



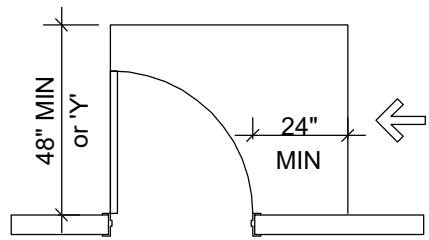


ICC A117.1-2009 : ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

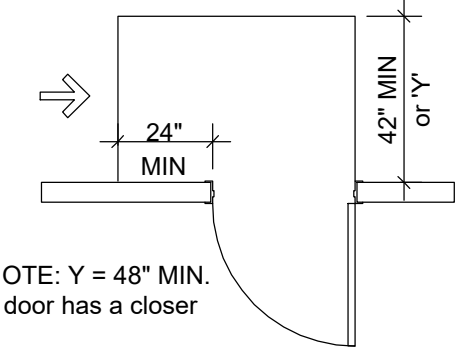
ALL INTERIOR CONSTRUCTION WITHIN THE SCOPE OF THIS PROJECT IS REQUIRED TO BE ACCESSIBLE AS SET FORTH IN THE "ICC A117.1-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES. SECTIONS INDICATED ON THIS SHEET REFERENCE THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, UNLESS NOTED OTHERWISE.

DOORS

1. Doors, doorways, and gates that are part of an accessible route shall comply with 404.
2. Door openings shall provide a clear width of 32 inches, unless the opening is more than 24 inches deep, in which case the clear width of the opening shall be 36 inches. For swinging doors, the clear width shall be measured between the face of the door and the stop, with the door open 90 degrees.
3. There shall be no projections into the clear opening lower than 34 inches. Projections into the clear opening between 34 inches and 80 inches shall not exceed 4 inches.
4. In accordance with 404.2.3 exception 2, door closers and stops shall be permitted to be a minimum of 78 inches above the floor or ground.
5. Minimum maneuvering clearances at swinging doors shall comply with ICC A117.1-2009 Section 404.2.3, Table 404.2.3.2 and Figure 404.2.3.2.
6. Fire doors shall have a minimum opening force allowable by the appropriate administrative authority.
7. Hinged doors other than fire doors shall have an opening force of 5 pounds maximum.
8. Sliding doors shall have an opening force of 5 pounds maximum.
9. Door and gate surfaces shall comply with 404.2.10.
10. Doors shall be permitted to swing into turning spaces, per 304.4.
11. Two doors in a series shall comply with ICC A117.1-2009 Section 404.2.5 and Figure 404.2.5.

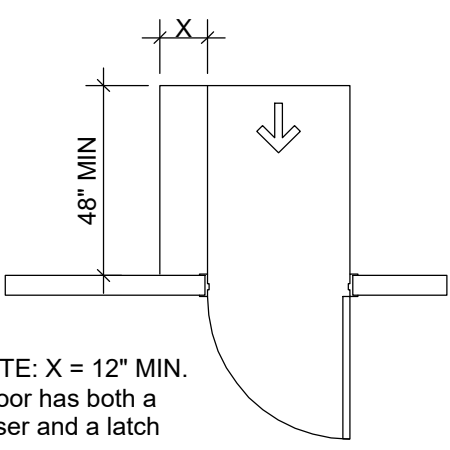
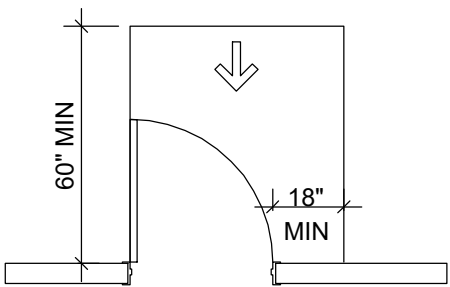


NOTE: Y = 54" MIN. if door has a closer



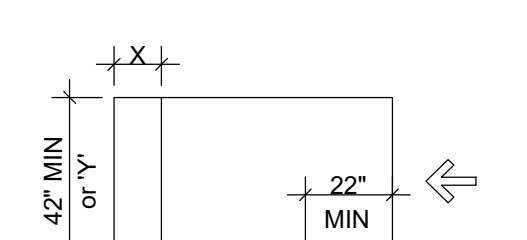
NOTE: Y = 48" MIN. if door has a closer

Latch-Side Approaches - Swinging Doors

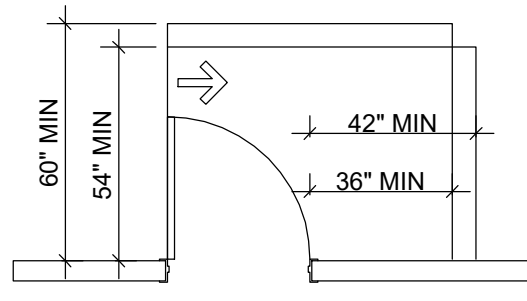


NOTE: X = 12" MIN. if door has both a closer and a latch

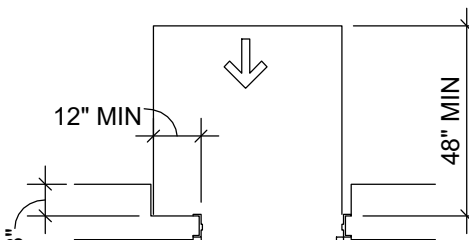
Front Approaches - Swinging Doors



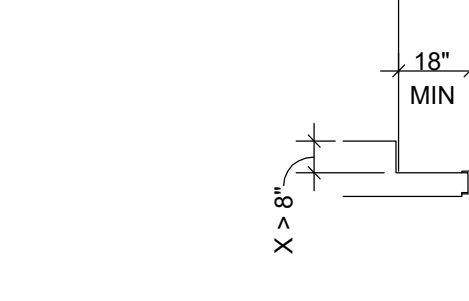
NOTE: Y = 48" MIN. if door has both a closer and a latch



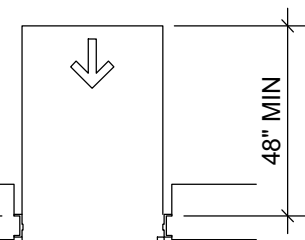
Hinge-Side Approaches - Swinging Doors



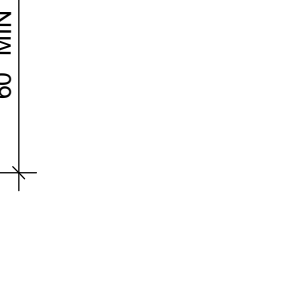
NOTE: Door has both a closer and a latch



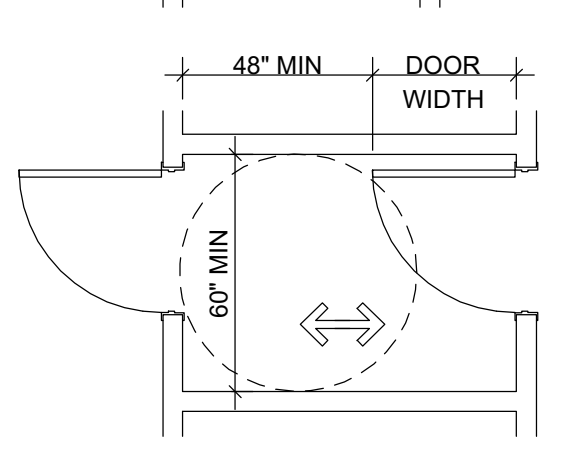
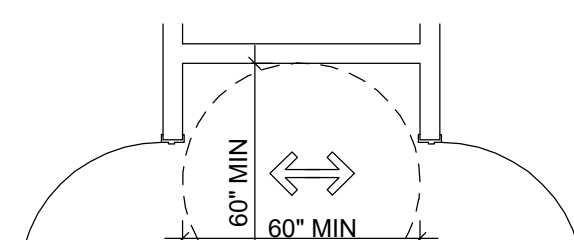
Recessed Doors and Gates



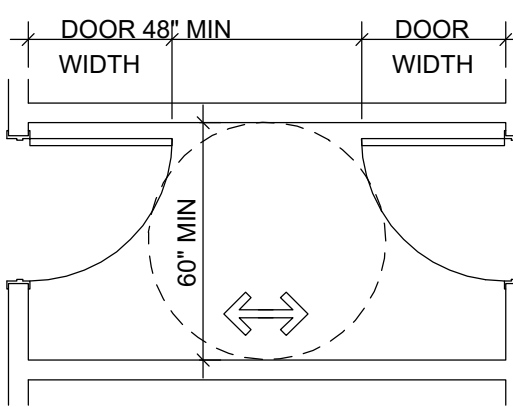
NOTE: Door can have either a latch OR closer, but not both



Recessed Doors and Gates

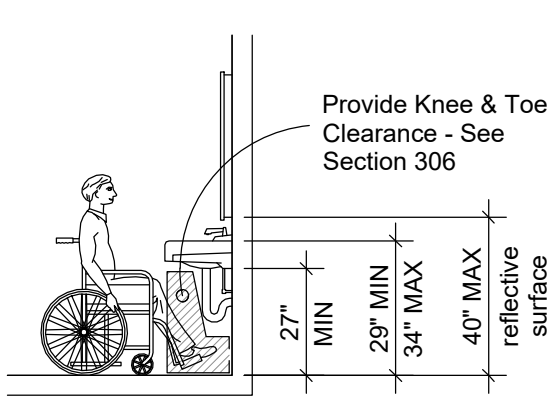


Doors in Series and Gates in Series

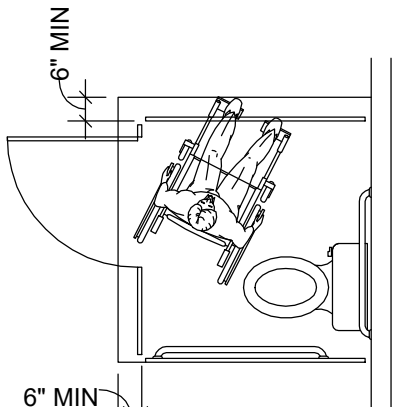


RESTROOMS & DRINKING FOUNTAINS

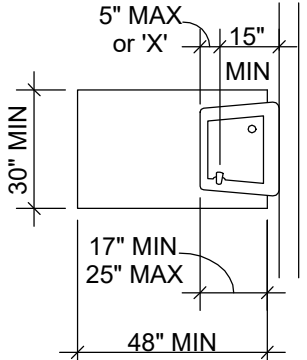
1. Where toilet rooms are provided, each toilet room shall comply with 603.
2. Where toilet compartments are provided, at least one toilet compartment shall comply with 604.8.1. In addition to the compartment required to comply with 604.8.1, at least one compartment shall comply with 604.8.2 where six or more toilet compartments are provided, or where the combination of urinals and water closets totals six or more fixtures.
3. Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches maximum above finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches maximum above the finish floor or ground.
4. Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches minimum and 48 inches maximum above the finish floor.
5. Water closets shall comply with 604.2 through 604.8.
6. Toilet paper dispensers shall comply with ICC A117.1-2009, Chapter 6, Section 604.7 and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.
7. Grab bars shall be provided at water closets and shall comply with ICC A117.1-2009, Chapter 6, Figure 604.5.
8. Urinals shall comply with 605 and shall be either wall-hung or stall type urinals.
9. Lavatories shall comply with 606. Faucets for lavatories shall comply with 606.4. Exposed pipes under lavatories shall be insulated or otherwise protected to prevent against contact.
10. Drinking Fountains shall comply with ICC A117.1-2009, Chapter 6, Section 602.2.
11. Toilet paper dispensers shall comply with ICC A117.1-2009, Chapter 6, Figure 604.9.2.
12. Fixed side wall grab bars shall comply with ICC A117.1-2009, Chapter 6, Section 604.5.1.



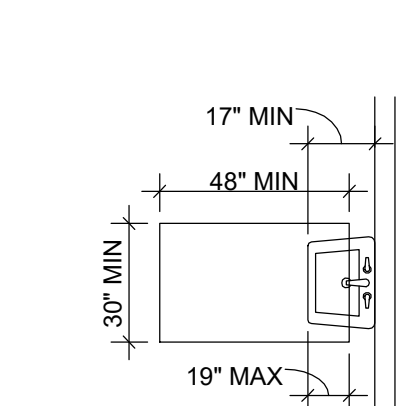
Clearances & Heights at Lavatory



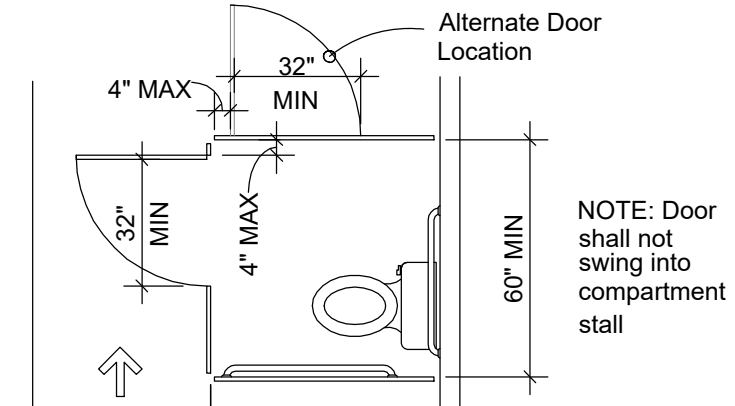
Stall Compartment Toe Clearance



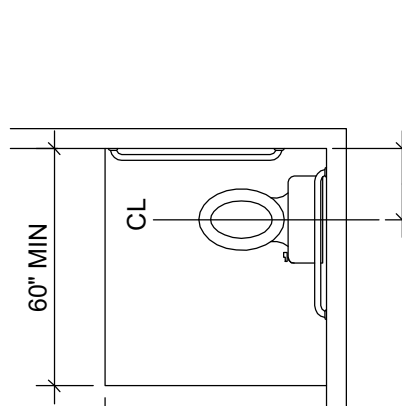
Drinking Fountain Clearance and Spout Location



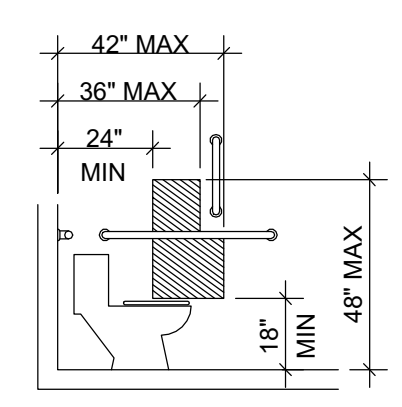
Lavatory Clearance



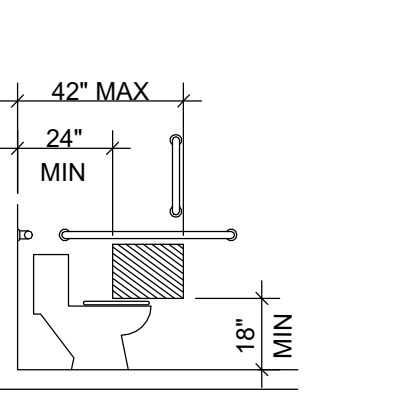
Standard Stall



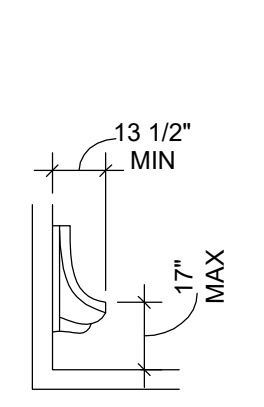
Clear Floor Space and Water Closet Location



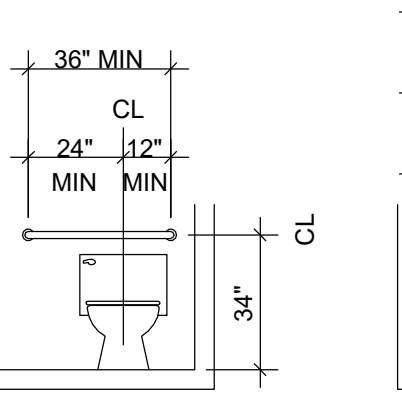
Recessed Toilet Paper Dispenser Location



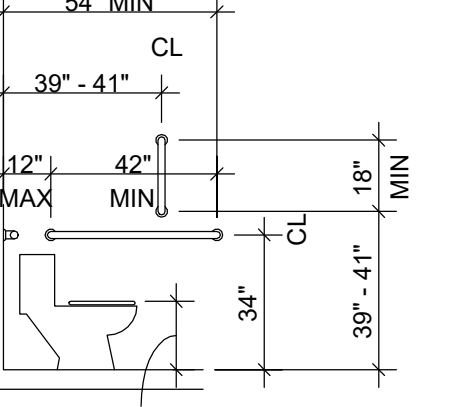
Protruding Toilet Paper Dispenser Location



Height and Depth of Urinal



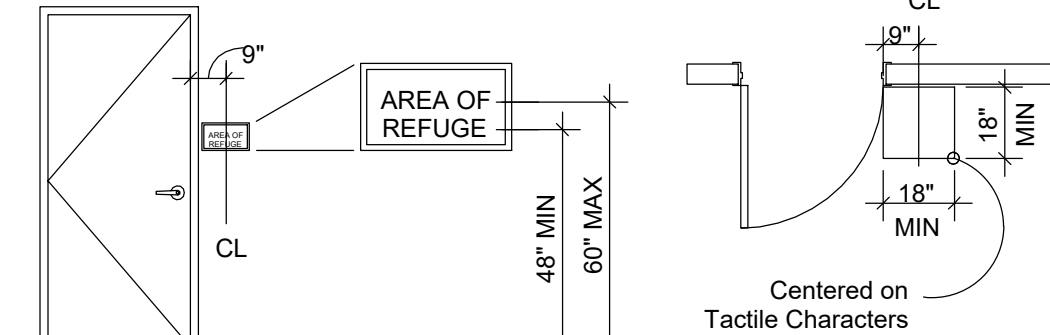
Grab Bars at Water Closets



Grab Bars at Water Closets

SIGNAGE

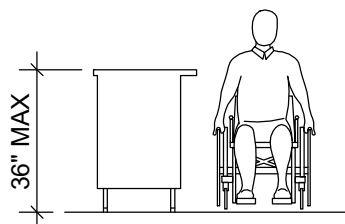
1. Signs shall comply with 703.
2. Signs identifying permanent rooms and spaces shall comply with 703.1, 703.2, and 703.5. Where pictograms are provided as designations of permanent rooms and spaces, the pictograms shall comply with 703.6 and shall have text descriptors complying with 703.2 and 703.5.
3. Signs that provide direction to or information about spaces and facilities shall comply with 703.5.
4. Where more than one check-out aisle is provided, check-out aisles complying with 904.3 shall be identified by the International Symbol of Accessibility complying with 703.7.2.1. Where check-out aisles are identified by numbers, letters, or functions, signs identifying check-out aisles complying with 904.3 shall be located in the same location as the check-out aisle identification.



Centered on Tactile Characters

FOODSERVICE LINES, TABLEWARE AREAS & CHECKOUT AISLES

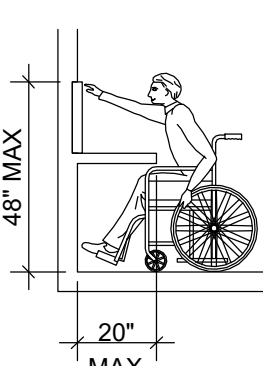
1. Where check-out aisles are provided, check-out aisles shall comply with 904.3 and be dispersed.
2. Where provided, at least one of each type of sales counter and service counter shall comply with 904.4. Where counters are dispersed throughout the building or facility, counters complying with 904.4 also shall be dispersed.
3. Food service lines shall comply with 904.5. Where self-service shelves are provided, at least 50 percent, but no fewer than one, of each type provided shall comply with 308.
4. Queues and waiting lines servicing counters or check-out aisles required to comply with 904.3 or 904.4 shall comply with 403.
5. Check-out aisles and sales and service counters shall comply with the applicable requirements of 904.
6. All points of counters required to comply with 904 shall be located adjacent to a walking surface complying with 403.



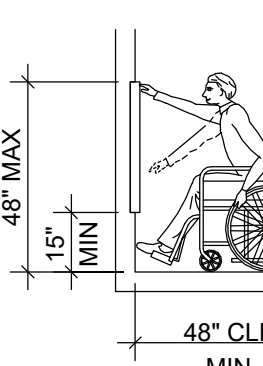
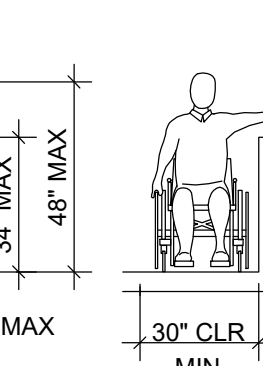
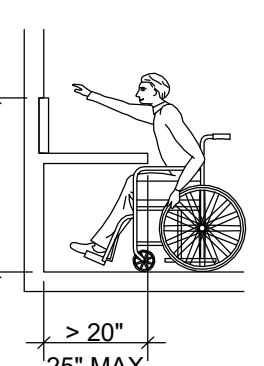
Parallel Approach at Sales & Service Counters

REACH RANGES, CONTROLS & OPERATING MECHANISMS

1. Reach ranges shall comply with 308.
2. Operable parts shall comply with 309 and shall be placed within one or more of the reach ranges specified in 308.
3. In accordance with 309.4, operable parts shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds maximum.

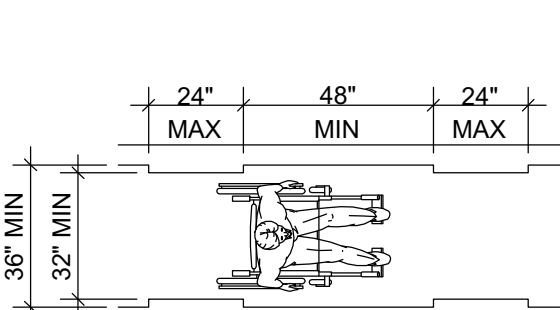


Obstructed Forward Reach

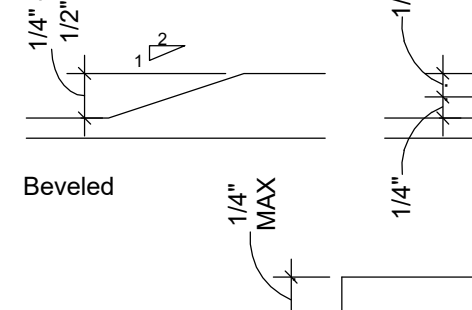


PATH OF TRAVEL

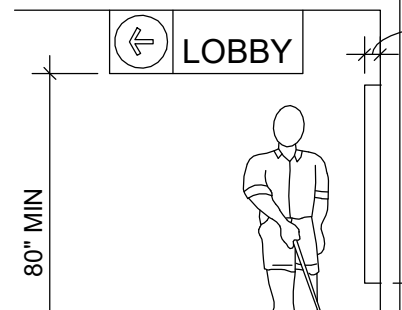
1. The running slopes of walking surfaces that are part of an accessible route shall not be steeper than 1:20 with a cross slope that is not steeper than 1:48.
2. Changes in level shall comply with ICC A117.1-2009 Section 303.
3. The clear width of walking surfaces on an accessible route shall comply with 403.5.1.
4. The clear width at turns along an accessible route shall comply with 403.5.2.
5. In accordance with 403.5.3, an accessible route with a clear width of less than 60 inches shall provide passing spaces at intervals of 200 feet.



Clear Width of an Accessible Route



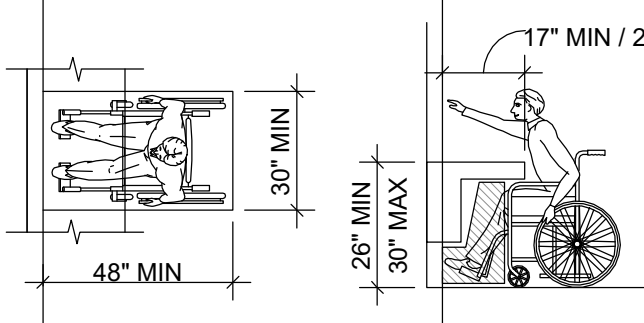
Changes in Level



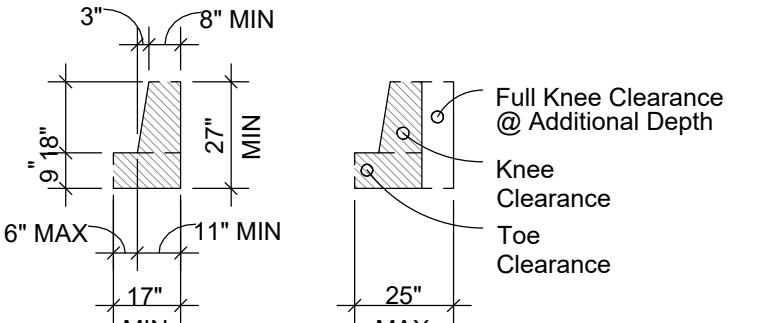
Walking Parallel To A Wall

SEATING AT TABLES & COUNTERS

1. Where dining surfaces are provided for the consumption of food and drink, at least 5 percent of the seating spaces and standing spaces at the dining surfaces shall comply with 902. In addition, where work surfaces are provided for use by other than employees, at least 5 percent shall comply with 902.
2. Confirm actual seat counts with Table 221.2.1.
3. Dining surfaces and work surfaces required to comply with 902 shall be dispersed throughout the space or facility containing dining surfaces and work surfaces.
4. Dining surfaces and work surfaces shall comply with 902.2 and 903.3.

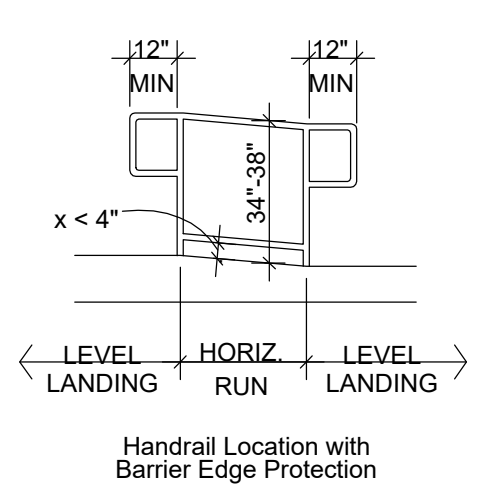


Toe and Knee Clearances

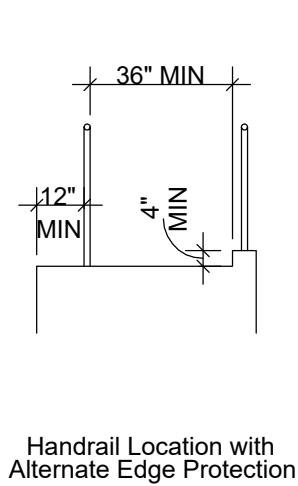


STAIRS AND RAMPS

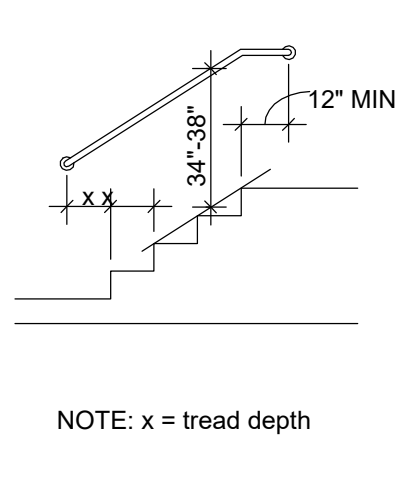
1. Ramps on accessible routes shall comply with 405.
2. Ramp runs shall have a running slope not steeper than 1:12 with a cross slope not steeper than 1:48.
3. The clear width of a ramp run or (where handrails are provided) the clear width between handrails shall be 36 inches minimum.
4. The rise for any ramp run shall be 30 inches maximum.
5. Ramps shall have landings at the top and the bottom of each ramp run complying with 405.7.
6. Ramps with a rise greater than 6 inches shall have handrails complying with 505.
7. Edge protection complying with 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and each side of ramp landings.
8. Stairs that are part of a means of egress shall comply with 504.
9. All steps on a flight of accessible stairs shall have uniform riser heights and uniform tread depths. Risers shall be between 4 inches and 7 inches in height. Treads shall be 11 inches deep minimum.
10. Open risers are not permitted.
11. Nosings in steps shall comply with 504.5.
12. Stairway handrails shall comply with 505.



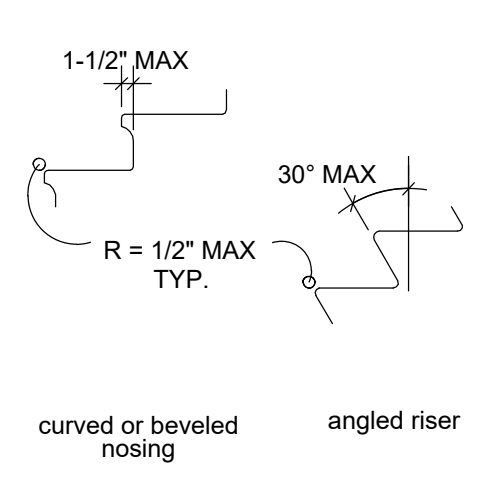
Handrail Location with Barrier Edge Protection



Handrail Location with Alternate Edge Protection



Handrail Location



Stair Nosings

BRAKES PLUS

601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
05.16.24	FOR SUBMITTAL TO BLDG. DEPT.	

ARCODEV JOB #:  
CLIENTJOB #:  
DRAWN BY: NLH  
CHECKED BY: NLH  
DATE OF ISSUE: 04.19.24



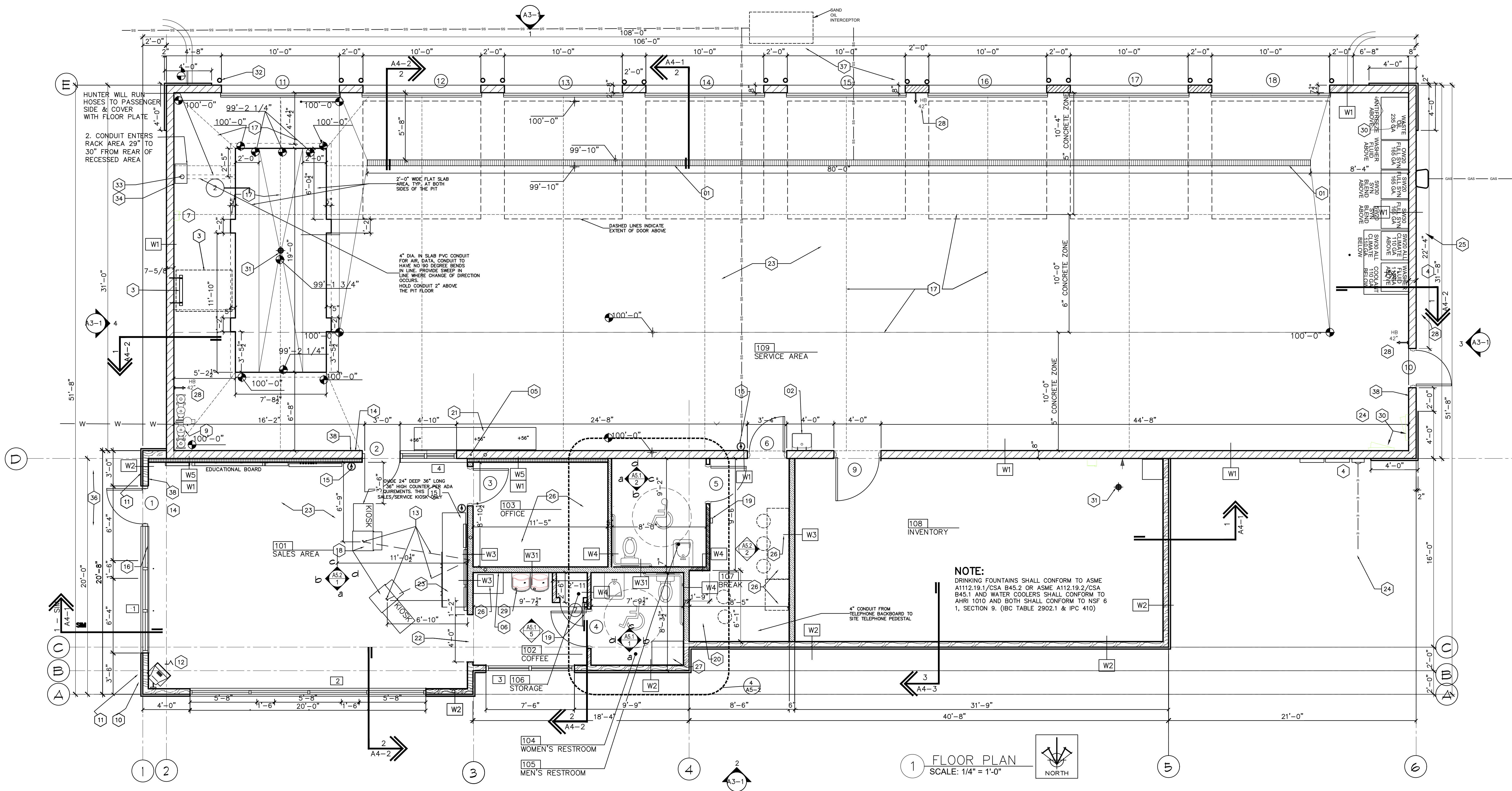
ASHEET

A0.1

ACCESSIBLE DETAILS







NOTE:  
DRINKING FOUNTAINS SHALL CONFORM TO ASME A112.19.1/CSA B45.2 OR ASME A112.19.2/CSA B45.1 AND WATER COOLERS SHALL CONFORM TO AHRI 1010 AND BOTH SHALL CONFORM TO NSF 6 1, SECTION 9. (IBC TABLE 2902.1 & IPC 410)

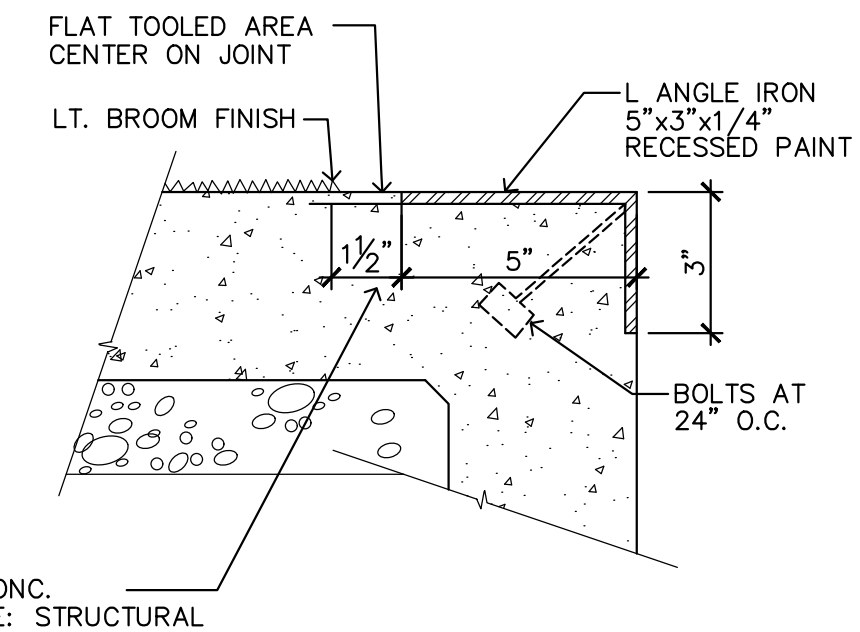
1 FLOOR PLAN  
SCALE: 1/4" = 1'-0"

FLOOR PLAN KEYNOTES:

- 6" WIDE CONTINUOUS PRE-FORMED TRENCH DRAIN, MAX OPENING = 3/4". SEE PLUMBING DRAWINGS AND DRAIN SPEC.
- DEEP-BASIN SERVICE SINK, RE: MECHANICAL DRAWINGS. PROVIDE 48" HIGH x 36" WIDE STAINLESS STEEL PANEL ON WALL BEHIND SINK.
- ROOF LADDER (HATCH ABOVE) - RE: 2/A2-4 - COORDINATE EXACT LOCATION WITH BAR JOIST LOCATIONS.
- ELECTRICAL ENTRY EQUIPMENT, REFER TO ELECTRICAL DRAWINGS.
- PROVIDE ELECTRICAL CONDUIT FROM 18" AFF TO ABOVE CEILING AND PENETRATE THROUGH MASONRY WALL TO OFFICE.
- COLD WATER LINE FOR COFFEE MACHINE, RE: PLUMBING DRAWINGS.
- PROVIDE DISCONNECT FOR A LIFT AT THIS LOCATION.
- NOT USED.
- BACK FLOW PREVENTER, SEE CIVIL DRAWINGS, REFER TO PLUMBING DRAWINGS.
- PROVIDE KEY DROP BOX, MODEL NO. DS2014K AS MANUFACTURED BY AMSEC, INSTALLED BY CONTRACTOR.
- KNOX BOX, OBTAINED FROM LOCAL FIRE DEPARTMENT AND INSTALLED BY CONTRACTOR. VERIFY LOCATION WITH FIRE DEPARTMENT PRIOR TO INSTALLATION.
- PROVIDE RACKING AS REQUIRED TO SUPPORT TV MOUNTING BRACKET, COORDINATE WITH OWNER.
- TWO 1" ELECTRICAL CONDUITS FROM WALL TO EACH KIOSK & SERVICE COUNTER. CONDUIT #1 SHALL BE 7" FROM REAR WALL & 2'-6" FROM CENTERLINE OF FRONT DOOR (UP TO ABOVE CEILING). CONDUIT #2 WILL BE TO THE OUTSIDE OF #1 AND SLIGHTLY BACK TO ALLOW FOR ANGLE MOUNTING OF KIOSK.
- PROVIDE SIGN AT EXIT "MAXIMUM NUMBER OF OCCUPANTS"
- PROVIDE FIRE EXTINGUISHER AS DIRECTED BY LOCAL FIRE DEPARTMENT
- NOT USED.
- CONTROL JOINTS TYP.
- KIOSK AND PRINTER CABINET PROVIDED AND INSTALLED BY G.C.
- PROVIDE ACCESSIBLE SIGNAGE AT RESTROOM AS REQUIRED PER CODE
- LOCKERS PROVIDED AND INSTALLED BY OWNER.
- SERVICE COUNTER PROVIDED AND INSTALLED BY G.C.
- 22' 4'-0" W X 7'-4" H OPENING
- CONCRETE SLAB - RE: STRUCTURAL DRAWINGS.
- PROVIDE CONDUIT FOR CONTROLS AND PIPING TO LANDSCAPE MANIFOLD
- GAS METER.
- MILLWORK PROVIDED AND INSTALLED BY G.C.
- NOT USED.
- HOSE BIB, REFER TO PLUMBING DRAWINGS.
- WATER-COOLER (DEEP-ROCK WATER 303.292 2020; OR EQUAL).
- ELECTRICAL CIRCUIT PANELS
- FLOOR DRAIN
- CONCRETE FILLED 4" DIA. STEEL BOLLARD 36" HIGH - PAINT RED
- CONDUIT CENTER IS 8" FROM THE CENTER.
- CONDUIT FROM CONTROL BOX TO RACK CONTROL BOX.
- NOT USED.
- ACCESSIBLE ENTRY SIDEWALK.
- PROVIDE 5" WIDE CONC. APRON IN FRONT OF OVERHEAD DOORS (6" DEEP WITH #4'S 16" O.C. EACH WAY IN CENTER OF SLAB)
- PROVIDE EXIT SIGN AS SHOWN ON DETAIL 10 ON SHEET A4-5 INCLUDING TACTILE REQUIREMENTS.

GENERAL NOTES:

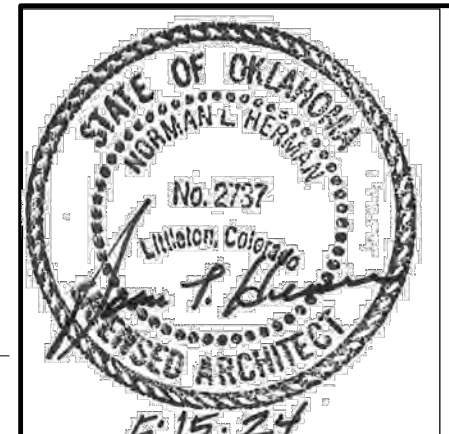
- PAIN EXPOSED UNFINISHED METALS PER SPECIFICATIONS. COLOR TO MATCH ADJACENT SURFACE IF NOT SPECIFIED.
- MAKE SURE TO HAVE A MINIMUM OF 6" CONCRETE UNDER HEAVY EQUIPMENT
- KEEP ALL EXPOSED PLUMBING AND CONDUIT LINES AT LEAST 6" ABOVE F.F.
- PROVIDE ANCHORS, BOLT AND OTHER NECESSARY FASTENERS AND BLOCKING AS REQUIRED AND ATTACH ACCESSORIES SECURELY TO WALLS AND PARTITIONS IN LOCATIONS AS SHOWN AS REQUIRED
- PROVIDE FIRE EXTINGUISHERS AS REQUIRED BY LOCAL FIRE MARSHALL. CONTRACTOR IS REQUIRED TO CONTACT FIRE DEPARTMENT FOR FIRE EXTINGUISHER TYPE AND EXACT MOUNTING LOCATIONS.
- ALL ELECTRICAL DEVICES SHALL BE EXPOSED SURFACE MOUNTED IN WALLS. INSTALLATION BAYS. ALL DEVICES IN PUBLIC AREAS SHALL BE CONCEALED IN WALLS.
- CONVENIENCE POWER IS INDICATED ON THIS DRAWING FOR REFERENCE. PROVIDE POWER PER EQUIPMENT AND ALL ASSEMBLIES NOTED AS WELL.
- FOLLOW ALL RECOMMENDATIONS OF THE SOILS REPORT BY OLSSON (402-479-5311). PROJECT #23-07386 DATED DEC. 2023.
- N/A
- ALL DIMENSIONS OF FACE OF STUDS AND FACE OF CMU BLOCKS



2 "L" MTL. AT RECESSED SLAB TYP.  
SCALE: 1/4" = 1'-0"

WALLS ASSEMBLIES:				
ID	WALL TYPE / SYMBOL	DESCRIPTION	FIRE RATING	UL LISTING
W1	8" NOM. CONCRETE BLOCK FULL HEIGHT / DECK	NOMINAL (SEE PLAN)X16X8 LIGHT WEIGHT CONCRETE BLOCK. PROVIDE LOOSE-FILL INSULATION IN OPEN CELLS WHERE EXTERIOR. GROUT CELLS SOLID AS THE STRUCTURAL DRAWINGS. MIN R VALUE OF 8.	-	-
W2	NEW WOOD STUD WALL	3/4" GYP BD EACH SIDE OVER 2X6 WOOD STUDS @ 16" O.C. TO 10' ELEVATION. PROVIDE MOISTURE RESISTANT GYP BD AT WET LOCATIONS IN RESTROOM. USE EXTERIOR SHEATHING ON OUTSIDE SURFACES. PROVIDE MIN. FULL BATT R-19 INSULATION W/ VAPOR BARRIER (480 KRAFT PAPER OF EQUAL CLASS III VAPOR BARRIER). PROVIDE WATER BARRIER *GREENGUARD MAX BUILDING WRAP. PROVIDE DRAINAGE PER IBC SECTION 1404.2 & INSTALLED PER 1405.	-	-
W3		3/4" GYP BD EACH SIDE OVER 2X6 WOOD STUDS @ 16" O.C. TO UNDERSIDE OF STRUCTURE ABOVE.	-	-
W31		3/4" GYP BD. EACH SIDE OVER 2X6 WOOD STUDS AT 16" O.C. 0 12'-0" AFF. PROVIDE MOISTURE RESISTANT GYP BD AT WET LOCATIONS IN RESTROOM. PROVIDE FULL BATT SOUND INSULATION.	-	-
W4	NEW WOOD STUD WALL	3/4" GYP BD EACH SIDE OVER 2X4 WOOD STUDS @ O.C. @12'-0" AFF PROVIDE FULL BATT SOUND INSULATION.	-	-
W5	NEW FURRING	3/4" GYP BD OVER 2X2 WOOD FURRING STUDS @ 16" O.C. TO 6" ABOVE CEILING. PROVIDE FULL BATT INSULATION IN FURRED CAVITY	-	-
W6	NOT USED	NOT USED	-	-
GENERAL WALL CONSTRUCTION NOTES:				
PROVIDE SLIP TRACK HEAD RECEPTOR WHERE REQUIRED. ALL WALLS AROUND RESTROOMS TO RECEIVE R-19 BATT INSULATION. ALL RESTROOM CEILINGS TO RECEIVE R-19 BATT INSULATION.				

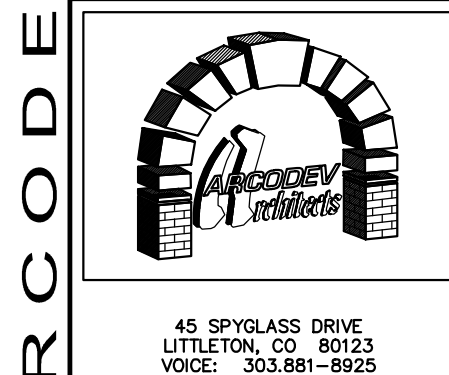
BRAKES PLUS  
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05.16.24	FOR SUBMITTAL TO BLDG. DEPT.

ARCODEV JOB #: -  
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CHECKED BY: NLH  
DATE OF ISSUE: 04.19.24



SHEET

A2-1

FLOOR PLAN

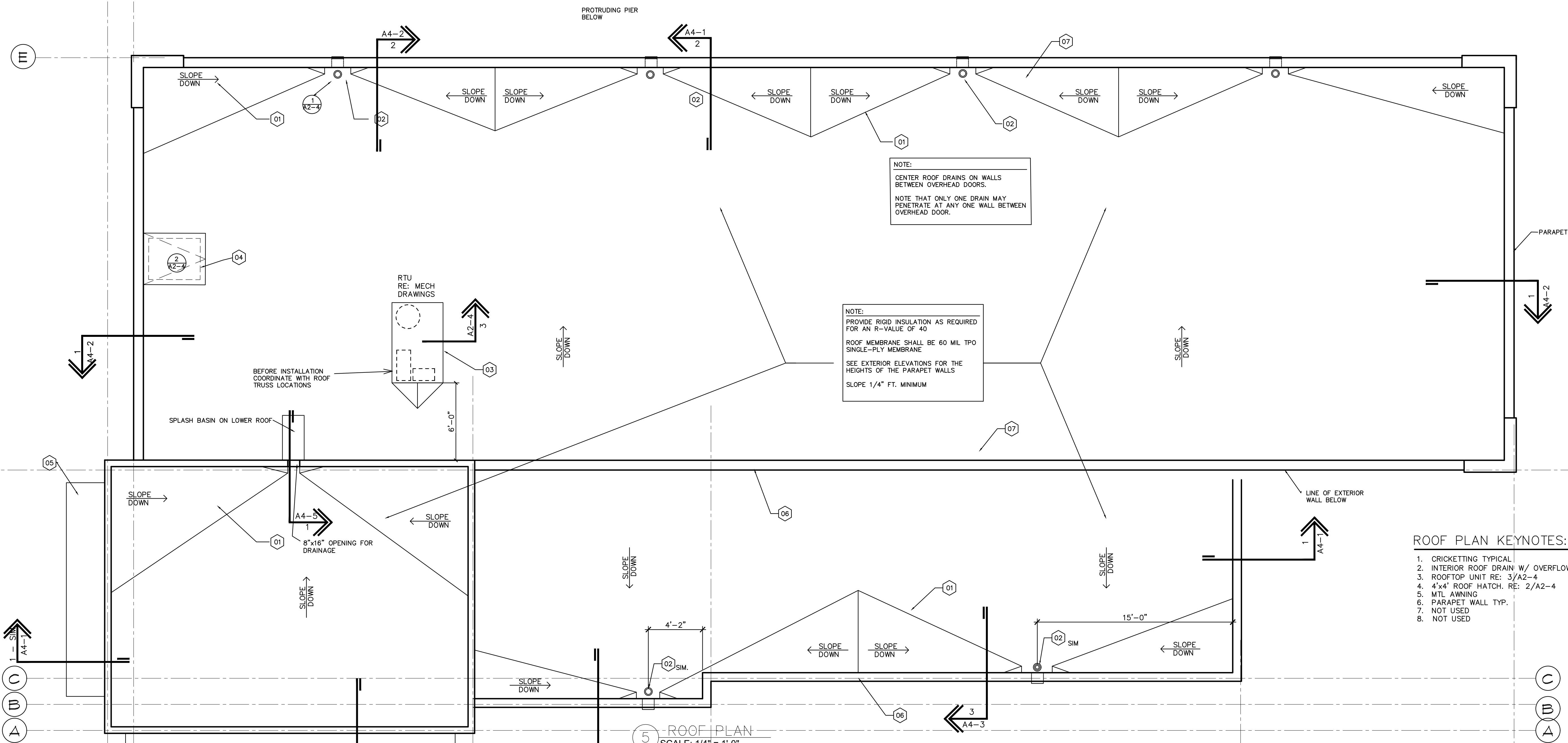










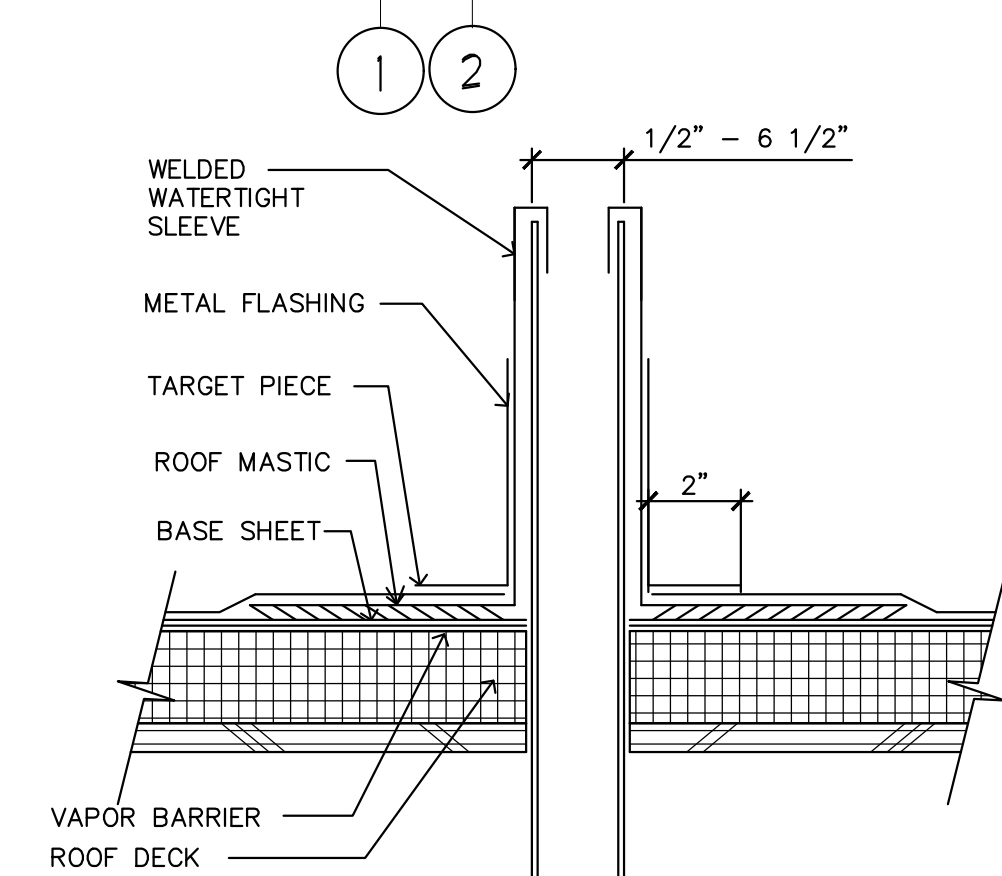


NOTE:  
CENTER ROOF DRAINS ON WALLS  
BETWEEN OVERHEAD DOORS.  
NOTE THAT ONLY ONE DRAIN MAY  
PENETRATE AT ANY ONE WALL BETWEEN  
OVERHEAD DOOR.

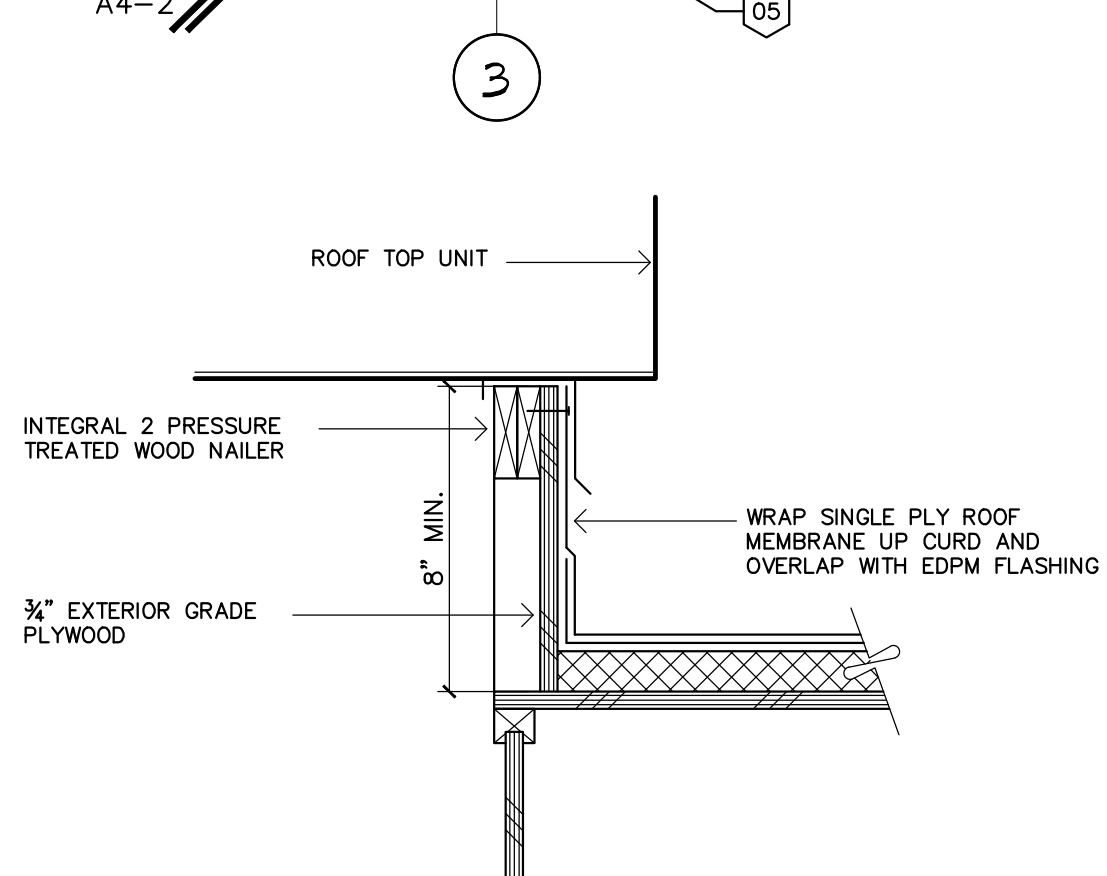
NOTE:  
PROVIDE RIGID INSULATION AS REQUIRED  
FOR AN R-VALUE OF 40  
ROOF MEMBRANE SHALL BE 60 MIL TPO  
SINGLE-PLY MEMBRANE  
SEE EXTERIOR ELEVATIONS FOR THE  
HEIGHTS OF THE PARAPET WALLS  
SLOPE 1/4" FT. MINIMUM

ROOF PLAN KEYNOTES:

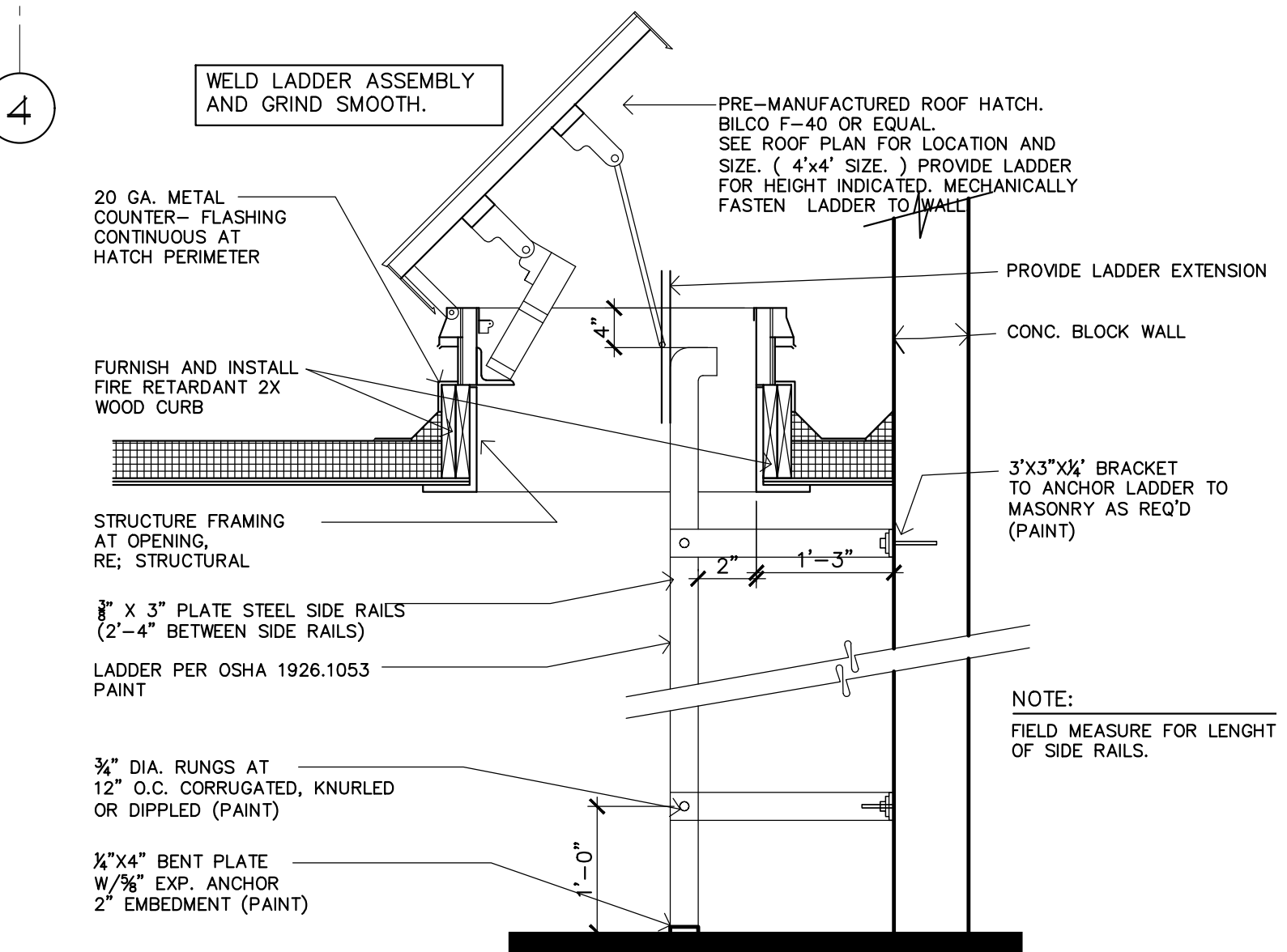
1. CRICKETTING TYPICAL
2. INTERIOR ROOF DRAIN W/ OVERFLOW RE: 1/A2-4. TYPICAL
3. ROOFTOP UNIT RE: 3/A2-4
4. 4'x4' ROOF HATCH. RE: 2/A2-4
5. MTL AWNING
6. PARAPET WALL TYP.
7. NOT USED
8. NOT USED



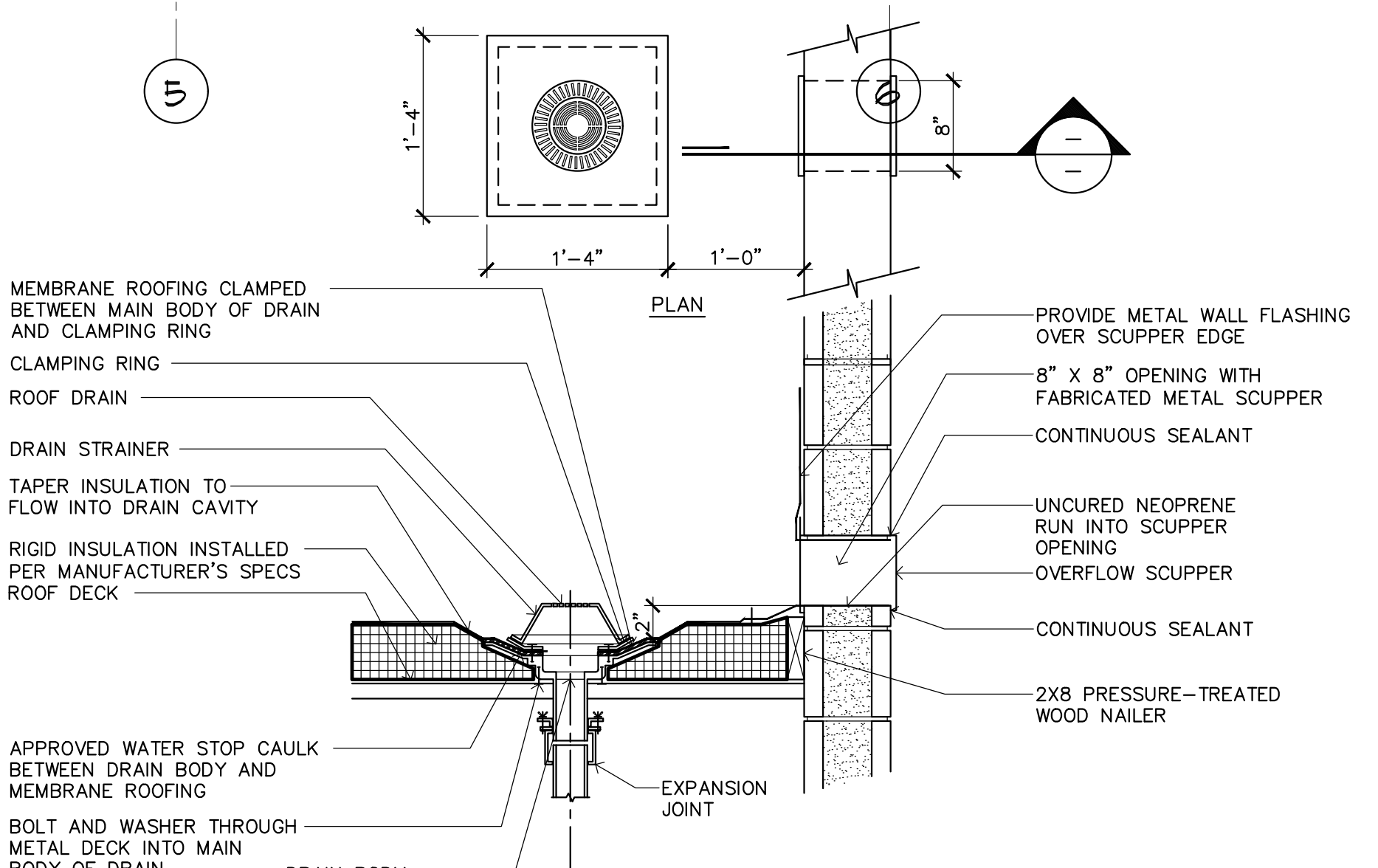
4 PIPE PENETRATION DETAIL  
SCALE: 3" = 1'-0"



3 RTU CURB DETAIL  
SCALE: 1 1/2" = 1'-0"



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



1 DOWNSPOUT / OVERTFLOW DETAIL  
SCALE: 1" = 1'-0"

BRAKES PLUS  
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA

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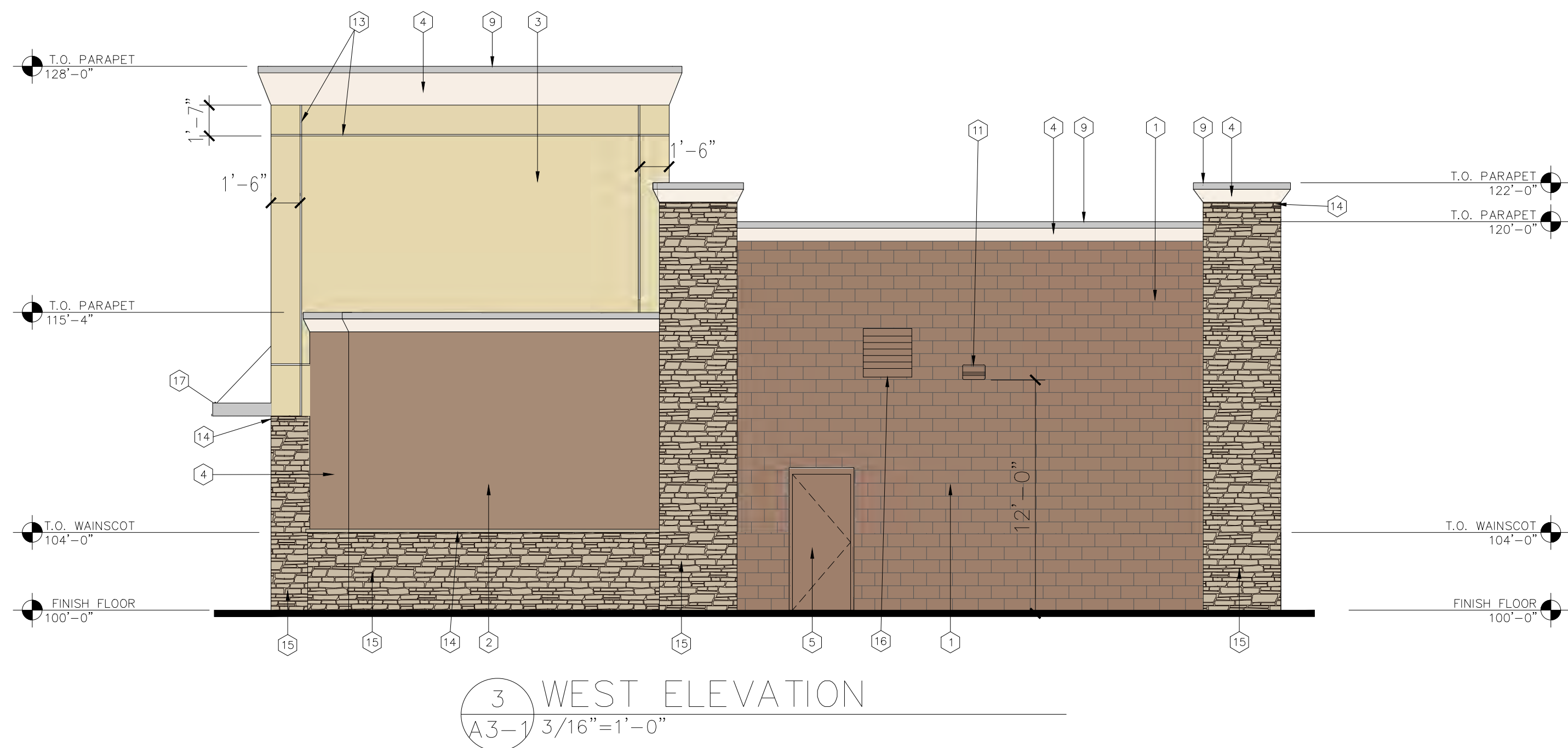
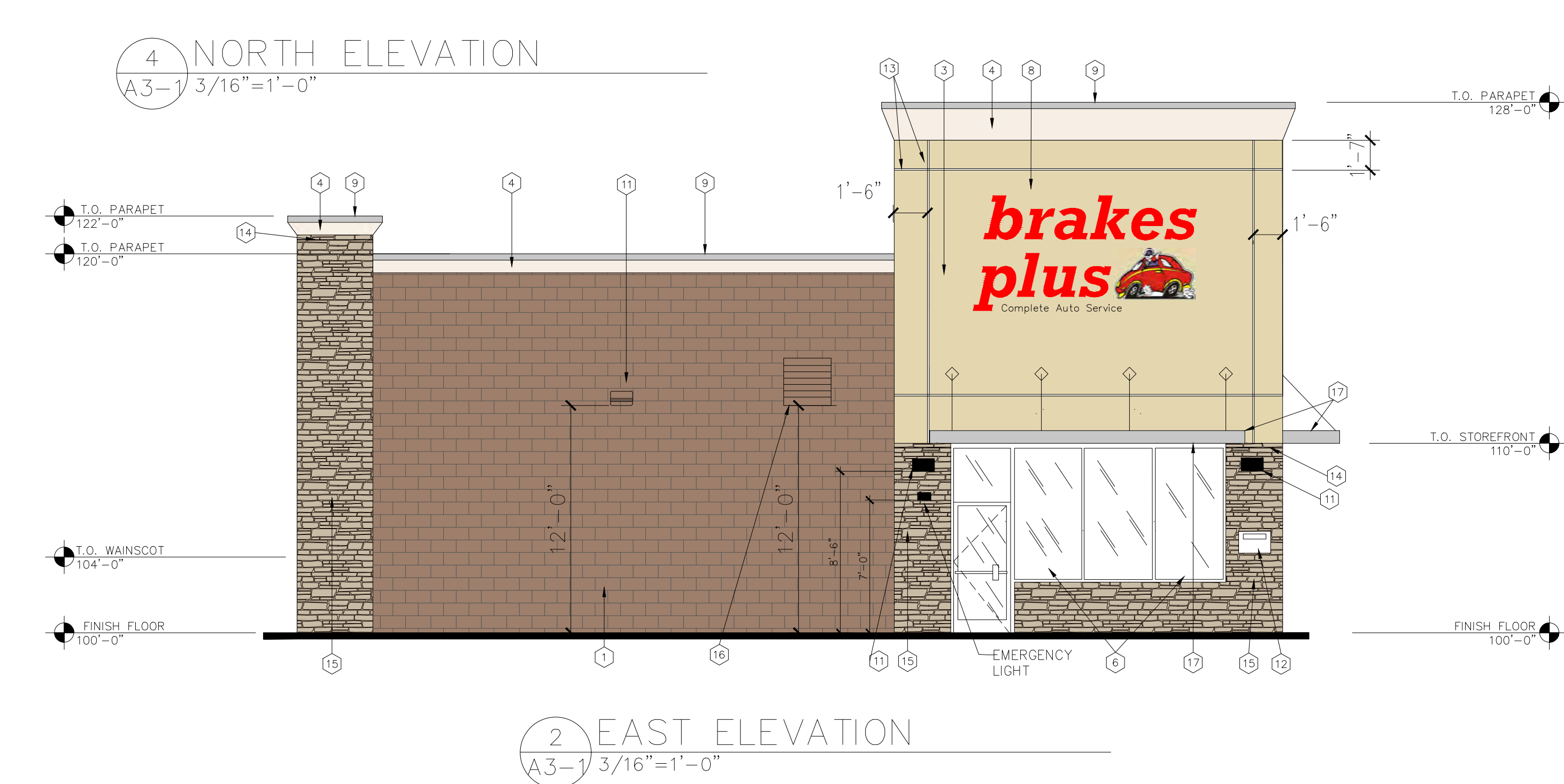
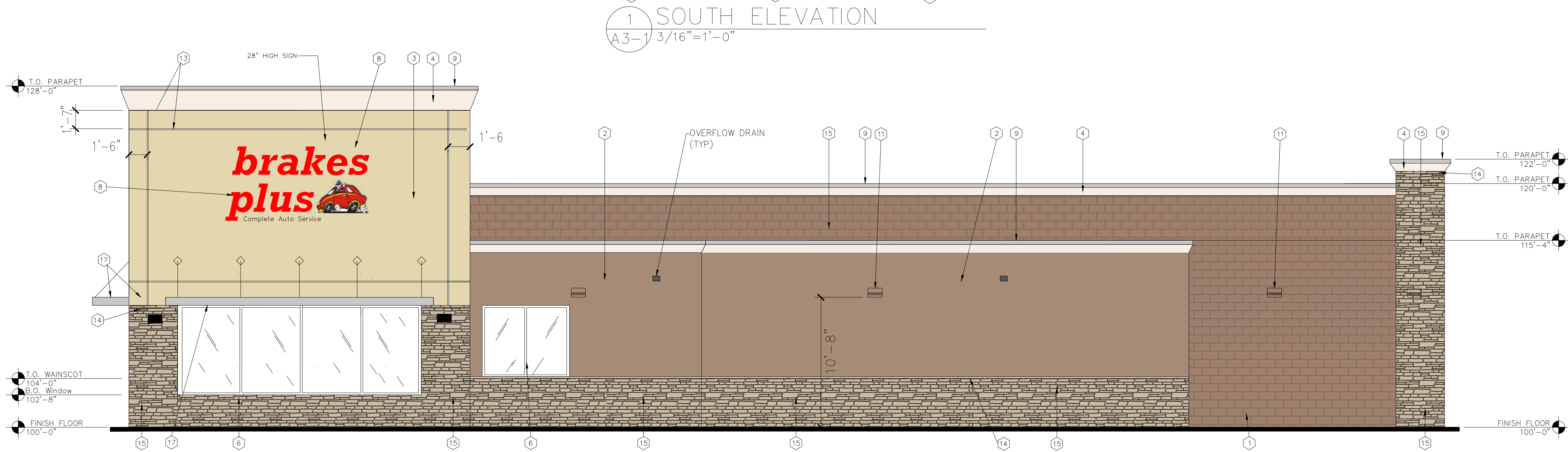
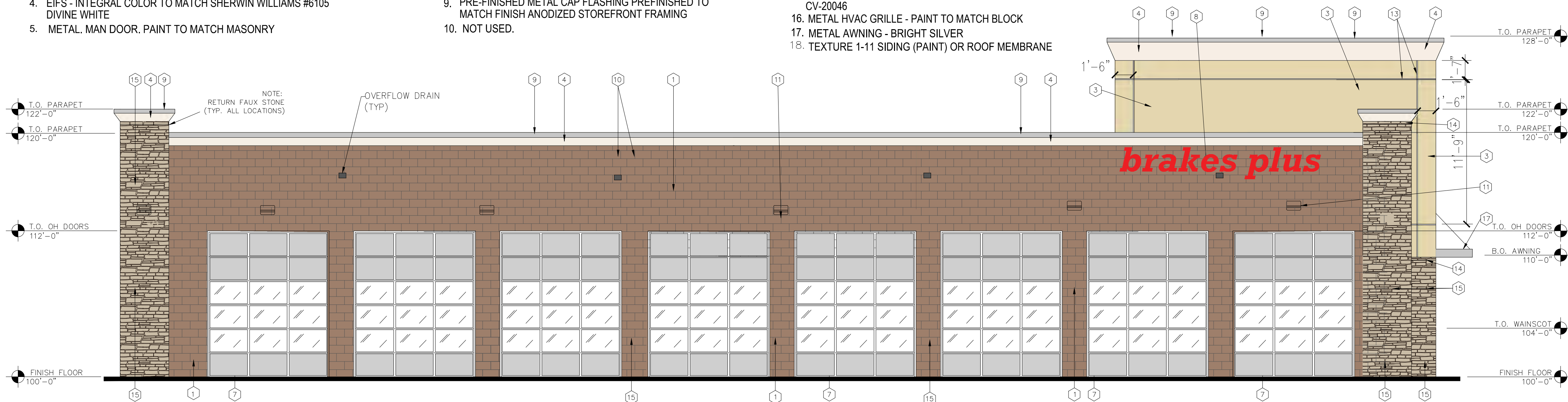
45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.881-8925

A2-4  
ROOF PLAN



KEYNOTES

1. SMOOTH FACE CONCRETE BLOCK BY BEST BLOCK  
COLOR: 739 MEDIUM BROWN
2. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #2834  
CRAFTSMAN BROWN
3. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #2834  
BIRDEYE MAPLE
4. EIFS - INTEGRAL COLOR TO MATCH SHERWIN WILLIAMS #6105  
DIVINE WHITE
5. METAL. MAN DOOR. PAINT TO MATCH MASONRY
6. ALUMINUM/GLASS STOREFRONT  
CLEAR ANODIZED ALUMINUM
7. ALUMINUM SECTIONAL OVERHEAD DOORS  
CLEAR ANODIZED ALUMINUM
8. ILLUMINATED SIGNAGE (UNDER SEPARATE PERMIT)
9. PRE-FINISHED METAL CAP FLASHING PREFINISHED TO  
MATCH FINISH ANODIZED STOREFRONT FRAMING
10. NOT USED.
11. DECORATIVE LIGHT FIXTURE.
12. KEY DROP BOX
13. 1 1/2" X 3/4" REVEAL
14. WATER SILL - FAUX STONE - CULTURED STONE - WHITE OAK COUNTRY  
LEDGESTONE CV-20046
15. FAUX STONE - CULTURED STONE - WHITE OAK COUNTRY LEDGESTONE  
CV-20046
16. METAL HVAC GRILLE - PAINT TO MATCH BLOCK
17. METAL AWNING - BRIGHT SILVER
18. TEXTURE 1-11 SIDING (PAINT) OR ROOF MEMBRANE



BRAKES PLUS

601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



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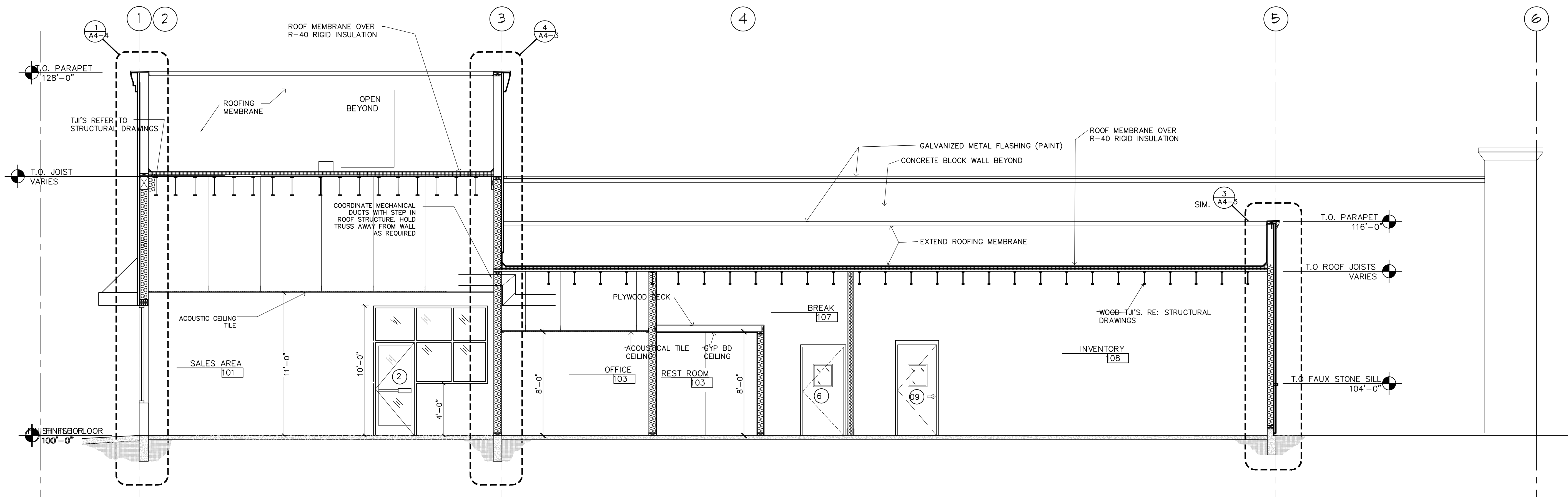
45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.881-8925

SHEET

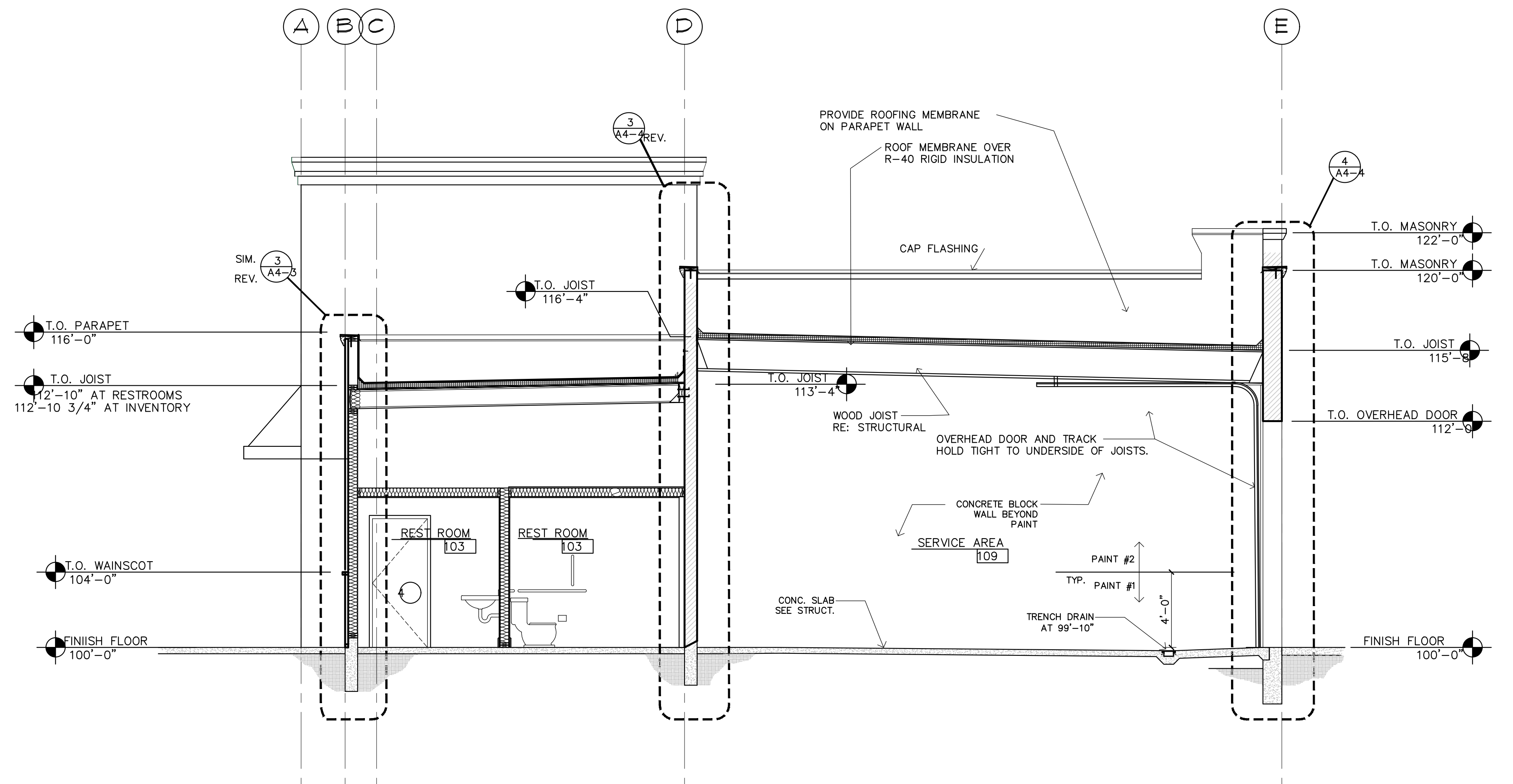
A3-1

EXTERIOR ELEVATIONS





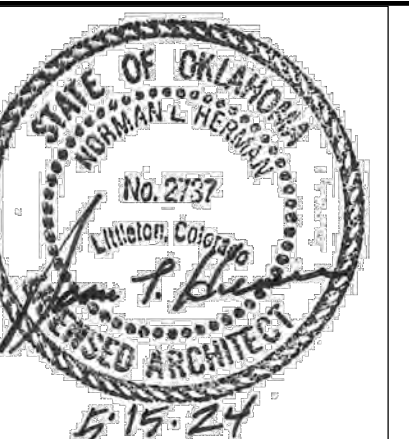
1 BUILDING SECTION  
SCALE: 1/4" = 1'-0"



