

1. ALL CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES AND ORDINANCES OR AGENCIES HAVING JURISDICTION OVER THIS PROJECT.
2. ESTABLISH AND MAINTAIN PROJECT SAFETY DURING CONSTRUCTION TO PROTECT PERSONNEL, TENANTS, AND BUILDING OCCUPANTS. REQUIREMENTS INCLUDE, BUT SHALL NOT BE LIMITED TO OSHA PART 1926 LATEST EDITION.
3. THE GENERAL CONTRACTOR SHALL ARRANGE ALL INSPECTIONS AND TESTS AS SPECIFIED OR REQUIRED BY THE BUILDING DEPARTMENT AND SHALL PAY ALL COSTS AND FEES FOR SAME. THE CONTRACTOR SHALL SECURE ALL BUILDING PERMITS AND UPON COMPLETION OF THE PROJECT (PRIOR TO FINAL PAYMENT) DELIVER TO THE OWNER A CERTIFICATE OF OCCUPANCY OR USE FROM THE BUILDING DEPARTMENT.
4. ALL PLUMBING AND ELECTRICAL WORK SHALL BE PERFORMED BY STATE LICENSED CONTRACTORS. CONTRACTORS SHALL SUBMIT ALL REQUIRED PERMITS, CERTIFICATES, AND SIGN-OFFS TO GENERAL CONTRACTOR FOR THEIR RECORDS.
5. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, BE FAMILIAR WITH THE EXISTING CONDITIONS, AND BRING ANY DISCREPANCIES TO THE ATTENTION OF THE OWNER PRIOR TO SUBMISSION OF CONSTRUCTION PROPOSAL AND BEFORE COMMENCEMENT OF THE WORK. THE DRAWINGS REFLECT CONDITIONS REASONABLY INFERRED FROM THE EXISTING VISIBLE CONDITIONS BUT CANNOT GUARANTEED BY THE DESIGNER. DRAWINGS MAY BE SCALED FOR ESTIMATING PURPOSES AND FOR GENERAL REFERENCE ONLY. FOR ALL OTHER DIMENSIONS OR LOCATIONS CONSULT THE DESIGNER OR REFER TO DIMENSIONS ON DRAWINGS. VERIFY ALL DIMENSIONS IN THE FIELD.
6. CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS, LOCATIONS, AND CHARACTERISTICS OF ALL WORK AND EQUIPMENT (WHETHER SUPPLIED BY THE OWNER OR OTHERS) WITH THE SUPPLIER OR MANUFACTURER PRIOR TO THE START OF RELATED WORK.
7. THE GENERAL CONTRACTOR SHALL LAY OUT ALL WORK AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS FOR TRADES SUCH AS ELECTRICAL, PLUMBING, ETC.
8. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL PROVIDE AND MAINTAIN ACCESS TO THE PREMISES AT ALL TIMES.
9. THE GENERAL CONTRACTOR SHALL KEEP THE CONSTRUCTION SITE FREE AND CLEAR OF ALL DEBRIS AND KEEP OUT ALL UNAUTHORIZED PERSONS. UPON COMPLETION OF WORK, THE ENTIRE CONSTRUCTION AREA IS TO BE THOROUGHLY CLEANED AND PREPARED FOR OCCUPANCY BY OWNER. ALL MATERIALS AND DEBRIS RESULTING FROM THE CONTRACTOR'S WORK SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY. GARBAGE SHALL BE TAKEN DURING CONSTRUCTION THAT NO DEBRIS OR MATERIALS ARE DEPOSITED IN ANY RIGHT OF WAY AREA.
10. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW CONDITIONS AND MATERIALS ON THE SITE. ANY DAMAGE CAUSED BY OR DURING THE EXECUTION OF THE WORK IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
11. ANY VARIATIONS FROM INDICATED DIMENSIONS OR CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER AND/OR DESIGNER.
12. NO CHANGES ARE TO BE MADE WITHOUT THE APPROVAL OF THE OWNER.
13. PROVIDE BRACING, BLOCKING, AND/OR STRUCTURE AS REQUIRED TO FACILITATE INSTALLATION OF ALL WALL AND MILLWORK MOUNTED EQUIPMENT. IN NEW AND EXISTING WALLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE SUPPORT REQUIRED TO MAINTAIN THE INTEGRITY OF THE WALLS AND THE SECURITY OF THE EQUIPMENT.
14. ALL WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED. PROVIDE WOOD BLOCKING IN ALL STUD WALL AT MILLWORK AND SPECIAL ITEM ANCHORING POINTS. WOOD BLOCKING SHALL BE MOISTURE TREATED IF LOCATED IN DRIP LOCATIONS OR ADJACENT TO CONCRETE OR MASONRY CONSTRUCTION. IF WOOD BLOCKING IS NOT PERMITTED BY CODE, THEN METAL STRIPS SHALL BE USED.
15. THE CONTRACTOR IS RESPONSIBLE FOR FIELD DIMENSIONS OF ALL MILLWORK, GLASS, DOOR OPENINGS, AND OTHER STRUCTURES PRIOR TO COMMENCEMENT OF FABRICATION.
16. THE MATERIALS USED FOR CONSTRUCTION OF SPACE SHALL NOT CONTAIN ASBESTOS, P.C.B, OR ANY OTHER HAZARDOUS MATERIALS OF ANY TYPE. MANUFACTURERS' NAMES AND TRADEMARKS SHALL NOT BE PROMINENTLY VISIBLE TO THE PUBLIC.
17. ALL WALLS TO BE LAID OUT AT 90-DEGREE ANGLES UNLESS OTHERWISE NOTED.
18. THE SCOPE OF WORK OF ALL TRADES IS TO INCLUDE ALL MATERIALS AND LABOR REQUIRED TO TOTALLY COMPLETE THE PROJECT AND BE FUNCTIONALLY CONSISTENT WITH THE DESIGN INTENT AS EXPRESSED IN THE CONSTRUCTION DOCUMENTS.
19. ALL UTILITIES SHALL BE CONNECTED TO PROVIDE GAS, ELECTRIC, AND WATER TO ALL EQUIPMENT WHETHER SAID EQUIPMENT IS IN CONTRACT OR NOT. EQUIPMENT SHALL BE GUARANTEED TO FUNCTION PROPERLY UPON COMPLETION.
20. MANUFACTURER'S STANDARD SPECIFICATIONS AND MATERIALS APPROVED FOR PROJECT USE ARE HEREBY MADE PART OF THESE NOTES WITH SAME FORCE AND EFFECT AS IF WRITTEN OUT IN FULL HEREIN. ALL APPLIANCES, FIXTURES, EQUIPMENT, HARDWARE, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND PROCEDURES.
21. THERMOSTATS SHALL NOT BE LOCATED IN THE CENTER OF A WALL, ON AN ACCENT/SPECIALTY WALL, OR IN A LOCATION WHICH CONFLICTS WITH FURNISHINGS WITHOUT THE OWNER'S APPROVAL.
22. WRITTEN WORDS TAKE PRECEDENCE OVER DRAWN LINES. LARGE-SCALE DETAILS AND PLANS TAKE PRECEDENCE OVER SMALLER DETAILS AND PLANS. SHOULD A CONFLICT ARRIVE BETWEEN THE SPECIFICATIONS AND DRAWINGS, THE REQUIREMENTS DEEMED MOST STRINGENT SHALL BE USED.
23. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED BUT NECESSARY FOR PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION, OR OPERATION OF ANY PART OF THE WORK AS DETERMINED BY THE DESIGNER SHALL BE INCLUDED IN THE WORK AS IF IT WERE SPECIFIED OR INDICATED ON THE DRAWINGS.
24. NO DEVIATION FROM THE DRAWINGS OR SPECIFICATIONS OR INTENT OF SAME SHALL BE MADE WITHOUT THE OWNER'S WRITTEN AUTHORIZATION.
25. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL APPROVAL. THE GENERAL CONTRACTOR SHALL SIGN THE WRITTEN GUARANTEE AS PROVIDED BY THE OWNER. THE GUARANTEE SHALL COVER ALL GENERAL AND SUBCONTRACTOR WORK. ALL DEFECTS DISCOVERED DURING THIS PERIOD SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
26. ALL DIMENSIONS ARE TO FACE OF STUD OR CENTERLINE OF STRUCTURE UNLESS OTHERWISE NOTED.
27. DOOR AND WINDOW DETAILS ARE INDICATED ON THE FLOOR PLAN. DOOR AND WINDOW DIMENSIONS ARE TO CENTERLINES OF UNITS UNLESS OTHERWISE NOTED.

	Wall Type (see wall type schedule)
	Door Type (see door schedule)
	Window Type (see window schedule)
	Building Section
	Wall Section
	Detail Number
	Building Elevation
	Interior Elevation
	Elevation Mark
	Room Name / Number
	Column Line
	Centerline
	Revision Tag

ELECTRICAL:	
E0.0	ELECTRICAL SYMBOLS
	LEGEND
E0.1	ELECTRICAL SITE PLAN
E1.0	MAIN BUILDING - FIRST
	FLOOR LIGHTING
	PLAN
E1.1	MAIN BUILDING - SECOND
	FLOOR LIGHTING
	PLAN
E2.0	MAIN BUILDING - FIRST
	FLOOR POWER PLAN
E2.1	MAIN BUILDING - SECOND
	FLOOR POWER PLAN
E3.0	MAIN BUILDING -
	ELECTRICAL
	SPECIFICATIONS
E3.1	MAIN BUILDING -
	ELECTRICAL
	SPECIFICATIONS

A0.0

SHEET

Q.C. — —

Code Research

International Building Code 2024 (IBC) w/ND Amendments

Information		Reference
Occupancy	Group B and R-2	Section 311.3 (IBC 2024)
Construction Type	Type V-B	Table 601 (IBC 2024)
Building Area	Total Area Per Floor	See Floor Plans
First Floor (B)	4,016 sf	
Second Floor (R-2)	3,487 sf	
Total:	7,503 sf	
Fully-Sprinklered	Yes Group B and R-2	Section 903 (IBC 2024)
Occupancy Separation	1 Hr. (Group B and R-2)	Table 508.4 (IBC 2024)

Building Height

Maximum Height in Feet	33' - 0"
Maximum Number of Stories	2 Stories

Construction Fire-Resistance Rating Requirements

	Construction Type: Type V-B	
Primary Structural Frame	0 Hr.	Table 601 (IBC 2024)
Exterior Bearing Walls	0 Hr.	Table 601 (IBC 2024)
Interior Bearing Walls	0 Hr.	Table 601 (IBC 2024)
Ext. Nonbearing Walls & Partitions	See Table 705.5	Table 601 (IBC 2024)
Int. Nonbearing Walls & Partitions	0 Hr.	Table 601 (IBC 2024)
Floor/Ceiling Construction & Assoc. Secondary Structural Members	0 Hr.	Table 601 (IBC 2024)
Roof Construction & Assoc. Secondary Structural Members	0 Hr.	Table 601 (IBC 2024)
Shaft Enclosures	1 Hr.	Section 713 (IBC 2024)
Exit Corridors	N/A	Section 1020 (IBC 2024)
Interior Exit Stairways	1 Hr.	Section 1023 (IBC 2024)
Exit Passageways	N/A	Section 1024 (IBC 2024)
Exit Discharge	N/A	Section 1028 (IBC 2024)

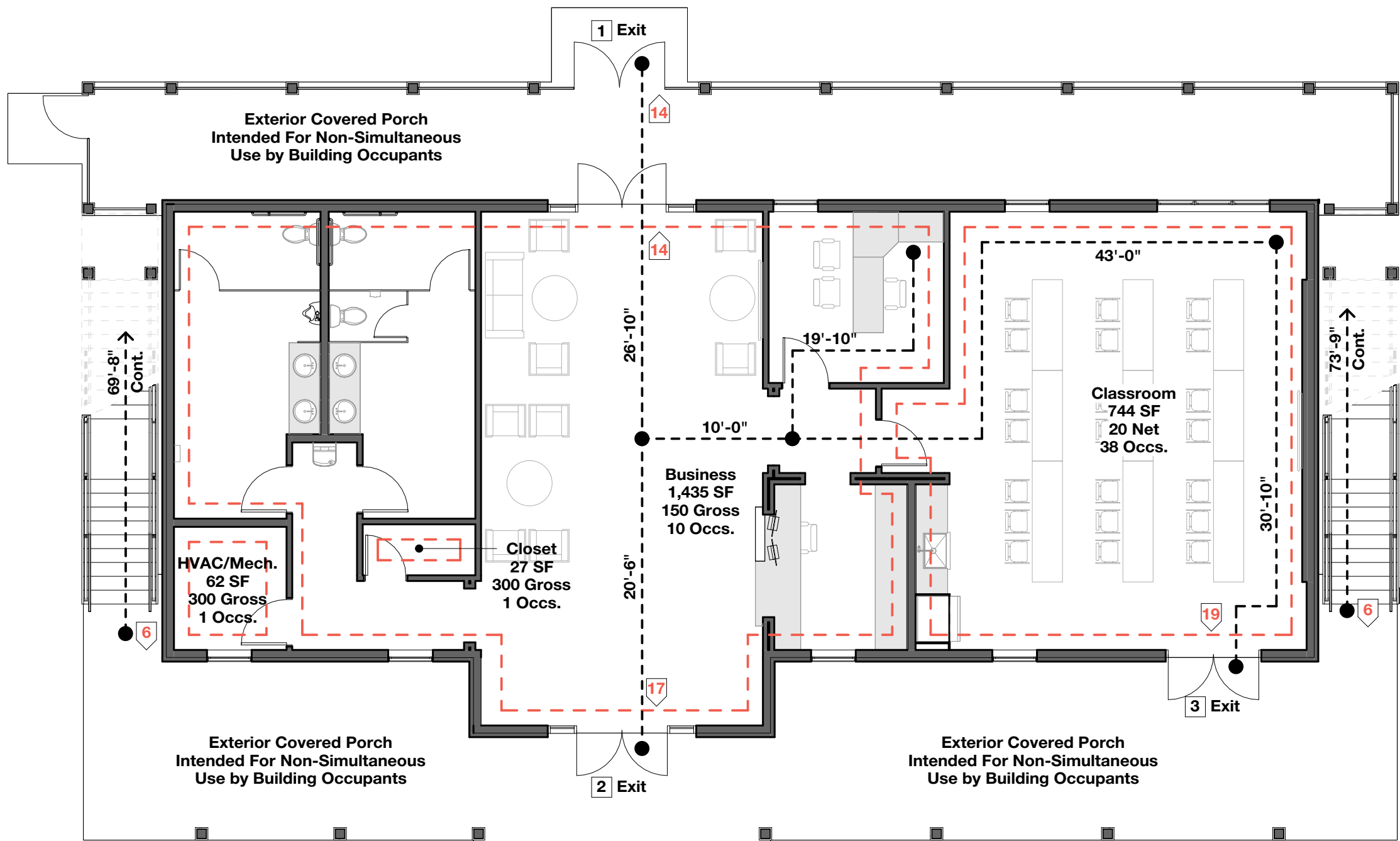
Light, Ventilation, & Sanitation

Lighting	Natural & Mechanical - By Others		
Ventilation	Natural & Mechanical - By Others		
Occupant Load	B Occupancy = 50 Occs.		R-2 Occupancy = 12 Occs.
	Men = 25 Occs.	Women = 25 Occs.	
Water Closets Required	1	1	1 Per Unit (3)
Water Closets Provided	1	2	3
Lavatories Required	1	1	1 Per Unit (3)
Lavatories Provided	2	2	3
Urinals Provided	1	N/A	N/A
Drinking Fountains Required	1 per 1,000 = 1		N/A
Drinking Fountains Provided	1		All Meet Barrier-Free Requirements
Service Sinks Required	1		1 Kitchen Sink Per Unit (3)
Service Sinks Provided	1		3

Egress Information

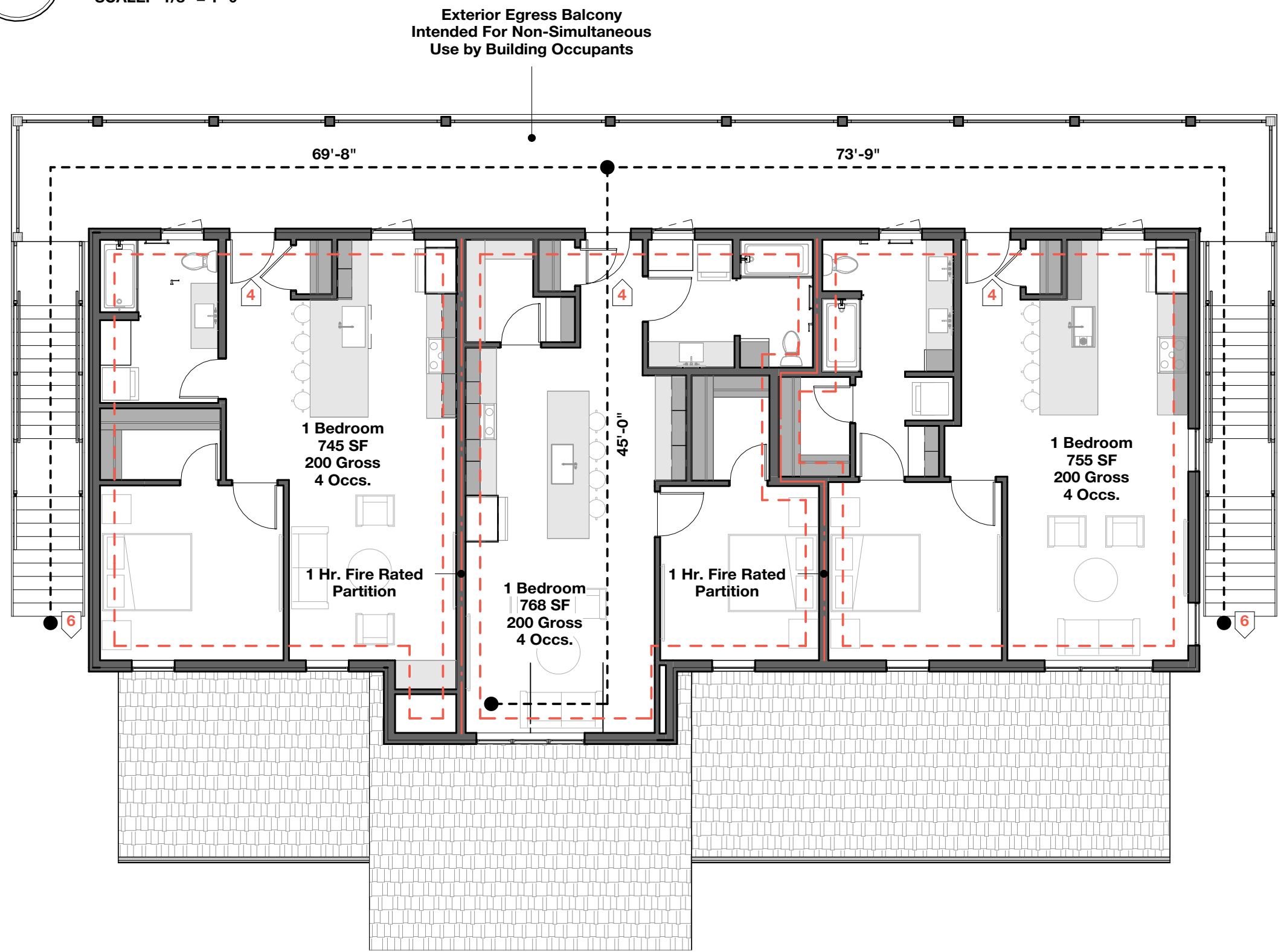
Total Occupant Load (Group B and R-2)	Total for Building = 62 Occs.	
Minimum Egress Height	7'-6" Minimum	Section 1003.2 (IBC 2024)
Minimum Exit Width Req'd (Sprinklered Building)	First Floor Exits (62 x .15 = 9.3") 9.3" / 3 = 3.1" per Exit	Section 1005 (IBC 2024)
Exit Width Provided	3 Exits @ 64" = 192" CLR	Section 1005 (IBC 2024)
Minimum Egress Width	32" Clear	Section 1005 (IBC 2024)
Common Path of Egress Travel	B = 100'-0" (Sprinklered Building) R-2 = 125'-0" (Sprinklered Building)	Table 1006.2.1 (IBC 2024)
Number of Exits Req'd	2	Table 1006.3.3 (IBC 2024)
Exit Door Minimum Width	32" Clear	Section 1010.1.1 (IBC 2024)
Exit Door Minimum Height	80" Clear	Section 1010.1.1 (IBC 2024)
Exit Access Travel Distance	B = 300'-0" (Sprinklered Building) R-2 = 250'-0" (Sprinklered Building)	Table 1017.2 (IBC 2024)
Dead End Corridors	50' (Sprinklered Building)	Section 1020.5 (IBC 2024)
Smokeproof Enclosures	N/A	Section 1023.12 (IBC 2024)
Horizontal Exits	N/A	Section 1026 (IBC 2024)
Area of Refuge	N/A	Section 1009.3.3 (IBC 2024)

Exit Width at Doors				Exit Width at Stairs			
Doors	Occupant Load	Min. Required	Provided	Stairs	Occupant Load	Min. Required	Provided
Exit #1	14 Occ.	2.1 inches	64.0 inches	Stairs #1	6	1.20 inches	46.0 inches
Exit #2	17 Occs.	2.55 inches	64.0 inches	Stairs #2	6	1.20 inches	46.0 inches
Exit #3	19 Occs.	2.85 inches	64.0 inches				



1 First Floor Code Plan

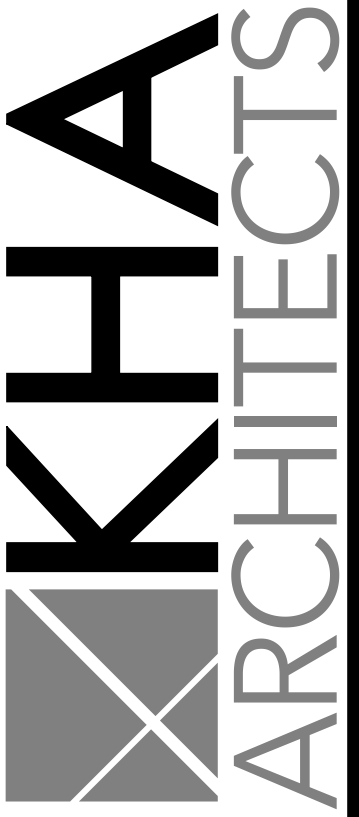
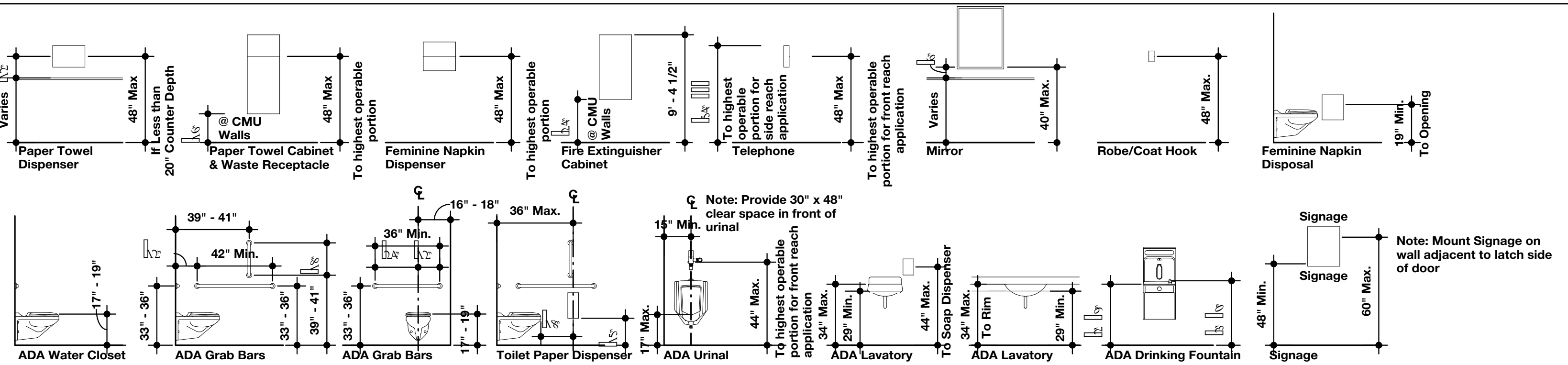
SCALE: 1/8" = 1'-0"



2 Second Floor Code Plan

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

Standard Mounting Heights/ADA Requirements



72-185 PAINTERS PATH
SUITE A
PALM DESERT, CA
92260
760.776.4068

INSTRUMENTS OF SERVICE
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ARCHITECTS, INC.

CITY APPROVAL:

TRMF RIDING STABLES - MAIN BUILDING
14532 194 Loop East
ND 58645



REVISION LIST	
SCHEMATIC	
DESIGN DEV.	
CONST. DOCS.	
CITY SUB. 1	
CITY SUB. 2	
CONSTR. REV 1	
CONSTR. REV 2	
CONSTR. REV 3	

PROJECT # : 2515
CONTACT : KRISTI
SCALE: AS NOTED

CODE PLANS

DATE: 08/07/26
Q.C. _____

GENERAL STRUCTURAL NOTES

GENERAL DESIGN AND CONSTRUCTION:

- (1) ALL WORK SHALL COMPLY WITH THE 2024 INTERNATIONAL BUILDING CODE (IBC 2024).
- (2) DESIGN LOADS:
- PROJECT LOCATION: MEDORA, NORTH DAKOTA
BUILDING RISK CATEGORY = II
- WIND LOADS: PER ASCE 7-22, EXPOSURE CATEGORY "C", $V_W = 110$
V. BASIC WIND SPEED (MAAPPED 3-SECOND GUST) = 112 MPH (RISK CATEGORY II)
- SNOW LOAD: PER ASCE 7-22 (ALSO SEE PLAN FOR POTENTIAL ADDITIONAL SNOW DRIFTING SPECIFICED AS ULTIMATE SNOW DRIFT)
CALCULATED ROOF SNOW, $P_F = 35$ PSF (ALLOWABLE) (AFTER 0.7 ASD FACTOR)
GROUND SNOW (MAAPPED), $P_G = 34$ PSF (ULTIMATE)
 $S = 1.0$, $C_E = 1.0$, $C_T = 1.0$, $W_0 = 0.45$
- SEISMIC LOADS PER ASCE 7 (MEDORA, ND)
SITE CLASS = D (ASSUMED), $S_S = 0.058$, $S_1 = 0.025$, $I_E = 1.0$
SITE COEFFICIENT, $F_A = 1.6$, SITE COEFFICIENT, $F_V = 2.4$
SEISMIC DESIGN CATEGORY A
- TOTAL ROOF DEAD LOAD = 20 PSF
- TOTAL FLOOR DEAD LOAD = 25 PSF (W/ GYPCRETE)
EXTERIOR PATIO PAVEMENT/FLOOR TOTAL DEAD LOAD = 45 PSF (INCLUDING 25 PSF PEDESTAL PAVEMENT SYSTEM)
- FLOOR LIVE LOAD = 40 PSF UNIFORM LOAD (RESIDENTIAL)
- STAIR DEAD LOAD = 20 PSF
STAIR LIVE LOAD = 100 PSF
- (3) DESIGN PARAMETERS:
- HORSE STALL BUILDING WILL NOT BE PERMANENTLY HEATED
-GARAGE & MAIN BUILDING WILL BE PERMANENTLY HEATED
- (4) SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES.
- (5) THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED. THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF THE STRUCTURE DURING ALL PHASES OF DEMOLITION, CONSTRUCTION AND INSTALLATION. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS OR OTHER PERSONS BY MEANS OF SHORING, BRACING AND JOB SITE SAFETY MEASURES.
- (6) MEANS-AND-METHODS INCLUDING TEMPORARY BRACING AND SHORING AGAINST WIND AND ERECTION IS THE RESPONSIBILITY OF THE CONTRACTOR.
- (7) NO AREA OF THE STRUCTURE SHALL BE LOADED WITH CONSTRUCTION MATERIAL OR EQUIPMENT THAT EXCEEDS FINAL DESIGN LOADING INDICATED.
- (8) VERIFY LOCATION OF BOX-OUTS AND OPENINGS WITH MECHANICAL AND ELECTRICAL CONTRACTORS. OPENING SIZES AND LOCATIONS SHOWN FOR PIPES, DUCTS, ETC. ARE FOR GENERAL INFORMATION ONLY AND SHALL BE VERIFIED WITH THE MECHANICAL AND ELECTRICAL CONTRACTORS BEFORE COMMENCING WITH WORK.
- (9) VERIFY ALL MECHANICAL AND ELECTRICAL EQUIPMENT WEIGHT AND LOCATIONS WITH MECHANICAL AND ELECTRICAL CONTRACTORS AND COMPARE WITH THAT SHOWN ON THE DRAWINGS. IF WEIGHTS AND LOCATIONS DIFFER FROM THAT SHOWN, CONTACT THE STRUCTURAL ENGINEER TO PROVIDE FOR SUPPORT.
- (10) HOLES, PIPES, SLEEVES, ETC. THROUGH STRUCTURAL FRAMING AND FOUNDATIONS THAT ARE NOT SHOWN ON THE DRAWINGS ARE NOT ACCEPTABLE.
- (11) CONTRACTOR SHALL PROVIDE A CAST-IN SLEEVE WHERE DRAIN TILE PASSES THROUGH FOOTINGS OR FOUNDATION WALLS.
- (12) STRUCTURAL ENGINEER'S SEAL ON THE PLAN DOES NOT PROVIDE FOR CONSTRUCTION INSPECTION OR MATERIAL TESTING OF ANY KIND. SEE REQUIREMENTS IN THE PROJECT DOCUMENTS FOR TESTING LABORATORY SERVICES AND INSPECTIONS.
- (13) SHOP DRAWINGS PREPARED BY SUPPLIERS, SUBCONTRACTORS, ETC. SHALL BE DIMENSIONED, REVIEWED, COORDINATED, AND SIGNED/STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE STRUCTURAL ENGINEER. MANUFACTURED COMPONENTS SUCH AS PRE-MANUFACTURED TRUSSES SHALL BE ENGINEERED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE THE PROJECT IS BEING BUILT PRIOR TO SUBMISSION.
- (14) ALL NECESSARY EGRESS EXIT/ENTRY DOORS MUST BE CONSTRUCTED AND MAINTAINED TO OPERATE FREELY AT ALL TIMES PROVIDING EGRESS FROM THE BUILDING AS WELL AS SATISFYING AND MAINTAINING ANY AND ALL ADA REQUIREMENTS. DESIGN AND CONSTRUCTION OF EXTERIOR CONCRETE SIDEWALKS, STOOPS, PAVING, DOOR SILL, ETC., TO PROVIDE AND MAINTAIN EGRESS IN A FROST-FREE MANNER VIA STOOP FOUNDATIONS, NON-FROST SUSCEPTIBLE FILL, FLOWABLE FILL, SHALLOW INSULATED FROST-PROTECTED FOUNDATION OR OTHER MEANS OTHER THAN WHAT IS SHOWN ON THESE CONSTRUCTION DOCUMENTS IS NOT THE RESPONSIBILITY OF CONSTRUCTION ENGINEERS.
- (15) CONSTRUCTION MAY PROVIDE PERIODIC OBSERVATIONS TO ASSURE CONFORMANCE WITH DESIGN INTENT OF THE CONSTRUCTION DOCUMENTS. HOWEVER, THESE OBSERVATIONS ARE NOT MEANT TO FULFILL THE REQUIREMENTS OF THE IBC REQUIRED SPECIAL INSPECTIONS. CONSTRUCTION IS NOT CONSIDERED A QUALIFIED "SPECIAL INSPECTOR" AS IT RELATES TO REQUIRED BUILDING CODE. REFER TO THE SPECIAL INSPECTIONS NOTES BELOW.
- (16) CONSTRUCTION IS NOT RESPONSIBLE FOR LIFE SAFETY (I.E. EGRESS REQUIREMENTS) OR FIRE CODE (I.E. FIREWALLS, FIRE BARRIERS, STAIRS) REQUIREMENTS. G.C. AND/OR OWNER REQUIRED TO CONSULT DESIGN PROFESSIONAL FOR ALL LIFE SAFETY AND FIRE CODE REQUIREMENTS.
- (17) CONSTRUCTION IS NOT RESPONSIBLE FOR ANY MOISTURE PROTECTION, INSULATION, OR BUILDING ENVELOPE DESIGN. G.C. AND/OR OWNER REQUIRED TO CONSULT DESIGN PROFESSIONAL FOR ALL REQUIRED BUILDING ENVELOPE DESIGN AND DETAILS.

STATEMENT OF SPECIAL INSPECTIONS:

- (1) SPECIAL INSPECTIONS AND STRUCTURAL TESTING SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER, UNLESS SPECIFIED DIFFERENTLY IN PROJECT SPECIFICATIONS. FOR THE ITEMS IDENTIFIED IN THIS SECTION AND IN OTHER AREAS OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS, UNLESS WAIVED BY THE BUILDING OFFICIAL

(SEE IBC CHAPTER 17).

- (2) THE NAMES AND CREDENTIALS OF THE SPECIAL INSPECTORS TO BE USED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL.

- (3) DUTIES OF THE SPECIAL INSPECTOR:
- THE SPECIAL INSPECTOR SHALL REVIEW ALL WORK LISTED BELOW FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AND THE IBC.
 - THE SPECIAL INSPECTOR SHALL FURNISH SPECIAL INSPECTION REPORTS TO THE EOR, CONTRACTOR, OWNER AND BUILDING OFFICIAL ON A WEEKLY BASIS, OR MORE FREQUENTLY AS REQUIRED BY THE BUILDING OFFICIAL. ALL ITEMS NOT IN COMPLIANCE SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND IF UNCORRECTED, TO THE EOR AND THE BUILDING OFFICIAL.
 - ONCE CORRECTIONS HAVE BEEN MADE BY THE CONTRACTOR, THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT TO THE BUILDING OFFICIAL STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AS WELL AS THE APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC.

(4) DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:

- THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE OWNER AND THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF WORK. IN ACCORDANCE WITH IBC 1704.4, THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED WITHIN THE "STATEMENT OF SPECIAL INSPECTIONS".
- THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE SPECIAL INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORK DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
- ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT HAS BEEN OBSERVED BY THE SPECIAL INSPECTOR.

(1) REQUIRED SPECIAL INSPECTIONS (PER IBC 2024):

CONCRETE (IBC SECTION 1705.3): SPECIAL INSPECTIONS TO BE PERFORMED PER "REQUIRED SPECIAL INSPECTION SCHEDULE" TABLE LOCATED WITHIN THESE CONSTRUCTION DOCUMENTS AND ALSO CALLED OUT IN THE IBC TABLE 1705.3. (EXCEPTION: SPECIAL INSPECTIONS ARE NOT REQUIRED FOR CONCRETE IN THE FOLLOWING CASES:

- ISOLATED SPREAD CONCRETE FOOTINGS OF BUILDINGS THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.
- CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDINGS THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK WHERE:
 - THE FOOTINGS SUPPORTING WALLS OF LIGHT-FRAMED CONSTRUCTION
 - THE FOOTINGS ARE DESIGNED IN ACCORDANCE WITH TABLE 1809.7 OF THE IBC.
 - THE STRUCTURAL DESIGN OF THE FOOTING IS BASED ON A SPECIFIED COMPRESSIVE STRENGTH, F'_C , NOT MORE THAN 2,500 PSI, REGARDLESS OF THE COMPRESSIVE STRENGTH SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS OR USED IN THE FOOTING CONSTRUCTION.
- NONSTRUCTURAL CONCRETE SLABS SUPPORTED DIRECTLY ON THE GROUND, INCLUDING PRESTRESSED SLABS ON GRADE, WHERE THE EFFECTIVE PRESTRESS IN THE CONCRETE IS LESS THAN 150 PSI.
- CONCRETE FOUNDATION WALLS CONSTRUCTED IN ACCORDANCE WITH TABLE 1807.1.6.2.
- CONCRETE PATIOS, DRIVEWAYS AND SIDEWALKS, ON GRADE.)

STRUCTURAL WOOD (IBC SECTION 1705.11.1 & IBC SECTION 1705.11.3): CONTINUOUS SPECIAL INSPECTION IS REQUIRED DURING FIELD GLUING OPERATIONS OF ELEMENTS OF THE MAIN WINDFORCE-RESISTING SYSTEMS. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR NAILING, BOLTING, ANCHORING, AND OTHER FASTENING OF ELEMENTS OF THE MAIN WINDFORCE-RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUCT, BRACES, AND HOLD-DOWNS. (EXCEPTION: SPECIAL INSPECTIONS ARE NOT REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING, AND OTHER FASTENING TO OTHER ELEMENTS OF THE MAIN WINDFORCE-RESISTING SYSTEM WHERE FASTENER SPACING OF THE SHEATHING IS MORE THAN 4 INCHES ON CENTER.)

WIND-RESISTING COMPONENTS (IBC SECTION 1705.11.3): PERIODIC SPECIAL INSPECTION IS REQUIRED FOR FASTENING OF THE FOLLOWING SYSTEMS AND COMPONENTS:

- ROOF COVERINGS, ROOF DECK, AND ROOF FRAMING CONNECTIONS.
- EXTERIOR WALL COVERING, AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING (I.E. WOOD STUDS, STEEL STUDS, CMU WALLS, ETC.)

SOIL (IBC SECTION 1705.6): SPECIAL INSPECTIONS TO BE PERFORMED PER TABLE 1705.6 LOCATED BOTH IN THE IBC AND WITHIN THESE CONSTRUCTION DOCUMENTS.

STRUCTURAL STEEL & STEEL JOISTS (IBC SECTION 1705.2, 1705.11, & 1705.12, AND AISC 360): SPECIAL INSPECTIONS TO BE PERFORMED PER "REQUIRED SPECIAL INSPECTION OF STRUCTURAL STEEL" TABLE LOCATED WITHIN THESE CONSTRUCTION DOCUMENTS AND ALSO CALLED OUT IN THE IBC & AISC.

WOOD TRUSSES (IBC SECTION 1704.2.5 & 1705.5.2): PREFABRICATED WOOD TRUSSES ARE REQUIRED TO BE INSPECTED PER SECTION 1705.2. IN ADDITION TO SECTION 1705.2, WHERE TRUSS CLEAR SPAN IS 60 FEET OR GREATER, THE SPECIAL INSPECTOR SHALL VERIFY THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE.

- (6) PLEASE SEE THE "SPECIAL INSPECTION SCHEDULES/TABLES" FOR THE TYPES, EXTENTS AND FREQUENCY OF SPECIFIC ITEMS REQUIRING SPECIAL INSPECTIONS AND STRUCTURAL TESTS AS PART OF THIS PROJECT. INSPECTIONS AND TESTING INDICATED IN THE SPECIAL INSPECTION TABLES ARE GUIDELINES TO THE REQUIRED INSPECTION AND TESTING REQUIRED BY THE BUILDING CODE FOR THE PARTICULAR BUILDING. THE IBC AND REFERENCED TESTING/INSPECTION STANDARDS SHALL BE REVIEWED AND FOLLOWED BY THE INSPECTING AGENCY TO ENSURE THAT ALL REQUIRED TESTING/INSPECTION AND PROCEDURE FOR TESTING/INSPECTION IS ACHIEVED.

FOUNDATIONS:

- (1) ASSUMED GEOTECHNICAL DESIGN VALUES - ALL CONCRETE FOUNDATION DESIGNS ARE BASED ON ASSUMED GEOTECHNICAL DESIGN VALUES TO BE CONFIRMED BY A GEOTECHNICAL ENGINEER. ALL FOUNDATION EXCAVATIONS MUST BE OBSERVED AND ALL ASSUMED DESIGN VALUES STATED BELOW SHALL BE VERIFIED IN WRITING BY A LICENSED GEOTECHNICAL ENGINEER FOLLOWING ON-SITE OBSERVATION PRIOR TO FABRICATING STEEL AND PLACING CONCRETE ANY CONCRETE. ALL ASSUMED GEOTECHNICAL DESIGN VALUES ARE AS FOLLOWS:

- MINIMUM SOIL BEARING CAPACITY = 2,000 PSF
- BACKFILL SOIL UNIT WEIGHT (γ) = 110 PCF (DRY)
- MAXIMUM LATERAL PRESSURE VALUES (GRANULAR BACKFILL WITH DRAINTILE):
 - ACTIVE PRESSURE: 41 PCF

- AT-REST PRESSURE: 60 PCF
- PASSIVE PRESSURE: 250 PCF
- COEFFICIENT OF FRICTION (CONCRETE ON SOIL): 0.35

- (2) ALL FOOTINGS SHALL BEAR ON NATURAL, UNDISTURBED SOIL. ALL NATURAL BEARING MATERIAL SHALL BE APPROVED IN WRITING BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOOTING CONCRETE.

- (2) ALL SEEPAGE SHALL BE CONTINUOUSLY PUMPED FROM EXCAVATIONS UNTIL THE GEOTECHNICAL ENGINEER OF RECORD DETERMINES SUCH SEEPAGE NO LONGER IMPACTS THE BEARING SOILS OR ENGINEERED FILL OR CONSTRUCTION OF FOOTINGS AND FLOOR SLABS.

- (3) POSITIVE DRAINAGE SHALL BE OBTAINED AWAY FROM THE STRUCTURES AND CARE REQUIRED FOR BACKFILLING AND DRAINAGE OF UTILITY TRENCHES DURING CONSTRUCTION SHALL BE PROVIDED PER THE GEOTECHNICAL REPORT AND THE CIVIL DRAWINGS.

- (4) EXCAVATIONS SHALL BE PERFORMED IN ACCORDANCE WITH ALL GOVERNING SAFETY REGULATIONS INCLUDING OSHA. THERE SHALL BE NO SURCHARGE LOAD FROM VEHICLES, EQUIPMENT, MATERIALS, SOIL PILES ETC. NEAR THE CREST OF THE EXCAVATION SLOPES PER THE GEOTECHNICAL REPORT. THE RESPONSIBILITY FOR EXCAVATION SAFETY AND TEMPORARY CONSTRUCTION SLOPES LIES SOLELY WITH THE CONTRACTOR.

- (5) A 6" THICK AGGREGATE BASE COURSE ACTING AS A CAPILLARY BREAK AND A VAPOR BARRIER SHALL BE PLACED BELOW ALL INTERIOR SLABS-ON-GRADE PER THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS. A MINIMUM 15 MIL VAPOR BARRIER SHALL BE PLACED ON TOP OF THE AGGREGATE BASE AND DIRECTLY BELOW THE SLAB WITH ALL SEAMS OVERLAPPED A MINIMUM OF 6" AND TAPED. THE SLAB SHALL BE PROPERLY CURED AS INDICATED IN THESE GENERAL STRUCTURAL NOTES AND THE PROJECT SPECIFICATIONS AS WELL AS PER THE RECOMMENDATIONS OF THE AGI TO AVOID CURLING.

- (6) CLEAN FOOTING EXCAVATIONS OF SNOW, WATER, MUD, LOOSE SOIL AND DEBRIS PRIOR TO PLACING FOOTING CONCRETE.

- (7) FOOTINGS MAY NOT BE EARTH FORMED.

- (8) ALL FOOTINGS ARE CENTERED UNDER THE PIERS, COLUMNS OR WALLS THEY SUPPORT, EXCEPT AS NOTED OTHERWISE.

- (9) EXCAVATIONS AND BACKFILL SHALL BE EXECUTED AND TESTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SOILS REPORT.

- (10) FOOTING EXCAVATIONS SHALL BE TO PROPER LINE AND LEVEL TO INSURE MINIMUM CONCRETE COVER OF FOOTING REINFORCEMENT FOR FOOTING DEPTH.

- (11) BACKFILL SHALL BE COMPACTED BY MECHANICAL MEANS.

- (12) BACKFILL SHALL NOT BE PLACED AGAINST FOUNDATION WALLS UNTIL WALLS UNTIL THE CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO RESIST LATERAL PRESSURE AND HAS ADEQUATE DURABILITY.

- (13) PLACE ALL BACKFILL ACCORDING TO THE RECOMMENDATIONS OF AN INDEPENDENT TESTING AGENCY AND A LICENSED GEOTECHNICAL ENGINEER.

- (14) PROTECT ALL FOUNDATIONS FROM THE ACTION OF WATER AND FREEZING.

- (15) SEE MECHANICAL, ELECTRICAL AND ARCHITECTURAL CONTRACTORS FOR ALL OPENINGS AND INSERTS NOT SHOWN ON THE STRUCTURAL DRAWINGS. ALL OPENINGS AND INSERTS SHALL BE PLACED PRIOR TO CASTING CONCRETE.

- (16) NON-FROST SUSCEPTIBLE GRANULAR FILL IS TO CONSIST OF GRANULAR MATERIAL WITH LESS THAN 5% PASSING THE #200 SIEVE AND NO MORE THAN 40% PASSING THE #40 SIEVE.

CONCRETE:

- (1) CONCRETE MIX DESIGN(S) SHALL BE BY AN INDEPENDENT TESTING LABORATORY AND SHALL BE DEVELOPED TO MEET THE DESIGN DRAWINGS AND SPECIFICATIONS AT THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

- (2) CONCRETE MIX DESIGNS: ALL CEMENT IS TO BE PORTLAND LESTONE CEMENT (PLC) MEETING ASTM C595 WITH CEMENT TYPE AS INDICATED IN THE FOLLOWING MIX DESIGN(S) AND WITH MAXIMUM ALKALI CONTENT (NAEQ) = 0.60%.

FOOTINGS ARE TO HAVE A CONCRETE MIX DESIGN CONSISTING OF TYPE 1L CEMENT (6 SACK MIN.) AND A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI, 25% MAX FLY ASH ALLOWED, 3/4" MAX AGGREGATE SIZE, 4" MAX SLUMP, 0.45 MAX WATER-TO-CEMENT RATIO, 5% TO 7% AIR ENTRAINMENT, WATER REDUCING ADMIXTURE OK, NO AIR ENTRAINMENT, WATER REDUCING ADMIXTURE OK.

FOUNDATION WALLS ARE TO HAVE A CONCRETE MIX DESIGN CONSISTING OF PLC TYPE 1L (6 SACK MIN.) AND A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI, 25% MAX FLY ASH ALLOWED, 3/4" MAX AGGREGATE SIZE, 4" MAX SLUMP, 0.45 MAX WATER-TO-CEMENT RATIO, 5% TO 7% AIR ENTRAINMENT, WATER REDUCING ADMIXTURE OK, MID RANGE PLASTICIZER OK, SUPER PLASTICIZER REQUIRES PRIOR APPROVAL.

INTERIOR SLABS-ON-GRADE ARE TO HAVE A CONCRETE MIX DESIGN CONSISTING OF TYPE 1L CEMENT (6 SACK MIN.) AND A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI, 25% MAX FLY ASH (NOTE: FLY ASH WILL RETARD INITIAL SET TIME), 3/4" MAX AGGREGATE SIZE, 4" MAX SLUMP, 0.45 MAX WATER-TO-CEMENT RATIO, 5% TO 7% AIR ENTRAINMENT, WATER REDUCING ADMIXTURE OK, MID RANGE AND SUPER PLASTICIZER REQUIRES PRIOR APPROVAL.

FLOWABLE FILL CONCRETE (CONTROLLED DENSITY FILL - CDF) IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 150 PSI AND A MAXIMUM STRENGTH OF 200 PSI AND IS TO CONSIST OF WATER, PORTLAND CEMENT, FINE AGGREGATE AND FLY ASH TO BE SELF-LEVELING, NOT NEEDING VIBRATION OR COMPACTION WITH A DENSITY OF 100 TO 125 PCF.

EXTERIOR EXPOSED ELEVATED SLABS (STOOP SLABS) ARE TO HAVE A CONCRETE MIX DESIGN CONSISTING OF TYPE 1L CEMENT (6 SACK MIN.) AND A 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI, 30% MAX FLY ASH (NOTE: FLY ASH WILL RETARD INITIAL SET TIME), 3/4" MAX AGGREGATE SIZE, 3" MAX SLUMP, 0.41 MAX WATER-TO-CEMENT RATIO, 5% TO 7% AIR ENTRAINMENT, WATER REDUCING ADMIXTURE OK, MID RANGE OK, SUPER PLASTICIZER REQUIRES PRIOR APPROVAL.

GROUT FOR STEEL BASE PLATES AND BEARING PLATES IS TO BE OF THE NON-SHRINK NON-METALLIC TYPE MEETING ASTM C1107 WITH A MAXIMUM SLUMP OF 3" AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI. FOLLOW MANUFACTURER'S DIRECTIONS FOR USE.

- (3) CONCRETE AGGREGATE SHALL MEET ASTM C33 WITH A MAXIMUM SHALE OR DELETERIOUS MATERIAL CONTENT OF 1%.

- (4) FLY ASH OF "TYPE C MEETING CLASS F" MAY BE SUBSTITUTED BY WEIGHT FOR CEMENT UP TO MAXIMUM LIMITS INDICATED IN EACH CONCRETE MIX DESIGN.

- (5) MID-RANGE PLASTICIZER MEETING ASTM C494 TYPE D IS ACCEPTABLE IF NOTED IN MIX DESIGN. MIX IS TO HAVE A MAXIMUM SLUMP AS INDICATED ABOVE FOR THE PARTICULAR MIX DESIGN PRIOR TO ADDING THE MID-RANGE. ADJUST AIR CONTENT AS REQUIRED BY THE SUPPLIER DUE TO THE USE OF THE MID-RANGE AND ITS PROJECTED EFFECT ON THE AIR CONTENT. TEST FOR AIR AFTER MID-RANGE ADDITION TO ACHIEVE RANGE SPECIFIED. SLUMP IS TO BE TESTED TO MEET THAT SPECIFIED ABOVE FOR PARTICULAR MIX DESIGN PRIOR TO ADDING MID-RANGE PLASTICIZER AND NO ADDITIONAL WATER MAY BE ADDED AFTER SLUMP TEST.

- (6) AIR ENTRAINING AGENTS SHALL MEET ASTM C260.

- (7) CONCRETE CONSTRUCTION SHALL CONFORM TO THE AGI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318.

- (8) HOT WEATHER CONCRETING PER ACI 308R AND COLD WEATHER PLACEMENT PER ACI 306R SHALL BE FOLLOWED WHERE WEATHER CONDITIONS WARRANT.

- (9) SLABS SHALL BE CURED WITH A CURING COMPOUND AS INDICATED IN THE SPECIFICATIONS AND PER THE RECOMMENDATIONS OF THE AGI CODE RELATIVE TO EXPOSURE TO SUNLIGHT, WIND, TEMPERATURE, ETC.

- (10) FORMS SHALL BE LEFT ON ALL WALLS FOR A MINIMUM OF 2 DAYS OR LONGER AS REQUIRED AT THE DISCRETION OF THE CONTRACTOR.

- (11) A CONTINUOUS BOND BREAK, SUCH AS 3/8" ASPHALTIC FIBER BOARD EXPANSION JOINT MATERIAL, SHALL BE PLACED BETWEEN THE CONCRETE SLAB AND THE PERIMETER FOUNDATION WALLS.

- (12) ALL CONCRETE POURS SHALL BE TESTED FOR STRENGTH (PER ASTM C31 AND C39), SLUMP AND AIR CONTENT. TEST ONE CYLINDER AT 7 DAYS, ONE AT 14 DAYS, TWO AT 28 DAYS AND HOLD ONE CYLINDER.

- (13) ALL CONCRETE REINFORCING SHALL MEET ASTM SPECIFICATION A615, GRADE 60.

- (14) REINFORCING STEEL SHALL BE BENT AND PLACED IN ACCORDANCE WITH THE AGI CODE. ALL TENSION SPLICES SHALL BE CLASS "B", 48 BAR DIAMETERS, MINIMUM. ALL COMPRESSION SPLICES SHALL BE 40 BAR DIAMETERS (MINIMUM), UNLESS NOTED OTHERWISE. LAP ALL CORNER BARS.

- (15) PROVIDE ADEQUATE SUPPORT BARS AND ACCESSORIES TO HOLD ALL REBAR FIRMLY IN PLACE.

- (16) ALL SLABS ARE TO BE REINFORCED WITH BARS LOCATED AS CALLED OUT ON STRUCTURAL DRAWINGS. G.C. MUST USE REBAR SUPPORT CHAIRS TO HOLD ALL SLAB BARS FIRMLY IN THEIR REQUIRED LOCATION DURING POURING. CHAIRS ARE TO BE PLACED FREQUENTLY ENOUGH TO ENSURE NO MORE THAN 1/4" OF SAG IS PRESENT IN ANY REINFORCING BARS.

- (17) CONCRETE COVER FOR REINFORCING SHALL BE PER ACI 318.

- (18) SLABS-ON-GRADE ARE TO BE REINFORCED AS SHOWN ON PLANS AND DETAILS. PLACE SLABS WITH CONSTRUCTION AND CONTRACTION JOINTS PER DETAILS.

- (19) OPENINGS IN CONCRETE SHALL BE REINFORCED WITH (2)- #5 BARS EACH SIDE, EXTENDING 30" PAST THE FACE OF THE OPENING UNLESS OTHERWISE NOTED.

- (20) INTERIOR CONCRETE SLABS-ON-GRADE WITHIN PERMANENTLY HEATED AREAS (NO AIR-ENTRAINMENT) MUST NOT BE ALLOWED TO FREEZE AFTER POURING. SUSPEND SOIL TEMPERATURE BENEATH INTERIOR SLABS-ON-GRADE MUST BE MAINTAINED ABOVE FREEZING AT ALL TIMES AFTER POURING. CONCRETE SHALL NOT BE POURED ON FROZEN SOILS.

- (21) ALL REINFORCING SPECIFIED FOR INTERIOR SLABS-ON-GRADE AND ELEVATED SLABS SHALL BE SUPPORTED ADEQUATELY AND FIRMLY ON CHAIRS TO MAINTAIN THE CLEAR DISTANCES SPECIFIED.

- (22) NO ELECTRICAL CONDUITS OR OTHER PIPING SHALL BE DIRECTLY ATTACHED TO THE REINFORCING STEEL OR OTHERWISE SUSPENDED WITHIN IN CONCRETE SLAB-ON-GRADE OR ELEVATED SLABS NOR SHALL CONDUIT OR PIPING OF ANY KIND BE PLACED ON TOP OF METAL FORM/DECK OR COMPOSITE DECKING. ALL CONDUIT OR PIPING MUST BE ATTACHED TO THE UNDERSIDE OF THE SLAB/DECKING AFTER THE CONCRETE HAS BEEN CAST AND CURED AND SHALL PENETRATE THE SLAB/DECKING AT PLANNED LOCATIONS. SEE PLANS AND TYPICAL DETAILS FOR PENETRATIONS IN ELEVATED SLABS.

- (23) ALL VERTICAL WALL AND PIER BARS MUST BE EXTENDED TO WITHIN 2" OF THE TOP OF FOUNDATION WALLS UNLESS SHOWN OTHERWISE ON THE DRAWINGS. ALL HORIZONTAL FOUNDATION WALL BARS MUST BE PLACED WITHIN 4" OF THE TOP AND BOTTOM OF THE WALL UNLESS SHOWN OTHERWISE.

- (24) ALL EPOXY-SET REBAR DOWELING TO CONCRETE SHALL BE HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM, DEVALT AC200+ WITH DUSTX+ HOLLOW DRILL BIT SYSTEM, OR EQUAL, EXCEPT AS NOTED OTHERWISE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

- (25) ALL ADHESIVE ANCHOR INSTALLATIONS IN THE HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE CONDUCTED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER AS CERTIFIED BY AGI PER ACI 318-11 9.2.2 OR ACI 318-14 17.8.2.2 OR ACI 318-19 17.2.3 OR APPROVED EQUIVALENT. CURRENT AGI CERTIFICATE MUST BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY ADHESIVE ANCHOR INSTALLATIONS.

STRUCTURAL STEEL:

- (1) STRUCTURAL STEEL WORK IS TO BE PER AISC SPECIFICATIONS. STEEL GRADE SHALL BE ASTM A992 (FY=50 KSI) FOR WIDE FLANGE SHAPES, ASTM A500, GRADE B (FY=48 KSI) FOR COLD-FORMED STEEL TUBES AND ASTM A36 (FY=36 KSI) FOR OTHER SHAPES EXCEPT AS NOTED OTHERWISE ON THE DRAWINGS.

- (2) BEAMS AND COLUMNS SHALL BE ERECTED TRUE AND PLUMB. PROVIDE TEMPORARY BRACING.

- (3) BEARING PLATES FOR STEEL BEAMS AND COLUMNS SHALL BE DRY PACKED WITH DRY GROUT AS SPECIFIED.

- (4) ALL BOLTS IN STRUCTURAL STEEL CONNECTIONS SHALL BE ASTM F3125, GROUP A, STANDARD HEAVY HEX HEAD OR TWIST-OFF TENSION CONTROL (TC) HIGH-STRENGTH BOLTS, EXCEPT AS NOTED OTHERWISE.

- (5) ALL ANCHOR RODS FOR STRUCTURAL STEEL COLUMNS SHALL BE ASTM F1554, GRADE 36 (FY=36 KSI) THREADED ROD WITH A NUT ON THE EMBEDDED END AS INDICATED ON THE DRAWINGS.

- (6) ALL SCREEN ANCHORS SHALL BE CARBON STEEL HILTI Kwik-Hus-EZ OR DEVALT SCREX-BOLT+, EXCEPT AS NOTED OTHERWISE. INSTALL BOLTS PER MANUFACTURER'S RECOMMENDATIONS WITH BOLT EMBEDMENT DEPTH INTO CONCRETE AS INDICATED ON STRUCTURAL DRAWINGS.

- (7) ALL EPOXY-SET THREADED ROD ANCHORAGE TO CONCRETE SHALL BE HILTI HIT-HY 200 SAFE SET SYSTEM WITH CARBON-STEEL ANCHORS (ANCHORS ARE TO CONSIST OF WAS-B-100 (FY=105 KSI) THREADED ROD MATERIAL MEETING ASTM 193, GRADE B1 PLACED IN HOLES CLEANED WITH

THE HILTI HOLLOW DRILL BIT SYSTEM, EXCEPT AS NOTED OTHERWISE) OR DEVALT AC200+ ADHESIVE SYSTEMS WITH FY=105 KSI THREADED ROD MATERIAL MEETING ASTM 193, GRADE B1 PLACED IN HOLES CLEANED WITH THE DUSTX+ HOLLOW DRILL BIT SYSTEM). INSTALL PER MANUFACTURER'S RECOMMENDATIONS WITH BOLT EMBEDMENT DEPTH INTO CONCRETE AS INDICATED ON STRUCTURAL DRAWINGS. CONTRACTOR IS TO PROVIDE HEAT AS REQUIRED TO MAINTAIN MINIMUM REQUIRED CONCRETE BASE MATERIAL TEMPERATURE PER SUPPLIER RECOMMENDATIONS DURING EPOXY CURING.

- (8) NO FIELD WELDS ARE TO BE MADE UNTIL THE MEMBERS ARE PROPERLY ALIGNED. FIELD WELDS ARE TO BE MADE BY COMPETENT CERTIFIED WELDERS USING PROPER ELECTRODES AND AMPERAGE.

- (9) ALL STRUCTURAL STEEL STAIRS SHALL BE DESIGNED FOR A MAXIMUM MEMBER LIVE LOAD DEFLECTION = L/600 ALONG THE MEMBER SPAN OR A MAXIMUM DEFLECTION OF 3/8" WHICHEVER IS LESS. ALL STEEL STAIRS SHALL BE DESIGNED BY THE STAIR SUPPLIER WITH SHOP DRAWINGS SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE THE PROJECT IS BEING BUILT PRIOR TO SUBMISSION.

- (10) EXTERIOR EXPOSED STEEL SUPPORT FRAMING (SUCH AS ROOFTOP MECHANICAL & SCREENWALL SUPPORT FRAMING, ETC.) SHALL BE PAINTED WITH EXTERIOR WEATHER RESISTANT PAINT. PAINT SHALL HAVE A MINIMUM APPLIED DRY THICKNESS OF 6 MILS TOTAL, WHICH INCLUDES PRIMER, MID-COAT, AND TOP-COAT. PAINT OVER CONNECTIONS AND DO NOT DISASSEMBLE STRUCTURAL FRAMING. STEEL FABRICATOR TO COORDINATE SHOP & FIELD PAINTED COATS WITH CONTRACTOR.



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CITY APPROVAL

TRIM RIDING STABLES - MAIN BUILDING
14532 L-94 Loop East
ND 58645

REVISION LIST		
SCHEMATIC	DESIGN REVIEW	
DESIGN DEV.		
CONST. DOCS.		
	BUD. DEPT.	
CITY SUB. 1		
CITY SUB. 2		
	CONSTRUCTION	
CONSTR. REV 1		
CONSTR. REV 2		
CONSTR. REV 3		

PROJECT #: C2683A

CONTACT : CHRIS

SCALE: AS NOTED

GENERAL STRUCTURAL
NOTES



50.1

Q.C.

REQUIRED SPECIAL INSPECTIONS OF CONCRETE CONSTRUCTION			
(IBC Table 1705.3)			
		FREQUENCY	
	Continuous	Periodic	Comments:
1) Inspect Reinforcement			
Inspect reinforcement, including prestressing tendons, and verify placement.		•	Verify reinforcing and placement as shown on drawings and per ACI 318 Ch. 20, 21.2, 21.3, 26.6.5-26.6.8 & IBC 1908.4
2) Reinforcing Bar Welding:			
Verify weldability of reinforcing bars other than ASTM A706.		•	Verify bar welding per AWS D1.4 & ACI 318-26.6.4 A706.
Inspect single-pass fillet welds, maximum 5/16th, and inspect all other welds.	•		
3) Inspect anchors cast in concrete.		•	Verify anchors are cast in concrete per structural drawings and ACI 318: 17.8.2
4) Inspect anchors post-installed in hardened concrete members:			
Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	•		Verify anchors are post installed in concrete per structural drawings, ACI 318: 17.8.2.4 (adhesive anchors) & 17.8.2 (mechanical anchors)
Mechanical anchors and adhesive anchors not defined in 4.6.		•	
5) Verify use of required design mix.		•	Verify mix designs meet strength and exposure requirements listed on approved plans; verify compliance with ACI 318 Ch. 19, 26.4.3, 26.4.4, & IBC 1908.4.1, 1908.2, 1908.2, 1908.3
6) Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	•		Verify uniform, & accurate tests per ASTM C123, ASTM C13, ACI 318: 26.4 & 26.12, and IBC 1908.10
7) Inspect concrete placement & application techniques.	•		Inspect concrete & shotcrete placement for proper application per ACI 318: 26.5 & IBC 1908.6, 1908.7, & 1908.8
8) Verify curing temperature and techniques.		•	Verify concrete curing temperature and technique is being maintained per approved plans, ACI 318: 26.5-26.5.5, & IBC 1908.9
9) Inspect prestressed concrete for:			
Application of prestressing forces: and	•		Verify prestressed concrete per ACI 318: 26.10
Grouting of bonded prestressing tendons.	•		
10) Inspect erection of precast concrete.		•	Inspect erection per ACI 318: Ch. 26.8
11) Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.		•	Verify strength per ACI 318: 26.11.2
12) Inspect formwork for shape, location and dimensions of the concrete member being formed.		•	Inspect formwork for shape, location, and dimensions of concrete member being formed per approved drawings and ACI 318: 26.11.1, 20b
See 17.4.10 & 17.4.11.			
(a) When requirements are also listed in 1705.3.2, special inspection for anchors is required.			
(b) Specific requirements for special inspection that is included in the research report for the anchor issued by an approved source in accordance with 17.4.2 in ACI 318, or other qualification procedures. When specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.			

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS			
(IBC 2015 Section 1705.6 & Table 1705.6)			
		FREQUENCY	
	Continuous	Periodic	Comments:
1) Minimum Testing:			
Verify Materials below shallow foundations are adequate to achieve the design bearing capacity.		•	
2) Prior to Construction:			
Verify excavations are extended to proper depth and have reached proper material.		•	
3) As Construction Begins:			
Perform classification and testing of compacted fill material.		•	
4) During Construction:			
Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	•		
Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.		•	

REQUIRED SPECIAL INSPECTIONS OF STRUCTURAL STEEL			
		FREQUENCY	
	Continuous	Periodic	Comments:
OTHER THAN STRUCTURAL STEEL (IBC 1705.11.3)			
Steel Roof & Floor Deck: (SDI -QA/QC)			
Material verification of steel deck		•	Identification markings per applicable ASTM standard.
Roof and floor deck welds		•	Verify that welds conform to AWS D1.3.
Installation of mechanical fasteners		•	Verify that fasteners conform to S24-C, S24-NC, S24-RD & manufacturer's instruction as well as construction documents
STRUCTURAL STEEL CONSTRUCTION (IBC 1705.2, 1705.11, 1705.12)			
Prior to Welding (Table N5.4-1, AISC 360-16):			
Verify welding procedures	•		
Material identification		•	Verify type and grade of material.
Welder identification		•	Verify there is a system in place to identify the welder who has welded a joint or member.
Fit-up groove welds		•	Verify joint preparation, dimensions, cleanliness, tacking and backing.
Access holes		•	Verify configuration and finish.
Fit-up fillet welds		•	Verify alignment, gaps at root, cleanliness of steel surfaces, tack weld quality and location.
During Welding (Table N5.4-02, AISC 360-16):			
Use of qualified inspectors		•	Verify that welders are appropriately qualified.
Control and handling of welding consumables		•	Verify packaging and exposure control.
Cracked tack welds		•	Verify welding is not over a cracked tack weld.
Environmental conditions		•	Verify wind speed & weather limits as well as precipitation and temperature.
WPS followed		•	Verify items such as welding equipment settings, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper post-welding.
Welding techniques		•	Verify interpass and final cleaning, each pass is within profile limitations, and quality of each pass.
Steel headed studs anchor atop beams	•		Verify placement and installation of steel headed stud anchors. See general structural notes for additional commentary of the testing of headed stud anchors
After Welding (Table N5.4-3, AISC 360-16):			
Welds cleaned		•	Verify that welds have been properly cleaned.
Size, length and location of welds	•		
Welds meet visual acceptance criteria	•		
Arc strikes	•		
k-ratio	•		
Backing & welding tabs removed	•		
Repair activities	•		
Document acceptance/rejection of weld	•		
No prohibited welds have been added without the approval of the EOR		•	
Nondestructive Testing (N5.5, AISC 360-16):			
CIP welds (Risk Cat. II)		•	Ultrasonic testing shall be performed on 10% of CIP groove welds in both T-weld corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater. Testing rate must be increased if 5% of welds have unacceptable defects.
CIP welds (Risk Cat. II or IV)		•	Ultrasonic testing shall be performed on 100% of CIP groove welds subject to transversely applied tension loading in both T and corner joints in materials 5/16-inch thick or greater. Testing rate must be increased if 5% of welds have unacceptable defects.
Access holes (Range > 2')		•	
Welded joints subject to fatigue		•	
Other Steel Inspections (Table N5.7, AISC 360-16; Tables J8-1 and J10-1, AISC 341-10):			
Structural steel details		•	All fabricated steel and their connections shall be inspected to verify compliance with the details shown in the approved plans.
Anchor rods/embeds supporting structural steel		•	Shall be on the premises during the placement of anchor rods/embedments. Verify diameter, grade, type, and length of element and the extent or depth of embedment prior to placement of concrete.
Reduced beam sections (RBS)		•	Verify contour and finish as well as dimensional tolerances (see Table B6.1 of AISC 341).
Protected Zones		•	Verify that no holes or unapproved attachments are made within the protected zone (see Table B8.1 of AISC 341).
OPEN-WEB STEEL JOIST AND JOIST GIRDERS (2015 IBC Section 1705.2.3 & TABLE 1705.2.3)			
Installation of Open-Web Steel Joists and Joist Girders			
End connections – welding or bolted		•	ISI specifications listed in Section 2207.1.
Bridging – horizontal or diagonal.			
Standard bridging.		•	ISI specifications listed in Section 2207.1.1.
Bridging that differs from the ISI specifications listed in Section 2207.1.1.		•	

WOOD AND TIMBER CONSTRUCTION:

- ALL SAWN LUMBER, SHEATHING, ENGINEERED LUMBER, AND TIMBER CONSTRUCTION SHALL CONFORM TO JOB NOTES AND SPECIFICATIONS AS WELL AS AMERICAN WOOD COUNCIL (AWC), AND AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS.
- UNLESS NOTED OTHERWISE, ALL DIMENSION LUMBER (2" TO 4" THICK X 2" AND WIDER) SHALL BE HEM-FIR NO. 2 OR SPRUCE-PINE-FIR NO.1/NO. 2 OR BETTER WITH A MINIMUM ALLOWABLE BENDING STRESS OF 850 PSI, SHEAR PARALLEL TO GRAIN STRESS OF 135 PSI, COMPRESSION PARALLEL TO GRAIN STRESS OF 1,150 PSI, COMPRESSION PERPENDICULAR TO GRAIN STRESS OF 405 PSI AND MODULUS OF ELASTICITY OF 1,300,000 PSI.
- ALL DIMENSIONAL LUMBER FOR WALL PLATES (2" TO 4" THICK X 2" AND WIDER) IN CONTACT WITH CONCRETE SHALL BE TREATED AND SHALL CONSIST OF PRESSURE TREATED SOUTHERN YELLOW PINE NO. 2 OR BETTER WITH DESIGN VALUES PER THE CURRENT ANSI/AF&PA NATIONAL DESIGN SPECIFICATION (NDS) SUPPLEMENT. DESIGN VALUES WILL VARY BASED ON THE WIDTH OF THE MEMBER.
- ALL DIMENSIONS LUMBER NOTED AS MACHINE STRESS RATED (MSR) LUMBER (2" TO 4" THICK X 2" AND WIDER) IS TO BE GRADE 1650F-1.5E OR BETTER AND HAVE A MINIMUM ALLOWABLE BENDING STRESS OF 1,650 PSI, SHEAR PARALLEL TO GRAIN STRESS (HORIZONTAL SHEAR) OF 135 PSI, COMPRESSION PARALLEL TO GRAIN STRESS OF 1,100 PSI, COMPRESSION PERPENDICULAR TO GRAIN STRESS OF 405 PSI AND MODULUS OF ELASTICITY OF 1,300,000 PSI.
- ALL STRUCTURAL FRAMING MEMBERS INCLUDING BEAMS, JOISTS, ETC (2" TO 4" THICK X 2" AND WIDER) NOTED ON THE PLANS AS "TREATED" SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE NO. 1 GRADE WITH THE FOLLOWING MINIMUM MATERIAL PROPERTIES: BENDING STRESS OF 1,000 PSI, SHEAR PARALLEL TO GRAIN STRESS OF 175 PSI, COMPRESSION PARALLEL TO GRAIN STRESS OF 1,400 PSI, COMPRESSION PERPENDICULAR TO GRAIN STRESS OF 565 PSI AND MODULUS OF ELASTICITY OF 1,600,000 PSI.
- WESTERN RED CEDAR DIMENSIONAL LUMBER (2" TO 4" THICK X 2" AND WIDER) IS TO BE NO. 2 OR BETTER GRADE WITH A MINIMUM ALLOWABLE BENDING STRESS OF 100 PSI, SHEAR PARALLEL TO GRAIN STRESS (HORIZONTAL SHEAR) OF 135 PSI, COMPRESSION PARALLEL TO GRAIN STRESS OF 650 PSI, COMPRESSION PERPENDICULAR TO GRAIN STRESS OF 425 PSI AND MODULUS OF ELASTICITY OF 1,000,000 PSI.
- ALL LAMINATED VENEER LUMBER (LVL) SHALL HAVE AN ALLOWABLE BENDING STRESS OF 3,100 PSI, COMPRESSION PERPENDICULAR TO GRAIN STRESS (PARALLEL TO GLUE LINE) OF 750 PSI, COMPRESSION PARALLEL TO GRAIN STRESS OF 3,000 PSI, HORIZONTAL SHEAR STRESS PERPENDICULAR TO GLUE LINE OF 285 PSI, AND MODULUS OF ELASTICITY OF 2,000,000 PSI.
- ALL PARALLAM (PL) WOOD MEMBERS FOR USE WITH EXTERIOR EXPOSURE SHALL BE PARALLAM PLUS PSL BY TRUS JOIST AND SHALL BE SERVICE LEVEL 2 (SL2) (NET USE), ANPA USE CATEGORY UC3B OR APPROVED EQUAL WITH A MINIMUM ALLOWABLE BENDING STRESS OF 1,821 PSI, COMPRESSION PERPENDICULAR TO GRAIN STRESS OF 360 PSI, COMPRESSION PARALLEL TO GRAIN STRESS OF 1,503 PSI, HORIZONTAL SHEAR STRESS PERPENDICULAR TO GLUE LINE OF 191 PSI, AND MODULUS OF ELASTICITY OF 1,460,000 PSI.
- ALL WOOD CONSTRUCTION SHALL CONFORM TO CHAPTER 23 OF THE INTERNATIONAL BUILDING CODE (IBC), EXCEPT AS NOTED OTHERWISE. ALL NAILING SHALL CONFORM TO TABLE 2304.10.2 "FASTENING SCHEDULE" OF THE INTERNATIONAL BUILDING CODE UNLESS THOSE REQUIREMENTS NOTED ON THE PLANS AND SPECIFICATIONS ARE MORE STRICT.
- JOINTS IN LOAD BEARING WALL TOP PLATES ARE TO BE OFFSET AT LEAST 48". ALL JOINTS ARE TO ALSO OCCUR CENTERED ON WOOD STUD BELOW. IF STUD ISN'T PRESENT, G.C. MUST INSTALL NEW STUD DIRECTLY BELOW JOINT (STUD TO BE TYPICAL SIZE AND TYPE).
- HOLES IN SAWN LUMBER SHALL BE AS SPECIFIED IN THE INTERNATIONAL BUILDING CODE (IBC).
- DIMENSION LUMBER USED FOR HEADERS AND JAMB MEMBERS SHALL BE FREE OF CHECKS AND SPLITS.
- ALL WOOD HEADERS SHALL HAVE STUD SUPPORTS AS INDICATED ON THE PLANS AND HEADER SCHEDULES WITH A MINIMUM OF 2 FULL HEIGHT STUDS AND 1 CRIPPLE STUD AT EACH END OF EACH HEADER.
- NO NOTCHING OF STUDS, JOISTS, RAFTERS, BEAMS OR TRUSSES IS PERMITTED WITHOUT THE ENGINEER'S APPROVAL. HOLES BORED IN THE STUD OR JOIST SHALL BE IN THE MIDDLE ONE-THIRD OF THE DEPTH AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-FOURTH THE DEPTH OF THE MEMBER.
- FASTENING OF STRUCTURAL WOOD MEMBERS SHALL BE AS SPECIFIED AND AS DETAILED.
- ENGINEERED WOOD SUPPLIER (LAMINATED VENEER LUMBER, PARALLAMS, ETC.) SHALL FURNISH ALL HANGERS AND HARDWARE FOR ALL WOOD TO WOOD AND WOOD TO MASONRY OR CONCRETE WALL CONNECTIONS, EXCEPT AS NOTED OTHERWISE.
- STUD WALLS ARE TO BE CONSTRUCTED WITH CONTINUOUS TREATED SILL PLATE AND WITH DOUBLE TOP PLATE. SEE PLANS AND DETAILS FOR STUD SIZES. FOUNDATION WALL PLATES ON CONCRETE OR MASONRY WALLS FOR LOAD BEARING WALLS SHALL BE ANPB FDN CGA TREATED SOUTHERN YELLOW PINE NO. 2 GRADE MINIMUM. FOUNDATION WALL PLATES FOR NON-LOAD BEARING WALLS SHALL BE ANPB LP-2 CGA TREATED PONDEROSA PINE STANDARD AND BETTER OR STUD GRADE MINIMUM. SILLS SHALL BE ANCHORED TO CONCRETE OR MASONRY WITH 3/8" DIAMETER BY 4" GALVANIZED ANCHOR BOLTS WITH 3" HOOK SPACED AT 48" O.C. MAXIMUM OR AS NOTED OTHERWISE. THERE SHALL BE A MINIMUM OF 3 BOLTS PER PIECE WITH ONE BOLT LOCATED WITHIN 6" OF EACH END OF EACH PIECE. THERE SHALL BE NO SILL SPLICE UNDER ANY POST OR JAMB.
- ALL CONSTRUCTION ADHESIVE FOR WOOD-TO-WOOD, WOOD-TO-STEEL, WOOD-TO-CONCRETE SHALL MEET PERFORMANCE SPECIFICATIONS AFA AF6-01 AND ASTM D-3498 AND SHALL HAVE A MINIMUM SHEAR STRENGTH AT 28 DAYS OF 400 PSI. G.C. TO FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR ADHESIVE INSTALLATION TIME, TEMPERATURE, CONDITIONS, AND COVERAGE, PROVIDED THAT THE FULL SURFACE AREA OF BOTH MEMBERS/SURFACES TO BE BONDED ARE COVERED W/ ADHESIVE AS RECOMMENDED.
- ALL FASTENERS INCLUDING NAILS, SCREWS, ANCHOR BOLTS, ETC. AND CONNECTORS IN CONTACT WITH TREATED LUMBER OR SHEATHING SHALL BE HOT-DIPPED GALVANIZED WITH A MINIMUM 600 COATING. INCLUDING ALL FASTENERS FROM WALL STUDS TO TREATED WALL SILL PLATES.
- ALL EXTERIOR EXPOSED FRAMING CONNECTORS AND FASTENERS PER BC 2304.10.5 MUST MEET ASTM A653, TYPE G185 ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL OR EQUIVALENT.

HORIZONTAL WOOD STRUCTURAL PANEL SHEATHING (FLOORS):

- FLOOR SHEATHING DIAPHRAGM - FLOOR SHEATHING SHALL CONSIST OF 3/4" TAG APA RATED STURD-FLOOR (WITH AN APA SPAN RATING OF 24 FOR FLOORS) CONFORMING TO DOC PS 1, DOC PS 2, OR CSA 0431 OR CSA 0325. ALL PANELS SHALL BE IDENTIFIED WITH A GRADE MARK OF CERTIFICATE OF INSPECTION ISSUED BY AN APA APPROVED AGENCY. PANELS ARE TO BE UNBLOCKED EXCEPT THAT EDGES OF ALL PANELS SHALL BE SUPPORTED ON TRUSS, JOIST, OR BLOCKING AT FLOOR EDGES AS DETAILED. SHEATHING SHALL BE FASTENED WITH 10D COMMON OR GALVANIZED BOX NAILS (GALVANIZED NAILS SHALL BE HOT-DIPPED OR TUMBLED) AT 6" O.C. AT PANEL EDGES AND AT 12" O.C. AT INTERMEDIATE FRAMING MEMBERS. NAILS ARE TO HAVE A MINIMUM PENETRATION OF 1/2" INTO FRAMING MEMBERS AND ARE TO BE LOCATED NOT LESS THAN 3/8" FROM EDGES OF PANELS AND FRAMING.
- ALL FLOOR PANEL SHEATHING SHALL BE ORIENTED WITH THE STRENGTH AXIS PERPENDICULAR TO THE SUPPORTS.
- FLOOR SHEATHING PANELS SHALL BE CONTINUOUS OVER THREE OR MORE SPANS (MINIMUM).
- FLOOR SHEATHING SHALL BE GLUED TO SUPPORTS AND TO EACH OTHER ALONG TAG EDGES WITH AN ADHESIVE CONFORMING TO PERFORMANCE SPECIFICATION AFG-01 DEVELOPED BY APA OR ASTM D3448.
- BLOCKING IS REQUIRED AT ALL DIAPHRAGM BOUNDARIES I.E. PERIMETER OF FLOOR AREA AND STAIR AND OTHER OPENINGS IN THE FLOOR FRAMING.
- ALL NAILING OF PANELS SHALL BE COMPLETED BEFORE GLUE SETS. CHECK MANUFACTURER'S RECOMMENDATIONS FOR ALLOWABLE SET TIME.
- PROVIDE 1/8" SPACE BETWEEN ALL EDGE AND END JOINTS OF PANELS. USE A SPACER TOOL TO ASSURE ACCURATE AND CONSISTENT SPACING.

HORIZONTAL WOOD STRUCTURAL PANEL SHEATHING (ROOFS):

- ROOF SHEATHING DIAPHRAGM - ALL EXTERIOR ROOF SHEATHING SHALL BE A MINIMUM OF 19/32" EXPOSURE I RATED PLYWOOD SHEATHING (WITH A 24/16 APA SPAN RATING) CONFORMING TO DOC PS 1, DOC PS 2, OR CSA 0431 OR CSA 0325. ALL PANELS SHALL BE IDENTIFIED WITH A GRADE MARK OF CERTIFICATE OF INSPECTION ISSUED BY AN APA APPROVED AGENCY. PANELS ARE TO BE UNBLOCKED EXCEPT THAT EDGES OF ALL PANELS SHALL BE SUPPORTED ON TRUSS, JOIST, OR BLOCKING AT ROOF EDGES AS DETAILED. SHEATHING SHALL BE FASTENED WITH 10D COMMON OR GALVANIZED BOX NAILS (GALVANIZED NAILS SHALL BE HOT-DIPPED OR TUMBLED) AT 6" O.C. AT PANEL EDGES AND AT 12" O.C. AT INTERMEDIATE FRAMING MEMBERS. NAILS ARE TO HAVE A MINIMUM PENETRATION OF 1 1/2" INTO FRAMING MEMBERS AND ARE TO BE LOCATED NOT LESS THAN 3/8" FROM EDGES OF PANELS AND FRAMING.
- ALL ROOF PANEL SHEATHING SHALL BE ORIENTED WITH THE STRENGTH AXIS PERPENDICULAR TO THE SUPPORTS.
- ROOF SHEATHING PANELS SHALL BE CONTINUOUS OVER THREE OR MORE SPANS (MINIMUM).

VERTICAL WOOD STUD SHEARWALLS:

- SHEARWALLS ARE TO BE PROVIDED AND LOCATED AS INDICATED ON THE STRUCTURAL DRAWINGS TO PROVIDE PERMANENT LATERAL SUPPORT OF THE STRUCTURE. WALL SEGMENTS INDICATED AS SHEARWALLS ARE TO CONSIST OF WALL SHEATHING, WOOD STUD FRAMING AND HOLDOWNS WITH SPECIAL FASTENING AND ANCHORAGE AS INDICATED IN THE WOOD SHEARWALL SCHEDULE.
- SHEARWALL SHEATHING IS TO BE INSTALLED BY THE FRAMING CONTRACTOR (NOT THE DRYWALL CONTRACTOR) AS THIS IS A STRUCTURAL ELEMENT REQUIRING SPECIFIC STRUCTURAL FASTENING. THE SHEARWALL SHEATHING AND HOLDOWNS ARE TO BE INSTALLED PRIOR TO FRAMING ANY INTERIOR PARTITIONS AS THE SHEARWALL SHEATHING IS TO RUN CONTINUOUS BEHIND PARTITION WALL INTERSECTIONS ALONG SHEARWALLS AT INTERIOR FACES (WHERE NOTED). SHEATHING AND HOLDOWNS ARE ALSO TO BE INSTALLED AND LOCATED PRIOR TO INSTALLATION OF MECHANICAL COMPONENTS TO AVOID CONFLICTS WITH THE STRUCTURAL SYSTEM.
- NO WALL PENETRATIONS ARE ALLOWED THROUGH SHEARWALLS UNLESS AUTHORIZED BY THE STRUCTURAL ENGINEER.
- WOOD PANEL SHEARWALL SHEATHING - ALL WOOD PANEL SHEARWALL SHEATHING SHALL BE EXPOSURE I RATED PLYWOOD OR OSB SHEATHING CONFORMING TO DOC PS 1 & DOC PS 2 WITH A 24/16 APA SPAN RATING. ALL PANELS SHALL BE IDENTIFIED WITH A GRADE MARK OF CERTIFICATE OF INSPECTION ISSUED BY AN APA APPROVED AGENCY. WOOD PANEL SHEARWALLS SHALL BE CONSTRUCTED AS A BLOCKED DIAPHRAGM WITH EDGES OF ALL PANELS SUPPORTED BY WALL STUDS OR MASONRY 2X BLOCKING TO MATCH THE STUD WIDTH. FASTEN THE WOOD PANELS TO THE ADJACENT STUDS/BLOCKING AS INDICATED IN THE WOOD SHEARWALL SCHEDULE. WHERE 8D NAILS ARE SPECIFIED, 2 1/2" X 0.131" COMMON OR 2 1/2" X 0.113" GALVANIZED BOX NAILS SHALL BE PROVIDED. WHERE 10D NAILS ARE SPECIFIED, 3" X 0.148" COMMON OR 3" X 0.128" GALVANIZED BOX NAILS SHALL BE PROVIDED. NAILS ARE TO BE LOCATED AT PANEL EDGES (EDGE SPACING) AND INTERIOR FRAMING MEMBERS (FIELD SPACING) AS INDICATED IN THE WOOD SHEARWALL SCHEDULE. GALVANIZED NAILS ARE TO BE HOT DIPPED OR TUMBLED. NAILS ARE TO HAVE A MINIMUM PENETRATION OF 1 1/2" INTO FRAMING MEMBERS AND ARE TO BE LOCATED NOT LESS THAN 3/8" FROM EDGES OF PANELS & FRAMING.
- GYPSUM PANEL SHEARWALL SHEATHING - ALL GYPSUM PANEL SHEARWALL SHEATHING SHALL BE AS INDICATED IN THE WOOD SHEARWALL SCHEDULE AND SHALL COMPLY WITH ASTM C1946. GYPSUM BOARD PANELS SHALL BE APPLIED PERPENDICULAR TO THE FRAMING WITH SOLID BLOCKING BEHIND THE HORIZONTAL PANEL JOINTS. SOLID BLOCKING IS TO CONSIST OF 2" NOMINAL WOOD FRAMING. SHEATHING FASTENERS ARE TO BE INSTALLED THROUGH THE SHEATHING INTO THE BLOCKING. SHEARWALL SHEATHING IS TO BE APPLIED ON SIDES OF THE SHEARWALLS AS INDICATED ON THE STRUCTURAL DRAWINGS AND IN THE WOOD SHEARWALL SCHEDULE. WHERE SHEATHING IS APPLIED TO BOTH FACES OF THE SHEARWALL, VERTICAL SHEATHING JOINTS ARE TO BE OFFSET FROM PANEL JOINTS ON THE OPPOSITE SIDE OF THE WALL. SHEATHING SHALL BE FASTENED TO FRAMING WITH NO. 6 X 1 1/4" TYPE N OR S SCREWS. SCREWS SHALL BE SPACED ALONG SHEATHING EDGES (EDGE SPACING) AND INTERMEDIATE STUD FRAMING (FIELD SPACING) AS INDICATED IN THE WOOD SHEARWALL SCHEDULE. FASTENERS ARE TO BE LOCATED NOT LESS THAN 3/8" FROM EDGES OF PANELS AND FRAMING.
- WOOD SHEARWALL STUD HOLDOWNS - WHERE SHEARWALL HOLDOWN LOCATIONS ARE INDICATED ON THE STRUCTURAL DRAWINGS, HOLDOWN STUDS AND HOLDOWN ANCHORS ARE TO BE PROVIDED. HOLDOWN STUDS ARE TO CONSIST OF TWO TYPICAL WALL STUDS NAILED TOGETHER WITH 10D NAILS AT 8" O.C. STAGGERED. HOLDOWN STUDS ARE TO BE LOCATED AT EACH SHEARWALL SEGMENT INDICATED ON THE PLAN, UNLESS NOTED OTHERWISE. TYPICALLY HOLDOWN STUDS ARE LOCATED ADJACENT TO WALL CORNERS AND WINDOW/DOOR OPENINGS AT THE ENDS OF SHEARWALL SEGMENTS.) SECURE HOLDOWN STUDS TO CONCRETE FOUNDATION WITH A SIMPSON HDUE HOLDOWN. REFER TO THE WOOD SHEARWALL SCHEDULE FOR THE SIZE OF HDUE HOLDOWNS REQUIRED AT EACH SHEARWALL SEGMENT. WHERE UPPER FLOORS ARE PRESENT, HDUE HOLDOWN ANCHORS ARE REQUIRED ABOVE AND BELOW THE FLOOR

CAVITY WITH 5/8" DIAMETER THREADED A36 STEEL RODS EXTENDING THROUGH THE FLOOR CAVITY TO EACH HDUE HOLDOWN TO TRANSFER TENSILE LOADS. IT IS CRITICAL THAT THESE UPPER HOLDOWNS AND HOLDOWN STUDS ARE ALIGNED WITH AND ATTACHED TO THE SAME HOLDOWN STUDS ANCHORED TO THE FOUNDATION BELOW. ALIGNMENT OF HOLDOWN STUDS IS TO BE MAINTAINED FULL HEIGHT OF THE BUILDING AND OFFSETTING OF HOLDOWN STUDS AND ANCHORS IS NOT ALLOWED. REFER TO THE STRUCTURAL DRAWINGS AND DETAILS FOR THESE HOLDOWN LOCATIONS. SIMPSON HDUE HOLDOWNS ARE TO BE ANCHORED AT THE BASE OF THE SHEARWALL TO THE CONCRETE FOUNDATION WITH CAST-IN-PLACE F1554 THREADED RODS (GALVANIZED) WITH EMBEDMENT DEPTH SHOWN ON THE DRAWINGS AND DETAILS. SEE FOUNDATION & FRAMING PLANS FOR HOLDOWN DETAILS & LOCATIONS.

- SHEARWALL HOLDOWNS - PROVIDE 2- 2X STUDS AT SHEARWALL END STUDS NEXT TO WINDOW AND DOOR OPENINGS AND AT BUILDING CORNERS. SECURE DOUBLE END STUDS TO FOUNDATION WALL WITH SIMPSON HDUE HOLDOWNS (OR EQUAL) WITH CAST-IN-PLACE GALVANIZED F1554 THREADED ANCHOR BOLT AND NUT. SEE FOUNDATION PLAN AND DETAILS FOR LOCATIONS AND EMBEDMENT DEPTH. HOLDOWN ANCHORS MUST BE CAST-IN-PLACE AND FIELD LOCATED BY THE GENERAL CONTRACTOR AND HELD IN POSITION FIRMLY WITH TEMPLATES. HOLDOWN ANCHORS MAY NOT BE POST-INSTALLED.
- WALL SHEATHING PANELS MUST BE INSTALLED HORIZONTALLY AND SHALL BE CONTINUOUS OVER TWO OR MORE SPANS (MINIMUM).

- IN WALLS WITH LIKE SHEATHING ON INSIDE AND OUT, OFFSET SHEATHING PANEL JOINTS ON EACH SIDE OF WALL A MINIMUM OF ONE STUD BAY.

TRUSSES:

- ROOF TRUSSES SHALL BE DESIGNED AND FABRICATED BY A "TRUSS PLATE INSTITUTE" (TPI) MEMBER FABRICATOR AND SHALL BE FABRICATED TO TPI STANDARDS.
- TRUSS FABRICATOR TO DESIGN AND SHOW SIZE AND LOCATION OF PERMANENT AND ERECTION BRACING PERPENDICULAR TO TRUSSES ON TRUSS SHOP DRAWINGS (TO BE INSTALLED BY GENERAL CONTRACTOR).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION, HANDLING, INSTALLATION, RESTRAINT AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES PER THE CURRENT BUILDING COMPONENT SAFETY INFORMATION (BCSI) BY SEGA AND TPI AS WELL AS THE CURRENT IIB-91 (COMMENTARY AND RECOMMENDATIONS FOR HANDLING INSTALLING & BRACING METAL PLATE CONNECTED WOOD TRUSSES BY THE TRUSS PLATE INSTITUTE (TPI)).
- ROOF TRUSSES ARE TO BE DESIGNED FOR 30 PSF LIVE LOAD AND 10 PSF DEAD LOAD AT TOP CHORDS AND 10 PSF DEAD LOAD AT BOTTOM CHORDS.
- ROOF TRUSSES ARE TO BE DESIGNED FOR L/360 LIVE LOAD DEFLECTION AND L/240 TOTAL LOAD DEFLECTION.
- FLOOR TRUSSES ARE TO BE DESIGNED FOR LIVE LOADS INDICATED ABOVE FOR THE PARTICULAR BUILDING AND AREA AND AS REQUIRED BY THE 2024 IBC CODE.
- FLOOR TRUSSES ARE TO BE DESIGNED FOR L/480 LIVE LOAD DEFLECTION AND L/360 TOTAL LOAD DEFLECTION.
- TRUSS MEMBER OVERALL DIMENSIONS, BEARING POINTS, TOP AND BOTTOM CHORD CONFIGURATION, BEARING HEEL HEIGHT AND BEARING POINTS SHALL BE AS SHOWN ON THE CONTRACT DOCUMENTS. OVERALL TRUSS DESIGN INCLUDING WEB MEMBER CONFIGURATION, MEMBER SIZES, CONNECTOR PLATES, ETC. BY TRUSS FABRICATOR SHALL BE BASED ON LOADS INDICATED.
- TRUSS FABRICATOR TO FURNISH SHOP DRAWINGS INCLUDING PROPOSED TRUSS MEMBER DESIGN, OVERALL LAYOUT PLAN AND LATERAL BRACING TO BE COMPLETED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE THE PROJECT IS BEING BUILT.
- HANDLING OF TRUSSES AND ERECTION BRACING IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT DIAGONAL LATERAL AND CROSS BRACING UNTIL ROOF SHEATHING, CEILINGS, AND PERMANENT BRACING CAN BE APPLIED AND SHEARWALLS COMPLETED.
- TRUSS SUPPLIER SHALL PROVIDE DESIGN OF ALL PERMANENT AND TEMPORARY LATERAL BRACING OF ALL TRUSS MEMBERS AS REQUIRED TO MAINTAIN STRENGTH, STABILITY AND SERVICEABILITY OF TRUSSES TO SUPPORT THE REQUIRED LOADS UNDER CONSTRUCTION AS WELL AS IN SERVICE.
- PROVIDE SOLID BLOCKING BETWEEN TRUSSES AT BEARINGS AND ALONG HIP AND RIDGE LINES, NAIL DECK TO BLOCKING AT RIDGE AND HIP LINES. PROVIDE INTERMEDIATE BRIDGING AS REQUIRED BY TRUSS DESIGN.

