDARDS: NFPA-70, NFPA-101, STATE BUILDING CODES, AND THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1971 AND ALL AMENDMENTS THERETO; EQUIPMENT, DEVICES, APPARATUS, SYSTEMS, AND INSTALLATIONS SHALL BE ENTIRELY SUITABLE AND SAFE FOR EACH INTENDED APPLICATION AND BE IN FULL COMPLIANCE WITH APPLICABLE STANDARDS, REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC., OF MUNICIPAL, COUNTY, AND STATE GOVERNMENTS, OWNER'S INSURANCE COMPANY, LOCAL UTILITIES, AND LABOR REGULATIONS. NOTHING CONTAINED IN THESE PLANS AND SPECIFICATIONS SHALL BE CONSTRUED TO CONFLICT WITH THESE LAWS, CODES, AND ORDINANCES.
2. DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE LOCATIONS OF ELECTRICAL EQUIPMENT. EXACT LOCATIONS SHALL BE COORDINATED BY THE CONTRACTOR AND VERIFIED IN THE FIELD PRIOR TO ROUGH-IN.
3. INSTALLATIONS WHICH INCLUDE ELECTRICAL FIXTURES, DEVICES, CONDUIT, SWITCHES, PANELS, HANGERS, WIRE, CABLE, STANDARDS, ETC., MUST BE ENTIRELY SUITABLE FOR TEMPERATURES, HUMIDITY, DAMP AREAS, VOLTAGE, FREQUENCY, AND ALL INSTALLATION CONDITIONS ENCOUNTERED.
4. INSTALLATION MUST BE ENTIRELY SAFE IN EVERY RESPECT, AND MUST NOT CREATE ANY CONDITIONS OF ANY KIND WHICH WILL BE HARMFUL TO ANY OCCUPANT OF THE BUILDING. IF CONTRACTOR BELIEVES THAT INSTALLATION WILL NOT BE SAFE FOR ALL PEOPLE, HE/SHE SHALL SO REPORT IN WRITING TO ENGINEER BEFORE ANY EQUIPMENT IS PURCHASED OR WORK IS INSTALLED, GIVING EXACT RECOMMENDATIONS, AND REASONS FOR THEM.
5. GROUNDING: ALL GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
6. INSTALLATION OF ELECTRICAL DEVICES SHALL BE COORDINATED WITH OTHER TRADES AS NECESSARY TO PREVENT ANY CONFLICTS DURING CONSTRUCTION.
7. LOW VOLTAGE CONDUIT AND JUNCTION BOXES SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
8. WHERE PHONE/DATA OUTLET LOCATIONS ARE INDICATED INSTALL 1" EMT FROM OUTLET BOX (4"x4"x1/2"MIN.) TO TOP OF FINISHED WALL (ABOVE S.A.T. CEILING) FOR OUTLETS LOCATED IN SURFACE MOUNTED RACEWAY. PROVIDE 2" EMT FROM SURFACE RACEWAY BACK BOX TO ABOVE SAT CEILING.
9. WHERE THERMOSTAT LOCATIONS ARE SHOWN, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A RECESSED WALL BOX WITH CONDUIT TO AN ACCESSIBLE LOCATION IN AREAS WHERE SURFACE MOUNTED BOXES ARE REQUIRED. A SURFACE MOUNTED BOX AND CONDUIT TO 10' AFF SHALL BE PROVIDED (OR TO THE EQUIPMENT LOCATION, WHICHEVER IS CLOSER). THERMOSTAT INSTALLATION AND THE CORRESPONDING LOW VOLTAGE THERMOSTAT WIRING SHALL BE BY THE MECHANICAL CONTRACTOR.
10. LIGHTING: FURNISH AND INSTALL ALL LIGHTING FIXTURES COMPLETE WITH LAMPS IN ACCORDANCE WITH THE LIGHTING FIXTURE SCHEDULE SHOWN ON THE DRAWINGS. ALL UNITS SHALL BE COMPLETE WITH SUSPENSION ACCESSORIES, CANOPIES, SOCKETS, LOUVERS, FRAMES, AND ROUGH-IN BOXES, WIRED AND ASSEMBLED TO FURNISH A COMPLETE WORKABLE SYSTEM.
11. EQUIPMENT GROUNDING CONDUCTORS SHALL BE PULLED WITH ALL BRANCH CIRCUITS. CONDUIT SHALL NOT BE USED AS A GROUND U.N.O.
12. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS, ACCESSORIES, TOOLS, EQUIPMENT, TRANSPORTATION, LABOR, SERVICES AND OPERATIONS NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM.
13. ELECTRICAL CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ARRANGE FOR ALL INSPECTIONS REQUIRED BY STATE OR LOCAL AUTHORITIES.
14. MATERIALS MUST BE NEW, IN FIRST CLASS CONDITION.
15. CONDUIT SHALL BE SEPARATELY HUNG AND ANCHORED, FREE TO EXPAND AND CONTRACT QUIETLY, WITHOUT IMPOSING STRAINS ON STRUCTURE, DEVICES, AND EQUIPMENT. CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.
16. CONTRACTOR SHALL PERFORM EXCAVATION REQUIRED TO INSTALL HIS WORK.
17. SEE ARCHITECTURAL SHEET FOR FIRE RATED CONSTRUCTION LOCATIONS. ALL ELECTRICAL PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE UL LISTED OF EQUAL OR GREATER HOUR RATING.
18. SEE ARCHITECTURAL SHEETS FOR SMOKE PARTITION LOCATIONS. ALL SPACES AROUND ELECTRICAL PENETRATIONS THROUGH A SMOKE PARTITION SHALL BE FILLED WITH AN APPROVED MATERIAL TO LIMIT THE FREE PASSAGE OF SMOKE.



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REVISION HISTORY

NO.	DESCRIPTION	DATE	APPR.
1			

ISSUED FOR: 10/14/22

DESIGN DEVELOPMENT

PRELIMINARY NOT FOR CONSTRUCTION

HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE, MO 65255

Non-Reduced Sheet Size 30" x 42"
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DESIGNED	DRAWN
MHB	MHB

FIELD	FIELD BOOK

CHECKED	CHECK DATE
JUN	

SHEET TITLE

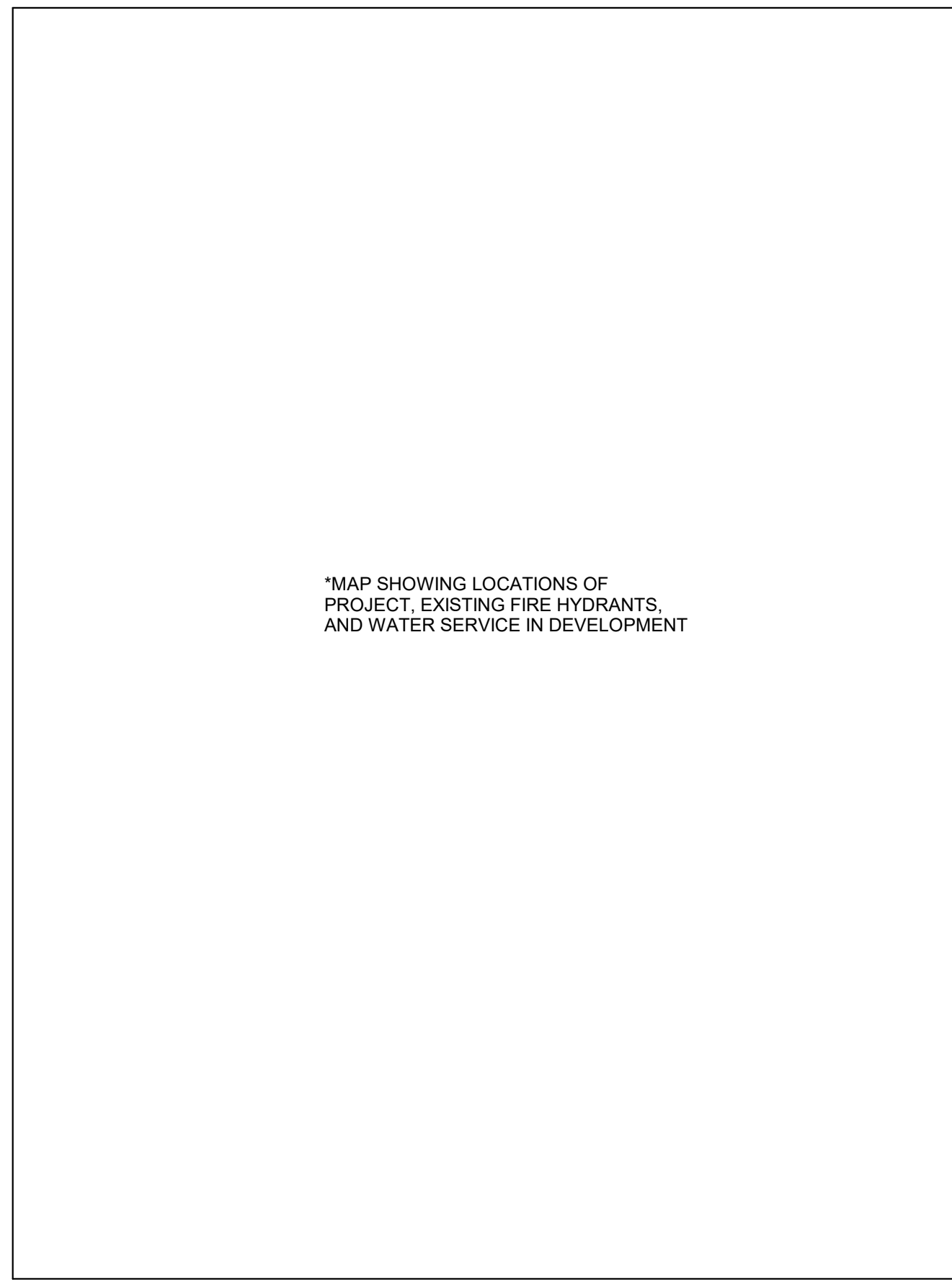
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PROJECT NO.
21-0922

DRAWING ISSUED DATE:
10/14/22

SHEET

MEP001

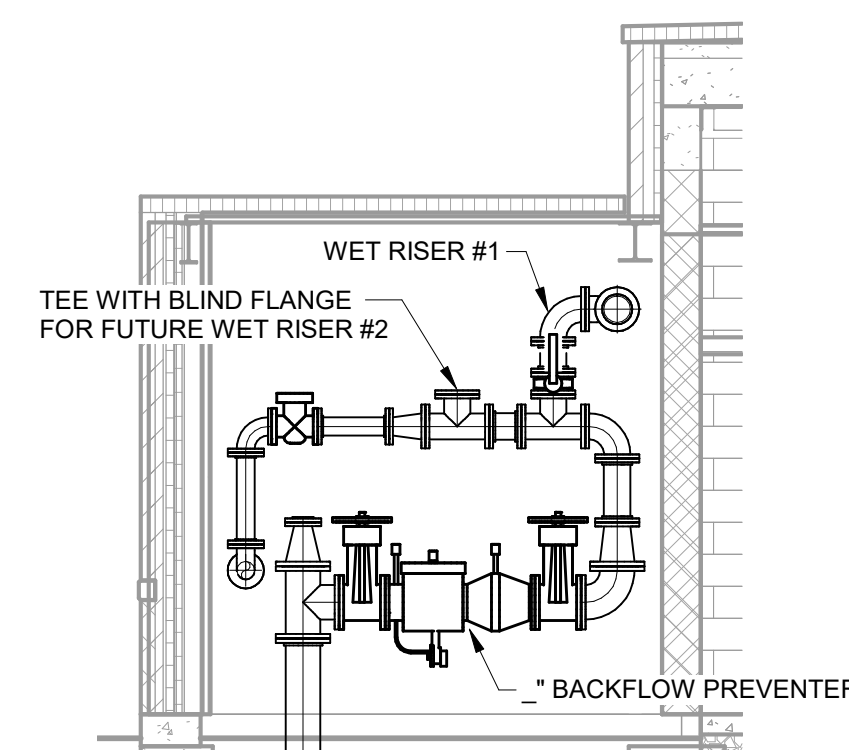


*MAP SHOWING LOCATIONS OF PROJECT, EXISTING FIRE HYDRANTS, AND WATER SERVICE IN DEVELOPMENT

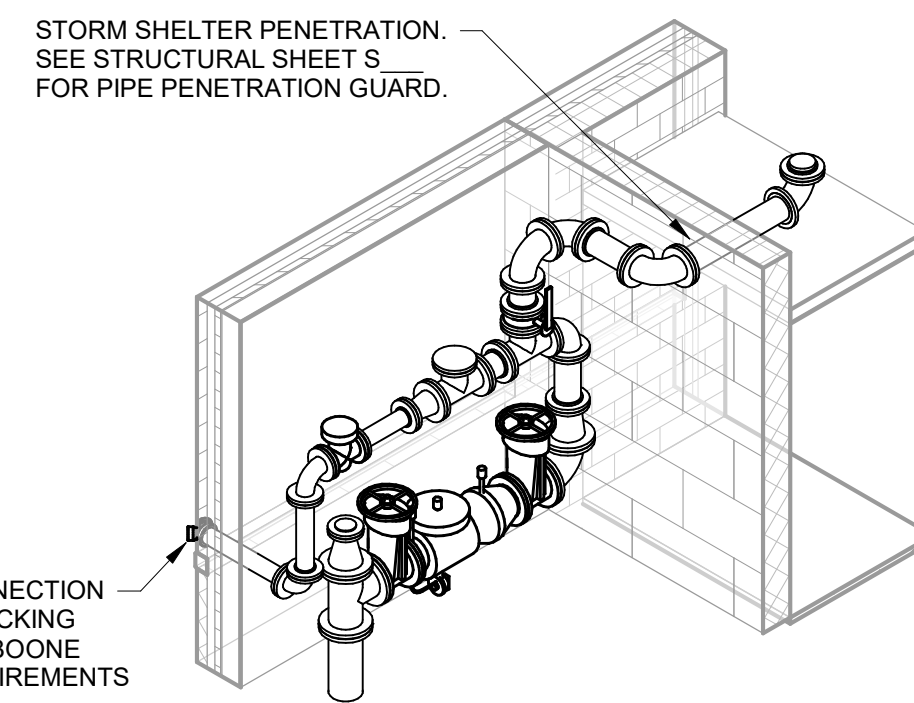
2 EXISTING FIRE HYDRANT LOCATIONS
NTS

FIRE SUPPRESSION SYSTEM SUMMARY					
ROOM #	ROOM NAME	AREA (SF)	OCCUPANCY HAZARD TYPE (NFPA 13)	MINIMUM REQUIRED DENSITY (GPM/SF)	SYSTEM NAME
100	CORRIDOR	2,583	LIGHT HAZARD	0.07	WET RISER #1
101	BOYS' TOILET	368	LIGHT HAZARD	0.07	WET RISER #1
102	GIRLS' TOILET	368	LIGHT HAZARD	0.07	WET RISER #1
103	ART CLASSROOM	1,154	ORDINARY HAZARD, GROUP 1	0.10	WET RISER #1
104	GIFTED CLASSROOM	1,155	LIGHT HAZARD	0.07	WET RISER #1
105	SCIENCE CLASSROOM	1,153	LIGHT HAZARD	0.07	WET RISER #1
106	CLASSROOM	1,158	LIGHT HAZARD	0.07	WET RISER #1
107	MECH	784	ORDINARY HAZARD, GROUP 1	0.10	WET RISER #1
109	CLASSROOM	1,158	LIGHT HAZARD	0.07	WET RISER #1
110	CLASSROOM	1,153	LIGHT HAZARD	0.07	WET RISER #1
111	CLASSROOM	1,155	LIGHT HAZARD	0.07	WET RISER #1
112	CLASSROOM	1,153	LIGHT HAZARD	0.07	WET RISER #1
113	JANITOR	45	ORDINARY HAZARD, GROUP 1	0.10	WET RISER #1
114	UTILITY	182	ORDINARY HAZARD, GROUP 1	0.10	WET RISER #1
115	FUTURE STAIR	184	LIGHT HAZARD	0.07	WET RISER #1
116	FIRE RISERS	92	LIGHT HAZARD	0.07	WET RISER #1
117	CORRIDOR	751	LIGHT HAZARD	0.07	WET RISER #1

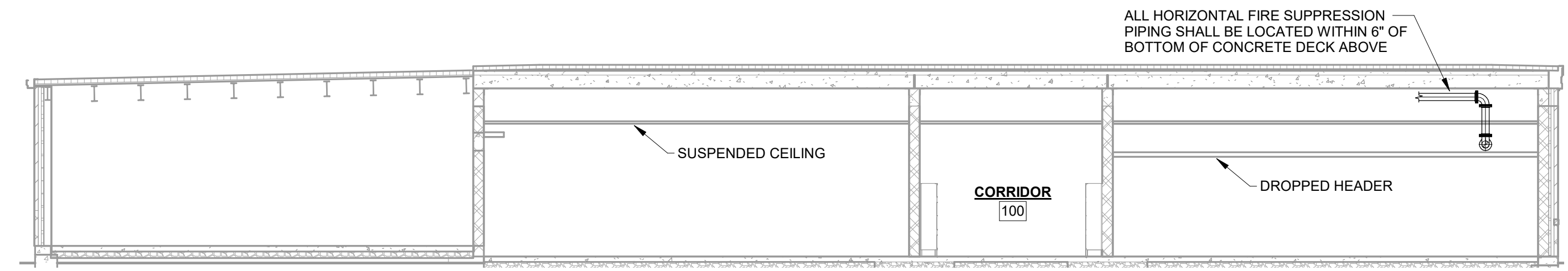
NOTES:
1. HYDRANT FLOW AND PRESSURE DATA AND HOSE ALLOWANCES IN DEVELOPMENT.



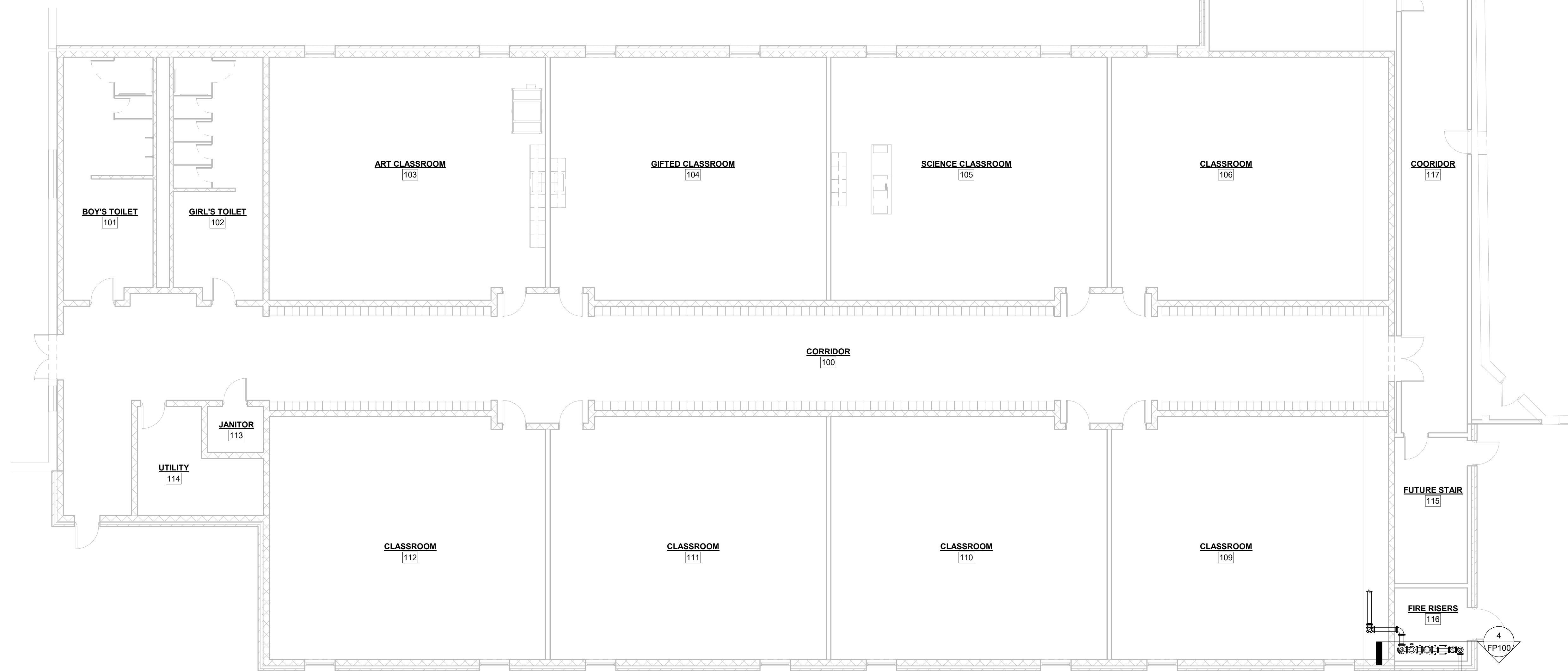
4 FIRE PROTECTION SERVICE ENTRANCE
1/4" = 1'-0"



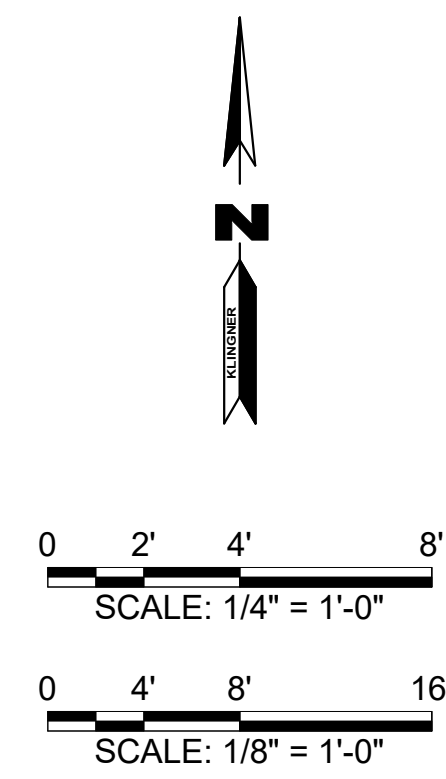
5 FIRE PROTECTION ISOMETRIC
NTS



3 FIRE PROTECTION BUILDING SECTION
1/8" = 1'-0"



1 FIRE PROTECTION PLAN
1/8" = 1'-0"



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REVISION HISTORY		
NO.	DESCRIPTION	DATE
3		

ISSUED FOR: 10/14/22

DESIGN DEVELOPMENT

PRELIMINARY
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HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE, MO 65255

Non-Reduced Sheet Size 30" x 42"
Full sized plans have been prepared using standard scales.
Reduced sized plans may not conform to standard scales.

