



OWNER:
DOMINGO ORNELAS
PH: (505) 690- 0391
EMAIL:
dominornelas@gmail.com

GENERAL CONTRACTOR:
Frank Trujillo
Tierra De Zia Contracting, LLC
(505) 470- 5400
tierradezia@gmail.com
Lic. #404576

CONSULTANTS:
Dwight Velarde, PE
Velarde Engineering
505) 720- 6016
veleng09@gmail.com

Jerry D. Watts, MSFPE
(800) 503- 1961
accentfire@aol.com

PROJECT
DESCRIPTION:

Iglesia Cristiana
Casa del Alferero

2501 Cactus Lane,
Santa Fe, NM 87507

REVISIONS:
DISC DATE

SHEET TITLE

TITLE SHEET,
DESIGN
CRITERIA,
VICINITY MAP,
INDEX

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

A- 1.0

IGLESIA CRISTIANA CASA DEL ALFERERO

2501 CACTUS LANE, SANTA FE, NM 87507

DESIGN CRITERIA

GROSS EXIST'G BLDG AREA:	0.00 SF
GROSS NEW BLDG AREA:	4,800.00 SF
TOTAL BUILDING AREA:	4,800.00 SF
LOT AREA:	54,992.45 SF
SANTA FE ZONING DISTRICT	R1 - PUD SINGLE FAMILY 1 DU/AC
OCCUPANCY CLASSIFICATION (IBC 2021, SECTION 303.4)	GROUP A- 3, PLACE OF WORSHIP
CONSTRUCTION TYPE, IBC SECTION 602.3 AND TABLE 601	TYPE III- B
ZONING DISTRICT	R1 - PUD
SIEMIC ZONE	2B
CLIMATE ZONE	5B
OCCUPANCY LOAD, (SEE CODE SUMMARY AT RIGHT)	402 TOTAL OCCUPANT LOAD
PARKING REQUIREMENTS (TABLE 14- 8.6- 1; RELIGIOUS ASSEMBLY)	RELIGIOUS ASSEMBLY: 1 SPACE PER FOUR SEATS: 138 SEATS/4 = 35 SPACES REQUIRED
ACCESSIBLE PARKING, NMAC CHAPTER 11, TABLE 1106.1: ADAAG TABLE 208.2	TOTAL REQ'D = 3, REQ'D VAN ACCESSIBLE = 1
EVSE PARKING SPACES (NMAC TABLE C405.13.1)	5% REQUIRED = 2 EVSE SPACES
EV CAPABLE SPACES (NMAC TABLE C405.13.1)	10% REQUIRED = 4 EV CAPABLE SPACES
BICYCLE PARKING REQMT., SFCC TABLE 14- 8.8	8 REQUIRED FOR PARKING SPACES BETWEEN 16-50

FIRE EXT'G SYSTEM (2021 IFC)

OCCUPANCY:	GROUP A-3, PLACE OF WORSHIP
BUILDING SQUARE FEET:	4800 SQUARE FEET
OCCUPANT LOAD:	402
CONSTRUCTION:	TYPE III-B
ZONING:	R1, RESIDENTIAL DISTRICT SINGLE FAMILY 1 DU/AC
SPRINKLER SYS. (IFC. SEC. 903.2.1.3)	REQUIRED FOR GROUP A-3 EXCEEDING 12,000 SF, AND AN OCCUPANT LOAD OF 300 OR MORE
STANDPIPES (IFC SEC. 905)	NOT REQUIRED
FIRE EXTINGUISHERS (IBC SEC. 906 AND TABLE 906.3(1))	1 2-A IN FOYER 1 2-A IN WORSHIP CENTER 1 2-A IN COFFEE BAR

LEGAL DESCRIPTION

LOT "S" OF LISCHKE SUBDIVISION, AS SHOWN ON PLAT
ENTITLED "COMPOSITE PLAT SHOWING LANDS OF EVELYN
LISHKE", AS RECORDED IN PLAT BOOK 8, PAGE 114,
DOCUMENT NO. 238,478 OF THE OFFICE OF THE SANTA FE
COUNTY CLERK, NEW MEXICO, AND WITH THE ADDRESS OF
2501 CACTUS LANE, SANTA FE, NEW MEXICO, 87507.

OCCUPANT LOAD CALCULATIONS

NET SQUARE FEET AREA:	4,800 SQ FT
OCCUPANCY CLASSIFICATION (SECTION 303.4)	GROUP A-3, PLACE OF RELIGIOUS WORSHIP
CONSTRUCTION TYPE (TABLE 601, SECTION 602)	TYPE III-B (EXISTING)
SEISMIC ZONE:	2B
CONSTRUCTION ZONE:	PD, PLANNED DEVELOPMENT DISTRICT
OCCUPANT LOAD: (TABLE 1004.5)	WORSHIP CENTER 969 SF/7 NET = 138 MOTHER'S ROOM 102SF/7 NET = 14 FOYER 902 SF/5 NET = 180 STAGE 290 SF/15 NET = 19 MULTI-PURPOSE ROOM 684 SF/15 NET = 45 SOUND BOOTH 55.4/15 NET = 3 OFFICE AREA 134 SF/100 GROSS = 1 COFFEE BAR 128 SF/200 GROSS = 1 JANITOR CLOSET 30 SF/300 GROSS = 1 TOTAL OCCUPANTS = 402
SEATING CAPACITY:	ASSEMBLY AREAS 138 SEATS
MEANS OF EGRESS:	MINIMUM NUMBER OF EXITS (SEC. 1021 AND TABLE 1021.1) 3 NUMBER OF EXITS PROVIDED 5 EXIT WIDTH PROVIDED (SEC 1005.3.2 - 0.2" PER OCCUPANT - 100.8" REQUIRED) 252" PROVIDED MAXIMUM DISTANCE TO EXITS (250'-0" WITH SPRINKLER SYSTEM, TABLE 1017.2) 45'-0" ACTUAL MAX
RESTROOM CALCULATIONS: (TABLE 2902.1)	MEN (201) HALF OF OCCUPANT LOAD 2 WATER CLOSETS (1/150) 2 LAVATORY (1/200) 1 URINAL WOMEN (201) HALF OF OCCUPANT LOAD 3 WATER CLOSETS (1/75) 2 LAVATORY (1/200) ADDITIONAL FIXTURES 1 SERVICE SINK 2 DRINKING FOUNTAIN (1-ACCESSIBLE)

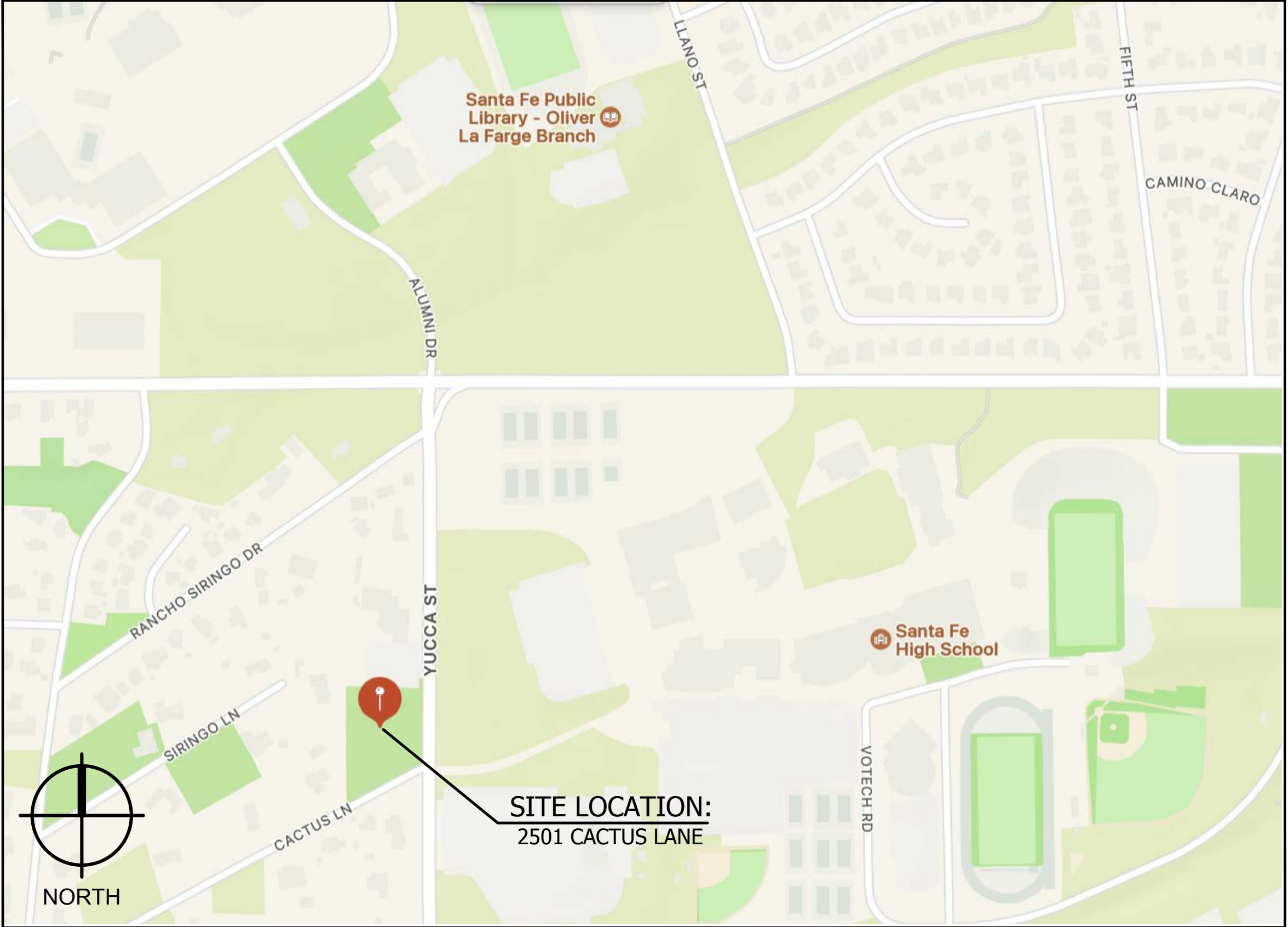
AUTHORITY

2021 INTERNATIONAL BUILDING CODE
2021 NM COMMERCIAL BUILDING CODE
2021 INTERNATIONAL EXISTING BUILDING CODE
2021 NM EXISTING BUILDING CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 NM ENERGY CONSERVATION CODE
2021 UNIFORM PLUMBING CODE
2021 NM PLUMBING CODE
2021 UNIFORM MECHANICAL CODE
2021 NM MECHANICAL CODE
2017 NATIONAL ELECTRICAL CODE
2020 NM ELECTRICAL CODE
2012 NM ELECTRICAL SAFETY CODE
2021 INTERNATIONAL FIRE CODE

PROJECT DIRECTORY

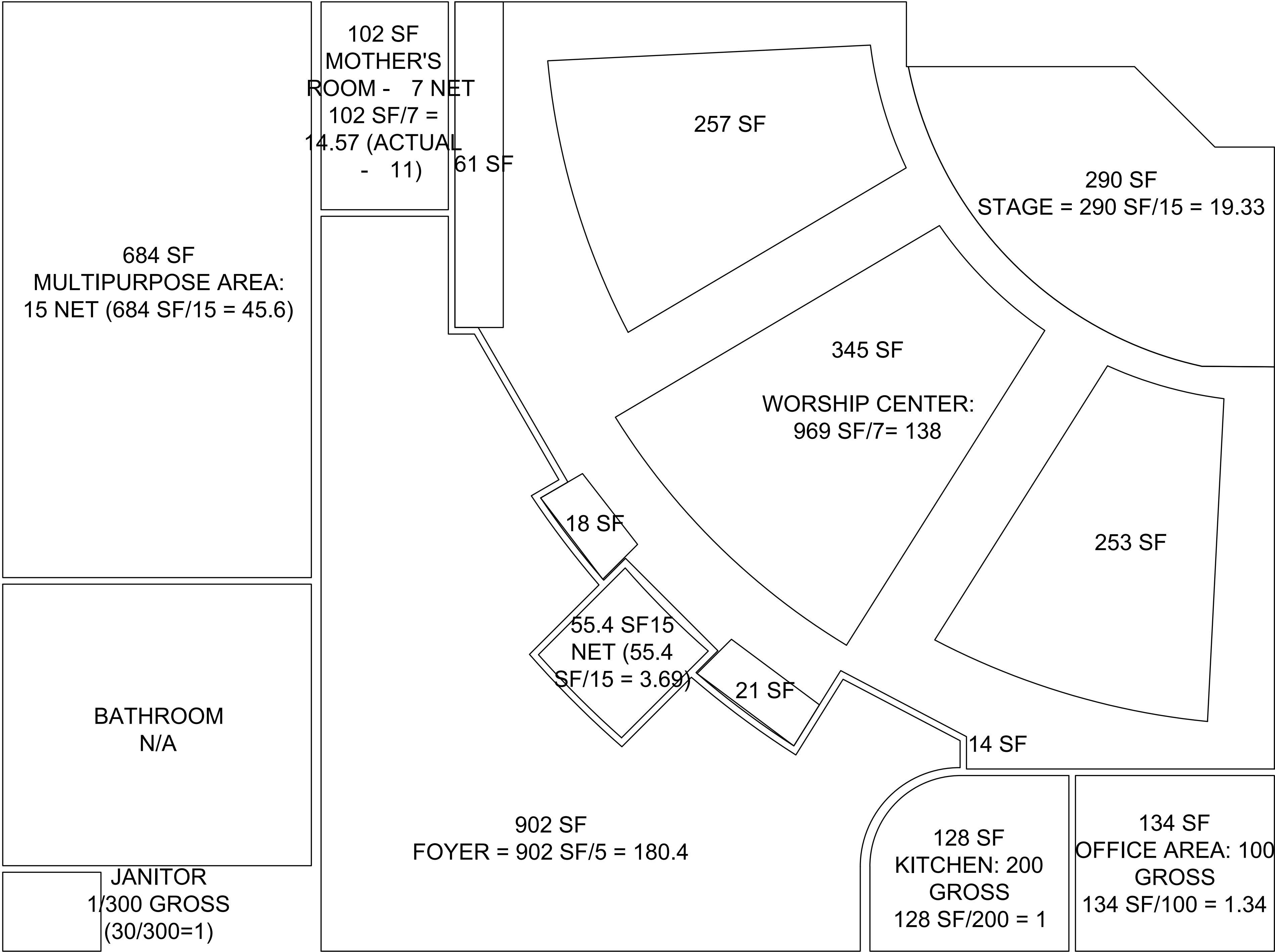
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GENERAL CONTRACTOR:	FRANK TRUJILLO Tierra De Zia Contracting, LLC PHONE: (505) 4705400 EMAIL: tierradezia@gmail.com Lic #404576
ARCHITECT:	JAY JAY SHAPIRO 90 LEAPING POWDER ROAD SANTA FE, NM 87508 PHONE: (505) 699- 6161 EMAIL: shapiro434@gmail.com

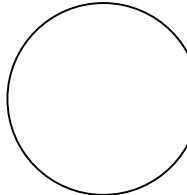
VICINITY MAP



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A- 1.1 BICYCLE RACK PLAN, DETAILS AND SPECIFICATIONS	E2.0 LIGHTING PLANS
A- 1.2PROPOSED LANDSCAPE PLAN	E3.0 SITE LIGHTING
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 **OCCUPANCY AREAS**
1/4" = 1'-0"

OCCUPANCY LOADS CRITERIA

I. OCCUPANCY CLASSIFICATION: A- 3 (IBC 303.4)

II. OCCUPANT LOAD (IBC SEC. 1004):

A. ASSEMBLY W/O FIXED SEATS, CONCENTRATED - 7 NET

- 1. WORSHIP CENTER: 969 SF/7= 138
- 2. MOTHER'S ROOM: 102 SF/7 = 14.57 (ACTUAL - 11)

B. ASSEMBLY WITHOUT FIXED SEATS, STANDING SPACE - 5 NET

- 1. FOYER = 902 SF/5 = 180.4

C. STAGES AND PLATFORMS - 15 NET

- 1. STAGE = 290 SF/15 = 19.33

D. ASSEMBLY WITHOUT FIXED SEATS, UNCONCENTRATED (TABLES AND CHAIRS) - 15 NET

- 1. MULTIPURPOSE AREA: 15 NET (684 SF/15 = 45.6)
- 2. SOUND BOOTH: 15 NET (55.4 SF/15 = 3.69)

E. KITCHENS - 200 GROSS

- 1. COFFEE BAR: 128 SF/200 = 1

III. OCCUPANT LOAD FACTOR (2021 NFPA TABLE 7.3.1.2 "OCCUPANT LOAD FACTOR")

A. BUSINESS USE 100 GROSS

- 1. OFFICE AREA: 100 GROSS (134 SF/100 = 1.34)

Jay Jay Shapiro

ARCHITECT

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Email: shapiro434@gmail.com



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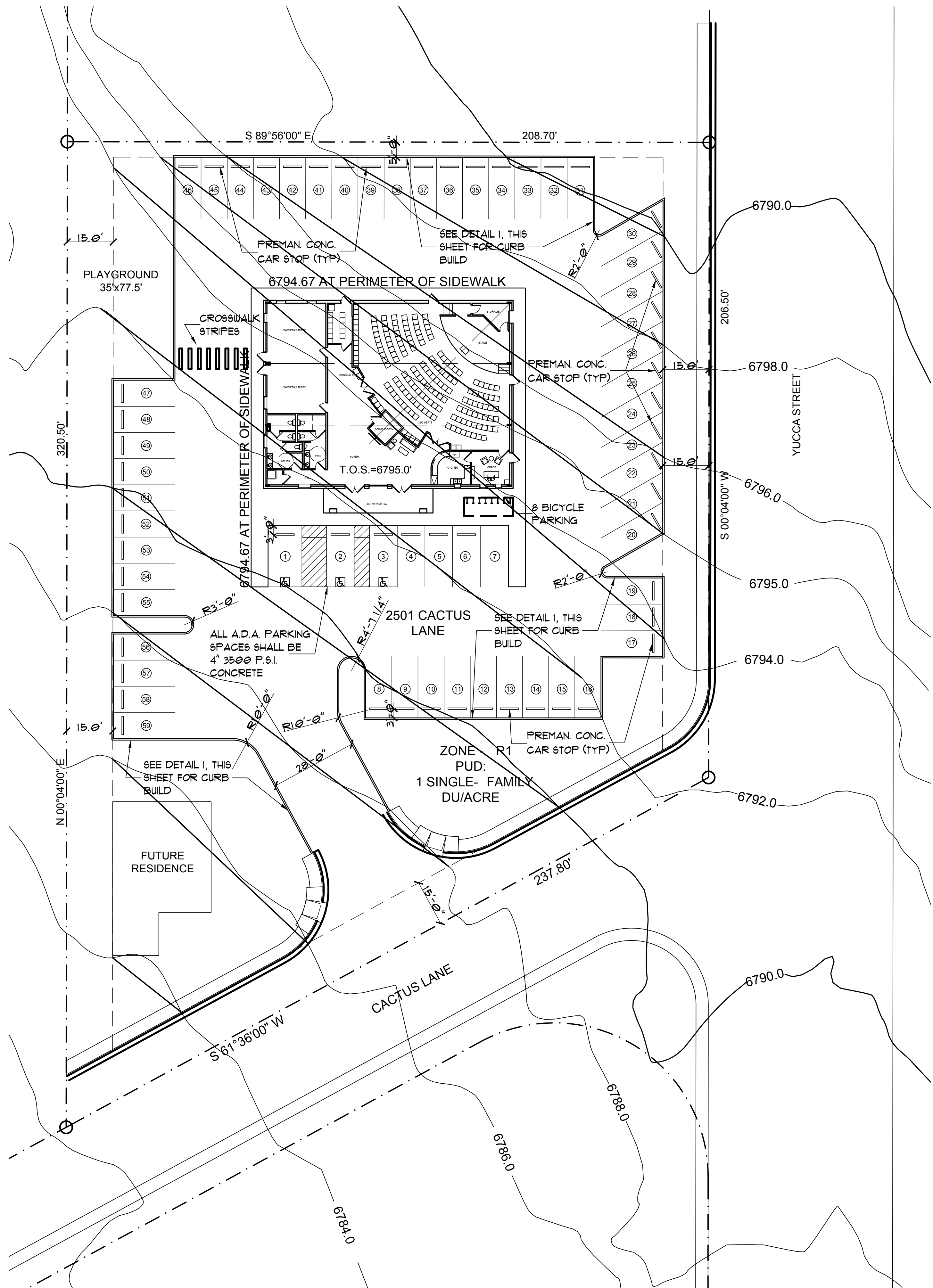
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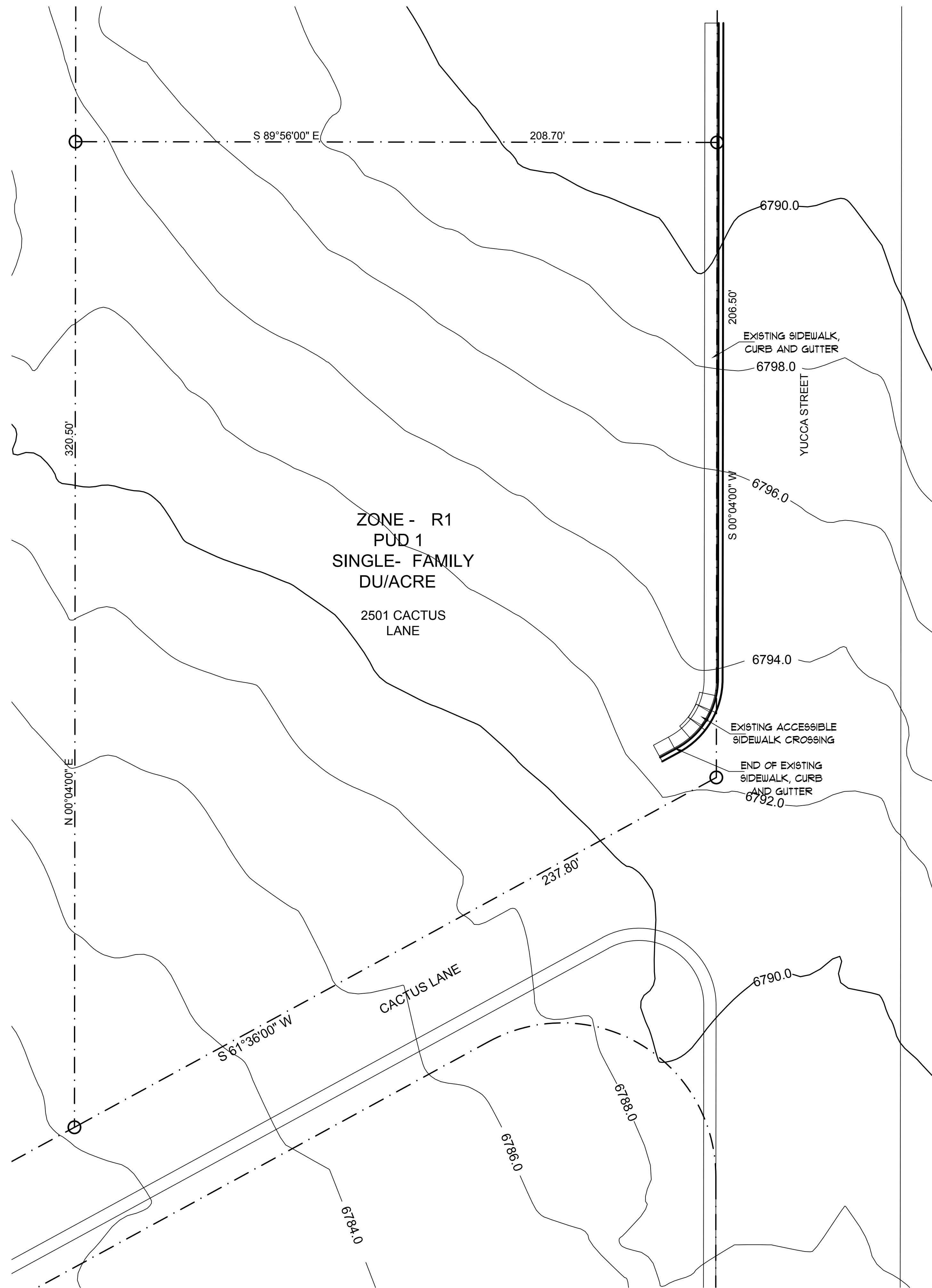
DATE: MAY 05, 2025

SHEET:

A- 0.1



1 PROPOSED SITEWORK
SCALE: 1" = 20.0'



1 EXISTING SITE PLAN
SCALE: 1" = 20.0'



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EXISTING AND
PROPOSED SITE
PLANS

PROJECT NO:
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BICYCLE RACK
PLANS, DETAILS
AND NOTES

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

SPECIFICATIONS:

BICYCLE RACKS:

- Inverted U type bicycle racks are the required bicycle parking rack.

- Each rack must be securely anchored and accommodate a bicycle frame where one wheel can be locked to the rack with a high security, U- shaped shackle lock if both wheels are left on the bicycle.

- A space of two (2) feet by six (6) feet (12 square feet) must be provided for each required bicycle parking space so that a bicycle six (6) feet long can be securely held with two points supported so that the bicycle cannot be pushed, or fall in a way that would damage the bicycle frame, wheel, or components.

- All racks must provide two points of contact with the frame at least 6" apart horizontally.

- If a bicycle corral is sought within a public street right- of- way, all design elements shall be developed in coordination with and approved by the city of Santa Fe public works department and parking division.

Distance to other racks:

- Racks placed parallel to each other (side by side) must be at least thirty- six (36) inches apart, this includes rack units sold as multiple units attached together.

- Racks aligned end to end must be at least ninety- six (96) inches apart.

Distance from wall:

- Racks placed perpendicular to a wall must be at least forty- eight (48) inches from the wall to the nearest vertical component of the rack.

- Racks parallel to a wall must be at least thirty- six (36) inches from the wall.

Distance from curb:

- Racks placed perpendicular to a curb must be at least forty- eight (48) inches from the curb to the nearest vertical component of the rack.

- Racks placed parallel to a curb must be at least twenty- four (24) inches from the curb to the rack.

Distance from pedestrian aisle:

- Rack units perpendicular to a pedestrian aisle must be at least forty- eight (48) inches from the rack to the edge of the aisle, and the pedestrian aisle should be at least sixty (60) inches wide.

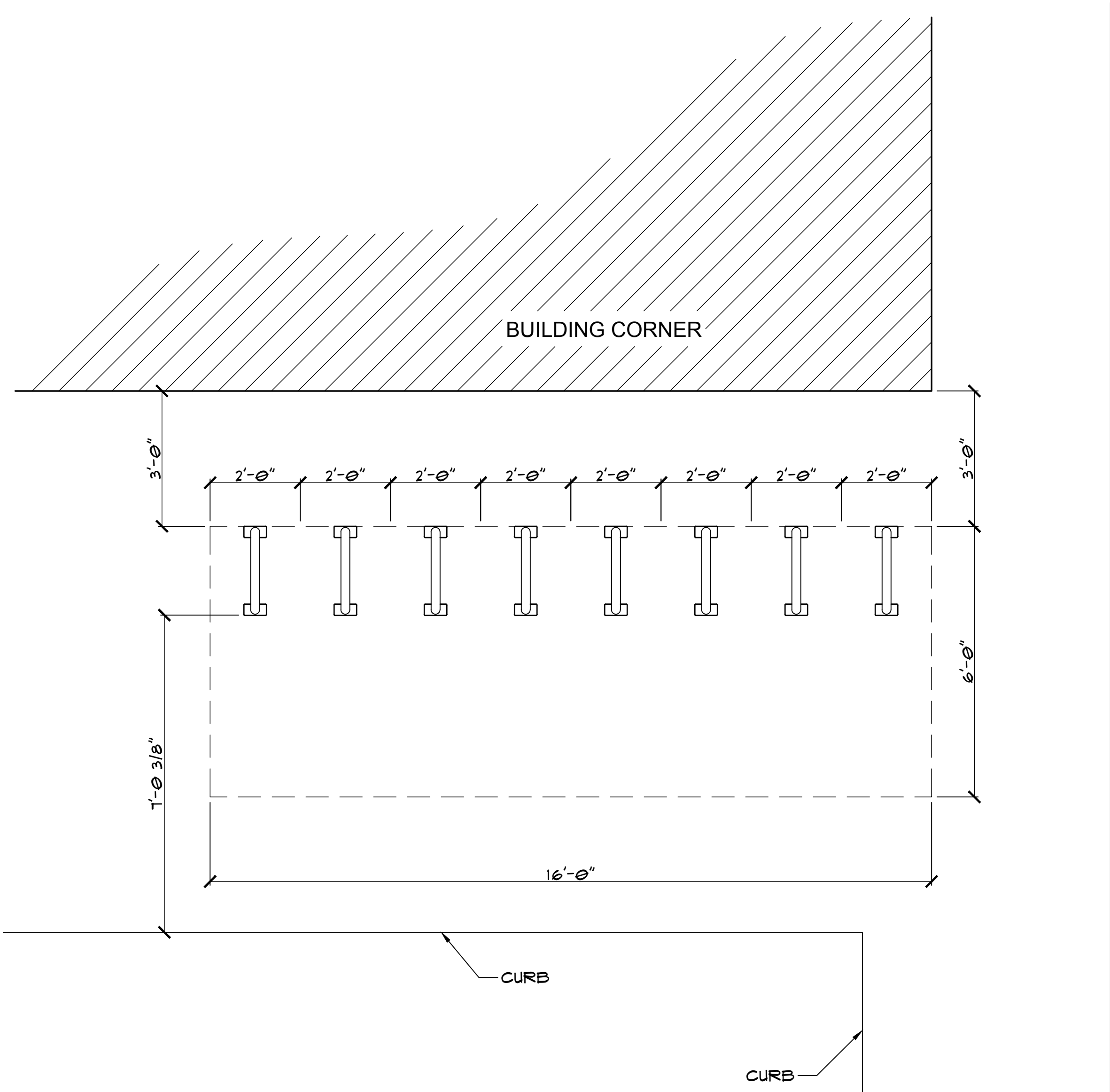
Parking and maneuvering areas:

- Each required bicycle parking space must be accessible without needing to move another bicycle.