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CITY APPROVAL

TRIMF RIDING STABLES - MAIN BUILDING

14532 L-94 Loop East
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REVISION LIST

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DESIGN DEV.	
CONST. DOCS.	
CITY SUB. 1	BLOG. DEPT.
CITY SUB. 2	
CONSTR. REV 1	CONSTRUCTION
CONSTR. REV 2	
CONSTR. REV 3	

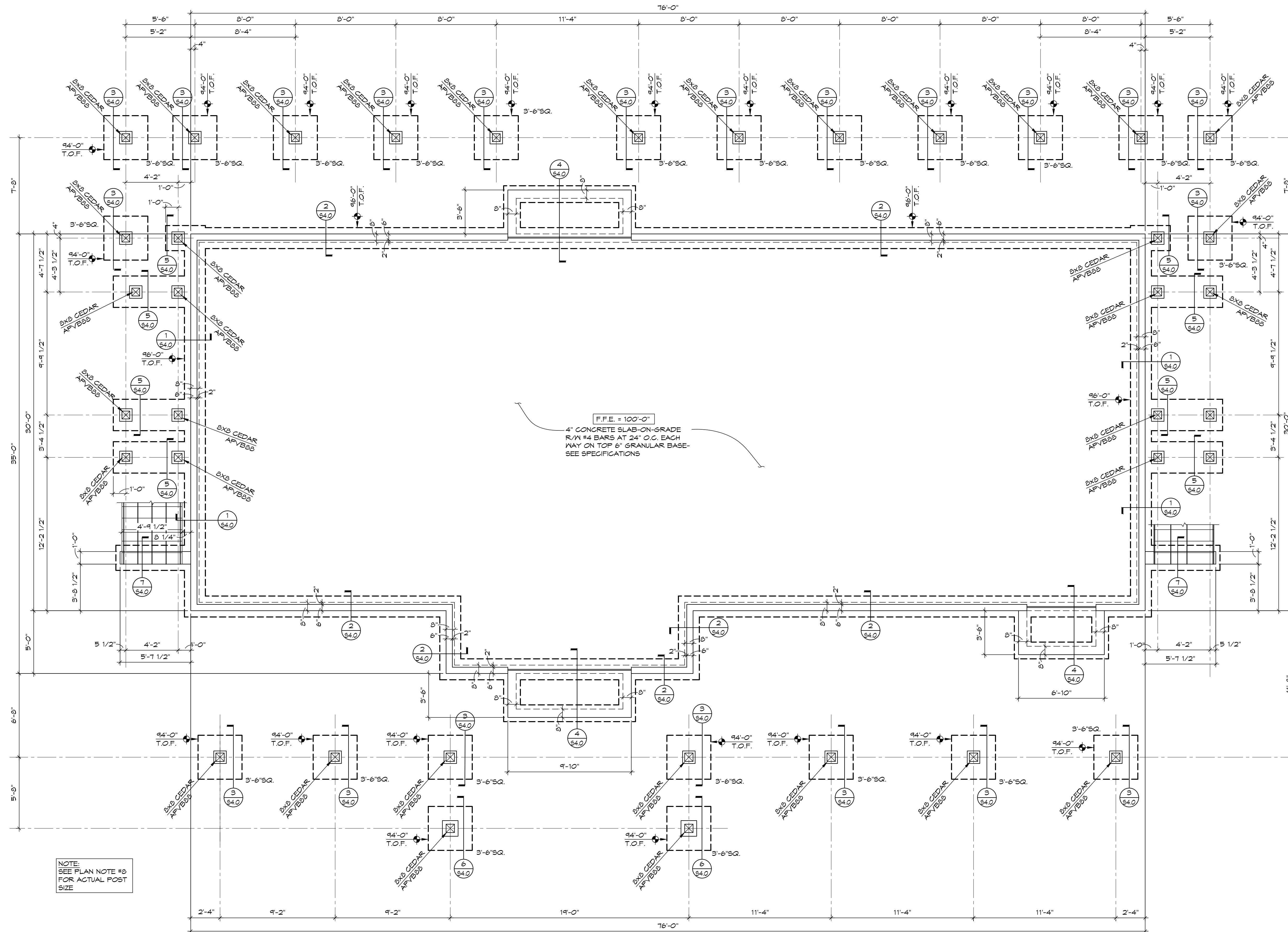
PROJECT #: C-2683A
CONTACT : CHRIS
SCALE: AS NOTED
GENERAL STRUCTURAL
NOTES & SPECIAL
INSPECTION NOTES

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Q.C.



FOUNDATION PLAN

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

- PLAN NOTES:
- (1) ALL PAD FOOTINGS ARE CENTERED BELOW THE COLUMN THEY SUPPORT - SEE FOUNDATION PLAN & PAD FOOTING SCHEDULE FOR SIZE & REINFORCING.
 - (2) ALL CONTINUOUS WALL FOOTINGS ARE 12" THICK UNREINFORCED, AND PROJECT 8" BEYOND EACH FACE OF FOUNDATION THEY SUPPORT, EXCEPT AS NOTED OTHERWISE.
 - (3) INDICATES STEP IN CONTINUOUS WALL FOOTING, SPACE STEPS AT 4'-0" FROM BUILDING CORNERS AND OTHER FOOTINGS STEPS EXCEPT AS SHOWN OTHERWISE.
 - (4) INDICATES TOP OF FOOTING ELEVATION.
 - (5) GENERAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR BUILDING GROUNDING WIRE ATTACHMENT TO FOUNDATION WALL REINFORCING PRIOR TO POURING FOUNDATION WALL.
 - (6) MECHANICAL PIPING CROSSING FOUNDATION WALL- SEE FOLLOWING RECOMMENDATIONS REGARDING PIPING & FOUNDATION CONFLICTS INDICATED ON PLAN. COORDINATE ALL OTHER LOCATIONS NOT SHOWN WITH STRUCTURAL ENGINEER.
 - (7) 8X8 CEDAR POST TO BE ACTUAL T 1/2X1 1/2.
 - (8) ALL TIMBER SIZES SHOWN ARE NOMINAL AND ACTUAL SIZES ARE 1/2" SMALLER THAN THAT SHOWN.



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CITY SUB. 2	
CONSTR. REV 1	
CONSTR. REV 2	
CONSTR. REV 3	

PROJECT #: C2663A

CONTACT: CHRIS

SCALE: AS NOTED

FOUNDATION PLAN



8/1/2026

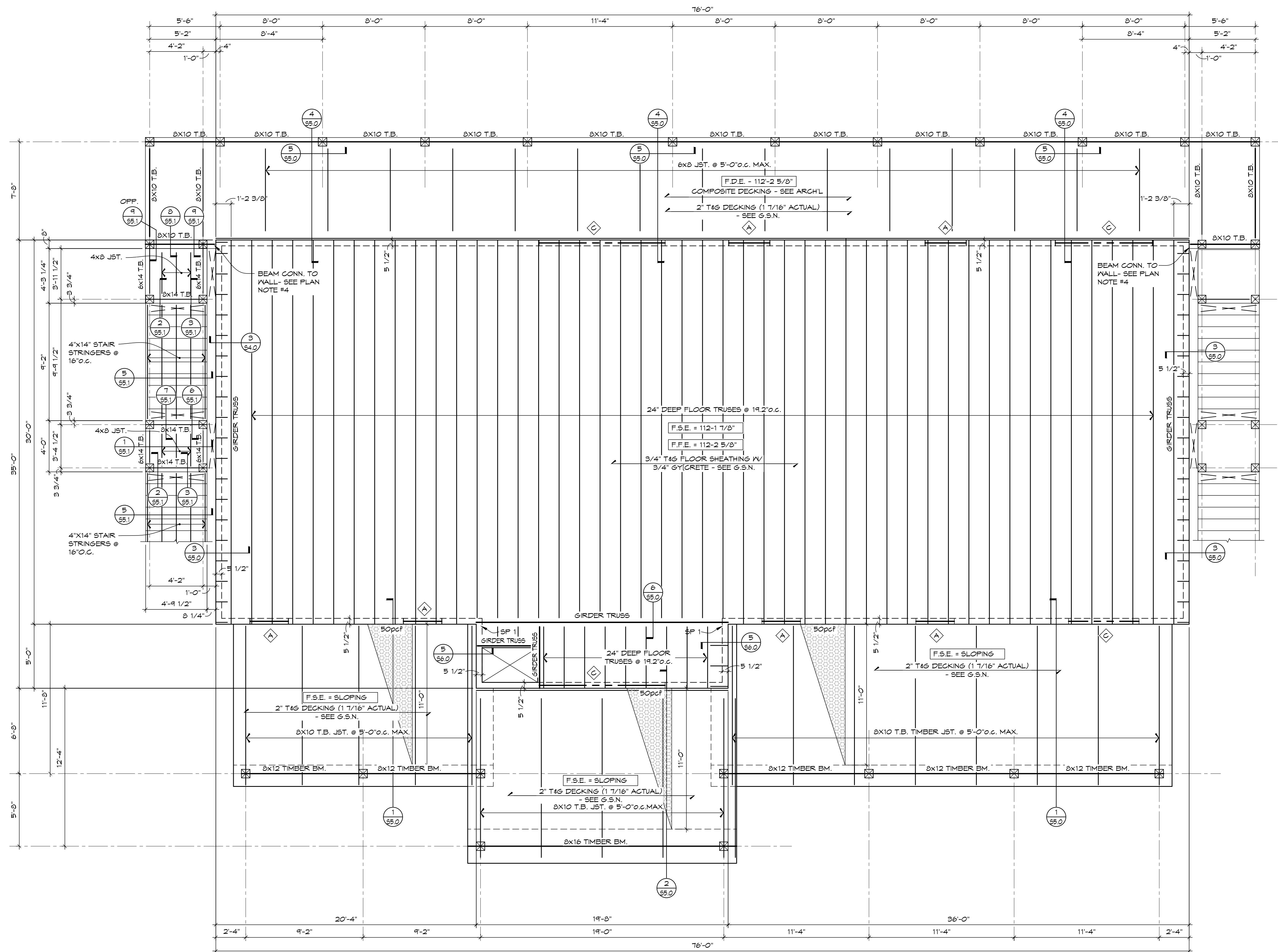


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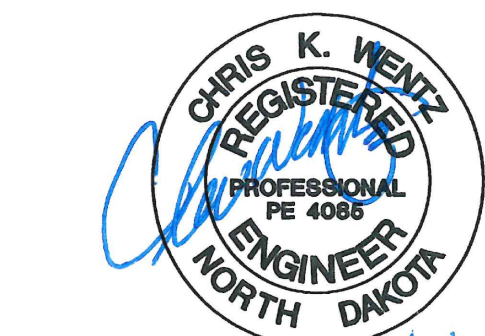


FLOOR FRAMING / LOW ROOF FRAMING PLAN

- PLAN NOTES:
- (1) INDICATES WOOD HEADER- SEE PLAN & WOOD HEADER SCHEDULE FOR HEADER SIZE & JAMB STUDS REQUIRED AT WALL OPENING.
 - (2) ALL EXTERIOR WALL ARE CONSIDERED SHEARWALLS AND SHOULD BE CONSTRUCTED PER G.S.N. & SCHEDULE/DETAIL 1/5503.
 - (3) "SP 1" ON ROOF FRAMING PLAN INDICATES STUD PACKS BELOW LVL BEAM BEARING (4) 2X CRIPPLES JV (1) 2X FULL HEIGHT EA. SIDE.
 - (4) SIMPSON OUTDOOR ACCENTS FACE MOUNT HANGER (P=1,700LB CAPACITY)- ATTACH THRU SHEATHING TO BLK'G BEHIND SHTG IN FOAM SPACE- FASTEN BLK'G IN SHTG SPACE TO STUDS JV (2) 5/16"DIA. SIMPSON SDVG SCREWS- (4 EA. SIDE OF TIMBER BM.)
 - (5) ALL STEEL TIMBER POST BASE, POST CAPS AND HANGER CONNECTION TO BE FINISHED IN BLACK.
 - (6) ALL TIMBER SIZES SHOWN ARE NOMINAL AND ACTUAL SIZES ARE 1/2" SMALLER THAN THAT SHOWN.
 - (7) F.F.E. - INDICATES FINISHED FLOOR ELEVATION OF (GYPCRETE)
F.S.E. - INDICATES FINISHED FLOOR SHEATHING ELEVATION.
 - (8) ALL TYPICAL JOIST HANGER TO HAVE G90 FINISH (ZMAX)

NOTE:
STAIR FRAMING SIZES,
DIMENSIONS & DETAILS
SAME AS OTHER END
OF BUILDING

WOOD HEADER SCHEDULE					
MARK	HEADER	JAMB		SILL (# WINDOWS)	MAX. ROUGH OPENING
		KING STUDS	JACK STUDS		
	(3) 2x8	(2) 2x8	(1) 2x8	(2) 2x8	3'-4"
	(3) 1 1/4" LVL	(2) 2x8	(1) 2x8	(2) 2x8	8'-0"
	(2) 14" LVL	(2) 2x8	(3) 2x8	(2) 2x8	10'-0"
WOOD HEADER SCHEDULE NOTES: (1) SEE TYPICAL FRAMING DETAILS FOR STANDARD WOOD HEADER/SILL FRAMING DETAIL. (2) ALL LVL ARE TO BE 1 3/4" THICK UNLESS OTHERWISE NOTED.					



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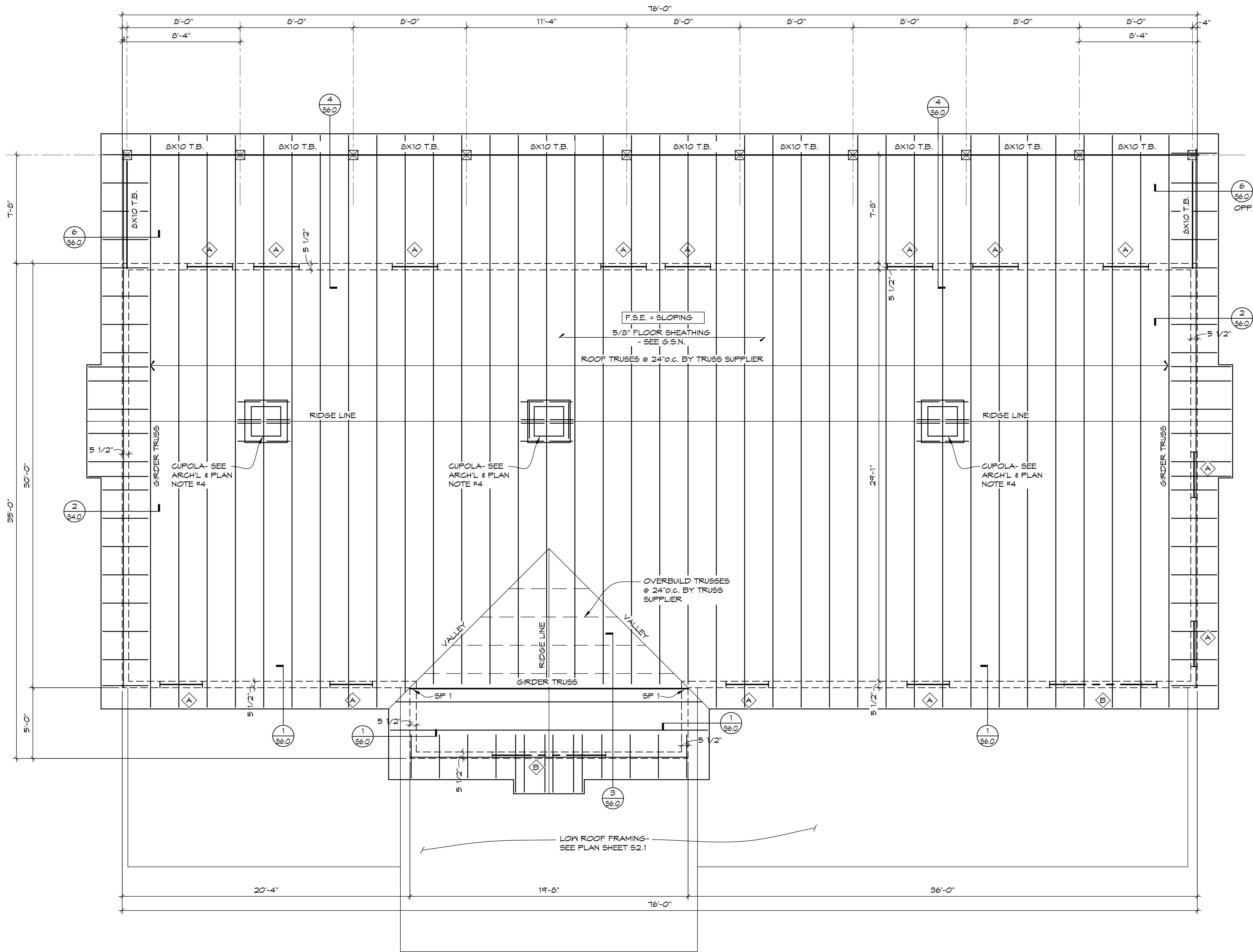
CITY APPROVAL:

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CONSTR. REV 2		
CONSTR. REV 3		

PROJECT #: C2663A
CONTACT: CHRIS
SCALE: AS NOTED
FLOOR / LOW ROOF
FRAMING PLAN

SHEET
S2.0
DATE: 8/7/26
Q.C. _____



ROOF FRAMING PLAN

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



PLAN NOTES:

- (1) INDICATES WOOD HEADER- SEE PLAN & WOOD HEADER SCHEDULE FOR HEADER SIZE & JAMB STUDS REQUIRED AT WALL OPENING.
- (2) ALL EXTERIOR WALL ARE CONSIDERED SHEARWALLS AND SHOULD BE CONSTRUCTED PER G.S.N. & SCHEDULE/DETAIL 1/5503.
- (3) "SP 1" ON ROOF FRAMING PLAN INDICATES STUD PACKS BELOW LVL BEAM BEARING (3) 2X6 STUDS BELOW GIRDER TRUSS BEARING, BLOCKED THRU FLOOR & CONT. TO FOUNDATION WALL BELOW.
- (4) CUPOLA FRAMING ON ROOF- PROVIDE 2X4 BLOCKING BETWEEN ROOF TRUSSES W/ LUS24 FACE MOUNT HANGERS TO TRUSSES.
- (5) ALL TIMBER SIZES SHOWN ARE NOMINAL AND ACTUAL SIZES ARE 1/2" SMALLER THAN THAT SHOWN.

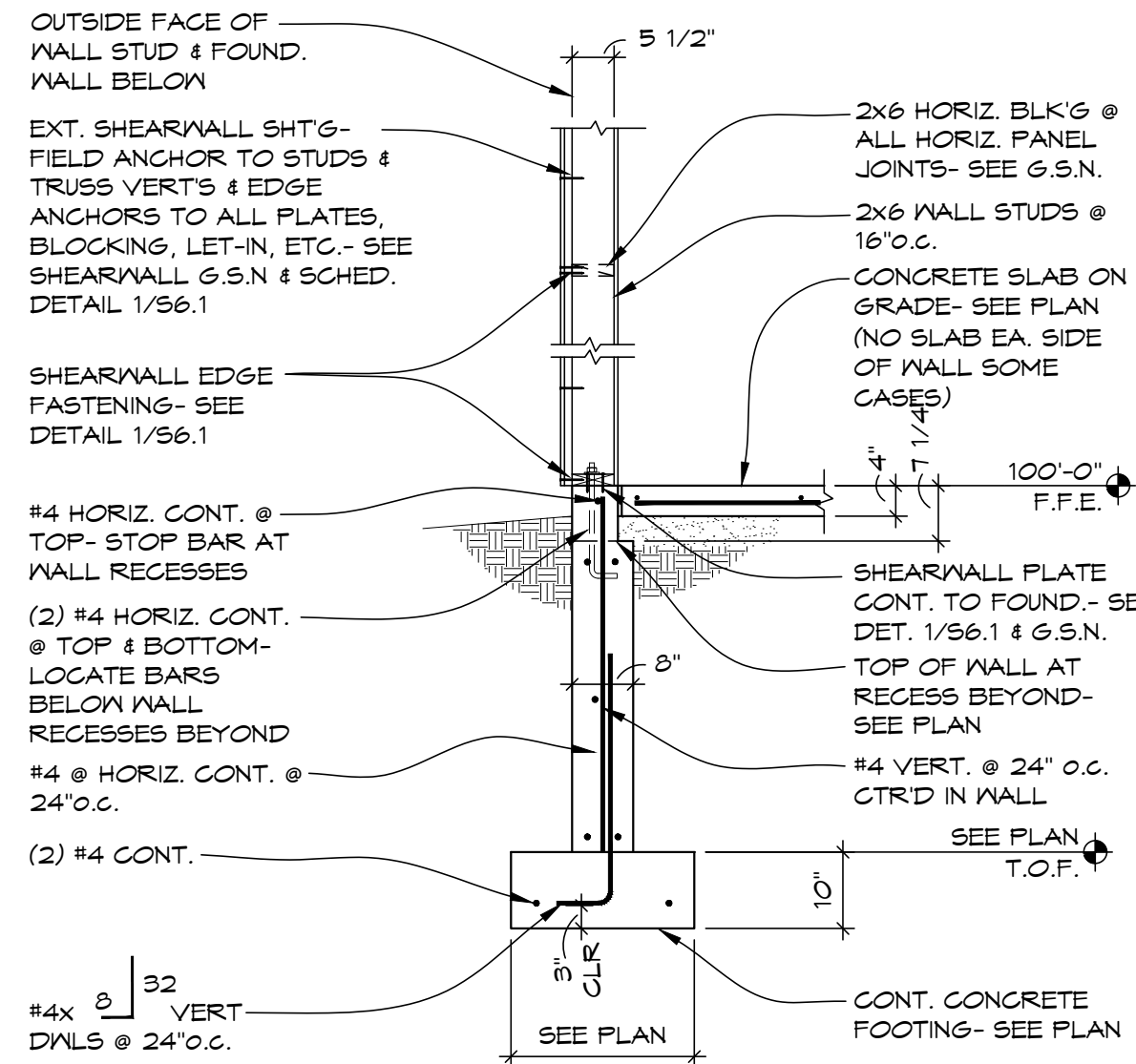
WOOD HEADER SCHEDULE					
MARK	HEADER	JAMB		SILL (# WINDOWS)	MAX. ROUGH OPENING
		KING STUDS	JACK STUDS		
	(3) 2x8	(2) 2x6	(1) 2x6	(2) 2x6	3'-4"
	(3) 7 1/4" LVL	(2) 2x6	(1) 2x6	(2) 2x6	8'-0"
	(2) 14" LVL	(2) 2x6	(3) 2x6	(2) 2x6	10'-0"

WOOD HEADER SCHEDULE NOTES:
(1) SEE TYPICAL FRAMING DETAILS FOR STANDARD WOOD HEADER/SILL FRAMING DETAIL.
(2) ALL LVL ARE TO BE 1 3/4" THICK UNLESS OTHERWISE NOTED.

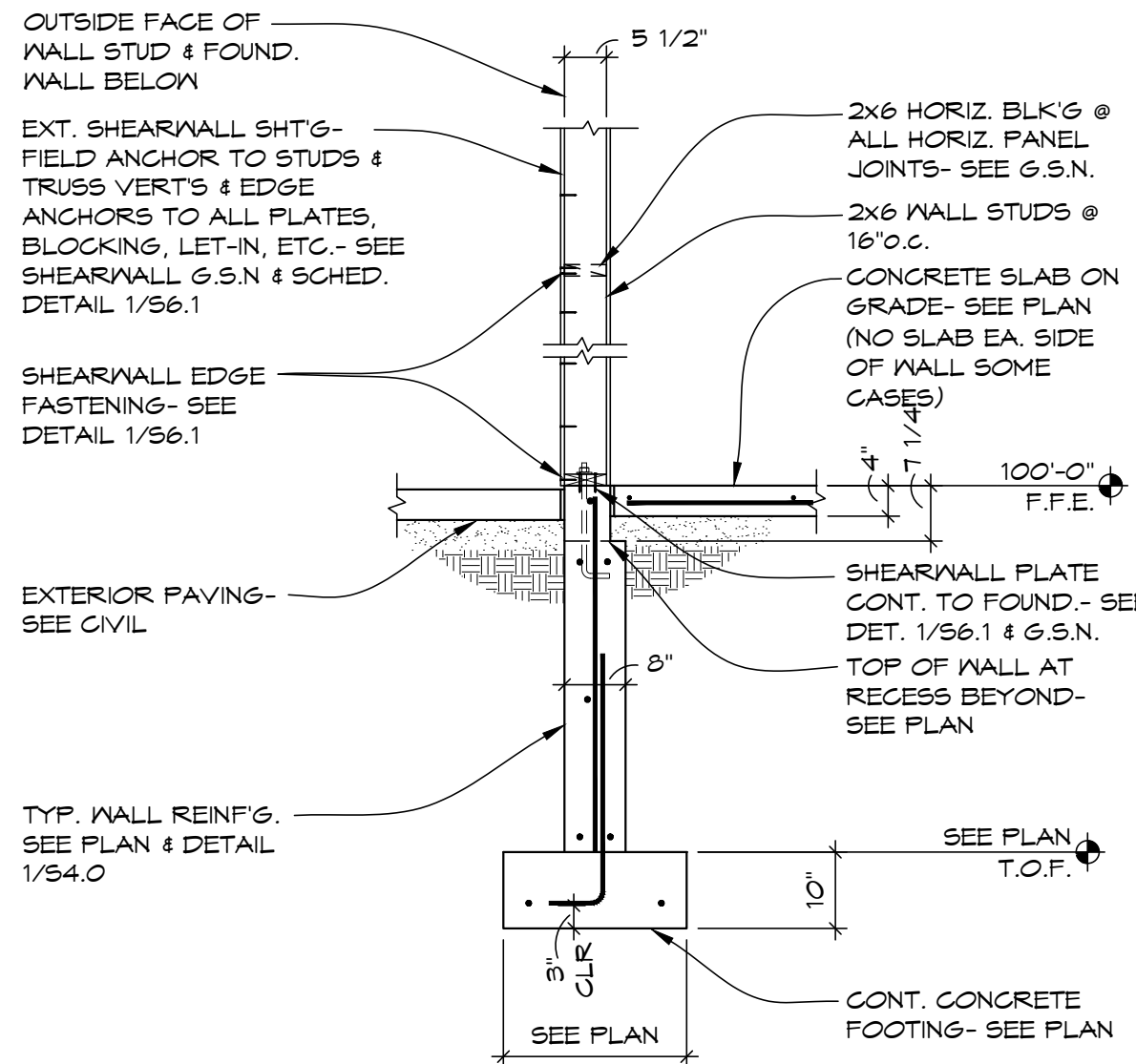
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PROJECT #: C2663A
CONTACT: CHRIS
SCALE: AS NOTED
ROOF FRAMING PLAN

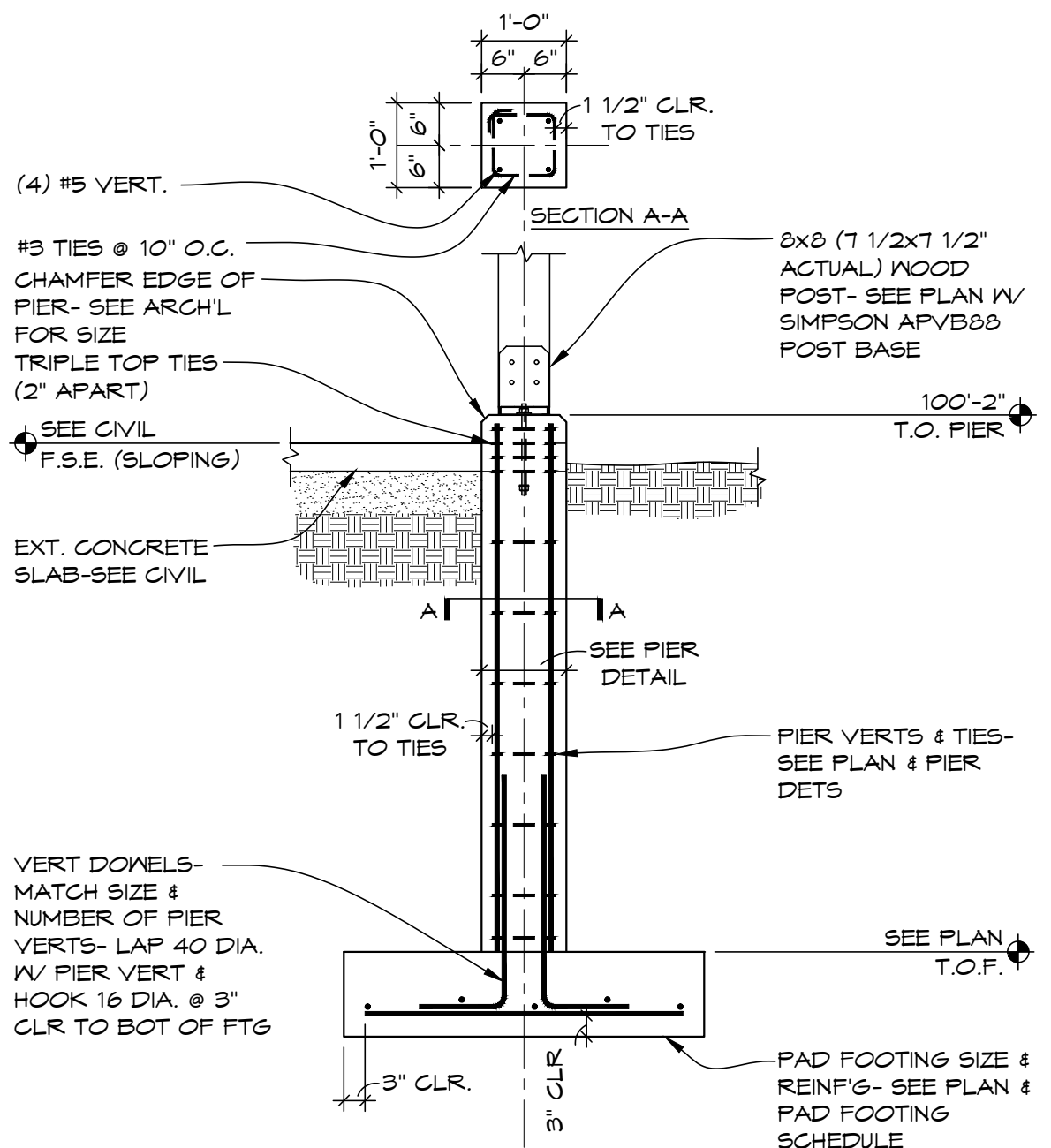




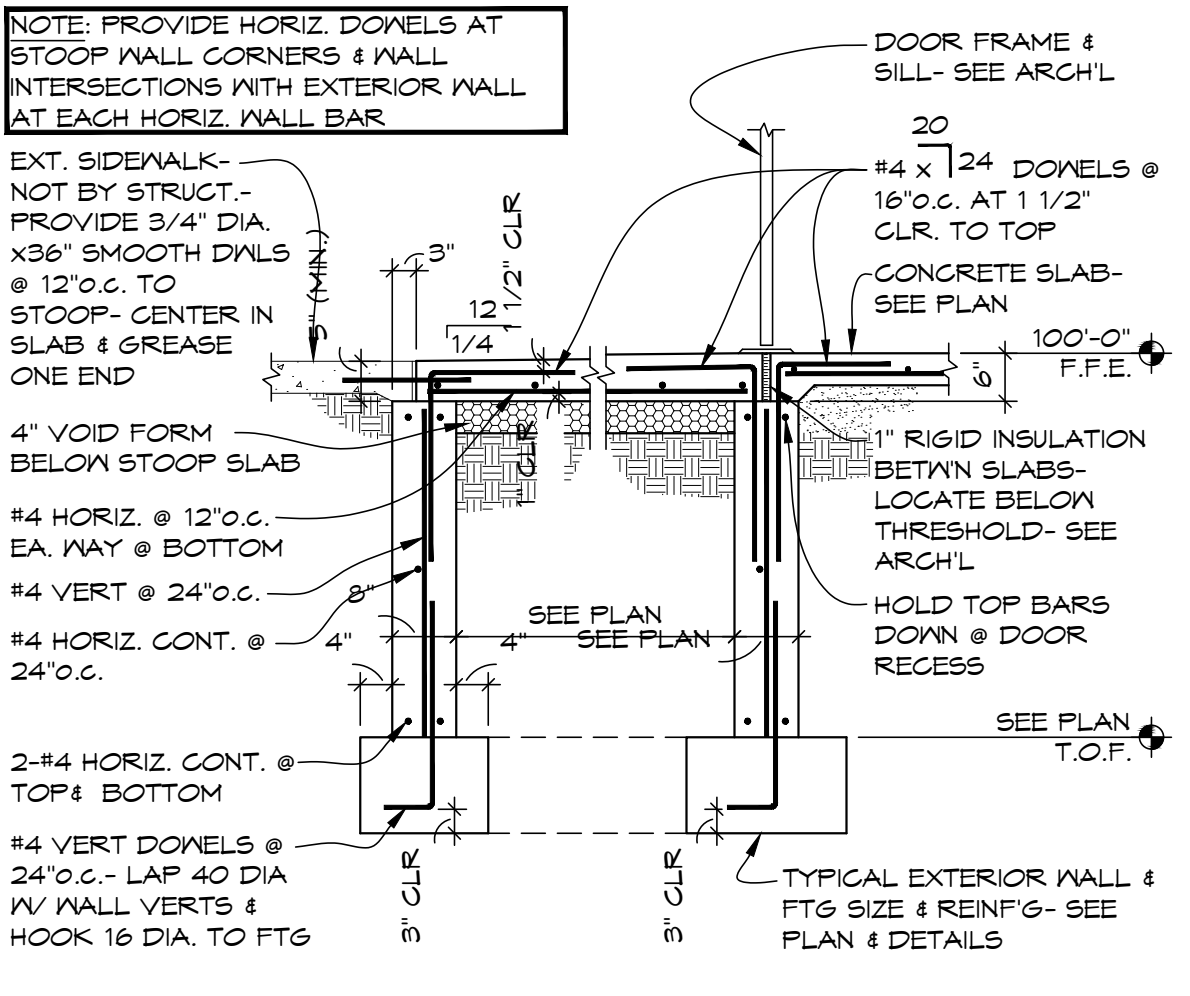
1 FOUNDATION WALL SECTION
SCALE: 1/2"=1'-0"



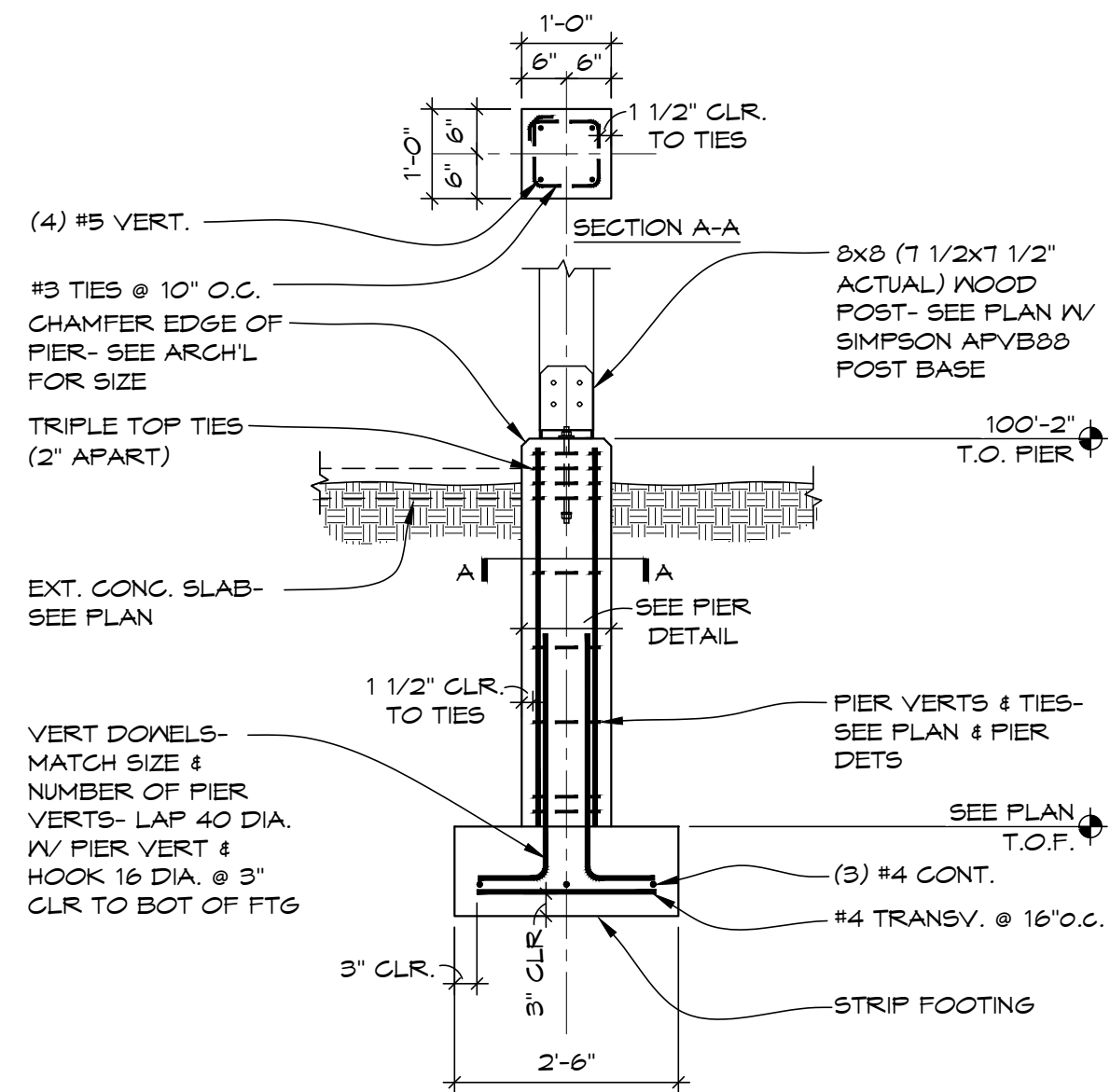
2 FOUNDATION WALL SECTION
SCALE: 1/2"=1'-0"



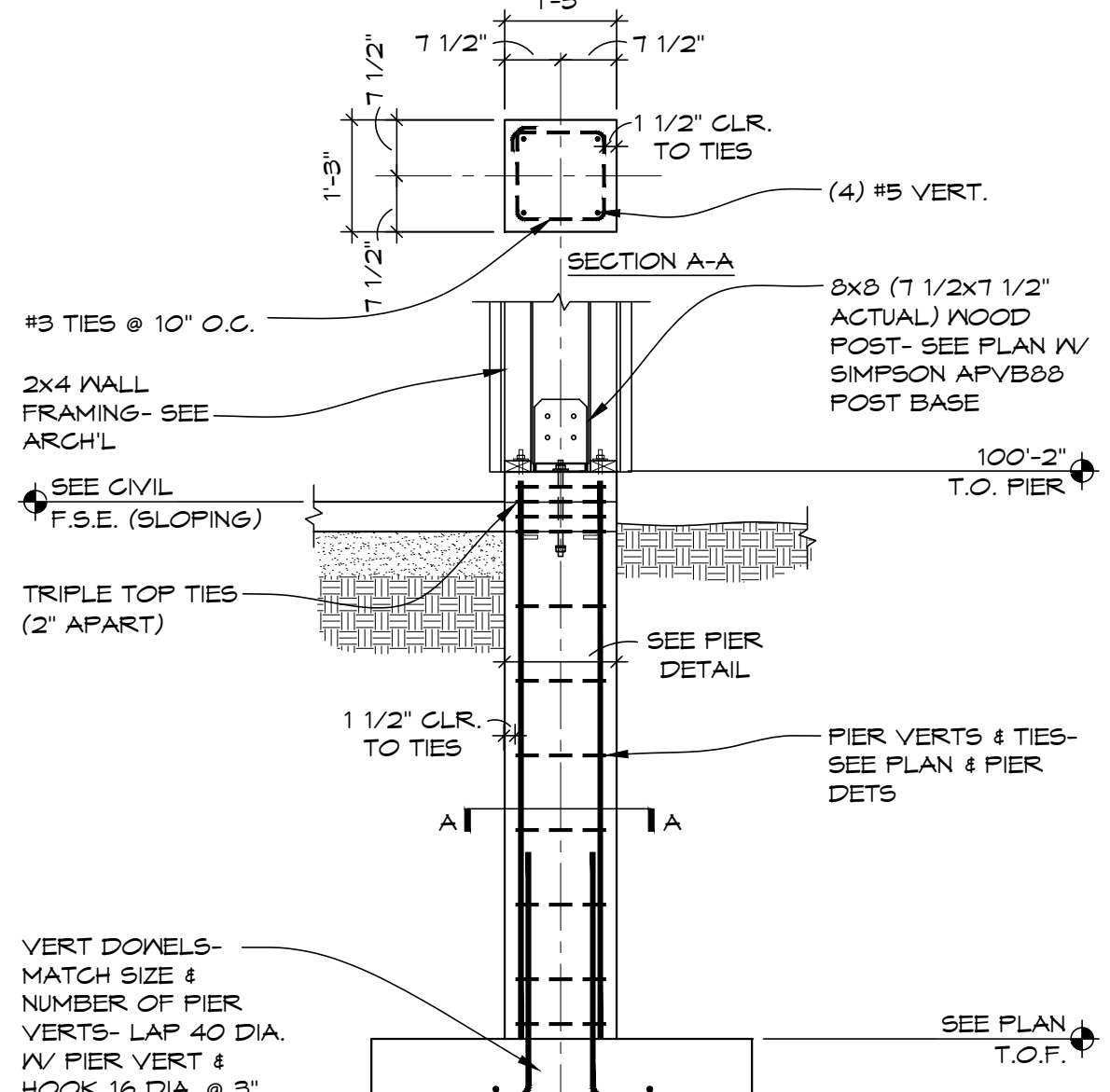
3 INTERIOR COLUMN PIER & PAD FOOTING
SCALE: 1/2"=1'-0"



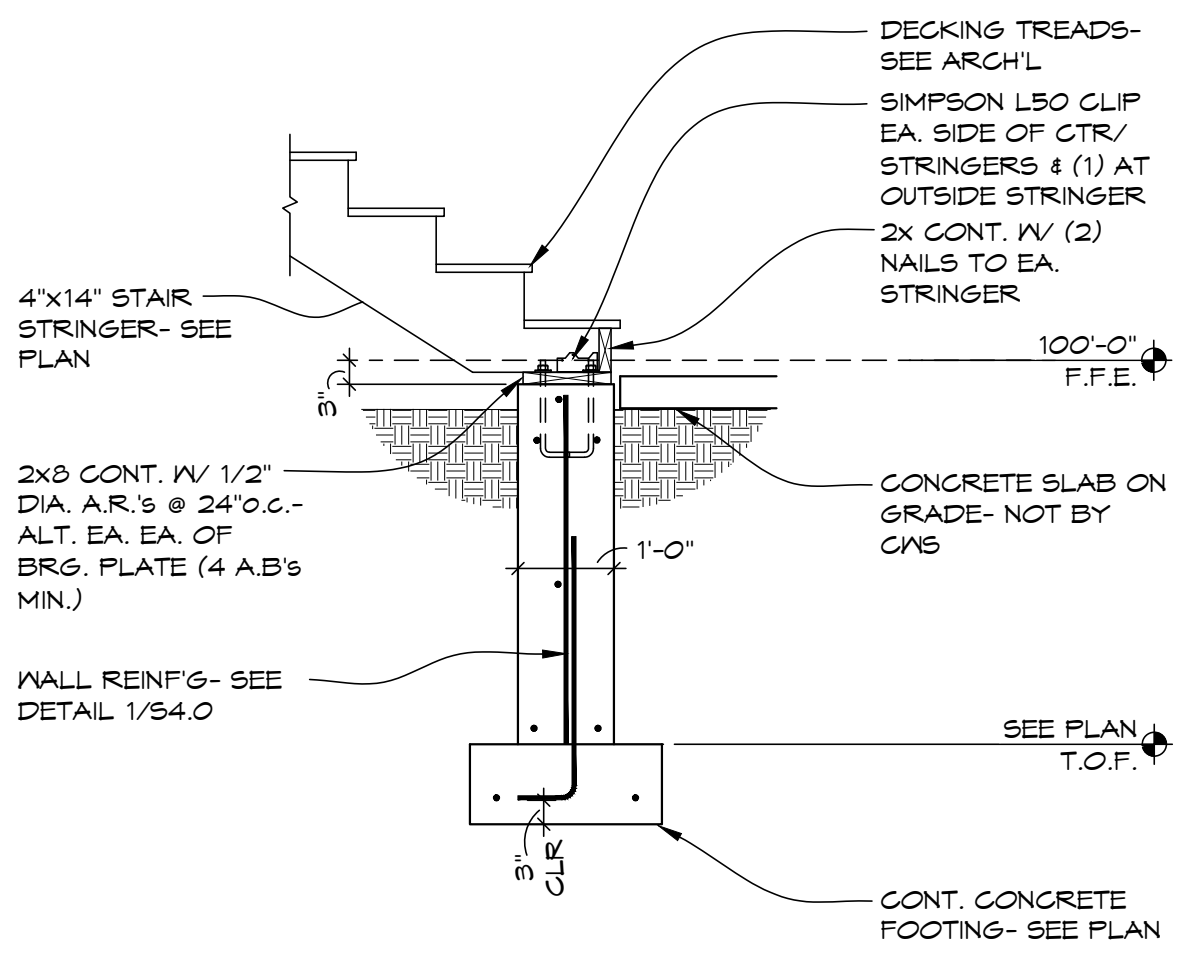
4 TYP. ENTRY STOOP FOUNDATION REINF'G
SCALE: 1/2"=1'-0"



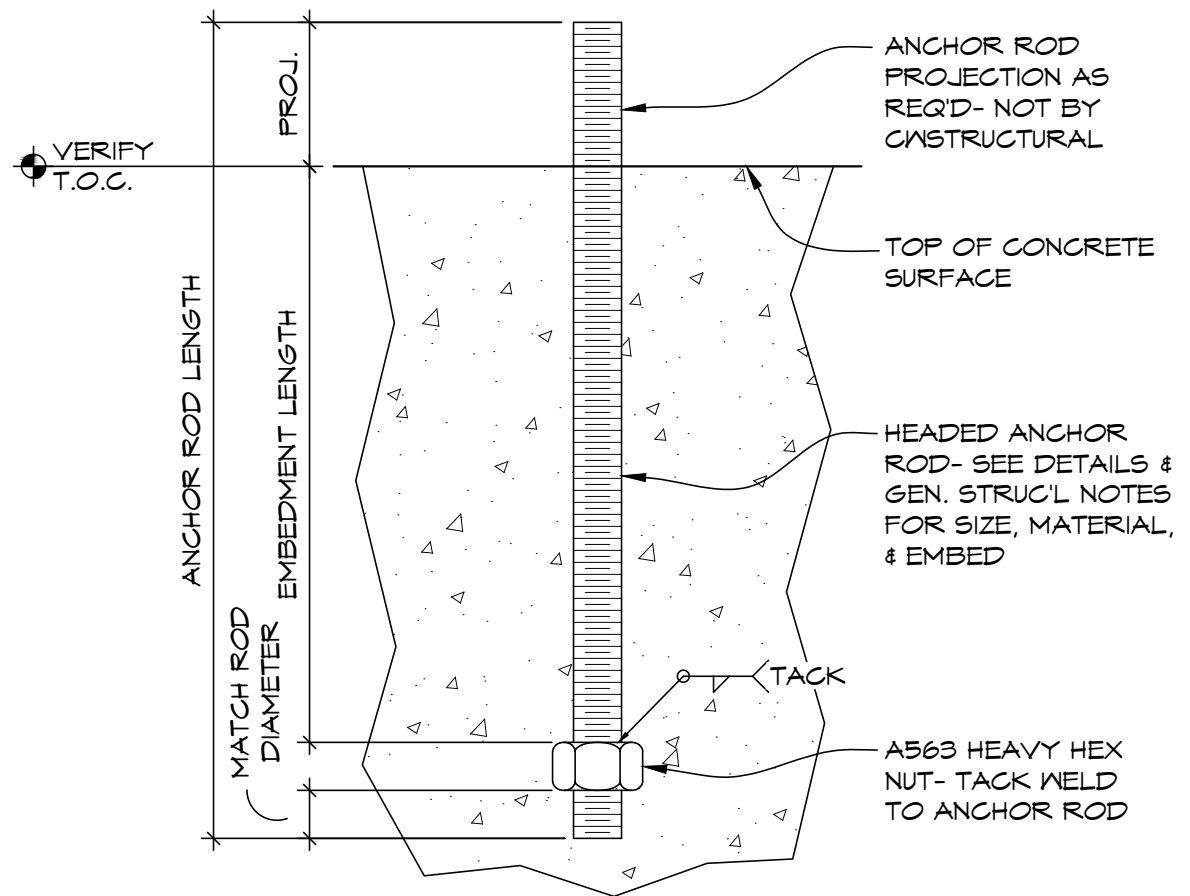
5 INTERIOR COLUMN PIER & PAD FOOTING
SCALE: 1/2"=1'-0"



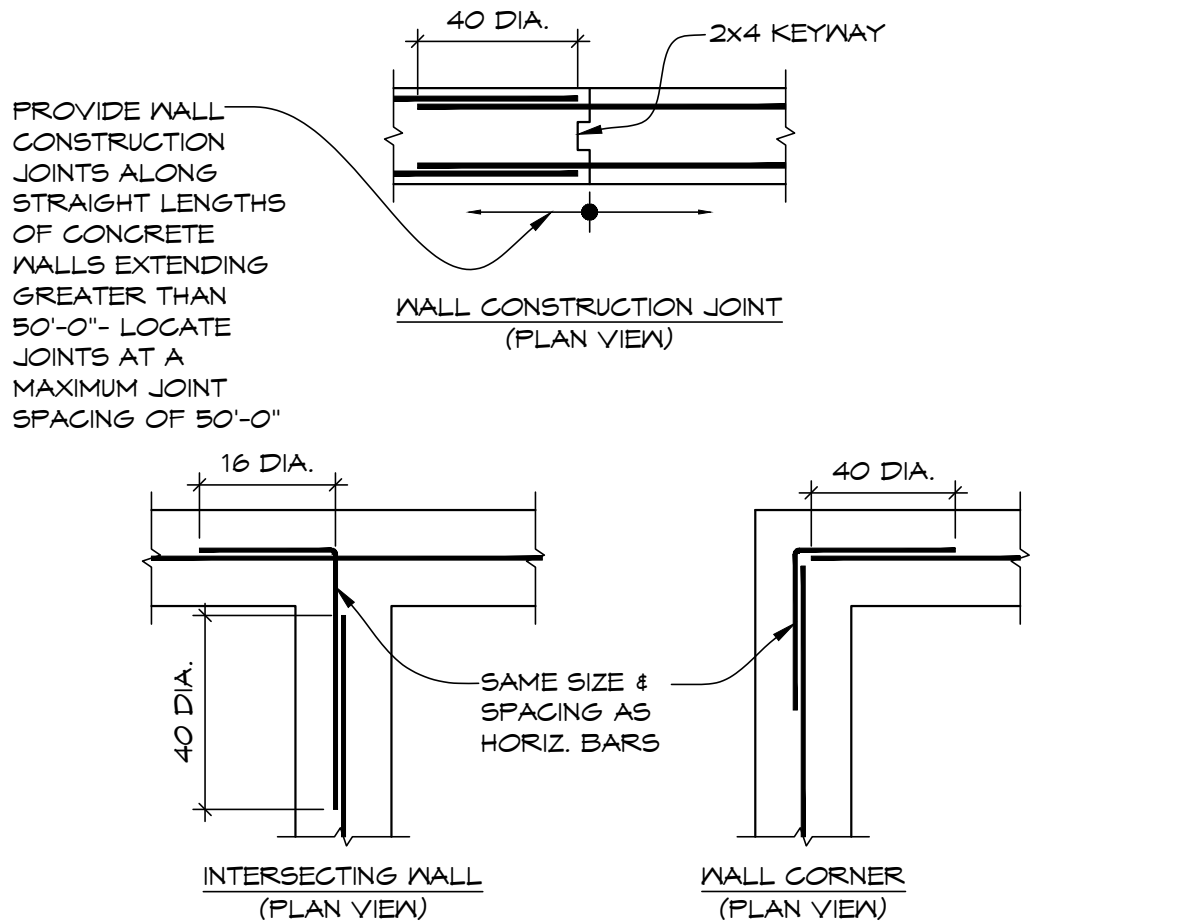
6 INTERIOR COLUMN PIER & PAD FOOTING
SCALE: 1/2"=1'-0"



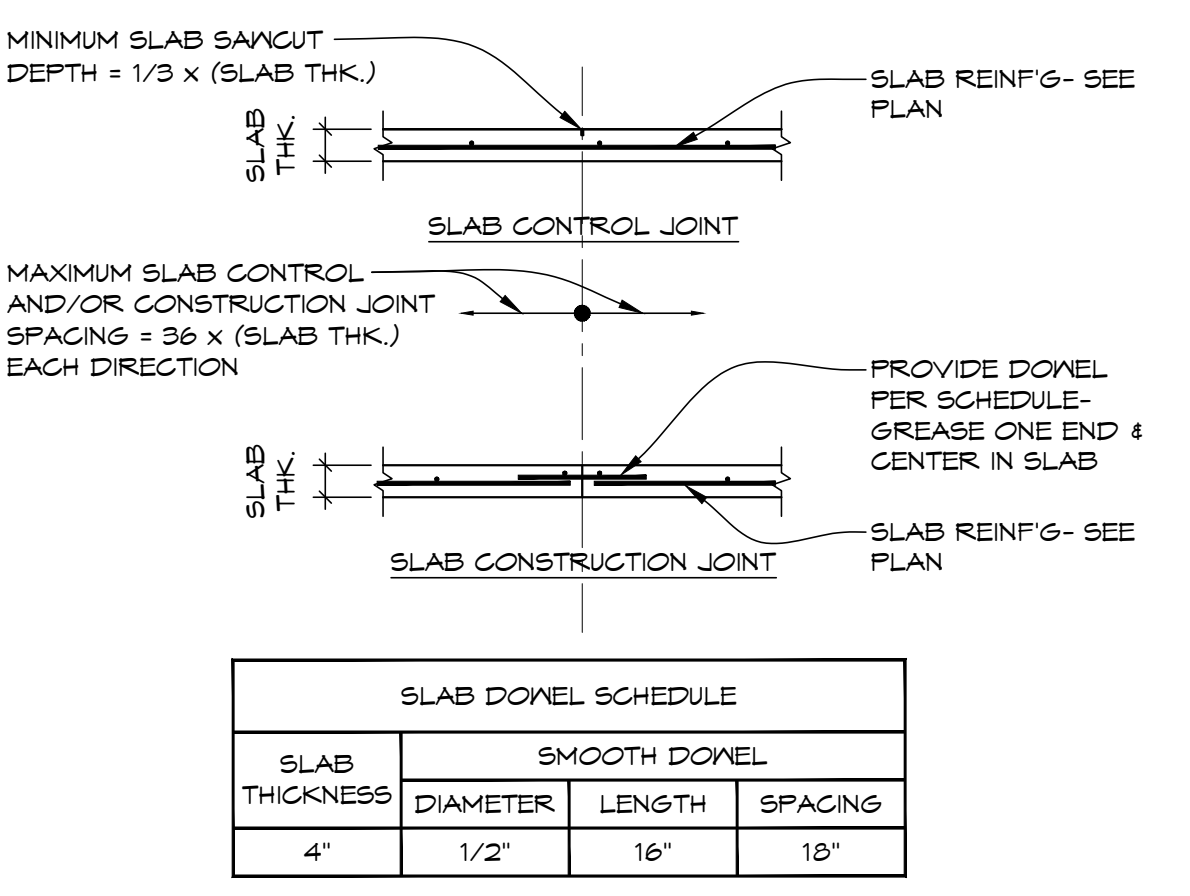
7 STRINGER BEARING DETAIL
SCALE: 1/2"=1'-0"



A TYPICAL HEADED ANCHOR ROD DETAIL
SCALE: NONE



B TYP. CONCRETE WALL REINFORCING DETS
SCALE: NO SCALE



C TYPICAL SLAB-ON-GRADE JOINTING DETAIL
SCALE: NO SCALE

SLAB DONEL SCHEDULE			
SLAB THICKNESS	SMOOTH DONEL		
	DIAMETER	LENGTH	SPACING
4"	1/2"	16"	10"



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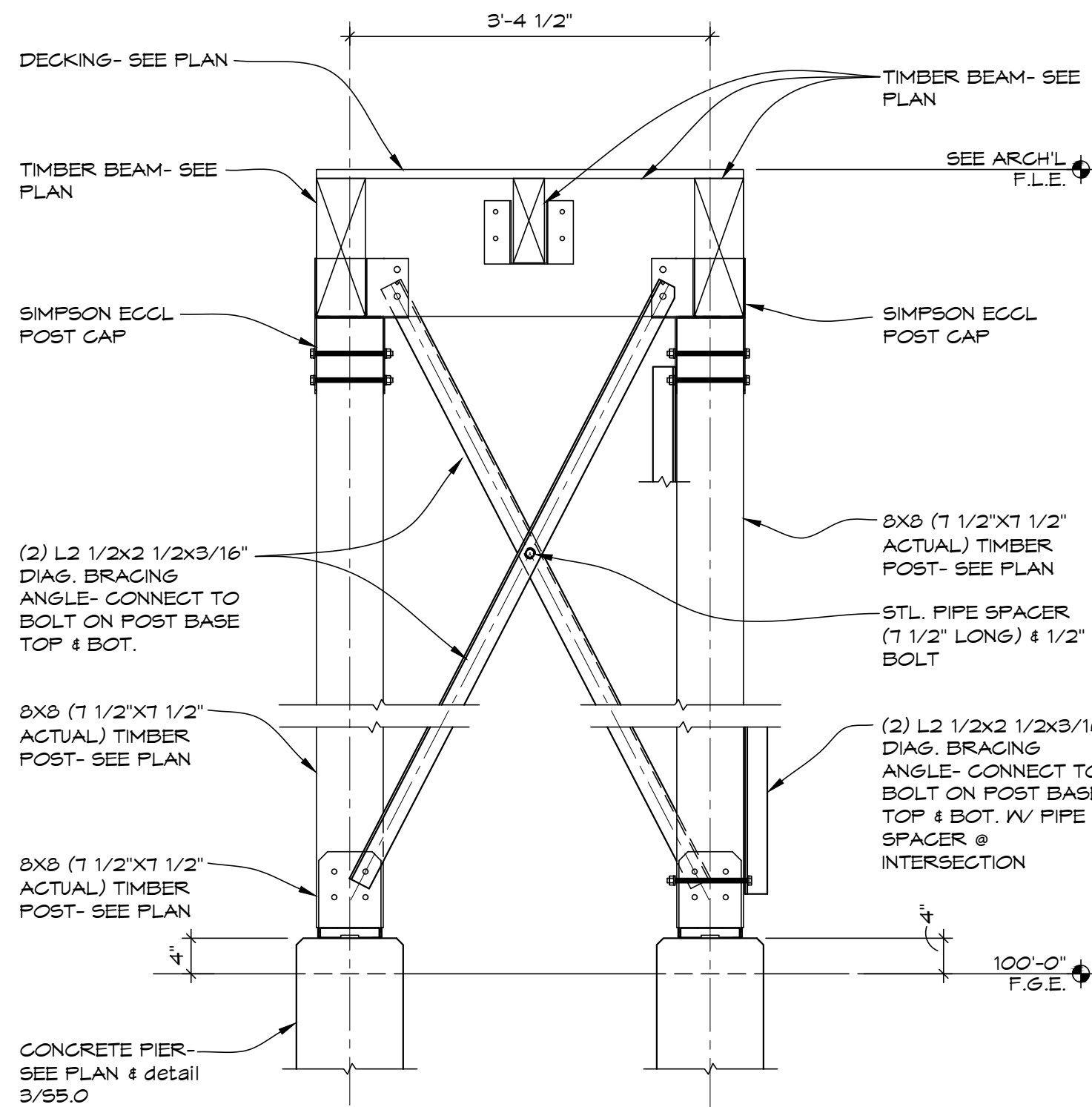
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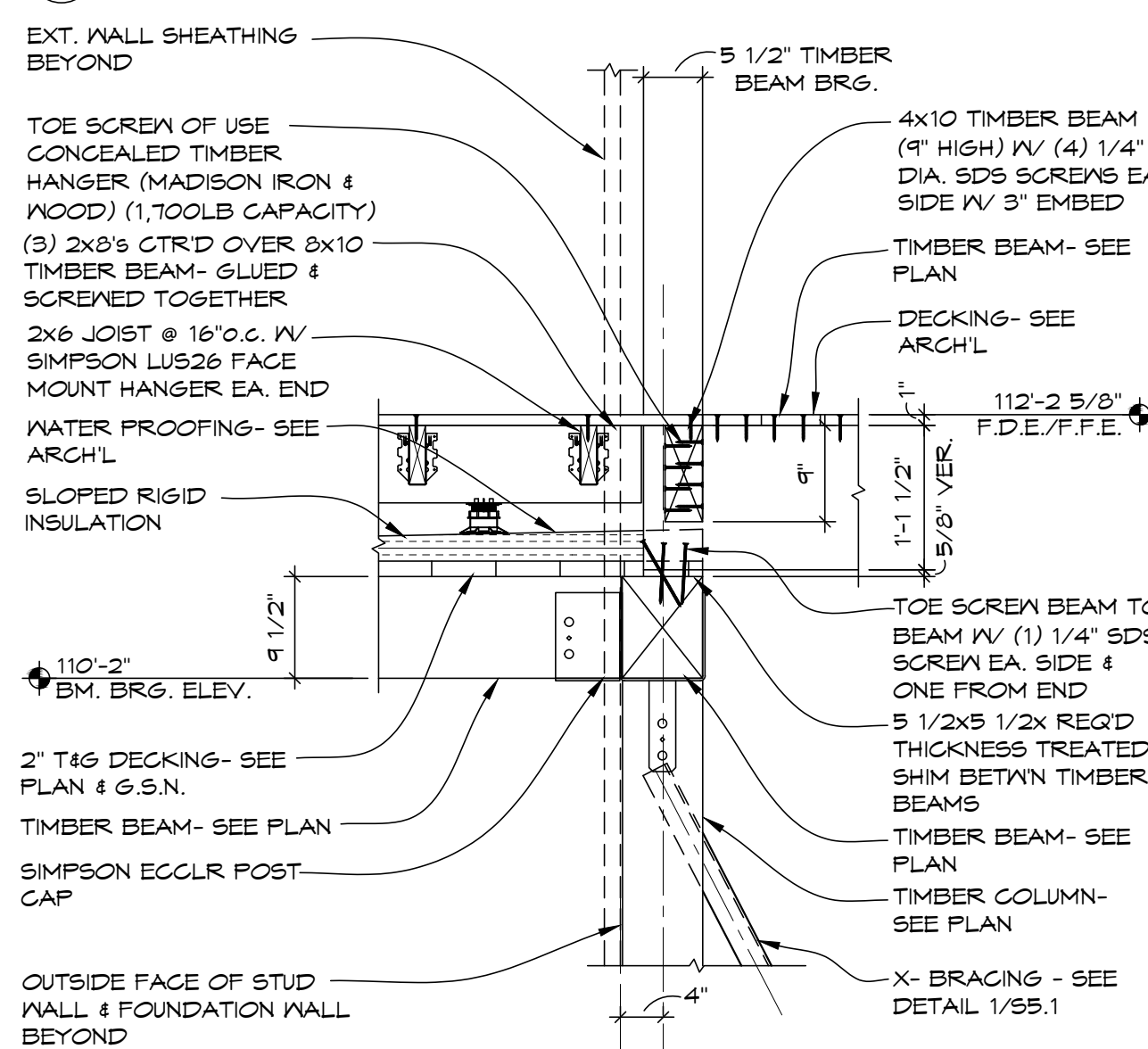
PROJECT #: C2663A
CONTACT: CHRIS
SCALE: AS NOTED
FOUNDATION DETAILS

DATE: 8/7/2026
SHEET
S4.0
Q.C.



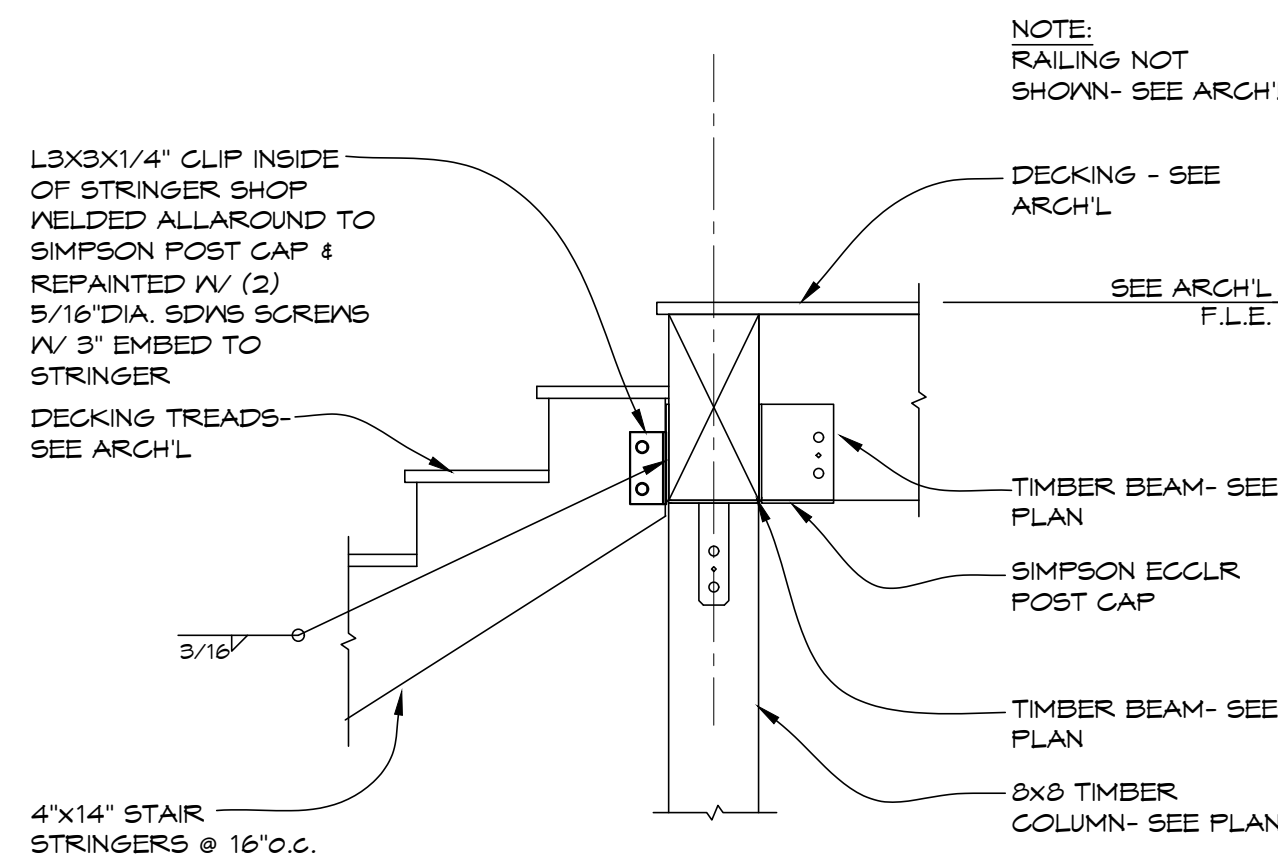
1 STAIR LANDING FRAMING / X-BRACING

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



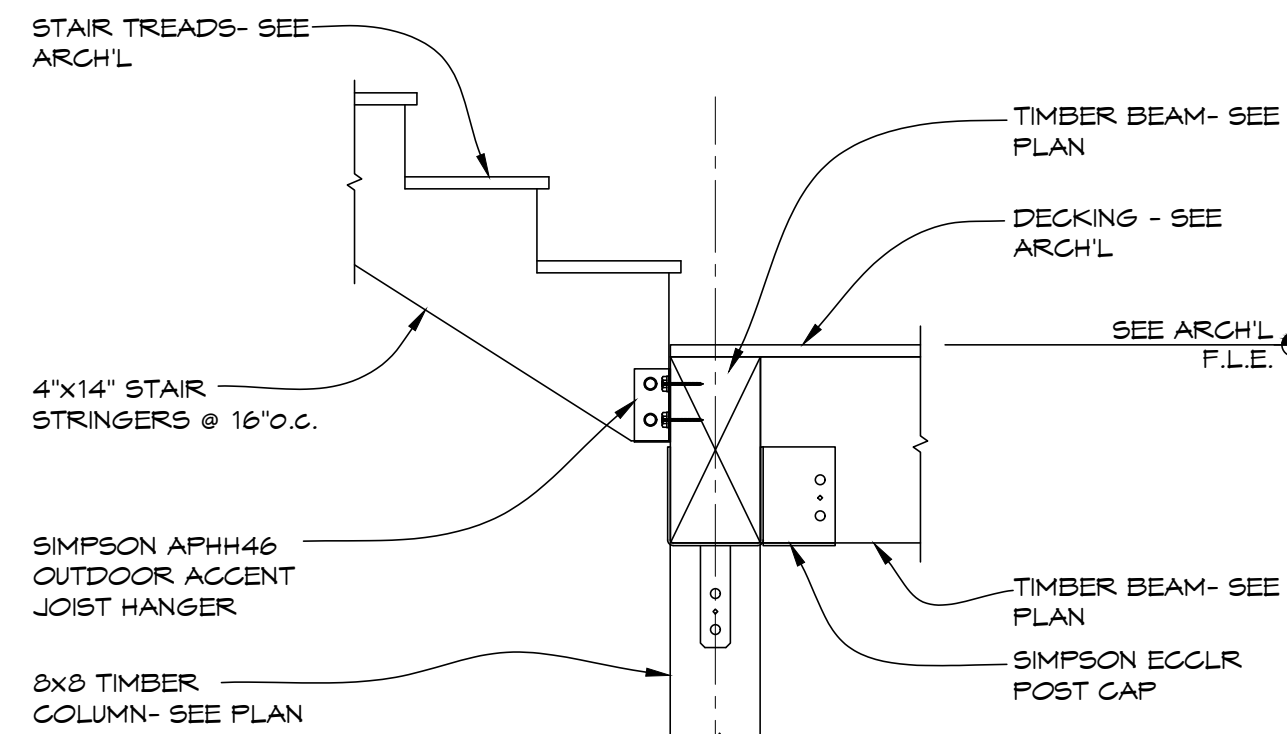
2 FLOOR TRUSS BEARING @ EXTERIOR WALL

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



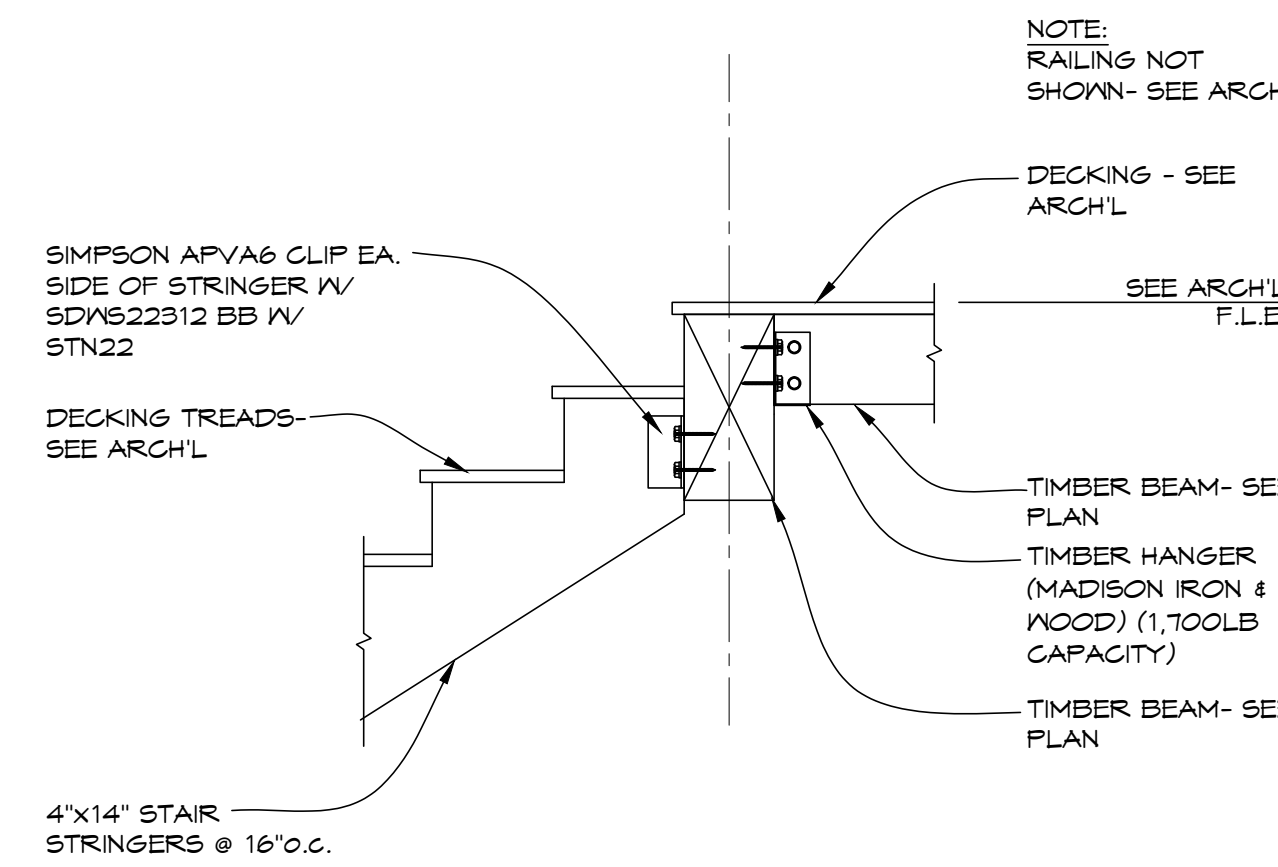
3 STAIR LANDING FRAMING / X-BRACING

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



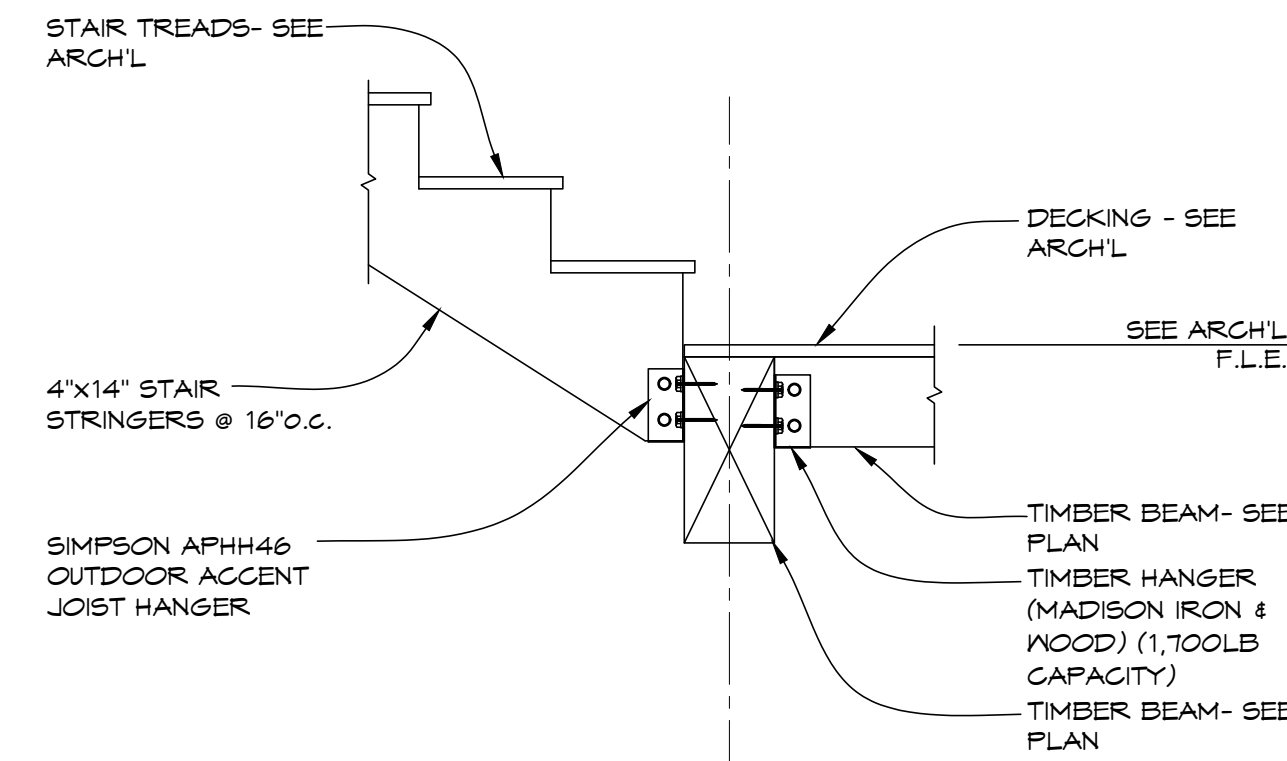
4 STAIR LANDING FRAMING / X-BRACING

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



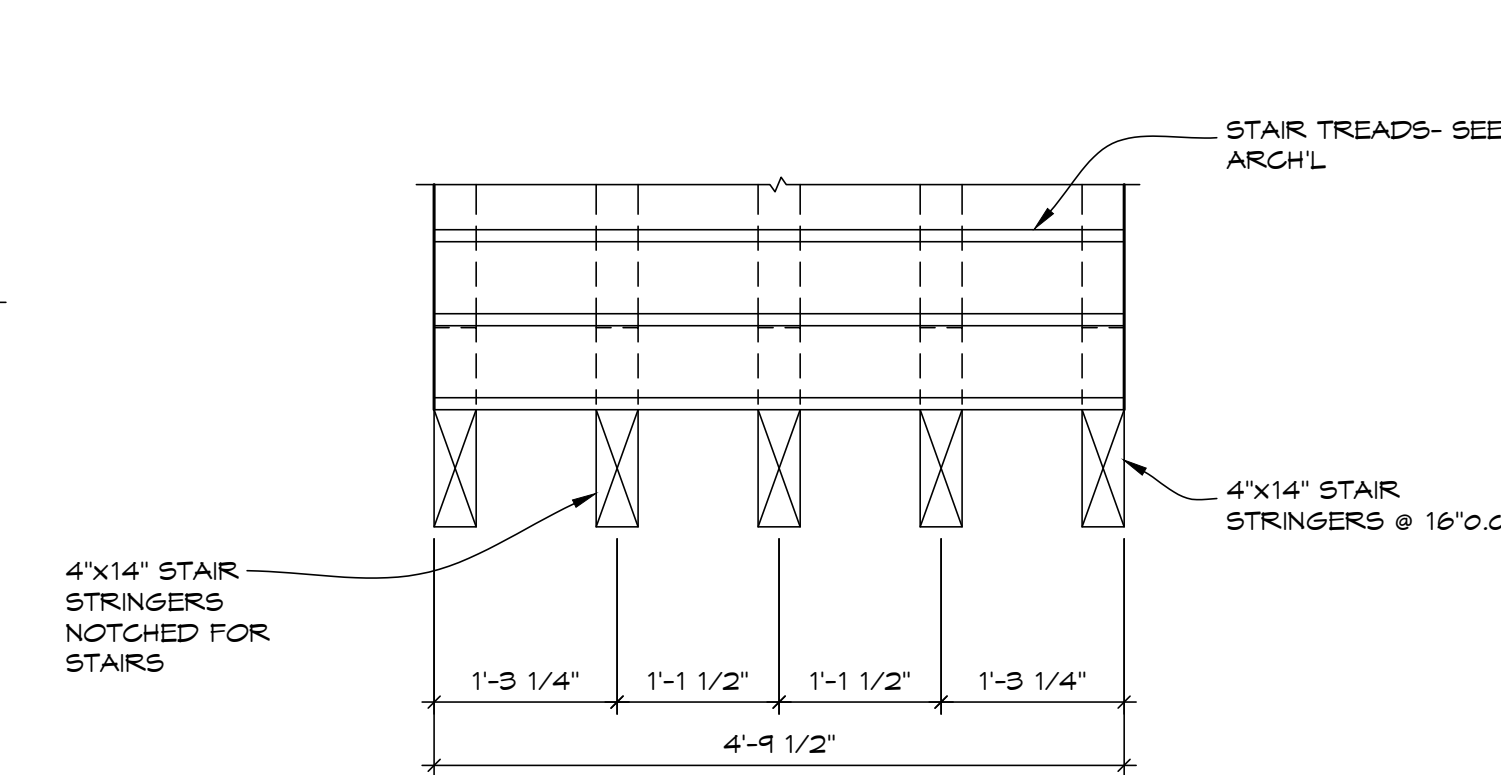
5 STAIR LANDING FRAMING / X-BRACING

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



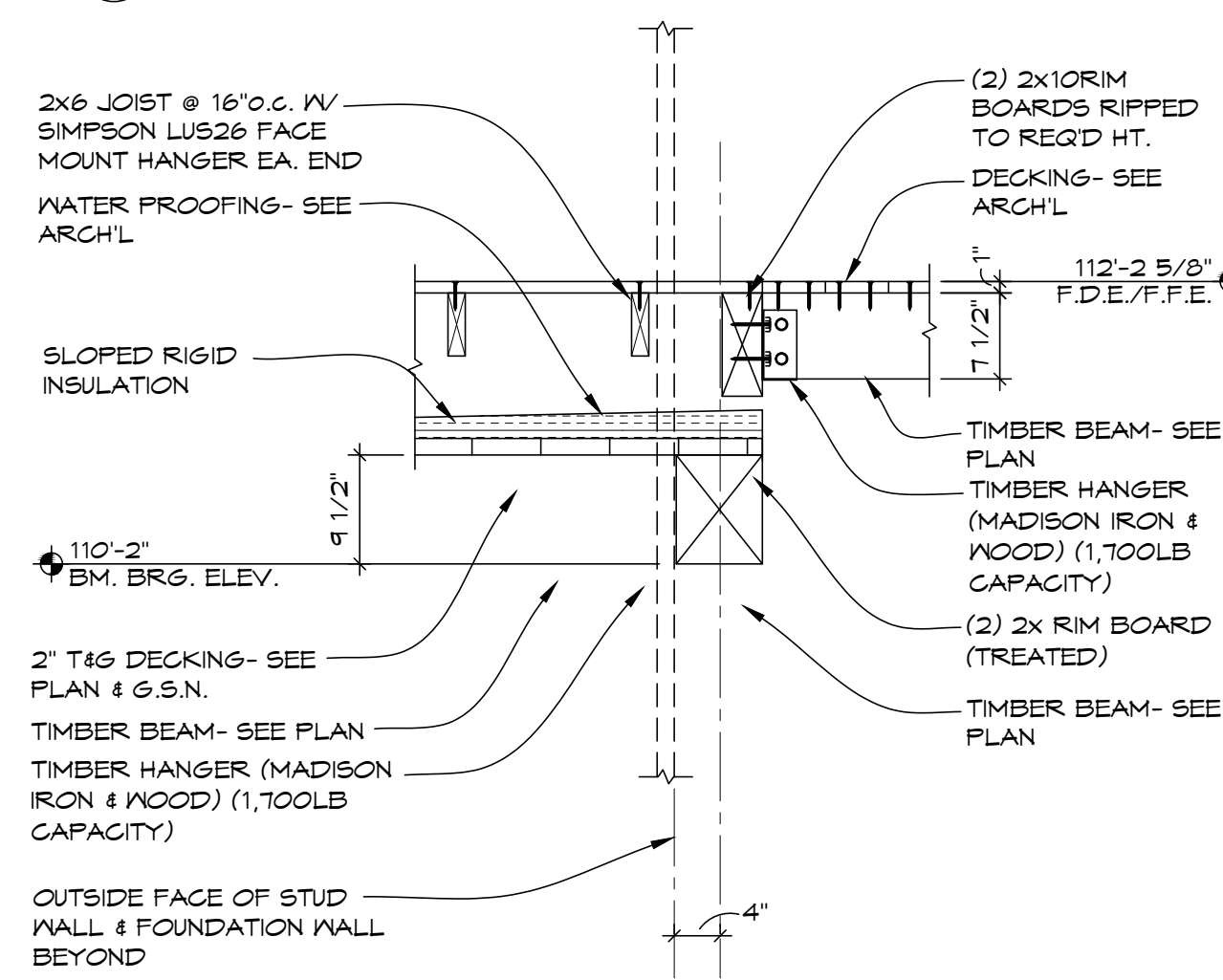
6 STAIR LANDING FRAMING / X-BRACING

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



7 SECTION THRU STAIR

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

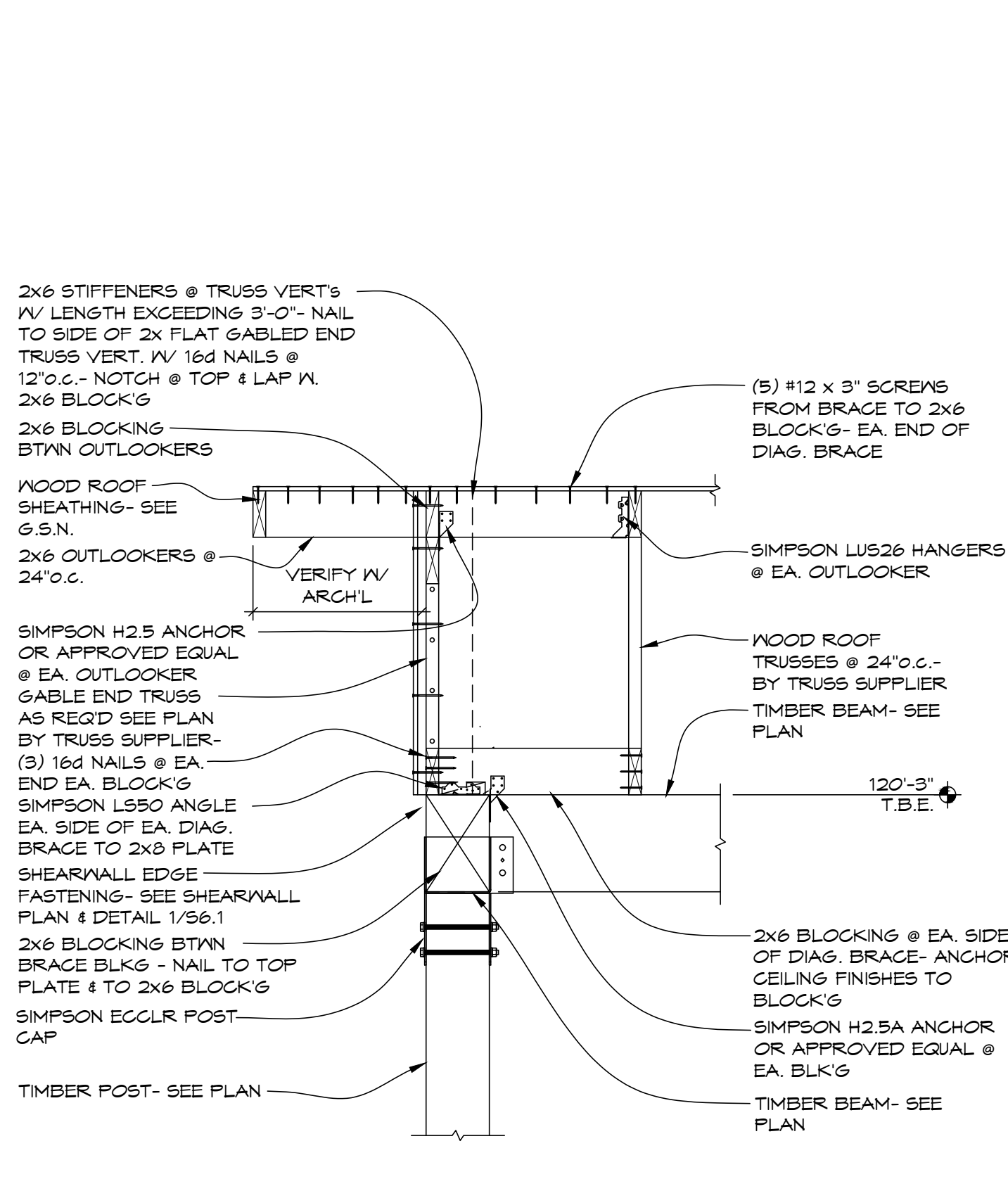
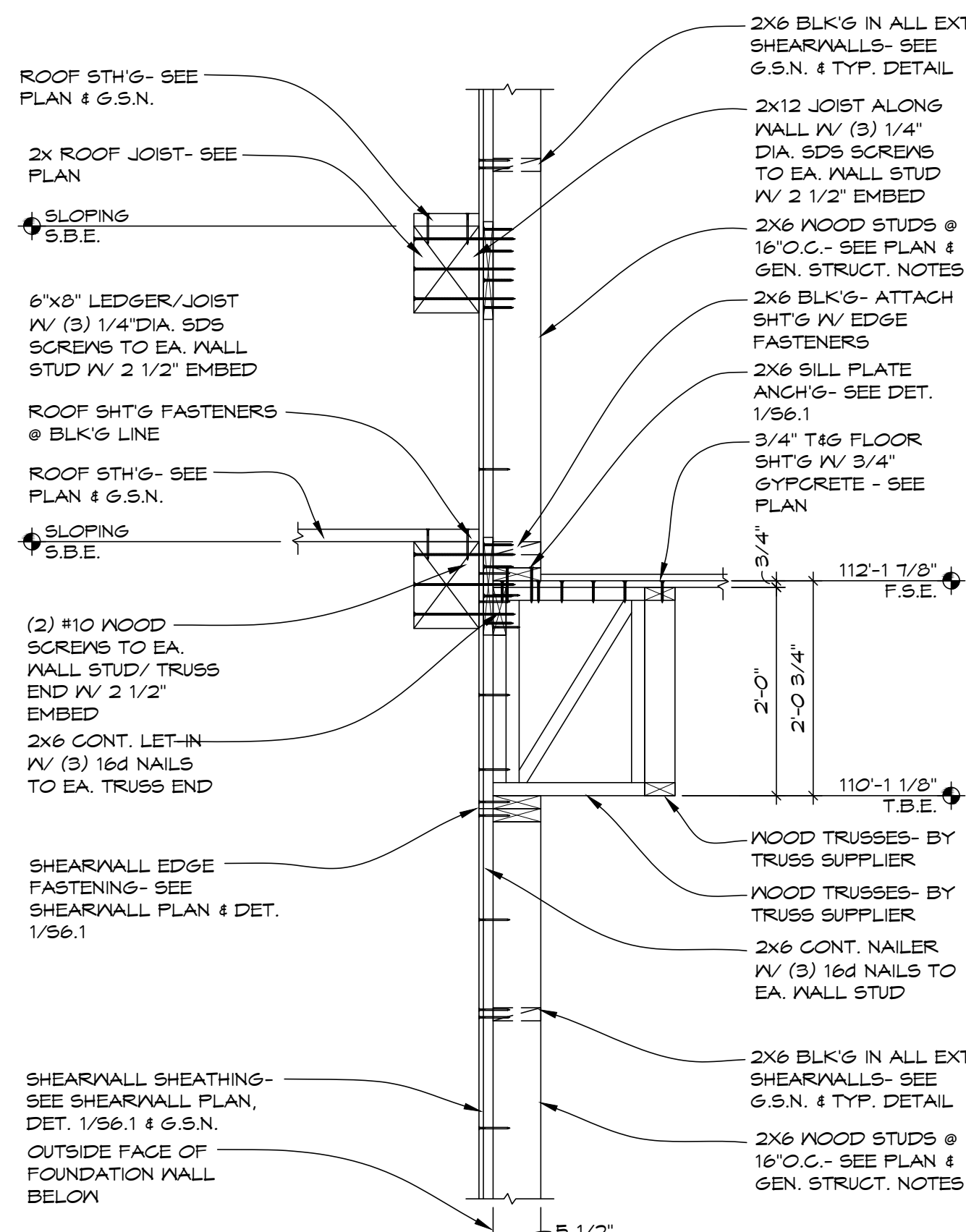
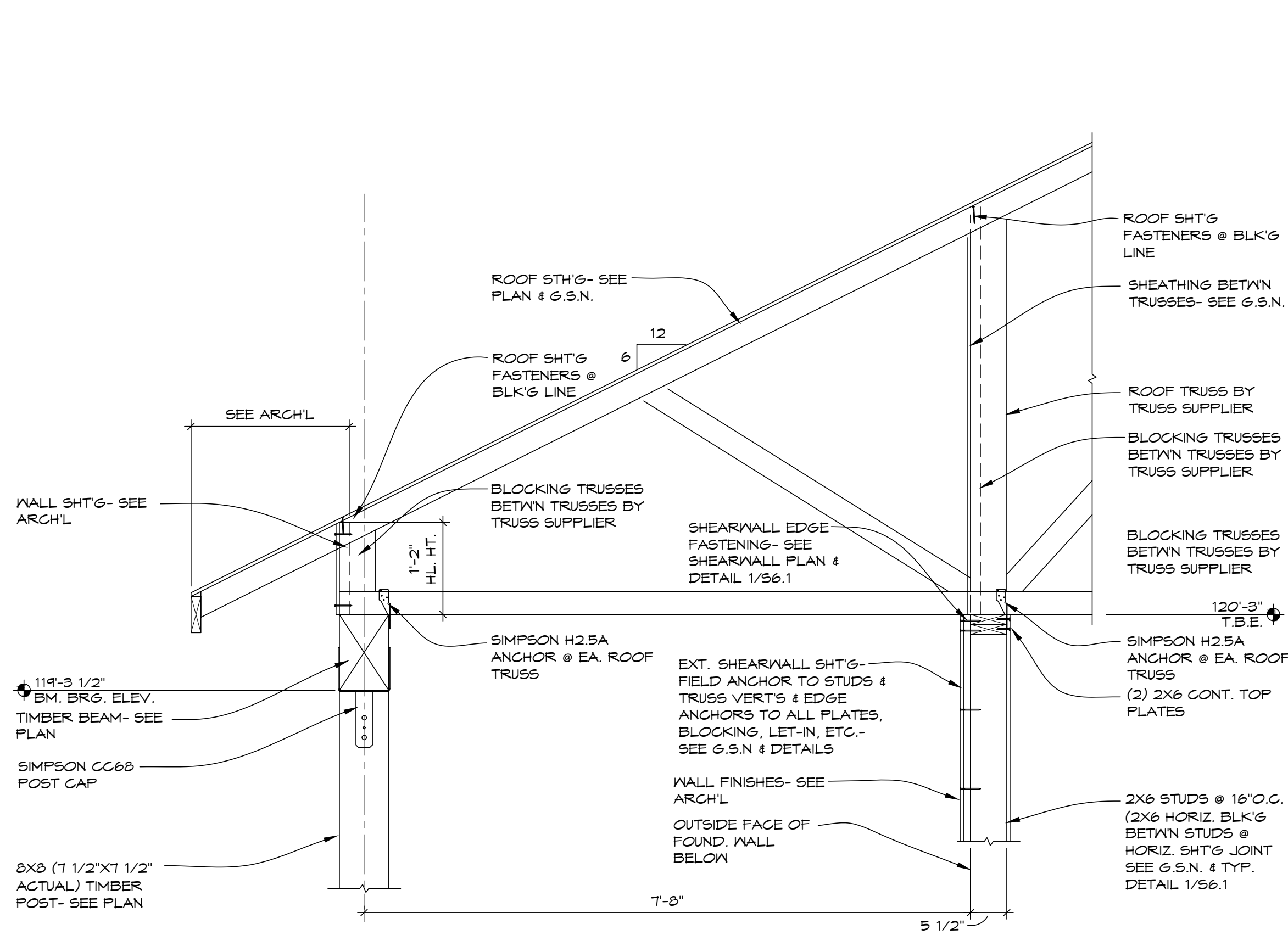
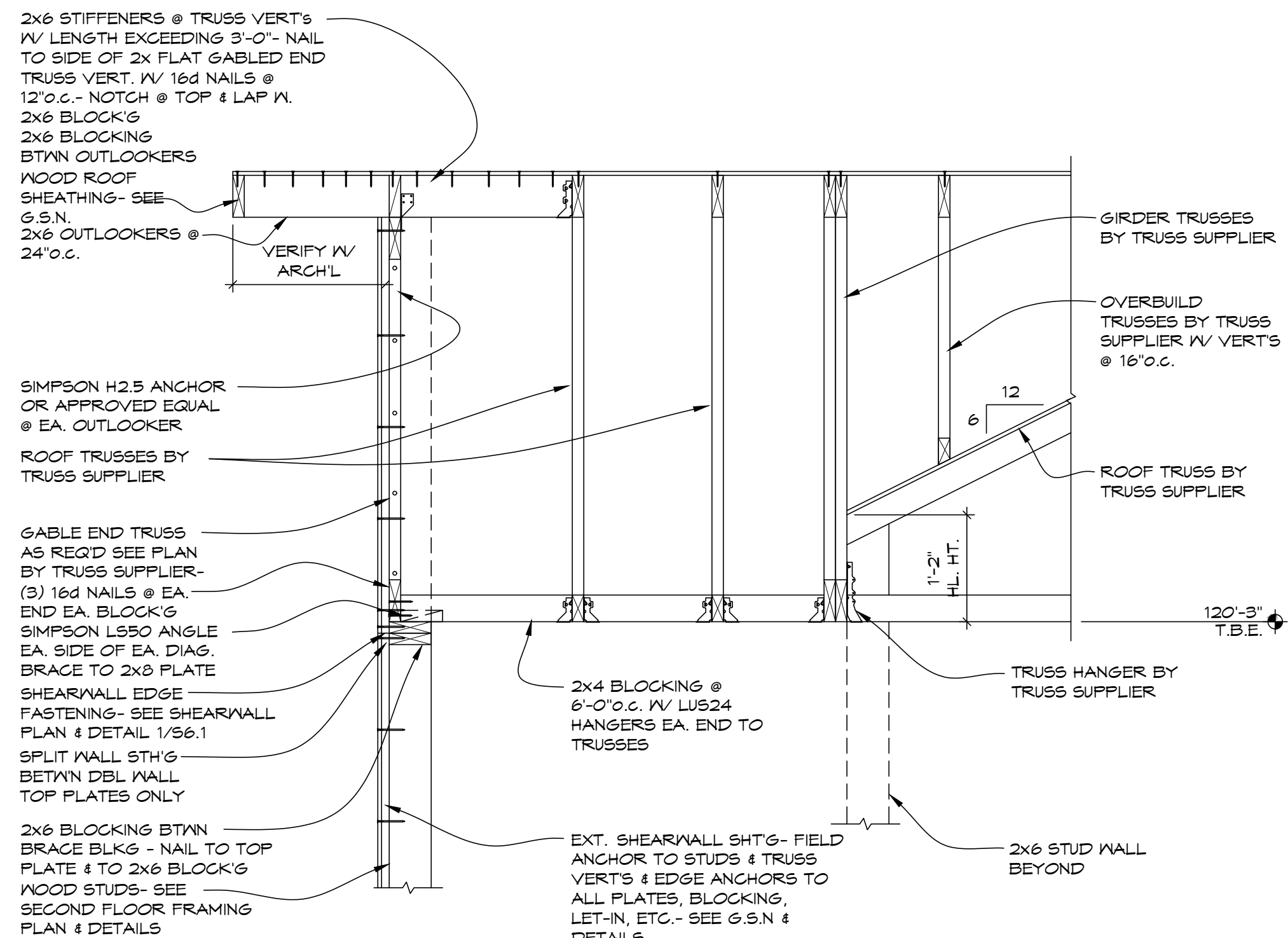
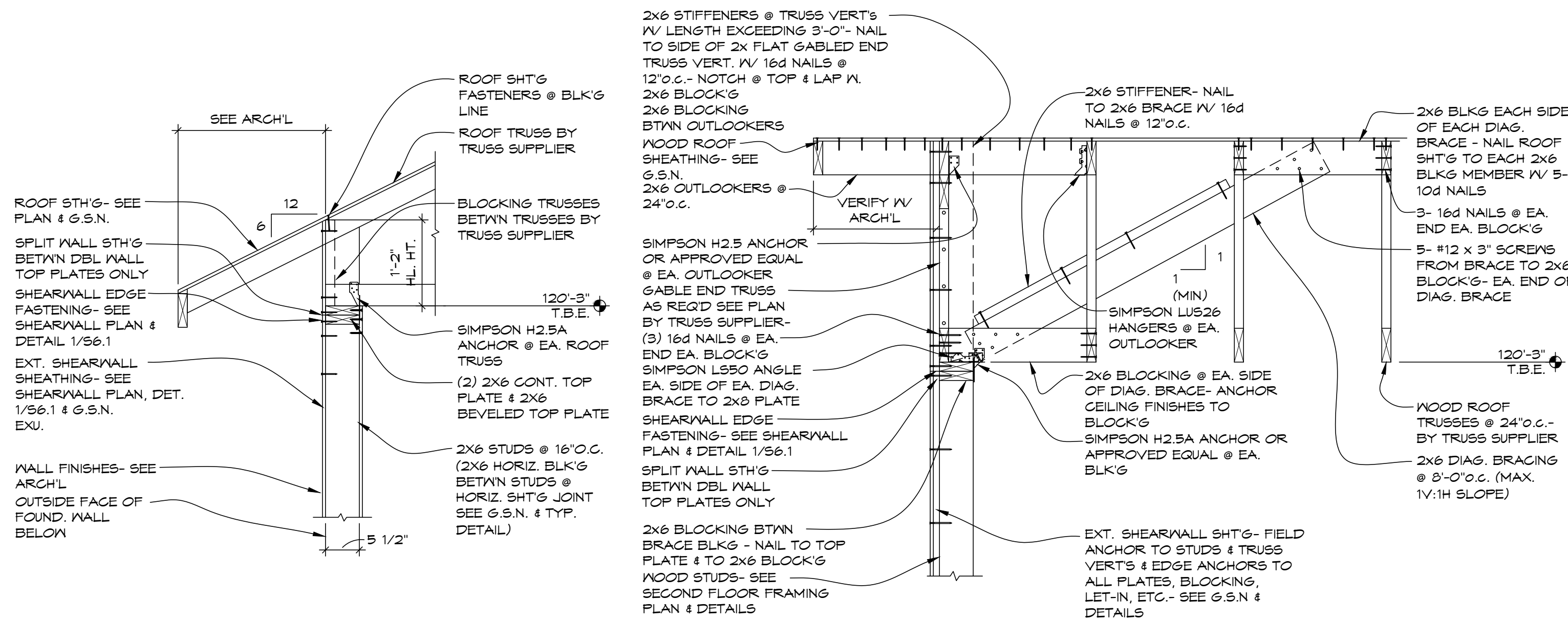


