

General Notes

1. GENERAL

- 1.1

THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE A PORTION OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR AND SUBCONTRACTORS SHALL REFERENCE AND COORDINATE WITH ALL OTHER DISCIPLINES' DRAWINGS. ANY DISCREPANCIES OR OMISSIONS SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND ARCHITECT.
- 1.2

STRUCTURAL DESIGN AND ENGINEERING OF FLOOR AND ROOF PRE-ENGINEERED PRODUCTS TO BE PROVIDED BY OTHERS AND ARE NOT INCLUDED WITHIN THE SCOPE OF WORK IN ARCHITECTURAL DRAWINGS.
- 1.3

THIS SET IS INTENDED TO BE A BUILDER'S SET OF DRAWINGS. THIS MEANS FINAL SELECTION OF ALL MATERIALS AND SYSTEMS SHALL BE AT THE DISCRETION AND RESPONSIBILITY OF THE DEVELOPER AND GENERAL CONTRACTOR. ALL MATERIALS AND SYSTEMS SHALL MEET THE DESIGN INTENT DEPICTED IN THE DOCUMENTS AND ALL APPLICABLE CODE REQUIREMENTS.
- 1.4

DESIGN CRITERIA:

A.

CODES AND SPECIFICATIONS:

1.

GENERAL BUILDING CODE:
INTERNATIONAL RESIDENTIAL CODE, 2009 EDITION.

2.

CONCRETE:
ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AMERICAN CONCRETE INSTITUTE.

B.

DESIGN LOADS (PSF):

1.

DEAD LOADS:
ANY CHANGES IN CONSTRUCTION MATERIALS FROM THOSE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS SHALL BE REPORTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF LOAD-CARRYING CAPACITY OF THE STRUCTURE.

2.

LIVE LOADS:
ROOF (USED FOR FOUNDATION DESIGN)-----20

3.

SNOW LOAD:
GROUND SNOW LOAD (Pg)-----5 PSF

4.

WIND LOADS:
BASIC WIND SPEED (3 - SECOND GUST)-----90 MPH
WIND IMPORTANCE FACTOR (IW)-----1.0
BUILDING CATEGORY-----II
WIND EXPOSURE CATEGORY-----B
INTERNAL PRESSURE COEFFICIENT-----+/- 0.18

5.

SEISMIC LOADS:
SEISMIC IMPORTANCE FACTOR (IE)-----1.0

MAPPED SPECTRAL RESPONSE ACCELERATION:
SS-----0.090
S1-----0.031
SITE CLASS (ASSUMED)-----D
SPECTRAL RESPONSE COEFFICIENTS:
SDS-----0.096
SD1-----0.050
SEISMIC DESIGN CATEGORY-----A
BASIC SEISMIC-FORCE-RESISTING SYSTEM: LIGHT-FRAME WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE

DESIGN BASE SHEAR-----3.2 KIP
SPECTRAL RESPONSE COEFFICIENT (CS)-----0.02
RESPONSE MODIFICATION FACTOR (R)-----6.5
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE METHOD

1.5

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO FABRICATION/CONSTRUCTION. NOTIFY STRUCTURAL ENGINEER AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION/CONSTRUCTION.

1.6

SUBMITTALS:

A.

REVIEW OF SHOP DRAWINGS AND OTHER SUBMITTALS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTING TO THE STRUCTURAL ENGINEER. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. ALL SHOP DRAWINGS MUST BE STAMPED BY THE CONTRACTOR PRIOR TO SUBMITTAL.

B.

SUBMIT ALL SHOP DRAWINGS ON THREE REPRODUCIBLE PRINTS ONLY. ONE REPRODUCIBLE PRINT WILL BE RETURNED TO THE CONTRACTOR. ALL REPRODUCIBLE PRINTS REQUIRED BY THE CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE AFTER REPRODUCIBLE PRINT IS RETURNED. IF ADDITIONAL PRINTS ARE SUBMITTED, THEY WILL BE RETURNED UNMARKED.

C.

SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS.

1.

CONCRETE MIX DESIGN

2.

CONCRETE REINFORCEMENT

1.7

ALL DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS, UNLESS NOTED.

1.8

THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.

1.9

CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT LOADS DO NOT EXCEED THE DESIGN LIVE LOAD.

2. FOUNDATION

2.1

GEOTECHNICAL REPORT: FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY ECS TEXAS, LLP, TITLED "SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION, THE COTTAGES OF SAN MARCOS, WONDER WORLD DR. AND CRADDOCK AV. SAN MARCOS, TX." PROJECT NUMBER #17-3766 DATED OCTOBER 1, 2012. THE CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT FROM THE OWNER AND FOLLOW ALL REQUIREMENTS AND RECOMMENDATIONS.

2.2

MAXIMUM ALLOWABLE BEARING PRESSURE PER GEOTECHNICAL REPORT (PSF): 3000

2.3

ALL FOUNDATION BEARING SURFACES SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE TO INSURE THEIR COMPLIANCE WITH PRESSURES NOTED. ALL FOOTING ELEVATIONS ARE ESTIMATED AND MAY BE ADJUSTED IN THE FIELD BY THE GEOTECHNICAL ENGINEER.

2.4

COMPACTED FILL SHALL MEET THE REQUIREMENTS NOTED IN THE GEOTECHNICAL REPORT.

2.5

PER THE "ANALYSIS AND RECOMMENDATIONS" SECTION OF THE GEOTECHNICAL REPORT, ALL DARK BROWN TO REDDISH BROWN EXPANSIVE CLAY SOILS ARE TO BE REMOVED. TOP SIX INCHES OF EXPOSED SOIL SHALL BE MOISTURE CONDITIONED AND TWO FEET OF SELECT FILL SHALL BE PLACED BACK. ALL FOUNDATIONS ARE TO BEAR ON A MINIMUM OF TWO FEET OF SELECT FILL. SELECT FILL SHALL MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.

2.6

IF VUGGY LIMESTONE IS ENCOUNTERED DURING CUT AND FILL OPERATIONS, PRIOR TO THE PLACEMENT OF FILL, VOIDS SHALL BE FILLED WITH CONTROLLED LOW STRENGTH MATERIAL (FLOWABLE FILL 300 PSI AT 28 DAYS) TO PREVENT FILL SOIL FROM BEING WASHED INTO THE VOIDS CAUSING SETTLEMENT OF STRUCTURES.

3. FOUNDATION QUALITY CONTROL DURING CONSTRUCTION

3.1

BEARING ELEVATIONS: THE TOP ELEVATION OF ALL FOOTINGS IS SHOWN ON THE DRAWINGS FOR BID PURPOSES. THE FINAL BEARING ELEVATIONS MAY VARY AS REQUIRED TO PROVIDE PROPER BEARING CAPACITY IN AN APPROVED BEARING STRATUM AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

3.2

FOOTING EXCAVATION:

A.

FOOTINGS SHALL BE NEATLY EXCAVATED WHERE POSSIBLE WITH SIDES AND TOP EDGES FREE OF LOOSE OR WET MATERIALS. WHERE NEAT EXCAVATION IS NOT POSSIBLE, FOOTING EXCAVATION SHALL BE OPEN CUT WITH EDGES FORMED AND BRACED. ALL FOOTINGS WITH FORMED EDGES SHALL BE BACKFILLED FROM BOTTOM TO TOP OF FOOTING WITH LEAN CONCRETE. THE BOTTOM EXCAVATION SHALL BE CLEAN AND DRY WITH ALL LOOSE MATERIAL REMOVED FOR AN ESSENTIALLY FLAT BEARING SURFACE. WHERE SOFT OR UNSUITABLE BEARING SURFACES ARE ENCOUNTERED, THE AREA SHALL BE UNDERCUT AS REQUIRED AND REPLACED WITH LEAN CONCRETE OR COMPACTED DENSE GRADED CRUSHED STONE AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

B.

ALL BACKFILL SHALL BE ENGINEERED FILL AS DEFINED IN THE GEOTECHNICAL REPORT. EXCAVATED MATERIAL MAY BE USED AS BACKFILL MATERIAL WITH WRITTEN APPROVAL FROM THE GEOTECHNICAL ENGINEER STATING THAT SUCH MATERIAL IS SUITABLE AS BACKFILL AND INSTRUCTIONS ARE GIVEN FOR PROPER MOISTURE CONTENT AND COMPACTION. THE TESTING AGENCY APPROVAL AND INSTRUCTIONS FOR COMPACTION SHALL BE SUBMITTED TO THE GEOTECHNICAL ENGINEER FOR REVIEW.

4. CONCRETE

4.1

CONCRETING OPERATIONS SHALL COMPLY WITH ACI STANDARDS.

4.2

CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (PSI), TYPE OF CONCRETE, MAXIMUM W/C (WATER/CEMENTITIOUS MATERIALS RATIO), AIR CONTENT, SLUMP AND CONCRETE USE:

STRENGTH	TYPE	W/C	AIR	SLUMP	USE
3000	NORMAL WT.	0.55	----	3" TO 5"	UNLESS NOTED

4.3

SLAB ON GRADE: 4" THICK, CONTRACTORS OPTION TO REINFORCED WITH 6X6 W2.9/W2.9 WWR AT MID-DEPTH OF SLAB OR MACROSYNTHETIC FIBERS. ADDITION RATE SHALL BE 3.5 POUNDS PER CUBIC YARD OR AS RECOMMENDED BY THE FIBER MANUFACTURER. PROVIDE 10 MIL POLYETHYLENE VAPOR RETARDER BENEATH SLAB ON GRADE AND OVER 6" THICK LAYER OF POROUS COMPACTED FILL.

4.4

REINFORCING BARS: ASTM A615 GRADE 60.

4.5

REINFORCING STEEL SHOWN IN SECTIONS AND DETAILS ARE A SCHEMATIC INDICATION THAT REINFORCING EXISTS. SEE SCHEDULES, SECTION NOTES AND GENERAL NOTES FOR ACTUAL REINFORCING REQUIRED.

4.6

REINFORCING BAR PLACING ACCESSORIES IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE. WHERE CONCRETE IS EXPOSED IN FINISHED BUILDING, PROVIDE ACCESSORIES WITH RUSTPROOF LEGS.

4.7

DETAIL REINFORCEMENT IN ACCORDANCE WITH ACI 315.

4.8

ALL REINFORCING MARKED "CONTINUOUS" SHALL BE SPLICED WITH CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.

4.9

CONCRETE COVERAGE OF REINFORCEMENT, UNLESS NOTED:

FOOTINGS-----2" TOP & 3" BOTTOM & SIDES

5. CONCRETE QUALITY CONTROL TESTING DURING CONSTRUCTION

5.1

CONCRETE AGGREGATES SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

A.

SPECIFICATION FOR CONCRETE AGGREGATES, ASTM C33.

B.

NORMAL WEIGHT CONCRETE AGGREGATES MAY BE EITHER GRAVEL OR LIMESTONE UNLESS SPECIFIED OTHERWISE.

5.2

WATER: WATER FOR CONCRETE SHALL BE CLEAN, FRESH AND DRINKABLE.

5.3

CEMENT:

A.

CEMENT SHALL CONFORM TO THE SPECIFICATION FOR PORTLAND CEMENT, ASTM C150, TYPE I (NORMAL).

B.

BRAND OF CEMENT: UNLESS ACCEPTED OTHERWISE BY THE STRUCTURAL ENGINEER, USE ONE BRAND OF CEMENT THROUGHOUT THE PROJECT.

5.4

CONCRETE MIX DESIGNS:

A.

AN INDEPENDENT TESTING AGENCY SHALL PREPARE DESIGN MIXES FOR EACH TYPE AND STRENGTH OF CONCRETE BY EITHER LABORATORY TRIAL MIXTURES OR FIELD EXPERIENCE METHODS AS SPECIFIED IN ACI 318.

B.

STRUCTURAL ENGINEER ACCEPTANCE: CONCRETE MIX DESIGNS MUST BE SUBMITTED A MINIMUM OF 15 DAYS PRIOR TO THE START OF THE WORK FOR STRUCTURAL ENGINEER'S ACCEPTANCE PRIOR TO PLACEMENT OF CONCRETE IN THE PLANT OR FIELD. ANY ADJUSTMENT IN APPROVED MIX DESIGNS INCLUDING CHANGES IN ADMIXTURES MUST BE SUBMITTED IN WRITING TO THE STRUCTURAL ENGINEER FOR ACCEPTANCE PRIOR TO USE IN THE FIELD.

C.

PUMPED CONCRETE: CONCRETE DESIGNED TO BE PUMPED SHALL BE SO NOTED ON THE MIX DESIGNS AND SHALL HAVE MIX PROPORTIONS COMPATIBLE WITH THE PUMPING PROCESS.

5.5

ADMIXTURES: USE ONLY ADMIXTURES APPROVED BY THE STRUCTURAL ENGINEER AND CONTAINING NO CHLORIDE IONS.

5.6

THE CONTRACTOR WILL EMPLOY A TESTING AGENCY TO PERFORM OTHER TESTS AND TO SUBMIT TEST REPORTS. SAMPLING AND TESTING FOR QUALITY CONTROL DURING PLACEMENT OF CONCRETE, AS FOLLOWS:

A.

SAMPLING FRESH CONCRETE: ASTM C172, EXCEPT MODIFIED FOR SLUMP TO COMPLY WITH ASTM C94.

1.

SLUMP: ASTM C143, ONE TEST FOR EACH SET OF COMPRESSIVE STRENGTH TEST SPECIMENS.

2.

CONCRETE TEMPERATURE: TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEGREES F (4 DEGREES C) AND BELOW, AND WHEN 80 DEGREES F (27 DEGREES C) AND ABOVE; AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS ARE MADE.

3.

COMPRESSIVE TEST SPECIMEN: ASTM C31, ONE SET OF FOUR STANDARD CYLINDERS FOR EACH COMPRESSIVE STRENGTH TEST, UNLESS OTHERWISE DIRECTED. MOLD AND STORE CYLINDERS FOR LABORATORY CURED TEST SPECIMENS EXCEPT WHEN FIELD-CURE TEST SPECIMENS ARE REQUIRED.

4.

COMPRESSIVE STRENGTH TESTS: ASTM C39, ONE SET FOR EACH 50 CU. YDS. OR FRACTION THEREOF, OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY OR FOR EACH 5,000 SQ. FT. OF SURFACE AREA PLACED; ONE SPECIMEN TESTED AT 7 DAYS, TWO SPECIMENS TESTED AT 28 DAYS, AND ONE SPECIMEN RETAINED IN RESERVE OR LATER TESTING IF REQUIRED.

A.

WHEN FREQUENCY OF TESTING WILL PROVIDE LESS THAN 5 STRENGTH TESTS FOR A GIVEN CLASS OF CONCRETE, CONDUCT TESTING FROM AT LEAST 5 RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN 5 ARE USED.

B.

WHEN STRENGTH OF FIELD-CURED CYLINDERS IS LESS THAN 85 PERCENT OF COMPANION LABORATORY-CURED CYLINDERS, EVALUATE CURRENT OPERATIONS AND PROVIDE CORRECTIVE PROCEDURES FOR PROTECTING AND CURING THE IN-PLACE CONCRETE.

C.

STRENGTH LEVEL OF CONCRETE WILL BE CONSIDERED SATISFACTORY IF AVERAGES OF SETS OF THREE CONSECUTIVE STRENGTH TEST RESULTS EQUAL OR EXCEED SPECIFIED COMPRESSIVE STRENGTH, AND NO INDIVIDUAL STRENGTH TEST RESULTS FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI.

5.7

TEST RESULTS WILL BE REPORTED IN WRITING TO OWNER, STRUCTURAL ENGINEER, ARCHITECT AND CONTRACTOR. REPORTS OF COMPRESSIVE STRENGTH TESTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING AGENCY, CONCRETE TYPE AND CLASS, LOCATION OF CONCRETE BATCH IN STRUCTURE, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIX PROPORTIONS AND MATERIAL; COMPRESSIVE BREAKING STRENGTH AND TYPE OF BREAK FOR BOTH 7-DAY TESTS AND 28-DAY TESTS.

5.8

NONDESTRUCTIVE TESTING: IMPACT HAMMER, SONOSCOPE, OR OTHER NONDESTRUCTIVE DEVICE MAY BE PERMITTED BUT SHALL NOT BE USED AS THE SOLE BASIS FOR ACCEPTANCE OF REJECTION.

5.9

ADDITIONAL TESTS: THE TESTING AGENCY WILL MAKE ADDITIONAL TESTS OF IN-PLACE CONCRETE WHEN TEST RESULTS INDICATE SPECIFIED CONCRETE STRENGTHS AND OTHER CHARACTERISTICS HAVE NOT BEEN ATTAINED IN THE STRUCTURE, AS DIRECTED BY THE STRUCTURAL ENGINEER. CONTRACTOR SHALL PAY FOR SUCH TESTS CONDUCTED, AND ANY OTHER ADDITIONAL TESTING AS MAY BE REQUIRED, WHEN UNACCEPTABLE CONCRETE IS VERIFIED.



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101-12-306.001

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ISSUE FOR
CONSTRUCTION

THE COTTAGES
of SAN MARCOS

5 BED-RIVERBIRCH

SAN MARCOS, TEXAS		1832 sq. ft.
NUMBER	12031	15 FEBRUARY 2013
Drawn by:	MBJ	
Checked by:	DCM	

SHEET INDEX

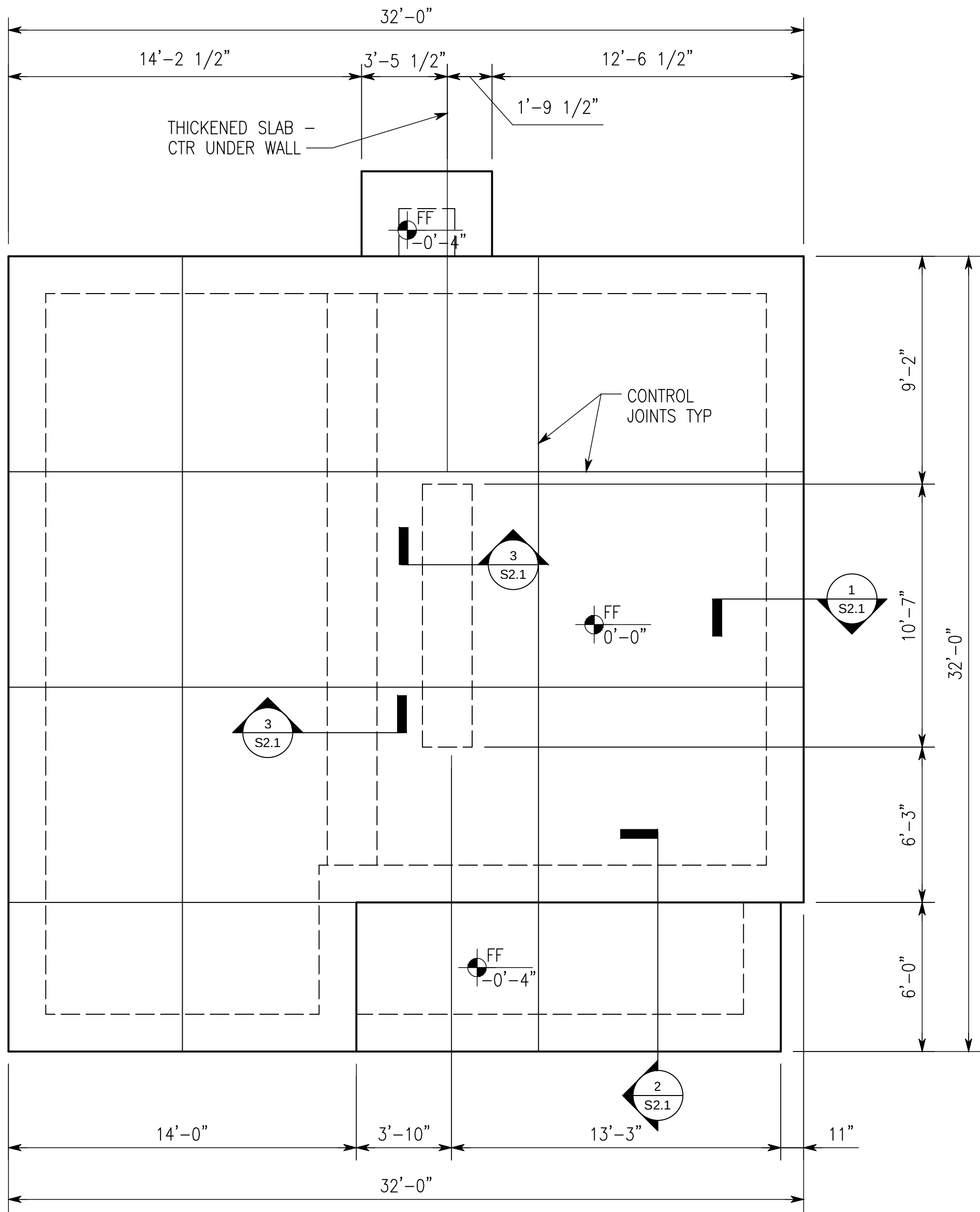
REVISIONS

GENERAL NOTES

S1.1

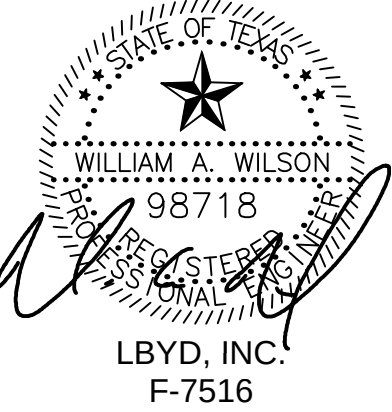
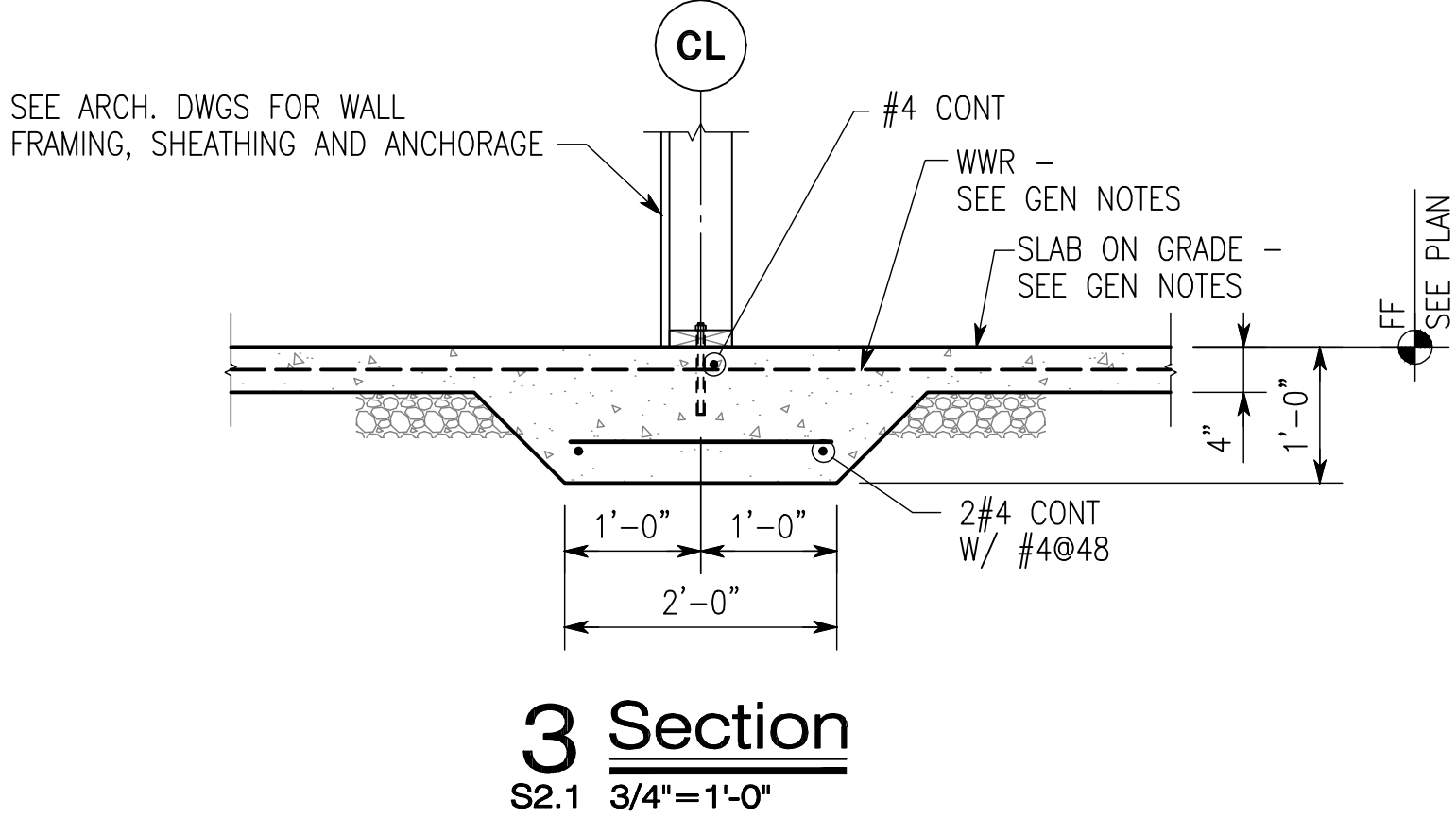
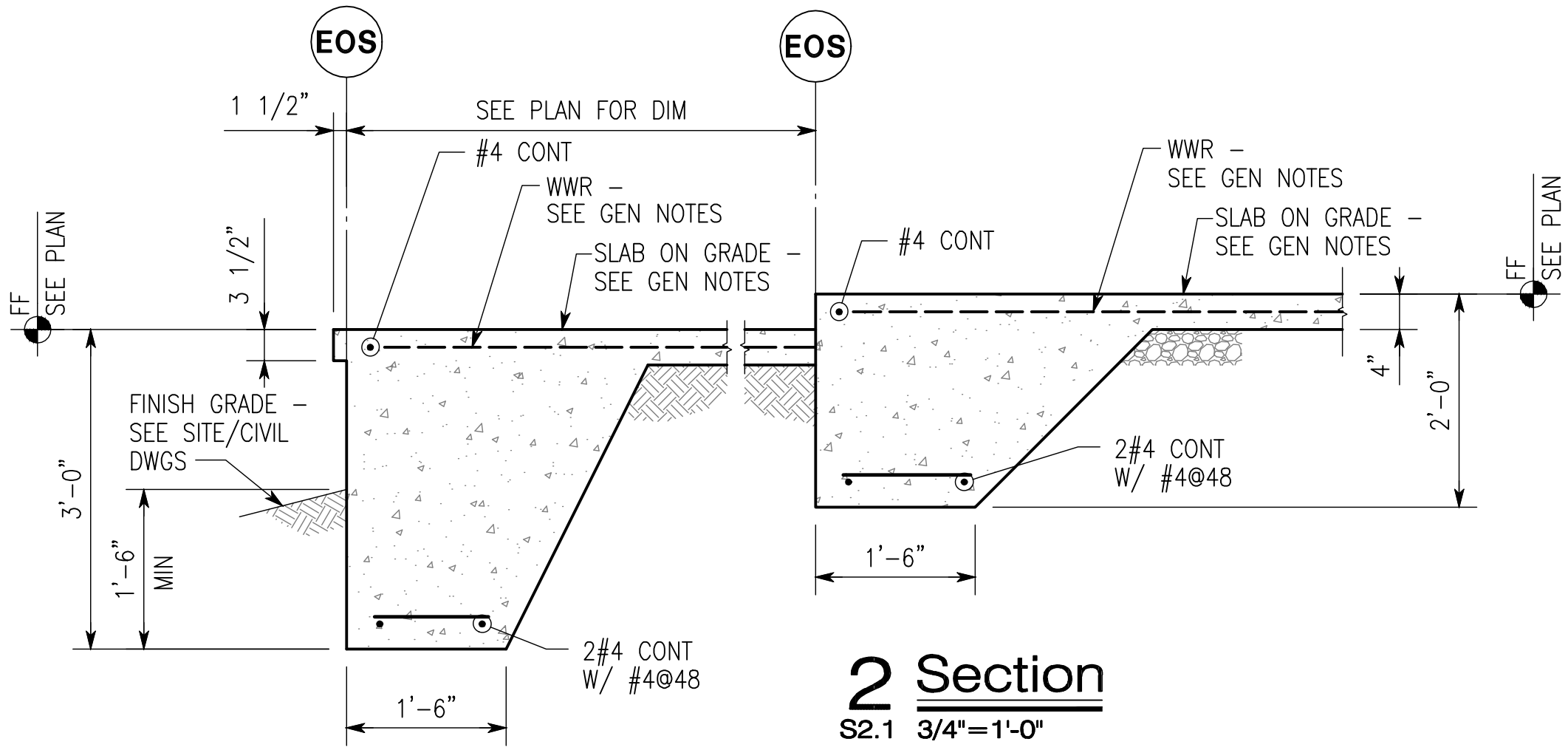
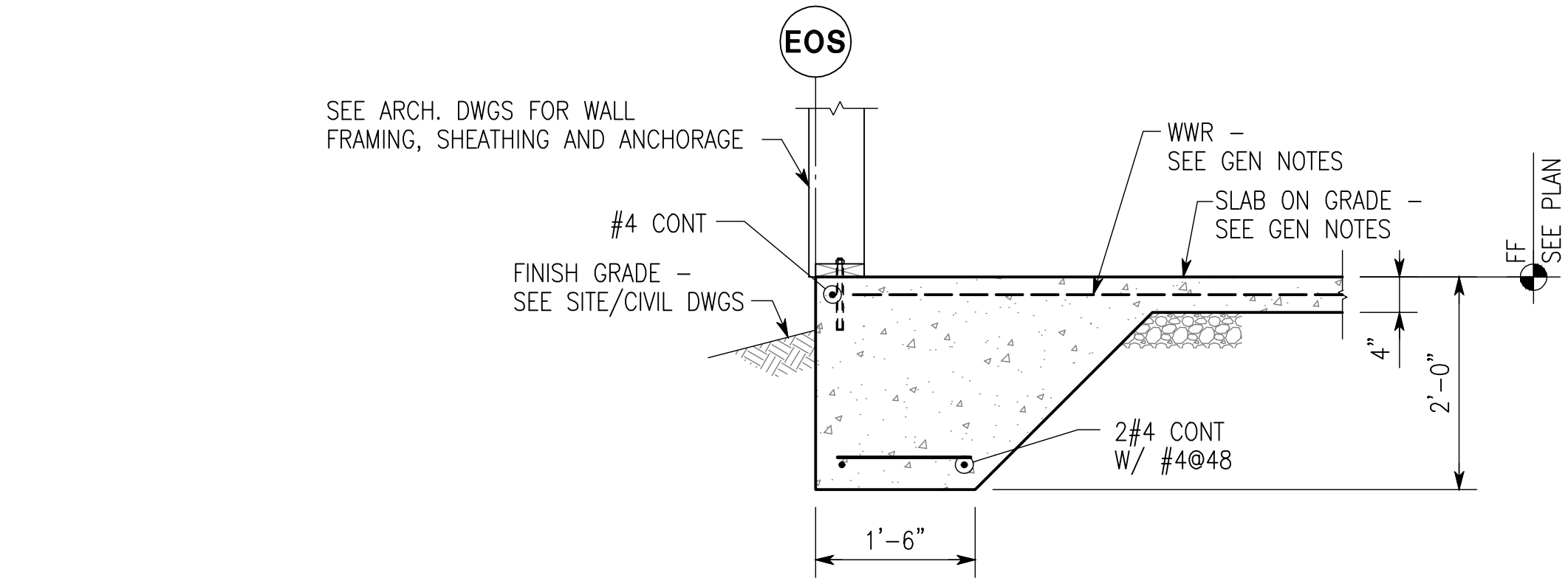
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Foundation Plan - Riverbirch

- 1/4" = 1'-0"**
1. FOR FINISH FLOOR (TOP OF SLAB) REFERENCE ELEVATION 0'-0", SEE CIVIL/ARCHITECTURAL DRAWINGS FOR ACTUAL ELEVATION.
 2. FOR SLAB ON GRADE CONSTRUCTION, SEE GENERAL NOTES.
 3. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS.



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**ISSUE FOR
CONSTRUCTION**

**THE COTTAGES
of SAN MARCOS**

5 BED-RIVERBIRCH

SAN MARCOS, TEXAS 1832 sq. ft.
NUMBER 12031 15 FEBRUARY 2013

Drawn by: MBJ
Checked by: DCM

SHEET INDEX

REVISIONS

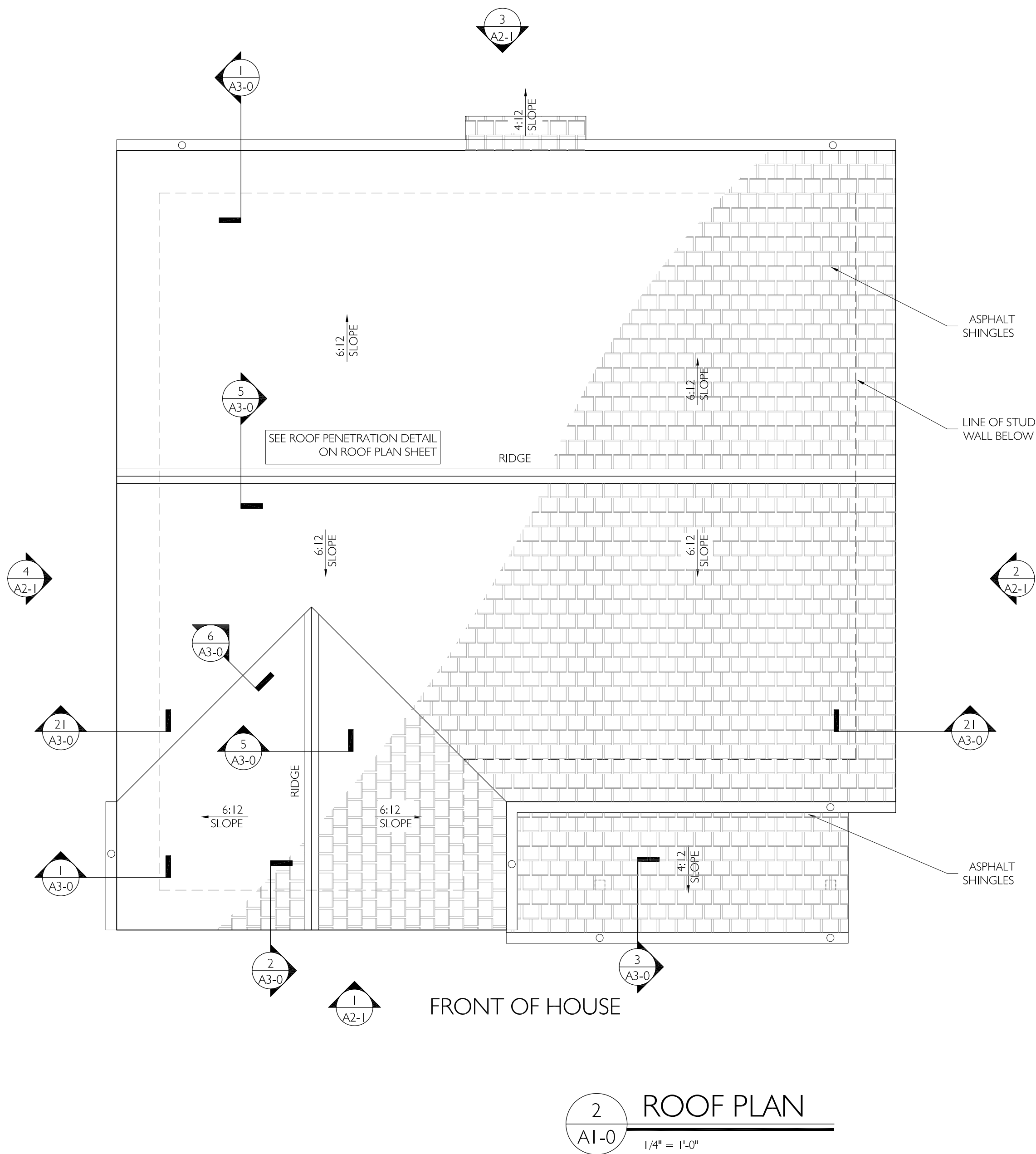
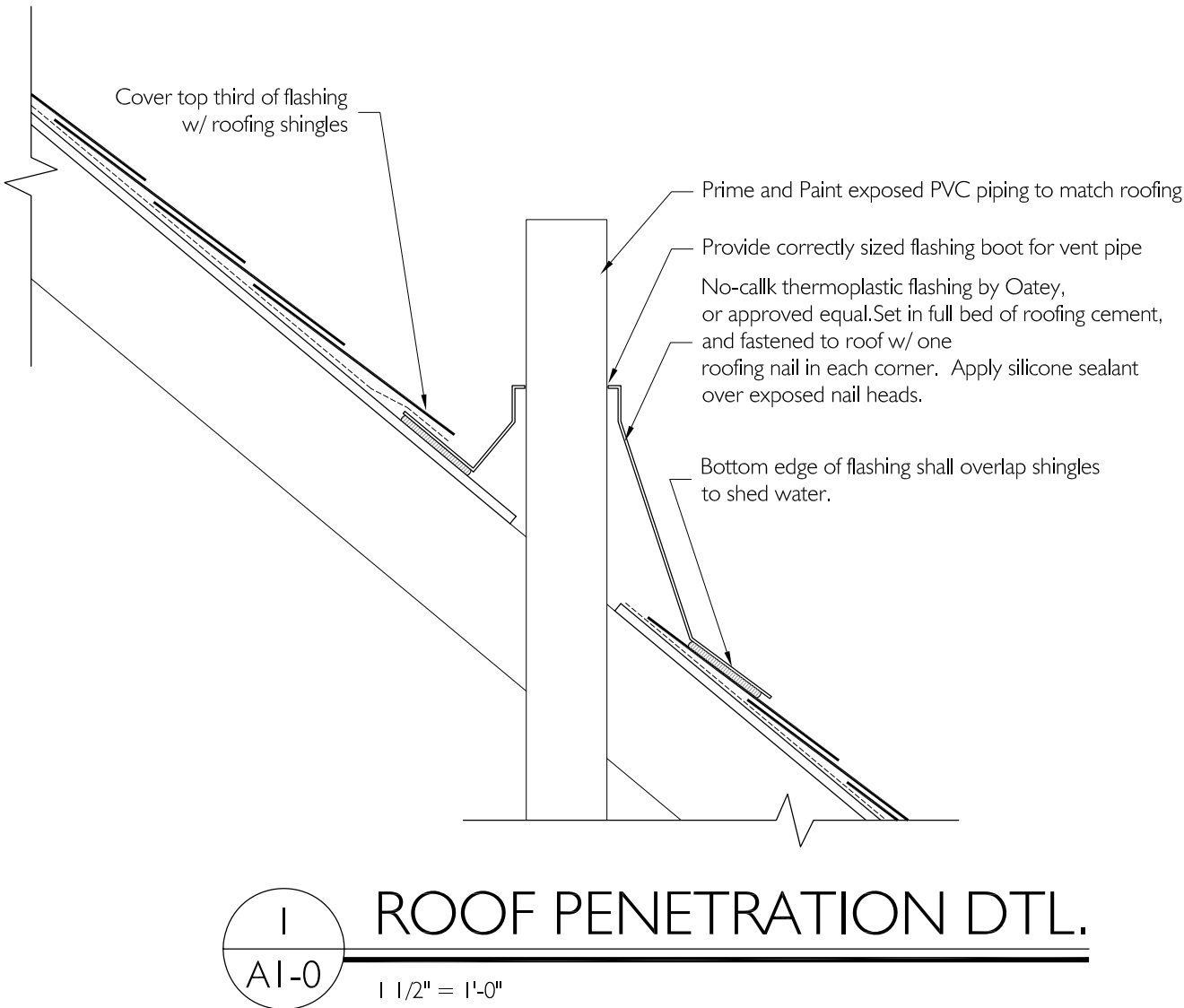
FOUNDATION PLAN