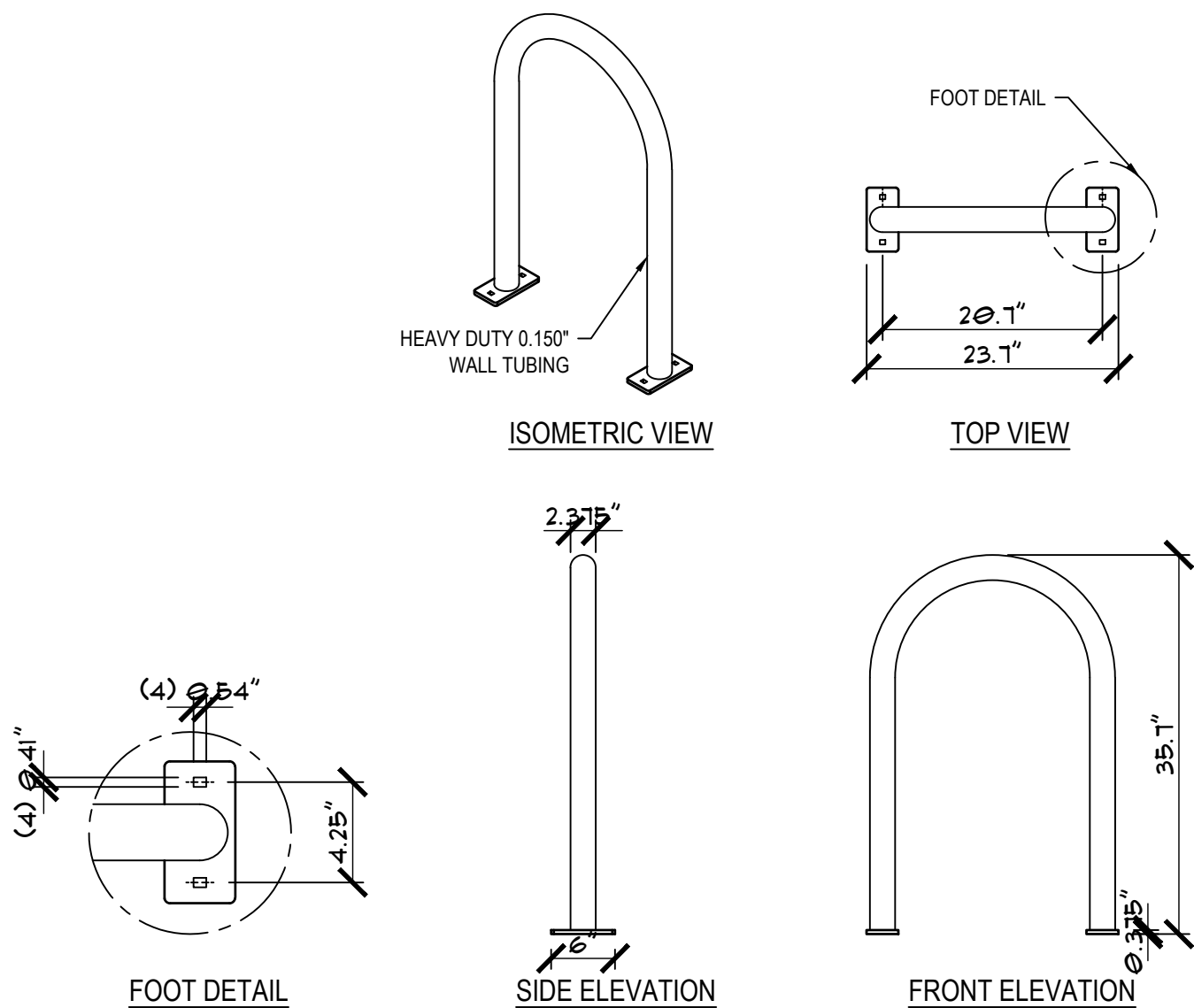
- There must be an aisle of at least five (5) feet wide behind all required bicycle parking to allow for maneuvering of the bicycle. Where bicycle parking is next to a sidewalk, the maneuvering area may extend into the sidewalk.

- The area devoted to bicycle parking must be hard surfaced.

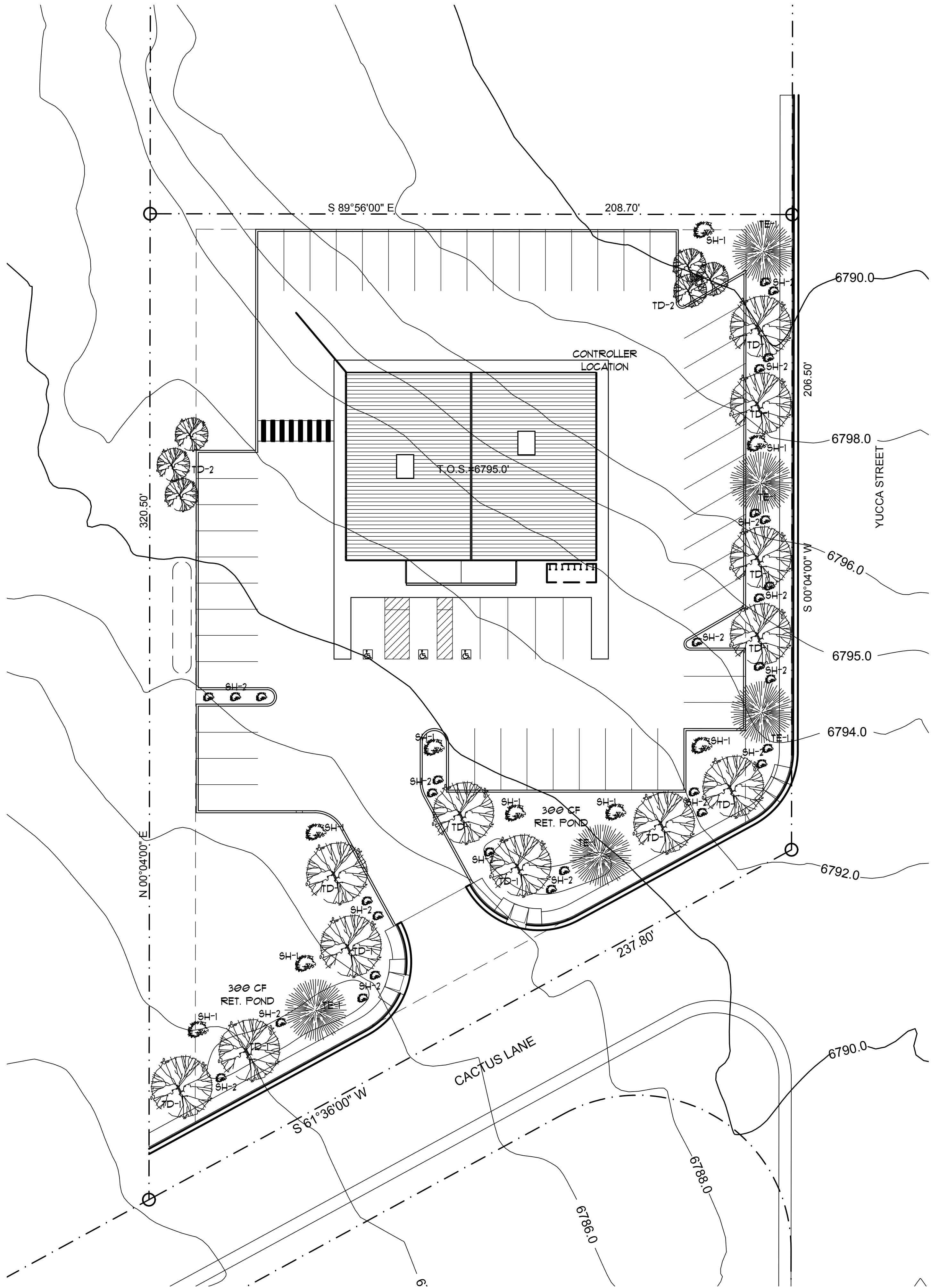
TABLE 14-8.6-3: General Off-Street Bicycle Parking For all uses except hotels or motels	
Automobile Parking Spaces Required	Bicycle Spaces Required
0—5	4
5—15	6
16—50	8
51—100	10
100 or more	12



1 BICYCLE RACK PLAN
SCALE: 1/2" = 1'- 0"



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



- PLANT LEGEND:
- TREE, EVERGREEN
- TREE, DECIDUOUS
- TREE, FRUIT
- SHRUB
- HEDGE
- PERENNIAL
- IRRIGATION SYSTEM NOTES:
1. CONTROLLER SHALL BE INSTALLED IN THE MECHANICAL ROOM.
2. USE BRASS BALL VALVE AT WATER SOURCE.
3. MAIN LINE FILTER SHALL BE RATED FOR TWO TIMES THE WATER PRESSURE.
4. PRESSURE REGULATOR AT EACH VALVE.
5. UTILIZE SCH 80 PVC FOR ALL UG LINES AND FOR VALVE PIPING.
6. BURY UG LINES MIN. 18" BELOW GRADE.
7. PROVIDE ANTI- SIPHON SOLENOID VALVES:

A. EVERGREENS - 1 VALVE

B. DECIDUOUS TREES - 3 VALVES

C. SHRUBS - 5
8. EMITTERS:

A. TWO 4 GAL/HR AT TREES

B. ONE 4 GAL/HR AT SHRUBS

C. ONE 2 GAL/HR AT PERENNIALS

D. ONE 2 GAL/HR AT HEDGES

PLANT SCHEDULE				
QUANTITY	DESIGNATION	COMMON NAME	BOTANICAL NAME	NOTES
5	TE-1	PINON PINE	PINUS EDULIS	12-35' DIA. BY 10-20' TALL
12	TD-1	FLOWERING PLUM	PRUNUS CERASIFERA	20-25' DIA. BY 20-30' TALL
6	TD-2	QUAKING ASPEN	POPULUS TREMULOIDES	15-30' DIA. BY 40-60' TALL
9	SH-1	FORSYTHIA	FORSYTHIA X INTERMEDIA	2'-10' DIA. BY 2'-10' TALL
29	SH-2	SHRUBBY CINQUEFOIL	DASIPHORA FRUTICOSA	3'-5' DIA. BY 2'-4' TALL
-	GC-1	3/4" CRUSHED GRAVEL	-	COLOR: SANTA FE BROWN
-	GC-2	1-2" ROUND GRAVEL	-	COLOR: GREY
-	GC-3	3-6" RIVER ROCK	-	COLOR: GREY
-	GC-4	1'-3' MOSS BOLDERS	-	COLOR: LOCAL

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LANDSCAPE PLAN, SCHEDULE, NOTES AND DETAILS

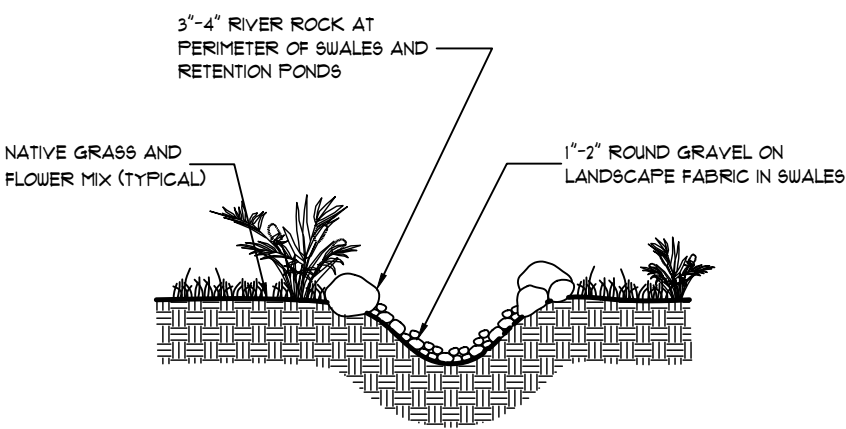
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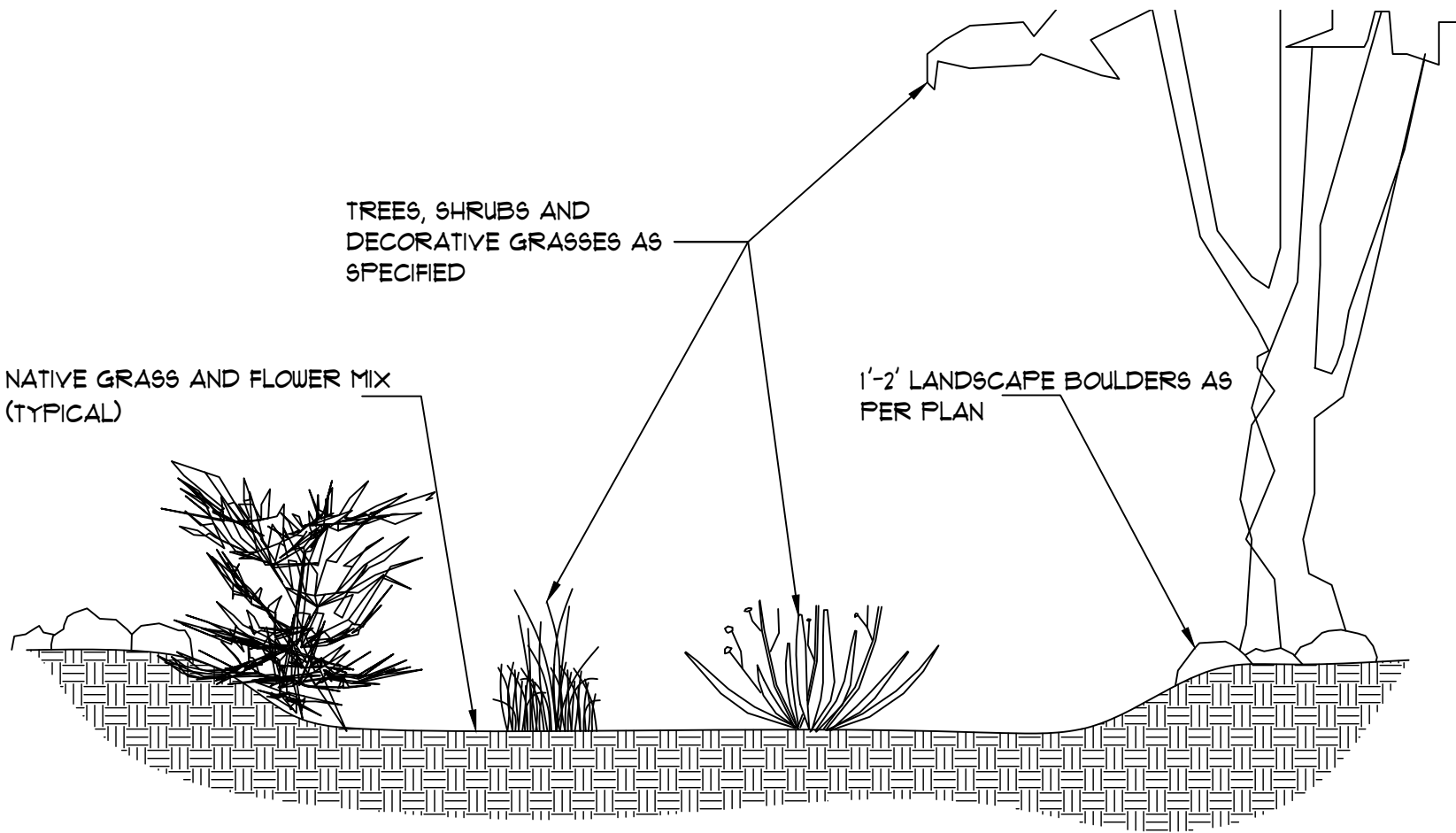
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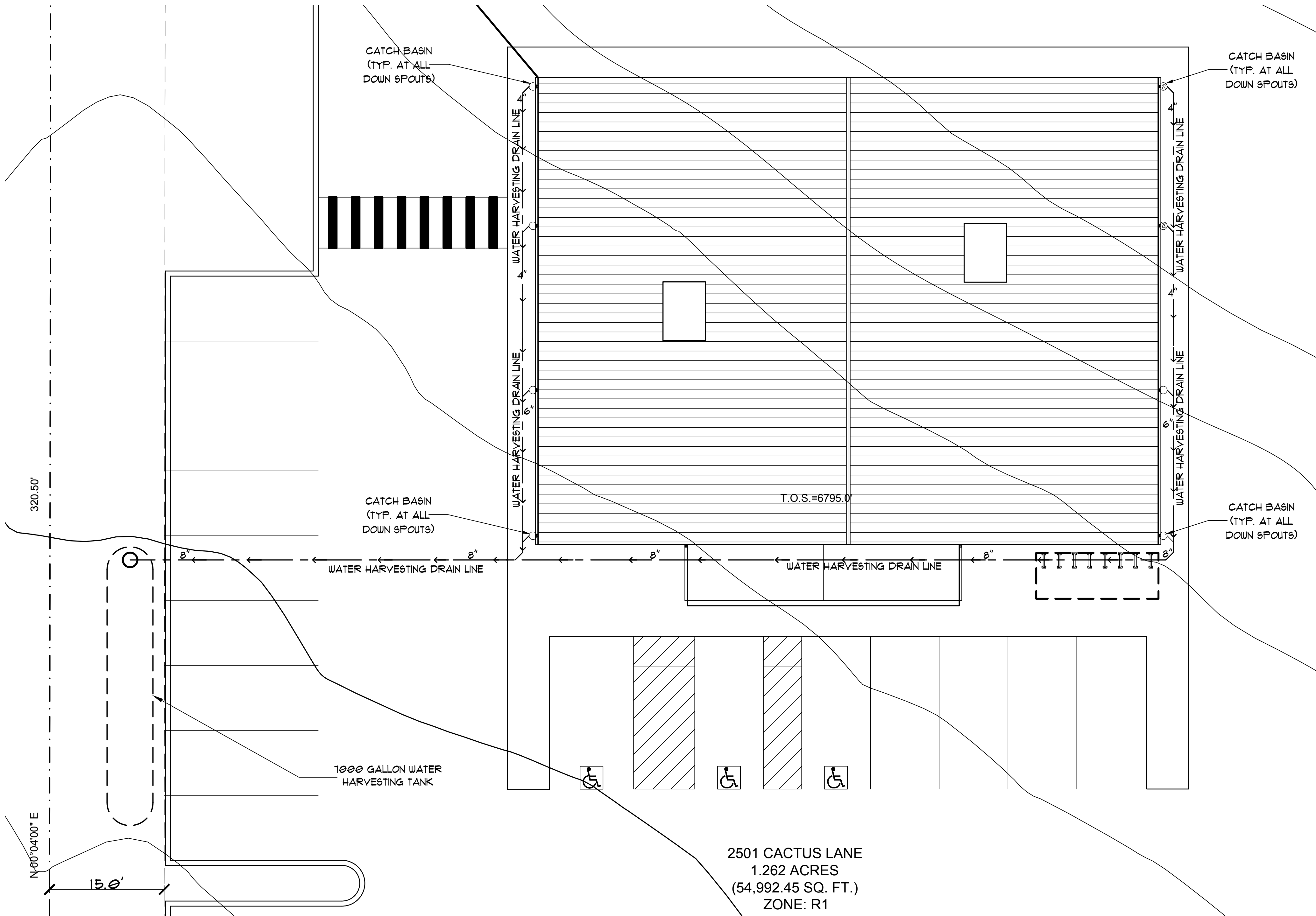
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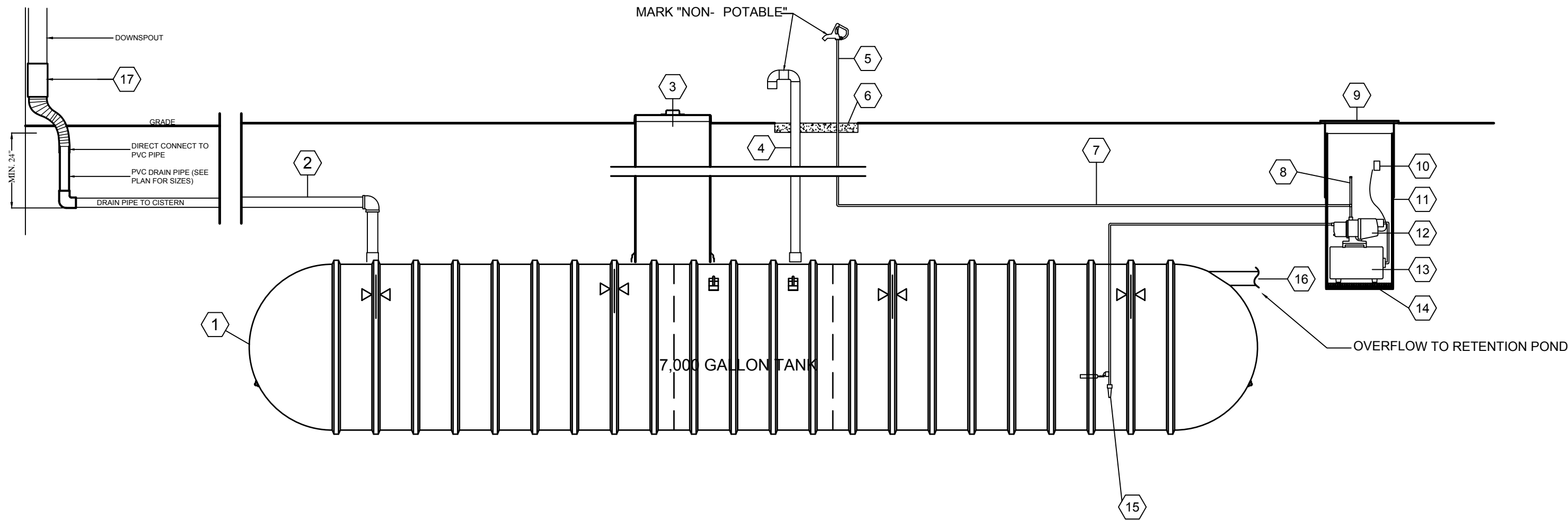
SWALE SECTION:



RETENTION POND SECTION:



1 WATER HARVESTING PLAN
SCALE: 1/8" = 1'- 0"



1 SECTION DETAIL:

WATER HARVESTING SYSTEM NOTES:

RAINWATER HARVESTING CALCULATION
DESCRIPTION: SQUARE FEET

TOTAL HEATED AREA 5249 SQ. FT.

FORMULAS

HEATED AREA x 0.85 = MIN. DRAINAGE
CAPTURE 1.15 X MIN. DRAINAGE CAPTURE =
CISTERN SIZE

CALCULATIONS

5249 x 0.85 = 4461.65 (MIN. DRAINAGE CAPTURE)
1.15 X 4461.65 = 6692.48 GALLONS (CISTERN SIZE)

TERRAIN MANAGEMENT - CALCULATION:

DESCRIPTION	COEFFICIENT	AREA
LOT	0.33	54993.00 SF
ROOFED	0.95	0.00 SF
EXTERIOR IMPERMIABLE		
SURFACES	0.95	9250.00 SF
RESIDUAL LOT	0.33	45743.00 SF

100 YEAR STORM INTENSITY, ZONE C = 7.8"/ 10 MIN.

RUN- OFF ANALYSIS FORMULA

COEF. x 100 YR. INT x AREA / 1 ACRE x SEC. PER INT.

PRE- DEVELOPMENT

.33 x 7.8 x 1.26 x 600 = 756 CU. FT.

POST DEVELOPMENT

RESIDUAL .33 x 7.8 x 1.05 x 600 = 630.07 CU. FT.
EXT. IMPERM. .95 x 7.8 x 0.212 x 600 = 127.41 CU. FT.

TOTAL POST = 757.48 CU. FT.

TOTAL TO RETAIN (POST- PRE)

(POST) - (PRE) = 757.48 - 756.00 = 1.48 CU. FT.

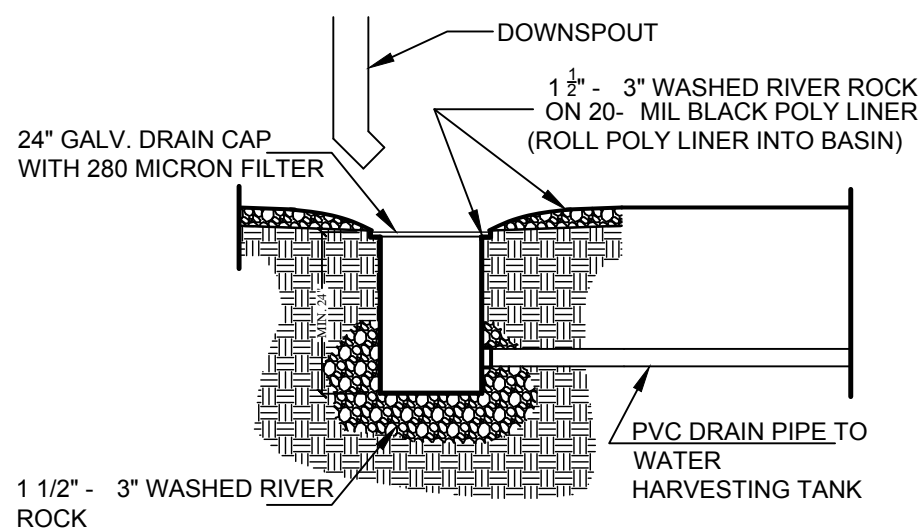
NOTES :

1. SLOPE RATIO AT CUTS SHALL BE 2:1 MAX.
2. ALL FILL RATIOS SHALL E 3:1 MAX.
3. RESEED OR RE- VEGETATE ALL DISTURBED AREAS.

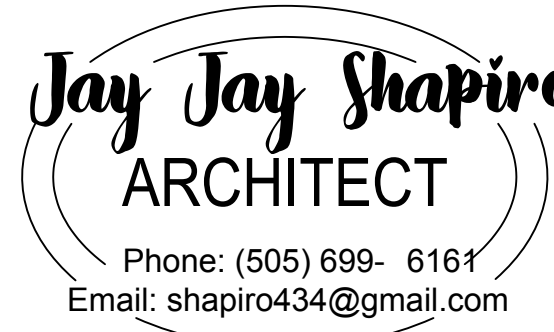
WATER HARVESTING SYSTEM NOTES

1. THE WATER HARVESTING SYSTEM SHALL BE AS MANUFACTURED BY NORWESCO OR EQUAL.
2. OVER- EXCAVATE CHAMBER MINIMUM 12" ON SIDES AND BOTTOM AND 36" ON TOP.
3. SLOPE ALL DRAIN PIPES 1/8" PER FOOT FROM HOUSE LOCATIONS TOWARD CHAMBER.
4. INSTALL A CLEAN- OUT AT HIGH END OF SYSTEM.
5. DRAIN PIPE SHALL BE 8" PVC BURIED AT A MINIMUM OF 24" BELOW GRADE.
6. PROVIDE A 12" THICK GRAVEL BASE UNDER CISTERN, WITH 3/4" GRAVEL.
7. FILL OVER- EXCAVATED AREAS AROUND AND ON TOP OF CISTERN WITH 3/4" GRAVEL.
8. FRENCH DRAINS SHALL HAVE 1- 1/2" TO 3" RIVER ROCK ON A MINIMUM 20 MIL. POLY- VINYL SHEET; CONNECT SHEET TO TOP OF DRAIN CANNISTER.

NO.	DESCRIPTION
1	XERXES SINGLE WALL FRP TANK - 7000 GALLON, 6" DIA. X 36" - 6" LENGTH, 2,500 POUNDS TOTAL WEIGHT
2	PVC DRAIN PIPE FROM CATCH BASINS - SEE PLAN FOR SIZES
3	20" ROUND MANHOLE COVER - LOCKING AND HINGED
4	4" VENT WITH SCREEN
5	3' BURY CLAYTON MARK YARD HYDRANT
6	4" X 36" DIAMETER CONCRETE COLLAR
7	MINIMUM 3/4" PVC PIPE
8	3/4" PVC PIPE AND CAP FOR IRRIGATION SYSTEM
9	28" ROUND MANHOLE COVER
10	115V POWER WITH GROUND FAULT PROTECTION
11	28" ID PLASTIC PUMP HOUSING
12	GRUNDFOS MQ3- 45 PUMP- 22 GPM, 65 PSI, 1" NPT CONNECTOR
13	FLOTEC FP7100H 15 GAL. PRESSURE TANK
14	3" THICK PEA GRAVEL
15	FLOAT SWITCH AND FOOT VALVE
16	OVERFLOW PIPE - STANDARD ON XERXES TANKS - PIPE TO RETENTION POND
17	INVISAFLOW MODEL #4400 FLEX GRATE DOWNSPOUT FILTER
*	-



1 OPTIONAL CATCH BASIN



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A- 1.3

SITework – Clearing, grubbing, rough grading, finish grading

General

This specification covers the requirements for site clearing, grubbing, rough grading, and finish grading in preparation for construction. The work shall prepare the site for foundation and structure placement while meeting the approved grading plan and ensuring proper drainage and stability.

1.0 Scope of Work

- A. Clearing: Removal of vegetation, trees, stumps, debris, and any unsuitable material from the designated project area.
B. Grubbing: Extraction of roots, underground obstructions, and other organic matter that could affect the stability of the subgrade.
C. Rough Grading: Establishment of a basic grade on the site to create the desired contours and elevations as indicated in the approved grading plan.
D. Finish Grading: Final grading to provide smooth, properly contoured surfaces with appropriate slopes for drainage, pedestrian safety, and site aesthetics.

2.0 Site Preparation

- A. Clearing and Grubbing
1. Prior to grading, the site shall be cleared of brush, trees, stumps, and large debris.
2. All vegetation within the cleared area will be removed to the depth that assures a stable subgrade.
3. Hazardous materials or environmentally sensitive areas (e.g., wetlands) encountered during clearing must be handled according to local regulations.
4. The contractor is responsible for obtaining necessary permits for clearing operations.
B. Protection of Adjacent Areas
1. Protect adjacent properties, landscaped areas, or permanent structures during the clearing and grading process.
2. Erosion control measures must be implemented to prevent sedimentation of nearby water sources.

3.0 Grading Requirements

- A. Rough Grading
1. The rough grading shall be executed using heavy earth- moving equipment, establishing preliminary contours, slopes, and elevations as per the approved grading plan.
2. Subgrade compaction shall be achieved to establish a stable base for subsequent paving or structural work.
3. A minimum compaction density, as specified by the geotechnical report or local standards (typically 90- 95% of the Modified Proctor density), should be achieved for the subgrade material.
b. Finish Grading
4. Finish grading shall complete the surface preparation by refining the contours, ensuring smooth transitions, and achieving specified drainage slopes.
5. Grades must be checked and verified through surveying equipment and approved by the Engineer before further construction.
6. Where applicable, cut and fill slopes should be stabilized with appropriate measures (e.g., seeding, erosion control blankets, retaining structures) to minimize surface erosion and ensure safety.

4.0 Drying, Drainage, and Erosion Control

- A. Drainage
1. The grading plan must provide positive drainage away from structures, inlets/outlets, and environmentally sensitive areas.
2. Areas subject to water accumulation must be properly engineered with swales, storm drains, or retention areas per design requirements.
b. Erosion & Sedimentation Control
3. Temporary measures (e.g., silt fences, erosion control blankets, straw wattles) shall be installed immediately after grading to reduce erosion risks.
4. A final stabilization plan, such as seeding with vegetation or installing permanent erosion control measures, is required before final acceptance of grading work.

5.0 Materials

1. Soil materials used for cut or fill shall be evaluated for organic content, classification, and compatibility with the subgrade requirements.
2. In cases where imported fill is needed, such material must be free from deleterious substances and shall meet local or specified gradation and compaction requirements.

6.0 Quality Control and Inspections

- A. The Contractor shall perform field measurements and surveys during rough and finish grading operations to confirm that the established grades, elevations, and slopes are within the tolerances specified in the grading plan.
B. Periodic inspection and testing (e.g., compaction tests) shall be conducted to ensure compliance with project requirements.
C. Any non- conforming work shall be corrected at the Contractor's expense under the supervision of the project Engineer.

7.0 Safety and Environmental Requirements

- A. All clearing and grading operations must comply with applicable OSHA safety regulations and local guidelines.
B. Dust control measures should be implemented on dry days.
C. If trees and vegetation of potential environmental significance are encountered, coordinate with the appropriate authority before removal.

8.0 Documentation and Submittals

- A. The Contractor shall provide a site grading plan showing existing and finished grades for review and approval before the commencement of work.
B. Test reports (e.g., compaction tests) and survey results must be submitted to the Engineer periodically and upon completion of each grading phase.

3000 PSI CONCRETE – BUILDING SLAB

General

1.0 Scope

- A. This mix design is intended for use in a building slab subjected to moderate loads. The concrete shall achieve a minimum compressive strength of 3000 psi (measured at 28 days) and is suitable for general building construction where exposure conditions are non- aggressive.

B. Intended Use and Exposures

1. Application: Building slab foundations and floors.
2. Exposure Classification: Interior or sheltered environments with minimal risk of freeze- thaw cycles, deicing salts, or chemical exposure.
3. Durability: Designed for moderate exposure conditions in accordance with local building codes.

2.0 Mix Design

- A. Required Compressive Strength: 3000 psi at 28 days.
B. Materials:
1. Cement: Portland Cement (ASTM C150 Type I or equivalent)
2. Fine Aggregate: Clean, well- graded sand conforming to ASTM C33
3. Coarse Aggregate: Crushed stone or gravel, nominal size ranging from 3/4" to 1 1/2", conforming to ASTM C33
4. Water: Potable water free from deleterious amounts of contaminants
5. Typical Proportions (by weight):
A) Cement: 500 - 520 lbs per cubic yard
B) Fine Aggregate (sand): 1560 lbs per cubic yard
C) Coarse Aggregate: 1600 lbs per cubic yard
D) Water: Approximately 32- 34 gallons (depending on moisture content and specific material properties)
6. Note: Actual mix proportions may be adjusted based on the specific properties of the materials used. A trial batch and quality assurance testing are recommended prior to full- scale production.

