

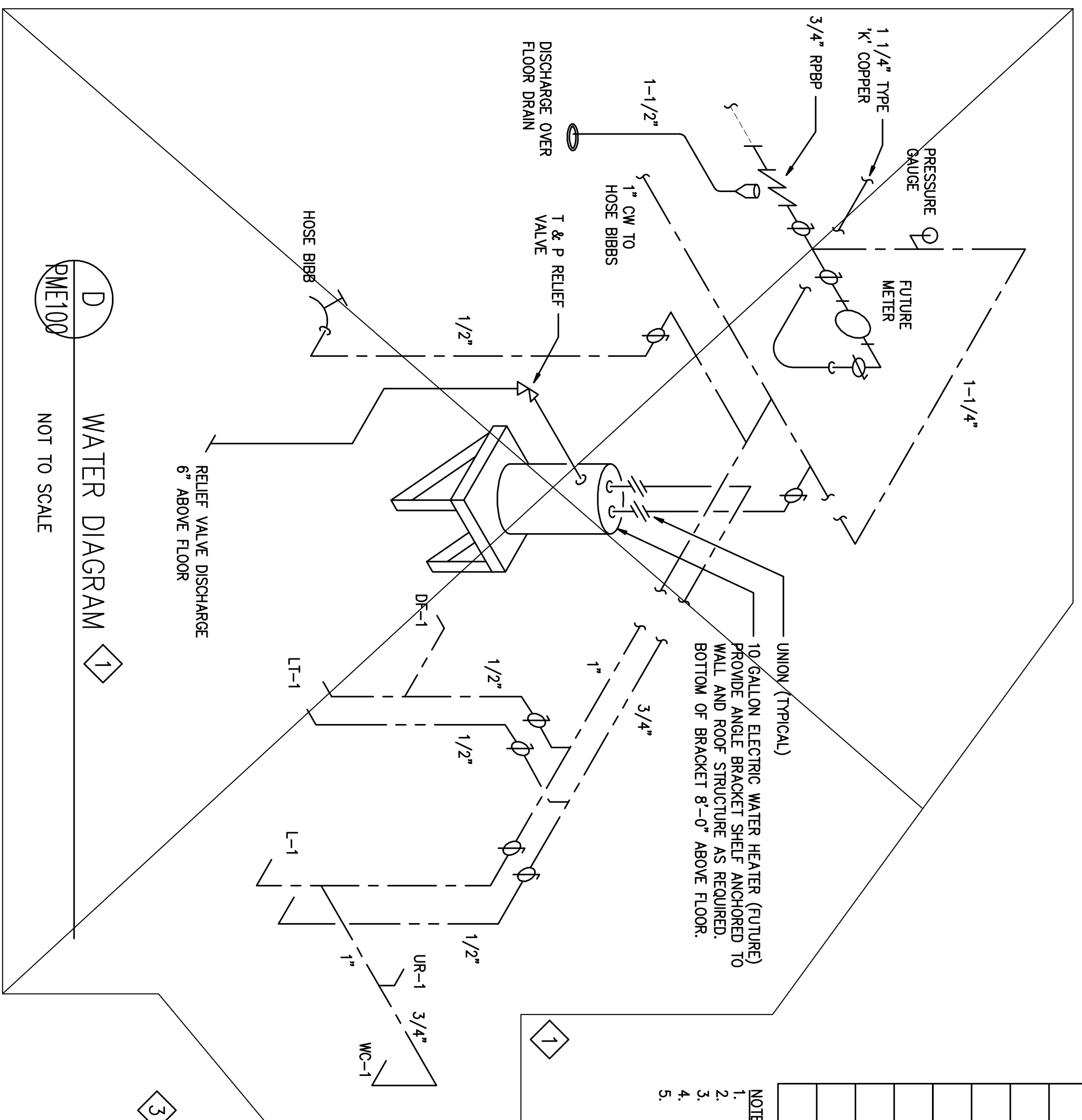
- 1 PLUMBING BID PREVIOUSLY BID.
- 2 ELECTRICAL WORK PREVIOUSLY BID.
- 3 HEATING BID PACKAGE HV-1.
- 4 PROVIDE 120V, 20A CONNECTION FOR GAS DETECTOR & BREAKER IN PANEL 'A', CIRCUIT #2.
- 5 PROVIDE 120V, 20A CIRCUIT TO NEW FAN. PROVIDE MANUAL MOTOR STARTER AT UNIT ABOVE CEILING, AND NEW 20/1 BREAKER IN PANEL 'A', CIRCUIT #1.
- 6 PROVIDE 120V, 20A CIRCUIT TO NEW FAN. PROVIDE MANUAL MOTOR STARTER IN NEAR 1 ENCLOSURE AS INDICATED, AND NEW 20/1 BREAKER IN PANEL 'A', CIRCUIT #2.
- 7 PROVIDE 240V, 18, 15A CIRCUIT (2P/2L/2N/3/4"/C) TO NEW FAN. PROVIDE 30/2 NEAR 1 COMBINATION MAGNETIC STARTER/DISCONNECT SWITCH AS INDICATED, AND NEW 15/2 BREAKER IN PANEL 'A', CIRCUIT #7 & 8.
- 8 PROVIDE 240V, 18, 15A CIRCUIT (2P/2L/2N/3/4"/C) TO NEW FAN. PROVIDE 30/2 NEAR 1 COMBINATION MAGNETIC STARTER/DISCONNECT SWITCH AS INDICATED, AND NEW 15/2 BREAKER IN PANEL 'A', CIRCUIT #11 & 13.
- 9 PROVIDE 240V, 18, 15A CIRCUIT (2P/2L/2N/3/4"/C) TO NEW FAN. PROVIDE 30/2 NEAR 1 COMBINATION MAGNETIC STARTER/DISCONNECT SWITCH AS INDICATED, AND NEW 15/2 BREAKER IN PANEL 'A', CIRCUIT #8 & 10.
- 10 PROVIDE 240V, 18, 15A CIRCUIT (2P/2L/2N/3/4"/C) TO NEW MAKE-UP AIR UNIT. PROVIDE NEW 15/2 BREAKER IN PANEL 'A', CIRCUIT #12 & 14. SWITCHER AND DISCONNECT SWITCH BY HC.
- 11 65 SHALL REFER TO THE GENERAL CONTRACT SPECIFICATIONS OR THESE SPECIFICATIONS SHALL APPLY, AND SHALL BE ENFORCED.

PLUMBING LEGEND	DESCRIPTION
SYMBOL	SANITARY WASTE
---	VENT
---	COLD WATER (CW)
---	HOT WATER (HW)
---	RISER UP
---	RISER DOWN
---	END CAP
---	LAUNDRY TRAY
---	DRINKING FOUNTAIN
---	HOSE BIBB
---	WALL HYDRANT
---	REDUCED PRESSURE BACKFLOW PREVENTER
---	WC
---	URINAL (WALL HUNG)
---	FLOOR DRAIN
---	CLEAN OUT
---	CO
---	BALL VALVE
---	END CAP
---	RISER UP
---	RISER DOWN
---	LAUNDRY TRAY
---	DRINKING FOUNTAIN
---	HOSE BIBB
---	WALL HYDRANT
---	REDUCED PRESSURE BACKFLOW PREVENTER

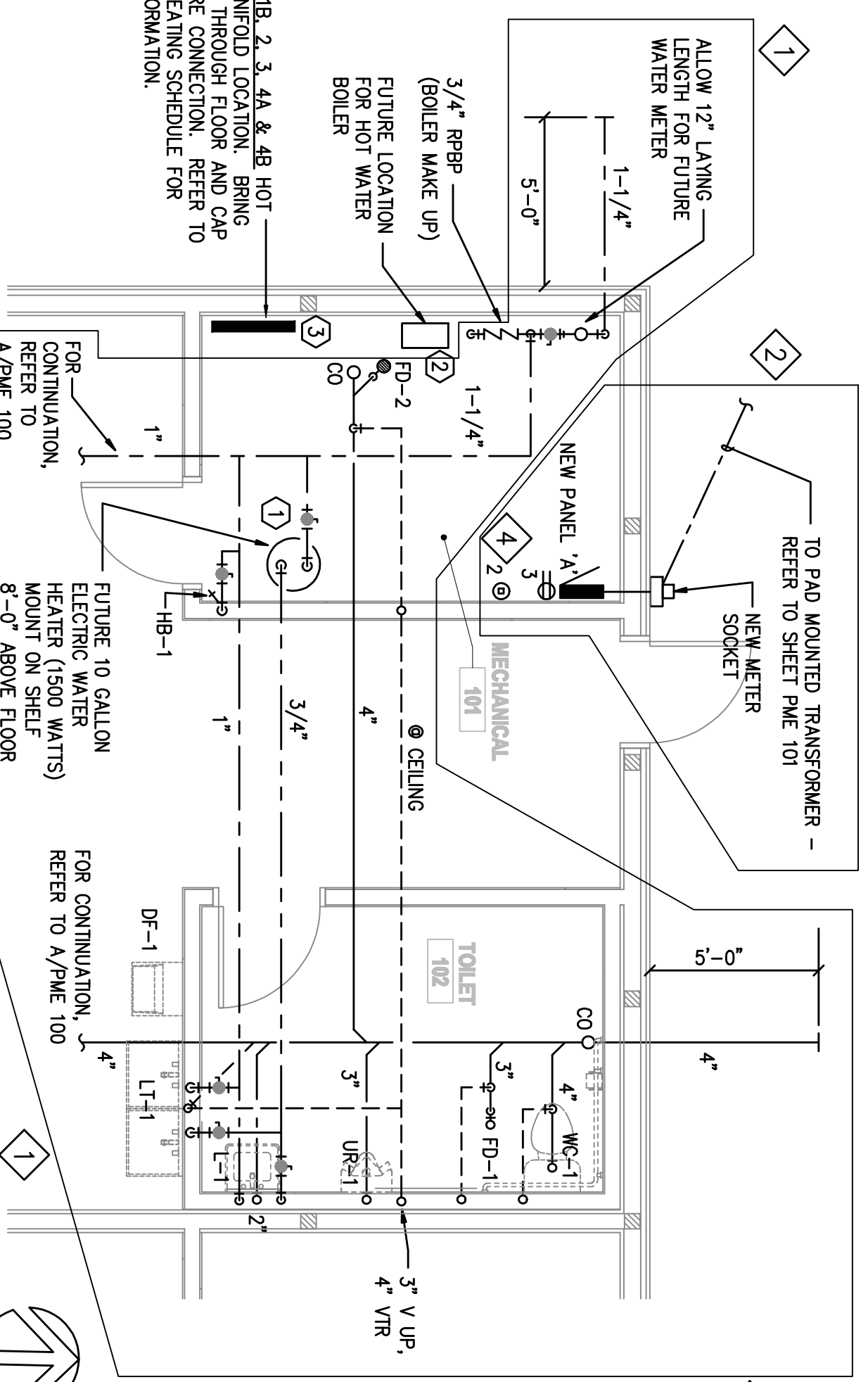
3 RADIANT FLOOR HEATING ZONE SCHEDULE

ZONE	AREA (SF)	REQUIRED HEATING (BTU/HR)	NUMBER OF CIRCUITS	TUBE DIA (IN)	CIRCUIT LENGTH (FT) (APPROX)	EMT	SURFACE TEMP °F	FLOW (GPM)	DELTA T (°F)	PD (FT)	NOTES
1A	915	20,000	4	1/2"	249	110°F	75.9	2.3	20	3.5	1 THRU 5
1B	400	16,500	2	1/2"	220	110°F	85.6	1.9	20	7.7	1 THRU 5
2	105	4,700	1	1/2"	125	110°F	87.4	0.53	20	1.6	1 THRU 5
3	105	4,700	1	1/2"	125	110°F	87.4	0.53	20	1.6	1 THRU 5
4A	835	20,500	4	1/2"	229	110°F	77.3	2.3	20	3.3	1 THRU 5
4B	410	16,700	2	1/2"	225	110°F	85.4	1.9	20	8.1	1 THRU 5
5A	3335	71,800	15	1/2"	243	110°F	75.7	8.1	20	3.1	1 THRU 5
5B	1160	47,800	6	1/2"	214	110°F	85.6	5.8	20	8.1	1 THRU 5

- NOTES:
1. SEE 'A' TUBING SIZE FOR A 72°F INDOOR DESIGN TEMP AND 87.5°F MAXIMUM FLOOR TEMP.
 2. HOT WATER IS A 30% GLYCOL SOLUTION.
 3. TYPICAL TUBE SPACING IS 12".
 4. INSTALL CONTINUOUS IN-SLAB HOT WATER TUBING AS PER MANUFACTURER'S WRITTEN INSTRUCTIONS. TUBING SPACES IN SLAB ARE PROHIBITED.
 5. TUBING MANUFACTURER TO VERIFY ACTUAL NUMBER OF CIRCUITS AND CIRCUIT LENGTH PRIOR TO INSTALLATION. SUBMIT CALCULATIONS TO A/E DURING SUBMITTAL.

