SHEET INDEX:

SCALE: 1-1/2" = 1'-0" | SCALE: 1" = 1'-0" | SCALE: 3/4" = 1'-0" | SCALE: 1/2" = 1'-0" | SCALE: 1/4" = 1'-0" | SCALE: 3/16" = 1'-0" | SCALE: 1/8" = 1'-0"

Drawing File: N:\2025\Tirado Truck-Harnett Co PIO 2025-04-02.2\DWG\G-Tirado PEMB-20 June 2025.dwg
Plotted By: Kelly Jul 10, 2025 - 10:52am

PROJECT:

TIRADO TRUCK REPAIR GARAGE

US 421 SOUTH, HARNETT COUNTY, NC

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

Reviewed for Code Compliance

07/31/2025

Harnett COUNTY NORTH CAROLINA

PROJECT TEAM:

BUILDING DEPARTMENT:

HARNETT COUNTY
PLANNING & INSPECTIONS DEPARTMENT
420 MCKINNEY PARKWAY
LILLINGTON, NC 27546
910-893-7525

PROJECT DESIGNER:

JENKINS CONSULTING ENGINEERS, P.A.
OFFICE in EUREKA SPRINGS, NC
KELLY J. DODSON
BUDDY JENKINS
1606 MCARTHUR ROAD
FAYETTEVILLE, NC 28311-1002
910-822-1724

BUILDING OWNER

LUIS TIRADO
3577 OLD US 421
LILLINGTON, NC 27546
919-648-3999

CONSTRUCTION MANAGEMENT:

TBD

CODE REVIEW:

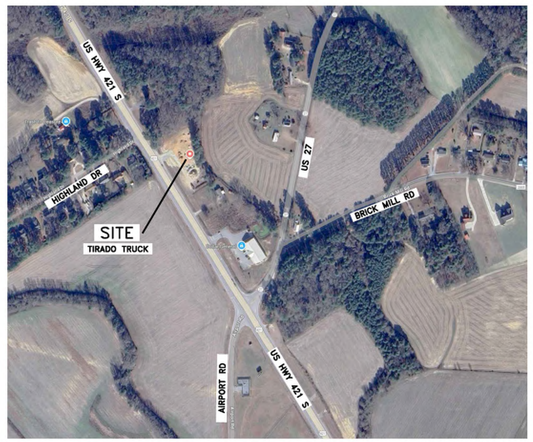
APPLICABLE CODES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

BUILDING	2018 NC BUILDING CODE
PLUMBING	2018 NC PLUMBING CODE
MECHANICAL	2018 NC MECHANICAL CODE
ELECTRICAL	2020 NATIONAL ELECTRICAL CODE (NFPA-70)
FIRE PREVENTION	2018 NC FIRE CODE
ENERGY	2018 NC ENERGY CONSERVATION CODE
ACCESSIBILITY	ICC A117.1-2009 AND THE AMERICANS WITH DISABILITIES ACT (ADAAG) 2018 NC BUILDING CODE CHAPTER 11

VICINITY PLAN

NOT TO SCALE

NORTH



BUILDING DATA:

THE PROJECT SCOPE IS TO CONSTRUCT A NEW BUILDING TO BE USED AS A REPAIR GARAGE.

JENKINS CONSULTING ENGINEERS, P.A.
OFFICE in EUREKA SPRINGS, NORTH CAROLINA
CORPORATION NUMBER C-3070 kelly@jenkinspe.com
1606 MCARTHUR RD. FAYETTEVILLE, NC 28311-1002
910.822.1724

NORTH CAROLINA PROFESSIONAL SEAL C-3070 ENGINEERS P.A. JENKINS CONSULTING CORPORATION

NORTH CAROLINA PROFESSIONAL SEAL 42009 ENGINEER KELLY J. DODSON

10 JULY 2025

DESIGNED / CHECKED BY: KJD
DRAWN BY: BT
PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

OWNER/TENANT:
LUIS TIRADO
3577 OLD US 421 LILLINGTON, NC 27546

CONTRACTOR/BUILDER:
TBD
TBD

REVISIONS:

REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: *TIRADO TRUCK SHOP*
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: COVER & INDEX TO DRAWINGS

CS

2018 NORTH CAROLINA BUILDING CODE SUMMARY: APPENDIX B

Name of Project: TIRADO TRUCK REPAIR GARAGE — ParID / PIN: 110589 0009 01/ 0589-17-0727
Address: US 421 SOUTH, HARNETT COUNTY, NC — Zip Code: 27546
Proposed Use: REPAIR GARAGE (S-1)
Owner or Authorized Agent: LUIS TIRADO — Phone 919-648-3999 — E-Mail Lacevedo95@ymail.com
Owned By: LUIS TIRADO ☐ City/County ☑ Private ☐ State
Code Enforcement Jurisdiction: ☐ City LILLINGTON ☑ County HARNETT COUNTY ☐ State NORTH CAROLINA

CONTACT: KELLY J. DODSON

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	N/A	N/A	N/A	N/A	N/A
Civil	JTE	JEREMY R. THOMAS	NC PE 27330	(919) 777-6010	jthomas@jthomasengineering.com
Electrical	JCE	DOUGLAS L. JENKINS	NC PE 28803	(910) 822-1724	buddyj@jenkinsce.pro
Fire Alarm	N/A	N/A	N/A	N/A	N/A
Plumbing	JCE	DOUGLAS L. JENKINS	NC PE 28803	(910) 822-1724	buddyj@jenkinsce.pro
Mechanical	JCE	DOUGLAS L. JENKINS	NC PE 28803	(910) 822-1724	buddyj@jenkinsce.pro
Sprinkler-Standpipe	N/A	N/A	N/A	N/A	N/A
Structural :	JCE	KELLY J. DODSON	NC PE 42009	(910) 822-1724	kellyd@jenkinsce.pro
INTERIOR WALLS	N/A	N/A	N/A	N/A	N/A
Retaining Walls >5' High	N/A	N/A	N/A	N/A	N/A
Building	JCE	KELLY J. DODSON	NC PE 42009	(910) 822-1724	kellyd@jenkinsce.pro

2018 NORTH CAROLINA BUILDING CODE: ☑ New Building ☐ Addition ☐ Shell / Core ☐ Phased Construction - Shell Core ☐ First Time Interior Completions

2018 NORTH CAROLINA EXISTING BUILDING CODE: (check all that apply) ☐ Prescriptive ☐ Repair ☐ Chapter 14 ☐ Alteration Level I ☐ Alteration Level II ☐ Alteration Level III ☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) N/A — CURRENT USE (S) (Ch. 3): N/A
RENOVATED: (date) N/A — PROPOSED USE (S) (Ch. 3): REPAIR GARAGE (S-1)
OCCUPANCY RISK CATEGORY (Table 1604.5): Current: II Proposed: II

BASIC BUILDING DATA
Construction Type: (check all that apply) ☐ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ ☐ V-A ☑ V-B
Sprinklers: ☑ No ☐ Partial ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☑ No Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Primary Fire District: ☑ No ☐ Yes (APPENDIX D) — Flood Hazard Area: ☑ No ☐ Yes
Special Inspections Required: ☑ No ☐ Yes

GROSS BUILDING AREA TABLE

FLOOR	EXISTING (sq ft)	NEW (sq ft)	SUBTOTAL
GROUND LEVEL	N/A	2,250	2,250
TOTAL SPACE AREA	N/A	2,250	2,250

ALLOWABLE AREA

Primary Occupancy Classification(s):
- Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
- Business ☐
- Educational ☐
- Factory ☐ F-1 Moderate ☐ F-2 Low
- Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
- Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
  - I-1 Condition ☐ 1 ☐ 2
  - I-2 Condition ☐ 1 ☐ 2
  - I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
- Mercantile ☐
- Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
- Storage ☑ S-1 Moderate ☐ S-2 Low ☐ High-piled ☐ Parking Garage ☐ Open ☐ Enclosed ☑ Repair Garage
- Utility and Miscellaneous ☐

Accessory Occupancy Classification(s): NONE
Incidental Uses (Table 509): NONE
This separation is not exempt as a Non-separated Use (see exceptions).
Special Uses (Chapter 4): ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424 ☐ 425 ☐ 426 ☐ 427 ☐ 428 ☐ 429 ☐ 430
Special Provisions (Chapter 5): ☐ 510.2 ☐ 510.3 ☐ 510.4 ☐ 510.5 ☐ 510.6 ☐ 510.7 ☐ 510.8 ☐ 510.9
Mixed Occupancy: ☑ No ☐ Yes Separation: Hr. Exception:
☐ Non-separated Use (508.3) (508.3.1)
☐ Separated Use (508.4) --See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area of each use shall not exceed 1.

Separated Use Formula 508.4.2:

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\frac{-}{-} + \frac{-}{-} = - \leq 1.00$$

STORY NUMBER	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 [4] AREA	(C) AREA FOR FRONTAGE INCREASE [1, 5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED [2, 3]
1	REPAIR GARAGE (S-1)	2,250	9,000	N/A	9,000

1 Frontage area increases from Section 506.3 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = ______ (F)
b. Total Building Perimeter = ______ (P)
c. Ratio (F/P)= ______ (F/P)
d. W = Minimum width (weighted average) of public way = ___ (W) where $W=(L_1 \times w_1 + L_2 \times w_2)/F$ (Equation 5-4)
e. Percent of frontage increase = $I_f = 100\,[F/P - 0.25] \times W/30$ = ______ (%) (Equation 5-5)

FRONTAGE INCREASE WORKSHEET for CALCULATIONS:

EXTERIOR WALL	(F) OPEN LENGTH (feet)	(P) TOTAL LENGTH (feet)	(W) (weighted average) WIDTH OF PUBLIC WAY OR OPEN SPACE (feet)	(%) FROM CALC. ABOVE	(B) FROM TABLE ABOVE	AREA INCREASE FOR COLUMN (C) ABOVE (% * TABLE AREA)
North						
South						
East						
West						
TOTAL						
EXAMPLE	75	100	25	42	23,500	(.42*23,500 = 9,870)

2 Unlimited area applicable under conditions of Sections 507
3 Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (Section 506.2).
4 The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1
5 Frontage increase is based on the unsprinklered area value in Table 506.2.

BUILDING CODE SUMMARY (continued)

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	40	20'-9"	-
Building Height in Stories (Table 504.4)	2	1	-

1. Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (feet)	RATING ** (TABLE 601) REQ'D V-B	RATING ** (TABLE 601) PROVIDED (w/___ * REDUCTION	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses		0	0	N/A	N/A	N/A	N/A
Bearing Walls Exterior		0	0	N/A	N/A	N/A	N/A
North		0	0	N/A	N/A	N/A	N/A
East		0	0	N/A	N/A	N/A	N/A
West		0	0	N/A	N/A	N/A	N/A
South		0	0	N/A	N/A	N/A	N/A
Interior		0	0	N/A	N/A	N/A	N/A
Nonbearing walls and partitions Exterior walls		0	0	N/A	N/A	N/A	N/A
North		0	0	N/A	N/A	N/A	N/A
East		0	0	N/A	N/A	N/A	N/A
West		0	0	N/A	N/A	N/A	N/A
South		0	0	N/A	N/A	N/A	N/A
Interior Non-Bearing Walls		0	0	N/A	N/A	N/A	N/A
Floor construction including supporting beams and joists		0	0	N/A	N/A	N/A	N/A
Floor Ceiling Assembly		0	0	N/A	N/A	N/A	N/A
Columns Supporting Floors		0	0	N/A	N/A	N/A	N/A
Roof construction including supporting beams and joists		0	0	N/A	N/A	N/A	N/A
Roof Ceiling Assembly		0	0	N/A	N/A	N/A	N/A
Columns Supporting Roof		0	0	N/A	N/A	N/A	N/A
Shaft Enclosures - Exit		0	0	N/A	N/A	N/A	N/A
Shaft Enclosures - Other		0	0	N/A	N/A	N/A	N/A
Corridor Separation		0	0	N/A	N/A	N/A	N/A
Occupancy / Fire Barrier Separation		0	0	N/A	N/A	N/A	N/A
Party/Fire Wall Separation		0	0	N/A	N/A	N/A	N/A
Smoke Barrier Separation		0	0	N/A	N/A	N/A	N/A
Smoke Partition		0	0	N/A	N/A	N/A	N/A
OWNER/Dwelling Unit/ Sleeping Unit Separation		0	0	N/A	N/A	N/A	N/A
Incidental Use Separation		0	0	N/A	N/A	N/A	N/A

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

EXTERIOR WALL	FIRE SEPARATION DISTANCE (feet) FROM PROPERTY LINE	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
North	-	-	-	-
South	-	-	-	-
East	-	-	-	-
West	-	-	-	-

LIFE SAFETY SYSTEM REQUIREMENTS

- Emergency Lighting: ☑ Yes ☐ No
- Exit Signs: ☑ Yes ☐ No
- Fire Alarm: ☐ Yes ☑ No
- Smoke Detection Systems: ☐ Yes ☑ No Partial ☐ Duct Detectors
- Carbon Monoxide Detection: ☐ Yes ☑ No
- Life Safety Systems Generator: ☐ Yes ☑ No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: LS

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
- ☐ Assumed and real property line locations (if not on the site plan)
- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
- ☑ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- ☑ Occupant loads for each area
- ☑ Exit access travel distances (1017)
- ☐ Common path of travel distances [1006.2.1 & 1006.3.2(1)]
- ☐ Dead end lengths (1020.4)
- ☑ Clear exit widths for each exit door
- ☑ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- ☑ Actual occupant load for each exit door
- ☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- ☐ Location of doors with panic hardware (1010.1.10)
- ☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- ☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
- ☐ Location of doors equipped with hold-open devices
- ☐ Location of emergency escape windows (1030)
- ☐ The square footage of each fire area (903)
- ☐ The square footage of each smoke compartment for Occupancy Classification I-II (407.5)
- ☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
NONE REQUIRED							

ACCESSIBLE PARKING (SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES: REQUIRED	TOTAL # OF PARKING SPACES: PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 96" ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
SEE CIVIL DRAWING						
TOTAL						

BUILDING CODE SUMMARY (continued)

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

USE	WATER CLOSETS MALE	WATER CLOSETS FEMALE	WATER CLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE	SERVICE SINK
REPAIR GARAGE (S-1) : REQUIRE			1	0			1		0	0	1
REPAIR GARAGE (S-1) : PROVIDED			2	0			2		0	0	1

SPECIAL APPROVALS:

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ (If checked, the remainder of this section is not applicable.)
Exempt Building: ☐ Provide code or statutory reference:
Climate Zone: ☐ 3A ☑ 4A ☐ 5A HARNETT COUNTY
Method of Compliance:
Energy Code: ☐ Performance ☑ Prescriptive
ASHRAE 90.1: ☐ Performance ☐ Prescriptive — Value of total assembly: -
Other: ☐ Performance (specify source)

THERMAL ENVELOPE: (Prescriptive method only)

Roof/ceiling Assembly #1 (each assembly)
- Description of assembly: METAL BUILDING ROOF PANEL WITH SIMPLE SAVER ROOF INSULATION
- U-Value of total assembly: 0.035 (0.037 MAXIMUM)
- R-Value of insulation: R-11 + R-19 LS (R-28.6 WITH THERMAL BLOCK)
- Skylights in each assembly: NONE
- U-Value of skylight: NONE
- Total square footage of skylights in each assembly: NONE

Exterior Walls Assembly #1 (each assembly)
- Description of assembly: METAL BUILDING WALL PANEL WITH SIMPLE SAVER WALL INSULATION
- U-Value of total assembly: 0.059 (0.06 MAXIMUM)
- R-Value of insulation: R-30
- Openings (windows or doors with glazing)
  - U-Value of assembly: 0.31 (0.32 MAX)
  - Solar heat gain coefficient: 0.23 (0.25 MAX)
  - Projection factor: -
  - Door R-Values: 2.7

Walls below grade (each assembly)
- Description of assembly: N/A
- U-Value of total assembly: -
- R-Value of insulation: -

Floors over unconditioned space (each assembly)
- Description of assembly: N/A
- U-Value of total assembly: -
- R-Value of insulation: -

Floors slab on grade
- Description of assembly: 6" CONCRETE SLAB
- U-Value of total assembly: -
- R-Value of insulation: -
- Horizontal/vertical requirement: -
- slab heated: -

MECHANICAL SUMMARY (SEE DRAWING SHEET M1)

ELECTRICAL SUMMARY (SEE DRAWING SHEET E1)

HARNETT COUNTY
BUILDING CODE SUMMARY
for:

TIRADO TRUCK REPAIR GARAGE

US 421 SOUTH, HARNETT COUNTY, NC

JENKINS CONSULTING ENGINEERS, PA

10 JULY 2025

DESIGNED / CHECKED BY: KJD
DRAWN BY: BT
PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

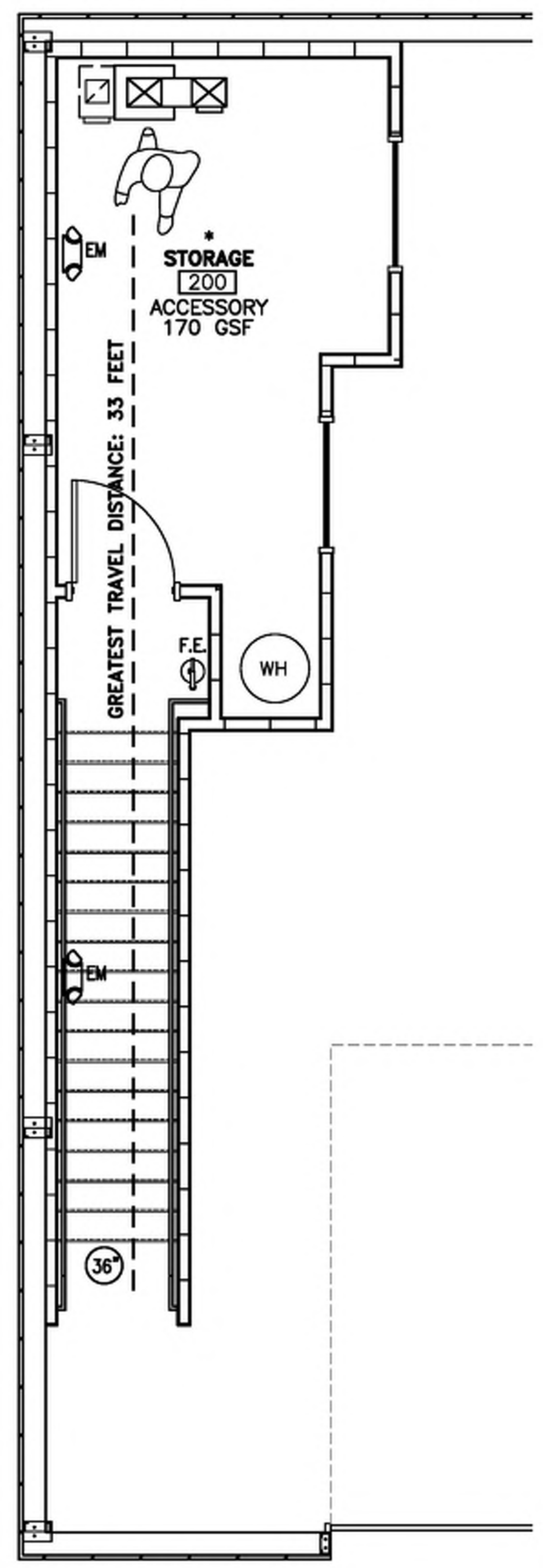
OWNER/TENANT: LUIS TIRADO 3577 OLD US 421 LILLINGTON, NC 27546
CONTRACTOR/BUILDER: TBD

REVISIONS:

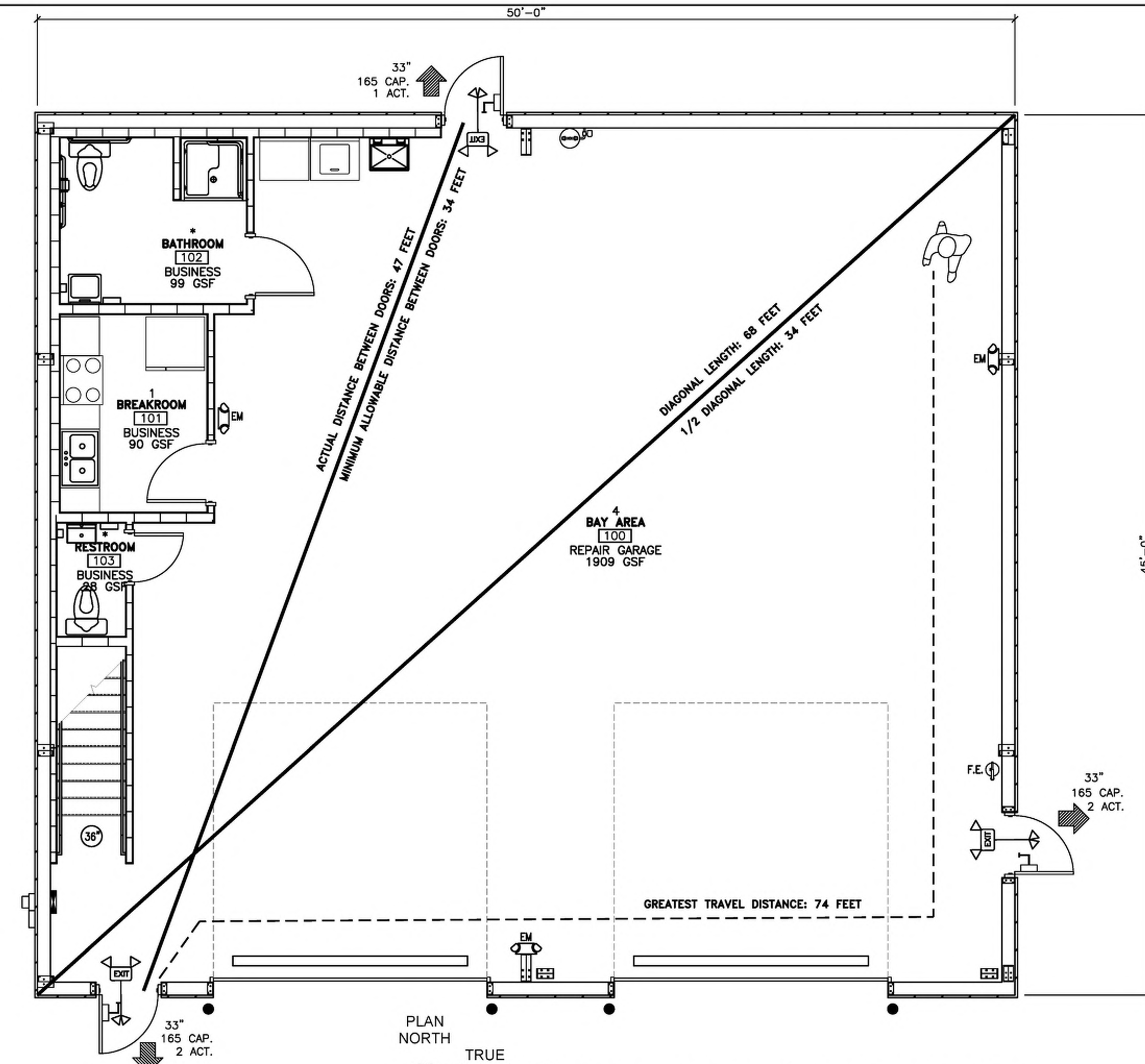
REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP — US 421 SOUTH, HARNETT COUNTY, NC
SHEET: BUILDING CODE SUMMARY

BCS



2 LS **LIFE SAFETY / EGRESS PLANS**
MEZZANINE
SCALE: 1/4" = 1'-0"



1 LS **LIFE SAFETY / EGRESS PLANS**
FIRST FLOOR
SCALE: 1/4" = 1'-0"

OCCUPANCY CLASSIFICATION per TABLE 1004.5

SPACE NUMBER	CURRENT SPACE USE	FUNCTION OF SPACE	OCCUPANT LOAD FACTOR	ROOM AREA (GROSS SF)	CALCULATED EGRESS OCCUPANCY TOTAL	ACTUAL BUILDING OCCUPANT TOTAL
100	BAY AREA	REPAIR GARAGE	500 GROSS	1909	4	4
101	BREAKROOM	BUSINESS	100 GROSS	90	1	1
102	BATHROOM	BUSINESS	100 GROSS	99	*	*
103	RESTROOM	BUSINESS	100 GROSS	28	*	*
200	STORAGE	ACCESSORY	300 GROSS	170	*	*
TOTAL OCCUPANT COUNT FOR BUILDING & EGRESS CAPACITY					5	

THE EGRESS CAPACITY SHALL BE BASED UPON OCCUPANT LOAD OF 5 PERSONS
(*) DENOTES OCCUPANT NUMBER ACCOUNTED FOR IN OCCUPANT TOTAL

LEGEND

SYMBOL	DESCRIPTION
F.E.	ABC FIRE EXTINGUISHER SUGGESTED LOCATION
	GREATEST TRAVEL DISTANCE
33"	EXIT WIDTH, 36" – 3 = 33" CLEAR WIDTH.
165 CAP. 22 ACT.	EXIT CAPACITY (NUMBER OF PERSONS) ACTUAL OCCUPANT LOAD FOR EXIT DOOR
EXIT	EXIT SIGN
EM	EMERGENCY LIGHT
36"	AISLE WIDTH WHERE SHOWN
EXIT	EXIT SIGN WITH EMERGENCY LIGHTING
CL	CL– DOOR CLOSER

ROOM LABEL	DESCRIPTION
4	OCCUPANT TOTAL
BAY AREA	ROOM NAME
100	ROOM NUMBER
REPAIR GARAGE	FUNCTION TYPE
100 SF	SPACE AREA

TIRADO TRUCK SHOP

STORAGE (S–1): REPAIR GARAGE

GROSS SQUARE FOOTAGE OF BUILDING 2,250 SQ. FT.
TYPE OF CONSTRUCTION: V–B
BUILDING IS TO BE USED AS A REPAIR GARAGE WITH OFFICE SPACES.
THIS BUILDING IS NOT PROTECTED BY FIRE SPRINKLERS
OCCUPANT LOAD FOR CALCULATING EGRESS CAPACITY:
SPACE OCCUPANCY BY FUNCTION OF SPACE
SEE TABLE ON THIS SHEET FOR INDIVIDUAL SPACE TOTALS
TOTAL OCCUPANT LOAD BY AREAS = 5 PERSONS

GREATEST TRAVEL DISTANCE SHOWN: 74 FEET. (PER 1017)
MAXIMUM ALLOWABLE TRAVEL DISTANCE: 200 FEET (PER TABLE 1017.2)
THE COMMON PATH OF TRAVEL IS LESS THAN 75 FEET. (PER 1006.2.1)
THERE ARE NO DEAD END CORRIDORS OVER 20 FEET. (PER 1020.4)

BUILDING EXIT WIDTH CALCULATIONS:
5 PERSON * 0.2"/OCCUPANT = 1" REQUIRED, 99" TOTAL PROVIDED (PER 1005.1)
MIN. NO. OF EXIT REQUIRED: TWO (2) (PER TABLES 1006.2.1 AND 1006.3.2(2))
NUMBER OF EXITS PROVIDED: THREE (3) ACCESSIBLE

EGRESS DOORS DO NOT REQUIRE PANIC HARDWARE. (PER 1010.1.10)
DOORS DO NOT HAVE DELAYED EGRESS LOCKS (PER 1010.1.9.7)
DOORS DO NOT HAVE ELECTROMAGNETIC EGRESS LOCKS (PER 1010.1.9.9)
DOORS DO NOT HAVE HOLD OPEN DEVICES.
THERE ARE NO EMERGENCY ESCAPE WINDOWS (PER 1030)
NO. OF FIRE EXTINGUISHERS PROVIDED:
PROVIDE TWO (2) FIRE EXTINGUISHER AT THIS BUILDING
FIRE EXTINGUISHER FOR CLASS A FIRE HAZARDS REQUIRE NO GREATER THAN 75 FT OF MAXIMUM TRAVEL DISTANCE IN LOW, ORDINARY AND EXTRA HAZARD OCCUPANCY.

JENKINS CONSULTING ENGINEERS, PA
NORTH CAROLINA PROFESSIONAL SEAL 42009 ENGINEER KELLY J. DODSON
10 JULY 2025

DESIGNED / CHECKED BY: KJD
DRAWN BY: BT
PROJECT #: 2025-04-02.2
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FINAL DRAWING [✓] FOR CONSTRUCTION

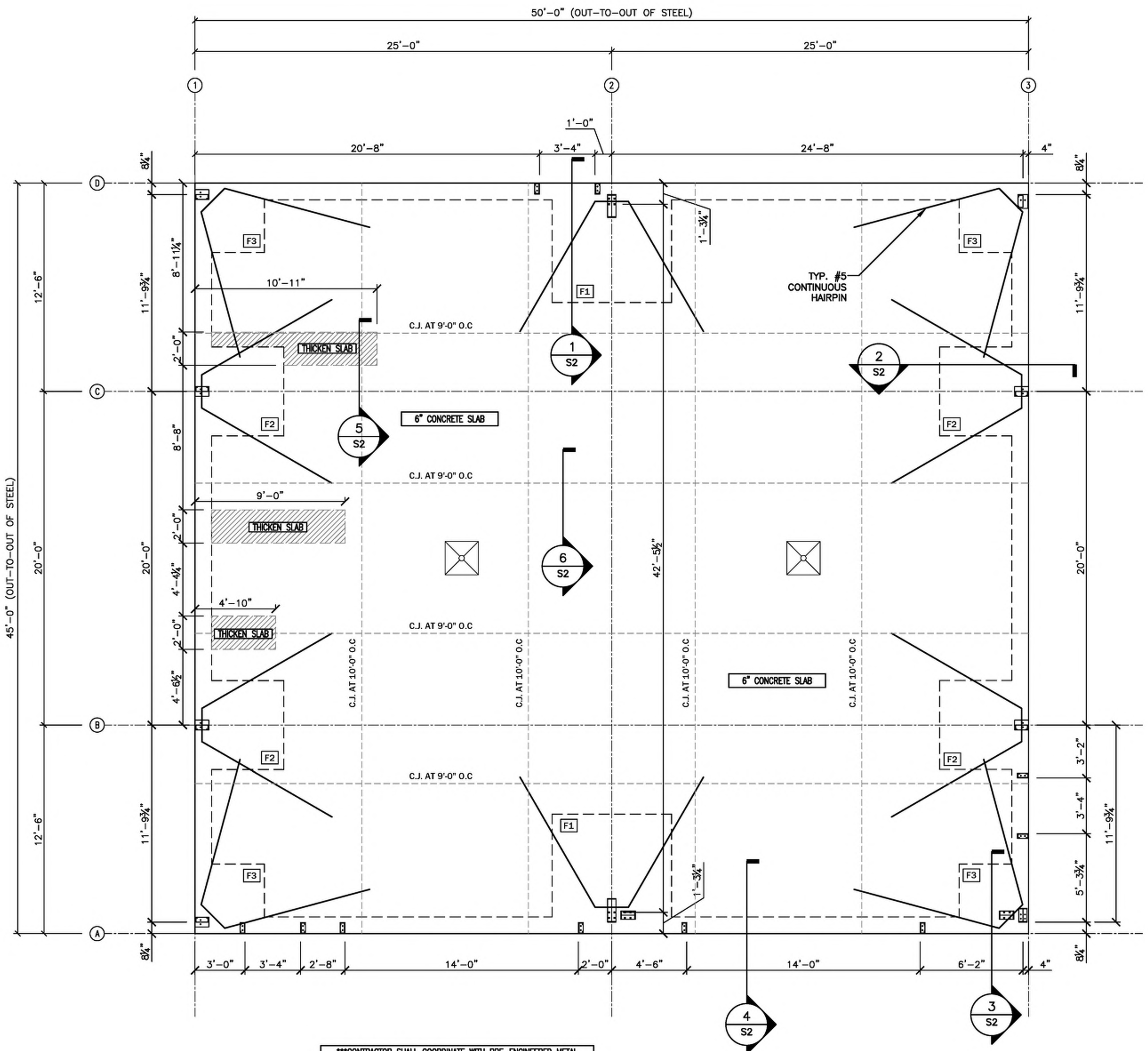
OWNER/TENANT: LUIS TIRADO
3577 OLD US 421 LILLINGTON, NC 27546
CONTRACTOR/BUILDER: TBD
TBD

REVISIONS:

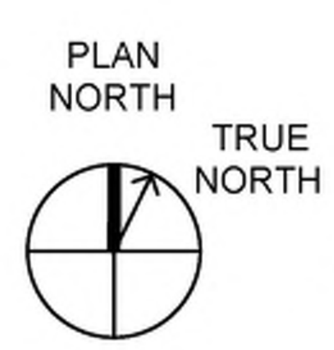
REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: **TIRADO TRUCK SHOP**
US 421 SOUTH, HARNETT COUNTY, NC
SHEET: BUILDING LIFE SAFETY – EGRESS PLAN

LS



***CONTRACTOR SHALL COORDINATE WITH PRE-ENGINEERED METAL BUILDING (PEMB) SHOP DRAWING BY OTHER FOR MORE DETAILS.



1 / S1 FOUNDATION PLAN

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

FOOTING SCHEDULE				
TAG	LENGTH	WIDTH	DEPTH	REINFORCING
F1	7'-2"	7'-2"	2'-0"	(8) #6 ALONG LENGTH T & B (8) #6 ALONG WIDTH T & B
F2	5'-4"	5'-4"	2'-0"	(6) #6 ALONG LENGTH T & B (6) #6 ALONG WIDTH T & B
F3	4'-2"	4'-2"	2'-0"	(5) #6 ALONG LENGTH T & B (5) #6 ALONG WIDTH T & B

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910.822.1724

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 42009 KELLY J. DODSON
10 JULY 2025

DESIGNED / CHECKED BY: KJD
DRAWN BY: BT
PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

FINAL DRAWING [ ] FOR REVIEW PURPOSES ONLY
PRELIMINARY [ ] FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING [✓] FOR CONSTRUCTION

OWNER/TENANT: LUIS TIRADO
3577 OLD US 421 LILLINGTON, NC 27546

CONTRACTOR/BUILDER: TBD

REVISIONS:

REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: FOUNDATION PLAN

S1

SCALE: 1/8" = 1'-0"
SCALE: 3/16" = 1'-0"
SCALE: 1/4" = 1'-0"
SCALE: 1/2" = 1'-0"
SCALE: 3/4" = 1'-0"
SCALE: 1" = 1'-0"
SCALE: 1-1/2" = 1'-0"

PRE-ENGINEERED BUILDING:

1. MATERIALS

MATERIALS	ASTM DESIGNATION	
STRUCTURAL STEEL PLATE	A529 OR A572 OR A570 OR A607	GRADE 50
COLD FORMED LIGHT GA. SHAPES	A570 OR A607	GRADE 55
BRACE RODS	A572	GRADE 65,U.O.N.
HOT ROLLED MILL SHAPES	A36 OR A572	Fy=36KSI OR GRADE 50
ROOF AND WALL SHEETS	A653 OR A792	GRADE 50
BOLTS	A307 AND A325	A307,U.O.N.

2. A325 BOLT TIGHTENING REQUIREMENTS:

ALL HIGH STRENGTH BOLTS ARE A325-N UNLESS SPECIFICALLY NOTED OTHERHISE. STRUCTURAL BOLTS SHALL BE TIGHTENED TO THE TURN-OF-THE-NUT METHOD IN ACCORDANCE WITH THE NINTH EDITION, AISC USPECIFICATION FOR STRUCTURAL UINTS USIN6 ASTM A325 OR A4QO BOLTS". PER SECTION &D.I, A325 BOLTS MAY BE INSTALLED HILTHOUT HASHERS INHEN TIGHTENED BY THE TURN-OF-THE-NUT METHOD. ALL HIGH STRENGTH BOLTS, EXCEPT AS NOTED OTHERHISE, ARE SUBJECT TO DIRECT TENSION AND MAY REQUIRE INSPECTION AS DEFINED BY THE APPLICABLE BUILDING CODE OR STANDARD. IT IS THE RESPONSIBILITY OF THE ERECTOR TO ASSURE PROPER TIGHTNESS.

3. THE BUILDING REACTION DATA REPORTS THE LOADS WHICH THIS BUILDING PLACES ON THE FOUNDATION.

4. ANCHOR BOLTS SHALL BE ACCURATELY SET TO A TOLERANCE OF ±1/8" IN BOTH ELEVATION AND LOCATION.

5. COLUMN BASE PLATES ARE DESIGNED NOT TO EXCEED A BEARING PRESSURE OF 1125 POUNDS PER SQUARE INCH.

6. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE DESIGN ENGINEER AT JENKINS CONSULTING ENGINEERS. THIS REVIEW IS FOR DESIGN CONTENT ONLY AND DOES NOT REMOVE RESPONSIBILITY FOR THE FABRICATOR OR THE ERECTOR TO PROVIDE MATERIAL IN ACCORDANCE WITH THESE PLANS.

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Snow (Is) 1.00; Seismic (Ie) 1.00

Live Loads: Roof 20 psf; Mezzanine 100 psf; Floor N/A psf

Ground Snow Load: 15 psf

Wind Load: Ultimate Wind Speed 118 mph (ASCE-7); Exposure Category C

SEISMIC DESIGN CATEGORY: ☐ A ☑ B ☐ C ☐ D

Provide the following Seismic Design Parameters:

- Risk Category (Table 1604.5) ☐ I ☑ II ☐ III ☐ IV
- Spectral Response Acceleration SS 18.5 %g S1 8.7 %g
- Site Classification (ASCE 7) ☐ A ☐ B ☐ C ☑ D ☐ E ☐ F
- Data Source: ☐ Field Test ☑ Presumptive ☐ Historical Data
- Basic structural system ☐ Bearing Wall ☐ Dual w/Special Moment Frame ☑ Building Frame ☐ Dual w/Intermediate R/C or Special Steel ☐ Moment Frame ☐ Inverted Pendulum
- Analysis Procedure: ☑ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
- Architectural, Mechanical, Components anchored? ☐ Yes ☑ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☑

SOIL BEARING CAPACITIES:

- Field Test (provide copy of test report) N/A psf
- Presumptive Bearing capacity 2,000 psf
- Pile size, type, and capacity N/A

REINFORCING STEEL

ALL REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO A.S.T.M. A615, GRADE 60.
ALL REINFORCING STEEL SHALL BE MANUFACTURED, DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. 315R, 318R AND A.C.I. SP 66.
WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A185, IN AS LONG A LENGTH AS IS PRACTICAL. WELDED WIRE FABRIC SHALL BE LAPPED AT LEAST ONE GRID WIDTH PLUS 2".
REINFORCEMENT SHALL BE BENT COLD AND SHALL NOT BE WELDED.

SPLICES:
REINFORCEMENT IN CONCRETE AND MASONRY SHALL HAVE LAP LENGTHS AS FOLLOWS, UNLESS OTHERWISE SPECIFIED ON DRAWINGS:

BAR SIZE:	IN CONCRETE:	IN MASONRY:
#3	1'-6"	2'-0"
#4	2'-0"	2'-6"
#5	2'-6"	3'-0"

PLACEMENT:
REINFORCEMENT SHALL BE ACCURATELY PLACED AND SUPPORTED BY CONCRETE, METAL, OR OTHER APPROVED CHAIRS, SPACERS OR TIES, AND SECURED AGAINST DISPLACEMENT DURING CONCRETE OR GROUT PLACEMENT.

EXCEPT WHERE OTHERWISE NOTED, REINFORCEMENT SHALL HAVE CONCRETE COVER AS FOLLOWS:

CONCRETE DEPOSITED AGAINST EARTH	3"
FORMED CONCRETE AGAINST EARTH	2"
EXTERIOR FACES OF WALLS	1"
TO TOP OF SLABS-ON-GRADE	3/4"

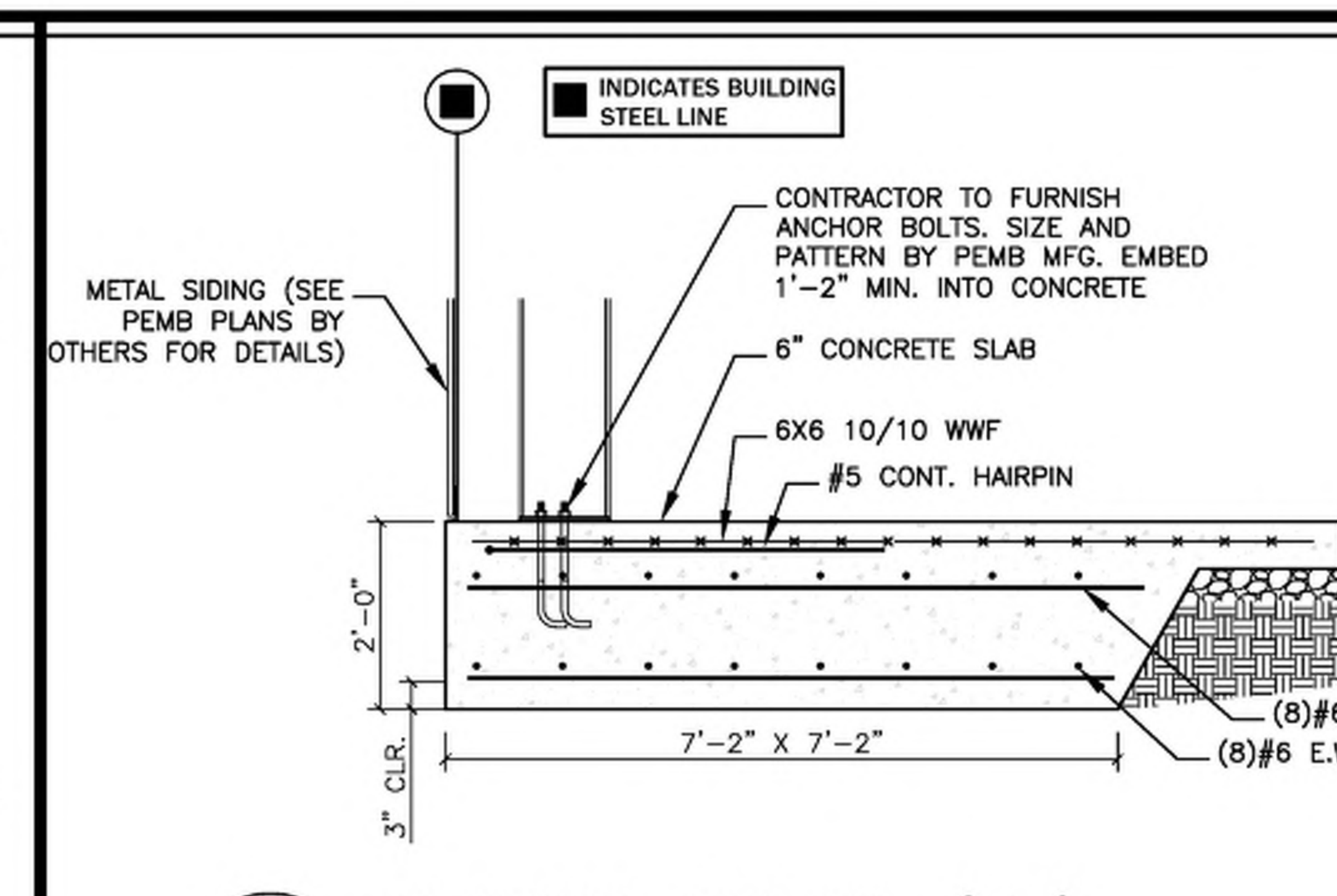
ALL SCALES, LOOSE RUST, GREASE OR DIRT SHALL BE REMOVED FROM THE REINFORCING BEFORE IT IS PLACED.
PROVIDE #5 "HAIRPIN" X 20' LONG AT EXTERIOR COLUMN LINES.
ANCHOR BOLTS SHALL BE (A-3077) HIGH STRENGTH.

SOIL TREATMENT:
ADMINISTRATION AS ACCEPTABLE

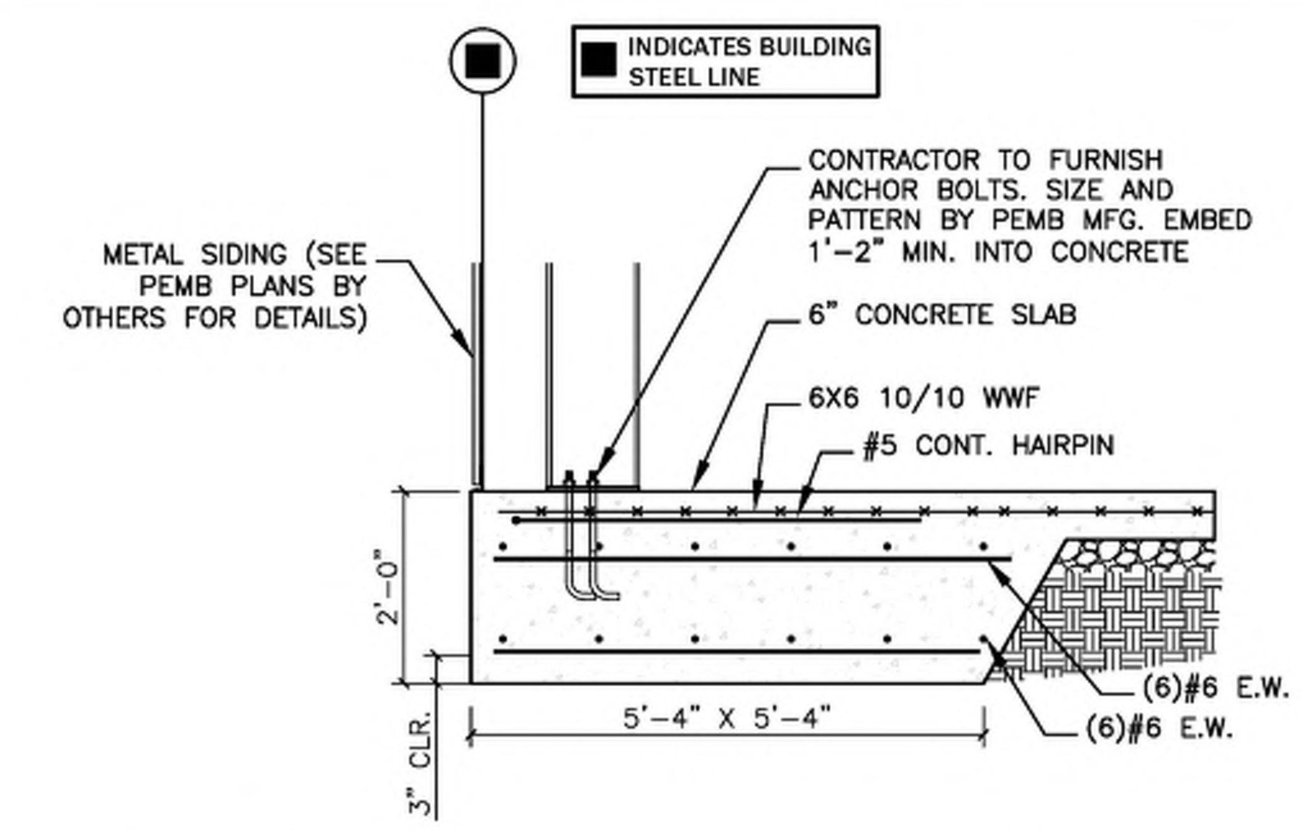
GENERAL CONDITIONS
THE GENERAL CONTRACTOR SHALL MAKE ADEQUATE SANITARY PROVISIONS.
THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SAFETY AND COMPLIANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT AS IT MAY REGARD ANY PHASE OF THE WORK ON THIS PROJECT.

SOIL COMPACTION AND TESTING
THE GENERAL CONTRACTOR SHALL OBTAIN THE SERVICES OF A TESTING LABORATORY, SUCH AS S&ME OR LAW ENGINEERING FOR THE PURPOSE OF DETERMINING THE SUITABILITY OF THE SUBSURFACE CONDITIONS AND THE BEARING CAPACITIES OF ALL AREAS BELOW CONCRETE (2000psf ASSUMED)..
THE SOIL AND BEARING REPORT SHALL BE SUBMITTED PRIOR TO EXCAVATING, WHERE POSSIBLE, BUT PRIOR TO PLACEMENT OF ANY REINFORCING AND CONCRETE.

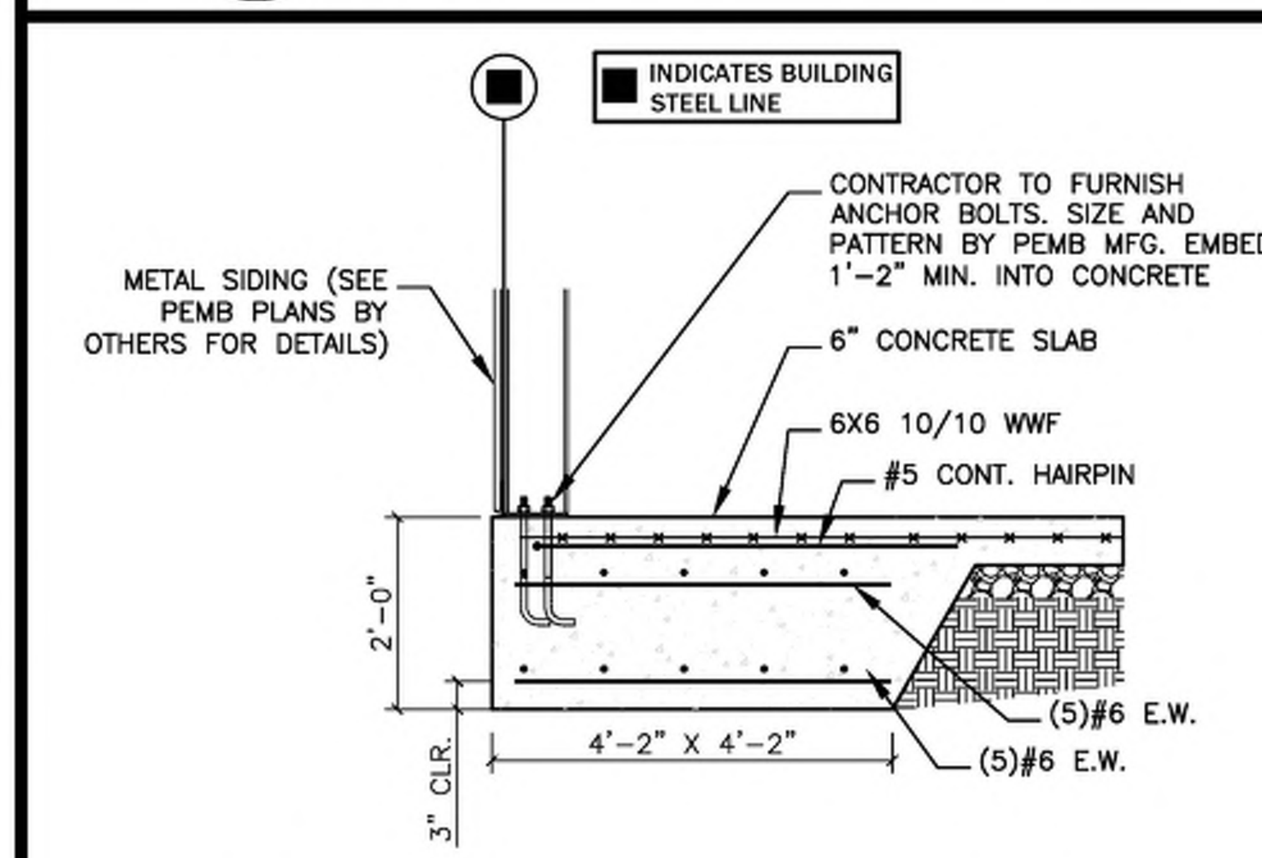
CONCRETE WORK
1. ALL CONCRETE FOR THE PROJECT SHALL BE "READY MIX" AND SHALL COMPLY WITH ASTM C-94. ALL SECTIONS OF THE CONCRETE WORK SHALL COMPLY WITH ALL A.S.T.M. AND A.C.I. REQUIREMENTS.
2. FORM WORK – ALL FORMS TO BE CAREFULLY BUILT AND SECURED IN PLACE IN SUCH A MANNER AS TO HAVE SUFFICIENT STRENGTH TO CARRY THE DEAD WEIGHT OF THE CONSTRUCTION AS A LIQUID, WITHOUT DEFLECTION OR VIBRATION. FORMS TO BE BUILT TIGHT, TRUE TO POSITION AND DIRECTION, THOROUGHLY BRACED, WIRED AND SPIKED OR OTHERWISE FASTENED TOGETHER.
3. CONCRETE – MINIMUM OF 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM OF FIVE SACKS OF CEMENT PER CUBIC YARD OF CONCRETE, MAXIMUM OF 4" SLUMP. 3 POUNDS OF FORTA-FERRO FIBER PER CUBIC YARD MAY BE SUBSTITUTED FOR 6X6 10/10 WWF.
4. FINISHING – IN ACCORDANCE WITH THE LATEST A.C.I. CODE, PLUMB, LEVEL, TRUE IN LINE, FREE OF HONEYCOMB. BUILDING SLAB SHALL HAVE A HARD STEEL TROWEL FINISH. WALKS SHALL HAVE BROOMED FINISH AND EXPANSION JOINTS AT APPROXIMATELY 50'-0" O.C. AND DUMMY JOINTS AS SHOWN ON THE SITE PLAN.
5. REMOVAL OF FORMS – FORMS SHALL BE CAREFULLY REMOVED SO AS NOT TO IMPAIR THE FACE OF THE CONCRETE. IMMEDIATELY AFTER THE FORMS ARE REMOVED ALL DAMAGE OF IMPERFECT WORK SHALL BE PATCHED IN A NEAT AND WORKMANLIKE MANNER OR IF BADLY DAMAGED, IN THE OPINION OF THE OWNER, THE WORK SHALL BE REBUILT. THE MINIMUM TIME BEFORE ANY FORMS CAN BE REMOVED IS SEVEN (7) DAYS FOR SUCH MEMBERS AS ARE SUBJECT TO BENDING STRESSES, SUCH AS SLABS.
6. CURING – USE MEMBRANE CURING METHOD. USE MFG. RATE, SPRAY IMMEDIATELY FOLLOWING FINISHING. PROTECT FROM FREEZING WEATHER, CURE A TOTAL OF 28 DAYS USING A.C.I. METHODS.