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

**BRAKES PLUS**

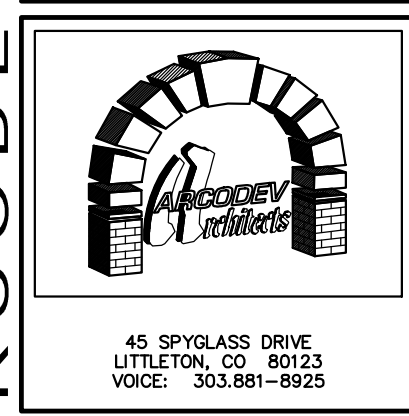
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



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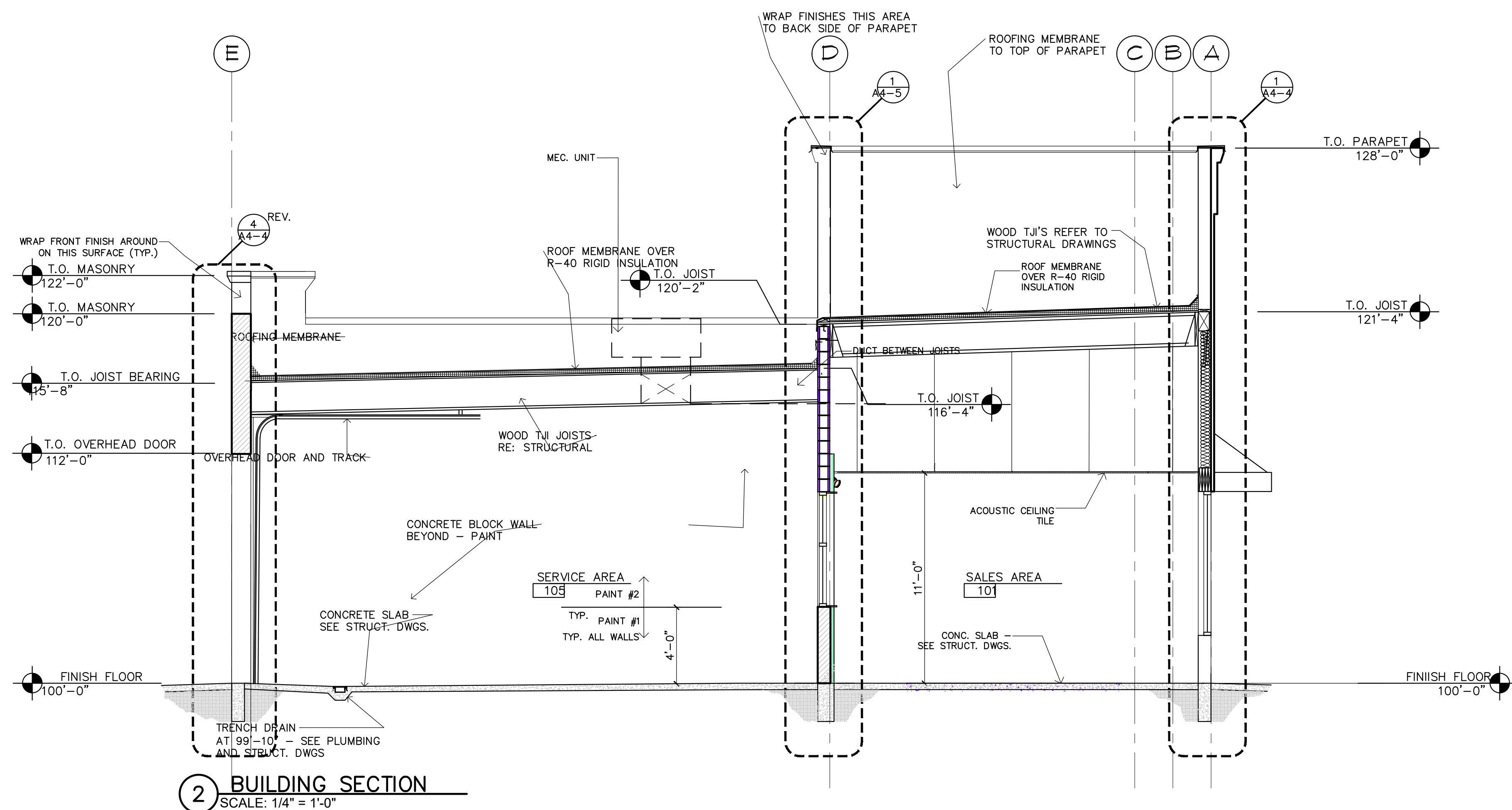
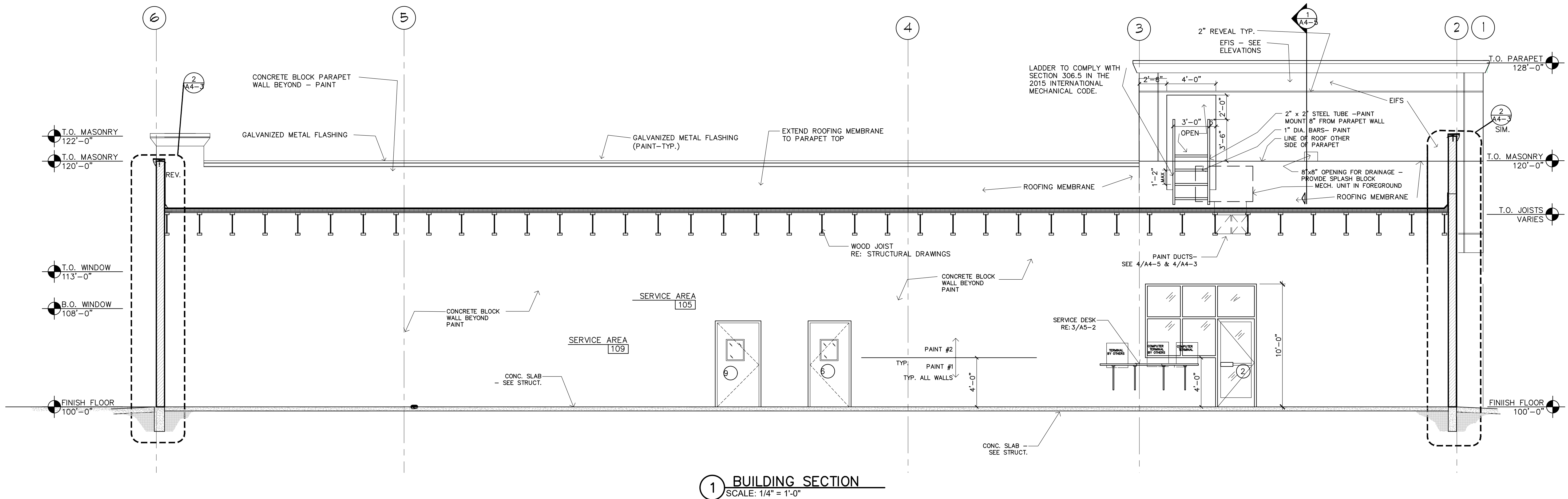
45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.981-8925

A SHEET

**A4-1**

BUILDING SECTIONS





**BRAKES PLUS**

601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



ARCHITECT OF RECORD

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CHECKED BY: NLH  
DATE OF ISSUE: 04.19.24



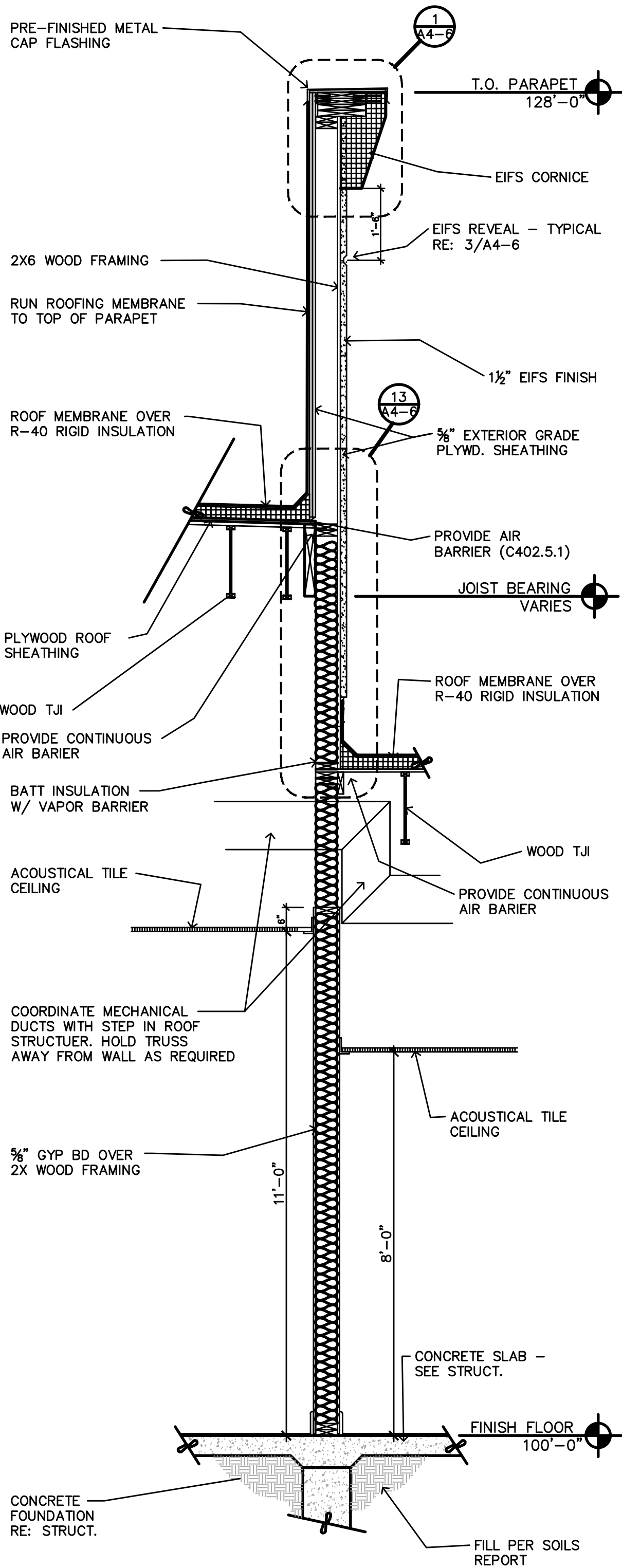
45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.881-8925

A SHEET

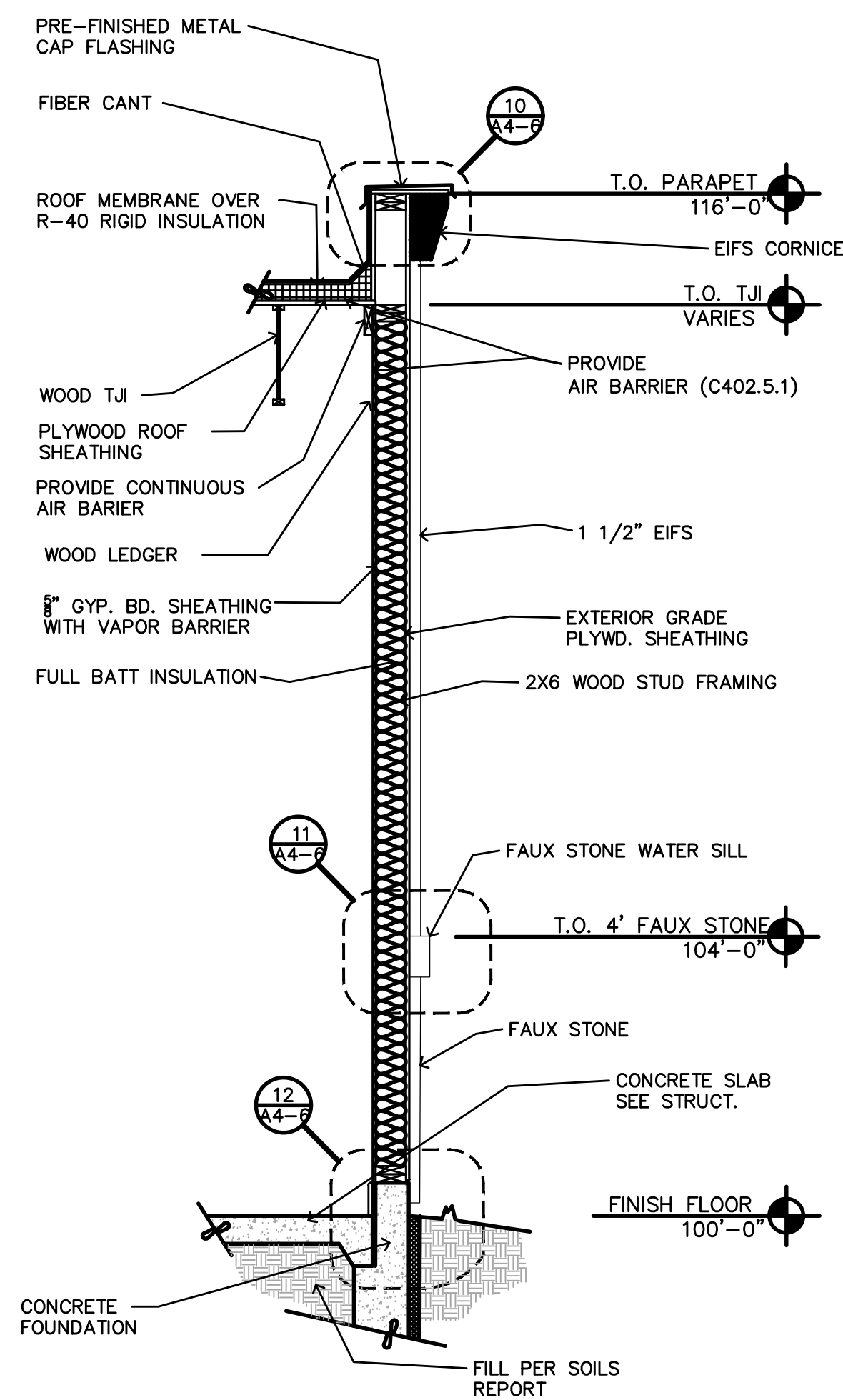
**A4-2**

BUILDING SECTIONS

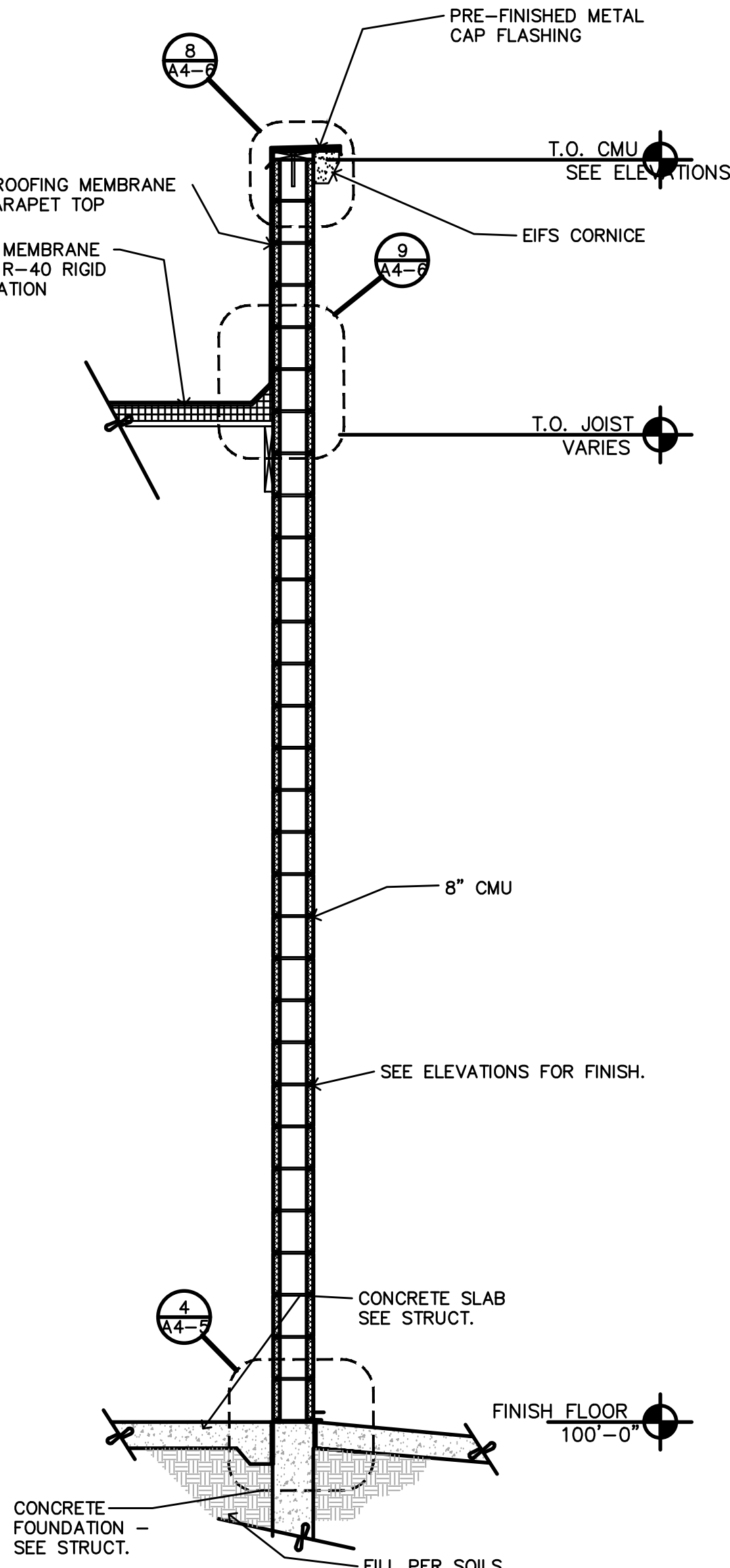




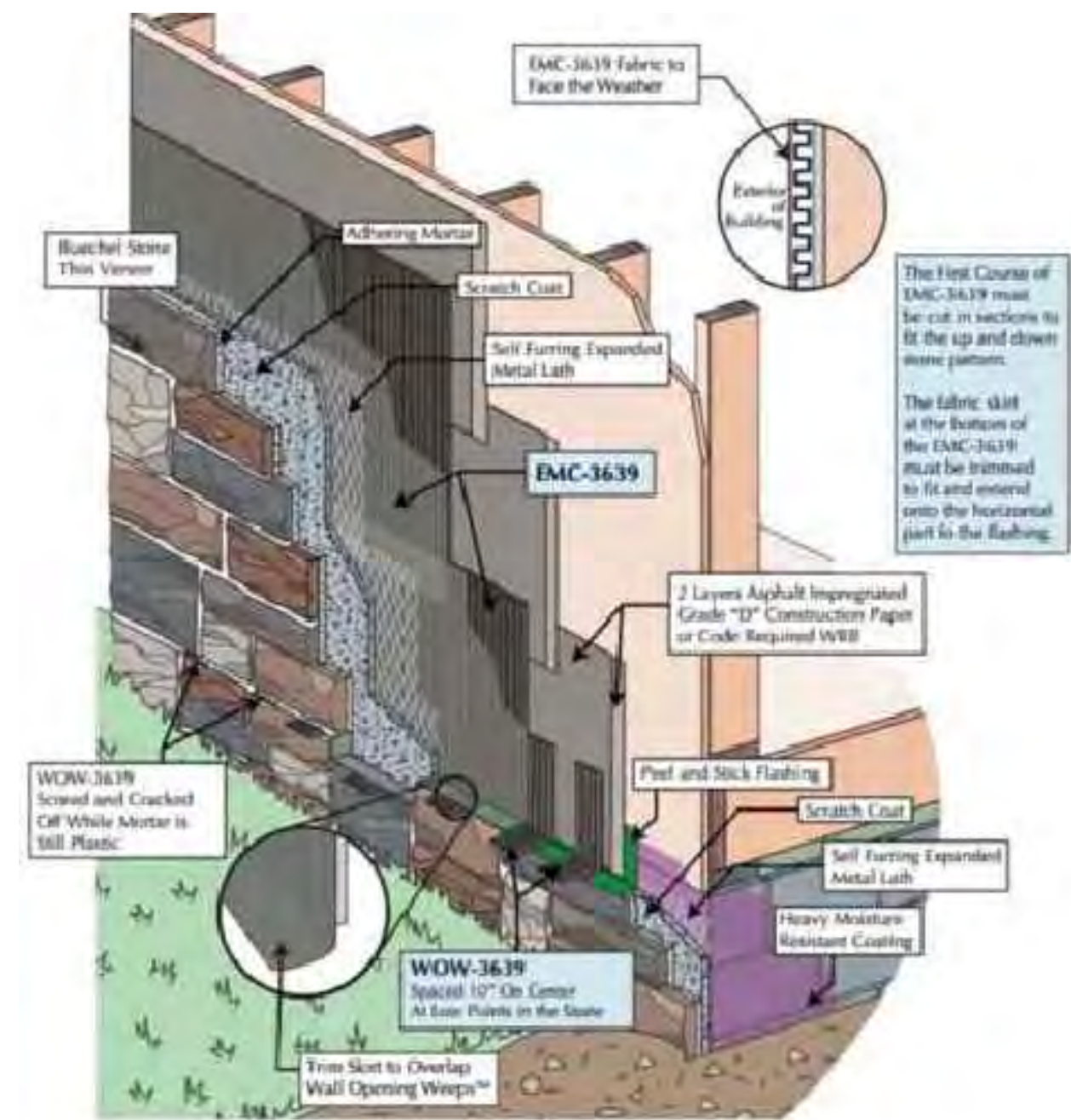
4 WALL SECTION  
A4-3 1/2"=1'-0"



3 WALL SECTION  
A4-3 1/2"=1'-0"



2 WALL SECTION  
A4-3 1/2"=1'-0"

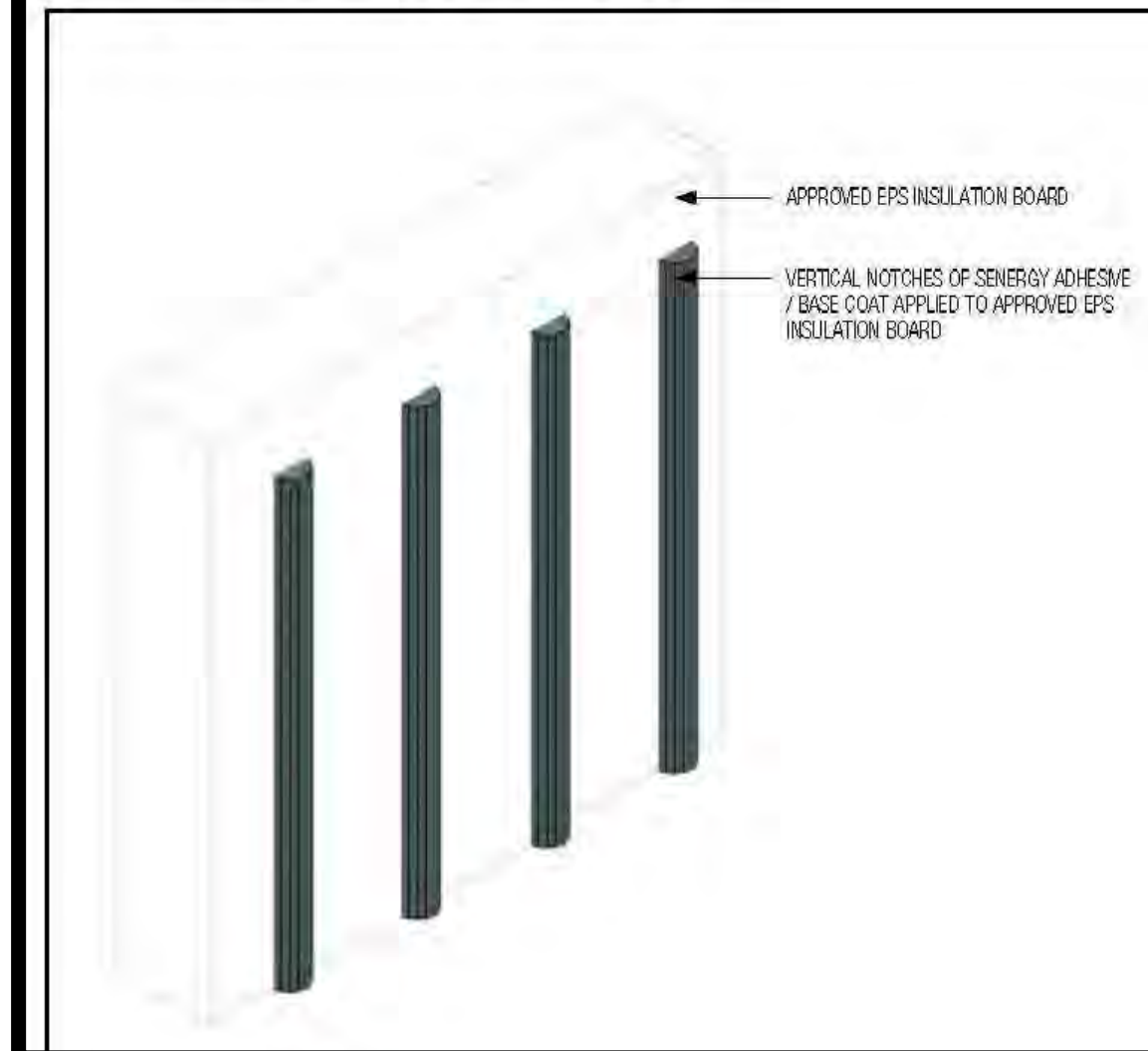


5 FAUX STONE WATER DRAINAGE DETAILS.  
A4-3 NO SCALE



## Channeled Adhesive CI Design

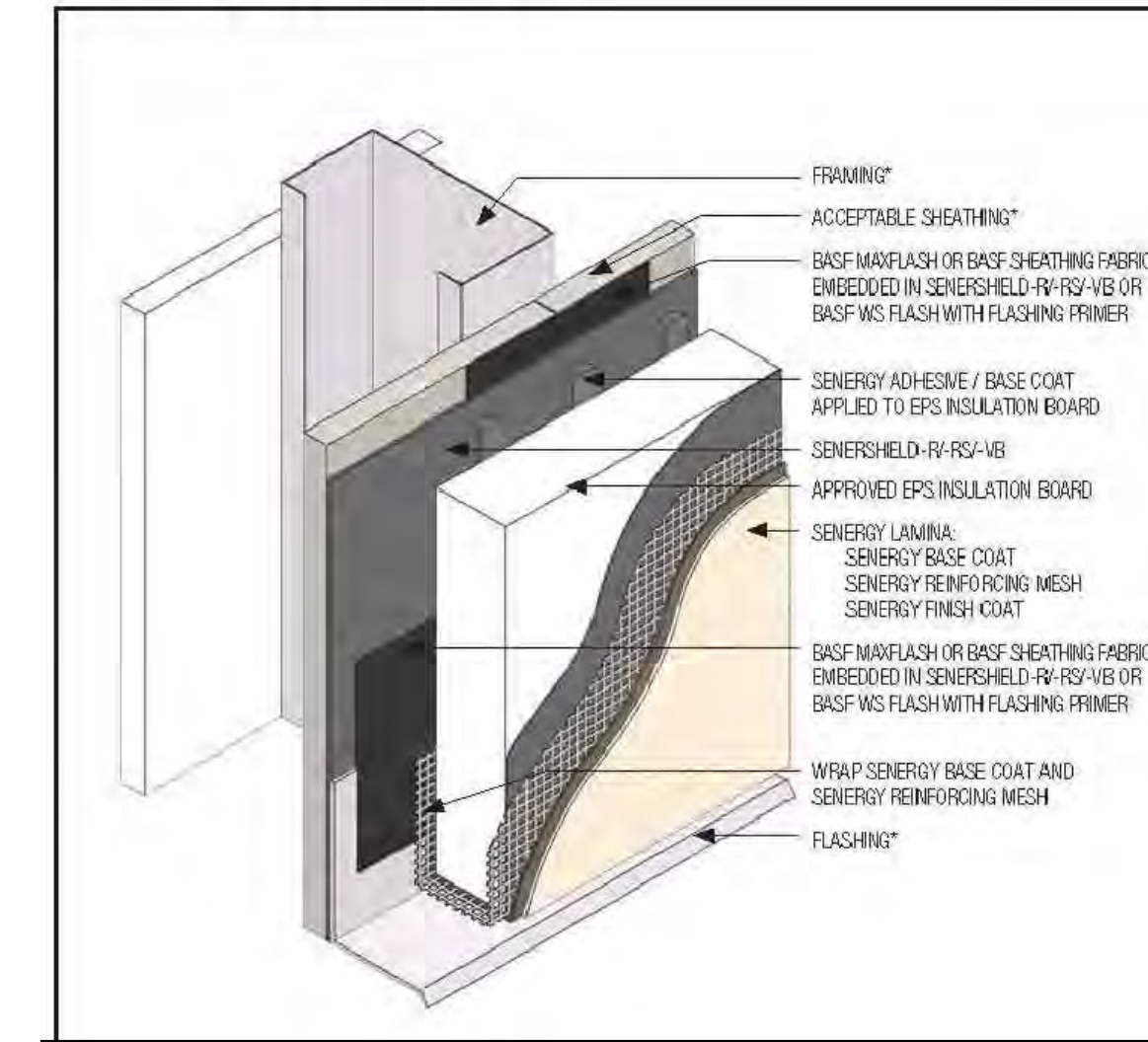
### TYPICAL CHANNELED ADHESIVE



- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- Apply mixed base coat to entire surface of insulation board using a stainless steel trowel with 1/2" x 1/2" (13 mm x 13 mm) notches spaced 2" (50 mm) apart. Ribbons of adhesive must be applied parallel to the 2" (50 mm) dimension of the EPS insulation board to ensure they are vertical when the EPS insulation board is applied to the substrate.
- Set EPS insulation board into place and apply pressure over entire surface of board to ensure positive uniform contact and high initial grab. Do not slide board into place.

## Channeled Adhesive CI Design

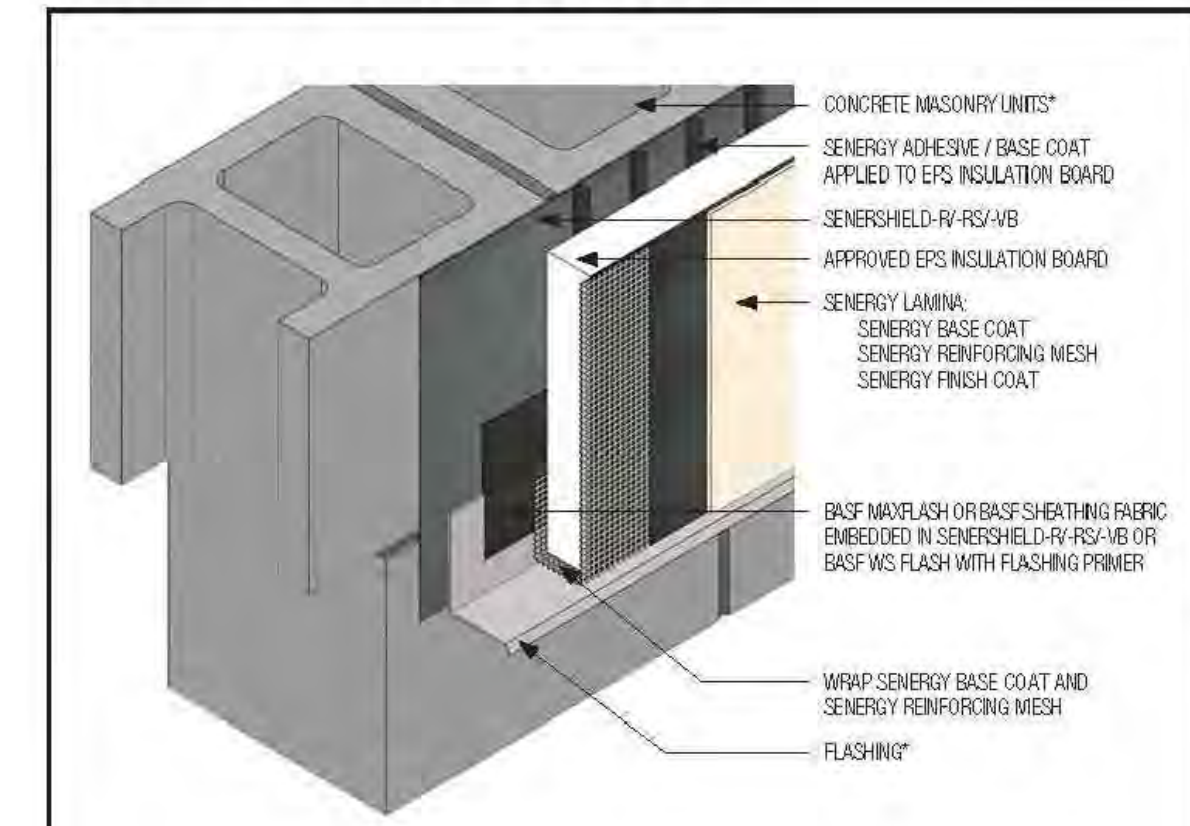
### TYPICAL APPLICATION



- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- All terminations must be fully encapsulated with mesh reinforced base coat.
- Ensure a means for drainage is provided at system termination.

## Channeled Adhesive CI Design

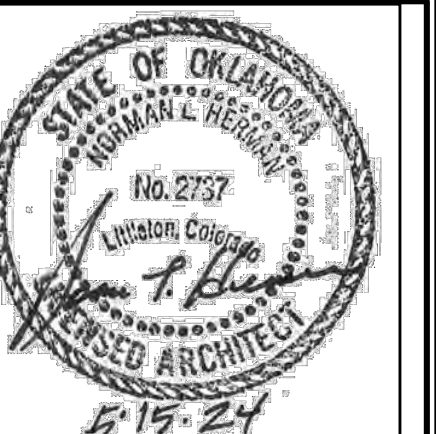
### TYPICAL APPLICATION OVER CMU



- Install BASF materials in accordance with current installation instructions.
- Unsatisfactory conditions shall be reported to the General Contractor and corrected before the application of BASF products.
- Verify all materials are installed in accordance with current installation instructions.
- All terminations must be fully encapsulated with mesh reinforced base coat.
- Ensure a means for drainage is provided at system termination.

BRAKES PLUS

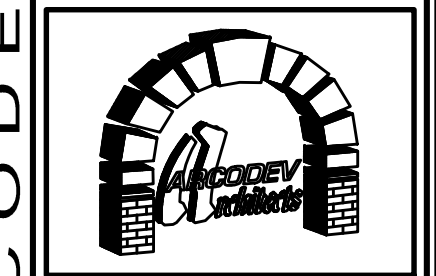
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
1	05.16.24	FOR SUBMITTAL TO BUDG. DEPT.
2		
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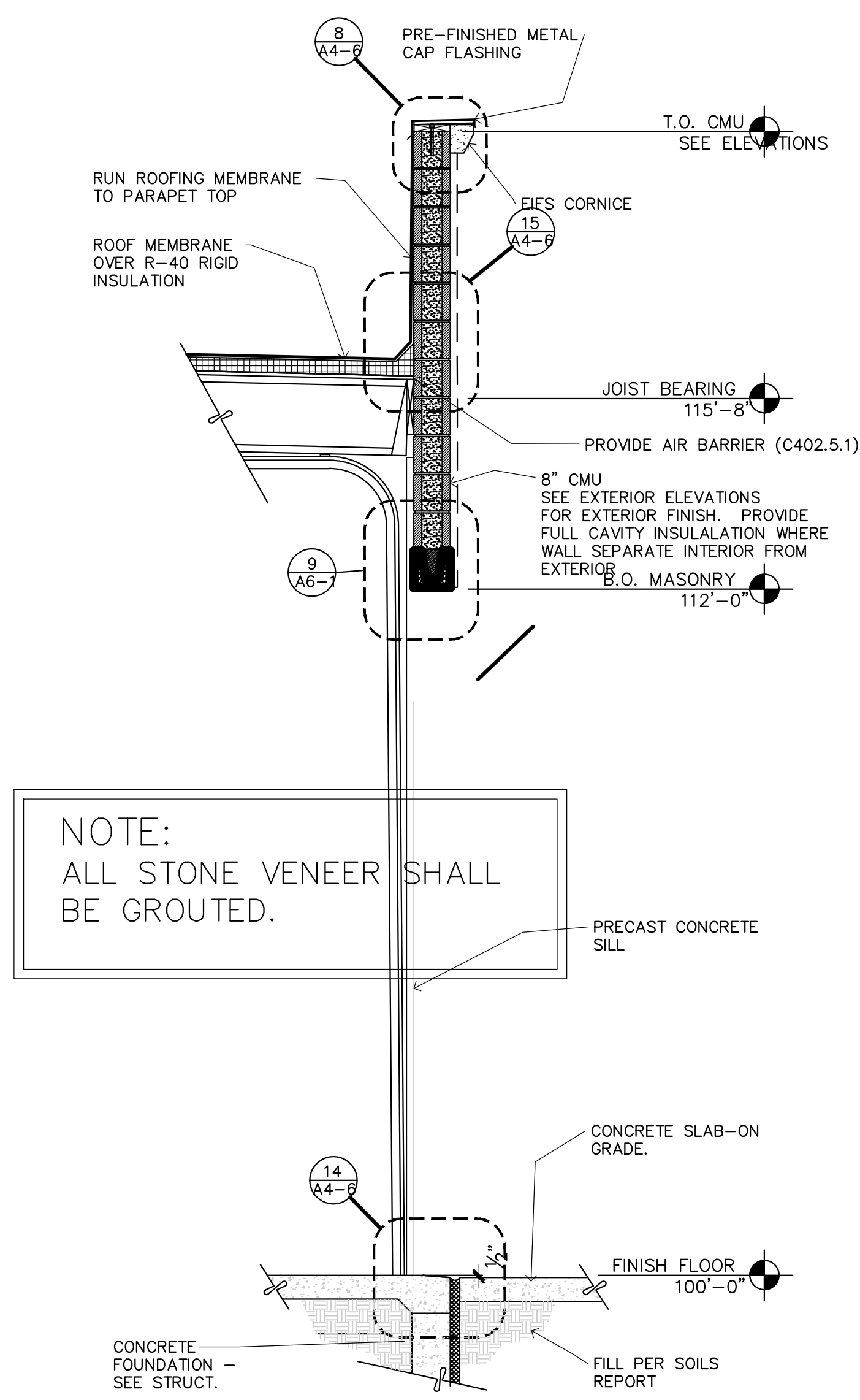
45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.951-8925

ARCHITECT

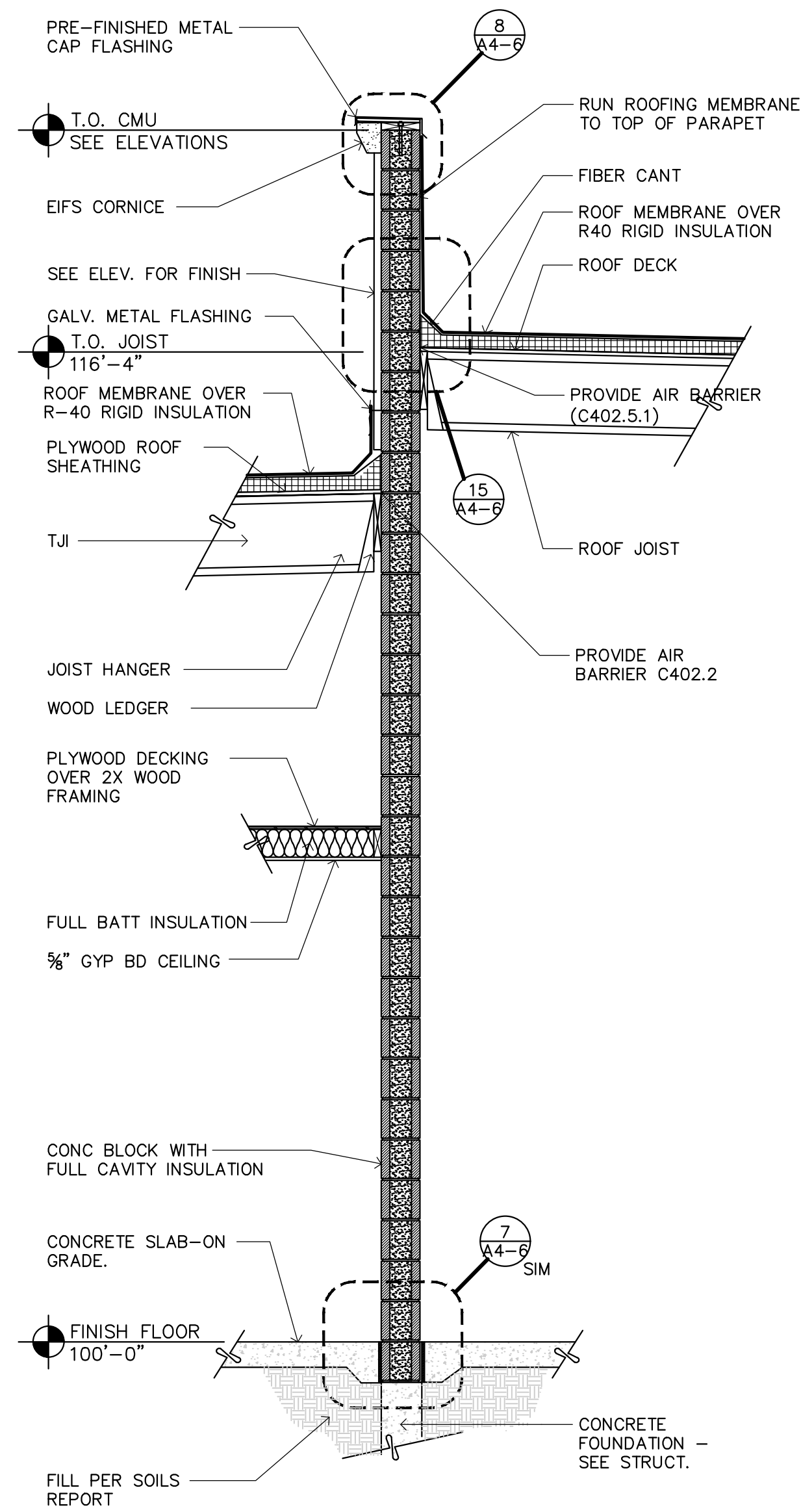
A4-3

WALL SECTIONS

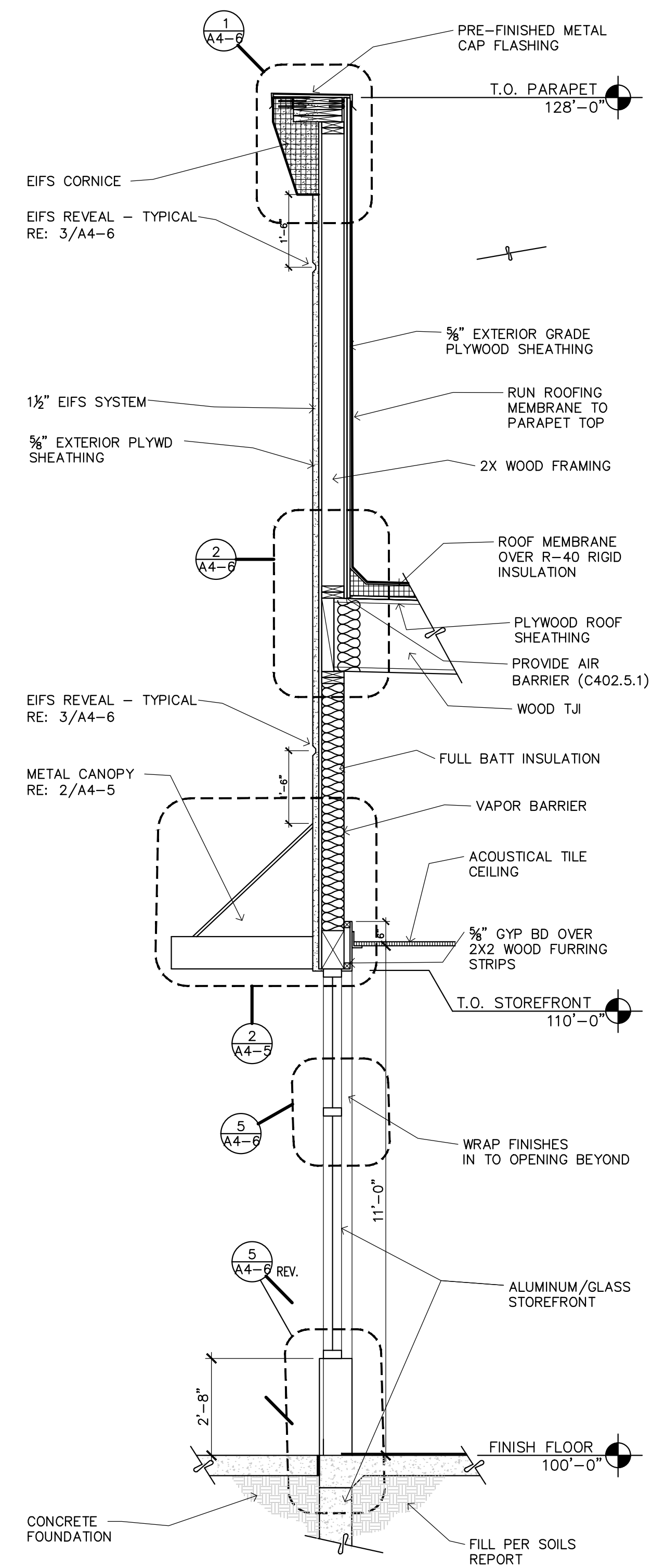




4 WALL SECTION  
A4-4 1/2"=1'-0"



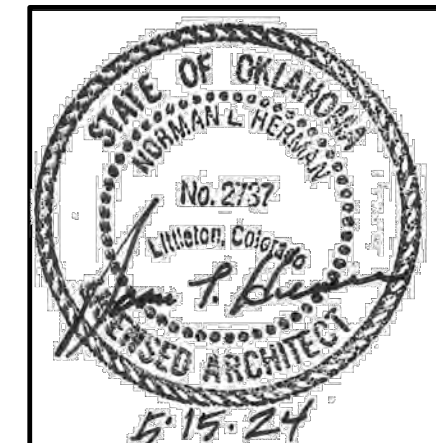
3 WALL SECTION  
A4-4 1/2"=1'-0"



1 WALL SECTION  
A4-4 1/2"=1'-0"

# BRAKES PLUS

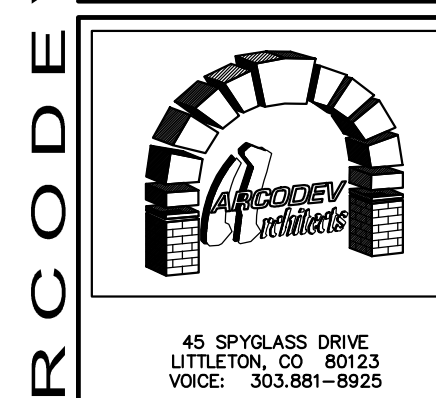
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



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45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.981-8925

A SHEET

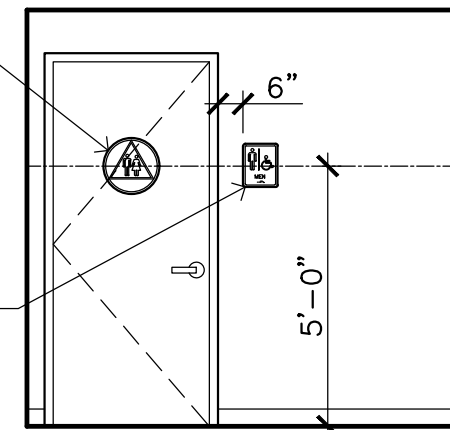
## A4-4

WALL SECTIONS



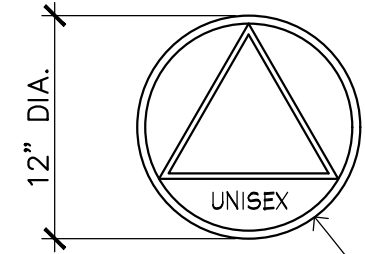
DOOR-MOUNTED SIGNAGE  
APPROPRIATE TO ROOM  
USE PER CBC 1115B.6.1,  
1115B.6.2 AND 1115B.6.2

WALL MOUNTED SIGNAGE TO  
BE LOCATED ON LATCH SIDE  
OF DOOR SWING. MOUNT AT  
60" TO CENTERLINE OF SIGN  
FROM FLOOR



NOTES:

- ON DOORWAYS LEADING TO  
SANITARY FACILITIES, THE  
SYMBOLS TO BE PROVIDED ARE  
12" EQUILATERAL TRIANGLE FOR  
MEN, OR 12" DIAMETER CIRCLE  
FOR WOMEN, 1/4" THICK CENTERED  
ON DOOR 60" ABOVE FLOOR,  
CONTRASTING COLOR WITH DOOR.  
PER CBC 1115B.6

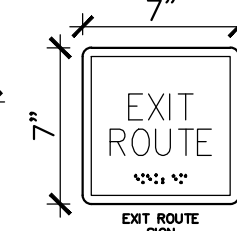
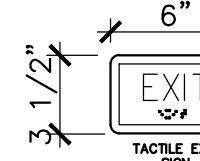


1/4" THICK (TYP)

NOTES:

- H.C. SIGNS PER ADA
- ALL LETTERS AND SYMBOLS SHALL BE RAISED 1/32"
- 12" DIAMETER CIRCLE, 1/4" THICK WITH THE COLOR AND CONTRAST  
BEING DISTINCTLY DIFFERENT FROM THE COLOR OF THE DOOR
- INTERNATIONAL SIGN OF ACCESSIBILITY, WHITE FIGURE ON BLUE  
(#15090 FEDERAL STANDARD 595A) BACKGROUND
- SIGN SHALL BE DISPLAYED AT 60" A.F.F., CENTERED ON THE DOOR,  
COLOR AND CONTRAST SHALL BE DISTINCTLY DIFFERENT FROM  
COLOR AND CONTRAST OF THE DOOR TYP. FOR MEN'S AND WOMEN'S  
SIGNS
- EDGES OF SIGNS SHALL BE ROUNDED, CHAMFERED OR EASED AND  
CORNERS OF SIGNS SHSALL HAVE A MINIMUM RADIUS OF 1/8"
- 12" EQUILATERAL TRIANGLE, 1/4" THICK WITH THE VERTEX POINTING  
UPWARD AND THE COLOR AND CONTRAST BEING DISTINCTLY  
DIFFERENT FROM THE COLOR OF THE DOOR
- LETTERS AND NUMERALS ON SIGNS ARE RAISED 1/32", SANS SERIF  
UPPERCASE CHARACTERS TO BE ACCOMPANIED BY GRADE 2  
BRAILLE.
- BRAILLE DOTS ARE 1/10" ON CENTER IN EACH CELL WITH 2/10"  
SPACE BETWEEN CELLS
- BRAILLE DOTS ARE RAISED A MINIMUM OF 1/40" ABOVE THE  
BACKGROUND
- MOUNTING HEIGHT IS 60" FROM FINISH FLOOR TO THE CENTERLINE  
OF THE SIGN

LETTERING RAISED 1/32"  
UPPER-CASE  
CHARACTERS



NOTE  
PROVIDE SIGNAGE AT RESTROOMS  
AND EXITS

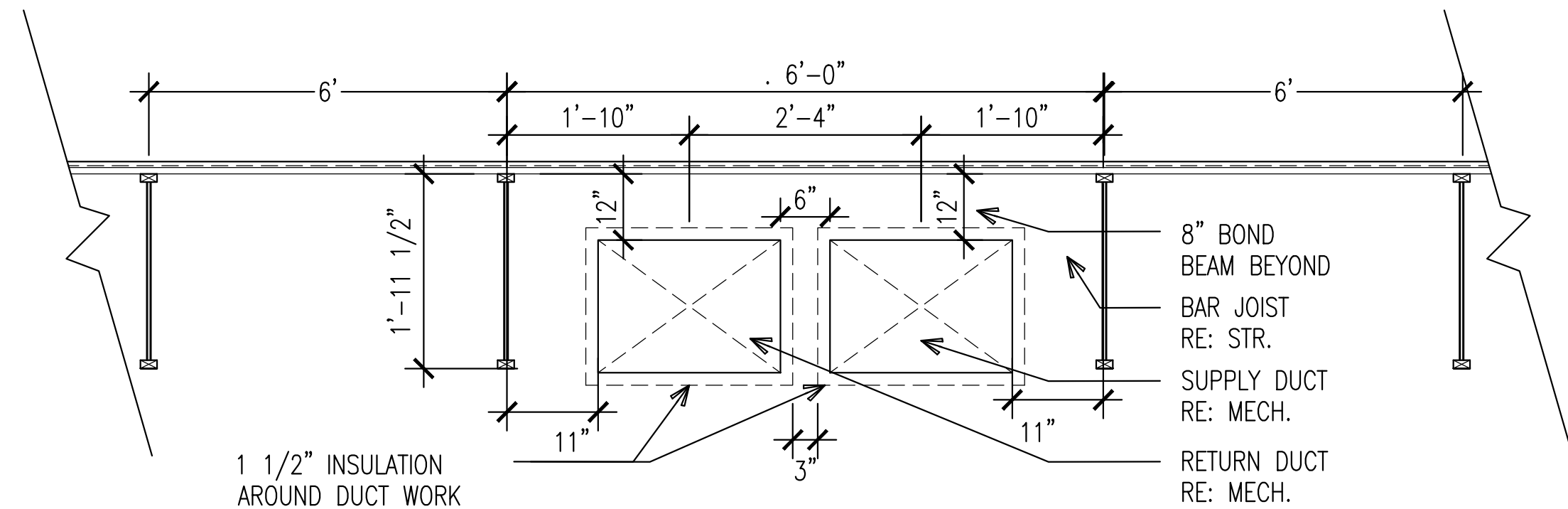
WHITE SYMBOLS AND  
LETTERS ON A BLUE  
BACKGROUND, TYPICAL  
CORRESPONDING, GRADE II  
BRAILLE

NOTES:

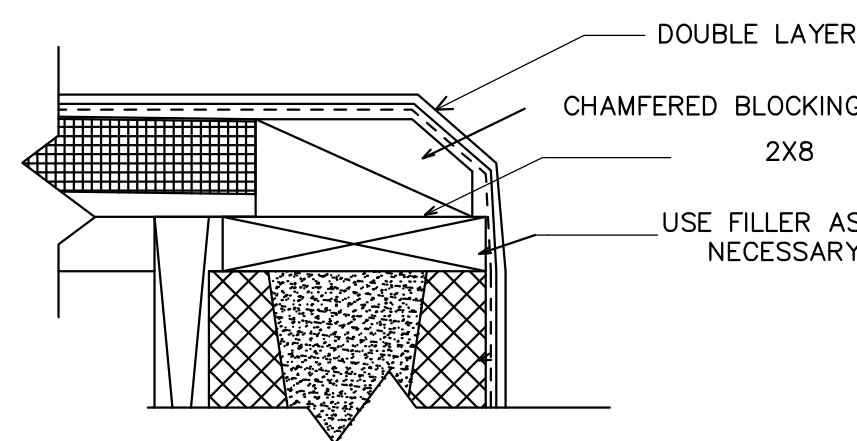
- CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A  
NONGLARE FINISH
- CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR  
BACKGROUND, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON  
A LIGHT BACKGROUND
- VISUAL CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS  
WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM  
AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".  
STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10%  
MINIMUM AND 20% MAXIMUM OF THE HEIGHT OF THE CHARACTER
- CHARACTERS ON SIGNS REQUIRED TO BE ACCESSIBLE SHALL BE  
SIZED ACCORDING TO THE "VISUAL CHARACTER HEIGHT" TABLE. THE  
MINIMUM HEIGHT IS MEASURED USING AN UPPERCASE LETTER "I".
- RAISED CHARACTERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND  
SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY  
CONTRACTED (GRADE 2) BRAILLE.
- RAISED CHARACTERS HSALL BE A MINIMUM OF 5/8" AND A MAXIUM  
OF 2" HIGH.
- PICTORIAL SYMBOL SIGNS (PICTOGRAMS) SHALL BE ACCOMPANIED BY  
THE VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM.  
THE OUTSIDE DIMENSION OF THE PICTOGRAM FIELD SHALL BE A  
MINIUM OF 6" IN HEIGHT.
- BRAILLE SHALL BE PLACED A MINIMUM OF 5/8" AND A MAXIMUM OF  
1/2" DIRECTLY BELOW THE TACTILE CHARACTERS, FLUSH LEFT OR  
CENTERED.

- RAISED CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS  
WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM  
AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".  
STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10%  
MINIMUM AND 20% MAXIMUM OF THE HEIGHT OF THE CHARACTER.
- CONTRACTED (GRADE 2) BRAILLE SHALL BE USED.
- MOUNTING HEIGHT SHALL BE 48" MINIMUM, MEASURED FROM THE  
BASELINE OF THE LOWEST LINE OF BRAILLE, AND 60" MAXIMUM,  
MEASURED FROM THE BASELINE OF THE HIGHEST RAISED  
CHARACTERS, ABOVE THE FINISH FLOOR OR GROUND SURFACE.

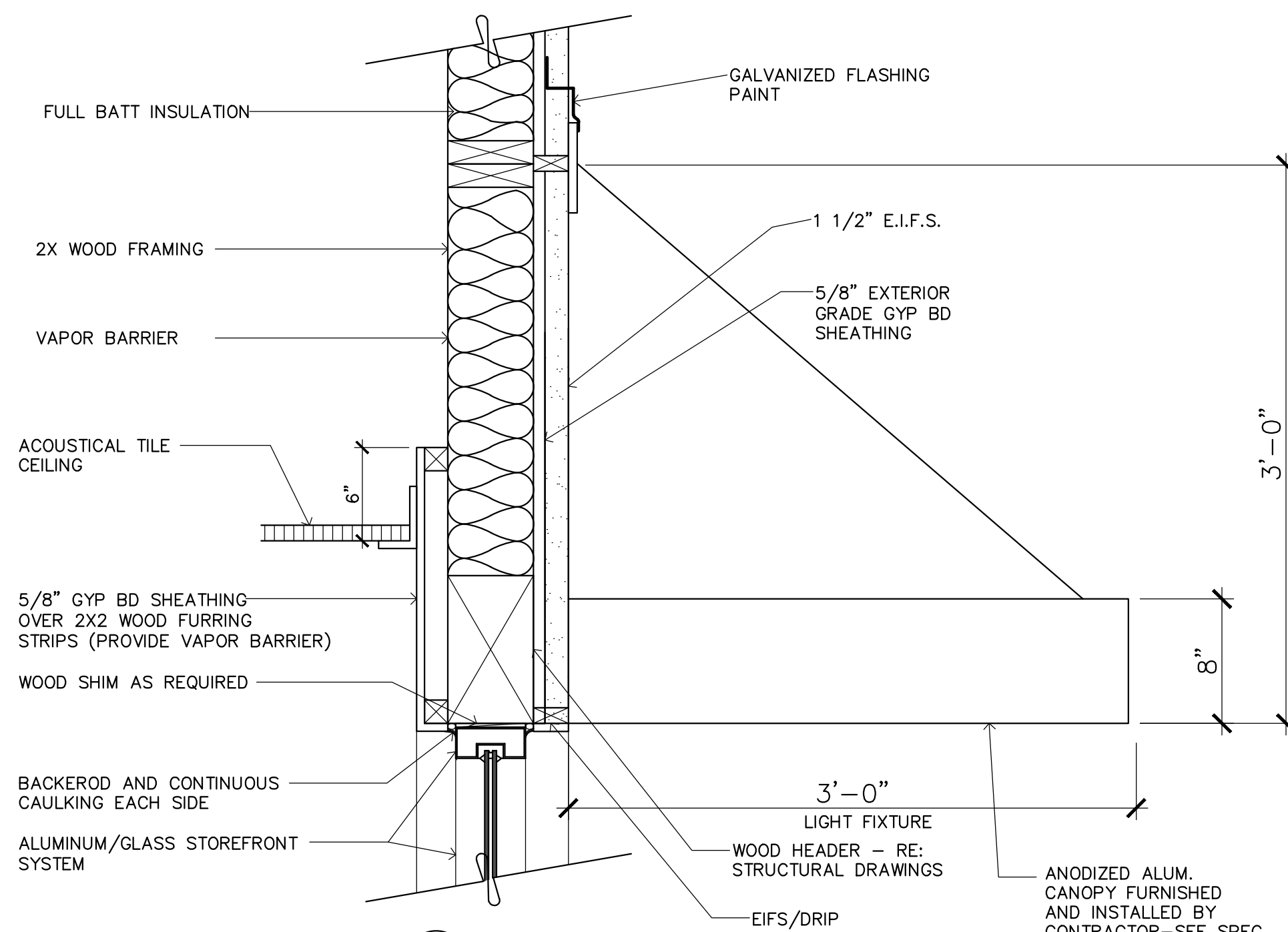
10 INTERIOR SIGNAGE INFORMATION  
NO SCALE



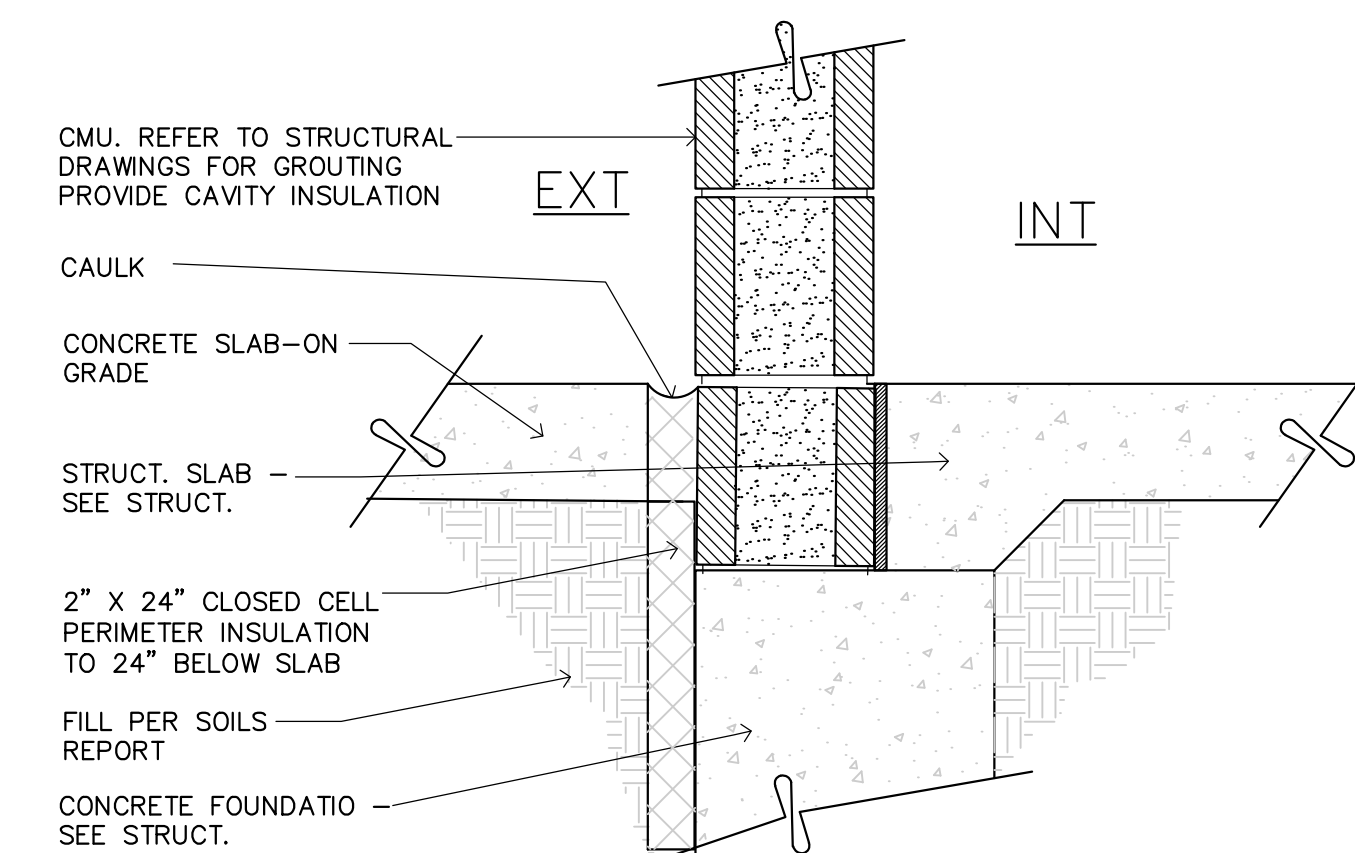
4 RTU DUCT-WORK DETAIL  
SCALE: 3/4" = 1'-0"



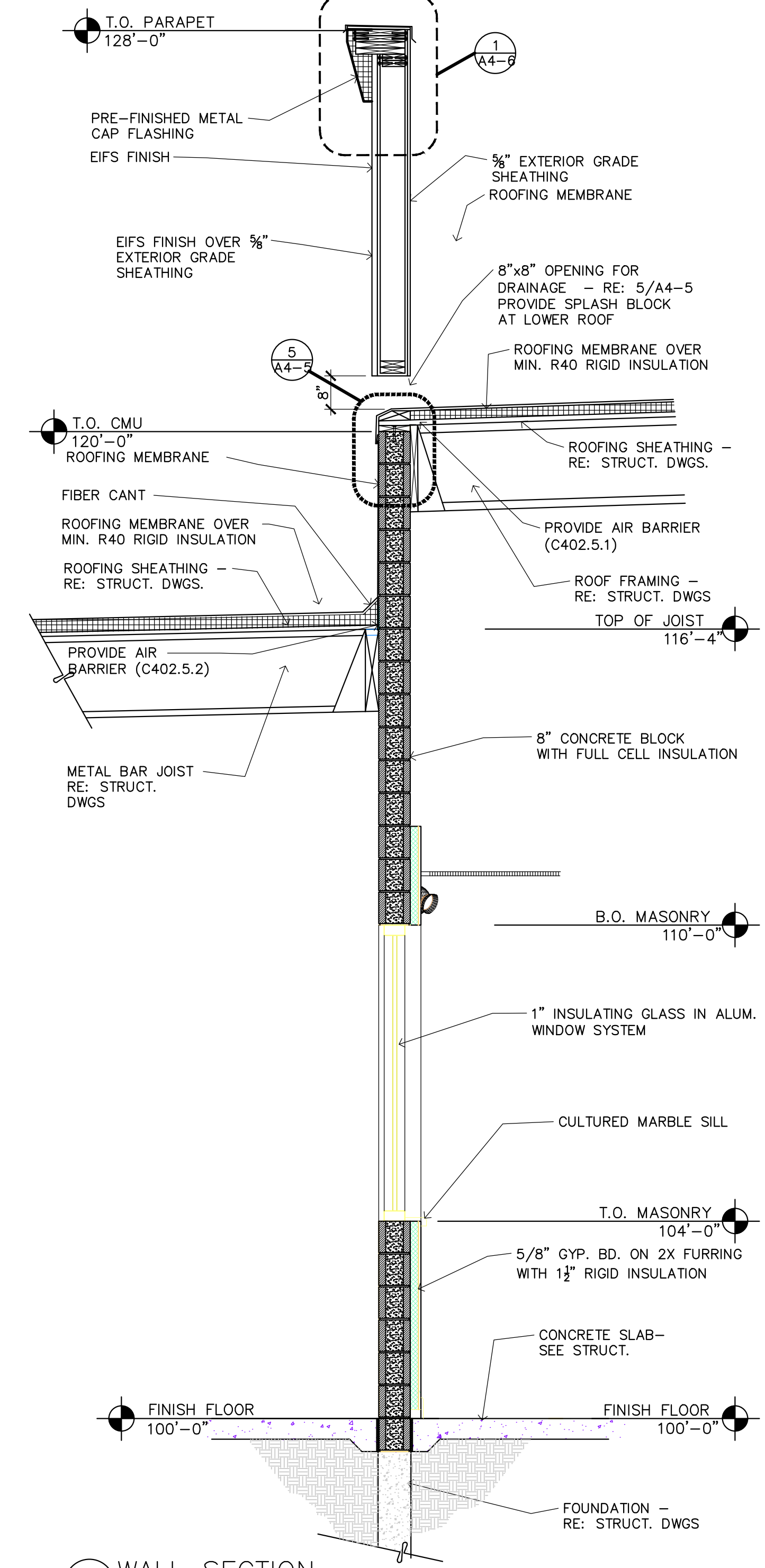
5 ROOF CORNER DETAIL  
SCALE: 3" = 1'-0"



2 AWNING DETAIL  
SCALE: 1 1/2" = 1'-0"



3 CMU FOUNDATION DETAIL  
SCALE: 1/2" = 1'-0"



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

BRAKES PLUS

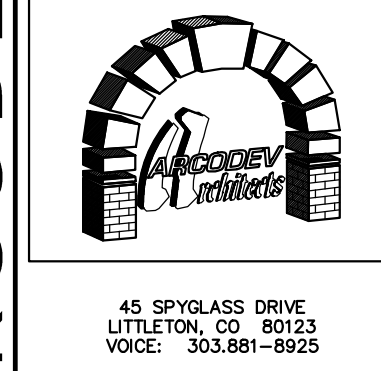
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



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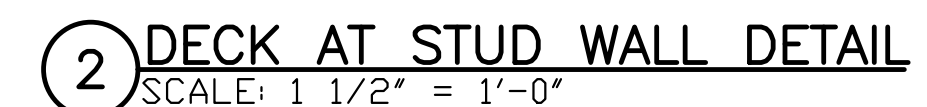
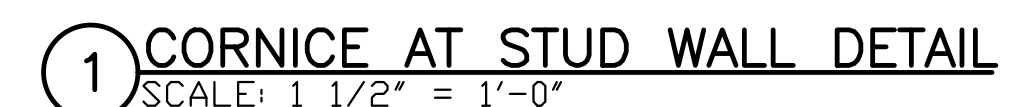
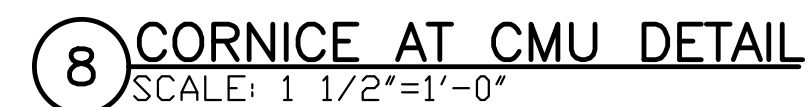
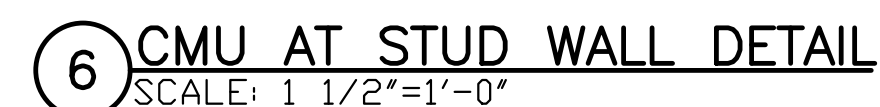
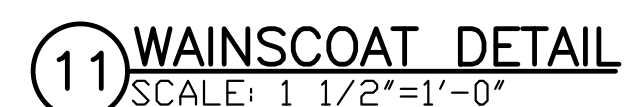
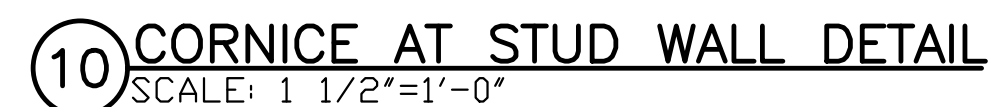
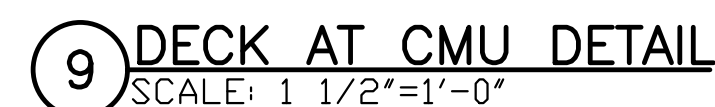
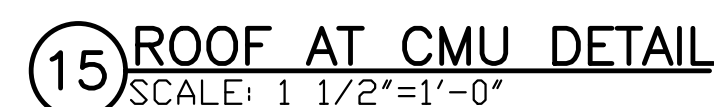


A SHEET

A4-5

WALL SECTIONS & DET.



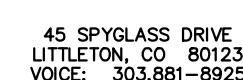


601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



REVISION	DATE	COMMENTS
	05.16.24	FOR SUBMITTAL TO BLDG. DEPT.

