



**TWO RIVERS**  
WISCONSIN

**LAND DEVELOPMENT APPLICATION**

APPLICANT A.C.E. Building Service Inc. (Derek Petska) TELEPHONE 920-682-6105

MAILING ADDRESS 3510 S. 26th Street Manitowoc WI 54220  
(Street) (City) (State) (Zip)

PROPERTY OWNER Sauve's Auto (Thomas Christensen) TELEPHONE 920-973-2273

MAILING ADDRESS 1421 Washington St. Two Rivers WI 54241  
(Street) (City) (State) (Zip)

REQUEST FOR:

- |                                     |                                  |                                     |                           |
|-------------------------------------|----------------------------------|-------------------------------------|---------------------------|
| <input type="checkbox"/>            | Comprehensive Plan Amendment     | <input checked="" type="checkbox"/> | Conditional Use           |
| <input checked="" type="checkbox"/> | Site/Architectural Plan Approval | <input type="checkbox"/>            | Annexation Request        |
| <input type="checkbox"/>            | Subdivision Plat or CSM Review   | <input type="checkbox"/>            | Variance/Board of Appeals |
| <input type="checkbox"/>            | Zoning District Change           | <input type="checkbox"/>            | Other                     |

STATUS OF APPLICANT:  Owner  Agent  Buyer  Other

PROJECT LOCATION 1421 Washington St. TYPE OF STRUCTURE Wood & PEMB

PRESENT ZONING B-1 Business District REQUESTED ZONING N/A

PROPOSED LAND USE No change in land use requested - Addition to existing building

PARCEL # 05300007705007; 05300007704109; 05300007704000 ACREAGE 0.55

LEGAL DESCRIPTION Lots 4 and 5 Excepting Therefrom the South 20 Feet and All of Lot 3 of Block 77 of the Original Plat, All Located in Government Lot 4, Section 1, Town 19 North, Range 24 East, City of Two Rivers, Manitowoc County, Wisconsin.

**NOTE: Attach a one-page written description of your proposal or request.**

The undersigned certifies that he/she has familiarized himself/herself with the state and local codes and procedures pertaining to this application. The undersigned further hereby certifies that the information contained in this application is true and correct.

Signed [Signature] Date 08/23/2024  
(Property Owner)

Fee Required

- \$ 350 Comprehensive Plan Amendment
- \$ t/b/d Site/Architectural Plan Approval (Listed in Sec 1-2-1)
- \$ t/b/d CSM Review (\$10 lot/\$30 min)
- Subdivision Plat (fee to be determined)
- \$ 350 Zoning District Change
- \$ 350 Conditional Use
- \$ t/b/d Annexation Request (State Processing Fees Apply)
- \$ 350 Variance/Board of Appeals
- \$ t/b/d Other

Schedule

- Application Submittal Date \_\_\_\_\_
- Date Fee(s) Paid \_\_\_\_\_
- Plan(s) Submittal Date \_\_\_\_\_
- Plan Comm Appearance \_\_\_\_\_

\$ 550.00 TOTAL FEE PAID APPLICATION, PLANS & FEE RECEIVED BY \_\_\_\_\_

August 26, 2024

City Building Inspections Office  
1717 E Park Street  
Two Rivers WI 54241

RE: Sauve's Auto  
Building Addition & Site Improvement @ 1421 Washington St.

To Whom It May Concern:

The proposed building addition and added parking spaces will replace the two-story residential building and garage on the north side of the property that are scheduled to be demolished. The proposed building expansion will be 3,620 square feet. Exterior finishes will complement the existing building, including metal & EPDM roofing, metal wall panel, aluminum fascia, soffit, gutter, and downspouts. All colors of exterior finishes to match complement the existing as depicted in the conceptual renderings.

The north and east sides of the expansion will consist of off-street asphalt parking. The north side of the expansion will also be landscaped with shrubs, and perennial plants and stone mulch. The project results in a net add of approximately 16,500 square feet of impervious area. The stormwater drainage pattern of the site will not change. The proposed building addition downspouts will be connected to the city of Two Rivers' storm sewer.

The following calculation was used to determine adequacy of off-street parking spaces per Sec. 10-1-13 "Off-street parking and loading" from the City of Two Rivers Municipal Code:

Total building area (including expansion): 6,600 s.f.

Per section 10-1-13: (1) for each vehicle connected with the business, (1) for each employee on duty when fully staffed, (1) for the owner or manager, plus (3) for each bay intended for service, repair or other use.

Included for this project: (4) vehicles connected with the business, (5) full time employees, (1) owner, (7) bays for service.

Shown per plan (18) off-street parking spaces are being provided.

(2) new LED wall-pack lights with photo sensors will be mounted on the exterior of the building located on the north wall and (2) on east exterior wall of the proposed expansion.

Construction is scheduled to begin mid-October and be completed in the spring of 2025.

**PROPOSED EXPANSION FOR  
SAUVE'S AUTO SERVICE  
1421 WASHINGTON STREET**





**TWO  
RIVERS**  
WISCONSIN

**COMMUNITY DEVELOPMENT**

1717 E. Park Street  
P.O. BOX 87  
Two Rivers, WI 54241-0087



**PLAN COMMISSION**

**Action:** Conditional Use Application & S&A Review  
**Location:** 1421 Washington Street (Sauve's)  
**Current Zoning:** Business (B-1)  
**Date:** September 9, 2024

The owner of this property is requesting a Conditional Use Permit for an existing gas station/automobile service use, as well as Site & Architectural Review for an addition at 1421 Washington Street. Gas stations/Automobile Services are a conditional use in the B-1 District

**Background**

The owner recently combined the parcels to allow for the proposed addition. The addition will allow for more space to service vehicles as well as a bigger parking lot.

**Questions and Discussion points from the Director of Public Works include the following:**

- Green Space - removing paved terraces and replacing with turf grass
- Creating green buffers in unused parking island areas
- ADA parking
- Where are mechanicals going to be located and are they screened
- Outdoor tire storage adjacent to Kozlowski Tire - screened
- No stormwater management required
- Exterior dumpster? Screening?
- Not a planning item but where internal plumbing is going to discharge to, specifically the sinks and drains in the shop area



[www.two-rivers.org](http://www.two-rivers.org)



920.793.5564



920.793.5512

CONDITIONAL USE  
PERMIT  
City of Two Rivers

Document Number

Permit No. 9-1-2024

Before the City Council of the City of Two Rivers, Manitowoc County, Wisconsin, regarding the premises at 1421 Washington Street in the City of Two Rivers, Manitowoc County, State of Wisconsin, further described as:

FERD BOHTE'S ADD ALL EXC N 35` OF LOT 9 & ALL OF LOTS 10 & 11 BLK 1

Inspections Department  
City of Two Rivers  
PO Box 87  
Two Rivers, WI 54241-0087

Parcel ID Number: 053-000-077-040.00

Zoning Classification of the Premises is: B-1 Business District/Conditional Use for a Gas Station / Automobile Service  
Mailing Address of the Premises Operator: 1421 Washington Street, Two Rivers WI 54241

WHEREAS, the Zoning Code and Zoning District Map of the above named municipality, pursuant to State Statute, state that the premises may not be used for the purpose hereinafter described but that upon petition such use may be approved by the municipality as a Conditional Use in particular circumstances as defined by the standards in the Zoning Ordinance; and

Petition therefore having been made, and public hearing held thereon, and the City Council of the City of Two Rivers having determined that by reason of the nature, character and circumstances of the proposed use, and of the specific and contemporary conditions, permit of such use upon the terms and conditions hereinafter prescribed would be consistent with the requirements of the Zoning Ordinance.

Now, therefore, it is permitted, subject to compliance with the terms and conditions hereinafter stated, that the Premises may be used for the purpose of the operation of a Gas Station / Automobile Service

Permitted by action of the City Council of the City of Two Rivers on October 7, 2024.  
Original filed in the office of the City Clerk of the City of Two Rivers, Wisconsin

The Conditions of this Permit are:

1. This Permit shall become effective upon the execution and recording by the Owner of the Premises as acceptance hereof.
2. This Permit is subject to the conditions herein and is subject to amendment and termination in accordance with the provisions of the Zoning Code of this Municipality.
3. The operation of the use permitted shall be in strict conformity to the approved conditions identified with this Petition for this Permit and such plans are incorporated herein by reference as if set forth in detail herein.
4. Any substantial change to the use or site as the conditions permitted by the issuance of this Permit would require approval by the Plan Commission and City Council as an amendment to this Permit.
5. This Permit is specifically issued to Lakeshore Commercial LLC and shall lapse upon a change in ownership of the business, tenancy of the subject premises or if the land uses ceases operation for more than 12 months. This permit may be reissued only after a proper application is made to the City as if this permit were being newly issued.
6. Conditions of Operations:
  - a. Hours of operation: 24 hours per day, seven days per week.
  - b. Any outdoor display of merchandise shall be limited to on the fuel islands beneath the canopy not exceeding three feet in height; and, immediately adjacent to the front wall of the building not exceeding the height of the window base.
  - c. A separate Conditional Use Permit shall be required for any land use which would include a drive-thru component.
  - d. Light fixtures under the canopy shall not glare into public streets and shall not glare into adjacent properties. Diffusers shall be installed as necessary to minimize glare of canopy lights.
  - e. Signage in accord with the City's Sign Code.
  - f. All landscaping plantings shall be maintained and kept in good health or be replaced; and all landscaped areas shall be maintained in such a manner to be free of weeds.

**SIGNATURES OF PROPERTY OWNER(S) AND PERMITEE(S):**

**As Owner(s) of the Subject Property, I/we accept and understand the above-described conditions.**

\_\_\_\_\_  
Printed Name: \_\_\_\_\_

\_\_\_\_\_  
Printed Name: \_\_\_\_\_

STATE OF WISCONSIN  
MANITOWOC COUNTY

Personally came before me this \_\_\_\_\_ day of \_\_\_\_\_, 2024, the above named \_\_\_\_\_ and to be the person(s) who executed the foregoing instrument and acknowledge the same.

\_\_\_\_\_  
Amanda Baryenbruch  
Notary Public, Manitowoc County, Wisconsin  
My commission expires: \_\_\_\_\_

**SIGNATURES - CITY OF TWO RIVERS**

\_\_\_\_\_  
Greg Buckley, City Manager

\_\_\_\_\_  
Amanda Baryenbruch, City Clerk

STATE OF WISCONSIN  
MANITOWOC COUNTY

Personally, came before me this \_\_\_\_\_ day of \_\_\_\_\_ 2024, the above-named Greg Buckley and Amanda Baryenbruch known to be the person(s) who executed the foregoing instrument and acknowledge the same.

\_\_\_\_\_  
Printed Name: \_\_\_\_\_  
Notary Public, Manitowoc County, Wisconsin  
My commission expires: \_\_\_\_\_

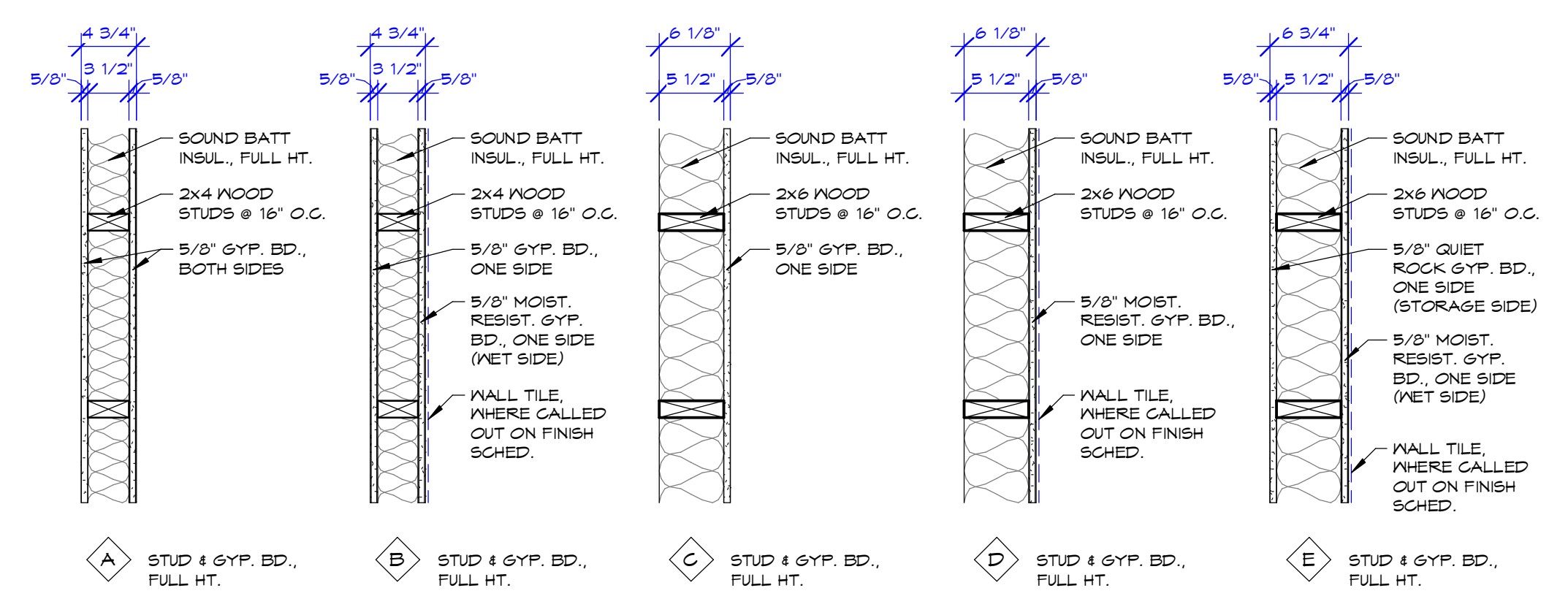
THIS INSTRUMENT WAS DRAFTED BY:  
Adam Taylor, Zoning Administrator





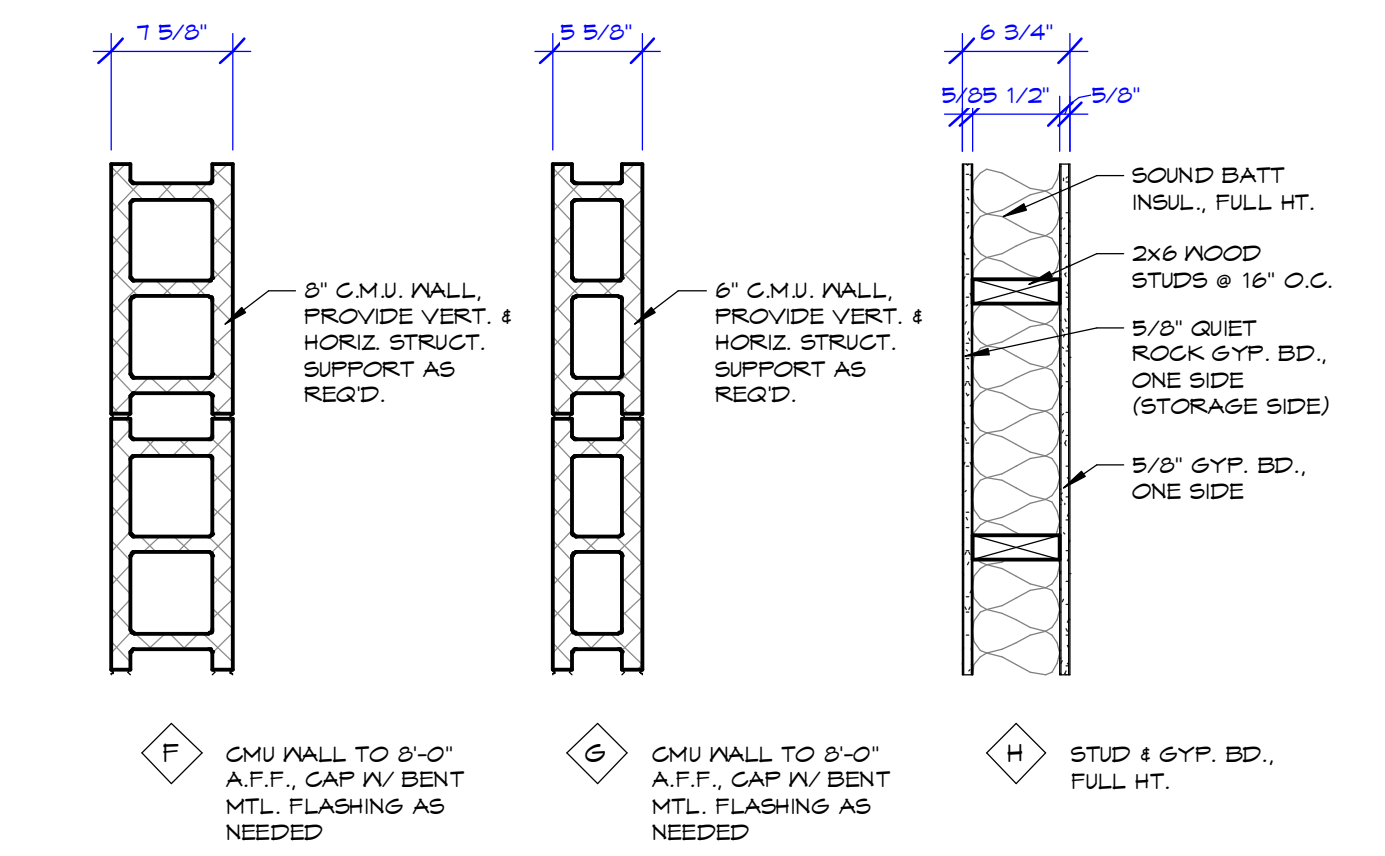






**GYPSUM BOARD CONTROL (EXPANSION) JOINT NOTE:**  
 INSTALL CONTROL (EXPANSION) JOINTS ACCORDING TO ASTM C480 AND IN SPECIFIC LOCATIONS APPROVED BY ARCHITECT FOR VISUAL EFFECT.

- CONTROL (EXPANSION) JOINTS SHALL BE INSTALLED IN CEILINGS EXCEEDING 2.500 S.F. IN AREA. THE DISTANCE SHALL NOT BE MORE THAN 50 FEET BETWEEN CEILING CONTROL (EXPANSION) JOINTS IN EITHER DIRECTION (WITH PERIMETER RELIEF, 30 FEET IN EITHER DIRECTION WITHOUT PERIMETER RELIEF).
- CONTROL (EXPANSION) JOINTS SHALL BE INSTALLED IN PARTITION WALL AND WALL FURRING RUNS EXCEEDING NOT MORE THAN 30 FEET. A CONTROL (EXPANSION) JOINT SHALL BE INSTALLED WHERE A CONTROL (EXPANSION) JOINT OCCURS IN THE BASE EXTERIOR WALL.
- CONTROL (EXPANSION) JOINTS ARE NOT REQUIRED FOR WALL LENGTHS LESS THAN 30 FEET.
- EXTEND CONTROL (EXPANSION) JOINTS THE FULL HEIGHT OF THE WALL OR LENGTH OF SOFFIT/CEILING MEMBRANE.
- LOCATE CONTROL (EXPANSION) JOINTS AT BOTH JAMBS OF OPENINGS IF GYPSUM BOARD IS NOT "YOKED" (CENTERED ON HEAD OPENING) USE ONE SYSTEM THROUGHOUT.
- WHERE VERTICAL AND HORIZONTAL CONTROL (EXPANSION) JOINTS INTERSECT, VERTICAL CONTROL (EXPANSION) JOINT SHALL BE CONTINUOUS; HORIZONTAL CONTROL (EXPANSION) JOINT SHALL ABUT IT.



**NOTE:** ALL GYP. BOARD SHALL EXTEND TO FULL HEIGHT OF STUD WALL, OR TO BOT. OF GYP. BD. CLG. (REFER TO REFL. CLG. PLANS). ALL GYP. BD. SHALL EXTEND 6" ABOVE HIGHEST ADJACENT CEILING, UNLESS NOTED OTHERWISE. ALL STUDS SHALL BE ADEQUATELY SUPPORTED AS TO MAINTAIN A RIGID WALL ASSEMBLY.

**NOTE:** ALL EXPOSED C.M.U. OUTSIDE CORNERS @ WALLS, OPENING JAMBS & UNFINISHED SILL SHALL HAVE SQUARE CORNERS, TYP.

**ROOM FINISH SCHEDULE**

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CLG HGT	REMARKS
				NORTH	SOUTH	EAST	WEST			
FIRST FLOOR										
101	WAITING	EPXY-1	VB-1	P-1	P-1	P-1	P-1	ACT-1	9'-0"	
102	TOILET	EPXY-1	CTB-1	CNT-1/P-2	P-2	P-2	P-2	CNT-1/P-2	VCG-1	9'-0" 1
103	RECEPTION	EPXY-1	KB-1	P-1	P-1	P-1	P-1	ACT-1	9'-0"	
104	CORR.	EPXY-1	VB-1	P-1	P-1	P-1	P-1	ACT-1	9'-0"	
105	OFFICE	LVT-1	KB-1	P-1	P-1	P-1	P-1	ACT-1	9'-0"	
106	BREAK	EPXY-1	VB-1	P-1	P-1	P-1	P-1	ACT-1	9'-0"	
107	TOILET	EPXY-1	CTB-1	CNT-1/P-2	P-2	P-2	P-2	CNT-1/P-2	VCG-1	9'-0" 1
108	STORAGE	SC-1	VB-1	P-1	P-1	P-1	P-1	EXPOSED	--	2,3
109	SERVICE GARAGE	SC-1	--	P-3/EXPOSED	P-3/MLP-1/EXPOSED	P-1	P-3	P-3/EXPOSED	EXPOSED	2,4,5,6,7
110	EXIST. SERVICE	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	3

**ROOM SCHED. NOTE:** WALL DIRECTIONS ARE BASED ON "PLAN NORTH" BEING "UE" ON THE PLAN SHEETS (NOT "TRUE" NORTH).

**GENERAL ROOM FINISH NOTES:**

- ALL GYP. BOARD SURFACES SHALL BE TAPED, MUDDERED, PRIMED, AND FINISHED WITH TWO (2) COATS OF PAINT.
- PROVIDE TRANSITION STRIPS BETWEEN CONCRETE FLOORS AND FINISHED FLOORS TYPICAL.
- REFER TO REFLECTED CEILING PLAN FOR GYPSUM WALL BOARD SOFFITS.
- FLOOR FINISH MATERIALS SHALL TRANSITION AT THE CENTER OF THE COMMUNICATING DOOR.
- REFER TO REFLECTED CEILING PLAN FOR CEILING MATERIAL TRANSITIONS.
- ALL CEILING GRIDS SHALL BE CENTERED IN EACH ROOM UNLESS OTHERWISE NOTED.
- ALL ELECTRICAL AND MECHANICAL FIXTURES TO BE INSTALLED WITHIN CEILING SHALL BE CENTERED ON CEILING TILE UNLESS NOTED OTHERWISE.
- GYPSUM BOARD IN THE RESTROOMS AND SURROUNDING THE UTILITY SINK SHALL BE MOISTURE RESISTANT.
- METAL EDGE STRIPS TO BE INSTALLED WHERE EXPOSED EDGE OF TILE MEETS CARPET, WOOD OR OTHER FLOORING.
- USE SCHLUTER RONDEC AT TOP OF TILE (WHERE APPLICABLE, OR NO-BULL-NOSE TRIM IS USED) @ OUTSIDE CORNERS.

**ROOM FINISH SCHEDULE REMARKS:**

- CNT-1 TO 5'-0" A.F.F., P-2 TO CEILING ABOVE. (SEE TYPICAL TILE ELEVATION FOR MORE INFO.)
- AREAS WITH SC-1, PROVIDE AN **ALTERNATE BID** FOR EPXY-1. PRICE EACH AREA SEPARATELY.
- EXISTING FINISHES TO REMAIN IN THIS ROOM, NO WORK.
- NO CEILING, EXPOSED TO STRUCTURE ABOVE.
- SERVICE BAY NORTH & WEST WALLS: P-3 TO 8'-0" A.F.F., EXPOSED FEMB WALL ABOVE TO ROOF
- SERVICE BAY EAST WALL: P-3 ENTIRE WALL, FULL HEIGHT
- SERVICE BAY SOUTH WALL: P-3 TO 8'-0" A.F.F., MLP-1 ABOVE AT WOOD STUD WALL ONLY, EXPOSED FEMB WALL ABOVE MLP-1 TO ROOF.
- PAINTED GYPSUM BOARD CEILING ATTACHED TO 2x10 ROOF STRUCTURE ABOVE, COLOR T.B.D.

**FLOOR FINISH CODES:**

EPXY-1: EPOXY FLOORING:  
 FINISH: DECORATIVE FLAKE  
 COLOR: QUARTZ BROADCAST

LVT-1: LUXURY VINYL TILE (COMMERCIAL GRADE):  
 COLOR: T.B.D.  
 STYLE: T.B.D.  
 SIZE: T.B.D.

SC-1: SEALED EXPOSED CONCRETE:

**BASE FINISH CODES:**

VB-1: VINYL COVE WALL BASE:  
 MFR: T.B.D.  
 COLOR: T.B.D.  
 SIZE: 4" TALL

KB-2: WOOD WALL BASE:  
 SPECIES: MAPLE, 1/4" EASED EDGE  
 SIZE: 3/4" THICK X 5" TALL

CTB-1: CERAMIC TILE BASE:  
 MFR: T.B.D.  
 COLOR: T.B.D.  
 FINISH: T.B.D.  
 SIZE: 6" TALL  
 GROUT: T.B.D.

**WALL FINISH CODES:**

P-1: GYPSUM BOARD - PAINTED  
 PAINT TYPE: INTERIOR GRADE LATEX  
 COLOR: T.B.D.  
 FINISH TYPE: LIGHT SKIP TROWEL

P-2: MOISTURE RESISTANT GYPSUM BOARD - PAINTED  
 PAINT TYPE: INTERIOR GRADE LATEX (MADE FOR HIGH MOISTURE)  
 COLOR: T.B.D.  
 FINISH TYPE: LIGHT SKIP TROWEL

P-3: CMU - PAINTED  
 PAINT TYPE: CMU GRADE PAINT W/ BLOCK FILLER  
 COLOR: T.B.D.

CNT-1: MOISTURE RESISTANT GYP. BD. W/ CERAMIC WALL TILE  
 HEIGHT: 5'-0" A.F.F.  
 TYPE/FINISH: T.B.D.  
 COLOR: T.B.D.

MLP-1: PRE-FINISHED METAL LINER PANEL (26 GAUGE)  
 COLOR: T.B.D.  
 LOCATION: INSTALLED AT EXPOSED WOOD STUD WALL W/ FLAT GRIDS AS REQUIRED.

EXPOSED: EXPOSED FEMB STRUCTURE/INSULATION FABRIC

**CEILING FINISH CODES:**

ACT-1: ACOUSTICAL LAY-IN TILES:  
 MFR.: ARMSTRONG OR EQUAL  
 STYLE: ULTIMA, BEVELED REGULAR  
 SIZE: 24"x24"  
 COLOR: WHITE  
 GRID: NARROW GRID, WHITE

VCG-1: VINYL COVERED GYPSUM BOARD, LAY-IN TILES:  
 MFR.: ARMSTRONG OR EQUAL  
 STYLE: T.B.D.  
 SIZE: 24"x24"  
 COLOR: WHITE  
 GRID: T.B.D.

EXPOSED: OPEN TO STRUCTURE/INSULATION ABOVE

**INTERIOR WALL TYPES**

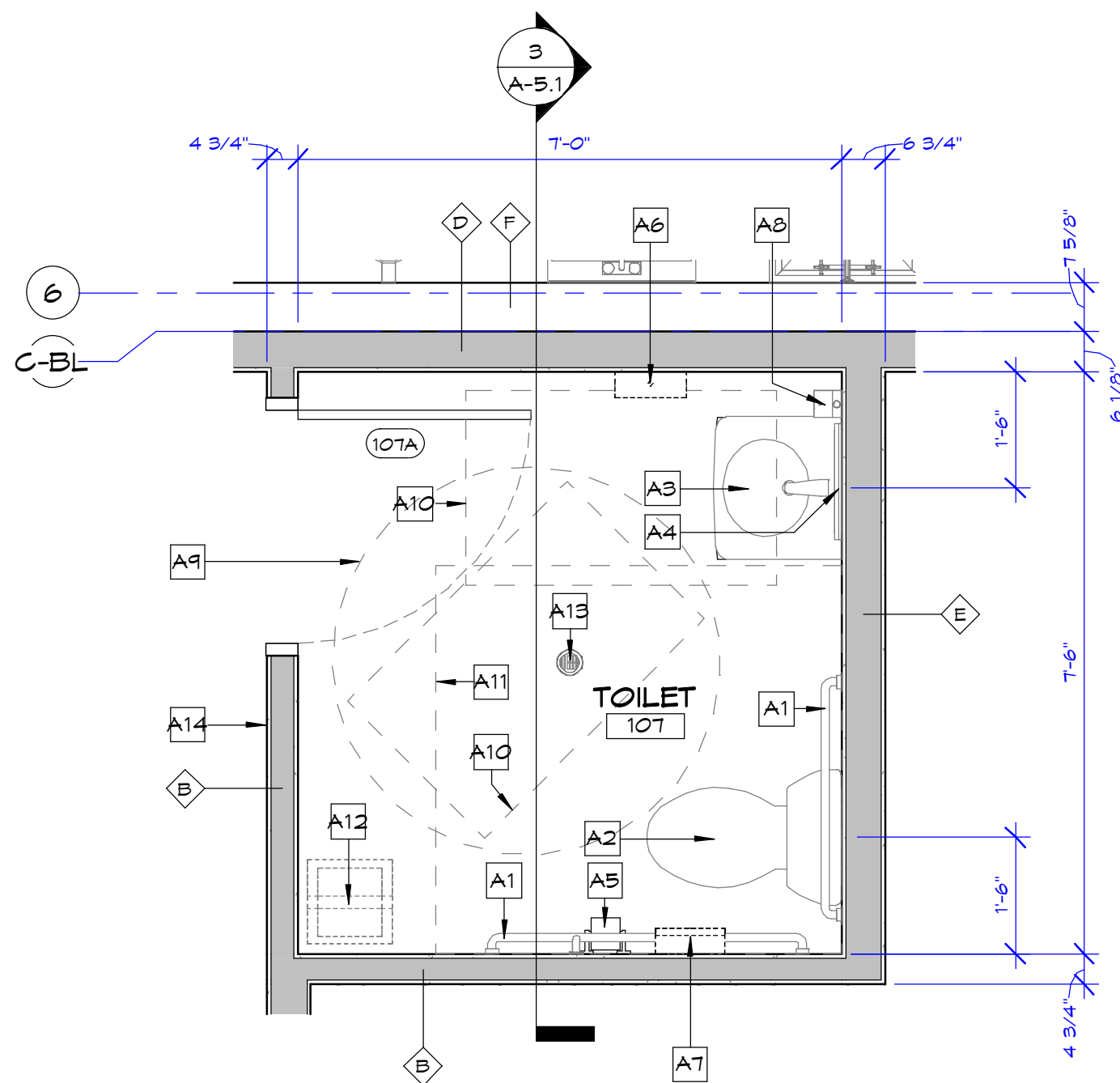
1" = 1'-0"

**TOILET ROOM GENERAL NOTES:**

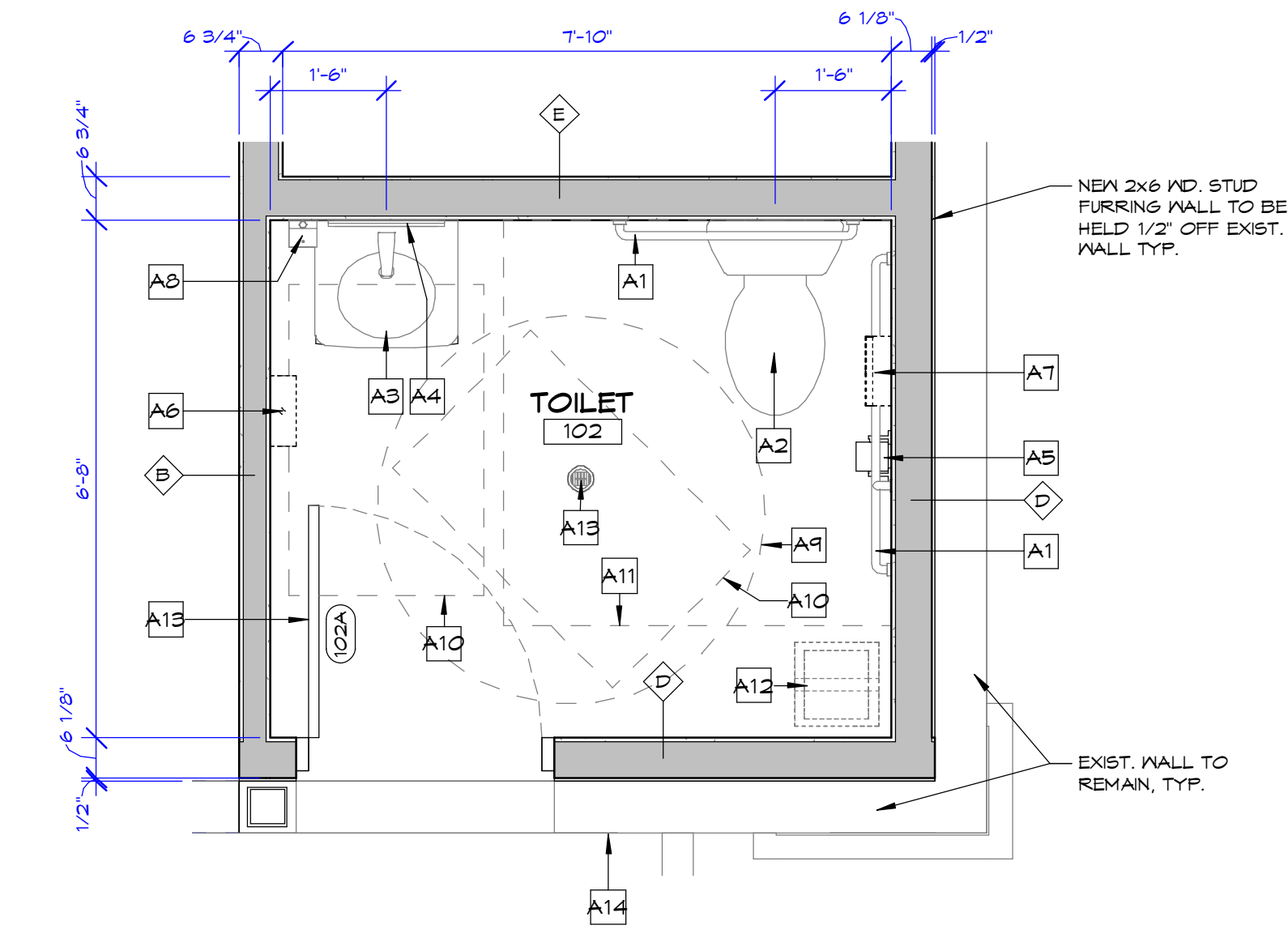
- ALL TOILET ROOM ACCESSORIES SHALL BE INSTALLED ACCORDING TO "ADA" GUIDELINES. SEE ADA GUIDELINE DETAILS FOR ADDITIONAL INFORMATION.
- ALL TOILET ROOM FLOOR FINISHES SHALL BE OF A SMOOTH, HARD, NON-ABSORBENT MATERIAL AND SHALL EXTEND A MIN. OF 4" UPWARD ONTO WALLS (i.e. CERAMIC BASE, VINYL COMPOSITION TILE W/ 4" VINYL BASE, ETC.). COORDINATE FLOOR FINISHES W/ ROOM FINISH SCHEDULE/OWNER.
- ALL TOILET ROOM WALLS SHALL BE FINISHED W/ MIN. (2) COATS OF OL-BASED OR OTHER IMPERVIOUS MATERIAL, COORDINATE TEXTURE W/ OWNER.
- GYPSUM BOARD IN THE RESTROOMS AND SURROUNDING THE UTILITY SINK SHALL BE MOISTURE RESISTANT.
- PROVIDE WOOD BLOCKING SUPPORT AS REQUIRED FOR MOUNTING ACCESSORIES.

**TOILET ROOM ACCESSORIES**

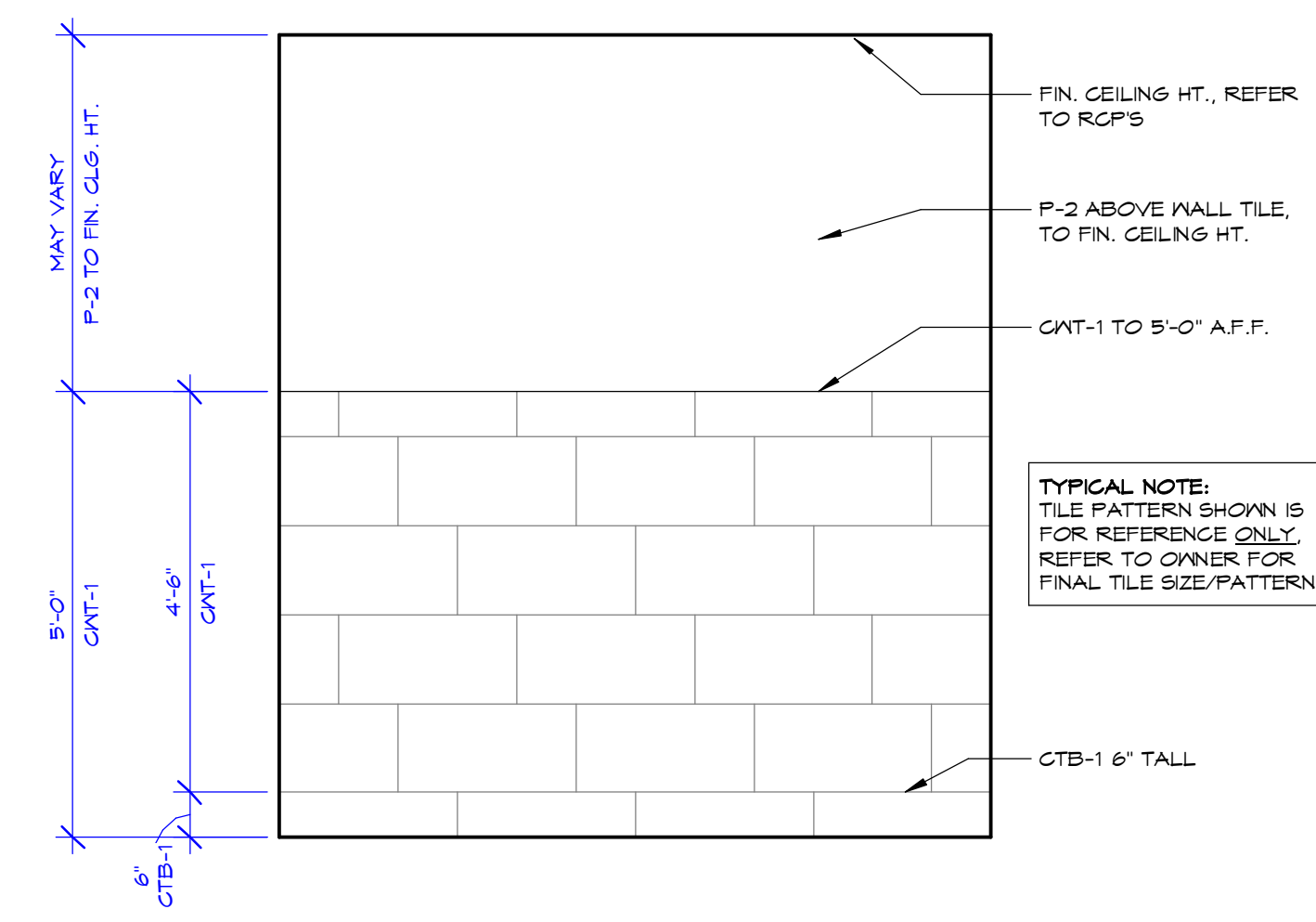
A1	PROVIDE AND INSTALL 36" x 42" HORIZONTAL & 18" VERTICAL GRAB BARS, BATIN FINISH STAINLESS STEEL OR EQUAL. REFER TO MOUNTING HEIGHT DETAILS.
A2	PROVIDE AND INSTALL ADA COMPLIANT WATER CLOSET, BY PLUMBING CONTRACTOR.
A3	PROVIDE & INSTALL ADA COMPLIANT WALL HUNG LAVATORY WITH MANUAL FAUCET & OFFSET GRID STRAINER, BY PLUMBING CONTRACTOR.
A4	24"x36" MIRROR OVER LAVATORY. REFER TO ACCESSIBILITY DETAILS FOR MOUNTING HEIGHT. INSTALLED BY GENERAL CONTRACTOR.
A5	TOILET PAPER DISPENSER, INSTALLED BY GENERAL CONTRACTOR.
A6	PAPER TOWEL DISPENSER, INSTALLED BY GENERAL CONTRACTOR.
A7	SANITARY NAPKIN DISPOSAL BY OWNER IF PROVIDED, INSTALLED BY GENERAL CONTRACTOR.
A8	WALL MOUNTED SOAP DISPENSER, SELECTED BY OWNER & INSTALLED BY GENERAL CONTRACTOR.
A9	REQUIRED 60" ADA TURNING CIRCLE.
A10	REQUIRED 30" x 48" ADA CLEAR FLOOR SPACE.
A11	REQUIRED 60"x60" ADA CLEAR SPACE AT WATER CLOSET.
A12	TRASH CAN, PROVIDED BY OWNER.
A13	FLOOR DRAIN, BY PLUMBING CONTRACTOR.
A14	ADA TOILET ROOM SIGNAGE W/ BRAILLE - SIGN AND MOUNTING BY GENERAL CONTRACTOR, REFER TO MOUNTING DETAILS.



**ENLRGD. TOILET PLAN (#107)**  
 1/2" = 1'-0"



**ENLRGD. TOILET PLAN (#102)**  
 1/2" = 1'-0"



**TYP. TILE ELEV. @ TOILET ROOM**  
 1/2" = 1'-0"

NO.	REVISION DESCRIPTION	DATE	REV. BY

**ACE BUILDING SERVICE**  
 OUR REPUTATION IS OUR FOUNDATION  
 3510 SOUTH 28TH STREET, MAINTON, WISCONSIN 54220  
 PHONE 920-682-6105 | WWW.ACEBUILDINGSERVICE.COM

**Civil & Structural**  
 A DIVISION OF ACE BUILDING SERVICE

**SMP**  
 SUPERVISING PROFESSIONAL

PROJECT INFORMATION:  
**SAUVE'S AUTO**  
 TWO RIVERS, WISCONSIN

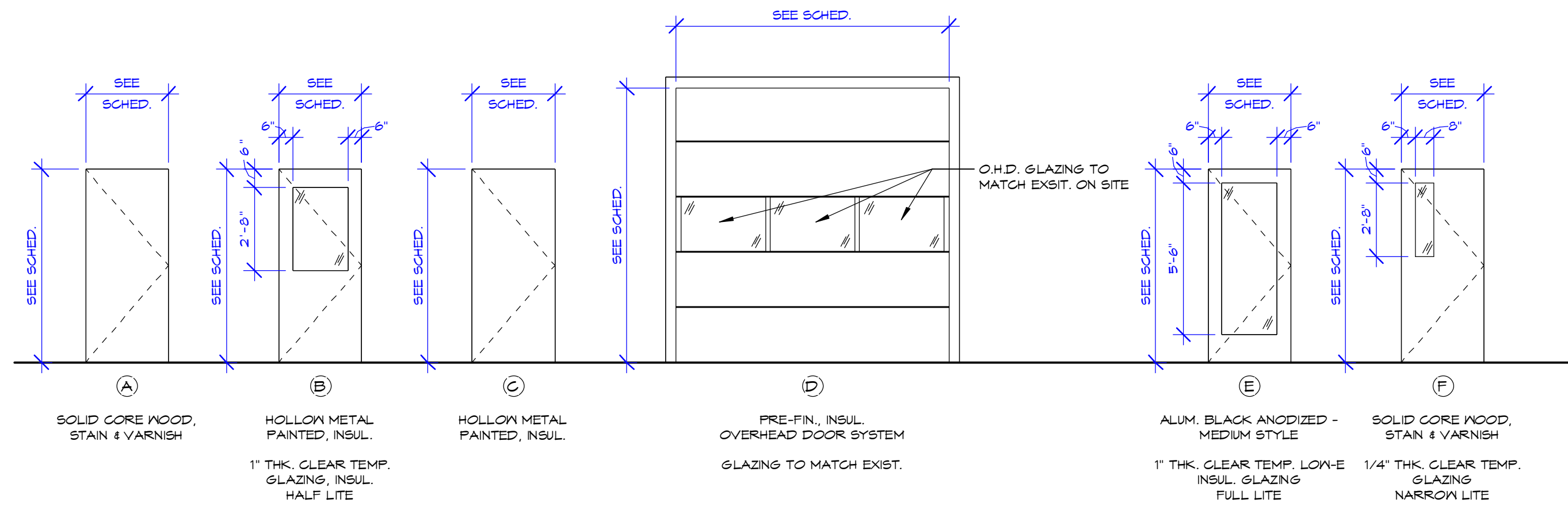
THIS PLAN AND IDEAS EXPRESSED HERE-IN ARE THE PROPERTY OF A.C.E. BUILDING SERVICE, INC. THESE PLANS SHALL NOT BE SHARED BY VISUAL MEANS OR REPRODUCED WITHOUT THE CONSENT OF A.C.E. BUILDING SERVICE, INC.

SHEET INFORMATION

A.C.E. JOB NO.	
DATE:	08-19-204
DRAWN BY:	DAH
SCALE:	As indicated

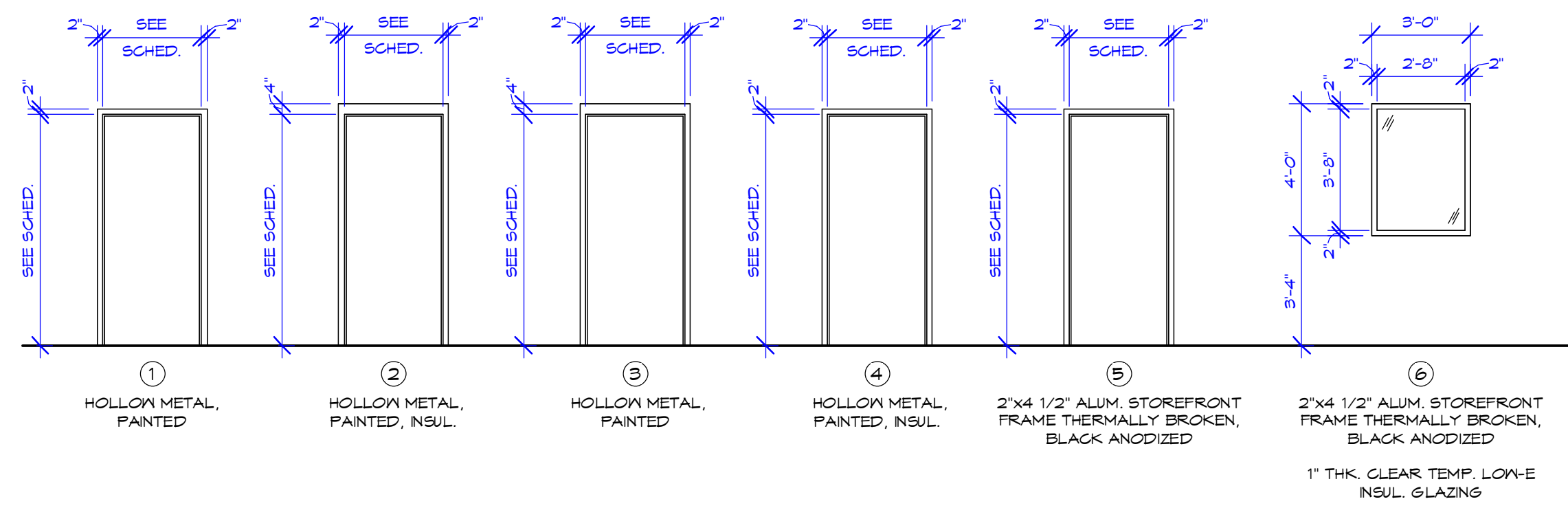
ROOM FINISH SCHED. & TOILET PLANS

SHEET  
**A-2.1**



**DOOR ELEVATIONS**

1/4" = 1'-0"



**FRAME ELEVATIONS**

1/4" = 1'-0"

DOOR NO.	FROM	TO	HAND	DOOR					FRAME			HRD'W. GROUP	FIRE RATING	REMARKS	
				OPENING		TYPE	MAT'L	FINISH	TYPE	MAT'L	FINISH				
				WIDTH	HEIGHT										
FIRST FLOOR															
101A	EXTERIOR	WAITING	LHR	3'-0"	7'-0"	E	ALUM.	ANOD.	5	ALUM.	ANOD.	1	--	1,6	
101B	WAITING	EXIST. SERVICE	LH	3'-0"	7'-0"	B	H.M.	PAINT	4	H.M.	PAINT	2	--	1	
101C	WAITING	RECEPTION	WALL OPNG.	10'-7 1/4"	8'-0"	--	--	--	--	--	--	--	--	2	
102A	WAITING	TOILET	LH	3'-0"	7'-0"	A	WOOD	S 4 V	3	H.M.	PAINT	4	--	4	
104A	CORRIDOR	SERVICE GARAGE	LH	3'-0"	7'-0"	B	H.M.	PAINT	2	H.M.	PAINT	2	--	5	
105A	CORRIDOR	OFFICE	RH	3'-0"	7'-0"	F	WOOD	S 4 V	1	H.M.	PAINT	6	--	3	
105B	EXTERIOR	OFFICE	WINDOW	3'-0"	4'-0"	--	--	--	6	ALUM.	ANOD.	--	--	3	
106A	CORRIDOR	BREAK	LH	3'-0"	7'-0"	F	WOOD	S 4 V	1	H.M.	PAINT	5	--	3	
106B	EXTERIOR	BREAK	WINDOW	3'-0"	4'-0"	--	--	--	6	ALUM.	ANOD.	--	--	3	
106C	EXTERIOR	BREAK	WINDOW	3'-0"	4'-0"	--	--	--	6	ALUM.	ANOD.	--	--	3	
107A	CORRIDOR	TOILET	LH	3'-0"	7'-0"	A	WOOD	S 4 V	1	H.M.	PAINT	4	--	4	
100A	SERVICE GARAGE	STORAGE	LH	3'-0"	7'-0"	G	H.M.	PAINT	2	H.M.	PAINT	5	--	6	
102A	EXTERIOR	SERVICE GARAGE	LHR	3'-0"	7'-0"	G	H.M.	PAINT	2	H.M.	PAINT	1	--	6	
109B	EXTERIOR	SERVICE GARAGE	O.H.D.	12'-0"	14'-0"	D	BY MFR.	PRE-FIN.	--	--	--	7	--	7	
109C	EXTERIOR	SERVICE GARAGE	O.H.D.	12'-0"	14'-0"	D	BY MFR.	PRE-FIN.	--	--	--	7	--	7	
109D	EXTERIOR	SERVICE GARAGE	O.H.D.	12'-0"	14'-0"	D	BY MFR.	PRE-FIN.	--	--	--	7	--	7	
109E	SERVICE GARAGE	EXIST. SERVICE	WALL OPNG.	12'-0"	10'-0"	--	--	--	--	--	--	--	--	2	
110A	EXTERIOR	EXIST. SERVICE	RHR	3'-0"	7'-0"	B	H.M.	PAINT	2	H.M.	PAINT	1	--	1,6	
110B	EXTERIOR	EXIST. SERVICE	LHR	3'-0"	7'-0"	C	H.M.	PAINT	2	H.M.	PAINT	1	--	1,6	
Grand Total: 19															

**OPENING SCHED. NOTE:**  
ONLY NEW DOORS/WINDOWS ARE LISTED ON THE OPENING SCHEDULE. ALL EXISTING DOORS ARE TO REMAIN AS-IS UNLESS NOTED OTHERWISE.