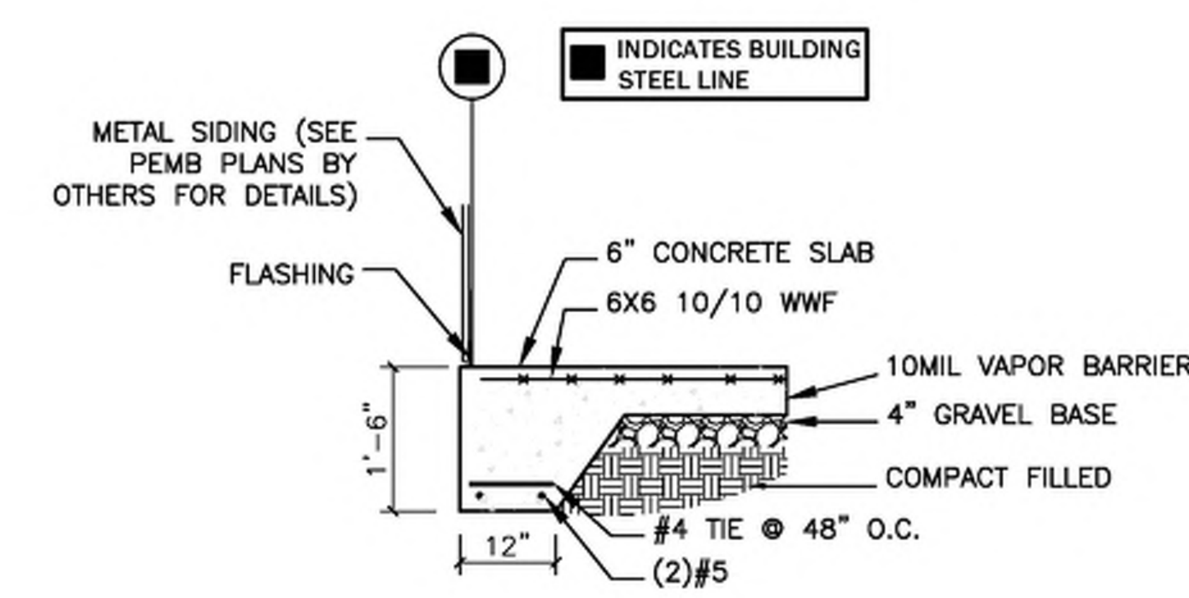
1 / S2 FOOTING DETAIL (F1)
N.T.S.



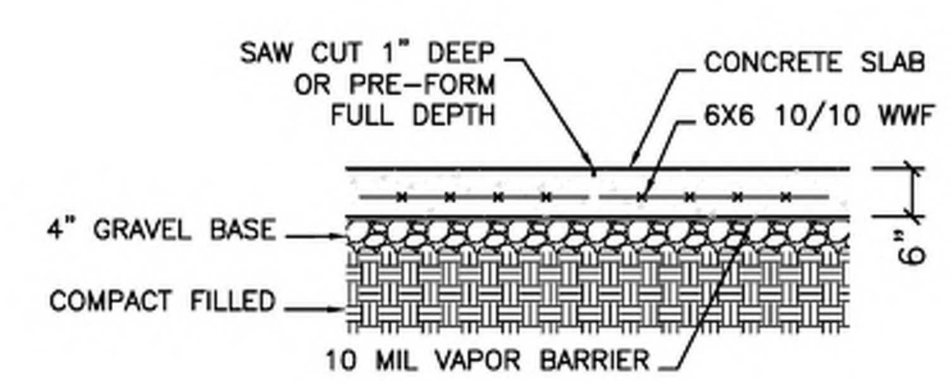
2 / S2 FOOTING DETAIL (F2)
N.T.S.



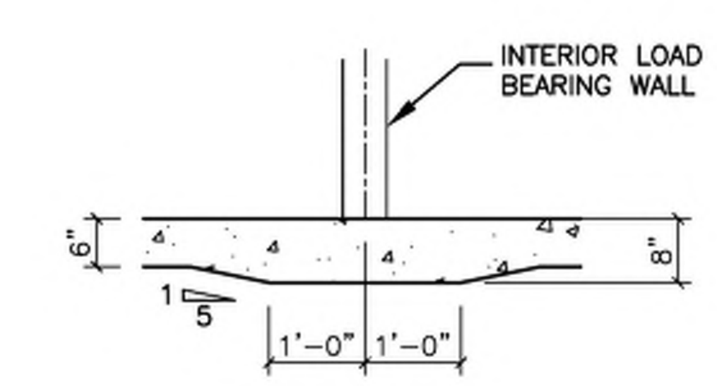
3 / S2 FOOTING DETAIL (F3)
N.T.S.



4 / S2 FOOTING DETAIL (PERIMETER)
N.T.S.



5 / S2 CONTROL JOINT DETAIL
N.T.S.



6 / S2 THICKENED SLAB DETAIL
N.T.S.

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CONTRACTOR/BUILDER: TBD
TBD

REVISIONS:

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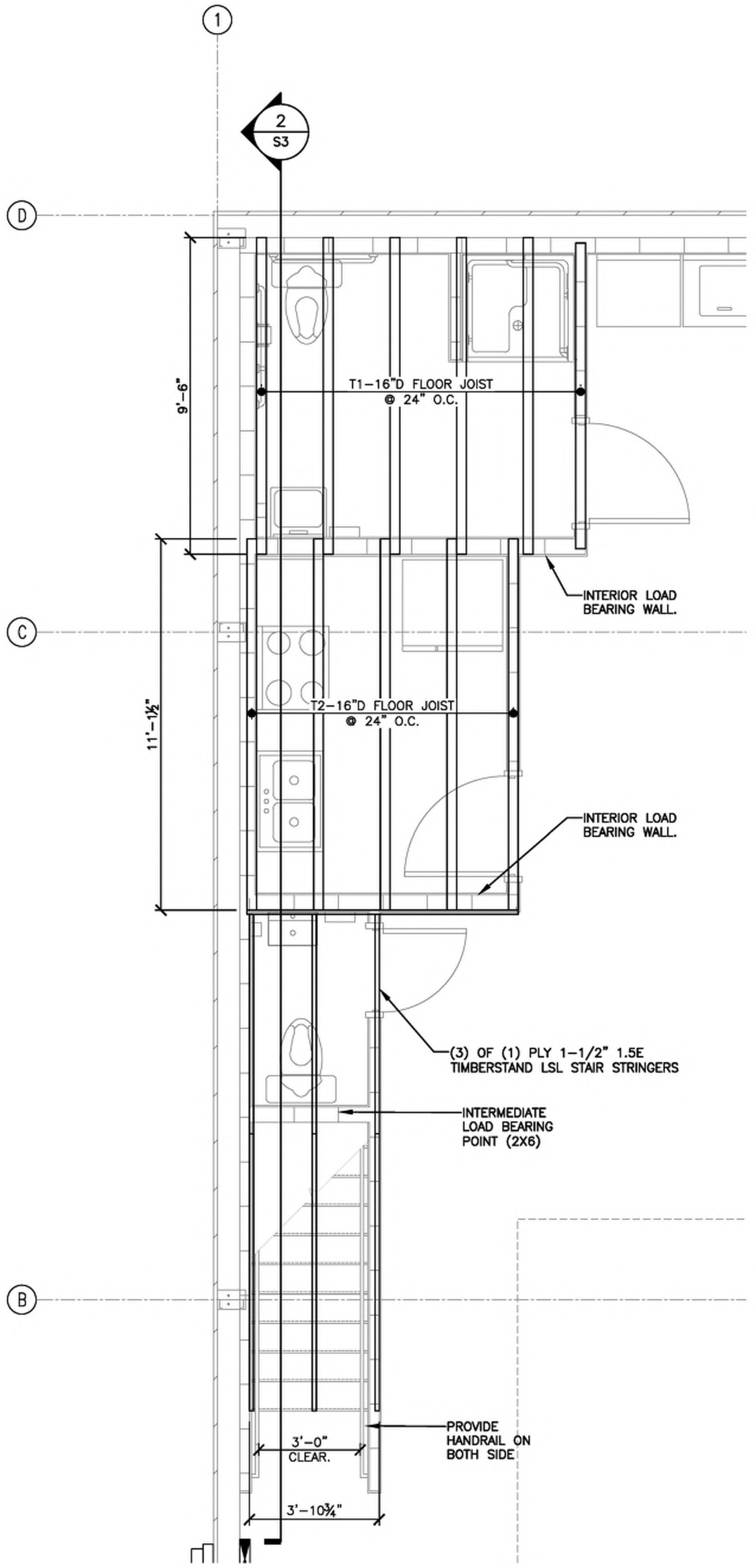
PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: NOTES & FOOTING DETAILS

S2

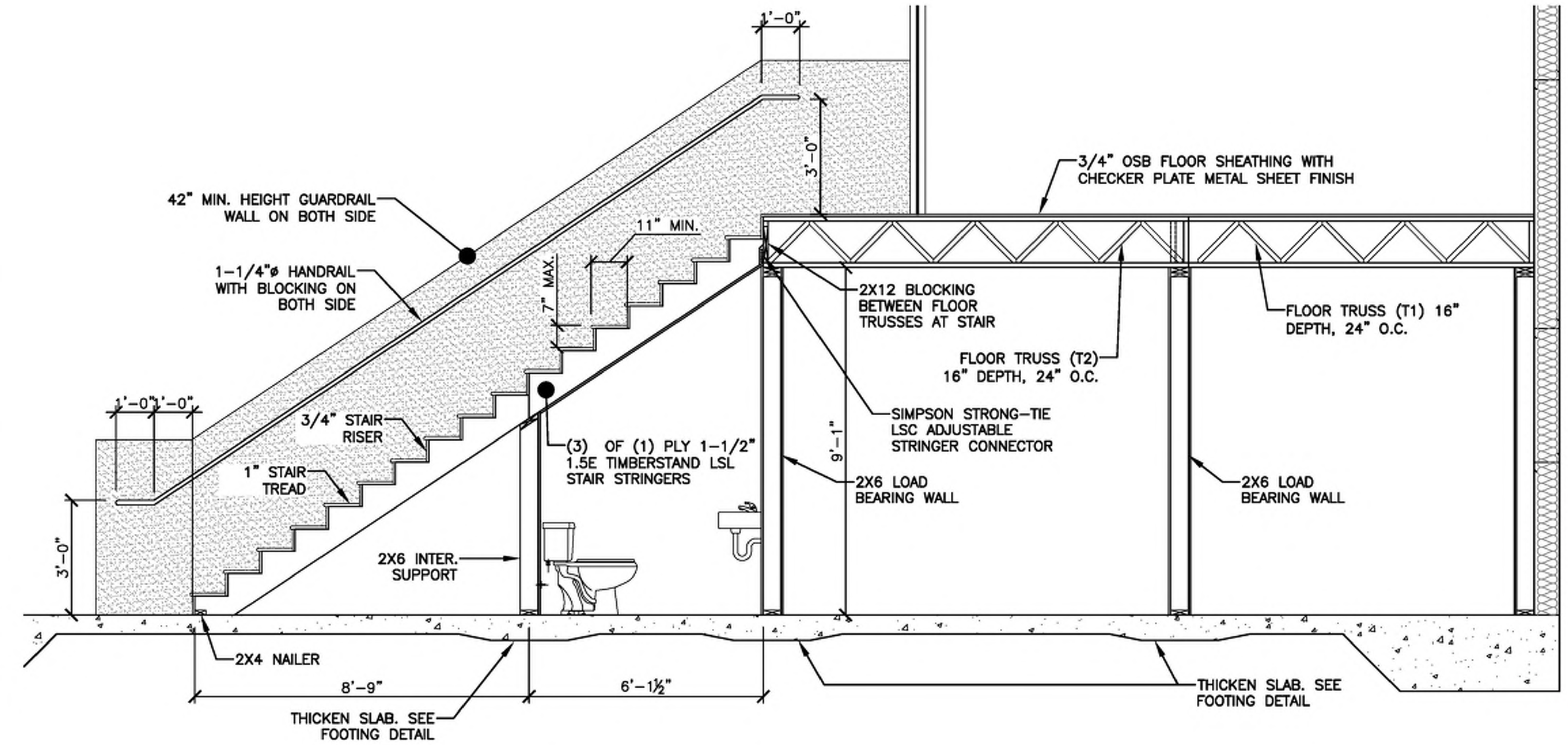


1 / S3 FLOOR FRAMING PLAN

SCALE: 3/8" = 1'-0"

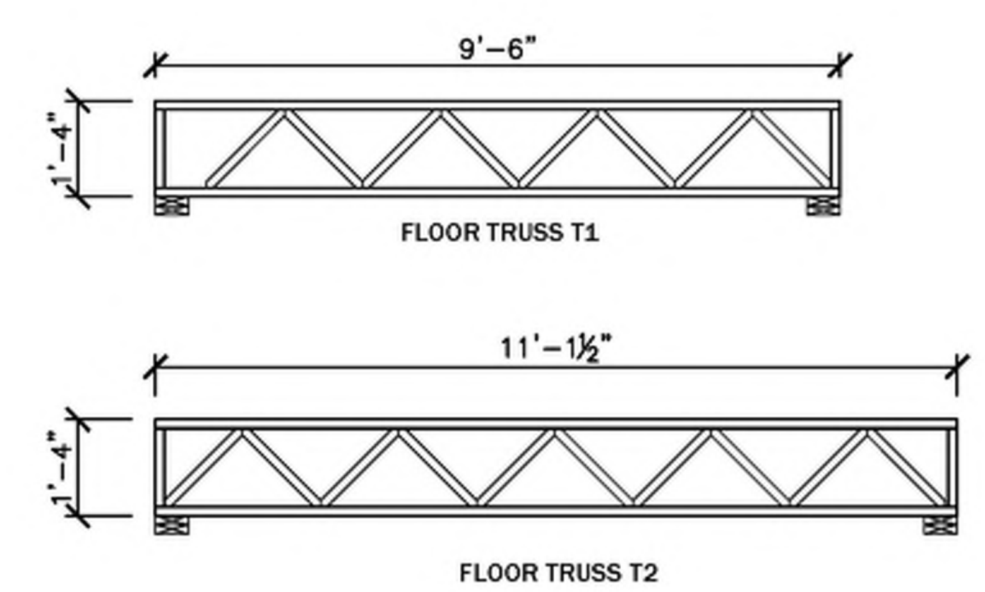
TRUSS DESIGN LOADS

DEAD LOADS		
	BOTTOM CHORD	10 psf
	TOP CHORD	10 psf
TOTAL		20 psf
LIVE LOADS		
	BOTTOM CHORD	0 psf
	TOP CHORD	125 psf
TOTAL		125 psf



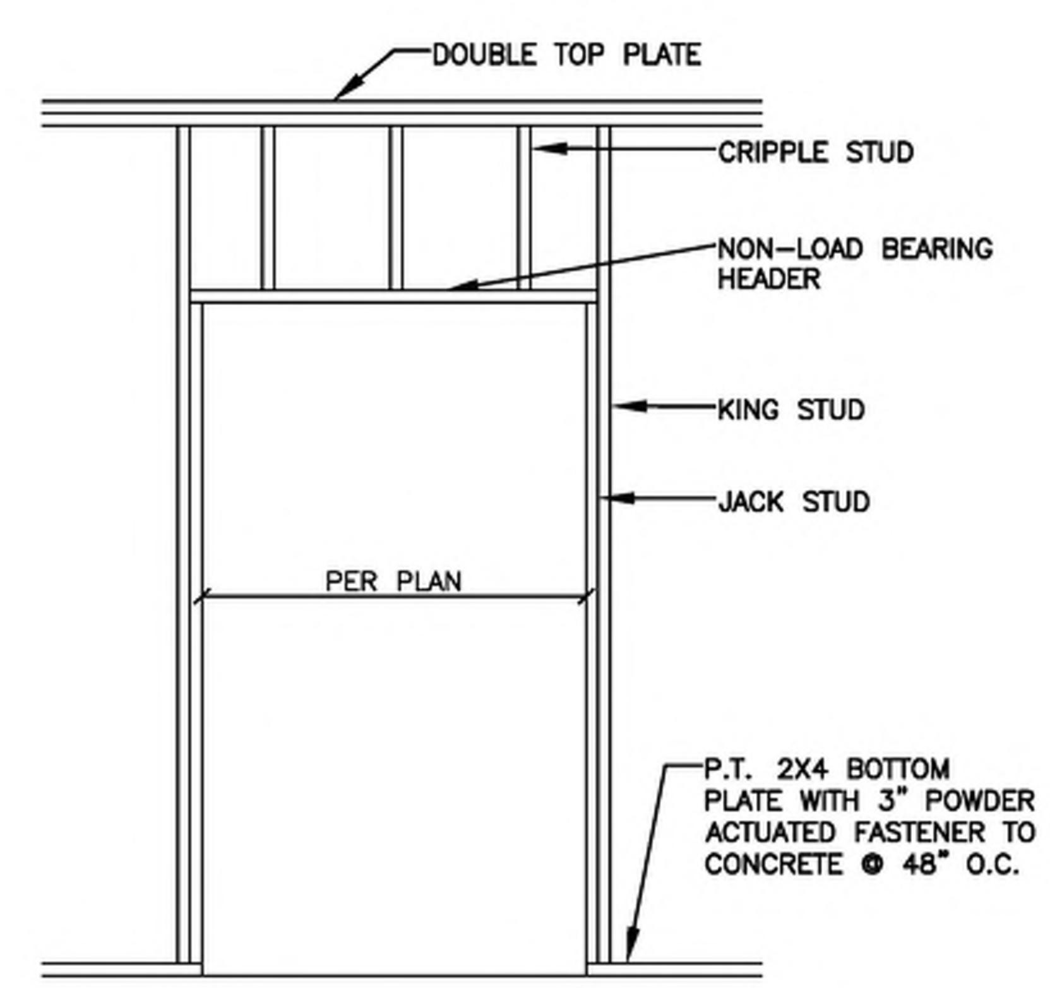
2 / S3 FRAMING SECTION

SCALE: 3/8" = 1'-0"



3 / S3 TRUSS PROFILES

***NOTE: THESE TRUSS PROFILES ARE ONLY DIAGRAMMATIC, ONLY FOR BASIS OF DESIGN. CONTRACTOR SHALL COORDINATE WITH TRUSS MANUFACTURER SHOP DRAWING FOR SPECIFIC TRUSS PROFILE AND MANUFACTURER'S REQUIREMENT.



4 / S3 HEADER FRAMING
NON-LOAD BEARING

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

SCALE: 1-1/2" = 1'-0" | SCALE: 1" = 1'-0" | SCALE: 3/4" = 1'-0" | SCALE: 1/2" = 1'-0" | SCALE: 1/4" = 1'-0" | SCALE: 3/16" = 1'-0" | SCALE: 1/8" = 1'-0"

Drawing File: H:\2025\Tirado Truck-Harnett Co PID 2025-04-02.2\DWG\Tirado PEMB-20 June 2025.dwg
Plotted by: ...
Plotted Date: Jul 10, 2025 - 10:56am

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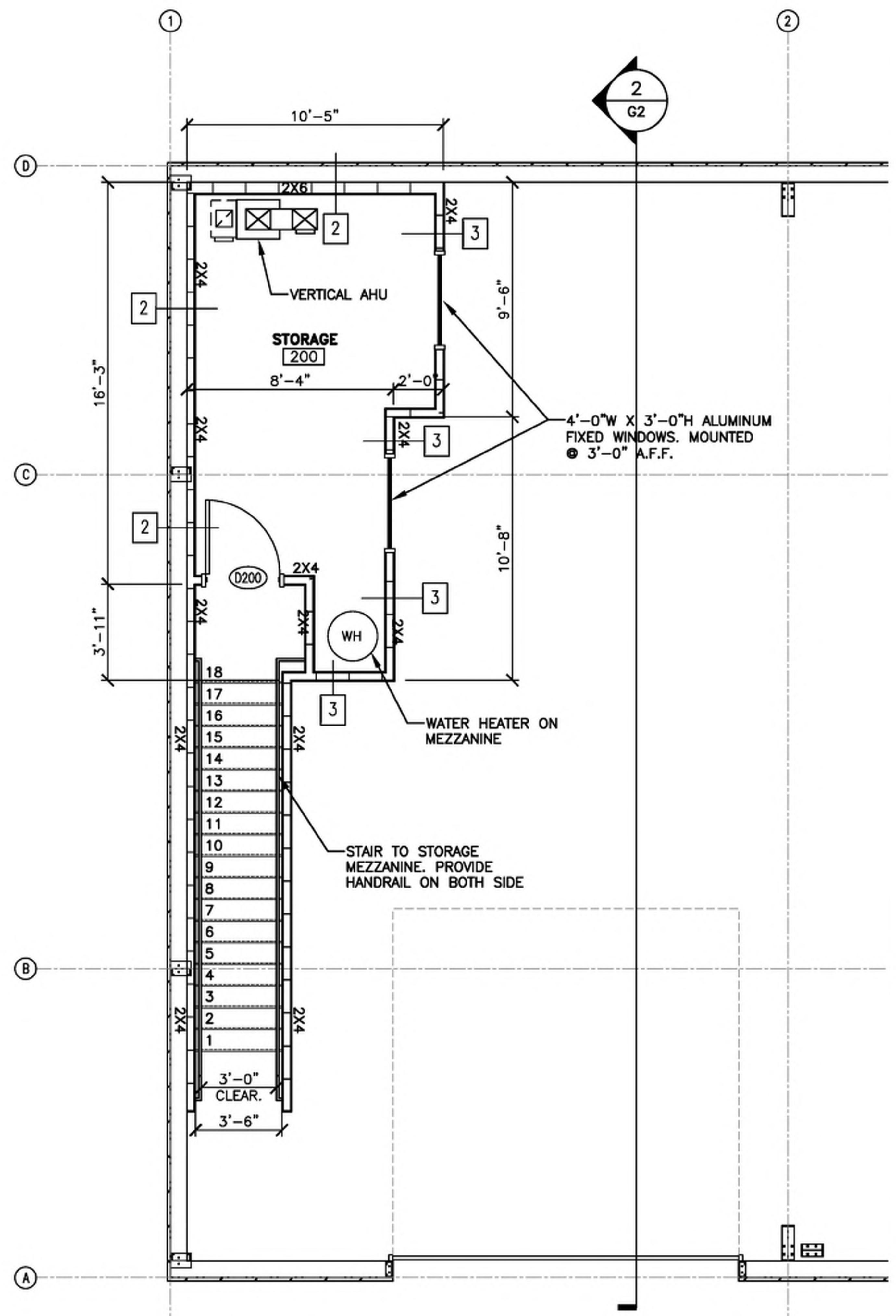
PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

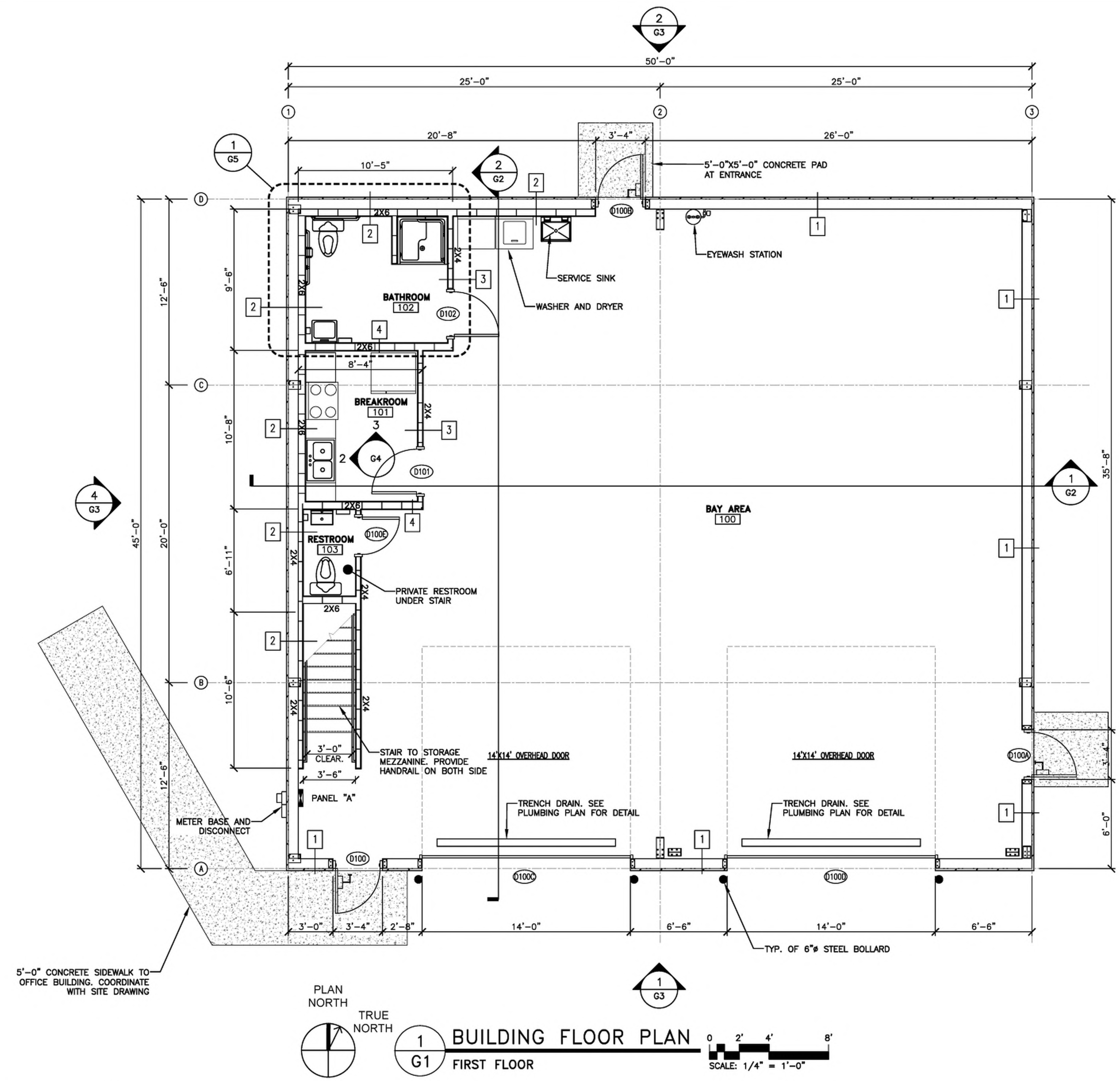
SHEET: FRAMING PLAN AND DETAILS

S3



2 / G1 BUILDING FLOOR PLAN
MEZZANINE

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



1 / G1 BUILDING FLOOR PLAN
FIRST FLOOR

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

FLOOR PLAN LEGEND

SYMBOL	DESCRIPTION
STAFF 103A	ROOM NAME ROOM NUMBER
(wall tag 1)	INTERIOR/ EXTERIOR WITH WALL TAG SEE SHEET G2 FOR WALL DETAILS.
(door D106)	DOOR – DOOR NUMBER SEE DOOR SCHEDULE FOR DETAILS
(panel symbol)	ELECTRICAL PANEL

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 42009 KELLY J. DODSON — 10 JULY 2025

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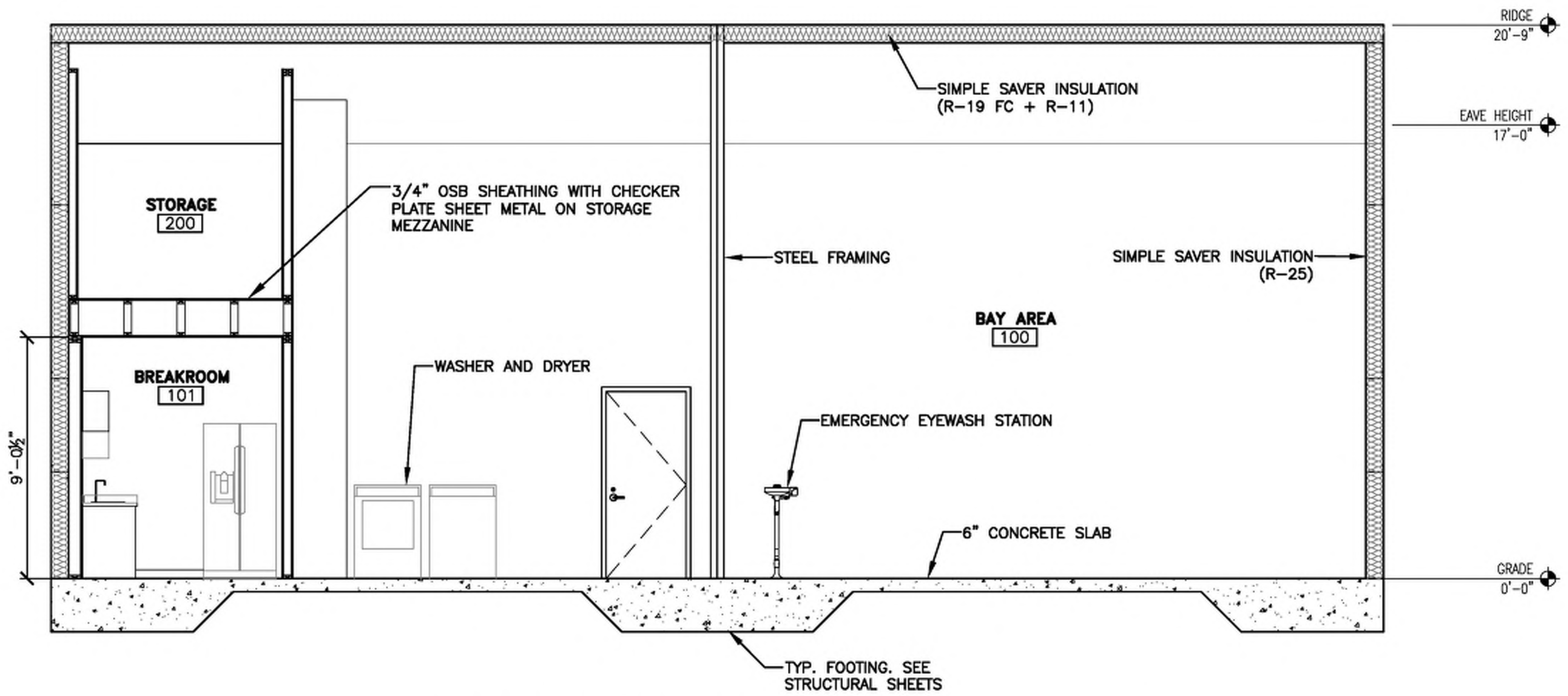
US 421 SOUTH, HARNETT COUNTY, NC

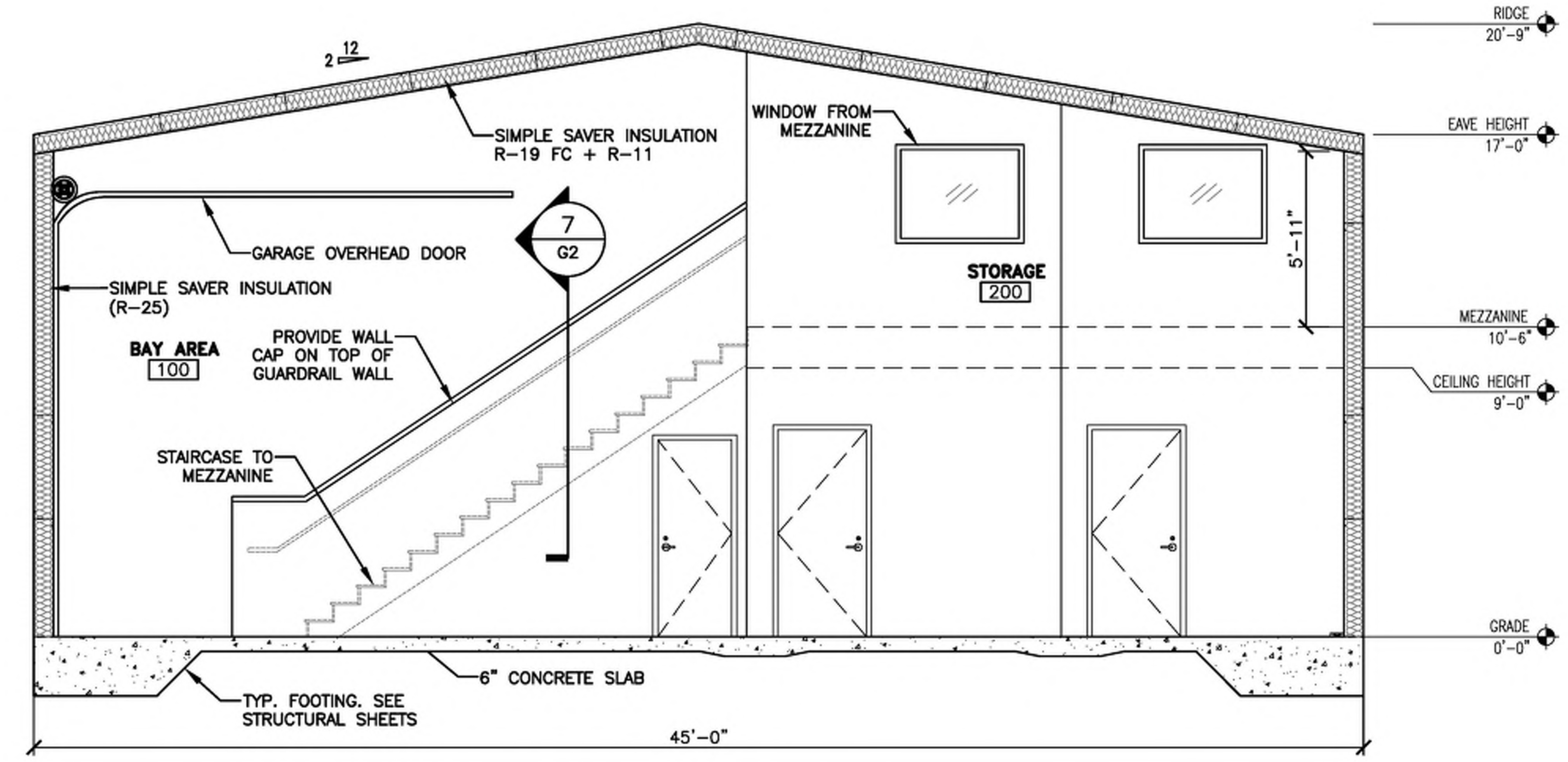
SHEET: BUILDING FLOOR PLANS

G1



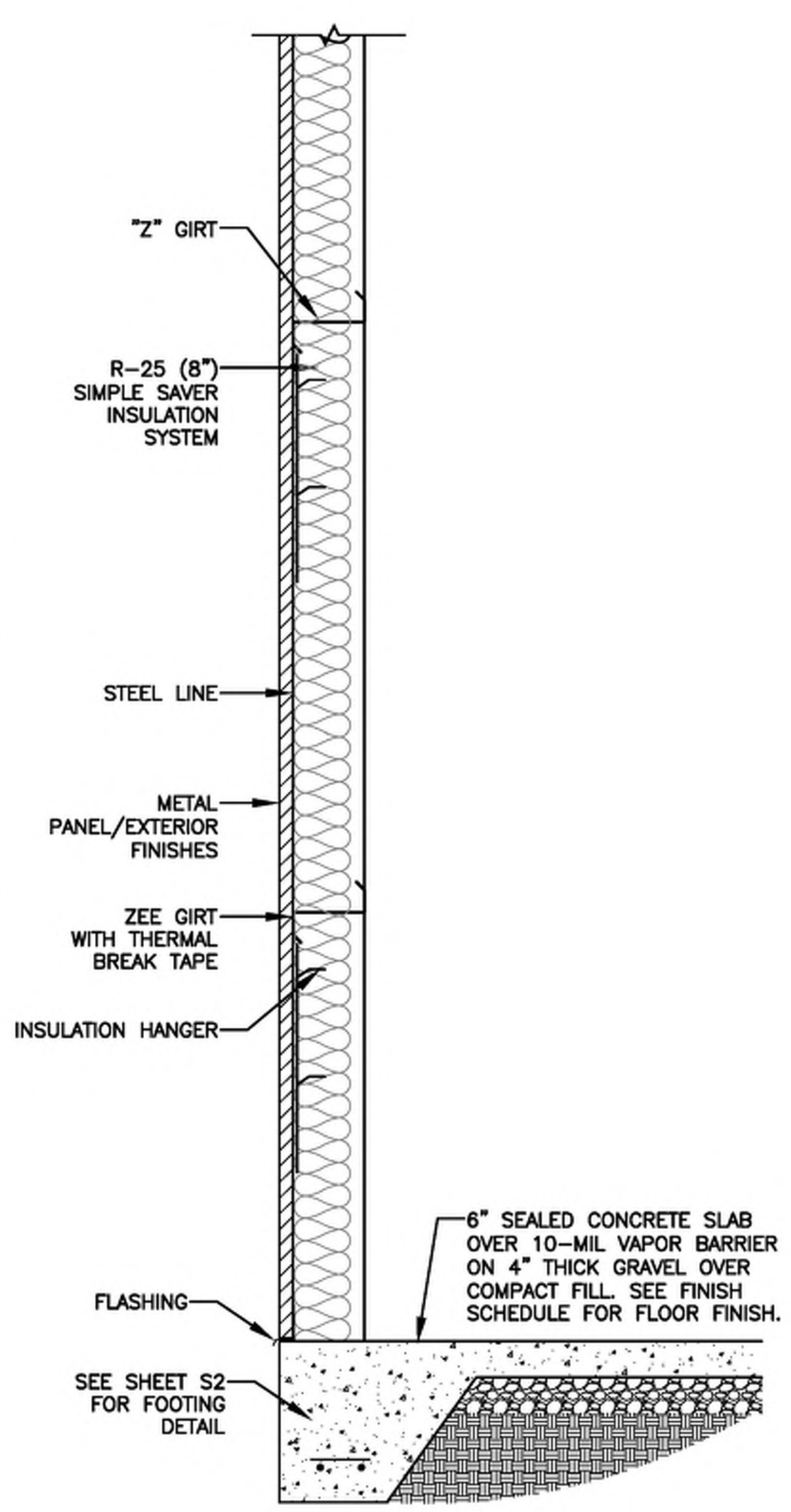
1 / G2 BUILDING SECTION

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



2 / G2 BUILDING SECTION

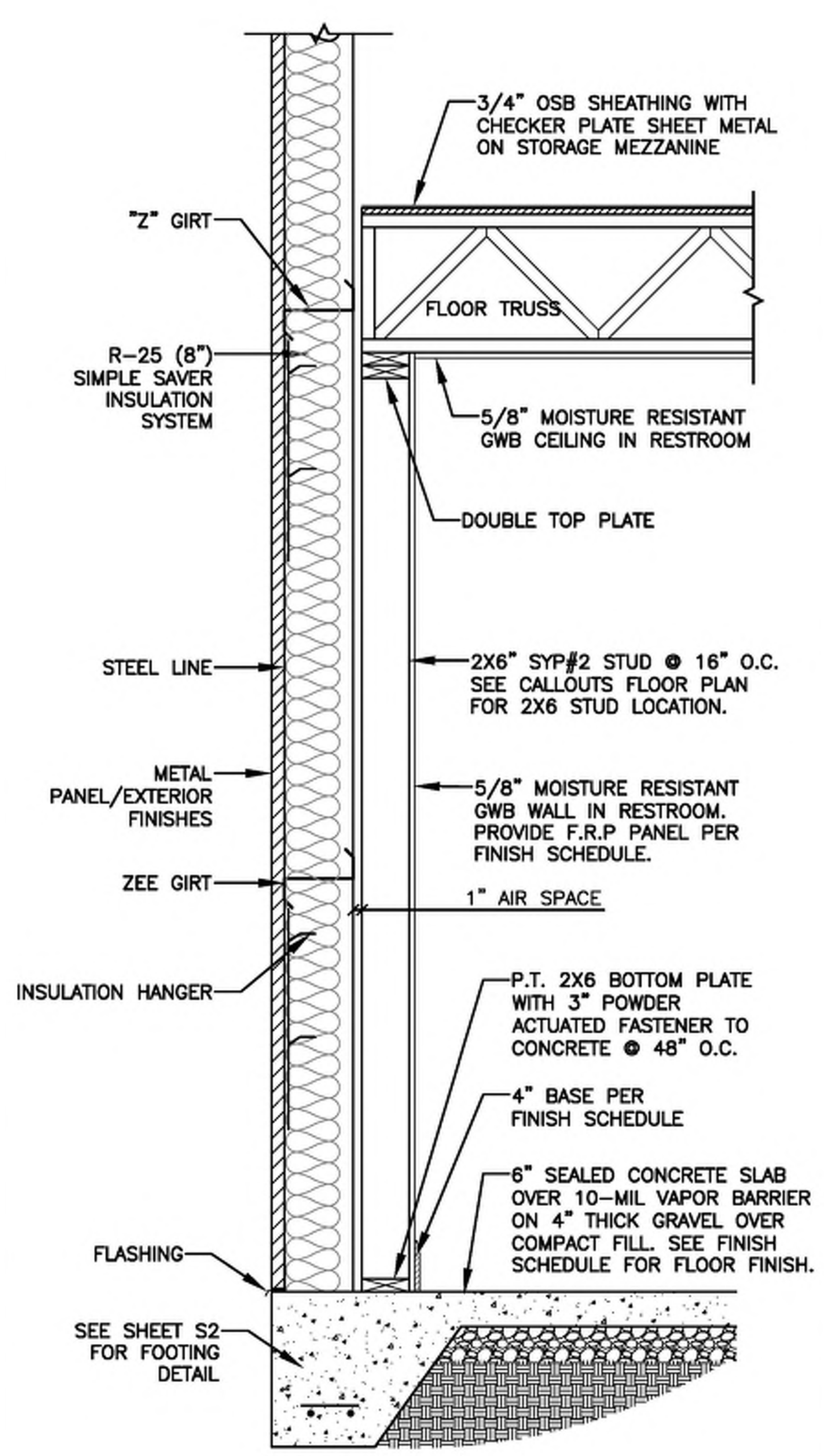
SCALE: 1/4" = 1'-0"



3 / G2 WALL SECTION

TYPE 1

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

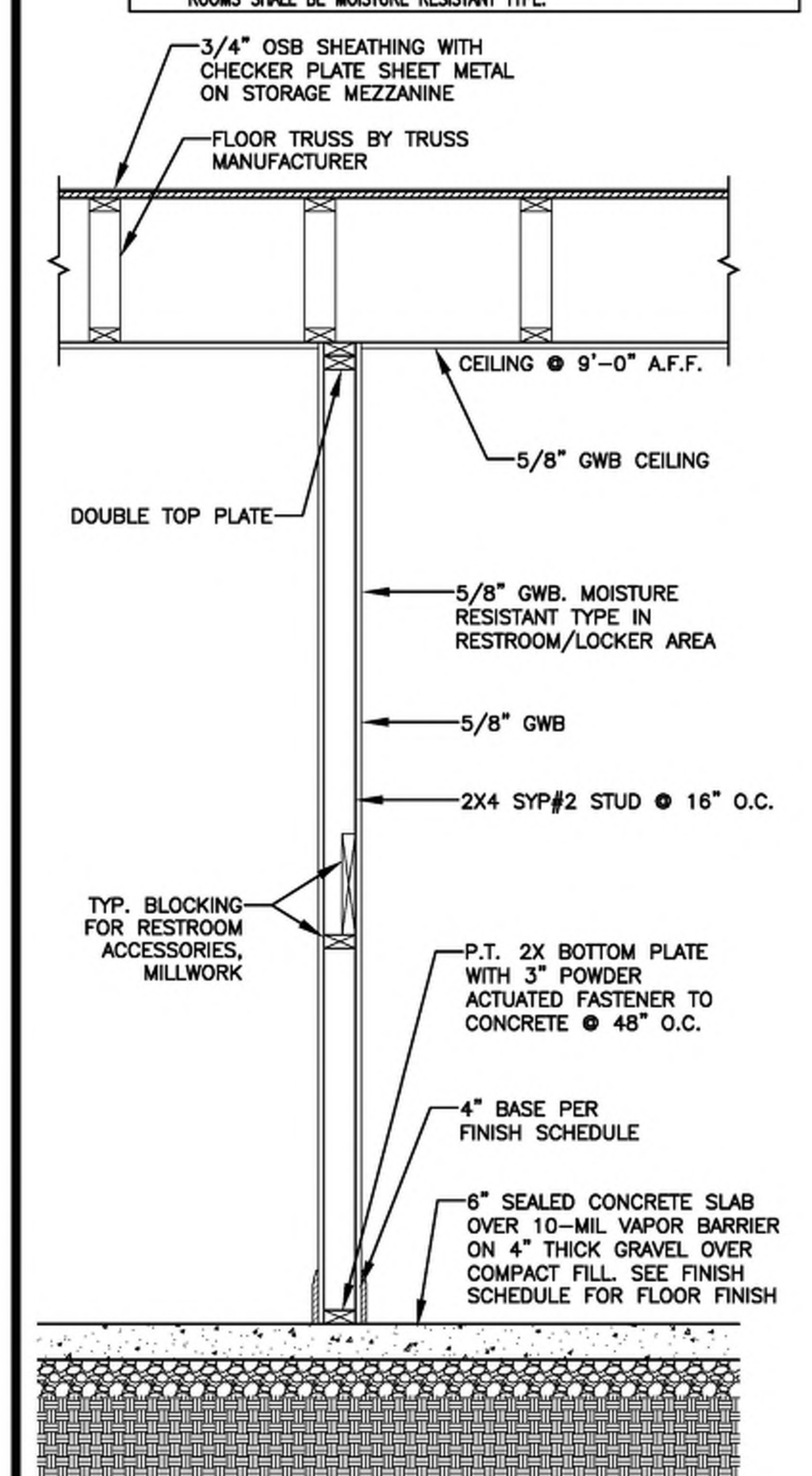


4 / G2 WALL SECTION

TYPE 2

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

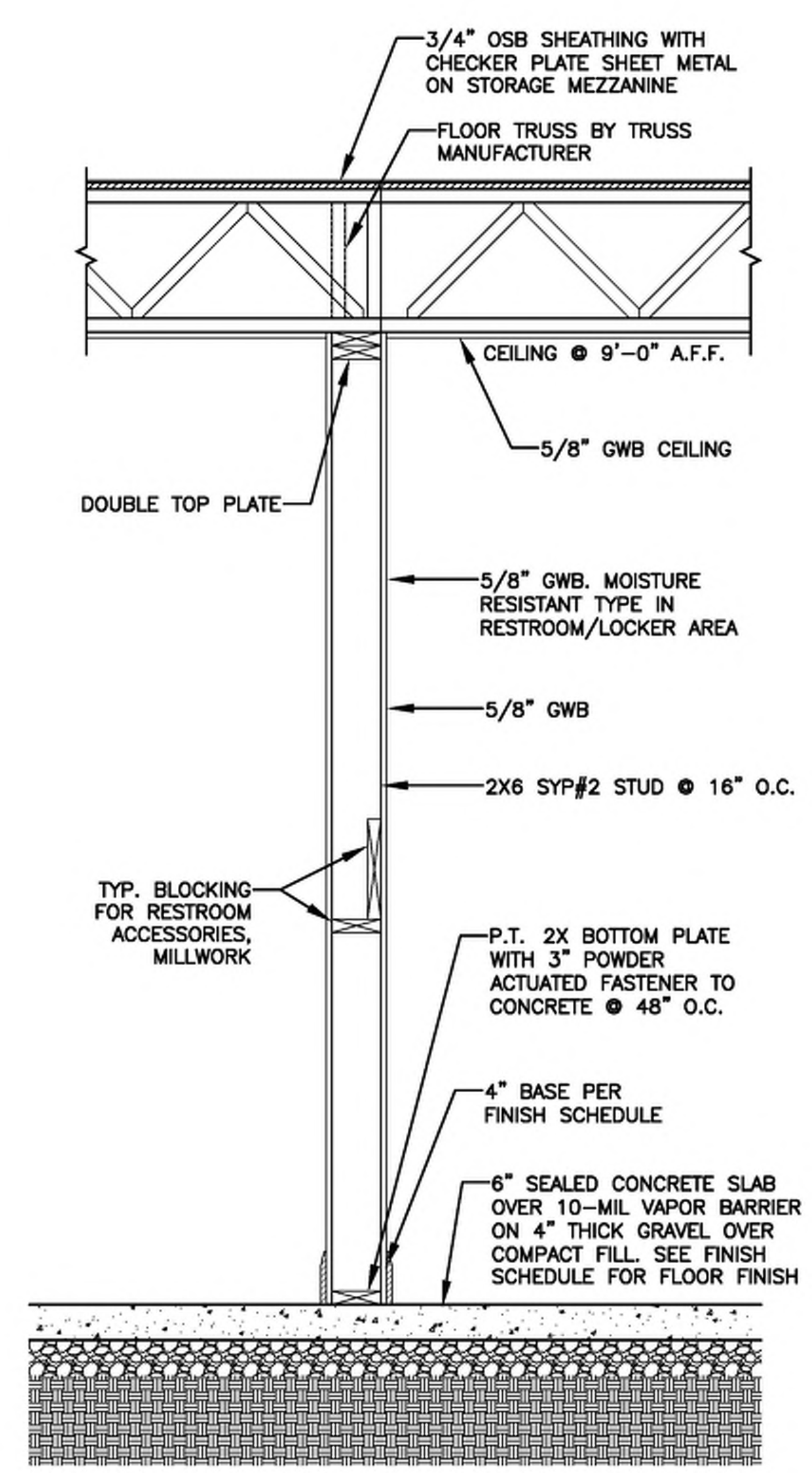
***NOTE:
1. SYP: SOUTHERN YELLOW PINE.
2. BOTTOM PLATES SHALL BE PRESSURE TREATED LUMBER SECURED TO FLOOR WITH 3" POWDER ACTUATED FASTENERS.
3. GYPSUM WALL BOARD FOR EXTERIOR WALLS, WALLS IN RESTROOMS, LOCKER ROOMS SHALL BE MOISTURE RESISTANT TYPE.