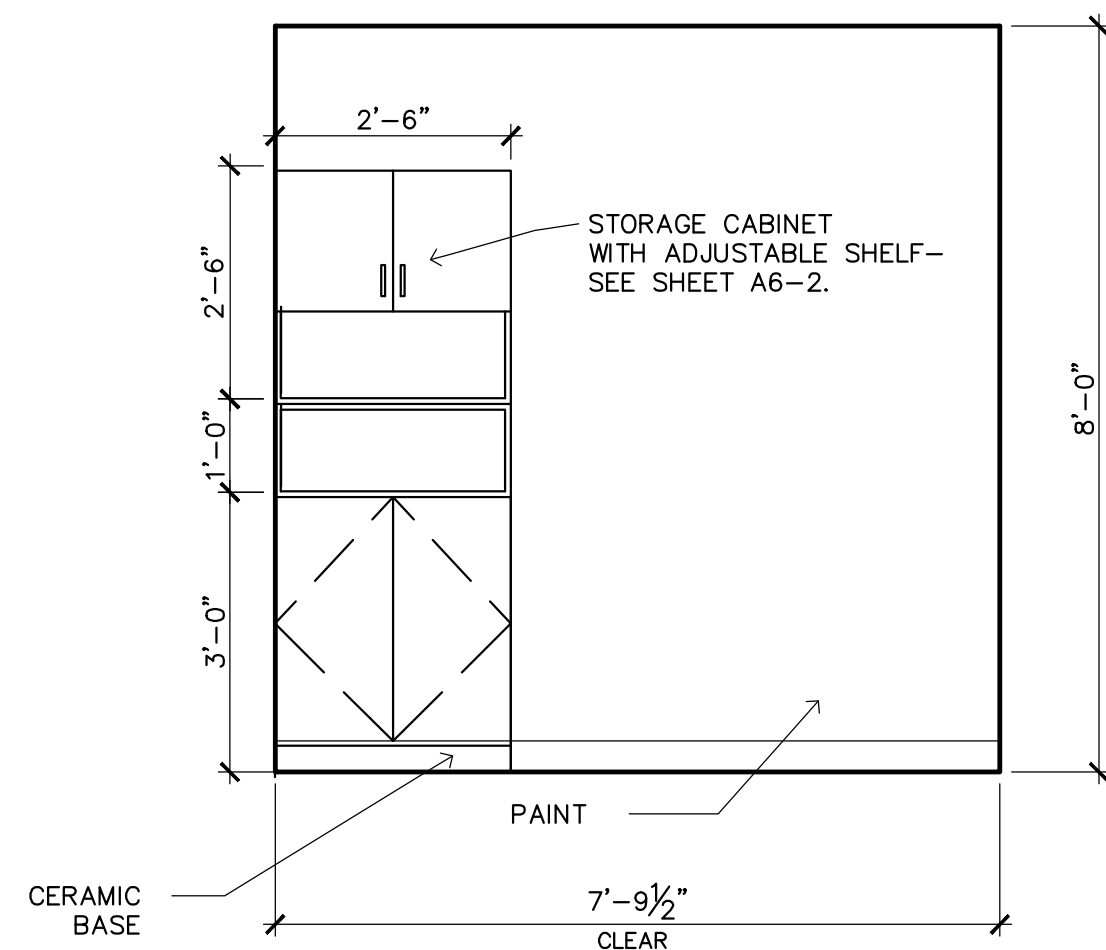
ARCODEV JOB #:	—
CLIENTJOB #:	—
DRAWN BY:	NLH
CHECKED BY:	NLH
DATE OF ISSUE:	04.19.24



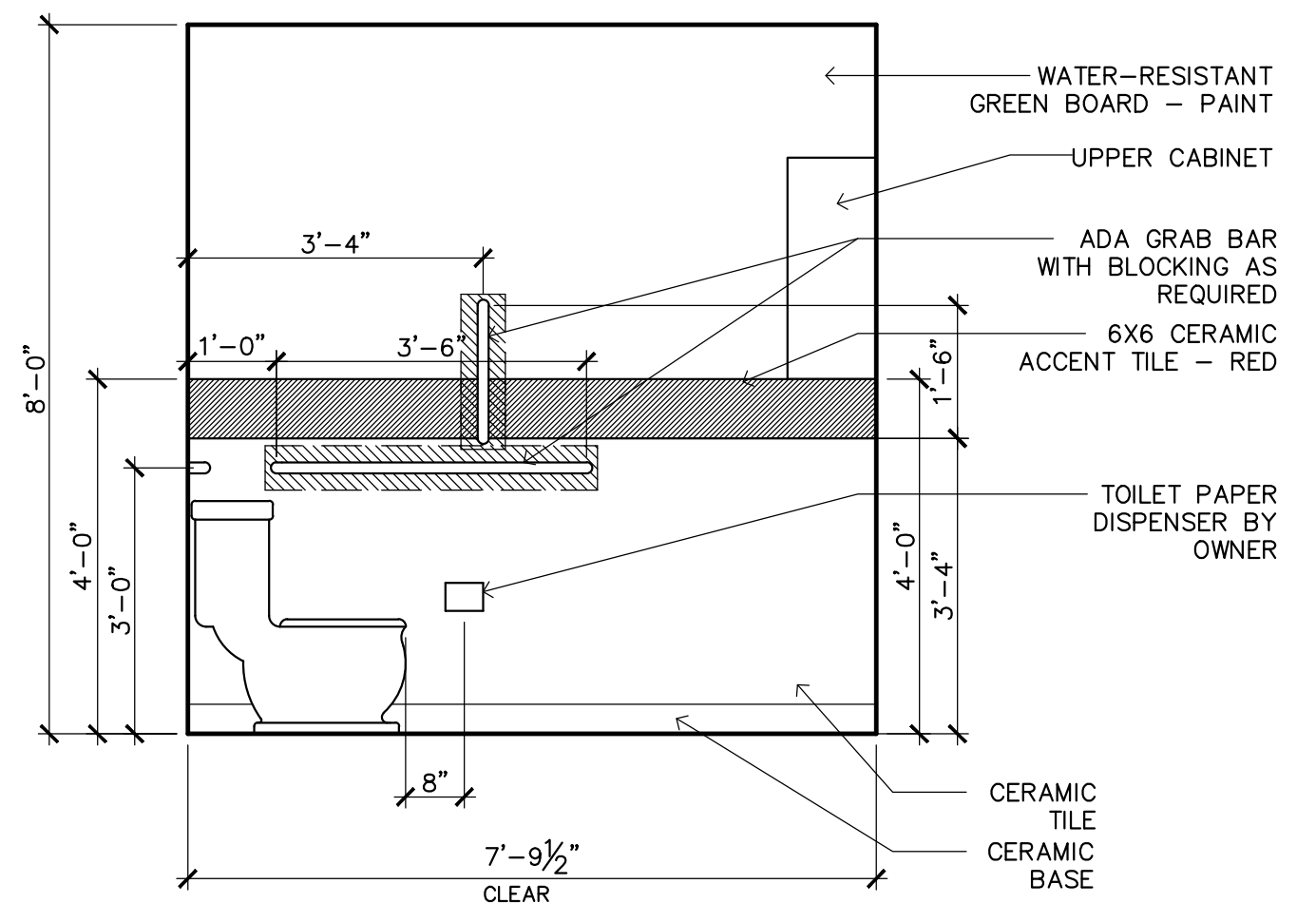
SHEET

## DETAILS

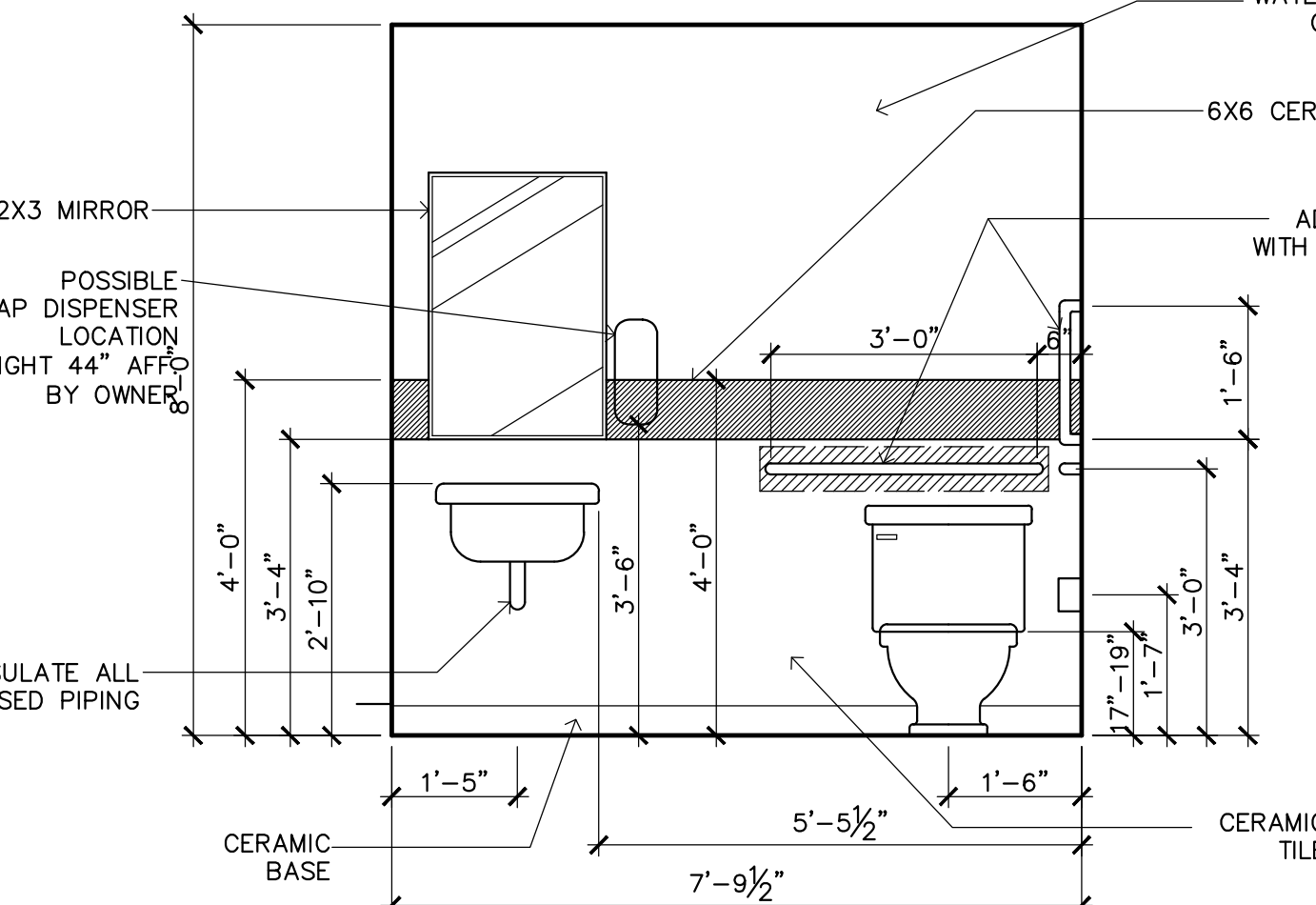




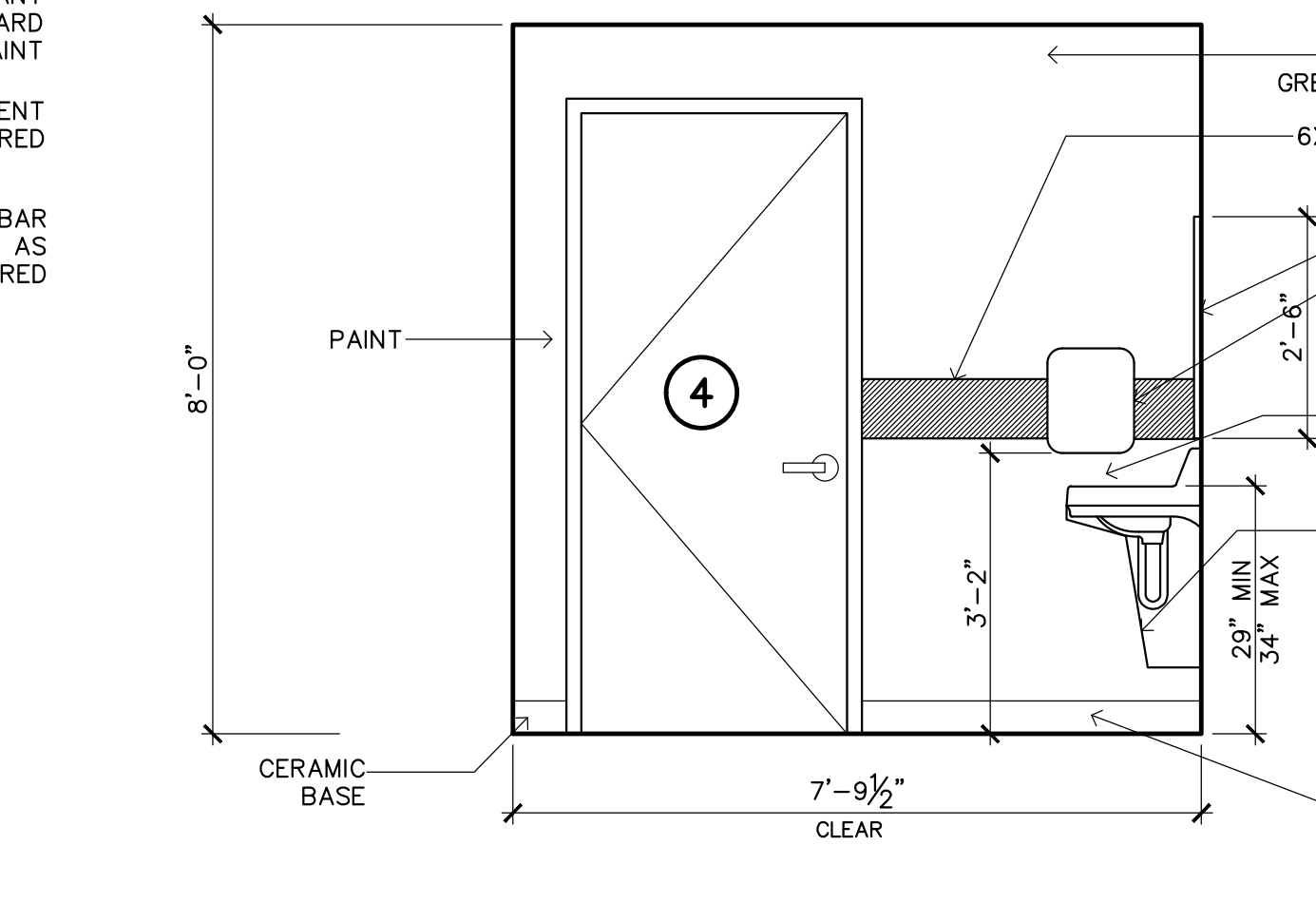
**1 WOMEN'S RESTROOM ELEVATION**  
SCALE: 1/2" = 1'-0"



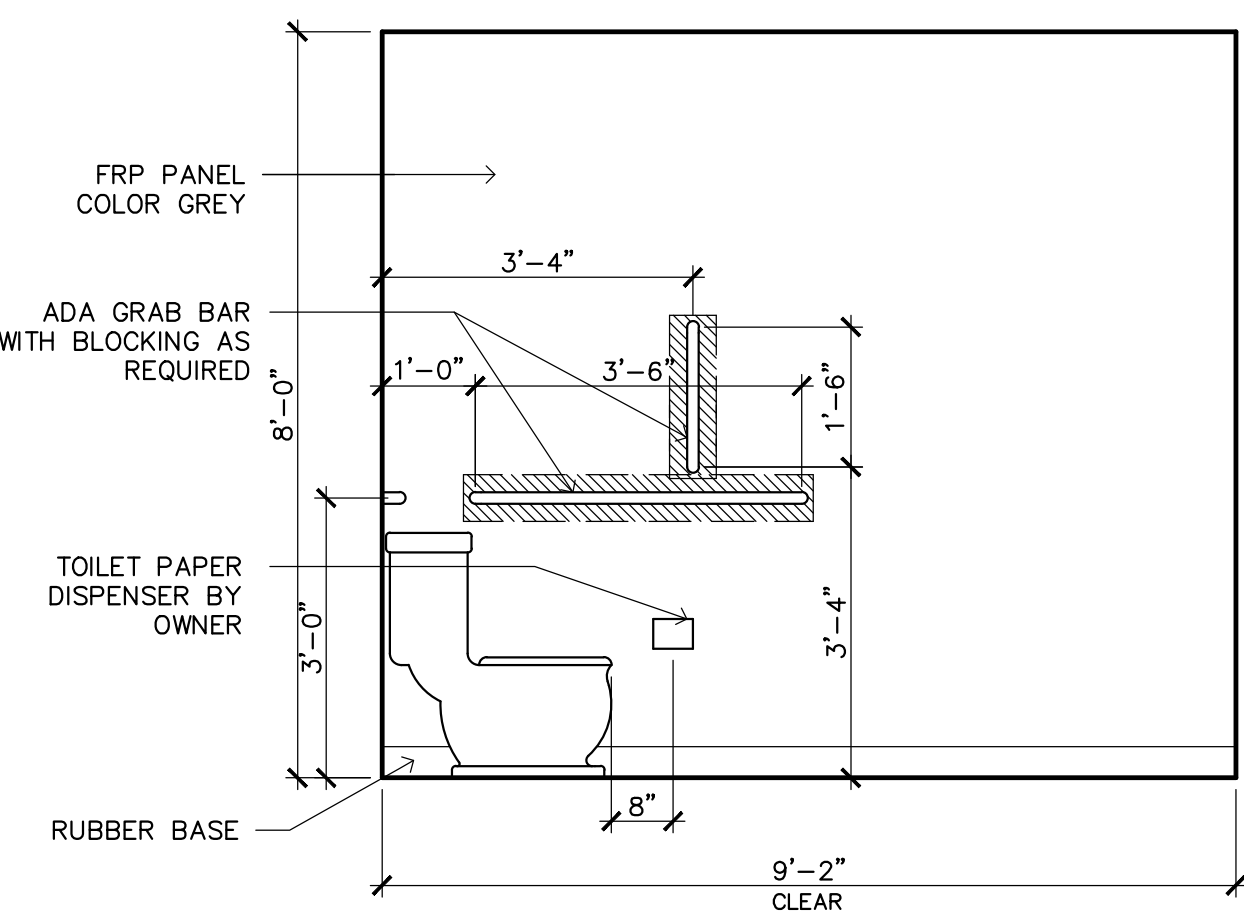
**2 MEN'S RESTROOM ELEVATION**  
SCALE: 1/2" = 1'-0"



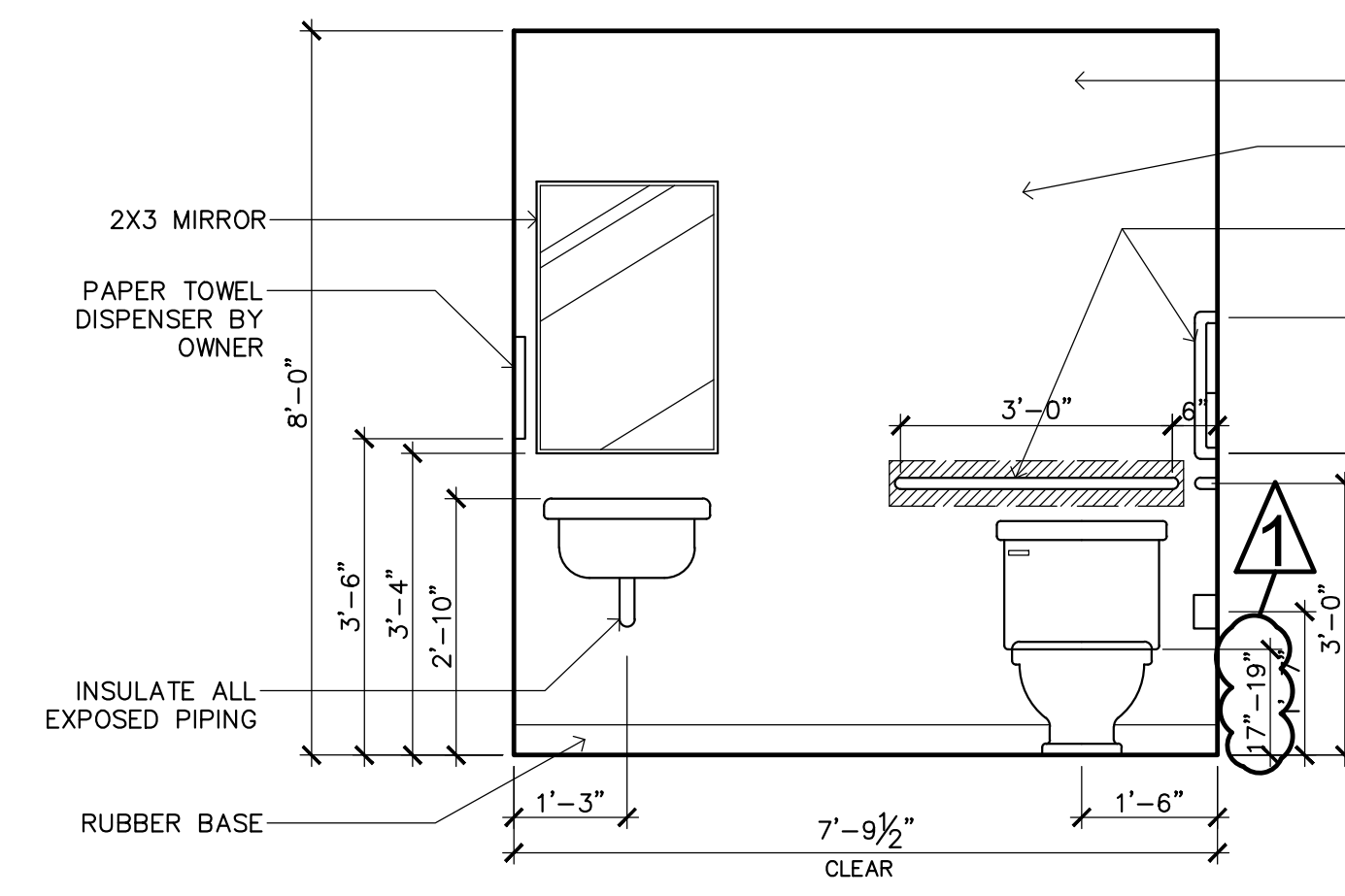
**3 COFFEE ROOM ELEVATION**  
SCALE: 1/2" = 1'-0"



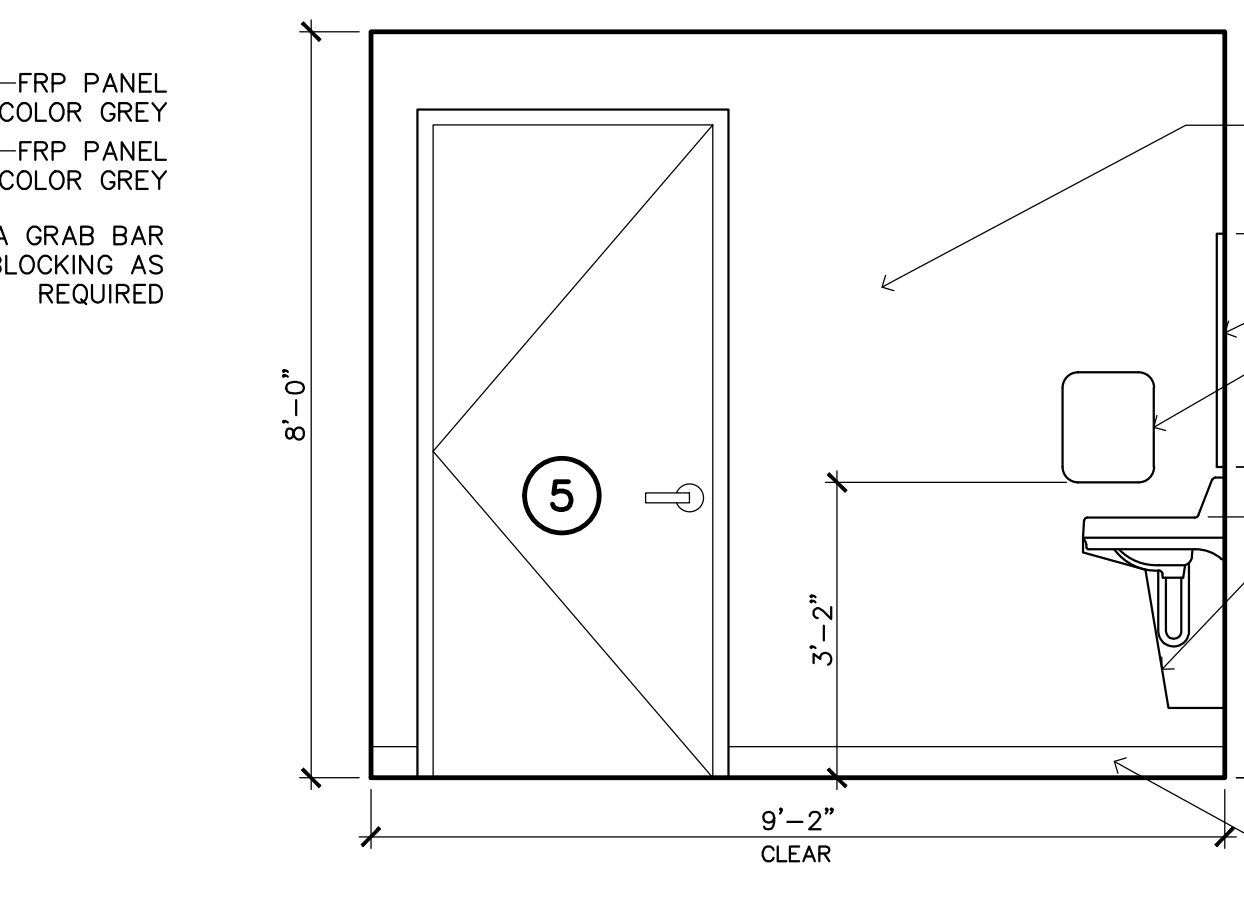
**4 ADA FIXTURE PLACEMENT**  
NO SCALE



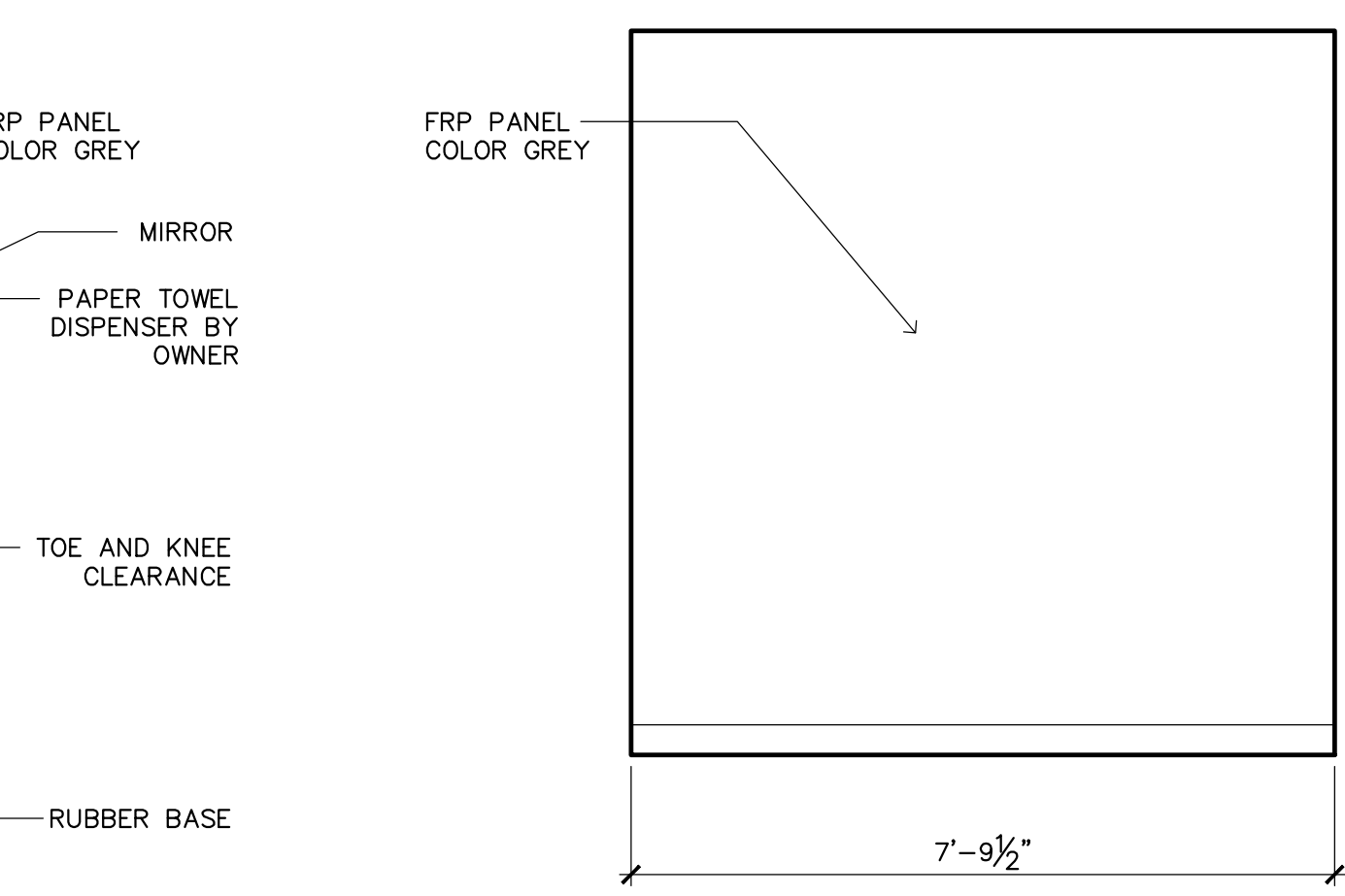
**5 COFFEE ROOM ELEVATION**  
SCALE: 1/2" = 1'-0"



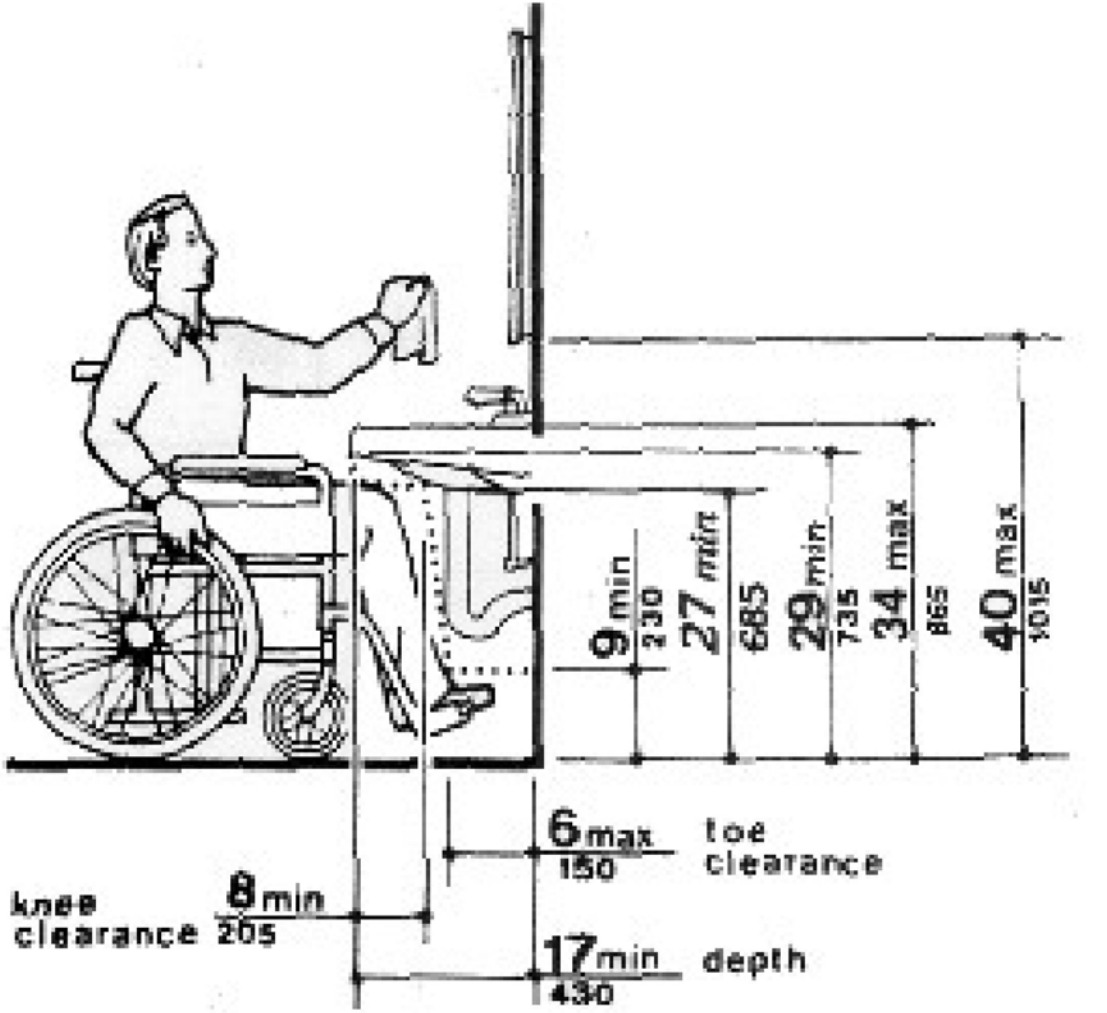
**6 ADA FIXTURE PLACEMENT**  
NO SCALE



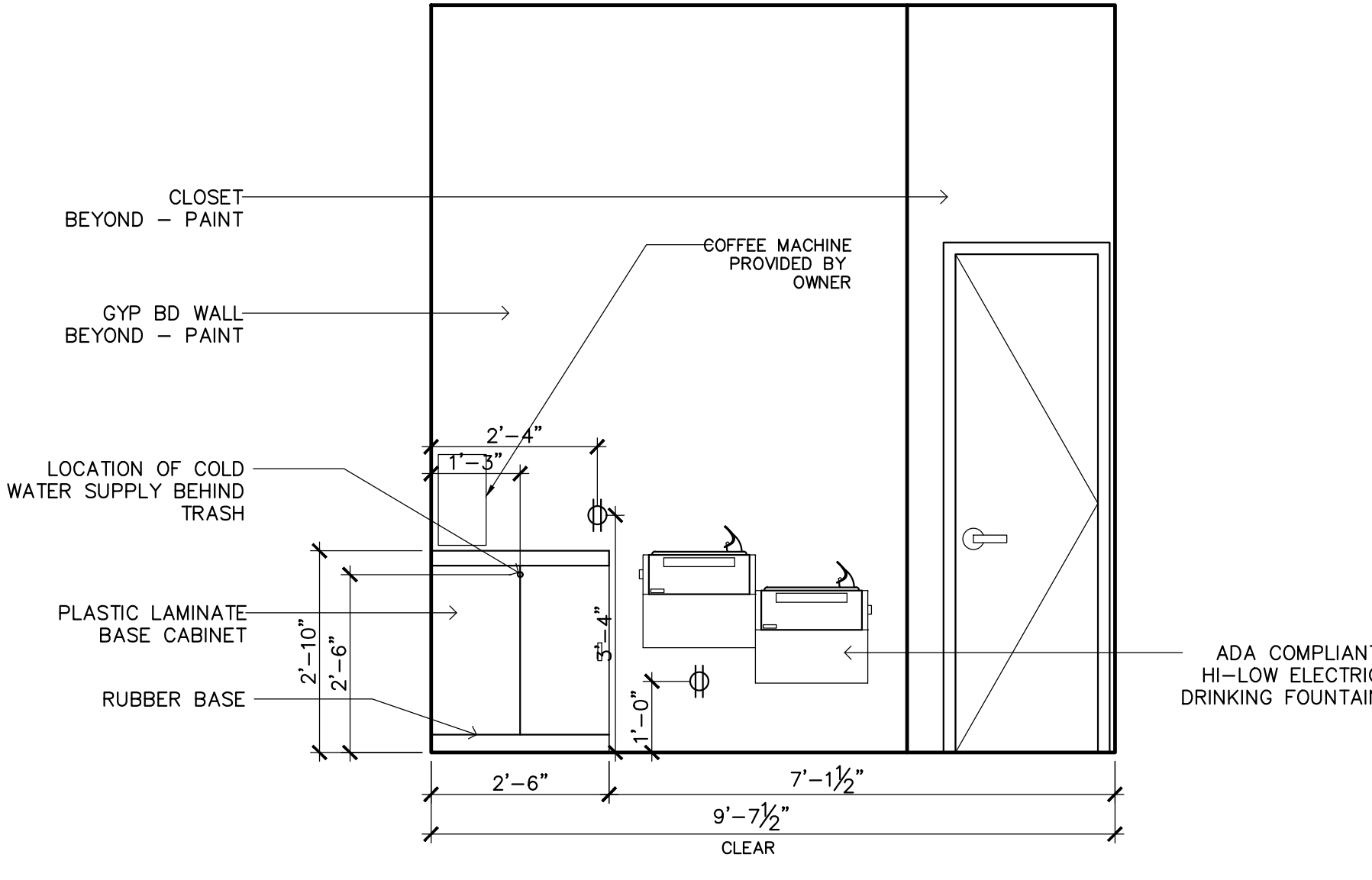
**7 COFFEE ROOM ELEVATION**  
SCALE: 1/2" = 1'-0"



**8 ADA FIXTURE PLACEMENT**  
NO SCALE

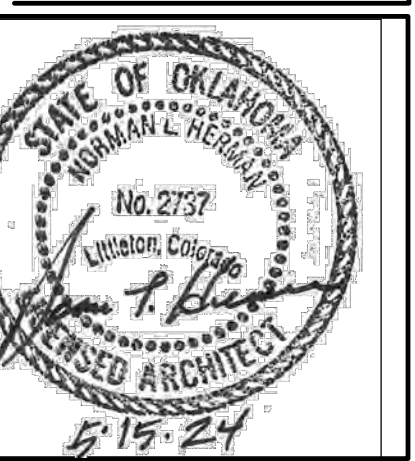


**9 ADA FIXTURE PLACEMENT**  
NO SCALE



**10 COFFEE ROOM ELEVATION**  
SCALE: 1/2" = 1'-0"

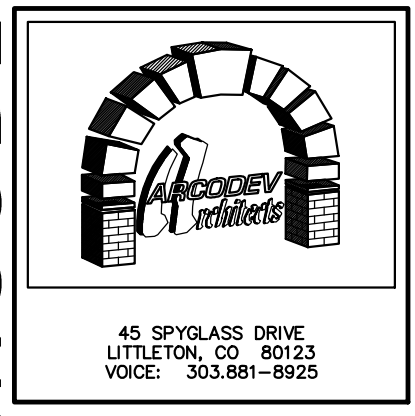
**BRAKES PLUS**  
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05/16/24	FOR SUBMITTAL TO BLDG. DEPT.

ARCODEV JOB #:  
CLIENT/JOB #:  
DRAWN BY: NLH  
CHECKED BY: NLH  
DATE OF ISSUE: 04/19/24



A SHEET

**A5-1**  
INTERIOR ELEVATIONS  
AND DETAILS





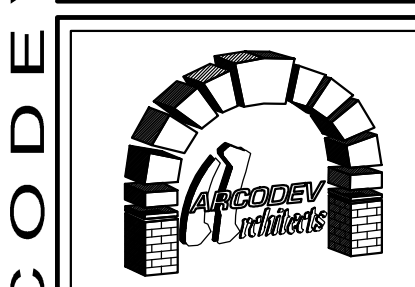
OPEN AREA: 60" DIA. CIRCLE  
TOILET: 5'-0" X 5'-0"  
SINK: 30"X48"



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05.16.24	FOR SUBMITTAL TO BLDG. DEPT.

ARCODEV JOB #:	-
CLIENTJOB #:	-
DRAWN BY:	NLH
CHECKED BY:	NLH
DATE OF ISSUE:	04.19.24



45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.881-8925

△ SHEET

A5-2

## INTERIOR ELEVATIONS AND DETAILS



## DOOR SCHEDULE

DOOR NO.	DOOR SIZE	DOOR				FRAME		DETAILS			HDWR GROUP	FIRE RATING	REMARKS
		TYPE	MAT'L	FINISH IN	OUT	MAT'L	FINISH	HEAD	JAMB	SILL			
1	3'-0" X 7'-0"	C	ALUM./GL	M1	M1	ALUM.	M1	8/A6-1	7/A6-1	8/A6-1	6	-	SIGN THIS DOOR SHALL REMAIN UNLOCKED DURING BUSINESS HOURS. NO PANIC BAR REQUIRED.
2	3'-0" X 7'-0"	C	ALUM./GL	M1	M1	ALUM.	M1	8/A6-1	7/A6-1	8/A6-1	6	-	THIS DOOR CLEAR MILL FINISH TO MATCH STOREFRONT FRAMING
3	3'-0" X 7'-0"	B	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	-	2	-	-
4	3'-0" X 7'-0"	F	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	-	1	-	PROVIDE ACCESSIBLE RESTROOM SIGNAGE.
5	3'-0" X 7'-0"	B	H.M.	P2	P2	H.M.	P2	3/A6-1	3/A6-1	-	1	-	PROVIDE ACCESSIBLE RESTROOM SIGNAGE.
6	3'-0" X 7'-0"	E	H.M.	P2	P2	H.M.	P2	2/A6-1 SM	4/A6-1 SIM	2/A6-1 SIM	4	-	PROVIDE 16"X30" VIEW PANEL.
7	2'-0" X 7'-0"	A	H.M.	-	-	-	-	-	-	-	-	-	-
8	NOT USED	-	-	-	-	-	-	1,2/A6-1	4/A6-1	1,2/A6-1	3	-	INSULATED DOOR
9	3'-8" X 7'-0"	E	H.M.	P2	P2	H.M.	P2	1/A6-1	4/A6-1	-	1	-	PROVIDE 16"X30" VIEW PANEL.
10	3'-0" X 7'-0"	B	H.M.	-	-	-	-	1,2/A6-1	4/A6-1	1,2/A6-1	3	-	INSULATED DOOR
11	10'-0" X 12'-0"	D	ALUM./GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
12	10'-0" X 12'-0"	D	ALUM./GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
13	10'-0" X 12'-0"	D	ALUM./GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
14	10'-0" X 12'-0"	D	ALUM./GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
15	10'-0" X 12'-0"	D	ALUM./GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
16	10'-0" X 12'-0"	D	ALUM./GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
17	10'-0" X 12'-0"	D	ALUM./GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK
18	10'-0" X 12'-0"	D	ALUM./GL	-	-	-	-	9/A6-1	6/A6-1	9/A6-1	-	-	PADLOCK

## NOTE:

- THRESHOLD SHALL BE MAXIMUM 1/2" HIGH ABOVE FLOOR AND LANDING ON BOTH SIDES AT BUILDING ENTRANCES.
- MAXIMUM DOOR OPENING EFFORT SHALL BE 5 LBS AT EXTERIOR AND INTERIOR DOORS PER ANSI 404.2.9.
- ALL DOORS SHALL BE EQUIPPED WITH SINGLE-EFFORT, NON-GRASP HARDWARE CENTERED BETWEEN 34" AND 48" ABOVE THE FLOOR.

## ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOORS		WALLS								CEILINGS		REMARKS
		FLOOR	BASE	WEST MATERIAL	FINISH	EAST MATERIAL	FINISH	NORTH MATERIAL	FINISH	SOUTH MATERIAL	FINISH	MATERIAL	FINISH	
101	SALES FLOOR	LVT	RB	GB	F3	ALUM./G.B.	F3	ALUM./GB	F3	G.B.	F3	ACT	F1	11'-0"
102	COFFEE ROOM	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	ACT	F1	10'-0"
103	OFFICE	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	ACT	F1	8'-0"
104	UNISEX RR.	LVT	CT	G.B./CT	F4/F1	G.B./CT	F4/F1	GB	F4	GB/CT	F4/F1	GB	F4	8'-0"
105	UNISEX RR.	SEALED CONCRETE	RB	FRP	F1	FRP	F1	FRP	F1	CONC	F1	GB	F4	8'-0"
106	STO.	LVT	RB	GB	F3	GB	F3	GB	F3	GB	F3	GB	F4	ON TRUSS
107	BREAK ROOM	SEALED CONCRETE	RB	GB	F3	GB	F3	G.B.	F3	CONC	F3	OPEN	P2	ON TRUSS
108	INVENTORY	SEALED CONCRETE	RB	G.B.	F3	GB	F3	GB	F3	CONC	F5	OPEN	F4	ON TRUSS
109	SERVICE AREA	SEALED CONCRETE	-	CMU	F5	CMU	F5	CMU	F5	CMU	F5	OPEN	F4	VARIES
110	NOT USED	-	-	-	-	-	-	-	-	-	-	-	-	-
111														

## NOTES:

- PROVIDE MOISTURE-RESISTANT GYPSUM BOARD.

## HARDWARE SCHEDULE

GROUP	QTY.	DESCRIPTION
1	1 EACH 1 EACH 3 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" HMF DOOR - 3070 X 1 3/4" H.M. HINGE - STANLEY FBB179 4.5 X 4.5 X 626 LOCKSET - SCHLAGE AL40S SAT X 626 (PRIVACY) FLOOR STOP - MM FS13 X US26D
2	1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" HMF LH CR ASA DOOR - 3070 X 1 3/4" H.M. HINGE - STANLEY FBB179 4.5 X 4.5 X 626 LOCKSET - SCHLAGE AL53PD SAT X 626 (ENTRY) CLOSER - LCN 1461 REG/PA TBMS X ALU FLOOR STOP - MM FS13 X US26D
3	1 EACH 1 EACH 3 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" 4" HD HMF RH CR BJPR DOOR - 3070 X 1 3/4" HMD BLANK MOLCR HINGE - STANLEY FBB179 NRP 4.5 X 4.5 X 626 EXIT DEVICE - VON DUPRIN 22NL 3' X SP28 RIM CYLINDER - SCH 'C' X US26D CLOSER - LCN 4041 CUSH TBMS X ALU LATCHGUARD - MM MG2C THRESHOLD - PEMKO 179AV X 36" SWEEP - PEMKO 18137P X 36" SMOKE SEAL - PEMKO S88C 17"
4	1 EACH 1 EACH 3 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" HMF LH CR ASA DOOR - 3070 X 1 3/4" H.M. HINGE - STANLEY FBB179 4.5 X 4.5 X 626 LOCKSET - SCHLAGE AL53PD SAT X 626 (ENTRY) CLOSER STOP - MM FS13 X US26D
5	1 EACH 1 EACH 3 EACH 1 EACH 1 EACH	FRAME - ME416 3070 X 5 3/4" HMF DOOR - 3070 X 1 3/4" H.M. HINGE - STANLEY FBB179 4.5 X 4.5 X 626 LOCKSET - SCHLAGE AL10S SAT X 626 (PASSAGE) FLOOR STOP - MM FS13 X US26D
6	2 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH 1 EACH	HINGE - KAWNEER OFFSET PIVOT CLOSER - LCN 4041 CUSH TBMS X ALU PUSH/PULL - KAWNEER, STYLE F-2 DEADLOCK - KAWNEER ADAMS RITE MS-1850A-505 W/ STANDARD LOCK CYLINDERS WITH HEAD & SILL BOLTS EXIT INDICATOR - KAWNEER ADAMS RITE 4089 THRESHOLD SWEEP WEATHERSTRIPPING NOTE: HEAD AND SILL BOLTS MUST BE OPERATED BY THE DEAD BOLT MECHANISM

\* ALL DOOR HARDWARE SHALL BE LEVER TYPE

## FINISHES

## DOOR AND FRAME MATERIAL

SCW SOLID CORE WOOD  
HM HOLLOW METAL  
ALUM ALUMINUM  
STL STEEL

## DOOR AND FRAME FINISHES

P1 NOT USED  
P2 PRIMED AND PAINTED  
P3 FACTORY PRIMED, STANDARD WHITE/LIGHT GRAY  
M1 CLEAR ANODIZED ALUMINUM, MILL FINISH

## FINISH MATERIALS

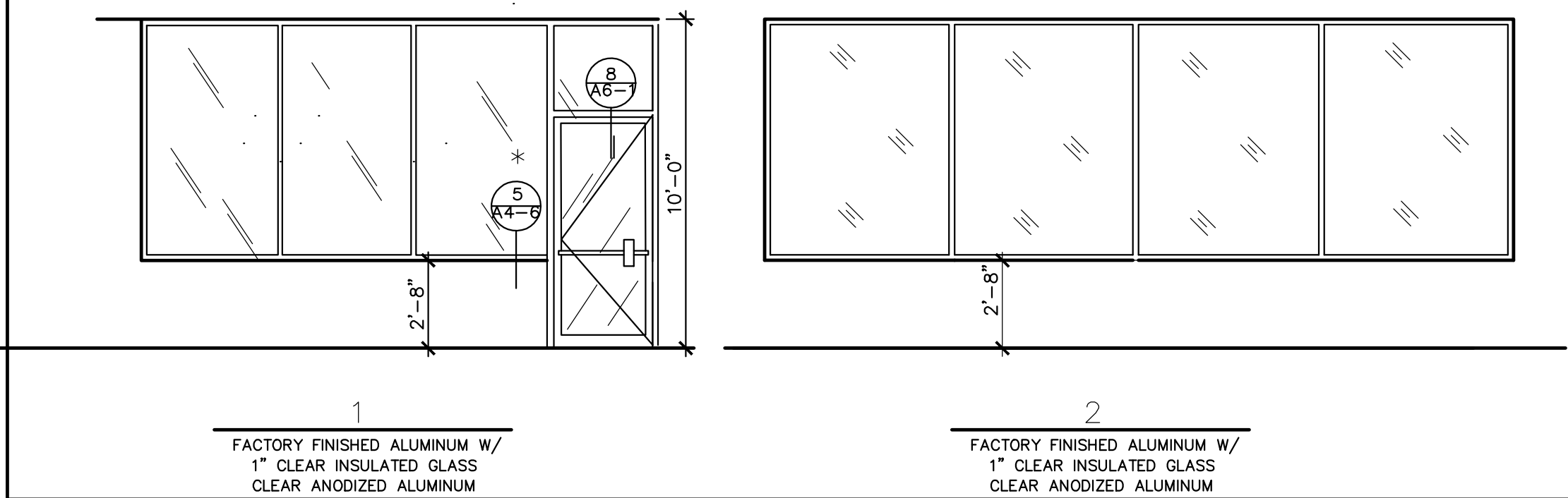
ACT ACOUSTICAL CEILING TILES  
CT CERAMIC TILE  
CMU CONCRETE MASONRY UNIT  
RB RUBBER BASE  
GB GYPSUM BOARD  
FRP FIBERGLASS REINFORCED PLASTIC  
CPT CARPET

## FINISHES

F1 NONE  
F2 HARDENER AND SEALER  
F3 2 COATS ENAMEL  
F4 2 COATS ENAMEL  
F5 1 COAT BLOCK FILLER - 2 COAT HIGH GLOSS ENAMEL  
F6 TO 4'-0" AFF - 1 COATS HIGH GLOSS ENAMELABOVE 4'-0" AFF 2 COATS SEMI-GLOSS ENAMEL

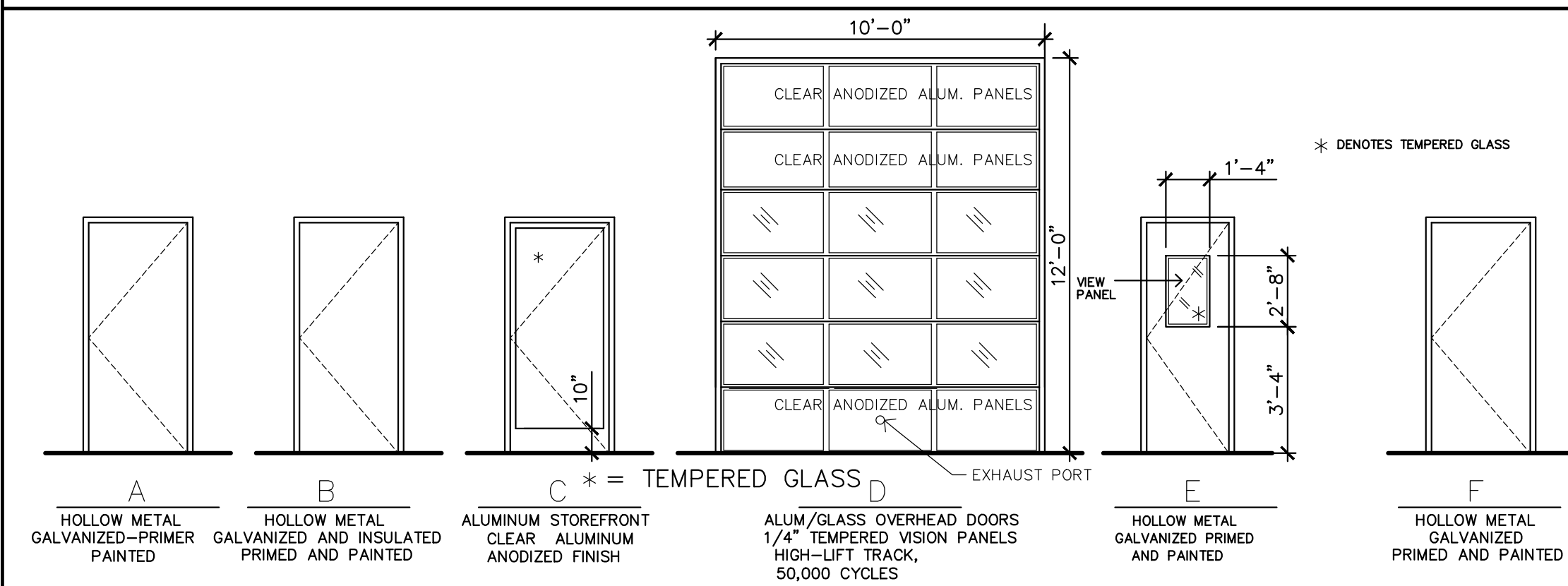
## WINDOW TYPES

\* = TEMPERED GLAZING



## DOOR TYPES

= TEMPERED GLAZING



## NOTE:

DOOR HANDLES, PULLS, LATCHES, AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE BY CHAPTER 11 SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.

## NOTE:

EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT

## FINISHES

## DOOR AND FRAME MATERIAL

SCW SOLID CORE WOOD  
HM HOLLOW METAL  
ALUM ALUMINUM  
STL STEEL

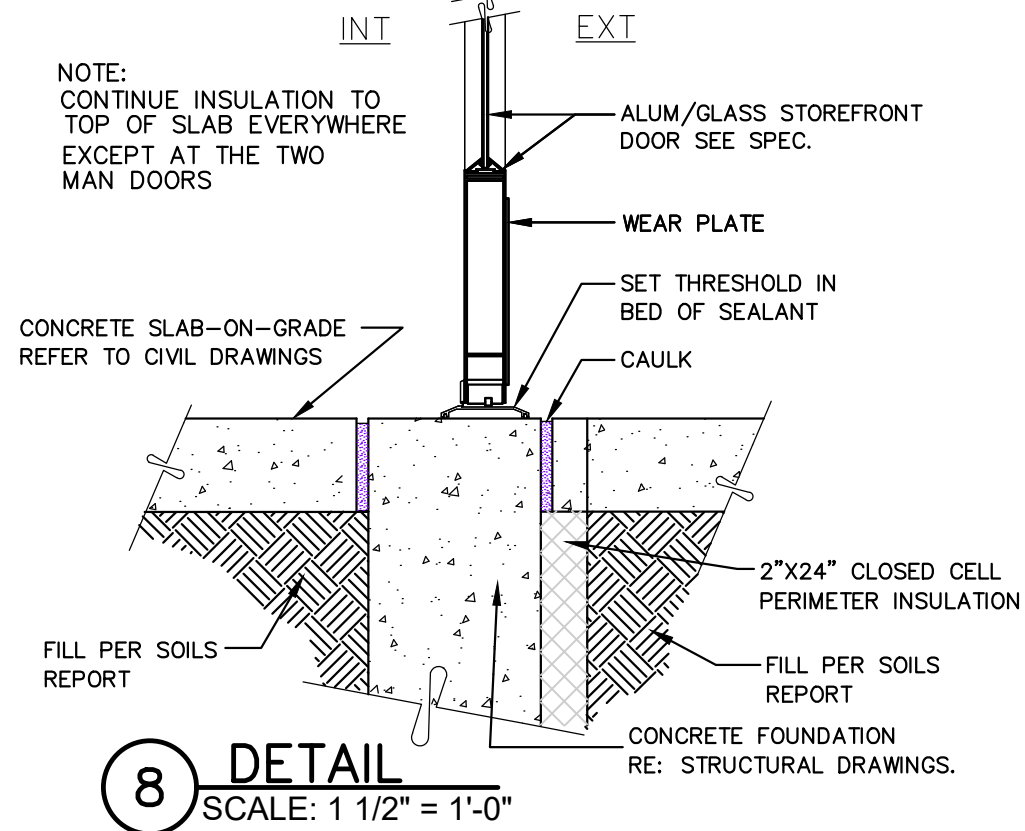
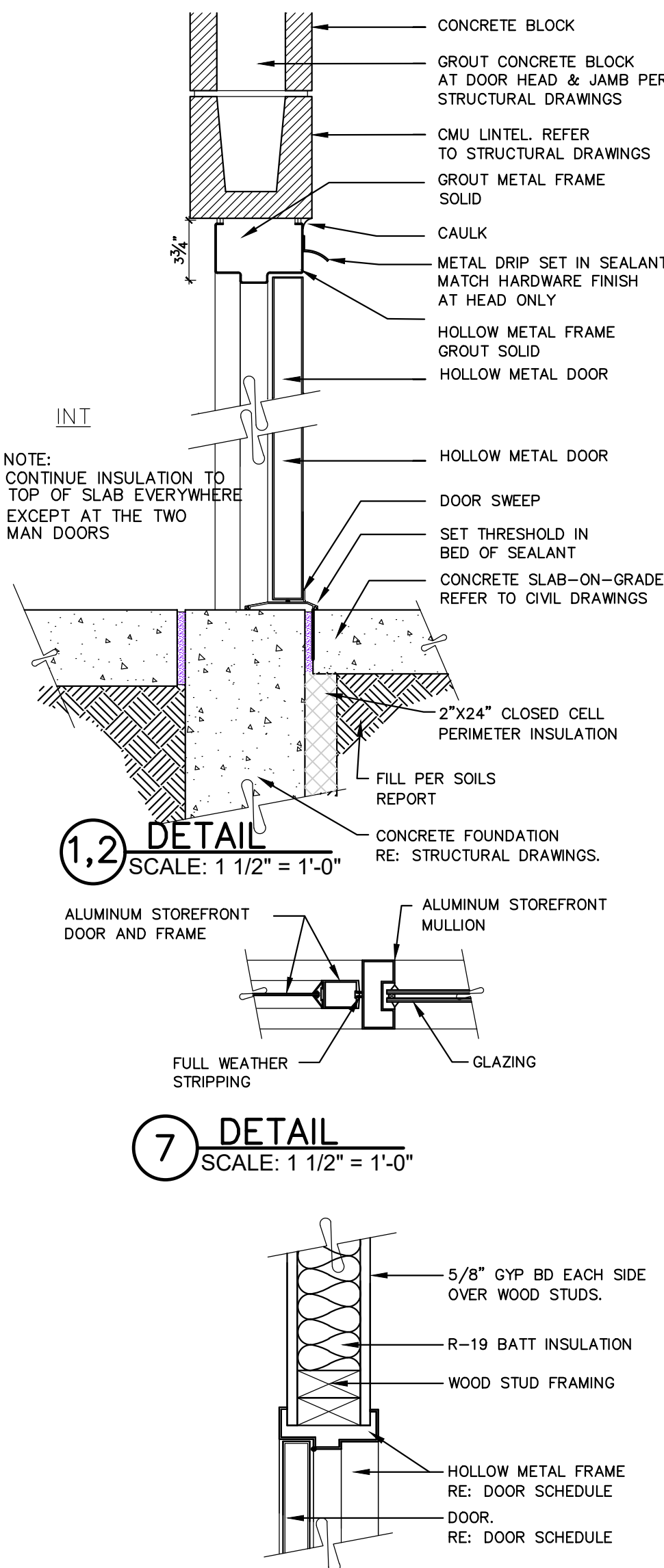
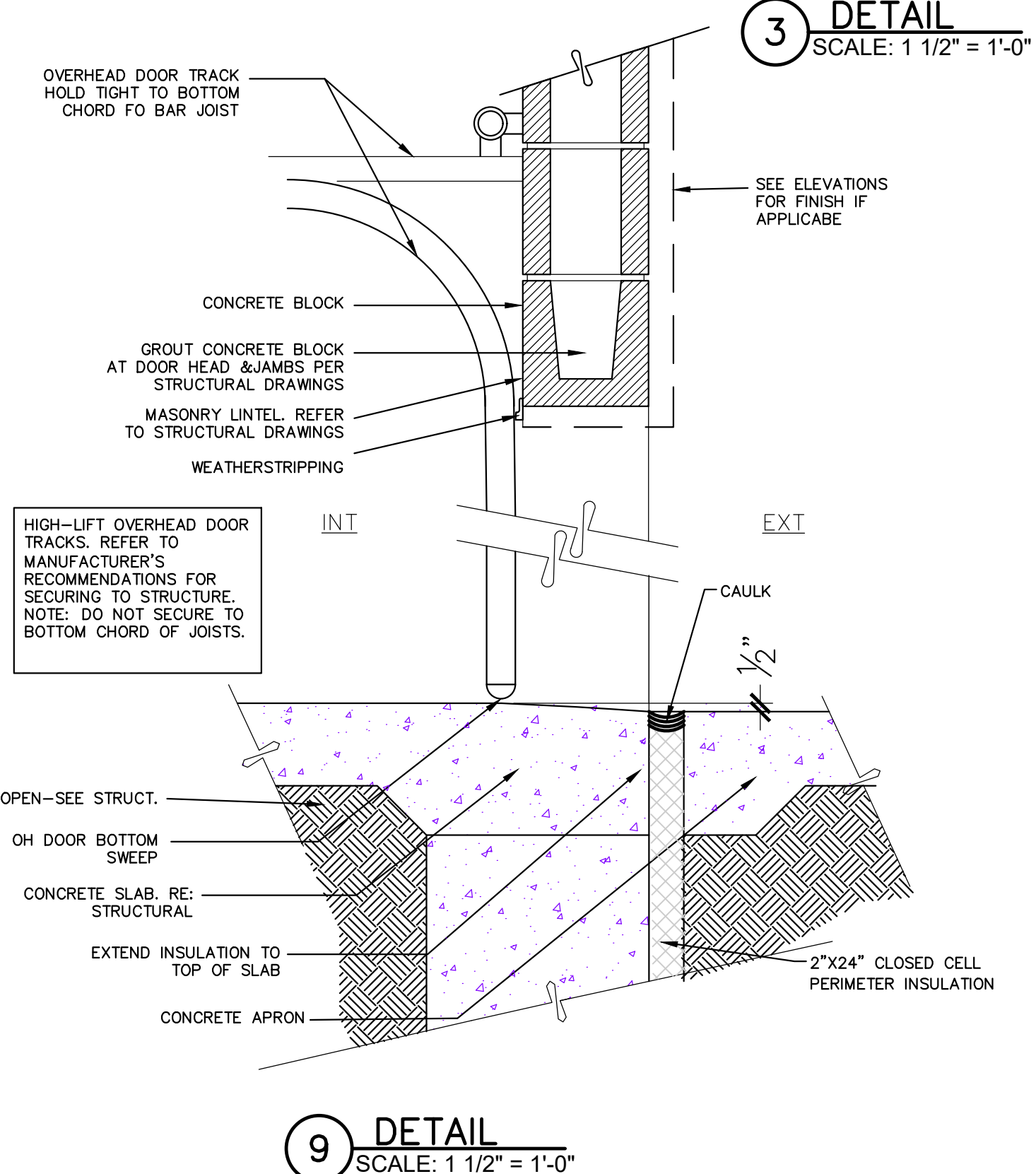
## DOOR AND FRAME FINISHES

P1 NOT USED  
P2 PRIMED AND PAINTED  
P3 FACTORY PRIMED, STANDARD WHITE/LIGHT GRAY  
M1 CLEAR ANODIZED ALUMINUM, MILL FINISH

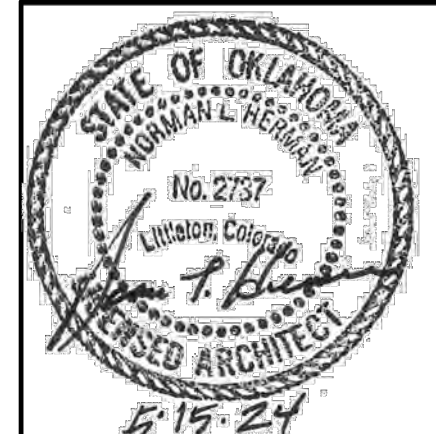
## FINISH MATERIALS

ACT ACOUSTICAL CEILING TILES  
CT CERAMIC TILE  
CMU CONCRETE MASONRY UNIT  
RB RUBBER BASE  
GB GYPSUM BOARD  
FRP FIBERGLASS REINFORCED PLASTIC  
CPT CARPET

## FINISHES

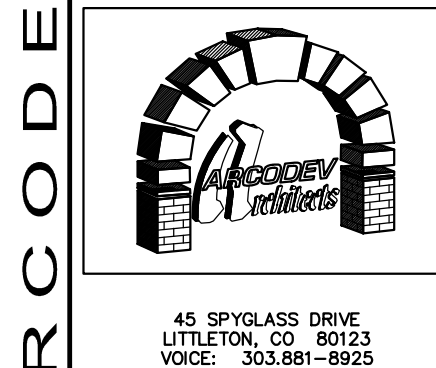
F1 NONE  
F2 HARDENER AND SEALER  
F3 2 COATS ENAMEL  
F4 2 COATS ENAMEL  
F5 1 COAT BLOCK FILLER - 2 COAT HIGH GLOSS ENAMEL  
F6 TO 4'-0" AFF - 1 COATS HIGH GLOSS ENAMELABOVE 4'-0" AFF 2 COATS SEMI-GLOSS ENAMEL8 DETAIL  
SCALE: 1 1/2" = 1'-0"4 DETAIL  
SCALE: 1 1/2" = 1'-0"5 DETAIL  
SCALE: 1 1/2" = 1'-0"1,2 DETAIL  
SCALE: 1 1/2" = 1'-0"7 DETAIL  
SCALE: 1 1/2" = 1'-0"3 DETAIL  
SCALE: 1 1/2" = 1'-0"9 DETAIL  
SCALE: 1 1/2" = 1'-0"

BRAKES PLUS

601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA

ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05.16.24	FOR SUBMITTAL TO BUDG. DEPT.

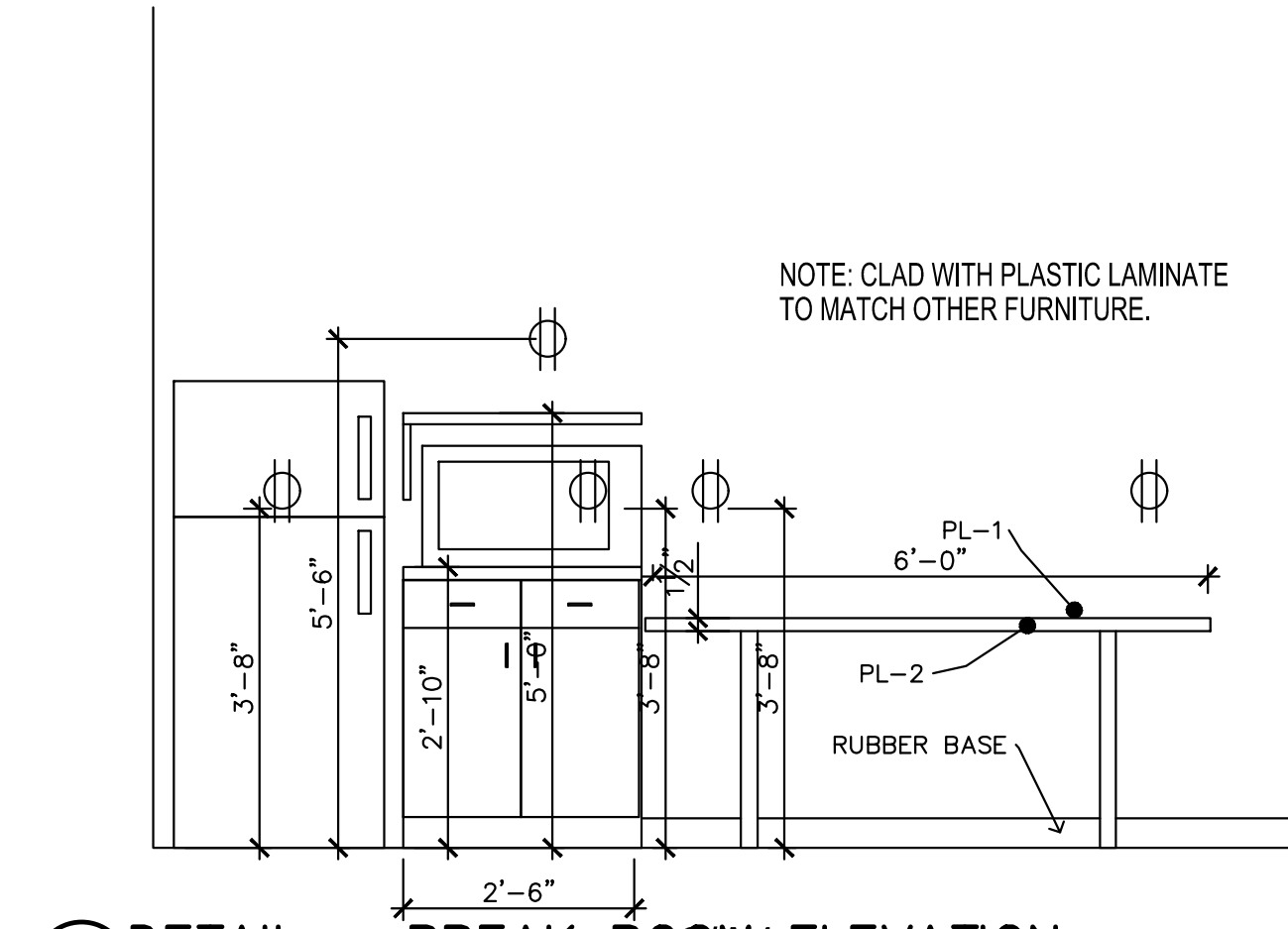
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CLIENTJOB #:  
DRAWN BY: NLH  
CHECKED BY: NLH  
DATE OF ISSUE: 04.19.24

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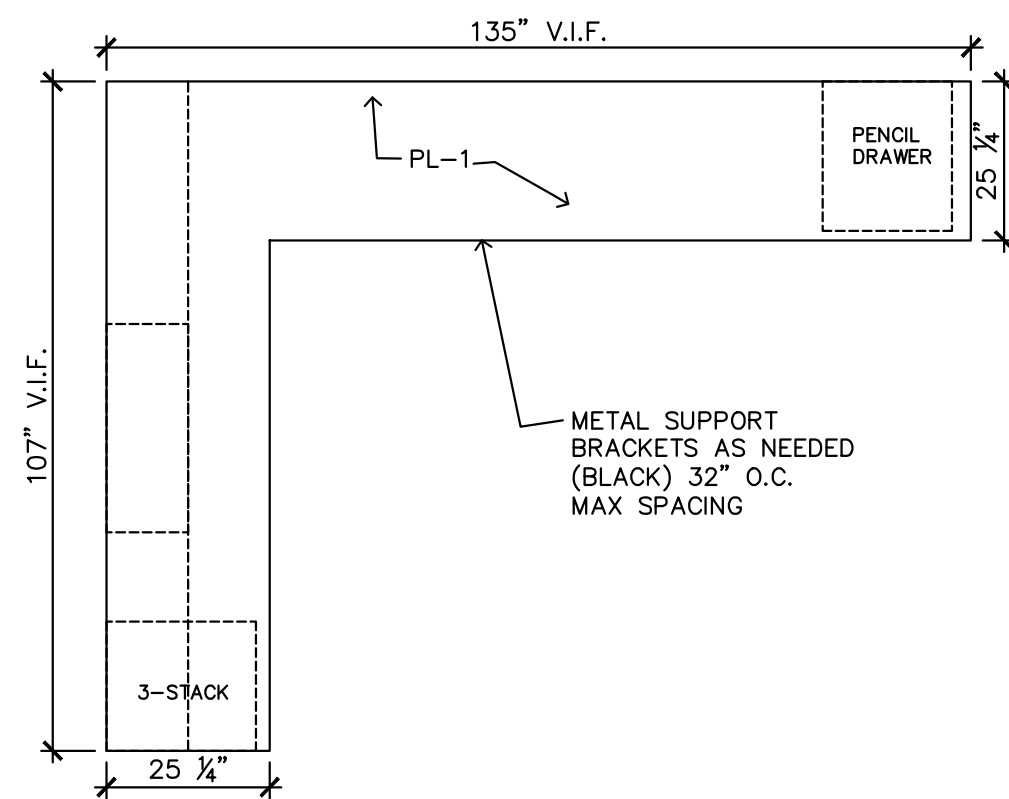
A6-1

SCHEDULES

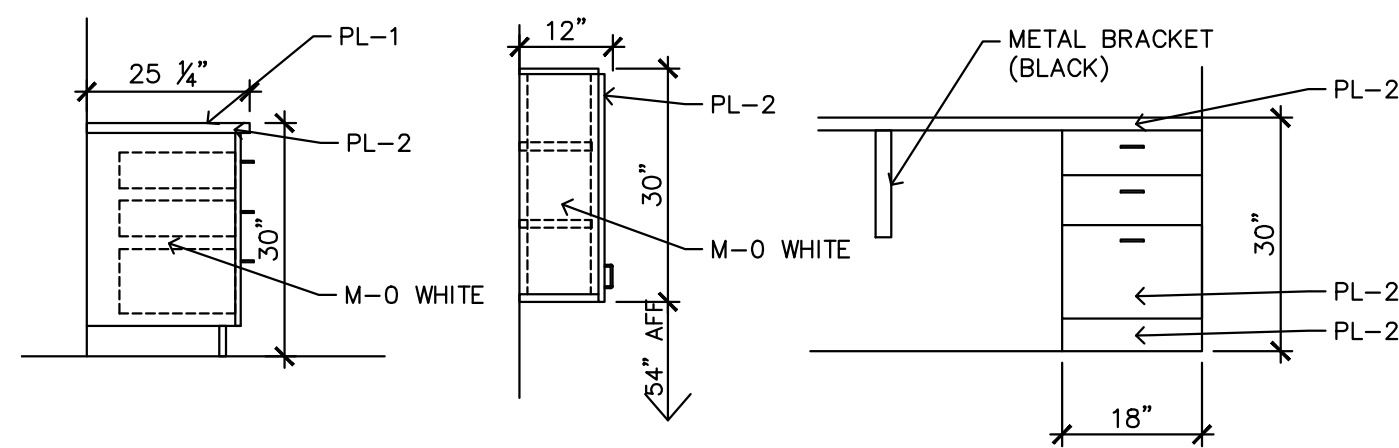




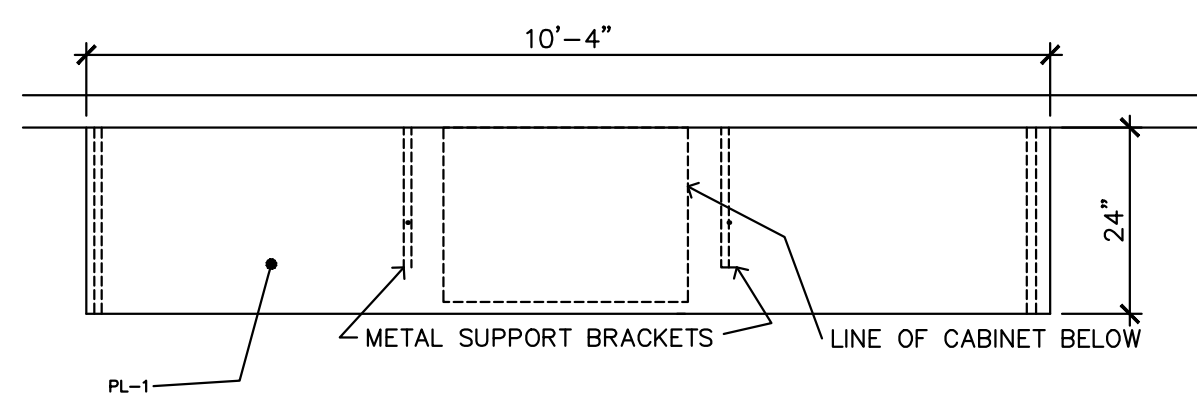
13 DETAIL — BREAK ROOM ELEVATION  
SCALE: 1/2" = 1'-0"



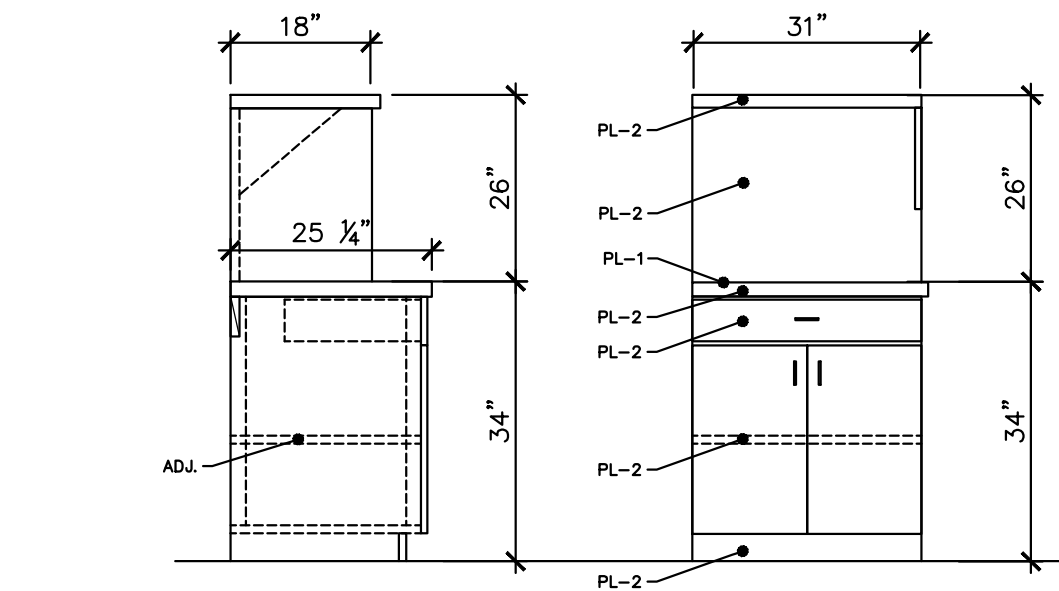
14 DETAIL — OFFICE 103 FURNITURE  
SCALE: 1/2" = 1'-0"



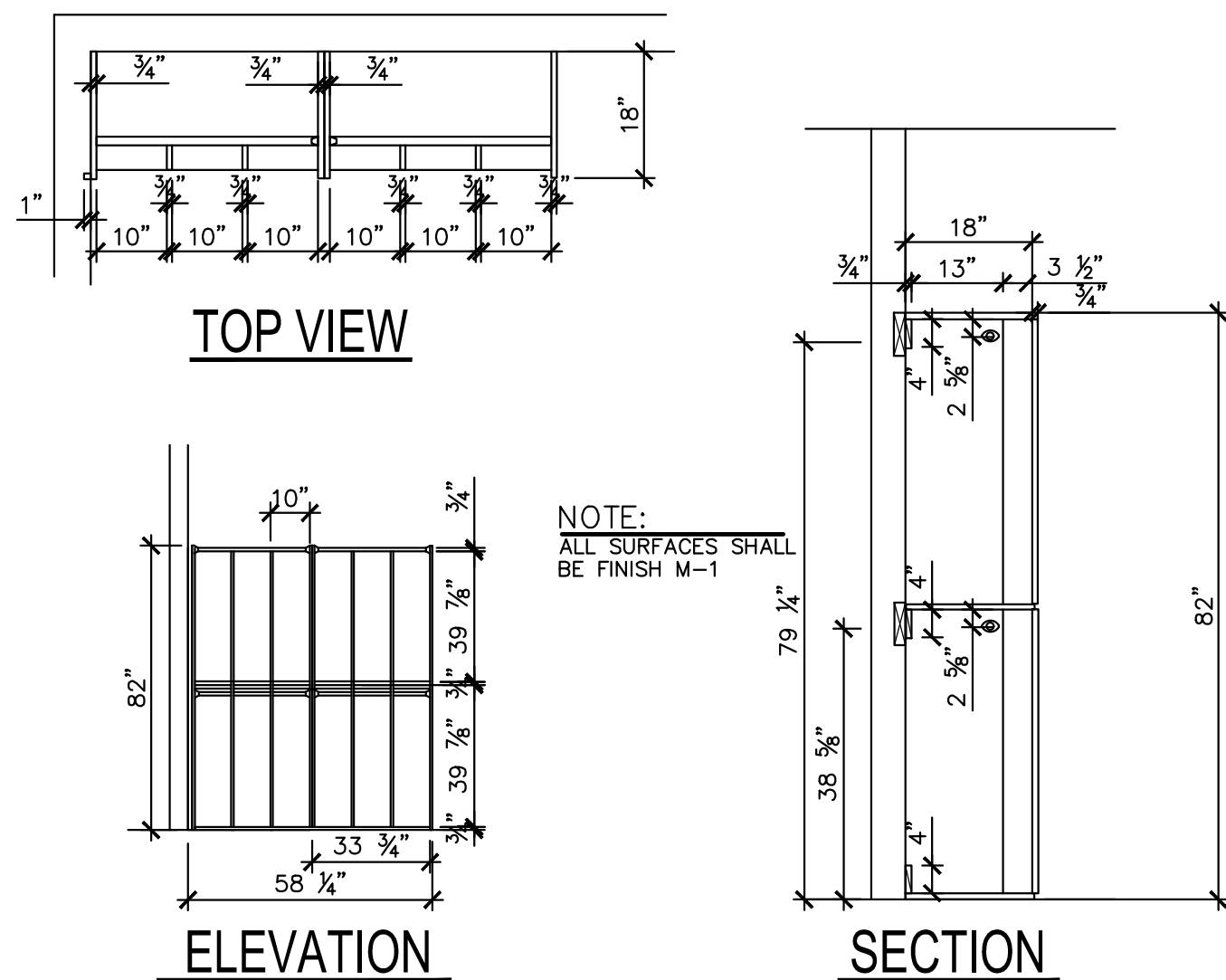
15 DETAIL — OFFICE 103 FURNITURE  
SCALE: 1/2" = 1'-0"



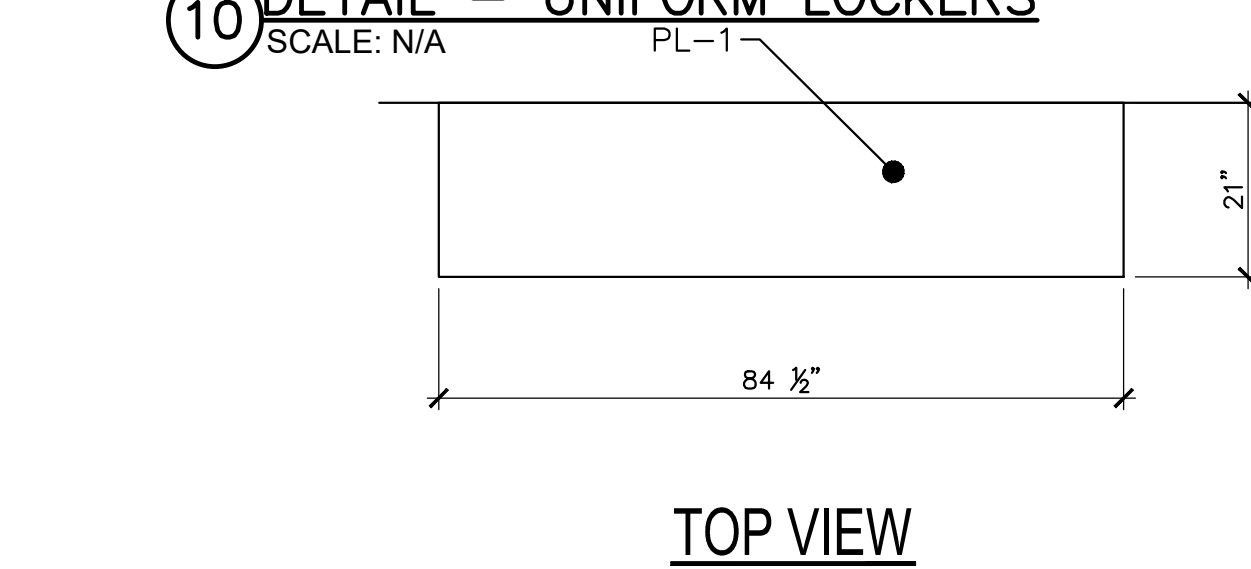
16 DETAIL — SERVICE ADVISORS DESK  
SCALE: 1/2" = 1'-0"



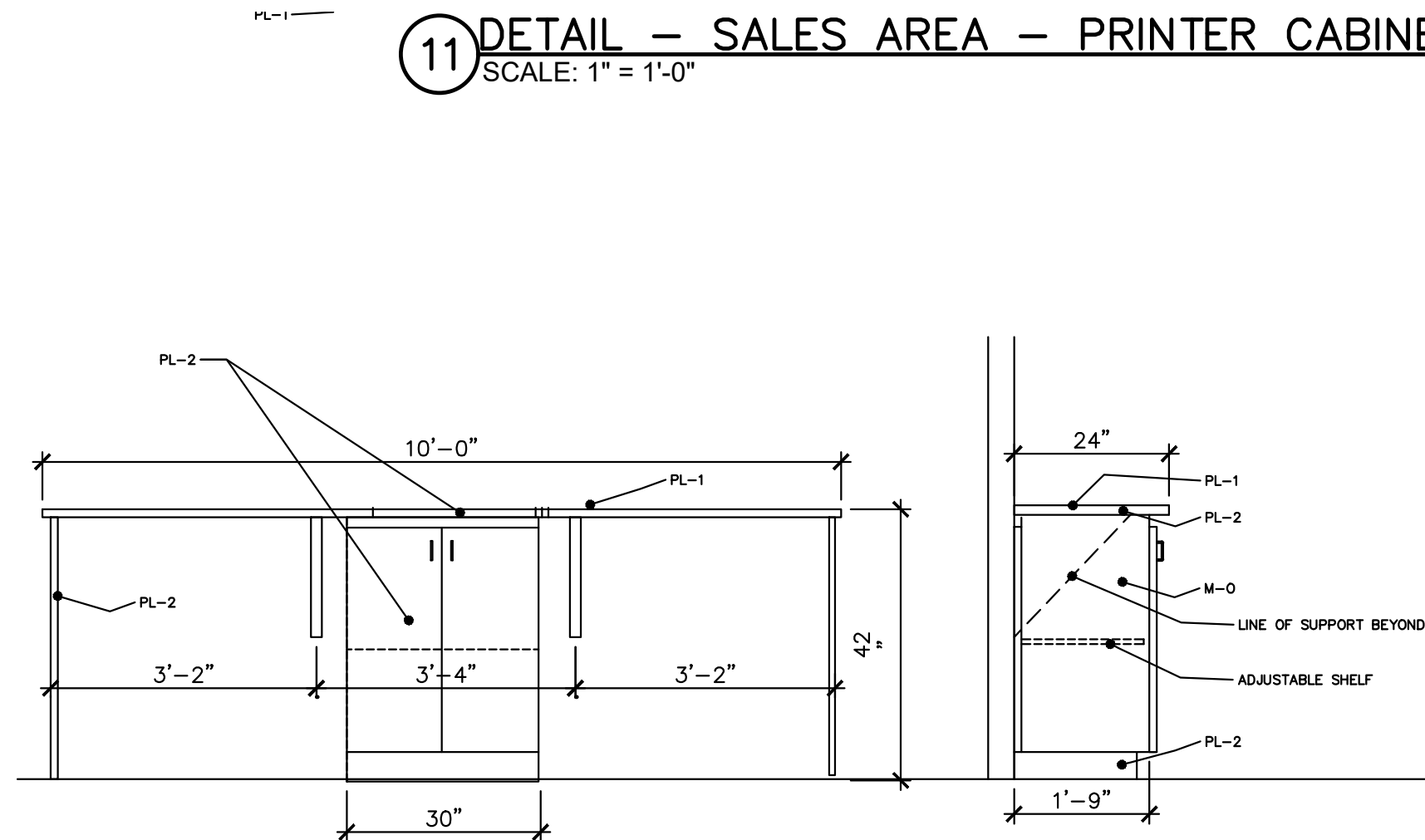
9 DETAIL — MICROWAVE STAND  
SCALE: 1/2" = 1'-0"



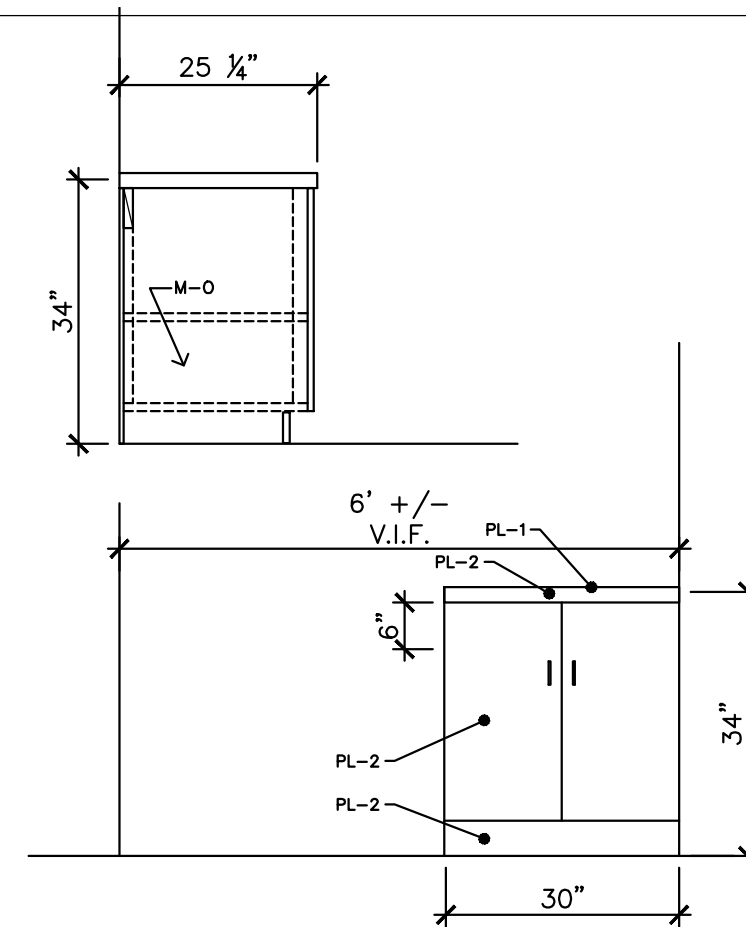
10 DETAIL — UNIFORM LOCKERS  
SCALE: N/A



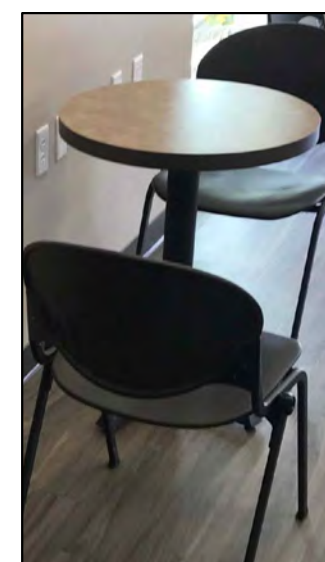
11 DETAIL — SALES AREA — PRINTER CABINETS  
SCALE: 1" = 1'-0"



12 DETAIL — SERVICE ADVISORS DESK  
SCALE: 1/2" = 1'-0"

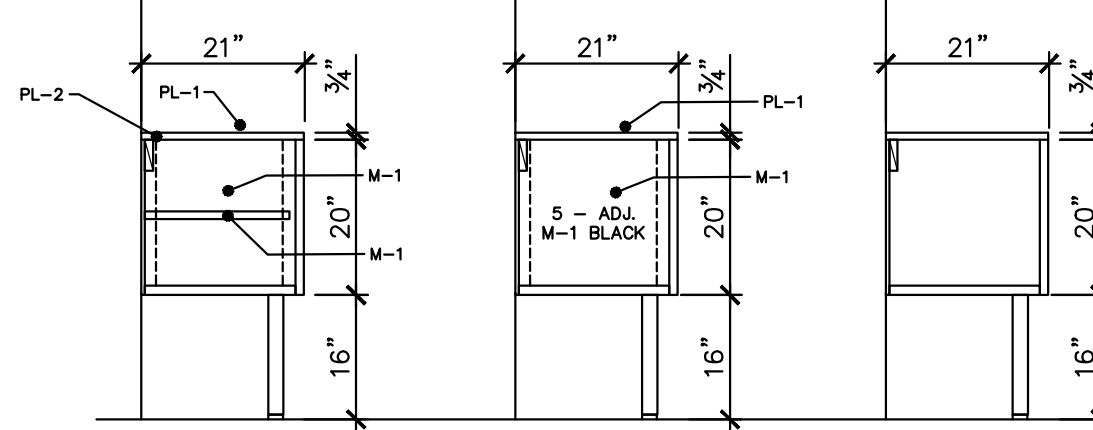


5 DETAIL — COFFEE ROOM 102  
SCALE: 1/2" = 1'-0"

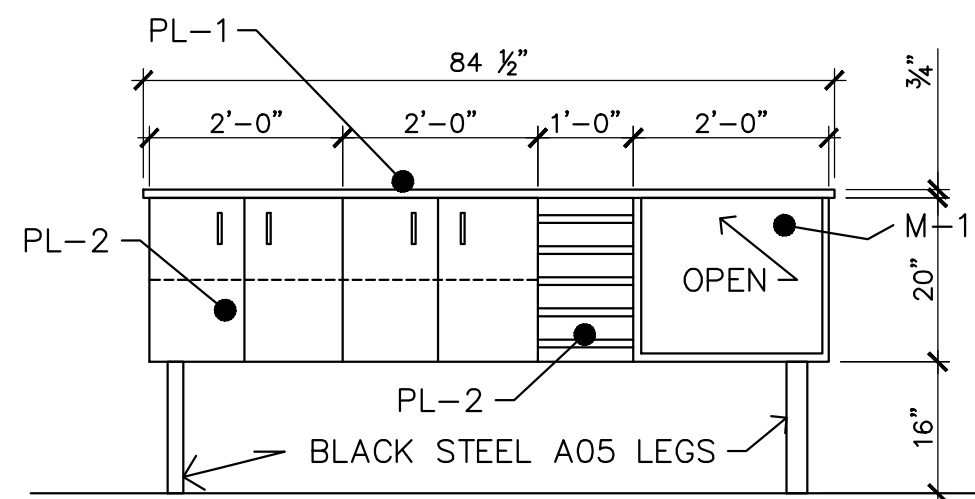


- NOTE:
- 24" DIAMETER, 1.5" THICK
  - EDGE - 3MM PVS EDGE BAND TO MATCH NATURAL TIGRUS LAMINATE
  - FLAT TOP SURFACE - WILSON ART 4689-60 NATURAL TIGRUS MATT FINISH
  - CENTER POST BASE, 30" TABLE HEIGHT, BLACK BASE

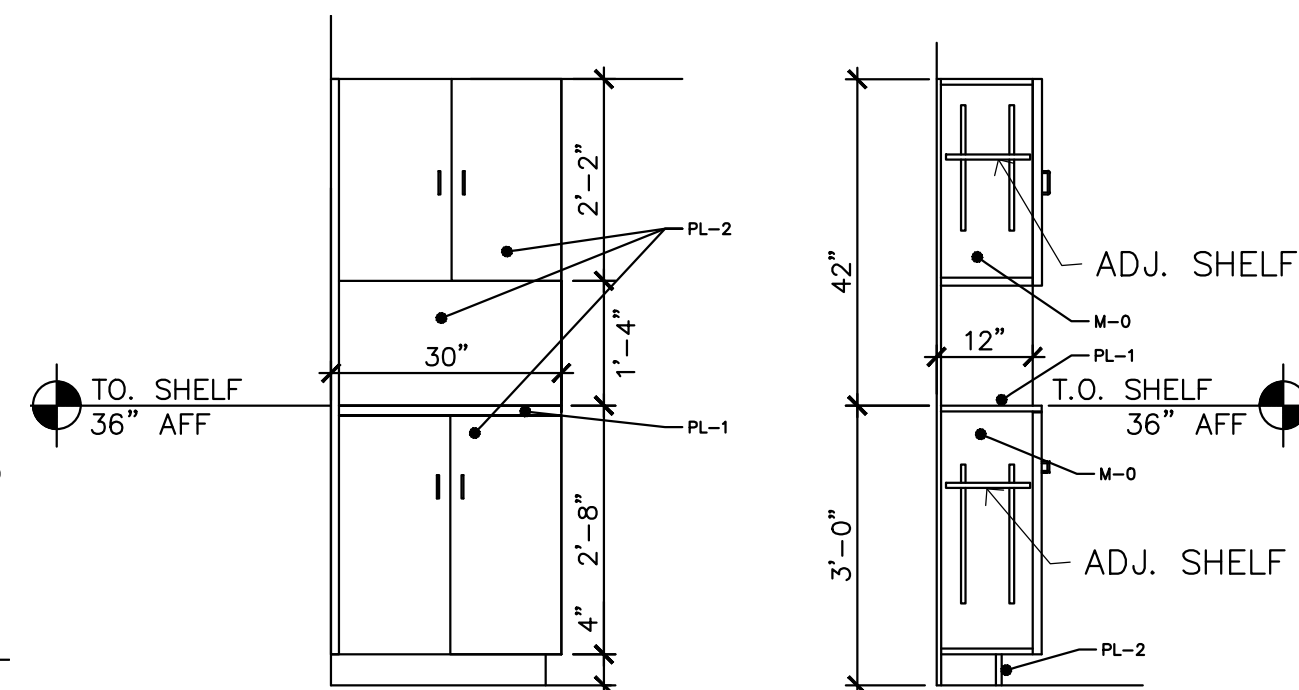
5B BISTRO TABLE  
NO SCALE



6 DETAIL — SALES AREA — PRINTER CABINETS  
SCALE: 1/2" = 1'-0"



7 DETAIL — SALES AREA — PRINTER CABINETS  
SCALE: 1" = 1'-0"



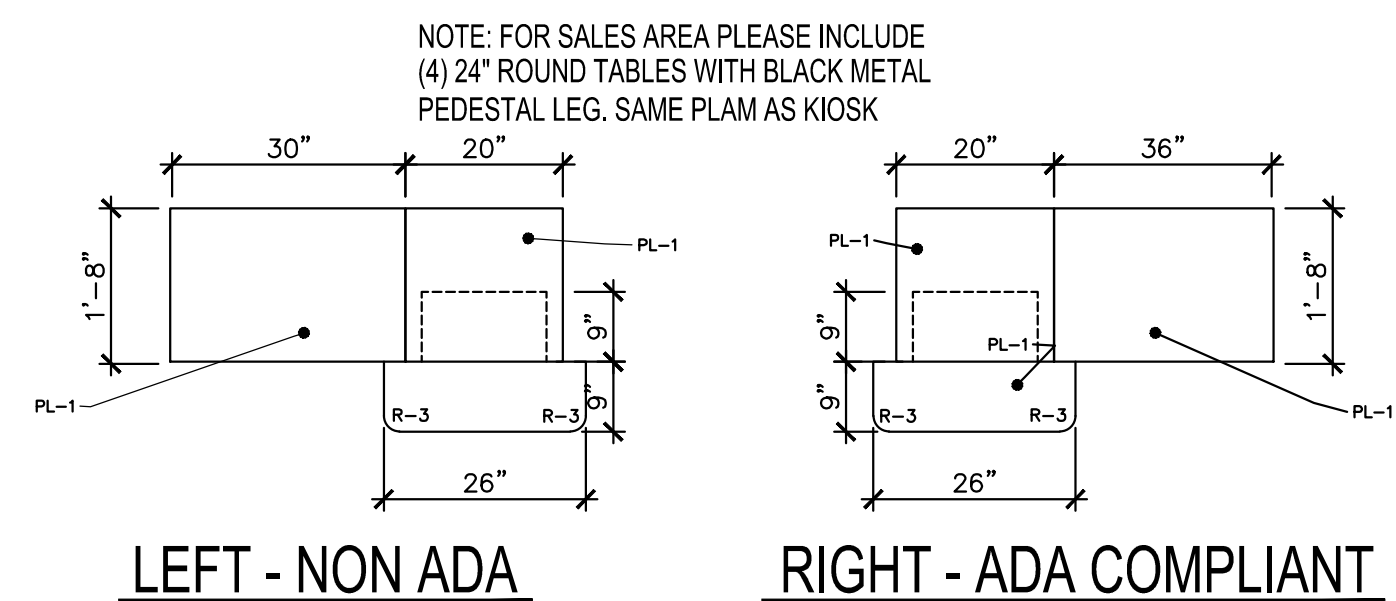
8 DETAIL — RESTROOM CABINETS  
SCALE: 1/2" = 1'-0"

### PLAM COLORS LEGEND:

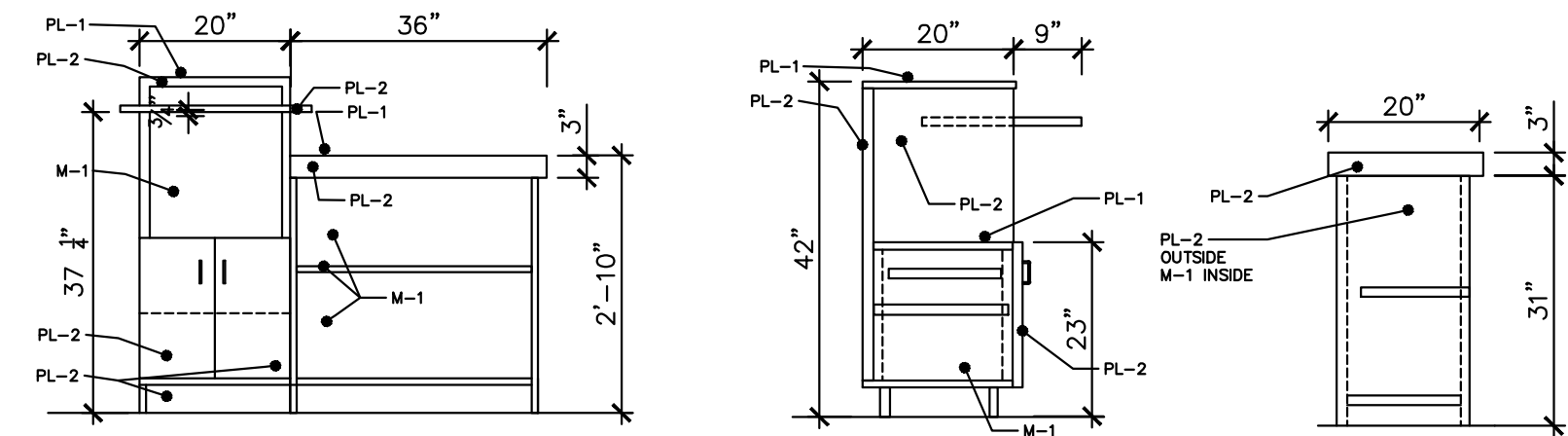
PLAM COLORS - WILSON ART:  
PL-1 = #4689 NATURAL TIGRUS  
PL-2 = #4623 GRAPHITE NEBULA  
M-0 = WHITE MELAMINE  
M-1 = BLACK MELAMINE

### NOTE:

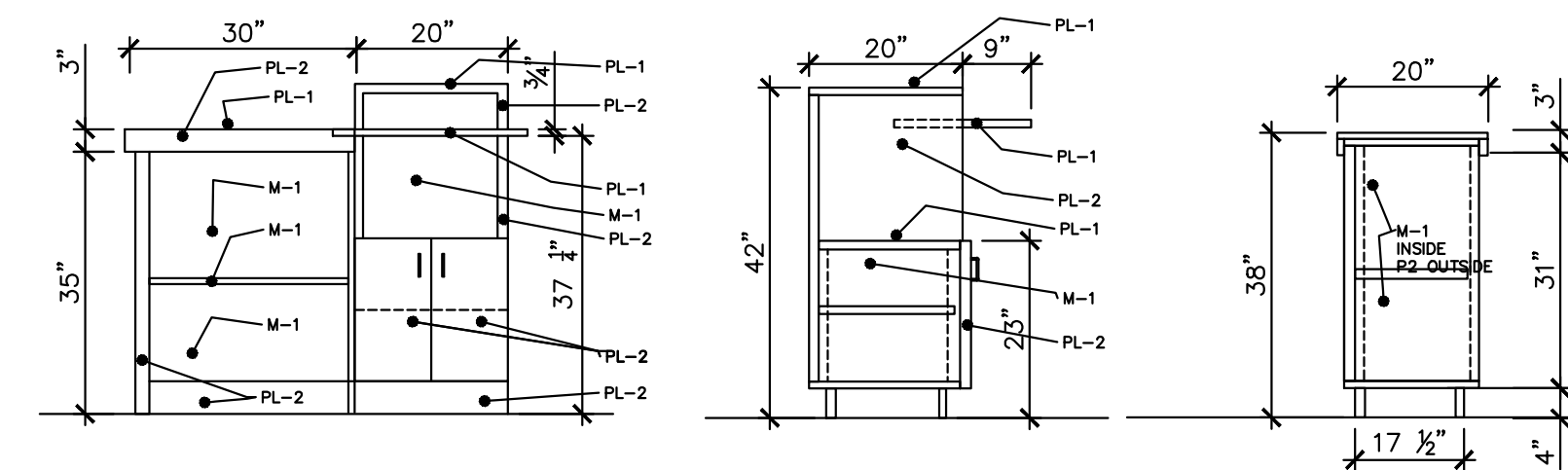
SELECTED CONTRACTOR WILL PROVIDE COMPLETE NEW DRAWINGS FOR APPROVAL.



