

# FIRE STATION #13

## EFFINGHAM COUNTY

HWY 119. GUYTON, GA  
2-15-2022



12 A E. GRADY STREET  
P.O. BOX 1382  
912-764-6288  
STATESBORO  
GEORGIA 30458  
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**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**HWY 119. GUYTON, GA**

**DESIGN TEAM**

**ARCHITECTURAL:**  
DPR ARCHITECTURE  
12 A EAST GRADY STREET  
STATESBORO, GA 30458  
PHONE: (912) 764 - 6288

**STRUCTURAL:**  
SAUSSY ENGINEERING  
400 JOHNNY MERCER BLVD #E  
SAVANNAH, GA 31410  
PHONE: (912) 898 - 8255

**MECHANICAL:**  
DELTA ENGINEERING  
204-A PITCARIN WAY  
AUGUSTA, GA 30909  
PHONE: (706) 364 - 1770

**ELECTRICAL:**  
DELTA ENGINEERING  
204-A PITCARIN WAY  
AUGUSTA, GA 30909  
PHONE: (706) 364 - 1770

**PLUMBING:**  
DELTA ENGINEERING  
204-A PITCARIN WAY  
AUGUSTA, GA 30909  
PHONE: (706) 364 - 1770

**CIVIL:**  
PARKER ENGINEERING  
36 COURLAND ST #B  
STATESBORO, GA 30458  
PHONE: (912) 764 - 7722

**SQUARE FOOTAGE**

HEATED - 1460 SF  
BAYS - 2380 SF  
STORAGE/  
MECHANICAL - 930 SF  
TOTAL - 4770 SF

**PERSPECTIVE VIEW**



**COLOR COPIES ONLY**  
REFER TO ELEVATIONS  
AND DETAILS FOR  
BUILDING GRAPHIC

**INDEX OF DRAWING**

**CIVIL:**  
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C1.0 - OVERALL LAYOUT  
C2.0 - EXISTING CONDITIONS AND  
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C3.0 - STAKING AND UTILITIES  
C4.0 - PAVING, GRADING, & DRAINAGE PLAN  
C4.1 - EROSION CONTROL PLAN  
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C6.0 - EROSION CONTROL DETAILS

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E3.1 - SCHEDULES, SYMBOLS, NOTES

SCHEDULE OF REVISIONS	
#	DATE

PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: JHB  
APPROVED BY: FRD



# FIRE STATION #13 EFFINGHAM COUNTY (SITE PLANS)

HWY 119, GUYTON, GA

02-15-2022



12 A E. GRADY STREET  
P.O. BOX 1382  
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DPR ARCHITECTURE  
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STATESBORO, GA 30458  
PHONE: (912) 764 - 6288

**CIVIL:**  
PARKER ENGINEERING  
36 COURLAND ST #B  
STATESBORO, GA 30458  
PHONE: (912) 764 - 7722

## VICINITY MAP



## INDEX OF DRAWING

**CIVIL:**

- C0.0 - COVER SHEET
- C1.0 - OVERALL LAYOUT
- C2.0 - EXISTING CONDITIONS AND DEMOLITION PLAN
- C3.0 - STAKING AND UTILITIES
- C4.0 - PAVING, GRADING, & DRAINAGE PLAN
- C4.1 - EROSION CONTROL PLAN
- C4.2 - GDOT PLAN
- C5.0 - CONSTRUCTION DETAILS
- C5.1 - CONSTRUCTION DETAILS
- C6.0 - EROSION CONTROL DETAILS

**UTILITY OWNERS:**  
WATER, REUSE, AND SEWER: CITY OF GUYTON (912-772-3353)  
CABLE: COMCAST (470-787-4373)  
TELEPHONE: PLANTERS RURAL TELEPHONE CO. (912-687-3064)  
POWER: GEORGIA POWER SAVANNAH (912-547-0660)

### EFFINGHAM COUNTY OFFICIALS

WESLEY CORBITT	CHAIRMAN
ROGER BURDETTE	BOARD MEMBER
FORREST FLOYD	BOARD MEMBER
JAMIE DELOACH	BOARD MEMBER
PHIL KIEFFER	BOARD MEMBER
REGGIE LOPER	BOARD MEMBER
TIM CALLANAN	COUNTY MANAGER

**FIRE STATION #13  
EFFINGHAM COUNTY  
GUYTON, GEORGIA**

### SCHEDULE OF REVISIONS

#	DATE
1	07-27-2020

PROJECT NUMBER: 2024  
PROJECT DATE: 02-15-2022  
DRAWN BY: WAS  
APPROVED BY: GWP



Know what's below.  
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36 COURTLAND STREET, SUITE B  
STATESBORO, GEORGIA 30458  
PHONE: 912-764-7722

**C0.0**



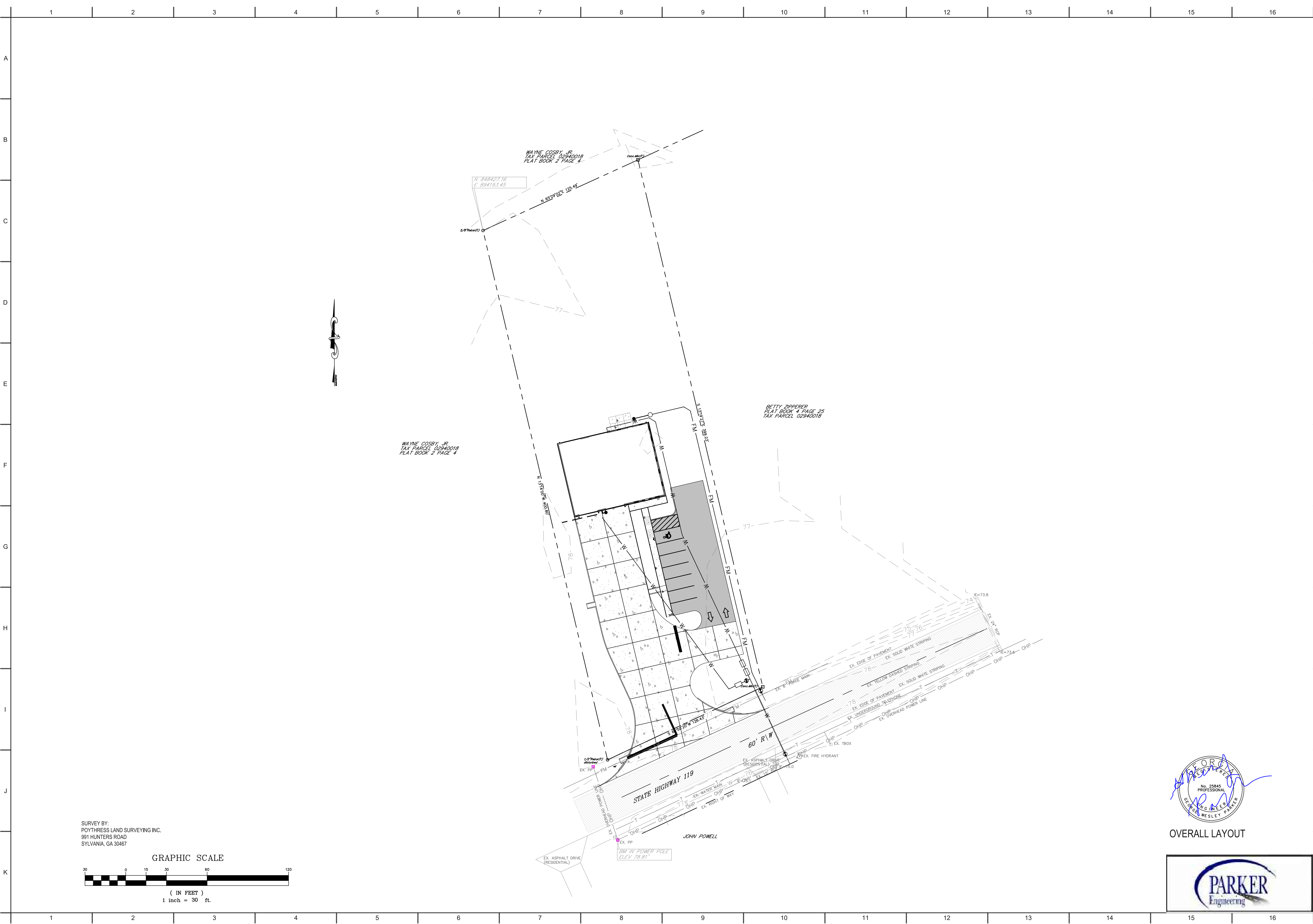
**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**GUYTON, GEORGIA**

SCHEDULE OF REVISIONS

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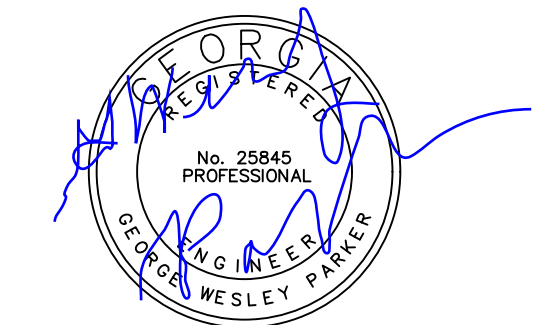
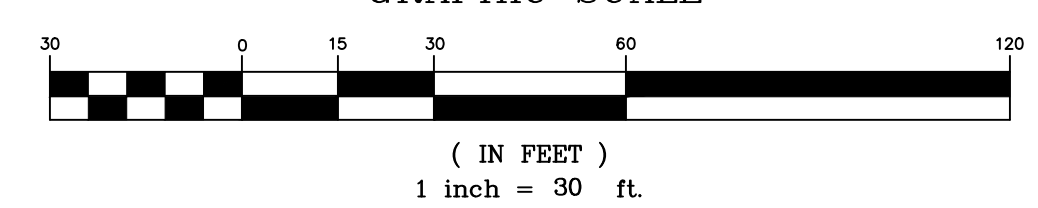
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**C1.0**



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991 HUNTERS ROAD  
SYLVANIA, GA 30467

GRAPHIC SCALE



OVERALL LAYOUT



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**EFFINGHAM COUNTY**  
**GUYTON, GEORGIA**

SCHEDULE OF REVISIONS

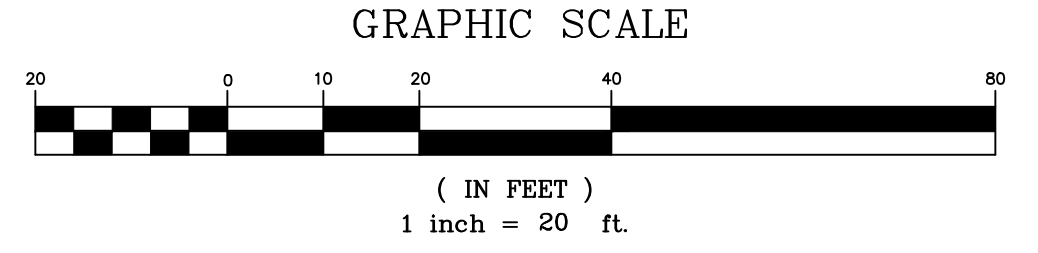
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**C2.0**



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991 HUNTERS ROAD  
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EXISTING CONDITIONS  
AND DEMOLITION PLAN



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



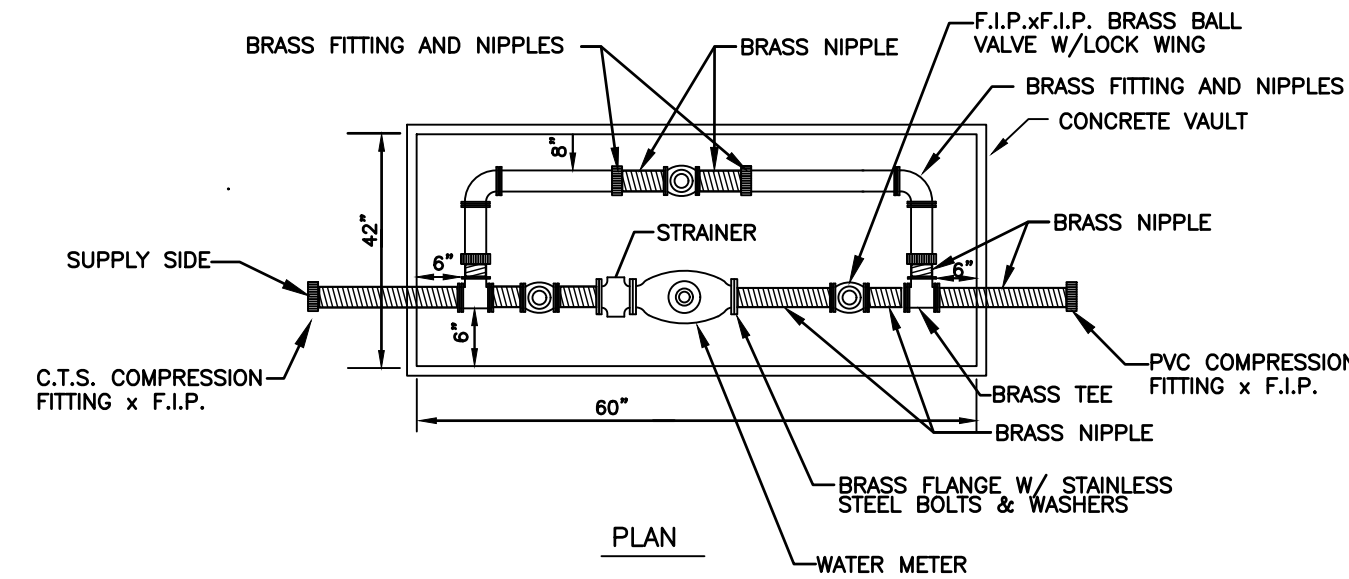
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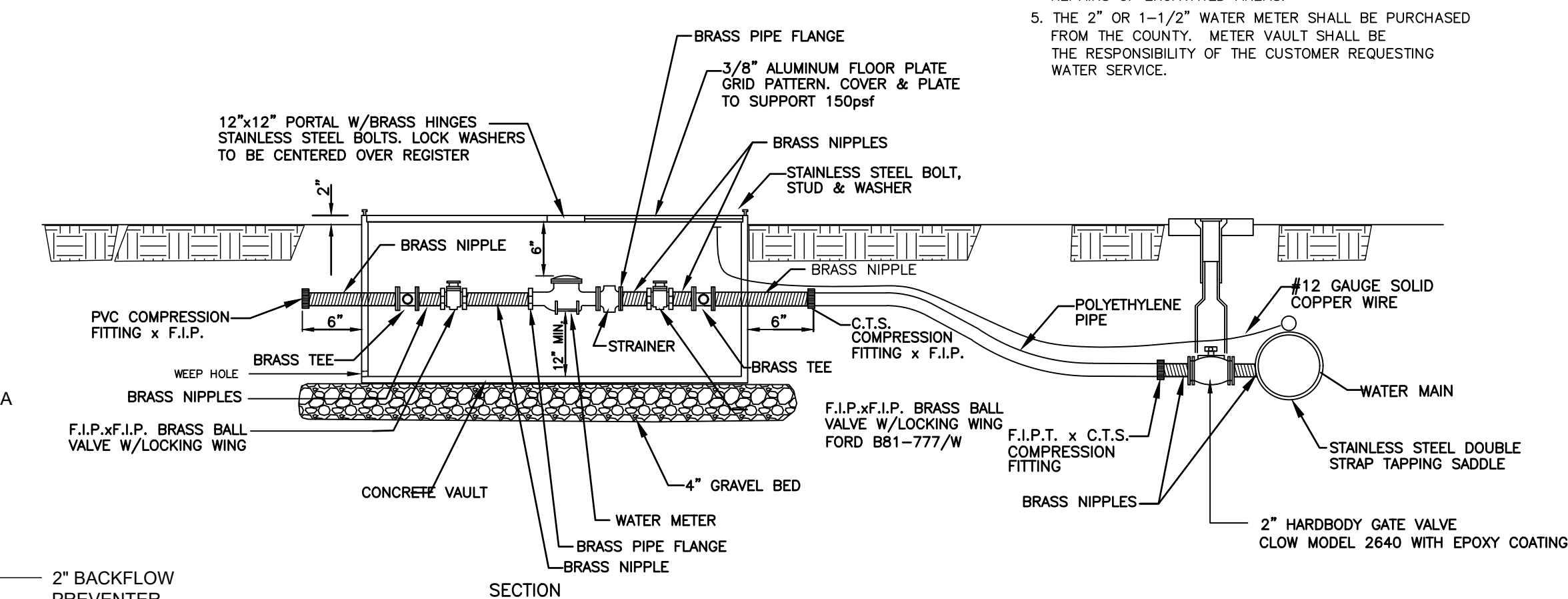
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- GENERAL NOTES:**
1. WATER METER SHALL BE PURCHASED FROM EFFINGHAM COUNTY.
  2. THE INSTALLATION OF THE METER AND BOX SHALL BE DONE BY THE CUSTOMER REQUIRING SERVICE.
  3. IF A WATER TAP IS REQUIRED FOR THE WATER SERVICE IT SHALL BE THE RESPONSIBILITY OF THE CUSTOMER REQUIRING SERVICE TO EXCAVATE THE WATER MAIN. EFFINGHAM COUNTY SHALL TAP THE WATER MAIN ONLY.
  4. THE CUSTOMER REQUIRING SERVICE SHALL BE RESPONSIBLE FOR ALL BACKFILLING AND/OR REPAIRS OF EXCAVATED AREAS.
  5. THE 2" OR 1-1/2" WATER METER SHALL BE PURCHASED FROM THE COUNTY. METER VAULT SHALL BE THE RESPONSIBILITY OF THE CUSTOMER REQUESTING WATER SERVICE.



**WATER METER DETAIL**  
NOT TO SCALE

MATERIALS		
ITEM	QUAN.	DESCRIPTION
1	2	RESILIENT TYPE GATE VALVES OS&Y (FOR 2" & LARGER LESS THAN 2" BALL VALVE)
2	1	REDUCED PRESSURE ZONE DEVICE/DOUBLE CHECK VALVE
3	4	BRASS 90° (DOMESTIC MADE)
4	1	STRAINER
5	2	BRASS NIPPLE (DOMESTIC MADE)
6		MINIMUM 12" CLEARANCE
7	2	BRASS PLUGS INSERTED IN TEST COCKS
8		6" GRAVEL & DRAIN
9		POLYTHYLENE PIPE WITH COMPRESSION FITTINGS
10	*	COUNTY APPROVED ENCLOSURE WITH HATCH COVER FOR BFP
11		CUT BRASS (DOMESTIC MADE)
12		UNION

\* RECOMMENDED FOR FREEZE PROTECTION

**BACKFLOW PREVENTER DETAIL**  
NOT TO SCALE



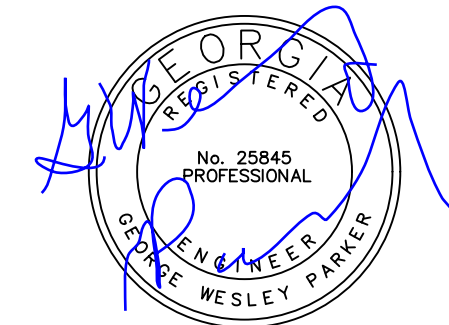
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991 HUNTERS ROAD  
SYLVANIA, GA 30467

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**EFFINGHAM COUNTY**  
**GUYTON, GEORGIA**

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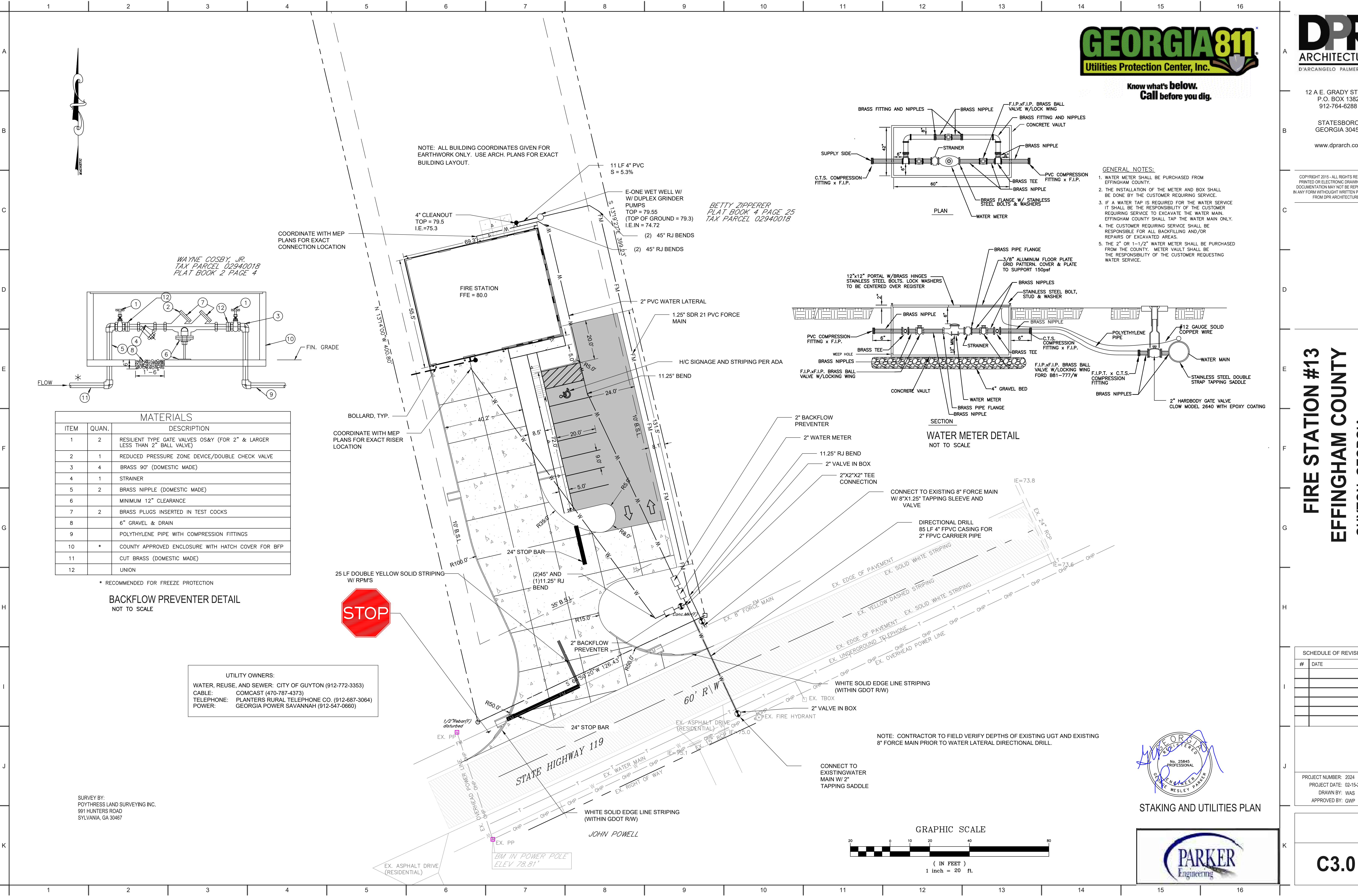
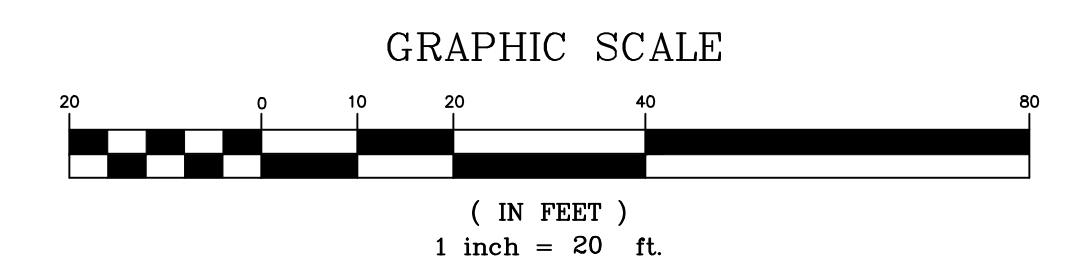
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STAKING AND UTILITIES PLAN



**C3.0**







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# FIRE STATION #13 EFFINGHAM COUNTY GUYTON, GEORGIA

SPOT GRADES LEGEND

- EC-EDGE OF CONCRETE
- EP-EDGE OF PAVEMENT
- TP-TOP OF PAVEMENT
- TC-TOP OF CONCRETE
- SG-SPOT GRADE

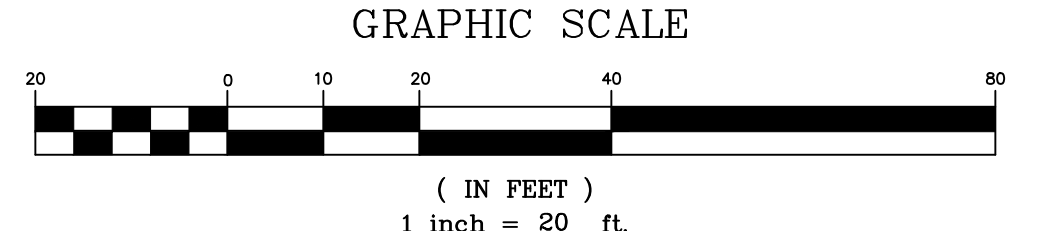
WAYNE COSBY, JR.  
TAX PARCEL 02940018  
PLAT BOOK 2 PAGE 4

BETTY ZIPPERER  
PLAT BOOK 4 PAGE 25  
TAX PARCEL 02940018

SURVEY BY:  
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991 HUNTERS ROAD  
SYLVANIA, GA 30467

JOHN POWELL

STATE HIGHWAY 119



PAVING, GRADING, & DRAINAGE PLAN



SCHEDULE OF REVISIONS

#	DATE

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# C4.0





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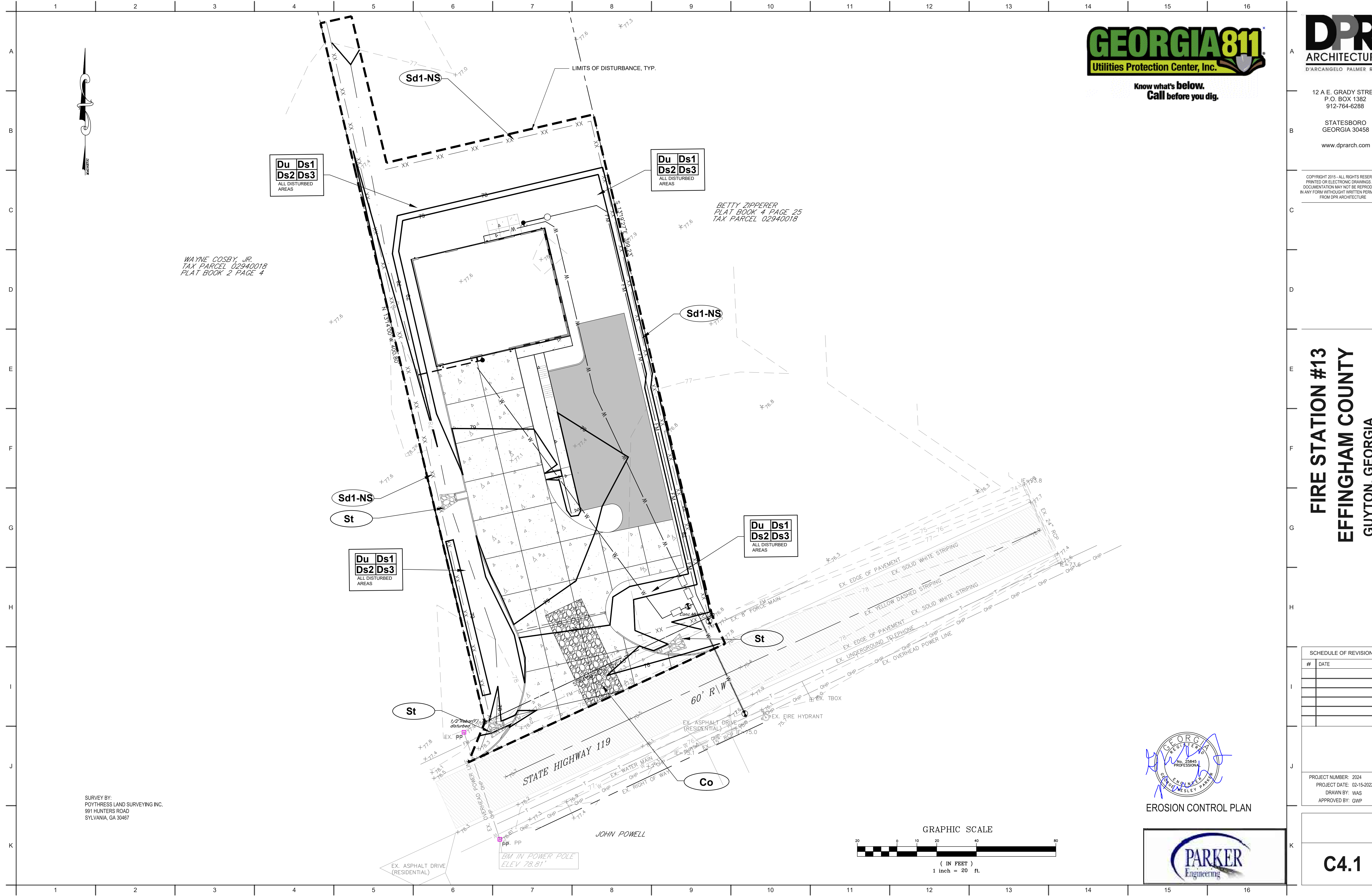
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**FIRE STATION #13  
EFFINGHAM COUNTY  
GUYTON, GEORGIA**



WAYNE COSBY, JR.  
TAX PARCEL 02940018  
PLAT BOOK 2 PAGE 4

BETTY ZIPPERER  
PLAT BOOK 4 PAGE 25  
TAX PARCEL 02940018

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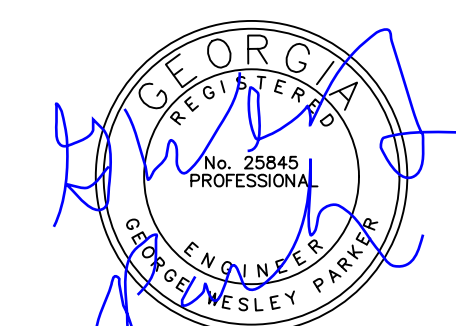
JOHN POWELL

BM IN POWER POLE  
ELEV 78.81'

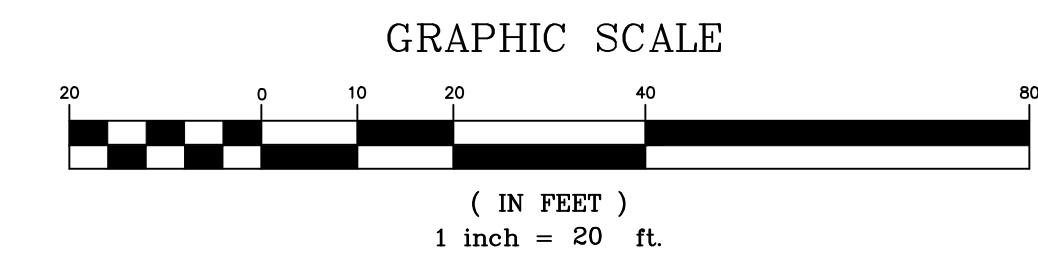
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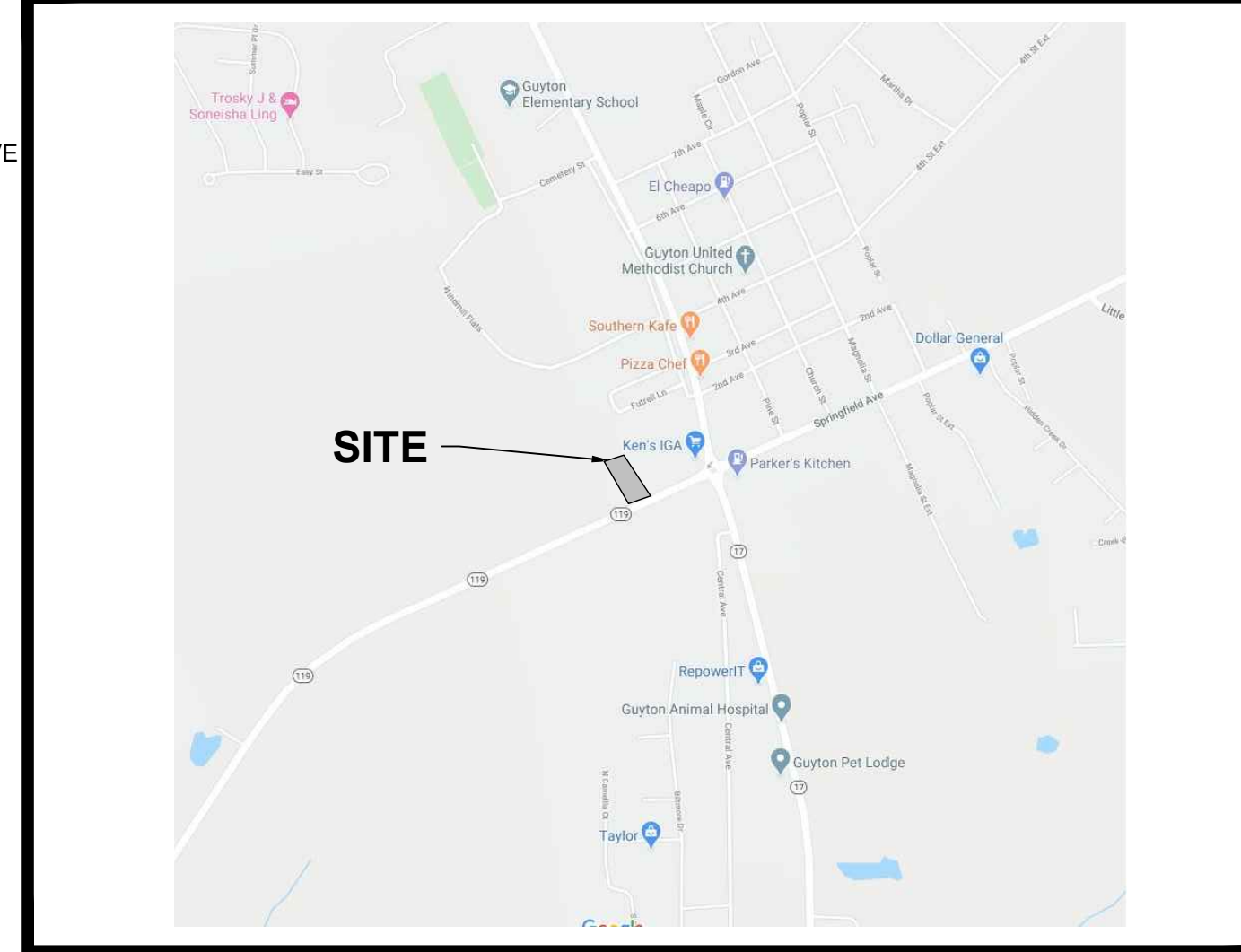
EROSION CONTROL PLAN



**C4.1**



# VICINITY MAP



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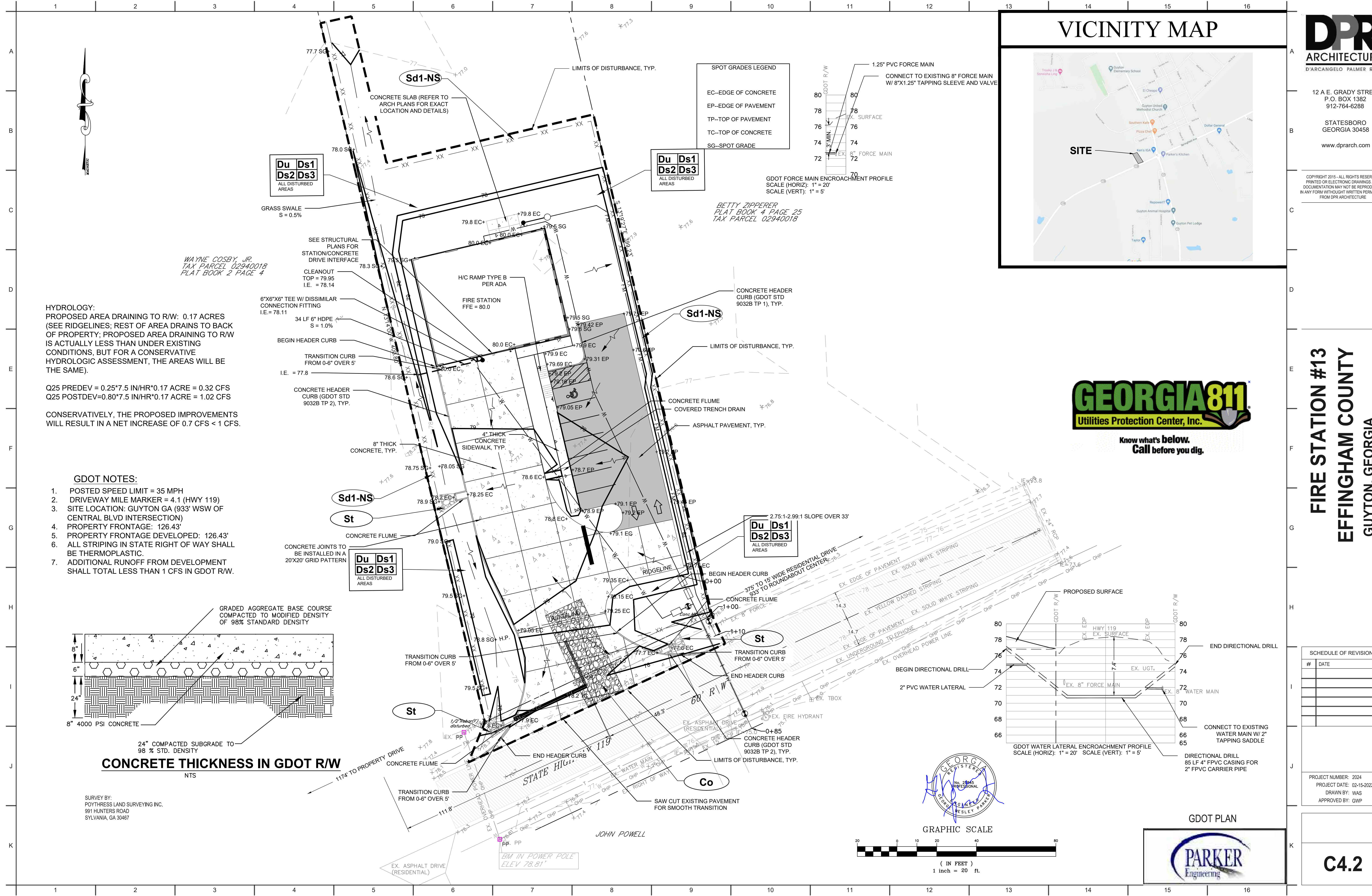
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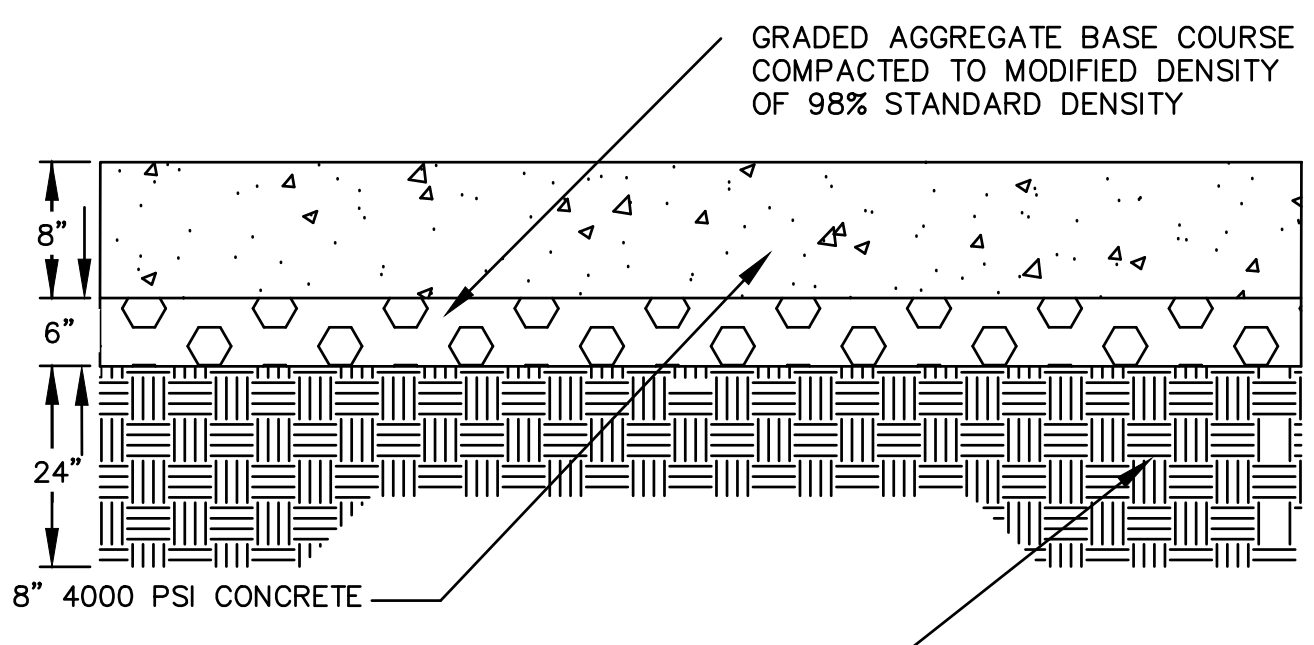


**HYDROLOGY:**  
PROPOSED AREA DRAINING TO R/W: 0.17 ACRES  
(SEE RIDGELINES; REST OF AREA DRAINS TO BACK  
OF PROPERTY; PROPOSED AREA DRAINING TO R/W  
IS ACTUALLY LESS THAN UNDER EXISTING  
CONDITIONS, BUT FOR A CONSERVATIVE  
HYDROLOGIC ASSESSMENT, THE AREAS WILL BE  
THE SAME).

Q25 PREDEV = 0.25\*7.5 IN/HR\*0.17 ACRE = 0.32 CFS  
Q25 POSTDEV = 0.80\*7.5 IN/HR\*0.17 ACRE = 1.02 CFS

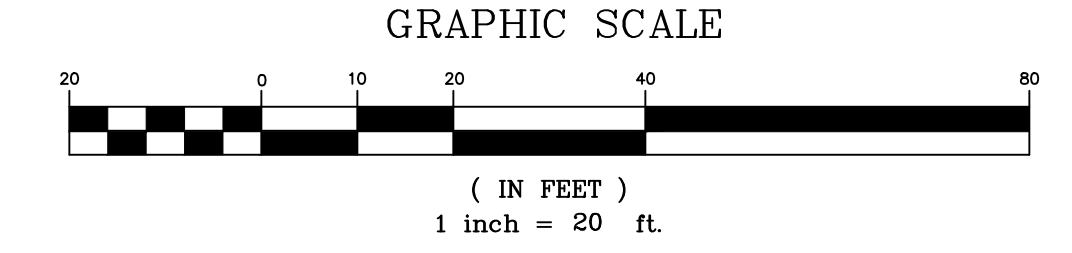
CONSERVATIVELY, THE PROPOSED IMPROVEMENTS  
WILL RESULT IN A NET INCREASE OF 0.7 CFS < 1 CFS.

- GDOT NOTES:**
1. POSTED SPEED LIMIT = 35 MPH
  2. DRIVEWAY MILE MARKER = 4.1 (HWY 119)
  3. SITE LOCATION: GUYTON GA (933' WSW OF CENTRAL BLVD INTERSECTION)
  4. PROPERTY FRONTAGE: 126.43'
  5. PROPERTY FRONTAGE DEVELOPED: 126.43'
  6. ALL STRIPING IN STATE RIGHT OF WAY SHALL BE THERMOPLASTIC.
  7. ADDITIONAL RUNOFF FROM DEVELOPMENT SHALL TOTAL LESS THAN 1 CFS IN GDOT R/W.



### CONCRETE THICKNESS IN GDOT R/W

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SYLVANIA, GA 30467



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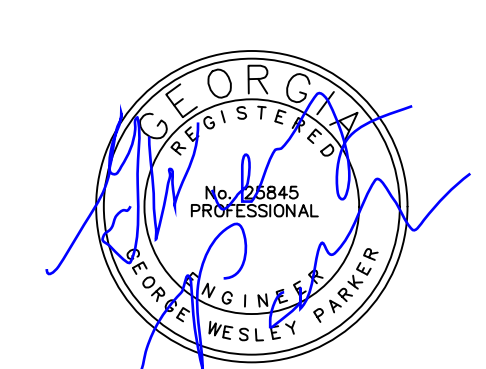
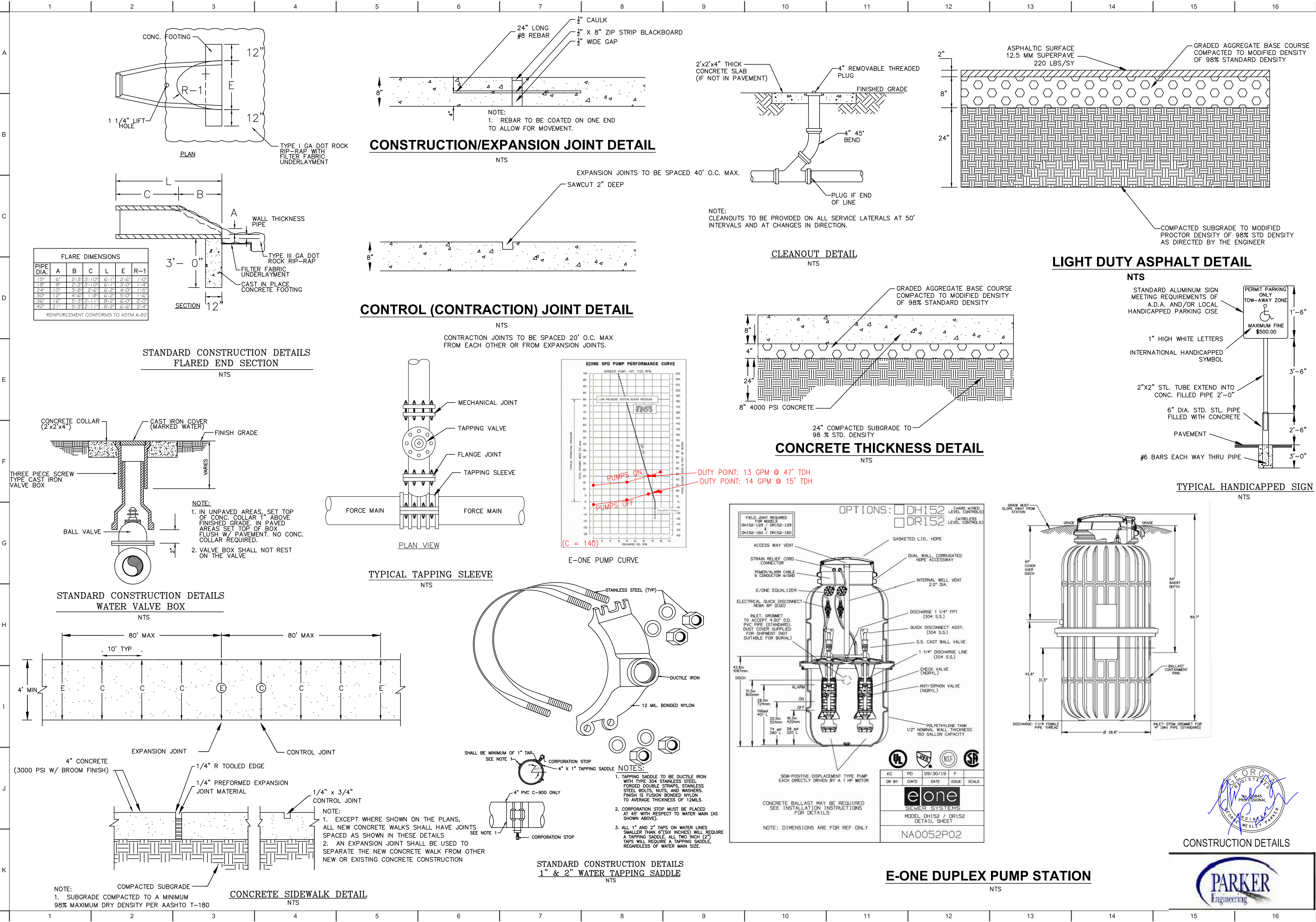
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**C4.2**





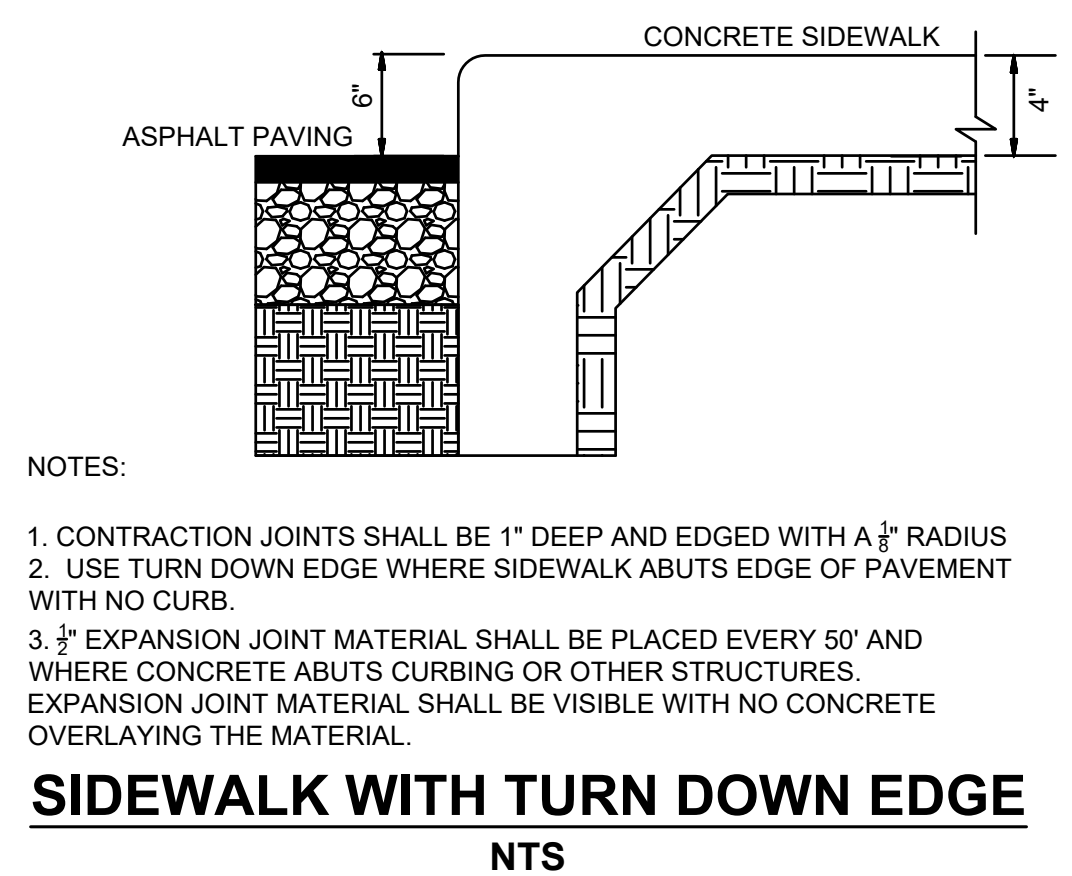
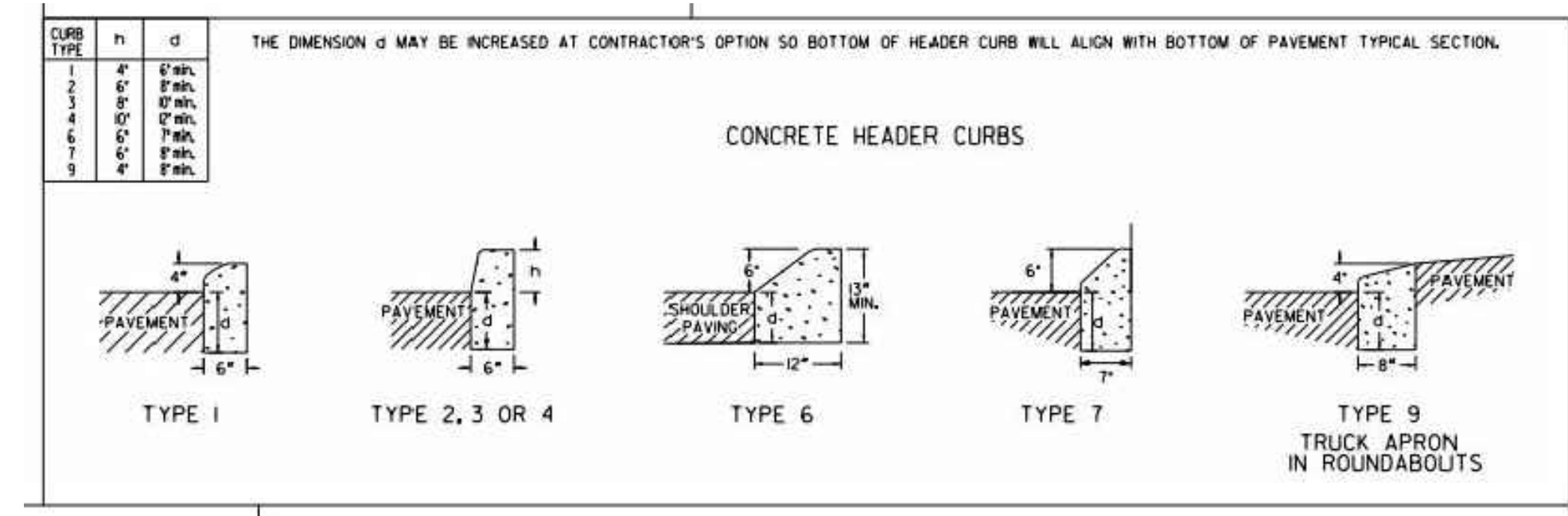
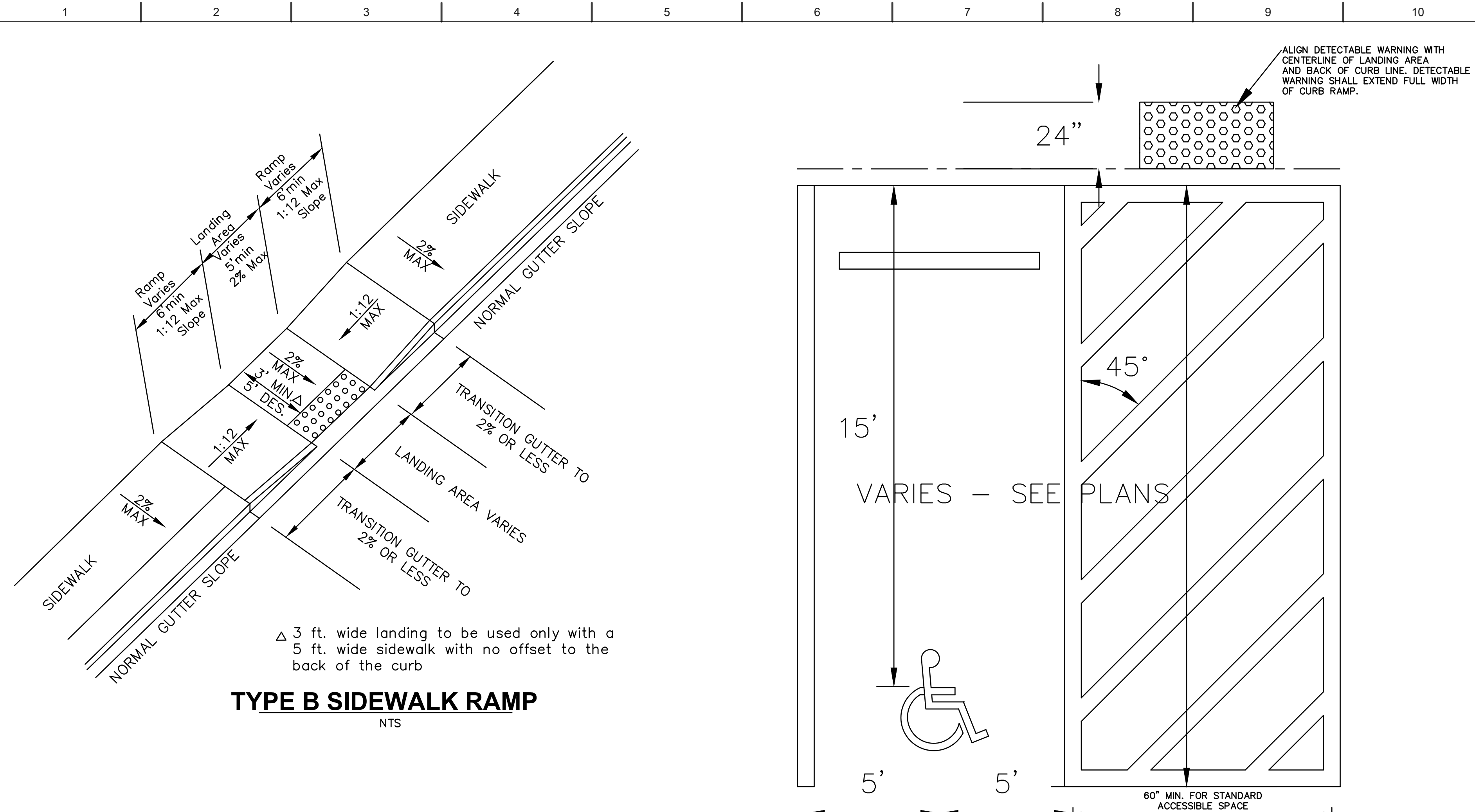
#	DATE



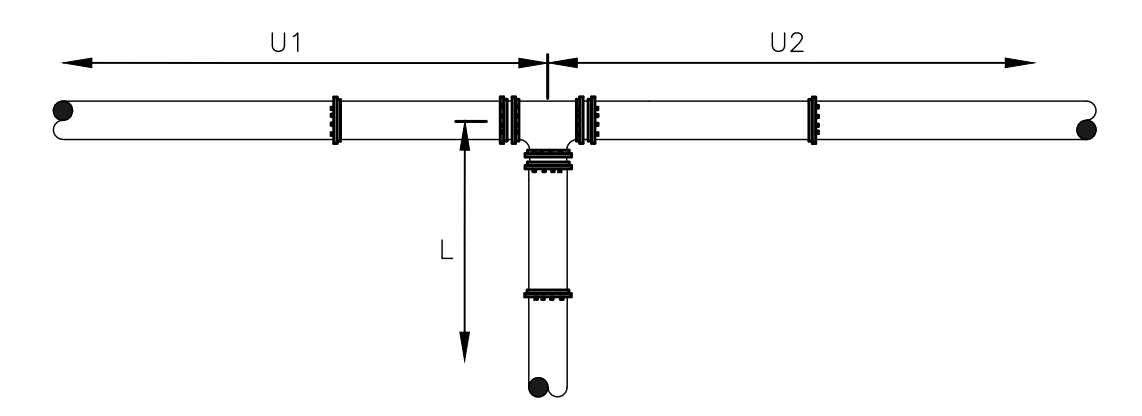
CONSTRUCTION DETAILS







- NOTES:
- STRIPING AND CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL, CODES AND SPECIFICATIONS.
  - 2% MAXIMUM SLOPE IN ALL DIRECTIONS WITHIN ACCESSIBLE PARKING SPACE AND ACCESS AISLE.
  - ONE IN EVERY EIGHT ACCESSIBLE SPACES SHALL BE SERVED BY AN 8' WIDE ACCESS AISLE AND SHALL BE DESIGNATED "VAN ACCESSIBLE."



