

The PETERS Residence

GENERAL NOTES

- THESE DRAWINGS AND COPIES THEREOF ARE LEGAL INSTRUMENTS OF THE DESIGNER AND ARE TO BE USED FOR THE CONSTRUCTION OF THE PROJECT ON THE DESIGNATED PROPERTY ONLY AND MAY NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY.
- ALL DIMENSIONS ARE TO THE OUTSIDE FACE OF STUDS. ALL EXTERIOR WALLS SHALL BE 2x6's AT 16" ON CENTER UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS SHALL BE 2x4's AT 16" ON CENTER UNLESS NOTED OTHERWISE.
- FIBER-CEMENT, FIBER-MAT REINFORCED CEMENTITIOUS BACKER UNITS, GLASS MAT GYPSUM BACKERS or FIBER-REINFORCED GYPSUM BACKERS SHALL BE INSTALLED IN ACCORDANCE w/ MFG'S RECOMMENDATIONS at ALL TUB and SHOWER AREAS and WALL PANELS in SHOWER AREAS per IRC R702.4.2.
- WATER RESISTANT GYPSUM BACKING BOARD SHALL NOT BE USED WHERE THERE WILL BE DIRECT EXPOSURE to WATER, or IN AREAS SUBJECT to CONTINUOUS HUMIDITY per IRC R702.3.8.1.
- PAINT ALL EXPOSED GALVANIZED METAL. DO NOT PAINT ALUMINIUM MATERIALS.
- PROVIDE TERMITE TREATMENT AT BUILDING AREA. APPLICATOR SHALL PROVIDE A MINIMUM FIVE YEAR GUARANTEE.
- BUILT-UP ROOFING SHALL BE A 20-YEAR BONDABLE 4-PLY FIBERGLASS ROOF w/ SHEET. CLASS "B" ROOF.
- ALL GLASS SHALL BE DUAL-GLAZED w/ BRONZE TINT UNLESS NOTED OTHERWISE. VERIFY COLOR OF FRAMES w/ OWNER PRIOR TO CONSTRUCTION AND INSTALLATION.
- EACH TRADE SHALL BE RESPONSIBLE FOR THE KNOWLEDGE OF THE RELATIVE INFORMATION CONTAINED IN THESE DOCUMENTS AND THE CONDITIONS UNDER WHICH HE OR SHE WILL BE EXPECTED TO PERFORM.
- THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL CAREFULLY AND THOROUGHLY EXAMINE THE PROJECT SITE, FIELD VERIFY ALL CONDITIONS, GRADES, ELEVATIONS AND DIMENSIONS OF THE VARIOUS FEATURES OF THE PROJECT SITE AND SHALL COMPARE THE DRAWINGS WITH EXISTING SITE CONDITIONS. DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE DESIGNER.
- THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL REVIEW AND THOROUGHLY EXAMINE AND FAMILIARIZE THEMSELVES WITH ALL THE ELEMENTS AND CONDITIONS IN THESE DRAWINGS AND SPECIFICATIONS. THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL VERIFY ALL DIMENSIONS ON THE DRAWINGS. ANY DISCREPANCIES AND/OR CONDITIONS NEEDING CLARIFICATION SHALL BE SUBMITTED TO THE DESIGNER FOR HIS RULING IN WRITING PRIOR TO BEGINNING WORK.
- ALL CONSTRUCTION, FABRICATION AND INSTALLATIONS SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF THE IRC, AND ANY FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND ORDINANCES OR THE GOVERNING AGENCY HAVING JURISDICTION OVER THE PROJECT, APPLICABLE CODES, ETC. ARE THOSE WHICH ARE IN EFFECT AT THE TIME THE PERMIT APPLICATION FOR THE PROJECT WAS REPORTED.
- EACH SUB-CONTRACTOR IS CONSIDERED A SPECIALIST IN HIS OR HER FIELD/TRADE AND SHALL (BEFORE SUBMISSION OF BID OF PERFORMANCE OF WORK) NOTIFY THE GENERAL CONTRACTOR AND THE DESIGNER IN WRITING OF SCOPE OF WORK CALLED OUT AS CONSTRUCTED, AS DESIGNED AND OR DETAILED.
- DUE TO REPROGRAPHIC PROCESSES THESE PLANS MAY NOT BE TO SCALE. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE FROM PLANS, SECTIONS, ELEVATIONS AND DETAILS.
- THE STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND FIRE SPRINKLER (IF APPLICABLE) ARE SUPPLEMENTAL TO THE ARCHITECTURAL DRAWINGS. SHOULD THERE BE ANY DISCREPANCIES BETWEEN THE VARIOUS DRAWINGS IT SHALL BE BROUGHT TO THE DESIGNER'S ATTENTION FOR CLARIFICATION.
- WHERE CONSTRUCTION DETAILS ARE NOT SHOWN OR NOTED FOR ANY PART OF THE WORK FOR THE TRADE INVOLVED, THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY, IN WRITING, OF ANY ALTERNATIVE NON-STANDARD OR UNTESTED METHODS PROPOSED.
- ALL EXISTING UTILITIES OR STRUCTURES ARE INDICATED ON THESE PLANS BASED ON INFORMATION OF RECORD. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS & ANY AND ALL DAMAGES WHICH OCCUR DUE TO HIS OR HER FAILURE TO LOCATE. CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.
- THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE ENFORCEMENT OF ALL REQUIREMENTS AND REGULATIONS AND SHALL PERFORM ALL WORK ON THIS PROJECT IN COMPLIANCE WITH THE STATE OF ARIZONA OCCUPATIONAL SAFETY AND HEALTH ACT.
- CONTRACTOR AND ALL SUB-CONTRACTORS SHALL GUARANTEE ALL WORK AGAINST FAULTY INSTALLATION AND/OR MATERIALS FOR A PERIOD OF NO LESS THAN ONE YEAR.
- ALL PARTIES USING THESE PLANS, PRINTS AND COPIES, ETC. REALIZE THAT THESE DOCUMENTS AND ANY & ALL SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND ARE & SHALL REMAIN AT ALL TIMES PROPERTY OF THE DESIGNER. NO REPRODUCTION IS PERMITTED, IN WHOLE AND PART BY ANY MEANS WHATSOEVER.
- ALL IDEAS, ARRANGEMENT AND DESIGNS ARE THE PROPERTY OF THE DESIGNER AND ARE PROTECTED BY COPYRIGHT LAWS OF THE UNITED STATES.
- ALL FINISH WORK IS TO BE PROTECTED FROM NEW CONSTRUCTION. DAMAGE CAUSED TO FINISH WORK BY ANY SUB-CONTRACTOR WILL BECOME THE RESPONSIBILITY OF THAT SUB-CONTRACTOR TO REPLACE AS SPECIFIED HERE-IN TO THE ACCEPTABLE STANDARDS OF THE DESIGNER AND THE ORIGINAL SUB-CONTRACTOR RESPONSIBLE FOR THE INITIAL WORK.
- ALL DOCUMENTS ARE TO BE CONSIDERED PRELIMINARY UNTILL THE ISSUANCE OF A BUILDING/CONSTRUCTION PERMIT. DESIGNER WILL NOT BE RESPONSIBLE FOR ANY DAMAGES STEMMING FROM THE IMPROPER USE OF PRELIMINARY DOCUMENTS INCLUDING SUCH USES AS BIDDING OR PREMATURE CONSTRUCTION.
- ALL FINISH TRADES ARE TO VERIFY CONDITION OF SURFACE TO BE ADEQUATE FOR INTENDED APPLICATION OR MAY BE MADE SUITABLE THROUGH SANDING OR FILLING AS DEEMED NECESSARY BY FINISH SUB-CONTRACTOR. SHOULD SURFACE NOT BE ADEQUATE, NOTIFY THE CONTRACTOR IN WRITING OR ASSUME ALL LIABILITY FOR FINISHING RESULTS.

ZONING INFORMATION

CURRENT ZONING: R-1

CODE TABLE

PLANS SHALL CONFORM WITH ALL CURRENT GOVERNING CODES (INCLUDING BUT NOT LIMITED TO) -

- 2018 INTERNATIONAL BUILDING CODE
- 2018 INTERNATIONAL MECHANICAL CODE
- 2018 INTERNATIONAL PLUMBING CODE
- 2018 INTERNATIONAL FUEL GAS CODE
- 2018 INTERNATIONAL FIRE CODE
- 2018 INTERNATIONAL ENERGY CONSERVATION CODE
- 2017 NATIONAL ELECTRIC CODE
- 2010 ADA STANDARDS for ACCESSIBLE DESIGN
- 2006 NFPA 101 LIFE SAFETY CODE