3.0 Workability and Slump

- A. Target Slump: 3 to 4 inches (controlled workability for slab placement)
B. Air Entrainment: Typically not required unless specified by local conditions. If required, add to improve freeze- thaw durability in relevant exposures.

4.0 Water/Cement Ratio

- A. Maximum Water/Cement Ratio: Approximately 0.50.
1. This ratio ensures adequate strength and durability while allowing sufficient workability. Adjustments may be made based on mix trials.

5.0 Admixtures (if applicable)

- A. Retarding Admixtures: May be used in hot weather to retard set times.
B. Water- Reducing Admixtures: Optional to achieve the target slump without adding excess water.
C. Air- Entraining Agents: Only if exposure demands require enhanced freeze- thaw resistance.
D. All admixtures shall conform to ASTM specifications (e.g., ASTM C494 for chemical admixtures).

6.0 Placing, Finishing, and Curing

- A. Placing: Concrete must be placed and consolidated in accordance with ACI 302 guidelines.
B. Finishing: Upon placement, finish as required ensuring a smooth, level surface free from defects.
C. Curing: Begin curing immediately after finishing. Maintain surface moisture (using curing compounds, water, or wet coverings) for a minimum of 7 days in moderate climates (longer in hot or dry conditions) to ensure proper hydration and strength development.

7.0 Quality Control and Testing

- A. Sampling: Concrete cylinders or prisms shall be cast for compressive strength testing according to ASTM C39/C31 protocols.
B. Acceptance Criteria: 28- day compressive strength must be at least 3000 psi.
C. Frequency of Testing: As required by local regulating agencies and project specifications.

8.0 Environmental Conditions

- A. Temperature Considerations: Concrete production should be adjusted for extreme environmental conditions. Pre- cooling or heating of aggregates and water may be necessary in very hot or cold weather to maintain proper set times and strength development.
B. Wind and Precipitation: Take precautions to protect the concrete from rapid drying (wind) or additional water (rain) during placement and curing.

9.0 Safety and Handling

- A. Material Handling: Follow all safety standards regarding the handling of cement and aggregates.
B. Equipment and Worker Safety: Ensure workers are equipped with personal protective equipment (PPE) and that all job- site safety protocols are followed.

PRE- FABRICATED METAL BUILDING – 80' L x 60' W

General

1.0 Scope

- A. This specification covers the materials, fabrication, delivery, and erection of a pre- fabricated metal building measuring 80 feet in length by 60 feet in width. The building is intended for light industrial/warehouse or commercial use and conforms to relevant local building codes and manufacturer engineering designs. The scope includes preparing the project site (foundations and anchor bolt layout provided in separate foundation drawings), delivery of complete building components, and on- site assembly by a qualified erection crew under the supervision of a certified project manager.

2.0 Supply and Delivery

- A. Supply, delivery, and installation of all pre- fabricated building elements including: Primary structural components (columns, beams, girts, and purlins)
Metal roof and wall panels with appropriate insulation as specified
Fasteners, clips, and accessories as required for a secure, weather- tight assembly
B. Coordination with the foundation contractor (as per approved foundation drawings) for proper anchor bolt positioning and building alignment.
C. Provision of temporary weather protection during erection if necessary.

3.0 Design and Manufacturing

- A. Design:
The building design shall be prepared by a Qualified Engineer and shall meet applicable local codes and standards (e.g., International Building Code [IBC], American Institute of Steel Construction [AISC]).
B. Engineering drawings and custom design details (including wind and seismic load calculations) are to be provided by the manufacturer for review and approval.

4.0 Fabrication & Materials:

- A. Components shall be fabricated using high- quality pre- galvanized steel meeting ASTM standards (e.g., ASTM A653) or approved equivalent.
B. All panels (roof and wall) shall be approved for durability, corrosion resistance, and performance under anticipated environmental conditions.
C. Connections, welds, and fasteners shall conform to manufacturer and industry standards.
D. Thermal insulation, if required per project specifications, shall be installed as integrated panels or applied following manufacturer guidelines.

5.0 Dimensions and Configuration

- A. Overall Building Dimensions:
1. Length: 80 feet
2. Width: 60 feet
3. Height: As per design (clear height at the eave and peak specified in contract drawings)
B. Structural Grid:
1. The column spacing and primary structural grid shall be based on the approved structural drawings and manufacturer's design.
2. Proper alignment with the building foundation anchor bolts is required.

6.0 Foundation Interface

- A. The building erection is to be coordinated with foundation preparation.
B. Anchor Bolts: Anchor bolt layout shall conform to manufacturer's installation drawings. Bolts shall be installed by the foundation contractor in accordance with approved engineering specifications.

7.0 Site Conditions

- A. The underlying foundation or slab must meet the engineer's load and concrete strength requirements prior to installation.
B. Any settlement or irregularities must be addressed in advance.

8.0 Erection and Installation

- A. Equipment and Personnel:
1. Erection shall be performed by qualified personnel experienced in metal building construction.
2. Appropriate lifting equipment and rigging shall be used, complying with OSHA and local safety regulations.
B. Field Assembly:
1. Pre- fabricated components shall be delivered in a coordinated sequence and stored in a safe, dry location prior to assembly.
2. Temporary bracing or shoring will be installed where necessary during the erection process.
3. All connections (bolted, welded or otherwise) shall be checked for proper tension and quality.
C. Weather Protection:
1. If weather prohibits immediate panel installation after primary structure erection, temporary protection (tarps, etc.) shall be provided to protect the structure and components.

9.0 Quality Control and Inspection

- A. Manufacturer Inspection:
1. All pre- fabricated components shall be inspected at the manufacturing facility to verify compliance with design and quality standards.
B. On- Site Inspection:
1. The erection process shall be monitored by a designated Project Manager and/or engineer to ensure adherence to the approved design, alignment to foundation anchor bolts, and proper installation practices.
2. Any deviations or nonconformities shall be corrective action items and documented before proceeding.
C. Testing:
1. Upon completion of erection, a final inspection of structural connections, panel installation, and weatherproofing shall be conducted, with documentation provided for final acceptance.

10.0 Safety and Environmental Requirements

- A. All work shall comply with OSHA safety guidelines, local jurisdiction regulations, and industry best practices.
B. Protective equipment, scaffolding, fall protection, and rigging safety procedures shall be in place during all erection activities.
C. Measures shall be implemented to minimize noise, dust, and environmental impacts during construction.

11.0 Documentation and Submittals

- A. Pre- Construction:
1. Submit design drawings, load calculations, and manufacturer installation procedures for review.
2. Provide a detailed schedule for component delivery and on- site erection.
B. During Construction:
1. Field inspection reports, erection sequence documentation, and quality control records shall be maintained and available for review.
C. Post- Construction:
1. Warranty documentation, as- built drawings, and maintenance instructions shall be submitted upon completion of the building erection.

12.0 Warranty and Maintenance

- A. The Manufacturer shall warrant the building components and their installation for defects in material or workmanship for a period defined in the contract (typically 1 to 5 years).
B. The Owner shall receive maintenance guidelines and recommended inspection intervals to ensure continued performance and longevity of the building.

COLD- FORMED METAL FRAMING, INTERIOR C- STUDS

General

1.1 Scope

- A. Supply and install interior load- bearing cold- formed C- studs, sizes 3- 5/8" and 6".

1.2 References

- A. AISI S100 – North American Specification for the Design of Cold- Formed Steel Structural Members
B. ASTM C645 – Standard Specification for Nonstructural Steel Framing Members
C. ASTM C955 – Standard Specification for Load- Bearing (Structural) Steel Studs, Headers, Joists, and Rafters

1.3 Submittals

- A. Product Data: Member profiles, gauges, coatings.
B. Shop Drawings: Framing layout, member schedules, splice details.
PRODUCTS

2.1 Materials

- A. Steel sheet: ASTM A653/A653M, G60 galvanized coating or G90 in high- corrosion areas.

2.2 C- Stud Profiles & Gauges

- A. 3- 5/8" C- stud: 54 mil (12 ga) minimum, 1¼" flanges, ½" return lip.
B. 6" C- stud: 54 mil (12 ga) minimum, 1¼" flanges, ½" return lip.

2.3 Track (U- Header)

- A. Matching gauge and flange dimensions; continuous at top and bottom of wall.

2.4 Accessories

- A. Splice plates, hold- down clips, deflection clips, fasteners, shim packers per manufacturer.

EXECUTION

3.1 Layout & Installation

- A. Install bottom/top track aligned and level. Secure tracks to slab and structure at 24" o.c. max.
B. Cut and insert C- studs into track. Space studs per structural drawings (typically 16" o.c.).
C. Ensure plumb within 1/8" in 10'. Use shim packers under tracks if required.

3.2 Splices & Bracing

- A. Splice studs where they exceed maximum specified length with full- depth splice plates and fasteners; stagger splices in alternate studs.
B. Install lateral bracing or blocking as shown on drawings or per AISI S100.

3.3 Fastening

- A. Fasten studs to tracks: two #10- 16 self- drilling screws at each flange, top and bottom.

- B. Fasten track to structure: ¼" diameter powder- actuated pins or approved anchors at 24" o.c. max.

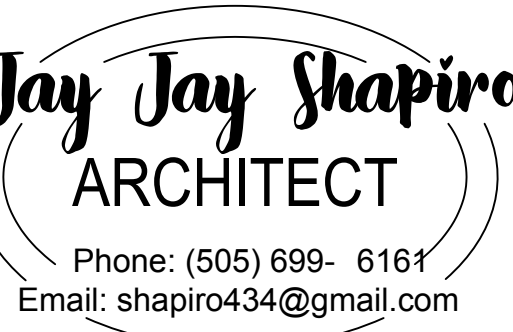
3.4 Tolerances & Quality Control

- A. Alignment: tracks and studs plumb and true to line; cumulative out- of- plumb not over 1/4" in 20'.
B. Fasteners: fully seated, no loose or missing screws.

3.5 Protection

- A. Protect studs and tracks from damage, moisture, and construction debris.

End of Section.



OWNERS:

DOMINGO ORNELAS
PH: (505) 690- 0391
EMAIL:
dominornelas@gmail.com

GENERAL CONTRACTOR:

Frank Trujillo
Tierra De Zia Contracting,
LLC
(505) 470- 5400
tierradezia@gmail.com
Lic. #404576

CONSULTANTS:

Dwight Velarde, PE
Velarde Engineering
(505) 720- 6016
veleng09@gmail.com

Jerry D. Watts, MSFPE
(800) 503- 1961
accentfire@aol.com

PROJECT

DESCRIPTION:

Iglesia Cristiana
Casa del Alferero

2501 Cactus Lane,
Santa Fe, NM 87507

REVISIONS:

#	DISC	DATE
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SHEET TITLE

SPECIFICATIONS

PROJECT NO:

CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

A- 2.0

Thermal and Acoustic Insulation

GENERAL

1.1 Scope

- A. Supply and install roof, foundation, exterior- wall, and interior- wall insulation per this specification.

1.2 References

- A. ASTM C665 – Mineral- Fiber Blankets and Boards
- B. ASTM C578 – Rigid Cellular Polystyrene Thermal Insulation
- C. ASTM C1149 – Sprayed Cellulosic Insulation
- D. ICC ESR- series for UPC 2.0 HFO polyiso

1.3 Submittals

- A. Product data sheets: thermal resistance (R- value), thickness, dimensions, fire and VOC ratings.
- B. Manufacturer’s installation instructions and warranty.

PRODUCTS

2.1 Roof Insulation – Polyiso UPC 2.0 HFO

- A. Type: closed- cell polyisocyanurate board with zero- ODP HFO blowing agent.
- B. Thickness: to achieve nominal R- 60 continuous (approx. 5½”-6” board, per manufacturer).
- C. Facing: coated glass- reinforced facer, both sides.
- D. Thermal conductivity: ≤ 0.019 Btu-in/ft²-°F-h.

2.2 Foundation Insulation – XPS

- A. Type: extruded polystyrene board, ASTM C578 Type X or IV.
- B. Thickness: 2” nominal.
- C. Compressive strength: ≥ 25 psi.
- D. Water absorption: ≤ 0.3 % by volume.

2.3 Exterior Wall Insulation – Cellulose

- A. Type: dense- pack spray- in cellulose, ASTM C1149.
- B. R- value: minimum R- 30 for 2×6 walls.
- C. Minimum density: 3.5 lb/ft³.
- D. Fire treatment: borate- based fire/termite retardant.

2.4 Interior Wall Acoustic Insulation

- A. Sound Attenuation Blankets
 - 1. Type: unfaced fiberglass or mineral- fiber blanket, ASTM C665.
 - 2. Thickness: 3” (min. 2.5 lb/ft² density).
 - 3. NRC: ≥ 0.70.
- B. Soundboard
 - 1. Type: ½” gypsum- fiber or cementitious soundboard, ASTM C931 or C423.
 - 2. Density: ≥ 40 lb/ft³.
 - 3. Fire rating: UL- classified for 1- hour assemblies (where required).

EXECUTION

3.1 General Installation

- A. Comply with manufacturer’s instructions, ASTM C1320 (installation of board insulation) and C1330 (cellulose).
- B. Keep insulation dry; protect from moisture and physical damage.

3.2 Roof

- A. Lay polyiso boards in a continuous layer above roof deck, stagger joints; seal seams with compatible tape or sealant.
- B. Install vapor retarder or cover board as specified before roofing membrane.

3.3 Foundation

- A. Adhere or mechanically fasten XPS boards to exterior of foundation wall, continuous from footing to finished grade.
- B. Seal board joints and perimeter with compatible foam or tape to prevent air/moisture intrusion.

3.4 Exterior Walls

- A. Drill or cut holes at stud cavities; dense- pack cellulose at 3.5 lb/ft³ to fill cavity fully without voids.
- B. Seal top and bottom plates to prevent settling; install netting or baffles where required.

3.5 Interior Walls

- A. After rough- in MEP, install 3” sound blankets within stud cavities.
- B. Affix ½” soundboard directly to one side of framing: fasteners at 8” o.c. edges, 12” o.c. field.

3.6 Quality Control and Verification

- A. Inspect thickness and R- values in random locations; use depth gauge or board markings.
- B. Verify continuous coverage, no gaps, voids, or compression.
- C. Check all seams and penetrations are sealed with appropriate material.

End of Section

COLD- FORMED METAL FRAMING, 6” C- JOISTS

GENERAL

1.1 Scope

- A. Supply and install 6” deep, cold- formed steel C- joists at 16” on center to support gypsum board ceilings (or wall furring) per approved shop drawings.

1.2 References

1. ASTM C645 — “Standard Specification for Nonstructural Steel Framing Members”

2. ASTM C754 — “Standard Specification for Installation of Steel Framing Members”

PRODUCTS

2.1 C- Joists

- A. Profile: C- shape, 6” depth, 1½” flange, ¾” lip, manufactured to ASTM C645
- B. Gauge: 20 ga (0.036”) G90 galvanized steel
- C. Section modulus and stiffness rated for L/240 deflection over a 12’ simple span

2.2 Tracks & Accessories

- A. Field- trimmed U- shaped top and bottom track, same gauge as joists
- B. Splice plates or clip- angles for continuous runs longer than one track length
- C. Fasteners: self- drilling, self- tapping screws compatible with steel thickness

INSTALLATION

3.1 Layout

- A. Install top track level and plumb on bearing walls or structure
- B. Snap or set C- joists into track at 16” o.c., verify spacing with a laser or chalk line

3.2 Fastening

- A. Secure each joist flange to the track with two 1¼” Type S self- drilling screws
- B. Stagger splices; use manufacturer- approved splices or clip angles

3.3 Gypsum Board Attachment (if ceiling use)

- A. Attach 5/8” gypsum board perpendicular to joists with 1” Type S drywall screws
- B. Screw spacing: 7–8” o.c. along joists; 3/8” from panel edges

3.4 Tolerances & Quality

- A. Maximum deflection under live load L/240
- B. Joist plane variation: ±1/8” in 10’
- C. Verify plumb, level, and secure connections before drywall installation

CLEAN- UP & PROTECTION

4.1 Remove metal shavings and debris

4.2 Protect installed framing until finished removal of trades

End of Section

THERMOPLASTIC (TPO) ROOFING SYSTEM

GENERAL

1.1 SUMMARY

- A. Work under this Section includes supply and installation of a fully adhered, single- ply TPO roofing system complete with insulation, vapor retarder, roof membrane, flashings, and accessories.

1.2 REFERENCES

- A. ASTM D6878 — Standard Specification for TPO Sheet Roofing
- B. ASTM D4434 — Standard Specification for PVC Sheet Roofing
- C. ASTM D7554 — TPO Membrane Thickness
- D. FM 4470, 4450 — Factory Mutual Approval Standards
- E. NRCA Roofing Manual

1.3 SUBMITTALS

- A. Product Data: Manufacturer’s technical datasheets for membrane, adhesives, primers, and flashing materials.
- B. Shop Drawings: Plan views showing membrane layout, insulation joints, flashings, drains, curbs, penetrations, edge details.
- C. Samples: 12”×12” TPO membrane, trim flanges, seam tape.
- D. Certificates: Membrane FM Approval, UL Class A roof assembly (if required).
- E. Warranties: Manufacturer’s 20- year membrane warranty; Installer’s workmanship warranty.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in TPO roofing with minimum 20 years’ experience and FM Approval for specified assembly.
- B. Installer Qualifications: Certified by membrane manufacturer, with not less than 5 completed TPO roof projects of similar scope.
- C. Pre- Installation Meeting: Review substrate condition, insulation layout, flashing details, weather constraints, safety procedures.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer’s unopened, labeled packaging.
- B. Store membrane rolls on end, in a clean, dry area, protected from sun and heat.
- C. Store adhesives and primers between 60°F and 80°F per manufacturer’s instructions.

2.1 TPO ROOFING MEMBRANE

- A. Type: Thermoplastic Polyolefin (TPO), reinforced with polyester scrim.
- B. Thickness: 60- mil minimum, meeting ASTM D6878 and ASTM D7554 tolerances.
- C. Color: White (reflective).
- D. Physical Properties (minimum per ASTM D6878):
 - 1. Tensile Strength: ≥ 265 lb/in (MD & CD)
 - 2. Elongation: ≥ 15%
 - 3. Tear Strength: ≥ 50 lbf (MD & CD)
 - 4. Puncture Resistance (ASTM D5635): ≥ 16 lbf

2.2 INSULATION

- A. Type: Polyisocyanurate (ISO) board, coated facer on both sides.
- B. Thickness: As indicated on drawings to achieve required R- value (typ. R- 20).
- C. Compressive Strength: ≥ 25 psi (ASTM D1621).
- D. Dimension Tolerance: Length and width ± 1/8”, thickness –0/+3/16”.

2.3 VAPOR RETARDER (IF REQUIRED)

- A. Type: Self- adhered, non- perforated bituminous sheet or composite sheet with perm ≤ 0.1.
- B. Thickness: 40 mils minimum.

2.4 ADHESIVES AND PRIMERS

- A. Membrane Adhesive: Low- VOC, manufacturer- approved, water- based or solvent- based fully- adhered adhesive.
- B. Primer: For flashing surfaces (e.g., metal, concrete) if required by membrane manufacturer.

2.5 FLASHING AND ACCESSORIES

- A. TPO Flashing Sheet: Same membrane type and thickness as field membrane.
- B. Pre- Molded Inside/Outside Corners, Pipe Boots: Manufacturer’s matching accessories.
- C. Metal Drip Edge: Pre- finished, compatible color.
- D. Fasteners & Plates: Corrosion- resistant, approved types for insulation attachment.

3.1 EXAMINATION

- A. Verify roof deck is clean, dry, smooth, and free of sharp objects or protrusions.
- B. Verify deck deflection limits per manufacturer’s requirements.
- C. Verify substrate temperature and ambient conditions are within limits for membrane application.

3.2 PREPARATION

- A. Dry- in Substrate: Ensure roof deck is free of ponded water.
- B. Moisture Testing: If required, conduct ASTM F2170 relative humidity tests or ASTM D4263 plastic sheet test.
- C. Prime Flashing Surfaces: Apply primer to concrete, masonry, and metal per manufacturer’s instructions.

3.3 INSULATION INSTALLATION

- A. Vapor Retarder: Install self- adhered sheets directly to deck, lapping sidelines 2”, end laps 6”, and seal with manufacturer’s lap sealant.
- B. ISO Boards: Set in full- coverage bead of compatible adhesive, stagger joints; secure with mechanical fasteners per spacing schedule.
- C. Cover Board (if specified): Adhere or mechanically attach per drawings.

3.4 MEMBRANE INSTALLATION

- A. Layout: Unroll membrane and allow to relax per manufacturer’s time table.
- B. Adhesive Application: Apply adhesive to insulation and/or membrane backside in uniform ribbons or full- coverage spray.
- C. Positioning: Embed membrane, maintaining 1/8” to 1/4” slack at terminations and flashings.
- D. Seaming: Hot- air weld sidelaps and endlaps with automatic welding equipment. Test seams with hand probe to ensure full fusion.
- E. Detail Work: Install flashings, corners, pipe boots, and edge metal. Ensure all terminations are sealed with factory or field- fabricated metal termination bars and sealant.

3.5 FIELD QUALITY CONTROL

- A. Inspection: Membrane seams, flashings, penetrations, and terminations shall be inspected by a Factory Authorized Field Technician.
- B. Weld Testing: Perform destructive and non- destructive seam tests (e.g., seam probe, peel tests) in accordance with ASTM D5385.
- C. Repair: Cut out and re- weld or patch defective seams and damage areas.

3.6 PROTECTION AND CLEANING

- A. Protect finished roof from traffic and damage until acceptance.
- B. Remove debris, adhesive smears, and unused materials.
- C. Leave adjacent surfaces clean and undamaged.

WARRANTY

4.1 Manufacturer’s Membrane Warranty

- A. Twenty- year no- dollar- limit manufacturer’s warranty covering membrane defects and reasonable consequential damage to roofing components.

4.2 Installer’s Workmanship Warranty

- A. Two- year warranty covering installation workmanship defects effective from date of final acceptance.

Gypsum Board Assemblies

GENERAL

1.1 Scope

- A. Supply and install 5/8” Firecode® C gypsum panels with a minimum Level 4 finish.

1.2 References

- A. ASTM C1396/C1396M – Gypsum Board
- B. ASTM C840 – Application and Finishing of Gypsum Board
- C. GA- 216 – Recommended Levels of Gypsum Board Finish

1.3 Submittals

- A. Product data: board size, edge type, paper facing, fire- rating documentation.
- B. Joint treatment and finish system manufacturer’s instructions.

PRODUCTS

2.1 Firecode® C Gypsum Panels

- A. Type: 5/8” thick, Firecode® C (core enhanced for fire resistance), taper- edged, in 4’ × 8’ or 4’ × 12’ sheets.
- B. Conform to ASTM C1396/C1396M, FC- C classification.

2.2 Accessories

- A. Framing: steel studs and runners per Section 05 40 00 (minimum 3- 5/8” studs).
- B. Joint treatment:
 - 1. Paper or fiberglass tape (ASTM C475).
 - 2. Setting- type joint compound for first coat.
 - 3. Topping compound for fill and finish coats.
 - 4. Fasteners: corrosion- resistant drywall screws per ASTM C1002 (1¼” long for studs, 1” for furring).
 - 5. Edge trim and corner beads: zinc or plastic, as required.

EXECUTION

3.1 Examination

- A. Verify framing is plumb, true, spaced 16” o.c. (or as specified), and free of irregularities.

3.2 Installation of Gypsum Panels

- A. Install per ASTM C840 and manufacturer’s instructions.
- B. Orient panels horizontally with ends staggered.
- C. Secure panels to framing: screws at 7” o.c. in field, 6” o.c. at perimeter.

3.3 Joint Treatment & Level 4 Finish

- A. Level 4 per GA- 216:
 - 1. Embed tape in setting- type compound; fill joints, trim flush.
 - 2. Apply two full coats of topping compound; feather edges 6” minimum.
 - 3. Skimcoat entire surface with lightweight topping compound to uniform appearance.
- B. Corner Treatment
 - 1. Reinforce outside corners with corner beads; finish flush.
 - 2. Sand lightly between coats to remove imperfections; avoid exposing paper.

3.4 Protection

- A. Protect finished surfaces from damage, moisture, and construction traffic.
- B. Begin decoration only after Level 4 finish is dry and free of defects.

End of Section



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veleng09@gmail.com

Jerry D. Watts, MSFPE
(800) 503- 1961
accentfire@aol.com

PROJECT DESCRIPTION:

Iglesia Cristiana
Casa del Alferero

2501 Cactus Lane,
Santa Fe, NM 87507

REVISIONS:
DISC DATE

SHEET TITLE

SPECIFICATIONS

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

A- 2.1

Recessed Audio–Duplex Stage Pocket Boxes

GENERAL

1.1 Scope

- A. Recessed audio stage pocket floor and wall boxes with low- voltage modules and one duplex receptacle each.

1.2 References

- A. UL 5A, UL 514A, UL 50E; NEC (NFPA 70); NECA 1.

1.3 Submittals

- A. Product data, shop drawings (locations, cut- outs), sample faceplate.
PRODUCTS

2.1 Manufacturer

- A. Mody Company Creative, Inc.; www.modycompany.com.

2.2 Floor Boxes

- A. Die- cast aluminum, nickel finish; spring- loaded gasketed lid.
B. Depth: 3.5" min. Accommodates up to six low- voltage modules + one NEMA 5- 15R duplex receptacle module.

2.3 Wall Boxes

- A. 16 ga galvanized steel, black paint; flush cover with captive screws.
B. Depth: 2.5" min. Holds four low- voltage modules + one duplex receptacle.

2.4 Faceplates & Modules

- A. Stainless or zinc- plated steel faceplates with engraved labels.
B. Low- voltage modules: XLR, TRS, speakON, RCA, HDMI or blank.
C. Duplex receptacle: NEMA 5- 15R, hospital- grade, ivory.

EXECUTION

3.1 Rough- In

- A. Set floor boxes level in formwork or core- drill wall boxes per template.
B. Install conduit/cables; secure with clamps and bushings.

3.2 Final Installation

- A. Snap in modules and duplex receptacle per schedule; torque screws to 12 lb- in.
B. Wire low- voltage and receptacle per manufacturer's diagram; respect polarity and grounding.

3.3 Quality Control

- A. Verify box type, location, plumb, and cover flushness.
B. Test audio circuits (continuity, polarity) and receptacle for proper grounding and polarity.

3.4 Protection & Cleaning

- A. Protect openings during construction. Clean faceplates and lids; touch up paint as needed.

End of Section

Manufactured Stone Masonry Veneer

GENERAL

1.1 Scope

- A. Supply and install Cultured Stone® Ancient Villa® Ledgestone, Sevilla style, on entry portal columns over cement- board backing.

1.2 References

- A. ASTM C1670 – Standard Specification for Manufactured Stone Masonry Units
B. ASTM C847 – Installation of Masonry Veneer over Wood Frame Construction
C. Manufacturer's current product literature and installation guide

1.3 Submittals

- A. Product Data: stone profiles, dimensions, weights, colors, textures, cement- board requirements.
B. Shop Drawings: countertop plans, elevations, seam locations, edge profiles, cutouts for sinks and faucets.
C. Shop Drawings: elevations of column veneers, joint patterns, flashings, weep locations.

PRODUCTS

2.1 Manufactured Stone Veneer

- A. Manufacturer: Cultured Stone®, a BMC® company.
B. Product: Ancient Villa® Ledgestone, Sevilla color blend.
C. Unit size: random ledgestone units, nominal 2"–4" heights × 6"–18" lengths; ¾"–1¼" thickness.
D. Weight: ≈ 7–8 lb/ft².
E. Compressive strength, absorption, and other properties: per ASTM C1670.

2.2 Backing & Accessories

- A. Cement- Board Backing: ½" fiber- cement backerboard, ASTM C1177 or C1325, installed over approved weather–resistive barrier (WRB).
B. Metal Lath: galvanized, 3.4 lb/yd²; apply over WRB and backerboard as required.
C. Flashing: corrosion- resistant metal flashing at base and transitions per details.
D. Weep Screeds & Weep Vents: at base of veneer.
E. Mortar: Type S or N, Portland cement, lime, and graded sand per ASTM C270; color to match stone.
F. Accessories: units, thru- wall flashing, drip screeds, control joints per manufacturer's instructions.

EXECUTION

3.1 Preparation

- A. Verify substrate is plumb, true, sound, and has WRB and flashings in place.
B. Install cement- board backerboard per ASTM and manufacturer's instructions; fasten at 8" o.c. max.
C. Apply metal lath over cement board; securely fasten and lap per spec.

3.2 Stone Installation

- A. Mix mortar to a stiff, workable consistency.
B. Butter each stone's back face with a ½"–¾" mortar bed; press firmly in a staggered pattern.
C. Maintain ¼" joint width (nominal); tool joints flush or slightly concave.
D. Provide tight, natural- looking stone- to- stone fit; cut units neatly to fit at corners and openings.

3.3 Flashing & Weeps

- A. Integrate flashing at base of columns; terminate lath and cement board above flashing.
B. Install weep screed at base; provide ¾16" weep vents or weep holes at 16" o.c. max.

3.4 Cleaning & Protection

- A. Brush excess mortar from faces before hardening.
B. After mortar cures, rinse veneer with low- pressure water; avoid bleach or acid cleaners.
C. Protect finished veneer from staining, mortar droppings, and impact until project completion.

3.5 Warranty

- A. Provide manufacturer's 10- year limited warranty on manufactured stone units.

End of Section

Natural Stone Countertops (Granite)

GENERAL

1.1 Scope

- A. Supply and install polished, natural granite countertops, Grade 2–3 quality, including fabrication, seams, edge profiles, and anchorage.

1.2 References

- A. ANSI Z124.6 – Solid Surfaces (for comparison)
B. ASTM C616 – Standard Specification for Quartz- Based Dimension Stone
C. CRI Green Label Plus (where LEED or low- VOC criteria apply)

1.3 Submittals

- A. Product Data: granite source, physical properties, finish, and maintenance instructions.
B. Shop Drawings: countertop plans, elevations, seam locations, edge profiles, cutouts for sinks and faucets.
C. Samples: 12" × 12" polished slabs of selected granite.

PRODUCTS

2.1 Granite Material

- A. Grade 2–3 (commercial quality): uniform color and veining, minimal fissures, consistent polish.
B. Color: as selected from manufacturer's standard range.
C. Thickness: nominal 3 cm (1¼").
D. Finish: polished to 300–400 grit, 95 % gloss minimum.
E. Physical Properties: compressive strength ≥ 25,000 psi; water absorption ≤ 0.4 %.

2.2 Fabrication

- A. Templating: field verify all dimensions with approved drawings before cutting.
B. Seams: use color matched, UV- stable epoxy; seams tight (≤ 0.005" gap), ground and polished smooth.
C. Edge Profile: eased "Eased" (1 mm radius) or as indicated on drawings.
D. Cutouts: sink, cooktop, and faucet openings with factory- finished edges.
E. Backsplashes and splash guards: matching granite, 4" high or as indicated.

2.3 Accessories

- A. Epoxy adhesive and seam filler, color matched to stone.
B. Sound- dampening underlayment pads.
C. Sealant: impregnating stone sealer, clear, low- VOC.

EXECUTION

3.1 Inspection

- A. Verify cabinetry is level, plumb, and within ± 1⁄16" over 8".
B. Confirm substrate rigidity and attachment points for anchorage.

3.2 Installation

- A. Dry- fit all pieces; adjust for uniform reveal and seam alignment.
B. Apply adhesive to substrate and joint faces; set slabs in place.
C. Level and align slabs; shim as needed with non- staining, non- metallic shims.
D. Clean excess adhesive immediately; tool seams flush and polish to match surrounding surface.