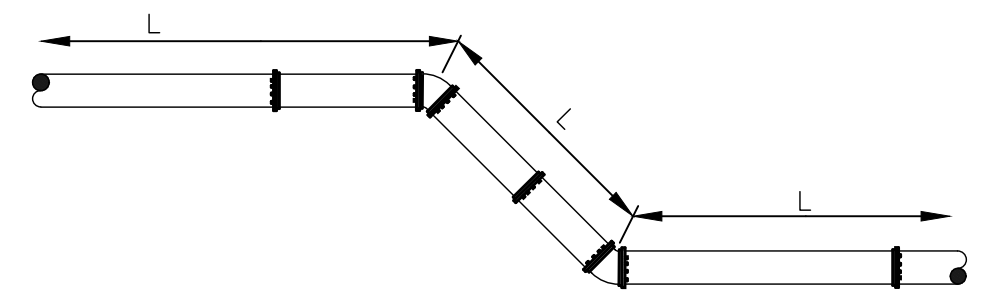
- NOTES:
- LENGTH OF RESTRAINT SHOWN IS IN FEET.
  - WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
  - U1 AND U2 = UNINTERRUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION.
  - Ur = THE SMALLER OF U1 OR U2.
  - L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.
  - WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90° HORIZONTAL BEND.

PVC LINE

TEE	Ur	5'-10'	11'-20'	21'-35'	> 35'
4X4	43	28	4	*	*
6X4	38	17	*	*	*
6X6	64	49	25	*	*
8X4	34	6	*	*	*
8X6	61	42	10	*	*
8X8	87	72	48	12	*
10X4	29	*	*	*	*
10X6	58	34	*	*	*
10X8	84	66	35	*	*
10X10	106	91	67	31	*
12X4	24	*	*	*	*
12X6	54	26	*	*	*
12X8	82	60	23	*	*
12X10	104	86	57	13	*
12X12	126	112	87	51	*

MINIMUM RESTRAINED LENGTH (L)  
RESTRAIN AT TEE ONLY.

**TEE RESTRAINT (PVC LINE)**  
NOT TO SCALE



PVC LINE

PIPE DIA.	BEND ANGLE		
	11 1/2'	22 1/2'	45'
4	5	10	22
6	7	15	30
8	9	19	40
10	11	23	48
12	13	27	56

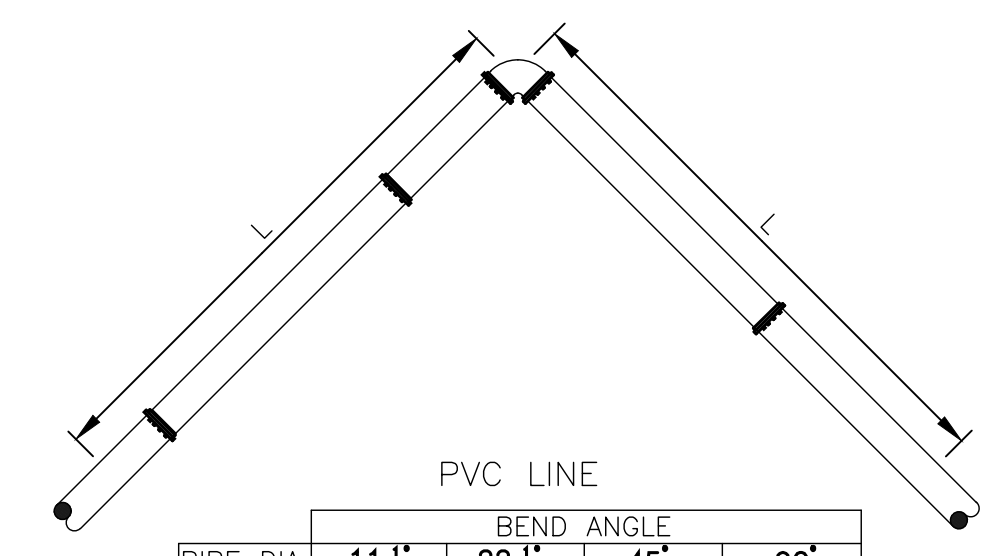
DUCTILE IRON LINE

PIPE DIA.	BEND ANGLE		
	11 1/2'	22 1/2'	45'
4	3	6	12
6	4	8	17
8	4	10	22
10	5	12	26
12	6	15	30
16	7	19	39
20	11	23	47
24	13	26	55

MINIMUM RESTRAINED LENGTH (L)

- NOTES:
- LENGTH OF RESTRAINT SHOWN IS IN FEET.
  - WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

**VERTICAL BEND RESTRAINT**  
NOT TO SCALE



PVC LINE

PIPE DIA.	BEND ANGLE		
	11 1/2'	22 1/2'	45'
4	3	6	12
6	4	8	17
8	5	11	22
10	6	13	26
12	7	15	31

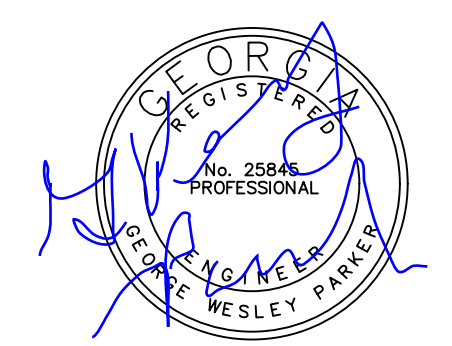
DUCTILE IRON LINE

PIPE DIA.	BEND ANGLE		
	11 1/2'	22 1/2'	45'
4	2	4	8
6	3	6	12
8	4	7	15
10	4	9	18
12	5	10	21
16	6	13	27
20	8	16	33
24	9	18	38

MINIMUM RESTRAINED LENGTH (L)

- NOTES:
- LENGTH OF RESTRAINT SHOWN IS IN FEET.
  - WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

**HORIZONTAL BEND RESTRAINT**  
NOT TO SCALE



CONSTRUCTION DETAILS



SCHEDULE OF REVISIONS

#	DATE

PROJECT NUMBER: 2024  
PROJECT DATE: 02-15-2022  
DRAWN BY: WAS  
APPROVED BY: GWP

**C5.1**



SCHEDULE OF REVISIONS	
#	DATE

PROJECT NUMBER: 2024  
PROJECT DATE: 02-15-2022  
DRAWN BY: WAS  
APPROVED BY: GWP

**C6.0**

**STRUCTURAL PRACTICES**

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
St	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.

**VEGETATIVE PRACTICES**

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.

TOTAL ACREAGE -1.13 ACRES  
DISTURBED ACREAGE -0.85 ACRES

CURRENT LAND USE- VACANT; WOODED AREA  
PROPOSED LAND USE - MANNED FIRE STATION

**NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.**

**NO BUFFER ENCROACHMENTS ARE NEEDED FOR THIS PROJECT.**

**WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.**

**THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.**

**EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.**

**ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.**

**52. VEGETATIVE PLAN FOR DISTURBED AREAS**

All bare areas resulting from construction operations will be established to perennial vegetation as soon as possible after final grading is complete.

**SEEDBED**

Prepare seedbed to a depth of at least 4 inches on all areas where a good seedbed is not present. Remove rocks, roots, or other objects that will interfere with vegetation establishment or maintenance operations.

**FERTILIZER**

Apply agricultural lime at the rate of 1 tons per acre. Apply 1000 lbs. 15-15-15 fertilizer per acre. Spread lime and fertilizer uniformly over all areas immediately before final land preparation and mix thoroughly with the soil. Apply topdressing of 100 lbs. per acre of ammonium nitrate (or equivalent) when plants are 2 to 4 inches tall.

**PLANTING**

All areas shall be seed with the following:

**NOVEMBER-MARCH**

Rye (Temporary Grassing)/Bermuda Mixture (Permanent Grassing)  
Rye @ 1/2 bushel (3.9 lbs.) per acre  
Unhulled Bermuda @ 10 lbs. per acre

**MARCH-NOVEMBER**

Browntop Millet (Temporary Grassing)/Bermuda Mixture (Permanent Grassing)  
Browntop Millet @ 10 lbs. per acre  
Hulled Bermuda @ 10 lbs. per acre

**MULCHING**

2 Tons per acre of straw. Anchor mulch into ground. Mulch shall be approximately 1-2 inches thick.

**MAINTENANCE**

Apply 400 lbs. per acre or 10-10-10 fertilizer and topdress with 30 lbs. of ammonium nitrate per acre every year. Apply 1 ton of lime per 5 years.

PROVIDE VEGETATION AND MULCHING TO ALL DISTURBED AREAS IMMEDIATELY AFTER GRADING. LAND CLEARING SHALL BE KEPT TO A MINIMUM AND SHALL BE ACCOMPLISHED IN A WAY TO MINIMIZE EROSION. SCHEDULE LAND DISTURBING ACTIVITIES WITH REGARD TO WEATHER FORECAST TO LIMIT EXPOSURE OF UNPROTECTED LAND FROM WIND, RAIN AND OTHER EROSION FORCES.

**GENERAL EROSION CONTROL NOTES**

THIS SITE IS NOT LOCATED WITHIN A FLOOD ZONE.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT ALL STAGES OF CONSTRUCTION.

CONSTRUCTION OR LAND CLEARING SHALL BEGIN WITH THE INSTALLATION OF EROSION CONTROL MEASURES.

SEDIMENT CONTROL WILL BE ACHIEVED BY USE OF SEDIMENT INLET TRAPS, SILT FENCE, SEDIMENT BASIN AND A CONSTRUCTION EXIT. REMOVE ACCUMULATED SILT FROM SILT FENCE AND CHECK DAMS WHEN THEY REACH .5' IN DEPTH.

CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES DAILY AND AFTER ALL RAIN EVENTS. ANY DAMAGES SHOULD BE REPAIRED BY THE END OF THE DAY. SEDIMENT DISPOSAL SHALL BE ACCOMPLISHED BY SPREADING EVENLY OVER THE SITE. SEDIMENT FENCES SHALL REMAIN UNTIL THE AREA IS STABILIZED.

EROSION CONTROL MEASURES IN THE PLAN ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROL MEASURES AS DETERMINED BY ACTUAL FIELD CONDITIONS.

ALL RIP-RAP SHALL BE INSTALLED FLUSH WITH CHANNEL BANKS AND BOTTOM.

**SPILL CONTINGENCY PLAN**

- A. CONTAIN THE SPILL
- B. STOP THE SOURCE
- C. CLEANUP PROCEDURES SHALL BE CLEARLY POSTED
- D. CLEANUP MATERIALS SHALL BE READILY AVAILABLE

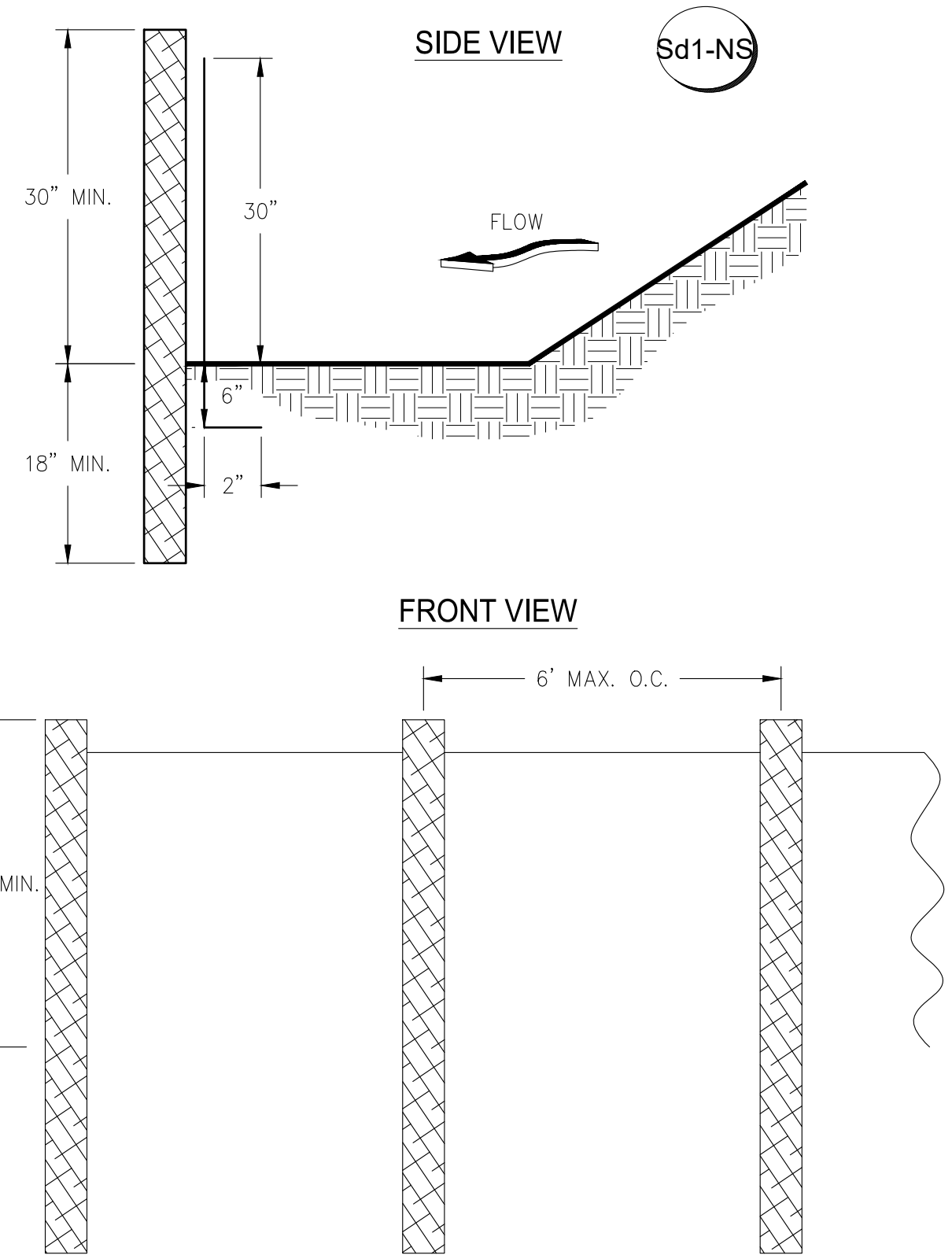
**NOTES REGARDING CRITICAL WORK ZONE**

AT THE END OF EACH WORK DAY ALL SLOPES 2:1 OR STEEPER AND HIGHER THAN 5 FEET SHALL RECEIVE SURFACE ROUGHENING, POLYMERS, AND EROSION CONTROL MATTING. ADDITIONALLY, ALL FILL SLOPES SHALL RECEIVE A DIVERSION DIKE AND TEMPORARY DOWN DRAINS ALONG THE TOP OF THE SLOPE PREVENTING DRAINAGE SPILLING OVER THE EDGE AND DOWN THE FACE OF THE SLOPE. THE TEMPORARY DOWN DRAINS SHALL BE CONSTRUCTED WITH PERFORATED STAND PIPES AT THE TOP OF THE SLOPE AND RECONSTRUCTED EACH DAY AS THE SLOPE INCREASES IN HEIGHT.

**PIPE VELOCITY CHART**

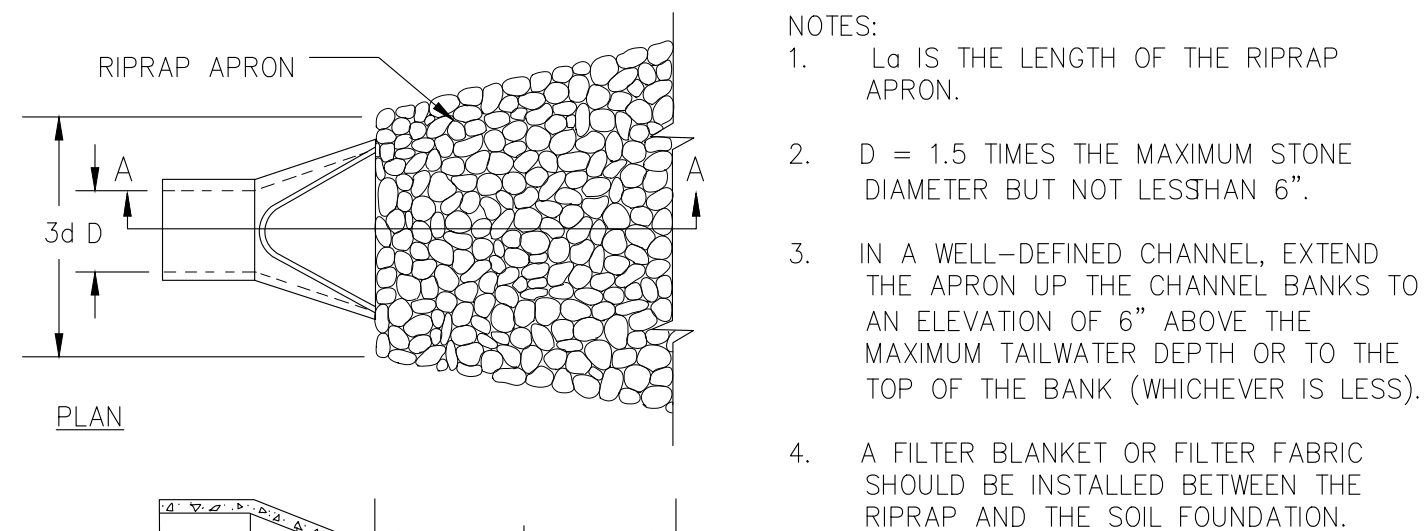
STRUCTURE	VELOCITY	d	La	ROCK SIZE	D	TAILWATER
FLUME	< 5 FPS	NA	9'	9"	2'	MIN
FLUME	< 5 FPS	NA	9'	9"	2'	MIN
FLUME	< 5 FPS	NA	9'	9"	2'	MIN

**SILT FENCE - TYPE NON-SENSITIVE**

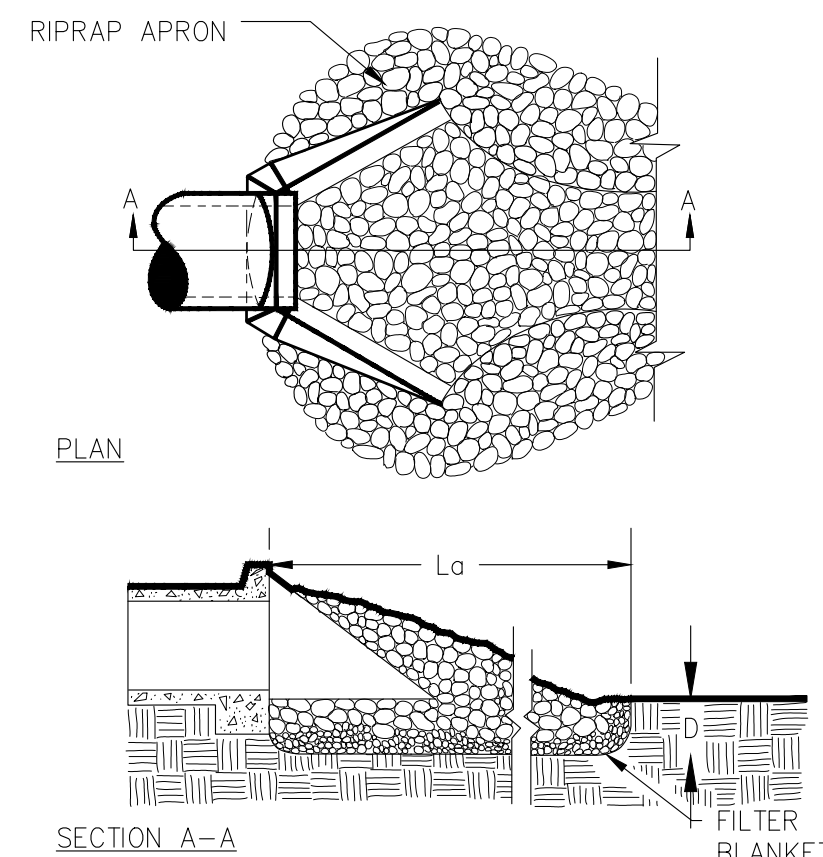


**RIPRAP OUTLET PROTECTION**

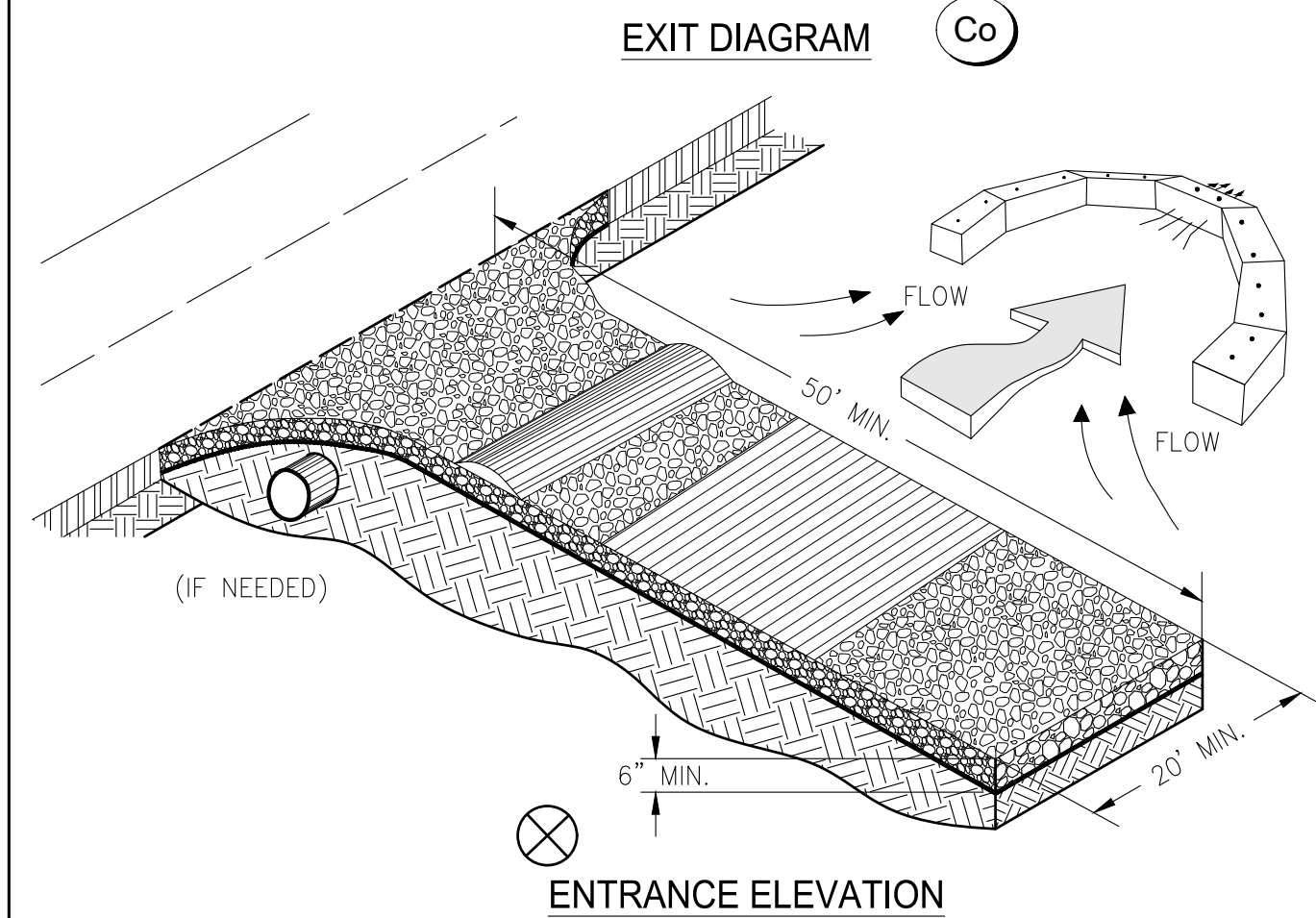
**PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL**



**PIPE OUTLET TO WELL DEFINED CHANNEL**

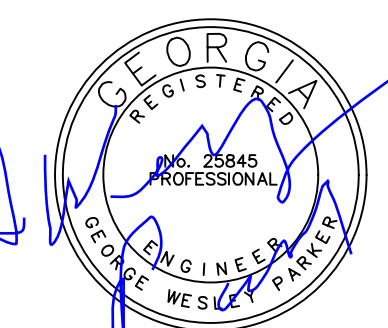


**CRUSHED STONE CONSTRUCTION EXIT**



**NOTES:**

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6"
5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.



**EROSION CONTROL DETAILS**







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**EFFINGHAM COUNTY**  
**HWY 119, GUYTON, GA**

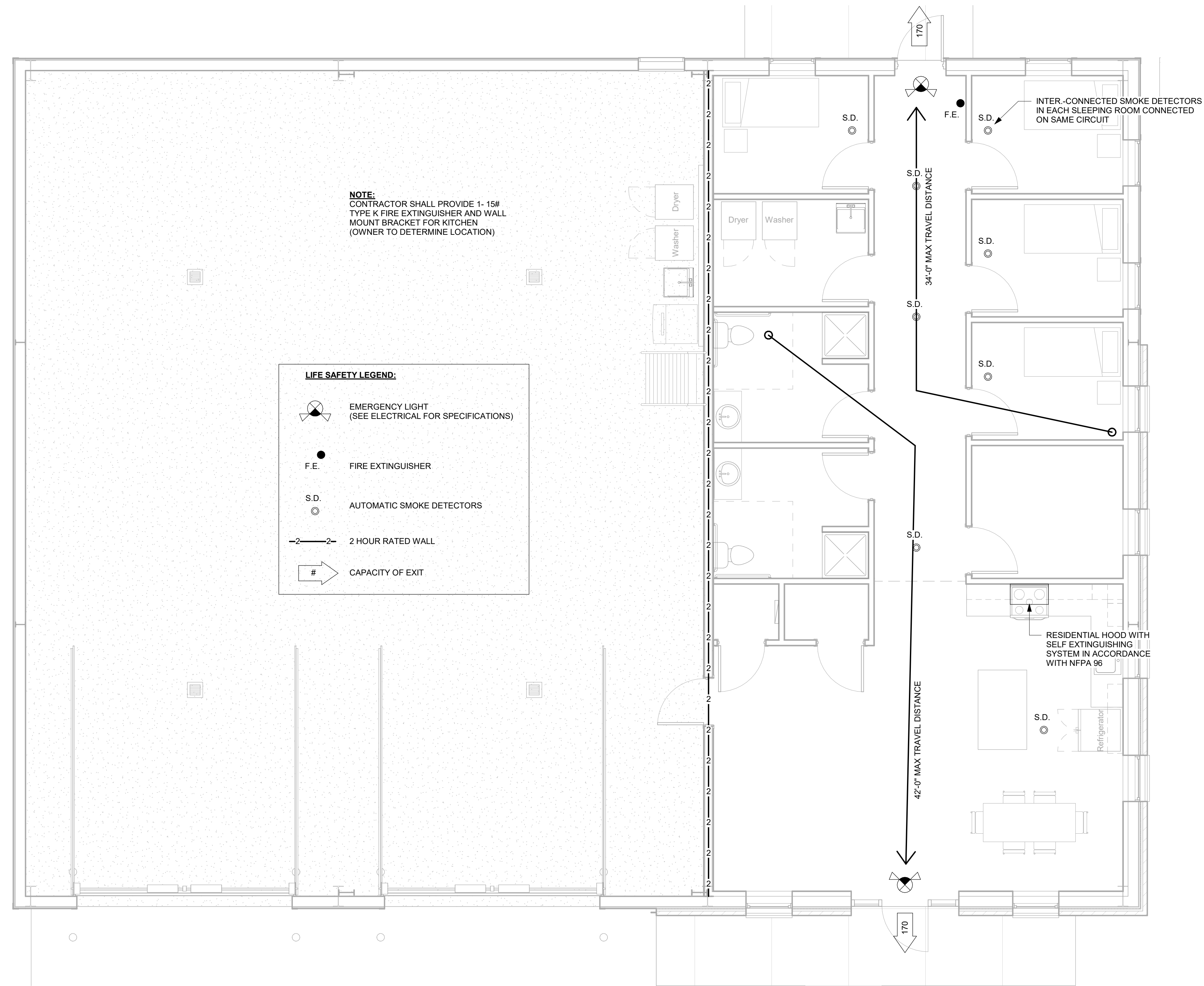
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**LSP**



1 LIFE SAFETY PLAN  
LSP 1/4" = 1'-0"





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**EFFINGHAM COUNTY**  
**HWY 119, GUYTON, GA**

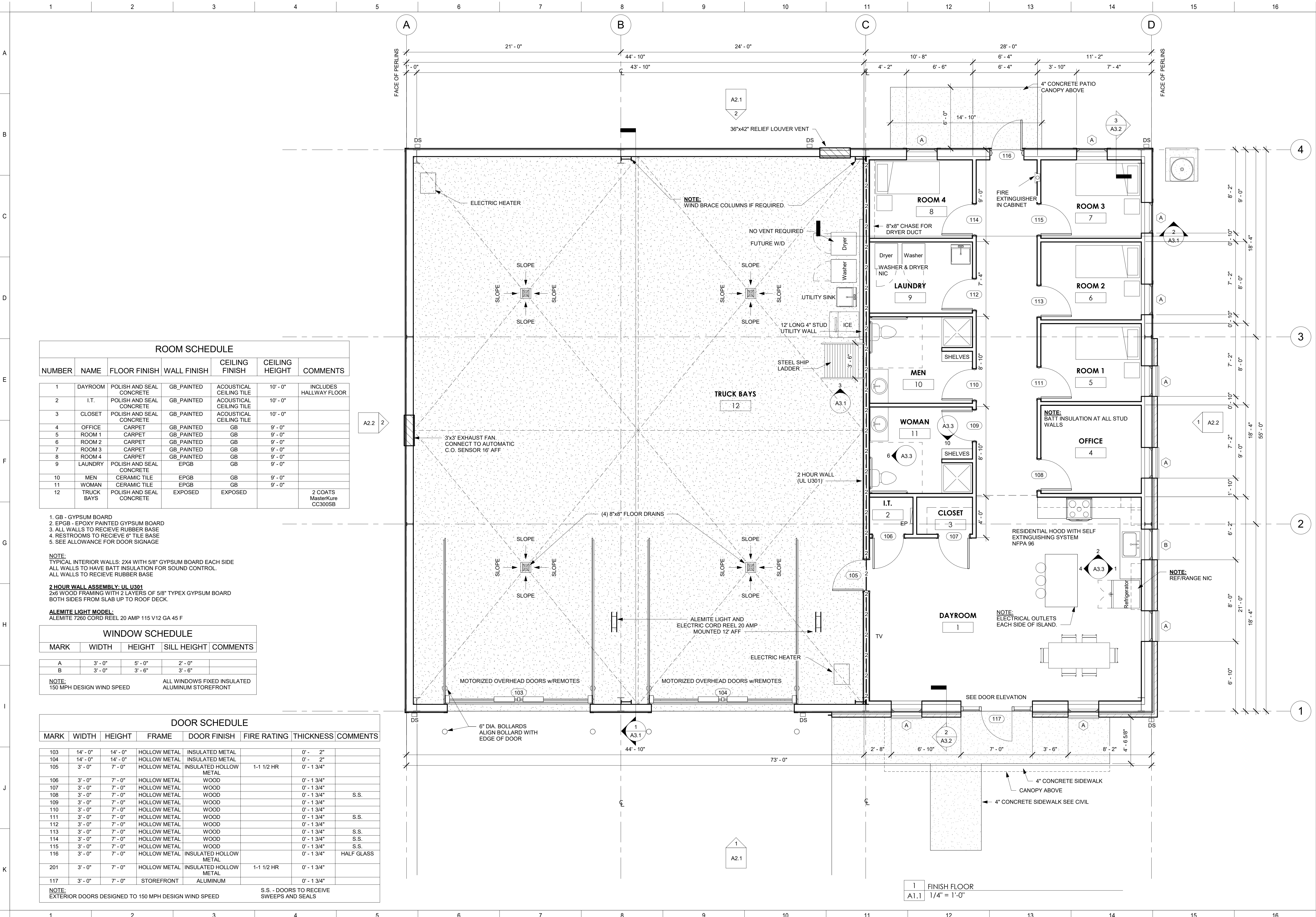
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APPROVED BY: FRD

**A1.1**



ROOM SCHEDULE

NUMBER	NAME	FLOOR FINISH	WALL FINISH	CEILING FINISH	CEILING HEIGHT	COMMENTS
1	DAYROOM	POLISH AND SEAL CONCRETE	GB_PAINTED	ACOUSTICAL CEILING TILE	10' - 0"	INCLUDES HALLWAY FLOOR
2	I.T.	POLISH AND SEAL CONCRETE	GB_PAINTED	ACOUSTICAL CEILING TILE	10' - 0"	
3	CLOSET	POLISH AND SEAL CONCRETE	GB_PAINTED	ACOUSTICAL CEILING TILE	10' - 0"	
4	OFFICE	CARPET	GB_PAINTED	GB	9' - 0"	
5	ROOM 1	CARPET	GB_PAINTED	GB	9' - 0"	
6	ROOM 2	CARPET	GB_PAINTED	GB	9' - 0"	
7	ROOM 3	CARPET	GB_PAINTED	GB	9' - 0"	
8	ROOM 4	CARPET	GB_PAINTED	GB	9' - 0"	
9	LAUNDRY	POLISH AND SEAL CONCRETE	EPGB	GB	9' - 0"	
10	MEN	CERAMIC TILE	EPGB	GB	9' - 0"	
11	WOMAN	CERAMIC TILE	EPGB	GB	9' - 0"	
12	TRUCK BAYS	POLISH AND SEAL CONCRETE	EXPOSED	EXPOSED	9' - 0"	2 COATS MasterKure CC300SB

1. GB - GYPSUM BOARD
2. EPGB - EPOXY PAINTED GYPSUM BOARD
3. ALL WALLS TO RECEIVE RUBBER BASE
4. RESTROOMS TO RECEIVE 6" TILE BASE
5. SEE ALLOWANCE FOR DOOR SIGNAGE

**NOTE:**  
TYPICAL INTERIOR WALLS: 2X4 WITH 5/8" GYPSUM BOARD EACH SIDE  
ALL WALLS TO HAVE BATT INSULATION FOR SOUND CONTROL.  
ALL WALLS TO RECEIVE RUBBER BASE

**2 HOUR WALL ASSEMBLY: UL U301**  
2x6 WOOD FRAMING WITH 2 LAYERS OF 5/8" TYPEX GYPSUM BOARD  
BOTH SIDES FROM SLAB UP TO ROOF DECK.

**ALEMITE LIGHT MODEL:**  
ALEMITE 7260 CORD REEL 20 AMP 115 V12 GA 45 F

WINDOW SCHEDULE

MARK	WIDTH	HEIGHT	SILL HEIGHT	COMMENTS
A	3' - 0"	5' - 0"	2' - 0"	
B	3' - 0"	3' - 6"	3' - 6"	

**NOTE:**  
150 MPH DESIGN WIND SPEED  
ALL WINDOWS FIXED INSULATED ALUMINUM STOREFRONT

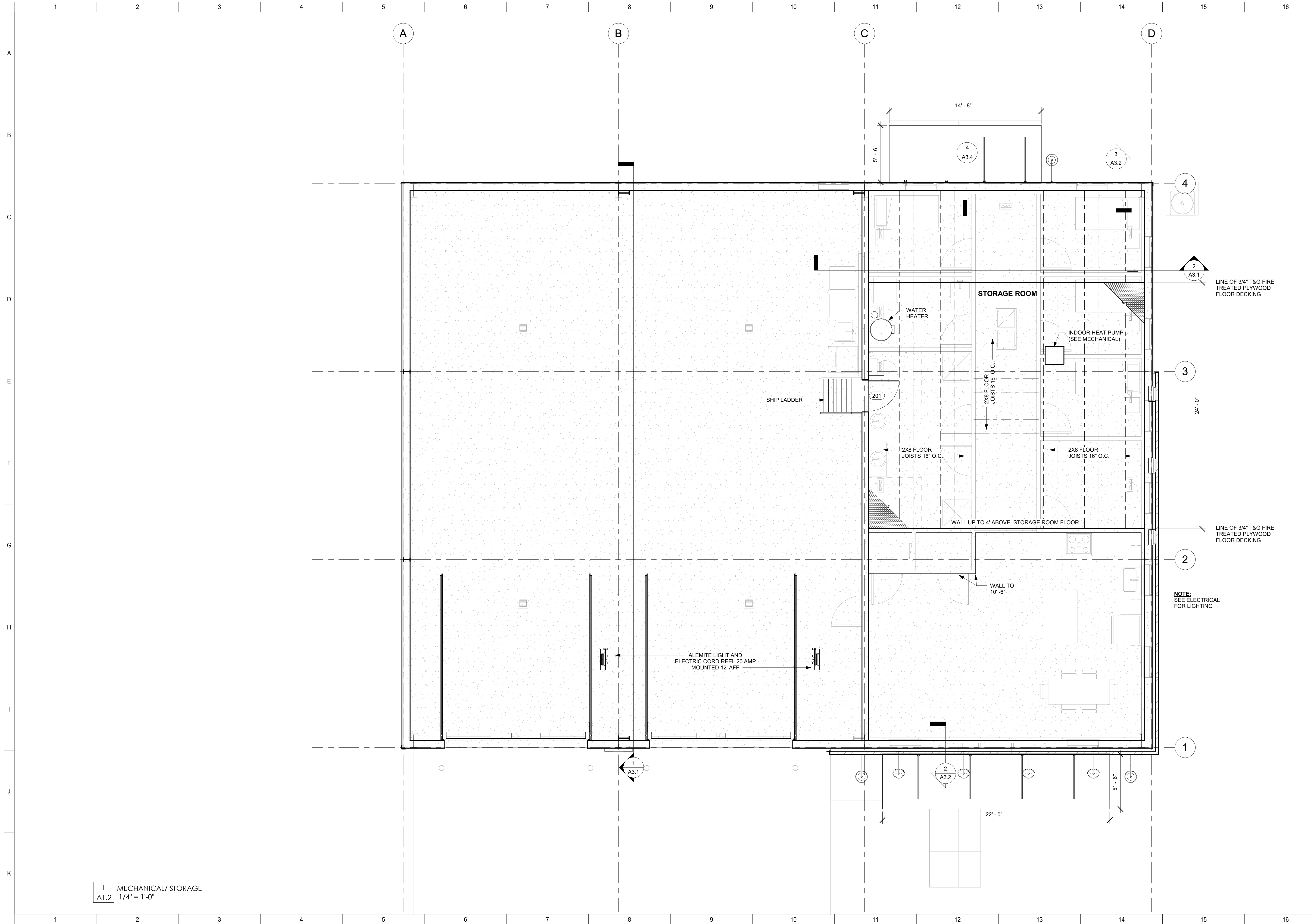
DOOR SCHEDULE

MARK	WIDTH	HEIGHT	FRAME	DOOR FINISH	FIRE RATING	THICKNESS	COMMENTS
103	14' - 0"	14' - 0"	HOLLOW METAL	INSULATED METAL		0' - 2"	
104	14' - 0"	14' - 0"	HOLLOW METAL	INSULATED METAL		0' - 2"	
105	3' - 0"	7' - 0"	HOLLOW METAL	INSULATED HOLLOW METAL	1-1 1/2 HR	0' - 1 3/4"	
106	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
107	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
108	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
109	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
110	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
111	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
112	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
113	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
114	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
115	3' - 0"	7' - 0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
116	3' - 0"	7' - 0"	HOLLOW METAL	INSULATED HOLLOW METAL		0' - 1 3/4"	HALF GLASS
201	3' - 0"	7' - 0"	HOLLOW METAL	INSULATED HOLLOW METAL	1-1 1/2 HR	0' - 1 3/4"	
117	3' - 0"	7' - 0"	STOREFRONT	ALUMINUM		0' - 1 3/4"	

**NOTE:**  
EXTERIOR DOORS DESIGNED TO 150 MPH DESIGN WIND SPEED  
S.S. - DOORS TO RECEIVE SWEEPS AND SEALS

1 FINISH FLOOR  
A1.1 1/4" = 1'-0"





1 MECHANICAL/ STORAGE  
 A1.2 1/4" = 1'-0"



12 A E. GRADY STREET  
 P.O. BOX 1382  
 912-764-6288

STATESBORO  
 GEORGIA 30458

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**FIRE STATION #13**  
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2 A3.1  
 LINE OF 3/4" T&G FIRE TREATED PLYWOOD FLOOR DECKING

LINE OF 3/4" T&G FIRE TREATED PLYWOOD FLOOR DECKING

NOTE:  
 SEE ELECTRICAL FOR LIGHTING

SCHEDULE OF REVISIONS

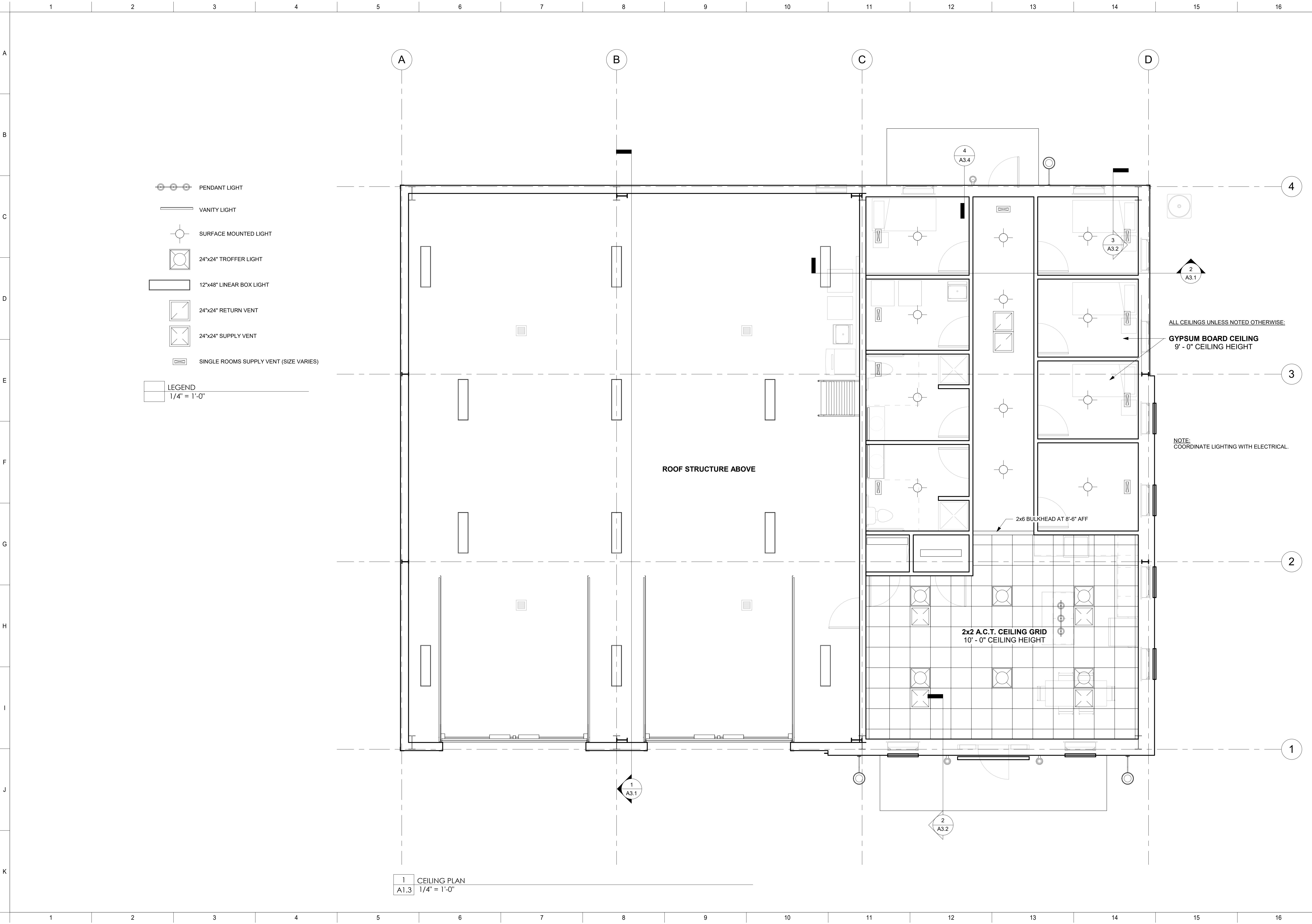
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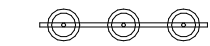


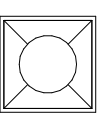

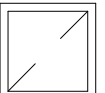
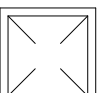
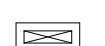
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**A1.2**





-  PENDANT LIGHT
-  VANITY LIGHT
-  SURFACE MOUNTED LIGHT
-  24"x24" TROFFER LIGHT
-  12"x48" LINEAR BOX LIGHT
-  24"x24" RETURN VENT
-  24"x24" SUPPLY VENT
-  SINGLE ROOMS SUPPLY VENT (SIZE VARIES)
- LEGEND**  
1/4" = 1'-0"

1 CEILING PLAN  
A1.3 1/4" = 1'-0"



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**A1.3**





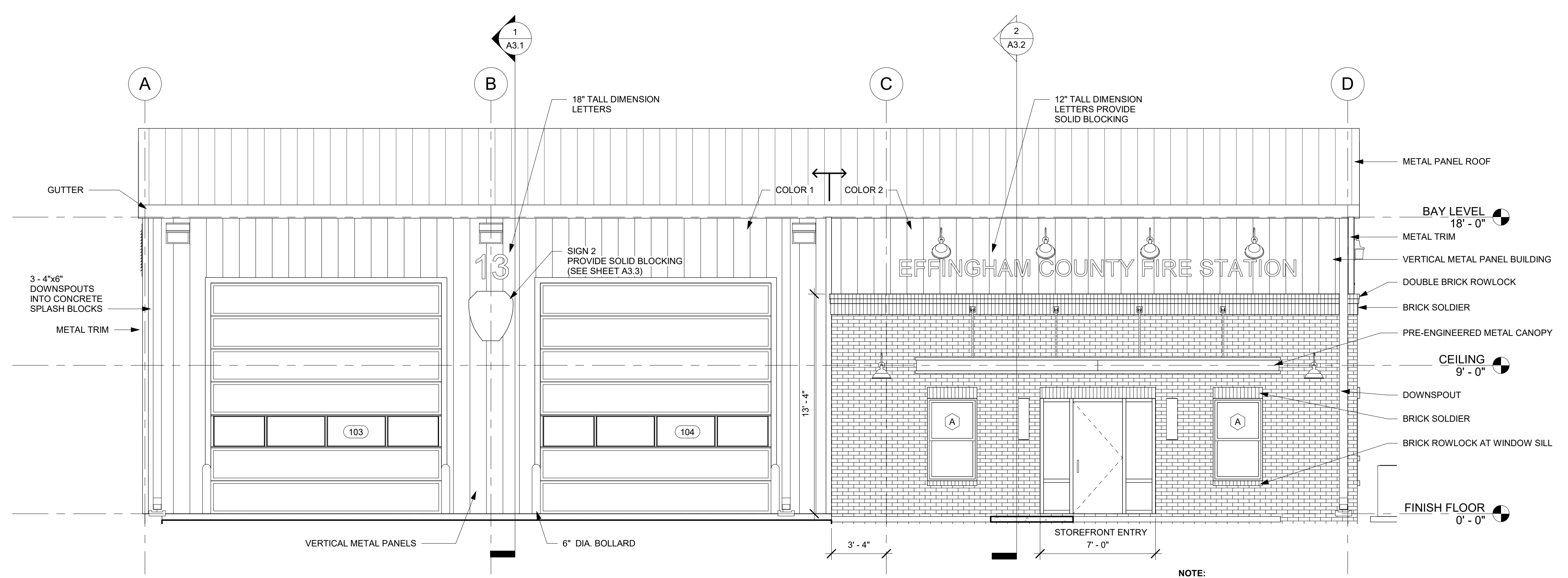
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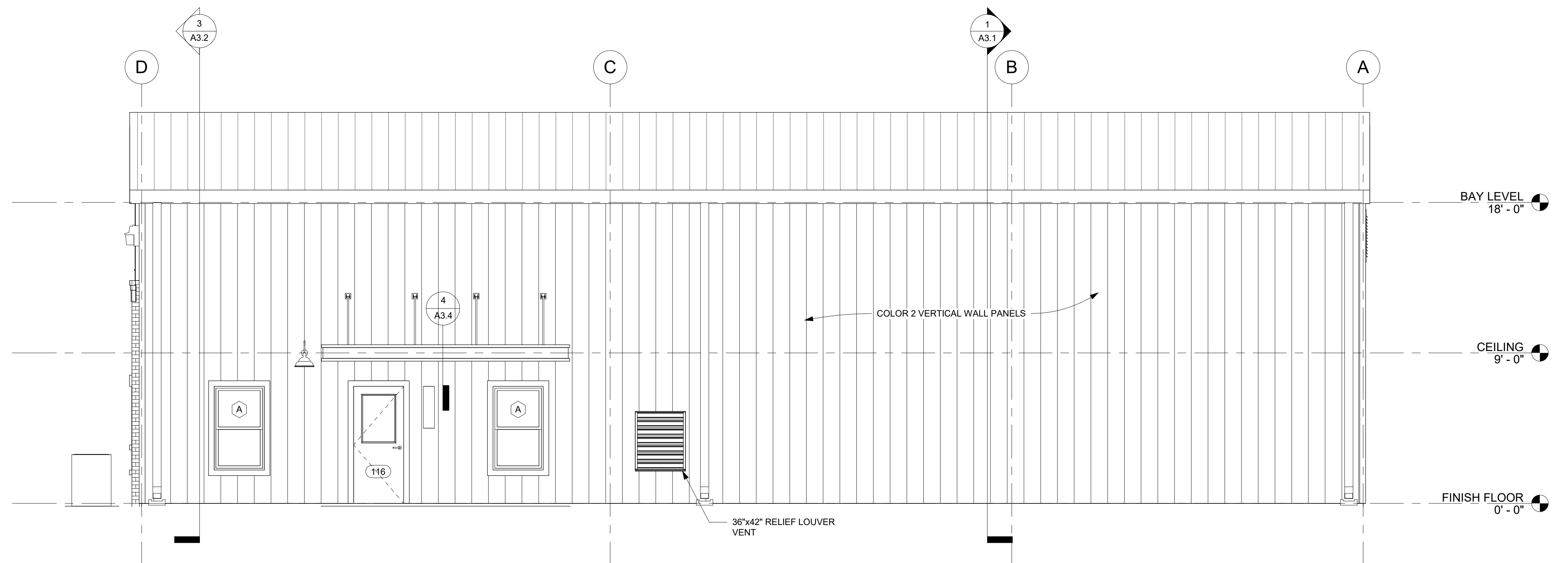
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**A2.1**