PROJECT TEAM

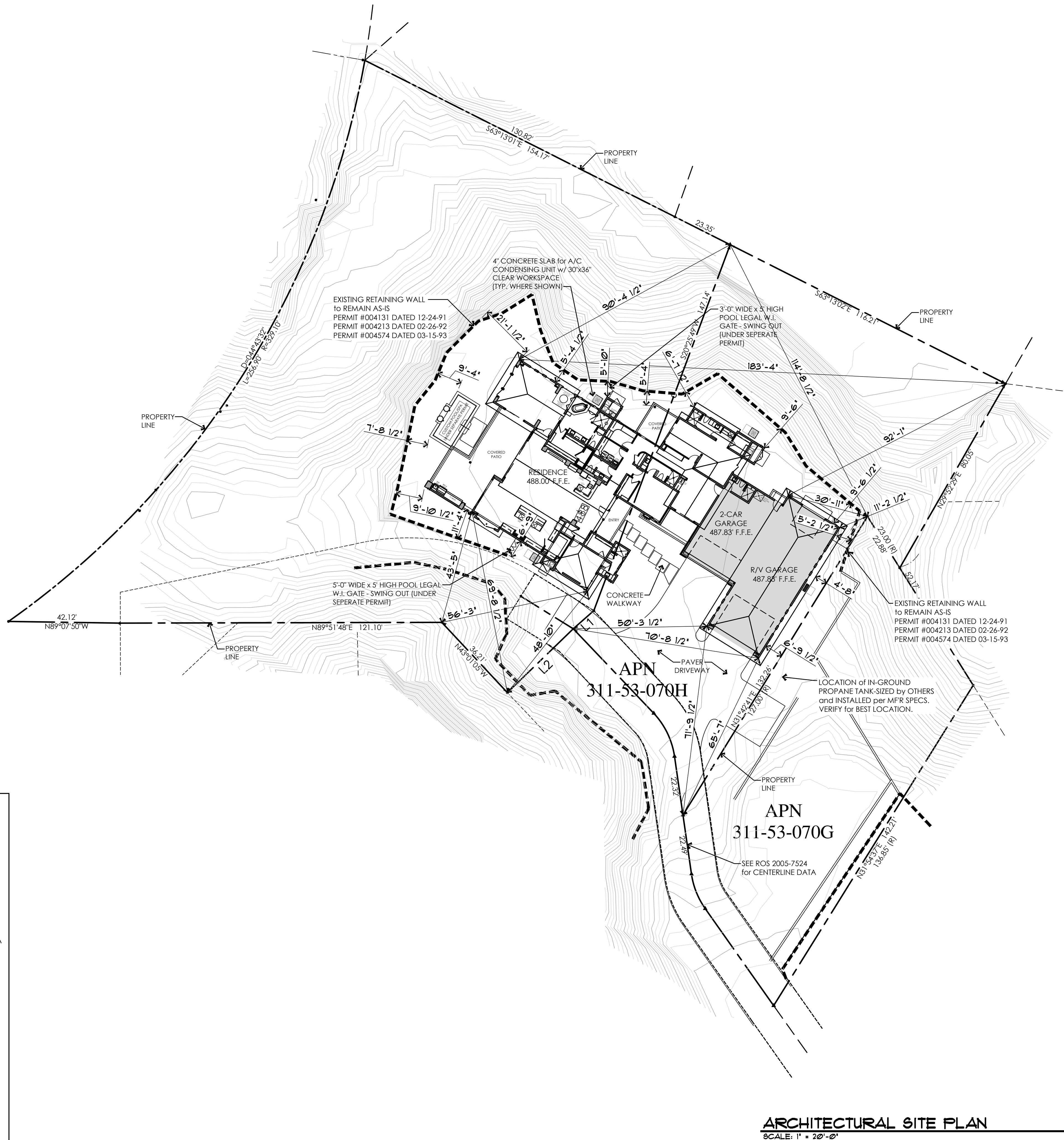
DESIGNER:
ZETTEL GROUP, INC.,
1915 McCULLOCH BLVD NORTH
SUITE 100
LAKE HAVASU CITY, AZ 86403
PH - (928) 453-3910
FAX - (928) 680-5559

STRUCTURAL ENGINEER:
LEI ENGINEERS, SURVEYORS and
PLANNERS
3302 N. MAIN STREET
SPANISH FORK, UT 84660
PH - (801) 798-0555
FAX - (801) 798-9393
office@lei-eng.com

ALL SEDIMENT and EROSION
CONTROL DEVICES SHALL
BE IN PLACE PRIOR TO
CONSTRUCTION.

NOTES:

- ENTIRE STRUCTURE, EXCEPT ROOF OVERHANG, IS TO BE LOCATED WITHIN THE BUILDING ENVELOPE (BE).
- VERIFY FOR LOCATION OF ALL ON-SITE UTILITIES INCLUDING SEWER & NATURAL GAS and CONNECT TO SAME.
- COMPACTION TESTS SHALL BE PERFORMED BY A LICENSED SURVEY COMPANY. SITE RETENTION SHALL BE A 2:1 MAXIMUM SLOPE AWAY FROM THE STRUCTURE.
- ELECTRICAL METER LOCATION SHALL BE VERIFIED BY LOCAL UTILITY COMPANY.
- ZONING & BUILDING SETBACKS SHALL BE VERIFIED WITH THE LOCAL PLANNING and ZONING DEPARTMENTS.
- ALL PERIMETER WALLS, POOLS, OUT BUILDINGS, RETAINING WALLS, ETC. SHALL BE CONSTRUCTED UNDER SEPARATE PERMIT.



SHEET INDEX

- | | |
|------|--|
| A1.1 | ARCHITECTURAL SITE PLAN, GENERAL NOTES, CODE INFORMATION and SHEET INDEX |
| A2.1 | FLOOR PLAN |
| A3.1 | ENLARGED FLOOR PLANS and INTERIOR ELEVATIONS |
| A3.2 | ENLARGED FLOOR PLANS and INTERIOR ELEVATIONS |
| A3.3 | DOOR DETAILS and NOTES |
| A3.4 | WINDOW DETAILS and NOTES |
| A4.1 | EXTERIOR ELEVATIONS |
| A4.2 | EXTERIOR ELEVATIONS |
| A5.1 | REFLECTED CEILING PLAN |
| A6.1 | ELECTRICAL PLAN |
| A6.2 | GENERAL MECHANICAL, ELECTRICAL and PLUMBING NOTES |
| A7.1 | ROOF DRAINAGE PLANS |
| A8.1 | PLUMBING FIXTURE LOCATION PLAN |
| S0.0 | GENERAL STRUCTURAL NOTES |
| S1.1 | FOUNDATION PLAN |
| S1.2 | FOUNDATION DETAILS |
| S1.3 | FOUNDATION DETAILS |
| S2.1 | ROOF FRAMING PLAN |
| S2.2 | FRAMING DETAILS |
| S2.3 | FRAMING DETAILS |
| S2.4 | FRAMING DETAILS |
| S2.5 | STRUCTURAL NOTES and SCHEDULES |
| S3.1 | SHEAR WALL PLAN |
| S4.1 | BUILDING SECTIONS |
| S4.2 | BUILDING SECTIONS |
| S4.3 | BUILDING SECTIONS |
| S4.4 | FRAMING DETAILS |
| M1.1 | MECHANICAL FLOOR PLAN |
| M2.1 | MECHANICAL SCHEDULES |
| E1.1 | ONE-LINE DIAGRAM and LOAD CALCULATIONS |
| P1.1 | PLUMBING FLOOR PLAN |
| P2.1 | PLUMBING SCHEMATICS |
| P3.1 | PLUMBING SPECIFICATIONS |

CONTRACTOR:

PROJECT:

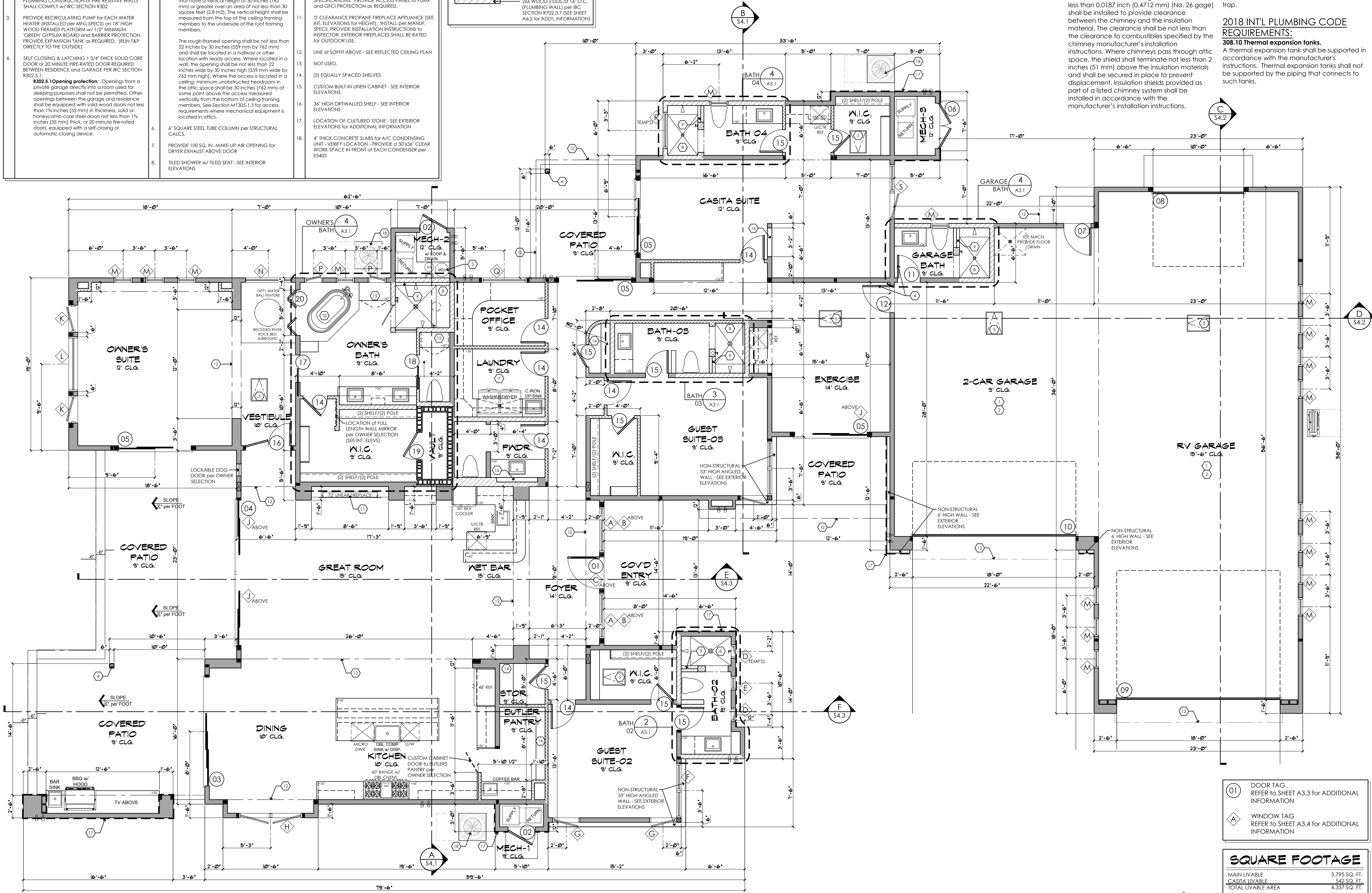
The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THE PLAN TO AVOID ERRORS, THE DESIGNER ASSUMES NO LIABILITY FOR ANY ERRORS OR OMISSIONS. THE DESIGNER SHALL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THE DESIGNER SHALL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THE DESIGNER SHALL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS.	
REVISIONS:	
△	
△	
△	
△	
SCALE: 3/32" = 1'-0"	JOB #: 2024-05
DRAWN: S.L.Z./S.L.Z.	CHECKED: S.L.Z.
DATE: 21 MARCH 2025	
SHEET	
A1.1	
© COPYRIGHT 2022	