2 DETAIL — SALES AREA KIOSKS  
SCALE: 1/2" = 1'-0"



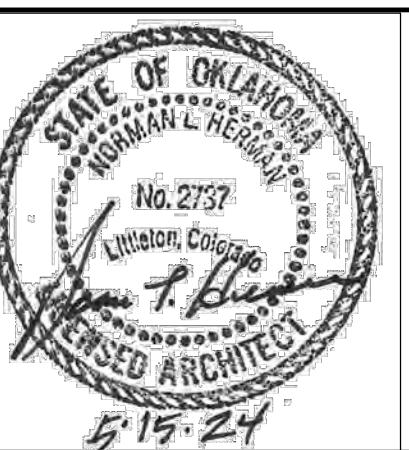
3 DETAIL — KIOSK 2 — ADA COMPLIANT  
SCALE: 1/2" = 1'-0"



4 DETAIL — KIOSK 1 — NON ADA  
SCALE: 1/2" = 1'-0"

BRAKES PLUS

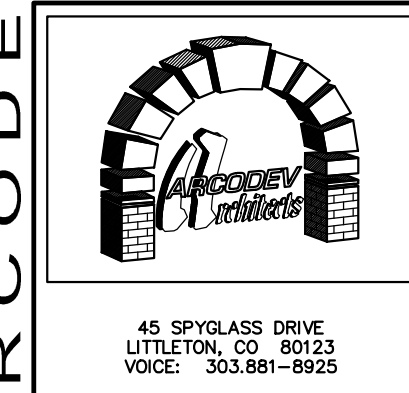
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05/16/24	FOR SUBMITTAL TO BUDG. DEPT.

ARCDEV JOB #:  
CLIENT JOB #:  
DRAWN BY: NLH  
CHECKED BY: NLH  
DATE OF ISSUE: 04/19/24



45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.961-8925

SHEET

A6-2

FURNITURE AND  
FIXTURE DETAILS



RESTROOM WAINSCOT FINISHES	
MAIN COLOR	TWO TOP ROWS
DALTILE (SEMI-GLOSS)	DALTILE (SEMI-GLOSS)
PRICE GROUP 2	PRICE GROUP 3
#0132	#DM-1
URBAN PUTTY #0161	CURRENT
SEMI-GLOSS	SEMI-GLOSS
4 1/4" X 4 1/4"	4 1/4" X 4 1/4"
GROUT: MAYEI BLANCO	GROUT: MAYEI BLANCO

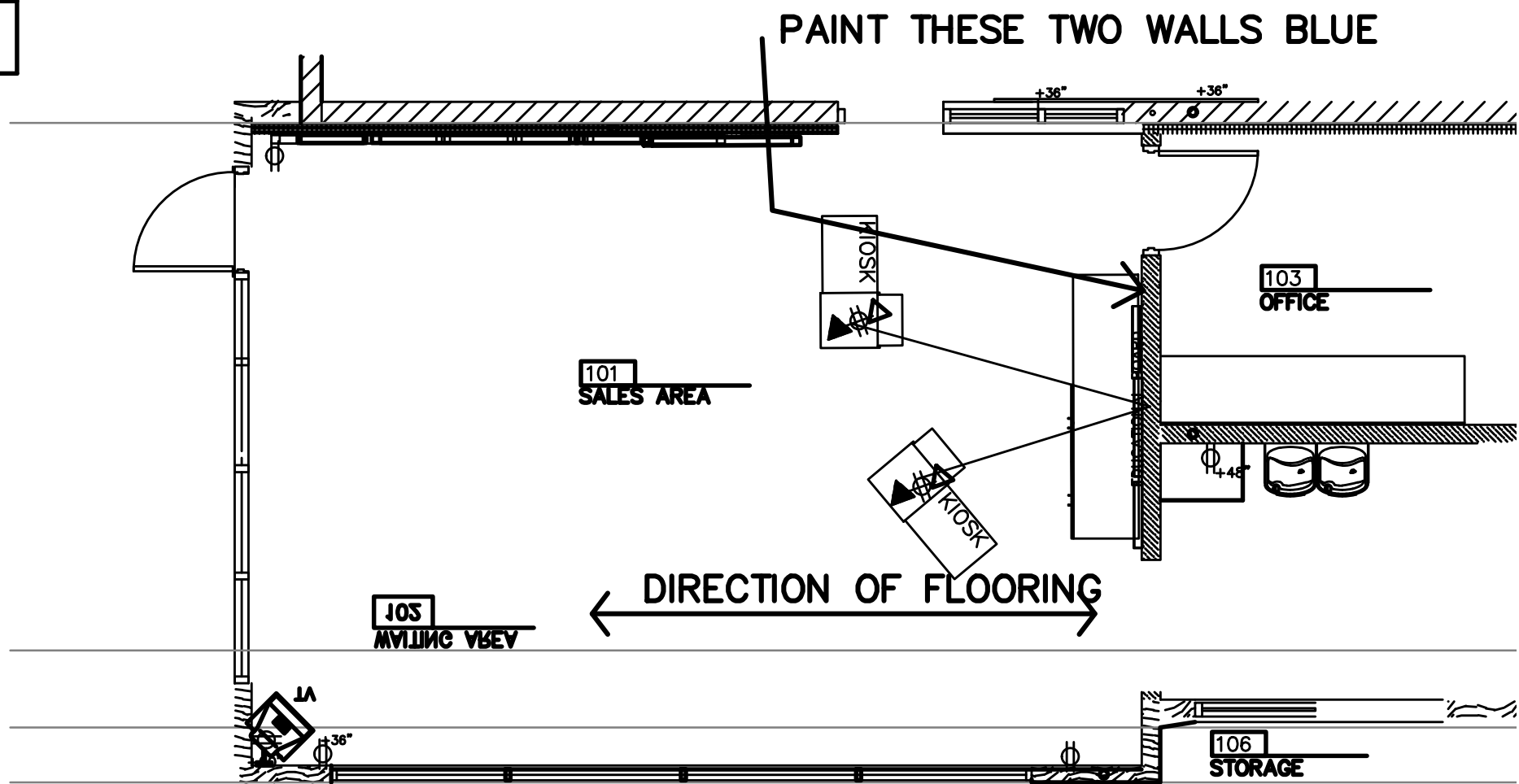
4 RESTROOM FINISHES  
SCALE: N.T.S.

GENERAL NOTES:

- APPLY THE WALK OFF CARPET (4'X6' DIRECTRLY TO THE CONCRETE SLAB DO NOT APPLY IT OVER THE FLOORING. PROVIDE JOHNSONITE REDUCER AROUND ALL EDGES (STYLE: CTA-09-A1, COLOR: BURNT UMBER)
- ALL FLOORING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR
- PROVIDE 1 EXTRA BOX (32 S.F.) OF ALL FLOORING PRODUCTS FOR ATTIC STOCK
- ALL FLOORING MATERIALS MAY BE PURCHASED FROM EF CONTRACT FLOORING EXCEPT ADHESIVE AND THE TRANSITION STRIPS.....CONTACT KIMBERLY LYNCH AT THE CONTACT INFORMATION SHOWN BELOW.
- RUBBER TRANSITION STRIP HAS A 1-3 WEEK LEAD TIME

NOTE:

ALL INTERIOR FINISHES SHALL COMPLY WITH THE REQUIREMENTS CONTAINED IN TE 2018 IBC CHAPTER 18



1 DETAIL - INTERIOR PAINT DETAILS  
SCALE: N.T.S.

	Floor	Supplied by:
Manufacturer (1)	Bolyu/EF Contract Flooring	Bolyu/EF Contract Flooring
Number (1)	Main Floor LVT Style: Woodlands, Color Ironwood LVT direction - Run lengthwise in the wide direction of the room. Regardless of entry location /showroom design	Bolyu/EF Contract Flooring
Color (1)	Ironwood - Item # EFCWL001	Bolyu/EF Contract Flooring
Finish	N/A	
Size (1)	7" x 48" (42 sq ft per box)	Bolyu/EF Contract Flooring
Note (1)	LVT - with Hardwood Plank Pattern Attic Stock - Provide 1 extra Box (32 sq. ft) extra for Attic Stock	
Adhesive (1a)	LVT Adhesive The LVT adhesive, Taylor, RESOLUTE (MS-PLUS® RESILIENT™) Adhesive	Supplied by Installer
Transition	Johnsonite - Rubber Reducer - Style: CTA-09-A1, Color: #63 Burt Umber	Supplied by Installer - Lead Time 1 - 3 weeks
Size (2)	24" x 24", (6.22 sq yds per box)	Bolyu/EF Contract Flooring
Note (2)	Install Quarter Turn	
Adhesive (2a)	Nexus, multipurpose carpet tile adhesive	Bolyu/EF Contract Flooring
<div>CONTACT PRICING AND QUESTIONS (ALL LOCATIONS, NATIONWIDE) TARA KALVA BOLYUEF CONTRACT 720-461-9844 TARA.KALVA@EFCONTRACTFLOORING.COM</div>		

3 DETAIL - FLOORING SPECIFICATIONS  
SCALE: N.T.S.

Brakes Plus Interior Paint Specifications						
Location	Worldly Gray	Intellectual Gray	Virtual Taupe	Balanced Beige	Safety Red	Brakes Plus Blue
Shop	All walls above red base	Ceiling & Joists	Metal Doors & Frames (Interior of Building)		Lower 4' of walls This area to receive block filler & gloss paint	
Office			Painted Wood Doors and Frames	Walls		
Showroom			Half Wall Drywall Painted Wood Doors and Frames (to office and bathroom and Closet)	Walls		See attached Drawing
Parts Room	Walls	Ceiling & Joists	Metal Door and Frame			
Employee Bath	Walls & Ceiling		Metal Doors & Frames			
Customer Bath			Painted Wood Doors and Frames	Walls & Ceiling		Formula: Promar 200 Deep Base B31W2253 1 Gallon Formula W1 2Y 23+11 B1 1+01 L1 2Y 21+11 R3 55+01
Break Room	Walls	Ceiling				
* Use block fill on all cinder block walls prior to painting (See Finish Schedule Section 3.05)						
Brand	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams	Sherwin-Williams
Color	Worldly Gray	Intellectual Gray	Virtual Taupe	Balanced Beige	Safety Red	Blue
Number	SW7043	SW7045	SW7039	SW7037		Brakes Plus Custom Color
Product						
Finish	See Finish Schedule Section 3.05	Dry Fall	See Finish Schedule Section 3.05	See Finish Schedule Section 3.05	See Finish Schedule Section 3.05	

2 DETAIL - INTERIOR PAINT SPECIFICATIONS  
SCALE: N.T.S.

Brakes Plus Exterior Paint Specifications					
Location	Brand	Color	Number	Finish	Special Instructions
Corner-guards	Sherwin Williams	Artisan Tan	SW 7540		
Doors	Sherwin Williams	Artisan Tan	SW 7540		
Trash Enclosure Doors	Sherwin Williams	Artisan Tan	SW 7540		

5 DETAIL - EXTERIOR PAINT SPECIFICATIONS  
SCALE: N.T.S.

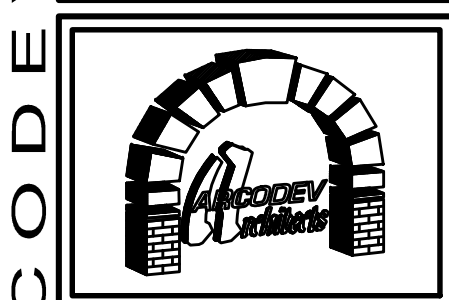
BRAKES PLUS  
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05.16.24	FOR SUBMITTAL TO BLDG. DEPT.

ARCODEV JOB #: \_\_\_\_\_  
CLIENTJOB #: \_\_\_\_\_  
DRAWN BY: NLH  
CHECKED BY: NLH  
DATE OF ISSUE: 04.19.24



45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.891-8925

A SHEET

A6-3  
MATERIAL FINISHES



GENERAL STRUCTURAL NOTES:

A. DESIGN DATA:

DESIGN CODE:	2015 INTERNATIONAL BUILDING CODE
CONCRETE 28-DAY STRENGTH:	FC = 4,500 PSI
MISCELLANEOUS ROLLED SECTIONS AND PLATES (ANGLES, CHANNELS, PLATES, ETC.)	ASTM A36 (UNLESS NOTED OTHERWISE)
PLAIN BOLTS AND ANCHORS	ASTM A307
REINFORCING STEEL	ASTM A615    FY = 60,000 PSI
WELDED WIRE FABRIC	ASTM A185

MORTAR TYPE S & GROUT 28-DAY COMPRESSIVE STRENGTH = 2,000 PSI (MASONRY CEMENT IS NOT ACCEPTABLE/ASTM C1019

CONCRETE MASONRY UNITS (LIGHTWEIGHT)     ASTM C652  
NET COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS = 2,800 PSI  
NET AREA COMPRESSIVE STRENGTH OF MASONRY FM = 2,000 PSI

ALLOWABLE SOIL BEARING CAPACITY: 2,500 PSF (PER SOIL REPORT)

DESIGN LOADS	
ROOFS	D = 20 PSF Lr = 20 PSF S = 10 PSF (GROUND & ROOF SNOW LOAD)

WIND LOADING CRITERIA (2015 IBC & ASCE 7-10)  
115 MPH, EXPOSURE C

SEISMIC LOADING CRITERIA (2015 IBC & ASCE 7-10)  
IMPORTANCE FACTOR = 1.0  
MAPPED SPECTRAL RESPONSE S<sub>s</sub> = 0.28g, S1 = 0.078g  
SITE CLASS = D, F<sub>a</sub> = 1.576, F<sub>v</sub> = 2.4  
SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.295g, SD1 = 0.125g  
SEISMIC DESIGN CATEGORY = B  
SEISMIC FORCE RESISTANT SYSTEM = ORDINARY REINFORCED MASONRY SHEAR WALLS & LIGHT FRAMED SHEAR WALLS  
RESPONSE MODIFICATION FACTOR (R) = 2.0

B. FOUNDATION WORK:

1. THE GEOTECHNICAL REPORT PREPARED BY OLSSON (PROJECT NO. 023-07386) DATED DECEMBER 27, 2023, IS AVAILABLE AND SHALL BE REVIEWED BY THE CONTRACTOR. SEE SPECIFICATIONS AND GEOTECHNICAL REPORT FOR OVEREXCAVATION RECOMPACTION.

2. CONTRACTOR SHALL COORDINATE FOOTING ELEVATIONS WITH FINAL GRADING PLAN TO PROVIDE A MINIMUM OF 2'-0" OF GRADE ABOVE THE BOTTOM OF ALL FOOTINGS.

3. SUBSOILS SUPPORTING OR IN DIRECT CONTACT WITH FOOTINGS, SLABS/ON GRADE, OR OTHER FOUNDATION ELEMENTS SHALL BE PROTECTED AGAINST FREEZING CONDITIONS THAT COULD CAUSE MOVEMENT OR OTHER DETRIMENTAL EFFECT TO THE STRUCTURE AS A WHOLE OR TO ANY OF ITS COMPONENT PARTS.

4. WHEN WORKING NEAR EXISTING AND/OR NEW CONSTRUCTION, THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO UNDERMINE, DISTURB, DAMAGE OR, IN ANY WAY, CAUSE UNDESIRABLE MOVEMENT, CRACKING, AND/OR SETTLEMENT OF THE ADJACENT CONSTRUCTION.

5. SLABS ON GRADE SHALL BE SUPPORTED ON SUBGRADE THAT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE SECTION 4.3 "SLAB-ON-GRADE FLOORS" IN THE GEOTECHNICAL REPORT. ANY UNACCEPTABLE UNDISTURBED VIRGIN SOIL OR BACKFILL/GRANULAR FILL, AS DETERMINED BY THE OWNER'S GEOTECHNICAL ENGINEER, SHALL BE REMOVED AND REPLACED AS REQUIRED BY THE GEOTECHNICAL ENGINEER.

C. CONCRETE:

1. FOR REINFORCEMENT DEVELOPMENT LENGTH AND SPLICE LENGTH SEE TYPICAL REINFORCEMENT TABLE ON THIS SHEET.

2. PROVIDE CORNER BARS IN WALLS AND FOOTINGS THE SAME SIZE AND NUMBER AS THE CONTINUOUS REINFORCING.

3. REINFORCING IN FOOTINGS SHALL BE ACCURATELY PLACED BEFORE PLACING CONCRETE. DO NOT FLOAT REINFORCING INTO FOOTINGS.

4. CONCRETE SHALL BE REGULAR WEIGHT (144 PCF) WITH TYPE III CEMENT, ¾" MAXIMUM AGGREGATE SIZE WITH POTABLE WATER. CONCRETE SHALL CONFORM TO ACI 301. THE MAXIMUM WATER-CEMENT RATIO FOR FOOTINGS, WALLS & SLABS SHALL BE 0.45. PROVIDE 6% AIR ENTRAINMENT IN CONCRETE USED IN FOOTINGS & WALLS. INTERIOR SLABS SHALL HAVE NATURAL ENTRAPPED AIR (3% MAXIMUM).

5. MECHANICALLY VIBRATE CONCRETE. EXCEPT THAT SLABS ON GRADE NEED TO BE VIBRATED ONLY AROUND UNDERFLOOR DUCTS AND OTHER ITEMS EMBEDDED IN THE SLAB. EMBEDDED ITEMS INCLUDE ELECTRICAL CONDUITS, MECHANICAL PIPING, AND STEEL ANGLES OR CHANNELS. EMBEDDED ITEMS DOES NOT IMPLY REINFORCING STEEL. ALL OTHER CONCRETE PLACEMENT SHALL BE VIBRATED. CONCRETE SHALL BE VIBRATED IN CONFORMANCE WITH ACI 308. VIBRATE CONCRETE ONLY UNTIL THE CONCRETE IS THOROUGHLY CONSOLIDATED AND THE VOIDS FILLED. INSERT INTERNAL VIBRATORS VERTICALLY TO THE FULL DEPTH OF THE LAYER BEING PLACED AND INTO THE PREVIOUS LAYER IF APPLICABLE. DO NOT DRAG VIBRATORS THROUGH THE CONCRETE. DO NOT FLOW CONCRETE FROM ONE LOCATION TO ANOTHER BY USE OF VIBRATOR.

6. DO NOT PLACE PIPES, DUCTS, OR CHASES IN STRUCTURAL CONCRETE WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS.

7. FLOOR SURFACE TOLERANCE CLASS "B". SEE ACI 301 FOR PROCEDURE OF MEASUREMENT AND CORRECTION.

8. CONTROL JOINTS SHALL BE PLACED AT COLUMN-LINE INTERSECTIONS AT A MAXIMUM SPACING INDICATED BELOW AND HAVE A MAXIMUM ASPECT RATIO OF 1.5 TO 1.0 UNLESS OTHERWISE INDICATED. SEE DETAIL - ON DRAWING - FOR CONTROL JOINT REQUIREMENTS.

SLAB THICKNESS	MAX. CONTROL JOINT SPACING
4"	12'-0"
5"	15'-0"

9. ALL CONSTRUCTION JOINTS IN CONCRETE WALLS SHALL HAVE A 2" X 4" CONTINUOUS KEYWAY. ALL CONSTRUCTION JOINTS, EXCEPT THOSE DETAILED, SHALL HAVE ARCHITECT/ENGINEER APPROVAL. SEE SPECIFICATIONS FOR OTHER CONSTRUCTION JOINT REQUIREMENTS.

10. ALL REINFORCING STEEL SHALL BE DEFORMED NEW BILLETS BARS (A615, GRADE 60), BENT COLD, AND DETAILED, FABRICATED, AND HELD IN PLACE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315 - LATEST EDITION) EXCEPT AS OTHERWISE DETAILED OR SPECIFIED.

11. UNLESS NOTED OTHERWISE ON PLAN SHEETS SLABS ON GRADE SHALL BE:

SLAB THICKNESS	SLAB REINFORCEMENT	SUBBASE
4"	8x6-W1.4W1.4 WWF	SEE GEOTECHNICAL REPORT
5"	6x6-W2.3W2.3 WWF	SEE GEOTECHNICAL REPORT

12. ALL REINFORCING IN SLABS AND WALLS SHALL BE CONTINUOUS UNLESS DETAILED OTHERWISE AND LAP SPLICED ONLY IN REGIONS OF LOW STRESS. ALL BARS SHALL HAVE A STANDARD HOOK WHERE A HOOK IS SHOWN, UNLESS DETAILED OTHERWISE.

13. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"  
CONCRETE EXPOSED TO EARTH OR WEATHER: 2"  
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS AND WALLS: 1"

D. MASONRY:

1. FURNISH AND CONSTRUCT MASONRY IN ACCORDANCE WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR MASONRY CONSTRUCTION (ACI 530.1-11/ASCE 6-11/TMS 602-11.)

2. LAY MASONRY UNITS IN RUNNING BOND.

3. MAXIMUM GROUT LIFT WITHOUT CLEANOUTS 4'-0" IN BLOCK WALLS AND 8" IN GROUTED TWO-WYTHE WALLS.

4. IN 8" WALLS, PROVIDE CONTINUOUS FULL HEIGHT VERTICAL REINFORCING IN CENTER OF GROUT AT CENTER OF WALL. TYPICAL REINFORCING SHALL BE 1-#6 AT 2'-0" ON CENTER AND 2-#6 AT CORNERS INTERSECTIONS. WALL ENDS, DOOR AND WINDOW JAMBS, AND SIDE OF EXPANSION OR CONTROL JOINTS UNLESS NOTED OTHERWISE.

5. GROUT CELLS FULL AT ALL ANCHOR AND EMBED LOCATIONS.

6. PROVIDE LADDER TYPE #9 JOINT REINFORCING AT 18" ON CENTER VERTICAL SPACING IN ALL CLAY MASONRY AND UNLESS NOTED OTHERWISE.

7. SPLICE MASONRY WALL REINFORCING AS SCHEDULED ON 3/S-3.

8. PLACE BOND BEAM REINFORCING CONTINUOUS THROUGH EXPANSION CONTROL JOINTS, WRAPPING BARS WITH 18 INCH THICK BOND BREAKING TAPE 2'-0" BOTH SIDES OF JOINT. DO NOT SPLICE BOND BEAM REINFORCING WITHIN 6'-0" OF AN EXPANSION OR CONTROL JOINT.

9. PROVIDE CONTINUOUS BOND BEAMS AT ALL BEAM BEARING AND TRUSS BEARING ELEVATIONS, AND AT THE TOP OF ALL WALLS.

10. SPLICE BOND BEAM REINFORCING AT MASONRY CONTROL/EXPANSION JOINTS AS SHOWN ON MASONRY JOINT DETAIL ON 4/S-3.

11. PROVIDE CONTINUOUS WIRE LATH GROUT BARRIERS BELOW BOND BEAMS.

12. PROVIDE LINTELS OVER ALL OPENINGS AND RECESSES IN MASONRY WALLS.

13. ALL LINTELS SHALL HAVE A MINIMUM BEARING OF 8 INCHES EACH END.

14. FOR ALL OPENINGS NOT OTHERWISE DETAILED OR SCHEDULED, MINIMUM LINTELS SHALL BE FOR EACH 4 INCH OF MASONRY WIDTH 1-L 3-1/2 X 3-1/2 X 1/4 FOR SPANS UP TO 4'-0", 1-L 4 X 3-1/2 X 1/4 FOR SPANS UP TO 6'-0" AND 1-L 5 X 3-1/2 X 1/4 FOR SPANS UP TO 8'-0". FOR SPANS LESS THAN 2'-0" PROVIDE A 5/16" PLATE.

15. MASONRY CONTROL JOINT SPACING SHALL NOT EXCEED 24'-0".

16. ALL MASONRY CONSTRUCTION SHALL HAVE SPECIAL INSPECTION PER IBC SECTION 1705.4 AND HAVE LEVEL 2 QUALITY ASSURANCE IN ACCORD WITH ACI530-11 SECTION 1.14. PERIODIC INSPECTION SHALL BE INTERPRETED AS TWO TIMES PER WEEK.

E. WOOD:

1. WOOD SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTION BUREAU.

2. ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED GRADING AGENCY.

3. SAWN LUMBER SHALL HAVE THE FOLLOWING MINIMUM GRADE UNLESS NOTED OTHERWISE:

TYPE OF USE	MATERIAL AND GRADE
TOP PLATES, ALL OTHER SAWN LUMBER	DOUGLAS FIR NO. 2
POSTS AND BEAMS	DOUGLAS FIR NO. 1

4. ALL 2x BEARING WALLS SHALL BE BLOCKED HORIZONTALLY AT 4'-0" O.C. VERT. SPACING FOR ALL WALLS GREATER THAN 9'-0" IN HEIGHT.

5. ALL PLYWOOD SHALL BE C-D OR C-C SHEATHING EXTERIOR GRADE CONFORMING TO STANDARD PS0.019.

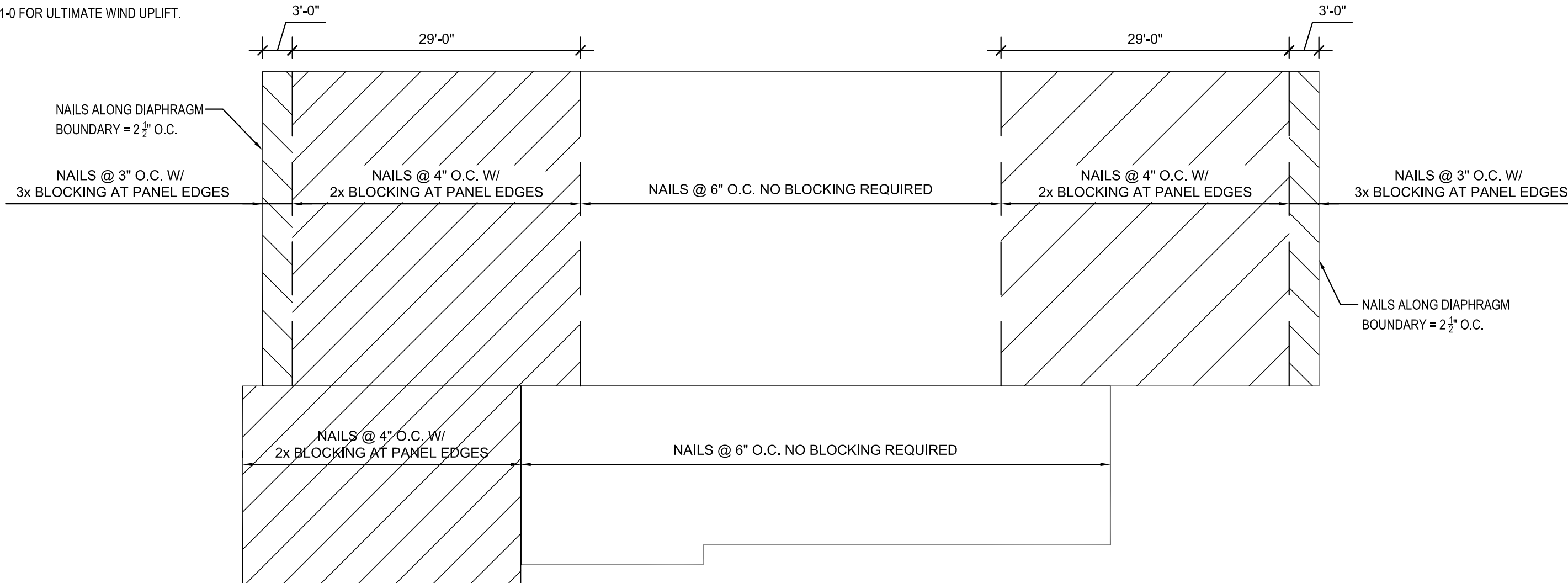
6. PLYWOOD SHALL BE PLACED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS USING A MINIMUM 5-PLY PLYWOOD. PLYWOOD JOINTS SHALL BE STAGGERED.

7. PLYWOOD ATTACHMENT SHALL BE DONE USING COMMON NAILS. NAILING SHALL BE AS NOTED ON ROOF FRAMING PLAN.

8. ALL SILL PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED DOUGLAS FIR OR FOUNDATION GRADE REDWOOD.

9. BRACE WOOD TRUSSES Laterally AT BEARING POINTS AND INTERMEDIATE LOCATIONS AS REQUIRED BY MANUFACTURER.

10. SEE 3/S1-0 FOR ULTIMATE WIND UPLIFT.



2  
S1-0 ROOF DIAPHRAGM NAILING PATTERN 3/4"=1'-0"

F. SPECIAL INSPECTION

1. IN ACCORD WITH 2018 IBC SECTIONS 1704 & 1705, AS NOTED BELOW, TESTING AND INSPECTION SHALL BE BY AN INDEPENDENT TESTING/INSPECTION FIRM UNDER THE SUPERVISION OF A LICENSED ENGINEER EMPLOYED BY THAT FIRM. THIS ENGINEER SHALL BE DEEMED THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS PERFORMED BY HIS FIRM OR HIS CONSULTANTS. INSPECTORS SHALL BE ICBO CERTIFIED AND APPROVED BY THE BUILDING OFFICIAL.

2. THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE BUILDING OFFICIAL AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE INTERNATIONAL BUILDING CODE.

3. SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION THE INSPECTIONS CONDUCTED BY THE LOCAL DEPARTMENT OF BUILDING SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY SECTION 108.5 AND 108.7 OF THE INTERNATIONAL BUILDING CODE.

4. CONCRETE PER SECTION 1705.3 AND TABLE 1705.3.

5. ANCHOR RODS INSTALLED IN CONCRETE: PER TABLE 1705.3.

6. REINFORCING PER TABLE 1705.3.

7. STRUCTURAL MASONRY: PER SECTION 1705.4.

8. GRADING, EXCAVATION AND FILLING: PER SECTION 1705.6. SEE GEOTECHNICAL REPORT.

9. EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHOR INSTALLATION TO VERIFY INSTALLATION IN ACCORD WITH ICBO REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.

10. THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.

11. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE BUILDING OFFICIAL AND TO THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL.

12. THE TESTING/INSPECTION FIRMS ENGINEER SHALL COMPLETE, SIGN AND SEAL, A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

13. THE SPECIAL INSPECTOR SHALL BE SELECTED AND CREDENTIALS SHALL BE SUBMITTED TO THE CITY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

G. OTHER:

1. UNLESS NOTED OTHERWISE, EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT II EXPANSION ANCHORS OR APPROVED EQUAL. ADHESIVE ANCHORS SHALL BE HILTI STANDARD HAS RODS WITH THE HVA ADHESIVE SYSTEM, THE SIMPSON SET SYSTEM, OR APPROVED EQUAL.

2. VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.

3. VERIFY IN FIELD ALL EXISTING CONDITIONS SHOWN ON DRAWINGS.

4. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADES. PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING, OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.

5. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE STAMP (AND SIGNATURE) OF AN ENGINEER REGISTERED IN OKLAHOMA.

TYPICAL REINFORCING NOTES

1. REINFORCING BAR DEVELOPMENT AND LAP SPLICE LENGTH SHALL BE AS SHOWN IN THIS TABLES UNLESS OTHERWISE NOTED ON THE DRAWINGS.

2. THE LENGTHS SHOWN IN THE TABLES ARE BASED ON THE FOLLOWING CONCRETE COVERAGE AND REINFORCING C-C SPACING:  
BEAMS OR COLUMNS:  
COVER (EQUAL OR MORE) 1.0bd (BAR DIAMETER)  
CENTER TO CENTER (C-C) SPACING (EQUAL OR MORE) 2.0bd.  
ALL OTHERS:  
COVER (EQUAL OR MORE) 1.0bd  
CENTER TO CENTER SPACING (EQUAL OR MORE) 3.0bd.

3. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE.

4. DEVELOPMENT AND SPLICE LENGTH SHOWN SHALL NOT APPLY IF ANY OF THE FOLLOWING CONDITIONS OCCUR:  
A) f<sub>c</sub> < 2,500 PSI  
B) f<sub>y</sub> > 60,000 PSI  
C) THE COVER OR C-C BAR SPACING IS NOT AS LISTED ABOVE  
D) THE REINFORCING STEEL IS EPOXY COATED  
E) LIGHT WEIGHT CONCRETE IS USED.

5. CENTER ON CENTER SPACING (S) IS DEFINED AS BELOW:

1. THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE BUILDING OFFICIAL AND TO THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL.

2. THE TESTING/INSPECTION FIRMS ENGINEER SHALL COMPLETE, SIGN AND SEAL, A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.

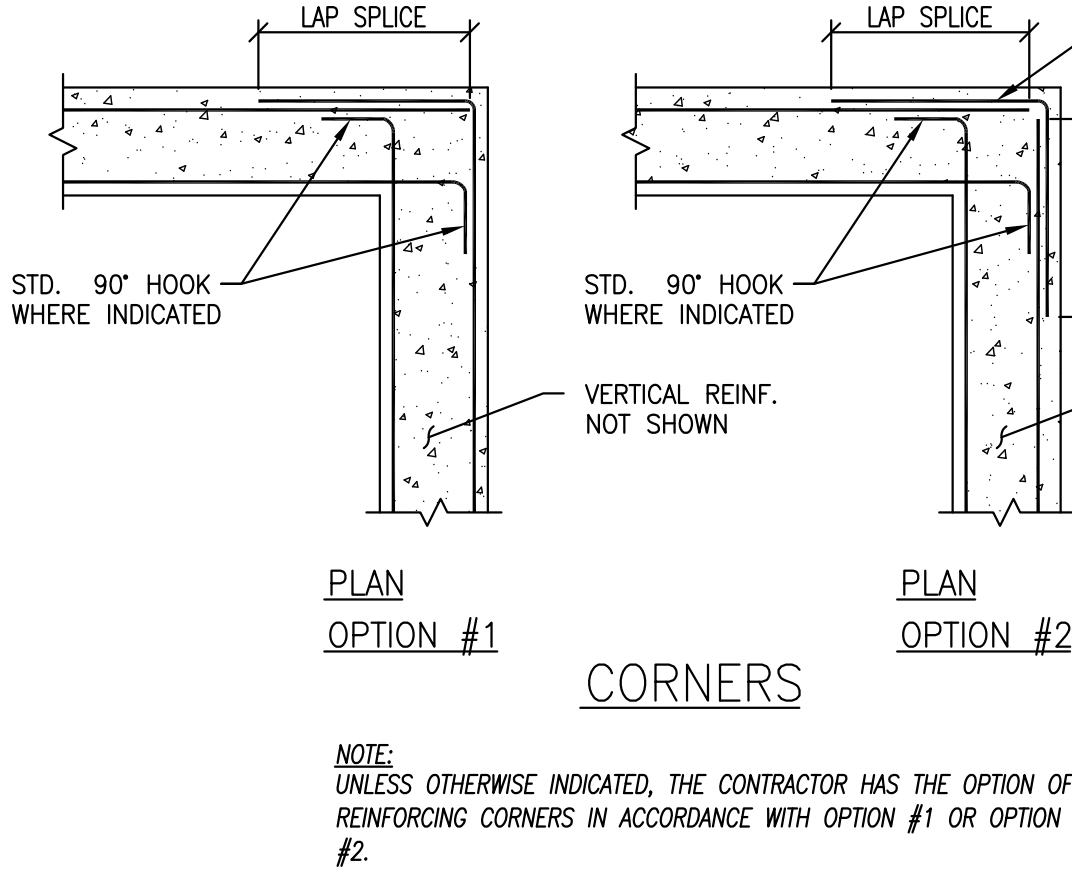
3. THE SPECIAL INSPECTOR SHALL BE SELECTED AND CREDENTIALS SHALL BE SUBMITTED TO THE CITY PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

4. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADES. PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING, OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.

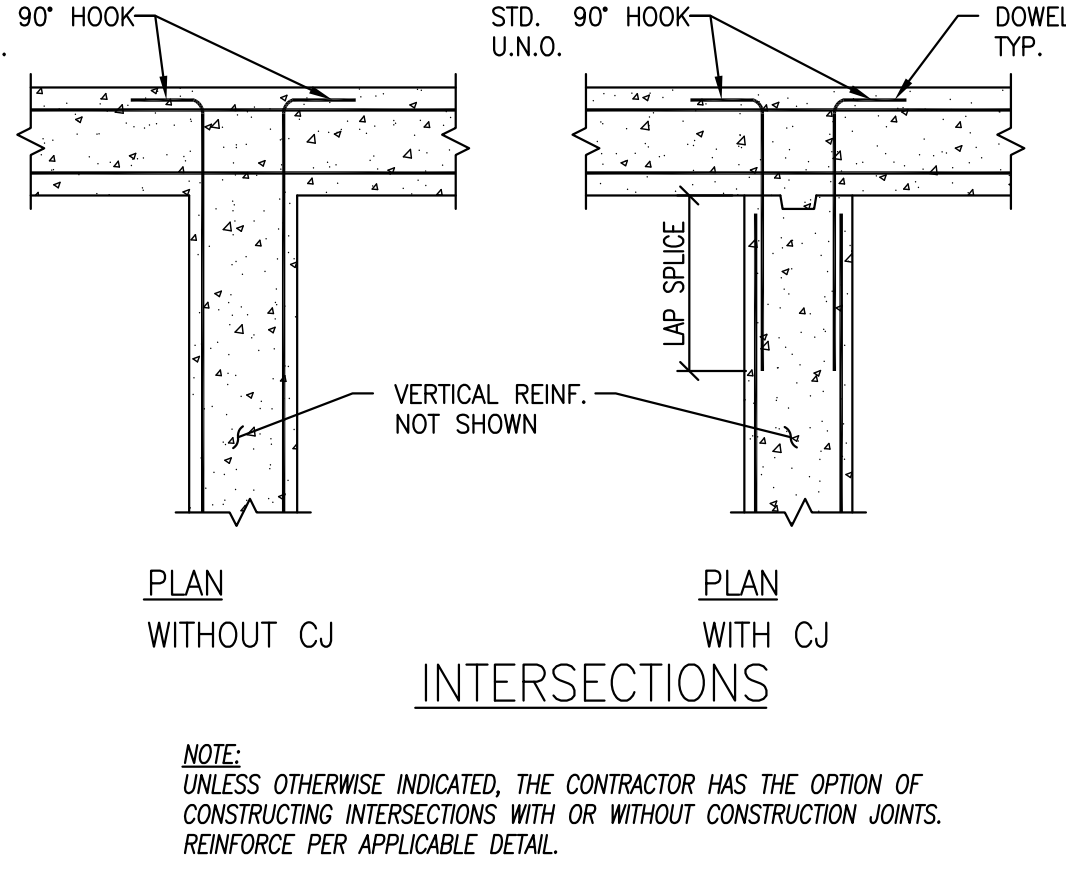
5. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE STAMP (AND SIGNATURE) OF AN ENGINEER REGISTERED IN OKLAHOMA.

REINFORCING DEVELOPMENT AND SPLICES f'c = 4,000 PSI				
BAR SIZE	DEVELOPMENT LENGTH		SPLICE LENGTH	
	TOP	OTHER	TOP	OTHER
#3	1'-7"	1'-3"	2'-0"	1'-7"
#4	2'-1"	1'-7"	2'-8"	2'-1"
#5	2'-7"	2'-0"	3'-4"	2'-7"
#6	3'-1"	2'-5"	4'-0"	3'-1"
#7	4'-6"	3'-6"	5'-10"	4'-6"
#8	5'-2"	4'-0"	6'-8"	5'-2"
#9	5'-10"	4'-6"	7'-7"	5'-10"
#10	6'-7"	5'-1"	8'-6"	6'-7"
#11	7'-3"	5'-7"	9'-5"	7'-3"

DEVELOPMENT LENGTHS HOOKED BARS (f'c = 4,000 PSI)	
BAR SIZE	LENGTH OR MIN. EMBEDMENT
#3	8"
#4	10"
#5	1'-0"
#6	1'-3"
#7	1'-5"
#8	1'-7"
#9	1'-10"
#10	2'-0"
#11	2'-3"

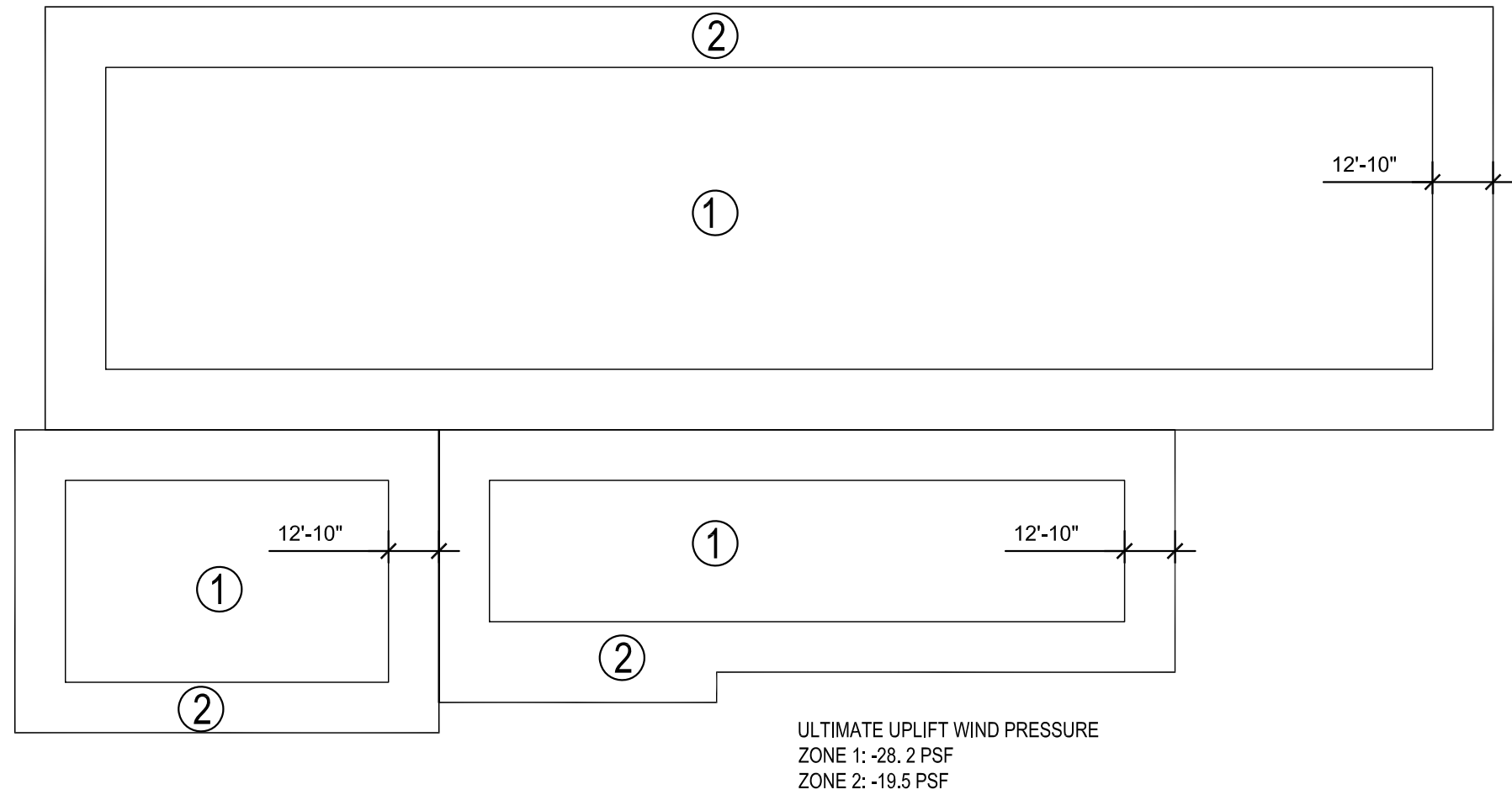


CORNERS



INTERSECTIONS

1  
S1-0 HORIZONTAL WALL REINFORCEMENT DETAILS 3/4"=1'-0"

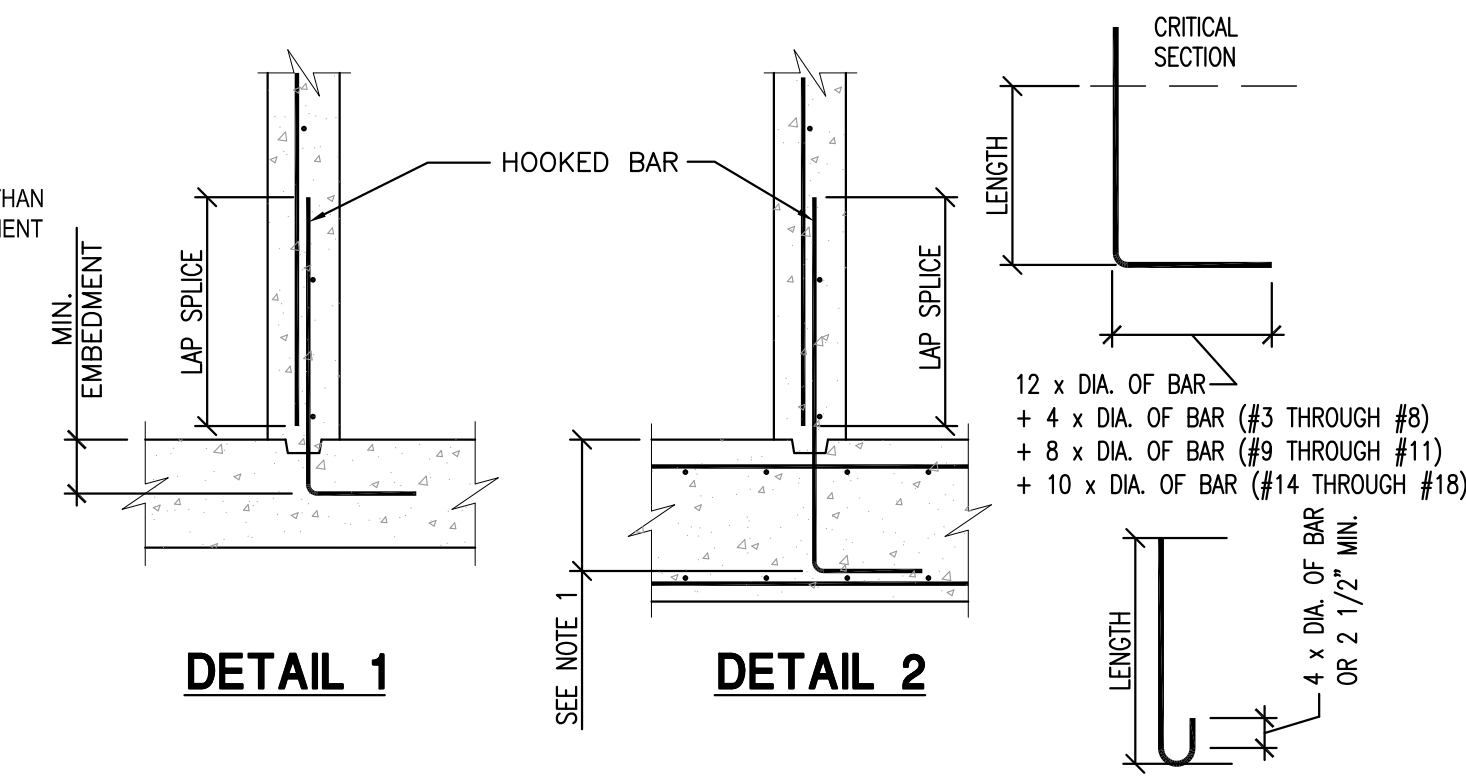


3  
S1-0 ROOF WIND UPLIFT LOADING 3/4"=1'-0"

DEVELOPMENT LENGTH NOTES

1. WHERE DRAWINGS ARE DETAILED SIMILAR TO DETAIL 2, EXTEND THE EMBEDMENT LENGTH SUCH THAT THE HOOKED BAR CONTACTS THE LAYER OF MAIN REINFORCING SHOWN.

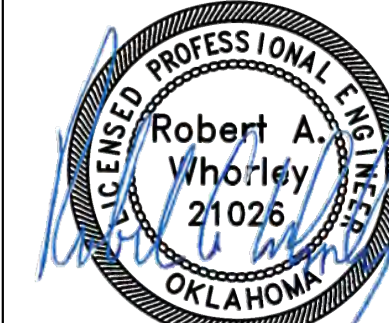
2. EMBEDMENT LENGTHS IN CHART ARE TYPICAL EXCEPT AS NOTED IN DETAIL 2, OR AS INDICATED ON DRAWINGS.



DETAIL 1

DETAIL 2

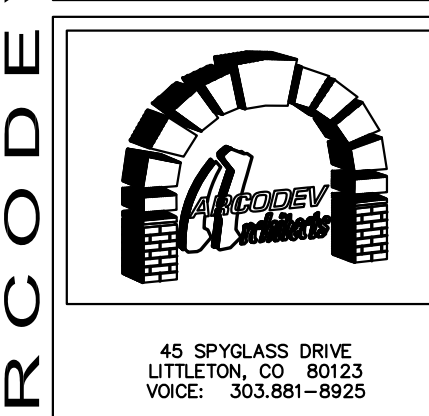
CONCRETE REINFORCEMENT COVER			
CONCRETE EXPOSURE	MEMBER	REINFORCEMENT	SPECIFIED COVER
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3"
	ALL	#6 TO #18	2"
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#5 AND SMALLER	1 1/2"
	ALL	#14 & #18	1 1/2"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, & WALLS	#14 & SMALLER	3/4"
	BEAMS, COLUMNS, PEDASTALS, AND TENSION TIES	PRIMARY REINFORCEMENT STIRRUPS, TIES, SPIRALS, AND HOOPS	1 1/2"



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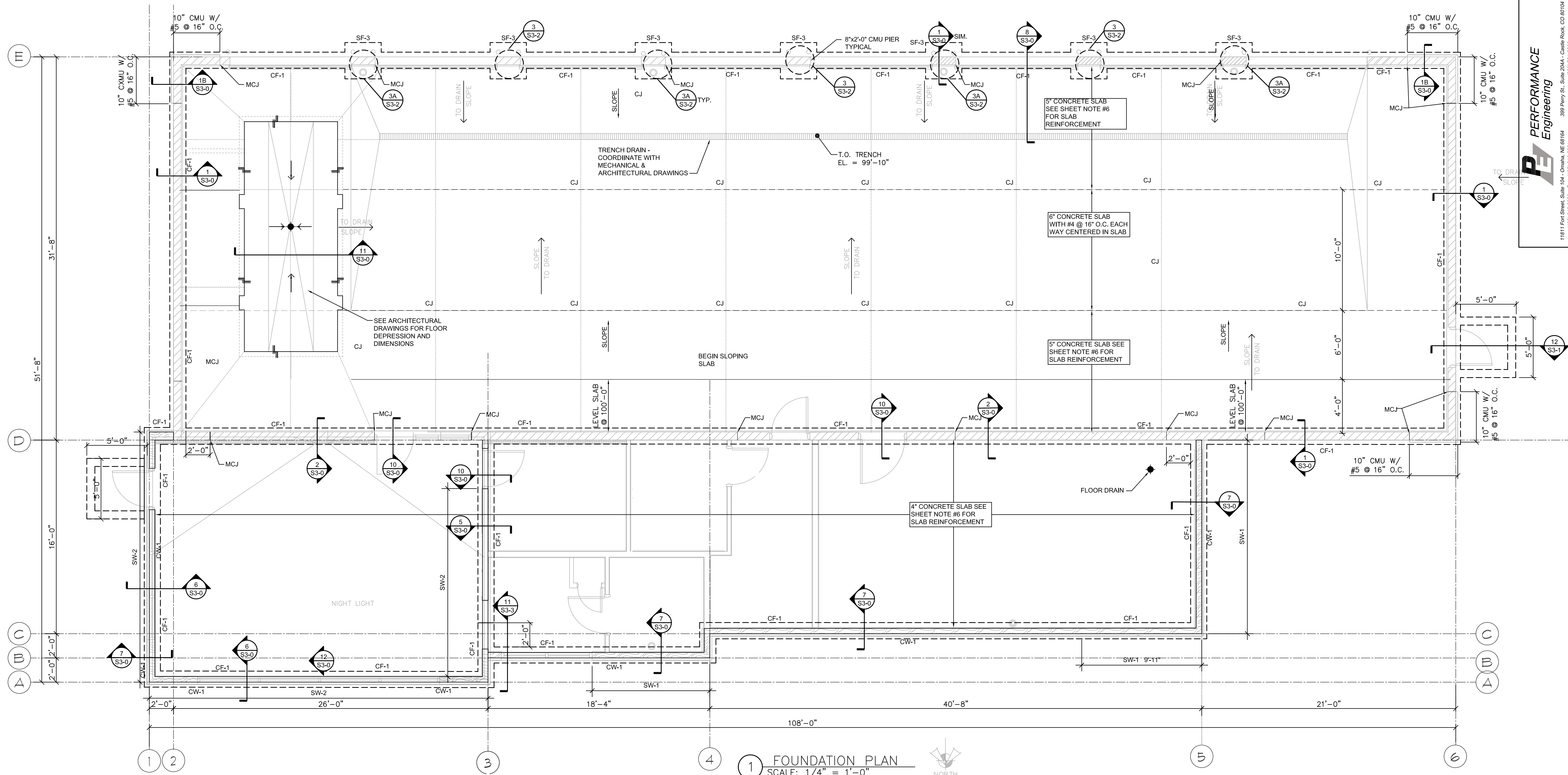
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SHEET

S1-0  
GENERAL STRUCTURAL  
NOTES AND DETAILS



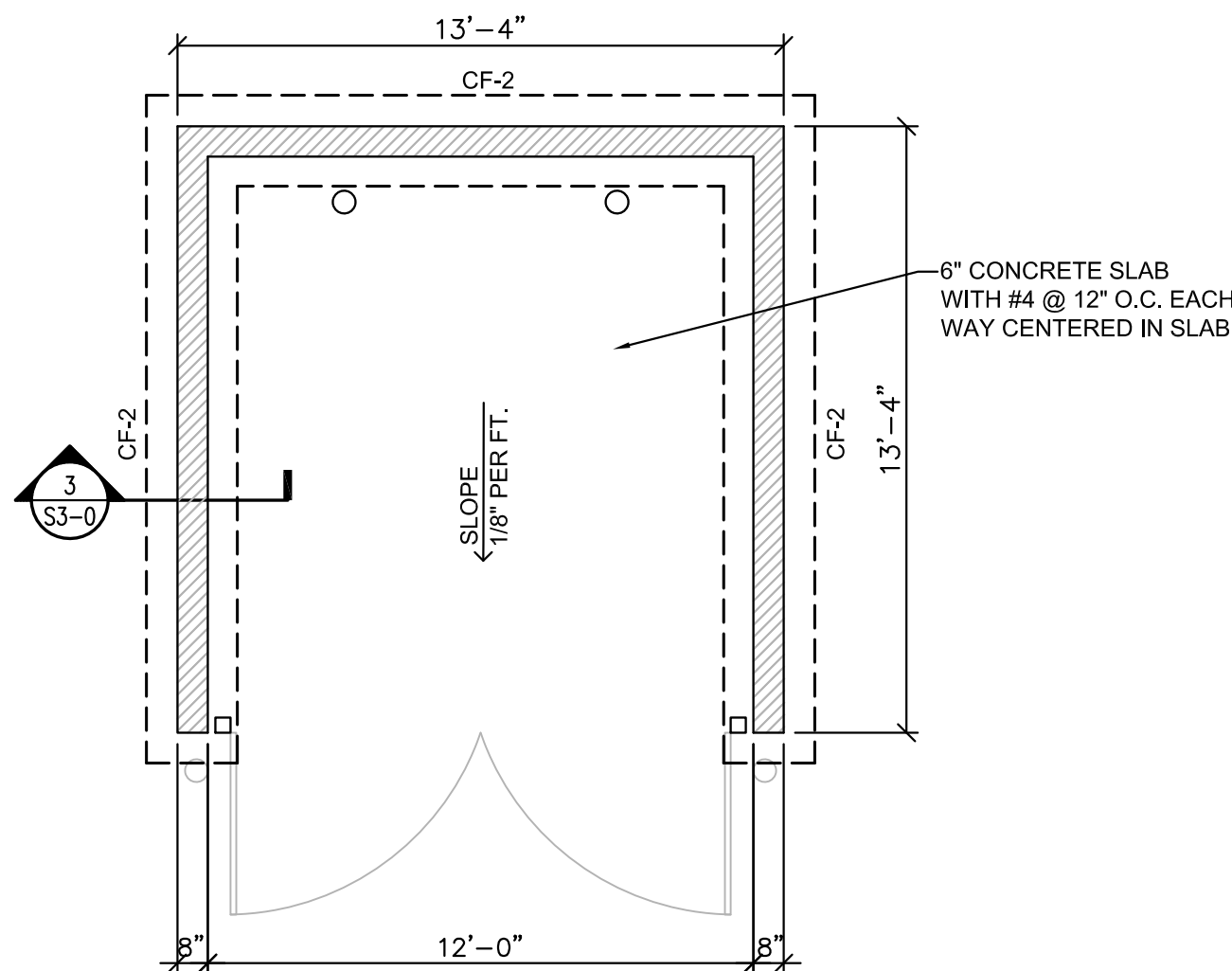


SHEAR WALL SCHEDULE										
MARK	WALL SHEATHING	NAILS, PENETRATION	PANEL EDGE NAILING	FIELD NAILING	SILL BOLTS	STUDS, SILLS & PLATES	ALLOWABLE SHEAR (PLF)	HOLDDOWNS	FOUNDATION ANCHOR	END MEMBERS
SW-1	1/2" NOMINAL STRUCTURAL I SHEATHING, ONE SIDE, BLOCKED	10d x 3" 1 1/2" PEN.	6" O.C.	6" O.C.	3/4" DIA. @ 24" O.C.	2x STUDS, 2x SILL, 2x PL	340	HDU8-SDS2.5	7/8" DIA. EMBED 9"	4x OR (3) 2x
SW-2	1/2" NOMINAL STRUCTURAL I SHEATHING, TWO SIDES, BLOCKED	10d x 3" 1 1/2" PEN.	6" O.C.	6" O.C.	3/4" DIA. @ 24" O.C.	2x STUDS, 2x SILL, 2x PL	680	HDU11-SDS2.5	1" DIA. EMBED 12"	6x OR (4) 2x

- NOTE:  
1. ALL WOOD MEMBERS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.  
2. NAILING & HARDWARE IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED.  
3. WHERE PANELS ARE APPLIED ON BOTH FACES OF WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS. STAGGER NAILING AT EACH SIDE OF JOINT.  
4. INSTALL HARDWARE IN ACCORD WITH MANUFACTURER'S RECOMMENDATIONS.  
5. ALL BOLT HOLES SHALL BE 1/8" (MAX) OVERSIZED AT THE CONNECTION OF HOLD DOWNS TO POSTS. INSPECTOR SHALL VERIFY.  
6. SEE DETAIL 5/S3-4 FOR TYPICAL SHEAR WALL FRAMING.

FOUNDATION SCHEDULE		
MARK	SIZE (L x W x D)	REINFORCING
CF-1	CONT. 1'-6" x 1'-0"	3 - #5 CONT. & #4 BARS @ 16" O.C. BOTT
CF-2	CONT. 2'-0" x 1'-4"	3 - #5 CONT. & #4 BARS @ 16" O.C. BOTT
SF-3	3'-0" x 3'-0" x 3'-6" DEEP	4 - #5 EACH WAY TOP & BOTT (RUN TRENCH REINF. THROUGH)

FOUNDATION WALL SCHEDULE	
MARK	REINFORCING
CW-1	6" WIDE x 1'-2" HIGH 2 - #5 CONT. & # DOWELS AT 24" O.C.



- SHEET NOTES:**  
1. INDICATES CMU WALLS WITH #5 VERTICAL BARS @ 2'-0" O.C. CENTERED IN MASONRY WALLS. SEE 8/S3-3 FOR MASONRY CONSTRUCTION.  
2. SOIL PREPARATION BENEATH BUILDING AND FOUNDATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT FOR A MONOLITHIC REINFORCED STIFFENED SLAB ON GRADE CONSTRUCTION (OPTION #2 & TABLE 3.2 OF THE SOIL REPORT). THIS ACTION SHALL BE OBSERVED BY A REPRESENTATIVE OF THE GEOTECHNICAL FIRM ON A CONTINUOUS BASIS TO ENSURE THAT SOIL PROPERTIES MEET THE REQUIREMENTS IN THE GEOTECHNICAL REPORT.  
- ALL SUBGRADE SOILS BELOW SLAB ON GRADES SHALL BE MOISTURE CONDITIONED AND COMPACTED AS DISCUSSED IN THE SOIL REPORT.  
- CONTRACTOR SHALL FOLLOW ALL RECOMMENDATIONS FOR MATERIAL AND COMPACTION LISTED IN THE SOIL REPORT  
3. CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF FLOOR AND WALL PENETRATIONS AND BLOCK OUT ACCORDINGLY.  
4. TOP OF FOOTING ELEVATION SHALL BE 99'-4" UNLESS NOTED OTHERWISE. CONTINUOUS FOOTINGS MAY BE EARTH FORMED. SLABS THICKEN/HAUNCH TO 8" OVER FOOTINGS.  
5. "MCJ" INDICATES MASONRY CONTROL JOINT LOCATION FOR CONCRETE MASONRY UNITS. SEE 2/S3-3 & 4/S3-3 FOR DETAILS. SEE ARCHITECTURAL DRAWINGS FOR BRICK CONTROL JOINTS.  
6. SEE PLAN FOR SHOP AREA SLAB ON GRADE THICKNESS. REINFORCE CONCRETE SLAB WITH #4 BARS @ 16" O.C. EA. WAY. TOP OF SLAB SHALL BE 100'-0" UNLESS NOTED OTHERWISE.  
7. SW-# INDICATES SHEAR WALL TYPE. SEE SCHEDULE.

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PE # 240448

**BRAKES PLUS**  
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA

5/13/24  
ENGINEER OF RECORD

REVISION

DATE	COMMENTS

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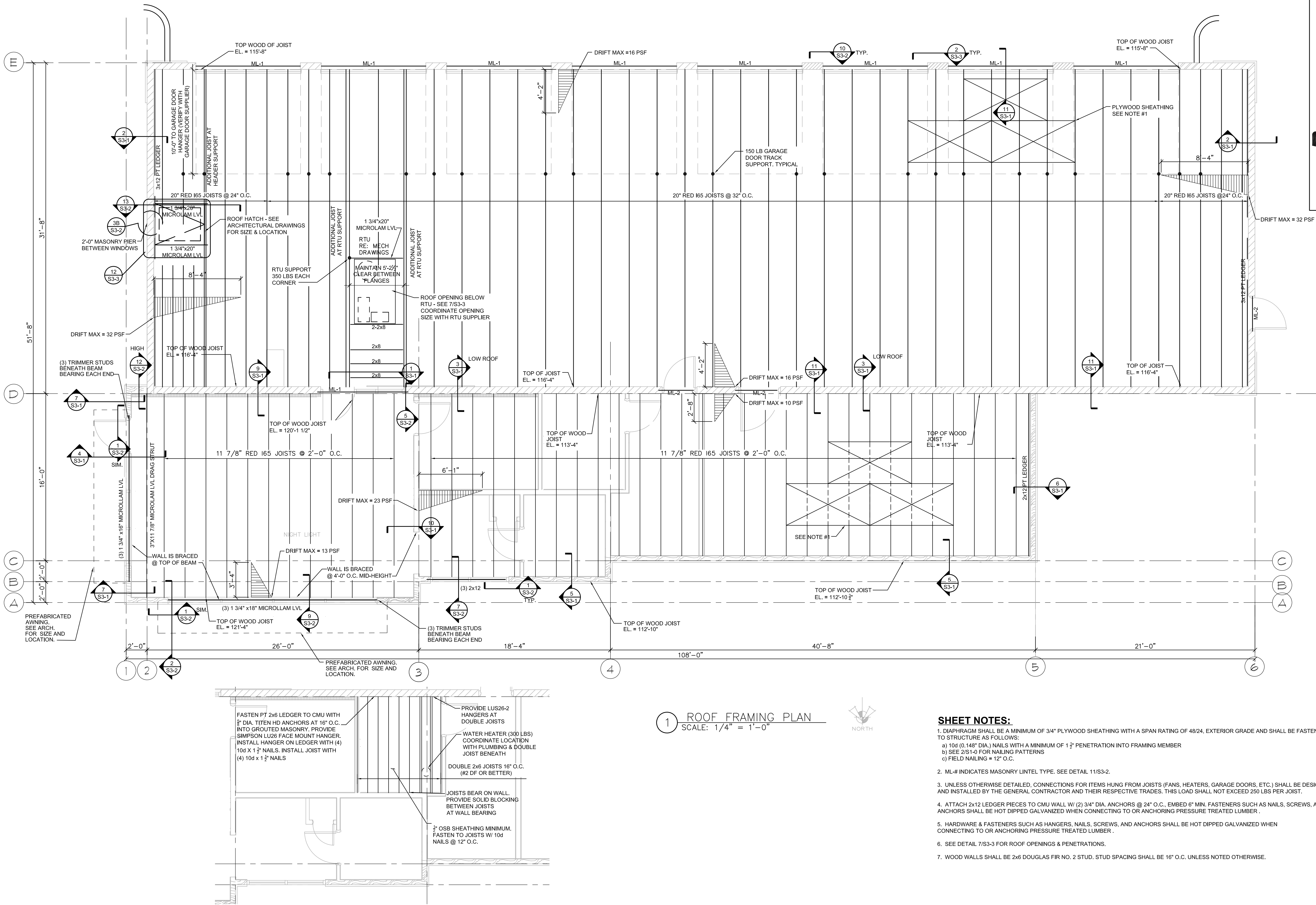
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SHEET

**S2-0**  
FOUNDATION PLAN





1 ROOF FRAMING PLAN  
SCALE: 1/4" = 1'-0"



**SHEET NOTES:**

- DIAPHRAGM SHALL BE A MINIMUM OF 3/4" PLYWOOD SHEATHING WITH A SPAN RATING OF 48/24, EXTERIOR GRADE AND SHALL BE FASTENED TO STRUCTURE AS FOLLOWS:  
a) 10d (0.148" DIA.) NAILS WITH A MINIMUM OF 1 3/4" PENETRATION INTO FRAMING MEMBER  
b) SEE 2/S1-0 FOR NAILING PATTERNS  
c) FIELD NAILING = 12" O.C.
- ML-# INDICATES MASONRY LINTEL TYPE. SEE DETAIL 11/S3-2.
- UNLESS OTHERWISE DETAILED, CONNECTIONS FOR ITEMS HUNG FROM JOISTS (FANS, HEATERS, GARAGE DOORS, ETC.) SHALL BE DESIGNED AND INSTALLED BY THE GENERAL CONTRACTOR AND THEIR RESPECTIVE TRADES. THIS LOAD SHALL NOT EXCEED 250 LBS PER JOIST.
- ATTACH 2x12 LEDGER PIECES TO CMU WALL W/ (2) 3/4" DIA. ANCHORS @ 24" O.C., EMBED 6" MIN. FASTENERS SUCH AS NAILS, SCREWS, AND ANCHORS SHALL BE HOT DIPPED GALVANIZED WHEN CONNECTING TO OR ANCHORING PRESSURE TREATED LUMBER.
- HARDWARE & FASTENERS SUCH AS HANGERS, NAILS, SCREWS, AND ANCHORS SHALL BE HOT DIPPED GALVANIZED WHEN CONNECTING TO OR ANCHORING PRESSURE TREATED LUMBER.
- SEE DETAIL 7/S3-3 FOR ROOF OPENINGS & PENETRATIONS.
- WOOD WALLS SHALL BE 2x6 DOUGLAS FIR NO. 2 STUD. STUD SPACING SHALL BE 16" O.C. UNLESS NOTED OTHERWISE.