8 FLOOR TRUSS BEARING @ EXTERIOR WALL

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

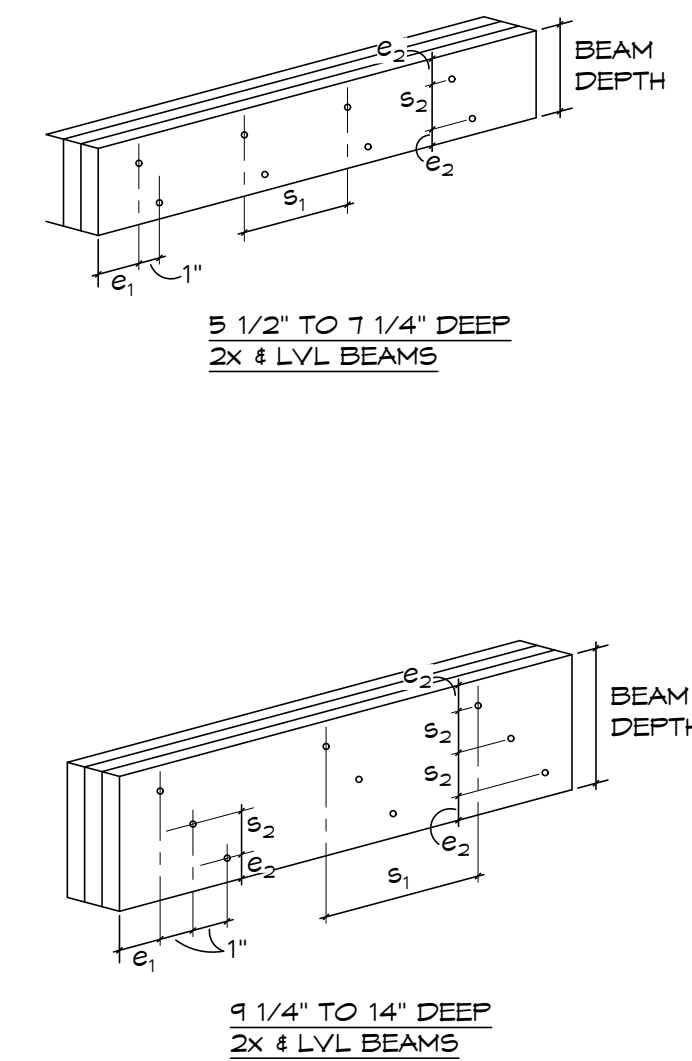
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MULTI-PLY BEAM FASTENING SCHEDULE								
PLIES	FASTENERS	e ₁	e ₂ (min.)	s ₁	s ₂ (min.)			
(2)-2x6	SIMPSON SDW22300 (2 ROWS)	6"	1 1/2"	16"	2 1/2"			
(2)-2x8					3 1/2"			
(3)-2x8	SIMPSON SDW22428 (2 ROWS)				3 1/2"			
(3)-2x10	SIMPSON SDW22428 (3 ROWS)							
(3)-2x12					2 1/2"			
(2)-1 3/4"x5 1/2" LVL	SIMPSON SDW22338 (2 ROWS)	6"	1 1/2"	16"	2 1/2"			
(2)-1 3/4"x7 1/4" LVL					3 1/2"			
(2)-1 3/4"x9 1/4"	SIMPSON SDW22338 (3 ROWS)				2 1/2"			
(3)-1 3/4"x9 1/4" LVL	SIMPSON SDW22500 (3 ROWS)							
(3)-1 3/4"x11 1/4" LVL					2 1/2"			
(3)-1 3/4"x14" LVL					3 1/2"			
					5"			
MULTI-PLY BEAM FASTENING SCHEDULE NOTES: (1) MULTI-PLY WOOD BEAMS SUPPORTING FRAMING LOAD ON THEIR FACE(S) VIA HANGERS ARE TO BE FASTENED PER THE SCHEDULE AND DIAGRAMS AS SHOWN. (2) SCREWS (OR NAILS) OTHER THAN SIMPSON SDW TRU85-PLY SCREWS OF TYPE & LENGTH NOTED ARE NOT ACCEPTABLE FOR FASTENING OF WOOD BEAM PLIES								

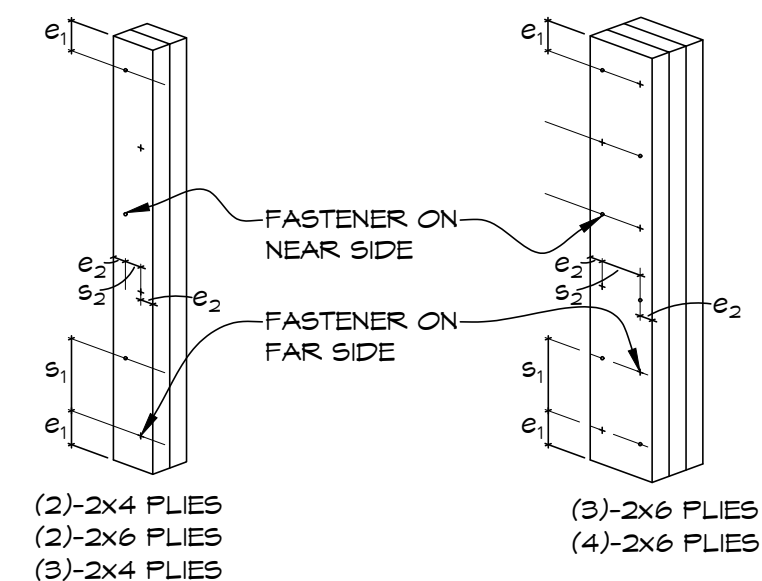
WOOD STUD SHEARWALL SCHEDULE							
MARK	SHEARWALL SHEATHING	PANEL FASTENING		SILL TO ANCHORAGE	HOLD-DOWNS (SEE ENDS OF SHEARWALLS)	BLOCKING @ PANEL JOINTS	NOTES:
		EDGE	FIELD				
SW 1	EXTERIOR SHEARWALLS R-6 ZIP SHEATHING ALL EXTERIOR WALL FACES	131 SHANK NAILS @ 4" O.C.	131 SHANK NAILS @ 12" O.C.	HILTI X-CP FASTENERS @ 10" O.C. ± 2 3/4" EDGE DISTANCE	N/A	BLOCKED	ALL SHEARWALL SHEATHING IS TO BE INSTALLED BY THE FRAMING CONTRACTOR PRIOR TO FRAMING ANY INTERIOR PARTITION WALLS. SHEARWALL.
							REFER TO WOOD STUD SHEARWALL NOTES IN GENERAL STRUCTURAL NOTES FOR ADDITIONAL INFORMATION ON SHEATHING, FASTENING AS WELL AS ADDITIONAL NOTES ON SHEARWALL CONSTRUCTION REQUIREMENTS. ALL HORIZ. PANEL EDGES TO BE BLOCKED W/ 2x8 BLOCKING. SIMPSON L70 CLIPS EACH SIDE OF LVL JAMB STUD PACKS TO TOP & BOTTOM WALL PLATES- 5/8" DIA. A.B. EA. SIDE OF STUD PACK TO FOUNDATION.

2 TYPICAL MULTI-PLY BEAM FASTENING REQUIREMENTS

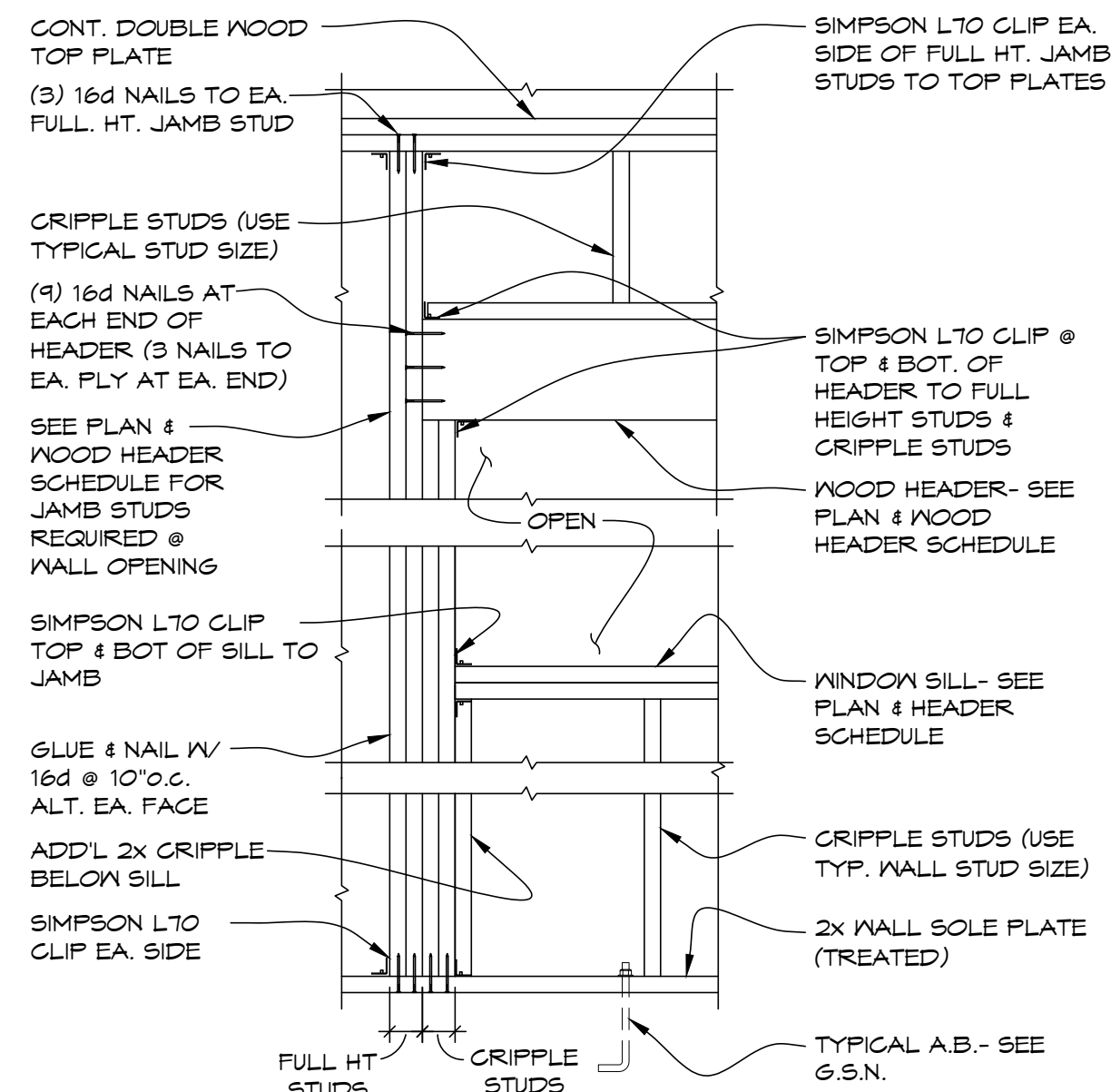
BUILT-UP WOOD COLUMN SCHEDULE						
PLIES	FASTENERS	e ₁	e ₂	g ₁	g ₂	
(2)-2x4	5/16" x 3" COMMON NAIL NAILS SMIPSON SDN92300	3 1/2"	1"	6"	N/A	
(2)-2x6	5/16" x 3" COMMON NAIL NAILS SMIPSON SDN92430	3 1/2"	1 1/2"	8"	N/A	
(3)-2x4	5/16" x 3" COMMON NAIL NAILS SMIPSON SDN92343	3 1/2"	1 1/2"	8"	N/A	
(3)-2x6	5/16" x 3" COMMON NAIL NAILS SMIPSON SDN92438	3 1/2"	1 1/2"	8"	2 1/2"	
(4)-2x6	SMIPSON SDN92360	3 1/2"	1 1/2"	8"	2 1/2"	

NOTES:
(1) BUILT-UP COLUMNS CONSISTING OF 2x WOOD LAMINATIONS MAY BE SUBSTITUTED FOR SOLID WOOD COLUMNS NOTED ON STRUCTURAL DRAWINGS WHEN PLIES ARE FASTENED PER BUILT-UP WOOD COLUMN SCHEDULE SUBSTITUTION NOTE: 4x4 POST = (3)-2x4; 4x6 POST = (3)-2x6; 6x6 POST = (4)-2x6

(2) SCREENS OTHER THAN SIMPSON SDW TRUSS-PLY SCREENS OF TYPE AND LENGTH NOTED ARE NOT ACCEPTABLE FOR FASTENING OF COLUMN PLIES.



5 TYPICAL MULTI-PLY STUDS FASTENING REQUIREMENTS



④ WOOD HEADER BRG. DET. @ WINDOW/DOOR

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PROJECT # : C2663A

CONTACT : CHRIS

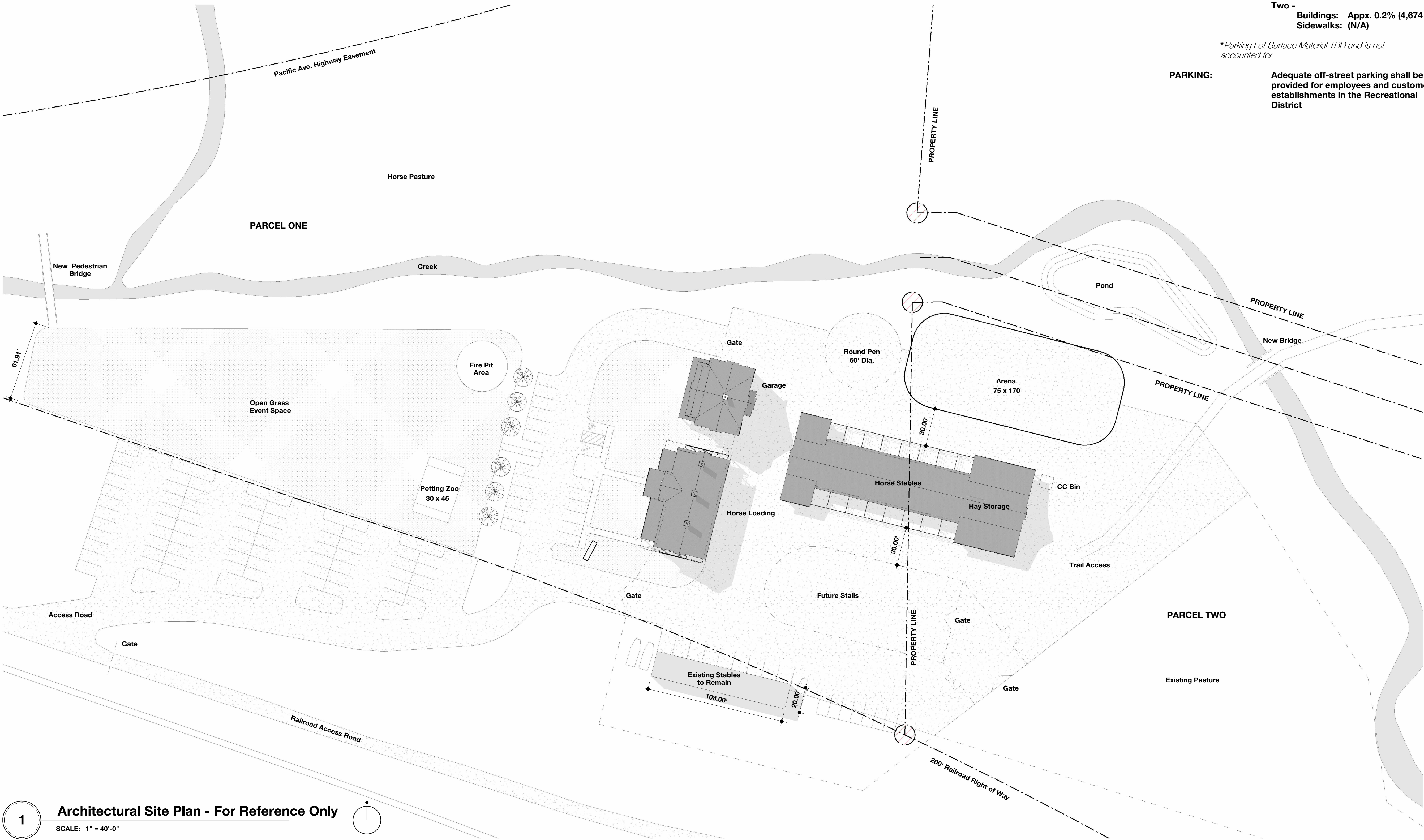
FRAMING DETAILS

DATE: 8/7/26

S6.1

SHEET

Q.C. — —



SITE INFORMATION

PARCELS: One - 12000000385002
Two - 12000000385003

ZONING: Historical Integrity
(Recreational Application)

SETBACKS: Front - 75'
Side - 25'
Rear - 25'

LOT SIZE: One - Appx. 322,344 SF (7.4 Acres)
Two - Appx. 1,785,960 SF (41 Acres)

LOT COVERAGE: One -
Buildings: Appx. 5% (16,377 SF)
Sidewalks: Appx. 0.5%(1,462 SF)
Two -
Buildings: Appx. 0.2% (4,674 SF)
Sidewalks: (N/A)

**Parking Lot Surface Material TBD and is not accounted for*

PARKING: Adequate off-street parking shall be provided for employees and customers of establishments in the Recreational District

KHHA

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LICENSED ARCHITECT
KRISTI W. HANSON
NO. 2765
EXP. 06/30/2027
STATE OF NORTH DAKOTA

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CONSTR. REV 3	

PROJECT # : 2515
CONTACT : KRISTI
SCALE: AS NOTED

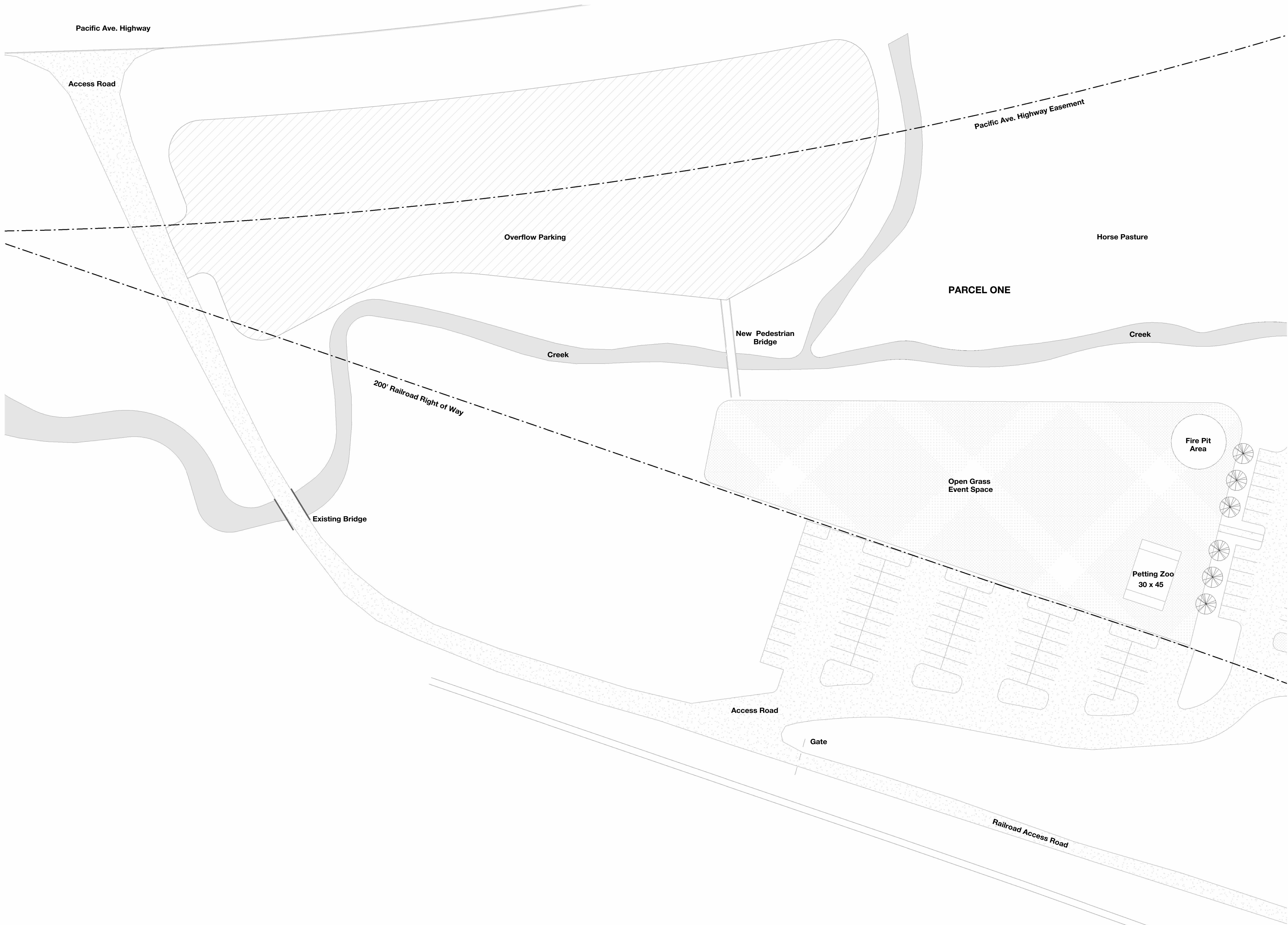
SITE PLAN

SHEET

A7.0

DATE: 08/07/26

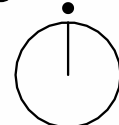
Q.C. _____



Architectural Site Plan - Cont. - For Reference Only

SCALE: 1" = 40'-0"

1



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PROJECT # : 2515
CONTACT : KRISTI
SCALE: AS NOTED

SITE PLAN

1

7.1

DATE: 08/07/26

Q.C. _____

Floor Plan General Notes

- 1. All interior wall types to be wall type 'D' unless noted otherwise in the Construction Documents.
- 2. All exterior wall types to be wall type 'A' unless noted otherwise in the Construction Documents.
- 3. Coordinate all wall framing w/all ductwork, transfer grilles, piping, mechanical and electrical infrastructure.
- 4. Contractor to provide and install wood backing throughout, including but not limited to, casework, mirrors, tv's/monitors, coat hooks, grab bars, etc.
- 5. Contractor to field verify all dimensions shown and inform Construction Manager of any discrepancies and coordinate as required.
- 6. All walls to be framed, and sheathed to structure/structural deck above unless noted otherwise in the Construction Documents.

Floor Plan Keynotes

- 1 Semirecessed Fire Extinguisher Cabinet - Academy Series & Fire Extinguisher - Basis of Design: JL Industries 5E Multi-purpose ABC fire extinguisher 5 lb. - Model No: JLI-Cosmic-5E
- 2 Owner Provided TV - See Elec. Drawings
- 3 Dashed line indicates header above - See RCPs for more information

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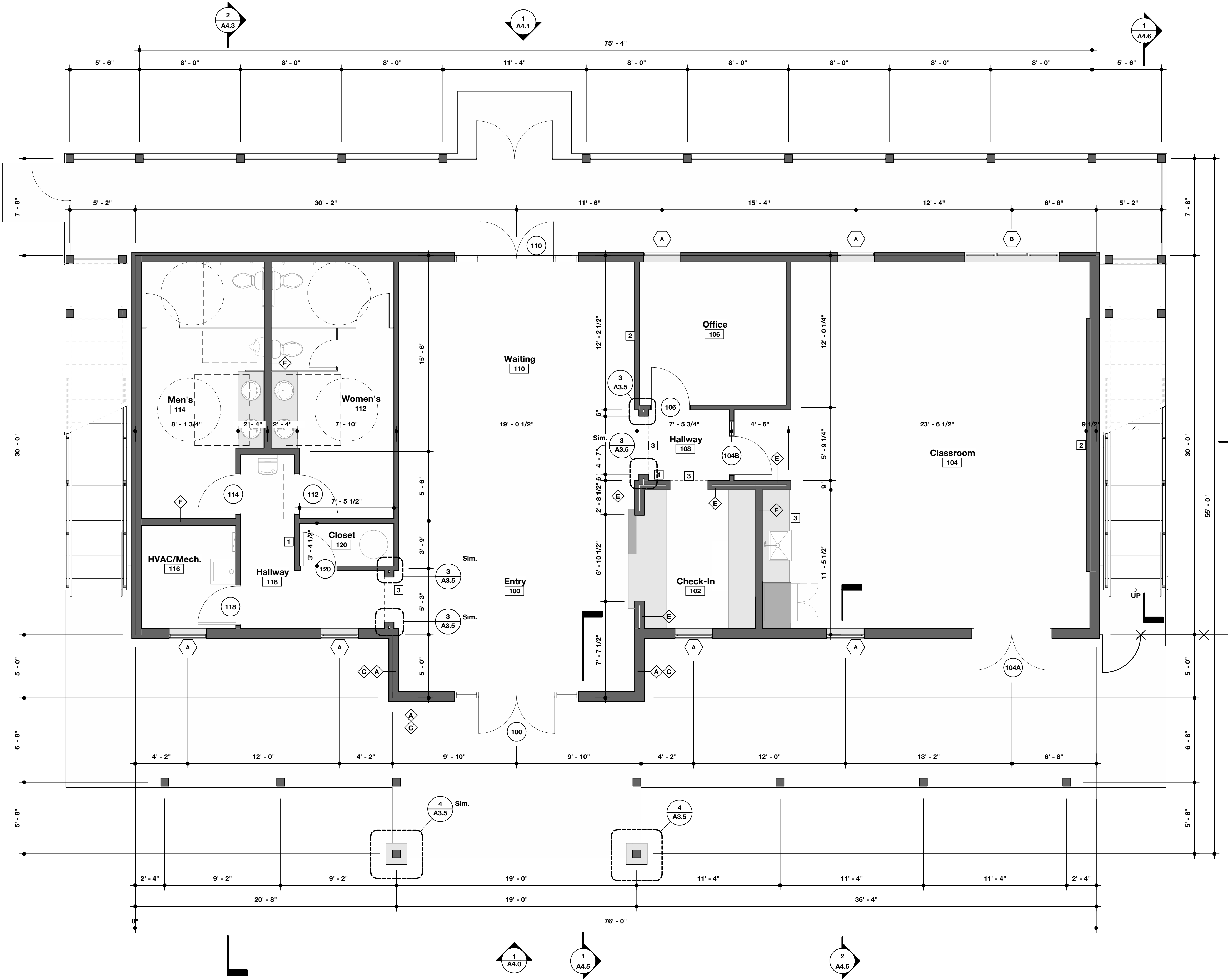
PROJECT # : 2515

CONTACT : KRISTI

SCALE: AS NOTED

FIRST FLOOR PLAN

1
A3.0
DATE: 08/07/26
Q.C. _____



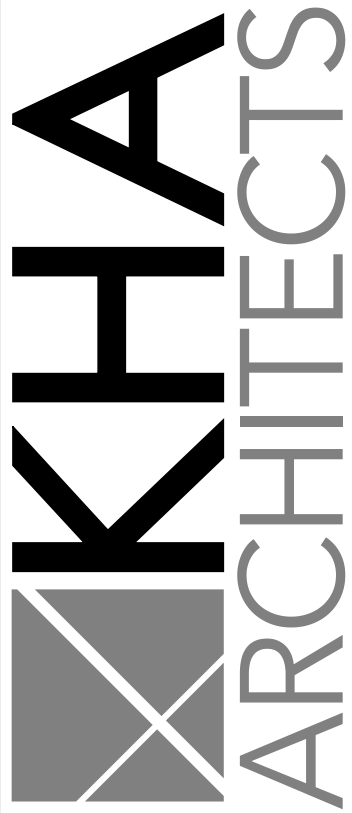
1 First Floor Plan
SCALE: 1/4" = 1'-0"

Floor Plan General Notes

- 1. All interior wall types to be wall type 'D' unless noted otherwise in the Construction Documents.
- 2. All exterior wall types to be wall type 'A' unless noted otherwise in the Construction Documents.
- 3. Coordinate all wall framing w/all ductwork, transfer grilles, piping, mechanical and electrical infrastructure.
- 4. Contractor to provide and install wood backing throughout, including but not limited to, casework, mirrors, tv's/monitors, coat hooks, grab bars, etc.
- 5. Contractor to field verify all dimensions shown and inform Construction Manager of any discrepancies and coordinate as required.
- 6. All walls to be framed, and sheathed to structure/structural deck above unless noted otherwise in the Construction Documents.

Floor Plan Keynotes

- 1 Semirecessed Fire Extinguisher Cabinet - Academy Series & Fire Extinguisher - Basis of Design: JLI Industries SE Multi-purpose ABC fire extinguisher 5 lb. - Model No: JLI-Cosmic-SE
- 2 Owner Provided TV - See Elec. Drawings
- 3 Dashed line indicates header above - See RCPs for more information



72-185 PAINTERS PATH
SUITE A
PALM DESERT, CA
92260
760.776.4068

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ARCHITECTS, INC.

CITY APPROVAL:

TRMF RIDING STABLES - MAIN BUILDING
14532 1-94 Loop East
ND 58645



REVISION LIST	
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DESIGN DEV.	
CONST. DOCS.	
CITY SUB. 1	BUDG. DEPT.
CITY SUB. 2	
CONSTR. REV 1	CONSTRUCTION
CONSTR. REV 2	
CONSTR. REV 3	

PROJECT # : 2515

CONTACT : KRISTI

SCALE: AS NOTED

SECOND FLOOR PLAN

DATE: 08/07/26
A3.7
Q.C. _____



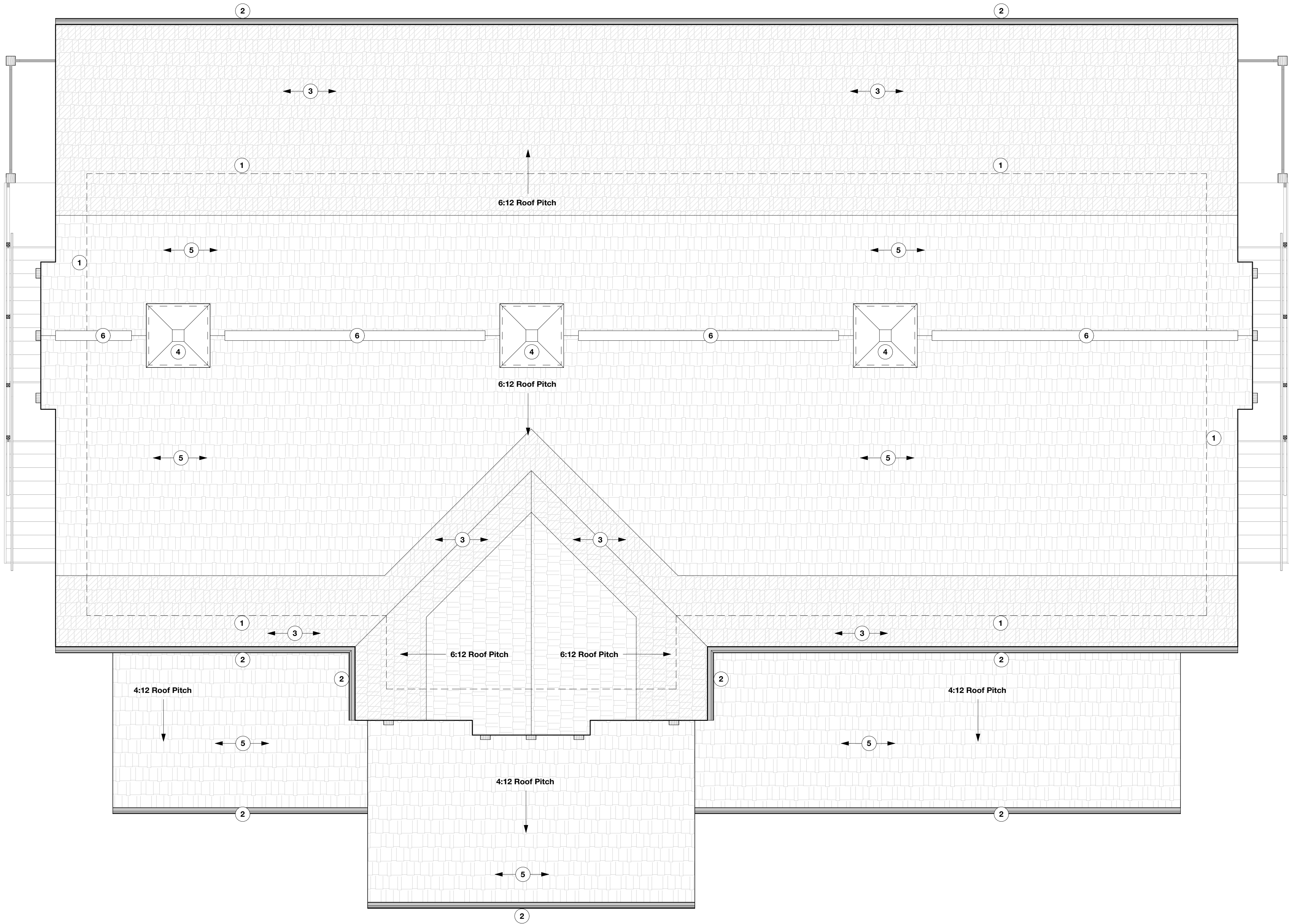
1 Second Floor Plan
SCALE: 1/4" = 1'-0"

Roof Plan General Notes

- 1. Contractor to paint all roof penetrations and venting to match the roof color.
- 2. Contractor to provide and install insect/animal screens at all roof vents and penetrations.
- 3. Contractor to provide and install ice and water shield at all valleys and eaves throughout. All ice and water shield to extend past inside face of exterior wall by a minimum of 24" or greater as indicated on drawings. Basis of Design: Grace Ice & Water Shield Roofing underlayment by Certainteed.
- 4. Contractor to provide and install synthetic roof underlayment throughout.
- 5. Contractor to provide and install pre-finished metal kick flashing at all roof/wall intersections as required. Finish to match adjacent material.

Roof Plan Keynotes

- 1 Dashed line indicates wall below.
- 2 Line indicates gutter and downspout system - See Building Elevations for additional information.
- 3 Ice and Water Shield - Typ. - See General Notes for additional information.
- 4 Decorative Cedar Roof Cupola - See Detail 3/A4.3 for more information
- 5 Asphalt shingles over compatible synthetic underlayment installed throughout - Finish: AS-1
- 6 Ridge Vent - Basis of Design: CertainTeed Filtered Ridge Vent.



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72-185 PAINTERS PATH

SUITE A

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CITY APPROVAL:

TRMF RIDING STABLES - MAIN BUILDING

14532 1-94 Loop East

ND 58645

LICENSED ARCHITECT

KRISTI W HANSON

NO. 2765

EXP. 06/30/2027

STATE OF NORTH DAKOTA

REVISION LIST

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CITY SUB. 2	
CONSTR. REV 1	CONSTRUCTION
CONSTR. REV 2	
CONSTR. REV 3	

PROJECT # : 2515

CONTACT : KRISTI

SCALE: AS NOTED

ROOF PLAN

SHEET

A3.2

DATE: 08/07/26

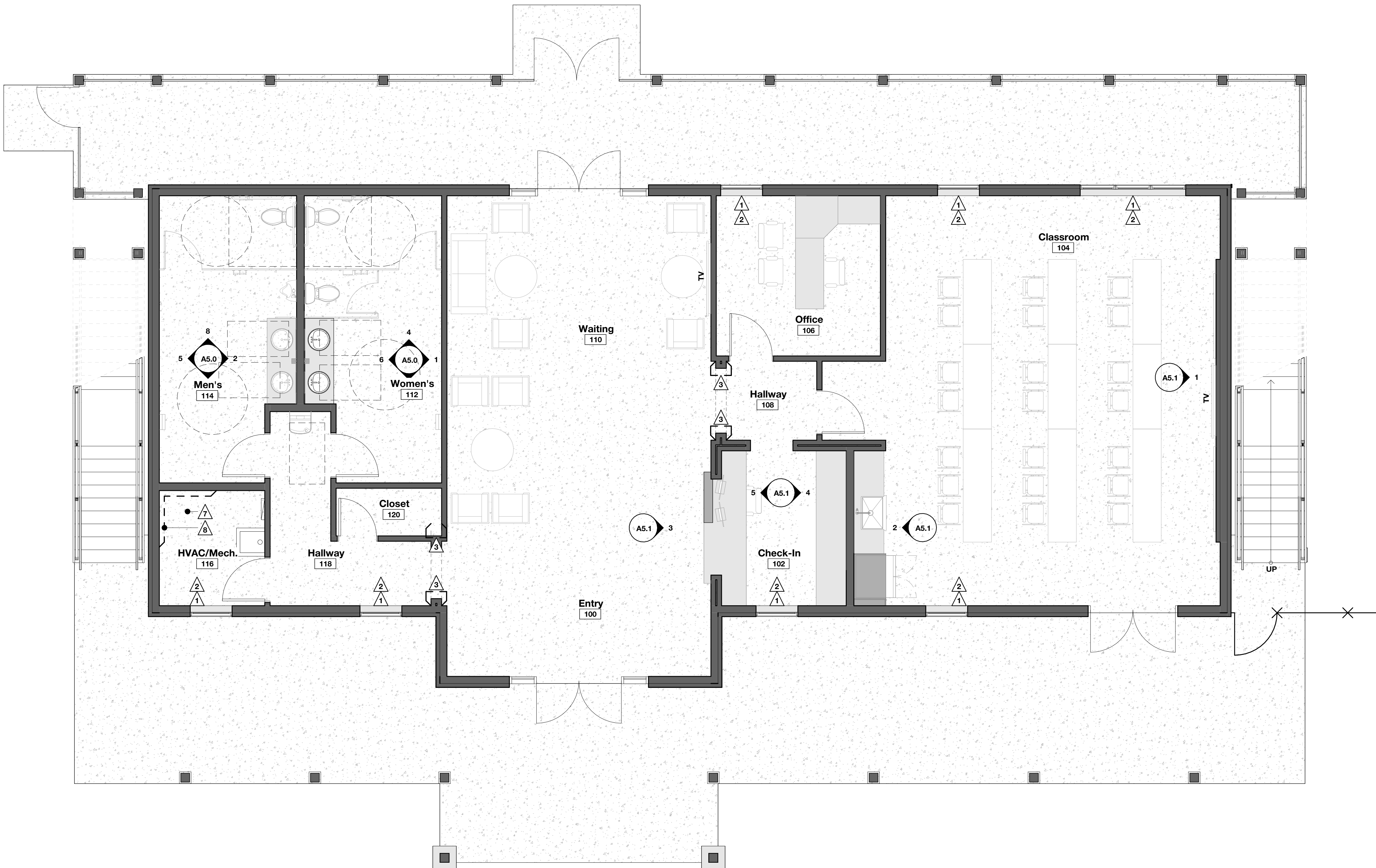
Q.C. _____

Floor Plan General Notes

1. Furniture shown to be Owner provided.

Finish Plan Keynotes

- 1 PVC-1 window sill at this location - See Finishes Legend for more information
- 2 Provide and Install SWF manual roller window shade - Crosshatch R 3% Open - Finish: Eggshell/Fog
- 3 WD-1 wall finish from floor to ceiling at this location - See Finishes Legend for more information
- 4 Wired Shelving to be located in this room - Top of shelf to be 5'-8" A.F.F - Basis of Design: Rubbermaid FastTrack Closet Freeslide Kit
- 5 Provide and install FT-1 transition strip between carpet and LVT flooring - Finish: Hammered Nickel
- 6 Wired Shelving to be located in this room - Top of shelving units to be 5'-8", 4'-0" & 2'-4" A.F.F - Basis of Design: Rubbermaid Steel Tight Mesh Shelf Kit
- 7 Mop Sink - See Mech. Drawings
- 8 Prove and install FRP - @48" A.F.F. - Extend 4'-0" from the corner of wall on each side of Mop Sink- See Finishes Legend for more information



72-185 PAINTERS PATH
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CITY APPROVAL:

TRMF RIDING STABLES - MAIN BUILDING
14532 L-94 Loop East
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REVISION LIST	
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DESIGN DEV.	
CONST. DOCS.	
	BLOG. DEPT.
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CITY SUB. 2	CONSTRUCTION
CONSTR. REV 1	
CONSTR. REV 2	
CONSTR. REV 3	

PROJECT # : 2515

CONTACT : KRISTI

SCALE: AS NOTED

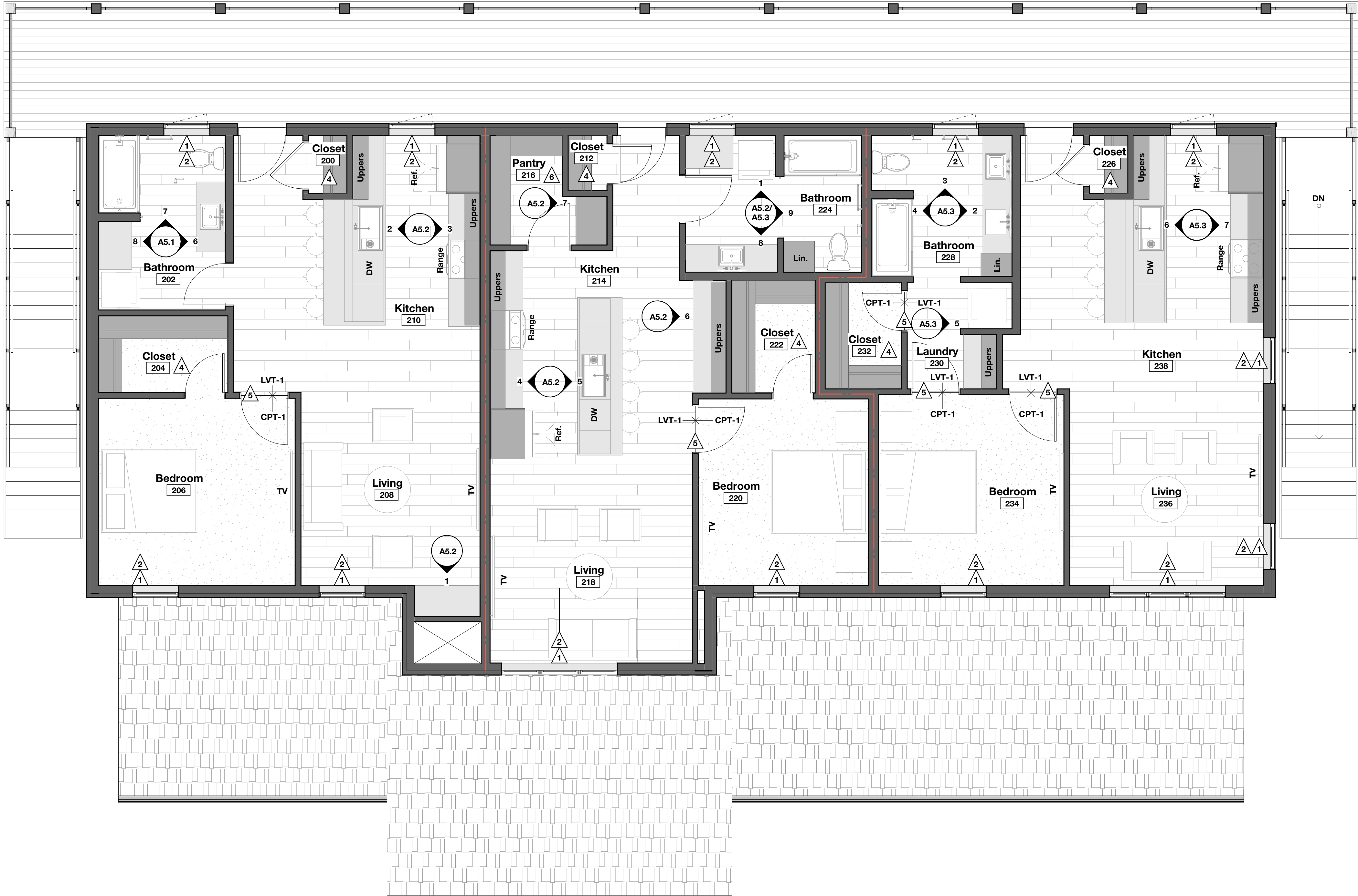
FIRST FLOOR FINISH
PLAN

Floor Plan General Notes

1. Furniture shown to be Owner provided.

Finish Plan Keynotes

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- 2 Provide and Install SWF manual roller window shade - Crosshatch R 3% Open - Finish: Eggshell/Fog
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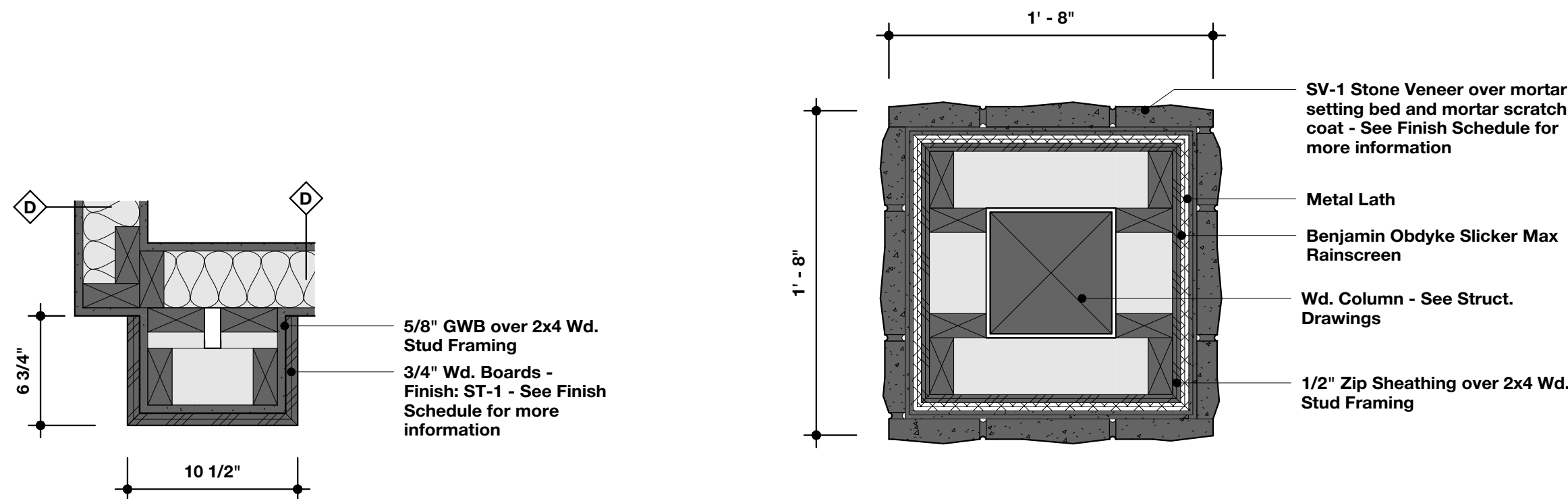
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PROJECT # : 2515
CONTACT : KRISTI
SCALE: AS NOTED

SECOND FLOOR
FINISH PLAN

DATE: 08/07/26
Q.C. _____

A3.4

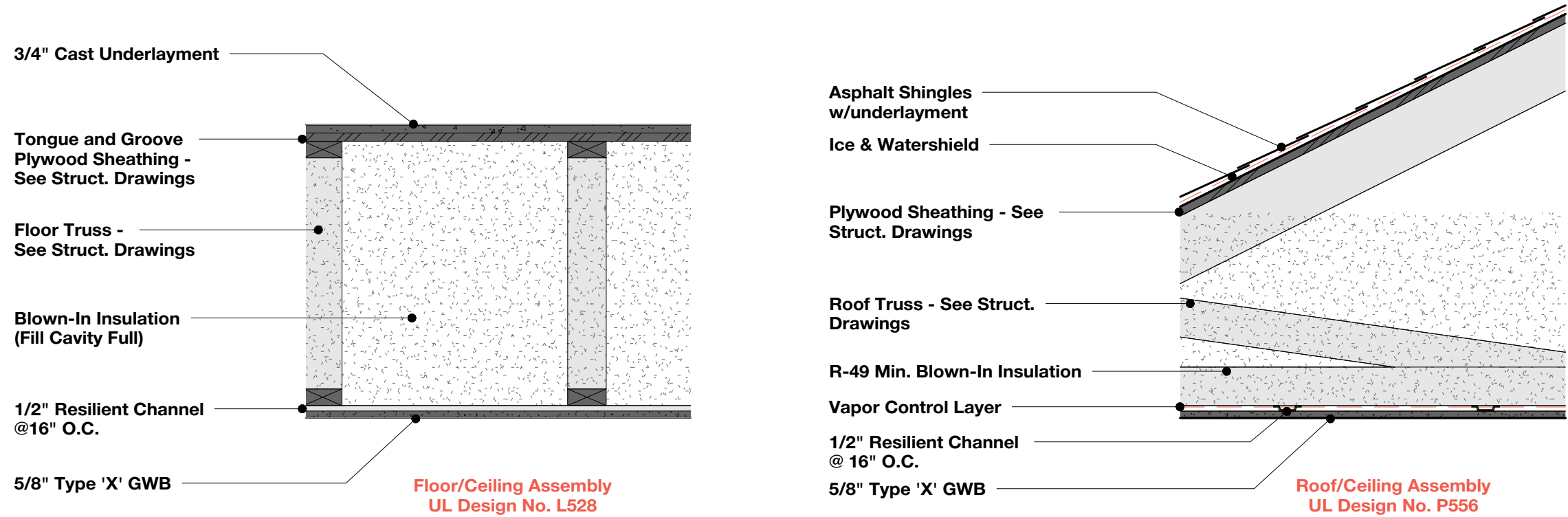


Floor Plan Detail - Int. Wood Wrap

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

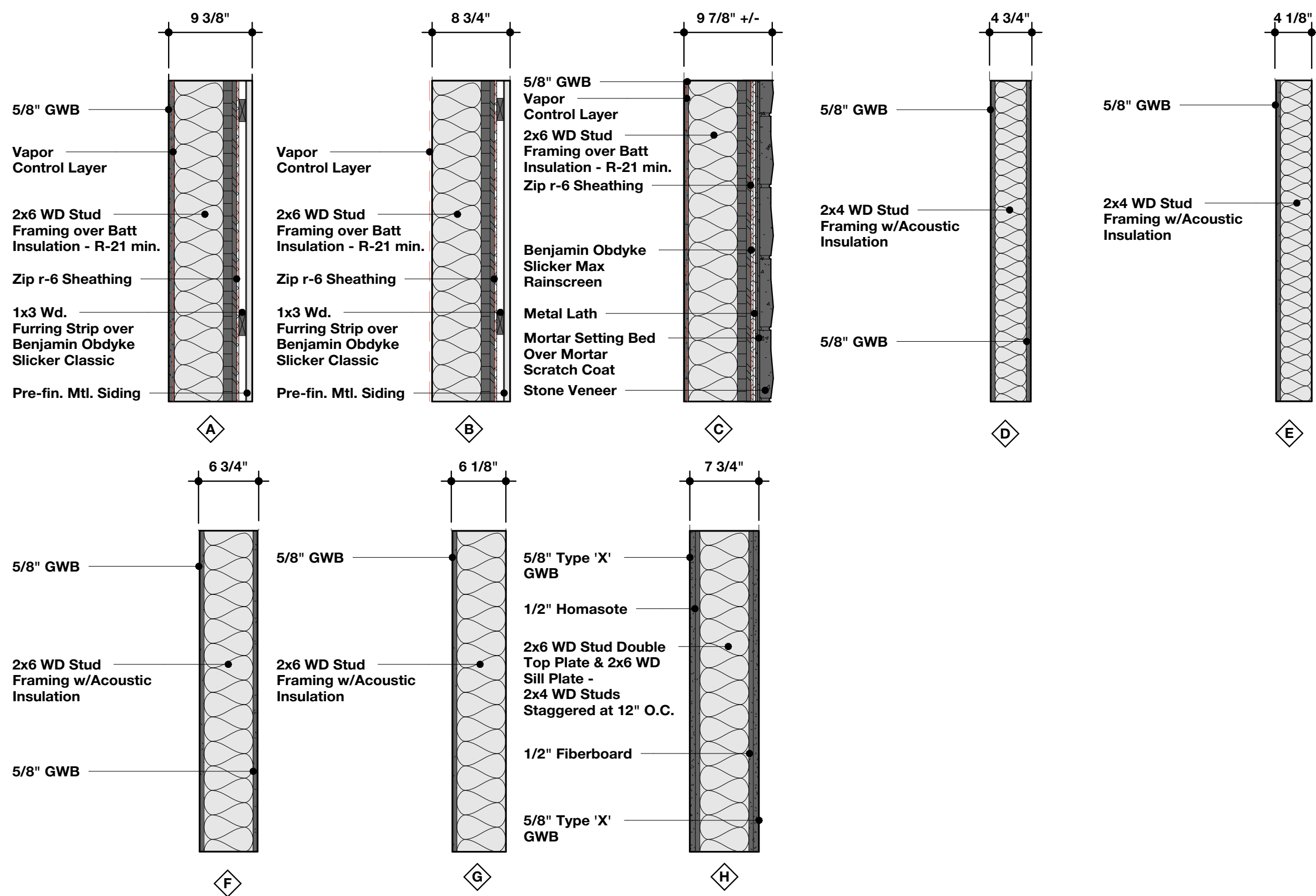
Floor Plan Detail - Stone @ Columns

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



Horizontal Assemblies

SCALE: 1" = 1'-0"



Wall Type Legend

SCALE: 1" = 1'-0"

Unit Separating Wall
1 HR Rated Wall
UL Design No. U340

DOOR SCHEDULE

Door #	Width	Height	Thickne ss	Door Type	Frame Type	Details		Hardware	Fire Rating	Notes
100	6' - 0"	8' - 0"	1 3/4"	ALUM-1	ALUM-A	5/A3.6	4/A3.6	Group 1A	--	3, 7
104A	6' - 0"	8' - 0"	1 3/4"	ALUM-1	ALUM-A	5/A3.6	4/A3.6	Group 1	--	3, 7
104B	3' - 0"	8' - 0"	1 3/8"	WD-1	HM-D	9/A3.6	10/A3.6	Group 2	--	4, 5
106	3' - 0"	8' - 0"	1 3/8"	WD-1	HM-A	9/A3.6	10/A3.6	Group 2	--	4, 5
110	5' - 10"	8' - 0"	1 3/4"	ALUM-1	ALUM-A	5/A3.6	4/A3.6	Group 1A	--	3, 7
112	3' - 0"	8' - 0"	1 3/4"	WD-2	HM-A	9/A3.6	10/A3.6	Group 5	--	4, 5
114	3' - 0"	8' - 0"	1 3/4"	WD-2	HM-A	9/A3.6	10/A3.6	Group 5	--	4, 5
118	3' - 0"	8' - 0"	1 3/4"	HM-1	HM-A	9/A3.6	10/A3.6	Group 4	--	1, 4
120	2' - 8"	8' - 0"	1 3/4"	HM-1	HM-A	9/A3.6	10/A3.6	Group 4	--	4, 5
200	3' - 0"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 8	--	6
202	2' - 8"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 7	--	6
204	2' - 6"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 8	--	6
206	3' - 0"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 7	--	6
210	3' - 0"	7' - 0"	1 3/8"	WD-3	HM-B	7/A3.6	8/A3.6	Group 6	--	2, 3
212	2' - 6"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 8	--	6
214	3' - 0"	7' - 0"	1 3/8"	WD-3	HM-B	7/A3.6	8/A3.6	Group 6	--	2, 3
216	2' - 8"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 8	--	6
220	3' - 0"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 7	--	6
222	2' - 6"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 8	--	6
224	3' - 0"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 7	--	6
226	2' - 6"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 8	--	6
230	3' - 0"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 7	--	6
232	2' - 6"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 8	--	6
234	3' - 0"	6' - 8"	1 3/8"	WD-4	-	--	--	Group 7	--	6
238	3' - 0"	7' - 0"	1 3/8"	WD-3	HM-B	7/A3.6	8/A3.6	Group 6	--	2, 3

DOOR NOTES

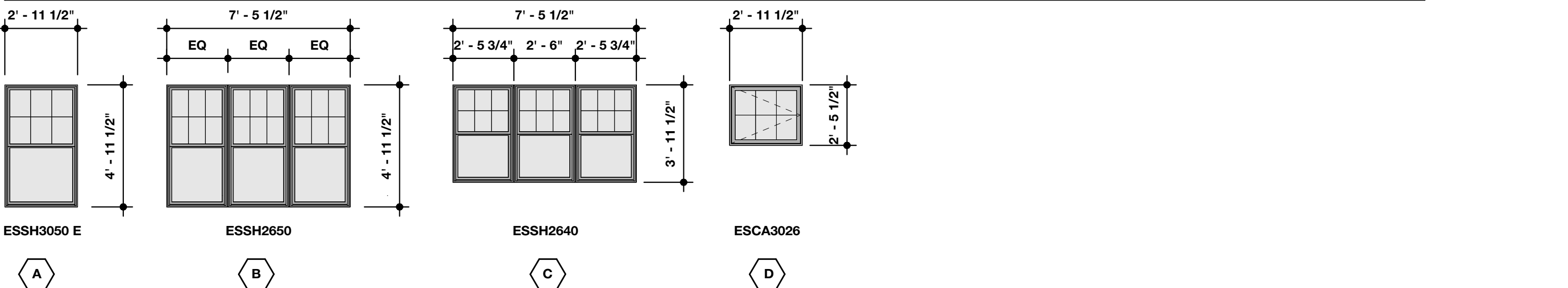
- Hollow Metal Door - Basis of Design: Steelcraft - L Series Flush Door - Finish: Paint to match frame
- Fiberglass Door - Basis of Design: Jeld-Wen Design-Pro Fiberglass Exterior Door - Style: Fir Top View Craftsman 6-Light 2-Panel Glass Panel - Finish: Hazelnut
- Door and frame to be insulated.
- Hollow Metal Frame - Basis of Design: RediFrame hollow metal frames with standard snap on trim - Finish: RediFrame Brown
- Solid Core Door - Basis of Design: Lynden Doors Laminate Architectural Series - Finish: LAM-1 - See Door Types for Glazing Locations
- Hollow Core Door - Basis of Design: Lynden Doors Molded - Style: Flat Panels Smooth Yarrow - Finish: PT-3
- Aluminum Storefront - Basis of Design: Tubelite T14000 Series Storefront - 2" x 4-1/2" - Finish: Clear Anodized - Glazing: 1" Insulated Glazing w/Low-E on #3 surface - Finish: Dark Bronze

WINDOW SCHEDULE

Type	WIDTH	HEIGHT	MANUFACTURER	MODEL	DETAIL			NOTES
A	2' - 11 1/2"	4' - 11 1/2"	Marvin Windows and Doors	ESSH3050 E	1/A3.6	3/A3.6	2/A3.6	Interior Finish: Bronze - Exterior Finish: Bronze
B	7' - 5 1/2"	4' - 11 1/2"	Marvin Windows and Doors	ESSH2650	1/A3.6	3/A3.6	3/A3.6	Interior Finish: Bronze - Exterior Finish: Bronze
C	7' - 5 1/2"	3' - 11 1/2"	Marvin Windows and Doors	ESSH2640	1/A3.6	3/A3.6	3/A3.6	Interior Finish: Bronze - Exterior Finish: Bronze
D	2' - 11 1/2"	2' - 5 1/2"	Marvin Windows and Doors	ESCA3026	1/A3.6	3/A3.6	3/A3.6	Interior Finish: Bronze - Exterior Finish: Bronze

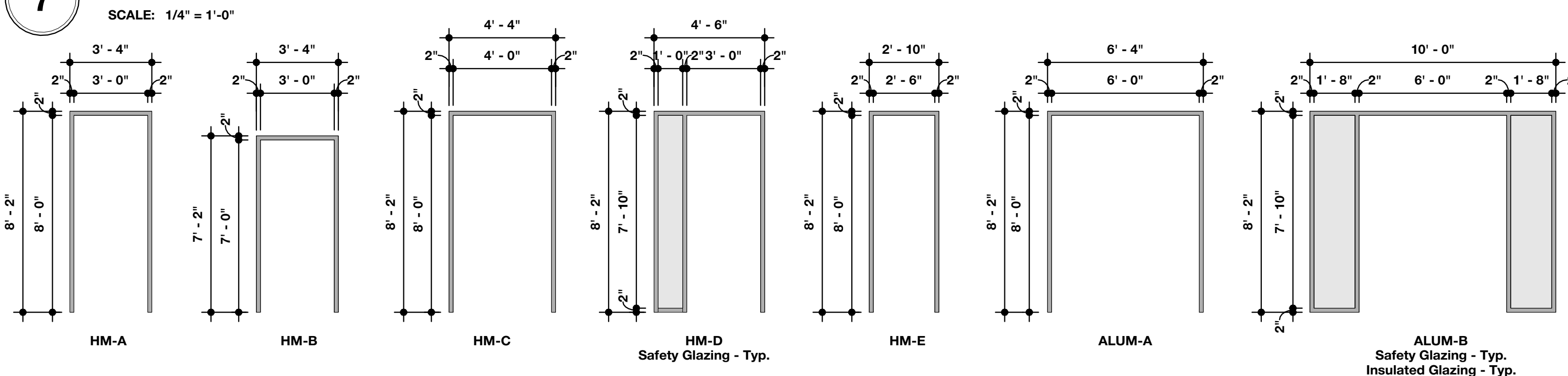
Window Notes

- Contractor to field verify all rough openings prior to procurement.
- Contractor to provide spray foam insulation at shims.
- Contractor to provide self-adhesive flashing membrane at head, jamb and sill locations per manufacturer's recommendation.
- Contractor to provide all required hardware at egress window locations to meet code.
- First Floor window head height to be 8'-2" A.F.F.
- Second Floor window head height to be 7'-0" A.F.F.



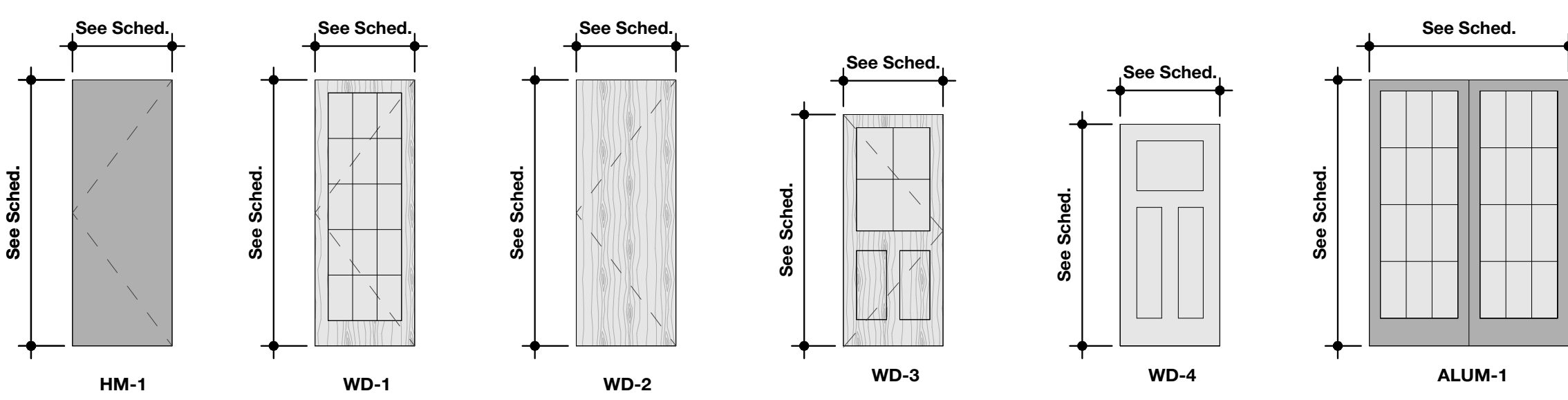
Window Elevations

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



Frame Types

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



Door Types

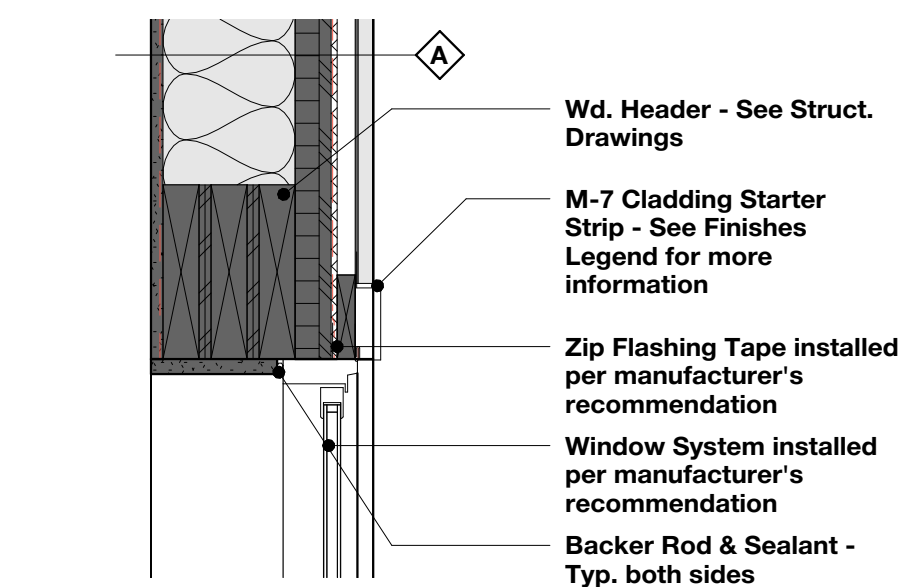
SCALE: 1/4" = 1'-0"

FINISH SCHEDULE

ROOM	SPACE NO.	FLOORING	BASE	WALLS				CEILING		CABINETRY	NOTES
				NORTH	SOUTH	EAST	WEST	FINISH	HEIGHT		
Entry	100	CONC-1	VB-1	PT-1	PT-1	-	PT-1	PT-2/WD-1	-	-	
Check-In	102	CONC-1	VB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	CB-1	
Classroom	104	CONC-1	VB-1	PT-1	PT-1/PT-??	PT-1	PT-1	PT-2	-	CB-1	
Office	106	CONC-1	VB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Hallway	108	CONC-1	VB-1	-	PT-1	PT-1	PT-1	PT-2	-	-	
Waiting	110	CONC-1	VB-1	PT-1	PT-1	PT-1	-	PT-2/WD-1	-	-	
Women's	112	CONC-1	VB-1	PT-1/WT-1	PT-1/WT-1	PT-1/WT-1	PT-1/WT-1	PT-2	-	-	
Men's	114	CONC-1	VB-1	PT-1/WT-1	PT-1/WT-1	PT-1/WT-1	PT-1/WT-1	PT-2	-	-	
HVAC/Mech.	116	CONC-1	VB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Hallway	118	CONC-1	VB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Closet	120	CONC-1	VB-1	PT-1	-	PT-1	PT-1	PT-2	-	-	
Closet	200	LVT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Bathroom	202	LVT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	CB-1	
Closet	204	CPT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Bedroom	206	CPT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Living	208	LVT-1	WB-1	PT-1	PT-1	-	PT-1	PT-2	-	?	
Kitchen	210	LVT-1	WB-1	PT-1	PT-1/WT-2	PT-1	-	PT-2	-	CB-1	
Closet	212	LVT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	?	
Kitchen	214	LVT-1	WB-1	PT-1/WT-2	PT-1	PT-1	-	PT-2	-	CB-1	
Pantry	216	LVT-1	WB-1	PT-1	PT-1	PT-1	-	PT-2	-	?	
Living	218	LVT-1	WB-1	PT-1	PT-1	-	PT-1	PT-2	-	-	
Bedroom	220	CPT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Closet	222	CPT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Bathroom	224	LVT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	CB-1	
Closet	226	LVT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Bathroom	228	LVT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	CB-1	
Laundry	230	LVT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	CB-1	
Closet	232	CPT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Bedroom	234	CPT-1	WB-1	PT-1	PT-1	PT-1	PT-1	PT-2	-	-	
Living	236	LVT-1	WB-1	PT-1	PT-1	-	PT-1	PT-2	-	-	
Kitchen	238	LVT-1	WB-1	PT-1	PT-1/WT-2	PT-1	-	PT-2	-	CB-1	

FINISHES LEGEND

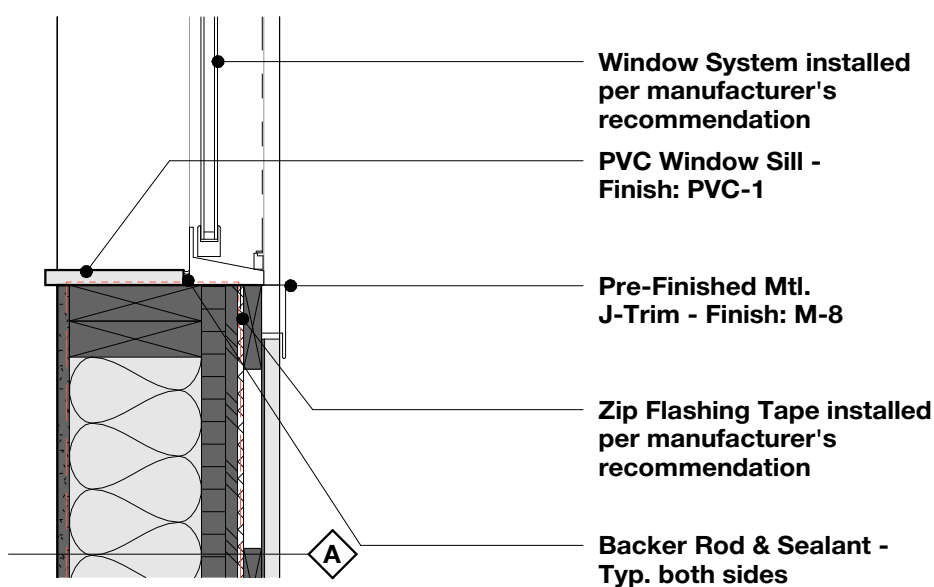
PAINT AND STAIN:				WALLS:			
PT-1	Interior Paint	Walls	Sherwin Williams - SW 9588 - High Sierra in eg-shel	WT-1	Wall Tile	Public Bathrooms	MSI - Cabana - Finish: Honey - Size 9" x 47" - Grout: TEC - Sable 925
PT-2	Interior Paint	Ceilings	Sherwin Williams - SW 9588 - High Sierra in flat				
PT-3	Interior Paint	Trim	Sherwin Williams - SW 7005 - Pure White in Satin				
ST-1	Interior Stain	Wood Accents	Stain to match LAM-1 - Verify finish w/Architect	BASE:			
ST-2	Exterior Stain	Wood Beams & Trim	Verify finish w/Architect	VB-1	Vinyl Base	First Floor	Tarkett - 4" Vinyl Base - Color: 63 Burnt Umber
				WB-1	Wood Base	Units	4 1/4" MDF Flat Stock - Paint: PT-3
FLOORING:				MOULDINGS and TRIM:			
LVT-1	Luxury Vinyl Tile	Units	J + J Flooring - Retreat V5056 - Finish: Beauty 1185 - Size: 9" x 48"	MT-1	Metal Tile Trim	Public Bathrooms	Schluter - JOLLY - Finish: Brushed Nickel
CPT-1	Broadloom Carpet	Unit Bedrooms/Closets	J + J Flooring - Fairway II N9117 - Finish: Cypress Point 9785	FT-1	Floor Transition	Unit Floor Transitions	Pin Metal - Finish: Hammered Nickel
DECK-1	Decking	Egress Balcony	Trex Enhance - 1x6 Deck Boards - Color: Toasted Sand	FIBER REINFORCED PLASTIC			
CONC-1	Burnished Concrete	First Floor	Matte Finish	FRP-1	Fiber Reinforced Plastic	HVAC/Mech.	Embossed White w/Matching Mouldings
SOLID SURFACE:				WOOD:			
SS-1	Corian Solid Surface	First Floor Countertops	Corian Solid Surface - Neutral Aggregate	WD-1	Wood Boards	Interior Accents	3/4" Wd. Boards - Stain: ST-1 - Species: White Oak
SS-2	Corian Solid Surface	Apartment Countertops	Corian Solid Surface - Limestone Prima	WD-2	Wood Trim	Exterior	3/4" Wd. Boards - Stain: ST-2 - Species: Cedar
LAMINATE:				METAL:			
LAM-1	Plastic Laminate	Commercial Interior Doors	Wilsonart - Neowalnut 7991K-28	M-1	Fascia, Trim, Etc.	Exterior	EDCO Fascia and Trim - Color: Statuary Bronze
				M-2	Gutter	Exterior	EDCO Rainware - Size: 3" x 4" - Color: Statuary Bronze
PVC				M-3	Downspout	Exterior	EDCO Rainware - Color: Statuary Bronze
PVC-1	PVC	Window Sills	PVC Window Sills - Paint: PT-3	M-4	Outside Corner Trim	Exterior	MAC Metal Architectural - M21H Molding - Color: Match Siding
EXTERIOR SOFFIT & CLADDING:				M-5	Inside Corner Trim	Exterior	MAC Metal Architectural - M22H Molding - Color: Match Siding
SS-1	Prefinished Stl. Siding	Exterior	MAC Metal Architectural - Board and Batten - Finish: Cork	M-6	Window Sill	Exterior	MAC Metal Architectural - M04H Molding - Color: Match Siding
MS-1	Prefinished Mtl. Soffit	Exterior	EDCO Vented Mtl. Soffit - Color: Statuary Bronze	M-7	Cladding Starter Strip	Exterior	MAC Metal Architectural - M17H Molding - Color: Match Siding
MS-2	Prefinished Mtl. Soffit	Exterior Egress Balcony	MAC Metal Architectural - Harrywood Plus Vented - Finish: Cork	M-8	Top of Wall Trim	Exterior	MAC Metal Architectural - M04H Molding - Color: Match Siding
MASONRY:				M-9	Door Jamb	Exterior	MAC Metal Architectural - M05H Molding - Color: Match Siding
SV-1	Stone Veneer	Exterior	Fon Du Lac Stone - Traditional Collection - Color: Fon Du Lac Harvest	CASEWORK:			
				CB-1	Plastic Laminate	Throughout	Wilsonart - Neowalnut 7991K-28
ROOFING:				PULL HARDWARE:			
AS-1	Asphalt Shingles	Exterior	Certaanteed Landmark Shingles - Color: Driftwood	PULL-1	Cabinetry Bar Pull	Throughout	Mastercraft - 3" Spoon Style - Satin Nickel
CEILINGS:							
ACT-1	Acoustic Ceiling Tile	Restrooms, Hallway 108	Armstrong - Cirrus Angled Tegular - Size: 24" x 24" x 3/4" - Color: White - Grid: Prelude 15/16" - Color: White				
NOTES: 1. All GWB walls slated to receive paint to be finished to a smooth Level '4' 2. Provide Melamine Interior on all casework - Finish: Natural 3. All Materials and Products to be installed per manufacturer's specifications 4. All windows to have drywall returns at the head and jamb.							



1

Window Detail - Head

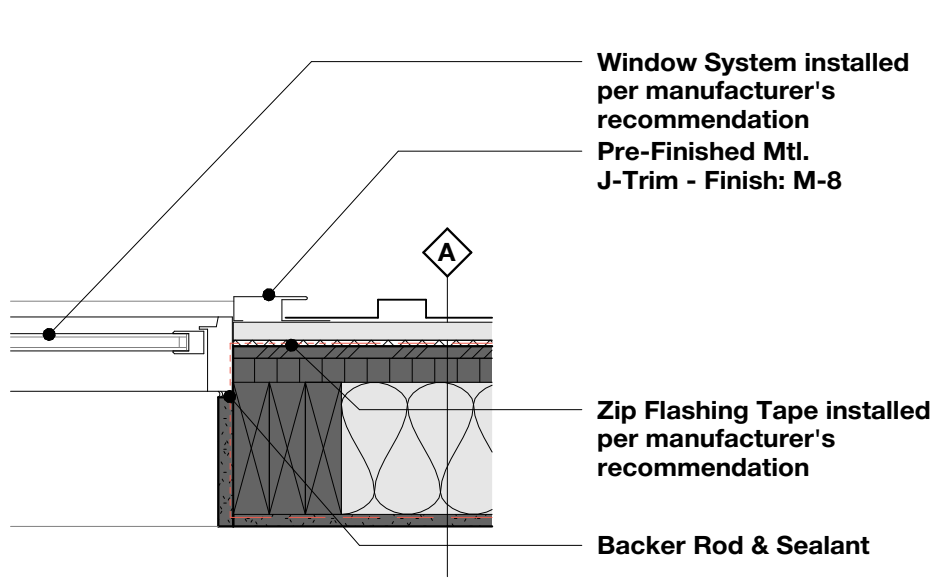
SCALE: 1 1/2" = 1'-0"



2

Window Detail - Sill

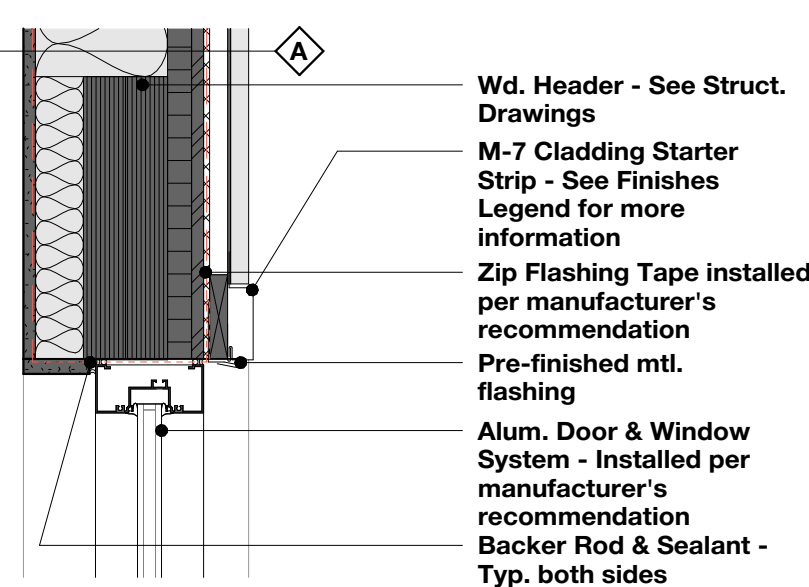
SCALE: 1 1/2" = 1'-0"



3

Window Detail - Jamb

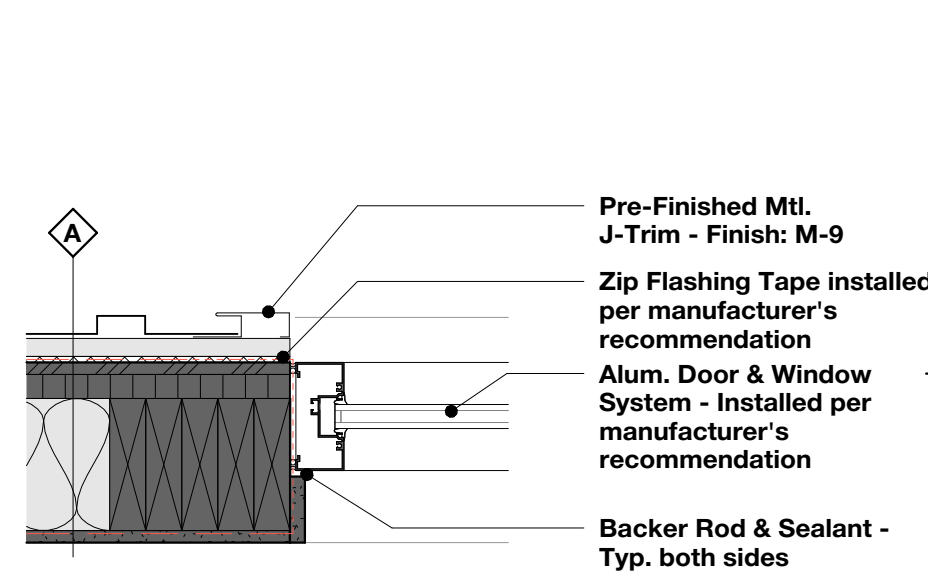
SCALE: 1 1/2" = 1'-0"



4

Alum. Frame Detail - Head

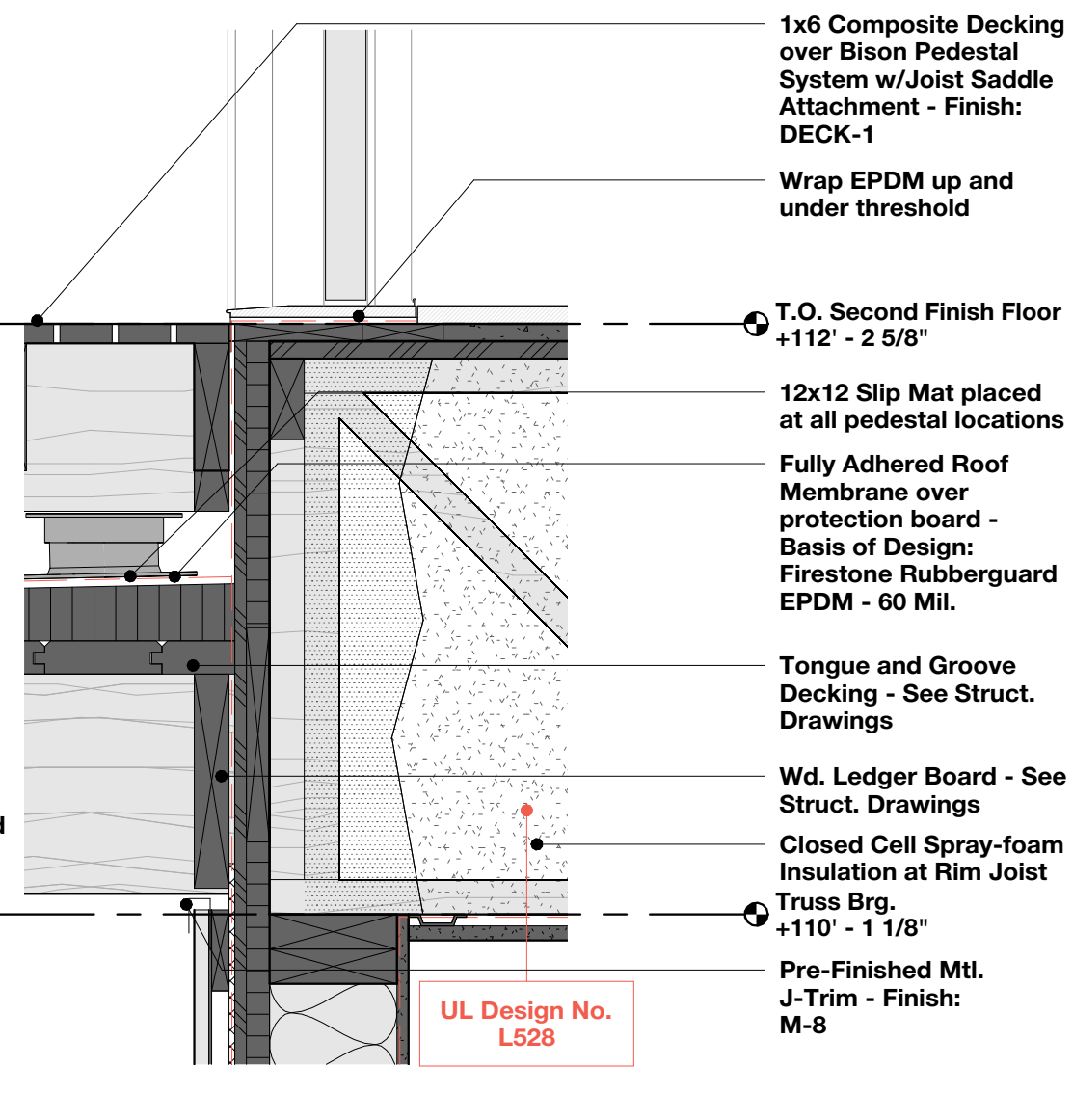
SCALE: 1 1/2" = 1'-0"



5

Alum. Frame Detail - Jamb

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



6

Ext. Door Detail - Sill

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

DOOR HARDWARE

Provide hardware specified or required to make door fully functional and compliant with all applicable codes. Door hardware to be of an approved manufacturer. The following manufacturers are approved: Dorma, Falcon, Ives, LCN, Sargent, and Schlage.