S2.1

NOTE TO FRAMER:

Flash at All Valleys
- Use Detail 6/A3-0

Note:
- Use high temp modified bitumen underlayment along eaves, and roof slope transitions, in 18"-24"-36" widths, in keeping with underlayment manufacturers recommendations; install underlayment along both sides of valleys at 48" upslope. See detail 27 for detail of flashing at valleys.
- Use membrane (high temp) flashing under metal flashing installations at windows, louvers, faux vents and wall accents.
- Use non-corrosive fasteners and use of elastometric washers where applicable and for securing downspouts; typical.
- use double dipped galvanized roofing nails with ring shank for penetration flashing flange securement over the long term



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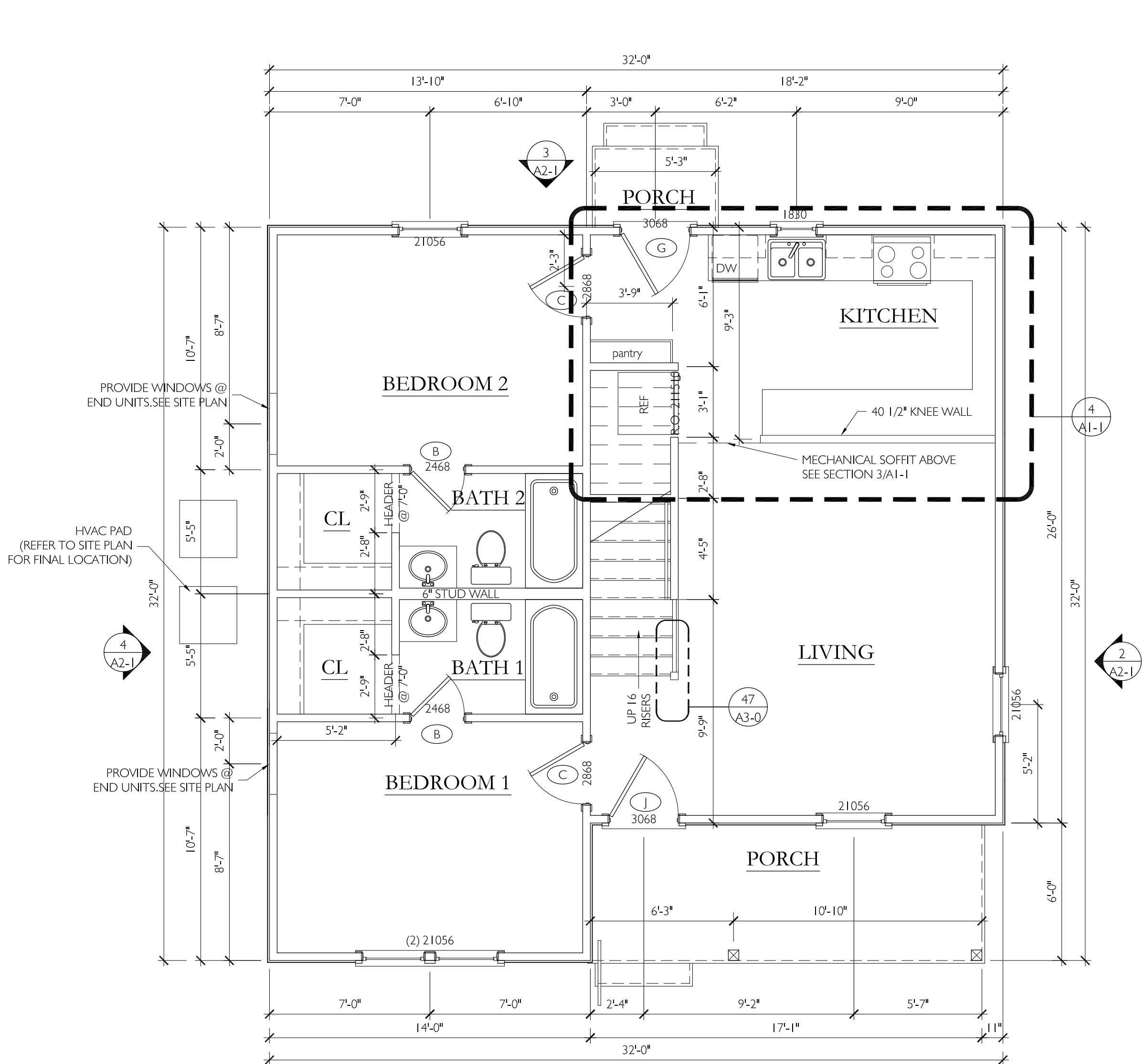
5 BED-RIVERBIRCH
1832 sq. ft.

SAN MARCOS, TEXAS
NUMBER 12031 15 FEBRUARY 2013
Drawn by: TMB
Checked by: EAL
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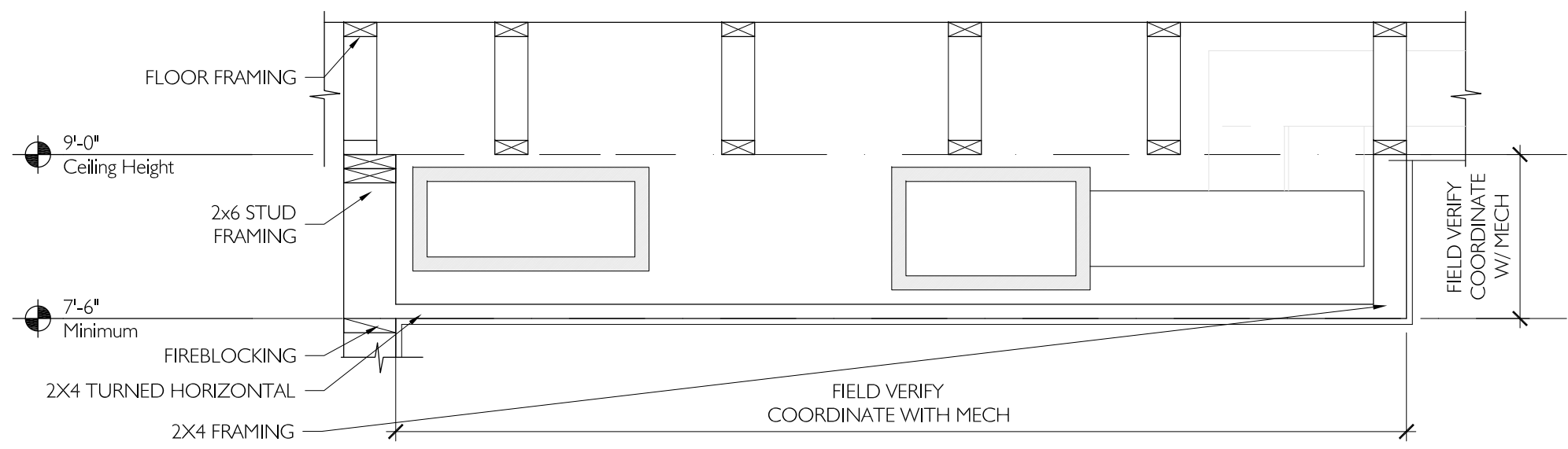
ROOF PLAN

A1-0

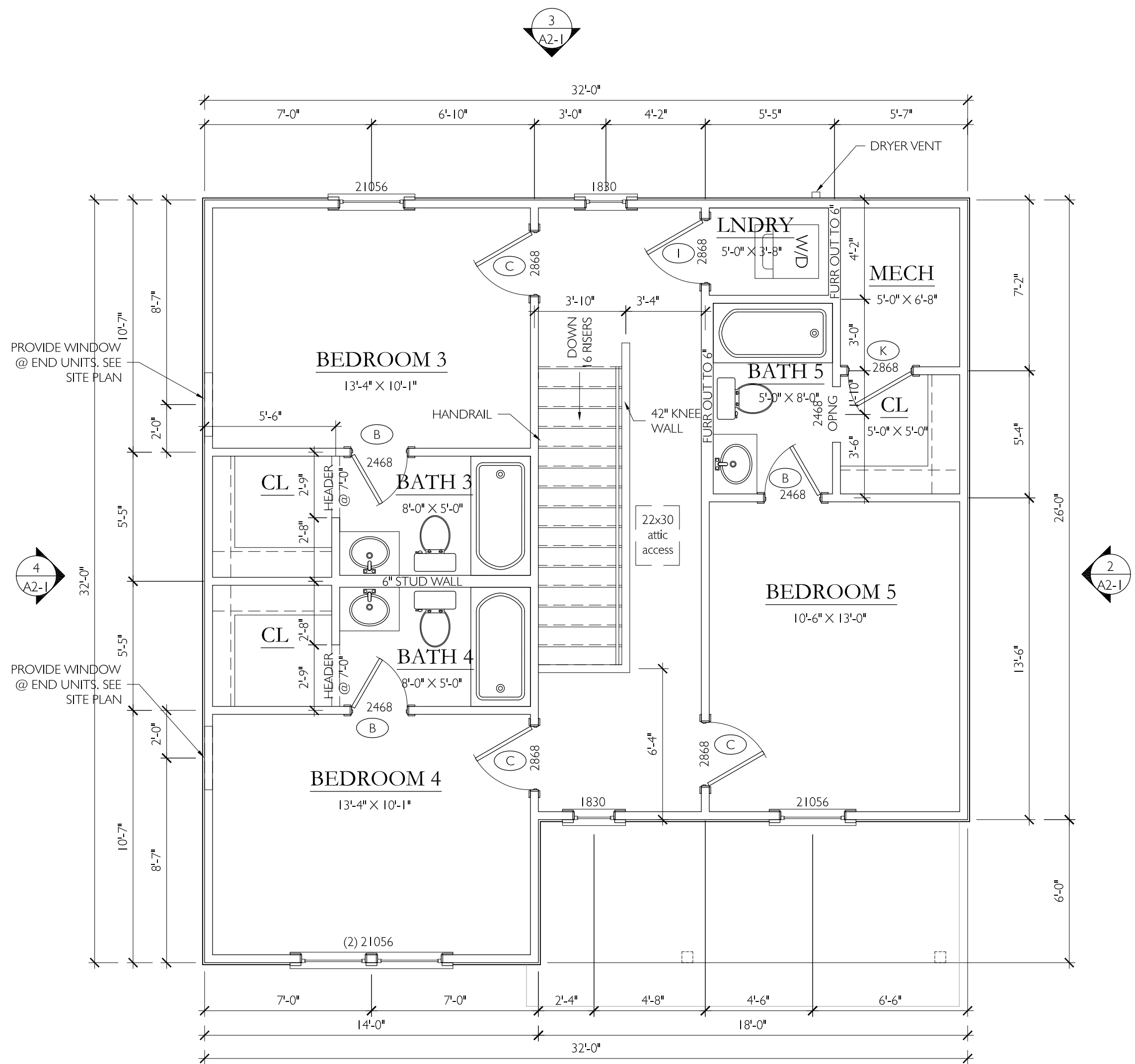
NOTE TO FRAMER:
5'-0" clear R.O. at all bathtubs
Furr out wall to 6" at laundry



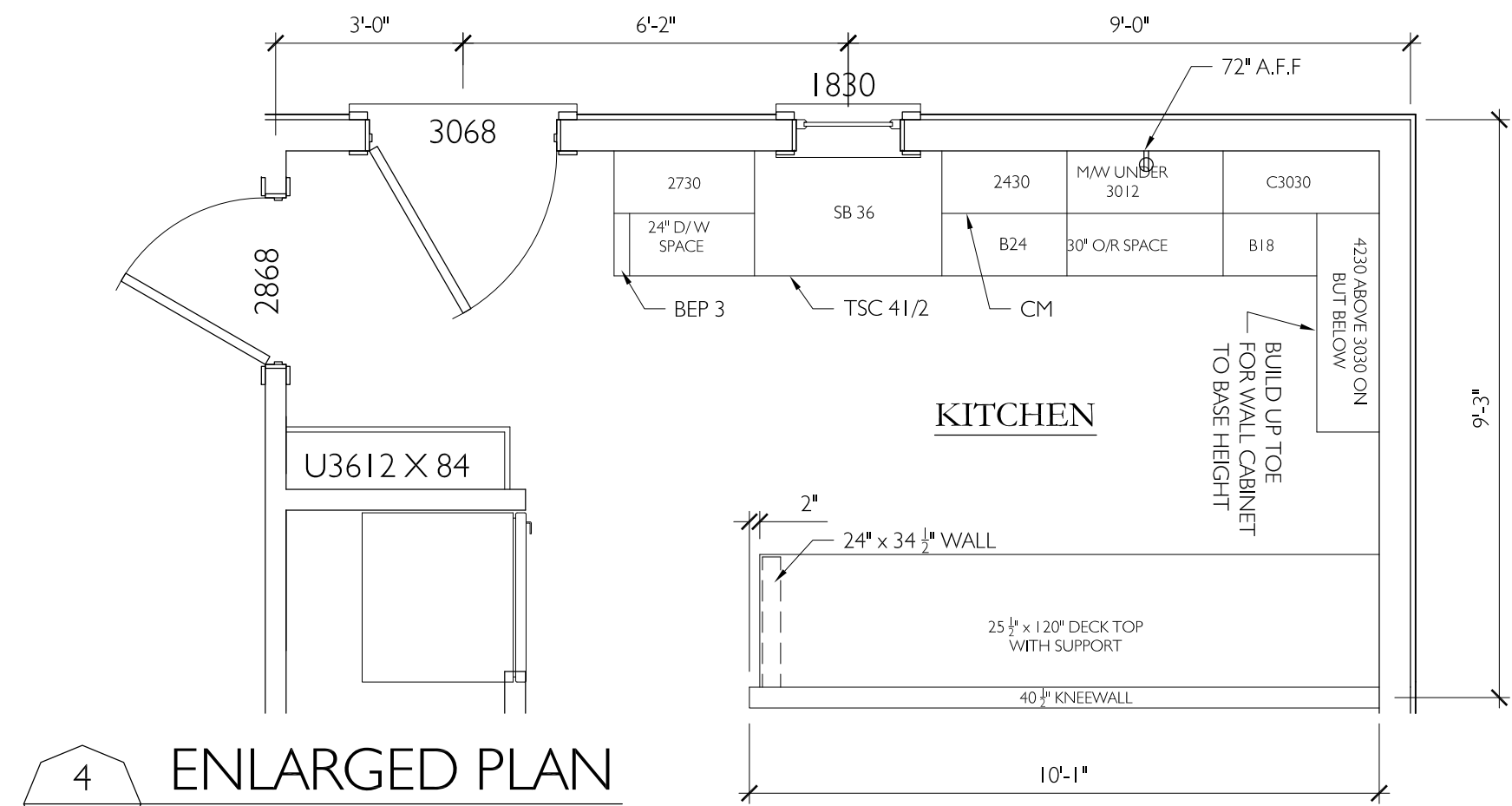
1
A1-1
MAIN LEVEL FLOOR PLAN
1/4" = 1'-0"



3
A1-1
SOFFIT SECTION
3/4" = 1'-0"



1
A2-1
FRONT OF HOUSE
2
A1-1
UPPER LEVEL FLOOR PLAN
1/4" = 1'-0"



4
A1-1
ENLARGED PLAN
3/8" = 1'-0"

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5 BED-RIVERBIRCH
1832 sq. ft.
SAN MARCOS, TEXAS
NUMBER 12051 15 FEBRUARY 2013
Drawn by: TMB
Checked by: EAL
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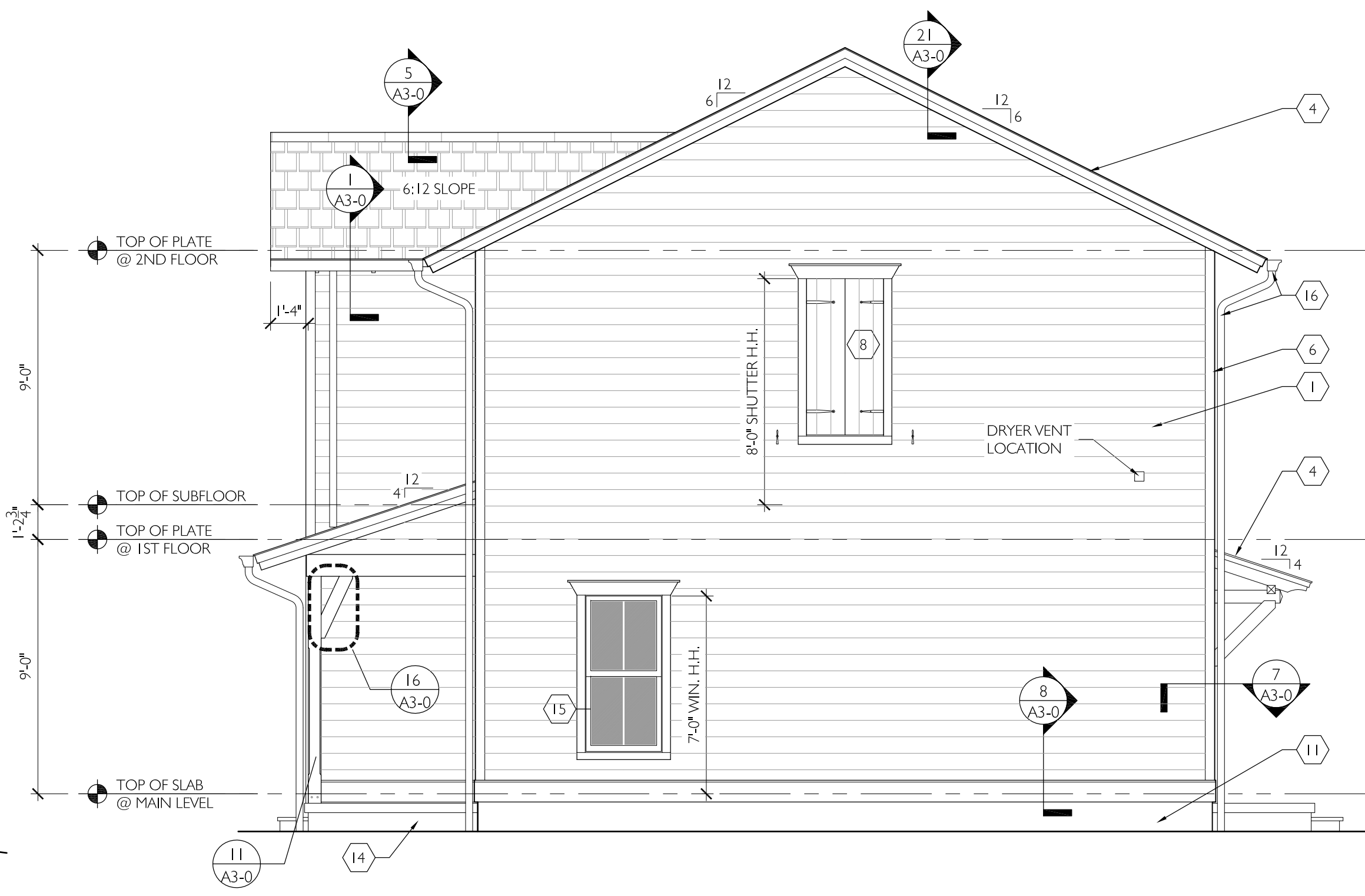
FLOOR PLANS

A1-1

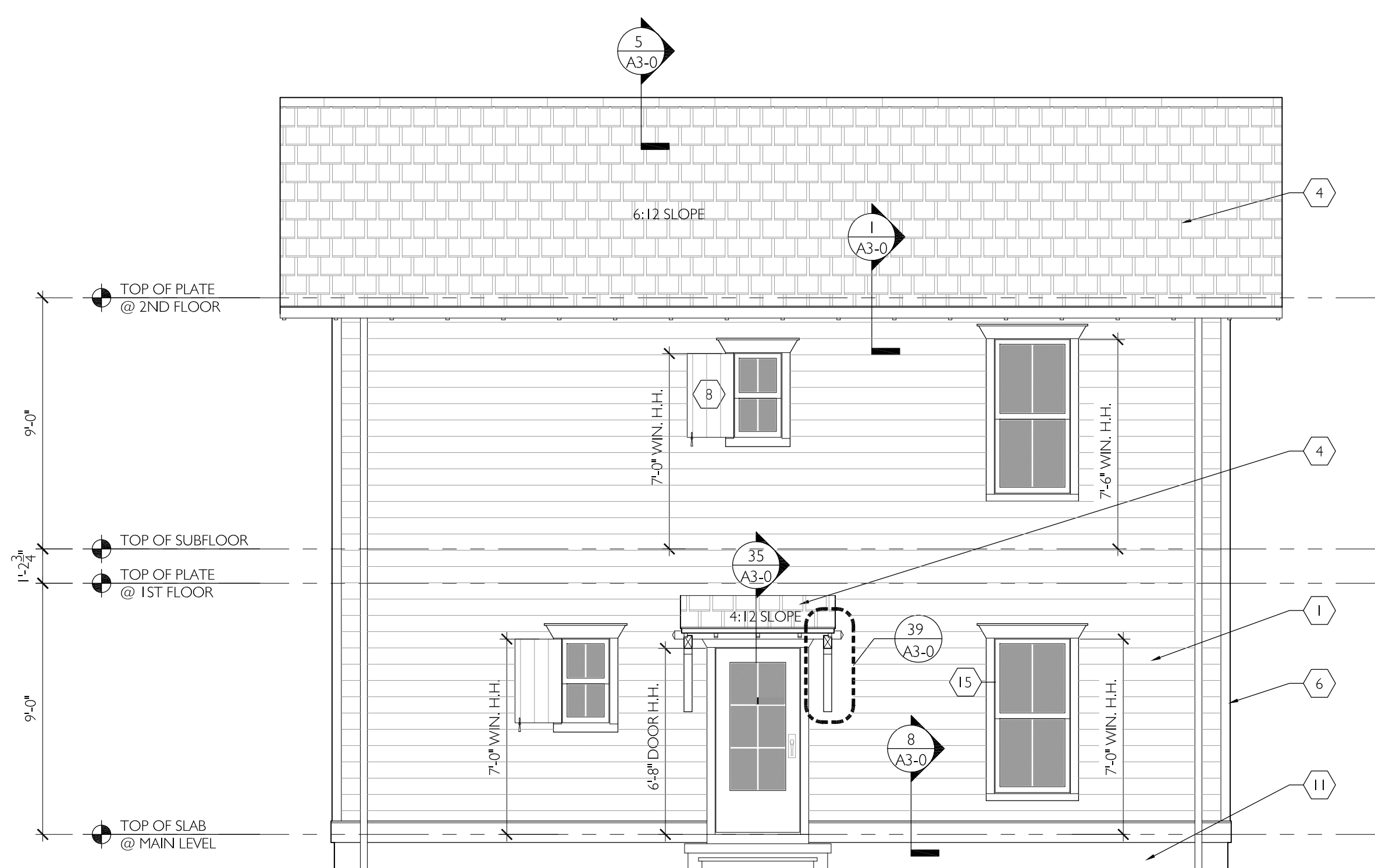
	EXTERIOR MATERIAL SCHEDULE
1	*SMARTSID® HORIZONTAL LAP SIDING W/ 7" EXPOSURE
2	3/8" SMARTSIDE VERTICAL EXTERIOR PANEL W/ BATTEN STRIPS @ 16" O.C.
3	SITE FENCING. SEE CIVIL FOR DETAIL.
4	DIMENSIONAL ASPHALT SHINGLES
5	SIMULATED STONE VENEER
6	5/4" *SMARTSIDE® CORNER BOARD 4" @ FRONT/REAR, 4" @ SIDES
7	WOOD LOUVER DOOR/VENT
8	FAUX SHUTTERS. SEE DETAIL 15a to 15d ON SHEET A3.0 FOR DETAIL
9	IF FOUR OR MORE RISERS ARE REQUIRED SEE DETAIL 72. PER IRC R311.7.7
10	6" VERTICAL TONGUE & GROOVE BOARDS
11	MORTAR SMEAR
12	SEE DETAIL 12 FOR HOUSE NUMBER LOCATION
14	MORTAR SMEAR @ PORCH
15	SEE DETAIL 13 FOR WINDOW CALL OUTS AND DETAILS
16	6" K STYLE - 4" ROUND - HIDDEN HANGER 6"-FASTENED W/ 1 1/2" GALV. SCREW W/ NEOPRENE WASHER
17	*SMARTSID® HORIZONTAL LAP SIDING W/ 4" EXPOSURE



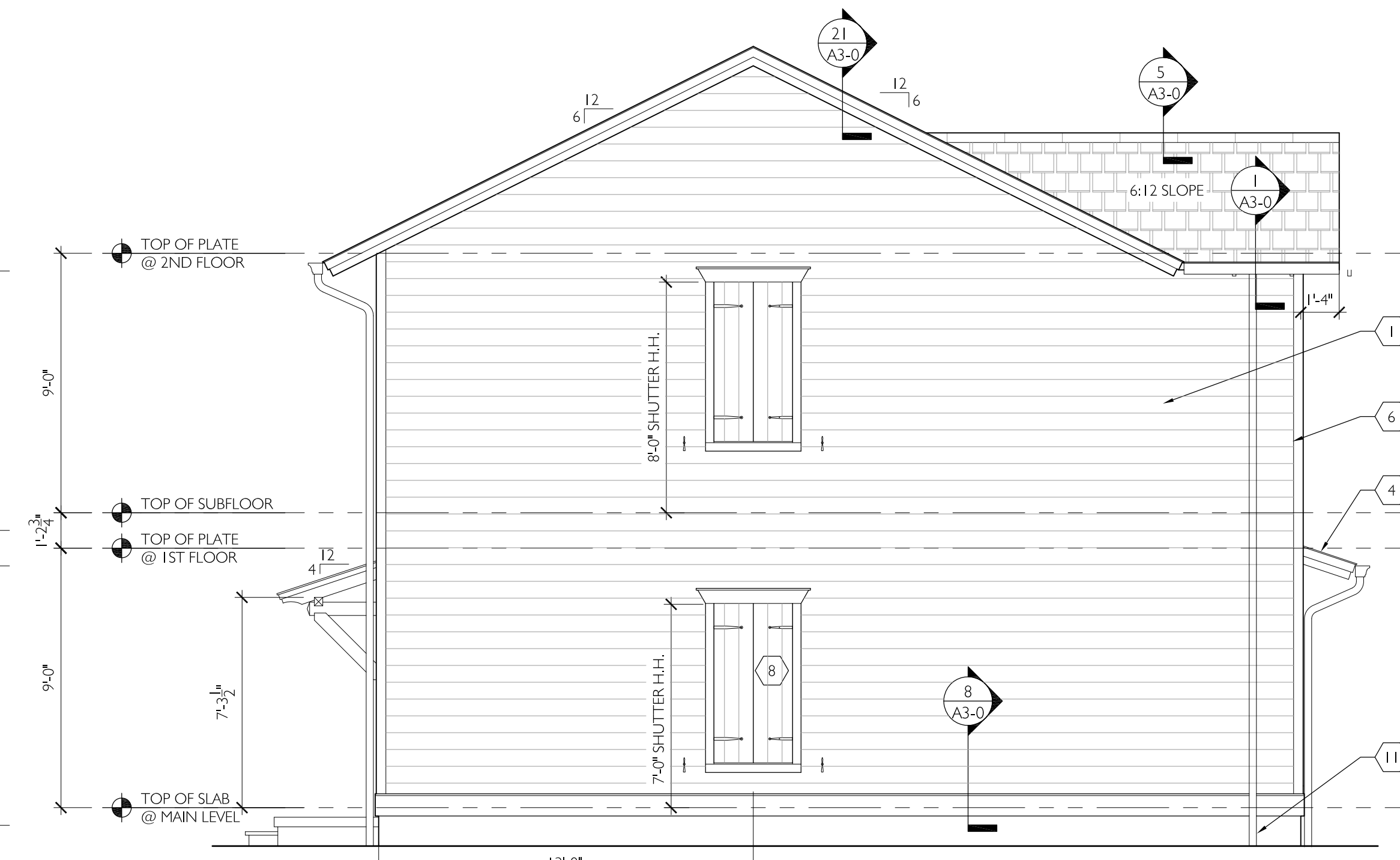
1 FRONT ELEVATION
A2-1 1/4" = 1'-0"



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



3 REAR ELEVATION
A2-1 1/4" = 1'-0"



4 LEFT SIDE ELEVATION
A2-1 $1/4" = 1'-0"$

GENERAL NOTE:

- Use modified bitumen (High Temp) underlayment along eaves, and slope transitions, in 18"-24"-36" widths, in keeping with underlayment manufacturers recommendations; install underlayment along both sides of valleys at 48" upslope. If required, see detail 27 for detail of flashing at valleys.
- Use membrane (high temp) flashing under metal flashing installations at windows, louvers, faux vents and wall accents.

- Use non-corrosive fasteners and use of elastomeric washers where applicable and for securing downspouts; typical.
- Use 15# felt on all roofs.
- Use neutral cure silicone sealant at all $\frac{1}{2}$ joint openings, wall penetrations, along inside corners and cladding changes
- Flash and seal wall penetrations to create a watertight cladding installation capable of performing under 6.24 psf water pressure test or equivalent rainfall per IBC 2009; typ.
- use double dipped galvanized roofing nails with ring shank for penetration flashing flange securement over the long term



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NUMBER 12031 15 FEBRUARY 2013