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



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**BRAKES PLUS**

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YUKON, OKLAHOMA

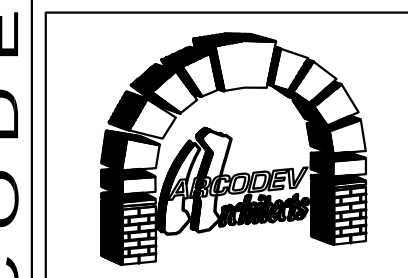


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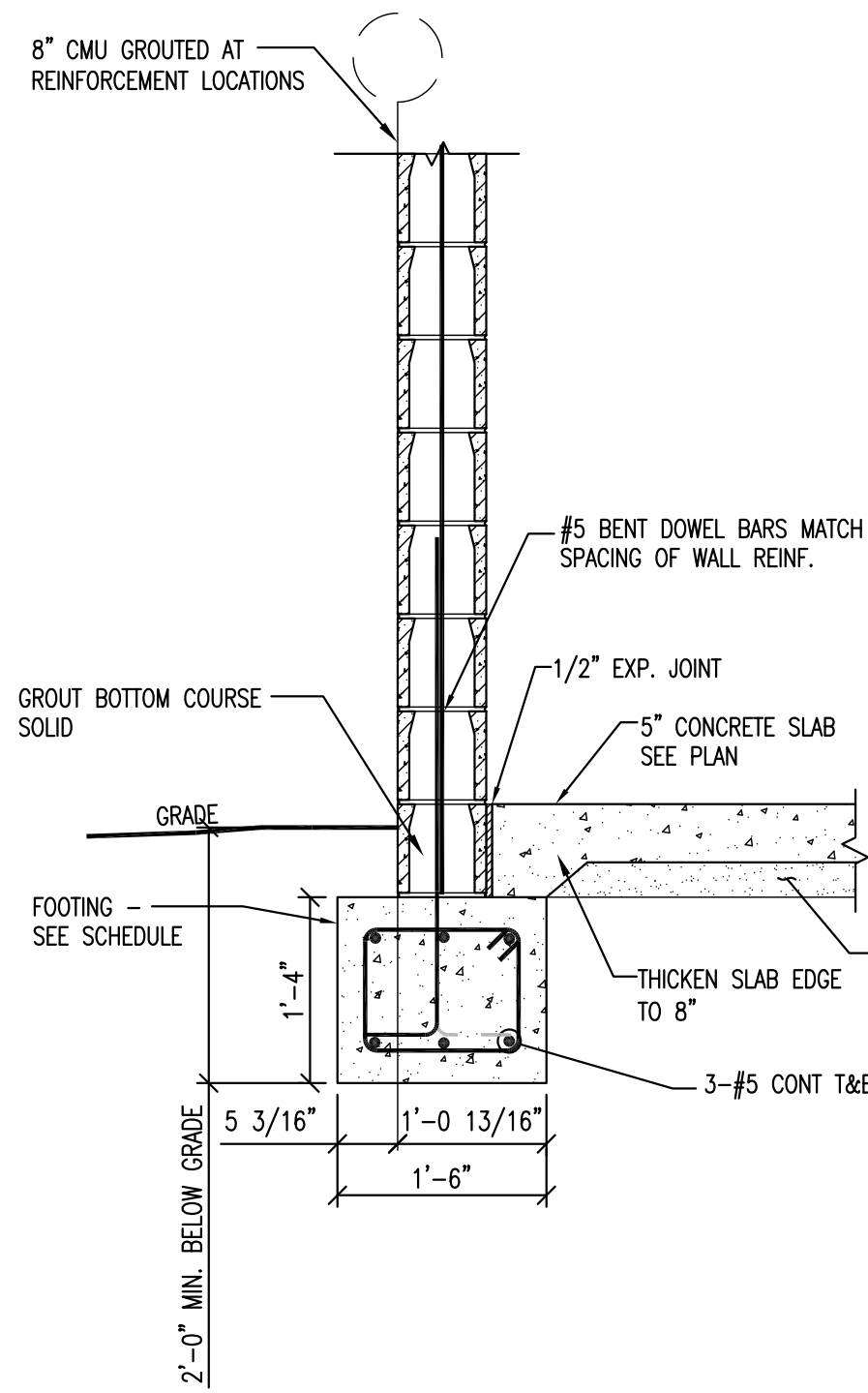


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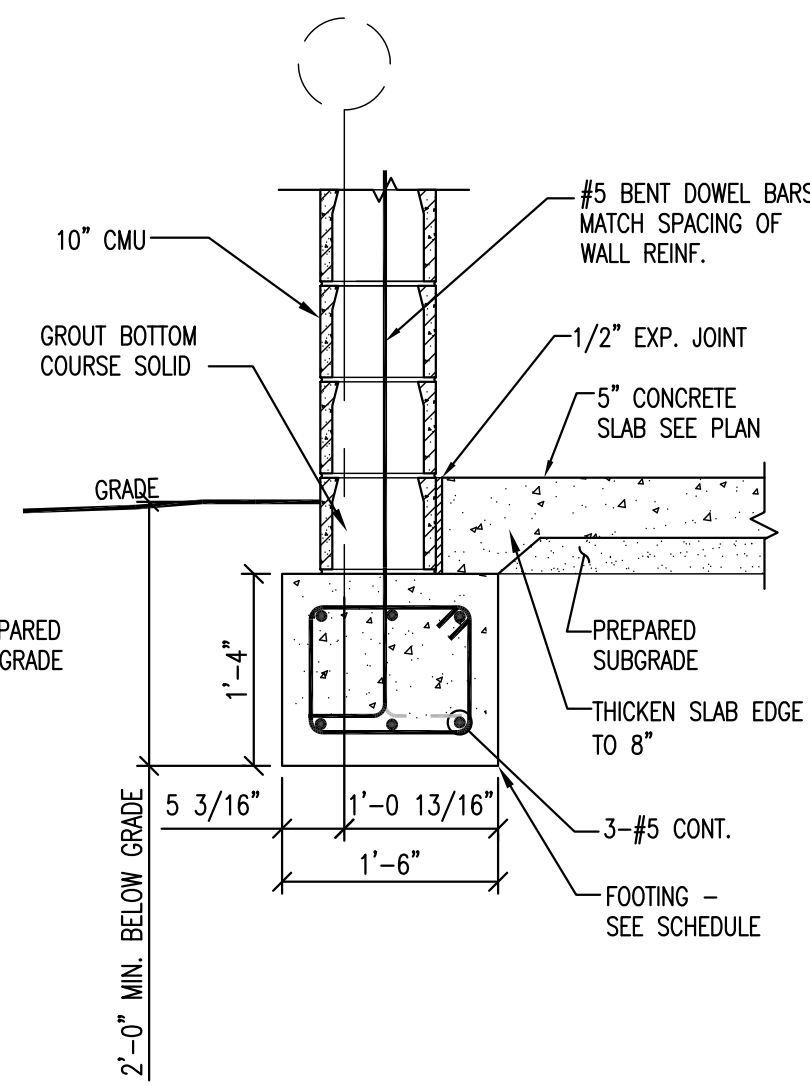
**S2-1**

ROOF FRAMING PLAN

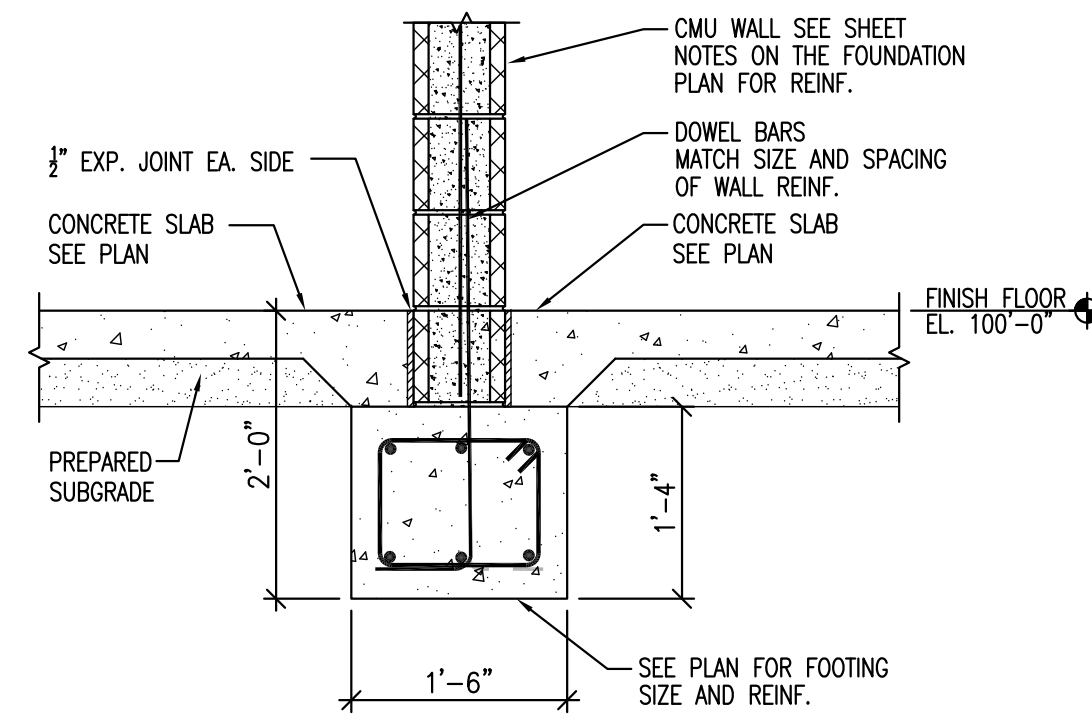




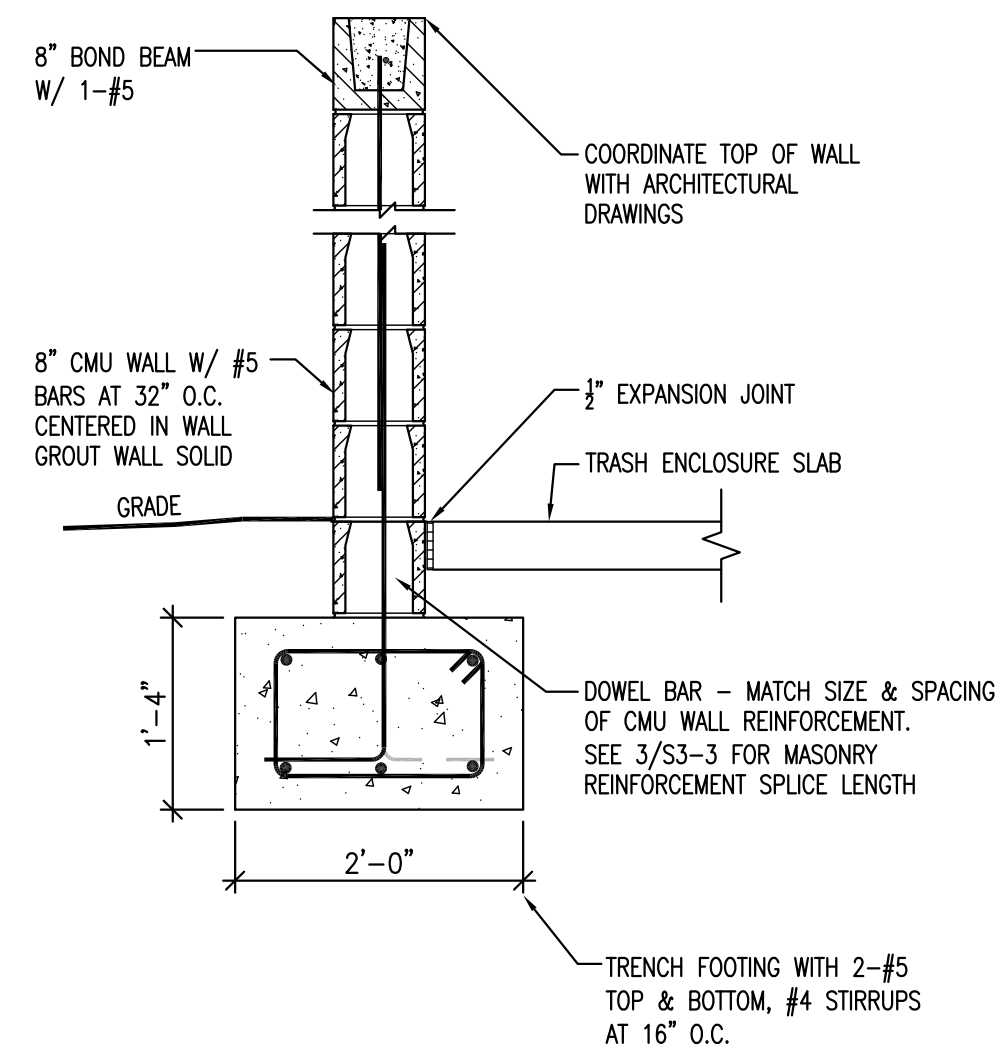
1  
S3-0 TRENCH FOOTING @ WALL  
3/4"=1'-0"



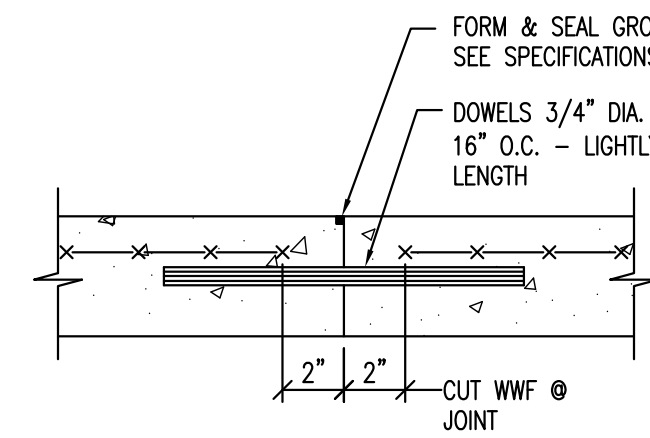
1B  
S3-0 FOOTING @ 10" CMU  
3/4"=1'-0"



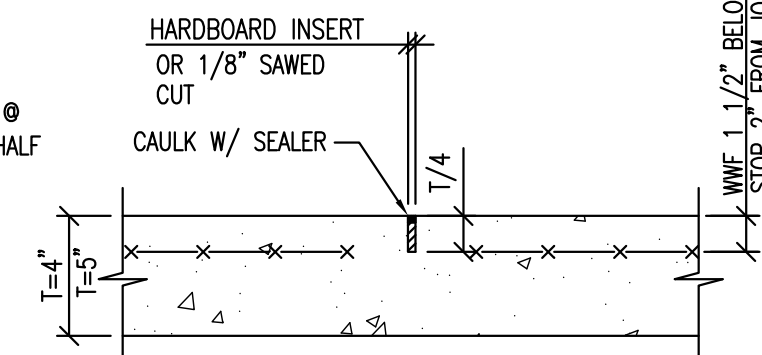
2  
S3-0 FOOTING  
3/4"=1'-0"



3  
S3-0 TRASH ENCLOSURE WALL SECTION  
3/4"=1'-0"



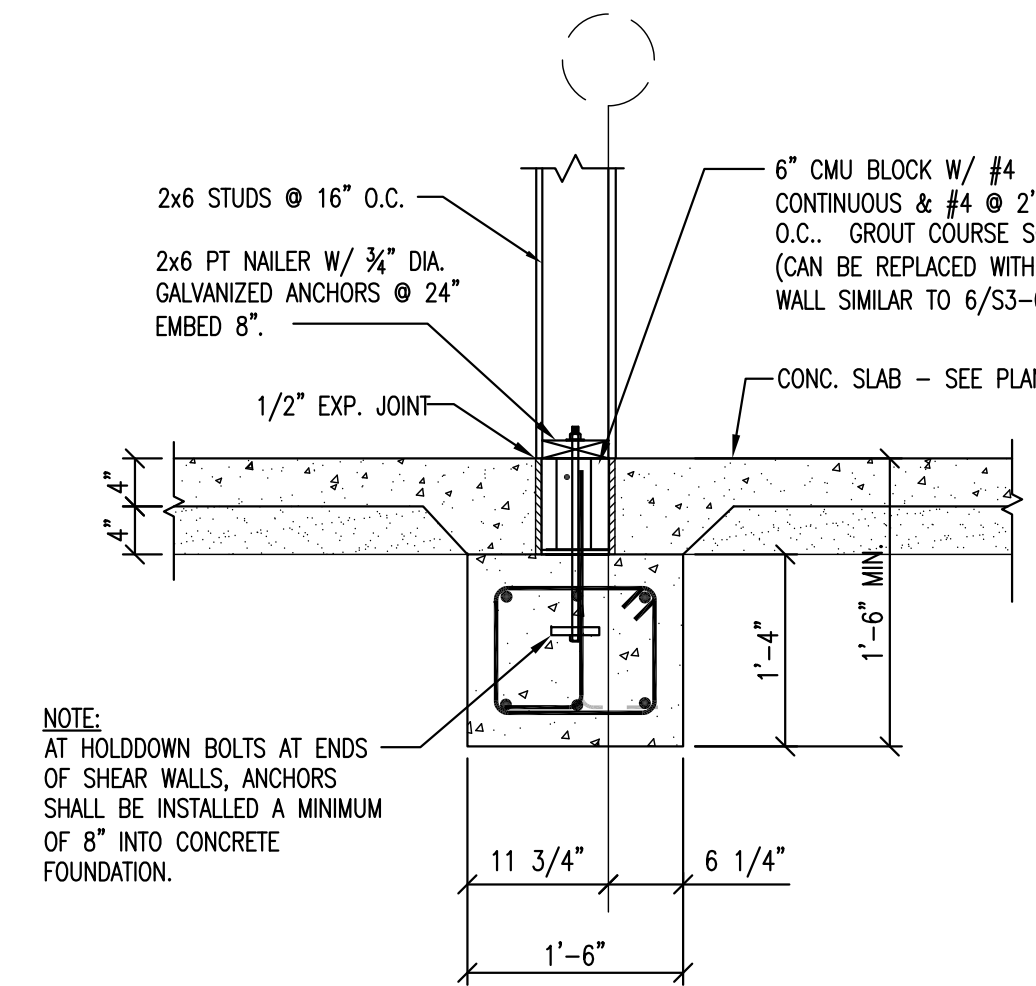
CONSTRUCTION JOINT



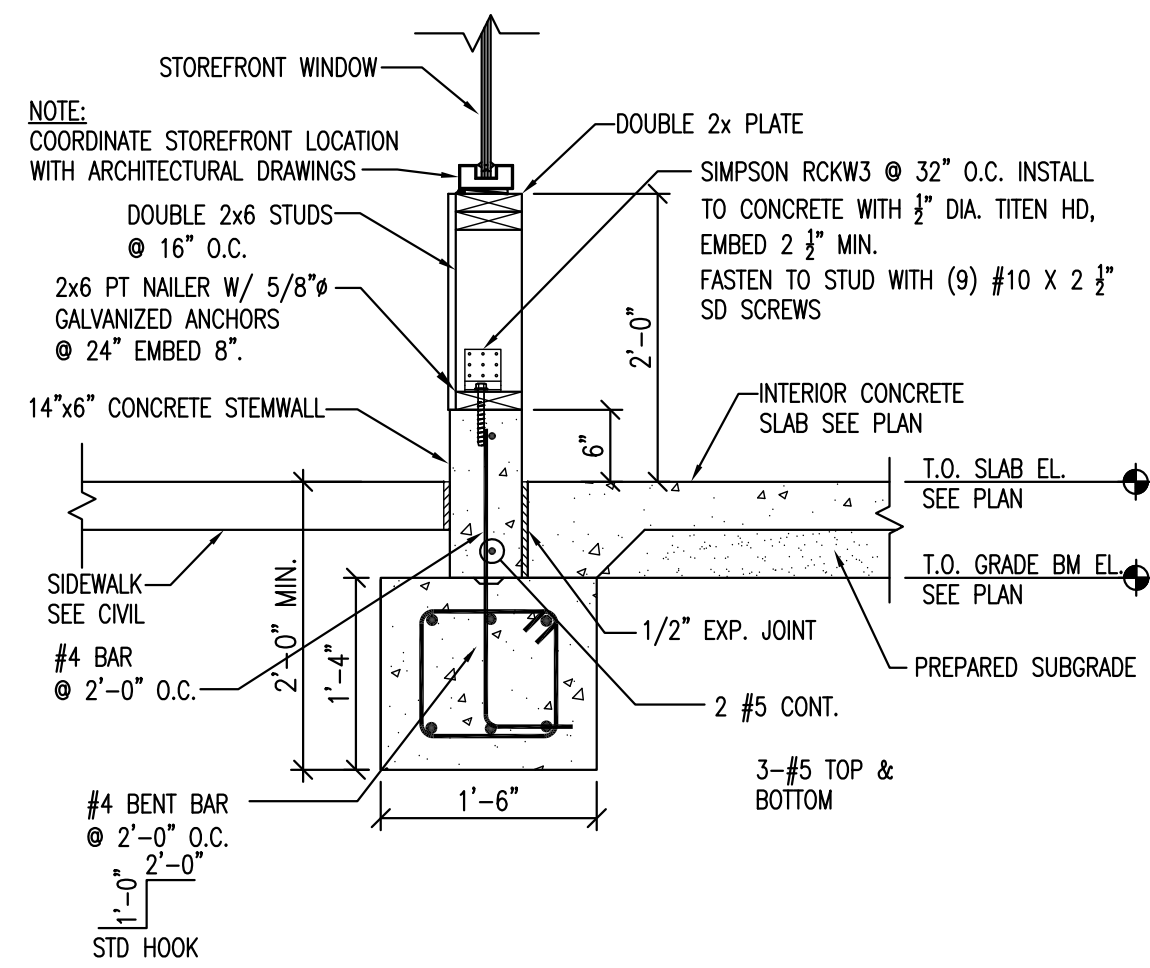
CONTROL JOINT

- NOTES:
1. EPOXY JOINT FILLER TO BE SIKADUR 51 BY SIKA CORPORATION OR APPROVED EQUAL. MINIMUM AGE OF CONCRETE TO BE 28 DAYS WHEN FILLED.
  2. SAW JOINT AS SOON AS SURFACE IS FIRM ENOUGH TO BE TORN OR DAMAGED BY THE BLADE (USUALLY 4 TO 12 HOURS AFTER CONCRETE HARDENS).

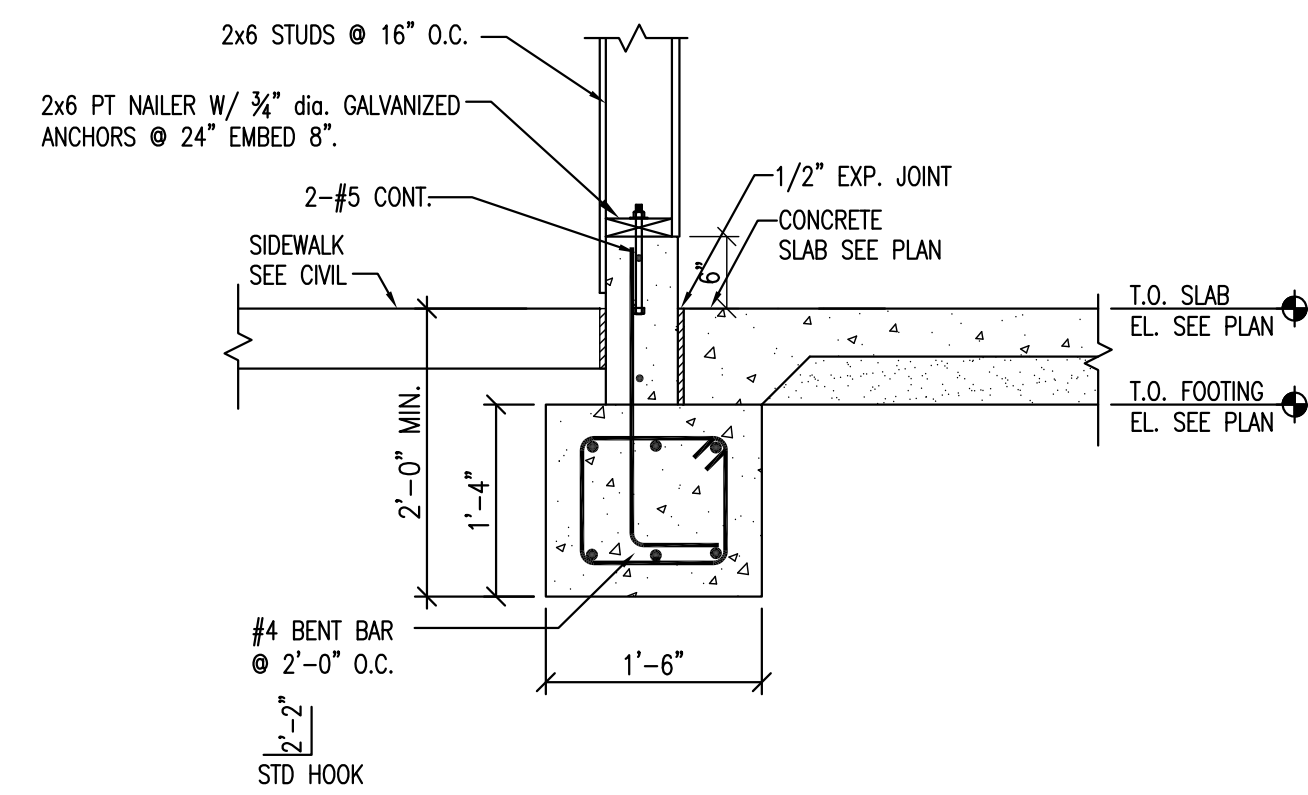
4  
S3-0 4" & 5" CONCRETE SLAB (C.J.) DETAILS  
N.T.S.



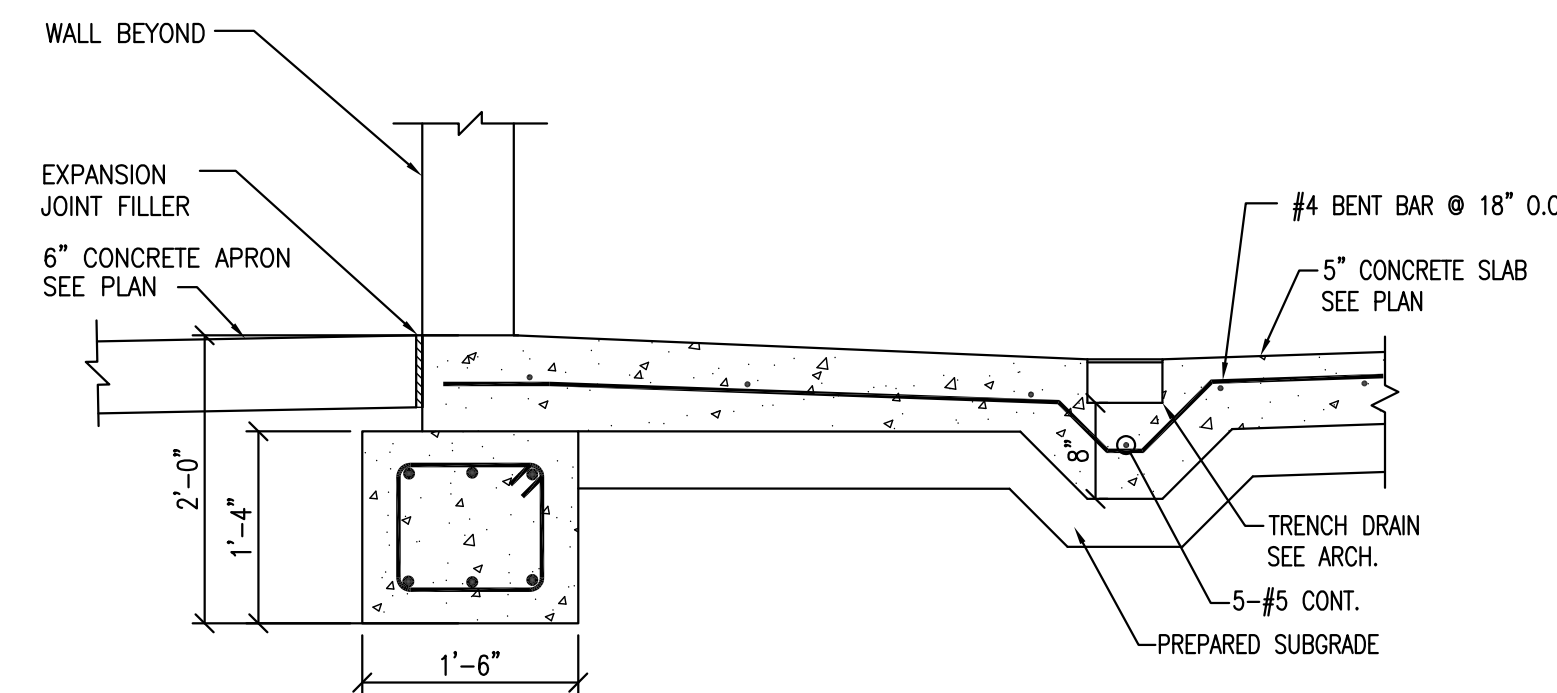
5  
S3-0 FOUNDATION SECTION  
3/4"=1'-0"



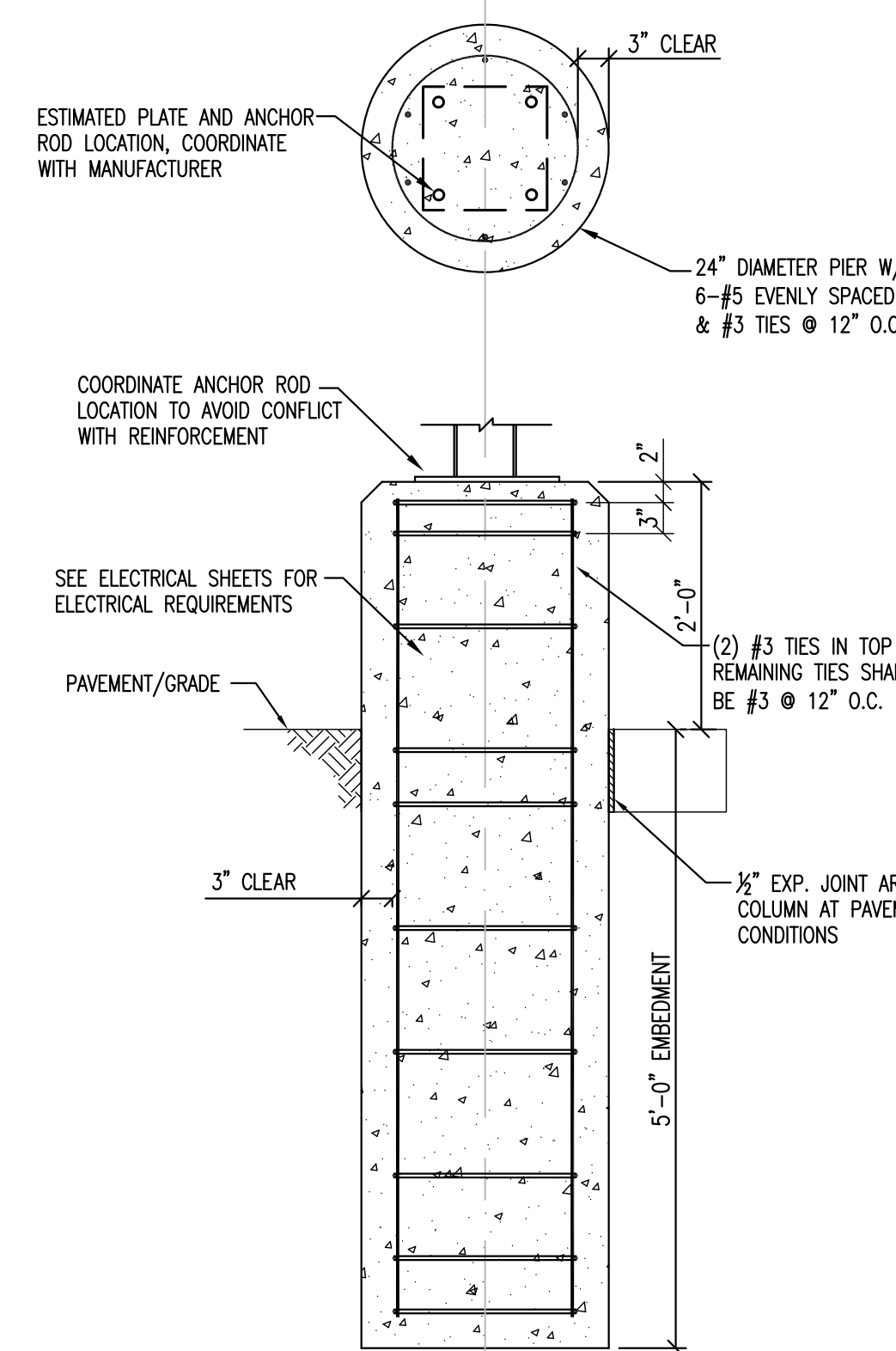
6  
S3-0 FOOTING @ STOREFRONT  
3/4"=1'-0"



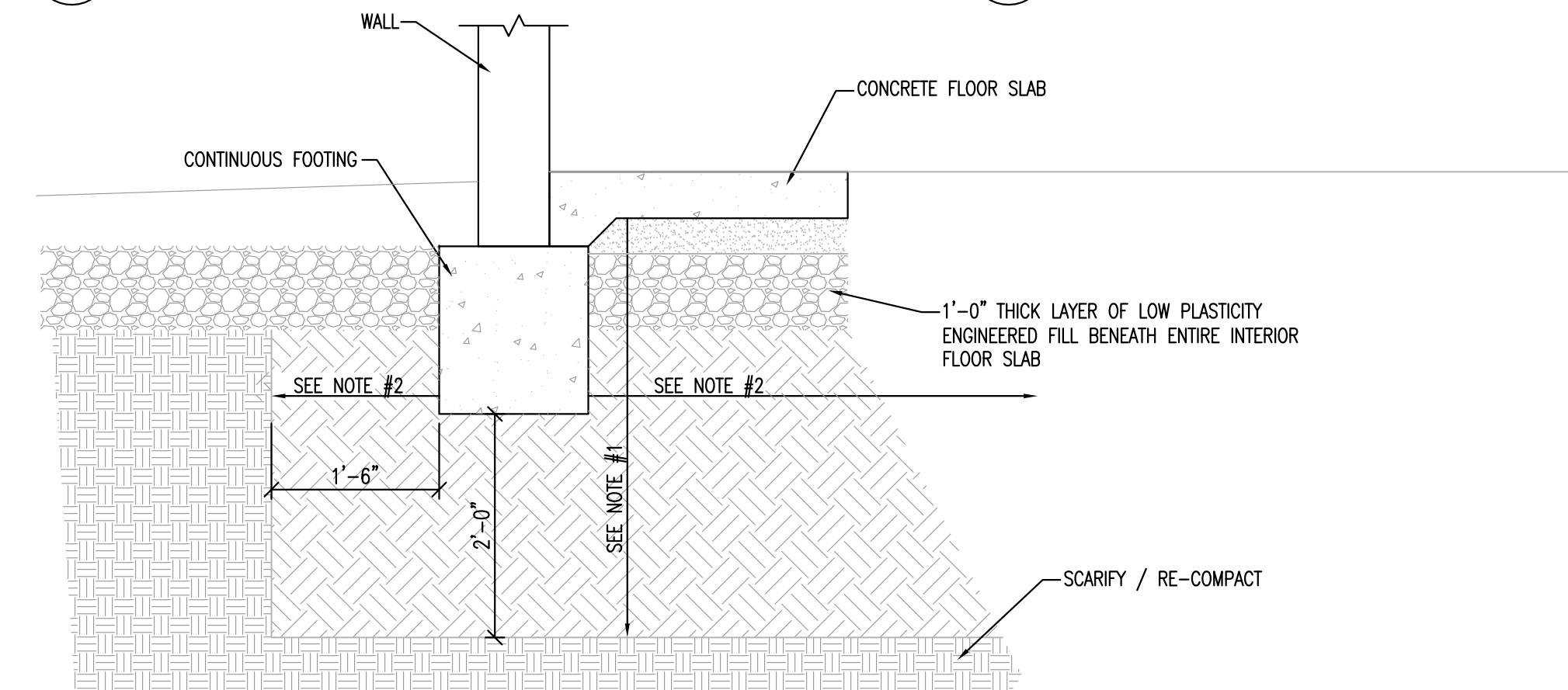
7  
S3-0 FOOTING @ WOOD WALL  
3/4"=1'-0"



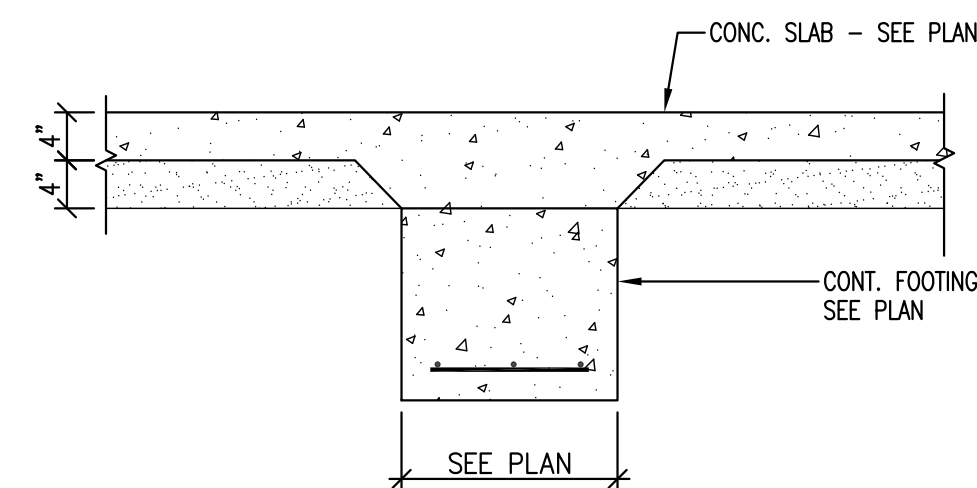
8  
S3-0 FOOTING & TRENCH DRAIN  
3/4"=1'-0"



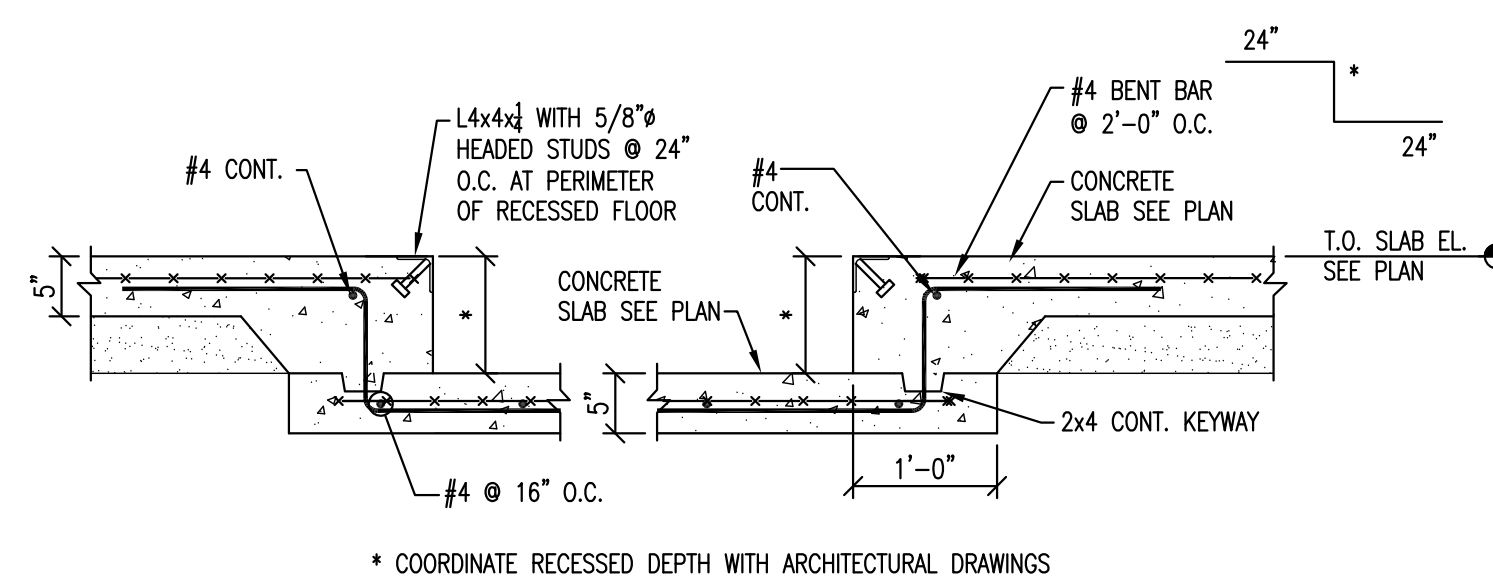
12  
S3-0 LIGHT POLE FOUNDATION  
3/4" = 1'-0"



9  
S3-0 SUBGRADE PREPARATION  
3/4"=1'-0"



10  
S3-0 FOOTING SECTION  
3/4" = 1'-0"



11  
S3-0 DEPRESSED SLAB DETAIL  
3/4"=1'-0"

- SUBGRADE PREPARATION NOTES:
- #1 SUBGRADE IMPROVEMENTS SHALL CONSIST OF A MINIMUM OF 2'-0" OF ENGINEERED FILL & 1'-0" THICK LAYER OF NON-EXPANSIVE FILL
  - #2 THE OVEREXCAVATION SHALL EXTEND BELOW THE ENTIRE STRUCTURE AND BEYOND THE OUTSIDE EDGES OF THE PROPOSED BUILDING FOOTPRINT A MINIMUM DISTANCE OF 1'-6".
  - #3 REFER TO THE SOIL REPORT FOR ALL MATERIAL TYPE, COMPACTION, AND MOISTURE REQUIREMENTS FOR THE IMPROVED SUBGRADE ZONE & THE NON-EXPANSIVE FILL LAYER BELOW THE FLOOR SLAB
  - #4 PROVIDE 4" GRANULAR LEVELING AND DRAINAGE LAYER DIRECTLY UNDER THE SLAB.

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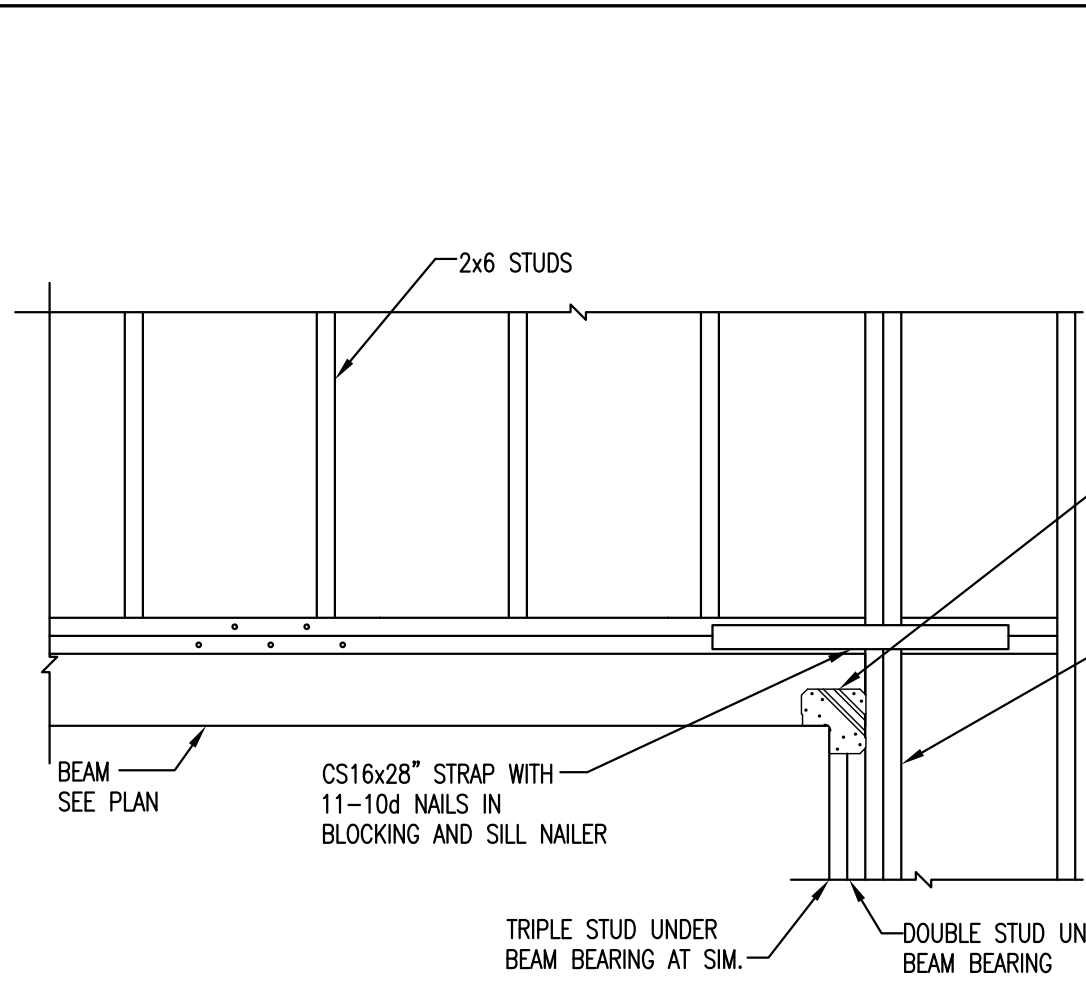
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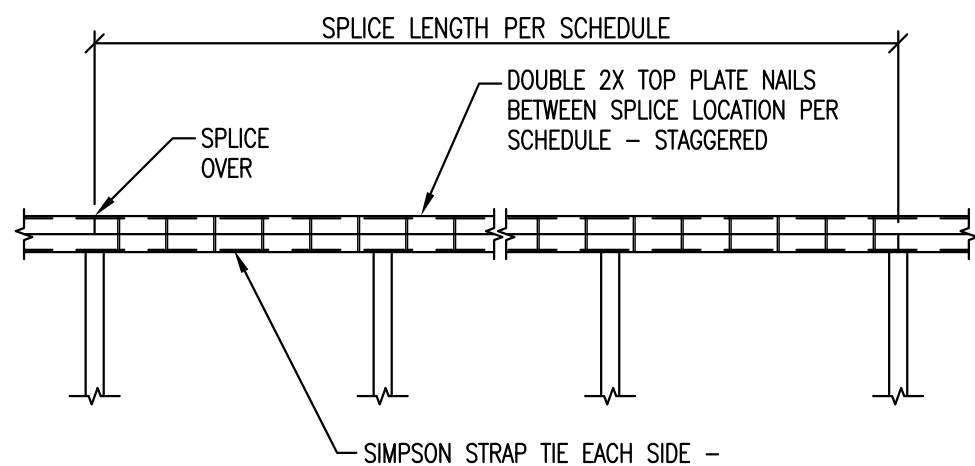
S3-0

SECTIONS AND DETAILS





**1 BEAM BEARING DETAIL**  
S3-2 3/4"=1'-0"

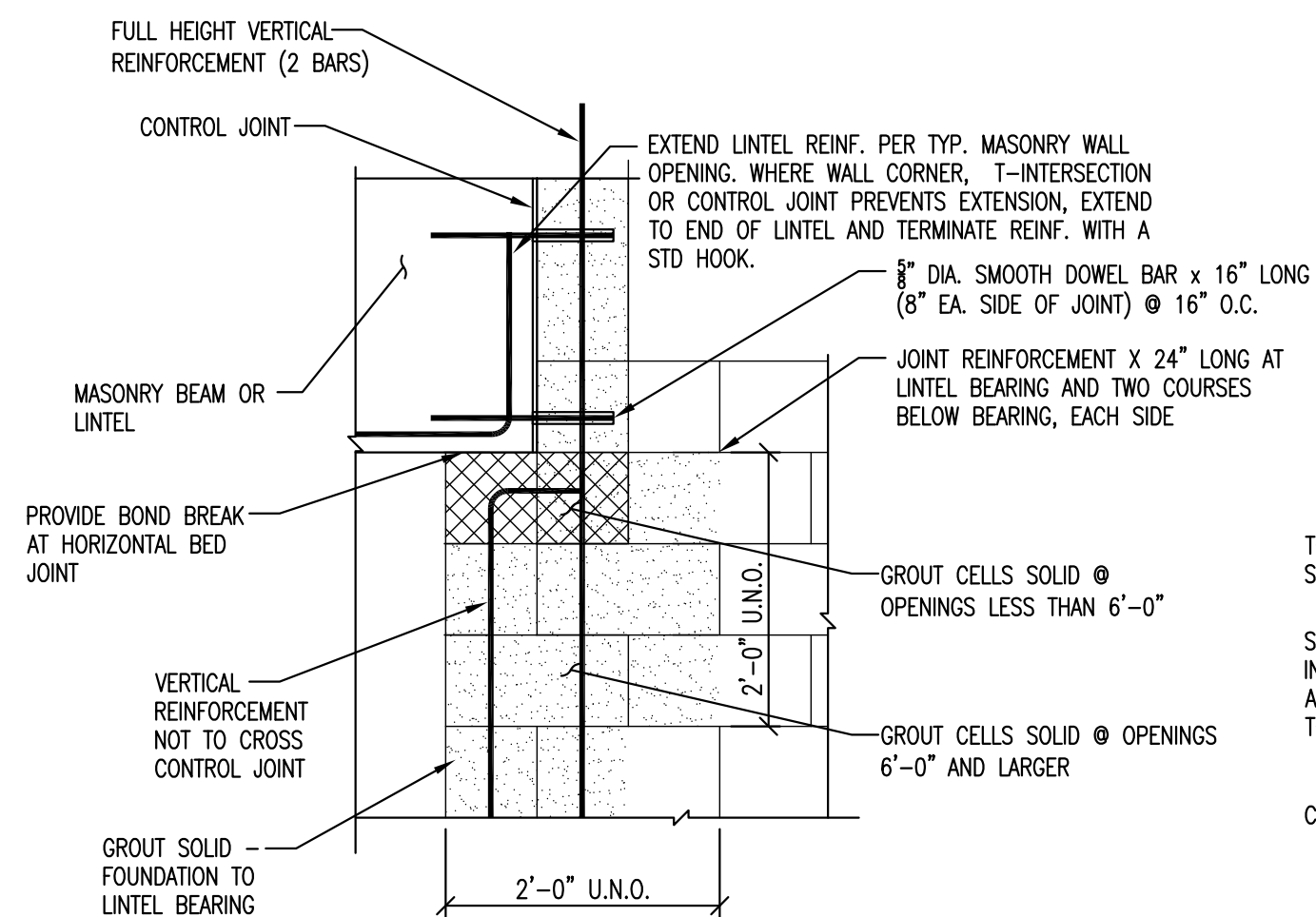


**2 HIGH PARAPET**  
S3-2 3/4"=1'-0"

LENGTH OF WALL (BETWEEN CORNERS)	SPLICE LENGTH (MINIMUM)	NAILS ALONG SPLICE LENGTH
OVER 30'	4'-0"	18-16d
OVER 20'	2'-8"	10-16d
OVER 10'	1'-4"	6-16d
LESS THAN 10'	1'-4"	4-16d

NOTE:  
1. DO NOT SPLICE TOP PLATES WITHIN 6'-0" OF ENDS OF WOOD STRUCTURAL PANEL SHEAR WALLS.  
2. THIS DETAIL APPLIES TO ALL EXTERIOR WALLS AND INTERIOR WALLS. SIMPSON STRAP TIE NEE NOT BE APPLIED TO INTERIOR WALLS.  
3. PROVIDE SIMPSON CMST 14 ON EACH SIDE OF TOP PLATE AT SPLICE LOCATION. EXTEND STRAP 34" BEYOND END OF PLATE SPLICE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

**6 CHORD SPLICE**  
S3-2 3/4"=1'-0"

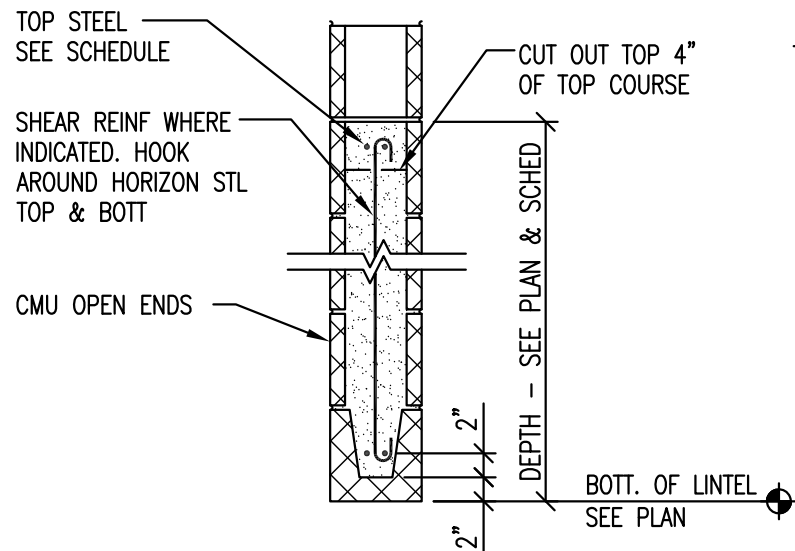


**10 TYP. MASONRY BM/ LINTEL BEARING**  
S3-2 3/4"=1'-0"

**7 FRAMING SECTION**  
S3-2 3/4"=1'-0"

MASONRY LINTEL SCHEDULE				
MARK	DEPTH	BOND BM REINF	SHEAR REINF	REMARKS
ML-1	2'-8"	2-#5 TOP & BOT	-	8" CMU
ML-2	1'-4"	2-#5 TOP & BOT	-	8" CMU

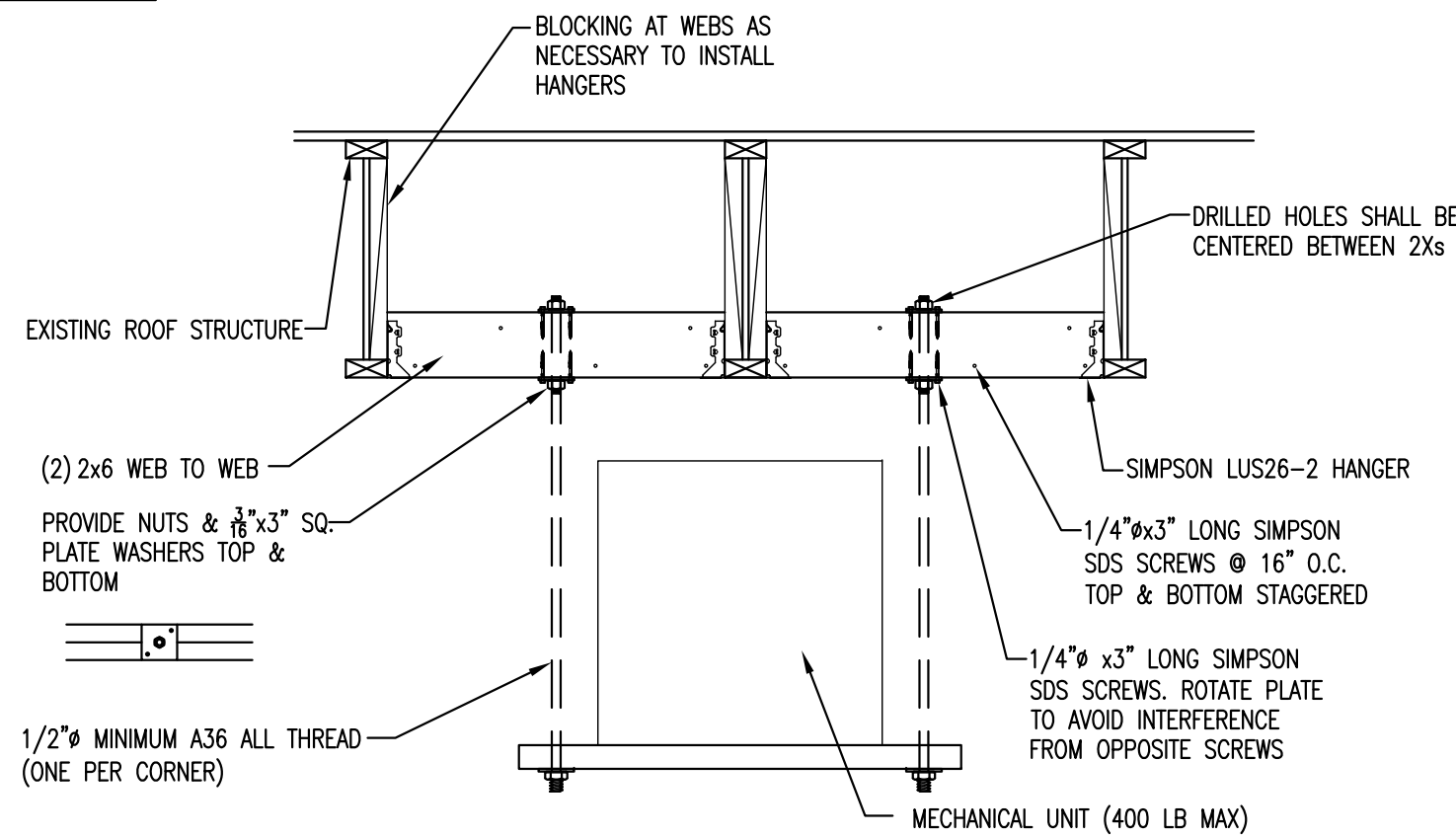
NOTE:  
1. USE LINTEL ML-2 AT ALL OPENINGS LESS THAN 4'-0" WIDE UNLESS NOTED OTHERWISE.  
2. BOND BEAM REINFORCEING SHALL BE CONTINUOUS WITHOUT SPLICES.  
3. MASONRY LINTELS SHALL BE GROUTED SOLID.



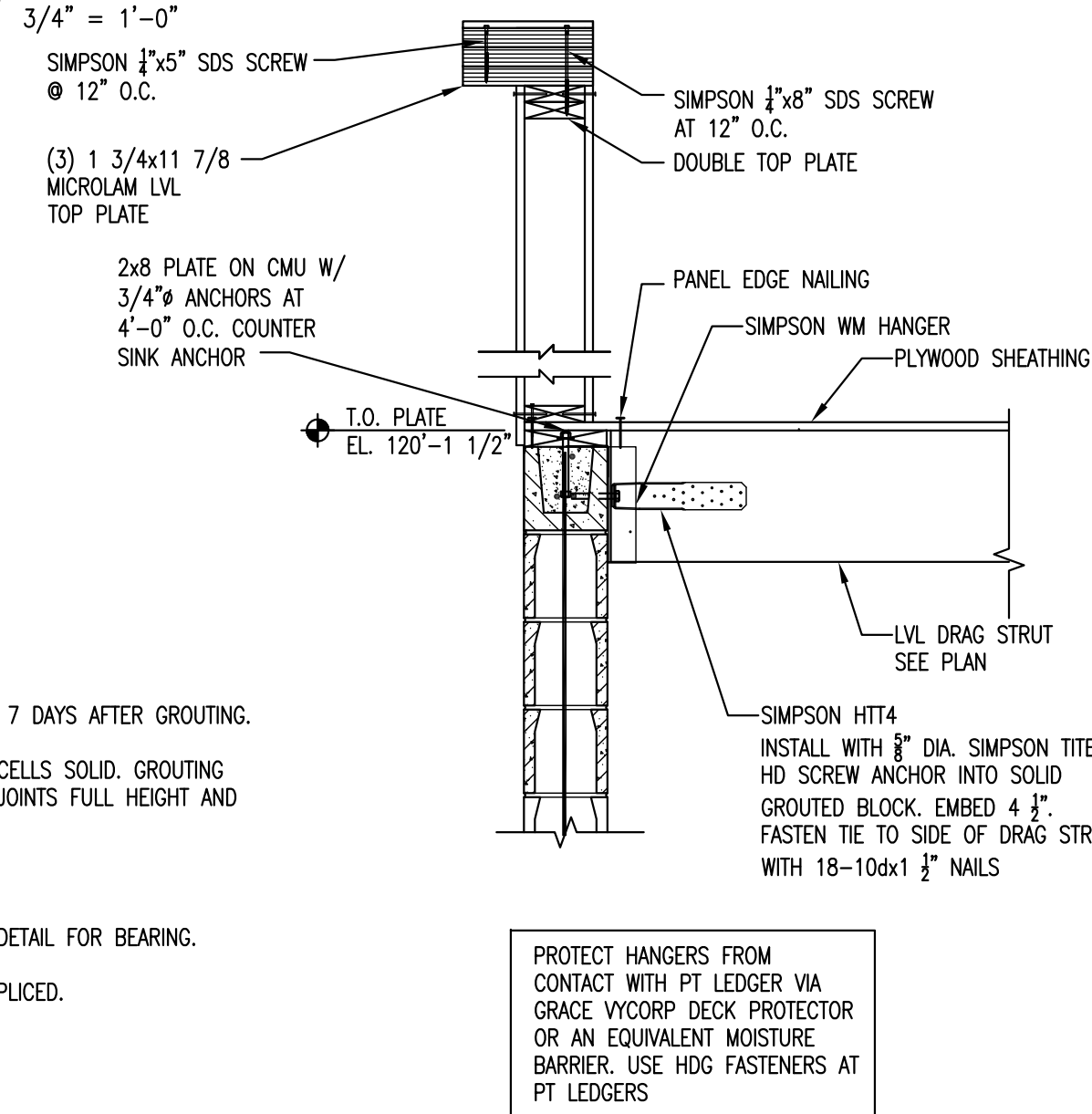
**11 TYP. MASONRY BEAM/ LINTEL**  
S3-2 3/4"=1'-0"

NOTES:  
1. PROVIDE SHORING UNDER BEAM FOR A MIN. OF 7 DAYS AFTER GROUTING.  
2. MONOLITHICALLY GROUT BOND BEAM AND ALL CELLS SOLID. GROUTING SHALL HAVE NO VERTICAL OR HORIZONTAL COLD JOINTS FULL HEIGHT AND LENGTH OF LINTEL INCLUDING END BEARINGS.  
3. MECHANICALLY VIBRATE GROUT.  
4. SEE TYPICAL MASONRY BEAM/LINTEL BEARING DETAIL FOR BEARING.  
5. HORIZONTAL REINFORCEMENT SHALL NOT BE SPLICED.

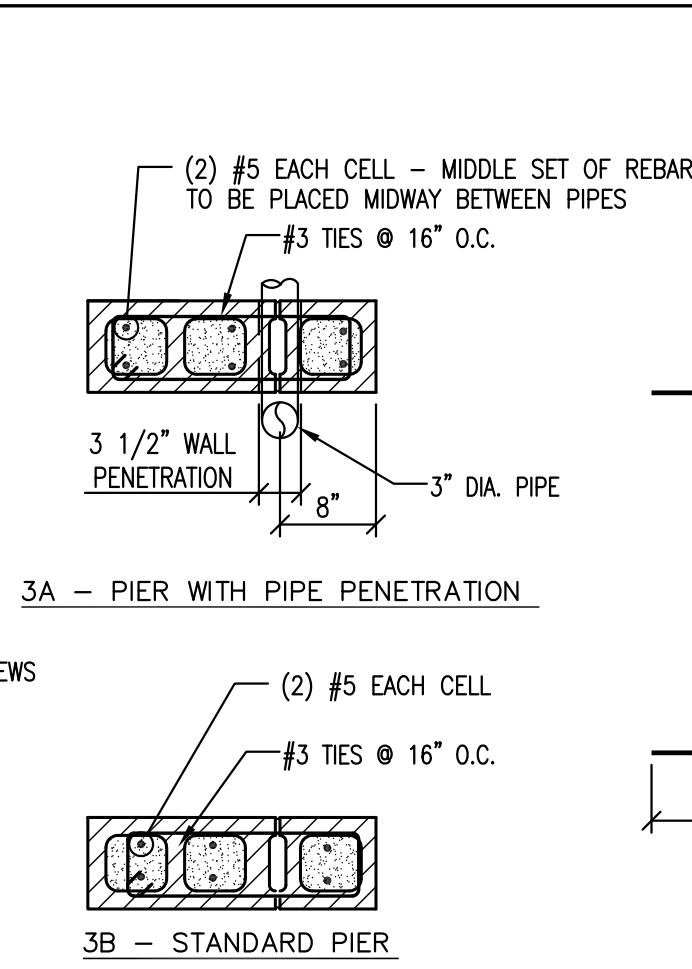
BLOCKING AT CANOPY CONNECTION



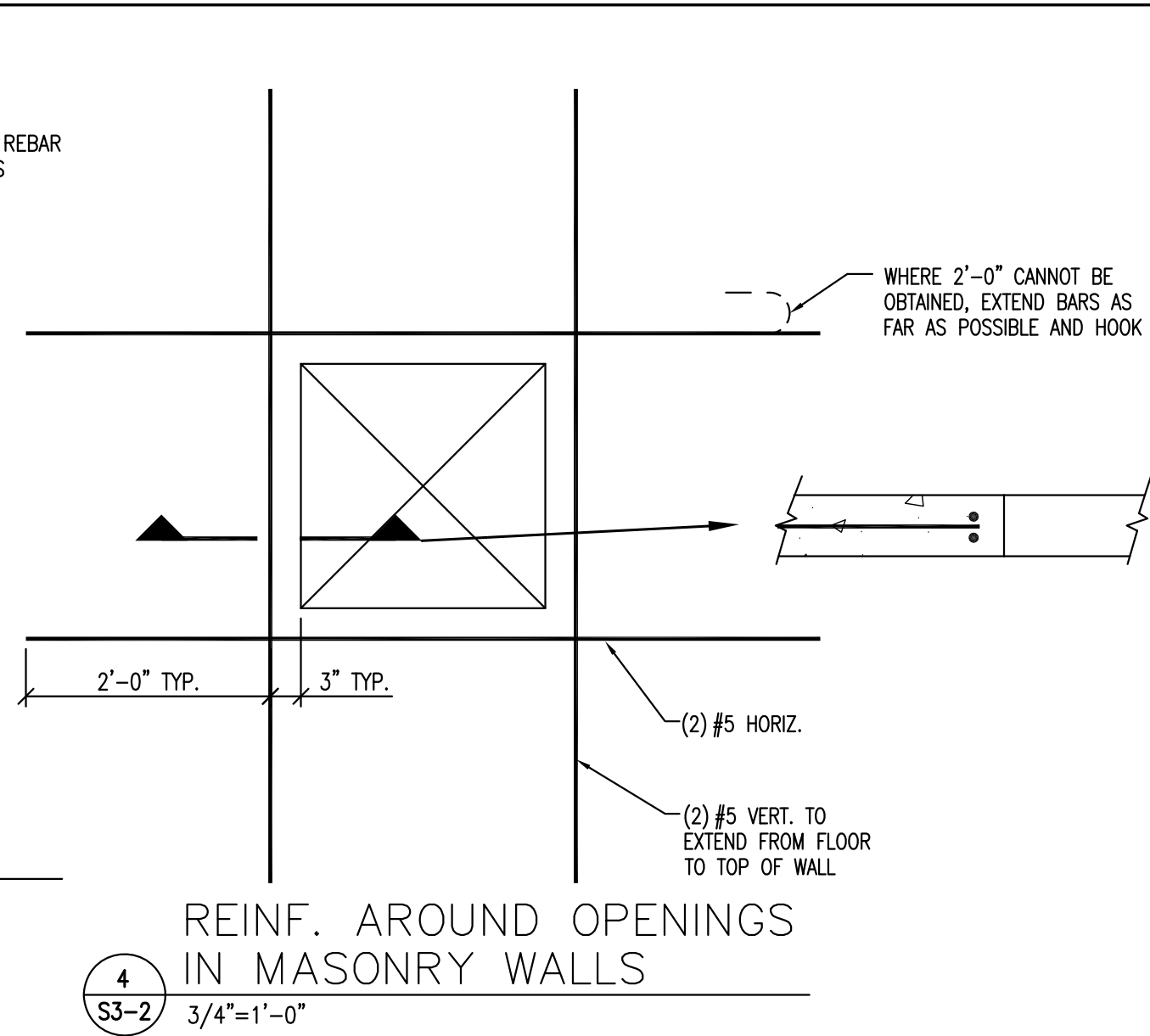
**8 FRAMING SECTION**  
S3-2 3/4"=1'-0"



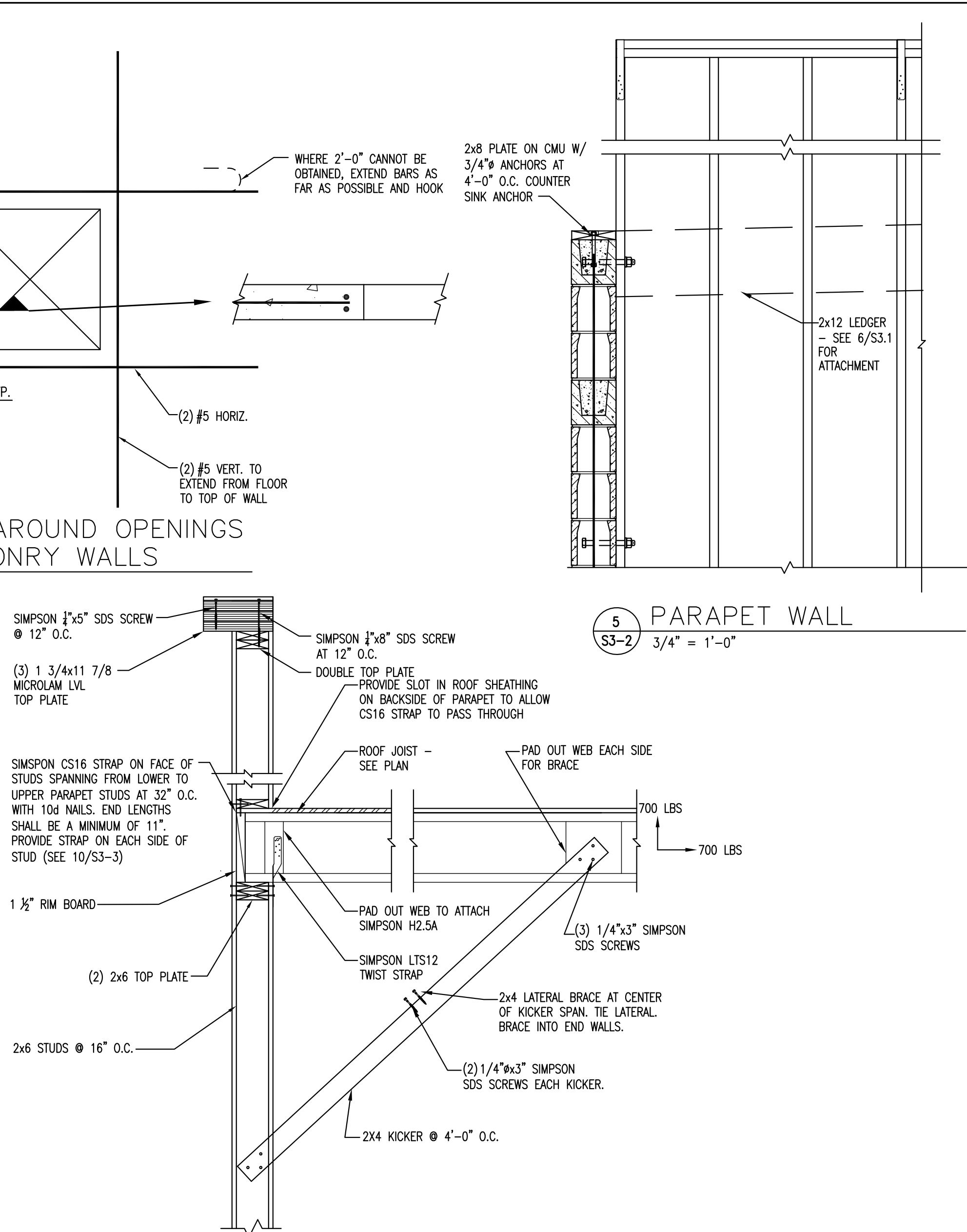
**12 PARAPET WALL SECTION**  
S3-2 3/4"=1'-0"



**3 MASONRY PIER**  
S3-2 3/4"=1'-0"

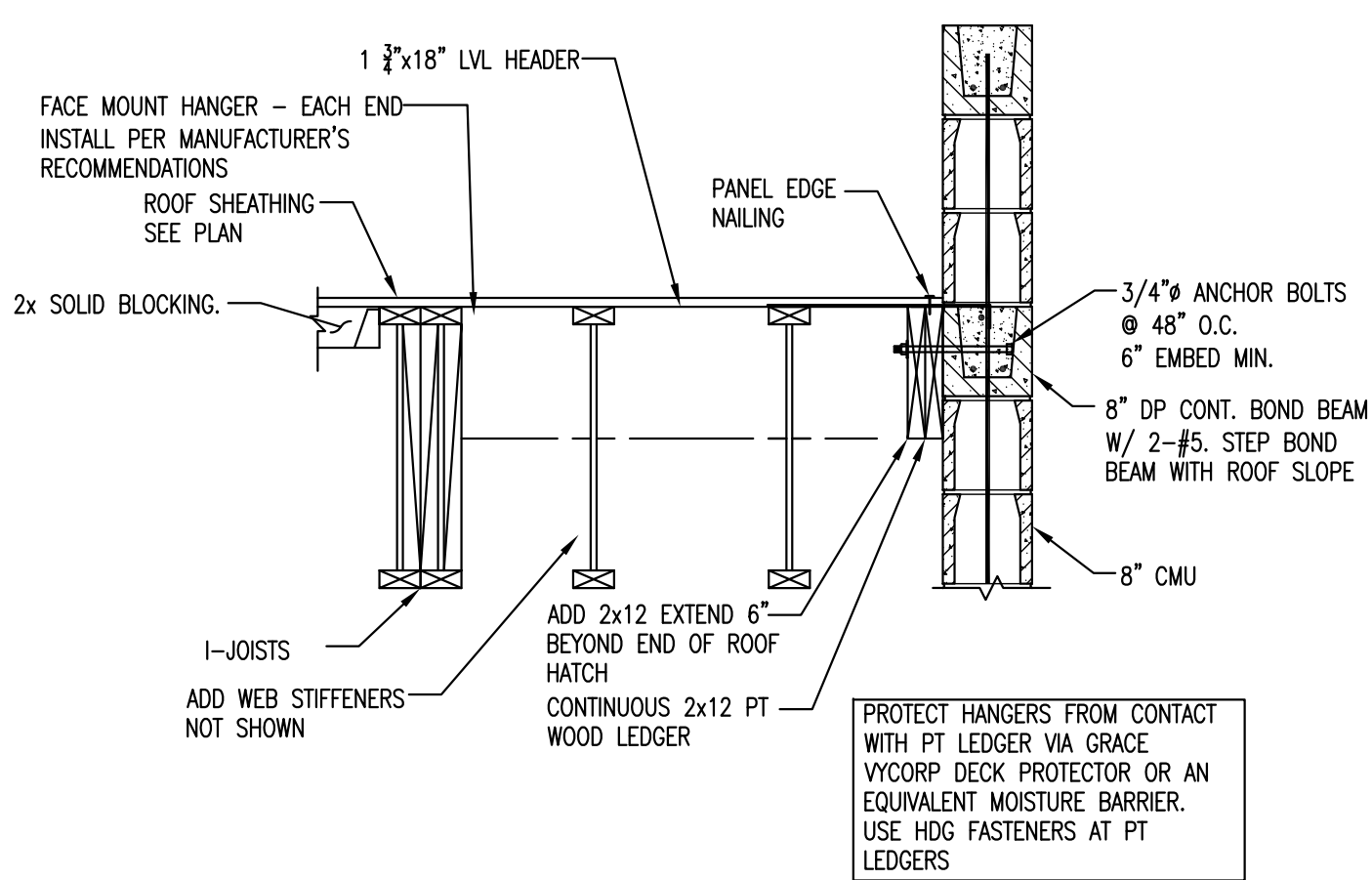


**4 REINF. AROUND OPENINGS IN MASONRY WALLS**  
S3-2 3/4"=1'-0"



**5 PARAPET WALL**  
S3-2 3/4"=1'-0"

**9 WALL SECTION**  
S3-2 3/4"=1'-0"

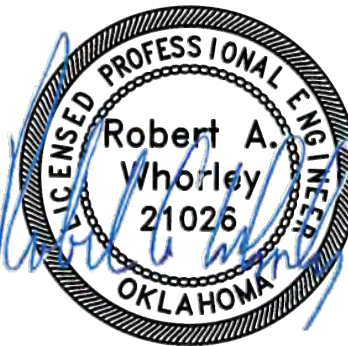


**13 ROOF OPENING DETAIL**  
S3-2 3/4"=1'-0"

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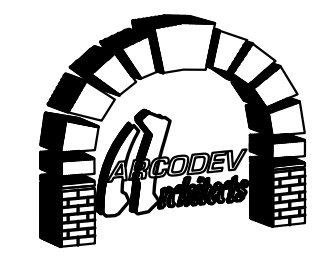


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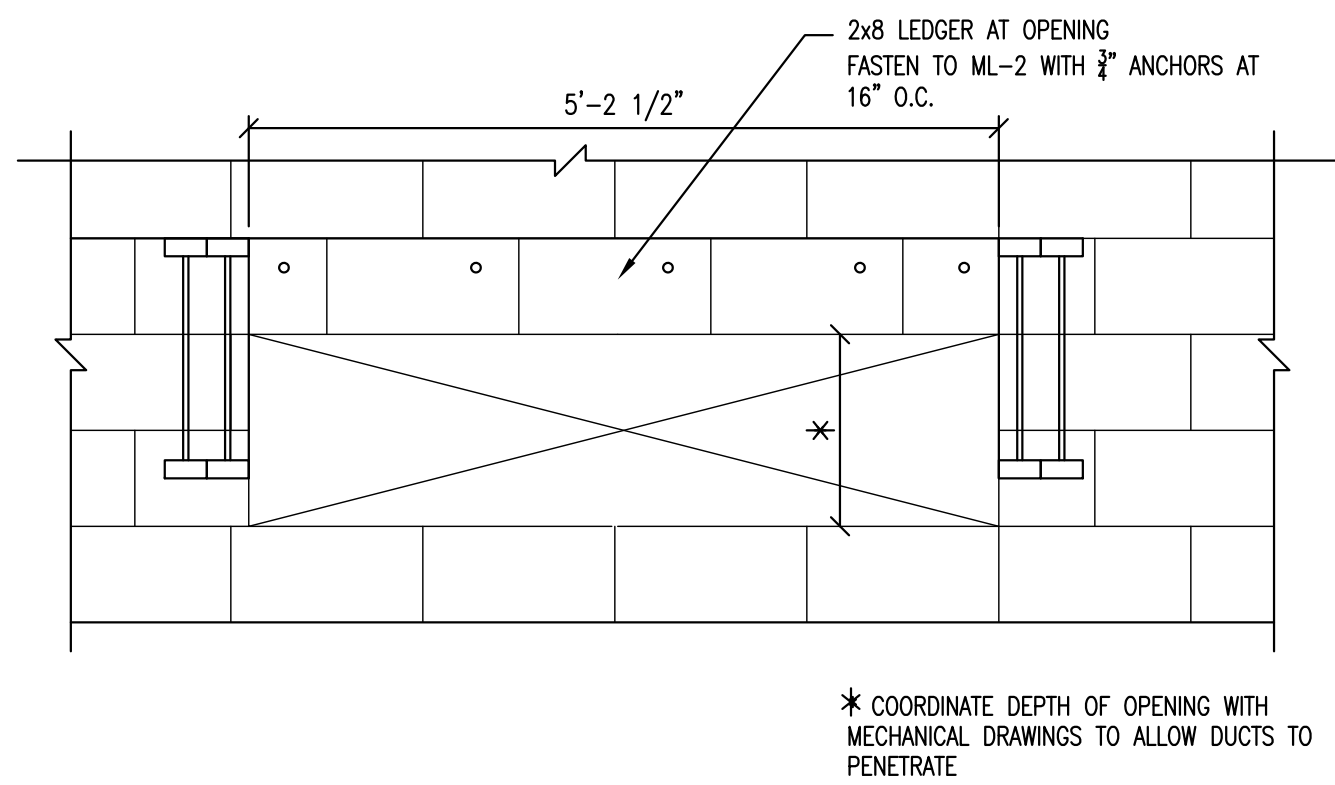
45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.881-8925

SHEET

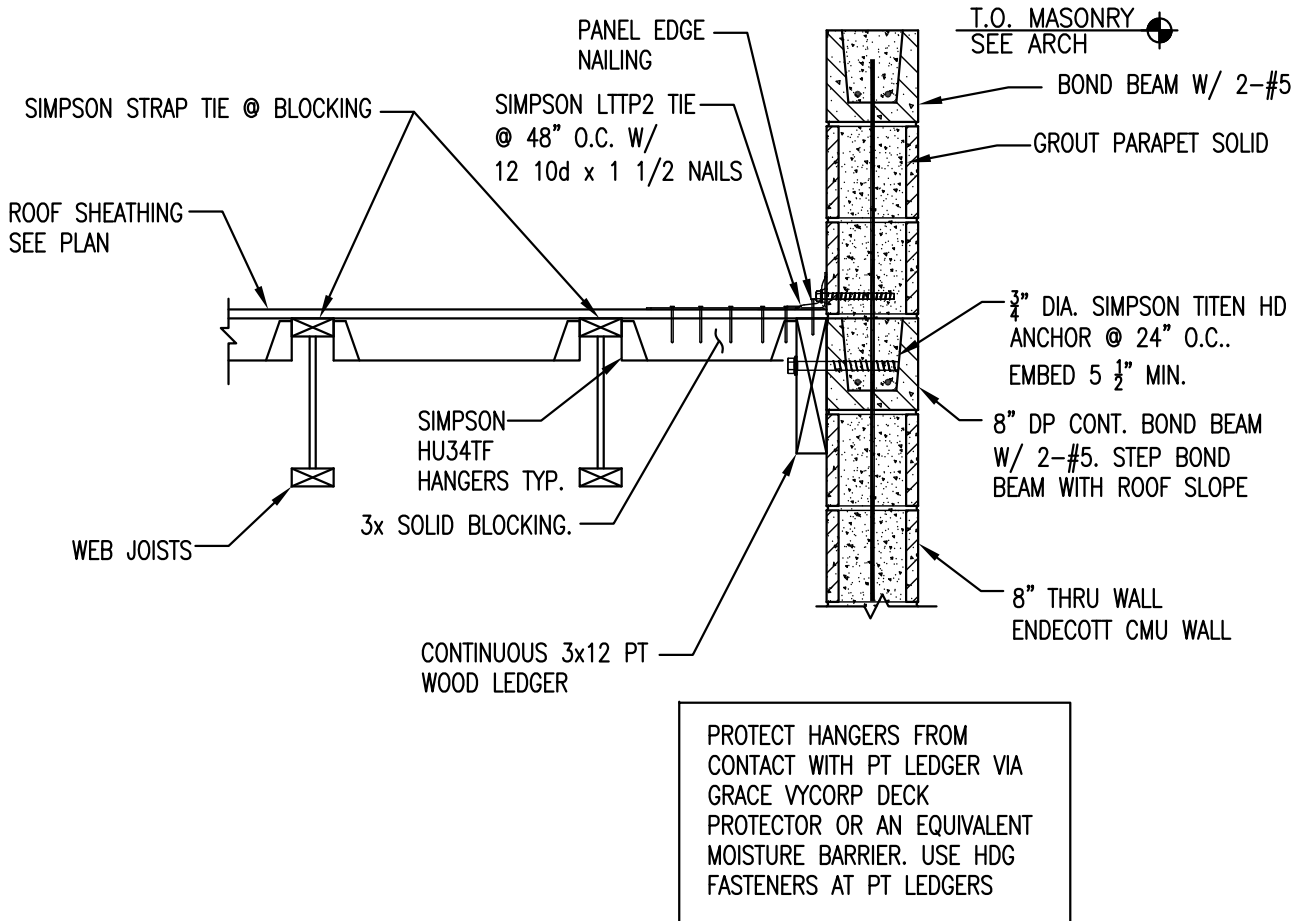
**S3-1**

SECTIONS AND DETAILS

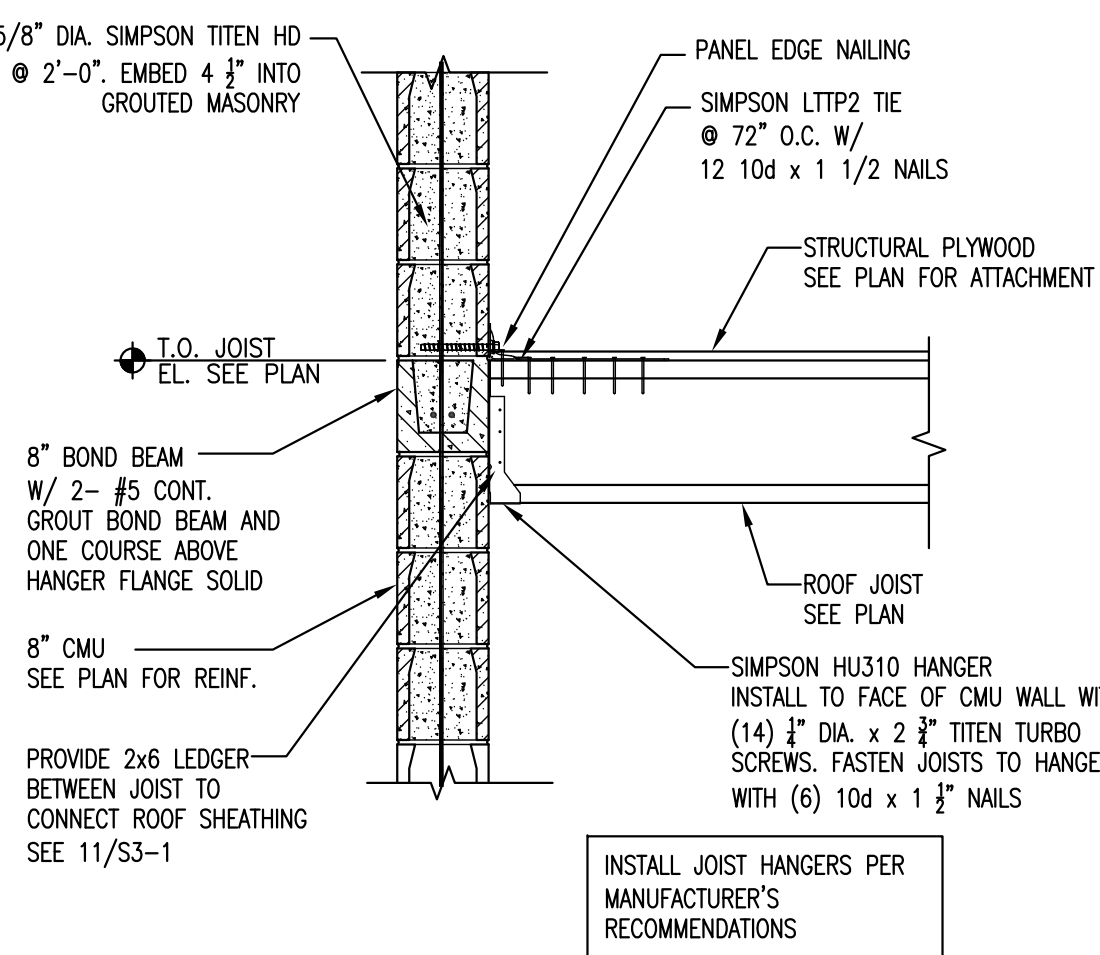




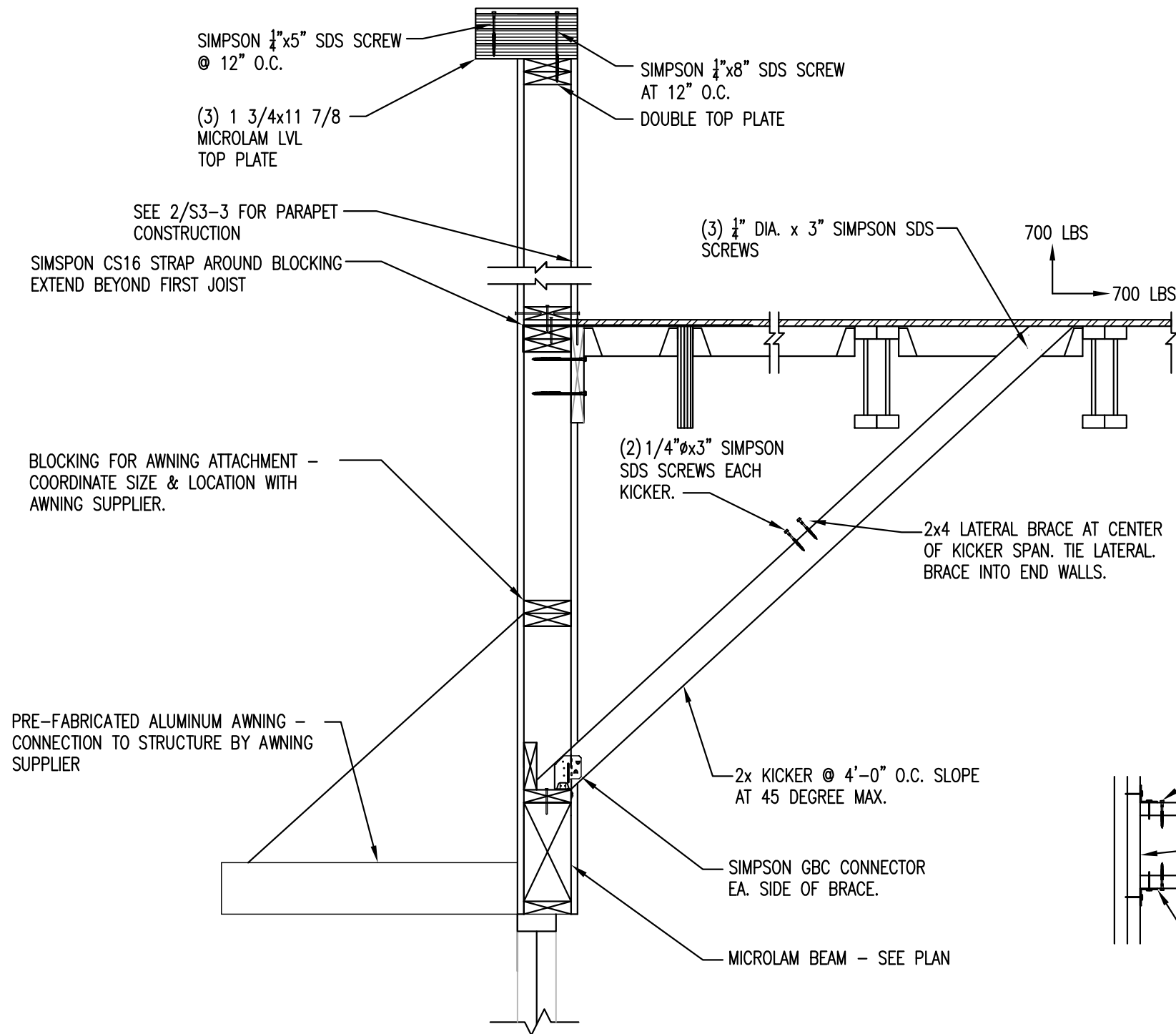
1  
S3-1 DUCT OPENING  
3/4" = 1'-0"