GROUP 1

Each Door shall have:
(3) Butt Hinges
(1) Push Bar
(1) Pull Handle - Basis of Design: ???
(1) Mortise Lockset
(1) Door Closer w/Hold Open
(1) Weather Stripping
(1) Threshold
(1) Gasketing
Finish: 619

GROUP 1A: At Doors '100' and '110' only, provide an automatic door opener w/push plates - Basis of Design Automatic Door Opener: Assa Abloy SW100 Door Operator - Basis of Design Push Plates: Bea 10PBS451 Square Switch

GROUP 4

Each Door shall have:
(3) Butt Hinges
(1) Storeroom Function Lockset
(1) Wall Stop
(1) Door Closer w/Hold Open
Finish: 619
Basis of Design: Schlage ND Series w/Sparta Lever

GROUP 7

(3) Butt Hinges
(1) Privacy Function Lockset
Finish: 619
Basis of Design: Schlage Latitude w/Collins Trim

GROUP 2

Each Door shall have:
(3) Butt Hinges
(1) Office Function Lockset
(1) Door Sweep
(1) Wall Stop
Finish: 619
Basis of Design: Schlage ND Series w/Sparta Lever

GROUP 5

Each Door shall have:
(3) Butt Hinges
(1) Push Plate
(1) Pull Handle
(1) Door Closer w/Hold Open
(1) Wall Stop
Finish: 619
Basis of Design: Schlage ND Series w/Sparta Lever

GROUP 8

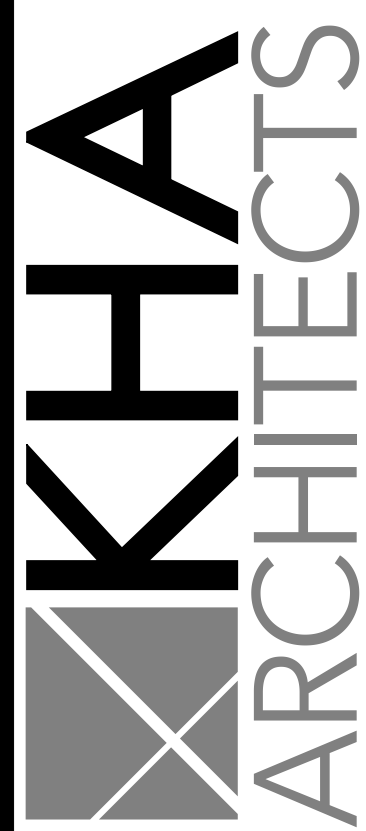
(3) Butt Hinges
(1) Passage Function Lockset
Finish: 619
Basis of Design: Schlage Latitude w/Collins Trim

GROUP 3

Each Door shall have:
(3) Butt Hinges
(1) Passage Function Lockset
(1) Door Sweep
(1) Wall Stop
Finish: 619
Basis of Design: Schlage ND Series w/Sparta Lever

GROUP 6

Each Door shall have:
(3) Butt Hinges
(1) Door Closer
(1) Apartment/Privacy Function Lockset
(1) Wall Stop
(1) Concealed Door Position Sensor
(1) Weather Stripping
(1) Threshold
(1) Gasketing
(1) Door Sweep
Finish: 619
Basis of Design: Schlage XE360M-D Series w/Latitude Lever



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14532 194 Loop East

ND 58645



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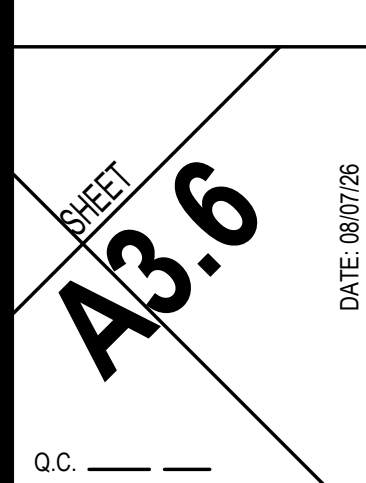
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PROJECT #: 2515

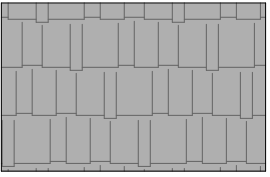
CONTACT: KRISTI

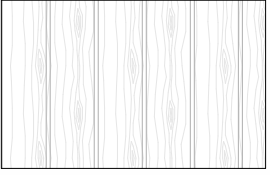
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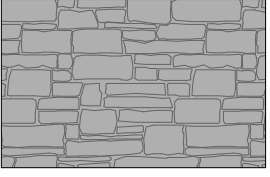
SCHEDULES



Material Finish Legend

- 

Asphalt Shingles - Finish:
AS-1 - See Finishes Legend for more information
- 

Prefinished Stl. Siding -
Finish: SS-1 - See Finishes Legend for more information
- 

Stone Veneer - Finish: SV-1 -
See Finishes Legend for more information

Elevation Keynotes

- Window/Door Trim - Finish: See head/jamb/sill details for more information
- Corner Trim - Finish: M-4
- Stone Cap - Basis of Design: Fon Du Lac Stone - Indiana Rockface Sill
- Pre-finished stepped metal fascia wrap - Finish: M-1
- Wd. Beam - Finish: WD-2
- Wd. Gable Accents - See detail 3/A4.0 for additional information
- Aluminum Gutter & Downspout System - Finish: M-2 (Gutter) and M-3 (Downspout)
- Exposed Wd. Rafter Tails at this location - Finish: ST-2
- Light Fixture - See Elec. Drawings
- 1x12 Cedar Trim - Finish: ST-2
- Aluminum Post Cap - Finish: Match adjacent railing



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SCALE: AS NOTED

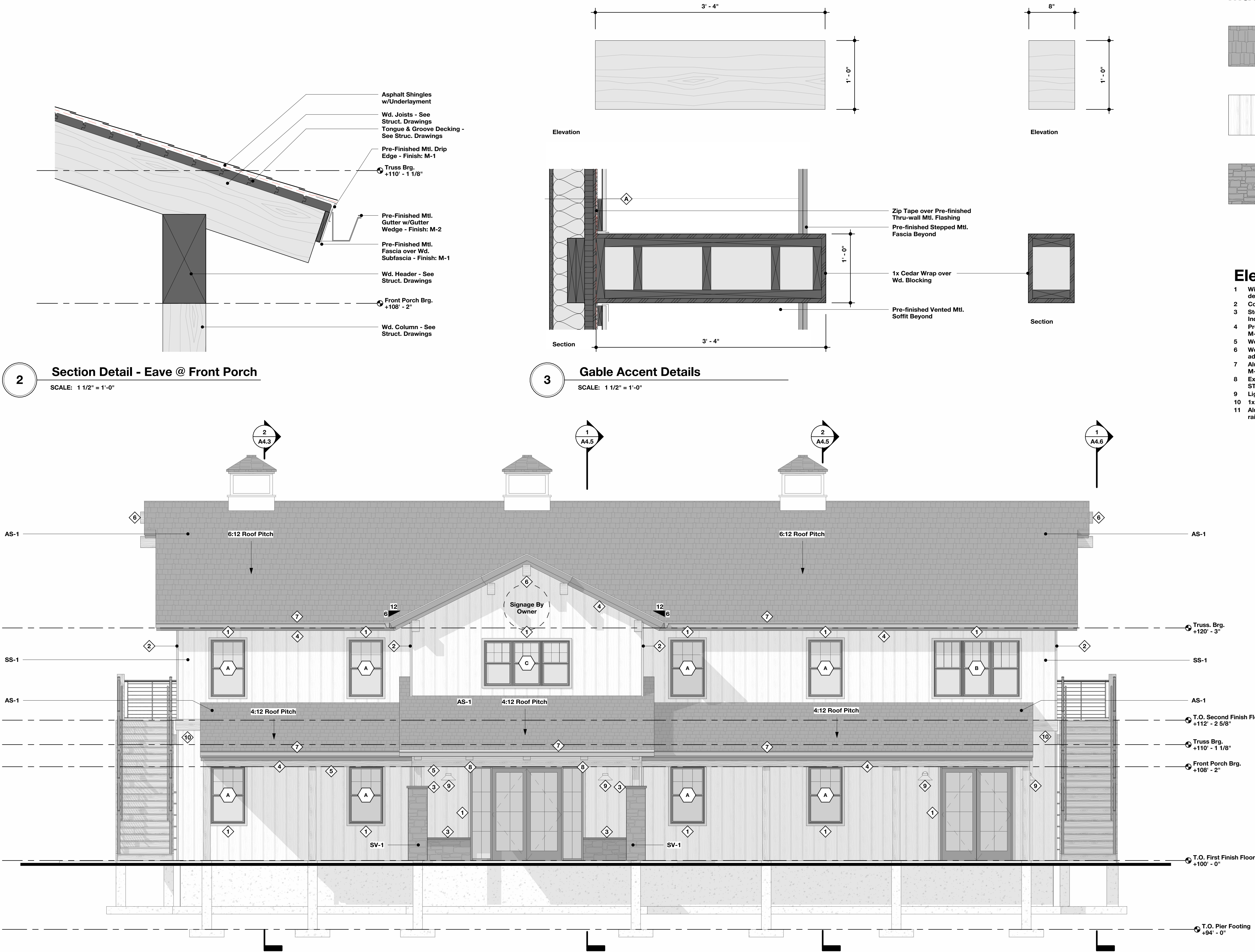
ELEVATIONS

1

DATE: 08/07/26

Q.C.

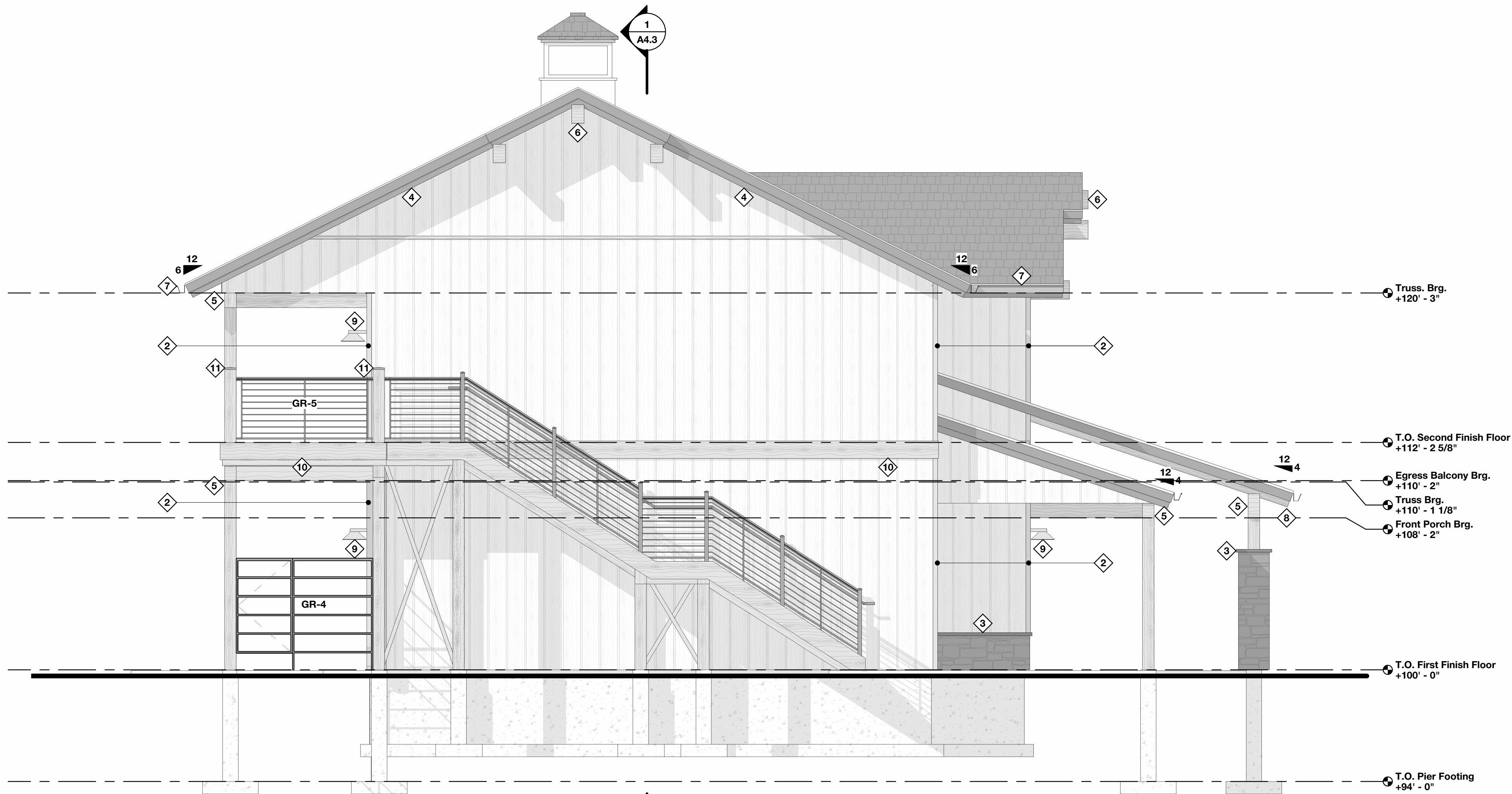
AS-1



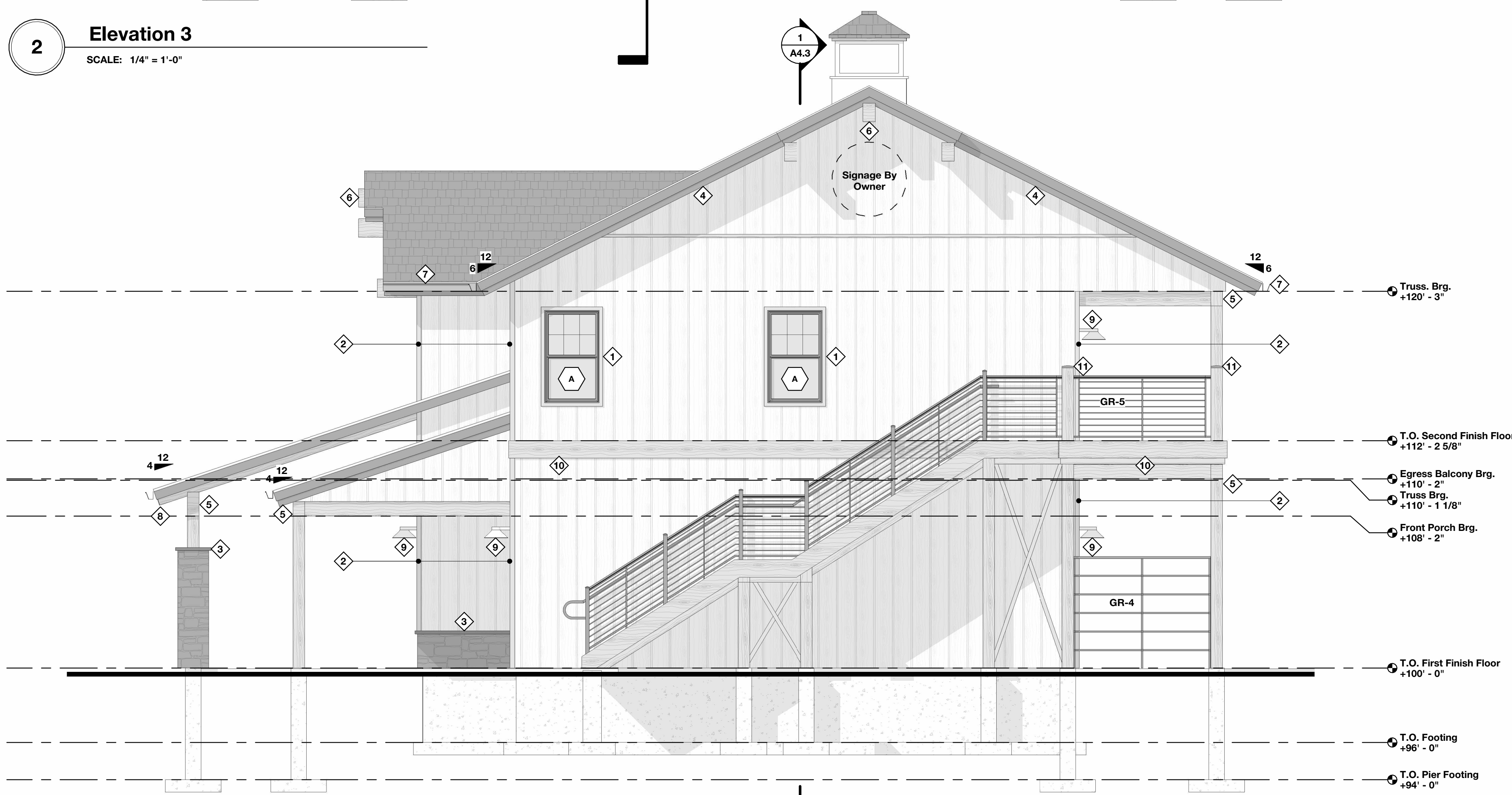
2 Section Detail - Eave @ Front Porch
SCALE: 1 1/2" = 1'-0"

3 Gable Accent Details
SCALE: 1 1/2" = 1'-0"

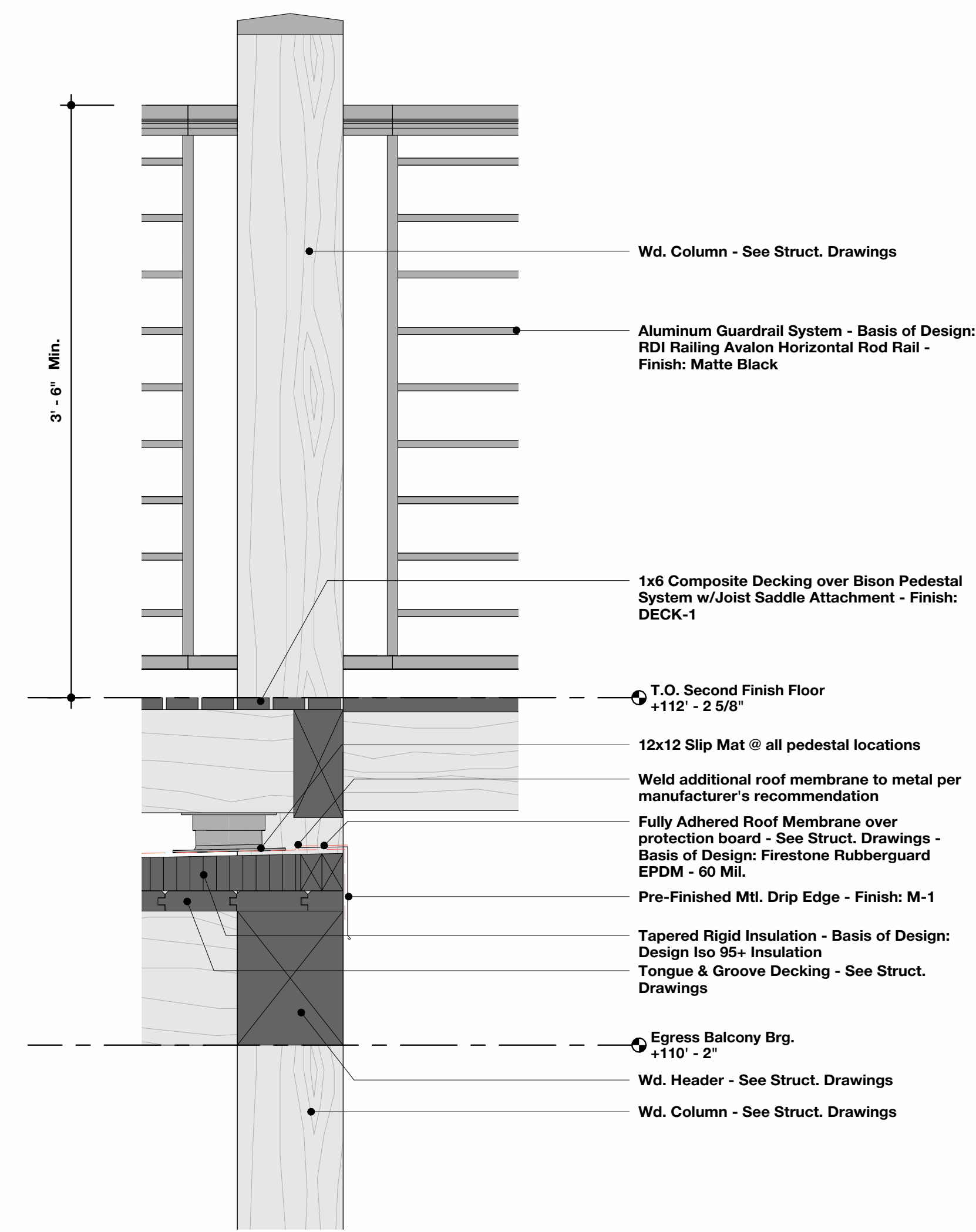
1 Elevation 1
SCALE: 1/4" = 1'-0"



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



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



3 Section Detail - Exterior Stair to Deck
SCALE: 1 1/2" = 1'-0"

Material Finish Legend

- Asphalt Shingles - Finish: AS-1 - See Finishes Legend for more information
- Prefinished Stl. Siding - Finish: SS-1 - See Finishes Legend for more information
- Stone Veneer - Finish: SV-1 - See Finishes Legend for more information

Elevation Keynotes

- Window/Door Trim - Finish: See head/jamb/sill details for more information
- Corner Trim - Finish: M-4 - See Finishes Legend for more information
- Stone Cap - Basis of Design: Fon Du Lac Stone - Indiana Rockface Sill
- Pre-finished stepped metal fascia wrap - Finish: M-1
- Wd. Beam - Finish: WD-2
- Wd. Gable Accents - See detail 3/A4.0 for additional information
- Aluminum Gutter & Downspout System - Finish: M-2 (Gutter) and M-3 (Downspout)
- Exposed Wd. Rafter Tails at this location - Finish: ST-2
- Light Fixture - See Elec. Drawings
- 1x12 Cedar Trim - Finish: ST-2
- Aluminum Post Cap - Finish: Match adjacent railing



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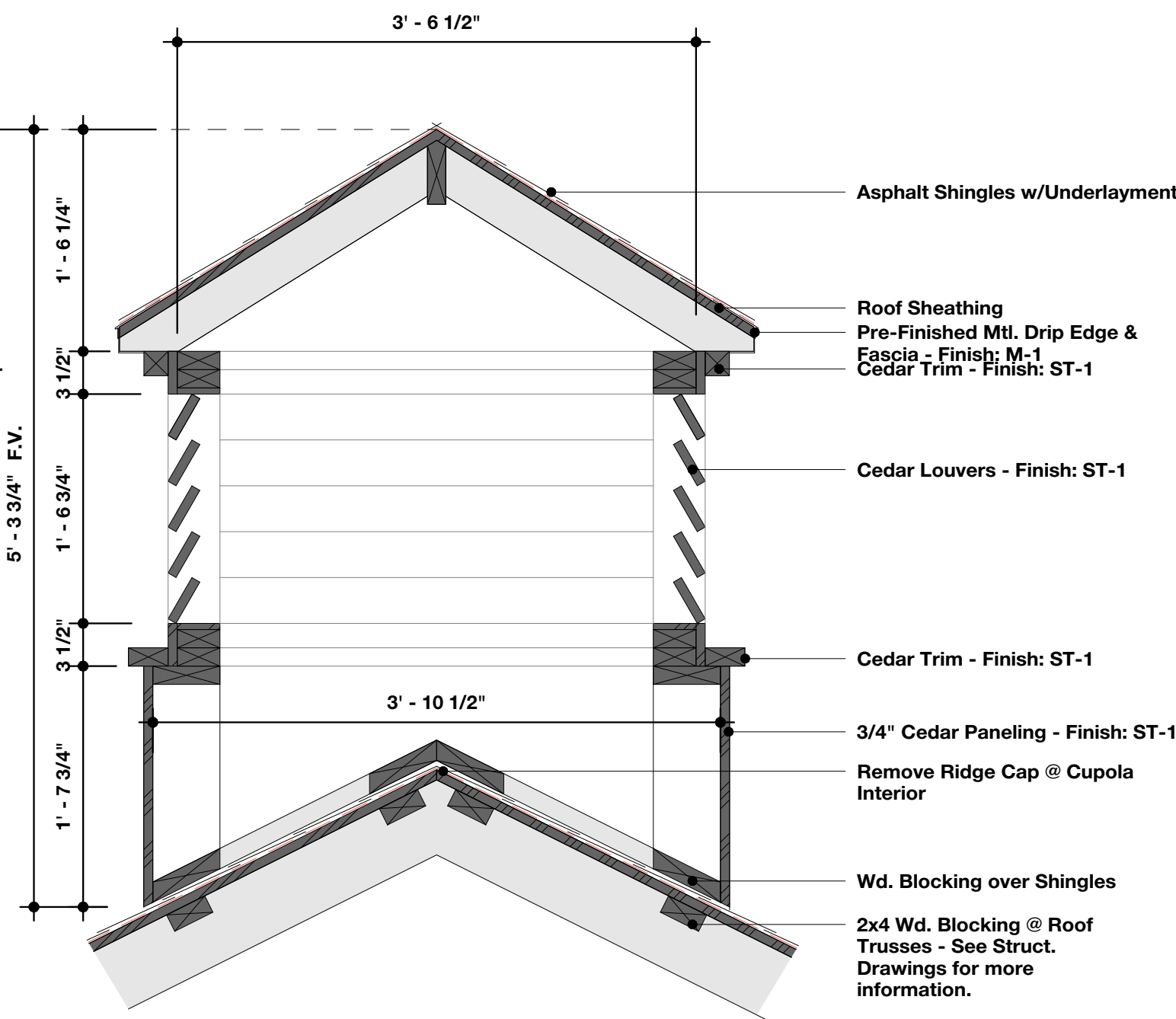
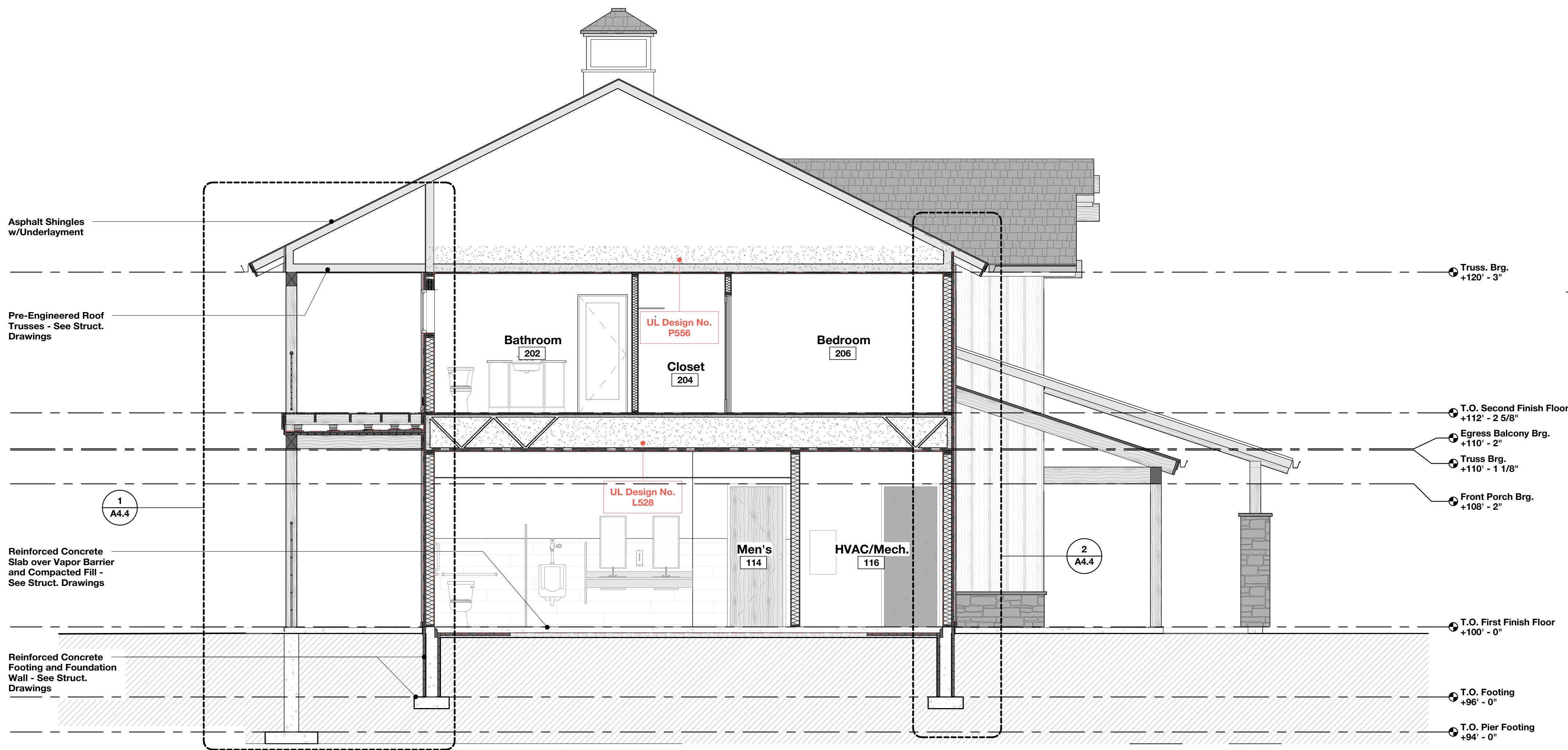


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CONSTR. REV 3	CONSTRUCTION

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CONTACT: KRISTI
SCALE: AS NOTED

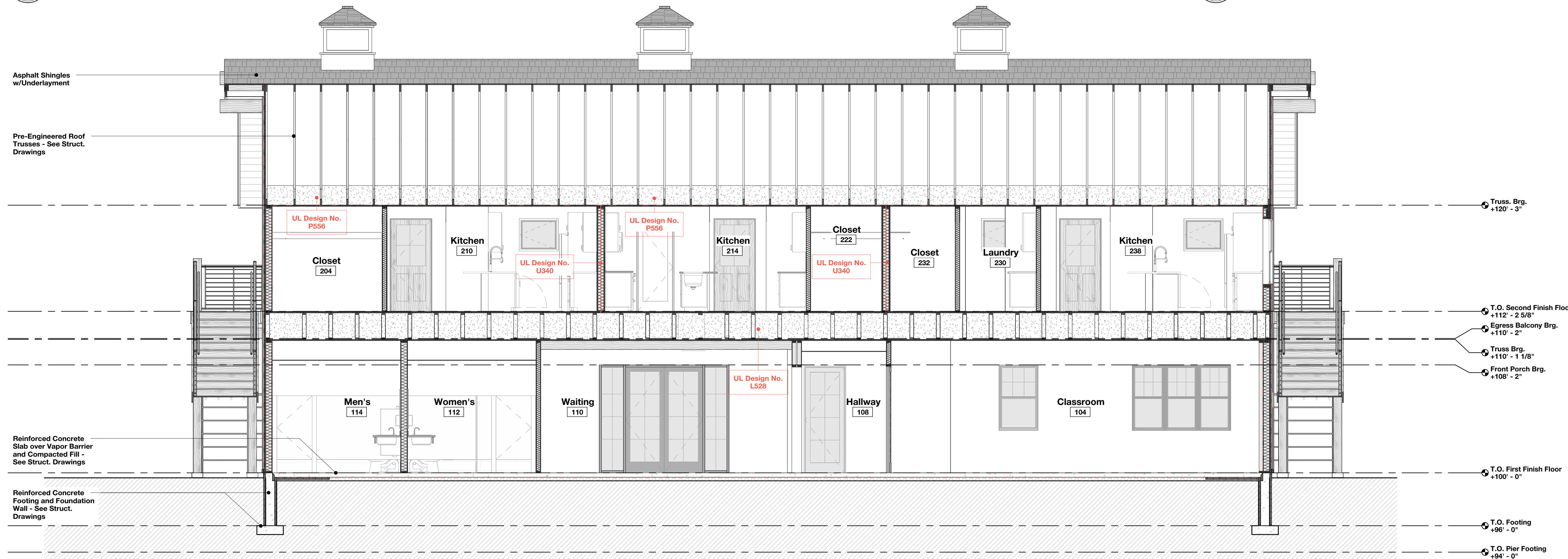
ELEVATIONS

SHEET
A4.2
DATE: 08/07/26
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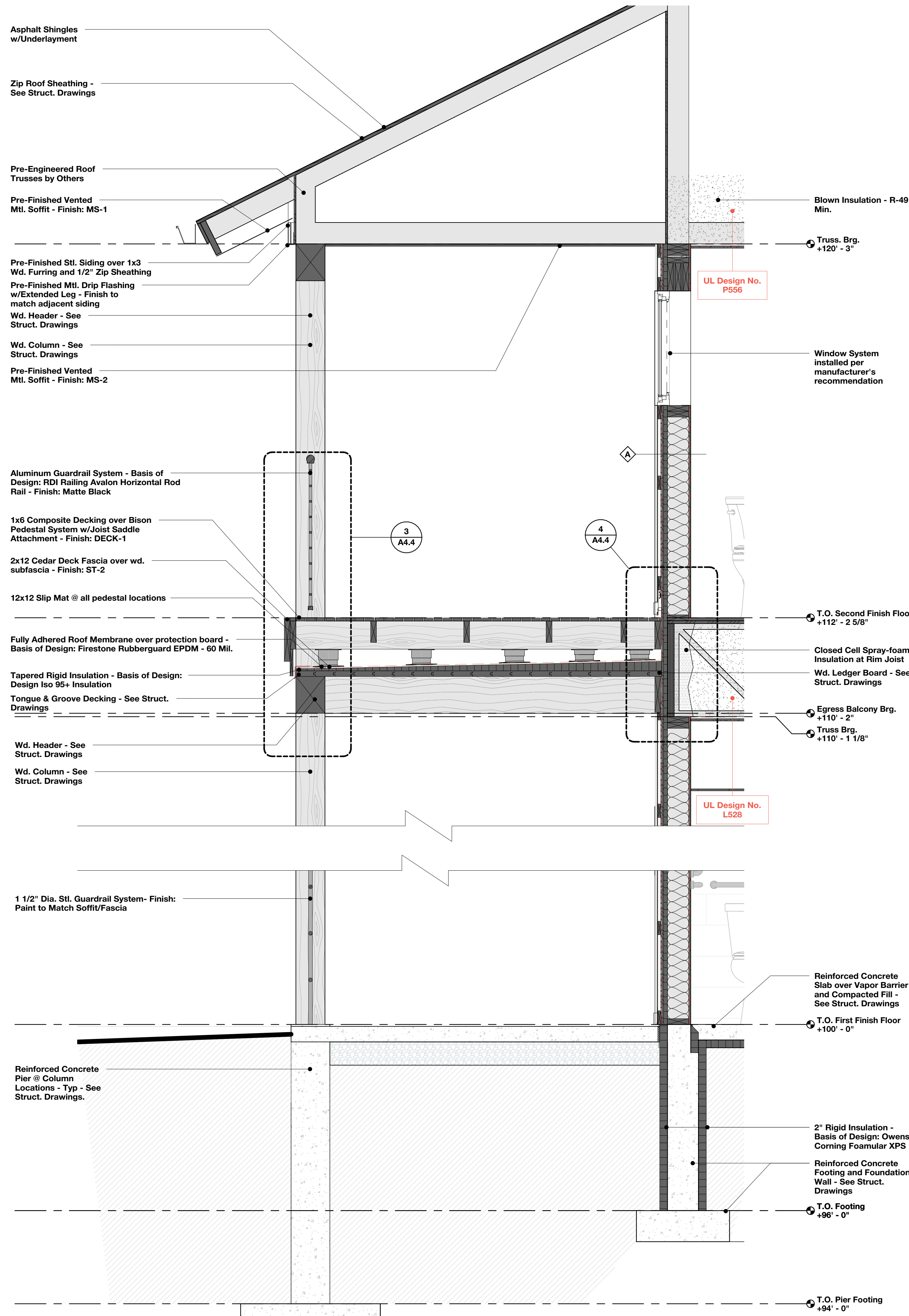
2 Building Section - B
SCALE: 1/4" = 1'-0"

3 Cupola Details
SCALE: 1" = 1'-0"



1 Building Section - A
SCALE: 1/4" = 1'-0"

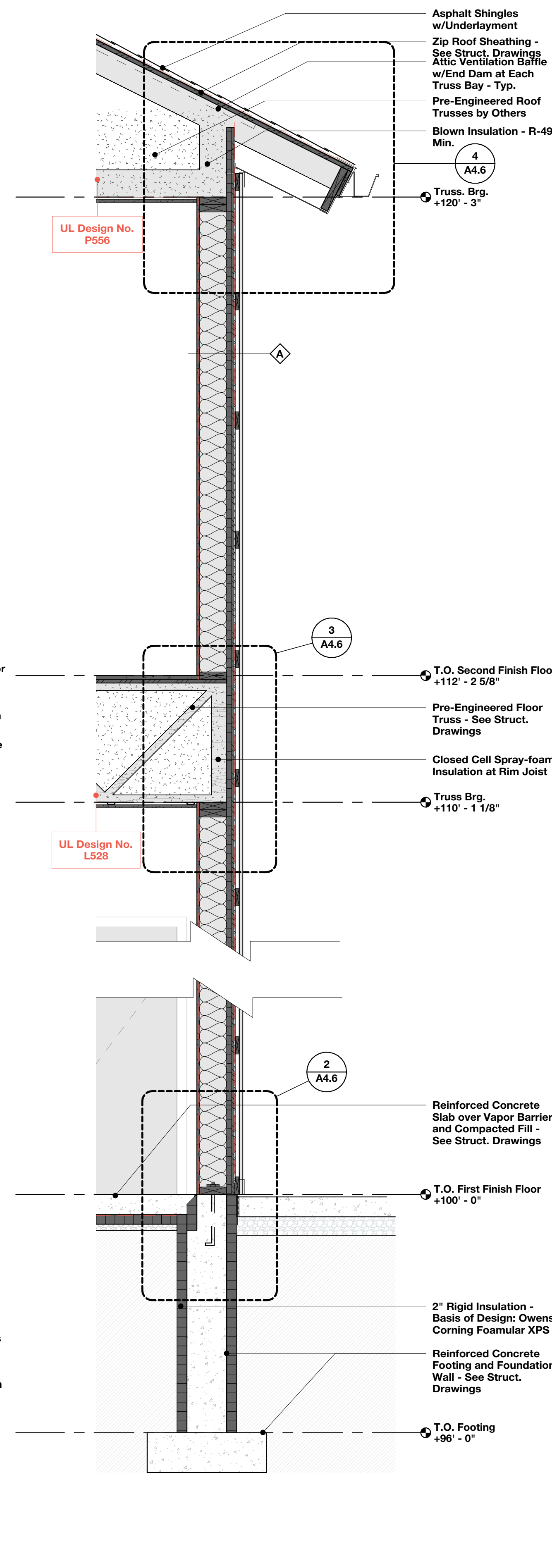
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1

Wall Section - Egress Balcony

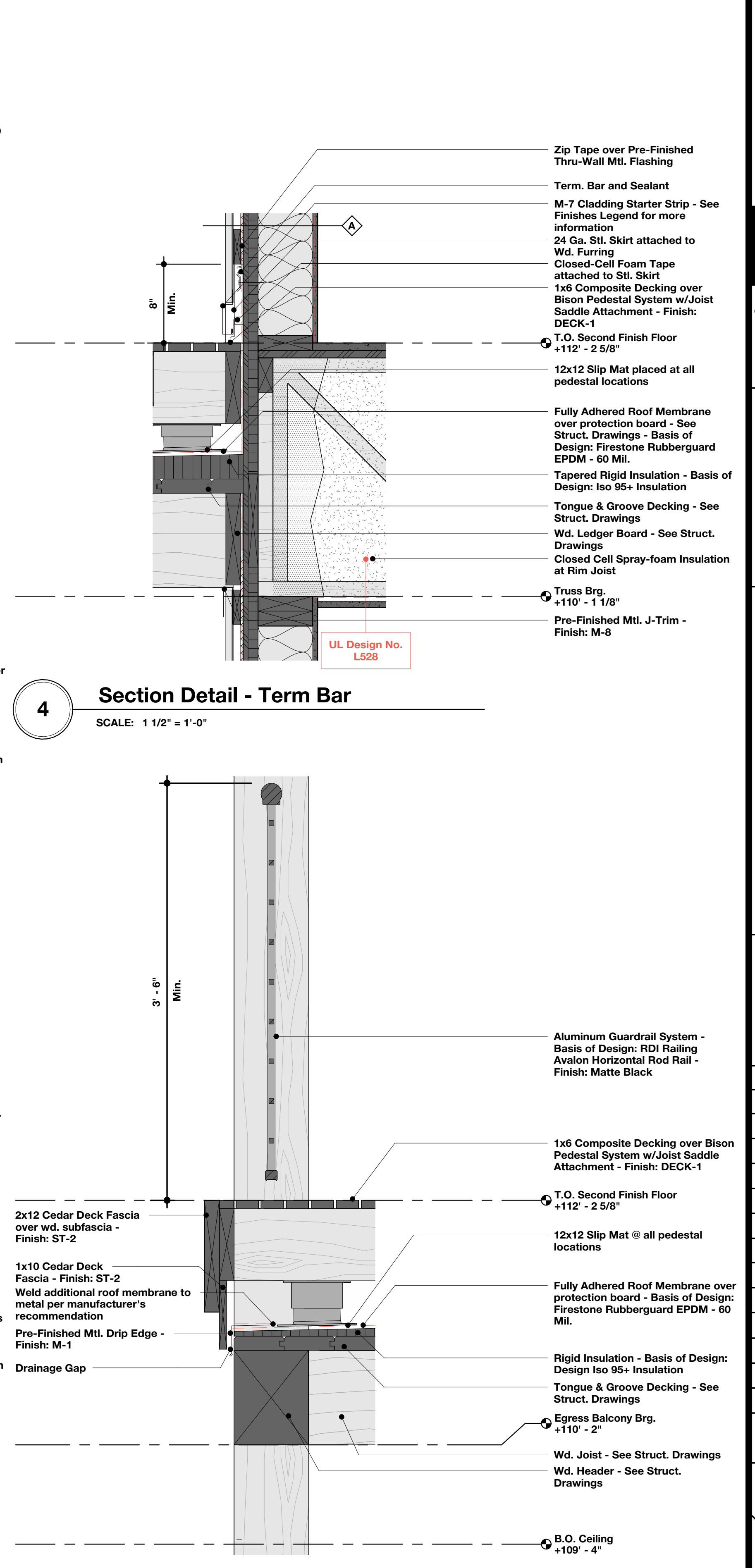
SCALE: 3/4" = 1'-0"



2

Wall Section - Typ

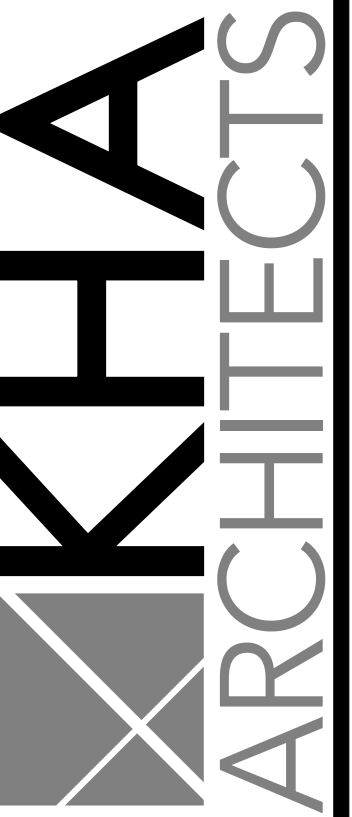
SCALE: 3/4" = 1'-0"



3

Section Detail - Egress Balcony

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



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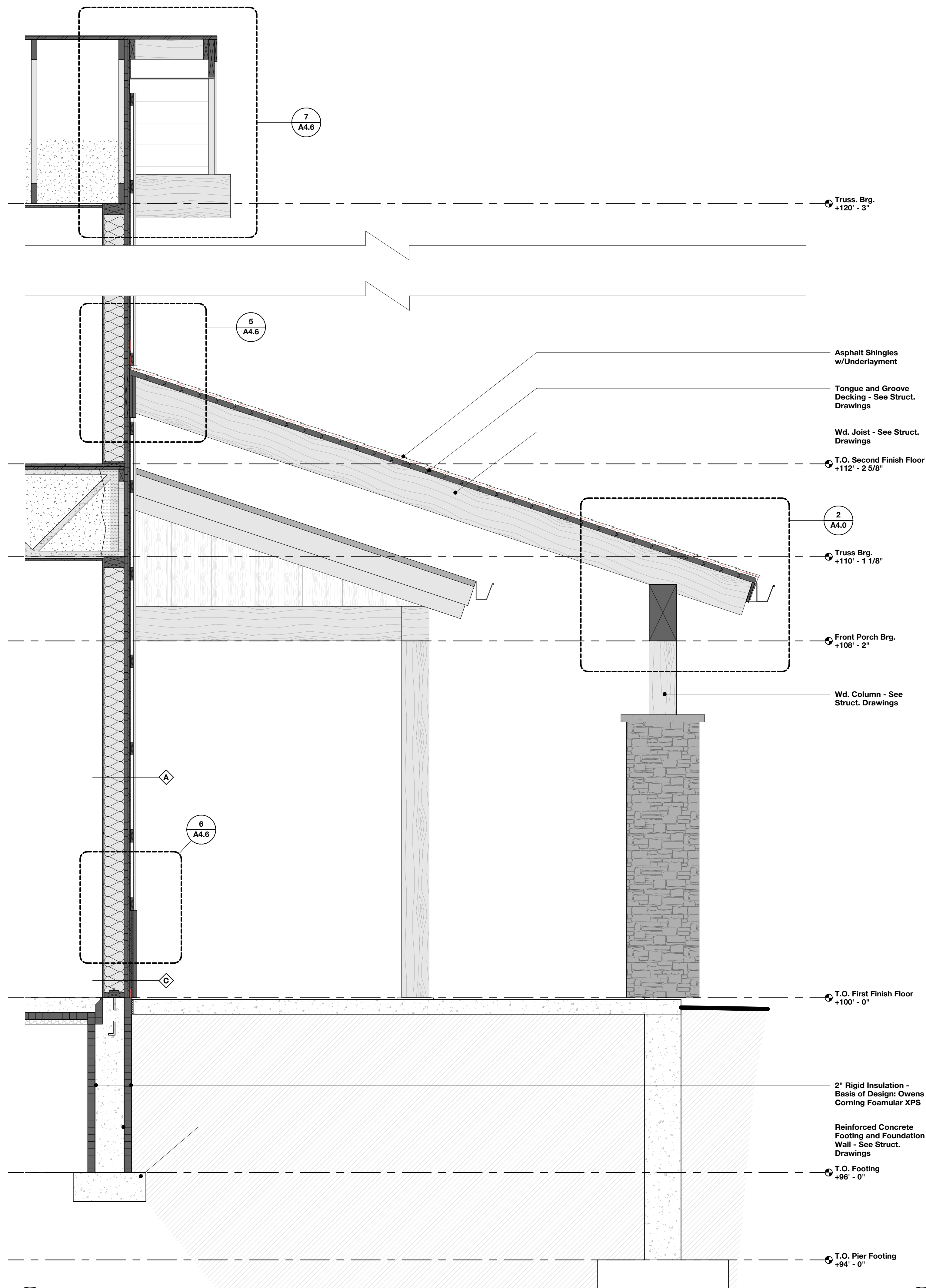
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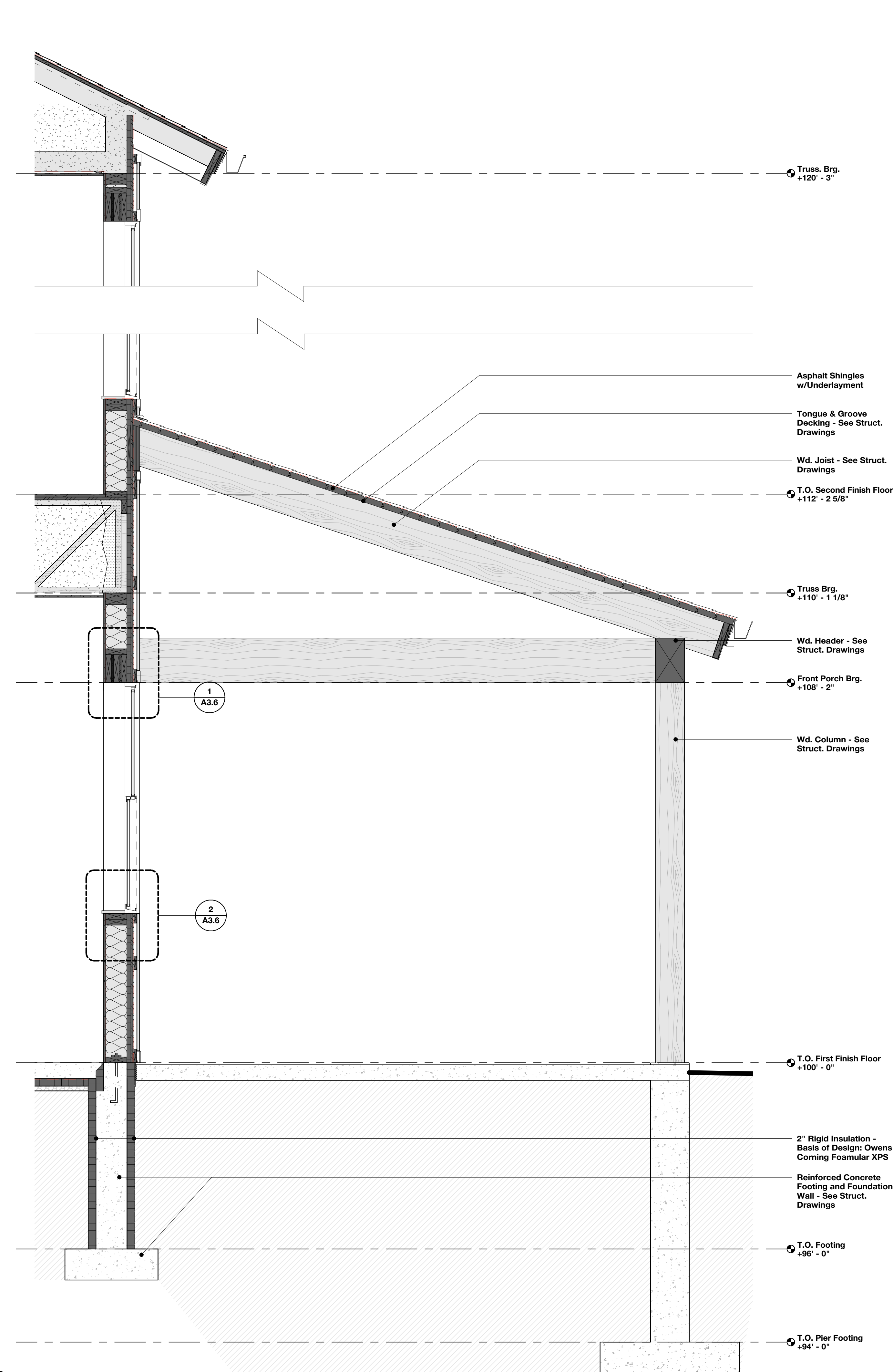
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SCALE: AS NOTED

WALL SECTIONS

SHEET
A4.4
DATE: 08/07/26
Q.C. _____



1 Wall Section - Front Porch
SCALE: 3/4" = 1'-0"

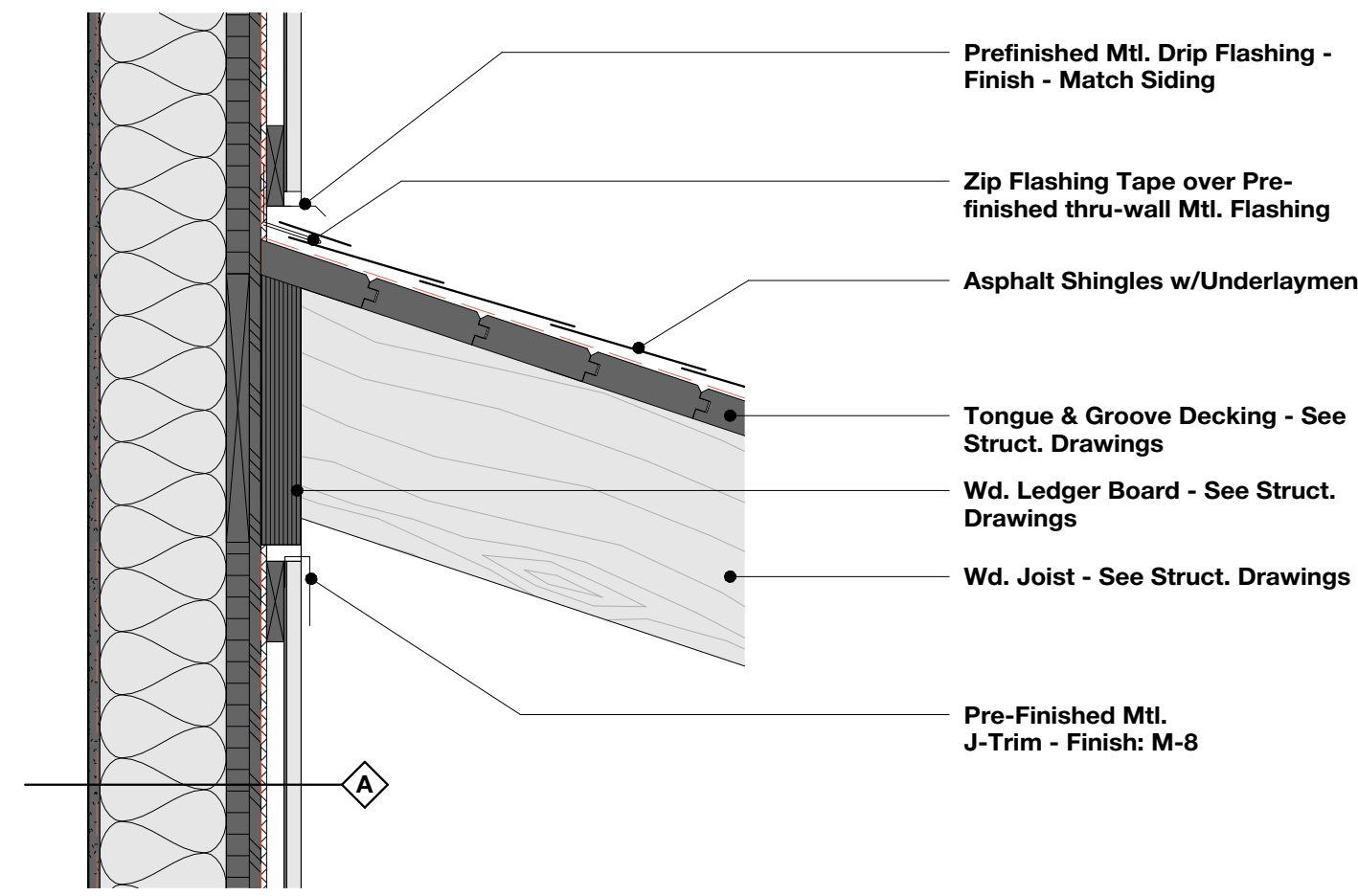


2 Wall Section - Side Porch
SCALE: 3/4" = 1'-0"

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SCALE: AS NOTED

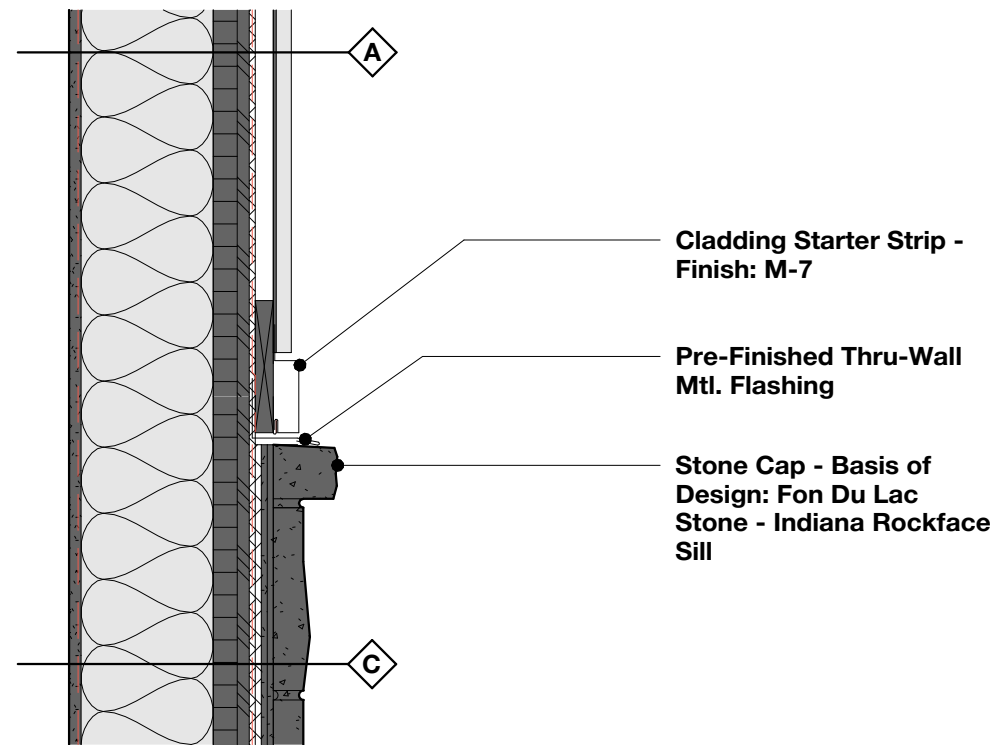
WALL SECTIONS



5

Section Detail - Roof/Wall Intersection

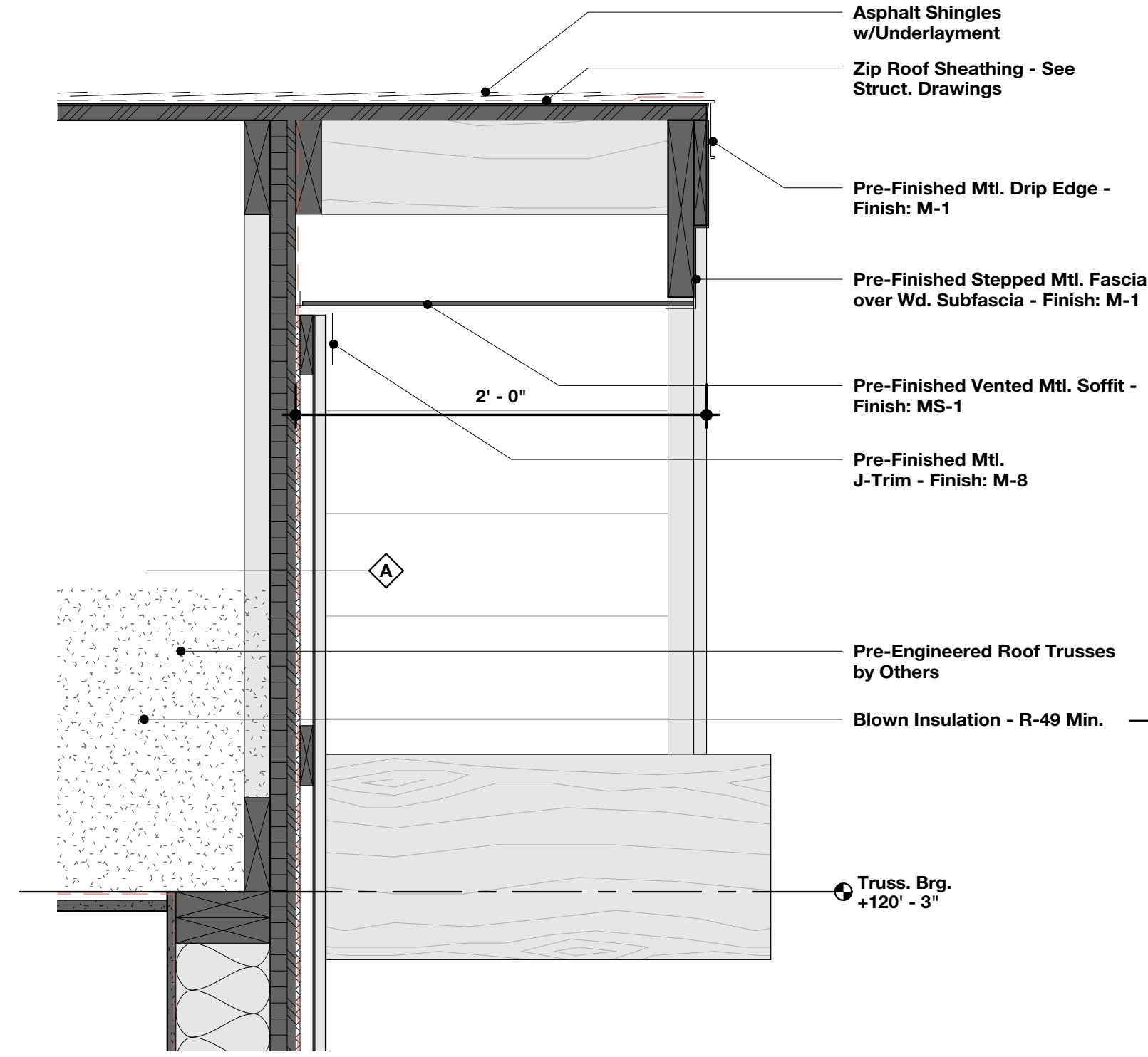
SCALE: 1 1/2" = 1'-0"



6

Section Detail - Stone Cap

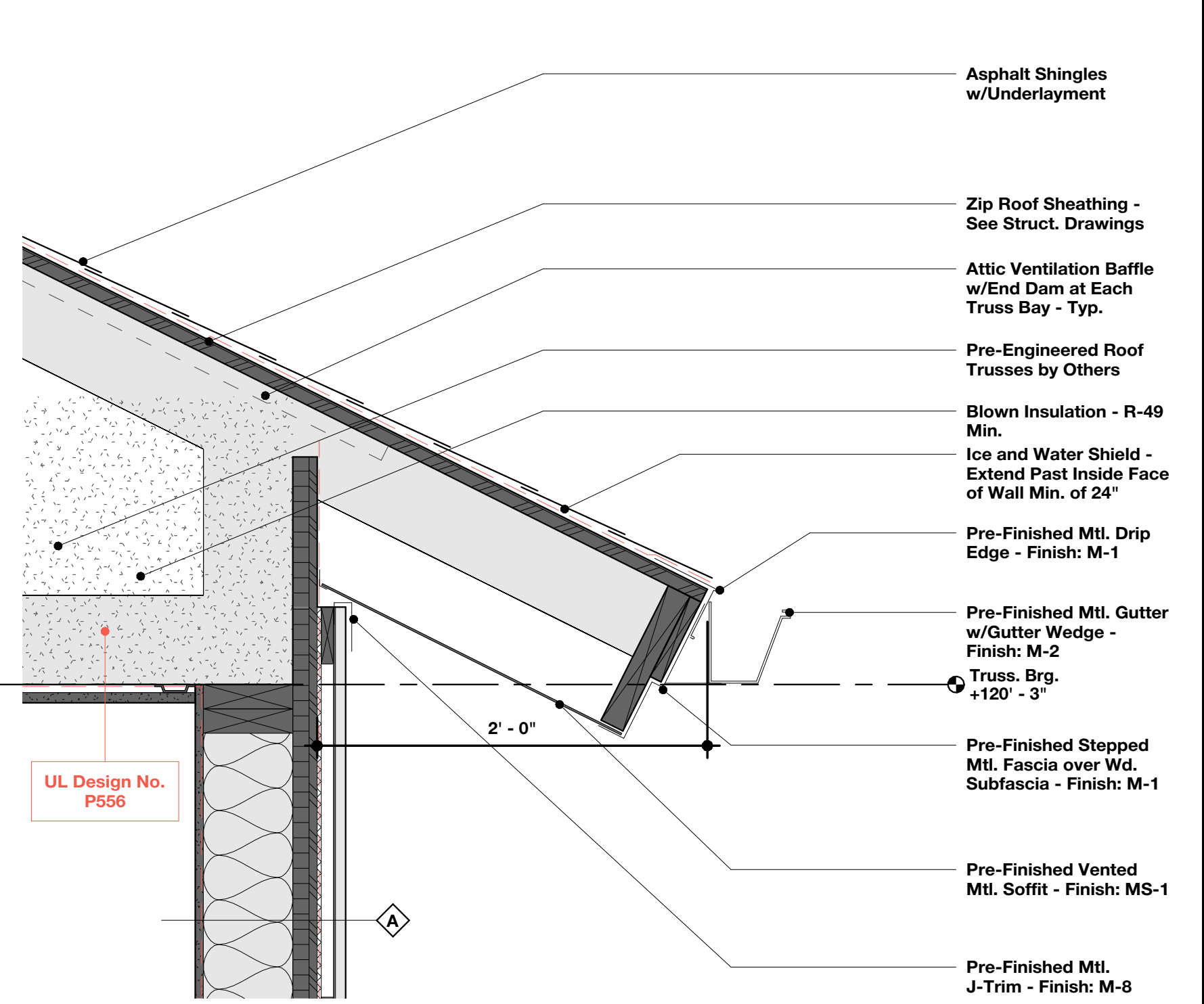
SCALE: 1 1/2" = 1'-0"



7

Section Detail - Rake

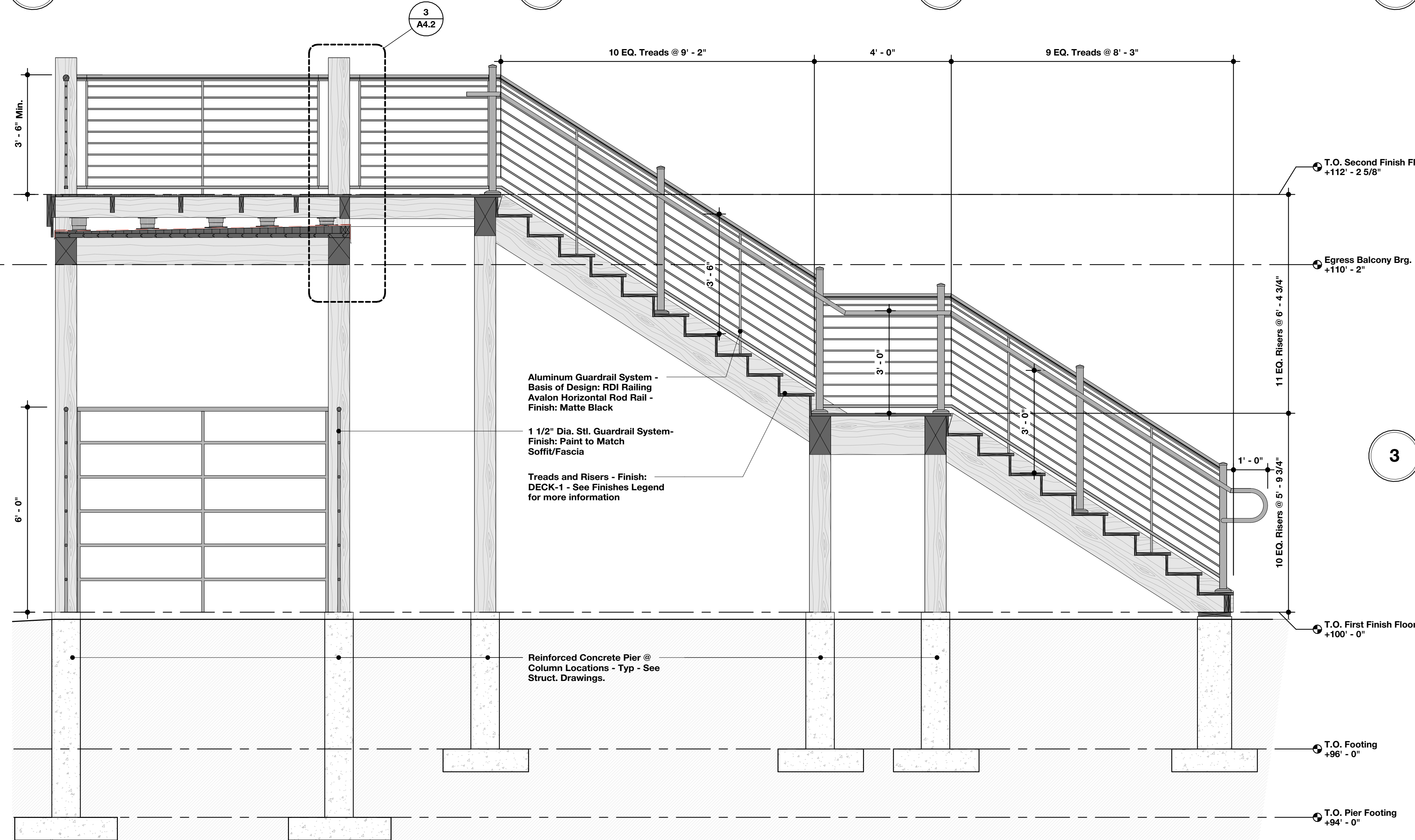
SCALE: 1 1/2" = 1'-0"



4

Section Detail - Eave

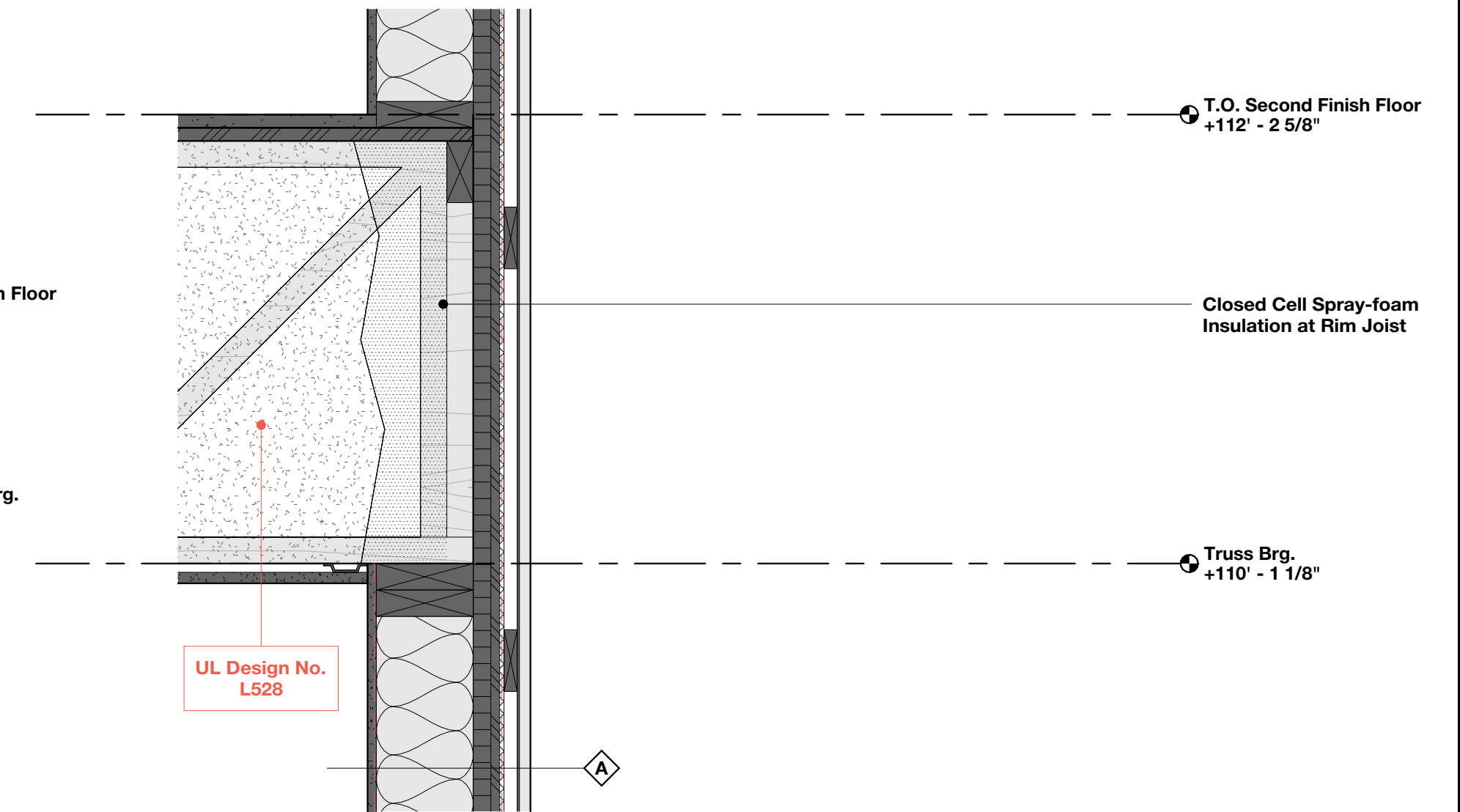
SCALE: 1 1/2" = 1'-0"



1

Stair Section

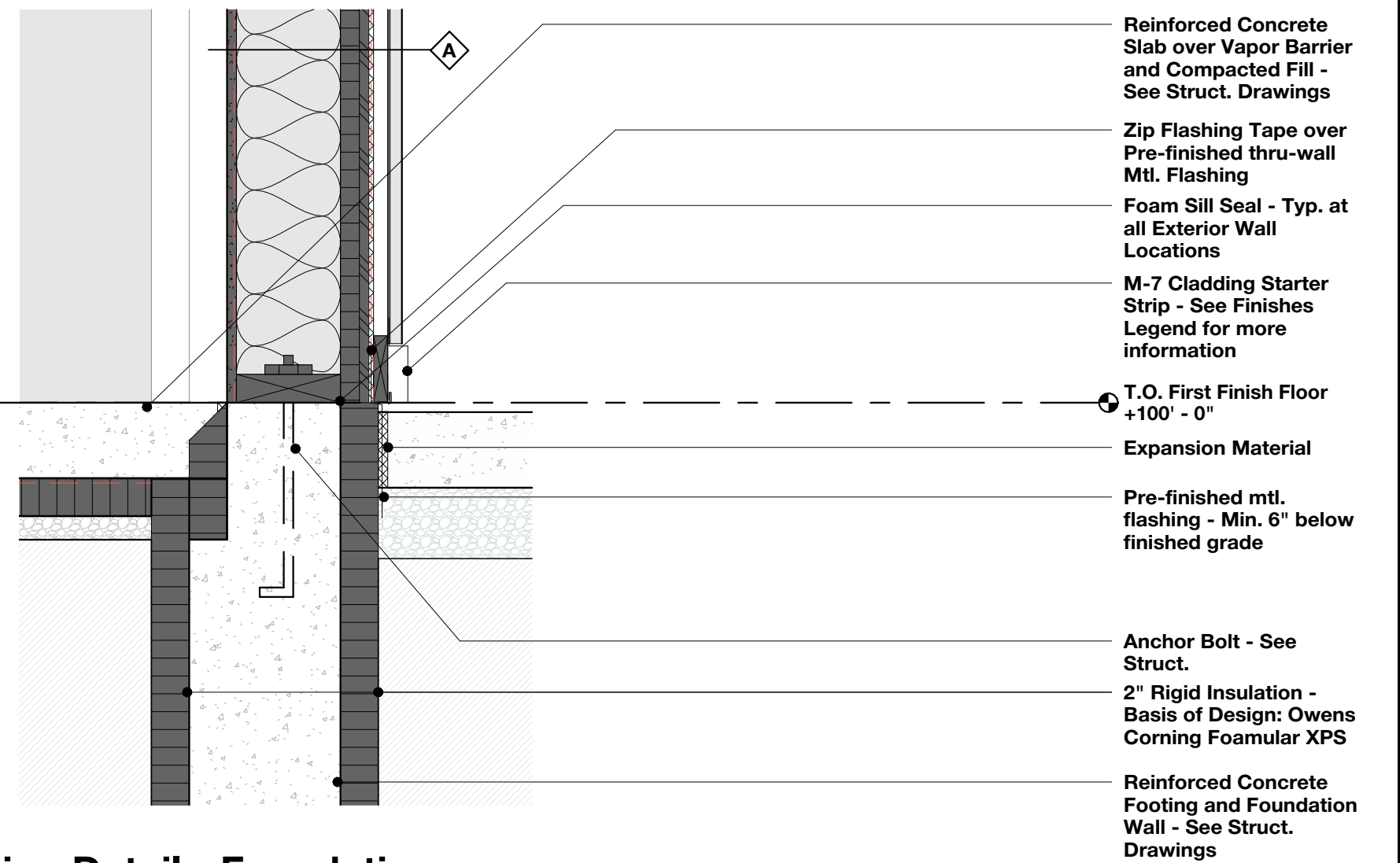
SCALE: 1/2" = 1'-0"



3

Section Detail - Rim Joist

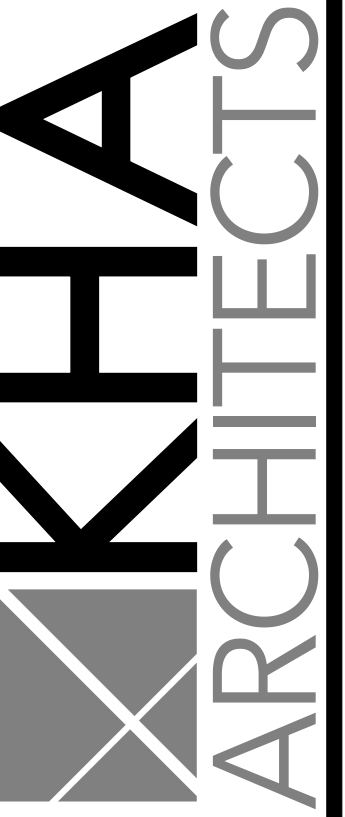
SCALE: 1 1/2" = 1'-0"



2

Section Detail - Foundation

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



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PROJECT #: 2515

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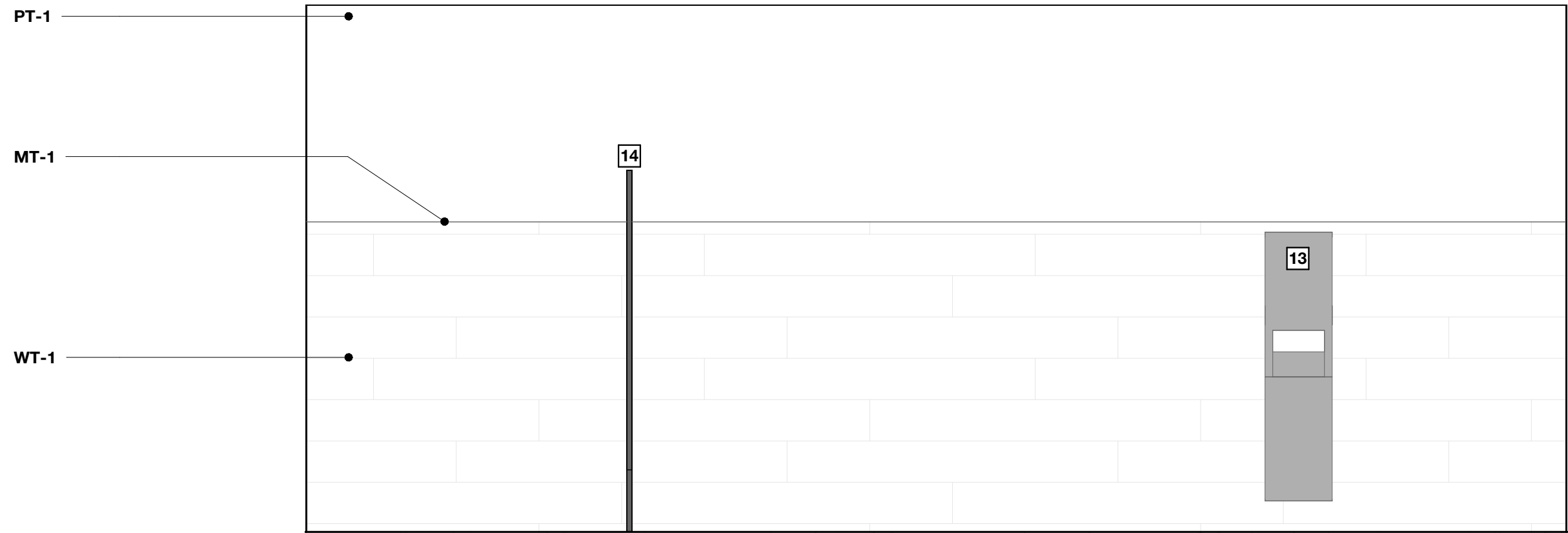
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SECTION DETAILS

DATE: 08/07/26
A4.6
Q.C. _____

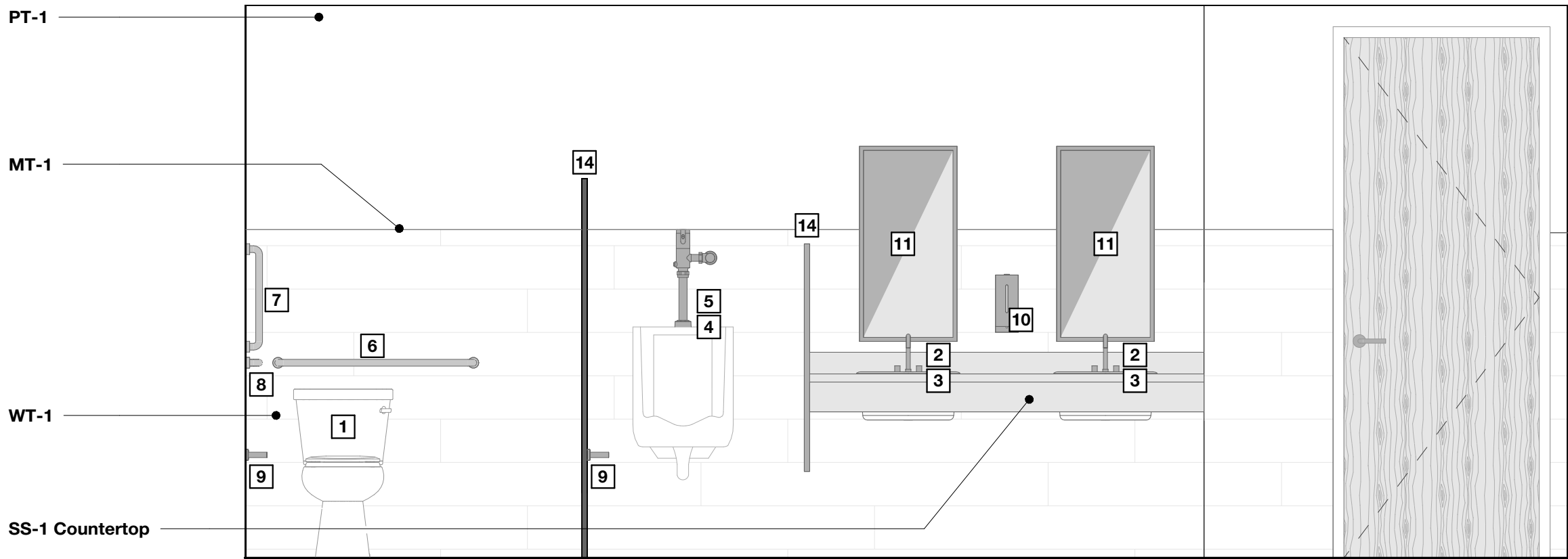
Interior Elevation Keynotes

- 1 Water Closet - See Mech. Drawings
- 2 Faucet - See Mech. Drawings
- 3 Lavatory - See Mech. Drawings
- 4 Urinal - See Mech. Drawings
- 5 Urinal Flushometer - See Mech. Drawings
- 6 Stainless Steel 36" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 36 - Finish: Stainless Steel, Satin
- 7 Stainless Steel 18" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 18 - Finish: Stainless Steel, Satin
- 8 Stainless Steel 42" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 42 - Finish: Stainless Steel, Satin
- 9 Toilet Tissue Dispenser - Basis of Design: Industrial Farm Co. - The Tierney Horseshoe Toilet Paper Holder Open to Right - Finish: Black Powder Coat
- 10 Soap Dispenser - Basis of Design: Bobrick Surface-Mounted Automatic Foam Soap Dispenser - Model No.: B-2013 - Finish: Stainless Steel, Satin
- 11 18 x 36 Framed Mirror - Basis of Design: Bobrick - Model No.: B-290 1836 - Finish: Stainless Steel, Satin
- 12 Sanitary Napkin Disposal - Bobrick Surface Mounted Sanitary Napkin Disposal - Model No.: B-35139 - Finish: Stainless Steel, Satin
- 13 Paper Towel Dispenser & Waste Receptacle - Bobrick Fino Collection - Model No.: B-9944 - Finish: Stainless Steel, Satin
- 14 Plastic Laminate Toilet Partition w/associated componenets and accessories - Verify finish w/Architect Drawings
- 15 Unit Bathroom Faucet - See Mech. Drawings
- 16 Unit Bathroom Sink - See Mech. Drawings
- 17 Unit Toilet - See Mech. Drawings
- 18 Towel Bar - Basis of Design: Kohler - Numista K-R-30661 18" Towel Bar - Finish: Vibrant Brushed Nickel
- 19 Unit Bathroom Mirror - Basis of Design: Tetote 20 in W x 30 in. H Modern Rectangular Aluminum Framed Wall Bathroom Vanity Mirror - Finish: Brushed Nickel
- 20 Light Fixture - See Elec. Drawings
- 21 Shower Trim Kit - See Mech. Drawings
- 22 Alcove Tub & Surround - Basis of Design: Sterling - Ensemble Medley 60" x 32" Vikrell bath/shower - See floor plan for drain location - Finish: White
- 23 Towel Hook - Basis of Design: Kohler - Numista K-R30664 - Finish: Vibrant Brushed Nickel
- 24 Stacked Laundry Unit - Verify make and model w/Owner
- 25 Owner Provided Printer - Verify make and model w/Owner
- 26 Owner Provided TV - See Elec. Drawings
- 27 Owner Provided Whiteboard - Verify make and model w/Owner
- 28 Bar Faucet - See Mech. Drawings
- 29 Apron Sink - See Mech. Drawings
- 30 Refrigerator - Verify Make and Model w/Owner
- 31 Kitchen Faucet - See Mech. Drawings
- 32 Kitchen Sink - See Mech. Drawings
- 33 Dishwasher - Verify Make and Model w/Owner
- 34 Microwave/Hood Combo - Verify Make and Model w/Owner
- 35 Range - Verify Make and Model w/Owner
- 36 Garbage Disposal - See Mech. Drawings
- 37 Shower Rod - Basis of Design: Kohler - Elate K-33810 - Finish: Brushed Stainless
- 38 Toilet Paper Holder - Basis of Design: Kohler - Numista K-R30662 - Finish: Vibrant Brushed Nickel