**SCHEDULE NOTE:**  
OPENING SCHEDULE & HARDWARE TO BE REVIEWED WITH OWNER PRIOR TO ORDERING DOORS/WINDOWS.

**GENERAL DOOR & WINDOW NOTES:**

- VERIFY ALL OPENING DIMENSIONS PRIOR TO FABRICATION OR CONSTRUCTION OF ALL DOORS & FRAMES.
- ALL HARDWARE TO BE AMERICANS WITH DISABILITIES ACT (A.D.A.) COMPLIANT.
- PROPER EXIT HARDWARE IS REQUIRED ON ALL EXIT AND EXIT ACCESS DOORS. HARDWARE SHALL COMPLY WITH REQUIREMENTS OF IBC SECTION 1003.1.8 THRU 1003.1.9.
- ALL FRAMES TO BE FIELD VERIFIED PRIOR TO FABRICATION BY WINDOW SUPPLIER.
- ALL GLAZING IN HAZARDOUS IMPACT AREAS SHALL BE SAFETY GLAZING IN ACCORDANCE WITH SECTION 2406.
- ALL HOLLOW METAL DOORS/FRAMES SHALL BE WELDED. NO KNOCK DOWN FRAMES PERMITTED.
- ALL EXTERIOR HOLLOW METAL EXIT DOORS TO HAVE LATCH GUARDS AND CLOSERS.
- ALUMINUM ENTRANCE DOORS SHALL BE EQUIPPED WITH CYLINDER LOCK, INTERIOR TURN-LOCK, SURFACE MOUNTED SELF CLOSER AND DOOR STOP.
- STANDARD ROUND PUSH/PULLS UNLESS NOTED OTHERWISE. FINISH TO MATCH DOORS.
- ALL KEYING SHALL BE COORDINATED AND VERIFIED WITH OWNER AND/OR OWNER'S REPRESENTATIVE.
- ALL INTERIOR ALUMINUM FRAMES SHALL HAVE A MAXIMUM 1/8" CAULK JOINT AROUND PERIMETER.
- ALL ALUMINUM STOREFRONT TO BE CLASS I ANODIZED ALUMINUM.
- REFER TO EXTERIOR HOLLOW METAL DOORS AND/OR FRAMES TO BE GALVANIZED.
- REFER TO DETAILS 1/A-3.1, 2/A-3.1 AND 3/A-3.1 FOR TYPICAL HOLLOW METAL AND ALUMINUM REQUIREMENTS.

**OPENING SCHEDULE REMARKS:**

- NEW DOOR IN EXISTING ROUGH OPENING, PATCH WALL AS NEEDED FROM DEMO WORK.
- NEW WALL OPENING IN EXISTING CMU WALL, DEMO & PATCH WALL AS NEEDED. PROVIDE LINTEL AS REQUIRED, SEE STRUCTURAL DRAWINGS FOR MORE INFO.
- EXTERIOR WINDOW, REFER TO WINDOW/FRAME ELEVATIONS FOR MORE INFO.
- LIGHTLY BRUSHED, STAINLESS STEEL KICK PLATE, ONE SIDE OF DOOR (TOILET ROOM SIDE).
- LIGHTLY BRUSHED, STAINLESS STEEL KICK PLATES, BOTH SIDES OF DOOR.
- EXTERIOR DOOR TO HAVE HEAVY DUTY HINGES, HYDRAULIC CLOSER, WEATHER-STRIPPING, DOOR SWEEP, & ADA ALUMINUM THRESHOLD.
- OVERHEAD DOOR SYSTEM SUPPLIED BY MANUFACTURER.

**DOOR HARDWARE GROUPS**

- HARDWARE SET #1**
- HEAVY DUTY CLOSER
  - LATCH GUARD
  - THRESHOLD
  - SCHLAGE ND SERIES LEVER HANDLE ENTRANCE LOCKSET
  - WEATHER STRIPPING
  - EXTERIOR GRADE BALL BEARING BUTTS
- HARDWARE SET #2**
- MEDIUM DUTY CLOSER
  - PUSH/PULL
  - THRESHOLD
- HARDWARE SET #3**
- SCHLAGE ND SERIES LEVER HANDLE PASSAGE LATCH
  - MEDIUM DUTY CLOSER
  - BALL BEARING BUTTS
  - KICK-DOWN DOOR STOP
- HARDWARE SET #4**
- SCHLAGE ND SERIES LEVER HANDLE PRIVACY LOCK
  - MEDIUM DUTY CLOSER
  - BALL BEARING BUTTS
  - KICK-DOWN DOOR STOP
- HARDWARE SET #5**
- SCHLAGE ND SERIES LEVER HANDLE STOREROOM LOCK
  - BALL BEARING BUTTS
  - MEDIUM DUTY CLOSER
  - KICK-DOWN DOOR STOP
- HARDWARE SET #6**
- SCHLAGE ND SERIES HANDLE OFFICE LOCK
  - BALL BEARING BUTTS
  - WALL MOUNT DOOR STOP
- HARDWARE SET #7**
- HEAVY DUTY JACKSHAFT DOOR OPERATOR
  - PHOTO EYES
  - THREE-BUTTON CONTROL STATION
  - (2) 2-BUTTON PROGRAMMABLE REMOTES

NO.	REVISION DESCRIPTION	DATE	REV. BY

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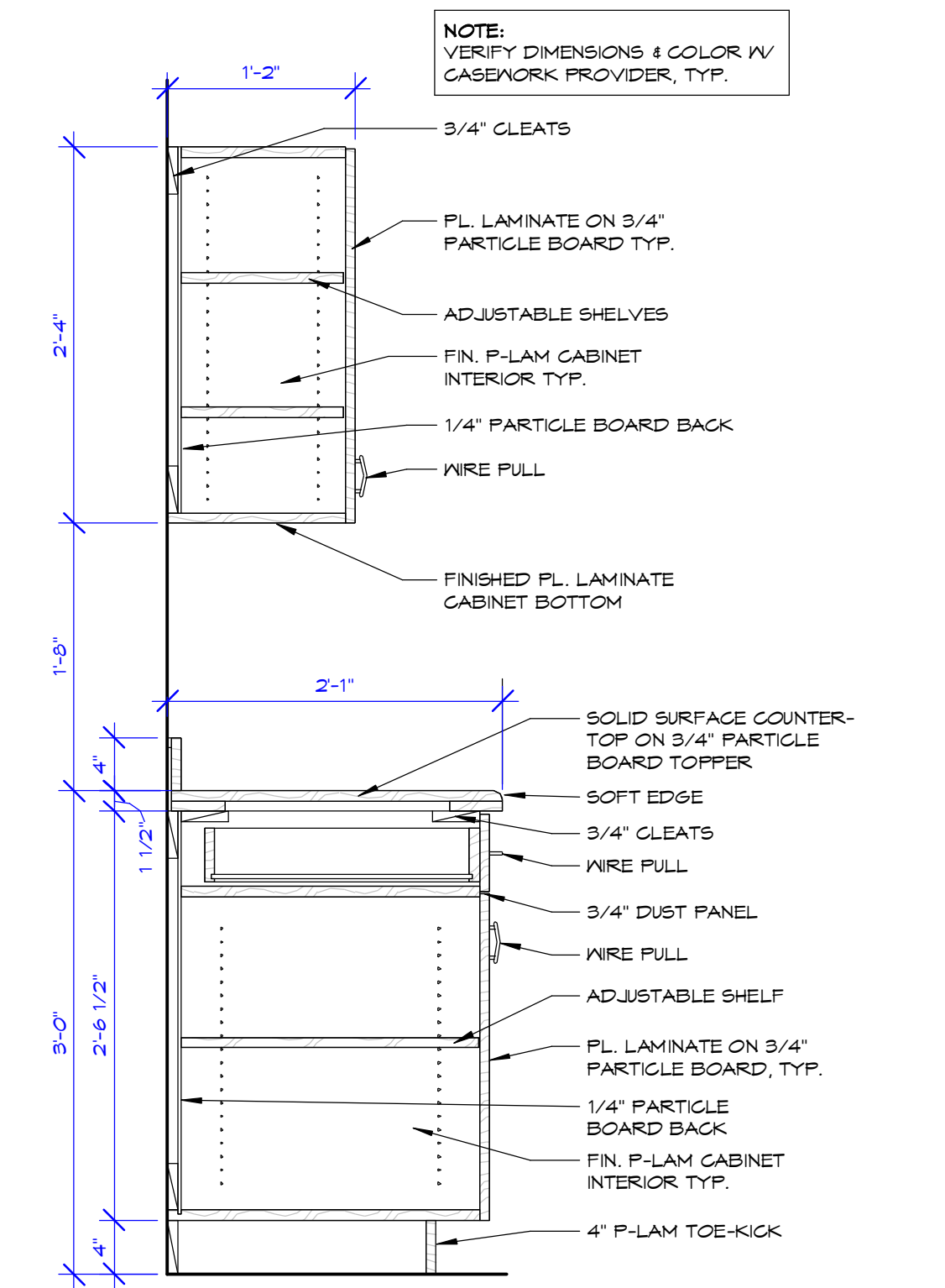
**SMP**  
SUPERVISING PROFESSIONAL

PROJECT INFORMATION:  
**SAUVE'S AUTO**  
TWO RIVERS, WISCONSIN

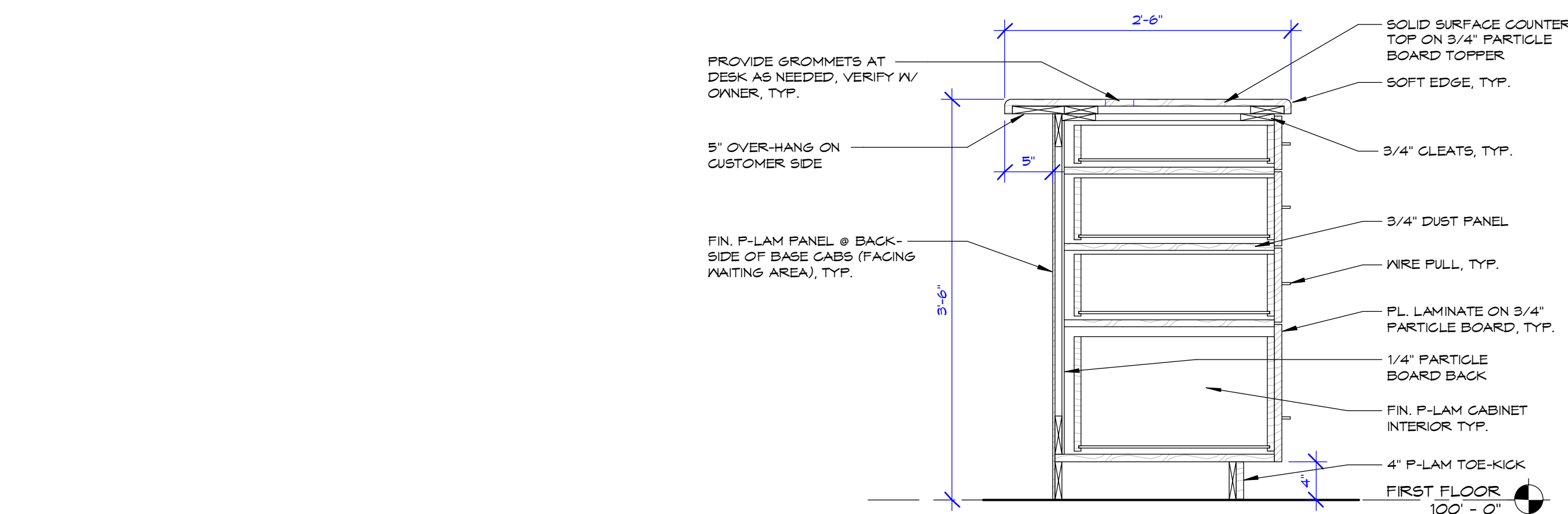
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SHEET INFORMATION	
A.C.E. JOB NO.	
DATE:	08-19-2014
DRAWN BY:	DAH
SCALE:	As indicated

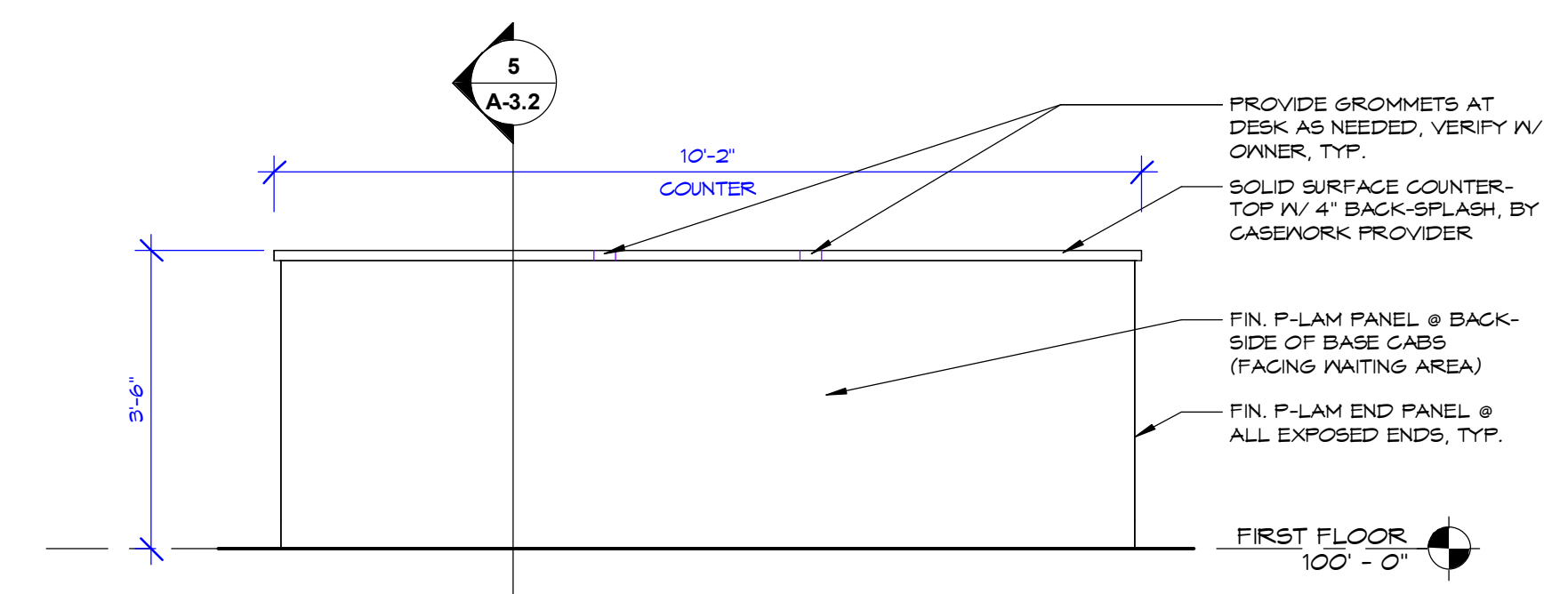
SHEET  
**A-3.1**



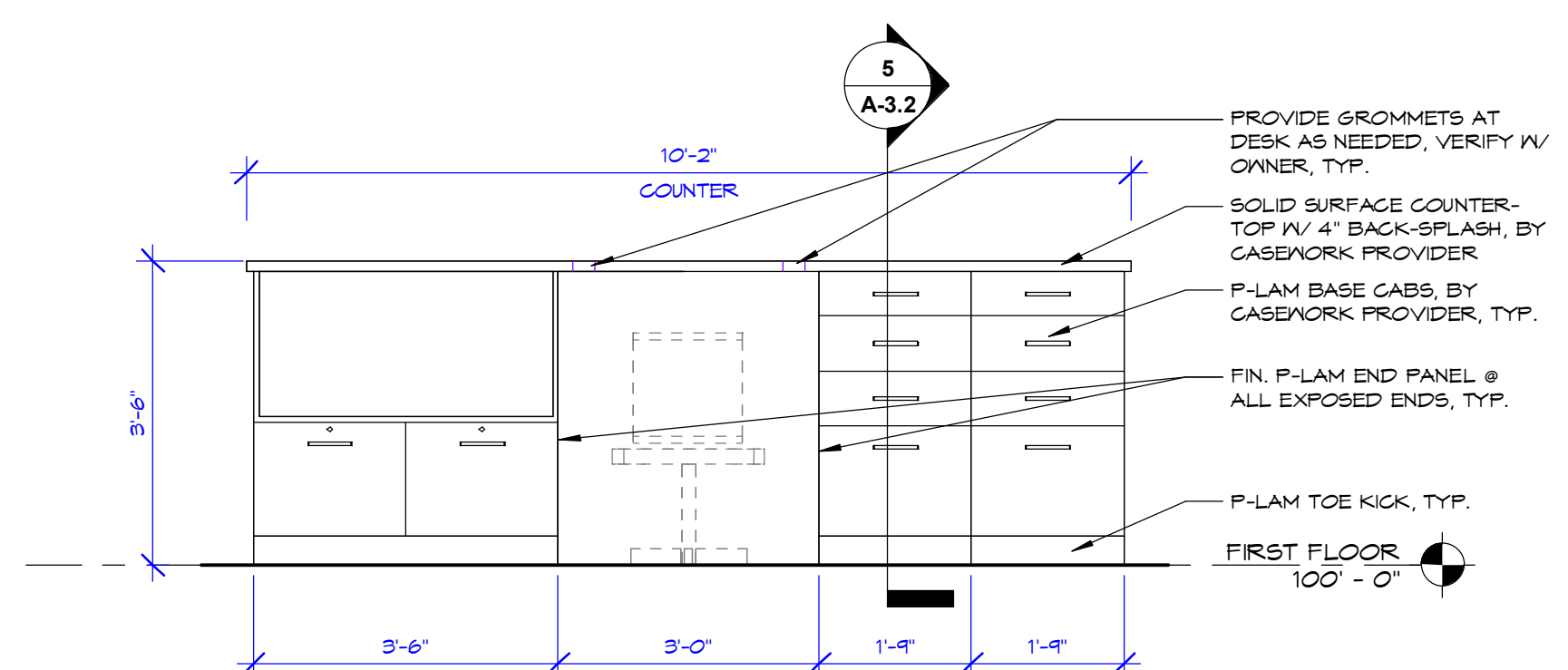
3 TYPICAL CABINET SECTION  
1" = 1'-0"



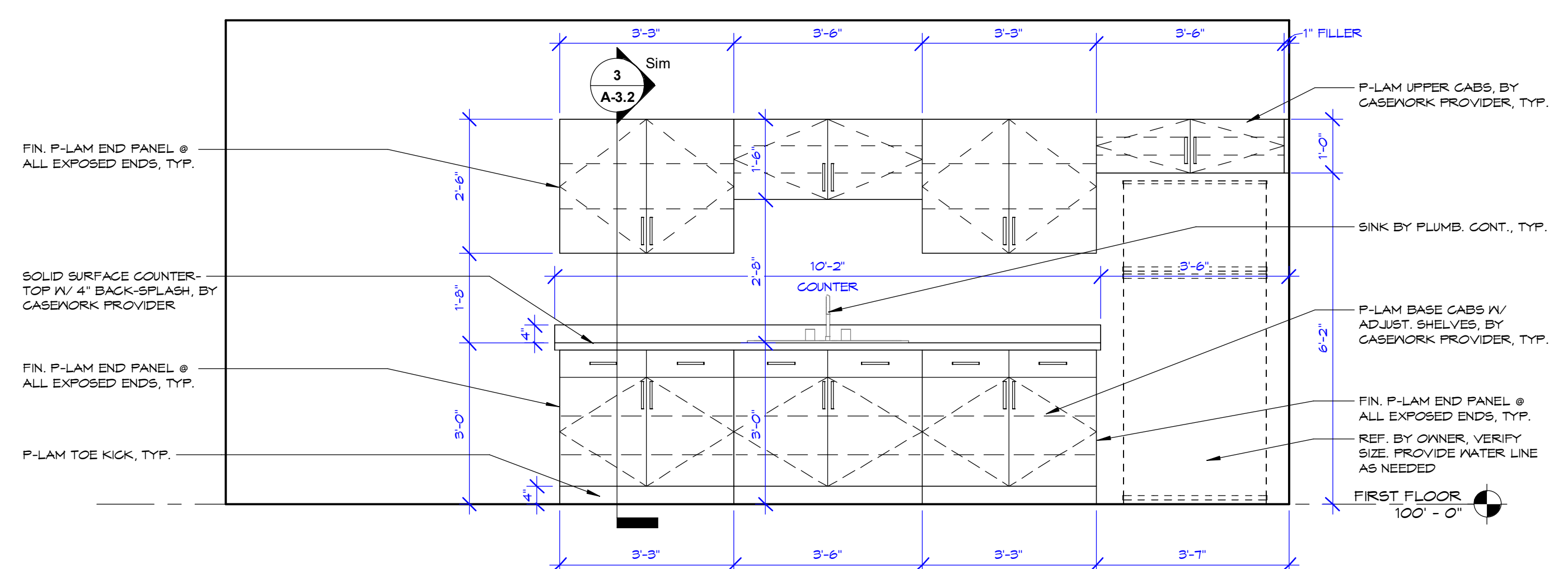
5 TYP. SECT. @ RECEPTION DESK  
1" = 1'-0"



4 RECEPTION DESK ELEV. (CUSTOMER SIDE)  
1/2" = 1'-0"



2 RECEPTION DESK ELEV. (WORKER SIDE)  
1/2" = 1'-0"



1 BREAKROOM CASEWORK ELEV.  
1/2" = 1'-0"

NOTE:  
VERIFY DIMENSIONS & COLOR W/  
CASEWORK PROVIDER, TYP.

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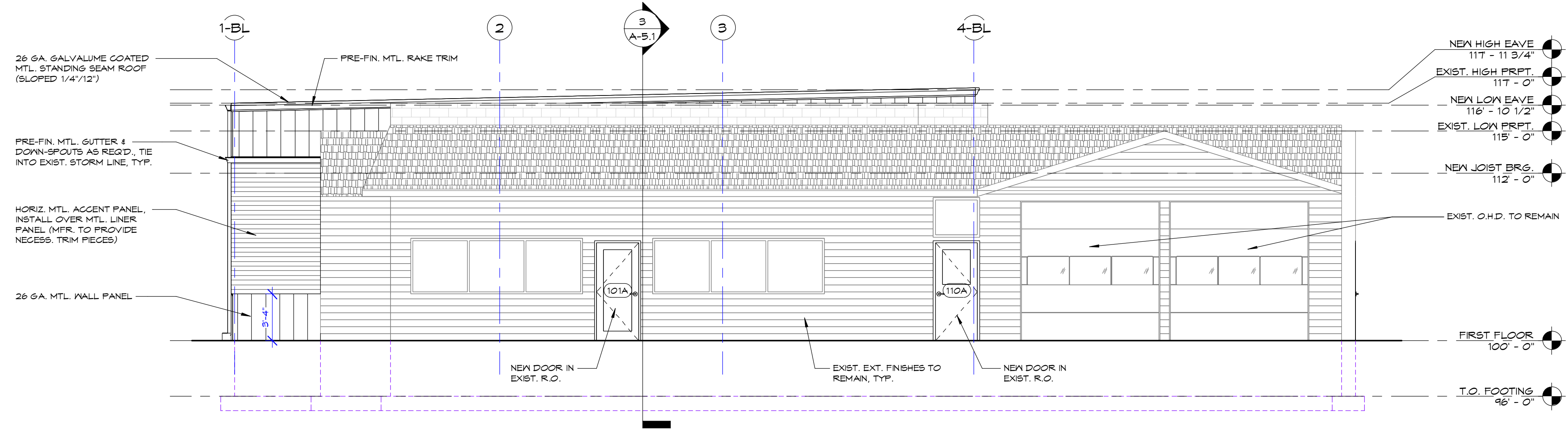
SHEET INFORMATION

A.C.E. JOB NO.	
DATE:	08-19-2014
DRAWN BY:	DAH
SCALE:	As indicated

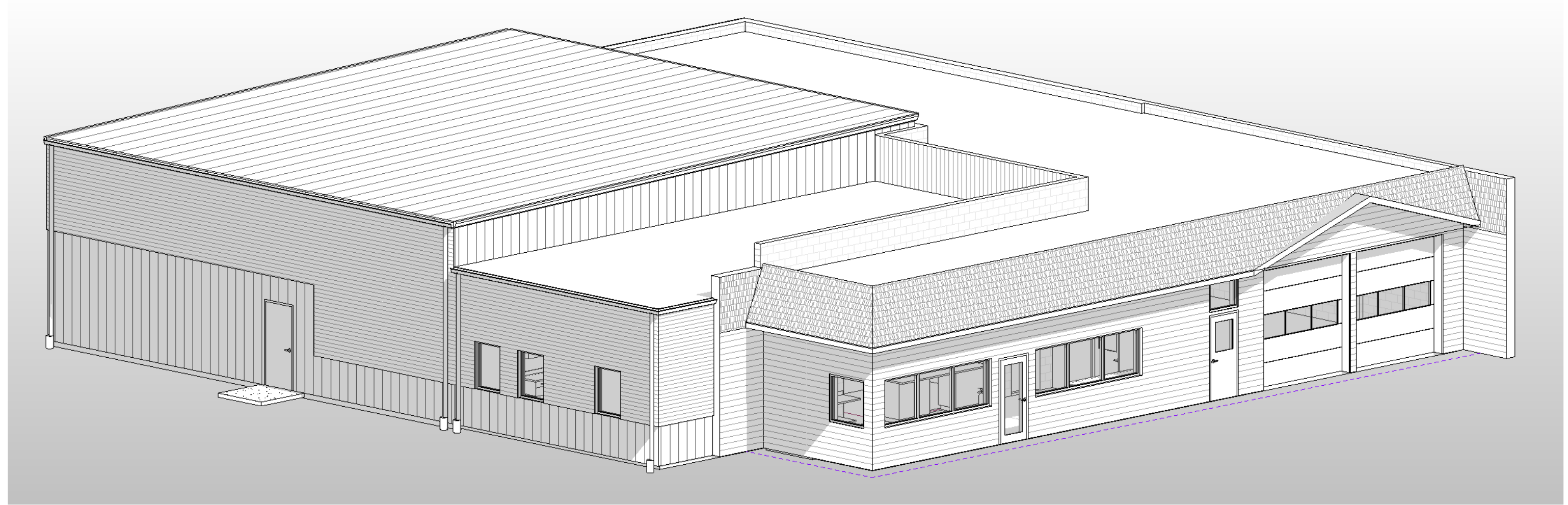
CASEWORK ELEVATIONS & DETAILS

**A-3.2**

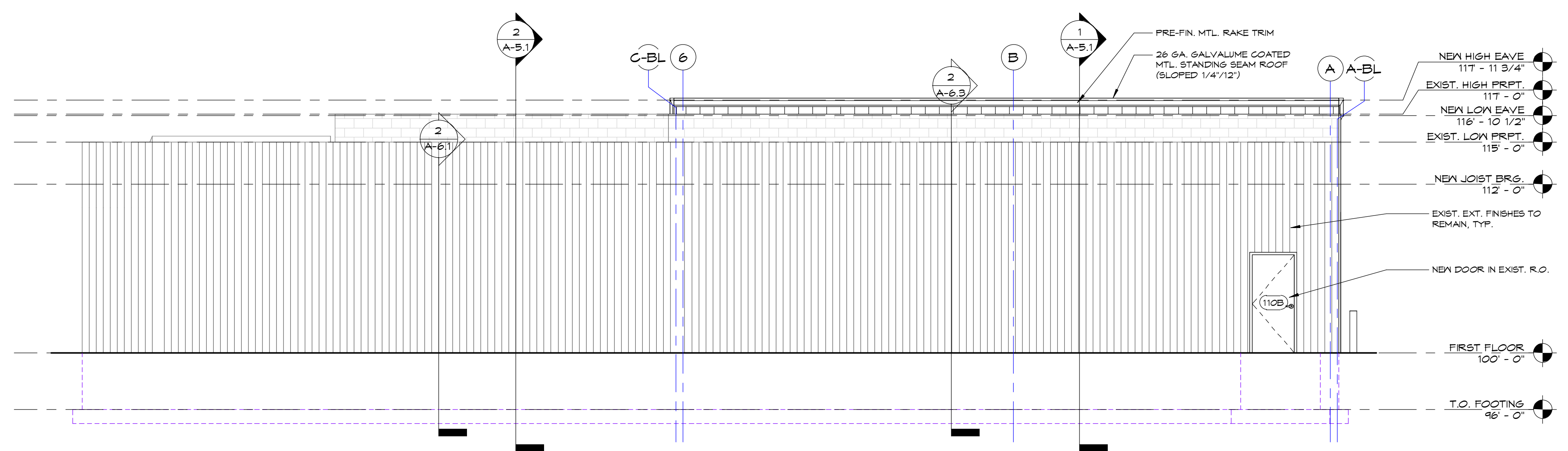




1 BUILDING ELEVATION - WEST  
3/16" = 1'-0"



3 3D - NORTHWEST PERSPECTIVE



2 BUILDING ELEVATION - SOUTH  
3/16" = 1'-0"

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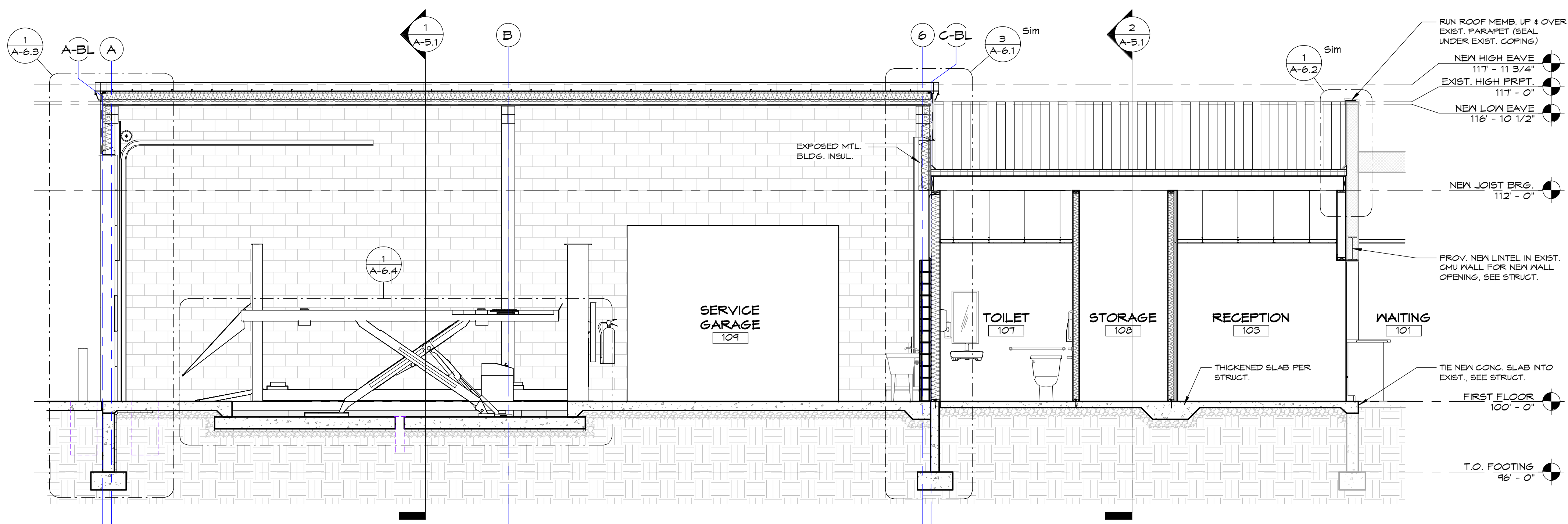
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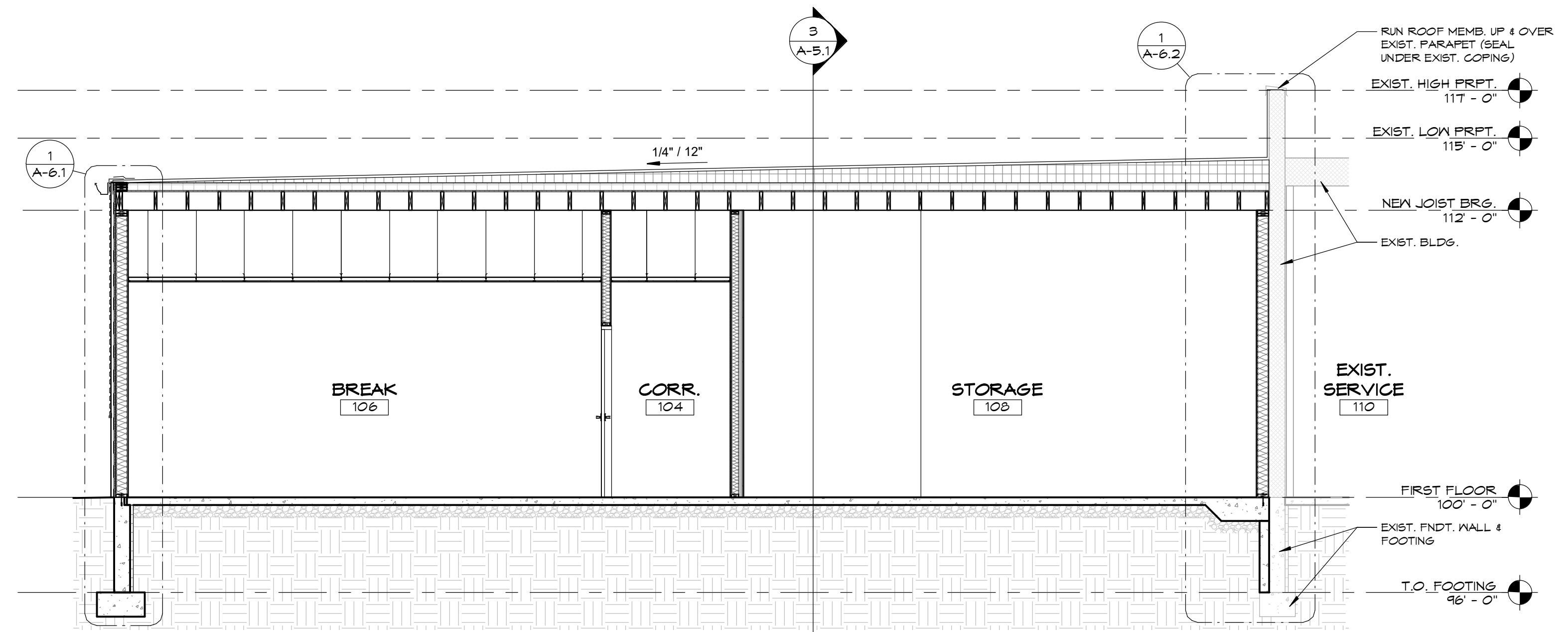
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SHEET INFORMATION  
A.C.E. JOB NO.  
DATE: 08-19-204  
DRAWN BY: DAH  
SCALE: 3/16" = 1'-0"  
EXTERIOR ELEVATIONS

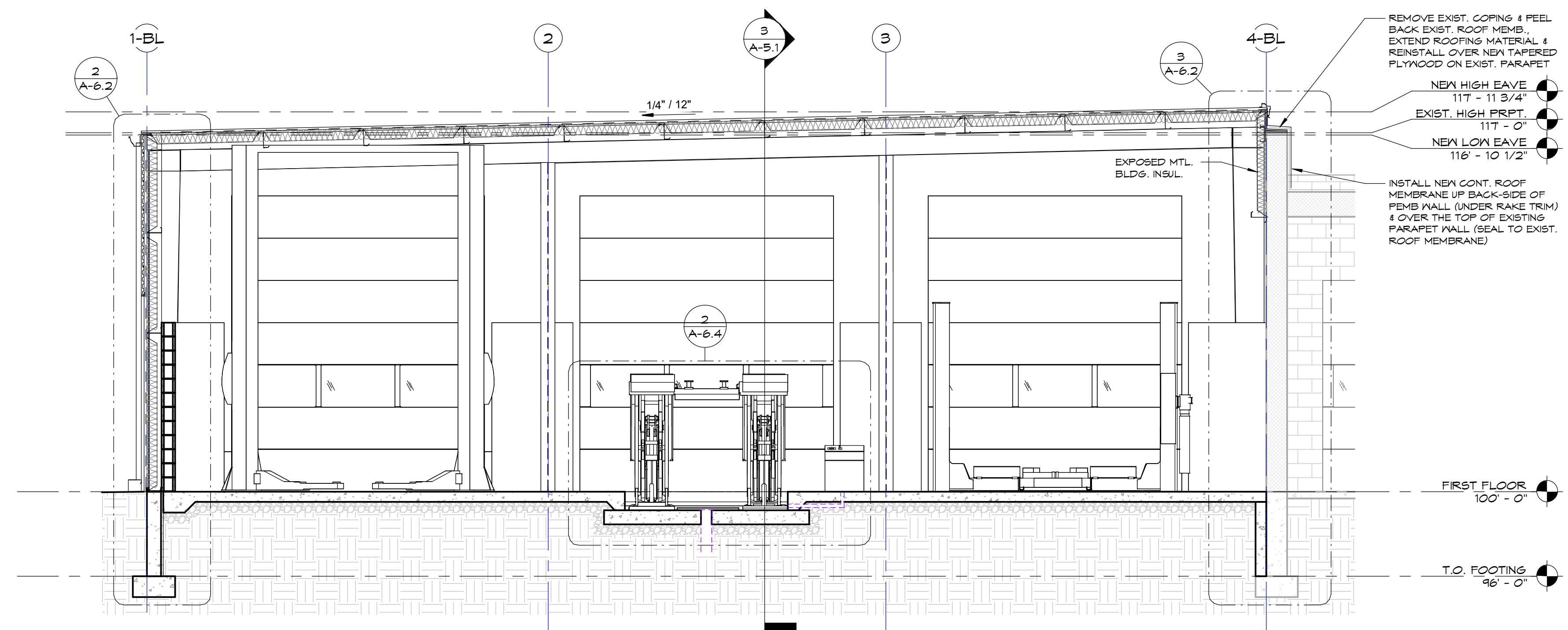
SHEET  
**A-4.2**



3 BUILDING SECTION - OFFICE/SERVICE BAY  
1/4" = 1'-0"



2 BUILDING SECTION @ OFFICE  
1/4" = 1'-0"



1 BUILDING SECTION @ SERVICE GARAGE  
1/4" = 1'-0"

NOTE:  
BUILDING SECTIONS FOR MASSING  
ONLY. REFER TO WALL SECTIONS &  
DETAILS FOR ADDTL. INFO.

REV. BY	DATE	REVISION DESCRIPTION

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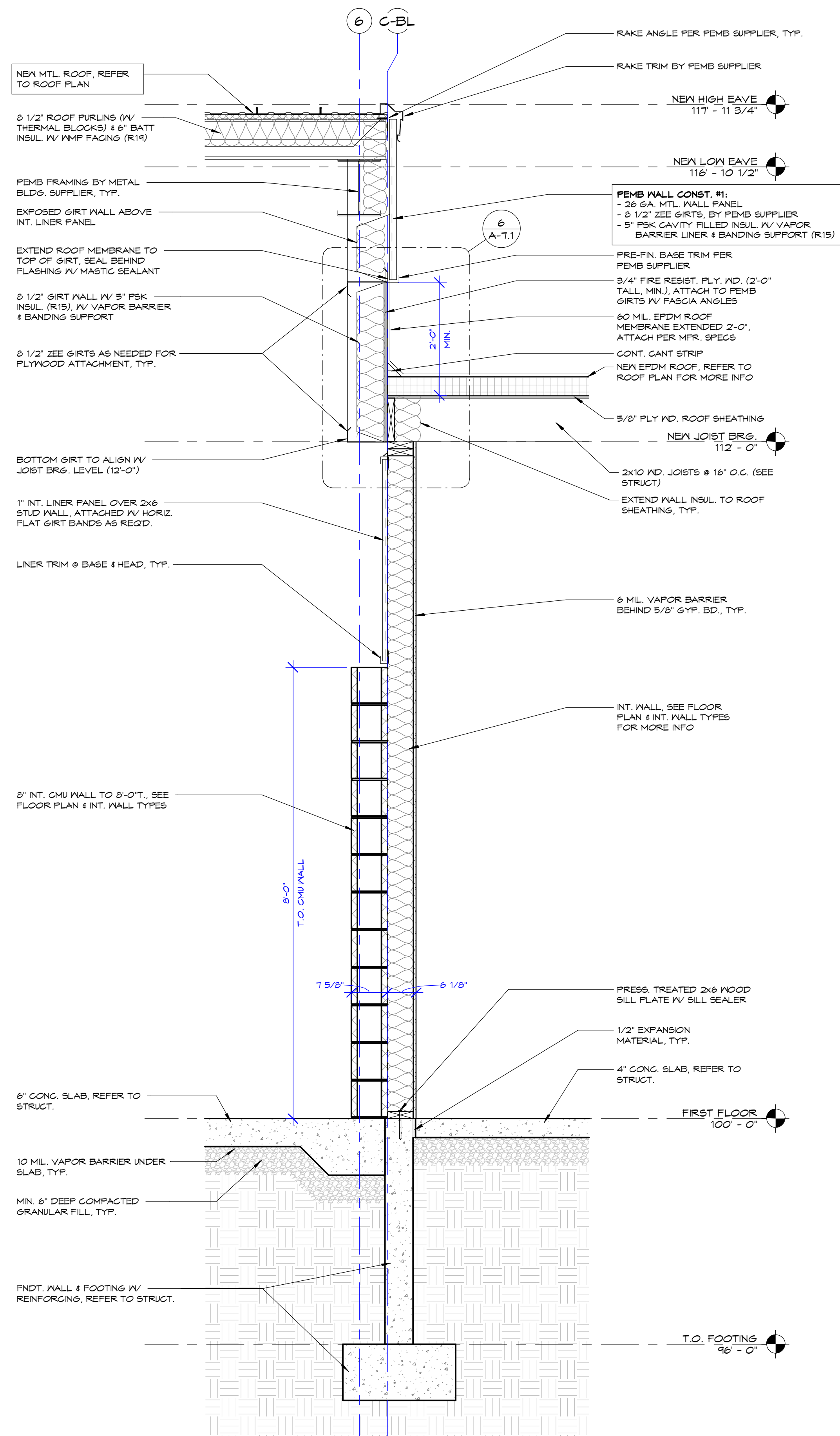
**SMI**  
SUPERVISING PROFESSIONAL

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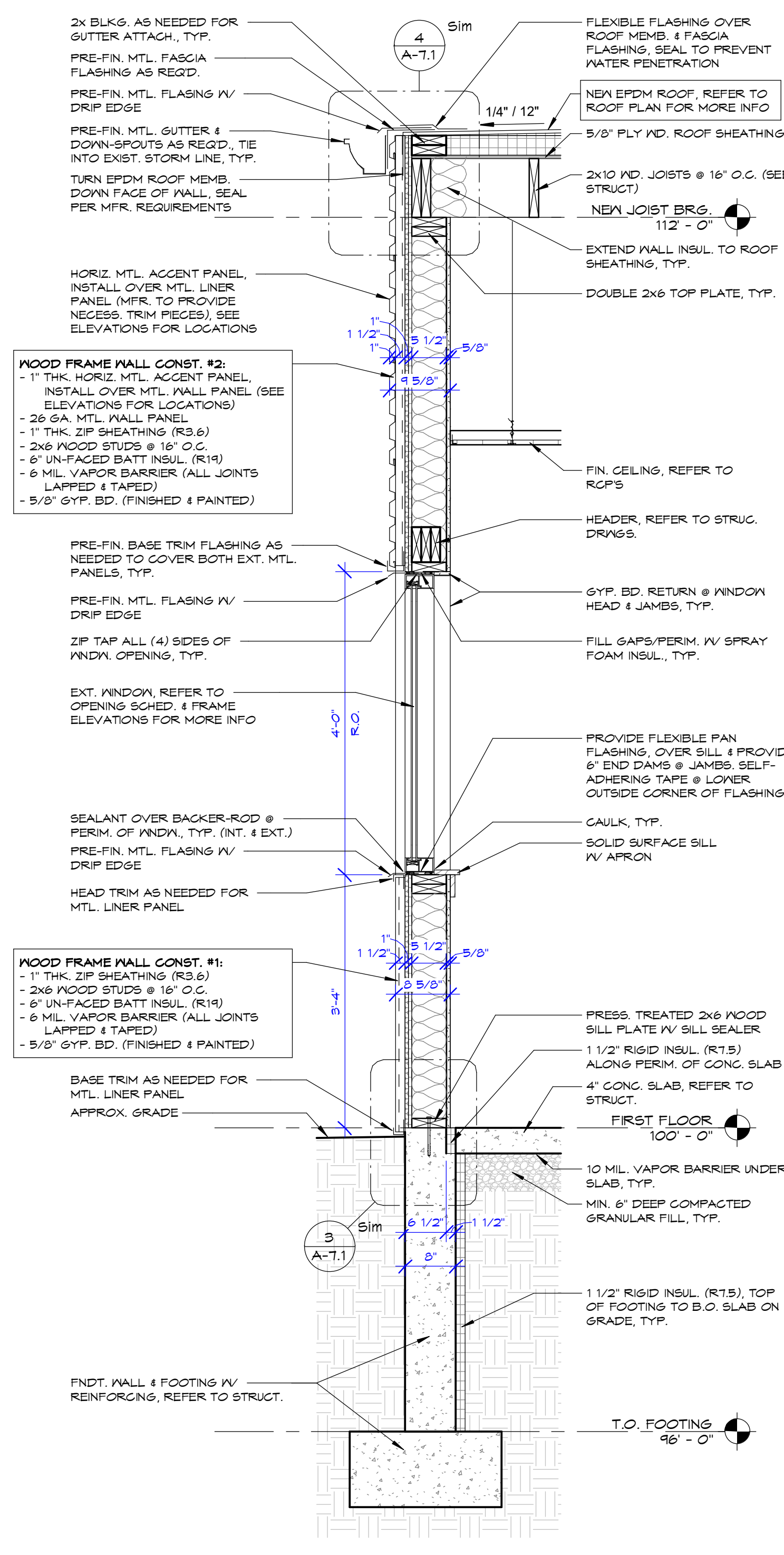
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SHEET INFORMATION  
A.C.E. JOB NO. \_\_\_\_\_  
DATE: 08-19-204  
DRAWN BY: DAH  
SCALE: 1/4" = 1'-0"