3.3 Joint Sealing & Finish

- A. After adhesive cures, clean seams and apply impregnating sealer per manufacturer's instructions.
B. Wipe down all surfaces; remove fingerprints, dust, and residue.

3.4 Protection & Maintenance

- A. Cover countertops with plywood or protective film until project handover.
B. Provide maintenance kit and instructions: routine cleaning with pH- neutral cleaner; resealing schedule.

End of Section

Plumbing Systems

GENERAL

1.1 Scope

- A. Supply, install, and test sanitary drainage, vent, and domestic water piping systems serving the following church fixtures:
1. 5 water closets (tank type)
2. 1 urinal
3. 4 lavatories
4. 1 janitor sink
5. 1 kitchen sink
6. 1 refrigerator ice- maker line
7. 1 domestic water heater
8. 4 exterior hose bibs

1.2 References

- A. IPC – International Plumbing Code
B. ASTM D2665 – PVC DWV Pipe and Fittings
C. ASTM D1785 – PVC Pressure Pipe and Fittings
D. ASTM B88 – Seamless Copper Water Tube
E. ASSE 1017 – Backflow Preventers for Hose Connections
F. NSF/ANSI 61 – Drinking Water System Components

1.3 Submittals

- A. Product data on pipe, fittings, valves, water heater, backflow preventers.
B. Shop drawings: fixture layouts, piping risers, vent stacks, roof- penetration details.
C. Test reports: air- test of DWV system and hydrostatic test of water lines.

PRODUCTS

2.1 Sanitary Drainage & Vent Piping

- A. Pipe and Fittings:
1. Sanitary (DWV) Piping: PVC Schedule 40, solvent- welded, ASTM D2665.
2. Vent Piping: same as DWV piping.
B. Sizes:
1. Building drain and lateral to grease arrester: 4" PVC.
2. Branch drains serving lavatories, sinks, urinal: 2" or 3" PVC per code.
3. Fixture drains: water closets on 3"; urinal on 2"; all others on 1½"–2" as required.
4. Stack vents: minimum 3" PVC through- roof penetration.

2.2 Domestic Cold & Hot Water Piping

- A. Material Options (select one):
1. Type L hard- drawn copper tubing, ASTM B88, solder- joint fittings, lead free.
2. Cross- linked polyethylene (PEX) tubing, ASTM F876/F877, crimp or expansion fittings.
B. Sizes:
1. Main riser: 1" cold and hot.
2. Branch to fixtures: ¾" to lavatories, kitchen sink, janitor sink; ½" to hose bibs, ice maker.
C. Valves and Accessories:
1. Shutoff valves: bronze ball or gate valves at each fixture.
2. Vacuum breakers/backflow preventers: ASSE 1017 on each hose bib.
3. Water heater expansion tank, pressure- relief valve, and sediment trap.

2.3 Water Heater

- A. Type: gas- fired (or electric) storage heater, natural draft or direct vent, 50–75 gal capacity.
B. Features: factory installed T&P relief valve, insulated jacket, ASME rated.

EXECUTION

3.1 Rough In – DWV System

- A. Lay 4" building drain with 1⁄8" fall per foot minimum. Branches: slope ¼"/ft for 2"–3" lines, ½"/ft for 4".
B. Install fixture traps and branch piping to stack. Maintain minimum trap arms.
C. Connect to gravity flow sewer lateral. Provide cleanouts at base of each vertical stack and changes of direction > 45°.

3.2 Rough In – Vent System

- A. Extend vent stacks through roof with a minimum 3" pipe. Terminate at least 10" above roof and 2' clear of openings.

3.3 Rough In – Water System

- A. Install cold water riser and branch with continuous slope to drain.
B. Install hot water riser from heater to serve fixtures. Include mixing valve if required.
C. Size and locate shutoff valves at each fixture.
D. Install hosebib vacuum breakers per manufacturer's instructions.

3.4 Equipment Installation

- A. Set water heater level on concrete pad or bracket; provide seismic strapping where required.
B. Connect water, gas (if applicable), and flue per code and manufacturer.

3.5 Testing

- A. DWV Air Test: cap fixture outlets, apply 5 psi air, hold 15 min; inspect for pressure loss.
B. Water Test: fill cold- water piping to 150 psi; hold 15 min; inspect for leaks.

3.6 Balancing & Commissioning

- A. Adjust water heater controls; flush and disinfect water system.
B. Verify fixture flow rates and drainage performance.

PROTECTION & CLEAN UP

4.1 Protect installed piping and equipment from damage.

4.2 Remove debris, surplus material, and packaging from site daily.

End of Section



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Jerry D. Watts, MSFPE
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PROJECT

DESCRIPTION:

Iglesia Cristiana
Casa del Alferero

2501 Cactus Lane,
Santa Fe, NM 87507

REVISIONS:

#	DISC	DATE
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SHEET TITLE

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

A- 2.2

2. SEE SHEET A-3.2 FOR CONCRETE DETAIL DRAWINGS AND SPECIFICATIONS.

DAY JAY SHAPIRO
NO. 2858
REGISTERED ARCHITECT

Jerry D. Watts, MSFPE
(800) 503- 1961
accentfire@aol.com

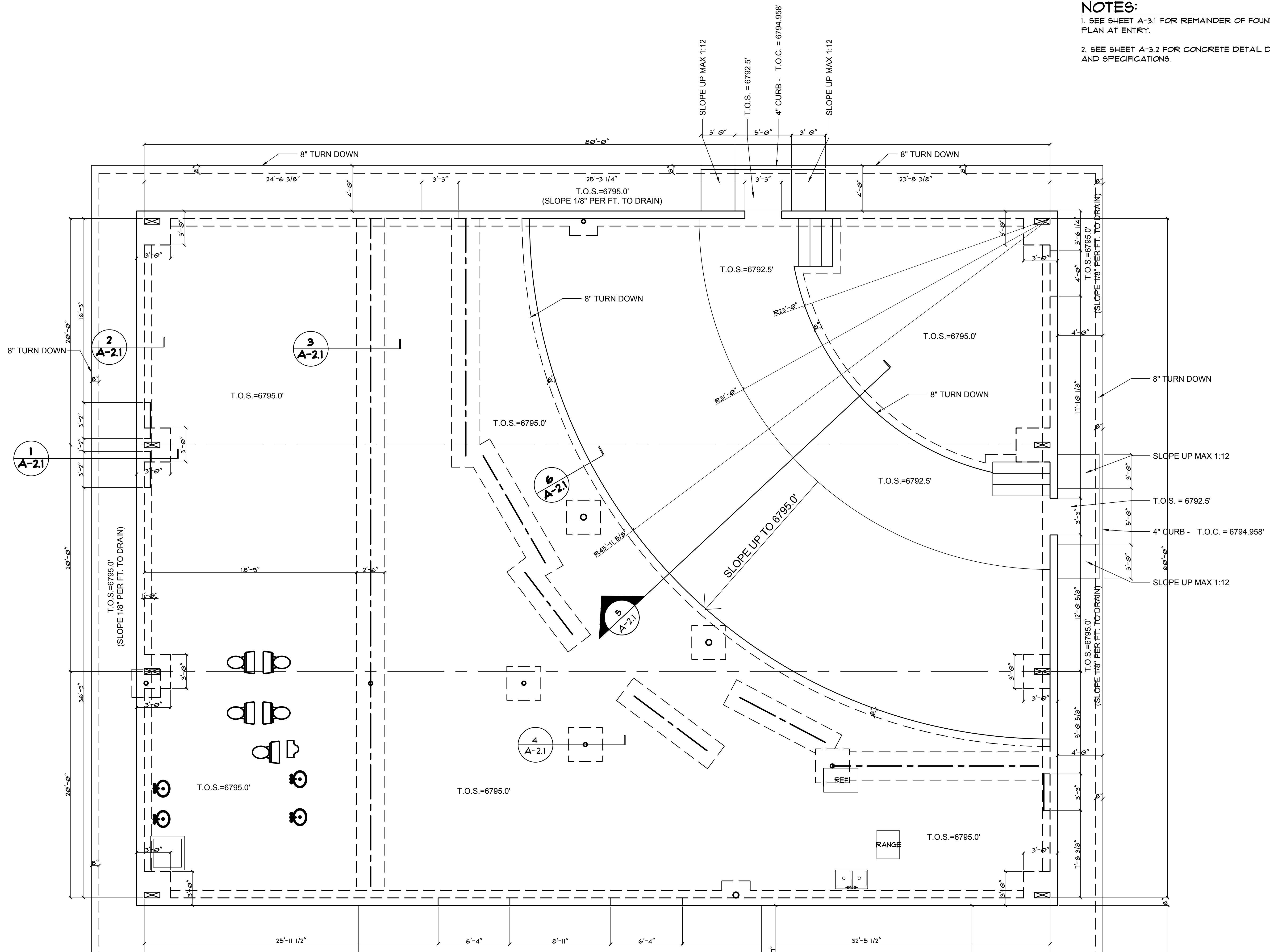
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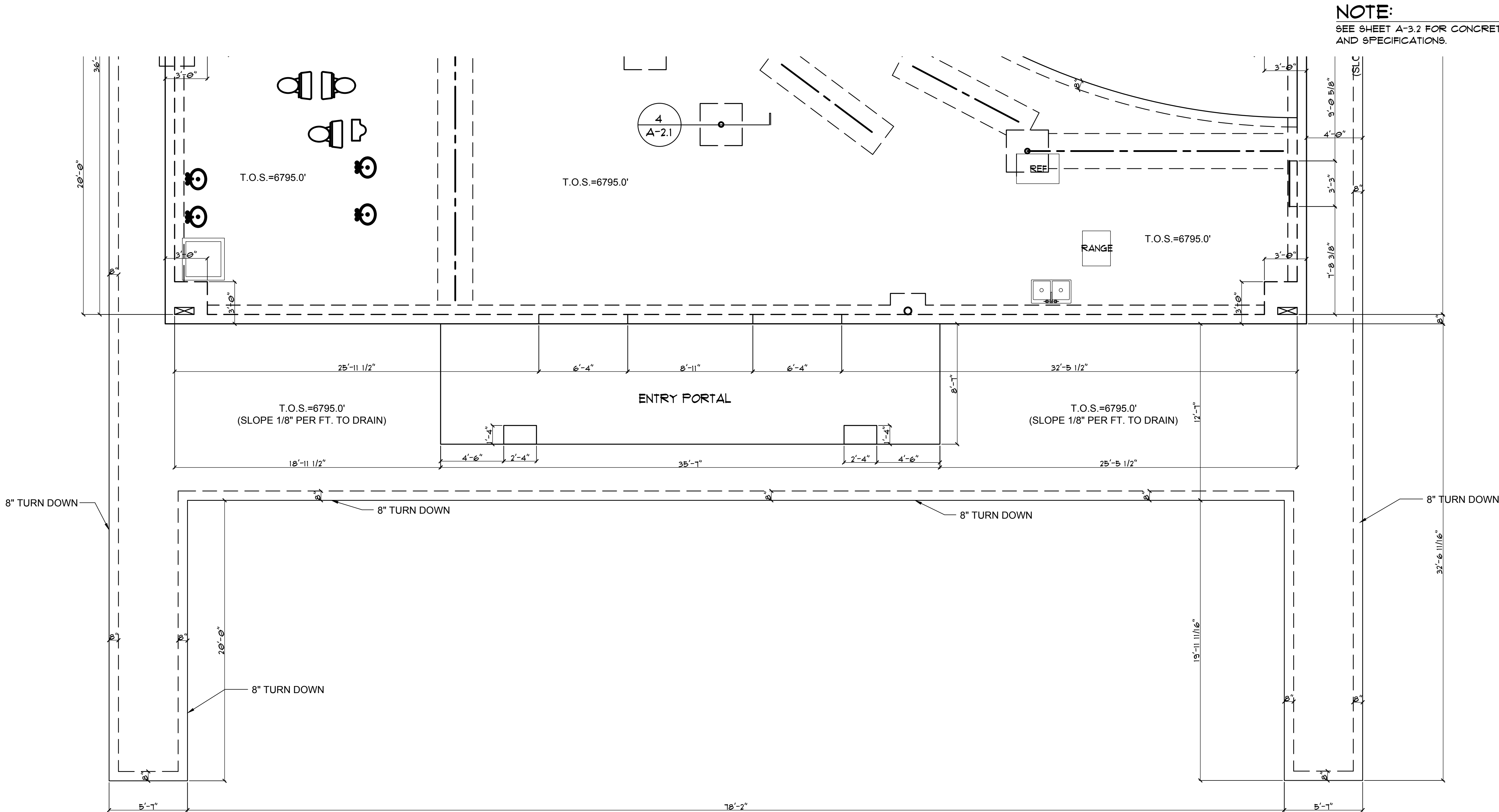
FOUNDATION PLAN

SHEET: _____

A- 3.0



1 FOUNDATION PLAN
1/4" = 1'- 0"



1 FOUNDATION PLAN - CONTINUED
1/4" = 1'- 0"

CONCRETE SPECIFICATIONS:

3000 PSI CONCRETE – BUILDING SLAB

GENERAL

1.0 Scope.

A. This mix design is intended for use in a building slab subjected to moderate loads. The concrete shall achieve a minimum compressive strength of 3000 psi (measured at 28 days) and is suitable for general building construction where exposure conditions are non-aggressive.

B. Intended Use and Exposures

- Application: Building slab foundations and floors.
- Exposure Classification: Interior or sheltered environments with minimal risk of freeze-thaw cycles, deicing salts, or chemical exposure.
- Durability: Designed for moderate exposure conditions in accordance with local building codes.

2.0 Mix Design

A. Required Compressive Strength: 3000 psi at 28 days.

B. Materials:

- Cement: Portland Cement (ASTM C150 Type I or equivalent)
- Fine Aggregate: Clean, well-graded sand conforming to ASTM C33
- Coarse Aggregate: Crushed stone or gravel, nominal size ranging from 3/4" to 1 1/2", conforming to ASTM C33
- Water: Potable water free from deleterious amounts of contaminants
- Typical Proportions (by weight):
 - Cement: 500 - 520 lbs per cubic yard
 - Fine Aggregate (sand): 1560 lbs per cubic yard
 - Coarse Aggregate: 1600 lbs per cubic yard
 - Water: Approximately 32 - 34 gallons (depending on moisture content and specific material properties)

6. Note: Actual mix proportions may be adjusted based on the specific properties of the materials used. A trial batch and quality assurance testing are recommended prior to full-scale production.

Approved equivalent.
approved for durability, corrosion resistance, and environmental conditions.
Materials shall conform to manufacturer and industry

For project specifications, shall be installed as integrated turner guidelines.

Clear height at the eave and peak specified in contract

Primary structural grid shall be based on the approved architect's design.
Building foundation anchor bolts is required.

Coordinated with foundation preparation.
shall conform to manufacturer's installation drawings.
Installation contractor in accordance with approved

Design must meet the engineer's load and concrete strength

Manufacturer.

EXECUTION

3.1 Layout & Installation

- Install bottom/top track alignment max.
- Cut and insert C-studs into track (o.c.).
- Ensure plumb within 1/8" in 1'

3.2 Splices & Bracing

- Splice studs where they exceed and fasteners; stagger splices in B.
- Install lateral bracing or blocking

3.3 Fastening

A. Fasten studs to tracks: two #4

B. Fasten track to structure: 1/4" x 24" o.c. max.

3.4 Tolerances & Quality Control

- Alignment: tracks and studs plumb 1/4" in 20'.
- Fasteners: fully seated, no loose

Must be addressed in advance.

Installed by qualified personnel experienced in metal building

Installation and rigging shall be used, complying with OSHA

Studs shall be delivered in a coordinated sequence and assembly.

Installation will be installed where necessary during the erection (or otherwise) shall be checked for proper tension

Final panel installation after primary structure erection.
(If applicable) shall be provided to protect the structure and

3.5 Protection

A. Protect studs and tracks from

End of Section.



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SHEET TITLE

FOUNDATION
PLAN

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

A- 3.1



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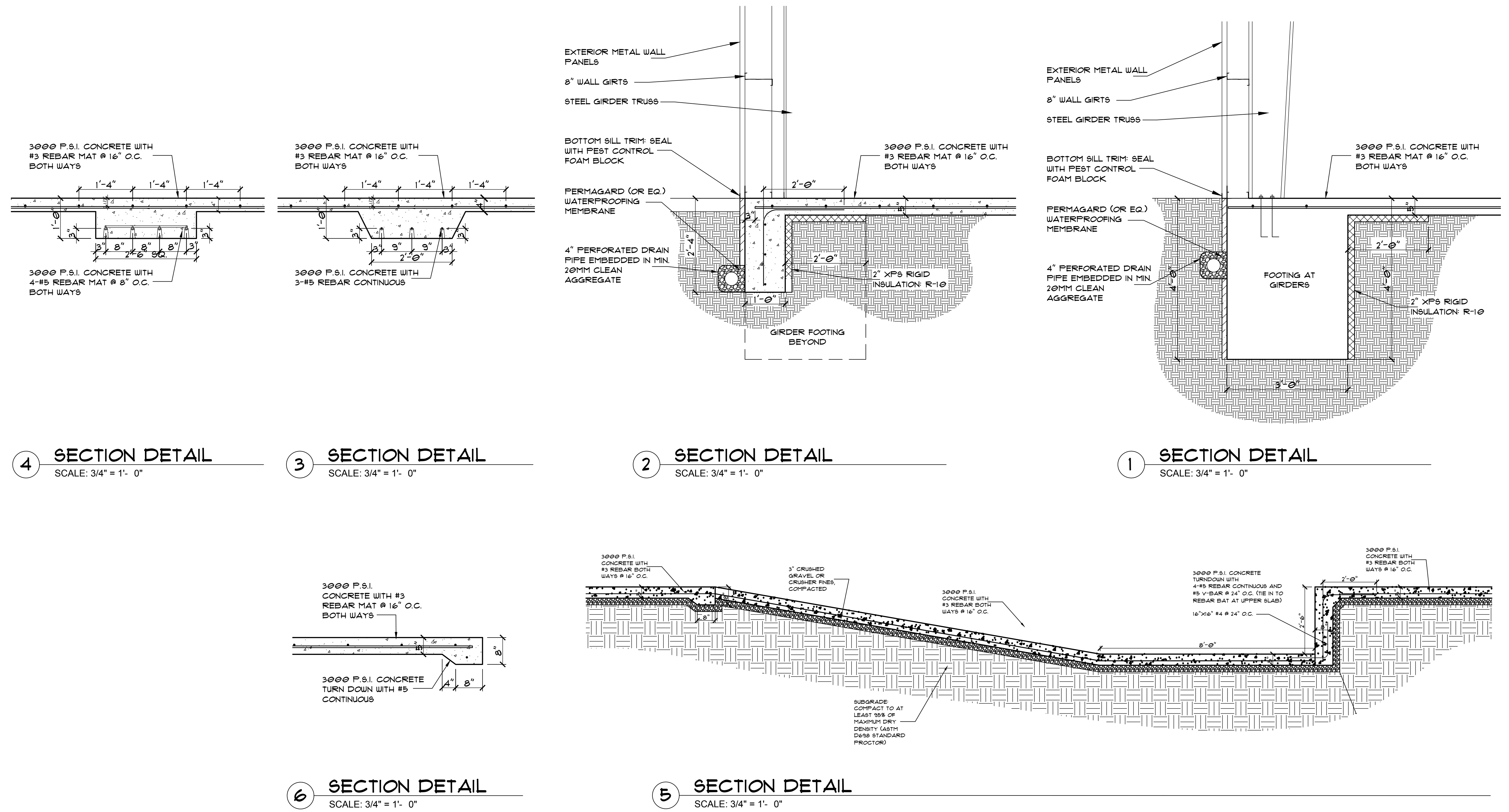
SHEET TITLE

FOUNDATION
DETAILS,
CONCRETE
SPECIFICATIONS

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:



CONCRETE SPECIFICATIONS:

3000 PSI CONCRETE – BUILDING SLAB

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1.0 Scope.

A. This mix design is intended for use in a building slab subjected to moderate loads. The concrete shall achieve a minimum compressive strength of 3000 psi (measured at 28 days) and is suitable for general building construction where exposure conditions are non- aggressive.

B. Intended Use and Exposures

1. Application: Building slab foundations and floors.

2. Exposure Classification: Interior or sheltered environments with minimal risk of freeze- thaw cycles, deicing salts, or chemical exposure.

3. Durability: Designed for moderate exposure conditions in accordance with local building codes.

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B. Materials:

1. Cement: Portland Cement (ASTM C150 Type I or equivalent)

2. Fine Aggregate: Clean, well- graded sand conforming to ASTM C33

3. Coarse Aggregate: Crushed stone or gravel, nominal size ranging from 3/4" to 1 1/2", conforming to ASTM C33

4. Water: Potable water free from deleterious amounts of contaminants

5. Typical Proportions (by weight):

A) Cement: 500 - 520 lbs per cubic yard

B) Fine Aggregate (sand): 1560 lbs per cubic yard

C) Coarse Aggregate: 1600 lbs per cubic yard

D) Water: Approximately 32- 34 gallons (depending on moisture content and specific material properties)

6. Note: Actual mix proportions may be adjusted based on the specific properties of the materials used. A trial batch and quality assurance testing are recommended prior to full- scale production.

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B. Cut and insert C- studs into t o.c.).

C. Ensure plumb within 1/8" in 11

3.2 Splices & Bracing

A. Splice studs where they exce- and fasteners; stagger splices in B. Install lateral bracing or blocki

3.3 Fastening

A. Fasten studs to tracks: two #1

B. Fasten track to structure: 1/4" c 24" o.c. max.

3.4 Tolerances & Quality Contr

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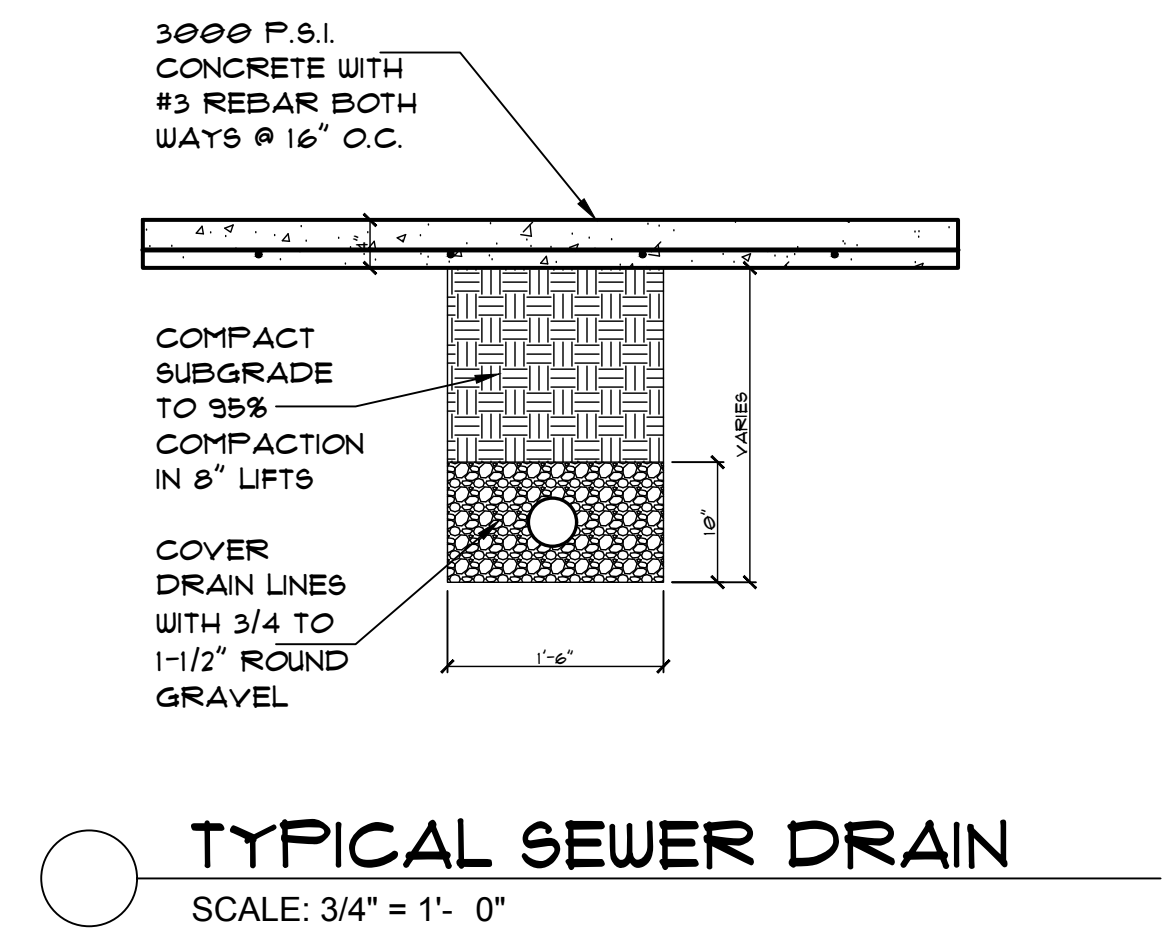
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TYPICAL SEWER DRAIN
SCALE: 3/4" = 1'- 0"



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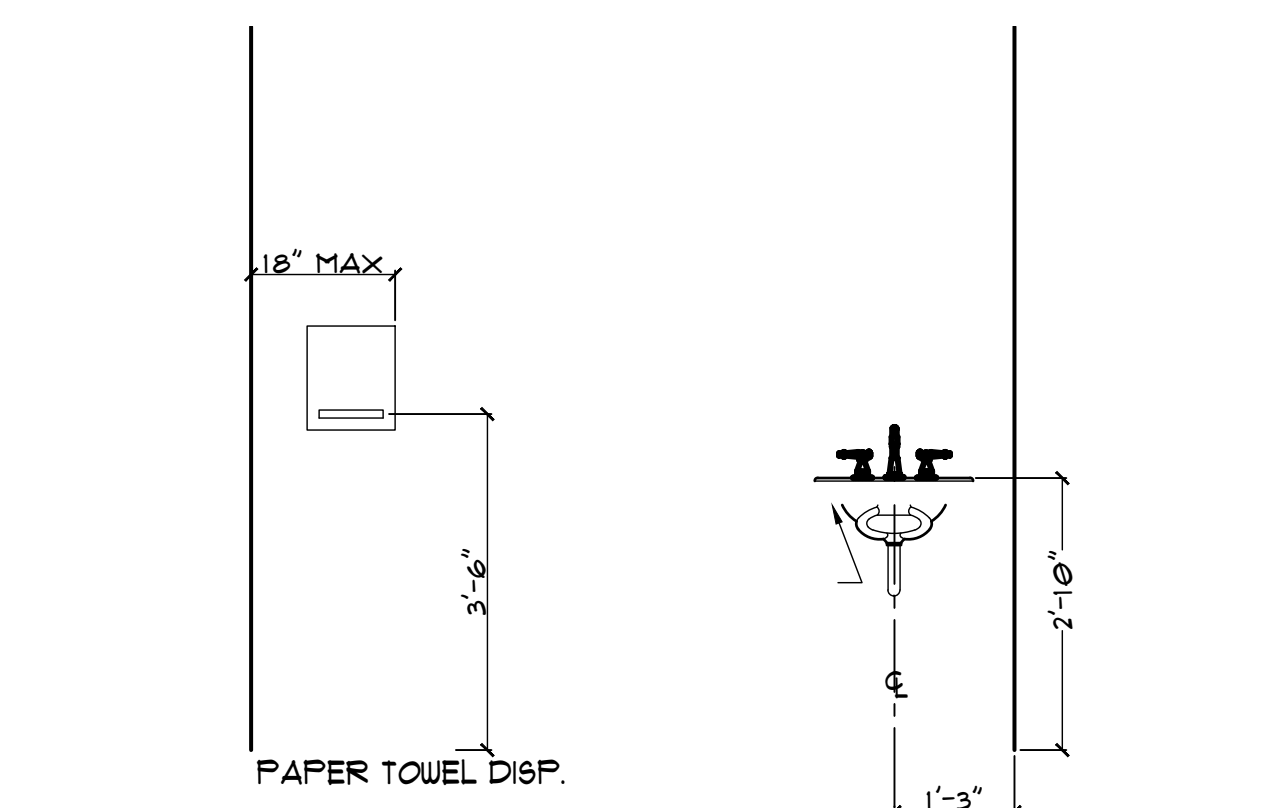
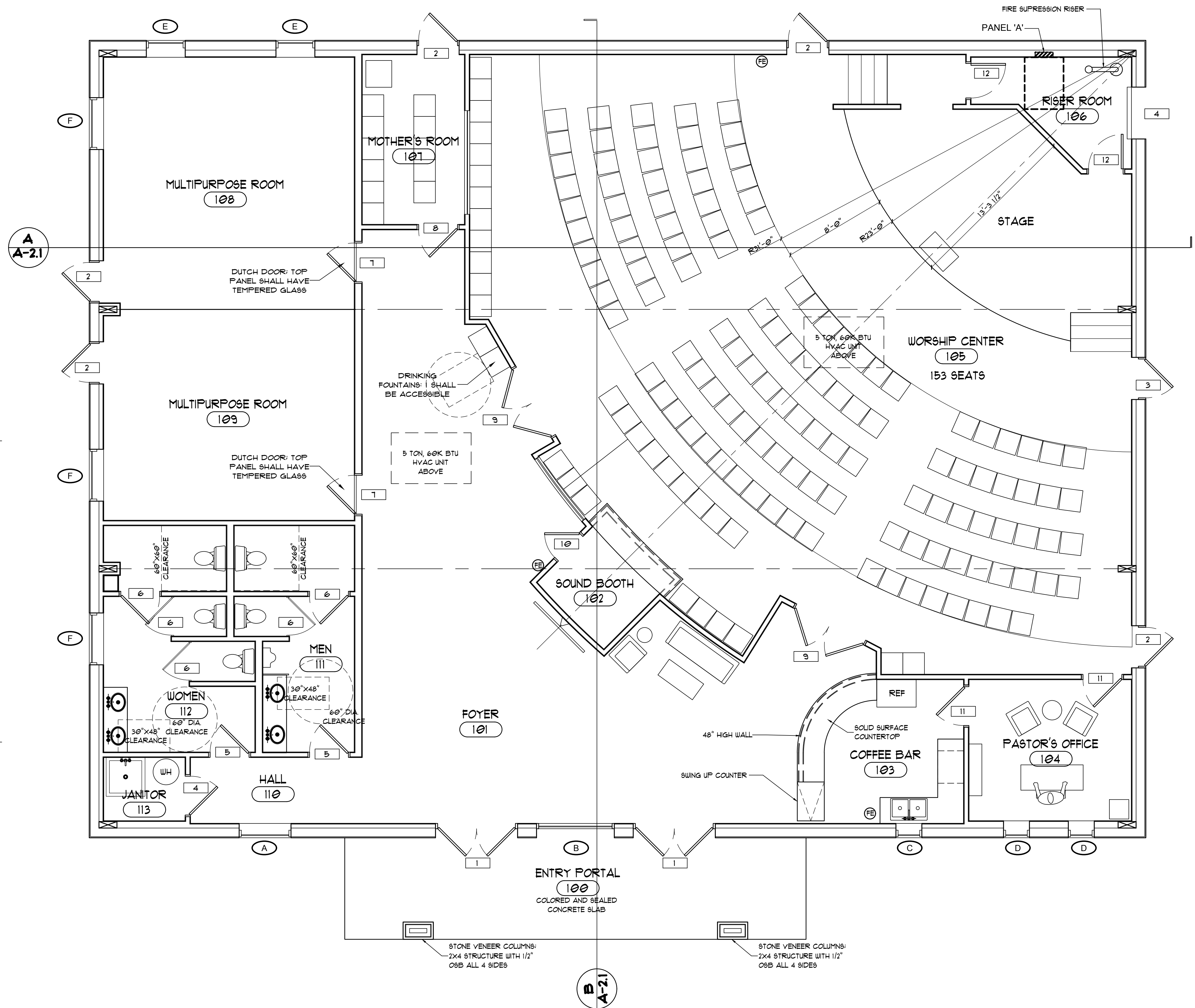
SHEET TITLE