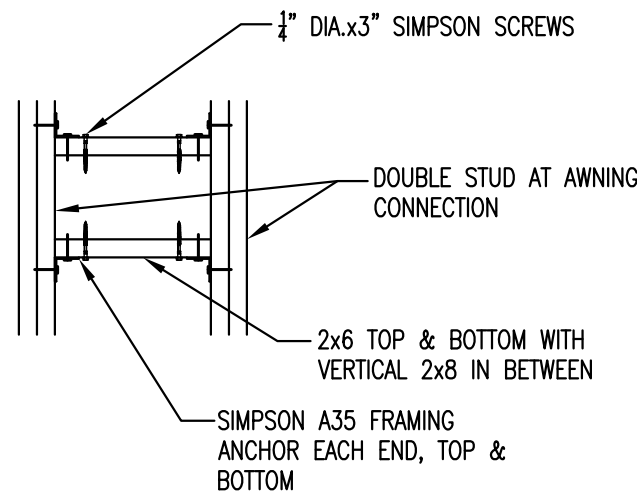
2  
S3-1 ROOF DIAPHRAGM CONNECTION  
3/4" = 1'-0"



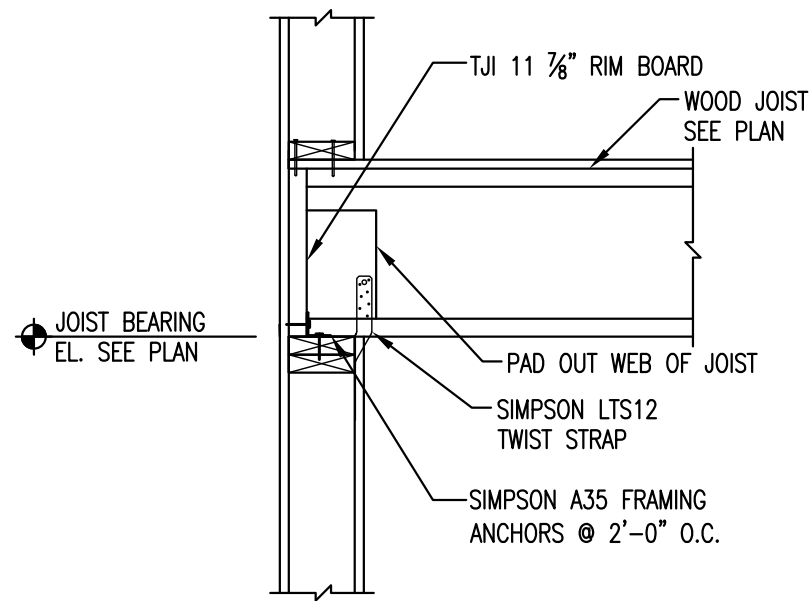
3  
S3-1 WALL SECTION  
3/4"=1'-0"



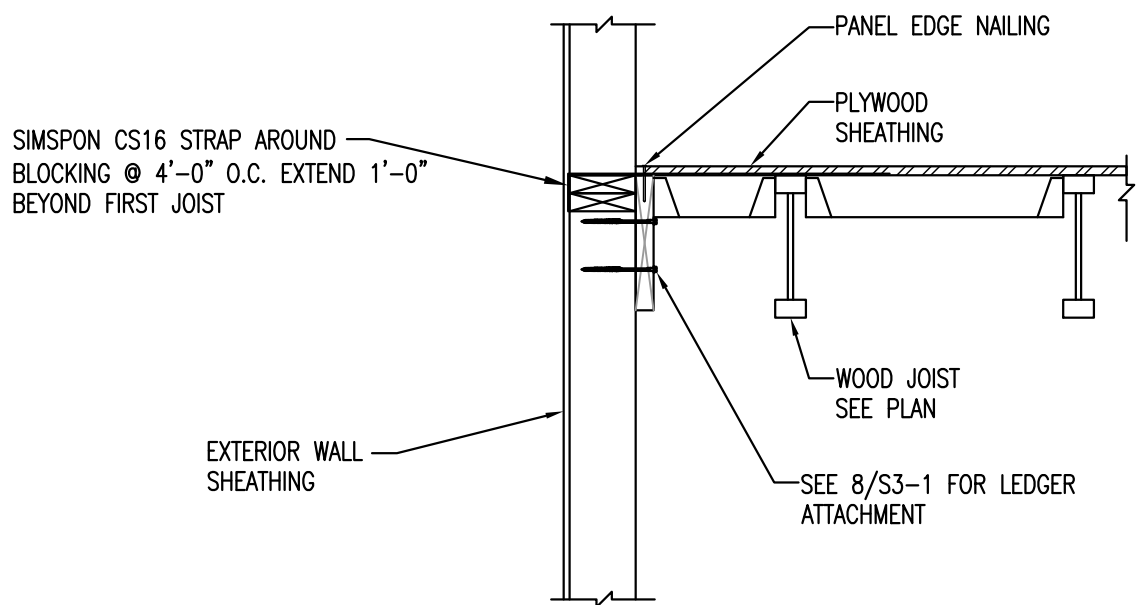
4  
S3-1 STOREFRONT WALL SECTION  
3/4"=1'-0"



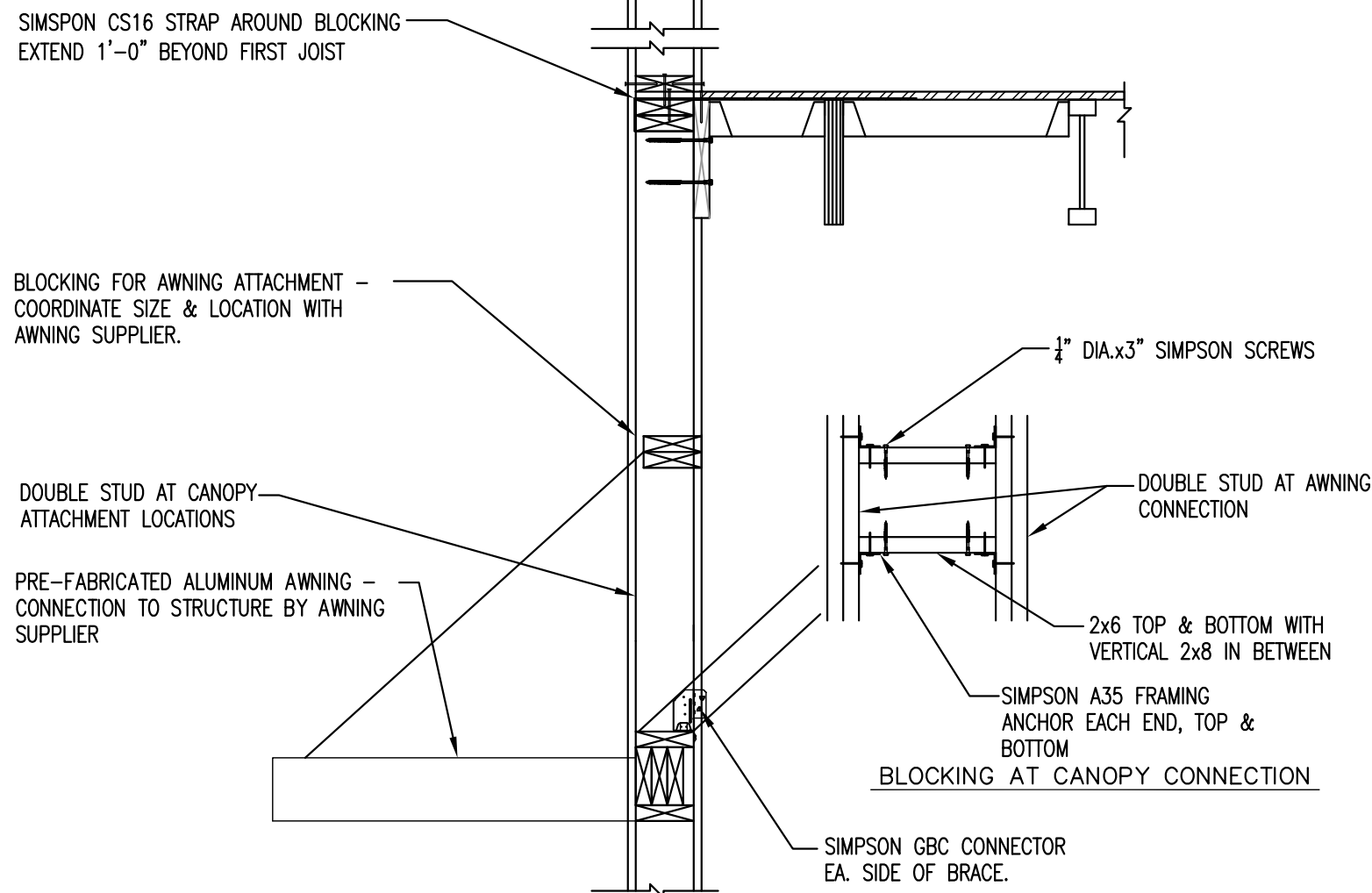
BLOCKING AT CANOPY CONNECTION



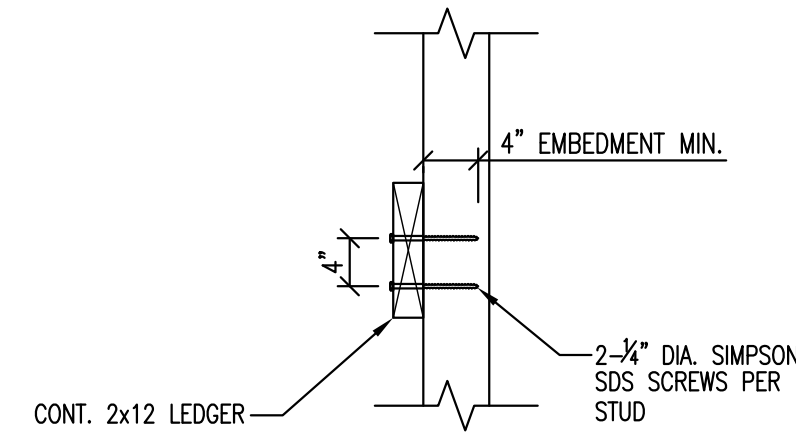
5  
S3-1 FRONT WALL SECTION  
3/4"=1'-0"



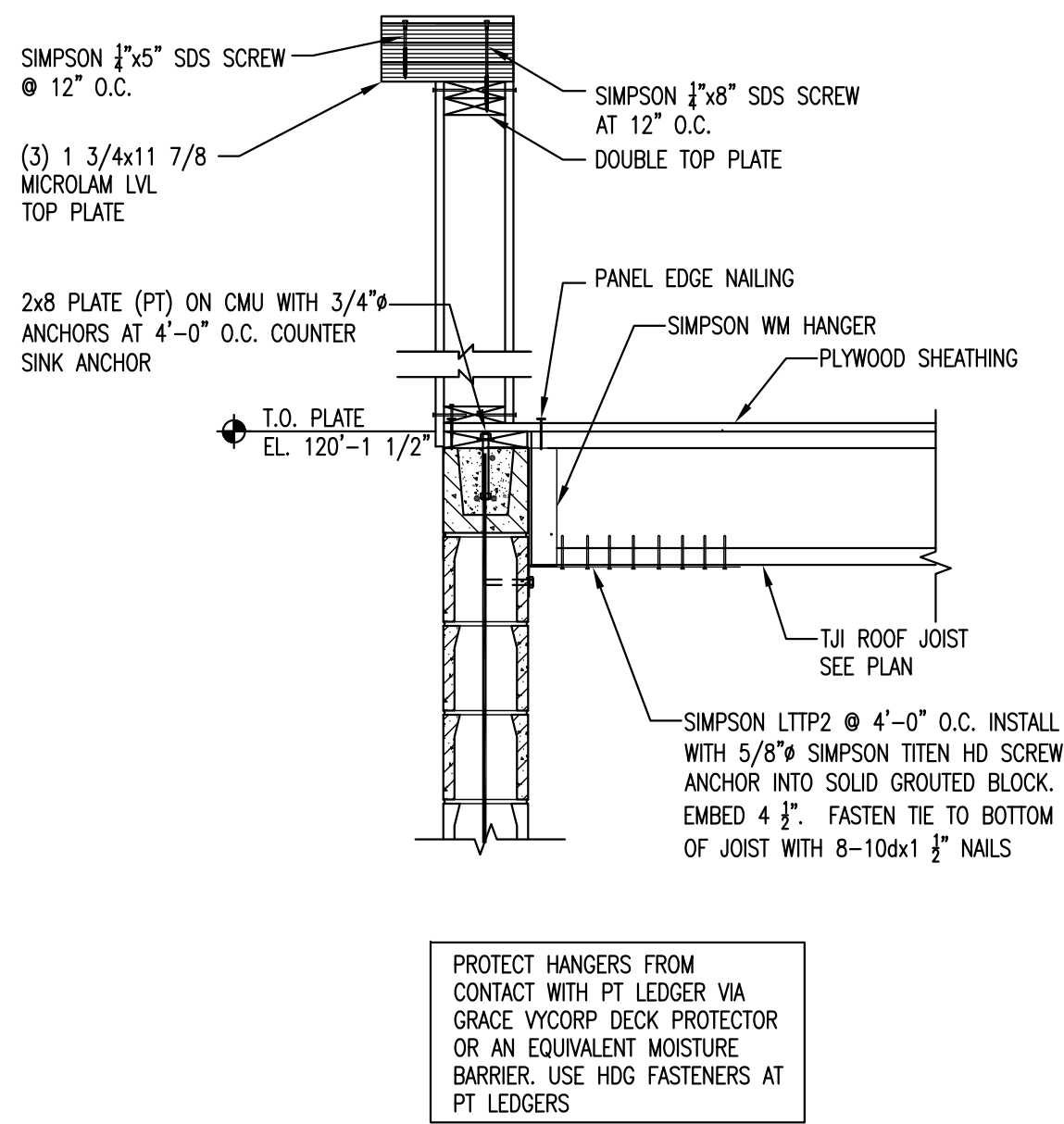
6  
S3-1 SIDE WALL SECTION  
3/4"=1'-0"



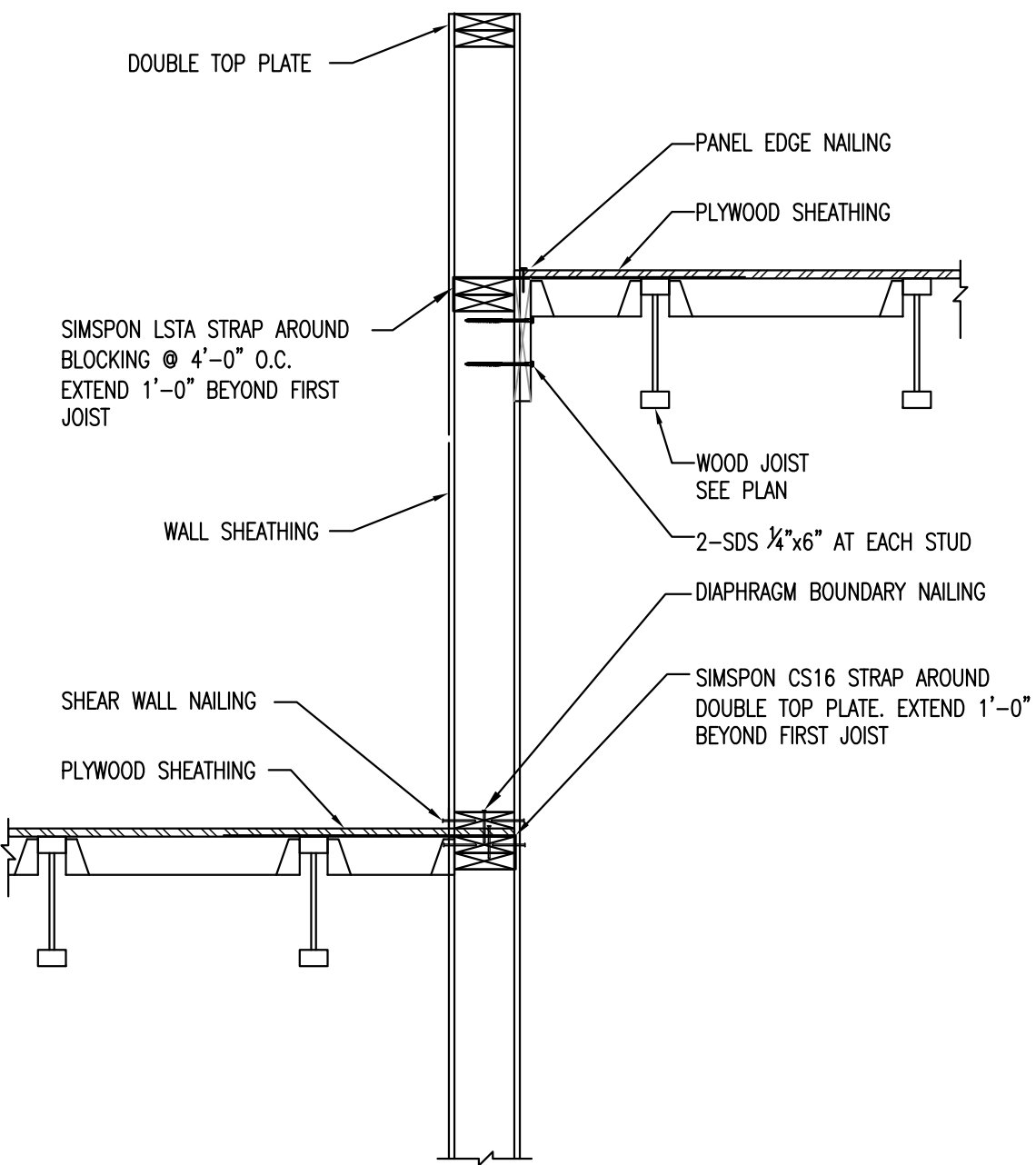
7  
S3-1 WALL SECTION  
3"=1'-0"



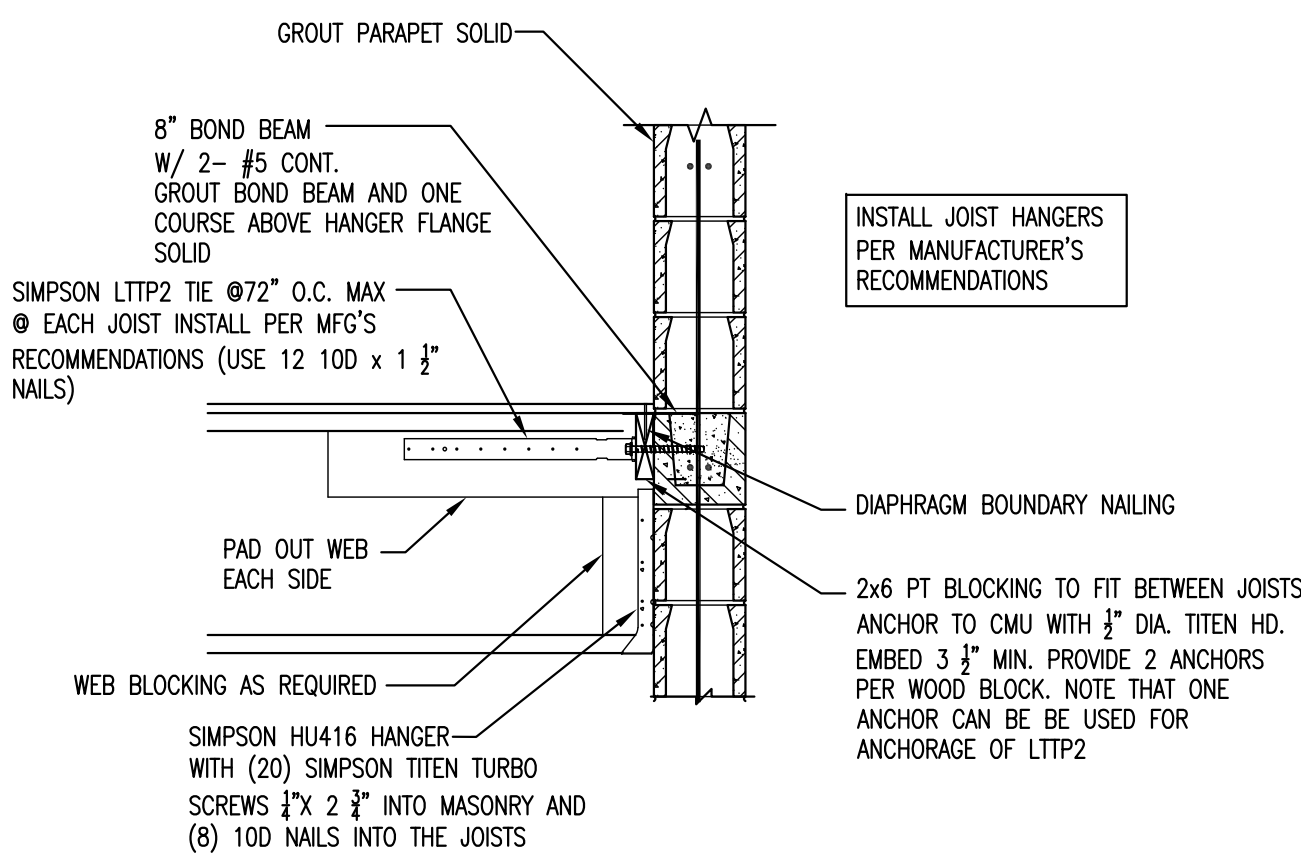
8  
S3-1 LEDGER ATTACHMENT  
3"=1'-0"



9  
S3-1 PARAPET WALL SECTION  
3/4"=1'-0"



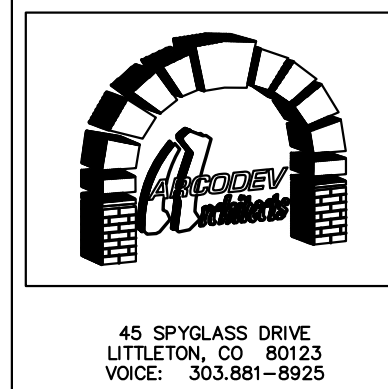
10  
S3-1 WALL SECTION  
3/4" = 1'-0"



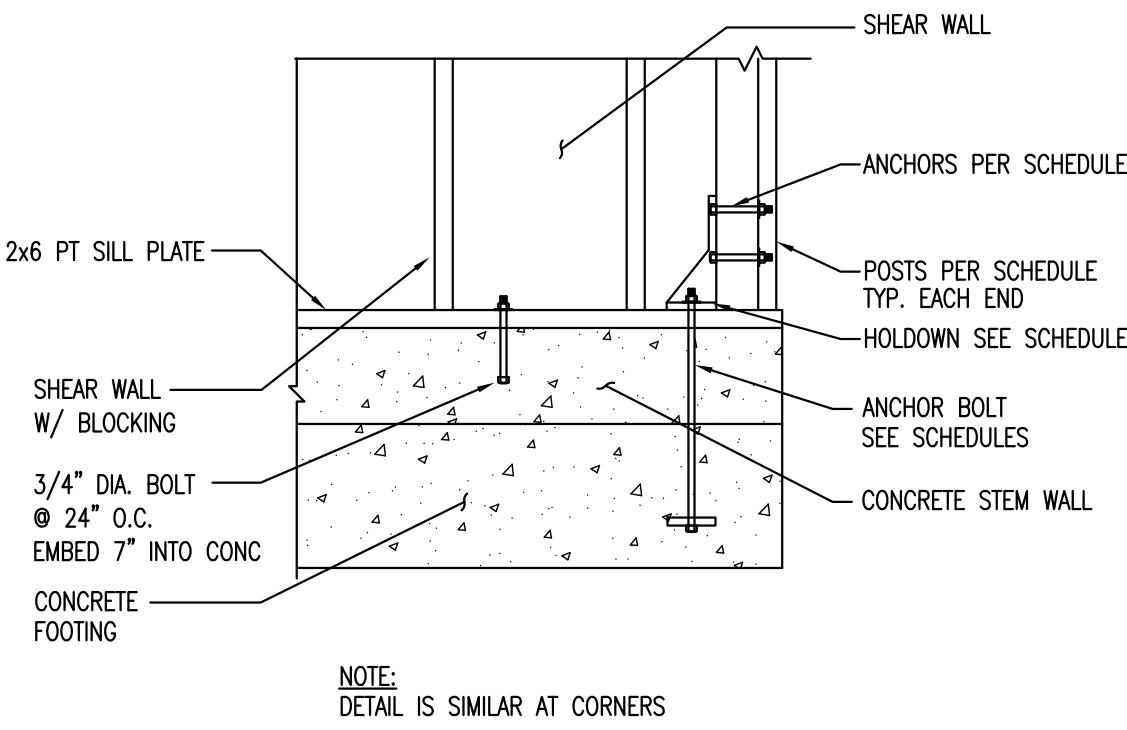
11  
S3-1 JOIST CONNECTION  
3/4"=1'-0"

REVISION	DATE	COMMENTS

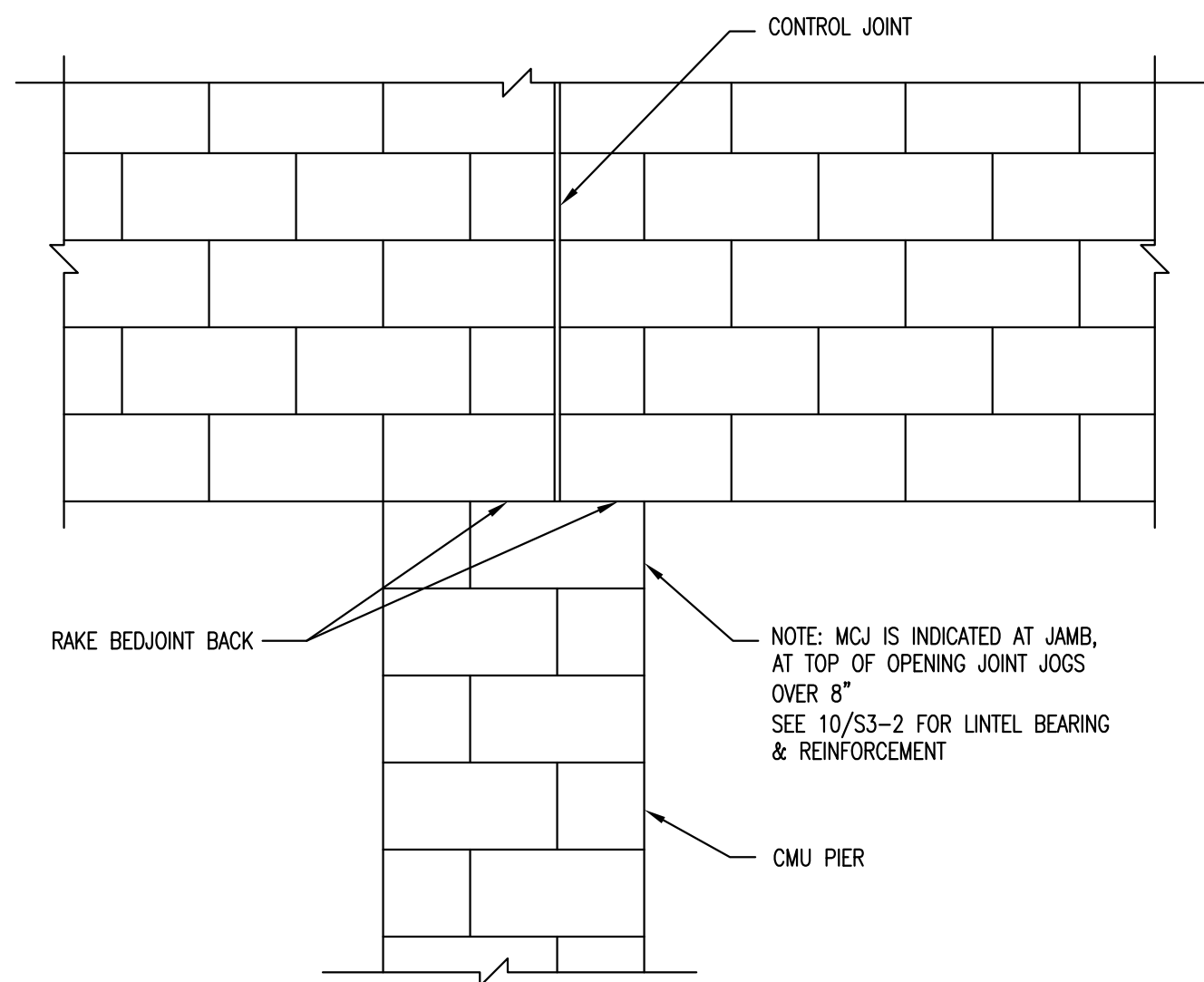
ARCODEV JOB # \_\_\_\_\_  
CLIENT JOB # \_\_\_\_\_  
DRAWN BY: SLM  
CHECKED BY: TAS  
DATE OF ISSUE: 05.13.24







1 FOOTING @ COLUMN  
S3-3 3/4"=1'-0"

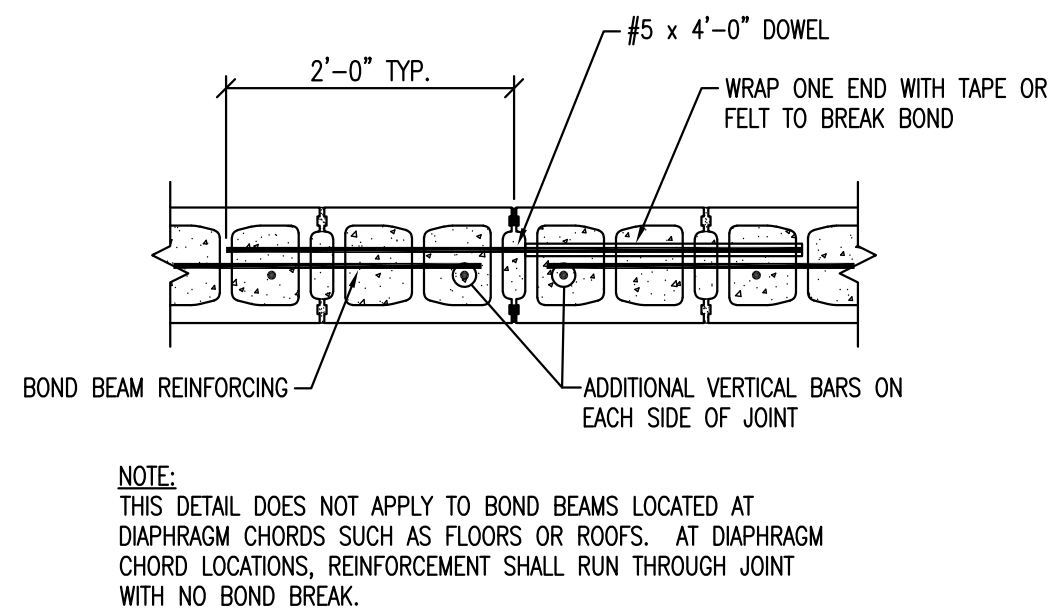


2 CONTROL JOINT @ PIER  
S3-3 3/4"=1'-0"

MASONRY REINF. SPLICE TABLE								
BAR SIZE	6" BLOCK	8" BLOCK		10" BLOCK		12" BLOCK		REMARKS
	BAR @ CL	BAR @ CL	BAR @ EDGE	BAR @ CL	BAR @ EDGE	BAR @ CL	BAR @ EDGE	
#4	2'-1"	1'-9"	2'-7"	2'-1"	2'-5"	2'-1"	2'-4"	-
#5	3'-3"	2'-2"	4'-0"	2'-7"	3'-10"	2'-7"	3'-7"	-
#6	-	3'-6"	8'-2"	4'-4"	7'-8"	4'-4"	7'-3"	-
#7	-	5'-0"	-	5'-1"	10'-5"	5'-1"	9'-10"	-

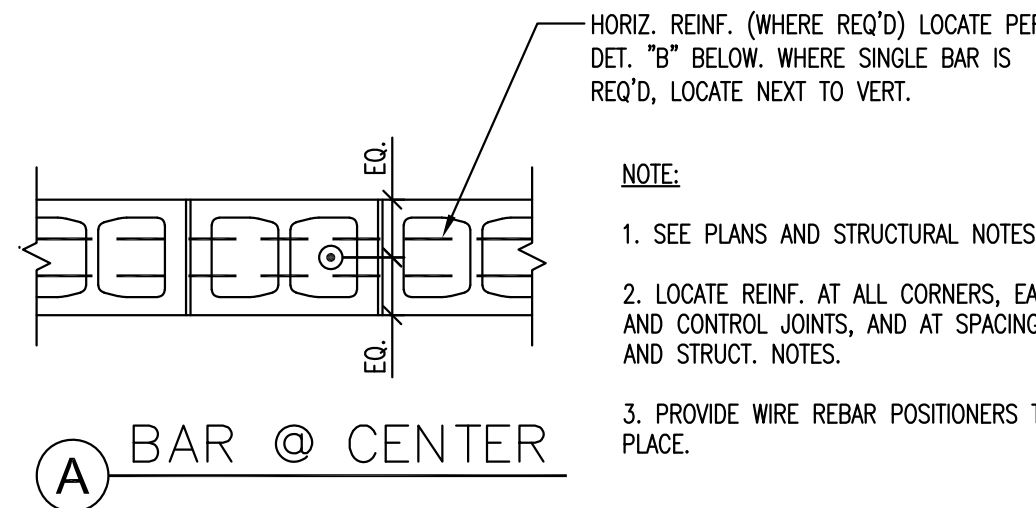
NOTE: WHEN REQUIRED SPLICE LENGTH EXCEEDS 4'-0" USE HIGH LIFT GROUTING WITH NO SPLICES OR USE MECHANICAL TENSION SPLICES WITH LOW LIFT GROUTING.

3 MASONRY REINFORCEMENT SPLICE & DEVELOPMENT LENGTH  
S3-3 3/4"=1'-0"

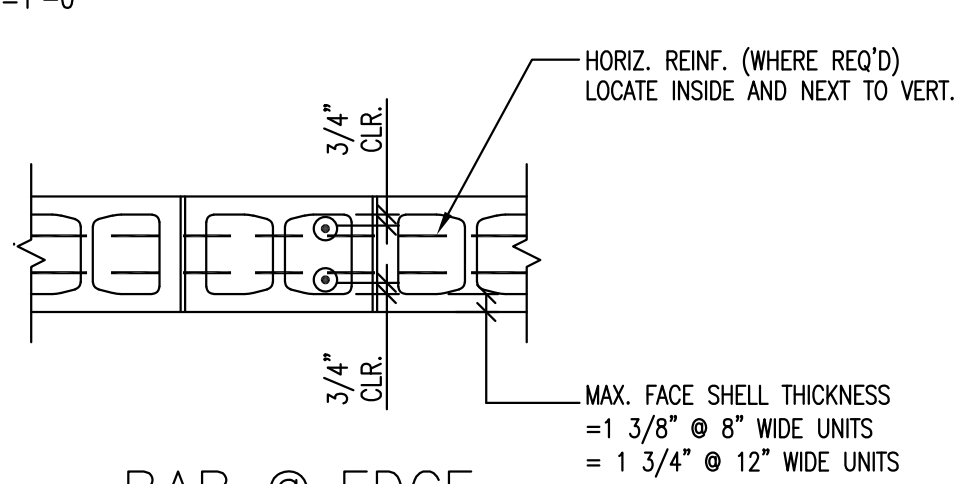


NOTE: THIS DETAIL DOES NOT APPLY TO BOND BEAMS LOCATED AT DIAPHRAGM CHORDS SUCH AS FLOORS OR ROOFS. AT DIAPHRAGM CHORD LOCATIONS, REINFORCEMENT SHALL RUN THROUGH JOINT WITH NO BOND BREAK.

4 MASONRY CONTROL JOINT  
S3-3 3/4"=1'-0"

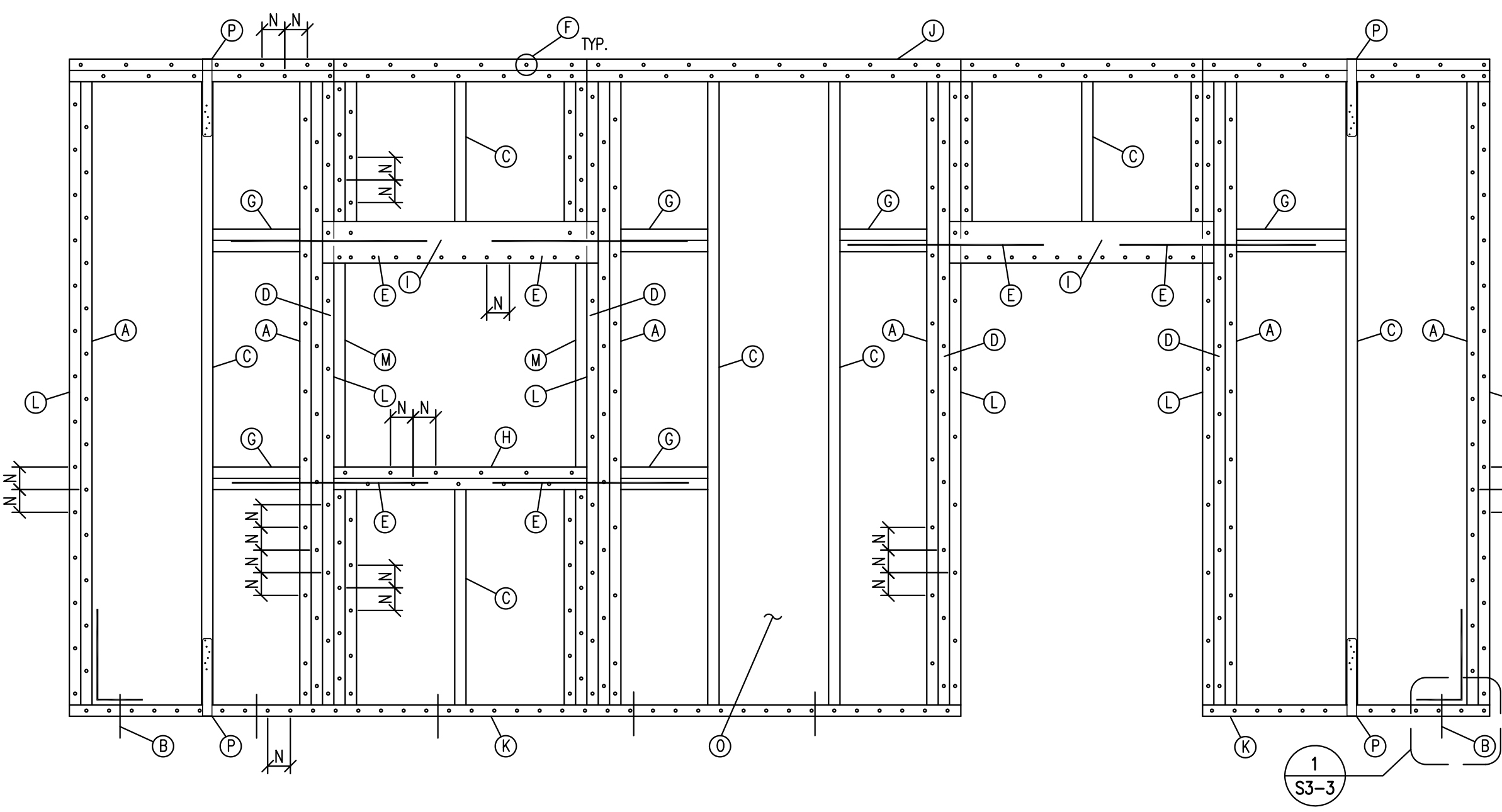


A BAR @ CENTER

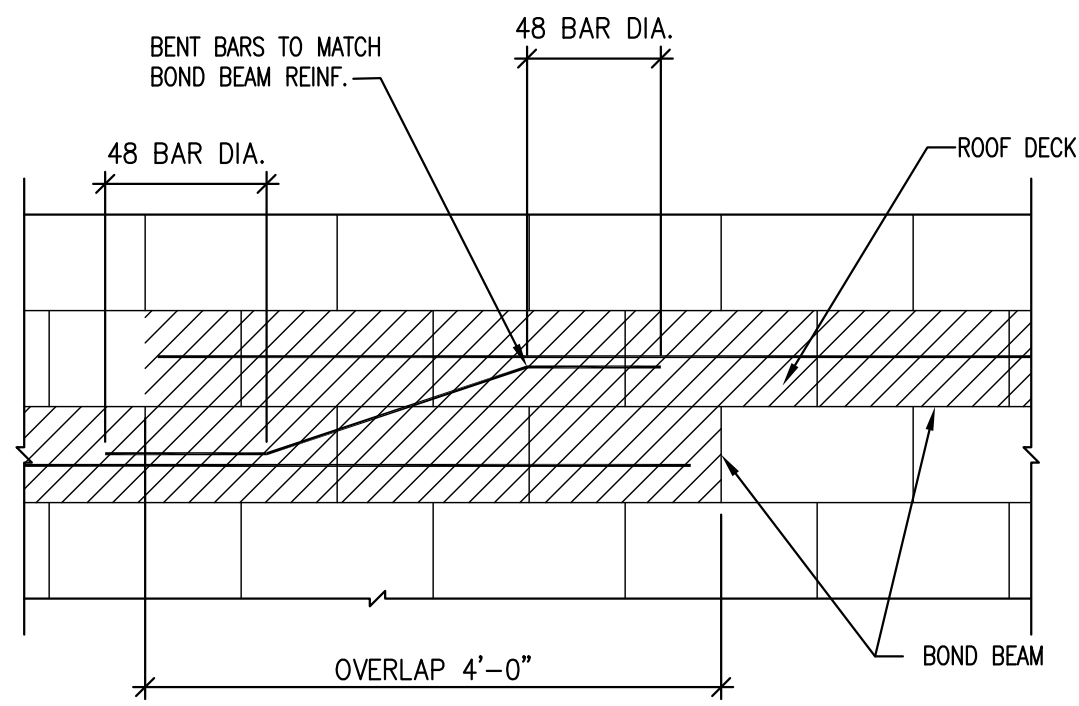


B BAR @ EDGE

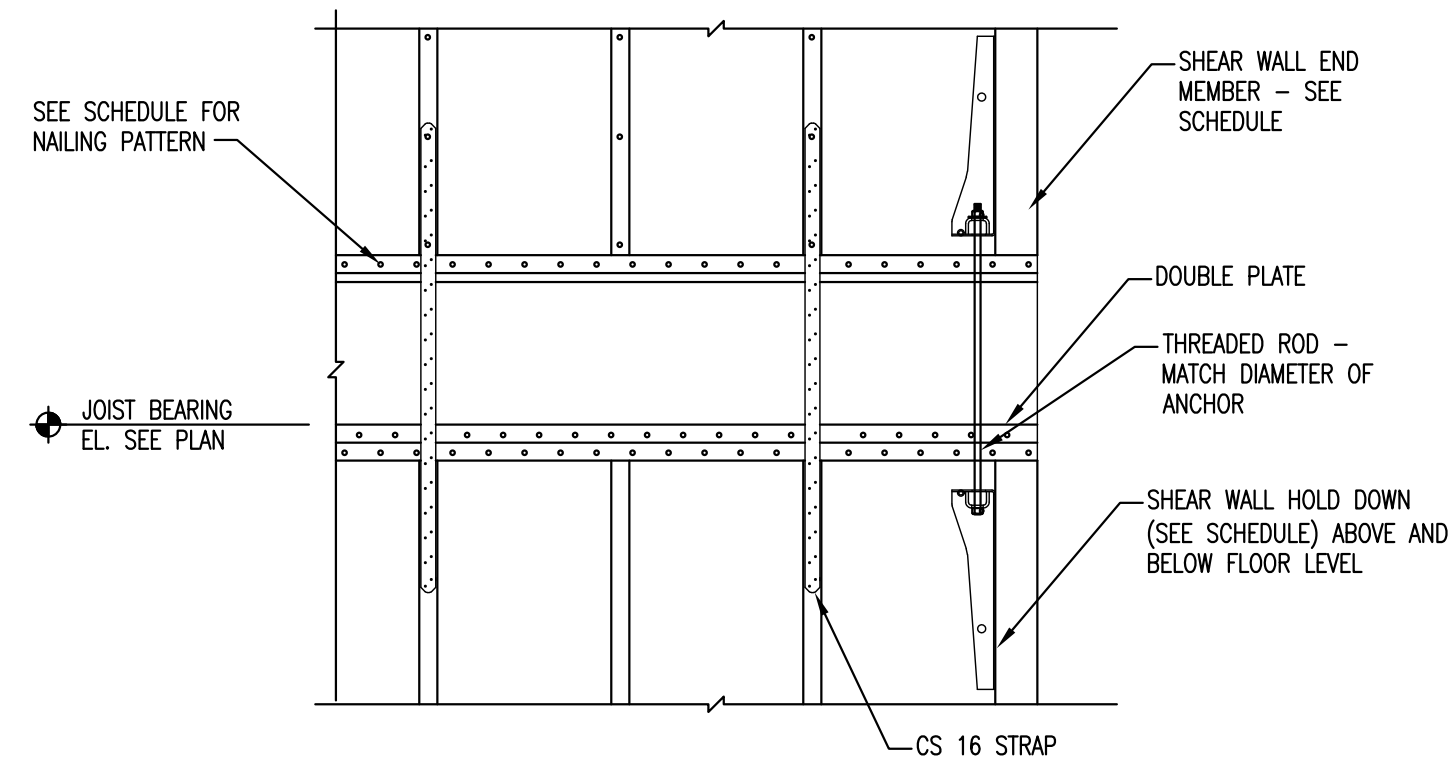
6 TYP. MASONRY WALL REINF. PLACEMENT  
S3-3 3/4"=1'-0"



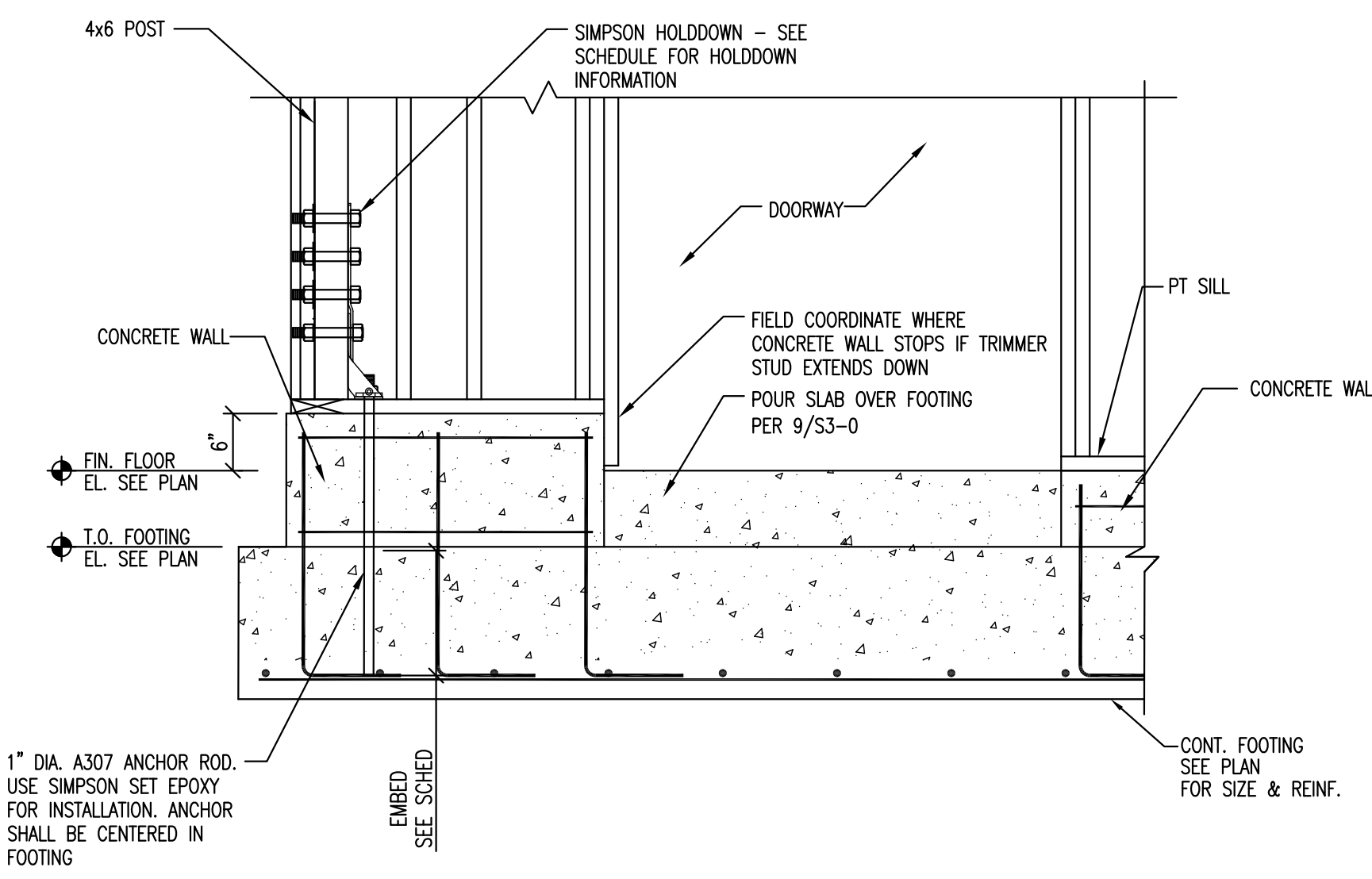
5 SHEAR WALL CONSTRUCTION  
S3-3 3/4"=1'-0"



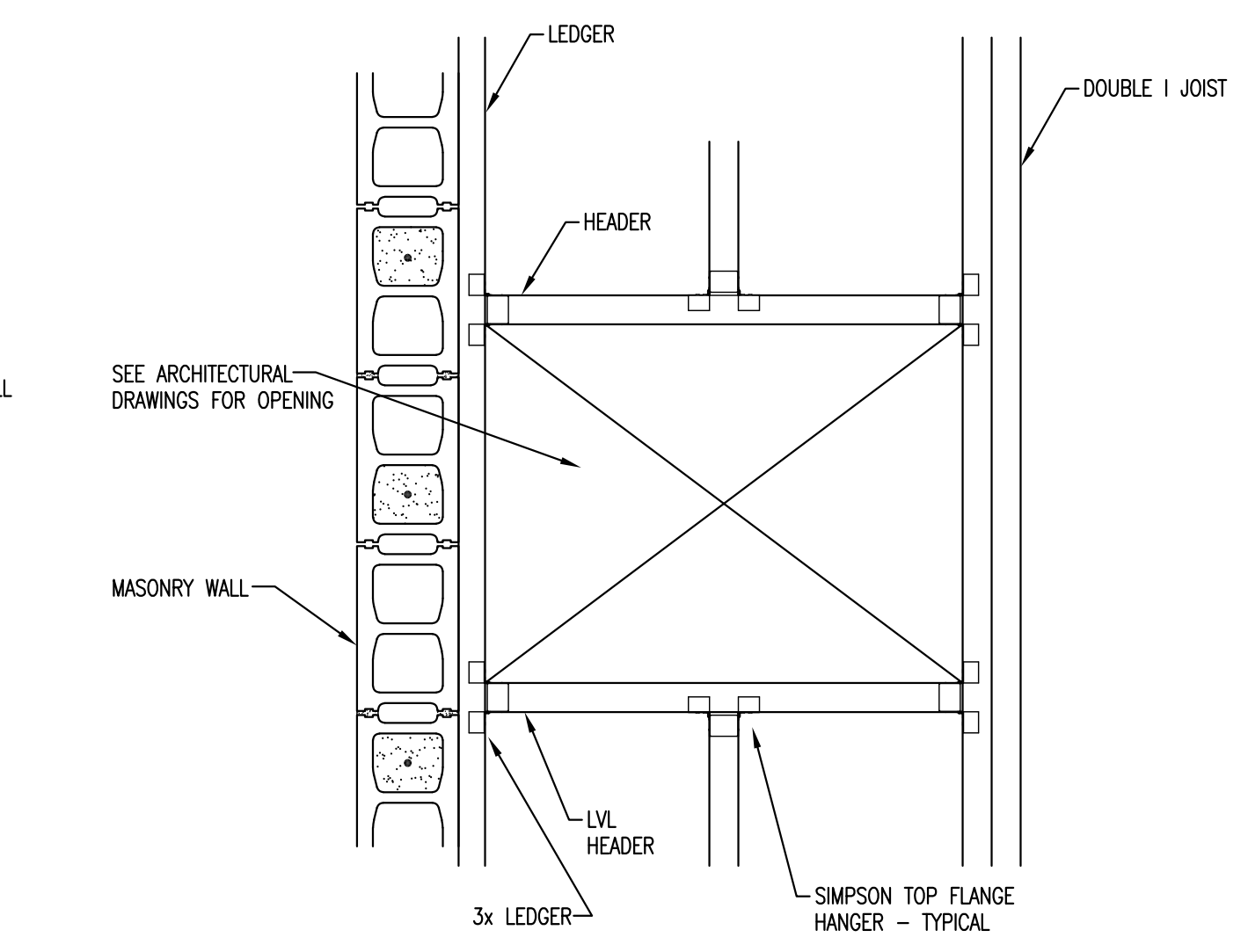
9 BOND BEAM STEP AT SLOPING ROOF  
S3-3 3/4"=1'-0"



10 TWO LEVEL SHEAR WALL CONNECTION  
S3-3 3/4"=1'-0"



11 FOOTING SECTION  
S3-3 NTS



12 ROOF ACCESS OPENING  
S3-3 3/4"=1'-0"

REVISION	DATE	COMMENTS

ARCODEV JOB # \_\_\_\_\_  
CLIENT JOB # \_\_\_\_\_  
DRAWN BY: SLM  
CHECKED BY: TAS  
DATE OF ISSUE: 05.13.24





MECHANICAL GENERAL NOTES AND SPECIFICATIONS		
GENERAL CONSTRUCTION NOTES:	FOR: EXACT WALL LOCATIONS, DIMENSIONS, AND PLUMBING FIXTURE LOCATIONS AND REQUIREMENTS.	ANY VISIBLE SEALANT FROM THE EXTERIOR SO THE DUCTWORK HAS A CLEAN AND WORKMAN LIKE APPEARANCE.
1. DRAWINGS ARE MEANT TO SHOW INTENT ONLY, NOT EXACT DETAIL. THESE DRAWINGS ARE A "BUILDERS SET" AND INTENDED FOR THE USE ON AN EXPERIENCED AND WELL QUALIFIED CONTRACTOR WHO MAY INTER REASONABLE INFORMATION BASED ON EXPERIENCE COMMON IN THE INDUSTRY AND TRADES. QUALITY OF A REQUIRED STANDARD. DO NOT USE DRAWINGS FOR FIELD VERIFY FIELD VERIFICATION OF WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CLARIFICATIONS BEFORE STARTING ANY WORK. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL ERRORS IN HIS WORK, INCLUDING THE LACK OF FIELD VERIFICATION OF EXISTING CONDITIONS.	SUB-CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ALTERATIONS REQUIRED BY THE OWNER, ARCHITECT, OR FIELD CONDITIONS.	D.DUCT SIZES GIVEN ARE NET INSIDE FREE AREA.
2. THE ARCHITECT AND PROFESSIONAL CONSULTANTS WILL HAVE NO CONTROL OF, AND WILL NOT BE RESPONSIBLE FOR, CONSTRUCTION, TECHNICAL SERVICES, PROJECT DELAYS, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THIS PROJECT OR FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK ON THIS SITE, NOR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE INTENT OF THE CONTRACT AND OR THESE CONSTRUCTION DOCUMENTS.	ALL EQUIPMENT SHALL BE NEW, SHALL COMPLY WITH APPLICABLE INDUSTRY STANDARDS, WITH SPECIFICATIONS ON DRAWINGS, AND ENERGY CODE COMPLIANCE CERTIFICATION AS ADOPTED BY THE STATE, AS WELL AS LOCAL JURISDICTIONAL BUILDING DEPARTMENT. SUBMIT DATA FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. SUBMITTAL SHALL INCLUDE ENERGY CODE COMPLIANCE CERTIFICATION.	E.EQUIPMENT FLEXIBLE DUCTWORK CONNECTION NOT TO EXCEED 10 INCHES IN LENGTH WITH A MAX. 25 FLAME/50 SMOKE INDEX.
BASIC REQUIREMENTS:	SUB-CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT INCLUDING: FIXTURES SPECIFIED IN EQUIPMENT SCHEDULE ON DRAWINGS FOR REVIEW/APPROVAL (5) DAYS PRIOR TO BID. EQUIPMENT IS NOT TO BE ORDERED WITHOUT SUBMITTAL TO ARCHITECT/OWNER/ENGINEER.	F.FLEXIBLE DUCTWORK TO AIR DEVICES SHALL HAVE A MAXIMUM STRETCHED LENGTH OF 6 FEET. SUITABLE FOR RETURN AIR PLENUM.
MECHANICAL DESIGN SHALL CONFORM TO THE CURRENT ADOPTED INTERNATIONAL MECHANICAL CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT MECHANICAL SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.	ALL SPACE HEATING SUPPLY AIR DUCTS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST S.M.A.C.N.A. DUCT CONSTRUCTION STANDARDS AND BE INSULATED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL JURISDICTIONAL ENERGY CONSER- VATION STANDARDS AND THE LATEST EDITION INTERNATIONAL MECHANICAL CODE.	G. ALL EXHAUST TERMINALS MUST BE 3'-0" AWAY FROM IN ELEVATION FROM OPERABLE PORTION OF WINDOW AND DOORS. MC TO OFFSET AS REQUIRED.
COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN AND/OR INSTALLATION.	ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS. INCREASE LISTED DUCT SIZE TO ACCOMMODATE LINER.	H. ALL DIRECT VENT VENT TERMINALS MUST BE 4'-0" AWAY IN ELEVATION HORIZONTALLY OR BELOW AND ATLEAST 1'-0" ABOVE ANY OPERABLE PORTION OF A WINDOW OR DOOR. MC TO OFFSET AS REQUIRED.
RELOCATION OF OUTLETS AND/OR DEVICES MADE PRIOR TO ROUGH-IN SHALL BE DONE AT NO ADDITIONAL COST.	FLEX SHALL NOT EXCEED 8 FT. IN LENGTH AND SHALL BE TYPE "I" FACTORY DUCT. PROVIDE WITH 1 IN. EXTERNAL INSULATION IF MAIN SUPPLY DUCT IS INSULATED.	INSULATION
ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED MECHANICS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.	ALL SUPPLY RUN-OUTS TO HAVE MANUALLY ADJUSTABLE VOLUME DAMPERS WITH ABILITY TO LOCK IN PLACE. THIS SUB-CONTRACTOR SHALL INCLUDE IN HIS/HER BID THE COMPLETE COST FOR THE ELECTRICAL CONTRACTOR TO INSTALL EXHAUST FANS AS REQUIRED BY EQUIPMENT SCHEDULE. THIS SUB-CONTRACTOR SHALL FIELD VERIFY 10 FT. MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKE AND ALL VENTS OR EXHAUST OUTLETS.	A. ALL INSULATING VALUES ARE TO CONFORM TO THE LATEST VERSION OF THE INTERNATIONAL ENERGY CODE.
INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN.	WALL THERMOSTATS FOR HEATING/COOLING UNITS TO BE AUTOMATIC CHANGEOVER TYPE AND INSTALLED 48 IN. ABOVE FINISHED FLOOR. HEATING/COOLING UNITS SHALL MAINTAIN MINIMUM OUTSIDE AIR AS SHOWN ON SCHEDULE OR SHOWN IN FRESH AIR CALCULATIONS.	B. ALL ROUND CONCEALED RIGID SUPPLY DUCTWORK SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-6.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.
ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN.	ALL FURNACES OR ROOTOPT UNITS SUPPLYING MORE THAN 2000 CFM OF AIR SHALL BE EQUIPPED WITH A SMOKE DETECTOR WHICH IN THE MAIN FURNACE AIR DUCT WITH THE POWER OFF TO THE UNIT. WHEN SMOKE IS DETECTED, THIS SMOKE DETECTOR SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE MECHANICAL CONTRACTOR. IN BUILDINGS WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED, THE SMOKE DETECTOR SHALL BE WIRED BY THE ELECTRICAL CONTRACTOR AND SHALL BE SUPERVISED BY FIRE ALARM SYSTEM. SEE LATEST EDITION INTERNATIONAL MECHANICAL CODE FOR ADDITIONAL REQUIREMENTS. MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL REMOTE TEST SWITCH AND INDICATING LIGHT AT CEILING LOCATION NEAR FURNACE/ROOFTOP LOCATION.	C. OUTDOOR AIR INTAKE DUCT SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-12.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.
THE SUB-CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIARIZED WITH ALL REQUIREMENTS OF THE CONTRACT PRIOR TO SUBMISSION OF BID. THE SUB-CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO BID OR START OF INSTALLATION.	MECHANICAL CONTRACTOR IS RESPONSIBLE TO HAVE ROOFTOP UNIT MANUFACTURERS TECHNICIAN START ALL ROOFTOP UNITS. PROVIDE WRITTEN REPORT FROM MANUFACTURER FOR START-UP COMMISSIONING.	D. WHEN LOCATED IN UNCONDITIONED SPACES ALL RECTANGULAR DUCTWORK SHALL BE LINED WITH 1" THICK 2 POUND DENSITY MINIMUM R-6.0 FIBER GLASS ACOUSTIC DUCT LINER. ALL DUCTWORK EXPOSED TO OUTDOOR AMBIENT TYPE CONDITIONS (UNCONDITIONED ATTICS, OUTSIDE AIR DUCTS, ETC) SHALL BE EXTERNALLY WRAPPED OR INTERNALLY LINED IN 2 - 2.5" NOMINAL INSULATION (MINIMUM R-12.0). ALL OUTDOOR DUCTWORK SHALL HAVE 2 - 2.5" DUCTLINER (MINIMUM R-12.0) AND THE DUCT BE SEALED WEATHERPROOF PER SMACNA GUIDELINES. RECTANGULAR DUCT WORK IN RETURN AIR PLENUM SHALL BE LINED WITH 1/2" THICK 2 POUND DENSITY (MINIMUM R2.1) MAT-LACED ACOUSTIC DUCT LINER.
THE SUB-CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS WHEN THEY BECOME DUE, AND SHALL NOT COVER ANY WORK UNTIL APPROVED BY THE INSPECTION AUTHORITY. ANY AND ALL FEES ASSOCIATED WITH THE MECHANICAL INSPECTIONS SHALL BE PAID FOR BY THE SUB-CONTRACTOR IN ORDER TO DELIVER A COMPLETE AND FINISHED BUILDING, READY FOR OCCUPANCY AND 100% USAGE. THE SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE SUB-CONTRACTOR HAS FAMILIARIZED HIMSELF/HERSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND LABOR BECAUSE OF DIFFICULTIES ENCOUNTERED, WILL NOT BE RECOGNIZED IF THEY COULD HAVE BEEN FORESEEN HAD PROPER EXAMINATION BEEN MADE. ANY COSTS DUE TO THE LACK OF COOPERATION AMONG TRADES SHALL BE BORNE BY THE SUB-CONTRACTOR.	DUCTWORK	E. AIR INLETS AND OUTLETS
THE INFORMATION PRESENTED ON THESE DRAWINGS IS DIAGRAMMATIC IN NATURE. IT DOES NOT NECESSARILY REPRESENT THE EXACT LOCATION, SIZE, OR TYPE OF MATERIALS AND LABOR FOR COMPLETELY FINISHED AND OPERATIONAL SYSTEMS. REFER TO LATEST ARCHITECTURAL DRAWINGS	A. DUCTWORK SHALL BE GALVANIZED SHEET METAL INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. INSTALL TURNING PANES IN ALL ELBOWS. ALL SPIN-IN FITTINGS AND RUNOUTS TO ALL REGISTERS, RETURN, OR EXHAUST TERMINAL SHALL BE PROVIDED WITH MANUAL VOLUME DAMPERS.	A. FURNISH AND INSTALL CENTRIFUGAL EXHAUST FANS AS SCHEDULED ON THE PLANS.
	B. ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA STANDARDS. THE DUCT PRESSURE CLASS SHALL BE AS NOTED ON PLANS OR CORRESPONDING TO THE MAXIMUM EQUIPMENT ESP ON EACH SYSTEM. THE DUCTWORK SHALL BE SEALED TIGHT. LEAKAGE MAY NOT EXCEED 10% OF DESIGN AIRFLOW AT DESIGN PRESSURE. FOR SMOKE CONTROL SYSTEMS THE DUCT MUST BE TESTED AT 1.5 TIMES ITS DESIGN PRESSURE AND LEAKAGE MAY NOT EXCEED 5% OF DESIGN AIRFLOW.	B. FURNISH AND INSTALL RIGID ROOF CURBS AND BACKDRAFT DAMPERS.
	C. ALL EXPOSED ROUND DUCTWORK SHALL BE SPIRAL DUCT. NO JOISTS OR CONNECTIONS SHALL HAVE	C. FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROL NECESSARY FOR PROPER OPERATION.
		ROOFTOP HVAC UNITS
		A. FURNISH AND INSTALL ROOF TOP PACKAGED ELECTRIC A/C UNITS WITH NATURAL GAS HEATING SECTIONS AS SCHEDULED ON THE PLANS. ACCEPTABLE MANUFACTURERS ARE TRANE, CARRIER, CARRIER, OR YORK. ANY SUBSTITUTED MODELS MUST BE EQUAL IN CONTROLS, ACCESSORIES, AND PERFORMANCE TO SCHEDULED MODELS.
		B. FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROLS FOR SATISFACTORY OPERATION. PROVIDE PHASE REVERSAL PROTECTION ON ANY UNITS WITH SCROLL COMPRESSORS.
		C. FURNISH PROGRAMMABLE SPACE THERMOSTAT WITH NIGHT SETBACK OPERATION OR DIGITAL CONTROL SYSTEM FOR VAV APPLICATIONS AS APPLICABLE. MOUNT AT 42+INCHES AFF.
		D. FURNISH ALL UNITS WITH 100% OUTDOOR AIR ECONOMIZER PACKAGE UNLESS OTHERWISE NOTED.
		E. FURNISH ALL UNITS WITH 14-INCH ROOF CURBS.
		RADIANT HEATING UNITS
		A. FURNISH AND INSTALL NATURAL GAS FIRED RADIANT HEATING UNITS AND ASSOCIATED ACCESSORIES AS SCHEDULED ON THE PLANS.
		B. UNITS SHALL BE COMPLETE WITH PLUGS FOR ELECTRICAL CONNECTION, SPACE THERMOSTATS, TUBE EXTENSIONS, FLUES, AND ROOF CAPS AS REQUIRED. UNITS SHALL BE UL AND AGA RATED.

SYSTEM OR UNIT #	ROOM NAME	ZONE FLOOR AREA (SQ.FT.) Az	OUTDOOR AIRFLOW REQUIRED PER PERSON (CFM/PERSON) Rp	OUTDOOR AIRFLOW REQUIRED PER PERSON (CFM / SQ.FT) Ra	ZONE OCCUPANT DENSITY (PPL/1000 SQ.FT.)	ZONE POPULATION (PEOPLE) Pz	BREATING OUTDOOR AIR FLOW (CFM) Vbz	DISTRIBUTION EFFECTIVENESS Ez	REQUIRED ZONE OUTDOOR AIR FLOW (CFM) Voz (CFM)
RTU-1	SALES 101	530	7.5	0.12	15	8	155	0.8	16
	COFFEE 102	75	5	0.06	5	0	5	0.8	6
	OFFICE 103	100	5	0.06	5	1	11	0.8	14
	BREAK 107	114	5	0.06	5	12	15	0.8	15
	INVENTORY 108	500		.12 CFM/SQ.FT.					60
								TOTAL OUTSIDE AIR REQUIRED	249
							TOTAL OUTSIDE AIR PROVIDED	350	

PLAN MARK	MFR	MODEL NO.	LOCATION	STYLE	CFM	ESP (IN)	SONES	WEIGHT LBS	SPD	ELECTRICAL DATA				REMARKS
										VOLT	PH	HP	WATTS	
EF-1	ACME	VQ0150	TOILET	CEILING	75	0.25	1.1	25	1	115	1	-	100	1, 2
EF-2	ACME	VQ0150	TOILET	CEILING	75	0.25	1.1	25	1	115	1	-	100	1, 2
EF-3	GREENHECK	SBE-2H0-5	SIDEWALL-SERVICE AREA	WALL	3200	.35	23	150	1	115	1	1/2	9.8 AMPS	1, 3 - 7
1. SELECTION BASED AT ALTITUDE														
2. INTERLOCK WITH LIGHT SWITCH														
3. PROVIDE WALL MOUNTED SENSOR CONNECTED BY E.C.														
4. PROVIDE VIBRATION ISOLATORS														
5. FURNISH WITH WALL COLLAR (# C-20), MOTORIZED DAMPER & WEATHERHOOD														
6 CO SENSOR ALARM PER PLANS														
DAMPERS OPEN AT 50 PPM & FAN ENRGIZES														
SHUTDOWN OPERATION - REVERSE SEQUENCE														
7 PROVIDE STARTER SET BY MC, USED FOR DAMPER MOTOR, THERMOSTAT AND CO SENSOR CONTROL.														

PLAN MARK	MFR	MODEL NO.	LOCATION	STYLE	CFM	ESP (IN)	SPD	ELECTRICAL DATA VOLT	PH	HP	WATTS	REMARKS
F-1	DAYTON	2RD29	CEILING/WALL	PROP	7450/3450	.25	1	115	1	1/4	-	1 - 5
1. SELECTION BASED AT ALTITUDE												
2. PROVIDE SOFT START												
3. OSCILLATING FAN												
4. STRUCTURAL AND MOUNTING EQ. PER MANUFACTURER												
5. OSCILLATING FAN: MEANT FOR AIR MOVEMENT ONLY												

PLAN MARK	MFR	MODEL NO.	FUEL	INPUT MBTUH	OUTPUT MBTUH	CFM	HP	VOLT	PH	FLUE SIZE (IN)	REMARKS
GUH-1	MODINE	PDP175	NG	175	143	2725	1/2	115	1	5	1, 2

1. REFERS TO MODINE. PERFORMANCE REFERS TO LOCAL ALTITUDE. 82% EFFICIENCY GAS HEATING UNIT.

2. PROVIDE REMOTE TSTAT WITH SUMMER/WINTER SWITCH.

PLAN MARK	MFR	MODEL NO.	CFM	MIN OA CFM	BLWR HP	ESP (IN)	GAS NAT/PROP	HEATING CAPACITY		EAT (F)	LAT (F)	EFF	STG	NET COOLING CAPACITY						REFRIG (R410A / R22)	EFFICIENCY (STD / HI)	SEER/EER RATING	WEIGHT LBS	ELECTRICAL DATA				REMARKS	
								INPUT MBH (SL)	OUTPUT MBH (ALT)					TOTAL MBH	SENS MBH	EADB (F)	EAWB (F)	LADB (F)	LAWB (F)					VOLT	PH	FLA (LG MTR)	MCA		MOCP
RTU-1	CARRIER	48GCFM06K1A3	1990	300	2	0.40	NG	130	106	63.3	113.4	81%	2	60.53	46.61	79.3	65.6	57.2	55.7	R-410A	STD	16 SEER	900	208	1	31.3	37	50	1 - 5

1. REFERS TO COOLING CAPACITIES BASED ON 95F OADB, 80F EADB, 61F EAWB @ ELEV. AND 100F CONDENSING TEMPERATURE

2. PROVIDE 14" ROOF CURB, BELT DRIVE, HAIL GUARDS, MICROPROCESSOR CONTROL, OPTIONAL DISCONNECT, AND 100% ECONOMIZER W/ BARO RELIEF.

3. PROVIDE OPTIONAL CONVENIENCE OUTLET

4. SEER AND EER RATING ARE RATED AT ARI CONDITIONS AND IN ACCORDANCE WITH DOE TEST PROCEDURES.

5. PROVIDE 7-DAY, 24 HOUR PROGRAMMABLE THERMOSTAT.

6. PROVIDE DUCT SMOKE DETECTOR AS REQUIRED.

(E) DEMO  
(E) EXISTING  
(N) NEW  
(AA) AIR ADMITTANCE VALVE  
(AD) AREA DRAIN  
(AFH) ABOVE FINISH FLOOR  
(A) AIR HANDLING UNIT  
(B) BOILER  
(BB) BASEBOARD  
(BF) BOOSTER FAN  
(BFP) BACKFLOW PREVENTER  
(BT) BATH TUB  
(BV) BALL VALVE  
(CD) CONDENSATE DRAIN  
(CFM) CUBIC FEET PER MINUTE  
(CH) CHILLER  
(CO) CLEANOUT  
(COTG) CLEANOUT TO GRADE  
(CU) CONDENSING UNIT  
(CV) CHECK VALVE  
(CUH) CABINET UNIT HEATER  
(DCW) DOMESTIC COLD WATER  
(DF) DRINKING FOUNTAIN  
(DHW) DOMESTIC HOT WATER  
(DSN) DOWN SPOUT NOZZLE  
(EC) ELECTRICAL CONTRACTOR  
(ECO) END OF LINE CLEANOUT  
(EDH) ELECTRIC DUCT HEATER  
(EF) EXHAUST FAN  
(EWC) ELECTRIC WATER COOLER  
(E) ELECTRIC WATER HEATER  
(FURN) FURNACE  
(FCO) FLOOR CLEANOUT  
(FCD) FAN COIL UNIT  
(FDU) FAN DRAIN  
(FS) FLOOR SINK  
(G) GAS  
(GC) GENERAL CONTRACTOR  
(GM) GAS METER  
(GPH) GALLONS PER HOUR  
(GPM) GALLONS PER MINUTE  
(GUH) GAS UNIT HEATER  
(GW) GREASE WASTE  
(GWH) GAS WATER HEATER  
(HB) HOSE BIB  
(HP) HEAT PUMP  
(HX) HEAT EXCHANGER  
(I) ICE MAKER  
(IM) LAVATORY  
(LS) LAUNDRY SINK  
(MAU) MAKE-UP AIR UNIT  
(MC) MECHANICAL CONTRACTOR  
(MF) MEASURE FLOW  
(NC) NOT IN CONTRACT  
(NO) NORMALLY CLOSED  
(N) NORMALLY OPEN  
(NTS) NOT TO SCALE  
(OA) OUTSIDE AIR  
(ORD) OVER FLOW ROOF DRAIN  
(P) PUMP  
(PC) PLUMBING CONTRACTOR  
(PRV) PRESSURE REDUCING VALVE  
(PSF) POUNDS PER SQUARE INCH  
(R) RETURN AIR  
(RAR) RETURN AIR REGISTER  
(RD) ROOF DRAIN  
(RH) RADIANT HEATER  
(RTU) ROOF TOP UNIT  
(SR) SUPPLY AIR  
(SAR) SUPPLY AIR REGISTER  
(SF) SUPPLY FAN  
(SFT) SERIES FAN TERMINAL  
(SH) SHOWER  
(SK) SINK  
(SOI) SAE/OIL INTERCEPTOR  
(SS) SERVICE SINK  
(T&P) TEMPERATURE & PRESSURE  
(TD) TRENCH DRAIN  
(TY) TYPICAL  
(UR) URINAL  
(VAV) VARIABLE AIR VOLUME  
(VVT) VARI TRAC  
(WB) WASHER BOX  
(WO) WALL CLEANOUT  
(WH) WYDRANT

PROVIDE TURNING VANES AT ALL CORNER BENDS IN ACCORDANCE WITH S.M.A.C.N.A. LOW VELOCITY DUCT MANUAL.





















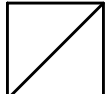

TYPICAL DUCT TAKE-OFF WITH MANUAL VOLUME DAMPER. MARK DAMPER POSITION AFTER AIR BALANCE.

THERMOSTAT SHALL BE MOUNTED PER OWNER'S DIRECTION. DO NOT MOUNT IN DIRECT SUNLIGHT. THERMOSTAT SHALL BE MOUNTED NEAR RETURN AIR DUCT AT 48" AFF.

MANUAL BALANCING DAMPER - PROVIDE WHERE SHOWN, AT ALL RUN-OUTS TO AIR OUTLETS, AND AT ALL MAIN DUCT SPLITS. DAMPERS SHALL BE "YOUNG REGULATOR CO" MODEL 820 OR EQUAL.

POINT OF CONNECTION - NEW TO EXISTING

INDICATES UNDERCUT DOOR FOR RETURN AIR

	SUPPLY UP		FIRE DAMPER
	SUPPLY DOWN		SMOKE DAMPER
	RETURN UP		FIRE SMOKE DAMPER
	RETURN DOWN		EQUIPMENT TAG
	EXHAUST UP		(POC) POINT OF CONNECTION
	EXHAUST DN		ROOFTOP UNIT
	FLEXIBLE DUCT		FURNACE
	DEMO		CONDENSING UNIT
	MANUAL VOLUME DAMPER		PARALLEL FAN POWERED VAV BOX
	CEILING SUPPLY DIFFUSERS SEE SCHEDULES		VAV/WT BOX
	CEILING RETURN AIR REGISTER SEE SCHEDULES		
	SIDEWALL SUPPLY/RETURN REGISTER, SEE SCHEDULES		

- DCW— DOMESTIC COLD WATER
- 110°— DOMESTIC HOT WATER
- CND— CONDENSATE DRAIN
- G— GAS LINE
- SS— SANITARY SEWER BELOW FLOOR (SS)
- V— SANITARY VENT
- V— BALL VALVE
- CLEANOUT
- FLOOR DRAIN
- FLOOR SINK
- ELBOW – TURNED DOWN
- ELBOW – TURNED UP

THE MECHANICAL CONTRACTOR SHALL EMPLOY THE SERVICES OF AN INDEPENDENT TEST AND BALANCE CONTRACTOR TO BALANCE THE HVAC SYSTEMS IN ACCORDANCE WITH THE DRAWINGS.

HVAC SYSTEMS SHALL BE BALANCED IN ACCORDANCE WITH THE LATEST NEBB PROCEDURAL STANDARDS. THE BALANCING CONTRACTOR SHALL HAVE AT LEAST (3) THREE YEARS OF EXPERIENCE IN TESTING AND BALANCING.

THE BALANCING REPORT SHALL CONTAIN ALL INFORMATION REQUIRED BY NEBB PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING. THE REPORT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE FOLLOWING:

JURISDICTION:	YUKON, OK
MECHANICAL CODE:	2018 IMC
ENERGY CODE:	2018 IECC
LOCAL ADDENDUMS:	YES
WINTER DESIGN DB:	9 F
SUMMER DESIGN TEMP DB / WB	99/74 F
INDOOR HEATING SET POINT:	72 F
INDOOR COOLING SET POINT:	75 F
ROOF R-VALUE:	R40 (VERIFY)
WALL R-VALUE:	R19
ELEVATION:	597 FT
BUILDING TOTAL AREA:	4897 SQ.FT.

SHEET #	SHEET TITLE
M0.1	MECHANICAL SPECS, SCHEDULES AND LEGEND
M0.2	SEQUENCE OF OPERATION
M1.1	MECHANICAL PLAN
M1.2	MECHANICAL ROOF PLAN
M2.1	MECHANICAL DETAILS
M3.0	MECHANICAL COMCHECK
M3.1	MECHANICAL COMCHECK

PLAN MARK	STYLE	MATERIAL	FIN	FACE PATT.	DAMPER	NC (MAX)	NO. SLOTS	SIZE	INLET DIA.	REMARKS
CD-1	TMS	STL	WHT	4W	NONE	35	-	24x24	PER PLANS	1, 2
CD-2	TMS	STL	WHT	4W	NONE	35	-	12x12	PER PLANS	1, 2
SG-1	300RL	STL	WHT	FIXED	OBD	35	-	NOTED	-	
RG-1	PAR	STL	WHT	FIXED	-	30	-	24x24	PER PLANS	
RG-2	PAR	STL	WHT	FIXED	-	30	-	12x12	PER PLANS	
RG-3	350RL	STL	WHT	FIXED	-	30	-	NOTED	-	

EQUAL MANUFACTURERS INCLUDE PRICE, METAL-AIRE & KRUEGER.