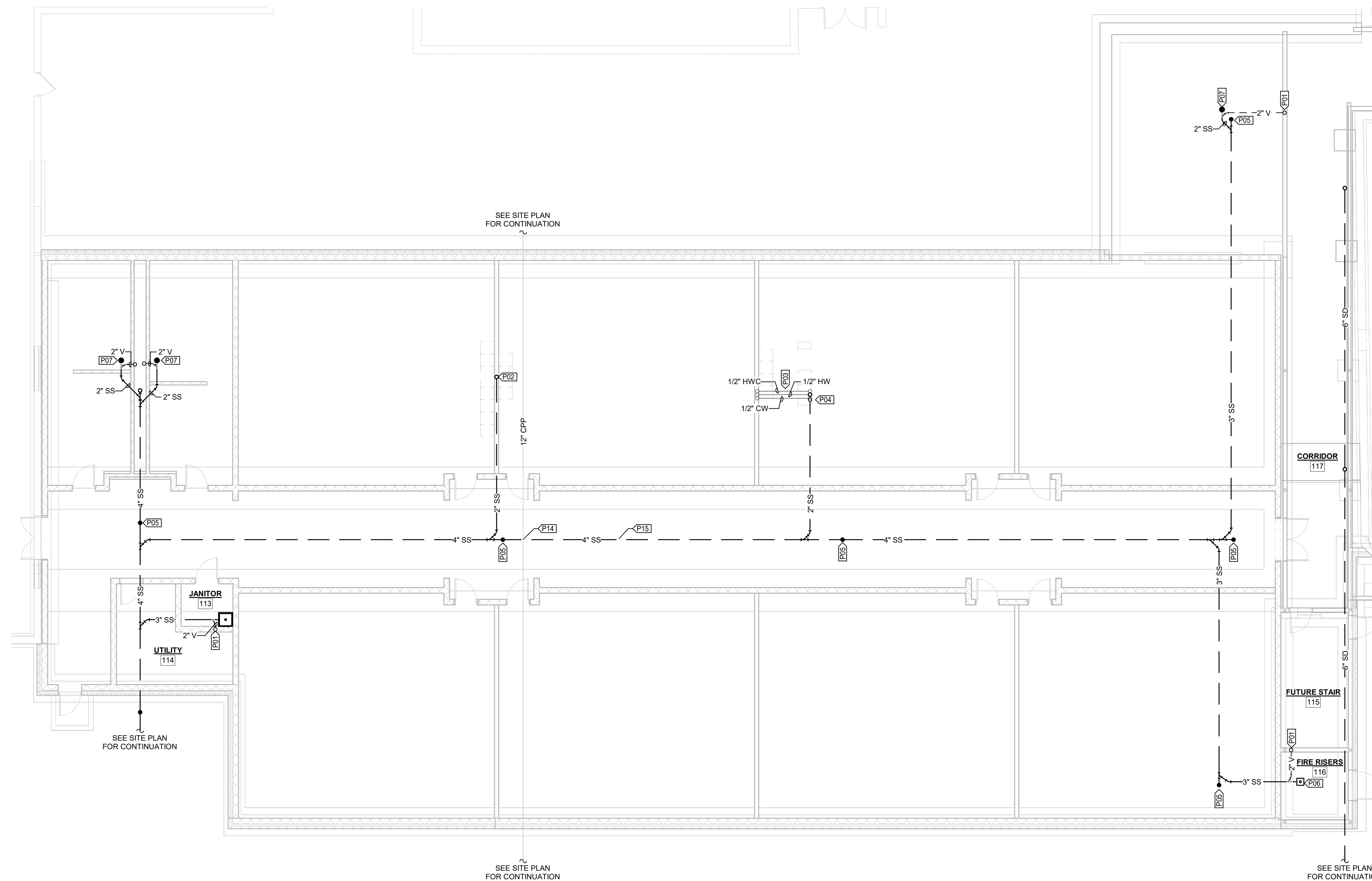
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FIELD	JBM	FIELD BOOK	JBM
CHECKED	JBM	CHECK DATE	JBM

SHEET TITLE

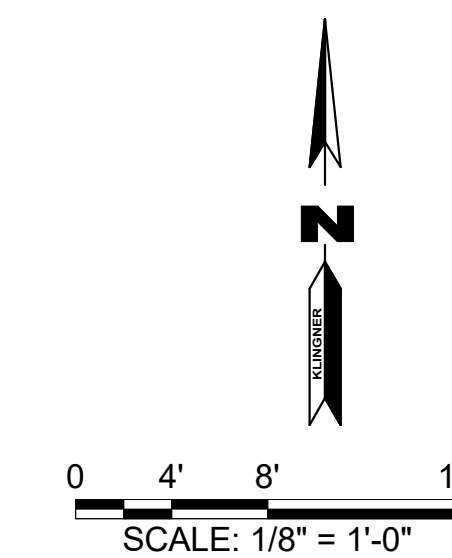
FIRE PROTECTION PLAN

PROJECT NO. 21-4982
DRAWING ISSUED DATE: 10/14/22

SHEET
FP100



1 PLUMBING PLAN - BELOW FLOOR
1/8" = 1'-0"



VALUE	DESCRIPTION
P01	ROUTE 2" VENT UP AND PROVIDE A 3" VENT THROUGH ROOF.
P02	ROUTE SANITARY SEWER UP TO CLASSROOM SINKS. REFER TO ABOVE FLOOR PLUMBING PLAN FOR ADDITIONAL INFORMATION.
P03	ROUTE DOMESTIC HOT WATER, DOMESTIC COLD WATER, AND DOMESTIC HOT WATER CIRCULATION PIPING UNDER FLOOR AND TO ISLAND.
P04	ROUTE SANITARY SEWER UP TO CLASSROOM ISLAND SINK. ROUTE CLASSROOM SINK VENT PIPE DOWN AND CONNECT TO SANITARY SEWER.
P05	ROUTE SANITARY SEWER UP TO CLEANOUT. REFER TO ABOVE FLOOR PLUMBING PLAN FOR ADDITIONAL INFORMATION.
P06	ROUTE SANITARY SEWER UP TO FLOOR SINK. COORDINATE INSTALLATION OF FLOOR SINK WITH FIRE SUPPRESSION DRAIN.
P07	ROUTE SANITARY SEWER UP TO FLOOR DRAIN. REFER TO ABOVE FLOOR PLUMBING PLAN FOR ADDITIONAL INFORMATION.
P14	EXISTING STORM WATER DRAINAGE PIPE APPROXIMATELY 5FT BELOW FINISHED FLOOR WHERE NEW SANITARY SEWER PIPE CROSSES ABOVE.
P15	SLOPE 4" SANITARY SEWER AT 1/8" PER FOOT UP TO THE EXISTING STORM WATER DRAINAGE PIPE.

- GENERAL NOTES:**
- SLOPE 3" AND SMALLER SANITARY SEWER PIPING AT 1/4" PER FOOT.
 - SANITARY SEWER PIPING WHICH IS 4" AND LARGER CAN BE SLOPED AT 1/8" PER FOOT.

REVISION HISTORY			
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HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE, MO 65255

Non-Reduced Sheet Size 30" x 42"
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FIELD	FIELD BOOK	FIELD	FIELD BOOK
CHECKED	JUN	CHECK DATE	

SHEET TITLE

BELOW FLOOR
PLUMBING PLAN

PROJECT NO.
21-4882

DRAWING ISSUED DATE:
10/14/22

SHEET

P101

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VALUE	DESCRIPTION
P01	ROUTE 2" VENT UP AND PROVIDE A 3" VENT THROUGH ROOF.
P08	ROUTE CONDENSATE DISCHARGE PIPE DOWN TIGHT TO WALL AND INTO MOP SINK.
P09	PROVIDE SHUTOFF VALVES IN DOMESTIC COLD WATER PIPE, DOMESTIC HOT WATER PIPE, AND DOMESTIC HOT WATER CIRCULATION PIPE AND CAP FOR FUTURE CONNECTION.
P10	REFER TO 3-D VIEW FOR PIPING INFORMATION IN BOYS' AND GIRLS' TOILET ROOMS.
P11	REFER TO DOMESTIC WATER HEATER PIPING SCHEMATIC DIAGRAM FOR ACCESSORIES, COMPONENTS, AND PIPING ARRANGEMENT. COORDINATE INSTALLATION WITH MECHANICAL CONTRACTOR.
P12	ROUTE 1" SANITARY SEWER UP. REFER TO ABOVE FLOOR PLUMBING PLAN FOR ADDITIONAL INFORMATION.
P13	CONCENTRIC VENT FOR DOMESTIC WATER HEATER.
P16	STORM WATER DRAINAGE PIPE UP TO ROOF DRAIN.
P17	STORM WATER DRAINAGE PIPE UP TO EMERGENCY ROOF DRAIN.

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 HALLSVILLE, MO 65255

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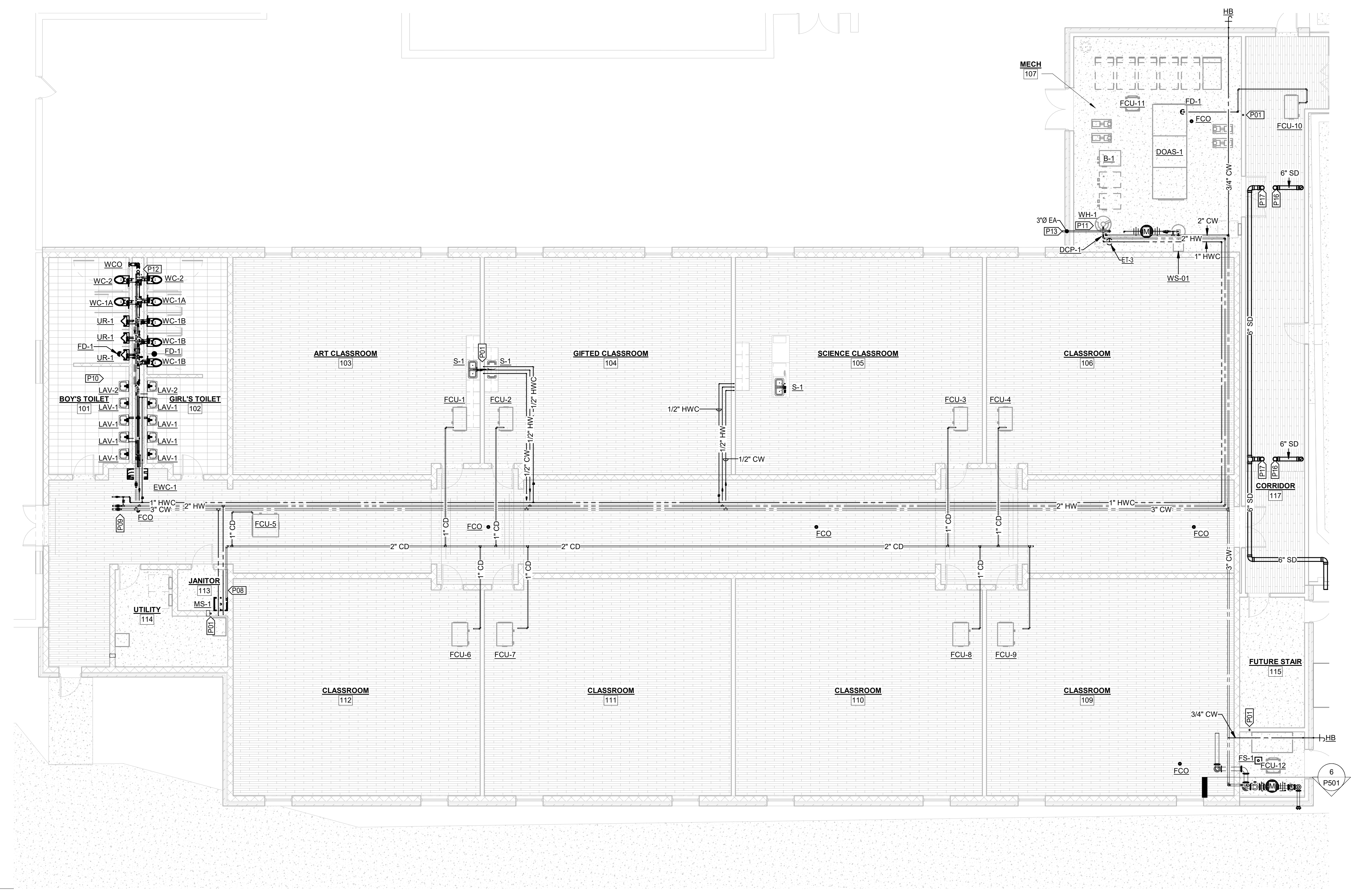
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FIELD	MHB	FIELD BOOK	MHB
CHECKED	JUN	CHECK DATE	

SHEET TITLE
ABOVE FLOOR PLUMBING PLAN

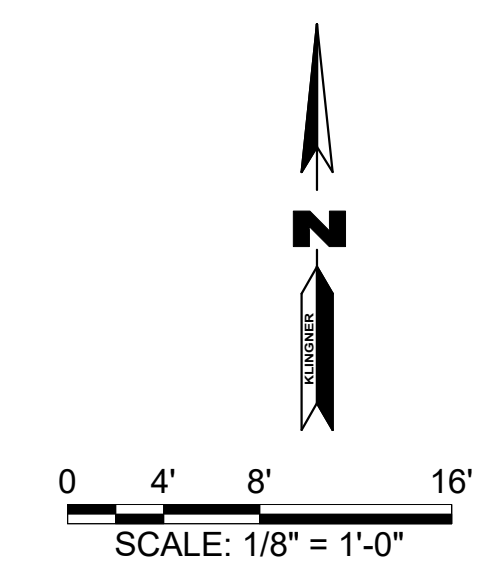
PROJECT NO.
 21-0982

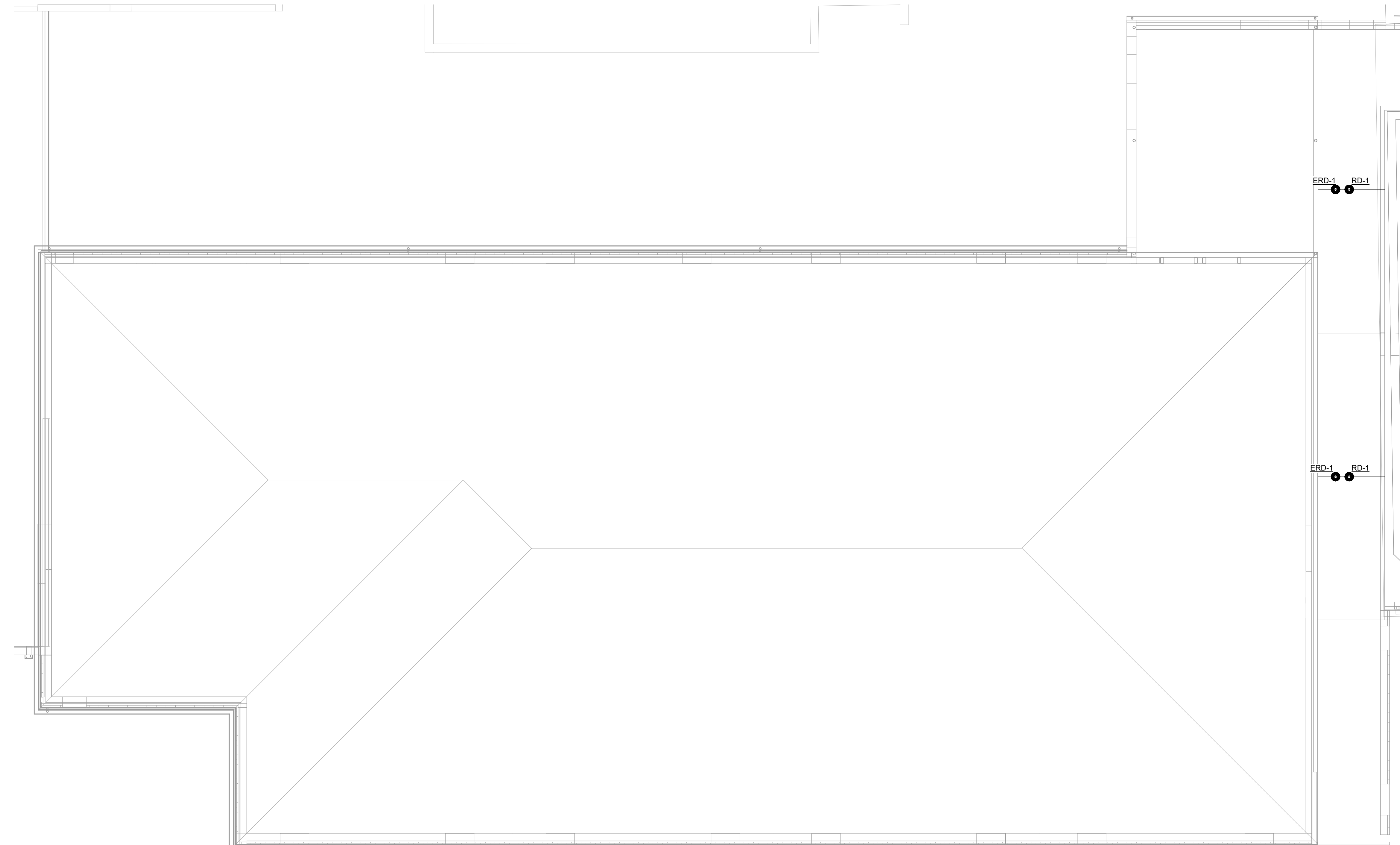
DRAWING ISSUED DATE:
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P102



1 PLUMBING PLAN - ABOVE FLOOR
 1/8" = 1'-0"





KEYNOTE LEGEND	
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 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE, MO 65255

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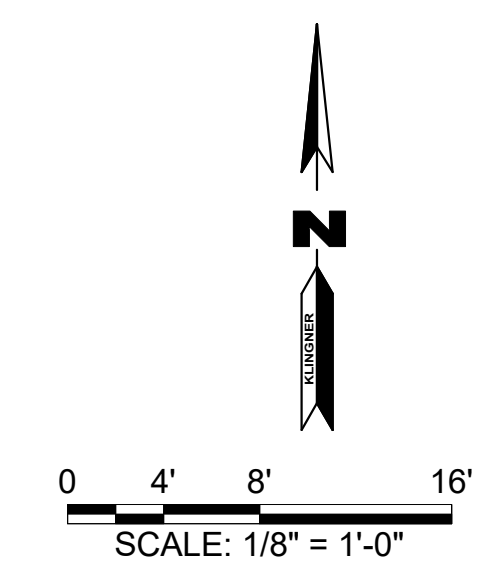
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SHEET TITLE
PLUMBING ROOF PLAN