1 FRONT ELEVATION  
A2.1 1/4" = 1'-0"

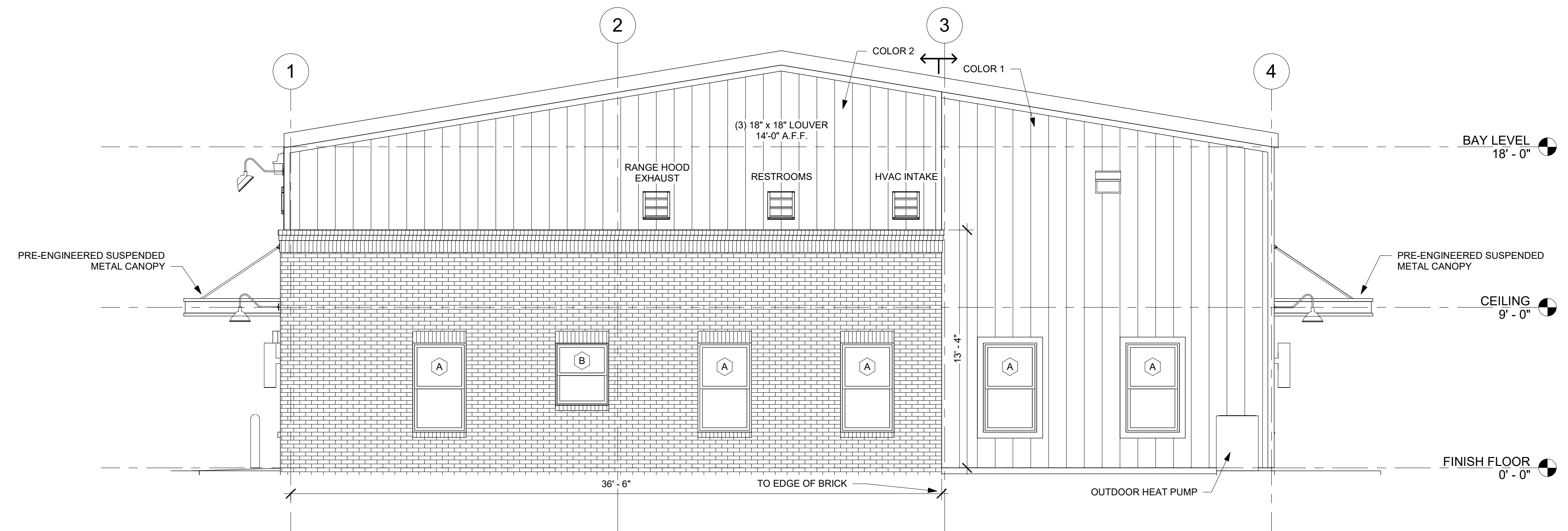


2 REAR ELEVATION  
A2.1 1/4" = 1'-0"

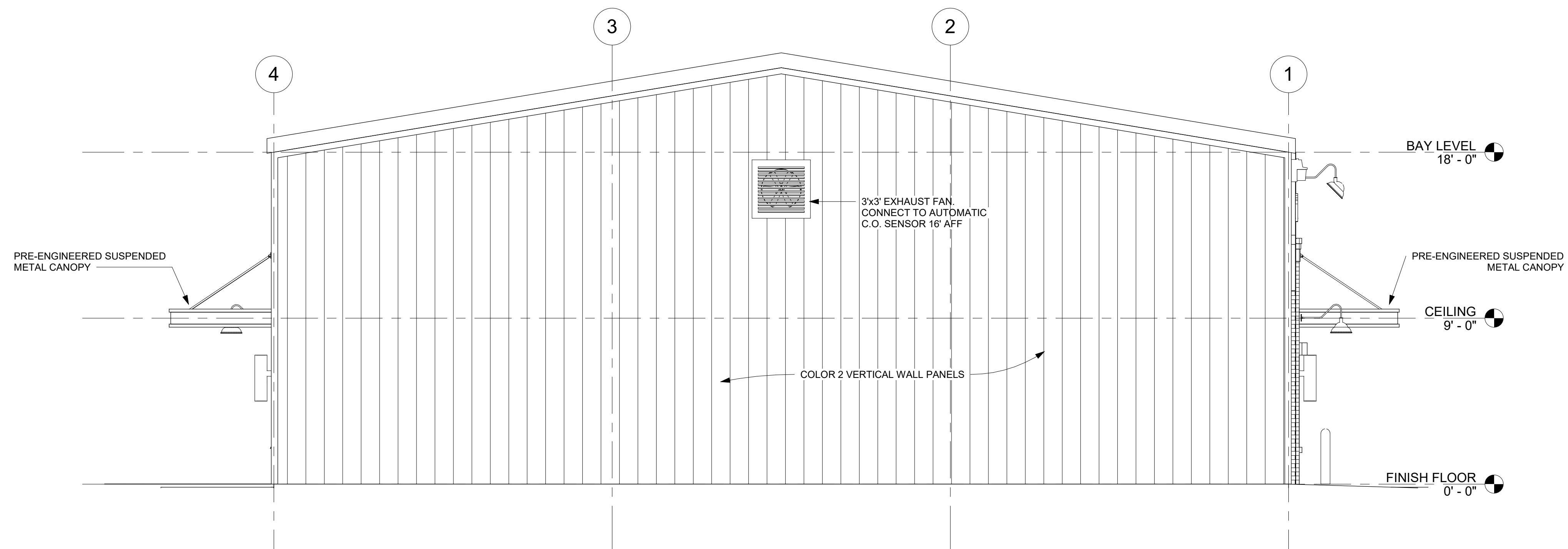




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1 SIDE A ELEVATION  
A2.2 1/4" = 1'-0"



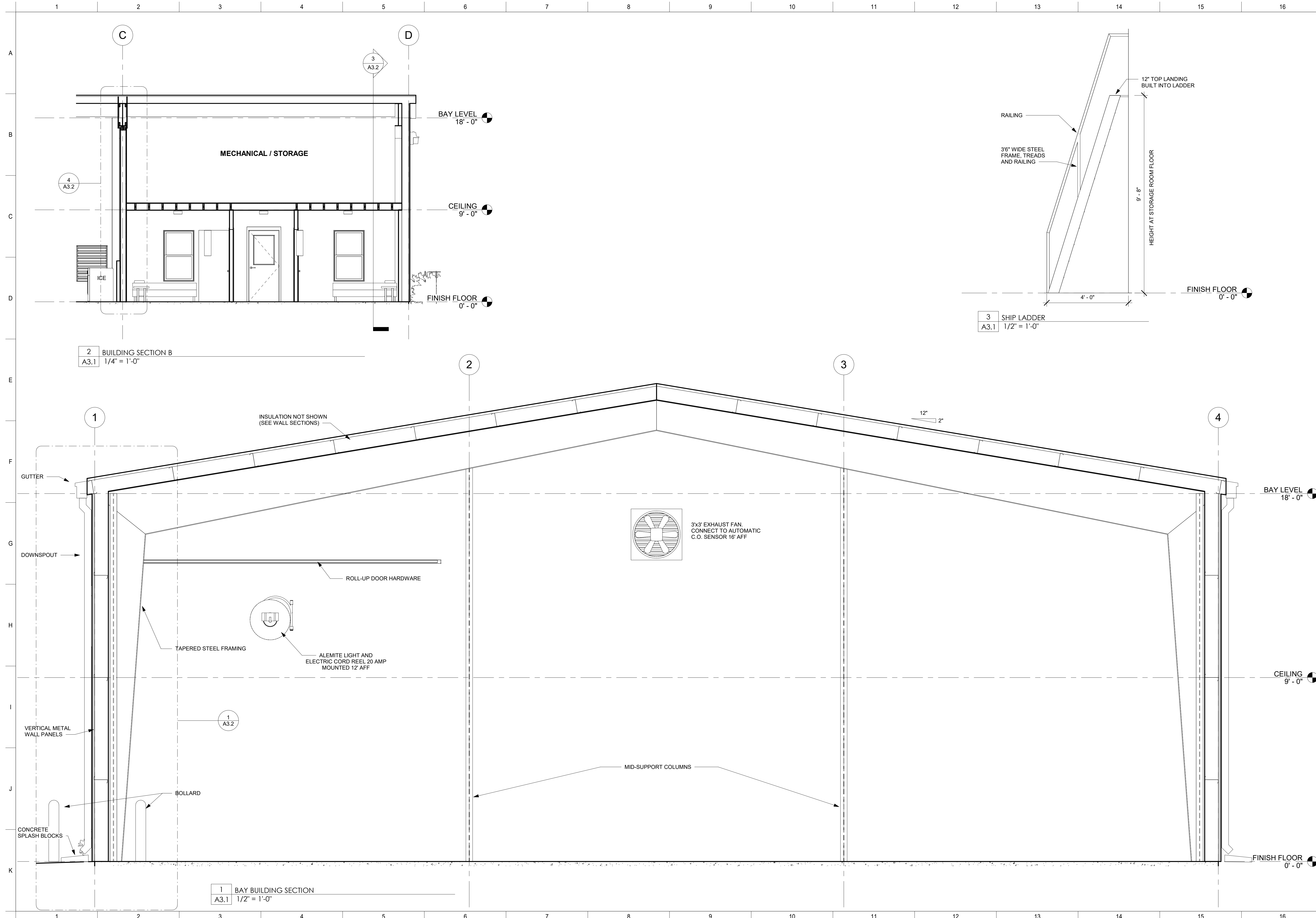
2 SIDE B ELEVATION  
A2.2 1/4" = 1'-0"

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**A2.2**





2 BUILDING SECTION B  
A3.1 1/4" = 1'-0"

3 SHIP LADDER  
A3.1 1/2" = 1'-0"

1 BAY BUILDING SECTION  
A3.1 1/2" = 1'-0"



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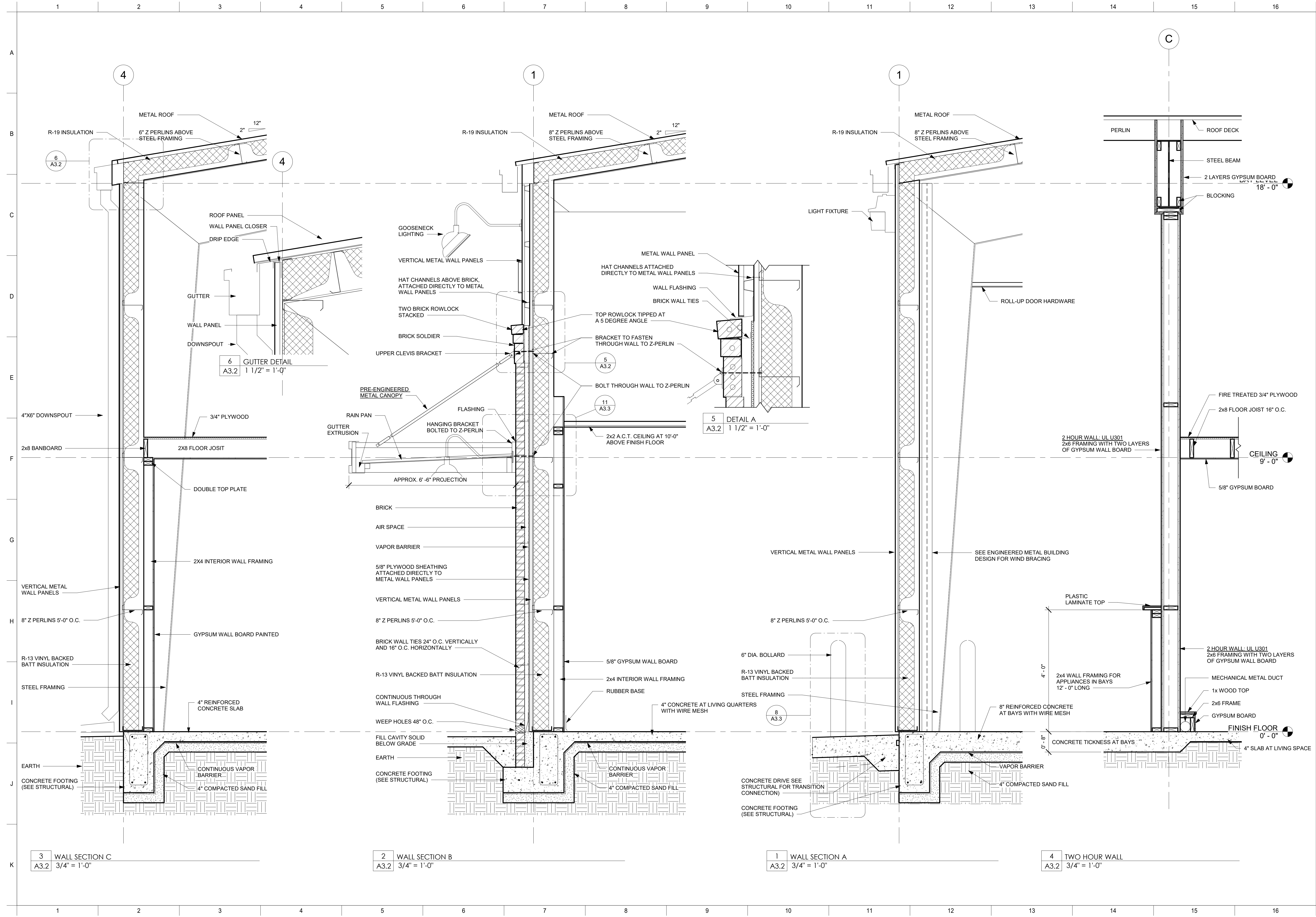
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**A3.2**



3 WALL SECTION C  
A3.2 3/4" = 1'-0"

2 WALL SECTION B  
A3.2 3/4" = 1'-0"

1 WALL SECTION A  
A3.2 3/4" = 1'-0"

4 TWO HOUR WALL  
A3.2 3/4" = 1'-0"

6 GUTTER DETAIL  
A3.2 1 1/2" = 1'-0"

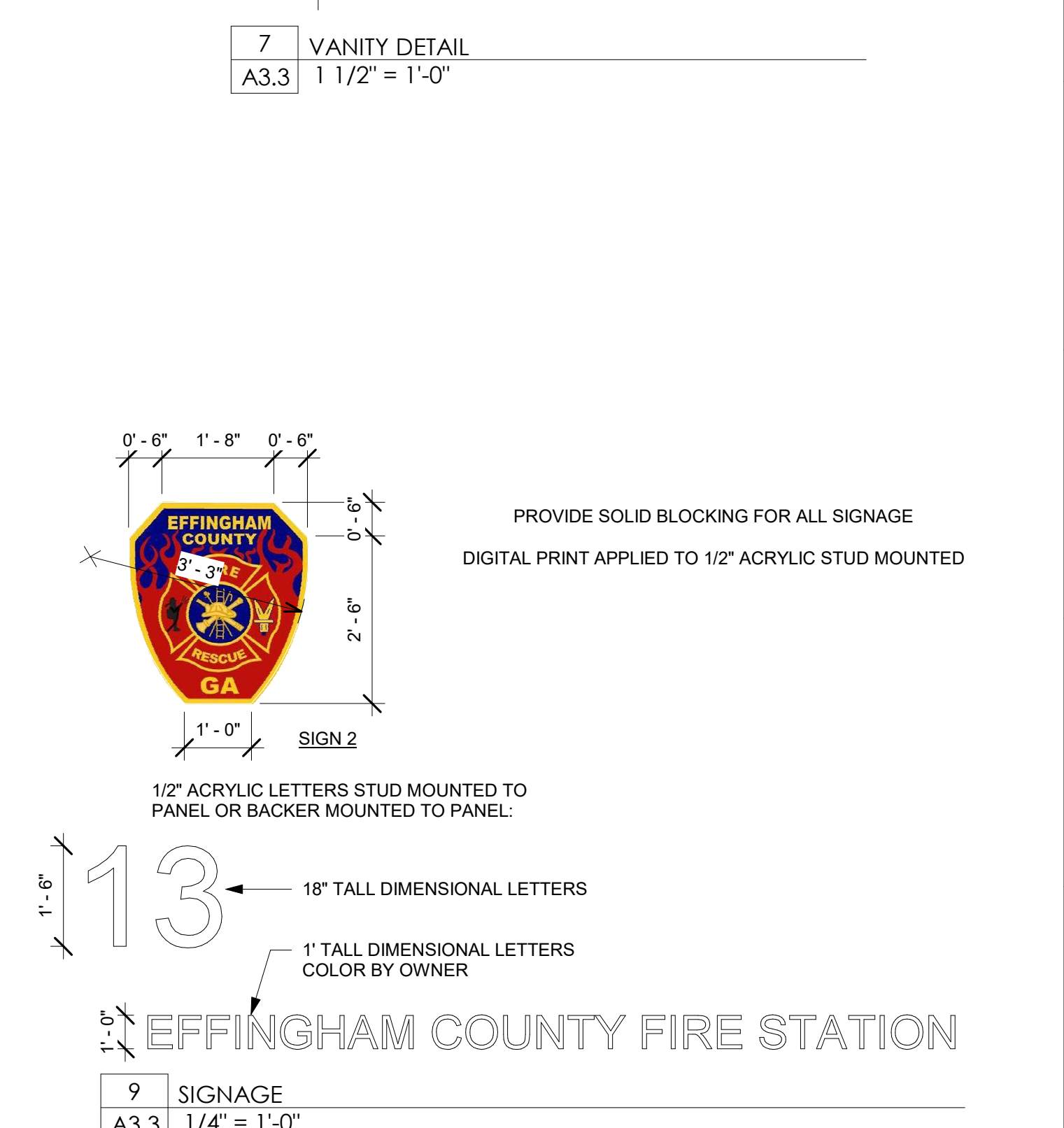
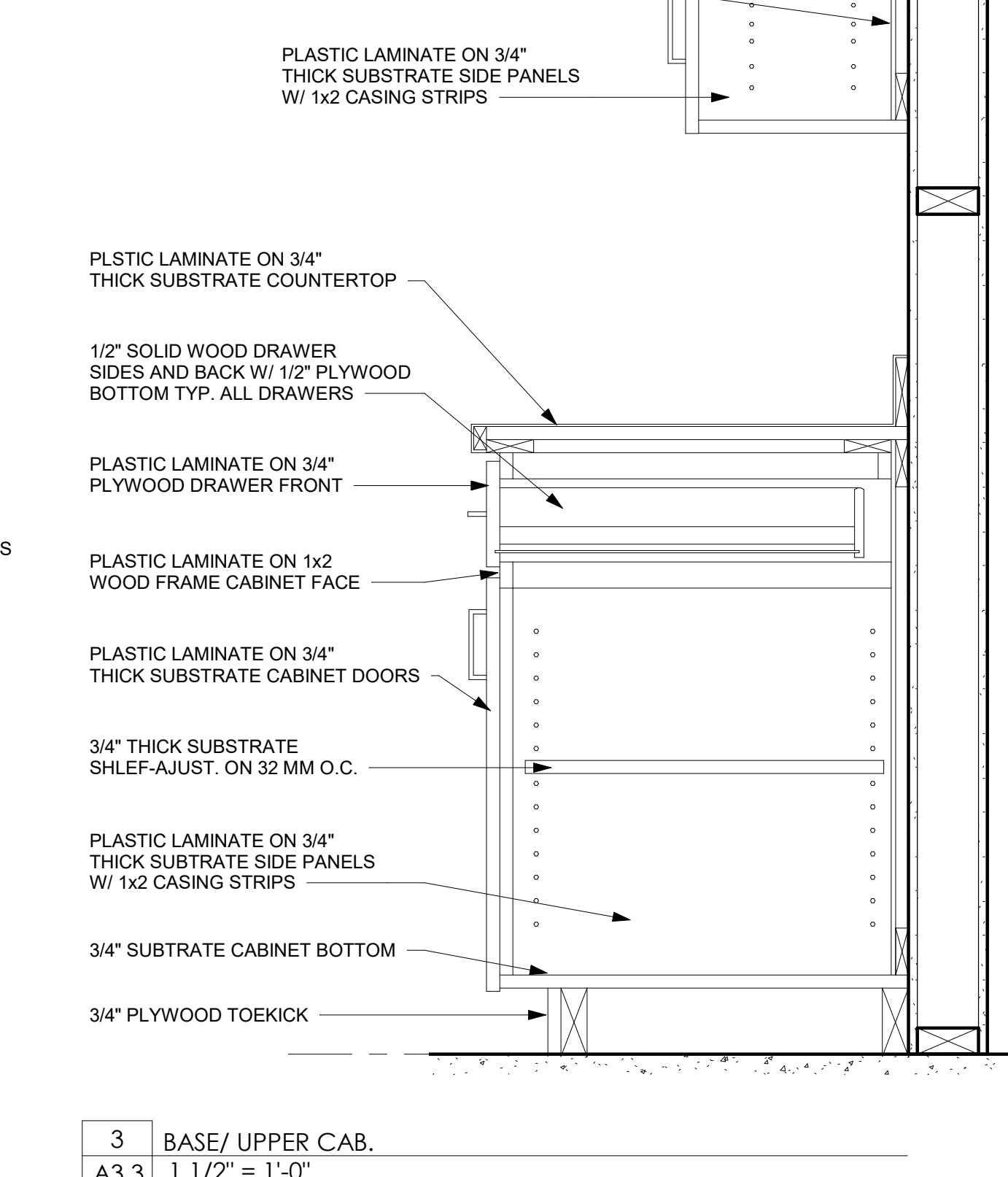
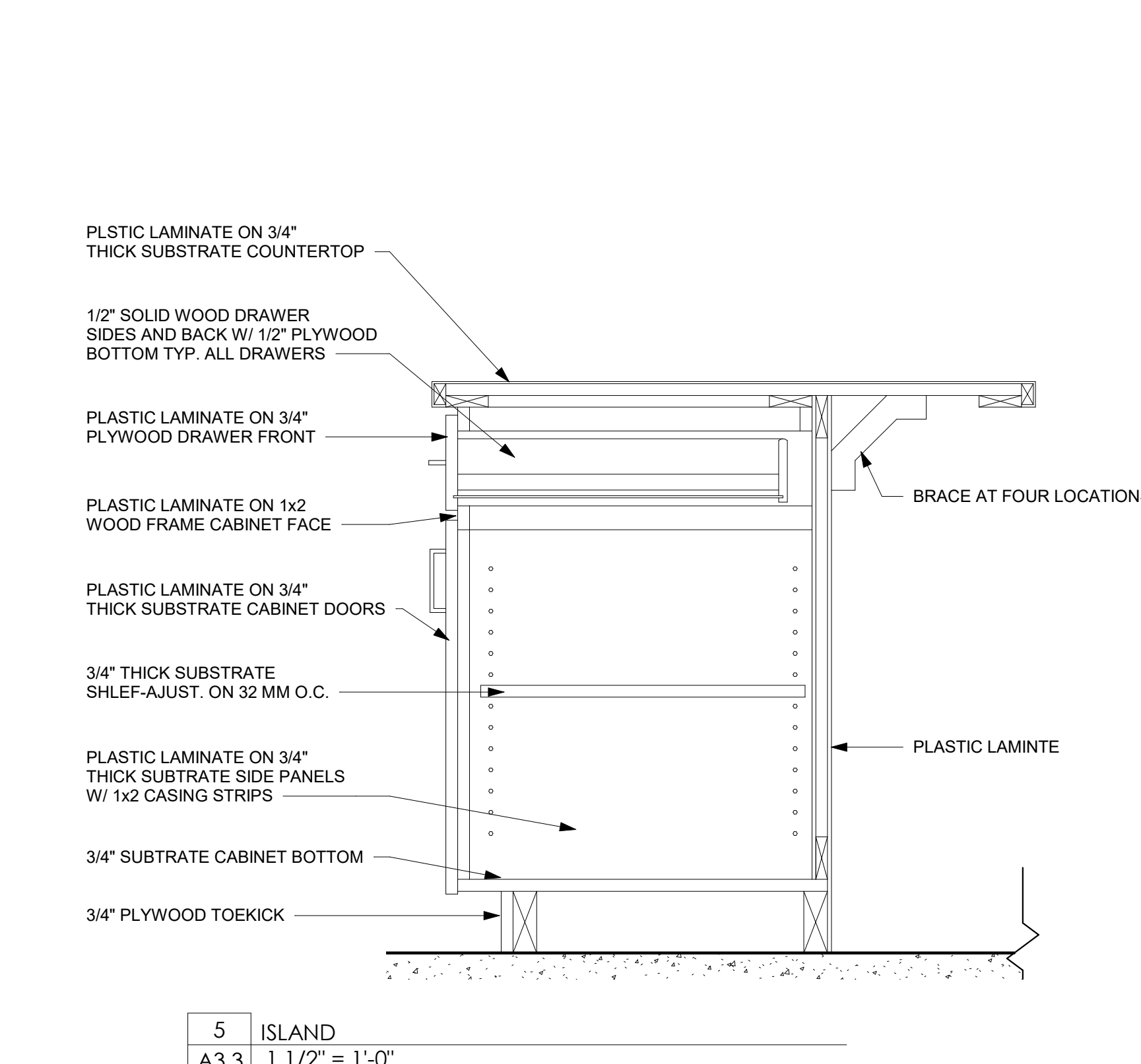
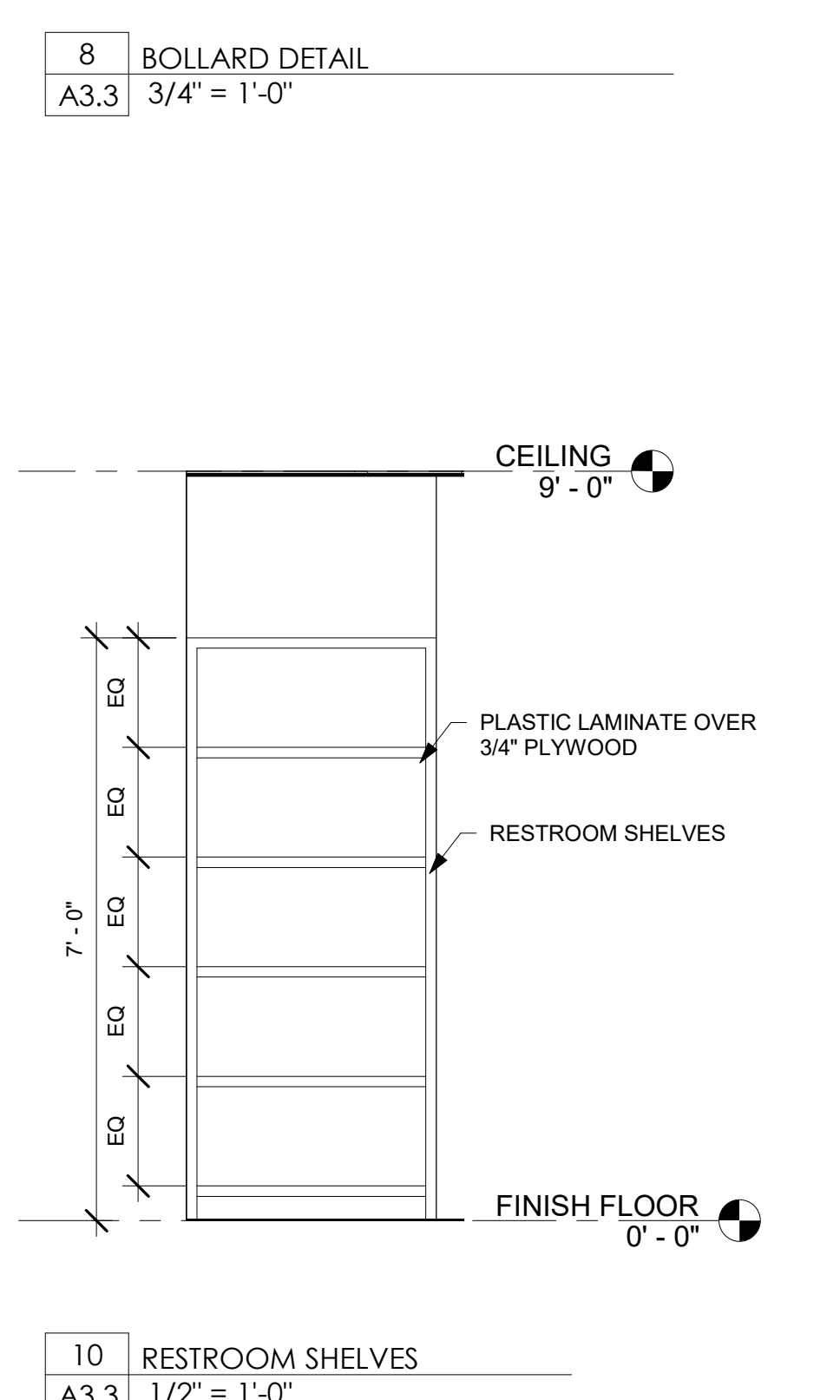
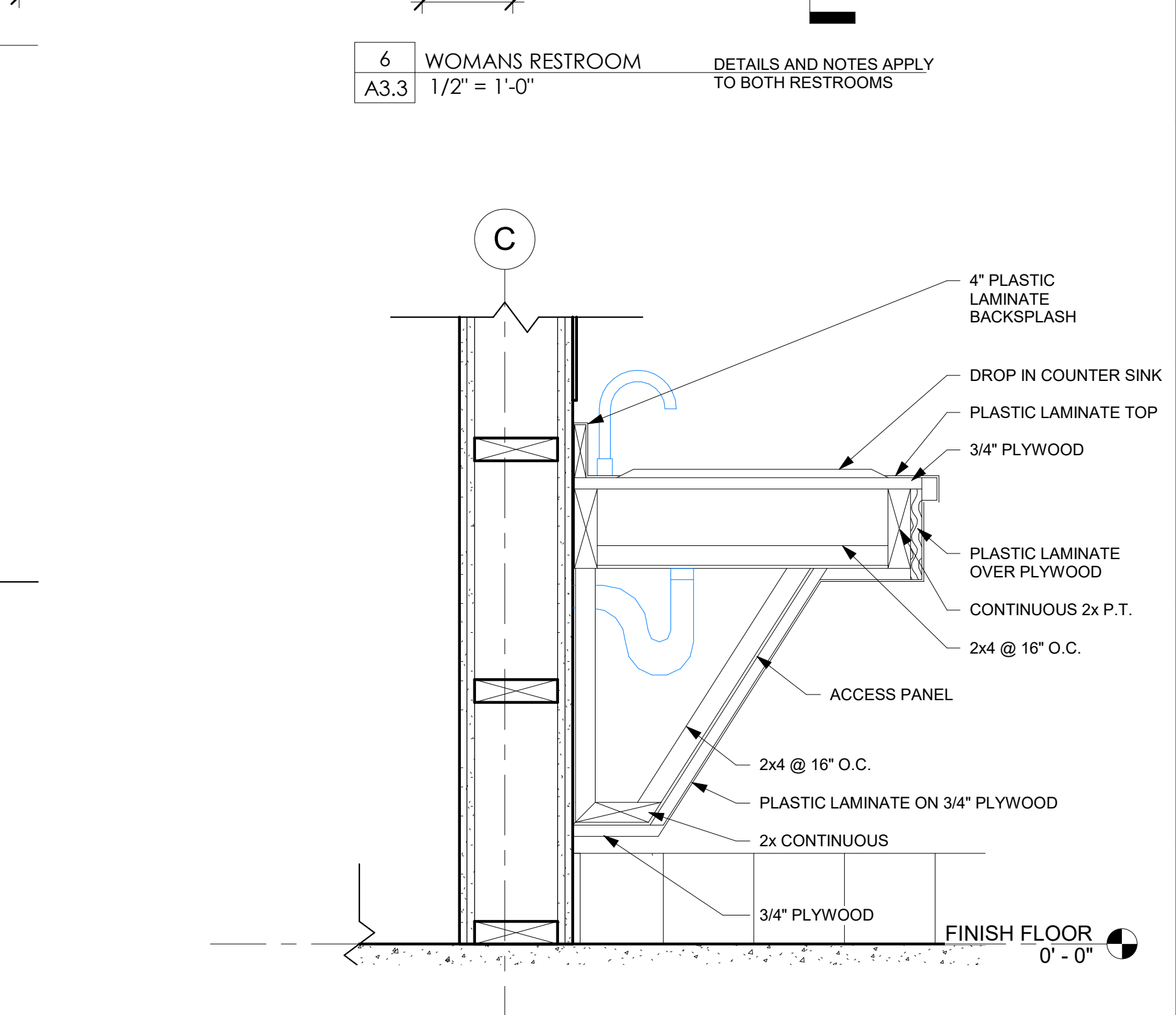
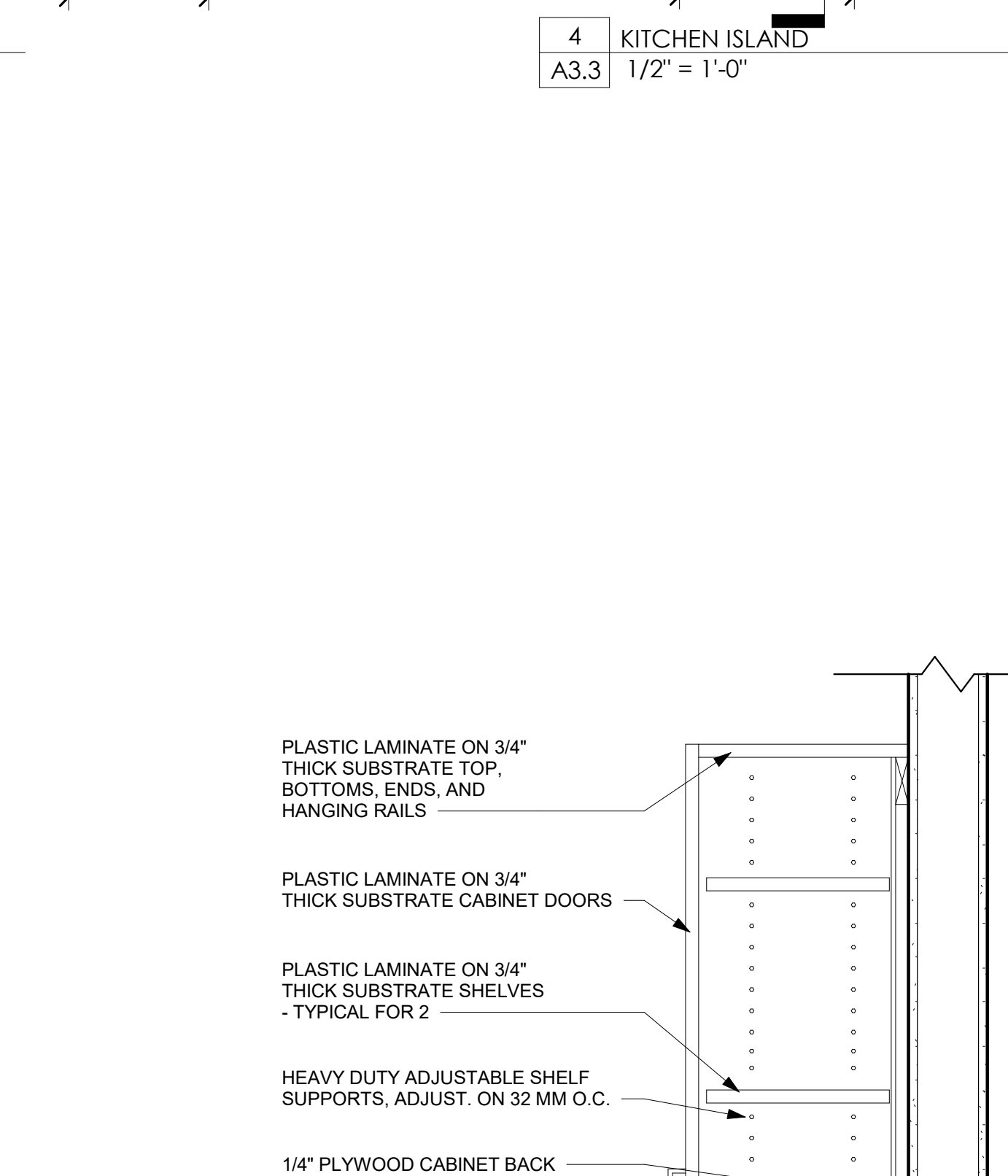
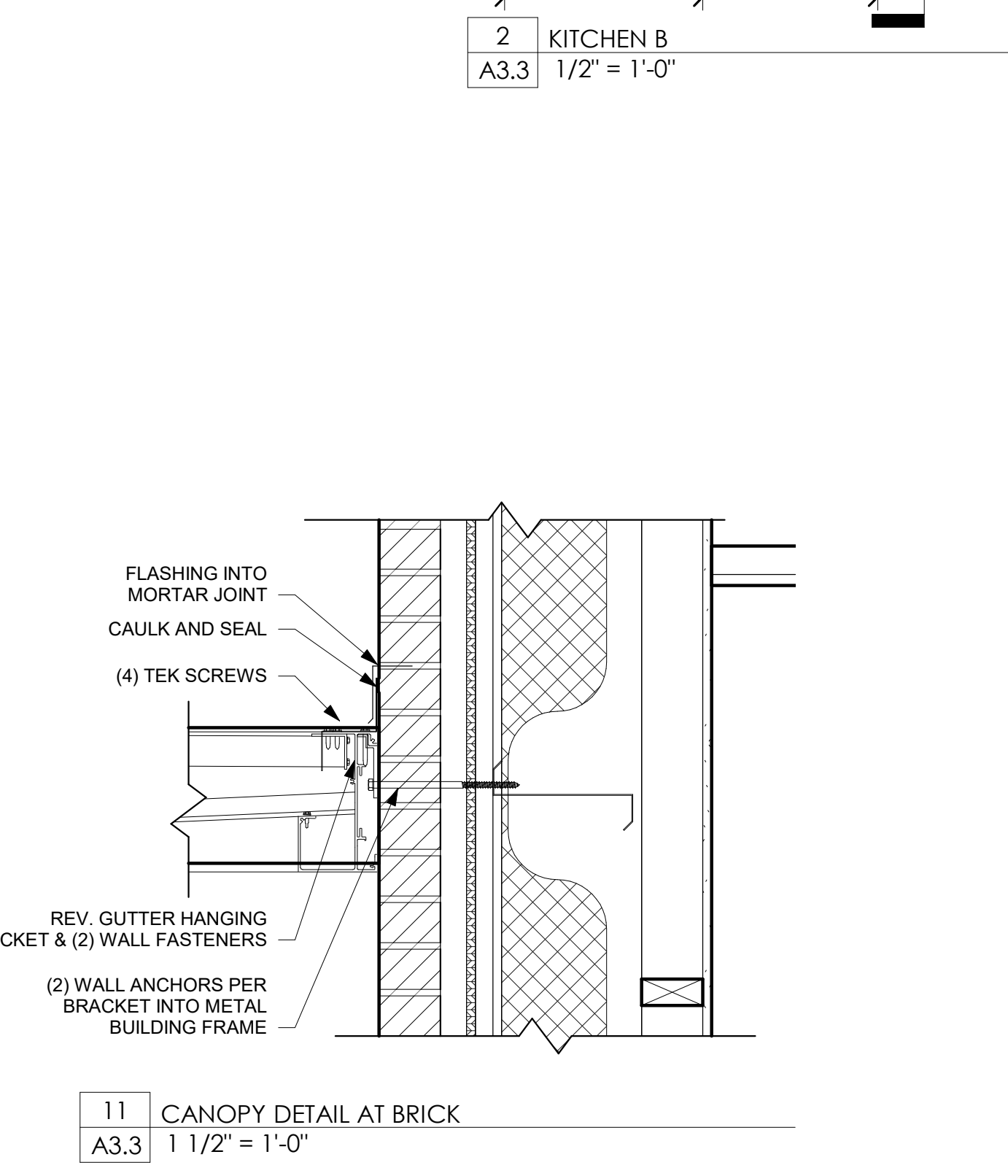
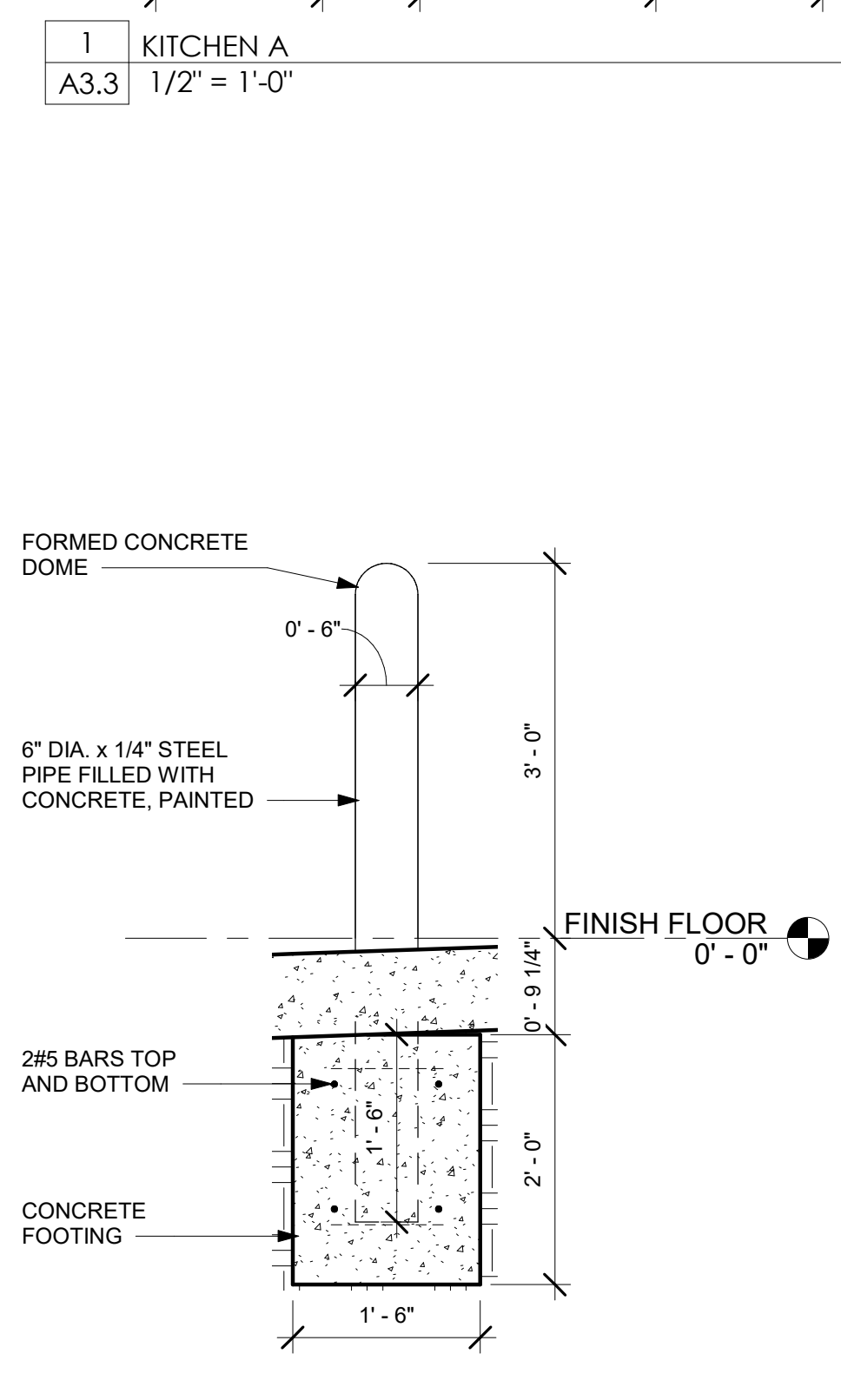
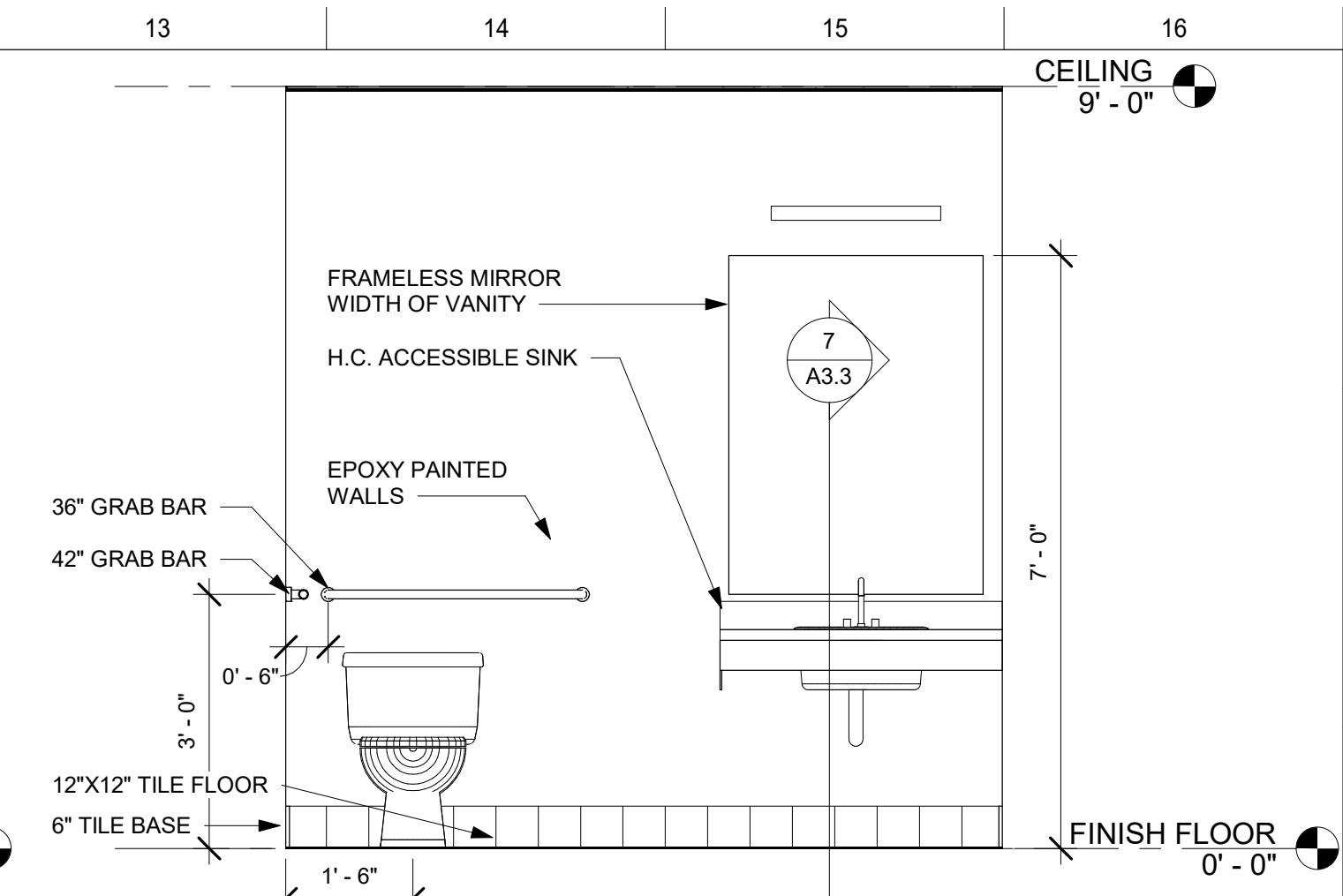
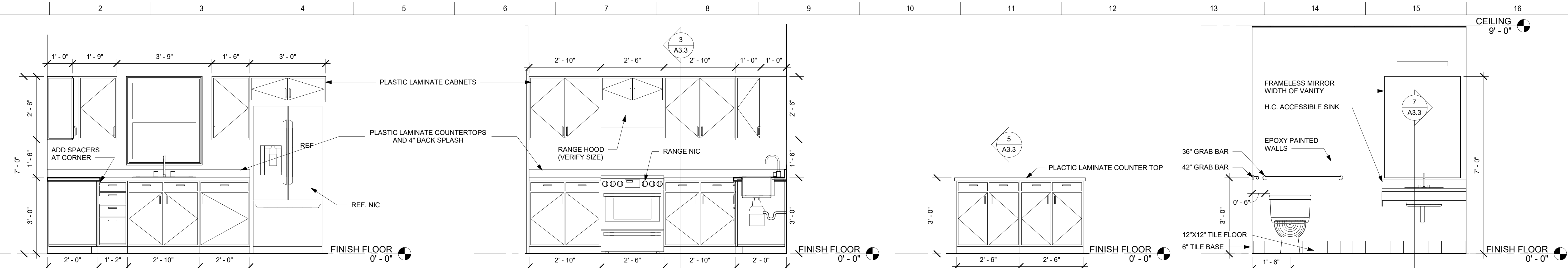
5 DETAIL A  
A3.2 1 1/2" = 1'-0"

8  
A3.3





**FIRE STATION #13  
EFFINGHAM COUNTY  
HWY 119. GUYTON, GA**



SCHEDULE OF REVISIONS	
#	DATE

BID SET

PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: JHB  
APPROVED BY: FRD

**A3.3**

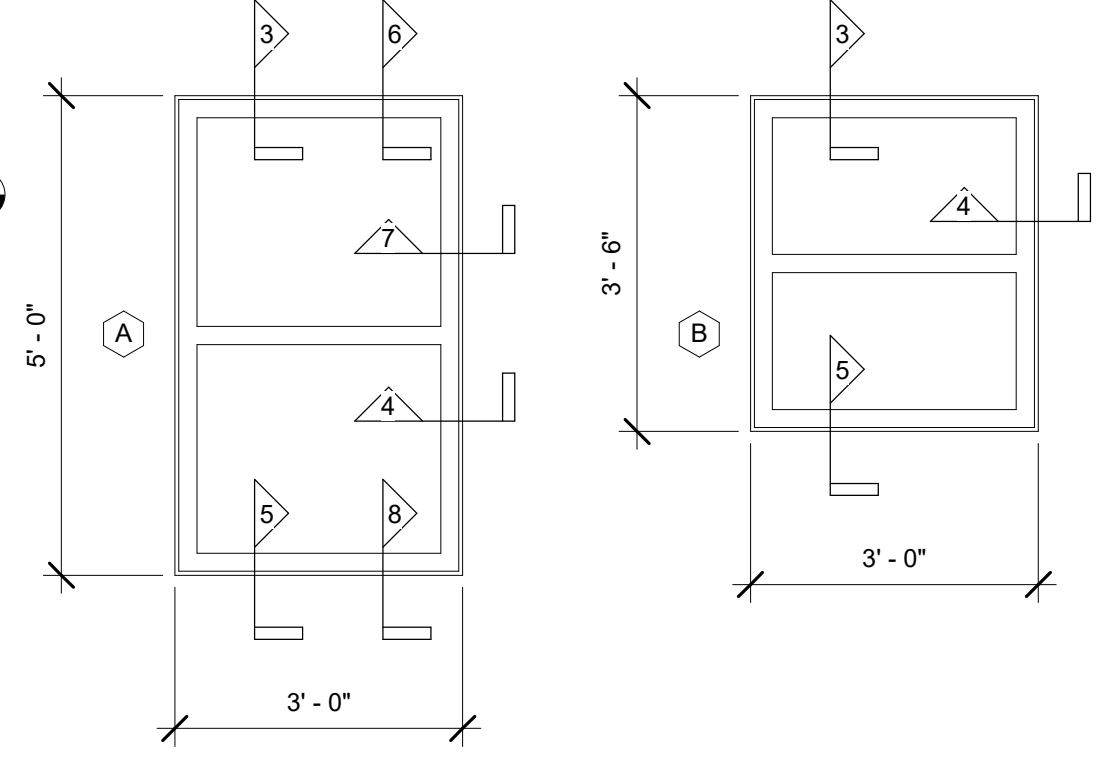




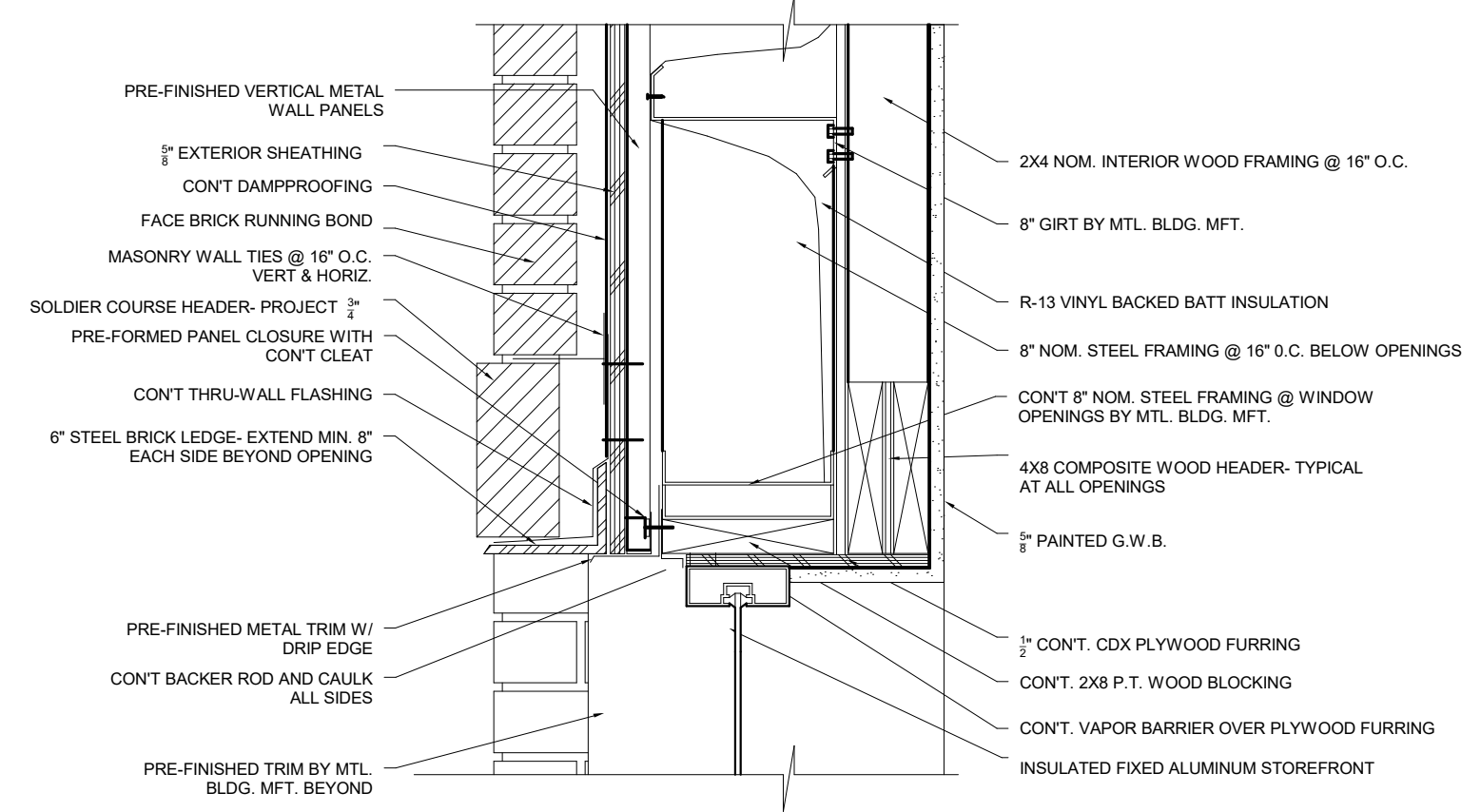
WINDOW SCHEDULE				
MARK	WIDTH	HEIGHT	SILL HEIGHT	COMMENTS
A	3'-0"	5'-0"	2'-0"	
B	3'-0"	3'-6"	3'-6"	

NOTE:  
150 MPH DESIGN WIND SPEED

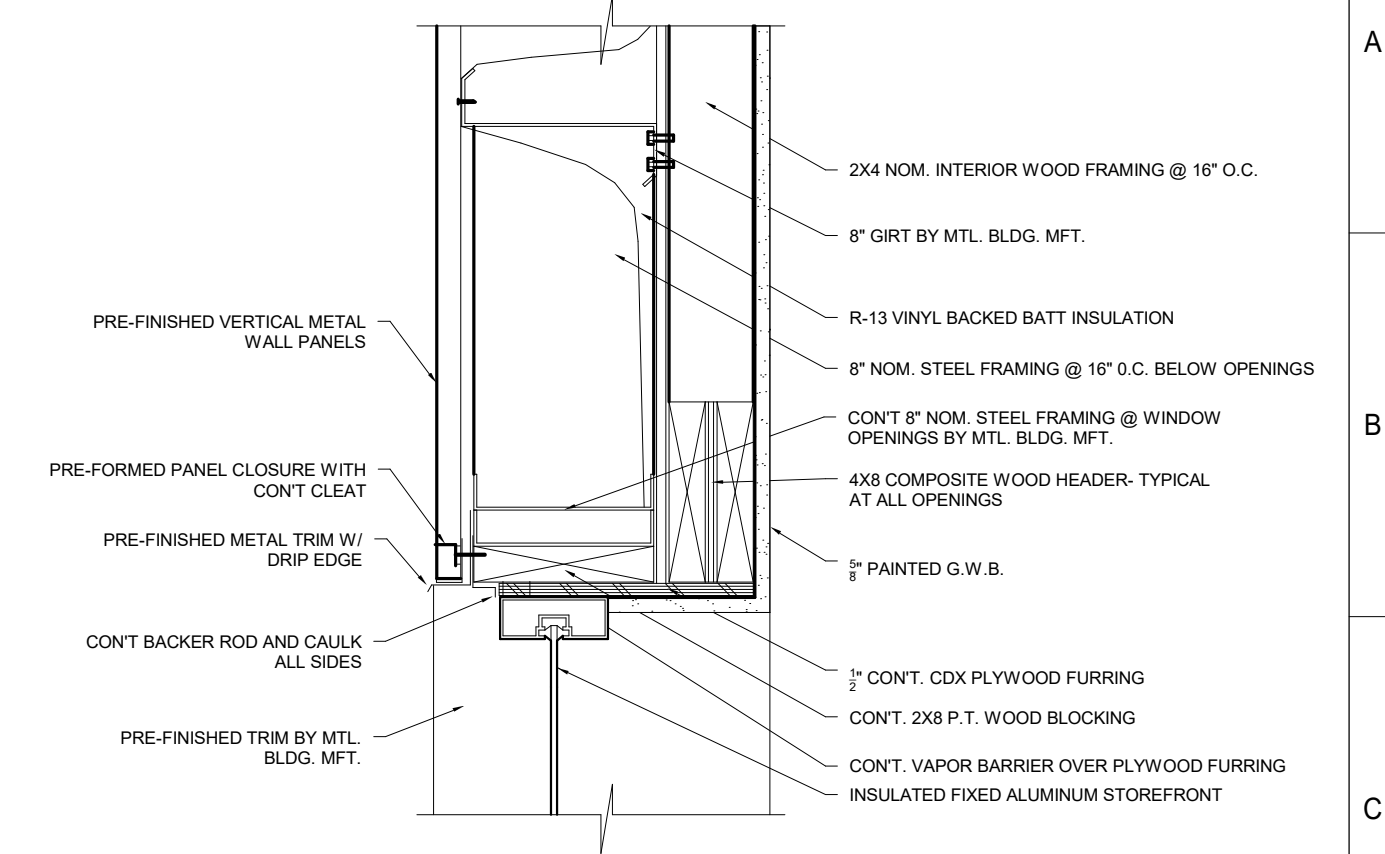
NOTE:  
ALL WINDOWS FIXED INSULATED ALUMINUM STOREFRONT.