5 / G2 WALL SECTION

TYPE 3

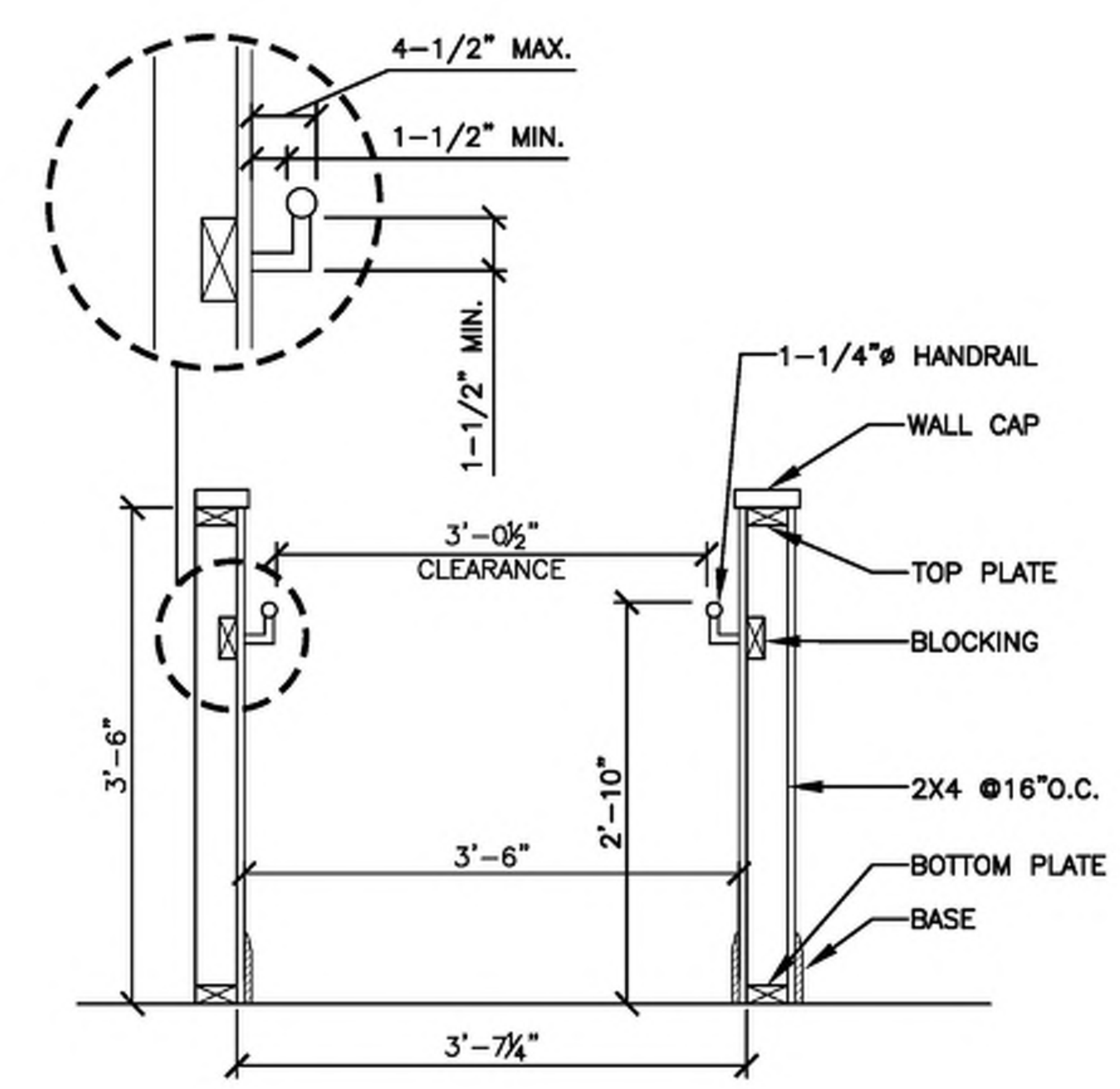
SCALE: 3/4" = 1'-0"



6 / G2 WALL SECTION

TYPE 4

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



7 / G2 STAIR GUARDRAIL WALL

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

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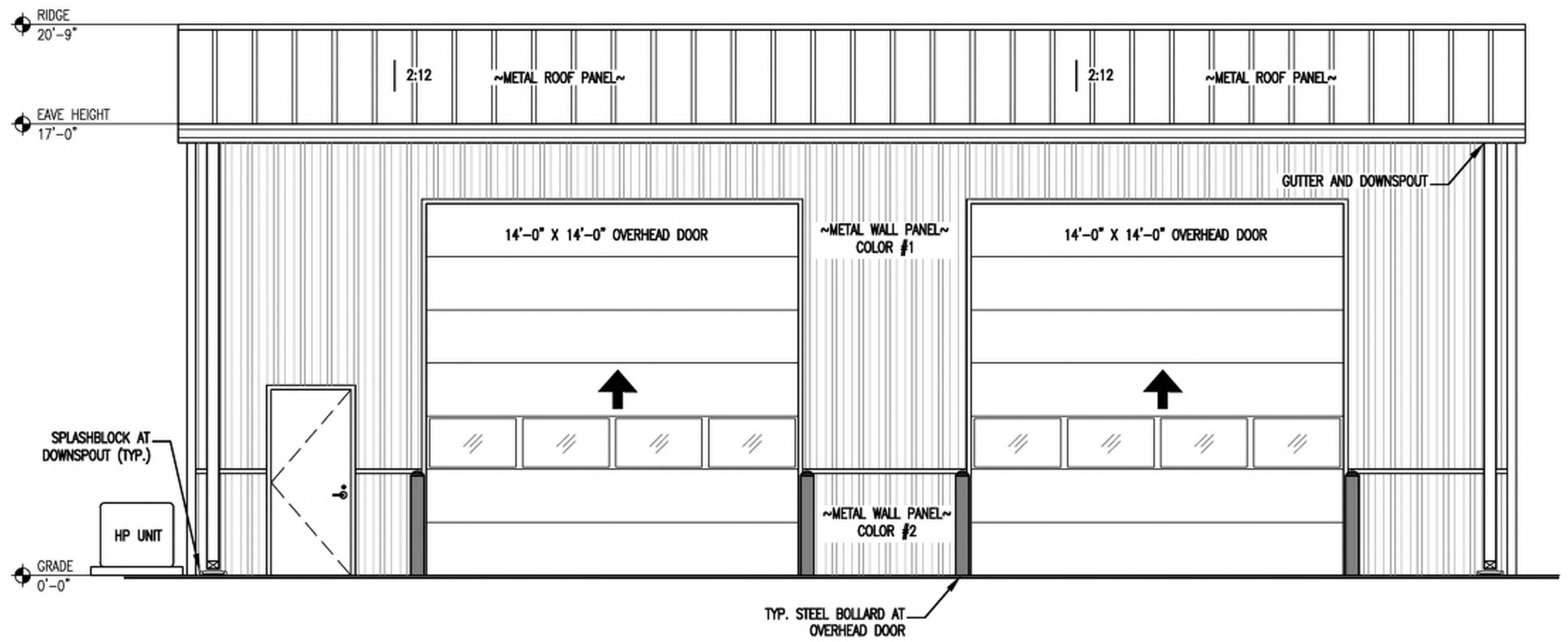
PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

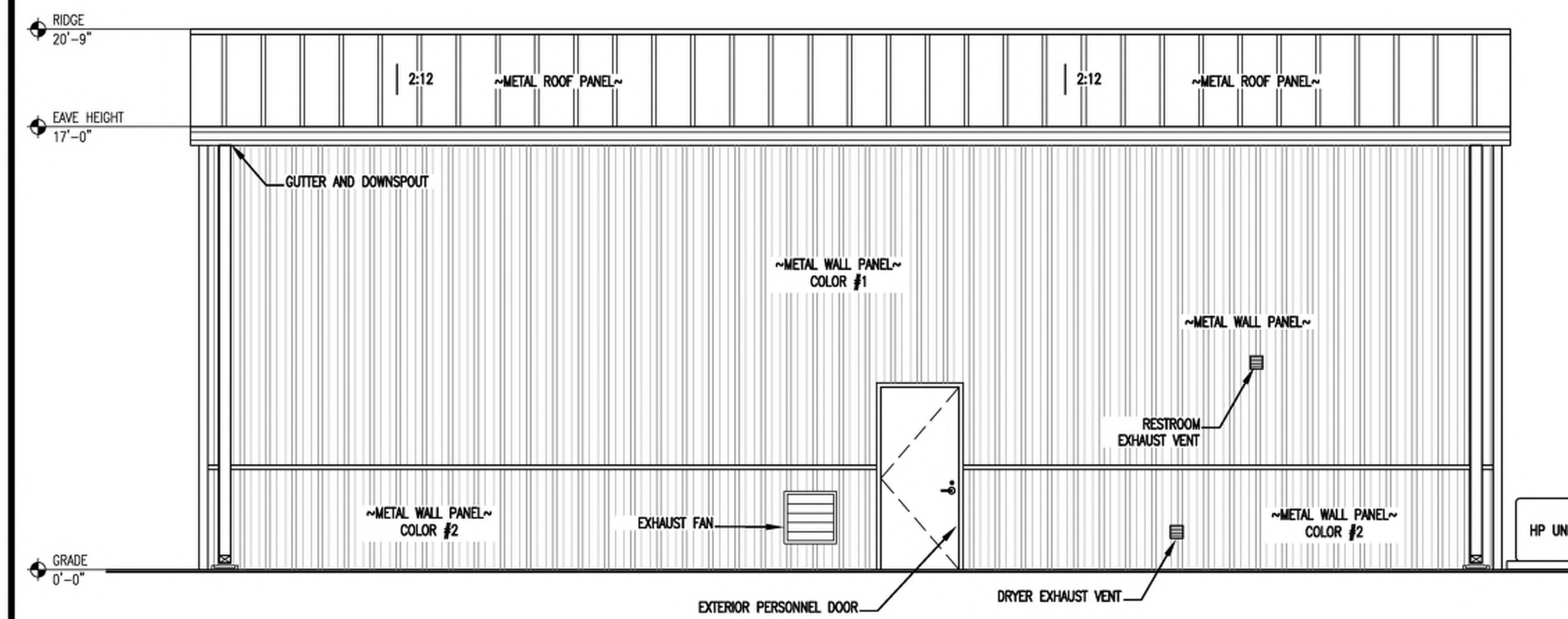
SHEET: BUILDING SECTIONS

G2



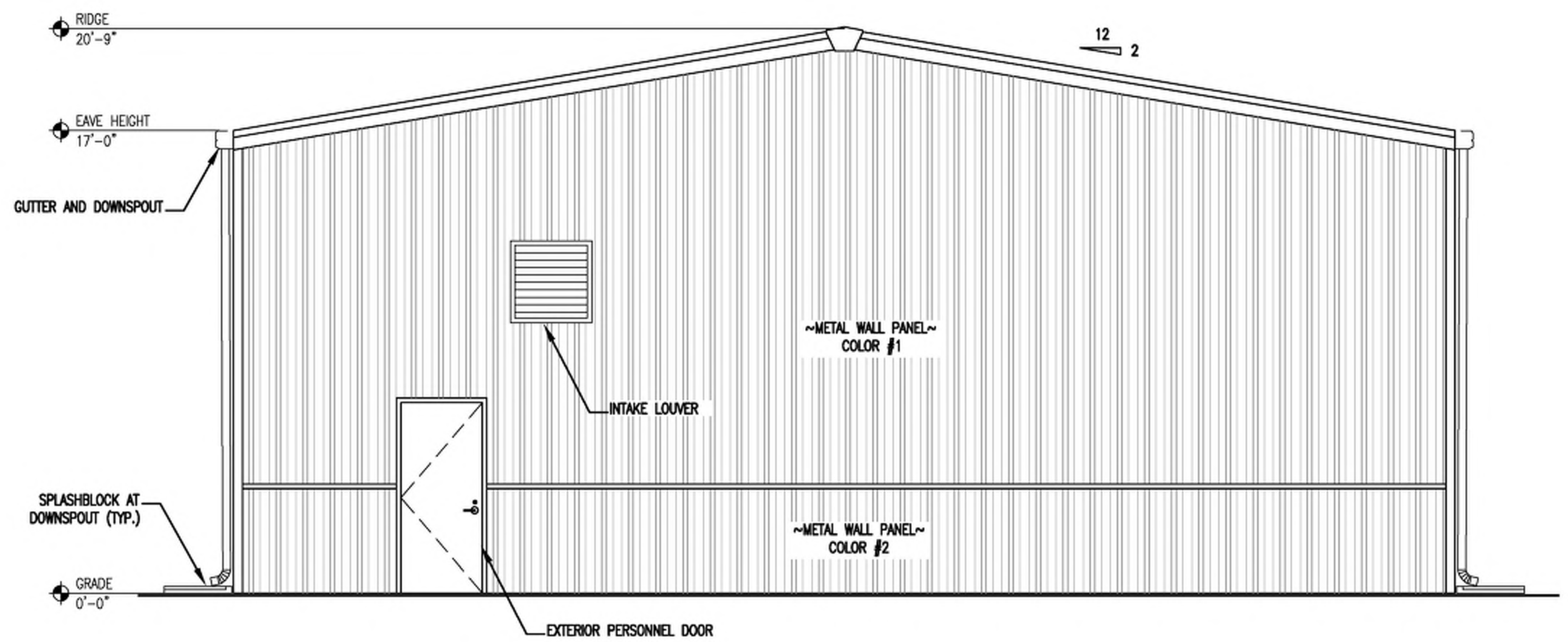
1 G3 FRONT ELEVATION

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



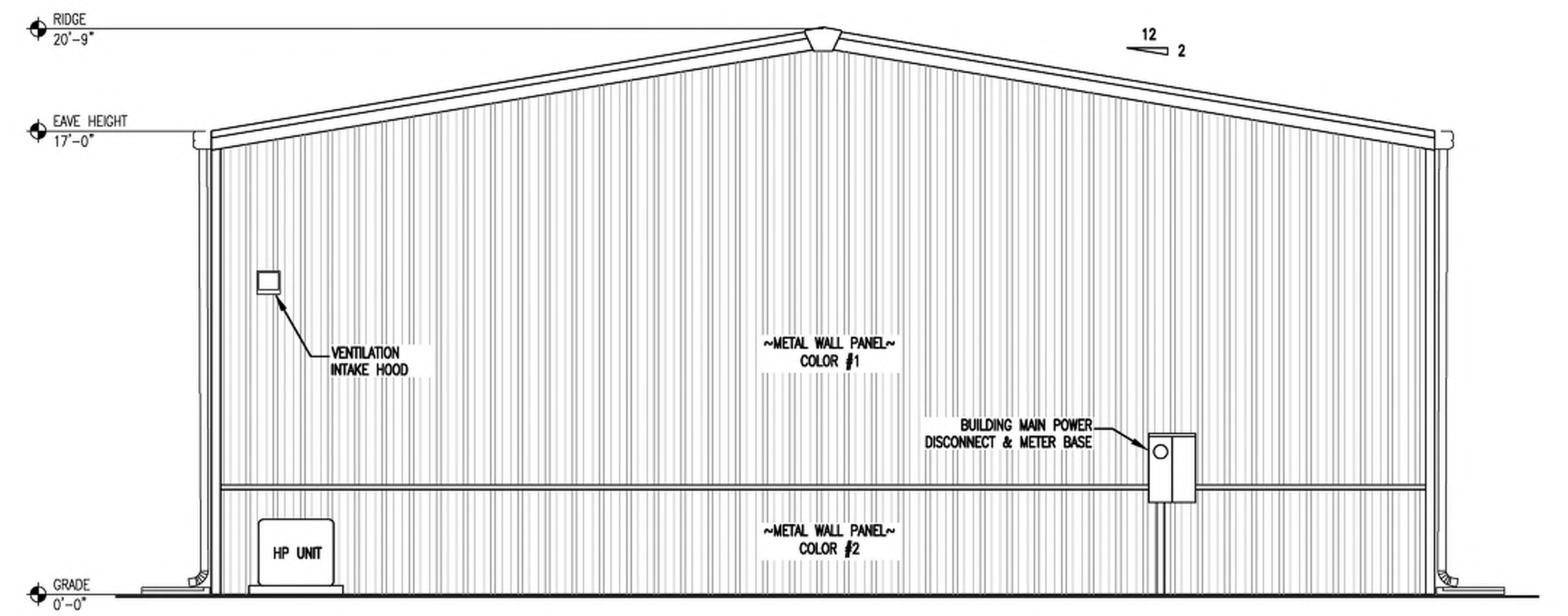
2 G3 REAR ELEVATION

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



3 G3 RIGHT SIDE ELEVATION

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



4 G3 LEFT SIDE ELEVATION

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

SCALE: 1-1/2" = 1'-0"
SCALE: 1" = 1'-0"
SCALE: 3/4" = 1'-0"
SCALE: 1/2" = 1'-0"
SCALE: 1/4" = 1'-0"
SCALE: 3/16" = 1'-0"
SCALE: 1/8" = 1'-0"

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DRAWN BY: BT
PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

OWNER/TENANT: LUIS TIRADO
CONTRACTOR/BUILDER: TBD

REVISIONS:

REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: BUILDING ELEVATIONS

G3

Drawing File: H:\2025\Tirado Truck-Harnett Co PID 2025-04-02.2\DWG\G-Tirado PEMB-20 June 2025.dwg
Plotted by: bert
Plotted Date: Jul 25, 2025 - 11:06am

ROOM FINISH SCHEDULE

ROOM NAME	ROOM NUMBER	NET SQ.FT.	FLOOR	BASE	WALLS	WALLS HEIGHT	CEILING MATERIAL	CEILING HEIGHT	REMARKS ***NOTE: ALL FINISHES SHALL MATCH WITH EXISTING BUILDING
BAY AREA	100	1862	SEALED CONCRETE	N/A	N/A	N/A	EXPOSED	VARIES	
BREAKROOM	101	76	VCT	WOOD	GYP.BD/PT	9'-0"	GYP.BD/PT	9'-0"	
BATHROOM	102	81	VCT	WOOD	GYP.BD/PT F.R.P. PANEL	9'-0"	GYP.BD/PT	9'-0"	4'-0" F.R.P. PANEL ON WALL
RESTROOM	103	23	VCT	WOOD	GYP.BD/PT F.R.P. PANEL	9'-0"	GYP.BD/PT	9'-0"	4'-0" F.R.P. PANEL ON WALL
STORAGE	200	166	ALUMINUM CHECKER PLATE	WOOD	GYP.BD/PT	VARIES	EXPOSED	VARIES	

FINISH SCHEDULE CODES

LVT	LUXURY VINYL TILE	PT	PAINTED	VW	VINYL WALLCOVERING	MT	MOSAIC TILE	V.P.	VINYL PLANK
CONC.	CONCRETE	CMU	CONCRETE MASONRY UNIT	SC	SEALED CONCRETE	PNL	PANELING	PAVERS	BRICK PAVERS
COMP.	COMPOSITION	ACOUSTIC	ACOUSTICAL	RU	RUBBER	WD	WOOD	CPT	CARPET
GYP. BD.	GYPSUM BOARD	SV	SHEET VINYL	CER TILE	CERAMIC TILE	ST	STEEL	1-HOUR	U-305
AA	ANODIZED ALUMINUM	C.G	CORNER GUARD (ACROVYN)	WC	WAINSCOT	FRP	FIRE RESISTANT PANEL		

FINISH GENERAL NOTES

1. FINISH SCHEDULE DESCRIBES ONLY THE BASIC SURFACE FINISH.
2. CASEWORK FINISHES ARE NOT SHOWN IN THE DRAWING. REFER TO SPECIFICATIONS FOR MATERIALS AND FINISHES.
3. PROVIDE CORNER GUARDS AS SHOWN ON FINISHES DRAWING.
4. F.R.P. WALL PANEL SHALL BE 51" TALL A.F.F.

DOOR SCHEDULE

DOOR NO	DOOR SIZE (WIDTH X HEIGHT X THICKNESS)	DOOR STYLE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FIRE RATING	ENTRANCE LOCK	STOREROOM LOCK	PASSAGE SET	PRIVACY SET	PUSH/PULL	PANIC SET	CLOSER	STOP	THRESHOLD	KICK PLATES	WEATHERSTRIPPING		REMARKS
																					NOTE: G.C. TO REVIEW ALL HARDWARE SETS, MATERIAL AND FINISHES WITH OWNER BEFORE ORDER & INSTALLATION
D100	3'-0" X 7'-0" X 1-3/4"	A	HM	P	1	HM	P		X						X	X	X		X		EXTERIOR HINGED SINGLE DOOR – BAY AREA
D100A	3'-0" X 7'-0" X 1-3/4"	A	HM	P	1	HM	P		X						X	X	X		X		EXTERIOR HINGED SINGLE DOOR – BAY AREA
D100B	3'-0" X 7'-0" X 1-3/4"	A	HM	P	1	HM	P		X						X	X	X		X		EXTERIOR HINGED SINGLE DOOR – BAY AREA
D100C	14'-0" X 14'-0"	B	HM			HM															SECTIONAL OVERHEAD DOOR – BAY AREA
D100D	14'-0" X 14'-0"	B	HM			HM															SECTIONAL OVERHEAD DOOR – BAY AREA
D100E	2'-6 X 6'-8" X 1-3/4"	C	WD	P	2	WD	P					X						X			INTERIOR HINGED SINGLE DOOR – RESTROOM
D101	3'-0" X 7'-0" X 1-3/4"	D	WD	P	2	WD	P				X							X			INTERIOR HINGED SINGLE DOOR WITH WINDOW – BREAKROOM
D102	3'-0" X 7'-0" X 1-3/4"	C	WD	P	2	WD	P					X						X			INTERIOR HINGED SINGLE DOOR – BATHROOM
D200	3'-0" X 7'-0" X 1-3/4"	C	HM	P	2	WD	P		X												INTERIOR HINGED SINGLE DOOR – STORAGE

****NOTE: ALL NEW HARDWARE TO BE LEVER ADA ACCEPTABLE
ALL THRESHOLDS TO MEET ADA SPECIFICATIONS

NOTES:

1. APPLY 2 COATS OF SEMI-GLOSS TO ALL WOOD DOORS.
2. ALL EXIT DOORS TO BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, TOOL, SPECIAL KNOWLEDGE OF EFFORT. ALL HARDWARE MUST BE DIRECT ACTING REQUIRING NOT MORE THAN ONE OPERATION.
3. DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST TO OPERATE. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34" MINIMUM AND 48" MAXIMUM ABOVE THE FLOOR PER ICC/ANSI A117.1-2009 SECTIONS 404.2.6& 404.2.7
4. G.C. TO REVIEW ALL HARDWARE SETS WITH OWNER BEFORE INSTALLATION
5. PROVIDE TRANSITION STRIPS AT ALL FLOORING MATERIAL CHANGES

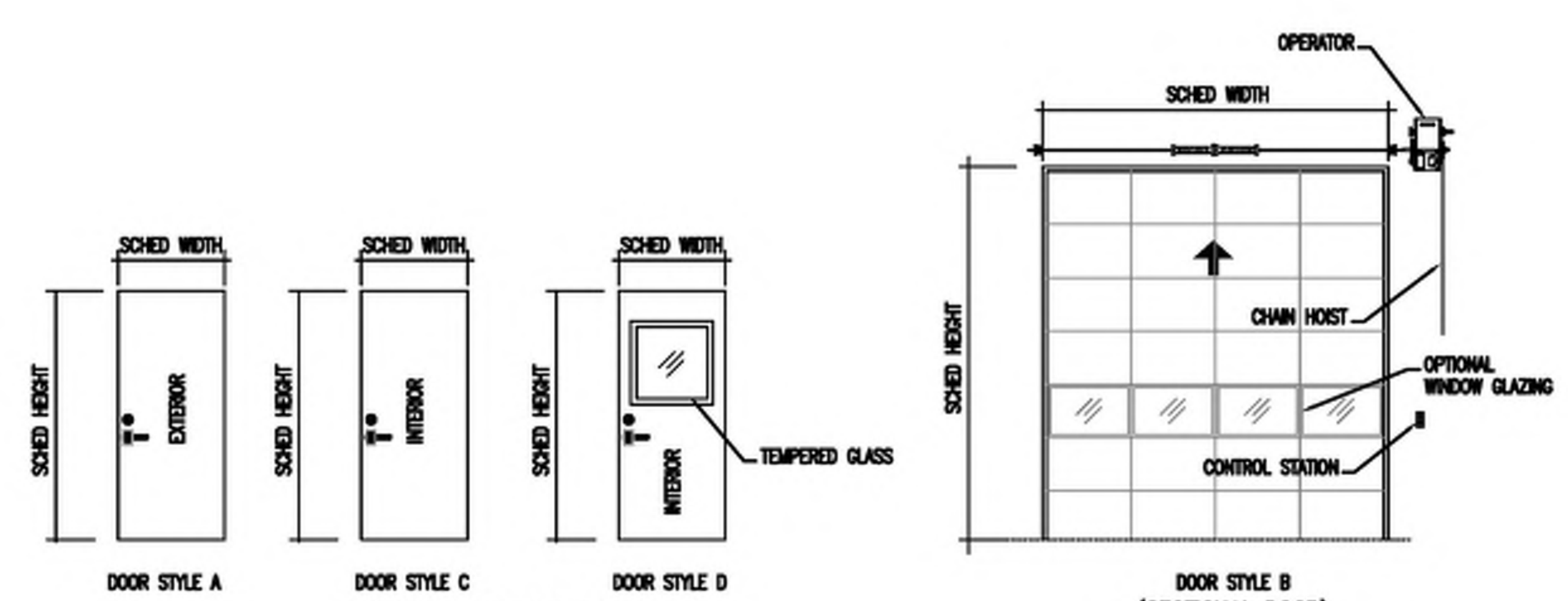
PASSAGE SET: (CLOSET & HALL) PASSAGE LOCKSETS KEEP DOORS FIRMLY CLOSED, BUT DO NOT ACTUALLY LOCK. BOTH LEVERS ALWAYS TURN FREE WITH NO LOCK CYLINDER OR PROVISION FOR A KEY.

PRIVACY SET: (RESTROOM) PRIVACY LOCKSETS ARE LOCKED WITH AN INSIDE PUSH-BUTTON. TURNING THE INSIDE KNOB OR LEVER RELEASES THE LOCK. A SMALL SCREWDRIVER CAN BE USED AS AN EMERGENCY KEY, FROM THE OUTSIDE, IF NECESSARY.

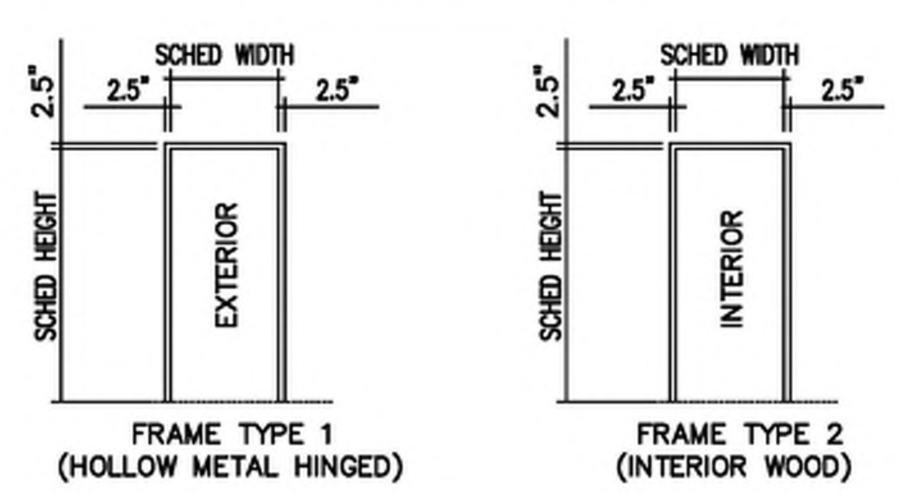
ENTRANCE LOCK: (ENTRY) ENTRANCE LOCKED BY PUSHING AND TURNING A BUTTON AND UNLOCKED BY THE KEY UNTIL THE INSIDE BUTTON IS MANUALLY UNLOCKED. THEY ARE ALSO AVAILABLE WITH PUSHBUTTON LOCKING, IN WHICH PUSHING THE BUTTON LOCKS THE OUTSIDE KNOB OR LEVER UNTIL IT IS UNLOCKED BY KEY OR BY TURNING THE INSIDE KNOB OR LEVER. THE INSIDE KNOB OR LEVER IS ALWAYS FREE FOR IMMEDIATE EXIT.

DOOR SCHEDULE LEGEND

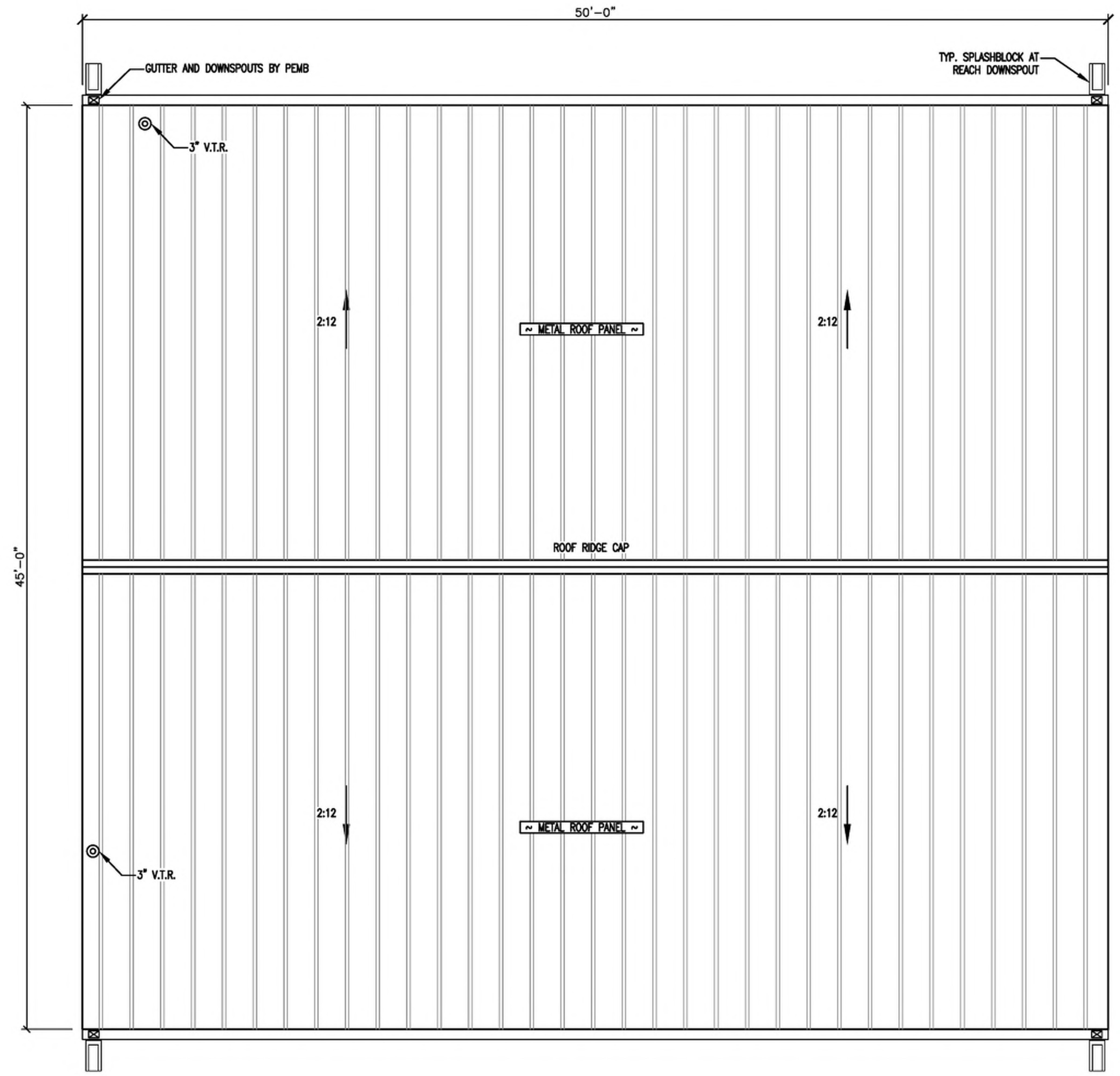
H	HEIGHT	HM	HOLLOW METAL KNOCK-DOWN
W	WIDE	P	PAINT
ALUM	ALUMINUM	S	STAIN
WD	WOOD-SOLID CORE	M	METAL
T	THICKNESS	WI	WROUGHT IRON
		VA/B	VERIFY ANODIZED OR BRONZE



DOOR STYLES

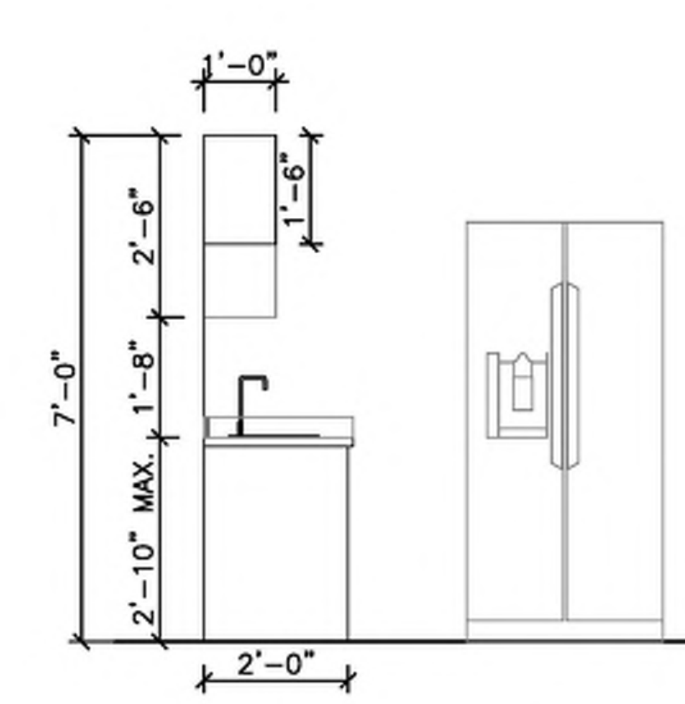


DOOR FRAMES



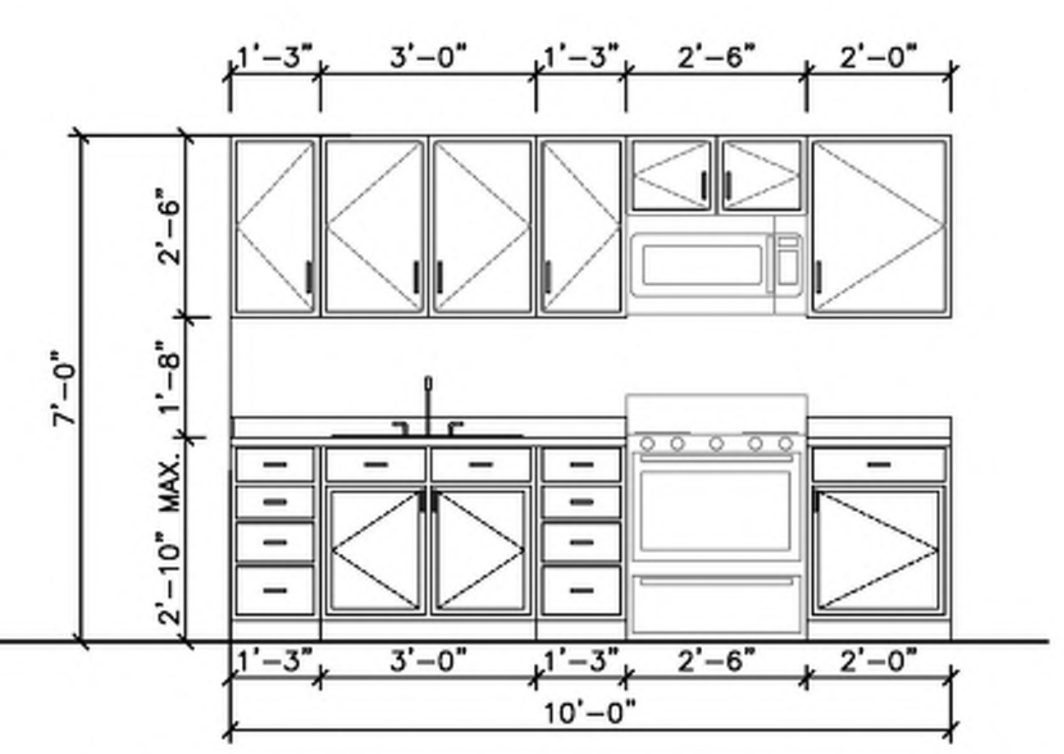
1 G4 BUILDING ROOF PLAN

0 2' 4' 8' SCALE: 1/4" = 1'-0"



3 G4 BREAKROOM CASEWORK

0 1'-4" 2'-8" 5'-4" SCALE: 3/8" = 1'-0"



2 G4 BREAKROOM CASEWORK

0 1'-4" 2'-8" 5'-4" SCALE: 3/8" = 1'-0"

JENKINS CONSULTING ENGINEERS, PA

DESIGNED / CHECKED BY: KJD
DRAWN BY: BT
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DATE: 10 JULY 2025

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OWNER/TENANT: LUIS TIRADO
3577 OLD US 421 LILLINGTON, NC 27546

CONTRACTOR/BUILDER: TBD

REVISIONS:

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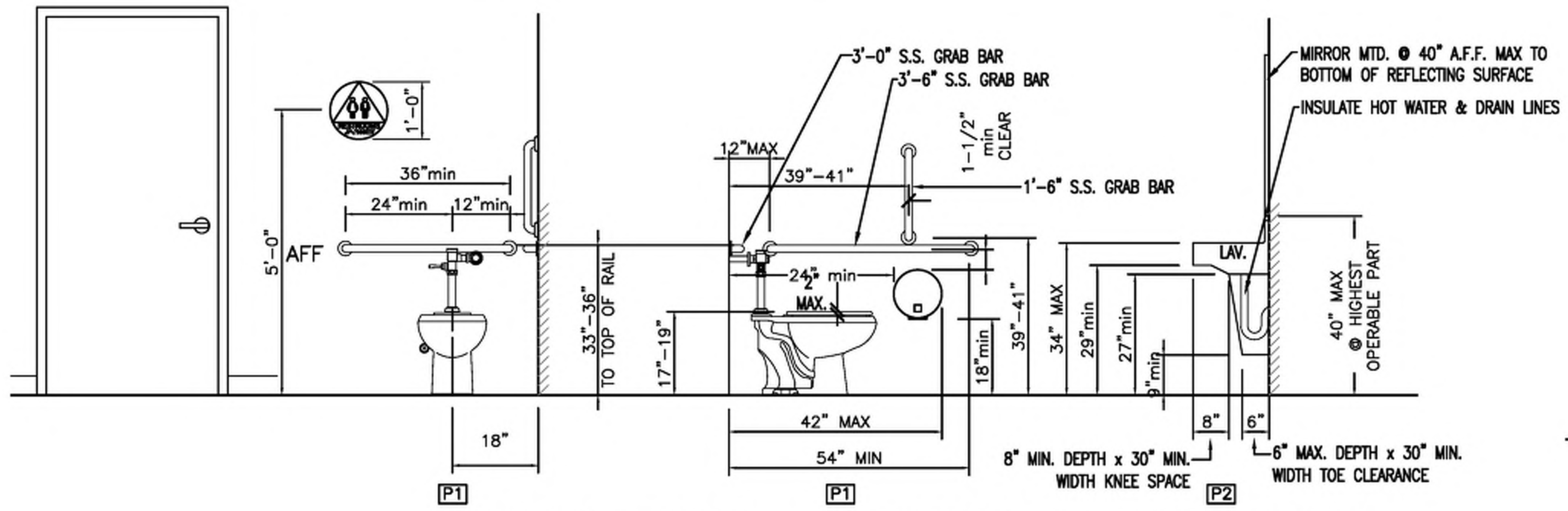
1	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

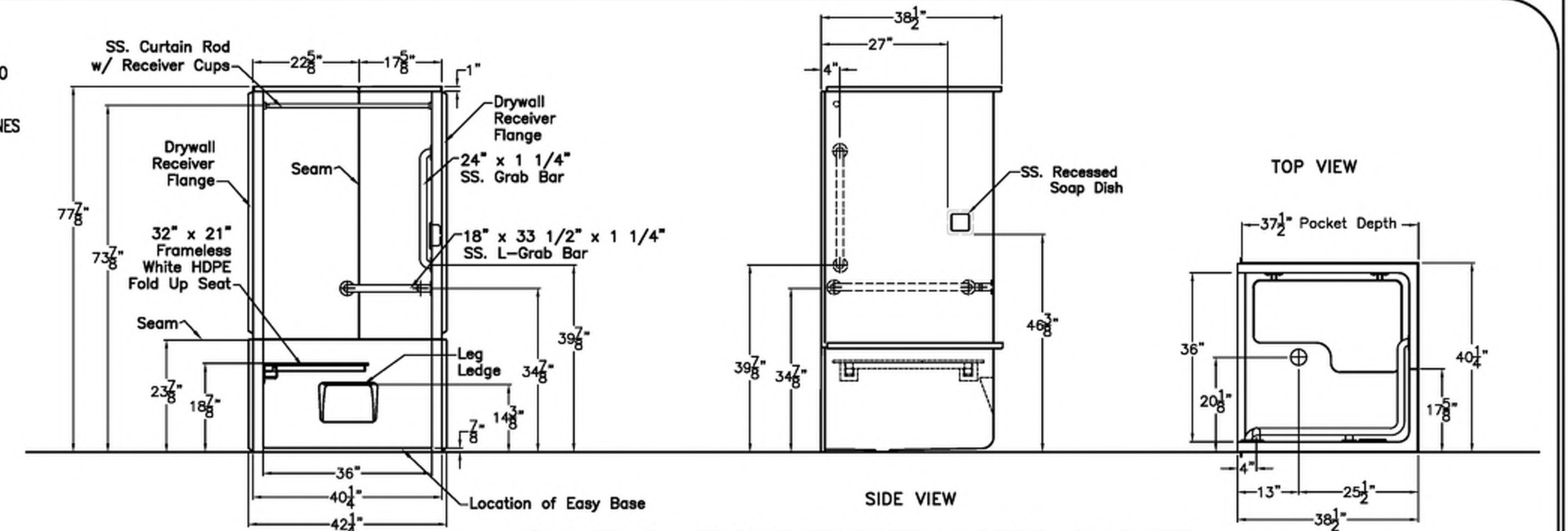
SHEET: SCHEDULE & ROOF PLAN

G4



MOUNTING HEIGHTS & REQUIRED CLEARANCES FOR ADA

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



MOUNTING HEIGHT FOR TRANSFER SHOWER

NOT TO SCALE

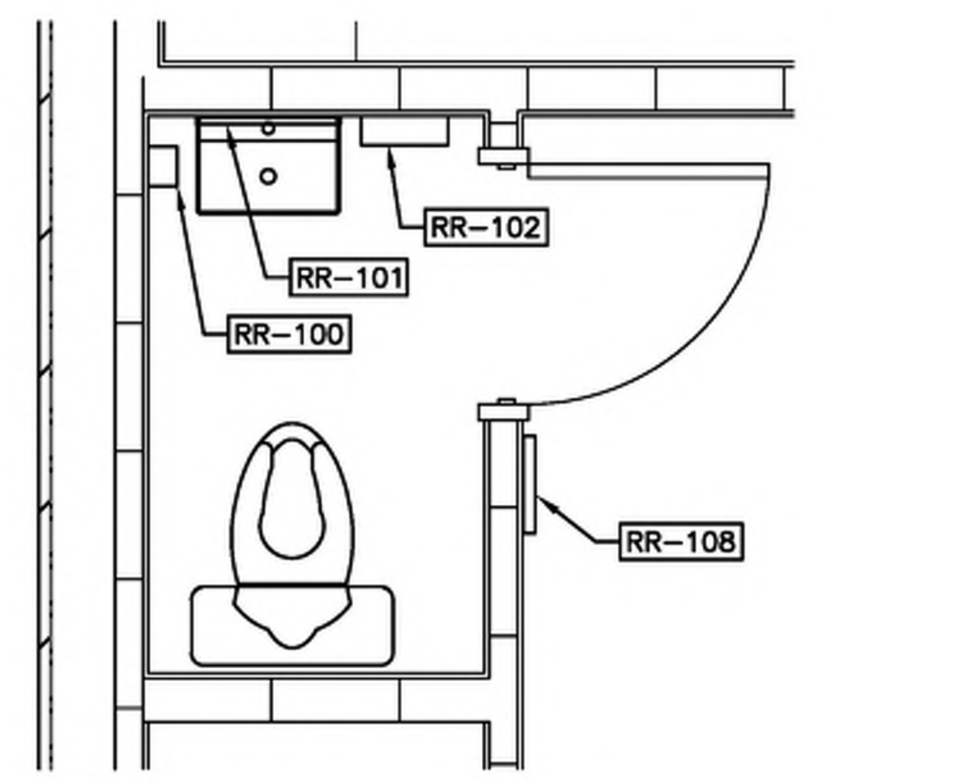
ACCESSORY LEGEND					
NO.	QTY	G.C.INST.	ITEM DESCRIPTION	MODEL #	MANUFACTURER
RR-100	2	X	SOAP DISPENSER (WALL MOUNT)	B-2111	BOBRICK
RR-101	2	X	MIRROR, 18" X 36"	B-165 1836	BOBRICK
RR-102	2	X	PAPER TOWEL DISPENSER	B-2620	BOBRICK
RR-103	2	X	TOILET PAPER DISPENSER	B-273	BOBRICK
RR-104	1	X	GRAB BAR 1-1/2" DIA X 36" S.S. FIN.	B-5806 X 36	BOBRICK
RR-105	1	X	GRAB BAR 1-1/2" DIA X 42" S.S. FIN.	B-5806 X 42	BOBRICK
RR-106	1	X	GRAB BAR 1-1/2" DIA X 18" S.S. FIN.	B-5806 X 18	BOBRICK
RR-107	2	X	ADA UNDER LAV KNEE PROTECTION	TRAP & SUPPLIES	HANDY SHIELD MAXX
RR-108	SEE PLAN	X	RESTROOM SIGNAGE	RR-120-DCTS	COMPLIANCE SIGNS

ACCESSORY NOTES:

1. PROVIDE BLOCKING AT ALL WALL MOUNTED ACCESSORIES.
2. GRAB BARS, FASTENERS AND MOUNTING DEVICES SHALL BE INSTALLED PER ADA REQUIREMENTS.
3. INSTALL AT LOCATIONS REQUIRED AND AS SHOWN ON DRAWINGS.
4. ALL TOILET ACCESSORIES TO BE SELECTED BY OWNER
5. ALL TOILET ACCESSORIES TO BE INSTALLED BY CONTRACTOR
6. ALL LAVATORIES & SINKS SHALL HAVE PROTECTIVE COVERING ATTACHED TO THE SUPPLY & DRAIN LINES BELOW THE FIXTURES.

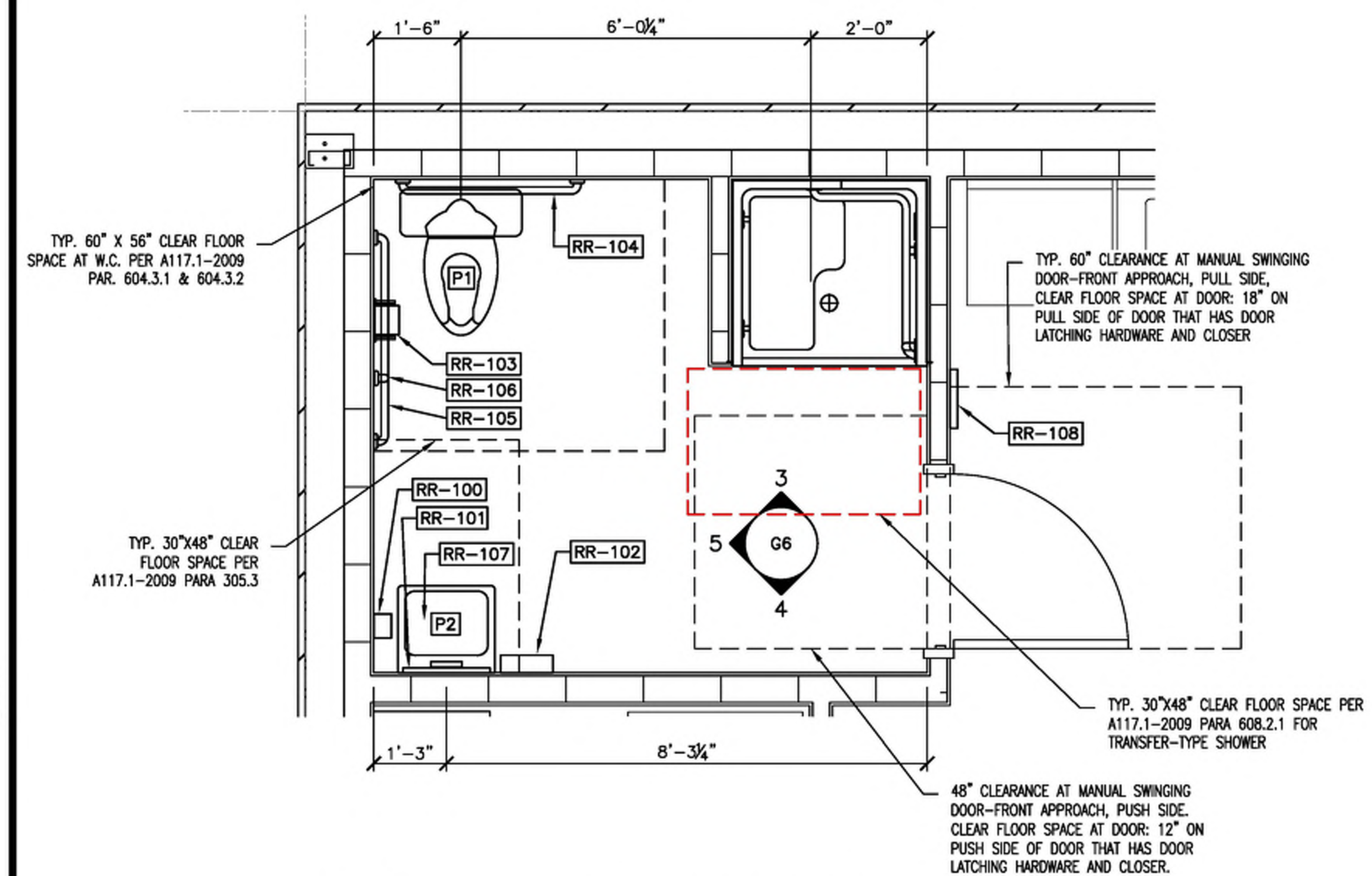
SEE SHEET P1 FOR PLUMBING FIXTURE SCHEDULE.