FLOOR PLAN,
A.D.A. FIXTURE
DETAILS

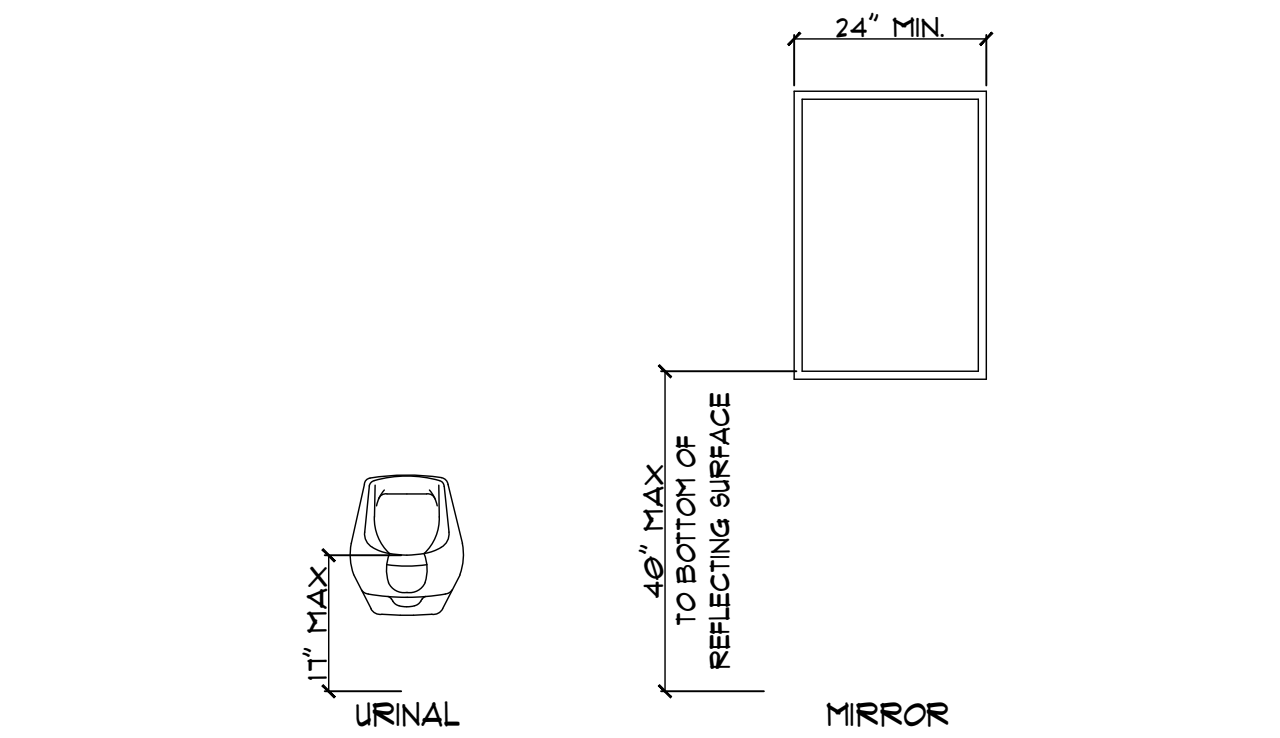
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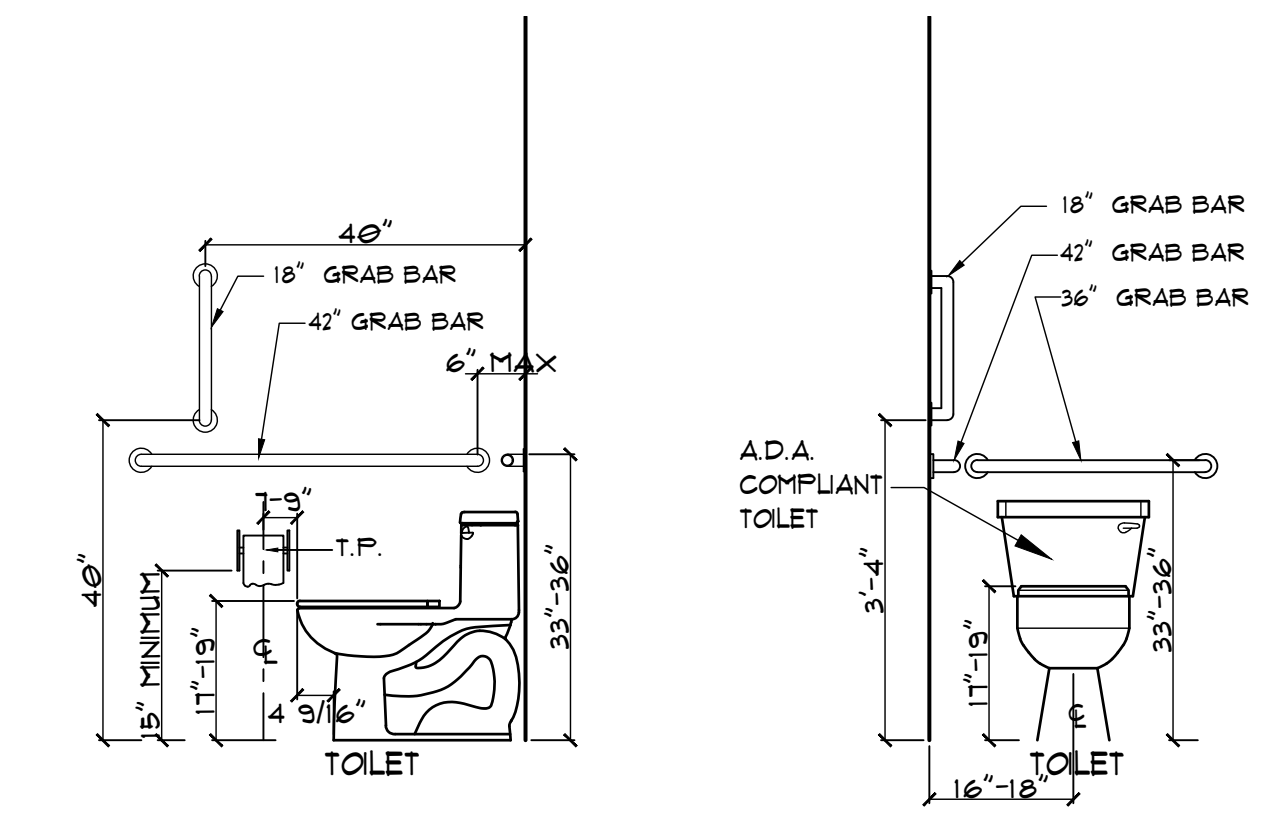
SHEET:



2 A.D.A. TOWEL DISP. AND SINK
SCALE: 1/4" = 1'- 0"



2 A.D.A. URINAL AND MIRROR
SCALE: 1/4" = 1'- 0"



2 A.D.A. TOILET REQUIREMENTS
SCALE: 1/4" = 1'- 0"

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

ROOM FINISH SCHEDULE										
MARK	ROOM	WALLS				CEILING		FLOOR	BASE	REMARKS
		N	S	E	W	MAT'L	HEIGHT			
100	ENTRY PORTAL	W1	W8	-	-	C4	12'-0"	F1	-	STONE VENEER AT COLUMNS
101	FOYER	W1/F1	W1/F1	W1/F1	W1/F1	C2	VARIES	F1	B2	OPEN TO DECK AT PART OF FOYER
102	SOUND BOOTH	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	10'-0"	F5	B2	WOOD CAP ON LOW WALL
103	COFFEE BAR	W1/F2	W1/F2	W1/F2	W1/F2	C1/F1	10'-0"	F1	B2	WASHABLE/MILDEW RESISTANT PAINT
104	PASTOR'S OFFICE	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	10'-0"	F1	B2	VERIFY PAINT COLOR WITH PASTOR
105	WORSHIP CENTER	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	VARIES	F1	B2	-
106	RISER ROOM	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	10'-0"	F1	B2	-
107	MOTHER'S ROOM	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	10'-0"	F1	B2	-
108	MULTIPURPOSE ROOM	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	10'-0"	F1	B2	-
109	MULTIPURPOSE ROOM	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	10'-0"	F1	B2	-
110	HALL	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	10'-0"	F1	B2	-
111	MEN'S BATHROOM	W1/W5/F2	W1/W5/F2	W1/W5/F2	W1/W5/F2	C1/F1	10'-0"	F1	B2	WASHABLE/MILDEW RESISTANT PAINT
112	WOMEN'S BATHROOM	W1/W5/F2	W1/W5/F2	W1/W5/F2	W1/W5/F2	C1/F1	10'-0"	F1	B2	WASHABLE/MILDEW RESISTANT PAINT
113	JANTOR CLOSET	W1/F1	W1/F1	W1/F1	W1/F1	C1/F1	10'-0"	F1	B2	WASHABLE/MILDEW RESISTANT PAINT

FINISH SCHEDULE LEGEND:

WALLS:
W1 = 5/8" STANDARD GYP. BD., TAPE, SMOOTH FINISH, PAINT.
W2 = 5/8" WATER RESISTANT GYP. BD., TAPE, SMOOTH FINISH, PAINT
W3 = 1/2" CEMENT BACKER BOARD
W5 = TILE AS SELECTED BY OWNER
W6 = SOLID SURFACE (CORIAN, KRION, HI- MACS)
W7 = METAL SIDING
W8 = STONE VENEER

CEILING:
C1 = 5/8" FIRECODE 'C' GYP. BD., TAPE, SMOOTH FINISH, PAINT.
C2 = 1/2" STANDARD GYP. BD., TAPE, SMOOTH FINISH, PAINT.
C3 = OPEN TO STRUCTURE
C4 = "KNOTWOOD" METAL SOFFIT/CEILING

PAINT:
P1 = EGG- SHELL LATEX PAINT
P2 = MILDEW RESISTENT AND WATERPROOF PAINT

FLOORS:
F1 = CONCRETE, SEAL
F2 = CONCRETE, HONE AND SEAL
F3 = ENGINEERED WOOD PLANK, WATERPROOF
F4 = CONCRETE, EPOXY PAINT AND SEALER
F5 = CARPET

BASE:
B1 = 1X6 HARDWOOD BASE, STAINED AND SEALED
B2 = 4" VINYL BASE, BLACK

TOILET ACCESSORIES NOTES:

1. IT IS IMPERATIVE THAT BACKING AND BLOCKING BE INSTALLED IN THE FOLLOWING LOCATIONS:
A. AT BOTH TIE IN LOCATIONS OF ALL A.D.A. GRAB BARS;
B. AT ALL TOILET ACCESSORY LOCATIONS;
C. AT ALL LOCATIONS OF BATHROOM PARTITIONS;
D. AT ALL WALL MOUNTED LAVATORIES, COUNTERTOPS, AND SINKS;

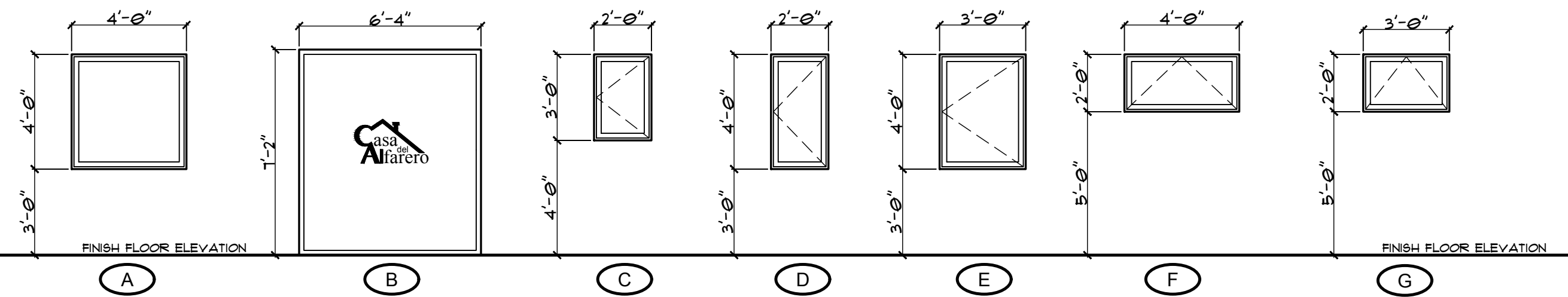
TOILET ACCESSORIES TA- X					
MARK	QTY	ITEM	MANUFACTURER	MODEL NO	REMARKS
TA-1	5	TOILET TISSUE DISPENSER	BOBRICK	B-35003.MBLK	SUPPLIED AND INSTALLED BY G.C.; RECESSED UNIT
TA-2	4	FAUCET AND SOAP DISPENSER	BOBRICK	B-8021 AND B-862	SUPPLIED AND INSTALLED BY G.C.
TA-3	2	GRAB BAR	BOBRICK	150CX36.MBLK - 36"	SUPPLIED AND INSTALLED BY G.C.
TA-5	2	GRAB BAR	BOBRICK	150CX42.MBLK - 42"	SUPPLIED AND INSTALLED BY G.C.
TA-6	2	GRAB BAR	BOBRICK	150CX18.MBLK - 18"	SUPPLIED AND INSTALLED BY G.C.
TA-7	2	MIRROR	LOCAL INSTALLER	1/4" THICK; FULL LENGTH X 36" HIGH	SUPPLIED AND INSTALLED BY G.C.; FULL LENGTH OF COUNTER
TA-8	2	PROTECTIVE PLUMBING COVERS	TRUBRO LAV-GUARD	103 WHITE	SUPPLIED AND INSTALLED BY G.C.
TA-9	3	SANITARY NAPKIN DISPOSAL	BOBRICK	B-3513.MBLK	SUPPLIED BY G.C., WOMEN'S RESTROOM ONLY; RECESSED UNIT
TA-10	2	WASTE RECEPTACLE	BOBRICK	B-35643.MBLK	SUPPLIED AND INSTALLED BY G.C.; RECESSED UNIT
TA-11	2	PAPER TOWEL DISPENSER	BOBRICK	B-35903.MBLK	SUPPLIED AND INSTALLED BY G.C.; RECESSED UNIT

PLUMBING FIXTURES PF- X					
MARK	QTY	ITEM	MANUFACTURER	MODEL NO	REMARKS
PF-1	1	KITCHEN SINK	X	X	SUPPLIED BY G.C.
PF-2	1	JANTOR'S SINK	X	X	SUPPLIED BY G.C.
PF-3	4	LAVATORY	X	X	SUPPLIED BY G.C.
PF-4	5	A.D.A. TOILET	X	X	SUPPLIED BY G.C.
TA-5	1	URINAL	X	X	SUPPLIED BY G.C.

WINDOW SCHEDULE (X)											
WINDOW						FRAME			DETAILS		REMARKS
MARK	TYPE	MAT'L	SIZE	THK	FIN	TYPE	MAT'L	COLOR	HEAD	JAMB	
A	FIXED	MTL/GLASS	48"x48"	N/A	FAC. PT.	THERM. BRK	ALUM	BRONZE	GYP.BD	GYP.BD	SUPPLIED AND INSTALLED BY BLDG. MANUF.
B	FIXED	MTL/GLASS	68"x86"	N/A	FAC. PT.	THERM. BRK	ALUM	BRONZE	GYP.BD	GYP.BD	SUPPLIED AND INSTALLED BY STOREFRONT INSTALLER
C	CASEMENT	MTL/GLASS	24"x36"	N/A	FAC. PT.	THERM. BRK	ALUM	BRONZE	GYP.BD	GYP.BD	SUPPLIED AND INSTALLED BY BLDG. MANUF.
D	CASEMENT	MTL/GLASS	24"x48"	N/A	FAC. PT.	THERM. BRK	ALUM	BRONZE	GYP.BD	GYP.BD	SUPPLIED AND INSTALLED BY BLDG. MANUF.
E	CASEMENT	MTL/GLASS	36"x48"	N/A	FAC. PT.	THERM. BRK	ALUM	BRONZE	GYP.BD	GYP.BD	SUPPLIED AND INSTALLED BY BLDG. MANUF.
F	AWNING	MTL/GLASS	48"x24"	N/A	FAC. PT.	THERM. BRK	ALUM	BRONZE	GYP.BD	GYP.BD	SUPPLIED AND INSTALLED BY BLDG. MANUF.
G	AWNING	MTL/GLASS	36"x24"	N/A	FAC. PT.	THERM. BRK	ALUM	BRONZE	GYP.BD	GYP.BD	SUPPLIED AND INSTALLED BY BLDG. MANUF.

WINDOW NOTE:

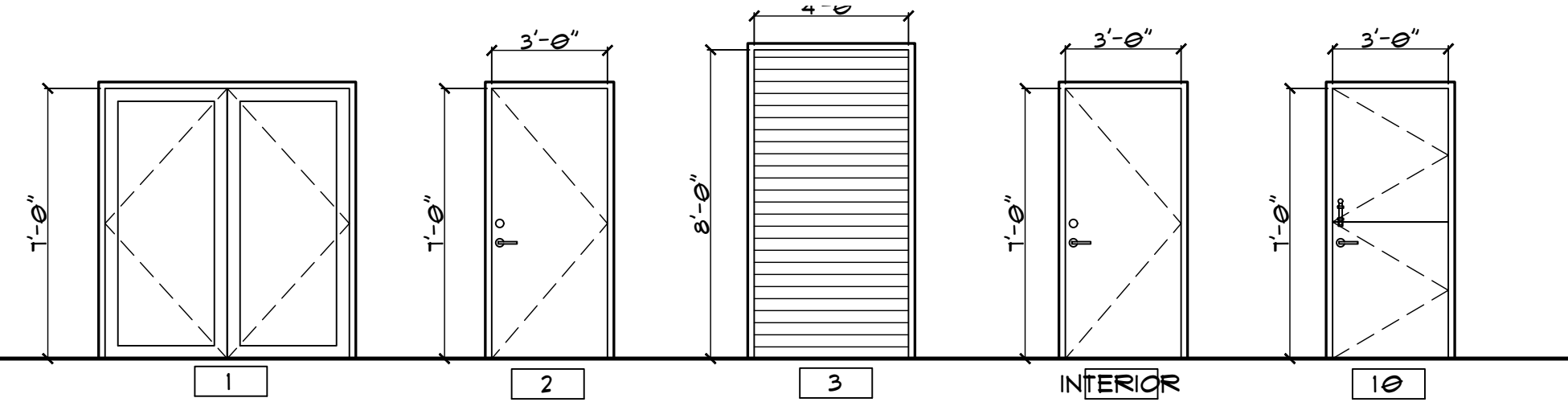
1. METAL BUILDING MANUFACTURER SHALL SUPPLY ALL WINDOWS, EXCEPT STOREFRONT, DESIGNATED AS "B".
2. STOREFRONT DOORS AND WINDOW (#1 AND LETTER 'B') SHALL BE PURCHASED BY OWNER AND INSTALLED BY CONTRACTOR.
3. COLOR FOR ALL WINDOWS AND STOREFRONT SHALL BE DARK BRONZE



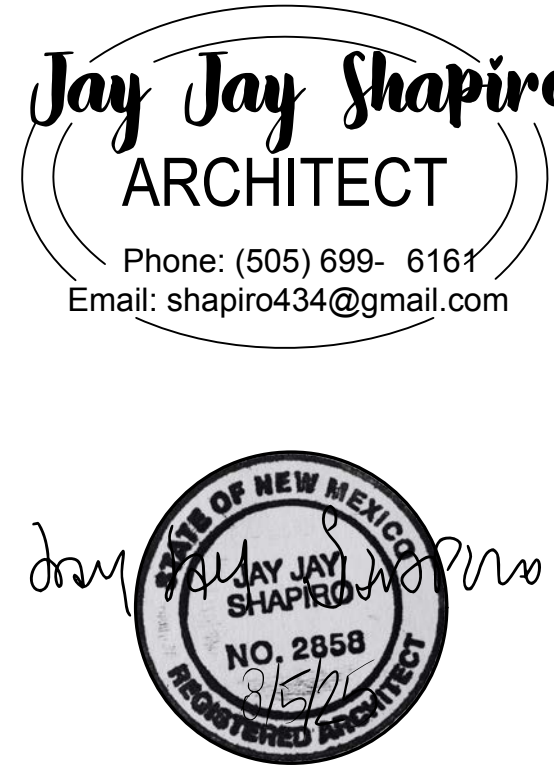
DOOR SCHEDULE (XXX)													
DOOR						FRAME			DETAILS		HARDWARE SET	QTY	REMARKS
MARK	TYPE	MAT'L	SIZE	THK	FIN	TYPE	MAT'L	FIN	HEAD	JAMB			
1	STOREFRONT	MTL/GLASS	60x10	-	PAINT	STOREFT.	ALUM	DK BRONZE	1/A2.1	1/A2.1	A	2	NOTES 1, 2, 3
2	EXTERIOR	METAL	30x10	1-3/4	PAINT	WELDED	HM	DK BRONZE	1/A2.1	1/A2.1	B	6	NOTE 8
3	ROLL UP	METAL	48"x36"	-	PAINT	-	METAL	DK BRONZE	1/A2.1	1/A2.1	BY MANUF.	1	-
4	INTERIOR	SCB	30x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	C	NOTE 6	-
5	INTERIOR	SCB	30x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	D	NOTE 6	NOTE 1
6	INTERIOR	SCB	30x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	E	NOTE 6	-
7	INT. DUTCH	SCB	30x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	F	NOTE 6	-
8	INTERIOR	SCB	30x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	C	NOTE 1	-
9	INT. DBL	SCB	60x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	G	NOTE 1	NOTE 9
10	INTERIOR	SCB	30x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	C	NOTE 1	-
11	INTERIOR	SCB	30x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	C	NOTE 1	-
12	INTERIOR	SCB	30x60	1 3/4"	STAIN/SEAL	APPL STOP	WOOD	STAIN/SEAL	1/A2.1	1/A2.1	C	NOTE 1	-

DOOR SCHEDULE NOTES:

1. STOREFRONT DOORS SHALL HAVE 1-1.
2. STOREFRONT SHALL BE INSTALLED BY STOREFRONT SUPPLIER, INCLUDING ALL HARDWARE; MUST MEET ALL A.D.A. ACCESSIBLE GUIDELINES.
3. PROVIDE A.D.A. COMPLIANT THRESHOLD IF NECESSARY.
4. ROLL UP DOOR BY OVERHEAD GARAGE DOOR; INSTALLER SHALL INCLUDE WEATHERSTRIP, THRESHOLD AND ALL HARDWARE; DOOR SHALL BE INSULATED.
5. ALL INTERIOR DOORS SHALL BE SOLID CORE BIRCH, 1-3/4" THICK, FIRE-RATED
6. DUTCH DOOR SHALL BE MANUFACTURED BY DOOR SUPPLIER, READY TO INSTALL; SEE HARDWARE SCHEDULE FOR HARDWARE
7. UNDERCUT RESTROOM DOORS 3/4".
8. ALL EXTERIOR DOORS SHALL HAVE A LATCH PROTECTOR
9. INSTALL MAGNETIC DOOR STOP; SAME COLOR AS HARDWARE



HARDWARE SCHEDULE							
MARK	QTY	ITEM	MANUF.	MODEL NO	COLOR	REMARKS	
A	1 1/2 PR	4" BUTT HINGES	MCKINNEY	TA3350	DK BRZ	HEAVY DUTY HINGES SECURITY DEADLOCK & CYLINDER GUARD, DBL. CYLINDER BY STOREFRONT MANUFACTURER BY STOREFRONT MANUFACTURER BY STOREFRONT MANUFACTURER BY STOREFRONT MANUFACTURER	
	1	DOOR LOCK CLOSER	-	422 SERIES	DK BRZ		
	2	OFFSET PULLS	SARGENT	-	DK BRZ		
	2	DOUBLE BEND PUSH BAR	-	-	DK BRZ		
	2	THRESHOLD W/SWEEP	-	-	DK BRZ		
B	1 1/2 PR	4" BUTT HINGES	MCKINNEY	TA3350	DK BRZ	HEAVY DUTY HINGES A.D.A. COMPLIANT	
	1	KEYED ENTRY SET	SCHLAGE	LATITUDE W/GREYSON TRIM	DK BRZ		
	1	CLOSER	SARGENT	422 SERIES	DK BRZ		
	1	LATCH PROTECTOR	-	-	DK BRZ		
	1	KICK PLATE	-	10"x34"	DK BRZ		
C	1 1/2 PR	3-1/2" BUTT HINGES	MCKINNEY	TA3350	DK BRZ	A.D.A. COMPLIANT	
	1	KEYED ENTRY SET	SCHLAGE	LATITUDE W/GREYSON TRIM	DK BRZ		
	1	WALL STOP	-	-	DK BRZ		
D	1 1/2 PR	3-1/2" BUTT HINGES	MCKINNEY	TA3350	DK BRZ	A.D.A. COMPLIANT	
	1	PUSH/PULL HARDWARE	EMRO OR EQ.	-	DK BRZ		
	1	WALL STOP	-	-	DK BRZ		
	1	AUTOMATIC DOOR CLOSER	-	-	DK BRZ		
E	1-1/2 PR	3-1/2" BUTT HINGES	MCKINNEY	TA3350	DK BRZ	A.D.A. COMPLIANT	
	1	PRIVACY SET	SCHLAGE	LATITUDE W/GREYSON TRIM	DK BRZ		
	1	WALL STOP	-	-	DK BRZ		
F	2 PR	3-1/2" BUTT HINGES	MCKINNEY	TA3350	DK BRZ	A.D.A. COMPLIANT	
	1	KEYED ENTRY SET	SCHLAGE	LATITUDE W/GREYSON TRIM	DK BRZ		
	2	DUTCH DOOR BOLT	BALDWIN	-	DK BRZ		
G	(2) 1 1/2 PR	3-1/2" BUTT HINGES	MCKINNEY	TA3350	DK BRZ	A.D.A. COMPLIANT	
	2	PUSH/PULL HARDWARE	EMRO OR EQ.	-	DK BRZ		



OWNERS:
DOMINGO ORNELAS
PH: (505) 690- 0391
EMAIL:
dominornelas@gmail.com

GENERAL CONTRACTOR:
Frank Trujillo
Tierra De Zia Contracting,
LLC
(505) 470- 5400
tierradezia@gmail.com
Lic. #404576

CONSULTANTS:
Dwight Velarde, PE
Velarde Engineering
(505) 720- 6016
veleng09@gmail.com

Jerry D. Watts, MSFPE
(800) 503- 1961
accentfire@aol.com

PROJECT
DESCRIPTION:

Iglesia Cristiana
Casa del Alferero

2501 Cactus Lane,
Santa Fe, NM 87507

REVISIONS:
DISC DATE

SHEET TITLE

SCHEDULES:
WINDOW, DOOR,
ROOM FINISH,
TOILET ACCES.,
PLUMBING,
HARDWARE

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

A- 4.1



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PH: (505) 690- 0391
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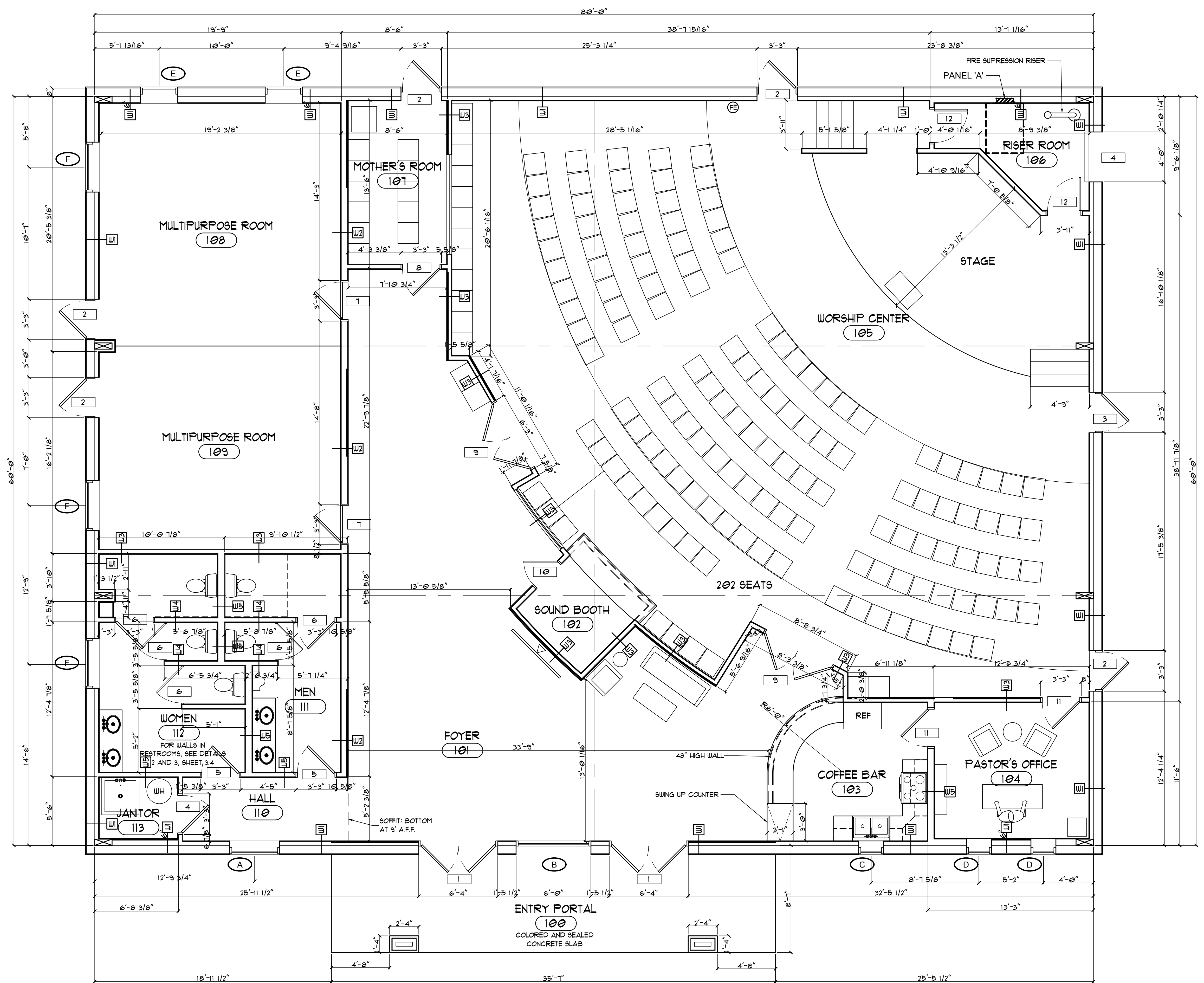
SHEET TITLE

DIMENSION
PLAN

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:



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



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DOMINGO ORNELAS
PH: (505) 690- 0391
EMAIL:
dominornelas@gmail.com