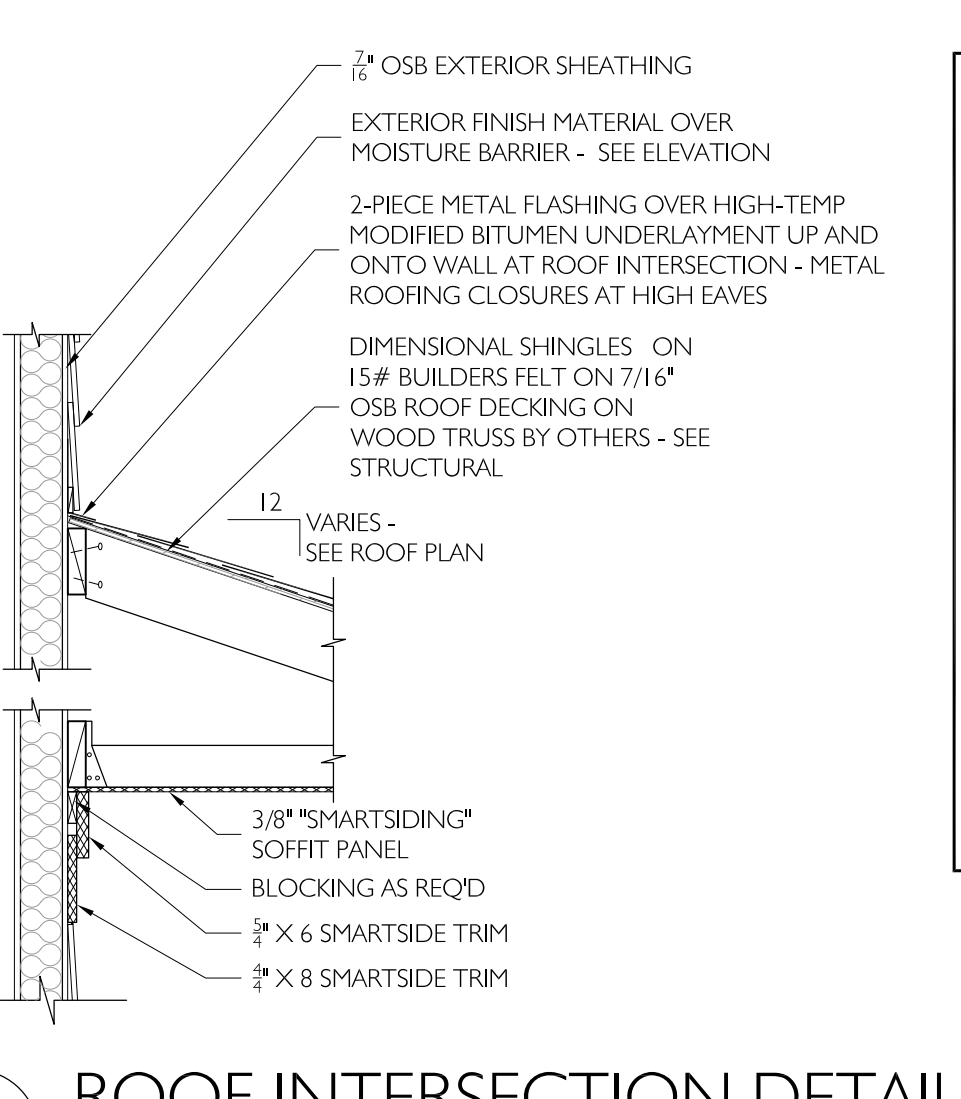
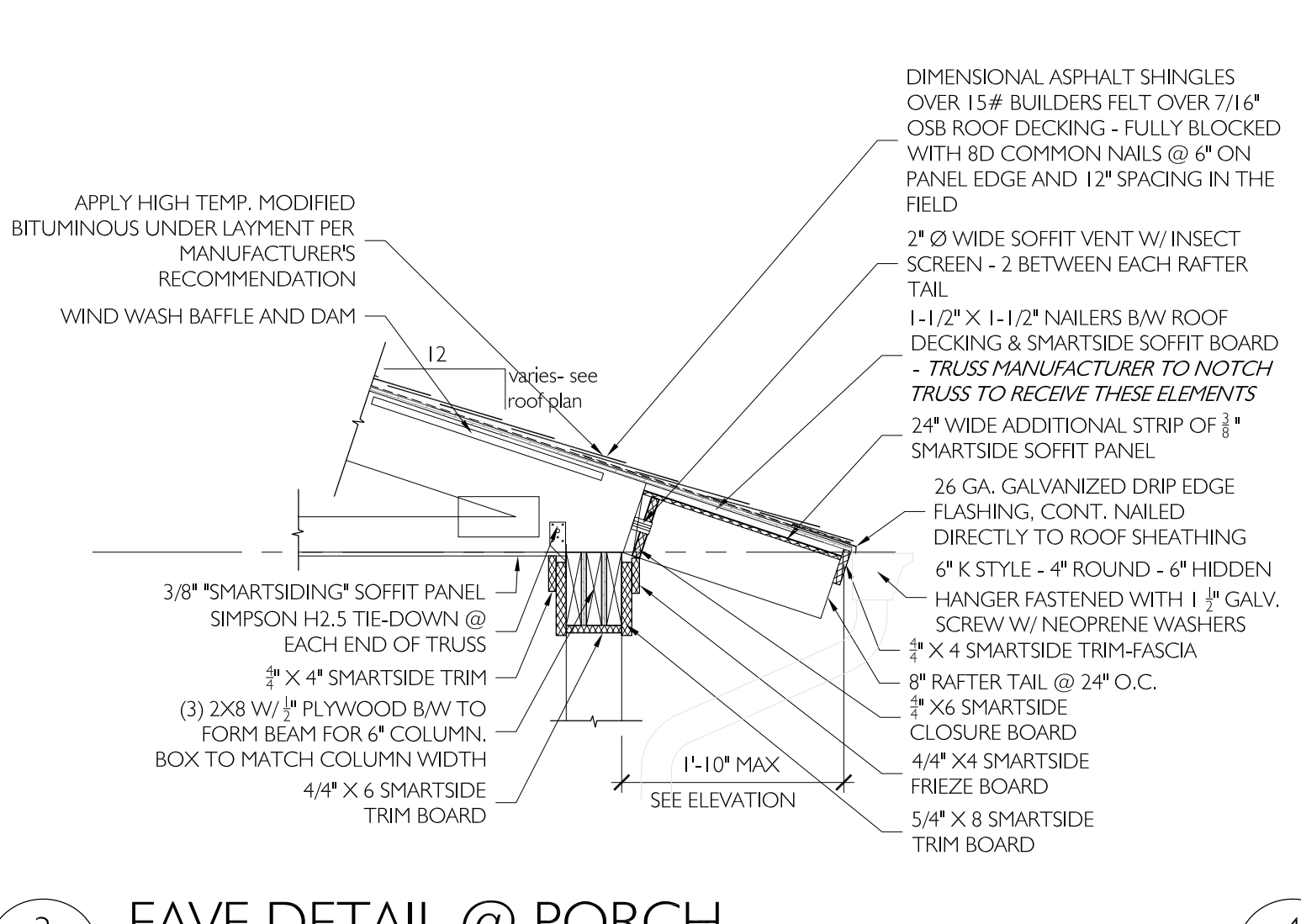
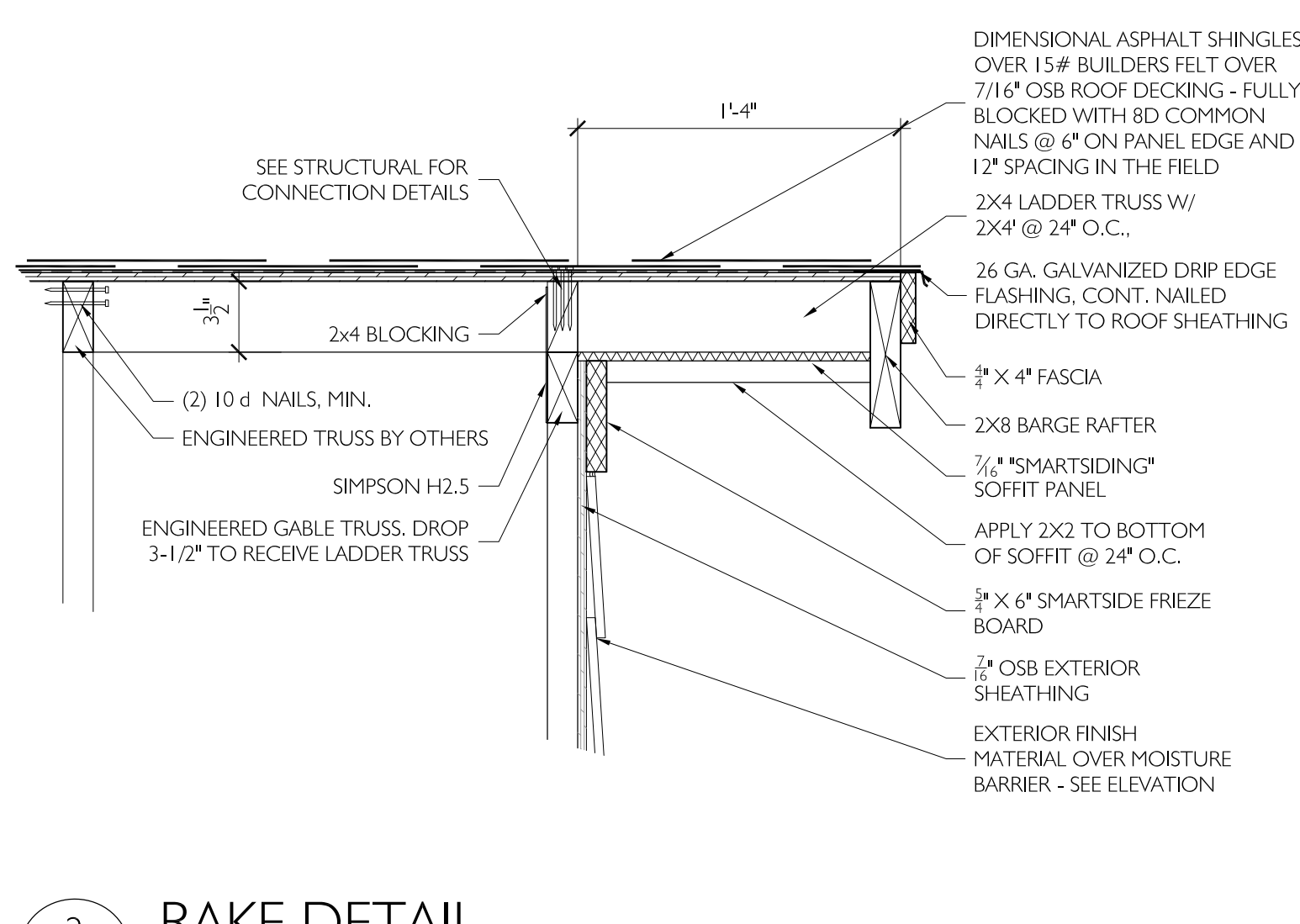
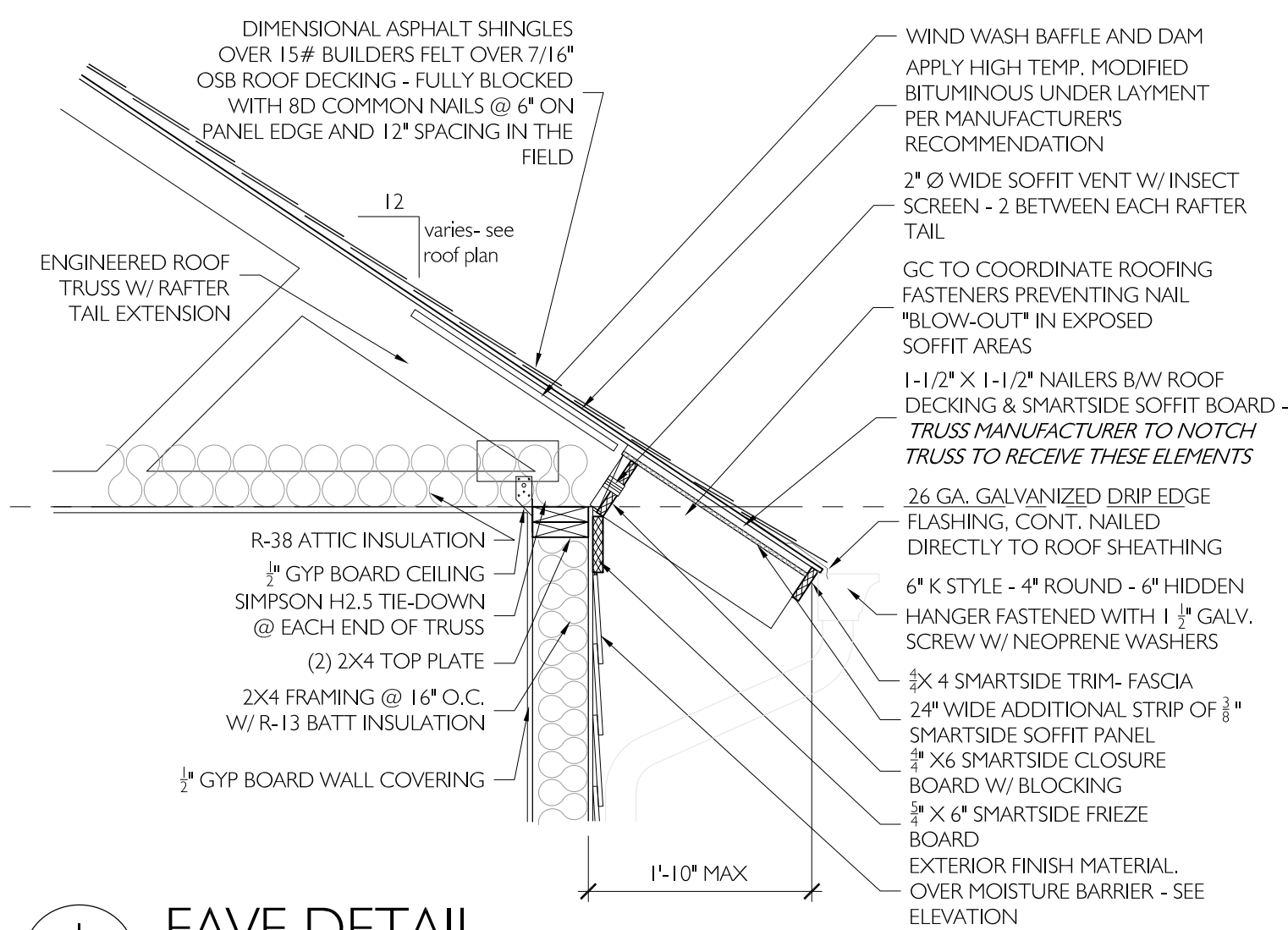
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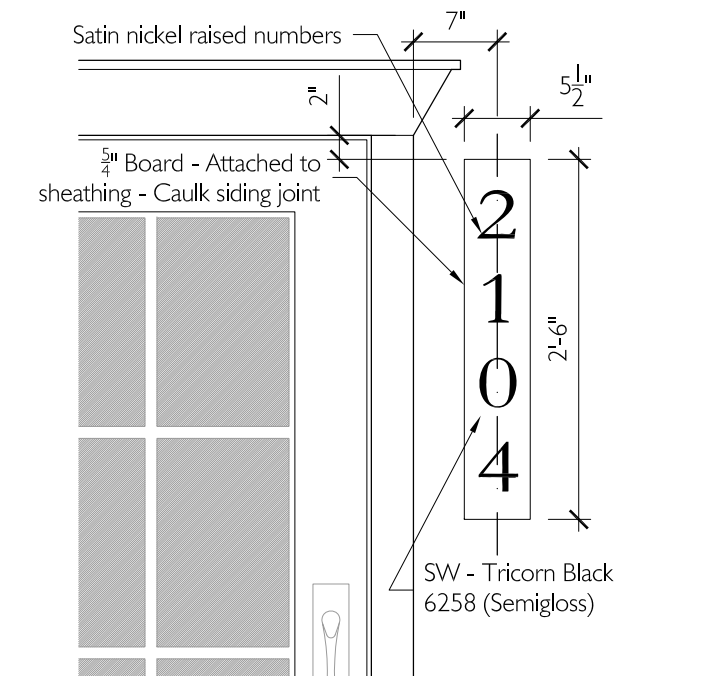
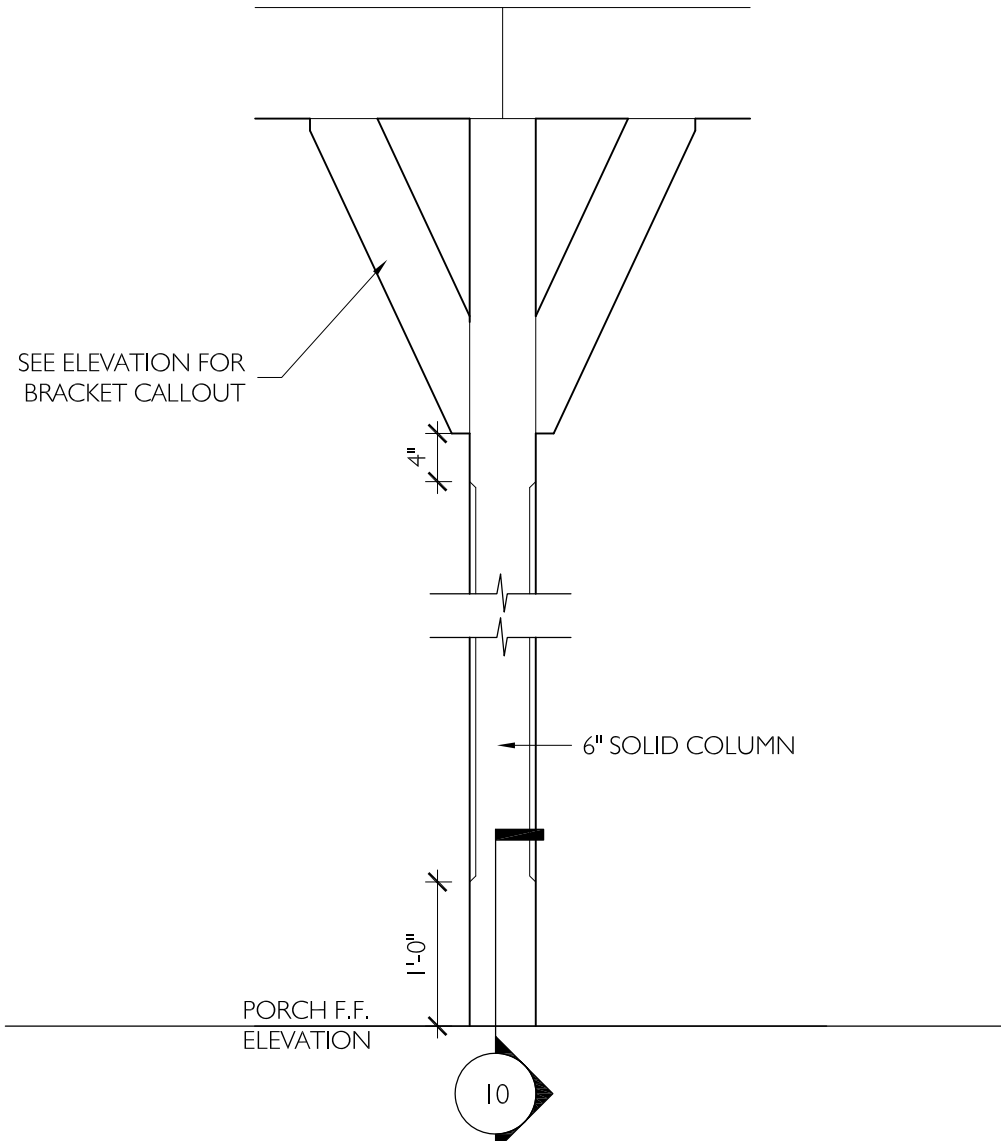
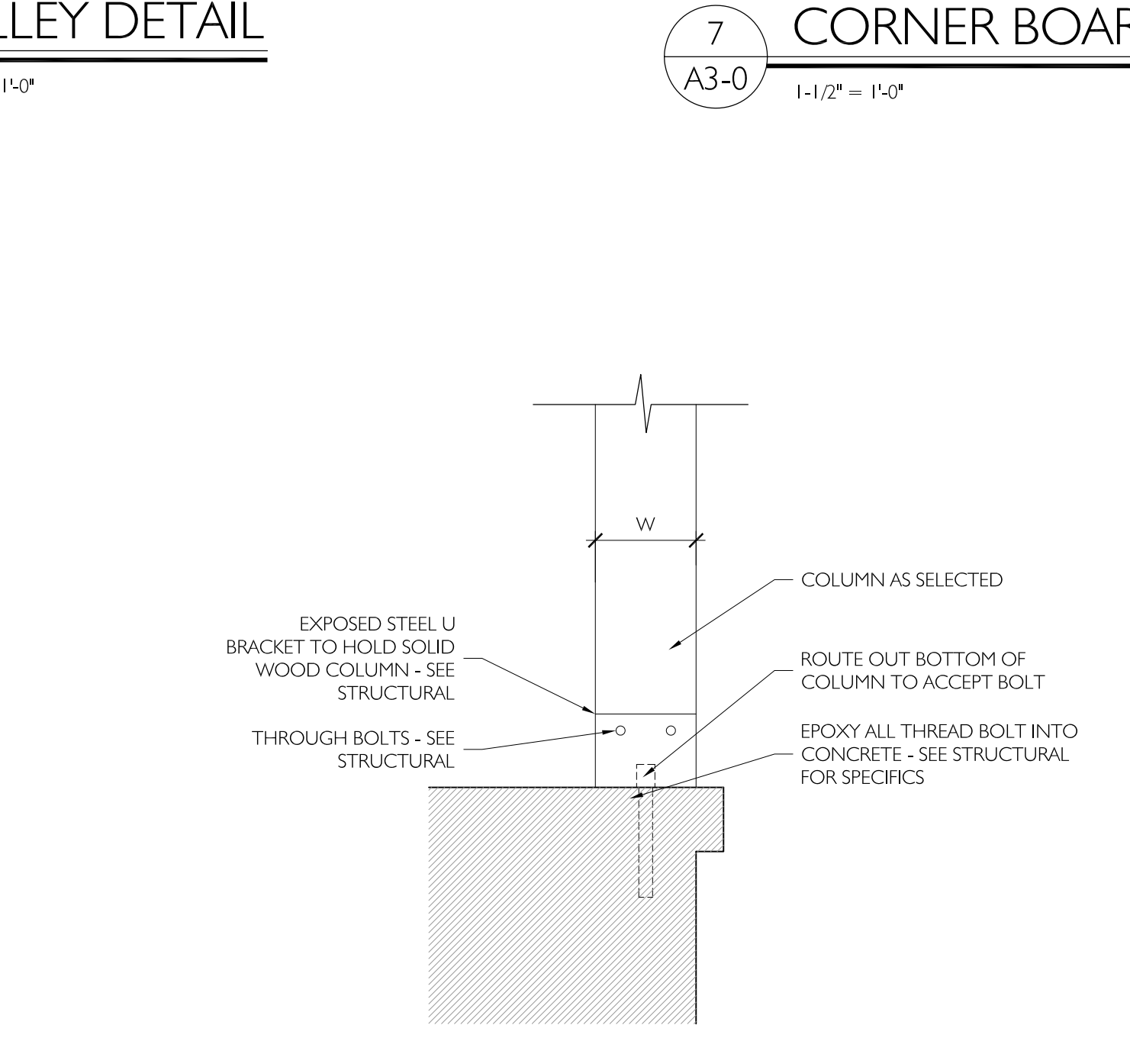
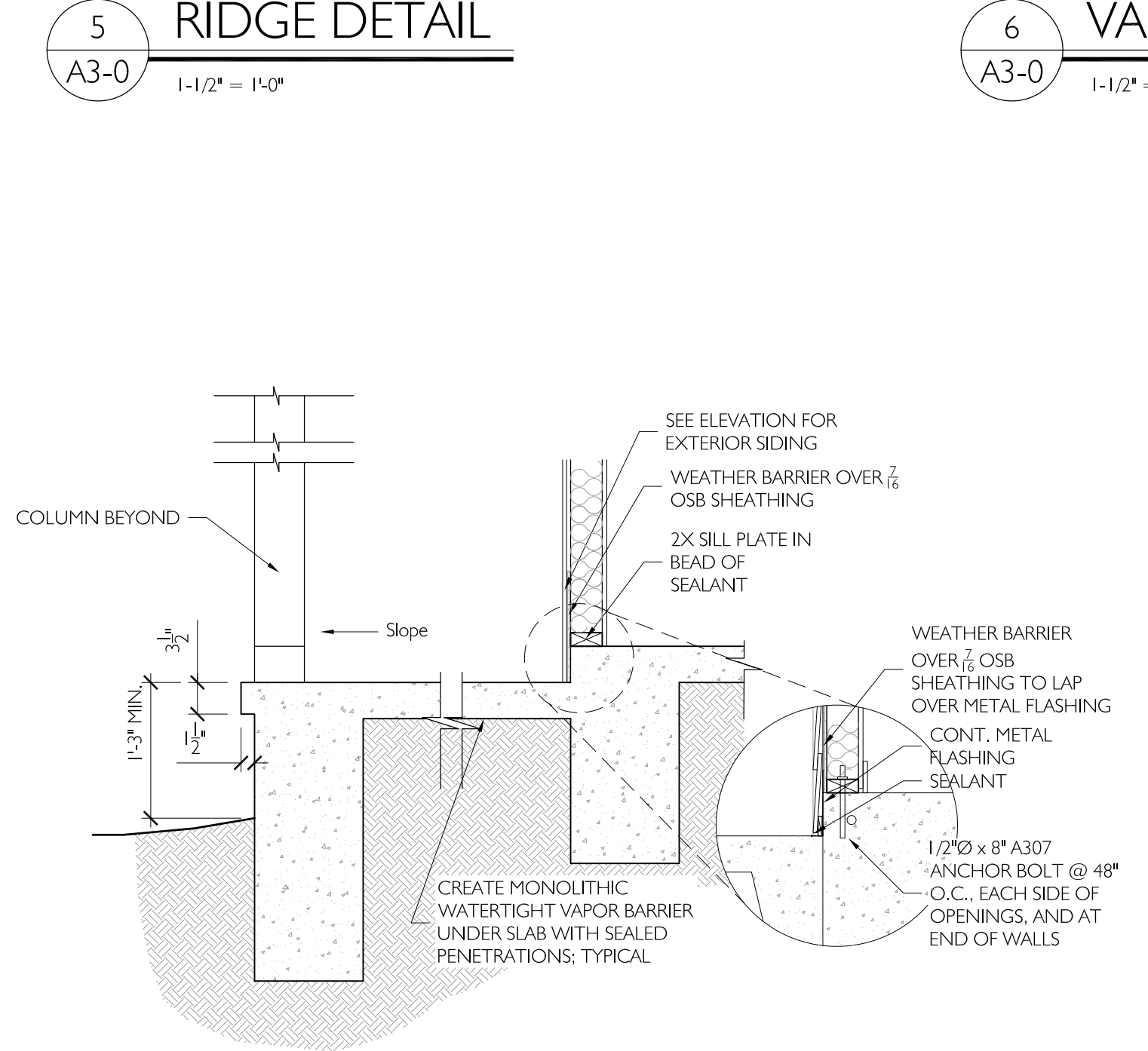
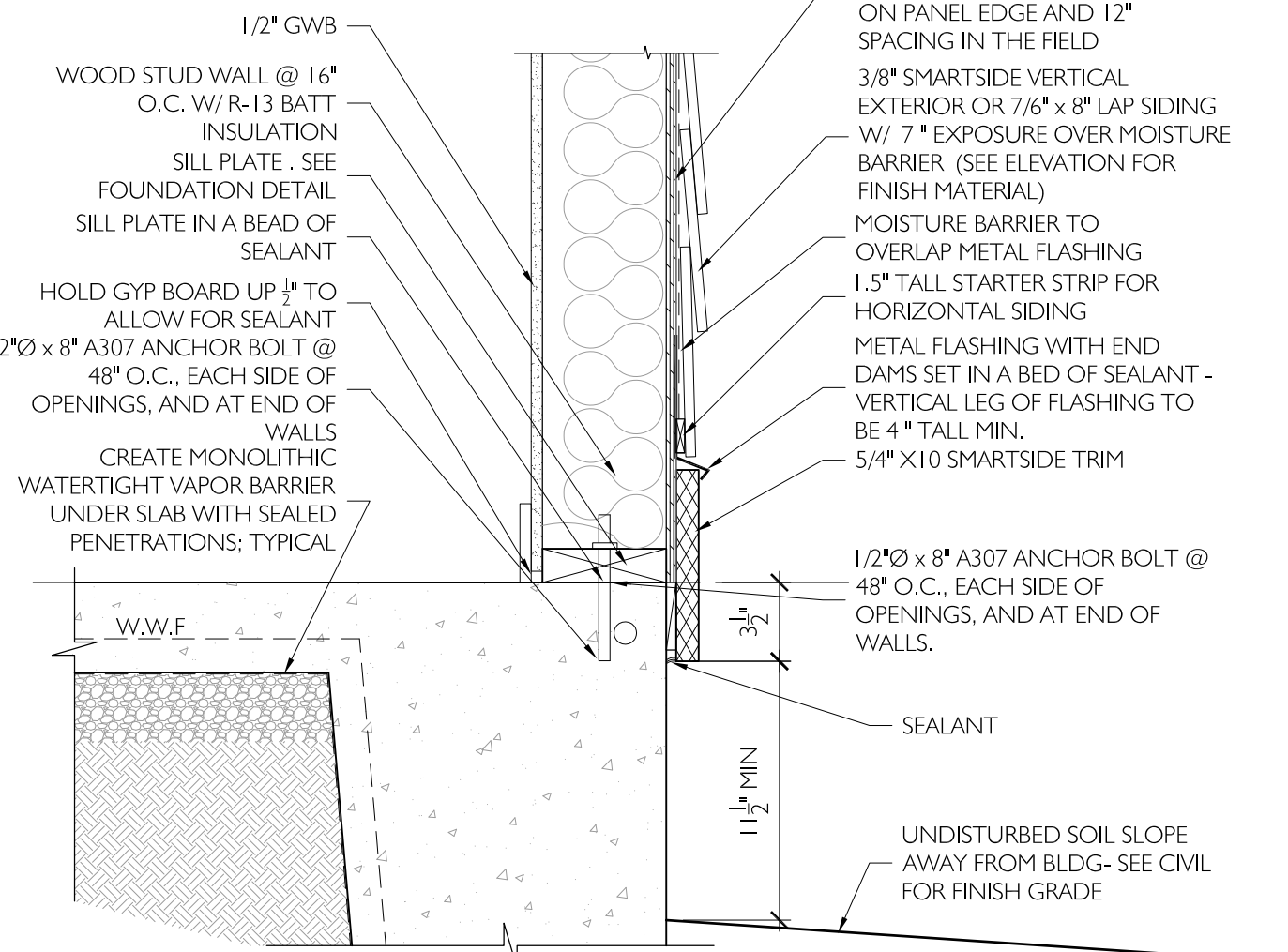
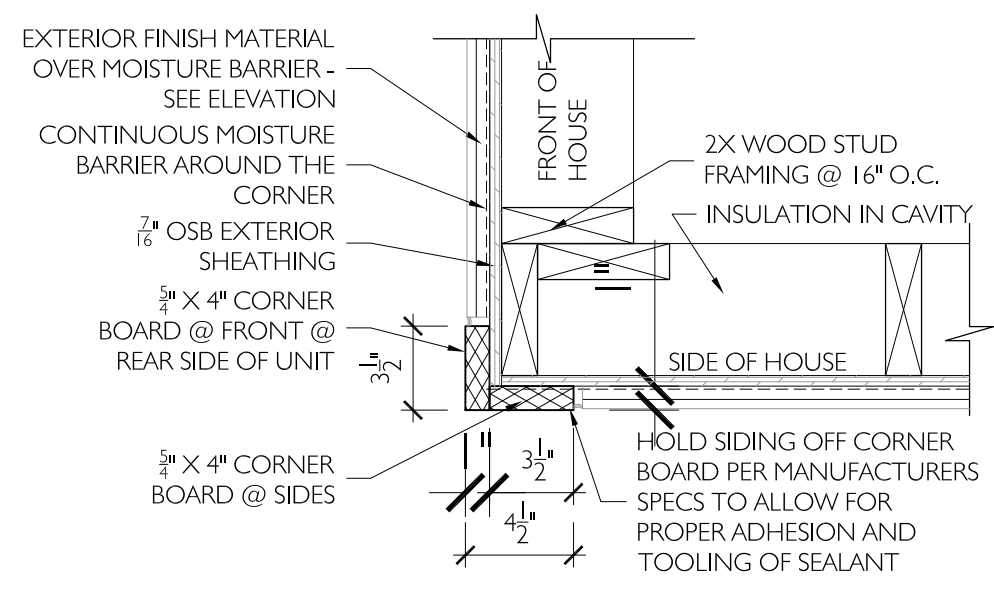
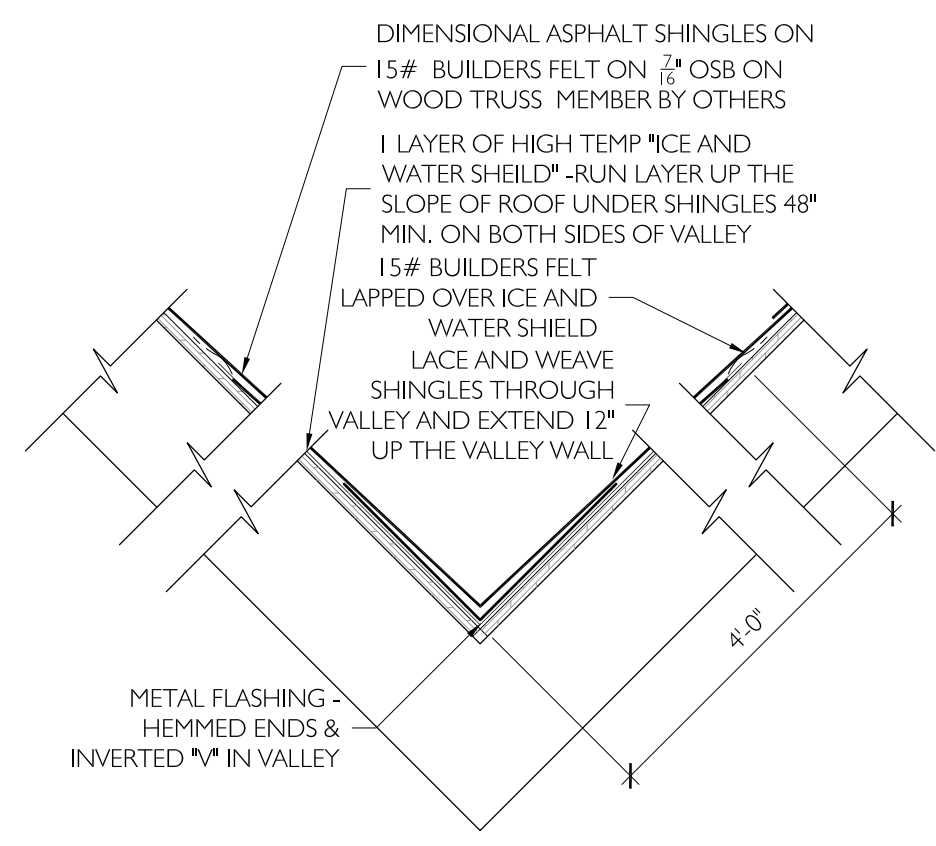
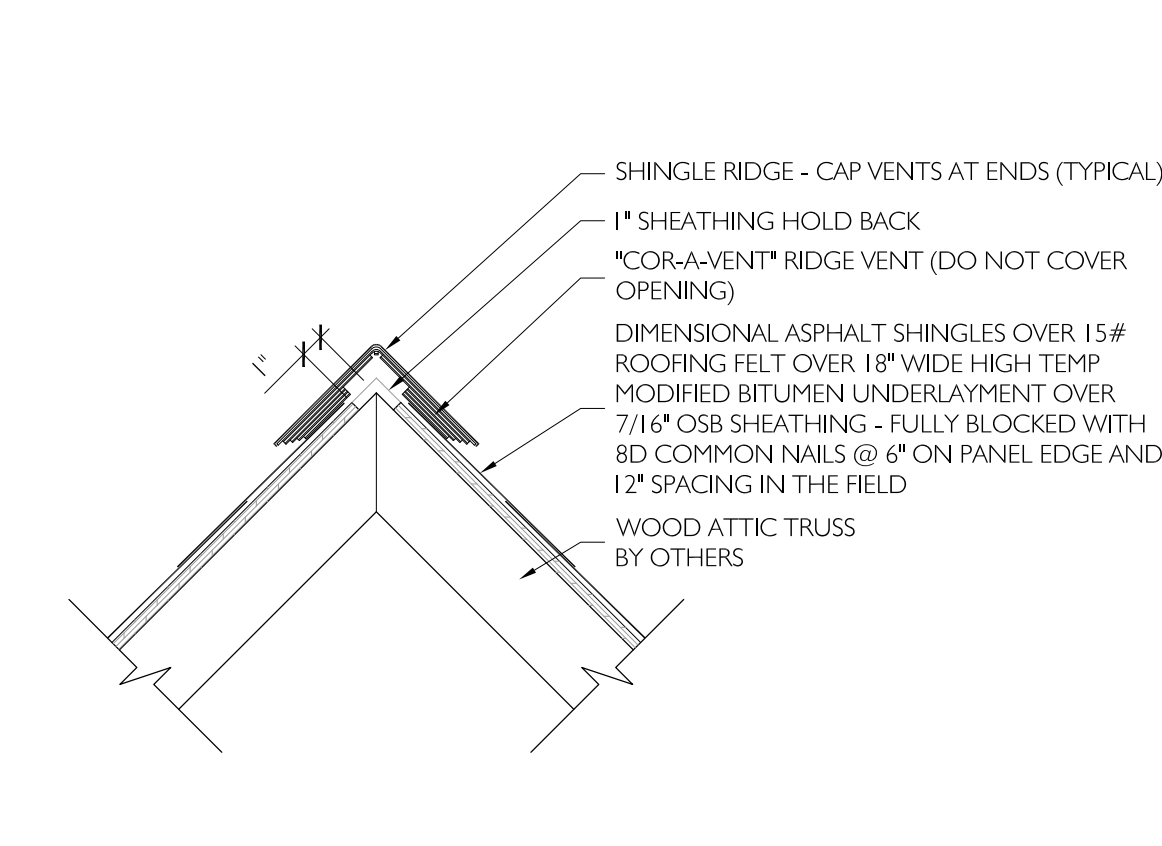
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EXTERIOR ELEVATIONS
"RIVERBIRCH"