- NOTE:
- STRUCTURAL ELEMENTS OF THE FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL BUILDING CODE and ALL CURRENT GOVERNING CODES.
 - ARCHITECTURAL ELEMENTS OF THE FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

KEYNOTE LEGEND			
NOT ALL KEYNOTES USED ON THIS LEVEL			
1. GARAGE CEILING, WALLS, and ALL STRUCTURAL MEMBERS SHALL HAVE 5/8" TYPE 'X' GYPSUM BOARD (TYPICAL)	5. 22"x30" ATTIC ACCESS PER IRC R807 w/ (2) LAYERS OF TYPE 'X' GYP. BOARD R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches (762 mm) or greater over an area of not less than 30 square feet (2.8 m ²). The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members. The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other location with ready access. Where located in a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.	9. 3x4" HIGH WOOD FRAMED TILED WALL at SHOWER - SEE INTERIOR ELEVATIONS	11. 0" CLEARANCE PROPANE FIREPLACE APPLIANCE (SEE INT. ELEVATIONS for HEIGHT). INSTALL per MANUF. SPECS. PROVIDE INSTALLATION INSTRUCTIONS to INSPECTOR. EXTERIOR FIREPLACES SHALL BE RATED for OUTDOOR USE.
2. PENETRATION BY MECHANICAL, ELECTRICAL, and PLUMBING CONSTRUCTION OF FIRE RESISTIVE WALLS SHALL COMPLY w/ IRC SECTION R302	6. 6" SQUARE STEEL TUBE COLUMN per STRUCTURAL CALCS.	12. LINE of SOFTIT ABOVE - SEE REFLECTED CEILING PLAN	12. NOT USED.
3. PROVIDE RECIRCULATING PUMP for EACH WATER HEATER (INSTALLED per MFG SPECS) on 18" HIGH WOOD FRAMED PLATFORM w/ 1/2" MINIMUM "GREEN" GYPSUM BOARD and BARRIER PROTECTION. PROVIDE EXPANSION TANK as REQUIRED. (RUN T&P DIRECTLY TO THE OUTSIDE)	7. PROVIDE 100 SQ. IN. MAKE-UP AIR OPENING for DRYER EXHAUST ABOVE DOOR	13. (5) EQUALLY SPACED SHELVES	14. CUSTOM BUILT-IN LINEN CABINET - SEE INTERIOR ELEVATIONS
4. SELF CLOSING & LATCHING 1 3/4" THICK SOLID CORE DOOR or 20 MINUTE FIRE-RATED DOOR REQUIRED BETWEEN RESIDENCE and GARAGE PER IRC SECTION R302.5.1. R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/4 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 1/4 inches (35 mm) thick, or 20-minute fire-rated doors, equipped with a self-closing or automatic-closing device.	8. TILED SHOWER w/ TILED SEAT - SEE INTERIOR ELEVATIONS	15. 3x4" HIGH DRYWALLED SHELF - SEE INTERIOR ELEVATIONS	16. LOCATION of CULTURED STONE - SEE EXTERIOR ELEVATIONS for ADDITIONAL INFORMATION
		17. 4" THICK CONCRETE SLABS for A/C CONDENSING UNIT - VERIFY LOCATION - PROVIDE a 30"x36" CLEAR WORK SPACE in FRONT of EACH CONDENSER per E3405	

WALL LEGEND	
	2x6 WOOD STUDS - SPACING per STRUCTL. CALCS.
	2x4 WOOD STUDS at 16" O.C.
	2x6 WOOD STUDS at 16" O.C. (PLUMBING WALL) per IRC SECTION R702.3.7 (SEE SHEET A6.2 for ADD'L INFORMATION)



2018 INT'L RESIDENTIAL CODE REQUIREMENTS:
R1005.8 Insulation shield.
Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L MECHANICAL CODE REQUIREMENTS:
307.2.4.1 Ductless mini-split system traps.
Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain line, or a trap.

2018 INT'L PLUMBING CODE REQUIREMENTS:
308.10 Thermal expansion tanks.
A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

zettel group inc.
CUSTOM DESIGN AND PLANNING
Post Office Box 157
Lake Havasu City, AZ 86405-0157
Ph (928) 453-3910
www.zettelgroup.com

CONTRACTOR:

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. ■ DO NOT SCALE DRAWINGS ■ NOTIFY DESIGNERS IMMEDIATELY PRIOR TO PROCEEDING WITH WORK SHOULD ANY DISCREPANCIES OCCUR. DESIGNERS ASSUME NO RESPONSIBILITY OF WORK IN PLACE

REVISIONS:

△	
△	
△	
△	

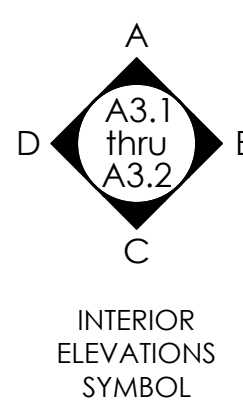
SCALE: 1/4" = 1'-0"
DRAWN: S.L.Z./S.L.Z.
DATE: 21 MARCH 2025
SHEET