GYPSUM WALL BOARD SHALL BE MOISTURE RESISTANT IN RESTROOM



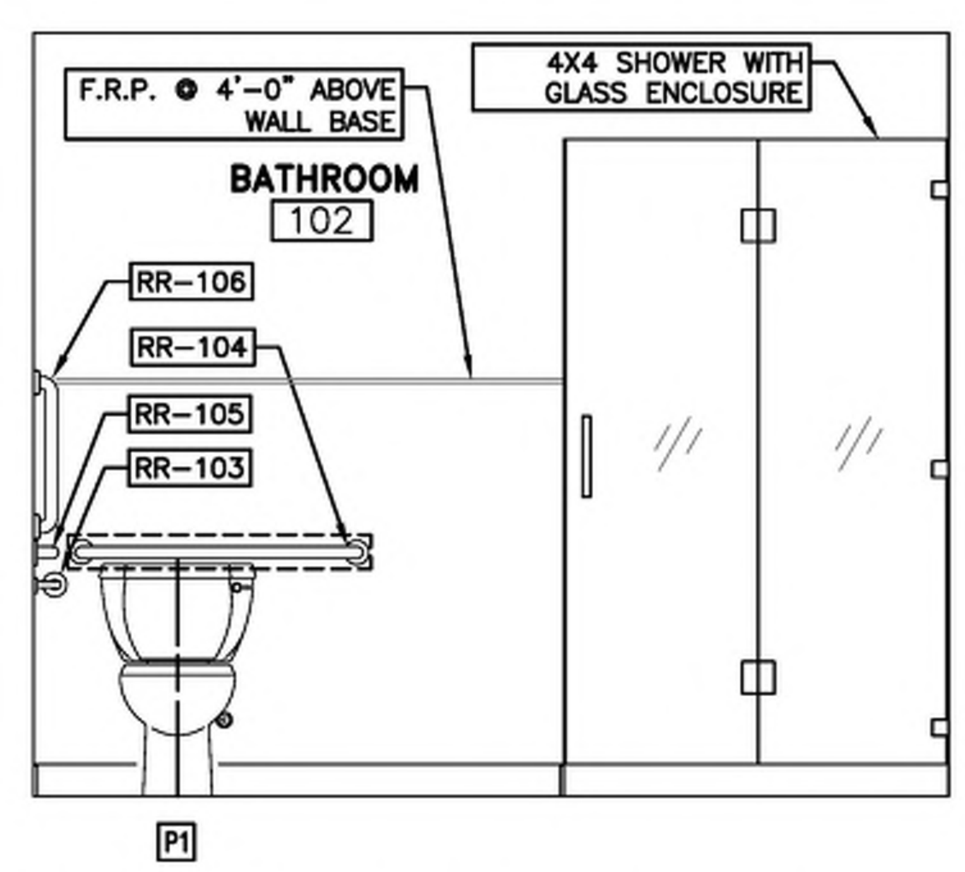
2 G5 PRIVATE RR ACCESSORY PLAN

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



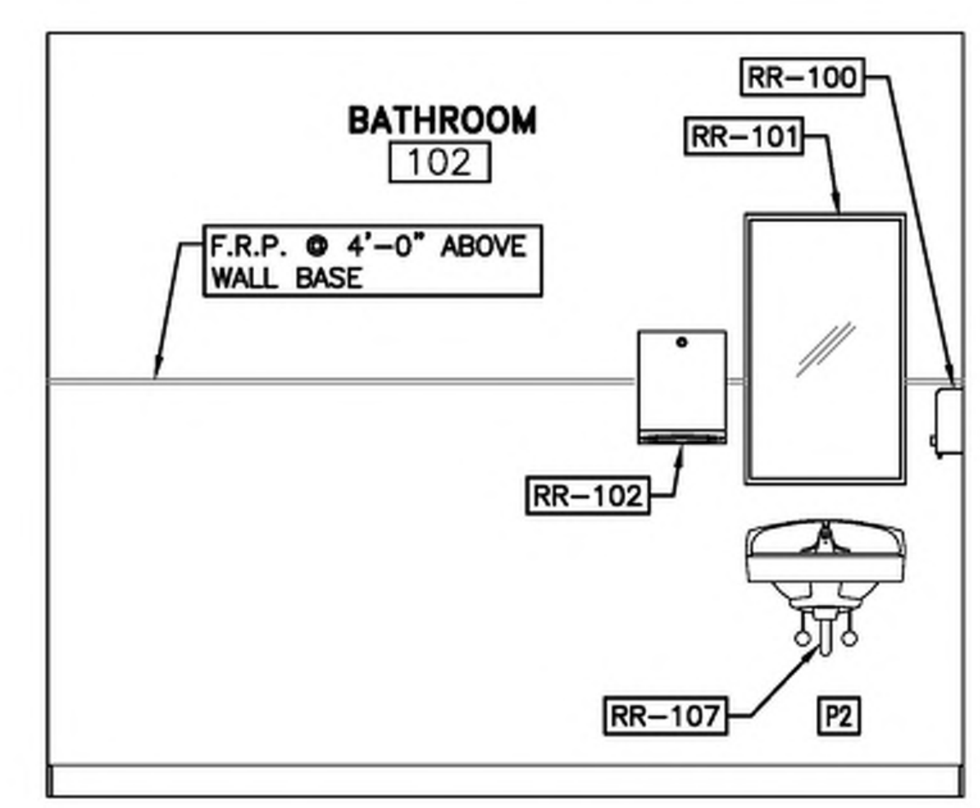
1 G5 ENLARGED RESTROOM PLAN

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



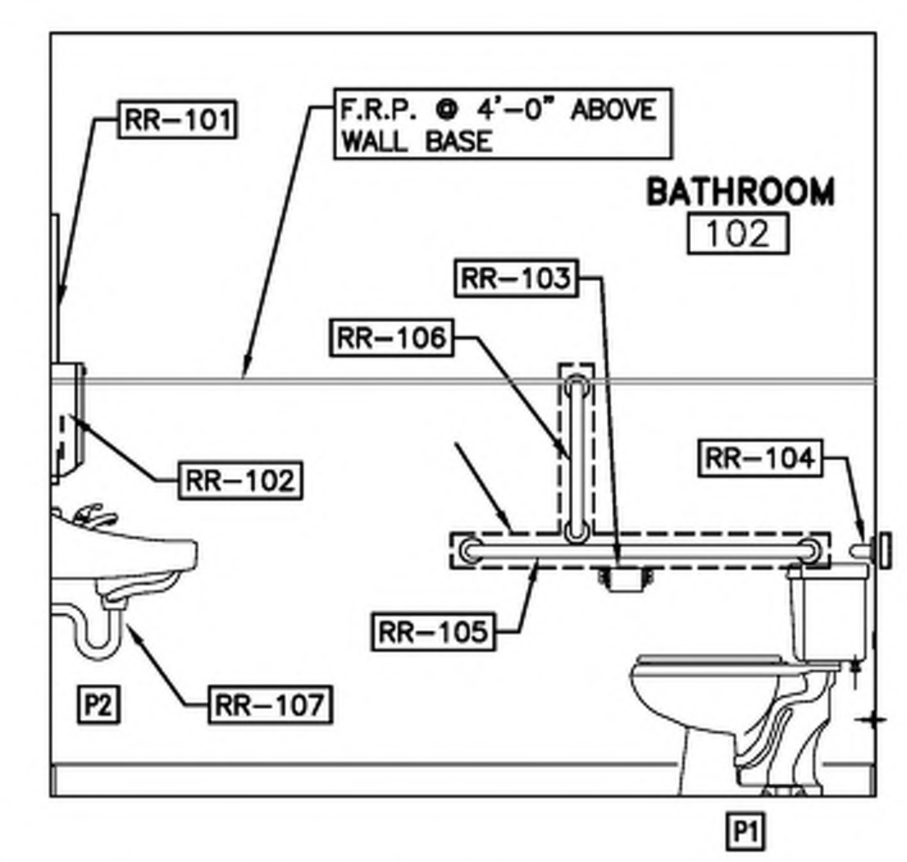
3 G5 RR ELEVATION

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



4 G5 RR ELEVATION

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



5 G5 RR ELEVATION

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

JENKINS CONSULTING ENGINEERS, PA
OFFICE in EUREKA SPRINGS, NORTH CAROLINA
1606 McARTHUR RD FAYETTEVILLE, NC 28311-1002
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NORTH CAROLINA PROFESSIONAL SEAL 42009 ENGINEER KELLY J. DODSON
10 JULY 2025

DESIGNED / CHECKED BY: KJD
DRAWN BY: BT
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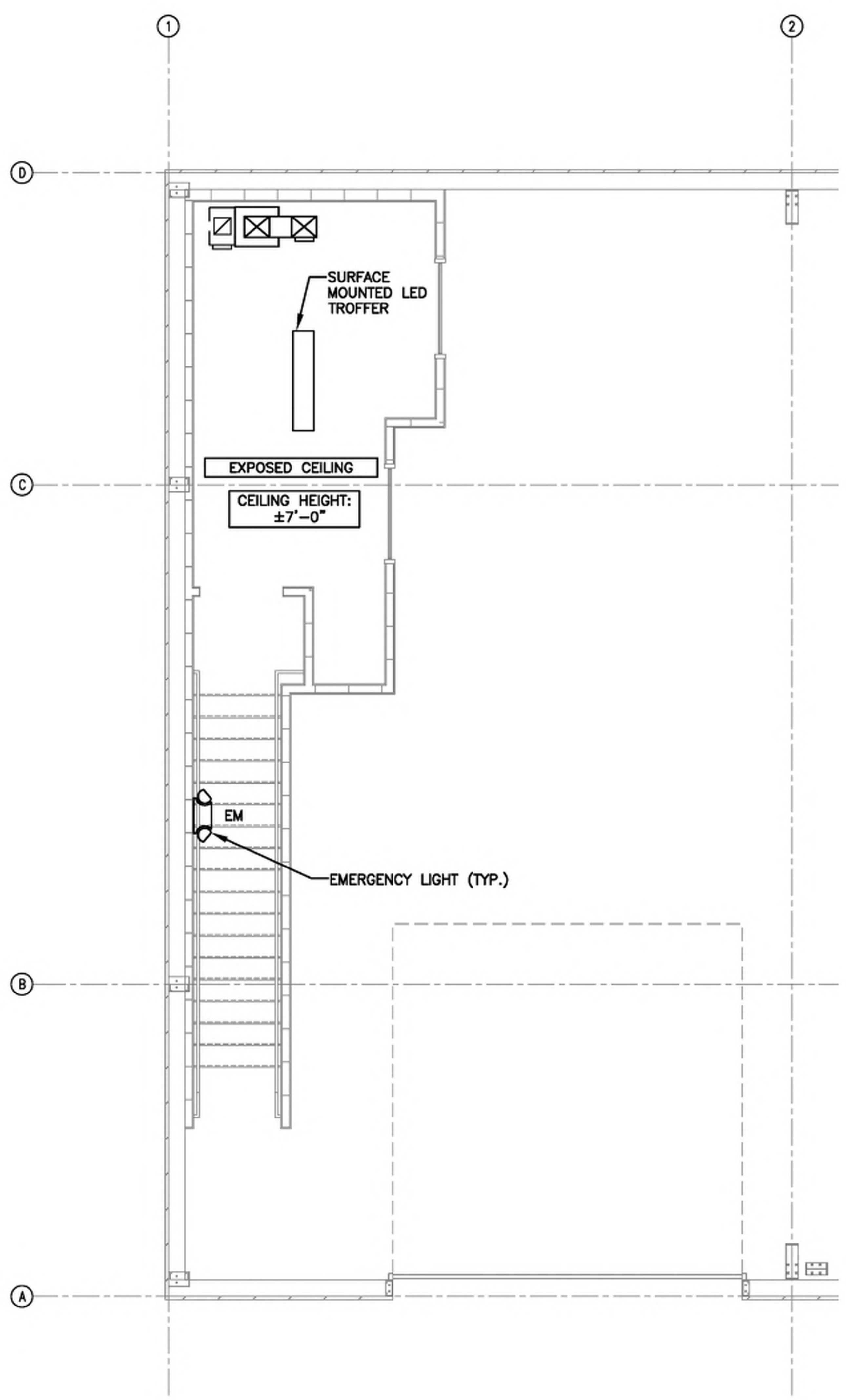
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: ACCESSIBLE RESTROOM DETAILS

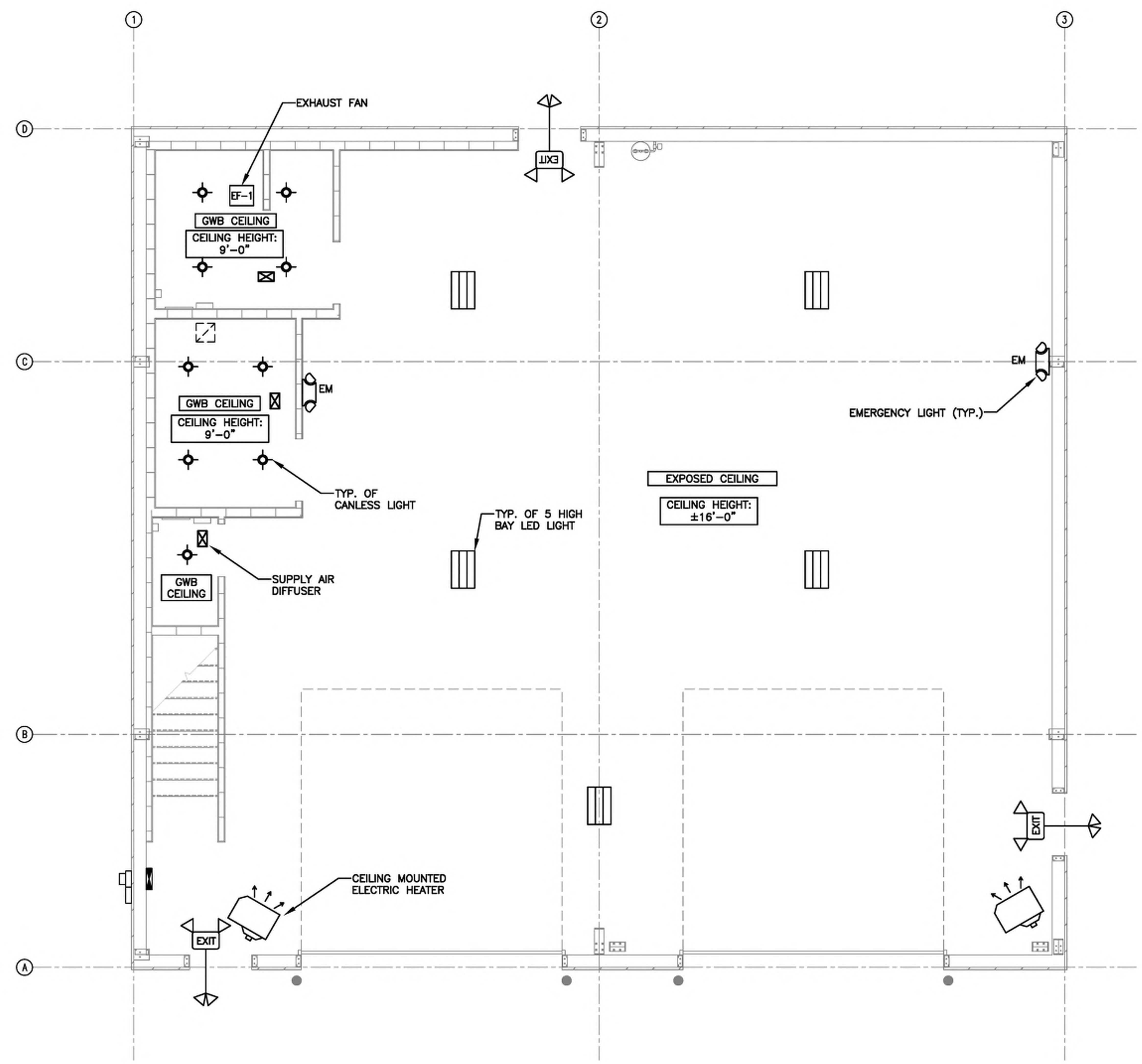
G5



PLAN NORTH
TRUE NORTH

2 REFLECTED CEILING PLAN
G6 MEZZANINE

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



PLAN NORTH
TRUE NORTH

1 REFLECTED CEILING PLAN
G6 FIRST FLOOR

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

PERMITTING STAMP

JENKINS CONSULTING ENGINEERS, PA

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CONTRACTOR/BUILDER:
TBD

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PROJECT:
TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET:
REFLECTED CEILING PLAN

G6

GENERAL NOTES:

ALL WORK SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE 2018 EDITION, ASHRAE, SMACNA, AND NFPA.

STRUCTURAL MEMBERS OF THE BUILDING SHALL NOT BE CUT IN ANY MANNER FOR THE INSTALLATION OF ANY EQUIPMENT UNLESS PRIOR APPROVAL IS OBTAINED.

THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS AND ROUTING OF ALL DUCTWORK, PIPING, AND EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICT.

THE MECHANICAL CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE MECHANICAL PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION OF THE MECHANICAL SYSTEMS AND REVIEW ANY CONFLICTS WITH THE GENERAL CONTRACTOR.

THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE. THINK OF OTHER CONTRACTORS AND THEIR REQUIREMENTS IN VERTICAL CHASES AND WALL MOUNT SPACE.

ALL CONTRACTORS TO FOLLOW THIS ORDER OF PRIORITY:

1. STORM AND SANITARY SEWER LINES
2. DUCTWORK AND HVAC SYSTEMS
3. HOT AND COLD WATER LINES
4. RIGID CONDUIT
5. CABLE

THE MECHANICAL CONTRACTOR SHALL COORDINATE SIZE AND LOCATION OF ALL PENETRATIONS (PERTAINING TO HIS WORK) THROUGH THE ROOF, WALLS, FLOORS WITH THE GENERAL CONTRACTOR. ANY WATERPROOFING AROUND THE OPENINGS TO BE COMPLETED BY THE GENERAL CONTRACTOR.

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL HIS OWN SUPPORT DEVICES. ALL LOCATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS PRIOR TO INSTALLATION. ALL PLATFORMS AND WALKWAYS IN ATTIC SPACES ARE PROVIDED BY THE GENERAL CONTRACTOR. THE MECHANICAL CONTRACTOR TO COORDINATE THE LOCATION AND DIMENSIONS OF ALL PLATFORMS IN THE ATTIC WITH THE GENERAL CONTRACTOR.

ALL EQUIPMENT HAVING ROTATING OR MOVING PARTS SHALL HAVE VIBRATION ISOLATORS TO ELIMINATE TRANSMISSION OF OBJECTIONABLE NOISE TO OTHER MATERIAL OR EQUIPMENT.

WHERE OUTSIDE AIR INTAKE DUCTWORK CONNECTS TO OUTSIDE AIR LOUVER, THE INSIDE FACE OF THE DUCTWORK SHALL BE PRIMED AND PAINTED WITH (2) TWO COATS OF FLAT BLACK TO PREVENT DUCTWORK FROM BEING VISIBLE

THE MECHANICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT AND BACK WITH WHITE CORE, WHITE ENGRAVED LETTERS (1/4 INCH MINIMUM) ETCHED INTO THE WHITE CORE. NAME TAGS TO BE MOUNTED WITH SELF-TAPPING SHEET METAL SCREWS.

ALL EQUIPMENT MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE WORK OR IN ACCORDANCE WITH THE PARTICULAR MANUFACTURER'S STANDARD GUARANTEE IF LONGER. ANY FAULTY MATERIAL OR WORKMANSHIP OR FAILURE OF ANY PART OF THE SYSTEM DURING NORMAL OPERATIONS UNDER THIS GUARANTEE SHALL BE CORRECTED WITHOUT COST TO THE OWNER.

THE MECHANICAL CONTRACTOR SHALL CLEAN ALL OF HIS EQUIPMENT PRIOR TO FINAL CLOSE OUT OF THIS PROJECT TO BE FREE OF ANY DIRT OR DEBRIS IN DRAIN PANS, CONDENSATE DRAINS, CONDENSING UNIT COILS, AND ETC.

ALL EQUIPMENT SHALL BE LOCATED AND INSTALLED TO PROVIDE MAXIMUM SPACE FOR MAINTENANCE AND SERVICE.

PROVIDE EQUIPMENT SUPPORT PAD FOR ALL BASE MOUNTED EQUIPMENT. PAD SHALL BE 4" HIGH OR PREFABRICATED CONCRETE PAD FOR ALL CONDENSING UNITS, AND PACKAGE UNITS, 4" MINIMUM FROM EQUIPMENT EDGE TO END OF PAD ON ALL SIDES.

THE MECHANICAL CONTRACTOR SHALL CONFIRM ALL BREAKER AND DISCONNECT SIZES OF HIS EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING ANY EQUIPMENT FOR THIS PROJECT.

CONDENSATE DRAINS SHALL BE A MINIMUM OF 3/4" ø PVC PIPE. A P-TRAP SHALL BE INSTALLED IN PIPE AT THE UNIT. ALL CONDENSATE LINES SHALL BE ROUTED AS INDICATED ON PLANS.

INSTALL FLEXIBLE DUCT CONNECTION AT SUPPLY AND RETURN DUCTWORK CONNECTIONS TO ALL AIR HANDLING UNITS, FAN BOXES, ETC.

DESIGN CRITERIA NOTES:

ALL SUPPLY, RETURN, EXHAUST AND OUTDOOR AIR DUCTWORK (WITH THE EXCEPTION OF COMMERCIAL KITCHEN DUCTWORK) SHALL BE SIZED AT 0.08" PER 100'-0" OF DUCT FOR EXTERNAL STATIC PRESSURE. ALL DUCTWORK SHALL BE 1"WG PRESSURE CLASS.

ECONOMIZERS ARE REQUIRED FOR ANY HVAC SYSTEM WITH A COOLING CAPACITY OF 65,000 BTU/HR OR GREATER (NCECC C403.1)

CORRIDORS SHALL NOT SERVE AS SUPPLY, RETURN, EXHAUST, RELIEF OR VENTILATION AIR DUCTS; CORRIDORS MAY BE USED FOR MAKEUP AIR PROVIDED TO TOILET AREAS FOR EXHAUST MAKEUP PROVIDING THE CORRIDOR IS PROVIDED WITH AN OUTSIDE AIR RATE GREATER THAN THE MAKEUP REQUIRED FOR EXHAUST. WHERE LOCATED IN TENANT SPACES OF LESS THAN 1000 SQ/FT THE USE OF CORRIDORS FOR RETURN AIR IS PERMITTED. (NCMC 601.2.1 & 601.2.3)

HVAC SYSTEM SHALL HAVE PROGRAMMABLE THERMOSTAT CAPABLE OF OFF HOUR CONTROLS (NIGHT SETBACK) TO MAINTAIN NO MORE THAN 85°F OR NO LESS THAN 55°F (NCECC C403.2.4.2.1, C403.2.4.2.3 & C403.2.4.2.3)

THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL A DUCT MOUNTED SMOKE DETECTOR IN THE RETURN AIR DUCT AT EACH UNIT IN ACCORDANCE WITH NORTH CAROLINA BUILDING CODE EDITION 2018. THE MECHANICAL CONTRACTOR TO WIRE FROM THE DETECTOR TO EACH UNIT.

DUCTWORK NOTES:

ALL DUCTWORK, PIPING, EQUIPMENT, ETC. SHALL BE SUPPORTED FROM THE BUILDING SUPPORT STRUCTURE AND NOT THE ROOF.

ALL DUCT LAYOUT AND LOCATIONS ARE SHOWN DIAGRAMMATIC. THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE BUILDING CONDITIONS AND COORDINATE THE DUCT LAYOUT WITH ALL CONTRACTORS PRIOR TO INSTALLATION.

ALL DUCTWORK SHALL BE CONSTRUCTED OF SHEET METAL IN ACCORDANCE WITH ASHRAE & SMACNA. DUCT SIZES SHOWN ARE NET FREE AREA REQUIRED.

VOLUME OR SPLITTER DAMPERS SHALL BE INSTALLED WHERE NECESSARY TO GUIDE AND CONTROL THE AIR FLOW. TURNING VANES ARE REQUIRED IN ALL ELBOWS AND AIR DEFLECTION DEVICES WILL BE INSTALLED WHERE REQUIRED FOR A BALANCED SYSTEM. PROVIDE SHEET METAL SLEEVES AND COLLARS WHERE DUCTS PASS THRU WALLS.

ALL DUCTS SHALL BE AIR TIGHT, RIGID AND FREE FROM VIBRATION AND NOISE. ALL LAP JOINTS SHALL BE IN THE DIRECTION OF FLOW AND SEALED WITH DUCT SEALER. ALL TAPES AND MASTICS USED SHALL LISTED WITH UL181A AND SHALL BE MARKED. (NCMC (603.9) & NCECC (C403.2.9)

FLEXIBLE DUCT SHALL BE SUPPORTED EVERY 5'-0". MAXIMUM SAG IS A 1/2 INCH PER FOOT OF SPACING BETWEEN SUPPORTS. SADDLE MATERIAL IN CONTACT WITH THE FLEXIBLE DUCT SHALL BE WIDE ENOUGH SO THAT IT DOES NOT REDUCE THE INTERNAL DIAMETER OF THE DUCT. THE SADDLE MUST COVER ONE-HALF THE CIRCUMFERENCE OF THE OUTSIDE DIAMETER OF THE FLEXIBLE DUCT AND FIT NEATLY AROUND THE LOWER HALF OF THE DUCT'S OUTER CIRCUMFERENCE.

PROVIDE PERMANENT MANUAL DAMPERS IN ALL SUPPLY AND RETURN AIR DUCTS AT THE MAIN TRUNK LINE FOR SYSTEM BALANCING. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR BALANCING THE AIR DISTRIBUTION SYSTEM AFTER THE SYSTEM HAS BEEN INSTALLED AND EQUIPMENT IS OPERATING. MANUAL DAMPERS ARE REQUIRED TO BE INSTALLED IN THE RETURN AIR DUCT IF THE DUCT IS RETURNING AIR FROM INDIVIDUAL ROOMS. MANUAL DAMPERS ARE NOT REQUIRED IF THE DUCT IS RETURNING AIR FROM CENTRALLY LOCATED FILTER/RETURN GRILLES.

THE OUTSIDE AIR INTAKE DUCTWORK SHALL BE HARD ROUND DUCT, FLEXIBLE DUCT WILL NOT BE ACCEPTED. SEE PLAN FOR DUCT SIZE.

ALL OUTSIDE AIR INTAKE DUCTS SHALL HAVE A FILTER BOX TO HOUSE A MINIMUM OF 16 IN. X 20 IN. X 2 IN. THICK FILTER, U.N.O. AT EACH AIR HANDLING UNIT EITHER IN THE ATTIC OR CRAWL SPACE. THE FILTER BOX SHALL HAVE A HINGED DOOR THAT IS GASKETED TO MAINTAIN A AIRTIGHT SEAL WITH A THUMBSCREW TO ACCESS THE FILTER.

THE OUTSIDE AIR FILTER SHALL BE THE HI-E 40 AS MANUFACTURED BY PUROLATOR PRODUCTS AIR FILTRATION COMPANY, OR APPROVED EQUAL. AIR FILTER SHALL BE (2) TWO INCHES DEEP, MEDIUM EFFICIENCY, PLEATED MEDIA, DISPOSABLE PANEL TYPE. THE FILTER MEDIA SHALL BE SELF-EXTINGUISHING NON-WOVEN COTTON AND SYNTHETIC FIBERS. THE FILTER MEDIA SHALL BE BONDED TO A 28-GAUGE CORROSION RESISTANT, EXPANDED METAL SUPPORT GRID WITH A 95% OPEN FACE AREA.

DUCT/PIPING INSULATION NOTES:

ALL SUPPLY AND RETURN AIR DUCTS SHALL BE INSULATED WITH MIN. R-6.0 INSULATION UNLESS NOTED OTHERWISE IN THE DRAWING. IECC (C403.2.9) ACCEPTABLE MANUFACTURERS ARE JOHNSON MANVILLE.

LIQUID AND SUCTION PIPING TO AND FROM AIR HANDLING UNITS SHALL BE INSULATED WITH 1-1/2" THICK PIPE INSULATION IN ACCORDANCE WITH NCECC TABLE (C403.2.10).

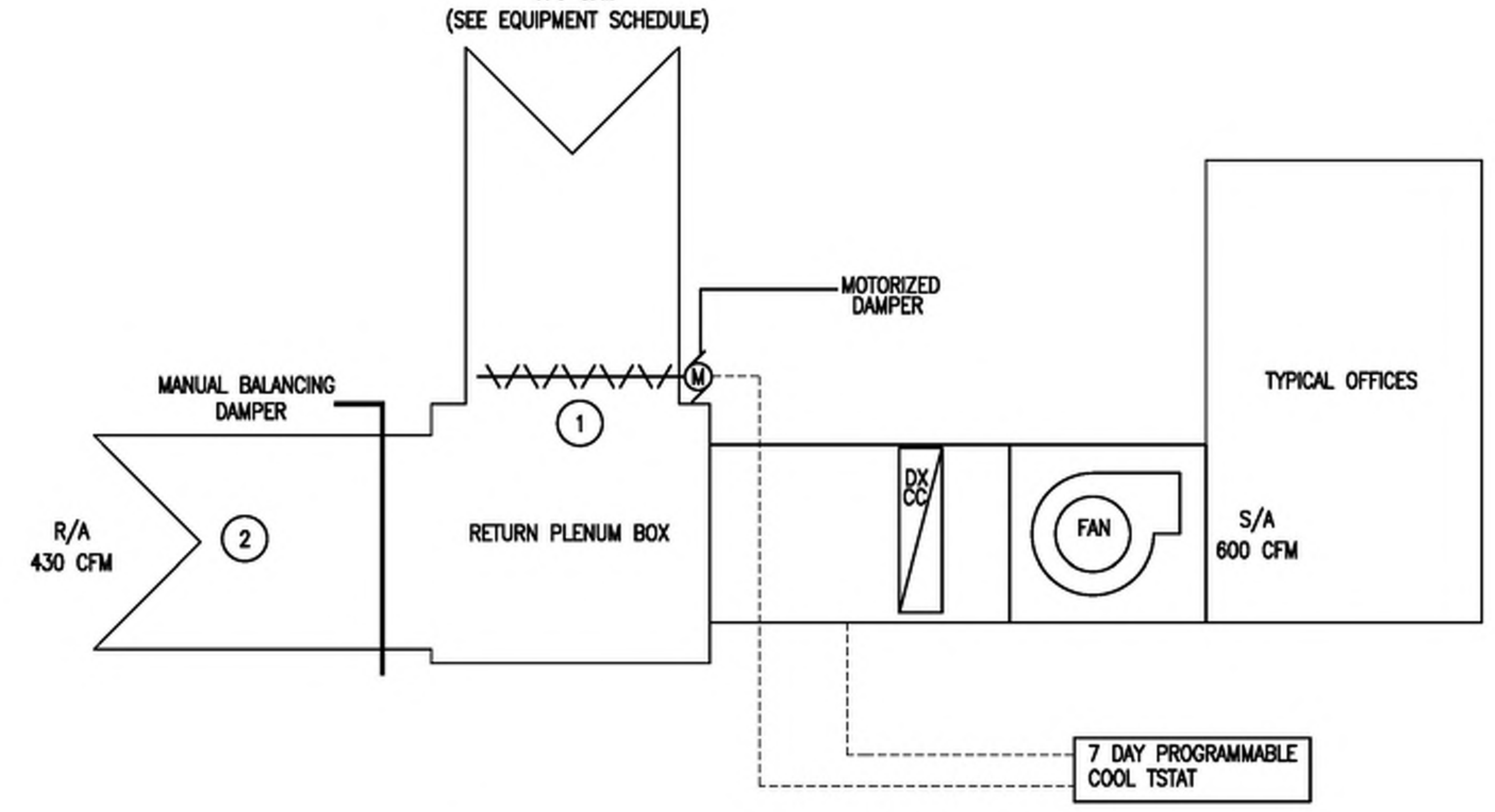
ALL FLEXIBLE DUCT REQUIRING INSULATION SHALL HAVE A VALUE OF AT LEAST R-5.0. THE FLEXIBLE DUCT SHALL BE ATCO RUBBER PRODUCTS, INC. UPC NO. 036 OR APPROVED EQUAL WITH A REINFORCED METALLIZED POLYESTER JACKET. THE INNER CORE IS AIRTIGHT AND IS DESIGNED FOR LOW TO MEDIUM OPERATING PRESSURES IN HVAC SYSTEMS. AIR DUCT CONNECTIONS AND JOINTS SHALL BE MADE PER INSTALLATION INSTRUCTIONS OUTLINED BY ATCO.

OUTSIDE AIR INTAKE DUCTWORK AND EXHAUST DUCTWORK IS TO BE UNINSULATED.

OUTSIDE/EXHAUST AIR CALCULATION

UNIT	OCCUPANCY TYPE:	NET SF (Az)	CEILING HEIGHT (ClgHt)	VOLUME (CF) (Az*ClgHT)	SUPPLY AIR (CFM)	AIR CHANGES PER HOUR (ACH75)	OCCUPANT DENSITY #/1000	OCCUPANTS (Pz)	O.A. CFM PER PERSON (Rp)	O.A. CFM PER SF (Ra)	(RpPz)	(RaAz)	O.A. CFM REQUIRED (Vbz) (RpPz + RaAz)	ZONE O.A. AIR FLOW (Ez)	ADJUSTED O.A. Voz = Vbz/Ez	EXHAUST CFM REQUIRED	
AHU-1	101-BREAKROOM	76	9'-0"	684	200	17.5	5	1	5	0.06	5	4.56	9.56	0.8	11.95		
	102-BATHROOM	81	9'-0"	729	100	8.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70 CFM / FIXTURE	70
	103-RESTROOM	22	9'-0"	198	50	15.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70 CFM / FIXTURE	70
	200-STORAGE	146	9'-0"	1314	250	11.4	N/A	N/A	N/A	0.06	N/A	8.76	8.76	0.8	10.95		
														OUTSIDE AIR SUB-TOTAL	22.90 (A)	EXHAUST AIR SUB-TOTAL	140 (B)
											AHU-1 (OUTSIDE AIR) USE LARGEST (A OR B) VALUES						140
														MIN. OUTSIDE AIR CFM REQUIRED	22.90	TOTAL EXHAUST CFM REQUIRED	140
														TOTAL OUTSIDE AIR CFM PROVIDED	170	TOTAL EXHAUST CFM PROVIDED	170
EF-2	100-BAY AREA	1862	17'-0"	63968	4300	4.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.75 CFM / SQ.FT.	1397
														OUTSIDE AIR SUB-TOTAL	1397 (A)	EXHAUST AIR SUB-TOTAL	4300***(B)
											(OUTSIDE AIR) USE LARGEST (A OR B) VALUES						4300
														MIN. OUTSIDE AIR CFM REQUIRED	1397	TOTAL EXHAUST CFM REQUIRED	4300
														TOTAL OUTSIDE AIR CFM PROVIDED	4300	TOTAL EXHAUST CFM PROVIDED	4300

*** = 4300 CFM * 60= 258000 CFM/HOUR; 258000/63968 = 4.03 AIR CHANGES PER HOUR
(SERVICE BAY REQUIRES MINIMUM 4.0 AIR CHANGES PER HOUR (NEC 511))



TYPICAL AIR HANDLING UNIT DIAGRAM WITH VENTILATION

NOT TO SCALE

DESCRIPTION AND SEQUENCE OF OPERATION OF HVAC SYSTEM

THE HVAC SYSTEM AT THIS BUILDING CONSISTS OF:

(1) 1.5 TON SPLIT SYSTEM HEAT PUMP UNIT WHICH PROVIDE HEATING/COOLING/VENTILATION TO SPACES

OCCUPIED OPERATION

THE SUPPLY FANS SHALL RUN CONTINUOUS TO PROVIDE THE REQUIRED VENTILATION RATE. IN THE COOLING MODE, A RISE IN TEMPERATURE BEYOND SET POINT OF PROGRAMMABLE T-STAT WILL RESULT IN ACTIVATION OF DX COOLING CYCLE UNTIL DESIRED TEMPERATURE IS REACHED. IN HEATING MODE, A SIGNAL FROM T-STAT WILL ACTIVATE THE HEAT PUMP TO DELIVER HEATING TO SPACES. IF OUTSIDE TEMPERATURE FALLS BELOW SET POINT, HEAT STRIPS WILL ACTIVATE TO BRING TEMPERATURE TO DESIRED SET POINT AT WHICH TIME THE HEAT STRIPS WILL TURN OFF AND HEAT PUMP SHALL BE USED TO MAINTAIN DESIRED SPACE TEMPERATURE.

PROVIDE HEAT STRIP LOCKOUT CONTROLS TO PREVENT HEAT STRIP OPERATION BETWEEN 35°F AND 40°F PER ENERGY CODE PARAGRAPH 503.2.4.1.1.

UNOCCUPIED OPERATION

THE SUPPLY FAN SHALL BE INDEXED OFF AND MOTORIZED OUTSIDE AIR DAMPER SHALL BE CLOSED. PROGRAMMABLE THERMOSTATS SHALL PROVIDE CONTROL OF UNIT.

EXHAUST FAN OPERATION

THE RESTROOM EXHAUST FAN IN STAFF RESTROOM SHALL BE SWITCHED WITH LIGHTING FOR TOILET AND SHOWER UNIT.

REPAIR GARAGE BAY AREA EXHAUST FAN SHALL BE OPERATE AT ALL TIME WHEN THE BUILDING IS OCCUPIED.

SEQUENCE OF OPERATION: (SPLIT SYSTEM– SINGLE STAGE)

TYPICAL OPERATION (OCCUPIED MODE):

(1) MODULATE TO ALLOW 170 CFM OF O/A

(2) 430 CFM OF R/A WITH MANUAL BALANCING DAMPER

UNOCCUPIED MODE:

(1) IN CLOSED POSITION.

(2) N/A

APPENDIX B MECHANICAL DESIGN

2018 BUILDING CODE SUMMARY

PROJECT NAME: TIRADO TRUCK REPAIR GARAGE

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE
PRESCRIPTIVE [X] ENERGY COST BUDGET [ ]

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

THERMAL ZONE: ZONE 4A NORTH CAROLINA
WINTER DRY BULB: 22.5° F
SUMMER DRY BULB: 97.3° F

INTERIOR DESIGN CONDITIONS
WINTER DRY BULB: 68°
SUMMER DRY BULB: 78°
RELATIVE HUMIDITY: 50%

SPACES HEATING LOAD: 13,600 BTU'S
SPACES COOLING LOAD: 14,300 BTU'S

MECHANICAL SPACING CONDITIONING SYSTEM

UNITARY

DESCRIPTION OF UNIT: SPLIT SYSTEM HEAT PUMP (1) 1.5 TON
HEATING EFFICIENCY: 8.2 HSPF (8.2 HSPF MINIMUM STANDARD EFFICIENCY, TABLE C403.2.3 (2))
COOLING EFFICIENCY: 14.0 SEER (14.0 SEER MINIMUM STANDARD EFFICIENCY, TABLE C403.2.3 (2))
SIZE CATEGORY OF UNIT: (1) 1 (≤ 65,000 BTU/H)

BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON.: ____________

CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON.: ____________

LIST EQUIPMENT EFFICIENCIES: ____________

DESIGNER STATEMENT: TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT REQUIREMENTS OF THE INTERNATIONAL ENERGY CODE. THE HVAC UNIT QUALIFIES AS MORE EFFICIENT MECHANICAL EQUIPMENT DESCRIBED IN THE CODE.

SIGNED: Buddy Jenkins
NAME: BUDDY JENKINS
TITLE: ENGINEER

PERMITTING STAMP

NORTH CAROLINA PROFESSIONAL SEAL C-3070 JENKINS CONSULTING ENGINEERS, PA CORPORATION

JENKINS CONSULTING ENGINEERS, PA
OFFICE in EUREKA SPRINGS, NORTH CAROLINA
CORPORATION NUMBER C-3070 buddy@jenkinsce.pro
1606 McARTHUR RD. FAYETTEVILLE, NC 28311-1002
910.822.1724

NORTH CAROLINA PROFESSIONAL SEAL 28803 ENGINEER DOUGLAS JENKINS
10 JULY 2025

DESIGNED / CHECKED BY: BJ
DRAWN BY: BT
PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

FINAL DRAWING [ ] FOR REVIEW PURPOSES ONLY
PRELIMINARY [ ] FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING [✓] FOR CONSTRUCTION

OWNER/TENANT: LUIS TIRADO
3577 OLD US 421 LILLINGTON, NC 27546

CONTRACTOR/BUILDER: TBD
TBD

REVISIONS:

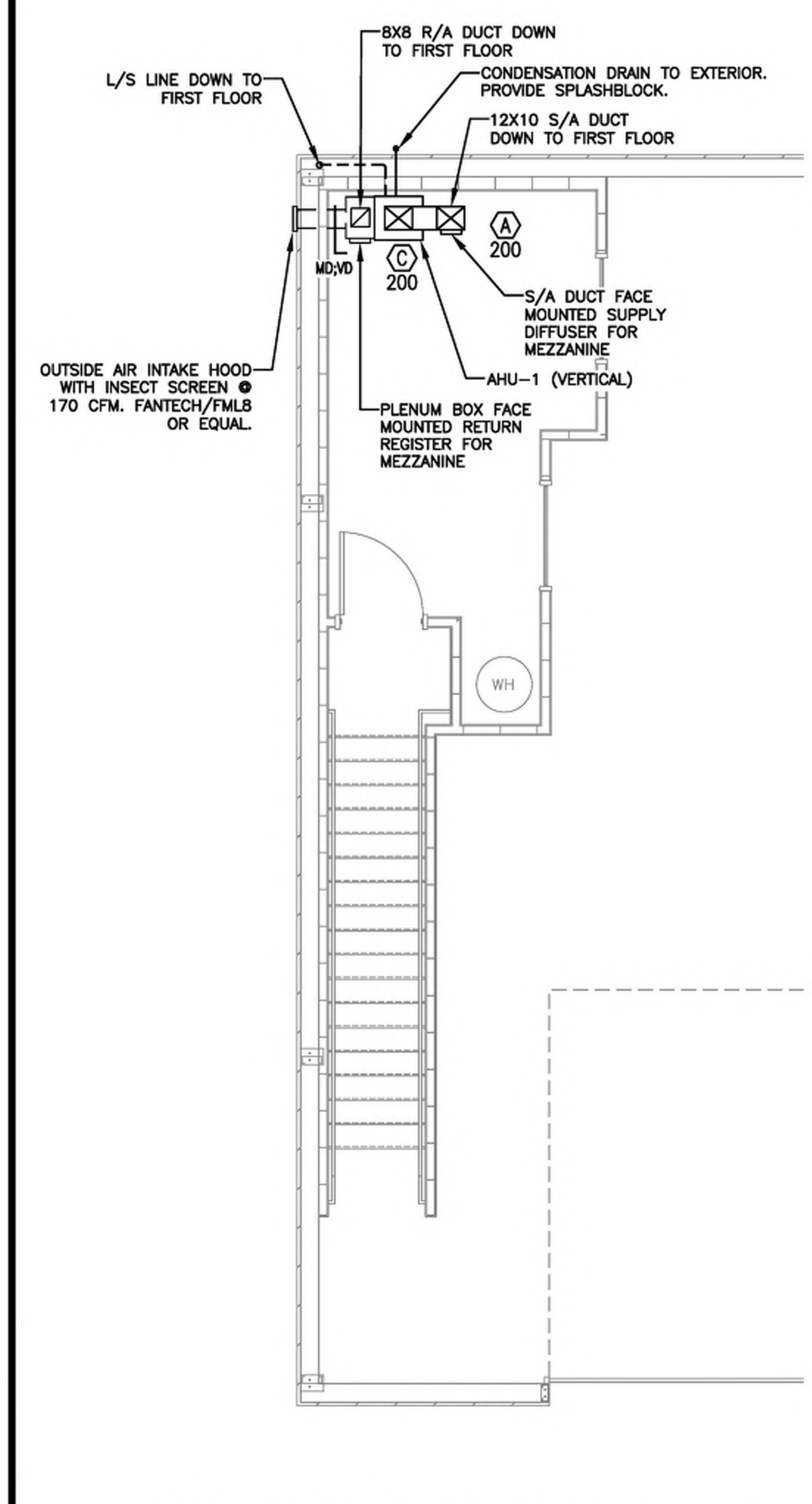
REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

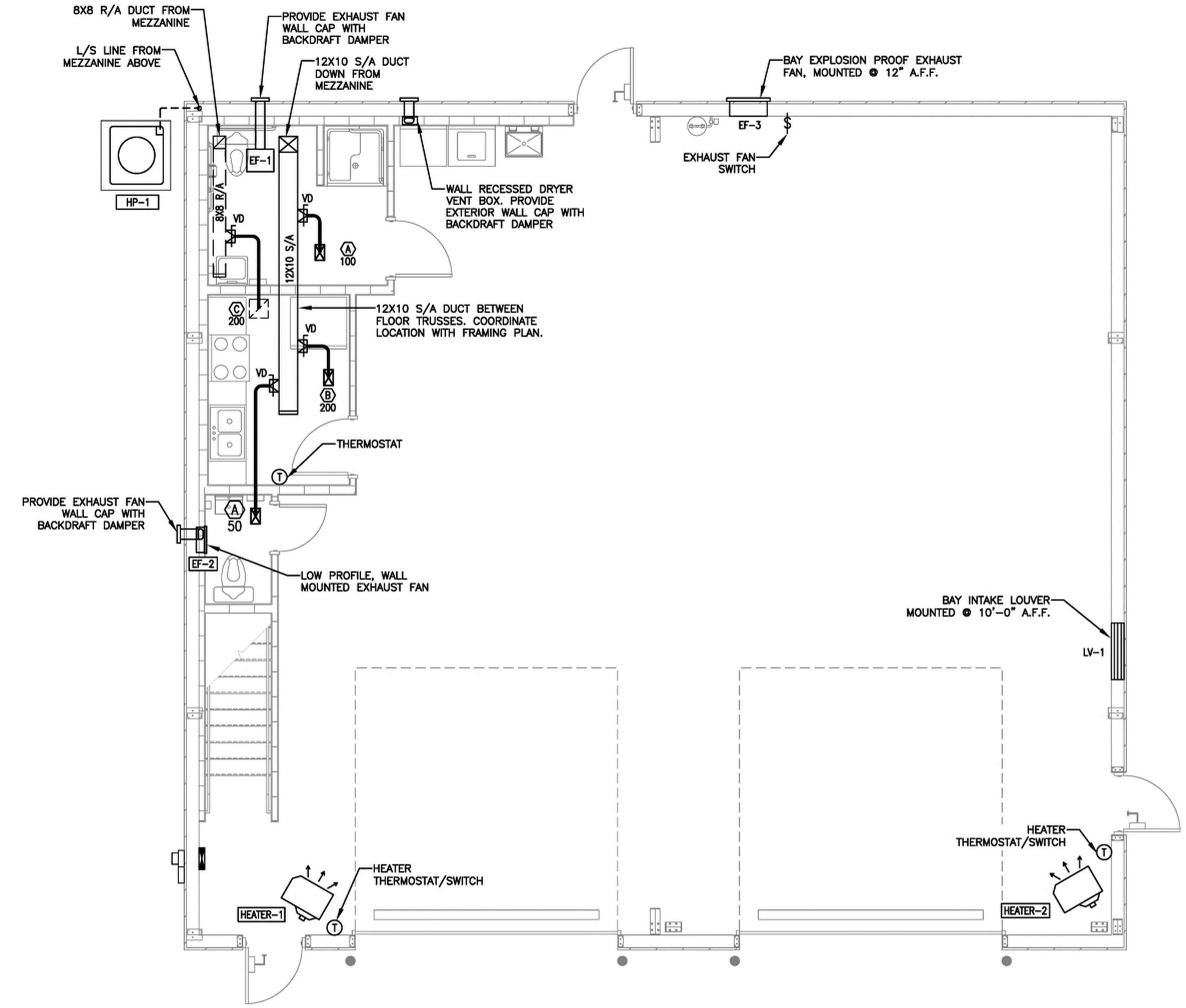
SHEET: MECHANICAL NOTES & DETAILS

M1

SCALE: 1-1/2" = 1'-0"
SCALE: 1" = 1'-0"
SCALE: 3/4" = 1'-0"
SCALE: 1/2" = 1'-0"
SCALE: 1/4" = 1'-0"
SCALE: 3/16" = 1'-0"
SCALE: 1/8" = 1'-0"



2 / M2 HVAC PLAN
MEZZANINE
SCALE: 1/4" = 1'-0"



1 / M2 HVAC PLAN
FIRST FLOOR
SCALE: 1/4" = 1'-0"

DUCTWORK CONVERTER

0.08 FRICTION (HEAD) LOSS PER 100 FEET OF DUCT

AIRFLOW RATE (CFM)	RECTANGULAR DUCT (W)" x (H)"	SPIRAL/ ROUND DUCT ø" (DIAMETER)
300	8 X 8	10
600	12 X 10	12

MECHANICAL CONTRACTOR MAY USE EITHER ROUND OR RECTANGULAR DUCTWORK FOR HVAC SYSTEM, DEPENDING ON THE BUILDING OWNER'S PREFERENCE.