1. SELECTION BASED ON TITUS  
2. OPPOSED BLADE DAMPER TO BE SUPPLIED IF NOT ACCESSIBLE FROM CEILING.

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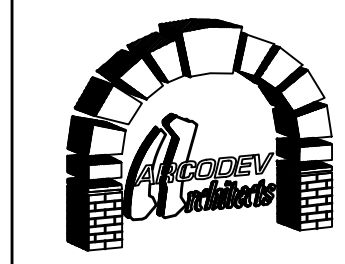
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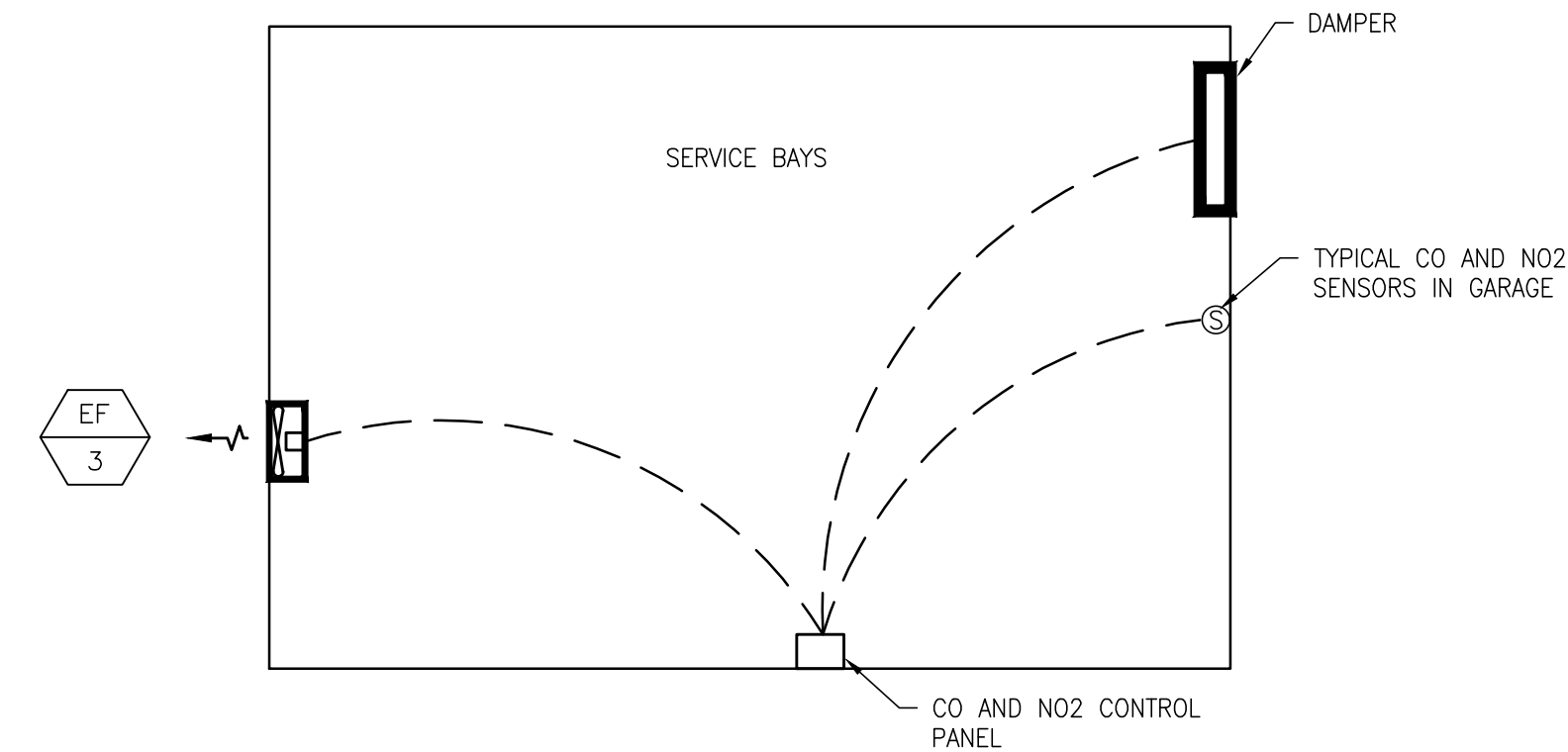
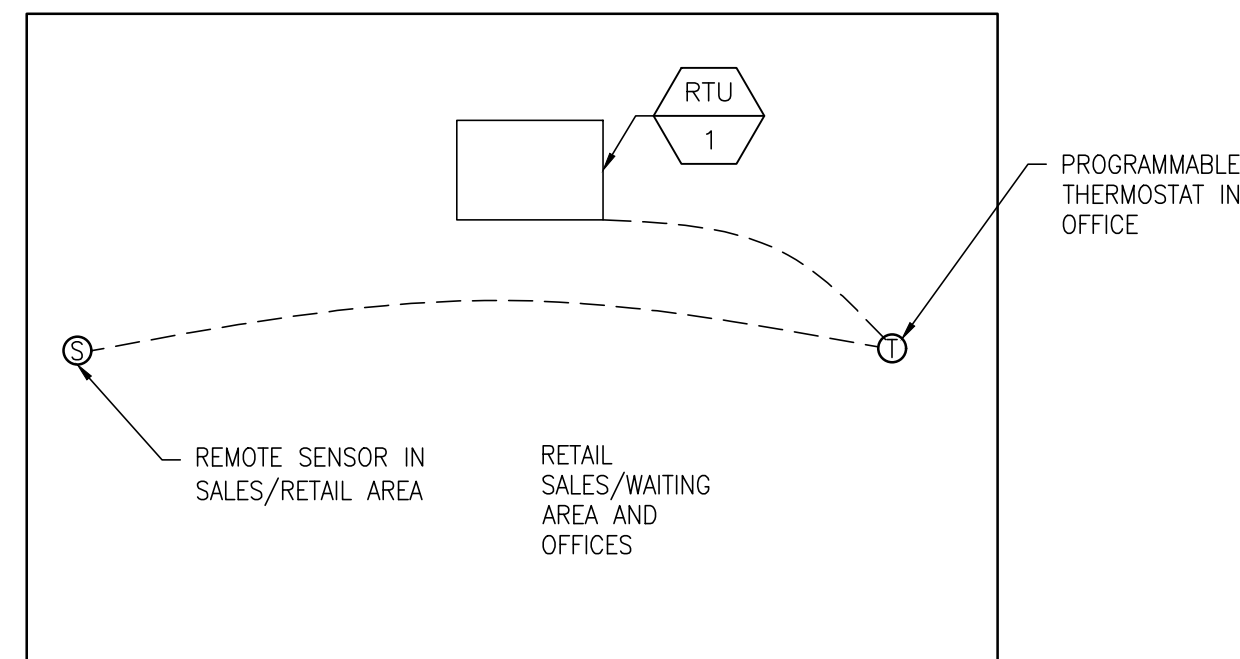


45 SPYGLASS DRIVE  
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# MO.1

MECHANICAL SPECS,  
SCHEDULES AND LEGEND





## GARAGE GAS DETECTION SPECIFICATIONS

- A. THE GARAGE GAS DETECTION SYSTEM SHALL HAVE A DEDICATED MICROPROCESSOR-BASED CONTROLLER THAT SHALL MONITOR AND CONTROL THE GARAGE GAS DETECTION SYSTEM IN A STAND-ALONE MODE OR AS A PART OF THE BUILDING AUTOMATION SYSTEM. THE CONTROLLER SHALL HAVE A LOCAL DISPLAY.
- B. THE SYSTEM SHALL CONSIST OF EXHAUST FANS, NATURAL MAKEUP AIR AND MULTIPLE GAS DETECTION SENSORS LOCATED PER SUPPLIER REQUIREMENTS AND RECOMMENDATIONS. THE PLANS ARE ONLY A GUIDE, ALL REQUIRED SENSOR LOCATIONS SHALL BE INCLUDED IN THE BID.
- C. THE SENSORS SHALL BE ONE OF THE FOLLOWING TYPES:
1. MACURCO CM21A
  2. VULCAIN Q2
  3. VERIS G SERIES
  4. MSA Z GUARD
- EACH SENSOR SHALL HAVE AN INTEGRAL ALARM LIGHT FOR 25, 50 AND 200 PPM CO AS A MINIMUM. AS AN ALTERNATE, A SERIES OF LIGHTS SHALL BE MOUNTED AT EACH SENSOR FOR THIS PURPOSE.
- D. THE CONTROLLER SHALL MONITOR THE FAN STATUS AND IF THE FAN FAILS TO START AN AUDIBLE ALARM SHALL BE SOUNDED IN THE GARAGE TO ANNUNCIATE THE FAILURE. THE FAILURE SHALL AUTOMATICALLY RESET WHEN FAN STATUS IS ESTABLISHED.
- E. THE SYSTEM SHALL MONITOR ALL OF THE GAS DETECTION SENSORS IN THE GARAGE AND DETERMINE THE MAXIMUM VALUE OF ALL OF THE SENSORS. IF THE MAXIMUM VALUE EXCEEDS THE MINIMUM SETPOINT (THRESHOLD 1) (ADJ.) THE EXHAUST FANS SHALL OPERATE. WHEN THE MAXIMUM VALUE DROPS BELOW 80% OF MINIMUM SETPOINT (THRESHOLD 1) (ADJ.) THE FAN SHALL BE DISABLED. SYSTEM TO EXHAUST A MINIMUM OF 0.75 CFM/SQFT AT HIGH SPEED.
- F. IF AN SENSOR FAILS THE FAN SHALL OPERATE CONTINUOUSLY AND THE AUDIBLE ALARM SHALL BE SOUNDED. WHEN A SENSOR READING RISES ABOVE 200 PPM CO OR 2.0 PPM NO2, THE AUDIBLE ALARM SHALL BE SOUNDED.
- G. POINTS LIST:
1. AIP CARBON MONOXIDE SENSORS (AS REQUIRED)
  2. AIP NITROGEN DIOXIDE SENSORS (AS REQUIRED)
  3. AOP FAN ANALOG SPEED REQUEST
  4. BIP FAN STATUS
  5. BOP ALARM LIGHT, HORN WITH SILENCE BUTTON
  6. ALM FAN FAILURE
  7. STPT FAN ENABLE LEVEL
  8. STPT FAN DISABLE LEVEL

END

## SERVICE BAY EXHAUST FAN/INTAKE LOUVER

NOT TO SCALE

PROJ # 241212

**ADAM A. POWELL , P.E.**  
PEC Enterprises, Inc.  
14412 Alene Ct. NE  
Albuquerque, NM 87123  
Telephone 720-409-2454

## BRAKES PLUS

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ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
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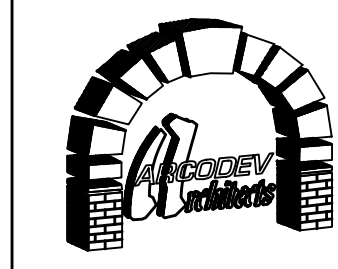
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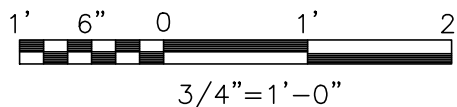
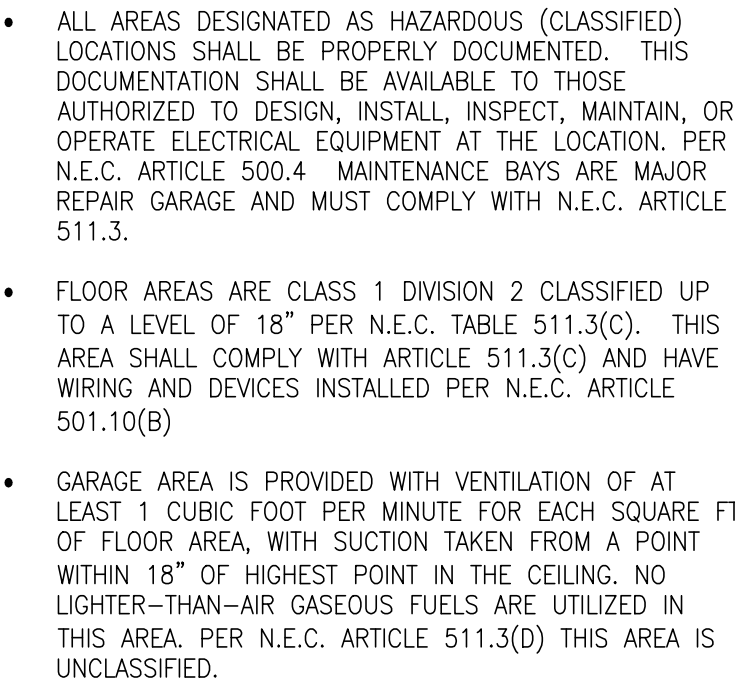
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SHEET

# MO.2

## MECHANICAL SEQUENCE OF OPERATIONS

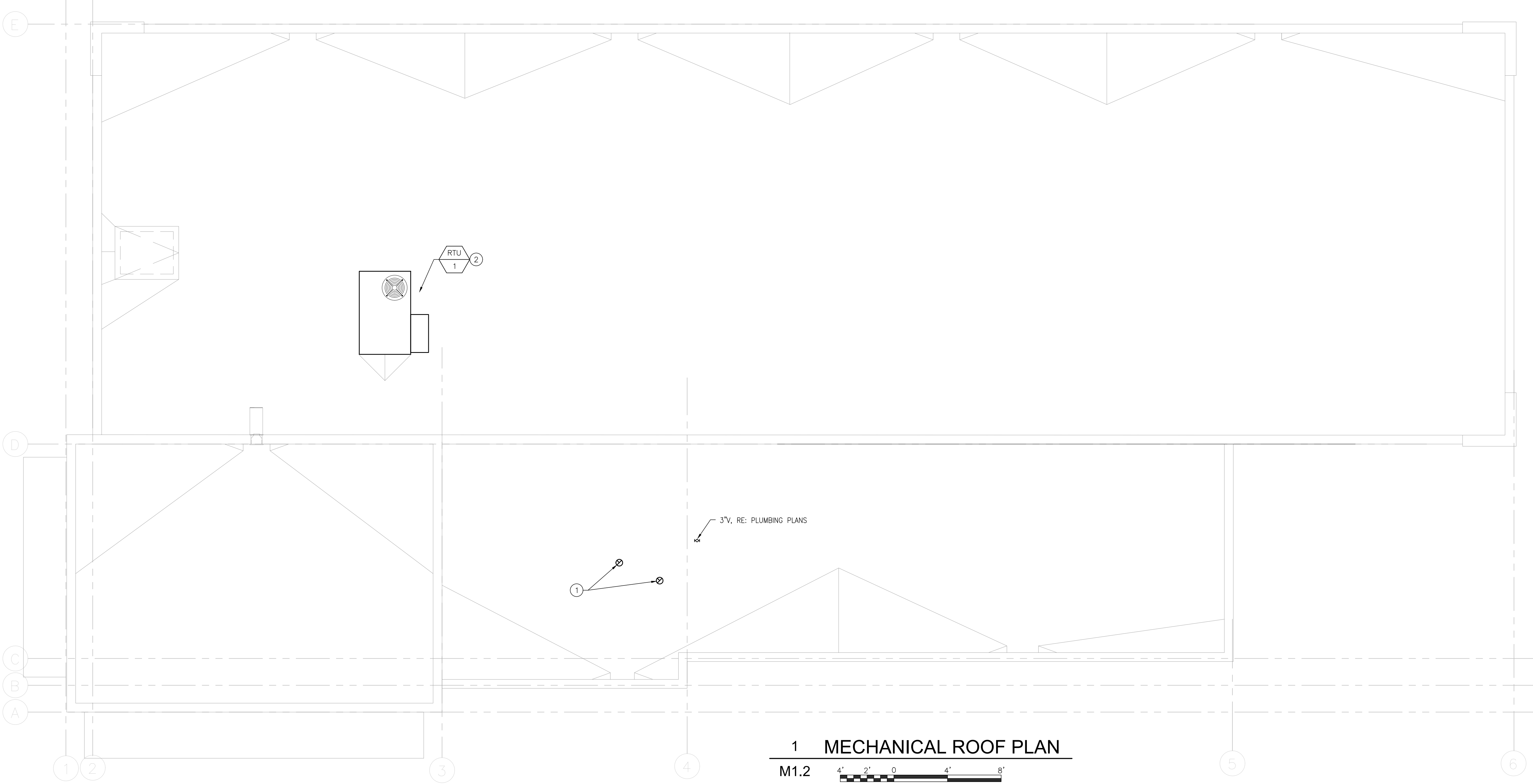




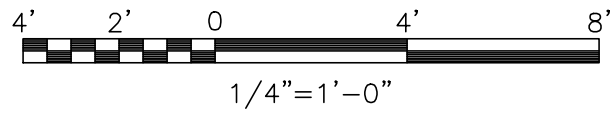
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PEC Enterprises, Inc.  
14412 Alene Ct. NE  
Albuquerque, NM 87123  
Telephone 720-409-2454

MECHANICAL PLAN





1 MECHANICAL ROOF PLAN  
M1.2



- DRAWING NOTES:**
- ① EXHAUST DUCT FROM RESTROOM BELOW. TERMINATE WITH APPROVED CAP.
  - ② NEW ROOFTOP UNIT: MAINTAIN 10'-0" FROM OUTSIDE AIR INTAKE.

PROJ # 241212

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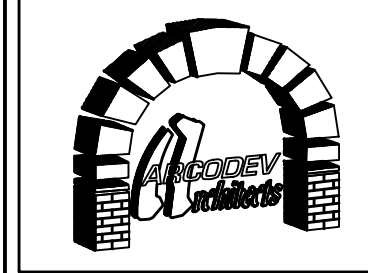
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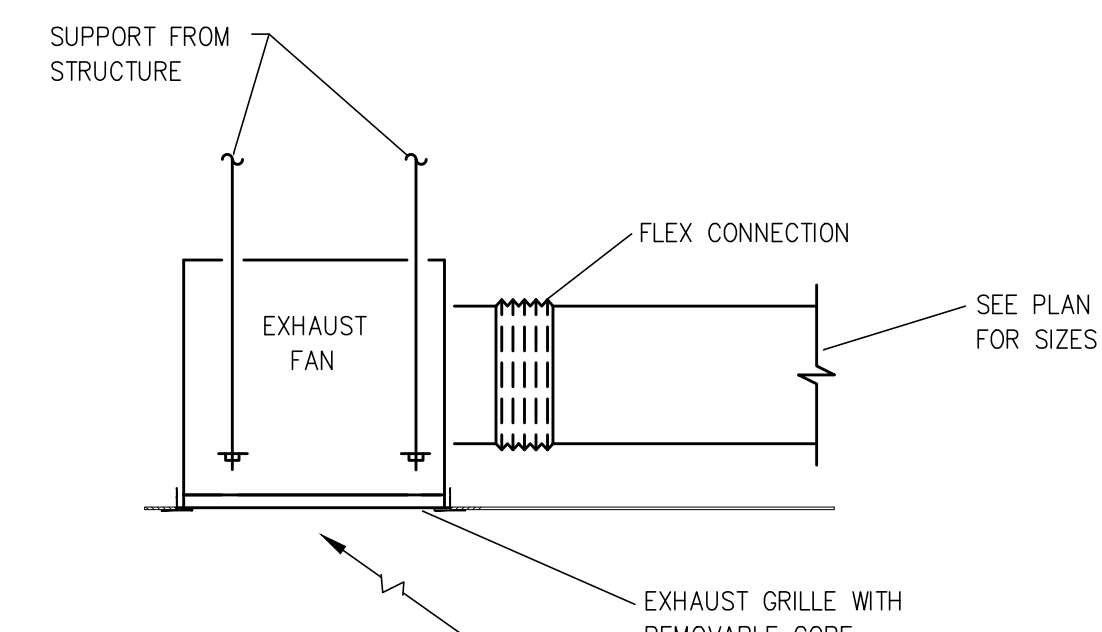
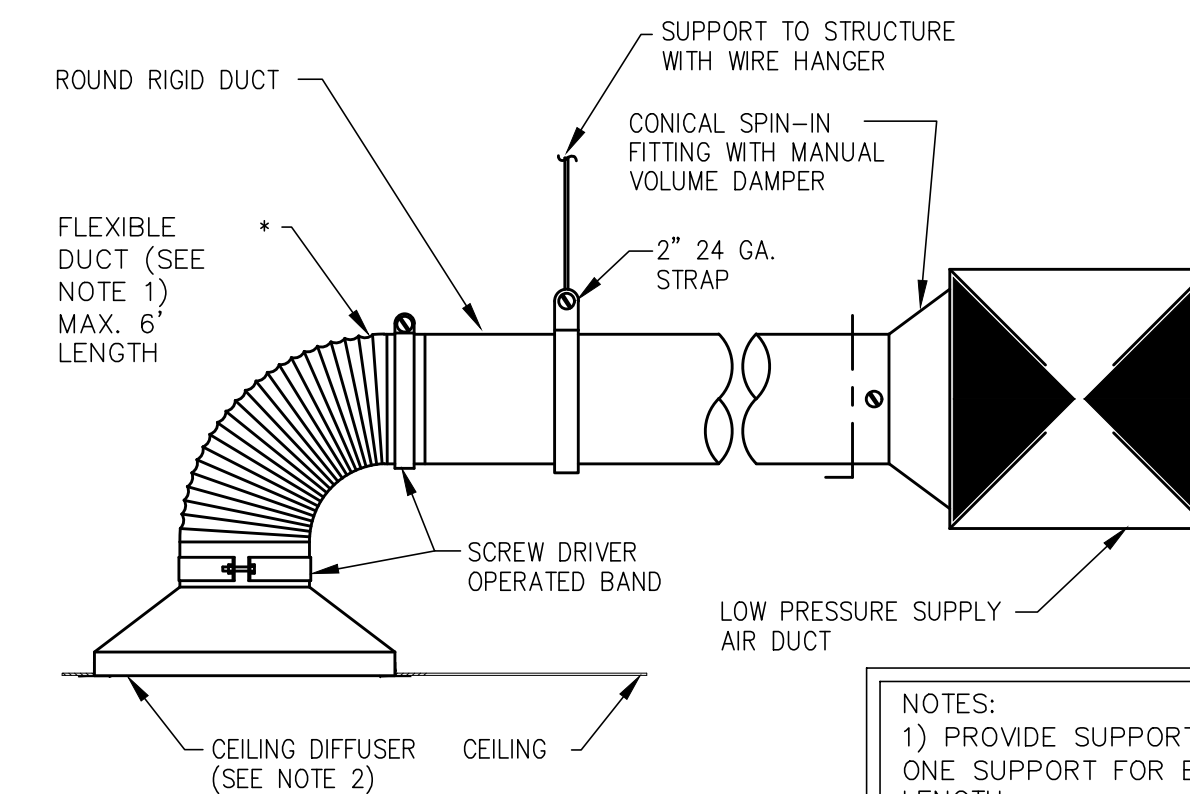
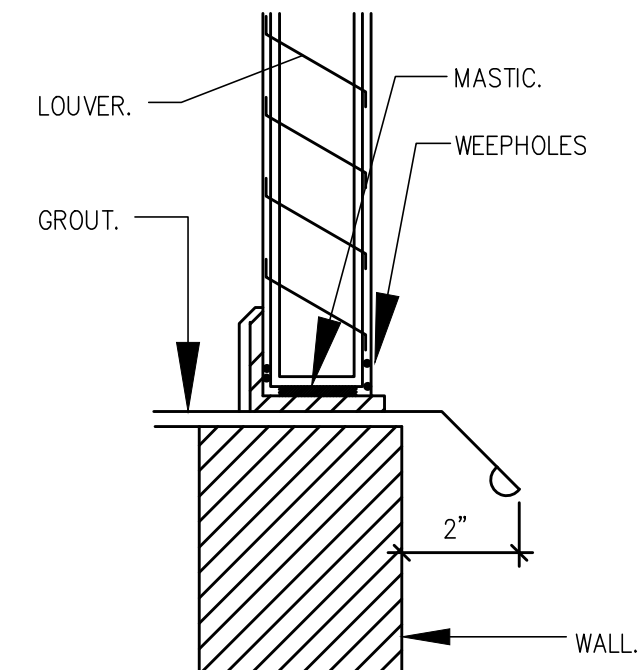
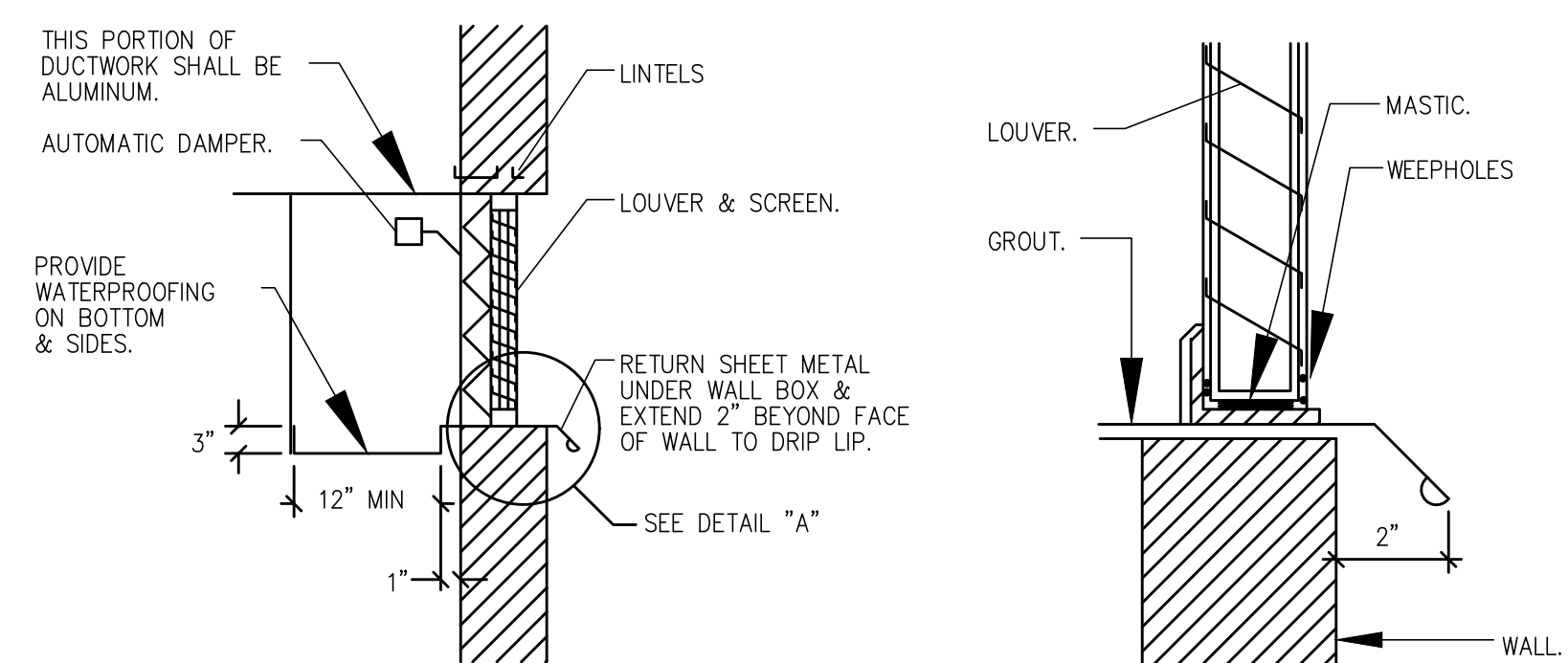
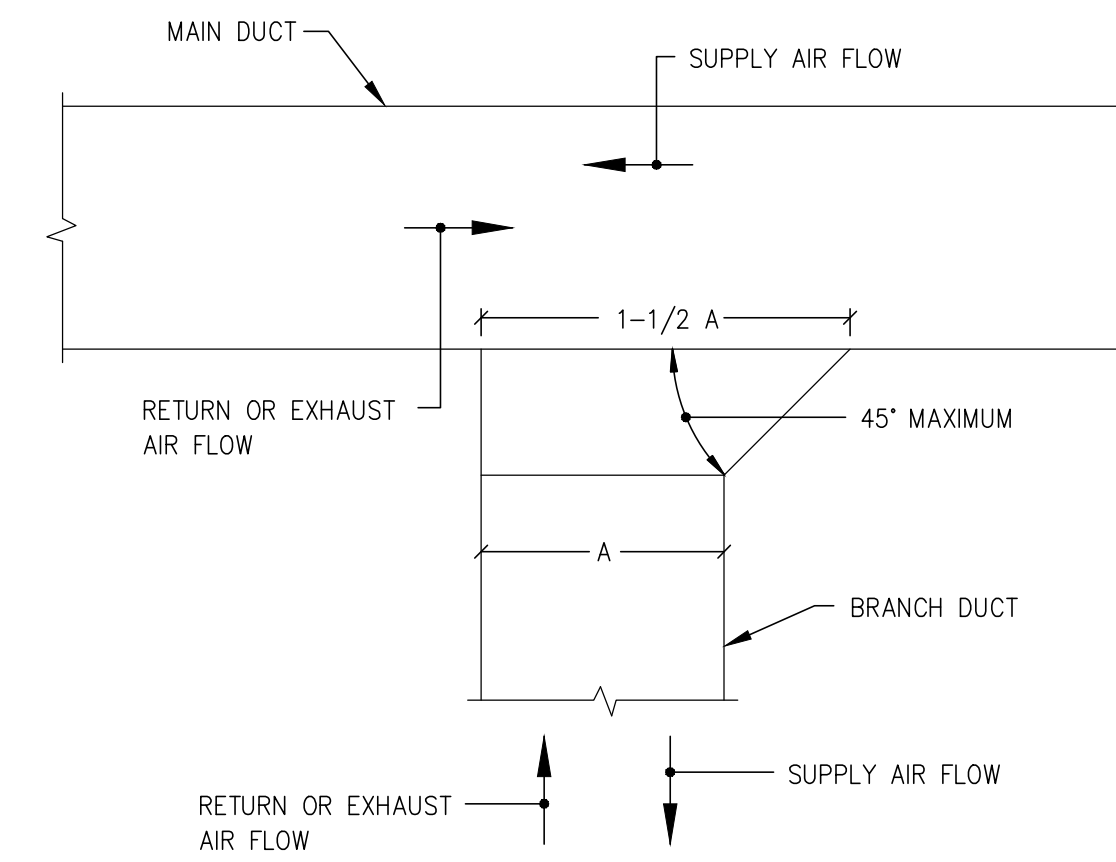
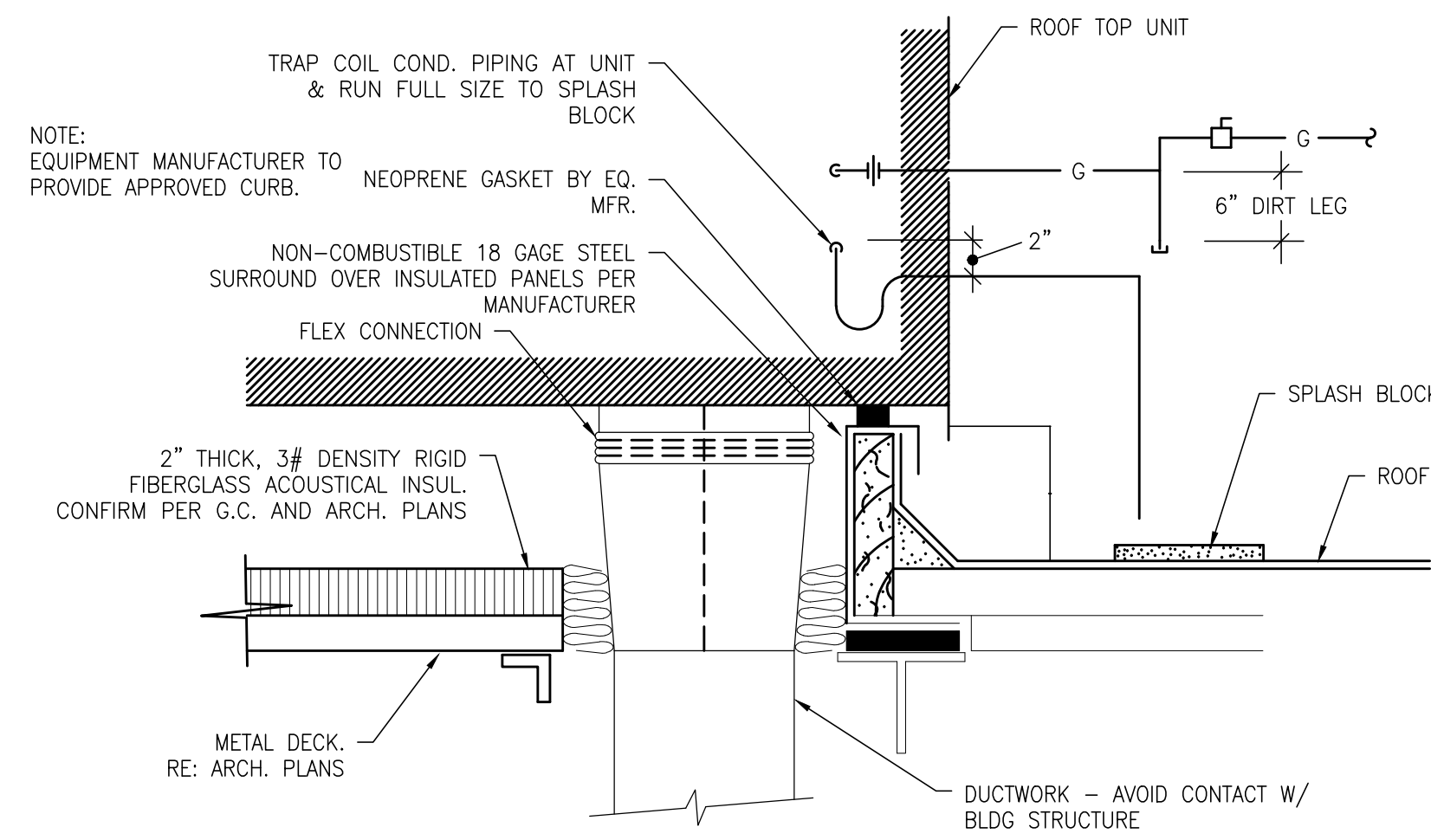
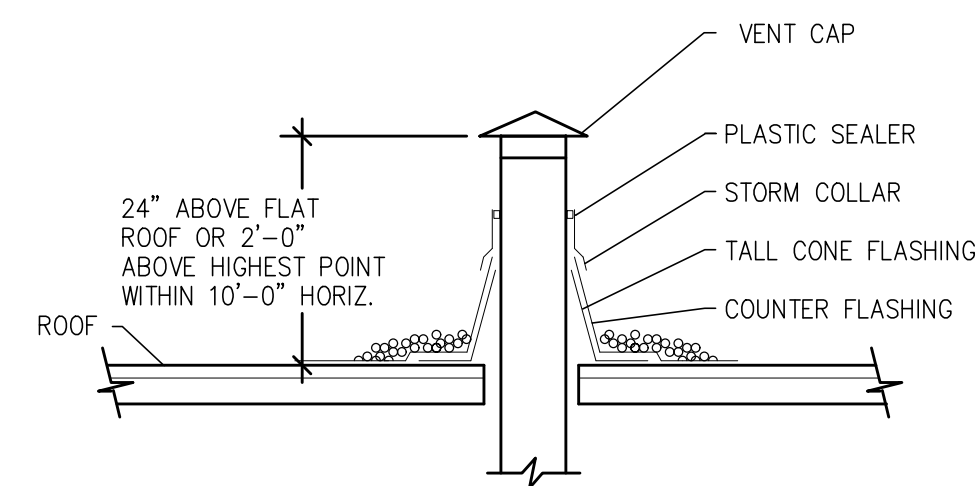
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SHEET

M1.2

MECHANICAL ROOF PLAN





## BRAKES PLUS

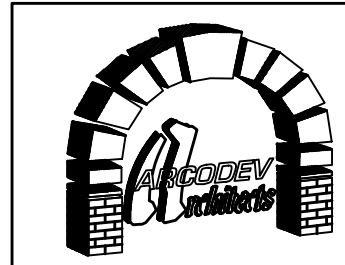
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SHEET

## M2.1

## MECHANICAL DETAILS

PROJ # 241212

**ADAM A. POWELL , P.E.**  
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Albuquerque, NM 87123  
Telephone 720-409-2454











PLUMBING GENERAL NOTES AND SPECIFICATIONS		
<p><b>GENERAL CONSTRUCTION NOTES:</b></p> <ol style="list-style-type: none"> <li>DRAWINGS ARE MEANT TO SHOW INTENT ONLY, NOT EXACT DETAIL. THESE DRAWINGS ARE A "BUILDERS SET" AND INTENDED FOR THE USE ON AN EXPERIENCED AND WELL QUALIFIED CONTRACTOR WHO MAY INTERPRET REASONABLE INFORMATION BASED ON EXPERIENCE COMMON IN THE INDUSTRY AND TRADES. QUALITY LEVEL IS A REQUIRED STANDARD. DO NOT SCALE DRAWINGS. FIELD VERIFY ALL CONDITIONS OF WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CLARIFICATIONS BEFORE STARTING ANY WORK. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL ERRORS IN HIS WORK, INCLUDING THE LACK OF FIELD VERIFICATION OF EXISTING CONDITIONS.</li> <li>THE ARCHITECT AND PROFESSIONAL CONSULTANTS WILL NOT HAVE CONTROL OF AND WILL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THIS PROJECT OR FOR THE WORK OF ANY WORK, CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK ON THIS SITE, NOR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE INTENT OF THE CONTRACT AND OR THESE CONSTRUCTION DOCUMENTS.</li> </ol> <p><b>BASIC REQUIREMENTS:</b></p> <p>PLUMBING DESIGN SHALL CONFORM TO THE CURRENT INTERNATIONAL PLUMBING CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT PLUMBING SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.</p> <p>DO NOT SCALE FROM THESE DRAWINGS. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS FOR DIMENSIONS AND FOR ESTIMATING DISTANCES. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS RELATING TO THE JOB WHETHER OR NOT INDICATED ON THESE DRAWINGS.</p> <p>ANY SCALE, DIMENSION OR QUANTITIES SHOWN ON THE DRAWINGS ARE FOR ENGINEERING CALCULATION PURPOSES ONLY. THE PLUMBING CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ESTIMATING AND DETERMINING ALL DISTANCES AND QUANTITIES RELATED TO THE PROJECT. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS AND VERIFY EXISTING CONDITIONS ON SITE FOR ALL ESTIMATING PURPOSES.</p> <p>COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CONFLICTS EXIST, THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRADE CONFLICTS AND SUBMIT TO ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN AND/OR INSTALLATION. RELOCATION OF OUTLETS AND/OR DEVICES MADE PRIOR TO ROUGH-IN SHALL BE DONE AT NO ADDITIONAL COST.</p> <p>ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED PLUMBERS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.</p> <p>INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF ANY DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN.</p> <p>ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN. SUBMIT MANUFACTURER'S LITERATURE (SHOP DRAWINGS) FOR MATERIALS AND EQUIPMENT. SUBMITTAL SHALL INCLUDE EQUIPMENT PERFORMANCE DATA AT ELEVATION AND/OR LOCAL CONDITIONS. EQUIPMENT CUTSHEETS OR CATALOG COPIES ARE NOT ACCEPTABLE. SUBMITTAL SHALL BEAR THE APPROVAL OF THE GENERAL CONTRACTOR FOR COMPLIANCE WITH COORDINATION AND THESE SPECIFICATIONS PRIOR TO SUBMITTAL TO ARCHITECT AND/OR HIS AGENCIES. ANY EQUIPMENT SUBSTITUTED FOR WHAT IS SCHEDULED SHALL BE EQUAL TO THAT SCHEDULED IN CONTROLS, ACCESSORIES, AND PERFORMANCE REGARDLESS OF MANUFACTURER.</p> <p>FIELD LABEL ALL PLUMBING EQUIPMENT AND PIPING AS INDICATED ON THE PLANS PER PLUMBING AND LOCAL CODE REQUIREMENTS. INDICATE DIRECTION OF FLOW ON PIPING.</p> <p>TAG ALL VALVES WITH CONSECUTIVE NUMBERING ON PERMANENT HARD PLASTIC OR METAL TAB AND PROVIDE SCHEDULE LISTING ITEMS, AREA SERVED, SIZE AND VALVE TYPE. SUBMIT FINAL VALVE SCHEDULE FOR REVIEW.</p>		
<p>PROVIDE EXPANSION LOOPS, SWING JOINTS, OR MECHANICAL EXPANSION COMPENSATING DEVICES AS REQUIRED TO ACCOUNT FOR THERMAL EXPANSION OF ALL PIPING SYSTEMS. EXPANSION SYSTEM SIZING SHALL BE IN ACCORDANCE WITH MATERIALS DATA SHEETS AND MANUFACTURER RECOMMENDATIONS.</p> <p>INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. IF PLAN DIFFERS FROM THESE INSTRUCTIONS THEN NOTIFY ENGINEER PRIOR TO ROUGH-IN. MANUFACTURER'S INSTRUCTIONS SHALL PREVAIL. SPECIAL ATTENTION MUST BE PAID TO GAS FIRED EQUIPMENT FLUE/CA LENGTHS, SIZES, AND MATERIAL.</p> <p><b>BASIC MATERIALS</b></p> <p>PLUMBING CONTRACTOR TO PROVIDE PLUMBING SYSTEM CONTROLS, CONTROLLERS, CONTROL TRANSFORMER, DISCONNECTS, STARTERS, CONTROL WIRING, ASSOCIATED CONTROL POWER WIRING, AND ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL PLUMBING SYSTEM. ALL ELECTRICAL ITEMS SHALL BE COORDINATED WITH ELECTRICAL DRAWINGS AND ELECTRICAL SUB-CONTRACTOR FOR INSTALLATION.</p> <p>PROVIDE SUPPLEMENTAL STEEL AND SUPPORTS AS REQUIRED FOR INSTALLATION OF PLUMBING MATERIALS, EQUIPMENT, AND APPARATUS.</p> <p>ALL WORK IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED AS EXPOSED ON THE PLANS. PRIOR TO THE INSTALLATION OF ANY EXPOSED WORK THIS CONTRACTOR SHALL VERIFY AND OBTAIN ARCHITECTURAL APPROVAL OF LOCATION AND EXTENT.</p> <p>PROVIDE PRESSURE REDUCING VALVE ASSEMBLY AT BUILDING WATER SERVICE ENTRY WHERE PRESSURE EXCEEDS 65 PSI. PRESSURE REDUCING VALVE TO BE SET TO 65 PSI.</p> <p>PROVIDE SANITARY SEWER SYSTEM CLEANOUTS AS REQUIRED BY LOCAL CODES. PROVIDE BRANCH SHUT-OFF VALVES ON ALL WATER LINES EXTENDING FROM MAINS. THE CONTRACTOR SHALL LOCATE AND FURNISH FOR INSTALLATION BY OTHERS, ALL ACCESS PANELS AS REQUIRED FOR ACCESS TO VALVES, MOTORS, ETC. AND THE PROPER SERVICING OF EQUIPMENT AND LINES INSTALLED UNDER THIS CONTRACT.</p> <p><b>PIPING</b></p> <ol style="list-style-type: none"> <li>SANITARY, VENT, AND STORM PIPING ABOVE GRADE SHALL BE CAST IRON NO-HUB PIPE AND FITTINGS, MANUFACTURED TO CISPI 310 BEARING THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE AND BE LISTED BY NSF INTERNATIONAL. COUPLINGS FOR JOINING CAST IRON NO-HUB PIPE SHALL MEET THE REQUIREMENTS OF CISPI 310. THE REST OF THE PIPING TO THE CISPI 310 STANDARD. IF HEAVY DUTY COUPLINGS ARE REQUIRED: HUSKY 2000, CLAMP AL 80, OR MISSION 80 COUPLINGS WITH CONSIDERATION TO USE: HUSKY 4000 OR CLAMP AL 125. INSTALLATION IN COMPLIANCE TO CISPI HANDBOOK.</li> <li>SANITARY, VENT, AND STORM PIPING BELOW GRADE SHALL BE SOLID CORE PVC SCHEDULE 40 OR 80 PIPE AND SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785 AND ASTM D 2665. INJECTION MOLDED PVC DWV FITTINGS SHALL CONFORM TO ASTM D 2665. FABRICATED PVC DWV FITTINGS SHALL CONFORM TO ASTM F 1866. PIPE AND FITTINGS SHALL BE MANUFACTURED AS A SYSTEM MANUFACTURER. THE PRODUCT OF ONE MANUFACTURER. PIPE AND FITTINGS SHALL BE MANUFACTURED IN THE UNITED STATES. ALL SYSTEMS SHALL UTILIZE A SEPARATE WASTE AND VENT SYSTEM. PIPE AND FITTINGS SHALL CONFORM TO NSF INTERNATIONAL STANDARD 14. INSTALLATION SHALL COMPLY WITH THE LATEST INSTALLATION INSTRUCTIONS PUBLISHED BY MANUFACTURER AND SHALL BE IN ACCORDANCE WITH THE PLUMBING, BUILDING, AND FIRE CODE REQUIREMENTS. BURIED PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 2321 AND ASTM F 1668. SOLVENT CEMENT JOINTS SHALL BE MADE IN A TWO STEP PROCESS WITH PRIMER CONFORMING TO ASTM F 656 AND SOLVENT CEMENT CONFORMING TO ASTM D 2564. THE SYSTEM SHALL BE PROTECTED FROM CHEMICAL AGENTS, FIRE STOPPING MATERIALS, THREAD SEALANT, PLASTICIZED VINYL PRODUCTS, OR OTHER AGGRESSIVE CHEMICAL AGENTS NOT COMPATIBLE WITH PVC COMPOUNDS. SYSTEMS SHALL BE HYDROSTATICALLY TESTED AFTER INSTALLATION.</li> <li>DOMESTIC WATER PIPING ABOVE GRADE: ASTM B 88, TYPE L COPPER WITH SOLDERED OR MECHANICALLY CRIMPED JOINTS (PRO PRESS)</li> <li>DOMESTIC WATER PIPING ABOVE GRADE: SOCKET WELDED CPVC TUBE AND FITTINGS PER ASTM D 2846.</li> <li>DOMESTIC WATER PIPING ABOVE GRADE: UPONOR AQPXV PIPING WITH PROPEX FITTINGS FOR ALL BRANCH CONNECTIONS AND TERMINATIONS (OR REHAU EQUIVALENT). DCW TO BE BLUE PIPE, DHW TO BE RED PIPE, AND DHWR TO BE CLEAR PIPE.</li> <li>DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K COPPER WITH SILVER SOLDERED JOINTS.</li> <li>CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER WITH SOLDERED JOINTS, OR CPVC IF ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION.</li> </ol>	<ol style="list-style-type: none"> <li>ANY PIPING SYSTEM LOCATED IN A RETURN AIR PLENUM SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NO MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.</li> <li>FIRE STOP ALL PIPING MATERIALS PASSING THROUGH FIRE RATED STRUCTURES OR FIRE RATED ASSEMBLIES IN ACCORDANCE WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. USE CURRENTLY LISTED U.L. CLASSIFIED PRODUCTS, TESTED BY ASTM E814. USE FOR ALL APPLICABLE PIPE PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, OR FLOOR CEILING ASSEMBLIES IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.</li> <li>COMPRESSED AIR PIPING: 1" AND SMALLER: TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; COPPER-PUSH FITTINGS; AND BRAZED JOINTS.</li> <li>COMPRESSED AIR PIPING: 2" DOWN TO 1-1/4" SHALL BE : TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; AND BRAZED JOINTS.</li> <li>COMPRESSED AIR PIPING: 2-1/2" TO 4" SHALL BE TYPE K OR L (TYPE A OR B), COPPER TUBE; WROUGHT-COPPER FITTINGS; COPPER PRESSURE-SEAL-JOINT FITTINGS; AND BRAZED JOINTS.</li> <li>COMPRESSED AIR DRAIN PIPING SHALL BE TYPE M (TYPE C) COPPER TUBE; WROUGHT-COPPER FITTINGS, AND BRAZED OR SOLDERED JOINTS.</li> </ol> <p><b>INSULATION</b></p> <ol style="list-style-type: none"> <li>WATER PIPING IN UNCONDITIONED SPACE AND EXTERIOR WALLS SHALL BE 2" FIBERGLASS INSULATION.</li> <li>HOT WATER PIPING 2" OR LESS SHALL BE 1-INCH FIBERGLASS INSULATION. HOT WATER PIPING GREATER THAN 2-INCHES SHALL BE 1 1/2" FIBERGLASS INSULATION. RUNOUTS, NOT EXCEEDING 12 FEET, UP TO 2-INCHES SHALL BE 1/2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKET.</li> <li>STORM DRAIN PIPING ABOVE GRADE SHALL BE 1/2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKET.</li> <li>HORIZONTAL SANITARY AND STORM PIPING EXPOSED TO OUTDOOR TYPE AMBIENT CONDITIONS INCLUDING COVERED PARKING AND CRAWL SPACES SHALL BE HEAT-TRACED AND INSULATED WITH 1-INCH FIBERGLASS INSULATION.</li> <li>VERTICAL SANITARY AND STORM PIPING EXPOSED TO OUTDOOR TYPE AMBIENT CONDITIONS INCLUDING COVERED PARKING AND CRAWL SPACES SHALL BE INSULATED WITH 1-INCH FIBERGLASS INSULATION.</li> <li>CONDENSATE DRAIN PIPING SHALL BE 1/2-INCH THICK INSULATION WITH AN ALL-SERVICE JACKET.</li> <li>COLD WATER DISTRIBUTION PIPING SHALL NOT BE INSULATED UNLESS OTHERWISE NOTED.</li> <li>COLD OR HOT WATER PIPING IN A WALL, CEILING, OR FLOOR THAT IS ADJACENT TO AN UNCONDITIONED SPACE SHALL HAVE 1-INCH THICK INSULATION. THE PIPING SHALL ALSO BE INSTALLED TO THE WARM SIDE OF THE BUILDING INSULATION.</li> <li>HOT WATER PIPING LESS THAN 1-1/2" SHALL BE 1-INCH FIBERGLASS INSULATION. HOT WATER PIPING 1-1/2 TO 4" SHALL BE 1 1/2" FIBERGLASS INSULATION.</li> </ol>	
	<p><b>PLUMBING EQUIPMENT/FIXTURES</b></p> <ul style="list-style-type: none"> <li>FURNISH AND INSTALL PLUMBING FIXTURES AS SCHEDULED ON THE PLANS.</li> <li>PROVIDE CHROME PLATED ANGLE STOPS AND ESCUTCHEON PLATES ON ALL EXPOSED FIXTURE RUNOUTS</li> <li>PROVIDE INSULATION AND ROUGH IN AS REQUIRED FOR COMPLIANCE WITH ADA REQUIREMENTS.</li> <li>PROVIDE ALL ACCESSORIES AND SPECIALTY ITEMS AS REQUIRED FOR A COMPLETE FIXTURE INSTALLATION.</li> </ul>	<p><b>REDUCED PRESSURE BACKFLOW PREVENTER</b></p> <p>FURNISH AND INSTALL LEADFREE REDUCED PRESSURE BACKFLOW PREVENTER FOR THE PRIMARY DOMESTIC COLD WATER SERVICE IN ACCORDANCE WITH STATE, LOCAL, AND JURISDICTIONAL WATER DISTRICT REQUIREMENTS.</p> <p>FURNISH AND INSTALL REDUCED PRESSURE BACKFLOW PREVENTER FOR MECHANICAL EQUIPMENT REQUIRED OF THIS OR OTHER SECTIONS OF THESE SPECIFICATIONS.</p> <p><b>ELECTRIC WATER HEATERS</b></p> <p>FURNISH AND INSTALL A GLASS LINED ELECTRIC WATER HEATER AS SCHEDULED ON THE PLANS.</p> <p>FURNISH HEATER WHICH ARE UL LABELED AND MEET THE REQUIREMENTS OF LOCAL MUNICIPALITIES.</p> <p>WATER HEATER LOCATED IN CEILING SHALL BE PROVIDED WITH 2 1/2" DRAIN PAN. TERMINATE DRAIN TO NEAREST FLOOR DRAIN, FLOOR SINK OR LAV TRAP.</p>

ABBREVIATIONS		PLUMBING LEGEND	
(D)	DEMO	-----CND-----	CONDENSATE
(E)	EXISTING	-----DCW-----	DOMESTIC COLD WATER
(N)	NEW	-----120-----	DOMESTIC HOT WATER
AAV	AIR ADMITTANCE VALVE	-----120R-----	DOMESTIC HOT WATER RECIRC
AD	AREA DRAIN	-----GW-----	GREASE WASTE
AFF	ABOVE FINISH FLOOR	-----G-----	GAS
AHU	AIR HANDLING UNIT	-----RD-----	ROOF DRAIN
B	BOILER	-----ORD-----	OVERFLOW ROOF DRAIN
BB	BASEBOARD	-----SOI-----	SAND OIL
BF	BOOSTER FAN	-----SS-----	SANITARY SEWER
BFP	BACKFLOW PREVENTER	-----V-----	VENT
BT	BATH TUB	----- (A)XX-----	TYPICAL PIPE ABOVE/ON ROOF
BV	BALL VALVE	----- (B)XX-----	TYPICAL PIPE BELOW/UNDERGROUND
CD	CONDENSATE DRAIN	----- (E)XX-----	TYPICAL PIPE EXISTING
CFM	CUBIC FEET PER MINUTE		
CH	CHILLER		
CO	CLEANOUT		
COTG	CLEANOUT TO GRADE		
CU	CONDENSING UNIT		
CV	CHECK VALVE		
CUH	CABINET UNIT HEATER		
DCW	DOMESTIC COLD WATER		
DF	DRINKING FOUNTAIN		
DHW	DOMESTIC HOT WATER		
DSN	DOWN SPOUT NOZZLE		
EC	ELECTRICAL CONTRACTOR		
EOH	END OF LINE CLEANOUT		
EDH	ELECTRIC DUCT HEATER		
EF	EXHAUST FAN		
EW	ELECTRIC WATER COOLER		
EW	ELECTRIC WATER HEATER		
FURN	FURNACE		
FCO	FLOOR CLEANOUT		
FCU	FAN COIL UNIT		
FD	FLOOR DRAIN		
FS	FLOOR SINK		
G	GAS		
GC	GENERAL CONTRACTOR		
GM	GAS METER		
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE		
GUH	GAS UNIT HEATER		
GW	GREASE WASTE		
GWH	GAS WATER HEATER		
H	HOSE BIB		
HP	HEAT PUMP		
HX	HEAT EXCHANGER		
IM	ICE MAKER BOX		
LAV	LAVATORY		
LS	LAUNDRY SINK		
MAU	MAKE-UP AIR UNIT		
MC	MECHANICAL CONTRACTOR		
MF	MEASURE FLOW		
NC	NOT IN CONTRACT		
NC	NORMALLY CLOSED		
NO	NORMALLY OPEN		
NT	NOT TO SCALE		
OA	OUTSIDE AIR		
ORD	OVER FLOOR ROOF DRAIN		
P	PUMP		
PC	PLUMBING CONTRACTOR		
PRV	PRESSURE REDUCING VALVE		
PSI	POUNDS PER SQUARE INCH		
R	RETURN AIR		
RAR	RETURN AIR REGISTER		
RD	ROOF DRAIN		
RD	RADIANT HEATER		
RTU	ROOF TOP UNIT		
S	SUPPLY AIR		
SA	SUPPLY AIR REGISTER		
SF	SUPPLY FAN		
SFT	SERIES FAN TERMINAL		
SH	SHOWER		
SK	SINK		
SOI	SAND/OIL INTERCEPTOR		
SS	SERVICE SINK		
T&P	TEMPERATURE & PRESSURE		
TD	TRENCH DRAIN		
TP	TYPICAL		
UR	URINAL		
VAV	VARIABLE AIR VOLUME		
VVT	VARI TRAC		
WB	WASHER BOX		
WCO	WALL CLEANOUT		
WH	WALL HYDRANT		

TAG	ADA	DESCRIPTION	CONNECTIONS	FIXTURE	MODEL NAME	MODEL #	FLOW RATE	DIMENSIONS	MOUNTING	RIM HEIGHT	FINISH	MISC.	REMARKS
			DOW DHW WASTE VENT	MANUFACTURER									
WC-1	YES	WATER CLOSET-TANK	1/2" 1/2" 3" 2"	AMER. STND.	CADET PRO	21AA-104	1.28 GPF	12" R.J.2-1/8" TRAP	FLOOR	16-1/2"	VITREOUS CHINA	ELONGATED	
		OPEN FRONT LESS COVER		AMER. STND.	HEAVY DUTY	5901.110		ELONGATED			PLASTIC	STAINLESS HINGES	
LAV-1	YES	WALL HUNG	1/2" 1/2" 1-1/2" 2"	AMER. STND.	LUCERNE	0356.XXX		20-2"x18-1/4"	WALL HANGER	31" TO 34" TO RIM	VITREOUS CHINA	FRONT OVERFLOW SINGLE HOLE, 4" CENTERS	6W, WB
	YES	FAUCET		MOEN	CHATEAU	L64621	0.5 GPM	DECK MOUNT	4" CENTERS		POLISHED CHROME	-	PS
SS-1	YES	SERVICE SINK	3" 2"	CHICAGO FAUCET	ELKAY	14-022X22-0X	2.0 GPM	FLOOR/WALL	36"		STAINLESS STEEL		
	YES	FAUCET		CHICAGO FAUCET	MECHANICAL	540-LDL12ABCP	2.2 GPM	DECK MOUNT	8" CENTERS		CHROME PLATES	ADJ. ARM. HOT/COLD PADDLE	
		MANUAL FOOT PEDAL VALVE	1/2" 1/2"	ZURN	FOOT VALVE	Z85500-XL			FLOOR		CHROME		**
TB-1	-	TRENCH DRAIN	- - 4" -	ZURN		Z886	-	80"-0" LENGTH	FLOOR		W/ DGE (TRAFFIC RATED) GRATES	-	
WD-1	-	WALL BOX	1/2" - - -	SIoux CHIEF		696	-	696-IF FRAME	WALL			RECESSED WALL BOX	W/ WATER HAMMER ARRESTOR
	N	INTERIOR WALL HYDRANT	3/4" - - -	WOODFORD	ANTI-SIPHON	MODEL 101	-	VARIES W/ WALL DEPTH	INTERIOR ONLY	24" AFG	INTERIOR USE ONLY	W/ BACKFLOW PROTECTION	
ERC-1	Y	B/LVELE	1/2" - 2" 2" 2"	ELKAY	EZH20	EZSTLSWSK	36" WIDE	FLOOR	ADA		STAINLESS STEEL	CARRIER FREE	6W, 7
		WALL HANGER		ZURN	SINGLE	Z1222		WALL			DURA COATED	CARRIER ONLY	IF REQUIRED
RD-1	-	ROOF DRAIN	- - - -	ZURN		Z100	15" DIA	ROOF/EXTERIOR	-		DURA COATED CAST IRON	FLASH CLAMP/GRAVEL GUARD	
ORD-1	-	OVERFLOW ROOF DRAIN	- - - -	ZURN		Z100	15" DIA	ROOF/EXTERIOR	-		DURA COATED CAST IRON	FLASH CLAMP/GRAVEL GUARD	
DSN-1		DOWNSPOUT NOZZLE	- - - -	ZURN		Z199			EXTERIOR			NICKEL BRONZE	-
AD-1		AREA DRAIN	- - - -	ZURN	MEDIUM DUTY	Z-507-P	-	7" ROUND	FLOOR			CAST IRON BODY	-
FD-1		FLOOR DRAIN	- - - -	ZURN		Z-550-P	5-1/2" ROUND		FLOOR		NICKEL BRONZE FINISH, STAINLESS STRAINER	W/ TRAP PRIMER CONNECTION	

BS-BASKET STRAINER	GS-GRID STRAINER	WB-WALL BRACKET	GENERAL NOTES:
DS-DOME STRAINER	PS-POP UP STRAINER	TP-ASSE 1018 OR 1044 TRAP PRIMER	1. ALL PUBLIC SINKS TO HAVE OPEN GRID STRAINERS.
EC-ENAMEL COATING	SS-STAINLESS STEEL	6W-6" WALL REQ.	2. ALL NON-PUBLIC SINKS TO HAVE POP-UP STRAINERS.

6. TRIP LEVERS SHALL BE TO WIDE/OPEN SIDE OF TOILET.

7. 120V/1ph-5 FLA, 370 WATTS

PROJECT: BRAKES PLUS - HIGHLAND VILLAGE, TEXAS												
BUILDING: 1			CODE: 2018 IPC				DATE: 1/6/2023					
FIXTURE TOTAL	FIXTURE TYPE			WATER FIXTURE UNITS					WASTE FIXTURES UNITS		REMARKS	
		occ.	SUPPLY TYPE	COLD WATER	COLD TOTAL	HOT WATER	HOT TOTAL	COLD & HOT	COMBINED TOTAL	FIXTURE VALUES		TOTAL VALUES
2	HOSE BIBBS	PRIVATE	1/2" VALVE	1.00	2.0		0.0	1.00	2.0		0.0	
1	DRINKING FOUNTAIN	OFFICES	3/8" VALVE	0.25	0.3		0.0	0.25	0.3	0.50	0.5	
2	LAVATORY	PUBLIC	FAUCET	1.50	3.0	1.50	3.0	2.00	4.0	1.00	2.0	
1	SERVICE SINK	OFFICES	FAUCET	2.25	2.3	2.25	2.3	3.00	3.0	2.00	2.0	
2	WATER CLOSET	PUBLIC	FLUSH TANK	5.00	10.0		0.0	5.00	10.0	4.00	8.0	
TOTAL FIXT. UNITS					17.50		5.25		19.25		12.50	TOTAL FIXTURE UNITS
			GPM						20		4"	BUILDING MAIN SIZE
			PIPE SIZE						1"		1/8"	BUILDING MAIN SLOPE
	WATER SERVICE LINE SIZE	FT/SEC	PSI/100FT	NOTES								
TAP & METER	3/4"											
BFP & BLDG MAIN	1"	6.00	9.00									

PLAN MARK	MANUFACTURER	MODEL NO.	TANK GALLONS	ELECTRICAL			GPH RISE	(F)	REMARKS
				VOLT	PH	KW			
EW-H-1	STATE	PCE-30-10MSA	30	120	1	1.5	8	70	1

PLAN MARK	MANUFACTURER	MODEL NO.	GPM	HEAD (FT)	RPM	HP	ELECTRICAL		REMARKS
							VOLT	PHASE	
CP-1	TACO	008	10	10	3250	1/25	120	1	1

PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)	REMARKS
ABS	4	10	B
PVC	4	10	B
COPPER OR COPPER ALLOY	12	10	
COPPER 1-1/4" AND SMALLER	6	10	
COPPER 1-1/2" AND LARGER	10	10	
CROSS LINK PE (PEX)	2.67" (32")	10	B
CAST IRON	5	15	A
STAINLESS STEEL	10	10	B

SHEET #	SHEET TITLE
P0.1	PLUMBING SPECS, SCHEDULES & LEGEND
P1.0	UNDERGROUND PLUMBING PLAN
P1.1	PIPING PLAN
P2.1	PLUMBING ROOF PLAN
P3.1	PLUMBING DETAILS
P4.0	PLUMBING ISOMETRICS

# BRAKES PLUS

640 EAST FM 2410  
HARKER HEIGHTS, TEXAS



REVISION	DATE	COMMENTS
	05/13/24	PERMIT

**ARCODEV JOB #:**  
**CLIENT/JOB #:**  
**DRAWN BY:**  
**CHECKED BY:**  
**DATE OF ISSUE:** 05/13/24

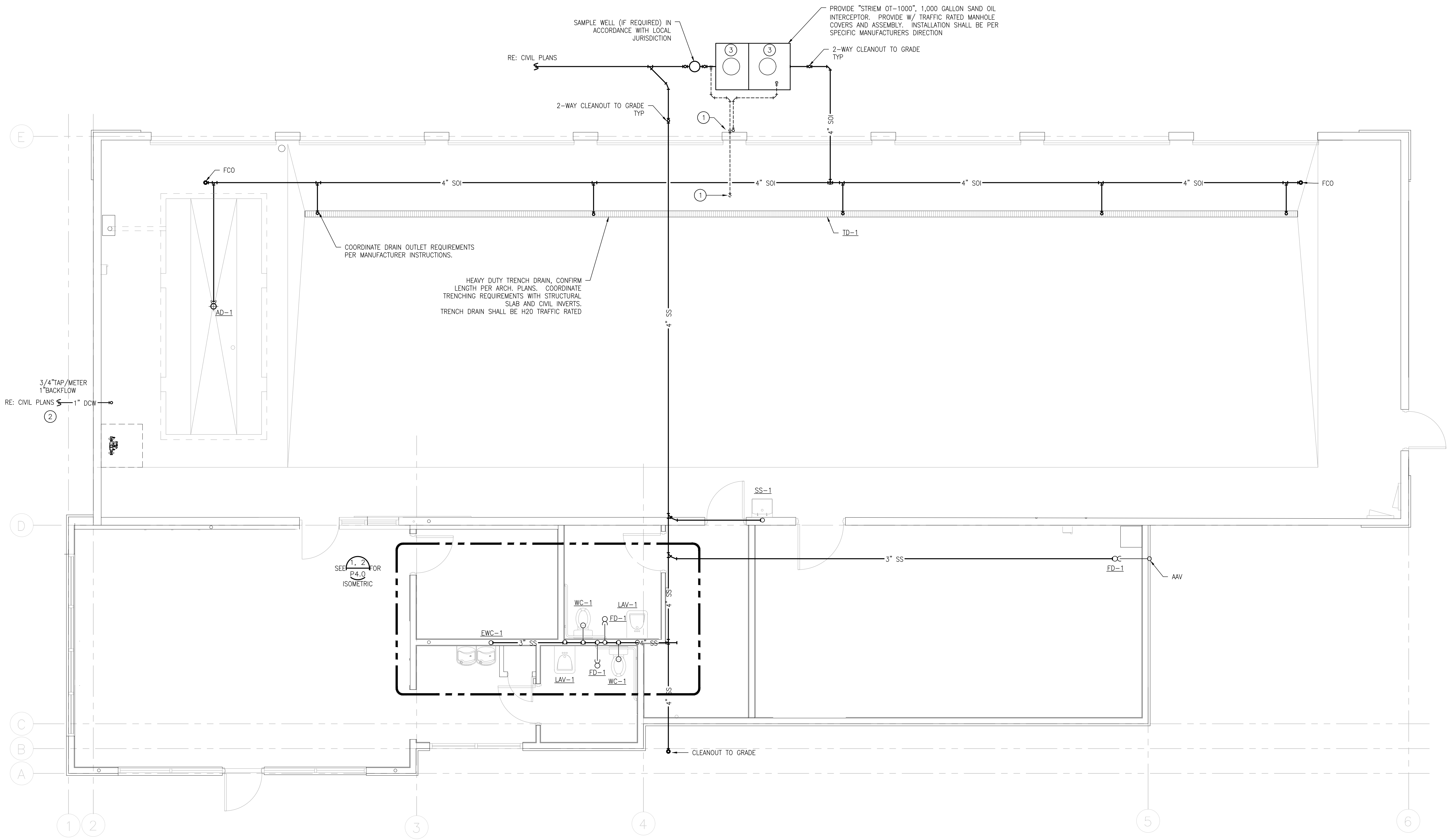


45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.881-8925

# PO.1

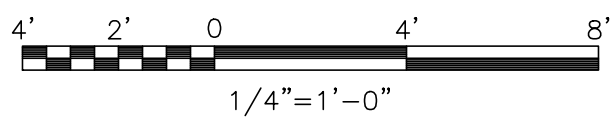
## PLUMBING SPECS, SCHEDULES AND LEGEND





# 1 UNDERGROUND PLUMBING PLAN

P1.0



## GENERAL NOTES:

- BUILDING SEWERS SHALL BE PROVIDED WITH CLEANOUTS LOCATED NOT MORE THAT 100'-0" APART, IPC SECTION 708.3.2
- CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45 DEGREES FOR BUILDING SEWER. FOR BUILDING DRAINS WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING, IPC SECTION 708.3.3
- REFER AND COORDINATE W/ CIVIL PLANS FOR SANITARY, GAS AND WATER EXIT/ENTRY LOCATIONS.
- PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS, RE: DETAIL ON SHEET P3.1

## DRAWING NOTES:

- (2), 2" VENT UP THROUGH SLAB, COMBINE INTO (1) 3" V, ROUTE AS INDICATED. TERMINATE 3" V TO 3" VTR.
- 1" DOMESTIC WATER TAP/METER ON SITE UPSIZE TO A 1" DCW AFTER METER, TO A 1" BACKFLOW IN BUILDING. COORDINATE PER CIVIL PLANS.
- H2O TRAFFIC RATED MANHOLE ASSEMBLY, ACCESS COVERS, MANHOLE RING EXTENTIONS AS REQUIRED FOR DEPTH OF INTERCEPTOR.

PROJ # 241212

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14412 Alene Ct. NE  
Albuquerque, NM 87123  
Telephone 720-409-2454

BRAKES PLUS

640 EAST FM 2410  
HARKER HEIGHTS, TEXAS



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05/13/24	PERMIT

ARCODEV JOB #:  
CLIENT JOB #:  
DRAWN BY: JRC  
CHECKED BY: LRP  
DATE OF ISSUE: 05/13/24



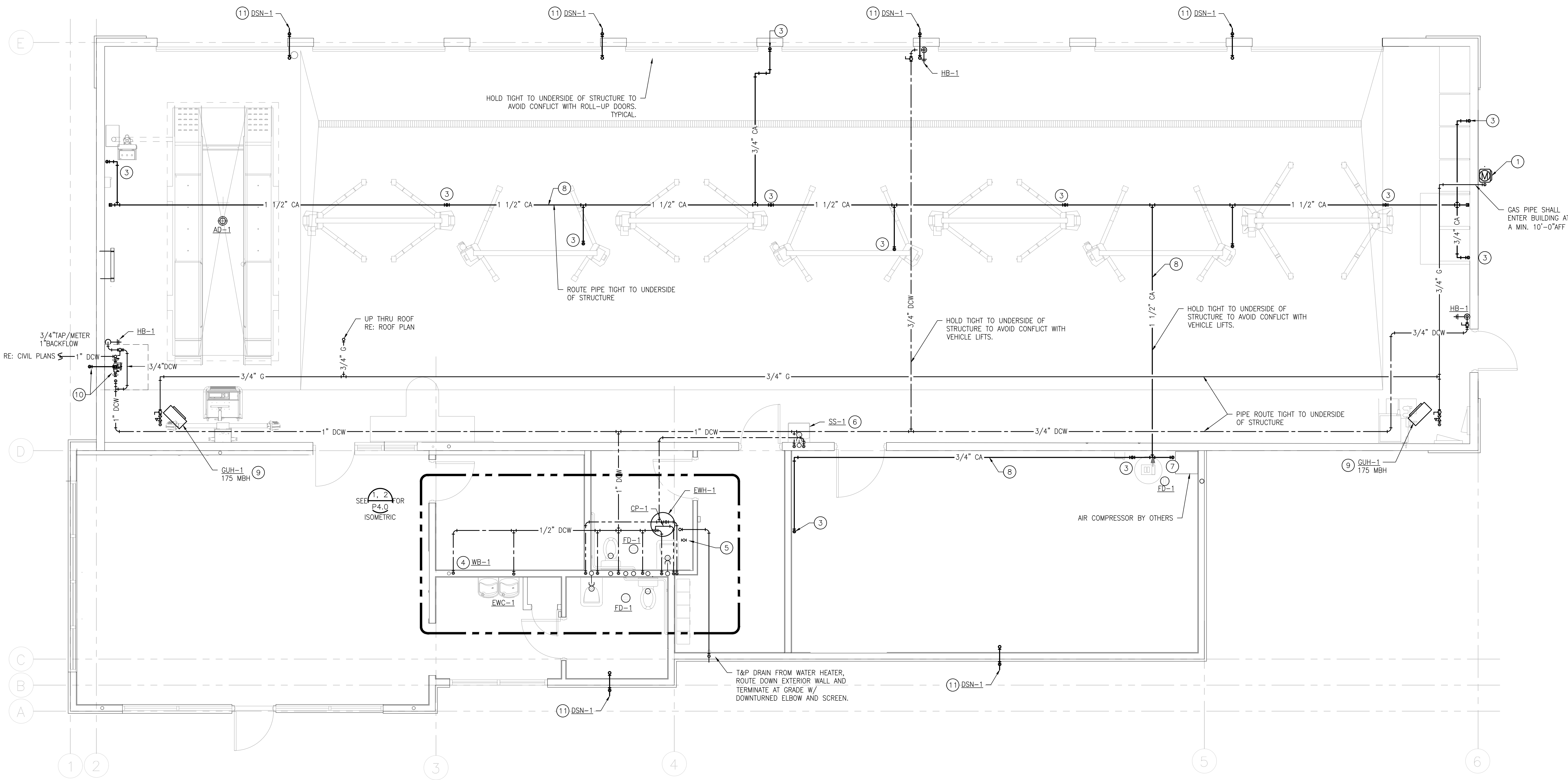
45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.881.6825

SHEET

P1.0

UNDERGROUND  
PLUMBING PLAN





#### DRAWING NOTES:

- 1 GAS METER: SIZING BASED ON 175'-0" AT 2 PSI GAS PRESSURE. TOTAL CONNECTED GAS LOAD = 480 MBH. CONFIRM GAS PRESSURE WITH LOCAL GAS COMPANY SERVICE.
- 2 3/4" G UP THRU ROOF FOR RTU-1, 130 MBH
- 3 3/4" CA DROP, TERMINATE PER DETAIL. CONFIRM HEIGHT REQUIREMENT WITH EQUIPMENT SERVED. CONTRACTOR TO VERIFY SIZE IS ADEQUATE FOR EQUIPMENT USE.
- 4 1/2" DCW DN IN WALL TO RECESSED WALL OUTLET VALVE BOX, PROVIDE W/ INLINE BACKFLOW PREVENTER. ROUGH-IN FOR COFFEE MAKER.
- 5 3" V UP TO 3" VTR.
- 6 3/4" DCW/DHW AT WALL, OFFSET 1/2" DCW/DHW TO FAUCET AND 1/2" DCW/DHW TO FOOT PEDALS.
- 7 COMPRESSED AIR MAIN FROM COMPRESSOR OUTLET. INSTALL PER MANUFACTURERS INSTRUCTIONS. PROVIDE ONE DISCONNECT AT AIR COMPRESSOR.

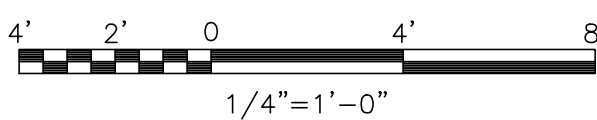
- 8 SLOPE COMPRESSED AIR DOWN IN DIRECTION OF SLOPE AT 1/8" PER FOOT, TYPICAL.
- 9 TERMINATE W/ SHUT-OFF VALVE, PRV AND DIRT LEG. PRV SHALL BE CAPABLE OF REDUCING FROM 2 PSI GAS TO 6"W.C. AT MBH AS INDICATED. PROVIDE VENTLESS REGULATOR IS LOCAL AHJ ALLOWS. IF NOT, VENT SHALL EXIT TO ATMOSPHERE, FULL SIZE.
- 10 1" LEADFREE DOMESTIC WATER BACKFLOW DEVICE, FEBCO LF825Y OR EQUAL. RELIEF DRAIN PIPING FROM AIR GAP FITTING TO TERMINATE OUTDOORS. DISCHARGE MIN 6" AFG, TURN DOWN TO FINISHED GRADE. TERMINATION SHALL INCLUDE STAINLESS STEEL INSECT SCREEN.
- 11 3" RD/ORD FROM ABOVE TO NEAREST PILASTER AND DOWN. EXTEND TO EXTERIOR WALL, TERMINATE W/ DSN-1 AT MIN 12' AFG.

#### GENERAL NOTES:

1. PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS, RE: DETAIL ON SHEET P3.1
2. PAINT ALL EXPOSED GAS PIPING TO MATCH, PER ARCH. PLANS.

### 1 PLUMBING PLAN

P1.1



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BRAKES PLUS

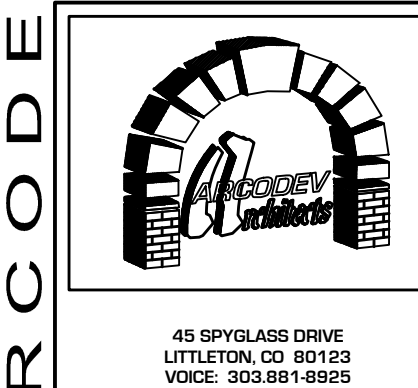
640 EAST FM 2410  
HARKER HEIGHTS, TEXAS



ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05/13/24	PERMIT

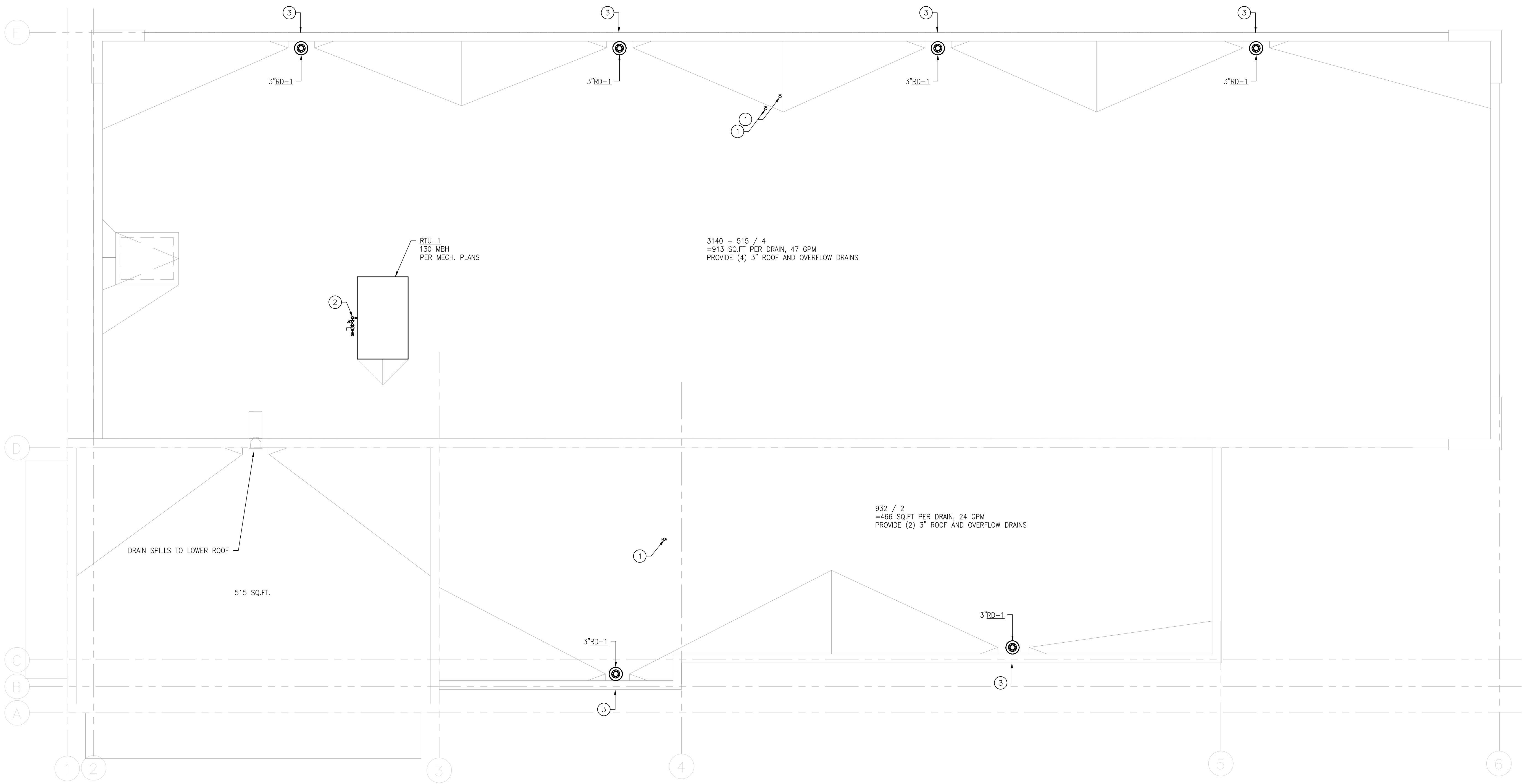
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SHEET

P1.1  
PLUMBING PLAN





1 PLUMBING ROOF PLAN

P2.1

4' 2' 0 4' 8'

1/4"=1'-0"

- DRAWING NOTES:**
- ① 3" PLUMBING VENT UP THRU ROOF FROM BELOW, RE: PLUMBING PLANS.
  - ② GAS PIPING UP FROM BELOW, ROUTE AND TERMINATE W/ SHUT-OFF VALVE, PRV AND DIRT LEG AT ROOFTOP UNIT. PRV SHALL BE CAPABLE OF REDUCING FROM 2 PSI GAS PRESSURE TO 7"W.W. AT MBH AS INDICATED.
  - ③ OVERFLOW SCUPPER, SIZE PER ARCHITECTURAL PLANS.