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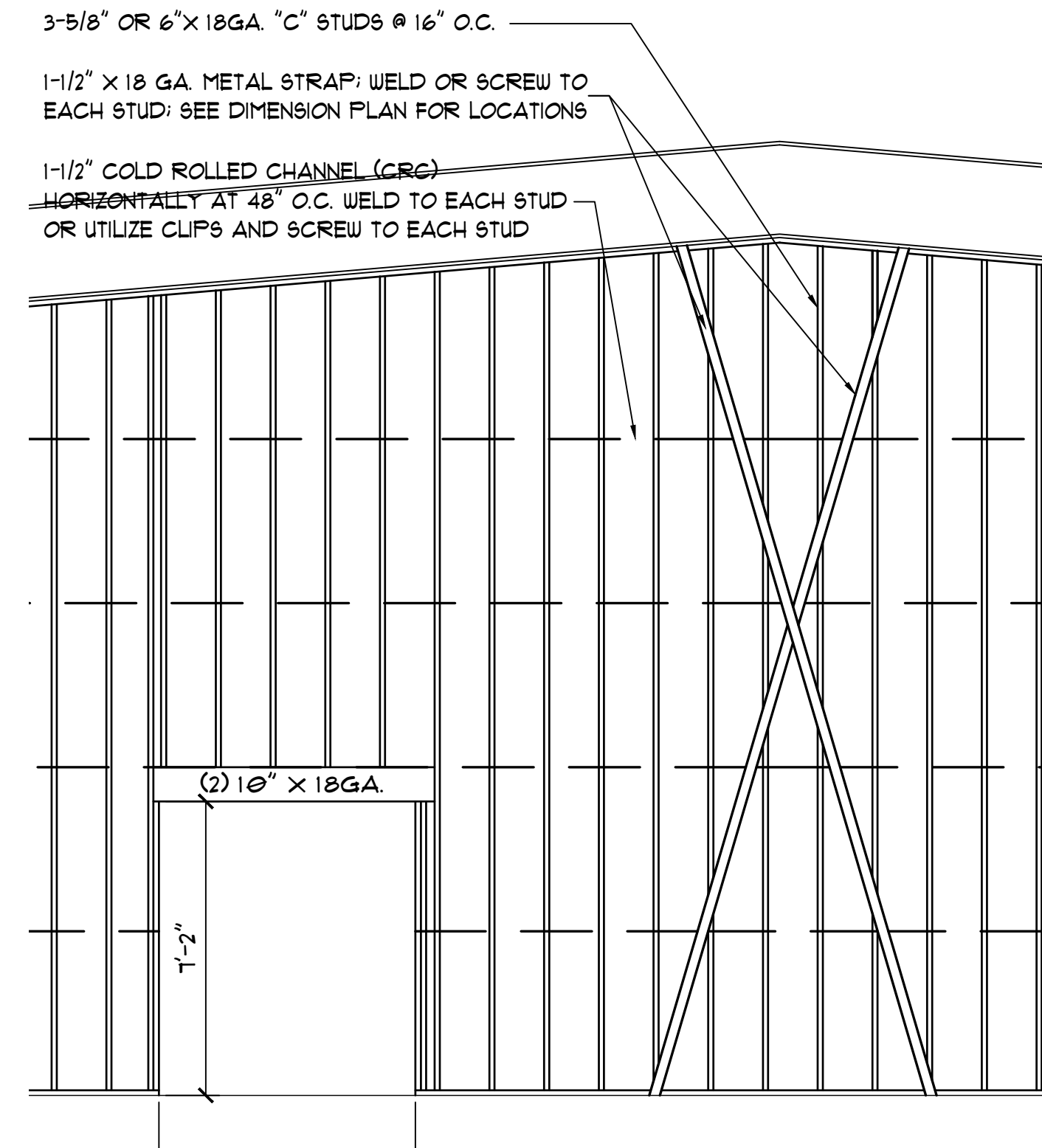
WALL TYPES,
METAL STUD
DETAILS

PROJECT NO:
CDA- 025- 001

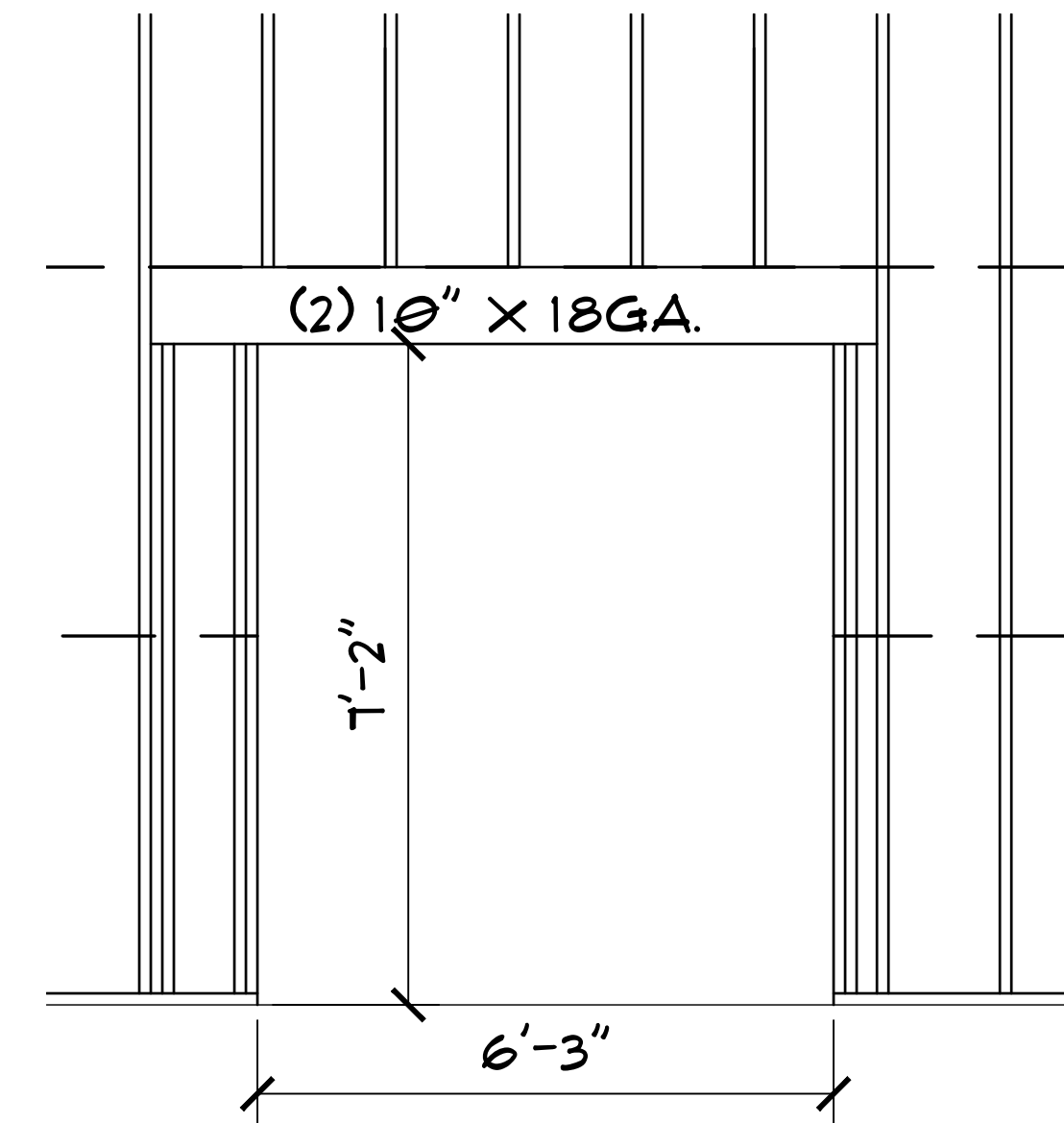
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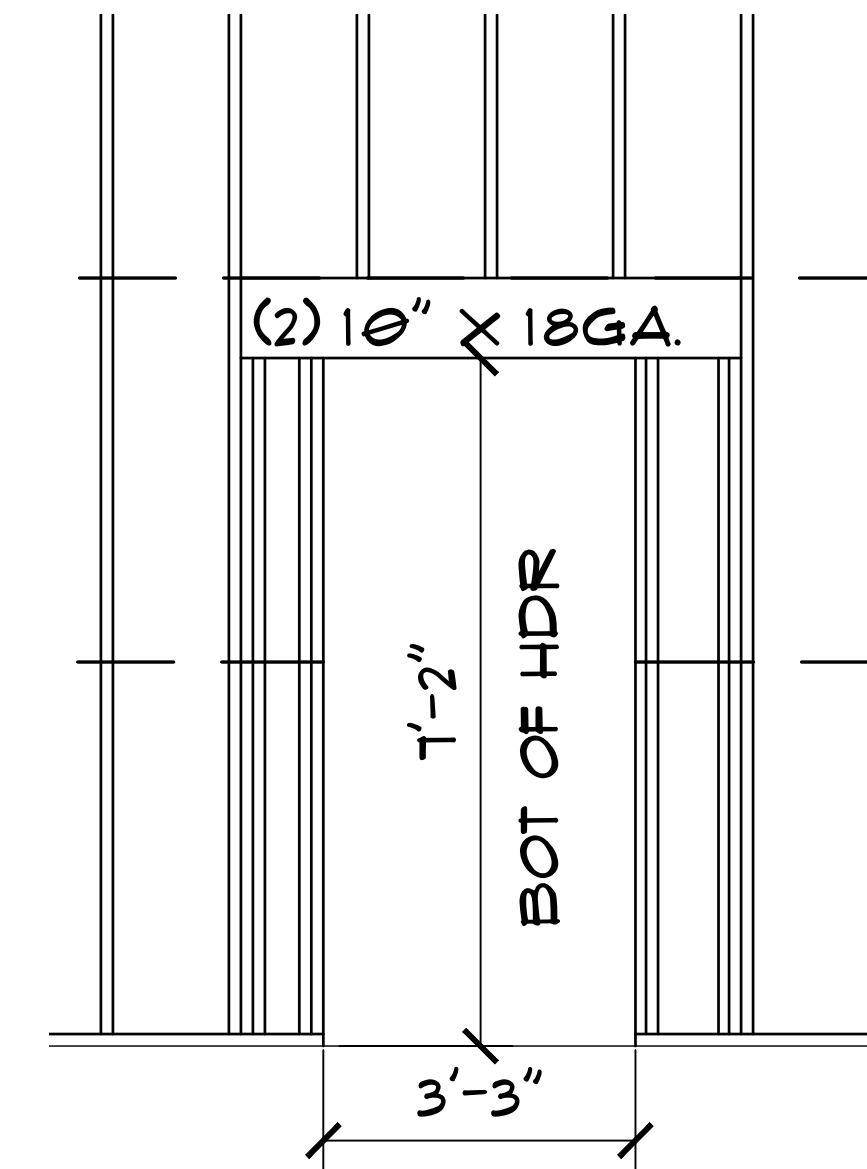
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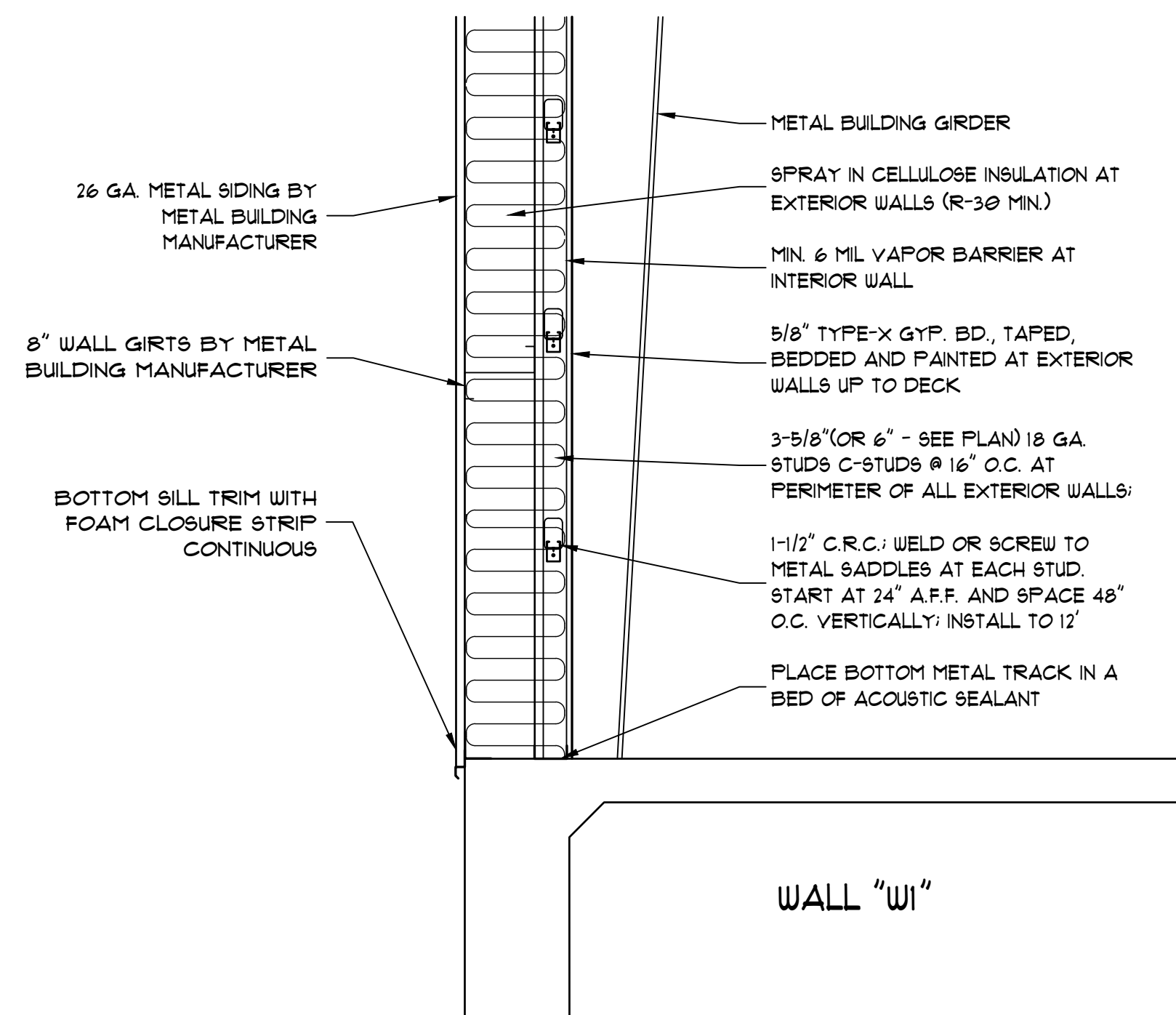
2 X-BRACING AND CRC CHANNEL
SCALE: 1/4" = 1'- 0"



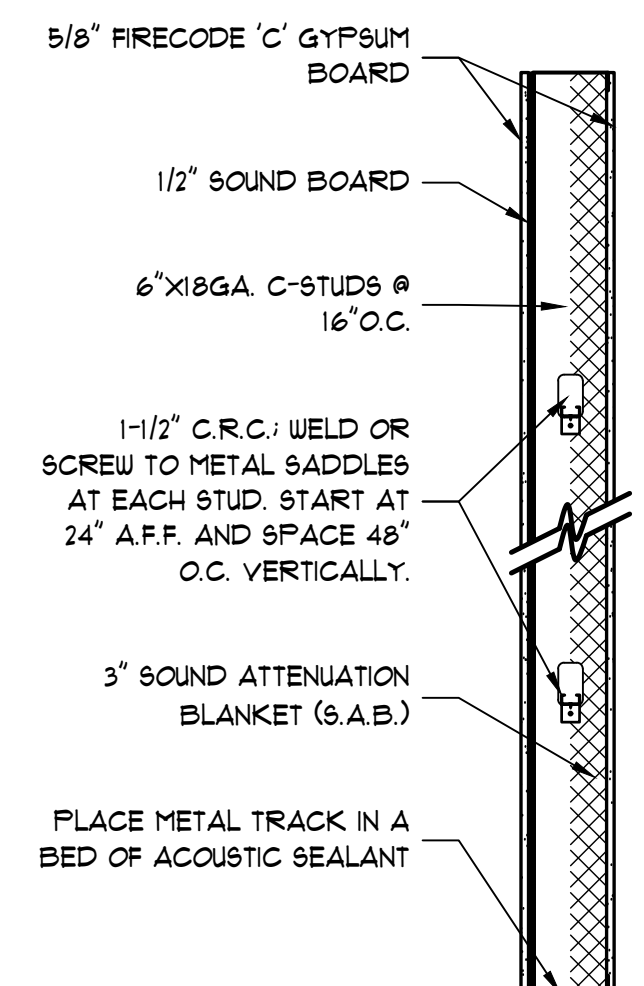
3 6' OPENING
SCALE: 1/2" = 1'- 0"



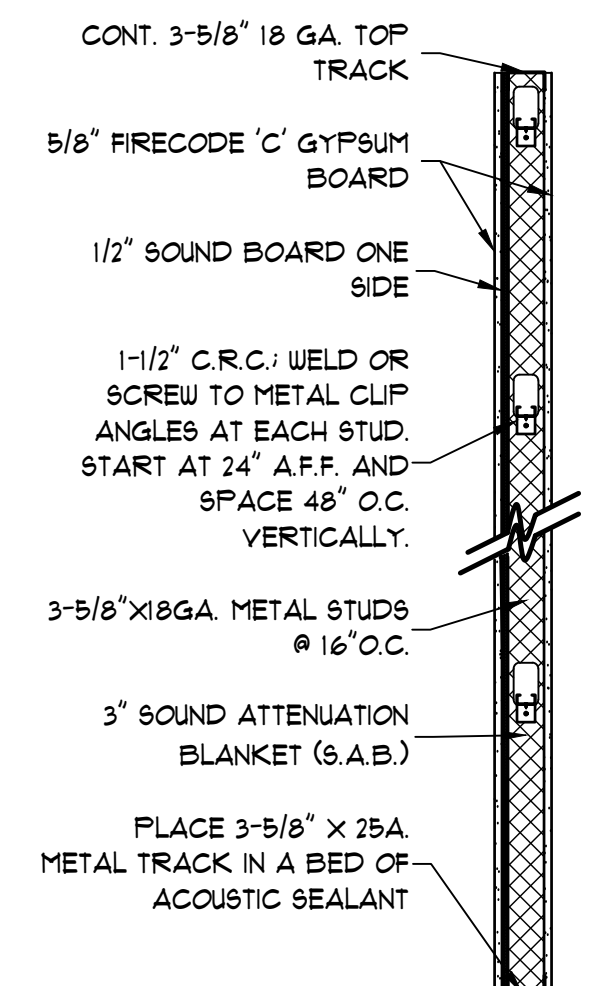
4 3' OPENING
SCALE: 1/2" = 1'- 0"



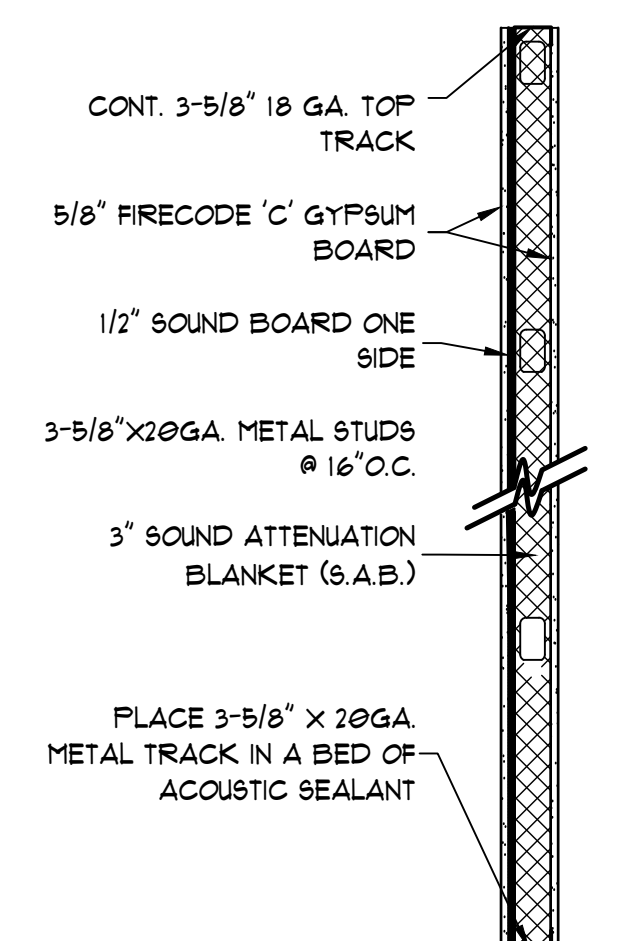
1 WALL TYPES
SCALE: 3/4" = 1'- 0"



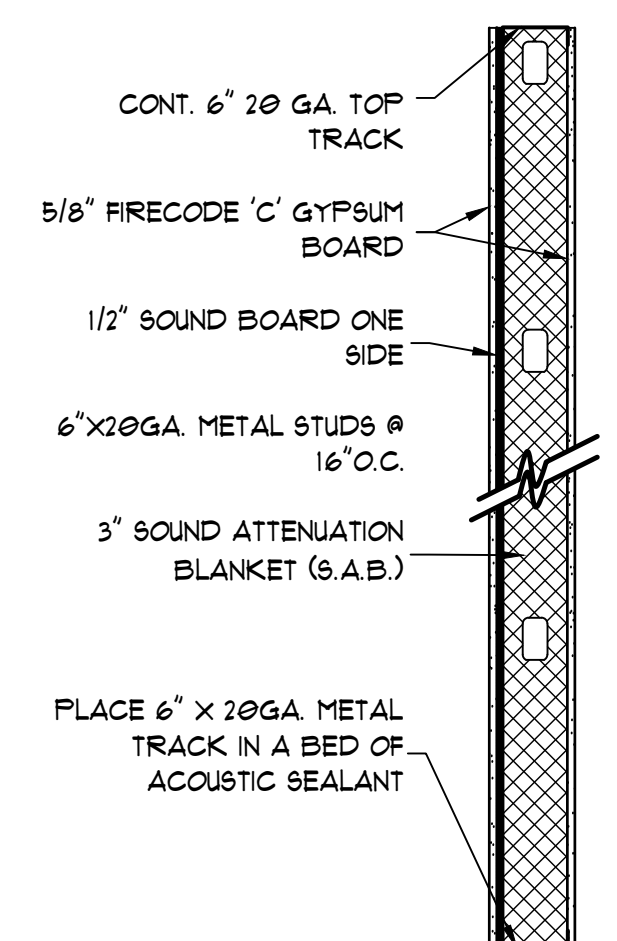
WALL "W2"



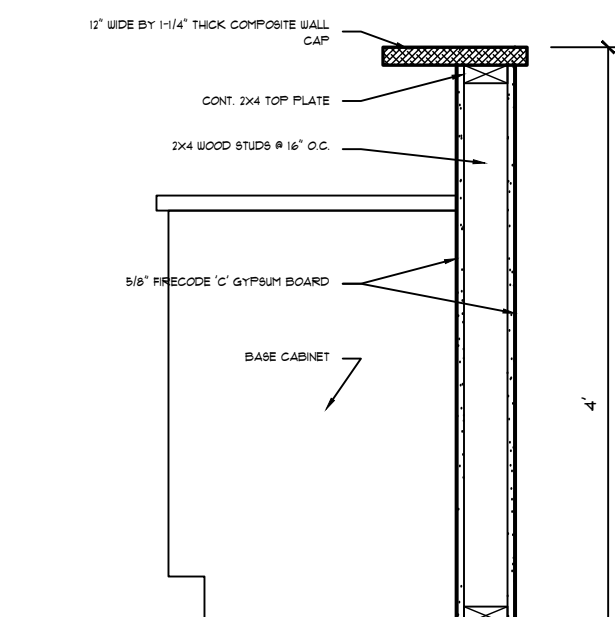
WALL "W3"



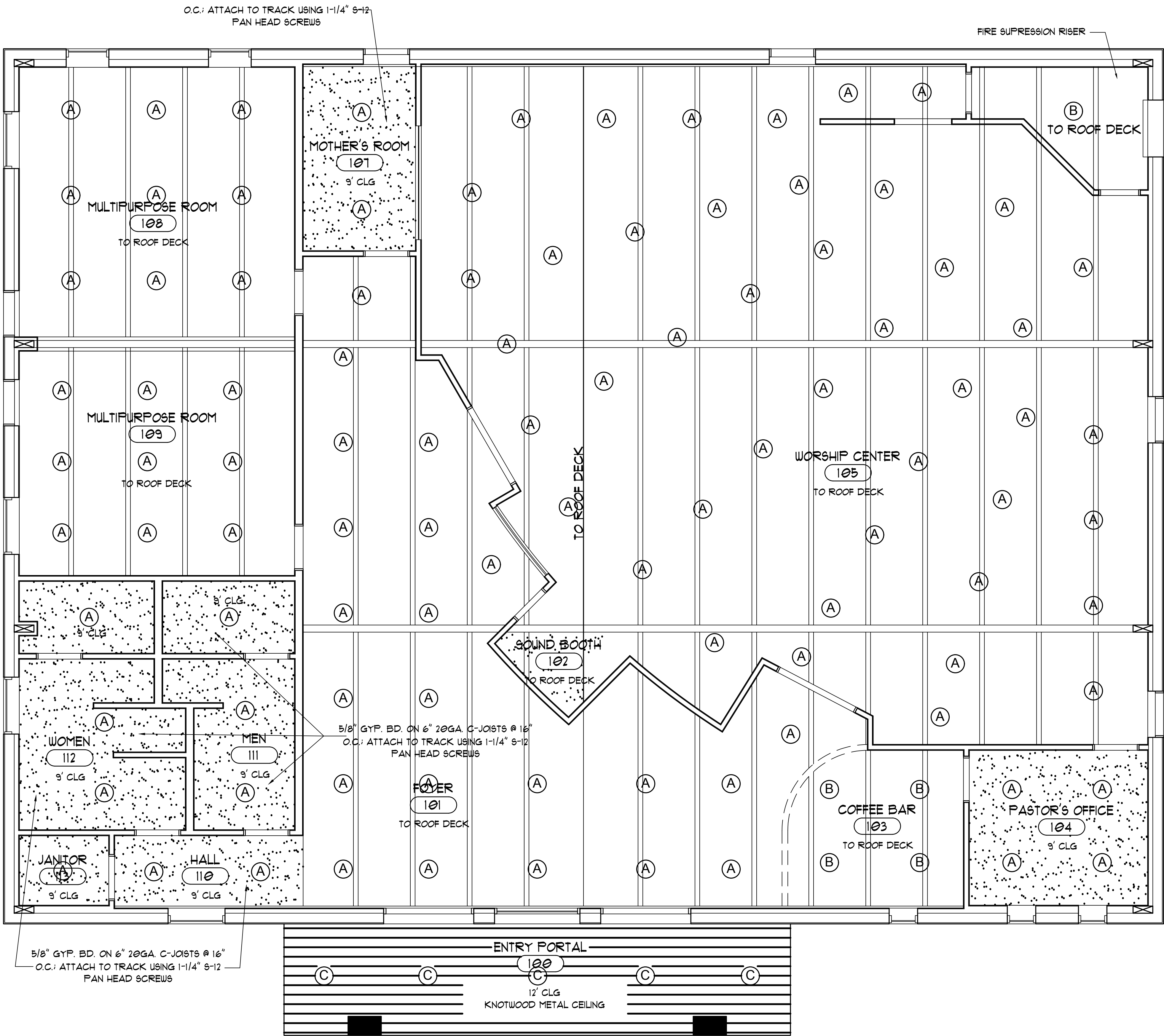
WALL "W4"



WALL "W5"



WALL "W6"



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

JOIST SPECIFICATIONS

COLD- FORMED METAL FRAMING, 6" C- JOISTS

GENERAL

- 1.1 Scope
A. Supply and install 6" deep, cold- formed steel C- joists at 16" on center to support gypsum board ceilings (or wall furring) per approved shop drawings.
- 1.2 References

1. ASTM C645 — "Standard Specification for Nonstructural Steel Framing Members"
2. ASTM C754 — "Standard Specification for Installation of Steel Framing Members"

PRODUCTS

- 2.1 C- Joists
A. Profile: C- shape, 6" depth, 1 1/2" flange, 3/4" lip, manufactured to ASTM C645
B. Gauge: 20 ga (0.036") G90 galvanized steel
C. Section modulus and stiffness rated for L/240 deflection over a 12' simple span
- 2.2 Tracks & Accessories
A. Field- trimmed U- shaped top and bottom track, same gauge as joists
B. Splice plates or clip- angles for continuous runs longer than one track length
C. Fasteners: self- drilling, self- tapping screws compatible with steel thickness

INSTALLATION

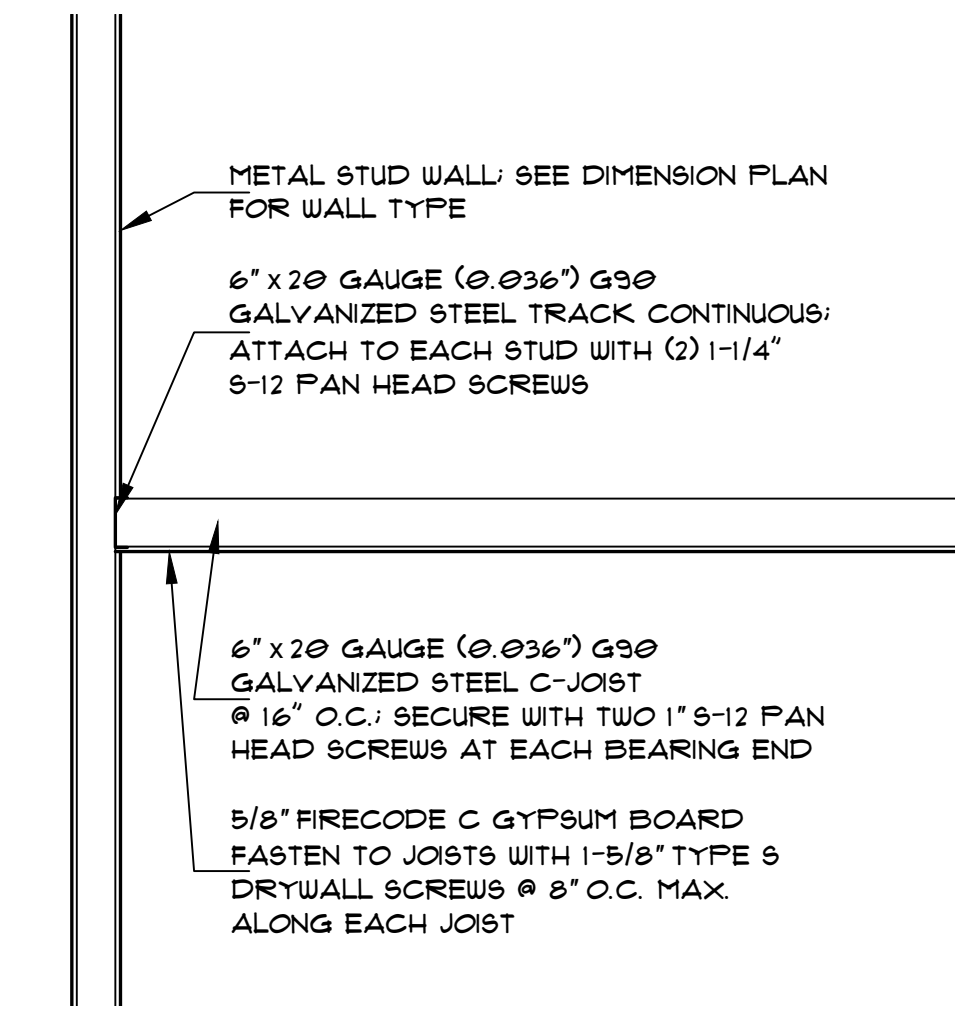
- 3.1 Layout
A. Install top track level and plumb on bearing walls or structure
B. Snap or set C- joists into track at 16" o.c., verify spacing with a laser or chalk line
- 3.2 Fastening
A. Secure each joist flange to the track with two 1 1/4" Type S self- drilling screws
B. Stagger splices; use manufacturer- approved splices or clip angles
- 3.3 Gypsum Board Attachment (if ceiling use)
A. Attach 5/8" gypsum board perpendicular to joists with 1" Type S drywall screws
B. Screw spacing: 7-8" o.c. along joists; 3/8" from panel edges

- 3.4 Tolerances & Quality
A. Maximum deflection under live load L/240
B. Joist plane variation: ±1/8" in 10'
C. Verify plumb, level, and secure connections before drywall installation