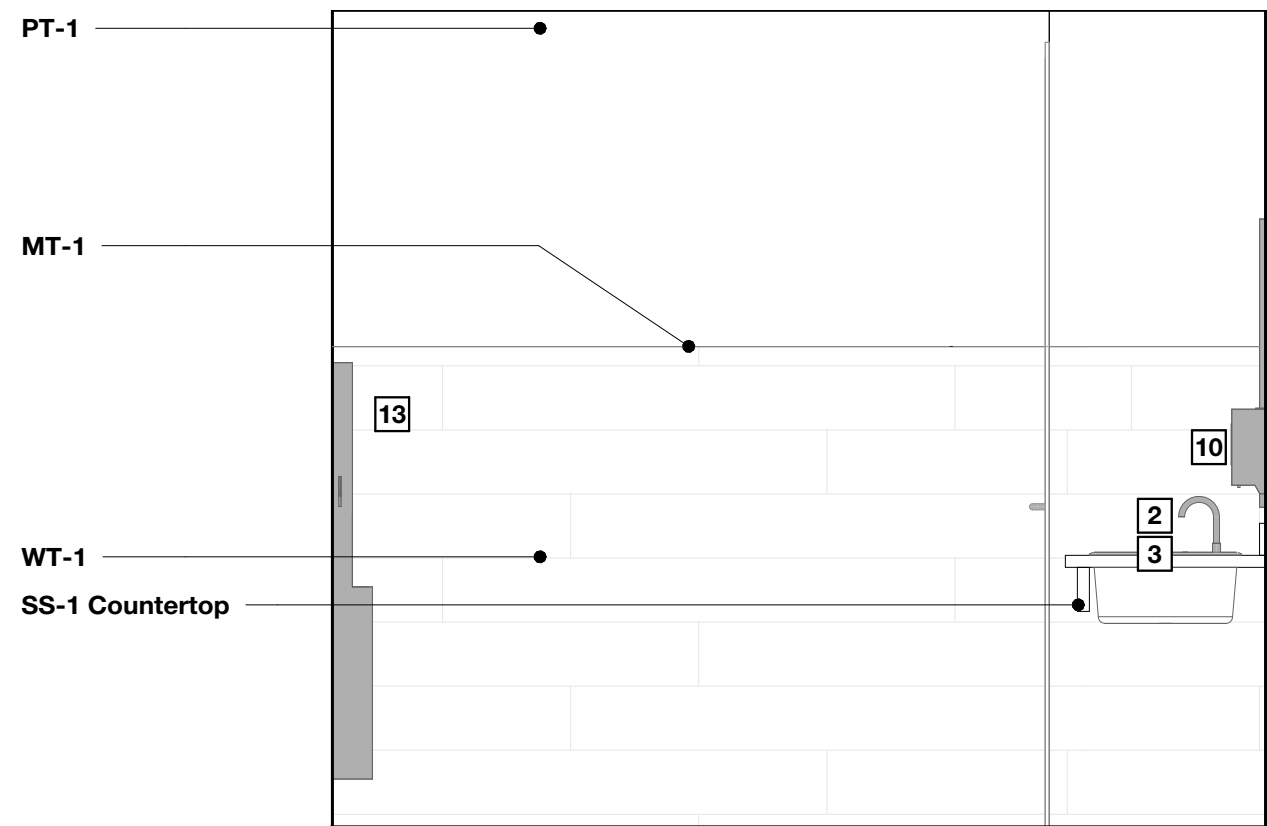
1 Women's 112 - A

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



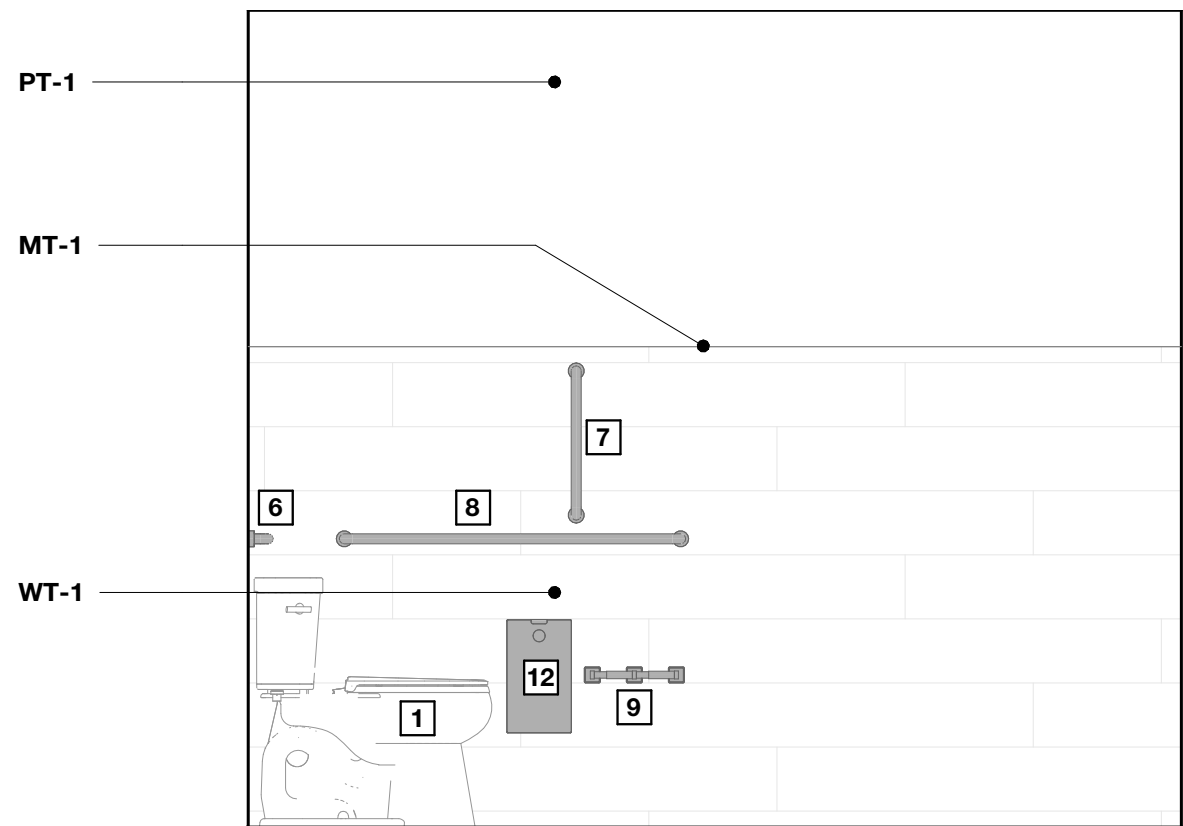
2 Men's 114 - A

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



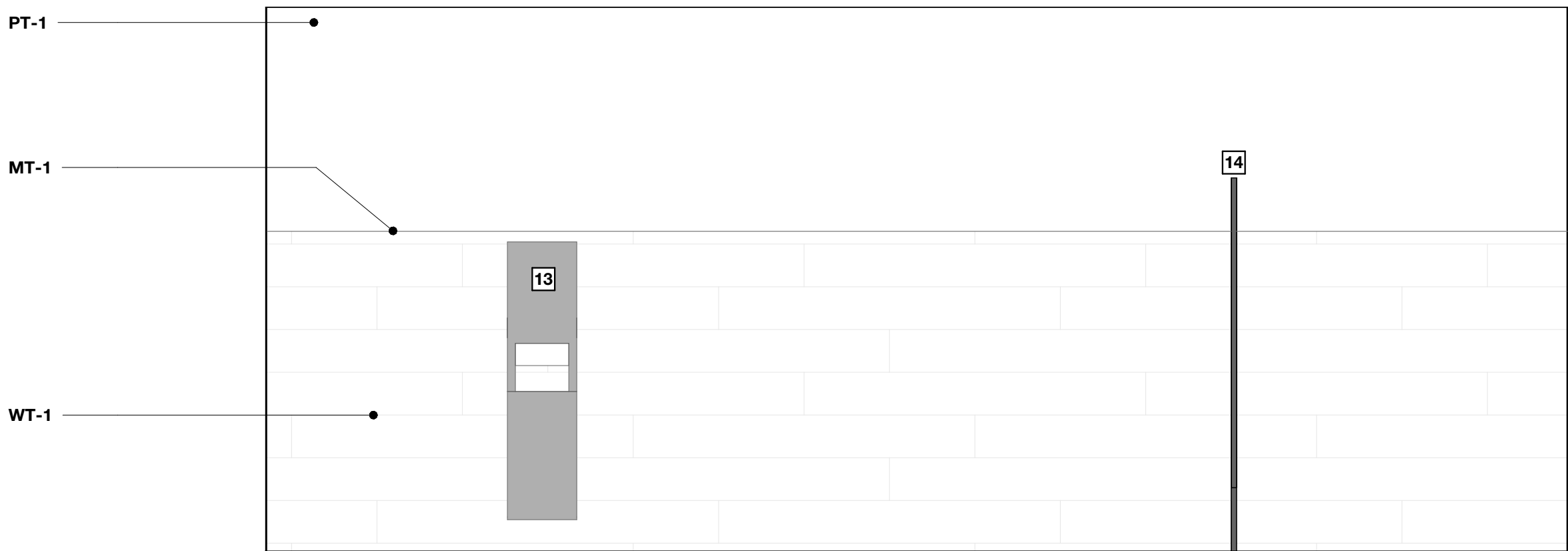
3 Women's 112 - B

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



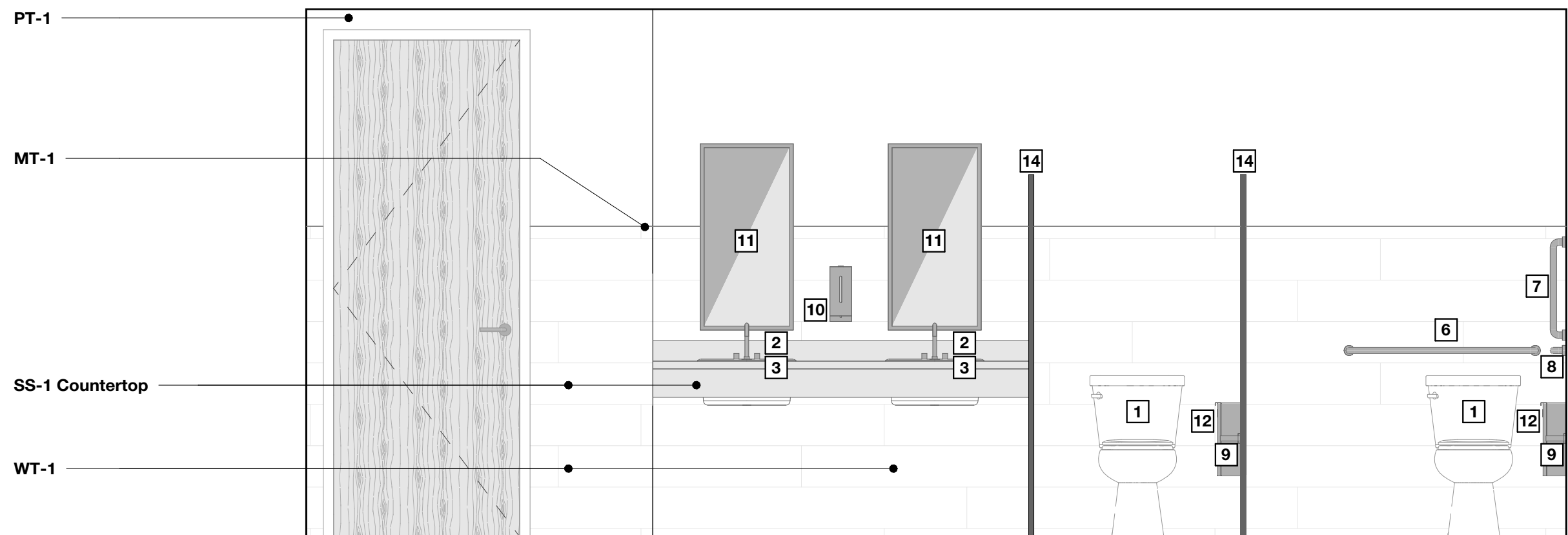
4 Women's 112 - D

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



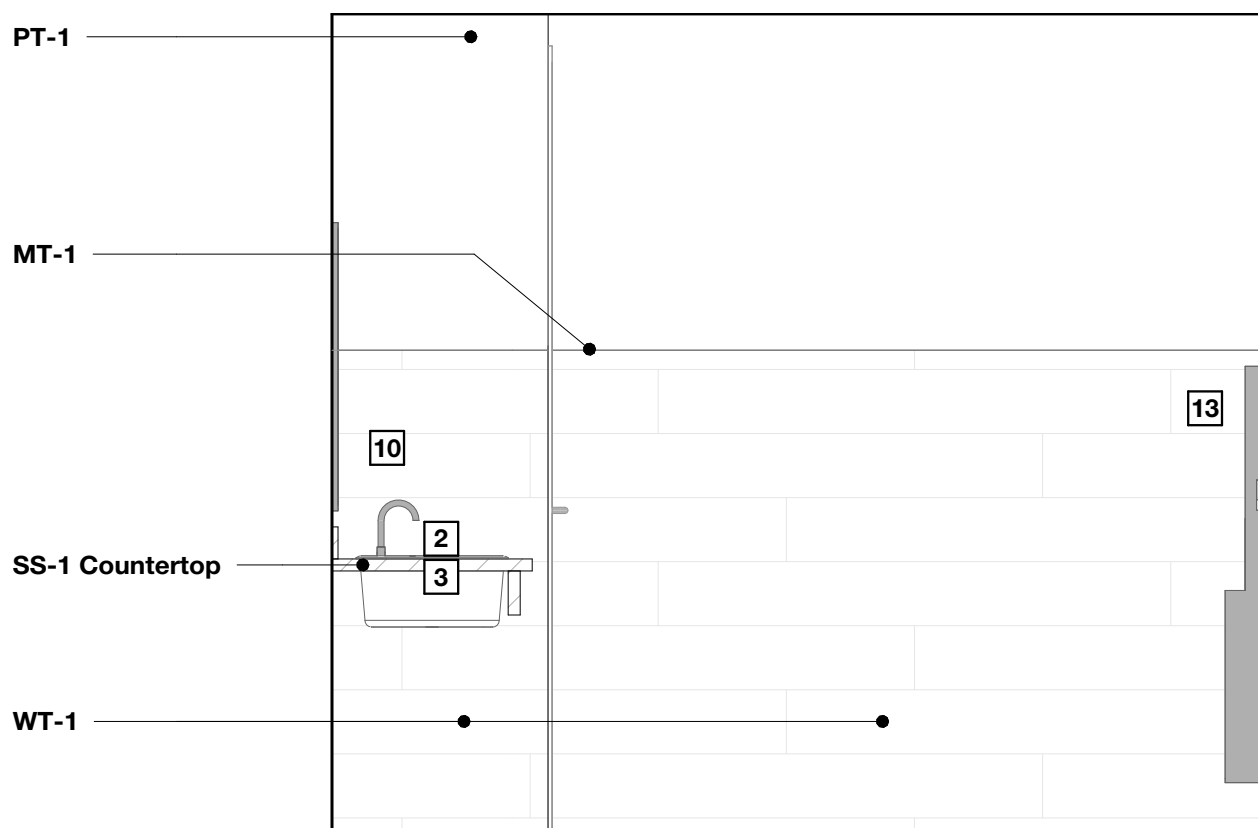
5 Men's 114 - C

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



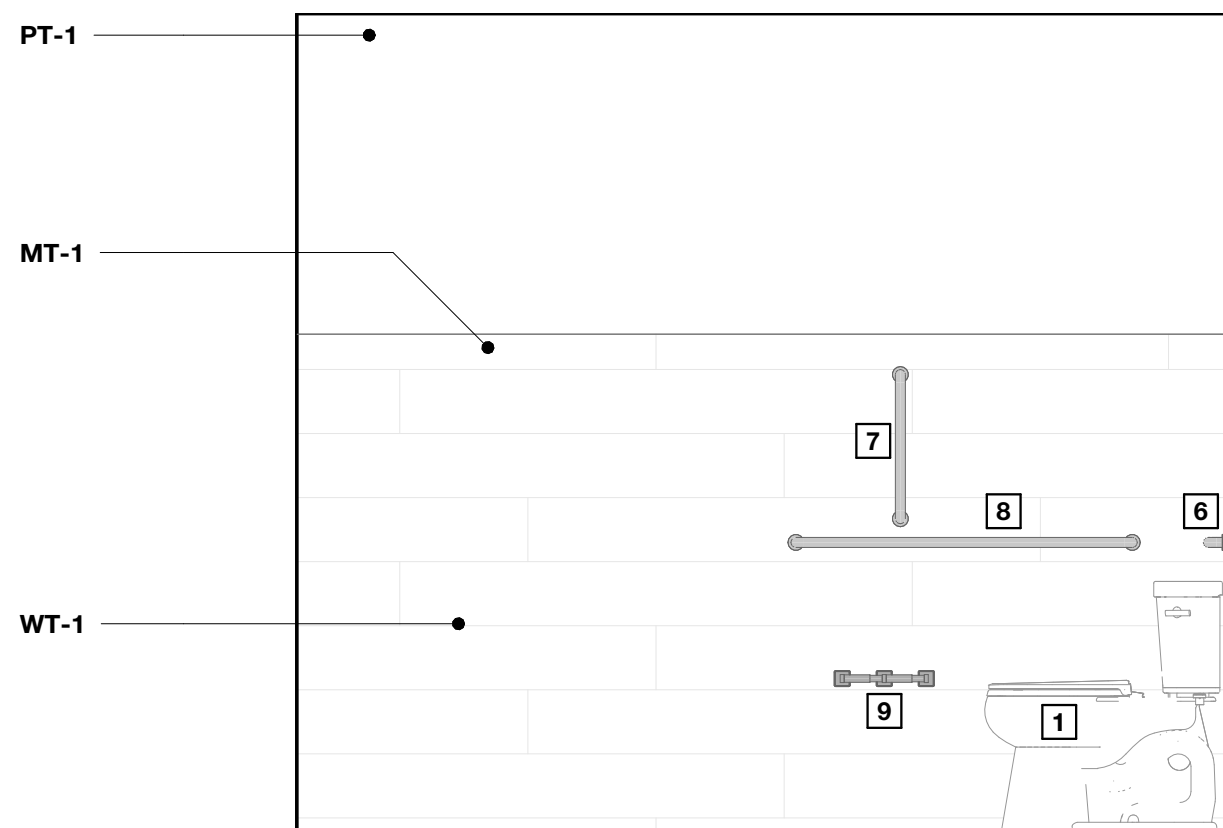
6 Women's 112 - C

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



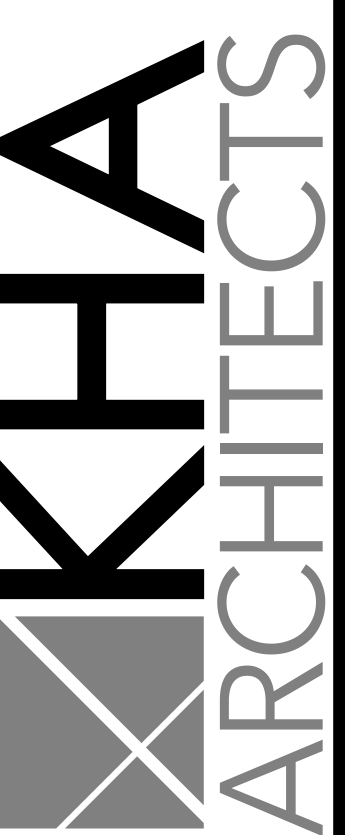
7 Men's 114 - B

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



8 Men's 114 - D

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



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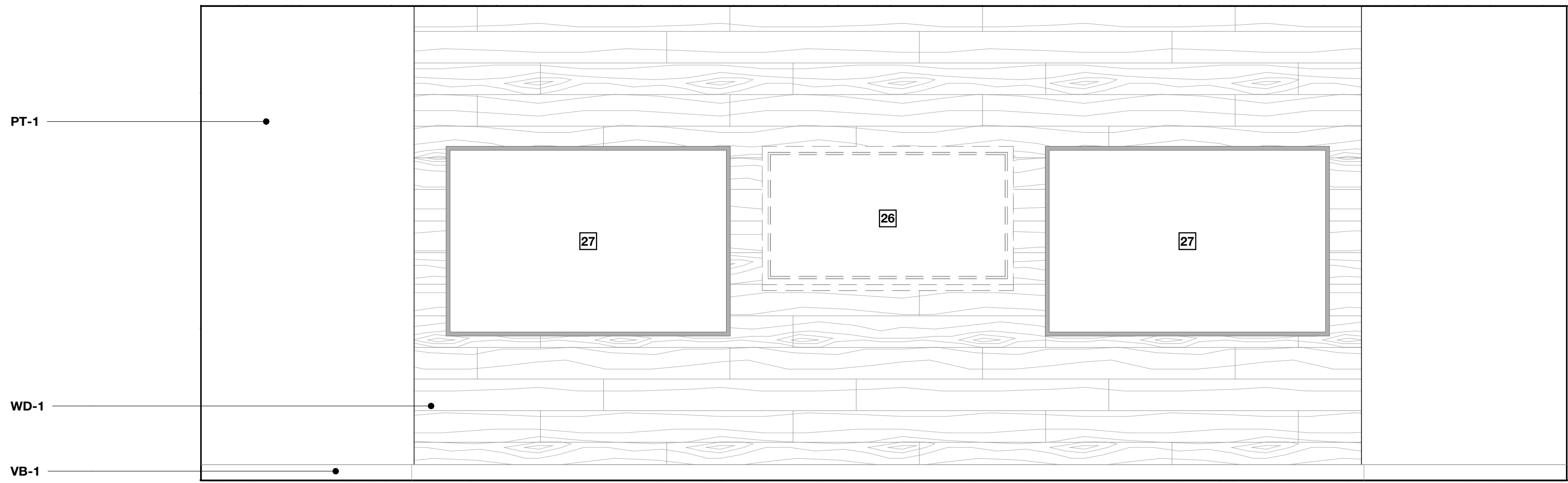


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CONSTR. REV 2	BLDG. DEPT.
CONSTR. REV 3	

PROJECT #: 2515
CONTACT: KRISTI
SCALE: AS NOTED

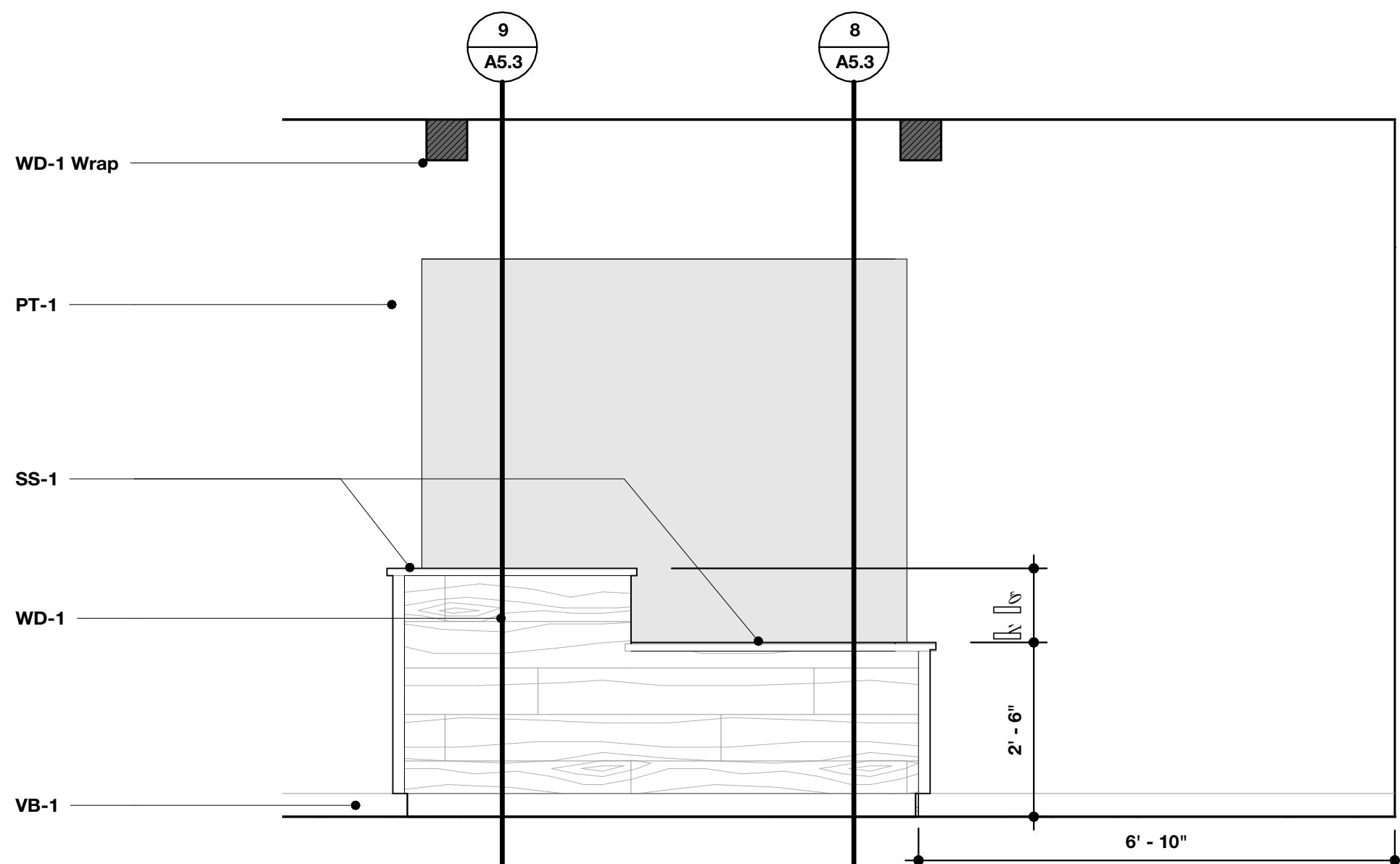
INTERIOR
ELEVATIONS

SHEET
A5.0
DATE: 08/07/26
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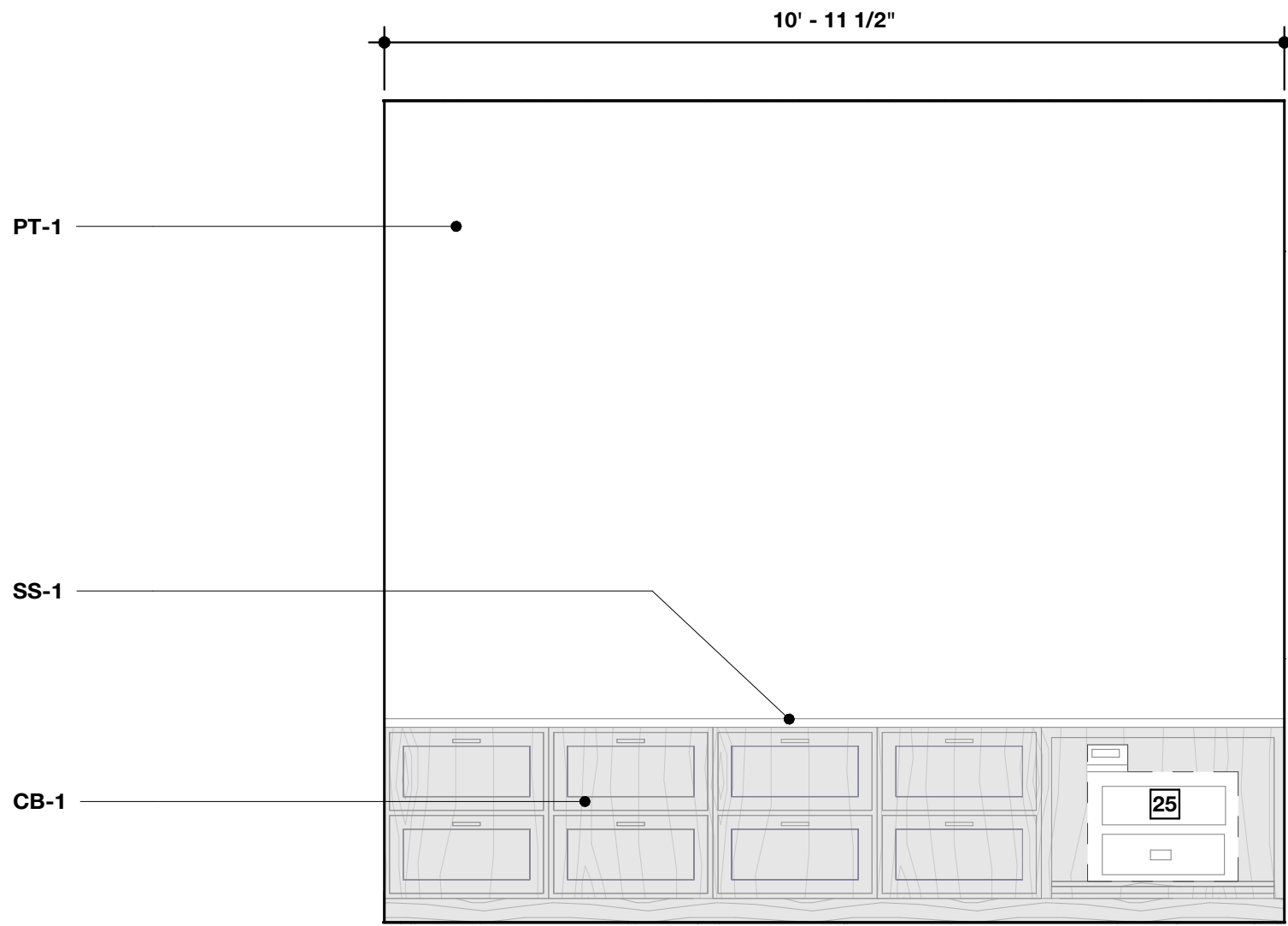
1 Classroom 104 - A

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



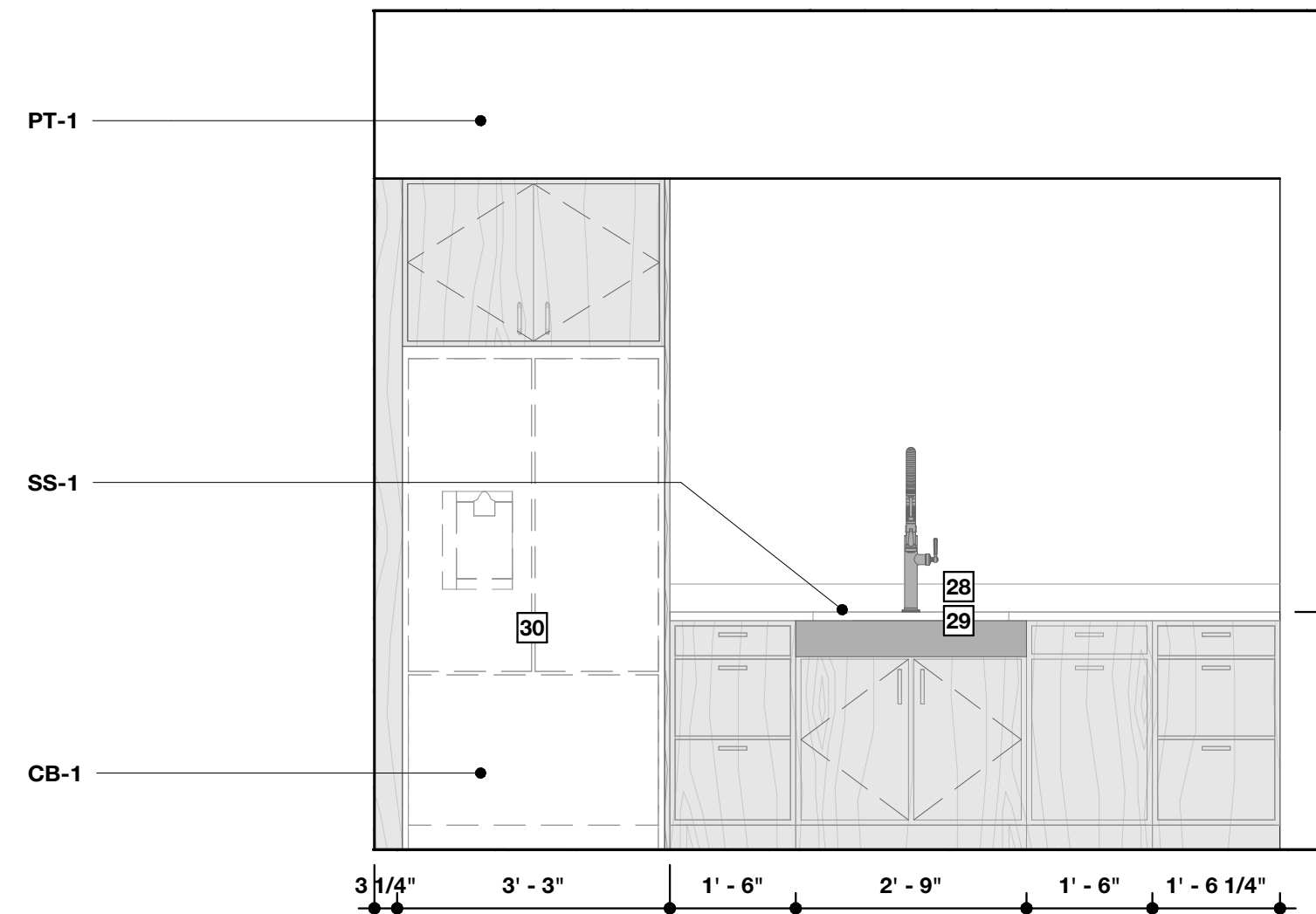
3 Check-In 102 - A

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



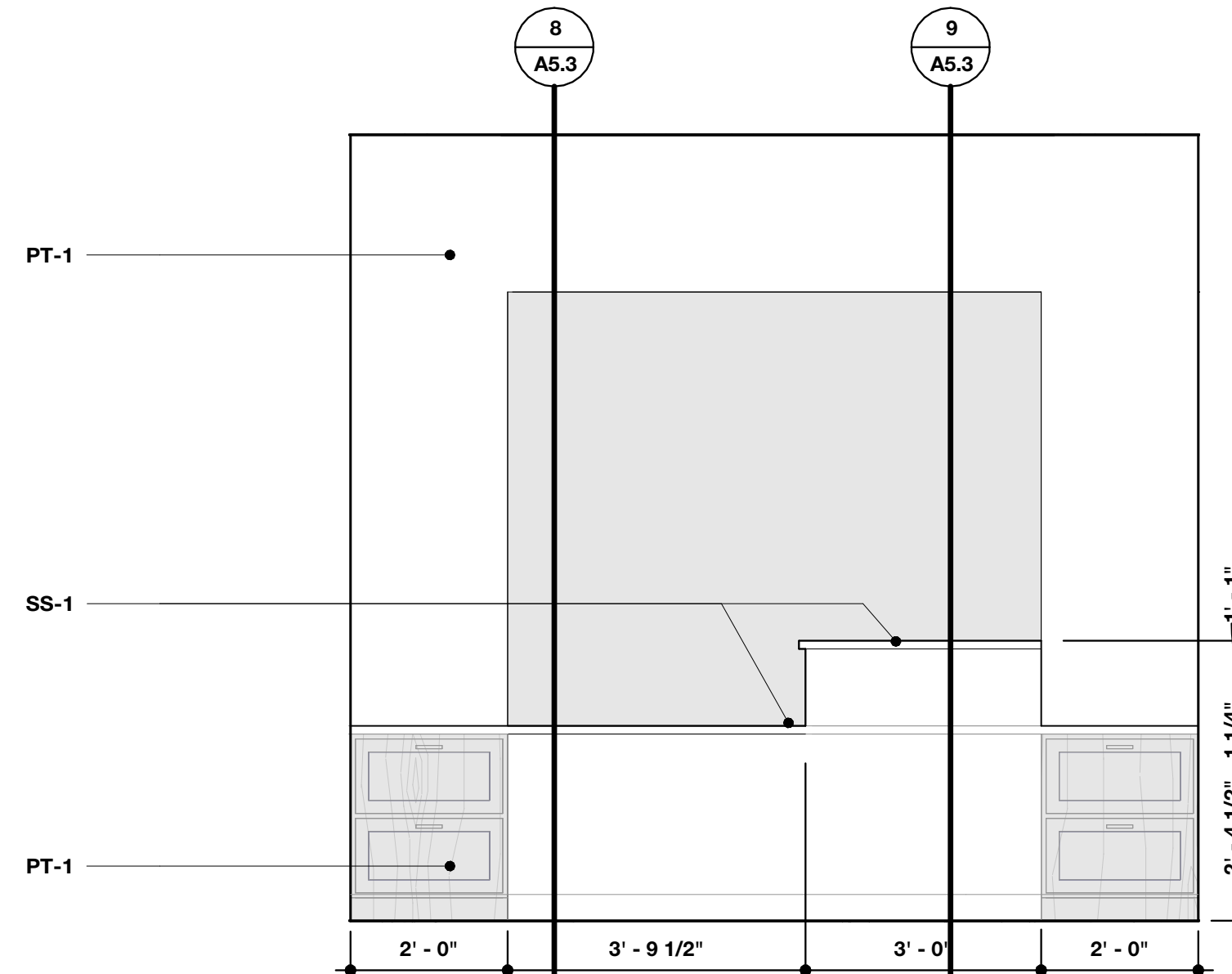
4 Check-In 102 - B

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



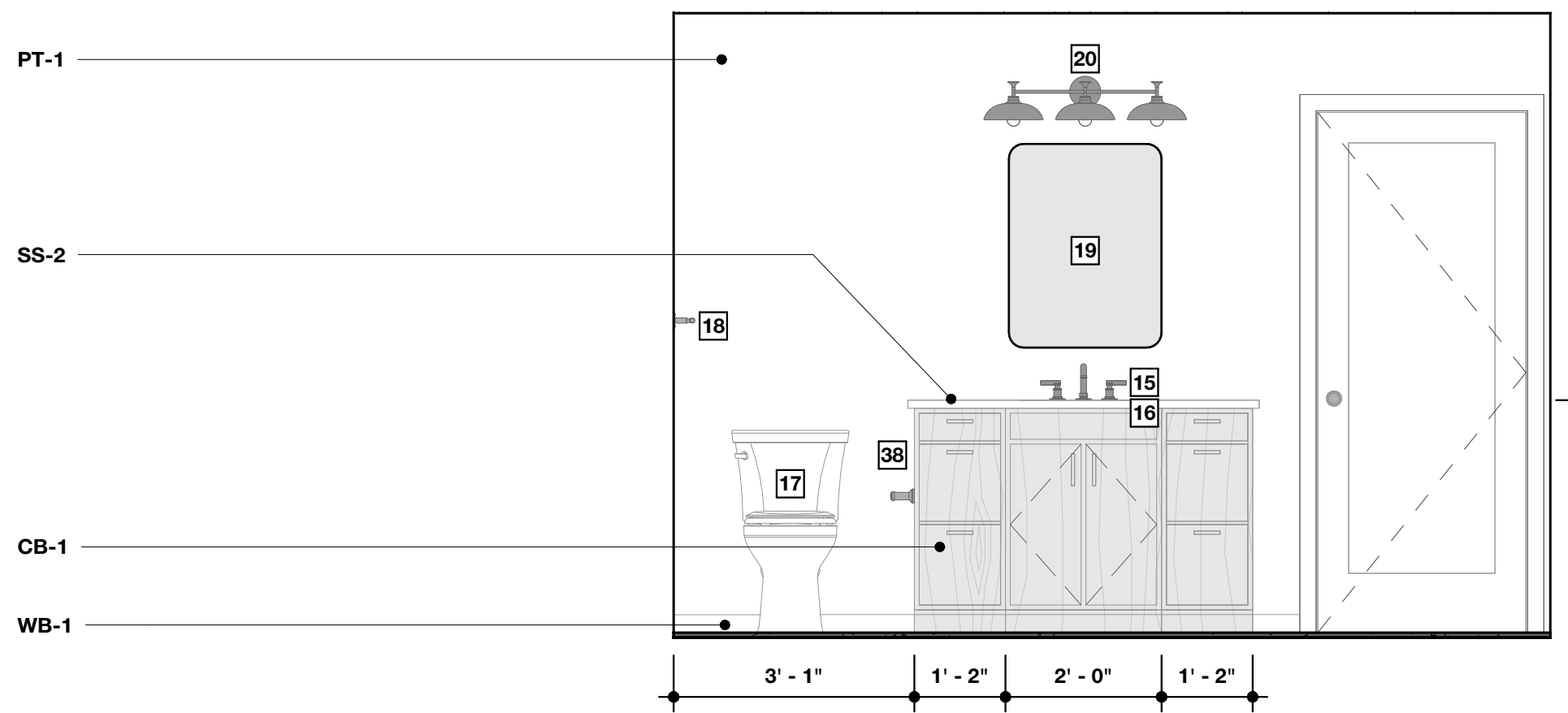
2 Classroom 104 - B

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



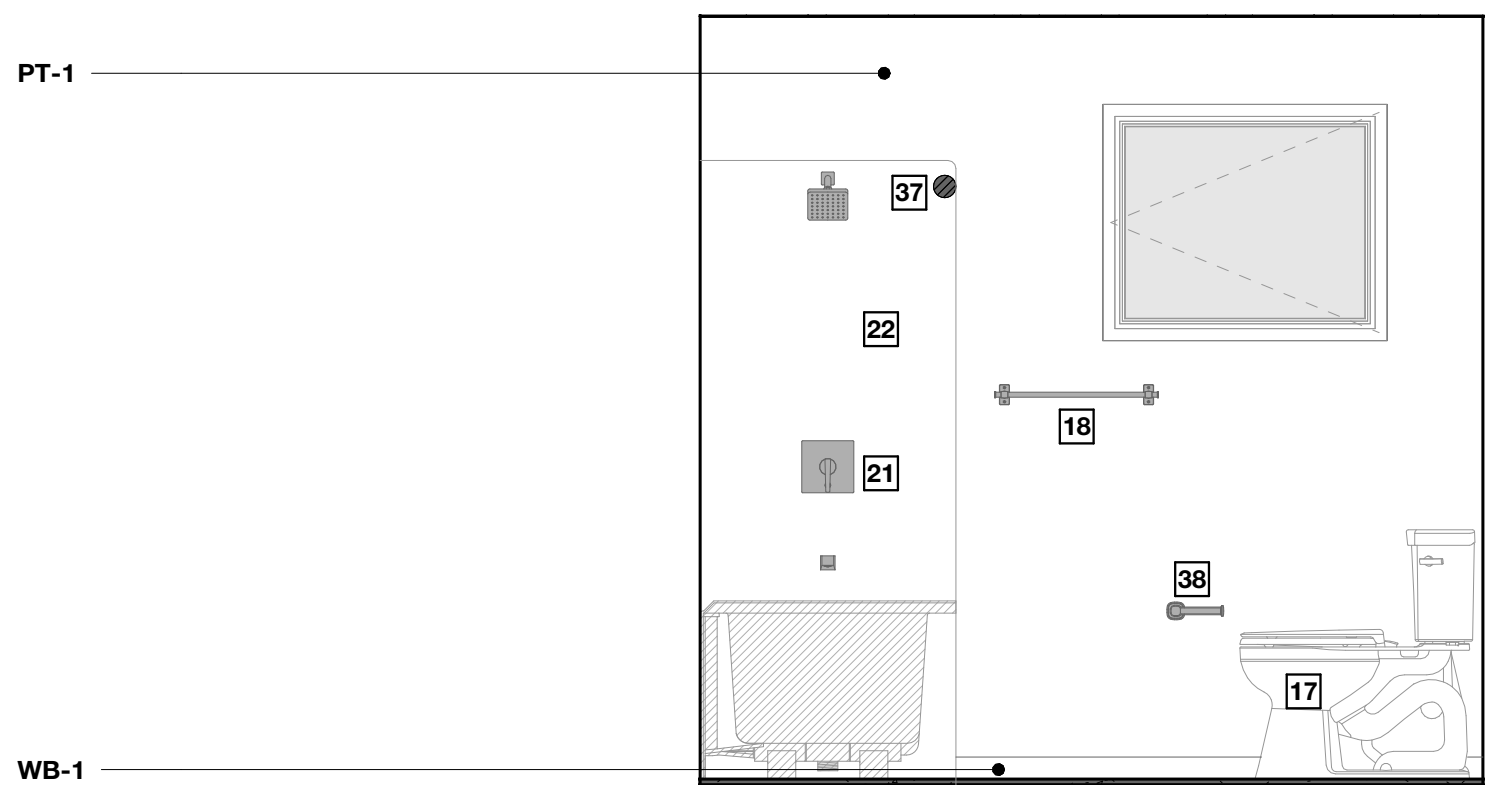
5 Check-In 102 - C

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



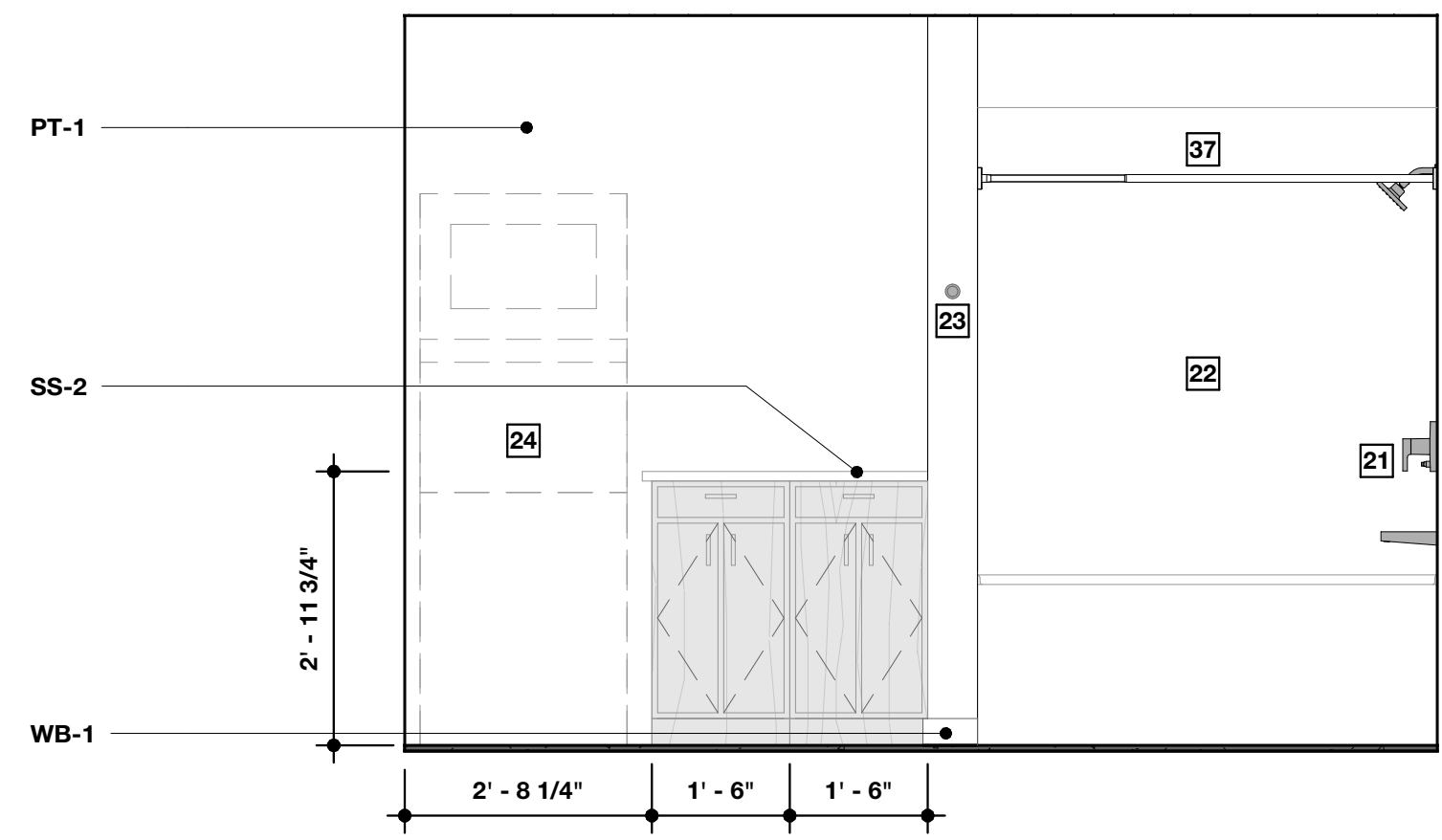
6 Bathroom 202 - A

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



7 Bathroom 202 - B

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

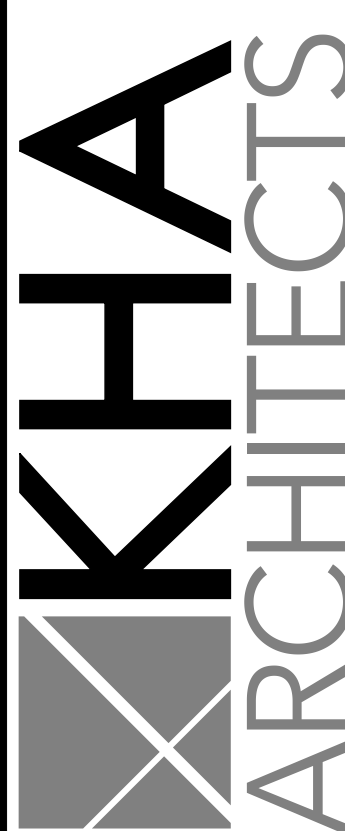


8 Bathroom 202 - C

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

Interior Elevation Keynotes

- 1 Water Closet - See Mech. Drawings
- 2 Faucet - See Mech. Drawings
- 3 Lavatory - See Mech. Drawings
- 4 Urinal - See Mech. Drawings
- 5 Urinal Flushometer - See Mech. Drawings
- 6 Stainless Steel 36" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 36 - Finish: Stainless Steel, Satin
- 7 Stainless Steel 18" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 18 - Finish: Stainless Steel, Satin
- 8 Stainless Steel 42" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 42 - Finish: Stainless Steel, Satin
- 9 Toilet Tissue Dispenser - Basis of Design: Industrial Farm Co. - The Tierney Horseshoe Toilet Paper Holder Open to Right - Finish: Black Powder Coat
- 10 Soap Dispenser - Basis of Design: Bobrick Surface-Mounted Automatic Foam Soap Dispenser - Model No.: B-2013 - Finish: Stainless Steel, Satin
- 11 Sanitary Napkin Disposal - Bobrick Surface Mounted Sanitary Napkin Disposal - Model No.: B-290 1836 - Finish: Stainless Steel, Satin
- 12 Sanitary Napkin Disposal - Bobrick Surface Mounted Sanitary Napkin Disposal - Model No.: B-35139 - Finish: Stainless Steel, Satin
- 13 Paper Towel Dispenser & Waste Receptacle - Bobrick Fino Collection - Model No.: B-9944 - Finish: Stainless Steel, Satin
- 14 Plastic Laminate Toilet Partition w/associated components and accessories - Verify finish w/Architect
- 15 Unit Bathroom Faucet - See Mech. Drawings
- 16 Unit Bathroom Sink - See Mech. Drawings
- 17 Unit Toilet - See Mech. Drawings
- 18 Towel Bar - Basis of Design: Kohler - Numista K-R-30661 18" Towel Bar - Finish: Vibrant Brushed Nickel
- 19 Unit Bathroom Mirror - Basis of Design: Tetote 20 in W x 30 in. H Modern Rectangular Aluminum Framed Wall Bathroom Vanity Mirror - Finish: Brushed Nickel
- 20 Light Fixture - See Elec. Drawings
- 21 Shower Trim Kit - See Mech. Drawings
- 22 Alcove Tub & Surround - Basis of Design: Sterling - Ensemble Medley 60" x 32" Vikrell bath/shower - See floor plan for drain location - Finish: White
- 23 Towel Hook - Basis of Design: Kohler - Numista K-R30664 - Finish: Vibrant Brushed Nickel
- 24 Stacked Laundry Unit - Verify make and model w/Owner
- 25 Owner Provided Printer - Verify make and model w/Owner
- 26 Owner Provided TV - See Elec. Drawings
- 27 Owner Provided Whiteboard - Verify make and model w/Owner
- 28 Bar Faucet - See Mech. Drawings
- 29 Apron Sink - See Mech. Drawings
- 30 Refrigerator - Verify Make and Model w/Owner
- 31 Kitchen Faucet - See Mech. Drawings
- 32 Kitchen Sink - See Mech. Drawings
- 33 Dishwasher - Verify Make and Model w/Owner
- 34 Microwave/Hood Combo - Verify Make and Model w/Owner
- 35 Range - Verify Make and Model w/Owner
- 36 Garbage Disposal - See Mech. Drawings
- 37 Shower Rod - Basis of Design: Kohler - Elate K-33810 - Finish: Brushed Stainless
- 38 Toilet Paper Holder - Basis of Design: Kohler - Numista K-R30662 - Finish: Vibrant Brushed Nickel



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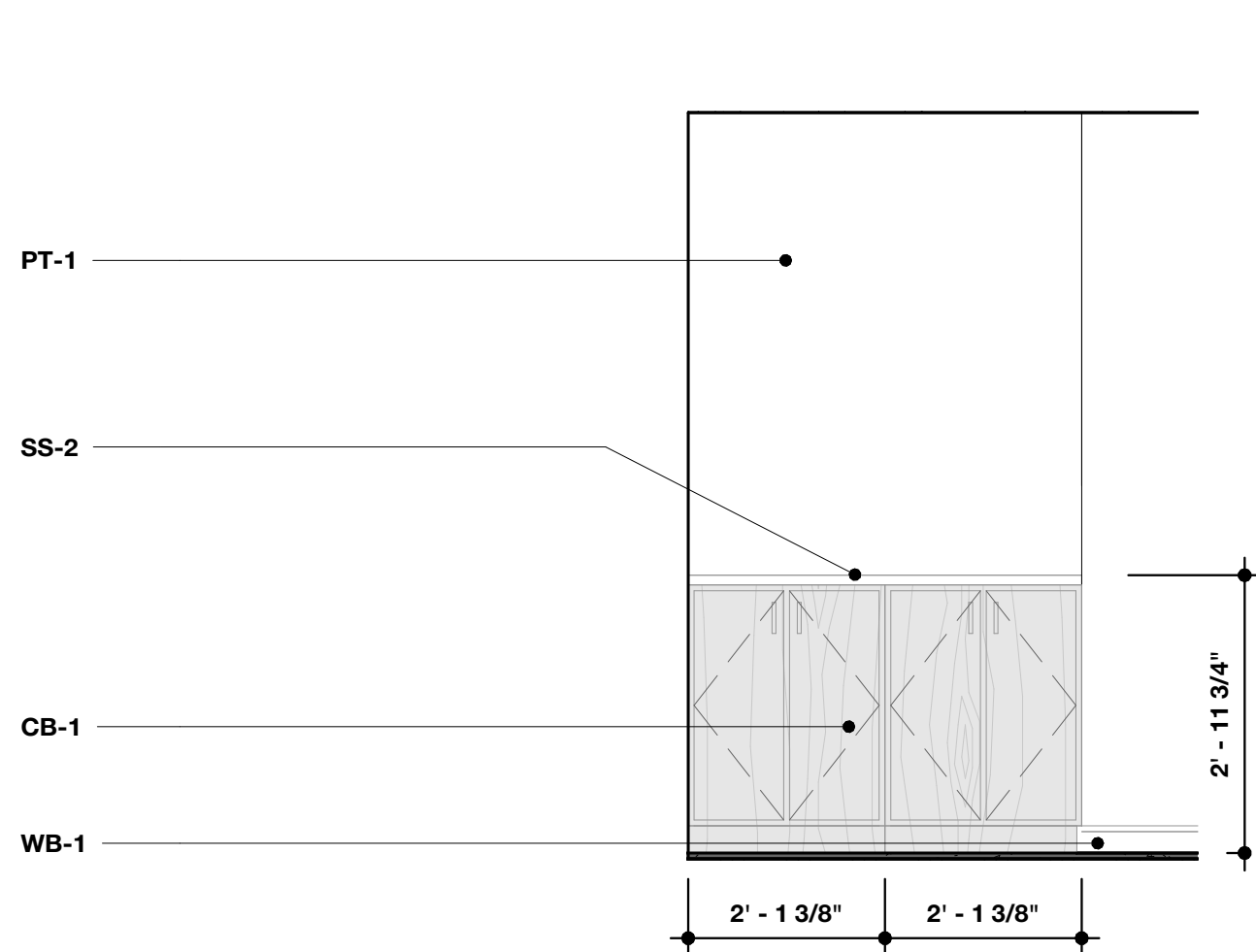


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SCALE: AS NOTED

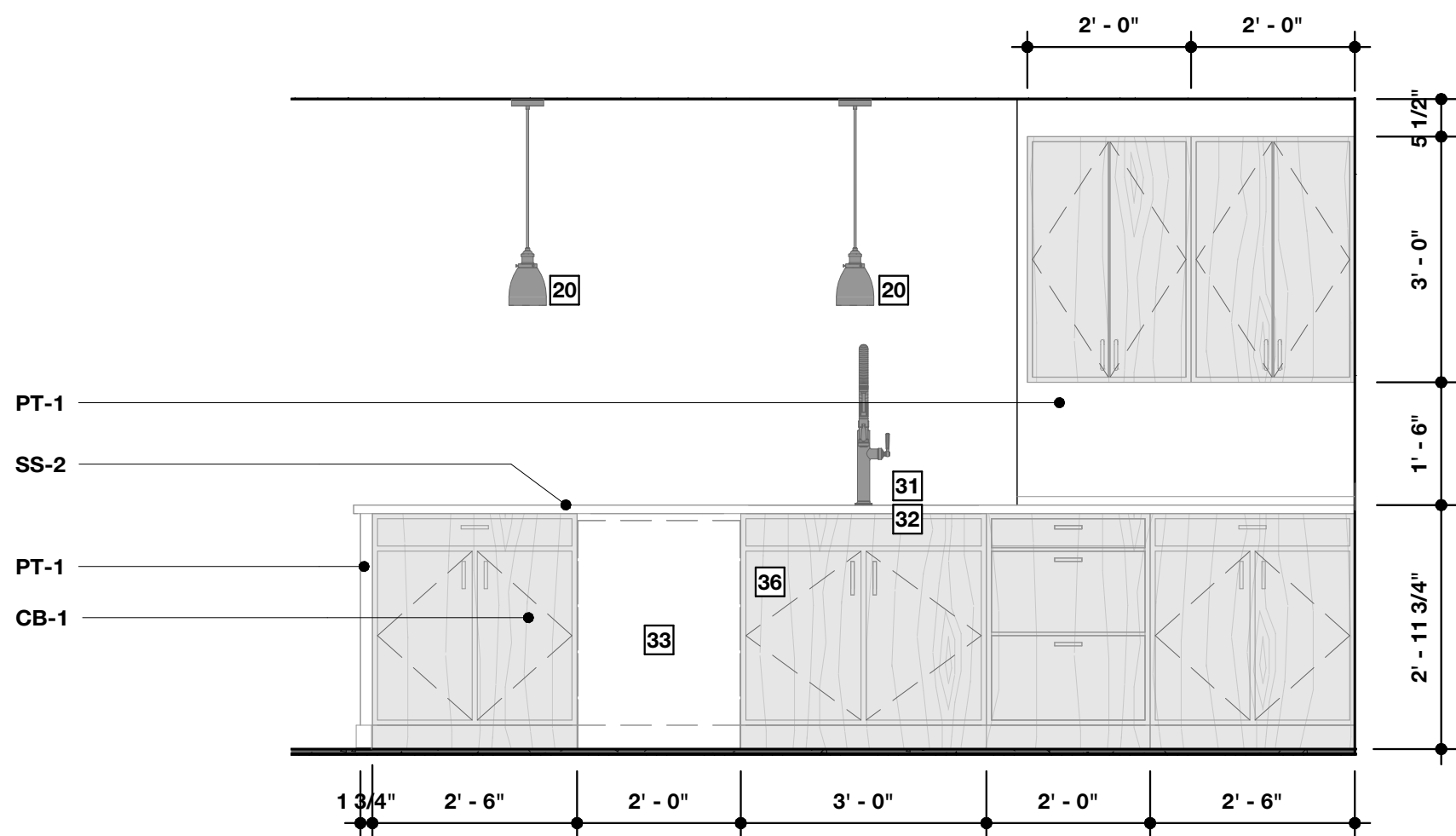
INTERIOR
ELEVATIONS

SHEET
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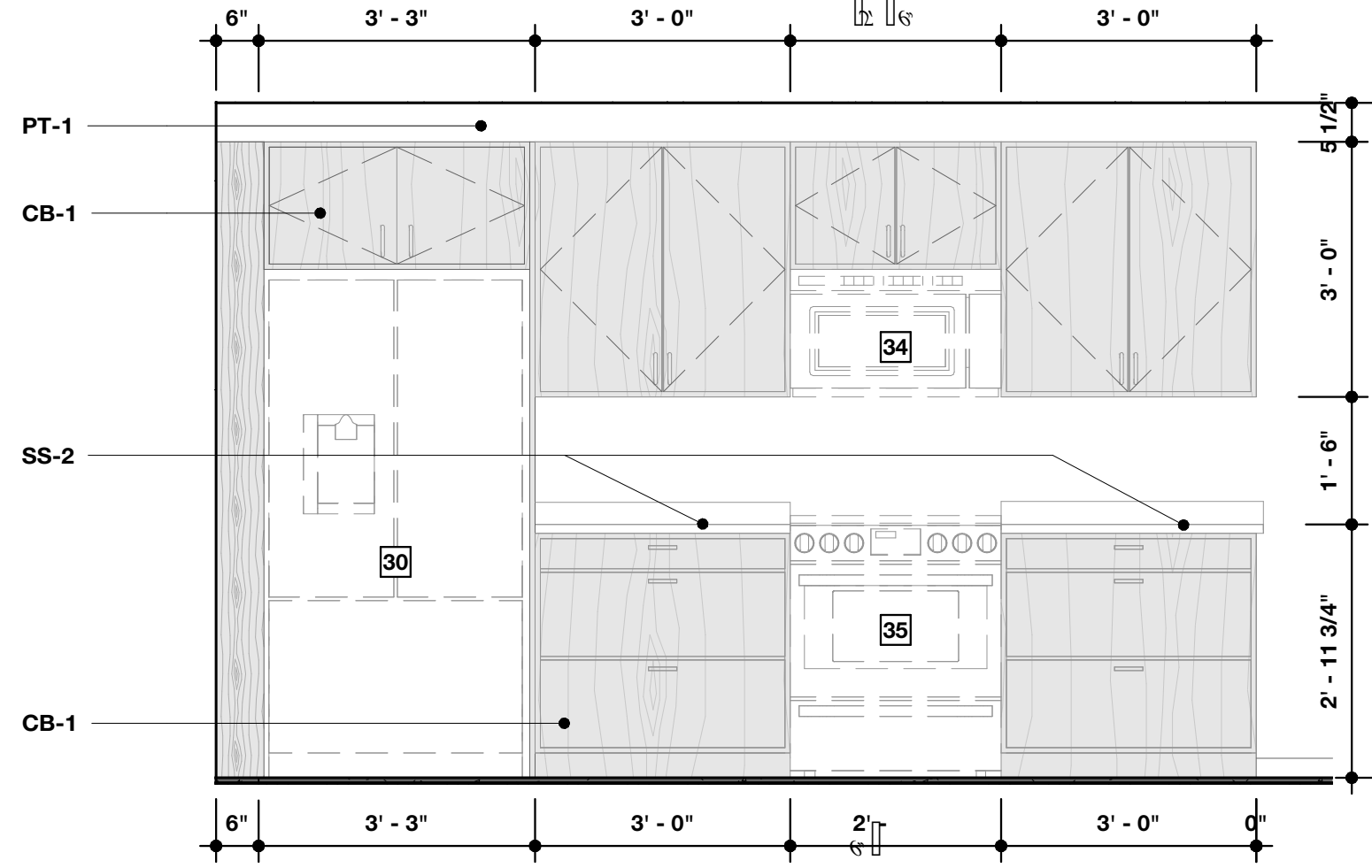
1 Living 208

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



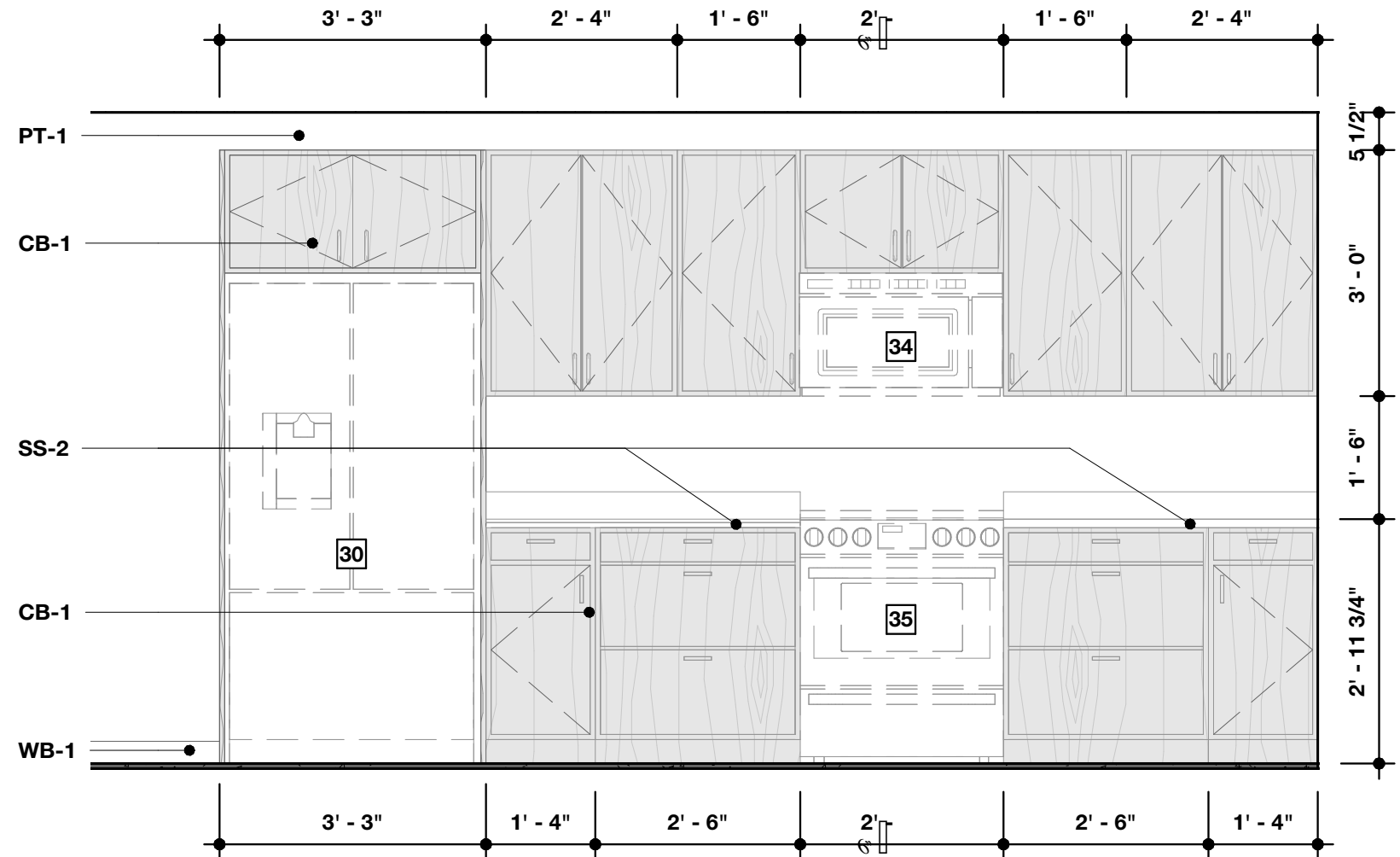
2 Kitchen 210 - A

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



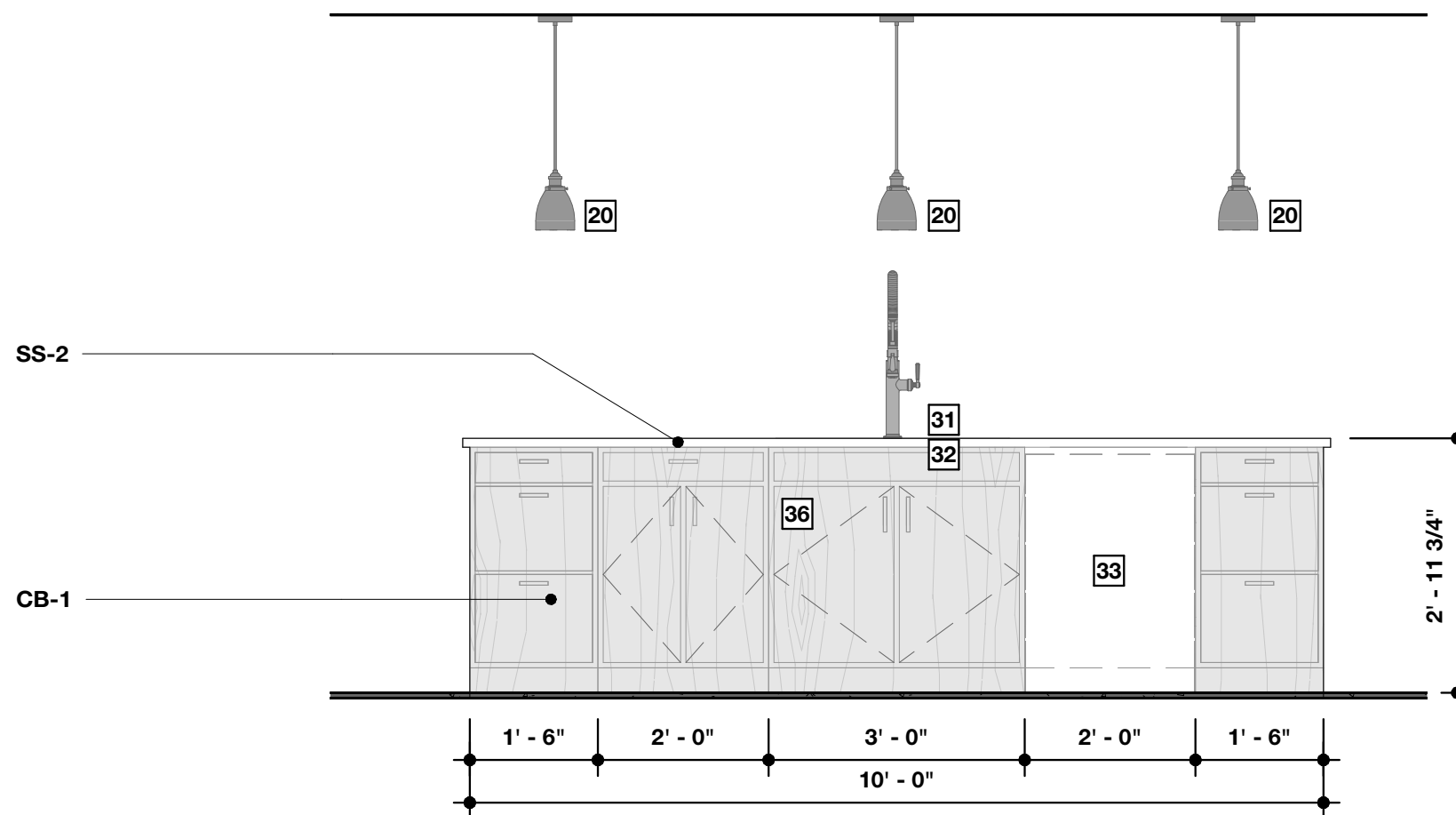
3 Kitchen 210 - B

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



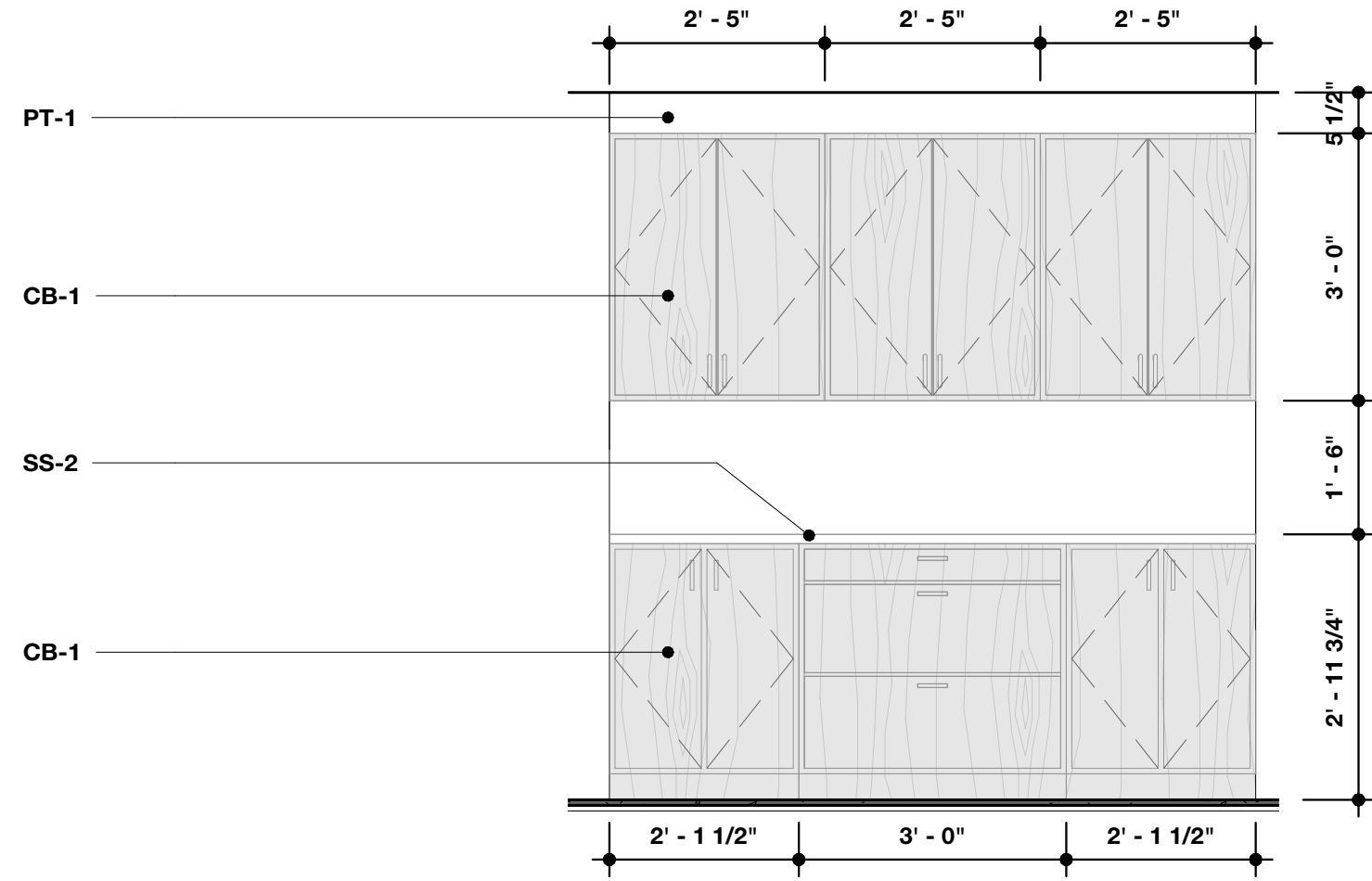
4 Kitchen 214 - A

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



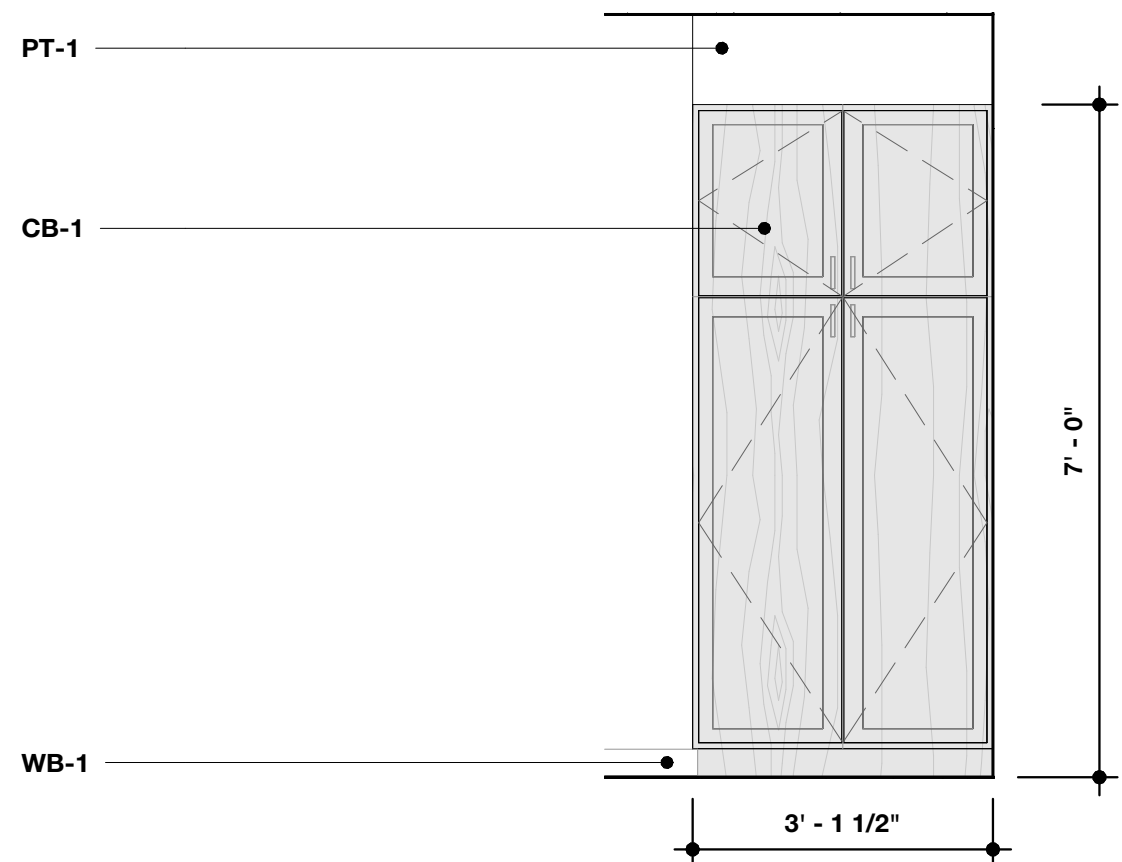
5 Kitchen 214 - B

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



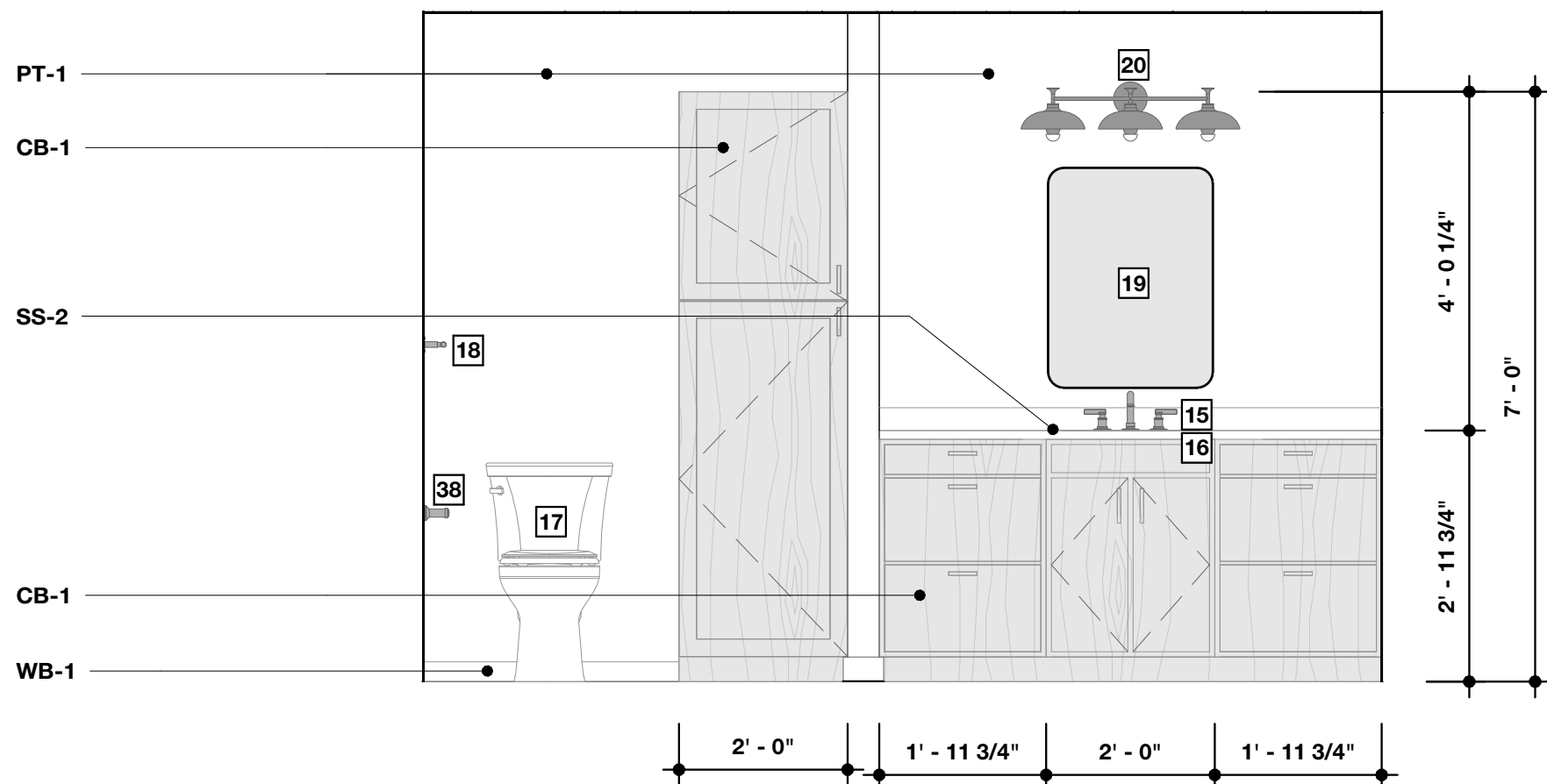
6 Kitchen 214 - C

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



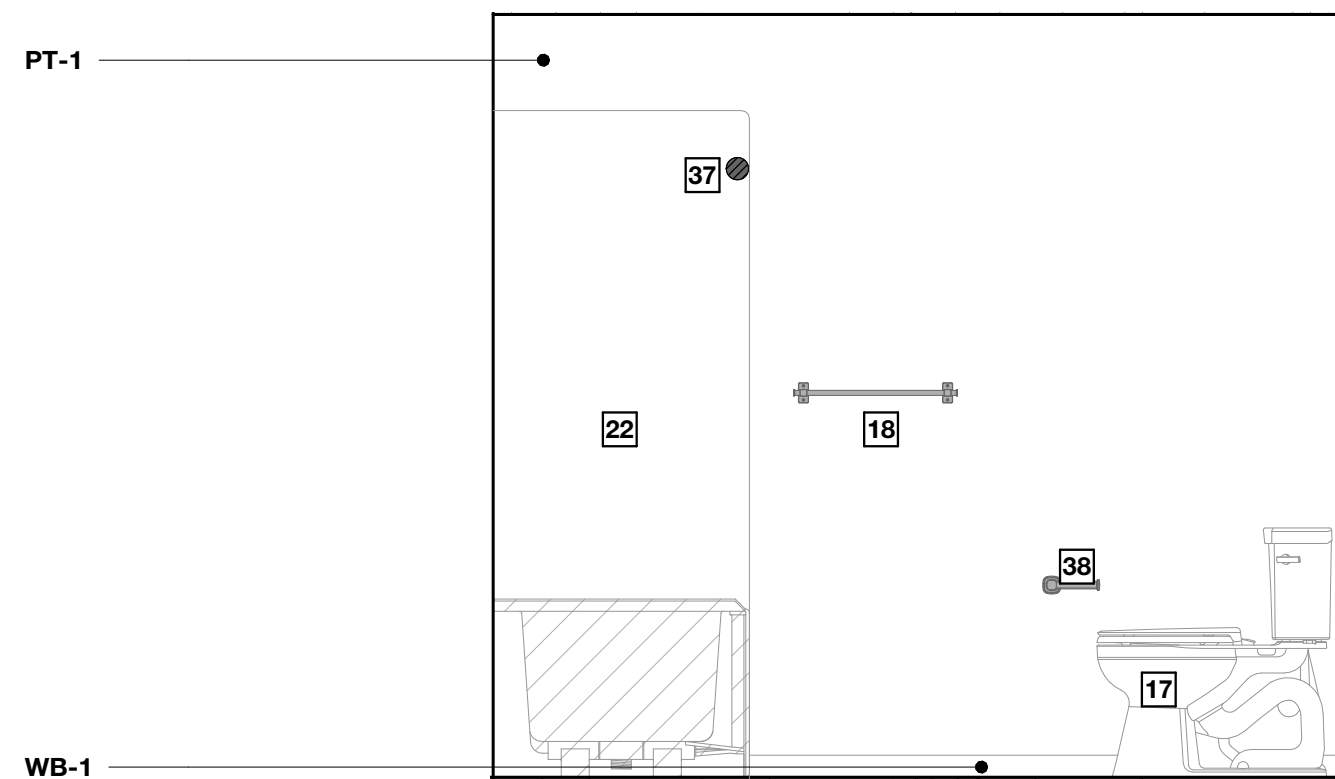
7 Pantry 216

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



8 Bathroom 224 - A

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

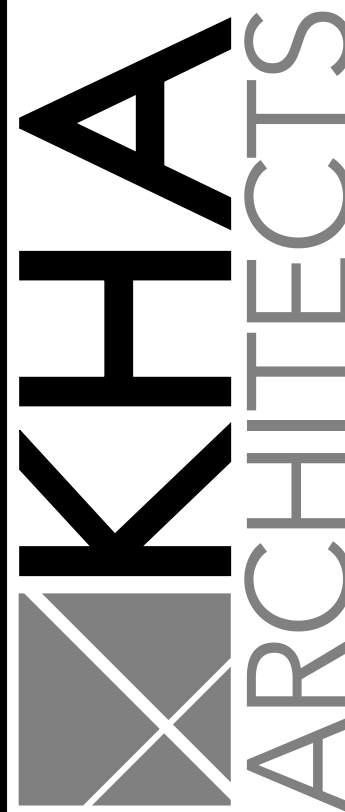


9 Bathroom 224 - B

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

Interior Elevation Keynotes

- 1 Water Closet - See Mech. Drawings
- 2 Faucet - See Mech. Drawings
- 3 Lavatory - See Mech. Drawings
- 4 Urinal - See Mech. Drawings
- 5 Urinal Flushometer - See Mech. Drawings
- 6 Stainless Steel 36" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 36 - Finish: Stainless Steel, Satin
- 7 Stainless Steel 18" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 18 - Finish: Stainless Steel, Satin
- 8 Stainless Steel 42" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 42 - Finish: Stainless Steel, Satin
- 9 Toilet Tissue Dispenser - Basis of Design: Industrial Farm Co. - The Tierney Horseshoe Toilet Paper Holder Open to Right - Finish: Black Powder Coat
- 10 Soap Dispenser - Basis of Design: Bobrick Surface-Mounted Automatic Foam Soap Dispenser - Model No.: B-2013 - Finish: Stainless Steel, Satin
- 11 18 x 36 Framed Mirror - Basis of Design: Bobrick - Model No.: B-290 1835 - Finish: Stainless Steel, Satin
- 12 Sanitary Napkin Disposal - Bobrick Surface Mounted Sanitary Napkin Disposal - Model No.: B-35139 - Finish: Stainless Steel, Satin
- 13 Paper Towel Dispenser & Waste Receptacle - Bobrick Fino Collection - Model No.: B-9944 - Finish: Stainless Steel, Satin
- 14 Plastic Laminate Toilet Partition w/associated components and accessories - Verify finish w/Architect
- 15 Unit Bathroom Faucet - See Mech. Drawings
- 16 Unit Bathroom Sink - See Mech. Drawings
- 17 Unit Toilet - See Mech. Drawings
- 18 Towel Bar - Basis of Design: Kohler - Numista K-R-30661 18" Towel Bar - Finish: Vibrant Brushed Nickel
- 19 Unit Bathroom Mirror - Basis of Design: Tetote 20 in W x 30 in. H Modern Rectangular Aluminum Framed Wall Bathroom Vanity Mirror - Finish: Brushed Nickel
- 20 Light Fixture - See Elec. Drawings
- 21 Shower Trim Kit - See Mech. Drawings
- 22 Alcove Tub & Surround - Basis of Design: Sterling - Ensemble Medley 60" x 32" Vikrell bath/shower - See floor plan for drain location - Finish: White
- 23 Towel Hook - Basis of Design: Kohler - Numista K-R30664 - Finish: Vibrant Brushed Nickel
- 24 Stacked Laundry Unit - Verify make and model w/Owner
- 25 Owner Provided Printer - Verify make and model w/Owner
- 26 Owner Provided TV - See Elec. Drawings
- 27 Owner Provided Whiteboard - Verify make and model w/Owner
- 28 Bar Faucet - See Mech. Drawings
- 29 Apron Sink - See Mech. Drawings
- 30 Refrigerator - Verify Make and Model w/Owner
- 31 Kitchen Faucet - See Mech. Drawings
- 32 Kitchen Sink - See Mech. Drawings
- 33 Dishwasher - Verify Make and Model w/Owner
- 34 Microwave/Hood Combo - Verify Make and Model w/Owner
- 35 Range - Verify Make and Model w/Owner
- 36 Garbage Disposal - See Mech. Drawings
- 37 Shower Rod - Basis of Design: Kohler - Elate K-33810 - Finish: Brushed Stainless
- 38 Toilet Paper Holder - Basis of Design: Kohler - Numista K-R30662 - Finish: Vibrant Brushed Nickel



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CONTACT : KRISTI

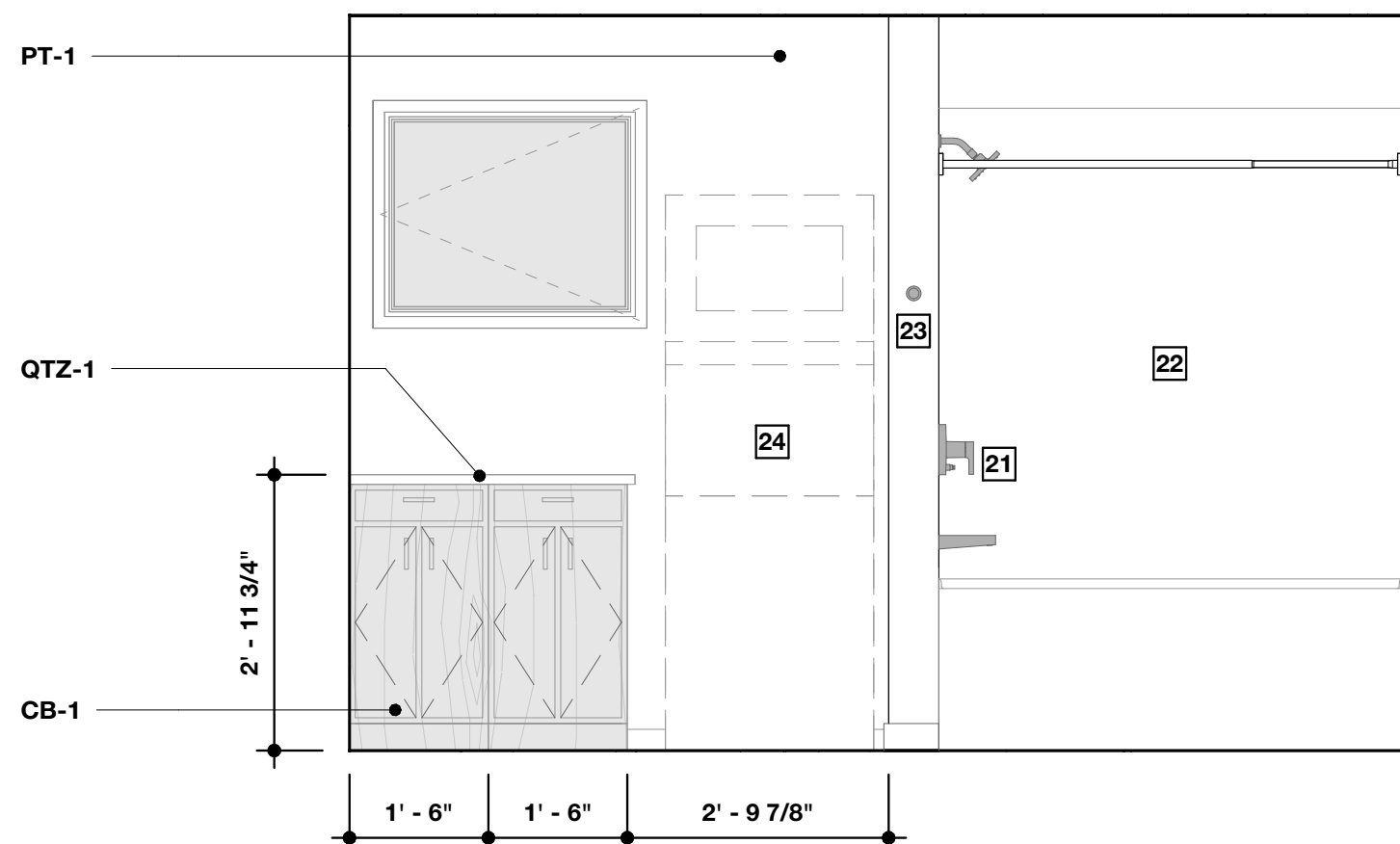
SCALE: AS NOTED

INTERIOR
ELEVATIONS

SHEET
A5.2

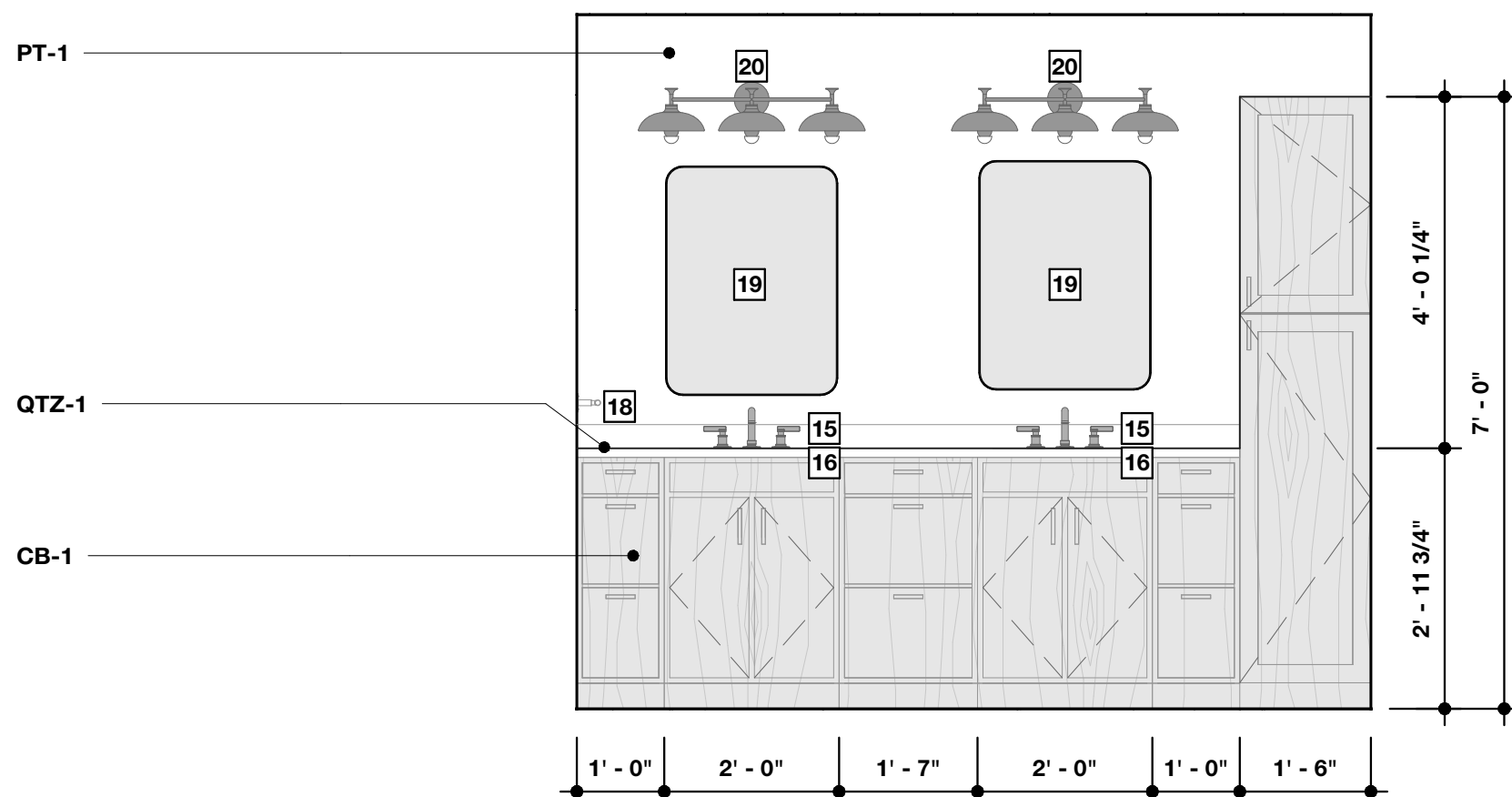
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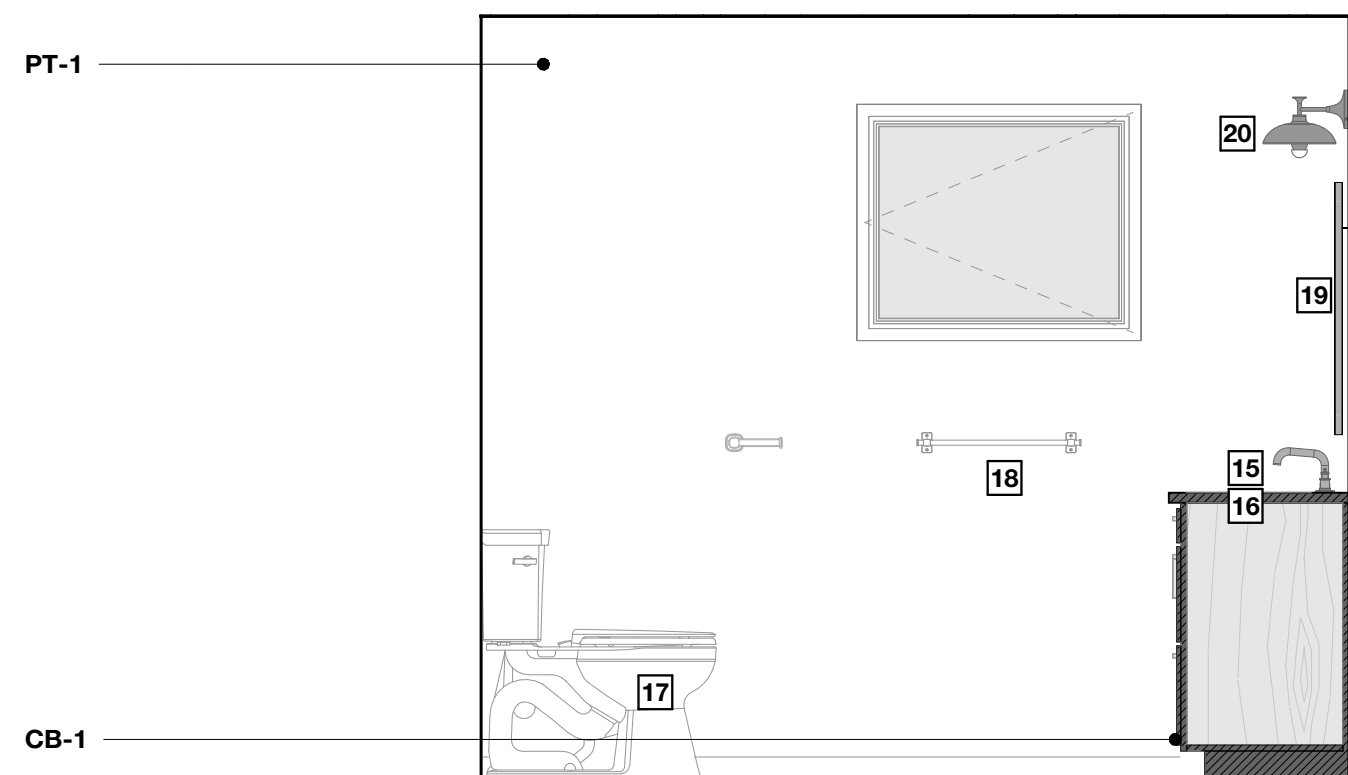
1 Bathroom 224 - C