PROJECT NO.
 21-0932

DRAWING ISSUED DATE:
 10/14/22

SHEET
P103



1 PLUMBING ROOF PLAN
 NTS

PLUMBING FIXTURE SCHEDULE														
TAG	ADA	DESCRIPTION	ROUGH IN PIPE SIZE				BASIS OF DESIGN		FIXTURE REMARKS	TYPE	DESCRIPTION	BASIS OF DESIGN FIXTURE ACCESSORIES		ACCESSORY REMARKS
			CW	HW	SS	V	MAKE	MODEL				MAKE	MODEL	
ECO	No	CAST IRON WITH BRONZE PLUG & RUBBER GASKET CONNECTION TO PIPE					ZURN JAY R SMITH MIFAB	ZN-1400-BP-SG-SM 4021S C1220-1		COORDINATE FINISH ELEVATION WITH GENERAL CONTRACTOR				
ERD-1	Yes	12"ø CAST IRON BODY AND DOME STRAINER, W/ FLASHING CLAMP, ROOF SUMP, & UNDER DECK CLAMP	0"	0"	2"	0"	ZURN JAY R SMITH JOSAM	Z121 1010 21500		LARGE SUMP OVERFLOW ROOF DRAIN WITH INTEGRAL GRAVEL STOP AND 2" HIGH WATER DAM COLLAR				
EW-1	Yes	BOTTLE FILLING STATION & 8-LEVEL ADA COLLER	1/2"		1 1/2"	1 1/2"	ELKAY ZURN JAY R SMITH MIFAB	L25TL8WSLK ZN-1400-BP-SG-SM 4021S C1220-1		COORDINATE FINISH ELEVATION WITH GENERAL CONTRACTOR				
FGO	No	ADJUSTABLE, CAST IRON BODY W/ POLISHED NICKEL BRONZE TOP & BRONZE PLUG			4"		ZURN JAY R SMITH MIFAB	Z121 1010 21500						
FD-1	Yes	ADJUSTABLE, CAST IRON BODY W/ POLISHED NICKEL BRONZE TOP FLOOR DRAIN			2"	2"	ZURN	ZN-1158						
FS-1	Yes	12 x 12 A.R.E. SANI-FLOOR RECEPTOR, 6 INCH SUMP DEPTH	0"	0"	3"	2"	ZURN	ZN-1900-3NH		COORDINATE FINISH ELEVATION WITH GENERAL CONTRACTOR				
HB	No	EXTERIOR FROSTPROOF, BACKFLOW PREVENTER, ANTI-SIPHON, AUTOMATIC DRAINING, W/ LOOSE KEY	3/4"				WOODFORD JAY R SMITH WATTS	MODEL 67 5619 HY-42						
LAV-1	No	WALL MOUNT LAVATORY, 19"W X 17"D, VITREOUS CHINA WITH FAUCET HOLES ON 4" CENTERS	1/2"	1/2"	1 1/4"	1 1/4"	AMERICAN STANDARD GERBER KOHLER	DECLYN 0321.075 12-314-98 K-1728	FAUCET CARRIER	4" CENTERS, SELF CLOSING METERING TYPE W/ SEPARATE HOT & COLD WATER CONTROL AND 0.5 GPM FLOW CONTROL W/ FOOT SUPPORT AND CONCEALED ARMS	CHICAGO FAUCET GERBER TSBRASS WADE JAY R SMITH ZURN	802-VE2805-665ABCP 44-340 B-0831 520 0700 Z1231		
LAV-2	Yes	WALL MOUNT LAVATORY, 19"W X 17"D, VITREOUS CHINA WITH FAUCET HOLES ON 4" CENTERS	1/2"	1/2"	1 1/4"	1 1/4"	AMERICAN STANDARD GERBER KOHLER	DECLYN 0321.075 12-314-98 K-1728	FAUCET CARRIER	4" CENTERS, SELF CLOSING METERING TYPE W/ SEPARATE HOT & COLD WATER CONTROL AND 0.5 GPM FLOW CONTROL W/ FOOT SUPPORT AND CONCEALED ARMS	CHICAGO FAUCET GERBER TSBRASS WADE JAY R SMITH ZURN	802-VE2805-665ABCP 44-340 B-0831 520 0700 Z1231		
MS-1	Yes	3" DRAIN, MOLDED ONE-PIECE CONSTRUCTION	1/2"	1/2"	3"	1 1/2"	SWAN FIAT ACORN	MS-2424 MSBD2424 TM-242410	HOSE CORNER GUARD RIM GUARD MOP HOLDER FAUCET	5/8" DIA. REINFORCED RUBBER HOSE, SPRING LOADED RUBBER HOLDER 20 GA. TYPE 304 STAINLESS STEEL STAINLESS STEEL SPRING LOADED RUBBER ON STAINLESS STEEL WALL PLATE 8" ADJUSTABLE CENTERS, LEVER ACTUATED TYPE W/ SEPARATE HOT & COLD WATER CONTROL, VACUUM BREAKER NOZZLE, WALL BRACE, AND ROUGH CHROME PLATED FINISH	SWAN FIAT MUSTEE SWAN FIAT MUSTEE SWAN FIAT MUSTEE SWAN FIAT MUSTEE SWAN	MS2405 832AA 665.700 MSG2436 57.2436 E-88-AA 63.403 MS2437 889-CC 66.800 MS-2412 830-AA 63.600A		
RD-1	Yes	12"ø CAST IRON BODY AND DOME STRAINER, W/ FLASHING CLAMP, ROOF SUMP, & UNDER DECK CLAMP	0"	0"	2"	0"	ZURN JAY R SMITH MIFAB	Z121 1010 21500		LARGE SUMP OVERFLOW ROOF DRAIN WITH INTEGRAL GRAVEL STOP AND 2" HIGH WATER DAM COLLAR				
S-1	Yes	DOUBLE WELL SINK, 18 GA. (18-8) NICKEL BEARING STAINLESS STEEL WITH THREE FAUCET HOLES AND TWO 13-1/2"x16"x10" BOWLS.	3/4"	3/4"	2"	1 1/2"	ELKAY FRANKE JUST MFG	DLR332210 D6410PCB-1 DLX-2133-4-GR	FAUCET STRAINER & TAILPIECE	DECK MOUNTED FAUCET, PULL DOWN SPOUT, USER ADJUSTABLE TEMPERATURE CONTROL, GOOSENECK SPOUT 3-1/2" DRAIN TYPE 304 SST BODY STRAINER BASKET AND TAILPIECE	ELKAY CHICAGO FAUCETS AMERICAN STANDARD ELKAY	LKAV3032 434-ABCP 4931.390 LK99	PROVIDE WITH POINT OF USE THERMOSTATIC MIXING VALVE SET TO 104F. PROVIDE DECK MOUNTED TRIM PLATE FOR 3 HOLE SINK.	
UR-1	Yes	WALL MOUNTED, WASHOUT FLUSHING ACTION, VITREOUS CHINA URINAL WITH TOP SPUD	3/4"	0"	2"	1 1/2"	AMERICAN STANDARD GERBER KOHLER	WASHBROOK FLOWWISE 6590.001 27-790 K-4904-ET	FLUSH VALVE CARRIER	MANUAL W/ FLUSH VALVE SUPPORT AND LOWER BEARING PLATE	KOHLER SLOAN TOTO WADE JAY R SMITH ZURN	K-10949 8186-0.5 TEU1LA 400-AM1-AM11 0617 Z1222-58		
WC-1A		WALL MOUNTED VITREOUS CHINA, ELONGATED BOWL, SIPHON JET, WATER SAVING, 1-1/2" TOP SPUD	1"		3"	2"	AMERICAN STANDARD KOHLER TOTO	AFWALL MILLENNIUM 2257.101 K-4325 CT708U(G)	SEAT FLUSH VALVE CARRIER	OPEN FRONT, LESS COVER, ELONGATED, HEAVY DUTY MANUAL EXTRA-HEAVY DUTY 750 LBS BACK-TO-BACK ADJUSTABLE SIPHON JET CARRIER SYSTEM	BEMIS KOHLER AMERICAN STANDARD KOHLER SLOAN TOTO ZURN	2155CTJ K-4666-CA 5901.110T K-10674-SV 8111-1.6 TET1GA Z1201-ND4-XH		
WC-1B		WALL MOUNTED VITREOUS CHINA, ELONGATED BOWL, SIPHON JET, WATER SAVING, 1-1/2" TOP SPUD	1"		3"	2"	AMERICAN STANDARD KOHLER TOTO	AFWALL MILLENNIUM 2257.101 K-4325 CT708U(G)	SEAT FLUSH VALVE CARRIER	OPEN FRONT, LESS COVER, ELONGATED, HEAVY DUTY MANUAL EXTRA HEAVY-DUTY, 750 LBS, ADJUSTABLE HIGH PERFORMANCE SIPHON JET CARRIER SYSTEM	BEMIS KOHLER AMERICAN STANDARD KOHLER SLOAN TOTO ZURN	2155CTJ K-4666-CA 5901.110T K-10674-SV 8111-1.6 TET1GA Z1201-N_4-XH		
WC-2	Yes	WALL MOUNTED VITREOUS CHINA, ELONGATED BOWL, SIPHON JET, WATER SAVING, 1-1/2" TOP SPUD	1"		3"	2"	AMERICAN STANDARD KOHLER TOTO	AFWALL MILLENNIUM 2257.101 K-4325 CT708U(G)	SEAT FLUSH VALVE CARRIER	OPEN FRONT, LESS COVER, ELONGATED, HEAVY DUTY MANUAL EXTRA HEAVY-DUTY, 750 LBS. BACK TO BACK, ADJUSTABLE HIGH PERFORMANCE, SIPHON JET CARRIER SYSTEM	BEMIS KOHLER AMERICAN STANDARD KOHLER SLOAN TOTO ZURN	2155CTJ K-4666-CA 5901.110T K-10674-SV 8111-1.6 TET1GA Z1201-ND4-XH		
WCO	Yes	CLEANOUT WITH ROUND, POLISHED STAINLESS STEEL ACCESS COVER			4"		ZURN JAY R SMITH SOUX CHIEF	Z1446-NH 4710 870-56						

GAS WATER HEATER SCHEDULE															
DESCRIPTION	WATER VOLUME	FUEL TYPE	INPUT CAP.	MIN. UEF	HEAT RECOVERY	MAX. PRES.	MAX. TEMP.	VOLT	POLES	FLA	MOP	MAKE	MODEL	OPERATING WEIGHT (LBS)	REMARKS
COMMERCIAL, CONDENSING, MODULATING BURNER GAS WATER HEATER	60.0 gal	NAT. GAS	120000 Btu/h	95%	138 GPH @ 100°F	370.0 fh2O	180 °F	120 V	1	5 A	15 A	A. O. SMITH	BTH-120 MXI	460 lb	1, 2, 3
1. PROVIDE CONCENTRIC VENT TERMINATION KIT. 2. PROVIDE CONDENSATE NEUTRALIZATION KIT. 3. SET STORAGE TEMPERATURE AT 140°F.															

DOMESTIC EXPANSION TANK SCHEDULE										
TAG	DESCRIPTION	MAX. PRES.	MAX. TEMP.	PRE-CHARGE	TANK VOLUME	ACCEPTANCE VOLUME	MAKE	MODEL	WEIGHT	REMARKS
ET-3	POTABLE WATER, DIAPHRAGM EXPANSION TANK	150 psi	200 °F	38 psi	4.4 gal	3.2 gal	BELL AND GOSSETT	PT-12	45 lb	1
1. PROVIDE MOUNTING HARDWARE										

DOMESTIC CIRCULATING PUMP SCHEDULE										
TAG	TYPE	FLOW	HEAD	VOLT	POLES	MOP	MAKE	MODEL	WEIGHT	REMARKS
DCP-1	ECM HIGH-EFFICIENCY, VARIABLE SPEED, ADJUSTABLE SETTINGS CIRCULATOR PUMP	3.0 GPM	18.0 fh2O	120 V	1	15 A	TACO GRUNDFOS BELL & GOSSETT	0034e	25 lb	1
1. PROVIDE AQUASTAT.										

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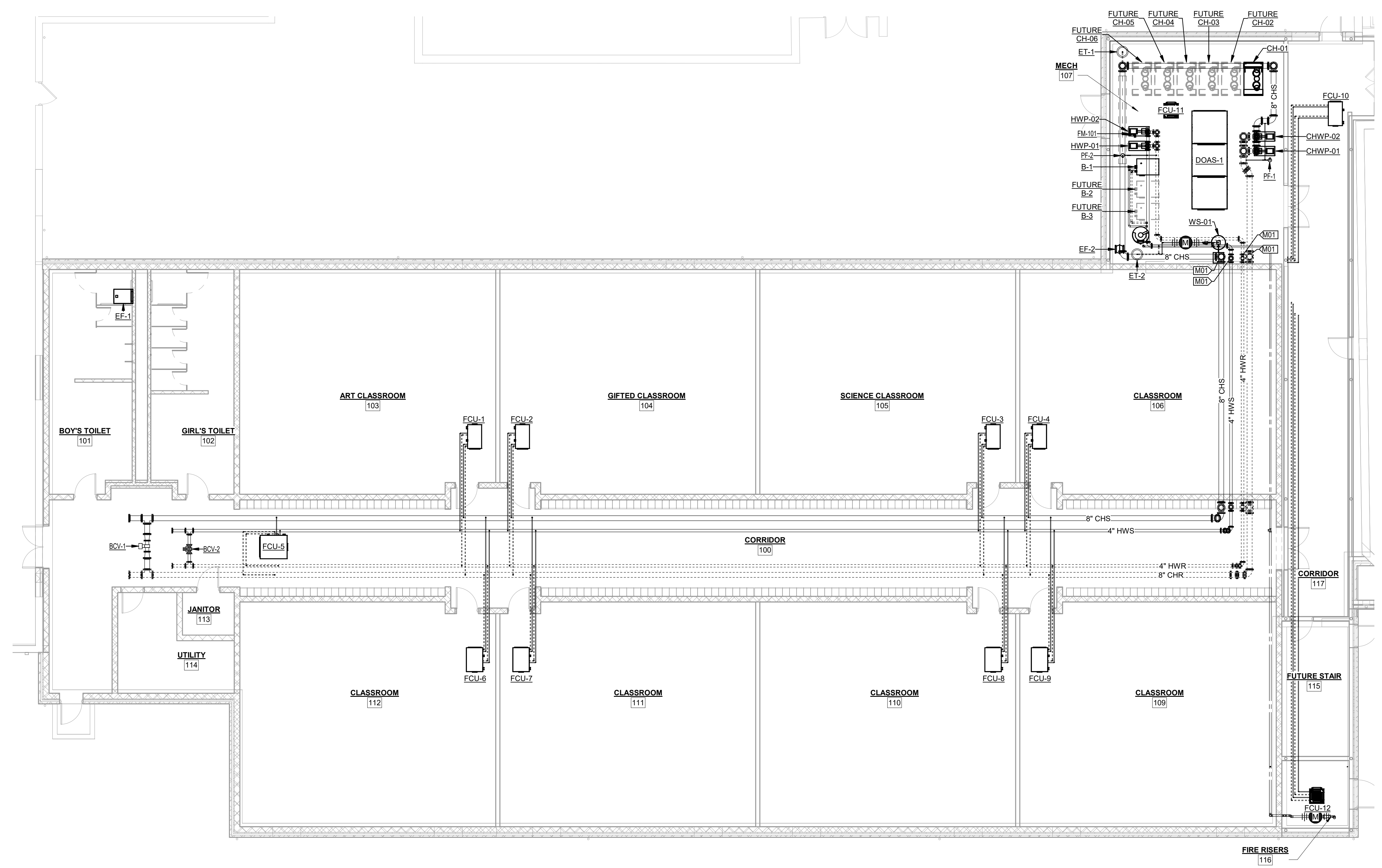
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 HALLSVILLE SCHOOL DISTRICT
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 HALLSVILLE, MO 65255

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 FIELD FIELD BOOK
 CHECKED JUN CHECK DATE
 SHEET TITLE
 PLUMBING SCHEDULES
 PROJECT NO. 21-0932
 DRAWING ISSUED DATE: 10/14/22
 SHEET
P601

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KEYNOTE LEGEND	
VALUE	DESCRIPTION
M01	PROVIDE FLEXIBLE PIPE CONNECTION AT VERTICAL PIPE DROP



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

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CHECKED	JUN	CHECK DATE	
SHEET TITLE			
MECHANICAL HYDRONIC PLAN			
PROJECT NO. 21-0982			
DRAWING ISSUED DATE: 10/14/22			
SHEET			
M101			

VALUE	DESCRIPTION

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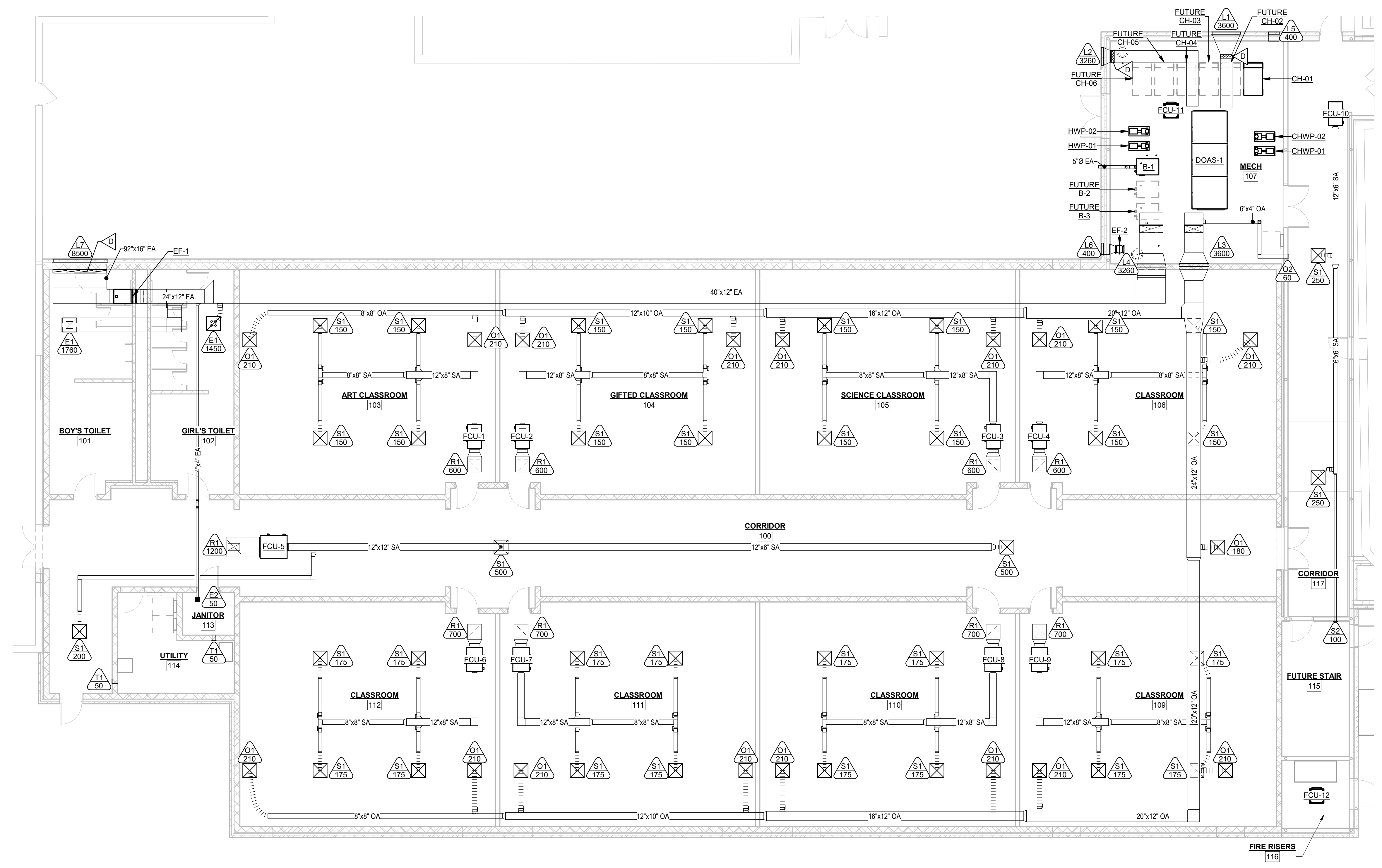
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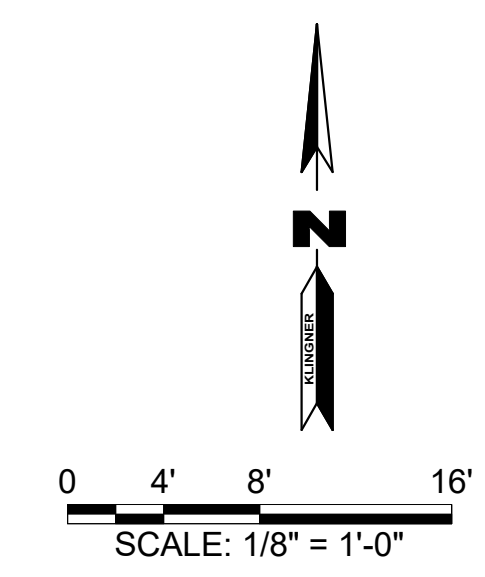
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CHECKED	JUN
CHECK DATE	
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MECHANICAL DUCTWORK PLAN	
PROJECT NO.	21-0932
DRAWING ISSUED DATE:	10/14/22
SHEET	
M102	



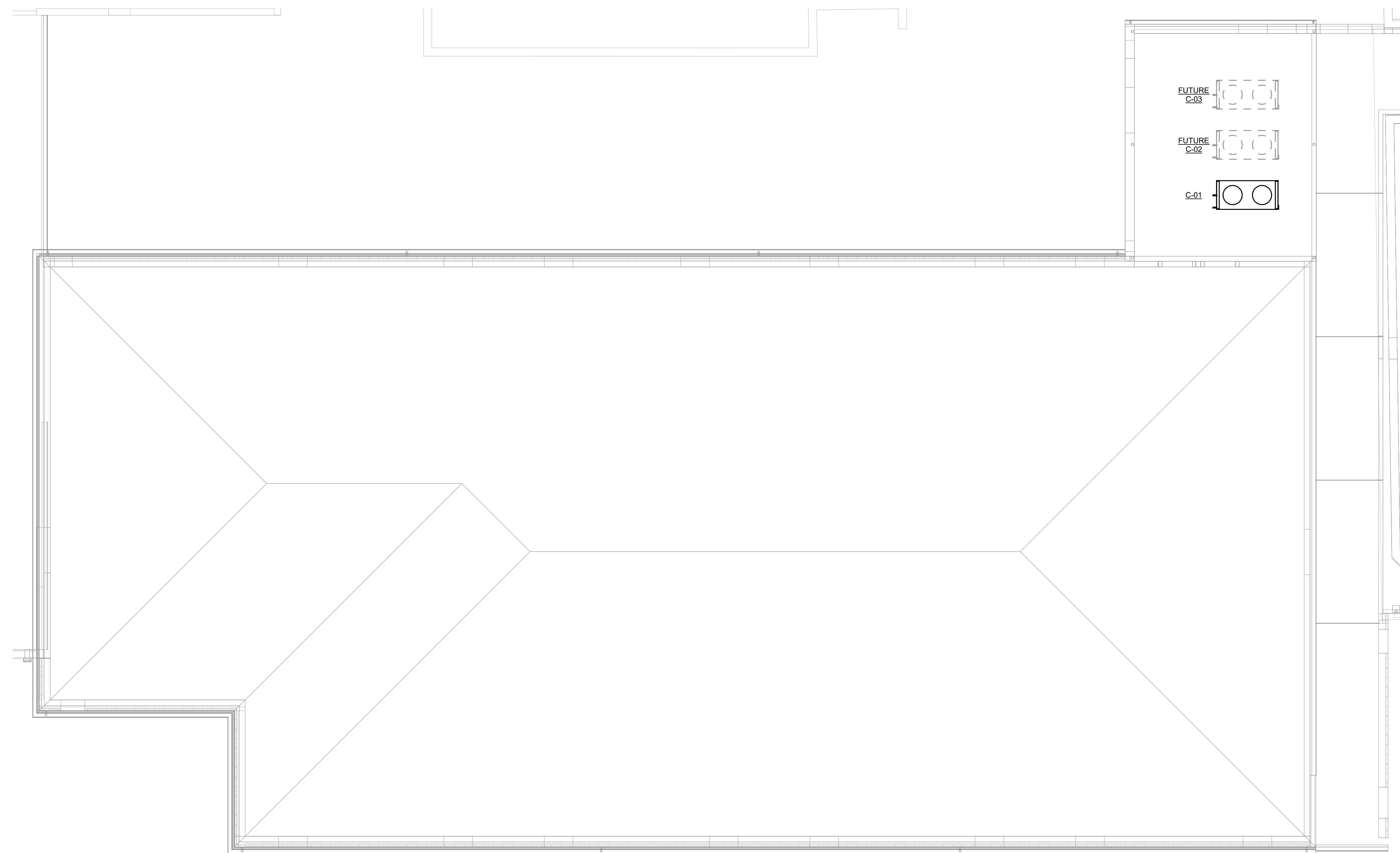
1 MECHANICAL DUCTWORK PLAN
 1/8" = 1'-0"



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



KEYNOTE LEGEND	
VALUE	DESCRIPTION

KLINGNER & ASSOCIATES, P.C.
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 907 East Ash St.
 63101
 573.395.5988
 www.klinger.com
 Quincy, IL, Galveston, TX, Burlington, IA
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NO.	DESCRIPTION	DATE

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HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE, MO 65255

Non-Reduced Sheet Size 30" x 42"
 Full sized plans have been prepared using standard scales.
 Reduced sized plans may not conform to standard scales.