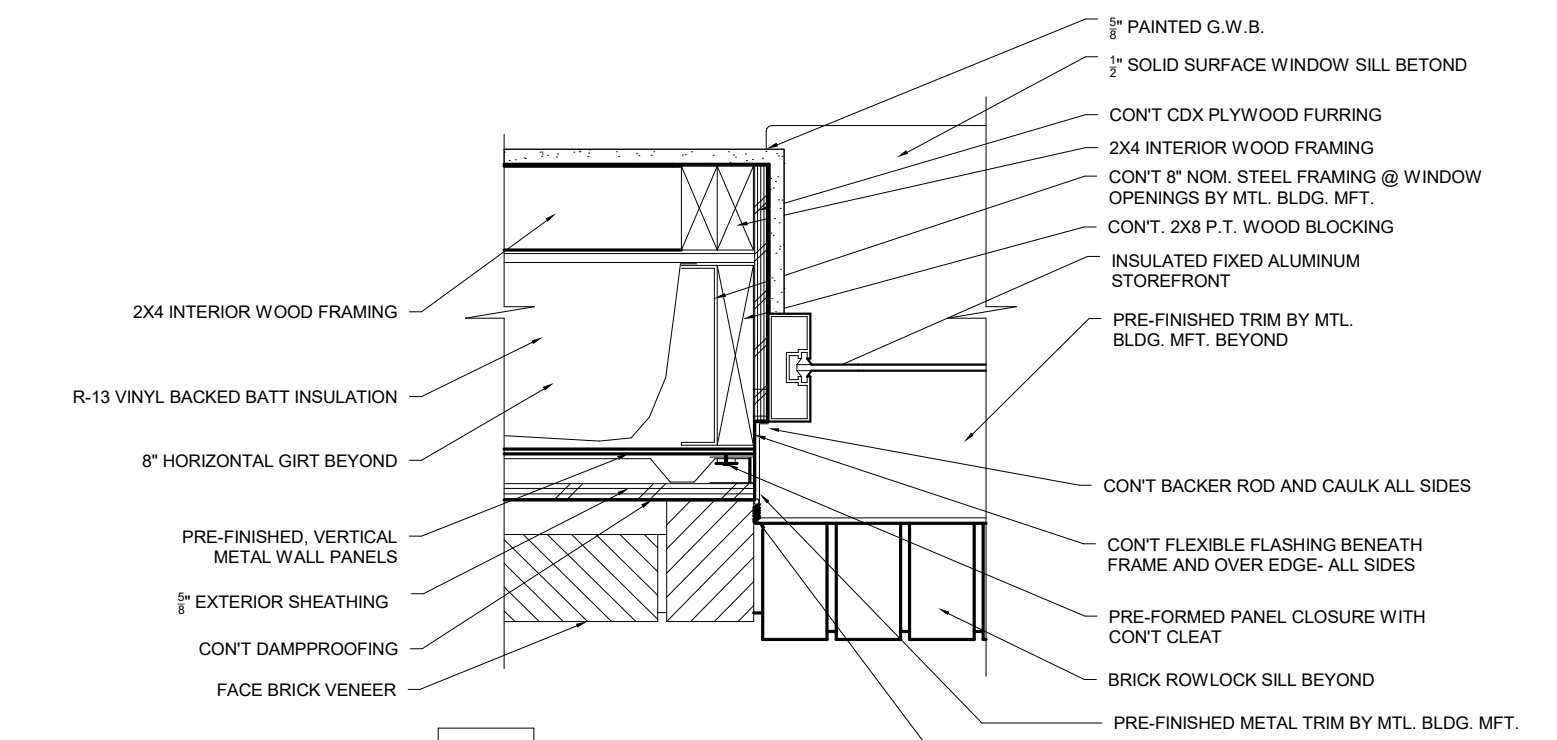
3 INSULATED ALUMINUM STOREFRONT  
A3.4 1/2" = 1'-0"



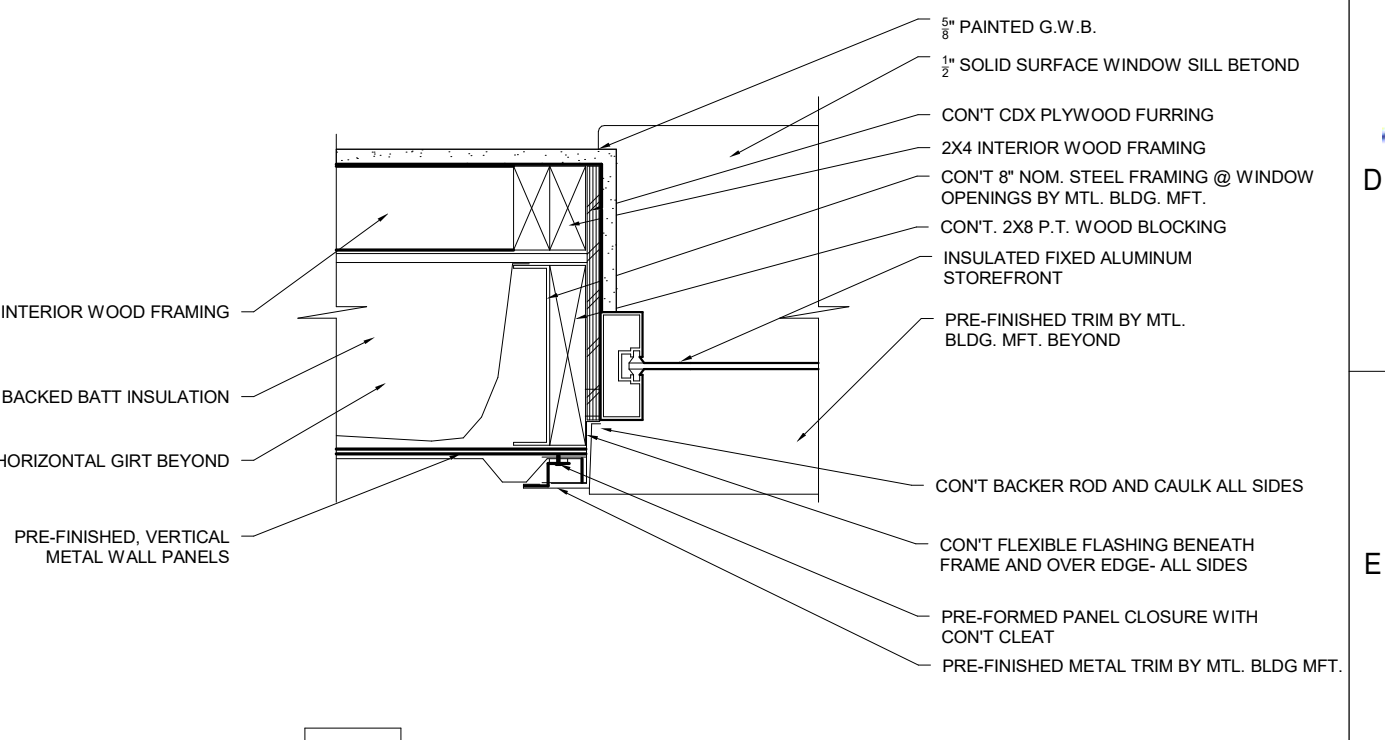
3 BRICK WINDOW HEAD  
A3.4 1 1/2" = 1'-0"



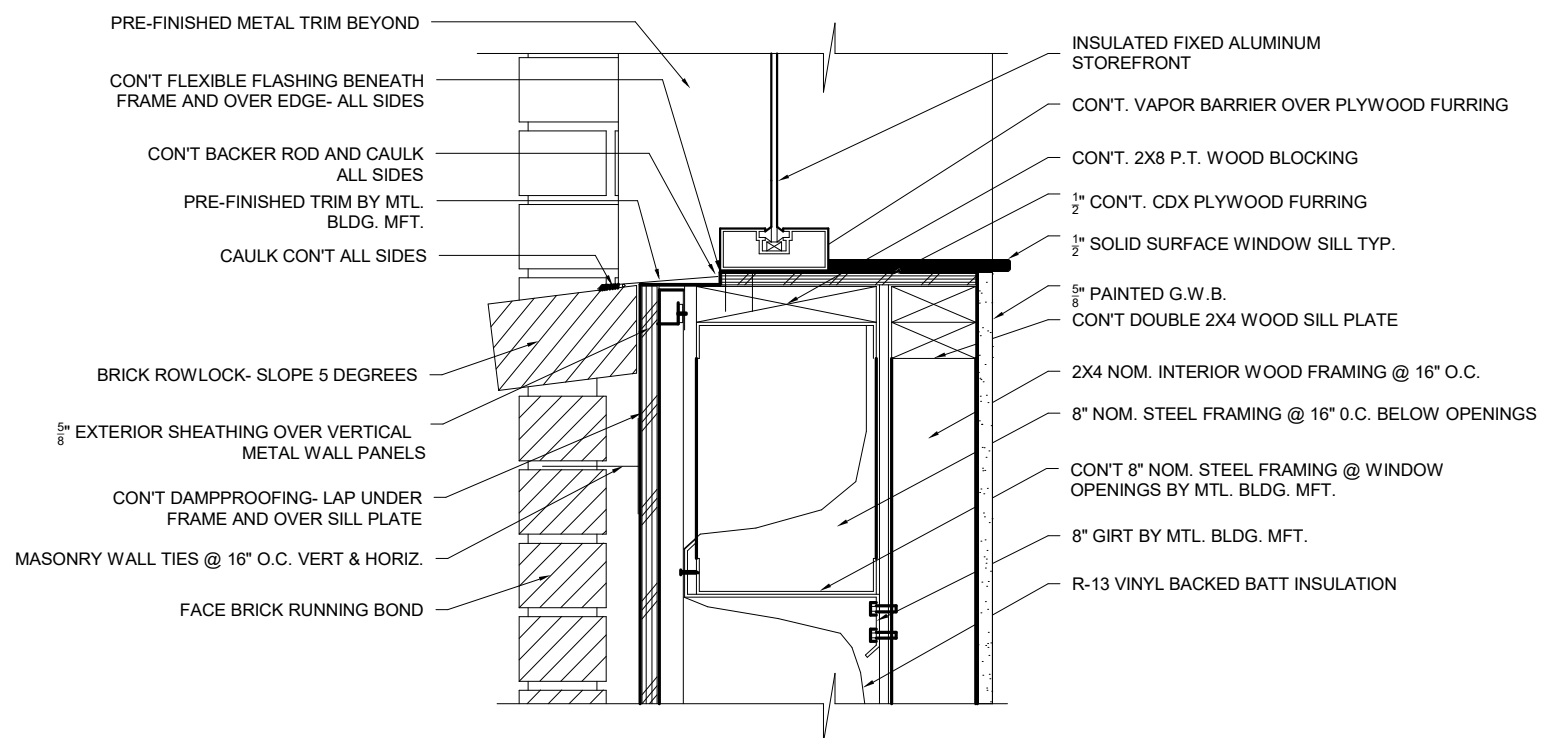
6 METAL PANEL WINDOW HEAD  
A3.4 1 1/2" = 1'-0"



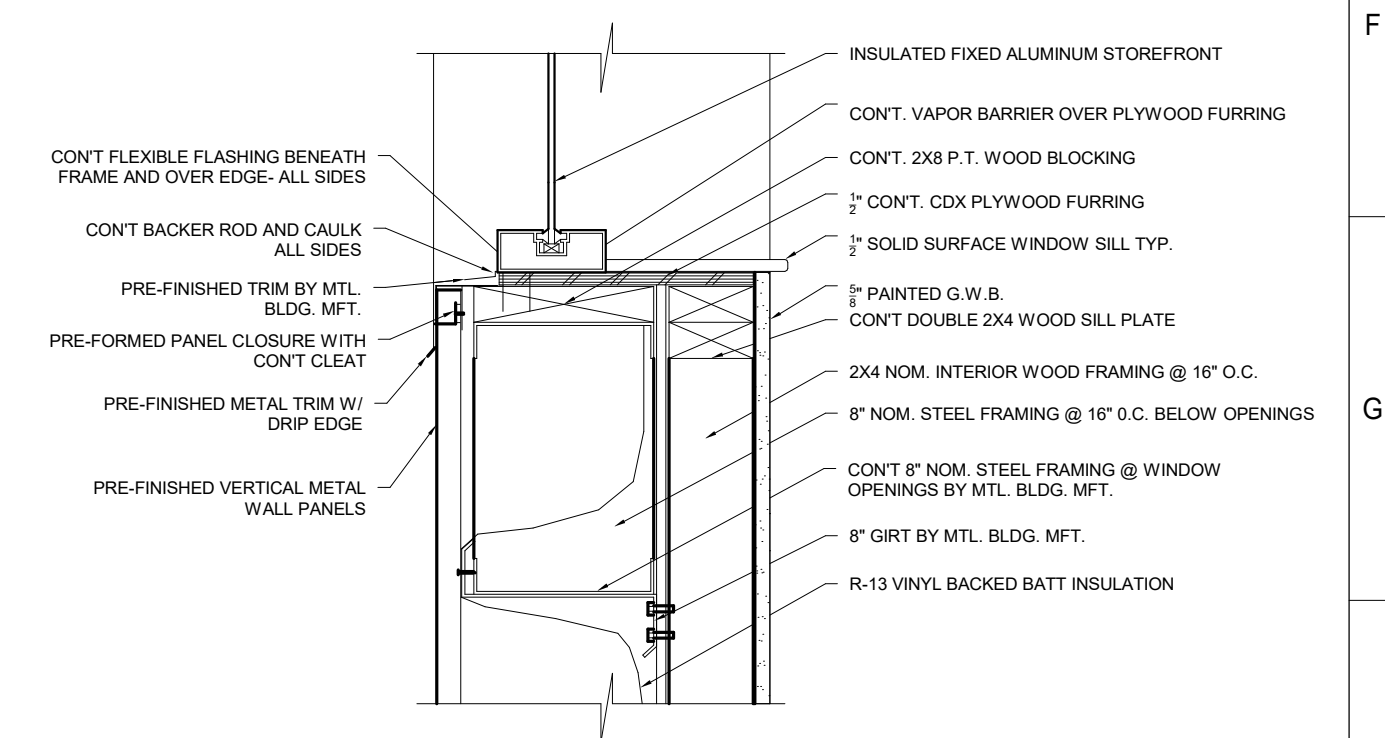
4 BRICK WINDOW JAMB  
A3.4 1 1/2" = 1'-0"



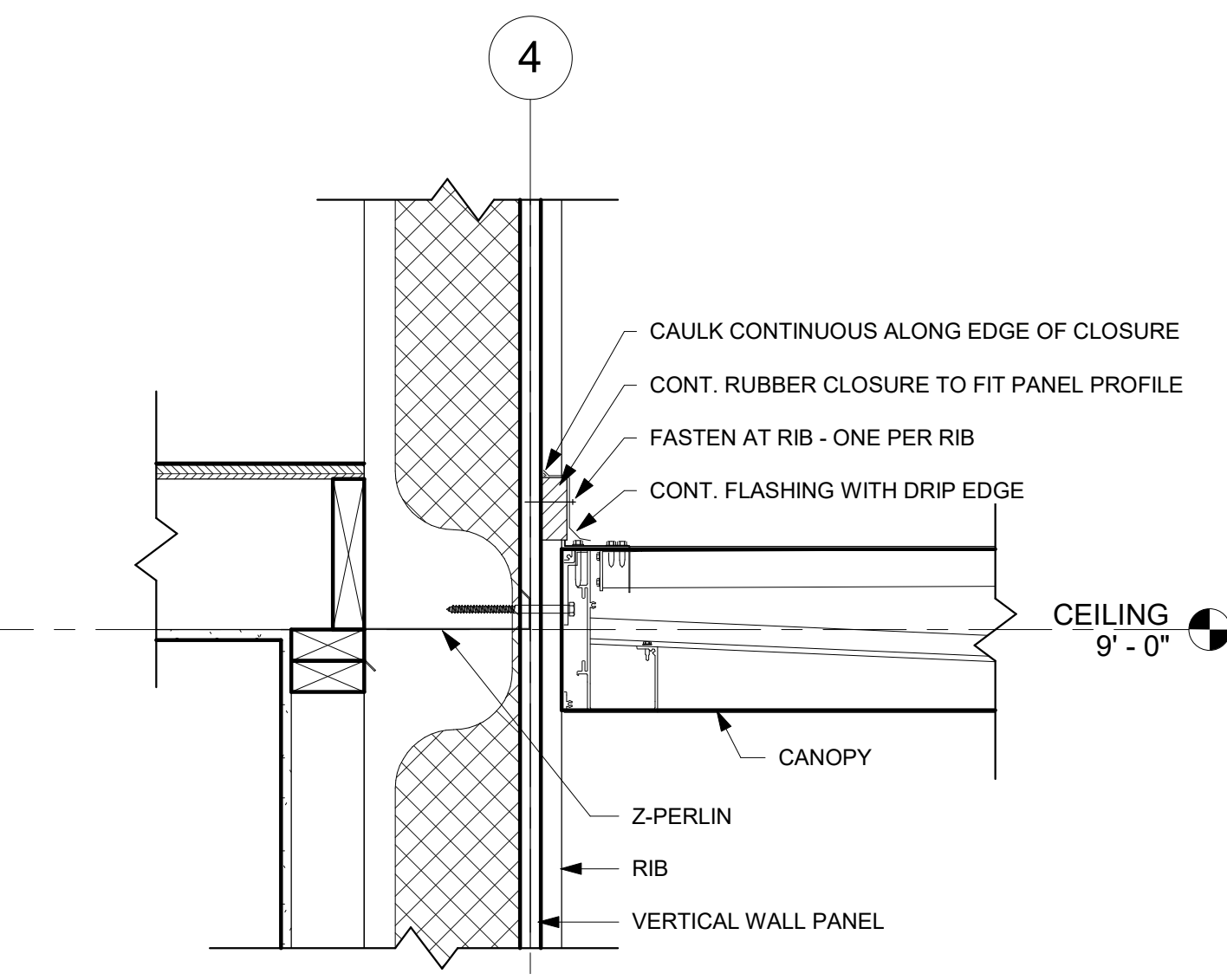
7 METAL PANEL WINDOW JAMB  
A3.4 1 1/2" = 1'-0"



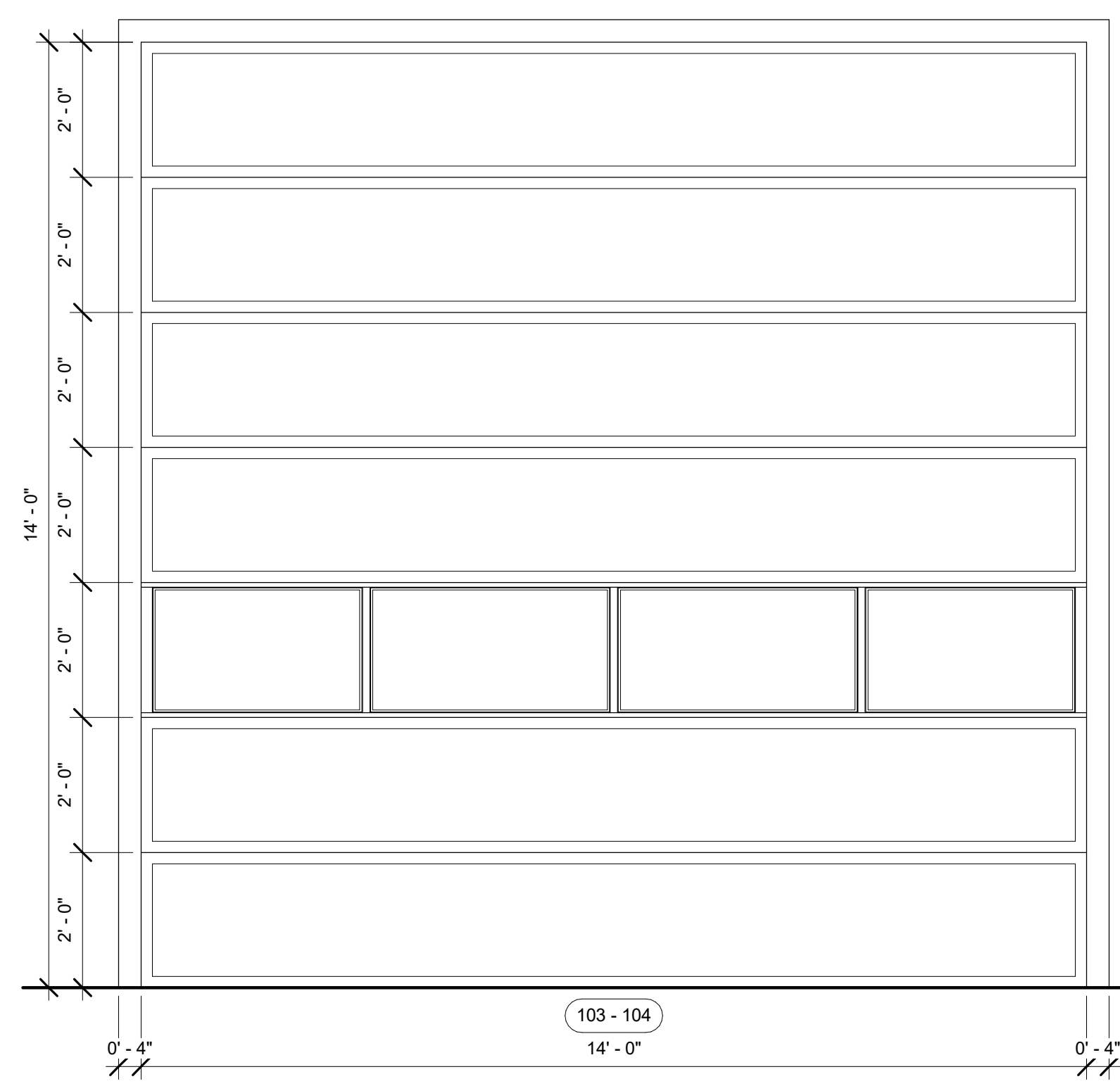
5 BRICK WINDOW SILL  
A3.4 1 1/2" = 1'-0"



8 METAL PANEL WINDOW SILL  
A3.4 1 1/2" = 1'-0"



4 CANOPY DETAIL AT WALL PANEL  
A3.4 1 1/2" = 1'-0"



1 DOOR ELEV. DETAILS  
A3.4 1/2" = 1'-0"

DOOR SCHEDULE							
MARK	WIDTH	HEIGHT	FRAME	DOOR FINISH	FIRE RATING	THICKNESS	COMMENTS
103	14'-0"	14'-0"	HOLLOW METAL	INSULATED METAL		0' - 2"	
104	14'-0"	14'-0"	HOLLOW METAL	INSULATED METAL		0' - 2"	
105	3'-0"	7'-0"	HOLLOW METAL	INSULATED HOLLOW METAL	1-1 1/2 HR	0' - 1 3/4"	
106	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
107	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
108	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
109	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
110	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
111	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
112	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	
113	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
114	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
115	3'-0"	7'-0"	HOLLOW METAL	WOOD		0' - 1 3/4"	S.S.
116	3'-0"	7'-0"	HOLLOW METAL	INSULATED HOLLOW METAL		0' - 1 3/4"	HALF GLASS
201	3'-0"	7'-0"	HOLLOW METAL	INSULATED HOLLOW METAL	1-1 1/2 HR	0' - 1 3/4"	
117	3'-0"	7'-0"	STOREFRONT	ALUMINUM		0' - 1 3/4"	

NOTES:  
EXTERIOR DOORS DESIGNED TO 150 MPH DESIGN WIND SPEED  
ALL DOORS TO RECEIVE 7 PIN SMALL FORMAT IC HARDWARE  
ALL DOORS TO RECEIVE GRADE 2 STAINLESS STEEL HARDWARE  
CONTRACTOR TO PROVIDE FULL HARDWARE SCHEDULE FOR APPROVAL

S.S. - DOORS TO RECEIVE SWEEPS AND SEALS

SCHEDULE OF REVISIONS	
#	DATE

BID SET

PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: JHB  
APPROVED BY: FRD



# STRUCTURAL NOTES

## BASIS OF DESIGN:

- A. GRAVITY LOADS**  
1. ROOF DEAD LOADS: AS SPECIFIED BY MBM  
2. ROOF LIVE LOADS: 20 PSF  
3. COLLATERAL LOAD: 5 PSF  
4. 2<sup>ND</sup> FLOOR DEAD LOADS: 15 PSF  
5. 2<sup>ND</sup> FLOOR LIVE LOADS: 125 PSF
- B. WIND LOADS** (REFERENCE: ASCE 7-16)  
BASIC WIND SPEED (3 SECOND GUST), V = 146 MPH (FIGURE 26.5-1B)  
NOMINAL WIND SPEED, V<sub>ASD</sub> = 113 MPH  
RISK CATEGORY = IV (TABLE 1.5-1)  
EXPOSURE CATEGORY = C (SECTION 26.7)  
INTERNAL PRESSURE COEFFICIENTS: +0.18, -0.18 (TABLE 26.13-1)  
(ENCLOSED BUILDING TYPE)

THIS PROJECT IS NOT LOCATED IN A WIND-BORNE DEBRIS REGION.

- D. SEISMIC LOADS** (REFERENCE: ASCE 7-16)  
RISK CATEGORY III (TABLE 1.5-1)  
0.2 SEC SPECTRAL RESPONSE ACCELERATION: S<sub>s</sub> = 0.286  
1.0 SEC SPECTRAL RESPONSE ACCELERATION: S<sub>1</sub> = 0.110  
SPECTRAL RESPONSE ACCELERATION: S<sub>d1</sub> = 0.174  
SITE CLASSIFICATION = D (SECTION 11.4)  
BASIC SEISMIC-FORCE-RESISTING SYSTEM  
LONGITUDINAL: PORTAL FRAMES  
TRANSVERSE: RIGID FRAMES  
SEISMIC DESIGN CATEGORY = C (SECTION 11.6)  
SEISMIC IMPORTANCE FACTOR = 1.25 (TABLE 1.5-2)  
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE (SECTION 12.8)

## GENERAL:

- DO NOT SCALE DRAWINGS. FOLLOW DIMENSIONS SHOWN ON PLAN OR OBTAIN ADDITIONAL INFORMATION.
- CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN HEREIN WITH ARCHITECTURAL PLANS, SECTIONS, AND DETAILS PRIOR TO CONSTRUCTION OR MATERIAL PURCHASE. CONTRACTOR SHALL NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES NOTED. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND ELEVATIONS NOT SHOWN HEREIN.
- WHERE DETAIL OR SECTION IS SHOWN FOR ONE CONDITION, IT SHALL APPLY TO ALL LIKE OR SIMILAR LOCATIONS.
- CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF AND SHALL NOTIFY THE ARCHITECT IN WRITING PRIOR TO SUBMITTING BIDS.
- REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION, OR ASSOCIATION OR TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE LATEST STANDARD, CODE, SPECIFICATION, OR TENTATIVE SPECIFICATION ADOPTED AT THE DATE OF TAKING BIDS, UNLESS SPECIFICALLY STATED OTHERWISE.
- COORDINATE FLOOR SLAB LAYOUT WITH ARCHITECTURAL DRAWINGS FOR EXACT LIMITS AND DEPRESSIONS FOR AREAS TO RECEIVE ARCHITECTURAL FLOOR FINISHES. COORDINATE FLOOR JOINTS AT DOORS WITH ARCHITECTURAL DOOR DETAILS. LIMITS SHOWN ON STRUCTURAL DRAWINGS ARE SCHEMATIC.
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DETAILS OF ALL EXTERIOR WALKS, CANOPIES, RAMPS, RAMP WALLS, AND ENTRANCE SLABS NOT DETAILED HEREIN.
- NO CHANGE IN SIZE OR DIMENSION OF ANY STRUCTURAL MEMBER SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD UNLESS SPECIFICALLY DETAILED ON THE CONTRACT DRAWINGS.
- STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THE SHOP DRAWINGS AND CONSTRUCTION ACTIVITIES.
- THE USE OF REPRODUCTIONS OF CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER, IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREON AS CORRECT AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
- CONTRACTOR HAS THE SOLE RESPONSIBILITY FOR MEANS, METHODS, SAFETY, TECHNIQUES, SEQUENCES, AND PROCEDURES OF ALL CONSTRUCTION SHOWN HEREIN. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTIBILITY, ANALYSIS, AND ERECTION PROCEDURES, INCLUDING DESIGN AND ERECTION OF FALSE WORK, TEMPORARY BRACING, ETC. CONTRACTOR HAS THE SOLE RESPONSIBILITY TO COMPLY WITH ALL OSHA REGULATIONS.
- THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM. TEMPORARY SUPPORTS REQUIRED FOR STABILITY DURING ALL INTERMEDIATE STAGES OF CONSTRUCTION SHALL BE DESIGNED, FURNISHED, AND INSTALLED BY THE CONTRACTOR.

## FOUNDATIONS:

- FOUNDATION DESIGN IS BASED ON A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF BASED ON THE RECOMMENDATIONS INCLUDED IN GEOTECHNICAL REPORT PREPARED BY WHITAKER LAB & ENGINEERING, REPORT NO. 9-24-20-1 DATED SEPTEMBER 24, 2020. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD DIFFERENT FROM THOSE ASSUMED OR DESIGNED.
- ALLOWABLE BEARING PRESSURE SHALL BE VERIFIED BY FIELD TESTING IN ACCORDANCE WITH REQUIREMENTS OF THE PROJECT SPECIFICATIONS. IN THE ABSENCE OF SPECIFICATION REQUIREMENTS, A DYNAMIC CONE PENETROMETER TEST (ASTM STP-399) SHALL BE PROVIDED AT EACH COLUMN FOOTING EXCAVATION AND MAXIMUM 35' O.C. IN WALL FOOTINGS AND THICKENED SLABS TO VERIFY AVAILABILITY OF THE DESIGN PRESSURE INDICATED.
- ALL FOOTINGS AND SLABS SHALL BEAR ON SUBGRADE COMPACTED TO A MINIMUM 95% ASTM D-1557 USING MECHANICAL JUMPING TAMPS.
- ALL WATER SOFTENED SOILS IN FOUNDATION EXCAVATIONS SHALL BE REMOVED PRIOR TO POURING CONCRETE. FILL OVER-EXCAVATED LIMITS WITH COMPACTED STRUCTURAL FILL OR ADDITIONAL CONCRETE.
- ALL BOTTOM REINFORCING IN FOOTINGS AND THICKENED SLABS SHALL BE SUPPORTED WITH WHOLE CONCRETE BRICKS OR PREFABRICATED ALL PLASTIC CHAIR SUPPORT AT MAXIMUM 48" O.C. BAR SUPPORTS SHALL BE POSITIONED TO MAINTAIN NO LESS THAN 3" CLEAR TO BOTTOM OF LOWEST REINFORCING BAR.
- ALL FOOTING, PIER AND OTHER FOUNDATION TYPE REINFORCING SHALL BE TIED IN PLACE PRIOR TO POURING CONCRETE.
- CONSTRUCTION JOINTS IN WALL FOOTINGS SHALL BE FORMED VERTICALLY WITH MINIMUM 2'-0" LAP HORIZONTAL REINFORCING.

## CONCRETE:

- UNLESS SPECIFIED OTHERWISE, CONCRETE COVER OVER REINFORCEMENT SHALL CONFORM TO THE FOLLOWING:  
A. ALL FOOTINGS AND OTHER CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:  
B. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:  
#5 BAR AND SMALLER: 1 1/2"  
#6 BAR AND LARGER: 2"  
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:  
1. SLABS, WALLS, JOISTS:  
#11 BAR AND SMALLER: 3/4"  
#14 AND #18 BARS: 1 1/2"  
2. BEAMS, COLUMNS:  
PRIMARY REINFORCEMENT, TIES, STRUTS, SPIRALS: 1 1/2"
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
- PROVIDE DOWELS OF THE SAME SIZE AND NUMBER AS THE VERTICAL WALL AND COLUMN REINFORCING, UNLESS NOTED OTHERWISE.
- REINFORCEMENT SHALL BE SPLICED ONLY AT LOCATIONS SHOWN OR NOTED ON THE STRUCTURAL DOCUMENTS, EXCEPT REINFORCING MARKED CONTINUOUS MAY BE SPLICED AT LOCATIONS DETERMINED BY THE CONTRACTOR. SPLICES AT OTHER LOCATIONS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
- ALL CONCRETE WORK SHALL CONFORM TO ACI 318 AND CRSI STANDARDS.
- CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. NO HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED EXCEPT THOSE SHOWN ON THE STRUCTURAL DRAWINGS.
- DEFECTIVE AREAS IN CONCRETE WORK INCLUDING, BUT NOT LIMITED TO, HONEYCOMBING, SPALLS, AND CRACKS WITH WIDTHS EXCEEDING 0.10" SHALL BE REPAIRED BY THE CONTRACTOR. THE EXTENT OF THE DEFECTIVE AREA SHALL BE DETERMINED BY THE STRUCTURAL ENGINEER.
- NO REINFORCING SHALL BE CUT IN FIELD. ADDITIONAL REINFORCING AND THAT QUANTITY OF REINFORCING OCCURRING AT OPENINGS SHALL BE PLACED EQUALLY EACH SIDE OF OPENING AS DETAILED.
- HOOKS IN REINFORCING ARE IN ADDITION TO LINKS SHOWN.
- UNLESS NOTED OTHERWISE, DETAILING AND FABRICATION OF REINFORCING STEEL SHALL FOLLOW ACI MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES (ACI 315).
- REINFORCING SHALL BE SUPPORTED IN FORMS AND SPACED WITH WIRE BAR SUPPORTS ACCORDING TO CRSI PLACING REINFORCING BARS, UNLESS NOTED OTHERWISE.

## PRE-ENGINEERED METAL BUILDING:

- METAL BUILDING MANUFACTURER SHALL FURNISH ALL ITEMS SPECIFIED OR SHOWN IN THE CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, FRAMES, BASE PLATES, WIDE FLANGE GIRTS, PURLINS, CABLES, RODS, ANGLE FRAMES, ETC., NECESSARY TO COMPLETE THE STEEL PORTION OF THE STRUCTURE UNLESS SPECIFICALLY DETAILED OTHERWISE.
- BUILDING SHALL BE DESIGNED FOR ALL GRAVITY AND LATERAL (WIND AND SEISMIC) BUILDING LOADS AS INDICATED IN THE BASIS OF DESIGN HEREIN EXCEPT THAT ROOF DEAD LOADS SHALL BE COMPUTED AS BUILDING COMPONENT PLUS 8 PSF AUXILIARY LOAD.
- BRACING SYSTEMS INCLUDING SAG RODS, STRUTS, ETC., SHALL BE THE STANDARD OF THE BUILDING MANUFACTURER AND SHALL BE INCLUDED IN THE SUBMITTED SHOP DRAWINGS. MANUFACTURER SHALL COORDINATE LOCATION AND TYPES OF ALL BRACING NECESSARY TO ACCOMMODATE ALL ARCHITECTURAL REQUIREMENTS.
- ROOF PURLINS SHALL BE SPACED A MAXIMUM OF 5'-0" O.C. CALCULATIONS FOR FRAME DEFLECTIONS SHALL BE BASED ON THE STIFFNESS OF PRE-ENGINEERED METAL BUILDING STRUCTURE ONLY AND SHALL NOT INCLUDE STIFFNESS CONTRIBUTIONS FROM ADJACENT STRUCTURES.
- CALCULATED DRIFTS DUE TO LATERAL LOADS INDUCED ON THE STRUCTURE SHALL NOT EXCEED THE FOLLOWING:  
DRIFT DUE TO WIND: H/360  
DRIFT DUE TO SEISMIC: H/200
- THE SIZE, NUMBER, AND PLACEMENT PATTERN OF ALL ANCHOR RODS SHALL BE DETERMINED BY PRE-ENGINEERED BUILDING MANUFACTURER. ANCHOR ROD SIZES AND EMBEDMENTS SHALL BE AS INDICATED ON THE DRAWINGS.
- ALL PRE-ENGINEERED METAL BUILDING COLUMNS SHALL BE DESIGNED BASED ON A PINNED-BASED SUPPORT CONDITION. METAL BUILDING STRUCTURE SHALL NOT INDUCE ANY OVERTURNING OR BENDING MOMENT FORCES INTO THE FOUNDATION OTHER THAN GRAVITY LOADS DUE TO DEAD, LIVE AND WIND UPLIFTS.
- CONTRACTOR SHALL PROVIDE THE METAL BUILDING MANUFACTURER ALL LOCATIONS AND WEIGHTS OF ROOF SUPPORTED MECHANICAL EQUIPMENT. LOADS SHALL BE SHOWN IN THE METAL BUILDING SHOP DRAWING CALCULATIONS.
- ALL CALCULATIONS ARE TO BE PREPARED, SIGNED, AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA.

## SPECIAL STRUCTURAL INSPECTIONS:

- A. SPECIAL INSPECTIONS**
- SPECIAL STRUCTURAL TESTS AND INSPECTIONS SHALL BE PERFORMED ON THIS PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 OF THE IBC 2018 BUILDING CODE.
  - SPECIAL STRUCTURAL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN AGENCY SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER OF RECORD (EOR) WHICH MEETS ALL OF THE REQUIREMENTS FOR APPROVAL INDICATED IN IBC 2018 SECTION 1704. SPECIAL INSPECTORS SHALL BE QUALIFIED PERSONS WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
  - THE CONTRACTOR SHALL COORDINATE THE INSPECTION SERVICES IN ACCORDANCE WITH THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE TO THE INSPECTOR TO ALLOW PROPER SCHEDULING OF PERSONNEL.
  - THE COSTS OF THE SPECIAL INSPECTORS SERVICES SHALL BE PAID FOR BY THE OWNER. COSTS OF INSPECTION SERVICES WHICH ARE EXEMPTED UNDER CHAPTER 17 AND SPECIFIED IN THE PROJECT SPECIFICATIONS, SHALL BE PAID FOR BY THE CONTRACTOR.
- B. REPORTS**
- SPECIAL INSPECTORS SHALL KEEP A RECORD OF ALL INSPECTIONS PERFORMED. COPIES OF ALL INSPECTIONS SHALL BE FURNISHED TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE EOR WITHIN 48 HOURS OF THE INSPECTION.
  - REPORTS SHALL INDICATE THAT THE WORK WAS PERFORMED AND CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WORK WHICH DOES NOT CONFORM TO THE CONTRACT DOCUMENTS SHALL BE IDENTIFIED IN THE REPORT AND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR.
  - A FINAL REPORT OF INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS INCLUDING ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE EOR PRIOR TO COMPLETION OF THE STRUCTURAL SYSTEMS BUT AT A FREQUENCY NOT TO EXCEED 60 DAYS.

## REQUIRED SPECIAL INSPECTIONS

IBC SECTION	DESCRIPTION OF WORK	SPECIAL INSPECTION REQUIRED		
		YES	NO	REMARKS
1704.2.5	INSPECTION OF FABRICATORS	X		1
1705.2	STEEL CONSTRUCTION	X		2
1705.3	CONCRETE CONSTRUCTION		X	3
1705.4	MASONRY CONSTRUCTION		X	
1705.5	WOOD CONSTRUCTION		X	
1705.6	SOILS	X		4
1705.7	DRIVEN DEEP FOUNDATION		X	
1705.8	CAST-IN-PLACE DEEP FOUNDATIONS		X	
1705.9	HELICAL PILE FOUNDATIONS		X	
1705.10	WIND RESISTANCE	X		
1705.11	SEISMIC RESISTANCE	X		
1705.12	TESTING AND QUALIFICATIONS FOR SEISMIC RESISTANCE	X		
1705.13	SPRAYED FIRE-RESISTANT MATERIALS		X	
1705.14	MASTIC AND INTUMESCENT COATINGS		X	
1705.15	EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)		X	

- REMARKS:**
- WHERE FABRICATION OF STRUCTURAL LOAD BEARING ELEMENTS (I.E. JOISTS) ARE BEING PERFORMED ON THE PREMISES OF A FABRICATORS SHOP, SPECIAL INSPECTIONS ARE REQUIRED.
  - STEEL SPECIAL INSPECTION: CONTINUOUS AND PERIODIC INSPECTIONS, AS DEFINED BY SECTION 202 OF THE IBC 2018 BUILDING CODE, SHALL BE PERFORMED BY THE SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705.2 QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360 AND TABLE 1705.2.2.
  - CONCRETE SPECIAL INSPECTION: CONTINUOUS AND PERIODIC INSPECTIONS, AS DEFINED BY SECTION 202 OF THE IBC 2018 BUILDING CODE, SHALL BE PERFORMED BY THE SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705.3 AND TABLE 1705.3.
  - SOILS SPECIAL INSPECTION: INSPECTION OF THE EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD BEARING REQUIREMENTS SHALL BE PERFORMED BY THE SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1705.6 AND TABLE 1705.6.
- D. SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF IBC SECTION 1705.11.**
- F. STRUCTURAL TESTING FOR SEISMIC RESISTANCE SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF IBC SECTION 1705.12.**

## STRUCTURAL LEGEND

### SYMBOLS

FOOTING	
	UNREINFORCED CONCRETE MASONRY
	REINFORCED CONCRETE MASONRY
	CONCRETE
	BOND BEAM
	REINF. MASONRY PIERS
	DROP SLAB TO RECEIVE FLOOR FINISH
	THICKENED SLAB
	FLOOR JOINT
	WALL FLOOR JOINT
	SAWN JOINT
	1\"/>
	CONCRETE SLAB TURNDOWN
	SLOPE (DIRECTION AND DROP)
	VERTICAL STEP IN WALL FOOTING
	TOP OF STEEL ELEVATION
	TOP OF FOOTING ELEVATION
	ADD #4x4\"/>
	HIGH STRENGTH BOLT
	JOIST BOTTOM CHORD STRUT
	ROOF DRAIN
	FRAME AROUND ROOF DECK OPENING
	BEAM TO COLUMN MOMENT CONNECTION

### ABBREVIATIONS

W/	WITH
DBL.	DOUBLE
BOT.	BOTTOM
DJ	DOUBLE JOIST
SIM	SIMILAR
T/O	THROUGHOUT
U.N.	UNLESS NOTED
P.E.J.	PRE-MOLDED EXPANSION JOINT
GA.	GAUGE
E.W.	EACH WAY
O.C.	ON CENTER
CL	CLEARANCE
FD	FLOOR DRAIN
A.F.F.	AT FINISHED FLOOR
LLV	LONG LEG VERTICAL
SLV	SHORT LEG VERTICAL
EJ	EXPANSION JOINT
MBM	METAL BUILDING MANUFACTURER
MBP	METAL BUILDING PURLINS
O.H.	OPPOSITE HAND
PB	PARALAM BEAM
ML	MICROLAM BEAM
RS	ROUGH SAWN
P.T.	PRESSURE TREATED
P.E.	PRE-ENGINEERED

### STRUCTURAL SHEET INDEX

S1.0	STRUCTURAL NOTES
S1.1	FOUNDATION PLAN
S1.2	SECTIONS

### MATERIAL SPECIFICATIONS:

#### CONCRETE

- FOUNDATIONS: 3000 PSI 28 DAY COMPRESSIVE STRENGTH (NON-AIR ENTRAINED)
- BLOCK FILL: 2500 PSI 28 DAY COMPRESSIVE STRENGTH
- SLABS: 3000 PSI 28 DAY COMPRESSIVE STRENGTH (AIR-ENTRAINED)
- REINFORCING BARS: ASTM A615, GRADE 60, DEFORMED
- WELDED WIRE MESH: ASTM A185

#### TIMBER

- FRAMING: SYP NO. 2 KD or BETTER
- LOAD BEARING STUDS: SYP NO. 2



12A E. GRADY STREET  
P.O. BOX 1382  
912-764-6288

STATESBORO  
GEORGIA 30458

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**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**GUYTON, GA**

### SCHEDULE OF REVISIONS

#	DATE

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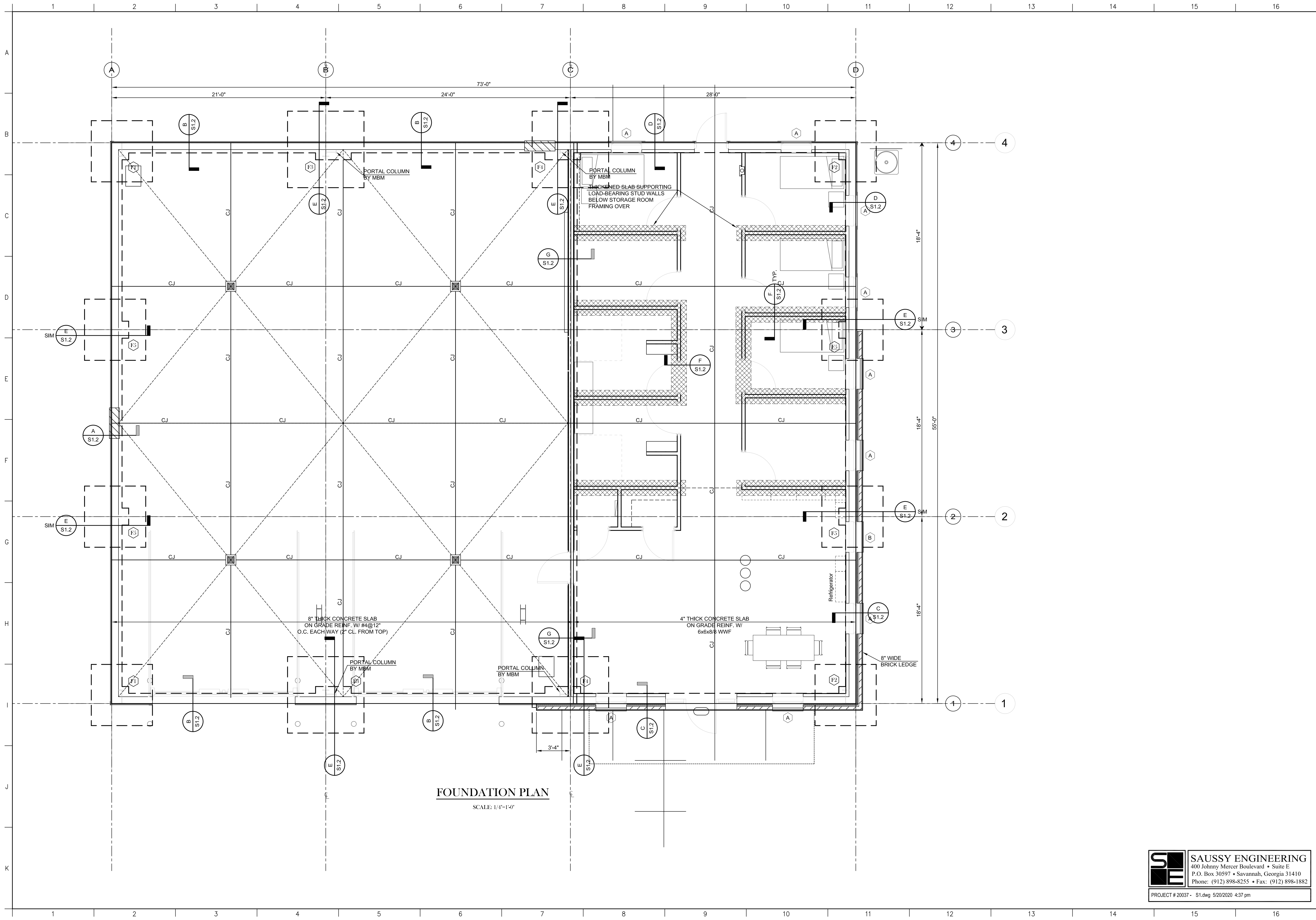
PROJECT NUMBER: 2024  
PROJECT DATE: 02-15-2022  
DRAWN BY: H. Saussy III  
APPROVED BY: H. Saussy III

### STRUCTURAL NOTES

**S1.0**

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400 Johnny Mercer Boulevard • Suite E  
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**FOUNDATION PLAN**  
SCALE: 1/4"=1'-0"



**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**GUYTON, GA**

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**FOUNDATION PLAN**  
  
**S1.1**

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# COLUMN AND FOUNDATION SCHEDULE

MARK	COLUMN		PIER		FOOTING			ANCHOR ROD TYPE	NOTES	
	SIZE	BASE PLATE	SIZE	VERT. REINF.	SIZE	DEPTH	REINF. E.W.			REINF. TOP/BOT?
TYPE F1	BY MBM	BY MBM	20"x20"	12#5	6"	6'-0"x6'-0"	18"	7#6	YES	AR2
TYPE F2	BY MBM	BY MBM	20"x20"	12#5	6"	6'-0"x6'-0"	18"	7#6	YES	AR2
TYPE F3	BY MBM	BY MBM	20"x42"	16#5	6"	7'-6"x7'-6"	30"	8#6	YES	AR1
TYPE F4	BY MBM	BY MBM	20"x42"	16#5	6"	7'-6"x7'-6"	30"	8#6	YES	AR1
TYPE F5	BY MBM	BY MBM	18"x18"	12#5	6"	6'-0"x6'-0"	18"	7#6	YES	AR2