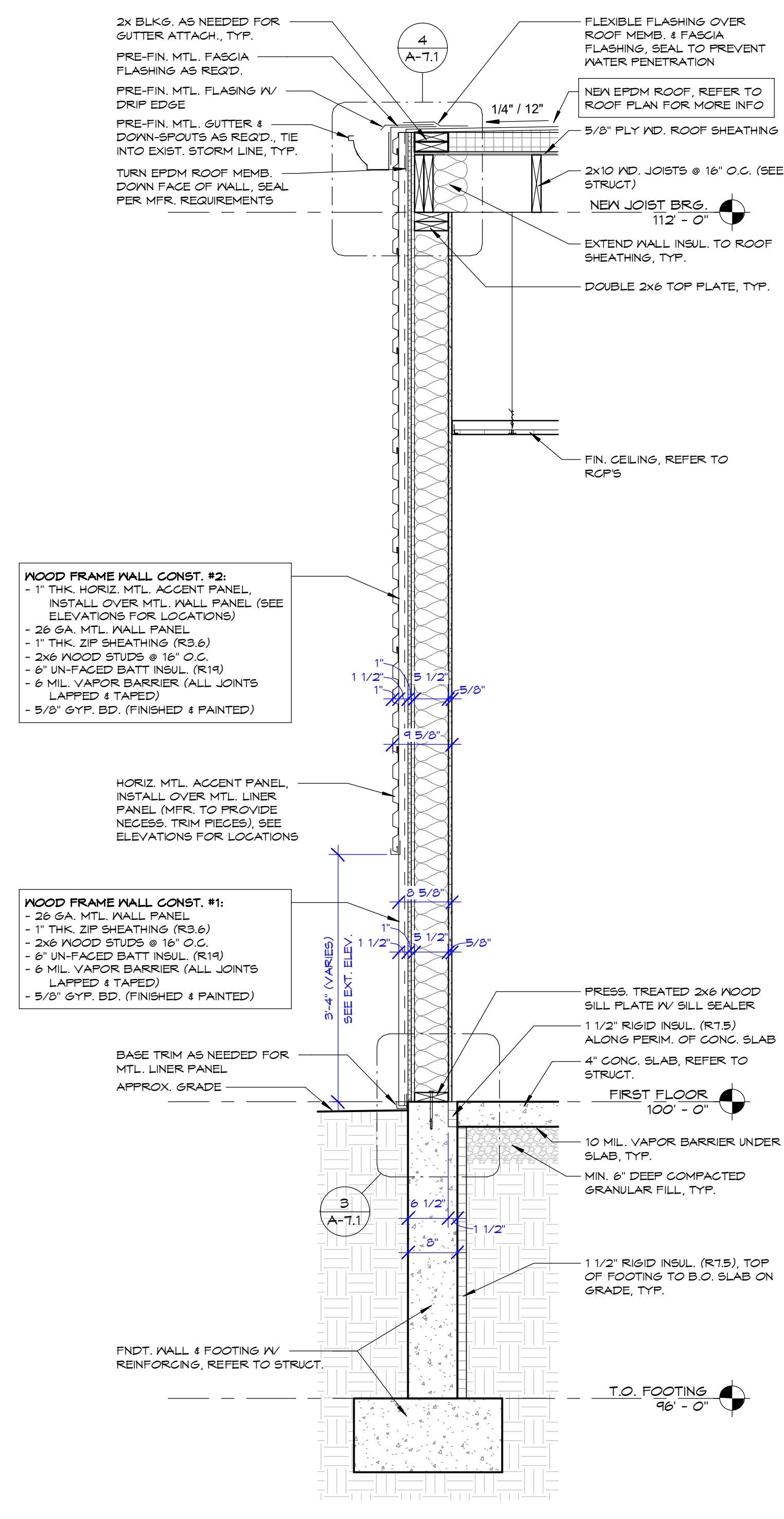
BUILDING SECTIONS  
SHEET  
**A-5.1**



3 WALL SECT. @ SHOP/OFFICE  
A-6.1 3/4" = 1'-0"



2 OFFICE WALL SECT. @ WINDOW  
A-6.1 3/4" = 1'-0"



1 TYP. WALL SECT. @ OFFICE  
A-6.1 3/4" = 1'-0"

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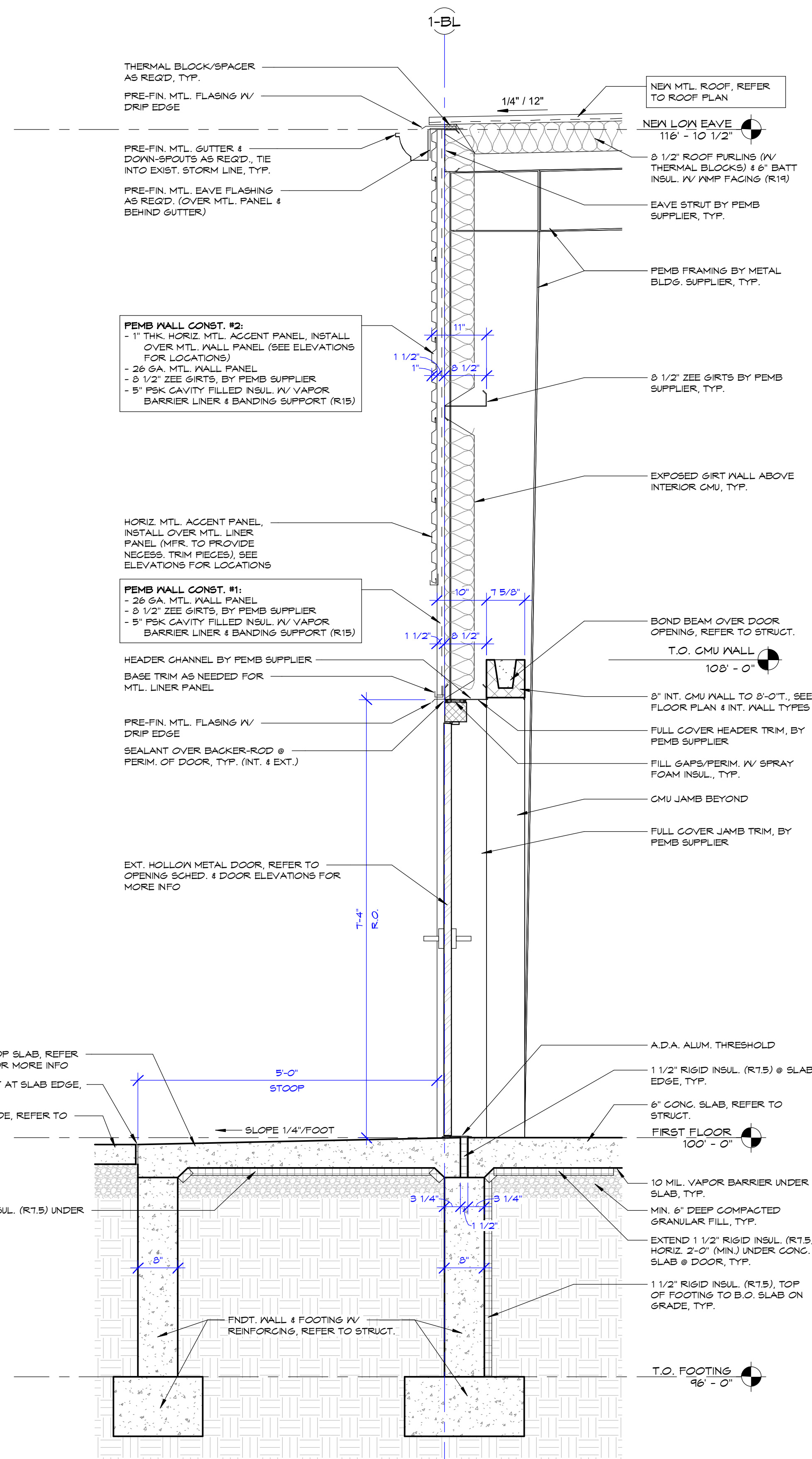
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SHEET INFORMATION	
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DATE:	08-19-204
DRAWN BY:	DAH
SCALE:	3/4" = 1'-0"
WALL SECTIONS	

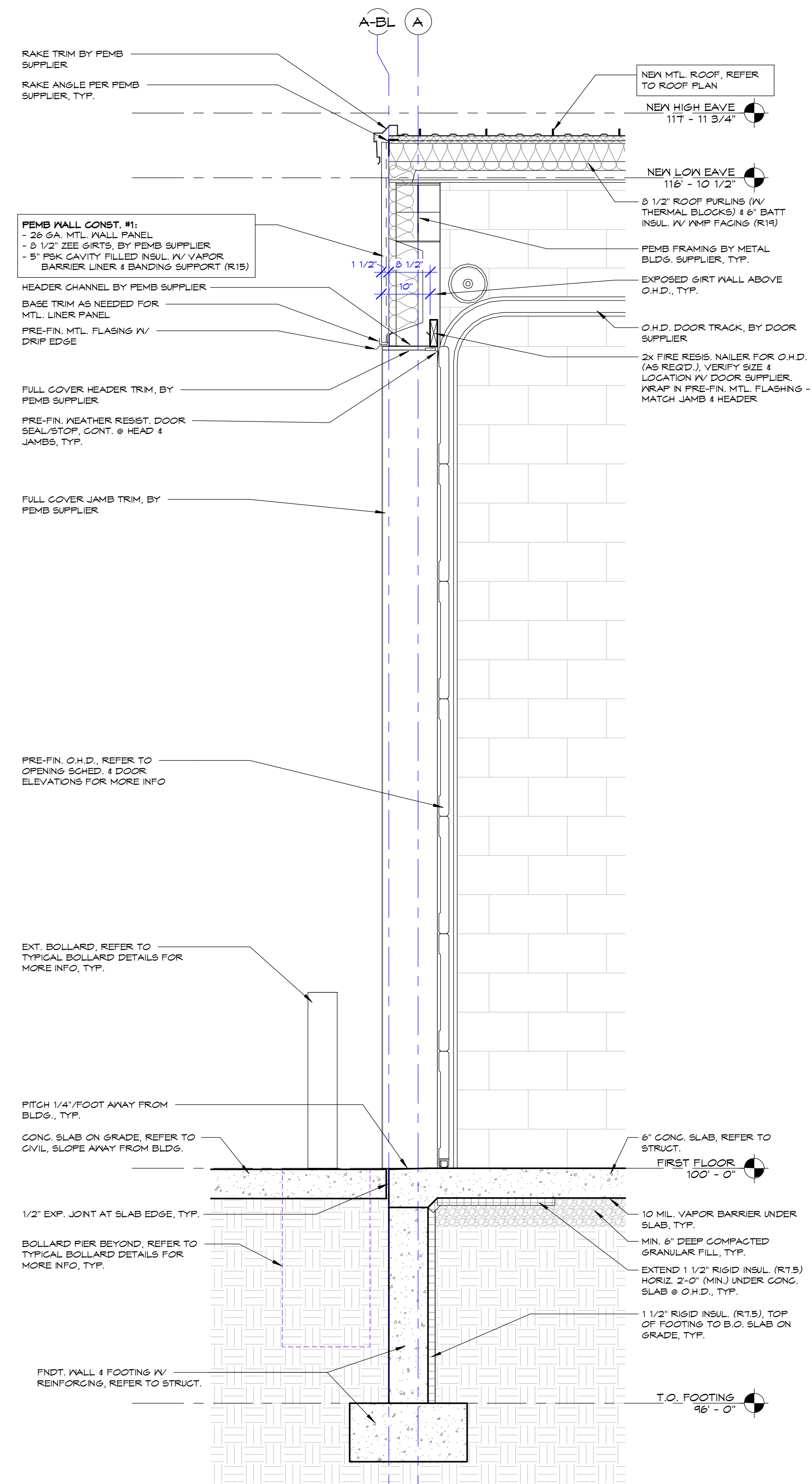
SHEET  
**A-6.1**







2 WALL SECT. @ STOOP  
3/4" = 1'-0"



1 WALL SECT. @ O.H.D.  
3/4" = 1'-0"

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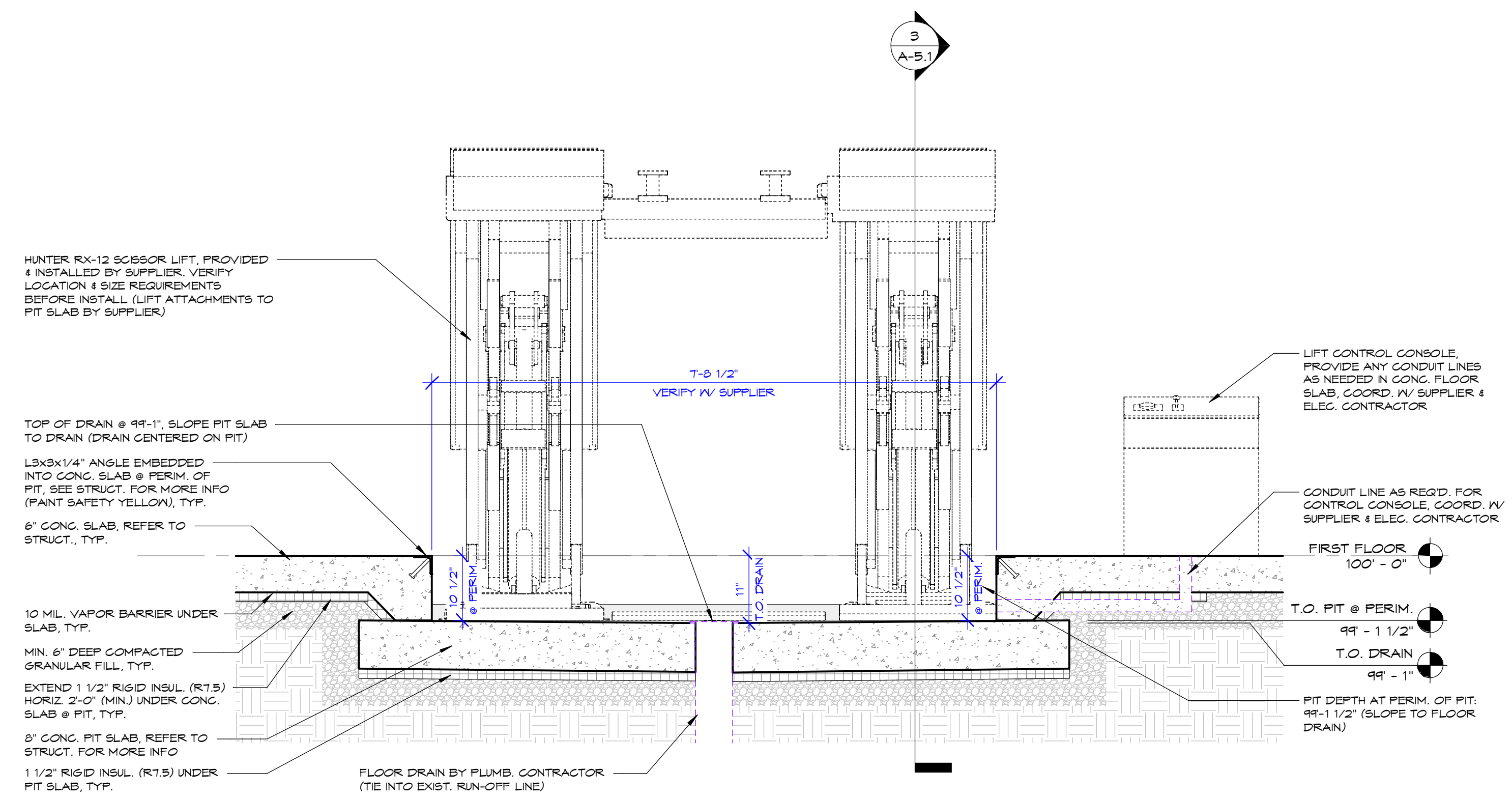
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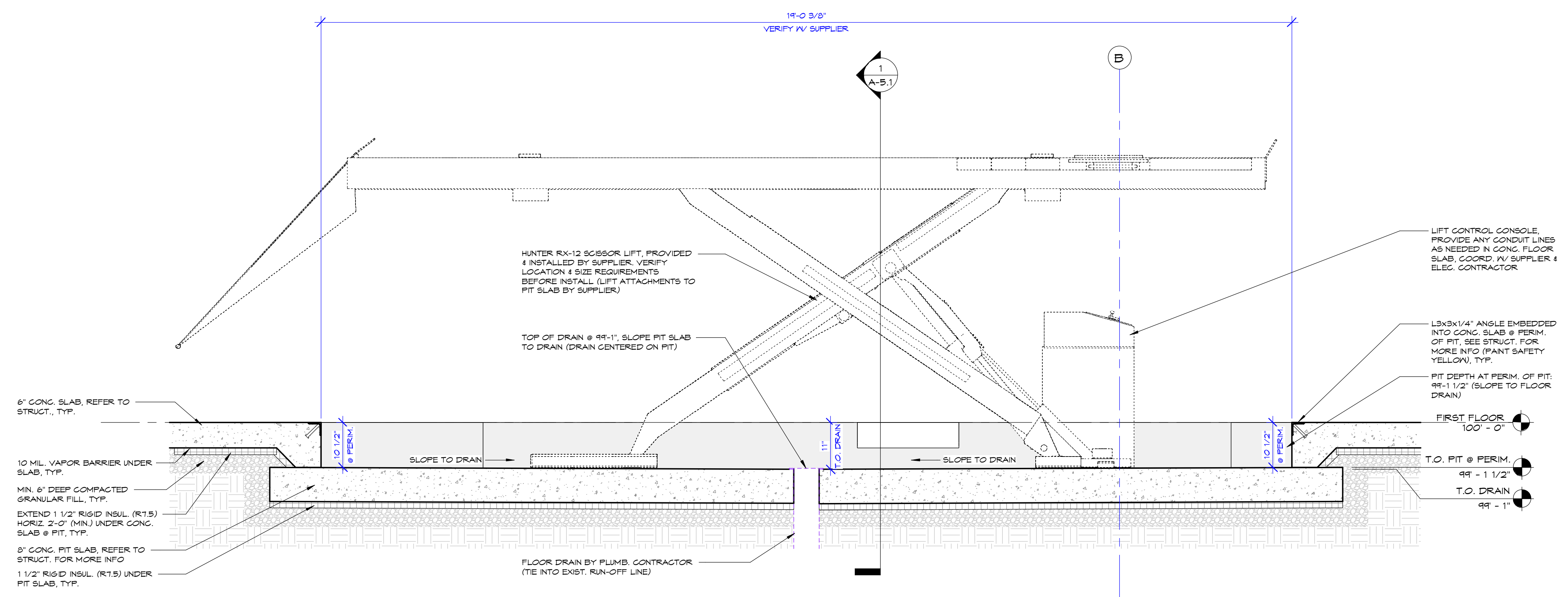
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DATE:	08-19-204
DRAWN BY:	DAH
SCALE:	3/4" = 1'-0"
WALL SECTIONS	
SHEET	
<b>A-6.3</b>	



2 SHORT SECTION @ PIT  
A-6.4 3/4" = 1'-0"



1 LONG SECTION @ PIT  
A-6.4 3/4" = 1'-0"

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SHEET INFORMATION  
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DATE: 08-19-204  
DRAWN BY: DAH  
SCALE: 3/4" = 1'-0"

PIT SECTIONS

SHEET  
**A-6.4**





**REFLECTED CEILING PLAN NOTES:**

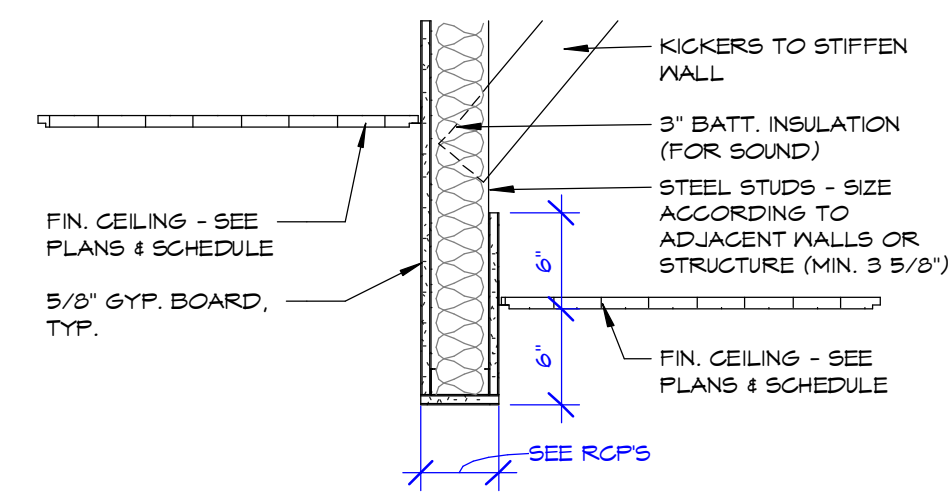
- GRID LAYOUT SHOWN FOR DESIGN INTENT ONLY. CONTRACTOR SHALL VERIFY FINAL LAYOUT WITH FIELD CONDITIONS AND OBTAIN OWNER AND ARCHITECT APPROVAL PRIOR TO INSTALLATION.
- ALL CONSTRUCTION TO CONFORM TO THE 2015 INTERNATIONAL BUILDING CODE.
- ALL INTERIOR FINISHES TO COMPLY WITH STATE/ LOCAL CODES AND ORDINANCES.
- COORDINATE FINAL LAYOUT W/ OWNER, ELEG. CONTRACTOR SHALL COORDINATE ANY CODE REQUIREMENTS.
- ALL EXPOSED ELECTRICAL CONDUIT SHALL BE INSTALLED IN A NEAT AND ORDERLY FASHION.
- ALL EXPOSED CONDUIT SHALL BE PAINTED TO MATCH ADJACENT FINISHES.
- ALL CONDUIT SHALL BE BURIED IN WALLS WHERE POSSIBLE.
- LIGHTING AND HVAC SHOWN ON THIS PLAN IS FOR LAYOUT ONLY. REFER TO MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION PLANS FOR MORE INFORMATION.
- SEE ROOM FINISH SCHEDULE FOR CEILING FINISHES.
- PROVIDE HOLD DOWN CLIPS AT SUSPENDED CEILING ASSEMBLIES AT EXTERIOR DOORS AS RECOMMENDED BY CEILING MANUFACTURER.
- REFER TO ELECTRICAL PLANS FOR EXIT LIGHT LOCATIONS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CORRECT PLACEMENT OF ALL EXIT LIGHTS AND MEANS OF EGRESS LIGHTING.
- CONTRACTOR(S) TO COORDINATE FINAL FIXTURE AND EQUIPMENT HEIGHTS TO AVOID INTERFERENCES AND PROVIDE MINIMUM SEPARATION DISTANCE REQUIREMENTS.

**REFLECTED CEILING PLAN LEGEND:**

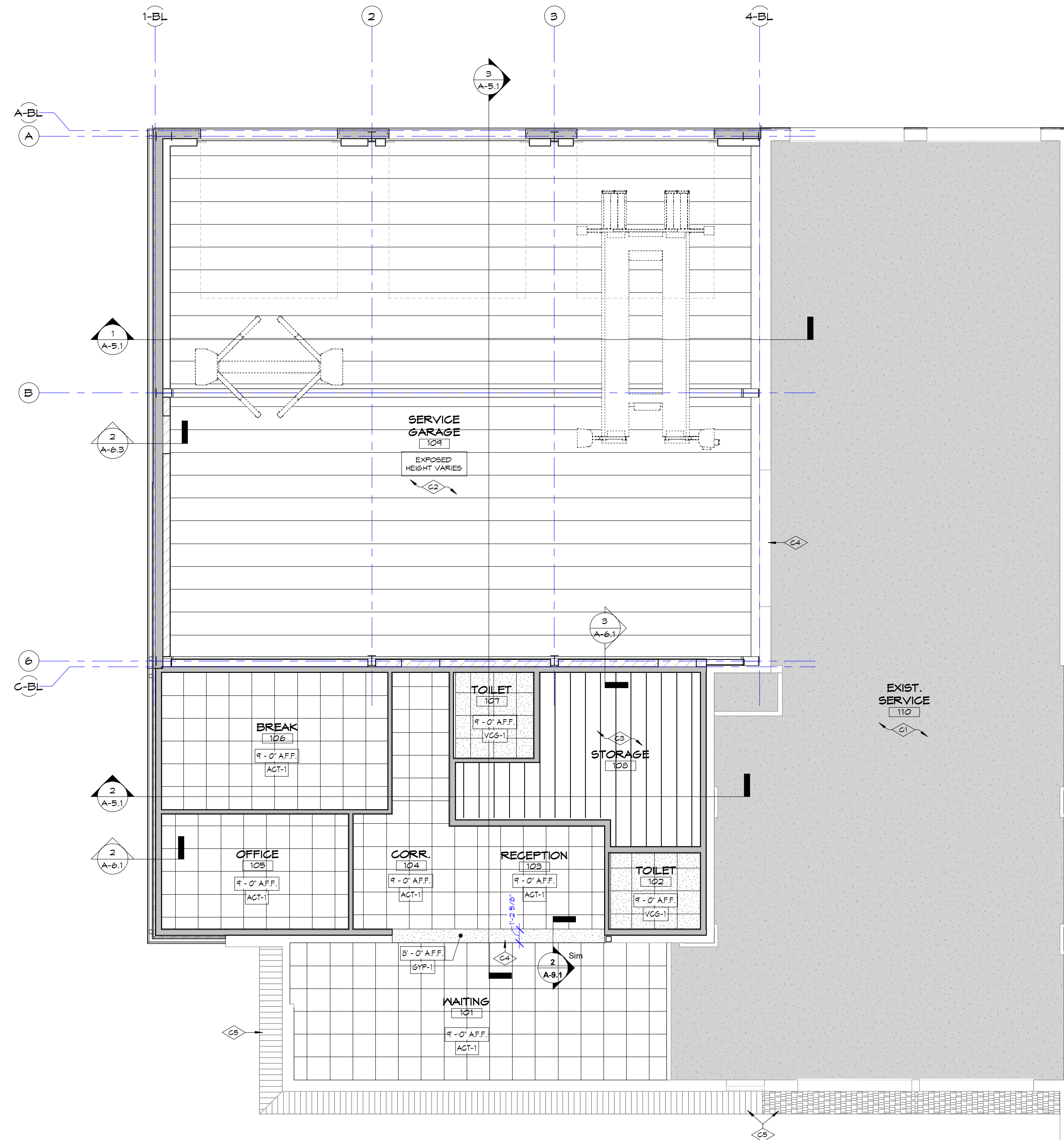
- 2 X 2' CEILING GRID SYSTEM W/ TEGULAR TILES. REFER TO ROOM FINISH SCHEDULE
- DRYWALL - AT BULKHEADS/ INT. SOFFITS REFER TO ROOM FINISH SCHEDULE FOR FINISH
- EXISTING PRECAST PLANK TO REMAIN
- 2 X 2' CEILING GRID SYSTEM W/ VINYL COVERED GYP TILES. REFER TO ROOM FINISH SCHEDULE
- EXISTING SOFFIT TO REMAIN
- EXISTING SHINGLE ROOF TO REMAIN
- EXPOSED METAL BUILDING ROOF SYSTEM

**KEYED CEILING PLAN NOTES**

C1	EXISTING CEILING/ROOF STRUCTURE TO REMAIN IN SERVICE AREA.
C2	NO CEILING, EXPOSED TO NEW METAL BUILDING ROOF STRUCTURE ABOVE.
C3	NO CEILING, EXPOSED TO BOTTOM OF NEW 2X10 ROOF JOISTS.
C4	NEW WALL OPENING IN EXISTING CMU WALL. SEE STRUCTURAL DRAWINGS FOR NEW LINTEL REQUIREMENTS.
C5	EXISTING ROOF SOFFIT ABOVE TO REMAIN.



**2 BULKHEAD DETAIL**  
A-9.1 1" = 1'-0"



**1 FIRST FLOOR REFLECTED CEILING PLAN**  
A-9.1 3/16" = 1'-0"

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PROJECT INFORMATION:  
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TWO RIVERS, WISCONSIN

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SHEET INFORMATION	
A.C.E. JOB NO.	08-19-204
DATE:	DAH
DRAWN BY:	As indicated
SCALE:	

REFLECTED CEILING PLAN  
SHEET  
**A-9.1**

GENERAL NOTES:

- 1. ALL MATERIALS, CONSTRUCTION, AND DETAILS SHALL CONFORM WITH THE FOLLOWING: PLANS AND SPECIFICATIONS CODE AS SPECIFIED IN DESIGN DATA
2. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BE FAMILIAR WITH THE ENTIRE SET OF CONSTRUCTION DOCUMENTS INCLUDING BUT NOT LIMITED TO: ARCHITECTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL, RFIs, SUBMITTALS, ETC.) IN ORDER TO PROVIDE ALL CONSTRUCTION AND MATERIALS FOR THIS PROJECT.
3. THE CONTRACTOR SHALL REFER TO OTHER DRAWINGS CONTAINED IN THE CONSTRUCTION DOCUMENTS FOR ADDITIONAL SPECIFIED MEMBERS, DIMENSIONS, ELEVATIONS, DETAILS, OPENINGS, INSERTS, SLEEVES, DEPRESSIONS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS, REQUIRED TO CONSTRUCT THIS PROJECT.
4. DETAILS SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PORTIONS OF THE CONTRACT DOCUMENTS UNLESS NOTED OTHERWISE.
5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
6. DO NOT SCALE PLANS.
7. IN NO CASE SHALL STRUCTURAL ALTERATIONS OR WORK AFFECTING A STRUCTURAL MEMBER BE MADE UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
8. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, SHORING, UNDERPINNING, TEMPORARY BRACING, ETC. SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK AS REQUIRED TO ENSURE THE SAFETY OF THE BUILDING AND WORKMEN ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE BASE BUILDING PRIMARY STRUCTURAL FRAME IS DESIGNED FOR THE FINAL COMPLETED CONDITION AS INDICATED HEREIN. LOADS IMPOSED ON THE BUILDING STRUCTURE DURING THE COURSE OF CONSTRUCTION SHALL BE CONFIRMED BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER AS PART OF THE MEANS AND METHODS OF CONSTRUCTION. CARE SHALL BE GIVEN BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER TO CONSIDER THE PRESENT STATE OF THE STRUCTURE AT THE TIME OF LOADING, INCLUDING AGE-DEPENDENT STRENGTH OF THE STRUCTURAL ELEMENTS AND THE NATURE OF ALL LOADS IMPOSED.
9. CONSTRUCTION DOCUMENTS SHOW DIMENSIONS AND ELEVATIONS TO SIGNIFICANT WORKING POINTS (COLUMN CENTERLINES, OUTSIDE FACE OF WALLS, TOP OF FRAMING MEMBERS, ETC.) MATERIAL SUPPLIERS AND DESIGNERS ARE RESPONSIBLE FOR ALL OTHER INFORMATION IN ORDER TO DETAIL/FABRICATE THEIR WORK. CONTACT THE ARCHITECT WITH ANY DISCREPANCIES.
10. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER PLANS, THE CONTRACTOR SHALL BRING THE DISCREPANCY TO THE ARCHITECT'S ATTENTION IMMEDIATELY, IN WRITING.
11. NO PROVISIONS HAVE BEEN MADE IN THE DESIGN OF THIS STRUCTURE FOR FUTURE EXPANSION, UNLESS SPECIFICALLY NOTED ON PLAN.
12. ALL EXISTING STRUCTURES, INCLUDING EXISTING FOUNDATION SYSTEMS AND UNDERGROUND ELEMENTS, SHALL BE COMPLETELY REMOVED. EXISTING SUBSURFACE ELEMENTS MAY REMAIN IF APPROVED BY THE GEOTECHNICAL ENGINEER IN CONSULTATION WITH THE STRUCTURAL ENGINEER AND THE EXISTING MATERIALS ARE PREPARED AS DIRECTED BY THE GEOTECHNICAL ENGINEER TO ACHIEVE THE PERFORMANCE CHARACTERISTICS INDICATED IN THE GEOTECHNICAL REPORT.

FOUNDATIONS AND EARTHWORK:

- 1. REFER TO DESIGN DATA FOR SOIL CONDITION ASSUMPTIONS AND DESIGN VALUES.
2. THE CONTRACTOR AND THE OWNER'S TESTING AGENT SHALL CONFIRM INSTALLATION AND CONSTRUCTION OF FOUNDATIONS IS COMPLETED IN CONFORMANCE WITH THE SOIL CONDITION ASSUMPTIONS AND DESIGN VALUES.
3. CENTER PIERS AND FOUNDATIONS UNDER COLUMN / WALL CENTERLINES UNLESS NOTED OTHERWISE.
4. BACKFILL SIMULTANEOUSLY ON BOTH SIDE OF FOUNDATION AND STEM WALLS.
5. EARTH RETENTION AND UNDERPINNING SYSTEMS, TEMPORARY OR PERMANENT, SHALL BE PROVIDED BY THE CONTRACTOR AND THE CONTRACTOR'S ENGINEER AS AN ELEMENT OF THE MEANS AND METHODS OF CONSTRUCTION.
6. SUBGRADES SHALL BE PREPARED AS REQUIRED TO ACHIEVE THE DESIGN VALUES INDICATED ON THESE CONSTRUCTION DOCUMENTS. TOP OF FOOTING ELEVATIONS SHOWN ON THESE CONSTRUCTION DOCUMENTS REPRESENT MINIMUM FOOTING DEPTHS FOR FROST PROTECTION. THE CONTRACTOR SHALL ENSURE FOUNDATION AND SLAB-ON-GROUND SYSTEMS ARE FOUNDED ON COMPETENT MATERIAL TO ACHIEVE THE DESIGN VALUES INDICATED ON THESE CONSTRUCTION DOCUMENTS. UNDERCUTTING OR OTHER ADDITIONAL EXCAVATION OR SUBGRADE PREPARATIONS MAY BE REQUIRED BELOW BOTTOM OF FOOTING ELEVATIONS TO EXTEND TO COMPETENT MATERIALS IF UNSUITABLE MATERIALS ARE PRESENT AT SPECIFIED BOTTOM OF FOOTING ELEVATION.
7. ALL EXTERIOR FOUNDATIONS SHALL BE CAST AT LEAST FROST DEPTH BELOW ADJACENT FINISH EXTERIOR GRADE. FOOTINGS SHALL BE CAST AT LEAST MINIMUM BEARING DEPTH BELOW ADJACENT FINAL GRADE OR FINISHED FLOOR ELEVATION. REFER TO SOIL DESIGN VALUES.
8. IF CONTAMINATED SOILS ARE FOUND ON SITE, CONTRACTOR OR OWNER SHALL CONSULT WITH A GEOTECHNICAL ENGINEER FOR REQUIRED REMEDIATION.
9. ENGINEERED FILL MATERIALS OR LEAN CONCRETE SHALL BE PROVIDED AND INSTALLED PER THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS.
10. WHERE NEW FOOTINGS ABUT EXISTING FOOTINGS, STEP OR THICKEN THE NEW FOOTING AS REQUIRED TO HAVE NEW BOTTOM OF FOOTING ELEVATION MATCH EXISTING BOTTOM OF FOOTING ELEVATION. CONTRACTOR SHALL FIELD VERIFY EXISTING BOTTOM OF FOOTING ELEVATION.
11. FOUNDATIONS SHALL NOT BE INSTALLED ON FROZEN SUBGRADE.

CAST IN PLACE REINFORCED CONCRETE:

- 1. CONCRETE WORK SHALL CONFORM TO REFERENCED EDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION".
2. CONTRACTOR SHALL ELECTRONICALLY SUBMIT STEEL REBAR SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT.
3. REFER TO REINFORCEMENT DEVELOPMENT AND LAP SPLICE SCHEDULE FOR LAP SPLICES (Ld) AND DEVELOPMENT LENGTH (Ld) IN REINFORCING STEEL.
4. ALL LAPS IN REINFORCING STEEL SHALL BE CLASS "B" LAP SPLICES UNLESS OTHERWISE NOTED. AT CONSTRUCTION JOINTS, CONTINUOUS BARS SHALL BE LAP SPICED WITH A CLASS "B" LAP. ALL OTHER BARS EXTENDING THRU THE JOINT SHALL BE FULLY DEVELOPED (Ld OR Ldh AS ILLUSTRATED OR NOTED) EACH SIDE OF JOINT, UNO.
5. ALL HOOKS IN REINFORCING STEEL SHALL BE STANDARD HOOKS, UNO.
6. PROVIDE THE FOLLOWING CLEAR COVER DISTANCES FOR REINFORCEMENT IN CONCRETE UNLESS NOTED OTHERWISE:
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
CONCRETE EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 18 BARS 2" NO. 5 BAR AND SMALLER 1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: WALLS, JOISTS, NO. 11 BAR AND SMALLER BEAMS AND COLUMNS 1 1/2"
7. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE NOT PERMITTED IN ANY CONCRETE MIX.
8. CONTRACTOR SHALL USE SMOOTH FORMS FOR EXPOSED CONCRETE SURFACES. ANY CONCRETE SURFACE REPAIRS SHALL BE PERFORMED BY THE CONTRACTOR AS REQUIRED. REPAIR AND PATCH DEFECTIVE AREAS WITH PROPRIETARY PATCHING COMPOUND IMMEDIATELY AFTER REMOVAL OF FORMS.
9. PROVIDE A 3/4" CHAMFER ON EXPOSED CORNERS OF CONCRETE UNLESS NOTED OTHERWISE. TOP SURFACE OF WALLS SHALL BE FINISHED SMOOTH, UNLESS NOTED OTHERWISE.
10. CONTRACTOR SHALL PROVIDE SUITABLE WIRE SPACERS, CHAIRS, TIES, ETC FOR SUPPORTING REINFORCING STEEL IN THE PROPER POSITION WHILE PLACING CONCRETE.

CAST IN PLACE REINFORCED CONCRETE (CONT.):

- 13. PROVIDE 1/2" EXPANSION JOINT MATERIAL AT INTERIOR LOCATIONS WHERE SLABS ABUT WALLS, COLUMNS, AND OTHER VERTICAL SURFACES UNLESS NOTED OTHERWISE.
14. TIME BETWEEN CONCRETE BATCHING AND PLACEMENT SHALL BE IN ACCORDANCE WITH ASTM C94.
15. ADDITION OF JOBSITE WATER TO CONCRETE SHALL BE PER ASTM C94.
16. ALL CONCRETE SLABS SHALL BE CURED PER ACI 308.1 RECOMMENDATIONS.
17. CONTROL JOINTS SHALL BE PLACED IN CONVENTIONAL SLAB ON GROUND WITHIN 24 HOURS OF INITIAL POUR. REFER TO PLAN NOTES FOR ADDITIONAL INFO.
18. OWNER SHALL HIRE A MATERIALS TESTING LABORATORY TO CAST AND TEST CONCRETE CYLINDERS. ALL TESTING SHALL BE IN ACCORDANCE WITH ACI 318. RESULTS OF CYLINDER TESTS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER. CONCRETE TEST REPORTS SHALL STATE THE FOLLOWING INFORMATION:
A. LOCATION ON PROJECT WHERE THE CONCRETE IS USED
B. 7 DAY COMPRESSIVE STRENGTH
C. 28 DAY COMPRESSIVE STRENGTH
D. AIR CONTENT
E. SLUMP
F. AMOUNT OF WATER ADDED ON JOB SITE
G. MIX USED
19. CONCRETE TEST REPORTS SHALL DIRECTLY STATE WHETHER OR NOT THE TEST RESULT COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.
20. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY IRREGULARITIES OR DEFECTS IN CONCRETE SLABS (CRACKS, BUMPS, FLOOR CURLING, ETC.) BEFORE ANY FLOOR FINISHES ARE APPLIED.
21. CONFORM TO ACI 117 FOR CONCRETE TOLERANCES.
22. CONFORM TO ACI 306.1 FOR COLD WEATHER CONCRETE PLACEMENT.
23. CONFORM TO ACI 305.1 FOR HOT WEATHER CONCRETE PLACEMENT.
24. WELDING OF REINFORCING STEEL SHALL NOT BE PERMITTED FOR NONWELDABLE REBAR NOR WITHOUT THE CONSENT OF THE STRUCTURAL ENGINEER.
25. DOWELS FOR SUCCESSIVE WORK SHALL BE SECURELY FASTENED IN CORRECT POSITION BEFORE PLACING CONCRETE. THE STICKING OF DOWELS AFTER PLACING CONCRETE SHALL NOT BE PERMITTED.

POST-INSTALLED ANCHORS TO CONCRETE AND MASONRY:

- 1. POST INSTALLED ANCHORS SHALL BE: EXPANSION, ADHESIVE, OR SCREW ANCHORS AS SPECIFIED, UNLESS NOTED OTHERWISE.
2. EXPANSION ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
A. FOR CONCRETE:
a. SIMPSON STRONG-BOLT 2
B. FOR GROUDED FILLED CONCRETE MASONRY:
a. SIMPSON STRONG-BOLT 2
3. ADHESIVE ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
A. FOR CONCRETE:
a. SIMPSON SET-3G EPOXY ADHESIVE ANCHOR SYSTEM WITH THREADED ROD OR REBAR WHERE SPECIFIED.
b. SIMPSON ET-3G EPOXY ADHESIVE ANCHOR SYSTEM WITH THREADED ROD OR REBAR WHERE SPECIFIED.
B. SOLID GROUDED CONCRETE MASONRY:
a. SIMPSON SET-3G EPOXY ADHESIVE ANCHOR SYSTEM WITH THREADED ROD OR REBAR WHERE SPECIFIED.
b. SIMPSON ET-3G EPOXY ADHESIVE ANCHOR SYSTEM WITH THREADED ROD OR REBAR WHERE SPECIFIED.
C. HOLLOW OR MULTI-WYTHE MASONRY:
a. SIMPSON SET-3G EPOXY ADHESIVE ANCHOR SYSTEM WITH THREADED ROD WITH SCREEN TUBES.
b. SIMPSON ET-3G EPOXY ADHESIVE ANCHOR SYSTEM WITH THREADED ROD WITH SCREEN TUBES.
4. SCREW ANCHORS (SEE NOTES BELOW FOR SUBSTITUTIONS):
A. FOR CONCRETE:
a. SIMPSON TITEN HD
B. SOLID GROUDED CONCRETE MASONRY:
a. SIMPSON TITEN HD
5. WHEN INSTALLING POST INSTALLED ANCHORS:
A. THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND CURRENT ICC-ES REPORT SHALL BE FOLLOWED.
B. DO NOT DAMAGE EXISTING REINFORCING, POST TENSIONED CABLES OR OTHER EMBEDDED ITEMS.
C. WHEN INSTALLING IN CONCRETE:
a. THE MINIMUM CONCRETE DESIGN COMPRESSIVE STRENGTH SHALL MATCH THE COMPRESSIVE STRENGTHS NOTED IN THE CONCRETE NOTES SECTION.
b. FOR POST INSTALLED ADHESIVE ANCHORS, THE CONCRETE SHALL HAVE A MINIMUM AGE OF 21 DAYS AT THE TIME OF INSTALLATION. ANCHORS INSTALLED IN CONCRETE LESS THAN 21 DAYS OLD SHALL BE TESTED IN ACCORDANCE WITH ACI 355.4 TO VERIFY PERFORMANCE.
c. FOR POST INSTALLED ADHESIVE ANCHORS, THE CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE AT LEAST 50-DEGREES FAHRENHEIT.
D. ADHESIVE USED IN AN ADHESIVE ANCHOR SYSTEM SHALL BE STORED AT THE SERVICE TEMPERATURE RANGE RECOMMENDED BY THE MANUFACTURER.
E. ANCHORS TO BE INSTALLED IN ADHESIVE SHALL BE CLEAN, OIL FREE AND FREE OF RUST, PAINT OR OTHER COATINGS.
F. ADHESIVE ANCHORS SHALL BE SECURELY PLACED TO PREVENT DISPLACEMENT OR DISTURBANCE WHILE THE ADHESIVE CURES. IF AN ANCHOR IS DISPLACED OR DISTURBED BEFORE A FULL ADHESIVE CURE IT SHALL BE CONSIDERED DAMAGED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
G. UNLESS NOTED OTHERWISE, ANCHORS SHALL BE INSTALLED PERPENDICULAR TO THE SUPPORTING SURFACE.
H. INSTALL ANCHORS TO ACCOMMODATE THE STANDARD HOLE SIZE IN THE SUPPORTED STEEL MEMBER. THE HOLE DIAMETER THROUGH THE SUPPORTED STEEL MEMBER SHALL BE 1/16" LARGER THAN THE ANCHOR UNLESS NOTED OTHERWISE. USE PLATE WASHERS WITH A STANDARD SIZE HOLE WELDED TO STEEL MEMBERS WHERE OVERSIZED HOLES MUST BE USED THROUGH THE STEEL MEMBER, UNO.
I. HOLES SHALL BE DRILLED AND INSTALLED PER THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AS OUTLINED IN THE ICC-ES REPORT. WHERE APPLICABLE, INSTALLATION SHALL ALSO FOLLOW PROPER CLEANING PROCEDURE AS INDICATED IN THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTION AS OUTLINED IN THE ICC-ES REPORT. HOLES SHALL BE DRILLED WITH A ROTARY IMPACT HAMMER DRILL OR ROCK DRILL. DO NOT CORE DRILL HOLES.
6. ALL PERSONNEL INSTALLING ANCHORS SHALL BE TRAINED AND CERTIFIED BY THE ANCHORING SYSTEM MANUFACTURER. CONTRACTOR SHALL SUBMIT VALID CERTIFICATION FROM THE MANUFACTURER ON ALL PERSONNEL. ALL PERSONNEL INSTALLING ADHESIVE ANCHORS IN A HORIZONTAL, OVERHEAD OR UPWARDLY INCLINED CONDITION SHALL BE TRAINED AND CERTIFIED BY THE ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM FOR SUCH APPLICATIONS.
7. POST INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM STRUCTURAL ENGINEER OF RECORD PRIOR TO USING POST INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST IN PLACE ANCHORS. ONLY USE SPECIFIC TYPE OF ANCHOR (EXPANSION, ADHESIVE, SCREW) WHERE INDICATED. DO NOT SUBSTITUTE ANCHOR TYPES WITHOUT WRITTEN APPROVAL FROM SEOR.
8. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED ABOVE SHALL BE SUBMITTED TO THE ENGINEER WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED (PER THE DELEGATED DESIGN NOTES) SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES CODE REPORTS SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE. THE PROPOSED SUBSTITUTION(S) SHALL MEET THE MOST RECENTLY PUBLISHED ACI 355.2 OR ACI 355.4.

CONCRETE MASONRY UNIT (CMU):

- 1. MASONRY CONSTRUCTION TO CONFORM TO ACI 530/530.1 BUILDING CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES).
2. ONLY LOAD BEARING MASONRY IS SHOWN ON THE STRUCTURAL PLANS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NON-LOAD BEARING MASONRY. REFER TO SCHEDULES AND DETAILS FOR NON-LOAD BEARING MASONRY INFORMATION.
3. CONTRACTOR SHALL ELECTRONICALLY SUBMIT STEEL REBAR SHOP DRAWINGS WITH ELEVATIONS OF REINFORCED WALLS FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT.
4. ALL MASONRY WALLS SHALL BE CONSTRUCTED IN A RUNNING BOND PATTERN AS DESCRIBED BY ACI 530 UNLESS NOTED OTHERWISE ON THE CONSTRUCTION DOCUMENTS.
5. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL VERTICAL CONTROL JOINTS IN EXTERIOR FACADE.
6. FOR LOAD BEARING WALLS, PROVIDE CONTROL JOINTS AS INDICATED ON PLAN. FOR ALL LOAD BEARING WALL CONTROL JOINTS NOT SPECIFIED AND AT ALL NON-LOAD BEARING WALLS, PROVIDE VERTICAL WALL CONTROL JOINTS IN MASONRY WALLS AS FOLLOWS:
A. 10'-0" MAXIMUM FROM CORNERS OF WALLS
B. 24'-0" o/c MAXIMUM
C. AT CHANGES IN WALL HEIGHT AND THICKNESS
D. AT WALLS ABUTTING COLUMNS
E. DO NOT PROVIDE CONTROL JOINTS IN ELEVATOR AND STAIR SHAFT WALLS.
F. DO NOT PROVIDE CONTROL JOINTS NEXT TO OPENINGS UNLESS NOTED OTHERWISE.
7. PROVIDE (1) VERTICAL BAR AT CORNERS AND ON EACH SIDE OF CONTROL JOINTS. MATCH SIZE OF SPECIFIED REINFORCEMENT. PROVIDE #5 IF NOT SPECIFIED.
8. LAP VERTICAL WALL REINFORCEMENT PER SCHEDULE.
9. LAP HORIZONTAL WALL REINFORCING PER SCHEDULE. STAGGER BOND BEAM LAP LOCATIONS MINIMUM 5'-0".
10. HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND INTERSECTIONS SHALL BE LAPPED PER TYPICAL DETAILS.
11. PROVIDE STANDARD (W1.7) HORIZONTAL JOINT REINFORCING AT 16" o/c VERTICALLY (8" o/c IN PARAPET WALLS) UNLESS NOTED OTHERWISE. REINFORCING TO BE HOT-DIPPED GALVANIZED IN EXTERIOR WALLS AND MILL-GALVANIZED FOR INTERIOR WALLS. JOINT REINFORCING SHALL BE LADDER TYPE CONFORMING TO ASTM A951, WITH PREFABRICATED CORNER AND TEE UNITS AT CORNERS AND INTERSECTIONS. LAP JOINT REINFORCING 8" MINIMUM.
12. FACE SHELLS AND WEBS SHALL BE FULL-BEDDED IN ALL COURSES OF PIERS, AND THE STARTING COURSE OF ALL WALLS.
13. ALL VERTICAL MASONRY WALL REINFORCEMENT SHALL RUN CONTINUOUS THROUGH BOND BEAMS AND EXTEND FULL HEIGHT OF THE WALL. GROUT CORES SOLID AT ALL VERTICAL REINFORCING.
14. COURSE AGGREGATE IN MASONRY GROUT SHALL BE PEA GRAVEL.
15. DO NOT PLACE GROUT UNTIL ENTIRE HEIGHT OF MASONRY TO BE GROUTED HAS ATTAINED ENOUGH STRENGTH TO RESIST GROUT PRESSURE. COMPLY WITH REQUIREMENTS IN TMS 602/ACI 530.1/ASCE 6 FOR CLEANOUTS AND FOR GROUT PLACEMENT, INCLUDING MINIMUM GROUT SPACE AND MAXIMUM POUR HEIGHT.
16. GALVANIZE ALL STEEL OUTSIDE OF BUILDING VAPOR BARRIER INCLUDING THE EXTERIOR LINTELS AND VENEER SUPPORT ANGLES AND ASSOCIATED ANCHORS, UNLESS NOTED OTHERWISE. WHERE ARCH DRAWINGS CALL OUT PAINTED LINTELS, COORDINATE PREP AND CLEAN LINTEL FOR PAINTING AFTER GALVANIZING WITH ARCHITECT AND PAINTING CONTRACTOR.
17. ALL PARTIAL HEIGHT BLOCKS LESS THAN 4" HIGH SHALL BE GROUTED SOLID IN LOAD BEARING WALLS.
18. SOLID OR SOLID-GROUTED CMU SHALL BE PROVIDED IN COURSES IMMEDIATELY ABOVE AND BELOW ANY CHANGES IN WYTHE THICKNESS.
19. SOLID GROUT ALL MASONRY BELOW GRADE.
20. CONTRACTOR SHALL GROUT MASONRY SOLID AT ALL POST-INSTALLED ANCHOR (EXPANSION, EPOXY, DRILLED) LOCATIONS. GROUT ON ALL SIDES OF EACH ANCHOR AT LEAST 4" OR THE SPECIFIED ANCHOR EMBEDMENT, WHICH EVER IS GREATER.
21. PROVIDE 8" HIGH BOND BEAM w/ (2) #5 x CONT AT TOP OF WALLS AND AT FLOOR LINES FOR MULTI-STORY WALLS. REFER TO TYPICAL DETAILS FOR TOP AND BOTTOM OF WALL DETAILS.
22. AT BEAM BEARING LOCATIONS, GROUT CMU SOLID A MINIMUM OF 16" WIDE x 3 COURSES DEEP UNLESS NOTED OTHERWISE.
23. MASONRY FIREWALL CONSTRUCTION ASSUMES MASONRY BLOCKS COMPRISED OF LIMESTONE.
24. ALL CMU BLOCK TO BE NORMAL WEIGHT (135 PCF) UNLESS NOTED OTHERWISE.
25. PROVIDE A MINIMUM OF 1/2" CLEAR BETWEEN INTERIOR BLOCK FACE SHELL AND FACE OF REINFORCING BAR. PROVIDE THE FOLLOWING CLEAR COVER DISTANCES FOR REINFORCING BARS AND TIES, UNLESS NOTED OTHERWISE:
MASONRY NOT EXPOSED TO EARTH OR WEATHER: 1 1/2"
MASONRY EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 9 BARS 2" NO. 5 BAR AND SMALLER 1 1/2"

STRUCTURAL STEEL:

- 1. DESIGN, FABRICATION, AND ERECTION SHALL CONFORM TO AISI (AMERICAN INSTITUTE OF STEEL CONSTRUCTION) "STEEL CONSTRUCTION MANUAL," EDITION AS SPECIFIED BY AISI CODE.
2. REFER TO STRUCTURAL STEEL CONNECTION NOTES ON SMT FOR INFORMATION ON STRUCTURAL STEEL CONNECTIONS.
3. STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO WEATHER OR CORROSIIVE ENVIRONMENTS SHALL BE GALVANIZED OR COATED PER THE REQUIREMENTS OF AISI 360.
4. WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS HOLDING CURRENT AWS CERTIFICATES IN THE TYPES OF WELDING SPECIFIED ON THE CONSTRUCTION DOCUMENTS.
A. USE PREQUALIFIED WELDED JOINTS IN ACCORDANCE WITH AISI AND AWS D1.1. NON-PREQUALIFIED JOINTS SHALL BE QUALIFIED PRIOR TO FABRICATION.
5. PROVIDE 3/16" CAP PLATE AT THE ENDS OF ALL EXPOSED TUBE AND PIPE MEMBERS, UNLESS NOTED OTHERWISE.
6. PROVIDE STIFFENER PLATES ON BOTH SIDES OF BEAM WEBS AT ALL CONCENTRATED LOADS ABOVE AND BELOW A BEAM. UNLESS NOTED OTHERWISE, FRAME THE LARGEST BEAM OVER COLUMNS AT BEAM TO BEAM INTERSECTIONS.
7. SPLICES SHALL BE ALLOWED ONLY AT LOCATIONS INDICATED ON THE STRUCTURAL DRAWINGS, UNLESS APPROVED BY THE STRUCTURAL ENGINEER. UNLESS NOTED OTHERWISE, FRAME THE LARGEST BEAM OVER COLUMNS AT BEAM TO BEAM INTERSECTIONS.
8. CONTRACTOR SHALL ELECTRONICALLY SUBMIT STEEL SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS BEFORE SUBMITTING TO THE ARCHITECT.
9. THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM. CONTRACTOR SHALL DETERMINE, FURNISH AND INSTALL ANY TEMPORARY BRACING OR GUYS REQUIRED TO ERECT STEEL MEMBERS. TEMPORARY BRACING SHALL BE LEFT IN PLACE UNTIL THE PERMANENT STRUCTURE IS IN PLACE AND SECURE.
10. STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
11. ANY HOLES, CUTS, OR COPING FIELD CUT INTO STEEL MUST BE VERIFIED WITH THE STRUCTURAL ENGINEER PRIOR TO WORK. CONTRACTOR SHALL COORDINATE ALL HOLES REQUIRED BY OTHERS WITH THE STRUCTURAL ENGINEER.
12. THE STEEL SUPPLIER SHALL COORDINATE THEIR WORK WITH OTHER DELEGATED DESIGN COMPONENTS (i.e. STEEL JOISTS, PRECAST CONCRETE, STEEL STAIR COMPONENTS, ETC.).
13. ALL BEAMS TO BE PLACED WITH POSITIVE CAMBER (INCLUDING NATURAL BEAM CAMBER) UPWARD. STRUCTURAL ENGINEER RECOMMENDS CONTRACTOR PERFORM A PRE-POUR SURVEY OF THE FRAMING TO ENSURE CAMBERS ARE WITHIN TOLERANCE. COORDINATE ALL INFORMATION PRIOR TO CONCRETE POUR WITH STRUCTURAL ENGINEER.