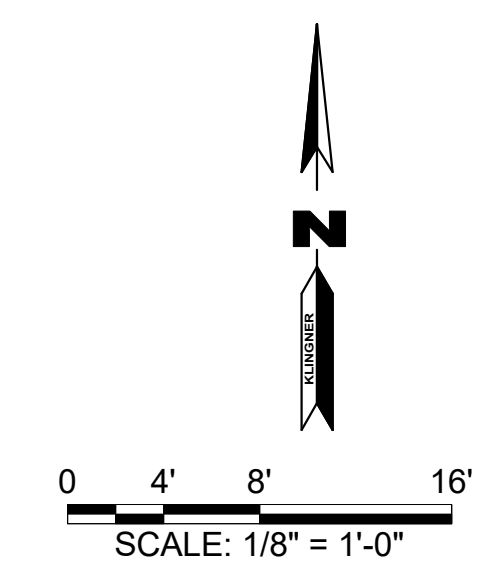
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MECHANICAL ROOF PLAN

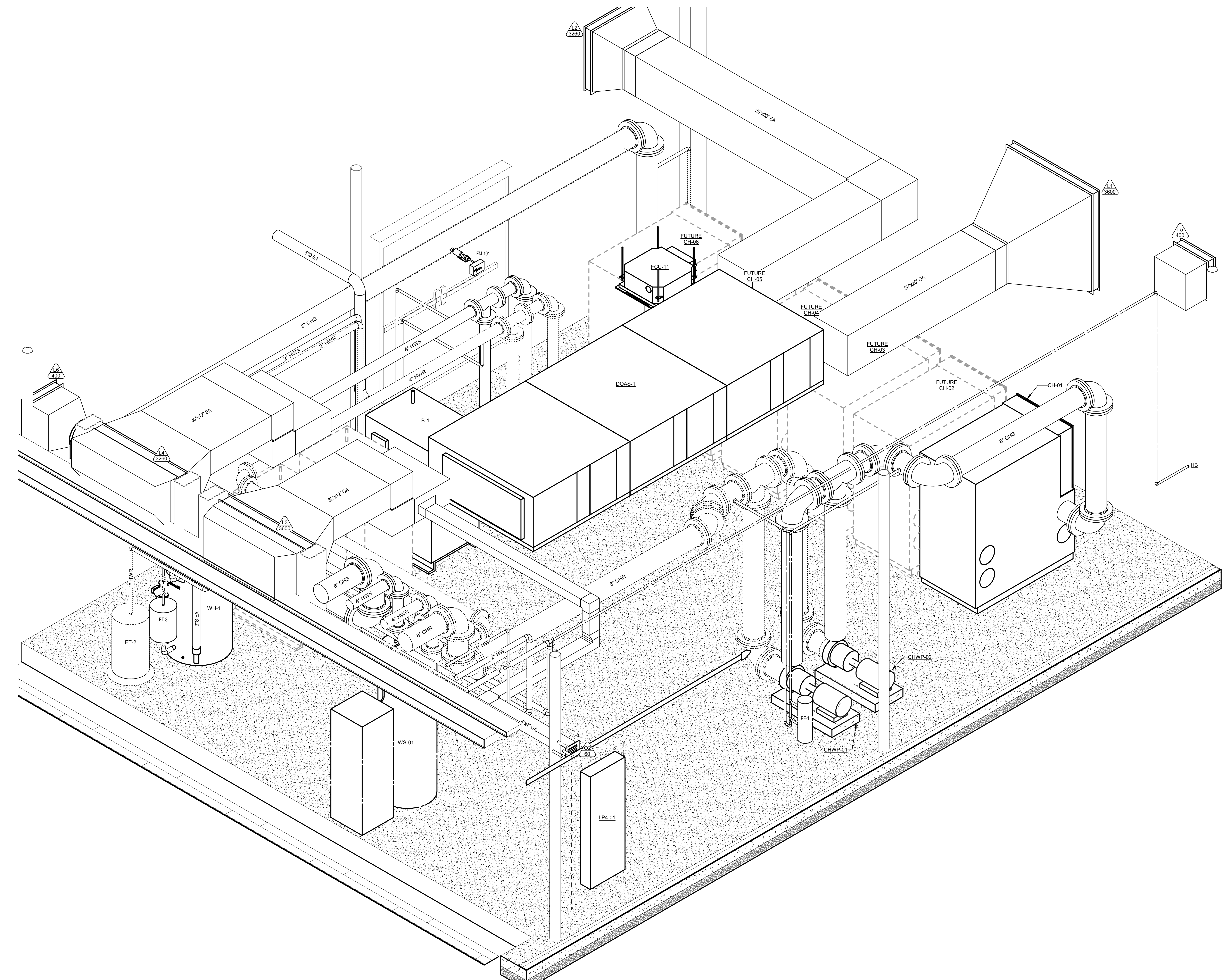
PROJECT NO.
 21-0982

DRAWING ISSUED DATE:
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SHEET
M103



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1 MECHANICAL ROOM ISOMETRIC
 NTS

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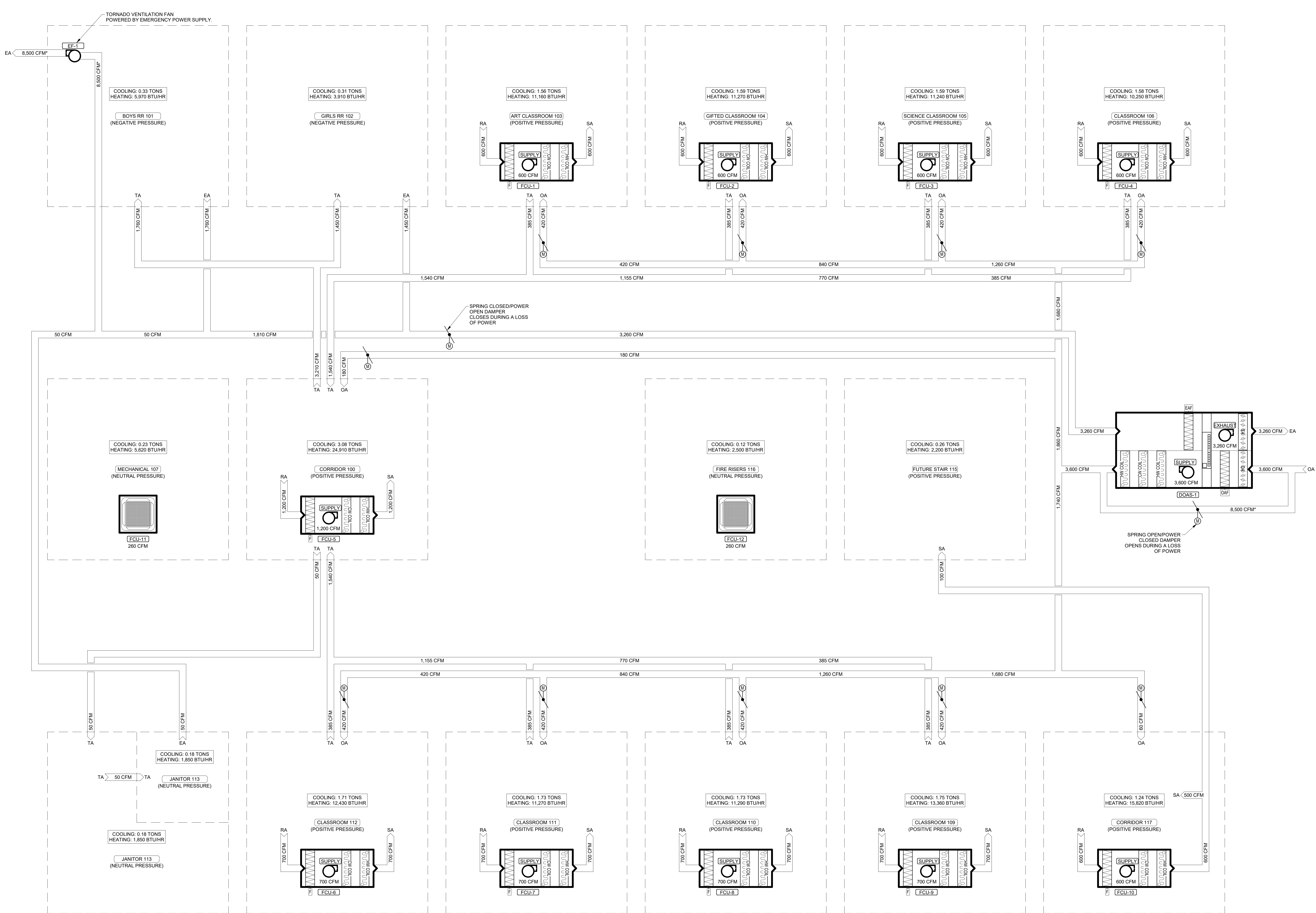
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MECHANICAL ROOM ISOMETRIC

PROJECT NO.
 21-4982

DRAWING ISSUED DATE:
 10/14/22

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*ONLY ACTIVE DURING A LOSS OF POWER. SIZED FOR 5 CFM/PERSON IN ACCORDANCE WITH ICC-500.

1 AIR FLOW SCHEMATIC - BOILER/CHILLER
 NTS

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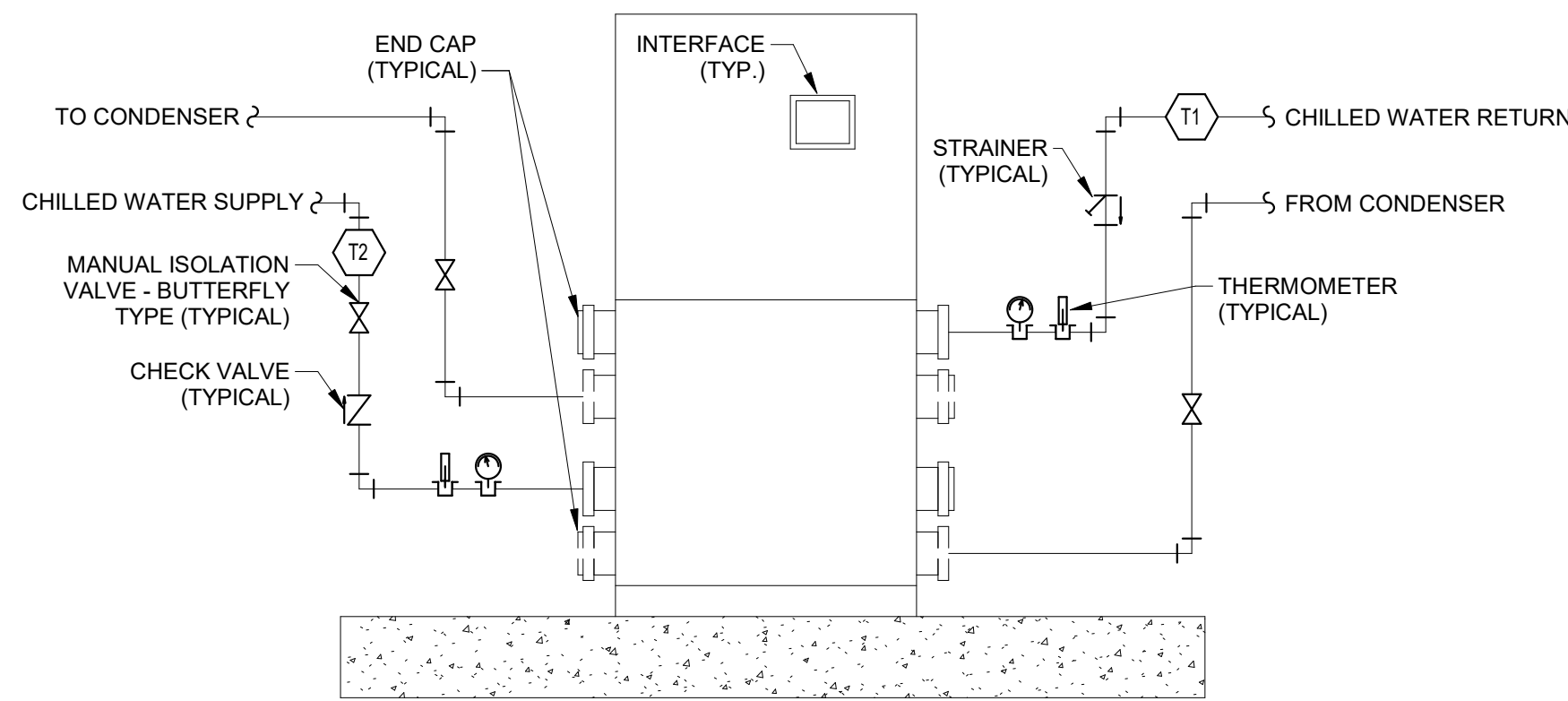
HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE, MO 65255

DESIGNED	MHB	DRAWN	MHB
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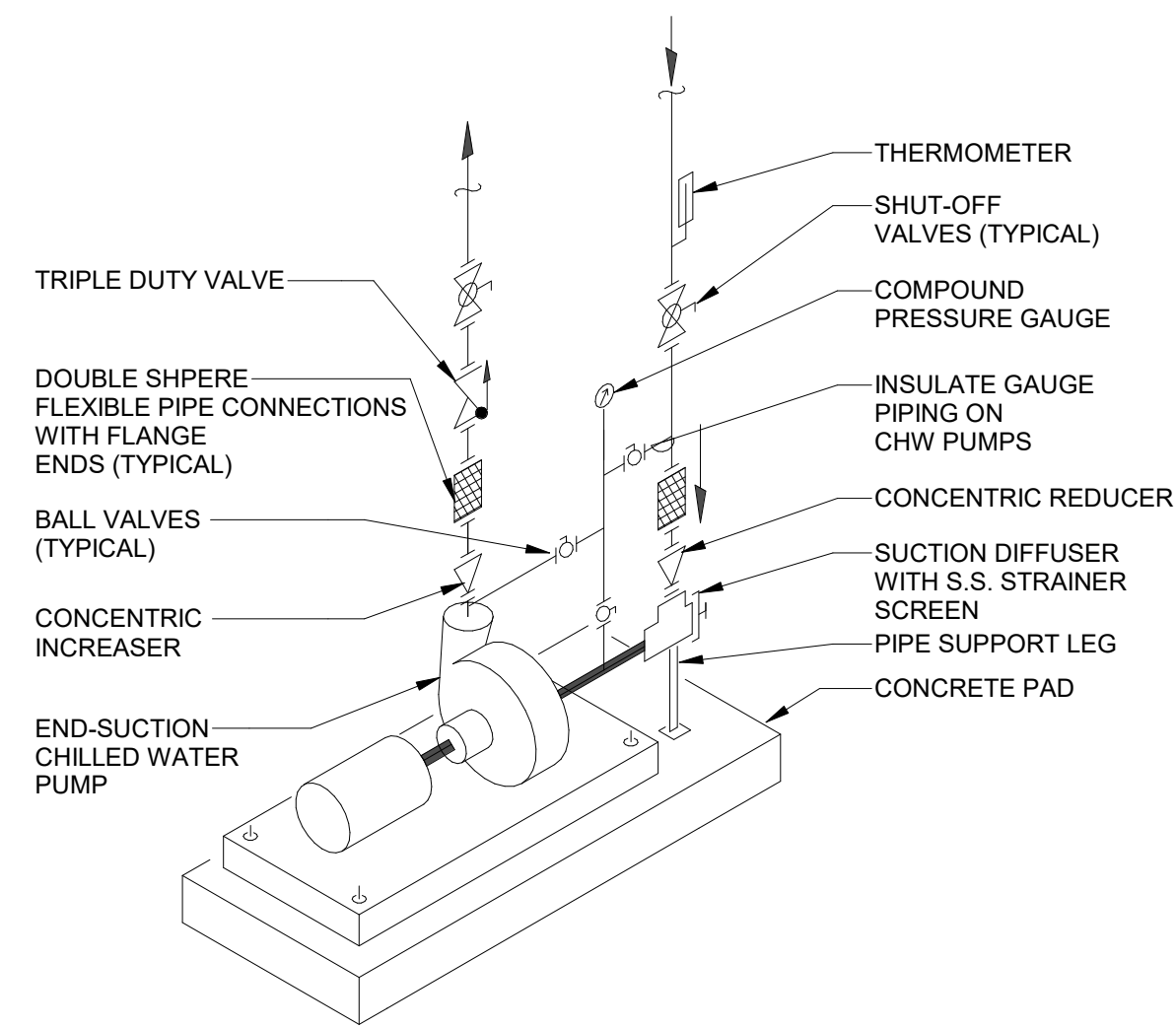
AIR FLOW DIAGRAM

PROJECT NO. 21-0892
 DRAWING ISSUED DATE: 10/14/22
 SHEET
M401

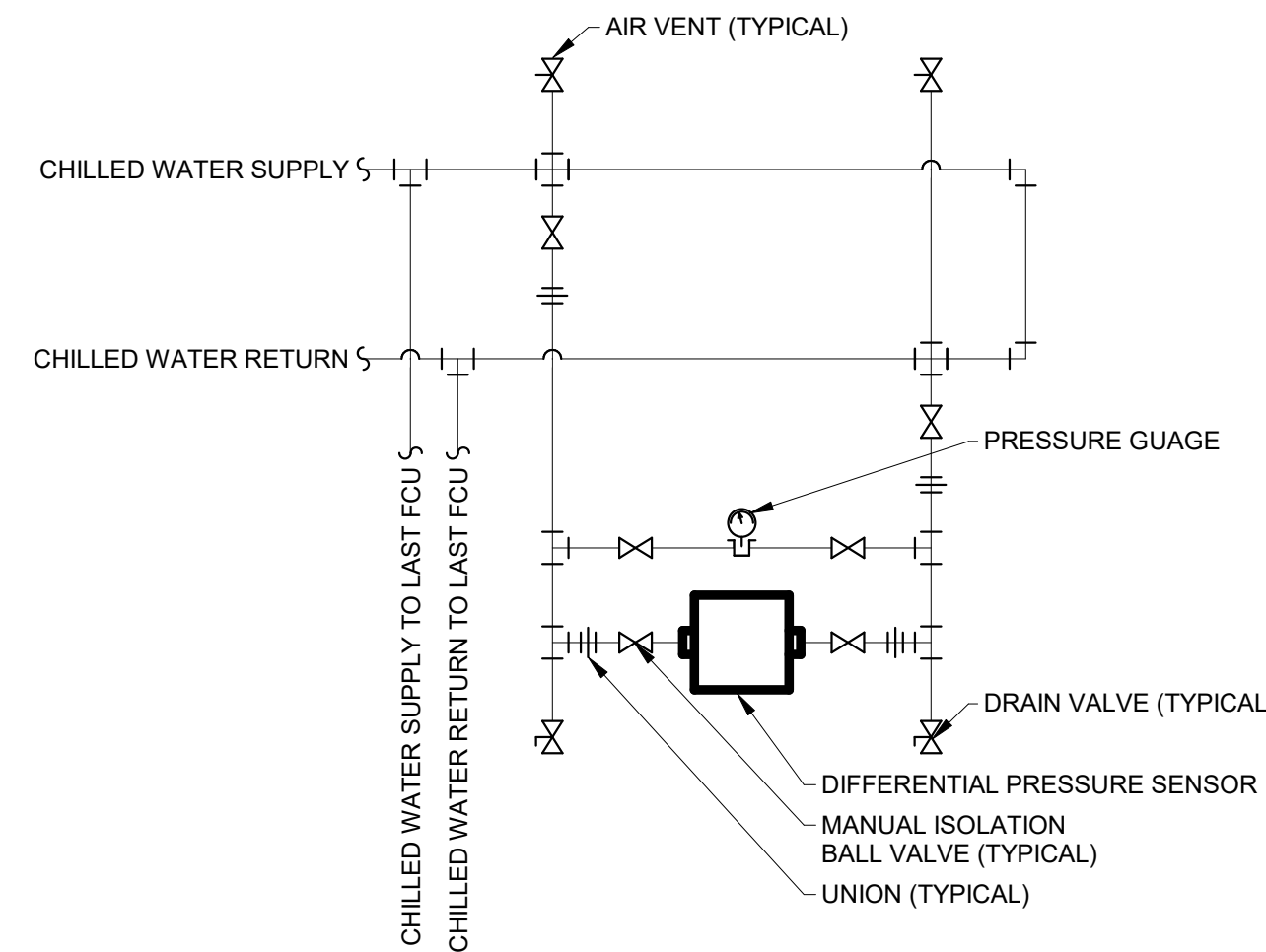
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1 CHILLER PIPING DETAIL
NTS

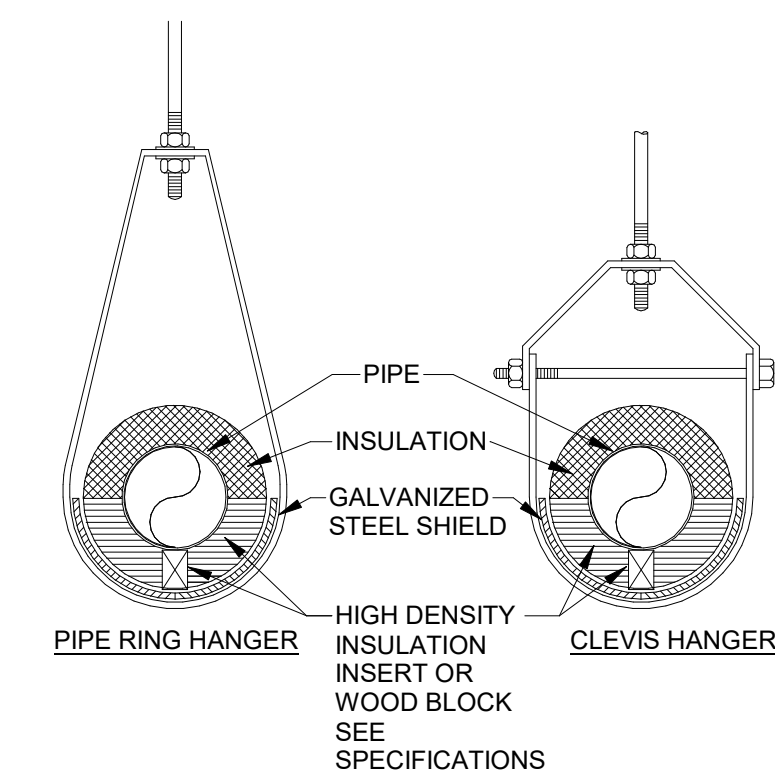


2 BASE MOUNTED PUMP DETAIL
NTS

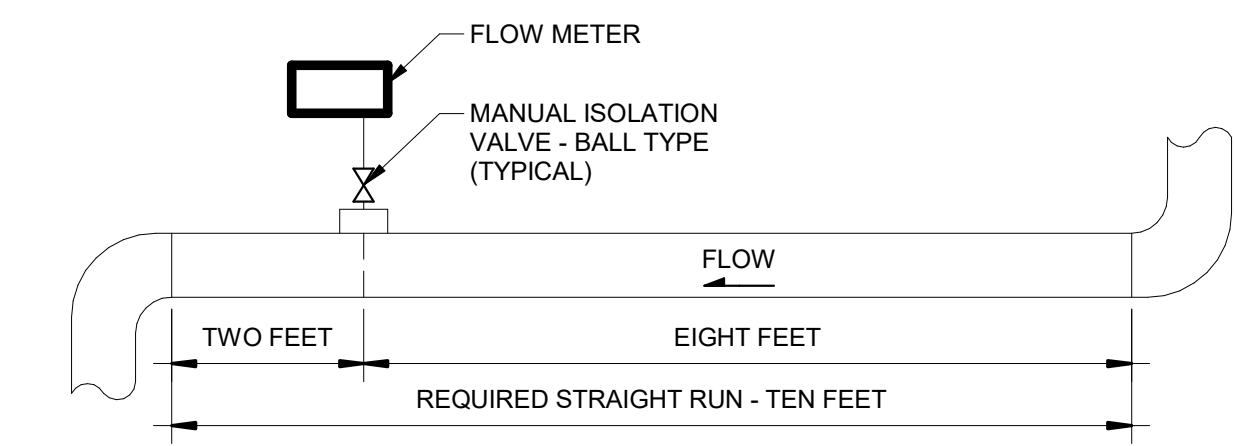


DIFFERENTIAL PRESSURE SENSOR NOTES:
 1. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR SPECIFIC INSTALLATION REQUIREMENTS.
 2. ALL PIPE SHALL BE MINIMUM SCHEDULE 40 BLACK STEEL BETWEEN POINT OF CONNECTION TO EACH MAIN AND FIRST ISOLATION VALVE. COPPER TUBING MAY BE USED AFTER ISOLATION VALVES.
 3. PROVIDE SUPPORTS FOR INSTRUMENT AND PIPING AS REQUIRED.
 4. ALL PIPING SHALL BE INSTALLED TO BE SELF-VENTING. PITCH HORIZONTAL RUNS OF INSTRUMENT PIPING TOWARD POINT OF CONNECTION.
 5. POINTS OF CONNECTION TO HORIZONTAL HYDRONIC PIPING MAINS SHALL BE ON THE SIDE OF THE PIPING. DO NOT CONNECT TO THE BOTTOM OR TOP OF THE HYDRONIC PIPING MAINS.