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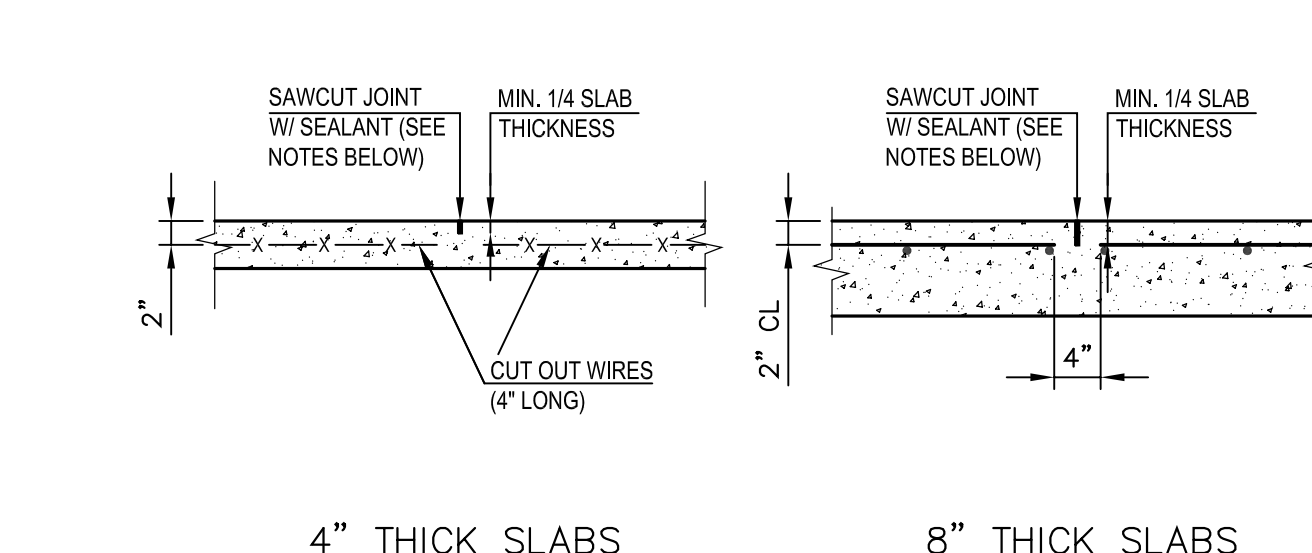
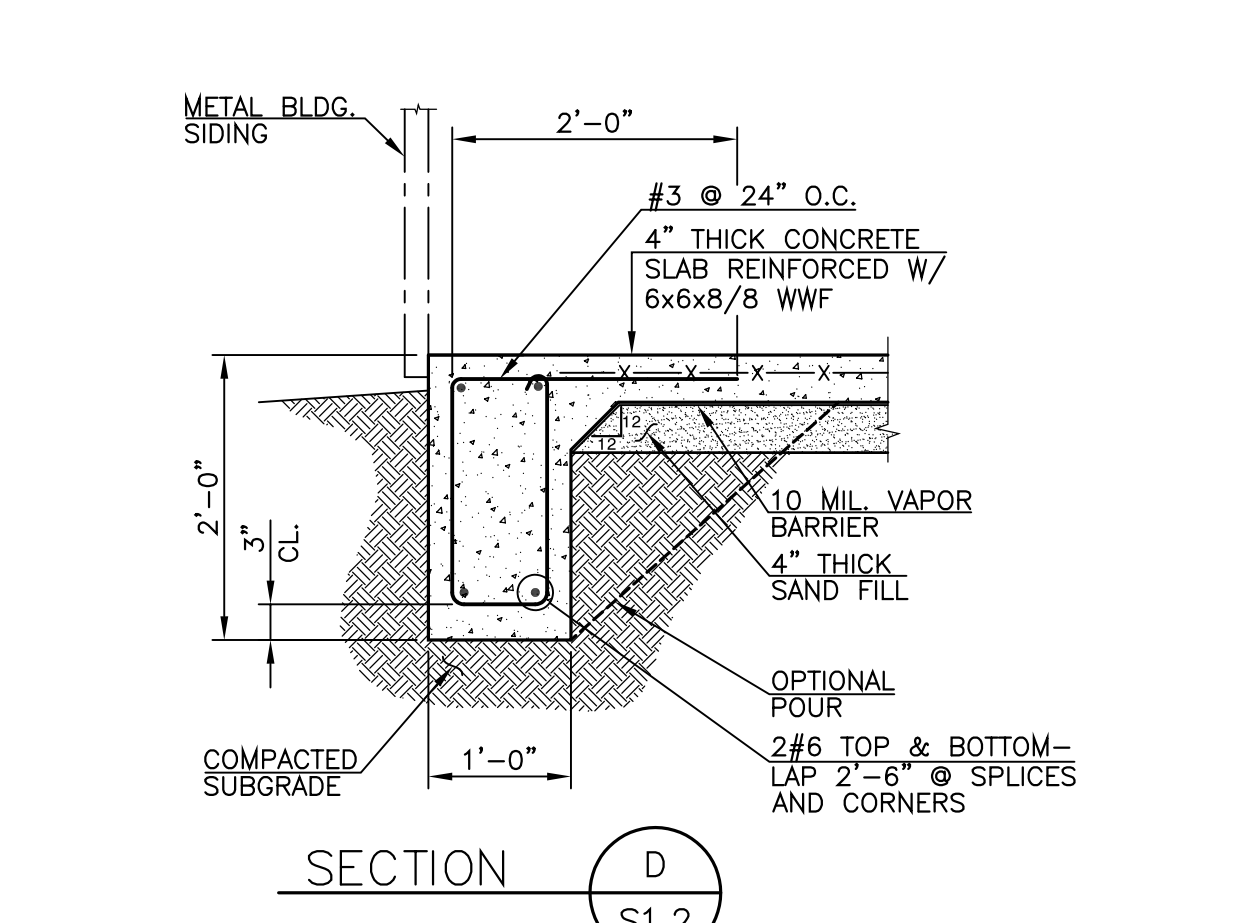
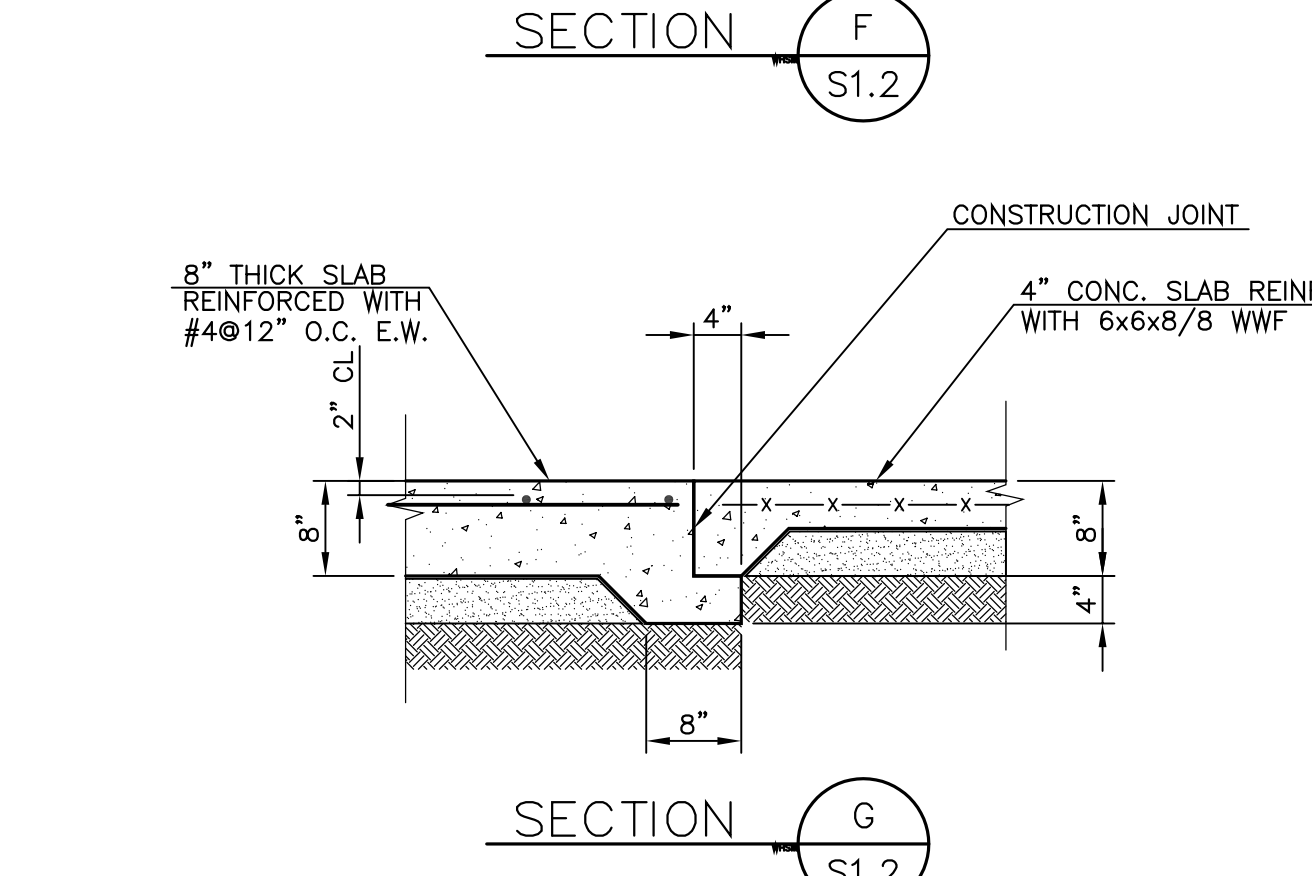
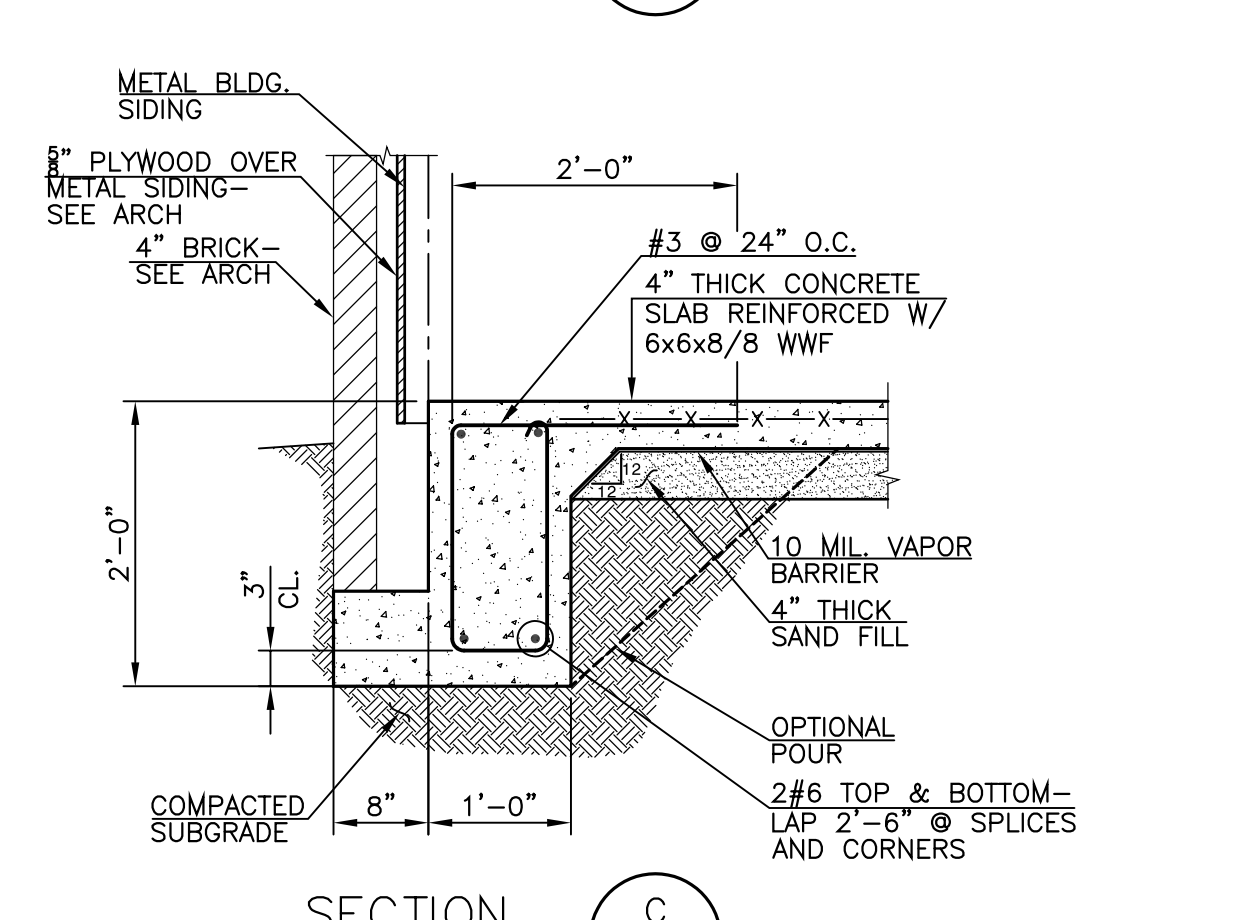
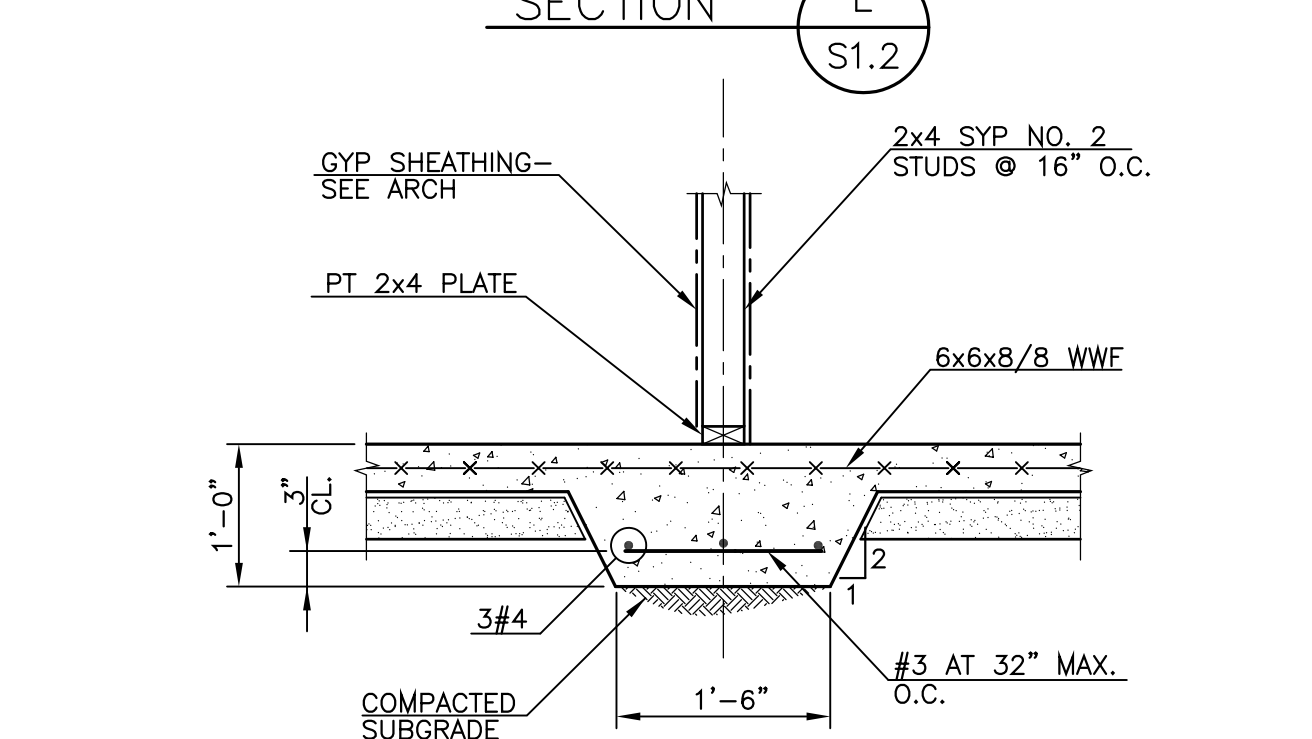
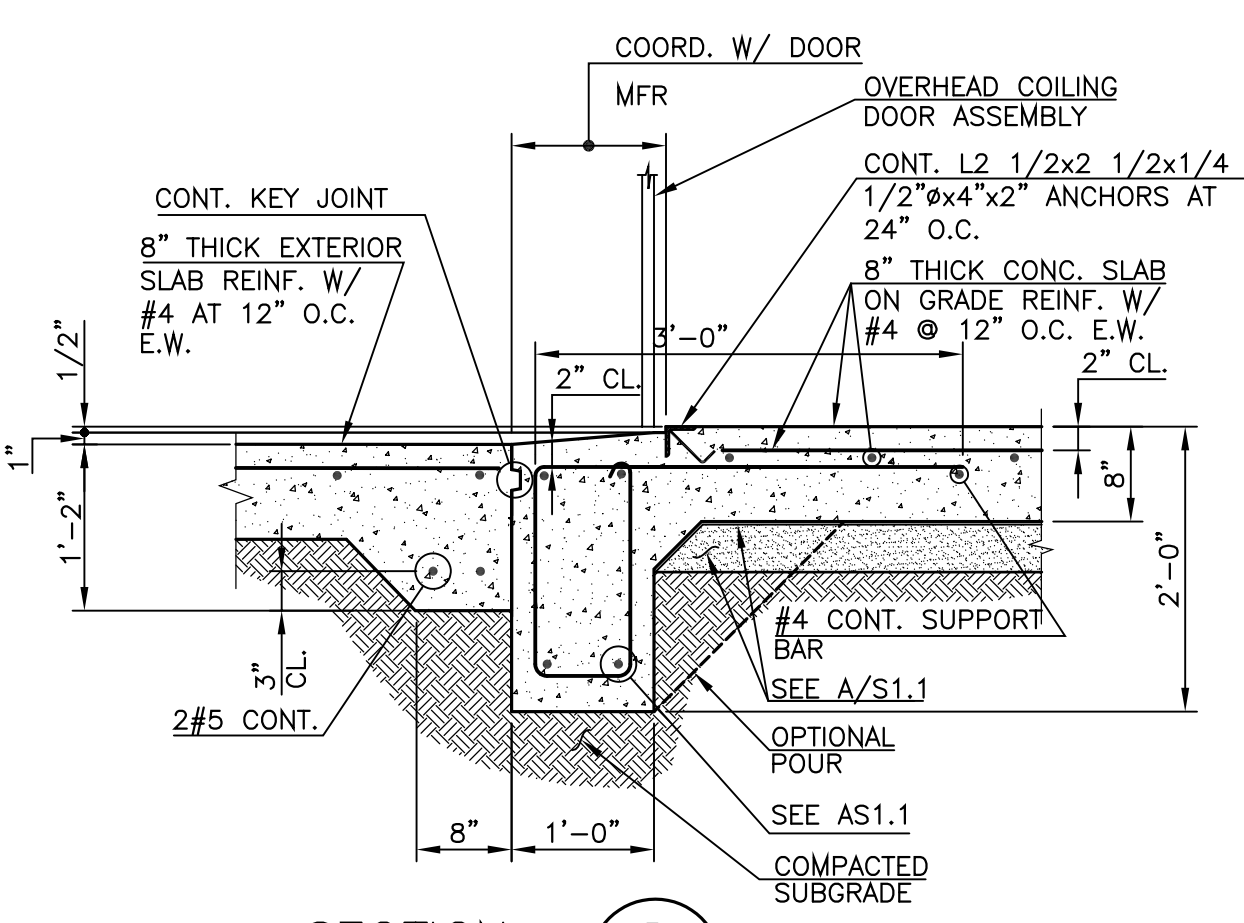
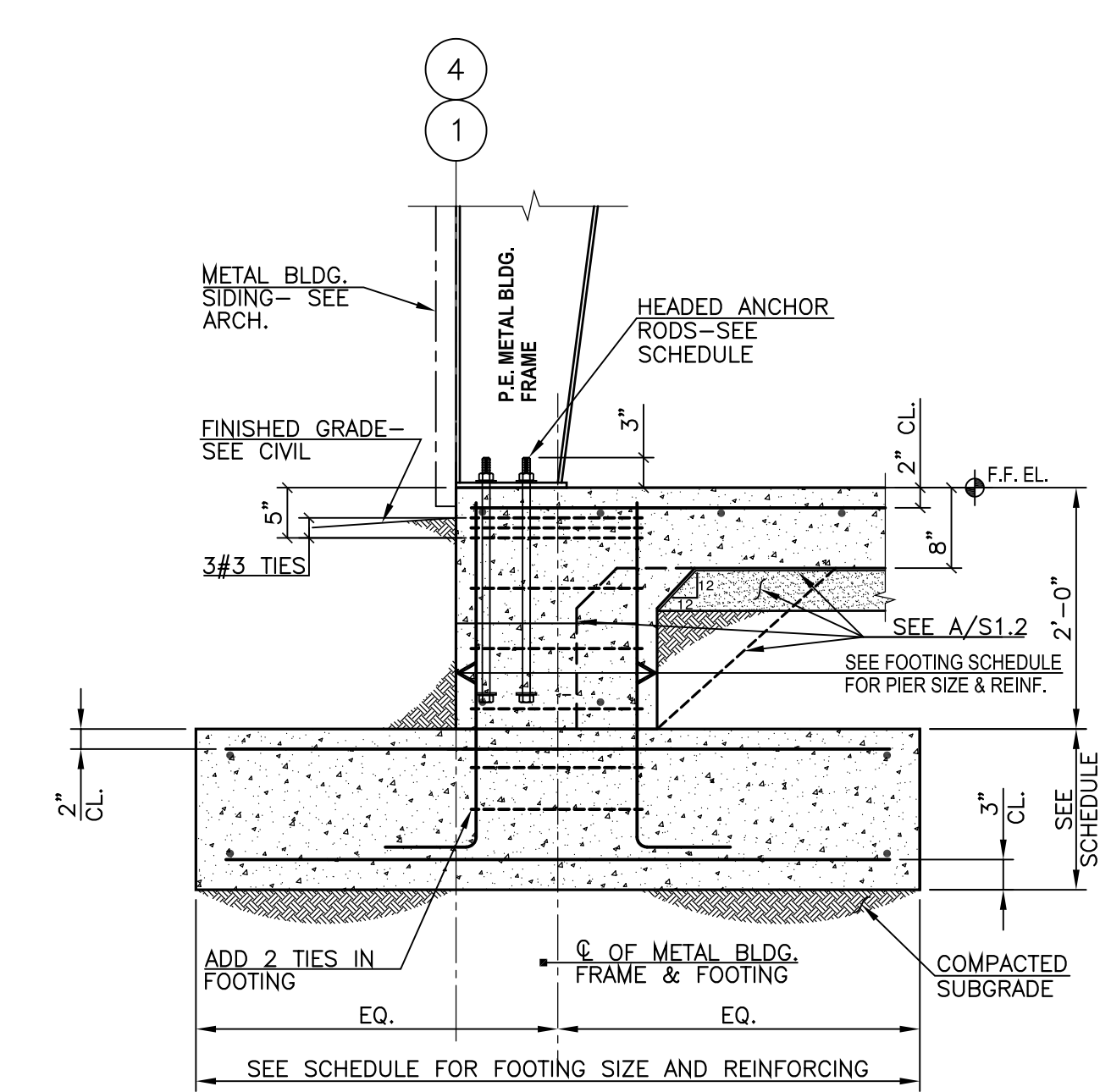
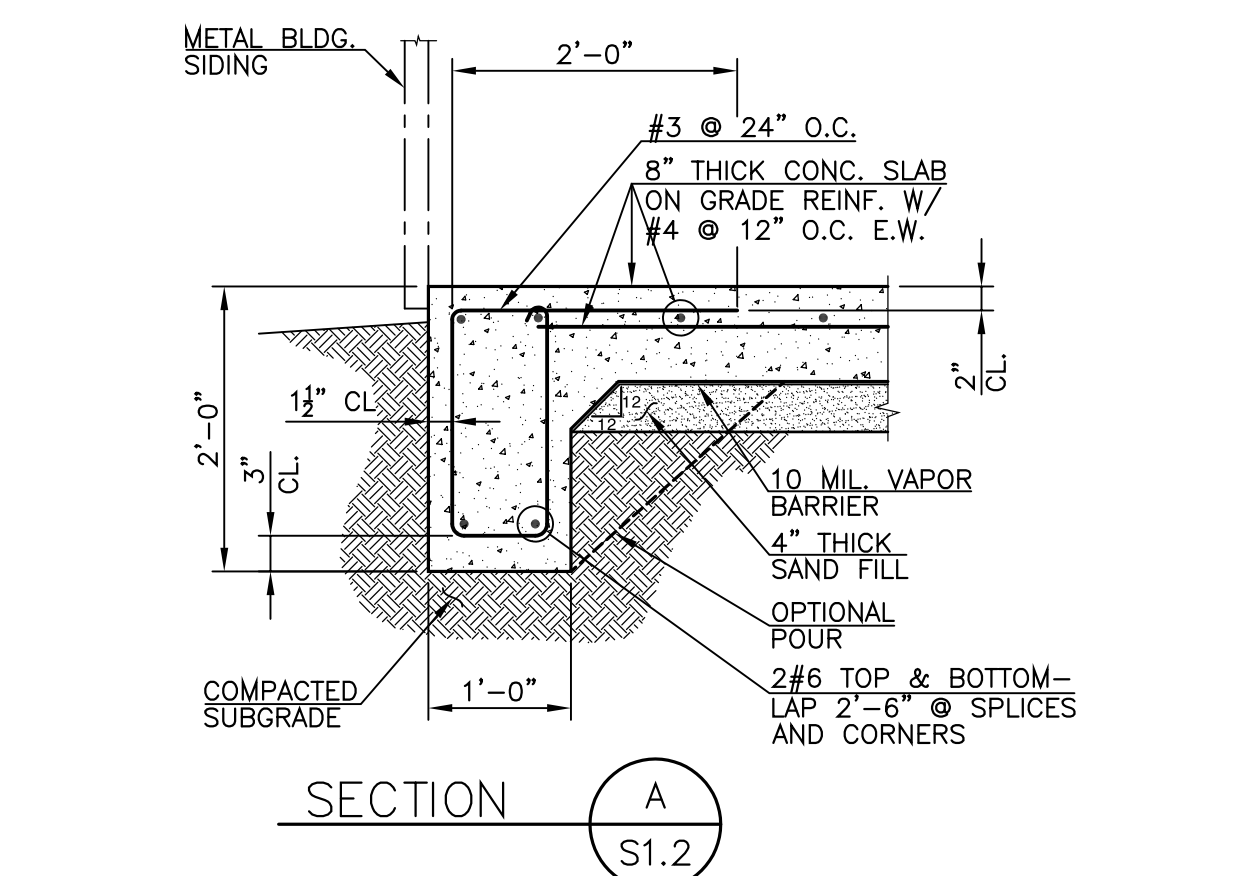
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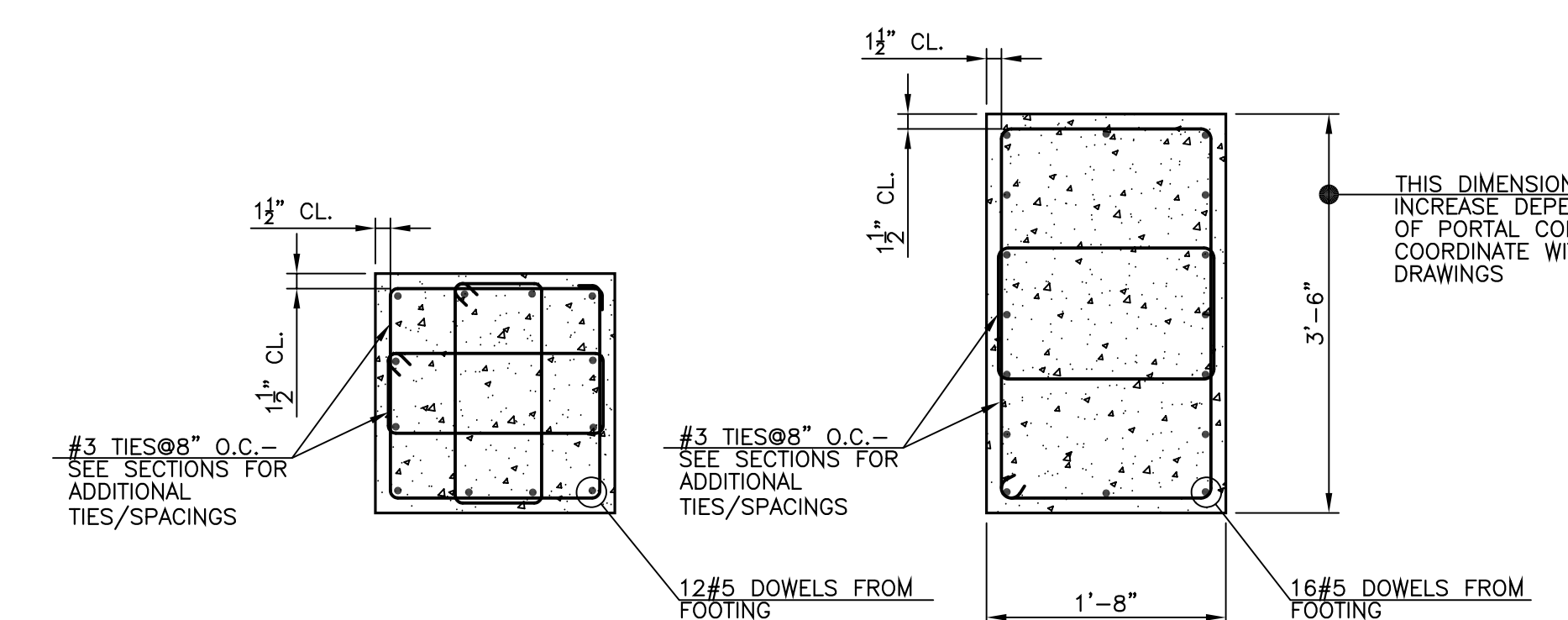
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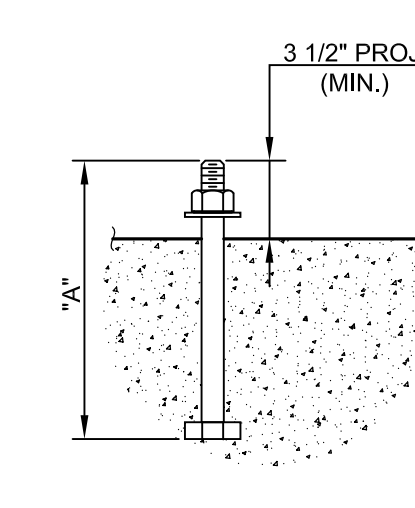


**CONTROL JOINT CONSTRUCTION:**  
CONTROL JOINTS (INDICATED AS CJ), SHALL BE CONSTRUCTED AS FOLLOWS:  
1. CONTROL JOINTS SHALL ONLY OCCUR AT DESIGNATED LOCATIONS WHERE SHOWN ON FOUNDATION PLAN.  
2. JOINT DEPTHS SHALL BE A MINIMUM OF 1/4 OF THE SLAB DEPTH BUT NOT LESS THAN 1".  
3. JOINTS SHALL BE SAWN AS SOON AS CONCRETE IS HARD ENOUGH TO SUPPORT THE WEIGHT OF THE EQUIPMENT TO BE USED WITHOUT RAVELING THE CONCRETE SURFACE BUT NO LATER THAN 12 HOURS AFTER POURING OF SLAB.  
4. JOINTS SHALL BE FILLED WITH INDUSTRIAL GRADE TRAFFIC SEALANT. SUBMIT SPEC. SHEET FOR REVIEW BY ENGINEER PRIOR TO USE.



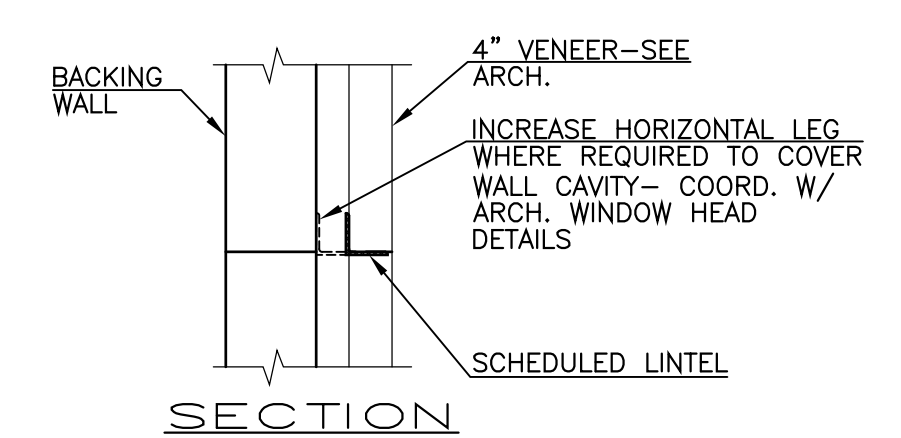
18"x18" & 20"x20" CONCRETE PIER  
20"x42" CONCRETE PIER  
**CONCRETE PIER DETAILS**

- NOTES:  
1. SEE SCHEDULE & SECTIONS FOR PIER SIZE & REINFORCING.  
2. TERMINATE VERTICAL BARS IN FOOTING WITH 90° HOOK (12) BAR DIAMETERS (MIN).  
3. ALTERNATE LOCATION OF 90° AND 135° BENDS.  
4. TOP OF PIERS SHALL BE AT FINISHED FLOOR U.N.  
5. TOP OF VERTICAL DOWELS SHALL EXTEND TO 1 1/2" FROM TOP OF PIER.



MARK	NO. OF RODS	SIZE DIA. "A"	NOTES
AR1	4	1"Ø	24"
AR2	4	3/4"Ø	18"

OPENING WIDTH	SIZE:	BEARING EA. END
MAX. 4'-0"	L3 1/2x3 1/2x5/16	6"
MAX. 6'-0"	L4x3 1/2x5/16 (LLV)	8"
MAX. 8'-0"	L6x3 1/2x5/16 (LLV)	10"
MAX. 10'-0"	L6x3 1/2x5/16 (LLV)	12"



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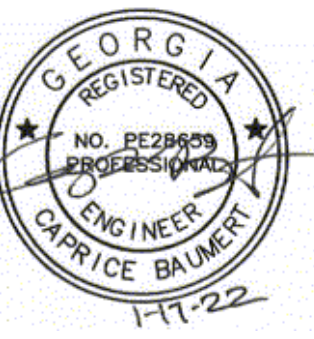
SECTIONS

**S1.2**

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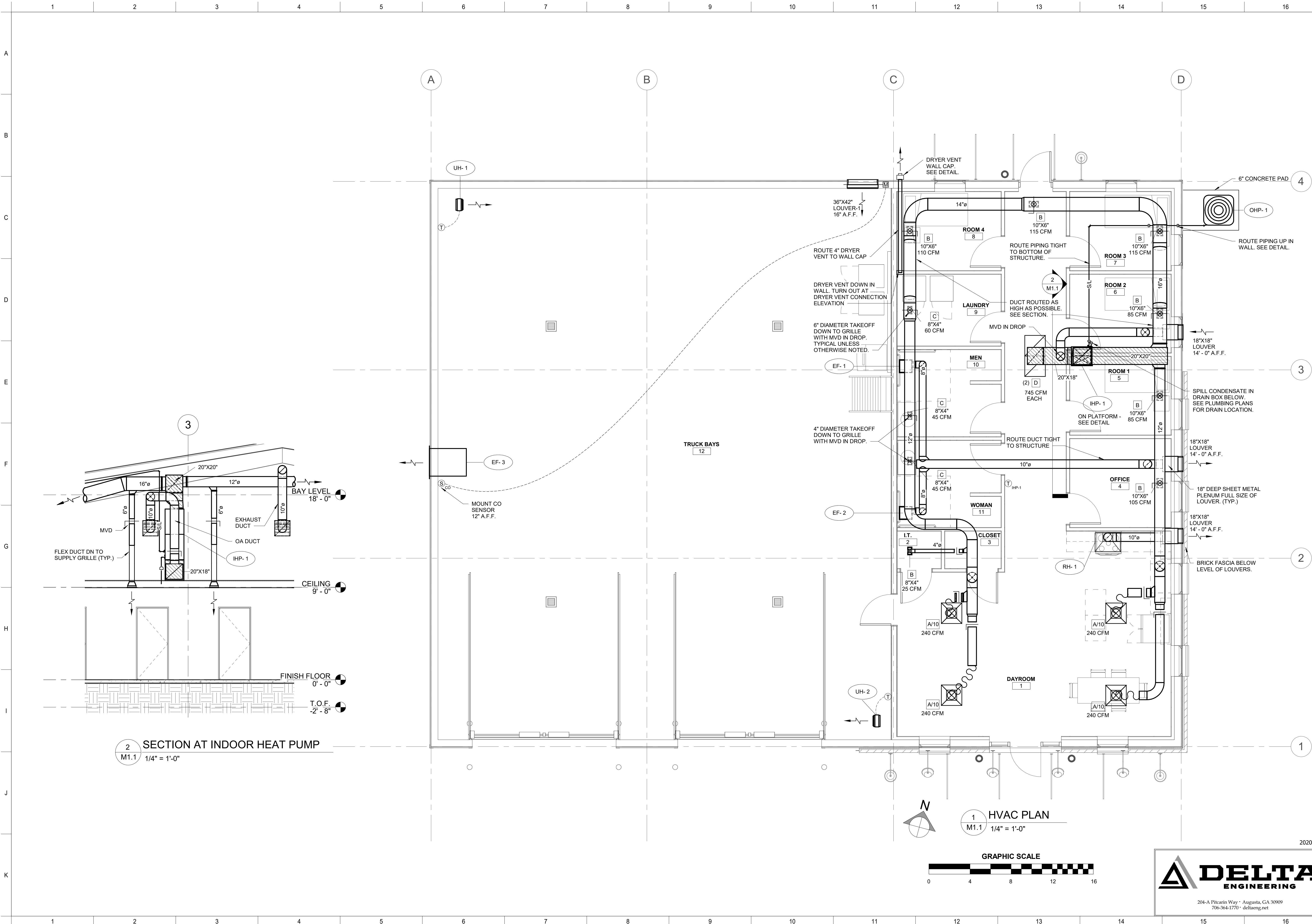
SCHEDULE OF REVISIONS

#	DATE

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APPROVED BY: CAB

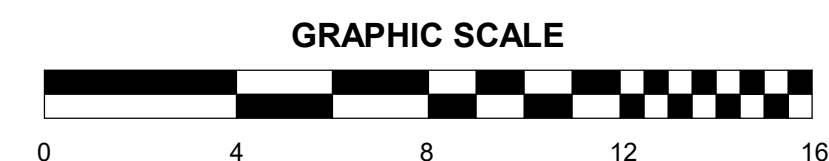
HVAC PLAN

**M1.1**



**2 SECTION AT INDOOR HEAT PUMP**  
M1.1 1/4" = 1'-0"

**1 HVAC PLAN**  
M1.1 1/4" = 1'-0"



2020-060

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INDOOR HEAT PUMP SCHEDULE															
ITEM	NUMBER	CFM	OUTSIDE AIR (CFM)	ESP (IN WG)	DRIVE	FAN HP	COOLING CAPACITY MBH (1)		HEATING CAPACITY (MBH)	HEATER KW (2)	HEATER STAGES	ELECTRICAL (2)		CARRIER MODEL NUMBER	NOTES
							SENSIBLE	TOTAL				VOLTAGE	PHASE		
IHP	1	1750	260	0.5	DIRECT	3/4 HP	42.1	53.8	39.0	9.0	1	208	1	FV4CNB006	

(1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.  
 (2) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS & CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES FOUND.

OUTDOOR HEAT PUMP SCHEDULE											
ITEM	NUMBER	COOLING CAPACITY (BTU/HR)	SEER/IEER	HEATING CAPACITY MBH HIGH (1)	COP HIGH (1)	HSPF	ELECTRICAL DATA (2)		CARRIER MODEL NUMBER	REFRIGERANT PIPE SIZES (3)	
							VOLTAGE	PHASE		SUCTION LINE SIZE	LIQUID LINE SIZE
OHP	1	53770	16	39.0	3.72	9.0	208	1	25HC8660	7/8	3/8

(1) RATINGS IN ACCORDANCE WITH A.R.I. STANDARD 240.  
 (2) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS & CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES FOUND.  
 (3) REFRIGERANT PIPE SIZES INDICATED ARE FOR ESTIMATING PURPOSES ONLY. EXACT SIZES AND ACCESSORIES REQUIRED SHALL BE DETERMINED BY EQUIPMENT MANUFACTURER FROM FIELD OBTAINED DIMENSIONS.

FAN SCHEDULE											
ITEM	NUMBER	LOCATION	CFM	ESP (in wg)	MOTOR SIZE	RPM	ELECTRICAL DATA (5)			GREENHECK MODEL NUMBER	NOTES
							VOLTAGE	PHASE	SONES		
EF	1	TOILET	130	0.5	42 WATTS	855	115	1	3	SP-A200	(1)(3)
EF	2	TOILET	130	0.5	42 WATTS	855	115	1	3	SP-A200	(1)(3)
EF	3	VEHICLE BAY	5000	0.125	1/2 HP	1044	115	1	12.3	SE1-24-428-B	(2)(4)

(1) FURNISH BACKDRAFT DAMPER, HANGING BRACKETS, METAL CEILING GRILLE, SPEED CONTROLLER, AND DISCONNECT MEANS.  
 (2) FURNISH MOTORSIDE GUARD, WALL MOUNT COLLAR, MOTORIZED WALL SHUTTER, MANUFACTURER STANDARD STARTER/HOA SWITCH, AND DISCONNECT MEANS.  
 (3) SWITCH WITH ROOM LIGHTS. FURNISH AUXILIARY CONTACTS AS REQUIRED.  
 (4) FAN TO ENERGIZE WHEN CO LIMIT IS EXCEEDED OR FAN IS SWITCHED ON. INTERLOCK FAN WITH MOTORIZED DAMPER ON LOUVER- SEE PLAN FOR LOCATION. FURNISH CO SENSOR WITH AUXILIARY CONTACTS.  
 (5) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS & CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES FOUND.

AIR DEVICE SCHEDULE						
TYPE	TYPE	NECK SIZE	FINISH	OPPOSED BLADE DAMPER	TITUS MODEL NUMBER	NOTES
A/10	SQUARE CEILING DIFFUSER	10"(1)	MANUFACTURER'S STANDARD WHITE	Yes	TMS / 24"X 24" FACE	(2)
B	STEEL 3-WAY REGISTER	SEE PLANS (2)	MANUFACTURER'S STANDARD WHITE	Yes	HART & COOLEY 631	(2)
C	ALUMINUM 3-WAY REGISTER	SEE PLANS (2)	MANUFACTURER'S STANDARD WHITE	Yes	HART & COOLEY A683	(2)
D	EGG CRATE RETURN/EXHAUST	22" X 22"	MANUFACTURER'S STANDARD WHITE	No	50F / 24X24 PANEL WITH BORDER FRAME	(2)
LOUVER	WIND DRIVEN LOUVER	SEE PLANS	(4)	No	GREENHECK ESD-635X	
LOUVER-1	STATIONARY LOUVER	SEE PLANS	(4)	No	GREENHECK EACC-601	(5)

(1) DUCT RUNOUT SHALL BE SAME SIZE AS NECK SIZE UNLESS NOTED OTHERWISE.  
 (2) FURNISH SQUARE TO ROUND NECK ADAPTER. SEE PLAN FOR ROUND SIZE.  
 (3) SEE ARCHITECTURAL PLANS FOR CEILING TYPE. FURNISH LAY-IN TYPE FOR T-BAR CEILINGS AND SURFACE TYPE FOR ALL OTHER CEILINGS.  
 (4) EXTRUDED ALUMINUM LOUVER- BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. FURNISH INSECT SCREEN AND FLANGE FRAME.  
 (5) CONCEALED MOTORIZED OPERATOR AND LINKAGE. LISTED SIZE DOES NOT INCLUDE OPERATOR COMPARTMENT SIZE.

KITCHENETTE RANGEHOOD SCHEDULE							
ITEM	NUMBER	EXHAUST CFM	EXHAUST AMPS	BROAN MODEL NO.	ELECTRICAL DATA (2)		NOTES
					VOLTS	PHASE	
RH	1	460	6.0	89000 SERIES	120	1	(1)

(1) FURNISH STAINLESS STEEL FINISH AND FIRE SUPPRESSION SYSTEM. MOUNT FIRE SUPPRESSION SYSTEM IN CABINET ABOVE RANGE.  
 (2) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS & CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES FOUND.

UNIT HEATER SCHEDULE				
ITEM	NUMBER	HEATER KW (2)	QMARK MODEL NO.	NOTES
UH	1	10	MUH-10	(1)
UH	2	10	MUH-10	(1)

(1) FURNISH BRACKET FOR SUSPENDED MOUNTING AND WALL THERMOSTAT.  
 (2) COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL PLANS & CONTRACTOR BEFORE ORDERING EQUIPMENT. NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES FOUND.

### HVAC GENERAL NOTES

INSTALL DUCTWORK AND PIPING ABOVE CEILINGS WHERE POSSIBLE AND IN CHASES TO PROVIDE MAXIMUM POSSIBLE CLEARANCE'S FOR MAINTENANCE ACCESS. INSTALL PIPING AND DUCTWORK IN EQUIPMENT ROOMS PARALLEL OR PERPENDICULAR TO WALLS AND CEILINGS UNLESS SHOWN OTHERWISE.

ALL DUCTWORK AND PIPING SHALL BE CONCEALED UNLESS NOTED OTHERWISE.

COORDINATE THE INSTALLATION OF DUCTWORK AND PIPING WITH THAT OF OTHER TRADES TO PROVIDE THE BEST POSSIBLE ARRANGEMENT. REFER TO PLUMBING, ELECTRICAL, AND STRUCTURAL DRAWINGS AND SPRINKLER SHOP DRAWINGS. ARRANGE PIPING AND DUCTWORK TO AVOID CONFLICTS WITH OTHER BUILDING TRADES.

UNLESS DIMENSIONED, PIPING, DUCTWORK, AND EQUIPMENT ARE SHOWN IN APPROXIMATE LOCATIONS. EXACT CONFIGURATION SHALL BE DETERMINED IN THE FIELD TO COORDINATE WITH OTHER TRADES AND TO ALLOW FOR A MINIMUM NUMBER OF OFFSETS AS POSSIBLE WHILE ALLOWING FOR ADEQUATE MAINTENANCE ACCESS.

FURNISH FLEXIBLE DUCT CONNECTIONS TO ALL AIR HANDLING EQUIPMENT.

EXACT LOCATION OF AIR DEVICES SHALL BE DETERMINED IN THE FIELD. COORDINATE WITH ARCHITECTURAL REQUIREMENTS AND LIGHTING. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND ELECTRICAL PLANS FOR LIGHT LOCATIONS. AIR DEVICE LOCATIONS SHALL BE INSTALLED WITH A UNIFORM APPEARANCE AND SHALL BE SYMMETRICAL.

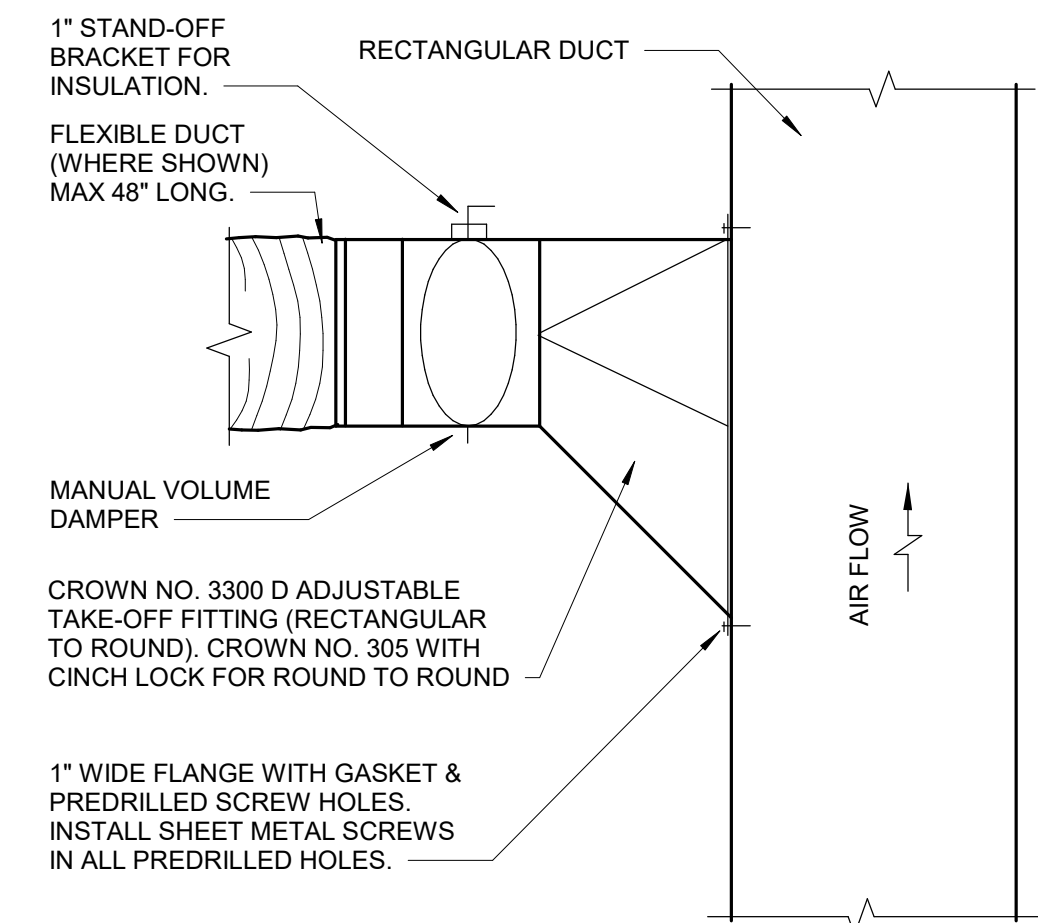
DUCT ACCESS DOORS SHALL BE FURNISHED AT ALL FIRE AND SMOKE DAMPERS, DUCT MOUNTED COILS, AND AT ALL DUCT MOUNTED CONTROL DEVICES.

SLOPE DRAIN LINE TOWARDS DRAIN WITH A MINIMUM SLOPE OF 1/4" PER FOOT.

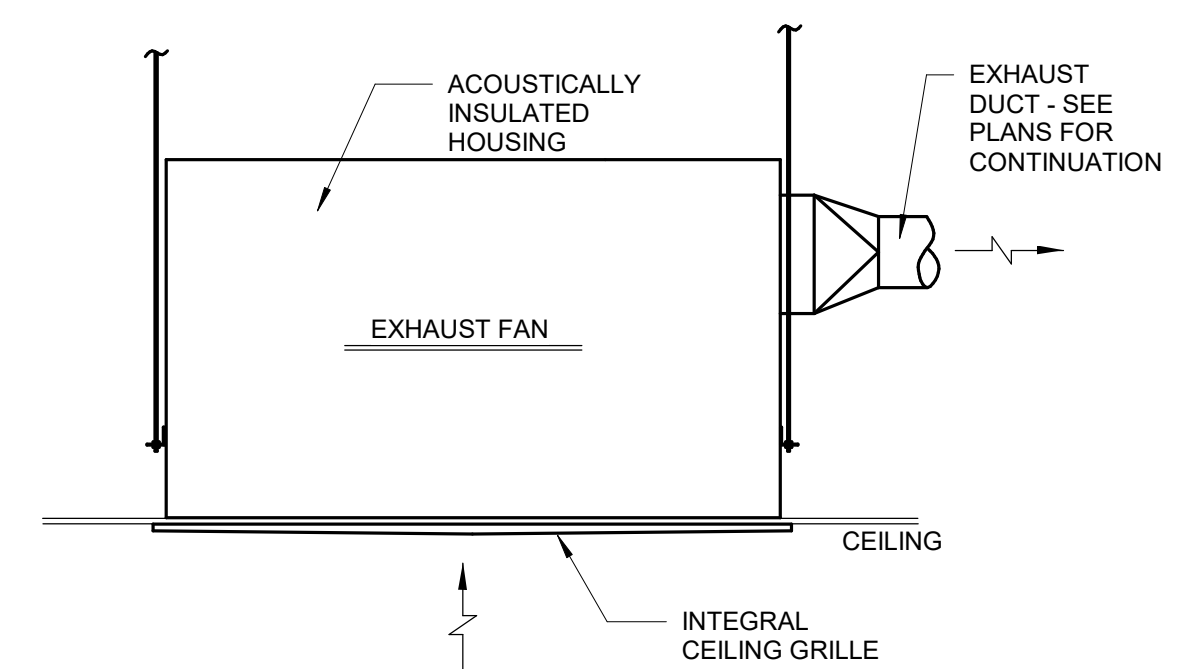
THERMOSTAT LOCATIONS SHALL BE A MINIMUM OF 8" AWAY FROM DOOR FRAMES. COORDINATE LOCATION OF THERMOSTATS WITH LIGHT SWITCHES AND OTHER WALL DEVICES FOR SYMMETRY. MOUNT AT 4'-0" A.F. UNLESS NOTED OTHERWISE.

### H.V.A.C. LEGEND

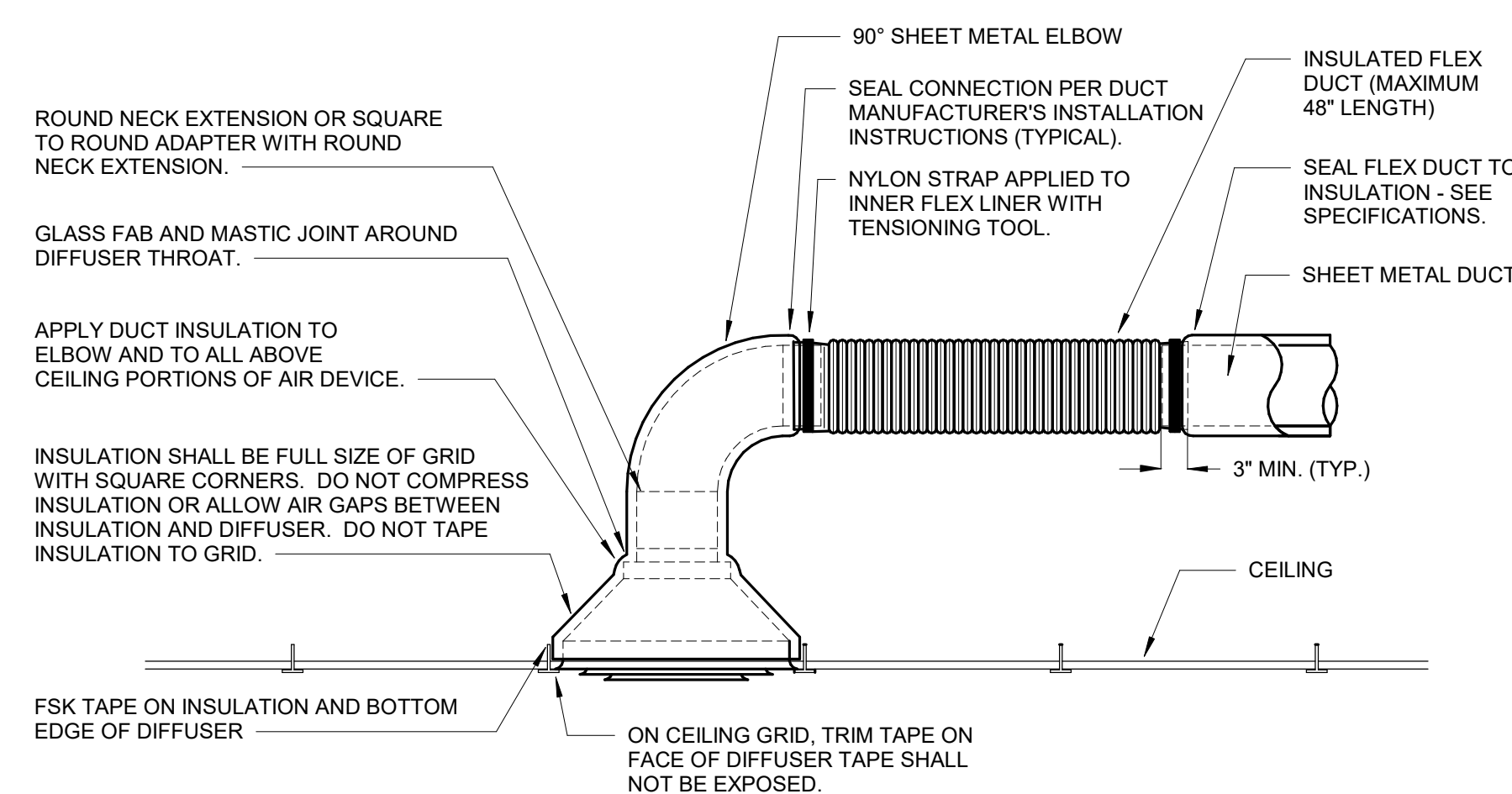
SYMBOL	DESCRIPTION
—S/L—	REFRIGERANT SUCTION / LIQUID
---	CONDENSATE DRAIN
⊖	THERMOSTAT 4'-0" A.F.
⊕	WALL SWITCH
⊠	FLEXIBLE DUCT CONNECTION AT UNIT
▨	LINED DUCT (SIZE SHOWN IS METAL SIZE)
⊞	FLEXIBLE DUCT CONNECTION
⊞	SUPPLY DIFFUSER
⊞	RETURN / EXHAUST GRILLE
⊞	SQUARE ELBOW WITH TURNING VANES
⊞	MANUAL VOLUME DAMPER (MVD)
A/B	SEE AIR DEVICE SCHEDULE FOR TYPE
⊞	NECK CONNECTION SIZE UNLESS NOTED OTHERWISE
C.F.M.	CUBIC FEET PER MINUTE
(F-1)	EQUIPMENT NUMBER - SEE SCHEDULES
→	AIRFLOW DIRECTION
∅	DIAMETER
⊞	AIR EXTRACTOR
OBD	OPPOSED BLADE DAMPER
TYP.	TYPICAL
ENT.	ENTERING
LVG.	LEAVING
S.P.	STATIC PRESSURE
A.P.D.	AIR PRESSURE DROP
OA	OUTDOOR AIR
CO	CARBON MONOXIDE



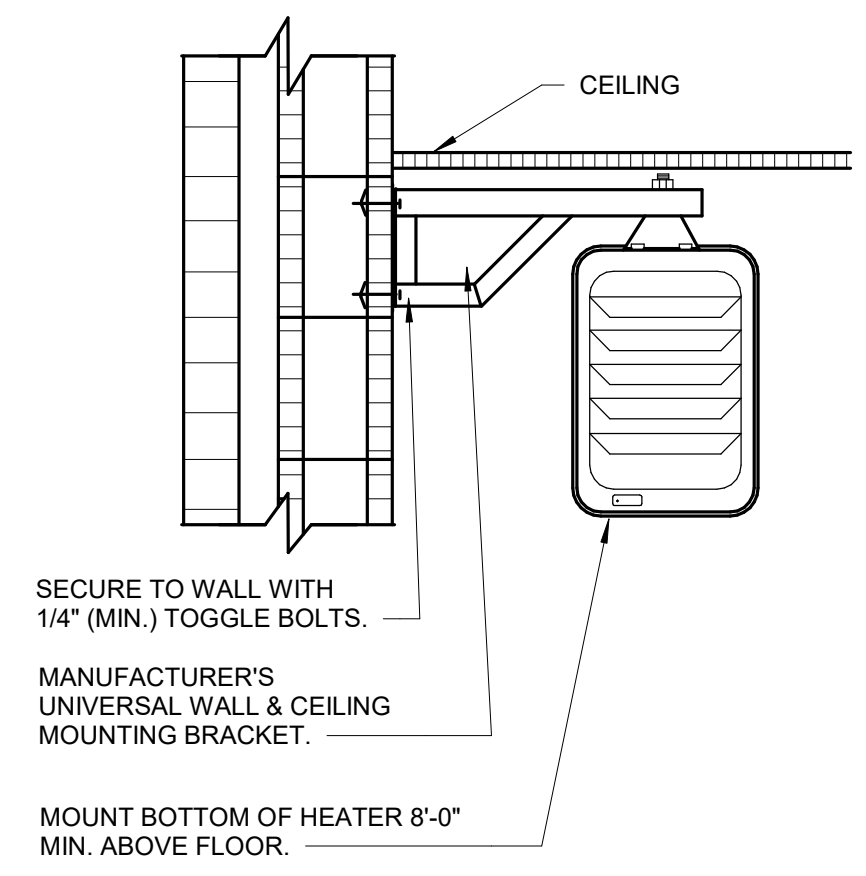
1 SUPPLY DUCT TAKEOFF FITTING DETAIL  
 M2.1 NTS