A2-1



GENERAL NOTE:
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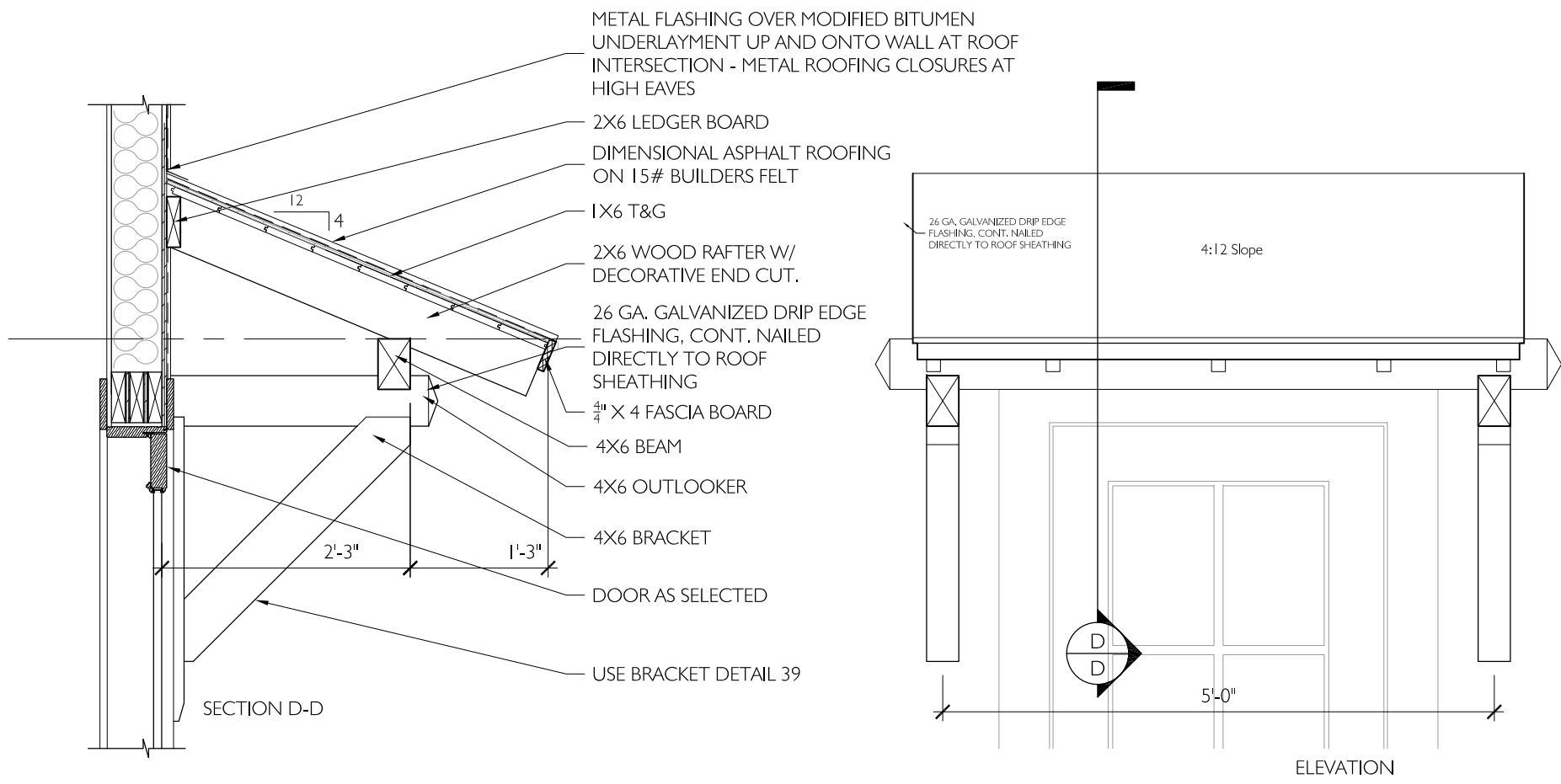
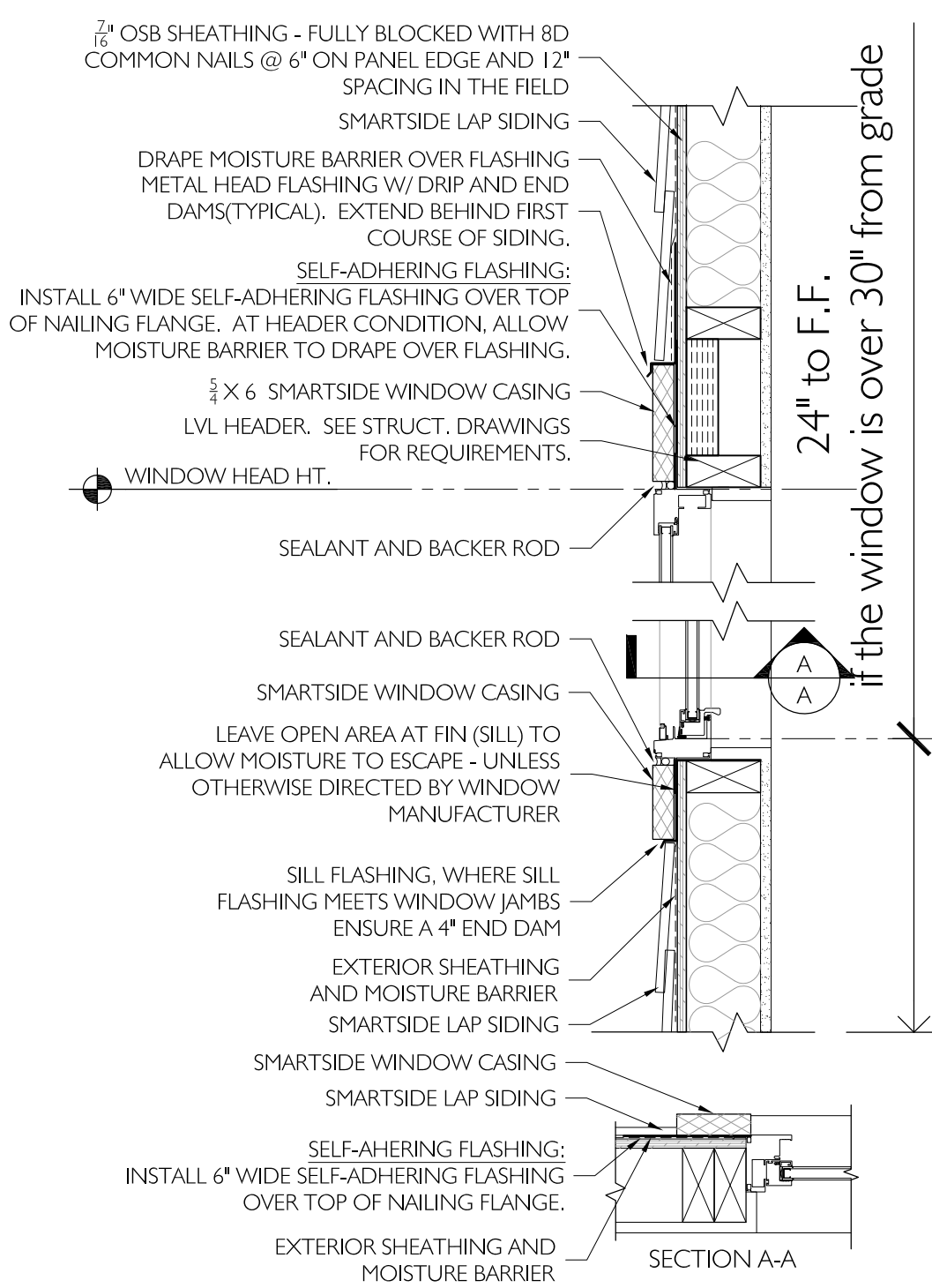
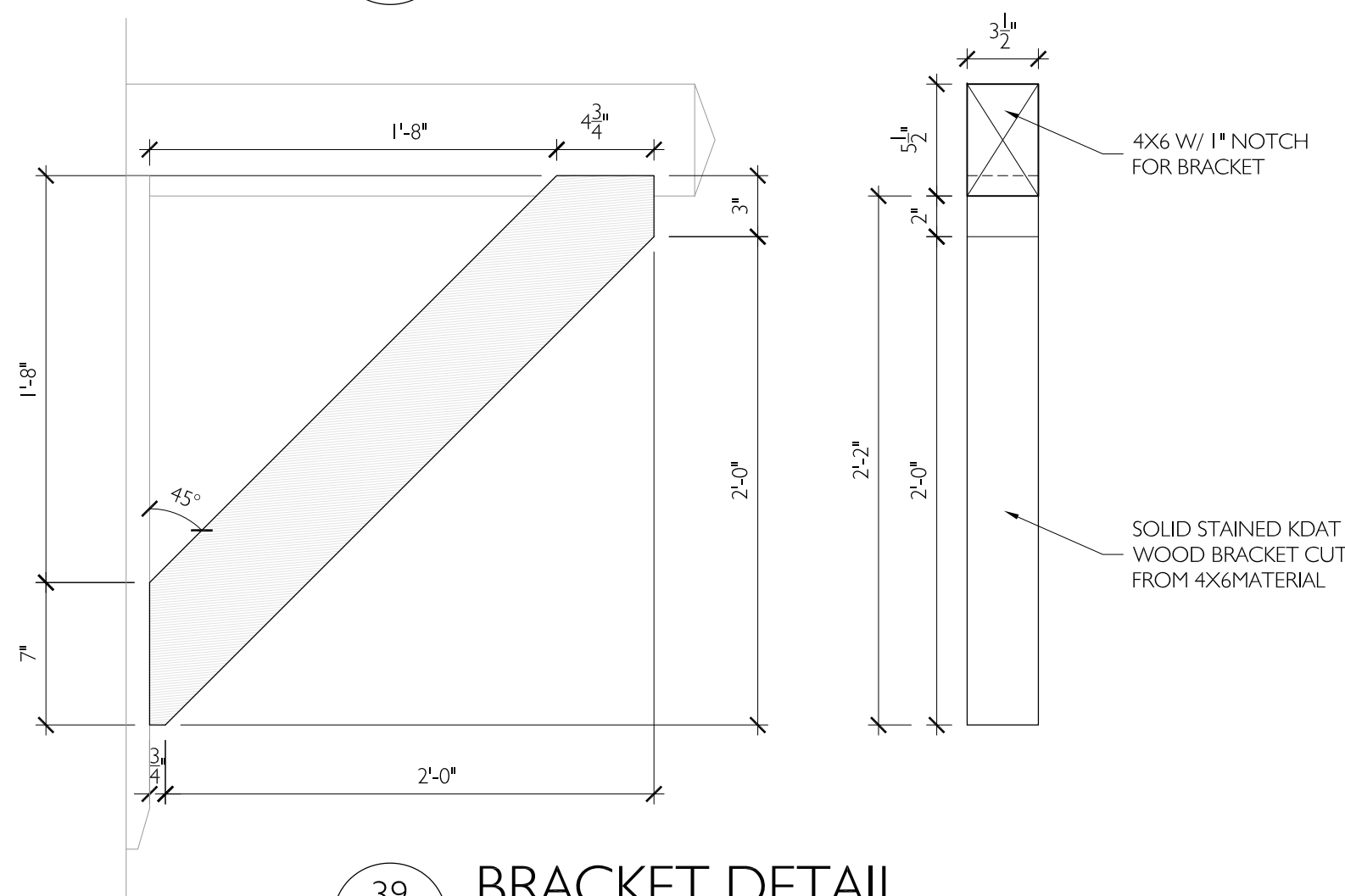
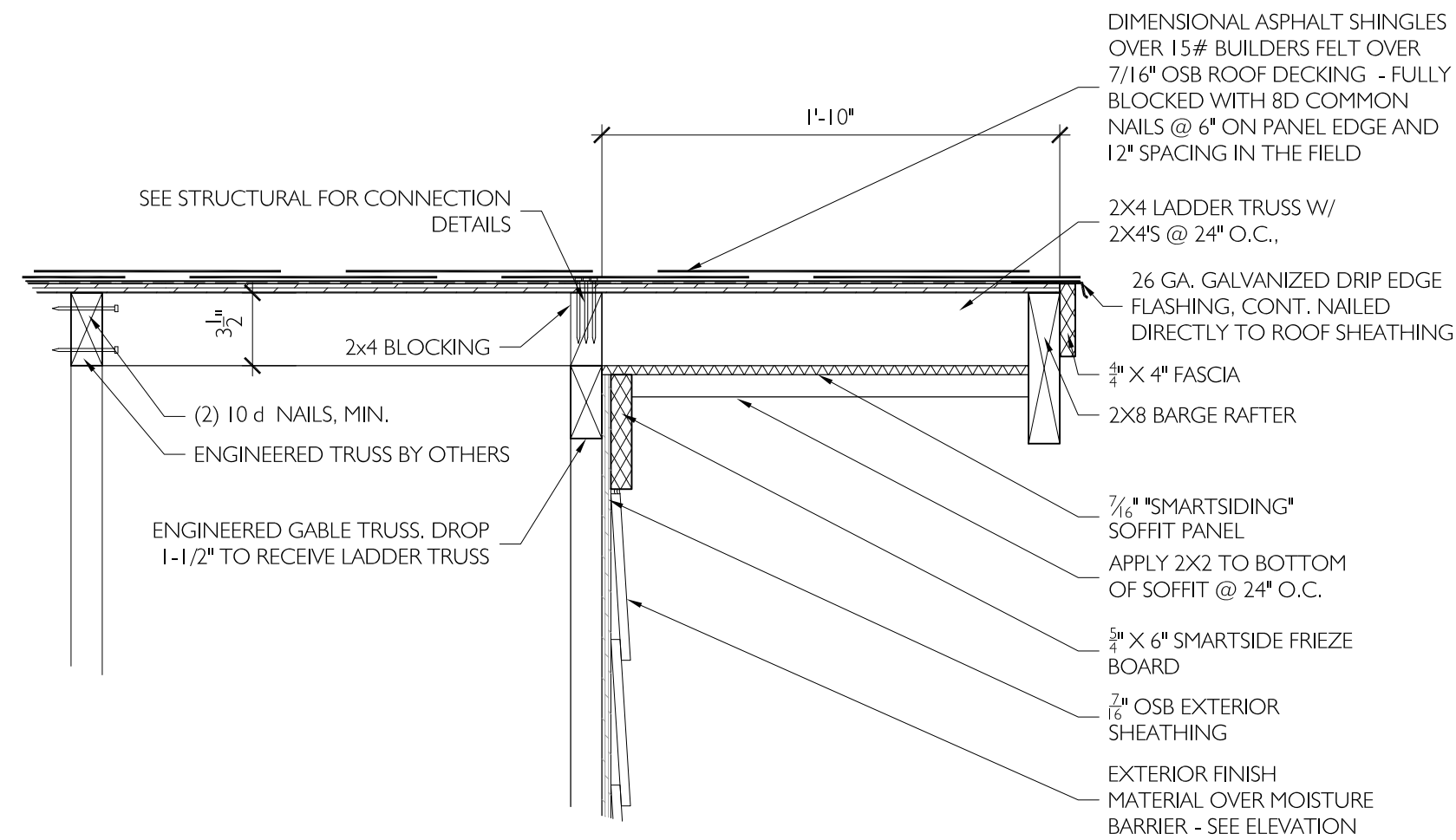
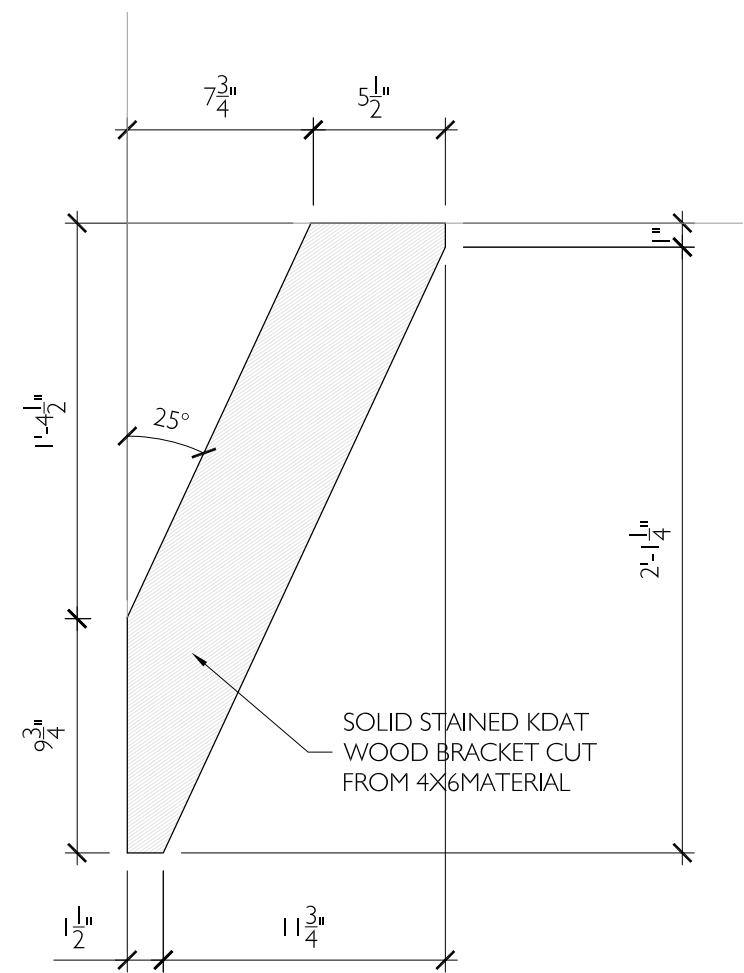
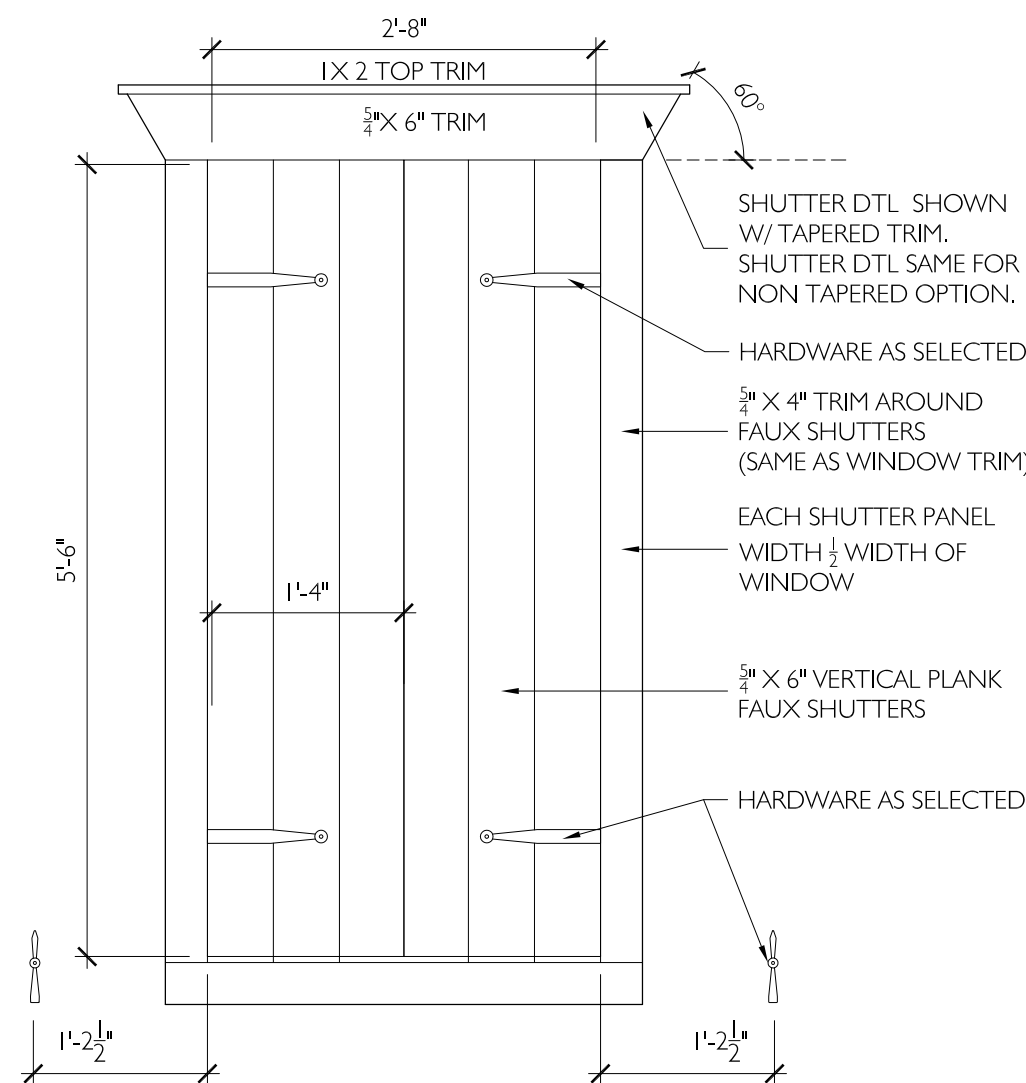
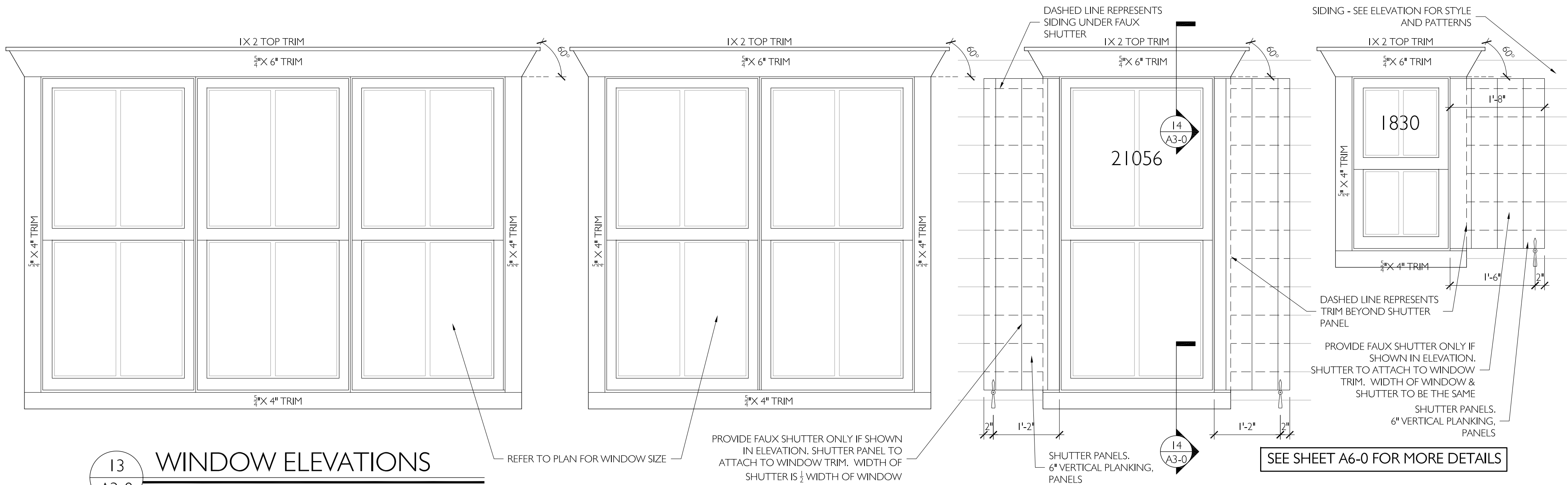
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ISSUE FOR CONSTRUCTION
THE COTTAGES OF SAN MARCOS

5 BED-RIVERBIRCH
1832 sq. ft.
SAN MARCOS, TEXAS
NUMBER 12031 15 FEBRUARY 2013
Drawn by: TMB
Checked by: EAL
REVISIONS
Rev 1 8-9-13

DETAILS AND SECTIONS
A3-0
RIVERBIRCH - 1 OF 3



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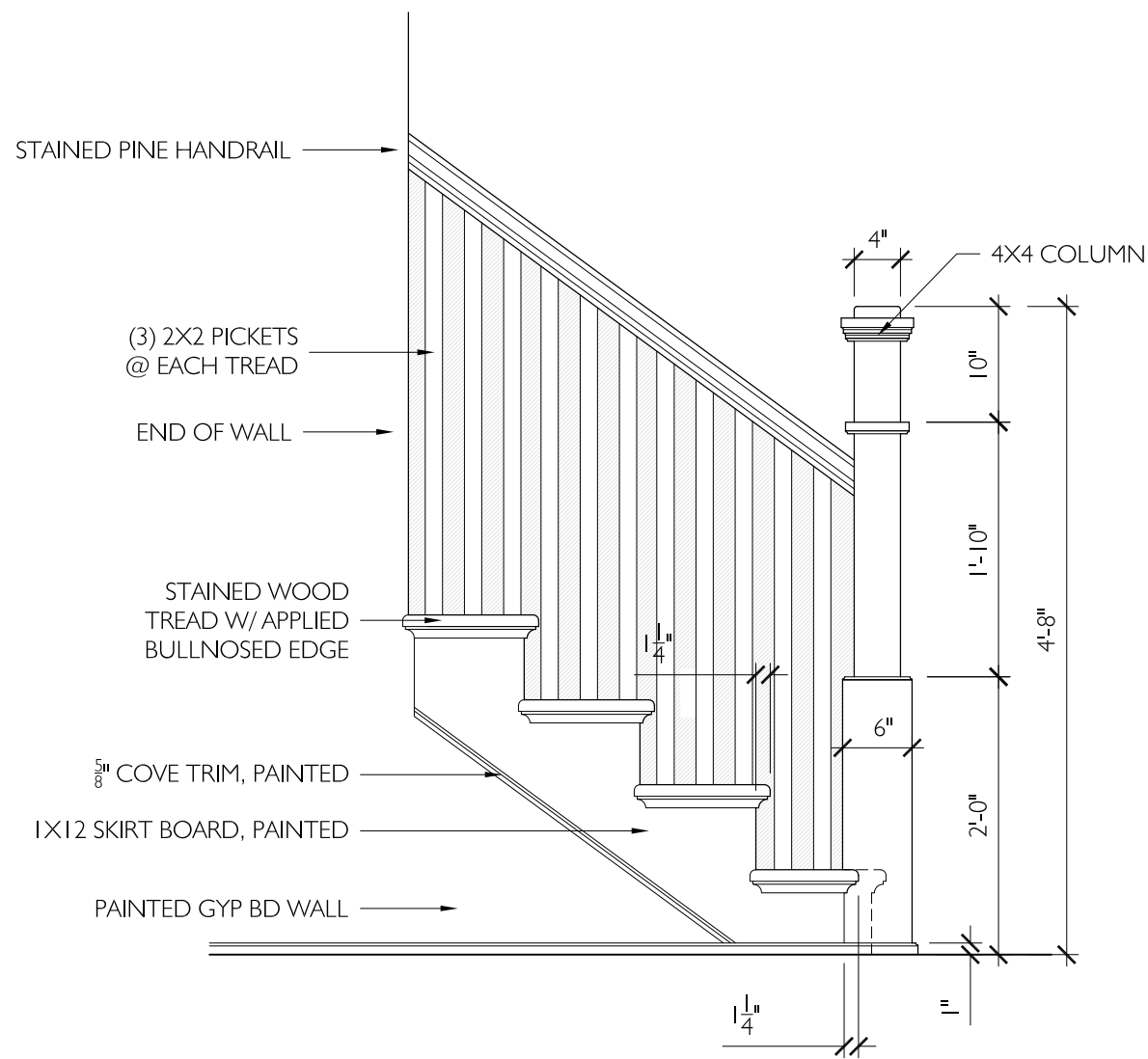
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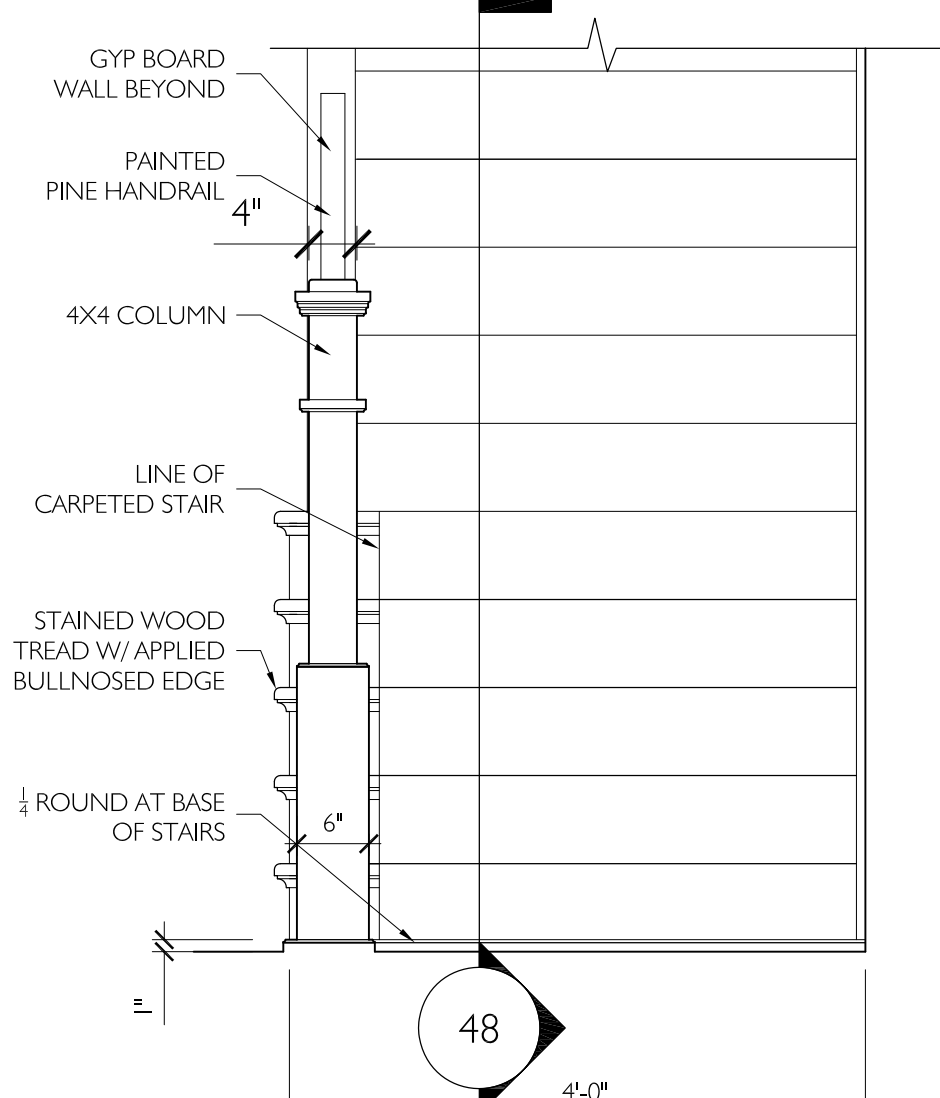
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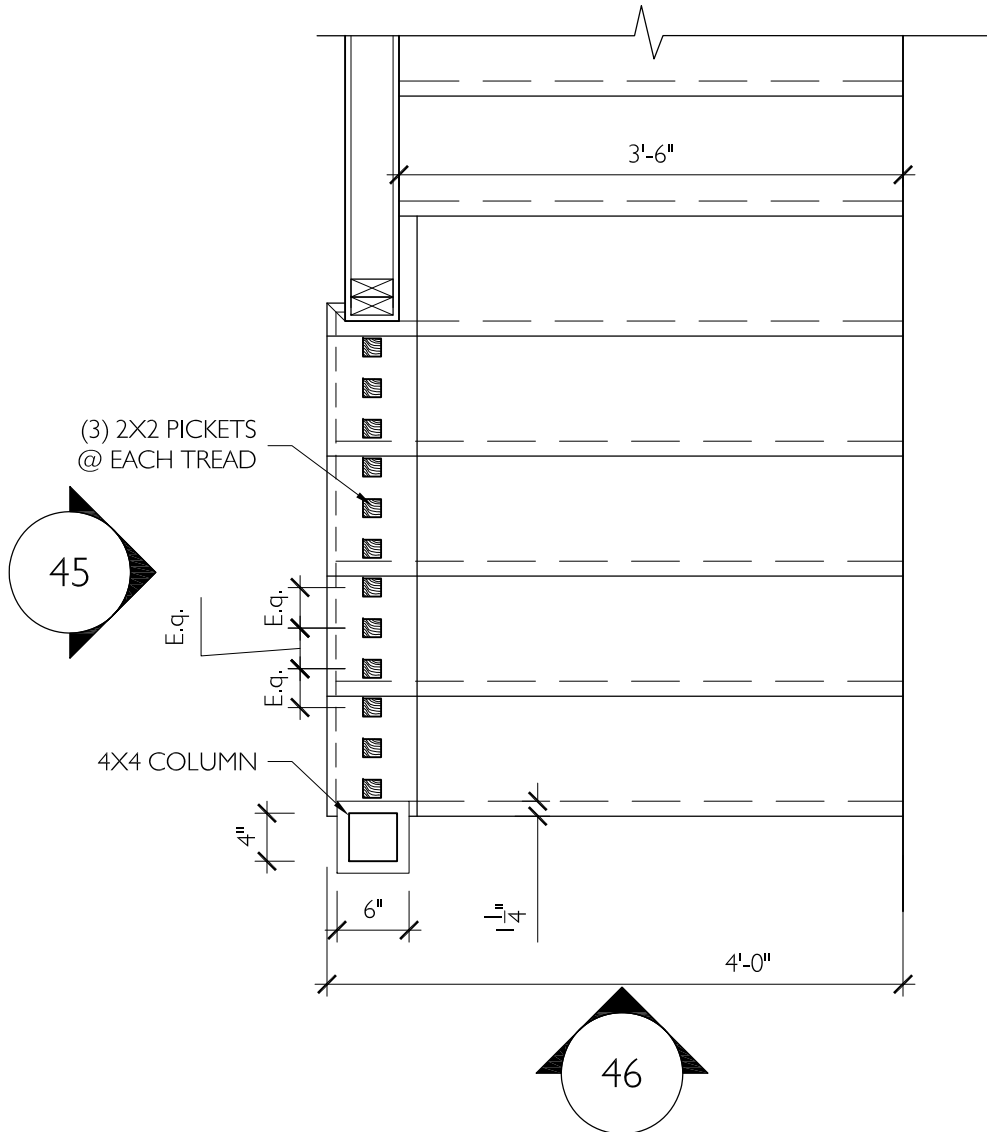
DETAILS AND SECTIONS
A3-0
RIVERBIRCH - 2 OF 3



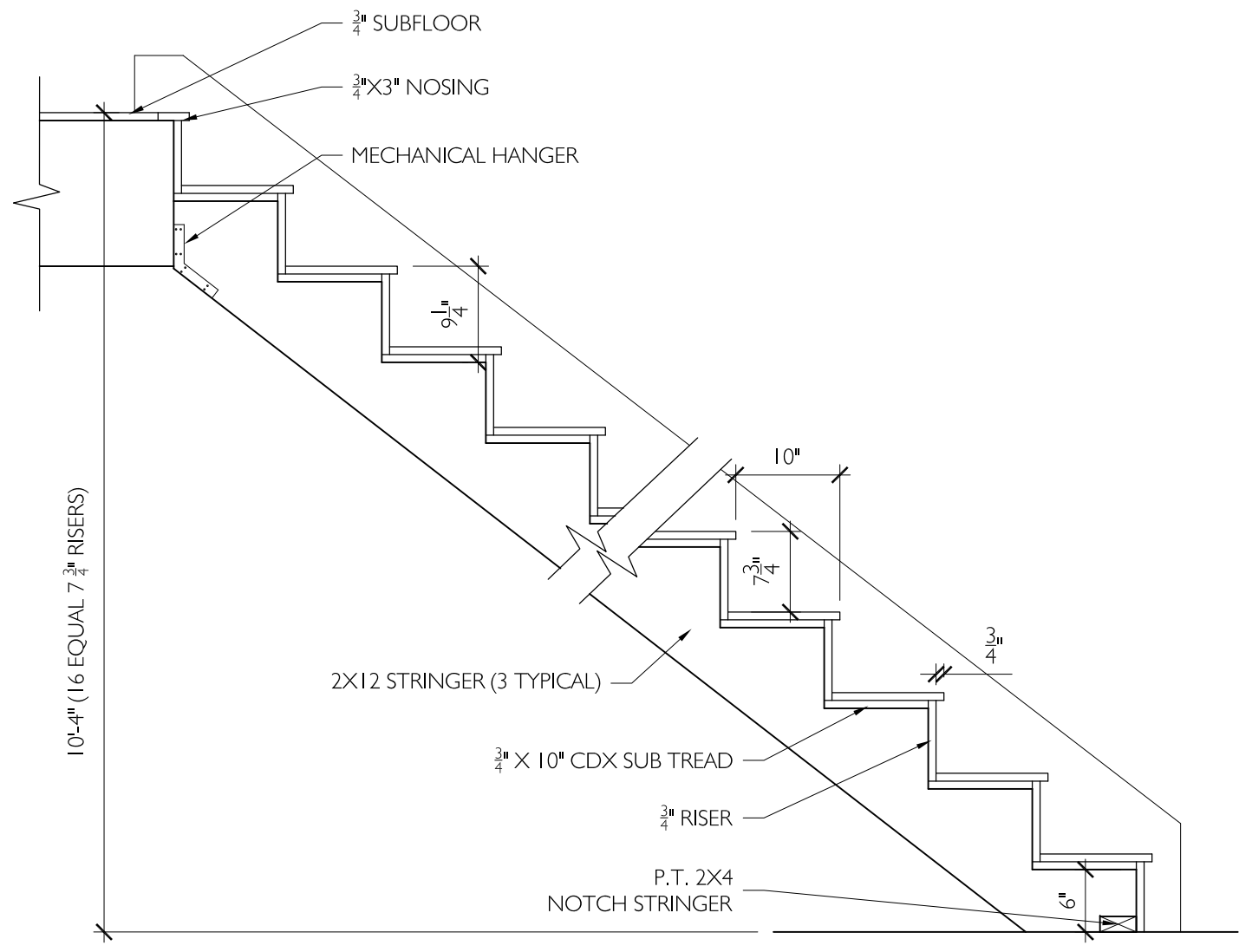
45 STAIR RAILING ELEVATION
A3-0 3/4" = 1'-0"



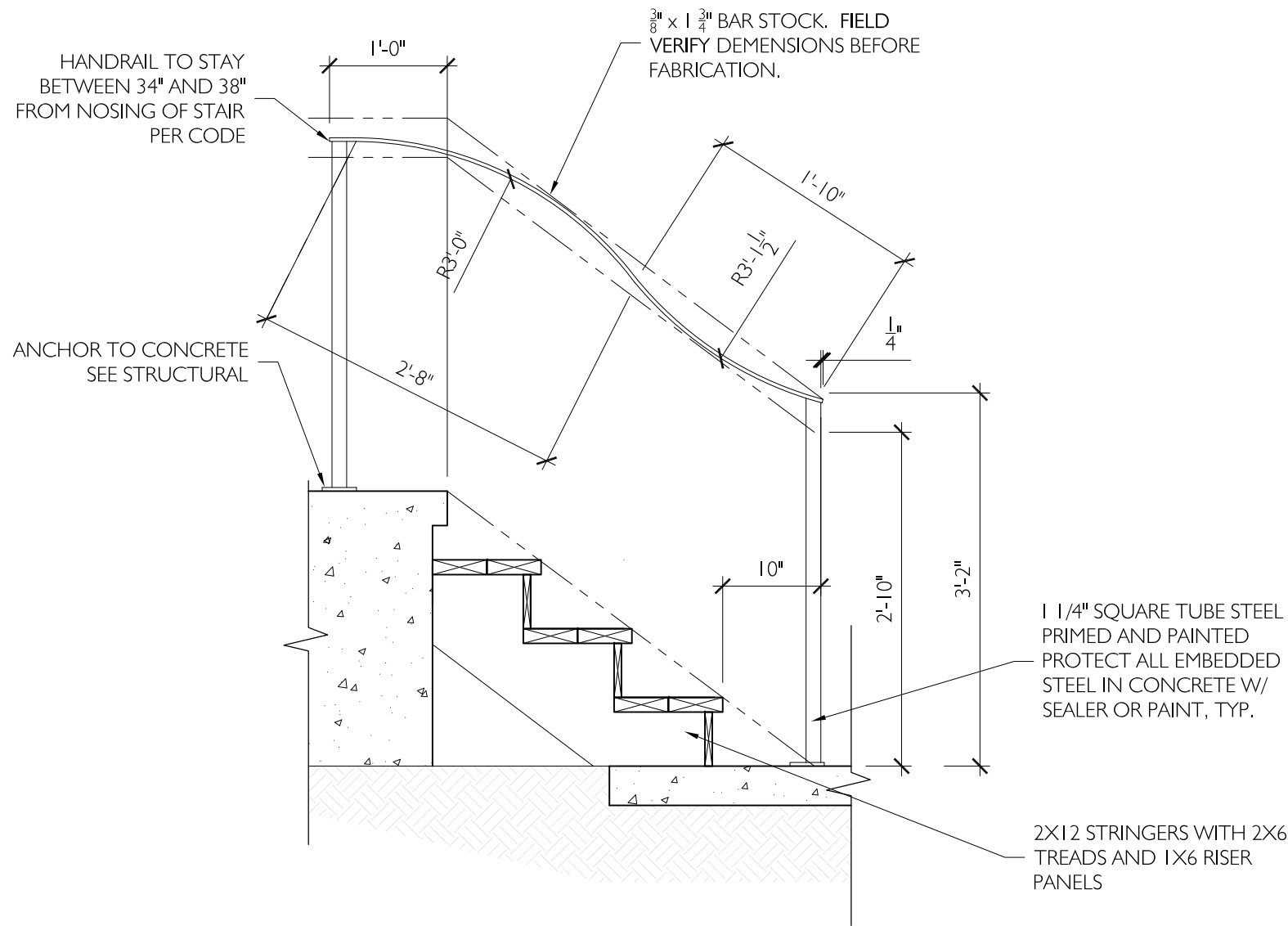
46 STAIR ELEVATION
A3-0 3/4" = 1'-0"



47 STAIR PLAN
A3-0 3/4" = 1'-0"



48 STAIR SECTION
A3-0 3/4" = 1'-0"



72 EXTERIOR HANDRAIL DETAIL
A3-0 3/4" = 1'-0"

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1832 sq. ft.

SAN MARCOS, TEXAS
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DETAILS AND SECTIONS
A3-0
RIVERBIRCH - 3 OF 3

DOOR TYPE	APPLICATION **	MANUFACTURER / STYLE *	SIZE			DOOR MATERIAL	DOOR FINISH	FRAME MATERIAL	FRAME FINISH	FIRE LABEL	HARDWARE TYPE	REMARKS
			W	H	T							
A	Interior Door	Masonite "Cheyenne" 2 Panel Plank Smooth Door	2'-6"	6'-8"	1-3/8"	Composite Wood	Paint	Wood	Paint	--	Keyed	
B	Interior Door	Masonite "Cheyenne" 2 Panel Plank Smooth Door	2'-4"	6'-8"	1-3/8"	Composite Wood	Paint	Wood	Paint	--	Privacy	Undercut door 1"
C	Interior Door	Masonite "Cheyenne" 2 Panel Plank Smooth Door	2'-8"	6'-8"	1-3/8"	Composite Wood	Paint	Wood	Paint	--	Keyed	Undercut door 1"
D	Interior Door	Masonite "Cheyenne" 2 Panel Plank Smooth Door	3'-0"	6'-8"	1-3/8"	Composite Wood	Paint	Wood	Paint	--	Passage Set	
E	Interior Door	Masonite - MDF Louvered Collection	2'-6"	6'-8"	1-3/8"	Composite Wood	Paint	Wood	Paint	--	Keyed	Half Louver door with Louver on Bottom
F	Interior Door	Masonite - MDF Louvered Collection	2'-8"	6'-8"	1-3/8"	Composite Wood	Paint	Wood	Paint	--	Keyed	Half Louver door with Louver on Bottom
G	Exterior Door	Therma Tru - Smooth Star Entry Door Collection	3'-0"	6'-8"	1-3/8"	Fiberglass	Paint	Wood	Paint	--	Exterior Handle Set w/ Electronic Deadbolt	
H	Interior Door	Masonite "Cheyenne" 2 Panel Plank Smooth Door	2'-4"	6'-8"	1-3/8"	Composite Wood	Paint	Wood	Paint	--	Passage Set	
I	Interior Door	Masonite "Cheyenne" 2 Panel Plank Smooth Door	2'-8"	6'-8"	1-3/8"	Composite Wood	Paint	Wood	Paint	--	Passage Set	
J	Exterior Door	Evermark - Custom CBI Door	3'-0"	6'-8"	1-3/8"	Fiberglass	Paint	Wood	Paint	--	Exterior Handle Set w/ Electronic Deadbolt	
K	Interior Door	Tru-Tech CBI Custom Door	2'-8"	6'-8"	1-3/4"	Composite Wood	Paint	Wood	Paint	--	Keyed	
L	Sprinkler Riser Room Door	Field Painted Galvanized Hollow Metal Door	3'-0"	6'-8"	1-3/4"	Galvanized Hollow Metal	Paint	Metal	Paint	--	Dummy Handle Set & Pad Lock	

* Listed Manufacturer shall be used unless prior approval is obtained from Owner and Architect.
** Refer to drawings for jamb thickness. Provide door stops where necessary.