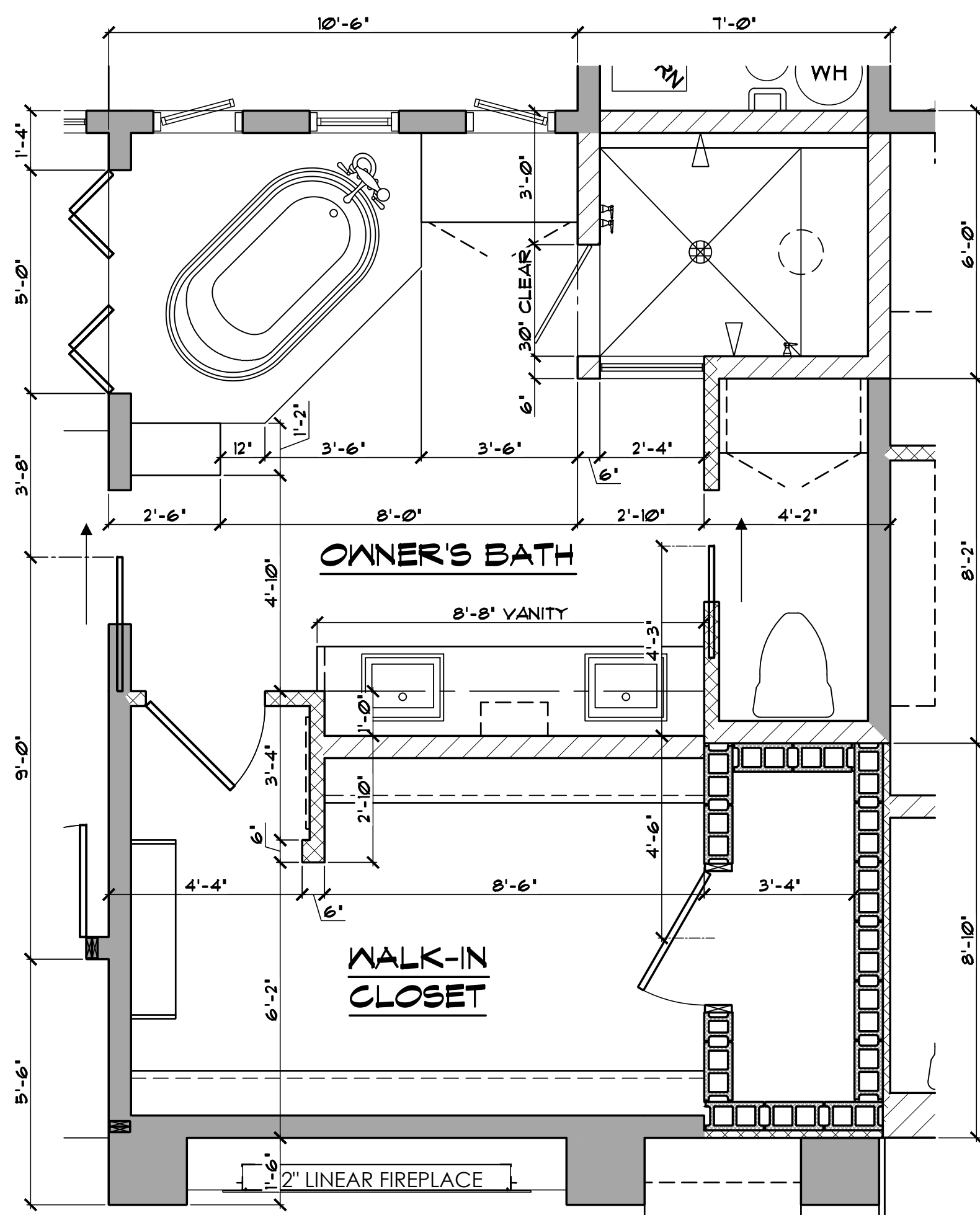
JOB #: 2024-05
CHECKED: S.L.Z.
A2.1

© COPYRIGHT 2025

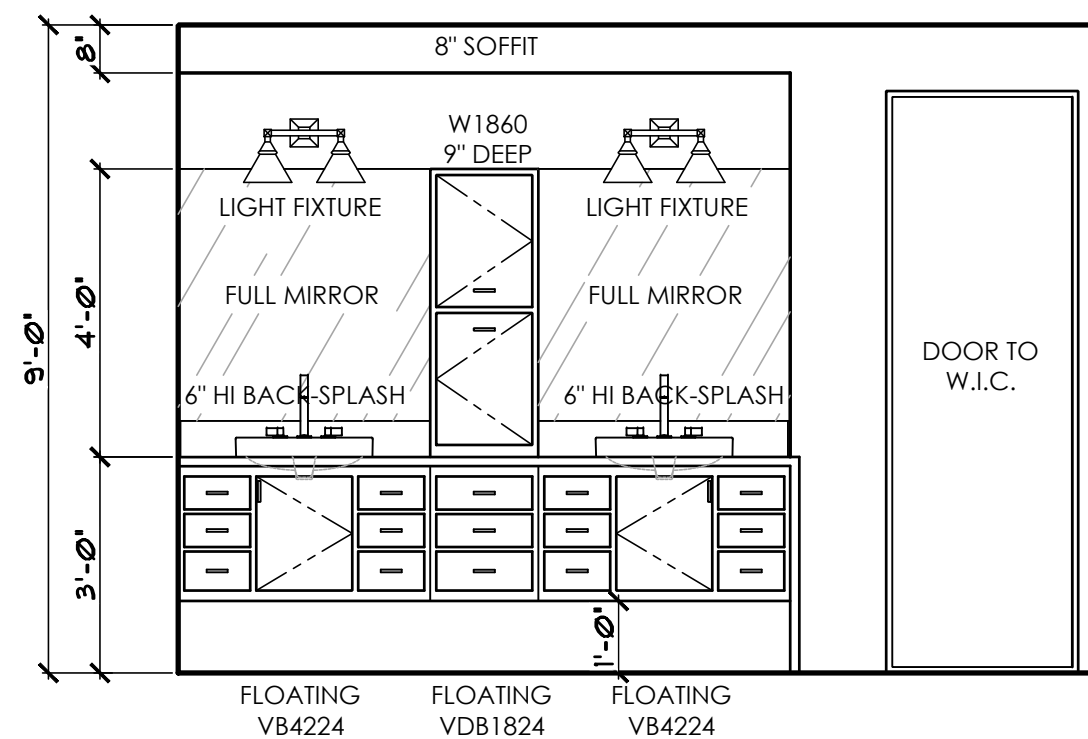
DOOR TAG	
01	REFER to SHEET A3.3 for ADDITIONAL INFORMATION
WINDOW TAG	
A	REFER to SHEET A3.4 for ADDITIONAL INFORMATION
SQUARE FOOTAGE	
MAIN LIVABLE	3,795 SQ. FT.
CASITA LIVABLE	542 SQ. FT.
TOTAL LIVABLE AREA	4,337 SQ. FT.
GARAGE	2,069 SQ. FT.
COVERED ENTRY	104 SQ. FT.
COVERED PATIOS	862 SQ. FT.
MECH. ROOMS	86 SQ. FT.
TOTAL UNDER ROOF	7,458 SQ. FT.
NOTE: ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.	

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

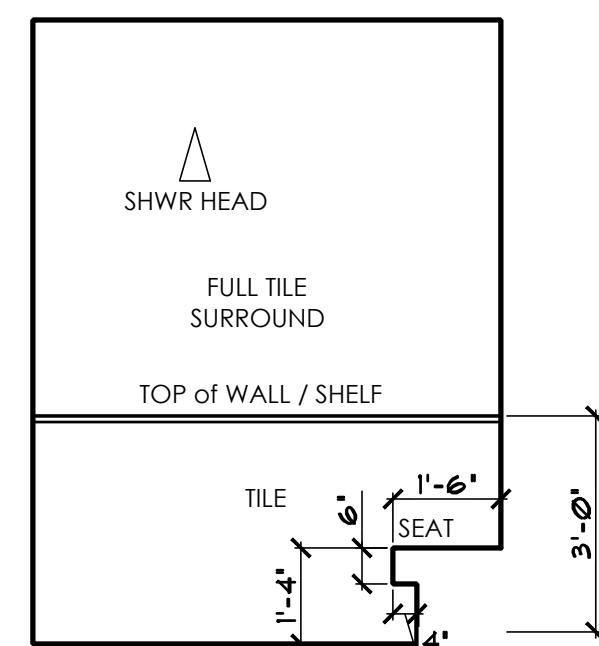




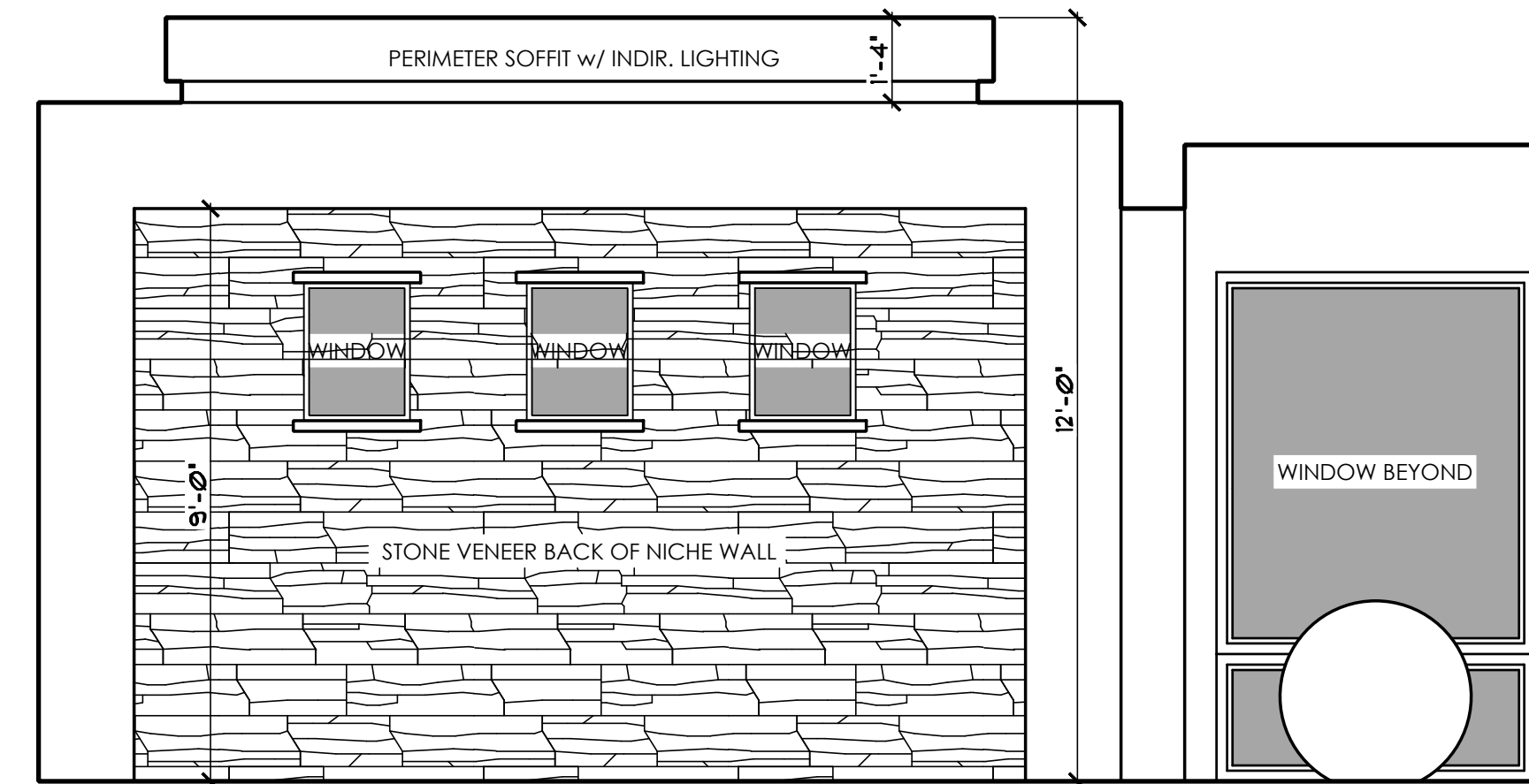
1 ENLARGED FLOOR PLAN - OWNER'S BATH
SCALE: 3/8" = 1'-0"