STRUCTURAL STEEL CONNECTION NOTES:

- 1. STEEL DETAILING AND CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF AISI 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" AND AISI 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS EDITION AS SPECIFIED BY CODE. LOAD RESISTANCE FACTORED DESIGN.
2. BEAM AND GIRDER CONNECTIONS SHALL BE DETAILED AS NOTED ON PLANS AND DETAILS.
3. BOLTS SHALL BE 3/4" DIAMETER, UNLESS NOTED OTHERWISE. PROVIDE BOLT DIAMETERS IN 1/4" INCREMENTS AND PROVIDE ALL BOLTS OF A SINGLE DIAMETER AT THE SAME MATERIAL GRADE.
4. SUBSTITUTION REQUESTS FOR CONNECTIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER SHOWING THAT THE SUBSTITUTED CONNECTION WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN PROCEDURE REQUIRED BY THE BUILDING CODE.

WOOD FRAMING:

- 1. DESIGN, FABRICATION, AND CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITION UNDER THE APPLICABLE CODE OF "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", AMERICAN WOOD COUNCIL.
2. DESIGN, FABRICATION, AND CONSTRUCTION OF ALL PLYWOOD FRAMING SHALL CONFORM TO THE CURRENT EDITION UNDER THE APPLICABLE CODE OF "PANEL DESIGN SPECIFICATIONS", AMERICAN PLYWOOD ASSOCIATION.
3. WOOD SHEATHING SHALL CONFORM TO THE CURRENT EDITIONS OF EITHER OF THE FOLLOWING STANDARDS, AND BEAR THE "APA - THE ENGINEERED WOOD ASSOCIATION" GRADE STAMP:
A. PS-1, "STRUCTURAL PLYWOOD" FOR SOFTWOOD PLYWOOD
B. PS-2, "PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL-USE PANELS" FOR OSB PANELS
4. WOOD SHEATHING SHALL BE ATTACHED TO WOOD FRAMING WITH THE LONG DIMENSION OF THE SHEATHING LAP PERPENDICULAR TO THE SUPPORTS. STAGGER ALL JOINTS UNLESS NOTED OTHERWISE.
5. WOOD SHEATHING PANEL EDGES SHALL BEAR ON THE FRAMING SUPPORT MEMBERS AND BUTT ALONG THEIR CENTER LINES. NAILS SHALL BE PLACED NOT LESS THAN 3/8" IN FROM THE PANEL EDGE.
6. WOOD MILL PLATES, WOOD SHEATHING, AND OTHER WOOD MEMBERS DIRECTLY EXPOSED TO MOISTURE OR IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED. WHERE WOOD MEMBERS ARE REQUIRED TO BE FIRE-RETARDANT TREATED AND ARE DIRECTLY EXPOSED TO MOISTURE OR IN DIRECT CONTACT WITH CONCRETE OR MASONRY, MEMBERS SHALL BE TREATED WITH AN EXTERIOR RATED FIRE-RETARDANT CHEMICAL PROCESS.
7. MAXIMUM MOISTURE CONTENT IN ANY WOOD MEMBER SHALL NOT EXCEED 19%.
8. 2x WOOD JOISTS SHALL HAVE 1x3 SPF NO.2 CROSS BRIDGING AT 8'-0" o/c MAXIMUM.
9. DO NOT EMBED WOOD MEMBERS IN CONCRETE.
10. FASTENERS (WOOD-TO-WOOD, STEEL-TO-WOOD CONNECTIONS):
A. BOLTS SHALL CONFORM TO ASTM A307, UNLESS NOTED OTHERWISE
B. LAG SCREWS SHALL CONFORM TO ASTM A307, UNLESS NOTED OTHERWISE
C. USE STEEL WASHERS BETWEEN HEAD OF BOLT OR LAG SCREW AND WOOD.
D. USE STEEL WASHERS BETWEEN NUT AND WOOD.
E. ALL FASTENERS ATTACHING PRESERVATIVE TREATED WOOD MEMBERS TO CONCRETE OR MASONRY SHALL BE HOT-DIPPED GALVANIZED OR STAINLESS STEEL
F. ALL NAILS SPECIFIED ARE TO BE COMMON NAILS. REFER TO GUN NAIL CONVERSION TABLE FOR GUN NAIL EQUIVALENTS.
G. INSTALL ALL HANGERS OR OTHER MANUFACTURED CLIPS, ETC WITH THE MANUFACTURER'S SPECIFIED FASTENERS, U.N.O.
H. ALL EXTERIOR FASTENERS, OR OTHER FASTENERS EXPOSED TO WET OR HIGH-HUMIDITY CONDITIONS SHALL BE GALVANIZED OR HAVE OTHER APPROVED EXTERIOR-RATED PROTECTION.
I. ALL HANGERS OR OTHER MANUFACTURED CLIPS, ETC IN EXTERIOR CONDITIONS OR OTHERWISE EXPOSED TO WET OR HIGH-HUMIDITY CONDITIONS SHALL BE GALVANIZED OR HAVE OTHER APPROVED EXTERIOR-RATED PROTECTION.
11. MAKE NO SUBSTITUTIONS OF ANY PRODUCTS SPECIFIED ON ANY FRAMING PLANS WITHOUT THE DIRECT WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER AND ARCHITECT.
12. TEMPORARY BRACING SHALL BE PROVIDED AND REMAIN IN PLACE UNTIL THE STRUCTURE IS COMPLETELY STABILIZED, TO RESIST BUCKLING OF LOAD BEARING STUDS. USE A CONTINUOUS 2x FRAMING MEMBER ATTACHED TO THE STUD WALL AT MID-HEIGHT. USE TEMPORARY X-BRACING TO RESIST LATERAL WIND AND SEISMIC LOADS. PROVIDE ANY OTHER TEMPORARY BRACING DEEMED NECESSARY DURING CONSTRUCTION. BRACING MAY BE REMOVED ONCE THE SHEATHING IS APPLIED TO AT LEAST ONE SIDE OF THE STUDS. TEMPORARY BRACING IS THE RESPONSIBILITY OF THE WOOD FRAMER.
13. ARCHITECT AND CONTRACTOR SHALL DETAIL AND CONSTRUCT BUILDING FINISHES TO ACCOMMODATE AN EXPECTED BUILDING SHRINKAGE OF APPROXIMATELY 3/16" TO 3/8" PER FLOOR OF WOOD CONSTRUCTION. PROPER CARE SHALL BE TAKEN TO PROTECT STORED AND INSTALLED LUMBER FROM THE ELEMENTS. DO NOT ALLOW LUMBER TO REST IN STANDING WATER.

EXISTING CONSTRUCTION / CONDITIONS:

- 1. ALL EXISTING FRAMING SHOWN ON THESE DRAWINGS IS BASED ON AVAILABLE DOCUMENTATION AND FIELD OBSERVATION TO DATE. CONTRACTOR SHALL FIELD VERIFY ALL SIZES, DIMENSIONS, ELEVATIONS, AND CONFIGURATIONS OF EXISTING STRUCTURAL ELEMENTS (COLUMNS, BEAMS, WALLS, ETC.) AS NECESSARY TO PROPERLY INSTALL ALL NEW STRUCTURAL ELEMENTS AS SHOWN. CONTRACTOR SHALL NOTIFY SEOR OF DISCREPANCIES AND COORDINATE DIFFERENCES BETWEEN FIELD CONDITIONS AND STRUCTURAL DRAWINGS PRIOR TO PROCEEDING WITH WORK, AND PROCUREMENT/FABRICATION OF MATERIALS.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ANY CONFLICTS WITH CONSTRUCTION DOCUMENTS.
3. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND CONSTRUCTION SEQUENCE IN ORDER TO ENSURE THE SAFETY OF THE BUILDING AND WORKERS DURING CONSTRUCTION (MEANS AND METHODS OF CONSTRUCTION). THIS INCLUDES, BUT IS NOT LIMITED TO, SHORING, UNDERPINNING, TEMPORARY BRACING, ETC. CONTRACTOR SHALL DESIGN AND PROVIDE ALL SHORING REQUIRED TO SUPPORT EXISTING CONSTRUCTION AND NEW CONSTRUCTION AS REQUIRED TO BUILD THIS PROJECT.

METAL BUILDING:

- 1. THE ENTIRE DESIGN OF THE METAL BUILDING SUPERSTRUCTURE SHALL BE THE RESPONSIBILITY OF THE METAL BUILDING SUPPLIER. SHOP DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE STAMPED BY THE PROFESSIONAL ENGINEER IN RESPONSIBLE CHARGE, FOR THE STATE IN WHICH THE PROJECT IS LOCATED.
2. THE CONTRACTOR SHALL COORDINATE WITH THE METAL BUILDING SUPPLIER ANCHOR BOLT SIZES, TYPE, AND LOCATIONS.
3. METAL BUILDING SHOP DRAWINGS SHALL CONTAIN THE FOLLOWING INFORMATION:
A. THE NAME, ADDRESS, AND PHONE NUMBER OF THE SUPPLIER
B. ALL DESIGN LOADS
C. FRAMING PLANS SPECIFYING ALL MEMBER SIZES AND LOCATIONS
D. ANCHOR BOLT SIZES, LENGTHS, AND ELEVATIONS
E. ALL COLUMN FRAME VERTICAL AND HORIZONTAL REACTIONS TRANSMITTED TO THE FOUNDATION
4. CONTRACTOR SHALL REVIEW AND COORDINATE WITH THE METAL BUILDING SUPPLIER ALL BUILDING DIMENSIONS AND ELEVATIONS FOR THE METAL BUILDING TO ENSURE THAT THE METAL BUILDING STRUCTURE WILL SUFFICIENTLY BEAR ON THE FOUNDATION PRIOR TO THE METAL BUILDING FABRICATION.

Table with columns: REV. BY, DATE, REVISION DESCRIPTION, NO.

ACE BUILDING SERVICE logo and contact information: 3810 SOUTH 26TH STREET | MANTOWOC, WISCONSIN 54230 | PHONE 920-682-6105 | WWW.ACEBUILDINGSERVICE.COM

Civil & Structural logo with text: A DIVISION OF ACE BUILDING SERVICE

SMT logo with text: SUPERVISING PROFESSIONAL

PROJECT INFORMATION: SAUVE'S AUTO TWO RIVERS, WISCONSIN

THIS PLAN AND IDEAS EXPRESSED HERE-IN ARE THE PROPERTY OF A.C.E. BUILDING SERVICE, INC. THESE PLANS SHALL NOT BE SHARED BY VISUAL MEANS OR REPRODUCED WITHOUT THE CONSENT OF A.C.E. BUILDING SERVICE, INC.

SHEET INFORMATION: A.C.E. JOB NO. DATE: 08-19-2024 DRAWN BY: PE SCALE: 12" = 1'-0"

GENERAL NOTES

SHEET: S-0.0

PERCE ENGINEERS, INC. logo and address: 181 N. Broadway Ave Milwaukee, WI 53202 414.278.6060 www.perceengineers.com PE Project: 240407

**MATERIAL STRENGTHS:**  
UNLESS NOTED OTHERWISE, THE FOLLOWING MATERIALS SHALL BE USED. REFER TO MATERIAL NOTES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

TYPE OF CONSTRUCTION	CONCRETE MATERIALS SCHEDULE							
	COMPRESSIVE STRENGTH (psi) (ASTM C39)	EQUIL. DENSITY (pcf)	EXPOSURE CATEGORIES				MAXIMUM w/cm	AIR CONTENT
			F	S	W	C		
FOOTINGS	3,000	145					--	--
FROST WALLS AND PIERS	4,000	145	F1				0.55	5%
INTERIOR WALLS AND PIERS	4,000	145					--	--
EXTERIOR WALLS AND PIERS	4,500	145	F2				0.45	6%
INTERIOR SLAB ON GROUND	4,000	145					--	--
LEAN CONCRETE	1,000	145					--	--

- CONCRETE MATERIALS SCHEDULE NOTES:**
- CORROSION EXPOSURE SHALL BE F0, S0, W0, AND C0 UNLESS NOTED OTHERWISE IN THE EXPOSURE CATEGORIES COLUMN.
  - MAXIMUM AGGREGATE SIZE FOR ALL MIXES TO BE 3/4 INCHES. FOOTINGS MAY BE 1 1/2 INCHES.
  - PROVIDE 5% AIR CONTENT AT ALL EXPOSED CONDITIONS NOT EXPLICITLY INDICATED ABOVE. TOLERANCE OF AIR CONTENT AS DELIVERED SHALL BE +/- 1.5%.
  - CONCRETE SUPPLIER AND FINISHER SHALL COORDINATE PROPERTIES OF PROPOSED MIX DESIGN UNDER VARIOUS WEATHER CONDITIONS TO COMPLETE PLACING AND FINISHING OF SLAB PER THE PROJECT REQUIREMENTS AND IN A TIMELY MANNER. APPROVED CHEMICAL ADMIXTURES MAY BE USED TO INCREASE WORKABILITY PROVIDED THE ADMIXTURE-TREATED CONCRETE HAS THE SAME OR LOWER WATER-CEMENT RATIO AND DOES NOT EXHIBIT SEGREGATION POTENTIAL OR EXCESSIVE BLEEDING. IF PROPOSED SLUMP WILL EXCEED 9", PROVIDE DOCUMENTATION OF PAST PERFORMANCE OF MIX DESIGN.
  - FOR CONCRETE FLOOR SLABS AND TOPPING, THE MINIMUM CEMENTITIOUS MATERIAL CONTENT SHALL BE 540 LBS/YD3 UNLESS APPROVED BY ENGINEER OF RECORD.
  - CONCRETE COMPRESSIVE STRENGTH SHALL BE DETERMINED AT 28 DAYS FOR STRENGTH EQUAL TO OR LESS THAN 6000 PSI, AND AT 56 DAYS FOR STRENGTH GREATER THAN 6000 PSI.
  - FOR EXPOSURE CATEGORY F3, MAXIMUM PERCENT OF TOTAL CEMENTITIOUS MATERIALS BY MASS AS FOLLOWS:
    - FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 - 25%
    - SLAG CEMENT CONFORMING TO ASTM C989 - 50%
    - SILICA FUME CONFORMING TO ASTM C1240 - 10%
    - TOTAL OF FLY ASH OR OTHER POZZOLANS AND SILICA FUME - 35%
    - TOTAL OF FLY ASH OR OTHER POZZOLANS, SLAG CEMENT, AND SILICA FUME - 50%
  - FOR EXPOSURE CLASSES S1, S2, AND S3, MINERAL FILLERS DERIVED FROM CARBONATE AGGREGATE ARE PROHIBITED. FOR EXPOSURE CLASSES S2 AND S3, DO NOT USE CEMENTITIOUS MATERIALS OTHER THAN PORTLAND CEMENT IN CONCRETE.
  - CONCRETE SUPPLIER, IN CONCERT WITH THE GENERAL CONTRACTOR, TO PROVIDE CONCRETE MIX SUCH THAT THE MAXIMUM TEMPERATURE WILL NOT EXCEED 138 DEGREES FAHRENHEIT. LIKEWISE, A THERMAL GRADIENT (FROM THE CENTER TO THE EDGE OF THE CONCRETE PLACEMENT) THAT EXCEEDS 35 DEGREES FAHRENHEIT IS NOT PERMITTED.

MACROSYNTHETIC FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE SLABS COMPLYING WITH ASTM C 1116, TYPE III, 1 1/2" TO 2 1/2" LONG

METAL / STEEL:  
UNLESS NOTED OTHERWISE, THE FOLLOWING MATERIALS SHALL BE PROVIDED:

REINFORCING STEEL	
ASTM A615, DEFORMED, TYPICAL	GRADE 60
ASTM A706, DEFORMED, WELDABLE	GRADE 60
STEEL WELDED WIRE REINFORCEMENT, FLAT SHEETS, ASTM A1054	GRADE 60
STRUCTURAL STEEL	
ROLLED WIDE FLANGE SHAPES, ASTM A992	GRADE 50
PLATES AND BARS, TYPICAL, ASTM A572	GRADE 50
STRUCTURAL CONNECTORS	
ANCHOR RODS, ASTM F1554, TYPICAL	GRADE 36
HIGH STRENGTH BOLTS, ASTM F3125, TYPE 1, TYPICAL	GROUP A (120 KSI)
NUTS, ASTM A633	
WASHERS, ASTM F436	
STEEL HEADED STUD ANCHORS, ASTM A108	
RODS, ASTM A36, TYPICAL	GRADE 36
WELDING ELECTRODES	
STRUCTURAL STEEL	E70XX
WELDABLE REINFORCING STEEL	E80XX
STAINLESS STEEL	E75XX

CONCRETE MASONRY:	
ASSEMBLY	f <sub>m</sub> = 2,500 PSI
BLOCK	f <sub>cm</sub> = 3,250 PSI OR GREATER
GROUT	f <sub>c</sub> = 2,500 PSI OR GREATER
PORTLAND CEMENT MORTAR	TYPE "M" MORTAR BELOW GRADE
	TYPE "M" OR "S" ABOVE GRADE

GROUT BELOW BASE PLATES AND BEARING PLATES	
NON-METALLIC, SHRINKAGE RESISTANT	ASTM C107

WOOD FRAMING (UNO ON PLANS / DETAILS):	
DIMENSIONAL LUMBER	
JOISTS / BEAMS / HEADERS	SPRUCE-PINE-FIR (SPF) No. 2 OR BETTER
POSTS / COLUMNS	SPRUCE-PINE-FIR No. 2 OR BETTER
WALL STUDS	SPRUCE-PINE-FIR No. 2 OR BETTER
WALL PLATES	SPRUCE-PINE-FIR No. 2 OR BETTER
PRESERVATIVE TREATED WALL PLATES	PRESERVATIVE TREATED SOUTHERN PINE (SYP) No. 2 OR BETTER
MSR LUMBER	STUDS, POSTS, WALL PLATES, JOISTS, BEAMS, HEADERS
	STRESS CLASS: SOUTHERN PINE 2400F-1.8E
	E = 1,800 KSI, F <sub>b</sub> = 2,400 PSI, F <sub>v</sub> = 190 PSI
	F <sub>c</sub> (PARALLEL) = 1,975 PSI, F <sub>c</sub> (PERPENDICULAR) = 805 PSI
EXTERIOR LUMBER	PRESERVATIVE TREATED SOUTHERN PINE (SYP) No. 2 OR BETTER
FIRE RETARDANT TREATED LUMBER	MINIMUM FRT LUMBER REDUCTION FACTORS
	F <sub>b</sub> = 0.91, F <sub>v</sub> = 0.88, F <sub>c</sub> = 0.95, F <sub>c</sub> (PERPENDICULAR) = 0.95
	F <sub>c</sub> (PARALLEL) = 0.94, E = 0.95, FASTENERS = 0.90

LAMINATED VENEER LUMBER (LVL)	
JOISTS / BEAMS / HEADERS	
	E = 2,000 KSI, F <sub>b</sub> = 2,600 PSI, F <sub>v</sub> = 285 PSI
	F <sub>c</sub> (PARALLEL) = 2,510 PSI, F <sub>c</sub> (PERPENDICULAR) = 750 PSI

**DESIGN DATA:**  
APPLICABLE CODES / STANDARDS:  
WISCONSIN COMMERCIAL BUILDING CODE - 2015 IBC AS MODIFIED BY CHAPTERS SP5 361-366, ADOPTED APRIL 1, 2018  
INTERNATIONAL EXISTING BUILDING CODE - 2015  
ASCE 7-10 MIN DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE/SEI

STRUCTURAL DESIGN STANDARDS (DESIGN SHALL CONFORM TO THE CURRENT EDITION UNDER THE APPLICABLE CODE)  
ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY  
ACI 530/531 BUILDING CODE REQUIREMENTS AND SPECS FOR MASONRY STRUCTURES (AND RELATED COMMENTARIES)  
ANSI/AISC 360 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS  
AWS D1.1/D1.1M STRUCTURAL WELDING CODE - STEEL  
NDS-NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION ASD/LRFD  
NDS-NATIONAL DESIGN SPECIFICATION SUPPLEMENT, DESIGN VALUES FOR WOOD CONSTRUCTION

**BUILDING DESIGN LOADS / CRITERIA:**

RISK CATEGORY	II
DESIGN DEAD LOADS:	
WOOD ROOF	20 PSF

DESIGN LIVE LOADS:	
RETAIL, OFFICE, RESTAURANT, RECREATIONAL	100 PSF
LIGHT STORAGE	125 PSF
PUBLIC GARAGES (PASSENGER VEHICLES)	40 PSF
HEAVY VEHICLE GARAGES (MIN)	50 PSF
INTERIOR PARTITION WALLS (UNIFORMLY DISTRIBUTED WEIGHT)	15 PSF
INTERIOR PARTITION WALLS (HORIZONTAL DESIGN LOADS)	5 PSF

HANDRAIL ASSEMBLIES AND GUARDS:	
200 lb LOAD OR 50 psf LOAD APPLIED IN ANY DIRECTION AT TOP OF HANDRAIL ASSEMBLY OR GUARD AND TO TRANSFER THIS LOAD THROUGH SUPPORTS TO THE STRUCTURE	
ROOF SNOW LOADS AND DESIGN DATA:	
DESIGN ROOF SNOW LOAD	25 PSF (BALANCED SNOW LOAD)
FLAT ROOF SNOW LOAD (P <sub>f</sub> ) = (0.7 * C <sub>e</sub> * C <sub>t</sub> * I <sub>s</sub> * P <sub>g</sub> )	25 PSF
SNOW EXPOSURE (C <sub>e</sub> )	1.0
SNOW LOAD IMPORTANCE FACTOR (I <sub>s</sub> )	1.0
ROOF THERMAL FACTOR (C <sub>t</sub> )	1.0
GROUND SNOW (P <sub>g</sub> )	35 PSF
RAIN ON SNOW SURCHARGE	0.0 PSF
SLOPED ROOF FACTOR (C <sub>s</sub> )	1.0

WIND DESIGN DATA:	
ULTIMATE WIND SPEED (3 SECOND GUST)	115 MPH
NOMINAL WIND SPEED	89.1 MPH
WIND DIRECTIONALITY FACTOR (K <sub>d</sub> )	0.85
MEAN ROOF HEIGHT	18 FT
WIND EXPOSURE CATEGORY	C
WIND EXPOSURE CLASSIFICATION	ENCLOSED
INTERNAL PRESSURE COEFFICIENT	+0.18
BUILDING LENGTH (L)	84.3 FT
LEAST WIDTH (B)	84.3 FT
VELOCITY PRESSURE EXPOSURE COEFFICIENT K <sub>1</sub> (CASE 1)	0.882
VELOCITY PRESSURE EXPOSURE COEFFICIENT K <sub>2</sub> (CASE 2)	0.882
TOPOGRAPHIC FACTOR (K <sub>zt</sub> )	1.0
EDGE STRIP (a)	7.2 FT
EDGE ZONE (2a)	14.4 FT
DESIGN PROCEDURE	C

**ULTIMATE WIND LOADS COMPONENTS & CLADDING:**

ROOF SURFACE PRESSURE			
AREA	10 SF	50 SF	100 SF
NEGATIVE ZONE 1	-30.0 PSF	-28.2 PSF	-27.4 PSF
NEGATIVE ZONE 2	-50.3 PSF	-37.8 PSF	-32.5 PSF
NEGATIVE ZONE 3	-50.3 PSF	-37.8 PSF	-32.5 PSF
POSITIVE ALL ZONES	16.0 PSF	16.0 PSF	16.0 PSF
OVERHANG ZONE 1&2	-43.2 PSF	-41.4 PSF	-40.6 PSF
OVERHANG ZONE 3	-43.2 PSF	-41.4 PSF	-40.6 PSF

WALL SURFACE PRESSURE			
AREA	10 SF	100 SF	500 SF
NEGATIVE ZONE 4	-29.7 PSF	-25.7 PSF	-22.8 PSF
NEGATIVE ZONE 5	-36.6 PSF	-28.5 PSF	-22.8 PSF
POSITIVE ZONE 4&5	27.4 PSF	23.4 PSF	20.6 PSF

PARAPET SURFACE PRESSURE				
CASE	SOLID PARAPET PRESSURE	10 SF	100 SF	500 SF
CASE A: PRESSURE TOWARDS BUILDING	CASE A: INTERIOR ZONE	68.5 PSF	46.7 PSF	43.9 PSF
CASE A: PRESSURE TOWARDS BUILDING	CASE A: CORNER ZONE	68.5 PSF	46.7 PSF	43.9 PSF
CASE B: PRESSURE AWAY FROM BUILDING	CASE B: INTERIOR ZONE	-48.0 PSF	-39.9 PSF	-34.3 PSF
CASE B: PRESSURE AWAY FROM BUILDING	CASE B: CORNER ZONE	-54.8 PSF	-42.7 PSF	-34.3 PSF

**EARTHQUAKE DESIGN DATA:**

SEISMIC IMPORTANCE FACTOR (I <sub>e</sub> )	1.0
MAPPED SPECTRAL ACCELERATIONS AT SHORT PERIODS (S <sub>s</sub> )	0.06
MAPPED SPECTRAL ACCELERATIONS AT (1) SECOND PERIODS (S <sub>1</sub> )	0.04
SITE CLASSIFICATION	D (UNCONFIRMED)
DESIGN SPECTRAL RESPONSE COEFFICIENT AT SHORT PERIODS (S <sub>ds</sub> )	0.61
DESIGN SPECTRAL RESPONSE COEFFICIENT AT (1) SECOND PERIODS (S <sub>d1</sub> )	0.658
SEISMIC DESIGN CATEGORY	A
BASIC SEISMIC-FORCE-RESISTING SYSTEM	STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
DESIGN BASE SHEAR	0.0200 KIPS
SEISMIC RESPONSE COEFFICIENT (C <sub>s</sub> )	0.020
RESPONSE MODIFICATION COEFFICIENT (R)	3.0
ANALYSIS PROCEDURE FOR SEISMIC DESIGN	EQUIVALENT LATERAL-FORCE ANALYSIS

**SOIL DESIGN VALUES:**  
THE DESIGN VALUES BELOW HAVE BEEN USED AS THE BASIS OF THE FOUNDATION DESIGN. THESE VALUES SHALL BE CONFIRMED BY THE FOUNDATION CONTRACTOR AND THE GEOTECHNICAL ENGINEER OF RECORD PRIOR TO CONSTRUCTION. NOTIFY THE SEOR IF THE FINAL DESIGN OR INSTALLED VALUES DIFFER FROM THE VALUES NOTED BELOW.

SOIL UNIT WEIGHT	115 PCF (UNCONFIRMED)
COEFFICIENT OF SLIDING FRICTION	0.30 (UNCONFIRMED)
SUBGRADE MODULUS	150 PCI (UNCONFIRMED)
FROST DEPTH	48" BELOW EXTERIOR FINISH GRADE (UNCONFIRMED)
ALLOWABLE SOIL BEARING PRESSURE	2,000 PSF (UNCONFIRMED)

**DELEGATED DESIGN NOTES:**

- ENGINEERING DESIGN, DETAILING, AND COORDINATION OF DELEGATED DESIGN ITEMS ARE DELEGATED TO THE CONTRACTOR PER THE SPECIFICATIONS AND CRITERIA INDICATED ON THE DRAWINGS. THE PRIMARY BASE BUILDING STRUCTURE HAS BEEN DESIGNED AS INDICATED HEREIN TO ACCEPT THE DELEGATED DESIGN ITEMS. THE CONTRACTOR SHALL COORDINATE THE WORK OF THE DELEGATED DESIGNERS WITH EACH OTHER AND THE PRIMARY BASE BUILDING STRUCTURE. IT IS SUGGESTED THAT DESIGN CRITERIA, LOAD PATHS, AND ATTACHMENT SCHEMES PROPOSED BY THE DELEGATED DESIGNER BE SUBMITTED FOR REVIEW BY THE ARCHITECT FOR COMPATIBILITY OF THE BASE BUILDING DESIGN PRIOR TO FINAL DESIGN AND DETAILING OF THE DELEGATED DESIGN PACKAGE.
- STRUCTURAL SYSTEMS SHALL BE DESIGNED FOR THE DELEGATED DESIGN PERFORMANCE CRITERIA DEFLECTION LIMITS NOTED ON THIS SHEET AND TO LIMIT BUILDING MOVEMENTS TO LESS THAN THE VALUES INDICATED IN THE COORDINATION WITH OTHER TRADES AND BUILDING SYSTEMS NOTES ON S-1.
- DOCUMENTS FOR DELEGATED DESIGN ITEMS SHALL BE STAMPED BY A QUALIFIED, PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE CONTRACTOR SHALL FORWARD THE REVIEWED DOCUMENTS TO THE ARCHITECT AND/OR ENGINEER OF RECORD WITH A NOTATION INDICATING THAT THE DELEGATED DESIGN DOCUMENTS HAVE BEEN REVIEWED AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING.
- DELEGATED DESIGN ITEMS INCLUDE ANY ITEMS NOT EXPLICITLY NOTED ON THE STRUCTURAL DRAWINGS, INCLUDING BUT NOT LIMITED TO:
  - PRIMARY BASE BUILDING STRUCTURAL ELEMENTS**
    - PRE-ENGINEERED METAL BUILDING
    - SHORING AND/OR UNDERPINNING OF EXISTING STRUCTURES
  - OTHER ITEMS SUPPORTED BY PRIMARY STRUCTURE (SECONDARY MEMBERS)**
    - CLADDING SYSTEMS AND COMPONENTS, INCLUDING SUPPLEMENTAL SUPPORT, WHERE REQUIRED
    - FURNITURE, FIXTURES, AND OTHER MISCELLANEOUS ARCHITECTURAL FABRICATIONS
    - SUPPORTS, BRACING, ATTACHMENTS, AND SUBFRAMING FOR SUPPORT OF OTHER TRADES AND BUILDING COMPONENTS. REFER TO MODIFICATIONS FOR COORDINATION WITH OTHER TRADES NOTES.

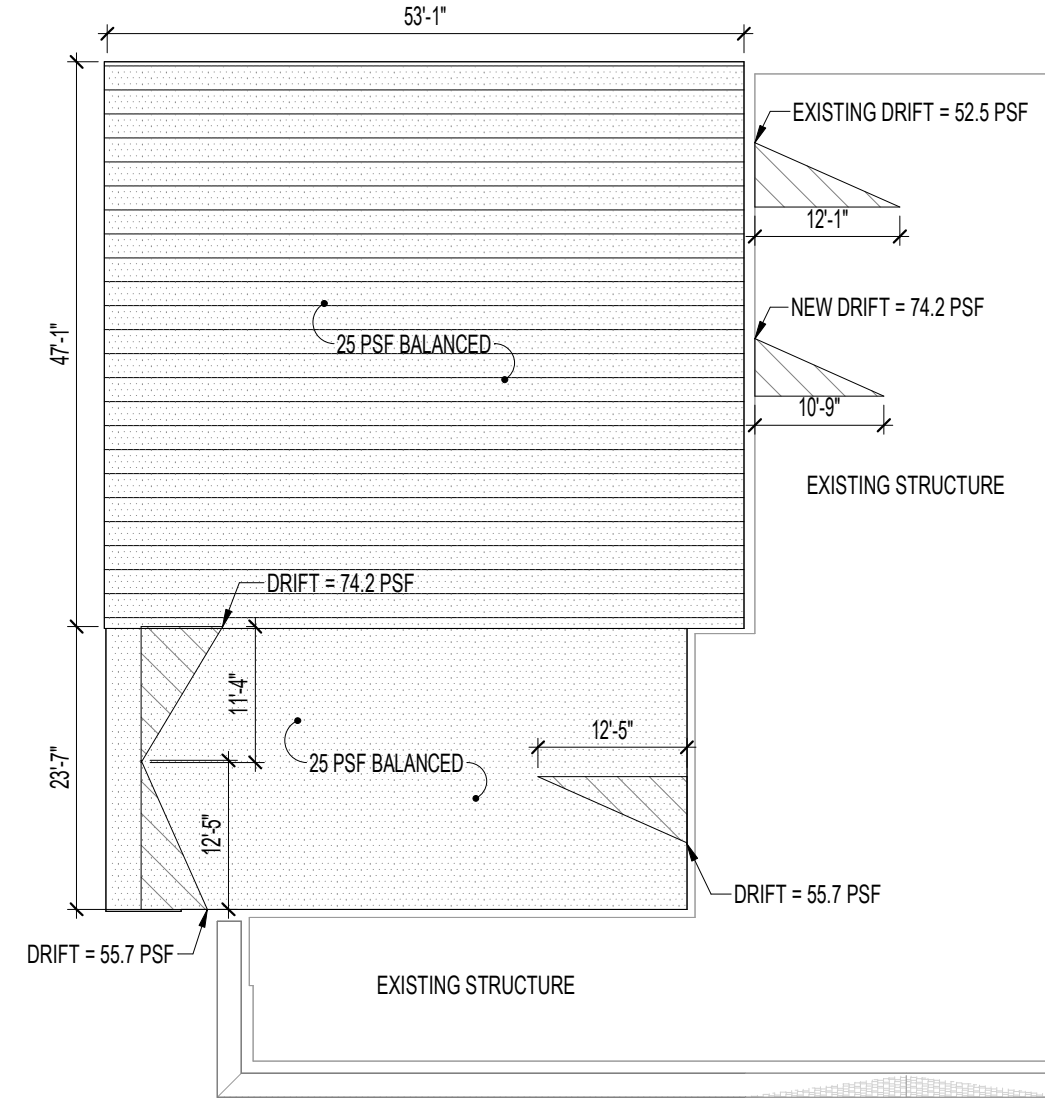
- DELEGATED DESIGN SUBMITTALS PERTAINING TO FOUNDATIONS AND OTHER GEOTECHNICAL ELEMENTS SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER OF RECORD.
- ENGINEERING AND SYSTEMS REQUIRED BY THE CONTRACTOR TO SUPPORT CONSTRUCTION REMAIN THE PREROGATIVE AND RESPONSIBILITY OF THE CONTRACTOR. REFER TO GENERAL NOTES.

**COORDINATION WITH OTHER TRADES:**

- SUPPORT, SUBFRAMING, BRACING, AND ATTACHMENTS TO PRIMARY BASE BUILDING STRUCTURE FOR ALL NONSTRUCTURAL BUILDING COMPONENTS, INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION ELEMENTS SHALL BE DESIGNED AND DETAILED BY THE MANUFACTURER, SUPPLIER, OR CONTRACTOR FURNISHING THOSE COMPONENTS. CONNECTIONS AND SUPPORTED LOADS TO STRUCTURAL MEMBERS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW. RESPONSIBILITY FOR THE PERFORMANCE OF THE SUPPLIED SYSTEM AND ASSOCIATED CONNECTIONS SHALL REMAIN THAT OF THE PARTY FURNISHING THE DESIGN AND DETAILING.
- THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES CONNECTING TO, REQUESTING OPENINGS IN PENETRATIONS THROUGH, OR ITEMS EMBEDDED WITHIN STRUCTURAL ELEMENTS, OR OTHERWISE IMPACTING THE BASE BUILDING STRUCTURE. UPON COMPLETION OF COORDINATION AND DESIGN, FULLY COORDINATED PLANS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION AND INSTALLATION. THIS INCLUDES BUT IS NOT LIMITED TO SLEEVES, CONDUITS, CABLES, PIPES, ELECTRICAL BOXES, CAST-IN ATTACHMENTS, POST-INSTALLED ANCHORS, ETC. REFER TO TYPICAL DETAILS CONTAINED HEREIN FOR REINFORCEMENT REQUIRED TO ACCOMMODATE REQUESTED MODIFICATIONS TO THE PRIMARY BASE BUILDING STRUCTURE. UPON REVIEW, ADDITIONAL OR ALTERNATIVE MODIFICATIONS MAY BE REQUIRED AT THE DISCRETION AND DIRECTION OF THE STRUCTURAL ENGINEERING OF RECORD.
- PENETRATIONS THROUGH, CONNECTIONS TO, AND ITEMS EMBEDDED WITHIN STRUCTURAL MEMBERS SHALL NOT NEGATIVELY IMPACT THE PERFORMANCE OF THE BASE BUILDING STRUCTURE.
- CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES, INCLUDING AS-BUILT CONDITIONS IMPACTING DESIGN AND COORDINATION. ADJACENCIES OF ITEMS PLANNED OR INSTALLED IN OR ON STRUCTURE SHALL BE IDENTIFIED AND CONSIDERED BY EACH TRADE FOR THE IMPACT OF SUCH ADJACENCIES TO THEIR SYSTEMS. VERIFY ALL MECHANICAL EQUIPMENT, WEIGHTS, SIZES, AND LOCATIONS PRIOR TO PREPARING SHOP DRAWINGS AND FABRICATING MATERIALS. COORDINATE ANY REQUIRED REVISIONS TO THE BASE BUILDING STRUCTURE WITH THE STRUCTURAL ENGINEER.
- MISCELLANEOUS ELEMENTS SUCH AS SHELF ANGLES, LINTELS, SUPPORTS FOR CURTAIN WALLS OR MASONRY, AND EDGE ANGLES AT OPENINGS AND PERIMETER CONDITIONS ARE INTENDED TO SUPPORT AND BE COORDINATED WITH MATERIALS FURNISHED BY OTHER TRADES. THESE MATERIALS ARE INTENDED TO BE FIELD ATTACHED TO MEET THE TOLERANCES REQUIRED BY OTHER TRADES, WHICH MAY BE MORE STRINGENT THAN THE TOLERANCES SPECIFIED BY THE RELEVANT CODE OF STANDARD PRACTICE FOR THE SUPPORTING ELEMENTS. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AND COORDINATE THE INSTALLATION OF SUPPORTING ELEMENTS TO COMPLY WITH THE TOLERANCE CRITERIA REQUIRED FOR INSTALLATION OF MATERIALS BY OTHER TRADES.

**6. UNDERGROUND**

- THE INFLUENCE AREA OF A FOOTING OR MAT SHALL BE DEFINED AS THE FRUSTUM OF SOIL LOCATED BELOW THE FOOTING OR MAT HAVING A 2:1 (HORIZONTAL VERTICAL) SLOPE EMANATING FROM THE FOOTING OR MAT EDGE, OR AS DEFINED BY THE GEOTECHNICAL ENGINEER OF RECORD.
  - PIPES, CONDUITS, AND BURIED ITEMS SHALL NOT BE PLACED WITHIN THE INFLUENCE AREA OF ADJACENT FOOTINGS OR MATS.
  - ALL STRUCTURES (eg. TRAP BASINS, GREASE TRAPS, ETC.) SHALL NOT BE INSTALLED WITHIN THE INFLUENCE AREA OF ADJACENT FOOTINGS OR MATS UNLESS THE STRUCTURE IS DESIGNED BY THE MANUFACTURER FOR INCREASED SURCHARGE LOAD APPLIED BY THE ADJACENT FOUNDATION AND HAS BEEN REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD OR THE GEOTECHNICAL ENGINEER OF RECORD.
- 7. MASONRY ELEMENTS**
- CONDUIT AND PIPING MAY BE PLACED THROUGH OR WITHIN HOLLOW CORES BUT SHALL NOT PASS THROUGH OR WITHIN BOND BEAMS, BRG, OR OTHER GROUTED OR REINFORCED MASONRY ELEMENTS.
  - NO ELEMENTS SHALL BE EMBEDDED THROUGH OR WITHIN SOLID OR SOLIDLY GROUTED MASONRY ELEMENTS.
  - ELEMENTS THROUGH OR WITHIN THE MASONRY SHOULD NOT BE ALUMINUM OR BE A MATERIAL THAT COULD RESULT IN DEGRADATION OF THE MASONRY.
  - FOR ADDITIONAL LIMITATIONS, REFER TO THE TMS 402 MASONRY CODE.
- 8. STEEL ELEMENTS**
- ALL PENETRATIONS INDICATED HEREIN SHALL BE CONFIRMED BY THE CONTRACTOR THROUGH COORDINATION WITH THE SUBCONTRACTORS AND DELEGATED DESIGN ENGINEERS. SUBMIT ALL REQUIRED PENETRATIONS FOR REVIEW AND APPROVAL PRIOR TO FINAL COORDINATION OF BUILDING SYSTEMS.
  - FIELD-CUTTING SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD.
- 9. MOVEMENT ACCOMMODATION BY BUILDING COMPONENTS**
- BUILDING COMPONENTS SUPPORTED ON THE BASE BUILDING STRUCTURE, SUCH AS CLADDING SYSTEMS, PARTITIONS WALLS, OPERABLE PARTITIONS, ETC., SHALL BE DESIGNED AND DETAILED TO ACCOMMODATE STRUCTURAL MOVEMENTS.