I
A5-0

DOOR SCHEDULE

N.T.S

D U N G A N
N E Q U E T T E
A R C H I T E C T S
1906 Cahaba Road
Mountain Brook Alabama 35223
t 205.322.6455
f 205.322.6167
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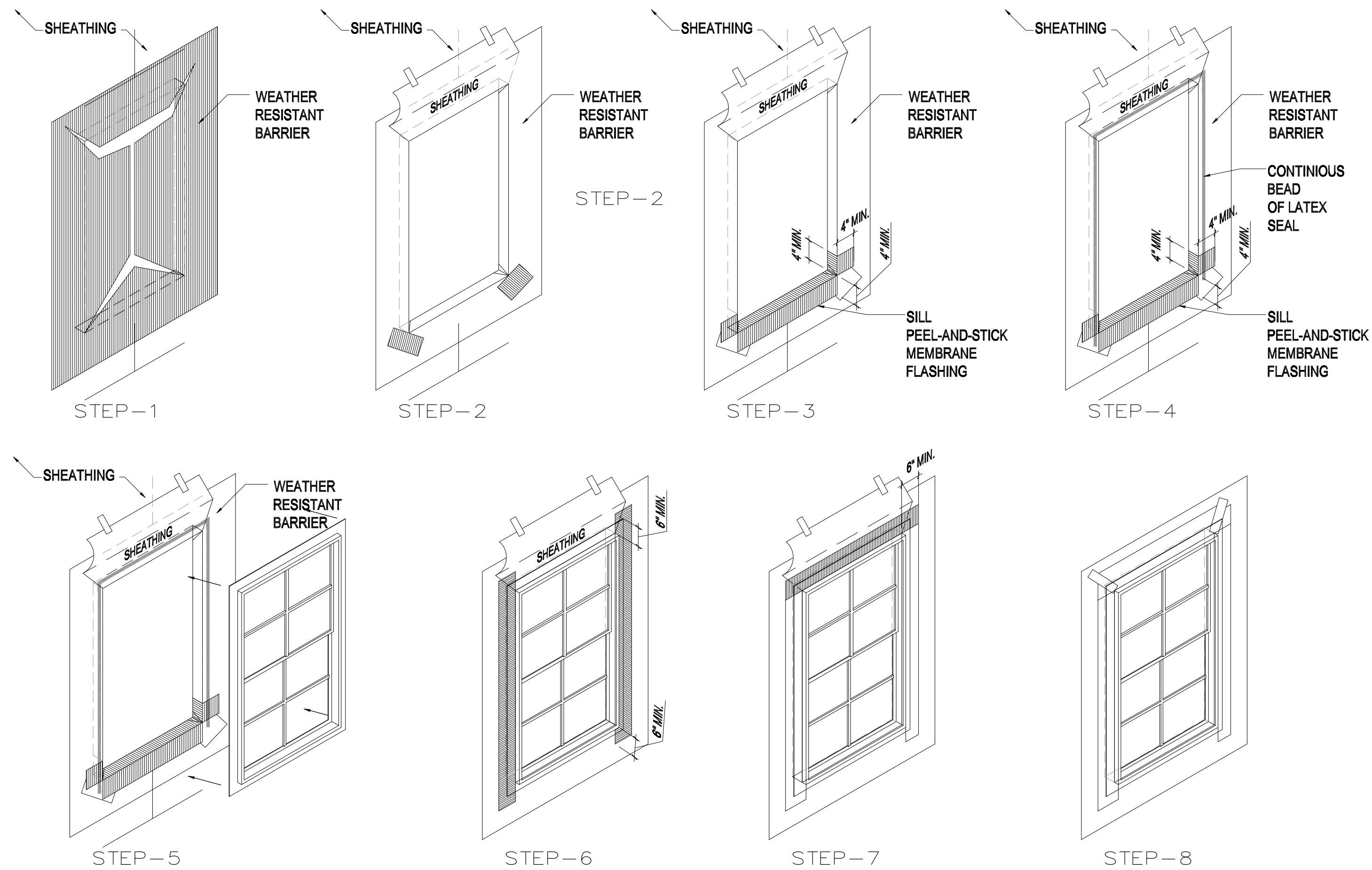


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DOOR SCHEDULE

A5-0



FLASHING INSTALLATION SEQUENCE

NOTE: (WINDOW FLASHING SEQUENCE SHOWN. HEAD AND JAMB SEQUENCES ARE SIMILAR FOR DOORS)

1. COMPLETELY INSTALL WEATHER RESISTANT BARRIER OVER ENTIRE SHEATHING USING "BUTTON CAP" NAILS (OR SCREWS FOR STEEL STUDS). "BUTTON CAP" FASTENERS SHALL BE USED AT ALL PERIMETER EDGES OF SHEET MATERIALS. ALL TERMINATIONS, PENETRATIONS, HORIZONTAL AND VERTICAL SEAMS ARE TO BE TAPED WITH APPROVED WEATHER RESISTANT BARRIER TAPE. CUT WEATHER RESISTANT BARRIER PER STEP DETAIL #1. THIS IS SOMETIMES CALLED AN "UPSIDE DOWN MARTINI GLASS". FOLD THE SILL PORTION OF THE WEATHER RESISTANT BARRIER OVER AND FASTEN REMAINING PORTION TO THE JAMBS. SEE DETAIL STEP #2.
2. INSTALL A 6" PIECE OF RUBBERIZED PEEL AND STICK MEMBRANE AT EACH CORNER OF THE SILL ON TOP OF BUILDING PAPER. THESE PATCHES SHOULD BE INSTALLED DIAGONALLY AT THE CORNERS OF THE SILL WITH A PORTION OF THE MEMBRANE EXTENDING INTO THE WINDOW OPENING AT THE CORNERS. SEE DETAIL STEP #2.
3. INSTALL RUBBERIZED PEEL AND STICK SILL FLASHING. INSTALL ON HORIZONTAL SURFACE OF ROUGH SILL COVERING FULL DEPTH OF SILL. EXTEND 6 INCHES UP BOTH JAMBS. EXTEND DOWNWARD 4 INCHES MINIMUM ONTO BUILDING PAPER BELOW SILL. MAKE SURE SILL FLASHING IS CONTINUOUS ON SILL AND JAMBS (NO CUTS OR GAPS IN MEMBRANE WHERE SILL AND JAMBS MEET). FOR 2X6 WALLS, A 12" WIDE MEMBRANE IS NEEDED. ROLL, (SMOOTH) OUT ANY BUBBLES. SEE DETAIL STEP #3.
4. INSTALL A CONTINUOUS BEAD OF LATEX SEALANT AROUND WINDOW OPENING AT WINDOW JAMBS AND HEAD ONLY. DO NOT INSTALL ANY SEALANT ON THE SILL NAILING FLANGE. SEE DETAIL STEP #4.
5. INSTALL WINDOW PER MANUFACTURER RECOMMENDATIONS. SEE DETAIL STEP #5.
6. INSTALL A 4" OR 6" RUBBERIZED PEEL AND STICK MEMBRANE OVER NAILING FLANGE AT JAMBS AND HEAD ONLY. IN THAT ORDER, A WIDER MEMBRANE MAY HAVE TO BE USED IF WINDOWS ARE TO RECEIVE ACCENT TRIM (SUCH AS A 2X6 OR 2X8) WRAP. ROLL (SMOOTH) OUT ANY BUBBLES. SEE DETAIL STEPS #6 AND #7.
7. FLIP HEAD FLAP OF BUILDING PAPER DOWN OVER THE HEAD FLASHING. SECURE FLAP ABOVE WINDOW WITH SHEATHING TAPE. MAKING SURE TO COMPLETELY COVER ENTIRE CUT AREA. SEE DETAIL STEP #8.
8. FOAM TRIM THAT IS GREATER THAN OR EQUAL TO 4" IN THICKNESS SHALL BE MECHANICALLY ANCHORED USING SCREWS AT 6", 12", 14" OR PER MANUFACTURER'S RECOMMENDATIONS.
9. SUFFICIENT MORTAR MUST BE APPLIED TO STUCCO BROWN COAT SUBSTRATE AND BACK OF VENEER SO THAT THE RESULTING THICKNESS IS NO LESS THAN 1/2" AND NOT MORE THAN 1-1/4".
10. NAILS TO BE NO MORE THAN 16" O.C.

GENERAL NOTES:

FLASHING REQUIREMENTS:

A. PROPER FLASHING AND SEALING ARE NECESSARY TO PREVENT WATER FROM ENTERING BETWEEN THE W.R.B., THE FENESTRATION PRODUCT FRAME, AND THE ADJACENT CONSTRUCTION MATERIALS.

B. UNLESS OTHERWISE SPECIFIED, FLASHING MATERIAL SHALL PROVIDE TWENTY-FOUR (24) HOUR MINIMUM PROTECTION FROM WATER PENETRATION WHEN TESTED IN ACCORDANCE WITH TEST METHOD D 779.

C. THE FLASHING MEMBRANE SHALL BE SECURELY AFFIXED TO MINIMIZE ANY WEATHER DAMAGE PRIOR TO THE BUILDING'S EXTERIOR TREATMENT BEING APPLIED. THE FENESTRATION PRODUCT AND FLASHING SHALL BE INTEGRATED INTO THE OVERALL W.R.B. THE GENERAL CONTRACTOR SHALL CONSULT THE FENESTRATION AND FLASHING MANUFACTURERS FOR ANY SPECIAL FLASHING REQUIREMENTS UNIQUE TO THEIR PRODUCTS.

D. UNLESS OTHERWISE SPECIFIED, GALVANIZED METAL FLASHING SHALL BE NO LESS THAN 26 GAGE IN THICKNESS AND SHALL BE ZINC COATED ON BOTH SIDES BY EITHER HOT DIPPED GALVANIZED OR ELECTROPLATED.

E. TO PROVIDE ADEQUATE PROTECTION AGAINST GALVANIC CORROSION, USE ONLY FASTENERS THAT ARE COMPATIBLE WITH THE MATERIALS JOINED AND THAT WILL NOT RESULT IN GALVANIC CORROSION.

F. FASTENER LENGTH SHALL BE SUFFICIENT TO PENETRATE THE SUBSTRATE TO A DEPTH DESIGNED TO MEET APPLICABLE BUILDING CODES, MANUFACTURER'S RECOMMENDATIONS, AND STRUCTURAL CALCULATIONS. NUMBER AND SPACING SHALL BE SUFFICIENT TO MEET LOADS.

G. THE INSTALLATION OF FASTENERS OR FASTENING SYSTEMS SHALL NOT CAUSE EXCESSIVE DISTORTION ($\pm 1/16"$ OF ANY FRAME OR SASH MEMBER, NOR IN ANY WAY IMPEDE THE OPERATION OF THE UNIT.

INSTALLATION REQUIREMENTS:

A. ANCHORING OF WINDOW PRODUCTS SHOULD ALWAYS BE DONE ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

B. WHEN REQUIRED, SHIMS SHALL BE INSTALLED IN A MANNER AND IN SUFFICIENT NUMBER TO MINIMIZE DEFLECTION, DISTORTION, OR ROTATION OF THE FRAME TO ACHIEVE PROPER OPERATION OF THE FENESTRATION PRODUCTS, OR AS RECOMMENDED BY THE FENESTRATION MANUFACTURER. DO NOT OVER-SHIM. PRODUCTS SHALL NOT BE RACKED MORE THAN 1/8" OUT OF SQUARE FOR DIMENSIONS UP TO 4 FEET OR MORE THAN 3-1/8" FOR DIMENSIONS GREATER THAN 4 FEET. REFER TO THE MANUFACTURER'S INSTRUCTIONS FOR SHIMMING REQUIREMENTS.

C. APPLY THE W.R.B. IN WATER SHEDDING FASHION, STARTING AT THE BASE OF THE WALL AND WORKING TOWARDS THE TOP. INSTALL THE W.R.B. TO THE FACE OF THE BUILDING SHEATHING FLUSH WITH THE ROUGH OPENING OF THE WINDOW HEAD, JAMBS, AND SILL.

GENERAL WATERPROOFING NOTES:

- See notes on elevation and title sheet for further notes on construction details



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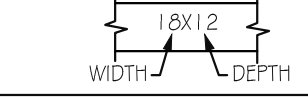
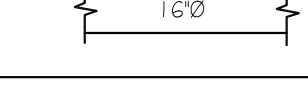
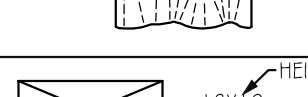
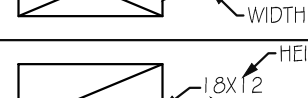
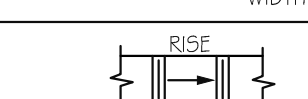
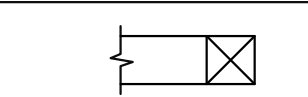
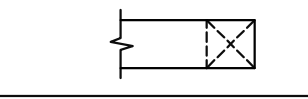
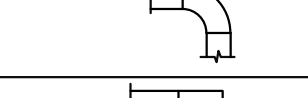
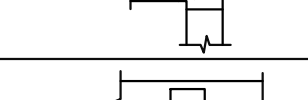
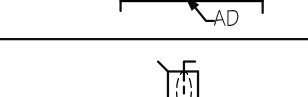
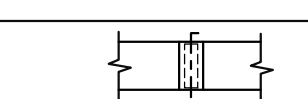
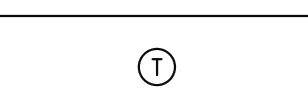
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BUSINESS PARK
SUITE 235
BIRMINGHAM, AL 35242
PHONE: 205.995.4879
WEB: BBGSINC.COM

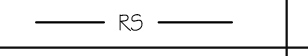
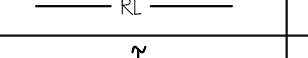
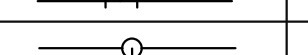
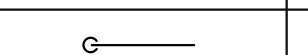
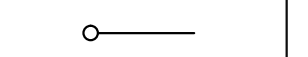
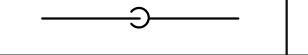
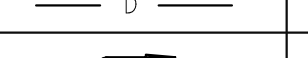
SPLIT SYSTEM AC UNIT SCHEDULE - HEAT PUMP													
MARK	TYPE	SERVES	SUPPLY FAN			COOLING CAPACITY				HEATING CAPACITY			BASIS OF DESIGN (FIRST CO.)
			CFM	E.S.P. IN W.G.	HP	OSA CFM	SENSIBLE MBH	TOTAL MBH	ENT. AIR Fdb	Fwb	STRIP HEAT KW	ENT. AIR F STEPS	
AC-5A	①	5 BEDROOM COTTAGE LOWER	800	0.3	1/6	0*	17.3	24	80	67	6	1	24HXB-6
AC-5B	①	5 BEDROOM COTTAGE UPPER	800	0.3	1/6	0*	17.3	24	80	67	6	1	24HXB-6
NOTES: ① CAPACITIES ARE MINIMUM GROSS CAPACITIES. ② EXTERNAL STATIC PRESSURE DOES NOT INCLUDE ELECTRIC HEATERS. ③ EXTERNAL STATIC PRESSURE INCLUDES 0.1 0" FOR DIRTY FILTERS. ④ ELECTRIC HEATER CAPACITIES SHOWN ARE NET AFTER ANY DERATE FOR 208/240 VOLTAGE. TYPES: ① VERTICAL SPLIT SYSTEM HEAT PUMP ACCESSORIES: ① 1" THICK THROWAWAY FILTER ② SINGLE POINT ELECTRICAL CONNECTION ③ 2" DEEP AUX. DRAIN PAN W/ FLOAT SWITCH ④ HEAT PUMP KIT * - OUTSIDE AIR TO RESIDENTIAL UNITS IS PROVIDED BY NATURAL VENTILATION PER IMC SECTION 402.													

FAN SCHEDULE																				
MARK	SERVES	LOCATION	TYPE	CFM	E.S.P. IN. W.G.	LIMIT	MOTOR		ACCESSORIES	INTERLOCK	BASIS OF DESIGN									
							W	VFD												
EF-1	BATHS	CEILING	Ⓐ	80	0.25	SPECIFIED BY ELECTRICAL														
FAN TYPES:																				
Ⓐ CEILING MOUNTED EXHAUST FAN / LIGHT COMBO, DIRECT DRIVE																				

AIR DEVICE SCHEDULE			
CEILING DIFFUSERS			
MARK	DESCRIPTION	BASIS OF DESIGN	REMARKS
MD 	AXB = NECK SIZE CFM = AIRFLOW W = ROUND RUNOUT M = OPPOSED BLADE MANUAL DAMPER IN NECK	CURVED BLADE CEILING DIFFUSER US AIRE SERIES 'L'	1. OBD - WITH ACCESSIBLE OPERATING LEVER 2. SQUARE TO ROUND ADAPTER AS REQUIRED
MD 	AXB = NECK SIZE CFM = AIRFLOW W = ROUND RUNOUT M = OPPOSED BLADE MANUAL DAMPER IN NECK	FLOOR SUPPLY REGISTER US AIRE SERIES '1520M'	1. MULTILOUVER DAMPER 2. OBD - WITH ACCESSIBLE OPERATING LEVER
MD 	AXB = NECK SIZE CFM = AIRFLOW W = ROUND RUNOUT M = OPPOSED BLADE MANUAL DAMPER IN NECK	SIDEWALL SUPPLY REGISTER US AIRE SERIES 'V'	1. OBD - WITH ACCESSIBLE OPERATING LEVER 2. SQUARE TO ROUND ADAPTER AS REQUIRED
	AXB = NECK SIZE CFM = AIRFLOW	FIXED VANE FILTER RETURN GRILLE US AIRE SERIES 'RHEP'	1. 1" STANDARD FILTER REQUIRED (MERV 7)

HEAT PUMP CONDENSING UNIT - AIR COOLED						
MARK	SERVES	ACCESSORIES	ELEC. VFD	NOMINAL TON	MIN. SEER/EEER	BASIS OF DESIGN (CARRIER)
CU-5A	AC-5B	①②③	24Q/1	2.0	13	25HBB324
CU-5B	AC-5B	①②③	24Q/1	2.0	13	25HBB324
NOTES: ① CAPACITY TO BALANCE RESPECTIVE AC UNIT. ② MINIMUM SEER/EEER AT ARI CONDITIONS. ③ CAPACITY BASED ON 95F AMBIENT AND 8F SUCTION LINE LOSS. ④ OTHER ACCEPTABLE MANUFACTURERS: LENNOX, YORK, TRANE ACCESSORIES: ① HEAD PRESSURE CONTROL TO 1 OF AMBIENT ② CONDENSER COIL GUARD ③ 5 YEAR COMPRESSOR PARTS WARRANTY						

DUCTWORK LEGEND	
SYMBOL	DESCRIPTION
	DUCTWORK, DOUBLE LINE INSIDE "FREE AREA" DIMENSIONS ARE SHOWN
	DUCTWORK, DOUBLE LINE INSIDE "FREE AREA" DIMENSIONS SHOWN Ø= ROUND.
	FLEXIBLE ROUND DUCT MAX. LENGTH = 5'-0"
	SUPPLY DUCTWORK SECTION INSIDE DIMENSIONS ARE SHOWN
	RETURN OR EXHAUST DUCTWORK SECTION OUTSIDE DIMENSIONS ARE SHOWN CLEAR
	DUCTWORK RISE OR DROP ARROW SHOWS DIRECTION OF AIR FLOW
	ELBOW TURNED UP WITH TURNING VANES
	ELBOW TURNED DOWN WITH TURNING VANES
	RADIUS TYPE ELBOW CENTERLINE RADIUS = 1.5 X WIDTH
	SQUARE TYPE ELBOW WITH DOUBLE THICKNESS VANES. VANES REQUIRED IN ALL DUCTWORK ELBOWS U.N.O.
	ACCESS DOOR (AD) 12X12 UNLESS NOTED OTHERWISE
	CONICAL SPIN-IN
	MANUAL VOLUME DAMPER (MD)
	LOW PRESSURE RUNOUT WITH SQUARE-TO-ROUND TRANSITION AND CONICAL SPIN-IN.
	3/4" DOOR UNDERCUT - SEE ARCH.
①	WALL MOUNTED WIRED THERMOSTAT

HVAC PIPING LEGEND	
SYMBOL	DESCRIPTION
	REFRIGERANT SUCTION LINE
	REFRIGERANT LIQUID LINE
	REFRIGERANT PIPING JOINT
	BRANCH OFF TOP OF MAIN
	PIPE DOWN
	PIPE UP
	RISE OR DROP IN PIPE
	ECCENTRIC REDUCER
	DRAIN
	SLOPE DOWN IN DIRECTION OF ARROW, 1" IN 20 FT.

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THE COTTAGES
of SAN MARCOS

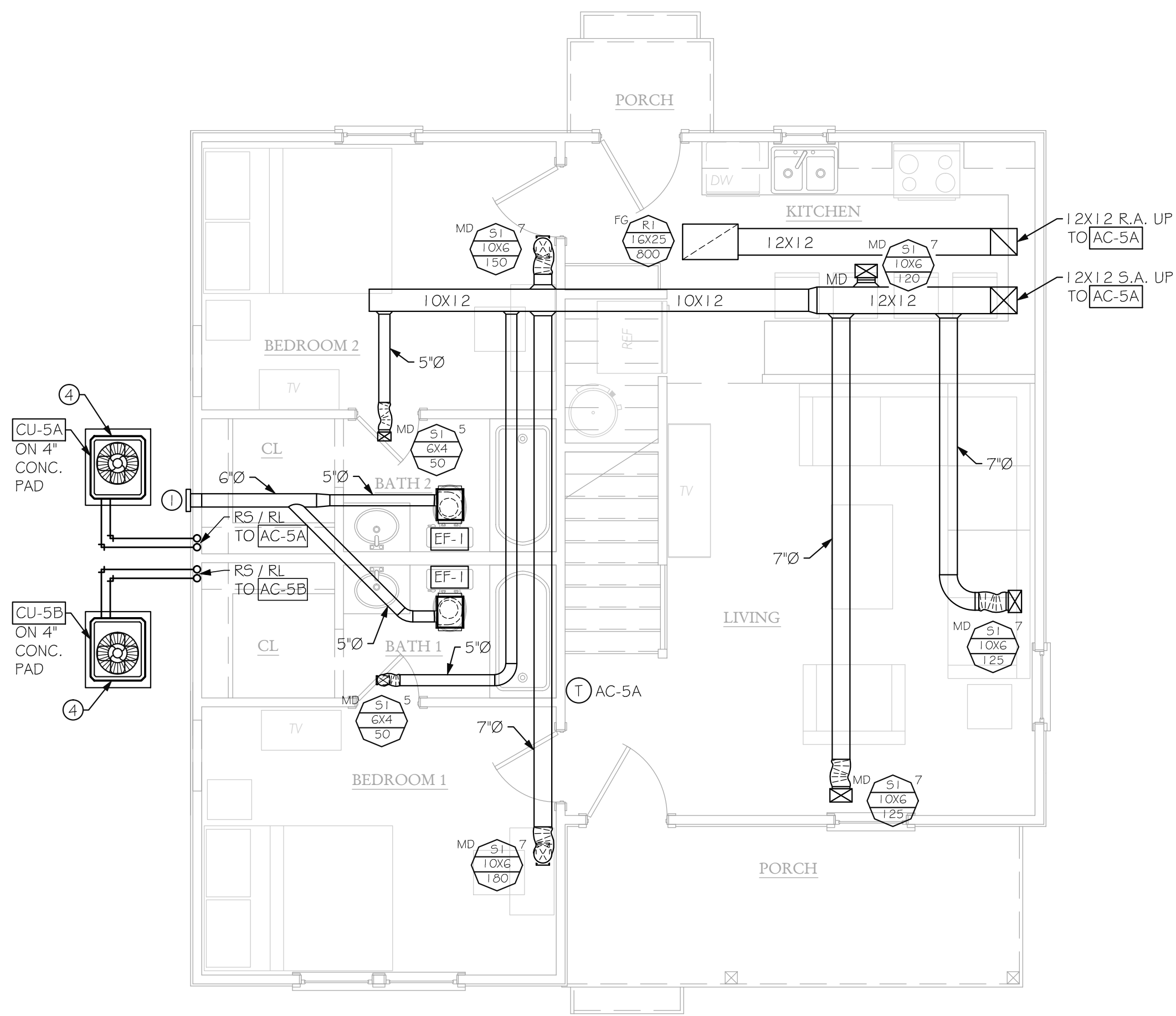
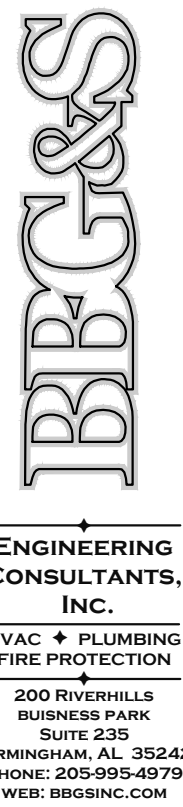
SAN MARCOS, TEXAS
NUMBER 12031 15 FEBRUARY 2013

Drawn by: JHR
Checked by: WCG

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REV.#1 8/9/2013

HVAC SCHEDULES AND
LEGENDS

M1-0



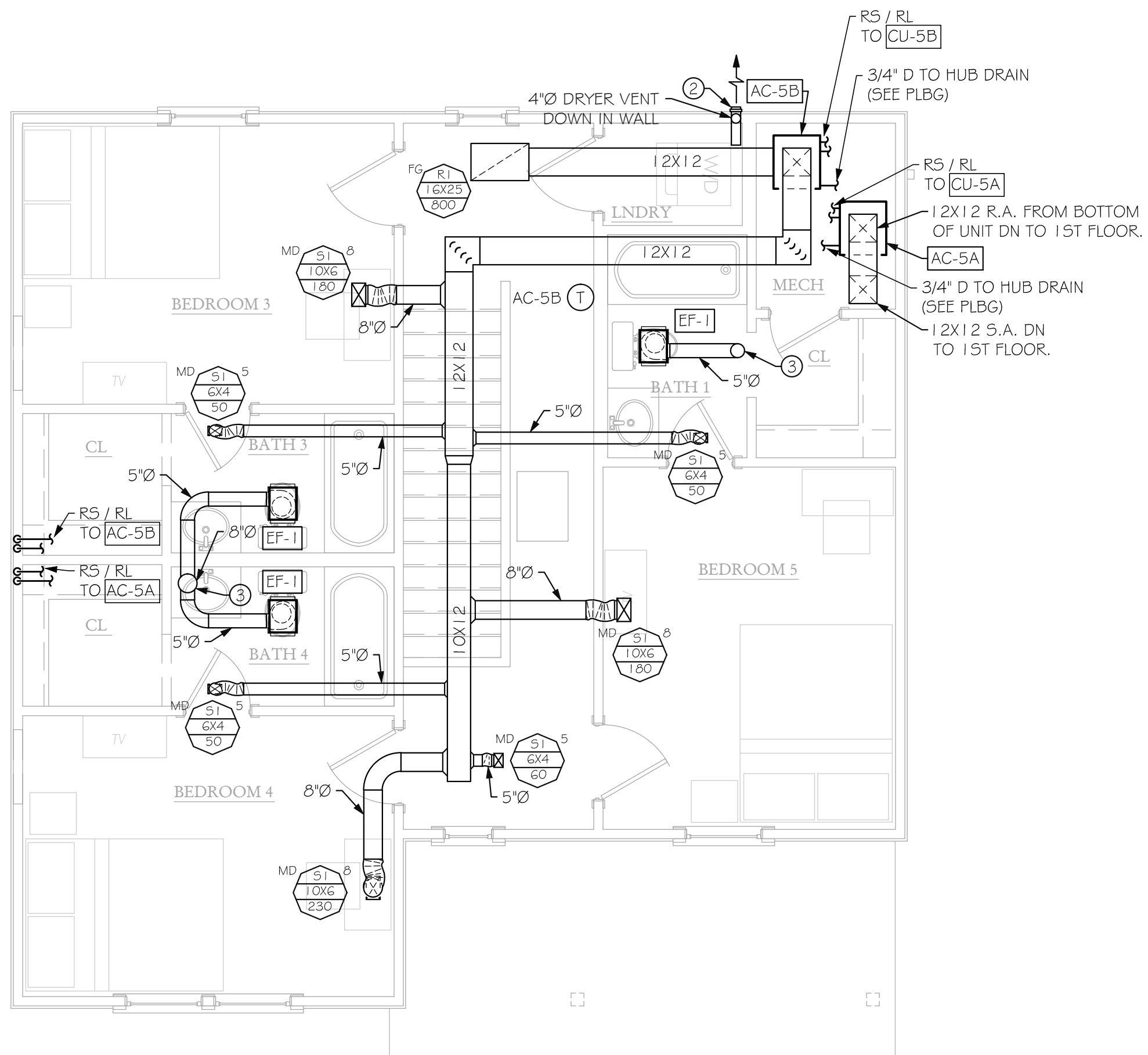
1 MAIN LEVEL HVAC FLOOR PLAN
1/4" = 1'-0"

GENERAL NOTES:

1. ALL REFRIGERANT PIPING TO BE SIZED ACCORDING TO MANUFACTURER'S GUIDELINES FOR PIPE MATERIAL. LENGTH OF RUN AND ELEVATION DIFFERENCE.
2. COORDINATE ROUTING OF PIPING AND DUCTWORK IN WALL CAVITIES AND JOISTS WITH OPENINGS PROVIDED IN FRAMING.
3. COORDINATE EXACT LOCATION OF CEILING DIFFUSERS WITH ARCHITECTURAL PLAN AND OTHER CEILING DEVICES.
4. BATHROOM EXHAUST FANS SHALL BE INSTALLED A MINIMUM OF 20" FROM TUB.
5. 1ST & 2ND FLOOR (ONLY): ALL DUCTWORK SHALL BE RUN IN JOIST SPACES. THIRD FLOOR: ALL DUCTWORK SHALL BE RUN IN ATTIC.
6. MAXIMUM DRYER VENT EQUIVALENT LENGTH = 25'-0".
7. ALL BEDROOM AND BATHROOM DOORS SHALL BE UNDERCUT 3/4" (SEE ARCH.).
8. MECHANICAL CONTRACTOR RESPONSIBLE FOR SEALING ALL PIPE & DUCT PENETRATIONS OF RATED WALLS.
9. FOR AREAS WITH GYP BOARD CEILINGS AN OPPOSED BLADE DAMPER BEHIND THE SUPPLY GRILLE MAY BE USED IN LIEU OF BALANCING DAMPER IN THE ROUND RUNOUT DUCT.
10. THERMOSTATS TO BE INSTALLED INLINE WITH LIGHT SWITCHES, 48" ABOVE FINISHED FLOOR.

KEYED NOTES:

- ① 6"Ø WALL CAP. SEE ARCHITECT FOR COLOR SELECTION.
- ② 4"Ø DRYER VENT CAP. SEE ARCHITECT FOR COLOR SELECTION.
- ③ UP TO 12X12 ROOF CAP. PAINT TO MATCH ROOF (SEE ARCH.).
- ④ COORDINATE EXACT LOCATION OF CONDENSING UNITS WITH ARCHITECTURAL PLANS AND ADJUST REFRIGERANT PIPING AS NECESSARY.



2 UPPER LEVEL HVAC FLOOR PLAN
1/4" = 1'-0"

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5 BED-RIVERBIRCH

1832 sq. ft.

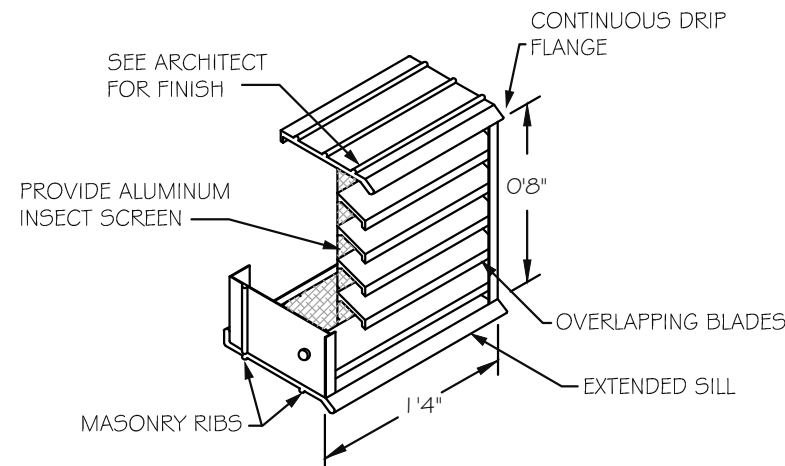
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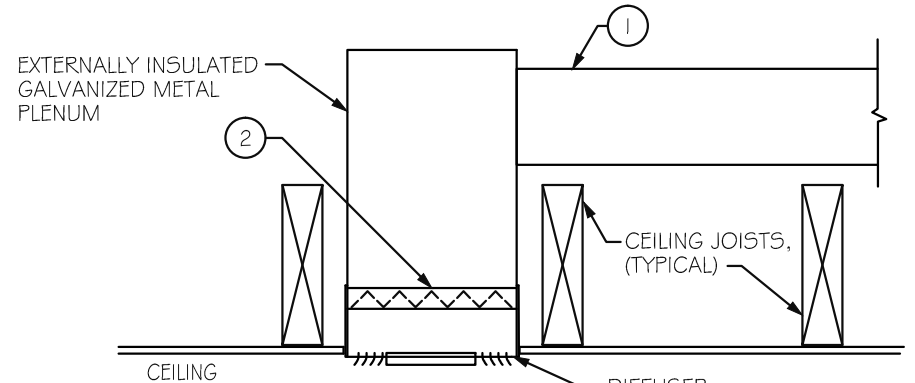
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HVAC FLOOR PLAN