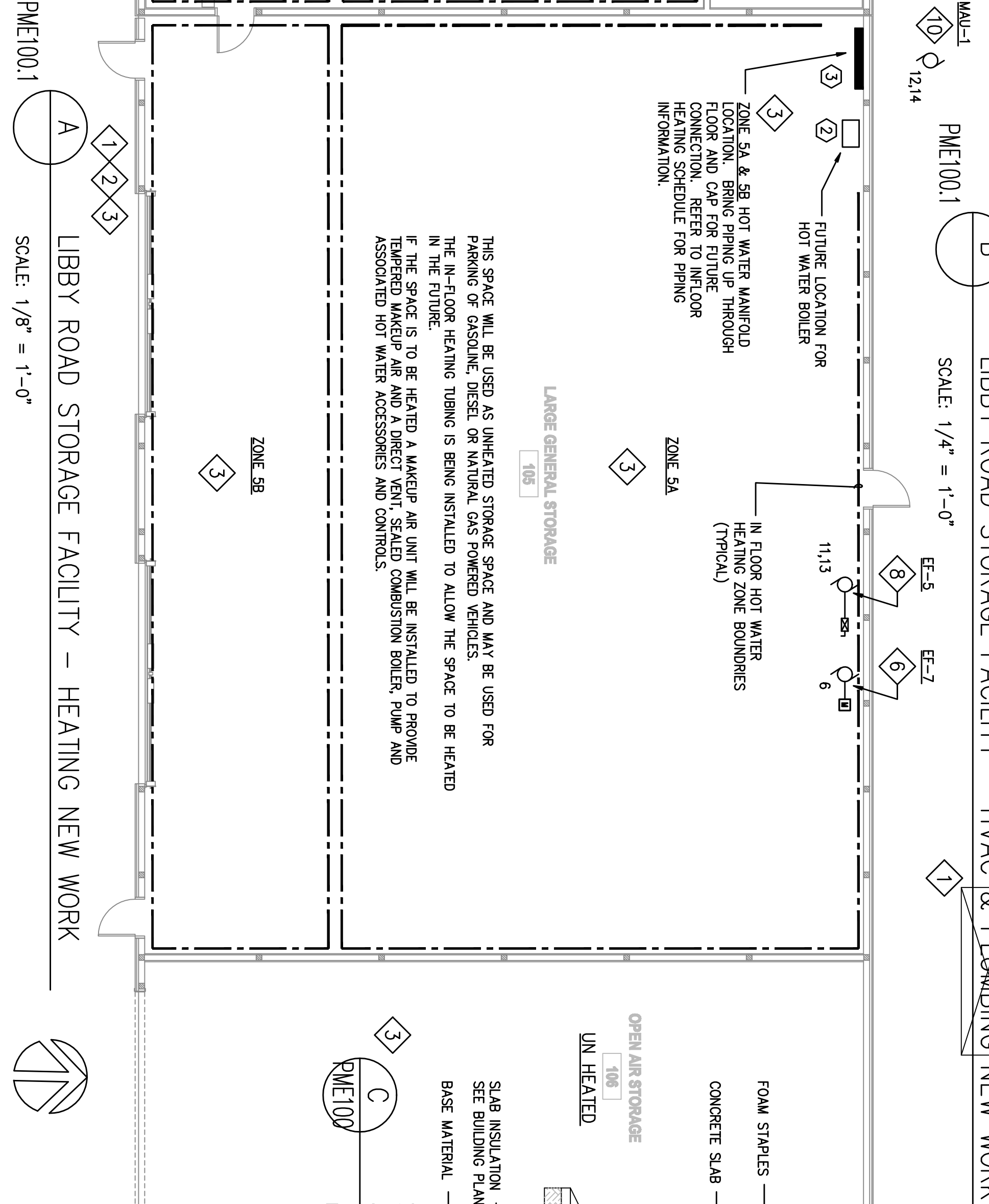
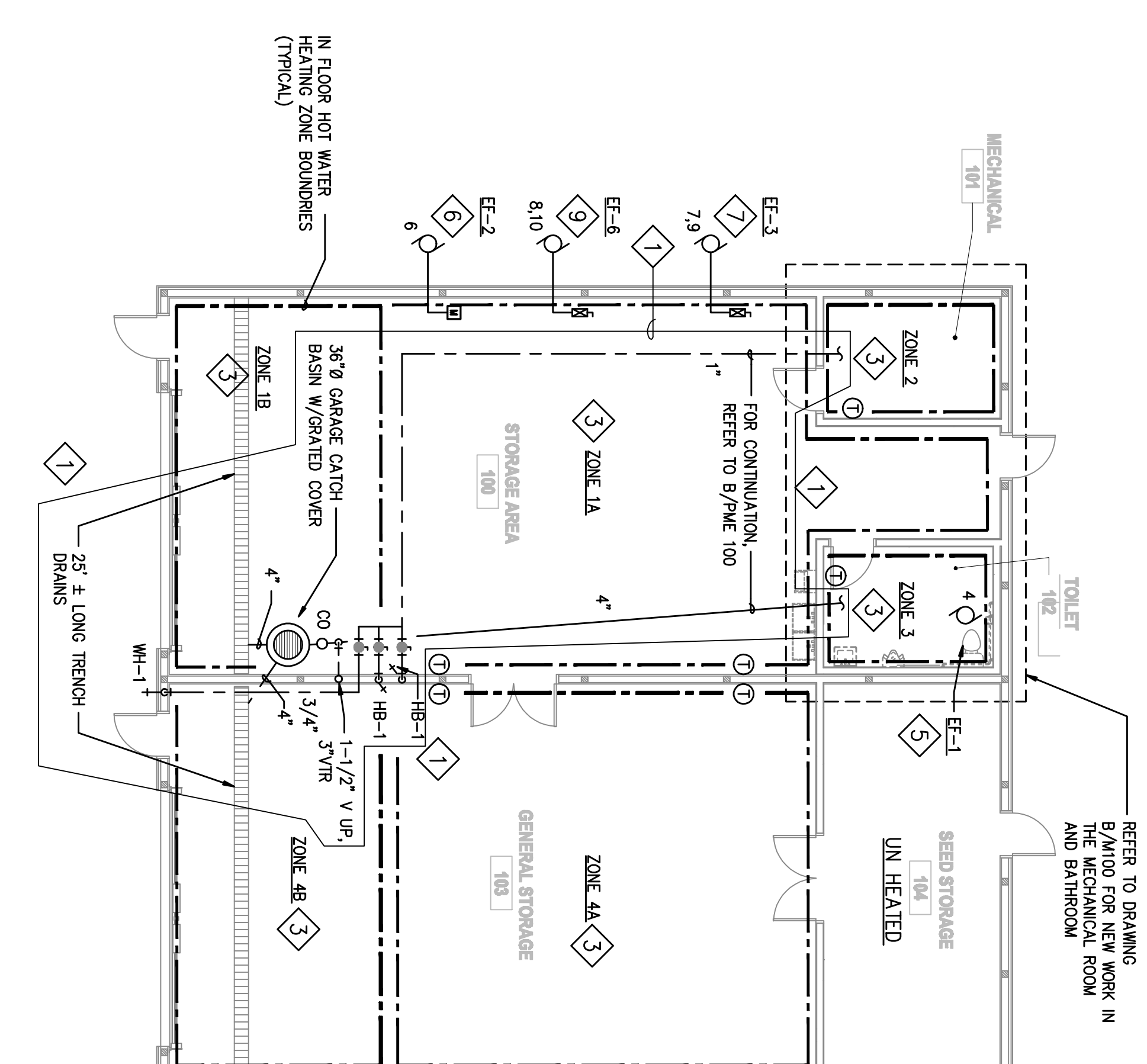


WATER DIAGRAM
NOT TO SCALE



LIBBY ROAD STORAGE FACILITY - HVAC & PLUMBING NEW WORK
SCALE: 1/4" = 1'-0"

- 1 HEATING GENERAL NOTES - DRAWING PME 100
 1. ALL VENTILATION EQUIPMENT IS INCLUDED AND INSTALLED AS PART OF PRICING PACKAGE HV-3. GAS DETECTION SYSTEM, VENTILATION CONTROLS AND VENTILATION EQUIPMENT AND POWER WIRING WILL BE PART OF PRICING PACKAGE HV-2.
 2. THE IN-FLOOR HEATING HEATING PIPING WILL BE PROVIDED & INSTALLED BY THE BUILDING CONSTRUCTION CONTRACTOR.
 3. BOILERS, PUMPS, IN-FLOOR MANIFOLDS AND HYDRONIC ACCESSORIES WILL BE PURCHASED AND INSTALLED IN THE FUTURE.
 4. FOR ROOMS 101, 102 AND 103 THE BOILER AND ASSOCIATED HOT WATER PIPING SHALL BE PROVIDED BY THE OWNER AS PART OF PHASE TWO OF THE PROJECT.
- 2 PLUMBING GENERAL NOTES - DRAWING PME 100
 1. PLUMBING FIXTURES WC-1, UR-1, LT-1, DE-1 AND WATER HEATER WILL BE PURCHASED AND INSTALLED BY THE OWNER.
 2. THE ONLY ELECTRICAL WORK TO BE INCLUDED IN THE CONSTRUCTION CONTRACT IS THE WORK INDICATED ON THE DRAWINGS.
 3. ALL LIGHTING AND POWER DISTRIBUTION IN THE BUILDING WILL BE BY THE OWNER.
- 3 KEYS NOTES - DRAWING PME 100
 - 1 PLUMBING - COMPRESSOR TO TERMINATE THE WATER HEATER COLD INLET AND HOT OUTLET PIPING FOR FUTURE CONNECTION TO WATER HEATER.
 - 2 HEATING - FUTURE DIRECT VENT SEALED COMBUSTION BOILER.
 - 3 HEATING - STUB IN-FLOOR HEATING TUBING TO MINIMUM 18 INCHES ABOVE FLOOR. TAG EACH LINE AS TO THE ZONE NUMBER AND INDICATE IF THE LINE IS SUPPLY OR RETURN.



- 1 THE SCOPE OF PRICING PACKAGE HV-1 IS THE PROVIDING AND INSTALLATION OF THE IN-FLOOR HEATING PIPING AND TUBING FOR ZONES 1A, 1B, 2, 3, 4A, 4B, 5A AND 5B AS INDICATED ON PLAN A-PME100.1
- 2 REFER TO SPECIFICATION SECTION 23 05 00, PART 1 - GENERAL, SCOPE FOR SPECIFICATION SECTIONS APPLICABLE TO THE WORK OF PRICING PACKAGE HV-2.
- 3 REFER TO SPECIFICATION SECTION 23 05 00, PART 1 - GENERAL, SCOPE FOR SPECIFICATION SECTIONS APPLICABLE TO THE WORK OF PRICING PACKAGE HV-2.

HEATING FLOOR PLANS AND RADIANT HEATING ZONE SCHEDULE

Issued For Approval & Bidding: 9/26/14
 Issued For Review: 4/7/14

LAKE FARM STORAGE FACILITY
 LAKE FARM COUNTY PARK
 4401 LIBBY ROAD
 MADISON, WI
 (PREVIOUS BID NUMBER 313094)
 PRICING PACKAGES HV-1, HV-2 & HV-3

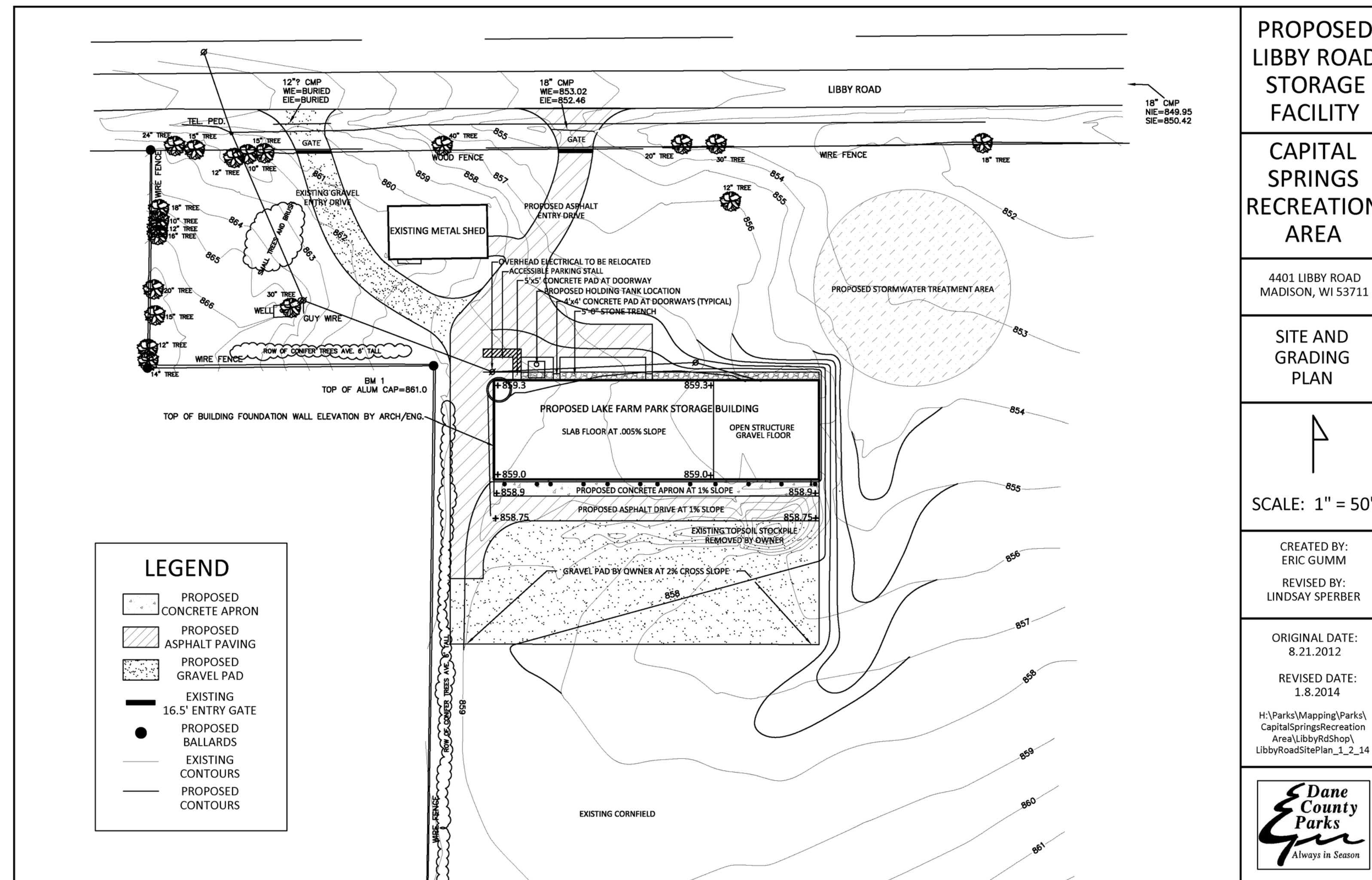
Dane County Department of Public Works, Highway and Transportation
 Public Works Engineering Division
 1919 Alliant Energy Center Way
 Madison, WI 53713

Project No. 13-0908.01
 Drawing No. **PME100.1**

Architecture
Planning

DorschnerAssociates, Inc.
849 E. Washington Ave., Ste. 112
Madison, Wisconsin 53703
Phone: 608.204.0777
Fax: 608.204.0778