1 ROOF SNOW LOAD PLAN  
S-0.1

DELEGATED DESIGN PERFORMANCE CRITERIA DEFLECTION LIMITS			
MEMBERS	LIVE	SNOW OR WIND	DEAD + LIVE OR SNOW
<b>ROOF MEMBERS</b>			
SUPPORTING GYPSUM BOARD CEILINGS	L/360	L/360	L/240
SUPPORTING FLEXIBLE CEILINGS	L/360	L/360	L/240
NOT SUPPORTING CEILINGS	L/240	L/240	L/180
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
<b>LINTEL / HEADER / BEAM MEMBERS</b>			
SUPPORTING RIGID MATERIALS (BRICK, MASONRY, ETC.)	L/600	L/600	L/600
SUPPORTING FLEXIBLE MATERIALS	L/360	L/360	L/240
<b>EXTERIOR WALLS (LATERAL DEFLECTION)</b>			
WITH RIGID FINISHES (BRICK, MASONRY, ETC.)	N/A	L/600	N/A
WITH FLEXIBLE FINISHES (EIFS, SIDING, ETC.)	N/A	L/360	N/A

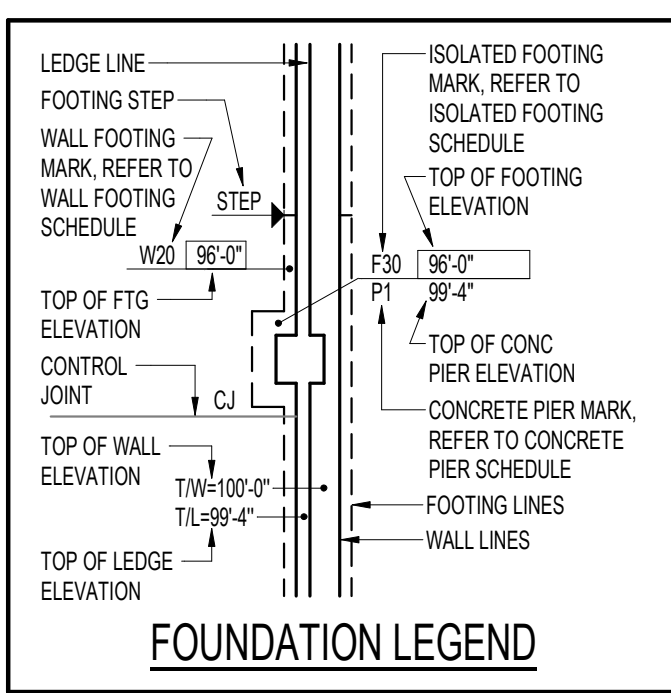
ABBREVIATIONS	
ALT..... ALTERNATE	LLH..... LONG LEG HORIZONTAL
ARCH..... ARCHITECTURAL	LLV..... LONG LEG VERTICAL
BLDG..... BUILDING	LSH..... LONG SIDE HORIZONTAL
BOT..... BOTTOM	LSL..... LONG SIDE VERTICAL
BRG..... BEARING	LST..... LONG SLOTTED
CFMF..... COLD FORMED METAL FRAMING	LtL..... TENSION LAP SPICE
CIP..... CAST IN PLACE	LSV..... LONG SIDE VERTICAL
CL..... CENTERLINE	LVL..... LAMINATED VENEER LUMBER
CLR..... CLEAR	LW..... LONG WAY
CJ..... CONTROL OR CONSTRUCTION JOINT	MAX..... MAXIMUM
CMU..... CONCRETE MASONRY UNIT	MECH..... MECHANICAL
COL..... COLUMN	MIN..... MINIMUM
CONT..... CONTINUOUS	MISC..... MISCELLANEOUS
db..... BAR DIAMETER	NTS..... NOT TO SCALE
DIA..... DIAMETER	o/c..... ON CENTER
DM..... DIMENSION	OFD..... OVERFLOW DRAIN
DL..... DEAD LOAD	OPP..... OPPOSITE
DWG..... DRAWING	PC..... PRECAST CONCRETE
E..... MODULUS OF ELASTICITY	PERP..... PERPENDICULAR
EA..... EACH	PSL..... PARALLEL STRAND LUMBER
EF..... EACH FACE	PT..... POST TENSIONED CONCRETE
EL..... ELEVATION	PT..... PRESERVATIVE TREATED
EOD..... EDGE OF DECK	RD..... ROOF DRAIN
EOS..... EDGE OF SLAB	REINF..... REINFORCEMENT
EQ..... EQUAL	REQD..... REQUIRED
EW..... EACH WAY	RTU..... ROOF TOP UNIT
EX..... EXISTING	SEOR..... STRUCTURAL ENGINEER OF RECORD
EXT..... EXTERIOR	SIM..... SIMILAR
Fb..... BENDING STRENGTH (WOOD)	SOG..... SLAB-ON-GROUND
Fc..... COMPRESSIVE STRENGTH (WOOD)	SPA..... SPACING
Fc..... MINIMUM CONCRETE COMPRESSIVE STRENGTH	SPEC..... SPECIFICATIONS
FD..... FLOOR DRAIN	SSLT..... SHORT SLOTTED
FF..... FINISH FLOOR	STL..... STEEL
FLR..... FLOOR	SW..... SHORT WAY
f <sub>m</sub> ..... MINIMUM MASONRY COMPRESSIVE STRENGTH	T..... TOP OF
FRT..... FIRE RETARDANT-TREATED	T&B..... TOP AND BOTTOM
FTG..... FOOTING	T&G..... TONGUE AND GROOVE
Fv..... SHEAR STRENGTH (WOOD)	TRANS..... TRANSVERSE
Fy..... MINIMUM YIELD STRENGTH	TYP..... TYPICAL
GA..... GAUGE	UNO..... UNLESS NOTED OTHERWISE
GALV..... GALVANIZED	VERT..... VERTICAL
GC..... GENERAL CONTRACTOR	VF..... VERIFY IN FIELD
GT..... GIRDER TRUSS	w/..... WITH
HORIZ..... HORIZONTAL	w/o..... WITHOUT
HVAC..... HEATING, VENTILATION, AIR COND.	WP..... WORKPOINT
HWS..... HEADED WELDED STUD	WT..... WEIGHT
Ld..... DEVELOPMENT LENGTH	WWF..... WELDED WIRE FABRIC
Lh..... HOOKED DEVELOPMENT LENGTH	
LL..... LINE LOAD	

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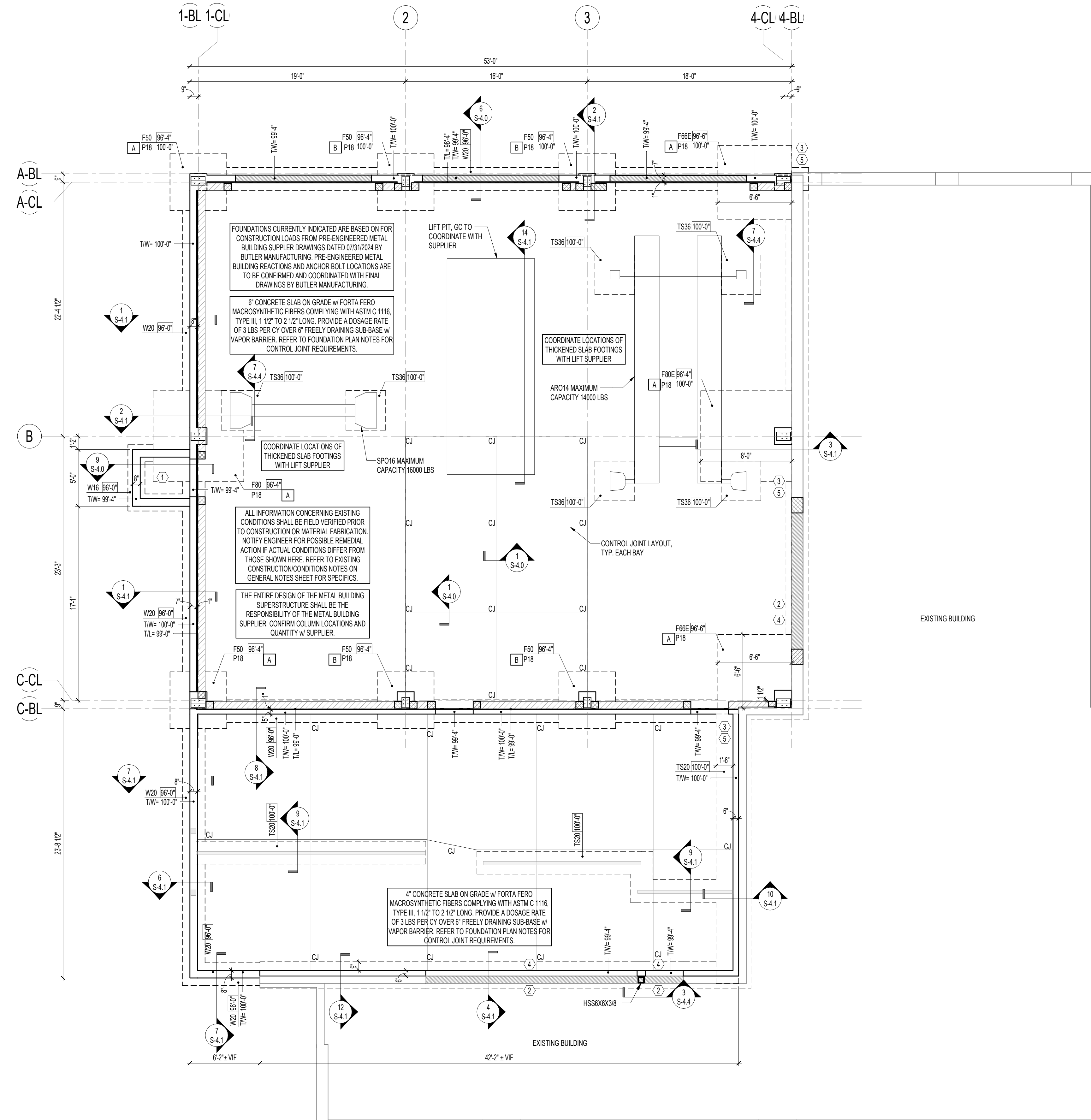
**FOUNDATION PLAN NOTES:**

- PLAN NOTES APPLY TO ALL FOUNDATION PLANS. INDIVIDUAL NOTES DO NOT NECESSARILY APPLY TO ALL SHEETS.
- REFER TO S-0.0 SERIES SHEETS FOR GENERAL NOTES AND SCHEDULES.
  - REFER TO SHEET S-4.0 AND S-4.1 FOR TYPICAL FOUNDATION DETAILS NOT CUT ON PLAN.
  - ELEVATION 100'-0" ON STRUCTURAL DRAWINGS CORRESPONDS TO FF ELEVATION SHOWN ON SITE PLAN. TYPICAL.
  - SLAB ON GROUND CONTROL JOINTS:** PROVIDE SAW CUT CONTROL JOINTS IN CONCRETE SLAB ON GROUND CONSTRUCTION WITHIN 24 HOURS OF INITIAL POUR. CONTROL JOINTS SHALL BE SPACED AT 36 TIMES THE SLAB THICKNESS, UP TO A MAXIMUM SPACING OF 18'-0". THE ASPECT RATIO OF SLAB PANELS SHALL BE A MAXIMUM OF 1.5 TO 1. CONTROL JOINTS SHALL BE PLACED ON COLUMN CENTERLINES, INTERIOR CORNERS, AND FLOOR DISCONTINUITIES (PITS, EQUIPMENT PADS, TRENCHES, DEPRESSED SLABS, ETC.). COORDINATE SLAB CONTROL JOINTS LAYOUT WITH ARCHITECT. SLAB ON GROUND CONSTRUCTION SHALL CONFORM TO ACI 302 "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION". REFER TO TYPICAL DETAILS FOR SLAB ON GROUND CONSTRUCTION.
  - SLAB DEPRESSIONS:** VERIFY ALL SLAB DEPRESSIONS (SIZE, DEPTH, LOCATION) w/ ARCHITECTURAL DRAWINGS.
  - GC TO COORDINATE FOOTING ELEVATIONS w/ ALL UNDERGROUND UTILITY WORK. NOTIFY SEOR OF ANY CONFLICTS.
  - AT ALL INTERIOR AND EXTERIOR WOOD BEARING WALLS, PROVIDE BOTTOM PLATE PER BEARING WALL SCHEDULE w/ 5/8" DIAMETER SIMPSON TITEN HD ANCHORS w/ 18" MINIMUM EMBED, AT 4'-0" o.c. UNLESS NOTED OTHERWISE. REFER TO WOOD SHEAR WALL SCHEDULE FOR PLATE ATTACHMENT AT WALLS DESIGNATED AS SHEAR WALLS ON PLAN.

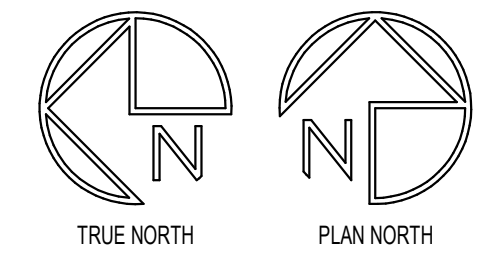


**FOUNDATION PLAN KEYED NOTES:**

- KEYED NOTES APPLY TO ALL FOUNDATION PLANS. ALL NOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS.
- CONCRETE STOOP, REFER TO 9S-4.0.
  - CUT EXISTING FOUNDATION WALL DOWN TO ELEVATION 99'-4" FOR NEW SLAB OVERPOUR.
  - PROVIDE #4 DOWELS x 18" EPOXY INTO EXISTING MASONRY WALL AT 24" o.c. VERTICAL FULL HEIGHT OF NEW CONCRETE FOUNDATION WALL. EMBED 6" MINIMUM INTO EXISTING WALL.
  - PROVIDE #4 DOWELS x 18" FROM NEW SLAB ON GROUND ADHESIVE ANCHORED INTO EXISTING CONCRETE SLAB ON GROUND AT 24" o.c. LOCATE DOWELS IN MID-HEIGHT OF THINNEST SLAB ON GROUND. EMBED DWLS 6" MINIMUM INTO EXISTING SLAB.
  - STEP OR THICKEN FOOTING AS REQUIRED TO HAVE NEW BOTTOM OF FOOTING ELEVATION MATCH EXISTING BOTTOM OF FOOTING ELEVATION. CONTRACTOR SHALL FIELD VERIFY BOTTOM OF EXISTING FOOTING, REFER TO TYPICAL DETAILS.



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



ALL INFORMATION CONCERNING EXISTING CONDITIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION OR MATERIAL FABRICATION. NOTIFY ENGINEER FOR POSSIBLE REMEDIAL ACTION IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN HERE. REFER TO EXISTING CONSTRUCTION/CONDITIONS NOTES ON GENERAL NOTES SHEET FOR SPECIFICS.

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SUPERVISING PROFESSIONAL

PROJECT INFORMATION:  
**SAUVE'S AUTO**  
TWO RIVERS, WISCONSIN

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SHEET INFORMATION

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DATE:	08-19-2024
DRAWN BY:	PE
SCALE:	As indicated

FOUNDATION PLAN

SHEET

**S-1.0**

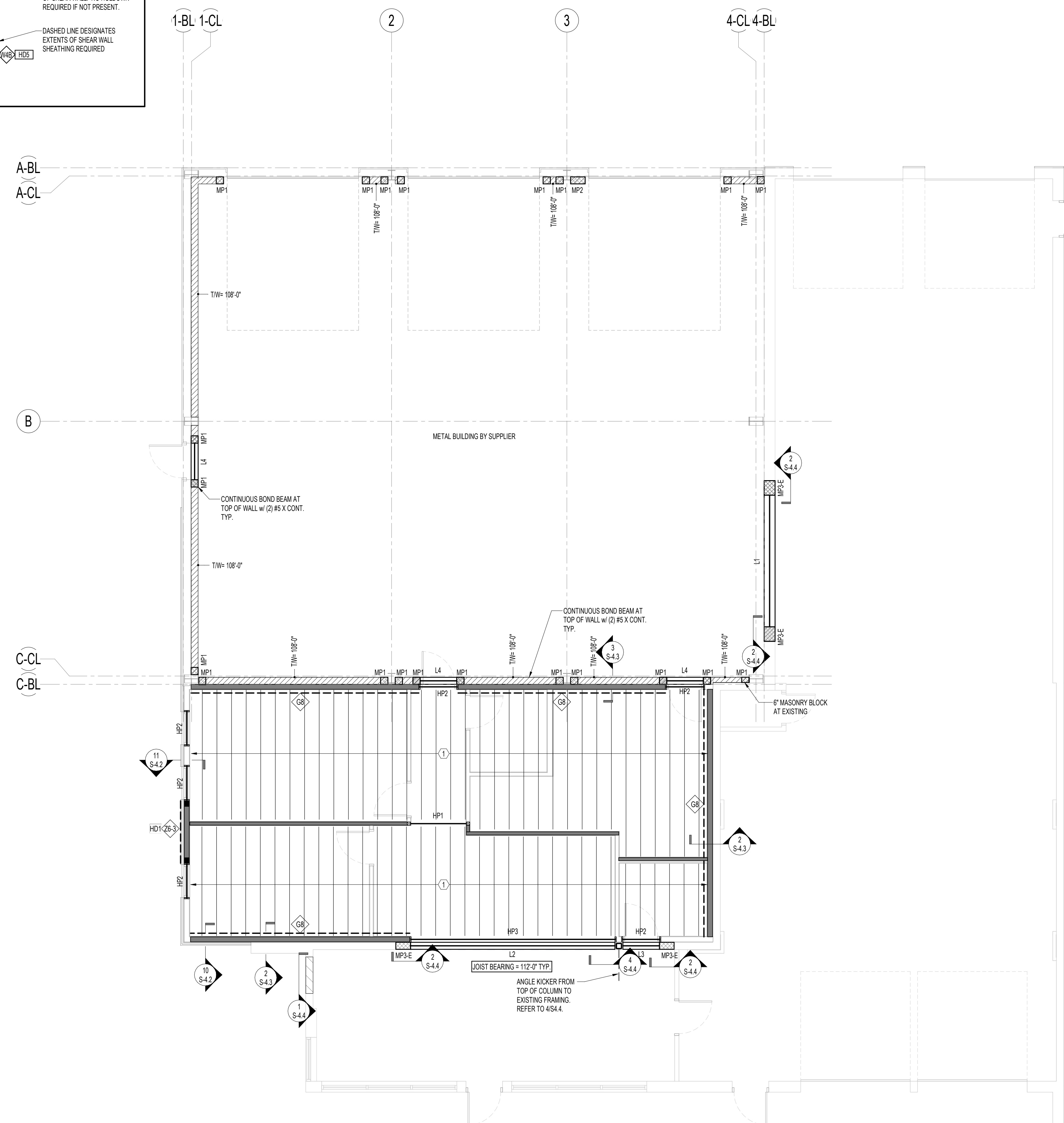
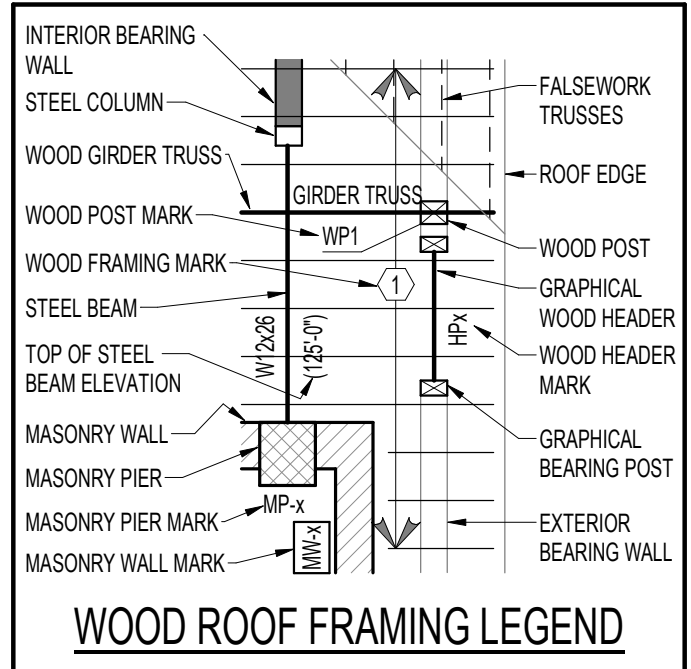
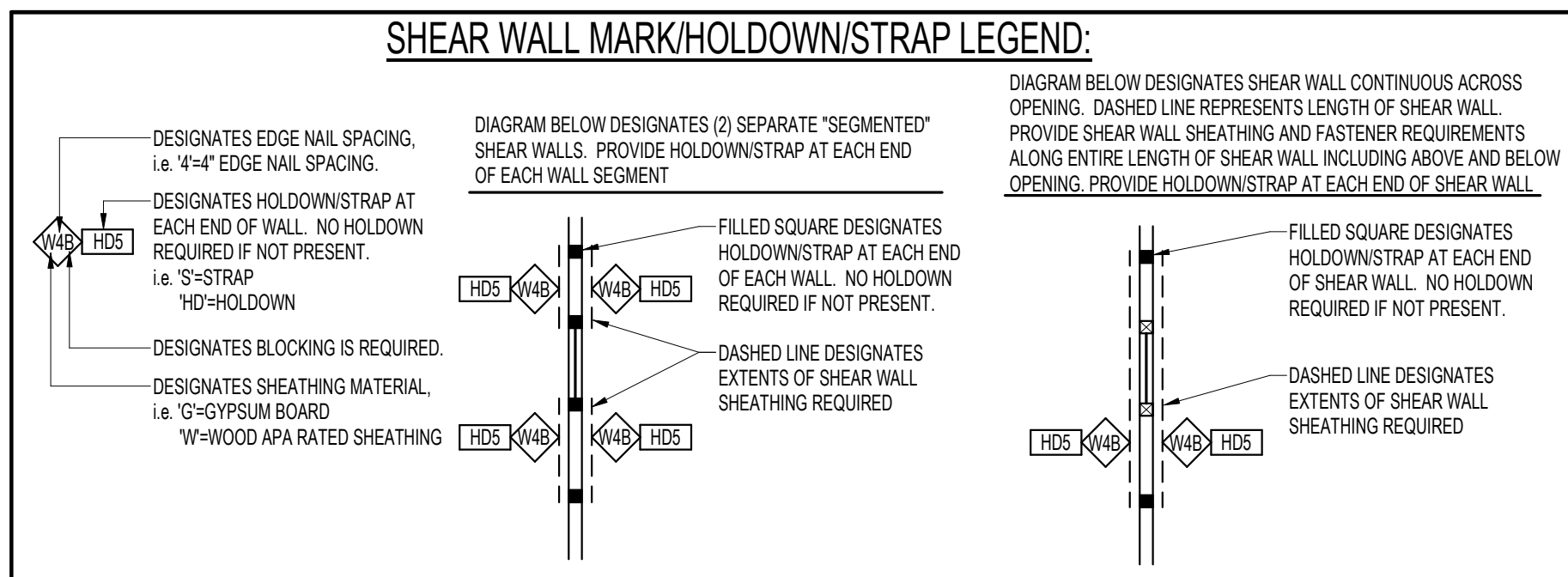
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Milwaukee, WI 53202  
414.278.6060  
www.pierceengineers.com  
PE Project: 240407

**WOOD ROOF FRAMING PLAN NOTES:**

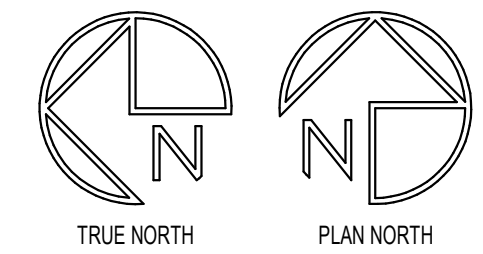
- PLAN NOTES APPLY TO ALL WOOD ROOF FRAMING PLANS. INDIVIDUAL NOTES DO NOT NECESSARILY APPLY TO ALL SHEETS.
- REFER TO S-0.0 SERIES SHEETS FOR GENERAL STRUCTURAL NOTES, INCLUDING COMPONENT DESIGN CRITERIA.
  - REFER TO SHEETS S-4.2 AND S-4.3 FOR WOOD SCHEDULES AND RELATED DETAILS AND TYPICAL WOOD DETAILS, INCLUDING:
    - WOOD BEARING WALL SCHEDULE
    - WOOD HEADER/POST SCHEDULE
    - WOOD SHEAR WALL AND STRAP & HOLD-DOWNS SCHEDULE
    - GUN NAIL CONVERSION SCHEDULE
    - MINIMUM WOOD FASTENING SCHEDULE
    - ALLOWABLE HOLES AND NOTCHES IN STRUCTURAL MEMBERS
  - REFER TO SHEET S-4.3 FOR TYPICAL ROOF SHEATHING DETAIL.
  - REFER TO SHEETS S-4.4 FOR MASONRY SCHEDULES AND RELATED DETAILS, INCLUDING:
    - STEEL LINTEL BEARING DETAIL AND SCHEDULE
  - REFER TO SHEET S-0.1 FOR SNOW LOAD PLAN.
  - ROOF SHEATHING SHALL BE 1/2" APA RATED WOOD ROOF SHEATHING (PL WOOD OR OSB) w/ THE LONG DIMENSION OF THE SHEETS LAID PERPENDICULAR TO THE ROOF TRUSSES. ATTACH SHEATHING TO ROOF TRUSSES w/ 10d NAILS AT 6" o/c SPACING (EDGES/FIELD). MINIMUM DISTANCE FOR NAILS IS 3/8" FROM PANEL EDGE. PROVIDE WOOD SHEATHING CLIPS WHERE SHEATHING EDGES ABUT BETWEEN ROOF TRUSSES. STAGGER ALL ROOF SHEATHING JOINTS. NAILS TO HAVE A MINIMUM PENETRATION INTO FRAMING MEMBER OF 1-1/2".
  - ALL EXTERIOR WOOD STUD WALLS SHALL HAVE (1) LAYER OF 1" ZIP SHEATHING ON THE EXTERIOR WALL FACE. REFER TO STANDARD WOOD WALL DETAILS FOR TYPICAL BEARING WALL CONSTRUCTION AND SHEATHING ATTACHMENT. IF WALL IS NOT SPECIFICALLY DESIGNATED AS A SHEAR WALL, ATTACH SHEATHING TO WALL STUDS w/ 10d NAILS AT 6" o/c SPACING (EDGES/FIELD). NAILS TO HAVE A MINIMUM PENETRATION INTO FRAMING MEMBER OF 1-1/2".
  - FOR WALLS NOT SPECIFICALLY DESIGNATED AS SHEAR WALLS, ATTACH MINIMUM 1/2" GYPSUM WALL BOARD TO INTERIOR STUD WALLS w/ No. 5 x 1 1/4" TYPE S OR W DRYWALL SCREWS AT 12" o/c AT ALL STUDS AND TOP & BOTTOM PLATES. MINIMUM EDGE DISTANCE FOR FASTENERS IS 3/8" FROM PANEL EDGE.
  - UNO, AT GIRDER TRUSS BEARING, PROVIDE A WOOD POST w/ MULTIPLE 2x MEMBERS AS REQUIRED TO MATCH GIRDER TRUSS WIDTH.
  - AT INTERIOR BEARING WALLS WHERE ROOF TRUSSES BEAR ON WALL FROM EITHER SIDE, LAP TRUSSES AND BEAR EACH TRUSS FULL WIDTH OF WALL, UNLESS NOTED OTHERWISE.
  - VERIFY ALL MECHANICAL EQUIPMENT WEIGHTS, SIZES, & LOCATIONS PRIOR TO PREPARING SHOP DRAWINGS & FABRICATING MATERIALS. CONTRACTOR TO COORDINATE ANY CHANGES w/ JOIST SUPPLIER AND STRUCTURAL ENGINEER.
  - ALL MECHANICAL EQUIPMENT SHALL BEAR ON (2) JOISTS/TRUSSES MINIMUM.

**WOOD ROOF FRAMING PLAN KEYED NOTES:**

- KEYED NOTES APPLY TO ALL WOOD ROOF FRAMING PLANS. ALL NOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS.
- 2X10 SPP NO. 1 NO. 2 OR BETTER JOISTS AT 16" o/c.



1 ROOF FRAMING PLAN  
SCALE: 3/16" = 1'-0"



ALL INFORMATION CONCERNING EXISTING CONDITIONS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION OR MATERIAL FABRICATION. NOTIFY ENGINEER FOR POSSIBLE REMEDIAL ACTION IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN HERE. REFER TO EXISTING CONSTRUCTION CONDITIONS NOTES ON GENERAL NOTES SHEET FOR SPECIFICS.

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**SHEET INFORMATION**

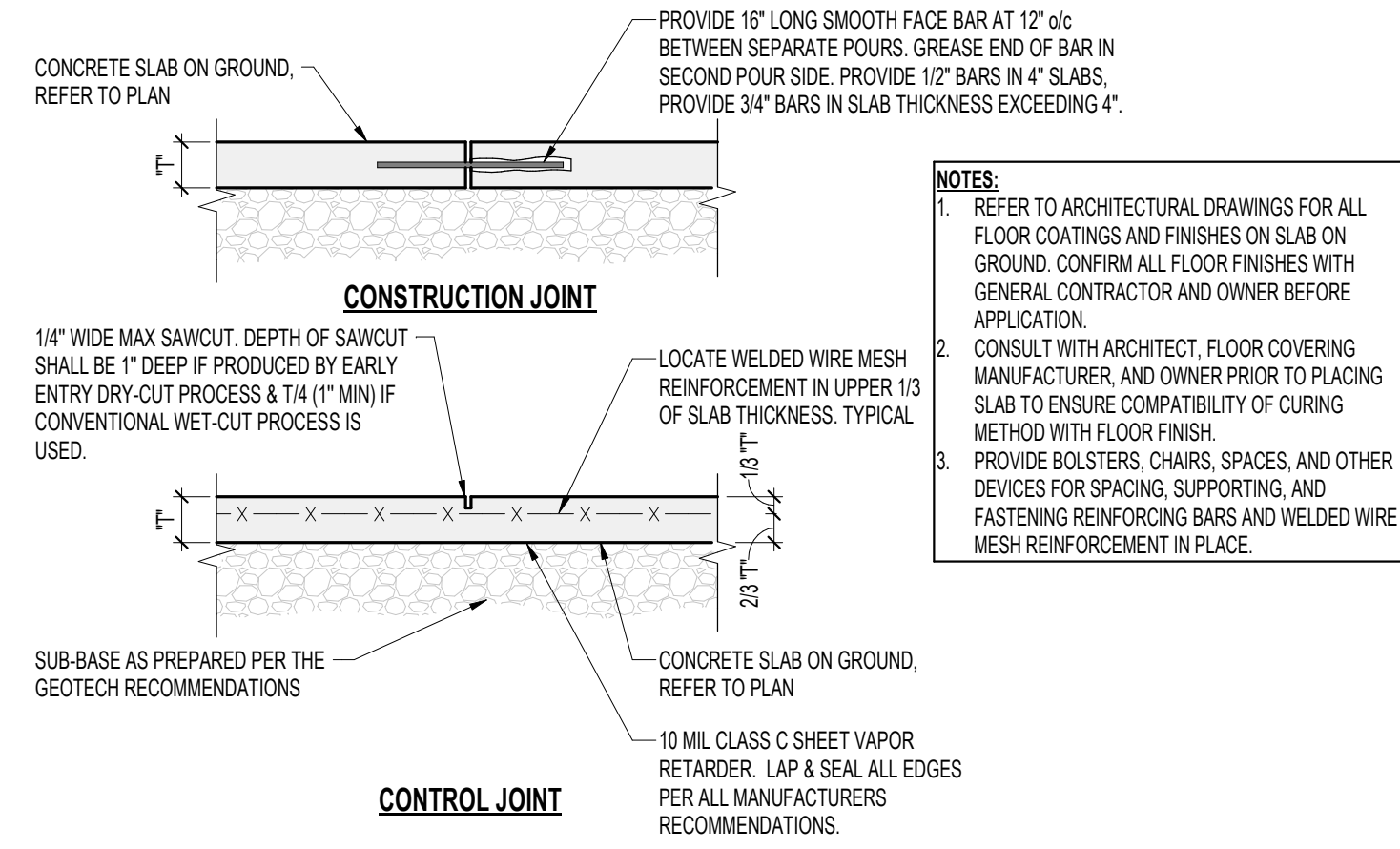
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ROOF FRAMING PLAN

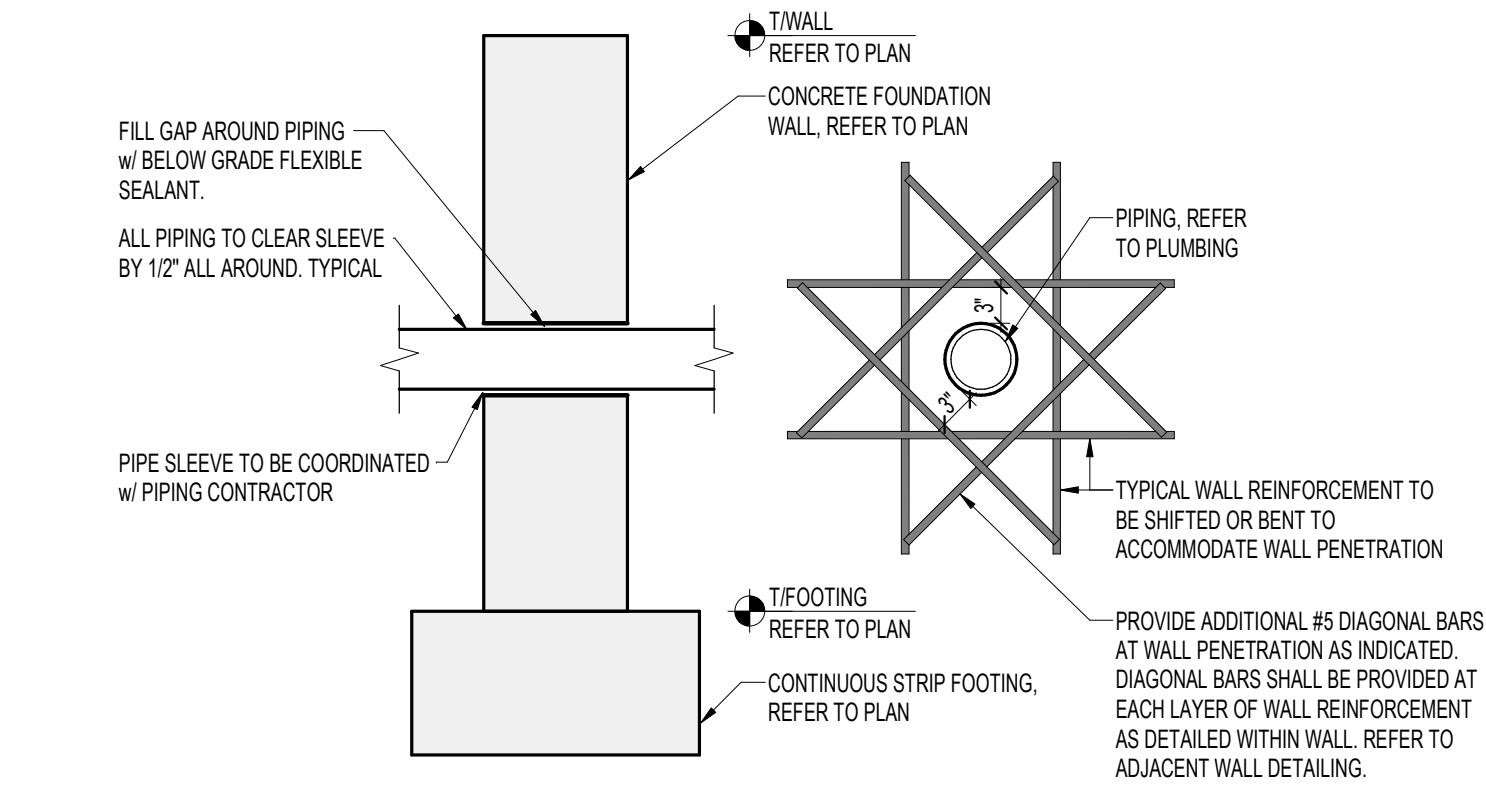
SHEET

**S-2.0**

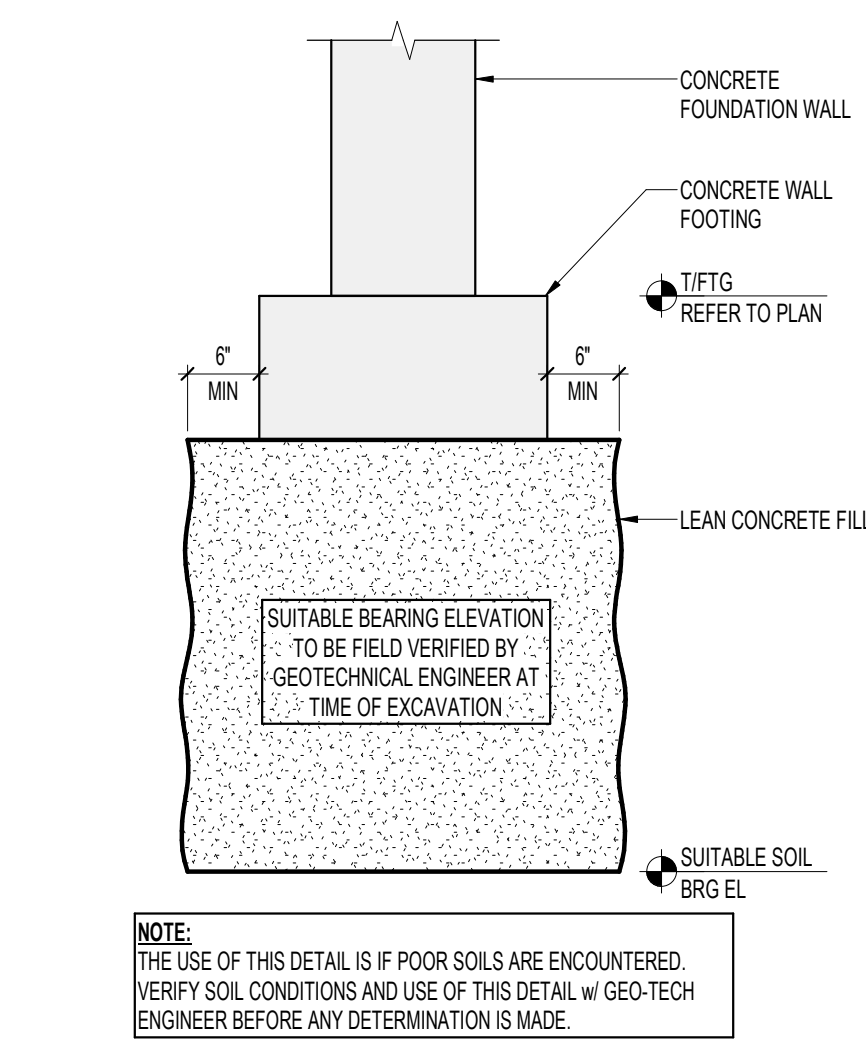
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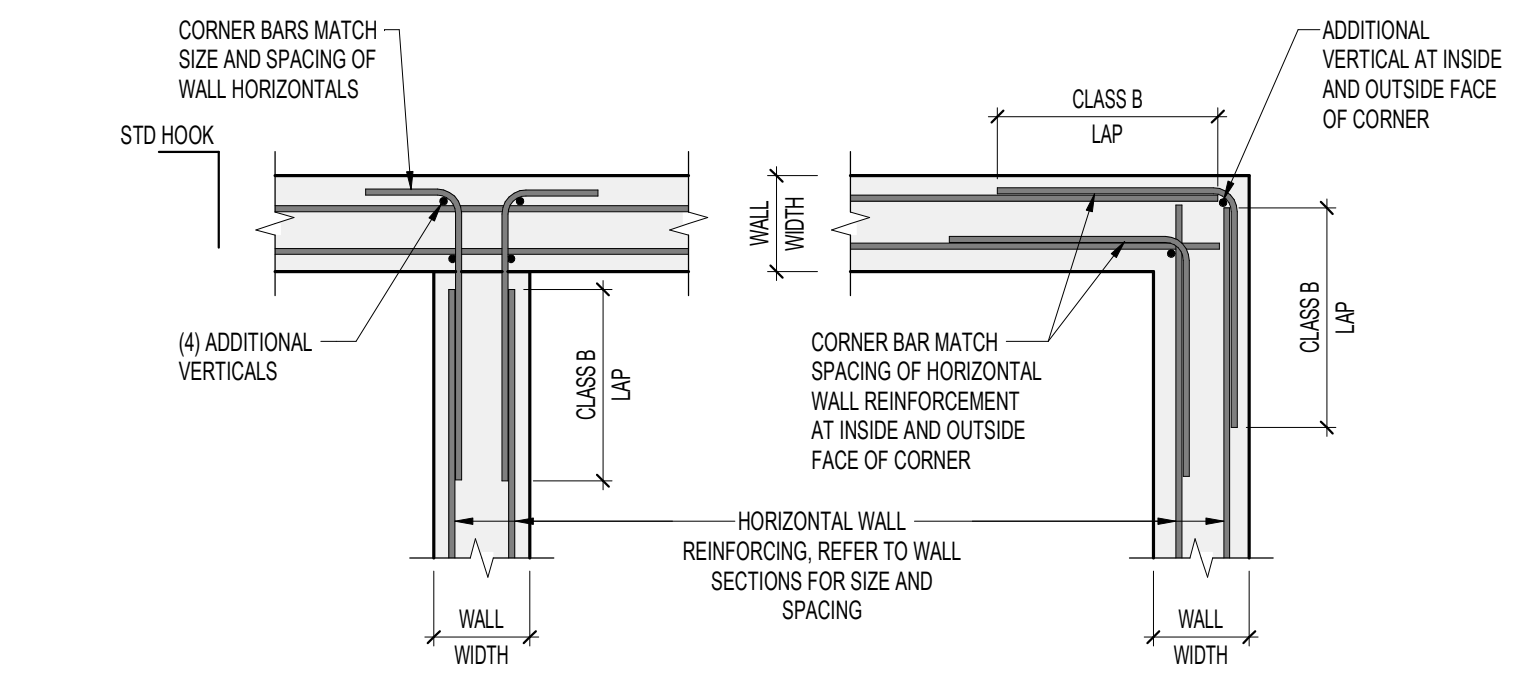
1 S-4.0 SLAB ON GRADE CONSTRUCTION DETAILS



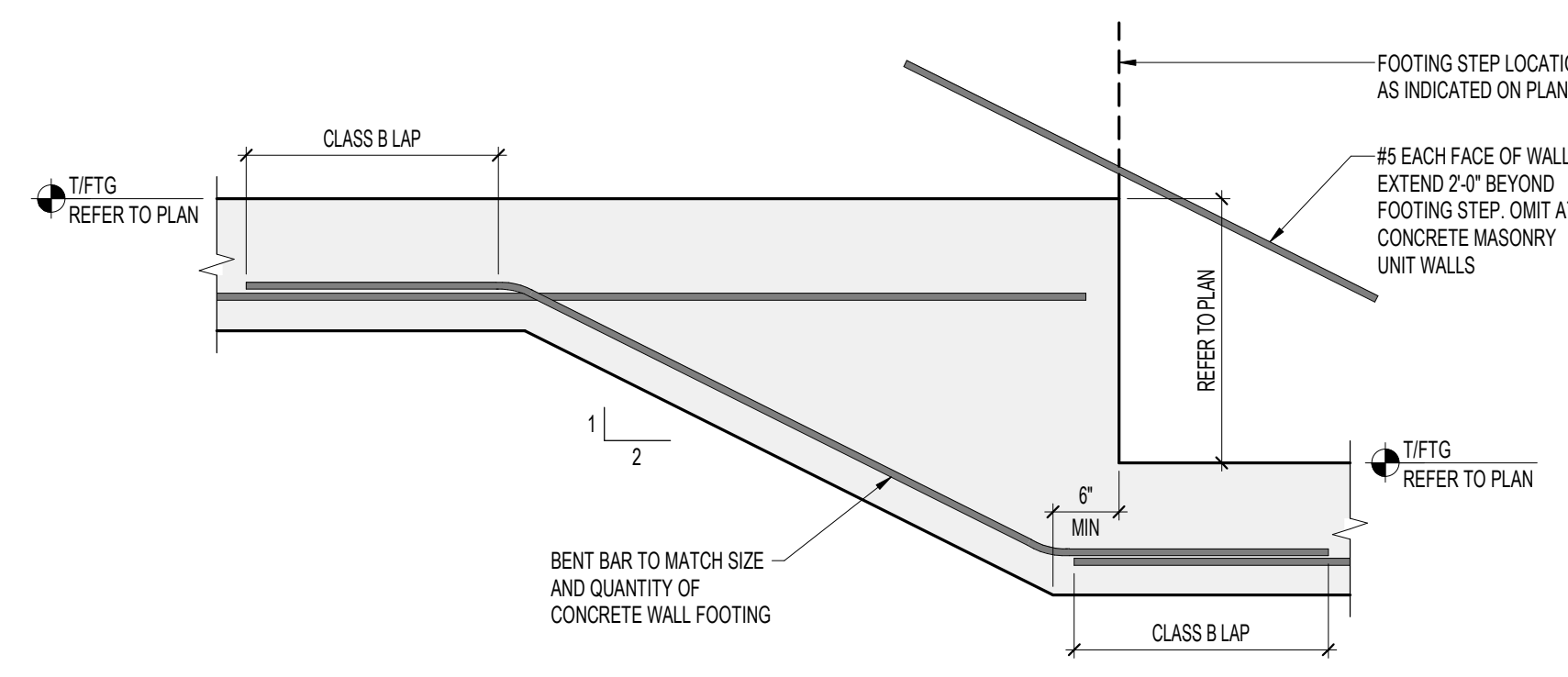
2 S-4.0 PIPE PENETRATION AT FOUNDATION WALL



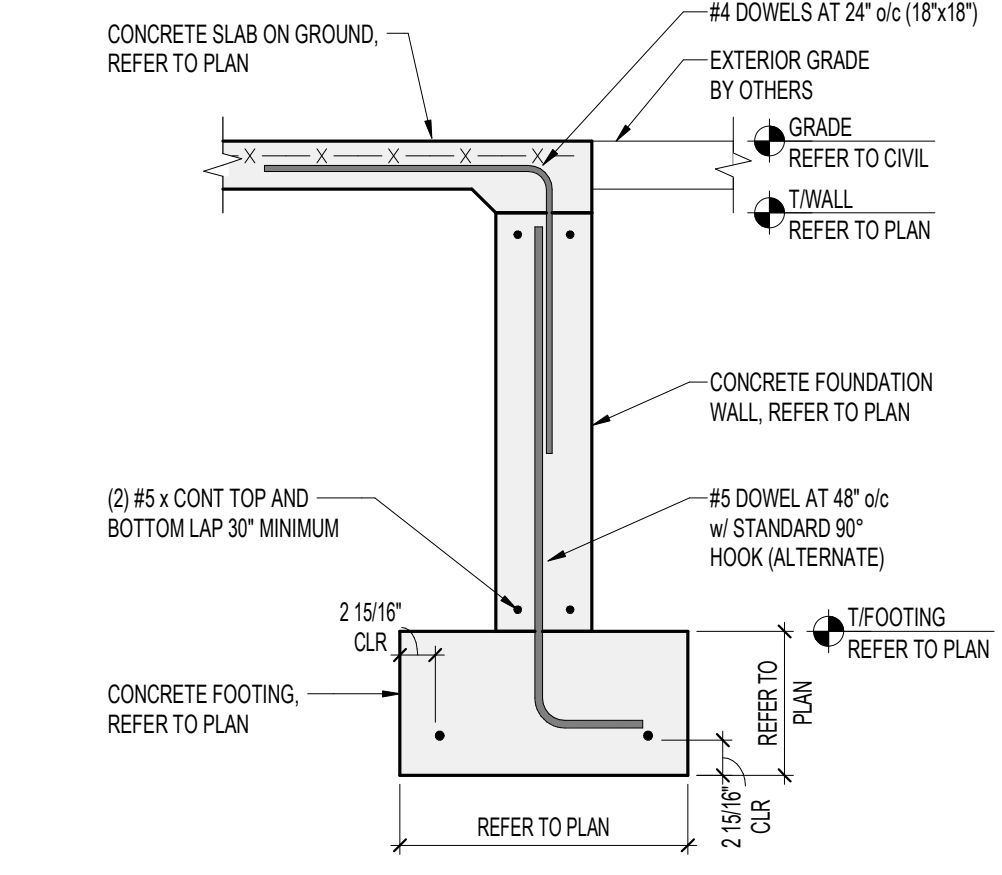
3 S-4.0 TYPICAL OVER-EXCAVATION DETAIL



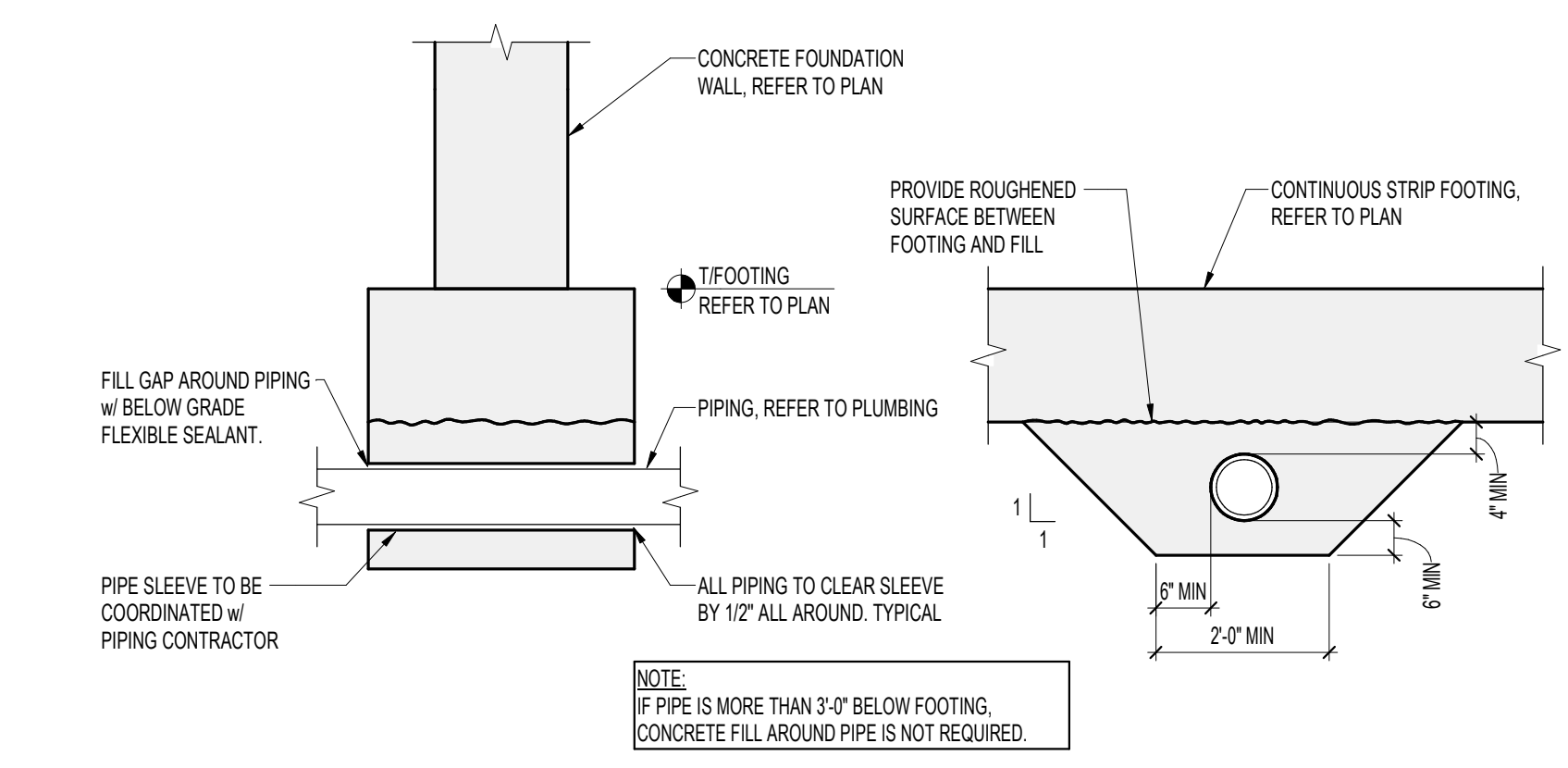
4 S-4.0 CORNER AND WALL INTERSECTION REINFORCING



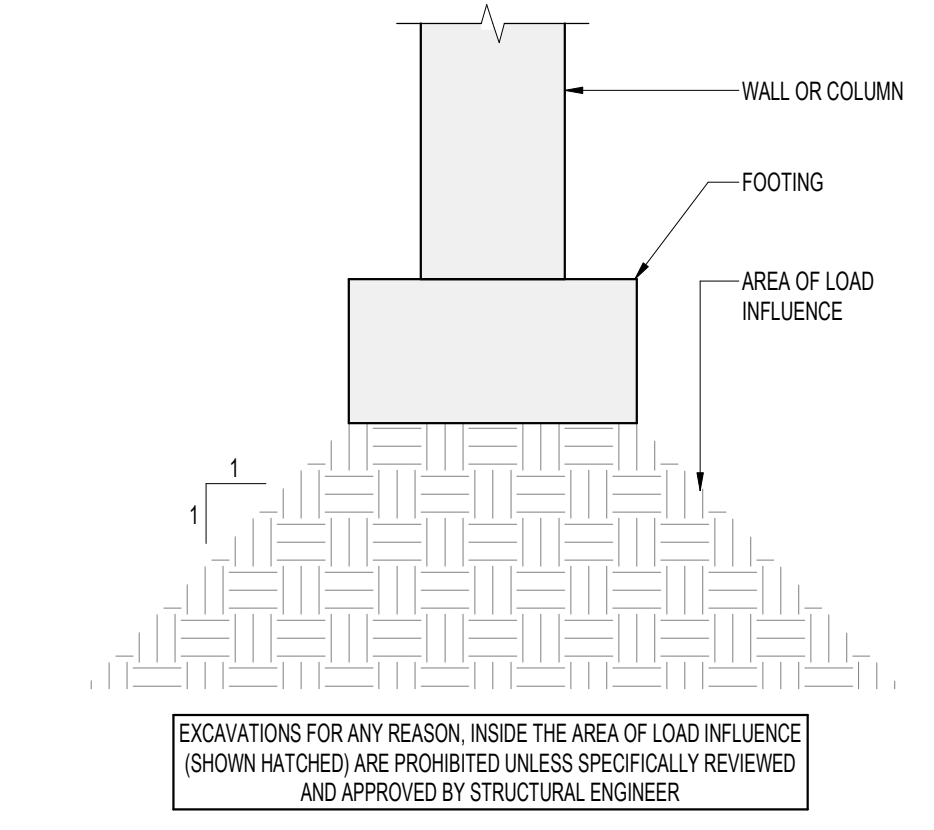
5 S-4.0 FOOTING STEP DETAIL



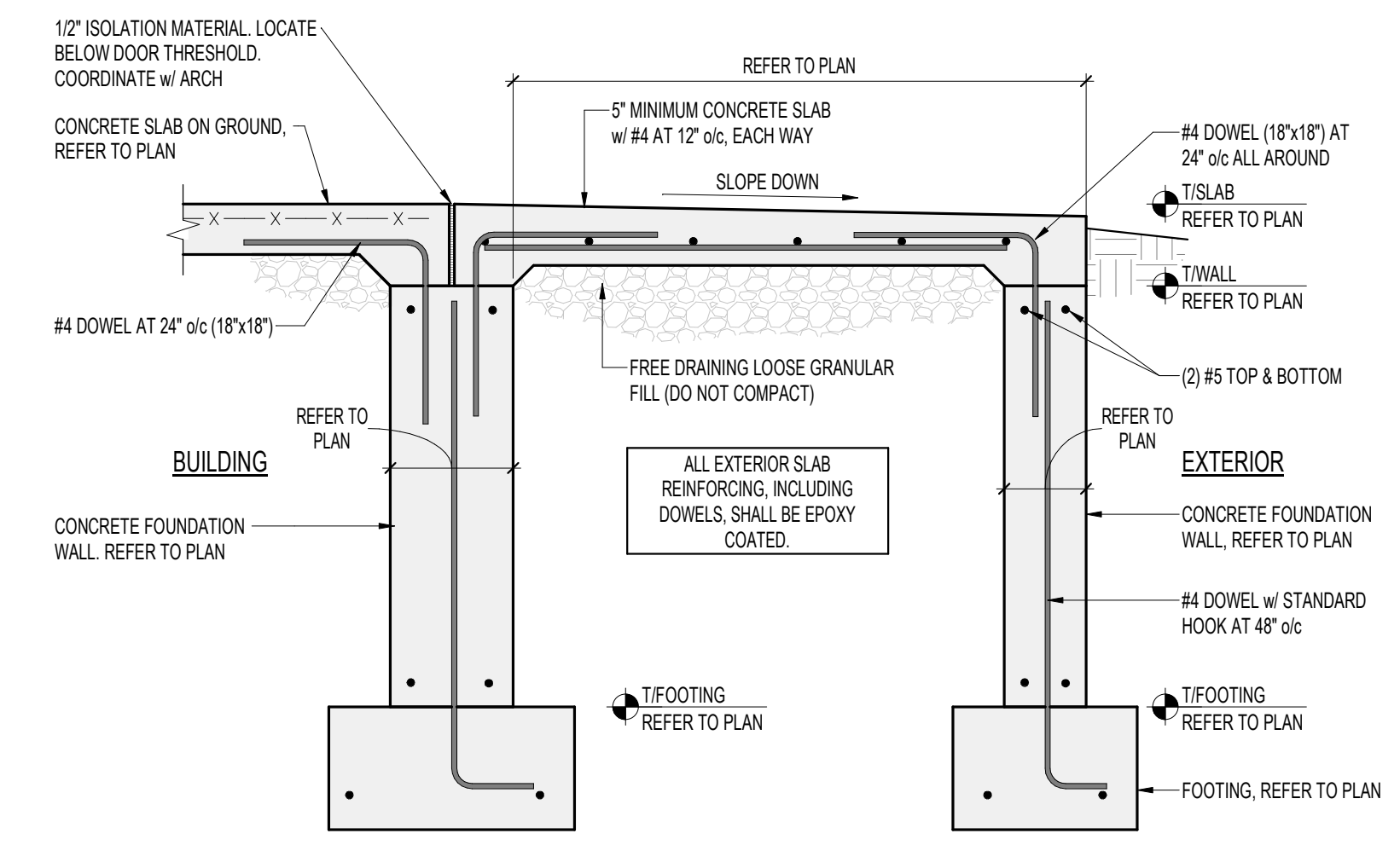
6 S-4.0 SLAB OVERPOUR AT GARAGE DOOR



7 S-4.0 PIPE PENETRATION UNDER STRIP FOOTING

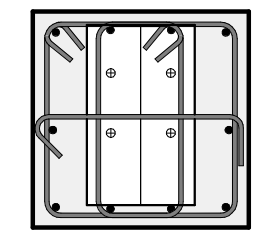


8 S-4.0 TYPICAL PROHIBITED EXCAVATIONS AT FOUNDATIONS

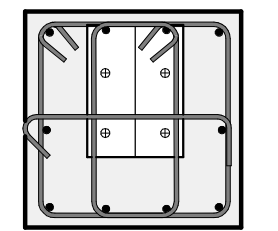


9 S-4.0 REINFORCED CONCRETE STOOP

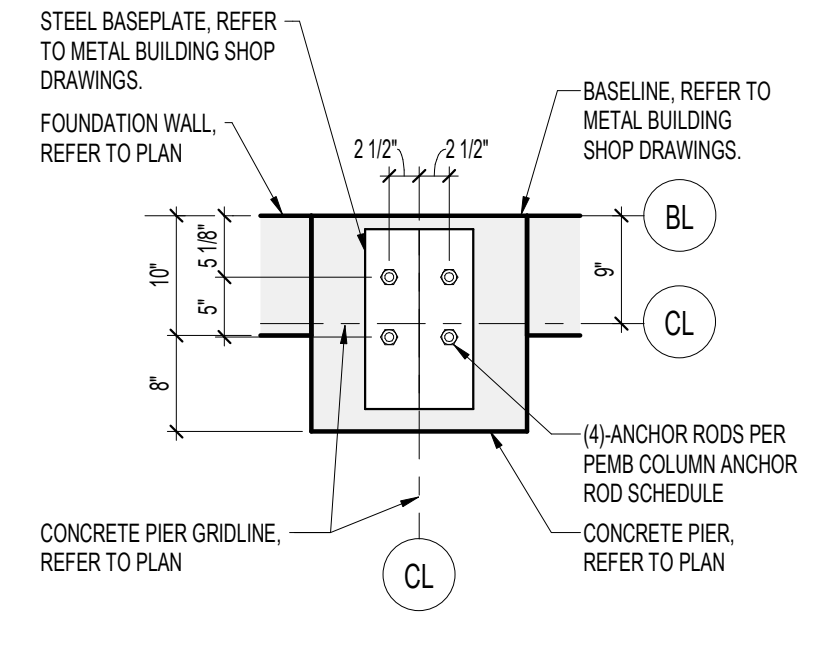
GC TO CONFIRM ALL ANCHOR ROD, BASEPLATE AND COLUMN DIMENSIONS w/ METAL BUILDING SUPPLIER.