LOUVER SCHEDULE

TAG	TYPE	LOCATION	DESIGN CFM	MIN FREE AREA (SQ.FT.)	FREE AREA %	LOUVER DIMS	DAMPER	SCREEN	MFG & MODEL
LV-1	INTAKE	WALL	3700	5	56	36"X36"X6"	GRAVITY	YES	RUSKIN ESD-635-36X36 OR EQUAL

NEW HEAT PUMP/ COOLING UNIT SCHEDULE

EQUIPMENT INFO			COOLING CAPACITIES						HEATING CAPACITIES		COMPRESSOR/CONDENSER SECTION					ELECTRICAL INFORMATION					MISCELLANEOUS INFORMATION		
TAG	TYPE	LOCATION	NOM. TONS	TOTAL COOLING	MIN. IEER	MIN. EER	MIN. SEER2	MIN. COP	UNIT CAPACITY	MIN. HSPF2	NO. OF COMPR.	COMPRESSOR AMPS RLA	CONDENSER FAN AMPS FLA	NO. OF FANS	FAN HP	UNIT VOLTS	UNIT PHASE	MCA	MOCP	WIRE SIZE (CU. 75 C)	MANUFACTURER/MODEL	UNIT SIZE (H)X(W)X(D)	UNIT WEIGHT
HP-1	SPLIT-SYSTEM HEAT PUMP	OUTDOOR PAD	1.5	18,000	N/A	N/A	15.2	N/A	18,000	7.8	1	8.2	0.95	1	1/6	240	1	11.2	20	#12	GOODMAN/GLZS4BA1810	33"X29"X29"	150 LBS

***BASIS OF DESIGN: GOODMAN EQUIPMENT. SIMILAR AND EQUAL EQUIPMENT BY TRANE, CARRIER, AND ICP MAY BE SUBSTITUTED FOR THE CARRIER EQUIPMENT. SUBMIT MANUFACTURERS LITERATURE TO ENGINEER FOR APPROVAL BEFORE SUBSTITUTING EQUIPMENT.

EXHAUST FAN SCHEDULE

EQUIPMENT INFO				FAN INFORMATION					ELECTRICAL INFORMATION						MFG & MODEL
TAG	QTY.	TYPE	LOCATION	EXHAUST CFM	AREA SERVED	ESP IN WG	FAN DRIVE	SONES	RPM	FAN WATT	UNIT VOLTS	UNIT PHASE	HP	WIRE SIZE (DU. 75 C)	
EF-1	1	EXHAUST	CEILING	100	BATHROOM	0.25	DIRECT	0.4	700	17	120	1	N/A	#12	GREENHECK / SP-A90-QD PROVIDE WALL CAP WITH BACKDRAFT DAMPER
EF-2	1	EXHAUST	WALL MOUNTED	70	RESTROOM	N/A	DIRECT	N/A	N/A	17	120	1	N/A	#12	GREENHECK / SP-LP0511-1 PROVIDE WALL CAP WITH BACKDRAFT DAMPER
EF-3	1	EXHAUST	WALL MOUNTED	4300	BAY AREA	0.25	DIRECT	N/A	1725	800	120	1	1/3	#12	CANARM / SD24-XPF (EXPLOSION PROOF) (CLASS I, GROUP D)

*** RESTROOM EXHAUST FAN SHALL CONTROLLED WITH RESTROOM LIGHT SWITCH.
*** BAY AREA EXHAUST FAN SHALL BE OPERATE AT ALL TIME WHEN THE BUILDING IS OCCUPIED.

NEW AIR HANDLING UNIT SCHEDULE

EQUIPMENT INFO				INDOOR FAN SECTION							ELECTRICAL INFORMATION						MISCELLANEOUS INFORMATION		
TAG	TYPE	LOCATION	NOM. TONS	SUPPLY CFM	OA CFM	ESP INCHES	FAN TYPE	FAN HP	FAN RPM	FAN FLA	HEAT STRIPS(kW)	UNIT VOLTS	UNIT PHASE	MCA	MOCP	WIRE SIZE (DU. 75 C)	MANUFACTURER/MODEL	UNIT SIZE (H)X(W)X(D)	UNIT WEIGHT
AHU-1	UP-FLOW SPLIT-SYSTEM	MEZZANINE	1.5	600	170	N/A	DIRECT	3/4	VARIABLE ECM	4.6	3.0 kW	240	1	21.4	25	#10	GOODMAN/ AMST24BU13 HEATER: HKTSN03X1	45"X21"X18"	112 LBS

***BASIS OF DESIGN: GOODMAN EQUIPMENT. SIMILAR AND EQUAL EQUIPMENT BY TRANE, CARRIER, AND ICP MAY BE SUBSTITUTED FOR THE CARRIER EQUIPMENT. SUBMIT MANUFACTURERS LITERATURE TO ENGINEER FOR APPROVAL BEFORE SUBSTITUTING EQUIPMENT.

REMARKS FOR AHU AND HP UNITS:

1. PROVIDE ELECTRICAL HEAT AS NOTED.
2. PROVIDE DRAIN PAN WITH FLOAT SWITCH.
3. PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT
4. PROVIDE MOTORIZED OUTSIDE AIR DAMPER.
5. PROVIDE VIBRATION ISOLATORS.
6. PROVIDE EQUIPMENT PAD FOR OUTDOOR UNITS.

UNIT HEATER SCHEDULE

EQUIPMENT TYPE			HEATING CAPACITIES			ELECTRICAL INFORMATION						EQUIPMENT INFORMATION				
TAG	FUEL TYPE	LOCATION	BTU OUTPUT	AIRFLOW CFM	FAN TYPE	MOTOR HP	UNIT VOLTS	UNIT PHASE	FAN FLA	MOCP	kW	UNIT SIZE (L)X(W)X(H)	UNIT WEIGHT	UNIT MANU.	MODEL NUMBER	REMARK
HEAT-1	ELECTRIC	SERVICE BAY	34,000	950	AXIAL FAN	0.07	240	1	41.6	55	9.9	49"x41"x34"	277 LBS	REZNOR	EUH-10	①②
HEAT-2	ELECTRIC	SERVICE BAY	34,000	950	AXIAL FAN	0.07	240	1	41.6	55	9.9	49"x41"x34"	277 LBS	REZNOR	EUH-10	①②

① FACTORY THERMOSTAT ② FACTORY CEILING SUSPENSION KIT

GRILLE/RETURN SCHEDULE

TAG	CFM	AIR PATTERN	FACE SIZE	NECK SIZE	SERVICE	MFG & MODEL	REMARKS
A	50-100	3-WAY	14" X 6"	6"ø	SUPPLY	TRUAIRE / 103M	SURFACE, ADJ. DAMPER, OFFWHITE, ALUM.
B	110-250	3-WAY	16" X 8"	8"ø	SUPPLY	TRUAIRE / 103M	SURFACE, ADJ. DAMPER, OFFWHITE, ALUM.
C	100-200	LOUVERED	10" X 10"	8" X 8"	RETURN	TRUAIRE A290 OR EQUAL	SURFACE; OFF WHITE; ALUM.; FILTER

PERMITTING STAMP

JENKINS CONSULTING ENGINEERS, PA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 28803 DOUGLAS JENKINS
10 JULY 2025

DESIGNED / CHECKED BY: BJ
DRAWN BY: BT
PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

FINAL DRAWING [ ] FOR REVIEW PURPOSES ONLY
PRELIMINARY [ ] FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING [✓] FOR CONSTRUCTION

OWNER/TENANT: LUIS TIRADO
3577 OLD US 421 LILLINGTON, NC 27546

CONTRACTOR/BUILDER: TBD

REVISIONS:

REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: MECHANICAL - HVAC PLAN

M2

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE; MOUNT AT 18" A.F.F.
TR	DUPLEX RECEPTACLE; MOUNT AT 18" A.F.F.; TAMPER RESISTANT
GFCI	DUPLEX RECEPTACLE; GROUND FAULT CIRCUIT INTERRUPTER
WP/GFCI	DUPLEX RECEPTACLE; WEATHERPROOF GROUND FAULT CIRCUIT INTERRUPTER
	QUAD RECEPTACLE; MOUNT AT 18" A.F.F.
	2 POLE 208/240V RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	FLOOR MOUNTED RECEPTACLE
	SINGLE POLE POWER/LIGHTING HOMERUN
	2-POLE POWER HOMERUN
	3-POLE POWER HOMERUN (3 PHASE)
	WALL MOUNTED DATA OUTLET
	WALL MOUNTED VOICE (TELEPHONE) OUTLET
	WALL MOUNTED VOICE/DATA OUTLET
TC	TIMECLOCK
TV	TELEVISION OUTLET
	DISCONNECT
J	JUNCTION BOX
	POWER PANEL
$	SWITCH
$3	3-WAY SWITCH
$D	SWITCH WITH DIMMER
OS	OCCUPANCY SENSOR WITH MANUAL OVERRIDE
	LAY-IN/SURFACE MOUNTED LED LIGHT FIXTURE
	LAY-IN/SURFACE MOUNTED LED; NIGHT LIGHT
	PENDANT LIGHT
	CAN LIGHT
	EMERGENCY LIGHT
EXIT	EXIT/EMERGENCY COMBO
EXIT	EXIT LIGHT
	REMOTE HEAD FOR EXIT LIGHTING
	EXTERIOR MOUNTED WALL PACK

ELECTRICAL NOTES:

ALL WORK SHALL BE IN ACCORDANCE WITH 2020 NEC.

WIRE AND CABLE SHALL BE INSULATED, TYPE THHN, 600 VOLTS, WITH COPPER CONDUCTORS. CONDUCTOR SIZES NO. 8 AWG AND LARGER MAY BE STRANDED. CONDUCTOR SIZES NO. 10 AWG AND SMALLER MAY BE SOLID OR STRANDED.

ROMEX CAN NOT BE USED IN THIS PROJECT. MC CAN BE USED.

EMT SHALL BE GALVANIZED STEEL TUBING 1/2-INCH MINIMUM SIZE, EQUAL TO ELECTRUNITE BRAND OR APPROVED AND USED ONLY WITH HEXAGONAL ALL STEEL COMPRESSION FITTINGS. MC CABLE MAY BE SUBSTITUTED FOR CONDUIT RACEWAYS WHERE PERMITTED BY THE CODE, AND APPROVED BY OWNER

PLASTIC CONDUIT SHALL BE RIGID, 3/4-INCH MINIMUM, NONMETALLIC, HEAVY DUTY, POLYVINYLCHORIDE (PVC). TYPE I WILL BE USED FOR CONCRETE ENCASEMENT. FITTINGS SHALL BE THE SAME MATERIALS AND MANUFACTURER AS THE PLASTIC CONDUIT.

FLEXIBLE METAL CONDUIT SHALL BE 1/2-INCH MINIMUM SINGLE STRIP, STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, MAXIMUM LENGTH OF 72 INCHES FOR LIGHTING, AND 36 INCHES FOR MOTORS. FLEXIBLE METAL CONDUIT SHALL BE LIQUID TIGHT OR WATER TIGHT WITH PVC JACKET WHERE USED IN DAMP, WET, OR OUTSIDE AREAS, AND LIQUID TIGHT OR WATER TIGHT CONNECTORS SHALL BE USED.

NO RECEPTACLES OR TELEPHONE OUTLETS ARE TO BE MOUNTED BACK TO BACK. KEEP AT LEAST 1 1/2 INCHES BETWEEN RECEPTACLES AND TELEPHONE OUTLETS.

ALL CONDUCTORS SHALL BE COPPER WITH A MINIMUM SIZE OF #12 AWG EXCEPT FOR FIRE ALARM. THESE CONDUCTORS SHOULD COMPLY WITH NFPA REQUIREMENTS.

THE ELECTRICAL CONTRACTOR SHALL ALIGN ALL FIXTURES, SMOKE DETECTORS, CEILING DIFFUSERS, ETC. AS REQUIRED TO PROVIDE A UNIFORM PRESENTATION. FOLLOW THE REFLECTED CEILING PLAN IF PROVIDED

CIRCUIT BREAKERS AND WIRE ARE SIZED FOR SPECIFIC EQUIPMENT. BEFORE ORDERING WIRE, BREAKERS, FIXTURES, CONDUIT, AND ETC. FOR THIS PROJECT: THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS ON THE JOB AND VERIFY THE ELECTRICAL DATA FOR THE EQUIPMENT THAT WILL BE ACTUALLY INSTALLED. RECOMPUTE WIRE AND BREAKER SIZES IF REQUIRED BY THE NEC.

THE MOUNTING HEIGHTS AND LOCATIONS OF ALL WALL MOUNTED OUTLETS AND JUNCTION BOXES SHALL BE REVIEWED AND COORDINATED WITH THE GENERAL CONTRACTOR AND OWNER PRIOR TO INSTALLATION FOR USE WITH ACTUAL EQUIPMENT.

ALL LIGHT SWITCHES, RECEPTACLES, WALL PLATES, TELEPHONE/COMPUTER OUTLET BOXES, AND, CABLE OUTLET BOXES SHALL BE WHITE.

EACH CONTRACTOR WILL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED IN HIS CONTRACT AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL BE REPLACED AT THE ELECTRICAL CONTRACTORS EXPENSE.

THE ELECTRICAL CONTRACTOR SHALL REFER TO THE DRAWINGS FOR FLOOR PLAN AND BUILDING ELEVATION DIMENSIONS.

THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE. THINK OF OTHER CONTRACTORS AND THEIR REQUIREMENTS IN VERTICAL CHASES AND WALL MOUNT SPACE. ALL CONTRACTORS TO FOLLOW THIS ORDER OF PRIORITY:
1. STORM AND SANITARY SEWER LINES
2. DUCTWORK AND HVAC SYSTEMS
3. HOT AND COLD WATER LINES
4. RIGID CONDUIT
5. CABLE

THE ELECTRICAL CONTRACTOR TO ORGANIZE HIS CONDUIT, WIRE, AND CABLE RUNS IN ATTIC SPACES AND ABOVE CEILINGS. MAKE RUNS PARALLEL, PERPENDICULAR, AND GROUPED TOGETHER WHERE POSSIBLE. LOCATE MAJOR GROUPINGS OVER HALLWAYS AND AREAS OF PUBLIC ACCESS. FREE RUNS OF PHONE, TELEVISION, SECURITY, ALARM, AND OTHER CABLES IS NOT ACCEPTABLE.

ALL DISCONNECT SWITCHES AND BREAKER SIZES SHOWN FOR MECHANICAL EQUIPMENT, KITCHEN EQUIPMENT, AND ETC. SHALL BE VERIFIED BEFORE PURCHASE AND INSTALLATION OF SAID EQUIPMENT WITH THE EQUIPMENT SUPPLIER AND MECHANICAL CONTRACTOR.

WHERE EQUIPMENT PENETRATES EXTERIOR WALLS OR ROOF, THEY SHALL BE PROPERLY SEALED.

EXHAUST FANS ARE TO BE PROVIDED AND INSTALLED BY THE MECHANICAL CONTRACTOR, AND ELECTRICAL WIRING BY THE ELECTRICAL CONTRACTOR.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE NAMEPLATES FOR IDENTIFICATION OF ALL EQUIPMENT, SWITCHES, PANELS, ETC. THE NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT AND BACK WITH WHITE CORE. WHITE ENGRAVED LETTERS (1/4 INCH MINIMUM) ETCHED INTO THE WHITE CORE. NAME TAGS TO BE MOUNTED WITH SELF-TAPPING SHEET METAL SCREWS.

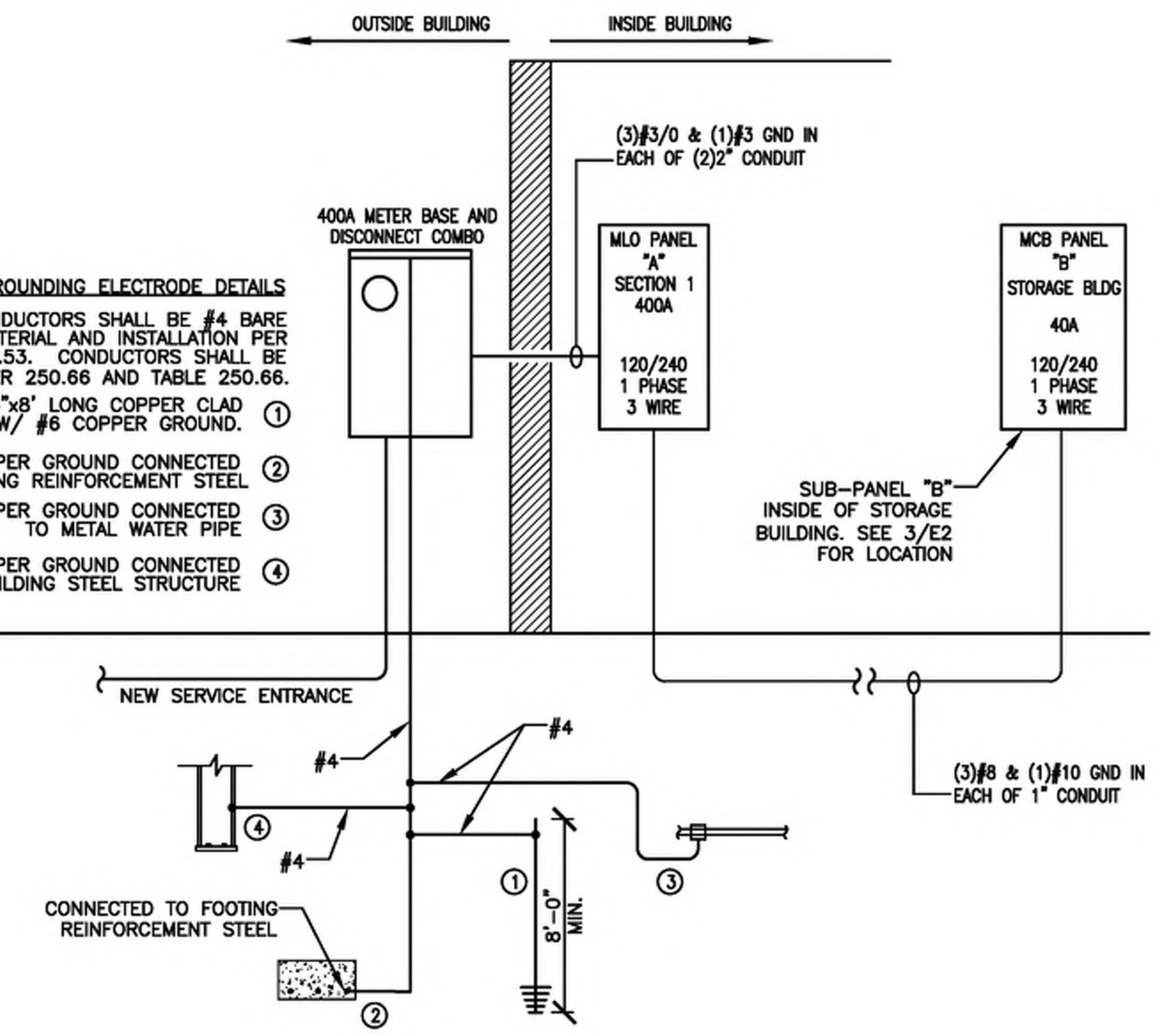
THE ELECTRICAL CONTRACTOR IS NOT TO SCALE THE DRAWINGS FOR RECEPTACLES AND LIGHT FIXTURES TO BE INSTALLED. THE DRAWINGS ARE FOR DIAGRAMMATIC PURPOSES ONLY TO SHOW GENERAL LOCATION. THE ELECTRICAL CONTRACTOR TO COORDINATE EXACT LOCATION OF RECEPTACLES AND LIGHT FIXTURES WITH THE GENERAL CONTRACTOR AND/OR CASEWORK DRAWINGS.

ALL LIGHT SWITCHES AND RECEPTACLES SHALL BE RATED FOR 20 AMP UNLESS NOTED OTHERWISE.

GROUNDING ELECTRODE DETAILS

GROUNDING ELECTRODE CONDUCTORS SHALL BE #4 BARE COPPER. OTHER MATERIAL AND INSTALLATION PER NEC 250.50, 250.52 AND 250.53. CONDUCTORS SHALL BE SIZED PER 250.66 AND TABLE 250.66.

1. (2) 3/4"x8' LONG COPPER CLAD GROUNDING RODS W/ #6 COPPER GROUND.
2. #4 COPPER GROUND CONNECTED BUILDING FOOTING REINFORCEMENT STEEL
3. #4 COPPER GROUND CONNECTED TO METAL WATER PIPE
4. #4 COPPER GROUND CONNECTED TO BUILDING STEEL STRUCTURE



POWER RISER DIAGRAM

NOT TO SCALE

PANEL "A"

PHASE: 1	WIRE: 3	VOLTS: 240/120	MAIN: 400A MLO
TYPE: NEMA 1	MOUNTING: RECESSED		ENCLOSURE: TYPE 1
SHORT CIRCUIT RATING: 22 kA RMS SYM.			
X GROUND TERMINAL BAR		X NEUTRAL TERMINAL BAR	

PHASE LOADING A	PHASE LOADING B	DESCRIPTION	WIRE SIZE	CKT. BKR. TRIP	CKT. NO.	A	B	CKT. NO.	CKT. BKR. TRIP	WIRE SIZE	DESCRIPTION	PHASE LOADING A	PHASE LOADING B
0.60		REFRIGERATOR	#12	20/1 GFCI	1			2	20/1	#12	RECEPT-RESTROOMS GFCI	0.55	
	0.55	RECEPT- BREAKROOM COUNTER	#12	20/1	3			4	20/1	#12	WASHER		0.85
1.00		MICROWAVE	#12	20/1 GFCI	5			6	20/1	#12	RECEPT- LEFT WALL	0.37	
	4.00	RANGE	#8	50/2	7			8	20/1	#12	RECEPT - BACK WALL		0.55
4.00					9			10	20/1	#12	RECEPT - RIGHT WALL	0.55	
	1.34	GARAGE DOOR	#12	20/1	11			12	30/2 GFCI	#10	CLOTHES DRYER		2.50
1.34		GARAGE DOOR	#12	20/1	13			14				2.50	
	0.18	LIGHTING - BREAK, RESTROOMS	#12	20/1	15			16	20/1	#12	EMERGENCY LIGHTS		0.10
0.83		LIGHTING - BAY AREA	#12	20/1	17			18	20/1	#12	EXTERIOR WALL PACK	0.14	
	0.10	LIGHT - MEZZANINE	#12	20/1	19			20	20/1	#12	BAY AREA EXHAUST FAN		0.80
-		-	-	-	21			22	-	-	-	-	
	-	-	-	-	23			24	-	-	-		-
-		-	-	-	25			26	-	-	-	-	
	-	-	-	-	27			28	-	-	-		-
-		-	-	-	29			30	-	-	-	-	
	-	-	-	-	31			32	40/2	#8	STORAGE BUILDING SUB-PANEL "B"		0.50
-		-	-	-	33			34				0.10	
	2.53	AIR COMPRESSOR	#10	30/2	35			36	30/2	#10	WATER HEATER		2.25
2.53					37			38				2.25	
	2.50	RECEPT- EQUIPMENT	#10	30/2 GFCI	39			40	30/2 GFCI	#10	RECEPT- EQUIPMENT		2.50
2.50					41			42				2.50	
	2.50	RECEPT- EQUIPMENT	#10	30/2 GFCI	43			44	30/2 GFCI	#10	RECEPT- EQUIPMENT		2.50
2.50					45			46				2.50	
	4.99	BAY HEATER 1	#6	55/2	47			48	55/2	#6	BAY HEATER 2		4.99
4.99					49			50				4.99	
	2.57	AHU-1	#8	35/2	51			52	20/2	#12	HP-1		1.34
2.57					53			54				1.34	
22.86	21.26	SUB-TOTAL (kVA)									SUB-TOTAL (kVA)	17.79	18.88

TOTAL CONNECTED LOAD = 80.79 KVA

TOTAL AMPS = 336.625 AMP

TOTAL OF: 54 SPACES

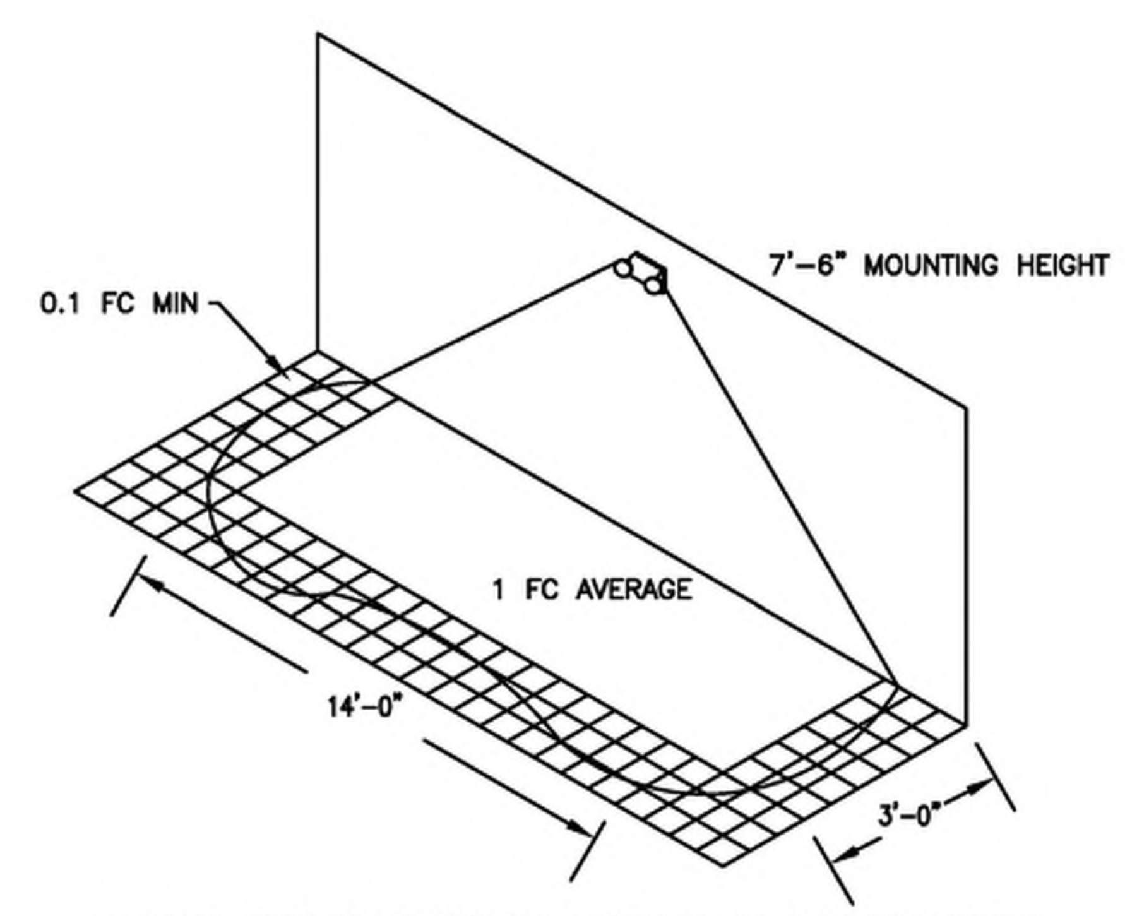
AVAILABLE FAULT CURRENT

UTILITY FAULT @ 240 VOLTS = 100 KVA XFMR 27,800 AMPS
(2 RUNS) #250 KCMIL AL. @ 200 FEET TO DISCONNECT AT SERVICE ENTRANCE
L-L FAULT CURRENT = 9,925 AMPS
L-N FAULT CURRENT = 6,512 AMPS

3/0 COPPER @ 5 FEET TO PANEL (SHORTEST RUN)
L-L FAULT CURRENT = 9,767 AMPS
L-N FAULT CURRENT = 6,377 AMPS

TOTAL CONNECTED LOAD SUMMARY

ITEM	CONNECTED LOAD (KVA)			ESTIMATED LOAD (KVA)
HVAC	27.78	@ 100%	=	27.78
LIGHTING	1.35	@ 125%	=	1.68
RECEPTACLES	2.57	(T-10.00*.60+10.00)	=	2.57
MISC. EQUIPMENT	49.09	@ 60%	=	29.45
TOTAL CONNECTED	80.79 KVA	336.625 AMPS		
ESTIMATED DEMAND	61.48 KVA	255.16 AMPS		



ASSUMES OPEN SPACE WITH NO OBSTRUCTIONS, MOUNTING HEIGHT; 7'-6"; CEILING HEIGHT, AND REFLECTANCES 80/50/20

EMERGENCY LIGHT FIXTURE PERFORMANCE MODEL: LITHONIA EU2L					
MOUNTING HEIGHT	ILLUMINATION LEVEL	SINGLE LUMINAIRE COVERAGE		MULTIPLE LUMINAIRE SPACING	
		3' PATH OF EGRESS	6' PATH OF EGRESS	3' PATH OF EGRESS	6' PATH OF EGRESS
7'-6"	1FC AVG.	14'	10'	18'	14'

APPENDIX B ELECTRICAL DESIGN
2018 BUILDING CODE SUMMARY

PROJECT NAME: TIRADO TRUCK REPAIR GARAGE

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT
METHOD OF COMPLIANCE:
ENERGY CODE: X PRESCRIPTIVE PERFORMANCE
ASHRAE 90.1: PRESCRIPTIVE PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE)
LAMP TYPE REQUIRED IN FIXTURE LED
NUMBER OF LAMPS IN FIXTURE (SEE FIXTURE SCHEDULE)
BALLAST TYPE USED IN THE FIXTURE ELECTRONIC
NUMBER OF BALLASTS IN FIXTURE 1
TOTAL WATTAGE PER FIXTURE VARIES PER FIXTURE
TOTAL INTERIOR WATTAGE SPECIFIED VERSUS ALLOWED (WHOLE BUILDING) 1,507 ALLOWED - 1,350 SPECIFIED
TOTAL EXTERIOR WATTAGE SPECIFIED VERSUS ALLOWED N/A

SECTION C406 ADDITIONAL EFFICIENCY PACKAGE OPTIONS

C406.1 BUILDINGS SHALL HAVE AT LEAST ONE OF THE FOLLOWING PRESCRIPTIVE COMPLIANCE (REQUIRED FOR NEW BUILDINGS, OPTIONAL FOR EXISTING BUILDINGS)

1. MORE EFFICIENT MECHANICAL EQUIPMENT PER C406.2
2. REDUCED LIGHTING POWER DENSITY PER C406.3
3. ENHANCED LIGHTING CONTROL SYSTEMS PER C406.4
4. ON-SITE SUPPLY OF RENEWABLE ENERGY PER C406.5
5. DEDICATED OUTDOOR AIR SYSTEM PER C406.6
6. HIGHER EFFICIENCY SERVICE WATER HEATING PER C406.7

DESIGNER STATEMENT:
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE ELECTRICAL SYSTEM AND EQUIPMENT REQUIREMENTS OF THE 2018 NC ENERGY CONSERVATION CODE.

SIGNED: Buddy Jenkins
NAME: BUDDY JENKINS
TITLE: PROFESSIONAL ENGINEER

PERMITTING STAMP

NORTH CAROLINA PROFESSIONAL SEAL C-3070 JENKINS CONSULTING ENGINEERS, PA CORPORATION
JENKINS CONSULTING ENGINEERS, PA
OFFICE in EUREKA SPRINGS, NORTH CAROLINA
CORPORATION NUMBER C-3070 buddyj@jenkinsce.pro
1606 McARTHUR RD. FAYETTEVILLE, NC 28311-1002
910.822.1724
NORTH CAROLINA PROFESSIONAL SEAL 28803 ENGINEER DOUGLAS "BUDDY" JENKINS
10 JULY 2025

DESIGNED / CHECKED BY: BJ
DRAWN BY: BT
PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

OWNER/TENANT: LUIS TIRADO
3577 OLD US 421 LILLINGTON, NC 27546

CONTRACTOR/BUILDER: TBD
TBD

REVISIONS: REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

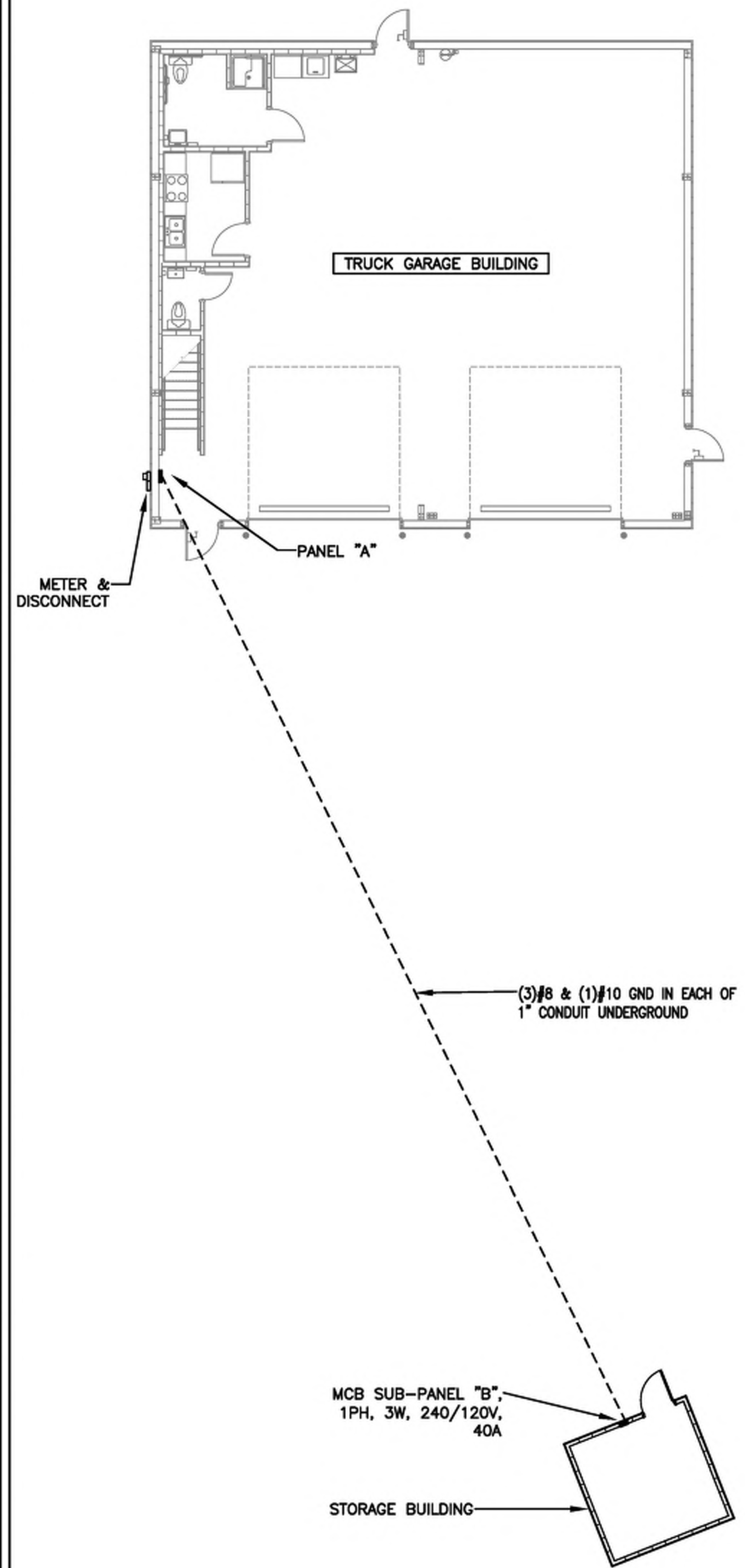
PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: ELECTRICAL RISERS & NOTES

E1

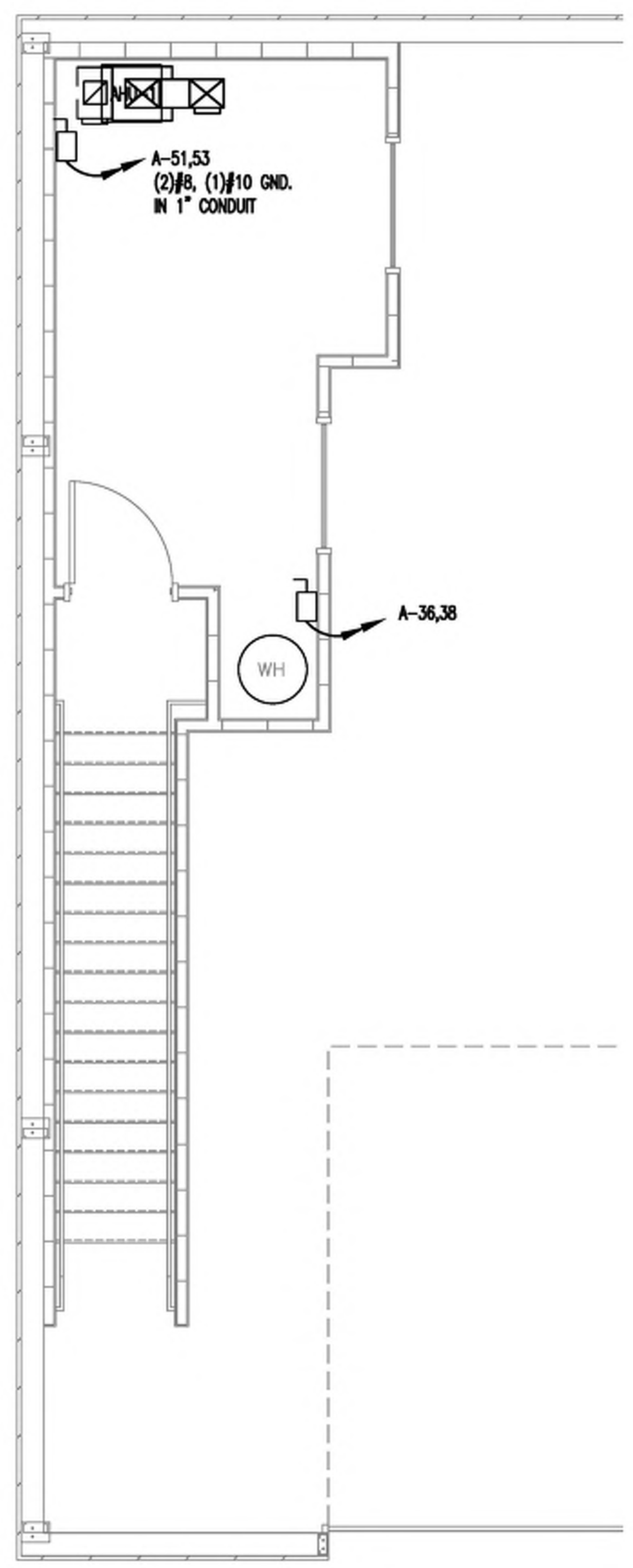
SCALE: 1-1/2" = 1'-0" 0 4" 8" 1'-4"
SCALE: 1" = 1'-0" 0 6" 1'-0" 2'-0"
SCALE: 3/4" = 1'-0" 0 8" 1'-4" 2'-8"
SCALE: 1/2" = 1'-0" 0 1' 2' 4'
SCALE: 1/4" = 1'-0" 0 2' 4' 8'
SCALE: 3/16" = 1'-0" 0 2'-8" 5'-4" 10'-8"
SCALE: 1/8" = 1'-0" 0 4' 8' 16'

Drawing File: H:\2025\Tirado Truck-Harnett Co PID 2025-04-02.2\DWG\MEP-Tirado PEMB-24 June 2025.dwg
Plotted by: bert
Plotted Date: Jul 10, 2025 - 10:53am



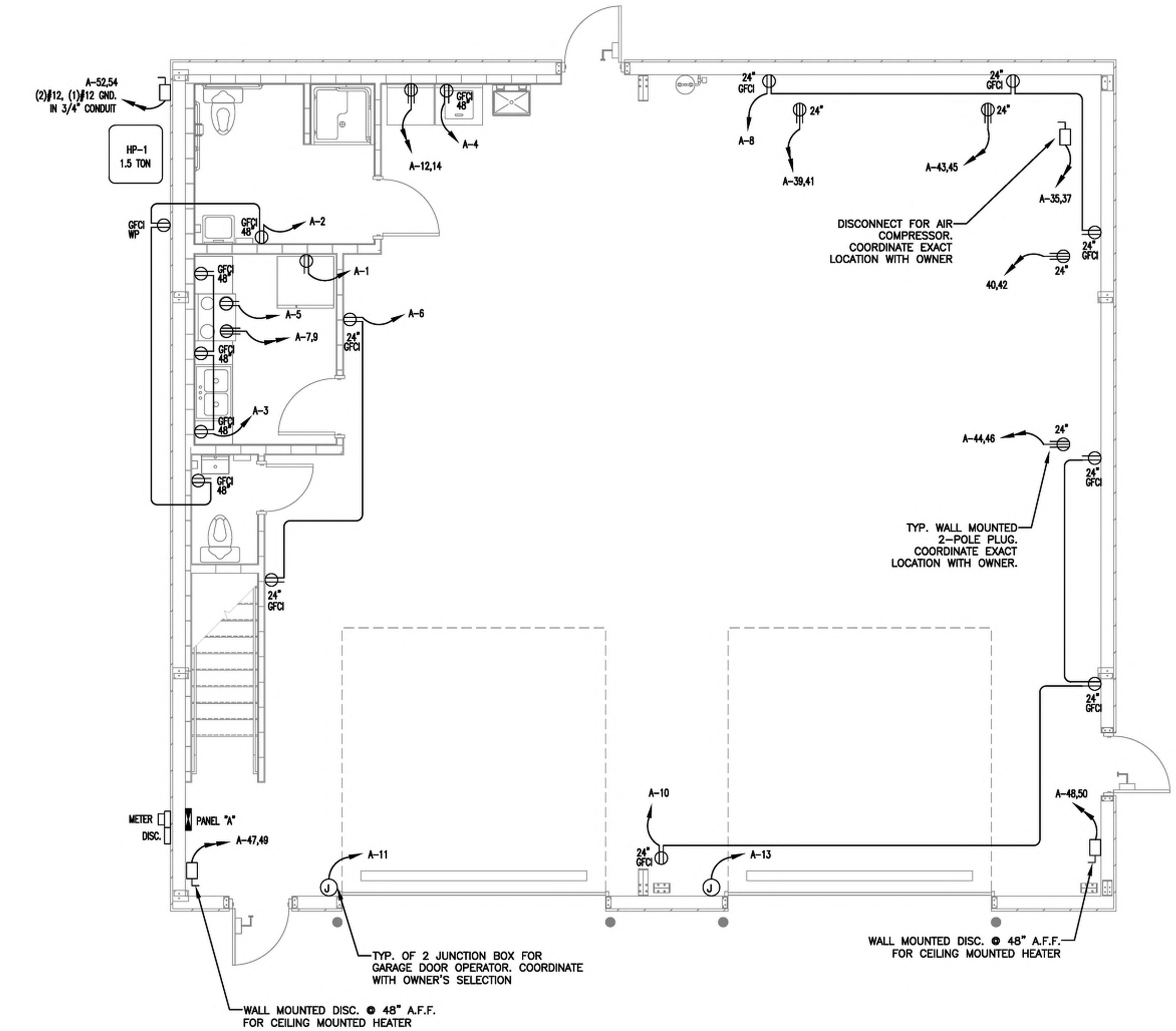
3 POWER PLAN
E2 SITE

0 5' 10' 20'
SCALE: 1" = 10'-0"



2 POWER PLAN
E2 MEZZANINE

0 2' 4' 8'
SCALE: 1/4" = 1'-0"



1 POWER PLAN
E2 FIRST FLOOR

0 2' 4' 8'
SCALE: 1/4" = 1'-0"

JENKINS CONSULTING ENGINEERS, PA

10 JULY 2025

DESIGNED / CHECKED BY: BJ
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PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

OWNER/TENANT: LUIS TIRADO
CONTRACTOR/BUILDER: TBD

REVISIONS:

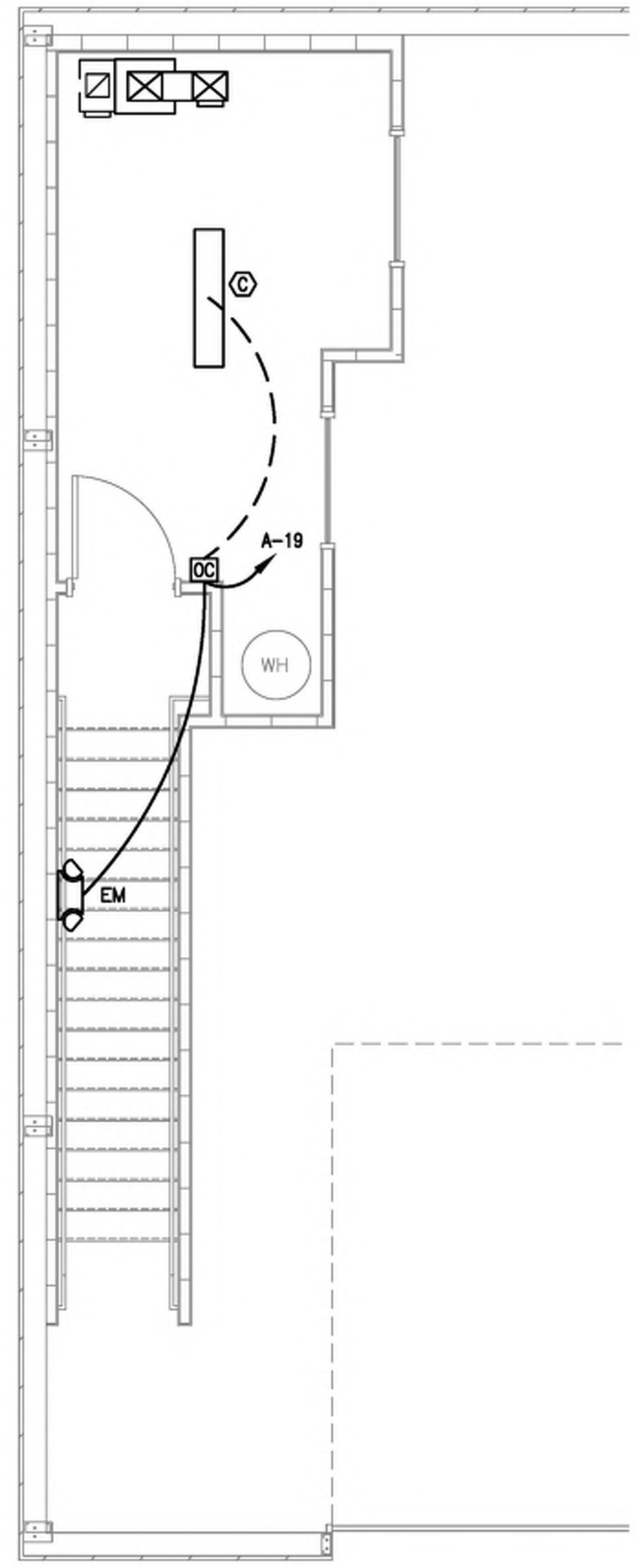
REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

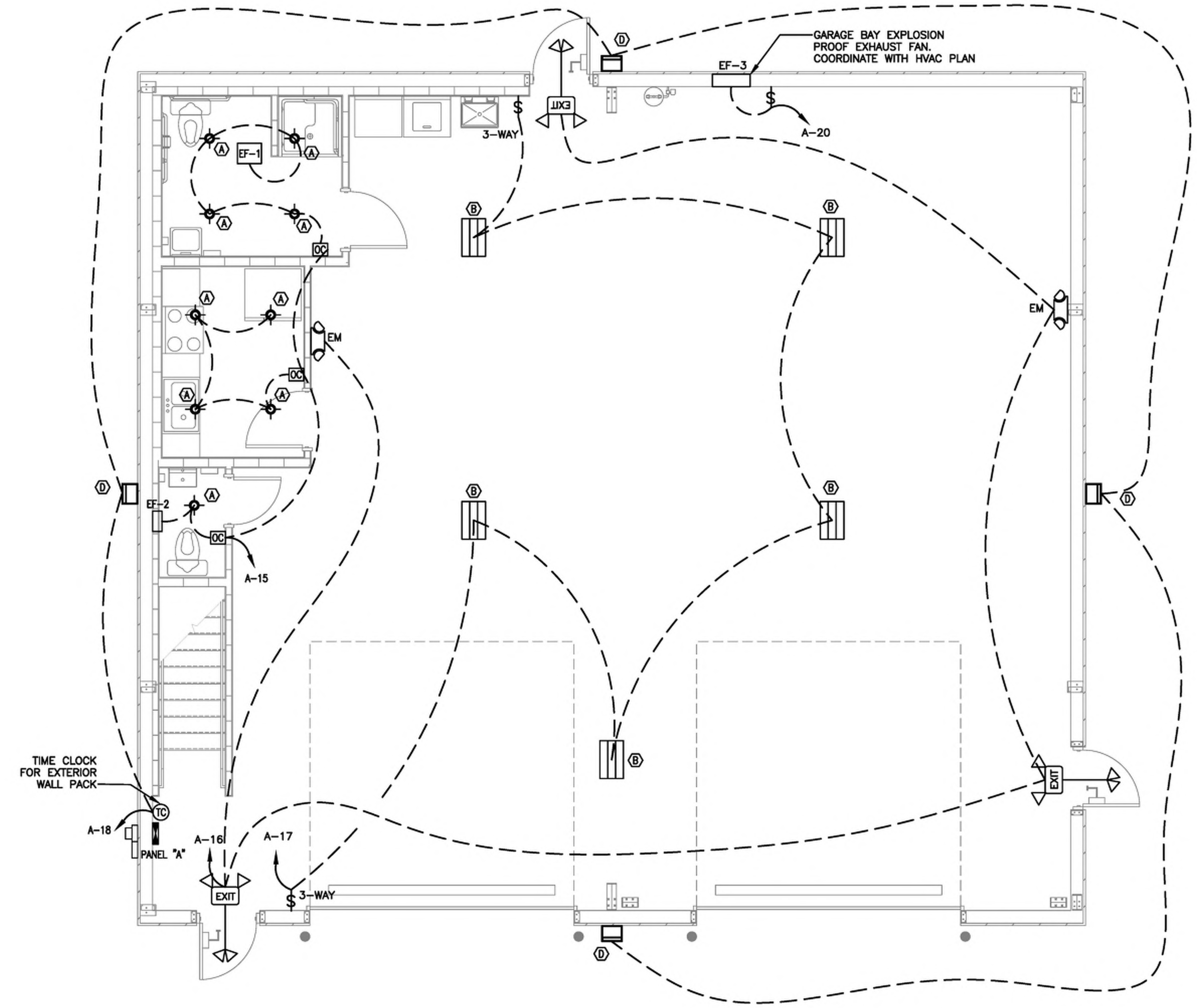
PERMITTING STAMP

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: ELECTRICAL – POWER PLAN

E2





2 / E3 LIGHTING PLAN
MEZZANINE
SCALE: 1/4" = 1'-0"

1 / E3 LIGHTING PLAN
FIRST FLOOR
SCALE: 1/4" = 1'-0"

LIGHT FIXTURE SCHEDULE

TAG	DESCRIPTION	SIZE	MOUNTING	LENS	COLOR	LUMENS	BULB	BALLAST TYPE	HOUSING	VOLTAGE	WATTAGE	MANU/MODEL NUMBER	REMARKS
A	LED RECESSED DOWNLIGHT	6"ø	RECESSED	N/A	5000 K	1210	LED	LED DRIVER	STEEL	120	14.3	LITHONIA NO. WF6 LED 50K MVOLT 90CRI OR EQUAL	
B	LED HIGH BAY LIGHT	24"X18"	SURFACE	N/A	5000 K	22000	LED	LED DRIVER	STEEL	120	165	LITHONIA NO. IBE L24 22000LM ATC MD 50K 80CRI OR EQUAL	
C	LED TROFFER	48"X12"	SURFACE	N/A	5000 K	4000	LED	LED DRIVER	STEEL	120	165	LITHONIA NO. SBL4 4000LM 80CRI 40K OR EQUAL	
D	EXTERIOR LED WALL PACK	13" X 9"	SURFACE	N/A	4000 K	5300	LED	LED DRIVER	STEEL	120	36	LITHONIA NO. TWR1 LED ALO SWW2 UVOLT PE DDBTXD OR EQUAL	
EM	EMERGENCY	N/A	WALL	N/A	N/A	N/A	(2) LAMPS	ELECTRONIC	POLYCARBONATE	120/240		LITHONIA NO. EU2L M12 OR EQUAL	6 VOLT NICAD BATTERY TEST SWITCH, POWER INDICATOR
EX	EXIT SIGN/EMERGENCY LIGHT COMBO	N/A	WALL	SINGLE	N/A	N/A	LED LIGHT	LED DRIVER	POLYCARBONATE	120/240		LITHONIA NO. LHQM LED R HO M6 OR EQUAL	6 VOLT NICAD BATTERY, (2) REMOTE HEADS

PERMITTING STAMP

JENKINS CONSULTING ENGINEERS, PA

10 JULY 2025

DESIGNED / CHECKED BY: BJ
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PROJECT #: 2025-04-02.2
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FINAL DRAWING - FOR REVIEW PURPOSES ONLY
PRELIMINARY - FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING - FOR CONSTRUCTION

OWNER/TENANT: LUIS TIRADO
CONTRACTOR/BUILDER: TBD

REVISIONS:

REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: ELECTRICAL – LIGHTING PLAN

E3

PLUMBING GENERAL NOTES:

PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA PLUMBING CODE 2018 EDITION AND LOCAL CODES.