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



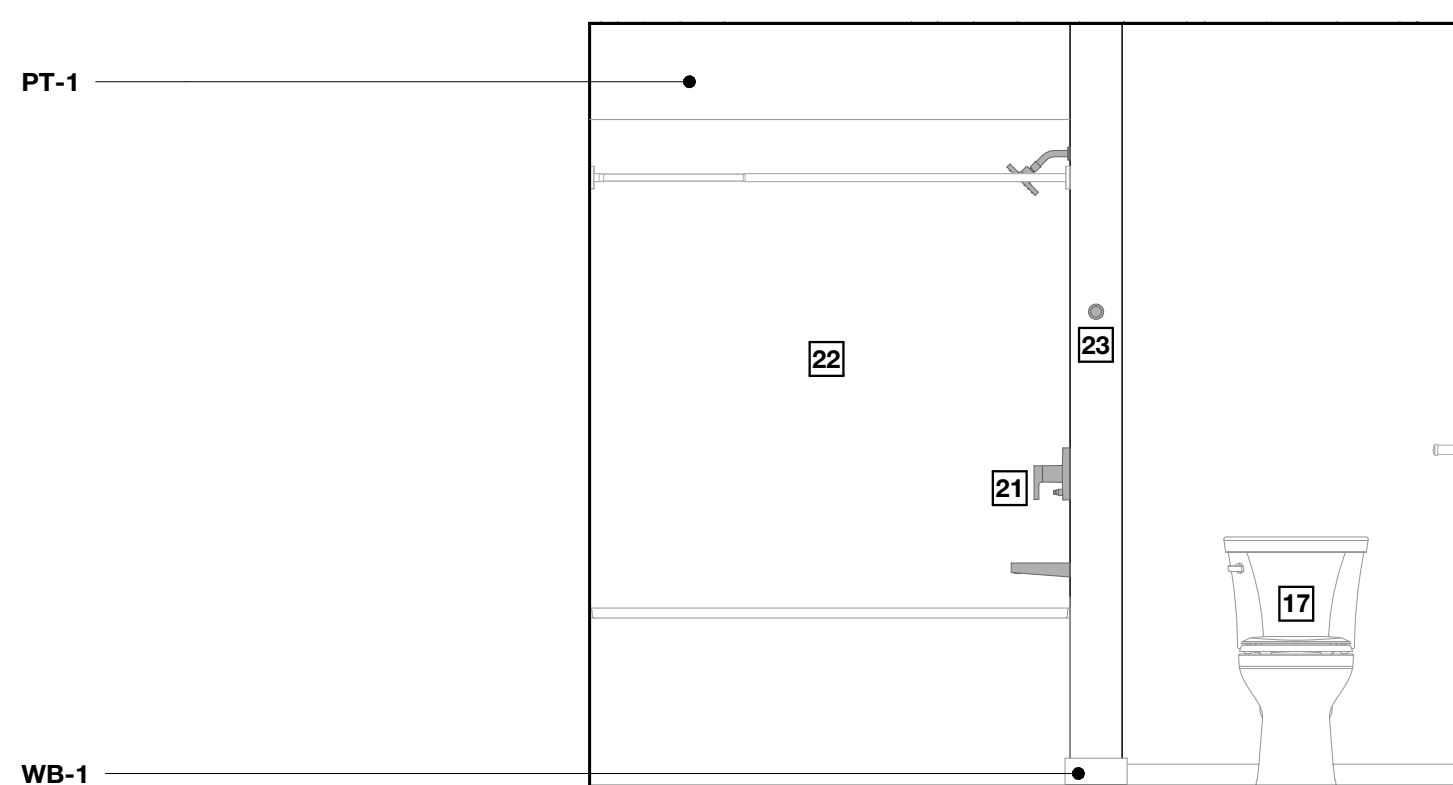
2 Bathroom 228 - A

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



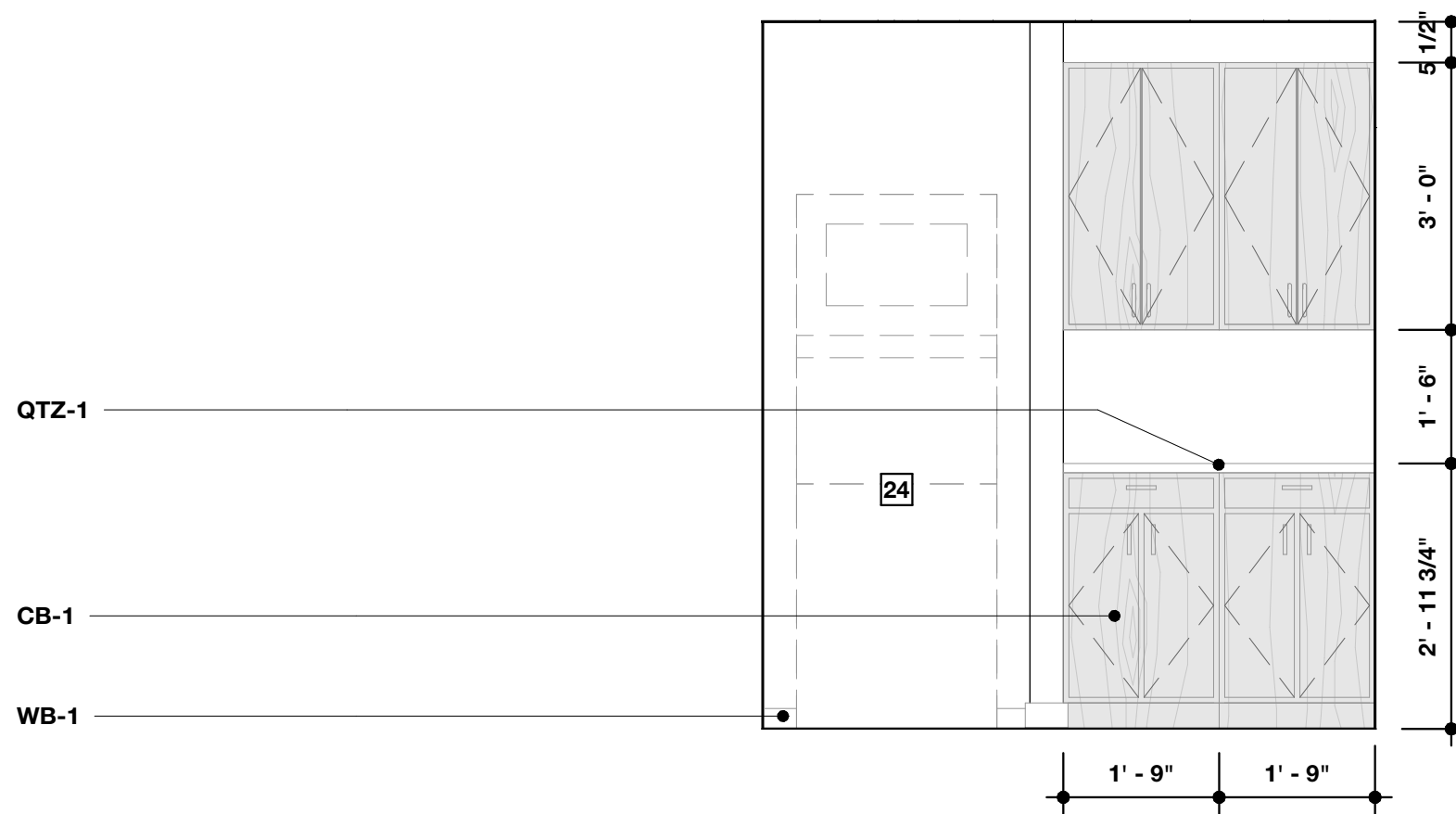
3 Bathroom 228 - B

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



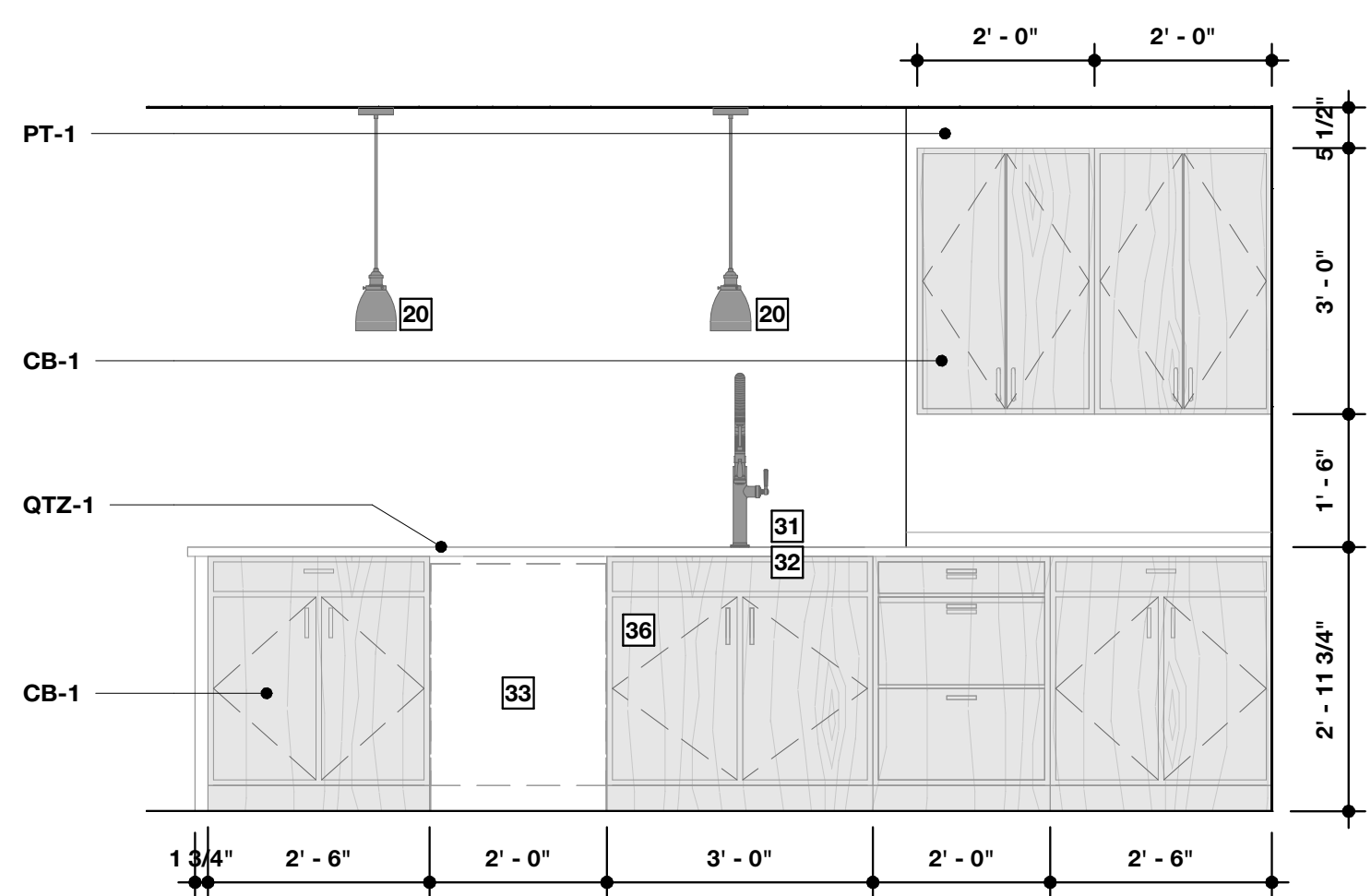
4 Bathroom 228 - C

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



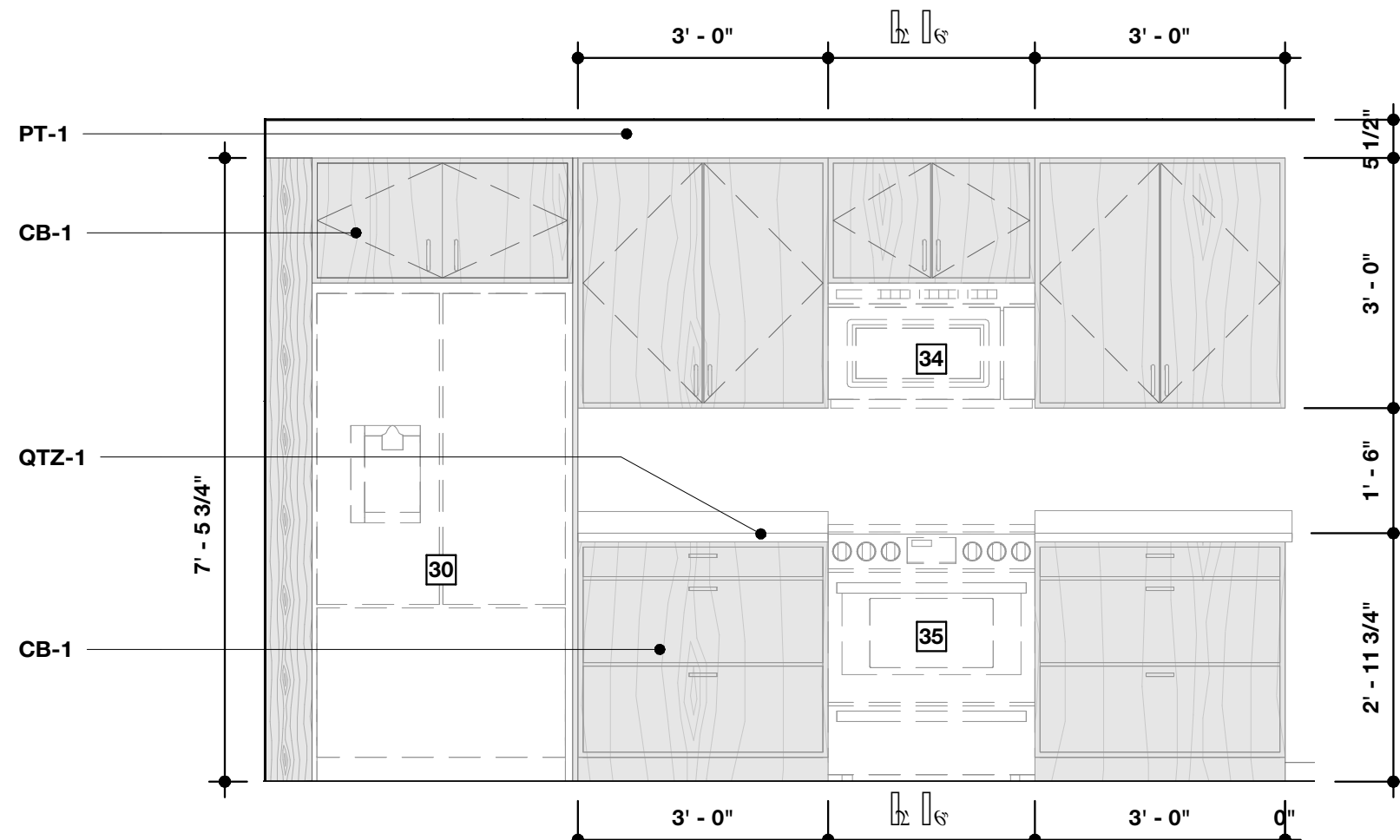
5 Laundry 230

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



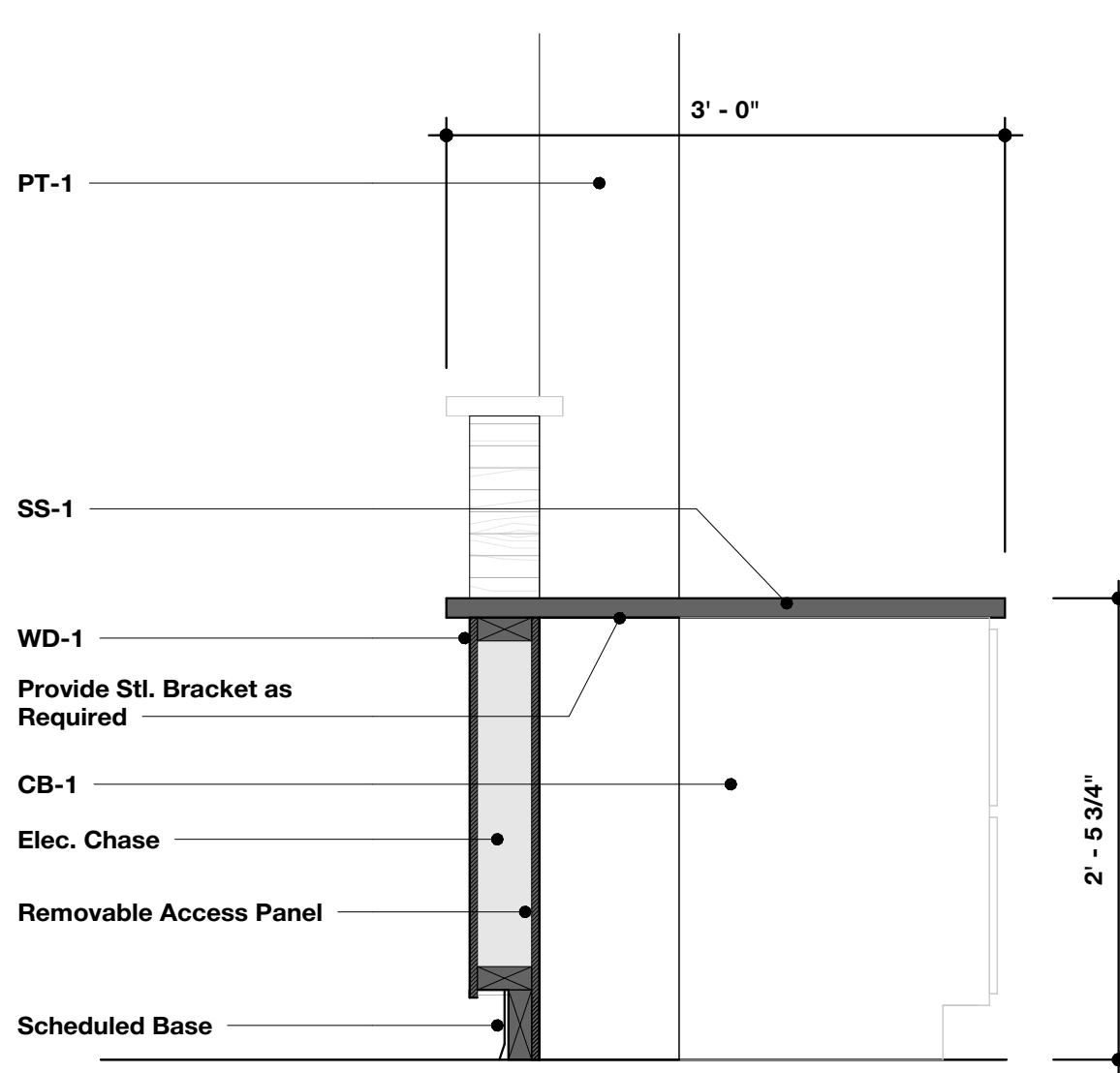
6 Kitchen 238 - A

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



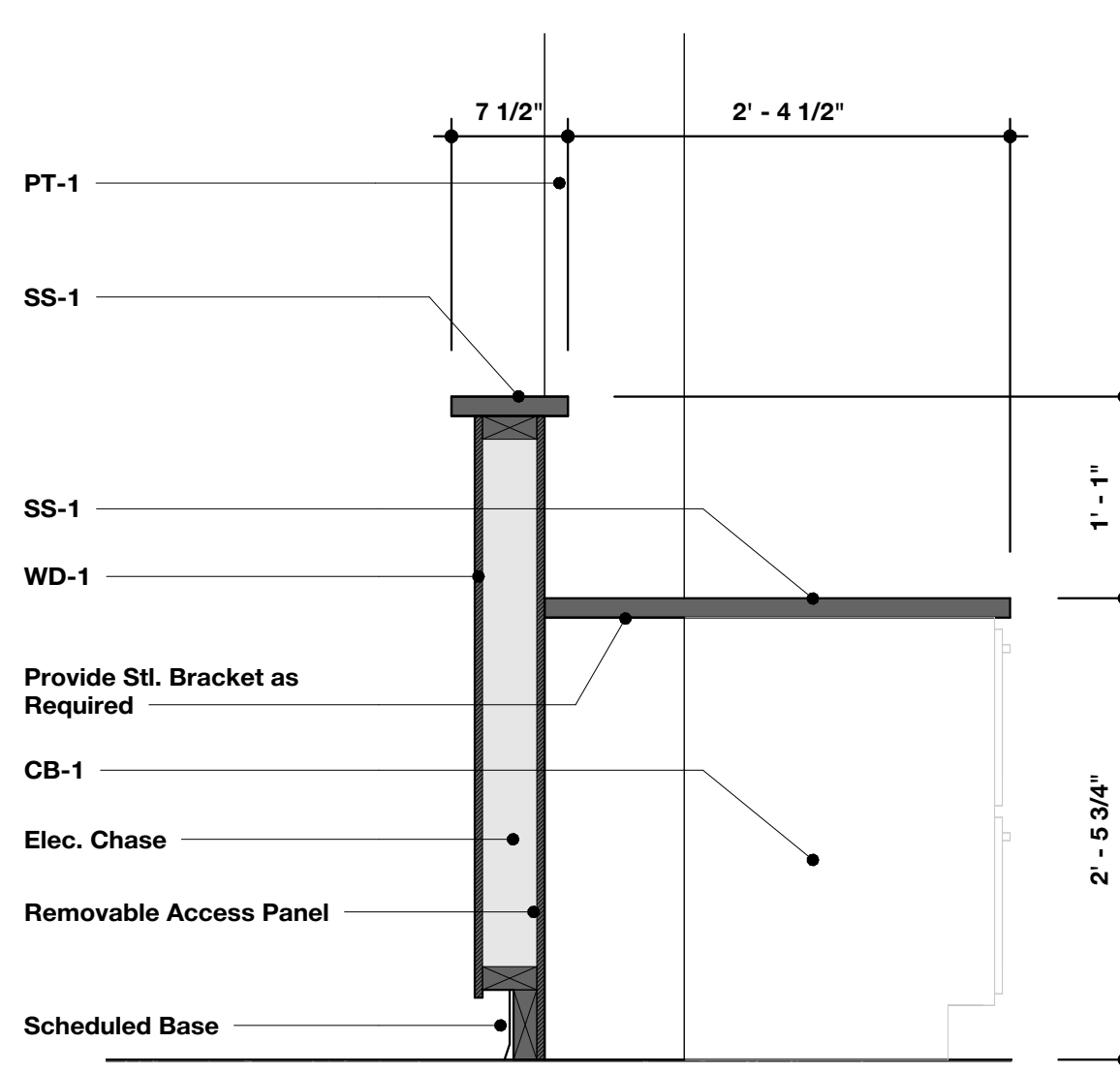
7 Kitchen 238 - B

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



8 Section Detail - Check-in 102 - A

SCALE: 1" = 1'-0"

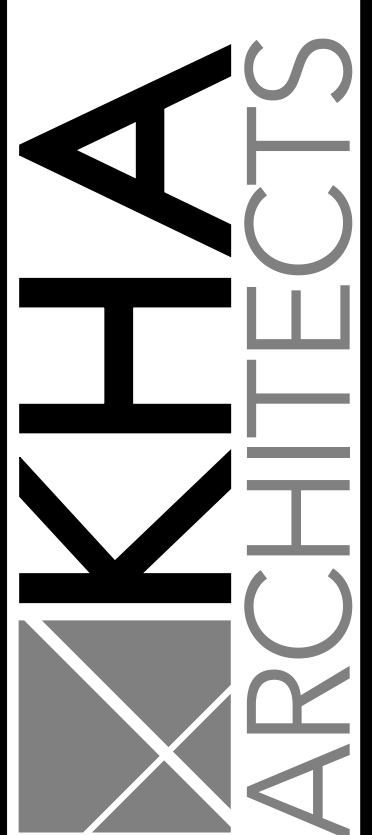


9 Section Detail - Check-in 102 - B

SCALE: 1" = 1'-0"

Interior Elevation Keynotes

- 1 Water Closet - See Mech. Drawings
- 2 Faucet - See Mech. Drawings
- 3 Lavatory - See Mech. Drawings
- 4 Urinal - See Mech. Drawings
- 5 Urinal Flushometer - See Mech. Drawings
- 6 Stainless Steel 36" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 36 - Finish: Stainless Steel, Satin
- 7 Stainless Steel 18" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 18 - Finish: Stainless Steel, Satin
- 8 Stainless Steel 42" Grab Bar - Basis of Design: Bobrick - Model No.: B-5806 x 42 - Finish: Stainless Steel, Satin
- 9 Toilet Tissue Dispenser - Basis of Design: Industrial Farm Co. - The Tierney Horseshoe Toilet Paper Holder Open to Right - Finish: Black Powder Coat
- 10 Soap Dispenser - Basis of Design: Bobrick Surface-Mounted Automatic Foam Soap Dispenser - Model No.: B-2013 - Finish: Stainless Steel, Satin
- 11 18 x 36 Framed Mirror - Basis of Design: Bobrick - Model No.: B-290 1836 - Finish: Stainless Steel, Satin
- 12 Sanitary Napkin Disposal - Bobrick Surface Mounted Sanitary Napkin Disposal - Model No.: B-35139 - Finish: Stainless Steel, Satin
- 13 Paper Towel Dispenser & Waste Receptacle - Bobrick Fino Collection - Model No.: B-9944 - Finish: Stainless Steel, Satin
- 14 Plastic Laminate Toilet Partition w/associated components and accessories - Verify finish w/Architect
- 15 Unit Bathroom Faucet - See Mech. Drawings
- 16 Unit Bathroom Sink - See Mech. Drawings
- 17 Unit Toilet - See Mech. Drawings
- 18 Towel Bar - Basis of Design: Kohler - Numista K-R-30661 18" Towel Bar - Finish: Vibrant Brushed Nickel
- 19 Unit Bathroom Mirror - Basis of Design: Tetote 20 in W x 30 in. H Modern Rectangular Aluminum Framed Wall Bathroom Vanity Mirror - Finish: Brushed Nickel
- 20 Light Fixture - See Elec. Drawings
- 21 Shower Trim Kit - See Mech. Drawings
- 22 Alcove Tub & Surround - Basis of Design: Sterling - Ensemble Medley 60" x 32" Vikrell bath/shower - See floor plan for drain location - Finish: White
- 23 Towel Hook - Basis of Design: Kohler - Numista K-R30664 - Finish: Vibrant Brushed Nickel
- 24 Stacked Laundry Unit - Verify make and model w/Owner
- 25 Owner Provided Printer - Verify make and model w/Owner
- 26 Owner Provided TV - See Elec. Drawings
- 27 Owner Provided Whiteboard - Verify make and model w/Owner
- 28 Bar Faucet - See Mech. Drawings
- 29 Apron Sink - See Mech. Drawings
- 30 Refrigerator - Verify Make and Model w/Owner
- 31 Kitchen Faucet - See Mech. Drawings
- 32 Kitchen Sink - See Mech. Drawings
- 33 Dishwasher - Verify Make and Model w/Owner
- 34 Microwave/Hood Combo - Verify Make and Model w/Owner
- 35 Range - Verify Make and Model w/Owner
- 36 Garbage Disposal - See Mech. Drawings
- 37 Shower Rod - Basis of Design: Kohler - Elate K-33810 - Finish: Brushed Stainless
- 38 Toilet Paper Holder - Basis of Design: Kohler - Numista K-R30662 - Finish: Vibrant Brushed Nickel



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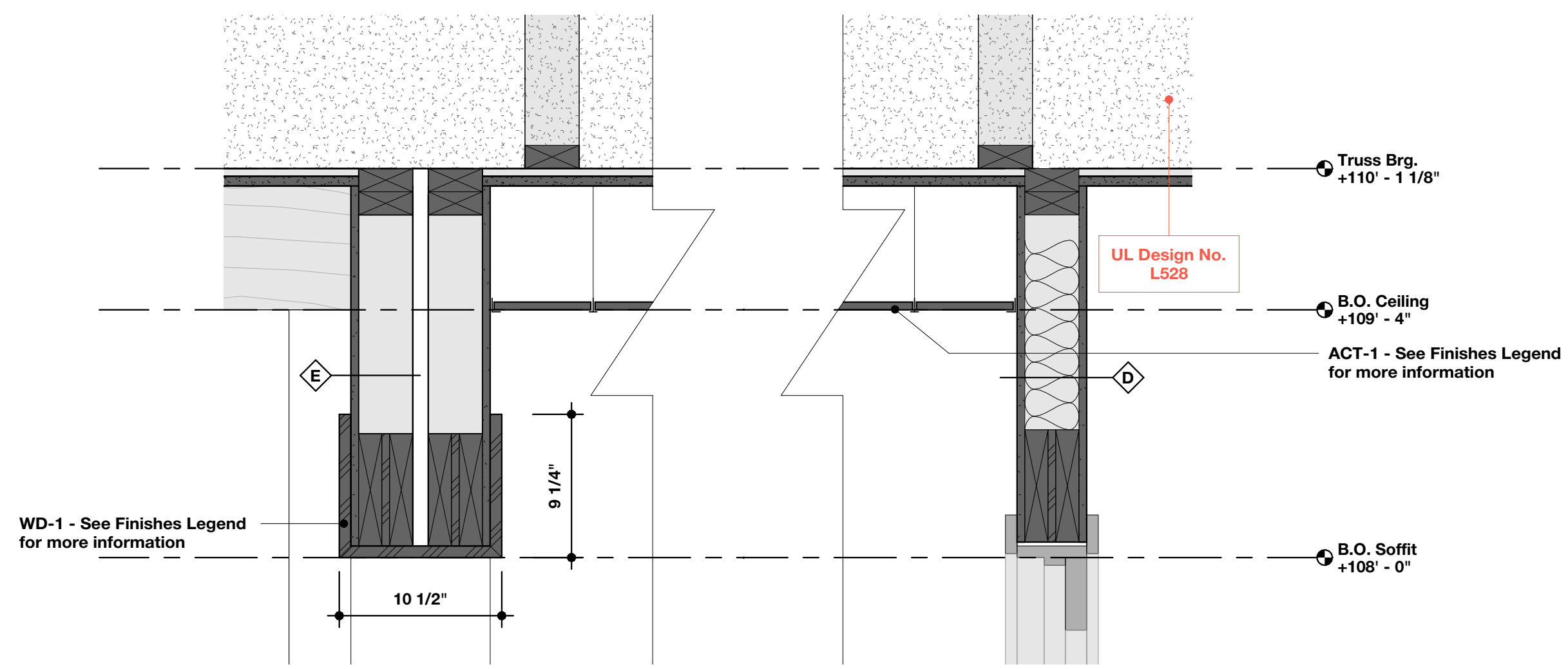
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CITY SUB. 2	BLDG. DEPT.
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CONSTR. REV 2	CONSTRUCTION
CONSTR. REV 3	CONSTRUCTION

PROJECT #: 2515
CONTACT: KRISTI
SCALE: AS NOTED

INTERIOR ELEVATIONS

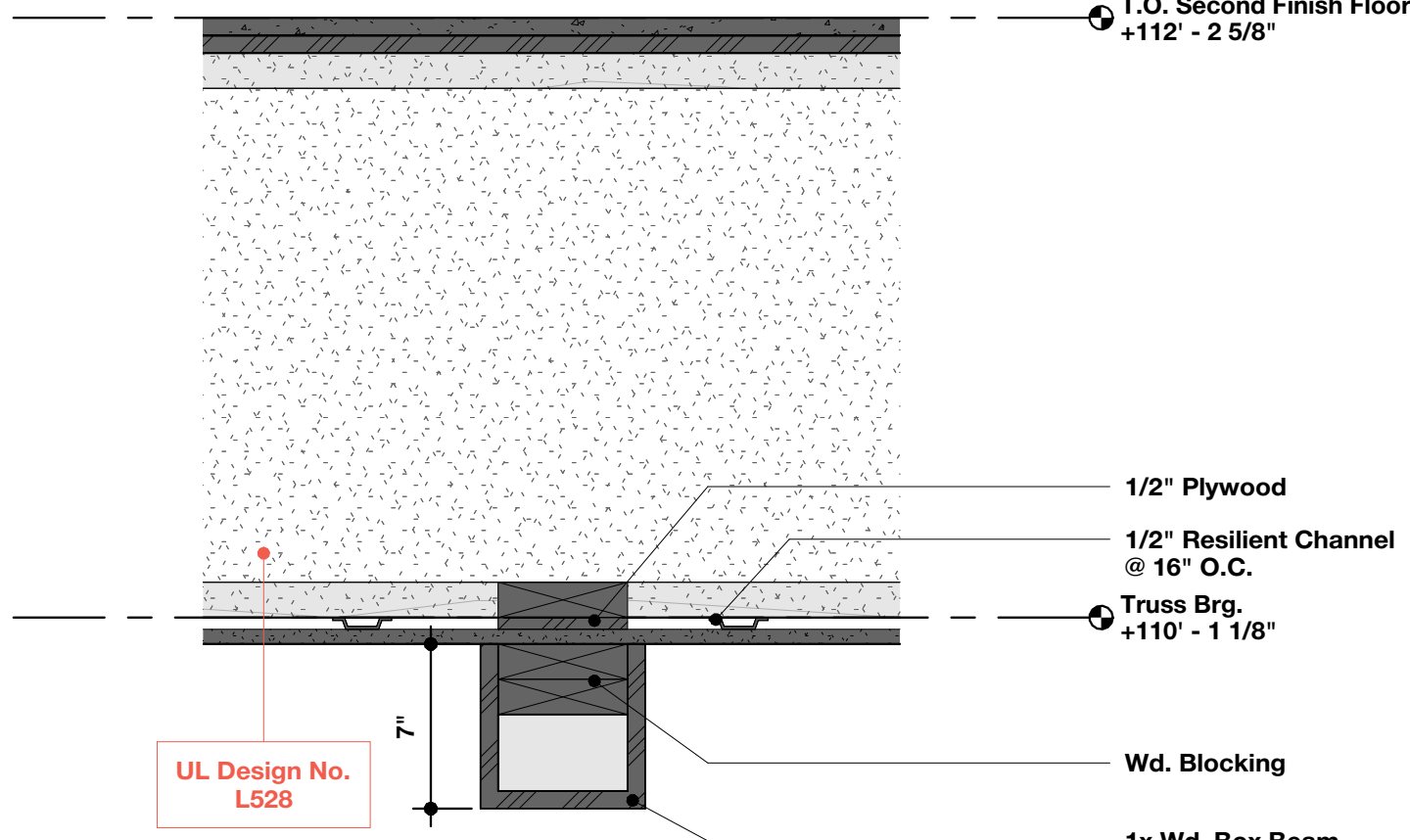
SHEET
A5.3
DATE: 08/07/26
Q.C. _____



2

Ceiling Detail - Hallway 108 - Drop Ceiling

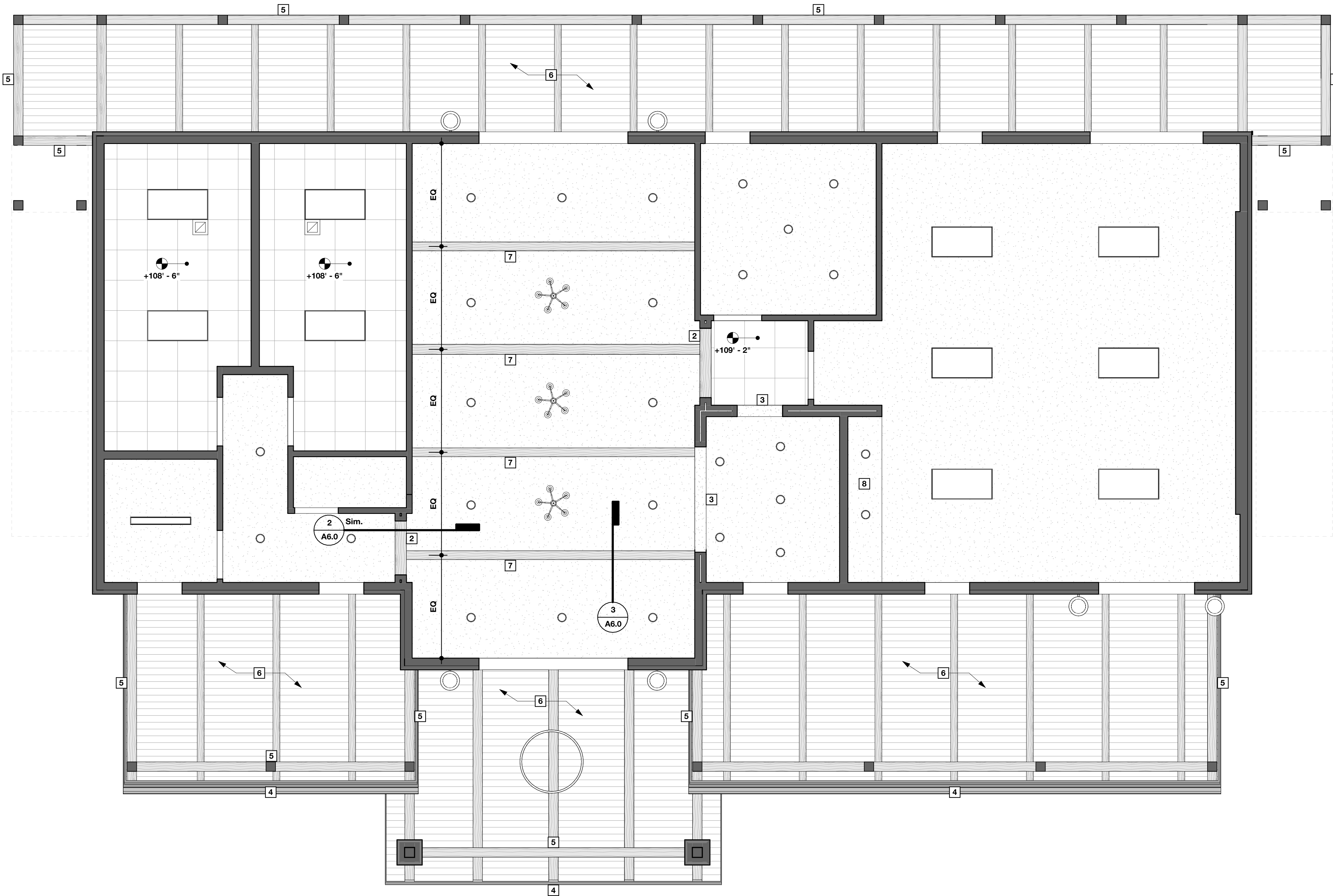
SCALE: 1 1/2" = 1'-0"



3

Ceiling Detail - Feaux Beams

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



1

First Floor RCP

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

RCP Keynotes

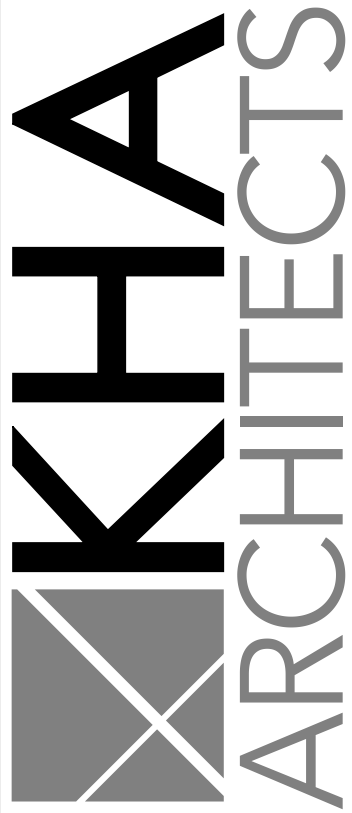
- 1 Wd. Gable Accents - See details for additional information
- 2 Wd. Soffit to be 8'-0" A.F.F. - Finish: WD-1
- 3 GWB Soffit to be 8'-0" A.F.F. - Finish: PT-1
- 4 Aluminum Gutter & Downspout System - Finish: M-2 (Gutter) and M-3 (Downspout)
- 5 Wd. Beam - Finish: WD-2
- 6 Exposed Wd. Joists and Tongue and Groove decking in this location
- 7 Feaux Wd. Beam - Finish: WD-1 - See detail 2/A6.0 for more information
- 8 GWB Soffit to be 7'-6" A.F.F. - Finish: PT-1

RCP General Notes

1. Paint All Fixture Trim/Diffusers to Match Soffit Color if Located in Gypsum Soffit.
2. Paint Linear Mechanical Diffusers to Match Wall Finish if Located in Wall Surface.
3. Window Heads and Jambs to be GWB Returns Finished to Match Adjacent Wall.
4. All finished ceiling heights on first floor to be 10'-0" A.F.F. unless otherwise noted.
5. All finished ceiling heights on second floor to be 8'-0" A.F.F. unless otherwise noted.

RCP Legend

- GWB Ceiling - See Finish Schedule and Finishes Legend for more information
- Acoustic Ceiling Tile - See Finish Schedule and Finishes Legend for more information
- Pre-finished Vented Metal Soffit - See Finish Schedule and Finishes Legend for more information
- Pre-finished Vented Metal Soffit - See Finish Schedule and Finishes Legend for more information
- Exterior Wall Sconce - See Elec. Drawings for more information
- 2x4 Recessed LED Lixture - See Elec. Drawings for more information
- 6" Dia. Surface Mount Light Fixture - See Elec. Drawings for more information
- Interior Chandelier - See Elec. Drawings for more information
- Exterior Chandelier - See Elec. Drawings for more information
- Surface Mount Light Fixture - See Elec. Drawings for more information
- Exhaust Fan - See Mech. Drawings for more information
- Vanity Wall Sconce - See Elec. Drawings for more information
- 1x4 Surface Mount Light Fixture - See Elec. Drawings for more information
- Pendant Light Fixture - See Elec. Drawings for more information



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TRMF RIDING STABLES - MAIN BUILDING
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ND 58645

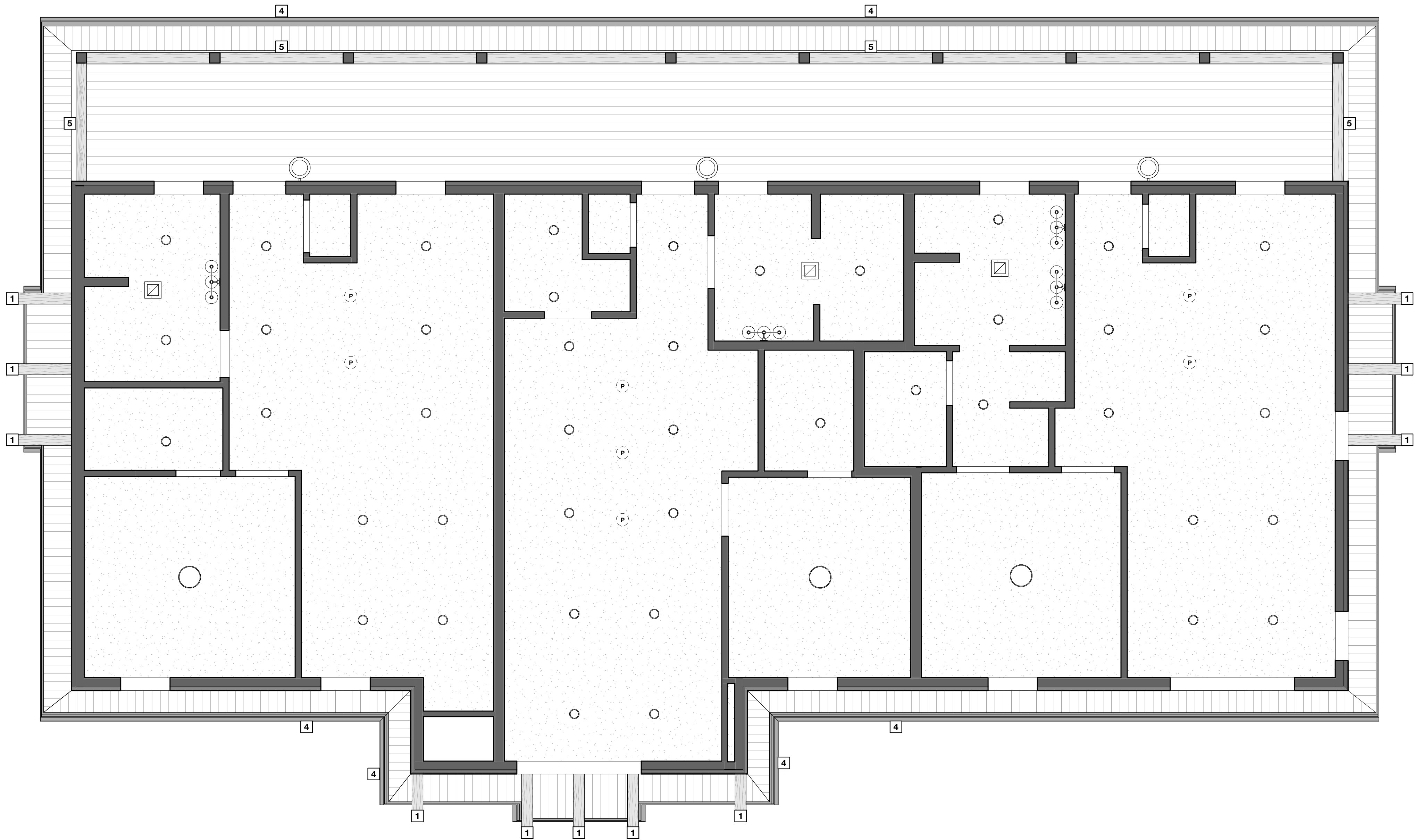


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CONSTR. REV 2	CONSTRUCTION
CONSTR. REV 3	CONSTRUCTION

PROJECT #: 2515
CONTACT: KRISTI
SCALE: AS NOTED

FIRST FLOOR RCP

SHEET
A6.0
DATE: 08/07/26
Q.C. _____



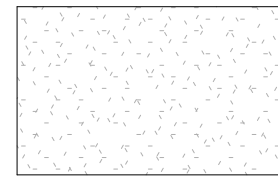
RCP Keynotes

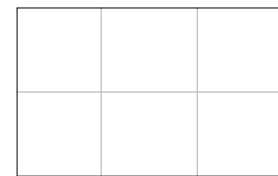
- 1 Wd. Gable Accents - See details for additional information
- 2 Wd. Soffit to be 8'-0" A.F.F. - Finish: WD-1
- 3 GWB Soffit to be 8'-0" A.F.F. - Finish: PT-1
- 4 Aluminum Gutter & Downspout System - Finish: M-2 (Gutter) and M-3 (Downspout)
- 5 Wd. Beam - Finish: WD-2
- 6 Exposed Wd. Joists and Tongue and Groove decking in this location
- 7 Faux Wd. Beam - Finish: WD-1 - See detail 2/A6.0 for more information
- 8 GWB Soffit to be 7'-6" A.F.F. - Finish: PT-1

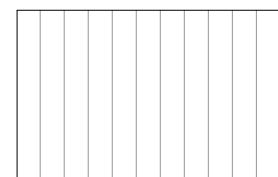
RCP General Notes

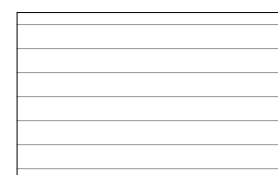
1. Paint All Fixture Trim/Diffusers to Match Soffit Color if Located in Gypsum Soffit.
2. Paint Linear Mechanical Diffusers to Match Wall Finish if Located in Wall Surface.
3. Window Heads and Jambs to be GWB Returns Finished to Match Adjacent Wall.
4. All finished ceiling heights on first floor to be 10'-0" A.F.F. unless otherwise noted.
5. All finished ceiling heights on second floor to be 8'-0" A.F.F. unless otherwise noted.

RCP Legend

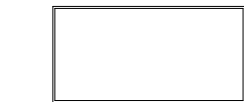
 GWB Ceiling - See Finish Schedule and Finishes Legend for more information

 Acoustic Ceiling Tile - See Finish Schedule and Finishes Legend for more information

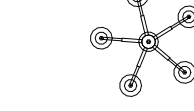
 Pre-finished Vented Metal Soffit - See Finish Schedule and Finishes Legend for more information

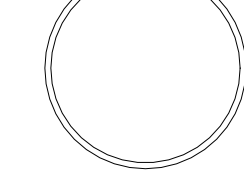
 Pre-finished Vented Metal Soffit - See Finish Schedule and Finishes Legend for more information

 Exterior Wall Sconce - See Elec. Drawings for more information

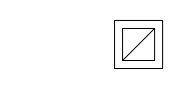
 2x4 Recessed LED Lixture - See Elec. Drawings for more information

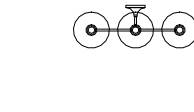
 6" Dia. Surface Mount Light Fixture - See Elec. Drawings for more information

 Interior Chandelier - See Elec. Drawings for more information

 Exterior Chandelier - See Elec. Drawings for more information

 Surface Mount Light Fixture - See Elec. Drawings for more information

 Exhaust Fan - See Mech. Drawings for more information

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 1x4 Surface Mount Light Fixture - See Elec. Drawings for more information

 Pendant Light Fixture - See Elec. Drawings for more information

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CONSTR. REV 3	

PROJECT # : 2515

CONTACT : KRISTI

SCALE: AS NOTED

SECOND FLOOR RCP

PLUMBING ROUGH-IN CONNECTION SCHEDULE				
FIXTURE	WASTE	VENT	OW	HW
EWC	2"	1-1/2"	1/2"	-
FD	2"	1-1/2"	-	-
L	2"	1-1/2"	1/2"	1/2"
NB	3"	1-1/2"	1/2"	1/2"
TS	2"	1-1/2"	1/2"	1/2"
S	2"	1-1/2"	1/2"	1/2"
U	2"	1-1/2"	3/4"	-
WC	4"	2"	1/2"	-
WMT	2"	1-1/2"	1/2"	1/2"

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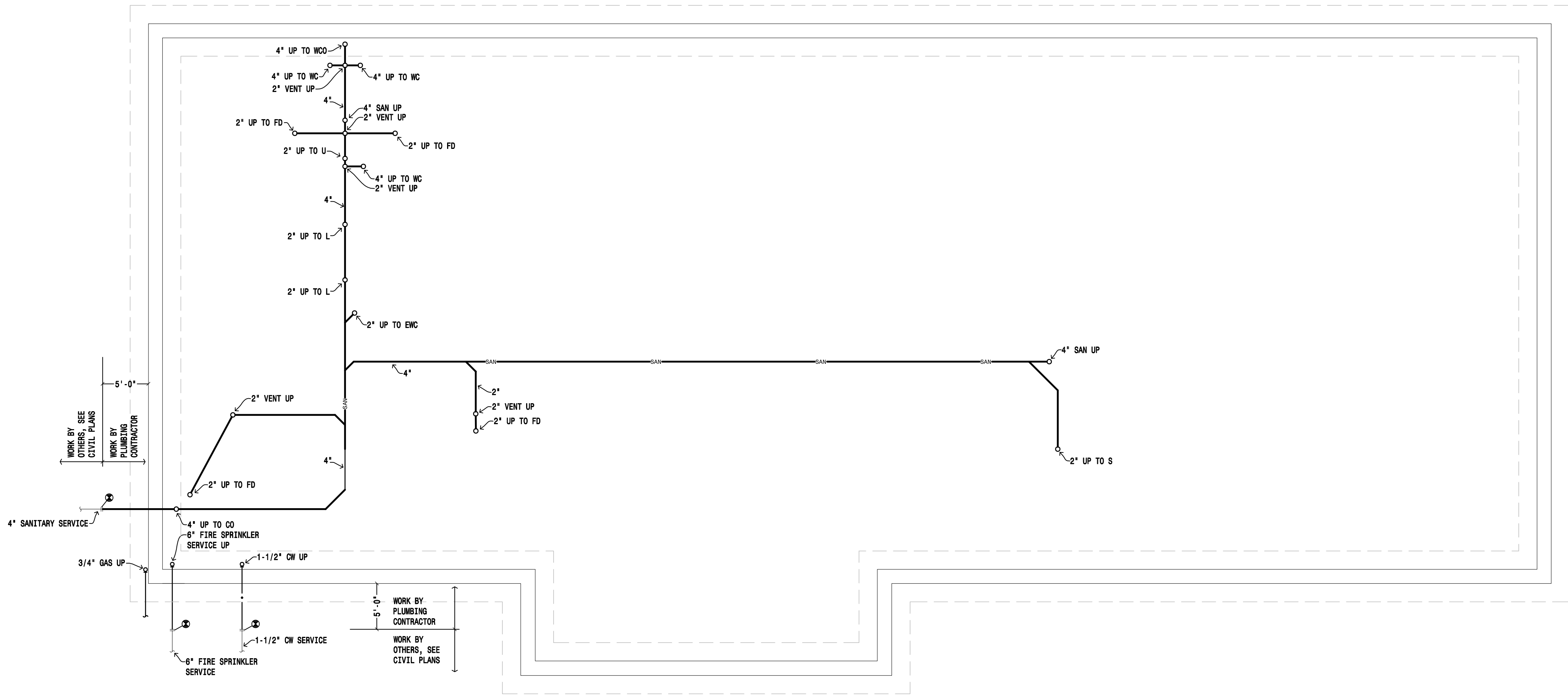
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CONSTR. REV 3	

PROJECT #: 2515
CONTACT : KRISTI
SCALE: AS NOTED
FOUNDATION PLAN -
UNDERGROUND
PLUMBING

1

DATE: 08/07/26

Q.C. _____



PLUMBING ROUGH-IN CONNECTION SCHEDULE				
FIXTURE	WASTE	VENT	OW	HW
EW	2"	1-1/2"	1/2"	-
FD	2"	1-1/2"	-	-
L	2"	1-1/2"	1/2"	1/2"
NB	3"	1-1/2"	1/2"	1/2"
TS	2"	1-1/2"	1/2"	1/2"
S	2"	1-1/2"	1/2"	1/2"
U	2"	1-1/2"	3/4"	-
WC	4"	2"	1/2"	-
WMT	2"	1-1/2"	1/2"	1/2"

- PLAN NOTES:
- ① MOUNT HOT AND COLD DOMESTIC WATER MANIFOLDS ON WALL. ROUTE 1-1/4" OW AND 1" HW TO MANIFOLDS. ALL PIPING TO MANIFOLDS TO BE COPPER. ROUTE COLD WATER PEX PIPING TO ALL FIXTURES. ROUTE HOT WATER PEX PIPING TO EACH FIXTURE IN MAIN RESTROOM AND NORTH APARTMENT. ALL PEX WHIPS TO MATCH PLUMBING ROUGH IN SCHEDULE SIZE.
- ② INSTALL HOT WATER MANIFOLD IN CEILING. PROVIDE RATED ACCESS PANEL. ALL PIPING TO AND FROM MANIFOLD TO BE COPPER. ROUTE HOT WATER PEX PIPING TO CLASSROOM SINK AND ALL FIXTURES IN MIDDLE AND SOUTH APARTMENT. ALL PEX WHIPS TO MATCH PLUMBING ROUGH IN SCHEDULE SIZE.

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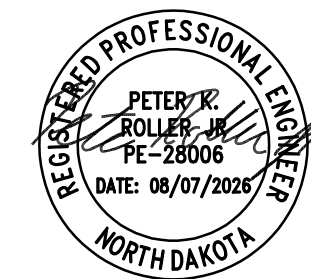
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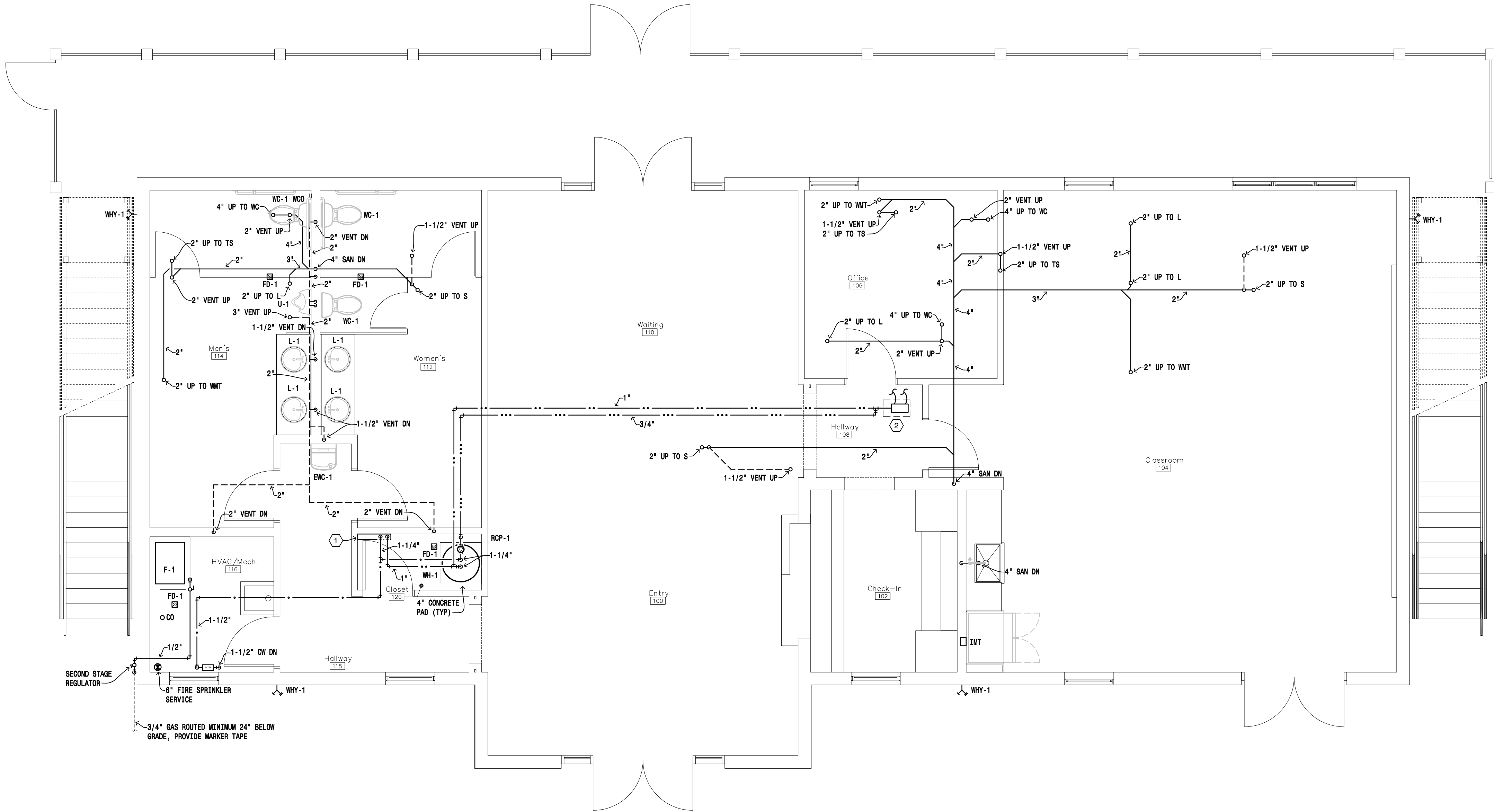
PROJECT #: 2515
CONTACT : KRISTI
SCALE: AS NOTED
FIRST FLOOR PLAN -
PLUMBING

SHEET

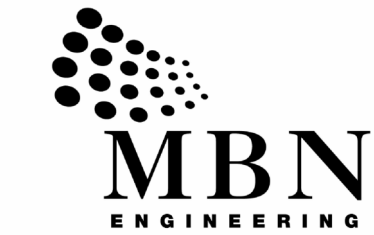
M7.1

DATE: 08/07/25

Q.C.



1 First Floor Plan – Plumbing
SCALE: 1/4" = 1'-0"



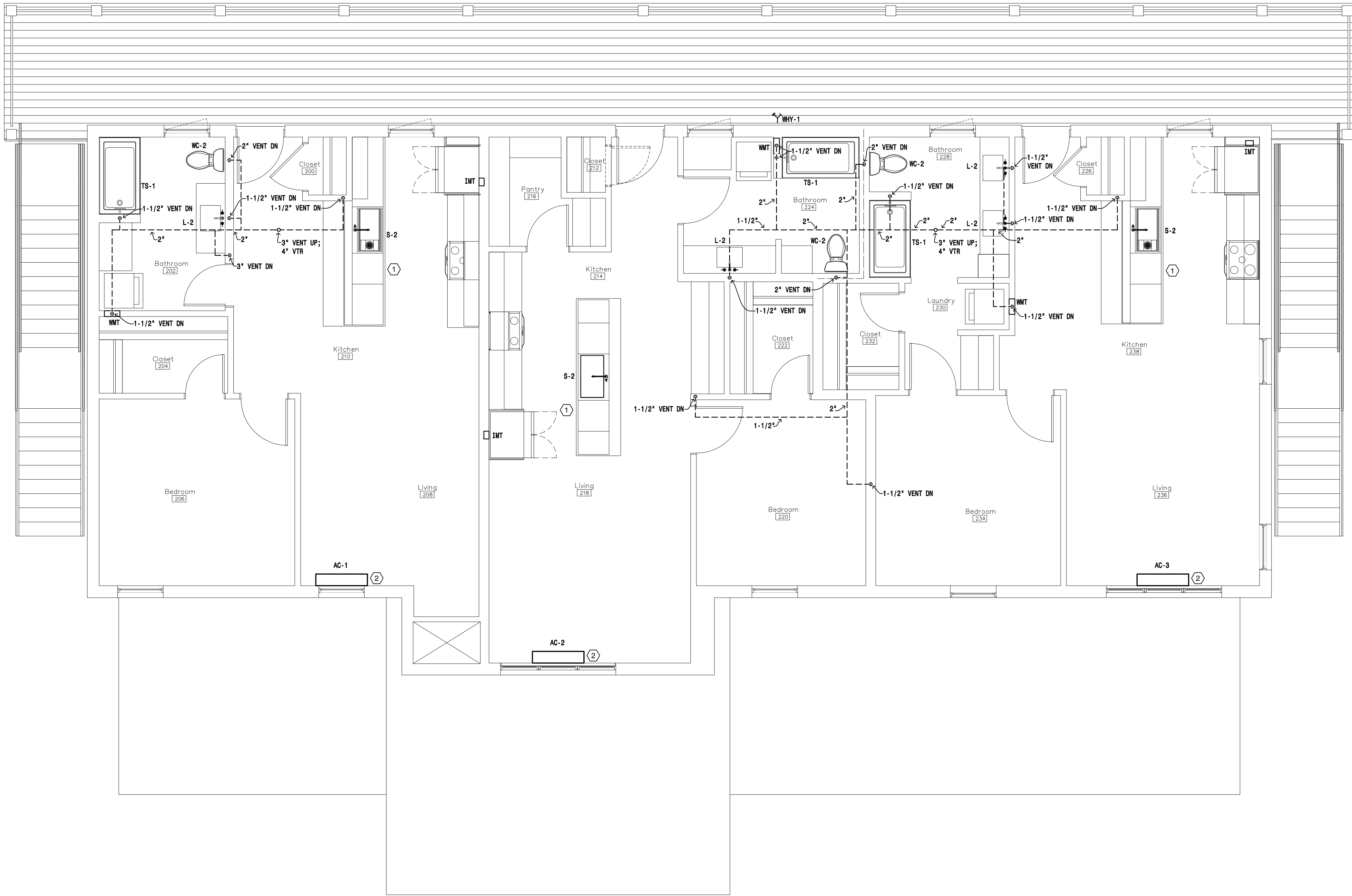
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PLUMBING ROUGH-IN CONNECTION SCHEDULE				
FIXTURE	WASTE	VENT	DN	HW
EWG	2"	1-1/2"	1/2"	-
FD	2"	1-1/2"	-	-
L	2"	1-1/2"	1/2"	1/2"
NB	3"	1-1/2"	1/2"	1/2"
TS	2"	1-1/2"	1/2"	1/2"
S	2"	1-1/2"	1/2"	1/2"
U	2"	1-1/2"	3/4"	-
WC	4"	2"	1/2"	-
WMT	2"	1-1/2"	1/2"	1/2"

PLAN NOTES:

- ① ROUTE 1/2" HW TO UNDER-COUNTER DISHWASHER. CONNECT DISHWASHER DRAIN TO GARBAGE DISPOSAL.
- ② ROUTE CONDENSATE PIPING DOWN THROUGH WALL AND DISCHARGE ON GRADE BELOW. COORDINATE DISCHARGE LOCATION WITH ARCHITECT.



1 Second Floor Plan — Plumbing
SCALE: 1/4" = 1'-0"

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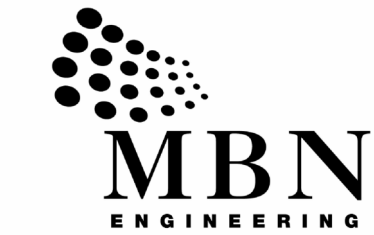
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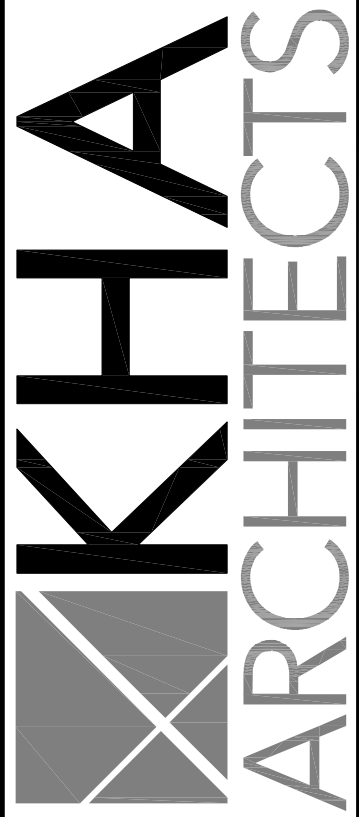
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PROJECT #: 2515
CONTACT : KRISTI
SCALE: AS NOTED
SECOND FLOOR PLAN -
PLUMBING

SHEET
M1.2
DATE: 08/07/25
Q.C. _____



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PROJECT #: 2515

CONTACT : KRISTI

SCALE: AS NOTED

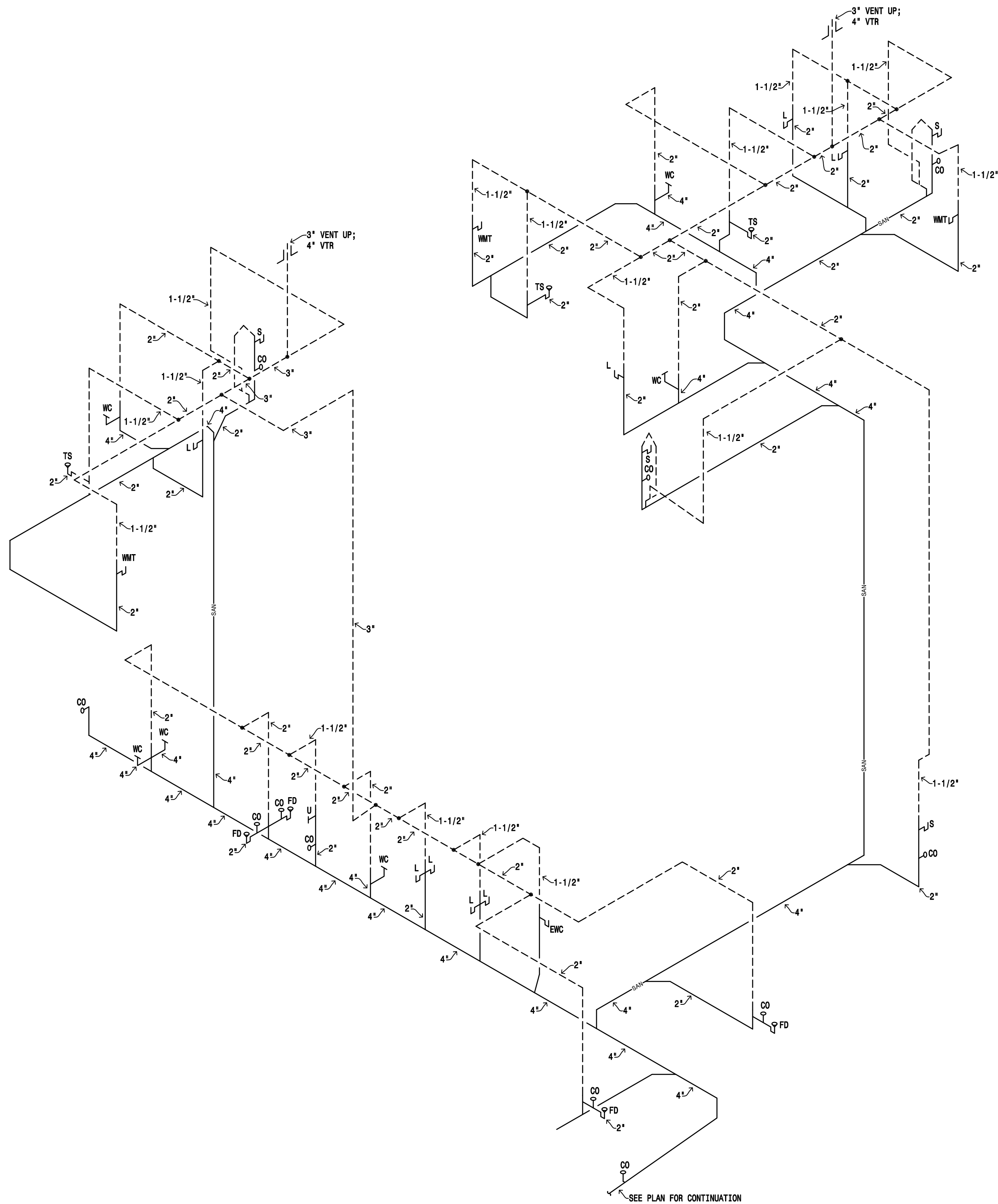
PLUMBING RISERS

1

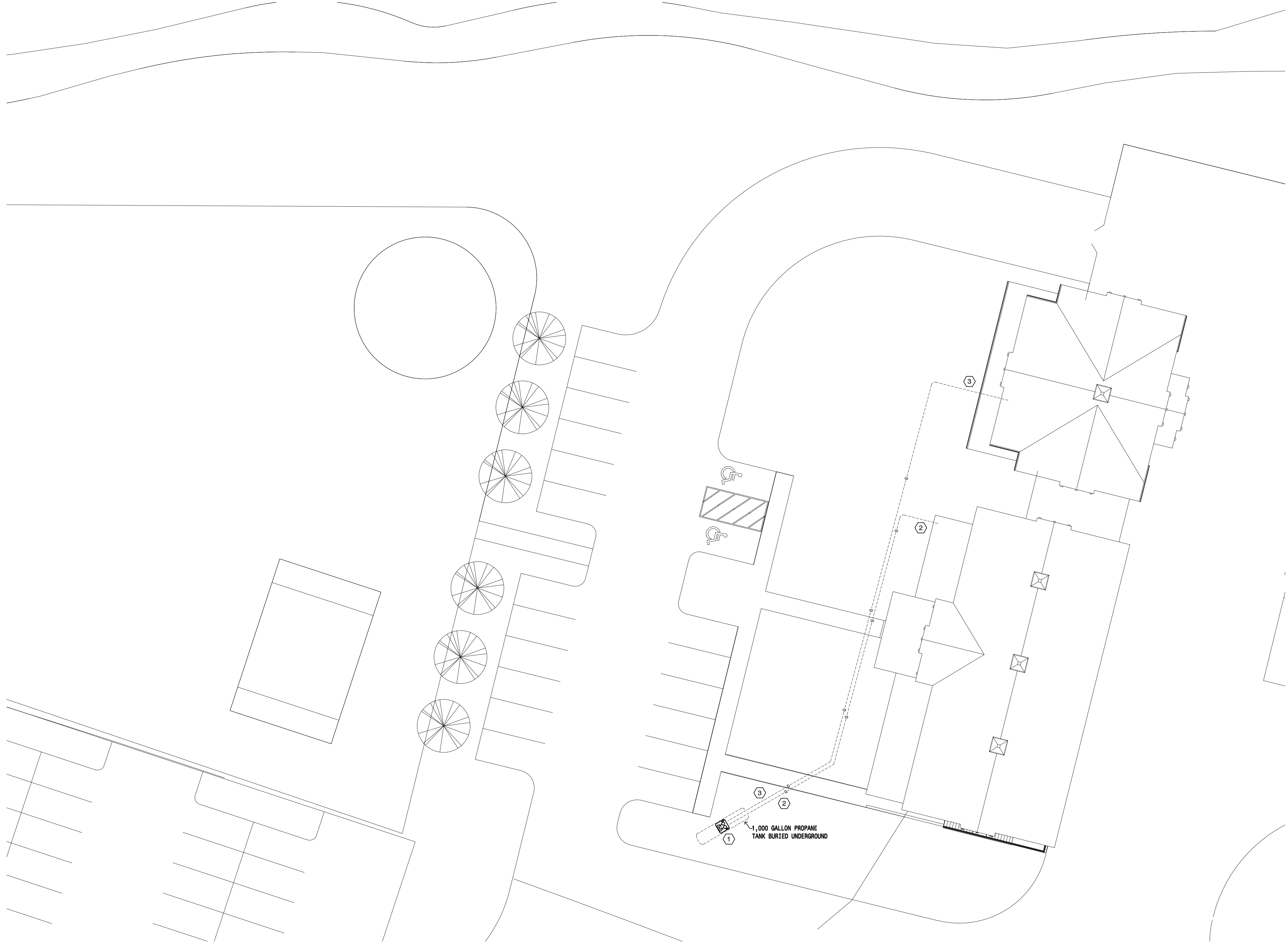
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Q.C.

DATE: 08/07/26



1 Sanitary Waste & Vent Riser
SCALE: NOT-TO-SCALE



- PLAN NOTES:
- ① PLUMBING CONTRACTOR TO SOURCE TANK FROM LOCAL PROVIDER, COORDINATE SUPPLIER WITH OWNER. BURY TANK AND ANCHOR PER DETAILS, PROVIDE WEATHER TIGHT ENCLOSURE FOR ACCESS TO ISOLATION VALVES AND FIRST STATE PRESSURE REGULATOR.
 - ② ROUTE 3/4" PROPANE PIPING MINIMUM 24" UNDERGROUND TO MAIN BUILDING. PROVIDE MARKER TAPE ON TOP OF PIPING. PROVIDE SECOND STAGE REGULATOR AT EXTERIOR WALL.
 - ③ ROUTE 3/4" PROPANE PIPING MINIMUM 24" UNDERGROUND TO GARAGE. PROVIDE MARKER TAPE ON TOP OF PIPING. PROVIDE SECOND STAGE REGULATOR AT EXTERIOR WALL. PROVIDE 2ND STAGE REGULATOR AT OUTER WALL FOR CONNECTION BY GARAGE CONTRACTOR.

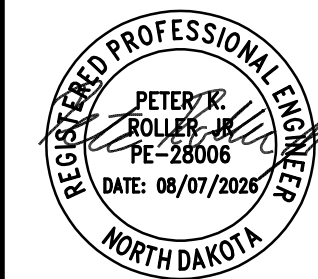
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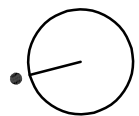


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PROJECT #: 2515
CONTACT : KRISTI
SCALE: AS NOTED
SITE PLAN - PLUMBING

M1.4
SHEET
DATE: 08/07/25
O.C. _____

1 Site Plan — Plumbing
SCALE: 1/16" = 1'-0"



GENERAL PLAN NOTES:

1. ALL DUCTWORK TO BE EXCEPT MAIN SUPPLY TRUNK TO BE ROUTED THROUGH JOIST SPACE.

2. CONTRACTOR TO TRANSITION AS NEEDED TO CONNECT TO FURNACE.

PLAN NOTES:

① 20x16 RA DN TO FURNACE.

② ROUTE REFRIGERANT PIPING FROM CONDENSING UNIT TO FURNACE, SIZE PER MANUFACTURERS RECOMMENDATIONS.

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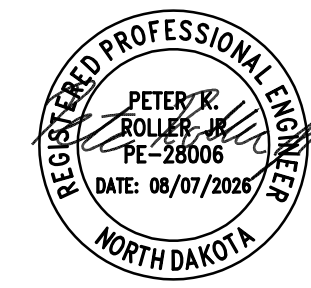
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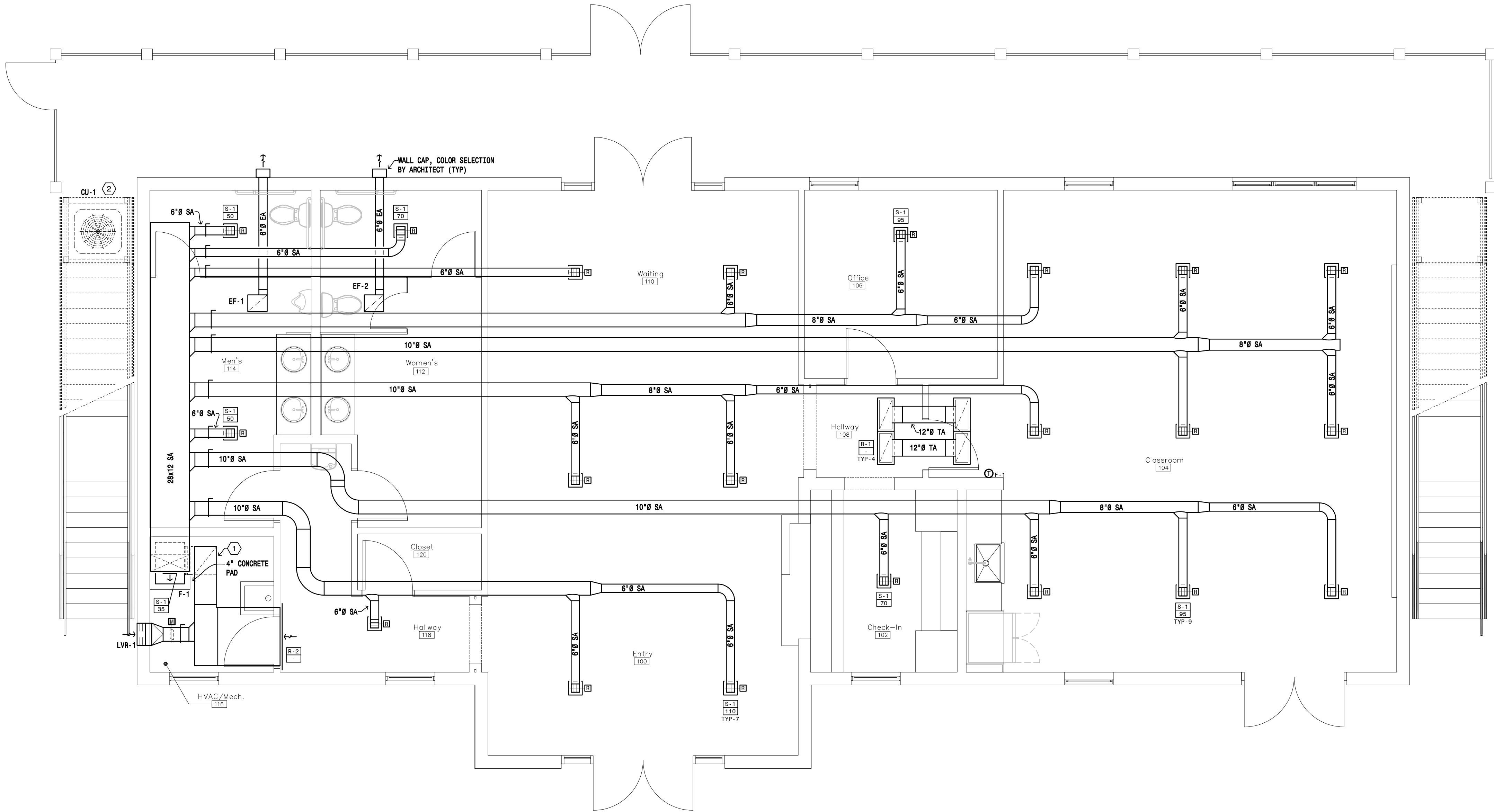
PROJECT #: 2515
CONTACT : KRISTI
SCALE: AS NOTED
FIRST FLOOR PLAN -
VENTILATION

1

DATE: 08/07/25

Q.C.

M2.1



1 First Floor Plan – Ventilation
SCALE: 1/4" = 1'-0"

- PLAN NOTES:
1. ALL BATHROOM EXHAUST AND DRYER VENT TO TERMINATE NO LESS THAN 36" RADIALLY FROM OPERABLE OPENINGS.
 2. PROVIDE VENT CAPS FOR ALL DRYER VENT AND BATHROOM EXHAUST, COLOR TO BE SELECTED BY ARCHITECT.

- PLAN NOTES:
- ① ROUTE REFRIGERANT PIPING FROM INDOOR UNIT TO OUTDOOR UNIT. SIZE PER MANUFACTURER'S RECOMMENDATIONS. ROUTE INDOOR UNIT

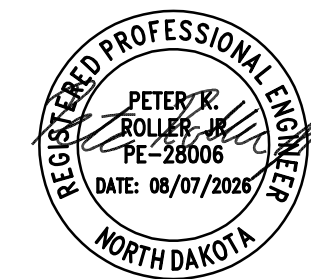
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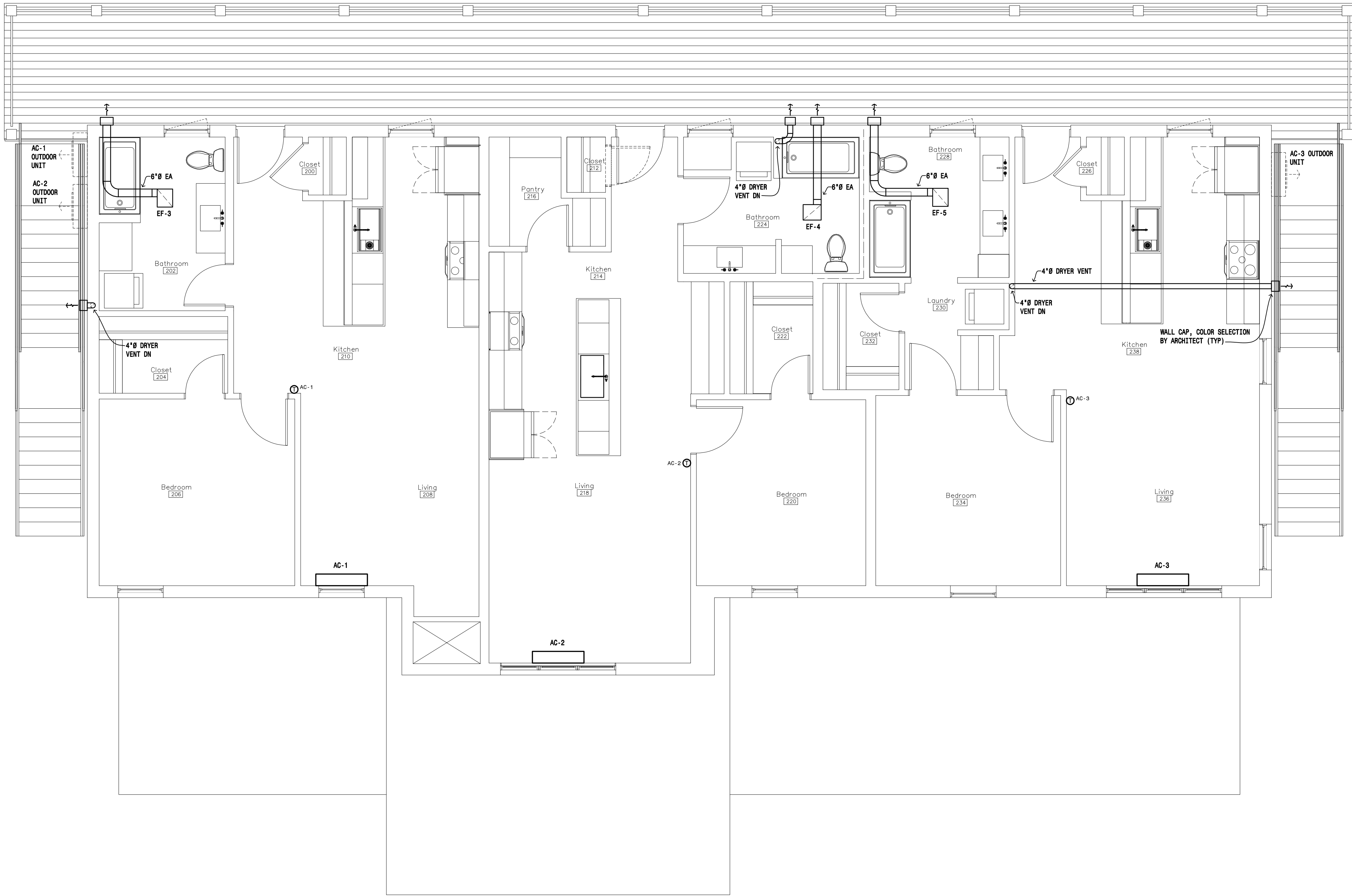
PROJECT #: 2515

CONTACT: KRISTI

SCALE: AS NOTED

SECOND FLOOR PLAN -
VENTILATION

SHEET
M2.2
DATE: 08/07/25
Q.C. _____



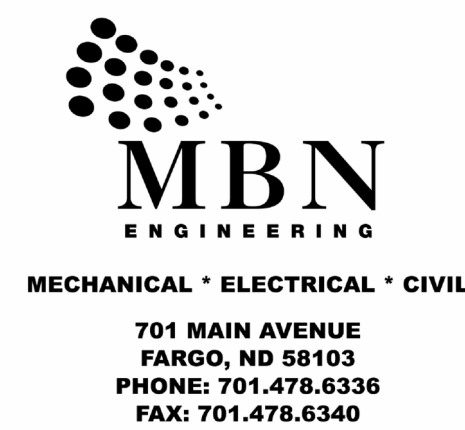
1 Second Floor Plan – Ventilation
SCALE: 1/4" = 1'-0"

FIRE SPRINKLER NOTES:

1. THE SECOND FLOOR SHALL BE PROVIDED WITH A FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13R.
2. ALL AREAS SHALL BE DESIGNED TO LIGHT HAZARD PARAMETERS UNLESS NOTED OTHERWISE BELOW OR ON PLANS.
3. SPRINKLERS ARE NOT BE REQUIRED IN BATHROOMS WHERE BATHROOM AREA DOES NOT EXCEED 55 SQ. FT. UNDER NFPA 13R
4. SPRINKLERS SHALL NOT BE REQUIRED IN ANY PORCHES, CORRIDORS, AND STAIRS THAT ARE OPEN AND ATTACHED UNDER NFPA 13R.
5. SPRINKLERS ARE NOT REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS, AND PANTRIES WITHIN THE DWELLING UNITS THAT HAVE AN AREA OF SPACE DOES NOT EXCEED 24 SQ. FT., THE LEAST DIMENSION DOES NOT EXCEED 3 FT AND THE WALLS AND CEILING ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED-COMBUSTIBLE MATERIALS AS DEFINED BY NFPA 220 UNDER NFPA 13R.
6. ARCHITECTURAL BACKGROUNDS ON THESE DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL BACKGROUNDS WITH ARCHITECTURAL SHEETS AND SITE VISITS.
7. COORDINATE PIPING LOCATIONS WITH ALL OTHER TRADES.
8. PROVIDE COVERAGE FOR ALL BALCONIES WITH FREEZE PROOF SIDEWALL SPRINKLER HEADS TO MEET IFC AND NFPA REQUIREMENTS.

FIRE SPRINKLER NOTES:

1. THE FIRST FLOOR SHALL BE PROVIDED WITH A FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13.
2. ALL AREAS SHALL BE DESIGNED TO LIGHT HAZARD PARAMETERS UNLESS NOTED OTHERWISE BELOW OR ON PLANS.
3. ALL AREAS WITH THIS SYMBOL: (OH1) SHALL BE DESIGNED TO ORDINARY HAZARD GROUP 1 PARAMETERS AS PER NFPA-13.
4. THIS BUILDING IS MADE OF COMBUSTIBLE CONSTRUCTION WITH WOOD JOISTS. PROVIDE SPRINKLER COVERAGE ABOVE CEILING IN JOISTS AND BELOW IN ACCORDANCE WITH NFPA 13.
5. CENTER FIRE SPRINKLER HEADS IN TWO DIRECTIONS IN LAY IN CEILING TILE.
6. ARCHITECTURAL BACKGROUNDS ON THESE DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL BACKGROUNDS WITH ARCHITECTURAL SHEETS AND SITE VISITS.
7. COORDINATE PIPING LOCATIONS WITH ALL OTHER TRADES.
8. PROVIDE COVERAGE FOR ALL BALCONIES WITH FREEZE PROOF SIDEWALL SPRINKLER HEADS TO MEET IFC AND NFPA REQUIREMENTS.