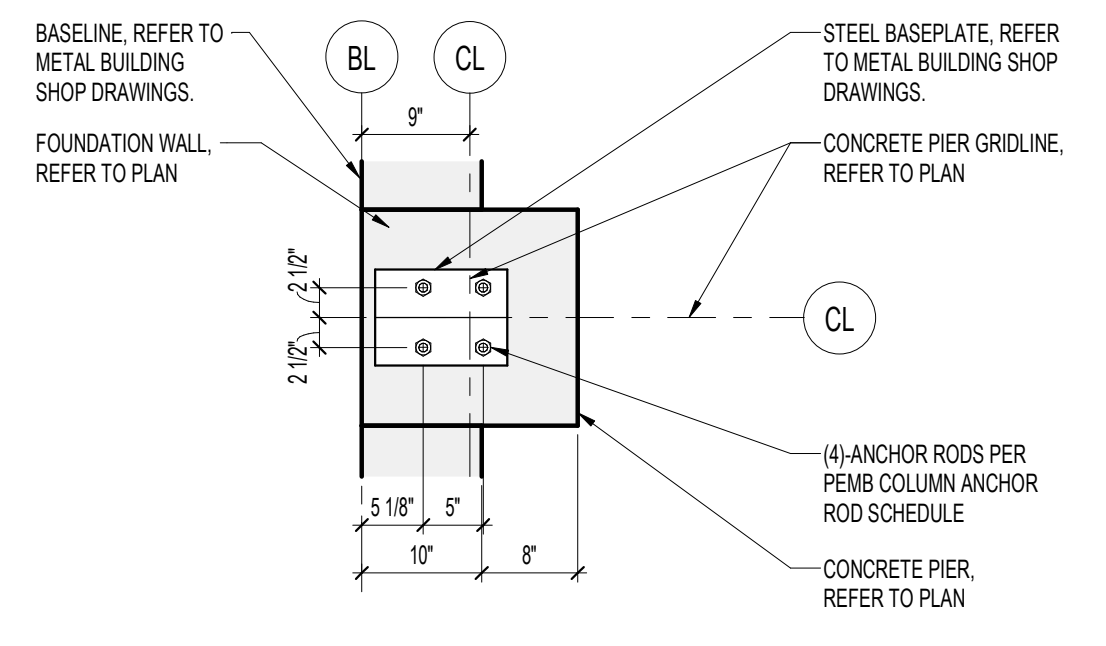
TYPE A PIER REINFORCING



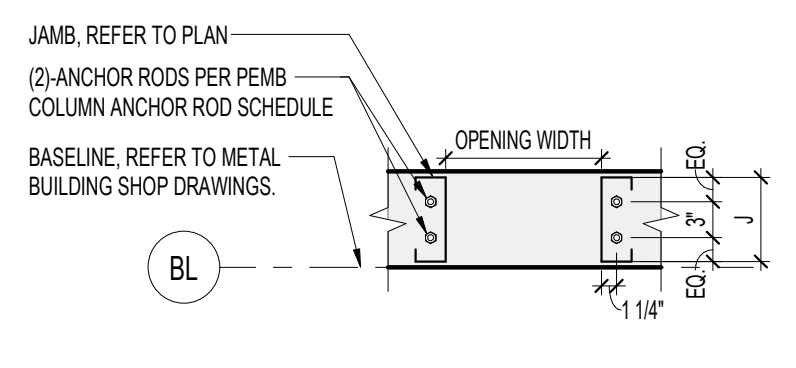
TYPE B PIER REINFORCING



TYPE A ANCHOR ROD LAYOUT

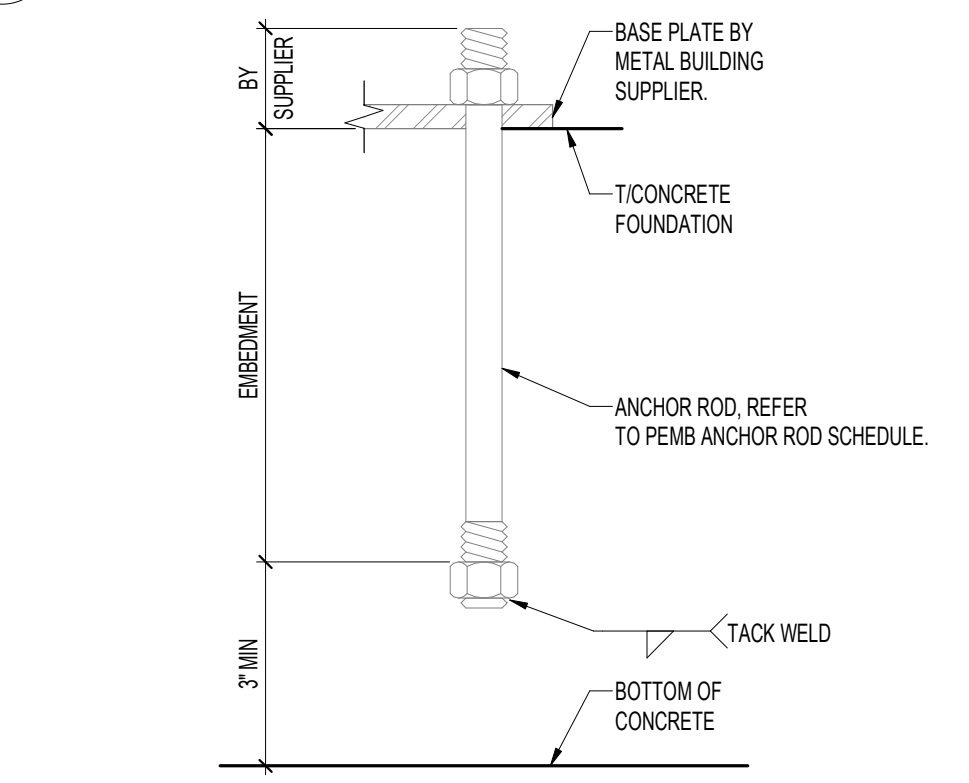


TYPE B ANCHOR ROD LAYOUT



TYPE C ANCHOR ROD LAYOUT

JAMB EQ. VALUES	
J	EQ.
7"	2"
8.5"	2-3/4"
10"	3-1/2"
11-1/2"	4-1/4"



PEMB COLUMN ANCHOR ROD SCHEDULE				
TYPE MARK	ANCHOR ROD DIAMETER	ANCHOR ROD EMBEDMENT	PLATE WASHER	REMARKS
A	3/4"	18"		
B	3/4"	18"		
C	1/2"	18"		

NOTES:  
 1. ANCHOR RODS DESIGNED BY METAL BUILDING SUPPLIER, INSTALLED BY GENERAL CONTRACTOR.  
 2. GC TO CONFIRM ANCHOR ROD GRADE, LOCATIONS, QUANTITY, AND DIAMETER, w/ METAL BUILDING SUPPLIER DRAWINGS.  
 3. GC CONFIRM BASEPLATE DIMENSIONS w/ METAL BUILDING SUPPLIER.

10 S-4.0 CONCRETE PIER TYPES AND ANCHOR ROD LAYOUT

11 S-4.0 ANCHOR ROD DETAIL AT METAL BUILDING

CONCRETE PIER SCHEDULE							
MARK	DIMENSIONS		VERTICAL REINFORCEMENT	PIER TIES	TIE TYPE	DOWELS	REMARKS
	WIDTH	LENGTH					
P18	18"	18"	(12) #5	#3 AT 8" o/c			

CONCRETE PIER SCHEDULE NOTES:  
 1. REFER TO PLAN FOR TOP OF CONCRETE PIER ELEVATION.  
 2. PROVIDE (3) #3 TIES OR (2) #4 DISTRIBUTED WITHIN THE TOP 5' OF THE CONCRETE PIER.  
 3. WHERE NO DOWELS ARE SHOWN FROM THE CONCRETE PIER TO THE CONCRETE FOOTING, EMBED VERTICAL PIER REINFORCEMENT TO BOTTOM OF FOOTING w/ 3" CONCRETE COVERAGE AND PROVIDE A STANDARD 90 DEGREE HOOK.  
 4. CENTER CONCRETE PIER BELOW COLUMN ABOVE, UNLESS DETAILED OTHERWISE.  
 5. LAP VERTICAL REINFORCEMENT 30 BAR DIAMETERS OR 24", WHICHEVER IS GREATER.

BAR SIZE	CLASS 'B' TENSION LAP SPLICE LENGTHS (INCHES)									
	f <sub>c</sub> = 3,000 psi		f <sub>c</sub> = 4,000 psi		f <sub>c</sub> = 5,000 psi		f <sub>c</sub> = 6,000 psi		f <sub>c</sub> = 8,000 psi	
	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP
#3	22	28	19	24	17	22	16	20	13	17
#4	29	37	25	32	22	29	21	27	18	23
#5	36	47	31	40	28	36	26	33	22	29
#6	43	56	37	48	33	43	31	40	26	34
#7	63	81	54	70	49	63	45	58	38	50
#8	72	93	62	80	55	72	51	66	44	57
#9	81	105	70	91	63	81	57	74	49	64
#10	91	118	79	102	70	91	64	84	56	72
#11	101	131	87	113	78	101	71	93	62	80

NOTES (d<sub>b</sub> = BAR DIAMETER, C-C = CENTER TO CENTER):  
 1. 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.  
 2. SCHEDULE BASED ON NORMAL WEIGHT CONCRETE AND CLEAR COVER > 1 d<sub>b</sub> AND C-C > 2 d<sub>b</sub>.  
 3. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE CALCULATED PER CURRENT EDITION OF ACI-318.  
 4. TOP BARS ARE DEFINED AS HORIZONTAL BARS HAVING 12" OR MORE OF CONCRETE CAST BELOW THE BARS.  
 5. VALUES IN THIS SCHEDULE ARE BASED ON NON-EPOXY COATED BARS. FOR EPOXY COATED BARS, MULTIPLY VALUES IN THIS TABLE BY 1.5.  
 6. THESE LAPS ARE TO BE USED UNLESS ALTERNATIVE LENGTH LAPS SPECIFICALLY INDICATED ON PLANS OR IN DETAILS.

ISOLATED FOOTING SCHEDULE								
MARK	DIMENSIONS			BOTTOM REINFORCING		TOP REINFORCING		REMARKS
	WIDTH	LENGTH	THICKNESS	LONG	SHORT	LONG	SHORT	
F50	5'-0"	5'-0"	1'-4"	(6) #5	(6) #5	(6) #5	(6) #5	
F66	6'-6"	6'-6"	1'-6"	(6) #5	(6) #5	(6) #5	(6) #5	
F80	8'-0"	8'-0"	1'-4"	(9) #5	(9) #5	(9) #5	(9) #5	
F86	8'-0"	8'-0"	1'-4"	(12) #5	(12) #5	(12) #5	(12) #5	

ISOLATED FOOTING SCHEDULE NOTES:  
 1. REFER TO STRUCTURAL NOTES SHEET FOR MINIMUM COVER REQUIREMENTS.  
 2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.  
 3. REFER TO FOUNDATION AND EARTHWORK GENERAL NOTES AND DESIGN CRITERIA FOR ADDITIONAL REQUIREMENTS.  
 4. ALL LAPS IN STEEL REINFORCING SHALL BE CLASS 'B' LAP SPLICES UNLESS NOTED OTHERWISE.

THICKENED SLAB SCHEDULE					
MARK	DIMENSIONS		REINFORCEMENT		REMARKS
	WIDTH (X-CONT)	THICKNESS	LONGITUDINAL	TRANSVERSE	
TS20	2'-0"	1'-0"	(2) #5	(4) #5	
TS36	3'-0"	1'-0"	(4) #5	(4) #5	

CONTINUOUS FOOTING SCHEDULE					
MARK	DIMENSIONS		REINFORCEMENT		REMARKS
	WIDTH (X-CONT)	THICKNESS	LONGITUDINAL	TRANSVERSE	
W16	1'-6"	1'-0"	(2) #5		
W20	2'-0"	1'-0"	(2) #5		

CONTINUOUS FOOTING SCHEDULE NOTES:  
 1. REFER TO STRUCTURAL NOTES SHEET FOR MINIMUM COVER REQUIREMENTS.  
 2. REFER TO FOUNDATION PLAN FOR TOP OF FOOTING ELEVATIONS.  
 3. REFER TO FOUNDATION AND EARTHWORK GENERAL NOTES AND DESIGN CRITERIA FOR ADDITIONAL REQUIREMENTS.  
 4. ALL LAPS IN STEEL REINFORCING SHALL BE CLASS 'B' LAP SPLICES UNLESS NOTED OTHERWISE.

REV. BY: \_\_\_\_\_ DATE: \_\_\_\_\_

NO. \_\_\_\_\_ REVISION DESCRIPTION: \_\_\_\_\_

**AC.E. BUILDING SERVICE**  
 OUR REPUTATION IS OUR FOUNDATION  
 3810 SOUTH 26TH STREET | MANTOWOC, WISCONSIN 54220  
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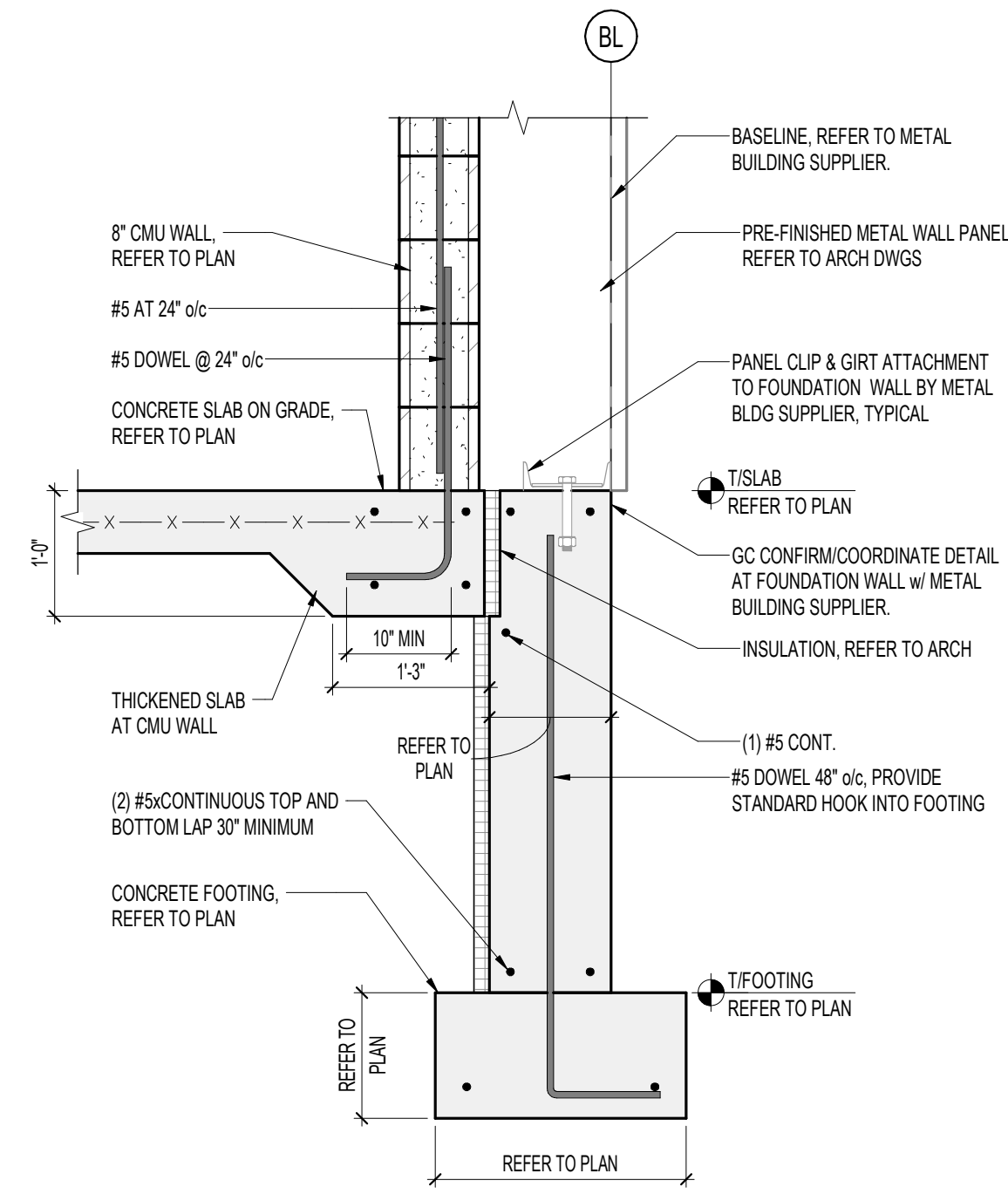
**SMT**  
 SUPERVISING PROFESSIONAL

PROJECT INFORMATION:  
**SAUVE'S AUTO**  
 TWO RIVERS, WISCONSIN

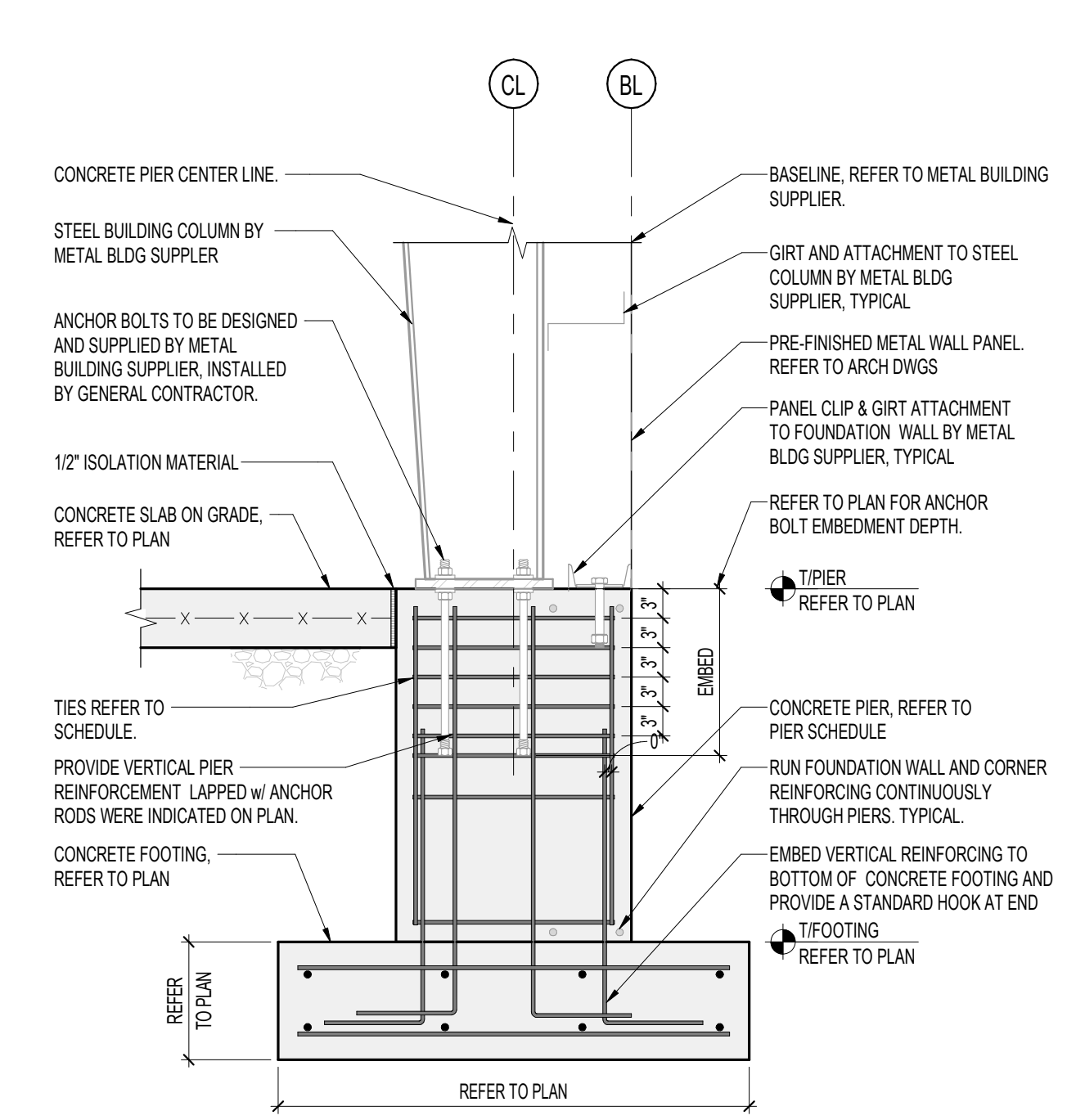
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 DATE: 08-19-2024  
 DRAWN BY: PE  
 SCALE: As indicated  
 STRUCTURAL DETAILS  
 SHEET  
**S-4.0**

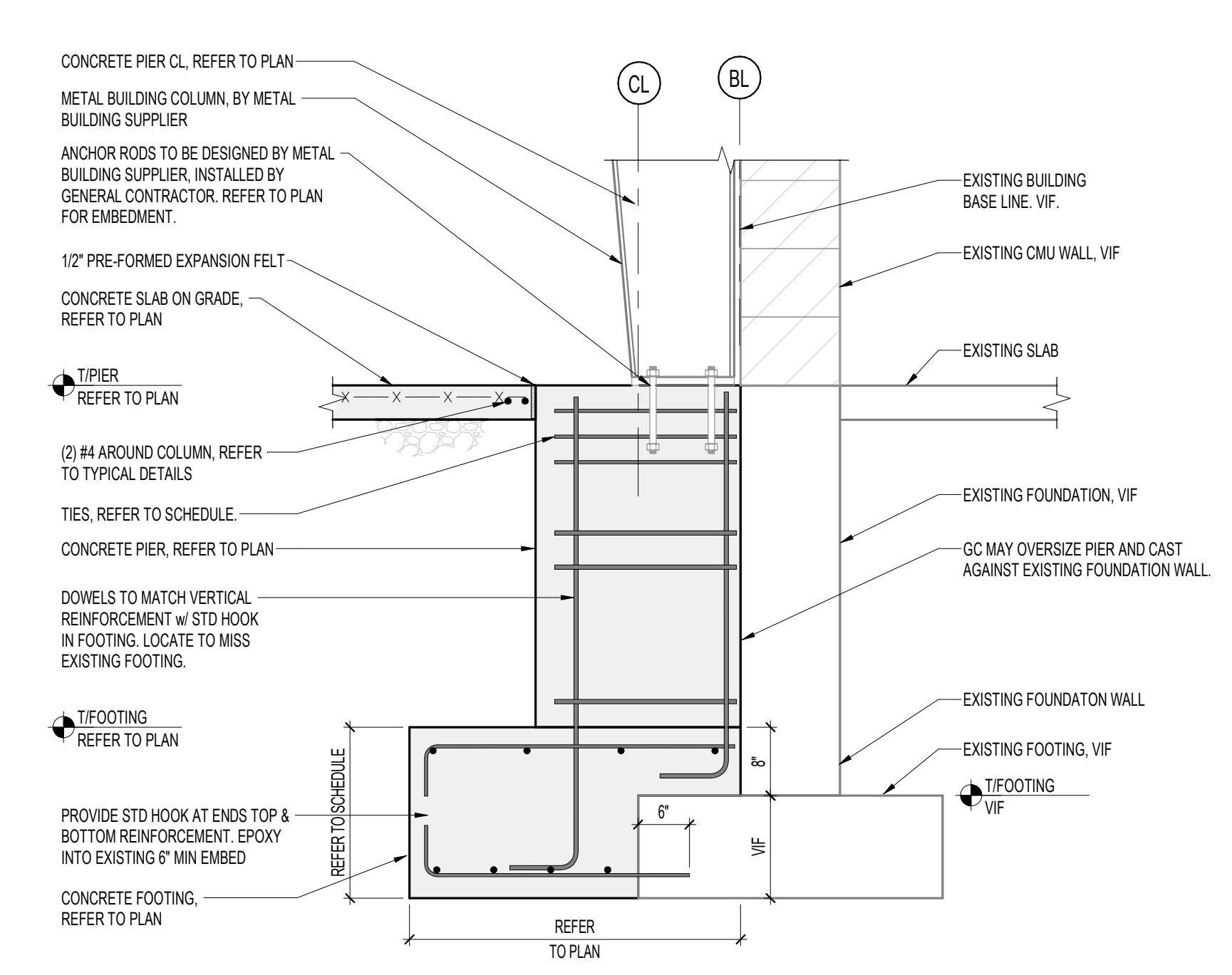
**PE**  
 PERCE ENGINEERS, INC.  
 181 N. Broadway Ave  
 Milwaukee, WI 53202  
 414.278.6060  
 www.perceengineers.com  
 PE Project: 240407



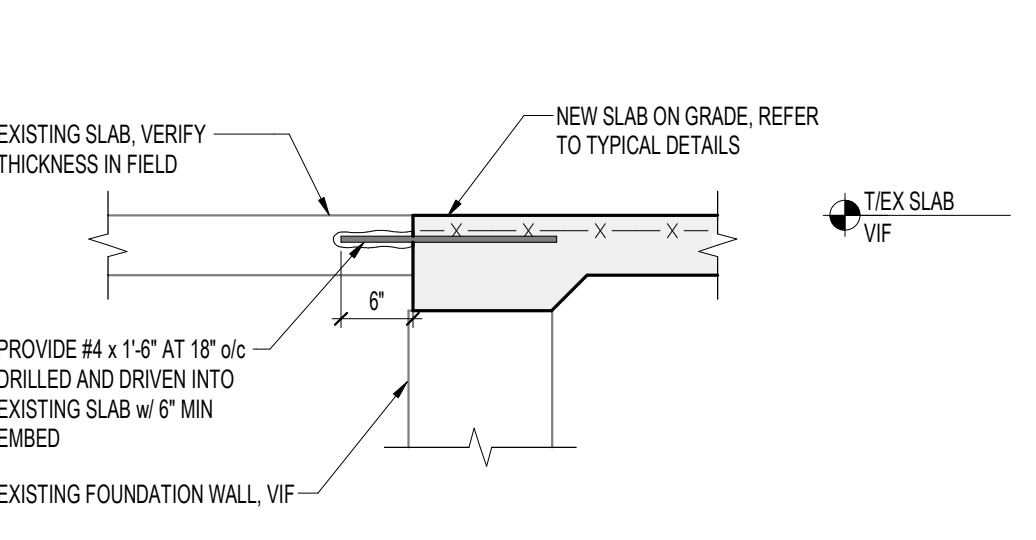
1 S-4.1 TYPICAL METAL BUILDING EXTERIOR CONCRETE FOUNDATION WALL



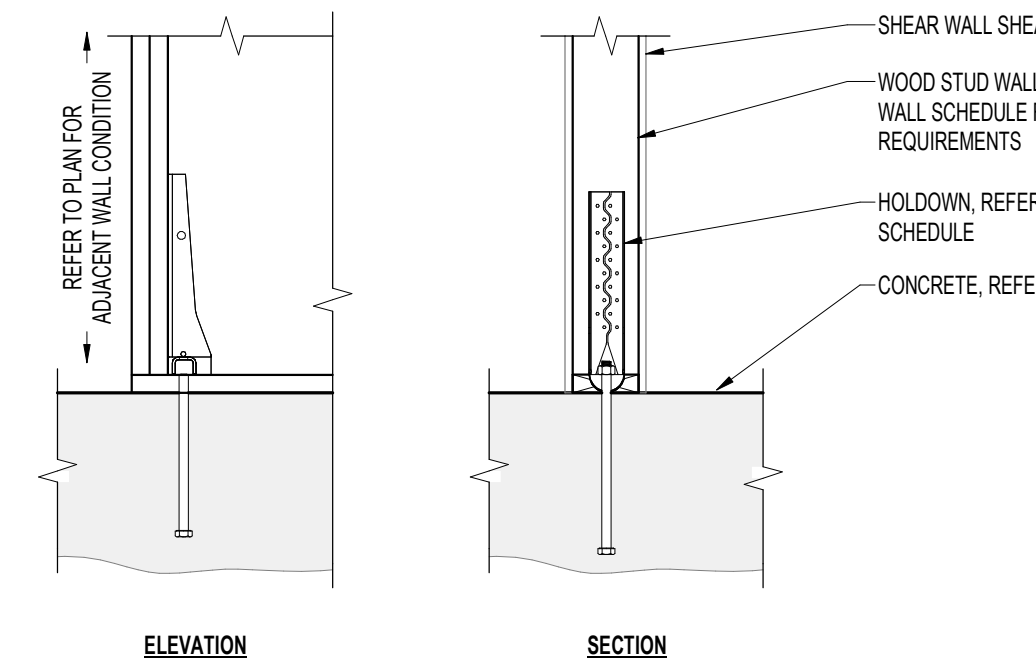
2 S-4.1 SECTION AT METAL BUILDING PIER



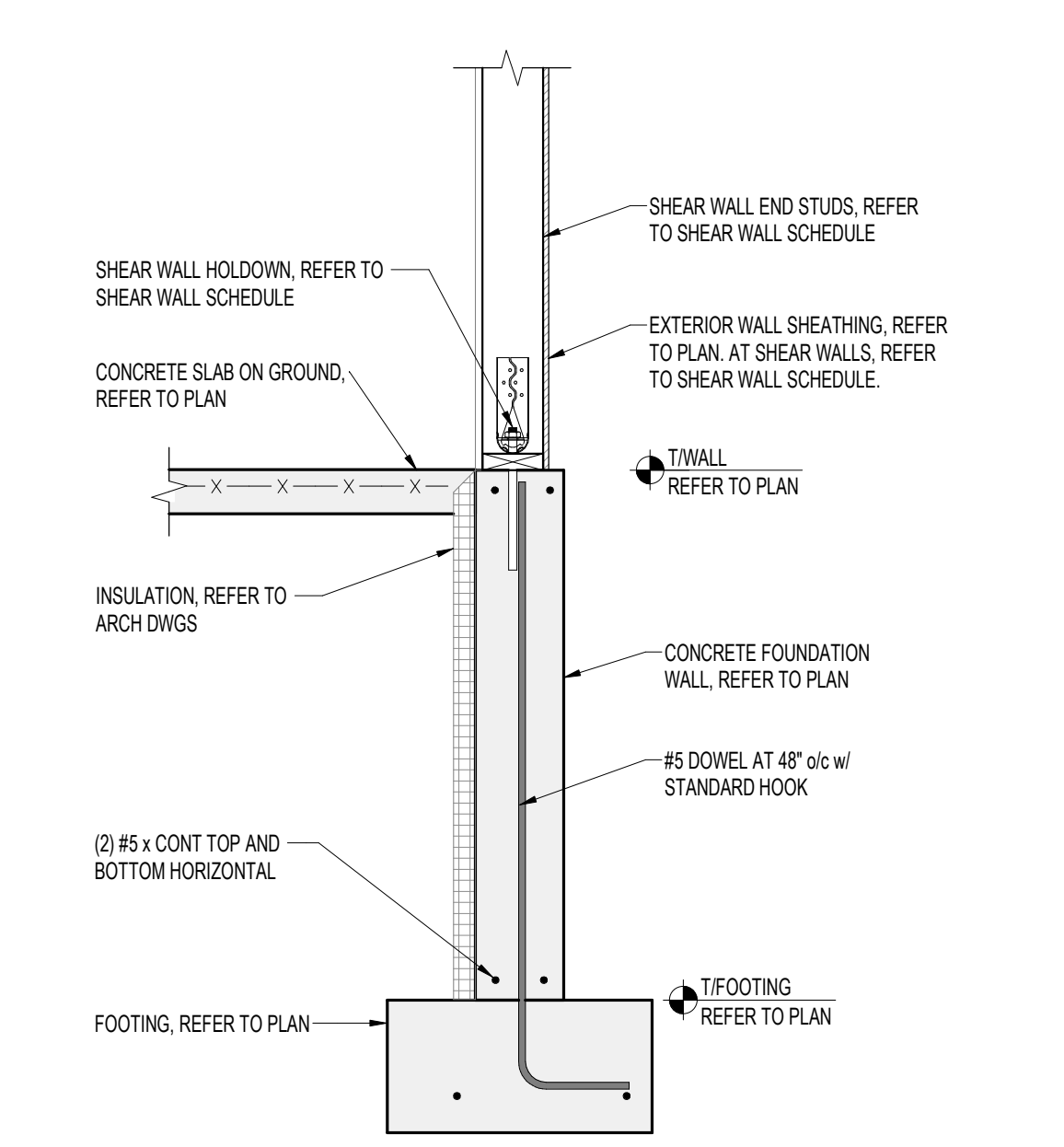
3 S-4.1 NEW PIER CONNECTED DETAILS TO EXISTING FOUNDATION WALL



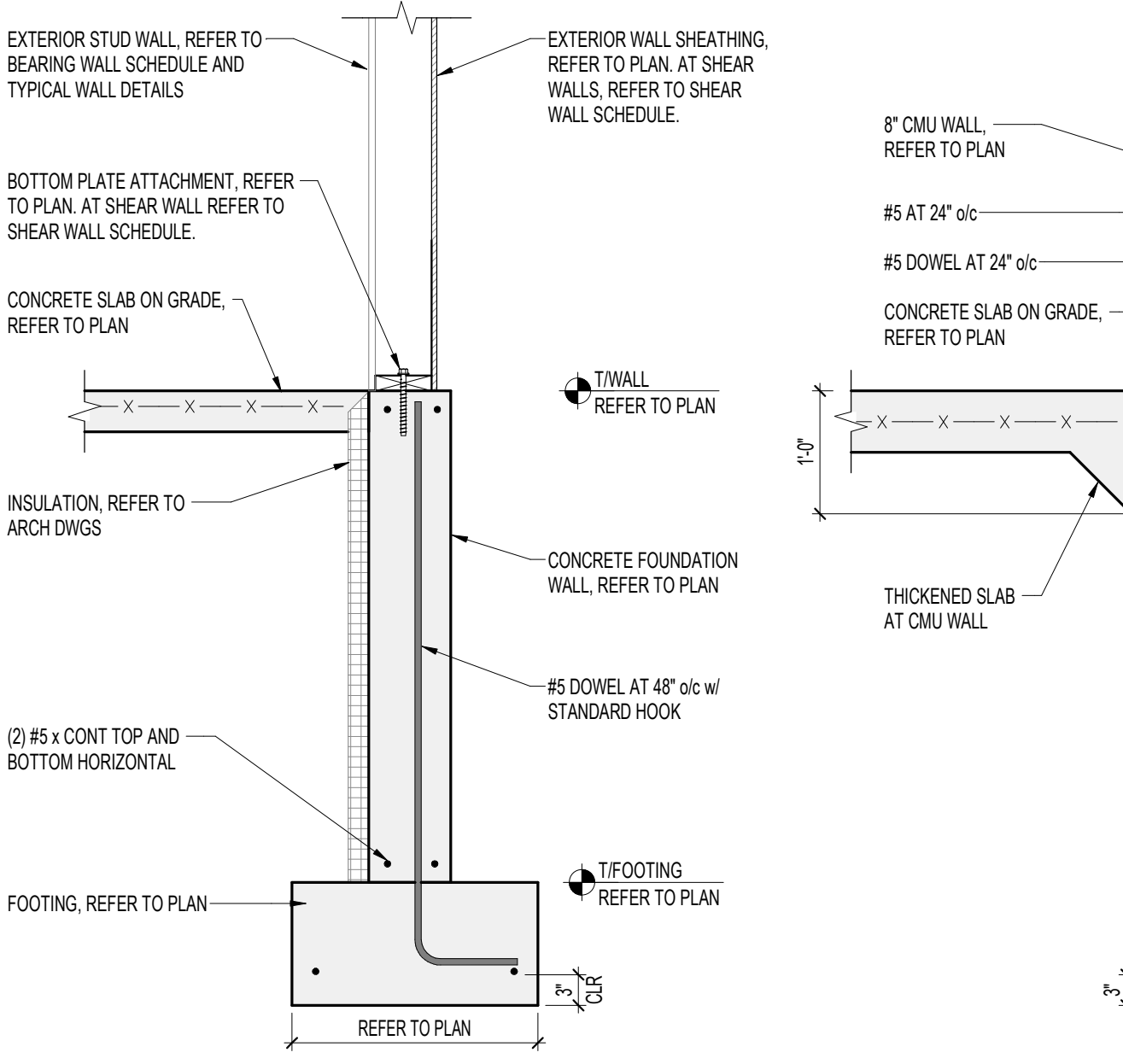
4 S-4.1 CONNECTION TO EXISTING SOG



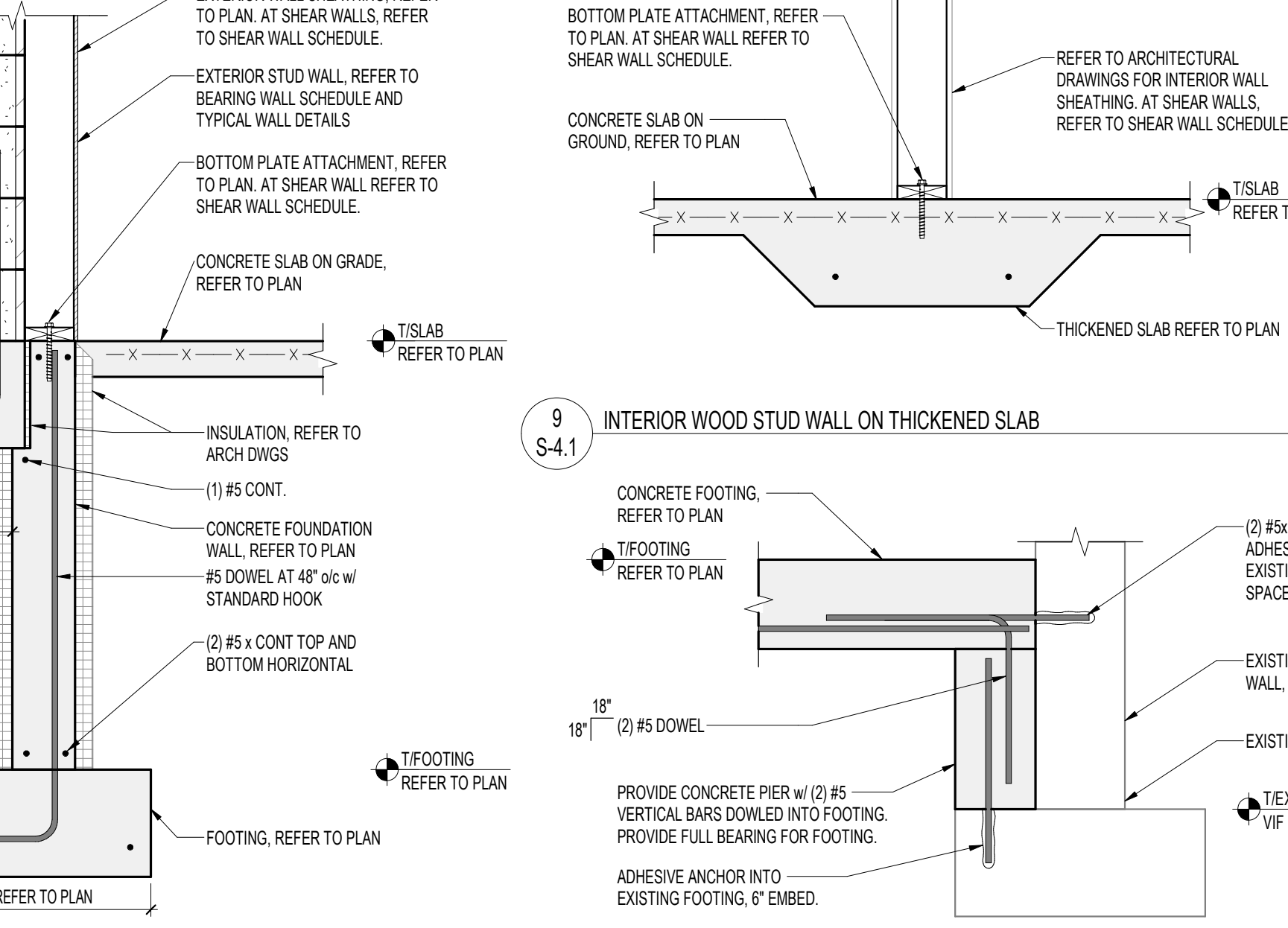
5 S-4.1 SHEARWALL HOLDDOWN ATTACHMENT



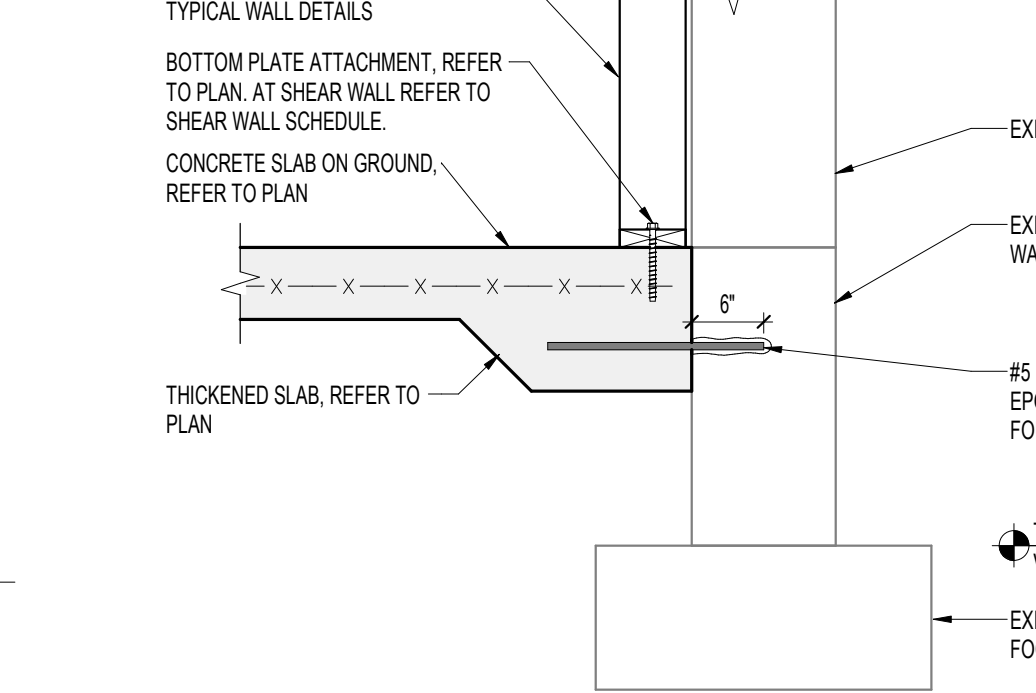
6 S-4.1 SHEAR WALL HOLDDOWN ATTACHMENT AT FROST WALL



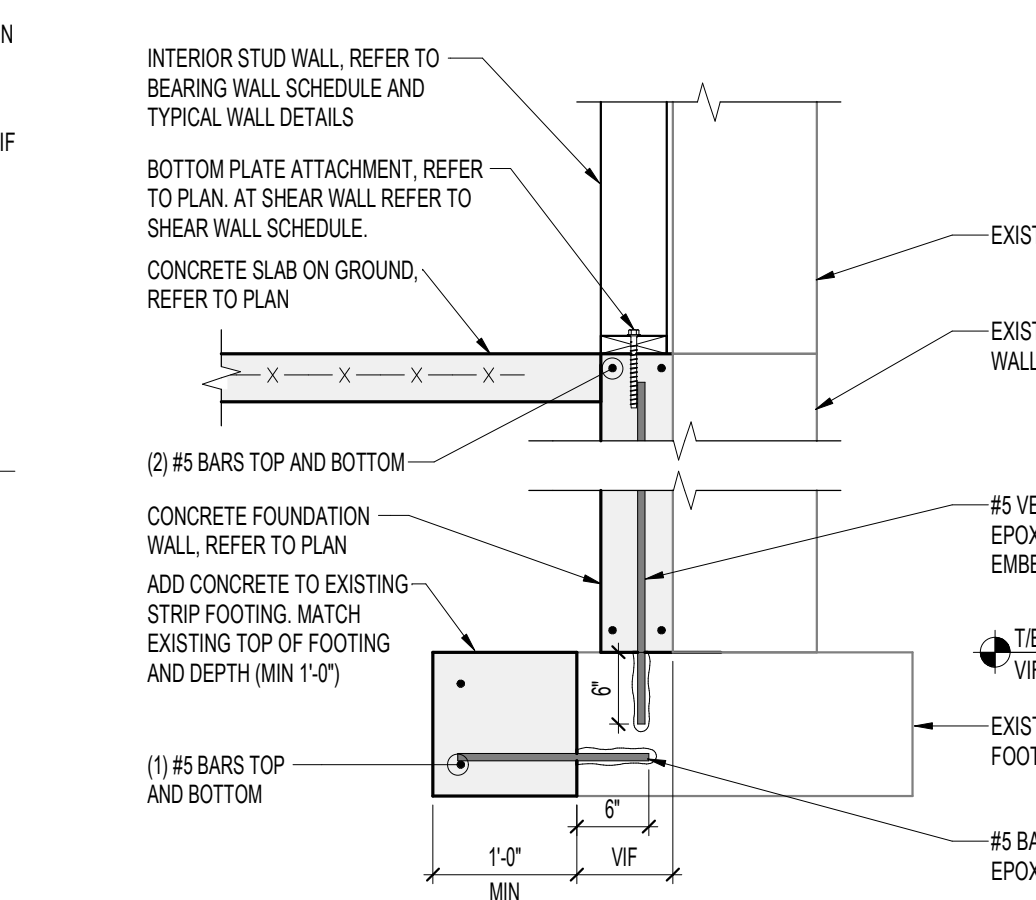
7 S-4.1 TYPICAL EXTERIOR CONCRETE FOUNDATION WALL