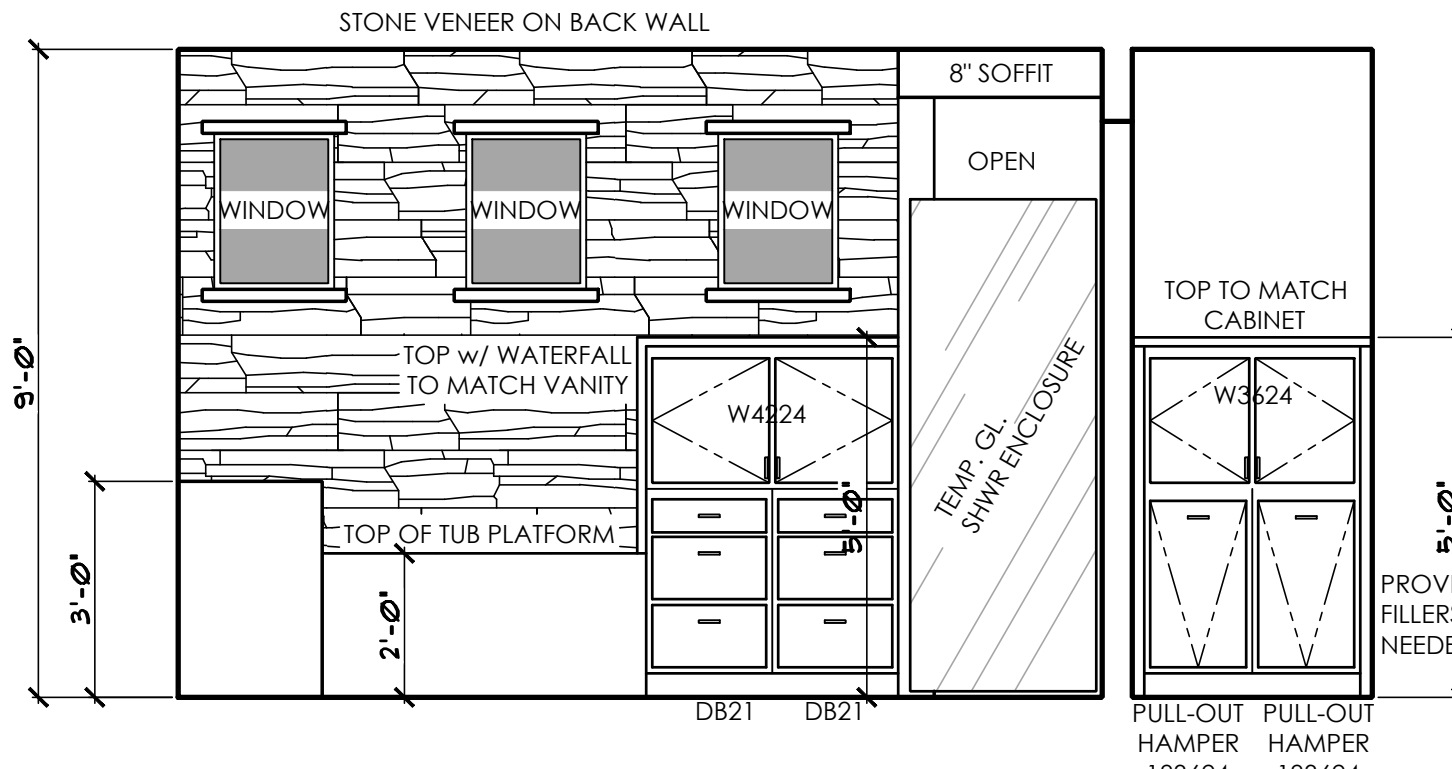
C OWNER'S BATH VANITY



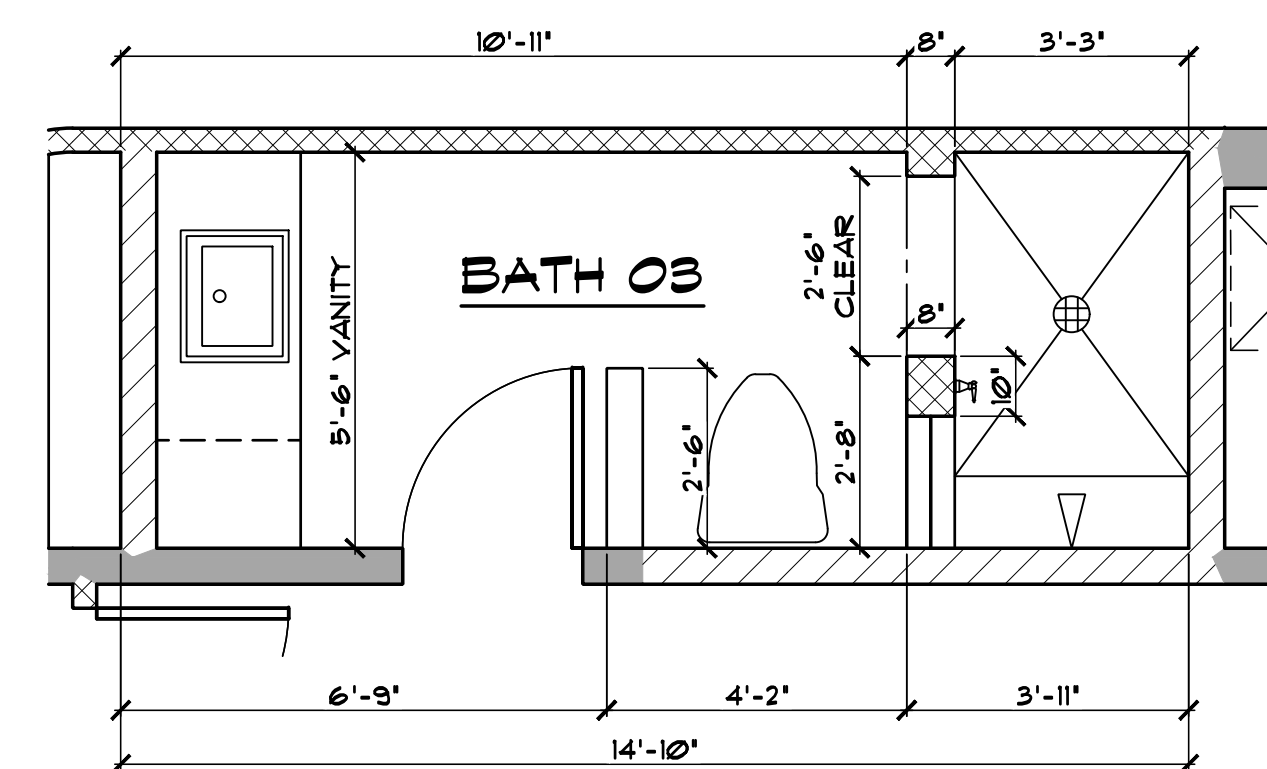
A OWNER'S BATH SHWR



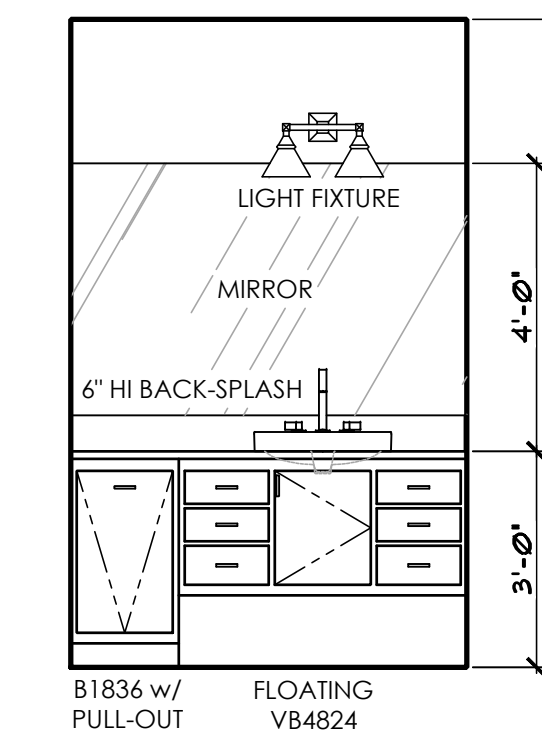
A OWNER'S SUITE



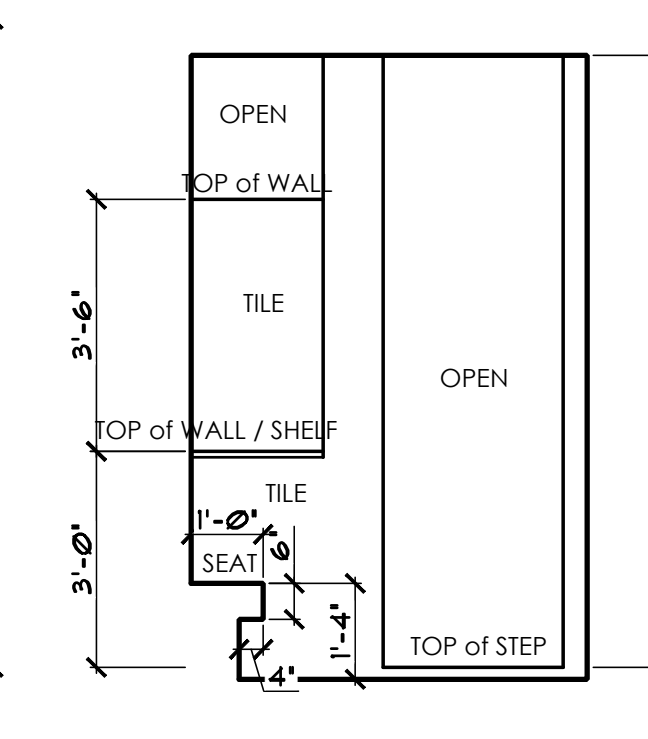
A OWNER'S BATH TUB / SHWR / TOILET LINEN



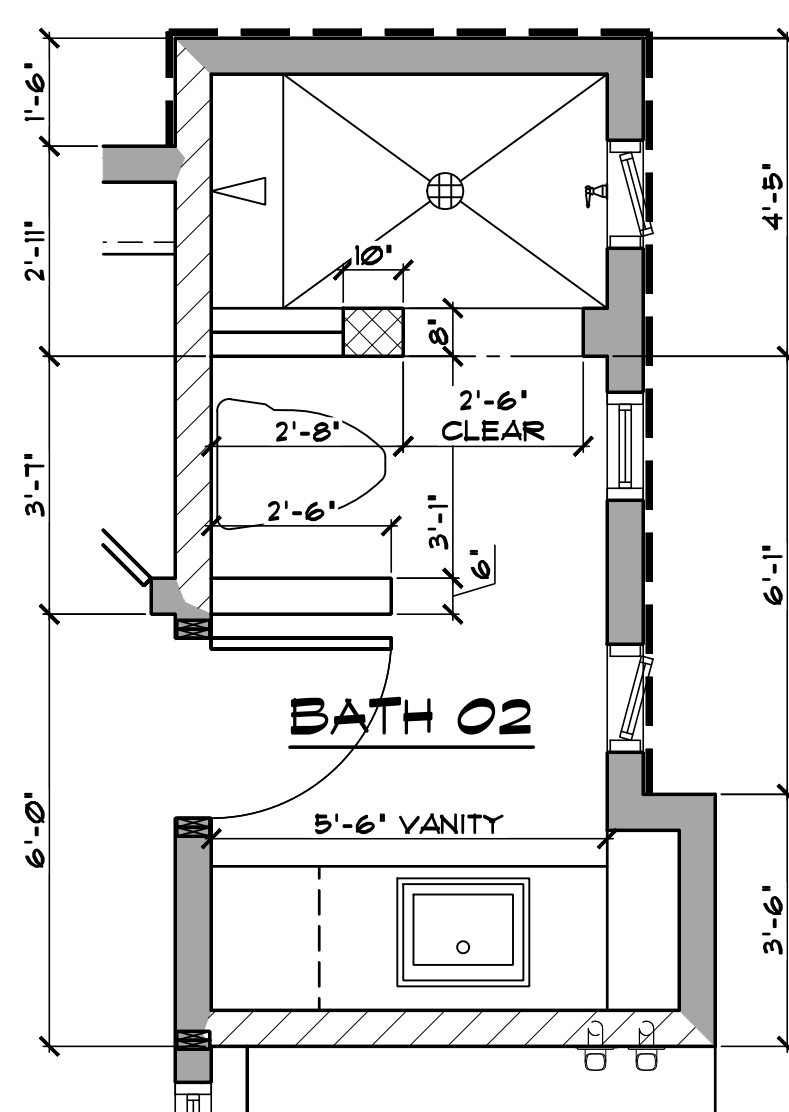
3 ENLARGED FLOOR PLAN - BATH 03
SCALE: 3/8" = 1'-0"