ISSUE



PROJECT
LAKE FARM STORAGE FACILITY

LAKE FARM COUNTY PARK
4401 LIBBY ROAD
MADISON, WI

RFB NO.
313094

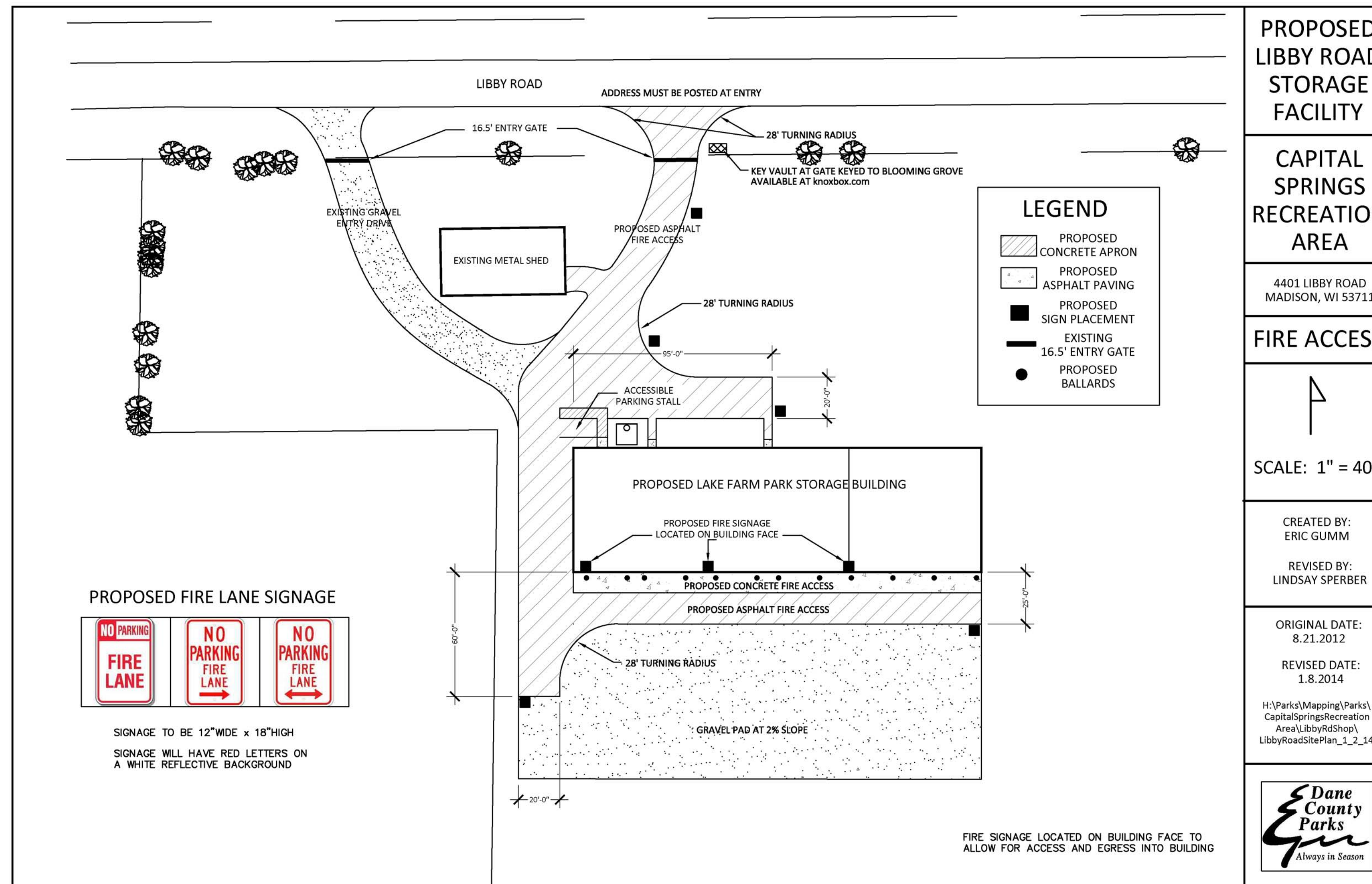
DRAWING
SITE AND GRADING PLAN

DATE
09.26.14

Architecture
Planning

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ISSUE



PROJECT
LAKE FARM STORAGE FACILITY

LAKE FARM COUNTY PARK
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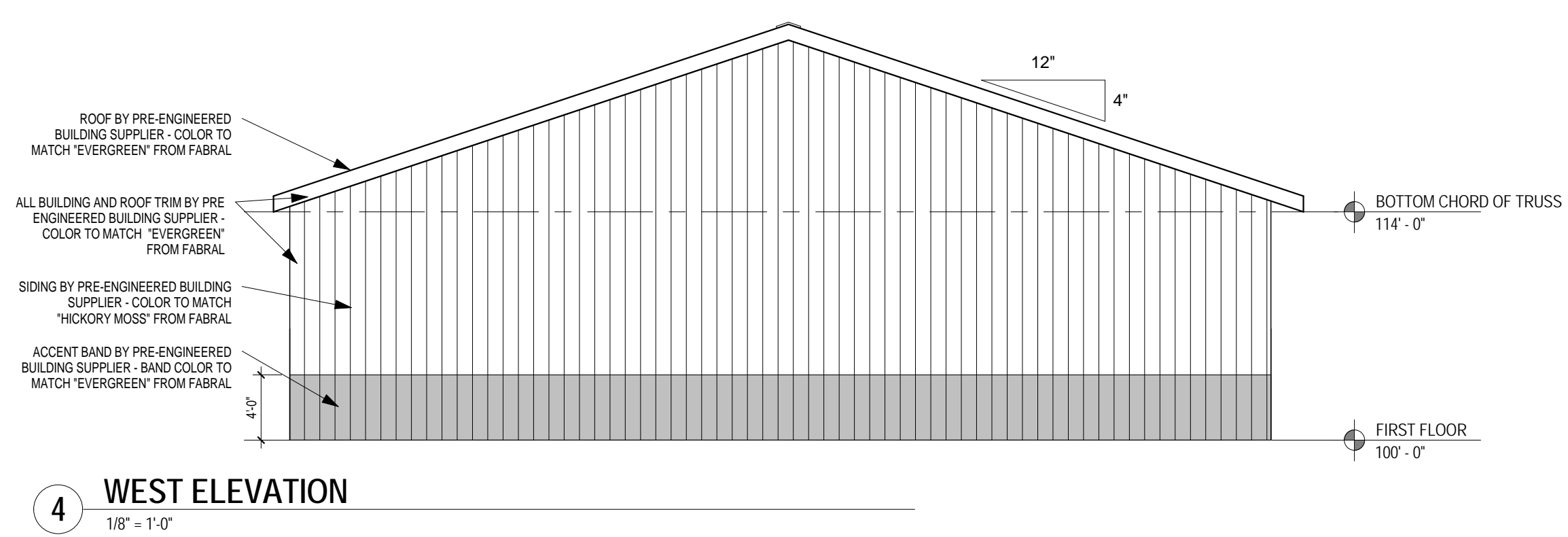
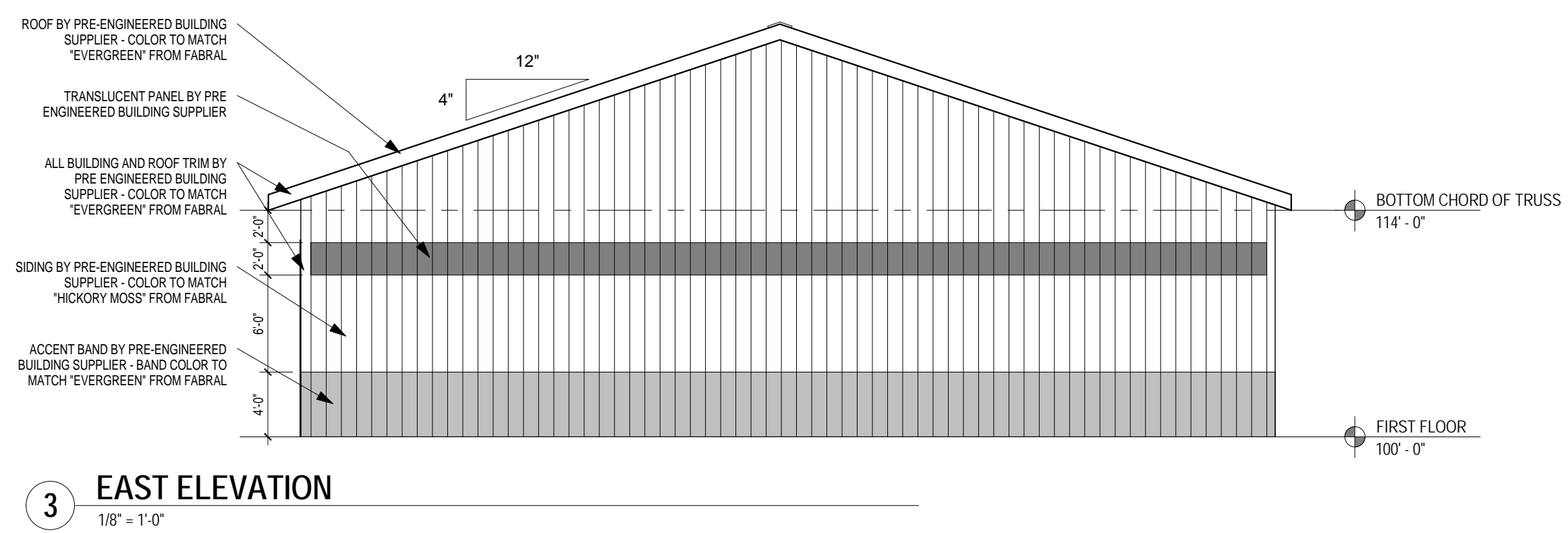
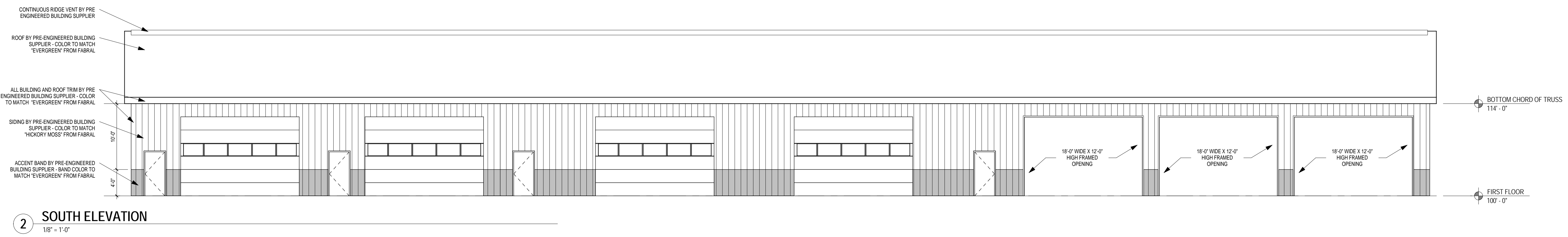
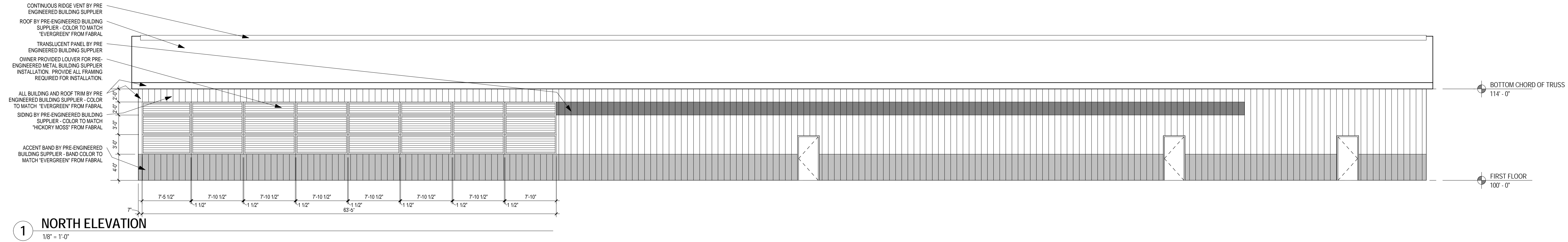
DRAWING
FIRE ACCESS

DATE
09.26.14

Architecture
Planning

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849 E. Washington Ave., Ste. 112
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ISSUE