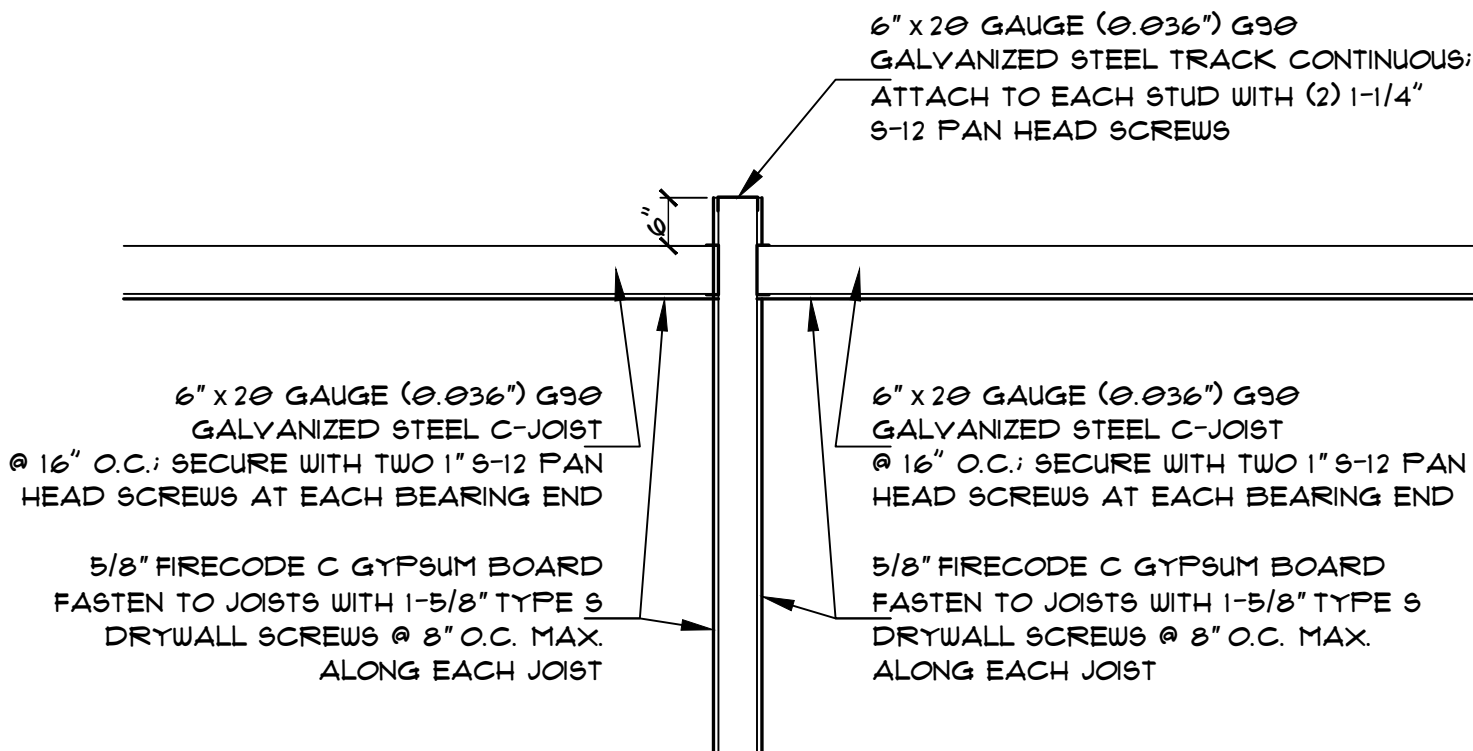
CLEAN- UP & PROTECTION

- 4.1 Remove metal shavings and debris
4.2 Protect installed framing until finished removal of trades

End of Section



3 DRYWALL CEILING
SCALE: 1/2" = 1'- 0"



2 DRYWALL CEILING
SCALE: 1/2" = 1'- 0"



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DOMINGO ORNELAS
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CONSULTANTS:

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veleng09@gmail.com

Jerry D. Watts, MSFPE
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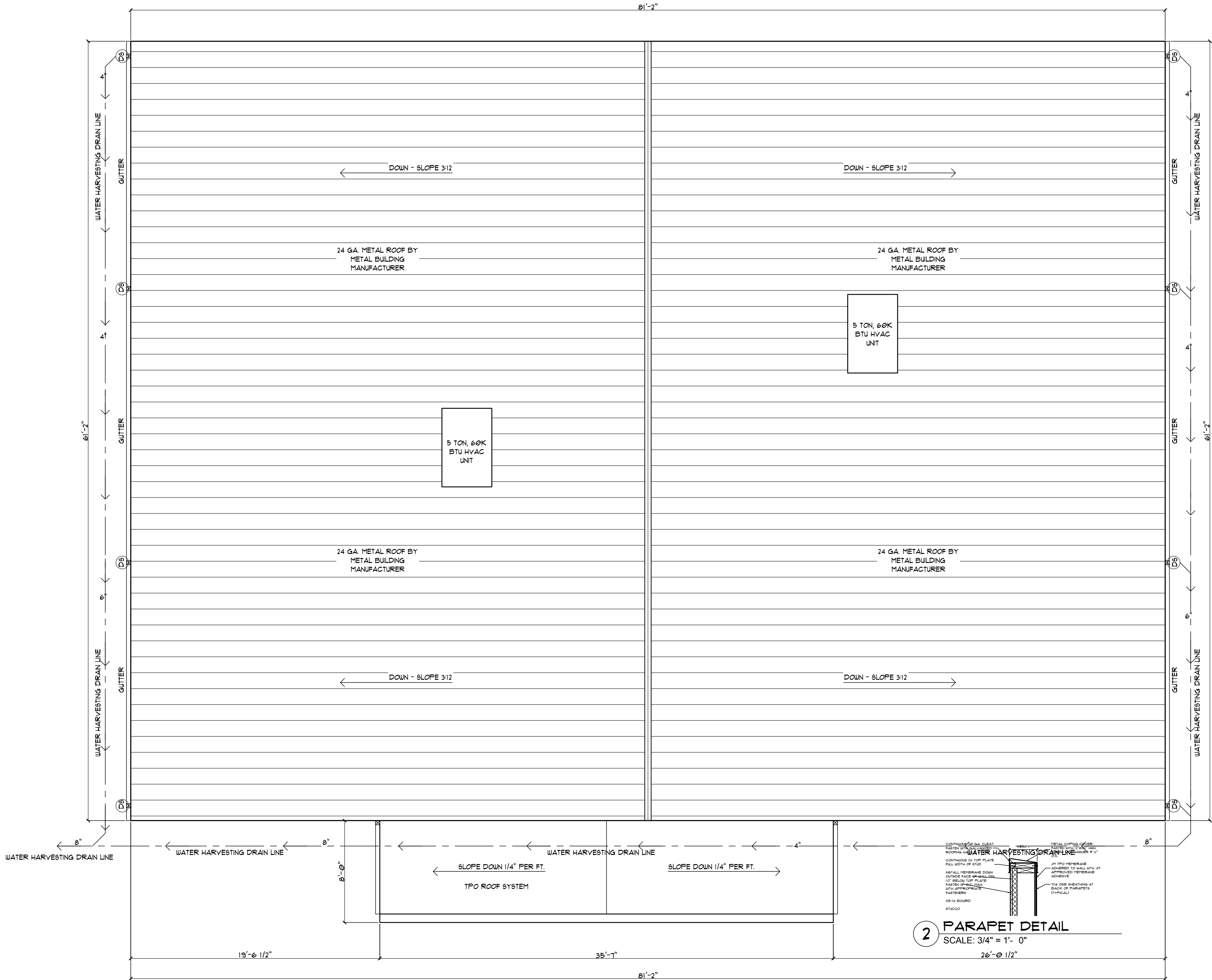
SHEET TITLE

REFLECTED
CEILING PLAN,
JOIST
SPECIFICATIONS,
CEILING
DETAILS

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:



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

THERMOPLASTIC (TPO) ROOFING SYSTEM

GENERAL

1.1 SUMMARY

A. Work under this Section includes supply and installation of a fully adhered, single- ply TPO roofing system complete with insulation, vapor retarder, roof membrane, flashings, and accessories.

1.2 REFERENCES

- A. ASTM D6878 — Standard Specification for TPO Sheet Roofing
- B. ASTM D4434 — Standard Specification for PVC Sheet Roofing
- C. ASTM D7554 — TPO Membrane Thickness
- D. FM 4470, 4450 — Factory Mutual Approval Standards
- E. NRCA Roofing Manual

1.3 SUBMITTALS

- A. Product Data: Manufacturer's technical datasheets for membrane, adhesives, primers, and flashing materials.
- B. Shop Drawings: Plan views showing membrane layout, insulation joints, flashings, drains, curbs, penetrations, edge details.
- C. Samples: 12"×12" TPO membrane, trim flanges, seam tape.
- D. Certificates: Membrane FM Approval, UL Class A roof assembly (if required).
- E. Warranties: Manufacturer's 20- year membrane warranty; installer's workmanship warranty.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in TPO roofing with minimum 20 years' experience and FM Approval for specified assembly.
- B. Installer Qualifications: Certified by membrane manufacturer, with not less than 5 completed TPO roof projects of similar scope.
- C. Pre- Installation Meeting: Review substrate condition, insulation layout, flashing details, weather constraints, safety procedures.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's unopened, labeled packaging.
- B. Store membrane rolls on end, in a clean, dry area, protected from sun and heat.
- C. Store adhesives and primers between 60°F and 80°F per manufacturer's instructions.

2.1 TPO ROOFING MEMBRANE

- A. Type: Thermoplastic Polyolefin (TPO), reinforced with polyester scrim.
- B. Thickness: 60- mil minimum, meeting ASTM D6878 and ASTM D7554 tolerances.
- C. Color: White (reflective).
- D. Physical Properties (minimum per ASTM D6878):
 - 1. Tensile Strength: ≥ 265 lbf/in (MD & CD)
 - 2. Elongation: ≥ 15%
 - 3. Tear Strength: ≥ 50 lbf (MD & CD)
 - 4. Puncture Resistance (ASTM D5635): ≥ 16 lbf

2.2 INSULATION

- A. Type: Polyisocyanurate (ISO) board, coated facer on both sides.
- B. Thickness: As indicated on drawings to achieve required R- value (typ. R- 20).
- C. Compressive Strength: ≥ 25 psi (ASTM D1621).
- D. Dimension Tolerance: Length and width ± 1/8", thickness −0/+3/16".

2.3 VAPOR RETARDER (IF REQUIRED)

- A. Type: Self- adhered, non- perforated bituminous sheet or composite sheet with perm ≤ 0.1.
- B. Thickness: 40 mils minimum.

2.4 ADHESIVES AND PRIMERS

- A. Membrane Adhesive: Low- VOC, manufacturer- approved, water- based or solvent- based fully- adhered adhesive.
- B. Primer: For flashing surfaces (e.g., metal, concrete) if required by membrane manufacturer.

2.5 FLASHING AND ACCESSORIES

- A. TPO Flashing Sheet: Same membrane type and thickness as field membrane.
- B. Pre- Molded Inside/Outside Corners, Pipe Boots: Manufacturer's matching accessories.
- C. Metal Drip Edge: Pre- finished, compatible color.
- D. Fasteners & Plates: Corrosion- resistant, approved types for insulation attachment.

3.1 EXAMINATION

- A. Verify roof deck is clean, dry, smooth, and free of sharp objects or protrusions.
- B. Verify deck deflection limits per manufacturer's requirements.
- C. Verify substrate temperature and ambient conditions are within limits for membrane application.

3.2 PREPARATION

- A. Dry- in Substrate: Ensure roof deck is free of ponded water.
- B. Moisture Testing: If required, conduct ASTM F2170 relative humidity tests or ASTM D4263 plastic sheet test.
- C. Prime Flashing Surfaces: Apply primer to concrete, masonry, and metal per manufacturer's instructions.

3.3 INSULATION INSTALLATION

- A. Vapor Retarder: Install self- adhered sheets directly to deck, lapping sidelines 2", end laps 6", and seal with manufacturer's lap sealant.
- B. ISO Boards: Set in full- coverage bead of compatible adhesive, stagger joints; secure with mechanical fasteners per spacing schedule.
- C. Cover Board (if specified): Adhere or mechanically attach per drawings.

3.4 MEMBRANE INSTALLATION

- A. Layout: Unroll membrane and allow to relax per manufacturer's time table.
- B. Adhesive Application: Apply adhesive to insulation and/or membrane backside in uniform ribbons or full- coverage spray.
- C. Positioning: Embed membrane, maintaining 1/8" to 1/4" slack at terminations and flashings.
- D. Seaming: Hot- air weld sidelaps and endlaps with automatic welding equipment. Test seams with hand probe to ensure full fusion.
- E. Detail Work: Install flashings, corners, pipe boots, and edge metal. Ensure all terminations are sealed with factory or field- fabricated metal termination bars and sealant.

3.5 FIELD QUALITY CONTROL

- A. Inspection: Membrane seams, flashings, penetrations, and terminations shall be inspected by a Factory Authorized Field Technician.
- B. Weld Testing: Perform destructive and non- destructive seam tests (e.g., seam probe, peel tests) in accordance with ASTM D5385.
- C. Repair: Cut out and re- weld or patch defective seams and damage areas.

3.6 PROTECTION AND CLEANING

- A. Protect finished roof from traffic and damage until acceptance.
- B. Remove debris, adhesive smears, and unused materials.
- C. Leave adjacent surfaces clean and undamaged.

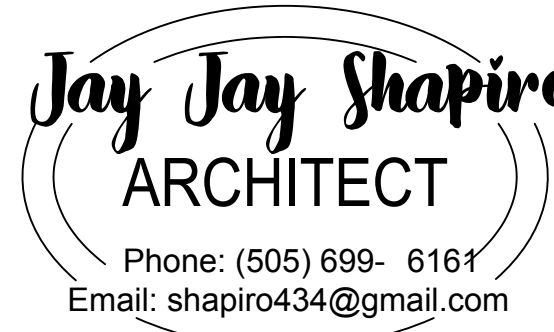
WARRANTY

4.1 Manufacturer's Membrane Warranty

- A. Twenty- year no- dollar- limit manufacturer's warranty covering membrane defect and reasonable consequential damage to roofing components.

4.2 Installer's Workmanship Warranty

- A. Two- year warranty covering installation workmanship defects effective from date of final acceptance.



OWNERS:

DOMINGO ORNELAS
PH: (505) 690- 0391
EMAIL:
dominornelas@gmail.com

GENERAL CONTRACTOR:

Frank Trujillo
Tierra De Zia Contracting,
LLC
(505) 470- 5400
tierradezia@gmail.com
Lic. #404576

CONSULTANTS:

Dwight Velarde, PE
Velarde Engineering
(505) 720- 6016
veleng09@gmail.com

Jerry D. Watts, MSFPE
(800) 503- 1961
accentfire@aol.com

PROJECT

DESCRIPTION:

Iglesia Cristiana
Casa del Alferero

2501 Cactus Lane,
Santa Fe, NM 87507

REVISIONS:

#	DISC	DATE
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SHEET TITLE

ROOF PLAN,
SPECIFICATIONS

PROJECT NO:

CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

A- 5.0



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DOMINGO ORNELAS
PH: (505) 690- 0391
EMAIL:
dominornelas@gmail.com

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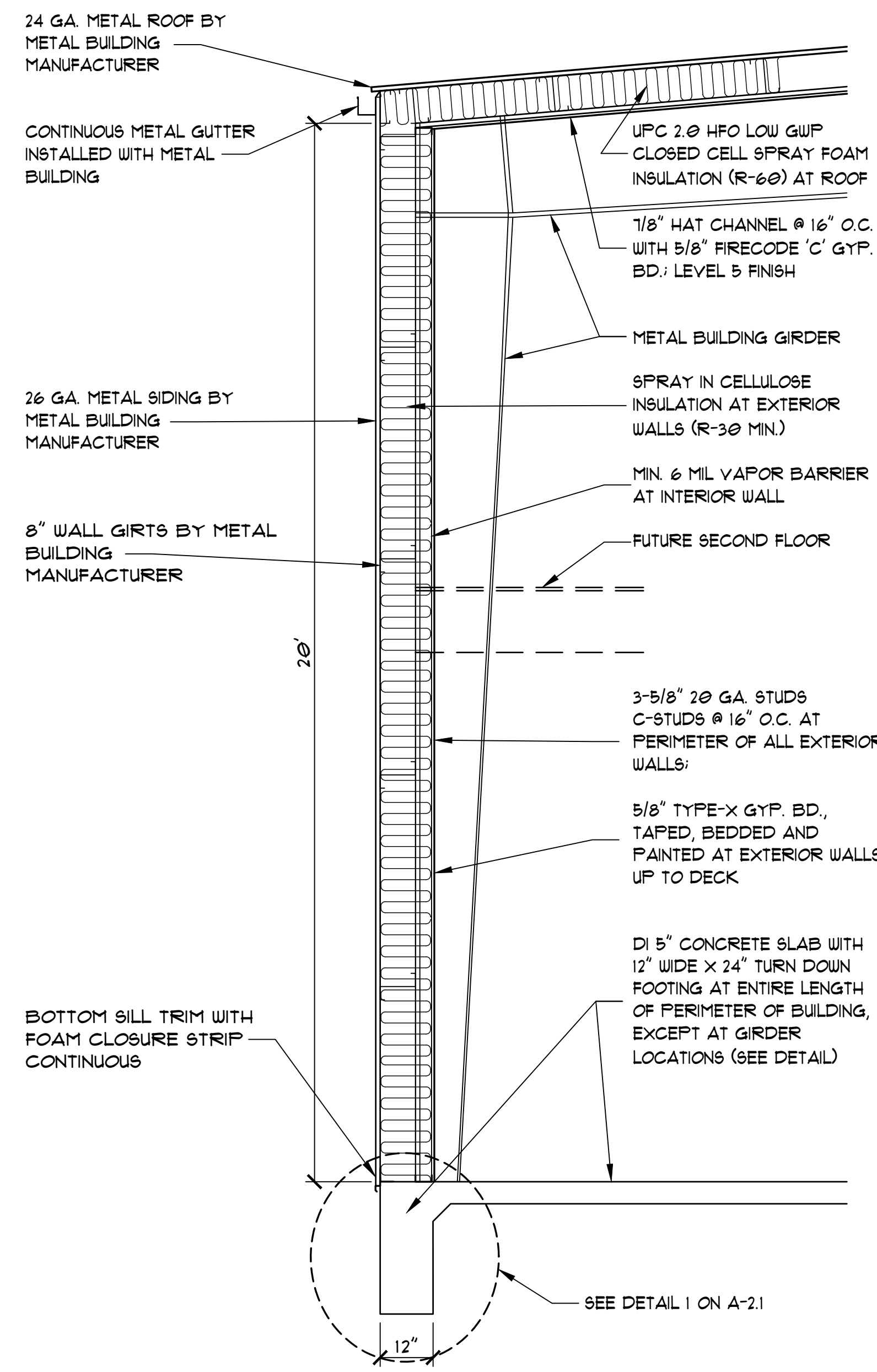
SHEET TITLE

BUILDING SECTIONS,
EXTERIOR WALL SECTION

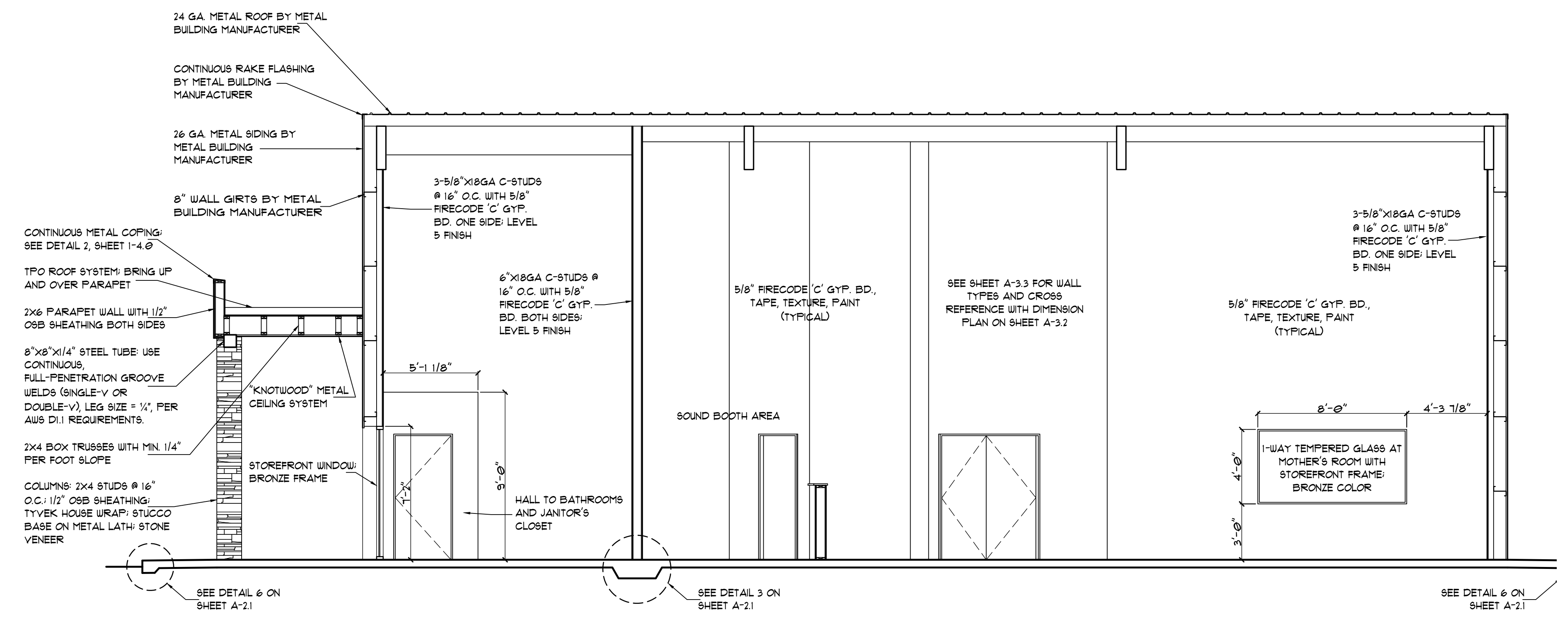
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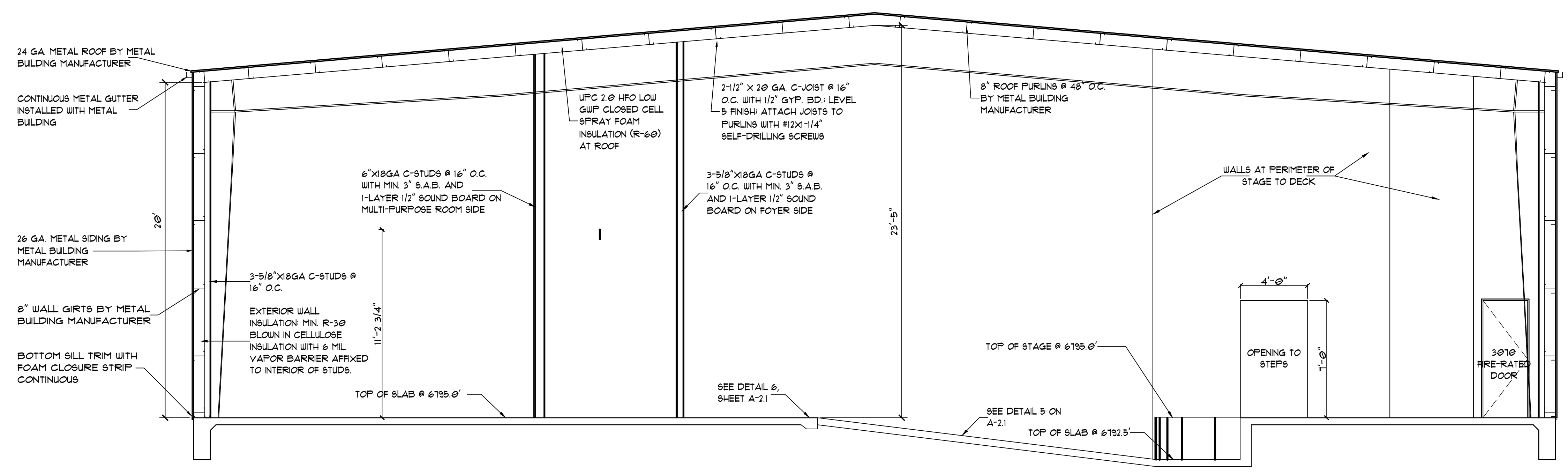
SHEET:



1 WALL SECTION
SCALE: N.T.S.



B BUILDING SECTION
SCALE: N.T.S.



A BUILDING SECTION
SCALE: N.T.S.



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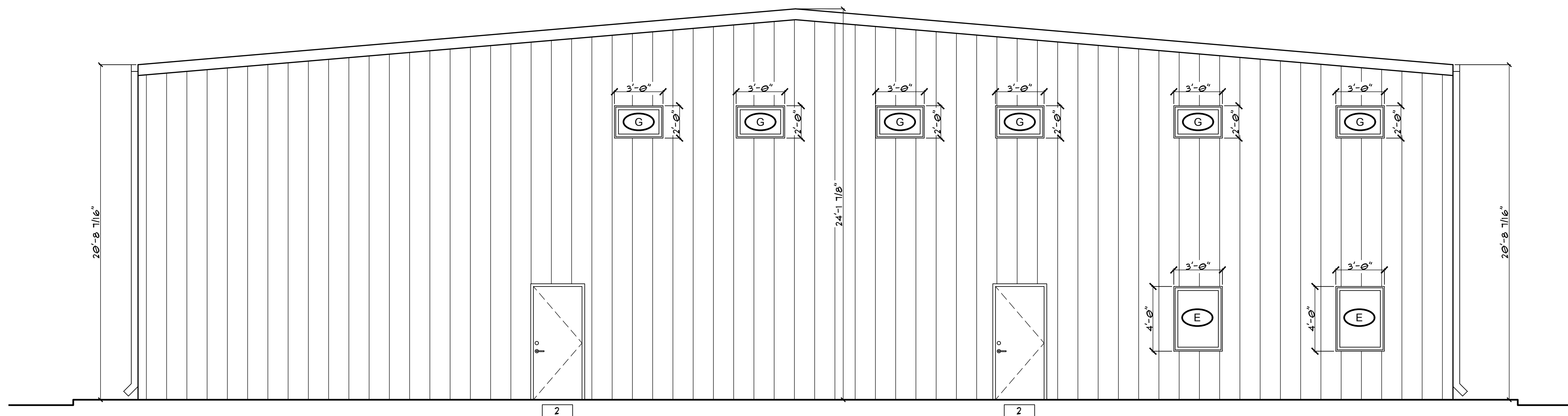
EXTERIOR
ELEVATIONS

PROJECT NO:
CDA- 025- 001

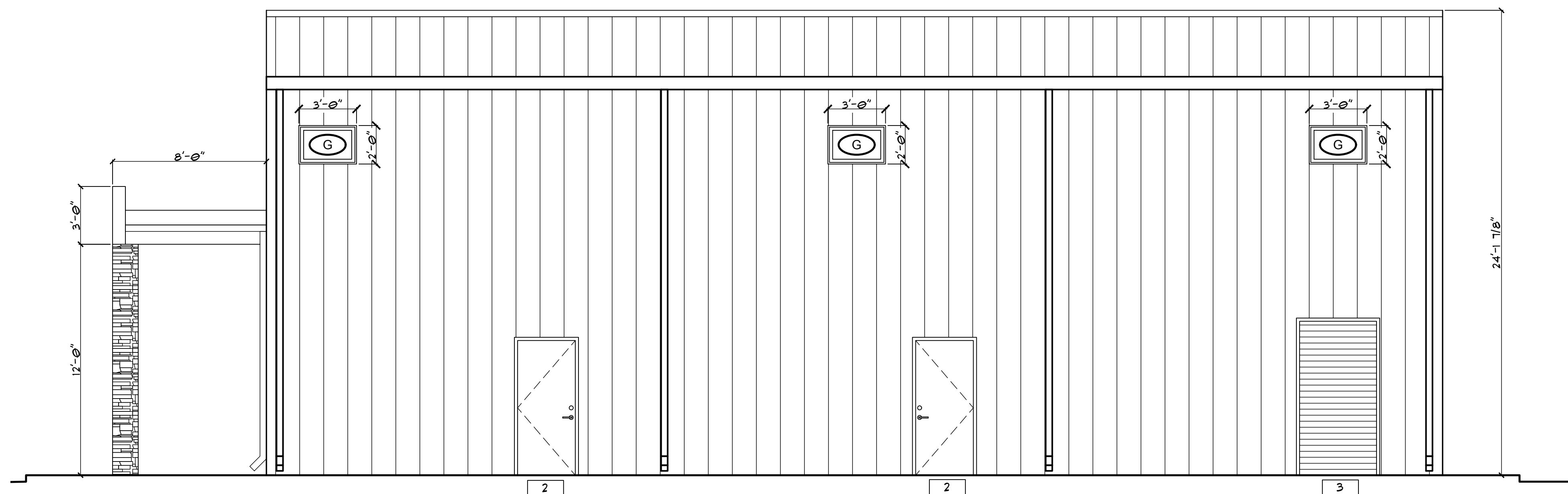
DATE: MAY 05, 2025

SHEET:

A- 7.0



1 NORTH ELEVATION
SCALE: 1/4" = 1'- 0"



1 EAST ELEVATION
SCALE: 1/4" = 1'- 0"



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tierradezia@gmail.com
Lic. #404576

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Velarde Engineering
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Jerry D. Watts, MSFPE
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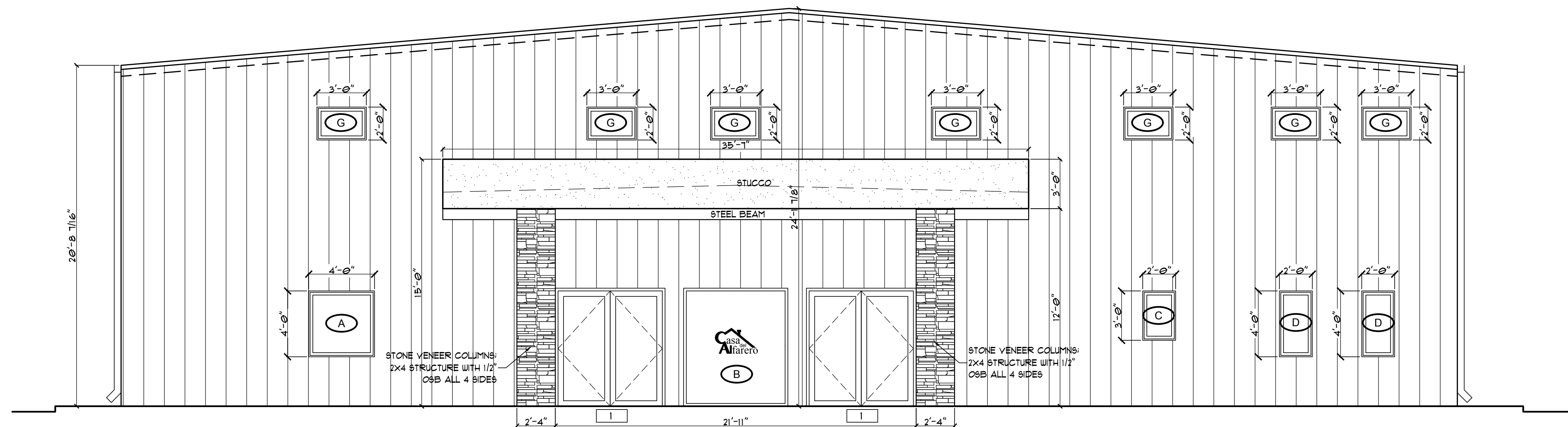
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EXTERIOR
ELEVATIONS