ALL WORK SHALL BE COORDINATED AND PERFORMED WITH PRIOR APPROVAL FROM THE GENERAL CONTRACTOR AND OWNER TO SUIT THE OWNER'S OPERATING CONDITIONS.

PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE GENERAL CONTRACTOR OF ANY DEVIANCIES FROM THE CONTRACT DRAWINGS PRIOR TO STARTING ANY WORK.

THE PLUMBING CONTRACTOR SHALL COORDINATE WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE. THINK OF OTHER CONTRACTORS AND THEIR REQUIREMENTS IN VERTICAL CHASES AND WALL MOUNT SPACE. ALL CONTRACTORS TO FOLLOW THIS ORDER OF PRIORITY:
1. STORM AND SANITARY SEWER LINES
2. DUCTWORK AND HVAC SYSTEMS
3. HOT AND COLD WATER LINES
4. RIGID CONDUIT
5. CABLE

THE PLUMBING CONTRACTOR TO ORGANIZE HIS PIPING IN ATTIC SPACES, CRAWL SPACES, AND ABOVE CEILINGS. MAKE RUNS PARALLEL, PERPENDICULAR, AND GROUPED TOGETHER WHERE POSSIBLE. LOCATE MAJOR GROUPINGS OVER HALLWAYS AND AREAS OF PUBLIC ACCESS IF POSSIBLE. FREE RUNS OF PIPING IS NOT ACCEPTABLE.

THE PLUMBING CONTRACTOR SHALL LAY OUT AND INSTALL HIS WORK IN ADVANCE OF POURING CONCRETE FLOORS OR WALLS. HE SHALL FURNISH ALL SLEEVES TO THE GENERAL CONTRACTOR FOR OPENINGS THROUGH POURED MASONRY FLOORS, OR WALLS, ABOVE GRADE REQUIRED FOR PASSAGE OF ALL PIPES TO SUPPORT HIS EQUIPMENT.

HORIZONTAL DRAINAGE AND WASTE PIPE SHALL HAVE A MINIMUM SLOPE OR FALL OF 1/8 INCH PER FOOT. ALL CHANGE OF HORIZONTAL DIRECTIONS IN SOIL WASTE PIPE SHALL BE MADE WITH LONG RADIUS FITTINGS WITH "Y" BRANCHES AND 1/8 OR 1/16 BENDS.

COLD AND HOT WATER PIPING ABOVE GRADE SHALL CAN BE CAN BE PEX PIPING (WITH OWNERS APPROVAL).

ALL HOT WATER PIPING SHALL BE INSULATED WITH 1 INCH THICK SECTIONAL INSULATION OR FIBROUS GLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE.

ALL COLD WATER PIPING SHALL BE INSULATED WITH 1/2 INCH THICK SECTIONAL INSULATION OR FIBROUS GLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE.

SANITARY HORIZONTAL WASTE, VENT PIPING, AND FITTINGS ABOVE GRADE SHALL BE SCHEDULE 40 PVC-DWV PIPE-CELLULAR CORE FROM CHARLOTTE PIPE AND FOUNDRY COMPANY OR APPROVED EQUAL, AND MUST MEET OR EXCEED THE REQUIREMENTS OF ASTM F-891, NSF STANDARD NO. 14, AND IAPMO UPC.

ALL WASTE STACK PIPING SHALL BE CAST IRON AND INSULATED FOR SOUND IN WALLS.

ALL WASTE AND STORM PIPING ABOVE CEILING, VERTICAL CHASES, WALLS SHALL BE INSULATED WITH 1/2 INCH THICK SECTIONAL INSULATION OR FIBROUS GLASS MATERIALS WITH FACTORY APPLIED COVER. COVER SHALL BE EMBOSSED VAPOR BARRIER, LAMINATED WITH PRESSURE SEALING CAP ADHESIVE. NO INSULATION REQUIRED IN CRAWL SPACE OR BELOW FLOOR SLAB OF ANY WASTE AND STORM PIPING.

IN LIEU OF FIBERGLASS INSULATION, THE PLUMBING CONTRACTOR IS ALLOWED TO USE CLOSED CELL INSULATION, 1/2 INCH THICK ARMSTRONG/ARMAFLEX II ON ALL COLD WATER PIPES. RIGID URETHANE FOAM INSULATION, 1 INCH THICK ARMSTRONG/ARMALOK II ON ALL HOT WATER PIPING.

ALL PLUMBING EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

ALL FIXTURES, DRAINS, TRAPS, ETC. SHALL BE SET PLUMB AND LEVEL.

ALL HANDICAPPED FIXTURES AND TRIM SHALL BE INSTALLED IN ACCORDANCE WITH THE NORTH CAROLINA PLUMBING CODE 2018 EDITION.

CHROME PLATED ESCUTCHEONS SHALL BE PROVIDED AT EACH WALL PENETRATION.

ESCUTCHEONS SHALL BE CHROME PLATED, SPRING TYPE, ON ALL PIPES PASSING THROUGH WALLS AND CEILINGS IN FINISHED AREAS. FLOOR ESCUTCHEONS SHALL BE CAST BRASS, CHROME PLATED, WITH SET SCREW.

ESCUTCHEONS SHALL BE OF SUFFICIENT SIZE TO COVER OUTSIDE DIAMETER OF THE PIPE OR THE INSULATION OF THE PIPE.

FLASHING FOR VENTS THROUGH THE ROOF SHALL BE TWO-PIECE TYPE, 16 OUNCE COPPER COUNTER FLASHING AND BASE FLASHING, OR A TWO-PIECE TYPE, 4 POUND LEAD COUNTER FLASHING AND BASE FLASHING. THE BASE FLASHING SHALL BE INSTALLED BY THE GENERAL CONTRACTOR WITH THE ROOF SYSTEM.

VENT FLASHING SHALL EXTEND DOWN AT LEAST 4 INCHES FROM THE TOP OF THE PIPE. FLASHING SHALL EXTEND AT LEAST 12 INCHES IN ALL DIRECTIONS FROM THE PIPE AND SHALL BE PARALLEL TO THE ROOF LINE.

ALL EQUIPMENT AND INSTALLED MATERIALS SHALL BE THOROUGHLY CLEAN AND FREE OF ALL DIRT, OIL, GRIT, GREASE, AND ETC.

ALL PLUMBING SYSTEMS AND EQUIPMENT SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE BUILDING FROM THE OWNER.

PLUMBING FIXTURE SCHEDULE

SYMBOL	MANUFACTURER	MODEL #	FIXTURE DESCRIPTION	FIXTURE MOUNTING	ACCESSORIES	SUPPLY	WASTE	VENT	ELECTRICAL	REMARKS
P1	AMERICAN STANDARD	CADET ADA/ 215AA.104	ELONGATED BOWL; FLUSH TANK TOILET	FLOOR MOUNTED	SEAT: AMERICAN STANDARD / 5901.100	3/4" C.W.	4"	2"		SELECTED MODEL OR EQUAL
P2	AMERICAN STANDARD	LUCERNE/ 0355.012	LAVATORY	WALL MOUNTED	DELTA 501-WFHGMHDF FAUCET MIXING VALVE / APOLLO 34B	1/2" C.W. & H.W.	2"	1-1/2"		SELECTED MODEL OR EQUAL
P3	FREEDOM SHOWERS	APFQ3637BF3PR	40" X 38" ADA TRANSFER SHOWER RIGHT VALVE WALL	FLOOR MOUNTED	FOLD-UP SHOWER SEAT, GRAB BARS, SOAP DISH CURTAIN ROD, ADA COMPLIANT SHOWER HEAD	1/2" C.W. & H.W.	3"	2"		SELECTED MODEL OR EQUAL
P4	TBD	TBD	RESIDENTIAL GRADE WASHING MACHINE	FLOOR MOUNTED	PROVIDE GUY GRAY BOX AND SHUTOFF VALVE, DRAIN HOSE	1/2" C.W. & H.W.	2"	1-1/2"		
P5	MUSTEE	19CF	COMBO UTILITY SINK W/ FAUCET, FLOOR TYPE	FLOOR MOUNTED	COMBO WITH 6" SWING END FAUCET	1/2" C.W. & H.W.	2"	1-1/2"		SELECTED MODEL OR EQUAL
P6	TBD	TBD	2 COMPARTMENT KITCHEN SINK	DROP-IN	PROVIDE KITCHEN SINK FAUCET, DRAIN CONNECTION	1/2" C.W. & H.W.	2"	1-1/2"		SELECTED MODEL OR EQUAL
P7	HOROW	HR-WS4531W	RECTANGULAR WALL-MOUNT SINK	WALL MOUNTED	PROVIDE SINGLE HOLE FAUCET	1/2" C.W. & H.W.	2"	1-1/2"		SELECTED MODEL OR EQUAL
P8	TBD	TBD	6" X 144" PRE-SLOPED TRENCH DRAIN W/ TRAFFIC RATED GRATE	FLOOR MOUNTED	–	–	4"	2"		
WH	RHEEM	XE40M06ST45U1	40 US GAL. WATER HEATER, 4.5kW	FLOOR MOUNTED	3/4" T & P RELIEF VALVE; THERMAL EXPANSION TANK PROVIDE DRAIN PAN	3/4" C.W. & H.W.	–	–	240V 4.5KW	SELECTED MODEL OR EQUAL
HB	WATTS	TBD	FROST-PROOF WALL HYDRANT	WALL MOUTNED	–	3/4" C.W.	–	–	–	

WATER CALCULATIONS

QTY.	ITEM	C.W. FIXTURE UNITS	WATER SUPPLY FIXTURE UNITS EACH	WATER SUPPLY FIXTURE UNITS TOTAL
2	WATER CLOSET	5.0	5.0	10.0
2	LAVATORY	1.5	2.0	4.0
1	SERVICE SINK	2.25	2.25	3.0
1	KITCHEN SINK	1.5	2.0	2.0
1	WASHER	1.0	1.0	1.4
1	HOSE BIBB	2.25	2.25	3.0
1	SHOWER	1.0	1.0	1.4
	TOTAL WATER SUPPLY FIXTURE UNITS			24.80

DRAINAGE CALCULATIONS

QTY.	ITEM	DRAINAGE FIXTURE UNITS	DRAINAGE FIXTURE UNITS TOTAL
2	WATER CLOSET	4.0	8.0
2	LAVATORY	1.0	2.0
2	FLOOR DRAIN	2.0	4.0
1	SERVICE SINK	2.0	2.0
1	KITCHEN SINK	2.0	2.0
1	WASHER	2.0	2.0
1	SHOWER	3.0	3.0
	TOTAL DRAINAGE FIXTURE UNITS		23.0

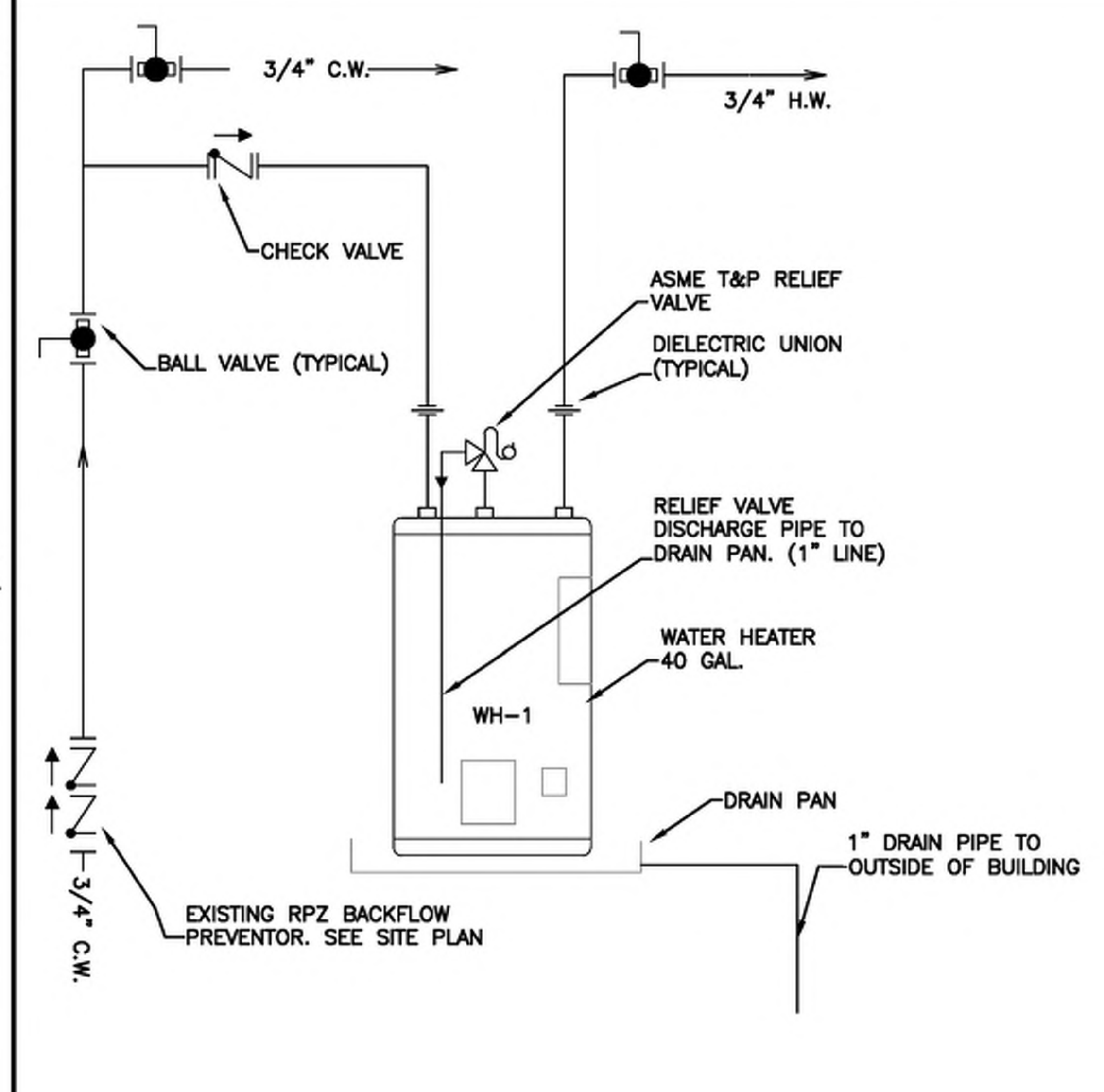
PLUMBING SYMBOL LEGEND

(red line)	HOT WATER LINE
(blue line)	COLD WATER LINE
	PIPE TURNS UP
	PIPE TURNS DOWN
	SHUT OFF VALVE
(solid line)	SANITARY WASTE
(dashed line)	VENT LINE

OIL SEPARATOR CALCULATIONS

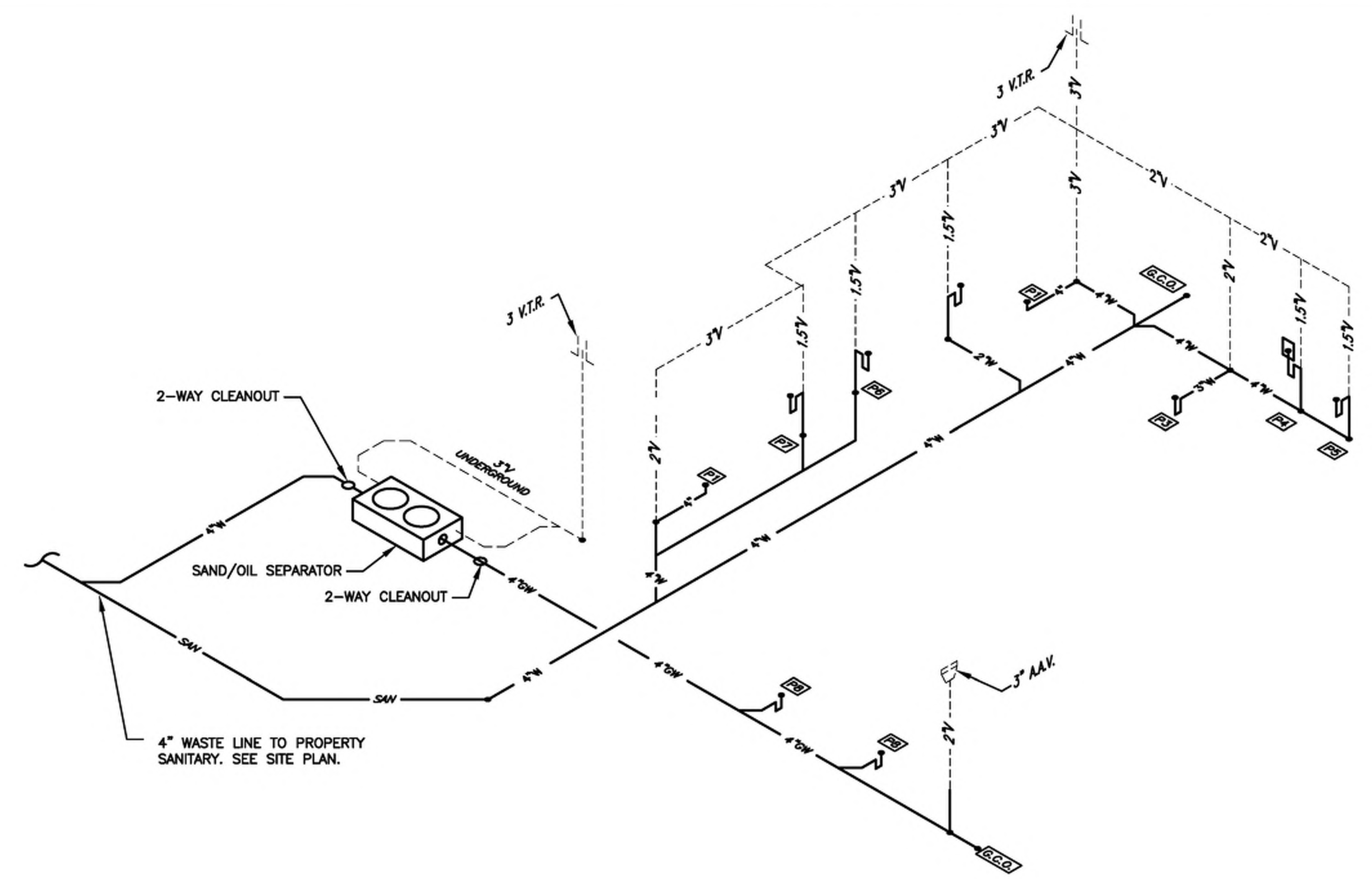
SERVICE AREA:	1,900 SQ.FT.
ANTICIPATED FLOW RATE:	25 GPM
OIL SEPARATOR SIZING	
6.0 CU.FT. FOR FIRST 100 SQ.FT. OF DRAINAGE AREA:	6 CU.FT.
1.0 CU.FT. FOR EACH ADDITIONAL 100 SQ.FT. OF DRAINAGE AREA:	18 CU.FT.
CU.FT. REQUIREMENT:	24 CU.FT.
GAL. REQUIREMENT:	180 GAL

SIZING METHODOLOGY COMPLIES WITH UPC SECTION 1017.2 AND IPC 1003.4.2.2.



WATER HEATER DIAGRAM

NOT TO SCALE



WASTE/VENT – RISER DIAGRAM

NOT TO SCALE

PERMITTING STAMP

JENKINS CONSULTING ENGINEERS, PA
OFFICE in EUREKA SPRINGS, NORTH CAROLINA
CORPORATION NUMBER C-3070 buddyj@jenkinsce.pro
1606 McARTHUR RD. FAYETTEVILLE, NC 28311-1002
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NORTH CAROLINA PROFESSIONAL SEAL C-3070 JENKINS CONSULTING ENGINEERS, PA CORPORATION

NORTH CAROLINA PROFESSIONAL SEAL 28803 ENGINEER DOUGLAS JENKINS

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3577 OLD US 421 LILLINGTON, NC 27546

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TBD

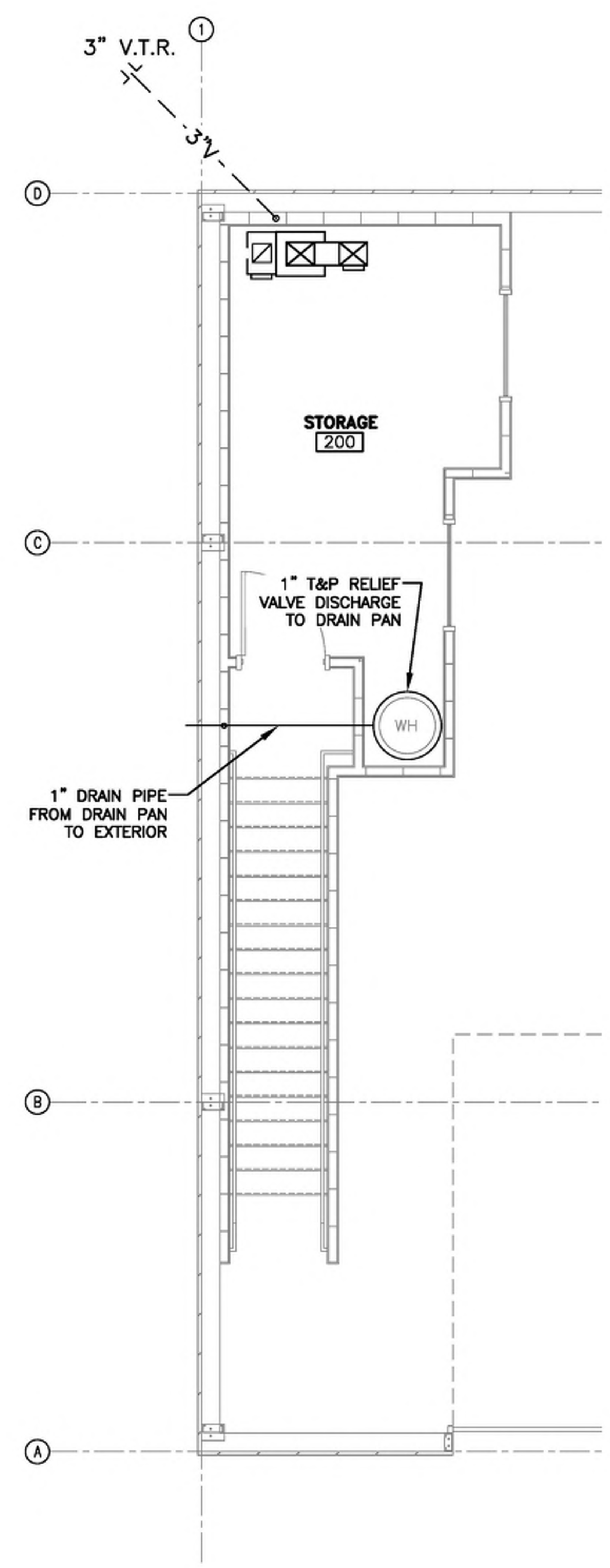
REVISIONS:

REV	DATE	DESCRIPTION
△	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

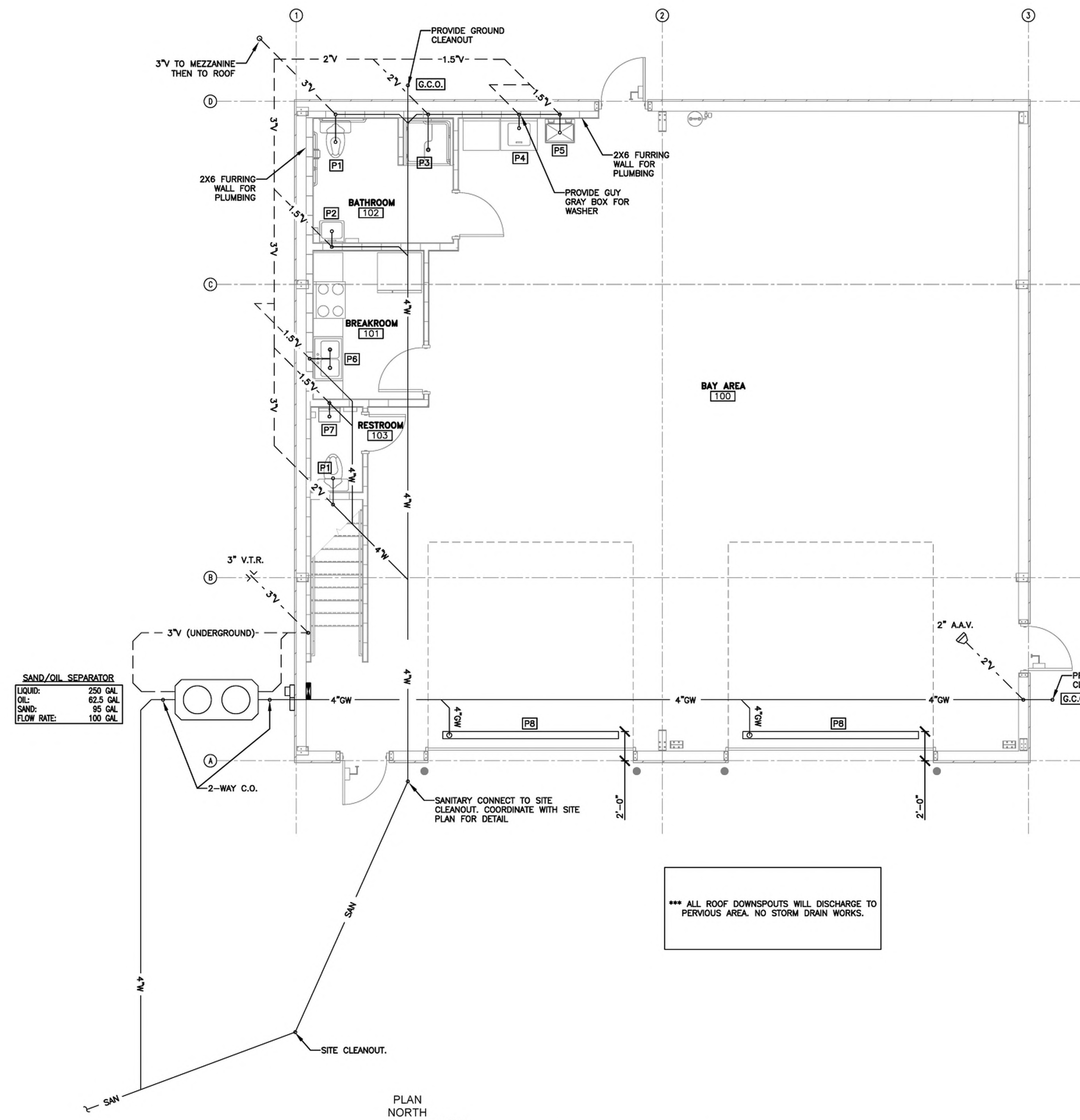
SHEET: PLUMBING SCHEDULES, NOTES, AND RISERS

P1



2 WASTE & VENT PLAN
P2 MEZZANINE

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



SAND/OIL SEPARATOR

LIQUID:	250 GAL
OIL:	62.5 GAL
SAND:	95 GAL
FLOW RATE:	100 GAL

*** ALL ROOF DOWNSPOUTS WILL DISCHARGE TO PERVIOUS AREA. NO STORM DRAIN WORKS.

1 WASTE & VENT PLAN
P2

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

PERMITTING STAMP

JENKINS CONSULTING ENGINEERS, PA
OFFICE in EUREKA SPRINGS, NORTH CAROLINA
CORPORATION NUMBER C-3070
1606 McARTHUR RD. FAYETTEVILLE, NC 28311-1002
910.822.1724
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 28803 DOUGLAS JENKINS
10 JULY 2025

DESIGNED / CHECKED BY: BJ
DRAWN BY: BT
PROJECT #: 2025-04-02.2
DATE: 10 JULY 2025

FINAL DRAWING [ ] FOR REVIEW PURPOSES ONLY
PRELIMINARY [ ] FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING [x] FOR CONSTRUCTION

OWNER/TENANT: LUIS TIRADO
CONTRACTOR/BUILDER: TBD

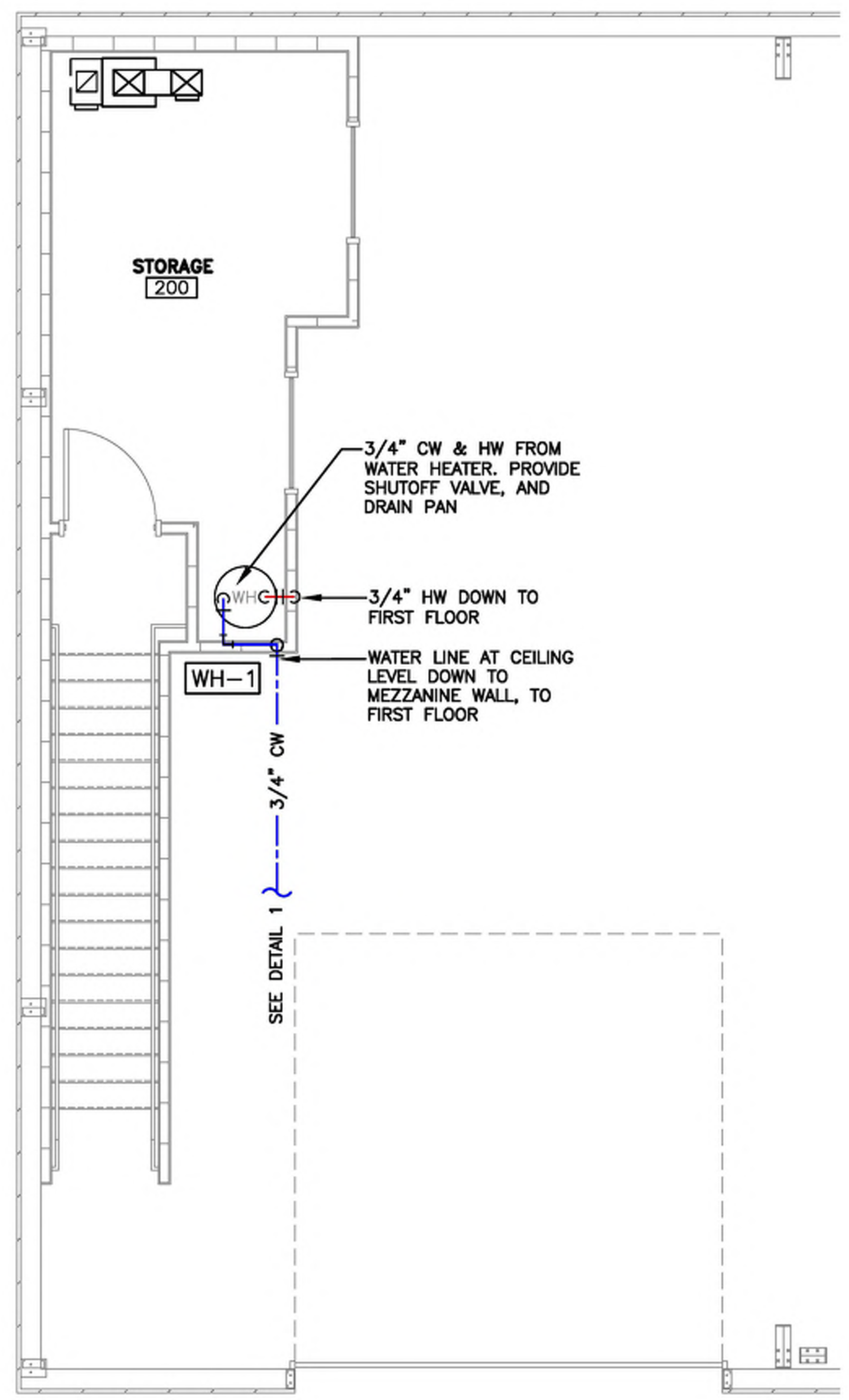
REVISIONS:

REV	DATE	DESCRIPTION
1	07/10/25	FINAL FOR CONS.

PROJECT: TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET: PLUMBING – WASTE & VENT PLAN

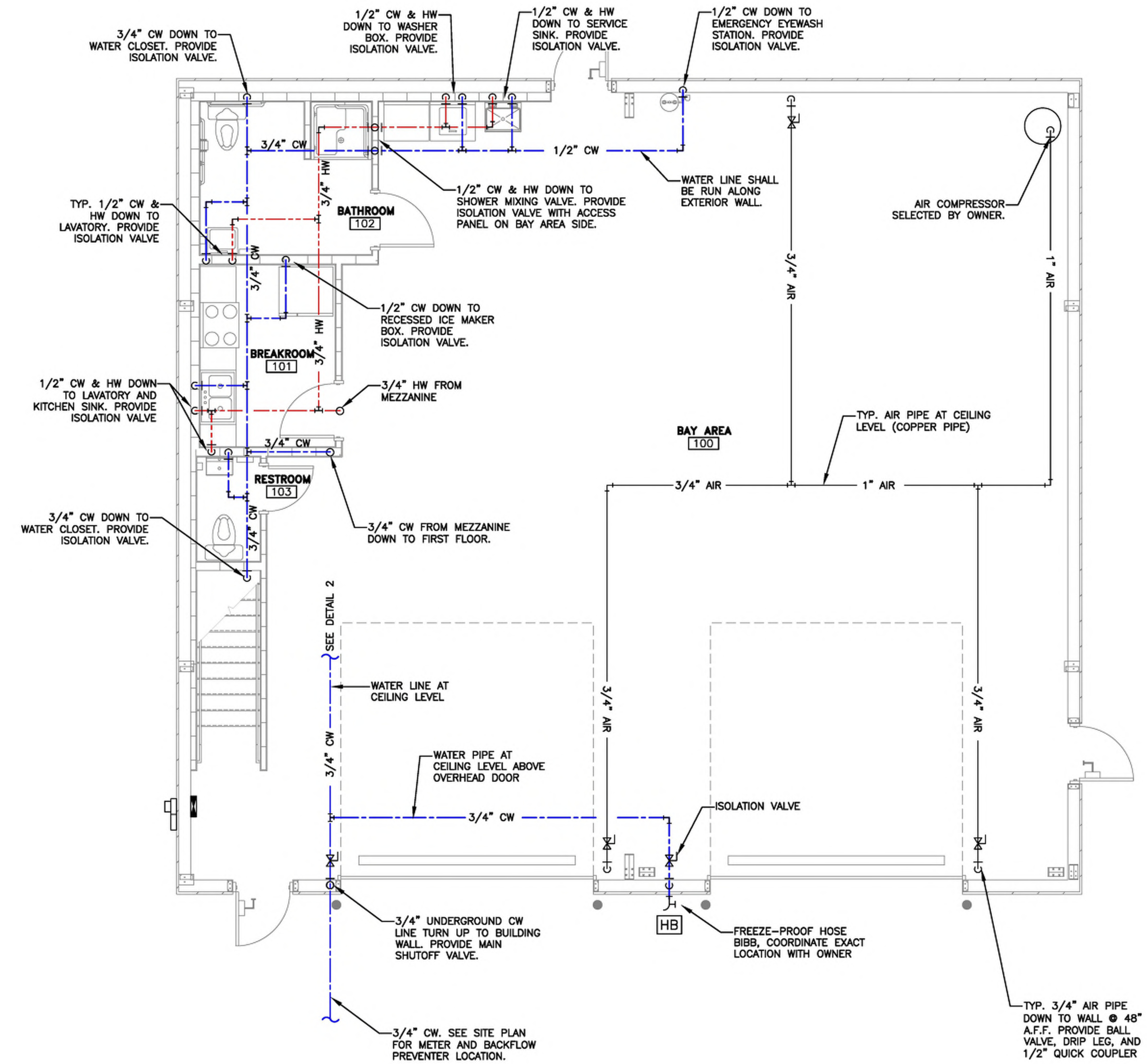
P2



PLAN NORTH
TRUE NORTH

2 WATER PLAN
P3 MEZZANINE

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



PLAN NORTH
TRUE NORTH

1 WATER & AIR PLAN
P3 FIRST FLOOR

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

PERMITTING STAMP

JENKINS CONSULTING ENGINEERS, PA
OFFICE in EUREKA SPRINGS, NORTH CAROLINA
CORPORATION NUMBER C-3070 buddyj@jenkinsce.pro
1606 McARTHUR RD. FAYETTEVILLE, NC 28311-1002
910.822.1724

NORTH CAROLINA PROFESSIONAL SEAL C-3070 JENKINS CONSULTING ENGINEERS, PA CORPORATION
NORTH CAROLINA PROFESSIONAL SEAL 28803 ENGINEER DOUGLAS "BUDDY" JENKINS
10 JULY 2025

DESIGNED / CHECKED BY:	BJ
DRAWN BY:	BT
PROJECT #:	2025-04-02.2
DATE:	10 JULY 2025

FINAL DRAWING ☐ FOR REVIEW PURPOSES ONLY
PRELIMINARY ☐ FOR DESIGN DEVELOPMENT ONLY
FINAL DRAWING ☑ FOR CONSTRUCTION

OWNER/TENANT:
LUIS TIRADO
3577 OLD US 421 LILLINGTON, NC 27546

CONTRACTOR/BUILDER:
TBD

REVISIONS:

REV	DATE	DESCRIPTION
△	07/10/25	FINAL FOR CONS.

PROJECT:
TIRADO TRUCK SHOP
US 421 SOUTH, HARNETT COUNTY, NC

SHEET:
PLUMBING – WATER & AIR PLAN

P3

BUILDER/CONTRACTOR RESPONSIBILITIES

Drawing Validity – These drawings, supporting structural calculations and design certification are based on the order documents as of the date of these drawings. These documents describe the material supplied by the manufacturer as of the date of these drawings. Any changes to the order documents after the date on these drawings may void these drawings, supporting structural calculations and design certification. The Builder/Contractor is responsible for notifying the building authority of all changes to the order documents which result in changes to the drawings, supporting structural calculations and design certification.

Builder Acceptance of Drawings – Approval of the manufacturer's drawings and design data affirms that the manufacturer has correctly interpreted and applied the requirements of the order documents and constitutes Builder/Contractor acceptance of the manufacturer's interpretations of the order documents and standard product specifications, including its design, fabrication and quality criteria standards and tolerances. (AISC code of standard practice Sept 86 Section 4.2.1) (Mar 05 Section 4.4.1)

Code Official Approval – It is the responsibility of the Builder/Contractor to ensure that all project plans and specifications comply with the applicable requirements of any governing building authority. The Builder/Contractor is responsible for securing all required approvals and permits from the appropriate agency as required.

Builder is responsible for State, Federal and OSHA safety compliance – The Builder/Contractor is responsible for applying and observing all pertinent safety rules and regulations and OSHA standards as applicable.

Building Erection – The Builder/Contractor is responsible for all erection of the steel and associated work in compliance with the Metal Building Manufacturers drawings. Temporary supports, such as temporary guys, braces, false work or other elements required for erection will be determined, furnished and installed by the erector. (AISC Code of Standard Practice Sept 86 Section 7.9.1) (Mar 05 Section 7.10.3)

Discrepancies – Where discrepancies exist between the Metal Building plans and plans for other trades, the Metal Building plans will govern. (AISC Code of Standard Practice Sept 86 Section 3.3) (Mar 05 Section 3.3)

Materials by Others – All interface and compatibility of any materials not furnished by the manufacturer are the responsibility of and to be coordinated by the Builder/Contractor or A/E firm. Unless specific design criteria concerning any interface between materials if furnished as a part of the order documents, the manufacturers assumptions will govern.

Modification of the Metal Building from Plans – The Metal Building supplied by the manufacturer has been designed according to the Building Code and specifications and the loads shown on this drawing. Modification of the building configuration, such as removing wall panels or braces, from that shown on these plans could affect the structural integrity of the building. The Metal Building Manufacturer or a Licensed Structural Engineer should be consulted prior to making any changes to the building configuration shown on these drawings. The Metal Building Manufacturer will assume no responsibility for any loads applied to the building not indicated on these drawings.

Foundation Design – The Metal Building Manufacturer is not responsible for the design, materials and workmanship of the foundation. Anchor rod plans prepared by the manufacturer are intended to show only location, diameter and projection of the anchor rods required to attach the Metal Building System to the foundation. It is the responsibility of the end customer to ensure that adequate provisions are made for specifying rod embedment, bearing values, tie rods and or other associated items embedded in the concrete foundation, as well as foundation design for the loads imposed by the Metal Building System, other imposed loads, and the bearing capacity of the soil and other conditions of the building site. (MBMA 06 Sections 3.2.2 and A3)

PROJECT NOTES

Material properties of steel bar, plate, and sheet used in the fabrication of built-up structural framing members conform to ASTM A529, ASTM A572, ASTM A1011 SS, or ASTM A1011 HSLAS with a minimum yield point of 50 ksi. Material properties of hot rolled structural shapes conform to ASTM A992, ASTM A529, or ASTM A572 with a minimum specified yield point of 50 ksi. Hot rolled angles, or other than flange braces, conform to ASTM 36 minimum. Hollow structural shaped conform to ASTM A500 grade b, minimum yield point is 42 ksi for round HSS and 46 ksi for rectangular HSS. Material properties of cold form light gage steel members conform to the requirements of ASTM A1011 SS Grade 55 or ASTM A1011 HSLAS Class 1 Grade 55, with a minimum yield point of 55 ksi.

The manufacturer does not assume any responsibility for the erection nor field supervision of the structure and or any special inspections that may be required by the local building authority during erection (including inspection of the high strength bolts or field welds) as required during erection. The coordination and the costs associated for setting up and Special Inspections are the responsibility of the Erector, Owner, Architect, or Engineer of Record.

Design is based upon the more severe loading of either the roof snow load or the roof live load.

Loads, as noted, are given within order documents and are applied in general accordance with the applicable provisions of the model code and/or specification indicated. Neither the manufacture nor the certifying engineer declares or attests that the loads as designated are proper for the local provisions that may apply or for site specific parameters. The manufacturer's Engineer's certification is limited to design loads supplied by an Architect and/or engineer of record for the overall construction project.

This project is designed using manufacture's standard serviceability standards. Generally this means that all stresses and deflections are within typical performance limits for normal occupancy and standard metal building products. If special requirements for deflections and vibrations must be adhered to, then they must be clearly stated in the contract documents.

This metal building system is designed as enclosed. All exterior components (i.e. doors, windows, vents, etc.) must be designed to withstand the specified wind loading for the design of components and cladding in accordance with the specified building code. Doors are to be closed when a maximum of 50% of design wind velocity is reached.

The design collateral load has been uniformly applied to the design of the building. Hanging loads are to be attached to the purlin web. This may not be appropriate for heavily concentrated loads. Any attached load in excess of 150 pounds shall be accounted for by special design performed by a licensed engineer using concentrated loads and may require separate support members within the roof system.

The metal building manufacturer has not designed the structure for snow accumulation loads at the ground level which may impose snow loads on the wall framing provided by the manufacturer.

DESIGN LOADING

THIS STRUCTURE IS DESIGNED UTILIZING THE LOADS INDICATED AND APPLIED AS REQUIRED BY:

IBC 15

THE BUILDER IS TO CONFIRM THAT THESE LOADS COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT.

ROOF DEAD LOAD		
SUPERIMPOSED	1.99	PSF
COLLATERAL (LIGHTS)	1.00	PSF
ROOF LIVE LOAD	20.00	PSF(NOT REDUCIBLE)
RISK CATEGORY	II – Normal	
SNOW LOAD		
GROUND SNOW LOAD (Pg)	15.00	PSF
SNOW LOAD IMPORTANCE FACTOR (Is)	1.0000	
FLAT ROOF SNOW LOAD (Pf)	10 PSF	(AS PER ASCE 7-10 SECTION 7.3)
MIN. ROOF SNOW LOAD (Pf)	15 PSF	(USED IN DESIGN)
SNOW EXPOSURE FACTOR (Ce)	1.0	
THERMAL FACTOR (Ct)	1.00	
WIND LOAD		
ULTIMATE WIND SPEED	118	MPH
NOMINAL WIND SPEED(Vasd)	91	MPH(IBC SECTION 1609.3.1)
SERVICEABILITY WIND SPEED	76	MPH
WIND EXPOSURE CATEGORY	C	
TOPOGRAPHICAL FACTOR	1.0	
INTERNAL PRESSURE COEFFICIENT (GCpi)	0.18 /-0.18	

ZONE 4, COMPONENT WIND LOAD ≤ 10FT²

28.47 PSF PRESSURE -37.89 PSF SUCTION

ZONE 5, COMPONENT WIND LOAD < 10FT²

28.47 PSF PRESSURE -30.84 PSF SUCTION

ZONES PER ASCE 7-10; FIG. 30.4-1
ZONES PRESSURES SHOWN ARE UN-FACTORED

RAIN INTENSITY

5-MINUTE DURATION, 5-YEAR RECURRENCE (I1) 7.0 IN/HOUR

SEISMIC LOAD

SEISMIC IMPORTANCE FACTOR (Ie) 1.00

S_s 0.185 S_{DS} 0.197

S1 0.087 S_{D1} 0.139

SITE CLASS D STIFF SOIL

SEISMIC DESIGN CATEGORY B

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

COLUMN LINE	TRANSVERSE	LONGITUDINAL FRONT	LONGITUDINAL BACK
BASIC FORCE RESISTING SYSTEM*	H	H	H
RESPONSE MODIFICATION COEFFICIENT(R)	3	3	3
SYSTEM OVER-STRENGTH FACTOR(Ω_0)	2.5000	2.5000	2.5000
SEISMIC RESPONSE COEFFICIENT(C_s)	0.066	0.066	0.066

BLDG DESIGN BASE SHEAR (V) TRANSVERSE 1.18 (k) LONGITUDINAL 1.08 (k)

THE TRANSVERSE DIRECTION IS PARALLEL TO THE RIGID FRAMES
THE LONGITUDINAL DIRECTION IS PERPENDICULAR TO THE RIGID FRAMES
BASIC STRUCTURAL SYSTEM (FROM ASCE 7-10 TABLE 12.2-1)

BASIC FORCE RESISTING SYSTEM*
H. STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE

DRAWING INDEX

DRAWING STATUS

☐ FOR APPROVAL

THESE DRAWINGS, BEING FOR APPROVAL, ARE BY DEFINITION NOT FINAL, AND ARE FOR CONCEPTUAL REPRESENTATION ONLY. THEIR PURPOSE IS TO CONFIRM PROPER INTERPRETATION OF THE PROJECT DOCUMENTS. ONLY DRAWINGS ISSUED "FOR ERECTOR INSTALLATION" CAN BE CONSIDERED AS COMPLETE.

☐ FOR CONSTRUCTION PERMIT

THESE DRAWINGS, BEING FOR PERMIT, ARE BY DEFINITION NOT FINAL. ONLY DRAWINGS ISSUED "FOR ERECTOR INSTALLATION" CAN BE CONSIDERED AS COMPLETE.

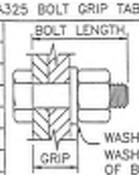
☒ FOR ERECTOR INSTALLATION

FINAL DRAWINGS FOR CONSTRUCTION.

FOR QUESTIONS OR ASSISTANCE CONCERNING ERECTION CALL:
905-477-1894
MONDAY – FRIDAY 7:30AM TO 5:00PM

1/2"ø A325 BOLT GRIP TABLE

GRIP	LENGTH
0 TO 9/16"	1 1/4" F.T.
Over 9/16" TO 1 1/16"	1 3/4" F.T.
Over 1 1/16" TO 1 5/16"	2"
Over 1 5/16" TO 1 9/16"	2 1/4"
Over 1 9/16" TO 1 13/16"	2 1/2"
Over 1 13/16" TO 2 1/16"	2 3/4"
LOCATIONS OF BOLTS LONGER THAN 2 3/4" NOTED ON ERECTION DRAWINGS	
F.T. DENOTES FULLY THREADED	



NOTE:
FULL THREAD ENGAGEMENT IS DEEMED TO HAVE BEEN MET WHEN THE END OF THE BOLT IS FLUSH WITH THE FACE OF THE NUT.

WASHER REQUIRED ONLY WHEN SPECIFIED. WASHER MAY BE LOCATED UNDER HEAD OF BOLT, UNDER NUT, OR AT BOTH AT LOCATIONS NOTED ON ERECTION DRAWINGS. ADD 5/32" FOR EACH WASHER TO MATERIAL THICKNESS TO DETERMINE GRIP.