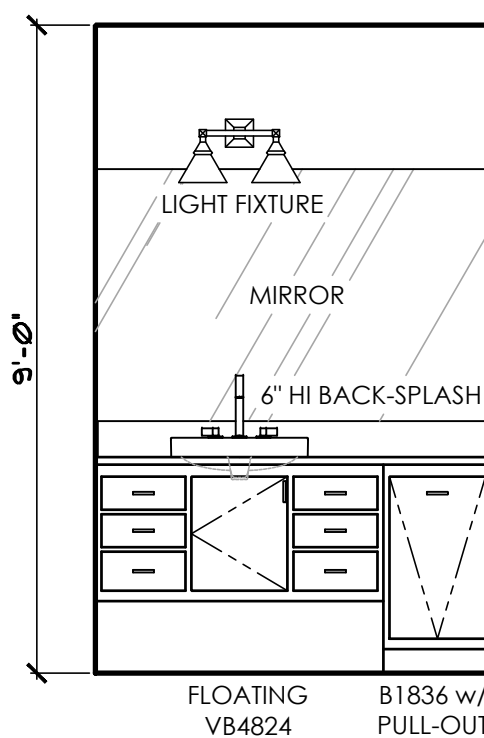
D BATH 03



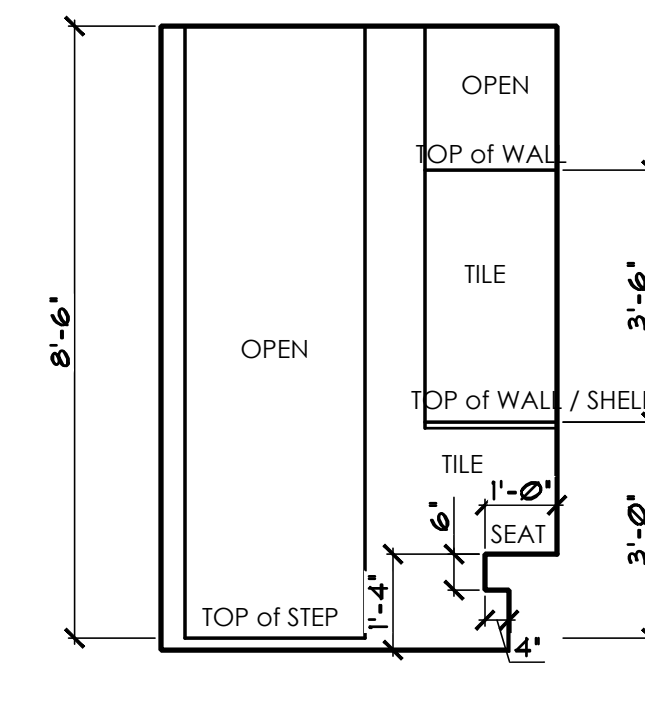
D BATH 03 SHOWER



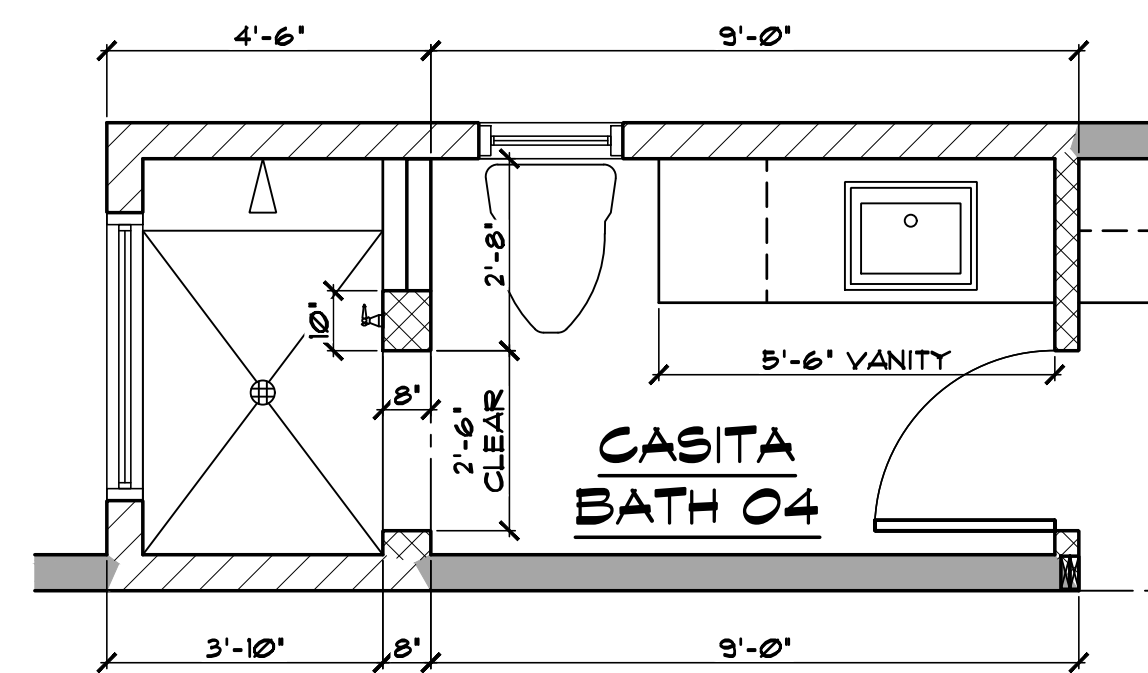
2 ENLARGED FLOOR PLAN - BATH 02
SCALE: 3/8" = 1'-0"



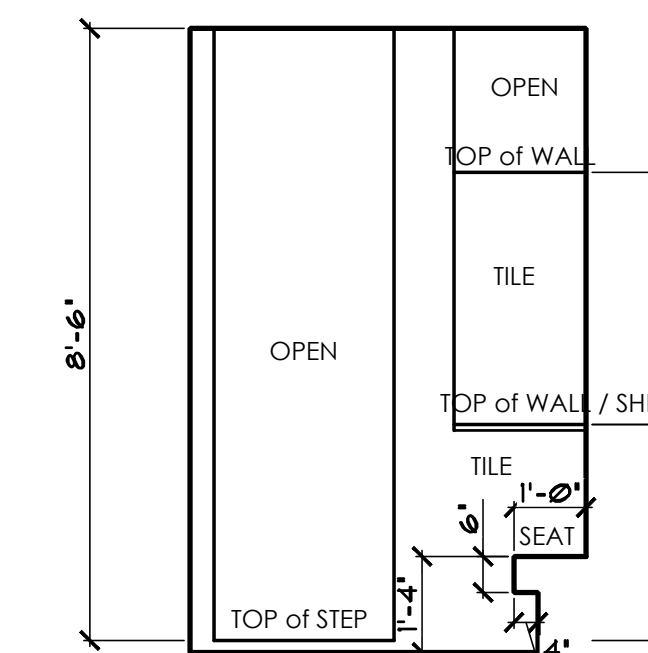
C BATH 02



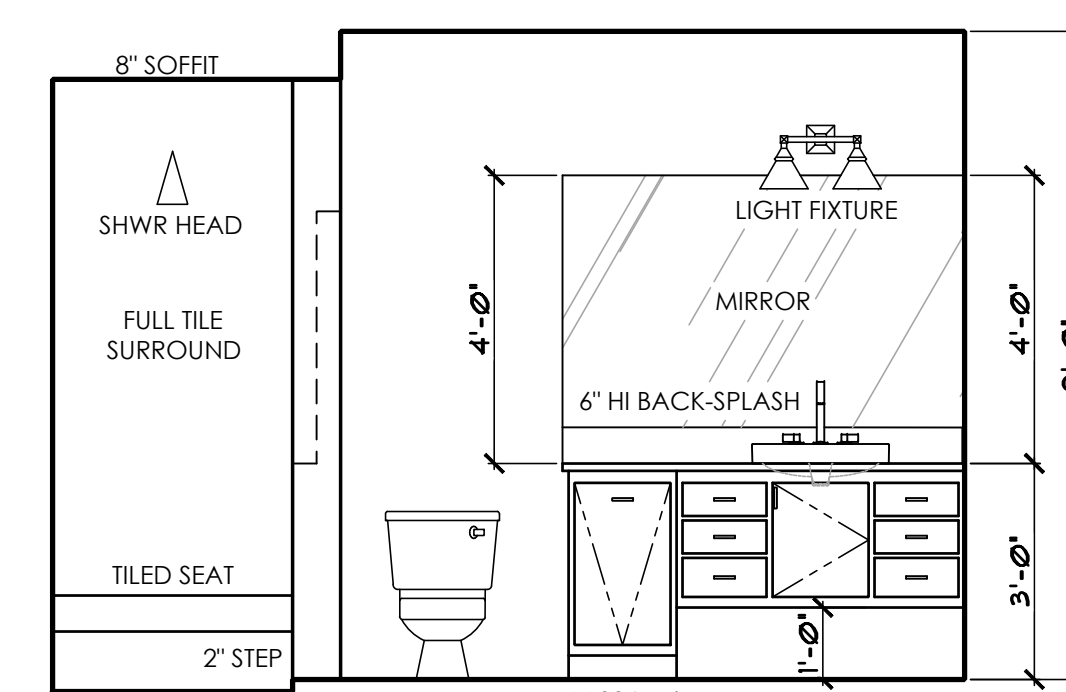
C BATH 02 SHOWER



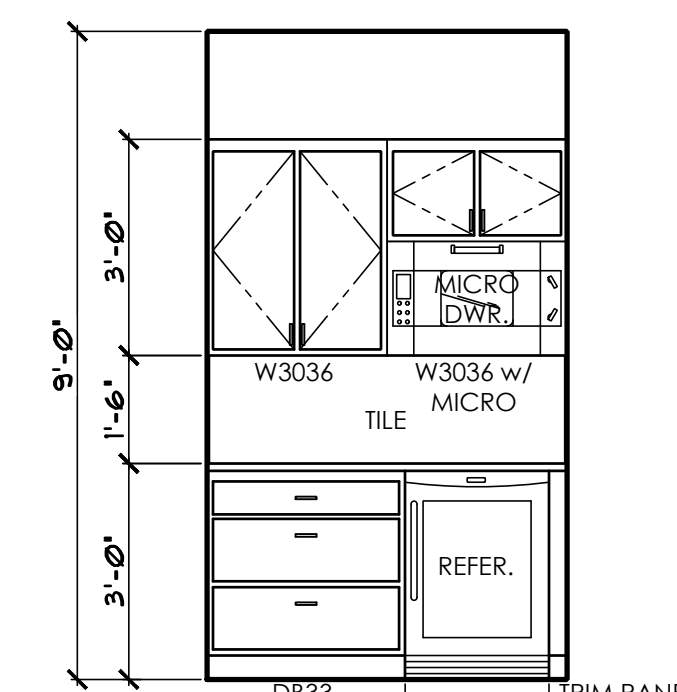
4 ENLARGED FLOOR PLAN - CASITA BATH 04
SCALE: 3/8" = 1'-0"