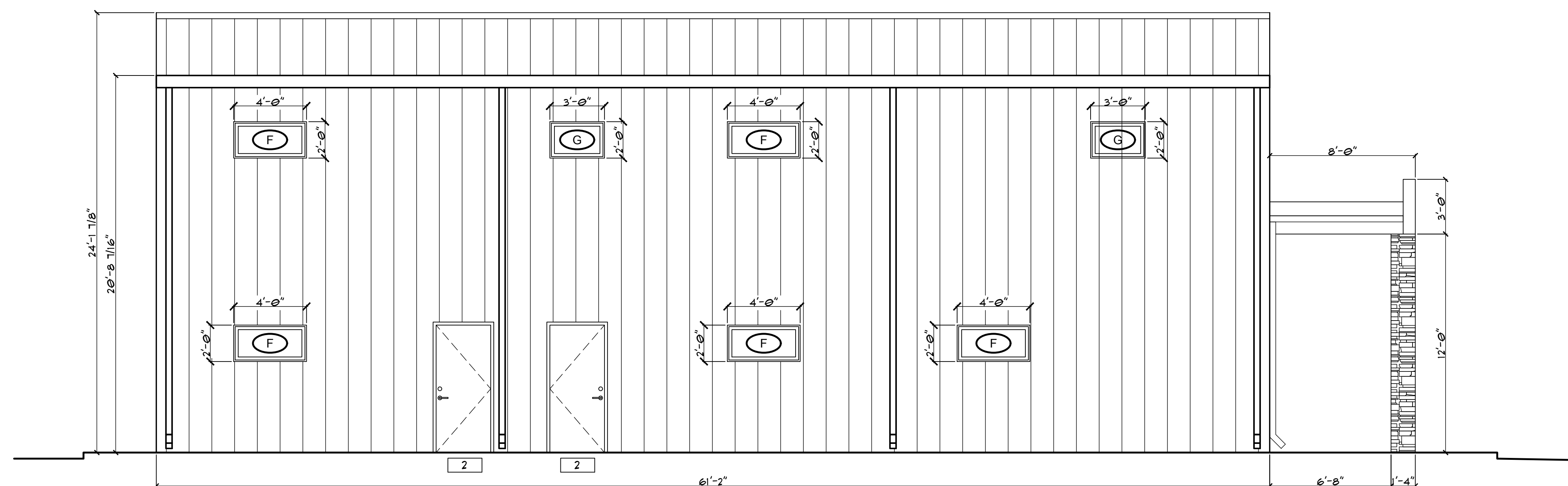
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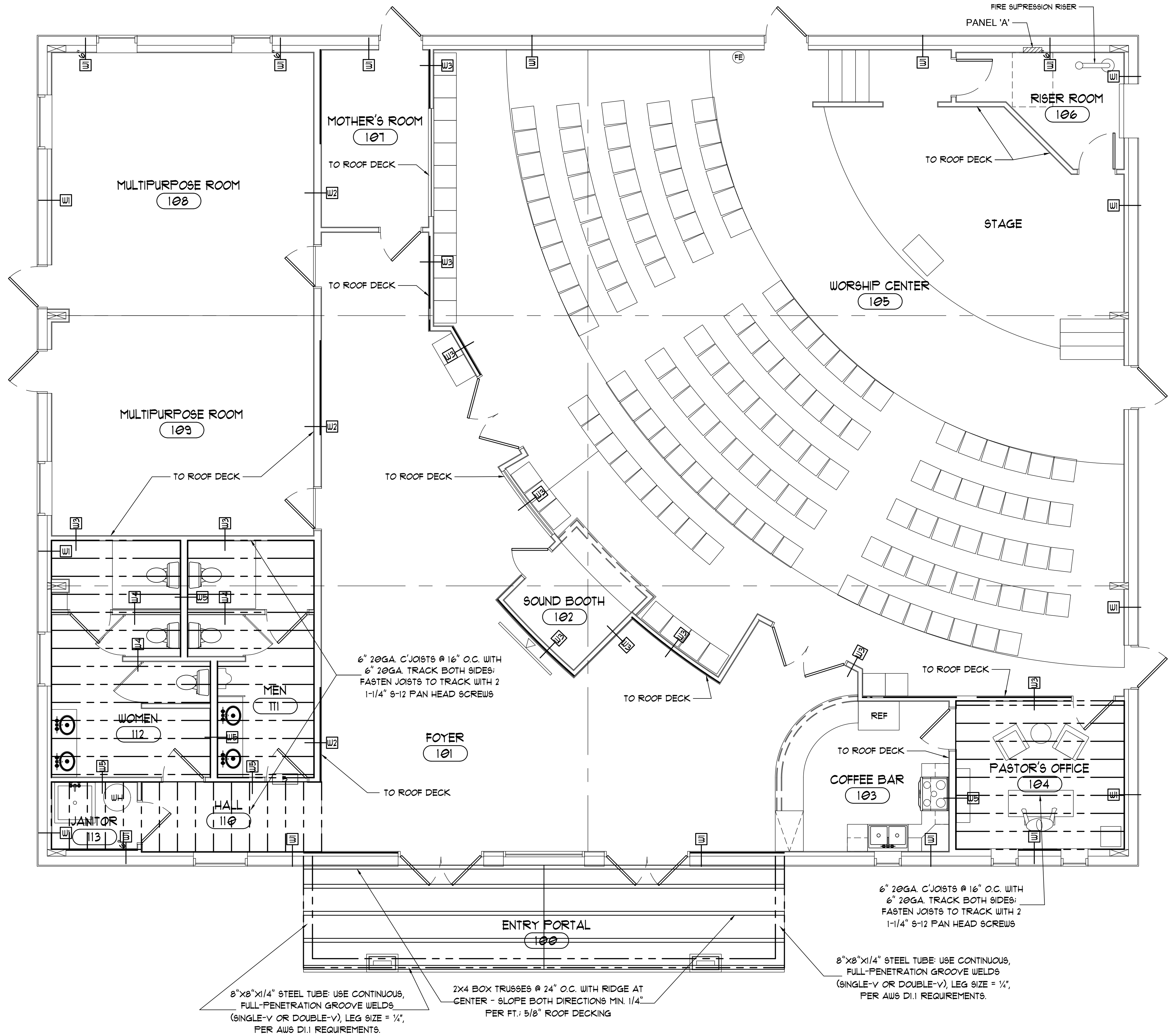
SHEET:



1 SOUTH ELEVATION
SCALE: 1/4" = 1'- 0"



1 WEST ELEVATION
SCALE: 1/4" = 1'- 0"



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

COLD- FORMED METAL FRAMING, INTERIOR C- STUDS

GENERAL

- 1.1 Scope
A. Supply and install interior load- bearing cold- formed C- studs, sizes 3- 5/8" and 6".
- 1.2 References
A. AISI S100 – North American Specification for the Design of Cold- Formed Steel Structural Members
B. ASTM C645 – Standard Specification for Nonstructural Steel Framing Members
C. ASTM C955 – Standard Specification for Load- Bearing (Structural) Steel Studs, Headers, Joists, and Rafters

- 1.3 Submittals
A. Product Data: Member profiles, gauges, coatings.
B. Shop Drawings: Framing layout, member schedules, splice details.
PRODUCTS

- 2.1 Materials
A. Steel sheet: ASTM A653/A653M, G60 galvanized coating or G90 in high- corrosion areas.

- 2.2 C- Stud Profiles & Gauges
A. 3- 5/8" C- stud: 54 mil (12 ga) minimum, 1 1/4" flanges, 1/2" return lip.
B. 6" C- stud: 54 mil (12 ga) minimum, 1 1/4" flanges, 1/2" return lip.

- 2.3 Track (U- Header)
A. Matching gauge and flange dimensions; continuous at top and bottom of wall.

- 2.4 Accessories
A. Splice plates, hold- down clips, deflection clips, fasteners, shim packers per manufacturer.

EXECUTION

- 3.1 Layout & Installation
A. Install bottom/top track aligned and level. Secure tracks to slab and structure at 24" o.c. max.
B. Cut and insert C- studs into track. Space studs per structural drawings (typically 16" o.c.).
C. Ensure plumb within 1/8" in 10'. Use shim packers under tracks if required.

- 3.2 Splices & Bracing
A. Splice studs where they exceed maximum specified length with full- depth splice plates and fasteners; stagger splices in alternate studs.
B. Install lateral bracing or blocking as shown on drawings or per AISI S100.

3.3 Fastening

- A. Fasten studs to tracks: two #10- 16 self- drilling screws at each flange, top and bottom.
B. Fasten track to structure: 1/4" diameter powder- actuated pins or approved anchors at 24" o.c. max.

- 3.4 Tolerances & Quality Control
A. Alignment: tracks and studs plumb and true to line; cumulative out- of- plumb not over 1/4" in 20'.
B. Fasteners: fully seated, no loose or missing screws.

- 3.5 Protection
A. Protect studs and tracks from damage, moisture, and construction debris.

End of Section.

COLD- FORMED METAL FRAMING, 6" C- JOISTS

GENERAL

- 1.1 Scope
A. Supply and install 6" deep, cold- formed steel C- joists at 16" on center to support gypsum board ceilings (or wall furring) per approved shop drawings.
- 1.2 References

1. ASTM C645 — "Standard Specification for Nonstructural Steel Framing Members"
2. ASTM C754 — "Standard Specification for Installation of Steel Framing Members"

PRODUCTS

- 2.1 C- Joists
A. Profile: C- shape, 6" depth, 1 1/2" flange, 3/4" lip, manufactured to ASTM C645
B. Gauge: 20 ga (0.036") G90 galvanized steel
C. Section modulus and stiffness rated for L/240 deflection over a 12' simple span
- 2.2 Tracks & Accessories
A. Field- trimmed U- shaped top and bottom track, same gauge as joists
B. Splice plates or clip- angles for continuous runs longer than one track length
C. Fasteners: self- drilling, self- tapping screws compatible with steel thickness

INSTALLATION

- 3.1 Layout
A. Install top track level and plumb on bearing walls or structure
B. Snap or set C- joists into track at 16" o.c., verify spacing with a laser or chalk line
- 3.2 Fastening
A. Secure each joist flange to the track with two 1 1/4" Type S self- drilling screws
B. Stagger splices; use manufacturer- approved splices or clip angles
- 3.3 Gypsum Board Attachment (if ceiling use)
A. Attach 5/8" gypsum board perpendicular to joists with 1" Type S drywall screws
B. Screw spacing: 7-8" o.c. along joists; 3/8" from panel edges
- 3.4 Tolerances & Quality
A. Maximum deflection under live load L/240
B. Joist plane variation: ±1/8" in 10'
C. Verify plumb, level, and secure connections before drywall installation

CLEAN- UP & PROTECTION

- 4.1 Remove metal shavings and debris
4.2 Protect installed framing until finished removal of trades

End of Section

NOTE:
SEE SHEET A- 4.3 FOR WALL TYPES AND DETAILS

Jay Jay Shapiro
ARCHITECT
Phone: (505) 699- 6161
Email: shapiro434@gmail.com



OWNERS:
DOMINGO ORNELAS
PH: (505) 690- 0391
EMAIL:
dominornelas@gmail.com

GENERAL CONTRACTOR:
Frank Trujillo
Tierra De Zia Contracting, LLC
(505) 470- 5400
tierradezia@gmail.com
Lic. #404576

CONSULTANTS:
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Velarde Engineering
(505) 720- 6016
veleng09@gmail.com

Jerry D. Watts, MSFPE
(800) 503- 1961
accentfire@aol.com

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SHEET TITLE

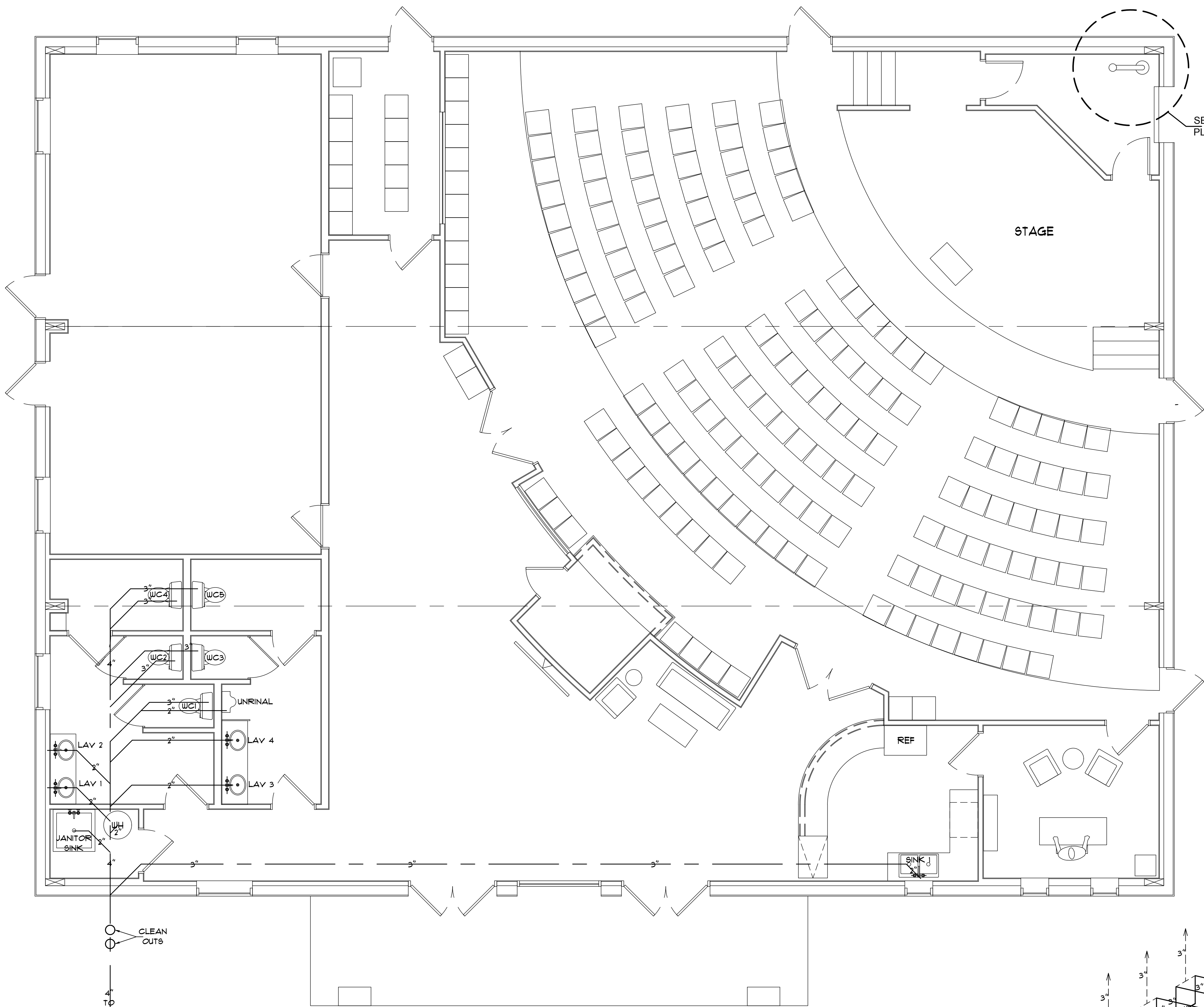
**METAL JOIST
FRAMING PLAN**

PROJECT NO:
CDA- 025- 001

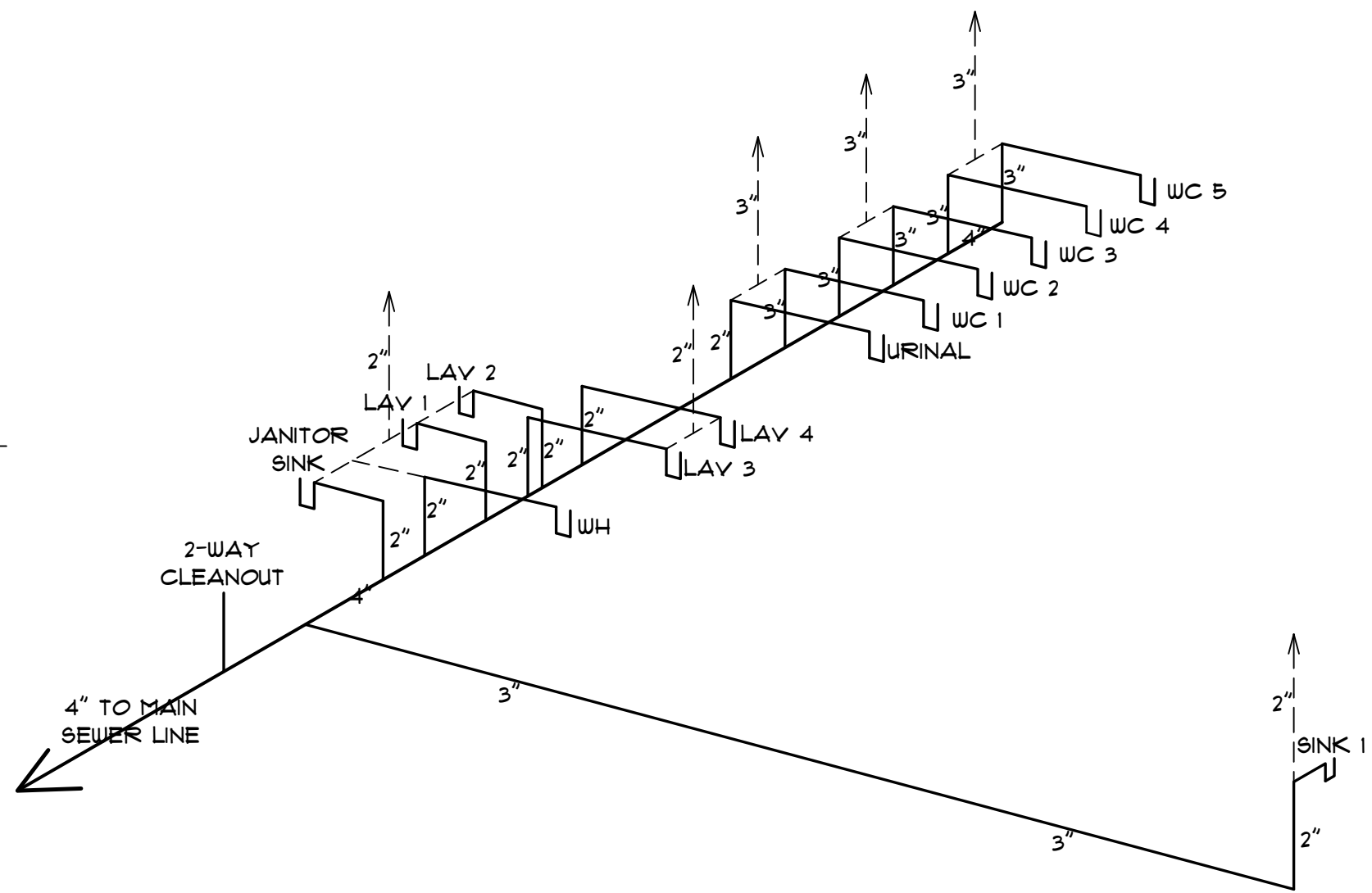
DATE: MAY 05, 2025

SHEET:

A- 8.0



1 PLUMBING PLAN - SEWER LINES
SCALE: 1/4" = 1'- 0"



2 PLUMBING PLAN - ISOMETRIC
SCALE: 1/4" = 1'- 0"

Plumbing Systems

GENERAL

1.1 Scope

- A. Supply, install, and test sanitary drainage, vent, and domestic water piping systems serving the following church fixtures:
- 5 water closets (tank type)
 - 1 urinal
 - 4 lavatories
 - 1 janitor sink
 - 1 kitchen sink
 - 1 refrigerator ice- maker line
 - 1 domestic water heater
 - 4 exterior hose bibs

1.2 References

- A. IPC – International Plumbing Code
B. ASTM D2665 – PVC DWV Pipe and Fittings
C. ASTM D1785 – PVC Pressure Pipe and Fittings
D. ASTM B88 – Seamless Copper Water Tube
E. ASSE 1017 – Backflow Preventers for Hose Connections
F. NSF/ANSI 61 – Drinking Water System Components

1.3 Submittals

- A. Product data on pipe, fittings, valves, water heater, backflow preventers.
B. Shop drawings: fixture layouts, piping risers, vent stacks, roof- penetration details.
C. Test reports: air- test of DWV system and hydrostatic test of water lines.

PRODUCTS

2.1 Sanitary Drainage & Vent Piping

- A. Pipe and Fittings:
1. Sanitary (DWV) Piping: PVC Schedule 40, solvent- welded, ASTM D2665.
2. Vent Piping: same as DWV piping.
- B. Sizes:
1. Building drain and lateral to grease arrester: 4" PVC.
2. Branch drains serving lavatories, sinks, urinal: 2" or 3" PVC per code.
3. Fixture drains: water closets on 3", urinal on 2"; all others on 1½"-2" as required.
4. Stack vents: minimum 3" PVC through- roof penetration.

2.2 Domestic Cold & Hot Water Piping

- A. Material Options (select one):
1. Type L hard- drawn copper tubing, ASTM B88, solder- joint fittings, lead free.
2. Cross- linked polyethylene (PEX) tubing, ASTM F876/F877, crimp or expansion fittings.
- B. Sizes:
1. Main riser: 1" cold and hot.
2. Branch to fixtures: ½" to lavatories, kitchen sink, janitor sink; ½" to hose bibs, ice maker.
- C. Valves and Accessories:
1. Shutoff valves: bronze ball or gate valves at each fixture.
2. Vacuum breakers/backflow preventers: ASSE 1017 on each hose bib.
3. Water heater expansion tank, pressure- relief valve, and sediment trap.

2.3 Water Heater

- A. Type: gas- fired (or electric) storage heater, natural draft or direct vent, 50–75 gal capacity.
B. Features: factory installed T&P relief valve, insulated jacket, ASME rated.

EXECUTION

3.1 Rough In – DWV System

- A. Lay 4" building drain with 1/8" fall per foot minimum. Branches: slope ¼"/ft for 2"–3" lines, ½"/ft for 4".
B. Install fixture traps and branch piping to stack. Maintain minimum trap arms.
C. Connect to gravity flow sewer lateral. Provide cleanouts at base of each vertical stack and changes of direction > 45°.

3.2 Rough In – Vent System

- A. Extend vent stacks through roof with a minimum 3" pipe. Terminate at least 10" above roof and 2' clear of openings.

3.3 Rough In – Water System

- A. Install cold water riser and branch with continuous slope to drain.
B. Install hot water riser from heater to serve fixtures. Include mixing valve if required.
C. Size and locate shutoff valves at each fixture.
D. Install hosebib vacuum breakers per manufacturer's instructions.

3.4 Equipment Installation

- A. Set water heater level on concrete pad or bracket; provide seismic strapping where required.
B. Connect water, gas (if applicable), and flue per code and manufacturer.

3.5 Testing

- A. DWV Air Test: cap fixture outlets, apply 5 psi air, hold 15 min; inspect for pressure loss.
B. Water Test: fill cold- water piping to 150 psi; hold 15 min; inspect for leaks.

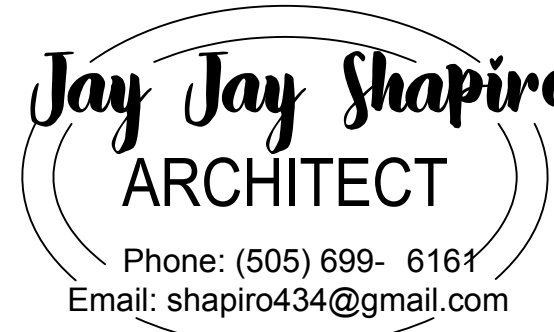
3.6 Balancing & Commissioning

- A. Adjust water heater controls; flush and disinfect water system.
B. Verify fixture flow rates and drainage performance.

PROTECTION & CLEAN UP

- 4.1 Protect installed piping and equipment from damage.
4.2 Remove debris, surplus material, and packaging from site daily.

End of Section



OWNERS:

DOMINGO ORNELAS
PH: (505) 690- 0391
EMAIL:
dominornelas@gmail.com

GENERAL CONTRACTOR:

Frank Trujillo
Tierra De Zia Contracting,
LLC
(505) 470- 5400
tierradezia@gmail.com
Lic. #404576

CONSULTANTS:

Dwight Velarde, PE
Velarde Engineering
(505) 720- 6016
veleng09@gmail.com

Jerry D. Watts, MSFPE
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accentfire@aol.com

PROJECT

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SHEET TITLE

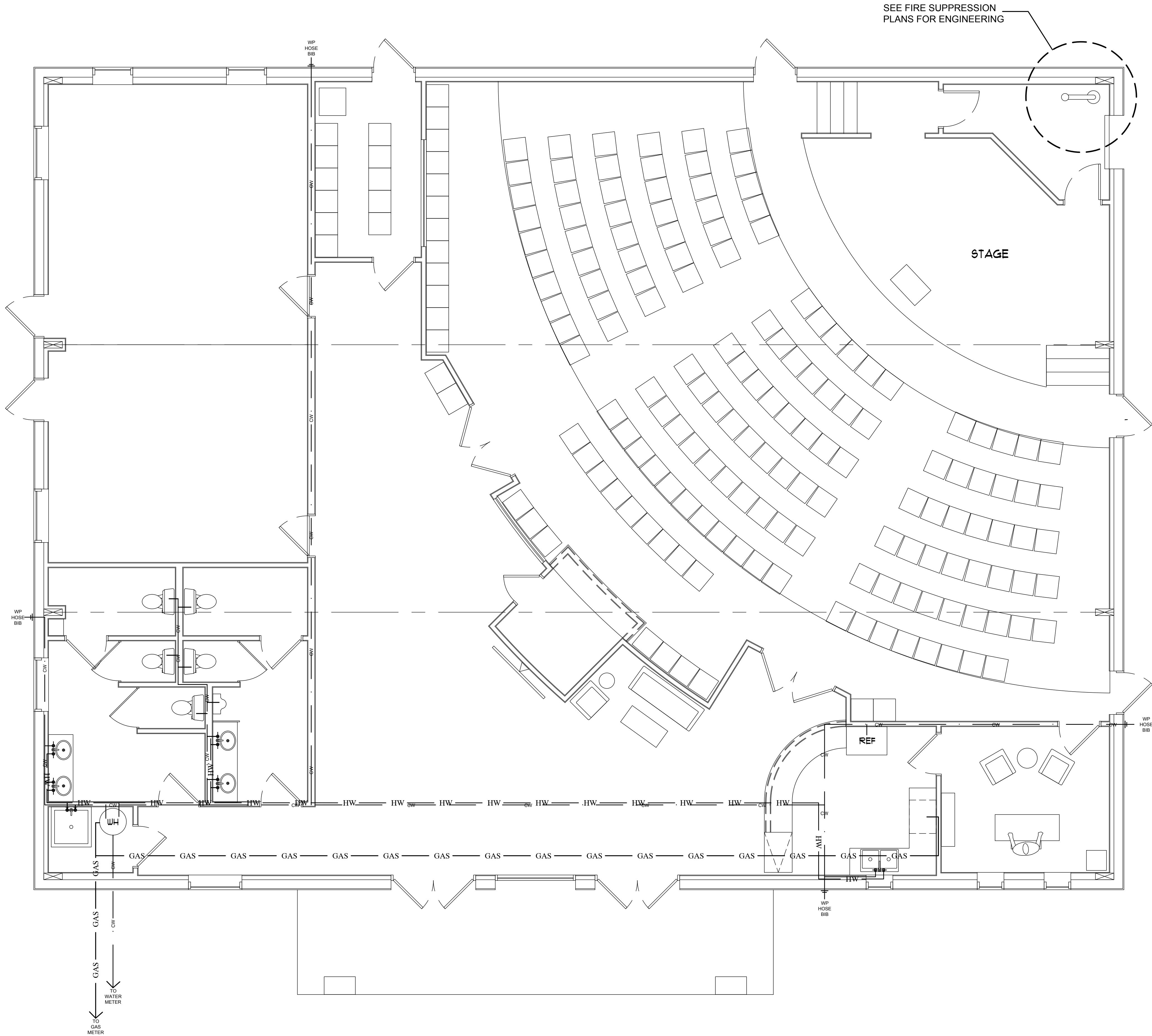
PLUMBING
PLAN, SEWER
LINES

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

P1.0



Plumbing Systems

GENERAL

- 1.1 Scope
- A. Supply, install, and test sanitary drainage, vent, and domestic water piping systems serving the following church fixtures:
- 1.5 water closets (tank type)
 - 2.1 urinal
 - 4 lavatories
 - 4.1 janitor sink
 - 5.1 kitchen sink
 - 6.1 refrigerator ice- maker line
 - 7.1 domestic water heater
 - 8.4 exterior hose bibs
- 1.2 References
- A. IPC – International Plumbing Code
- B. ASTM D2665 – PVC DWV Pipe and Fittings
- C. ASTM D1785 – PVC Pressure Pipe and Fittings
- D. ASTM B88 – Seamless Copper Water Tube
- E. ASSE 1017 – Backflow Preventers for Hose Connections
- F. NSF/ANSI 61 – Drinking Water System Components

- 1.3 Submittals
- A. Product data on pipe, fittings, valves, water heater, backflow preventers.
- B. Shop drawings: fixture layouts, piping risers, vent stacks, roof- penetration details.
- C. Test reports: air- test of DWV system and hydrostatic test of water lines.

PRODUCTS

- 2.1 Sanitary Drainage & Vent Piping
- A. Pipe and Fittings:
1. Sanitary (DWV) Piping: PVC Schedule 40, solvent- welded, ASTM D2665.
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- B. Sizes:
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 2. Branch drains serving lavatories, sinks, urinal: 2" or 3" PVC per code.
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- 2.2 Domestic Cold & Hot Water Piping
- A. Material Options (select one):
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- B. Sizes:
1. Main riser: 1" cold and hot.
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- C. Valves and Accessories:
1. Shutoff valves: bronze ball or gate valves at each fixture.
 2. Vacuum breakers/backflow preventers: ASSE 1017 on each hose bib.
 3. Water heater expansion tank, pressure- relief valve, and sediment trap.

- 2.3 Water Heater
- A. Type: gas- fired (or electric) storage heater, natural draft or direct vent, 50–75 gal capacity.
- B. Features: factory installed T&P relief valve, insulated jacket, ASME rated.

EXECUTION

- 3.1 Rough In – DWV System
- A. Lay 4" building drain with 1/8" fall per foot minimum. Branches: slope ¼"/ft for 2–3" lines, ½"/ft for 4".
- B. Install fixture traps and branch piping to stack. Maintain minimum trap arms.
- C. Connect to gravity flow sewer lateral. Provide cleanouts at base of each vertical stack and changes of direction > 45°.
- 3.2 Rough In – Vent System
- A. Extend vent stacks through roof with a minimum 3" pipe. Terminate at least 10" above roof and 2' clear of openings.
- 3.3 Rough In – Water System
- A. Install cold water riser and branch with continuous slope to drain.
- B. Install hot water riser from heater to serve fixtures. Include mixing valve if required.
- C. Size and locate shutoff valves at each fixture.
- D. Install hosebib vacuum breakers per manufacturer's instructions.

- 3.4 Equipment Installation
- A. Set water heater level on concrete pad or bracket; provide seismic strapping where required.
- B. Connect water, gas (if applicable), and flue per code and manufacturer.
- 3.5 Testing
- A. DWV Air Test: cap fixture outlets, apply 5 psi air, hold 15 min; inspect for pressure loss.
- B. Water Test: fill cold- water piping to 150 psi; hold 15 min; inspect for leaks.
- 3.6 Balancing & Commissioning
- A. Adjust water heater controls; flush and disinfect water system.
- B. Verify fixture flow rates and drainage performance.

PROTECTION & CLEAN UP

- 4.1 Protect installed piping and equipment from damage.
- 4.2 Remove debris, surplus material, and packaging from site daily.

End of Section

Jay Jay Shapiro
ARCHITECT

Phone: (505) 699- 6161
Email: shapiro434@gmail.com



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SHEET TITLE

PLUMBING
PLAN, WATER
LINES

PROJECT NO:
CDA- 025- 001

DATE: MAY 05, 2025

SHEET:

P2.0

1 PLUMBING PLAN - WATER LINES
SCALE: 1/4" = 1'- 0"