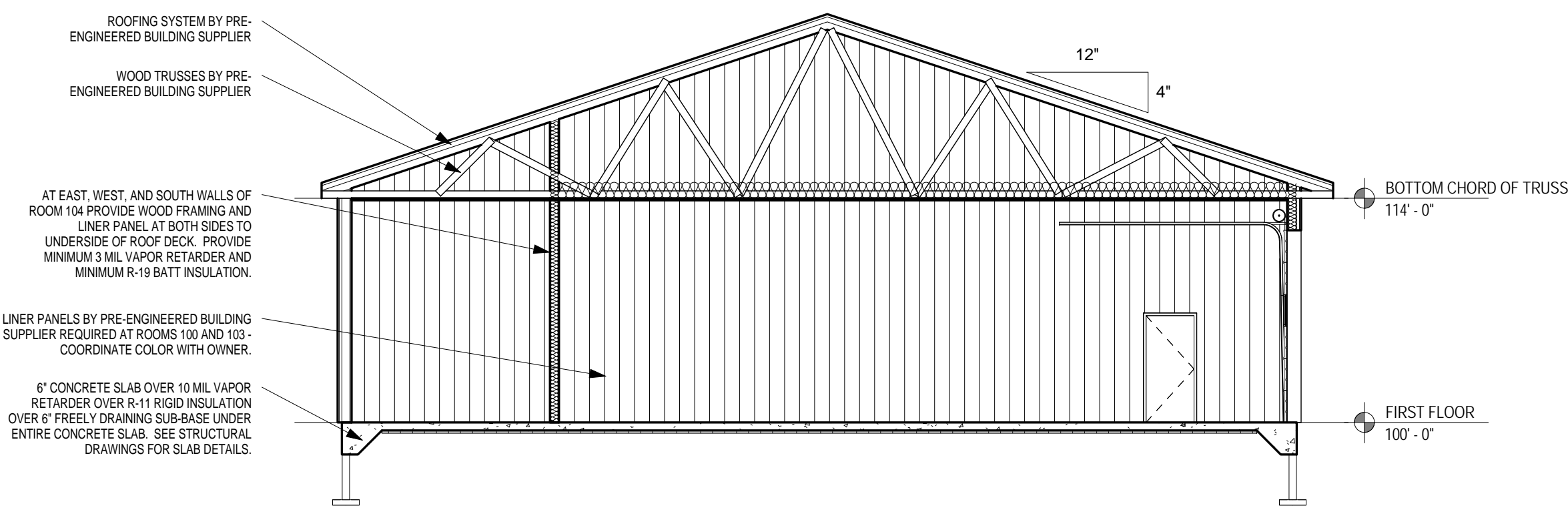
PROJECT
LAKE FARM STORAGE FACILITY

LAKE FARM COUNTY PARK
4401 LIBBY ROAD
MADISON, WI

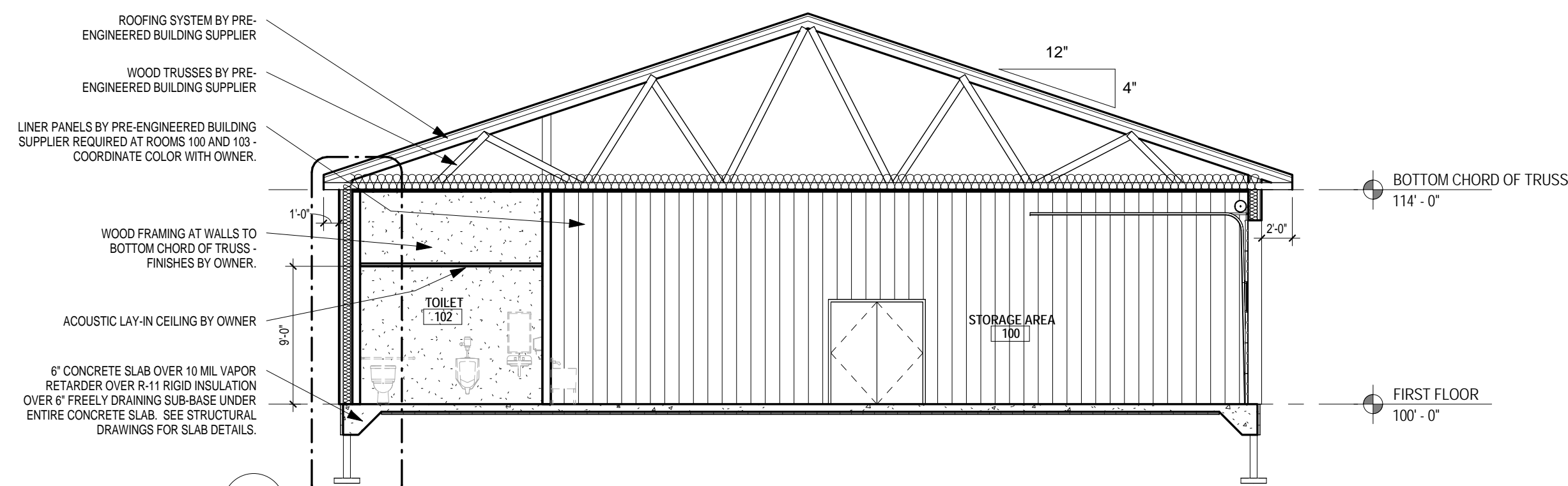
RFB NO.
313094

DRAWING
EXTERIOR ELEVATIONS

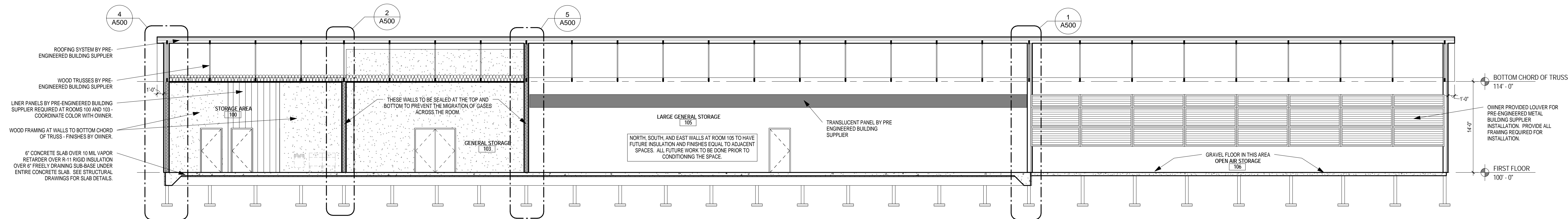
DATE
09.26.14



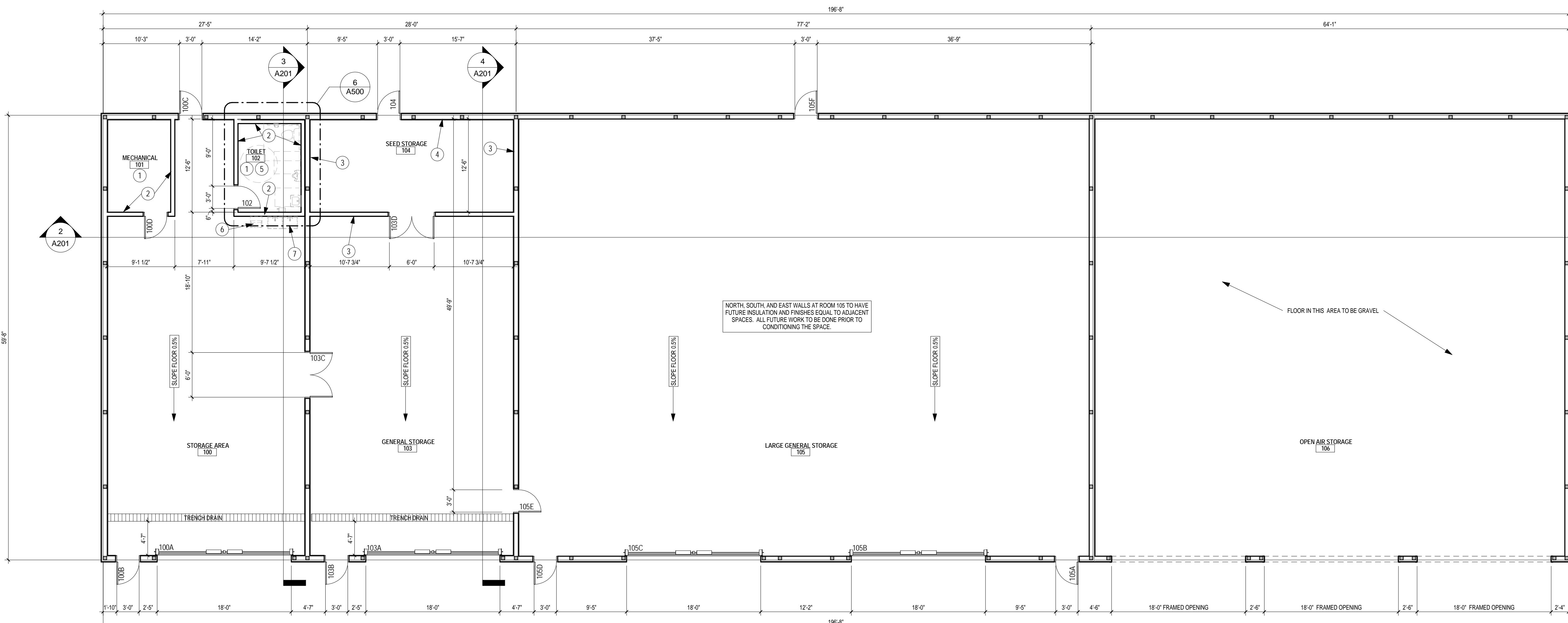
4 BUILDING SECTION
1/8" = 1'-0"



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



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



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

FLOOR PLAN KEY NOTES

- 1 PROVIDE PLYWOOD AND BLOCKING IN ALL WALLS AT THIS ROOM FOR TOILET ACCESSORIES AND MEP. SEE MEP DRAWINGS FOR DETAILS.
- 2 PROVIDE WOOD FRAMING AT THESE WALLS TO BOTTOM CHORD OF TRUSS - FINISHES BY OWNER.
- 3 AT EAST, WEST, AND SOUTH WALLS OF ROOM 104 PROVIDE WOOD FRAMING AND LINER PANEL AT BOTH SIDES TO UNDERSIDE OF ROOF DECK. PROVIDE MINIMUM 3 MIL VAPOR RETARDER AND MINIMUM R-19 BATT INSULATION.
- 4 NO R-19 WALL INSULATION OR LINER PANEL AT THE NORTH WALL OF ROOM 104.
- 5 ALL TOILET FIXTURES AND ACCESSORIES ARE BY OWNER.
- 6 DRINKING FOUNTAIN BY OWNER.
- 7 UTILITY SINKS BY OWNER.

PROJECT
LAKE FARM STORAGE FACILITY

LAKE FARM COUNTY PARK
4401 LIBBY ROAD
MADISON, WI

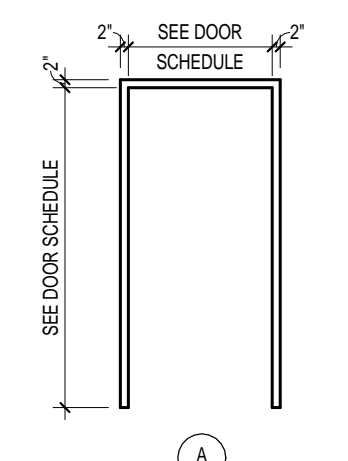
RFB NO.
313094

DRAWING
FIRST FLOOR PLANS AND
BUILDING SECTIONS

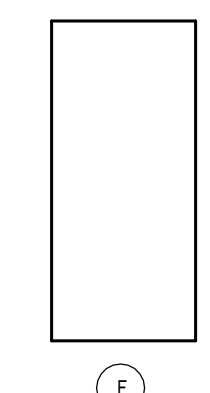
DATE
09.26.14

DOOR NUMBER	ROOM NAME	DOOR			DOOR ELEVATION	DOOR SCHEDULE						GLAZE	FIRE RATING	HARDWARE	COMMENTS	
		W	H	T		MATERIAL	FRAME	FRAME	FRAME	FRAME	FRAME					FRAME
FIRST FLOOR																
100A	STORAGE AREA	18'-0"	12'-0"	2"	OH	ALUM										
100B	STORAGE AREA	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								
100C	STORAGE AREA	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								
100D	STORAGE AREA	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								
102	TOILET	3'-0"	6'-8"	1-3/4"	F	HM	A	HM						NO DOOR CLOSER	NO DOOR CLOSER	
103A	GENERAL STORAGE	18'-0"	12'-0"	2"	OH	ALUM										
103B	GENERAL STORAGE	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								
103C	GENERAL STORAGE	6'-0"	6'-8"	1-3/4"	F	HM	A	HM								
103D	GENERAL STORAGE	6'-0"	6'-8"	1-3/4"	F	HM	A	HM								
104	SEED STORAGE	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								
105A	LARGE GENERAL STORAGE	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								
105B	LARGE GENERAL STORAGE	18'-0"	12'-0"	2"	OH	ALUM										
105C	LARGE GENERAL STORAGE	18'-0"	12'-0"	2"	OH	ALUM										
105D	LARGE GENERAL STORAGE	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								
105E	LARGE GENERAL STORAGE	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								
105F	LARGE GENERAL STORAGE	3'-0"	6'-8"	1-3/4"	F	HM	A	HM								

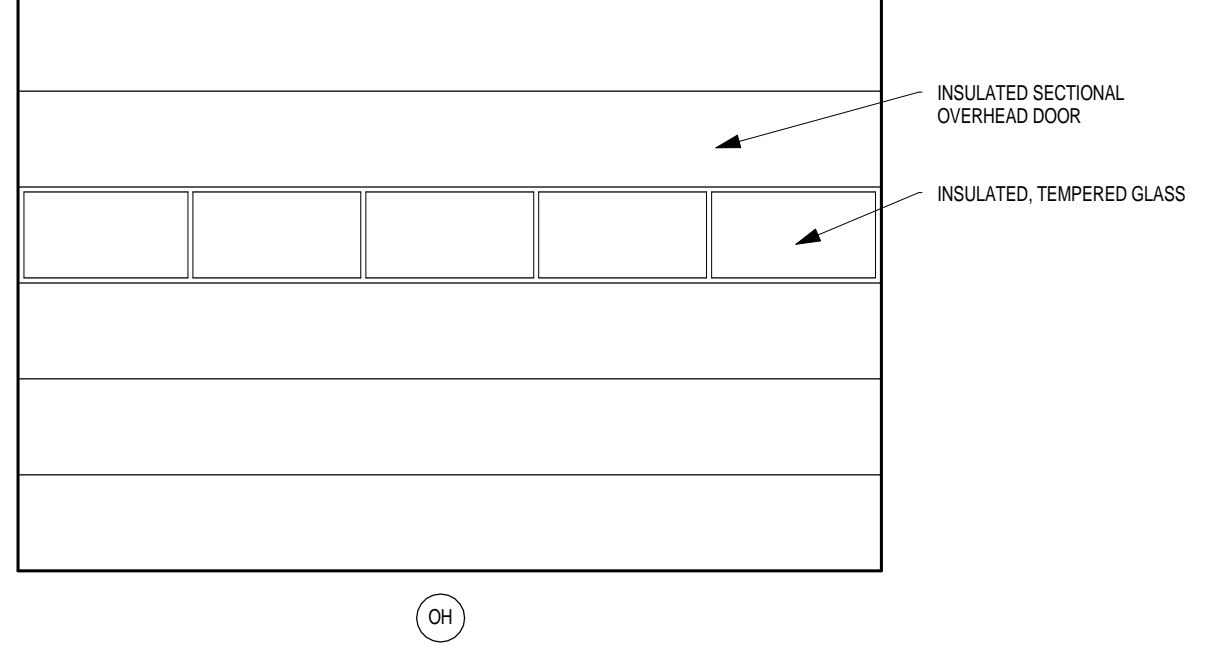
DOOR SCHEDULE NOTES
1. ALL DOORS TO BE STOREROOM FUNCTION UNLESS NOTED OTHERWISE.



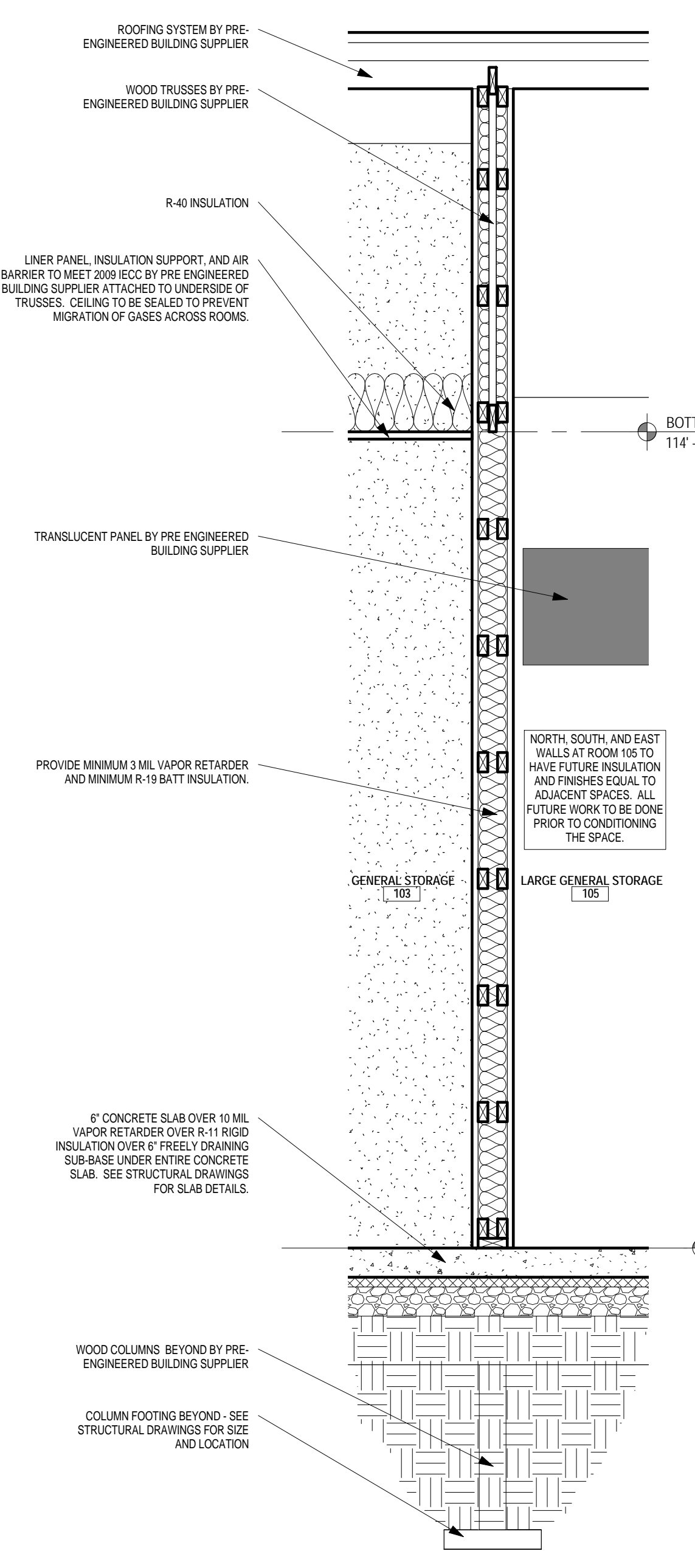
7 DOOR FRAME ELEVATIONS
1/4" = 1'-0"



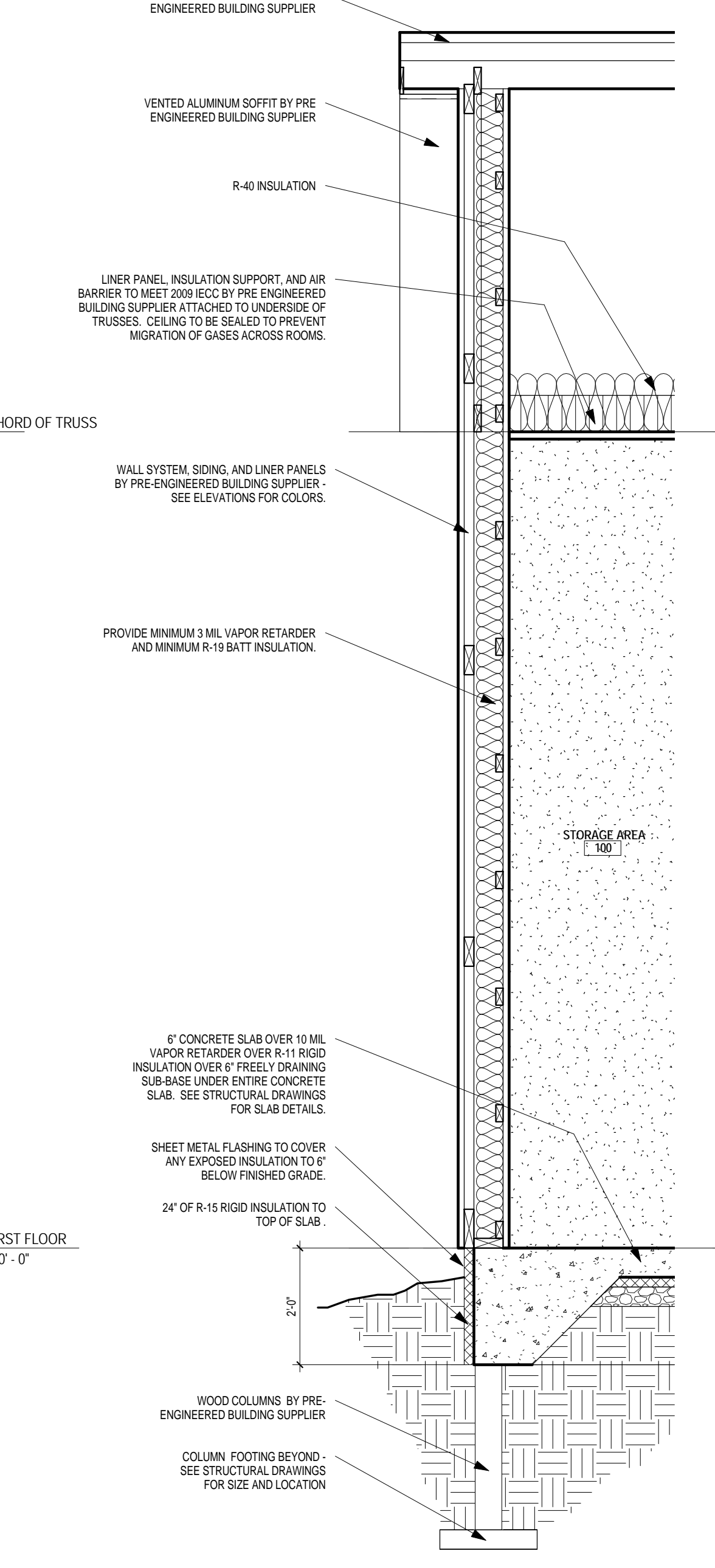
8 DOOR TYPE ELEVATIONS
1/4" = 1'-0"