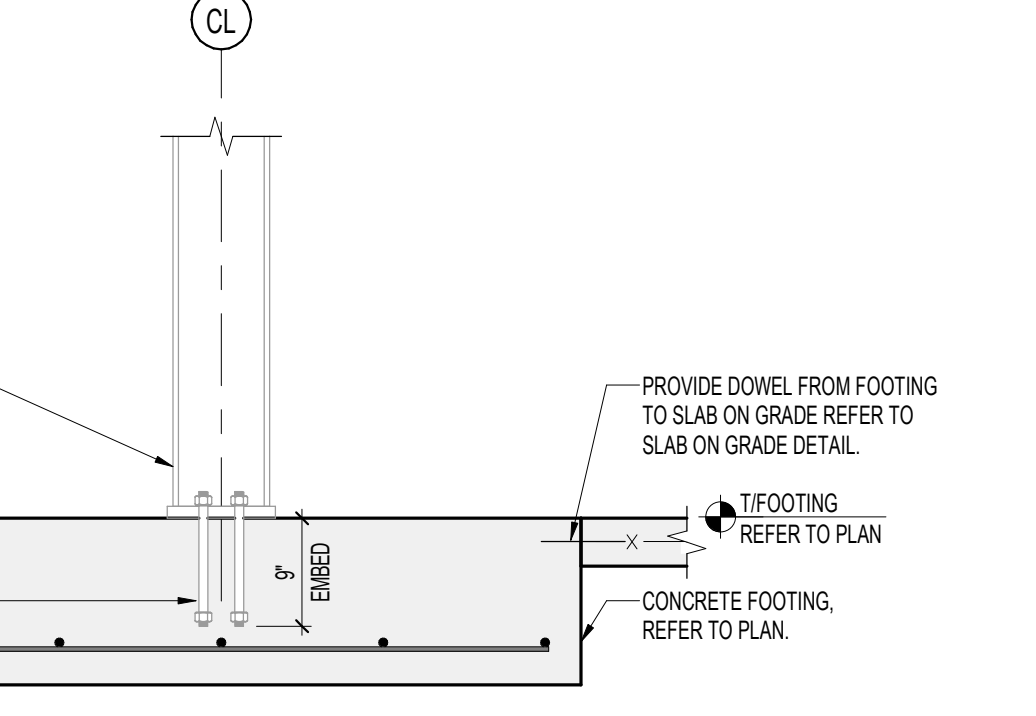
8 S-4.1 SECTION



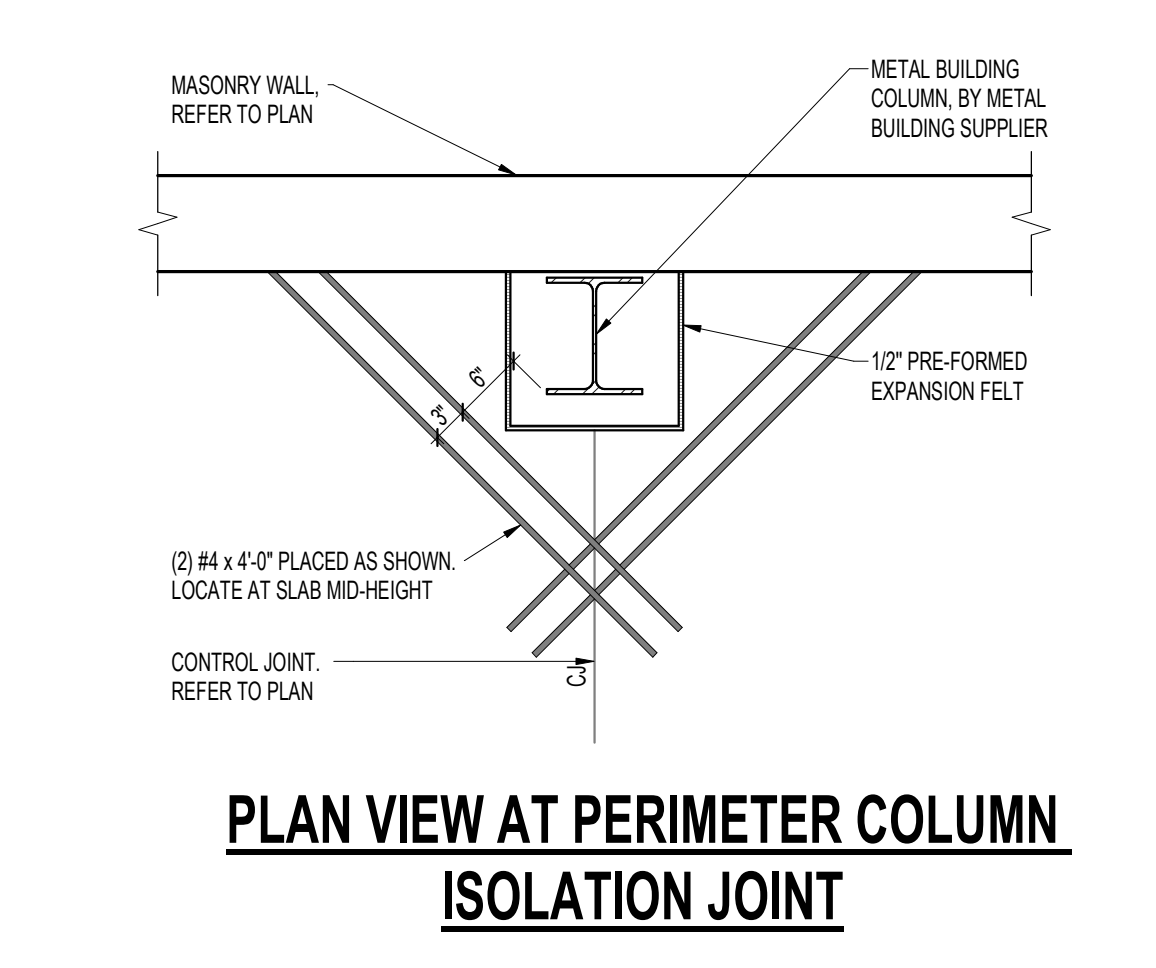
9 S-4.1 INTERIOR WOOD STUD WALL ON THICKENED SLAB



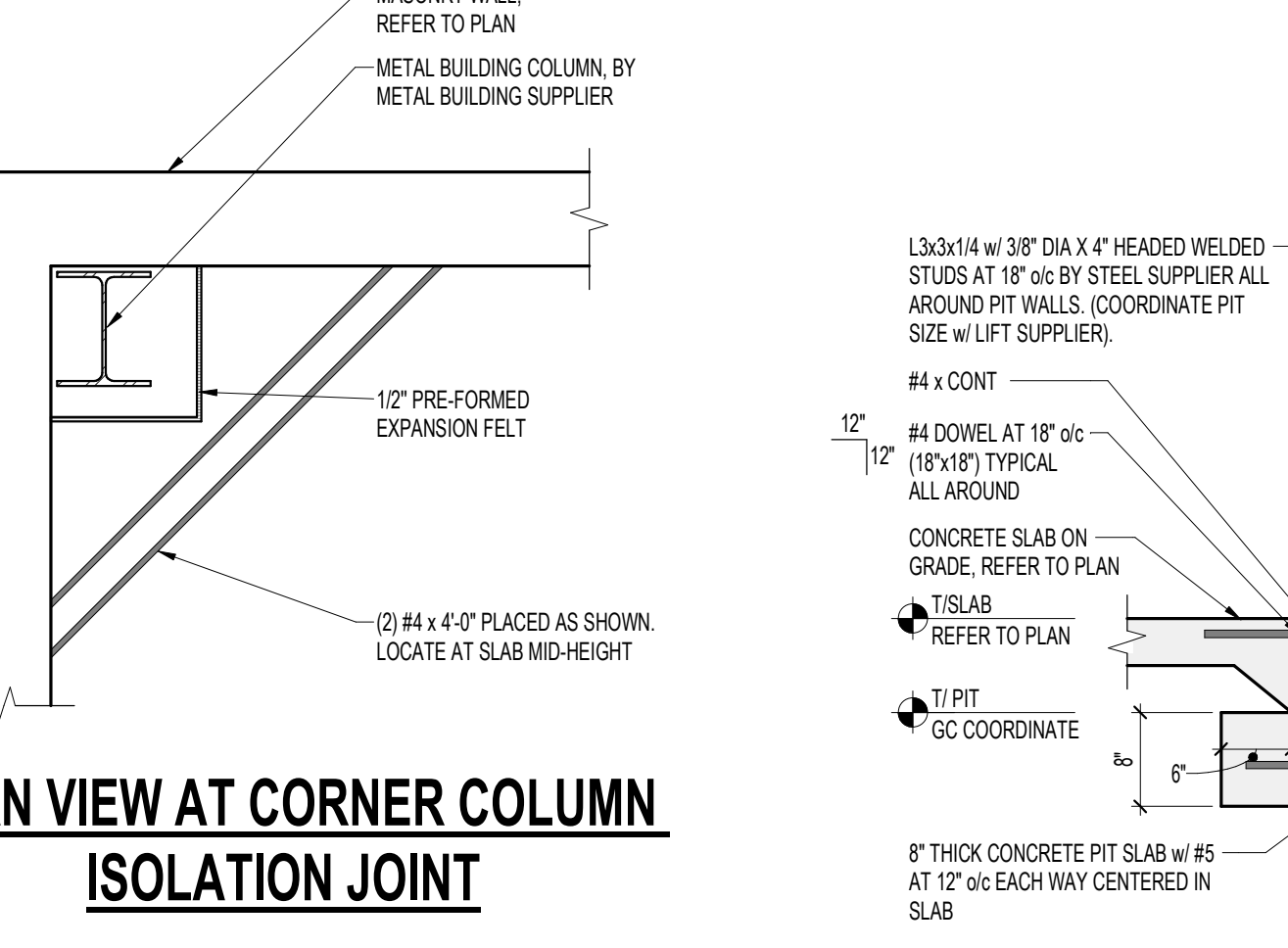
10 S-4.1 FOOTING STEP AT EXISTING



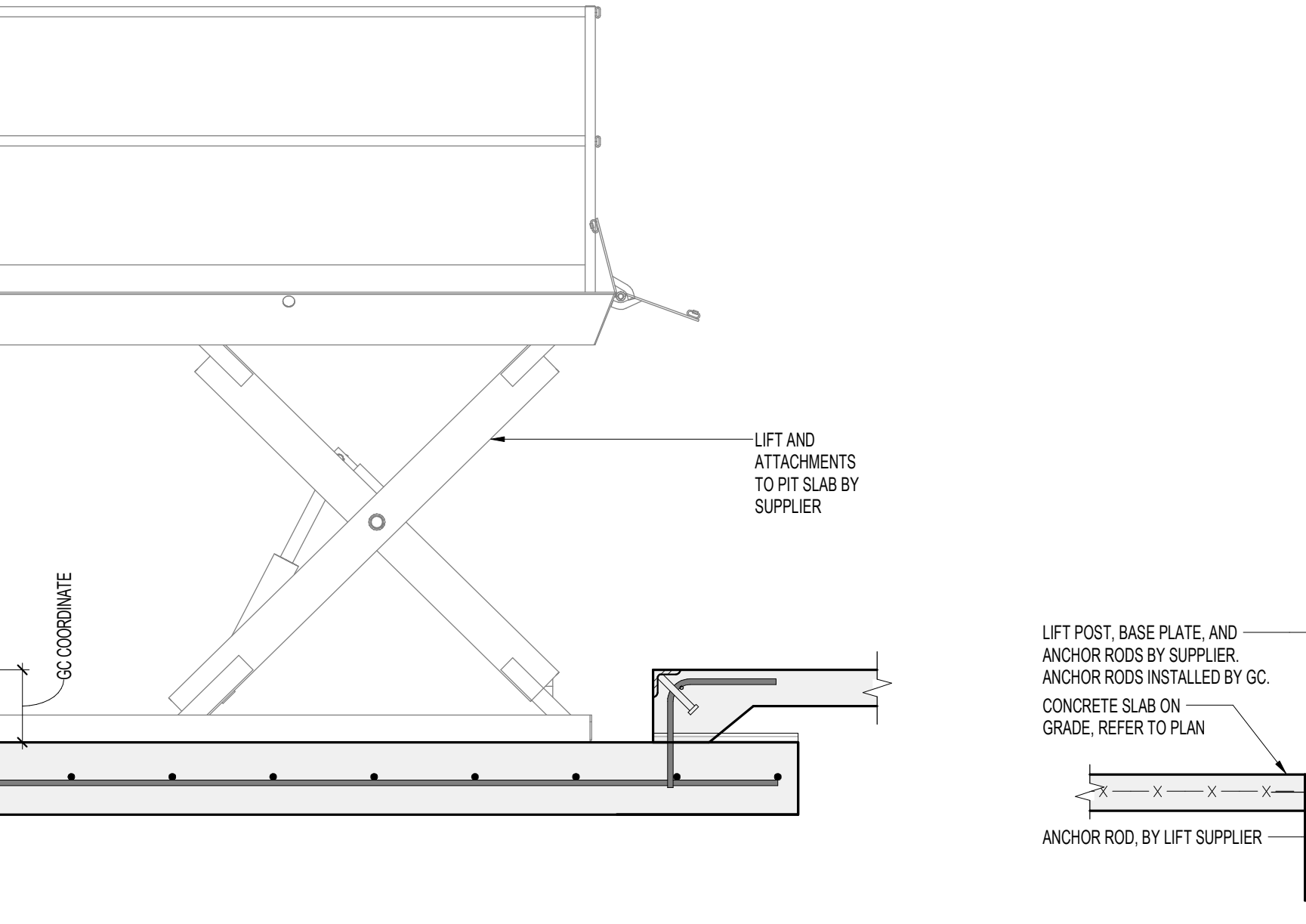
11 S-4.1 CONNECTION TO EXISTING STRIP FOOTING



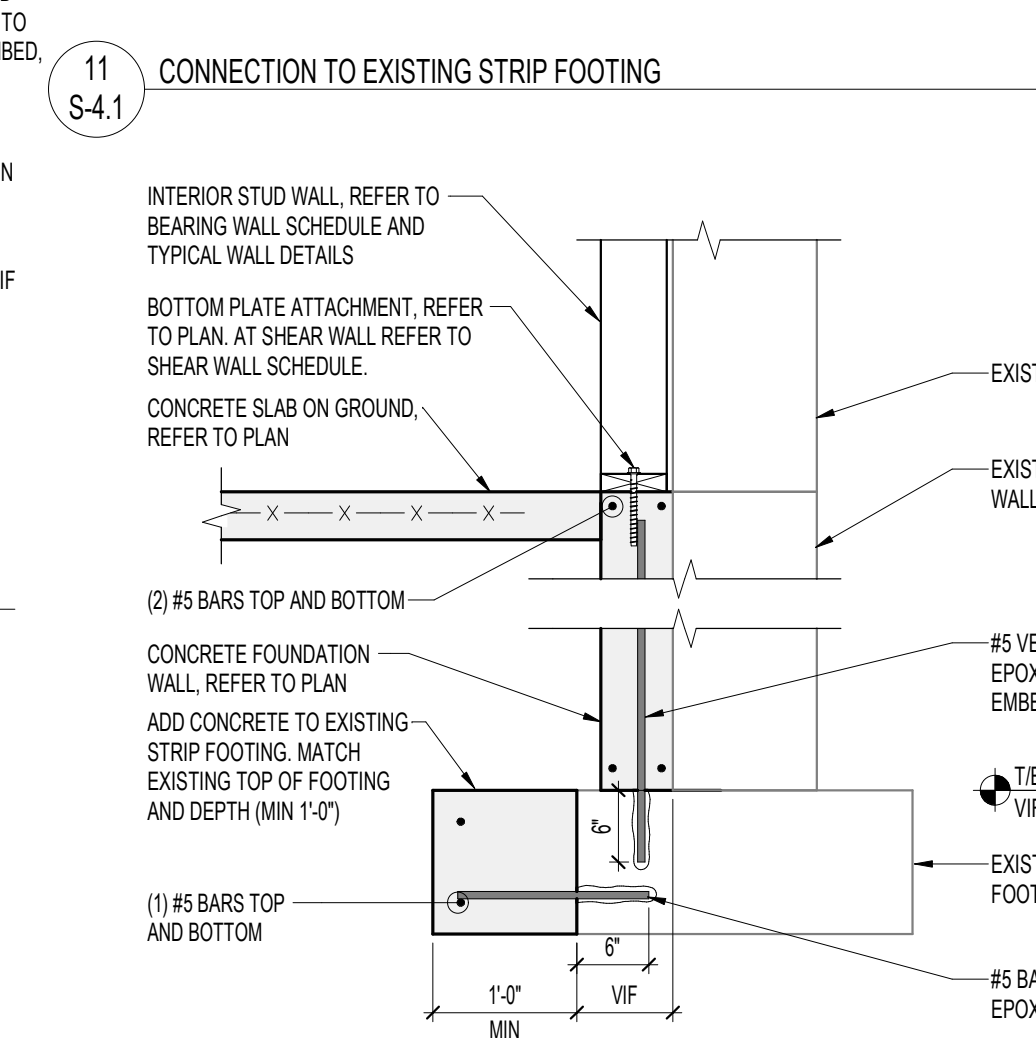
12 S-4.1 PLAN VIEW AT PERIMETER COLUMN ISOLATION JOINT



13 S-4.1 PLAN VIEW AT CORNER COLUMN ISOLATION JOINT



14 S-4.1 SECTION AT LIFT



15 S-4.1 STEEL COLUMN SITTING ON INTERIOR CONCRETE FOOTING WITH BOX-OUT ISOLATION JOINT

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SHEET INFORMATION  
A.C.E. JOB NO.  
DATE: 08-19-2024  
DRAWN BY: PE  
SCALE: 3/4" = 1'-0"  
STRUCTURAL DETAILS

PE  
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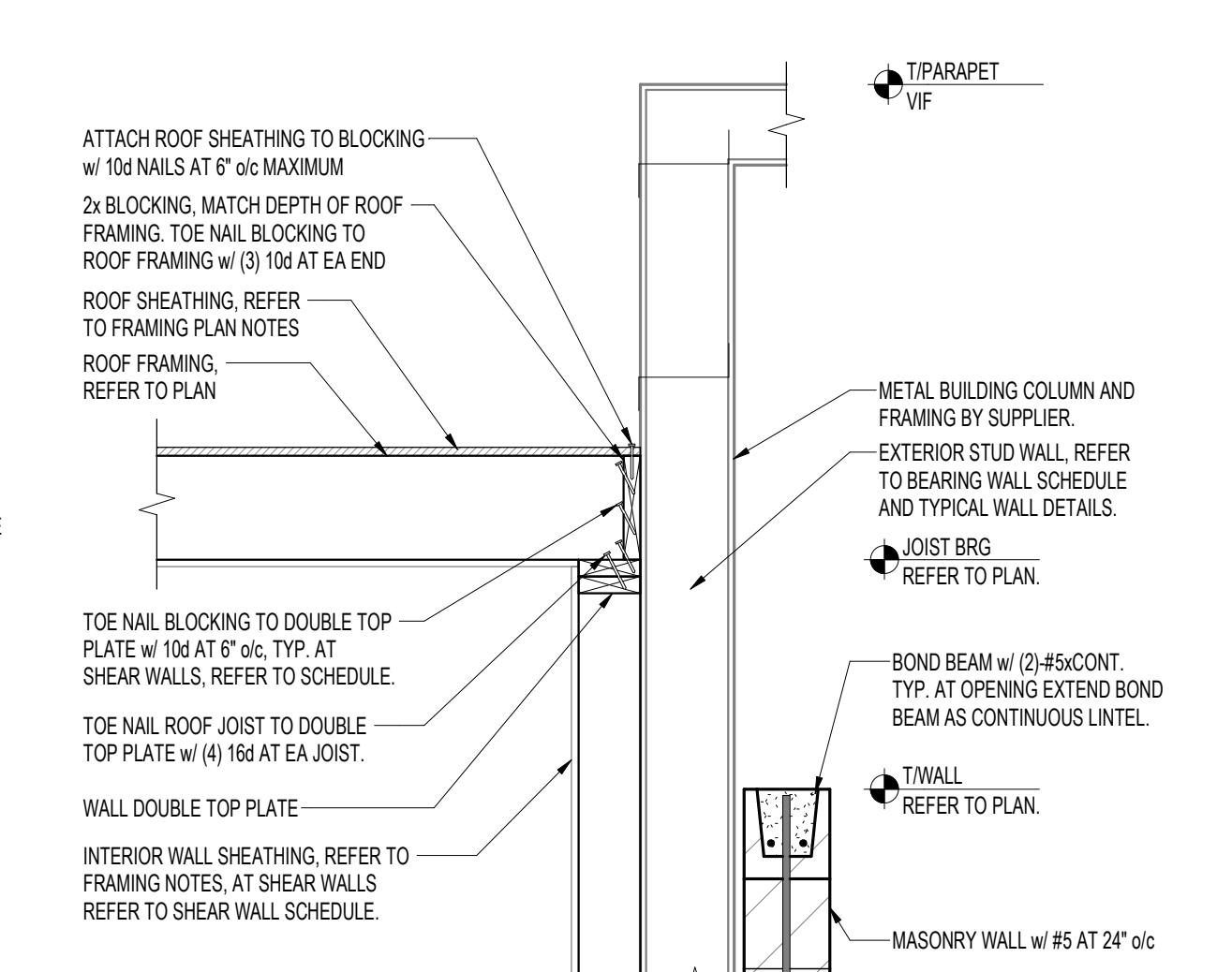
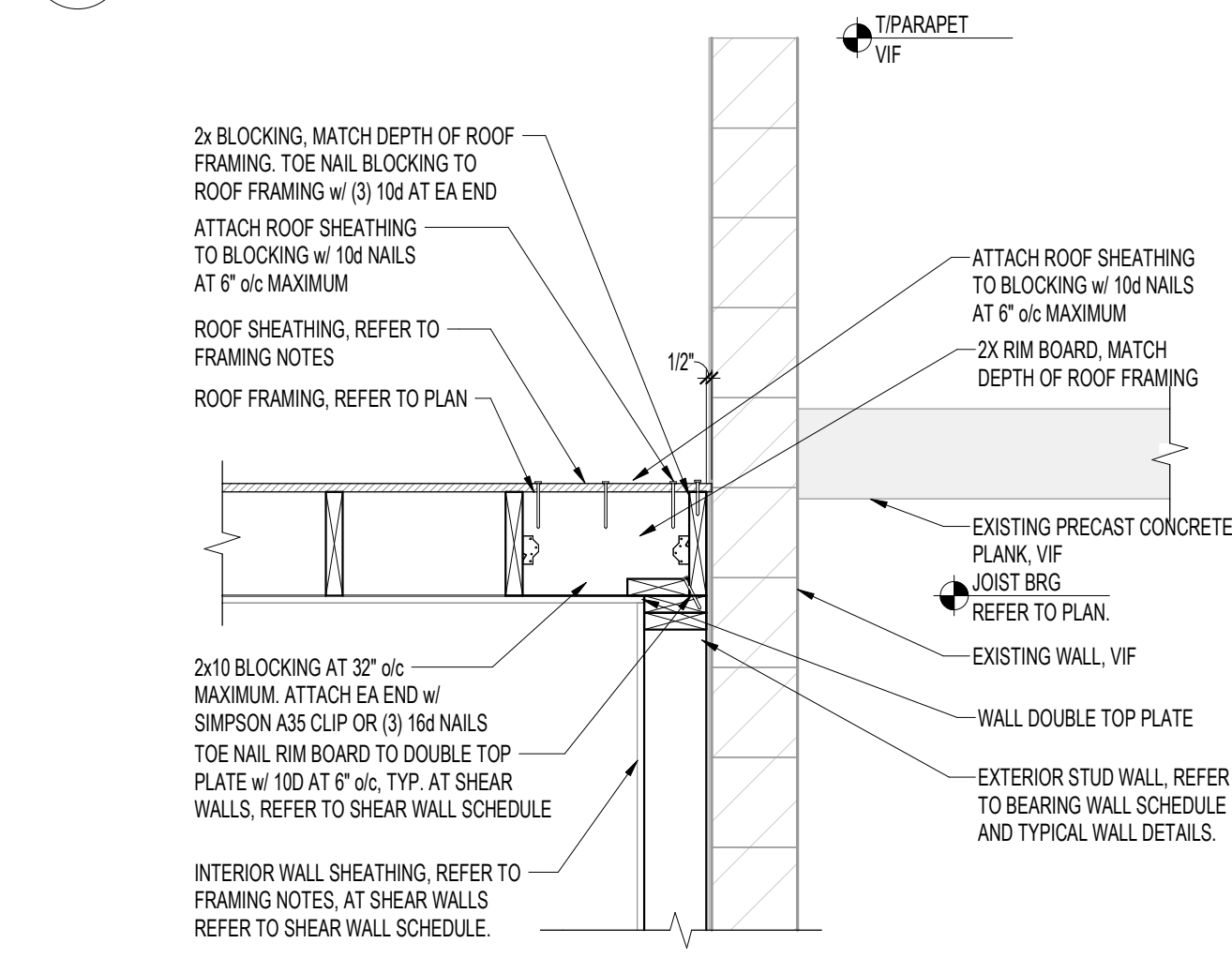
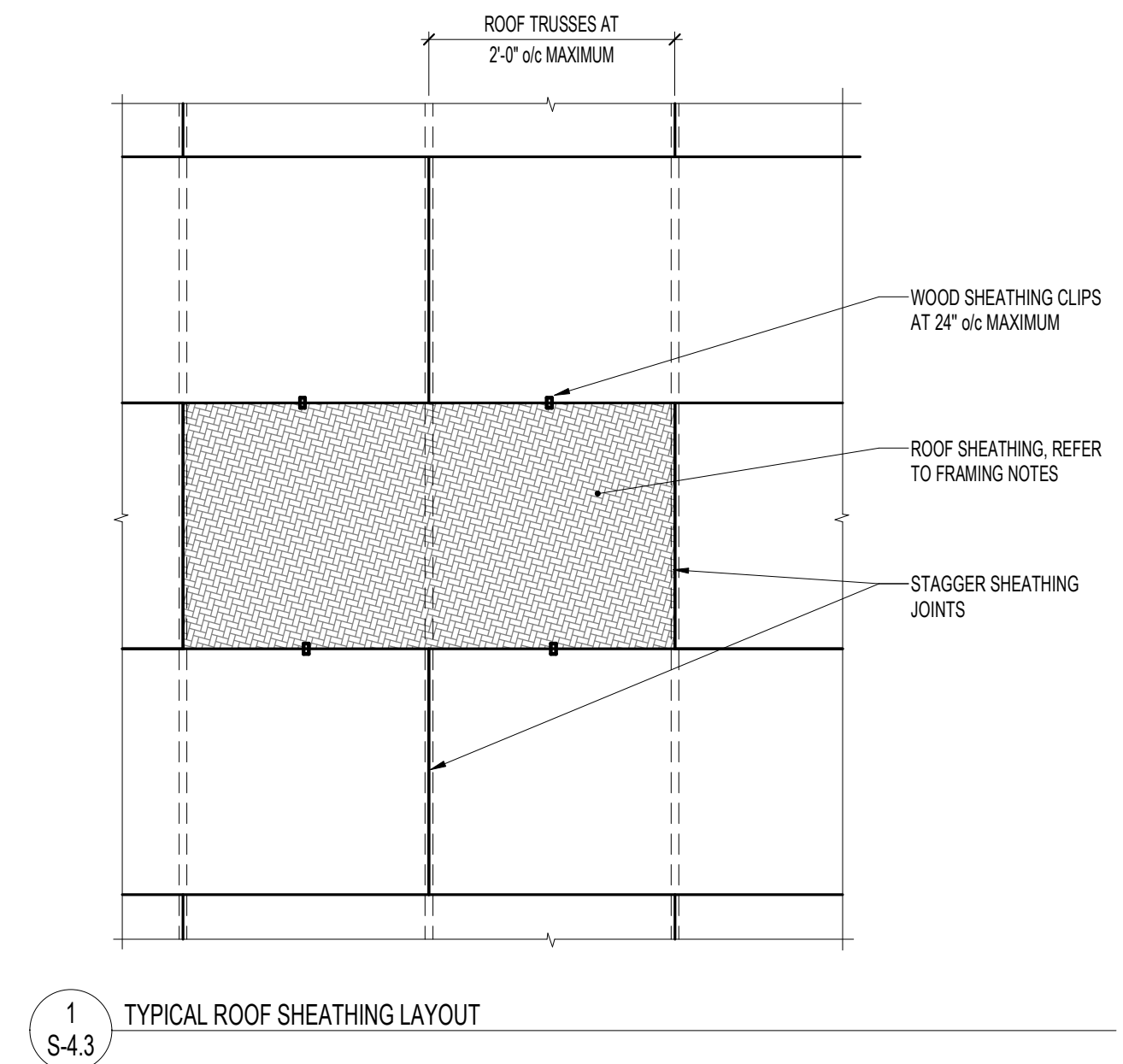
SHEET  
**S-4.1**



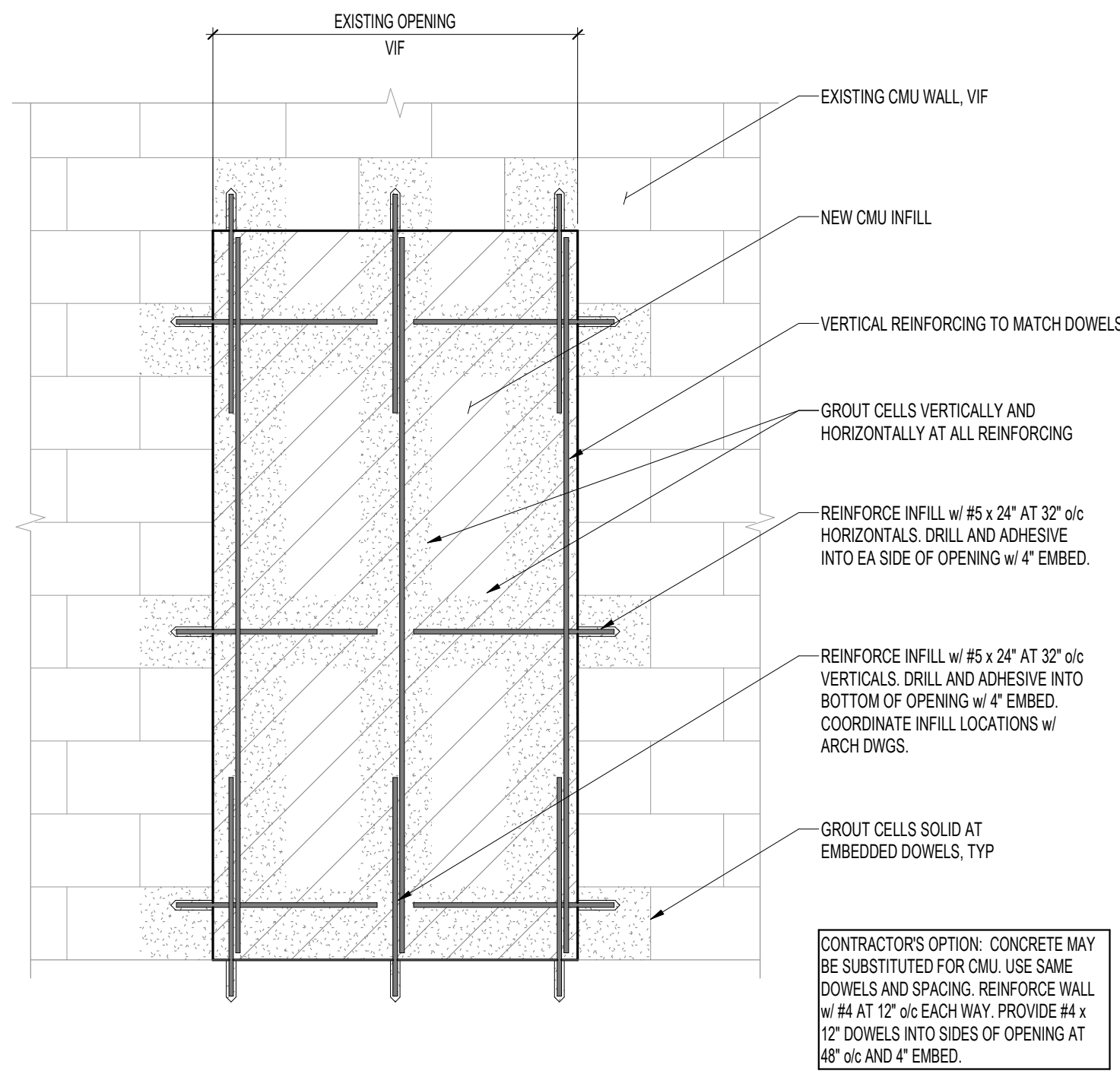
IBC 2015 TABLE 2304.10.1 MINIMUM FASTENING SCHEDULE, UNO		
DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
<b>ROOF</b>		
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	(3) 8d COMMON (2 1/2" x 0.131"); OR (3) 10d BOX (2" x 0.128"); OR (3) 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN	EACH END, TOENAIL
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	(2) 8d COMMON (2 1/2" x 0.131") (2) 3" x 0.131" NAILS (2) 3" x 14 GAGE STAPLES	EACH END, TOENAIL
FLAT BLOCKING TO TRUSS AND WEB FILLER	(2) 16d COMMON (3 1/2" x 0.162") (3) 3" x 0.131" NAILS (3) 3" x 14 GAGE STAPLES	END NAIL
2. CEILING JOISTS TO TOP PLATE	(3) 8d COMMON (2 1/2" x 0.131"); OR (3) 10d BOX (2" x 0.128"); OR (3) 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN	EACH JOIST, TOENAIL
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST). (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	(3) 16d COMMON (3 1/2" x 0.162"); OR (4) 10d BOX (2" x 0.128"); OR (4) 3" x 0.131" NAILS, OR (4) 3" x 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	PER TABLE 2308.7.3.1	FACE NAIL
5. COLLAR TIE TO RAFTER	(3) 10d COMMON (2" x 0.148"); OR (4) 10d BOX (2" x 0.128"); OR (4) 3" x 0.131" NAILS, OR (4) 3" x 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
6. RAFTER TO ROOF TRUSS TO TOP PLATE (SEE SECTION 2308.7.5, TABLE 2308.7.5)	(3) 10d COMMON (2" x 0.148"); OR (3) 10d BOX (2" x 0.128"); OR (4) 10d BOX (2" x 0.128"); OR (4) 3" x 0.131" NAILS, OR (4) 3" x 14 GAGE STAPLES, 7/16" CROWN	TOENAIL <sup>(6)</sup>
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" INCH RIDGE BEAM	(2) 16d COMMON (3 1/2" x 0.162"); OR (3) 10d BOX (2" x 0.128"); OR (3) 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN  (3) 10d COMMON (3 1/2" x 0.162"); OR (3) 16d BOX (3 1/2" x 0.135"); OR (4) 10d BOX (2" x 0.128"); OR (4) 3" x 0.131" NAILS, OR (4) 3" x 14 GAGE STAPLES, 7/16" CROWN	END NAIL  TOENAIL
<b>WALL</b>		
8. STUD TO STUD (NOT AT BRACED WALL PANELS)	16d COMMON (3 1/2" x 0.162") 10d BOX (2" x 0.128"); OR 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN	24" o/c FACE NAIL 16" o/c FACE NAIL
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d COMMON (3 1/2" x 0.162") 16d BOX (3 1/2" x 0.135") 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN	16" o/c FACE NAIL 12" o/c FACE NAIL 12" o/c FACE NAIL
10. BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON (3 1/2" x 0.162") 16d BOX (3 1/2" x 0.135")	16" o/c EACH EDGE, FACE NAIL 12" o/c EACH EDGE, FACE NAIL
11. CONTINUOUS HEADER TO STUD	(4) 8d COMMON (2 1/2" x 0.131"); OR (4) 10d BOX (2" x 0.128")	TOENAIL
12. TOP PLATE TO TOP PLATE	16d COMMON (3 1/2" x 0.162") 10d BOX (2" x 0.128"); OR 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN	16" o/c FACE NAIL 12" o/c FACE NAIL
13. TOP PLATE TO TOP PLATE, AT END JOINTS	(8) 16d COMMON (3 1/2" x 0.162"); OR (12) 10d BOX (2" x 0.128"); OR (12) 3" x 0.131" NAILS, OR (12) 3" x 14 GAGE STAPLES, 7/16" CROWN	EACH SIDE OF END JOINT, FACE NAIL, MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d COMMON (3 1/2" x 0.162") 16d BOX (3 1/2" x 0.135"); OR 3" x 0.131" NAILS, OR 3" x 14 GAGE STAPLES, 7/16" CROWN	16" o/c FACE NAIL 12" o/c FACE NAIL
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS	(2) 16d COMMON (3 1/2" x 0.162"); OR (3) 16d BOX (3 1/2" x 0.135"); OR (4) 3" x 0.131" NAILS, OR (4) 3" x 14 GAGE STAPLES, 7/16" CROWN	16" o/c FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	(4) 8d COMMON (2 1/2" x 0.131"); OR (4) 10d BOX (2" x 0.128"); OR (4) 3" x 0.131" NAILS, OR (4) 3" x 14 GAGE STAPLES, 7/16" CROWN  (2) 16d COMMON (3 1/2" x 0.162"); OR (3) 10d BOX (2" x 0.128"); OR (3) 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN	TOENAIL  END NAIL
17. TOP OR BOTTOM PLATE TO STUD	(2) 16d COMMON (3 1/2" x 0.162"); OR (3) 10d BOX (2" x 0.128"); OR (3) 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN	END NAIL
18. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	(2) 16d COMMON (3 1/2" x 0.162"); OR (3) 10d BOX (2" x 0.128"); OR (3) 3" x 0.131" NAILS, OR (3) 3" x 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
19. 1" BRACE TO EACH STUD AND PLATE	(2) 8d COMMON (2 1/2" x 0.131"); OR (2) 10d BOX (2" x 0.128"); OR (2) 3" x 0.131" NAILS, OR (2) 3" x 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL
20. 1" x 6" SHEATHING TO EACH BEARING	(2) 8d COMMON (2 1/2" x 0.131"); OR (2) 10d BOX (2" x 0.128")	FACE NAIL
21. 1" x 8" AND WIDER SHEATHING TO EACH BEARING	(3) 8d COMMON (2 1/2" x 0.131"); OR (3) 10d BOX (2" x 0.128")	FACE NAIL

IBC 2015 TABLE 2304.10.1 MINIMUM FASTENING SCHEDULE, UNO			
DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	EDGE (INCHES)	INTERMEDIATE SUPPORTS (INCHES)
31. 3/8" - 1/2"	6d COMMON OR DEFORMED (2" x 0.113") (SUBFLOOR AND WALL) 8d BOX OR DEFORMED (2 1/2" x 0.113") (ROOF) 2 3/8" x 0.113" NAIL (SUBFLOOR AND WALL) 1 3/4" x 16 GAGE STAPLES, 7/16" CROWN (SUBFLOOR AND WALL) 2 3/8" x 0.113" NAIL (ROOF) 1 3/4" x 16 GAGE STAPLES, 7/16" CROWN (ROOF)	6 6 6 4 4 3	12 12 12 8 8 6
32. 19/32" - 3/4"	8d COMMON (2 1/2" x 0.131"); OR 6d DEFORMED (2" x 0.113") 2 3/8" x 0.113" NAIL OR 2" x 16 GAGE STAPLES, 7/16" CROWN	6 4 6	12 12 8
33. 7/8" - 1 1/4"	10d COMMON (3" x 0.148"); OR 8d DEFORMED (2 1/2" x 0.131")	6	12
<b>OTHER EXTERIOR WALL SHEATHING</b>			
34. 1/2" FIBERBOARD SHEATHING <sup>(8)</sup>	1 1/2" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 1 1/4" x 16 GAGE STAPLES w/ 7/16" CROWN OR 1" CROWN	3	6
35. 25/32" FIBERBOARD SHEATHING <sup>(8)</sup>	1 3/4" GALVANIZED ROOFING NAIL (7/16" DIAMETER HEAD); OR 1 1/2" x 16 GAGE STAPLES w/ 7/16" CROWN OR 1" CROWN	3	6
<b>WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING</b>			
36. 3/4" AND LESS	8d COMMON (2 1/2" x 0.131"); OR 6d DEFORMED (2" x 0.113")	6	12
37. 7/8" - 1"	8d COMMON (2 1/2" x 0.131"); OR 8d DEFORMED (2 1/2" x 0.131")	6	12
38. 1 1/8" - 1 1/4"	10d COMMON (3" x 0.148"); OR 8d DEFORMED (2 1/2" x 0.131")	6	12
<b>PANEL SIDING TO FRAMING</b>			
39. 1/2" AND LESS	6d CORROSION-RESISTANT SIDING (1 7/8" x 0.106"); OR 6d CORROSION-RESISTANT CASING (2" x 0.099")	6	12
40. 5/8"	8d CORROSION-RESISTANT SIDING (2 3/8" x 0.128"); OR 8d CORROSION-RESISTANT CASING (2 1/2" x 0.113")	6	12
<b>INTERIOR PANELING</b>			
41. 1/4"	4d CASING (1 1/2" x 0.080"); OR 4d FINISH (1 1/2" x 0.072")	6	12
42. 3/8"	6d CASING (2" x 0.099"); OR 6d FINISH (PANEL SUPPORTS AT 24 INCHES)	6	12
<b>MINIMUM FASTENER SCHEDULE NOTES:</b>			
<sup>(6)</sup> NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.			
<sup>(8)</sup> SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).			
<sup>(9)</sup> WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.			

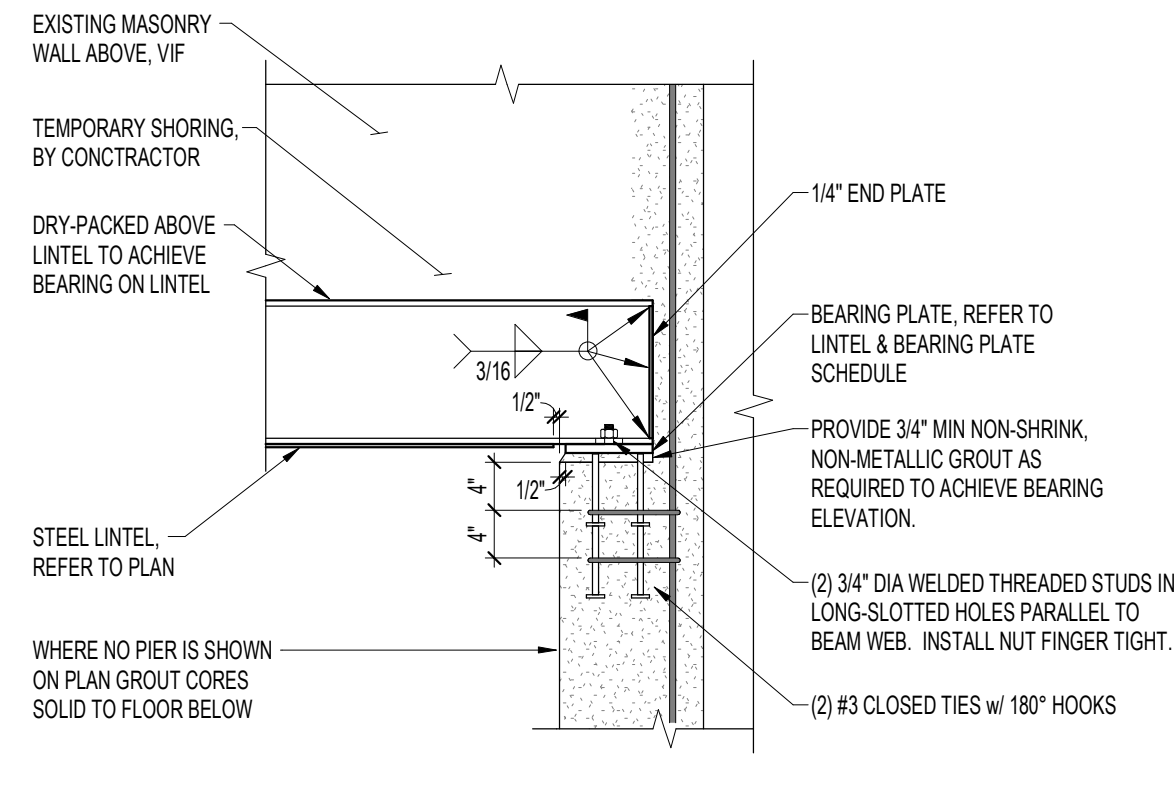
WOOD GUN NAIL CONVERSION		
USE	SPECIFIED COMMON NAILS	GUN NAIL EQUIVALENT
FLOOR & ROOF SHEATHING	10d AT 6" o/c	0.131"x3" AT 4" o/c
SHEAR WALLS, TYPE "W68"	10d AT 6" o/c	0.131"x3" AT 4" o/c
	8d AT 6" o/c	0.131"x3" AT 6" o/c
SHEAR WALLS, TYPE "W48"	10d AT 4" o/c	0.131"x3" AT 3" o/c
	8d AT 4" o/c	0.131"x3" AT 4" o/c
TYPICAL FASTENER CONDITIONS	(2) 10d OR (2) 16d	(3) 0.131"x3"
	(3) 10d OR (3) 16d	(4) 0.131"x3"
	(4) 10d OR (4) 16d	(6) 0.131"x3"
	10d AT 6" o/c	0.131"x3" AT 4" o/c
	16d AT 16" o/c	0.131"x3" AT 12" o/c
	16d AT 12" o/c	0.131"x3" AT 8" o/c
<b>GUN NAIL CONVERSION SCHEDULE NOTES:</b>		
1. REFER TO MINIMUM FASTENING SCHEDULE FOR ITEMS NOT COVERED HERE.		
2. MINIMUM PENETRATION INTO BASE WOOD MEMBER = 1 1/2".		
3. GUN NAILS SHALL HAVE FULL ROUND HEADS.		



NO.	REVISION DESCRIPTION	DATE	REV. BY
<p>PROJECT INFORMATION:</p> <p><b>SAUVE'S AUTO</b> TWO RIVERS, WISCONSIN</p> <p>THIS PLAN AND IDEAS EXPRESSED HERE-IN ARE THE PROPERTY OF A.C.E. BUILDING SERVICE, INC. THESE PLANS SHALL NOT BE SHARED BY VISUAL MEANS OR REPRODUCED WITHOUT THE CONSENT OF A.C.E. BUILDING SERVICE, INC.</p> <p>SHEET INFORMATION</p> <p>A.C.E. JOB NO. _____</p> <p>DATE: 08-19-2024</p> <p>DRAWN BY: PE</p> <p>SCALE: As indicated</p> <p>STRUCTURAL DETAILS</p> <p>SHEET</p> <p><b>S-4.3</b></p>			
<p>AC.E. BUILDING SERVICE OUR REPUTATION IS OUR FOUNDATION 3810 SOUTH 26TH STREET   MANTOWOC, WISCONSIN 54220 PHONE 920-682-4105   WWW.ACEBUILDINGSERVICE.COM</p> <p><b>Civil &amp; Structural</b> A DIVISION OF AC.E. BUILDING SERVICE</p> <p>SUPERVISING PROFESSIONAL: </p>		<p>DATE</p> <p>REV. BY</p>	



1 S-4.4 TYPICAL LOAD BEARING CMU WALL INFILL



2 S-4.4 STEEL LINTEL BEARING ON EXISTING MASONRY WALL

LOAD BEARING LINTEL SCHEDULE						
MARK	TYPE	BEAM SIZE OR BOND BEAM DEPTH	CONT PLATE THICKNESS	BOND BEAM BOTTOM REIN. UNO	STIRRUPS	REMARKS
L1	A	W16x26	5/16"	--	--	3/8"x6"x10' w/ (2) 1/2" DIA x 10' HEADED STUDS AT 5' GAGE
L2	SEE PLAN	W16x31	--	--	--	--
L3	SEE PLAN	W8x10	--	--	--	--
L4	B	8"	--	(2) #5	--	--

**LOAD BEARING LINTEL SCHEDULE NOTES:**

- UNLESS STEEL LINTEL BEAM CONNECTS TO A COLUMN, PROVIDE 8" BEARING AT EACH END OF LINTEL.
- EXTEND BOND BEAM REINFORCING 30" PAST OPENING EXTENTS. REINFORCING THAT CANNOT ACHIEVE 30" PAST OPENING SHALL TERMINATE IN A 180° HOOK AND EXTEND AT LEAST 18" PAST OPENING. NOTIFY ENGINEER IF THIS CANNOT BE ACHIEVED.
- DO NOT INSTALL CONTROL JOINT WITHIN BOND BEAM REINFORCING EXTENTS.
- EXTERIOR LINTELS TO BE HOT DIPPED GALVANIZED, UNLESS NOTED OTHERWISE. WHERE ARCH DRAWINGS CALL OUT PAINTED LINTELS, COORDINATE PREP AND CLEAN LINTEL FOR PAINTING AFTER GALVANIZING WITH ARCHITECT AND PAINTING CONTRACTOR.
- REFER TO ARCH DRAWINGS FOR OPENING LOCATIONS, ELEVATIONS, AND SIZES.
- REFER TO TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
- GROUT CONCRETE MASONRY UNITS SOLID FULL HEIGHT AND LENGTH OF BOND BEAM LINTEL.