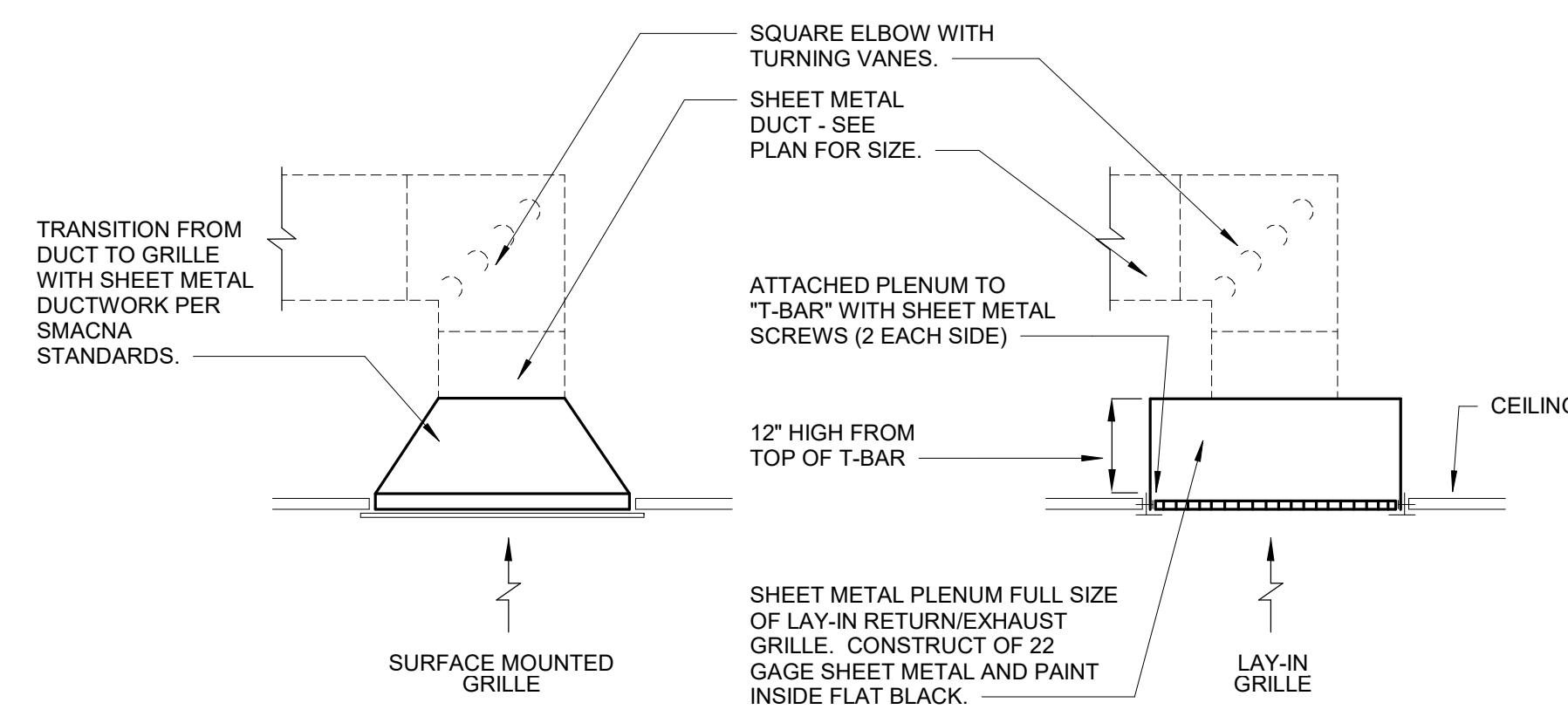
2 EXHAUST FAN DETAIL  
 M2.1 NTS



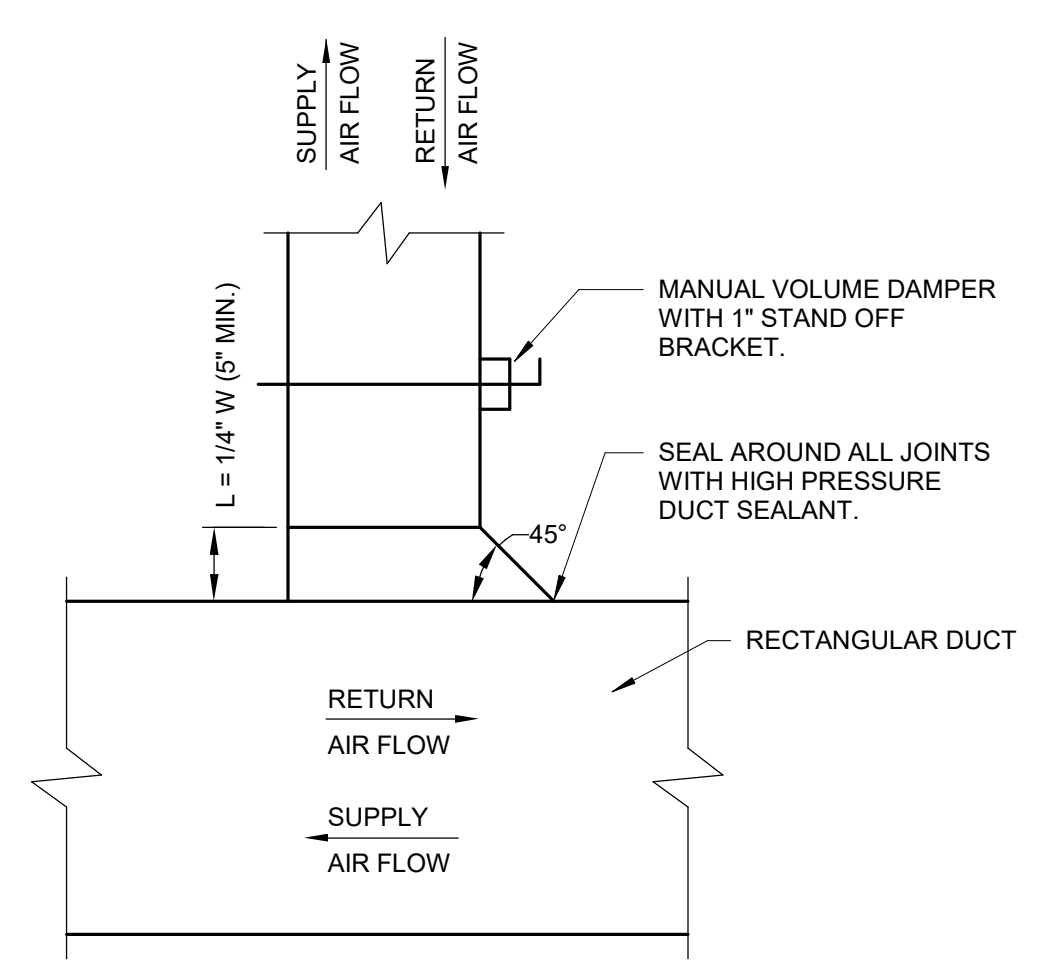
3 ROUND DUCT CONNECTION DETAIL  
 M2.1 NTS



5 ELECTRIC UNIT HEATER MOUNTING DETAIL  
 M2.1 NTS



6 EXHAUST/RETURN AIR CONNECTION DETAIL  
 M2.1 NTS



4 RECTANGULAR TAKEOFF DETAIL FOR SUPPLY AND RETURN DUCTWORK  
 M2.1 NTS



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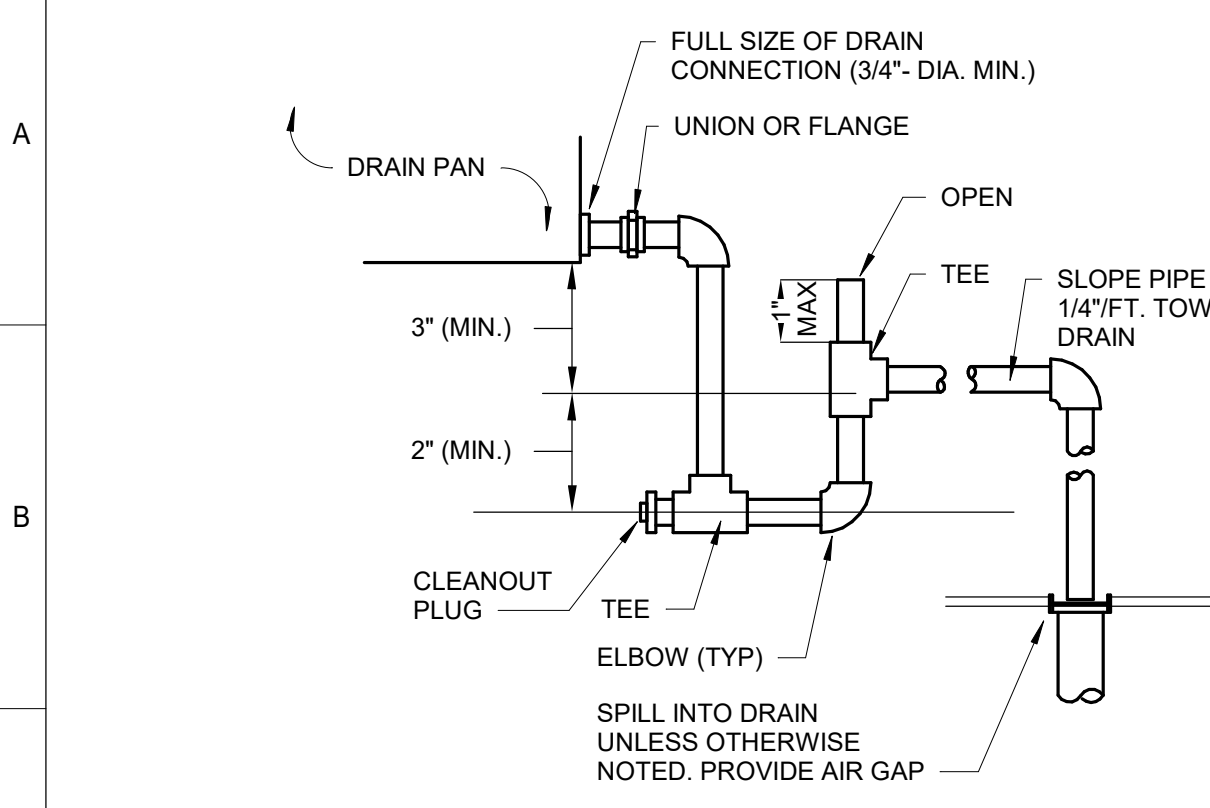
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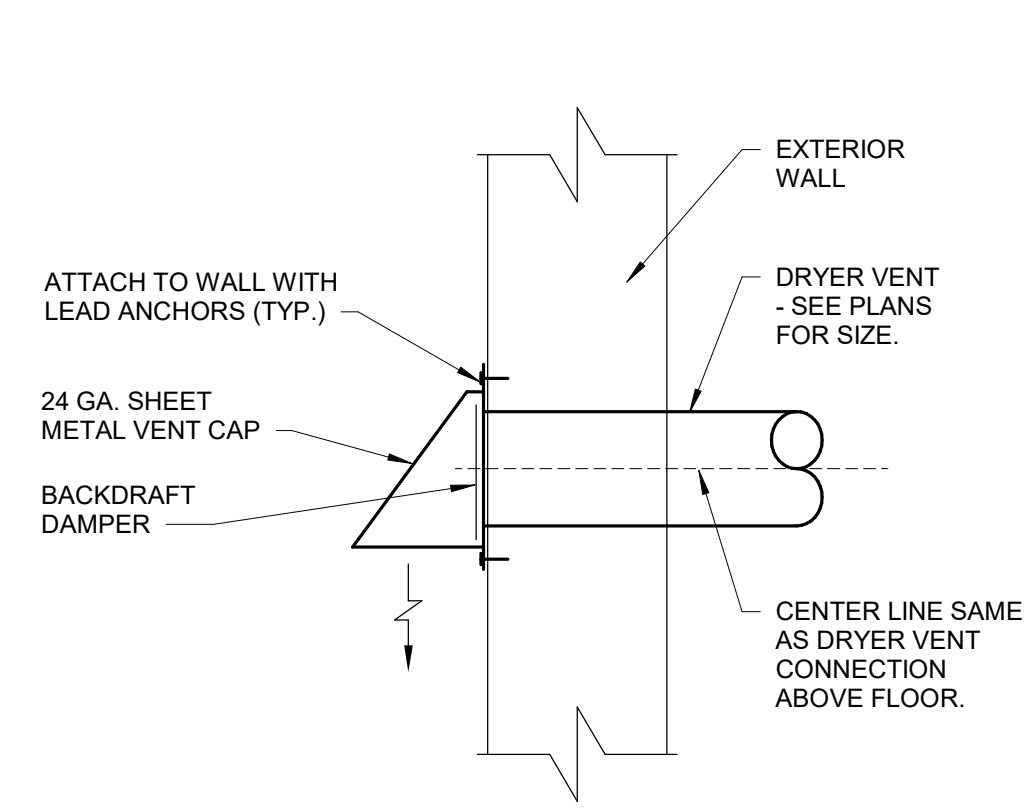
HVAC NOTES, LEGEND, DETAILS & SCHEDULES

**M2.1**

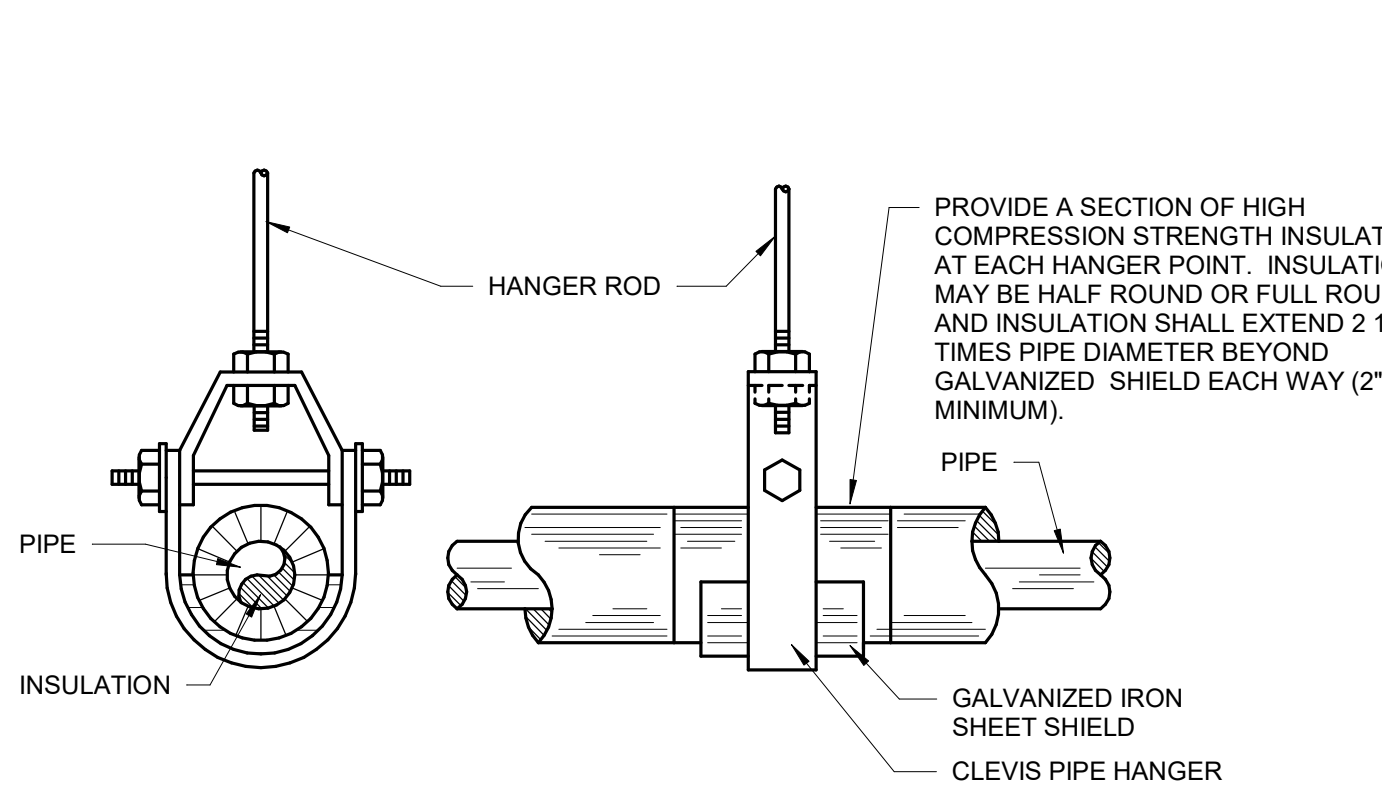




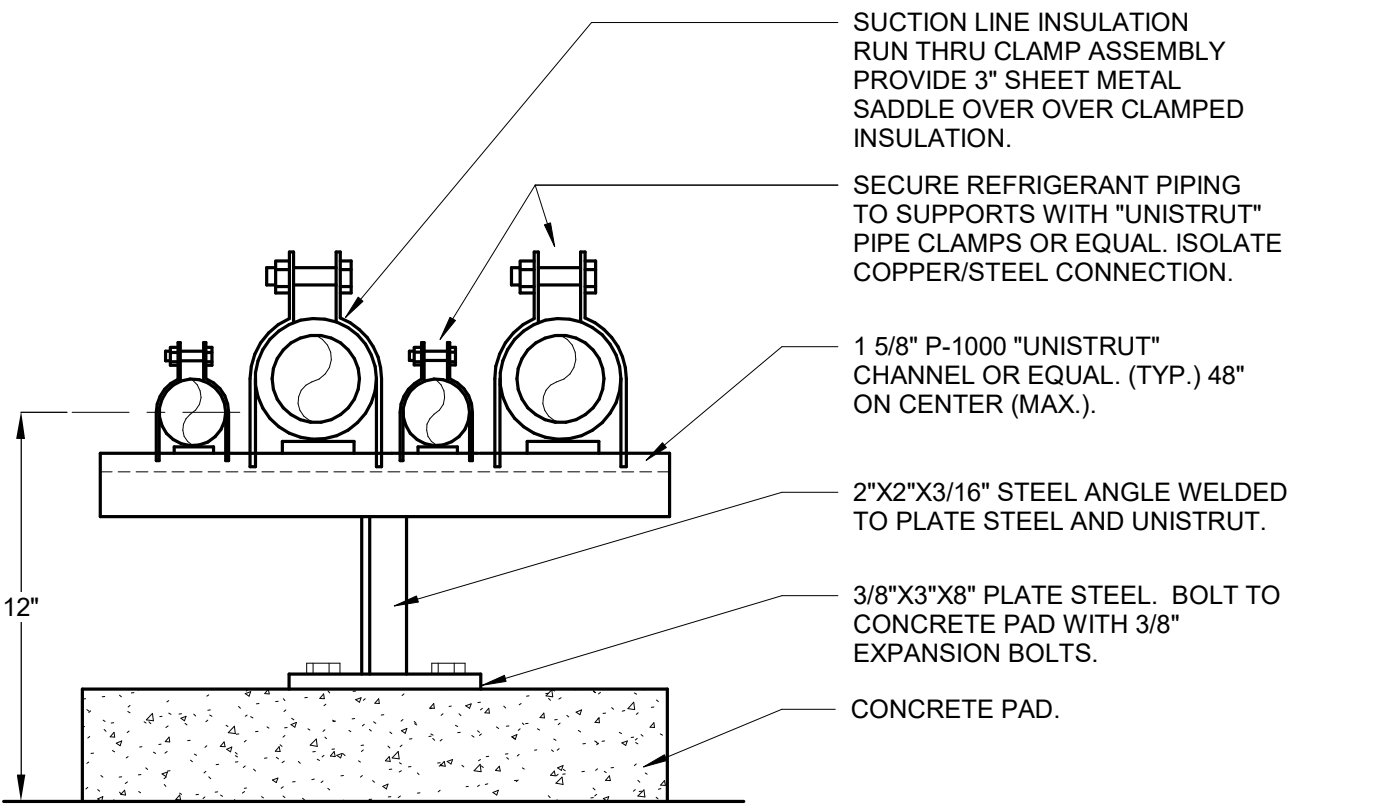
**1 CONDENSATE DRAIN DETAIL**  
M2.2 NTS



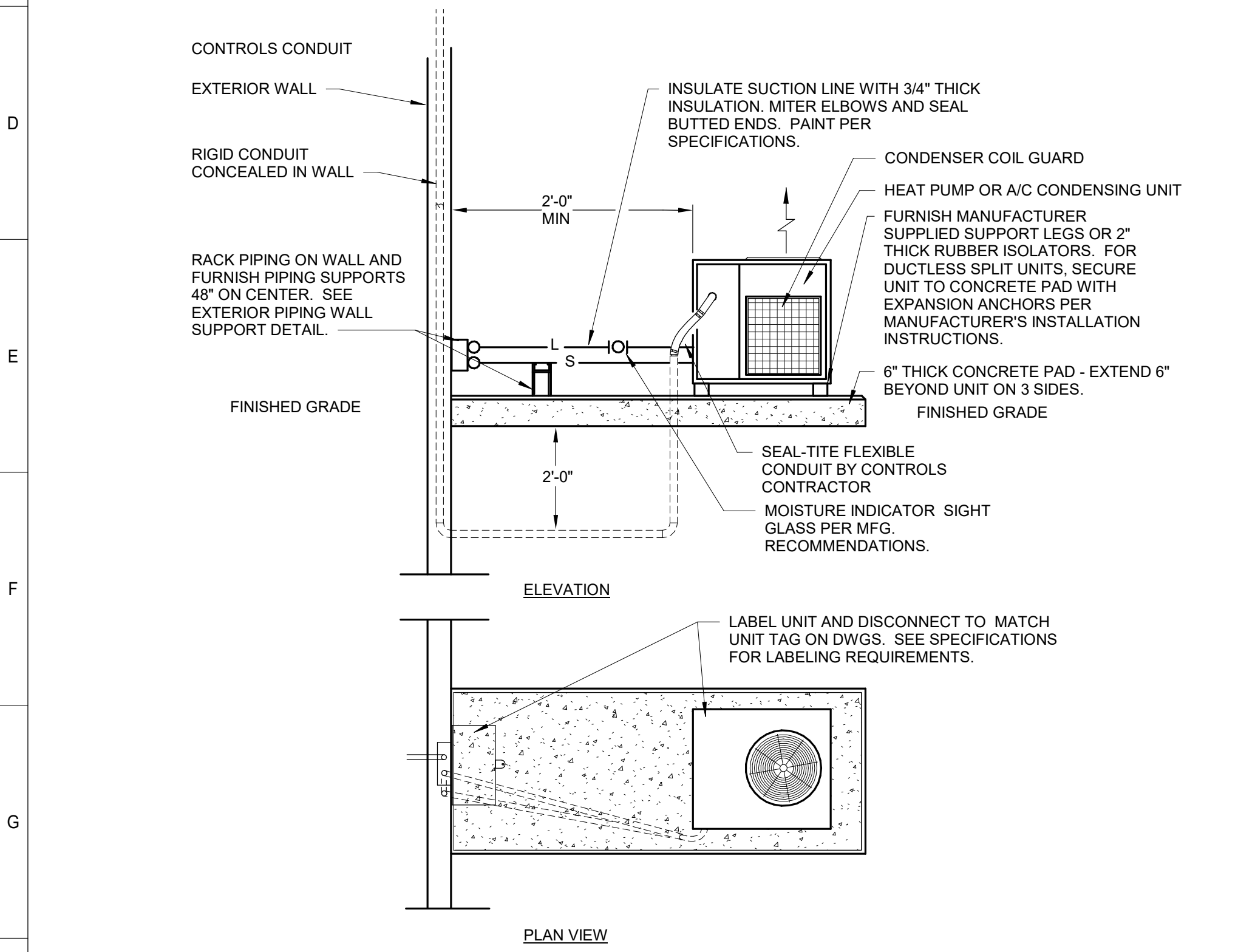
**2 DRYER VENT DETAIL**  
M2.2 NTS



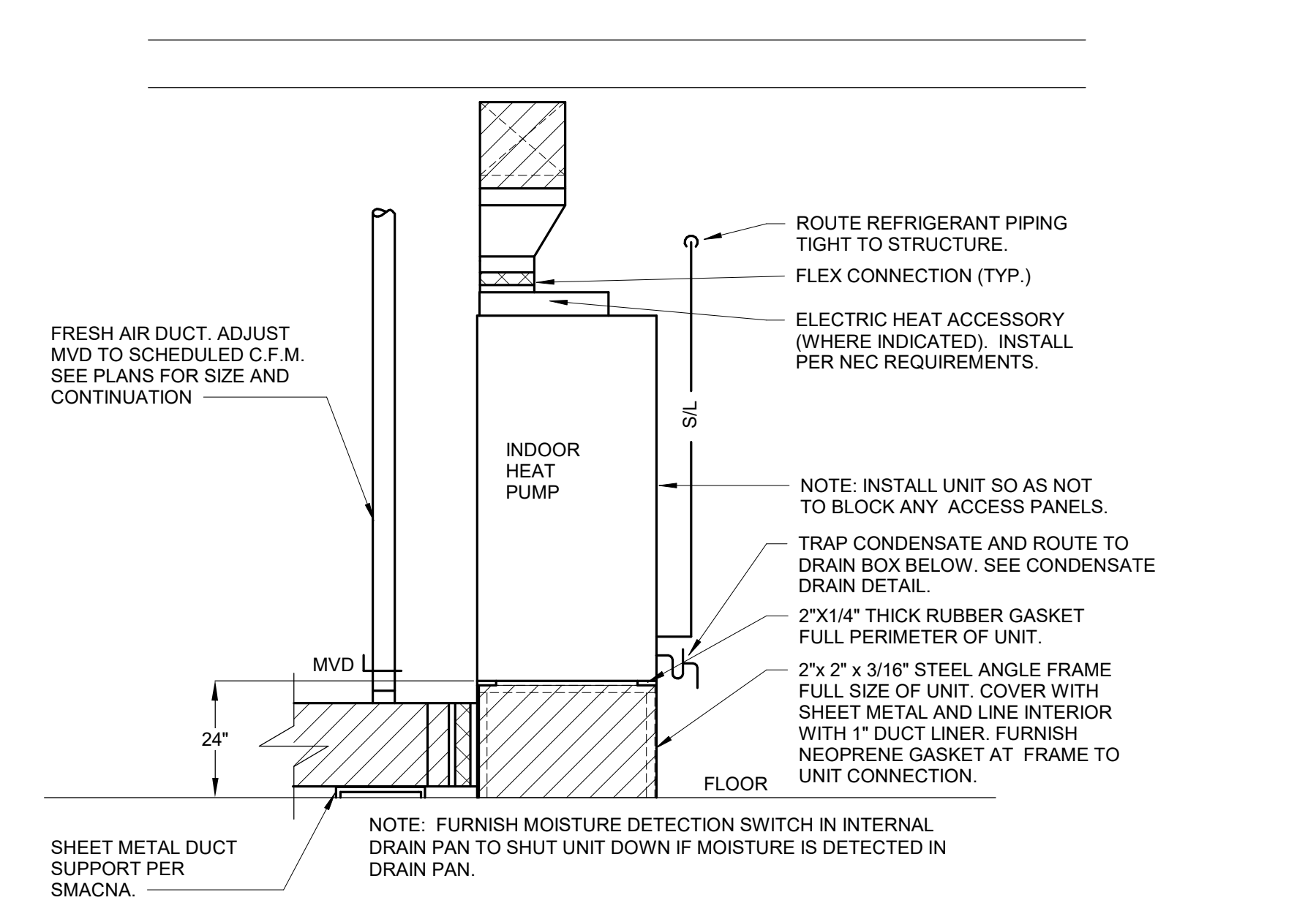
**3 PIPE HANGER DETAIL**  
M2.2 NTS



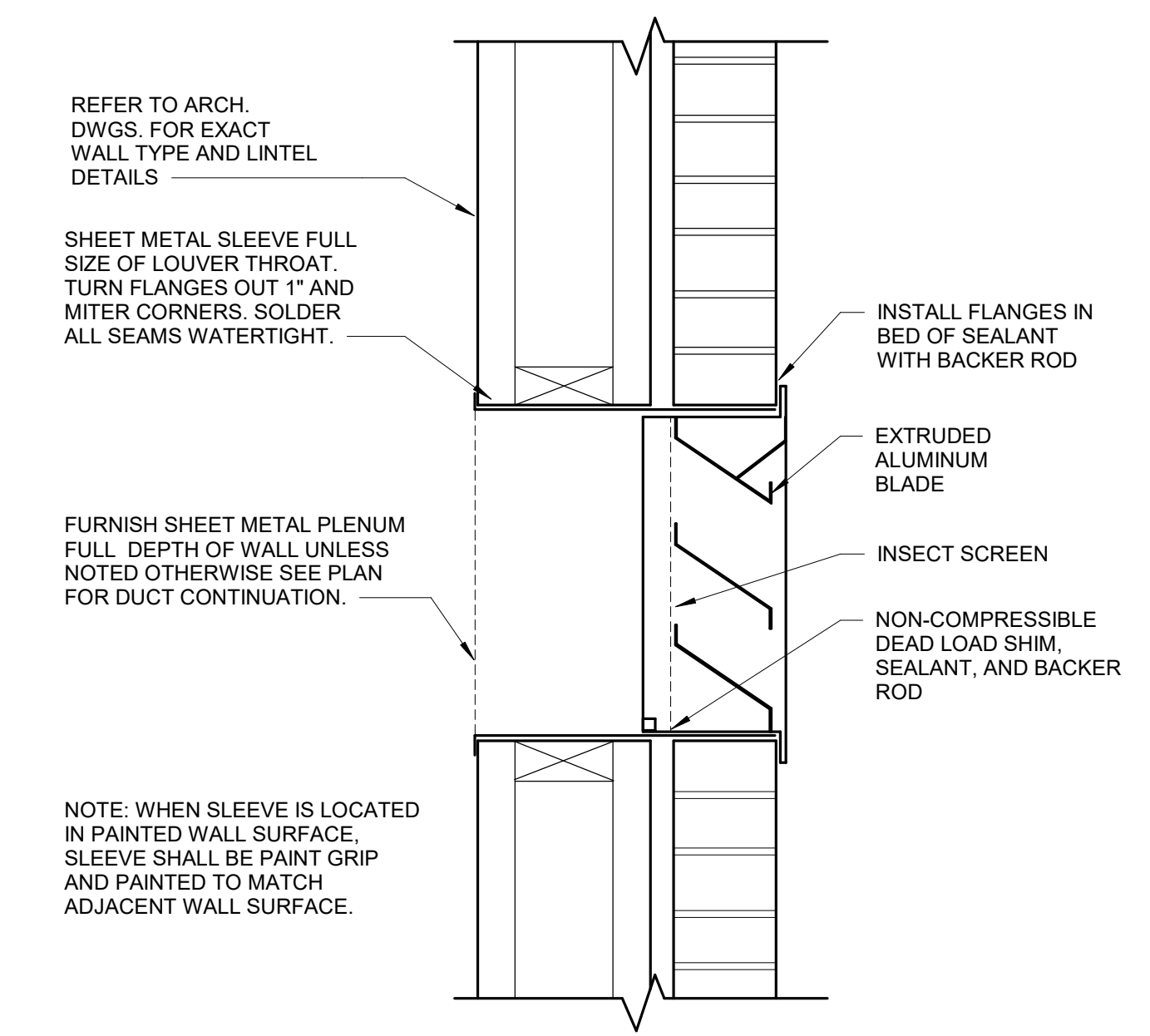
**4 EXTERIOR PIPING SUPPORT DETAIL**  
M2.2 NTS



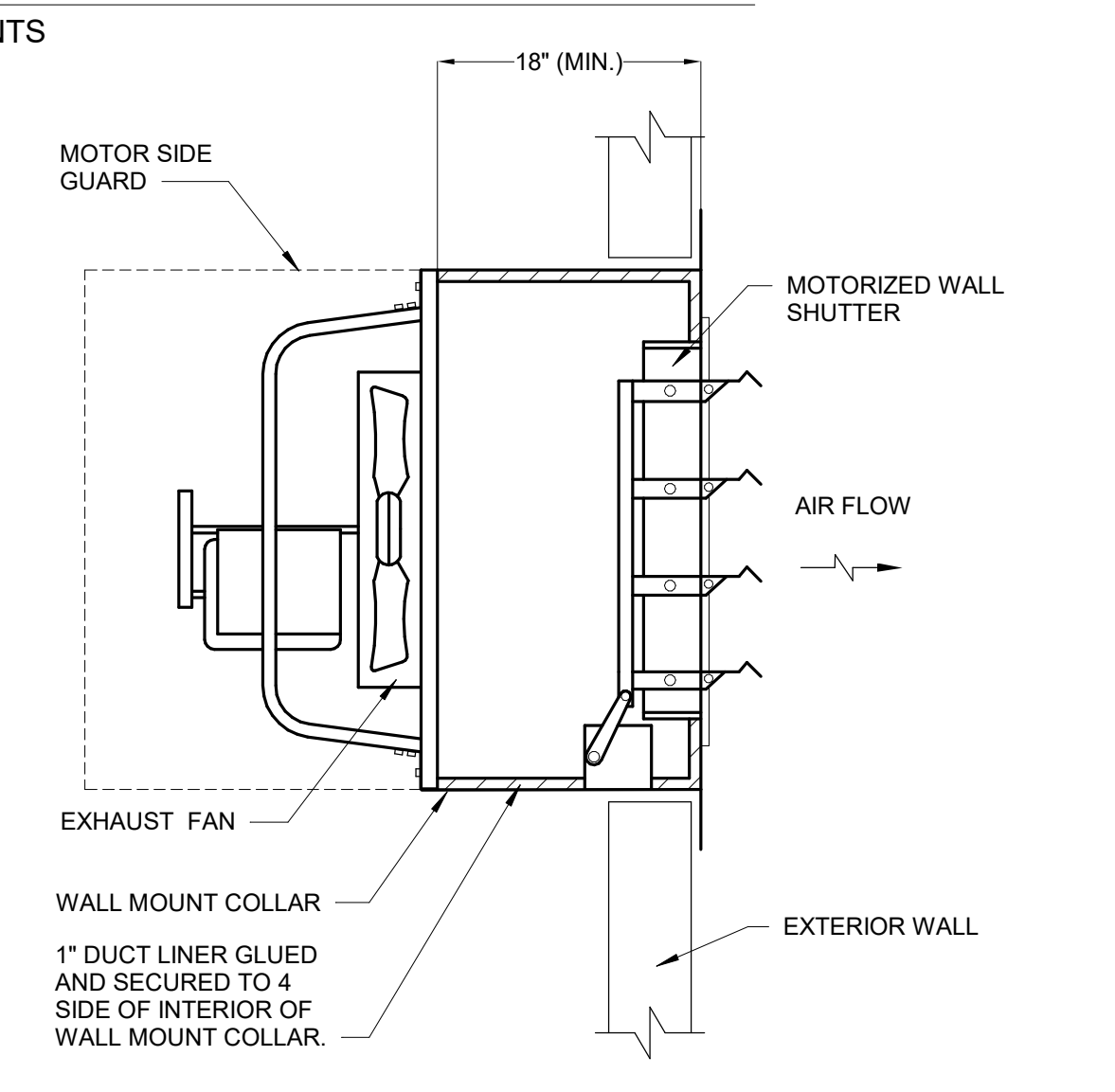
**5 EXTERIOR HVAC UNIT DETAIL**  
M2.2 NTS



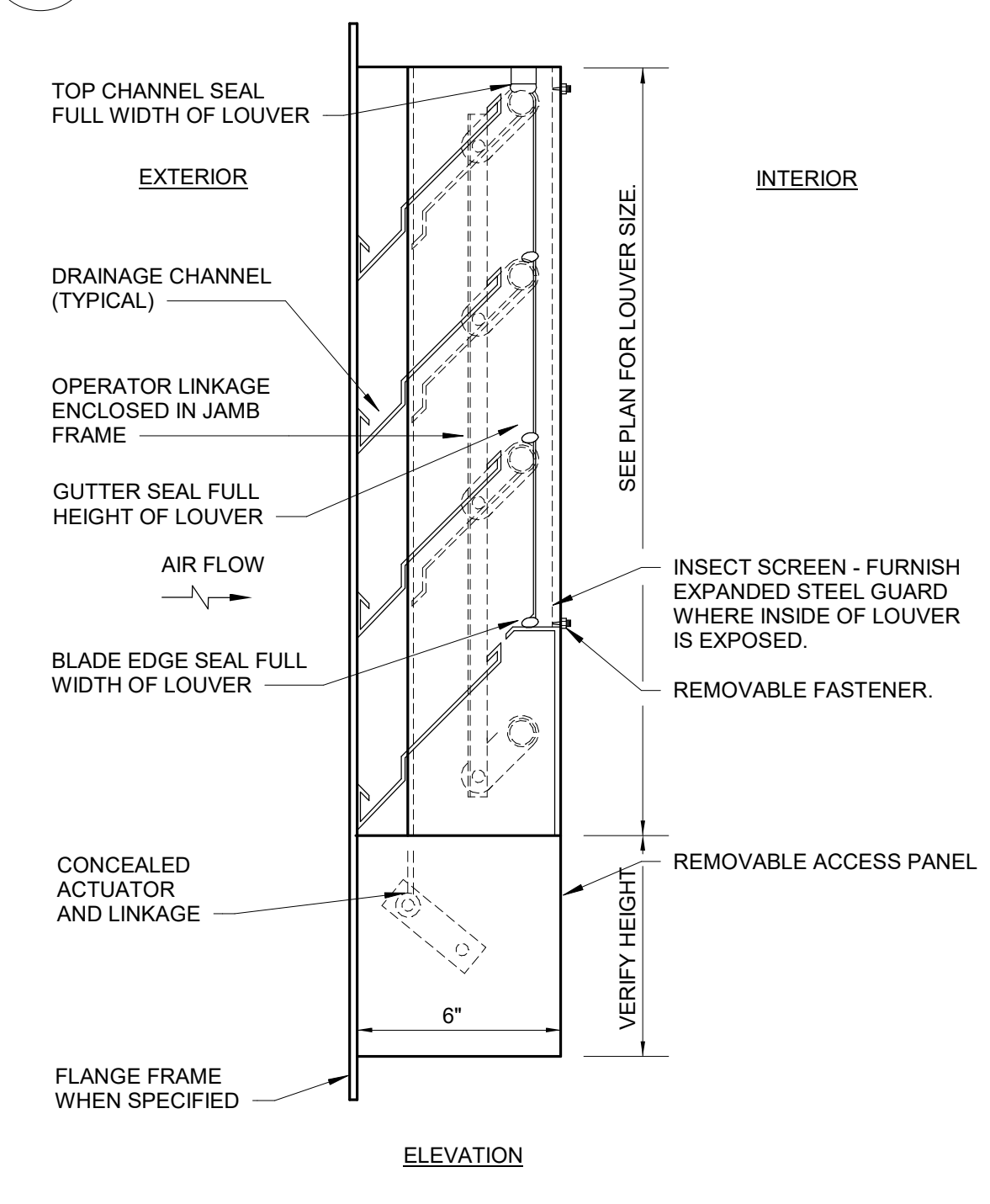
**6 INDOOR HEAT PUMP DETAIL**  
M2.2 NTS



**7 LOUVER DETAIL**  
M2.2 NTS



**8 WALL MOUNTED PROPELLER EXHAUST FAN DETAIL**  
M2.2 NTS



**9 STATIONARY LOUVER WITH MOTORIZED DAMPER DETAIL**  
M2.2 NTS



**FIRE STATION #13**  
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APPROVED BY: CAB



A B C D E F G H I J K

H.V.A.C. SPECIFICATIONS

GENERAL:

- A. Entire system shall be installed to meet all applicable Local, State and National Codes, current requirements of NFPA, State of Georgia Heating and Air Conditioning Code and National Electric Code.
B. HVAC Subcontractor shall have a current Class II Conditioned Air Contractors License for the state in which the project is being constructed.
C. These specifications and all accompanying HVAC drawings are intended to provide for all labor, materials, and equipment necessary for the installation of a complete and functioning HVAC system.
D. All equipment shall be installed in accordance with the manufacturer's written instructions. Installing contractor shall furnish fully functioning systems.
E. The accompanying drawings are schematic only and are not intended to show all fittings, transitions, connections, offsets, etc. unless specifically shown. Install work as closely as possible to conform to the structural conditions, equipment, and work of other trades and the intent of the drawings, without additional cost to the owner.
F. Drawings shall not be scaled. Refer to architectural drawings for dimensions. Refer to drawings of other trades and coordinate all equipment to be installed in accordance with manufacturer's installation instructions.
G. Furnish 3000 psi 6-inch-thick concrete pad for equipment where designated on the plan. Pads shall be reinforced with 6" x 6" 1010 wire and shall have chamfered edges. Concrete pads shall extend 6" beyond all sides of unit.
H. All equipment shall be labeled with black plastic engraved equipment tags with minimum 1" lettering.
I. Furnish Owner 3 bound copies of Operating and Maintenance Instructions on each piece of HVAC equipment at project closeout.
J. Furnish formal training to familiarize the Owner in the operation and maintenance of all the HVAC Systems including controls.

SHOP DRAWINGS:

- A. Submit pdf or 6 hard copy sets of Shop Drawings for approval of all HVAC equipment, accessories, insulation materials, and controls to be used on this project. Shop drawings shall be submitted before any materials or equipment incorporated in this work has been ordered. Shop drawings shall include the name and address of the manufacturer with items to be furnished and capacities and characteristics clearly marked.
B. Contractor shall obtain written approval from the engineer/ architect for the use of substitute materials claimed as equal to those specified 10 days prior to the bid date.
C. Equipment of greater or larger power, dimensions, capacities, and ratings may be furnished provided such proposed equipment is approved in writing and connecting mechanical and electrical services, circuit breakers, conduit, motors, bases, and equipment spaces are increased. No additional costs will be approved for these increases, if larger equipment is approved. If minimum energy ratings or efficiencies of the equipment are specified, the equipment must meet the design requirements and commissioning requirements.
D. The equipment listed on the Drawings is considered basis of design equipment and has been used for the physical arrangement of the mechanical systems. When other equipment listed in the specifications as acceptable, equal or equipment which has received "prior approval" is used, it shall be the Contractor's responsibility to provide structural, ductwork, electrical, service clearances, or other changes required to accommodate the substituted equipment. Changes to use non basis of design equipment shall be made at no additional cost to the Owner. Submit a list of required changes along with all prior approval requests and shop drawing submittals.
E. Approval of shop drawings and or submitted data shall not relieve the contractor of the responsibility to comply with the requirements and intent of the plans and specifications with regard to dimensions, capacities, quantities, performance characteristics, etc.

ELECTRICAL:

- A. All line and low voltage control wiring shall be furnished by the HVAC Contractor. Provide complete wiring diagrams and all switches, starters, controls, relays, etc. necessary for a complete system. Run all wiring in EMT raceways.
B. Voltage and phase of mechanical equipment requiring power shall be designated by the Owner. Model numbers listed in mechanical equipment schedule shall not be construed to indicate electrical characteristics.
C. Piping, equipment, and other mechanical installations shall not be located within 42" of the front or 36" of the side of any electrical switchboards, panelboards, power panels, motor control centers, electrical transformers or similar electrical equipment. Piping and ductwork shall not pass through or above electrical equipment rooms except as required to serve those rooms.

DUCTWORK:

- A. Low Pressure, Metal: Fabricate of galvanized steel as per SMACNA Manual for HVAC Duct Construction Standards, tables 1-3 through 1-19 including associated details. Use water based joint and seam sealant, resistant to UV light when cured, UL 723 listed, and complying with NFPA requirements for class 1 ducts to seal joints. Duct tape is not an acceptable product. Seal duct in accordance with ASHRAE standard 90.1.
B. Low Pressure round duct shall be rated for 1 inch positive pressure per SMACNA (snap-lock ductwork is acceptable).
C. Insulated flexible round duct: Shall be Flexmaster Type 3M or equal products by Thermoflex, Cleveflex or Atco. Reinforced with steel wire helix encapsulated in the inner liner with silver mylar, glass reinforced outer jacket. Rated for 10" wg, positive pressure. Minimum R value = 6.0. Met UL 181 Class 1 air duct requirements. Flexible duct shall not exceed 4 feet in length and shall be supported 3 feet maximum on center with 3" wide by 26 gauge galvanized hangers. Duct shall be secured to branch ducts and outlets with stainless steel worm drive strap or nylon self-locking strap around the inner liner only.
D. All ductwork shall be supported in accordance with SMACNA Standards.

DUCT ACCESSORIES:

- A. Turning Vanes: Use single thick vanes in square elbows. Fabricate according to SMACNA HVAC Duct Construction Standards, Figures 2-2 through 2-7.
B. Manual Dampers: For rectangular duct. Opposed blade, constructed with galvanized gauge steel blades and equal to SMACNA DCS Fig. 2-15. End of damper operating rod shall be square to accommodate damper operator. Manual dampers 12" or smaller in height may be single blade type equal to SMACNA DCS Fig 2-14 constructed of galvanized sheet metal.
C. Round damper shall be SMACNA DCS Fig 2-14 with blade gauge as follows: 8" and smaller = 22 gauge, 9" - 12" = 20 gauge, 13" and larger = 18 gauge.
D. Access Doors: As per SMACNA Fig. 2-12.
E. Grille and register connections: As per SMACNA Fig. 2-16.
F. Fire dampers shall be curtain type and dynamically rated, U.L. Classified for 1-1/2 or 3 hour (as indicated on architectural) fire resistance.

PIPING:

- A. Refrigerant piping shall be ACR nitrogen charged tubing with joints made with Sil-fos or equal high temperature (1200 degrees F.) brazing compound. Bleed dry nitrogen through piping during brazing process. After satisfactory leak test, piping and system shall be evacuated and charged in accordance with the manufacturer's printed instructions.
B. Condensate drain piping: Type "L" drawn-temper copper tubing with soldered joints.

INSULATION:

- A. Ductwork: Insulate lined and unlined supply, outdoor air, and return ductwork within building envelope with 3/4 lb. 2" thick fiberglass blanket insulation with FSK jacket. (Use 3" insulation for duct outside of building envelope) Lap all joints 2" minimum, staple 4" o.c. and seal with vapor barrier adhesive reinforced with fiber glass mesh ("glas-fab"). Use Stik-clips 24" on center on bottom of 30" wide and larger ducts. Insulate top of all air device surfaces.
B. Refrigerant Pipe: Insulate with 3/4" thick flexible elastomeric insulation. Seal all joints with adhesive. Slip whole sections of insulation on piping before pipe joints are made. Miter all elbows. Paint outdoor insulation two coats of manufacturer's recommended coating.
C. Duct Liner: 1 1/2 lbs. density, 1" thick with surface coated to prevent glass fibers from getting into airstream. Flame spread rating less than 25 and smoke spread rating less than 50. Adhere liner and cover entire surface with thick coat of adhesive that complies with NFPA 90A and ASTM C916. Fasten liner with weld pins 12" o.c. in accordance with SMACNA Duct Liner Application Standard.
D. Air conditioning Condensate Piping: 3/8" flexible elastomeric insulation for interior applications.

HANGERS:

- A. Support pipe from structure above with Grinnell CT-99 hanger, all thread rod and Fig. 86 C-clamp. Provide supplementary steel for upper attachment. Hangers shall fit around insulated pipe and shall have 24-gauge galvanized sheet metal saddle.

TESTS:

- A. Refrigerant Piping: Pressure test with dry nitrogen to 200 psig in accordance with ASME B31.5, Chapter VI. Perform final tests at 27-psig vacuum and 200 psig using halide torch or electronic leak detector. Test to no leakage.
B. Heat Pump Units: Record all motor and heater nameplate amps and running amps during Heating and Cooling cycle (below 60 degrees F. cooling). Complete manufacturer's installation and startup checks. Furnish startup sheets to owner at project closeout.
C. Air Side: Record air quantities at supply outlets, return grilles, exhaust grilles, and outside air duct. All airflow quantities shall be balanced to be within + or - 10% of design air quantity. Test and balance shall be performed by an AABC certified agent. Submit reports on AABC forms to engineer to review.

H.V.A.C. SPECIFICATIONS (cont'd)

SPLIT SYSTEM HEAT PUMP:

- A. Unit shall be of size, type and capacity as indicated on the Drawings and shall be manufactured by Carrier. Equal units by Lennox or Trane will be acceptable.
B. The following accessories shall be furnished: Condenser Coil Guard, 5-minute Anti-Recycle Timer, Hard Start Kit for Single Phase Units, Crankcase Heater, Outdoor Thermostat for each Auxiliary Heat Stage, Defrost Thermostat for Indoor Coil, Low Ambient Controls, Outdoor air thermostat to prevent resistant heat from energizing above 45 degrees F.
C. Auxiliary electric heaters shall be of size and capacity as indicated on the Drawings and meet the requirements of the National Electric Code and Underwriters Laboratories.

EXHAUST FANS:

- A. Exhaust fans shall be of size, type and capacity as shown on the drawings and shall be manufactured by Greenheck. Equal products by Ilg, Acme, Penn, Jenn-Air or Loren Cook are acceptable.
B. Ceiling Mounted: shall be furnished with speed controller, disconnect switch, ceiling grille.

ELECTRIC UNIT HEATERS:

- A. Unit shall be of size, type and capacity as indicated on the Drawings and shall be manufactured by QMark. Equal units by Raywall or Reznor will be acceptable.
B. Assembly including casing, electric coil, fan, and motor in horizontal discharge configuration with adjustable discharge louvers. Furnish unit mounted thermostat.

RANGEHOOD

- A. Ventilating type range hood shall be size, type and capacity as shown on drawings. Furnish permanent washable filter, minimum 2 speed fan, and built in lighting. Furnish fire suppression system capable of detecting a cooking grease fire originating from the range top, extinguish the fire and prevent re-ignition. System shall also shutoff off the gas or electric supply to surface elements on range while providing a signal to the fire alarm system. System shall have means to distribute the chemical agent, fire detection components, container for storing chemicals, valve assembly with pressure gauge, mounting bracket for container, and appliance shut-off device. System shall have a current U.L. Listing.

CONTROLS:

- A. Installation shall be in accordance with HVAC equipment manufacturer's wiring diagrams. Control components shall form a fully functional system.
B. HVAC unit thermostats shall be manufacturer's standard electronic 7-day programmable model having an Off-Em-Ht.-Heat-Auto-Cool System switch and an Auto-On Fan switch. Provide multi-stage heating and cooling thermostat where controlled unit has multi-stage capability. Outdoor thermostat shall prevent strip heat from being energized above 45 degrees F. (Emergency heat position not required for non-heat pump unit.) Furnish unit with the following features: Override function, Proportional plus integral control, Automatic changeover, and Keypad lockout.
C. Sequence of Operation:

Heat pump units: Units shall be controlled by programmable heat pump thermostats. The compressor, heat/cool reversing valve and supply fan shall energize in heating or cooling mode as required to satisfy the thermostat set point. When the compressor is unable to meet the heating requirements, the auxiliary strip heat shall energize. When outdoor air temperature is above 45°F (adjustable), resistance heat shall not be energized. Occupied and unoccupied set points shall be coordinated with the owner.

Fans: Refer to fan schedule. Where fans are indicated to be interlocked with the room lights furnish starters/contactors as required for control operation.