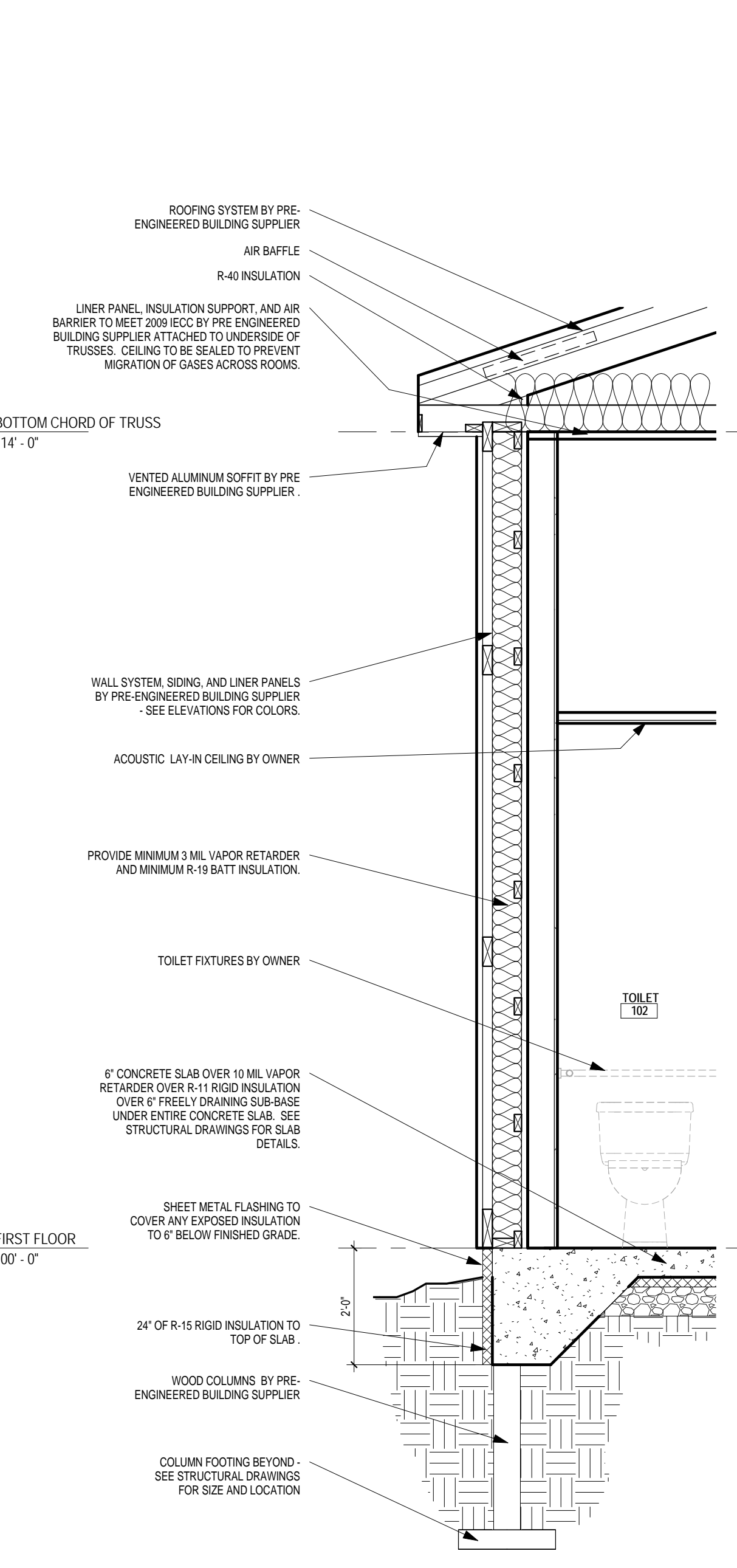
6 ENLARGED BATHROOM FLOOR PLAN
1/4" = 1'-0"



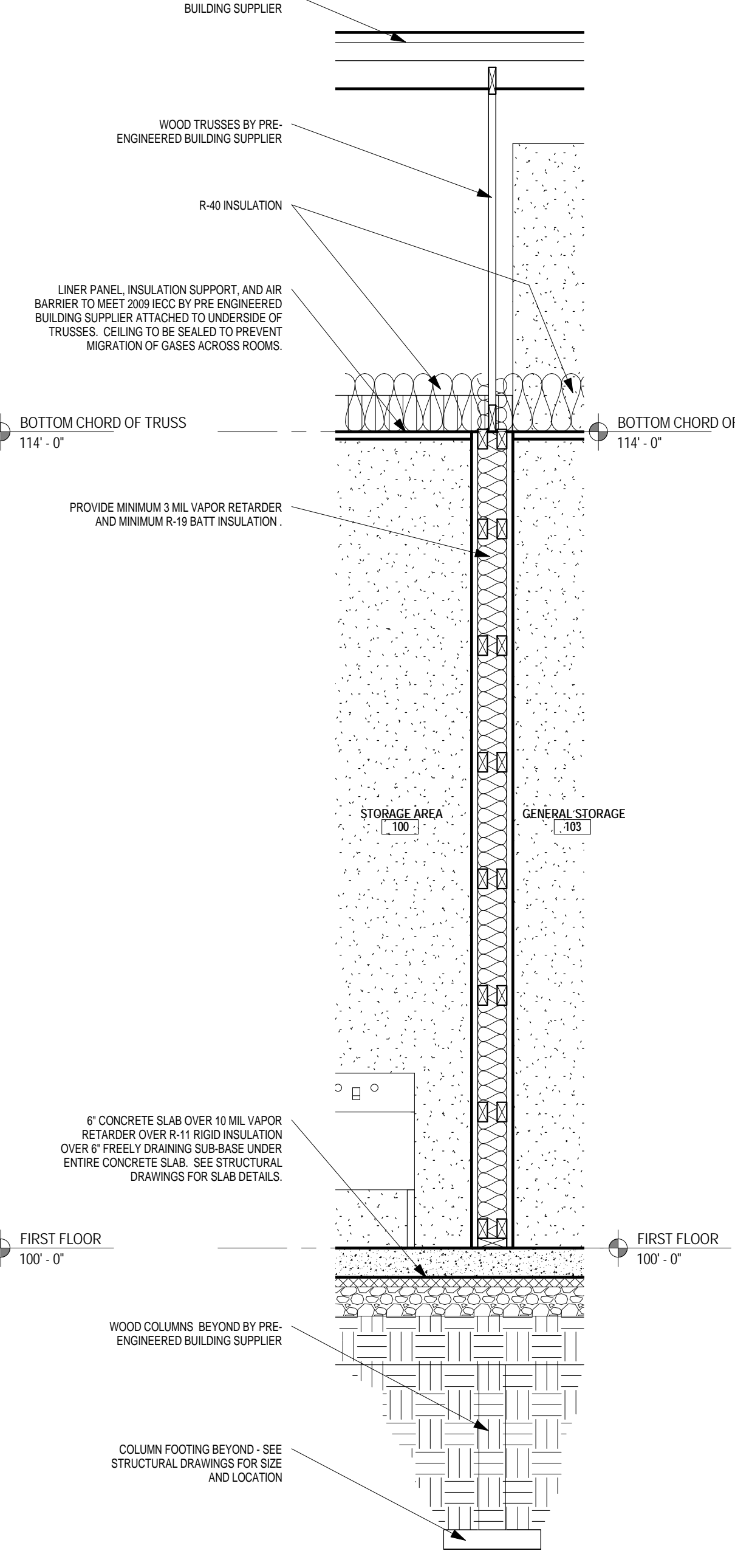
5 WALL SECTION
1/2" = 1'-0"



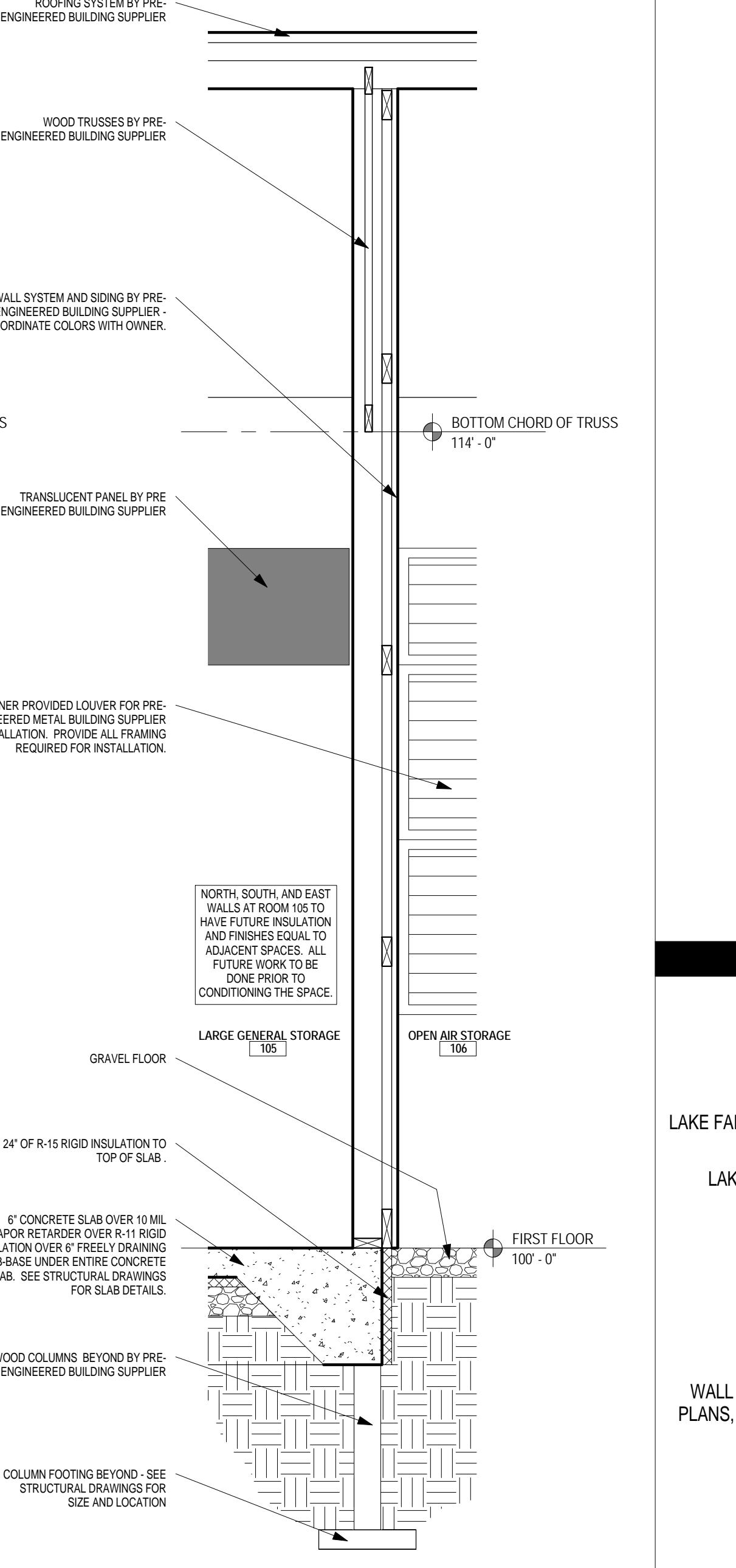
4 WALL SECTION
1/2" = 1'-0"



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



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



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

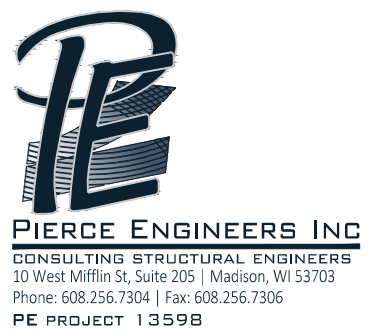
PROJECT
LAKE FARM STORAGE FACILITY

LAKE FARM COUNTY PARK
4401 LIBBY ROAD
MADISON, WI

RFB NO.
313094

DRAWING
WALL SECTIONS, ENLARGED
PLANS, AND DOOR SCHEDULE

DATE
09.26.14



STRUCTURAL ABBREVIATIONS

ABBRV.	WORD OR PHRASE	ABBRV.	
@	AT	LL	LIVE LOAD
&	AND	LLH	LONG LEG HORIZONTAL
AB	ANCHOR BOLT	LLV	LONG LEG VERTICAL
ALT	ALTERNATE	LSL	LAMINATED STRAND LUMBER
APA	AMERICAN PLYWOOD ASSOC.	LVL	LAMINATED VENEER LUMBER
ARCH	ARCHITECTURAL	LW	LONG WAY
BC	BOTTOM CHORD	MFR	MANUFACTURER
BLDG	BUILDING	MAX	MAXIMUM
BLKG	BLOCKING	MECH	MECHANICAL
BM	BEAM	MIN	MINIMUM
BOT	BOTTOM	MISC	MISCELLANEOUS
BRG	BEARING	NIC	NOT IN CONTRACT
C	CENTERLINE	NTS	NOT TO SCALE
CB	COLUMN BASE	OC	ON CENTER
CIP	CAST-IN-PLACE	O.F.	OUTSIDE FACE
CL	CENTERLINE	OPP	OPPOSITE
CLR	CLEAR	PARA	PARALLEL
CJ	CONTROL OR CONSTRUCTION JOINT	PIC	PRECAST CONCRETE
CMU	CONCRETE MASONRY UNIT	PCF	POUNDS PER CUBIC FOOT
COL	COLUMN	PERP	PERPENDICULAR
CONC	CONCRETE	ϵ	STEEL PLATE
CONT	CONTINUOUS	PLY	PLYWOOD
DBA	DECK BEARING ANGLE	PSI	POUNDS PER SQUARE INCH
DEFL	DEFLECTION	PSF	POUNDS PER SQUARE FOOT
DEMO	DEMOLITION	PSL	PARALLEL STRAND LUMBER
DFL	DOUGLAS FIR LARCH	PIT	POST TENSIONED CONCRETE
DIA (Ø)	DIAMETER	PT	PRESSURE TREATED
DIM	DIMENSION	REINF	REINFORCEMENT
DL	DEAD LOAD	REQD	REQUIRED
DTL	DETAIL	RTU	ROOF TOP UNIT
DWL	DOWEL	SCHD	SCHEDULE
DWG	DRAWING	SHT	SHEET
EA	EACH	SIM	SIMILAR
EF	EACH FACE	SMS	SHEET METAL SCREWS
EJ	EXPANSION JOINT	SOG	SLAB ON GRADE
EL	ELEVATION	SPEC	SPECIFICATION
EMBED	EMBEDMENT	SPP	SPRUCE-PINE-FIR
EOSL	EDGE OF SLAB	SQ	SQUARE
EOS	EDGE OF STEEL	SS	STAINLESS STEEL
EQ	EQUAL	STL	STEEL
EW	EACH WAY	STR	STRUCTURAL
EXIST	EXISTING	SW	SHORT WAY
EXP	EXPANSION	SYM	SYMMETRICAL
EXT	EXTERIOR	SYP	SOUTHERN YELLOW PINE
FD	FLOOR DRAIN	T&B	TOP AND BOTTOM
FND	FOUNDATION	TC	TOP CHORD
FF	FINISH FLOOR	T&G	TONGUE AND GROOVE
FIN	FINISH	TF	TOP OF FOOTING ELEVATION
FLR	FLOOR	TL	TOP OF LEDGE ELEVATION
FRMG	FRAMING	TOC	TOP OF CONCRETE ELEVATION
FTG	FOOTING	TOSL	TOP OF SLAB ELEVATION
GA	GAGE	TOS	TOP OF STEEL ELEVATION
GALV.	GALVANIZED	TP	TOP OF PILE ELEVATION
GB	GRADE BEAM	TIPC	TOP OF PILE CAP
GC	GENERAL CONTRACTOR	TRANS	TRANSVERSE
GT	GIRDER TRUSS	TS	TUBE STEEL
GYP	GYPSUM	TW	TOP OF WALL ELEVATION
HORIZ	HORIZONTAL	TYP	TYPICAL
HIF	HORIZONTAL INSIDE FACE	UNO	UNLESS NOTED OTHERWISE
HOF	HORIZONTAL OUTSIDE FACE	VERT	VERTICAL
HSS	HOLLOW STRUCTURAL SECTION	VIF	VERTICAL INSIDE FACE
HT	HEIGHT	VOF	VERTICAL OUTSIDE FACE
HVAC	HEATING, VENTILATING & AIR COND.	w/	WITH
HWS	HEADED WELD STUD	WF	WIDE FLANGE
I.F.	INSIDE FACE	w/o	WITHOUT
INFO	INFORMATION	WP	WORKPOINT
JST	JOIST	WT	WEIGHT
KSI	KIPS PER SQUARE INCH	WWF	WELDED WIRE FABRIC
L	ANGLE	SLRS	SEISMIC LOAD RESISTING SYSTEM
		SMF	SPECIAL MOMENT FRAME
		SCBF	SPECIAL CONCENTRIC BRACED FRAME