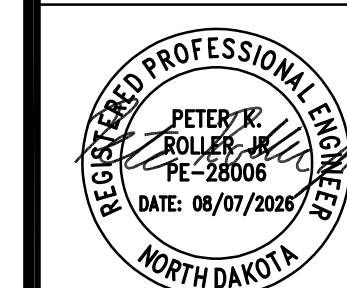


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CITY APPROVAL:

TRMF RIDING STABLES - MAIN BUILDING
14532 L-94 Loop East
ND 58645



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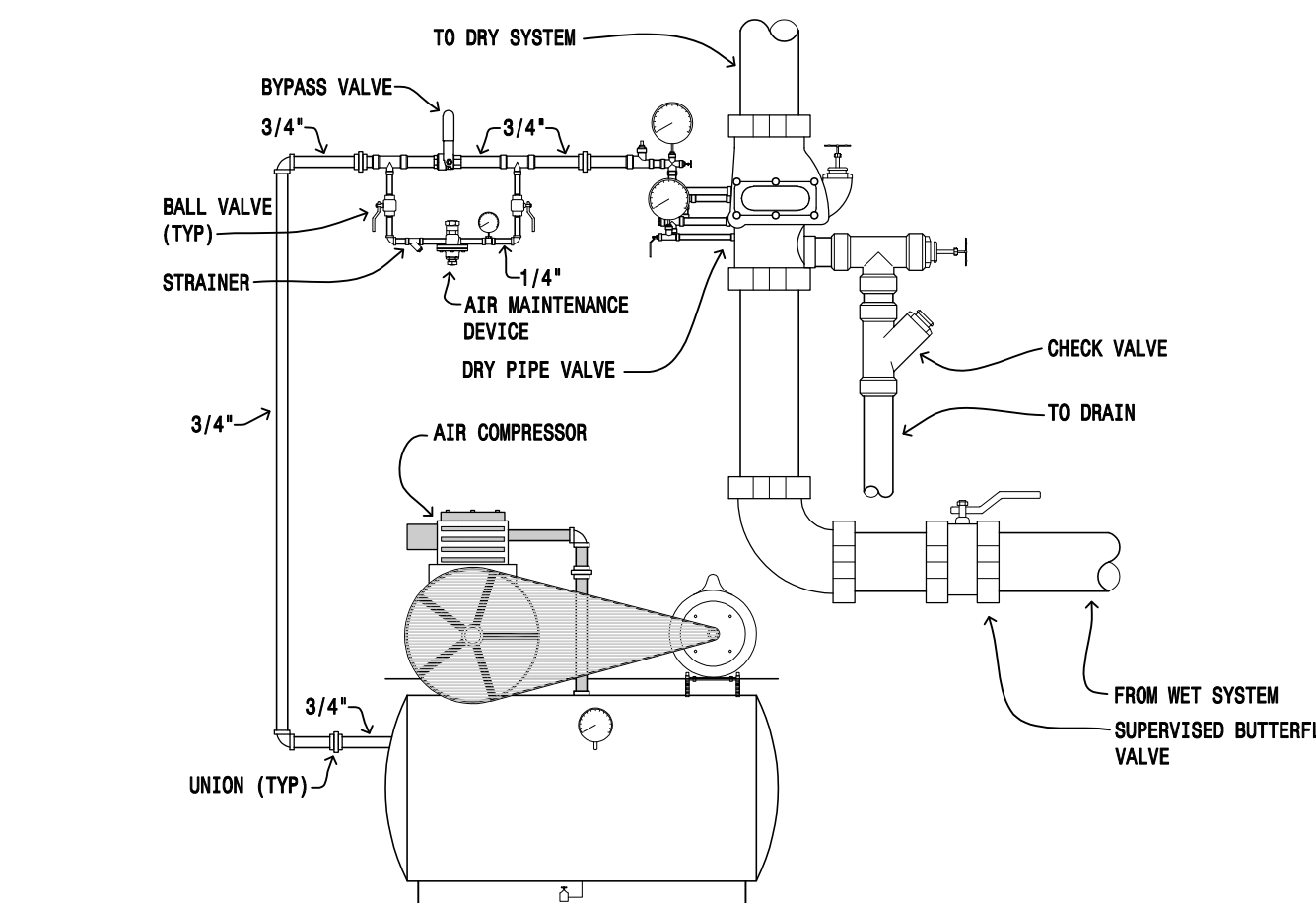
PROJECT #: 2515

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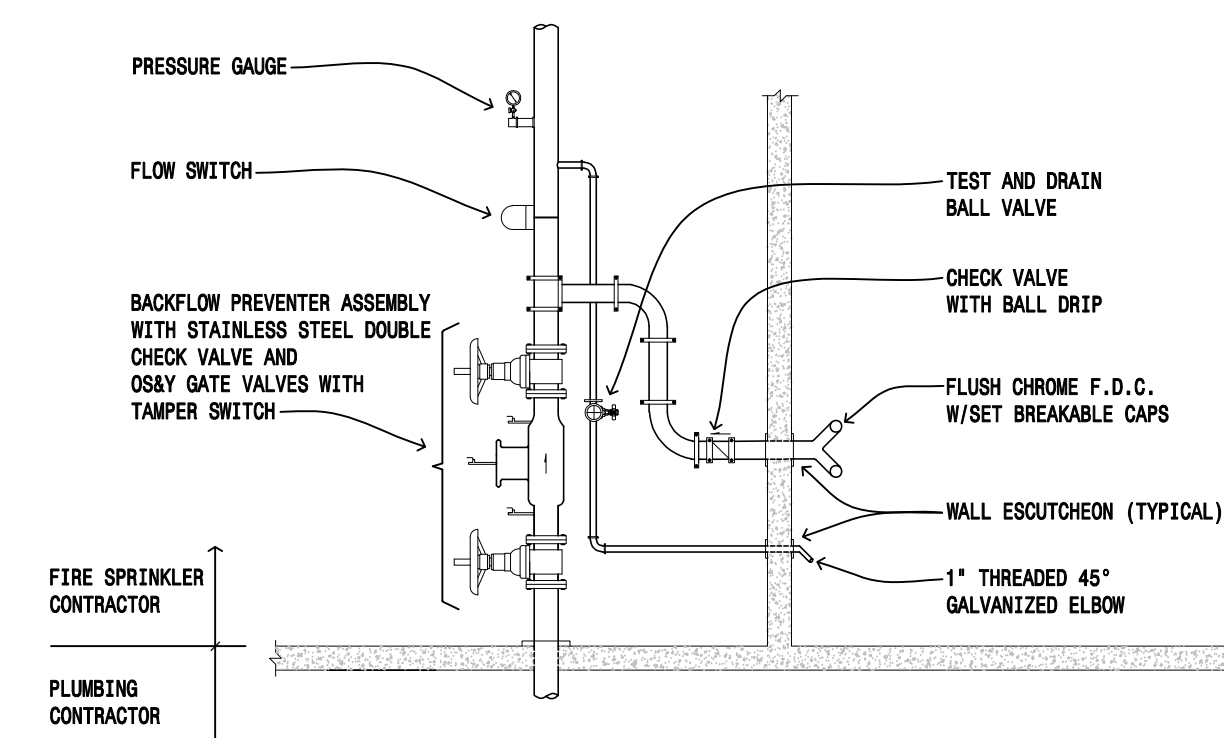
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FIRE SPRINKLER

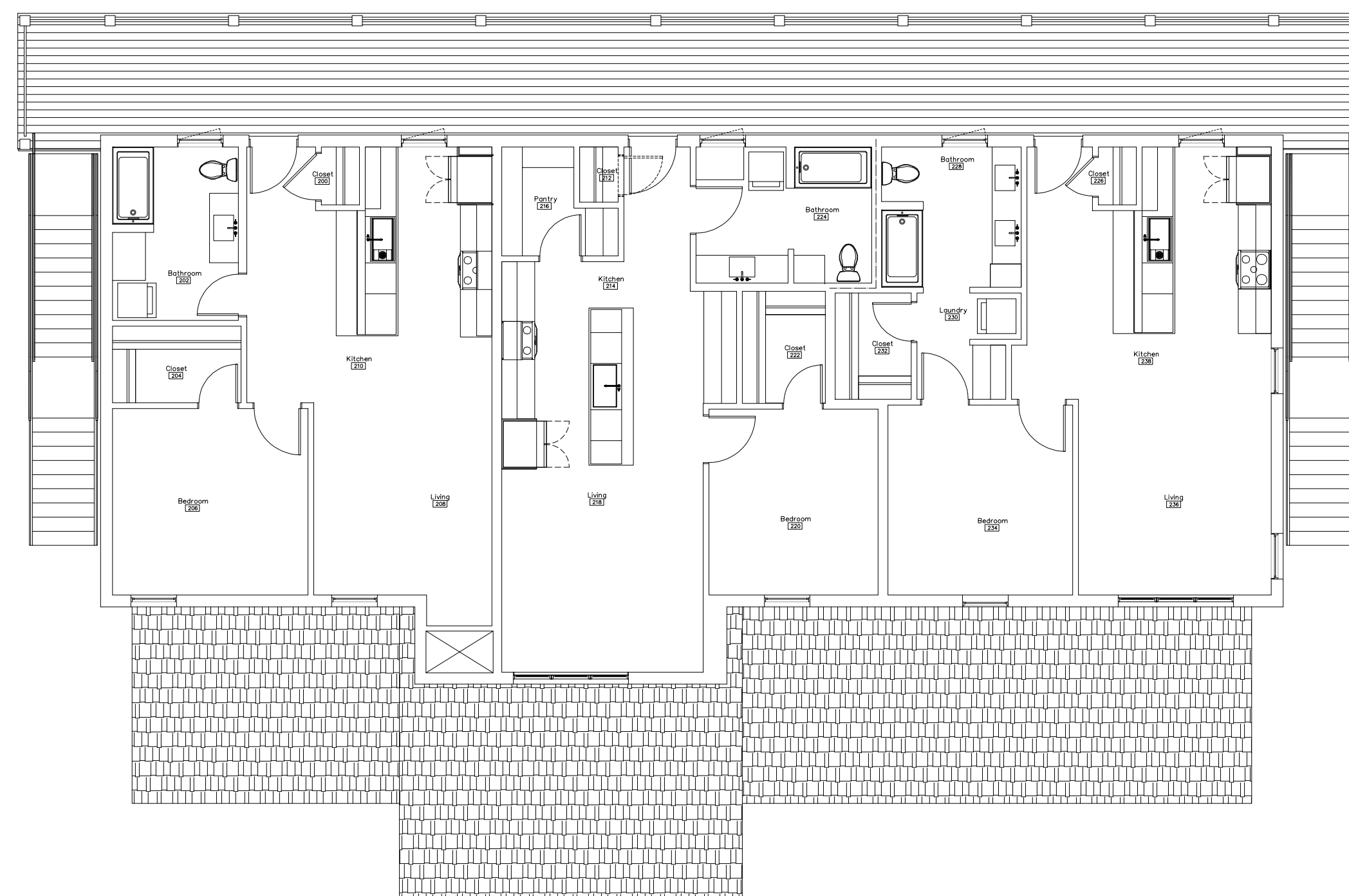
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M3.1
DATE: 08/07/25
Q.C. _____



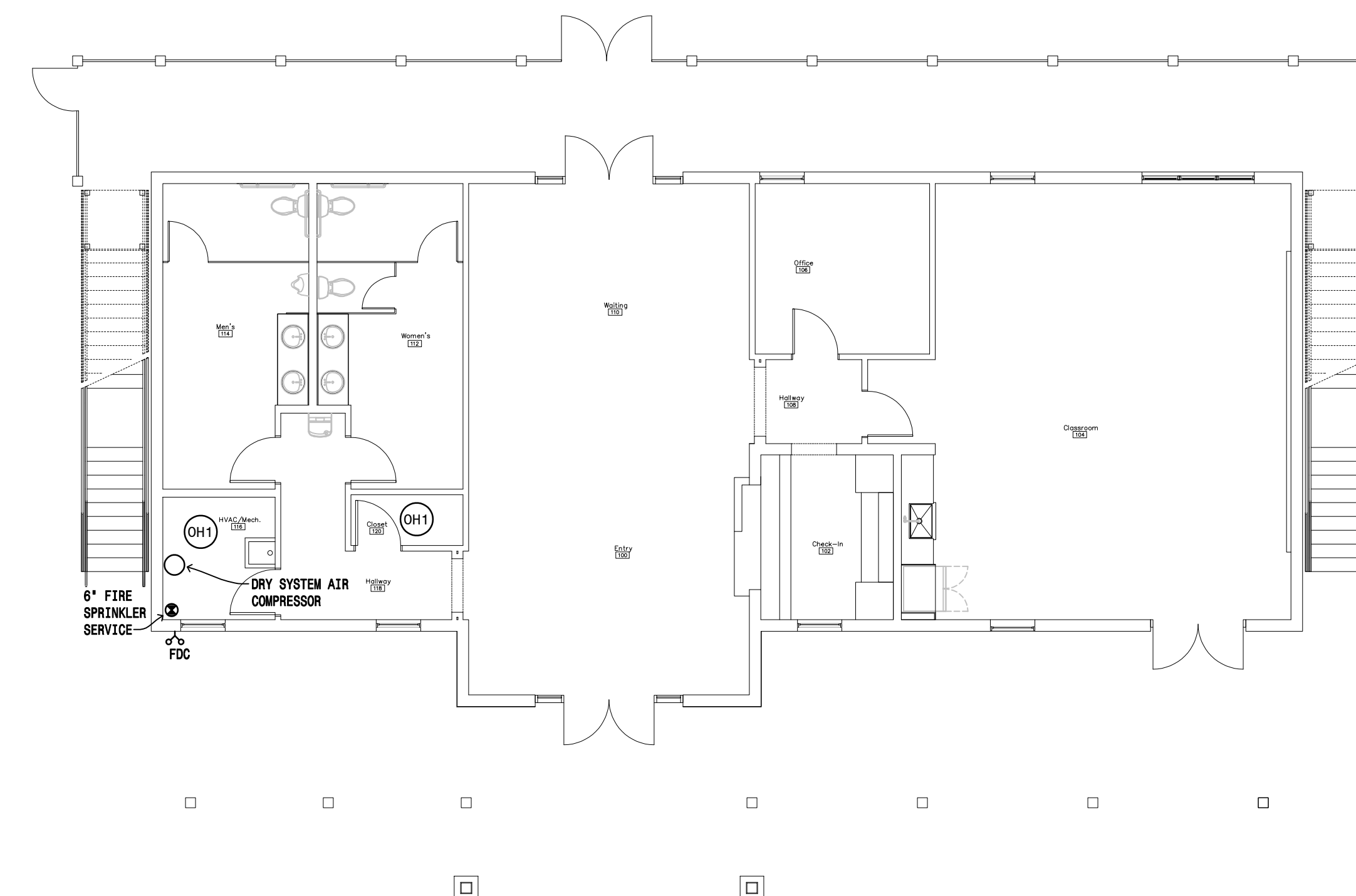
3 Dry Pipe Valve Detail
SCALE: NOT-TO-SCALE



2 Fire Sprinkler Riser Detail
SCALE: NOT-TO-SCALE



4 Second Floor Plan - Fire Sprinkler
SCALE: 1/8" = 1'-0"



1 First Floor Plan - Fire Sprinkler
SCALE: 1/8" = 1'-0"

REVISION LIST

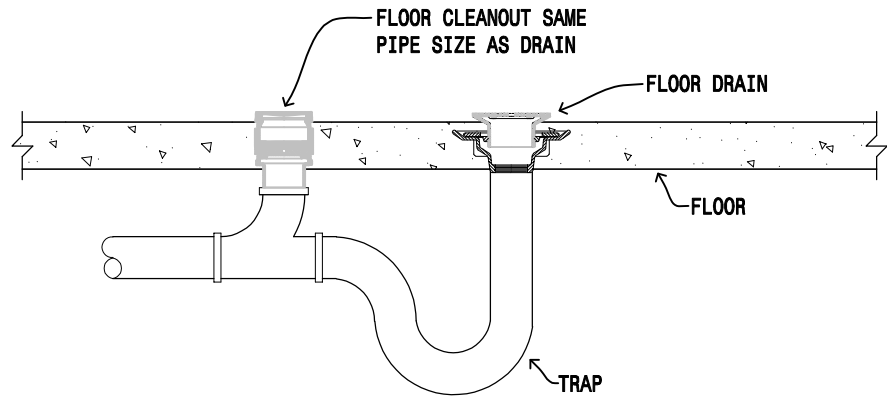
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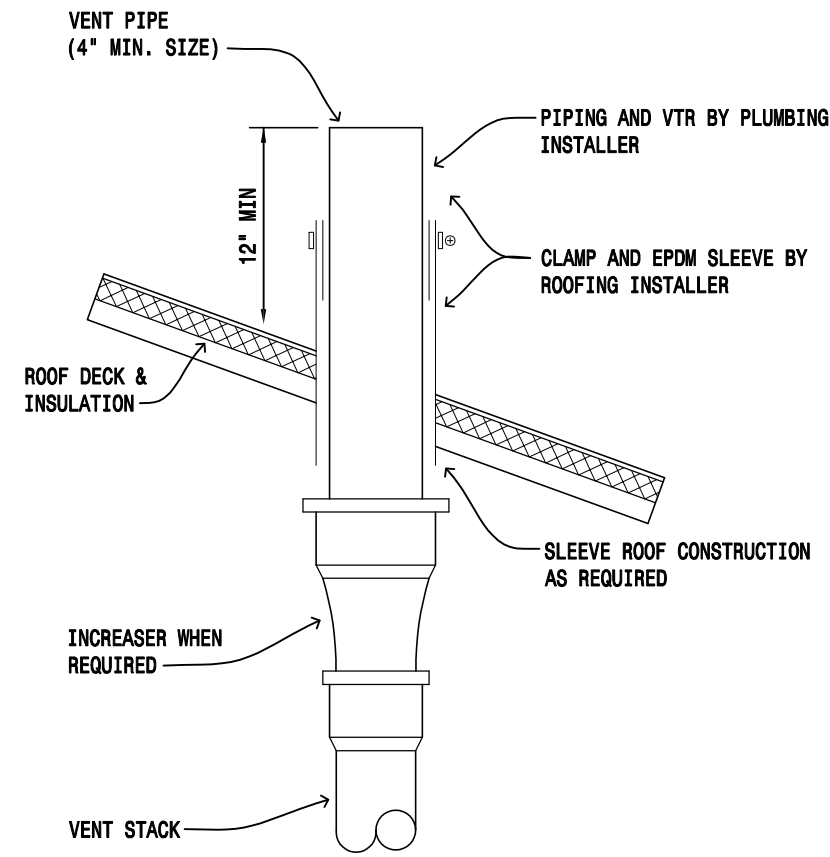
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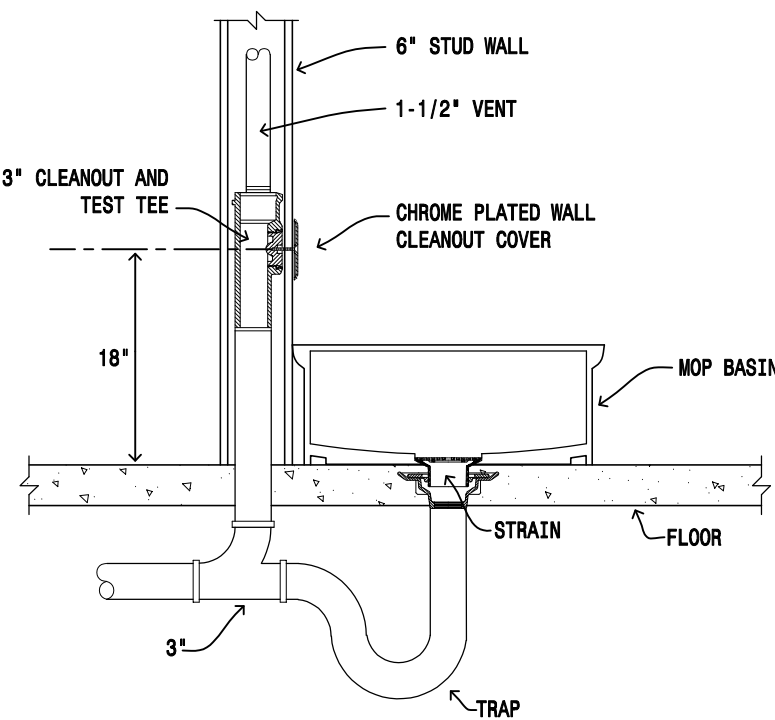
MECHANICAL DETAILS



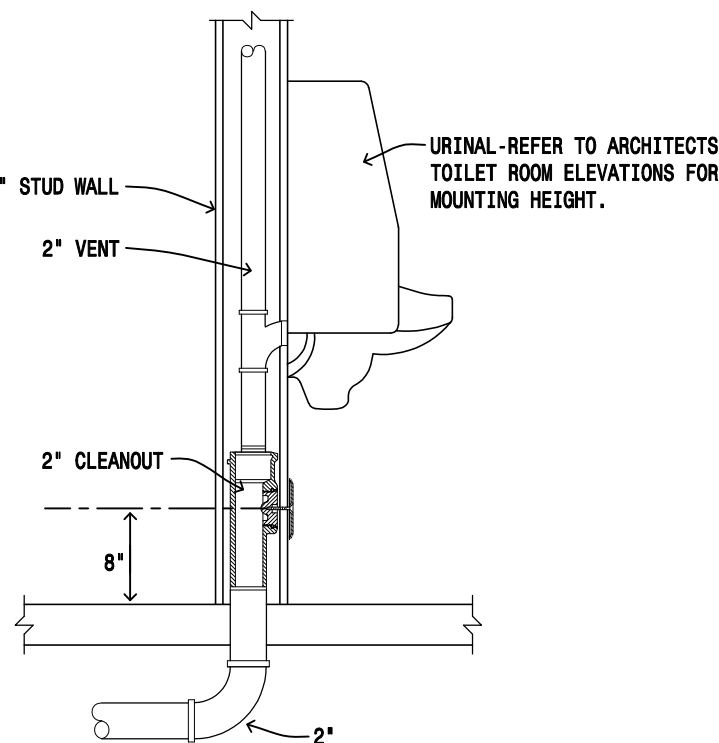
7 Floor Drain Detail
SCALE: NOT-TO-SCALE



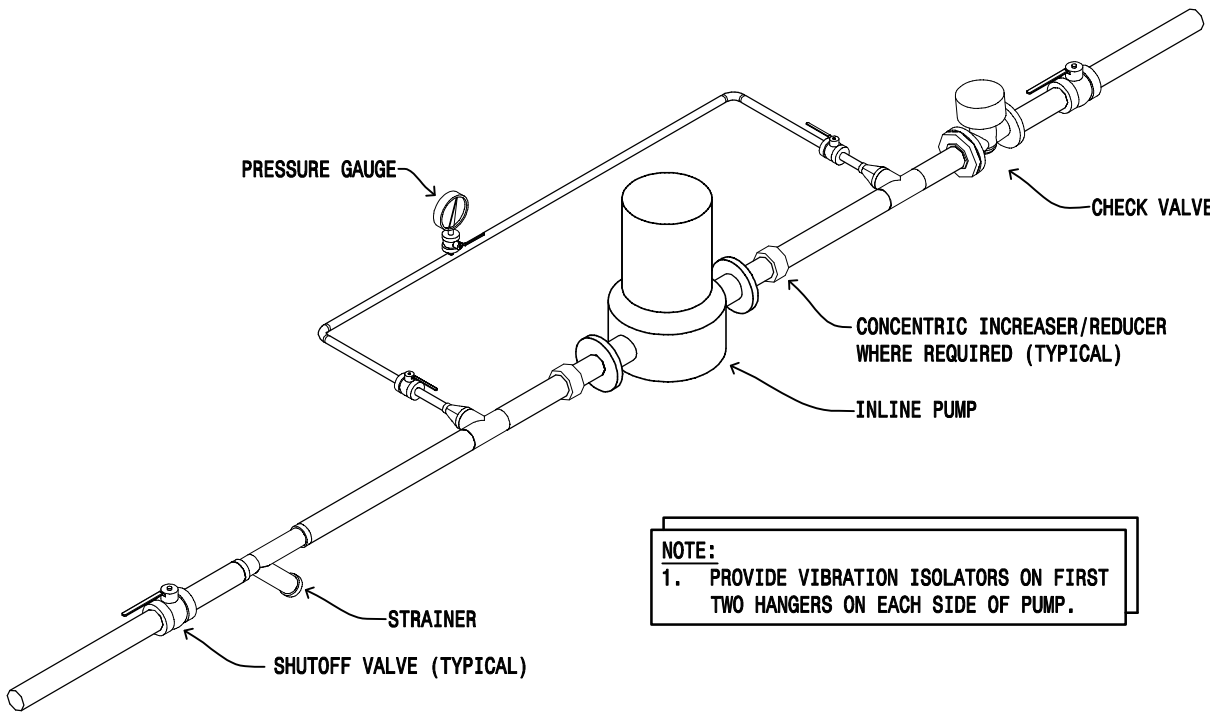
10 Plumbing Vent Detail
SCALE: NOT-TO-SCALE



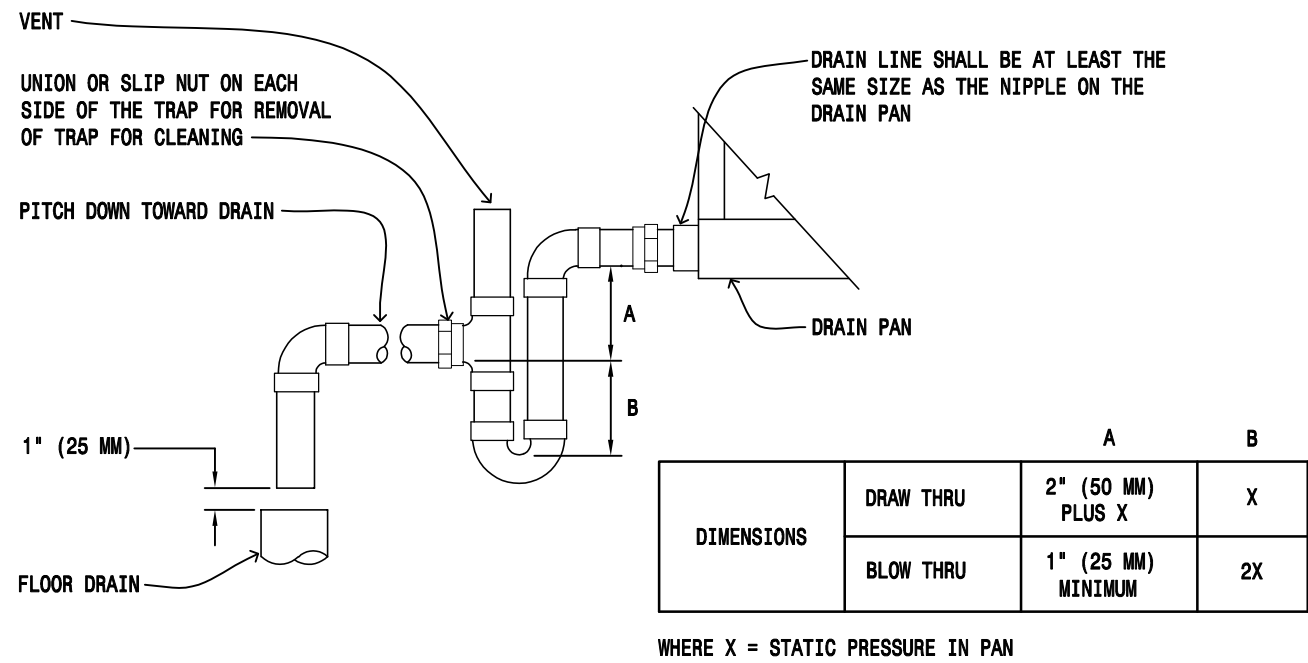
9 Mop Basin Detail
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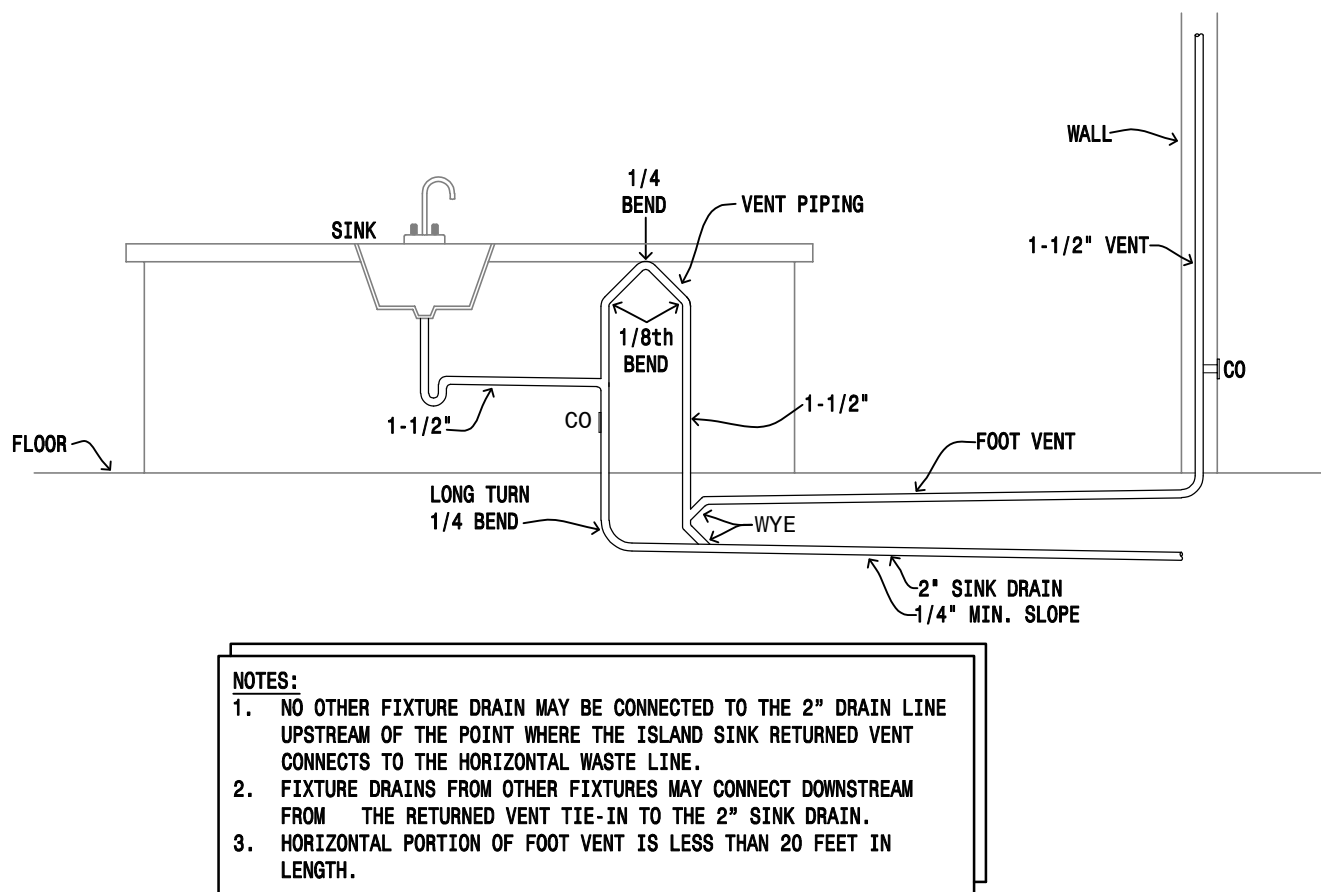
8 Urinal Detail
SCALE: NOT-TO-SCALE



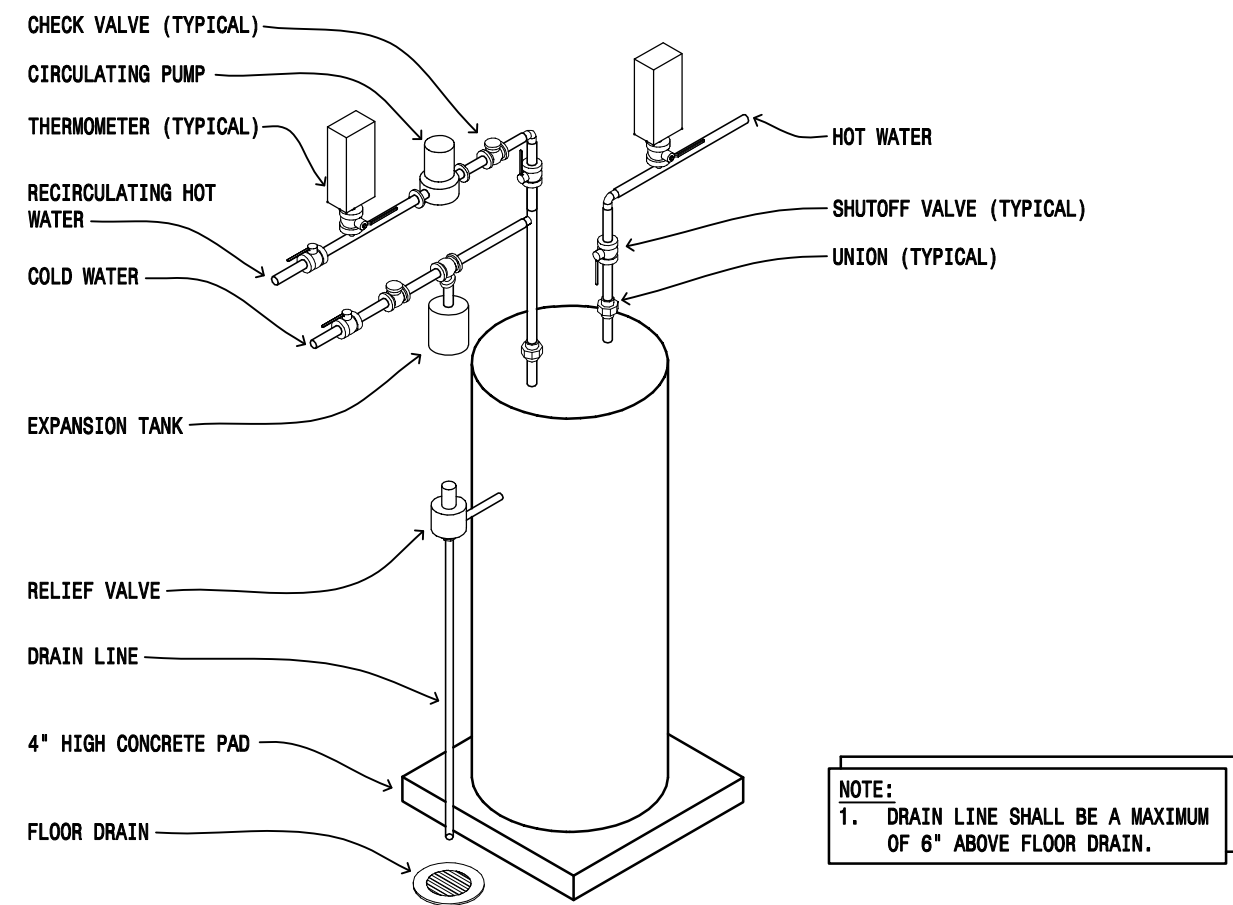
6 Inline Pump Detail
SCALE: NOT-TO-SCALE



5 Furnace Drain Trap Detail
SCALE: NOT-TO-SCALE



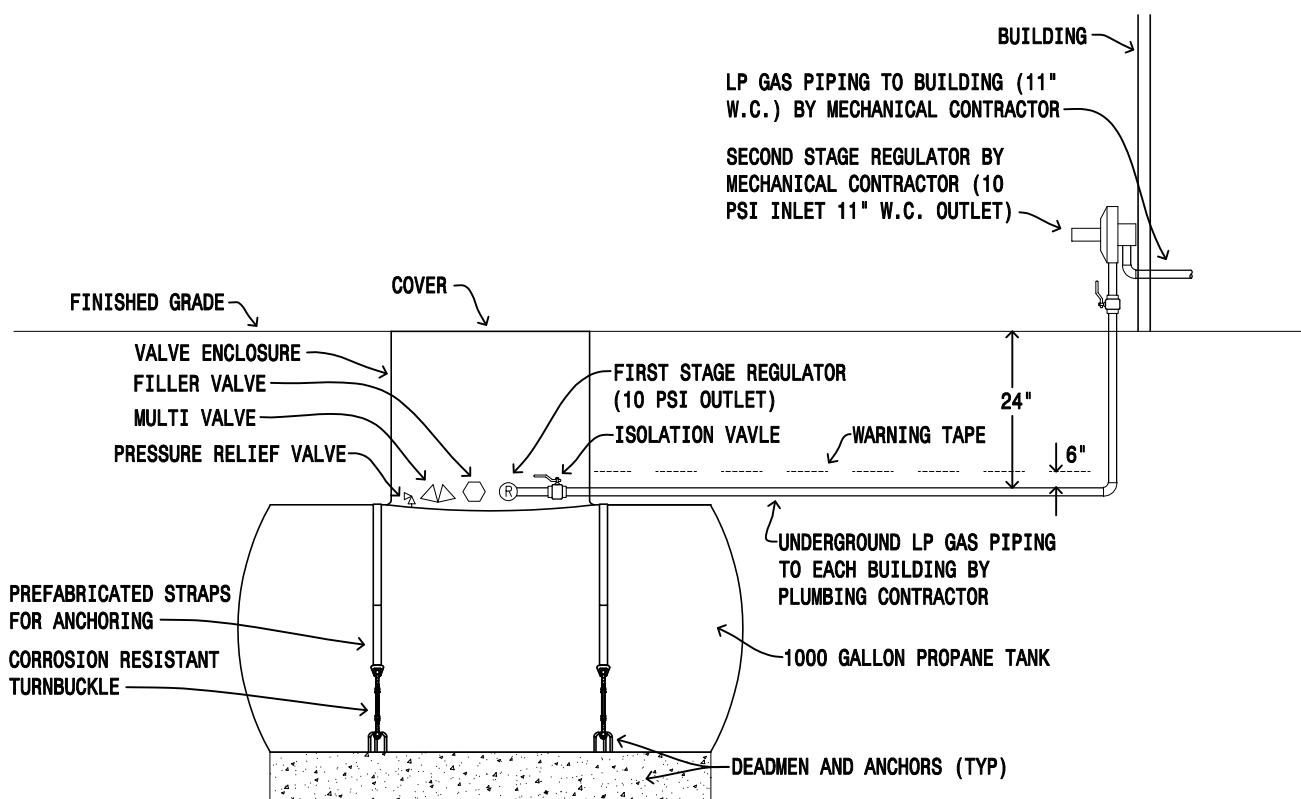
4 Island Venting Detail
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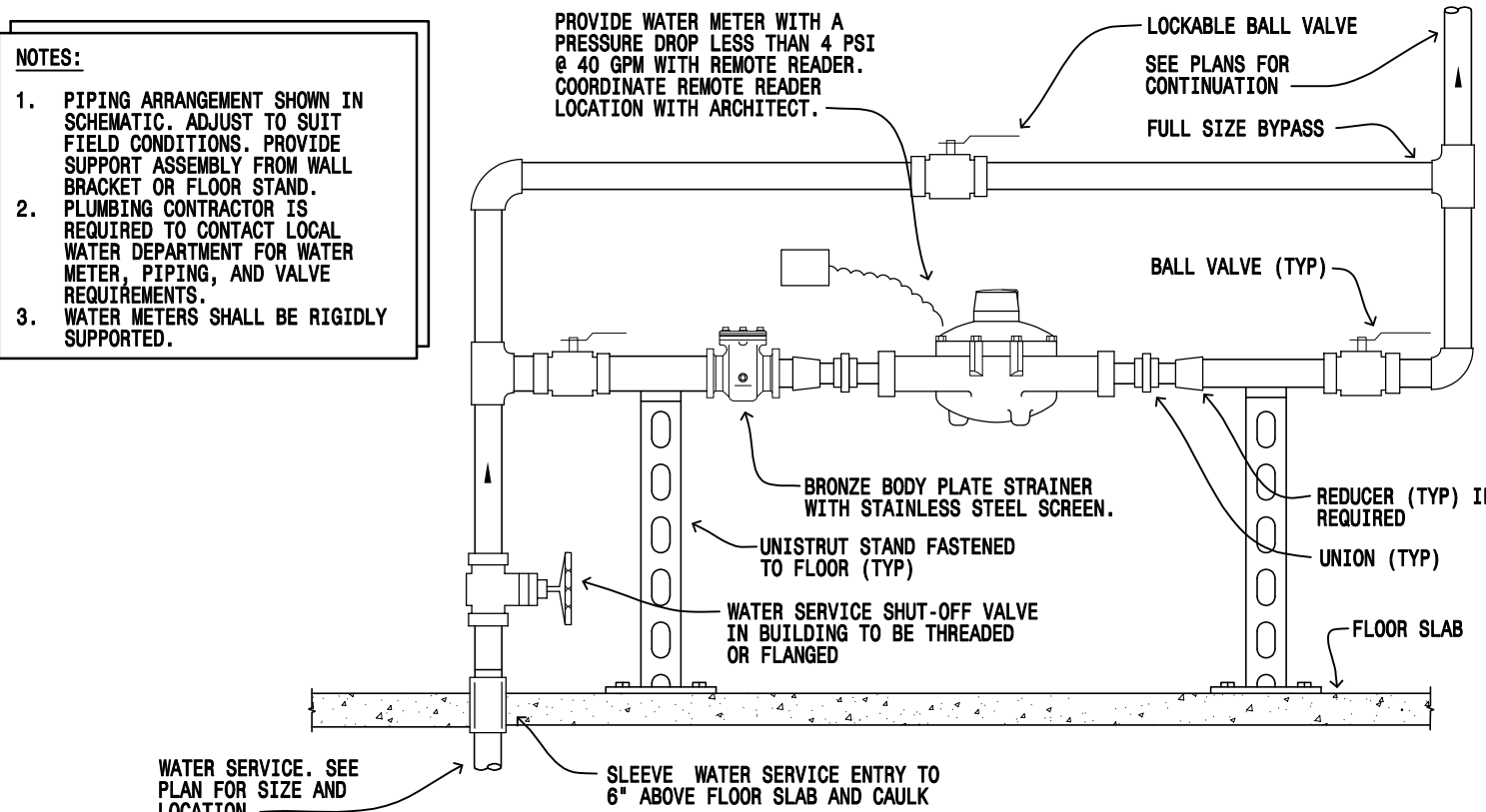
3 Electric Water Heater Detail
SCALE: NOT-TO-SCALE

TYPICAL LP TANK SIZES:
500 GALLON = 37" DIA x 19" LONG
1000 GALLON = 41" DIA x 192" LONG
1850 GALLON = 48" DIA x 269" LONG

NOTE:
1. PROVIDE DEDICATED FIRST STAGE REGULATOR AND ISOLATION VALVE FOR EACH BUILDING. INSTALL PIPING PER NFPA.



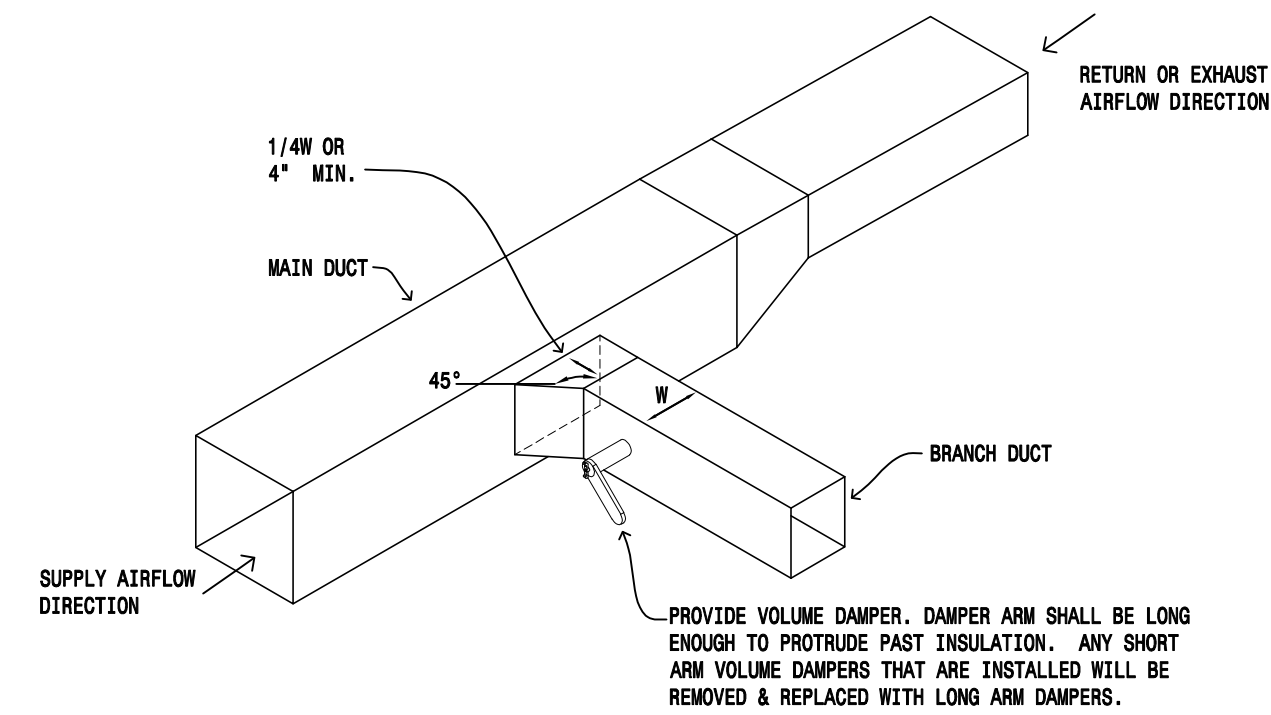
2 Buried LP Tank Detail
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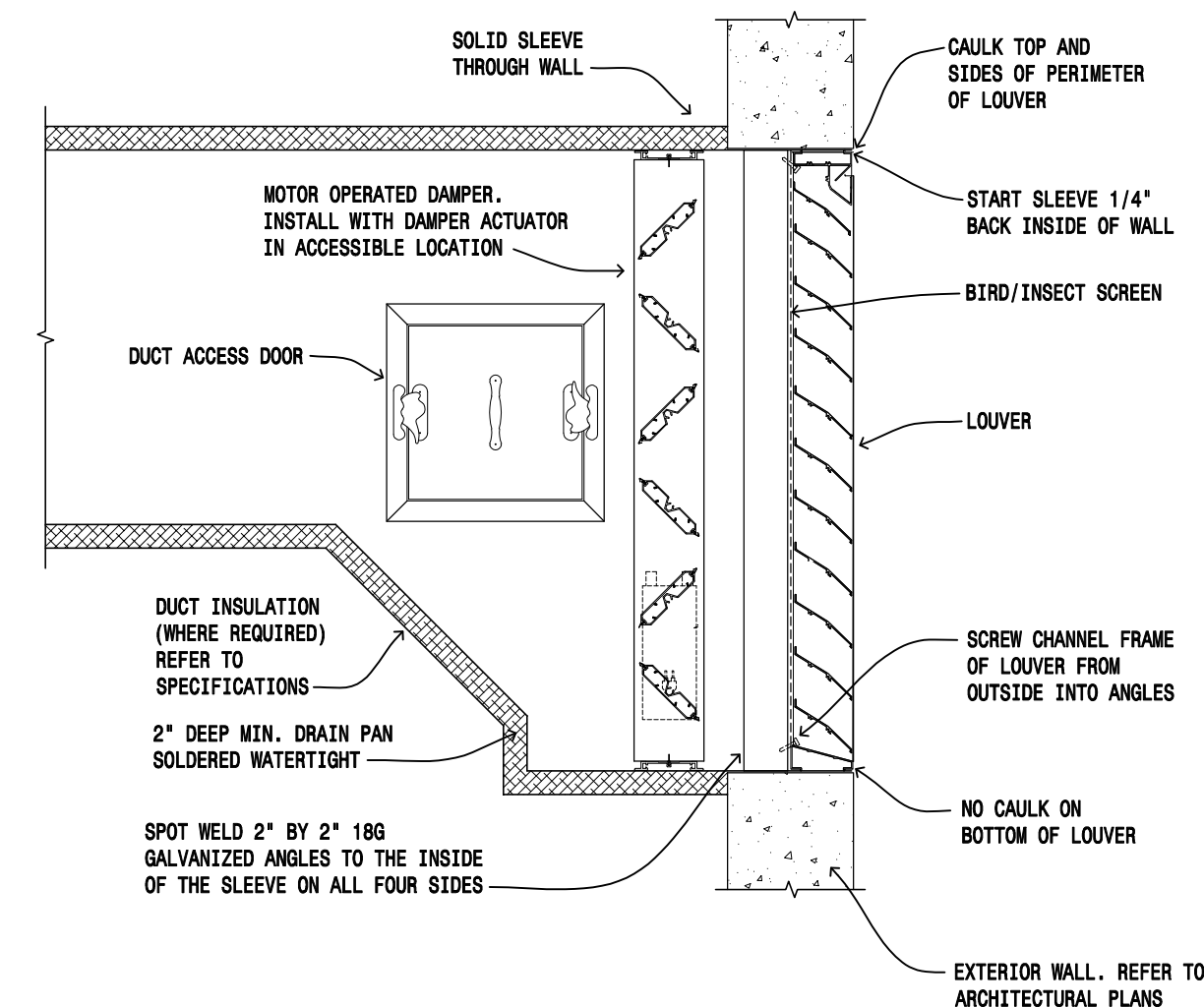
1 WATER METER DETAIL
SCALE: NOT-TO-SCALE

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CONSTR. REV 3	

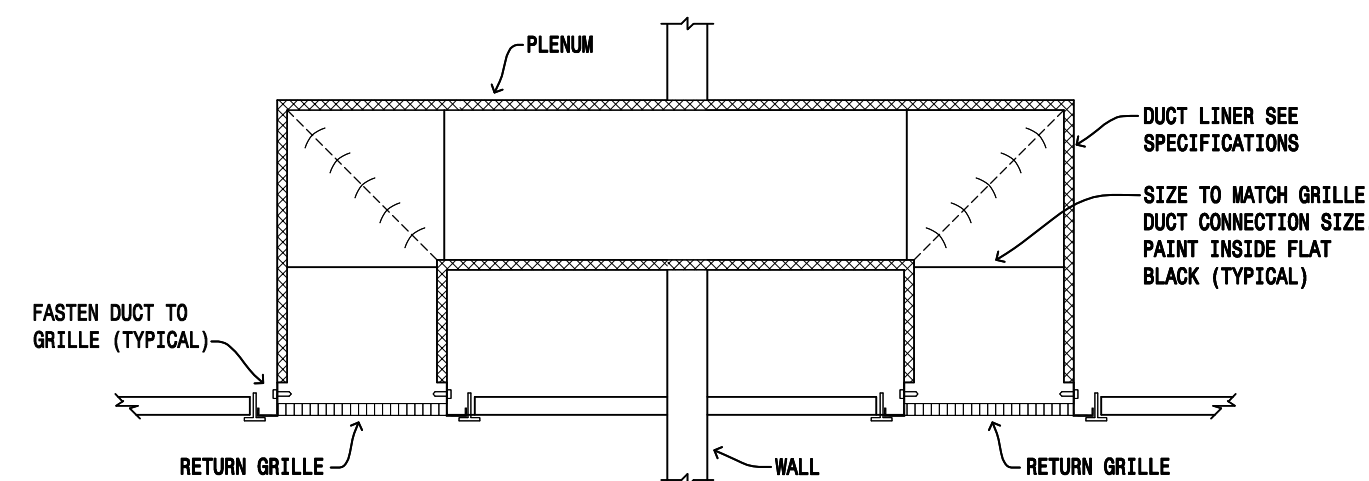
PROJECT #: 2515
CONTACT : KRISTI
SCALE: AS NOTED
MECHANICAL DETAILS



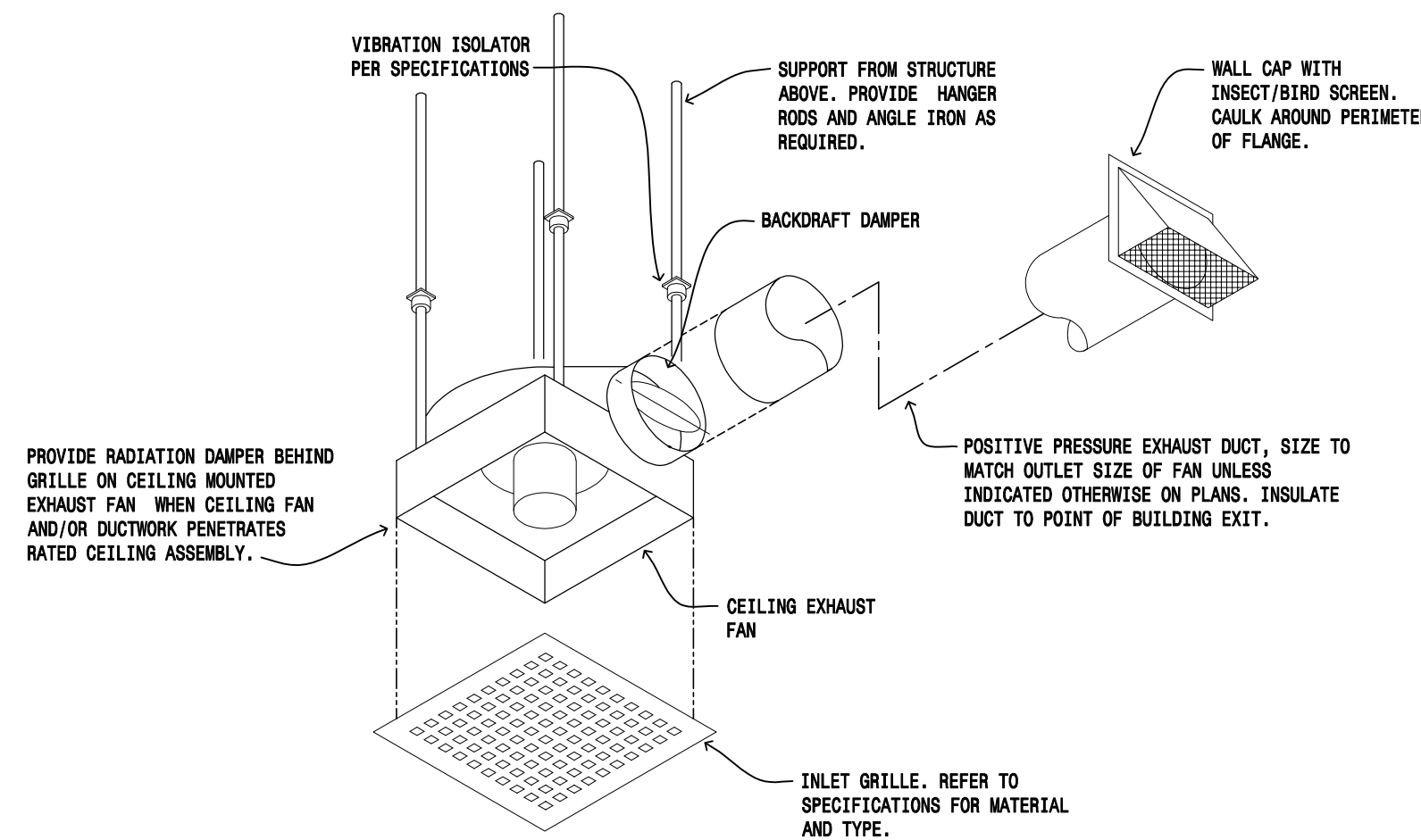
3 Branch Ductwork Detail
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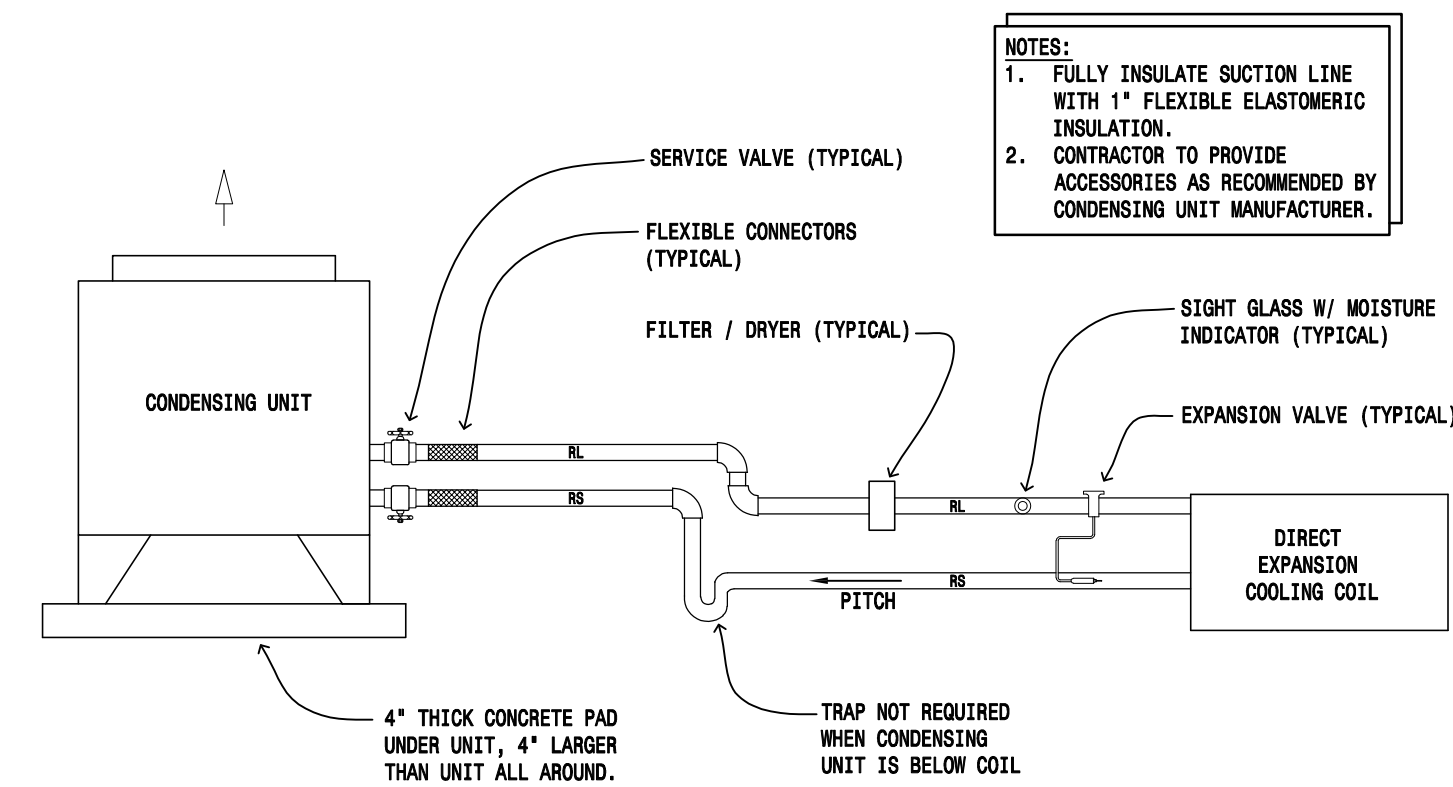
2 Louver Detail
SCALE: NOT-TO-SCALE



5 Transfer Air Detail
SCALE: NOT-TO-SCALE



4 Ceiling Exhaust Fan Detail
SCALE: NOT-TO-SCALE



1 Refrigerant Piping Detail
SCALE: NOT-TO-SCALE

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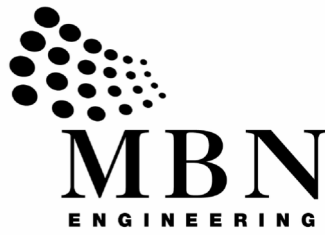
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CONTACT : KRISTI
SCALE: AS NOTED

ELECTRICAL
SYMBOLS LEGEND

LIGHTING			POWER			SYSTEMS			FIRE ALARM			MISC/ABBREVIATIONS		
SYMBOLS	DESCRIPTION	MOUNTING HEIGHT	SYMBOLS	DESCRIPTION	MOUNTING HEIGHT	SYMBOLS	DESCRIPTION	MOUNTING HEIGHT	SYMBOLS	DESCRIPTION	MOUNTING HEIGHT	SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
	CEILING SURFACE MOUNTED LIGHT FIXTURE, CAPITAL LETTER INDICATES FIXTURE TYPE, SMALL LETTER INDICATES SWITCHING.	6 INCHES ABOVE DOOR FRAME TO BOTTOM		DUPLX RECEPTACLE ('C' INDICATES EMERGENCY CRITICAL BRANCH POWER)	18 INCHES		CEILING MOUNTED RECESSED SPEAKER	90 INCHES TO BOTTOM		MANUAL STATION	48 INCHES		CEILING-MOUNTED JUNCTION BOX	18 INCHES
	RECESSED CEILING MOUNTED LIGHT FIXTURE			DOUBLE DUPLX RECEPTACLE ('C' INDICATES EMERGENCY CRITICAL BRANCH POWER)	18 INCHES		CEILING SURFACE MOUNTED SPEAKER			FIXED TEMPERATURE DETECTOR		WALL JUNCTION BOX		
	WALL MOUNTED LIGHT FIXTURE, SURFACE OR, RECESSED MOUNTED			TYPE 14-30 RECEPTACLE	18 INCHES		WALL MOUNTED SPEAKER			DUCT PHOTOELECTRIC DETECTOR		DASHED LINES INDICATE EXISTING FIXTURES, DEVICES, OR EQUIPMENT		
	CEILING EXIT SIGN, SHADED SIDE INDICATES LIGHTED FACE, ARROWS INSTALLED AS SHOWN			TYPE 14-50 RECEPTACLE	6 INCHES		CLOCK			PHOTOELECTRIC DETECTOR ('S' INDICATES SLEEPING ROOM WITH AUX. CONTACT, 'G' INDICATES WITH GUARD, 'E' INDICATES FOR ELEVATOR RECALL)		HASH MARKS INDICATE ITEM NOTED TO BE REMOVED		
	WALL EXIT SIGN			GFCI TYPE RECEPTACLE	18 INCHES		CLOCK/SPEAKER UNIT			COMBINATION FIRE/SMOKE DAMPER OR SMOKE DAMPER BY DIVISION 16		CONDUIT CONCEALED IN WALL OR CEILING, QUANTITY OF CONDUCTORS NOT SHOWN, PROVIDE AS REQUIRED FOR DEVICE/CIRCUIT NUMBERS SHOWN.		
	SUSPENDED LIGHT FIXTURE			MULTI-OUTLET ASSEMBLY - M.O.A., PROVIDE DEVICES AS SHOWN ON PLANS	18 INCHES		MICROPHONE OUTLET		18 INCHES		HORN WITH STROBE		CONDUIT CONCEALED IN FLOOR	
	SURFACE LIGHT FIXTURE			DUPLX RECEPTACLE, HALF SWITCHED	18 INCHES		MICROPHONE FLOOR OUTLET			SPEAKER HORN WITH STROBE		UNDERGROUND CONDUIT AT 24 INCHES MINIMUM		
	RECESSED LIGHT FIXTURE			FLOOR OUTLET, 'R' INDICATES RECESSED, 'F' INDICATES FLUSH, 'S' INDICATES SURFACE MOUNT			VOLUME CONTROL		48 INCHES		CHIME WITH STROBE		HOME RUN TO PANELBOARD, QUANTITY OF CONDUCTORS REQUIRED NOT INDICATED, PROVIDE QUANTITY AS REQUIRED FOR CIRCUIT NUMBERS SHOWN, SWITCHING ARRANGEMENT, OR NUMBER OF HOME RUNS SHOWN. '#10' INDICATES WIRE SIZE, 'NO NUMBERS INDICATES #12, 3/4 INCH CONDUIT MINIMUM.	
	FIXTURE CONNECTED TO EMERGENCY LIFE SAFETY POWER WHEN SHADED			DRY TYPE TRANSFORMER			AUXILIARY INPUT OUTLET		18 INCHES		STROBE LIGHT		INDICATES WIRE SIZE, 'NO NUMBERS INDICATES #12, 3/4 INCH CONDUIT MINIMUM.	
	FIXTURE CONNECTED TO CRITICAL POWER WHEN DASHED.			PUSH BUTTON			COMPUTER OUTLET (NUMBER INDICATES QUANTITY OF CABLES AND JACKS, NO NUMBER INDICATES ONE)		18 INCHES		LOCKDOWN ALERT SPEAKER WITH BLUE STROBE		SURFACE CONDUIT OR SURFACE RACEWAY	
	EMERGENCY BATTERY LIGHT	7 FOOT 6 INCHES		POWER DOOR HANDICAP PUSH PAD	42 INCHES		COMBINATION COMPUTER/TELEPHONE OUTLET IN SINGLE GANG OPENING (NUMBER INDICATES QUANTITY OF CABLES AND JACKS, NO NUMBER INDICATES ONE)	18 INCHES		FIRE ALARM MODULE/RELAY		WIRE BASKET TYPE CABLE TRAY		
	EMERGENCY REMOTE LAMP	7 FOOT 6 INCHES		EMERGENCY BOILER SHUTDOWN PUSH BUTTON	48 INCHES		TELEPHONE OUTLET ('W' INDICATES WALL MOUNTED AT 48 INCHES)	18 INCHES		INTEGRAL MAGNETIC DOOR CLOSER (PROVIDED BY DIVISION 8)		COMMUNICATIONS CABLE SUPPORT HANGER		
	PARKING LOT/AREA LIGHT FIXTURE	9 FOOT		THERMOSTAT - PROVIDE BY DIVISION 16	48 INCHES		COMPUTER/TELEPHONE OUTLET, PROVIDE ROUGH-IN AND CONDUIT ONLY	18 INCHES		SUPERVISORY SWITCH (NUMBER INDICATES NUMBER OF DEVICES AT THIS LOCATION)		AMPERE		
	PARKING LOT POST TOP LIGHT FIXTURE			THERMOSTAT - FURNISHED BY DIVISION 15, INSTALLED BY DIVISION 16	48 INCHES		TELEVISION OUTLET			PRESSURE SWITCH		ABOVE COUNTER		
	PHOTO CELL			THERMAL SWITCH (MOTOR OVERLOAD TYPE)	48 INCHES		REQUEST TO EXIT DEVICE			FLOW SWITCH		ABOVE FINISHED FLOOR		
	CEILING MOUNTED MOTION SENSOR SWITCH	48 INCHES		POWER POLE			DOOR POSITION SWITCH, RECESSED	18 INCHES		FIRE ALARM CONTROL PANEL		AIR HANDLING UNIT		
	WALL MOUNTED MOTION SENSOR SWITCH			MOTOR (NUMBER REFERS TO MOTOR AND EQUIPMENT SCHEDULE SEE SCHEDULE FOR WIRING AND CONTROLLER REQUIREMENTS)			DOOR POSITION SWITCH, SURFACE MOUNT	3 INCHES ABOVE DOOR FRAME		FIRE ALARM ANNUNCIATOR		BELOW COUNTER		
	MOTION SENSOR SWITCH POWER PACK			LIGHTING AND APPLIANCE PANELBOARD			DOOR POSITION SWITCH					CONDUIT		
	CONTACTOR (NUMBER INDICATES NUMBER OF POLES)			RECESSED LIGHTING AND APPLIANCE PANELBOARD			CARD READER					CABINET UNIT HEATER		
	ROOM CONTROLLER	48 INCHES		SWITCHBOARD OR MOTOR CONTROL CENTER AS NOTED			ELECTRIC LATCH BY DIV 08, CONNECTIONS BY DIV 26					EXHAUST FAN		
	SINGLE POLE (HORSEPOWER RATED WHEN USED AS MOTOR DISCONNECT)	48 INCHES		SPECIAL EQUIPMENT CABINET AS NOTED			ELECTRIC STRIKE BY DIV 08, CONNECTIONS BY DIV 26	48 INCHES				ELECTRIC WATER COOLER		
	DOUBLE POLE	48 INCHES		ENCLOSED MOLDED CASE CIRCUIT BREAKER			SURVEILLANCE CAMERA (OWNER PROVIDED)					FIRE ALARM		
	3-WAY	48 INCHES		VARIABLE FREQUENCY CONTROLLER WITH CONTROLLER			AREA OF REFUGE STATION					GROUND FAULT CIRCUIT INTERRUPTER		
	OCCUPANCY SENSOR SWITCH	48 INCHES		NON-FUSED DISCONNECT			CEILING MOUNTED BUZZER					GROUND		
	KEY OPERATED	48 INCHES		FUSED DISCONNECT			CEILING MOUNTED RTLS DEVICE					PHASE		
	WITH PILOT LIGHT (CAN BE USED WITH OTHER SWITCH TYPES)	48 INCHES		MAGNETIC STARTER			CEILING MOUNTED NURSE CALL DOME LIGHT					TELEVISION		
	MOMENTARY CONTACT	48 INCHES		COMBINATION STARTER-DISCONNECT			NURSE CALL EMERGENCY PULL CORD	48 INCHES				WIRE		
	DIMMER (600 WATT UNLESS OTHERWISE NOTED)	48 INCHES		TWIST LOCK OUTLET			NURSE CALL CODE BLUE	48 INCHES				WIRELESS ACCESS POINT		
	LIGHTING INTENSITY SELECTOR PANEL	48 INCHES					NURSE CALL DUTY STATION	48 INCHES				WEATHERPROOF		
	LOW VOLTAGE SWITCH						NURSE CALL STAFF ASSIST	48 INCHES				ELECTRICAL CONTRACTOR		
	TRACK LIGHTING	48 INCHES					NURSE CALL PATIENT STATION	48 INCHES						
	VACANCY SENSOR SWITCH						NURSE CALL MASTER STATION	48 INCHES						
							NURSE CALL STAFF STATION	48 INCHES						
							PATIENT/DEVICE TRACKING							
							NURSE CALL MASTER PANEL							

NOTES:
1. THIS IS A COMPREHENSIVE SYMBOL SCHEDULE. NOT ALL SYMBOLS ARE APPLICABLE TO THESE DRAWINGS.
2. MOUNTING HEIGHT IS TO THE CENTER OF DEVICE UNLESS OTHERWISE INDICATED.

3. FOR DEVICES SHOWN AS 48 INCHES MOUNTING HEIGHT, WHEN INSTALLED IN MASONRY BLOCK WALLS, MOUNTING AT 48 INCHES TO THE TOP OF THE OUTLET BOX IS ACCEPTABLE.

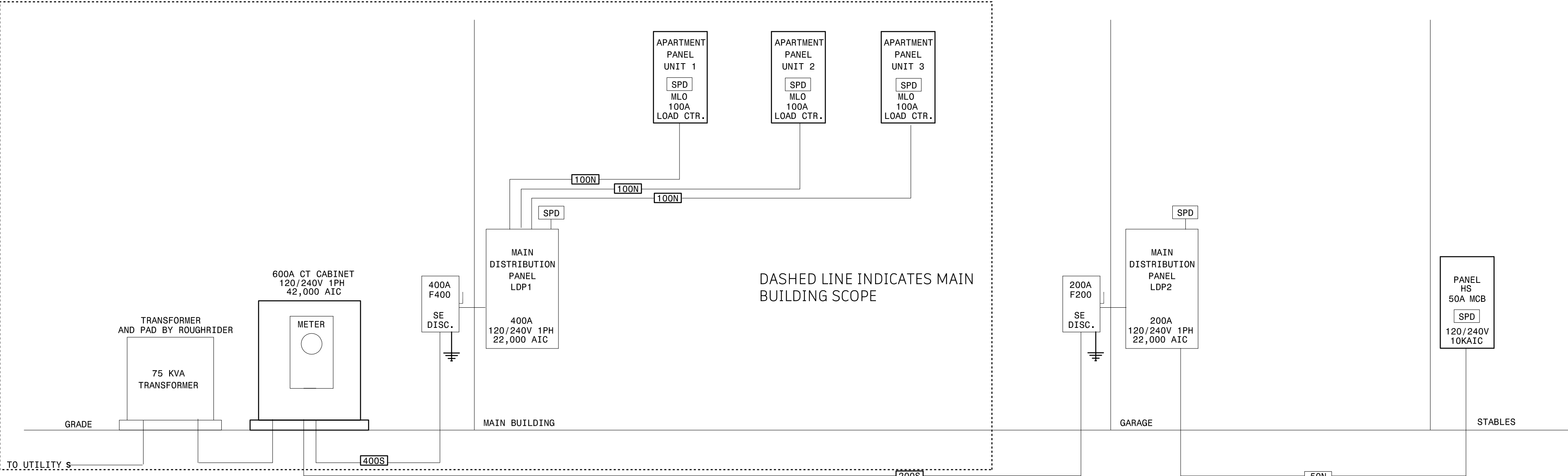


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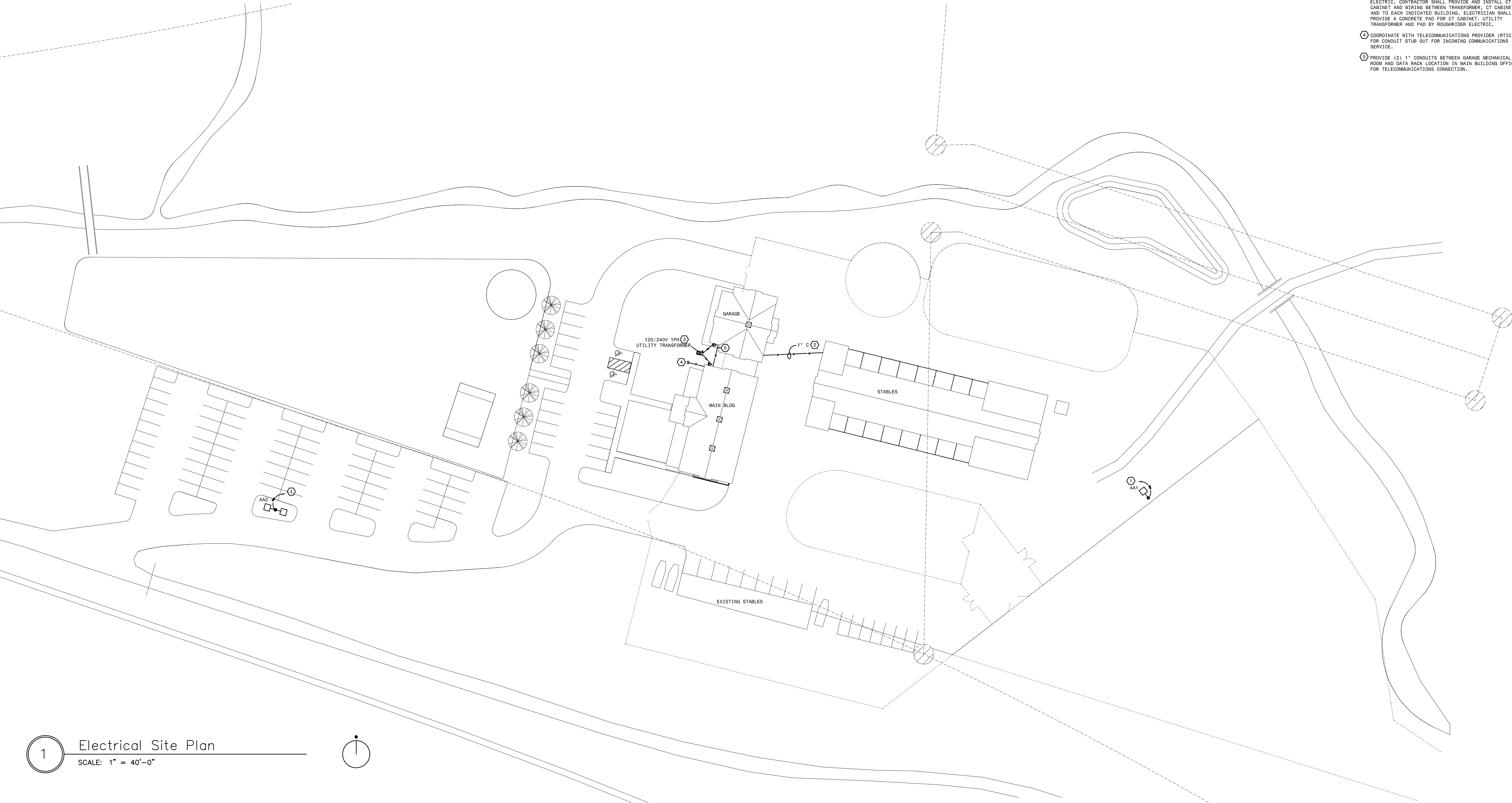
701 MAIN AVENUE
FARGO, ND 58103
PHONE: 701.478.6336
FAX: 701.478.6340

FEEDER SCHEDULE - ALUMINIUM									
FEEDER NUMBER	AMPERE RATING	PHASE CONDUCTORS PER CONDUIT		NEUTRAL CONDUCTOR SIZE		GROUND CONDUCTOR SIZE	CONDUIT SIZE	NUMBER OF PARALLEL SETS	REMARKS
	600	2	250 KCMIL	1	250 KCMIL	2/0 AWG	3"	3	
400S	400	2	250 KCMIL	1	250 KCMIL		2-1/2"	2	
200S	200	2	250 KCMIL	1	250 KCMIL		2-1/2"	1	
100N	100	2	1 AWG	1	1 AWG	6 AWG	1-1/4"	1	
50N	50	2	8 AWG	1	8 AWG	6 AWG	3/4"	1	

- PLAN NOTES:
- UTILIZE #6 CONDUCTORS IN 1" CONDUIT FOR SITE LIGHTING CIRCUIT BACK TO GARAGE BUILDING PANEL LDP2.
 - PROVIDE 1" CONDUIT FROM GARAGE MECHANICAL ROOM TO HORSE STABLES MECH ROOM FOR (2) CAT5 CABLES TO LOCATION OF OWNER PROVIDED NETWORK SWITCH WITHIN CASEWORK IN THIS ROOM. COORDINATE EXACT ROUGH-IN LOCATION WITH OWNER/ARCHITECT PRIOR TO INSTALL.
 - COORDINATE PLACEMENT OF UTILITY TRANSFORMER AND ANY NECESSARY CONNECTION CABINET FOR SERVICE TO BOTH MAIN BUILDING AND GARAGE/RESIDENCE WITH ROUGHRIIDER ELECTRIC. CONTRACTOR SHALL PROVIDE AND INSTALL CT CABINET AND WIRING BETWEEN TRANSFORMER, CT CABINET AND TO EACH INDICATED BUILDING. ELECTRICIAN SHALL PROVIDE A CONCRETE PAD FOR CT CABINET. UTILITY TRANSFORMER AND PAD BY ROUGHRIIDER ELECTRIC.
 - COORDINATE WITH TELECOMMUNICATIONS PROVIDER (RTIC) FOR CONDUIT STUB OUT FOR INCOMING COMMUNICATIONS SERVICE.
 - PROVIDE (2) 1" CONDUITS BETWEEN GARAGE MECHANICAL ROOM AND DATA RACK LOCATION IN MAIN BUILDING OFFICE FOR TELECOMMUNICATIONS CONNECTION.



2 ELECTRICAL RISER DIAGRAM



1 Electrical Site Plan
SCALE: 1" = 40'-0"

72-185 PAINTERS PATH
SUITE A
PALM DESERT, CA
92260
760.776.4068

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CITY APPROVAL:

TRMF RIDING STABLES - MAIN BUILDING
14532 L-94 Loop East
ND 58645



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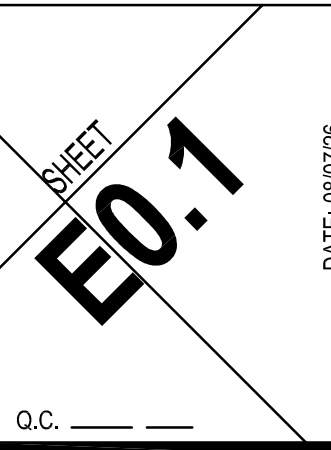
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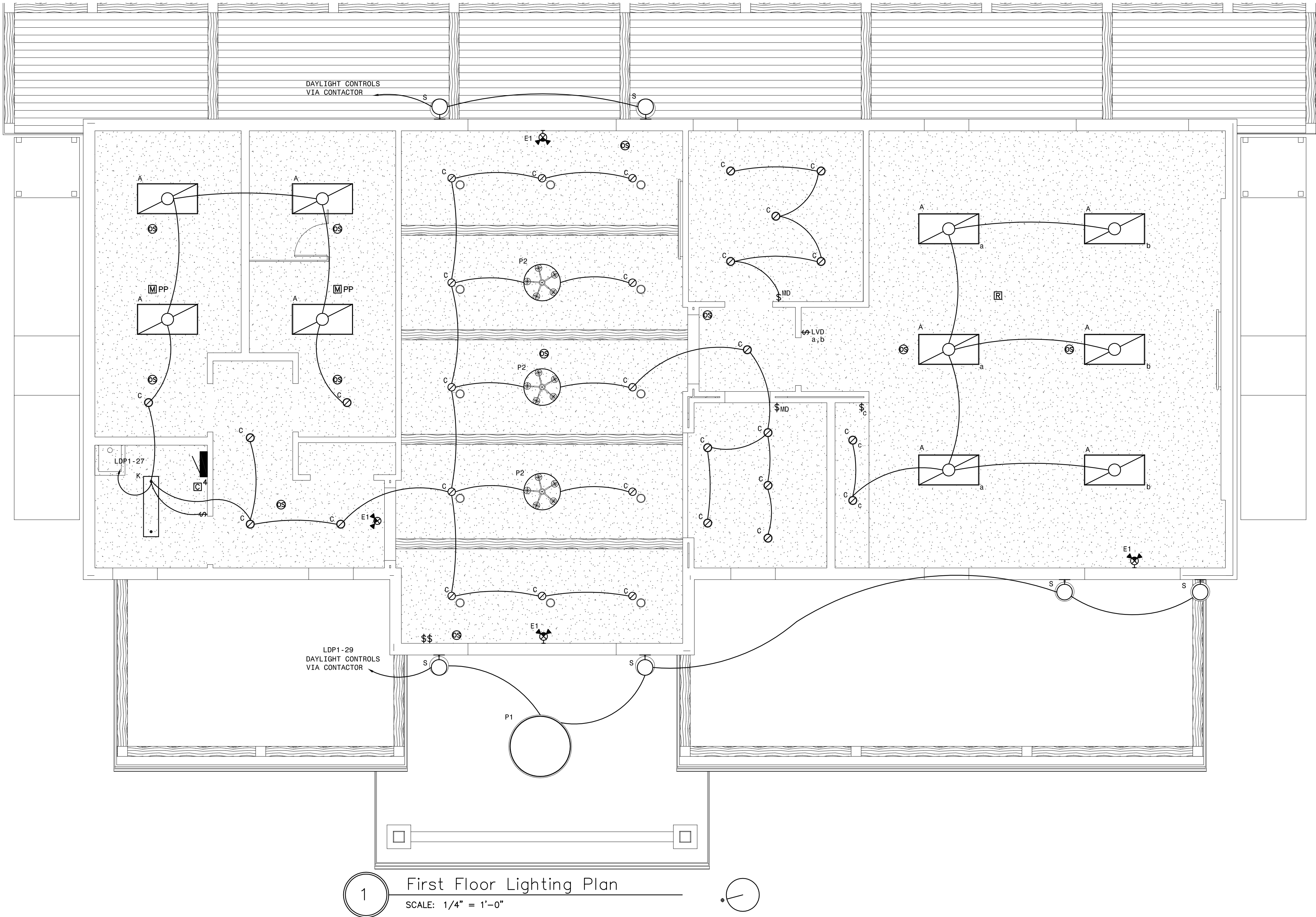
CONTACT : KRISTI

SCALE: AS NOTED

ELECTRICAL SITE
PLAN



LUMINAIRE SCHEDULE									
TYPE	MANUFACTURERS	CATALOG INFORMATION	FIXTURE DESCRIPTION	LED DATA	DRIVER DATA	INPUT WATTS	VOLTAGE	MOUNTING	REMARKS
				TYPE	TYPE				
A	LITHONIA OR EQUAL	CPANL SERIES	2 FOOT X 4 FOOT EDGE LIT LED FLAT PANEL FIXTURE, SURFACE MOUNT, SWITCHABLE CCT/LUMEN	3500K LED 3300 LUMENS	0-10V DIMMING LED DRIVER	30	MVOLT	SURFACE	PROVIDE WITH DIRECT CEILING MOUNT KIT
C	RAB OR EQUAL	DSK34 SERIES	6 INCH ROUND LED SURFACE MOUNT DISK LIGHT, 90 CRI, WHITE TRIAC ELV DIMMING, SMOOTH TRIM	3500K LED 1100 LUMENS	LED DRIVER	16	120	SURFACE	
E1	LITHONIA OR EQUAL	ECRG RD SERIES	SINGLE SIDED EMERGENCY EXIT SIGN, WITH DUAL ROUND LED HEADS, UNIV MOUNT, WHITE WITH RED LETTERS, THERMOPLASTIC HOUSING, INTEGRAL BATTERY WITH 90 MINUTES OF ILLUMINATION	LED		5	MVOLT	UNIV	
P			P1, P2, P3 AND P4 FIXTURES TO BE SELECTED AND PROVIDED BY OTHERS, INSTALLED BY ELECTRICIAN						
M	AFX OR EQUAL	ALPINT 17" LED	17" LED FLUSH MOUNT CEILING FIXTURE, FINISH SELECTED BY ARCHITECT	3500K LED 1200 LUMENS	LED DRIVER	26	120	SURFACE	
V			FIXTURE TO BE SELECTED AND PROVIDED BY OTHERS, INSTALLED BY ELECTRICIAN						
K	LITHONIA OR EQUAL	GSS SERIES	4 FOOT LED STRIP LIGHT WITH WHITE ACRYLIC LENS	3500K LED 4000 LUMENS	LED DRIVER	35	MVOLT	CHAIN HANG	SURFACE MOUNTED FIXTURE, PROVIDE WITH CHAIN HANG ACCESSORY
W			FIXTURE TO BE SELECTED AND PROVIDED BY OTHERS, INSTALLED BY ELECTRICIAN						



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ARCHITECTS

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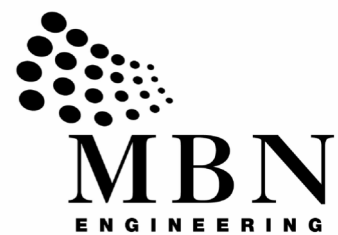
TRMF RIDING STABLES - MAIN BUILDING
14532 1-94 Loop East
ND 58645



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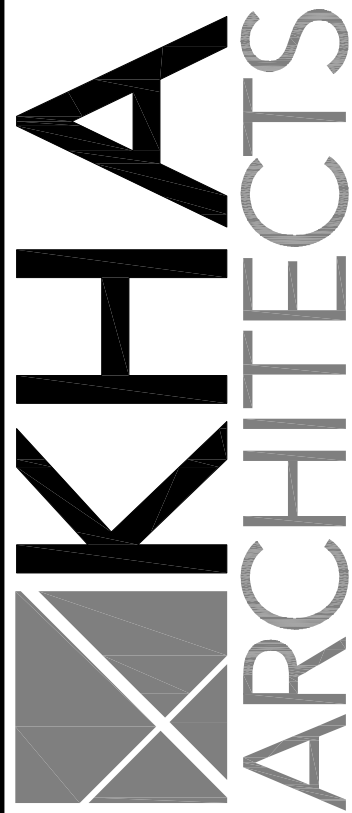
PROJECT #: 2515
CONTACT : KRISTI
SCALE: AS NOTED
MAIN BUILDING -
FIRST FLOOR
LIGHTING PLAN

DATE: 08/07/26
E7.0
O.C. _____



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PROJECT #: 2515

CONTACT : KRISTI

SCALE: AS NOTED

MAIN BUILDING -
SECOND FLOOR
LIGHTING PLAN

SHEET
E7.1

DATE: 08/07/26

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PANELBOARD LOAD SCHEDULE - 1 BDR APTS																			
PANEL: 1 BDRM - Main Bldg				MAIN: MLO				ENCLOSURE: NEMA 1				LOCATION: TYPICAL 1 BDRM							
RATING: 125 AMP				AIC RATING: 10,000				MOUNTING: RECESSED				FED FROM: House Panel							
CKT #	TRIP AMPS	POLE	LOAD IN VOLT-AMPERES				LOAD DESCRIPTION	PH	LOAD DESCRIPTION	HEAT/AC	KITCHEN	MTRS&EQUIP	RECP	LIGHTING	TRIP AMPS	POLE	CKT #		
1	**20	1					KITCHEN	A	LIGHTING						**15	1	2		
3	**20	1					KITCHEN	B	BEDROOM						**15	1	4		
5	**20	1					KITCHEN	A	LIVING ROOM						**15	1	6		
7	*20	1					MICROWAVE	B	MINI SPLIT						30		8		
9	*20	1					DISHWASHER	A							30	2	10		
11	*20	1					REFRIGERATOR	B	BASEBOARD						30		12		
13	**20	1					LAUNDRY RM	A							20	2	14		
15	***40						RANGE	B	BASEBOARD						20		16		
17		2						A							20	2	18		
19	*20	1					WASHER	B	DISPOSAL						*20	1	20		
21	***30						DRYER	A	BATH						**20	1	22		
23		2						B	BATH HEAT						20	1	24		
25	**20	1						A							2		26		
27	**20	1					SPARE	B	SPARE						**20	1	28		
29	*15	1					SPARE	A	SPARE						**20	1	30		

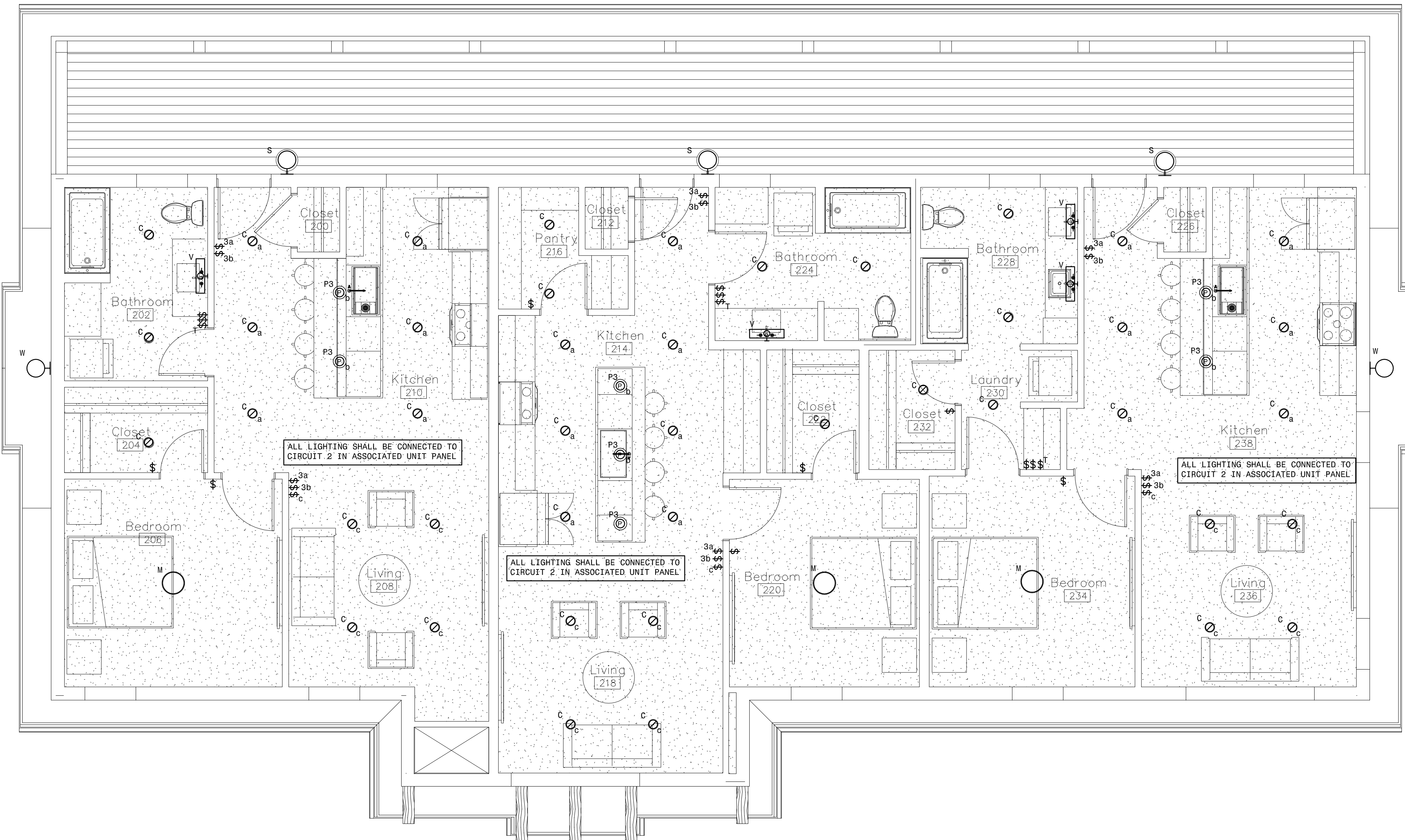
NOTES:

- BREAKERS NOTED WITH * TO BE AFCI/GFCI DUAL FUNCTION
- BREAKERS NOTED WITH ** TO BE AFCI
- BREAKERS NOTED WITH *** TO BE GFCI
- PANELS SHALL BE SERIES RATED TO 65KAIC WITH MAIN PANEL OCPD
- LOAD CENTERS ARE ACCEPTABLE FOR USE WITHIN APARTMENT UNITS

Typical Apartment UNIT 1		Sqft =	732 SF
732 Sqft x 3 VA/Sqft	=	2,196 VA	
2 Small Appliance Circuits	=	3,000 VA	
Dishwasher	=	1,500 VA	
Microwave	=	1,200 VA	
Laundry	=	1,500 VA	
Clothes Dryer	=	5,000 VA	
Water Heater	=	0 VA	
Range/Oven	=	8,000 VA	
Energy Recovery Unit	=	0 VA	
Duct Heater	=	0 VA	
	=	+ 0 VA	
Total	=	22,396 VA	
1st 10KVA @ 100%	=	10,000 VA	
Remainder @ 40%	=	4,958.4 VA	
Subtotal	=	14,958 VA	
Heat/AC Load	=	+ 6,000 VA	
Total	=	20,958 VA	
Panel Load (240 Volt)	=	87.3267 Amps	
Connected Load For Service Load Calculation	=	28,396 VA	

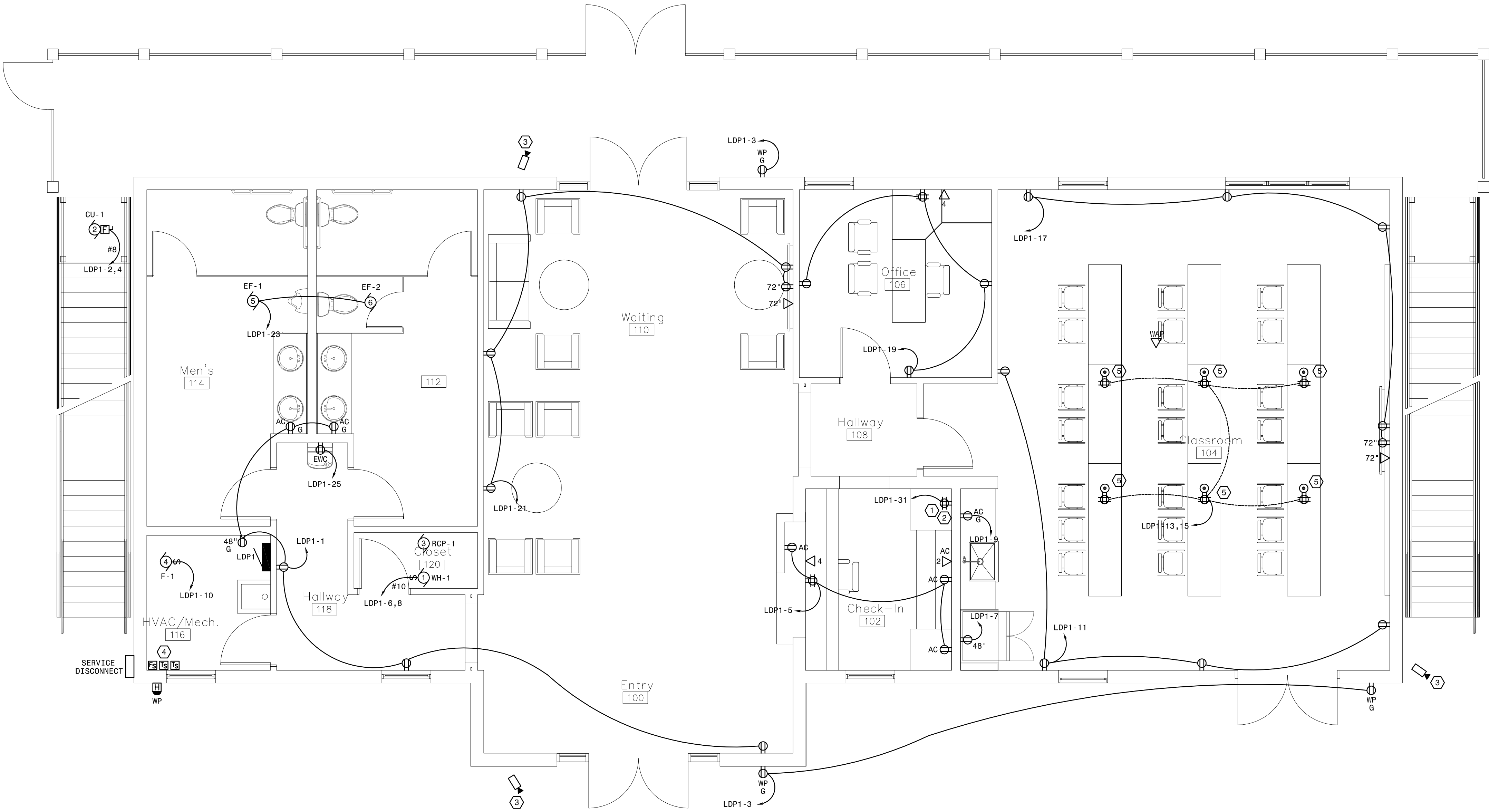
Typical Apartment UNIT 2		Sqft =	740 SF
740 Sqft x 3 VA/Sqft	=	2,220 VA	
3 Small Appliance Circuits	=	4,500 VA	
Dishwasher	=	1,500 VA	
Microwave	=	1,200 VA	
Laundry	=	1,500 VA	
Clothes Dryer	=	5,000 VA	
Water Heater	=	0 VA	
Range/Oven	=	8,000 VA	
Energy Recovery Unit	=	0 VA	
Duct Heater	=	0 VA	
	=	+ 0 VA	
Total	=	23,920 VA	
1st 10KVA @ 100%	=	10,000 VA	
Remainder @ 40%	=	5,568 VA	
Subtotal	=	15,568 VA	
Heat/AC Load	=	+ 6,000 VA	
Total	=	21,568 VA	
Panel Load (240 Volt)	=	89.8667 Amps	
Connected Load For Service Load Calculation	=	29,920 VA	

Typical Apartment UNIT 3		Sqft =	747 SF
747 Sqft x 3 VA/Sqft	=	2,241 VA	
3 Small Appliance Circuits	=	4,500 VA	
Dishwasher	=	1,500 VA	
Microwave	=	1,200 VA	
Laundry	=	1,500 VA	
Clothes Dryer	=	5,000 VA	
Water Heater	=	0 VA	
Range/Oven	=	8,000 VA	
Energy Recovery Unit	=	0 VA	
Duct Heater	=	0 VA	
	=	+ 0 VA	
Total	=	23,941 VA	
1st 10KVA @ 100%	=	10,000 VA	
Remainder @ 40%	=	5,576.4 VA	
Subtotal	=	15,576 VA	
Heat/AC Load	=	+ 7,000 VA	
Total	=	22,576 VA	
Panel Load (240 Volt)	=	94.0683 Amps	
Connected Load For Service Load Calculation	=	30,941 VA	



1 Second Floor Lighting Plan
SCALE: 1/4" = 1'-0"

PANELBOARD LOAD SCHEDULE																			
PANEL: LDP1			MAIN: MCB			ENCLOSURE: NEMA 1			LOCATION: MECH										
RATING: 400A			VOLTS: 240/120, 1 PH., 3W.			MOUNTING: SURFACE			FED FROM: UTILITY										
AIC RATING: 42,000																			
CKT #	TRIP AMPS	POLE	LOAD IN VOLT-AMPERES					PH	LOAD DESCRIPTION	LOAD IN VOLT-AMPERES					TRIP AMPS	POLE	CKT #		
			LIGHTING	RECP	MTRS&EQUIP	DWELLING	HEAT/AC			HEAT/AC	DWELLING	MTRS&EQUIP	RECP	LIGHTING					
1	20	1		1200					A	Conv. Rcpt					50		2		
3	20	1		800					B	Ext. Rcpt		3600				2	4		
5	20	1		1000					A	Check-In Desk		2250			30		6		
7	*20	1		1200					B	Fridge		2250				2	8		
9	20	1		400					A	Countertop		1800			20		10		
11	20	1		800					B	Class Rcpts			200		20		12		
13	20	1		1200					A	Floorbox			14700		100		14		
15	20	1		1200					B	Floorbox			14700			2	16		
17	20	1		800					A	Class Rcpts			15460		100		18		
19	20	1		1000					B	Office			15460			2	20		
21	20	1		1000					A	Waiting Room			14700		100		22		
23	20	1		600					B	Exhaust Fans			14700			2	24		
25	*20	1		800					A	Water Cooler					20		1		
27	20	1		1200					B	INTERIOR LITES					20		28		
29	20	1		400					A	EXTERIOR LITES					20		1		
31	20	1		400					B	Data Rack					20		32		
33	20	1							A						20		1		
35	20	1							B						20		36		
37	20	1							A						20		1		
39	20	1							B						20		40		
LOAD CALCULATIONS																			
LOAD TYPE		VA / PHASE		TOTAL VA		DEMAND FACTOR		DIVERSIFIED LOAD		NOTES:									
		A	B							1. BREAKERS NOTED WITH * TO BE GFCI									
LIGHTING		400	1,200	1600		1.00		1,600		2. PROVIDE INTEGRAL SURGE PROTECTION									
RECEPTACLES		6,400	6,000	12400		0.50		6,200											
MOTORS & EQUIP		0	200	200		0.90		180											
DWELLING UNIT		44,860	44,860	89720		0.45		40,374											
HEAT / AC		7,650	5,850	13500		0.90		12,150											
LARGEST MOTOR						0.25		0											
TOTAL AMPS:		252		TOTAL VA:		60,504													



1 First Floor Power & Systems Plan
SCALE: 1/4" = 1'-0"

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CITY APPROVAL:

- PLAN NOTES:
- 1 PROVIDE 120V POWER IN CASEWORK FOR CONNECTION TO IT EQUIPMENT. COORDINATE EXACT LOCATION WITH OWNER/ARCHITECT. PRIOR TO ROUGH-IN.
 - 2 PROVIDE A 12U RACK IN CASEWORK WITH PATCH PANEL FOR DATA CABLING TO WALL MOUNTED SCREENS, WAP, AND OFFICES.
 - 3 PROVIDE CAT-6 CABLE TO OWNER PROVIDED SECURITY CAMERA. ALLOW FOR 20' SLACK CABLE FOR FINAL LOCATION TO BE DETERMINE BY OWNER'S SECURITY INSTALLER.
 - 4 PROVIDE (2) TAMPER AND (1) FLOW SWITCH FOR FIRE/SPRINKLER RISER MONITORING. PROVIDE A FIRE SPRINKLER MONITORING PANEL WITH AUTO DIALER TO EMERGENCY SERVICES. PROVIDE A SMOKE DETECTOR ABOVE PANEL.
 - 5 PROVIDE CAST IRON ON GRADE FLOOR BOXES EQUAL TO LEGRAND RFB SERIES FOR IN FLOOR POWER.