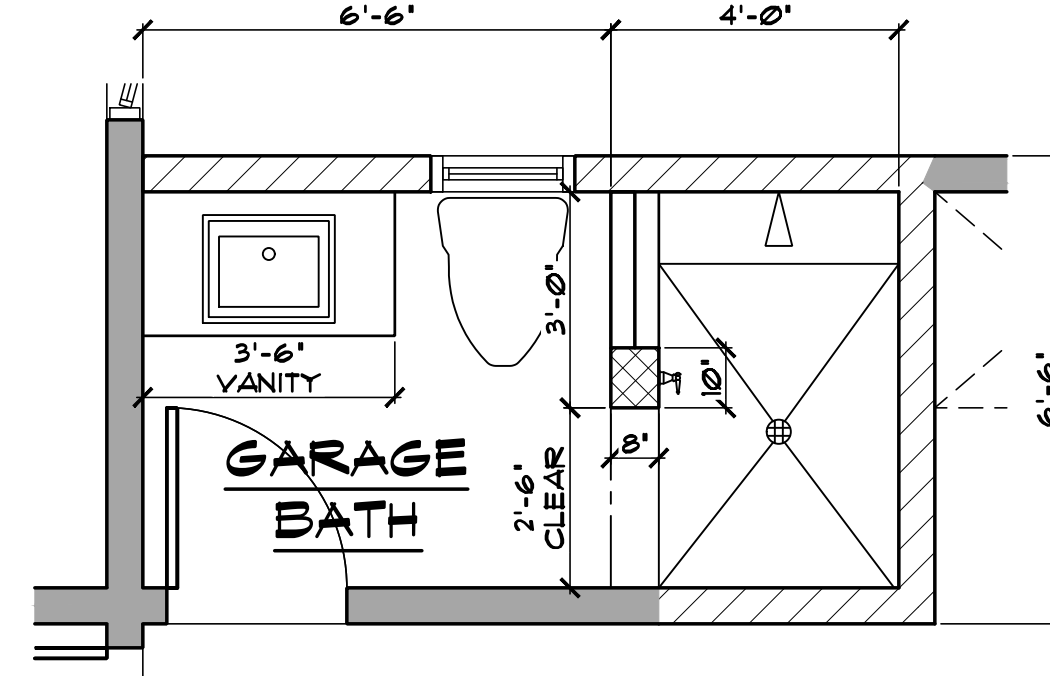
B BATH 04 SHOWER



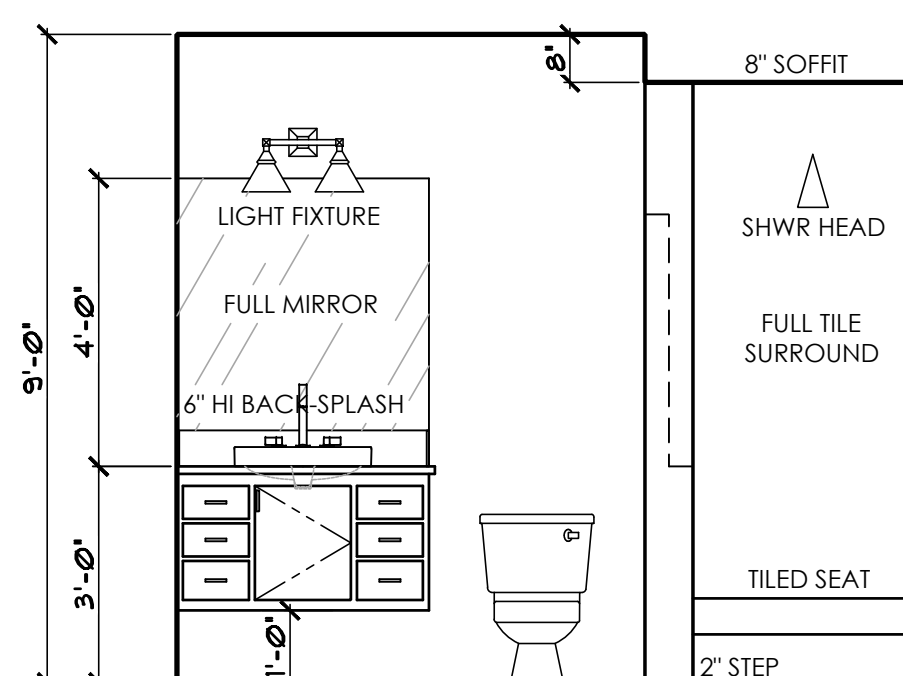
A BATH-04



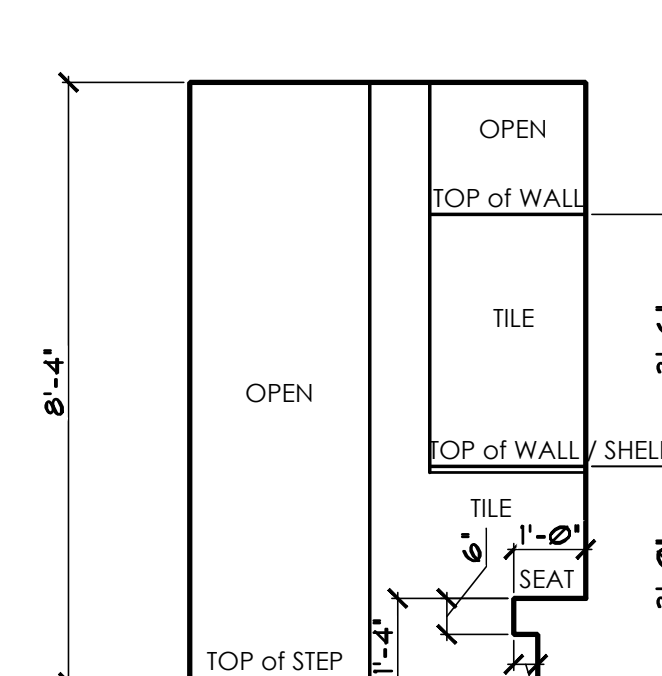
A CASITA BAR



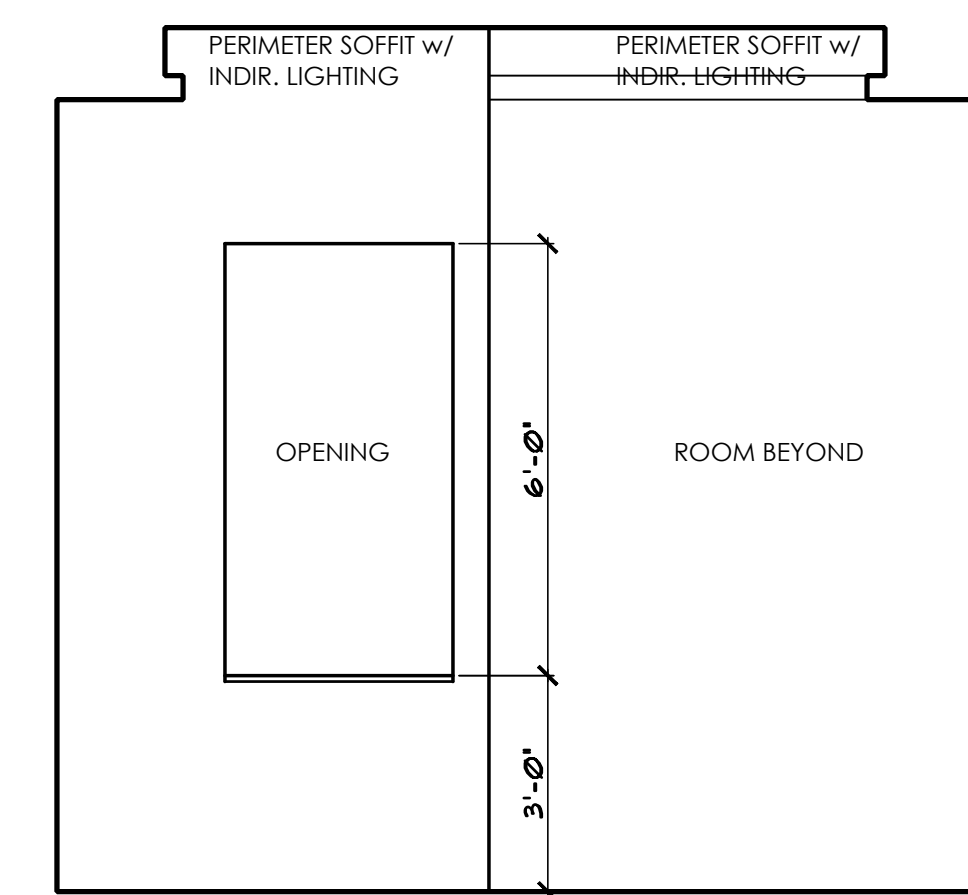
5 ENLARGED FLOOR PLAN - GARAGE BATH
SCALE: 3/8" = 1'-0"