ROOF TRUSS DESIGN NOTES

- DESIGN UPLIFT ON ROOF TRUSSES AS INDICATED IN THE DESIGN DATA. PROVIDE A TIE DOWN CLIP AT EACH TRUSS, AT EVERY POINT OF BEARING.
- DEFLECTION LIMITS:**
ROOF
LIVE LOAD L/360
TOTAL LOAD L/240
- LOADS:**
SNOW LOAD - PER DESIGN DATA INCLUDING APPLICABLE UNBALANCED LOADING CONDITION
DEAD LOAD - TYPICAL PRE-ENGINEERED BUILDING DEAD LOADS (FRAMING, SHEATHING, ROOFING, INSULATION, AND LIGHTS, HVAC, PLUMBING) PLUS 10psf COLLATERAL DEAD LOAD APPLIED TO BOTTOM CHORD OF TRUSS

CLASS 'B' TENSION LAP SPLICE LENGTHS (INCHES)

BAR SIZE	fc = 3000		fc = 4000	
	BOT	TOP	BOT	TOP
#3	22	28	19	24
#4	29	37	25	33
#5	36	47	31	41
#6	43	56	37	49
#7	63	81	54	71
#8	72	93	62	81
#9	81	105	70	91
#10	91	118	79	102
#11	101	131	87	113

NOTES (d_b = BAR DIAMETER, C-C = CENTER TO CENTER):

- SCHEDULE BASED ON CLEAR COVER > 1 d_b AND C-C > 2d_b
- TOP BARS OF BEAMS AND JOIST AND HORIZONTAL WALL REINFORCING THIS SCHEDULE IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT INTENDED TO COVER ALL SITUATIONS. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL REQUIRED LAP LENGTHS

CAST-IN-PLACE CONCRETE TOLERANCES

- CONCRETE COVER MEASURED PERPENDICULAR FROM THE SURFACE IN DIRECTION OF TOLERANCES:
MEMBERS 12" OR LESS ±½"
MEMBERS OVER 12" ±½"
- STEEL REINFORCEMENT SPACING SHALL BE WITHIN THE FOLLOWING TOLERANCES:
½" SPACING DISTANCE, NOT TO EXCEED 1"
PLACEMENT OF EMBEDDED ITEMS SHALL BE WITHIN THE FOLLOWING TOLERANCES:
VERTICAL ALIGNMENT ±1"
LATERAL ALIGNMENT ±1"
- PLACEMENT OF FOOTINGS SHALL BE WITHIN THE FOLLOWING TOLERANCES:
LATERAL ALIGNMENT ±2"
LEVEL ALIGNMENT ±½" TO -2"
(LEVEL ALIGNMENT SUPPORTING MASONRY) ±½"
- CROSS-SECTIONAL DIMENSION OF FOOTINGS SHALL BE WITHIN THE FOLLOWING TOLERANCES:
FORMED FOOTINGS ±1"
EARTHCAST FOOTINGS:
2" OR LESS ±3" TO -½"
GREATER THAN 2 BUT LESS THAN 6' ±6" TO -½"
GREATER THAN 6' ±12" TO -½"
FOOTING THICKNESS ±5%
- TOP OF FOOTING SLOPE 1" IN 10'
- SEE DRILLED PIER NOTES FOR ADDITIONAL INFORMATION AT DRILLED PIER FOUNDATIONS.

MILD STEEL PROTECTION

FOOTINGS - BOTTOM & SIDES	3"
FOOTING - TOP	2"
PERIMETER WALLS - #5 & SMALLER	1½"
PERIMETER WALLS - #6 & LARGER	2"
INTERIOR WALLS	¾"
BEAMS, PIERS, & COLUMNS	1½"
SLABS - BOTTOM & SIDES	1"
SLABS - TOP	¾"

GENERAL FOUNDATION NOTES

- PROTECT IN-PLACE FOUNDATIONS AND SLABS ON GRADE FROM FROST PENETRATION UNTIL PROJECT COMPLETION
- REFER TO ARCHITECTURAL DRAWINGS OR PLUMBING DRAWINGS FOR SPECIFIC FLOOR DRAIN LOCATIONS & ELEVATIONS.
- NO PROVISION HAS BEEN MADE FOR FUTURE EXPANSION.
- VERIFY SIZES OF ALL STOOPS WITH ARCHITECT PRIOR TO CONSTRUCTION.

CAST-IN-PLACE CONCRETE NOTES

- DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST PROVISIONS OF ACI 318/318R.
- CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER AT LEAST 48 HOURS PRIOR TO PLACING CONCRETE TO FACILITATE ON SITE OBSERVATION OF REBAR.
- ARRANGEMENT AND BENDING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI DETAILING MANUAL (ACI SP-08), LATEST EDITION.
- WHEN THE AVERAGE TEMPERATURE FROM MIDNIGHT TO MIDNIGHT IS EXPECTED TO DROP BELOW 40 DEGREES FAHRENHEIT FOR THREE SUCCESSIVE DAYS, COLD WEATHER CONCRETING REQUIREMENTS MUST BE FOLLOWED.
- WHEN AMBIENT AIR OR CONCRETE TEMPERATURES EXCEED 90 DEGREES FAHRENHEIT, STEEL REINFORCING AND/OR FORMING SURFACES ARE ABOVE 120 DEGREES, OR WHEN WIND VELOCITY, HUMIDITY, OR SOLAR RADIATION CREATE CONDITIONS OF ACCELERATED MOISTURE LOSS AND INCREASED RATE OF HYDRATION, HOT WEATHER CONCRETING REQUIREMENTS SHALL BE FOLLOWED.
- ALL HOOKS IN STEEL REINFORCING SHALL BE ACI STANDARD HOOKS, UNLESS NOTED OTHERWISE IN CONSTRUCTION DOCUMENTS.
- ALL CONCRETE SURFACES SHALL BE FORMED, UNLESS OTHERWISE NOTED.
- CONTROL JOINTS SHALL BE PLACED IN SLAB ON GRADE AND SLAB ON METAL DECK CONSTRUCTION WITHIN 24 HOURS OF INITIAL POUR
- WIRE SPACERS, CHAIRS, TIES, ETC. FOR SUPPORT OF STEEL REINFORCING SHALL BE PROVIDED BY THE CONTRACTOR TO ENSURE REINFORCING IS PLACED IN THE PROPER POSITION DURING CONCRETE PLACEMENT.
- STEEL REINFORCING SPLICES OF ADJACENT BARS SHALL BE STAGGERED SUCH THAT SPLICES ARE 4 FEET APART, MINIMUM
- PROVIDE (2) #5 BARS AROUND ALL OPENINGS AND (2) #5 DIAGONALLY AT ALL OPENING CORNERS UNLESS OTHERWISE SPECIFIED. EXTEND 2'-9" PAST OPENING TYPICALLY
- WELDED WIRE REINFORCING SHALL BE IN FLAT SHEETS ONLY, AND LAPPED A MINIMUM OF 6 INCHES.
- WELDING OF STEEL REINFORCING IS NOT PERMITTED.
- SLEEVES, CONDUITS, OR PIPES THROUGH SLABS AND WALLS SHALL BE PLACED AT THREE DIAMETERS ON CENTER, OR 4 INCHES MINIMUM.
- ALUMINUM CONDUIT OR PIPING SHALL NOT BE CAST IN CONCRETE.
- PROVIDE A ½" CHAMFER ON EXPOSED CORNERS OF CONCRETE UNO. TOP EDGES OF WALLS SHALL BE TOOLED UNO.
- FINISH & COVER CONCRETE SLABS w/ FILM FORMING CURING COMPOUND OR VAPOR RETARDER UNO OR SPECIFIED OTHERWISE.

HOT WEATHER CONCRETING NOTES

- CONCRETE MIXES TO BE PLACED DURING DRY AND WINDY CONDITIONS SHALL BE MODIFIED BY THE ADDITION OF RETARDING ADMIXTURES OR SLOWER CURING CEMENT SUBSTITUTES TO MINIMIZE THE EFFECTS OF ACCELERATED CURING.
- WATER SHALL NOT BE ADDED TO CONCRETE MIXES ON SITE FOR WORKABILITY. MID OR HIGH RANGE WATER REDUCERS SHALL BE APPROVED BY ENGINEER BEFORE ADDING TO CONCRETE MIX FOR INCREASED WORKABILITY.
- INGREDIENTS USED IN CONCRETE MIXES SHALL BE COOLED TO MAINTAIN A CONCRETE TEMPERATURE BELOW 90 DEGREES FAHRENHEIT AT TIME OF PLACEMENT.
- CHILLED WATER AND CHOPPED ICE MAY BE USED IN CONCRETE MIXTURES TO CONTROL CONCRETE TEMPERATURES. AMOUNT OF CHOPPED ICE SHALL NOT EXCEED THE EQUIVALENT AMOUNT OF MIXING WATER REQUIRED FOR THE DESIGN MIX.
- RETARDING ADMIXTURES SHALL NOT BE USED IN CONCRETE MIXES WITHOUT THE APPROVAL OF THE ENGINEER.

COLD WEATHER CONCRETING NOTES

- SNOW, FROST, AND ICE SHALL BE REMOVED FROM ALL SURFACES, INCLUDING REINFORCING, AGAINST WHICH THE CONCRETE IS TO BE PLACED
 - DO NOT PLACE CONCRETE ON FROZEN SUBGRADE.
 - THE MINIMUM PLACEMENT AND PROTECTION TEMPERATURE OF CONCRETE SHALL BE AS MINIMUM TEMP OF CONCRETE AS PLACED AND MAINTAINED DURING PROTECTION PERIOD (DEGREES FAHRENHEIT)
- | | |
|----------------------------|----|
| LEAST DIMENSION OF SECTION | |
| LESS THAN 12" | 55 |
| 12" TO LESS THAN 36 | 50 |
| 36" TO 72" | 45 |
| GREATER THAN 72" | 40 |
- TEMPERATURES OF CONCRETE SHALL BE MEASURED AT THE CONCRETE SURFACE.
 - CONCRETE TEMPERATURES SHALL BE MEASURED AND RECORDED FOR THE FIRST 3 DAYS UPON PLACEMENT OF CONCRETE. AT THE BEGINNING, MIDDLE, AND END OF EACH WORK DAY AT 4 HOUR INTERVALS. OVERNIGHT TEMPERATURE MEASUREMENTS ARE NOT REQUIRED.
 - HEATED AIR TEMPERATURES SHALL NOT EXCEED THE REQUIRED CONCRETE TEMPERATURES LISTED IN TABLE ABOVE BY MORE THAN 20 DEGREES.
 - CONCRETE SHALL BE CURED AND PROTECTED AGAINST DAMAGE FROM FREEZING FOR A MINIMUM PERIOD OF 3 DAYS.
 - DURING PERIODS NOT DEFINED AS COLD WEATHER, BUT WHEN FREEZING TEMPERATURES MAY OCCUR, PROTECT CONCRETE SURFACES FROM FREEZING FOR THE FIRST 24 HOURS AFTER PLACEMENT.
 - IF TEMPERATURE REQUIREMENTS DURING PROTECTION PERIOD ARE NOT MET, BUT CONCRETE WAS PREVENTED FROM FREEZING, CONTACT ARCHITECT/ENGINEER FOR EXTENT OF ADDITIONAL PROTECTION TIME REQUIRED.

DESIGN DATA

DESIGN CODE:
2011 WISCONSIN COMMERCIAL BUILDING CODE

WIND LOAD INFORMATION:

BASIC WIND SPEED	90 MPH
BUILDING OCCUPANCY CATEGORY	II
WIND LOAD IMPORTANCE FACTOR (I _w)	1.00
WIND EXPOSURE (PARTIALLY ENCLOSED)	C
INTERNAL PRESSURE COEFFICIENTS	± .18
COMPONENTS AND CLADDING (GROSS WIND PRESSURES):	
(FOR ZONE DEFINITIONS & DIAGRAMS SEE DESIGN GUIDE ASCE/SEI 7 SECTION 6)	
WIDTH OF PRESSURE COEFFICIENT ZONE (a)	8 ft
TRIBUTARY WIND LOAD AREAS:	10 ft ² 50 ft ² 100 ft ²
ROOF (GABLE/HIP/MONOSLOPE):	
NEGATIVE ZONE 1	-24 psf -23 psf -22 psf
NEGATIVE ZONE 2	-36 psf -29 psf -25 psf
NEGATIVE ZONE 3	-52 psf -34 psf -25 psf
POSITIVE PRESSURE ALL ZONES	13 psf 12 psf 12 psf
WALLS:	
ZONE 4	-24 psf -22 psf -22 psf
ZONE 5	-28.1 psf -25 psf -23 psf
POSITIVE ZONE 4/5	23 psf 20 psf 20 psf

SEISMIC LOAD INFORMATION:

SEISMIC USE GROUP / OCCUPANCY CATEGORY	II
SEISMIC LOAD IMPORTANCE FACTOR (I _e)	1.00
SEISMIC SITE CLASS	D
MAPPED SPECTRAL RESPONSE ACCELERATION (S _s)	10.40
MAPPED SPECTRAL RESPONSE ACCELERATION (S ₁)	4.40
SPECTRAL RESPONSE COEFFICIENT (S _{ds})	0.1222
SPECTRAL RESPONSE COEFFICIENT (S _{d1})	0.080
SEISMIC DESIGN CATEGORY	B
RESPONSE MODIFICATION FACTOR	1.5
SEISMIC RESPONSE COEFFICIENT (C _s)	0.081
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE

SNOW LOAD INFORMATION:

GROUND SNOW LOAD (P _g)	30 psf
SNOW EXPOSURE FACTOR (C _e)	1.00
SNOW LOAD IMPORTANCE FACTOR (I _s)	1.00
THERMAL FACTOR (C _t)	1.2
DESIGN/BALANCED SNOW LOAD (P _s)	1.20 AT OVERHANGS 25 psf