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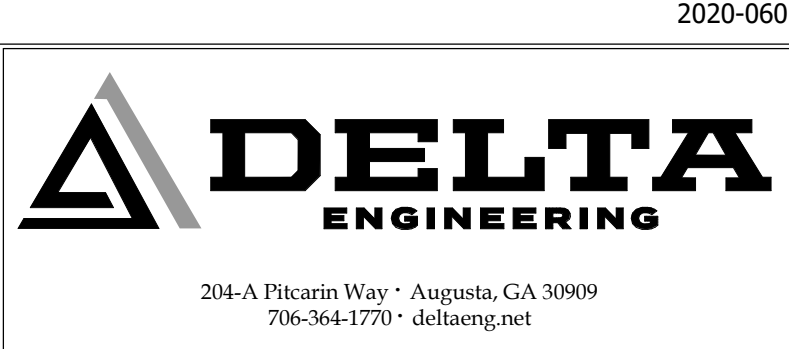
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FIRE STATION #13
EFFINGHAM COUNTY
GUYTON, GEORGIA

SCHEDULE OF REVISIONS

Table with 2 columns: #, DATE. Includes project details: PROJECT NUMBER: 2024, PROJECT DATE: 02-15-2022, DRAWN BY: NAF, APPROVED BY: CAB

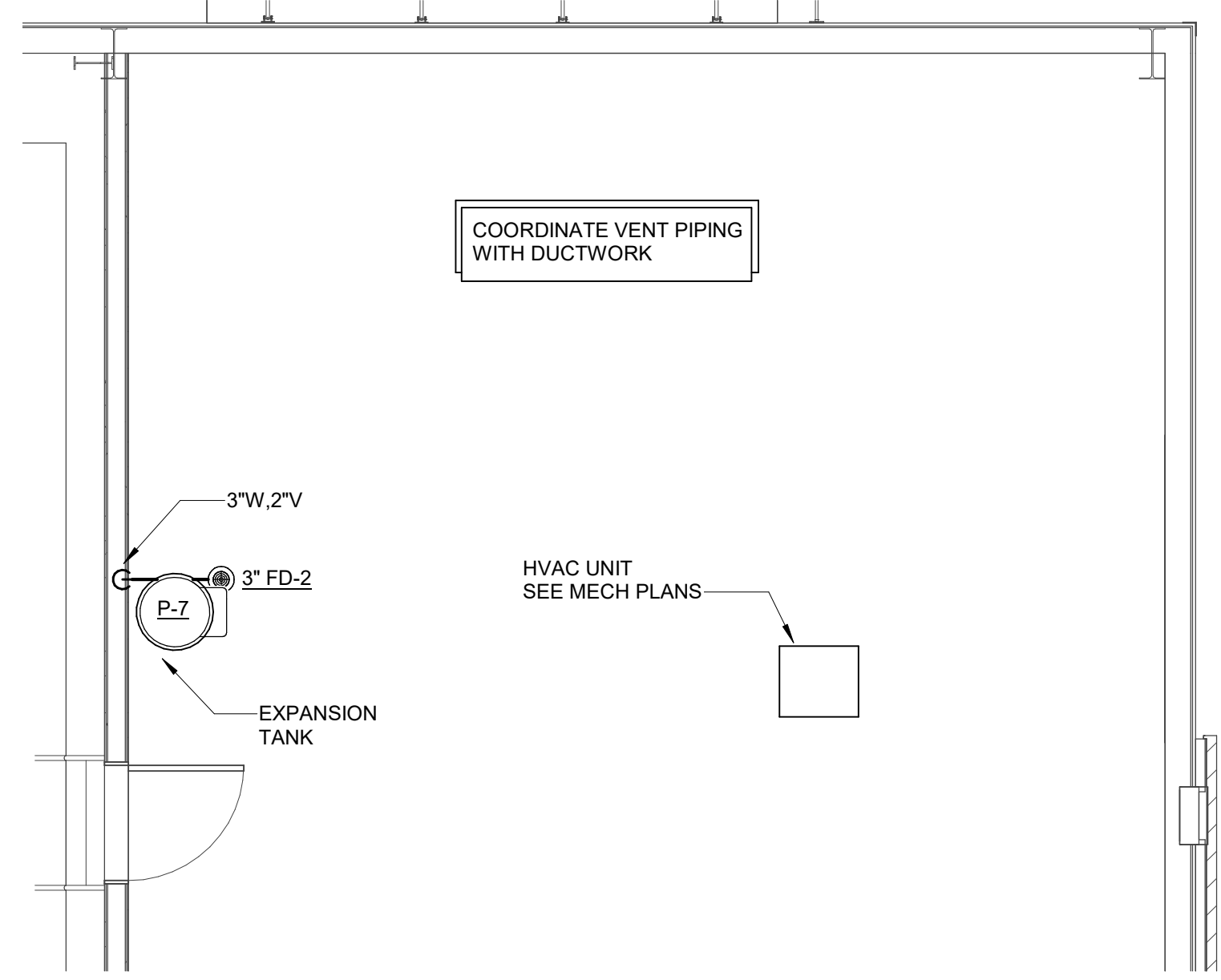
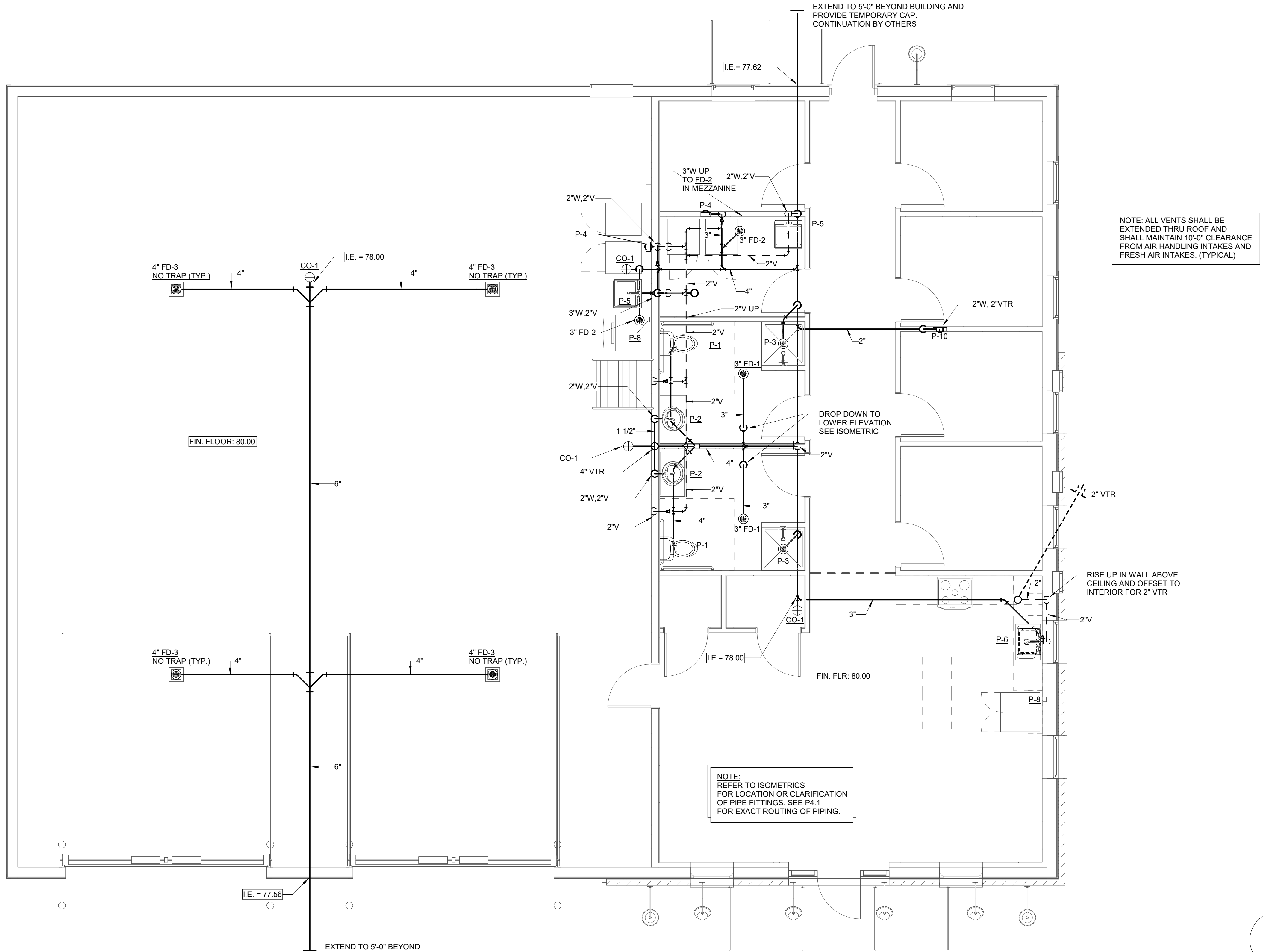


HVAC
SPECIFICATIONS
M2.3

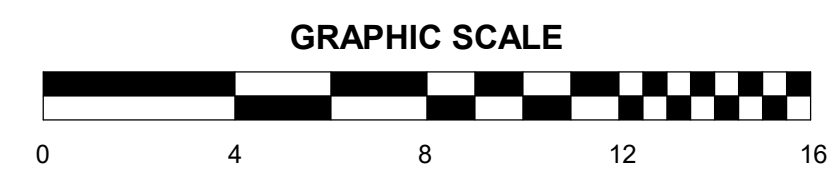




**FIRE STATION #13  
EFFINGHAM COUNTY  
GUYTON, GA**



**1 WASTE & VENT PIPING PLAN**  
P1.1 1/4" = 1'-0"



**2 MEZZANINE WASTE PIPING PLAN**  
P1.1 1/4" = 1'-0"

SCHEDULE OF REVISIONS	
#	DATE

PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: BAW  
APPROVED BY: CAB

2020-060

**DELTA**  
ENGINEERING

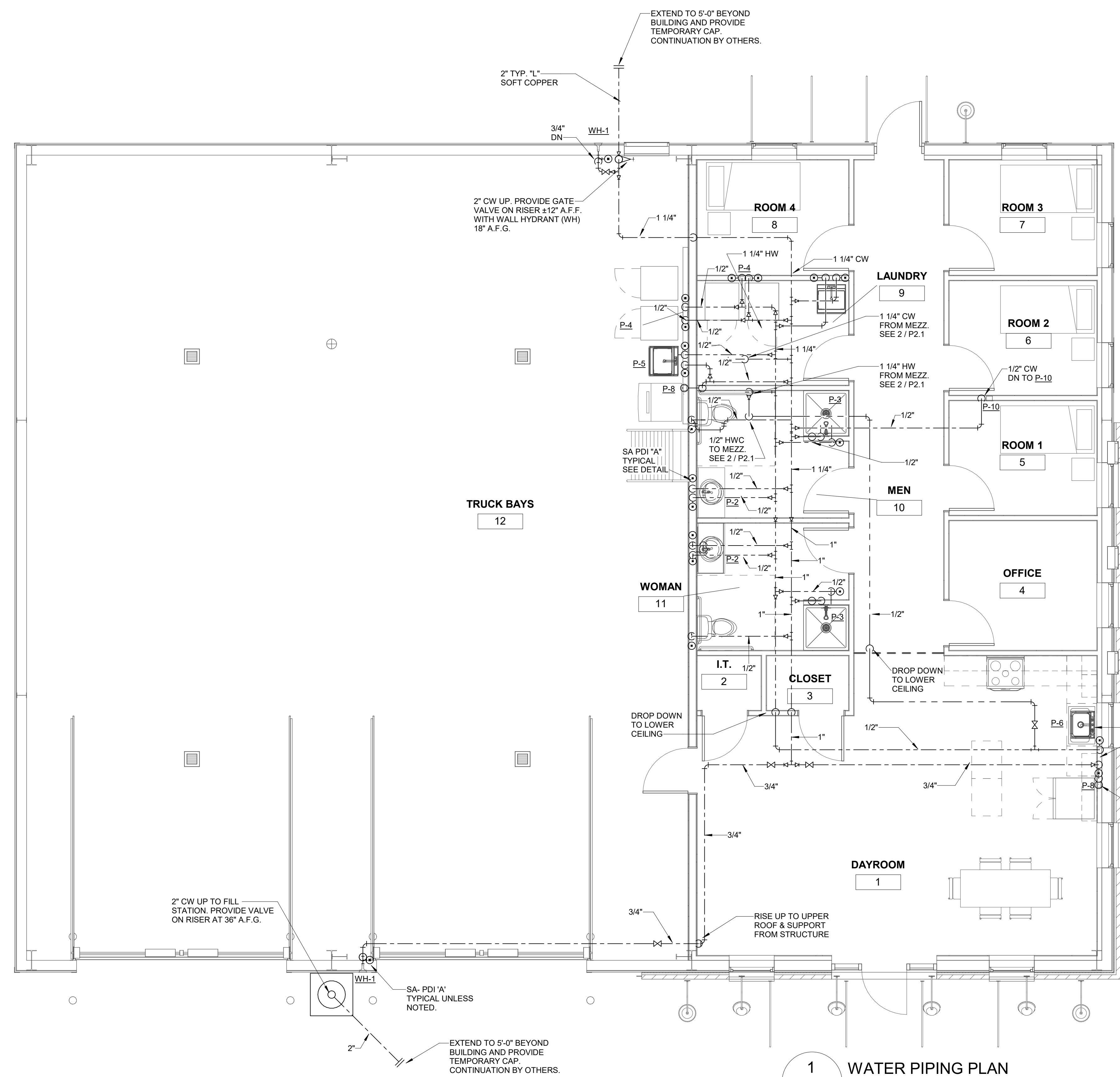
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**WASTE & VENT PIPING PLAN**  
**P1.1**

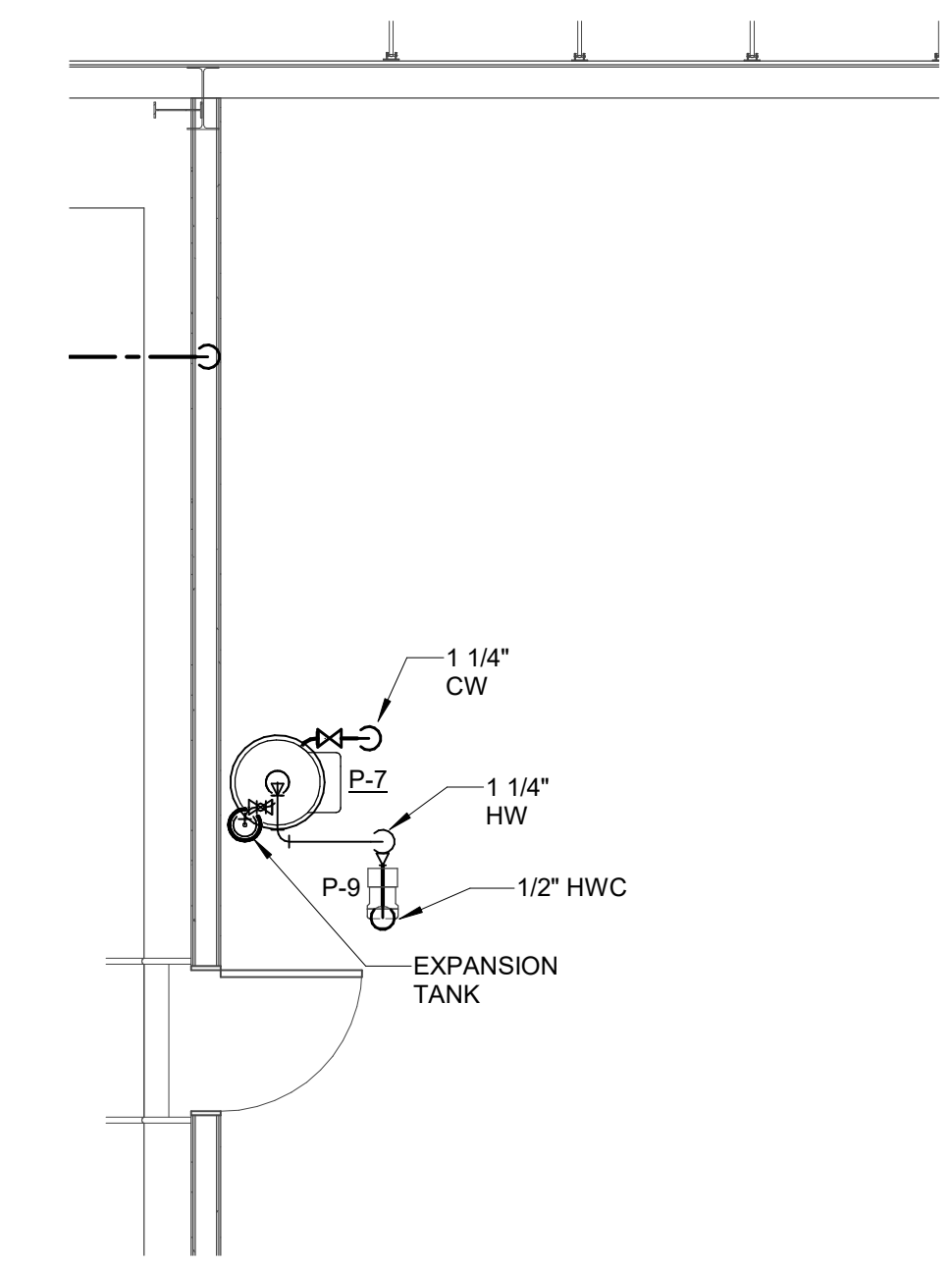
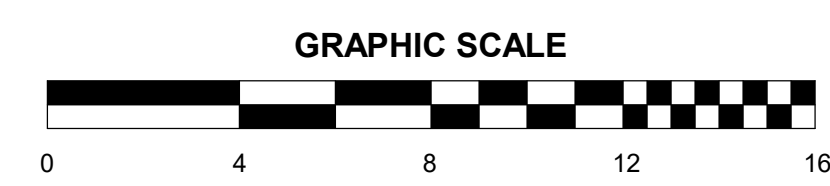




**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**GUYTON, GA**



**1 WATER PIPING PLAN**  
P2.1 1/4" = 1'-0"



**2 MEZZANINE WATER PIPING PLAN**  
P2.1 1/4" = 1'-0"

NOTE:  
REFER TO SHEET P4.1 FOR EXACT  
ROUTING OF PIPING

COORDINATE WATER  
PIPING WITH DUCTWORK

SCHEDULE OF REVISIONS	
#	DATE

PROJECT NUMBER: 2024  
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PLUMBING FIXTURE SCHEDULE										
SYM	FIXTURE	PIPE SIZES				RIM/MTG HGT	MANUFACTURER	MODEL #	COMMENTS	NOTES
		W	V	CW	HW					
P-1	TOILET H/C	4"	2"	1/2"	--	ADA	AM.STD	215AA.104 CADET PRO RIGHT HEIGHT	BENEKEE 527-SS WHITE SEAT - SUPPLIES & STOPS	(2)
P-2	LAVATORY H/C	4"	2"	1/2"	1/2"	ADA	AM.STD	0355 027	AM STD 614.115.002 FAUCET, STOPS, SUPPLIES, WASTE ARM	(1)(2)
P-3	SHOWER	FD	--	1/2"	1/2"	HEAD 6'-0"	SYMMONS	1-117-FS-2.0-72 SAFETY MIX FAUCET	STERLING 72200100 SHOWER STALL COORDINATE WITH OWNER	(2)
P-4	WASHING MACHINE BOX	2"	2"	1/2"	1/2"	BOTT 41"	OATEY	37550		
P-5	MOP SINK	2"	2"	1/2"	1/2"	--	FIAT	FL-1 FLOOR MOUNTED SERV-A-SINK	SUPPLIES; STOPS; TAILPIECE	
P-6	DAY ROOM SINK	2"	2"	1/2"	1/2"	--	AM.STD	20DB-8332284S-COLONY	AM STD 7074.040 FAUCET; GRID DRAIN; SUPPLIES; STOPS; TAILPIECE	
P-7	WATER HEATER	--	--	1 1/4"	1 1/4"	--	A.O. SMITH	ENS-50	STERLING 72200100 SHOWER STALL COORDINATE WITH OWNER	
P-8	ICE MAKER BOX	--	--	1/2"	--	BOTT 6"	OATEY	38547	50 GAL STORAGE (2) 4-5 KW-ELK NON-SIM OPERATED	
P-9	CIRCULATING PUMP	--	--	1/2"	--	BOTT 6"	TACO	006E3	-240 V - 1Ø E.F. .97	
P-10	CONDENSATE DRAIN BOX	2"	2"	1/2"	--	BOTT. 41"	OTAY	37557	BLANK PLATE	

FLOOR DRAIN & WALL HYDRANT SCHEDULE									
SYM	FIXTURE	PIPE SIZES				MANUFACTURER	MODEL #	COMMENTS	NOTES
		W	V	CW	HW				
CO-1	CLEAN OUT INTERIOR	4"	--	--	--	WATTS	WD-CO-200-RFC7		
FD-1	FLOOR DRAIN (GENERAL)	3"	--	--	--	WATTS	WD-FD-100		(3)(4)
FD-2	FLOOR DRAIN (MECH.RM)	3"	--	--	--	WATTS	WD-FD-100 ER		(3)(4)
FD-3	FLOOR DRAIN (MAINT. BAY)	4"	--	--	--	WATTS	WD-FD-6 HEAVY DUTY		(3)(4)
FS	FILL STATION	--	--	2"	--	HOT BOX	VENT BOX LV02202040	VALVE AT 36"	
WH-1	WALL HYDRANT	--	--	3/4"	--	WATTS	HY-330	MOUNT AT 18" A.F.G. AND 18" A.F.F.	

- PLUMBING FIXTURE KEY NOTES:**
- PROVIDED PROTECTIVE PIPE COVERS FOR ALL HANDICAP LAVATORIES
  - MOUNT AT ADA HEIGHT. ADA SHALL CONFORM TO ACCESSIBILITY CODE. REFER TO CODE FOR GUIDANCE. WHERE CONFLICTS ARISE BETWEEN ARCHITECTURAL DRAWINGS AND MECHANICAL DRAWINGS, ARCHITECTURAL DRAWING SHALL GOVERN.
  - PROVIDE WATTS' CLOSE TRAP SEAL FOR FLOOR DRAINS. IF APPROVED BY LOCAL AUTHORITY, IF NOT APPROVED PROVISIONS SHALL BE MADE TO PROVIDE TRAP PRIMERS ON FLOOR DRAINS. VERIFY WITH LOCAL AHJ PRIOR TO STARTING WORK.
  - PROVIDE 7" STRAINER ON 3" DRAIN AND 9" STRAINER ON 4" DRAINS. PROVIDE (SQUARE TOP) FOR QUARRY TILE AND CERAMIC TILE FLOORS

PLUMBING LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
-----	VENT	-----	COLD WATER
VTR	VENT THRU ROOF	-----	HOT WATER
PDI "X"	WATER HAMMER ARRESTOR	-----	WASTE OR SANITARY SEWER
CO	CLEANOUT	-----	SHUTOFF VALVE
FD	FLOOR DRAIN	TYP.	TYPICAL
-----	CHECK VALVE	-----	HOT WATER CIRCULATING

**GENERAL PLUMBING NOTES**

EXACT LOCATIONS AND ROUGHING REQUIREMENTS FOR ALL FIXTURES AND EQUIPMENT SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS. LARGE SCALE ARCHITECTURAL DETAILS AND APPROVED MANUFACTURER'S SHOP DRAWINGS. PARTICULAR ATTENTION SHALL BE DIRECTED TO FIXTURES OR EQUIPMENT FURNISHED UNDER OTHER DIVISIONS.

INVERT ELEVATIONS SHOWN SHALL BE VERIFIED ON THE JOB BEFORE INSTALLING ANY NEW PIPE.

INSTALL TEST-TEES WHEN SANITARY SEWER SYSTEM IS TO BE TESTED IN SECTIONS.

PIPING IS SHOWN IN ITS GENERAL LOCATION (UNLESS DIMENSIONED). EXACT LOCATION SHALL BE DETERMINED BY JOB CONDITIONS. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HIS WORK WITH THAT OF OTHER TRADES AND ARRANGE PIPING TO CLEAR STRUCTURAL MEMBERS AND DUCTWORK. RISERS FOR FIXTURES, UNLESS OTHERWISE NOTED, SHALL BE CONCEALED IN WALLS OR PIPE CHASES.

MINIMUM SIZE WATER LINE FOR ANY TWO FIXTURES SHALL BE 3/4". REFER TO PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL FIXTURE RUNOUT SIZES.

INSTALL UNDERGROUND WATER LINE(S) ABOVE SOIL AND WASTE LINE(S). WATER LINE SAME TRENCH WITH SOIL OR WASTE LINE SHALL BE INSTALLED ON AN UNDISTURBED EARTH LEDGE WITH BOTTOM OF WATER LINE 12" (MIN) ABOVE TOP OF SOIL OR WASTE LINE. IPC CODE REQUIREMENTS SHALL GOVERN FINAL INSTALLATION.

INSTALL ALL EXTERIOR WALL HYDRANTS 18" ABOVE FINISH GRADE (A.F.G.) EXCEPT AS NOTED OTHERWISE.

PROVIDE A MINIMUM COVER OF 30" FOR ALL LINES EXCEPT AS NOTED OTHERWISE ON CONTRACT DRAWINGS.

PROVIDE SLEEVES PER IPC REQUIREMENTS FOR PIPE PASSING THRU FLOOR, MASONRY WALLS AND FIRE OR SMOKE PARTITIONS. PACK ANNULAR SPACE BETWEEN PIPE WITH MATERIAL APPROVED IN U.L. BUILDING DIRECTORY OR AS DIRECTED BY IPC OR IBC REQUIREMENTS.

INSTALL INTERIOR HOSE BIBBS 18" ABOVE FINISHED FLOOR (A.F.F.) EXCEPT AS NOTED OTHERWISE. WHERE HOSE BIBBS ARE INSTALLED ADJACENT TO FIXTURES STOPS, INSTALL HOSE BIBBS AT SAME CENTERLINE ELEVATIONS AS FIXTURE STOPS.

REFER TO ARCHITECTURAL FINISH SCHEDULE AND ELEVATIONS FOR DETAILS OF FLOOR WHERE FLOOR DRAINS ARE TO BE INSTALLED.

IT SHALL BE CONTRACTORS RESPONSIBILITY TO COORDINATE THIS INSTALLATION WITH THAT OF OTHER TRADES TO ENSURE COMPLETE INSTALLATION. CONTRACTOR SHALL VERIFY ROUTING OF ALL PIPING AND ADJUST AS NECESSARY TO AVOID CONFLICTS WITH THAT OF OTHER TRADES AND OR STRUCTURAL MEMBERS.



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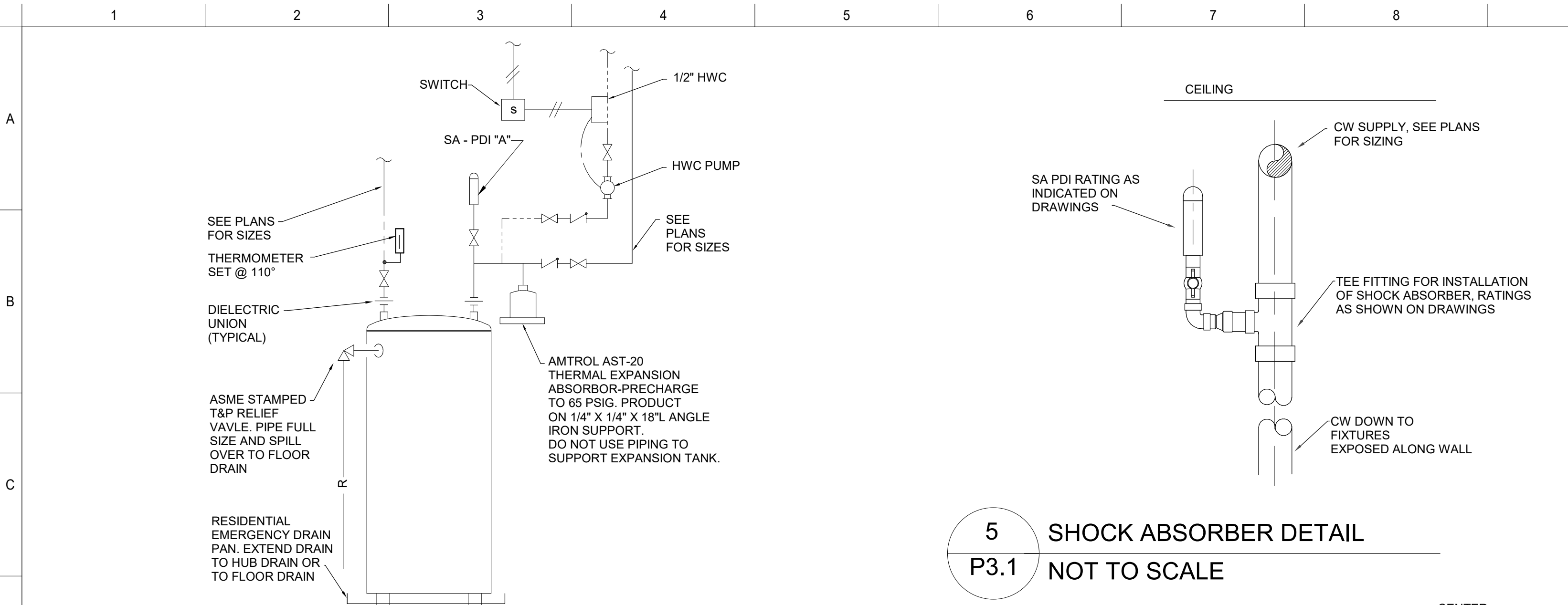
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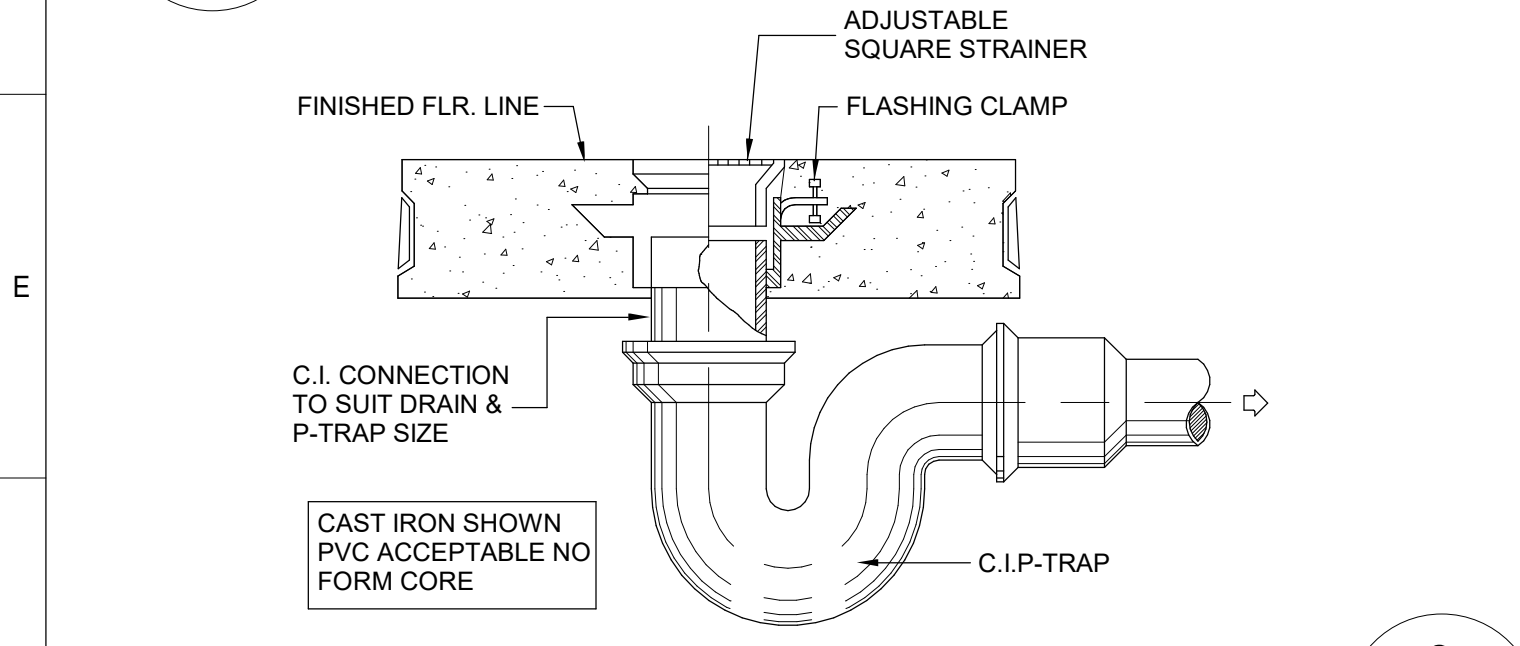
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PLUMBING NOTES,  
LEGEND, DETAILS &  
SCHEDULES

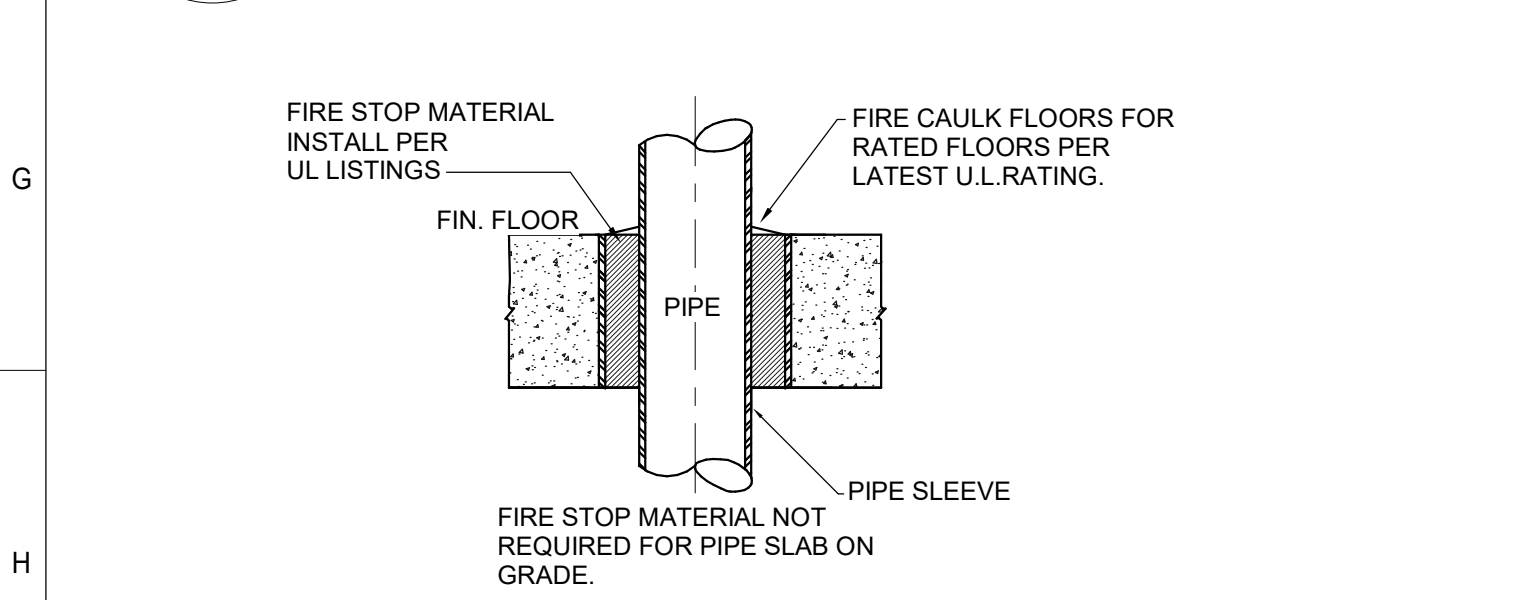
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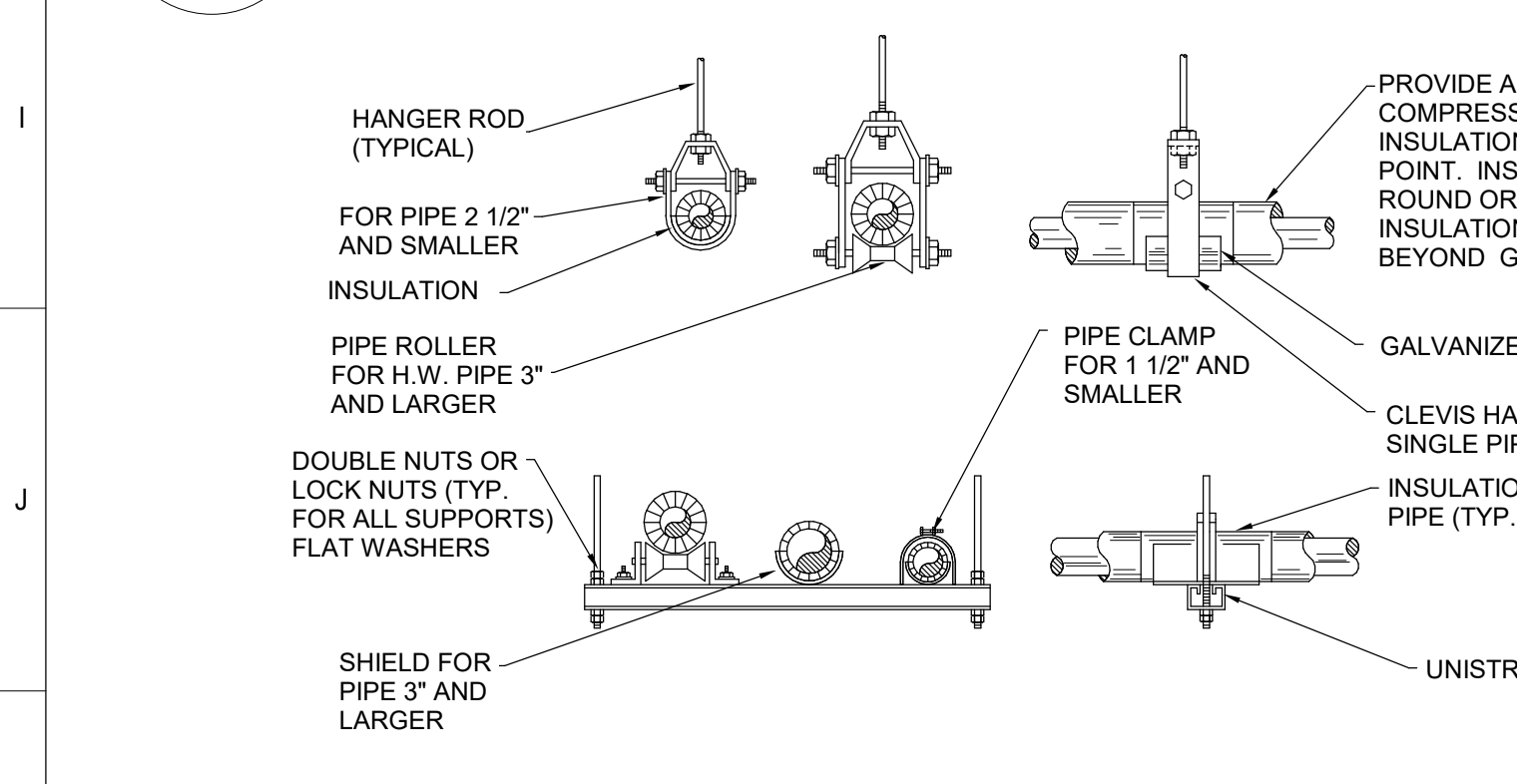
**1 ELECTRIC WATER HEATER-CIRCULATING PUMP**  
P3.1 NOT TO SCALE



**2 TYPICAL FLOOR DRAIN DETAIL**  
P3.1 NOT TO SCALE



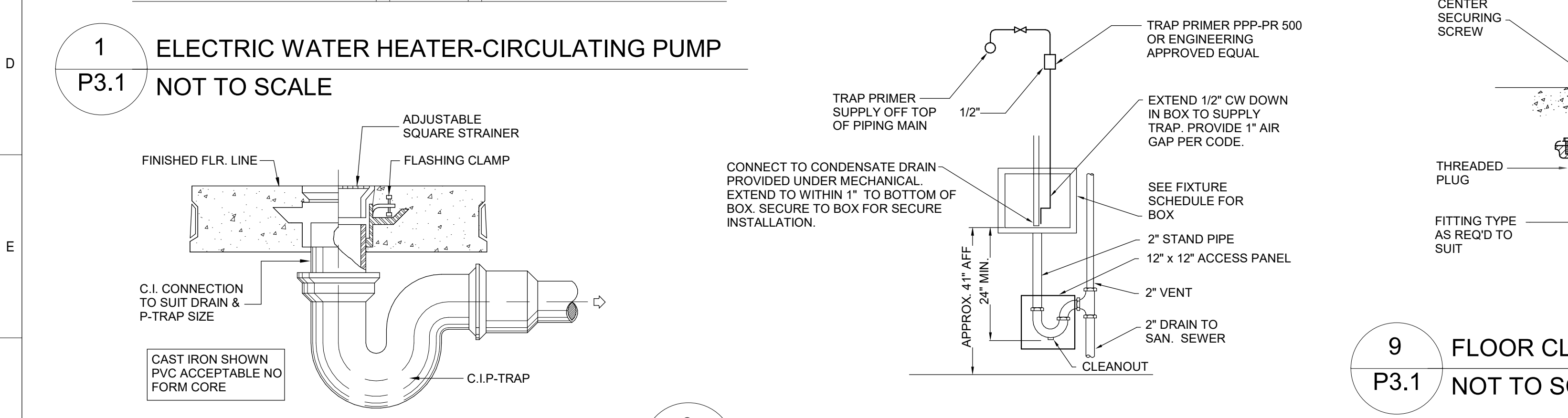
**3 PIPE THRU FLOOR SLAB DETAIL**  
P3.1 NOT TO SCALE



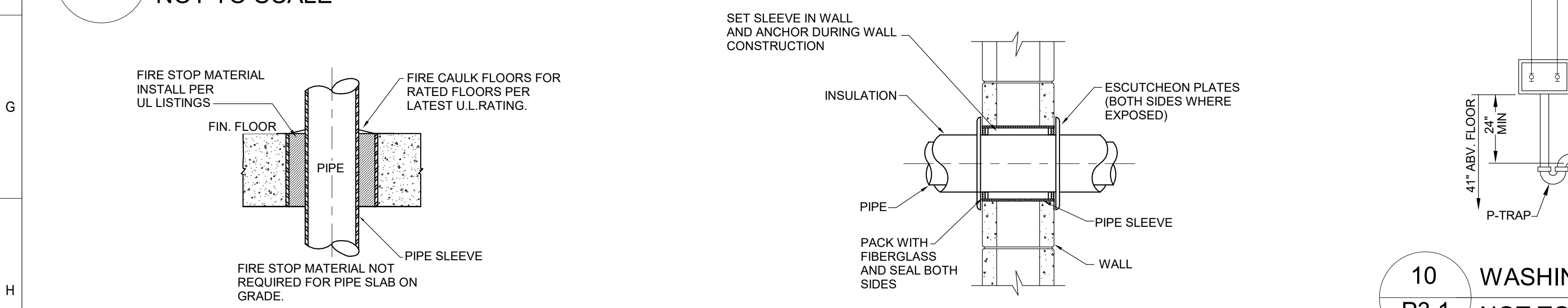
**4 PIPE HANGER SUPPORT DETAIL**  
P3.1 NOT TO SCALE



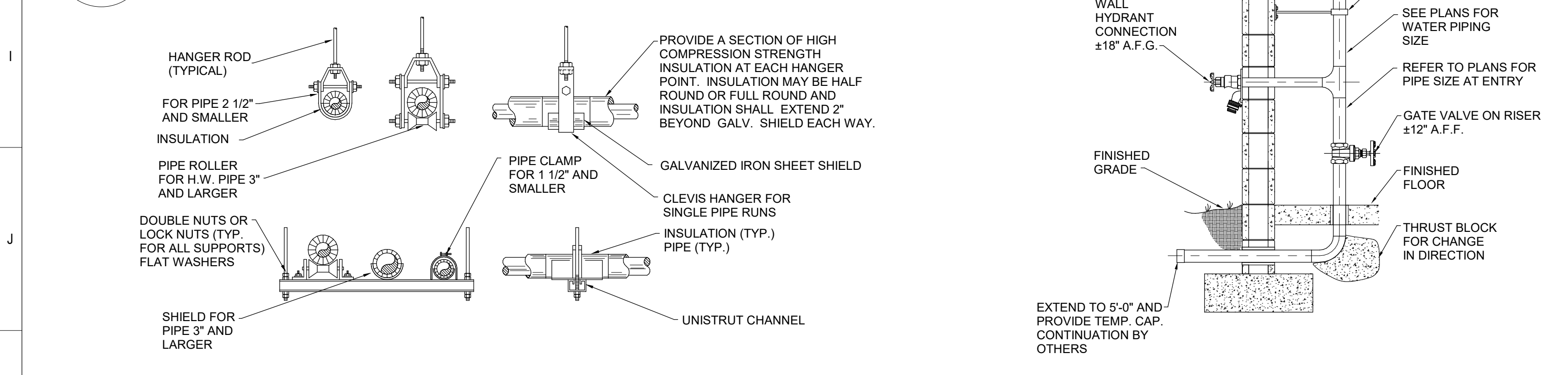
**5 SHOCK ABSORBER DETAIL**  
P3.1 NOT TO SCALE



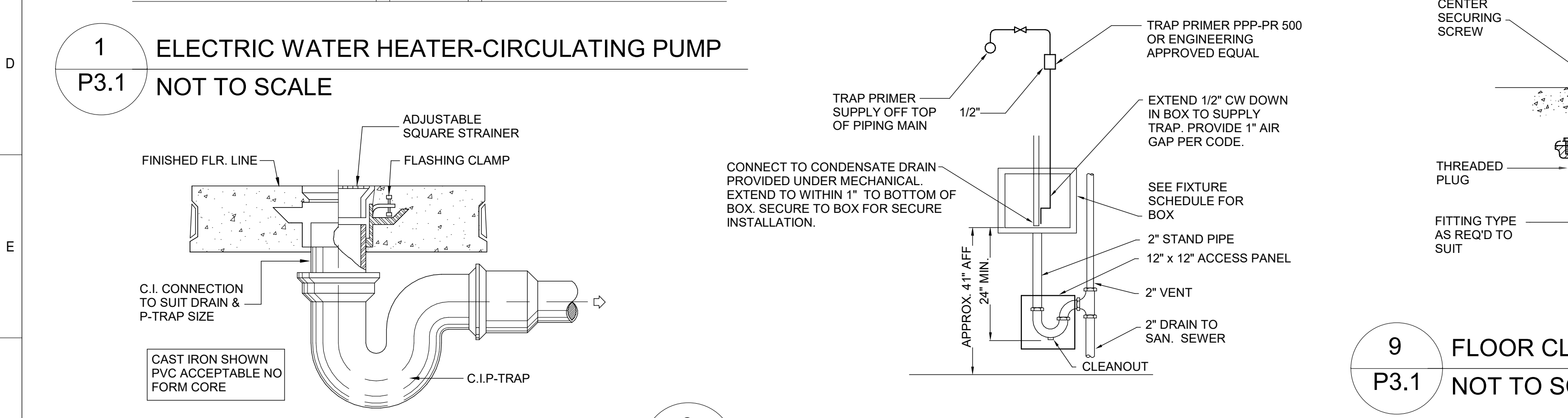
**6 CONDENSATE DRAIN BOX DETAIL**  
P3.1 NOT TO SCALE



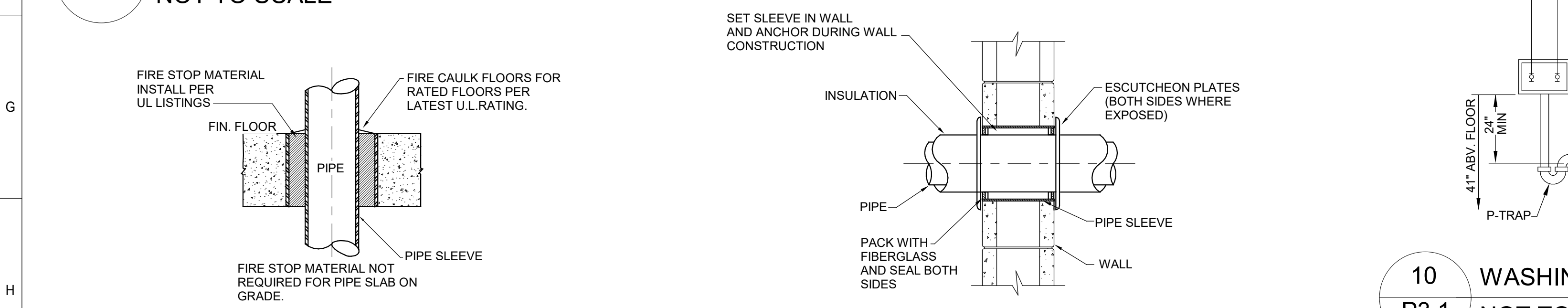
**7 PIPE THRU WALL DETAIL**  
P3.1 NOT TO SCALE



**8 WATER ENTRY DETAIL**  
P3.1 NOT TO SCALE



**9 FLOOR CLEANOUT DETAIL**  
P3.1 NOT TO SCALE



**10 WASHING MACHINE BOX DETAIL**  
P3.1 NOT TO SCALE



**8 WATER ENTRY DETAIL**  
P3.1 NOT TO SCALE



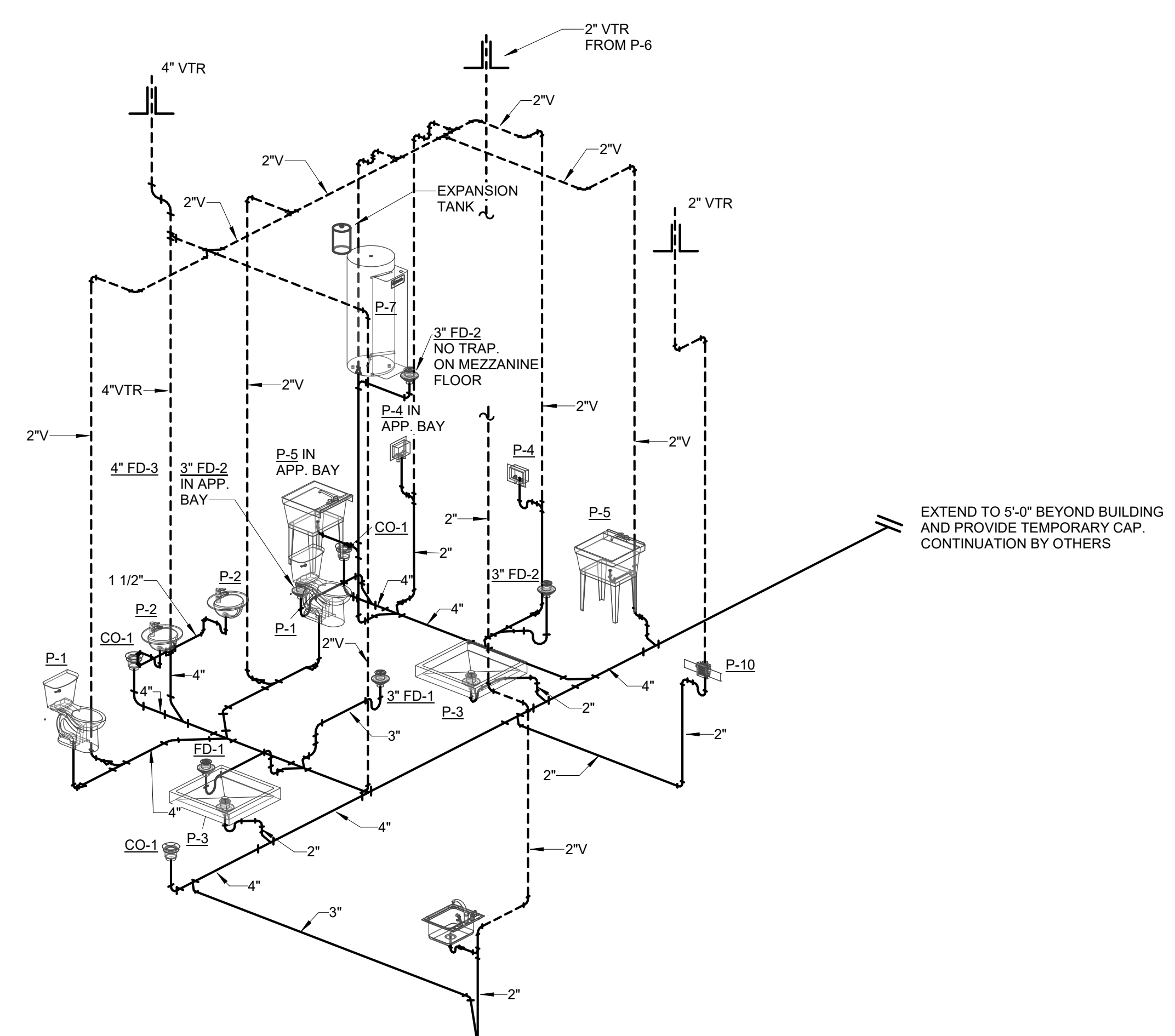


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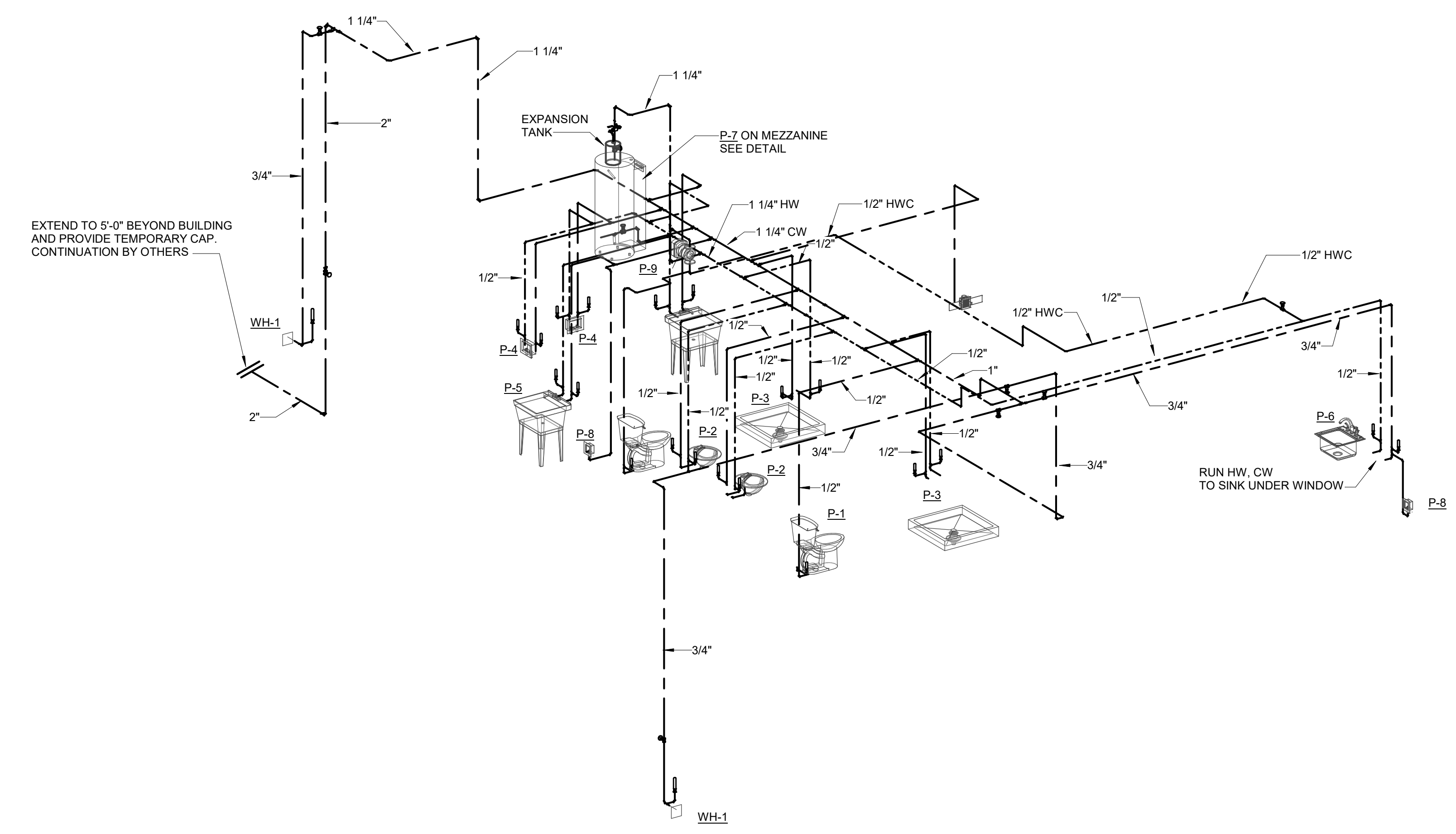
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PLUMBING  
ISOMETRICS  
  
**P4.1**



EXTEND TO 5'-0" BEYOND BUILDING  
AND PROVIDE TEMPORARY CAP.  
CONTINUATION BY OTHERS

**1** ISOMETRIC WASTE & VENT  
**P4.1** SCHEMATIC



EXTEND TO 5'-0" BEYOND BUILDING  
AND PROVIDE TEMPORARY CAP.  
CONTINUATION BY OTHERS

**2** ISOMETRIC WATER PIPING  
**P4.1** SCHEMATIC





**PLUMBING SPECIFICATIONS:**

**GENERAL:**

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS APPLY TO THIS SECTION

B. PLUMBING WORK SHALL BE PERFORMED AS OUTLINED BELOW

C. THESE SPECIFICATIONS AND ACCOMPANYING PLUMBING DRAWINGS ARE INTENDED TO PROVIDE FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE INSTALLATION COMPLETE OF ALL:

1. PLUMBING FIXTURES
2. EQUIPMENT
3. ROUGH-INS
4. WASTE VENT SYSTEMS
5. COLD WATER SYSTEMS
6. HOT WATER SYSTEMS

AND ACCESSORIES INCLUDING NECESSARY APPARATUS, VALVES AND FITTINGS HEREINAFTER DESCRIBED OR CALLED FOR ON THE PLUMBING DRAWINGS ACCOMPANYING THESE SPECIFICATIONS. WHERE CONFLICTS ARISE BETWEEN ARCHITECTURAL DRAWINGS AND PLUMBING DRAWINGS, CONTRACTOR SHALL COORDINATE CORRECT CONFIGURATION AND ADJUST AS NECESSARY FOR COMPLIANT INSTALLATION.

D. ALL PLUMBING WORK SHALL BE INSTALLED WITH IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE LATEST ADDITION OR IN COMPLIANCE WITH AUTHORITY HAVING JURISDICTION REQUIREMENTS.

E. THE CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS AND INSPECTION FEES NECESSARY FOR THIS WORK.

F. THE ACCOMPANYING DRAWINGS ARE SCHEMATIC ONLY AND ARE NOT INTENDED TO SHOW ALL FITTINGS, BOLTS, CONNECTIONS, OFFSETS, ETC., UNLESS SPECIFICALLY SHOWN. FOLLOW DRAWINGS AS CLOSELY AS POSSIBLE, PROVIDE ALL ADJUSTMENTS AS NECESSARY TO CONFORM TO THE STRUCTURAL CONDITIONS, EQUIPMENT, WORK OF OTHER TRADES AND THE INTENT OF THE DRAWINGS, WITHOUT COST TO THE OWNER. PLUMBING DRAWINGS SHOULD NOT BE SCALED. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO DRAWINGS OF OTHER TRADES AND COORDINATE. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURE INSTALLATION INSTRUCTIONS.

**SCOPE OF WORK:**

A. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL OF THE FOLLOWING WORK IN GENERAL AND PROVIDING A COMPLETE PLUMBING SYSTEM AS SHOWN ON THE PLANS. THE ITEMS IN GENERAL ARE TO BE AS FOLLOWS:

1. FURNISH AND INSTALL COMPLETE WASTE AND VENT SYSTEM WITH CONNECTIONS TO SERVICES AS SHOWN ON THE PLUMBING DRAWINGS AND HERE IN SPECIFIED.
2. FURNISH AND INSTALL HOT WATER SYSTEM COMPLETE WITH CONNECTIONS TO POINT AS SHOWN ON THE PLUMBING DRAWINGS AND HERE-IN SPECIFIED.
3. FURNISH AND INSTALL COLD WATER SYSTEM COMPLETE WITH CONNECTIONS TO POINT AS SHOWN ON THE PLUMBING DRAWINGS AND HERE-IN SPECIFIED.

**CONNECTION TO EXISTING UTILITIES:**

A. EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL NOT BE DETERMINED TO BE EXACT CONNECTION LOCATIONS. CONTRACTOR MUST VERIFY EXACT LOCATIONS, SIZES, INVERTS, AND CONDITION OF EXISTING UTILITIES PRIOR TO CONNECTIONS. FAILURE TO ACCURATELY LOCATE AND IDENTIFY EXISTING UTILITIES SHALL NOT INCUR ADDITIONAL COST FOR REPAIRS OR RECONNECTIONS OF NEW TO EXISTING UTILITIES.

**LIST OF MATERIALS, FIXTURES, AND EQUIPMENT:**

A. THE PLUMBING CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE ENGINEER/ ARCHITECT FOR THE USE OF SUBSTITUTE MATERIALS CLAIMED AS EQUAL TO THOSE SPECIFIED. SUCH APPROVAL MUST BE OBTAINED AS SOON AFTER CONTRACT AWARDS AS POSSIBLE AND BEFORE ANY MATERIALS ARE ORDERED. APPLICATIONS FOR APPROVAL SHALL BE MADE BY THE PLUMBING CONTRACTOR ONLY AND NO OTHER APPLICATIONS SHALL BE ACCEPTED. THE PLUMBING CONTRACTOR SHALL SUBMIT FOR APPROVAL WITHIN TEN (10) DAYS FOLLOWING AWARD OF CONTRACT AND WRITTEN NOTICE TO BEGIN THE WORK A COMPLETE LIST OF MATERIALS PROPOSED FOR THE JOB. ALL LIKE ITEMS SHALL BE BY THE SAME MANUFACTURER. NO FURTHER SUBSTITUTIONS SHALL BE ACCEPTED AFTER APPROVED BY ENGINEER / ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL COST ASSOCIATED WITH INSTALLATION OF UNAPPROVED FIXTURES AND REMOVAL AND REPLACEMENT OF SUCH AT NO COST TO OWNER.