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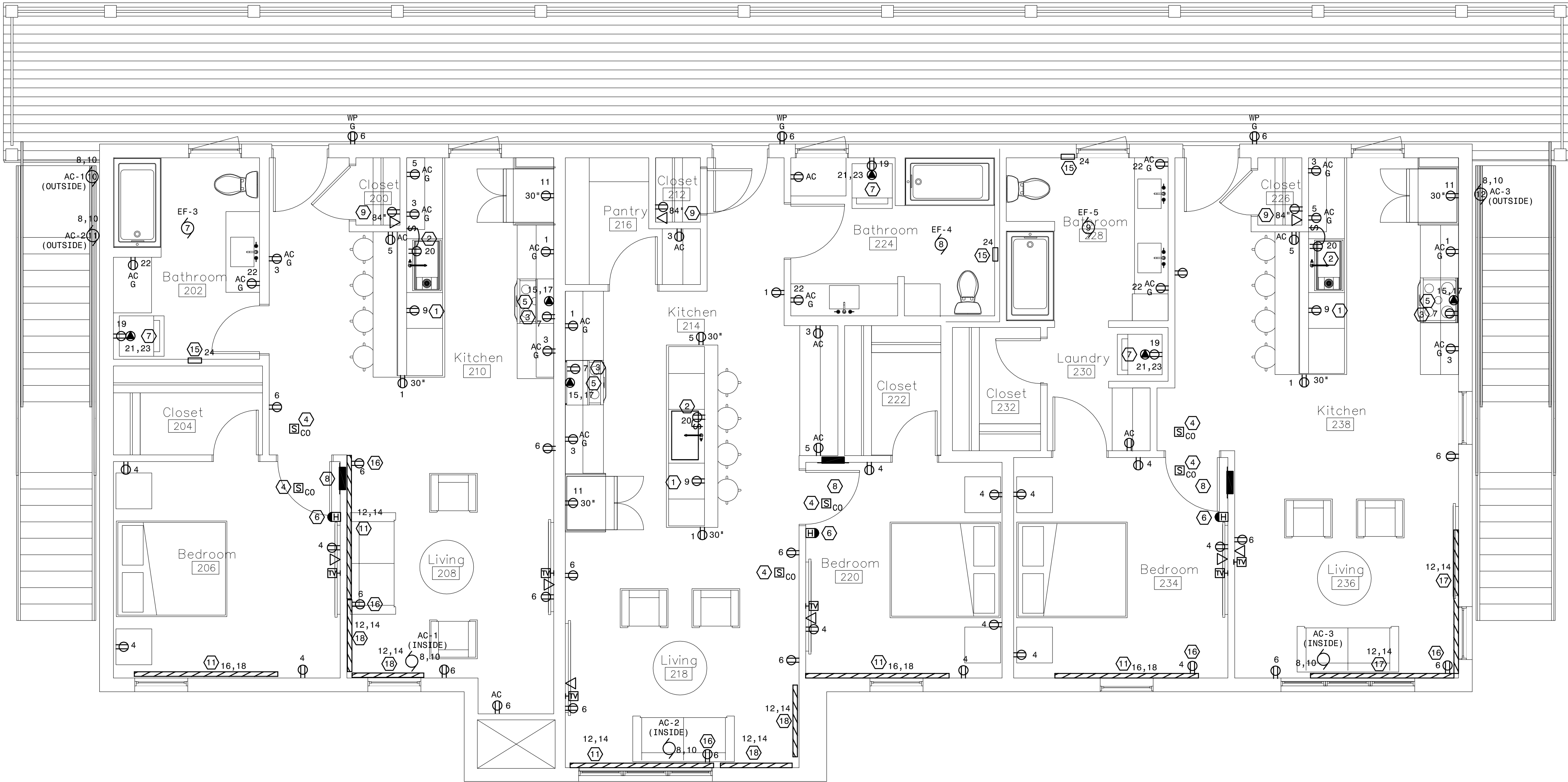
CONTACT : KRISTI

SCALE: AS NOTED

MAIN BUILDING -
FIRST FLOOR
POWER PLAN

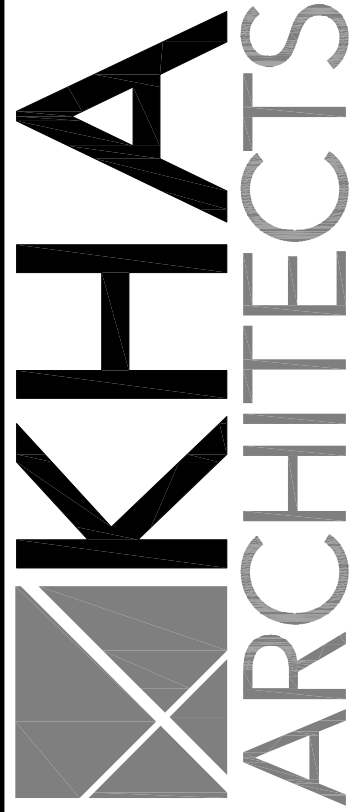
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MOTOR AND EQUIPMENT SCHEDULE - MAIN BUILDING																														
MOTOR NO	DESCRIPTION OF MOTOR OR EQUIPMENT	LOCATION (ROOM NO)	LOAD IN HORSEPOWER (HP) OR FULL LOAD AMPS (FLA)	VOLTAGE, PHASE	PANEL AND CIRCUIT NUMBER OR MCC NUMBER	CONDUCTOR SIZE AND QUANTITY	GROUND CONDUCTOR SIZE	CONDUIT SIZE	FAULT CURRENT RATING (AMPS)	CONTROLLER						DISCONNECT				CONTROL OR AUXILIARY DEVICE (SEE NOTES)										
										MAGNETIC STARTER/DISCONNECT	STARTER SIZE	VARIABLE FREQUENCY DRIVE	THERMOSTAT	MOTION SWITCH	PILOT TOGGLE SWITCH	CONTROLLER BY (DIV. NO.)	CONTROLLER LOCATION (ROOM NO.)	DISCONNECT SIZE AMPS	FUSIBLE / NON FUSIBLE	NEMA RATING	DISCONNECT BY (DIV. NO.)	VFD	DEFINITE PURPOSE RELAY	MOTION SWITCH	THERMOSTAT	AQUASTAT	PILOT SWITCH	FIRE ALARM CONTROL RELAY	FIRE ALARM DUCT DETECTORS (SUPPLY AND RETURN)	INTERLOCK WITH
1	WH-1	MAIN 120	4.5 KW	240, 1	LDP1-6,8	2 #10	#10	3/4"	5,000						23	ON UNIT	30A	NF	1	DIV 26										
2	CJ-1	MAIN EXT	31 MCA	240, 1	LDP1-2,4	2 #8	#8	1"	5,000						23	ON UNIT	60A	F50	3R	DIV 26										
3	RCP-1	MAIN 120	1/25 HP	120, 1	LDP1-12	2 #12	#12	3/4"	5,000						23	ON UNIT	20A	NF	1	DIV 26										
4	F-1	MAIN 116	12 MCA	120, 1	LDP1-10	2 #12	#12	3/4"	5,000						23	ON UNIT	20A	NF	1	DIV 26										
5	EF-1	MAIN 114	50 W	120, 1	LDP1-26	2 #12	#12	3/4"	5,000						26	ON UNIT	CORD AND PLUG			ON UNIT										
6	EF-2	MAIN 112	50 W	120, 1	LDP1-28	2 #12	#12	3/4"	5,000						26	ON UNIT	CORD AND PLUG			ON UNIT			8							
7	EF-3	MAIN 202	50 W	120, 1	LDP1-23	2 #12	#12	3/4"	5,000						26		CORD AND PLUG			ON UNIT										
8	EF-4	MAIN 224	50 W	120, 1	LDP1-23	2 #12	#12	3/4"	5,000						26		CORD AND PLUG			ON UNIT										
9	EF-5	MAIN 228	50 W	120, 1	LDP1-23	2 #12	#12	3/4"	5,000						26		CORD AND PLUG			ON UNIT										
10	AC-1	MAIN EXT	15A MCA	240, 1	APT UNIT PNL	2 #12	#12	3/4"	5,000						23	APT UNIT	30A	NF	3R	DIV 26										
11	AC-2	MAIN EXT	15A MCA	240, 1	APT UNIT PNL	2 #12	#12	3/4"	5,000						23	APT UNIT	30A	NF	3R	DIV 26										
12	AC-3	MAIN EXT	15A MCA	240, 1	APT UNIT PNL	2 #12	#12	3/4"	5,000						23	APT UNIT	30A	NF	3R	DIV 26										
NOTES FOR AUXILIARY CONTROL DEVICE																														
1. ELECTRICAL CONTRACTOR TO FURNISH, SET, AND WIRE AUXILIARY CONTROL DEVICE										5. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT - PROVIDE INTERCONNECTION BETWEEN THE UNITS																				
2. ELECTRICAL CONTRACTOR TO SET, AND WIRE AUXILIARY CONTROL DEVICE FURNISHED BY OTHERS										6. PROVIDE FAULT CURRENT LABEL ON DISCONNECT																				
3. ELECTRICAL CONTRACTOR TO WIRE AUXILIARY CONTROL DEVICE FURNISHED AND SET BY OTHERS										7. FAN TO BE CONTROLLED WITH LIGHT SWITCH																				
4. DUCT DETECTOR IN SUPPLY AND RETURN DUCTS PROVIDED BY AND INSTALLED BY ELECTRICAL										8. FAN TO BE CONTROLLED WITH LIGHTING CONTROL OCCUPANCY SENSOR																				



1 Second Floor Power & Systems Plan
SCALE: 1/4" = 1'-0"

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CITY APPROVAL:

GENERAL NOTES:

1. PROVIDE TAMPER RESISTANT RECEPTACLES FOR ALL 120 VOLT RECEPTACLES SHOWN UNLESS OTHERWISE NOTED.
2. ALL RECEPTACLES DENOTED WITH 'U' SHALL BE DUPLEX WITH INTEGRAL USB EQUAL TO LEVITON T5632 SERIES.
3. WALL SWITCHES DESIGNATED AS D* SHALL BE PROVIDED WITH DIMMING CONTROLS FOR ZONE INDICATED.
4. ALL ADA UNITS SHALL BE PROVIDED WITH HEARING IMPAIRED NOTIFICATION DEVICES INCLUDING VISUAL DOORBELL AND F/A STROBES.

PLAN NOTES:

1. PROVIDE RECEPTACLE IN CABINET BELOW FOR DISHWASHER. CONNECT TO AFCI/GFCI DUAL RATED CIRCUIT BREAKER.
2. PROVIDE RECEPTACLE IN CABINET BELOW SINK FOR DISPOSAL. INSTALL WALL SWITCH OR AIR SWITCH FOR CONTROL, COORDINATE WITH ARCHITECTURAL FOR EXACT STYLE.
3. PROVIDE RECEPTACLE AT MICROWAVE SHELF. VERIFY HEIGHT AND LOCATION PRIOR TO ROUGH-IN.
4. PROVIDE 120 VOLT COMBINATION SMOKE DETECTOR WITH BATTERY BACKUP FOR ALL 120 VOLT DETECTORS. DETECTORS ARE TO BE WIRED TOGETHER SO WHEN ONE ALARMS ALL OF THE DETECTORS WITHIN THE UNIT ALARM. DETECTORS SHALL NOT ACTIVATE GENERAL BUILDING ALARM.
5. PROVIDE NEMA 14-50 RECEPTACLE FOR RANGE. PROVIDE #8 CONDUCTORS.
6. PROVIDE LOW FREQUENCY SOUNDER WITH CONNECTION TO BUILDING GENERAL FIRE ALARM.
7. VERIFY ELECTRICAL CONNECTION REQUIREMENTS FOR STACKABLE WASHER/DRYER WITH SUPPLIER.
8. ELECTRICAL LOAD CENTER, SEE APARTMENT SCHEDULES.
9. PROVIDE (2) 2-GANG BOXES WITH 2-GANG MUD RING MOUNTED ABOVE SHELF FOR TELECOM AND TV CABLING. FROM THIS LOCATION, PROVIDE (1) CAT6A AND (1) COAX CABLE TO JANITOR/UTILITY ROOM ON FIRST FLOOR.
10. DEVICE (POWER/TELEVISION/DATA) TO BE MOUNTED AT 18 INCHES. CAT6 AND COAX TO BE COMBINED IN (1) SINGLE GANG BOX, PROVIDE BRUSHED MUD RING FOR CABLE ENTRY TO DEVICES ABOVE WHERE LOCATED BELOW RECESSED BOXES IN LIVING ROOM.
11. PROVIDE ELECTRIC BASEBOARD HEATER EQUAL TO BERKO 2500 SERIES, 2000 WATTS, 240 VOLT, SINGLE PHASE, FINISH BY ARCHITECT. PROVIDE WITH INTEGRAL RECEPTACLES WHERE REQUIRED TO MEET DEVICE SPACING REQUIREMENTS. WHERE UNITS ARE SHOWN ADJACENT TO ONE ANOTHER PROVIDE ANY FILLER PANELS, JOINER STRIPS OR INSIDE CORNERS TO MAKE BASEBOARD ONE CONTINUOUS RUN.
12. PROVIDE 208V RATED THERMOSTAT FOR BASEBOARD HEAT EQUAL TO QMARK MD26 SERIES, SNAP ACTION, POSITIVE OFF, MARKED OFF INDICATOR.
13. PROVIDE 120 VOLT CONNECTION TO EXHAUST FAN.
14. NOTE NOT USED.
15. PROVIDE FAN FORCED RECESSED WALL HEATER EQUAL TO BERKO SED SERIES. HEATER TO BE 120 VOLT, 1000 WATTS, INTEGRAL THERMOSTAT, POWER ON/OFF SWITCH, WHITE FINISH. COORDINATE EXACT ROUGH IN LOCATION WITH ARCHITECT PRIOR TO INSTALLATION TO ENSURE NO CONFLICTS WITH OTHER WALL MOUNTED ACCESSORIES IN BATHROOMS.
16. PROVIDE RECEPTACLE INTEGRAL TO ELECTRIC BASEBOARD IN THIS LOCATION.
17. PROVIDE ELECTRIC BASEBOARD HEATER EQUAL TO BERKO 2500 SERIES, 2500 WATTS, 240 VOLT, SINGLE PHASE, FINISH BY ARCHITECT. PROVIDE WITH INTEGRAL RECEPTACLES WHERE REQUIRED TO MEET DEVICE SPACING REQUIREMENTS. WHERE UNITS ARE SHOWN ADJACENT TO ONE ANOTHER PROVIDE ANY FILLER PANELS, JOINER STRIPS OR INSIDE CORNERS TO MAKE BASEBOARD ONE CONTINUOUS RUN.
18. PROVIDE ELECTRIC BASEBOARD HEATER EQUAL TO BERKO 2500 SERIES, 1000 WATTS, 240 VOLT, SINGLE PHASE, FINISH BY ARCHITECT. PROVIDE WITH INTEGRAL RECEPTACLES WHERE REQUIRED TO MEET DEVICE SPACING REQUIREMENTS. WHERE UNITS ARE SHOWN ADJACENT TO ONE ANOTHER PROVIDE ANY FILLER PANELS, JOINER STRIPS OR INSIDE CORNERS TO MAKE BASEBOARD ONE CONTINUOUS RUN.

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PROJECT #: 2515
CONTACT: KRISTI
SCALE: AS NOTED
MAIN BUILDING -
SECOND FLOOR
POWER PLAN

SHEET
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PART 1 - GENERAL

1. GENERAL CONDITIONS

A. THE GENERAL, SPECIAL, AND OTHER CONDITIONS OF THE ARCHITECTURAL, MECHANICAL AND VENDOR DOCUMENTS SHALL BE CONSIDERED AN INTEGRAL PART OF THESE ELECTRICAL SPECIFICATIONS.

B. REFERENCE TO THE "CONTRACTOR" IN THIS SPECIFICATION SHALL MEAN "ELECTRICAL CONTRACTOR (EC)", UNLESS NOTED OTHERWISE, ALL WORK SPECIFIED HEREIN IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.

2. SCOPE OF WORK

A. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TOOLS AND OTHER ITEMS NECESSARY FOR, OR INCIDENT TO, THE INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM AS REQUIRED FOR THIS PROJECT.

B. ALSO INCLUDE ALL OTHER WORK AND MISCELLANEOUS EQUIPMENT NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRED, THAT ARE REQUIRED FOR A FULLY FUNCTIONAL AND TESTED SYSTEM.

3. DRAWINGS AND DOCUMENTS

A. THE DRAWINGS AND SPECIFICATIONS FORM A COMPLETE SET OF PLANS FOR THE ELECTRICAL WORK FOR THIS PROJECT. WHAT IS REQUIRED BY EITHER SHALL BE AS BINDING AS IF REQUIRED BY BOTH. IN THE EVENT THE DRAWINGS AND SPECIFICATIONS ARE IN CONFLICT, THE GREATER REQUIREMENT OR COST SHALL BE INCLUDED IN BID, OR IF TIME ALLOWS, A CLARIFICATION WILL BE ISSUED.

B. BIDDERS SHALL EXAMINE AND INCLUDE ALL OTHER TRADE AND EQUIPMENT AND DRAWINGS AND SPECIFICATIONS TO AVOID OMISSIONS, DUPLICATIONS, AND TO ENSURE COMPLETE INSTALLATION OF ALL WORK FOR ELECTRICAL.

C. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW APPROXIMATE LOCATION ONLY. PLACEMENT OF ELECTRICAL EQUIPMENT AND DEVICES SHALL NOT INTERFERE WITH LOCATIONS OR CLEARANCES OF OTHER TRADES' MATERIALS OR EQUIPMENT. COORDINATE THE PLACEMENT OF ELECTRICAL DEVICES WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS.

D. THE DIRECT ROUTING OF CONDUITS AND WIRING IS NOT ASSURED. EXACT REQUIREMENTS SHALL BE GOVERNED BY THE CONDITIONS OF THE PROJECT SITE. EXTRA LENGTHS OF WIRING OR THE ADDITION OF PULL OR JUNCTION BOXES, ETC., NECESSITATED BY SUCH CONDITIONS, SHALL BE INCLUDED IN THE BID.

4. CODES, INSPECTIONS AND FEES

A. THE COMPLETED ELECTRICAL INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES. REVISIONS, AMENDMENTS, AND VARIATIONS IN INTERPRETATIONS BY APPROPRIATE AUTHORITIES HAVING JURISDICTION. WHERE THE DRAWINGS AND SPECIFICATIONS CALL FOR WORKMANSHIP OR MATERIALS IN EXCESS OF CODE OR REGULATORY REQUIREMENTS, THE DRAWINGS AND SPECIFICATIONS SHALL GOVERN.

B. THE WORK SPECIFIED HEREIN SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY AUTHORIZED REPRESENTATIVES OF THE NATIONAL BOARD OF FIRE UNDERWRITERS, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION, AND THE ENGINEER. THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS TO HAVE THE ELECTRICAL WORK INSPECTED BY APPROPRIATE INSPECTOR(S) AND SHALL PROVIDE TWO (2) COPIES OF FINAL SIGNED "CERTIFICATE OF INSPECTOR" TO THE OWNER.

C. OBTAIN AND PAY FOR ALL LICENSES, PERMITS, FEES AND CHARGES FOR ALL WORK INSTALLED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO PAY ALL FEES AND CHARGES LEVIED BY THE ELECTRICAL UTILITY COMPANY, ROUGHDRIDER ELECTRIC FOR CONNECTION TO ELECTRICAL SERVICES.

5. JOB SITE SAFETY

A. THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT THE JOB SITE. THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

B. NO ACT, DRAWING REVIEW OR CONSTRUCTION REVIEW BY THE OWNER, THE ENGINEERS OR THEIR CONSULTANTS, IS INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.

6. SITE CONDITIONS

A. EXAMINE THE SITE AND BE FAMILIAR WITH ALL EXISTING BUILDING CONDITIONS AND LIMITATIONS PRIOR TO SUBMITTING BID. NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK REQUIRED BECAUSE OF THESE CONDITIONS, OR IF INFORMATION IS VISIBLE OR READILY ATTAINABLE, FOR ANY LIMITATION OR MISUNDERSTANDING OF EXISTING CONDITIONS.

B. ANY DISCREPANCIES FROM THESE DOCUMENTS SHOULD BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO BID.

7. WORKMANSHIP AND CONTRACTOR QUALIFICATIONS

A. INSTALL ELECTRICAL EQUIPMENT AND MATERIALS IN A NEAT AND WORKMANLIKE MANNER BY PERSONS EXPERIENCED AND SKILLED IN THE TRADE. ONLY THE BEST QUALITY WORKMANSHIP WILL BE ACCEPTED. HAPHAZARD OR POOR INSTALLATION WILL BE CAUSE FOR REJECTION OF WORK. ALL EXPOSED COMPONENTS OF THE ELECTRICAL SYSTEM SHALL BE SQUARE AND TRUE WITH BUILDING LINES AND SURFACES.

B. CONTRACTOR SHALL BE LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

8. COORDINATION OF WORK

A. GIVE CAREFUL CONSIDERATION TO THE WORK OF THE GENERAL, MECHANICAL AND ALL OTHER CONTRACTORS/SUBCONTRACTORS ON THE PROJECT. ORGANIZE AND PHASE THE ELECTRICAL WORK SO THAT IT WILL NOT INTERFERE WITH THE WORK OF OTHER TRADES.

B. DRAWINGS AND SPECIFICATIONS FOR OTHER TRADES AND GENERAL CONSTRUCTION DRAWINGS SHALL BE CONSULTED FOR COORDINATION INFORMATION, DETAILS, DIMENSIONS, ETC. COORDINATE ALL SHAFTS, CHASES, FURRED SPACES, SUSPENDED CEILING, LOCATIONS OF EQUIPMENT, ETC.

C. THE LOCATION OF ALL OUTLETS, WIRING, AND EQUIPMENT SHALL BE VERIFIED. THE ELECTRICAL REQUIREMENTS OF ANY EQUIPMENT SHALL BE VERIFIED WITH ACTUAL EQUIPMENT OR APPROVED SHOP DRAWINGS PRIOR TO ANY ROUGH-IN WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES.

D. DIMENSIONS GIVEN ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. DIMENSIONS, WHETHER CALCULATED OR SCALED, SHALL BE VERIFIED IN THE FIELD.

E. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. COORDINATE WITH OTHER TRADES TO AVOID REWORK DUE TO FIELD CONDITIONS. CHANGES OR ADDITIONS, SUBJECT TO ADDITIONAL COMPENSATION, WHICH ARE MADE WITHOUT WRITTEN AUTHORIZATION AND AN AGREED PRICE, SHALL BE

AT THE CONTRACTOR'S RISK AND EXPENSE.

F. COORDINATE ROUTING OF ALL CONDUIT AND WIRE CONCEALED IN WALLS, SOFFITS OR CEILINGS PROVIDED BY THE GENERAL CONTRACTOR. FIELD COORDINATE ALL WORK TO CONCEAL INSTALLATIONS NOT COORDINATED OR SPECIFICALLY APPROVED BY THE ARCHITECT AND ENGINEER.

G. VERIFY ITEMS SUCH AS DOOR SWINGS, WINDOW LOCATIONS, CASEWORK, ETC., BEFORE INSTALLING ANY ELECTRICAL EQUIPMENT OR DEVICES.

H. MAKE MINOR ADJUSTMENTS TO WORK WHERE REQUESTED BY THE OWNER OR THE OWNER'S REPRESENTATIVE WHEN ADJUSTMENTS ARE NECESSARY OF PROPER OPERATION AND WITHIN THE INTENT OF THE CONTRACT.

9. MATERIALS AND EQUIPMENT

A. UNLESS OTHERWISE SPECIFIED, ALL MATERIAL AND EQUIPMENT SHALL BE NEW AND MANUFACTURED BY APPROVED OR LISTED MANUFACTURERS. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF ALL GOVERNING CODES.

B. ALL MATERIAL AND EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES, INC. (UL), AS CONFORMING TO ITS STANDARDS IN EVERY CASE WHERE SUCH A STANDARD HAS BEEN ESTABLISHED FOR THAT TYPE OF MATERIAL OR EQUIPMENT.

C. WHERE EQUIPMENT SUPPLIED BY THE CONTRACTOR HAS CHARACTERISTICS OTHER THAN AS SPECIFIED HEREIN, THE CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, REMOVE AND REPLACE THE ELECTRICAL WORK NECESSITATED BY THE SUBSTITUTED PRODUCT.

10. TEMPORARY INSTALLATIONS

A. COMPLY WITH THE OWNER AND GENERAL CONTRACTOR REQUIREMENTS. ALL WORK TO BE IN CONFORMANCE WITH N.E.C. ARTICLE 590, TEMPORARY INSTALLATIONS.

B. ELECTRICAL POWER SYSTEM: PROVIDE AN ELECTRICAL DISTRIBUTION SYSTEM OF SUFFICIENT SIZE, CAPACITY, AND POWER CHARACTERISTICS REQUIRED FOR ALL CONSTRUCTION OPERATIONS.

C. PROVIDE NEW TEMPORARY ELECTRICAL SERVICE AS REQUIRED FOR THE PROJECT. UTILIZE EXISTING BUILDING DISTRIBUTION IF AVAILABLE, AND SUPPLEMENT AS REQUIRED FOR THE PROJECT CONDITIONS. FOR NEW SERVICE CONSTRUCTION, COORDINATE WITH THE UTILITY TO PROVIDE TEMPORARY SERVICE FOR THE DURATION OF CONSTRUCTION SO AS NOT TO INTERFERE WITH NEW SERVICE CONSTRUCTION. PAY FOR ALL UTILITY CHARGES ASSOCIATED WITH THE TEMPORARY SERVICE INCLUDING ENERGY BILLS.

D. LIGHTING: PROVIDE TEMPORARY LIGHTING WITH LOCAL SWITCHING THROUGHOUT ALL AREAS OF CONSTRUCTION. PROVIDE ADEQUATE ILLUMINATION FOR CONSTRUCTION OPERATIONS, OBSERVATIONS, INSPECTIONS, AND TRAFFIC CONDITIONS.

E. WHERE LIGHT FIXTURES EXIST IN THE AREA OF CONSTRUCTION, UTILIZE EXISTING LIGHTS AND OUTLETS AS MUCH AS PRACTICAL TO MEET THESE REQUIREMENTS. CLEAN AND RE-LAMP (WHERE APPLICABLE) FIXTURES USED FOR TEMPORARY LIGHTING.

F. REMOVE ALL TEMPORARY INSTALLATION ELECTRICAL EQUIPMENT AT THE END OF THE PROJECT. PATCH AND SEAL SLEEVE OPENINGS.

11. DEMOLITION

A. WHERE ELECTRICAL WORK TO REMAIN IS DAMAGED OR DISTURBED IN THE COURSE OF THE WORK, REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL CAPACITY, QUALITY AND FUNCTIONALITY.

B. ACCESSIBLE WORK INDICATED TO BE DEMOLISHED: REMOVE EXPOSED ELECTRICAL INSTALLATION IN ITS ENTIRETY.

C. ABANDONED WORK: CUT AND REMOVE BURIED RACEWAY AND WIRING INDICATED TO BE ABANDONED IN PLACE 2 INCHES BELOW THE SURFACE OF ADJACENT CONSTRUCTION. CAP AND PATCH SURFACE TO MATCH EXISTING FINISH.

D. REMOVAL: REMOVE DEMOLISHED MATERIAL FROM PROJECT SITE.

E. TEMPORARY DISCONNECTION: REMOVE, STORE, CLEAN, REINSTALL, RECONNECT, AND MAKE OPERATIONAL COMPONENTS INDICATED FOR RELOCATION.

12. CUTTING AND PATCHING

A. PERFORM ALL CORE DRILLING, CUTTING AND PATCHING NECESSARY FOR THE COMPLETION OF THE ELECTRICAL WORK FOR THIS PROJECT. NO STRUCTURAL MEMBERS SHALL BE DISTURBED WITHOUT OBTAINING WRITTEN PERMISSION OF THE ENGINEER.

B. ANY SURFACE WHICH IS DISTURBED IN ANY WAY BY THE CONTRACTOR SHALL BE REPAIRED AND REFINISHED TO PROVIDE A SURFACE EQUAL IN STRENGTH, DURABILITY, AND APPEARANCE TO THE ORIGINAL SURFACE.

C. WHERE IT IS NECESSARY TO DRILL OR CUT CONCRETE SURFACES, THE EDGES SHALL BE SHARPLY DEFINED. HOLES SHALL BE MADE WITH A ROTARY DRILL. CUTS SHALL BE MADE WITH A CONCRETE SAW UNLESS SOME OTHER METHOD OF MAKING SPECIFIC CUTS IS APPROVED BY THE ENGINEER.

D. PENETRATIONS THROUGH SMOKE, FIRE, HAZARDOUS AREA, OR OTHER RATED SEPARATIONS SHALL BE FIRE SEALED TO PRESERVE THE RATINGS OF THE SEPARATIONS.

E. ALL CUTTING, DRILLING, PATCHING, REPAIRING, AND REFINISHING SHALL BE DONE BY PERSONS SKILLED IN APPROPRIATE TRADES.

F. CLEAN AWAY ALL RUBBISH AND LITTER GENERATED DURING ELECTRICAL INSTALLATION.

13. SHOP DRAWINGS AND SUBMITTALS

A. SUBMIT SHOP DRAWINGS FOR ALL NEW ITEMS OF ELECTRICAL EQUIPMENT. SUBMIT ELECTRONIC PDF VERSIONS OF THE SHOP DRAWINGS FOR REVIEW. ALL SHOP DRAWING SUBMITTALS SHALL ALLOW FOR A MINIMUM OF 14 WORKING DAYS FOR ENGINEER REVIEW.

B. SHOP DRAWINGS SHALL BE DETAILED, DIMENSIONED MANUFACTURERS' DRAWINGS. EACH SET OF DOCUMENTS SHALL LIST THE PROJECT NAME AND ADDRESS, AND THE CONTRACTOR'S NAME, ADDRESS, AND TELEPHONE NUMBER. AN INDEX PAGE SHALL LIST INDIVIDUALLY ALL THE ITEMS IN THE SUBMITTAL WITH REFERENCES TO TYPE DESIGNATIONS OR OTHER IDENTIFIERS NOTED ON DRAWINGS.

C. ASSURE THAT SHOP DRAWINGS ARE COMPLETE BEFORE SUBMITTAL. SUBMITTAL TO THE ENGINEER SHALL BE VIA THE GENERAL CONTRACTOR AND, WHERE REQUIRED, THE ARCHITECT. SHOP DRAWINGS NOT SIGNED BY BOTH THE CONTRACTOR AND THE GENERAL CONTRACTOR SHALL BE RETURNED.

D. HIGHLIGHT ANY INFORMATION OR OPTIONS BEING PROVIDED. SHOP DRAWINGS NOT INDICATING WHAT IS BEING PROVIDED

WILL BE RETURNED.

E. PROVIDE A LIST FOR ANY ITEM SUBMITTED IN THE SHOP DRAWINGS WHICH IS A SUBSTITUTION FOR SPECIFIED PRODUCTS. IF THE CONTRACTOR USES MATERIALS OTHER THAN THOSE SPECIFIED AND FAILS TO CALL ATTENTION TO THE DIFFERENCES BETWEEN THESE MATERIALS AND THOSE SPECIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT, AT NO ADDITIONAL COST TO THE OWNER, OF ANY SUCH MATERIALS DETERMINED BY THE ENGINEER TO BE UNACCEPTABLE.

F. THE APPROVAL STAMP/LETTER ON THE SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OR THE SUPPLIER OF RESPONSIBILITY FOR FULL CONTRACT COMPLIANCE.

G. LIGHTING CONTROL SYSTEM SUBMITTAL - PROVIDE FLOOR PLAN DRAWINGS WHICH INDICATE LOCATIONS, ORIENTATION AND COVERAGE OF EACH SENSOR, GROUPS, ZONES, SCENES, AND OTHER SPECIFIC DESIGN SYMBOLS AND DESIGNATIONS AS REQUIRED TO DEFINE INSTALLATION, LOCATION AND CONFIGURATION OF ALL CONTROL DEVICES.

H. FIRE ALARM SUBMITTAL - PROVIDE FLOOR PLAN DRAWINGS WHICH INDICATE THE LOCATION OF ALL COMPONENTS, CIRCUITS AND RACEWAYS. FLOOR PLANS SHOULD ALSO INDICATE CIRCUIT LAYOUTS, NUMBER, SIZE AND TYPE OF RACEWAY AND CONDUCTORS, CONDUIT FILL CALCULATIONS, SPARE CAPACITY CALCULATIONS, AND NOTIFICATION APPLIANCE CIRCUIT VOLTAGE DROP CALCULATIONS.

14. MAINTENANCE MANUAL AND RECORD DRAWINGS

A. FURNISH THE OWNER WITH TWO (2) PRINTED COPIES AND TWO (2) DIGITAL DATA DVD'S OF A MANUAL COVERING THE OPERATION AND THE MAINTENANCE OF ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT. THE MANUAL SHALL BE IN A 3-RING, LOOSE LEAF, HEAVY DUTY BINDER AND SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL. EACH MANUAL SHALL CONTAIN THE FOLLOWING:

• COMPLETE MANUFACTURER CATALOG DATA, MANUFACTURER'S LITERATURE, WIRING DIAGRAMS, DETAIL OPERATING INSTRUCTIONS, AND A COMPLETE LISTING OF SUPPLIERS AND DISTRIBUTORS WHERE REPLACEMENT PARTS AND MAINTENANCE SERVICES ARE AVAILABLE FOR ALL EQUIPMENT.

• PHYSICAL DESCRIPTION AND INSTALLATION INSTRUCTIONS AND USER'S MANUAL AND OPERATING INSTRUCTIONS.

• REPLACEMENT PARTS LIST.

• INSPECTION CERTIFICATES, SIGNED BY THE APPROPRIATE INSPECTOR, SHALL BE FURNISHED IN THE MAINTENANCE MANUAL.

• MANUFACTURER'S WARRANTY.

• SPECIFIED TEST REPORTS.

• DATA DVD WITH INDEXED PDF DOCUMENTS OF ALL MANUAL CONTENT OF ITEMS ABOVE.

B. MARKUP A SET OF CONSTRUCTION DOCUMENTS AS WORK PROGRESSES, TO SHOW ACTUAL CIRCUIT ROUTING AND DIMENSIONED INFORMATION, SIZES, TYPES, ETC., EQUIPMENT LOCATION CHANGES, AND ANY OTHER CHANGES OR DEVIATIONS BETWEEN PROJECT WORK, AS BUILT, AND THE CONTRACT DOCUMENTS. MARKINGS SHALL BE NEAT, LEGIBLE, AND PERMANENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR TRANSFER APPLICABLE MARKINGS TO SECOND SET OF DOCUMENTS AND PROVIDE BOTH SETS OF RECORD DOCUMENTS TO THE OWNER.

15. CLEAN-UP

A. RID THE PREMISES OF SCRAP MATERIALS, TRASH AND DEBRIS BOTH DURING CONSTRUCTION AND AT COMPLETION OF PROJECT. LEAVE THE BUILDING AND SURROUNDING AREA IN A CLEAN AND ORDERLY CONDITION.

16. ACCEPTANCE DEMONSTRATION AND TRAINING

A. PERFORM SYSTEM START-UP, TESTING AND PROGRAMMING PRIOR TO OWNER'S TRAINING. DO NOT SCHEDULE DEMONSTRATIONS UNTIL SYSTEMS ARE COMPLETELY READY TO TURN OVER TO THE OWNER AS FINAL.

B. DEMONSTRATE TO THE OWNER THE OPERATION OF THE ELECTRICAL INSTALLATIONS, INCLUDING ANY AND ALL SPECIAL ITEMS INSTALLED BY HIM OR INSTALLED UNDER HIS SUPERVISION. THE TIMING OF THE DEMONSTRATION WILL BE DETERMINED BY THE OWNER UPON COMPLETION OF THE WORK. PROPERLY SET AUTOMATIC TIME SWITCHES TO PERFORM SWITCHING OPERATIONS IN ACCORDANCE WITH SCHEDULES PROVIDED BY THE OWNER'S REPRESENTATIVE, AND DEMONSTRATE (USING THE MANUFACTURER'S OPERATING INSTRUCTIONS) HOW TO OVERRIDE, TEST AND PROGRAM LIGHTING SYSTEMS.

17. REBATE PROGRAMS

A. PROVIDE THE OWNER WITH ALL REBATE FORMS, FILLED OUT WITH APPLICABLE PROJECT INFORMATION, FOR UTILITY OR PRODUCT REBATE PROGRAMS TO WHICH THE OWNER IS ELIGIBLE.

18. GUARANTEES AND WARRANTIES

A. FURNISH THE OWNER WITH A WRITTEN GUARANTEE FOR THE PERIOD OF ONE (1) YEAR AGAINST THE FAILURE OF ANY PART OF THE ELECTRICAL SYSTEM INSTALLED UNDER THE SPECIFICATIONS DUE TO FAULTY MATERIAL OR WORKMANSHIP, WITHOUT ANY CHARGES, TO THE OWNER. GUARANTEE PERIOD TO START UPON SUBSTANTIAL COMPLETION OR AS SPECIFIED UNDER GENERAL AND SPECIAL CONDITIONS.

B. ASSURE THAT ANY EXTENDED WARRANTIES TO WHICH THE OWNER IS ELIGIBLE, ARE PASSED ON TO THE OWNER.

PART 2 - PRODUCTS

1. GENERAL - MATERIALS

A. ALL MATERIALS MUST BE NEW AND BEAR UNDERWRITER'S LABORATORIES (UL) LABEL. MATERIALS THAT ARE NOT COVERED BY UL TESTING STANDARDS SHALL BE TESTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY OR A GOVERNMENTAL AGENCY. MATERIAL NOT IN ACCORDANCE WITH THESE SPECIFICATIONS MAY BE REJECTED EITHER BEFORE OR AFTER INSTALLATION.

2. GENERAL - INSTALLATION

A. ELECTRICAL SYSTEM LAYOUTS INDICATED ON THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. GOVERN EXACT ROUTING OF CABLE AND WIRING AND THE LOCATIONS OF OUTLETS BY STRUCTURE AND EQUIPMENT DERIVED, TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS.

B. CONSULT ALL OTHER DRAWINGS, VERIFY SCALES AND REPORT ANY DIMENSIONAL DISCREPANCIES OR OTHER CONFLICTS WITH OWNER BEFORE SUBMITTING BID.

C. ALL HOME RUNS TO PANELBOARDS ARE INDICATED AS STARTING FROM THE OUTLET NEAREST THE PANEL AND CONTINUING IN THE GENERAL DIRECTION OF THAT PANEL. CONTINUE SUCH CIRCUITS TO THE PANEL AS THROUGH THE ROUTES WERE COMPLETED. TERMINATE HOMERUNS OF SIGNAL, ALARM AND COMMUNICATIONS SYSTEMS IN A SIMILAR MANNER.

D. AVOID CUTTING AND BORING HOLES THROUGH STRUCTURE OR STRUCTURAL MEMBERS WHEREVER POSSIBLE. OBTAIN PRIOR APPROVAL OF OWNER AND CONFORM TO ALL STRUCTURAL REQUIREMENTS WHEN CUTTING OR BORING THE STRUCTURE IN NECESSARY AND PERMITTED.

E. FURNISH AND INSTALL ALL NECESSARY HARDWARE, HANGERS, BLOCKING, BRACKETS, BRACING, RUNNERS, ETC., REQUIRED FOR EQUIPMENT SPECIFIED UNDER THIS SECTION.

F. PROVIDE NECESSARY BACKING REQUIRED TO INSURE RIGID MOUNTING OF OUTLET BOXES.

3. CONDUIT AND CABLES

A. ELECTRICAL CONDUCTORS SHALL BE BUILDING WIRE, EXCEPT WHERE OTHER TYPE OF WIRE OR CABLE IS SPECIFICALLY INDICATED.

B. BUILDING WIRE CONDUCTORS SHALL BE SOFT-DRAWN ANNEALED COPPER, HAVING A CONDUCTIVITY OF NOT LESS THAN 98% PURE COPPER. CONDUCTOR SIZES ARE AMERICAN WIRE GAUGE (AWG) OR CIRCULAR MILS (KCMIL) AS FOLLOWS:

• #12 AWG SOLID COPPER.
• #10 AWG AND LARGER SHALL BE STRANDED COPPER.
• BRANCH CIRCUITS TO BE COLOR CODED, COLOR IMPREGNATED WIRE.

C. INSULATION TYPE: XHHW, XHHW-2, THHW, OR THWN-2, COLOR CODED, COLOR IMPREGNATED WIRE.

D. AC, CORE CLAD OR ROMEX (NM) CABLES ARE PERMITTED WHERE ALLOWED BY CODE.

E. LIGHT FIXTURES SHALL NOT BE USED AS RACEWAY UNLESS LISTED AND MARKED AS RACEWAY IN ACCORDANCE WITH N.E.C. ARTICLE 410.64.

F. ELECTRICAL CONDUIT INSTALLATIONS MUST BE SUPPORTED PER THE N.E.C. AND NOT EXCEED 10 FEET BETWEEN SUPPORTS. ELECTRICAL CONDUIT INSTALLATIONS MUST BE A MINIMUM OF 3/4 INCH EMT.

G. CORD DROPS AND PORTABLE APPLIANCE CONNECTIONS: TYPE SO, OIL PROOF, HARD SERVICE CORD WITH STAINLESS-STEEL, WIRE-MESH, STRAIN RELIEF DEVICE AT TERMINATIONS TO SUIT APPLICATION.

H. PROVIDE #12 BRANCH CIRCUIT CONDUCTORS FOR ALL 120 VOLT, 20 AMP CIRCUITS LESS THAN 75 FEET (100 FEET FOR 277 VOLT CIRCUITS). PROVIDE #10 BRANCH CIRCUIT CONDUCTORS FOR ALL 120 VOLT, 20 AMP CIRCUITS OVER 75 FEET (100 FEET FOR 277 VOLT CIRCUITS).

I. WHERE MORE THAN THREE (3) CURRENT CARRYING CONDUCTORS ARE INSTALLED IN A SINGLE RACEWAY (E.G. COMBINING MULTI-CIRCUIT HOMERUNS), CONDUCTOR AMPACITY SHALL BE DE-RATED AS REQUIRED BY THE N.E.C.

J. PROVIDE DEDICATED NEUTRAL CIRCUITS FOR ALL 120 VOLT AND 277 VOLT BRANCH CIRCUITS.

4. LOW VOLTAGE CONDUCTORS AND CABLES

A. RS-232 CABLE: PLENUM RATED, TYPE CMP, TWO PAIR, NO. 22 AWG, STRANDED COPPER; EACH PAIR 100 PERCENT SHIELDED, COPPER DRAIN WIRE.

B. RS-485 CABLE: PLENUM RATED, TYPE CMP, TWO TWISTED PAIR, NO. 22 AWG, STRANDED COPPER, UNSHIELDED.

C. COAXIAL CABLE FOR CATV, MATV AND DBS:

• RG-6: 16 AWG, SOLID, COPPER-COVERED STEEL CONDUCTOR; GAS-IMPREGNATED, FOAM-PE INSULATION. DOUBLE SHIELDED WITH 100 PERCENT ALUMINUM-FOIL SHIELDED AND 60 PERCENT ALUMINUM BRAID. PLENUM RATED, TYPE CMP. USE WHERE THE COAXIAL CABLE WILL BE TAPPED OR SPLIT.

D. CONTROL CIRCUITS

• LOW VOLTAGE CONTROL CABLE: TWISTED PAIRS #16 AWG WITH OVERALL SHIELD.

• CLASS 1 CONTROL CIRCUITS: STRANDED COPPER, TYPE THWN OR XHHN, IN RACEWAY OR CABLE WITH ARMOR JACKET.

• CLASS 2 CONTROL CIRCUITS: STRANDED COPPER, TYPE THWN OR XHHN, IN RACEWAY, POWER-LIMITED CABLE, CONCEALED IN BUILDING FINISHES, CABLE WITH ARMOR JACKET OR POWER-LIMITED TRAY CABLE, IN CABLE TRAY AND ON HANGERS.

• CLASS 3 REMOTE-CONTROL AND SIGNAL CIRCUITS: STRANDED COPPER, TYPE TW OR TYPE TF, COMPLYING WITH UL 83.

F. ALL LOW VOLTAGE CABLES INSTALLED IN METAL BOX AND RACEWAY SYSTEM TO AN ACCESSIBLE CEILING.

G. MINIMUM CONDUIT SIZE IS 3/4 INCH WITH LARGER SIZES NOTED ON PLAN. INSTALL PLASTIC BUSHING ON CONDUIT ENDS.

H. GROUP AND BUNDLE LOW VOLTAGE CABLES AND PROVIDE SUPPORT INDEPENDENT OF CEILING SUPPORTS. UTILIZE D RINGS, J-HOOKS OR APPROVED NYLON STRAPS TO HOLD CABLES AND PROVIDE SUPPORTS INDEPENDENT OF THE CEILING SUPPORTS.

5. GROUNDING AND BONDING

A. CIRCUITS, METAL RACEWAY SYSTEMS, AND ALL OTHER PERMANENTLY INSTALLED ELECTRICAL EQUIPMENT SHALL BE SOLIDLY GROUNDING IN ACCORDANCE WITH THE N.E.C. TO FORM A CONTINUOUS, PERMANENT AND EFFECTIVE GROUNDING SYSTEM.

B. GROUNDING CONDUCTOR CONNECTIONS SHALL BE MADE

WITH SOLDERLESS PRESSURE TYPE FITTINGS, WHERE WELDED CONNECTIONS ARE PRACTICAL, CONNECTIONS MAY BE MADE BY THE USE OF SUITABLE WELDING PROCESS. ALL CONNECTIONS SHALL BE MADE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

C. GROUND RODS TO BE 10' X 3/4" COPPER CLAD STEEL. GROUND RODS IN EXTERIOR AREA LIGHTS TO BE 8' X 5/8" COPPER CLAD STEEL.

D. THE BUILDING AND ELECTRICAL SYSTEMS SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE N.E.C.

E. ELECTRICAL SERVICE AND SEPARATELY DERIVED ALTERNATING CURRENT SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH N.E.C., ARTICLE 250.

F. ALL FEEDER AND BRANCH CIRCUITS SHALL HAVE A GREEN COPPER GROUND CONDUCTOR RUN WITH THE PHASE AND NEUTRAL CONDUCTORS.

G. PROVIDE CODE REQUIRED #6 OR LARGER GROUND CONDUCTOR AND 12 INCH GROUND BUS AT TELECOMMUNICATIONS DEMARCONATION LOCATION.

6. CONDUIT HANGARS AND SUPPORT

A. FOR INDIVIDUAL CONDUIT RUNS NOT DIRECTLY FASTENED TO THE STRUCTURE, USE THREADED ROD AND HANGERS MANUFACTURED BY CADY, UNISTRUT OR POWERSTRUT.

B. GALVANIZED STEEL SLOTTED CHANNEL SUPPORT SYSTEMS WITH FITTINGS AND SUPPORTS BY THE SAME MANUFACTURER.

C. CONDUIT AND CABLE SUPPORT DEVICES TO BE STEEL WITH HANGERS AND SUPPORTS SUITABLE FOR RACEWAY OR CABLE TO BE SUPPORTED.

D. STEEL SLOTTED SUPPORT SYSTEMS WITH MANUFACTURER'S GALVANIZED STEEL COATING.

E. FABRICATED METAL EQUIPMENT SUPPORT ASSEMBLIES TO BE BOLTED STRUCTURAL STEEL OR STEEL SLOTTED SYSTEMS CALCULATED BY A REGISTERED STRUCTURAL ENGINEER.

F. CONCRETE BASES INSTALLED BY THE ELECTRICAL CONTRACTOR. BASE TO BE NOMINALLY 3000 PSI CONCRETE WITH DIMENSIONS NOTED ON THE DRAWINGS. INSTALL FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT.

7. RACEWAYS AND OUTLET BOXES

A. PROVIDE RACEWAYS, FITTINGS, CONNECTORS AND ACCESSORIES FOR A COMPLETE RACEWAY SYSTEM. RACEWAYS INCLUDE:

• RIGID STEEL: HOT-DIPPED GALVANIZED.
• ELECTRICAL METALLIC TUBING (EMT): ELECTRO-GALVANIZED.
• WIREWAYS: ENAMEL FINISH, HINGED TYPE.
• FLEXIBLE METALLIC CONDUIT: FOR FINAL CONNECTION IN DRY LOCATIONS LESS THE 6 FOOT LENGTHS.

• LIQUID TIGHT FLEXIBLE METAL CONDUIT: FOR FINAL CONNECTION IN DAMP OR WET LOCATIONS LESS THAN 6 FOOT LENGTHS.

B. PROVIDE FITTINGS AND ACCESSORIES APPROVED FOR THE PURPOSE EQUAL IN ALL RESPECTS TO THE CONDUIT OR RACEWAY. EMT CONNECTORS AND COUPLINGS SHALL BE SET STEEL SETSCREW TYPE INDOORS AND STEEL COMPRESSION TYPE IN DAMP OR WET LOCATIONS AND OUTDOORS.

C. OUTLET BOXES: 4" SQUARE X 1 1/2" DEEP (OR LARGER) GALVANIZED SHEET STEEL X-0 TYPE WITH PLASTER RING AND COVER FOR GENERAL INTERIOR USE. CAST METAL TYPE FS OR FD WITH MATCHING SCREW COVERS FOR EXTERIOR AND EXPOSED INTERIOR LOCATIONS (GASKETED IN DAMP OR WET LOCATIONS).

D. JUNCTION BOXES SHALL BE SAME AS OUTLET BOXES UP TO 42 CU. IN. USE CODE-GAUGE STEEL IN LARGER SIZES WITH SURFACES OR FLUSH-TYPE SCREW-MOUNTED TRIM COVERS. BOXES AND COVERS PAINTED WITH INHIBITOR-PRIMED PAINT INSIDE AND OUT.

E. PULL BOXES SHALL BE SAME AS JUNCTION BOXES UNLESS INDICATED OTHERWISE ON THE DRAWINGS, WITH COVERS.

F. TELEPHONE OUTLET BOXES SHALL NOT SMALLER THAN 4 11/8" SQUARE X 2 1/2" DEEP WITH SINGLE-GANG RING. OTHER CONFIGURATIONS AS SHOWN ON THE PLAN.

G. FLOOR BOXES - RECESSED. FLOOR BOXES TO BE LEGRAND/WIREMOLD HFBA SERIES, THOMAS & BETTS 665 OR 667 SERIES OR EQUAL. FLOOR BOX TO HAVE (4) INDEPENDENT WIRING COMPARTMENTS, (2) FOR POWER AND (2) FOR COMMUNICATIONS, PROVIDE GFCI OR BLANK BRACKETS AS REQUIRED. COVERS TO BE FLANGED DIE-CAST ALUMINUM ASSEMBLY WITH BRUSHED ALUMINUM FINISH, LID ARE TO BE FLUSH WITH FINISHED FLOOR, NO CUTOUTS, FINISH BY ARCHITECT.

H. FLOOR BOXES - POKE THROUGH. FLOOR BOXES TO BE LEGRAND/WIREMOLD EVOLUTION SERIES 6AT, FLOOR BOX TO HAVE (2) 20 AMPERE DUPLEX RECEPTACLES AND BRACKETS FOR MOUNT UP TO (8) RJ45 JACKS. COVER TO BE FLUSH STYLE ASSEMBLY WITH SPRING LOADED SLIDES, FINISH BY ARCHITECT.

I. ENCLOSE ALL ELECTRICAL POWER WIRING IN CONDUIT.

J. CONDUIT SHALL BE RIGID STEEL OR EMT AS FOLLOWS:

• ABOVE GROUND: USE RIGID STEEL ONLY.
• LOCATIONS SUBJECT TO MECHANICAL INJURY. RIGID STEEL ONLY.
• DRY LOCATIONS AND NOT SUBJECT TO MECHANICAL INJURY: EMT.

K. USE FLEXIBLE CONDUITS IN THE FOLLOWING APPLICATIONS:

• RECESSED LIGHTING FIXTURES.
• MOTOR CONNECTIONS AND TRANSFORMERS.
• AT BUILDING JOINTS.
• AT WET LOCATIONS, FLEXIBLE CONDUIT SHALL BE LIQUID TIGHT TYPE.

L. METAL CLAD CABLE WITH GREEN GROUND CONDUCTOR ALLOWED FOR THE FOLLOWING CONDUITS:

• ABOVE ACCESSIBLE CEILINGS FOR FINAL CONNECTIONS FROM JUNCTION BOXES TO LIGHT FIXTURES NOT EXCEEDING 6 FEET IN LENGTH.
• ALLOWED FOR BRANCH CIRCUITS FISHED INTO EXISTING WALL CONSTRUCTION.
• ALLOWED IN NEW CASEWORK OR BUILT UP STRUCTURES WHERE FLEXIBILITY IS REQUIRED.

M. CONDUIT CAST IN CONCRETE FLOORS IS NOT ALLOWED.

N. FITTINGS FOR EMT SHALL BE STEEL COMPRESSION TYPE IN EXTERIOR OR DAMP LOCATIONS. FITTINGS FOR OTHER RACEWAYS SHALL BE STEEL SET-SCREW TYPE STYLE IN INTERIOR LOCATIONS. DIE CAST FITTINGS ARE NOT ALLOWED.

O. INSTALL NYLON PULL CORDS IN ALL EMPTY CONDUITS.

P. PROVIDE EXPANSIONS FITTINGS CROSSING ALL EXPANSION JOINTS OR SPANNING BETWEEN ISOLATED STRUCTURES.

Q. SURFACE RACEWAYS TO BE A 2 COMPARTMENT STYLE SIMILAR TO WIREMOLD G-4000 WHITE FINISH WITH VOLUME OUTLETS NOTED ON PLANS.

R. GENERAL CONDUIT INSTALL

ENCLOSURES OF CODE GRADE STEEL. OVERSIZE GUTTERS SHALL BE PROVIDED FOR FEED THROUGH WHERE INDICATED OR REQUIRED. WHERE DOOR LUGS ARE NOT PERMITTED BY LOCAL CODE, A SUITABLE PULL BOX OR GUTTER ADJACENT TO PANELS SHALL BE PROVIDED FOR CONNECTIONS.

C. PANELBOARDS SHALL HAVE TRIM AND FLAT LOCKING DOORS WITH BOTH HINGES AND TRIM CLAMPS COMPLETELY CONCEALED. PANELS TO BE DOOR IN DOOR CONSTRUCTION. DOOR LOOKS SHALL BE FLUSH WITH THE COVER. ALL DOOR LOOKS SHALL BE COMMON KEYPED. TWO (2) KEYS SHALL BE PROVIDED FOR EACH PANELBOARD. A CLEAR PLASTIC-COVERED TYPEWRITTEN CIRCUIT DIRECTORY SHALL BE MOUNTED IN A CABINET HOLDER ATTACHED TO THE INNER SIDE OF THE DOOR. PANELBOARDS SHALL HAVE BLACK PLASTIC PLATES WITH 1/2 INCH HIGH WHITE CUT LETTES STAMPING PANELBOARD NUMBER AND VOLTAGE. WHERE PANELBOARDS ARE IN PUBLIC AREAS, IDENTIFICATION PLATES SHALL BE INSIDE DOOR.

D. BUSES SHALL BE MADE FROM 99 PERCENT ELECTROLYTIC COPPER OR 55 PERCENT CONDUCTIVITY ALUMINUM AND SHALL BE INDEPENDENTLY SUPPORTED (WITHOUT DEPENDENCE UPON THE CIRCUIT BREAKERS), WHERE BREAKERS AND/OR SWITCHES ARE LISTED IN THE SCHEDULES AS 'SPACE ONLY', THIS SHALL INCLUDE EXTENDED BUS AND MOUNTING PROVISIONS.

E. CIRCUIT BREAKERS SHALL BE BOLT-ON AND SHALL HAVE BOLTED LINE AND LOAD TERMINALS. ALL BRANCH CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, THERMAL MAGNETIC, COMMON TRIP ON ALL MULTI-POLE BREAKERS AND HAVING A MINIMUM SHORT CIRCUIT RATING AS SHOWN ON THE DRAWINGS. EACH BREAKER SHALL BE ITS CURRENT RATING ENGRAVED, IN EASY TO READ NUMBERS, ON THE TOGGLE HANDLE. ALL BREAKERS USED FOR LIGHTING SWITCHING CONTROL SHALL BE UL LISTED 'SMD' SWITCHING DUTY. ALL BREAKERS USED FOR MOTOR OR HIGH INDUCTANCE LOADS SHALL BE HACR RATED.

F. FUSIBLE FACTORY ASSEMBLED PANELBOARDS OR EQUAL BE SCHNEIDER ELECTRIC QMB FOR 225A-1600A OR EQUAL BY CUTLER-HAMMER, G.E., OR SEMENS WITH REQUIREMENTS NOTED ABOVE.

- TRIMS TO BE 4 PIECE WITHOUT DOOR FOR NEMA 1; WITH DOOR NOTED ON THE DRAWINGS OR FOR NEMA 3R/5/12.

- FUSED SWITCHES: NEMA KS 1, TYPE HD. TWIN, SIDE BY SIDE MOUNT FOR 30A-200A. SINGLE MOUNT FOR 400A AND ABOVE.

- FURNISH REJECTION FUSES AS NOTED IN FUSES BELOW.

G. WHERE PANELBOARDS ARE FLUSH MOUNTED IN WALLS, PROVIDE A MINIMUM OF FOUR (4) 1 INCH CONDUITS STUBBED TO AN ACCESSIBLE CEILING ABOVE THE PANEL.

H. CIRCUIT NUMBERS APPEARING ON DRAWINGS SHALL BE USED FOR REFERENCE ONLY. ACTUAL CONNECTIONS SHALL BE IN ACCORDANCE WITH PHASING OF THE CABINET AND LOAD BALANCE REQUIREMENTS. ROOM NUMBERS OR NAMES USED FOR CIRCUIT IDENTIFICATION SHALL CORRESPOND TO NAME PLATES INSTALLED ON ROOM DOORS BY THE GENERAL CONTRACTOR OR AS SELECTED BY THE OWNER AND SHALL BE VERIFIED AS THESE NAMES NOT BE THE SAME AS ROOM TITLES ON THE DRAWINGS.

I. TOP OF PANELBOARD TUBS SHALL BE 6'-6" ABOVE FINISHED FLOOR.

14. FUSES

A. FUSES SHALL BE ONE-TIME CARTRIDGE FUSES MANUFACTURED BY BUSMAN, GOULD SHAMMUT, OR LITTLE FUSE.

B. THE CONTRACTOR SHALL FURNISH AND INSTALL FUSES OF THE TYPES AND RATINGS DESIGNATED IN THE DRAWINGS AND SPECIFICATIONS IN EACH FUSIBLE DEVICE INSTALLED BY THE CONTRACTOR.

- FEEDER AND BRANCH CIRCUITS CLASS RK1 TIME DELAY.
- MOTOR CIRCUITS CLASS RK5 TIME DELAY.
- CONTROL CIRCUIT FUSES TO BE TIME DELAY.

15. ENCLOSED SWITCHES, CIRCUIT BREAKERS AND CONTROLLERS

A. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, AC, SINGLE THROW SAFETY SWITCHES, BUILT IN IN ACCORDANCE WITH NEMA REQUIREMENTS WITH A VOIDABLE FULL COVER INTERLOCK AND QUICK-MAKE, QUICK-BREAK MECHANISM. EACH SWITCH SHALL BE FUSIBLE UNLESS NON-FUSIBLE (NF) IS SPECIFICALLY NOTED. SWITCHES SHALL BE IN NEMA 1 ENCLOSURES IN DRY LOCATIONS AND NEMA 3R WHERE EXPOSED TO THE WEATHER.

B. PROVIDE AUXILIARY CONTACTS TO SHUT DOWN VFD PRIOR TO DISCONNECTING POWER. PROVIDE REJECTION FUSES WHERE NOTED.

C. FULL VOLTAGE NON REVERSING STARTERS - SIZE 0 MINIMUM.

D. ALL STARTERS TO BE COMBINATION STARTERS AND MOLDED CASE CIRCUIT WITH COVER MOUNTED HOA AND PILOT LIGHTS.

E. FRACTIONAL HP STARTERS QUICK MAKE QUICK BREAK SINGLE POLE SWITCHES FOR INTEGRALLY PROTECTED MOTORS.

F. MULTI POLE HORSE POWER RATED SWITCHES OR ENCLOSED CIRCUIT BREAKERS IN FLUSH NEMA 1 ENCLOSURES WHERE MOTORS ARE LOCATED IN FINISHED SPACES.

G. ALL DEVICES NEMA RATED FOR THE ENVIRONMENT THEY ARE LOCATED.

H. THE CONTRACTOR SHALL OBTAIN EXACT INFORMATION PERTAINING TO LOCATION, ELECTRICAL CHARACTERISTICS, AND WIRING FOR EQUIPMENT FURNISHED BY OTHERS FROM THE CONTRACTOR FURNISHING THE EQUIPMENT. THIS INFORMATION SHALL BE VERIFIED BY EXAMINING NAMEPLATES AND MANUFACTURER'S DATA SHEETS. IF A DISCREPANCY BETWEEN THE EQUIPMENT AND THE PROVISIONS MADE BY THESE SPECIFICATIONS SHALL BE REPORTED. EQUIPMENT DAMAGED AS A RESULT OF THE CONTRACTOR'S FAILURE TO OBSERVE MANUFACTURER'S REQUIREMENTS SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR. THE THERMAL PROTECTION ELEMENTS IN MANUAL STARTERS SHALL BE RECHECKED WITH NAME PLATE DATA AT THE SITE BEFORE OPERATION OF THE EQUIPMENT. WHERE NECESSARY, THE THERMAL PROTECTION ELEMENTS SHALL BE CHANGED TO PROPERLY PROTECT THE EQUIPMENT.

I. FURNISH AND INSTALL MANUAL THERMAL PROTECTION FOR ALL MOTORS NOT INTEGRALLY EQUIPPED WITH THERMAL PROTECTION.

J. THE CONTRACTOR SHALL FURNISH AND INSTALL FINAL ELECTRICAL CONNECTIONS TO ALL MOTORS AND ELECTRICALLY POWERED EQUIPMENT INDICATED ON THE PLANS OR EQUIPMENT SCHEDULE.

K. FURNISH AND INSTALL A DISCONNECT SWITCH

IMMEDIATELY AHEAD OF AND ADJACENT TO EACH MAGNETIC MOTOR STARTER OR APPLIANCE UNLESS THE MOTOR APPLIANCE IS LOCATED ADJACENT AND WITHIN SIGHT OF THE SERVING PANELBOARD, CIRCUIT BREAKER OR SWITCH. VERIFY ALL EQUIPMENT NAMEPLATE CURRENT RATINGS PRIOR TO INSTALLATION.

L. PROVIDE A FUSED DISCONNECT SWITCH ON ANY TRANSFORMER SECONDARY WHERE SECONDARY CONDUCTORS EXCEED 25 FEET FROM TERMINAL TO SECONDARY OVERCURRENT DEVICE.

M. THE CONTRACTOR SHALL FURNISH AND INSTALL DISCONNECT SWITCHES HAVING THE NUMBER OF POLES AND AMPERE RATINGS AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN EQUIPMENT SCHEDULES.

16. SURGE PROTECTION DEVICES (SPDS)

A. SERVICE ENTRANCE: MODULAR DESIGN WITH PEAK SINGLE IMPULSE SURGE CURRENT RATING OF 240KA PER MODE/480KA. TYPE 2 SURGE SUPPRESSION (SPD) AT THE MAIN ELECTRICAL SERVICE SHOWN ON THE DRAWINGS.

B. PANELBOARD SUPPRESSORS: NON-MODULAR DESIGN WITH PEAK SINGLE IMPULSE SURGE CURRENT RATING OF 120KA PER MODE/240KA. TYPE 2 SURGE SUPPRESSION (SPD) AT PANELBOARDS OR SEPARATELY DERIVED SYSTEMS SHOWN ON THE DRAWINGS.

C. TYPE 3 SURGE SUPPRESSION (SPD) AT POINT OF USE: DUPLEX RECEPTACLE INTEGRAL TO WIRING DEVICE.

D. INSTALL IN ACCORDANCE WITH N.E.C. ARTICLE 285.

E. INSTALL AN OCPD OR DISCONNECT AS REQUIRED TO COMPLY WITH UL LISTING OF THE SPD.

F. INSTALL SPDS WITH CONDUCTORS BETWEEN SUPPRESSORS AND POINTS OF ATTACHMENT AS SHORT AND STRAIGHT AS POSSIBLE, AND ADJUST CIRCUIT BREAKER POSITIONS TO ACHIEVE SHORTEST AND STRAIGHTEST LEADS. DO NOT SPLICE AND EXTEND SPD LEADS UNLESS SPECIFICALLY PERMITTED BY MANUFACTURER. DO NOT EXCEED MANUFACTURER'S RECOMMENDED LENGTH. DO NOT BOND NEUTRAL AND GROUND.

G. USE CRIMPED CONNECTORS AND SPLICES ONLY. WIRE NUTS ARE UNACCEPTABLE.

17. WIRING DEVICES

A. WIRING DEVICES SHALL BE INSTALLED IN METAL DEVICE BOXES.

B. SWITCHES AND RECEPTACLES SHALL BE HUBBELL, BRYANT, LEVITON, PASS & SEYMOUR, OR APPROVED EQUIP. SUBJECT TO APPROVAL BY THE ARCHITECT, COLOR SHALL BE WHITE FOR NORMAL POWER AND RED FOR EMERGENCY POWER. SPECIAL COLOR DEVICE OUTLETS AND MATCHING COVERPLATE AS NOTED ON THE PLANS.

C. SWITCHES SHALL BE HEAVY DUTY GRADE, AC QUIET TYPE, 20-AMP, 120/277 VOLT, WITH SILVER ALLOY CONTACTS, EQUAL TO HUBBELL #5362.

D. GENERAL PURPOSE DUPLEX RECEPTACLES SHALL BE HEAVY DUTY GRADE NEMA 5-20R, 125 VOLT, 3 WIRE GROUNDING TYPE DEVICES WITH BRASS ONE PIECE GROUND STRAP; THIRD POLE GROUNDING TO THE OUTLET BOX. HOSPITAL GRADE DUPLEX RECEPTACLES IN PATIENT CARE AREAS DEFINED PER N.E.C. ARTICLE 517.

E. GROUND FAULT CIRCUIT INTERRUPT (GFI) DUPLEX RECEPTACLES SHALL BE HEAVY DUTY GRADE, 20 AMP DEVICES WIRED SO THAT EACH UNIT IS SELF-CONTAINED. GFI RECEPTACLE SHALL NOT BE CONNECTED TO FEED THROUGH UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

F. RECEPTACLES IN DAMP OR WET LOCATIONS TO HAVE N.E.C. WEATHER RESISTANT RATING.

G. TAMPER RESISTANT RATING IN AREAS REQUIRED BY N.E.C.

H. AFCI RECEPTACLES WHERE REQUIRED BY N.E.C.

I. ISOLATED GROUND RECEPTACLES TO BE ORANGE IN COLOR.

J. SURGE PROTECTION DEVICE (SPD) TYPE 3 DUPLEX RECEPTACLE WITH INDICATION LIGHT AND AUDIBLE ALARM.

K. COVER PLATES TO BE NYLON. SPECIAL COLOR PLASTIC COVER PLATES TO MATCH STYLE LINE TYPE RECEPTACLES AS NOTED ON THE PLANS WITH MATCHING COLORS.

L. WEATHERPROOF DUPLEX RECEPTACLES SHALL BE GFCI PROTECTED WITH 'WHILE-IN-USE' WEATHERPROOF COVERPLATES.

M. INSTALL HOSPITAL GRADE RECEPTACLES IN PATIENT CARE AREAS. INSTALL WITH THE GROUND PIN NEUTRAL BLADE AT THE TOP.

N. THE CONTRACTOR SHALL FURNISH AND INSTALL WALL PLATES FOR ALL FLUSH MOUNTED WIRING DEVICES AND ALL FLUSH MOUNTED SPECIAL SYSTEM OUTLETS. SECTIONAL WALL PLATES SHALL NOT BE USED. BLANK PLATES SHALL BE INSTALLED OVER ALL OUTLETS PROVIDE FOR FUTURE USE. WALL PLATES SHALL BE SECURED WITH MATCHING SCREWS. ENGRAVED WALL PLATES SHALL HAVE BACK FILL.

O. THE CONTRACTOR SHALL FURNISH AND INSTALL OUTLETS FOR AND MAKE FINAL ELECTRICAL CONNECTIONS TO ALL ELECTRICALLY POWERED EQUIPMENT INDICATED ON THE PLANS OR EQUIPMENT SCHEDULES.

18. LIGHTING CONTROL SYSTEM

A. PROVIDE PRODUCTS LISTED, CLASSIFIED, AND LABELED AS SUITABLE FOR THE PURPOSE INTENDED.

B. UNLESS SPECIFICALLY INDICATED TO BE EXCLUDED, PROVIDE ALL REQUIRED CONDUIT, WIRING, CONNECTORS, HARDWARE, COMPONENTS, ACCESSORIES, ETC. AS REQUIRED FOR A COMPLETE OPERATING SYSTEM.

C. APPROVED MANUFACTURER'S

- HUBBELL BUILDING AUTOMATION
- SENSOR SWITCH INC
- WATTSTOPPER
- LEVITON

D. SOURCE LIMITATIONS: FURNISH PRODUCTS PRODUCED BY A SINGLE MANUFACTURER AND OBTAINED FROM A SINGLE SUPPLIER.

D. ALL OCCUPANCY SENSORS:

• DESCRIPTION: FACTORY ASSEMBLED COMMERCIAL SPECIFICATION GRADE DEVICES FOR INDOOR USE CAPABLE OF SENSING BOTH MAJOR MOTION, SUCH AS WALKING, AND MINOR MOTION, SUCH AS SMALL DESKTOP LEVEL MOVEMENTS, ACCORDING TO PUBLISHED COVERAGE AREAS, FOR AUTOMATIC CONTROL OF LOAD INDICATED.

• SENSOR TECHNOLOGY: PASSIVE INFRARED (PIR) - DESIGNED TO DETECT OCCUPANCY BY SENSING

MOVEMENT OF THERMAL ENERGY BETWEEN ZONES. ULTRASONIC - DESIGNED TO DETECT OCCUPANCY BY SENSING PROXIMITY TO LOCAL ADJACENT AND NOT REFLECTED INAUDIBLE SOUND WAVES.

• PROVIDE LED TO VISUALLY INDICATE MOTION DETECTION.

• OPERATION: UNLESS NOTED OTHERWISE, OCCUPANCY SENSOR TO TURN LOAD ON WHEN OCCUPANCY PRESENCE IS DETECTED AND TO TURN LOAD OFF WHEN NO OCCUPANT PRESENCE IS DETECTED DURING AN ADJUSTABLE TURN-OFF DELAY TIME INTERVAL.

• PASSIVE INFRARED LENS FIELD OF VIEW: FIELD CUSTOMIZABLE BY ADDITION OF FACTORY MASKING MATERIAL, ADJUSTMENT OF INTEGRAL BLINDERS, OR SIMILAR MEANS TO BLOCK MOTION DETECTION IN SELECTED AREAS.

• TURN-OFF DELAY: ADJUSTABLE

• SENSITIVITY: FIELD ADJUSTABLE

• INTEGRAL PHOTOCELL: FOR FIELD SELECTABLE AND ADJUSTABLE INHIBITION OF AUTOMATIC TURN-ON OF LOAD WHEN AMBIENT LIGHTING IS ABOVE THE SELECTED LEVEL.

• COMPATIBILITY (NON-DIMMING SENSORS): SUITABLE FOR CONTROLLING INCANDESCENT LIGHTING, LOW-VOLTAGE LIGHTING WITH ELECTRONIC AND MAGNETIC TRANSFORMERS.

• LOAD RATING FOR LINE VOLTAGE OCCUPANCY SENSORS: AS REQUIRED TO CONTROL THE LOAD INDICATED ON THE DRAWINGS.

• ISOLATED RELAY FOR LOW VOLTAGE OCCUPANCY SENSORS: SPDT DRY CONTACTS, RATINGS AS REQUIRED FOR INTERFACE WITH SYSTEM INDICATED.

E. WALL OCCUPANCY SENSORS:

• DESCRIPTION: OCCUPANCY SENSORS DESIGNED FOR INSTALLATION IN STANDARD WALL BOX AT STANDARD WALL SWITCH MOUNTING HEIGHT WITH A FIELD OF VIEW OF 180 DEGREES, INTEGRATED MANUAL CONTROL CAPABILITY, AND NO LEAKAGE CURRENT TO LOAD IN OFF MODE.

• UNLESS OTHERWISE INDICATED OR REQUIRED TO CONTROL THE LOAD INDICATED ON THE DRAWINGS, PROVIDE LINE VOLTAGE UNITS WITH SELF-CONTAINED RELAY.

• WHERE INDICATED, PROVIDE TWO-CIRCUIT UNITS FOR CONTROL OF TWO SEPARATE LIGHTING LOADS, WITH SEPARATE MANUAL CONTROLS AND SEPARATELY PROGRAMMABLE OPERATION FOR EACH LOAD.

• OCCUPANCY SENSOR TO BE FIELD SELECTABLE AS EITHER MANUAL-ON/AUTOMATIC-OFF OR AUTOMATIC ON/OFF.

• MANUAL-ON/OVERRIDE CONTROL: WHEN USED TO TURN OFF LOAD WHILE IN AUTOMATIC-ON MODE, UNIT TO REVERT BACK TO AUTOMATIC MODE AFTER NO OCCUPANT PRESENCE IS DETECTED DURING THE DELAYED-OFF TIME INTERVAL.

• DEVICE FINISH: MATCH FINISHES SPECIFIED IN WIRING DEVICES SECTION, UNLESS NOTED OTHERWISE.

• PROVIDE VANDAL RESISTANT LENSES FOR PASSIVE INFRARED (PIR) WALL SWITCH OCCUPANCY SENSORS.

• PASSIVE INFRARED (PIR) WALL SWITCH OCCUPANCY SENSORS: CAPABLE OF DETECTING MOTION WITHIN AN AREA OF 900 SQUARE FEET.

F. CEILING MOUNTED OCCUPANCY SENSORS:

• DESCRIPTION: LOW PROFILE OCCUPANCY SENSORS DESIGNED FOR CEILING INSTALLATION.

• UNLESS OTHERWISE INDICATED OR REQUIRED TO CONTROL THE LOAD INDICATED ON THE DRAWINGS, PROVIDE LOW VOLTAGE UNITS, FOR USE WITH SEPARATE COMPATIBLE ACCESSORY POWER PACKS.

• PROVIDE FIELD SELECTABLE SETTING FOR DISABLING LED MOTION DETECTOR VISUAL INDICATOR.

• OCCUPANCY SENSOR TO BE FIELD SELECTABLE AS EITHER MANUAL-ON/AUTOMATIC-OFF OR AUTOMATIC ON/OFF.

• FINISH: WHITE UNLESS OTHERWISE INDICATED.

• ULTRASONIC CEILING MOUNTED OCCUPANCY SENSORS: CAPABLE OF DETECTING MOTION WITHIN AN AREA OF 500 SQUARE FEET AT A MOUNTING HEIGHT OF 9 FEET, WITH A FIELD OF VIEW OF 360 DEGREES.

G. DUAL TECHNOLOGY WALL DIMMER VACANCY SENSORS:

• PRODUCTS: WATTSTOPPER - DW-311 SERIES. ACUTY BRANDS, SENSOR SWITCH - WSK PDT SERIES.

• DESCRIPTION: WALL MOUNTED 0-10V DIMMING DUAL TECHNOLOGY VACANCY SENSOR.

• CAPABLE OF DETECTING MOTION WITHIN AN AREA OF 525 SQUARE FEET.

• UNLESS OTHERWISE INDICATED OR REQUIRED TO CONTROL THE LOAD INDICATED ON THE DRAWINGS, PROVIDE LINE VOLTAGE UNITS WITH SELF-CONTAINED RELAY.

• FINISHES: MATCH FINISHED SPECIFIED FOR WIRING DEVICES UNLESS NOTED OTHERWISE.

H. ROOM CONTROLLERS

• DESCRIPTION: DIGITAL CONTROLLERS FOR LIGHTING ZONES, FIXTURES AND/OR PLUG LOADS. AUTOMATICALLY BRING PLUG LOADS TO THE CONNECTED CONTROL DEVICES IN THE SPACE WITHOUT COMMISSIONING OR THE USE OF ANY TOOLS. PROVIDE CONTROLLERS TO MATCH THE ROOM LIGHTING AND PLUG LOAD CONTROLLER REQUIREMENTS. CONTROLLERS ARE SIMPLE TO INSTALL, AND DO NOT HAVE DIP SWITCHES/POTENTIOMETERS, OR REQUIRE SPECIAL CONFIGURATION FOR STANDARD PLUS N° 60 APPLICATIONS. CONTROLLER UNITS INCLUDE THE FEATURES LISTED BELOW.

• AUTOMATIC ROOM CONFIGURATION TO THE MOST ENERGY-EFFICIENT SEQUENCE OF OPERATION BASED UPON THE DEVICES IN THE ROOM.

• SIMPLE REPLACEMENT USING THE DEFAULT AUTOMATIC CONFIGURATION CAPABILITIES, A ROOM CONTROLLER MAY BE REPLACED WITH AN ON-THE-SHELF DEVICE.

• MULTIPLE ROOM CONTROLLERS CONNECTED TOGETHER IN A LOCAL NETWORK MIT AUTOMATICALLY ARBITRATE WITH EACH OTHER, WITHOUT REQUIRING ANY CONFIGURATION OR SETUP, SO THAT INDIVIDUAL LOAD NUMBERS ARE ASSIGNED STARTING WITH LOAD 1 TO A MAXIMUM OF 64, ASSIGNED BASED ON EACH CONTROLLER'S DEVICE ID'S FROM HIGHEST TO LOWEST.

• DEVICE STATUS LEDS TO INDICATE: DATA TRANSMISSION, DEVICE HAS POWER, STATUS FOR

EACH LOAD, AND CONFIGURATION STATUS.

• QUICK INSTALLATION FEATURES INCLUDING: STANDARD JUNCTION BOX MOUNTING, QUICK LOW VOLTAGE CONNECTIONS USING STANDARD RJ-45 PATCH CABLE.

• BASED ON INDIVIDUAL CONFIGURATION, EACH LOAD SHALL BE CAPABLE OF THE FOLLOWING BEHAVIOR ON POWER UP FOLLOWING LOSS OF NORMAL POWER: TURN ON TO 100 PERCENT, TURN OFF, TURN ON TO LAST ON TO 100 PERCENT, TURN OFF, TURN ON TO LAST ON TO 100 PERCENT.

• EACH LOAD TO BE CONFIGURABLE TO OPERATE IN THE FOLLOWING SEQUENCES BASED ON OCCUPANCY: AUTO-ON/AUTO-OFF (FOLLOW ON AND OFF), MANUAL-ON/AUTO-OFF (FOLLOW OFF ONLY).

• BACNET OBJECT INFORMATION SHALL BE AVAILABLE FOR THE FOLLOWING OBJECTS: LOAD STATUS, SCHEDULE STATE, NORMAL OR AFTER-HOURS, DEMAND RESPONSE ENABLE AND DISABLE, ROOM OCCUPANCY STATUS, TOTAL ROOM LIGHTING AND PLUG LOAD WATTS, ELECTRICAL CURRENT, TOTAL WATTS PER CONTROLLER, TOTAL ROOM WATTS/SQ FT., FORCE ON/OFF ALL LOADS.

• UL 2043 PLENUM RATED

• MANUAL OVERRIDE AND LED INDICATION FOR EACH LOAD

• ZERO CROSS CIRCUITRY FOR EACH LOAD

• ALL DIGITAL PARAMETER DATA PROGRAMMED INTO AN INDIVIDUAL ROOM CONTROLLER OR PLUG LOAD CONTROLLER SHALL BE RETAINED IN NON-VOLATILE FLASH MEMORY WITHIN THE CONTROLLER ITSELF. MEMORY SHALL HAVE AN EXPECTED LIFE OF NO LESS THE 10 YEARS.

I. ON/OFF/0-10V DIMMING ROOM CONTROLLERS SHALL INCLUDE:

• DUAL VOLTAGE (120/277 VAC, 60 HZ) CAPABLE OF 347 VAC, 60 HZ. 120/277 VOLT MODELS RATED FOR 20A TOTAL LOAD; 347 VOLT MODELS RATED FOR 15A TOTAL LOAD.

• BUILT IN REAL TIME CURRENT MONITORING.

• ONE, TWO OR THREE RELAY CONFIGURATIONS.

• FOUR RJ-45 LOCAL NETWORK PORTS. PROVIDE INTEGRAL STRAIN RELIEF.

• ONE DIMMING OUTPUT PER RELAY. 0-10V DIMMING - WHERE INDICATED, ONE 0-10 VOLT ANALOG OUTPUT PER RELAY FOR CONTROL OF BALLASTS AND LED DRIVERS. THE 0-10 VOLT OUTPUT SHALL AUTOMATICALLY OPEN UPON LOSS OF POWER TO THE ROOM CONTROLLER TO ASSURE FULL LIGHT OUTPUT FROM THE CONTROLLED LIGHTING.

• PROVIDE (2) EXTRA.

J. POWER PACKS FOR LOW VOLTAGE OCCUPANCY SENSORS:

• DESCRIPTION: PLENUM RATED, SELF-CONTAINED LOW VOLTAGE CLASS 2 TRANSFORMER AND RELAY COMPATIBLE WITH SPECIFIED LOW VOLTAGE OCCUPANCY SENSORS FOR SWITCHING OF LINE VOLTAGE LOADS.

• PROVIDE QUANTITY AND CONFIGURATION OF POWER AND SLAVE PACKS WITH ALL ASSOCIATED WIRING AND ACCESSORIES AS REQUIRED TO CONTROL THE LOAD INDICATED ON THE DRAWINGS.

• INPUT SUPPLY VOLTAGE: DUAL RATED FOR 120/277 VAC.

• LOAD RATING: AS REQUIRED TO CONTROL THE LOAD INDICATED ON THE DRAWINGS.

K. ENGAGE MANUFACTURER'S REPRESENTATIVE TO SELECT DEVICES, QUANTITIES, LOCATIONS, AND INTERCONNECTING CABLEING TO ACHIEVE THE CONTROL SEQUENCE SPECIFIED IN THE LIGHTING CONTROL SCHEDULE.

L. COORDINATE LOCATION OF OUTLET BOXES AS REQUIRED FOR INSTALLATION OF LIGHTING CONTROL DEVICES PROVIDED UNDER THIS SECTION.

• MOUNTING HEIGHTS: UNLESS INDICATED OTHERWISE AS FOLLOWS: WALL SWITCH OCCUPANCY SENSORS - 48 INCHES ABOVE FINISHED FLOOR.

• ORIENT OUTLET BOXES FOR VERTICAL INSTALLATION OF LIGHTING CONTROL DEVICES UNLESS OTHERWISE INDICATED.

• LOCATE WALL SWITCH OCCUPANCY SENSORS ON STRIKE SIDE OF DOOR WITH EDGE OF WALL PLATE 3 INCHES FROM EDGE OF DOOR FRAME. WHERE THERE ARE INDICATIONS ARE INDICATED OTHERWISE, NOTIFY ARCHITECT TO OBTAIN DIRECTION PRIOR TO PROCEEDING WITH WORK.

M. WIRING:

• COMPLY WITH NECA 1.

• WIRING METHOD - INSTALL CABLES IN RACEWAYS EXCEPT WHERE INSTALLED IN ACCESSIBLE CEILINGS. CONCEAL RACEWAY AND CABLES EXCEPT IN UNFINISHED SPACES. SUPPORT CABLES AT INTERVALS NOT EXCEEDING 30 FEET.

• ROUTE ALL LOW VOLTAGE CABLES SEPARATE FROM LINE-VOLTAGE CONDUCTORS.

• CONDUCTOR/CABLE COORDINATION: VERIFY AND COORDINATE QUANTITY AND CONFIGURATION OF LINE VOLTAGE CONDUCTORS AND/OR LOW VOLTAGE CABLES NEEDED TO INTERCONNECT DIMMING CONTROL DEVICES WITH ASSOCIATED LIGHTING FIXTURES. CONTROL METHOD SHALL MATCH. NOTE THAT DIMMING METHODS MAY REQUIRE DIFFERENT CONDUCTOR/CABLE CONFIGURATIONS BE USED FOR DIFFERENT FIXTURES.

• UNLESS OTHERWISE INDICATED, CONNECT LIGHTING CONTROL DEVICE GROUNDING TERMINAL OR CONDUCTOR TO BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR AND TO OUTLET BOX WITH BONDING JUMPER.

N. WALL DEVICES:

• PROVIDE JUNCTION BOX IN WALL WITH CONDUIT STUBBED UP ABOVE NEAREST ACCESSIBLE CEILING SPACE.

• WHERE CABLEING IS ROUTED IN INACCESSIBLE LOCATION (ABOVE HARD CEILINGS, WITHIN FLOORS, WITHIN WALLS), PROVIDE CONDUIT ROUTED FROM DEVICE TO NEAREST ACCESSIBLE CEILING SPACE.

O. SENSORS:

• SELECT, INSTALL, AND AIM SENSORS TO ACHIEVE NOT LESS THAN 90 PERCENT COVERAGE OF INSTALLED AREAS. DO NOT EXCEED COVERAGE LIMITED BY THE REQUIREMENTS SPECIFIED IN MANUFACTURER'S WRITTEN INSTRUCTIONS.

• ADJUST LOCATION OF SENSORS TO MINIMIZE ACTIVATION OF INTERIOR ROOMS FROM ADJACENT

CORRIDOR ACTIVITY PER MANUFACTURER'S DIRECTION.

• ARRANGE CONTROL ZONES PER PLANS AND DETAILS. INDIVIDUAL ROOMS (DEFINED BY FULL HEIGHT WALL PARTITIONS OF DOORS) SHALL BE CONTROLLED INDEPENDENT OF ADJACENT ROOMS. MULTIPLE OCCUPANCY SENSORS IN THE SAME ROOM OR ZONE SHALL CONTROL ALL LIGHTING FIXTURES ASSOCIATED WITH THAT ROOM OR ZONE. ROOMS OR ZONES SHOWN ON TOILET OR BATHROOM SCHEDULES SHALL BE PROVIDED WITH MULTIPLE CONTROL DEVICES TO ACCOMMODATE CONTROL SEQUENCES.

• LOCATION ADJUSTMENTS - LOCATIONS INDICATED ARE DIAGRAMMATIC AND ONLY INTENDED TO INDICATE WHICH ROOMS OR AREAS REQUIRE DEVICES. PROVIDE QUANTITY AND LOCATIONS AS REQUIRED FOR COMPLETE COVERAGE OF RESPECTIVE ROOM OR AREA BASED ON MANUFACTURER'S RECOMMENDATIONS FOR INSTALLED DEVICES.

• LOCATE ULTRASONIC OCCUPANCY SENSORS A MINIMUM OF 4 FEET FROM AIR SUPPLY DUCTS OF OTHER SOURCES OF HEAVY AIR FLOW AND AS PER MANUFACTURER'S RECOMMENDATIONS, IN ORDER TO MINIMIZE FALSE TRIGGERS.

• UNLESS OTHERWISE INDICATED, INSTALL POWER PACKS FOR LIGHTING CONTROL DEVICES ABOVE ACCESSIBLE CEILING OR ABOVE ACCESS PANEL IN INACCESSIBLE CEILING NEAR THE SENSOR LOCATION.

P. EMERGENCY LIGHTING INTERFACE:

• INSTALL EMERGENCY RELAY ON LIFE SAFETY LIGHTING CIRCUITS INDICATED WITH AUTOMATIC CONTROLS. RELAY SHALL BYPASS AUTOMATIC CONTROLS AND ILLUMINATE LIFE SAFETY LIGHTING CIRCUIT UPON LOSS OF ADJACENT NORMAL BRANCH LIGHTING CIRCUIT SOURCE VOLTAGE. LOCATE IN ASSOCIATED SOURCE ELECTRICAL ROOM WITHIN NEMA 1 ENCLOSURE.

Q. ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO PERFORM START-UP SERVICE.

• COMPLETE INSTALLATION AND START-UP CHECKS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

• TEST EACH BUS CONTROLLER USING A PORTABLE PC.

• ACTIVATE LIGHT FIXTURES AND VERIFY THAT ALL FIXTURES ARE OPERATING AT 100 PERCENT.

• CONFIRM CORRECT COMMUNICATIONS WIRING, INITIATE COMMUNICATIONS BETWEEN DEVICES AND CONTROLLER/GATEWAY, AND PROGRAM THE LIGHTING CONTROL SYSTEM ACCORDING TO APPROVED CONFIGURATION SCHEDULES, TIME-OF-DAY SCHEDULES, AND INPUT OVERRIDE ASSIGNMENTS.

• CORRECT MALFUNCTIONING UNITS ON-SITE, WHERE POSSIBLE, AND RETEST TO DEMONSTRATE COMPLIANCE, OTHERWISE, REPLACE WITH NEW UNITS AND RETEST.

• LIGHTING CONTROLS WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS.

• PREPARE TEST AND INSPECTION REPORTS, INCLUDING A CERTIFIED REPORT THAT IDENTIFIES DEFECTS, CONTROLLERS INCLUDED AND DESCRIBES QUERY RESULTS. INCLUDE NOTATION OF DEFICIENCIES DETECTED, REMEDIAL ACTION TAKE, AND OBSERVATIONS MADE AFTER REDIAL ACTION.

R. TEST AND INSPECTION REPORT:

• PERFORM TESTS/INSPECTIONS AND SUBMIT REPORT PRIOR TO ENGINEER'S FINAL PUNCH INSPECTION.

• REPORT SHALL CONSIST OF ANY DEVELOPED TEST RESULT DATA AND SHALL, AT A MINIMUM, INCLUDE A COPY OF TEST REQUIREMENTS NOTED ABOVE TO ILLUSTRATE CONTRACTOR ACKNOWLEDGMENT OF TESTS AND INSPECTIONS.

• CONTRACTOR SHALL DEVISE SUCCESSFUL COMPLETION BY INITIATING INDIVIDUAL TEST AND INSPECTION REQUIREMENTS LISTED ABOVE ON THE COPY. INITIALIZING INDICATES THAT TESTS AND INSPECTIONS WERE PERFORMED FOR SPECIFIED WORK WITH A SUCCESSFUL OUTCOME. WORK NOT FOUND TO BE IN COMPLIANCE WAS CORRECTED AND RETESTED/RE-INSPECTED SUCCESSFULLY OR HAS BE SPECIFICALLY CLARIFIED AND NOTED ABOVE BY THE CONTRACTOR.

• UPON COMPLETION OF INITIAL PROGRAMMING, CHARGE ENGINEER, ARCHITECT, AND OWNER WHILE ON SITE TO CONFIRM TIME AND SCENE CONTROLS/ADJUSTMENTS PRIOR TO FINAL PROGRAMMING. PROVIDE TWO WEEKS NOTICE. TIME MAY BE REATIONS ARE INDICATED OTHERWISE, NOTIFY ARCHITECT TO OBTAIN DIRECTION PRIOR TO PROCEEDING WITH WORK.

S. DEMONSTRATION:

• TRAINING: TRAIN PERSONNEL ON OPERATION, ADJUSTMENT, PROGRAMMING AND MAINTENANCE OF LIGHTING CONTROL DEVICES. USE OPERATION AND MAINTENANCE AS TRAINING REFERENCE SUPPLEMENTED WITH ADDITIONAL TRAINING MATERIALS AS REQUIRED.

18. LIGHTING

A. PROVIDE PRODUCTS THAT COMPLY WITH REQUIREMENTS OF NFPA 70 AND NFPA 101.

B. PROVIDE PRODUCTS LISTED AND CLASSIFIED BY UNDERWRITERS LABORATORIES INC. AS SUITABLE FOR THE PURPOSE SPECIFIED AND INDICATED.

• UNLESS SPECIFICALLY INDICATED TO BE EXCLUDED, PROVIDE ALL REQUIRED CONDUIT, BOXES, WIRING, CONNECTORS, HARDWARE, COMPONENTS, ACCESSORIES, ETC., AS NECESSARY FOR A COMPLETE OPERATING SYSTEM.

D. PROVIDE PRODUCTS SUITABLE TO WITHSTAND NORMAL HANDLING, INSTALLATION, AND SERVICE WITHOUT ANY DAMAGE, DISTORTION, CORROSION, FADING, DISCOLORING, ETC.

E. PHOTOMETRIC MEASUREMENTS INDICATED ON THE PRODUCT DATA SHALL BE PROVIDED IN ACCORDANCE WITH IESNA LM-79-08 APPROVED METHOD: ELECTRICAL AND PHOTOMETRIC MEASUREMENTS OF SOLID-STATE LIGHTING PROJECTS AND SHALL MEET THE REQUIREMENTS SPECIFIED AND/OR INDICATED ON THE DRAWINGS.

F. LUMEN DATA INDICATED ON THE PRODUCT DATA SHEETS SHALL BE GENERATED IN ACCORDANCE WITH IESNA LM-80-08 APPROVED METHOD FOR MEASURING LUMEN MAINTENANCE OF LED LIGHT SOURCES AND SHALL MEET THE REQUIREMENTS SPECIFIED AND/OR INDICATED ON THE DRAWINGS.

G. LUMEN DEPRECIATION SHALL BE IDENTIFIED IN TERMS