SOIL LOAD INFORMATION:

COEFFICIENT OF SLIDING FRICTION (μ)	0.40
LATERAL EARTH PRESSURE:	
ACTIVE	35 pcf
AT-REST	55 pcf
PASSIVE	200 pcf
ALLOWABLE NET SOIL BEARING PRESSURE	Q _a = 2000 psf (PRESUMED)
MODULUS OF SUB-GRADE REACTION	k = 125 pci (PRESUMED)
FROST DEPTH	48"

LIVE LOAD:

STORAGE	125psf
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MATERIAL DESIGN PROPERTIES

CIP CONCRETE STRENGTHS:

FOOTINGS	fc = 3000 psi
SLAB ON GRADE	fc = 4000 psi
EXTERIOR SLAB ON GRADE	fc = 4500 psi

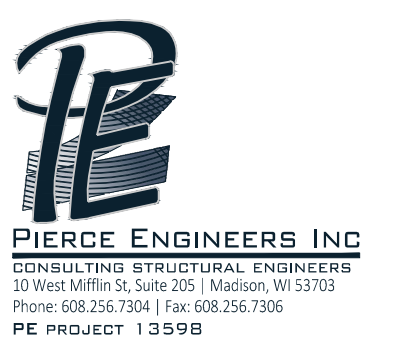
REINFORCING STEEL STRENGTHS:

BARS (ASTM A 615, grade 60)	Fy = 60,000 psi
WWF (ASTM A 185)	Fy = 65,000 psi

WOOD STRENGTHS:
WOOD MATERIAL PROPERTIES PER PRE-ENGINEERED BUILDING SUPPLIER

EARTHWORK NOTES

- ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000psf. GENERAL CONTRACTOR TO FIELD VERIFY w/TEST PITS OR OTHER MEANS WITH A QUALIFIED GEOTECHNICAL ENGINEER AT TIME OF EXCAVATION.
- ALL TOPSOIL, DEBRIS, SILTS, AND ORGANIC MATERIAL SHALL BE STRIPPED AND REMOVED FROM LIMITS OF EXCAVATIONS AND EXISTING SUBGRADE SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY PRIOR TO PLACEMENT OF FILL MATERIAL
- FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LIFTS NO THICKER THAN 8". EACH LIFT SHALL MEET COMPACTION REQUIREMENTS PRIOR TO PLACEMENT AND COMPACTION OF ADDITIONAL LIFTS.
- FILL MATERIAL SHALL BE PLACED AND COMPACTED AT +1% TO 4% OPTIMUM MOISTURE CONTENT TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY, UNLESS RECOMMENDED OTHERWISE BY A QUALIFIED SOILS ENGINEER.
- UNSATISFACTORY SOILS LOCATED BELOW FOUNDATIONS SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE SOILS ENGINEER.



PROJECT
LAKE FARM STORAGE FACILITY
LAKE FARM COUNTY PARK
4401 LIBBY ROAD
MADISON, WI

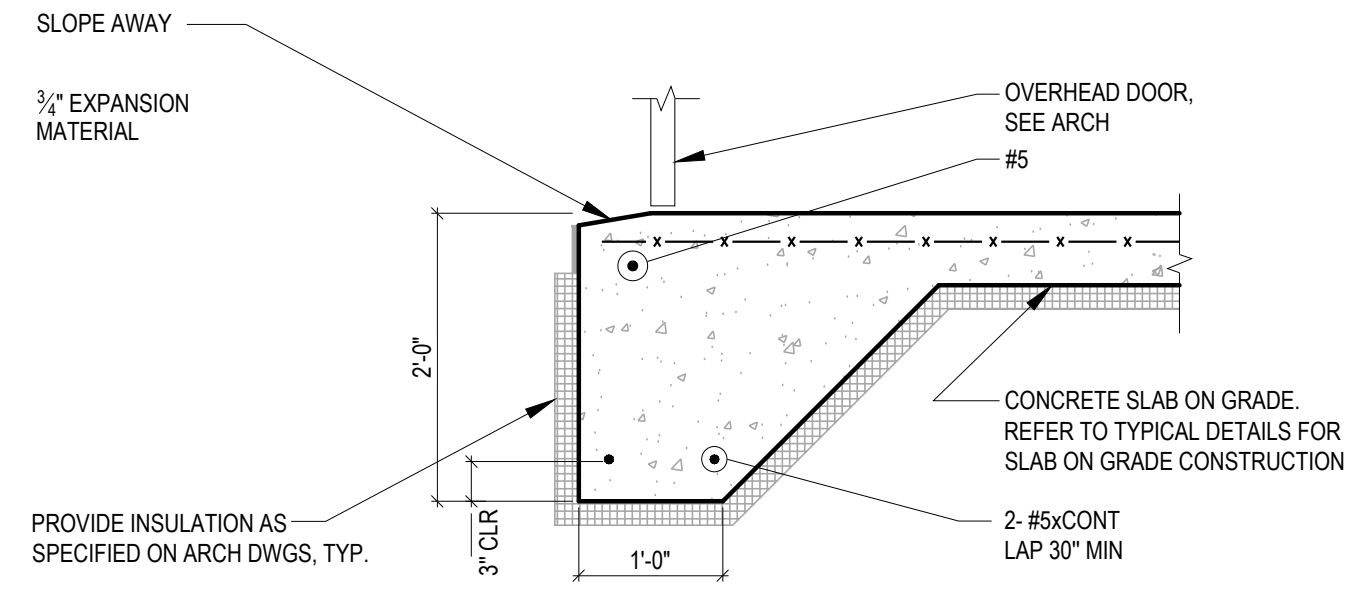
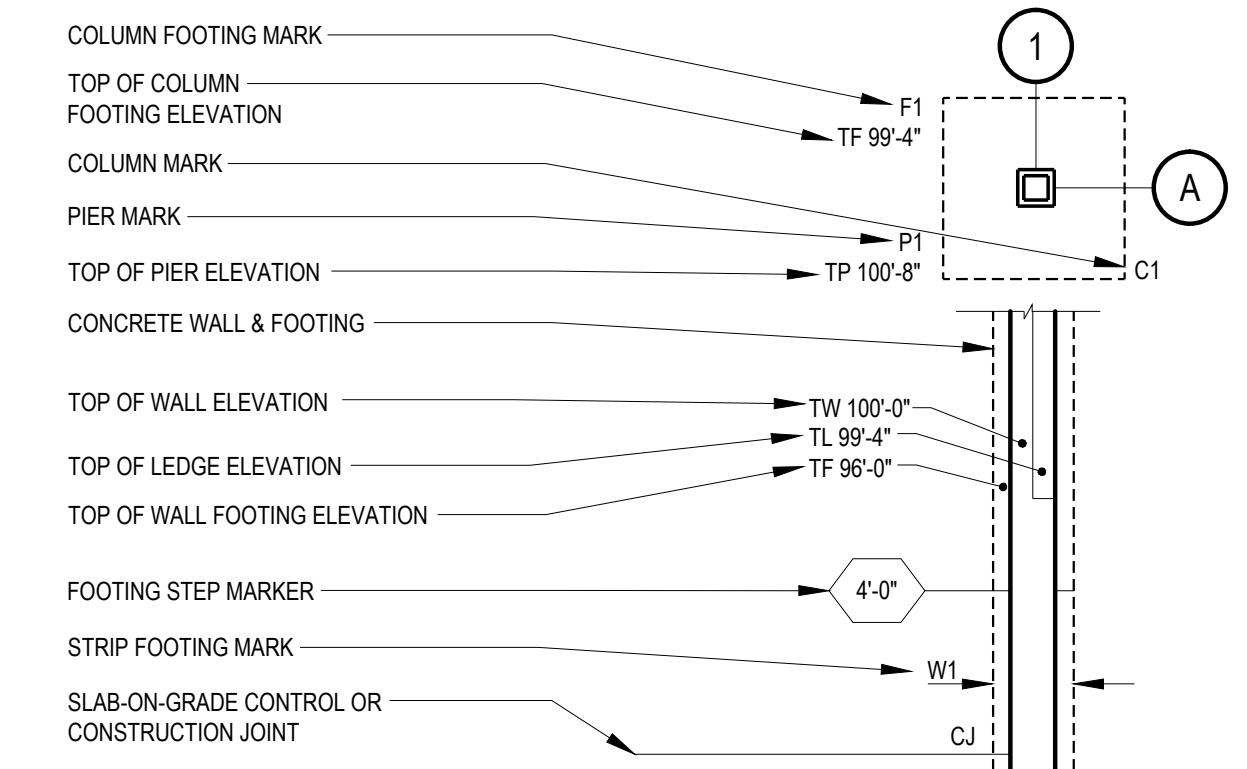
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DRAWING
FOUNDATION PLAN