Rev. 4/4/2017

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER

Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:03:11 -05'00'

NOV 02 2022

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

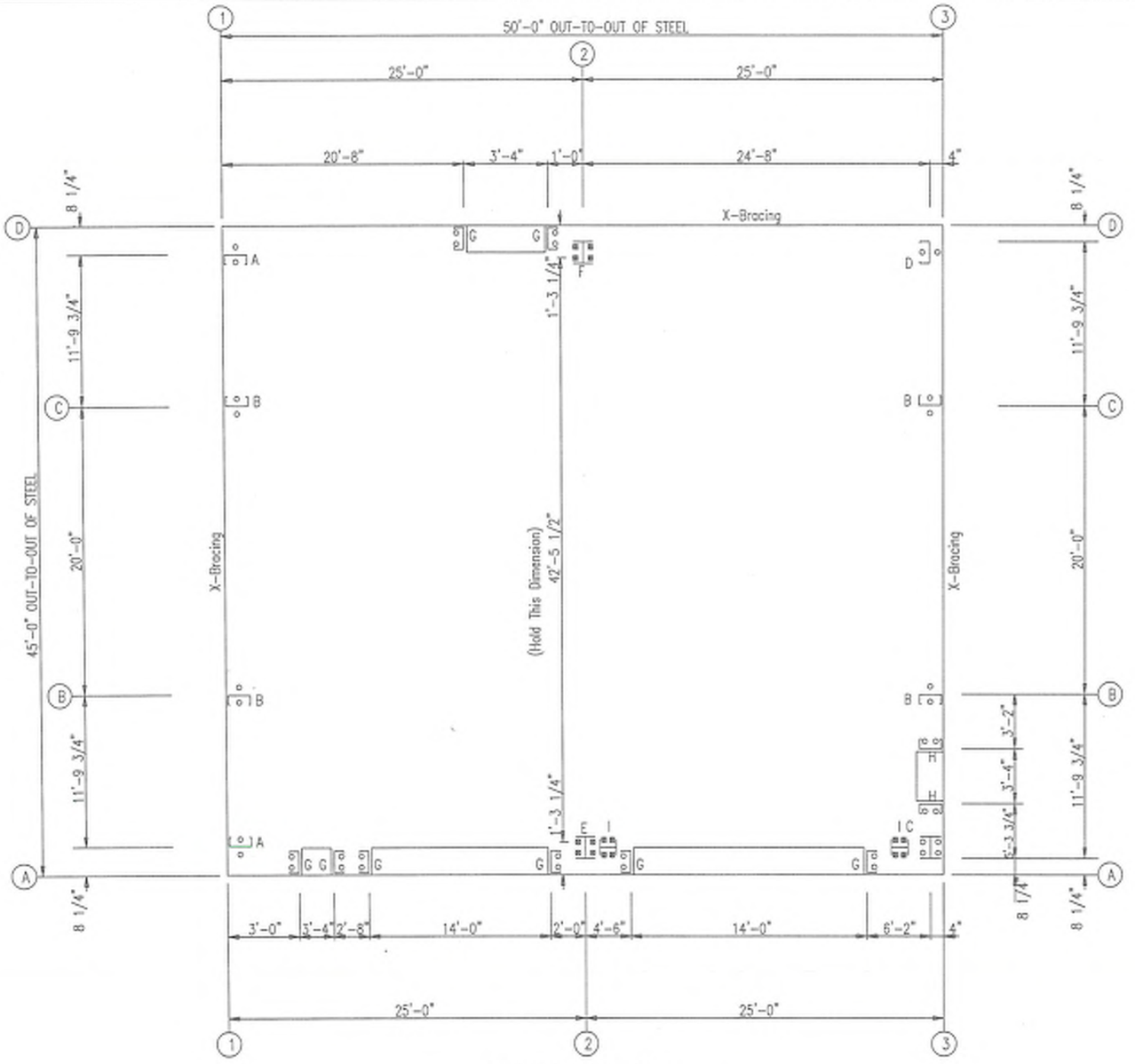
THIS DRAWING PREPARED BY AND/OR UNDER MY DIRECT SUPERVISION

PROJECT: LUIS TIRADO - 45X50X17

CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO

LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	C1	0



ANCHOR BOLT PLAN

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:03:50 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

PROVIDED BY AND/OR UNDER MY DIRECT SUPERVISION

PROJECT: LUIS TIRADO - 45X50X17

CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO

LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	F1	0

GENERAL NOTES

1) THE REACTIONS PROVIDED ARE BASED ON THE ORDER DOCUMENTS AT THE TIME OF MAILING. ANY CHANGES TO BUILDING LOADS OR DIMENSIONS MAY CHANGE THE REACTIONS. THE REACTIONS WILL BE SUPERSEDED AND VOIDED BY ANY FUTURE MAILING.
2) THE REACTIONS PROVIDED HAVE BEEN CREATED WITH THE FOLLOWING LAYOUT (UNLESS NOTHED OTHERWISE)
   A) A REACTION TABLE IS PROVIDED WITH REACTIONS FOR EACH LOAD GROUP
   B) RIGID FRAMES
      (1) SEE NOTE 3.
   C) ENDWALLS
      (1) SEE NOTE 3.
   D) X-BRACING
      1) X-BRACING REACTIONS ARE INCLUDED IN VALUES SHOWN IN THE REACTION TABLES AS NOTED IN THE BRACING REACTIONS TABLE.
      2) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE SIDEWALL, INDIVIDUAL LONGITUDINAL SEISMIC LOADS DO NOT INCLUDE THE AMPLIFICTION FACTOR, OMEGAs.
      3) FOR IBC AND UBC BASED BUILDING CODES, WHEN X-BRACING IS PRESENT IN THE ENDWALL, INDIVIDUAL TRANSVERSE SEISMIC LOADS DO NOT INCLUDE THE AMPLIFICATION FACTOR, OMEGAs.
   E) THE METAL BUILDING MANUFACTURER IS RESPONSIBLE ONLY FOR THE PORTION OF THE ANCHOR ROD DESIGN PERTAINING TO THE TRANSFER OF FORCES BETWEEN THE BASE PLATE BEARING AND THE ANCHOR RODS SHEAR AND TENSION. THE METAL BUILDING MANUFACTURER IS NOT RESPONSIBLE FOR THE ANCHOR ROD EMBEDMENT FOR TRANSFER OF FORCES TO THE FOUNDATION. THE METAL BUILDING MANUFACTURER DOES NOT DESIGN AND IS NOT RESPONSIBLE FOR THE DESIGN, MATERIAL, AND CONSTRUCTION OF THE FOUNDATION EMBEDMENT. THE END USE CUSTOMER SHALL ASSURE THAT ADEQUATE PROVISIONS ARE MADE TO THE FOUNDATION DESIGN FOR LOADS IMPOSED BY COLUMN REACTIONS OF THE BUILDING, OTHER IMPOSED LOADS, AND BEARING CAPACITY OF THE SOIL AND OTHER CONDITIONS OF THE BUILDING SITE. IT IS RECOMMENDED THAT THE ANCHORAGE AND FOUNDATION OF THE BUILDING BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER COMPETENT IN THE DESIGN OF SUCH STRUCTURES.
      i) (REF. APPENDIX A3 OF THE MBMA METAL BUILDING BUILDING SYSTEMS MANUAL)
   F) ANCHOR RODS ARE ASTM F1554 GR. 36 MATERIAL UNLESS NOTED OTHERWISE ON THE ANCHOR ROD LAYOUT DRAWING.
3) REACTIONS ARE PROVIDED AS UN-FACTORED FOR EACH LOAD GROUP APPLIED TO THE COLUMN. THE FACTORS APPLIED TO LOAD GROUPS FOR THE STEEL COLUMN DESIGN MAY BE DIFFERENT THAN THE FACTORS USED IN THE FOUNDATION DESIGN. THE FOUNDATION ENGINEER SHALL APPLY THE APPROPRIATE LOAD FACTORS AND COMBINE THE REACTIONS IN ACCORDANCE WITH THE BUILDING CODE AND DESIGN SPECIFICATIONS FOR PROPER FOUNDATION DESIGN.
   A) FOR PROJECTS USING ULTIMATE DESIGN WIND SPEEDS SUCH AS 2012 IBC, 2015 IBC, OR FLORIDA BUILDING CODE, THE WIND LOAD REACTIONS ARE AT A STRENGTH VALUE WITH A LOAD FACTOR OF 1.0.
   B) FOR IBC CODES, THE SEISMIC REACTIONS PROVIDED ARE AT A STRENGTH LEVEL WITH A LOAD FACTOR OF 1.0, AND DO NOT CONTAIN THE RHO FACTOR.

THE MANUFACTURER DOES NOT PROVIDE "MAXIMUM" LOAD COMBINATION REACTIONS. HOWEVER, THE INDIVIDUAL LOAD REACTIONS PROVIDED MAY BE USED BY THE FOUNDATION ENGINEER TO DETERMINE THE APPLICABLE LOAD COMBINATIONS FOR HIS/HER DESIGN PROCEDURES AND ALLOW FOR AN ECONOMICAL FOUNDATION DESIGN.

ENDWALL COLUMN: BASIC COLUMN REACTIONS (k)

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind_Left1 Horz	Wind_Left1 Vert	Wind_Right1 Horz	Wind_Right1 Vert	Wind_Left2 Horz	Wind_Left2 Vert	Wind_Right2 Horz	Wind_Right2 Vert	Wind Press Horz
1	D	0.2	0.1	1.0	0.5	0.0	-1.4	0.0	-1.2	0.0	-0.7	0.0	-0.4	0.0
1	C	0.7	0.2	4.7	2.5	-2.3	-8.5	0.0	-2.2	-2.3	-6.6	0.0	-0.2	-3.2
1	B	0.7	0.2	4.7	2.5	0.0	-2.2	2.3	-8.5	0.0	-0.2	2.3	-6.6	-3.2
1	A	0.2	0.1	1.0	0.5	0.0	-1.2	0.0	-1.4	0.0	-0.4	0.0	-0.7	0.0

Frm Line	Col Line	Wind Suct Horz	Wind_Long1 Horz	Wind_Long1 Vert	Wind_Long2 Horz	Wind_Long2 Vert	Seis_Left Horz	Seis_Left Vert	Seis_Right Horz	Seis_Right Vert	Seis Long Vert	-MIN_SNOW- Horz	-MIN_SNOW- Vert
1	D	0.0	0.0	-2.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8
1	C	3.5	0.0	-5.4	-0.6	-4.3	-0.3	-0.3	0.0	0.3	0.0	0.0	3.5
1	B	3.5	0.6	-4.3	0.0	-5.4	0.0	0.3	0.3	-0.3	0.0	0.0	3.5
1	A	0.0	0.0	-1.2	0.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8

Frm Line	Col Line	E1UNB_SL_L- Horz	E1UNB_SL_L- Vert	E1UNB_SL_R- Horz	E1UNB_SL_R- Vert
1	D	0.0	0.5	0.0	0.0
1	C	0.0	2.9	0.0	1.2
1	B	0.0	1.2	0.0	2.9
1	A	0.0	0.0	0.0	0.5

Frm Line	Col Line	Dead Vert	Collat Vert	Live Vert	Snow Vert	Wind_Left1 Horz	Wind_Left1 Vert	Wind_Right1 Horz	Wind_Right1 Vert	Wind_Left2 Horz	Wind_Left2 Vert	Wind_Right2 Horz	Wind_Right2 Vert
3	A	0.3	0.1	1.0	0.5	0.0	-1.4	0.0	-1.2	0.0	-0.7	0.0	-0.4
3	B	0.7	0.2	4.7	2.5	-2.3	-8.5	0.0	-2.2	-2.3	-6.6	0.0	-0.2
3	C	0.7	0.2	4.7	2.5	0.0	-2.2	2.3	-8.5	0.0	-0.2	2.3	-6.6
3	D	0.2	0.1	1.0	0.5	0.0	-1.2	0.0	-1.4	0.0	-0.4	0.0	-0.7

Frm Line	Col Line	Wind_Press Horz	Wind_Press Vert	Wind_Suct Horz	Wind_Suct Vert	Wind_Long1 Horz	Wind_Long1 Vert	Wind_Long2 Horz	Wind_Long2 Vert	Seis_Left Horz	Seis_Left Vert	Seis_Right Horz	Seis_Right Vert	Seis_Long Horz	Seis_Long Vert
3	A	0.0	0.0	0.0	0.0	0.0	-2.0	0.0	-1.2	0.0	0.0	0.0	0.0	0.0	0.0
3	B	-3.2	0.0	3.5	0.0	0.0	-5.4	-0.6	-4.3	-0.3	-0.3	0.0	0.3	0.0	0.0
3	C	-3.2	0.0	3.5	0.0	0.6	-4.3	0.0	-5.4	0.0	0.3	0.3	-0.3	0.0	0.0
3	D	-4.2	-2.6	0.0	2.6	0.0	-1.2	0.0	-2.0	0.0	0.0	0.0	0.0	-0.5	-0.3

Frm Line	Col Line	-MIN_SNOW- Horz	-MIN_SNOW- Vert	E2UNB_SL_L- Horz	E2UNB_SL_L- Vert	E2UNB_SL_R- Horz	E2UNB_SL_R- Vert
3	A	0.0	0.8	0.0	0.5	0.0	0.0
3	B	0.0	3.5	0.0	2.9	0.0	1.2
3	C	0.0	3.5	0.0	1.2	0.0	2.9
3	D	0.0	0.8	0.0	0.0	0.0	0.5

BUILDING BRACING REACTIONS

Reactions in plane of wall ± Reactions(k) — Panel_Shear (lb/ft)

Wall Loc	Wall Line	Col Line	Wind Horz	Wind Vert	Seismic Horz	Seismic Vert	Panel_Shear Wind	Panel_Shear Seis	Note
L_EW	1	C,B	Bracing, see EW reactions						(a)
F_SW	A	2,3							
R_EW	3	B,C	Bracing, see EW reactions						
B_SW	0	3,2	4.2	*	0.5	*			

(a)Wind bent in bay

*See RF reactions table for vertical and horizontal reactions in plane of the rigid frame.

NOTES FOR REACTIONS

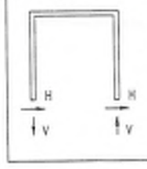
BUILDING REACTIONS ARE BASED ON THE FOLLOWING BUILDING DATA:

WIDTH (FT)	= 45
LENGTH (FT)	= 50
EAVE HEIGHT (FT)	= 17 / 17
ROOF SLOPE (rise/12)	= 2.0:12 / 2.0:12
DEAD LOAD (psf)	= 1.990
COLLATERAL LOAD (psf)	= 1
ROOF LIVE LOAD (psf)	= 20.00
FRAME LIVE LOAD (psf)	= 20
ROOF SNOW LOAD (psf)	= 10.5
GROUND SNOW LOAD (psf)	= 15.00
MINIMUM ROOF SNOW LOAD (psf)	= 15.00
WIND SPEED (MPH)	= 118
WIND CODE	= NCBC 18
EXPOSURE	= C
CLOSED/OPEN	= Closed
IMPORTANCE - WIND	= 1.00
IMPORTANCE - SEISMIC	= 1.00
SEISMIC ZONE	= C

REACTION KEY:

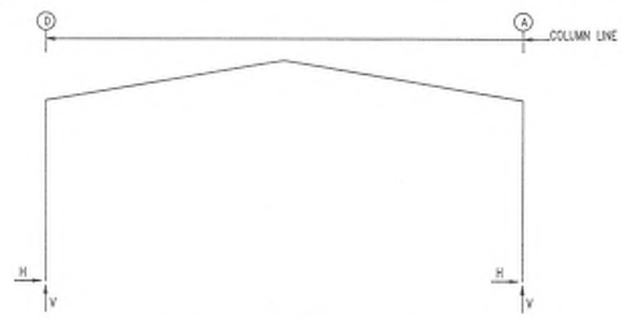
WIND Left/Right 1 = (with +GCpi Internal Pressure)
WIND Left/Right 2 = (with -GCpi Internal Pressure)
Wind_Long 1 = Wind Load Case B at Left EW
Wind_Long 2 = Wind Load Case B at Right EW
MIN_SNOW = Minimum Snow (Pm) per code
E1UNB_SL_L = Endwall Unbalanced Snow Left
E1UNB_SL_R = Endwall Unbalanced Snow Right
F1UNB_SL_L = Rigid Frame Unbalanced Snow Left
F1UNB_SL_R = Rigid Frame Unbalanced Snow Right

WIND BENT REACTIONS



Wall Loc	Wall Line	Col Line	Wind(k) ± Reactions Horz	Wind(k) ± Reactions Vert	Seismic(k) ± Reactions Horz	Seismic(k) ± Reactions Vert	Bolt(in) Qty	Bolt(in) Dia	Base_Plate(in) Width	Base_Plate(in) Length	Base_Plate(in) Thick
F_SW	A	2	2.1	2.9	0.3	0.4	4	0.750	6.000	10.500	0.375
F_SW	A	3	2.1	2.9	0.3	0.4	4	0.750	6.000	10.500	0.375

FRAME LINES: 2



RIGID FRAME: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc_Bolt Qty	Anc_Bolt Dia	Base_Plate (in) Width	Base_Plate (in) Length	Thick	Grout (in)
2	D	4	0.750	6.000	16.50	0.625	0.0
2	A	4	0.750	6.000	17.00	0.375	0.0

RIGID FRAME: BASIC COLUMN REACTIONS (k)

Frame Line	Column Line	Dead Horiz	Dead Vert	Collateral Horiz	Collateral Vert	Live Horiz	Live Vert	Snow Horiz	Snow Vert	Wind_Left1 Horiz	Wind_Left1 Vert	Wind_Right1 Horiz	Wind_Right1 Vert
2	D	0.7	2.0	0.3	0.7	5.7	14.0	3.0	7.4	-9.4	-16.6	0.5	-10.2
2	A	-0.7	2.1	-0.3	0.7	-5.7	14.1	-3.0	7.4	-0.5	-10.2	9.4	-16.6

Frame Line	Column Line	Wind_Left2 Horiz	Wind_Left2 Vert	Wind_Right2 Horiz	Wind_Right2 Vert	Wind_Long1 Horiz	Wind_Long1 Vert	Wind_Long2 Horiz	Wind_Long2 Vert	Seismic_Left Horiz	Seismic_Left Vert	Seismic_Right Horiz	Seismic_Right Vert
2	D	-9.3	-9.9	0.5	-3.5	-0.2	-16.8	-1.1	-14.6	-0.3	-0.2	0.3	0.2
2	A	-0.5	-3.5	9.4	-10.0	1.2	-12.0	0.2	-14.3	-0.3	0.2	0.3	-0.2

Frame Line	Column Line	Seismic_Long Horiz	Seismic_Long Vert	-MIN_SNOW- Horiz	-MIN_SNOW- Vert	F1UNB_SL_L- Horiz	F1UNB_SL_L- Vert	F1UNB_SL_R- Horiz	F1UNB_SL_R- Vert
2	D	0.0	-0.3	4.3	10.5	2.6	7.3	2.6	4.2
2	A	0.0	0.0	-4.3	10.8	-2.8	4.2	-2.6	7.3

ENDWALL COLUMN: ANCHOR BOLTS & BASE PLATES

Frm Line	Col Line	Anc_Bolt Qty	Anc_Bolt Dia	Base_Plate (in) Width	Base_Plate (in) Length	Thick	Grout (in)
1	D	2	0.625	7.000	10.00	0.250	0.0
1	C	2	0.625	7.000	10.00	0.250	0.0
1	B	2	0.625	7.000	10.00	0.250	0.0
1	A	2	0.625	7.000	10.00	0.250	0.0
3	A	4	0.625	6.000	10.00	0.375	0.0
3	B	2	0.625	7.000	10.00	0.250	0.0
3	C	2	0.625	7.000	10.00	0.250	0.0
3	D	2	0.625	7.000	10.00	0.250	0.0

ANCHOR BOLT SUMMARY

	Qty	Locate	Dia (in)	Type	Proj (in)
○	20	Jamb	5/8"	F1554	2.00
○	18	Endwall	5/8"	F1554	2.00
⊠	8	Frame	3/4"	F1554	2.50
⊠	8	WindCol	3/4"	F1554	2.50

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

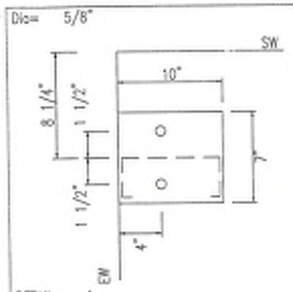
MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:04:04 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER
PRODUCED BY A MAJOR UNDER MY DIRECT SUPERVISION

PROJECT:	LUIS TIRADO - 45X50X17
CUSTOMER:	LUIS TIRADO
OWNER:	LUIS TIRADO
LOCATION:	LILLINGTON, NC 27546

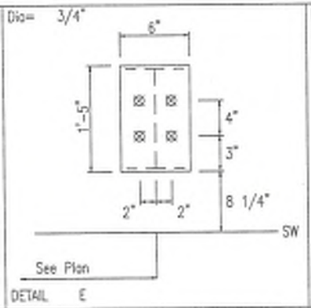
CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	F2	0

Dia= 5/8"



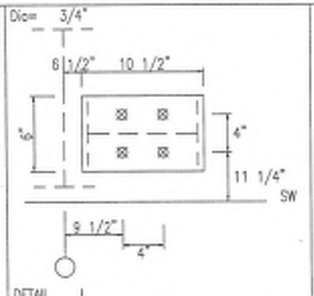
DETAIL A

Dia= 3/4"



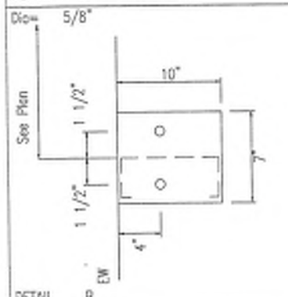
DETAIL E

Dia= 3/4"



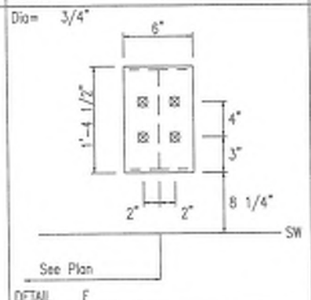
DETAIL I

Dia= 5/8"

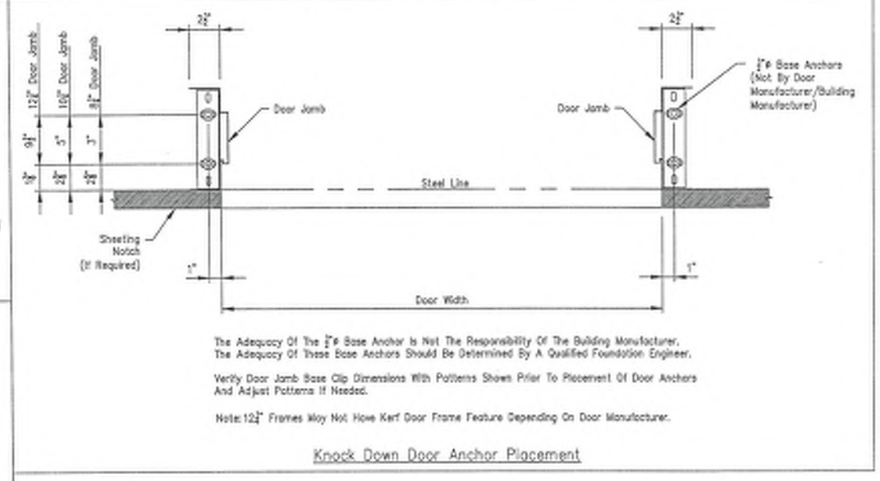


DETAIL B

Dia= 3/4"



DETAIL F



The Adequacy Of The 3/4" ø Base Anchor Is Not The Responsibility Of The Building Manufacturer.
The Adequacy Of These Base Anchors Should Be Determined By A Qualified Foundation Engineer.

Verify Door Jamb Base Clip Dimensions With Patterns Shown Prior To Placement Of Door Anchors And Adjust Patterns If Needed.

Note: 12" Frames May Not Have Kerf Door Frame Feature Depending On Door Manufacturer.

Knock Down Door Anchor Placement

Dia= 5/8"

DETAIL C

Dia= 5/8"

DETAIL G

Dia= 5/8"

DETAIL D

Dia= 5/8"

DETAIL H

ARDia 5/8" Framed Opening AR Layout

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

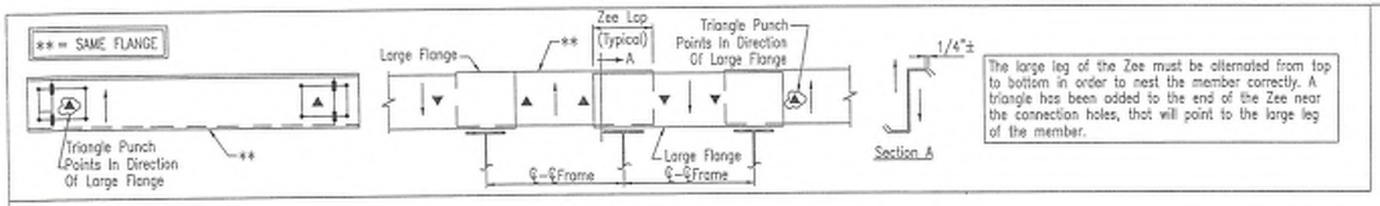
MICHAEL W CUSTER Digitally signed by MICHAEL W CUSTER Date: 2022.11.02 09:04:42 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

PROJECT: LUIS TIRADO - 45X50X17
CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO
LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	F3	0

PROJECT BY AND/OR UNDER MY DIRECT SUPERVISION

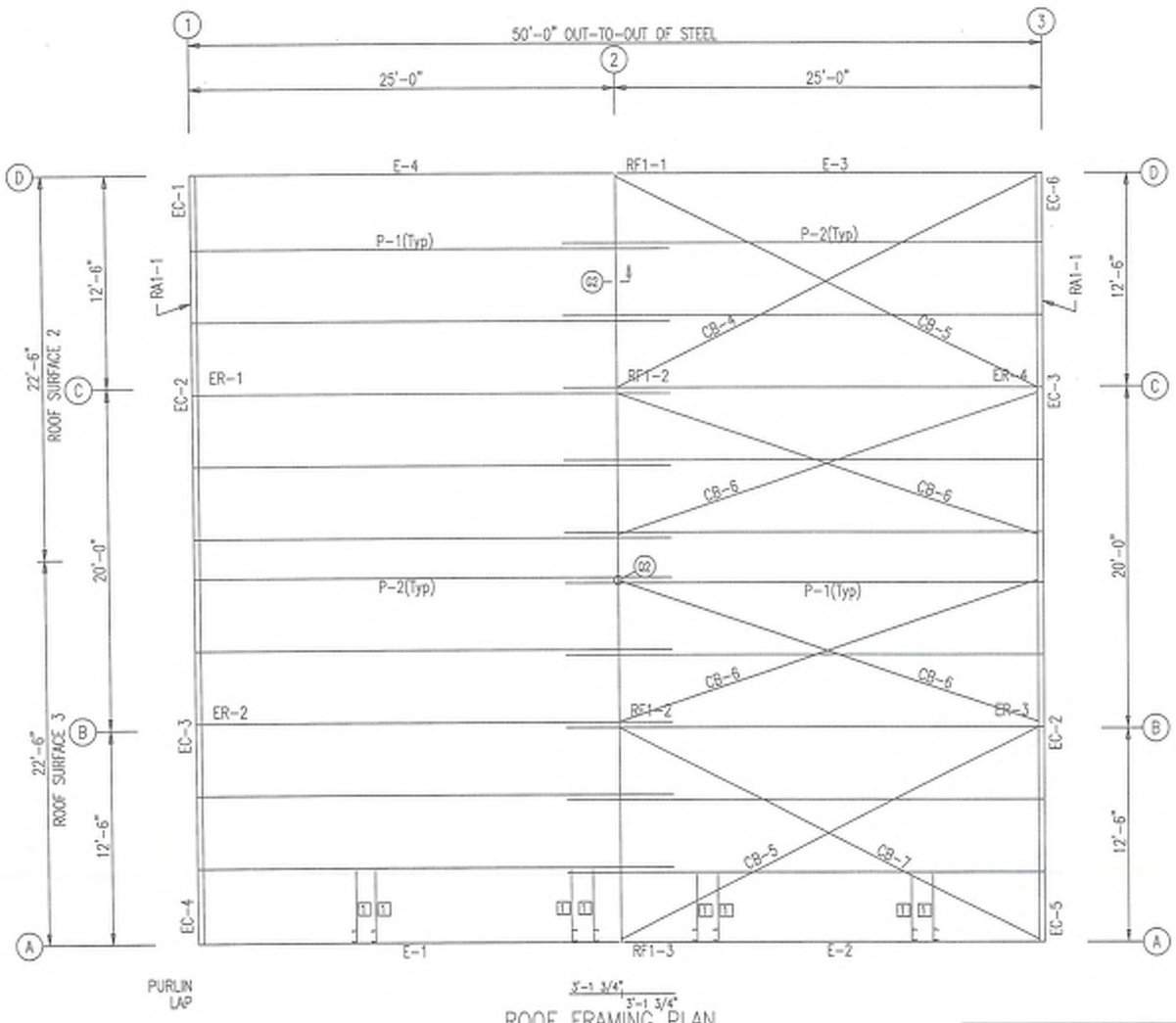


MEMBER TABLE
ROOF PLAN

MARK	PART	LENGTH
P-1	8X2.5Z14	28'-1 1/2"
P-2	8X2.5Z14	28'-1 1/2"
E-1	BES2L14	24'-11 1/2"
E-2	BES2L14	24'-11 1/2"
E-3	BES2L14	24'-11 1/2"
E-4	BES2L14	24'-11 1/2"
CB-4	1/4" CABLE	28'-2"
CB-5	1/4" CABLE	27'-9"
CB-6	1/4" CABLE	26'-7"
CB-7	1/4" CABLE	27'-6"

CONNECTION PLATES
ROOF PLAN

ID	MARK/PART
1	L083



ROOF FRAMING PLAN
BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:05:18 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

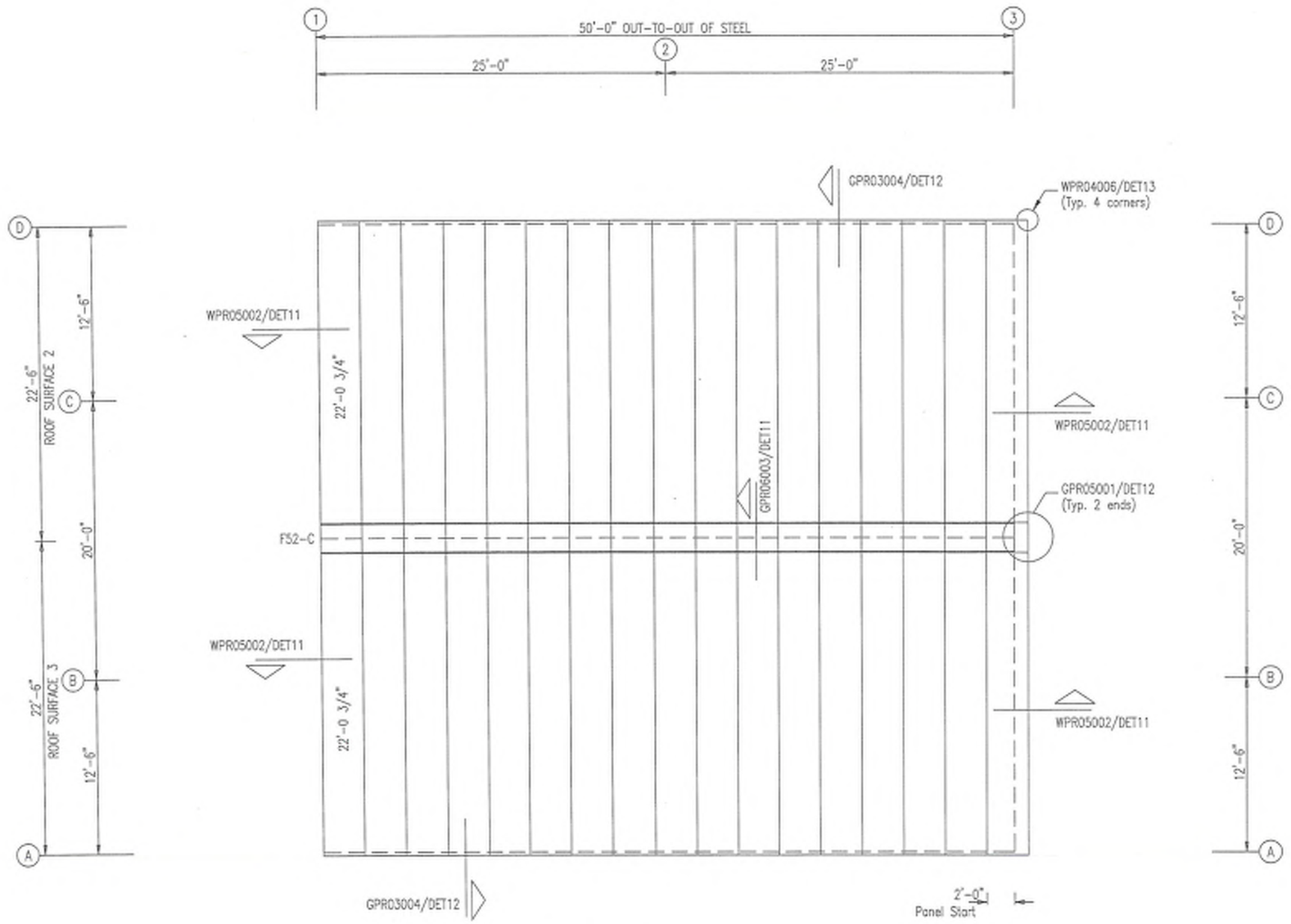
PROVIDED BY AND/OR PREPARED UNDER MY DIRECT SUPERVISION

PROJECT: LUIS TIRADO - 45X50X17
CUSTOMER: LUIS TIRADO
OWNER: LUIS TIRADO
LOCATION: ULLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	E1	0

GENERAL NOTES:
1. INSTALL ALL PURLIN AND FLANGE BRACES (FB) AS SHOWN.
2. ROOF PANEL PROVIDES STRUCTURAL STABILITY TO THE BUILDING.
3. STRUT PURLINS, IF PROVIDED, MUST BE INSTALLED AND FASTENED TO ROOF SHEETING PER "PBR" PANEL ROOF DETAIL.
4. DO NOT ADD ANY ADDITIONAL ROOF OPENINGS WITHOUT BUILDING MANUFACTURER APPROVAL OR PROFESSIONAL ENGINEER APPROVAL.
5. DO NOT STACK SHEET BUNDLES ON ROOF. ONLY RAISE INDIVIDUAL SHEETS AS NEEDED.
6. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

PBR ROOF SHEETING NOTE:
PBR ROOF PANELS ARE TO BE FIELD CUT IF THE PANELS EXTEND OUTSIDE OF THE ROOF PLANE, PANELS ARE NOT TO BE BACK LAPPED.



ROOF SHEETING PLAN

PANELS: 26 Gauge PBR – Galvalume
BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:05:56 -05'00'

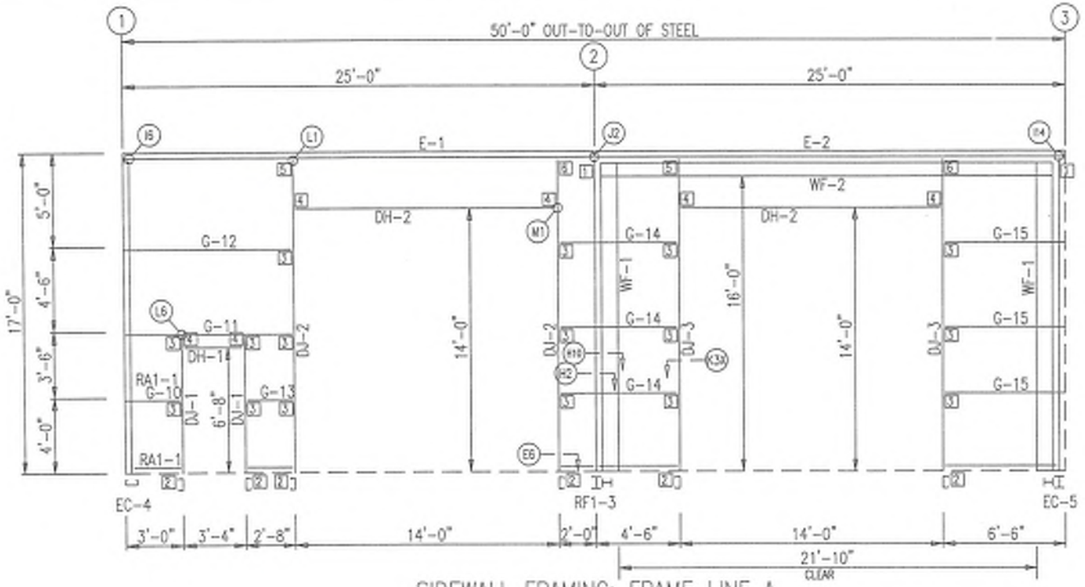
NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

THIS DRAWING PREPARED BY AND/OR UNDER MY DIRECT SUPERVISION

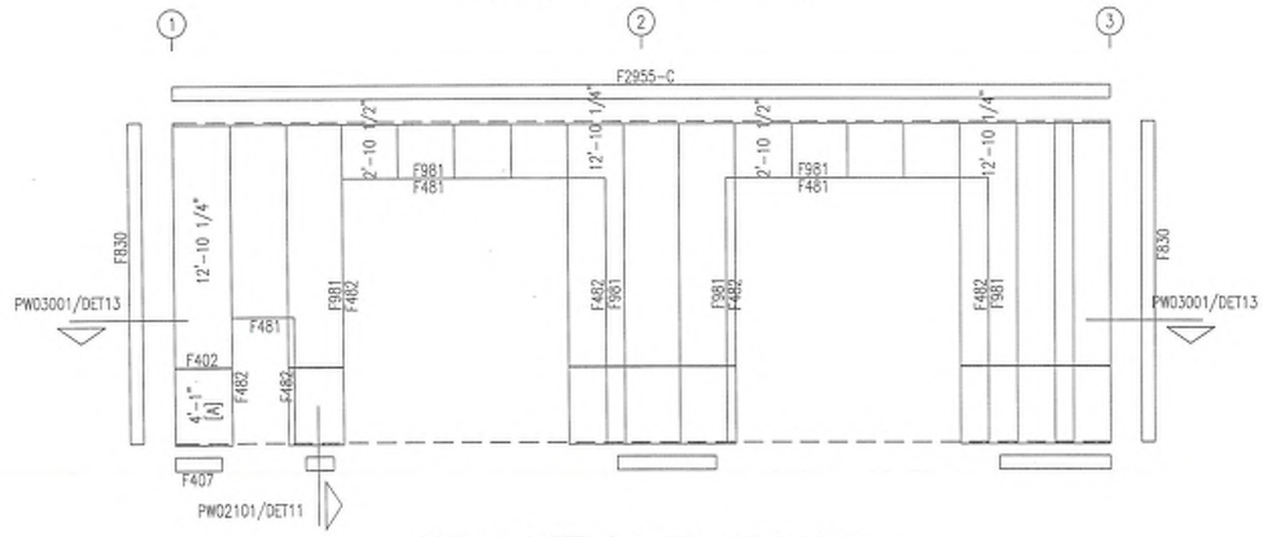
PROJECT:	LUIS TIRADO - 45X50X17
CUSTOMER:	LUIS TIRADO
OWNER:	LUIS TIRADO
LOCATION:	LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	E2	0

GENERAL NOTES:
1. INSTALL ALL PURLIN AND FLANGE BRACES (FB) AS SHOWN.
2. ROOF PANEL PROVIDES STRUCTURAL STABILITY TO THE BUILDING.
3. STRUT PURLINS, IF PROVIDED, MUST BE INSTALLED AND FASTENED TO ROOF SHEETING PER "PBR" PANEL ROOF DETAIL.
4. DO NOT ADD ANY ADDITIONAL ROOF OPENINGS WITHOUT BUILDING MANUFACTURER APPROVAL OR PROFESSIONAL ENGINEER APPROVAL.
5. DO NOT STACK SHEET BUNDLES ON ROOF. ONLY RAISE INDIVIDUAL SHEETS AS NEEDED.
6. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.



SIDEWALL FRAMING: FRAME LINE A



SIDEWALL SHEETING & TRIM: FRAME LINE A

PANELS: 26 Gauge PBR – Polar White

[A] PANELS: 26 Gauge PBR – Coal Black

BUILDING SIZE: 45'–0" x 50'–0" x 17'–0" 2.0:12

BOLT TABLE
FRAME LINE A

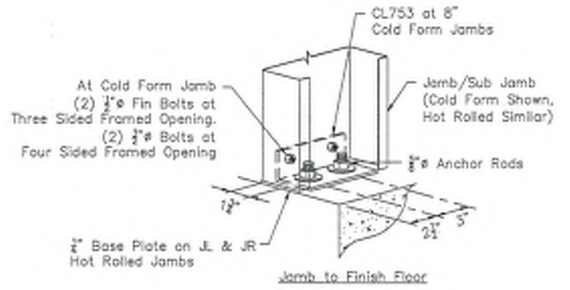
LOCATION	QUAN	TYPE	DIA	LENGTH
WF-1 – WF-2	8	A325	3/4"	2"
WF-1 – RF1-3	8	A325	3/4"	1 1/2"
WF-1 – EC-5	8	A325	3/4"	1 1/2"

MEMBER TABLE
FRAME LINE A

MARK	PART	LENGTH
WF-1	W10X42	16'-8 1/2"
WF-2	W08X42	21'-9 1/2"
DJ-1	8X35C14	7'-1 3/4"
DJ-2	8X35C13	15'-2 11/16"
DJ-3	8X35C14	15'-2 11/16"
DH-1	8X35C14	3'-3 3/4"
DH-2	8X35C14	13'-11 3/4"
E-1	8ES2L14	24'-11 1/2"
E-2	8ES2L14	24'-11 1/2"
G-10	8X25Z16	2'-7 3/4"
G-11	8X25Z16	8'-7 3/4"
G-12	8X25Z16	8'-7 3/4"
G-13	8X25Z16	2'-0"
G-14	8X25Z16	5'-10"
G-15	8X25Z16	6'-1 3/4"

CONNECTION PLATES
FRAME LINE A

ID	MARK/PART
1	SC479
2	CL753
3	CL751
4	SC429
5	SC585L
6	SC585R



GENERAL NOTES:

1. INSTALL ALL GIRTS AND FLANGE BRACES (FB) AS SHOWN.
2. WALL PANEL PROVIDES STRUCTURAL STABILITY TO THE BUILDING.
3. OTHER THAN FOR WALK DOORS AND WINDOWS SHOWN ON THE CONTRACT, DO NOT ADD ADDITIONAL WALL OPENINGS WITHOUT APPROVAL OF BUILDING MANUFACTURER OR PROFESSIONAL ENGINEER.
4. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:06:18 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

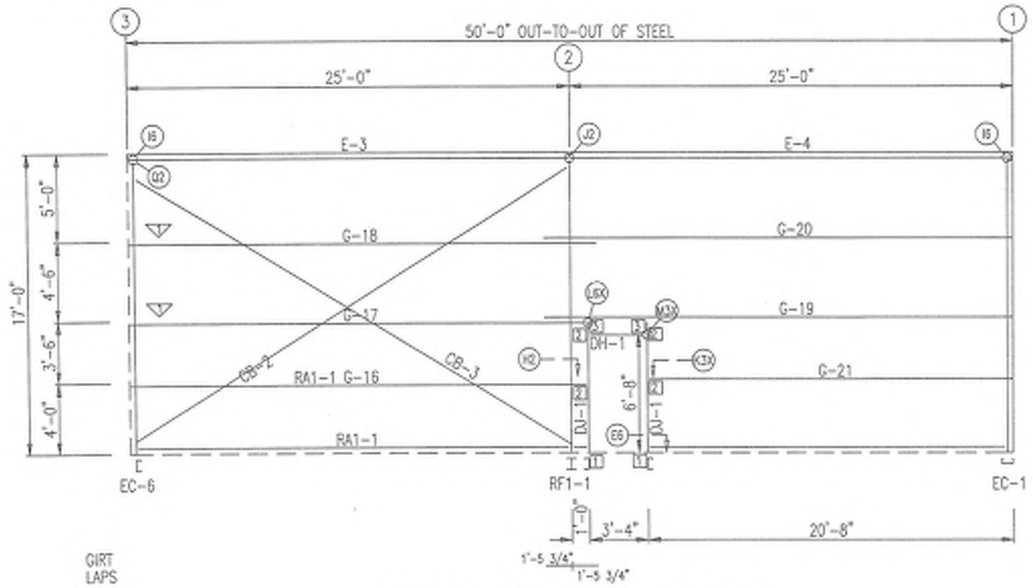
PROJECT: LUIS TIRADO – 45X50X17

CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO

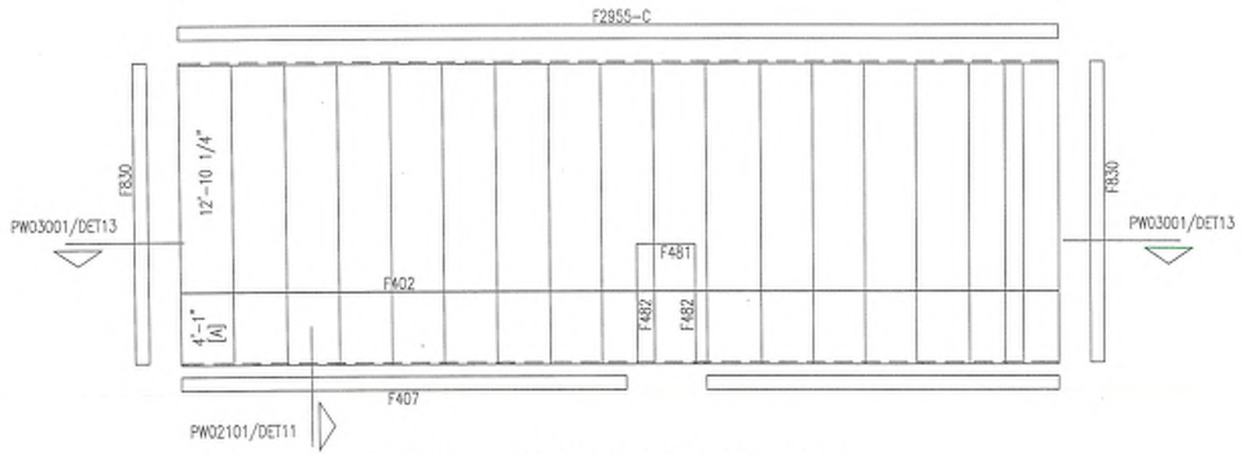
LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	E3	0

PROVIDED BY AND/OR UNDER MY DIRECT SUPERVISION



SIDEWALL FRAMING: FRAME LINE D



SIDEWALL SHEETING & TRIM: FRAME LINE D

PANELS: 26 Gauge PBR - Polar White

[A] PANELS: 26 Gauge PBR - Coal Black

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

MEMBER TABLE
FRAME LINE D

MARK	PART	LENGTH
DJ-1	8X35C14	7'-1 3/4"
DH-1	8X35C14	3'-3 3/4"
E-3	8ES2L14	24'-11 1/2"
E-4	8ES2L14	24'-11 1/2"
G-16	8X25Z14	25'-7 3/4"
G-17	8X25Z16	26'-5 1/2"
G-18	8X25Z16	26'-5 1/2"
G-19	8X25Z14	26'-5 1/2"
G-20	8X25Z16	26'-5 1/2"
G-21	8X25Z16	20'-3 3/4"
CB-2	1/4" CABLE	29'-8"
CB-3	1/4" CABLE	29'-10"

FLANGE BRACE TABLE
FRAME LINE 3

▽ ID	PART	LENGTH
FB30	L2X2X14G	2'-6"

CONNECTION PLATES
FRAME LINE D

ID	MARK/PART
1	CL753
2	CL751
3	SC425

GENERAL NOTES:

1. INSTALL ALL GIRTS AND FLANGE BRACES (FB) AS SHOWN.
2. WALL PANEL PROVIDES STRUCTURAL STABILITY TO THE BUILDING.
3. OTHER THAN FOR WALK DOORS AND WINDOWS SHOWN ON THE CONTRACT, DO NOT ADD ADDITIONAL WALL OPENINGS WITHOUT APPROVAL OF BUILDING MANUFACTURER OR PROFESSIONAL ENGINEER.
4. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER

Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:06:32 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

PROCURED BY AND/OR PREPARED UNDER MY DIRECT SUPERVISION

PROJECT: LUIS TIRADO - 45X50X17

CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO

LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	E4	0

BEARING FRAME ONLY!
WASHER TO BE USED AT ENDWALL COLUMN TO ENDWALL RAFTER CONNECTION. USE ONE WASHER ON COLUMN SIDE. WASHER NOT NEEDED ON CLIP SIDE.