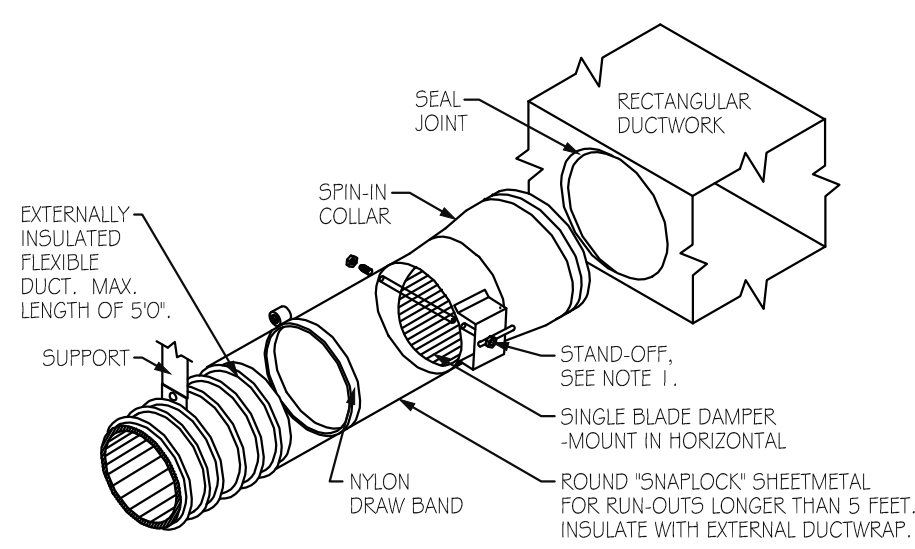
M2-0



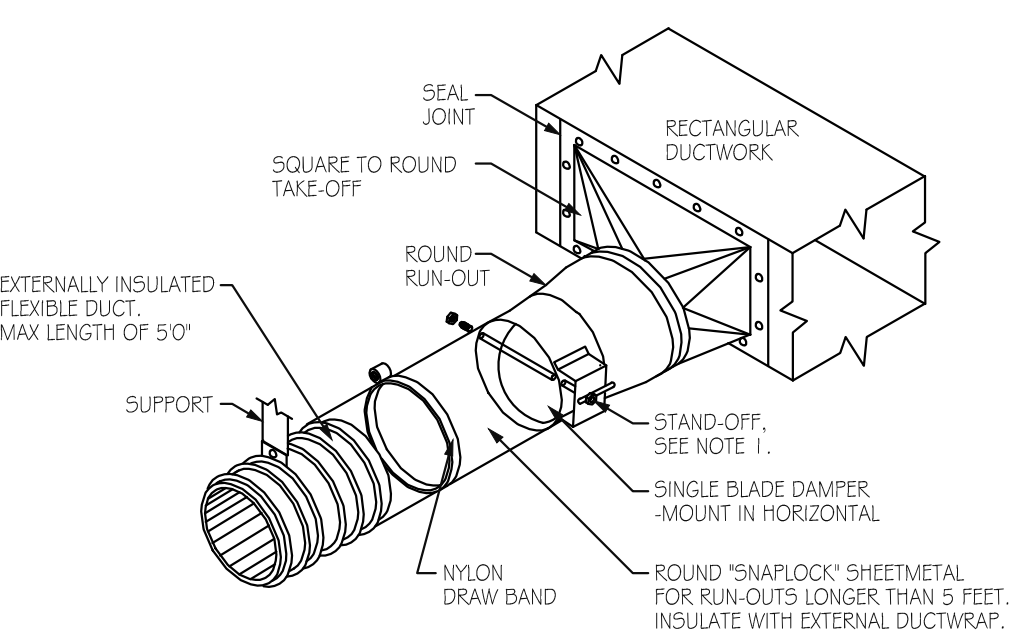
BRICK VENT DETAIL
SCALE: NONE



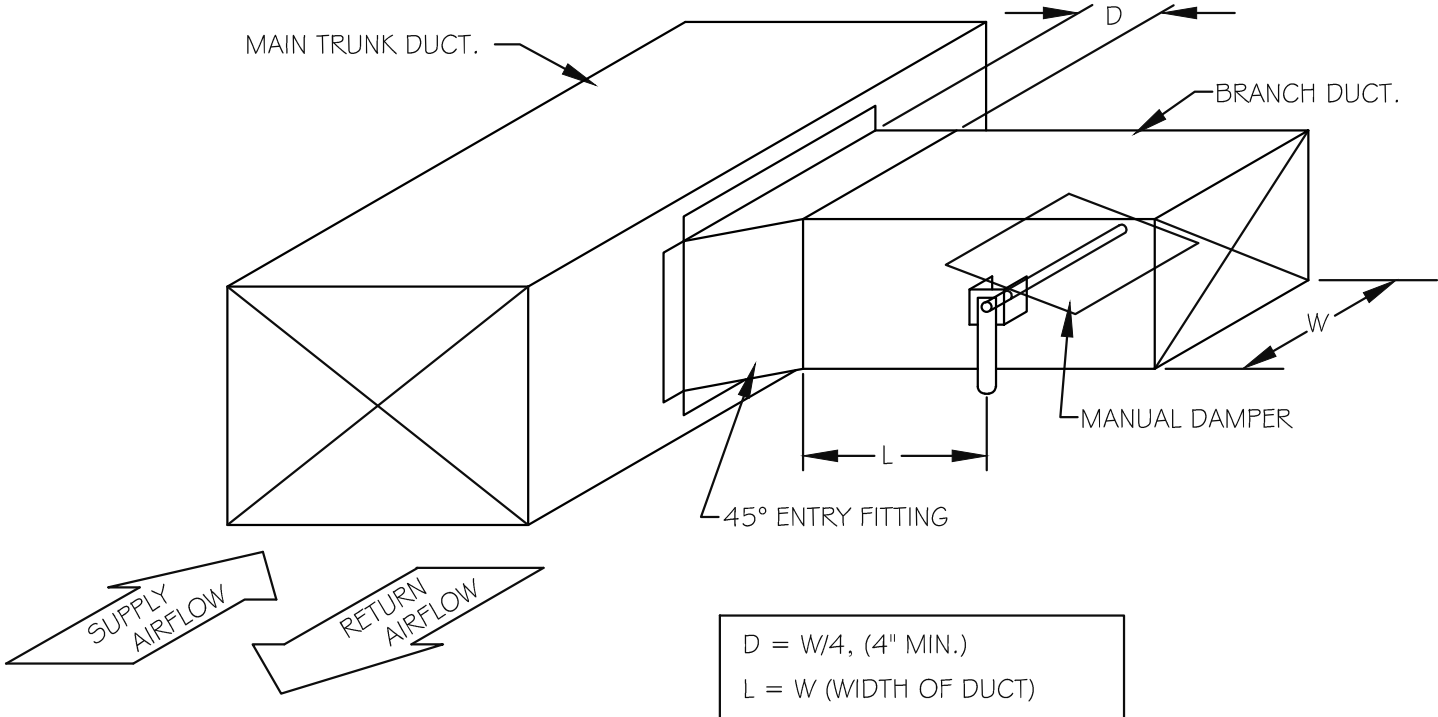
**CURVED BLADE
CEILING DIFFUSER DETAIL**
SCALE: NONE



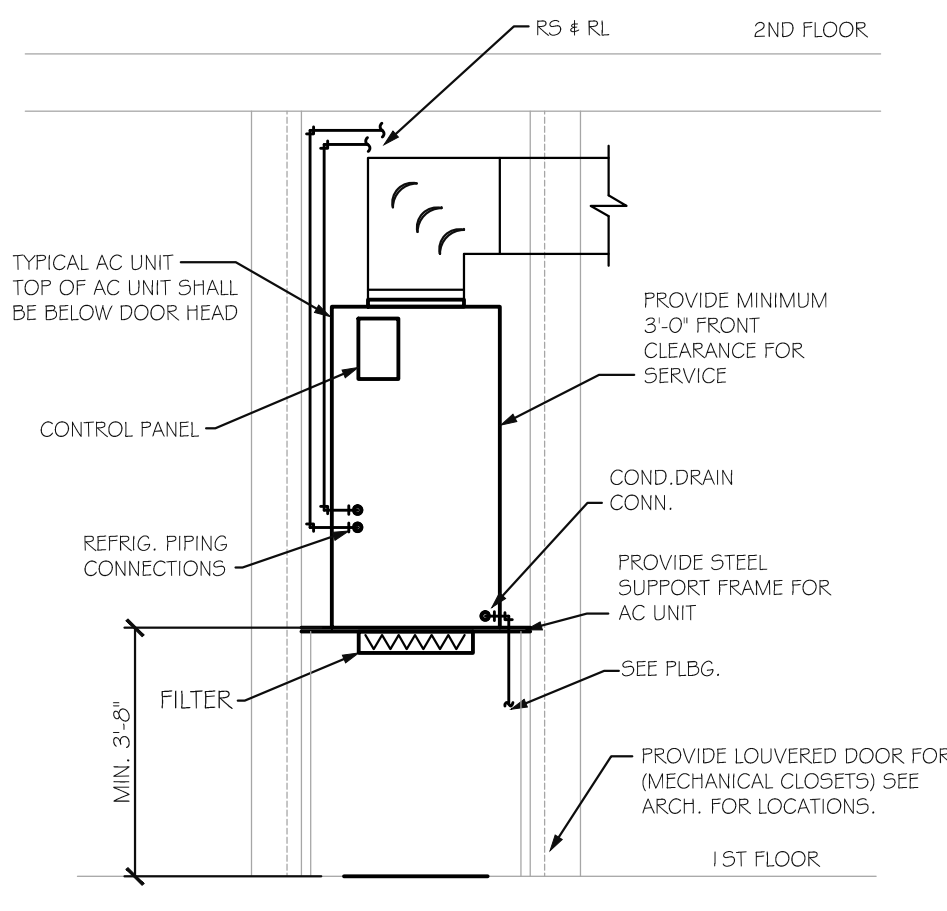
**LOW PRESSURE ROUND BRANCH
DUCT CONNECTOR DETAIL**
SCALE: NONE



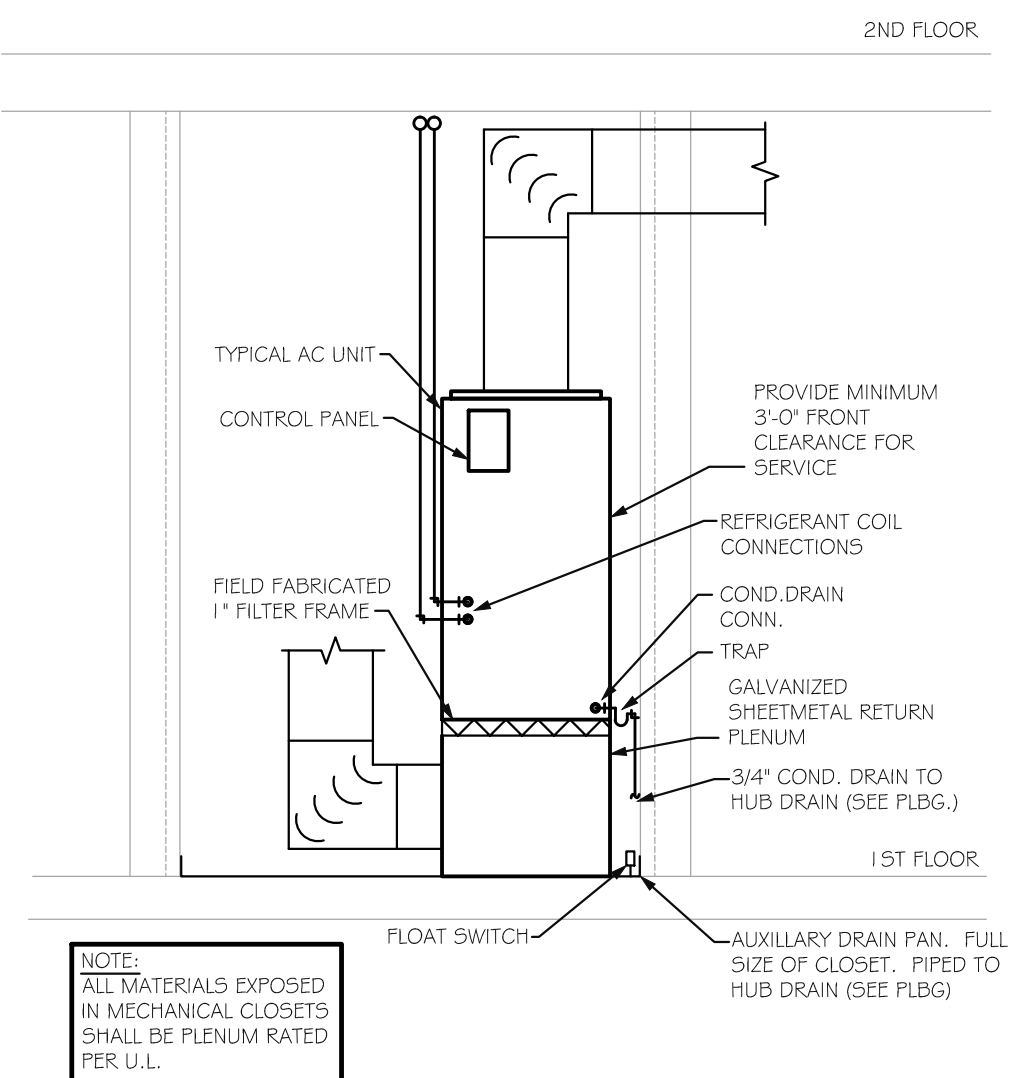
**LOW PRESSURE SQUARE TO ROUND
BRANCH DUCT CONNECTOR DETAIL**
SCALE: NONE



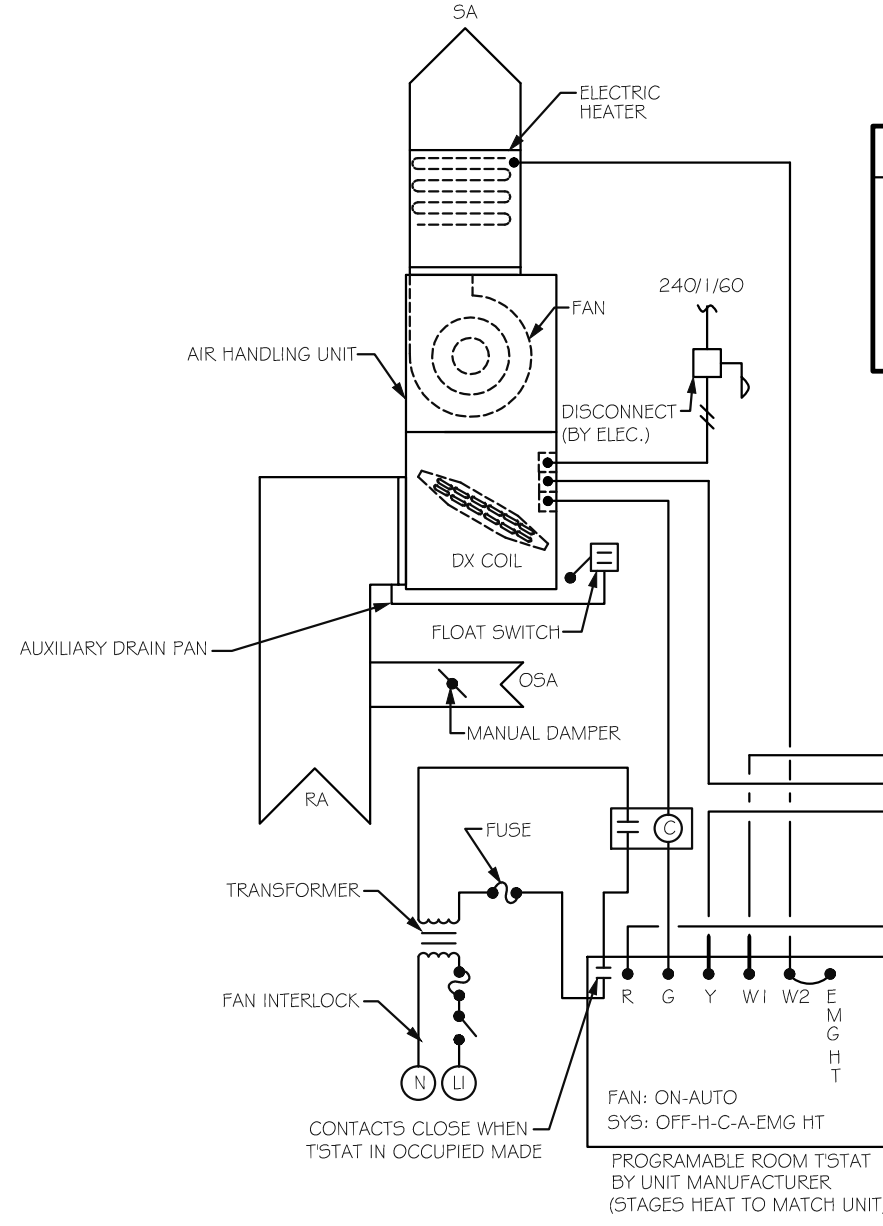
DUCT BRANCH CONNECTION
NO SCALE



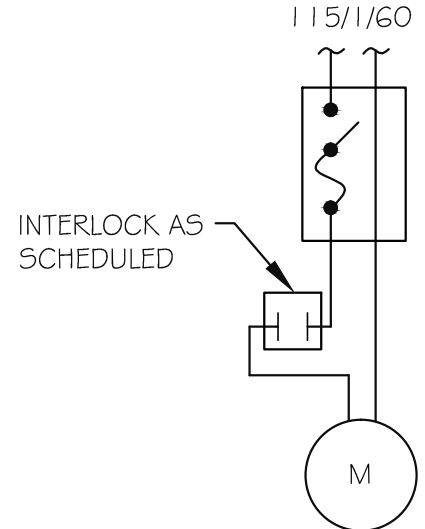
**TYPICAL CLOSET AC UNIT WITH
LOUVERED DOOR INSTALLATION DETAIL**
SCALE: NONE



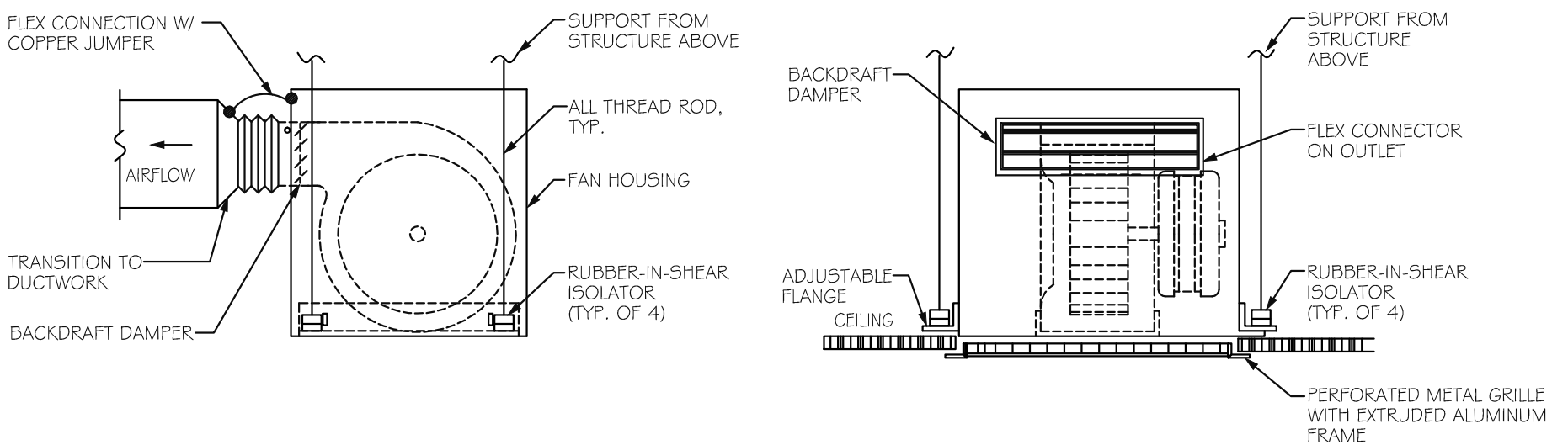
**TYPICAL AC UNIT WITH DUCTED
RETURN INSTALLATION**
SCALE: NONE



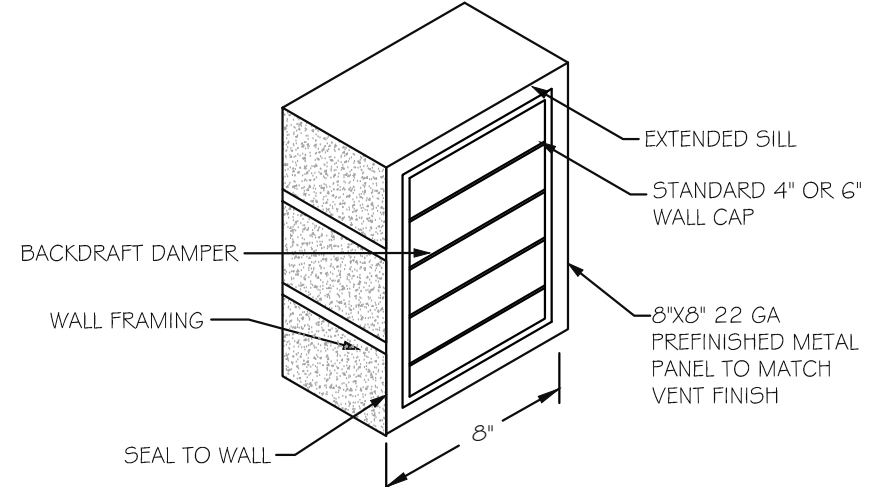
SPLIT SYSTEM HEAT PUMP UNIT CONTROLS
NO SCALE



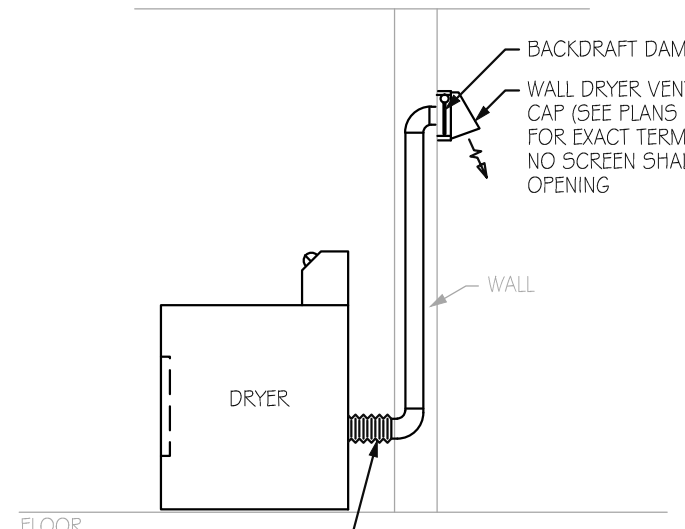
**SINGLE PHASE EXHAUST
FAN CONTROLS (INTERLOCK)**
NO SCALE



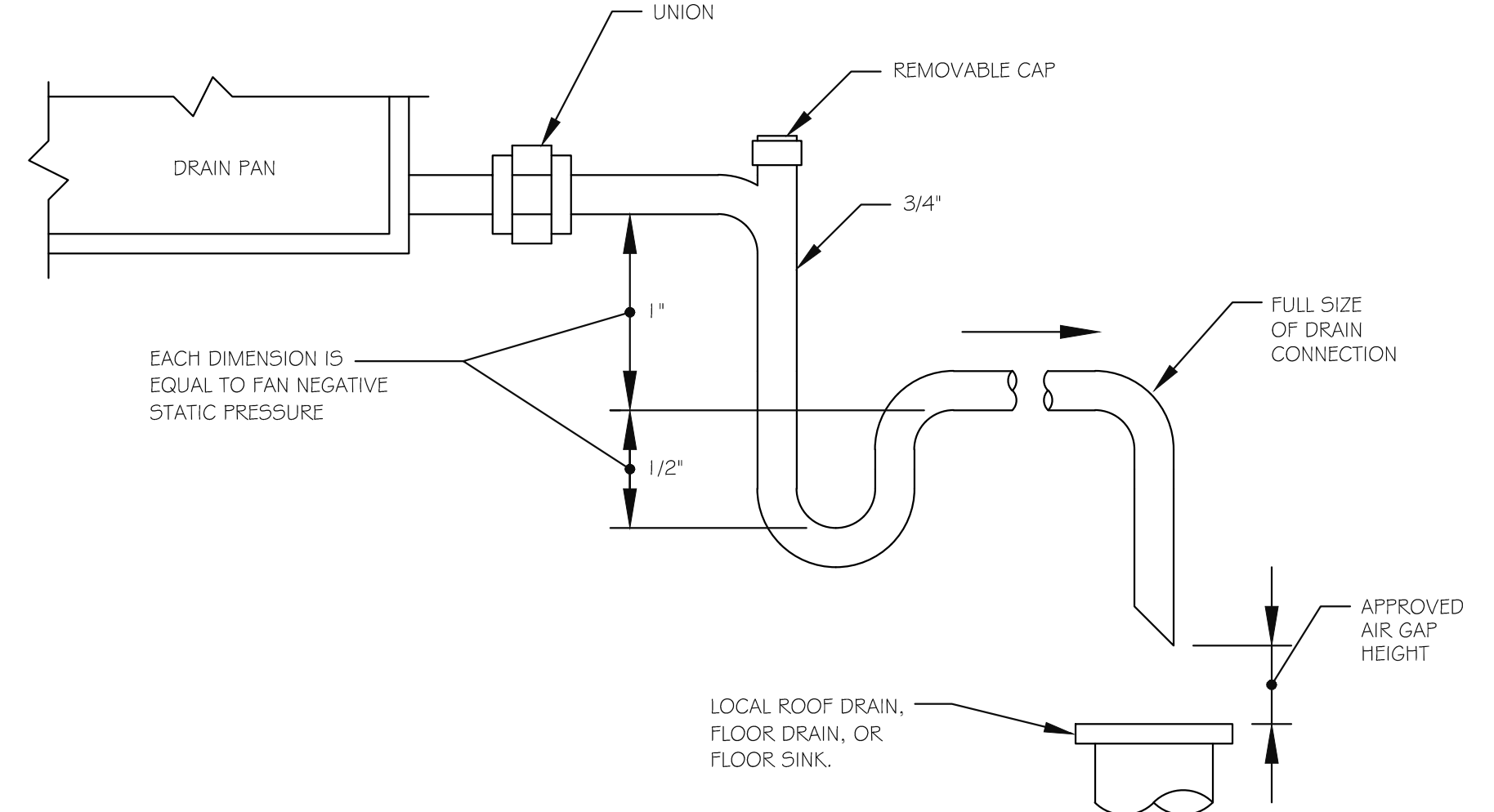
CEILING MOUNTED EXHAUST FAN DETAIL
SCALE: NONE



RESIDENTIAL WALL DRYER VENT CAP DETAIL
SCALE: NONE



RESIDENTIAL DRYER EXHAUST DETAIL
SCALE: NONE



CONDENSATE DRAIN DETAIL
NOT TO SCALE

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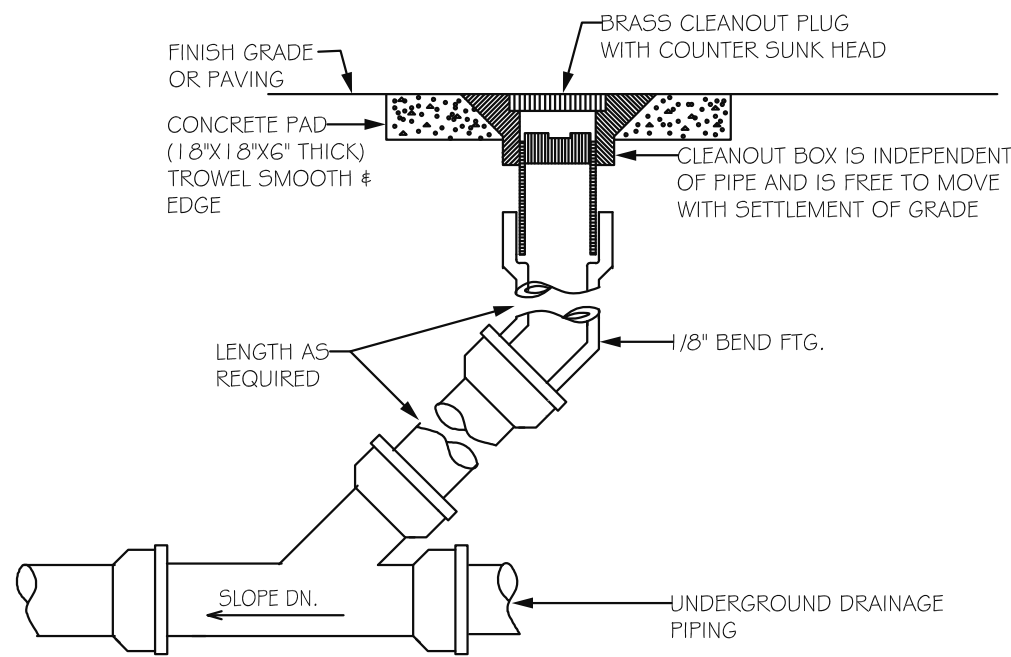
**ISSUE FOR
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**THE COTTAGES
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SAN MARCOS, TEXAS
NUMBER 12031 15 FEBRUARY 2013

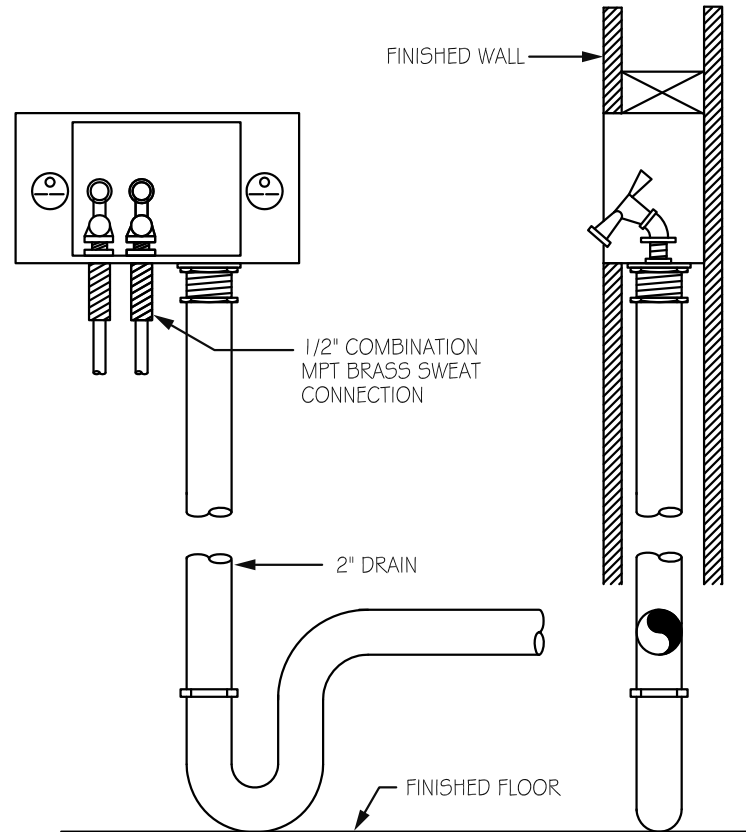
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**HVAC DETAILS AND
CONTROLS**
M3-0

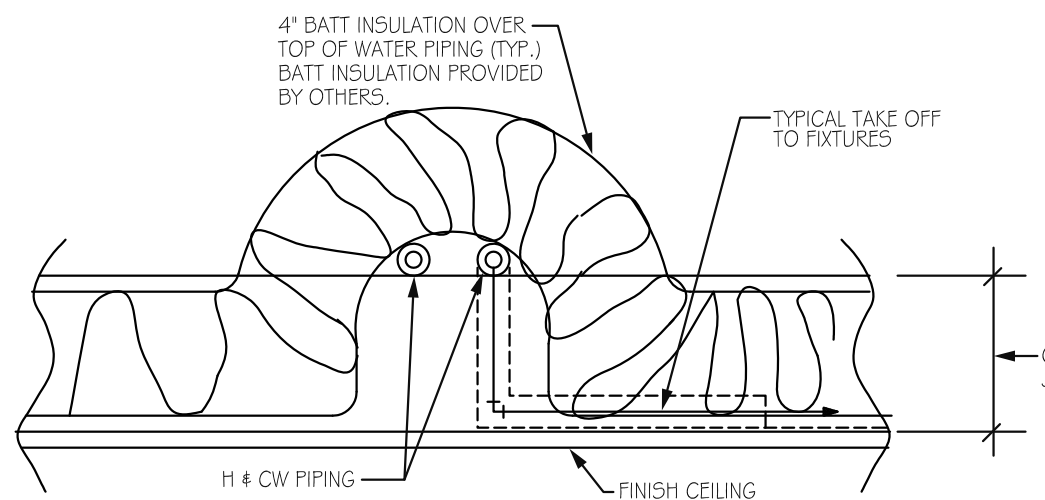


DETAIL OF YARD CLEANOUT
(SANITARY DRAIN) NO SCALE



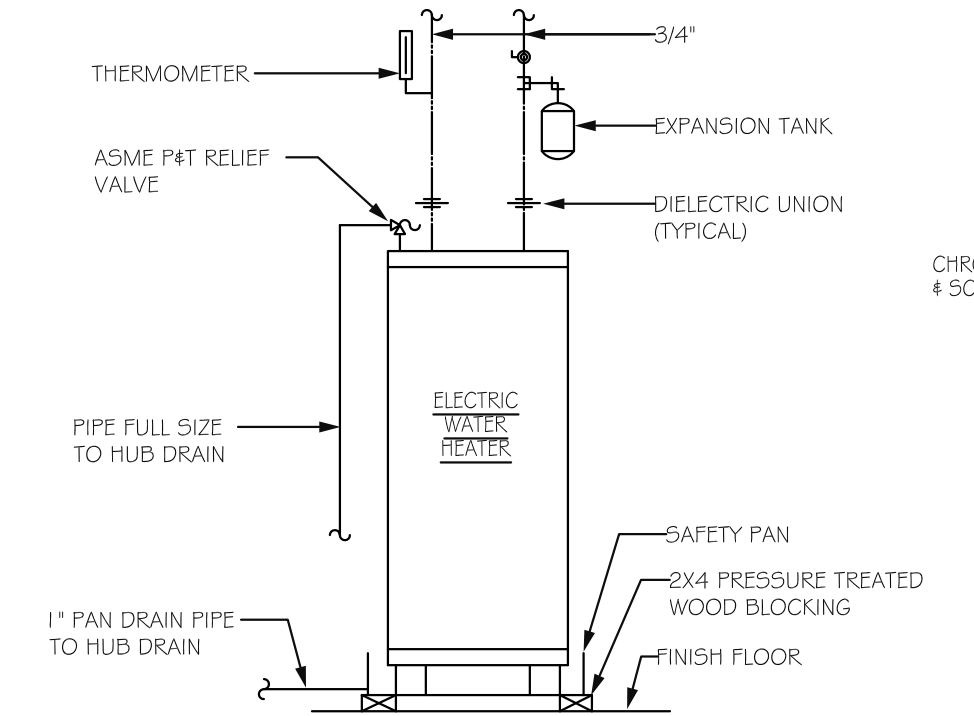
WASHING MACHINE SUPPLY & DRAIN UNIT DETAIL
NO SCALE

- GENERAL NOTES**
1. ALL WORK SHALL COMPLY WITH ALL APPLICABLE NFPA, STATE, COUNTY, AND LOCAL LAWS AND ORDINANCES.
 2. CONTRACTOR SHALL VERIFY LOCATION, SIZE AND ELEVATION OF ALL PIPING PROVIDED UNDER THE CIVIL SECTION PRIOR TO INSTALLING ANY NEW PIPE.
 3. ALL OUTSIDE CLEANOUTS SHALL BE BROUGHT TO GRADE AND EMBEDDED IN 1.8'X1.8'X6\"/>
 4. WHEREVER DISSIMILAR METALS ARE CONNECTED ON WATER LINES, A DIELECTRIC UNION SHALL BE USED.
 5. ALL HORIZONTAL WATER AND VENT PIPING IS RUN ABOVE CEILING AS SHOWN UNLESS OTHERWISE NOTED.
 6. ALL HORIZONTAL SANITARY PIPING IS RUN BELOW FLOOR AS SHOWN UNLESS OTHERWISE NOTED.
 7. 1.8\"/>
 8. ALL WATER PIPING BELOW SLAB ON GRADE SHALL BE BENT UP AT ENDS SO THAT NO JOINTS OCCUR BELOW FLOOR.
 9. COORDINATE ALL PIPE ROUTING TO AVOID CONFLICTS WITH, STRUCTURAL, MECHANICAL, AND ELECTRICAL FEATURES OF BUILDING.
 10. ALL WALL HYDRANTS SHALL BE MOUNTED 24\"/>
 11. ALL WATER PIPING INSTALLED IN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF THE EXTERIOR WALL INSULATION.
 12. PAVEMENT CUTS, BACKFILLING AND PATCHES SHALL MEET CITY OF ALBUQUERQUE, NEW MEXICO REQUIREMENTS.

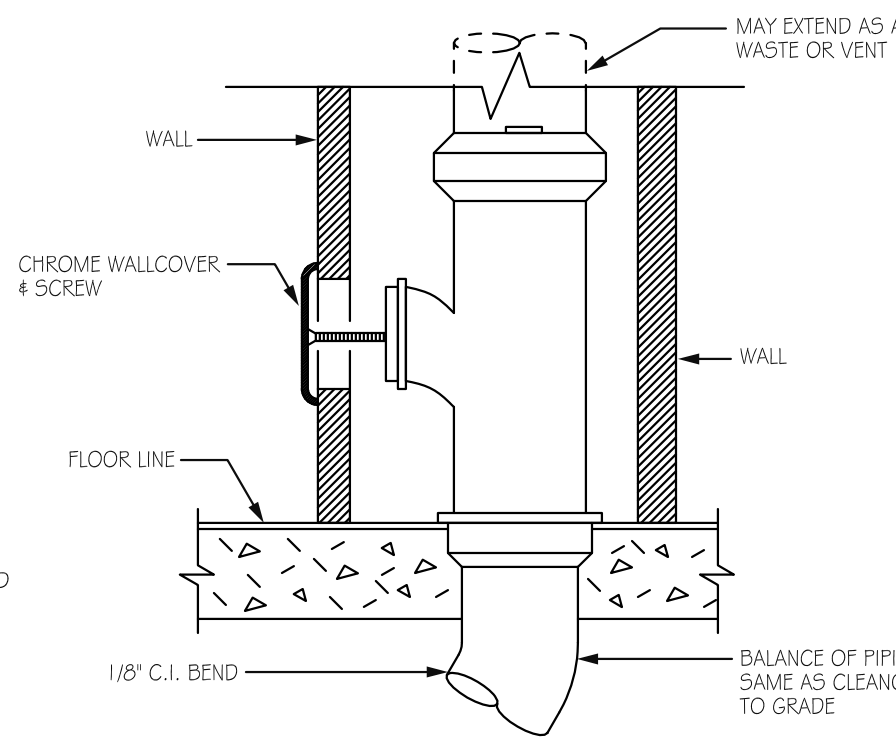


DETAIL OF WATER PIPING IN ATTIC SPACE
NO SCALE

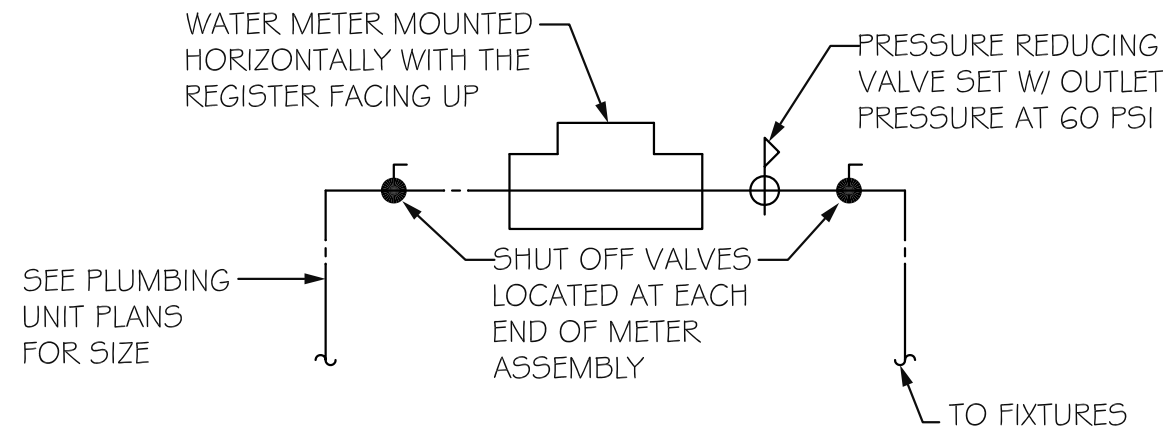
PLUMBING LEGEND			
	SOIL OR WASTE LINE		HUB DRAIN
	VENT LINE		FLOW LINE
	HOSE BIBB		ABOVE FINISH FLOOR
	WALL HYDRANT		CLEAN OUT
	LAVATORY		WASTE STACK
	COLD WATER LINE		SOIL STACK
	HOT WATER LINE		VENT STACK
	RISE R. DIAGRAM NUMBER		VENT THRU ROOF
	BALL VALVE		COLD WATER
	UNION		HOT WATER
	PIPE TURNING UP		INVERT
	PIPE TURNING DOWN		PLUMBING FIXTURE NUMBER
	P TRAP		WATER CLOSET



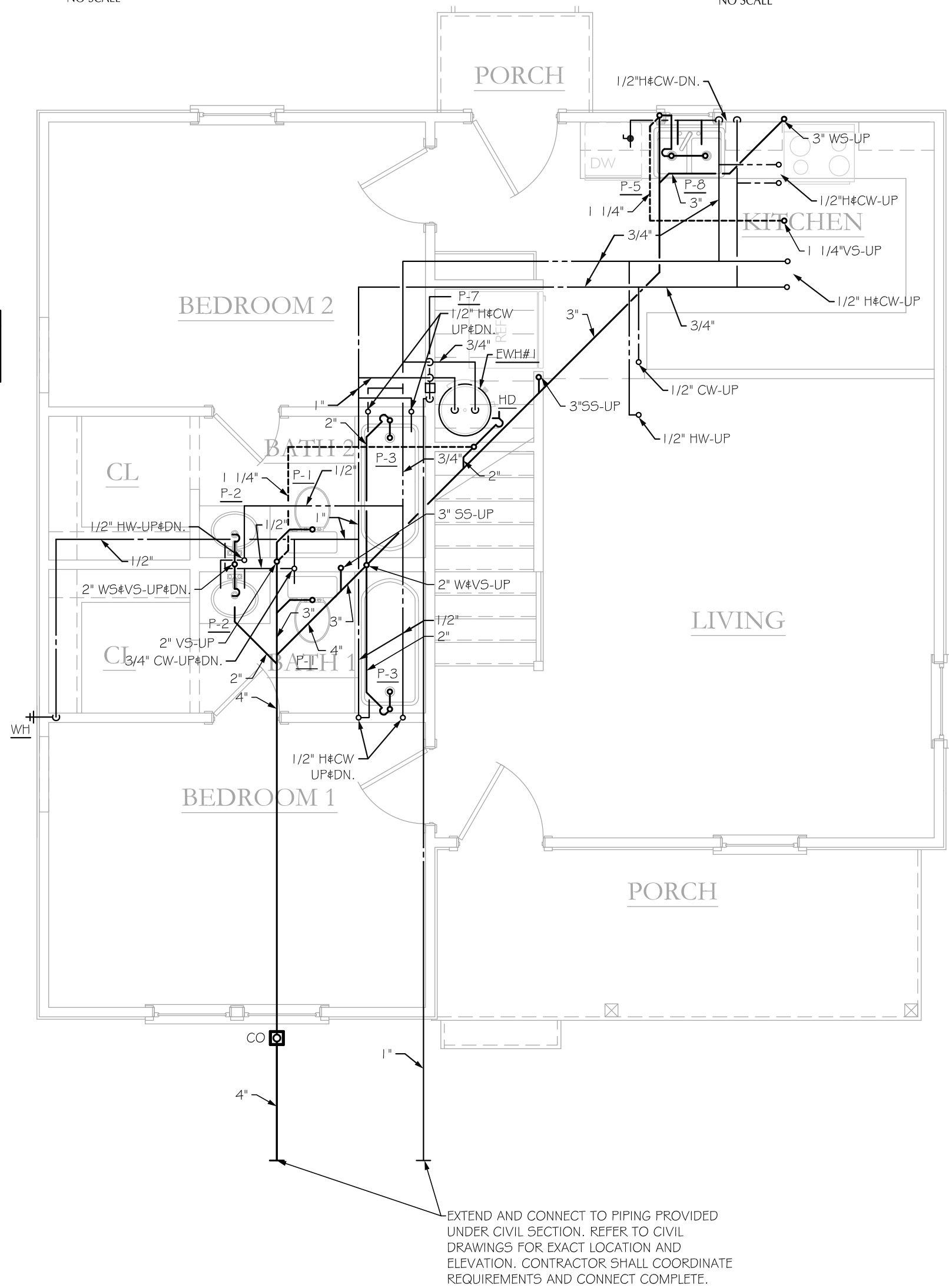
DETAIL OF PIPING AT ELECTRIC WATER HEATER
NO SCALE