3 DIFFERENTIAL PRESSURE SENSOR INSTALLATION DETAIL
NTS

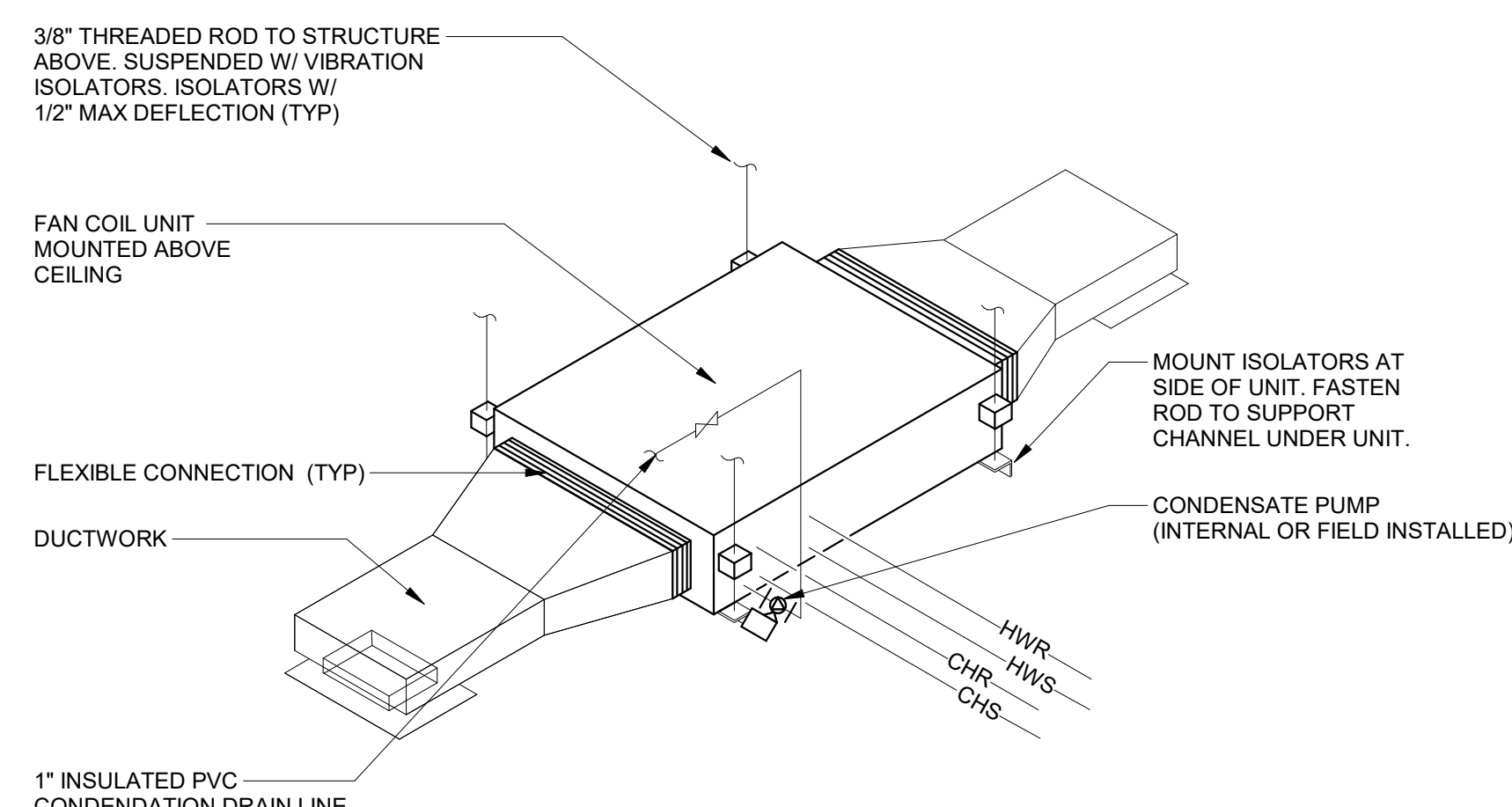


4 INSULATED PIPE HANGER DETAIL
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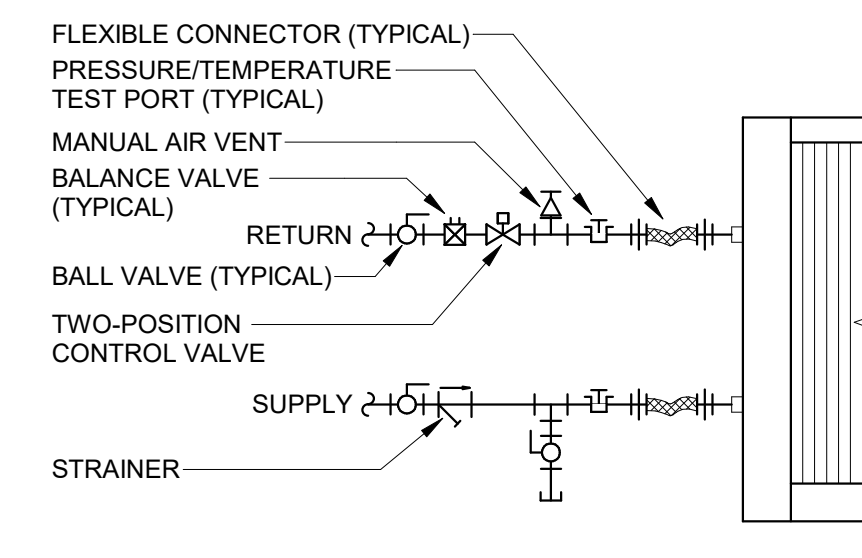


FLOW METER NOTES:
 1. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR ALL INSTALLATION REQUIREMENTS.

5 FLOW METER INSTALLATION DETAIL
NTS

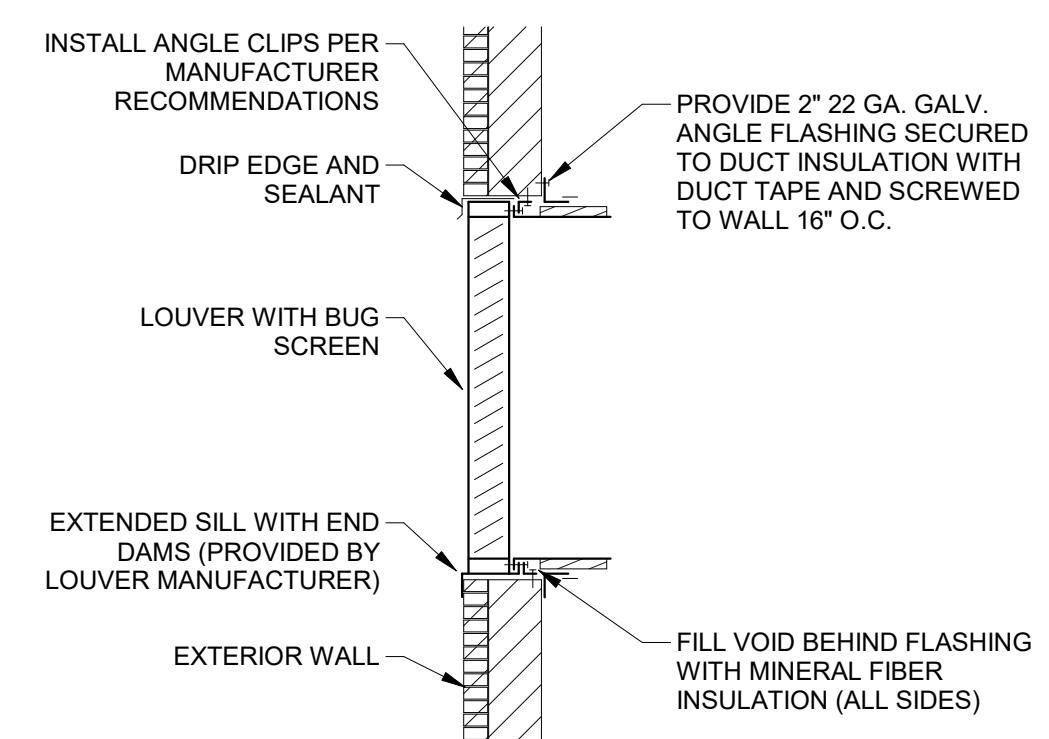


6 FAN COIL HORIZONTAL DUCTED DETAIL
NTS



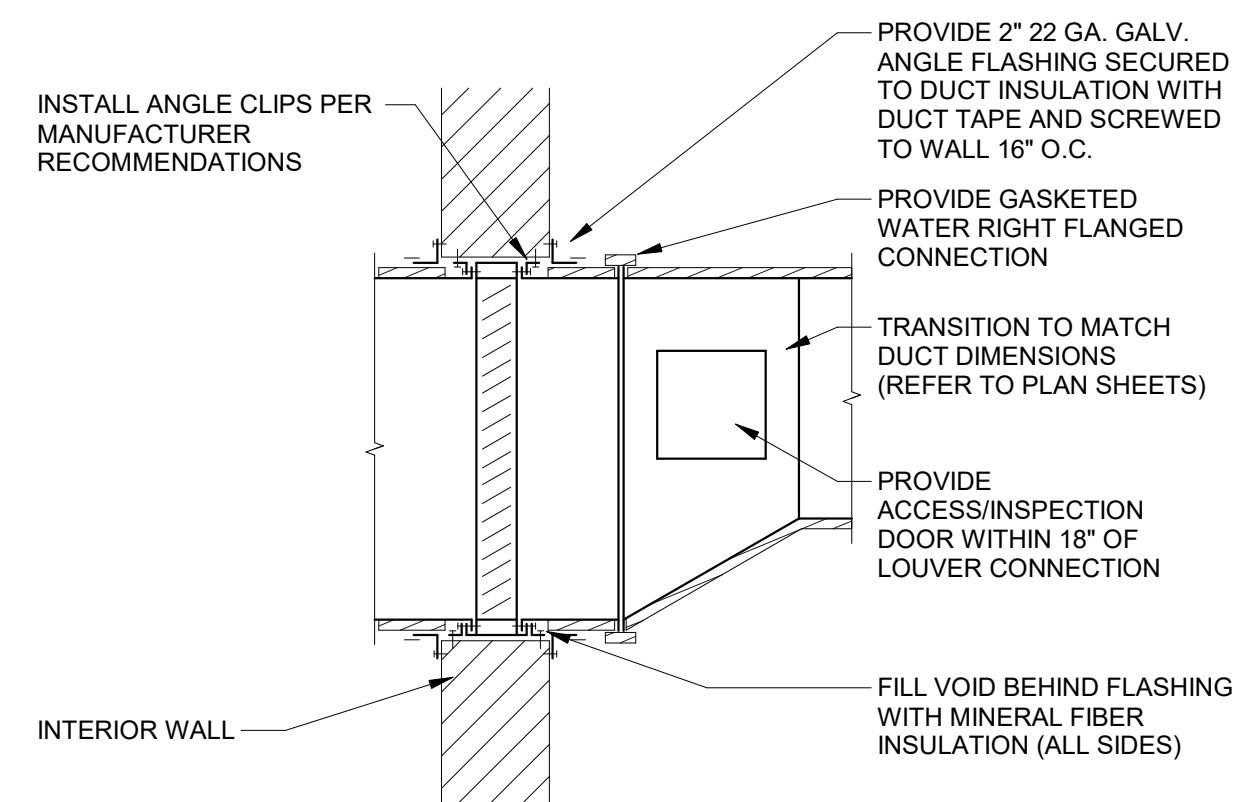
NOTES:
 1. REFER TO SPECIFICATIONS FOR PIPE MATERIAL AND VALVE AND ACCESSORIES REQUIREMENTS.

7 COIL CONNECTION DETAIL
NTS



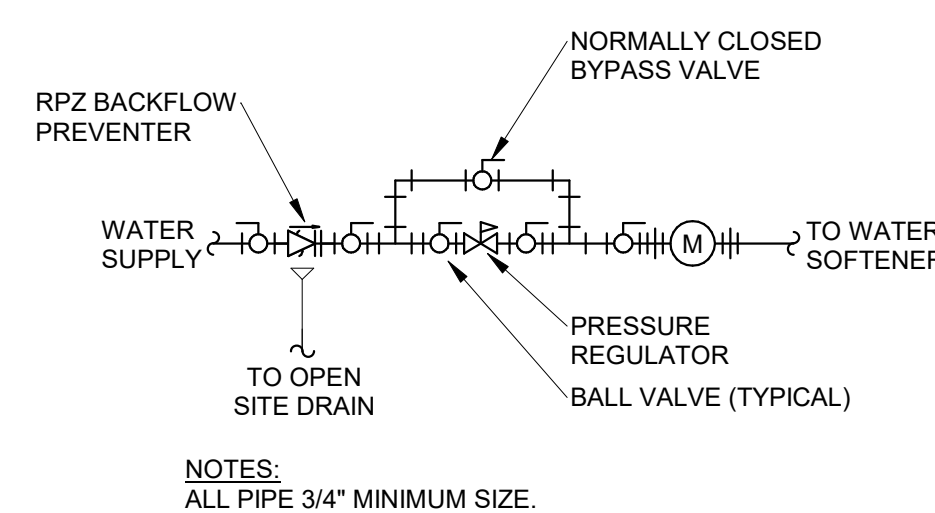
NOTES:
 1. FINAL COLOR SELECTION BY ARCHITECT SELECTION FROM MANUFACTURER STANDARD COLOR OPTIONS.
 2. COORDINATE PENETRATION FRAMING AND ALL FLASHING AND SEALANT WITH GENERAL CONTRACTOR.

8 LOUVER INSTALLATION DETAIL
NTS



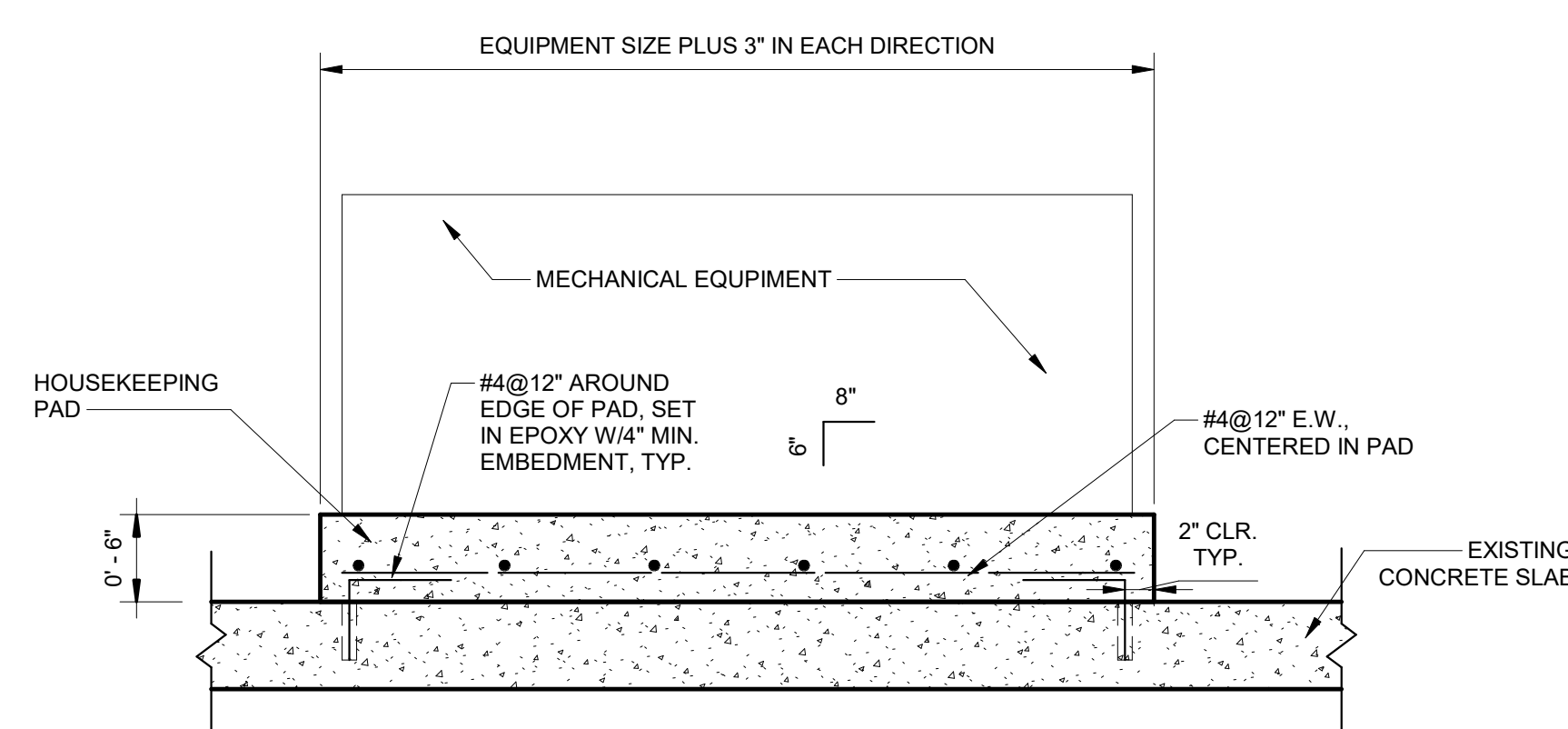
NOTES:
 1. FINAL COLOR SELECTION BY ARCHITECT SELECTION FROM MANUFACTURER CUSTOM COLOR OPTIONS.
 2. PENETRATION FRAMING AND ALL FLASHING AND SEALANT PROVIDED BY OTHERS (COORDINATE WITH GENERAL CONTRACTOR).

9 STORM LOUVER INSTALLATION DETAIL
NTS

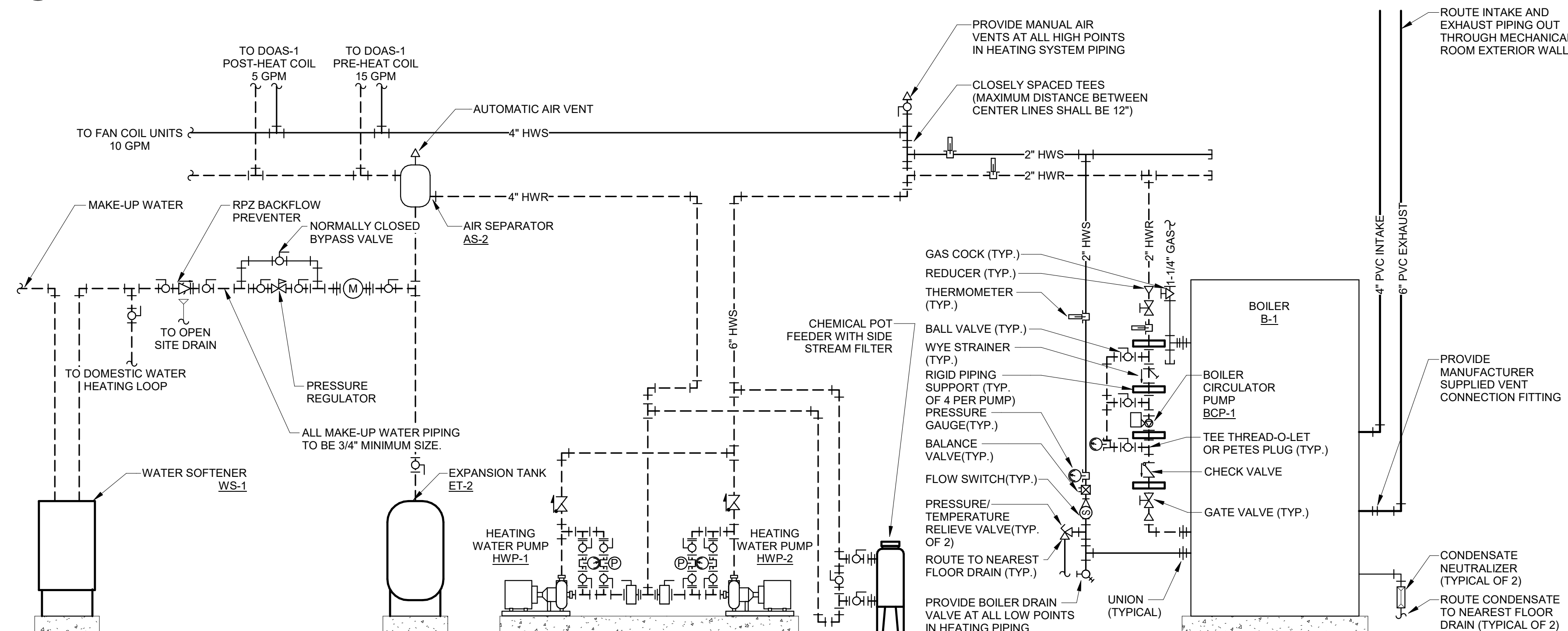


NOTES:
 ALL PIPE 3/4\"/>

10 CHILLED WATER MAKE-UP CONNECTION DETAIL
NTS



11 EQUIPMENT PAD DETAIL
NTS



12 BOILER SCHEMATIC PIPING DIAGRAM
NTS

BOILER WATER CONNECTION NOTES:
 1. PROVIDE MINIMUM OF 5 x PUMP INLET PIPE DIAMETER OF PIPING BETWEEN THE STRAINER AND THE INLET OF THE PUMP.
 2. PROVIDE A MINIMUM OF 5 x PUMP OUTLET DIAMETER OF PIPING BETWEEN THE PUMP DISCHARGE AND THE CHECK VALVE.
 3. SUCTION SIDE GATE VALVE AND STRAINER SHALL BE A MINIMUM OF ONE (1) PIPE DIAMETER LARGER THAN THE PUMP INLET CONNECTION.
 4. DISCHARGE SIDE CHECK VALVE AND GATE VALVE SHALL MATCH THE PUMP DISCHARGE CONNECTION.