NON-LOAD BEARING INTERIOR MASONRY WALL REINFORCING SCHEDULE			
CLEAR HEIGHT	WALL THICKNESS	VERTICAL REINFORCEMENT & SPACING	REMARKS
H < 8'-0"	8"	#5 AT 24" o/c MAX, CENTERED	

**NON-LOAD BEARING INTERIOR MASONRY WALL REINFORCING SCHEDULE NOTES:**

- WALLS THAT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS ARE CONSIDERED NON-LOAD BEARING. REFER TO ARCHITECTURAL DRAWINGS FOR ALL WALL LOCATIONS AND DIMENSIONS.
- REFER TO ARCHITECTURAL DRAWINGS FOR OPENING LOCATIONS, ELEVATIONS, AND SIZES.
- GROUT CONCRETE MASONRY UNITS SOLID FULL HEIGHT OF BUILDING AT REINFORCEMENT LOCATIONS.
- UNLESS NOTED OTHERWISE, PROVIDE #4 x 16" LONG DOWELS WITH 3" ADHESIVE EMBED INTO LOWER CONCRETE SUPPORT. SPACING TO MATCH VERTICAL WALL REINFORCING.
- REFER TO DETAIL SHEETS FOR TOP OF WALL BRACING.
- REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF SOLIDLY GROUTED WALLS.

MASONRY (CMU) REINFORCEMENT DEVELOPMENT AND LAP SPlice SCHEDULE							
BAR SIZE	CENTERED					CLEAR COVER - EACH FACE - ALL BLOCK - ASD	
	8" BLOCK	10" BLOCK	12" BLOCK	14" BLOCK	16" BLOCK	1 1/2"	2"
#3	12"	12"	12"	12"	12"	15"	12"
#4	16"	12"	12"	12"	12"	26"	20"
#5	26"	18"	14"	12"	12"	41"	31"
#6	47"	34"	28"	21"	18"	77"	58"
#7	--	47"	36"	29"	25"	104"	78"
#8	--	71"	55"	45"	38"	158"	117"
#9	--	--	70"	57"	48"	198"	149"

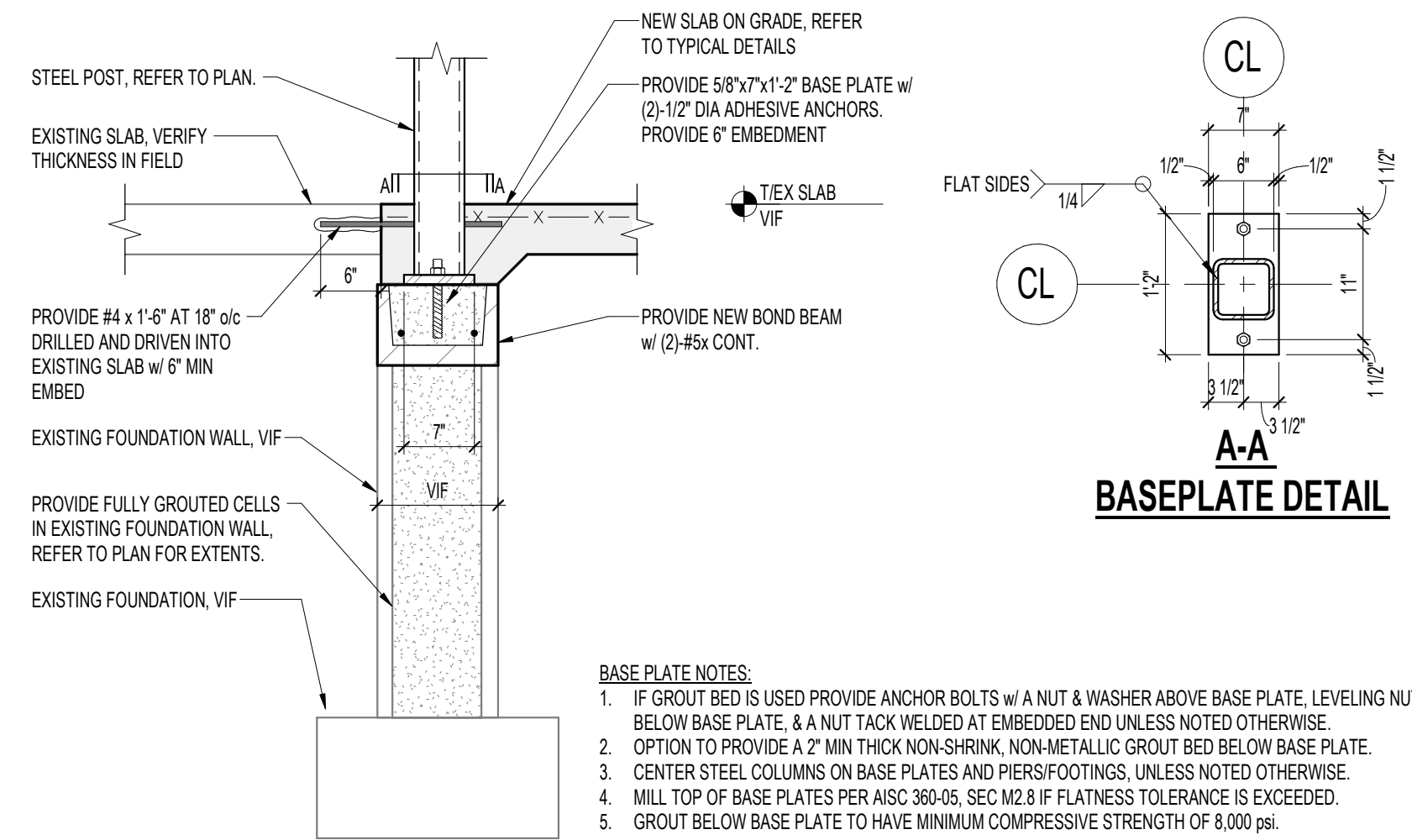
**MASONRY (CMU) REINFORCING DEVELOPMENT AND LAP SPlice SCHEDULE NOTES:**

- 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.
- VALUES IN THIS SCHEDULE ARE BASED ON NORMAL WEIGHT MASONRY BLOCK,  $f_m = 2,500$  psi.
- LOCATE BAR POSITIONERS AT SPLICES, TOP AND BOTTOM OF WALLS, AND AT INTERVALS NOT EXCEEDING 8'-0".
- TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPlice LENGTHS ARE CALCULATED PER CURRENT ADDITION OF TMS 402/ACI 530.

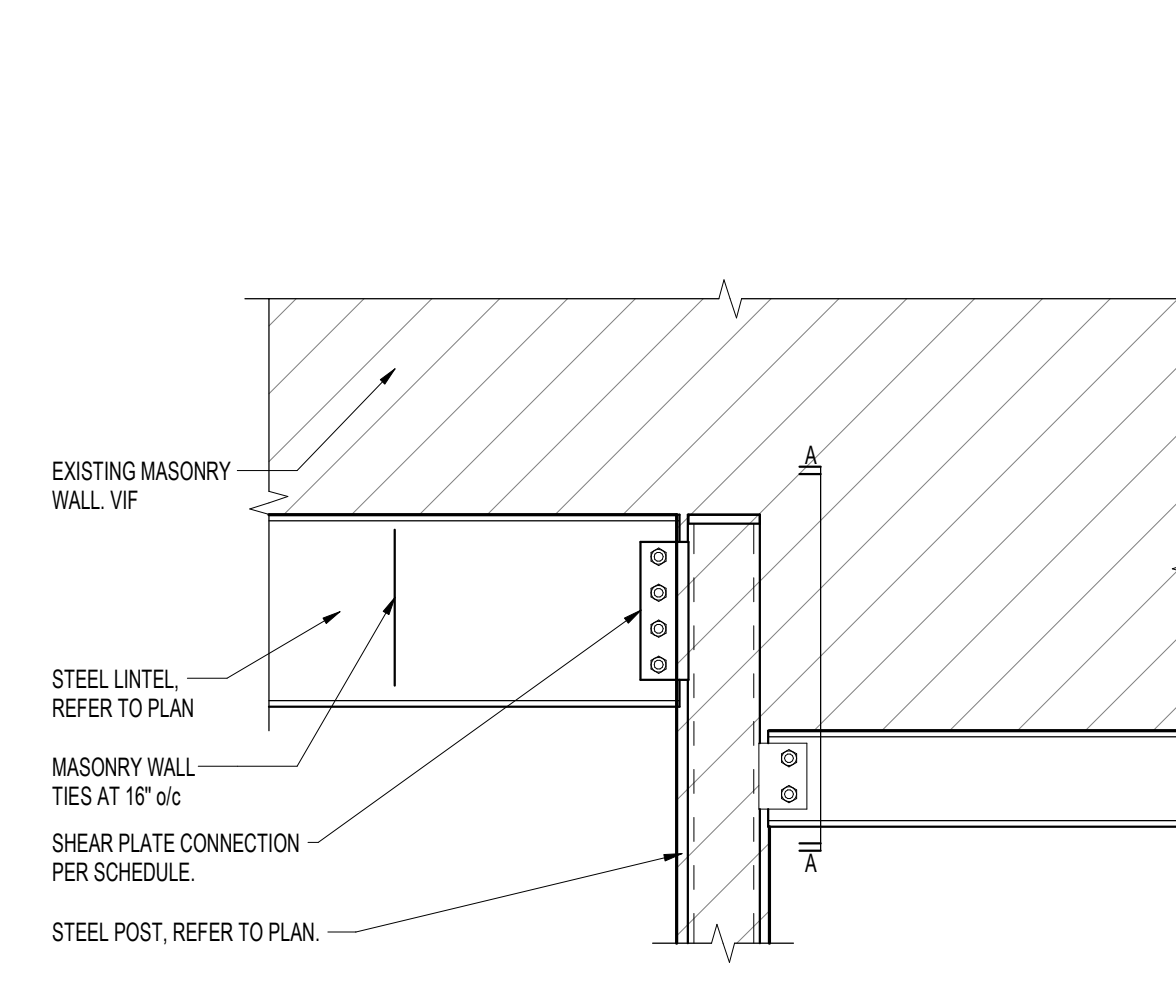
MASONRY PIER SCHEDULE					
MARK	SIZE	VERTICAL REINFORCEMENT	PIER TIES	TYPE MARK	REMARKS
MP1	8" WALL WIDTH	(1) #5	--	I	
MP2	16" WALL WIDTH	(2) #5	--	I	
MP3-E	16" WALL WIDTH	(1) #4	--	I	REFER TO DETAIL 2/S4.4

**MASONRY PIER SCHEDULE NOTES:**

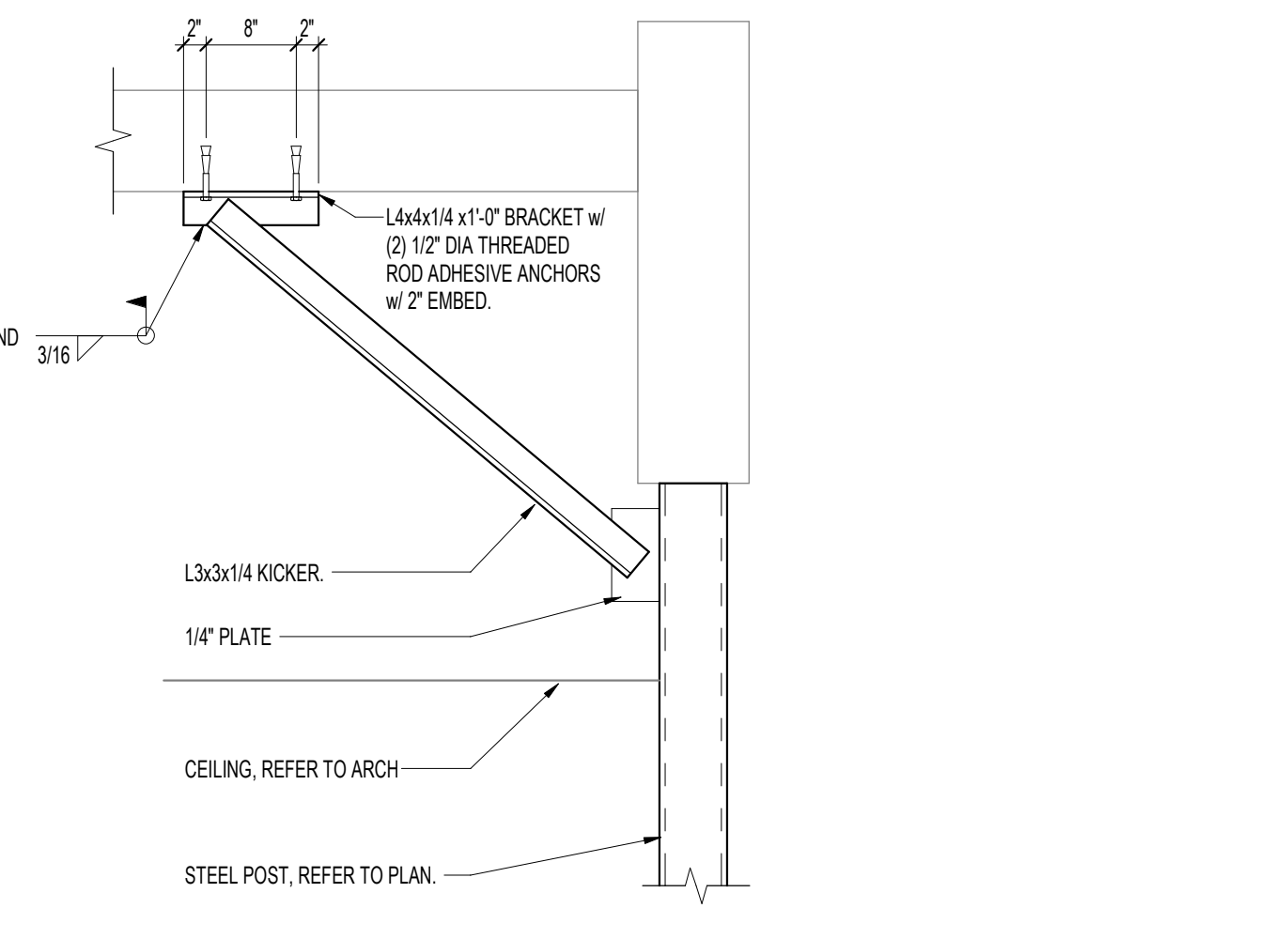
- AT TOP OF MASONRY PIER SUPPORTING STEEL BEAM, PROVIDE (2) #3 CLOSED TIES w/ 180° HOOKS MINIMUM. PROVIDE FIRST TIE BELOW TOP OF WALL, PIER, BEAM BEARING, ROOF AND/OR FLOOR SLAB AT HALF THE REQUIRED TIE SPACING INDICATED.
- GROUT CONCRETE MASONRY UNITS SOLID FOR FULL HEIGHT AND CROSS SECTION OF PIERS.
- PROVIDE DOWELS INTO CONCRETE FOOTING TO MATCH VERTICAL MASONRY WALL REINFORCEMENT. DOWELS TO TERMINATE IN STANDARD 90° HOOK IN FOOTING.
- CENTER MASONRY PIER BELOW BEAM ABOVE UNLESS DETAILED OTHERWISE.
- PROVIDE FIRST TIE ABOVE TOP OF FOOTING AT HALF THE REQUIRED TIE SPACING INDICATED.
- TIES SHALL BE PLACED IN THE GROUT AND NOT THE MORTAR JOINT.
- CONTRACTORS OPTION TO USE PREFORMED COLUMN AND PILASTER SHAPES IN LIEU OF STANDARD BLOCK SHAPE COURSING INDICATED.
- REFER TO GENERAL NOTES FOR CLEAR COVER REQUIREMENTS.



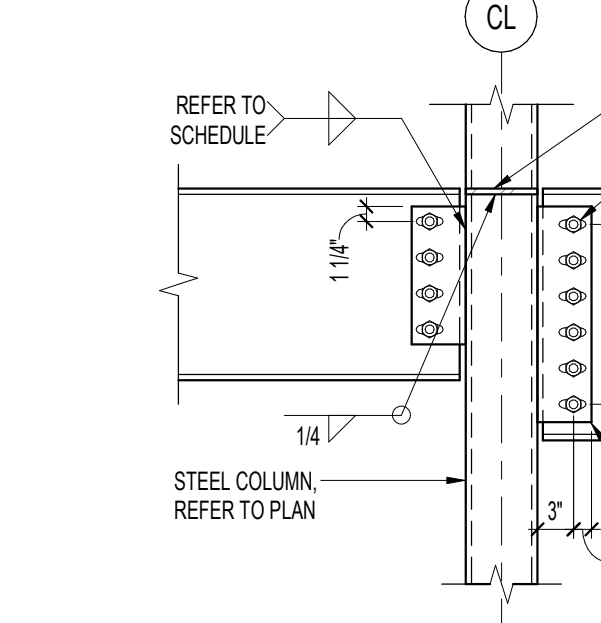
3 S-4.4 STEEL POST AT EXISTING



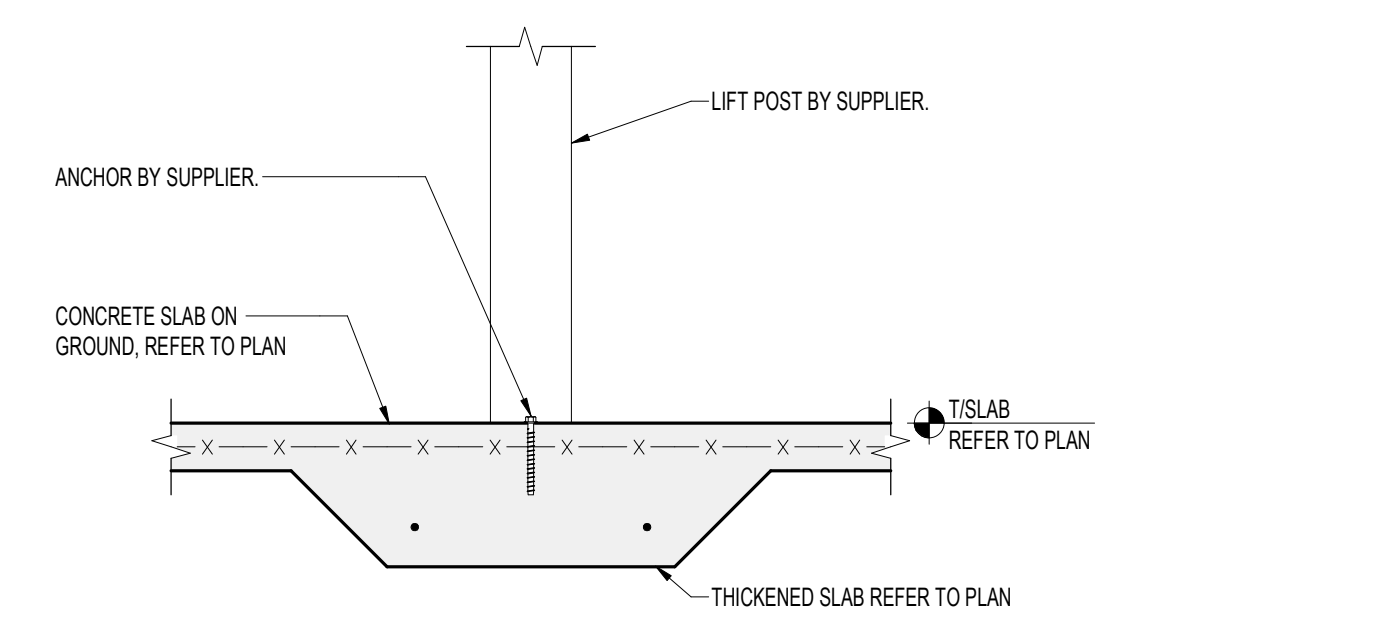
4 S-4.4 STEEL LINTEL w/ COLUMN



BEAM DEPTH	N	PLATE	WELD
W8, W10	2	5/16" x 4 1/2" x 0-5 1/2"	1/4"
W12, W14	3	5/16" x 4 1/2" x 0-8 1/2"	1/4"
W16	4	5/16" x 4 1/2" x 0-11 1/2"	1/4"
W18	5	5/16" x 4 1/2" x 1-2 1/2"	1/4"
W21	6	5/16" x 4 1/2" x 1-5 1/2"	1/4"
W24	7	5/16" x 4 1/2" x 1-8 1/2"	1/4"
W27	8	5/16" x 4 1/2" x 1-11 1/2"	1/4"
W30, W33	9	5/16" x 4 1/2" x 2-2 1/2"	1/4"



5 S-4.4 TYPICAL SHEAR PLATE CONNECTION



7 S-4.4 LIFT ON THICKENED SLAB

REV. BY: [ ]  
DATE: [ ]  
NO. [ ]

REVISION DESCRIPTION: [ ]

PROJECT INFORMATION:  
**SAUVE'S AUTO**  
TWO RIVERS, WISCONSIN

OUR REPUTATION IS OUR FOUNDATION  
3810 SOUTH 26TH STREET | MANTOWOC, WISCONSIN 54220  
PHONE 920-682-4105 | WWW.ACEBUILDINGSERVICE.COM

**A.C.E. BUILDING SERVICE**  
A DIVISION OF **Civil & Structural**

SUPERVISING PROFESSIONAL: [ ]

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SHEET INFORMATION  
A.C.E. JOB NO. [ ]  
DATE: 08-19-2024  
DRAWN BY: PE  
SCALE: As indicated  
STRUCTURAL DETAILS  
SHEET  
**S-4.4**

PERCE ENGINEERS, INC.  
181 N. Broadway Ave  
Milwaukee, WI 53202  
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PE Project: 240407









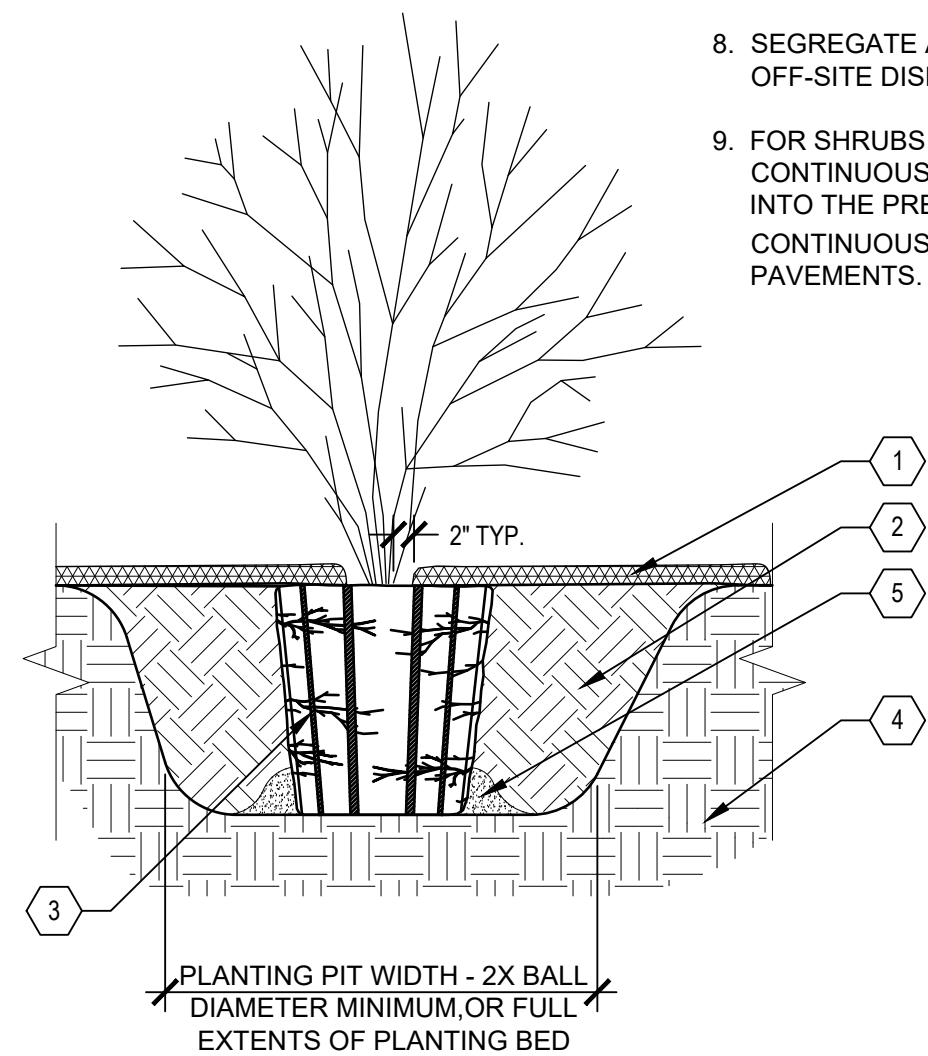






**NOTES:**

1. MAKE 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND THE CIRCUMFERENCE OF THE ROOT BALL BEFORE PLANTING TO LOOSEN POT-BOUND ROOTS.
2. PLANT EACH SHRUB SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
3. PLANTING HOLE MUST NOT BE DEEPER THAN THE HEIGHT OF THE ROOT BALL.
4. DO NOT PLACE MULCH IN CONTACT WITH STEMS.
5. PLACE ROOT BALL ON UNEXCAVATED OR TAMPED SOIL.
6. WATER ALL PLANTS WITHIN 2 HOURS OF INSTALLATION.
7. PRUNE ONLY AS NECESSARY TO REMOVE UNHEALTHY BRANCHES. DO NOT REMOVE MORE THAN 1/3 OF THE ORIGINAL PLANT MASS.
8. SEGREGATE ANY SOIL FROM BELOW WARNING LAYER EXCAVATED DURING PLANTING FOR OFF-SITE DISPOSAL. COORDINATE DISPOSAL WITH ENVIRONMENTAL CONSULTANT.
9. FOR SHRUBS PLANTED WITHIN PLANTING BEDS, CONTRACTOR SHALL PROVIDE PLANTING SOIL CONTINUOUSLY FOR THE ENTIRE PLANTING BED AND INDIVIDUAL SHRUBS SHALL BE PLANTED INTO THE PREPARED PLANTING SOIL. MULCH SURFACE FOR PLANTING BEDS SHALL ALSO BE CONTINUOUS ACROSS THE ENTIRE SURFACE AND HELD 1/2" MIN. TO 1" MAX. BELOW ADJACENT PAVEMENTS.



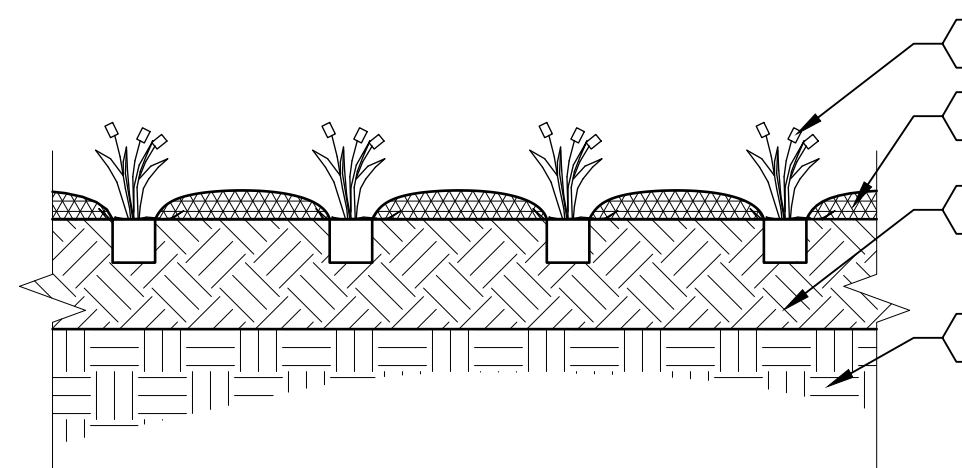
**KEYED LEGEND**

- 1 3" DEPTH TWICE-SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE INDICATED. KEEP 2" CLEAR OF STEMS
- 2 PLANTING SOIL AS SPECIFIED. PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED
- 3 1" TO 2" DEEP VERTICAL CUTS EVERY 6" AROUND PERIMETER
- 4 PREPARED SUBGRADE
- 5 TAMP SOIL AROUND BALL BASE FIRMLY WITH FOOT PRESSURE SO THAT BALL DOES NOT SHIFT

**A TYPICAL SHRUB PLANTING**  
SCALE: N.T.S.

**NOTES:**

1. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.
2. PLANTING HOLE MUST NOT BE DEEPER THAN THE HEIGHT OF THE ROOT BALL.
3. DO NOT PLACE MULCH IN CONTACT WITH STEMS.
4. WATER ALL PLANTS THOROUGHLY WITHIN 2 HOURS OF INSTALLATION.
5. PRUNE ONLY AS NECESSARY TO REMOVE UNHEALTHY OR DEAD PLANT PARTS. DO NOT REMOVE MORE THAN 1/3 OF THE ORIGINAL PLANT MASS.
6. FOR PLANTS PLANTED WITHIN PLANTING BEDS, CONTRACTOR SHALL PROVIDE PLANTING SOIL CONTINUOUSLY FOR THE ENTIRE PLANTING BED AND INDIVIDUAL SHRUBS SHALL BE PLANTED INTO THE PREPARED PLANTING SOIL. MULCH SURFACE FOR PLANTING BEDS SHALL ALSO BE CONTINUOUS ACROSS THE ENTIRE SURFACE AND HELD 1/2" MIN. TO 1" MAX. BELOW ADJACENT PAVEMENTS.



**KEYED LEGEND**

- 1 PERENNIAL, ORNAMENTAL GRASS, OR GROUND COVER PLUG, SEE LANDSCAPE PLAN SHEETS L100-L103
- 2 3" DEPTH TWICE-SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE INDICATED. KEEP 3" CLEAR OF STEMS
- 3 PLANTING SOIL. PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE ENTIRE AREA OF ANY GIVEN PLANT BED
- 4 PREPARED SUBGRADE

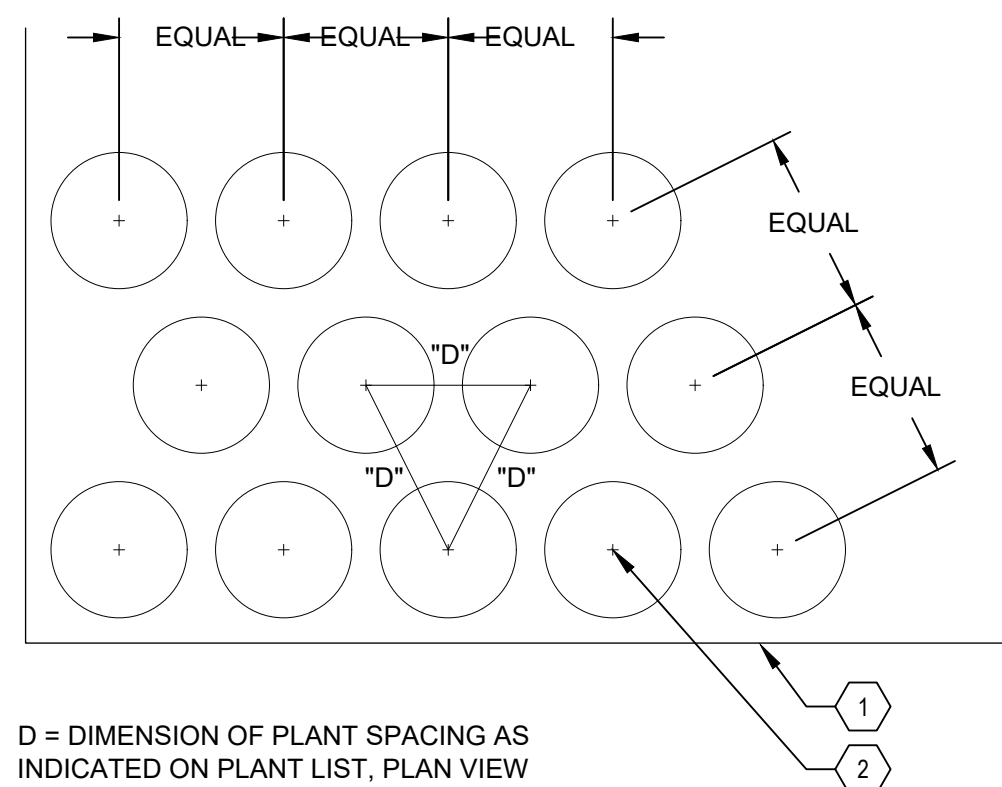
**B TYPICAL PERENNIAL & ORNAMENTAL GRASS PLANTING**  
SCALE: N.T.S.

**NOTES**

1. SET FINISH GRADE OF PLANTING AREA 2" BELOW FINISH SURFACE OF PAVING, CURB, OR HEADER
2. SEE PLANTING SCHEDULE FOR SPACING OF ALL SHRUBS AND GROUNDCOVERS
3. ALL SHRUBS / GROUNDCOVER TO BE PLANTED AT EQUAL SPACING (TRIANGULAR) UNLESS OTHERWISE INDICATED ON PLANS.
4. TO DETERMINE APPROPRIATE PLANT QUANTITIES REFER TO THE PLANTING SCHEDULE OR PLAN.

**KEYED LEGEND**

- 1 EDGE OF ADJACENT PAVEMENT
- 2 SHRUB, PERENNIAL OR ORNAMENTAL GRASS PLANT CENTER LOCATION



D = DIMENSION OF PLANT SPACING AS INDICATED ON PLANT LIST, PLAN VIEW

**C TYPICAL PLANT SPACING**  
SCALE: N.T.S.

**PLANTING QUALITY ASSURANCE**

1. PLANTS ARE TO BE INSPECTED UPON DELIVERY TO PROJECT SITE AND THE LANDSCAPE ARCHITECT OR OWNER'S PROJECT REPRESENTATIVE MAY REJECT ANY SPECIMENS NO LONGER MEETING THE SPECIFIED STANDARDS OR THAT HAVE BEEN DAMAGED IN TRANSIT.
2. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES AND VARIETY/HYBRID/CULTIVAR SPECIFIED, AND NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES, AND UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE OF THE SITE LOCATION. SPECIMENS NURSERY-DUG TO BE REPLANTED SHALL HAVE BEEN FRESHLY DUG AND PROPERLY PREPARED FOR PLANTING.
3. TREES:
  - 3.1. SHALL BE TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE SUPERIOR IN FORM, COMPACTNESS AND SYMMETRY. TREES WITH MULTIPLE LEADERS, UNLESS SPECIFIED OTHERWISE, AND SHRUBS WITH DAMAGED OR CUT MAINSTEM(S), WILL BE REJECTED.
  - 3.2. WITH A DAMAGED, CUT OR CROOKED LEADER, ABRASION OF BARK, SUNSCALD, FROST CRACK, DISFIGURING KNOTS, INSECTS (INCLUDING EGGS AND LARVAE) OR INSECT DAMAGE, CANKERS/CANKEROUS LESIONS OR FUNGAL MATS, MOLD, PREMATURELY-OPENED BUDS, OR CUTS OF LIMBS OVER 1/4" DIAMETER THAT ARE NOT COMPLETELY CALLOSED WILL BE REJECTED.
  - 3.3. SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS, AND BE FREE FROM PHYSICAL DAMAGE OR OTHER HINDRANCES TO HEALTHY GROWTH.
  - 3.4. BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH SOLID BALLS OF A DIAMETER NOT LESS THAN THAT RECOMMENDED BY THE AMERICAN STANDARDS FOR NURSERY STOCK, AND OF SUFFICIENT DEPTH TO INCLUDE BOTH FIBROUS AND FEEDING ROOTS. BALLS SHALL BE SECURELY WRAPPED WITH BURLAP, AND TIGHTLY BOUND WITH ROPE OR TWINE. NO PLANTS SHALL BE BOUND WITH ROPE OR WIRE IN SUCH A MANNER AS TO DAMAGE BARK OR BREAK BRANCHES. THE ROOT FLARE SHOULD BE WITHIN THE TOP 2" OF THE SOIL BALL. BALLED AND BURLAPPED PLANTS WILL NOT BE ACCEPTED IF THE BALL IS DRY, CRACKED, OR BROKEN BEFORE OR DURING PLANTING.
4. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED WITHIN THE PLANT SCHEDULE.

**PLANTING PROJECT CONDITIONS:**

1. VERIFY SERVICE AND UTILITY LOCATIONS, AND DIMENSIONS OF CONSTRUCTION CONTIGUOUS WITH NEW PLANTINGS BY FIELD MEASUREMENTS BEFORE PROCEEDING WITH PLANTING WORK.
2. INTERRUPTION OF EXISTING SERVICES OR UTILITIES; DO NOT INTERRUPT SERVICES OR UTILITIES UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY SERVICES OR UTILITIES ACCORDING TO REQUIREMENTS INDICATED:
  - 2.1. NOTIFY OWNER'S PROJECT REPRESENTATIVE NO FEWER THAN TWO DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF EACH SERVICE OR UTILITY.
  - 2.2. DO NOT PROCEED WITH INTERRUPTION OF SERVICES OR UTILITIES WITHOUT REPRESENTATIVE'S WRITTEN PERMISSION.
3. PLANTING RESTRICTIONS: PLANTING SHALL OCCUR DURING THE FOLLOWING ACCEPTABLE INSTALLATION PERIODS:
  - 3.1. DECIDUOUS TREES AND SHRUBS - APRIL 15 TO OCTOBER 15.
  - 3.2. NATIVE SEEDING AND TURFGRASS: APRIL 15 - OCTOBER 15
4. WEATHER LIMITATIONS: PROCEED WITH PLANTING ONLY WHEN EXISTING AND FORECASTED WEATHER CONDITIONS PERMIT PLANTING TO BE PERFORMED WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. APPLY PRODUCTS DURING FAVORABLE WEATHER CONDITIONS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AND WARRANTY REQUIREMENTS.
5. CONTRACTOR SHALL PROTECT ALL EXISTING AND/OR NEWLY INSTALLED PLANTS, LAWNS, AND GRASS AREAS FROM DAMAGE AT ALL TIMES. DAMAGED PLANTS, LAWNS OR GRASS AREAS SHALL BE REPLACED OR TREATED AS REQUIRED TO CONFORM TO SPECIFICATIONS HEREIN FOR FRESH STOCK. WORK AREA SHALL BE KEPT CLEAN AND ORDERLY DURING THE INSTALLATION PERIOD. UNDER NO CONDITION SHALL DEBRIS FROM PLANTING ACTIVITIES RESULT IN A SAFETY HAZARD ON-SITE OR ADJACENT OFF-SITE PROPERTY. DAMAGE TO SITE IMPROVEMENTS OR ADJACENT LANDSCAPES INCURRED AS A RESULT OF PLANTING OR REPLACEMENT OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR THAT CAUSES THE DAMAGE AT NO COST TO THE OWNER.
6. EXAMINE AREAS TO RECEIVE PLANTS FOR COMPLIANCE WITH REQUIREMENTS AND CONDITIONS AFFECTING INSTALLATION AND PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
  - 6.1. VERIFY THAT NO FOREIGN OR DELETERIOUS MATERIAL OR LIQUID SUCH AS PAINT, PAINT WASHOUT, CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, OR ACID HAS BEEN DEPOSITED IN SOIL WITHIN PLANTING AREAS.
  - 6.2. DO NOT MIX OR PLACE SOILS IN FROZEN, WET, OR MUDDY CONDITIONS.

**PLANTING DELIVERY, STORAGE, & HANDLING:**

1. BULK MATERIALS:
  - 1.1. DO NOT DUMP OR STORE BULK MATERIALS NEAR STRUCTURES, UTILITIES, WALKWAYS AND PAVEMENTS, OR ON EXISTING TURF AREAS OR PLANTS.
2. DO NOT PRUNE TREES AND SHRUBS BEFORE DELIVERY. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DRYING, WIND BURN, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERING OF PLANTS DURING SHIPPING AND DELIVERY. DO NOT DROP PLANTS DURING DELIVERY AND HANDLING.
3. HANDLE PLANTING STOCK BY ROOT BALL.
4. DELIVER PLANTS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND INSTALL IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN SIX HOURS AFTER DELIVERY, SET PLANTS AND TREES IN SHADED LOCATION, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST.
  - 4.1. SET BALLED STOCK ON GROUND AND COVER BALL WITH SOIL, PEAT MOSS, SAWDUST, OR OTHER ACCEPTABLE MATERIAL.
  - 4.2. WATER ROOT SYSTEMS OF PLANTS STORED ON-SITE DEEPLY AND THOROUGHLY WITH A FINE-MIST SPRAY. WATER AS OFTEN AS NECESSARY TO MAINTAIN ROOT SYSTEMS IN A MOIST, BUT NOT OVERLY WET CONDITION.

**EXCAVATION FOR SHRUBS**

1. EXCAVATE CIRCULAR PLANTING PITS AS INDICATED IN DRAWINGS. TRIM PERIMETER OF BOTTOM LEAVING CENTER AREA OF BOTTOM RAISED SLIGHTLY TO SUPPORT ROOT BALL AND ASSIST IN DRAINAGE AWAY FROM CENTER. DO NOT FURTHER DISTURB BASE. ENSURE THAT ROOT BALL WILL SIT ON UNDISTURBED BASE SOIL TO PREVENT SETTLING. SCARIFY SIDES OF PLANTING PIT SMOOED OR SMOOTHED DURING EXCAVATION.
  - 1.1. EXCAVATE APPROXIMATELY THREE TIMES AS WIDE AS BALL DIAMETER FOR BALLED AND BURLAPPED STOCK.
  - 1.2. DO NOT EXCAVATE DEEPER THAN DEPTH OF THE ROOT BALL, MEASURED FROM THE ROOT FLARE TO THE BOTTOM OF THE ROOT BALL.
  - 1.3. IF AREA UNDER THE PLANT WAS INITIALLY DUG TOO DEEP, ADD SOIL TO RAISE IT TO CORRECT LEVEL AND THOROUGHLY TAMP THE ADDED SOIL TO PREVENT SETTLING.
  - 1.4. MAINTAIN REQUIRED ANGLES OF REPOSE OF ADJACENT MATERIALS AS SHOWN IN DRAWINGS. DO NOT EXCAVATE SUBGRADES OF ADJACENT PAVING, STRUCTURES, HARDSCAPES, OR OTHER NEW OR EXISTING IMPROVEMENTS.
  - 1.5. MAINTAIN SUPERVISION OF EXCAVATIONS DURING WORKING HOURS.
  - 1.6. KEEP EXCAVATIONS COVERED OR OTHERWISE PROTECTED WHEN UNATTENDED BY INSTALLER'S PERSONNEL.
2. SUBSOIL AND TOPSOIL REMOVED FROM EXCAVATIONS MAY BE USED AS PLANTING SOIL IF THEY CONFORM TO THE REQUIREMENTS LISTED IN THESE SPECIFICATIONS.
3. NOTIFY OWNER'S PROJECT REPRESENTATIVE IF UNEXPECTED ROCK OR OBSTRUCTIONS DETRIMENTAL TO TREES OR SHRUBS ARE ENCOUNTERED IN EXCAVATIONS.
4. NOTIFY OWNER'S PROJECT REPRESENTATIVE IF SUBSOIL CONDITIONS EVIDENCE UNEXPECTED WATER SEEPAGE OR RETENTION IN TREE OR SHRUB PLANTING PITS.

**SHRUB PLANTING**

1. BEFORE PLANTING VERIFY THAT ROOT FLARE IS VISIBLE AT TOP OF ROOT BALL. IF ROOT FLARE IS NOT VISIBLE, REMOVE SOIL IN A LEVEL MANNER FROM THE ROOT BALL TO WHERE THE TOP-MOST ROOT EMERGES FROM THE TRUNK. AFTER SOIL REMOVAL TO EXPOSE ROOT FLARE, VERIFY THAT ROOT BALL STILL MEETS SIZE REQUIREMENTS. PLANT MATERIAL WITHOUT ROOT FLARE VISIBLE OR PLANTED TOO LOW WILL BE RE-PLANTED AT THE REQUEST OF THE LANDSCAPE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
2. PLANTS FOUND TO HAVE STEM GIRDLING ROOTS AND/OR KINKED ROOTS AT THE TIME OF PLANTING WILL BE REJECTED AND REPLACEMENTS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
3. REMOVE ALL TWINE, STRING, WIRE, AND ALL OTHER NON-BIODEGRADABLE MATERIAL ENTIRELY FROM ROOT BALL AREA.
4. REMOVE ONLY DEAD, DYING, OR BROKEN BRANCHES. DO NOT PRUNE FOR SHAPE. DO CUT TREE LEADERS.
5. SET BALLED AND BURLAPPED STOCK PLUMB AND IN CENTER OF PLANTING PIT OR TRENCH WITH ROOT FLARE 2 INCHES ABOVE ADJACENT FINISH GRADES.
  - 5.1. USE SOIL MATERIALS FROM EXCAVATION FOR BACKFILL.
  - 5.2. CAREFULLY CUT AND REMOVE BURLAP, ROPE, AND WIRE BASKETS FROM THE ENTIRE ROOT BALL. REMOVE PALLETS, IF ANY, BEFORE SETTING. DO NOT USE PLANTING STOCK IF ROOT BALL IS CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATION.
  - 5.3. BACKFILL AROUND ROOT BALL IN LAYERS, TAMPING TO SETTLE SOIL AND ELIMINATE VOIDS AND AIR POCKETS. WHEN PLANTING PIT IS APPROXIMATELY ONE-HALF FILLED, WATER THOROUGHLY BEFORE PLACING REMAINDER OF BACKFILL. REPEAT WATERING UNTIL NO MORE WATER IS ABSORBED.
  - 5.4. CONTINUE BACKFILLING PROCESS. WATER AGAIN AFTER PLACING AND TAMPING FINAL LAYER OF SOIL.

**SHRUB MATERIAL:**

1. GENERAL: FURNISH NURSERY-GROWN PLANTS TRUE TO GENUS, SPECIES, VARIETY, CULTIVAR, STEM FORM, SHEARING, AND OTHER FEATURES INDICATED IN PLANT SCHEDULE SHOWN AND DRAWINGS; AND WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, HEALTHY, VIGOROUS STOCK, DENSELY FOLIATED WHEN IN LEAF AND FREE OF DISEASE, PESTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT.
  - 1.1. COLLECTED STOCK: DO NOT USE PLANTS HARVESTED FROM THE WILD, FROM NATIVE STANDS, FROM AN ESTABLISHED LANDSCAPE PLANTING, OR NOT GROWN IN A STATE CERTIFIED NURSERY.
  - 1.2. PLANT MATERIAL SHALL BE PROVIDED IN THE CONTAINER TYPE INDICATED IN THE DRAWINGS (B&B, CONTAINER, BARE ROOT, ETC.), UNLESS THE CONTRACTOR RECEIVES WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT THAT SUBSTITUTION OF CONTAINER TYPE IS ACCEPTABLE.
2. FURNISH TREES WITH ROOT BALLS MEASURED FROM TOP OF ROOT BALL. ROOT FLARE SHALL BE VISIBLE BEFORE PLANTING.
3. SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD.

**PLANTING SOIL:**

- PLANTING SOIL SHALL BE PLACED IN ONE CONTINUOUS VOLUME FOR THE WIDTH OF LANDSCAPE AREAS, AND A MINIMUM OF 3X THE DIAMETER OF THE ROOT BALL LENGTHWISE
1. INSTALL PLANTING SOIL FOR PLANT BEDS IN 6" LIFTS, MINIMUM 8" DEPTH.
  2. DO NOT APPLY PLANTING SOIL TO SATURATED OR FROZEN SUBGRADES.
  3. PLANTING SOIL SHALL BE A MIX OF 6-PARTS TOPSOIL, 1-PART COMPOST (APPROVED FOR USE ON THE PROJECT), THOROUGHLY BLEND PLANTING SOIL OFF-SITE BEFORE SPREADING.
    - 3.1. THE PROJECT WILL ACCEPT ONLY CLEAN, SALVAGED OR IMPORTED TOPSOIL CAPABLE OF PASSING THE 1" SIEVE, FREE OF ROCKS, DEBRIS, AND OF NOXIOUS WEEDS.
    - 3.2. STRIPPED, SALVAGED, OR MINED TOPSOIL MUST BE TAKEN FROM THE TOP 6-INCHES OF THE A-HORIZON, HAVING A DARK BROWN TO BLACK COLOR WITH A GRANULAR STRUCTURE AND CLAY CONTENT OF LESS THAN 25%, VERIFIED WITH A RIBBON TEST THAT YIELDS NO MORE THAN 1-INCH.

**BARK MULCH MATERIAL & INSTALLATION**

1. TWICE-SHREDDED HARDWOOD BARK MULCH TO BE PROVIDED AS TOP-DRESSING FOR ALL AT-GRADE PLANTING BEDS IN LOCATIONS INDICATED ON PLANTING PLANS.
  - 1.1. SIZE RANGE: MAXIMUM 2.5" TO 3"
  - 1.2. COLOR: NATURAL, UN-DYED
  - 1.3. PROVIDE 3" DEPTH MULCH FOR ALL PLANTING BEDS INDICATED AS BARK MULCH PLANTING BED.
2. KEEP BARK MULCH 2" CLEAR OF ALL STEMS OF PLANT MATERIAL.

**CLEAN-UP AND PROTECTION**

1. DURING PLANTING, KEEP ADJACENT PAVING AND CONSTRUCTION CLEAN AND WORK AREA IN AN ORDERLY CONDITION.
2. PROTECT PLANTS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS AND OPERATIONS OF OTHER CONTRACTORS AND TRADES. MAINTAIN PROTECTION DURING INSTALLATION. TREAT, REPAIR, OR REPLACE DAMAGED PLANTINGS.
3. AFTER INSTALLATION REMOVE ALL NURSERY TAGS, NURSERY STAKES, TIE TAPE, LABELS, WIRE, STRING, AND OTHER DEBRIS FROM PLANT MATERIAL, PLANTING AREAS, AND PROJECT SITE.

REV	BY	DATE	DESCRIPTION

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**SHEET INFORMATION**

A.C.E. JOB NO. 302/23  
DATE: 8-26-24  
DRAWN BY: HLY  
SCALE:  
SHEET

**L200**

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