WALL CLEANOUT DETAIL
NO SCALE

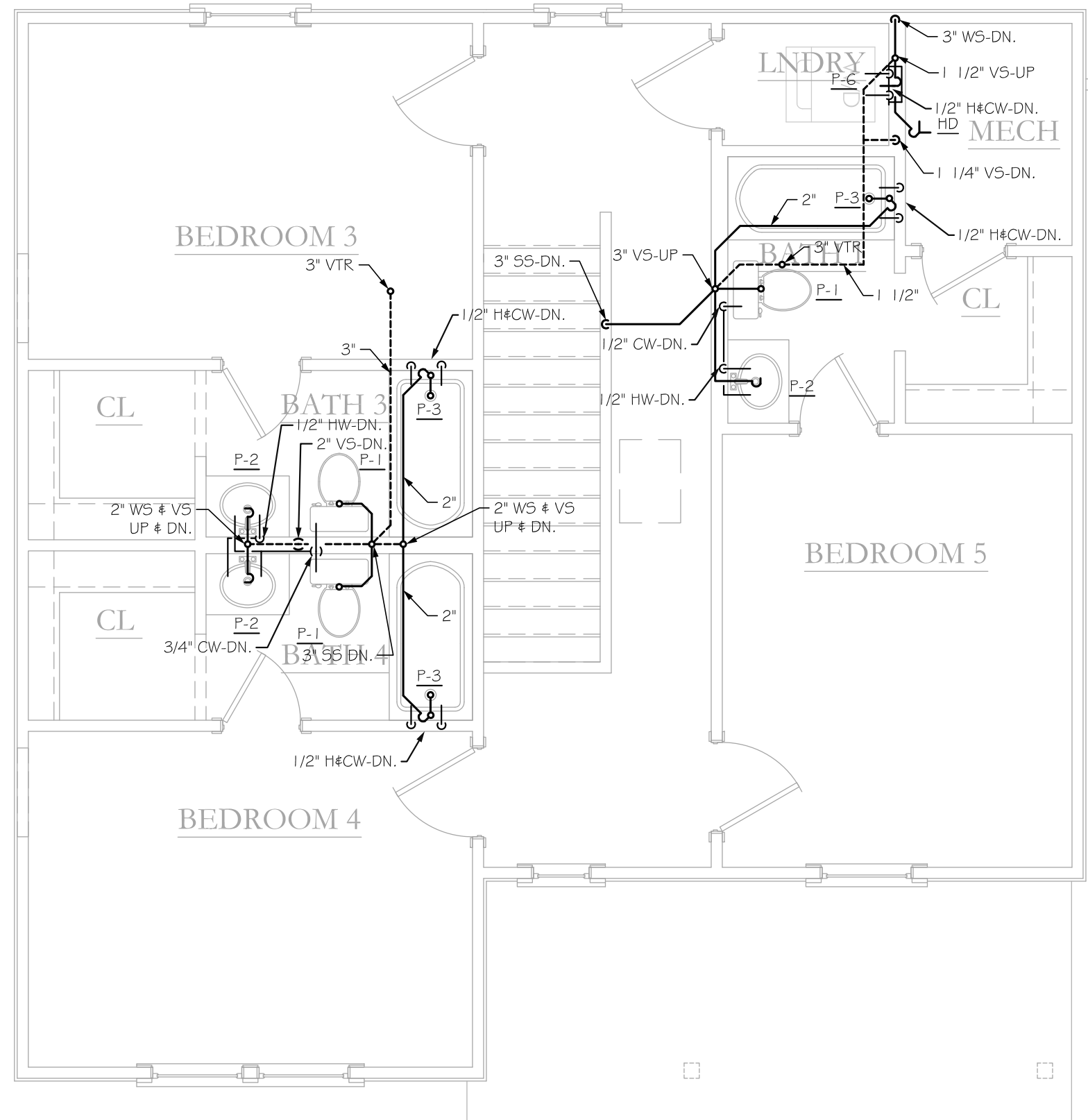


WATER METER DETAIL
NO SCALE



1
PI-0
1/4" = 1'-0"

MAIN LEVEL PLUMBING FLOOR PLAN

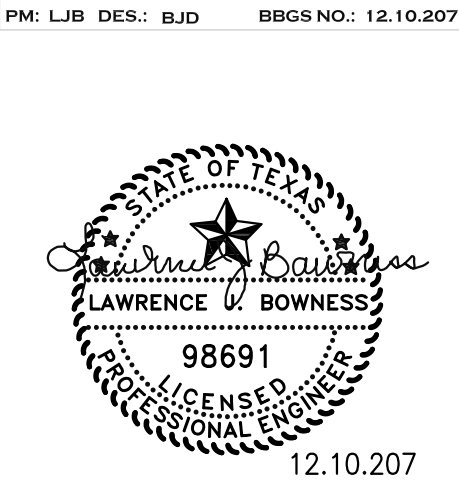


2
PI-0
1/4" = 1'-0"

UPPER LEVEL PLUMBING FLOOR PLAN

PLUMBING FIXTURE CONNECTION SCHEDULE						
MARK	FIXTURE	WASTE	CW	HW	REMARKS	
P-1	WATER CLOSET	3"	1/2"	---	FLOOR MOUNTED TANK TYPE	
P-2	LAVATORY	1 1/4"	1/2"	1/2"	COUNTERTOP	
P-3	BATHTUB	2"	1/2"	1/2"		
P-4	SINK	1 1/2"	1/2"	1/2"	SINGLE COMPARTMENT	
P-5	DISHWASHER	3/4"	---	1/2"	ROUGH AND CONNECT COMPLETE	
P-6	WASHING MACHINE BOX	2"	1/2"	1/2"	WALL MOUNTED, RECESSED	
P-7	REFRIGERATOR	---	1/2"	---	WALL MOUNTED, RECESSED WITH 10' OF SOFT COPPER	
P-8	SINK	1 1/2"	1/2"	1/2"	DOUBLE COMPARTMENT	

ELECTRIC WATER HEATER SCHEDULE						
MARK	A.O. SMITH MODEL #	LOCATION	CW	HW	ELEC.	GAL.
EW#1	ECT-80	4 & 5 BEDROOM COTTAGE AT REFRIGERATOR	3/4"	3/4"	240V/ 4.5 KW	80



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HVAC & PLUMBING FIRE PROTECTION
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WEB: BBG&S.COM

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ISSUE FOR
CONSTRUCTION
THE COTTAGES
of SAN MARCOS

5 BED-RIVERBIRCH
1789 sq. ft.

SAN MARCOS, TEXAS
NUMBER 12031
15 FEBRUARY 2012

Drawn by: HBS
Checked by: BJD

REVISIONS
REV. #1 8/9/2013

PLUMBING FLOOR PLAN

P1-0



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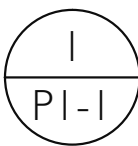
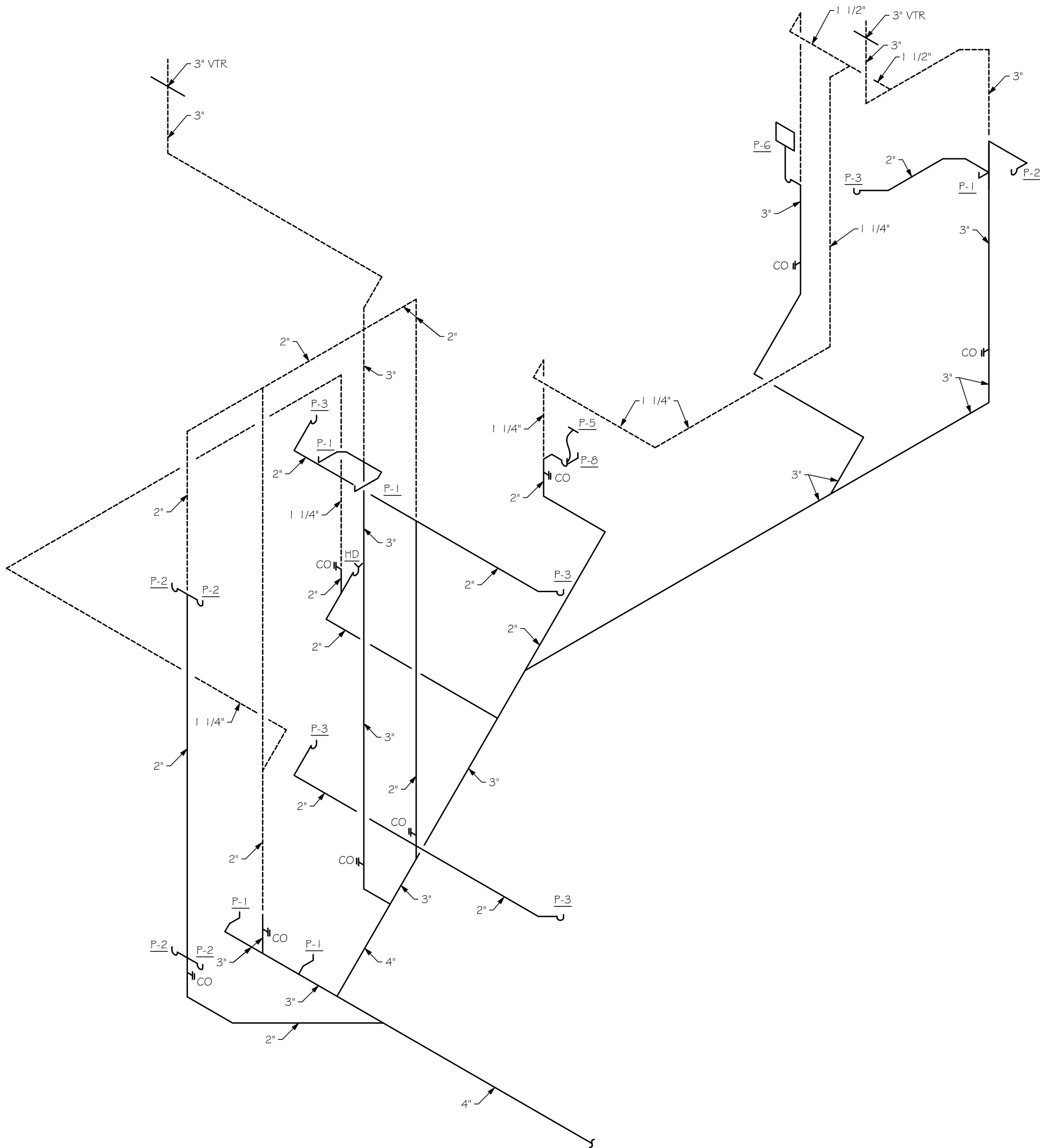
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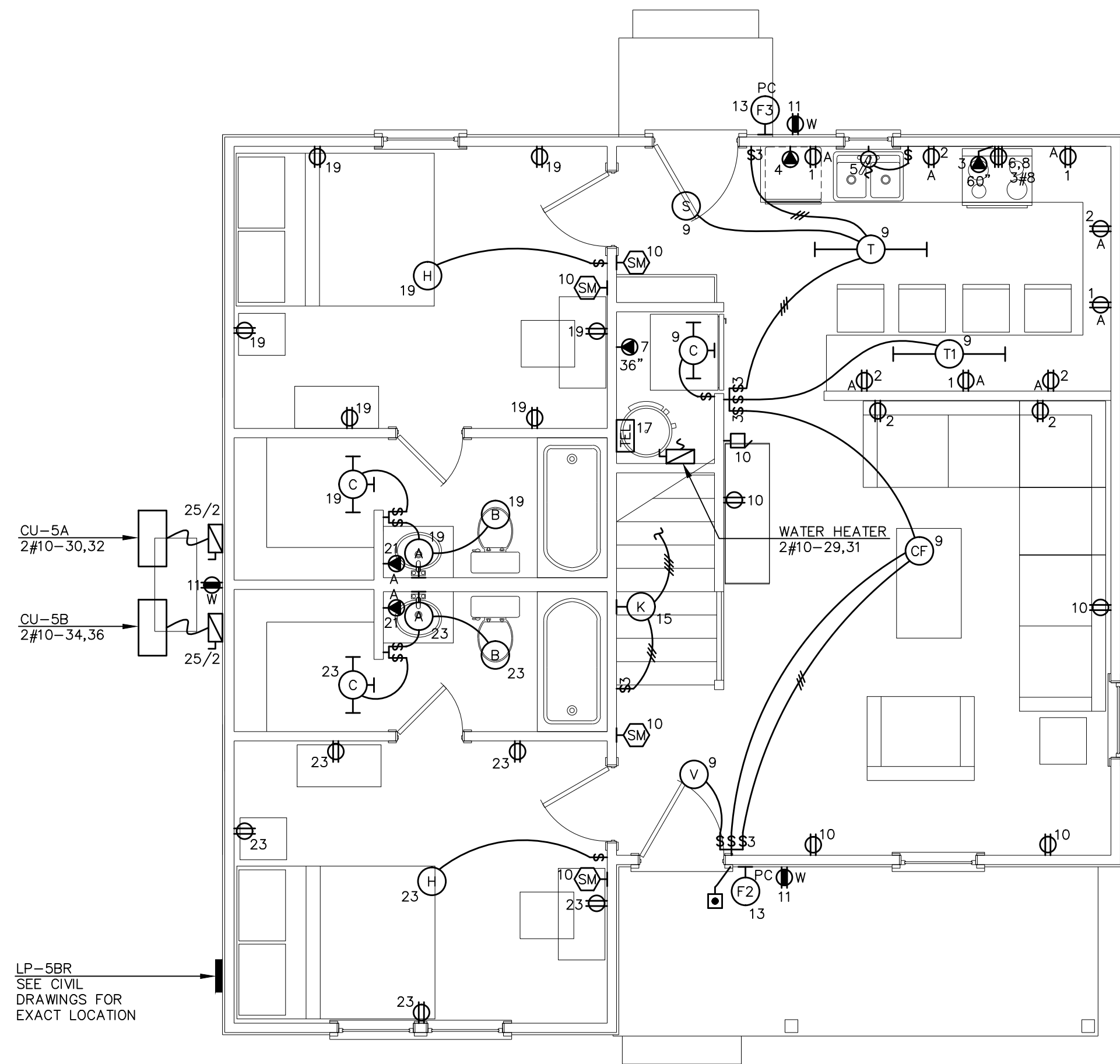
SANITARY RISER DIAGRAM

P1-1

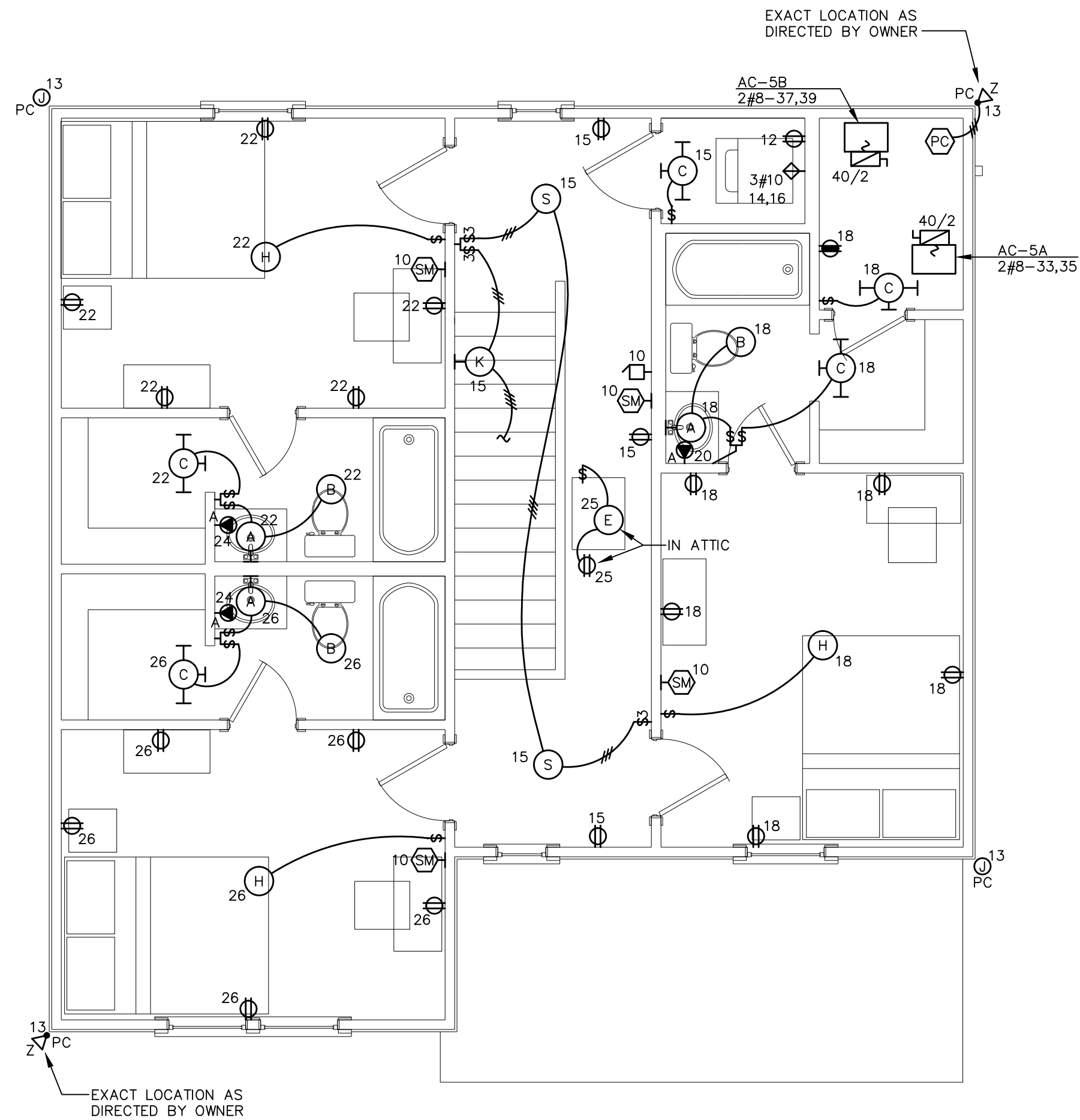


SANITARY RISER DIAGRAM

Scale: No Scale



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

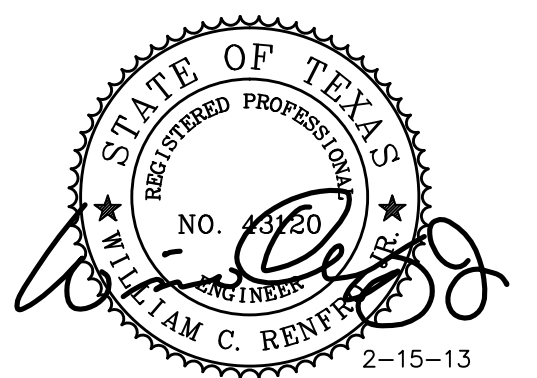


UPPER LEVEL ELECTRICAL PLAN
SCALE : 1/4" = 1'-0"

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5 BED-RIVERBIRCH
1832 sq. ft.
SAN MARCOS, TEXAS
NUMBER 12031 15 FEBRUARY 2013
Drawn by: RJD
Checked by: RCR

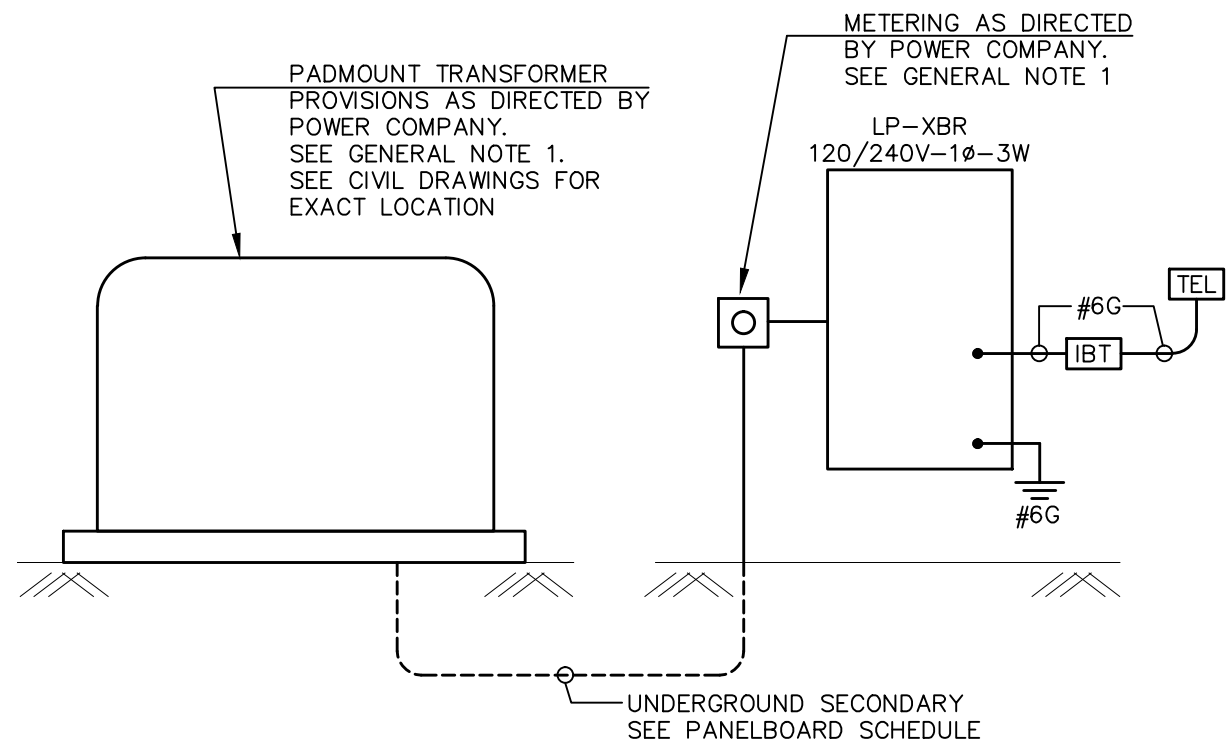


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REVISION 1		8-9-13

ELECTRICAL PLANS

E1-0

**JACKSON,
RENFRO
& ASSOCIATES, INC.**
ELECTRICAL ENGINEERING & DESIGN
141 VILLAGE STREET • SUITE 1 • BIRMINGHAM, ALABAMA • 35242
ROBERT RENFRO, PE
bobby@jraee.com
(205) 336-7114
(205) 995-1078
JRA JOB NO. 222162



SINGLE LINE DIAGRAM
SCALE : NONE

PANELBOARD SCHEDULE - LP-5BR											
PANEL TYPE: SQUARE D®-LOAD CENTER				AIC RATING: 22 KAC (MINIMUM)				MOUNTING: SURFACE NEMA 3R			
VOLTAGE: 120/240V-1P-3W				LOCATION: EXTERIOR - SEE PLAN				FEEDER: 3Ø/3-2" C			
AMPS & TYPE: 2002 MAIN BKR											
FED FROM: UTILITY											
CKT NO.	NOTES	BKR	DESCRIPTION	WATTS	PHASE	WATTS	DESCRIPTION	BKR	NOTES	CKT NO.	
1	GFCI	201	KITCHEN OUTLET	1,500	A	1,500	KITCHEN OUTLET	201	GFCI	2	
3	GFCI	201	MICROWAVE	1,500	B	1,200	DISHWASHER	201	GFCI	4	
5	GFCI	201	DISPOSAL	1,000	A	4,000	RANGE		50/2		6
7	GFCI	201	REFRIGERATOR	1,000	B	4,000					8
9	AFCI	201	COMMON AREALIGHTS	1,000	A	1,600	LIVING ROOM OUTLETS	201	AFCI		10
11	AFCI	201	OUTDOOR OUTLETS	400	B	1,200	WASHER	201	GFCI		12
13	AFCI	201	OUTDOOR LIGHTS	400	A	2,500	DRYER		30/2	-	14
15	AFCI	201	UPPER LEVEL LIGHTS & OUTLETS	1,400	B	2,500			-	-	16
17	AFCI	201	SECURITY TEL	500	A	1,400	BEDROOM LIGHTS & OUTLETS	201	AFCI		18
19	AFCI	201	BEDROOM LIGHTS & OUTLETS	1,400	B	1,200	BATHROOM OUTLETS	201	GFCI		20
21	GFCI	201	BATHROOM OUTLETS	1,200	A	1,400	BEDROOM LIGHTS & OUTLETS	201	AFCI		22
23	AFCI	201	BEDROOM LIGHTS & OUTLETS	1,400	B	1,200	BATHROOM OUTLETS	201	GFCI		24
25	-	201	ATTIC LIGHTS	400	A	1,400	BEDROOM LIGHTS & OUTLETS	201	AFCI		26
27	-	201			B			201	-		28
29	-	3Ø/2	WATER HEATER	2,250	A	1,600	CU-5A		25/2	-	30
31	-			2,250	B	1,600				-	32
33	-	4Ø/2	AC-5A	3,500	A	1,600	CU-5B		25/2	-	34
35	-			3,500	B	1,600				-	36
37	-	4Ø/2	AC-5B	3,500	A					-	38
39	-			3,500	B					-	40
41	-				A					-	42
NOTES:				PH. A	PH. B	TOTAL CONNECTED LOAD: 63.1 KVA					
				32,250	30,850					TOTAL DEMAND LOAD: 39.2 KVA	
						170.6 AMPS					
LOAD CALCULATIONS PER NEC 220.62 OPTIONAL CALCULATION											
LIGHTS/RECEPTACLES AT 3 WATTS/SF				5.7 KVA				FIRST 10 KVA NON-HVAC LOAD AT 100%			
KITCHEN				3.0 KVA				REMAINDER AT 40%			
RANGE				8.0 KVA				HVAC AT 100%			
LAUNDRY				6.2 KVA				TOTAL DEMAND LOAD			
MICROWAVE				1.5 KVA				10.0 KVA			
DISPOSAL				1.0 KVA				8.8 KVA			
REFRIGERATOR				1.0 KVA				20.4 KVA			
DISHWASHER				1.2 KVA				39.2 KVA			
WATER HEATER				4.5 KVA							
TOTAL NON-HVAC LOAD				32.1 KVA							

- GENERAL ELECTRICAL NOTES
- CONTRACTOR SHALL VERIFY ALL REQUIREMENTS FOR TELEPHONE AND POWER SERVICES WITH RESPECTIVE UTILITY COMPANIES PRIOR TO SUBMITTING BID. IF THEIR REQUIREMENTS ARE AT A VARIANCE WITH THOSE SHOWN ON PLANS THE CONTRACTOR SHALL INFORM ARCHITECT IMMEDIATELY. ALL COSTS INCURRED WITH UTILITY COMPANIES FOR SERVICES SHALL BE INCLUDED IN BID PRICE. IF SUCH COSTS ARE NOT AVAILABLE AT BID TIME CONTRACTOR SHALL INCLUDE WITH BID A LETTER FROM A RESPONSIBLE PARTY WITH THE UTILITY COMPANY STATING SUCH, AND COSTS WILL THEN BE EXCLUDED FROM THE BID PRICE.
 - THIS CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT FROM MANUFACTURER'S RECOMMENDATIONS PRIOR TO ROUGHING IN CONDUIT AND SHALL ADJUST CONDUIT SIZE, WIRE SIZE AND CIRCUIT PROTECTION SIZE ACCORDINGLY. IF REQUIREMENTS ARE LARGER THAN CALLED FOR ON ELECTRICAL PLANS NOTIFY ARCHITECT IMMEDIATELY.
 - CONTRACTOR SHALL VISIT THE SITE OF THE WORK PRIOR TO SUBMITTING BID TO EXAMINE CAREFULLY LOCAL CONDITIONS AND DIFFICULTIES TO BE ENCOUNTERED. ANY DISCREPANCY BETWEEN PLANS AND EXISTING CONDITIONS SHALL IMMEDIATELY BE CALLED TO THE ATTENTION OF THE ARCHITECT.
 - ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH ALL REQUIREMENTS OF ANY LOCAL APPLICABLE CODES OR ORDINANCES, PUBLIC UTILITY COMPANIES, STATE CODE, NATIONAL ELECTRICAL SAFETY CODE AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE WITH THE INTERIM AMENDMENTS THERETO.
 - ALL MATERIALS SHALL CONFORM TO THE LATEST ISSUE OF ALL APPLICABLE STANDARDS AS ESTABLISHED BY EEL, NEMA, IEEE, ASTM, IPCEA, NATIONAL BOARD OF FIRE UNDERWRITERS AND UNDERWRITERS LABORATORIES, INC.
 - CONTRACTOR SHALL FURNISH ARCHITECT WITH A CERTIFICATE OF FINAL INSPECTION FROM THE INSPECTING AUTHORITY.
 - THE COST OF ALL PERMITS AND INSPECTION FEES SHALL BE INCLUDED IN THE CONTRACT PRICE.
 - DEVICE PLATES SHALL BE SMOOTH PLASTIC, COLOR AS SELECTED, AS MANUFACTURED BY HUBBELL, SIERRA OR APPROVED EQUAL.
 - ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH NEC.
 - THIS CONTRACTOR SHALL LEAVE ENTIRE ELECTRICAL SYSTEM INSTALLED BY HIM UNDER THIS CONTRACT IN PROPER WORKING ORDER AND SHALL REPLACE WITHOUT ADDITIONAL CHARGE ALL WORK OR MATERIALS WHICH MAY DEVELOP DEFECTS WITHIN A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE BY THE ARCHITECT.

LIGHTING FIXTURE SCHEDULE											
MARK	MANUFACTURER	CATALOG NUMBER	VOLTAGE	LAMPS			MOUNTING HEIGHT	MOUNTING TYPE	REMARKS		
				NUMBER	WATTS	TYPE					
A	RAVINA	RL-13-357-ORB-CFL	120	3	13	CFL	ABOVE MIRROR	OUTLET BOX	VANITY LIGHT		
B	BROAN	680FL - 4.0 SONES - 100 CFM	120	1	22	CFL	CEILING	RECESSED	BATH FAN/LIGHT COMBO		
C	RAVINA	RL-117-ST	120	1	17	T8	ABOVE DOOR	SURFACE	FLOOR STRIP		
CF	ROYAL PACIFIC	1058BP-LK30-OB	120	3	13	CFL	AS DIRECTED BY ARCHITECT	PENDANT OR OUTLET BOX	CEILING FAN W/ LIGHT KIT		
E	SATCO	90-480	120	1	13	CFL	CEILING	OUTLET BOX	ATTIC LIGHT		
F1	NUVO	76-70X FINISH AS DIRECTED BY ARCH.	120	1	13	CFL	AS DIRECTED BY ARCHITECT	OUTLET BOX	EXTERIOR JELLY JAR		
F2	FORTE	1127-01-XXS FINISH AS DIRECTED BY ARCH.	120	1	13	CFL	AS DIRECTED BY ARCHITECT	OUTLET BOX	EXTERIOR GOOSENECK		
F3	NUVO	76-70X FINISH AS DIRECTED BY ARCH.	120	1	13	CFL	AS DIRECTED BY ARCHITECT	OUTLET BOX	EXTERIOR JELLY JAR		
F4	FORTE	1127-01-XXS FINISH AS DIRECTED BY ARCH.	120	1	13	CFL	AS DIRECTED BY ARCHITECT	OUTLET BOX	EXTERIOR GOOSENECK		
H	RAVINA	RL-11-3618-ORB-CFL	120	3	13	CFL	CEILING	OUTLET BOX	BEDROOM LIGHT		
K	RAVINA	RL-13-355-ORB	120	1	60	IFC	AS DIRECTED BY ARCHITECT	OUTLET BOX	STAIR SCONCE		
S	RAVINA	RL-11-3617-ORB	120	2	13	CFL	AS DIRECTED BY ARCHITECT	OUTLET BOX	HALLWAY CEILING LIGHT		
T	ROYAL PACIFIC	7934G-ORB	120	3	50	GU10 MR16	CEILING	TRACK	KITCHEN TRACK		
T1	ROYAL PACIFIC	7934G-ORB	120	4	50	GU10 MR16	CEILING	TRACK	DINING TRACK		
V	RAVINA	RL-11-3213-ORB	120	2	13	CFL	AS DIRECTED BY ARCHITECT	PENDANT	ENTRY CHANDELIER		
Z	H-FL26 PAR LAMP HOLDER WITH GLARE SHIELD FINISH AS DIRECTED BY ARCHITECT		120	1	27	CFL	BOTTOM OF EAVE	OUTLET BOX	EXTERIOR FLOOD LIGHT		
LIGHTING FIXTURE SCHEDULE GENERAL NOTES: 1. ALL EXTERIOR FIXTURES SHALL HAVE HIGH EFFICACY LAMPS. 2. 50% OF ALL FIXTURES INSIDE DWELLING UNITS SHALL BE HIGH EFFICACY LAMPS.											

- GENERAL ELECTRICAL LEGEND
- FIXTURE OUTLET - WALL SCONCE.
 - FIXTURE OUTLET - CEILING LIGHT..
 - FIXTURE OUTLET - WALL BRACKET - FLUORESCENT - ABOVE DOOR.
 - CEILING FAN WITH RADIATION DAMPER - MULTHOUSING DIRECT 805507.
 - FIXTURE OUTLET - MINI-PENDANT.
 - WALL OUTLET - DUPLEX - TAMPER PROOF - 15A - 125V - 2P - 3W - GROUNDING.
 - WALL OUTLET - DUPLEX - TAMPER PROOF - 20A - 125V - 2P - 3W - GROUNDING.
 - WALL OUTLET - DUPLEX - TAMPER PROOF - WEATHER RESISTANT - 15A - 125V - 2P - 3W - GROUNDING - "GFI" TYPE - WEATHERPROOF COVER.
 - FLOOR OUTLET - 15A - 125V - 2P - 3W - GROUNDING.
 - WALL OUTLET - SINGLE - 30A - 125/250V - 3P - 4W - GROUNDING.
 - WALL OUTLET - SINGLE - 50A - 125/250V - 3P - 4W - GROUNDING.
 - JUNCTION BOX FOR ALTERNATE LIGHT PLACEMENT.
 - BRANCH CIRCUIT - CONCEALED IN WALLS OR CEILING.
 - SWITCH OUTLET - S.P.S.T. - 15A - 120VAC.
 - SWITCH OUTLET - 3 WAY - 15A - 120VAC.
 - LIGHTING PANEL.
 - DISTRIBUTION CENTER.
 - DISCONNECT SWITCH - CIRCUIT BREAKER - SIZE AS INDICATED.
 - HOME NETWORKING PANEL - SEE A/V-TELECOMM DRAWINGS FOR EXACT LOCATION.
 - INTERSYSTEM BONDING TERMINATION - COPPER GROUND BUS IN NEMA 3R ENCLOSURE MOUNTED ADJACENT TO SERVICE EQUIPMENT PER NEC REQUIREMENTS.
 - INDICATES DEVICE TO BE INSTALLED ABOVE BACKSPLASH.
 - PUSHBUTTON - LOW VOLTAGE - DOOR BELL - EDWARDS OR EQUAL.
 - DOOR BELL BUZZER - 120 VOLT - WITH LOW VOLTAGE WIRING TO DOORBELL PUSHBUTTON - EDWARDS OR EQUAL.
 - SMOKE ALARM - SMOKE DETECTOR - SINGLE STATION - 120 VOLT - WITH BATTERY BACKUP - WALL MOUNTED. - LOCATE WITHIN 4" TO 12" OF TALLEST PART OF CEILING AND A MINIMUM OF 36" FROM AIR REGISTER - GENTEX OR EQUAL - ALL SMOKE DETECTORS SHALL BE INTERCONNECTED.
 - CARBON MONOXIDE DETECTOR - SINGLE STATION - 120 VOLT WITH BATTERY BACK-UP WALL MOUNTED AT 60" AFF - GENTEX OR EQUAL..
 - PHOTOCELL - MOUNT ON ROOF FACING NORTH.
 - INDICATES LIGHT CONTROLLED BY PHOTO-CELL.
 - INDICATES DEVICES LOCATED ABOVE COUNTER.

- DEVICE LOCATION NOTES
- MOUNT OUTDOOR SCONCE AT 86" A.F.F. UNLESS NOTED OTHERWISE.
 - REFER TO SITE PLAN FOR EXACT LOCATION OF PANELBOARD.
 - LOCATE CENTER OF DOOR BELL 48" A.F.F. AND 4" OVER FROM THE DOOR TRIM.
 - LIGHT SWITCHES AT VANITIES SHALL BE 6" FROM CORNER.

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ISSUE FOR
CONSTRUCTION
THE COTTAGES
of SAN MARCOS

5 BED-RIVERBIRCH
1832 sq. ft.
SAN MARCOS, TEXAS
NUMBER 12031 15 FEBRUARY 2013
Drawn by: RJD
Checked by: RCR



REVISIONS
REVISION 1 8-9-13

LEGEND, NOTES
& SCHEDULES

E2-0

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Architect Notes

1.0 Main Communications Room (MCR)

1.1 Facilities

The General Contractor shall construct the MCR to the minimum dimensions shown on the InfiniSys drawing set. The MCR walls shall be covered with 3/4" plywood over any building materials required by code. The plywood shall be 8' high, start at 6" AFF, and must meet all national, state, and local codes for fire rating. If noted, the MCR walls shall be shielded by installing a grounded metal lath behind the plywood. Once the MCR is constructed, the Low Voltage Contractor shall roughly designate the various protection areas per the InfiniSys drawings, using spray-paint to outline and label the areas. No piping, ductwork, mechanical equipment or power cabling should pass through the MCR.