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REVISION HISTORY		
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 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE, MO 65255

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CHECKED	JUN	CHECK DATE	

SHEET TITLE
MECHANICAL DETAILS

PROJECT NO.
 21-0922
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 10/14/22
 SHEET
M501

CHILLER SCHEDULE														ELECTRICAL				NOTES
MARK	MANUFACTURER	MODEL	DESCRIPTION	NOMINAL CAPACITY (TONS)	MINIMUM CAPACITY (%)	REFRIGERANT	MAXIMUM FULL LOAD ENERGY USAGE (KW/TON)	DESIGN FLOW (GPM)	MINIMUM FLOW (GPM)	EVAPORATOR DESIGN EWT (DEG. F)	DESIGN LWT (DEG. F)	DESIGN PD (FT)	VOLTAGE	PHASE	HZ	MCA	MOCP	
CH-01	CARRIER	30MPA	MODULAR, REMOTE-CONDENSER TYPE CHILLER	45	10	R-410A	1.100	80	64	56	44	5.07	208	3	60	181.35	225	1,2,3,4

NOTES:
1. PROVIDE WITH FACTORY INSTALLED BACNET CARD AND GRAPHICAL USER INTERFACE.
2. PROVIDE WITH DIGITAL COMPRESSOR ON LEAD CIRCUIT.

CONDENSER SCHEDULE														ELECTRICAL				NOTES
MARK	MANUFACTURER	MODEL	DESCRIPTION	DESIGN CAPACITY (TONS)	REFRIGERANT	DESIGN AMBIENT AIR TEMPERATURE (DEG. F)	MAXIMUM WIDTH (IN.)	MAXIMUM LENGTH (IN.)	VOLTAGE	PHASE	HZ	MCA	MOCP					
C-01	CARRIER	09DP	DUAL CIRCUIT, AIR-COOLED CONDENSER	80	R-410A	95	90	160	208	3	60	37.5	40	1,2				

NOTES:
1. SECURE CONDENSER TO ROOF. REFER TO STRUCTURAL PLANS.
2. PROVIDE WITH SECURITY GRILLES/HAIL GUARDS AND NON-FUSED DISCONNECT.

HYDRONIC PUMP SCHEDULE														ELECTRICAL				NOTES
MARK	APPLICATION	MANUFACTURER	MODEL	DESCRIPTION	FUTURE DESIGN FLOW RATE (GPM)	FUTURE DESIGN HEAD (FT)	PHASE 1 DESIGN FLOW RATE (GPM)	PHASE 1 DESIGN HEAD (FT)	MINIMUM FLOW RATE (GPM)	MOTOR HP	MOTOR RPM	VOLTAGE	PHASE	HZ				
CHWP-01	MECHANICAL ROOM	BELL & GOSSETT	e1510	CLOSED-COUPLED, END SUCTION CENTRIFUGAL	160	30	80	20	60	5	1160	208	3	60	1,2,3			
CHWP-02	MECHANICAL ROOM	BELL & GOSSETT	e1510	CLOSED-COUPLED, END SUCTION CENTRIFUGAL	160	30	80	20	60	5	1160	208	3	60	1,2,3			
HWP-01	MECHANICAL ROOM	BELL & GOSSETT	e1510	CLOSED-COUPLED, END SUCTION CENTRIFUGAL	90	30	30	30	30	5	1160	208	3	60	1,2,3			
HWP-02	MECHANICAL ROOM	BELL & GOSSETT	e1510	CLOSED-COUPLED, END SUCTION CENTRIFUGAL	90	30	30	30	30	5	1160	208	3	60	1,2,3			

NOTES:
1. PROVIDE WITH SUCTION DIFFUSER AND TRIPLE DUTY VALVE FROM PUMP MANUFACTURER.
2. PROVIDE WITH INVERTER DUTY MOTOR.
3. PROVIDE WITH CIRCUIT SETTER.

FAN COIL UNIT SCHEDULE														ELECTRICAL				NOTES	
MARK	MANUFACTURER	MODEL	CAPACITY (BTU/HR)	ENTERING WATER TEMPERATURE (DEG. F)	LEAVING WATER TEMPERATURE (DEG. F)	FLOW RATE (GPM)	PRESSURE DROP (FT)	CAPACITY (BTU/HR)	ENTERING WATER TEMPERATURE (DEG. F)	LEAVING WATER TEMPERATURE (DEG. F)	FLOW RATE (GPM)	PRESSURE DROP (FT)	AIRFLOW (CFM)	EXTERNAL STATIC (IN. WG)	VOLTAGE	PHASE	HZ		MCA
FCU-1	CARRIER	42DC10	25,422	44	56	4.0	3.7	26,199	140	110	0.8	1.5	600	0.63	120	1	60	5.13	1,2,3
FCU-2	CARRIER	42DC10	25,422	44	56	4.0	3.7	26,199	140	110	0.8	1.5	600	0.63	120	1	60	5.13	1,2,3
FCU-3	CARRIER	42DC10	25,422	44	56	4.0	3.7	26,199	140	110	0.8	1.5	600	0.63	120	1	60	5.13	1,2,3
FCU-4	CARRIER	42DC10	25,422	44	56	4.0	3.7	26,199	140	110	0.8	1.5	600	0.63	120	1	60	5.13	1,2,3
FCU-5	CARRIER	42DC14	33,963	44	56	6.0	4.8	25,722	140	110	1.6	5.4	1,200	0.64	120	1	60	9.00	1,2,3
FCU-6	CARRIER	42DC10	25,422	44	56	4.3	4.3	26,199	140	110	0.9	1.5	700	0.63	120	1	60	5.13	1,2,3
FCU-7	CARRIER	42DC10	25,422	44	56	4.3	4.3	26,199	140	110	0.9	1.5	700	0.63	120	1	60	5.13	1,2,3
FCU-8	CARRIER	42DC10	25,422	44	56	4.3	4.3	26,199	140	110	0.9	1.5	700	0.63	120	1	60	5.13	1,2,3
FCU-9	CARRIER	42DC10	25,422	44	56	4.3	4.3	26,199	140	110	0.9	1.5	700	0.63	120	1	60	5.13	1,2,3
FCU-10	CARRIER	42DC10	25,422	44	56	3.0	3.0	26,199	140	110	1.0	1.5	600	0.63	120	1	60	5.13	1,2,3
FCU-11	CARRIER	42WKN08	2,800	44	56	0.5	2.0	5,600	140	110	0.4	1.0	260	--	120	1	60	0.88	1,2,3
FCU-12	CARRIER	42WKN08	2,800	44	56	0.3	2.0	5,600	140	110	0.2	1.0	260	--	120	1	60	0.88	1,2,3

NOTES:
1. PROVIDE WITH CONDENSATE PUMP. CONDENSATE PUMPS MAY BE INTEGRAL OR FIELD PROVIDED AND EXTERNALLY MOUNTED.
2. PROVIDE WITH HOT WATER AND CHILLED WATER HYDRONIC CONTROL VALVES.
3. PROVIDE WITH ECM FAN.

DEDICATED OUTDOOR AIR UNIT SCHEDULE																										
MARK	MANUFACTURER	MODEL	DESCRIPTION	OCCUPANCY	SUPPLY FAN			EXHAUST FAN			COOLING COIL				PRE-HEATING COIL				POST-HEATING COIL							
					AIR FLOW (CFM)	ESP (IN. WG)	BHP	AIR FLOW (CFM)	ESP (IN. WG)	BHP	CAPACITY (BTU/HR)	ENTERING WATER TEMPERATURE (DEG. F)	LEAVING WATER TEMPERATURE (DEG. F)	FLOW RATE (GPM)	PRESSURE DROP (FT)	ENTERING AIR TEMPERATURE (DEG. F)	LEAVING AIR TEMPERATURE (DEG. F)	CAPACITY (BTU/HR)	ENTERING WATER TEMPERATURE (DEG. F)	LEAVING WATER TEMPERATURE (DEG. F)	FLOW RATE (GPM)	PRESSURE DROP (FT)	ENTERING AIR TEMPERATURE (DEG. F)	LEAVING AIR TEMPERATURE (DEG. F)		
DOAS-1	AAON	HS	AIR HANDLING UNIT WITH ENERGY RECOVERY WHEEL	OCCUPIED UNOCCUPIED	3,600 1,680	0.75		3,260 1,500			44	56	61	85.3/79.2	50/50			140	110			0				76

DEDICATED OUTDOOR AIR UNIT SCHEDULE-CONT.															
MARK	OCCUPANCY	SUMMER				WINTER				VOLTAGE	PHASE	HZ	MCA	MOCP	NOTES
		OUTDOOR AIR ENTERING (DEG. F)	OUTDOOR AIR LEAVING (DEG. F)	EXHAUST AIR ENTERING (DEG. F)	EXHAUST AIR LEAVING (DEG. F)	OUTDOOR AIR ENTERING (DEG. F)	OUTDOOR AIR LEAVING (DEG. F)	EXHAUST AIR ENTERING (DEG. F)	EXHAUST AIR LEAVING (DEG. F)						
DOAS-1	OCCUPIED	85.3/79.2								208	3	60			
DOAS-1	UNOCCUPIED														

BOILER SCHEDULE														ELECTRICAL				NOTES			
MARK	MANUFACTURER	MODEL	HEATING TYPE	HEATING INPUT CAPACITY (BTU/HR)	HEATING OUTPUT CAPACITY (BTU/HR)	MINIMUM EFFICIENCY (%)	MINIMUM TURNDOWN	WATER FLOW RATE (GPM)	ENTERING WATER TEMPERATURE (DEG. F)	LEAVING WATER TEMPERATURE (DEG. F)	WATER CONNECTION SIZE (IN.)	VENT CONNECTION SIZE (IN.)	AIR INTAKE CONNECTION SIZE (IN.)	GAS CONNECTION SIZE (IN.)	MAXIMUM DIMENSIONS WIDTH (IN.)	DEPTH (IN.)	VOLTAGE		PHASE	HZ	FLA
B-1	LOCHINVAR	KBX0650	NAT. GAS	650,000	630,500	97	63.050	30	110	140	2	4	4	1-1/4	30	45	120	1	60	3.3	1,2,3

NOTES:
1. PROVIDE WITH FACTORY INSTALLED BACNET CARD.
2. PROVIDE WITH A DEDICATED XX HP CIRCULATOR PUMP RATED FOR XX GPM AND XX FT HEAD.
3. PROVIDE ALL REQUIRED AIR SIDE, WATER SIDE, AND NATURAL GAS ACCESSORIES PER LOCAL CODE AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

EXHAUST FAN SCHEDULE													
MARK	DESCRIPTION	MANUFACTURER	MODEL	AIRFLOW (CFM)	ESP (IN. WG)	MOTOR HP	VOLTAGE	PHASE	HZ	FLA	NOTES		
EF-1	EMERGENCY EXHAUST FAN			8500	0.10	10	240	1	60		1		
EF-2	IN-LINE DUCT FAN	CAPTIVEAIRE	DFA-200-CA	400	0.10	0.25	120	1	60	4.8	1		

NOTES:
1. PROVIDE WITH A SEPARATE MOTOR STARTER.

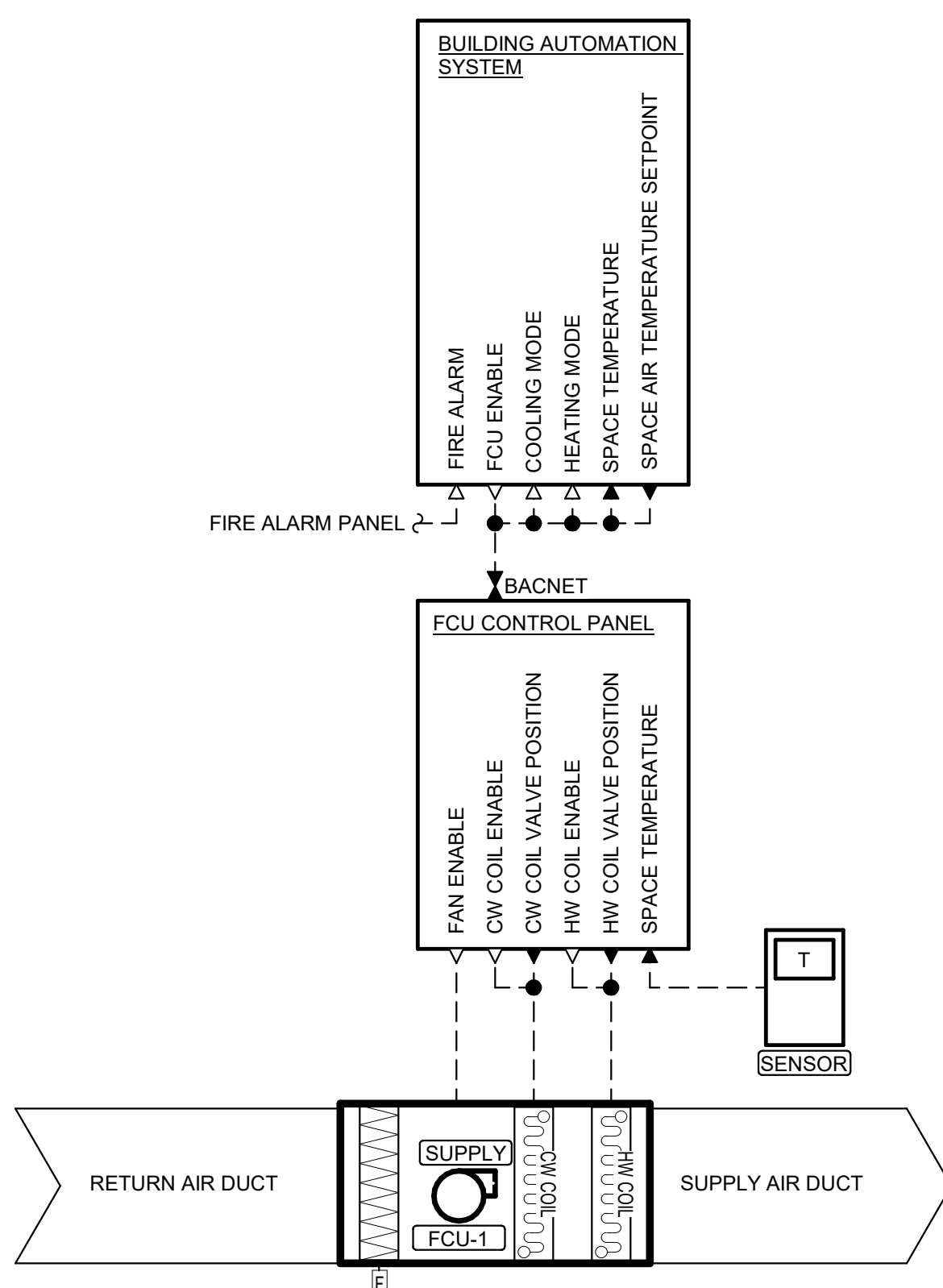
GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE																	
TAG	TYPE	DESCRIPTION	FACE SIZE		CONNECTION SIZE		TOTAL P.D.	THROW			DAMPER	MATERIAL	FINISH	FRAME	BASIS OF DESIGN		REMARKS
			LENGTH	WIDTH	RECTANGULAR LENGTH	RECTANGULAR WIDTH		ROUND	150 FPM	100 FPM					50 FPM	MAX. NC	
E1	CEILING RETURN	1/2" x 1/2" x 1" EGGRATE GRID			12"	12"								NOTE 1	TITUS	50F	
E2	EXHAUST GRILLE	35 DEG. FIXED DEFLECTION REGISTER WITH BLADES PARALLEL TO LONG DIMENSION. 3/4" SPACING.	8"		4"	6"					0	OPPOSED BLADE DAMPER	STEEL	WHITE ENAMEL	TITUS	350RL	
O1	CEILING DIFFUSER	24x24 MODULAR FULL-FACE DIFFUSER WITH ROUND NECK	24"	24"			8"	0.00 in-wg			0	---	STEEL	WHITE ENAMEL	TITUS	TMSA	
O2	SUPPLY REGISTER	DOUBLE DEFLECTION REGISTER WITH FRONT BLADES PARALLEL TO LONG DIMENSION. 3/4" SPACING.	24"		6"	4"		0.00 in-wg			0	OPPOSED BLADE DAMPER	STEEL	WHITE ENAMEL	TITUS	300RL	
R1	CEILING RETURN	1/2" x 1/2" x 1" EGGRATE GRID												NOTE 1	TITUS	50F	
S1	CEILING DIFFUSER	24x24 MODULAR FULL-FACE DIFFUSER WITH ROUND NECK	24"	24"			6"	0.00 in-wg			0	---	STEEL	WHITE ENAMEL	TITUS	TMSA	
S2	SUPPLY REGISTER	DOUBLE DEFLECTION REGISTER WITH FRONT BLADES PARALLEL TO LONG DIMENSION. 3/4" SPACING.	8"		4"	4"		0.00 in-wg			0	---	STEEL	WHITE ENAMEL	TITUS	300RL	
T1	TRANSFER GRILLE	SIGHT PROOF GRILLE WITH INVERTED-V BLADES IN HORIZONTAL POSITION.	8"		6"	4"					0	---	ALUMINUM	WHITE ENAMEL	TITUS	350RL	

LOUVER SCHEDULE																
TAG	DESCRIPTION	FUNCTION	AIRFLOW	WIDTH	HEIGHT	FRAME DEPTH	FREE AREA	MAX. P.D.	MAX. VELOCITY	MATERIAL	FINISH	DAMPER	ACTUATOR	BASIS OF DESIGN MAKE	MODEL	REMARKS
L1	COMBINATION INTAKE LOUVER	OUTDOOR AIR	3600 CFM	4'-2"	4'-2"	0'-4"	8.0 SF	0.21 in-wg	500 FPM	ALUMINUM	BAKED ENAMLE	BACKDRAFT	N/A	RUSKIN	ELB0612	INCLUDED EXTENDED SILL AND END DAMS, INSECT SCREEN
L2	COMBINATION EXHAUST LOUVER	EXHAUST AIR	3260 CFM	2'-8"	2'-8"	0'-4"	2.9 SF	0.27 in-wg	0 FPM	ALUMINUM	BAKED ENAMLE	BACKDRAFT	N/A	RUSKIN	ELB0813	INCLUDED EXTENDED SILL AND END DAMS, INSECT SCREEN
L3	FEMA 361 TORNADO LOUVER	OUTDOOR AIR	3600 CFM	4'-2"	2'-8"	0'-5 1/2"	4.8 SF	0.18 in-wg	0 FPM	ALUMINUM	BAKED ENAMLE	N/A	N/A	RUSKIN	XP500	
L4	FEMA 361 TORNADO LOUVER	EXHAUST AIR	3260 CFM	4'-2"	2'-8"	0'-5 1/2"	4.8 SF	0.14 in-wg	0 FPM	ALUMINUM	BAKED ENAMLE	N/A	N/A	RUSKIN	XP500	
L5	COMBINATION INTAKE LOUVER	OUTDOOR AIR	400 CFM	1'-8"	1'-8"	0'-4"	0.8 SF	0.21 in-wg	500 FPM	ALUMINUM	BAKED ENAMLE	BACKDRAFT	N/A	RUSKIN	ELB0612	INCLUDED EXTENDED SILL AND END DAMS, INSECT SCREEN
L6	COMBINATION EXHAUST LOUVER	EXHAUST AIR	400 CFM	1'-8"	1'-8"	0'-4"	0.8 SF	0.21 in-wg	0 FPM	ALUMINUM	BAKED ENAMLE	BACKDRAFT	N/A	RUSKIN	ELB0813	INCLUDED EXTENDED SILL AND END DAMS, INSECT SCREEN
L7	FEMA 361 TORNADO LOUVER	EXHAUST AIR	8500 CFM	7'-10"	1'-6"	0'-5 1/2"	4.3 SF	1.10 in-wg	0 FPM	ALUMINUM	BAKED ENAMLE	N/A	N/A	RUSKIN	XP500	INCLUDED EXTENDED SILL AND END DAMS, INSECT SCREEN