BOLT TABLE
FRAME LINE 1

LOCATION	QUAN	TYPE	DIA	LENGTH
ER-1/ER-2	4	A325	5/8"	1 3/4"
Columns/Raf	4	A325	1/2"	1 1/4"

MEMBER TABLE
FRAME LINE 1

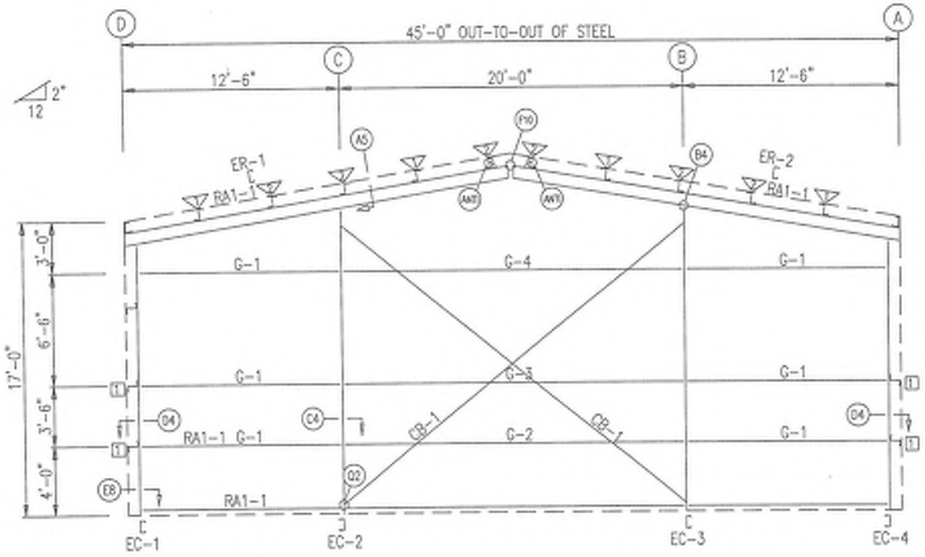
MARK	PART	LENGTH
EC-1	10F25C14	15'-5 7/8"
EC-2	10F35C13	17'-5 1/2"
EC-3	10F35C13	17'-5 1/2"
EC-4	10F25C14	15'-5 7/8"
ER-1	10F35C13	22'-11 1/8"
ER-2	10F35C13	22'-11 1/8"
G-1	8X25Z16	11'-1 3/4"
G-2	8X25Z16	19'-4"
G-3	8X25Z14	19'-4"
G-4	8X35Z13	19'-4"
CB-1	1/4" CABLE	26'-4"

FLANGE BRACE TABLE
FRAME LINE 1

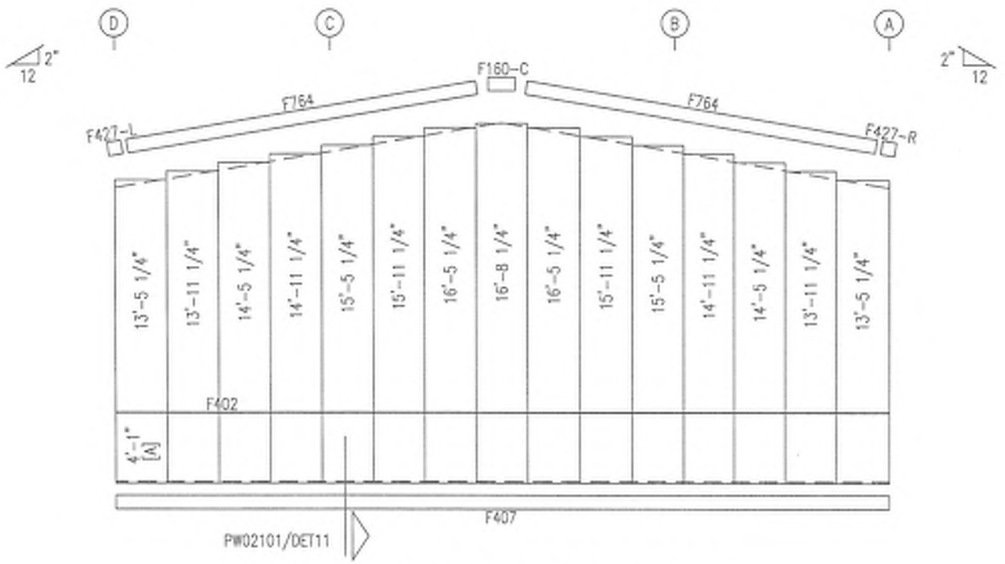
▽ ID	PART	LENGTH
1 FB30	L2X2X14G	2'-6"
2 FB7-1	L2.5X2.5X3/16	2'-6"

CONNECTION PLATES
FRAME LINE D

□ ID	MARK/PART
1	SC5

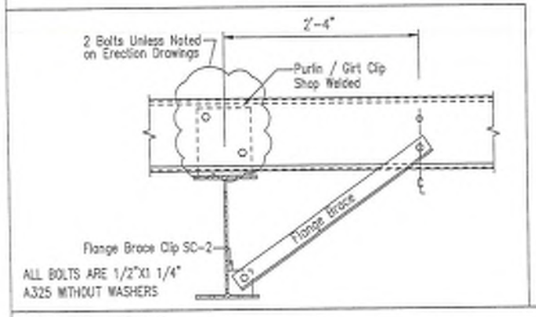


ENDWALL FRAMING: FRAME LINE 1



ENDWALL SHEETING & TRIM: FRAME LINE 1

PANELS: 26 Gauge PBR – Polar White
[A] PANELS: 26 Gauge PBR – Coal Black



GENERAL NOTES:
1. INSTALL ALL GIRTS AND FLANGE BRACES (FB) AS SHOWN.
2. WALL PANEL PROVIDES STRUCTURAL STABILITY TO THE BUILDING.
3. OTHER THAN FOR WALK DOORS AND WINDOWS SHOWN ON THE CONTRACT, DO NOT ADD ADDITIONAL WALL OPENINGS WITHOUT APPROVAL OF BUILDING MANUFACTURER OR PROFESSIONAL ENGINEER.
4. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

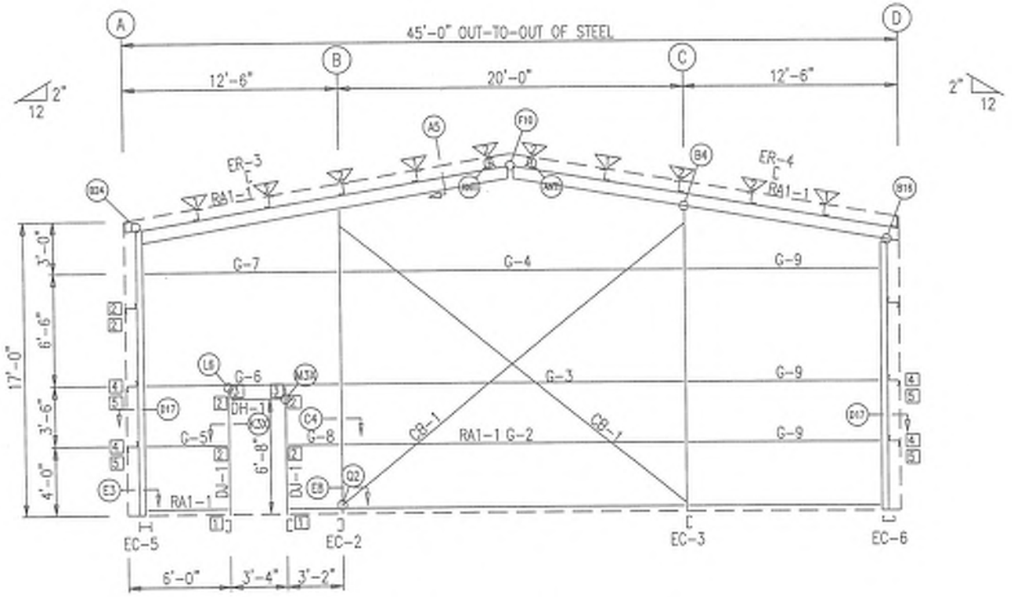
MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:06:45 -05'00'

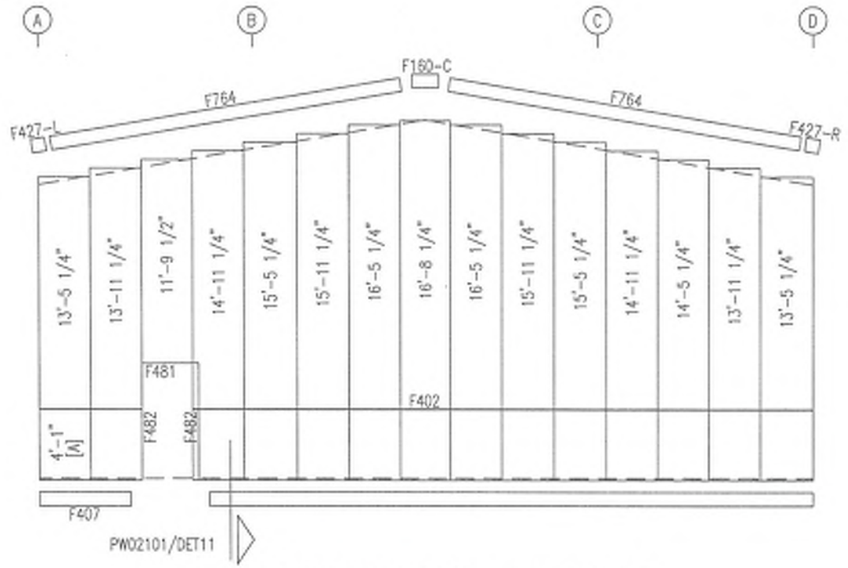
NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER
PROFESSIONAL ENGINEER
PROVIDED BY AND/OR UNDER MY DIRECT SUPERVISION

PROJECT:	LUIS TIRADO - 45X50X17					
CUSTOMER:	LUIS TIRADO			OWNER:	LUIS TIRADO	
LOCATION:	LILLINGTON, NC 27546					

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	E5	0



ENDWALL FRAMING: FRAME LINE 3



ENDWALL SHEETING & TRIM: FRAME LINE 3

PANELS: 26 Gauge PBR – Polar White

[A] PANELS: 26 Gauge PBR – Coal Black

BEARING FRAME ONLY!

WASHER TO BE USED AT ENDWALL COLUMN TO ENDWALL RAFTER CONNECTION. USE ONE WASHER ON COLUMN SIDE. WASHER NOT NEEDED ON CLIP SIDE.

BOLT TABLE
FRAME LINE 3

LOCATION	QUAN	TYPE	DIA	LENGTH
EC-5/ER-3	4	A325	5/8"	1 1/4"
ER-3/ER-4	4	A325	5/8"	1 3/4"
Int._Column/Raf	4	A325	1/2"	1 1/4"
EC-6/ER-4	4	A325	5/8"	1 1/2"

MEMBER TABLE
FRAME LINE 3

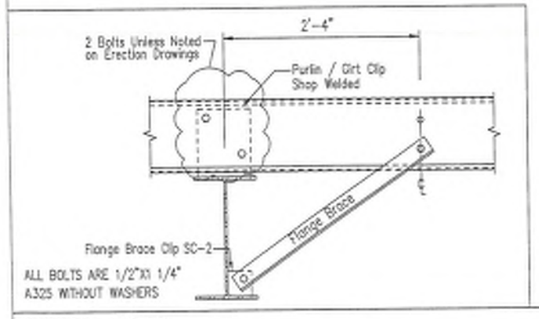
MARK	PART	LENGTH
EC-2	10F35C13	17'-5 1/2"
EC-3	10F35C13	17'-5 1/2"
EC-5	W10X12	16'-6 5/8"
EC-6	10F35C14	15'-8 9/16"
ER-3	10F35C13	21'-5"
ER-4	10F35C13	22'-11 1/8"
DJ-1	8X35C14	7'-1 3/4"
DH-1	8X35C14	3'-3 3/4"
G-2	8X25Z16	19'-4"
G-3	8X25Z14	19'-4"
G-4	8X35Z13	19'-4"
G-5	8X25Z16	4'-1 5/8"
G-6	8X25Z16	10'-7 5/8"
G-7	8X25Z16	10'-7 5/8"
G-8	8X25Z16	2'-6"
G-9	8X25Z16	10'-7 1/2"
CB-1	1/4" CABLE	26'-4"

FLANGE BRACE TABLE
FRAME LINE 1

▽ ID	PART	LENGTH
1 FB30	L2X2X14G	2'-6"
2 FB7-1	L2.5X2.5X3/16	2'-6"

CONNECTION PLATES
FRAME LINE 3

ID	MARK/PART
1	CL753
2	CL751
3	SC425
4	SCS
5	PC30



GENERAL NOTES:

1. INSTALL ALL GIRTS AND FLANGE BRACES (FB) AS SHOWN.
2. WALL PANEL PROVIDES STRUCTURAL STABILITY TO THE BUILDING.
3. OTHER THAN FOR WALK DOORS AND WINDOWS SHOWN ON THE CONTRACT, DO NOT ADD ADDITIONAL WALL OPENINGS WITHOUT APPROVAL OF BUILDING MANUFACTURER OR PROFESSIONAL ENGINEER.
4. AFTER INSTALLATION, WIPE ALL PANELS CLEAN OF METAL SHAVINGS CAUSED BY DRILLING.

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:06:58 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

PROJECT: LUIS TIRADO – 45X50X17

CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO

LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	E6	0

PRODUCED BY AN ENGINEER UNDER MY DIRECT SUPERVISION

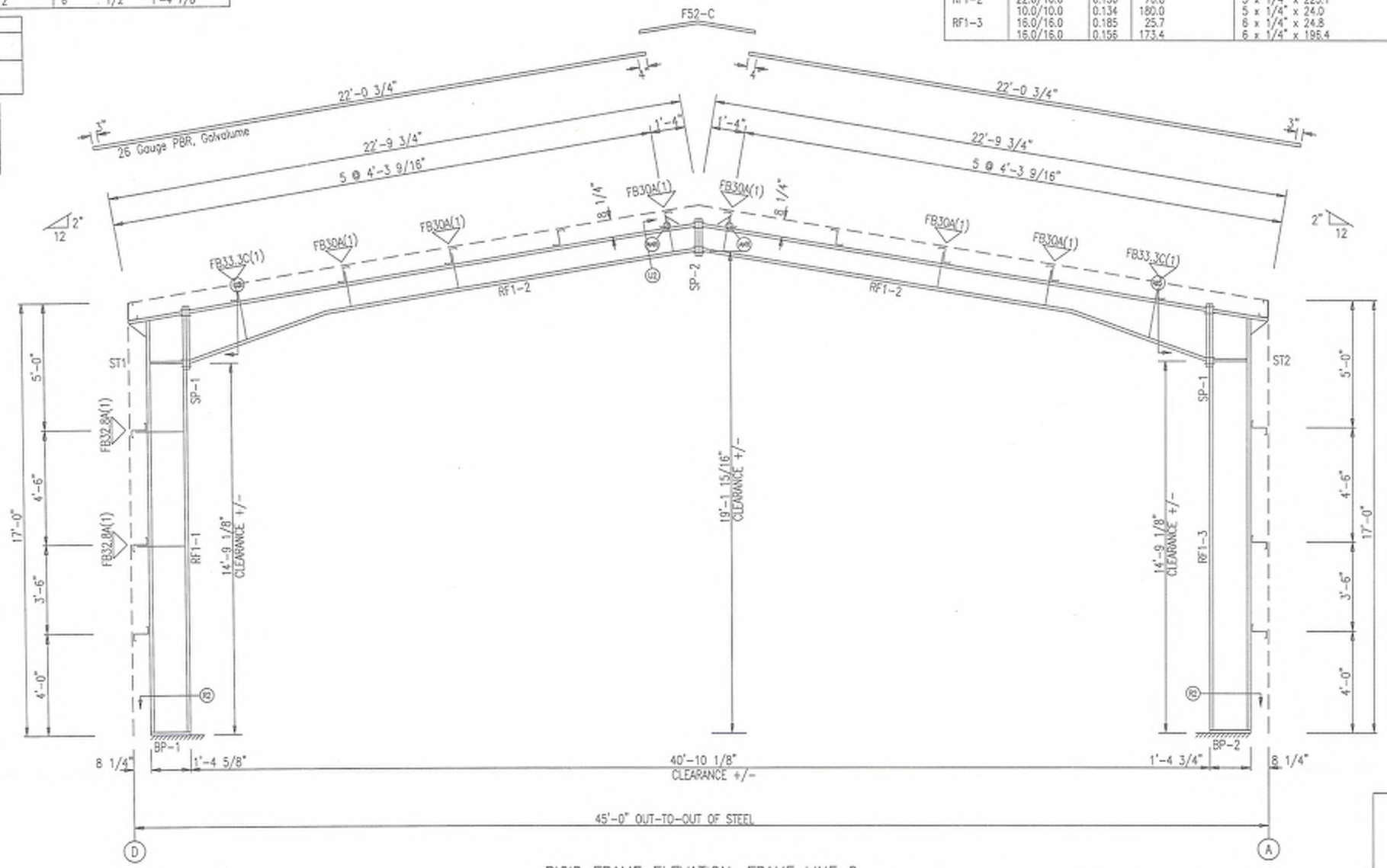
SPLICE PLATE & BOLT TABLE									
Mark	Qty Top	Bot	Int	Type	Dia	Length	Width	Thick	Length
SP-1	4	4	0	A325	3/4"	2 1/4"	6"	5/8"	2'-5 1/4"
SP-2	4	4	0	A325	3/4"	2"	6"	1/2"	1'-4 7/8"

STIFFENER TABLE				
Mark	Stiff Mark	Plate Size Width	Thick	Length
RF1-1	ST1	2 1/2	1/4"	16"
RF1-3	ST2	2 1/2	1/4"	16"

BASE PLATE TABLE			
Col Mark	Plate Size Width	Thick	Length
BP-1	6"	5/8"	1'-4 1/2"
BP-2	6"	5/8"	1'-5"

▽FLANGE BRACES: FBxx (1 or 2)
xx=length(in)
(1) One Side; (2) Two Sides
A - L2X2X14G
C - L2X2X1/8

MEMBER TABLE					
Mark	Web Depth Start/End	Web Plate Thick	Length	Outside Flange W x Thk x Length	Inside Flange W x Thk x Length
RF1-1	16.0/16.0	0.156	173.1	6 x 1/4" x 196.1	6 x 1/4" x 120.0
	16.0/16.0	0.185	25.7	6 x 1/4" x 24.8	6 x 3/8" x 53.1
RF1-2	22.0/10.0	0.156	70.8	5 x 1/4" x 223.1	5 x 1/4" x 71.8
	10.0/10.0	0.134	180.0	5 x 1/4" x 24.0	5 x 1/4" x 176.3
RF1-3	16.0/16.0	0.185	25.7	6 x 1/4" x 24.8	6 x 1/2" x 53.4
	16.0/16.0	0.156	173.4	6 x 1/4" x 196.4	6 x 3/8" x 120.0



RIGID FRAME ELEVATION: FRAME LINE 2

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

GENERAL NOTES:

1. BOLTED JOINTS WITH A325 TYPE 1 BOLTS GREATER THAN 1/2" DIAMETER ARE SPECIFIED AS PRE-TENSIONED JOINTS IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. PRE-TENSIONING CAN BE ACCOMPLISHED BY USING THE TURN-OF-NUT METHOD OF TIGHTENING, CALIBRATED WRENCH, TWIST-OFF-TYPE TENSION-CONTROL BOLTS OR DIRECT-TENSION-INDICATOR AS ACCEPTABLE TO THE INSPECTING AGENCY AND BUILDING OFFICIAL. INSTALLATION INSPECTION REQUIREMENTS FOR PRE-TENSIONED JOINTS (SPECIFICATION FOR STRUCTURAL JOINTS SECTION 9.2) USING TURN-OF-NUT/CALIBRATED WRENCH/TWIST OFF TYPE TENSION CONTROL BOLTS/DIRECT TENSION INDICATOR] METHOD IS SUGGESTED. THE CONNECTIONS ON THIS PROJECT ARE NOT SLIP CRITICAL.
2. ALL FIELD CONNECTIONS OF SECONDARY FRAMING SHALL BE BOLTED WITH A325 BOLTS.
3. INSTALL ALL FLANGE BRACES ON COLUMN AND RAFTER AS SHOWN.

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:07:11 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

PROJECT: LUIS TIRADO - 45X50X17
CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO
LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	E7	0

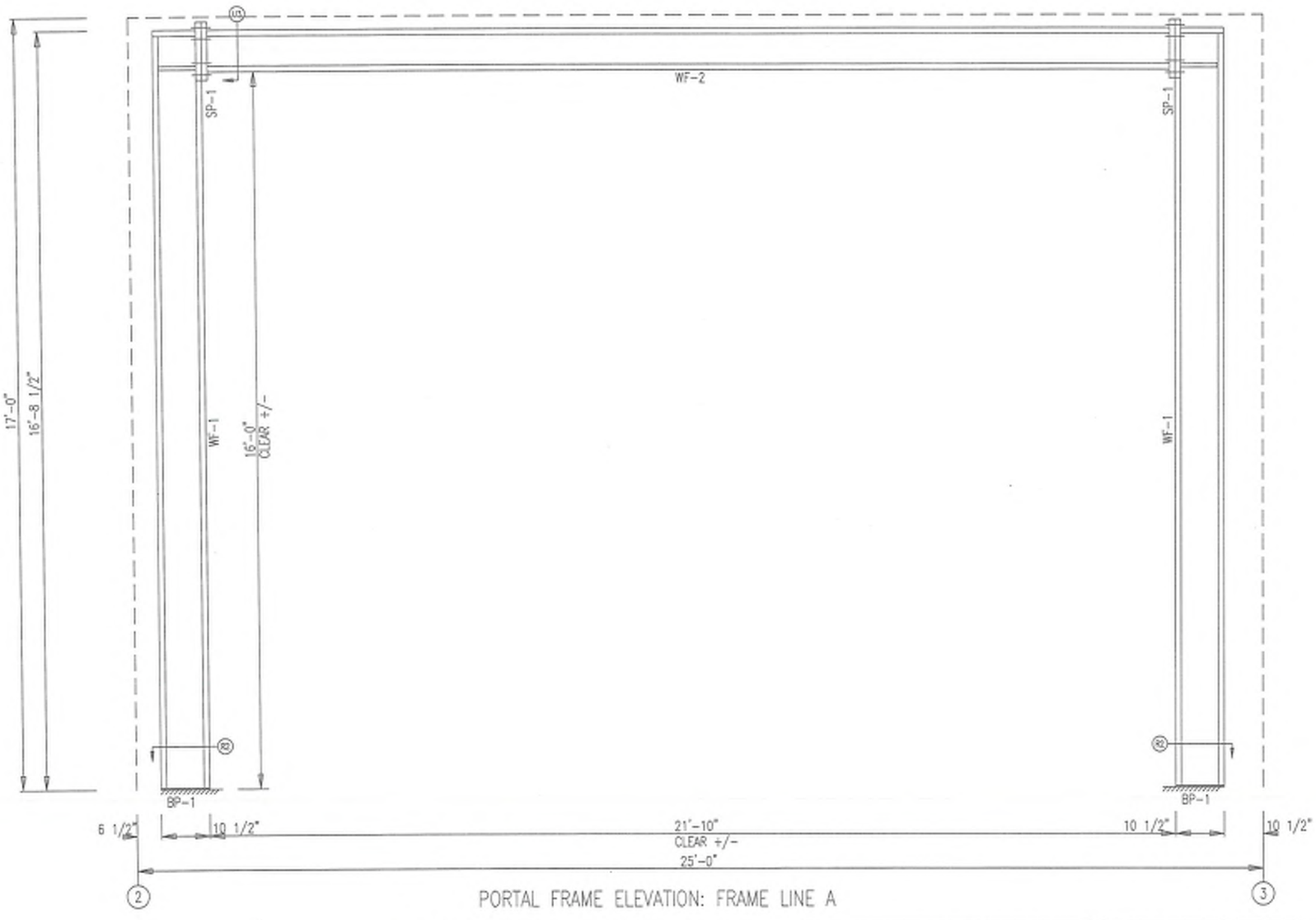
PROVIDED BY AND/OR UNDER MY DIRECT SUPERVISION

SPLICE PLATES & BOLTS								
Splice Mark	Quan Top/	Bot	Bolt Type	Dia	Length	Plate Size Width	Thick	Length
SP-1	4	4	A325	3/4"	2"	6"	1/2"	1'-4 1/4"

STIFFENER TABLE				
Mark	Stiff Mark	Plate Size Width	Thick	Length
WF-1	St-1	2"	5/16	10"

BASE PLATES			
Col Mark	Plate Size Width	Thick	Length
BP-1	6"	3/8"	10 1/2"

MEMBER SIZE TABLE (in)						
MARK	LENGTH	WEB DEPTH START/END	WEB PLATE THICK	WEB PLATE LENGTH	OUTSIDE FLANGE W x T x LENGTH	INSIDE FLANGE W x T x LENGTH
WF-1	200.5	10.0/10.0	0.156	16'-8 1/2"	5 x 1/4" x 16'-8 1/2"	5 x 1/4" x 16'-8 1/2"
WF-2	261.5	8.0/ 8.0	0.156	21'-9 1/2"	6 x 1/4" x 21'-9 1/2"	6 x 1/4" x 21'-9 1/2"



PORTAL FRAME ELEVATION: FRAME LINE A

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

GENERAL NOTES:

1. BOLTED JOINTS WITH A325 TYPE 1 BOLTS GREATER THAN 1/2" DIAMETER ARE SPECIFIED AS PRE-TENSIONED JOINTS IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. PRE-TENSIONING CAN BE ACCOMPLISHED BY USING THE TURN-OF-NUT METHOD OF TIGHTENING, CALIBRATED WRENCH, TWIST-OFF-TYPE TENSION-CONTROL BOLTS OR DIRECT-TENSION-INDICATOR AS ACCEPTABLE TO THE INSPECTING AGENCY AND BUILDING OFFICIAL. INSTALLATION INSPECTION REQUIREMENTS FOR PRE-TENSIONED JOINTS (SPECIFICATION FOR STRUCTURAL JOINTS SECTION 9.2) USING TURN-OF-NUT/CALIBRATED WRENCH/TWIST OFF TYPE TENSION CONTROL BOLTS/DIRECT TENSION INDICATOR] METHOD IS SUGGESTED. THE CONNECTIONS ON THIS PROJECT ARE NOT SLIP CRITICAL.
2. ALL FIELD CONNECTIONS OF SECONDARY FRAMING SHALL BE BOLTED WITH A325 BOLTS.
3. INSTALL ALL FLANGE BRACES ON COLUMN AND RAFTER AS SHOWN.

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER

Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:07:24 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

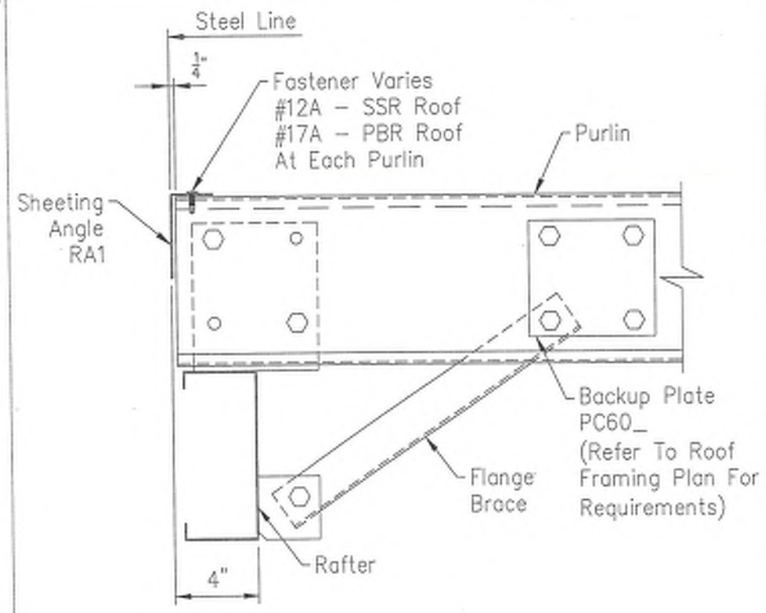
PROJECT: LUIS TIRADO - 45X50X17

CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO

LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	E8	0

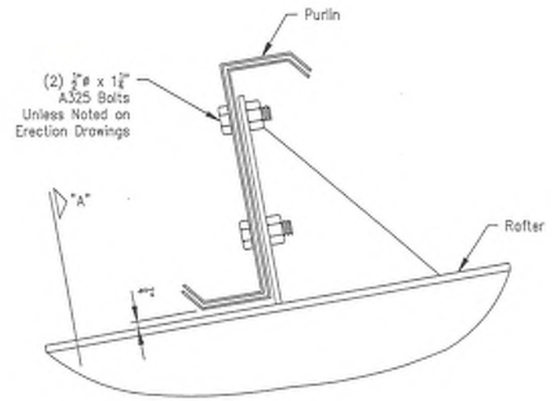
PRODUCED BY AND/OR UNDER MY DIRECT SUPERVISION

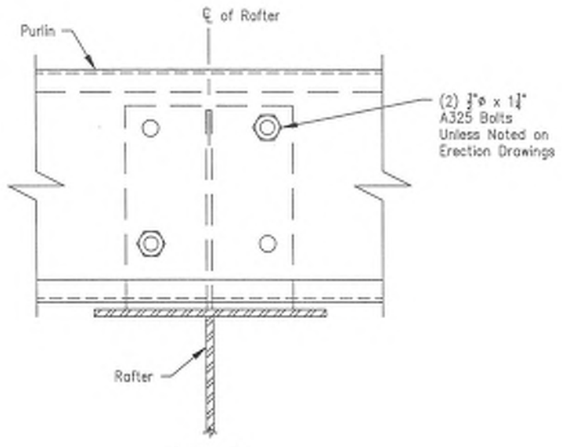


A5	Purlin To Bearing Frame Single Cold Form Rafter	Date Jul '21
Page MB–A5		Rev 02

Purlin with Anti-Roll Back-up Clip at Rafter

Page CF02035 | Date Dec '14 | Rev 04

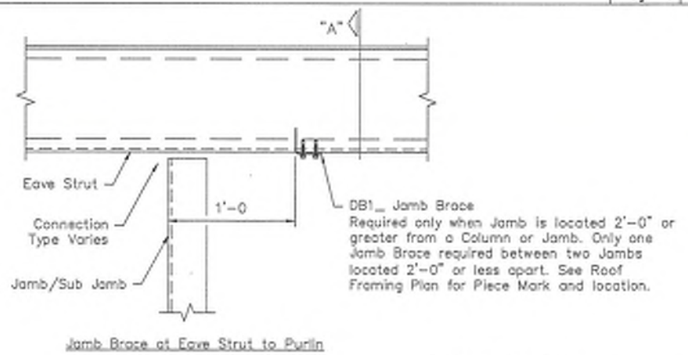




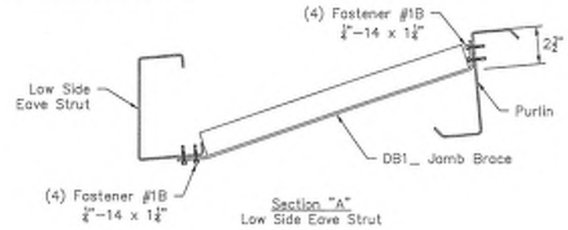
Section A

Framed Opening - Jamb Brace at Eave Strut to Purlin

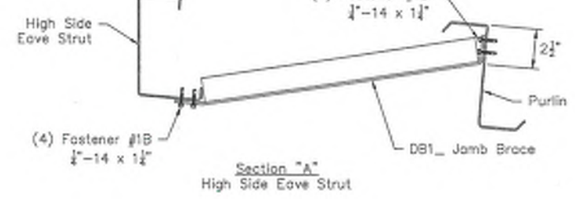
Page AC00910 | Date May '19 | Rev 01



Jamb Brace at Eave Strut to Purlin



Section "A"
Low Side Eave Strut



Section "A"
High Side Eave Strut

BUILDING SIZE: 45'–0" x 50'–0" x 17'–0" 2.0:12

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

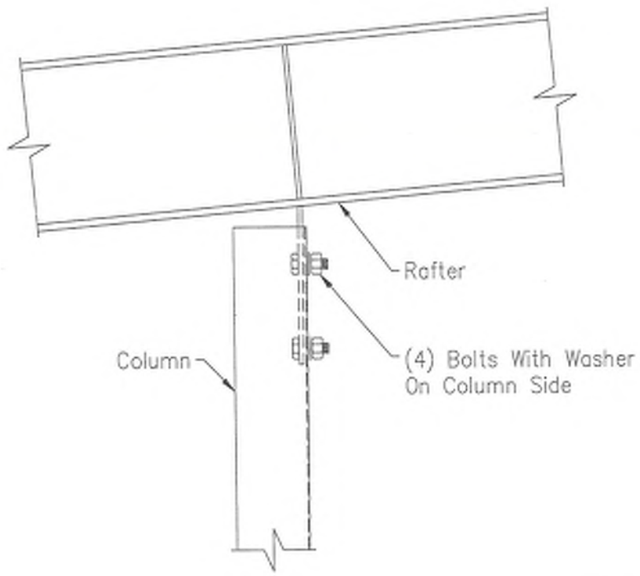
MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:07:38 -05'00'

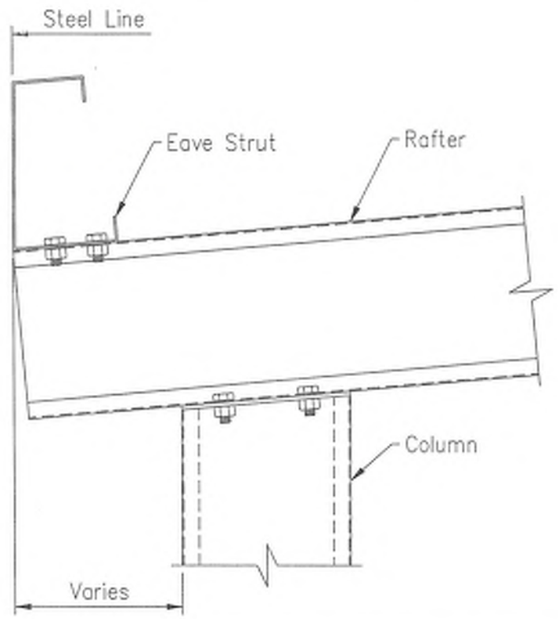
NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W CUSTER
PROJECT DESIGNED AND CHECKED UNDER MY DIRECT SUPERVISION

PROJECT: LUIS TIRADO – 45X50X17
CUSTOMER: LUIS TIRADO
OWNER: LUIS TIRADO
LOCATION: LILLINGTON, NC 27546

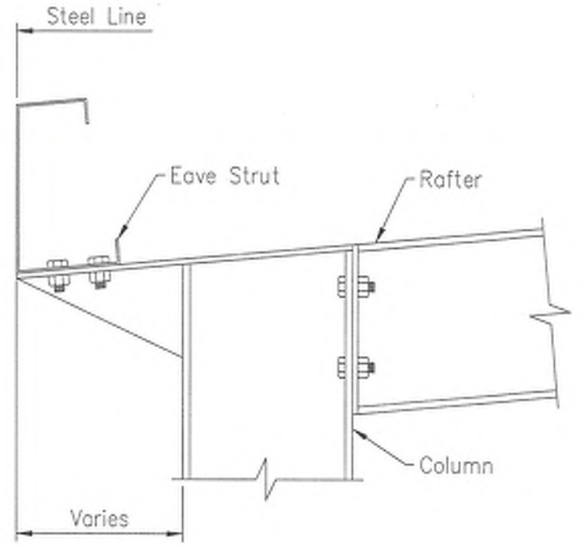
CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	DET1	0



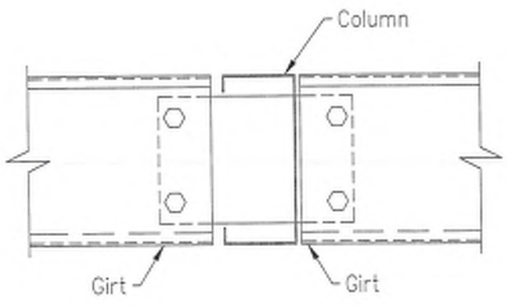
B4	Cold Form Endwall Column To Rafter	Date Aug '20
Page MB-B4		Rev 01



B16	Corner Column To Bearing Frame Single Cold Form Rafter	Date Jun '17
Page MB-B16		Rev 00



B24	Corner Column To Bearing Frame Rafter	Date Jun '17
Page MB-B24		Rev 00



C4	Girt To Cold Form Column	Date Jun '17
Page MB-C4		Rev 00

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

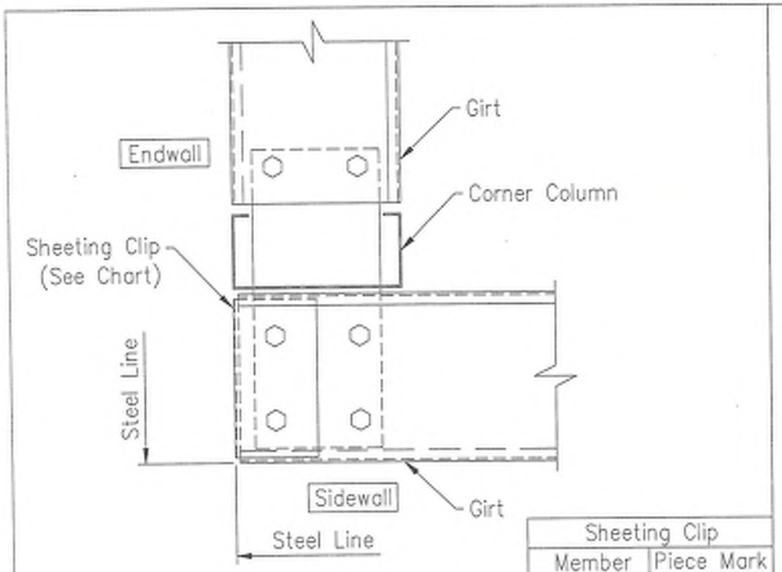
PROJECT: LUIS TIRADO - 45X50X17
CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO
LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	DET2	0

MICHAEL W CUSTER
Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:07:51 -05'00'

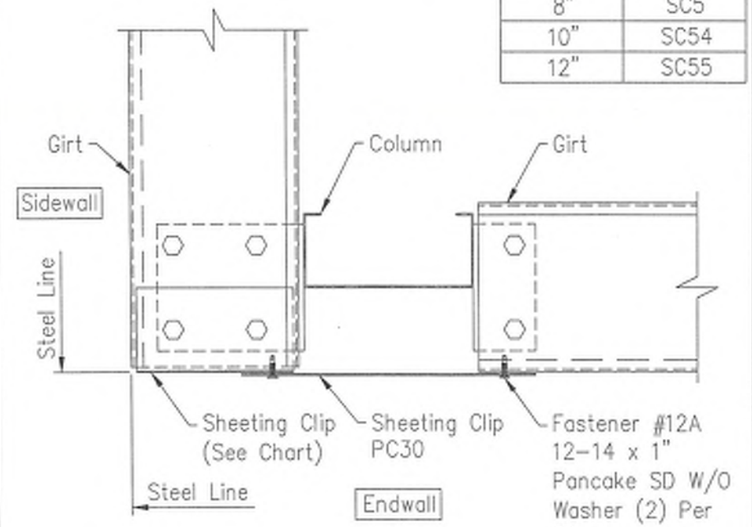
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023748 MICHAEL W. CUSTER

THESE PLANS AND/OR SPECIFICATIONS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION



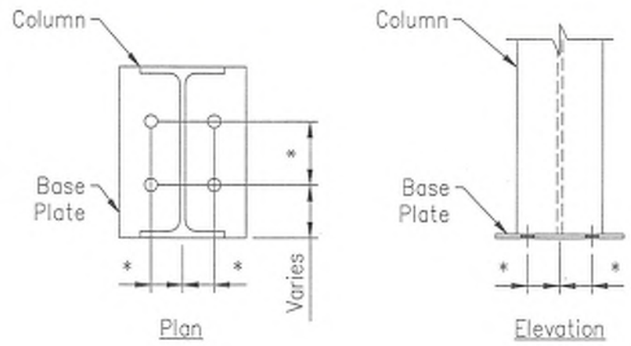
Sheeting Clip	
Member	Piece Mark
8"	SC5
10"	SC54
12"	SC55

D4	Girt To Cold Form Corner Column	Date: Oct '19
Page: MB-D4		Rev: 01



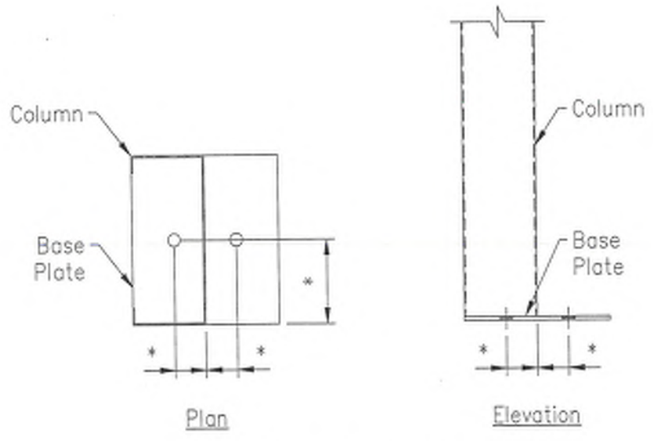
Sheeting Clip	
Member	Piece Mark
8"	SC5
10"	SC54
12"	SC55

D17	Girt To Cold Form Rotated Corner Column	Date: Jun '17
Page: MB-D17		Rev: 00



* – Refer To Anchor Rod Setting Plan For Dimension

E3	Endwall Column Base Plate	Date: Dec '18
Page: MB-E3		Rev: 01



* – Refer To Anchor Rod Setting Plan For Dimension

E8	Cold Form Endwall Column Base Plate	Date: Dec '18
Page: MB-E8		Rev: 01

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER

Digitally signed by MICHAEL W CUSTER
Date: 2022.11.02 09:08:06 -05'00'

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023748 MICHAEL W. CUSTER

PROJECT: LUIS TIRADO - 45X50X17

CUSTOMER: LUIS TIRADO OWNER: LUIS TIRADO

LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	DET3	0

PROVIDED AND/OR PREPARED UNDER MY DIRECT SUPERVISION

Bolted Clips - Framed Opening Connections - Cold Form and Hot Rolled Cee - Three and Four Sided Openings

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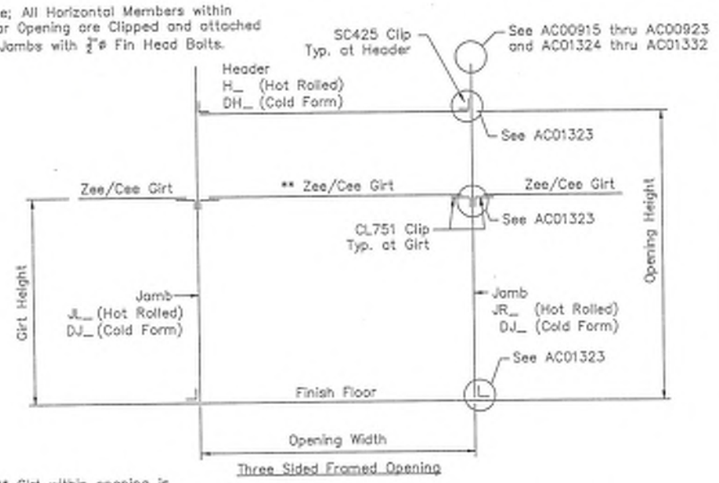
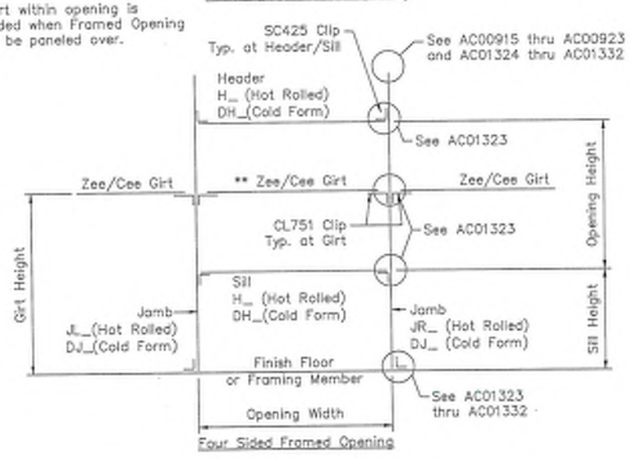
Note; All Horizontal Members within clear Opening are Clipped and attached to Jambs with ¾"ø Fin Head Bolts.



Three Sided Framed Opening

** Girt within opening is provided when Framed Opening is to be paneled over.



Four Sided Framed Opening

Bolted Clips - Framed Opening Connections - Three and Four Sided Openings - Girt Header

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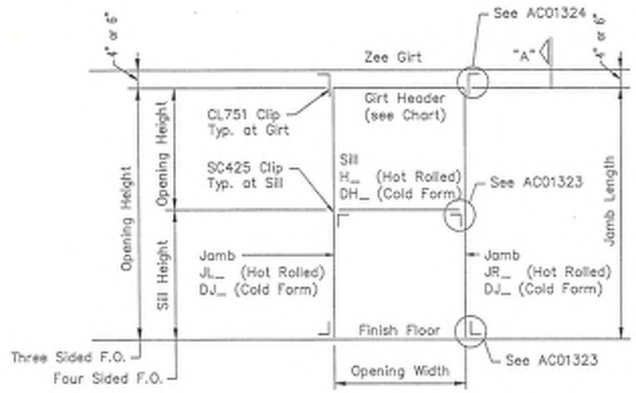
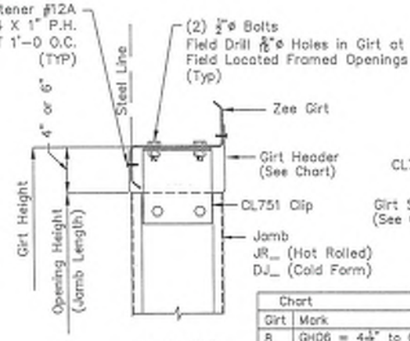
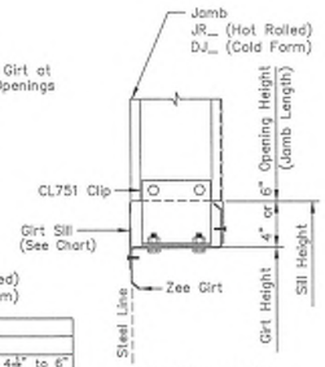




Section "A"

Chart	
Girt	Mark
8	GH06 = 4½" to 6"
8	GH08 <= 4"
10	GH10
12	GH12



Optional Use as Sill

Bolted Clips - Framed Opening Connections - Cold Form and Hot Rolled Base, Girt, Header, and Sill to Jamb

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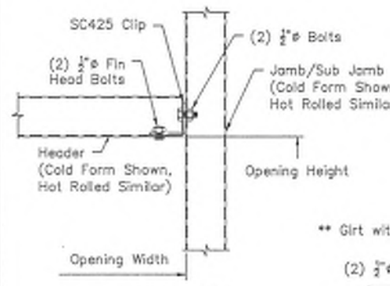
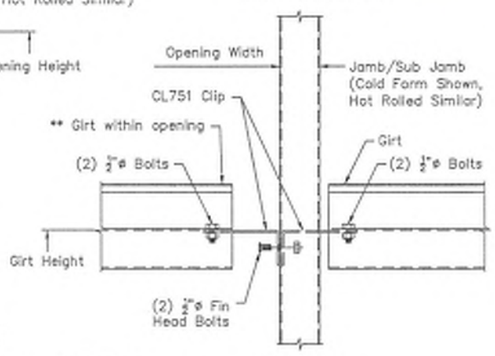
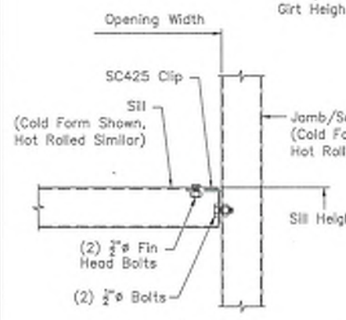


Header to Jamb

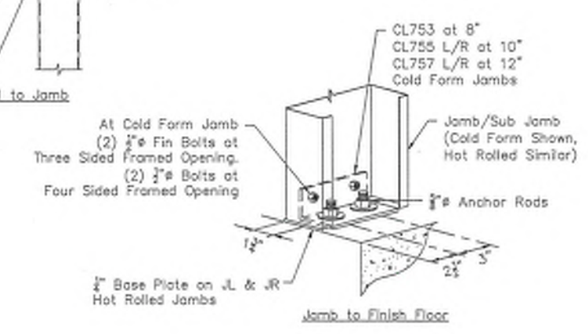
** Girt within opening is provided when Framed Opening is to be paneled over.



Girt to Jamb



Sill to Jamb



Jamb to Finish Floor

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

ISSUE	DATE	DESCRIPTION	BY	CK'D	DSN
0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	DM

MICHAEL W. CUSTER, P.E.
642 OAKBEND DRIVE
COPPEL TX. 75019
PH. 972-571-7082

MICHAEL W CUSTER

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Date: 2022.11.02 09:08:20 -05'00'

NORTH CAROLINA PROFESSIONAL SEAL 023748 ENGINEER MICHAEL W. CUSTER

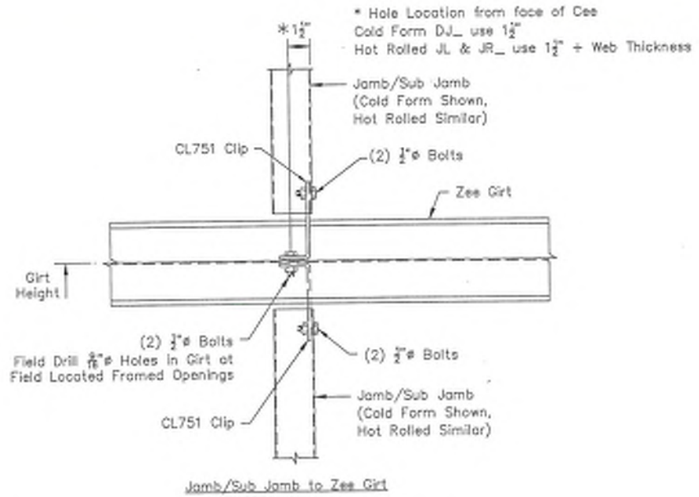
PROJECT: LUIS TIRADO - 45X50X17
CUSTOMER: LUIS TIRADO
OWNER: LUIS TIRADO
LOCATION: LILLINGTON, NC 27546

CAD	DATE	SCALE	PHASE	BUILDING ID	JOB NUMBER	SHEET NUMBER	ISSUE
	5/24/19	N.T.S.	1	A	19-B-19564	DET4	0

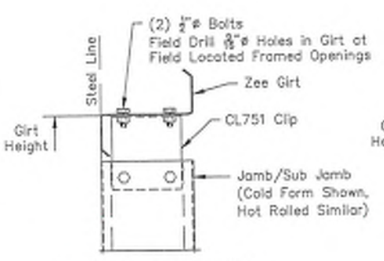
PREPARED BY AND/OR UNDER MY DIRECT SUPERVISION

Bolted Clips - Framed Opening Connections - Cold Form and Hot Rolled Jamb/Sub Jamb to Zee Girt

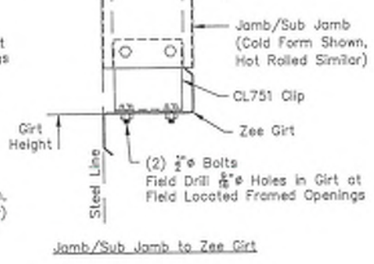
Page AC01324 | Date May '19 | Rev 01



Jamb/Sub Jamb to Zee Girt



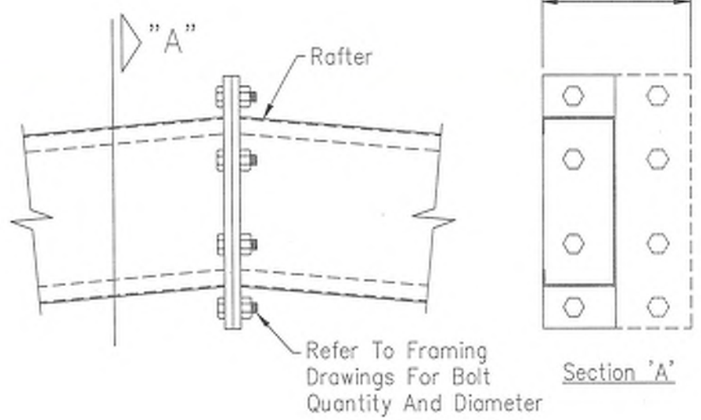
Jamb/Sub Jamb to Zee Girt



Jamb/Sub Jamb to Zee Girt

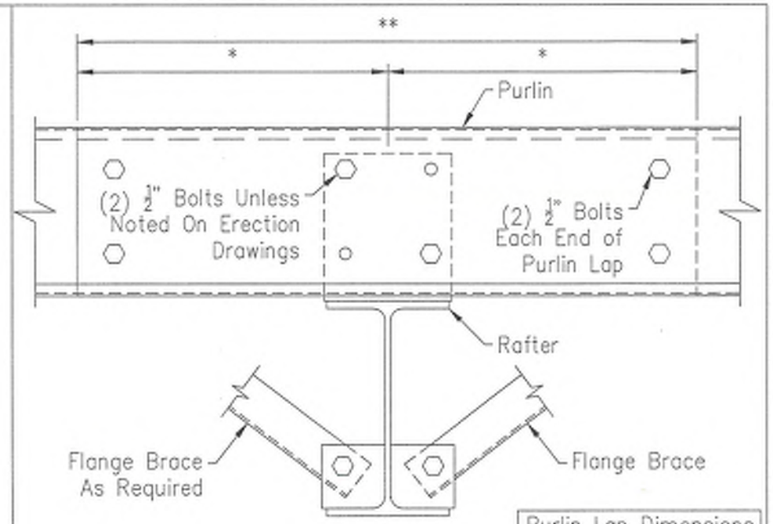
F10 — Endwall Bearing Frame – Cold Form Rafter Splice At Ridge

Page MB-F10 | Date Jun '17 | Rev 00



G2 — Purlin To Rigid Frame

Page MB-G2 | Date Sep '19 | Rev 01



Purlin Lap Dimensions	
*	**
1'-5¾"	2'-11½"
2'-5¾"	4'-11½"
3'-1¾"	6'-3½"

BUILDING SIZE: 45'-0" x 50'-0" x 17'-0" 2.0:12

BUILDING SOLD BY HERITAGE BUILDING SYSTEMS

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0	10/25/22	FOR ERECTOR INSTALLATION	MDB	HPD	CM

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CUSTOMER: LUIS TIRADO | OWNER: LUIS TIRADO

LOCATION: ULLINGTON, NC 27546

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	5/24/19	N.T.S.	1	A	19-B-19564	DET5	0

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