B. THE PLUMBING CONTRACTOR SHALL SUBMIT SIX (6) SETS OF SHOP DRAWINGS TO THE ARCHITECTS WITHIN 20 DAYS AFTER AWARD OF THE CONTRACT, AND BEFORE ANY MATERIALS, FIXTURES, AND EQUIPMENT TO BE INCORPORATED IN THE WORK HAS BEEN ORDERED. SHOP DRAWINGS SHALL INCLUDE THE NAME AND ADDRESS OF THE MANUFACTURER AND THEIR CATALOG NUMBERS AND TRADE NAMES CLEARLY MARKED. ALL ITEMS SHALL BE REFERENCED TO THE PLANS AND SPECIFICATIONS BY FIXTURE NUMBER. SUBMIT SHOP DRAWINGS AND / OR CATALOG DATA FOR THE FOLLOWING:

1. WASTE PIPING, FITTINGS AND COUPLINGS
2. WATER PIPING, FITTINGS AND EQUIPMENT
3. GATE VALVES, BALL VALVES, PLUG VALVES, BACK FLOW REENTERS
4. VENT CAPS
5. EMERGENCY DRAIN PANS
6. PIPING INSULATION
7. HANGER SUPPORTS AND HANGERS
8. FIXTURES

C. APPROVAL OF SHOP DRAWINGS AND / OR SUBMITTED DATA SHALL NOT RELIEVE THE PLUMBING CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH THE REQUIREMENTS AND INTENT OF THE PLANS AND SPECIFICATIONS WITH REGARD TO DIMENSIONS, CAPACITIES, QUALITY, QUANTITY, PERFORMANCE CHARACTERISTICS, ETC. IF DATA SUBMITTED DEVIATES FROM THE CONTRACT DOCUMENTS, THE PLUMBING CONTRACTOR SHALL POINT OUT SUCH DEVIATIONS IN WRITING AND ALSO STATE REASONS FOR SAME. ALL SIMILAR ITEMS SHALL BE OF ONE MANUFACTURER.

D. **FIXTURES:**

1. WATER CLOSETS, URINALS, LAVATORIES, SINKS, MOP SINKS, FLUSH VALVES, AND FAUCETS SHALL BE ALL ONE MANUFACTURER AND SHALL BE EQUALS OF AMERICAN STANDARD, KOHLER SLOAN, ZURN, SYMMONS, ELKAY, DAYTON. ENGINEERING APPROVAL FOR OTHERS NOT LISTED SHALL BE REQUIRED.
2. WATER HEATERS. (ELECTRIC) SHALL BE A.O. SMITH, STATE, RHEEM, VAUGHN, BRADFORD WHITE, AMERICAN, AND HTP. GAS WATER HEATERS SHALL BE A.O. SMITH, INTELLIHOT, BRADFORD WHITE VAUGHN, FVI AND HTP. ENGINEERING APPROVAL FOR OTHERS NOT LISTED SHALL BE REQUIRED.

**WORKMANSHIP:**

A. LAYOUT:

1. DRAWINGS INDICATE GENERAL LOCATIONS OF FIXTURES. EXACT LOCATIONS SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.
2. FURNISH AND INSTALL ALL NECESSARY SLEEVES, INSERTS, BOLTS, ETC., FOR CONCRETE FLOOR SLABS, ROOF, WALLS, AND PARTITIONS. FAILURE TO INSTALL SUCH ITEMS IN TIM TO AVOID DELAYING THE GENERAL CONTRACTOR SHALL RESULT IN THE CONTRACTOR DOING ANY NECESSARY CUTTING AND REPAIRING AT HIS EXPENSE.
3. SLEEVES AS HERE-IN-AFTER SPECIFIED SHALL BE INSTALLED ON ALL THROUGH THE FLOOR PIPING ABOVE SLAB ON GRADE EXCEPT WATER CLOSET ROUGH-INS. WATER CLOSET ROUGH-INS SHALL BE CAST IN PLACE. CORE DRILLING OF SLABS SHALL BE SEALED WITH APPROVED FIRE RETARDANT CAULKING AND SEALED WATERTIGHT.
4. ALL FIXTURES AND EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

B. DRAINAGE, WASTE, AND VENT PIPING:

1. SLOPE ALL LINES 2" AND SMALLER AT 1/4" / FOOT
2. SLOPE ALL LINES 3" AND LARGER AT 1/8" / FOOT
3. RUN ALL PIPING AS DIRECTLY AS POSSIBLE, AVOIDING UNNECESSARY BENDS AND BENDS AND TURNS SO AS NOT TO INTERFERE WITH PROPER INSTALLATION.
4. TAPPED TEES AND CROSSES WILL NOT BE PERMITTED. TAPPED SANITARY TEES AND CROSSES SHALL BE USED.

C. WATER SYSTEM:

1. CONCEAL WATER SUPPLY IN WALLS, BELOW FLOOR OR ABOVE CEILING EXCEPT WHERE EXPOSED FOR CONNECTIONS TO FIXTURES.
2. ALL WATER PIPING SHALL BE ROUTED WITH A MINIMUM CLEARANCE OF TEN (10) FEET FROM ANY ELECTRICAL SWITCHBOARDS, PANEL BOARDS OR TELEPHONE BACKBOARDS.
3. ALL SUPPLY TO FIXTURES SHALL HAVE INDIVIDUAL STOP VALVES
4. PROVIDE WATER HAMMER SHOCK ARRESTORS (PD) AS REQUIRED OR AS SHOWN TO PREVENT WATER HAMMER. ARRESTERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND AS DETAILED ON CONTRACT DRAWINGS. MANUFACTURERS OF URN, JOAN, J.R. SMITH SHALL BE ACCEPTABLE. PROVIDE 12" X 12" ACCESS DOORS FOR ALL SHOCK ARRESTORS INSTALLED ABOVE HARD CEILINGS.
5. ALL EXPOSED PIPING TO FIXTURES SHALL BE CHROME PLATED.
6. INSULATE ALL WATER PIPING INSIDE BUILDING AND HEREINAFTER SPECIFIED.

D. INSULATION:

1. ALL PIPE INSULATION JOINTS SHALL BE SEALED TO MAINTAIN INTEGRITY OF THE VAPOR JACKET AND SHALL PASS THRU ALL SLEEVES UNBROKEN EXCEPT FOR FIRE STOPS.
2. PIPE INSULATION AT ALL FIRE SEPARATIONS SHALL BE BUTTED TIGHTLY TO THE FIREWALL OR TO THE FLOOR AFTER FIR STOP MATERIAL HAS BEEN INSTALLED.

**CUTTING, PATCHING, AND CHASING:**

A. ALL CUTTING AND PATCHING SHALL BE GENERAL CONDITIONS OF THE ARCHITECTURAL SPECIFICATIONS. PLUMBING CONTRACTOR SHALL CUT ALL FLOORS NECESSARY TO INSTALL ALL PIPING AND SHALL REPAIR FLOOR TO MATCH THAT OF EXISTING.

**WASTE AND VENT SYSTEMS:**

A. PIPING:

1. WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC-DWV SOLID WALL PIPING CONFORMING TO ASTM D-2665-68 AND C.S. 272-65 WITH NS SEAL. NO FOAM CORE PIPING WILL BE ACCEPTABLE.
2. WASTE PIPING SLEEVES SHALL BE SCHEDULE 40 PVC-DWV OR CAST IRON SOLID WALL AS IDENTIFIED AS ABOVE BUT SHALL BE ONE PIPE DIAMETER LARGER FILLED WITH FORETOP MATERIAL FOR FIRE WALLS.

B. FITTINGS:

1. FITTINGS FOR PVC-DWV PIPING SHALL BE PVC-DWV FITTINGS CONFORMING TO PIPING SPECIFICATIONS LISTED ABOVE.

C. JOINTS:

1. JOINTS FOR PVC-DWV PIPING SHALL BE MADE USING PIPING MANUFACTURERS APPROVED SOLVENT CEMENT.
2. ANY FLASHING OF PLUMBING VENTS IF USED SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AND SHALL BE COORDINATED WITH SUCH.

**HOT AND COLD WATER SYSTEMS**

A. WATER PIPING:

1. WATER PIPING 4" AND SMALLER ABOVE GRADE INSIDE BUILDING SHALL BE TYPE "L" HARD COPPER CONFORMING ASTM B-88

B. FITTINGS:

1. FITTINGS FOR COPPER PIPING SHALL BE WROUGHT COPPER, SOLDER JOINT FITTINGS CONFORMING TO ANSI B 16.22

C. JOINTS:

1. ALL COPPER PIPING JOINTS, 1 1/4" AND SMALLER SHALL BE MADE USING LEAD FREE SOLDER WITH A MINIMUM MELTING POINT OF 410 DEGREES FAHRENHEIT.
2. ALL COPPER PIPING JOINTS, 1 1/2" AND LAGER SHALL BE MADE USING PHOS-COPPER SILVER ALLOY MATERIAL WITH A MINIMUM MELTING POINT OF 1000 DEGREE F.

**CLEANOUTS:**

A. CLEANOUT INSTALLED IN FLOORS AND WALKS SHALL HAVE ADJUSTABLE CAST IRON BODY WITH CAST BRASS PLUG, LEAD SEAL AND SQUARE NICKEL BRONZE TOP WITH WATERTIGHT CASKETCH COVER. CLEANOUTS SHALL BE J.R. SMITH, JOSAM, ZURN OR ENGINEERING APPROVED EQUAL.

**VALVES:**

A. VALVES SHALL BE INSTALLED AS NOTED ON CONTRACT DOCUMENTS. EXISTING VALVES IN PLACE SHALL BE VERIFIED FOR SAFE OPERATIONS AND SHALL BE REPLACED WITH THAT OF NEW IF DETERMINED TO BE UN-USABLE.

B. DOMESTIC COLD AND HOT WATER SYSTEM VALVES 1 1/4" AND SMALLER SHALL BE CAST BRONZE BODY, FULL PORTED, SOLDERED END GATE VALVES RATED FOR CLASS 150, 200 WOG SERVICES. DOMESTIC COLD AND HOT WATER SYSTEMS VALVES 1 1/2" AND 2" SHALL BE CAST BRONZE, FULL PORTED, THREADED END GATE VALVES RATED FOR CLASS 150, 200 WOG SERVICES. VALVES SHALL BE PROVIDED WITH STEM EXTENSION FOR INSULATION THICKNESS SPECIFIED. VALVES SHALL BE NIBCO OR JENKINS. VALVE NOT LISTED SHALL REQUIRE ENGINEERING APPROVED EQUAL.

**PIPE INSULATION:**

A. ALL PLUMBING PIPE INSULATION SYSTEMS, INCLUDING JACKETING, COVERINGS, ADHESIVES WHEN USED, SHALL HAVE A FLAME SPREAD RATING NOT EXCEEDING TWENTY-FIVE (25) AND A SMOKE DEVELOPMENT RATING NOT EXCEEDING FIFTY (50) WHEN THE INSULATION ASSEMBLY IS TESTED AS COMPOSITE.

1. INSULATE ALL COLD AND HOT WATER PIPING IN ACCORDANCE WITH IECC 2015 ADDITION
2. COLD WATER PIPING: INSULATION SHALL BE 1/2" FOR PIPING BELOW 1 1/2" DIAMETER AND 1 1/2" FOR PIPING ABOVE 1 1/2" DIAMETER
3. HOT WATER PIPING: INSULATION SHALL BE: 1" FOR PIPING BELOW 1 1/2" DIAMETER, AND 1 1/2" FOR PIPING ABOVE 1 1/2" DIAMETER
4. ALL PIPE INSULATION FOR PIPE FITTINGS SHALL BE PRE-MOLDED TO FIT FITTINGS AND SHALL BE ENCLOSED UNDER PRE-MOLDED PVC FITTING JACKET.

**HANGERS:**

A. HANGERS FOR HORIZONTAL PIPING SHALL BE CLEVIS TYPE AND SHALL BE MANUFACTURED BY MODERN, ANVIL OR ENGINEERING APPROVED EQUAL.

B. HANGERS FOR INSULATED PIPING SHALL EXTEND AROUND INSULATION. PROVIDE 16 GAGE GALVANIZED STEEL INSULATION PROTECTION SADDLES 12" LONG AT EACH HANGER ON ALL INSULATED LINES .

PIPE SIZE 1 1/2" AND SMALLER 6'-0" O.C.  
2" AND LARGER 10'-0"

C. A HANGER SHALL BE PROVIDED WITHIN ONE (1) FOOT OF EACH BEND IN HORIZONTAL PIPING. VERTICAL PIPING SHALL BE SUPPORTED AT EACH FLOOR OR AT INTERVALS NOT EXCEEDING TEN (10) FEET.

D. HANGERS SHALL BE FASTENED BY MEANS OF THREADED RODS TO STEEL BEAM CLAMPS, CENTER OF BAR JOIST, CENTER OF TRUSSES, ETC. ALL HANGERS SHALL PERMIT ADEQUATE ADJUSTMENT AFTER ERECTION WHILE STILL SUPPORTING THE LOAD.

**PROTECTION OF WORK AND EQUIPMENT:**

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WORK DAMAGED DURING CONSTRUCTION. ANY PLUMBING WORK DAMAGED BY ANY OTHER CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AND IN PERFECT WORKING CONDITION WITHOUT EXTRA COST TO THE OWNER. ALL FIXTURES AND FITTINGS SHALL BE ADEQUATELY PROTECTED BEFORE, DURING AND AFTER INSTALLATION.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLUMBING FIXTURES AT TIME OF FINAL INSPECTION. ANY BROKEN FIXTURES WILL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER REGARDLESS OF BY WHOM THE FIXTURE WAS BROKEN.

**TESTING:**

A. THE CONTRACTOR SHALL NOTIFY ENGINEER TWENTY FOUR (24) HOURS IN ADVANCE OF ALL TEST. THE CONTRACTOR SHALL MAKE ALL NECESSARY PRELIMINARY TEST TO INSURE A TIGHT SYSTEM. ANY JOINTS FOUND TO LEAK UNDER PRESSURE SHALL BE CLEANED AND REMADE.

B. ALL SANITARY WASTE, AND VENT PIPING SHALL BE TESTED IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE (IPC) REQUIREMENTS.

C. ALL WATER PIPING HOT AND COLD SHALL BE TESTED IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE (IPC) REQUIREMENTS.

D. CONTRACTOR SHALL FURNISH ALL EQUIPMENT NECESSARY TO PERFORM TEST IN ACCORDANCE WITH CODE REQUIREMENTS.

**STERILIZATION:**

A. WATER PIPING SHALL BE CHARGED WITH A CHLORINE SOLUTION CONTAINING NOT LESS THEN 50-PPM AVAILABLE CHLORINE. THE SOLUTION SHALL REMAIN IN PIPING FOR A MINIMUM PERIOD OF 6 HOURS, DURING WHICH TIME VALVES SHALL BE OPENED AND CLOSED TO PERMIT A SMALL FLOW OF THE SOLUTION. AT END OF SIX (6) HOURS THE SOLUTION SHALL BE TESTED AND MUST CONTAIN A RESIDUAL OF AT LEAST 5 TO 10 PPM. THE SYSTEM SHALL THEN BE DRAINED AND FLUSHED TO PROVIDE SATISFACTORY POTABLE WATER BEFORE FINAL CONNECTION IS MADE TO THE EXISTING DISTRIBUTION SYSTEM.

B. THE CONTRACTOR SHALL CONTRACT WITH AN INDEPENDENT TESTING LABORATORY FOR A CERTIFICATION LETTER THAT THE SYSTEM STERILIZATION MEETS OR EXCEEDS STANDARDS FOR POTABLE WATER.

**PLACING IN SERVICE:**

A. UPON COMPLETION OF THE ENTIRE SYSTEM INSTALLATION, THE ENTIRE SYSTEM AND EQUIPMENT SHALL BE TESTED BY ACTUAL OPERATIONS TO PROVIDE THAT ALL FIXTURES OPERATE AS INTENDED.

B. THE CONTRACTOR SHALL FLUSH ALL WASTE PIPING PRIOR TO FINAL CONNECTION TO EXISTING SYSTEM, TO ENSURE THAT NO FOREIGN MATERIALS ARE IN THE LINES, AND CONTINUOUS FLOW OF WATER AND WASTE CAN BE AFFECTED.

C. THE CONTRACTOR SHALL FLUSH ALL WATER PIPING PRIOR TO THE CONNECTION OF FLUSH VALVE, AND FAUCET AERATORS TO PROVIDE A CLEAN AND OPERATIONAL WATER SYSTEM.

D. THE CONTRACTOR SHALL PLACE THE ENTIRE SYSTEM IN A SATISFACTORY OPERATING CONDITION AND SHALL FURNISH ALL ASSISTANCE AND INSTRUCTIONS REQUIRED.

E. IT IS THE CONTRACTORS RESPONSIBILITY TO INSURE ALL FLOOR DRAINS AND CLEANOUTS ARE IN A CLEAN CONDITION.



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GEORGIA 30458

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**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**GUYTON, GA**

SCHEDULE OF REVISIONS	
#	DATE

PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: BAW  
APPROVED BY: CAB



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PLUMBING  
SPECIFICATIONS

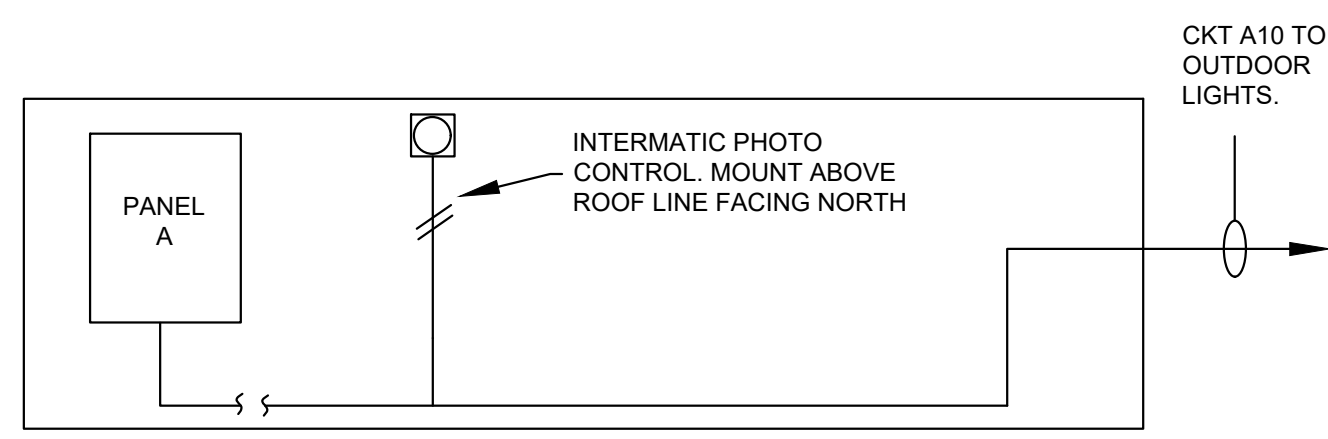
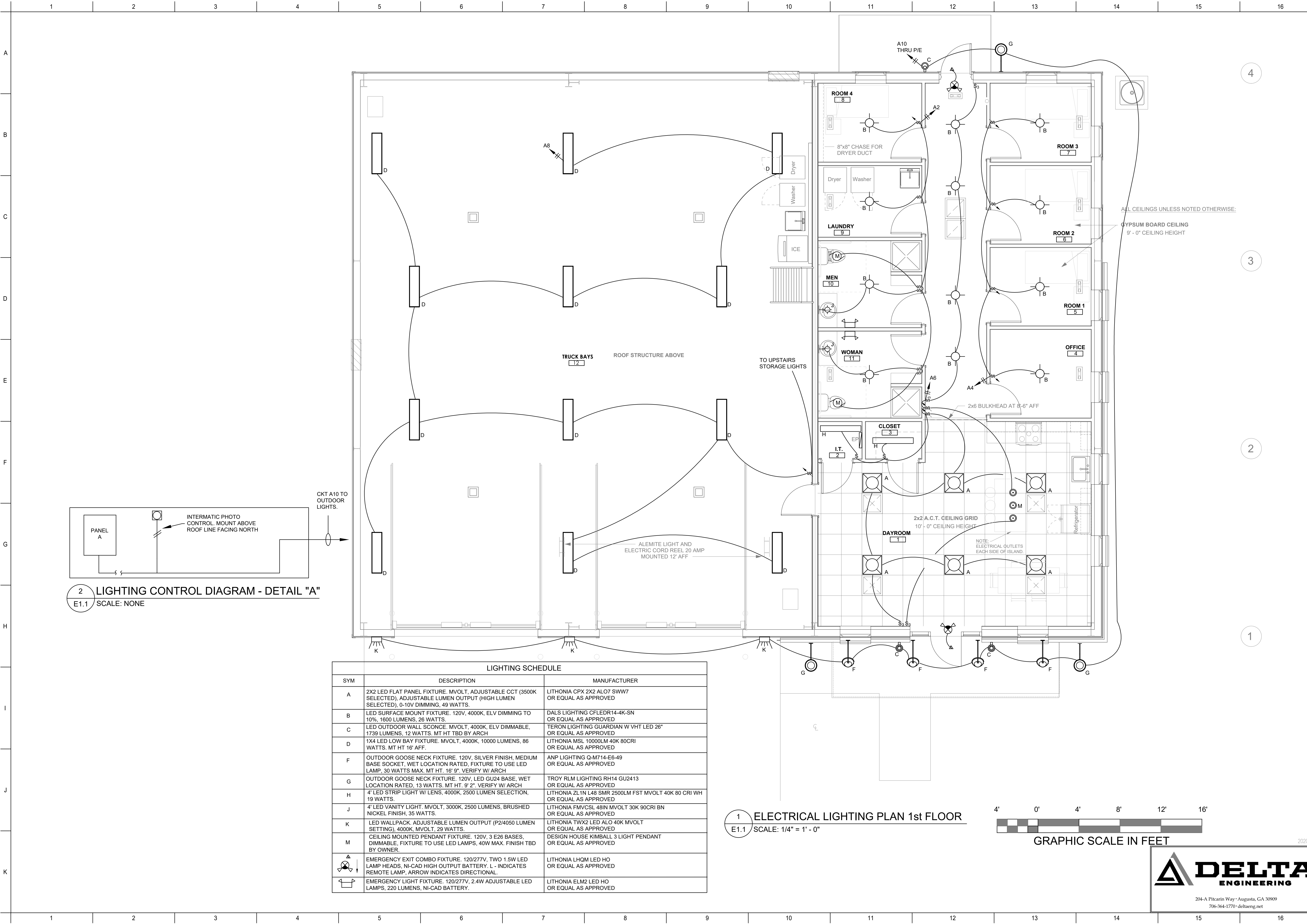
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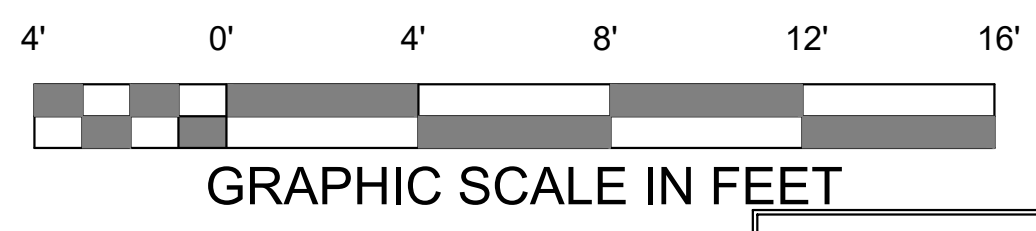
**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**GUYTON, GA**



**2 LIGHTING CONTROL DIAGRAM - DETAIL "A"**  
E1.1 SCALE: NONE

LIGHTING SCHEDULE		
SYM	DESCRIPTION	MANUFACTURER
A	2X2 LED FLAT PANEL FIXTURE. MVOLT, ADJUSTABLE CCT (3500K SELECTED), ADJUSTABLE LUMEN OUTPUT (HIGH LUMEN SELECTED), 0-10V DIMMING, 49 WATTS.	LITHONIA CPX 2X2 AL07 SWW7 OR EQUAL AS APPROVED
B	LED SURFACE MOUNT FIXTURE. 120V, 4000K, ELV DIMMING TO 10%, 1600 LUMENS, 26 WATTS.	DALS LIGHTING CFLEDR14-4K-SN OR EQUAL AS APPROVED
C	LED OUTDOOR WALL SCONCE. MVOLT, 4000K, ELV DIMMABLE, 1739 LUMENS, 12 WATTS. MT HT TBD BY ARCH	TERON LIGHTING GUARDIAN W VHT LED 26" OR EQUAL AS APPROVED
D	1X4 LED LOW BAY FIXTURE. MVOLT, 4000K, 10000 LUMENS, 86 WATTS. MT HT 16' AFF.	LITHONIA MSL 10000LM 40K 80CRI OR EQUAL AS APPROVED
F	OUTDOOR GOOSE NECK FIXTURE. 120V, SILVER FINISH, MEDIUM BASE SOCKET, WET LOCATION RATED, FIXTURE TO USE LED LAMP, 30 WATTS MAX. MT HT. 16' 9". VERIFY W/ ARCH	ANP LIGHTING Q-M714-E6-49 OR EQUAL AS APPROVED
G	OUTDOOR GOOSE NECK FIXTURE. 120V, LED GU24 BASE, WET LOCATION RATED, 13 WATTS. MT HT. 9' 2". VERIFY W/ ARCH	TROY RLM LIGHTING RH14 GU2413 OR EQUAL AS APPROVED
H	4' LED STRIP LIGHT W/ LENS, 4000K, 2500 LUMEN SELECTION, 19 WATTS.	LITHONIA ZL1N L48 SMR 2500LM FST MVOLT 40K 80 CRI WH OR EQUAL AS APPROVED
J	4' LED VANITY LIGHT. MVOLT, 3000K, 2500 LUMENS, BRUSHED NICKEL FINISH, 35 WATTS.	LITHONIA FMVCSL 48IN MVOLT 30K 90CRI BN OR EQUAL AS APPROVED
K	LED WALLPACK. ADJUSTABLE LUMEN OUTPUT (P214050 LUMEN SETTING), 4000K, MVOLT, 29 WATTS.	LITHONIA TWX2 LED ALD 40K MVOLT OR EQUAL AS APPROVED
M	CEILING MOUNTED PENDANT FIXTURE. 120V, 3 E26 BASES, DIMMABLE, FIXTURE TO USE LED LAMPS, 40W MAX. FINISH TBD BY OWNER.	DESIGN HOUSE KIMBALL 3 LIGHT PENDANT OR EQUAL AS APPROVED
△	EMERGENCY EXIT COMBO FIXTURE. 120/277V, TWO 1.5W LED LAMP HEADS, NI-CAD HIGH OUTPUT BATTERY. L - INDICATES REMOTE LAMP, ARROW INDICATES DIRECTIONAL.	LITHONIA LHQM LED HO OR EQUAL AS APPROVED
□	EMERGENCY LIGHT FIXTURE. 120/277V, 2.4W ADJUSTABLE LED LAMPS, 220 LUMENS, NI-CAD BATTERY.	LITHONIA ELM2 LED HO OR EQUAL AS APPROVED

**1 ELECTRICAL LIGHTING PLAN 1st FLOOR**  
E1.1 SCALE: 1/4" = 1' - 0"



SCHEDULE OF REVISIONS	
#	DATE

PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: SCH  
APPROVED BY: KDG

**LIGHTING PLAN**  
**1ST FLOOR**  
**E1.1**

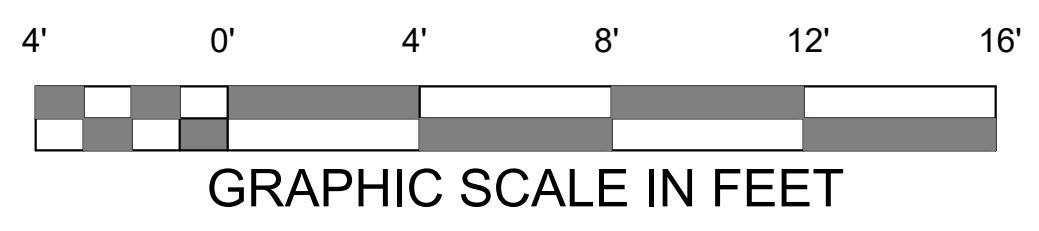




**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
GUYTON, GA



**1 ELECTRICAL POWER PLAN-1ST FLOOR**  
E2.1 SCALE: 1/4" = 1' - 0"



**DELTA ENGINEERING**  
204-A Pitarin Way · Augusta, GA 30909  
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SCHEDULE OF REVISIONS

#	DATE

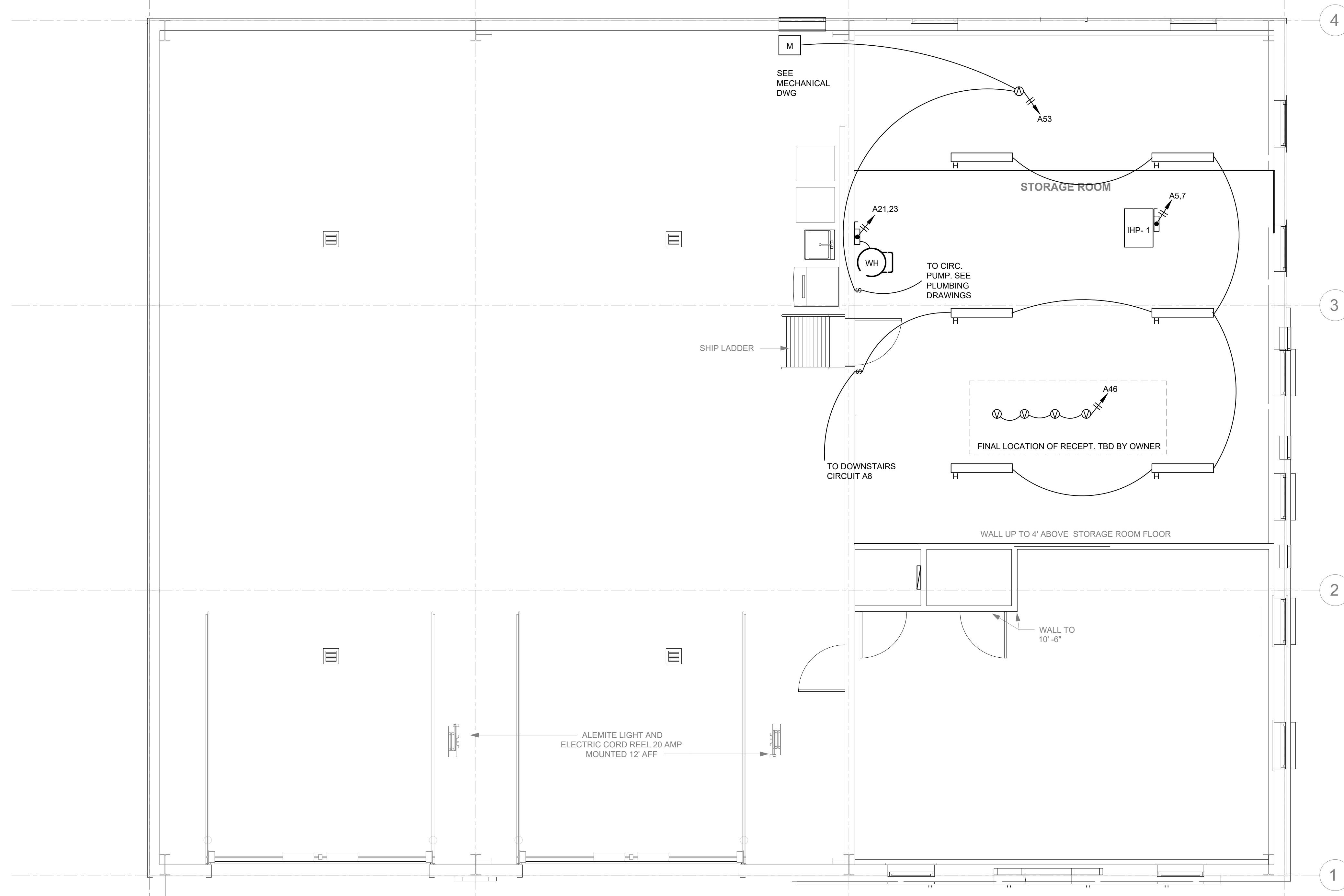
PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: SCH  
APPROVED BY: KDG

POWER PLAN  
1ST FLOOR  
**E2.1**

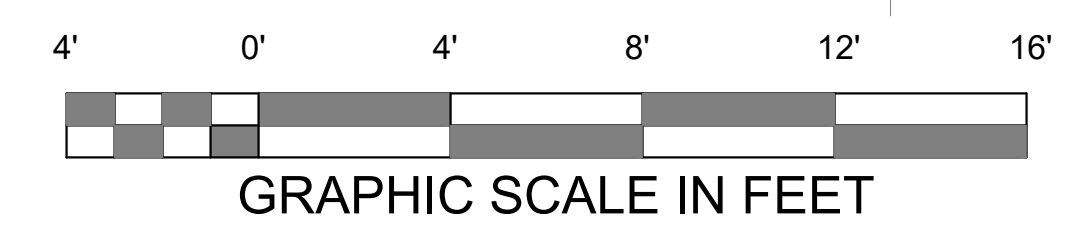




**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**GUYTON, GA**



1 ELECTRICAL LIGHT/POWER PLAN-STORAGE/MECH  
E2.2 SCALE: 1/4" = 1' - 0"



2020-060

**DELTA**  
ENGINEERING

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SCHEDULE OF REVISIONS	
#	DATE

PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: SCH  
APPROVED BY: KDG

LIGHTING/POWER  
PLAN 2ND FLOOR

**E2.2**





**FIRE STATION #13**  
**EFFINGHAM COUNTY**  
**GUYTON, GA**

SCHEDULE OF REVISIONS

#	DATE

PROJECT NUMBER: 2024  
PROJECT DATE: 2-15-2022  
DRAWN BY: SCH  
APPROVED BY: KDG

NOTES & SCHEDULES

**E3.1**

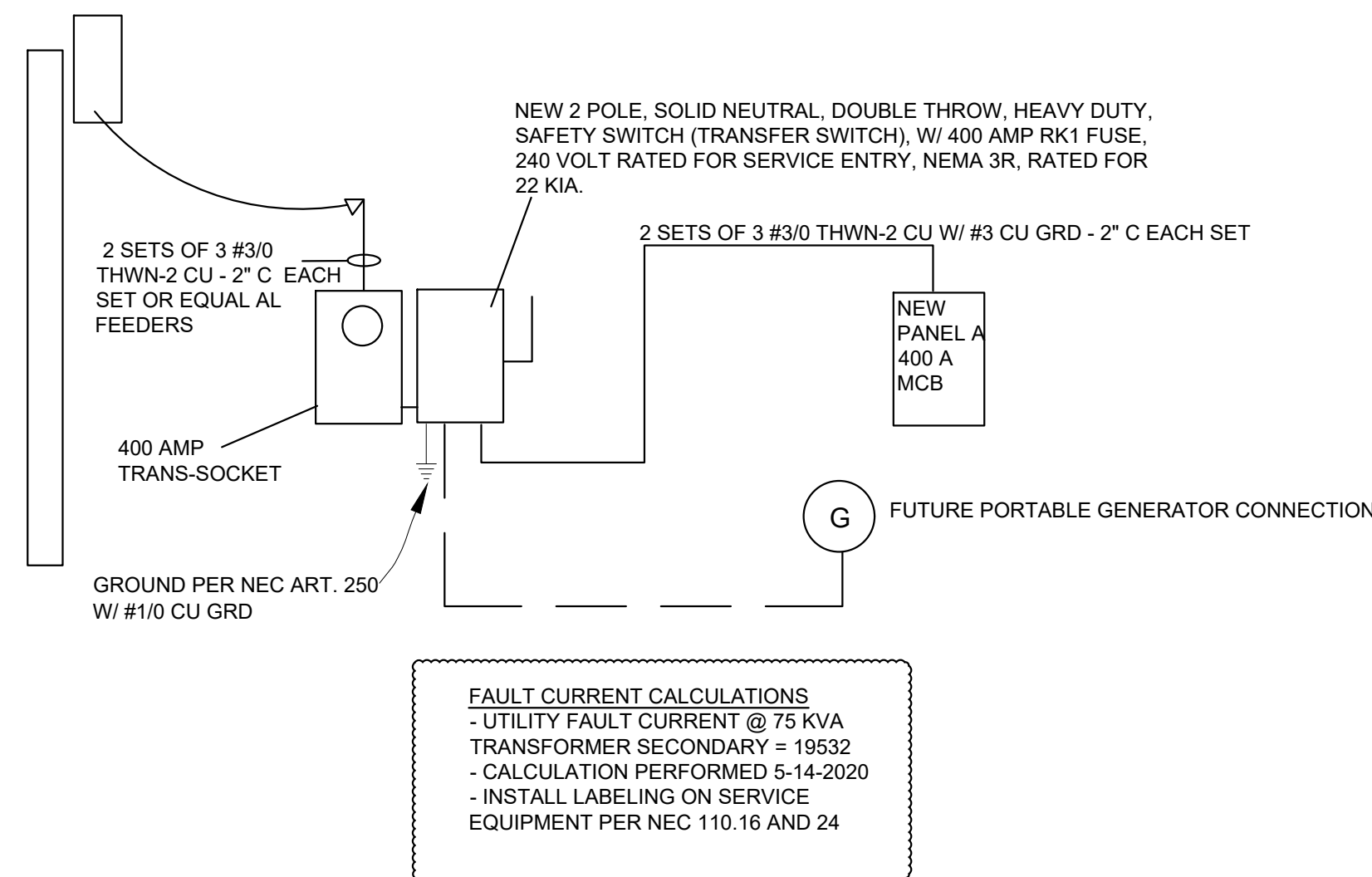


2020-060

POWER/LIGHTING PANEL: A													
		120/240V		1φ	MCB 400	MINIMUM AIC EACH BREAKER 22,000		SQ D PANEL	SURFACE MOUNTED				
LOAD A	LOAD B	LOAD SERVED	WIRE/CONDUIT SIZE	SIZE/POLE	CKT NO.	BUSS	CKT NO.	SIZE/POLE	WIRE/CONDUIT SIZE	LOAD SERVED	LOAD A	LOAD B	
3600		OHP - 1	#8 - 1/2"	60/2	1		2	20/1	#12 - 1/2"	LIGHTING - RM.4 & R. ROOMS	400		
	3600	IHP - 1	#6 - 3/4"	50/2	3		4			LIGHTING - RMS & OFFICE		200	
4760		IHP - 1	#6 - 3/4"	50/2	5		6			LIGHTING - DAYROOM/HALL	540		
	4760				7		8			LIGHTING - GARAGE		1140	
5000		UH - 1	#4 - 1"	60/2	9		10			LIGHTING - OUTDOOR	360		
	5000				11		12			WASHER		1800	
5000		UH - 2	#4 - 1"	60/2	13		14			RM.3&4 / HALLWAY	1000		
	5000				15		16			RM.1&2/ HALLWAY		1000	
2250		DRYER	#10 - 1/2"	30/2	17		18			OFFICE RECEPT.	1000		
	2250				19		20			TELEPHONE BACKBOARD		2000	
2250		WATER HEATER	#10 - 1/2"	30/2	21		22			RESTROOMS	400		
	2250				23		24			DAYROOM RECEPT. & TV		600	
4000		RANGE	#6 - 3/4"	50/2	25		26			DAYROOM RECEPT.	600		
	4000				27		28			MICROWAVE		1200	
720		RANGE HOOD	#12 - 1/2"	20/1	29		30			COFFEE	1800		
	1800	DISHWASHER		20/1	31		32			KITCHEN RECEPT		400	
200		BAY - CHORD REEL 1		20/1 GFI	33		34			REFRIGERATOR	900		
	200	BAY - CHORD REEL 2		20/1 GFI	35		36			BAR RECEPT		400	
1200		EF-3	#10 - 1/2"	25/1	37		38			DISPOSAL	700		
	1200	BAY DOOR - 1	#12 - 1/2"	20/1	39		40	30/2	#10 - 1/2"	ICE MAKER		1600	
1200		BAY DOOR - 2	#12 - 1/2"		41		42						
		SPARE			43		44	20/1	#12 - 1/2"	SMOKE DETECTORS		200	
		SPARE			45		46			STORAGE/MECH RECEPT.	800		
2250		DRYER - FUTURE	#10 - 1/2"	30/2	47		48			BAY - RECEPT.		800	
	1800	WASHER - FUTURE	#12 - 1/2"	20/1	49		50			SPARE			
500		ATTIC/OUTSIDE GFI	#12 - 1/2"	20/1	51		52						
					53		54						
TOTAL VA	TOTAL VA	TOTAL PANEL VA:	90900									TOTAL VA	TOTAL VA
32930	34110											10100	11340
		TOTAL LOAD CURRENT:	379										

\* ELECTRICAL CONTRACTOR TO VERIFY ALL HVAC ELECTRICAL EQUIPMENT SPECS PRIOR TO PURCHASE AND INSTALLATION. CONTACT ENGINEER IF ELECTRICAL LOADS DIFFERENT THAN SHOWN.

\*\* INSTALL EQUIPMENT GROUND WIRE PER NEC ART. 250 TABLE 122



**2** POWER RISER DIAGRAM  
E3.1 SCALE: NONE

**1** ELECTRICAL NOTES & SCHEDULES  
E3.1 SCALE: NONE

**ELECTRICAL MATERIALS**

- FURNISH ALL NECESSARY MATERIALS, TOOLS AND LABOR, AND INSTALL A COMPLETE AND FULLY OPERABLE SYSTEM AS SHOWN OR REASONABLY IMPLIED. ALL OUTLETS SHALL BE LEFT READY FOR USE. ALL MATERIALS SHALL BE NEW FREE OF DEFECTS AND BE UL LISTED.
- ALL WORK SHALL BE IN ACCORDANCE WITH NEC, LATEST EDITION, LOCAL CODES AND ORDINANCES AND THE REQUIREMENTS OF THE UTILITY COMPANY. LOCAL CODES SHALL GOVERN IN THE EVENT OF A CONFLICT.
- APPLY AND PAY FOR ALL REQUIRED PERMITS, INSPECTIONS, ETC.
- UNLESS OTHERWISE NOTED, ALL WIRING SHALL BE RUN CONCEALED AND OUTLETS SHALL BE FLUSH MOUNTED IN WALLS, CEILING OR FLOORS.
- OUTLET BOXES SHALL BE SIZED AND INSTALLED PER NEC AND MEET ALL LOCAL CODES.
- PANELS SHALL HAVE INSULATED NEUTRAL BUSES AND SEPARATE EQUIPMENT GROUNDING BUSES. PROVIDE CIRCUIT INDEX CARDS.
- LIGHTING FIXTURES SHALL BE COMPLETE WITH LAMPS, BALLASTS (IF APPLICABLE) AND MOUNTING ACCESSORIES AS REQUIRED. GROUND FIXTURES PER NEC ARTICLE 410-20.
- ALL POWER WIRING AND CONNECTIONS TO MECHANICAL EQUIPMENT SHALL BE PROVIDED BY THIS CONTRACTOR.
- SEAL ALL PENETRATIONS IN FIRE RATED ASSEMBLIES WITH 3-M, OR EQUAL FIRE STOP MATERIAL. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- AT THE COMPLETION OF THIS WORK, THIS CONTRACTOR SHALL REMOVE ALL RUBBISH CAUSED BY HIS WORK AND SHALL THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT.
- GROUND SYSTEMS PER NEC ARTICLE 250 AND LOCAL CODES.
- THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND LABOR FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OR FIRS BENEFICIAL USE BY THE OWNER, WHICHEVER COMES FIRST. THE ENTIRE SYSTEM SHALL BE FREE OF SHORTS AND GROUNDS. CORRECTIONS TO THE WIRING SYSTEM, DUE TO DEFECTIVE MATERIALS AND WORKMANSHIP, WITHIN THE GUARANTEE PERIOD, SHALL BE MADE BY THE CONTRACTOR AT NO COST TO THE OWNER.
- ALL HEATING, VENTILATION, AND AC BREAKERS SHALL BE HACR TYPE PER MANUFACTURER'S SPECIFICATIONS.
- CONDUCTORS SHALL BE THHN/ THWN-2 COPPER, 10WG & SMALLER SHALL BE SOLID 8 AWG AND LARGER SHALL BE STRANDED. COLOR CODE SHALL BE AS FOLLOWS: 120/208 3Ø4W: ØA - BLACK, ØB - RED, ØC - BLUE, NEUTRAL - WHITE, EQUIPMENT GROUND - GREEN. 277/480 3Ø4W: ØA - BROWN, ØB - ORANGE, ØC - YELLOW, NEUTRAL - GRAY, EQUIPMENT GROUND-GREEN USE OF #14 AWG IS ALLOWED WHERE PERMITTED BY NEC AND AUTHORITY HAVING JURISDICTION (AHJ)
- USE OF NM, NMC AND NMS CABLE IN LIEU OF CONDUIT AND STRANDED THHN, THWN WIRE FOR BRANCH CIRCUITS PER CURRENT NEC IS ALLOWED PROVIDED LOCAL AHJ APPROVES OF ITS USE. RESIDENTIAL CLASSIFICATIONS ONLY.
- CONDUITS CONCEALED IN WALLS AND ABOVE CEILING SHALL BE EMT. UNDERGROUND CONDUITS SHALL BE PVC, SCHEDULE 40, EXPOSED CONDUITS SHALL BE RIGID STEEL. CONDUITS SHALL BE RUN AT RIGHT ANGLES TO BUILDING WALLS.
- DEVICES AND DEVICE BOXES SHALL BE INSTALLED LEVEL AND PLUMB. DUPLEX RECEPTACLES SHALL BE INSTALLED SO THAT GROUNDS ARE AT BOTTOM. SINGLE POLE TOGGLE SWITCHES SHALL BE INSTALLED SO THAT OFF POSITION IS DOWN.
- DEVICE AND DEVICE PLATE MATERIALS AND COLORS SHALL BE AS SPECIFIED BY OWNER / ARCHITECT.
- ALL FUSES SHALL BE CLASS RK1 OR RK5 FUSES OR EQUAL WITH CURRENT LIMITING CHARACTERISTICS.
- VERIFY WITH LOCAL UTILITY THE SHORT CIRCUIT KIA RATING AT SERVICE ENTRANCE IS LESS THAN 22 KIA.
- LABEL ALL PANELS AND DISCONNECTS PER NEC ARC FLASH PROTECTION REQUIREMENTS.
- AFFIX MAXIMUM FAULT CURRENT TO MAIN CIRCUIT PANEL OR DISCONNECT AT FACILITY PER NEC 110.16 AND 24.

**ELECTRICAL SYMBOLS**

SYMBOL	DESCRIPTION
	BRANCH CIRCUIT OR FEEDER CONDUIT CONCEALED IN WALLS OR ABOVE CEILING WITH GROUND. ARROW DENOTES HOME RUN TO PANEL. CROSS HATCHES DENOTE NUMBER OF CONDUCTORS IF OTHER THAN TWO, BUT DO NOT INCLUDE SWITCH LEGS OR THE EQUIPMENT GROUND WIRE. NUMBER 12 MINIMUM SIZE. SEE PANEL SCHEDULE FOR WIRE SIZE.
S	120-277V/20A SINGLE POLE LIGHTING SWITCH, MOUNT AT 48" ABOVE FINISHED FLOOR
S <sub>3</sub>	120-277V/20A 3-WAY SWITCH, 3-DENOTES 3-WAY CONNECTORS MOUNT 48" AFF
	120V, 0-10 VOLT DIMMER SWITCH, SLIDE CONTROL W/ ON-OFF FEATURE. MUST BE COMPATIBLE WITH LED FIXTURE CHOSEN. SEE LIGHTING SCHEDULE FOR DETAILS.
	WALL MOUNTED LIGHT FOR OUTDOOR APPLICATION (TYP.)
A#	WRAP AROUND FIXTURE OR DROP IN TROFFER 120V (UNLESS NOTED OTHERWISE, SEE LIGHTING SCHEDULE) A = FIXTURE TYPE (SEE LIGHTING SCHEDULE) # = DENOTES CIRCUIT CONNECTION
	WALL MOUNTED LIGHT FIXTURE. SEE LIGHTING SCHEDULE.
	CEILING MOUNTED LIGHT FIXTURE. SEE LIGHTING SCHEDULE.
	EXHAUST FAN, FURNISH, INSTALL, AND CONNECT ELECTRICALLY COMPLETE. SEE MECHANICAL DRAWINGS FOR MAKE AND MODEL.
	EMERGENCY EXIT LIGHT WITH FACES AND ARROWS AS INDICATED. SHADED AREA DENOTES FACES. SEE LIGHT FIXTURE SCHEDULE. CONNECT TO CONTINUOUS (UNSWITCHED) POWER SUPPLY SERVING LIGHTING IN THE PARTICULAR SPACE. MOUNTED 9'-0" AFF.
	EMERGENCY BATTERY LIGHTS, SURFACE MOUNTED WITH UNIT MOUNTED LIGHTING HEADS. SEE LIGHT FIXTURE SCHEDULE. CONNECT TO CONTINUOUS (UNSWITCHED) POWER SERVING LIGHTING IN THE PARTICULAR SPACE. MOUNTED 8'-0" AFF.
TEL	TELEPHONE CABINET BACKBOARD SHALL BE 3/4" PLYWOOD
	ENCLOSED DISCONNECT SWITCH, NEMA-3R FOR OUTDOOR, NEMA 1 R FOR INDOOR, MOUNTED 30" AFF TO BUILDING, EXCEPT AS NOTED ON PRINTS. SIZE DISCONNECT AND FUSE TO MEET HVAC MFRS SPECIFICATIONS.
---	UNDERGROUND OR UNDER STRUCTURE RIGID METAL CONDUIT. BURY AT A DEPTH OF 24" BELOW GRADE.
	ELECTRICAL PANELBOARD (RECESSED OR FLUSH MOUNTED). SEE RISER AND PANEL SCHEDULE FOR RATINGS.
OHP# IHP#	HEAT PUMP UNIT, INDICATES SPECIFIC UNIT, I - INDICATES INDOOR, O - INDICATES OUTDOOR. (SEE MECHANICAL SCHEDULE FOR CORRECT UNIT)
J	WALL OR CEILING MOUNTED JUNCTION BOX, OR EQUIPMENT JUNCTION BOX WHEN FURNISHED WITH COVER. MINIMUM SIZE 4" x 4" x 1-1/2". SIZE PER NEC.
E	EQUIPMENT CONNECTION (EXACT LOCATION TO BE DETERMINED BY KITCHEN/ EQUIPMENT MANUFACTURER'S SPECIFICATIONS.)
	20A, 120VOLT DUPLEX CONVENIENCE OUTLET, CENTERED VERTICALLY 18" AFF UNLESS OTHERWISE NOTED.
	20A, 120VOLT GFI DUPLEX CONVENIENCE OUTLET, CENTERED VERTICALLY 18" AFF UNLESS OTHERWISE NOTED. IF LOCATED OUTSIDE, RECEPTACLE WILL HAVE INTEGRAL GROUND FAULT INTERRUPTER AND WEATHERPROOF COVER. *GFI DENOTES INTEGRAL GROUND FAULT INTERRUPTER. MOUNT GFIS IN BATHROOMS OR SINKS, 6" ABOVE COUNTER TOPS.
	20A, 120VOLT QUAD CONVENIENCE OUTLET, CENTERED VERTICALLY 18" AFF UNLESS OTHERWISE NOTED.
	WALL MOUNTED TELEPHONE/DATA JACK, 18" AFF OR AS INDICATED. RUN 1" CONDUIT W/ PULL STRING TO ABOVE CEILING.
	20A, 120VOLT DUPLEX CONVENIENCE OUTLET, MOUNTED 6" ABOVE COUNTERTOP, UNLESS OTHERWISE NOTED.
	20A, 120VOLT QUAD CONVENIENCE OUTLET, MOUNTED 6" ABOVE COUNTERTOP, UNLESS OTHERWISE NOTED.
	20A, 120VOLT DUPLEX CONVENIENCE OUTLET, MOUNTED IN FLOOR, UNLESS OTHERWISE NOTED.
TV	20A, 120VOLT DUPLEX OUTLET FOR T.V. EXACT HEIGHT & LOCATION TBD BY OWNER/ARCHITECT.
	FLUSH MOUNTED, 50AMP, 250V RANGE RECEPTACLE.
	FLUSH MOUNTED, 30AMP, 250V DRYER RECEPTACLE.
	COMBO SMOKE CO ALARM, FIRST ALERT MODEL #SC7010BV, 120V, BATTERY BACKUP, COMBINATION SMOKE & CARBON MONOXIDE DETECTOR. INTERCONNECT UP TO 12 DEVICES.

**ELECTRICAL NOTES**

- OUTLET BOXES ON OPPOSITE SIDES OF FIRE RESISTANT WALL OR SHAFT ENCLOSURE SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 24" MINIMUM.
- ALL CONVENIENCE OUTLETS INSTALLED TO SERVE A KITCHEN COUNT TOP SHALL BE GFI PROTECTED PER NEC.
- INSTALL SMOKE DETECTORS PER NFPA 72 AND IBC. SEE ELECTRICAL SYMBOLS.
- MAINTAIN CONTINUOUS GROUNDS ON ALL RECEPTACLES.
- USE FIRE RATED MATERIALS IN RATED WALLS. FOR STOP PER NFPA.
- CEILING PENETRATIONS SHALL MEET THE REQUIREMENT OF NEC AND IBC.
- GROUND ELECTRICAL SERVICE PER NEC250-66 AND AS APPROVED BY LOCAL AHJ.
- MAINTAIN 3 FT. MINIMUM CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT PER NEC 110.26 (A)
- CONSULT LOCAL UTILITY AND BUILDING AUTHORITY FOR APPROVAL PRIOR TO PURCHASE AND INSTALLATION OF ELECTRICAL EQUIPMENT. VERIFY AVAILABLE FAULT CURRENT IS LESS THAN EQUIPMENT RATING SPECIFIED. ELECTRICAL CONTRACTOR MAY REDUCE INTERRUPTING RATING OF EQUIPMENT IF LOCAL UTILITY AVAILABLE FAULT CURRENT IS SUBSTANTIALLY LOWER THAN ANTICIPATED AND SHALL GAIN APPROVAL IN WRITING FROM ENGINEER PRIOR TO PURCHASE AND INSTALLATION. INSTALLATION SHALL MEET THE REQUIREMENTS OF NEC 110.9 AND 110.10.
- FIRE ALARM (BY OTHERS). GAIN APPROVAL FROM LOCAL FIRE MARSHALL ON FIRE PROTECTION EQUIPMENT LAYOUT PRIOR TO INSTALLATION AND APPROVAL. FIRE MARSHAL MAY REQUIRE ADDITIONAL EQUIPMENT (SMOKE DETECTORS, EXIT SIGNS, EGRESS LIGHTS, ETC) GREATER THAN THAT SHOWN. IF ADDITIONAL EQUIPMENT IS REQUESTED OTHER THAN THAT SHOWN, CONTRACTOR SHALL CONSULT ARCHITECT / ENGINEER PRIOR TO CONTINUING. CONTRACTOR SHALL BE RESPONSIBLE FOR FAILURE TO INFORM ENGINEER AND ARCHITECT AND SHALL INCUR ALL COST FOR ADDITIONAL CHANGES WITHOUT PRIOR APPROVAL. INSTALL FIRE ALARM EQUIPMENT PER NFPA 72.
- HOME RUNS FOR ALL 20 AMP BRANCH CIRCUITS LONGER THAN 75 FEET SHALL BE AT LEAST 10 AWG.
- ALL 10,000 AIC RATED BREAKERS SHALL BE SERIES RATED FOR 22,000 AIC W/ MAIN CB.