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BRAKES PLUS

640 EAST FM 2410  
HARKER HEIGHTS, TEXAS

ADAM A. POWELL

27788

05/13/24

OKLAHOMA

ARCHITECT OF RECORD

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ARCODEV

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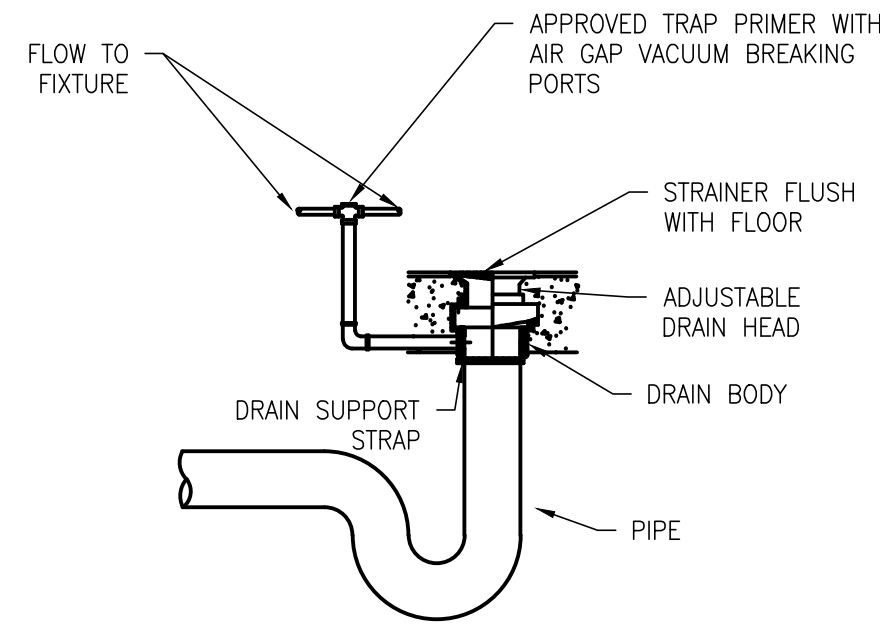
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LITTLETON, CO 80123  
VOICE: 303.881.6525

SHEET

P2.1

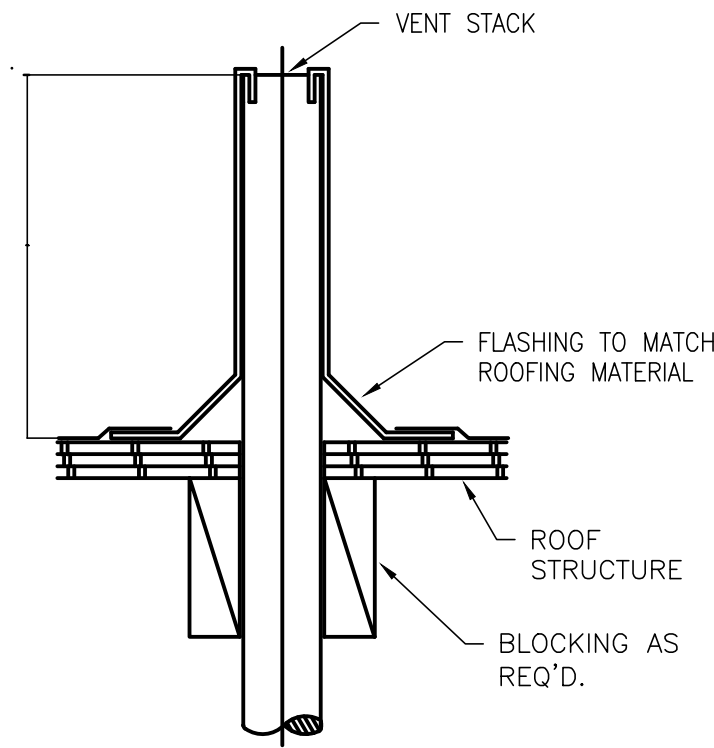
PLUMBING ROOF PLAN





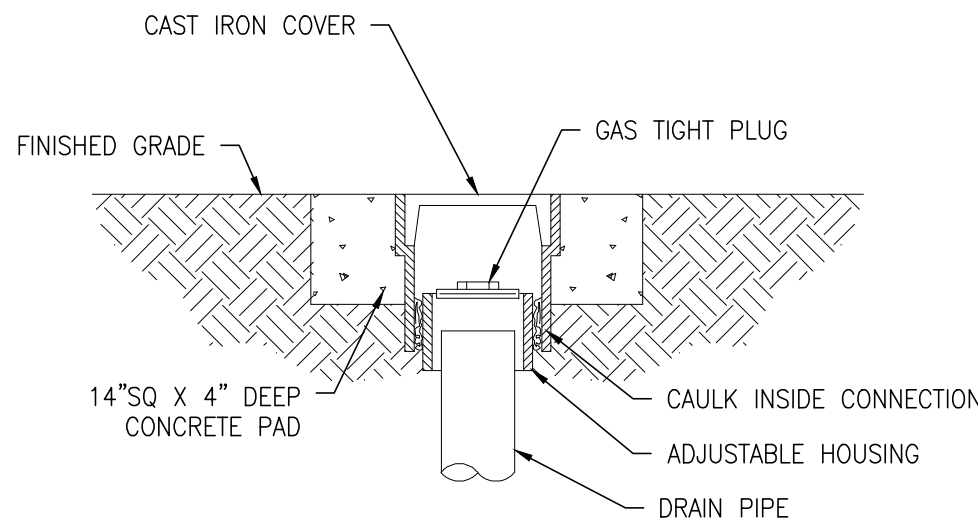
FLOOR DRAIN W/  
TRAP PRIMER DETAIL

NOT TO SCALE



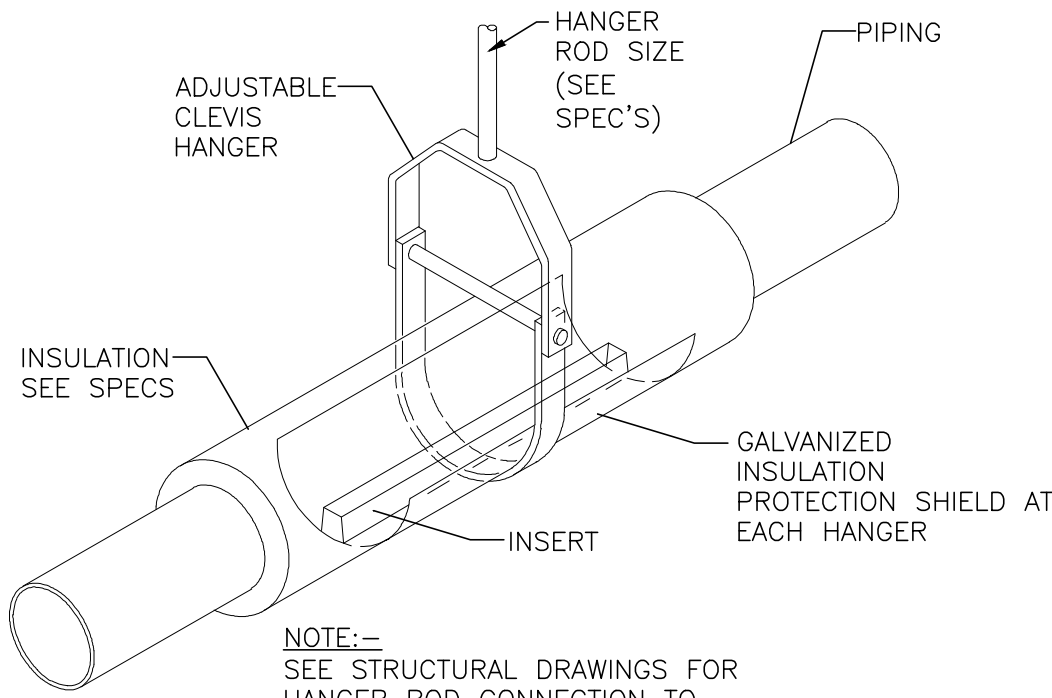
PIPE THRU ROOF DETAIL

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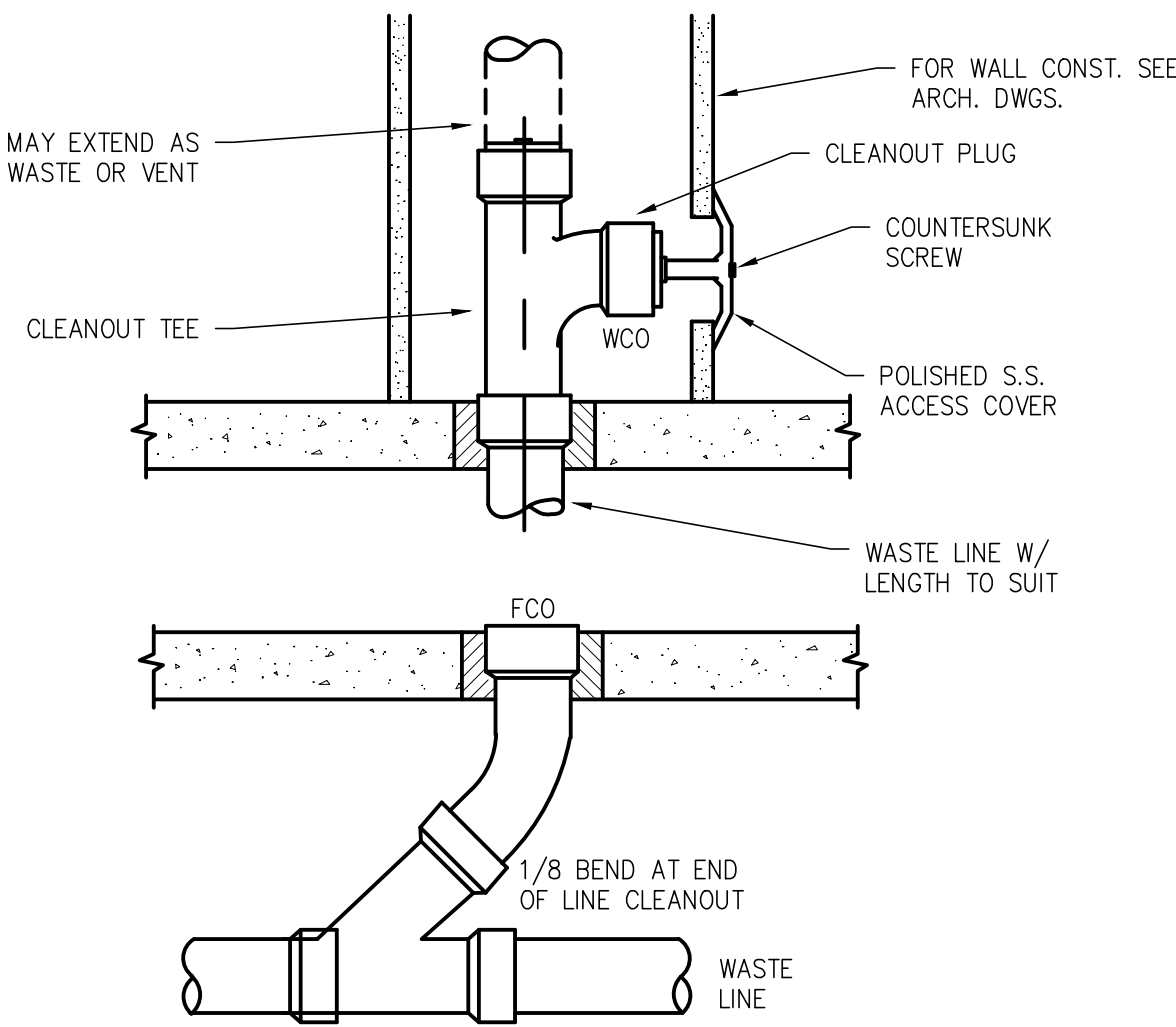
OUTSIDE CLEANOUT TO GRADE

NOT TO SCALE



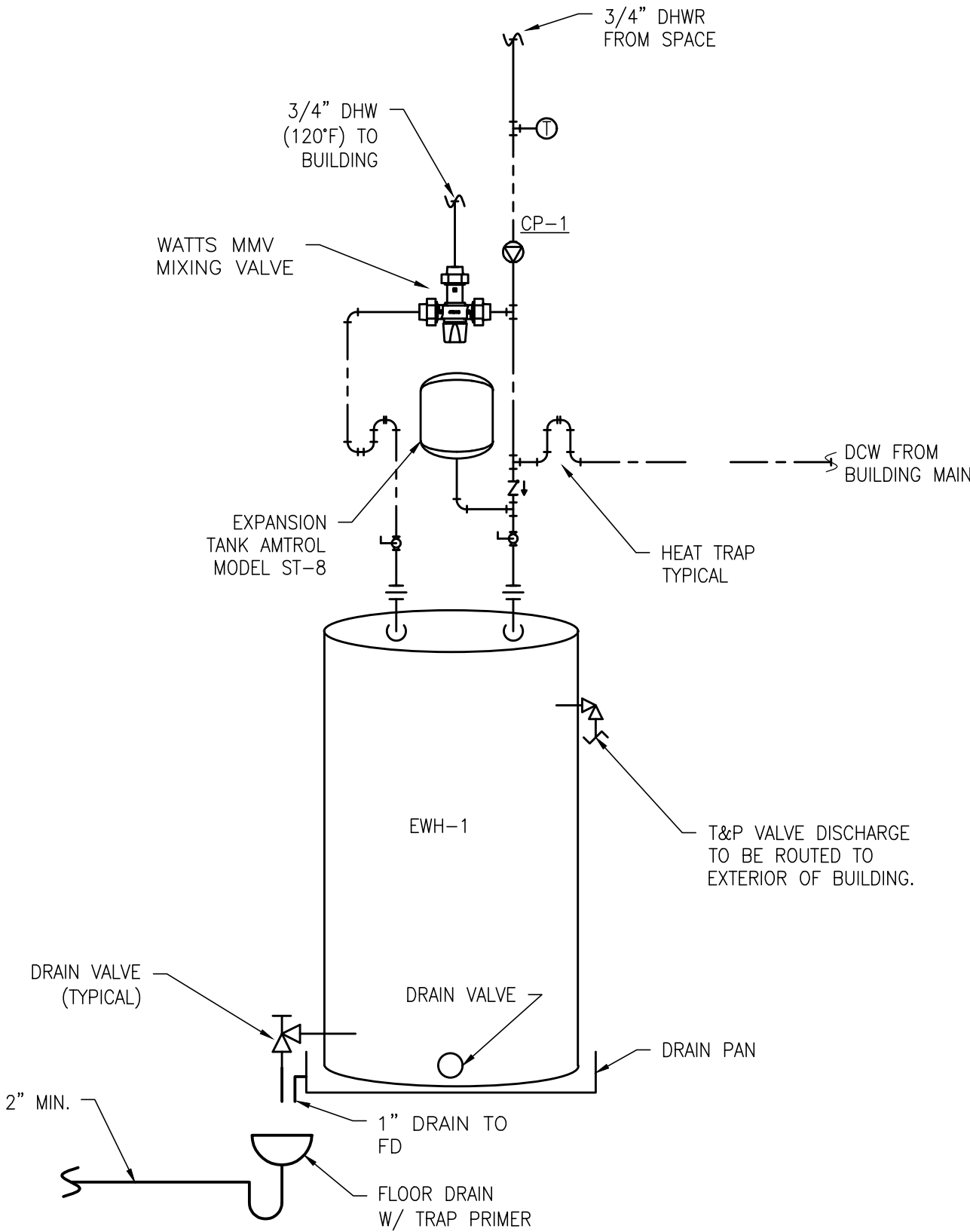
PIPE HANGER AND INSULATION DETAIL

NOT TO SCALE



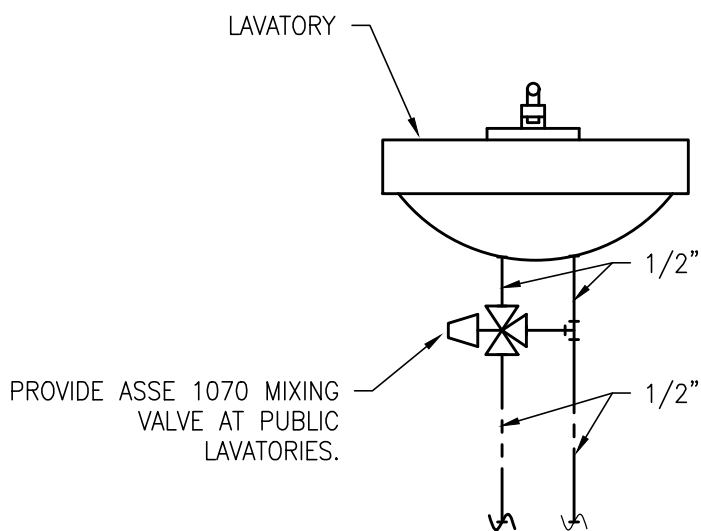
CLEANOUT DETAILS

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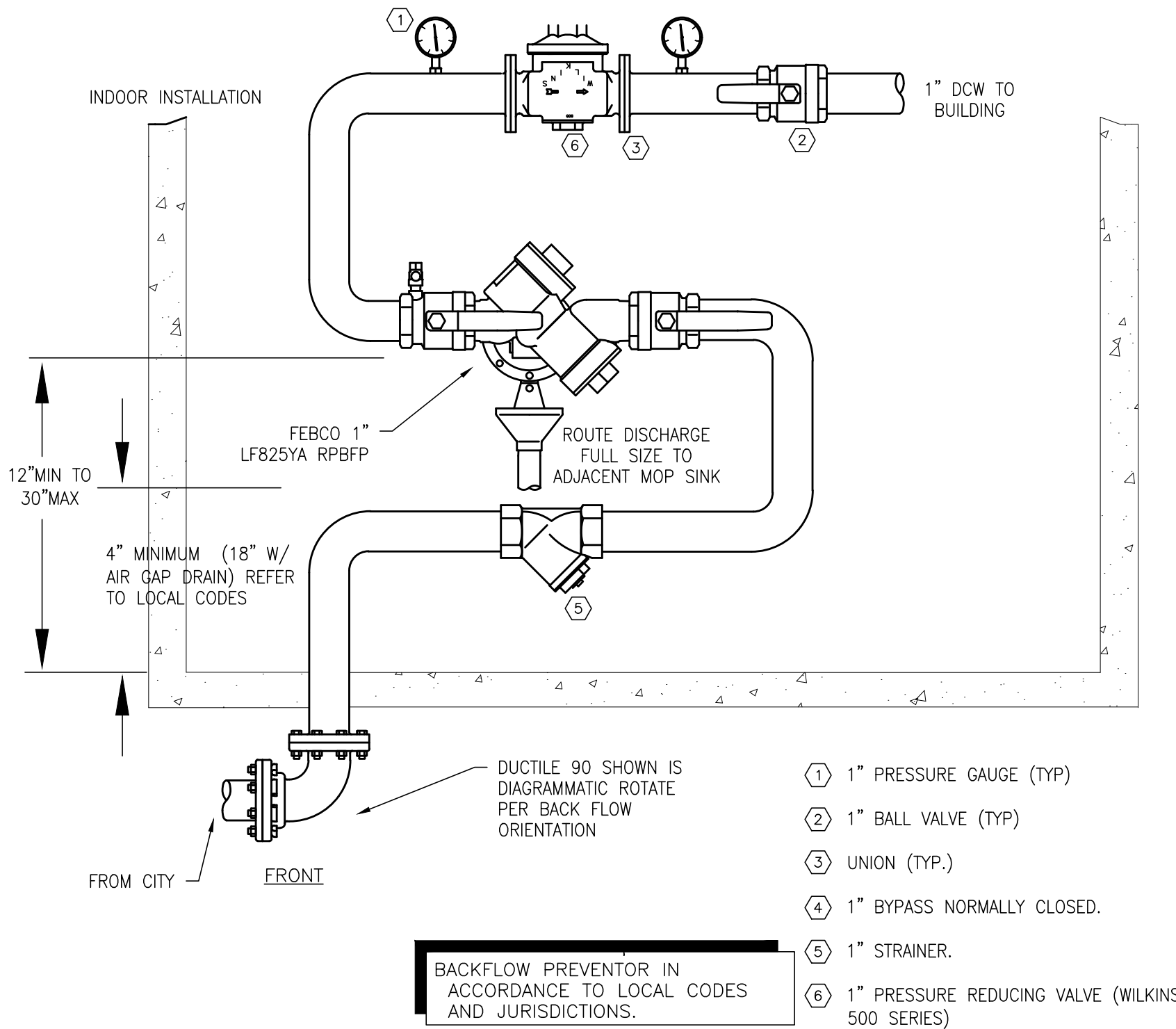
ELECTRIC WATER HEATER DETAIL

NOT TO SCALE



THERMOSTATIC MIXING VALVE DETAIL

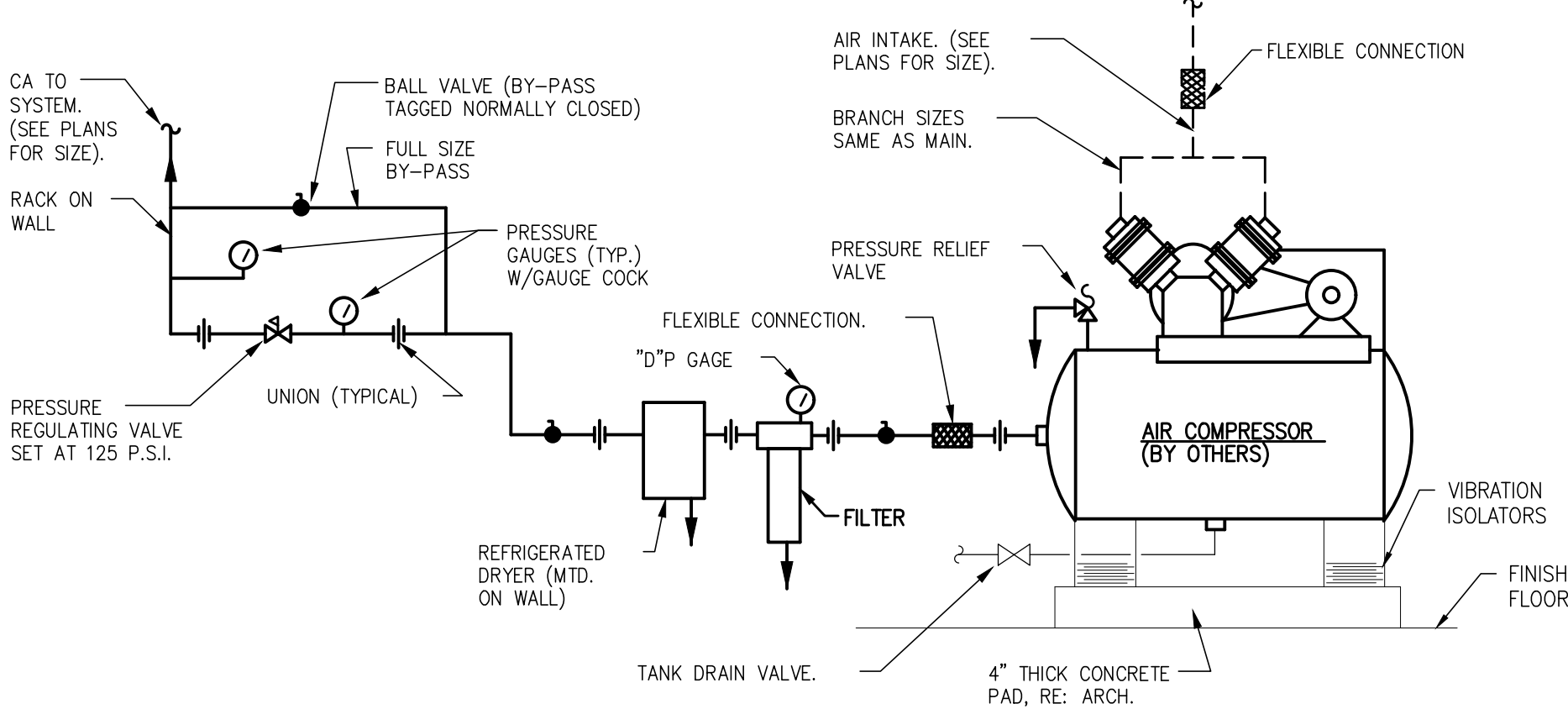
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DOMESTIC WATER ENTRY  
BACKFLOW DETAIL

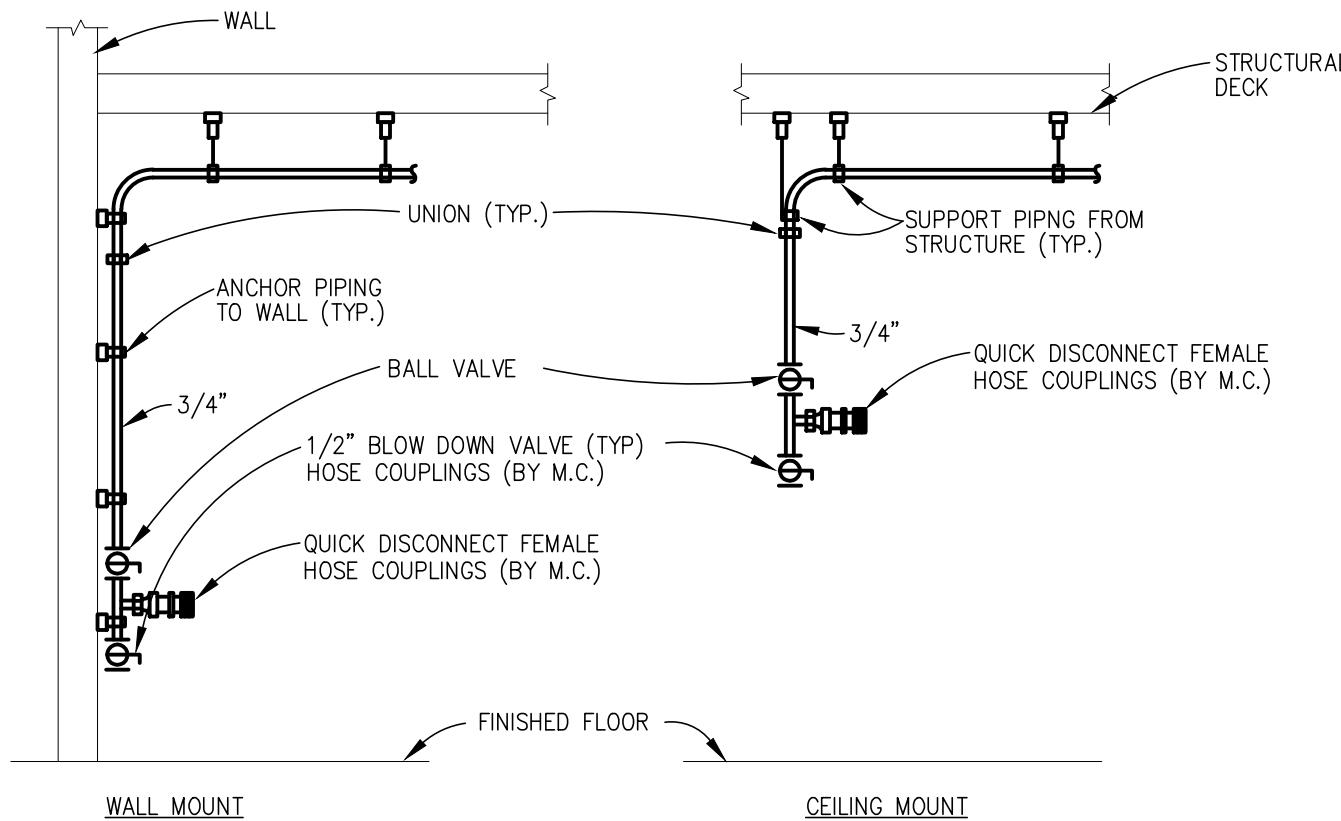
NOT TO SCALE

NOTE: EXTEND ALL DRAINS, FULL SIZE TO DISCHARGE ABOVE FLOOR SINK.



AIR COMPRESSOR PIPING DETAIL

NOT TO SCALE



COMPRESSED AIR CONNECTION DETAILS

NOT TO SCALE

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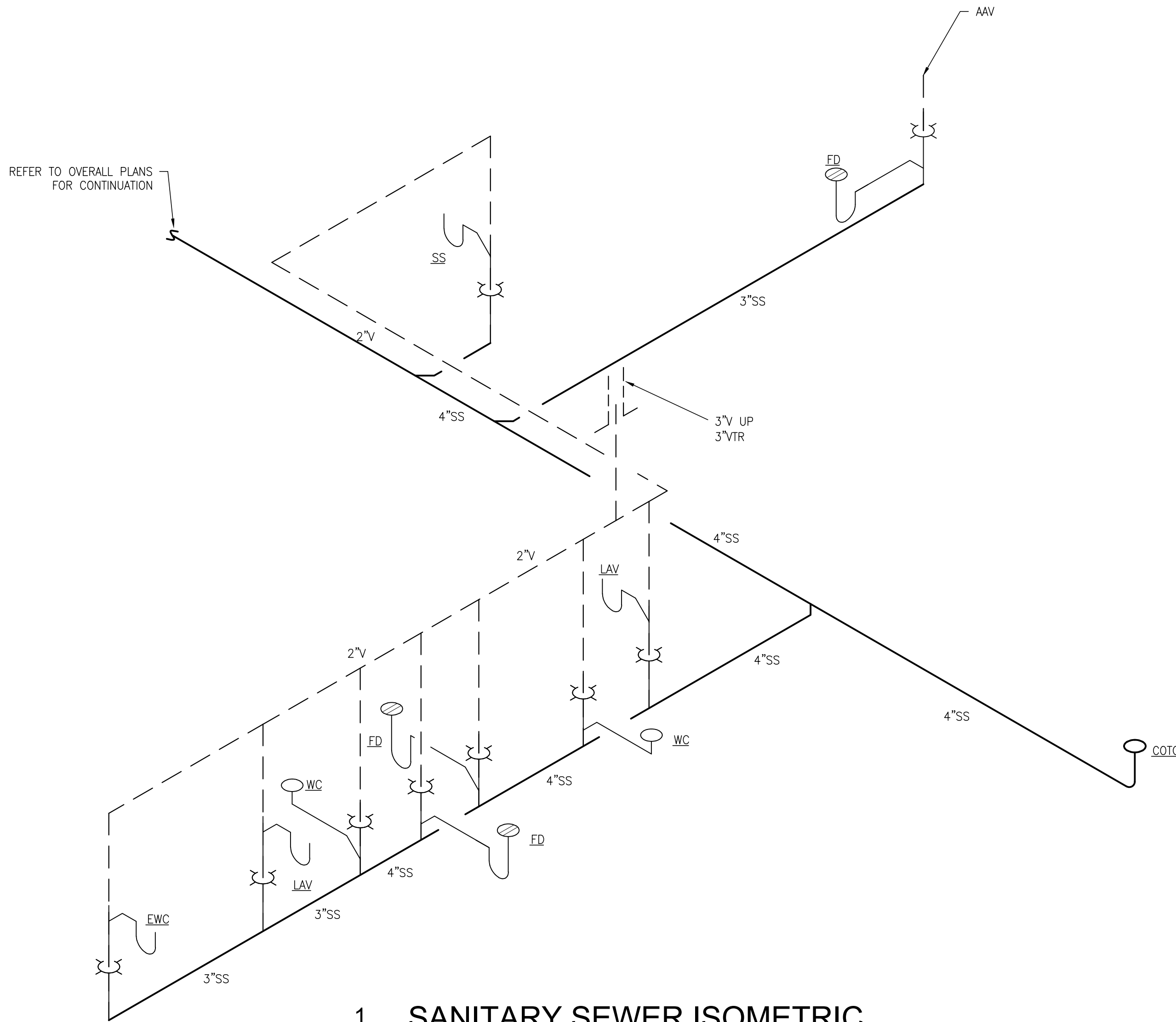
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SHEET

P3.1

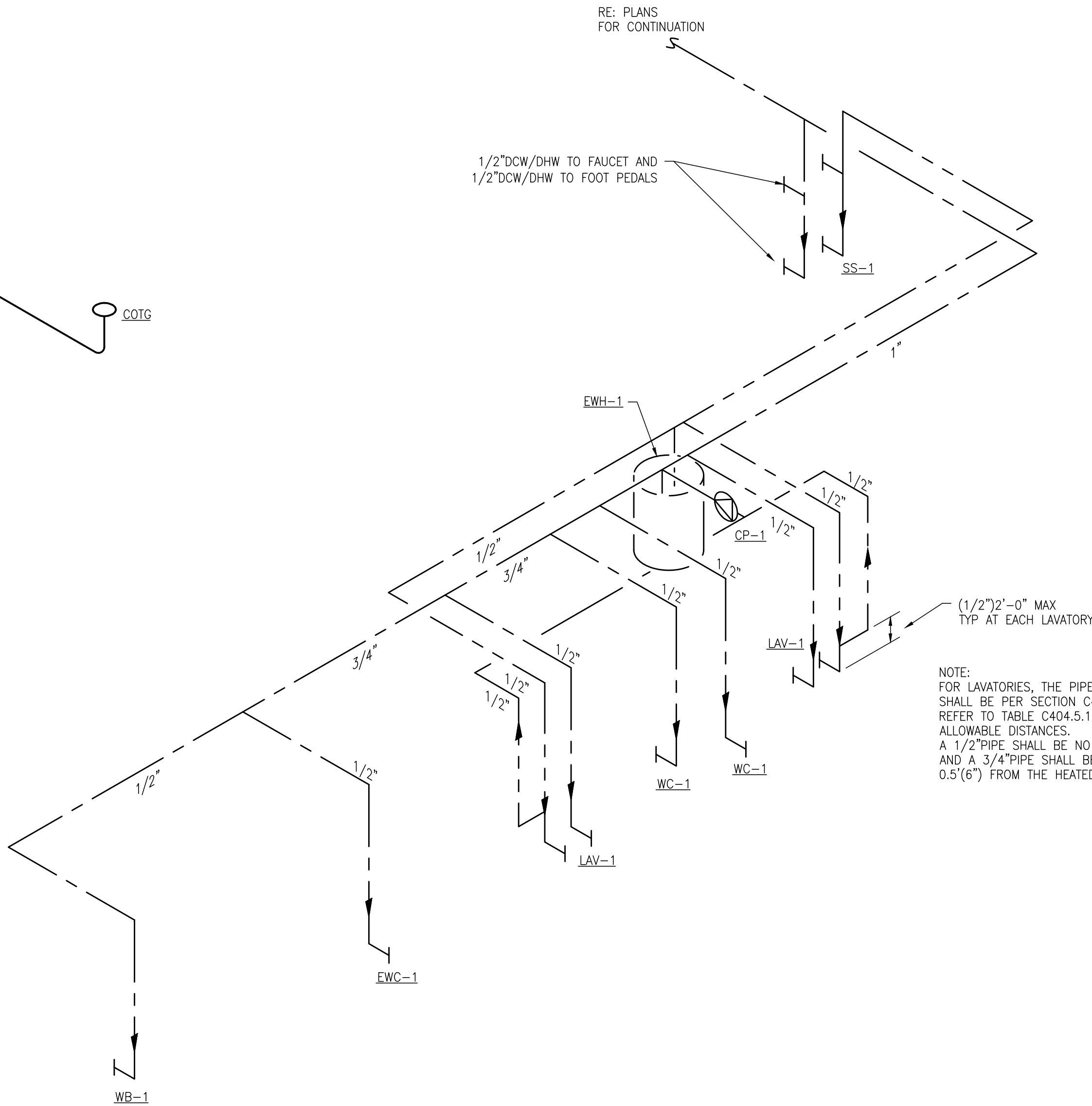
PLUMBING DETAILS





1 SANITARY SEWER ISOMETRIC

P4.0 N.T.S.



2 DOMESTIC HOT WATER PIPING DIAGRAM

P4.0 N.T.S.

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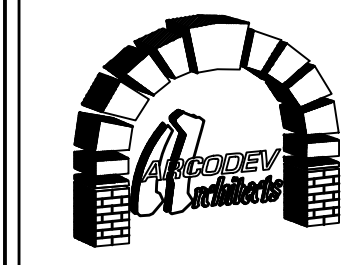
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SHEET

P4.0

PLUMBING ISOMETRICS



ELECTRICAL GENERAL NOTES

1. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.	18. SEE MECHANICAL DRAWINGS FOR LOCATION OF MECHANICAL EQUIPMENT. PROVIDE SERVICE TO AND CONNECT EQUIPMENT AS REQUIRED. PROVIDE FUSES OR HACR-TYPE CIRCUIT BREAKERS FOR ALL AIR CONDITIONING EQUIPMENT SIZED IN ACCORDANCE WITH MANUFACTURER'S NAMEPLATE.
2. FINAL CONNECTIONS & ROUGH-IN REQUIREMENTS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.	19. PROVIDE ENGRAVED NAMEPLATES ON PANELBOARDS, DISCONNECT SWITCHES, ETC. INDICATING EQUIPMENT DESIGNATION (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE. NAMEPLATES TO BE MECHANICALLY FASTENED.
3. CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID.	20. PANEL DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.
4. CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.	21. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW GRADE SHALL BE SCHEDULE 40 PVC. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH P.V.C. JACKET OR APPROVED EQUAL PROTECTION.
5. PROPOSED SUBSTITUTIONS OF ELECTRICAL EQUIPMENT OR REQUEST FOR "OR EQUAL" OR "APPROVED EQUAL" LISTING SHALL BE SUBMITTED TO ARCHITECT NOT LESS THAN TEN (10) WORKING DAYS PRIOR TO BID.	22. EMT, NON-METALLIC AND FLEXIBLE METAL CONDUITS SHALL HAVE A CODE SIZED COPPER GROUNDING CONDUCTOR. INCREASE CONDUIT SIZE AS REQUIRED.
6. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.	23. FIRE ALARM, SOUND, TELEPHONE, COMPUTER, AND SIMILAR SYSTEMS CONDUITS LARGER THAN 1" SHALL HAVE LONG RADIUS SWEEPS (12 TIMES THE DIAMETER).
7. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF LOCAL, STATE, AND NATIONAL CODES AND ORDINANCES.	24. ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L.
8. PROVIDE PERMITS AND INSPECTIONS REQUIRED.	25. WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75 DEGREE C.
9. PROVIDE RECORD DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC.	26. RECEPTACLES INSTALLED OUTSIDE, ON THE BUILDING EXTERIOR OR ROOF, WITHIN 6' OF A SINK OR WATER COOLER CONNECTION, VENDING MACHINES, AND KITCHEN AREAS SHALL BE GFCI TYPE OR PROTECTED BY GFCI CIRCUIT BREAKER PER NEC 511.12.
10. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.	27. ALL NEW EQUIPMENT SUCH AS SWITCHBOARDS, DISTRIBUTION PANELS, DISCONNECT SWITCHES, TRANSFORMERS, AND PANELBOARDS SHALL BE BY THE SAME MANUFACTURER.
11. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.	28. ELECTRICAL CONTRACTOR SHALL SUBMIT 5 COPIES OF ALL ELECTRICAL EQUIPMENT AND LIGHT FIXTURES TO ENGINEER VIA GENERAL CONTRACTOR FOR APPROVAL PRIOR TO ORDERING.
12. WIRE SHALL BE COPPER, 75 DEGREE C RATED FOR GENERAL USE. FOR HID FIXTURES AND WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS, WIRE SHALL BE COPPER, MINIMUM 90 DEGREE C RATED. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30 DEGREE C AMBIENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS.	29. ELECTRICAL CONTRACTOR TO PROVIDE FINAL CONNECTION OF OWNER FURNISHED EQUIPMENT. VERIFY EXACT REQUIREMENTS PRIOR TO ROUGH-IN.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.	30. HANDLE TIES SHALL BE PROVIDED FOR ALL MULTI-WIRED BRANCH CIRCUITS UNLESS INDIVIDUAL NEUTRAL CONDUCTORS ARE PROVIDED PER NEC 210.4(B).
14. CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS OR EQUIPMENT.	31. FURNISH ALL MECHANICAL EQUIPMENT WITH FUSIBLE DISCONNECTS. THESE DISCONNECTS SHALL BE EQUIPED WITH CLASS "R" FUSES.
15. SYSTEMS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC., SHALL BE CONNECTED AND OPERABLE.	
16. VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC., REQUIRED. BACKFILL TRENCHES TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.	
17. PROVIDE MAINTENANCE RECEPTACLE WITHIN 25'-0" OF ALL MECHANICAL OR MOTORIZED EQUIPMENT.	

ALL ELECTRICAL WORK SHALL COMPLY WITH N.E.C. REQUIREMENTS

ELECTRICAL SHEET INDEX

						5-13-24 PERMIT	
						SHEET NO.	SHEET DESCRIPTION
						EO.1	ELECTRICAL COVER SHEET
						ES1.1	ELECTRICAL SITE PLAN
						E1.1	ELECTRICAL LIGHTING PLAN
						E2.1	ELECTRICAL POWER PLAN
						E3.1	ELECTRICAL ROOF PLAN
						E4.1	ELECTRICAL ONE LINE DIAGRAM
						E5.1	LIGHTING COMPLIANCE CERTIFICATES

ELECTRICAL LEGEND

	DUPLEX OUTLET
	DEDICATED DUPLEX OUTLET
	AUTOCLAVE RECEPTACLE
	FOUR-PLEX OUTLET
	220-VOLT OUTLET
	FLOOR OUTLET
	TELEPHONE JACK
	TELEPHONE JACK +60"
	DATA JACK
	PLUGMODE
	ABOVE COUNTER
	LIGHT SWITCH @ 56" AFF
	THREE-WAY LIGHT SWITCH @ 56" AFF
	TELEPHONE BACKBOARD W/ OUTLET
	ELECTRICAL PANEL
	TIME CLOCK
	SIGN OUTLET
	JUNCTION BOX
	THERMOSTAT

VERIFY ELECTRICAL REQUIREMENTS WITH OWNER PRIOR TO INSTALLATION

FIRE ALARM LEGEND

	MINI HORN/STROBE +90" A.F.F.
	MANUAL FIRE ALARM PULL STATION +48" A.F.F.

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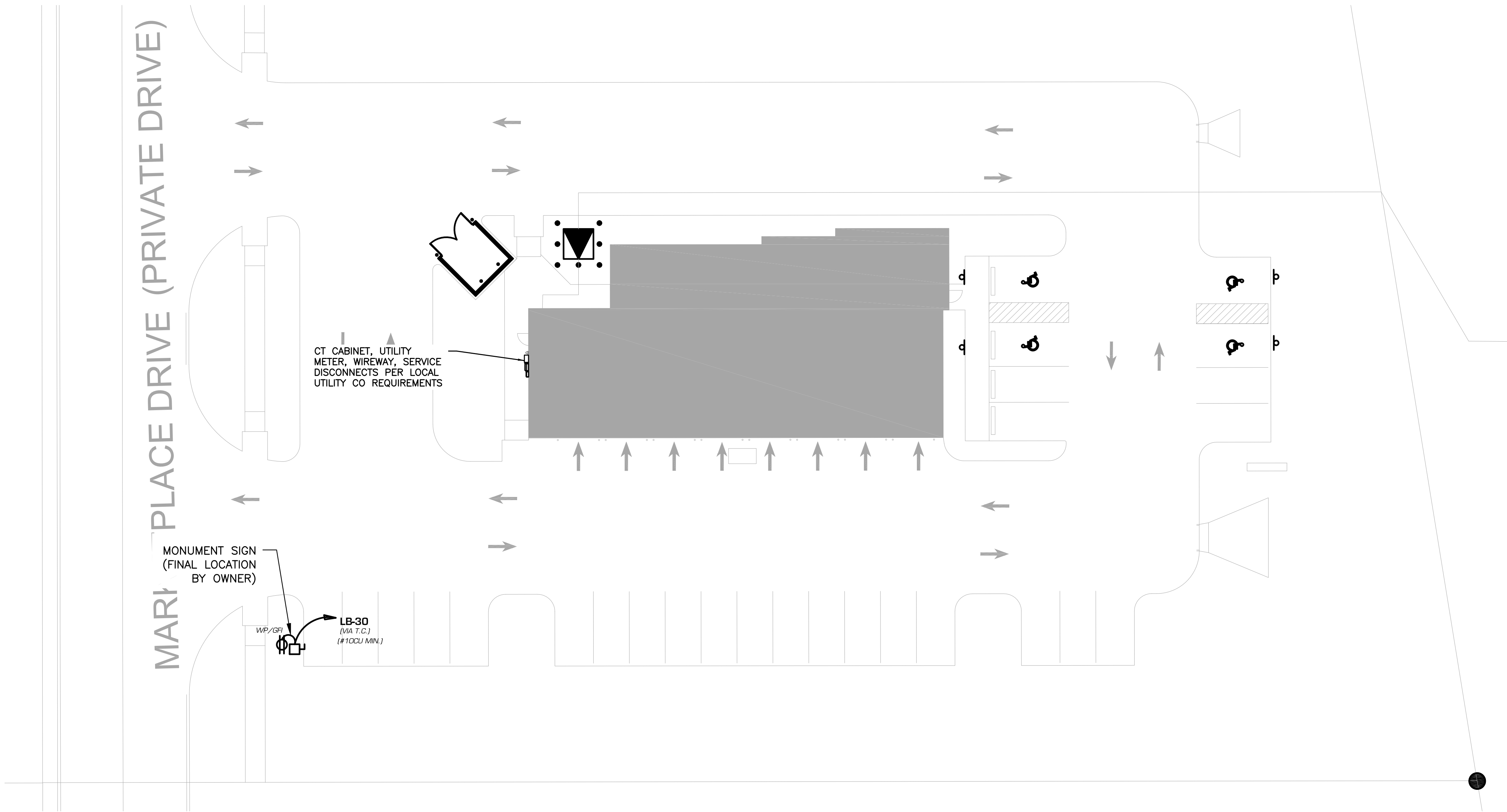
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SHEET

EO.1  
ELECTRICAL  
COVER SHEET





1 ELECTRICAL SITE PLAN  
SCALE: 1" = 20'-0"

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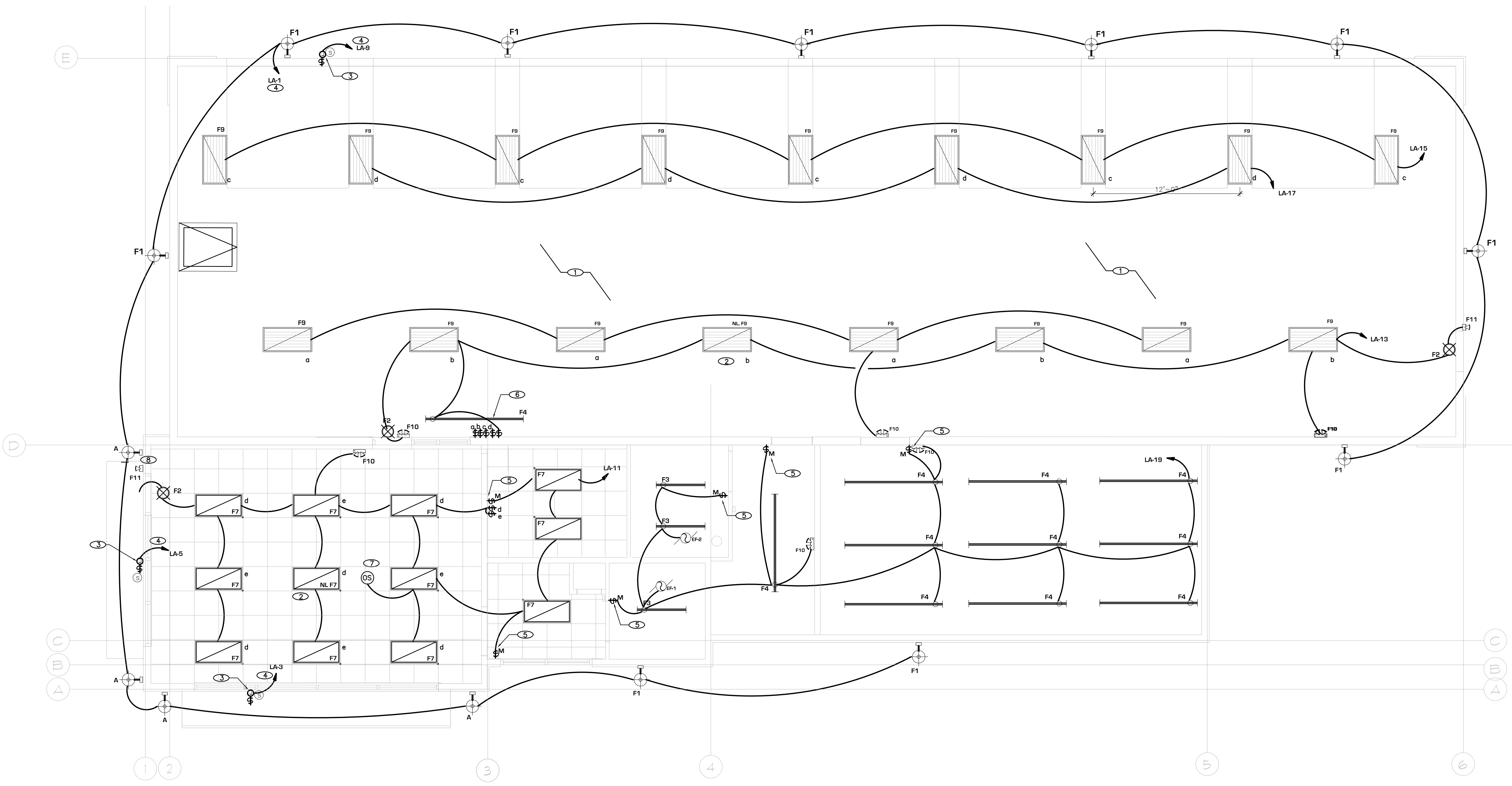
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PROJ #241212  
ES1.1  
ELECTRICAL  
SITE PLAN





- LIGHTING GENERAL NOTES**
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LUMINAIRE LOCATIONS.
  2. COORDINATE LUMINAIRE LOCATION WITH MECHANICAL PIPING, DUCTWORK, ETC. TO AVOID CONFLICTS.
  3. ALL CONDUIT SHALL BE INSTALLED CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED.
  4. EACH MULTIWIRED BRANCH CIRCUIT SHALL BE PROVIDED WITH A SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT.
  5. CONNECT EXTERIOR LUMINAIRE WITH MINIMUM #10 AWG CONDUCTOR.
  6. FUNCTIONAL TESTING OF THE LIGHTING SYSTEM SHALL COMPLY WITH SECTION C408.3.1 OF THE 2018 IECC

- LIGHTING DETAIL NOTES**
- 1 MOUNT TYPE 'F9' LUMINAIRE LOCATED IN GARAGE AREA CHAIN HUNG FROM STRUCTURE AT 12'-0" A.F.F.
  - 2 MOUNT TYPE 'F9' LUMINAIRE LOCATED BETWEEN OVERHEAD DOORS AT 2" BELOW OVERHEAD GRILLE GUIDES.
  - 3 NIGHT LIGHT UNSWITCHED FIXTURE. CONNECT AHEAD OF LOCAL SWITCHING OR LIGHT CONTROLS.
  - 4 JUNCTION BOX / DISCONNECTING MEANS FOR CONNECTION TO OWNER PROVIDED ILLUMINATED BUILDING SIGNAGE. COORDINATE EXACT LOCATION WITH SIGN CONTRACTOR PRIOR TO ROUGH-IN.
  - 5 LUMINAIRE OR SIGN BRANCH CIRCUIT CONTROLLED THROUGH PHOTOCELL ON/TIMECLOCK OFF.
  - 6 PROVIDED OCCUPANCY SENSOR ON/OFF SWITCH FOR CONTROL OF LIGHTING WITHIN THIS ROOM. SWITCH TO BE MANUFACTURED BY WATT STOPPER #LMPW-100.
  - 7 CENTER FIXTURE OVER SERVICE MANAGER'S DESK.

- 7 DASHED LINE INDICATES DAYLIGHT ZONE.
- 8 CIRCUIT SWITCHED VIA DAYLIGHT PHOTOCCELL SENSORS (DAYLIGHT RESPONSIVE CONTROLS) CONFIGURED TO COMPLETELY SHUT OFF ALL CONTROLLED LIGHT FIXTURES, IN ACCORDANCE WITH SECTION C405.2.3 OF THE 2018 IECC.
- 9 PROVIDED BI-LEVEL SWITCHING LIGHT-REDUCTION CONTROLS, IN ACCORDANCE WITH SECTION C405.2.3.1 OF THE 2018 IECC.

**1 ELECTRICAL LIGHTING PLAN**  
SCALE: 1/4" = 1'-0"

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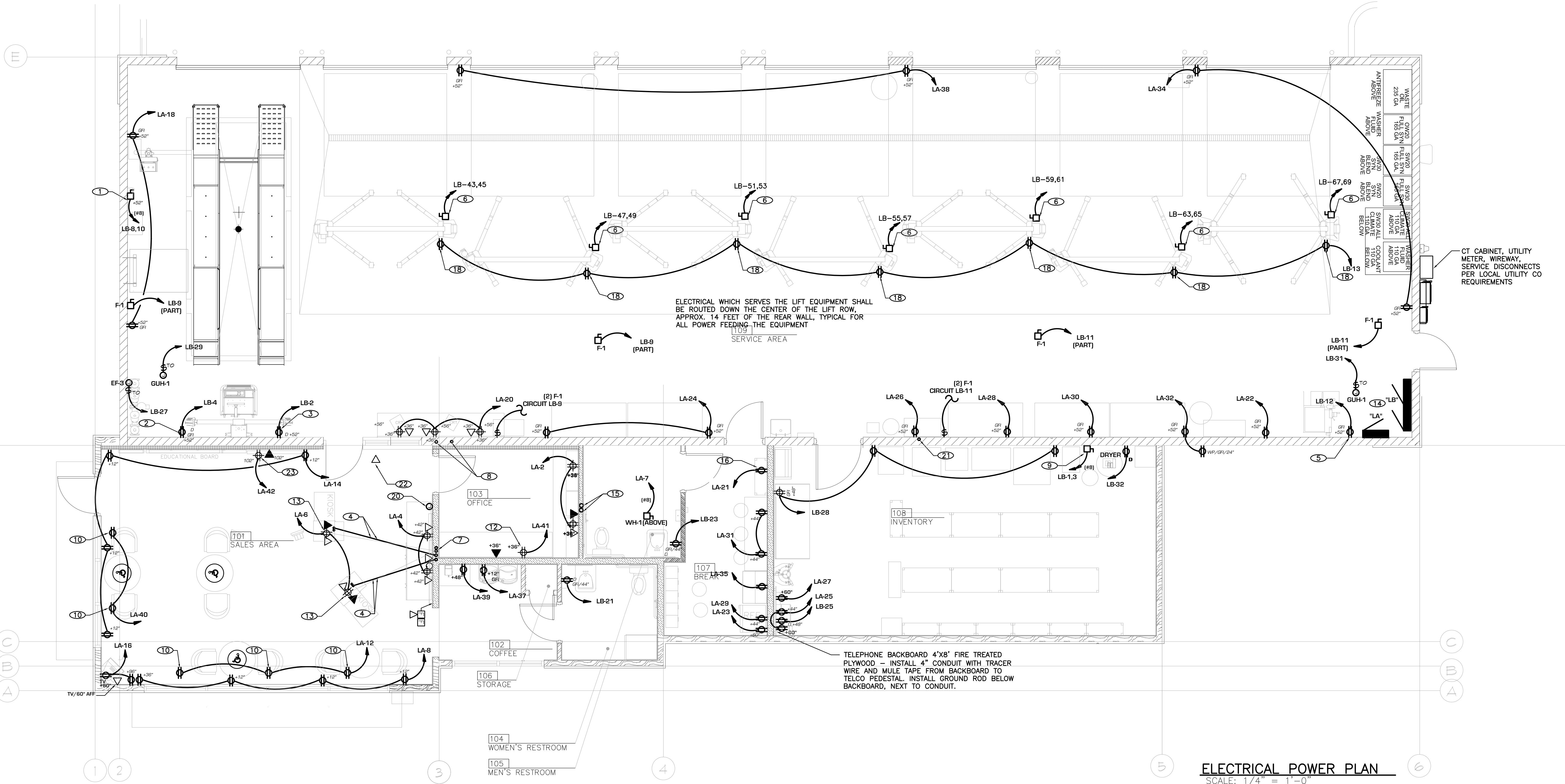
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**SHEET**  
**E1.1**  
ELECTRICAL  
LIGHTING PLAN





ELECTRICAL POWER PLAN  
SCALE: 1/4" = 1'-0"

POWER GENERAL NOTES

1. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT AND/OR LOCATION OF DEVICES PRIOR TO ROUGH-IN.
2. COORDINATE REQUIREMENTS AND LOCATIONS OF MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
3. MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT.
4. ALL CONDUIT SHALL BE INSTALLED CONCEALED IN FINISHED AREAS UNLESS OTHERWISE NOTED.
5. EACH MULTIWIRED BRANCH CIRCUIT SHALL BE PROVIDED WITH A SEPARATE NEUTRAL FOR EACH BRANCH CIRCUIT.
6. COORDINATE REQUIREMENTS AND LOCATIONS OF OWNER SUPPLIED EQUIPMENT WITH OWNER AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN.
7. PROVIDE GFCI PROTECTION FOR ALL 125V, 15-20A RECEPTACLES INSTALLED IN THE SERVICE BAY AREAS WHERE DIAGNOSTIC EQUIPMENT, POWER TOOLS, OR LIGHTING EQUIPMENT IS USED PER N.E.C. ARTICLE 511.12.

8. ELECTRICAL INSTALLATION SHALL COMPLY WITH N.E.C. ARTICLE 511:

- ALL AREAS DESIGNATED AS HAZARDOUS (CLASSIFIED) LOCATIONS SHALL BE PROPERLY DOCUMENTED. THIS DOCUMENTATION SHALL BE AVAILABLE TO THOSE AUTHORIZED TO DESIGN, INSTALL, INSPECT, MAINTAIN, OR OPERATE ELECTRICAL EQUIPMENT AT THE LOCATION. PER N.E.C. ARTICLE 500.4 MAINTENANCE BAYS ARE MAJOR REPAIR GARAGE AND MUST COMPLY WITH N.E.C. ARTICLE 511.3.
- FLOOR AREAS ARE CLASS 1 DIVISION 2 CLASSIFIED UP TO A LEVEL OF 18" PER N.E.C. TABLE 511.3(C). THIS AREA SHALL COMPLY WITH ARTICLE 511.3(C) AND HAVE WIRING AND DEVICES INSTALLED PER N.E.C. ARTICLE 501.10(B).
- GARAGE AREA IS PROVIDED WITH VENTILATION OF AT LEAST 1 CUBIC FOOT PER MINUTE FOR EACH SQUARE FT OF FLOOR AREA, WITH SUCTION TAKEN FROM A POINT WITHIN 18" OF HIGHEST POINT IN THE CEILING. NO LIGHTER-THAN-AIR GASEOUS FUELS ARE UTILIZED IN THIS AREA. PER N.E.C. ARTICLE 511.3(D) THIS AREA IS UNCLASSIFIED.

POWER DETAIL NOTES

1. ALIGNMENT RACK. PROVIDE 40A/2P DISCONNECT SWITCH AS REQUIRED FOR CONNECTION TO EQUIPMENT. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#8, 1#10G - 1"C.
2. ALIGNMENT MACHINE. PROVIDE 20 AMP, 120 VOLT GFI DUPLEX RECEPTACLE AS REQUIRED FOR CONNECTION TO EQUIPMENT. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#12, 1#12G - 1/2"C.
3. ALIGNMENT SENSORS. PROVIDE 20 AMP, 120 VOLT GFI DUPLEX RECEPTACLE AS REQUIRED FOR CONNECTION TO EQUIPMENT. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#12, 1#12G - 1/2"C.
4. PROVIDE (2) 1" ELECTRICAL CONDUITS FROM JUST ABOVE CEILING, THROUGH THE WALL, AND UNDER FLOOR SLAB TO EACH KIOSK. CONDUIT #1 (FOR POWER) SHALL BE 7'-0" FROM REAR WALL AND 2'-6" FROM CENTERLINE OF FRONT DOOR. CONDUIT #2 (FOR DATA) WILL BE JUST TO THE OUTSIDE OF CONDUIT #1 AND SLIGHTLY BACK TO ALLOW FOR ANGLE MOUNTING OF KIOSK.
5. BRAKE LATHE. PROVIDE 20 AMP, 120 VOLT GFI DUPLEX RECEPTACLE AS REQUIRED FOR CONNECTION TO EQUIPMENT. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#12, 1#12G - 1/2"C.
6. PROVIDE POWER FOR LIFTS, 208V, 1PH, 25A CIRCUIT, 17FLA. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.
7. PROVIDE TWO 1" EMPTY CONDUITS WITH PULL STRINGS FROM THE PRINTER DESK WALL BOX TO THE CEILING PLENUM.
8. PROVIDE TWO 1" EMPTY CONDUITS WITH PULL STRINGS AT THE SERVICE MANAGER'S DESK FROM THE WALL BOX UP TO THE CEILING PLENUM.
9. AIR COMPRESSOR. PROVIDE (1) 60A/2P DISCONNECT SWITCH AS REQUIRED FOR CONNECTION TO EACH MOTOR. CONNECT TO BRANCH BREAKER AS INDICATED VIA 2#8, 1#10G - 3/4"C.
10. PROVIDE FLUSH MOUNTED DUPLEX RECEPTACLE LOCATED IN CEILING FOR SHOW WINDOW RECEPTACLES.
11. INTERLOCK EF-3 WITH LV-1
12. PROVIDE FOUR-PLEX RECEPTACLE FOR CONNECTION TO OWNER SUPPLIED COMPUTER SERVER. COORDINATE LOCATION AND MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
13. COORDINATE LOCATION OF DUPLEX RECEPTACLE AND DATA OUTLET IN MILLWORK PRIOR TO ROUGH-IN.
14. MAINTAIN NEC REQUIRED CLEARANCES AT PANELS.
15. PROVIDE 1" EMPTY CONDUIT WITH PULL STRING IN MANAGER'S OFFICE AT EACH WORK STATION FROM THE WALL BOX TO THE CEILING PLENUM.
16. PROVIDE DUPLEX RECEPTACLE FOR CONNECTION TO IRRIGATION CONTROLLER. COORDINATE EXACT LOCATION WITH LANDSCAPE CONTRACTOR.
17. WEATHERPROOF RECEPTACLE PROVIDED WITH ROOF TOP UNIT, E.C. TO INSTALL.
18. GFI DUPLEX RECEPTACLE PROVIDED WITH LIFT. CONNECT 120 VOLT RECEPTACLE TO BRANCH CIRCUIT SERVING LIFT.
19. PROVIDE 1" EMPTY CONDUIT WITH PULL STRING FROM COMPUTER STATION LOCATION WALL BOX TO THE CEILING PLENUM.
20. ALARM PAD - PROVIDE 3/4" EMPTY CONDUIT STUBBED ABOVE CEILING. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.
21. PROVIDE 1" EMPTY CONDUIT WITH PULL STRING FROM TECH PERSON COMPUTER LOCATION WALL BOX TO THE CEILING PLENUM.
22. DATA OUTLET ABOVE CEILING FOR WIRELESS ROUTER. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.
23. DUPLEX RECEPTACLE AND DATA OUTLET FOR MENU TV. VERIFY EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.

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YUKON, OKLAHOMA



05.13.24

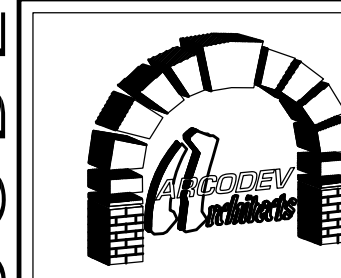
ARCHITECT OF RECORD

COMMENTS  
FOR BLDG. DEPT. SUBMITTAL

DATE  
05.13.24

REVISION

ARCDEV JOB #:  
CLIENT JOB #:  
DRAWN BY: SB  
CHECKED BY: LRP  
DATE OF ISSUE: 05.13.24



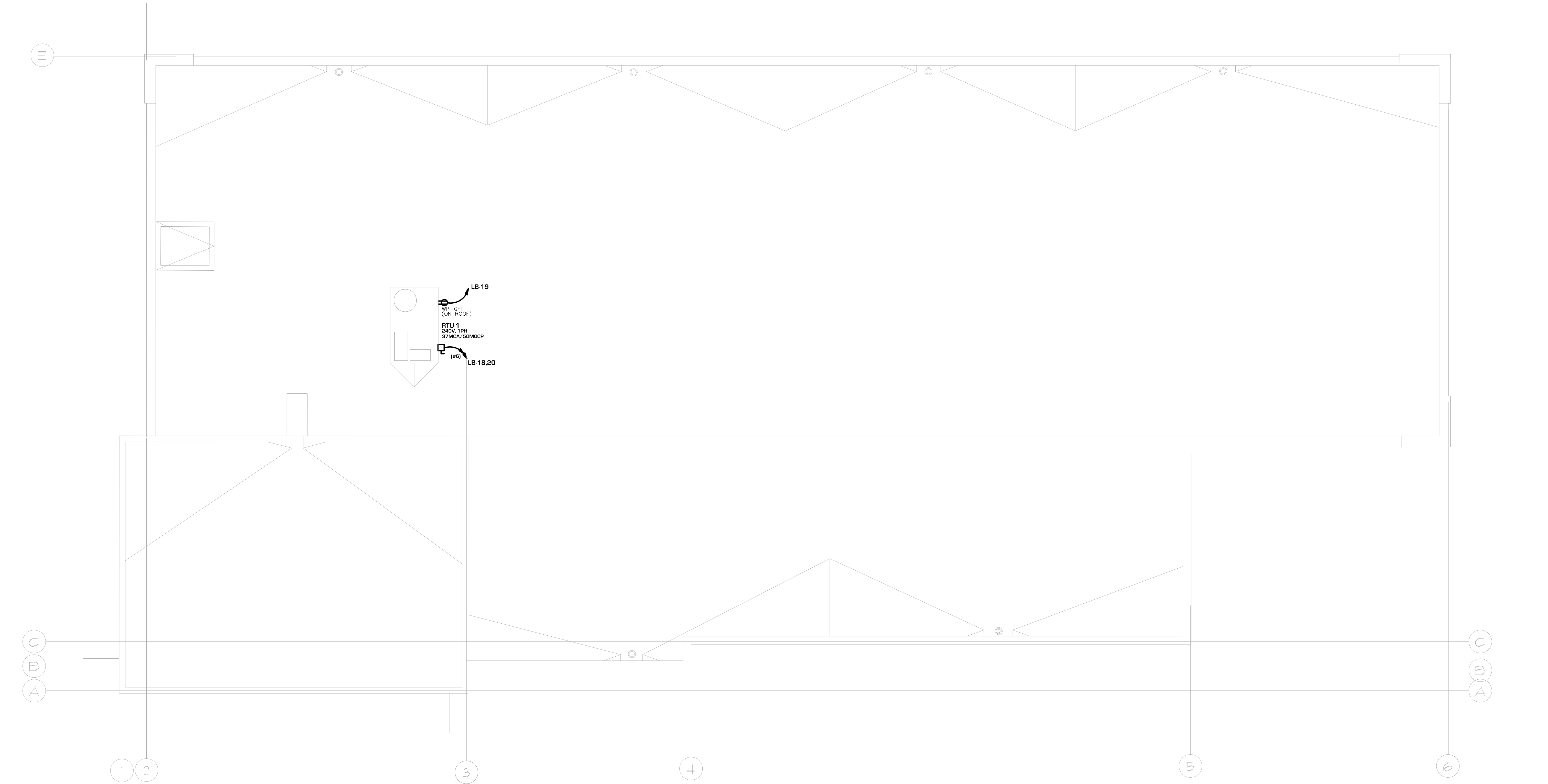
45 SPYGLASS DRIVE  
LITTLETON, CO 80123  
VOICE: 303.881-8825

SHEET

E2.1

ELECTRICAL  
POWER PLAN





1 ELECTRICAL ROOF PLAN  
SCALE: 1/4" = 1'-0"

PROJ #241212  
ADAM A. POWELL , P.E.  
PEC Enterprises, Inc.  
14412 Alene Ct. NE  
Albuquerque, NM 87123  
Telephone 720-409-2454

BRAKES PLUS  
601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA

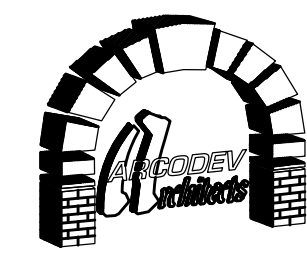


05.13.24

ARCHITECT OF RECORD

REVISION	DATE	COMMENTS
	05.13.24	FOR BLDG. DEPT. SUBMITTAL

ARCODEV JOB #: -  
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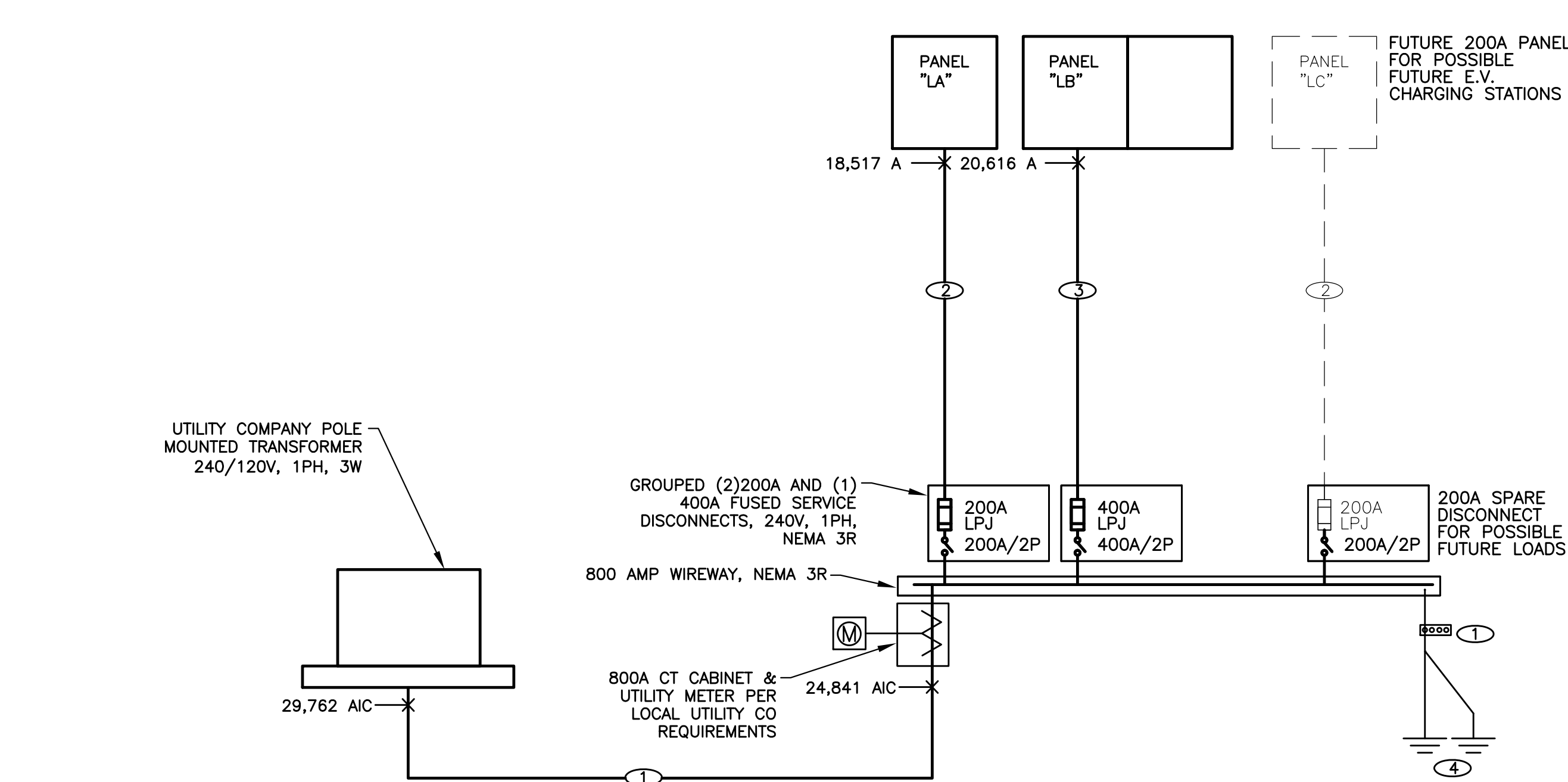
E3.1

ELECTRICAL  
ROOF PLAN



MECHANICAL EQUIPMENT SCHEDULE											
DESIGNATION	DESCRIPTION	LOAD				VOLTAGE	PHASE	DISCONNECT SIZE	FUSE SIZE	FEEDER SIZE	REMARKS
		HP	KVA	FLA	MCA						
RTU-1	ROOF TOP UNIT			31.3	37.0	240	1	60A/2P	50A FRN-R	(2#6, 1#10G, 1-1/4"C)	
EF-1	EXHAUST FAN		100W			120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EF-2	EXHAUST FAN		100W			120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EF-3	EXHAUST FAN	1/2	1176W	9.8		120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
F-1	AIR CIRCULATION FAN	1/4	696W	5.8		120	1	30A/1P	9A FRN-R	(2#12, 1#12G, 3/4"C)	
GUH-1	GAS UNIT HEATER	1/2				120	1	SMT0	-	(2#12, 1#12G, 3/4"C)	
EWH-1	WATER HEATER		1.5KW			120	1	-	-	(2#12, 1#12G, 3/4"C)	
REMARKS 1. UNIT FURNISHED WITH INTEGRAL DISCONNECT. 1. PROVIDE MOTOR RATED SWITCH WITH THERMAL OVERLOAD.											

LIGHT FIXTURE SCHEDULE ALL FIXTURES FURNISHED AND INSTALLED BY GENERAL CONTRACTOR											
SYMBOL	MARK	QUANTITY	DESCRIPTION	MANUF.	CAT. NO.	LAMP	LPW	MOUNTING	VOLTAGE	REMARKS	
	A	4	EXTERIOR DECORATIVE LIGHT FIXTURE	COOPER LIGHTING	303-W1-LEDB2-3000-UNV-T4-DIM10	16W LED	64	WALL	120	REFER TO ELEVATIONS FOR MOUNTING LOCATIONS	
	F1	10	EXTERIOR DECORATIVE LIGHT FIXTURE	MCGRAW EDISON	IST-SA1F-730-U-T4FT	25W LED	117	WALL	120		
	F2	3	EXIT SIGN	COOPER LIGHTING	APC7 G	LED		WALL/CENTER ON DOOR	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.)	
	F3	3	4'-0" STRIP LED	COOPER LIGHTING	4SNLED LD5 UNV	38W LED		UNIVERSAL	120	MOUNT AT 12'-0" AFF	
	F4	11	8'-0" STRIP LED	COOPER LIGHTING	8TSNLED LD5 UNV	61W LED		UNIVERSAL	120	MOUNT AT 12'-0" AFF	
	F7	12	2x4 RECESSED LED TROFFER	COOPER LIGHTING	24CGT 4540C	39W LED		GRID MOUNT	120		
	F9	17	4' - LED HIGHBAY	COOPER LIGHTING	LHB 18 UNV	87W LED		HUNG FROM STRUCT.	120		
	F10	6	EMERGENCY LIGHT W/ BATTERY BACKUP	COOPER LIGHTING	SEL 25	LED		WALL MOUNTED	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.) AND TIME DELAY RELAY	
	F11	2	EMERGENCY EGRESS LIGHT - EXTERIOR	COOPER LIGHTING	AEL 246	LED		SURFACE	120	PROVIDE EMERGENCY BATTERY PACK (90 MINUTE MIN.)	



LOAD CALCULATIONS			
LIGHTING	9.6 @ 125%	=	12.0 kVA
RECEPTACLE	10.0 @ 100%	=	10.0 kVA
BALANCE	3.1 @ 50%	=	1.6 kVA
MECHANICAL	12.4 @ 100%	=	12.4 kVA
25% OF LARGEST		=	1.9 kVA
SPECIAL	55.7 @ 100%	=	55.7 kVA
TOTAL		=	93.6 kVA (390 A)

#### SHORT CIRCUIT CALCULATIONS

POINT TO POINT METHOD FOR SHORT CIRCUIT CALCULATIONS ILLUSTRATED IN BUSSMAN MANUFACTURING PUBLICATION FORM SPD90.

SERVICE: 120/240 V., 1-PHASE, 3W

AVAILABLE SHORT CIRCUIT CURRENT FROM UTILITY = 29,762 A.

FIND FACTOR f = 2.0 x (length in feet) x (short circuit current)

(constant from table C) x (line-to-line voltage)

f = 2.0 x 100 x 29,762 = 0.198

3 x 20,868 x 240

FIND FACTOR M = 1 / (1 + f) M = 0.8347

SHORT CIRCUIT CURRENT AT CT/MAIN = M x AVAILABLE S.C. CURRENT

I = 24,841 A.

LENGTH IN FEET = 20 f = 2.0 x 20 x 24,841 = 0.342

FACTOR f = 0.342

FACTOR M = 0.7454

SHORT CIRCUIT CURRENT AT PANEL "LA" = 18,517 A.

LENGTH IN FEET = 24 f = 2.0 x 24 x 24,841 = 0.205

FACTOR f = 0.205

FACTOR M = 0.83

SHORT CIRCUIT CURRENT AT PANEL "LB" = 20,616 A.

#### NOTE:

1. ELECTRICAL CONTRACTOR TO LABEL THE SERVICE ENTRANCE WITH THE AVAILABLE FAULT CURRENT AND THE DATE IT WAS CALCULATED AS REQUIRED BY N.E.C. ARTICLE 100.24

SCHEDULE - PANEL LA				NOTE: ALL BREAKERS 20A UNLESS NOTED OTHERWISE			
MFG.	AS APPROVED			LIGHT	7.9	kVA @ 125% =	9.8
TYPE	PANELBOARD			RECEPT	11.7	kVA @ 100% =	11.7
LUG LOC.	TOP			MECH.		kVA @ 100% =	
AMPS	200A, MLO			25% LARGEST MOTOR		kVA	
VOLTAGE	120/240V, 1ph, 3W			SPECIAL	6.9	kVA @ 100% =	6.9
MOUNTING	SURFACE			SPARE		kVA	
BRACING	22,000 A.I.C.			TOTAL	27.8	kVA	
EXTERIOR LIGHTING	404	1		720	OFFICE RECEIPTS		
EXTERIOR SIGN	1200	3		800	SALES AREA COUNTER RECEIPTS		
EXTERIOR SIGN	1200	5		1000	KIOSK RECEIPTS		
EWH-1	1500	7		360	SALES AREA RECEIPTS		
EXTERIOR SIGN	1200	9			SPARE		
SALES, COFFEE, OFFICE LIGHTING	528	11		1800	SHOW WINDOW RECEIPTS		
SERVICE AREA LIGHTING	1144	13		360	SALES AREA RECEIPTS		
SERVICE AREA LIGHTING	660	15		500	TELEVISION		
SERVICE AREA LIGHTING	528	17		360	SERVICE AREA RECEIPTS		
INVENTORY, BREAK, RESTROOM LTG	1012	19		500	GARAGE A/C RECEIPTS		
IRRIGATION CONTROLS	500	21		540	GARAGE RECEIPT		
BREAK RM	180	23		360	GARAGE RECEIPT		
BURGLER ALARM	400	25		200	COMPUTER		
TELEPHONE SYSTEM	400	27		500	BENCH RECEIPT		
MICROWAVE	900	29		180	GARAGE RECEIPT		
BREAK RECEIPTS	360	31		360	GARAGE RECEIPT		
SPARE		33		500	SERVICE AREA RECEIPTS		
REFRIGERATOR	1200	35			SPARE		
RECEPT - WATER FOUNTAIN	370	37		360	GARAGE RECEIPT		
COFFEE UNIT	1000	39		1200	SHOW WINDOW RECEIPTS		
OFFICE RECEIPTS	360	41		300	MENU TV		
A phase =	11,526 VA	B phase =	14,420 VA	Total =	25,946 VA		

SCHEDULE - PANEL LB				NOTE: ALL BREAKERS 20A UNLESS NOTED OTHERWISE			
MFG.	AS APPROVED			LIGHT	1.7	kVA @ 125% =	2.1
TYPE	PANELBOARD 2-SECTION			RECEPT	1.4	kVA @ 100% =	1.4
LUG LOC.	TOP			MECH.	12.4	kVA @ 100% =	12.4
AMPS	400A, MLO			25% LARGEST MOTOR		kVA	
VOLTAGE	120/240V, 1ph, 3W			SPECIAL	44.4	kVA @ 100% =	44.4
MOUNTING	SURFACE			SPARE		kVA	
BRACING	22,000 A.I.C.			TOTAL	66.9	kVA	
AIR COMPRESSOR	3360	1		1800	ALIGNMENT SENSORS		
SPARE	3360	3		1800	ALIGNMENT MACHINE		
SPARE		5			SPARE		
SPARE		7		3120	ALIGNMENT RACK		
AIR CIRCULATION FANS	1392	9		3120	---		
AIR CIRCULATION FANS	1392	11		1800	BRAKE LATHE		
SHOP EQUIPMENT RECEIPTS	1440	13			SPARE		
SPARE		15			SPARE		
SPARE		17		3755	RTU-1		
ROOF RECEIPT	180	19		3755	---		
RECEPT - RESTROOM	180	21			SPARE		
RECEPT - RESTROOM	180	23		453	SITE LIGHTING		
RECEPT - INVENTORY	180	25			SPARE		
EF-3	1130	27		720	INVENTORY RECEIPTS		
GUH-1	500	29		1200	MONUMENT SIGN		
SPARE		31		1000	DRYER		
SPARE		33			SPARE		
SPARE		35			SPARE		
SPARE		37			SPARE		
SPARE		39			SPARE		
SPARE		41			SPARE		
SECTION TWO							
LIFT	2040	43			SPACE		
---	2040	45			SPACE		
LIFT	2040	47			SPACE		
---	2040	49			SPACE		
LIFT	2040	51			SPACE		
---	2040	53			SPACE		
LIFT	2040	55			SPACE		
---	2040	57			SPACE		
LIFT	2040	59			SPACE		
---	2040	61			SPACE		
LIFT	2040	63			SPACE		
---	2040	65			SPACE		
LIFT	2040	67			SPACE		
---	2040	69			SPACE		
SPACE		71			SPACE		
SPACE		73			SPACE		
SPACE		75			SPACE		
SPACE		77			SPACE		
SPACE		79			SPACE		
SPACE		81			SPACE		
SPACE		83			SPACE		
A phase =	31,207 VA	B phase =	33,670 VA	Total =	64,877 VA		

#### ELECTRICAL ONE LINE DIAGRAM

N.T.S.

#### FEEDER SCHEDULE

1 3 RUNS OF 3#300 MCM CU 2-1/2"C

2 3#250 MCM AL, 1#4 AL GND, 2"C

3 2 RUNS OF 3#250 MCM AL, 1#1 AL GND, 2"C

4 #2/0 CU GND TO BLDG. STEEL & COLD WATER BOND, #6 CU GND TO DRIVEN ROD, & #4 TO CONCRETE ENCASED ELECTRODE (UFER).

#### ONE-LINE DIAGRAM DETAIL NOTES

1 PROVIDE AN INTERSYSTEM BONDING TERMINATION (IBT) AS REQUIRED BY N.E.C. ARTICLE 250.94.

BRAKES PLUS

601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



05.13.24

ARCHITECT OF RECORD

DATE 05.13.24 FOR BLDG. DEPT. SUBMITTAL

REVISION

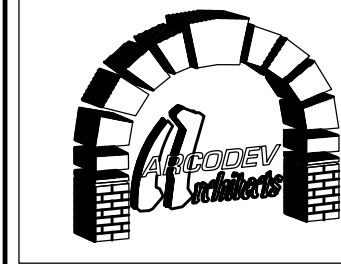
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45 SPYGLASS DRIVE  
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SHEET

PROJ #241212

ADAM A. POWELL, P.E.  
PEC Enterprises, Inc.  
14412 Alene Ct. NE  
Albuquerque, NM 87123  
Telephone 720-409-2454

E4.1

ELECTRICAL ONE  
LINE DIAGRAM



COMcheck Software Version 4.1.5.5  
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC  
Project Title: Brakes Plus  
Project Type: New Construction

Construction Site: 601 North Czech Hall Road  
Yukon, OK  
Owner/Agent:  
Designer/Contractor: Loren Priest  
EE, LLC  
12005 Antelope Trail  
Parker, CO 80138  
303.748.1189  
loren@eeparker.com

Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed  
Reduced Lighting Power, 1.0 credit

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft <sup>2</sup> )	C Allowed Watts / ft <sup>2</sup>	D Allowed Watts (B X C)
1-Sales Area (Retail/Sales Area)	1532	1.10	1685
2-Service/Repair (Automotive/Vehicular Maintenance Area)	3183	0.50	1592
Total Allowed Watts =			3277

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Sales Area (Retail/Sales Area)				
LED 7 F3 4' LED Strip, LED Linear 22W:	2	3	38	114
LED 8 F4 8' LED Strip, LED Linear 22W:	4	10	61	610
LED 7 copy 1: F7 2x4 LED Troffer, LED Panel 19W:	1	12	39	468
2-Service/Repair (Automotive/Vehicular Maintenance Area)				
LED 8 copy 2: F9 4' LED Highbay, LED Panel 80W:	1	17	87	1479
LED 8 copy 1: F4 8' LED Strip, LED Linear 22W:	4	1	61	61
Total Proposed Watts =			2732	

Interior Lighting PASSES: Design 17% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stan Bentley — Electrical Designer

Name - Title Signature Date 5-11-24

Project Title: Brakes Plus  
Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- YUKON OK.cck  
Report date: 05/11/24  
Page 1 of 8

Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3, C405.2.3.1, C405.2.3.2 [EL23]²	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3.1. Daylight-responsive controls for applicable spaces, C405.2.3.1. Daylight-responsive control function and section C405.2.3.2. Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL26]¹	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.4 [EL27]¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.5 [EL28]¹	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.6 [EL30]¹	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting >= 30%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.3 [EL6]¹	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.6 [EL26]¹	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.7 [EL27]¹	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.8.2, C405.8.2.1 [EL28]²	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.9 [EL29]²	Total voltage drop across the combination of feeders and branch circuits <= 5%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus  
Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- YUKON OK.cck  
Report date: 05/11/24  
Page 5 of 8

COMcheck Software Version 4.1.5.5  
Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC  
Project Title: Brakes Plus  
Project Type: New Construction  
Exterior Lighting Zone: 4 (High activity metropolitan commercial district (L24))

Construction Site: 601 North Czech Hall Road  
Yukon, OK  
Owner/Agent:  
Designer/Contractor: Loren Priest  
EE, LLC  
12005 Antelope Trail  
Parker, CO 80138  
303.748.1189  
loren@eeparker.com

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Wall area (Illuminated area of facade wall or surface)	3000 ft²	0.15	No	450
Total Tradable Watts (a) =			0	
Total Allowed Watts =			450	
Total Allowed Supplemental Watts (b) =			300	

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.  
(b) A supplemental allowance equal to 900 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Wall area (Illuminated area of facade wall or surface 3000 ft²): Non-tradable Wattage				
LED 1 F1: LED Wall pack, LED A Lamp 25W:	1	10	30	300
LED 4 A: LED Decorative Wall LT, LED A Lamp 25W:	1	4	26	104
Total Tradable Proposed Watts =			0	

Exterior Lighting PASSES: Design 0.0% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Stan Bentley — Electrical Designer

Name - Title Signature Date 5-11-24

Project Title: Brakes Plus  
Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- YUKON OK.cck  
Report date: 05/11/24  
Page 2 of 8

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [F117]¹	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.4.1 [F118]¹	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C405.5.1 [F119]¹	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Exterior Lighting fixture schedule for values.
C408.1.1 [F15]¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1, C408.2.5.2 [F116]¹	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [F133]¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus  
Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- YUKON OK.cck  
Report date: 05/11/24  
Page 6 of 8

COMcheck Software Version 4.1.5.5  
Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req. ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4]¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR8]²	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C406 [PR8]¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus  
Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- YUKON OK.cck  
Report date: 05/11/24  
Page 3 of 8

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [F117]¹	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.4.1 [F118]¹	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C405.5.1 [F119]¹	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Exterior Lighting fixture schedule for values.
C408.1.1 [F15]¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1, C408.2.5.2 [F116]¹	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [F133]¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus  
Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- YUKON OK.cck  
Report date: 05/11/24  
Page 7 of 8

Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2, C405.2.2.1 [EL22]²	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1, C405.2.1.1 [EL18]¹	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1, C405.2.1.1 [EL19]²	Occupancy sensors control function in warehouses; In warehouses, the lighting in aislesways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1, C405.2.1.1 [EL20]²	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight-responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21]²	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Brakes Plus  
Data filename: C:\COMCHECK\BRAKES PLUS\BRAKES PLUS- YUKON OK.cck  
Report date: 05/11/24  
Page 4 of 8

BRAKES PLUS

601 NORTH CZECH HALL ROAD  
YUKON, OKLAHOMA



05.13.24

ARCHITECT OF RECORD

DATE 05.13.24 FOR BLDG. DEPT. SUBMITTAL

REVISION

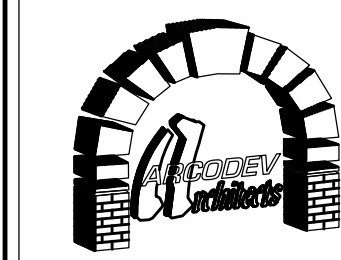
ARCODEV JOB #: -

CLIENT/JOB #: -

DRAWN BY: SB

CHECKED BY: LRP

DATE OF ISSUE: 05.13.24



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E5.1

LIGHTING COMPLIANCE  
CERTIFICATES