SEQUENCE OF OPERATION

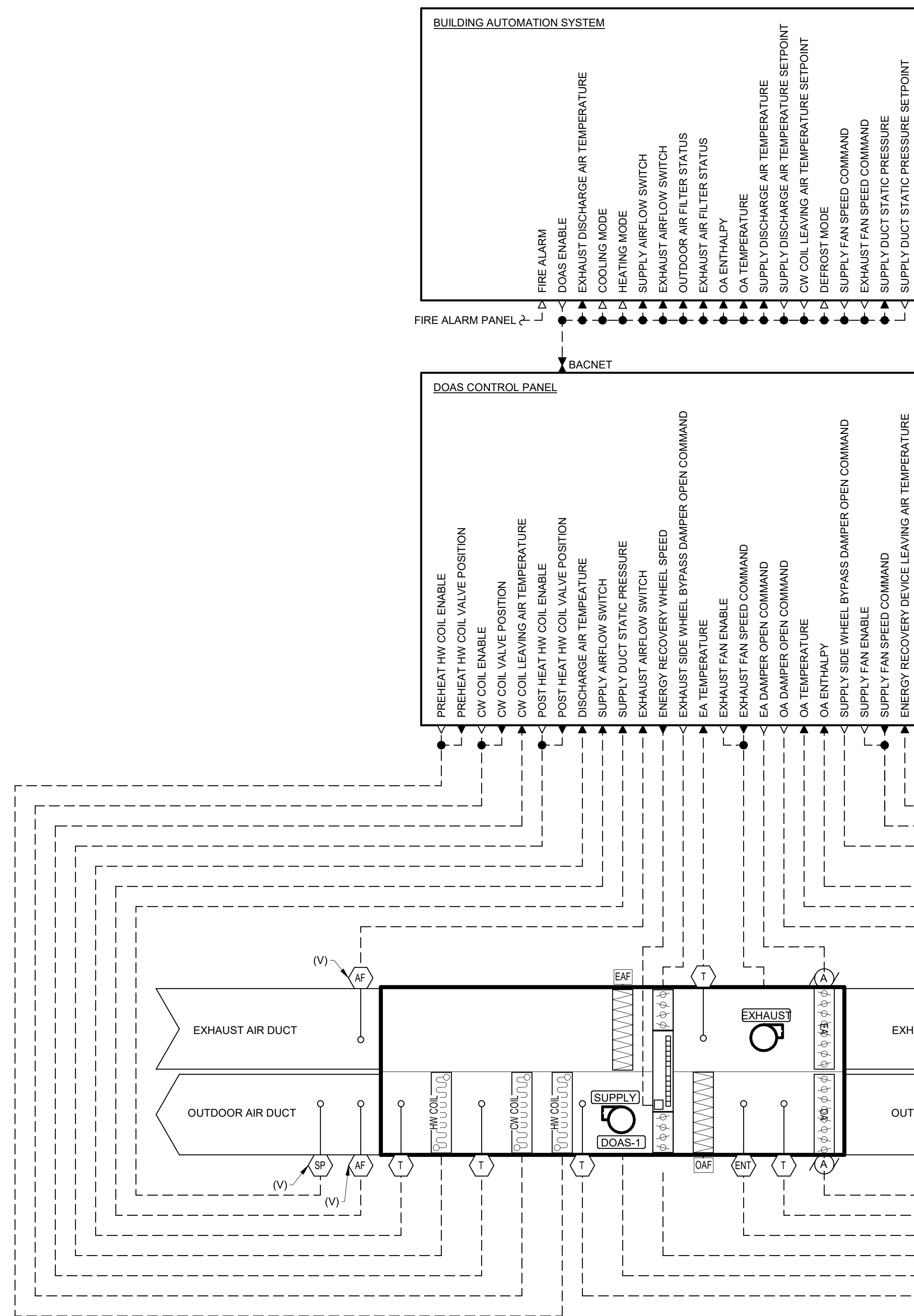
GENERAL OPERATION

- A. OCCUPANCY MODE: THE OCCUPANCY MODE (OCCUPIED OR UNOCCUPIED) SHALL BE DETERMINED THROUGH A USER-ADJUSTABLE, GRAPHICAL, SCHEDULING PROGRAM. SCHEDULING PROGRAM SHALL SUPPORT SEVEN-DAY SCHEDULING, CALENDAR SCHEDULING, AND HOLIDAY SCHEDULE OVERRIDE. THE BAS SHALL SUPPORT DIFFERENT OCCUPANCY SCHEDULES FOR EACH ROOM TEMPERATURE SETPOINT.
- B. ROOM TEMPERATURE SETPOINTS (FAN COIL UNITS ONLY)
1. INITIAL OCCUPIED PERIOD ROOM SETPOINTS (REGULARLY SCHEDULED WORK DAYS FROM 7:00 AM- 6:00 PM, MONDAY-FRIDAY)
- a. COOLING
- 72°F (ADJUSTABLE BETWEEN 65°F AND 80°F)
 - USERS SHALL BE ABLE TO OVERRIDE INDIVIDUAL ROOM SETPOINTS AT THE LOCAL THERMOSTATS. USER SELECTED RANGE SHALL BE LIMITED TO +/-5°F (ADJUSTABLE FROM 0° F-10°F) AND WITHIN THE COOLING SETPOINT RANGE DESCRIBED ABOVE. USER OVERRIDES SHALL RESET FOLLOWING SYSTEM SWITCHOVER TO UN-OCCUPIED CONDITION.
- b. HEATING
- 68°F (ADJUSTABLE BETWEEN 60°F AND 76°F)
 - USERS SHALL BE ABLE TO OVERRIDE INDIVIDUAL ROOM SETPOINTS AT THE LOCAL THERMOSTATS. USER SELECTED RANGE SHALL BE LIMITED TO +/-5°F (ADJUSTABLE FROM 0° F-10°F) AND WITHIN THE HEATING SETPOINT RANGE DESCRIBED ABOVE. USER OVERRIDES SHALL RESET FOLLOWING SYSTEM SWITCHOVER TO UN-OCCUPIED CONDITION.
2. INITIAL UN-OCCUPIED PERIOD ZONE SETPOINTS (ALL REMAINING TIME THAT IS NOT DEFINED AS OCCUPIED)
- a. COOLING
- 80°F (ADJUSTABLE BETWEEN 65°F AND 80°F)
 - USERS SHALL BE ABLE TO OVERRIDE INDIVIDUAL ROOM SETPOINTS. USER SELECTED RANGE SHALL BE LIMITED TO +/-5°F (ADJUSTABLE FROM 0°F-10°F) AND WITHIN THE COOLING SETPOINT RANGE DESCRIBED ABOVE. USER OVERRIDES SHALL RESET FOLLOWING SYSTEM SWITCHOVER TO OCCUPIED CONDITION.
- b. HEATING
- 60°F (ADJUSTABLE BETWEEN 60°F AND 75°F)
 - USERS SHALL BE ABLE TO OVERRIDE INDIVIDUAL ROOM SETPOINTS. USER SELECTED RANGE SHALL BE LIMITED TO +/-5°F (ADJUSTABLE FROM 0°F-10°F) AND WITHIN THE HEATING SETPOINT RANGE DESCRIBED ABOVE. USER OVERRIDES SHALL RESET FOLLOWING SYSTEM SWITCHOVER TO OCCUPIED CONDITION.
- C. ALL SETPOINTS INDICATED SHALL BE ADJUSTABLE WITHIN THE BAS SYSTEM.



FAN COIL UNIT CONTROL SUMMARY				
CONTROL POINT	LOCAL CONTROLLER DISPLAY	BAS DISPLAY	BAS ADJUSTABLE	COMMENTS
FCU ENABLE				
SPACE TEMPERATURE				
SPACE TEMPERATURE SETPOINT				
COOLING MODE				
HEATING MODE				

- FAN COIL UNIT SEQUENCE OF OPERATION**
- A. CENTRAL BAS SYSTEM CONTROL
- SPACE TEMPERATURE SHALL ENABLE THE FCU AT ALL TIMES.
 - SAFETY SHUTDOWNS/ALARM GENERATION:
 - BUILDING FIRE ALARM ACTIVATION SHALL DISABLE OPERATION OF THE FCU.
 - AN FCU GENERAL ALARM SHALL BE GENERATED IF THE SPACE TEMPERATURE IS GREATER THAN +/-5°F (ADJUSTABLE BETWEEN 2°F AND 10°F) FROM SETPOINT FOR MORE THAN FIVE MINUTES (ADJUSTABLE BETWEEN 1 AND 20 MINUTES).
 - FAN COIL UNIT SETPOINTS
 - SETPOINTS: AS PROVIDED WITHIN THE GENERAL BAS SYSTEM DESCRIPTION.
- B. FAN COIL UNIT CONTROLLER
- FAN COIL UNITS SHALL OPERATE TO MAINTAIN SPACE TEMPERATURE SETPOINT.
 - FAN COIL UNITS OPERATING MODE SHALL AUTOMATICALLY SWITCH BETWEEN HEATING AND COOLING BASED ON THE SPACE TEMPERATURE RELATIONSHIP TO SETPOINT.
 - SPACE TEMPERATURE SETPOINTS SHALL BE CONTROLLED THROUGH THE BAS WITH TEMPORARY OCCUPANT OVERRIDE AT THE LOCAL TEMPERATURE SENSORS.



DEDICATED OUTDOOR AIR SYSTEM CONTROL SUMMARY				
CONTROL POINT	LOCAL CONTROLLER DISPLAY	BAS DISPLAY	BAS ADJUSTABLE	COMMENTS
DOAS ENABLE				
COOLING MODE				
HEATING MODE				
SUPPLY FAN ON/OFF				
SUPPLY FAN SPEED COMMAND				
EXHAUST FAN ON/OFF				
EXHAUST FAN SPEED COMMAND				
SUPPLY DISCHARGE AIR TEMPERATURE				
SUPPLY DISCHARGE AIR TEMPERATURE SETPOINT				
EXHAUST AIR TEMPERATURE				
OA AIRFLOW SWITCH				ALARM IF ERV ON AND NO AIRFLOW AFTER 2 MINUTES
EA AIRFLOW SWITCH				ALARM IF ERV ON AND NO AIRFLOW AFTER 2 MINUTES
CW COIL LEAVING AIR TEMPERATURE				
CW COIL LEAVING AIR TEMPERATURE SETPOINT				
OUTDOOR AIR TEMPERATURE				
OUTDOOR AIR ENTHALPY				
DEFROST MODE				
SUPPLY DUCT STATIC PRESSURE				
SUPPLY DUCT STATIC PRESSURE SETPOINT				

DEDICATED OUTDOOR AIR UNIT CONTROLS DIAGRAM

- DEDICATED OUTDOOR AIR SYSTEM SEQUENCE OF OPERATION**
- A. CENTRAL BAS SYSTEM CONTROL
- THE BAS SHALL ENABLE DOAS-1 FROM 6AM TO 5PM (FULLY ADJUSTABLE).
 - SAFETY SHUTDOWNS/ALARM GENERATION:
 - BUILDING FIRE ALARM ACTIVATION SHALL DISABLE OPERATION OF THE DOAS.
 - DOAS GENERAL ALARM SHALL BE GENERATED IF THE DOAS IS NOT PROVEN BY THE SUPPLY AIR FLOW SWITCH WITHIN FIVE MINUTES OF GENERATING A DOAS RUN SIGNAL.
 - DOAS GENERAL ALARM SHALL BE GENERATED IF THE DOAS IS NOT PROVEN BY THE EXHAUST AIR FLOW SWITCH WITHIN FIVE MINUTES OF GENERATING A DOAS RUN SIGNAL.
 - THE BAS SYSTEM SHALL DETERMINE SETPOINTS ACCORDING TO THE FOLLOWING:
 - IF THE ENTERING AIR TEMPERATURE TO THE CHILLED WATER COIL IS ABOVE 54°F (ADJUSTABLE BETWEEN 50°F AND 60°F):
 - THE DOAS SHALL BE IN COOLING MODE.
 - THE CHILLED WATER COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE BAS PROVIDED LEAVING CHILLED WATER COIL AIR TEMPERATURE SETPOINT OF 53°F (ADJUSTABLE BETWEEN 49°F AND 60°F). THE HOT WATER COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE BAS PROVIDED DISCHARGE AIR TEMPERATURE SETPOINT OF 70°F (ADJUSTABLE BETWEEN 65°F AND 75°F).
 - IF THE ENTERING AIR TEMPERATURE TO THE CHILLED WATER COIL IS BELOW 54°F (ADJUSTABLE BETWEEN 50°F AND 60°F):
 - THE CHILLED WATER COIL SHALL BE DISABLED. THE HOT WATER COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE BAS PROVIDED DISCHARGE AIR TEMPERATURE SETPOINT OF 70°F (ADJUSTABLE BETWEEN 65°F AND 75°F).
- B. LOCAL DOAS CONTROLLER
- DOAS SHALL OPERATE TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT PROVIDED BY THE BAS (OCCUPANT OVERRIDE SHALL BE LOCKED OUT).
 - DOAS OPERATING MODE SHALL AUTOMATICALLY SWITCH BETWEEN HEATING AND COOLING BASED ON ENTERING AIR TEMPERATURE TO THE CHILLED WATER COIL.
 - IN COOLING MODE, THE CHILLED WATER COIL AND HOT WATER COIL SHALL BE ENABLED. THE CHILLED WATER COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE LEAVING CHILLED WATER COIL AIR TEMPERATURE SETPOINT PROVIDED BY THE BAS. THE HOT WATER COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE BAS PROVIDED DISCHARGE AIR TEMPERATURE SETPOINT.
 - IN HEATING MODE, THE CHILLED WATER COIL SHALL BE DISABLED. THE PREHEAT HOT WATER COIL SHALL PROVIDE FIRST STAGE HEATING. THE PREHEAT HOT WATER COIL SHALL MODULATE TO MAINTAIN THE BAS PROVIDED DISCHARGE AIR TEMPERATURE SETPOINT. WHEN THE PREHEAT HOT WATER COIL IS UNABLE TO MAINTAIN THE BAS PROVIDED DISCHARGE AIR TEMPERATURE SETPOINT, THE POST HEAT HOT WATER COIL SHALL BE ENABLED. THE PREHEAT HOT WATER COIL SHALL REMAIN FULLY OPEN AND THE POST HEAT HOT WATER COIL SHALL MODULATE TO MAINTAIN THE BAS PROVIDED DISCHARGE AIR TEMPERATURE SETPOINT.
 - THE SUPPLY SIDE AND EXHAUST SIDE WHEEL BYPASS DAMPERS SHALL OPEN WHENEVER THERE IS A FROST CONDITION ON THE EXHAUST SIDE OF THE ENERGY RECOVERY WHEEL. ONCE THERE IS NO LONGER A FROST CONDITION, THE BYPASS DAMPERS SHALL CLOSE.
 - SUPPLY AND EXHAUST FANS:
 - UPON ENABLING OF THE DOAS THE SUPPLY AND EXHAUST FANS SHALL BE ENERGIZED AND THE SUPPLY AIR AND EXHAUST AIR FANS SHALL MAINTAIN A DUCT STATIC PRESSURE OF 1.00 IN. W.C. (ADJUSTABLE BETWEEN 0.50 IN. W.C. AND 1.50 IN. W.C.).
 - THE OUTDOOR AIR AND EXHAUST AIR CONTROL DAMPERS SHALL BE FULLY OPEN WHENEVER THE DOAS IS ENABLED.
 - DISCHARGE AIR TEMPERATURE SETPOINT SHALL BE ADJUSTABLE THROUGH THE BAS.

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DESCRIPTION	DATE	APPR

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DESIGN DEVELOPMENT

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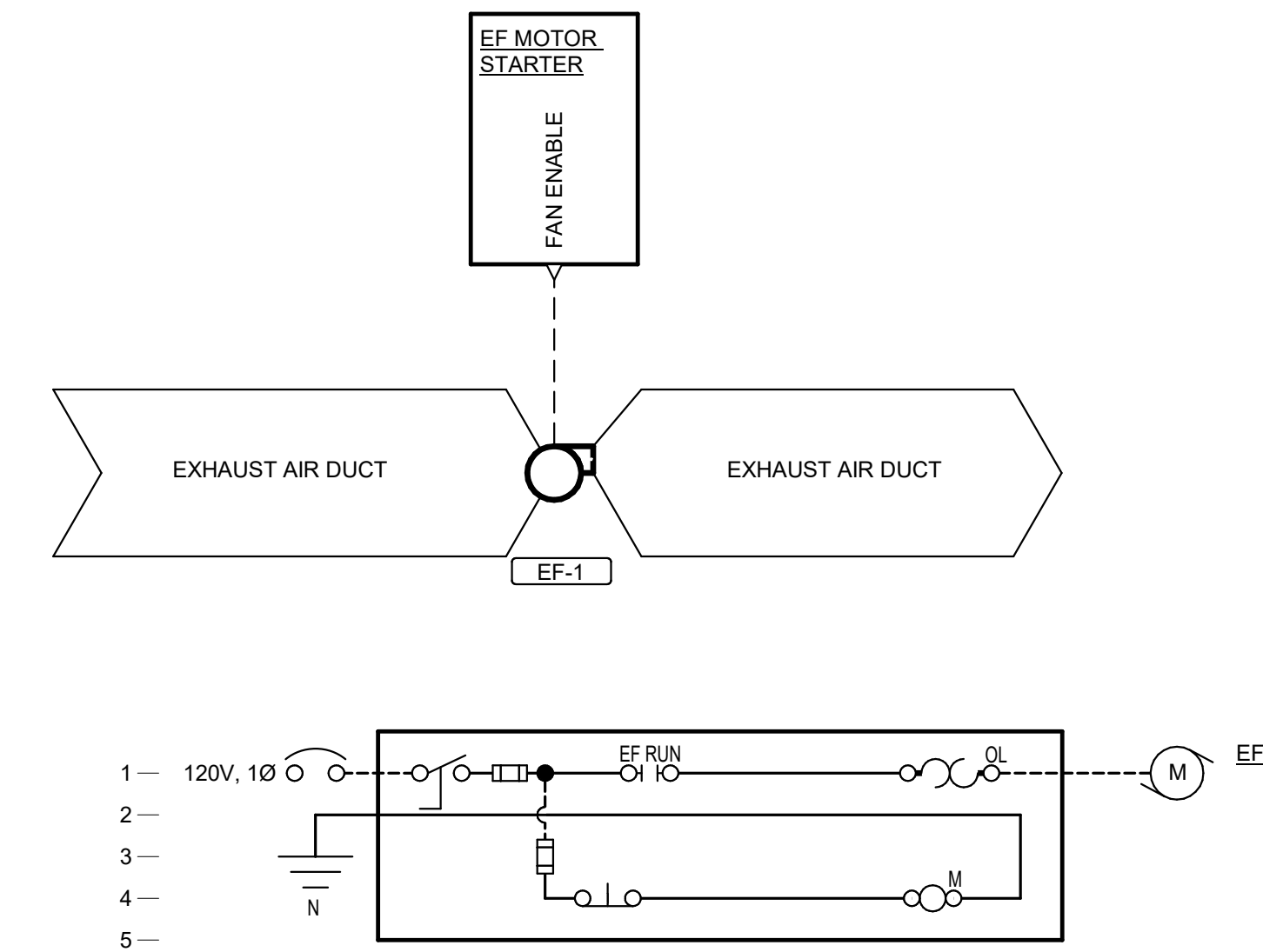
HALLSVILLE MIDDLE SCHOOL ADDITION
 HALLSVILLE SCHOOL DISTRICT
 421 MO-124 E
 HALLSVILLE, MO 65255

Non-Reduced Sheet Size 30" x 42"
 Full sized plans have been prepared using standard scales.
 Reduced sized plans may not conform to standard scales.

DESIGNED: MHB	DRAWN: MHB
FIELD: JUN	FIELD BOOK: JUN
CHECKED: JUN	CHECK DATE: JUN

SHEET TITLE
CONTROLS SEQUENCE OF OPERATION

PROJECT NO. 21-0922
 DRAWING ISSUED DATE: 10/14/22
 SHEET M701

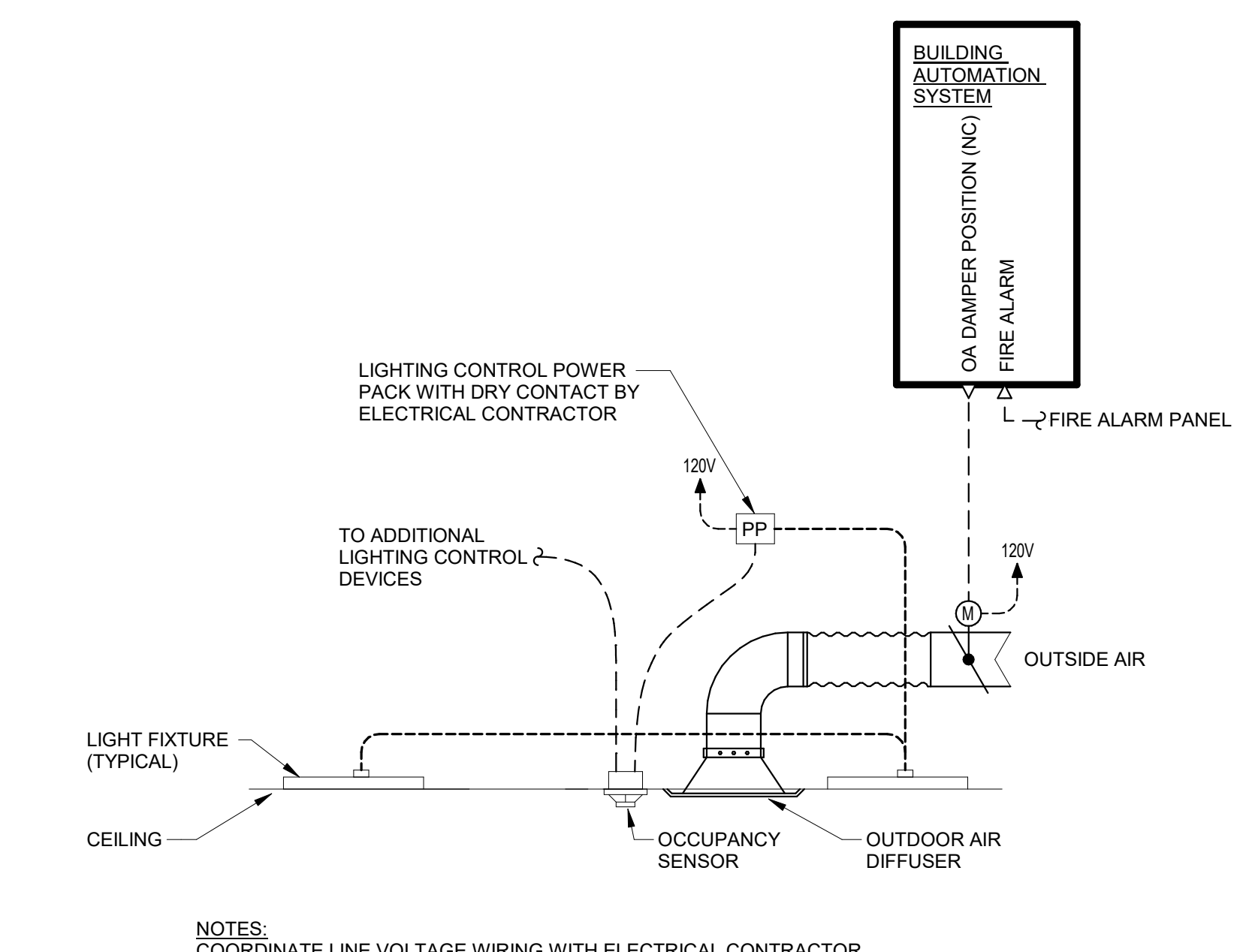


EMERGENCY EXHAUST SYSTEM SEQUENCE OF OPERATION

A. EXHAUST SYSTEM CONTROL

1. THE EMERGENCY EXHAUST FAN SHALL BE ENABLED BY THE EMERGENCY BACK UP POWER INVERTER. COORDINATE WITH ELECTRICAL CONTRACTOR.
2. THE EMERGENCY EXHAUST FAN SHALL PROVIDE THE AIR FLOW RATE SHOWN ON THE EQUIPMENT SCHEDULE WHEN ENABLED.