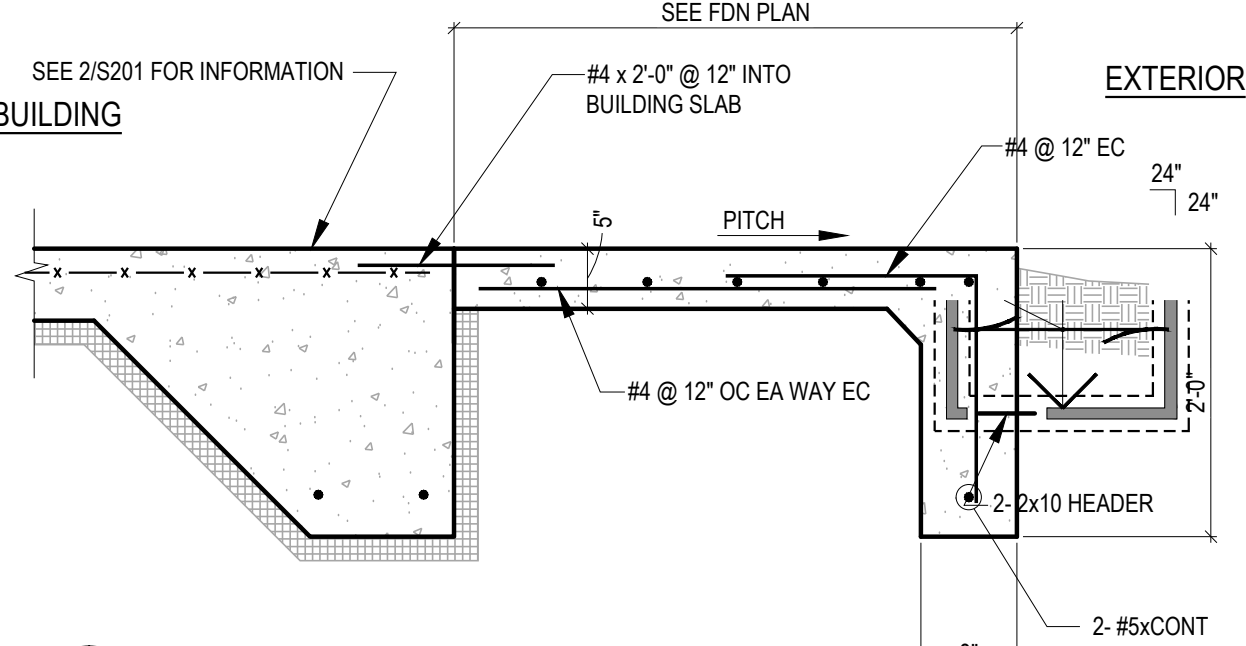
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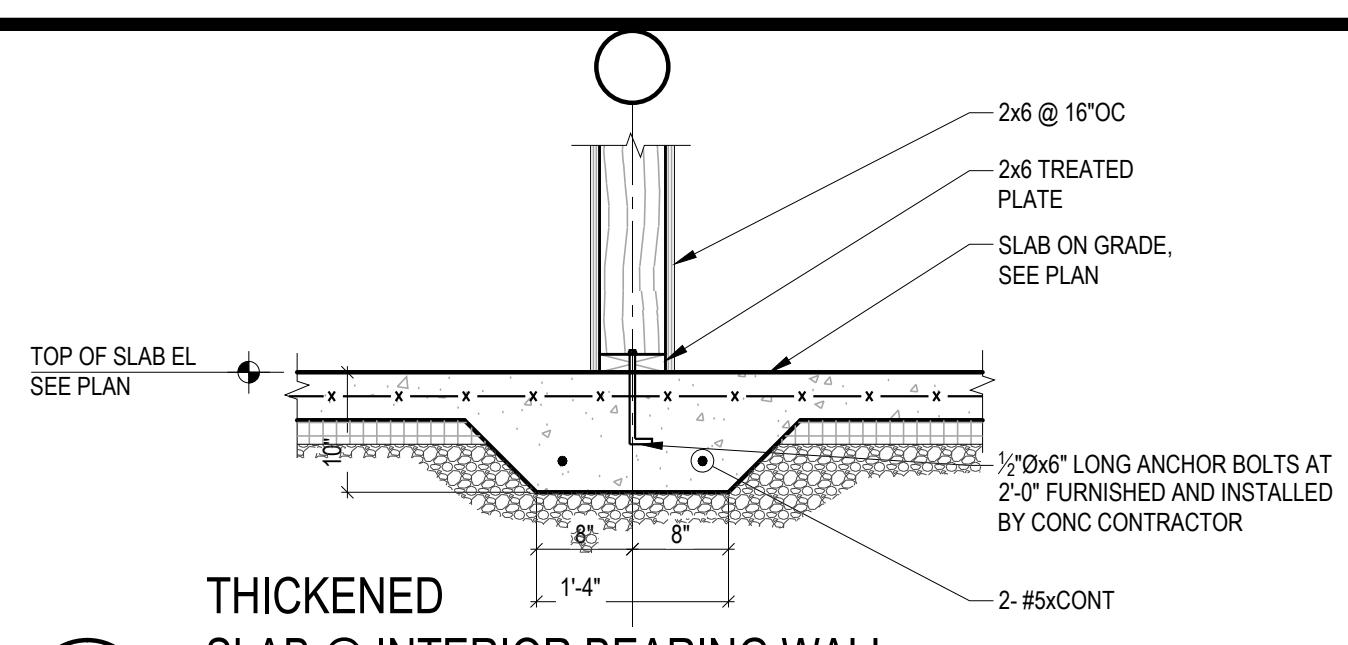
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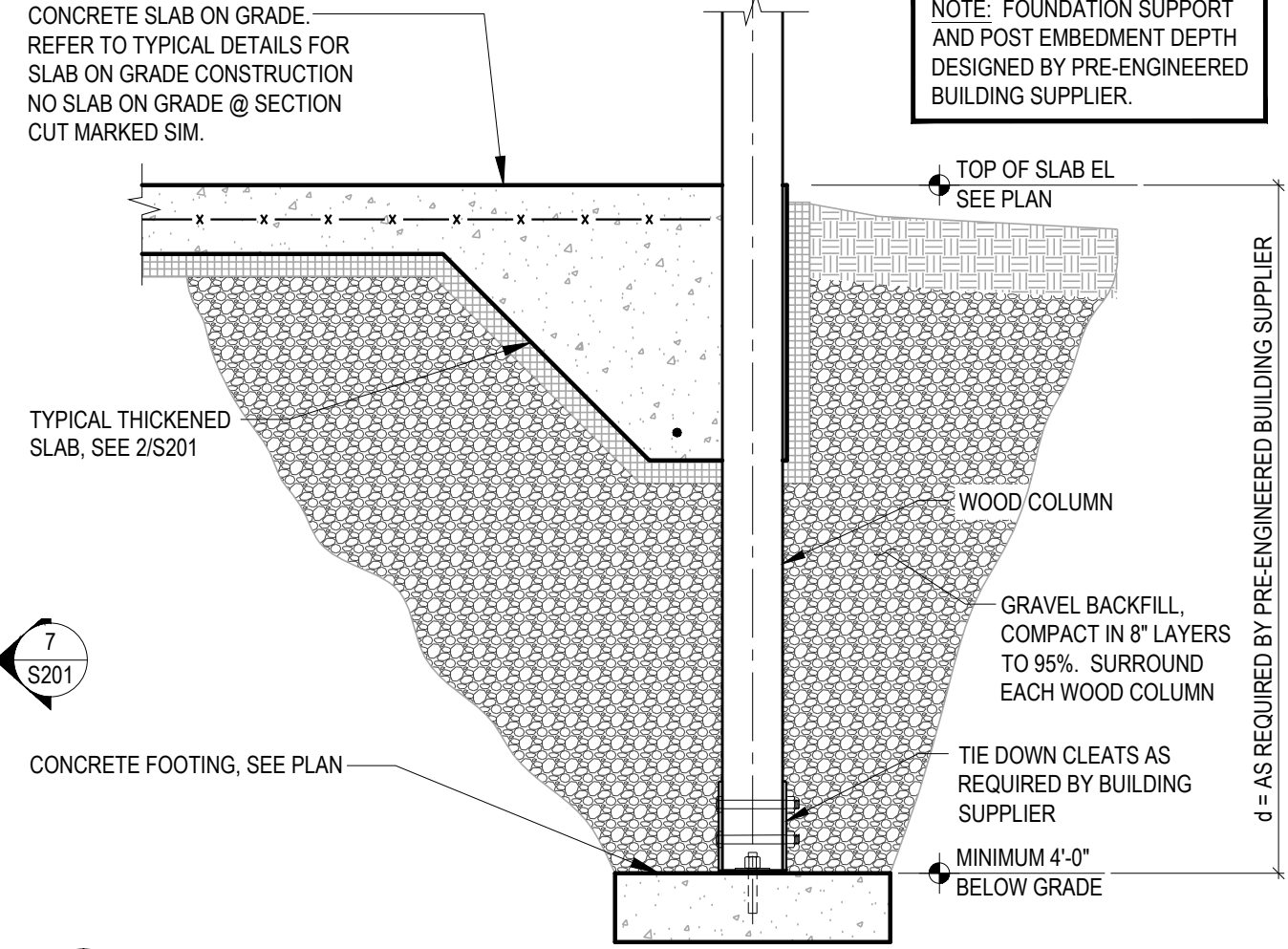
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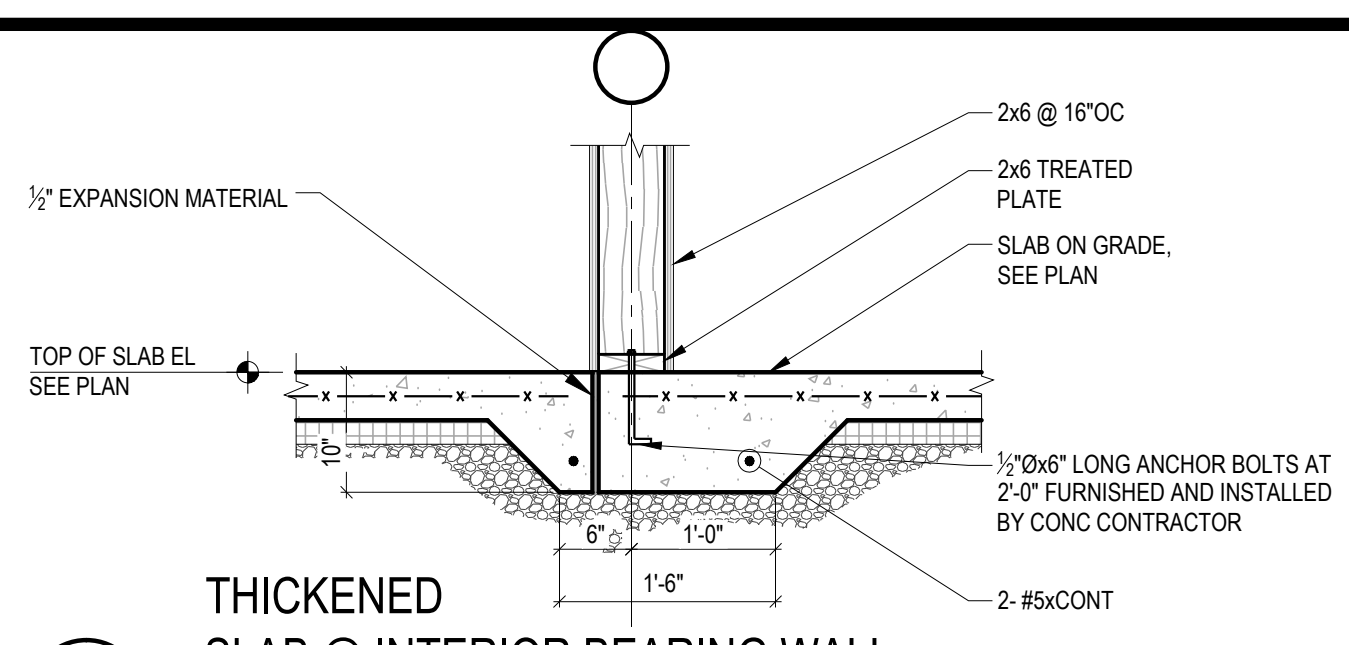
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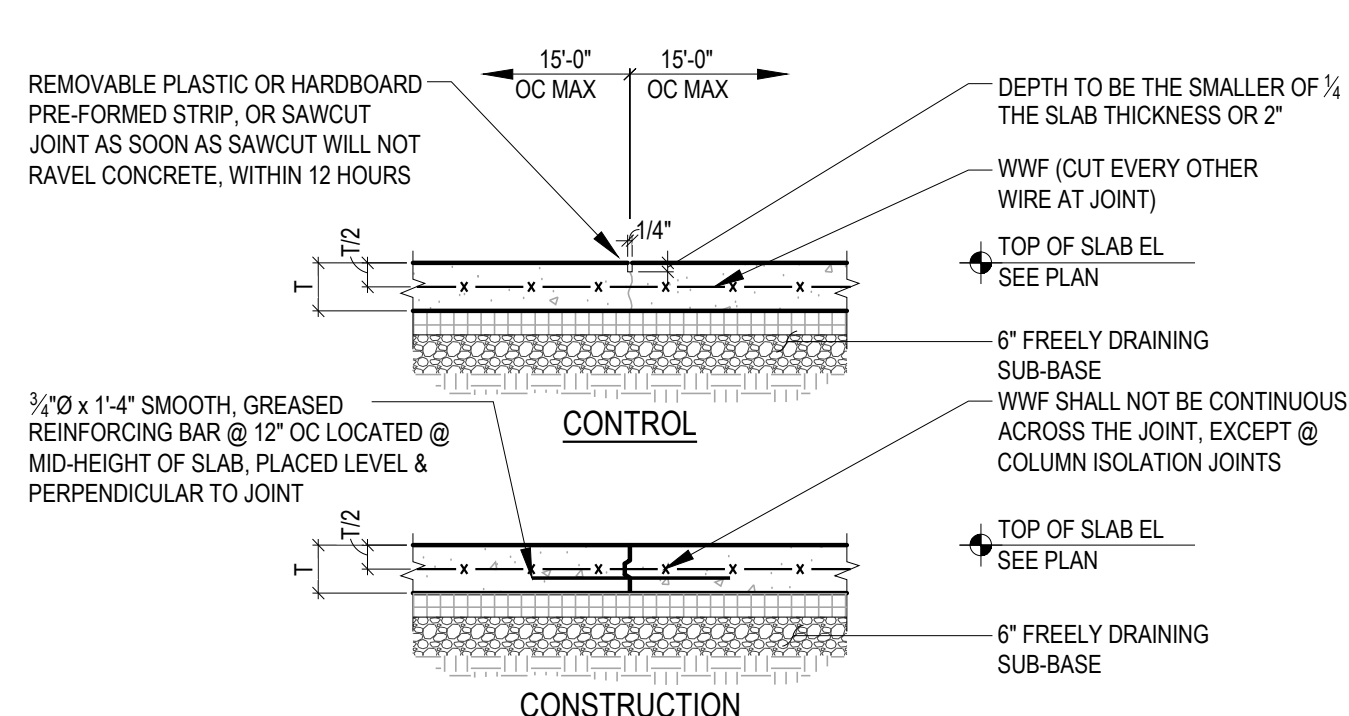
7 THICKENED SLAB @ INTERIOR BEARING WALL
SCALE: NTS



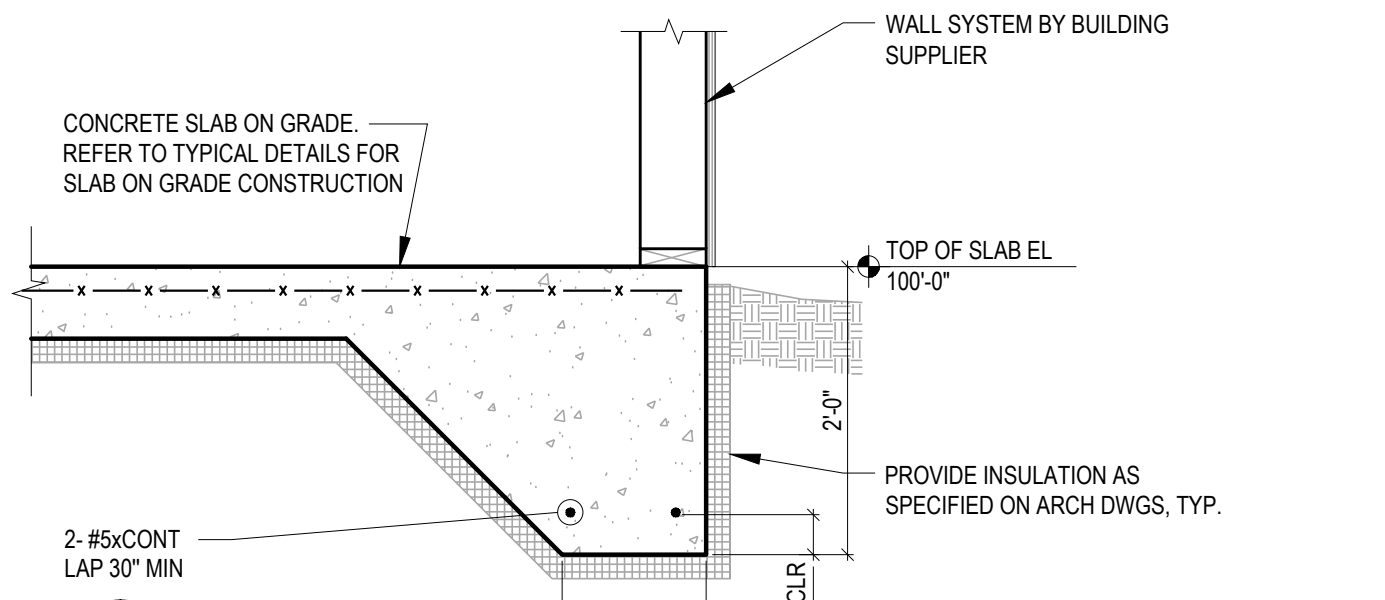
4 SECTION
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8 THICKENED SLAB @ INTERIOR BEARING WALL
SCALE: NTS

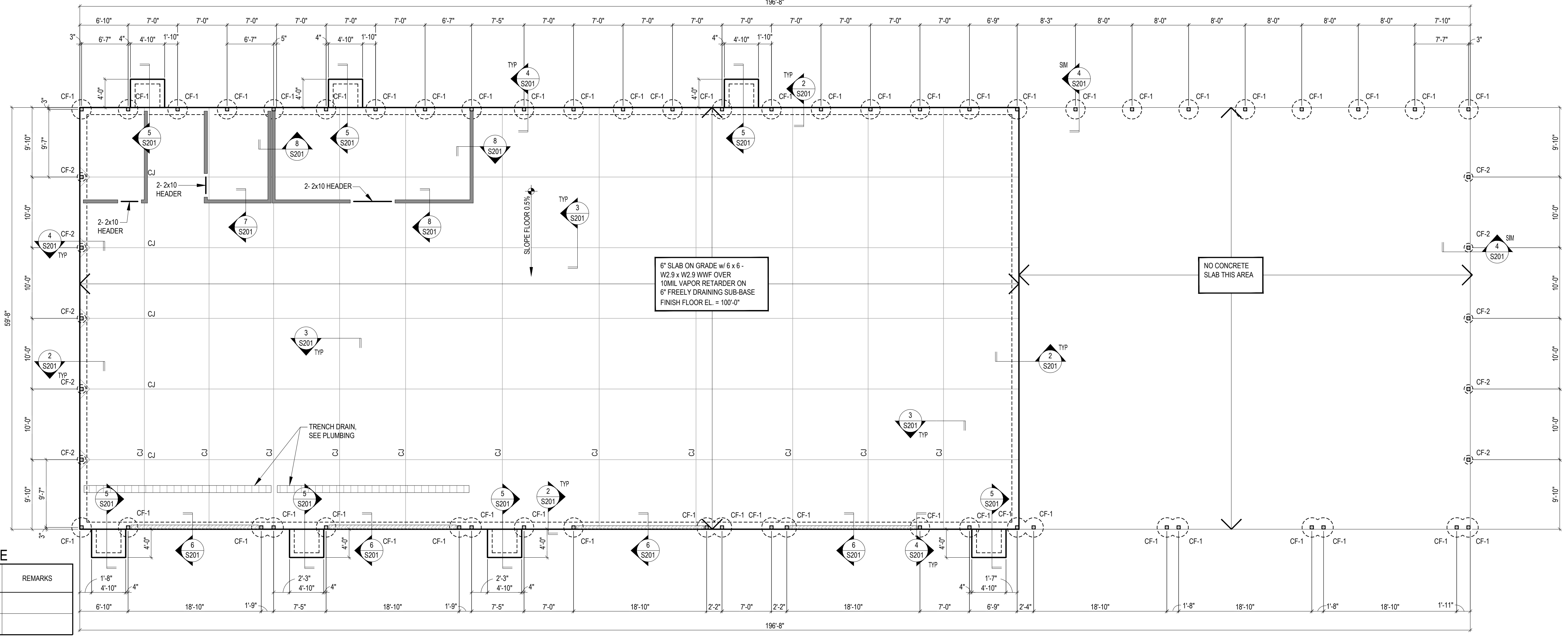


3 SLAB ON GRADE CONSTRUCTION/CONTROL JOINT
SCALE: NTS

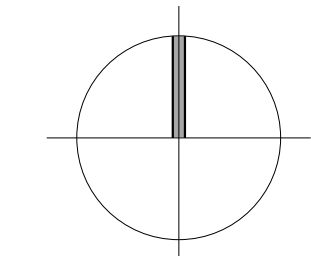


2 SECTION
SCALE: NTS

- NOTES:**
- SEE THE FOUNDATION PLAN FOR SLAB THICKNESS, REINFORCEMENT, AND JOINT LOCATIONS.
 - SLAB SHALL BE PLACED USING "STRIP" OR "LANE" CONSTRUCTION.
 - FILL JOINTS WITH SEMI-RIGID EPOXY MATERIAL.
 - SMOOTH DOWEL BARS SHALL BE SAWN, NOT SHEARED.



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



FOOTING SCHEDULE

MARK	DIMENSIONS		REINFORCEMENT	REMARKS
	DIAMETER	DEPTH		
CF-1	2'-9"	0'-6"	SEE NOTE 2	
CF-2	1'-3"	0'-6"	SEE NOTE 2	

- FOOTING SCHEDULE NOTES:**
- AT GD OPTION THE LARGER FOOTING MAY BE USED IN ALL LOCATIONS.
 - THE FOOTINGS ARE UNREINFORCED IF SITE CAST. PRECAST FOOTINGS HAVE 2-#3 REBARS EACH WAY.
 - CONCRETE STRENGTH IS 3000psi.