1.2 Secure Access/Lock Boxes

General Contractor shall provide single or double 36" x 80" lockable doors. The doors must be able to be securely locked, using a high-security deadbolt style lock, and be common-keyed across the site. Access shall be restricted to authorized personnel. The Low Voltage Contractor shall provide and install three lock-boxes (knock boxes) on a wall close to the MCR for each provider - Telephone, Video, and Data. The General Contractor shall ensure that the lock-boxes are accessible 24x7x365. The General Contractor shall also provide two sets of keys for the MCR and BCR(s) in each box.

2.0 Pathways

2.1 Coring

All coring through concrete, block, stone, or other impervious materials is the responsibility of the General Contractor.

2.2 Interior Pathways

All interior building pathways are the responsibility of the general contractor.

2.3 Fire stopping

All fire stopping designs shall be the responsibility of the site architect. All fire stopping as required by code and installation of the fire stopping designs of the site architect shall be the responsibility of the installing contractor.

MEP Notes

1.0 General

All electrical work shall conform to all of the National Electric Code for state, county, city electrical codes, and authorities having jurisdiction.

All switch boxes in units, leasing, amenities area, etc. must contain a neutral to the load they are controlling.

Install unswitched quad outlet by each Home Theater Outlet and duplex by each Multimedia Outlet

2.0 Main Communications Room (MCR)

2.1 HVAC

The SCG requires sufficient HVAC to maintain 40° - 85° Fahrenheit with humidity at 30-60%, non-condensing, positive pressure.

2.2 Lighting

4-bulb 4" or 4-bulb 8" fluorescent lighting fixtures with tube protectors installed are required for proper lighting, typically 8.5-9.0 feet above the floor, providing 85 foot-candles at 3 feet above the floor.

2.3 Electrical

All duplex outlets are to be Pass & Seymour Industrial Grade Surge Protective Receptacles with Isolated Ground unless otherwise specified. This ground shall be tied to the electrical service ground. Use Pass & Seymour part number IGS262-WSP for 15 amp circuits and Pass & Seymour part number IGS362-WSP for 20 amp circuits.

Required duplex outlets and circuits are as follows:

- Four (9) 20A 120VAC surge protected duplex outlets on four (4) separate circuits for data/video.
- One (1) 20A 120VAC surge protected duplex outlet on one (1) separate circuit for NVR.
- Minimum of two (2) convenience outlets on the lighting circuit.

All circuits must be clearly labeled at their circuit breaker panel.

2.4 Grounding

General Contractor shall provide solid copper grounding busbar to be installed with insulated standoffs, (1/4" thick x 4" high). This busbar is drilled with rows of holes according to NEMA standards for attachment of bolted compression fittings. Telecommunications equipment, frames, cabinets and voltage protectors shall be grounded to this busbar. General Contractor shall connect busbars in the MCR with a backbone of insulated, solid copper cable between all closets and rooms.

This backbone shall be connected to the Main Grounding Busbar in the MCR, to an earth ground in the electrical entrance facility, and to structural steel on each floor, if applicable.

Bonding conductor cabling shall be colored green or labeled appropriately.

All grounding shall be in accordance with Article 250 of NEC 2011.

3.0 Unit Distribution Panel (UDP)

3.1 Electrical

The Electrical Contractor must install a box with a 15A 120VAC Pass & Seymour 5262-WSP surge protected duplex outlet in the bottom of each UDP. This outlet does not require a dedicated circuit and may be powered from a lighting circuit.

3.2 Grounding

The Electrical Contractor shall attach the UDP grounding lug to the ground terminal of the installed surge protected duplex outlet.

4.0 Site Requirements

4.1 The MEP shall be responsible for the integration of the Access Control System with the Fire Alarm System.

4.2 The Electrical Contractor shall provide power to all gate camera locations.

4.3 The Electrical Contractor shall provide power to all access control panel and gate locations.

General Notes

1. Leave 2 foot tail at multimedia outlet, plaster ring locations.

2. Leave 3 foot tail at ntd(networkedapartment communications gateway) and speaker locations.

3. Leave 10 foot tail at communications gateway locations.

4. 3 inch min. bend radius on all cable runs do not use metal staples or kink cables.

Use plastic staples such as the peter mangone rb clip gun system.

5. All low voltage wiring must be kept one stud bay (12" min.) distance from parallel high voltage wiring and cross at right angles.

6. Mount home theater outlet in caddy/erico model mp2s low voltage mounting bracket or two-gang plastic box with back removed, unless it is in a fire-rated wall (if applicable.)

7. It is preferred to mount single outlets in a single gang plastic box with back removed. Optionally, a single gang mud ring may be used, unless it is in a fire-rated wall.

8. All blank covers are the responsibility of the installing sub-contractor.

9. Install all multimedia, and binding post outlets at duplex outlet height in all rooms, except wall outlet in kitchen or unless otherwise noted.

10. Low voltage boxes must be level and unobstructed.

11. Install pull strings in all empty conduits and inweirds.

12. Wall phone outlets must be at least 6" above any counter splash or ledge

13. All F-connectors must be stripped and crimped using approved tools, tighten all "I" connectors to 25 in-lbs torque using approved tool-all F-connectors shall be of the radial 360-degree crimp type (F-conn model RG-6NR or equivalent for RG-6 quad-shield). Compression crimp also acceptable.

14. No splices are permitted inside walls.

15. Install wall plates and speakers after finish painting.

16. All exposed connections, hardware shall be protected from plaster, paint and other such materials.

17. All final installation must be done in accordance with the attached drawings, specifications and InfiniSys supplied scope of work.

18. Fire stopping must be accomplished in accordance to local, state, and national codes and in accordance with the fire stopping designs of the site architect.

19. All grounding shall conform to NEC 2011 article 250.

20. The low voltage contractor shall label all low voltage cables at both ends in a clear and legible manner. The label shall be located within 1 foot of the likely termination point after trim so that the label will not be cut off.

Cable Specifications

- All cables and microduct pathways with included pull string/tape shall be at a minimum riser rated. All cables and microduct pathways with included pull string/tape shall be plenum rated in such spaces that require it by local, state or national code. The plenum rating must conform to the most current version of NFPA 262.
- Video Cable: All inside and home-run video cable will utilize Quad-Shield 60% minimum braid Series 6 coaxial cable terminating on OnQ Legrand or equivalent self-terminating F-81 barrel connectors. All coaxial cable must be manufacturer rated to a minimum of 3.0 GHz.
- All "I" connectors shall be of the radial 360-degree crimp type (F-Conn Model RG-6NR or equivalent for Quad-Shield). These connectors require a CablePro RTC-360 or equivalent tool for installation. Hex crimp tools are not acceptable.
- If the outlets with video ports are installed with a wall cavity depth of less than 3", 90° F-connector adapters (Channel Vision #2125 or equivalent) must be used inside the wall.
- Data Cable: All inside and home-run data wiring will utilize 4-Pair TIA Cat-5e or Cat-6 twisted pair copper cable terminating on TIA RJ-45 jacks utilizing the TIA 568a standard configuration. All Cat-5e or Cat-6 cable shall meet or exceed ANSI/EIA/TIA-568 requirements. It is required that all data cabling be bid utilizing Cat-5e and another bid utilizing Cat-6.

Item	Part #
OnQ Legrand Unit Distribution for CAT-6 Bid	
CATS NET APT 3 PORT PLATE (INT-TV) WHITE	WP3739-WH
CATS NET APT 3 PORT PLATE (INT) WHITE	WP3705-WH
CATS NET APT 3 PORT PLATE (INT-INT-TV) WHITE	WP3743-WH
6-Port CAT6 Network Interface Module W/2 Keystone Openings	AC1013
12-Port CAT6 Network Interface Module	AC1015
28-Inch Enclosure, No Cover	EN2880
28-Inch Hinged Cover And Lock	EN2860
OnQ Legrand Unit Distribution for CAT-5e Bid	
NET APT 3 PORT PLATE (INT-TV) WHITE	WP3639-WH
NET APT 3 PORT PLATE (INT) WHITE	WP3605-WH
NET APT 3 PORT PLATE (INT-INT-TV) WHITE	WP3643-WH
6-Port CAT5E Network Interface Module W/2 Keystone Openings	AC1012
12-Port CAT5E Network Interface Module	AC1014
28-Inch Enclosure, No Cover	EN2880
28-Inch Hinged Cover And Lock	EN2860

GENERAL WIRING NOTES

1. All low-voltage wiring should be run at least one stud bay apart (12" minimum) from any parallel high-voltage wiring, and cross at right angles whenever necessary. Where there is insufficient clearance to meet that requirement, the cabling must be arranged to provide the maximum possible separation, over as much distance as possible (under no circumstance shall the lateral distance be less than 4" without supplemental shielding). The only exception is where cables cross at right angles, where a 2" minimum separation must be maintained. This may require coordination with the Electrical Contractor before the high-voltage wiring commences.

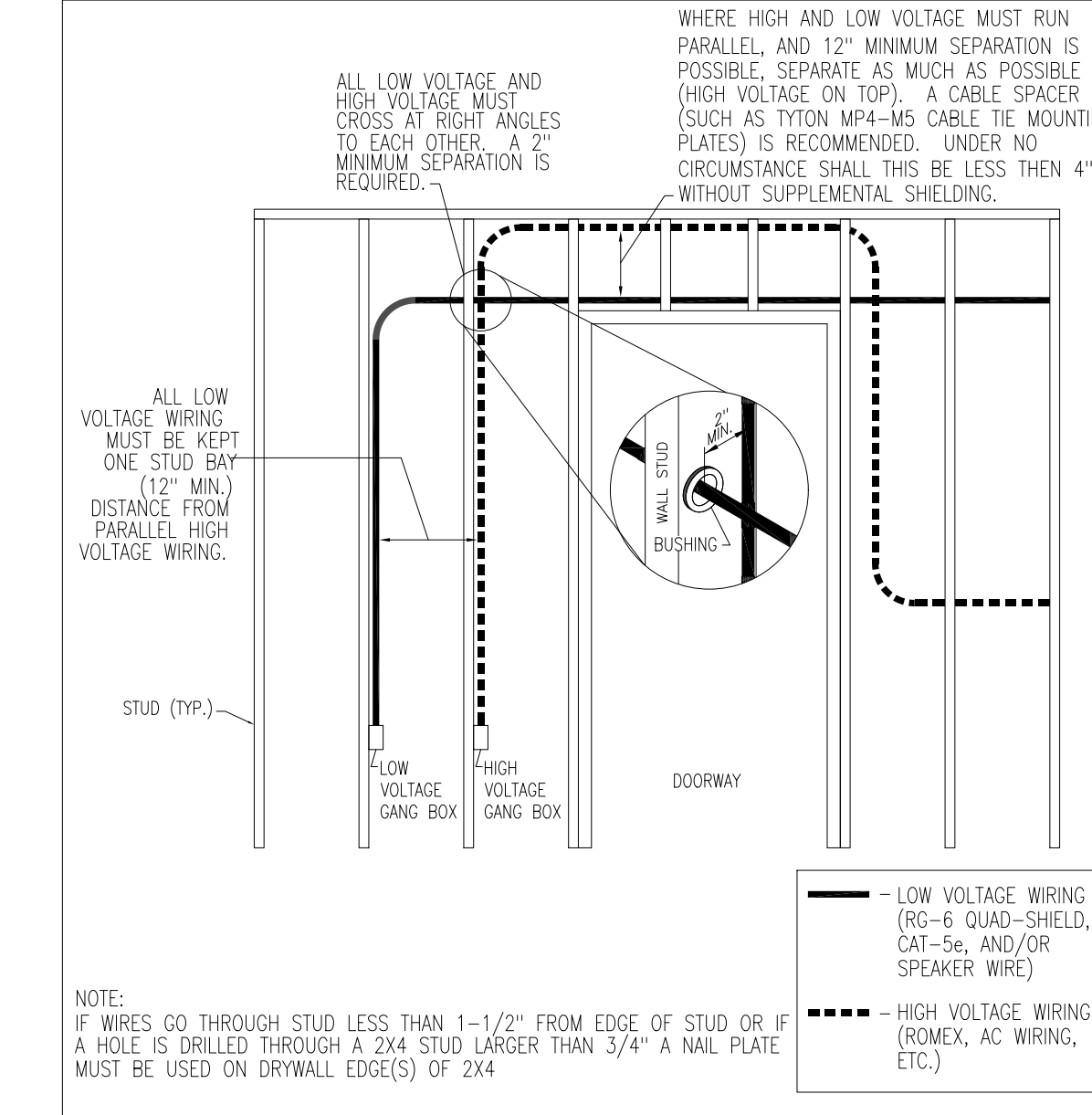
2. Protecting cabling from damage is the responsibility of the low-voltage installing contractor. All cabling must be run where it is unlikely to be damaged after installation. Nail plates should be installed where cabling passes through wall studs. Where steel framing is used, plastic bushings must be installed wherever cables pass through metal structural members. Cables must not touch any edges of metal framing.

3. All cabling must be properly supported and secured in a way that will not compress or deform the cables. All cable bends must maintain a minimum 3" bend radius.

4. Splicing or repair of cabling is not permitted. Damaged cable must be replaced in its entirety.

5. Any defective or damaged cabling, or any cable or cable installation that does not meet these specifications, must be replaced. This will be at the installation contractor's expense, unless it is the result of gross negligence by another trade, or unavoidable because of subsequent changes, structural modifications, etc.

6. The General Contractor shall be responsible for notifying the low-voltage installation contractor of any such cable damage.



MCR notes:

- All installation work shall meet applicable local, State and Federal codes.
- All fire stopping designs will be the responsibility of the site architect.
- All fire stopping as required by code and installation of the fire stopping designs of the site architect will be the responsibility of the installing contractor.
- All necessary low voltage permits and inspections shall be the responsibility of the installing contractor.
- All grounding shall conform to article 250 of NEC 2011 (if adopted by the authority having jurisdiction prior to permitting and/or the commencement of construction).
- All primary and secondary surge and isolation protection shall be the responsibility of the service provider.
- Carlton u69n 36" sweeps recommended.
- Conduits must be at least 24" below finish grade, 36" recommended.

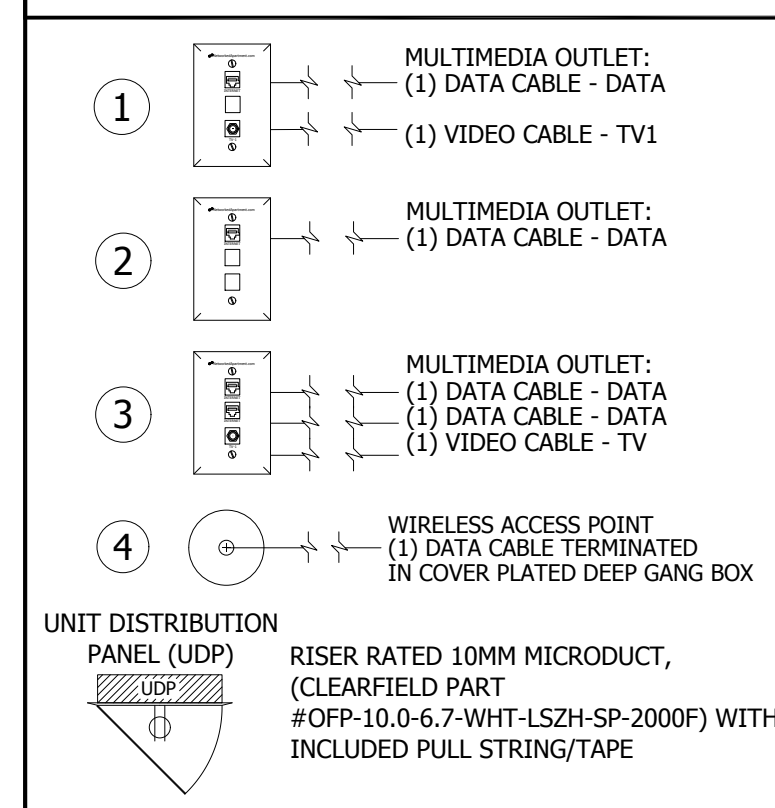
CONDUIT NOTES

- All conduits shall employ sweeps in lieu of bends. Sweeps must be 36" radius minimum.
- All underground conduits to be buried a minimum of 24" below finish grade. (36" is recommended)
- All cabling must be properly supported and secured in a way that will not compress or deform the cables. All cable bends must maintain a minimum 3" bend radius.
- All underground conduit ends, road crossings and sweeps shall be marked with electronic markers.
- 18" minimum, 24" average separate between low voltage and high voltage.
- Conduit runs should have no more than 270 degrees of bends between any two pull points. runs that exceed this should have appropriate pull boxes installed.
- Conduit runs exceeding 200 feet in length should have appropriate pull boxes installed.

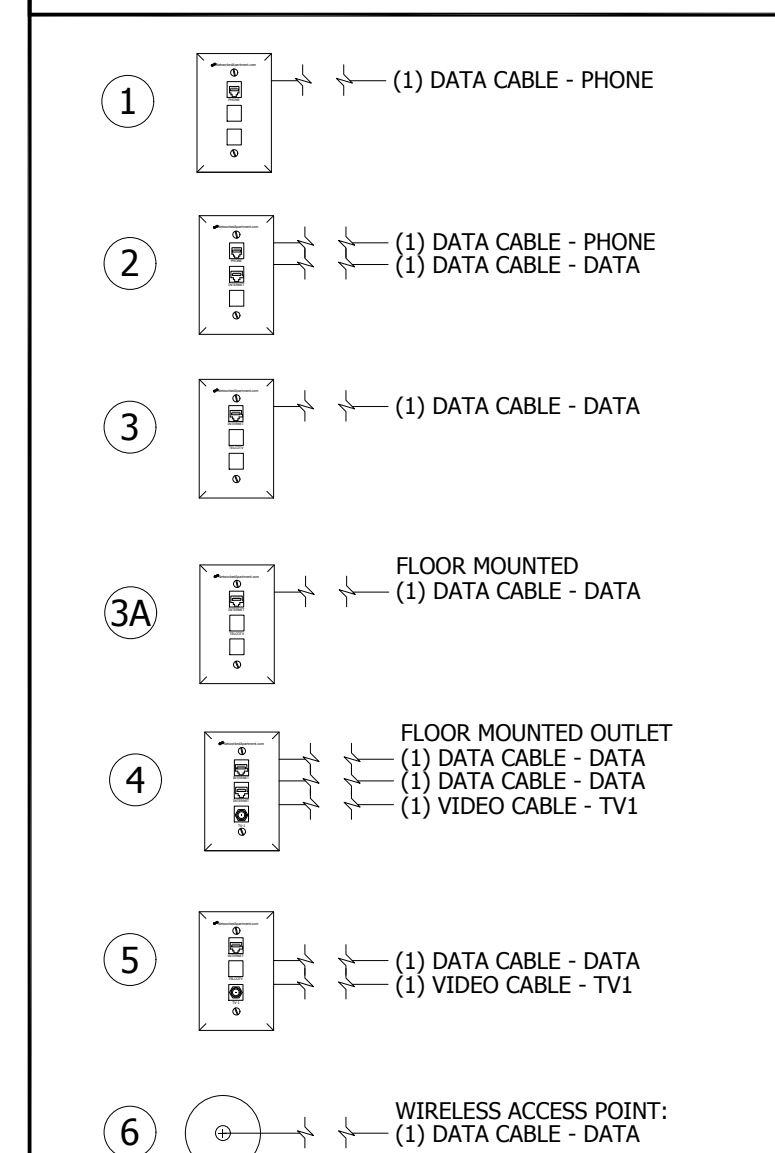
LOW-VOLTAGE DEVICES

LEGENDS

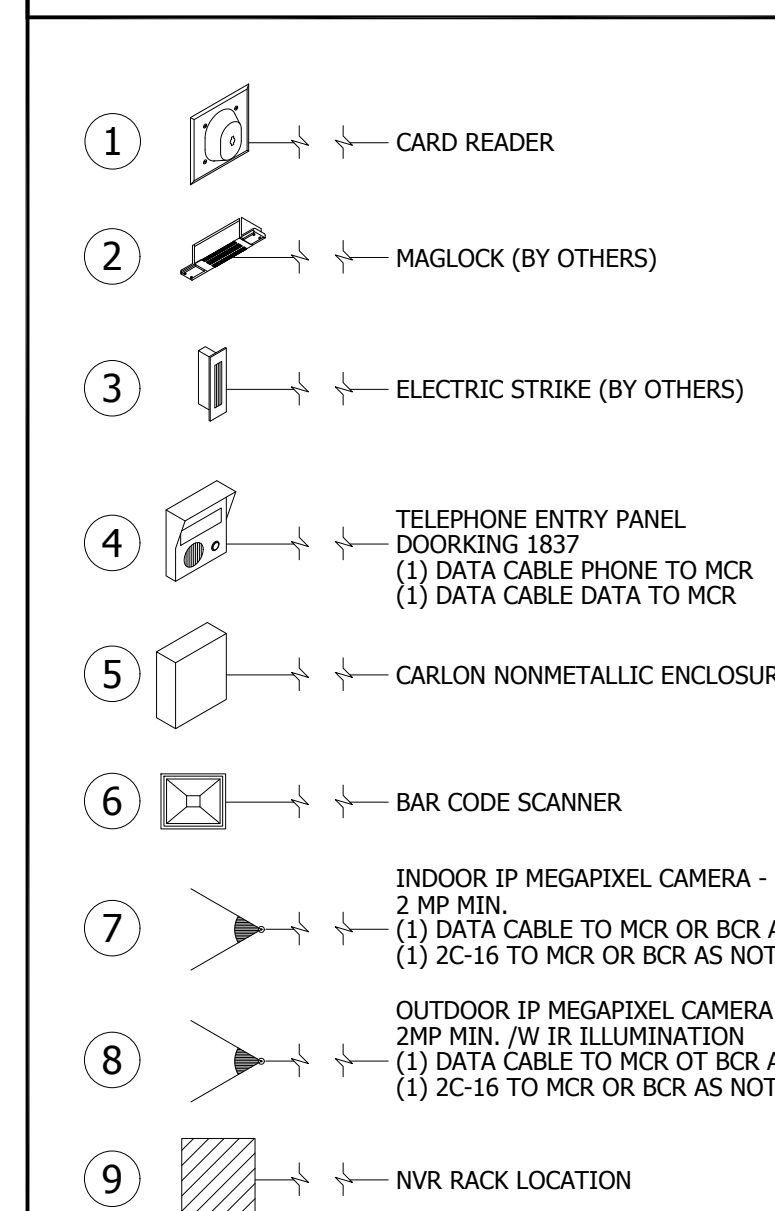
UNIT LEGEND



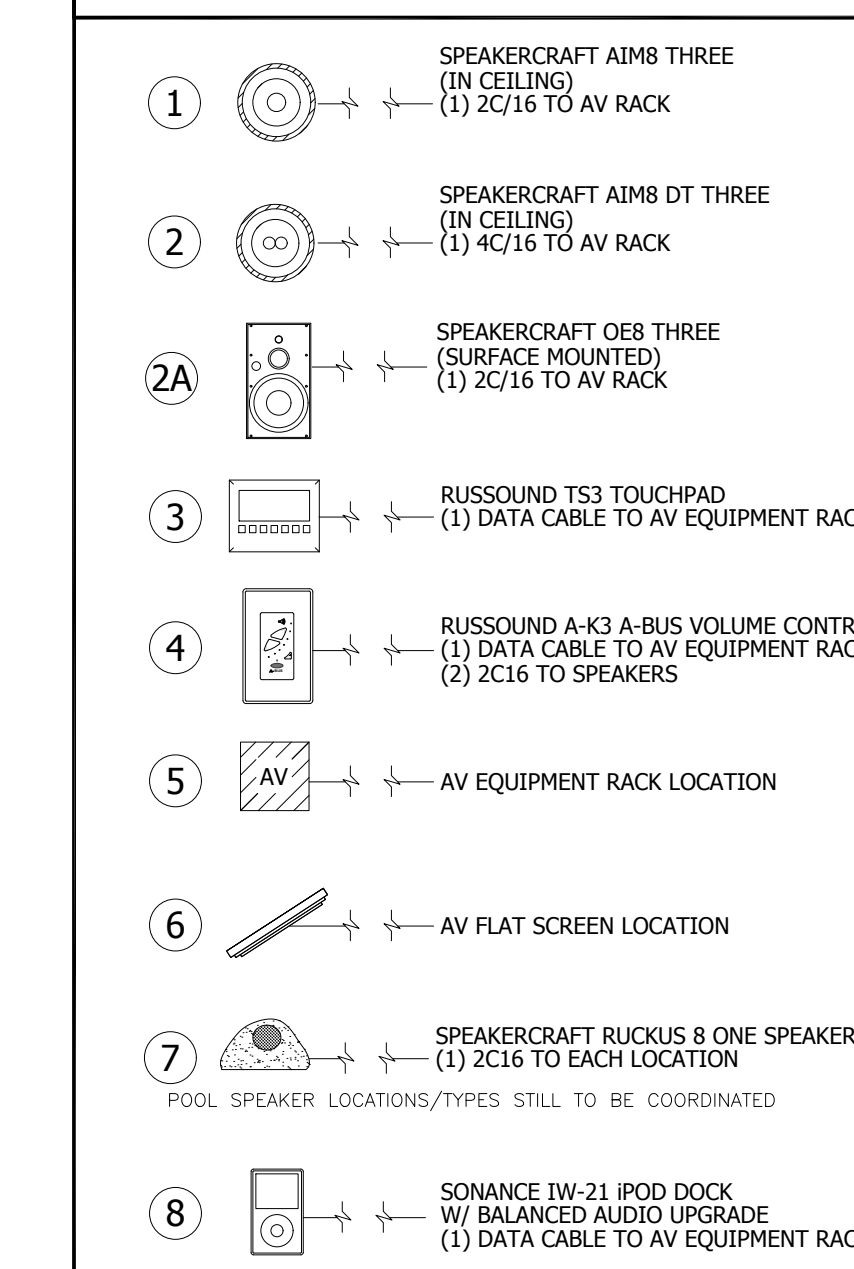
CABLED TO MCR



ACCESS CONTROL AND SURVEILLANCE VIDEO



A/V LEGEND



Drawing List

SHEET #	DESCRIPTION
T-000	LOW VOLTAGE NOTES AND LEGENDS
T-001	LOW VOLTAGE SITE PLAN
T-001 A	LOW VOLTAGE SITE PLAN
T-100	CLUBHOUSE LAYOUT
T-101	POOL LAYOUT
T-102	UNIT LAYOUTS
T-103	UNIT LAYOUTS
T-104	UNIT LAYOUTS
T-105	UNIT LAYOUTS
T-106	UNIT LAYOUTS
T-107	UNIT LAYOUTS
T-108	UNIT LAYOUTS
T-109	UNIT LAYOUTS
T-110	UNIT LAYOUTS
T-111	UNIT LAYOUTS
T-112	UNIT LAYOUTS
T-113	UNIT LAYOUTS
T-114	UNIT LAYOUTS
T-115	UNIT LAYOUTS
T-116	UNIT LAYOUTS
T-117	UNIT LAYOUTS
T-118	UNIT LAYOUTS
T-119	UNIT LAYOUTS
T-120	UNIT LAYOUTS
T-121	UNIT LAYOUTS
T-122	UNIT LAYOUTS
T-123	UNIT LAYOUTS
T-124	UNIT LAYOUTS
T-125	UNIT LAYOUTS
T-200	CLUB HOUSE ACC CTRL AND SEC CAMS
T-201	POOL AREA ACC CTRL AND SEC CAMS
T-300	CLUBHOUSE A/V
T-301	POOL AREA A/V
T-302	A/V DETAILS
T-400	MAIN COMMUNICATIONS ROOM LAYOUT
T-500	UNIT DETAILS
T-501	UNIT DETAILS



REVISIONS

NO.	DATE	DESCRIPTION
1	07/16/13	
2		
3		
4		
5		
6		

NetworkedApartment
FTTA Ready

LOW VOLTAGE
NOTES AND
LEGENDS

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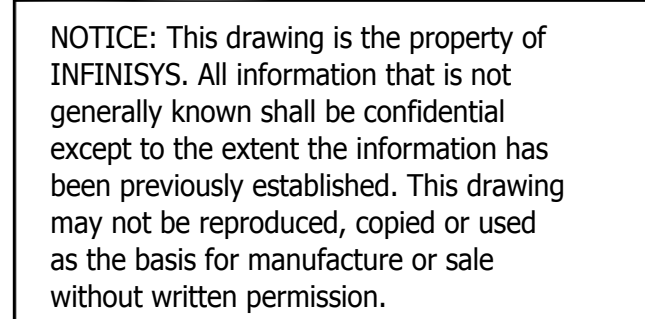
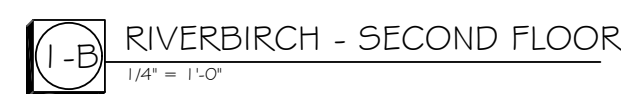
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DATE:	05/01/13
SCALE:	NTS
DRAWN:	VS
APPR:	TRS
JOB: CAPS. -	COTT. SAN MARCOS
QA:	

REV. LEVEL	DRAWING NO:
0	T-000

NetworkedApartmentTM
FTTA Ready

RIVERBIRCH UNIT LAYOUTS



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DATE:	05/20/13
SCALE:	AS NOTED
DRAWN:	MARICEL P.
APPR:	TRS
JOB: CAPS. - COTT. SAN MARCOS	
QA:	
REV. LEVEL	DRAWING NO:
0	T-116

REVISIONS

1	
2	
3	
4	
5	
6	

NetworkedApartmentTM
FTTA Ready

UNIT
DETAILS

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DATE: 05/20/13

SCALE: NTS

DRAWN: V.S.

APPR:

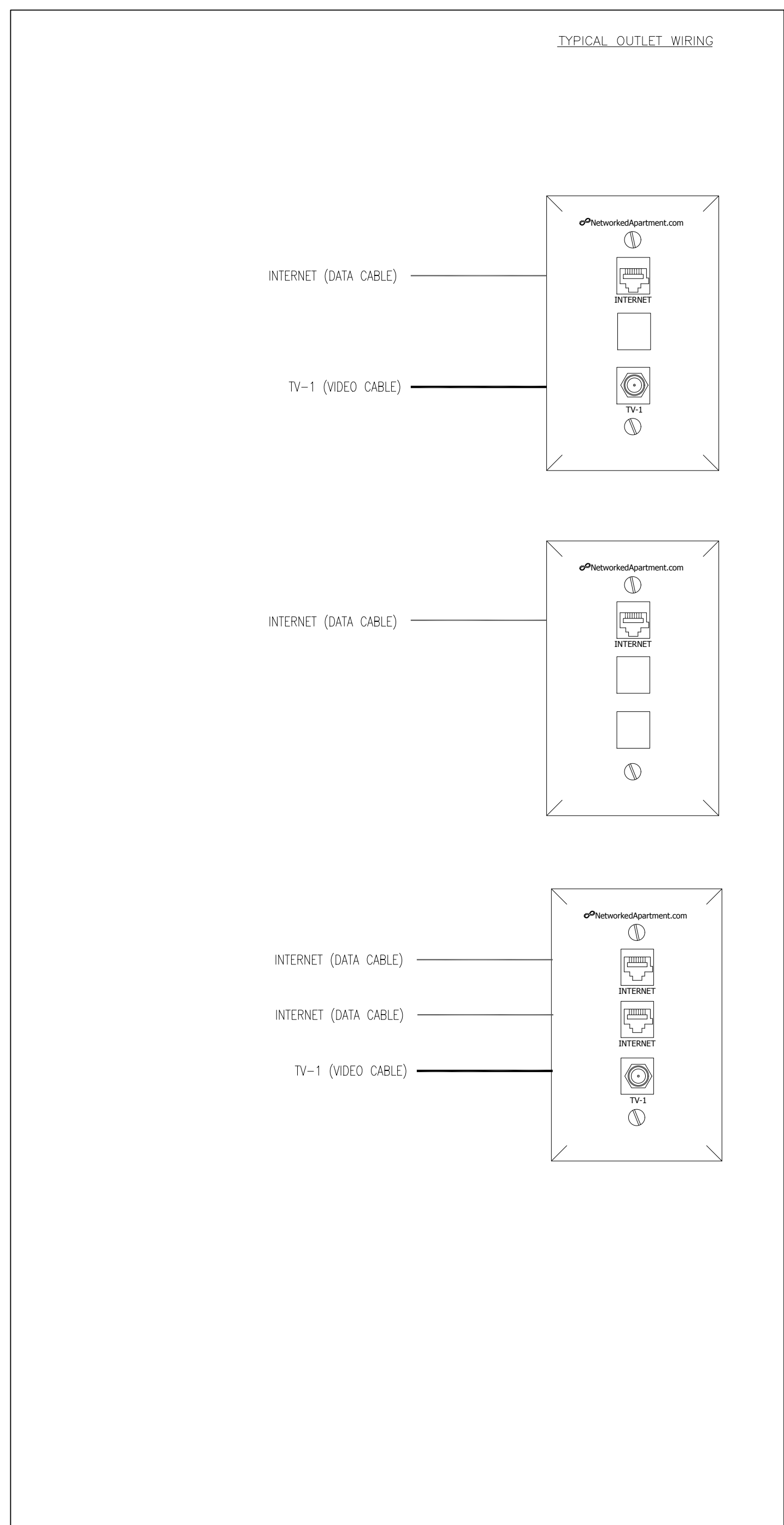
JOB: CAPS. - COTT. SAN MARCOS

QA:

REV.
LEVEL
0

DRAWING NO:
T-501

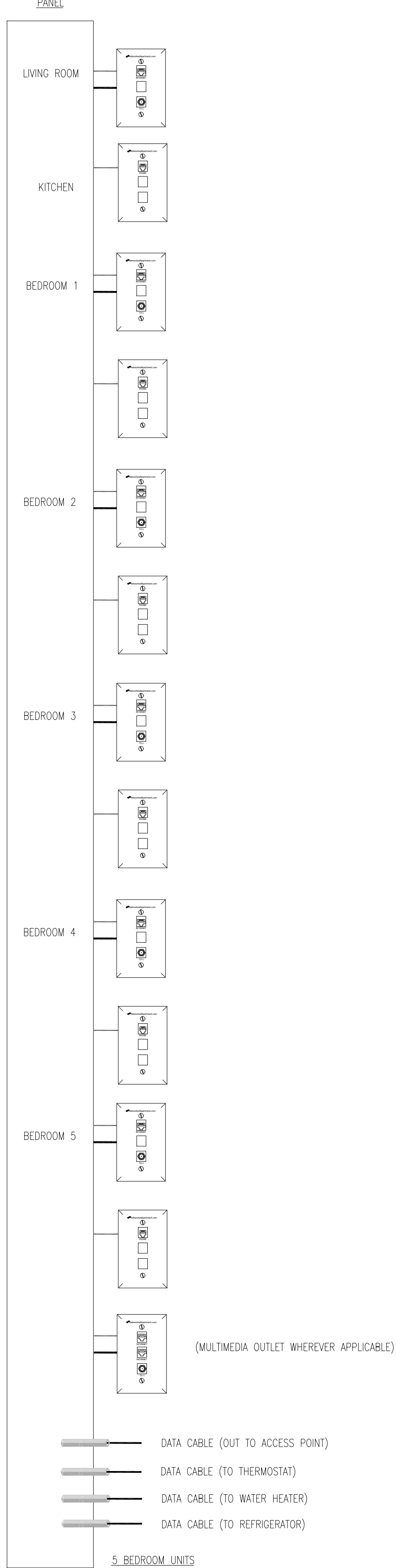
UNIT BLOCK DIAGRAM



TO M.C.R.

10 mm MICRODUCT

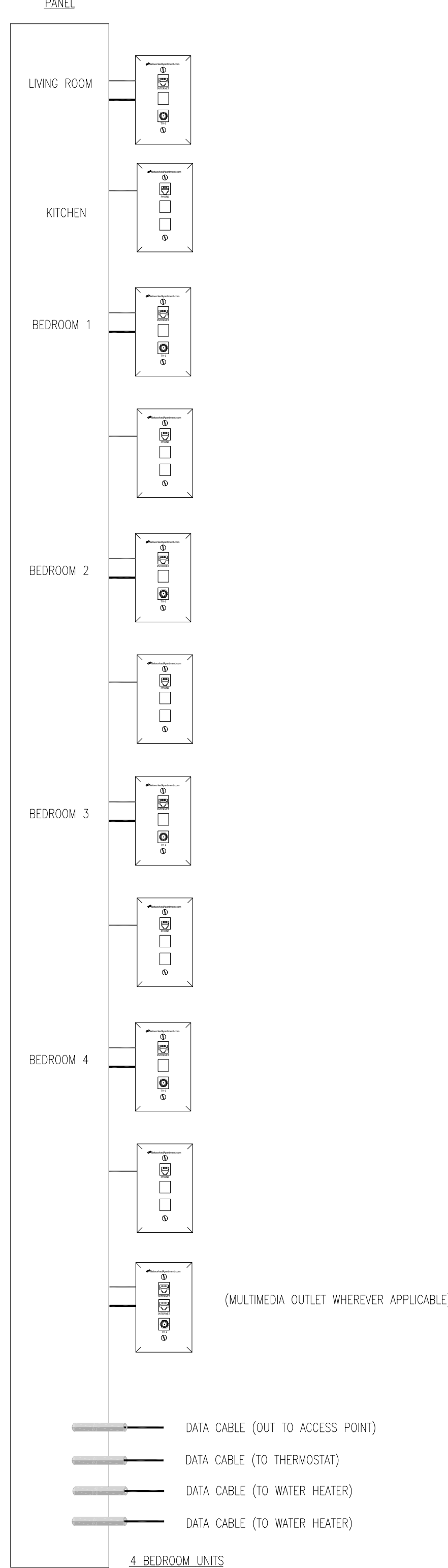
UNIT DISTRIBUTION
PANEL



TO M.C.R.

10 mm MICRODUCT

UNIT DISTRIBUTION
PANEL



TO M.C.R.

10 mm MICRODUCT

UNIT DISTRIBUTION
PANEL