EMERGENCY EXHAUST FAN CONTROLS DIAGRAM



ROOM HVAC CONTROL SUMMARY				
CONTROL POINT	LOCAL CONTROLLER DISPLAY	BAS DISPLAY	BAS ADJUSTABLE	COMMENTS
ROOM OCCUPANCY STATUS				
OUTDOOR AIR DAMPER ENABLE	●			

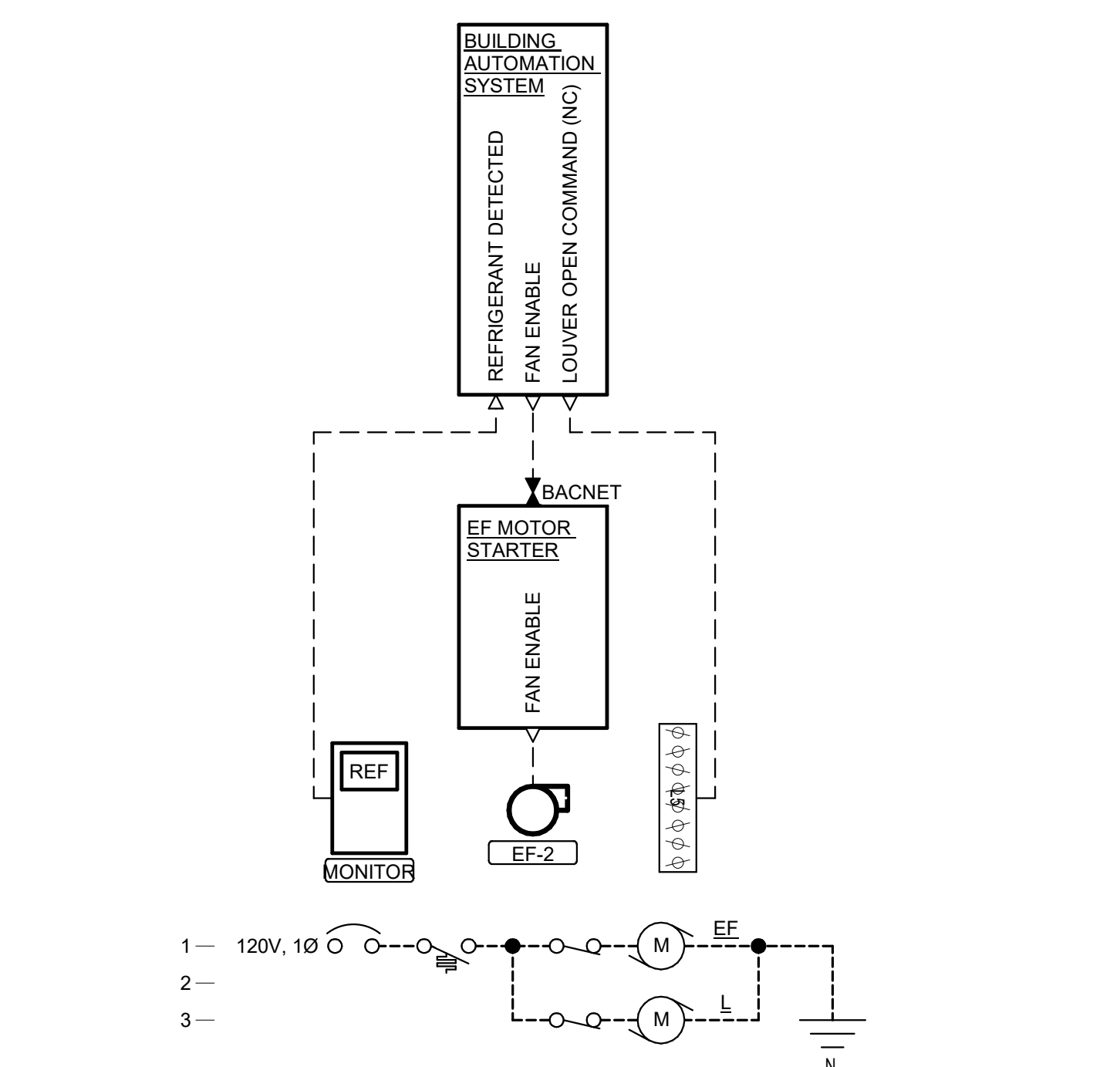
ROOM VENTILATION RATES			
ROOM NUMBER	ROOM NAME	OCCUPIED OUTDOOR AIR (CFM)	UNOCCUPIED OUTDOOR AIR (CFM)
100	CORRIDOR	180	180
103	ART CLASSROOM	420	180
104	GIFTED CLASSROOM	420	180
105	SCIENCE CLASSROOM	420	180
106	CLASSROOM	420	180
109	CLASSROOM	420	180
110	CLASSROOM	420	180
111	CLASSROOM	420	180
112	CLASSROOM	420	180
117	CORRIDOR	60	60
	TOTAL	3,600	1,680

ROOM OUTDOOR AIR DAMPER CONTROL SEQUENCE OF OPERATION

A. CENTRAL BAS SYSTEM CONTROL

1. THE BAS SHALL ENABLE THE ROOM OUTDOOR AIR DAMPERS AT ALL TIMES.
2. SAFETY SHUTDOWNS/ALARM GENERATION:
 - a. BUILDING FIRE ALARM ACTIVATION SHALL DISABLE OPERATION OF THE NORMALLY CLOSED OUTDOOR AIR DAMPERS.
3. OCCUPANCY SENSOR
 - a. THE ROOM OCCUPANCY SENSOR SHALL PROVIDE THE BAS WITH THE CURRENT SPACE OCCUPANCY STATUS.
4. ROOM OUTDOOR AIR DAMPER
 - a. THE ROOM OUTDOOR AIR DAMPER SHALL BE FULLY OPENED ANYTIME THE ROOM OCCUPANCY SENSOR SENSES OCCUPANCY.
 - b. WHEN NO OCCUPANCY IS SENSED FOR 20 MINUTES (ADJUSTABLE BETWEEN 5 MINUTES AND 30 MINUTES) THE ROOM OUTDOOR AIR DAMPER SHALL ADJUST TO THE DAMPER'S MINIMUM POSITION.

1 OUTDOOR AIR DAMPER CONTROLS DIAGRAM



EXHAUST FAN (EF-2) CONTROL SUMMARY				
CONTROL POINT	LOCAL CONTROLLER DISPLAY	BAS DISPLAY	BAS ADJUSTABLE	COMMENTS
FAN ON/OFF		●		
REFRIGERNAT DETECTED		●	●	
LOUVER DAMPER POSITION		●		

EXHAUST SYSTEM (EF-2)

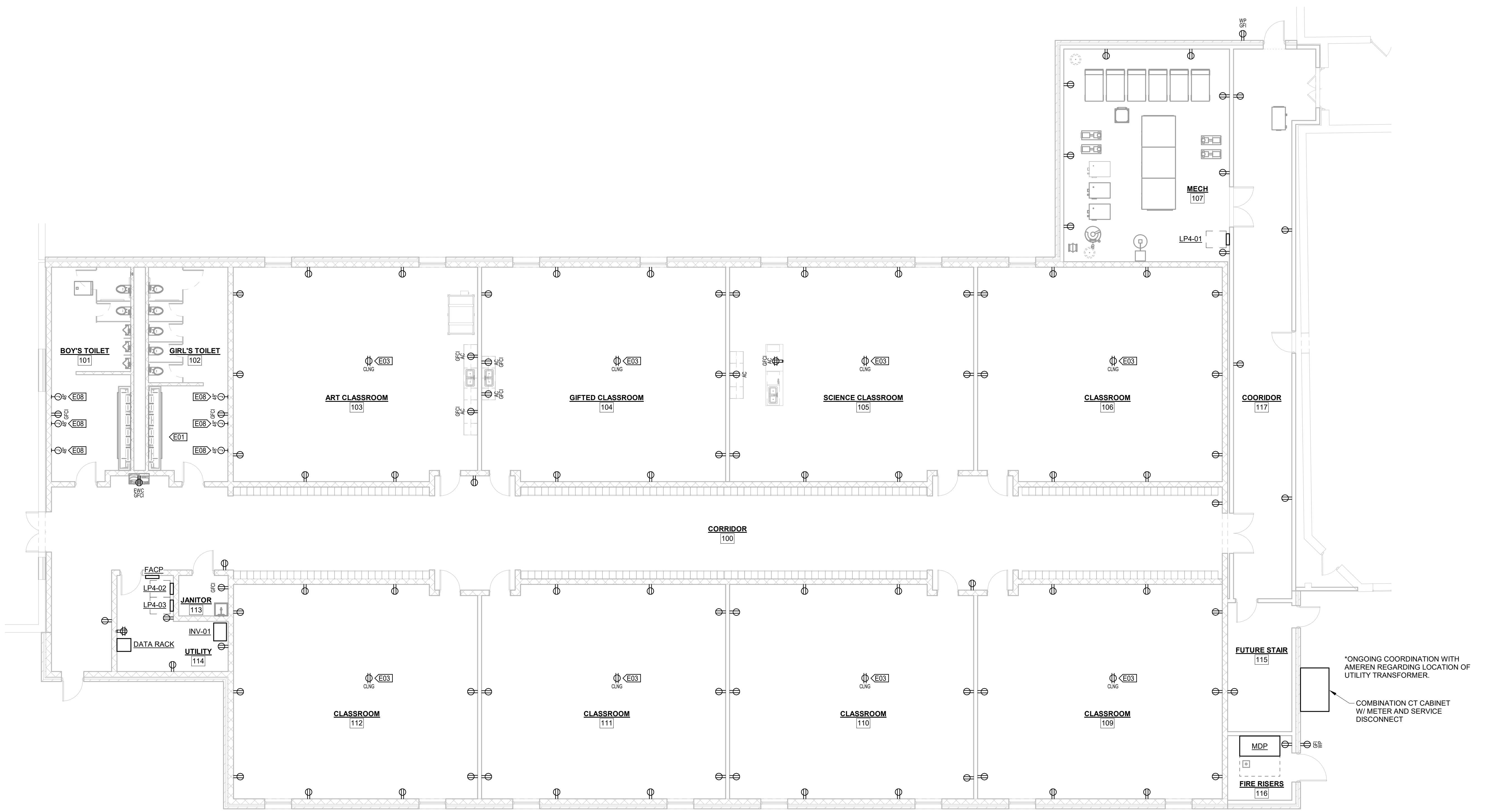
A. EXHAUST SYSTEM CONTROL

1. THE EXHAUST SHALL BE ENABLE AT ALL TIMES BY THE BAS.
2. THE BAS SHALL ENABLE THE EXHAUST FAN ONLY WHEN THE MECHANICAL ROOM REFRIGERANT MONITOR IS IN AN ALARM STATUS.
3. THE EXHAUST FAN SHALL PROVIDE THE AIR FLOW SPECIFIED ON THE EQUIPMENT SCHEDULE WHEN ENABLED.

MECHANICAL ROOM VENTILATION FAN CONTROLS DIAGRAM

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1 POWER PLAN
1/8" = 1'-0"



VALUE	DESCRIPTION
E01	DD SUBMITTAL ASSUMES ELECTRIC HAND DRYERS AND SENSOR-OPERATED PLUMBING FIXTURES. OWNER TO PROVIDE FINAL CONFIRMATION OF HAND DRYER AND PLUMBING FIXTURE OPERATION METHODS CONCURRENT WITH APPROVAL OF DD SUBMITTAL.
E03	INSTALL OUTLET IN CEILING TILE FOR POWER TO PROJECTOR. COORDINATE LOCATION OF OUTLET WITH OWNER.
E08	JUNCTION BOX FOR ELECTRIC HAND DRYER.

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REVISION HISTORY			
NO.	DESCRIPTION	DATE	APPR.

ISSUED FOR: 10/14/22
DESIGN DEVELOPMENT

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HALLSVILLE MIDDLE SCHOOL ADDITION
HALLSVILLE SCHOOL DISTRICT
421 MO-124 E
HALLSVILLE, MO 65255

Non-Reduced Sheet Size 30" x 42"
Full sized plans have been prepared using standard scales.
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FIELD	JBM	FIELD BOOK	JBM
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SHEET TITLE
POWER PLAN

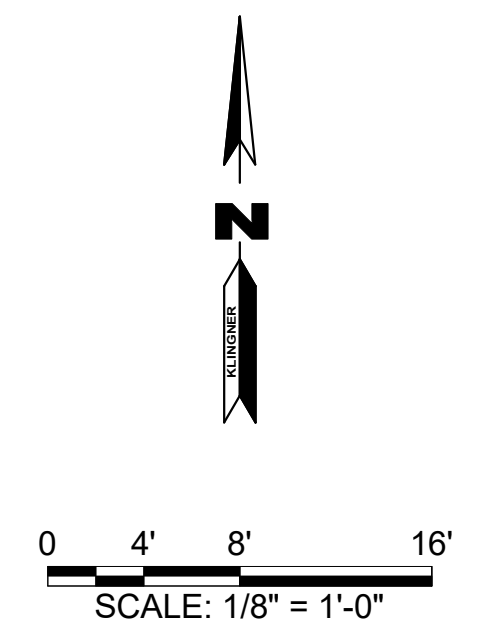
PROJECT NO.
21-0892

DRAWING ISSUED DATE:
10/14/22

SHEET
E100

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1 LIGHTING PLAN
1/8" = 1'-0"



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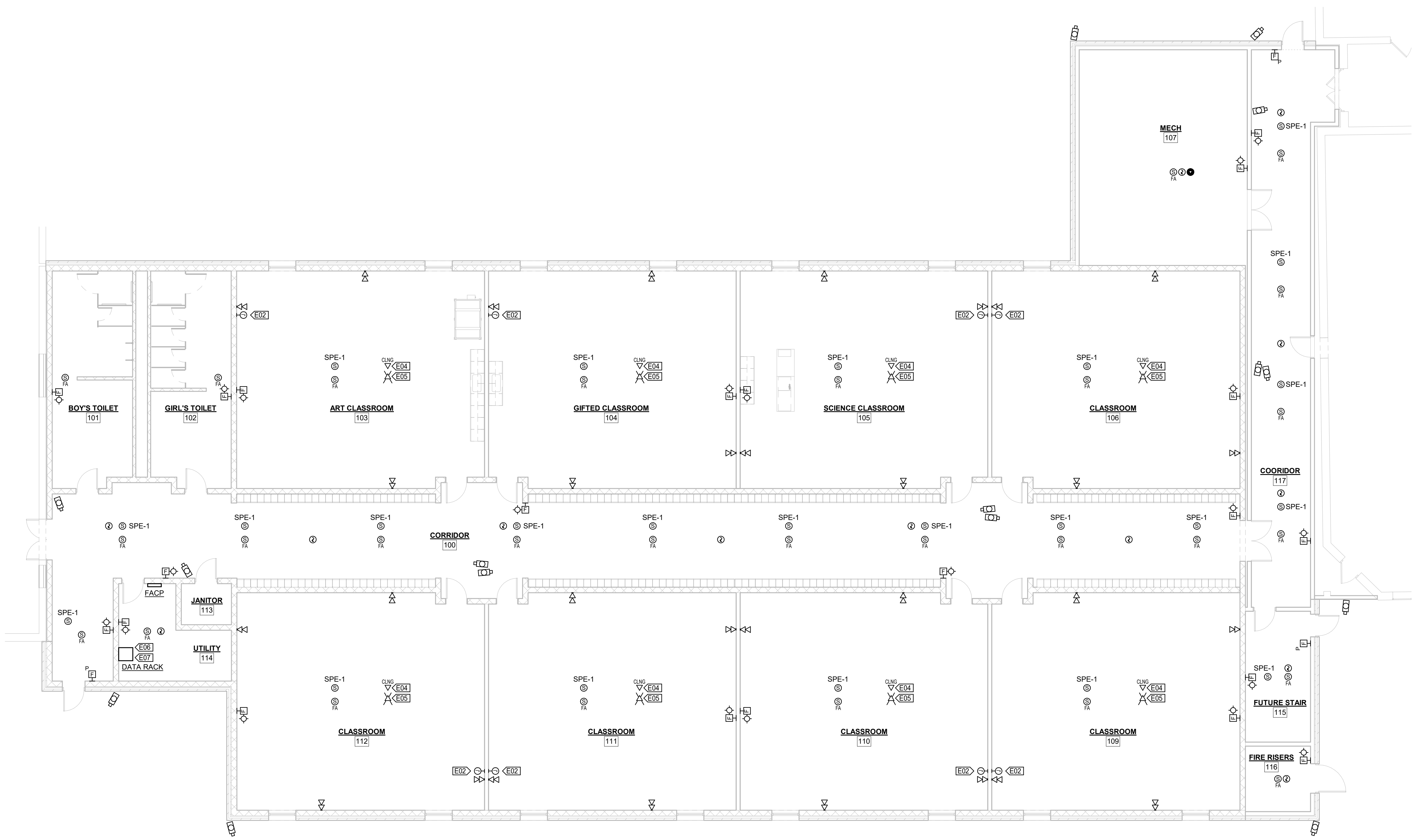
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SHEET TITLE
LIGHTING PLAN
PROJECT NO.
21-0932
DRAWING ISSUED DATE:
10/14/22
SHEET
E101

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1 LOW VOLTAGE PLAN
1/8" = 1'-0"



VALUE	DESCRIPTION
E02	INSTALL QUADPLEX JUNCTION BOX WITH 2" CONDUIT TO ABOVE FINISHED CEILING. LOCATE NEXT TO DATA RECEPTACLES. (TYPICAL FOR ALL WALL-MOUNTED JUNCTION BOXES SHOWN IN THIS ROOM ON THIS SHEET.)
E04	PROVIDE DATA CABLE TO CENTER OF ROOM ABOVE FINISHED CEILING WITH 20 FT OF EXCESS CABLE NEATLY COILED AND SECURED.
E05	PROVIDE DATA CABLE TO LOCATION SHOWN FOR FUTURE WIRELESS ACCESS POINT. PROVIDE 20 FT OF EXCESS CABLE NEATLY COILED AND SECURED ABOVE FINISHED CEILING. WIRELESS ACCESS POINT BY OWNER.
E06	TERMINATE ALL CLASSROOM NETWORK CABLES IN WALL-MOUNTED NETWORK CABINET USING PANDUIT MINICOM CAT6 JACKS IN PANDUIT RACK PANELS.
E07	INSTALL 12-STRAND 6-PAIR OM4 FIBER CABLE WITH LC CONNECTORS IN RACK PANEL INSIDE NETWORK CABINET AND ROUTE TO MAIN SERVER ROOM MS132 AND TERMINATE IN WALL BOX WITH LC ADAPTERS.

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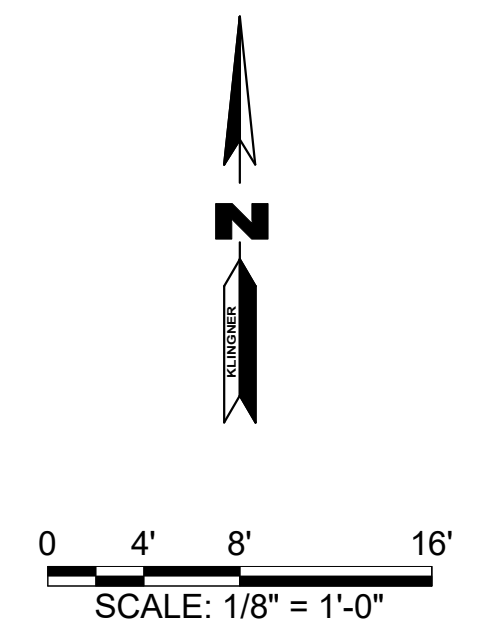
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CHECKED		CHECK DATE	

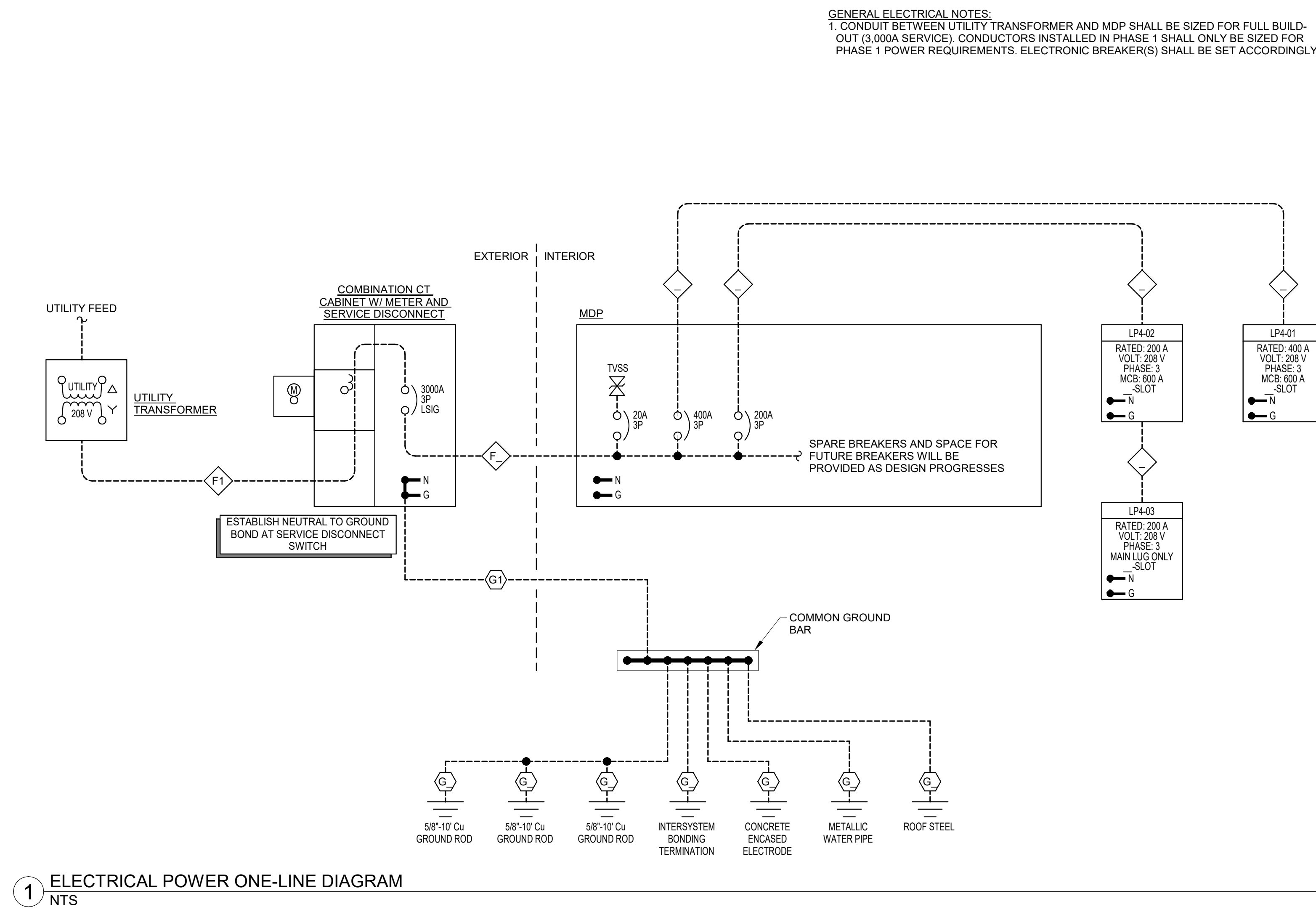
SHEET TITLE
LOW VOLTAGE PLAN

PROJECT NO.
21-4932

DRAWING ISSUED DATE:
10/14/22

SHEET
E102





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SHEET TITLE
ONE-LINE DIAGRAM

PROJECT NO.	21-0982
DRAWING ISSUED DATE:	10/14/22
SHEET	E701