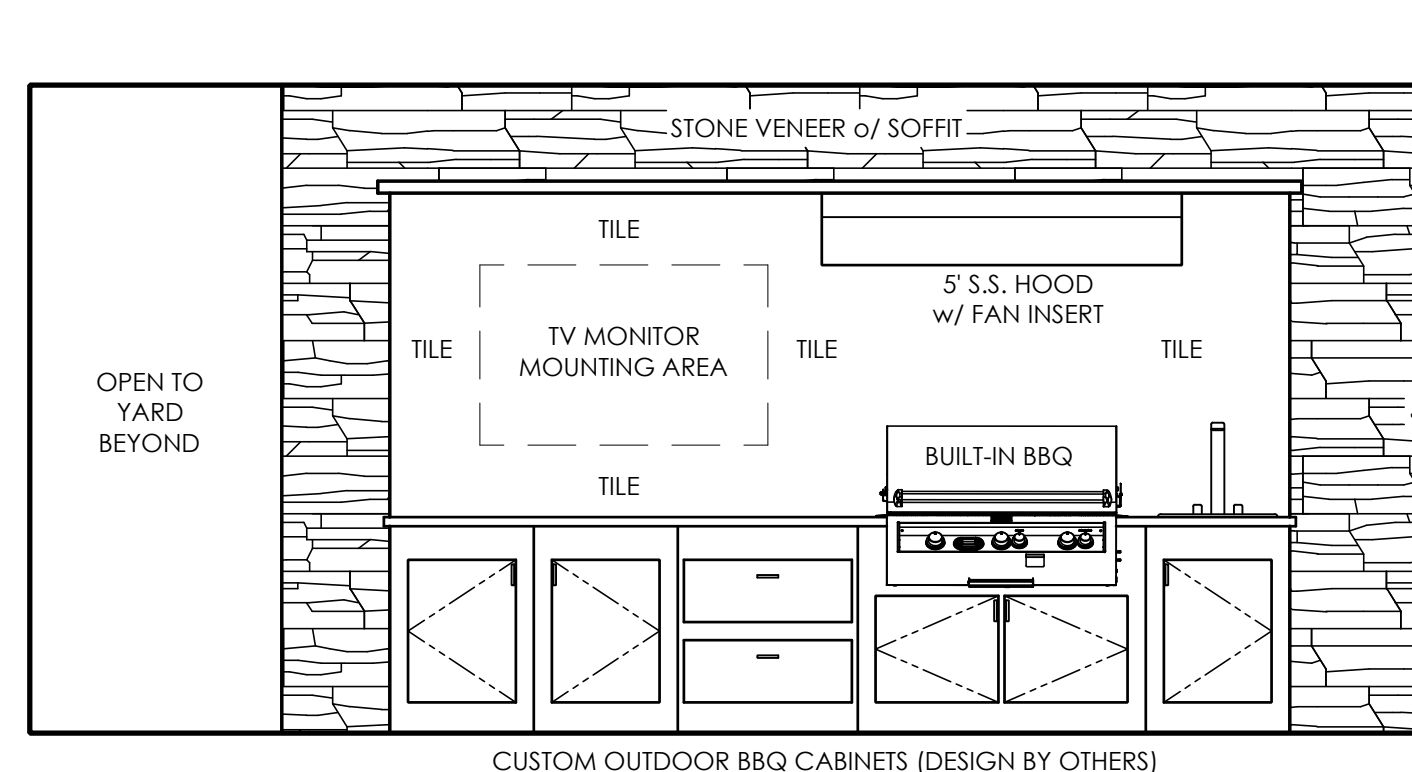
A GARAGE SHOWER



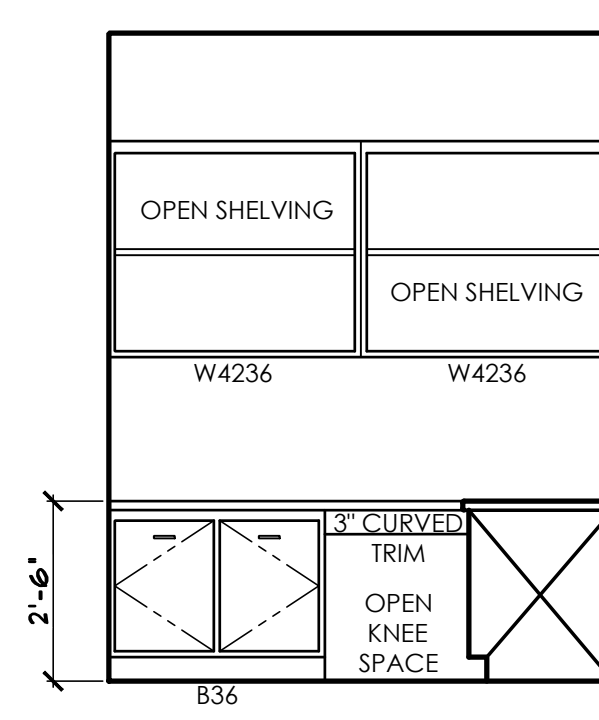
D GARAGE SHOWER



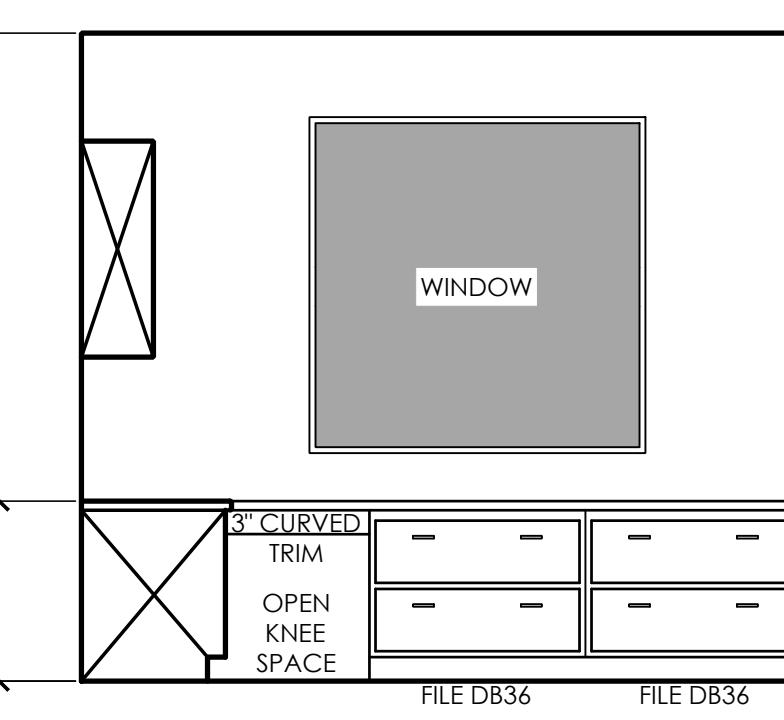
D CASITA NICHE



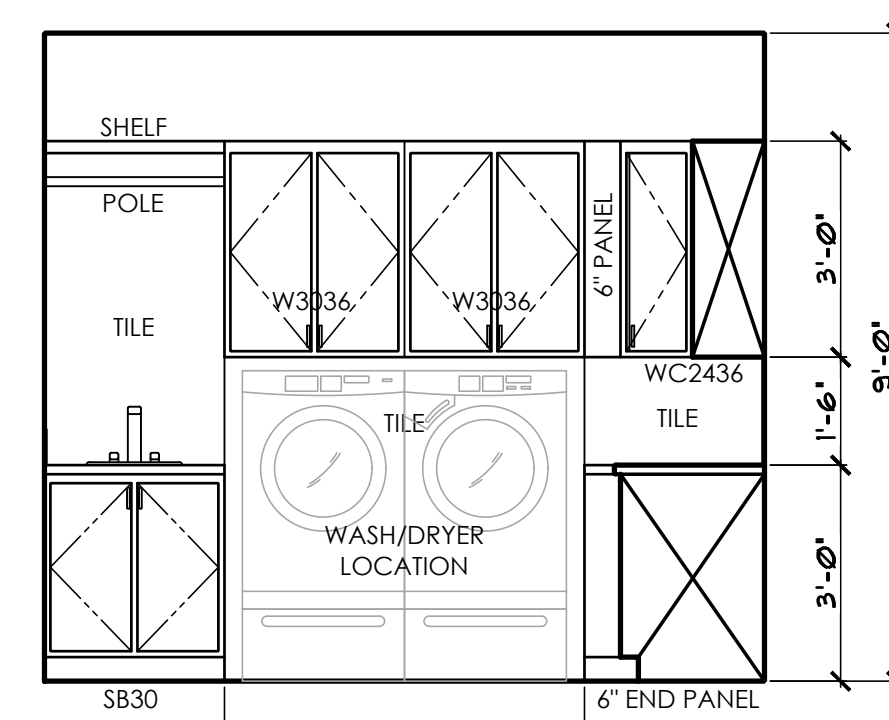
C PATIO BBQ NICHE



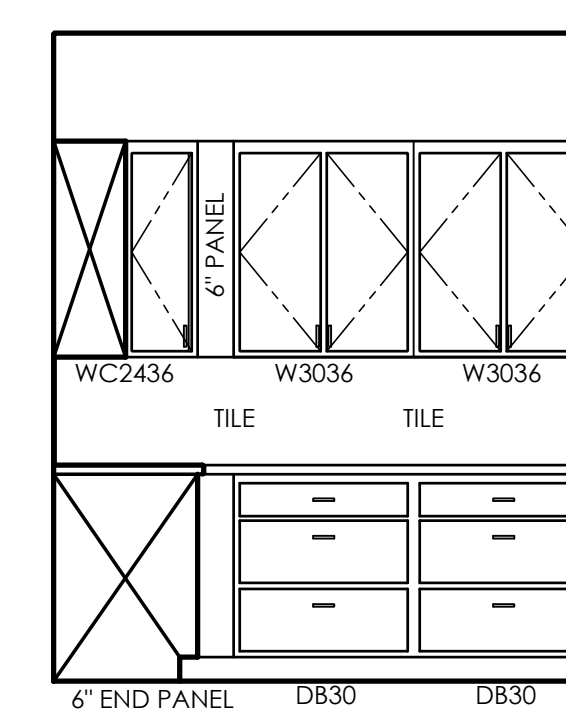
D POCKET OFFICE



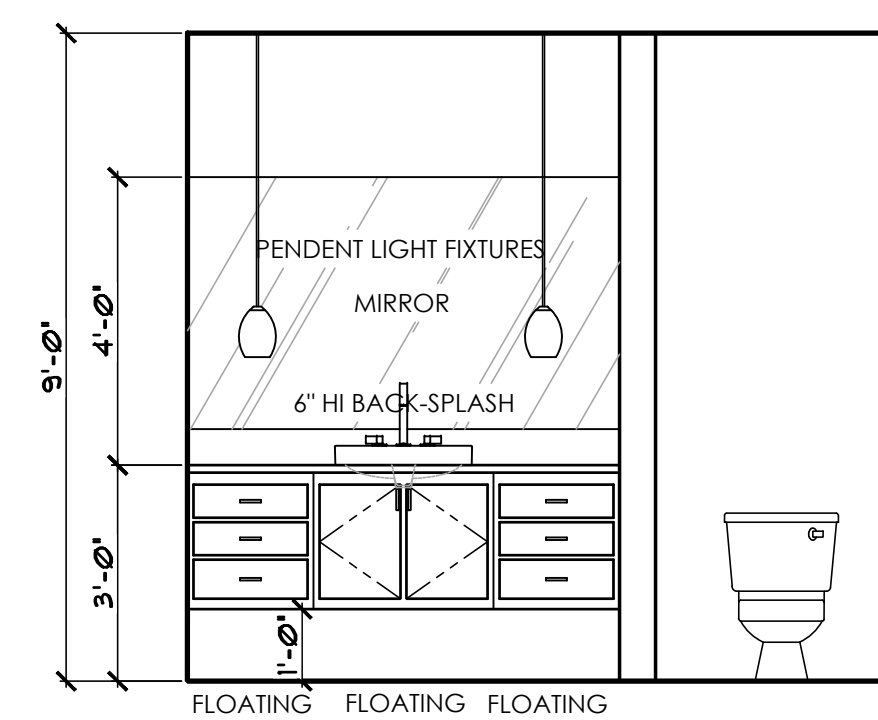
A POCKET OFFICE



C LAUNDRY



D LAUNDRY

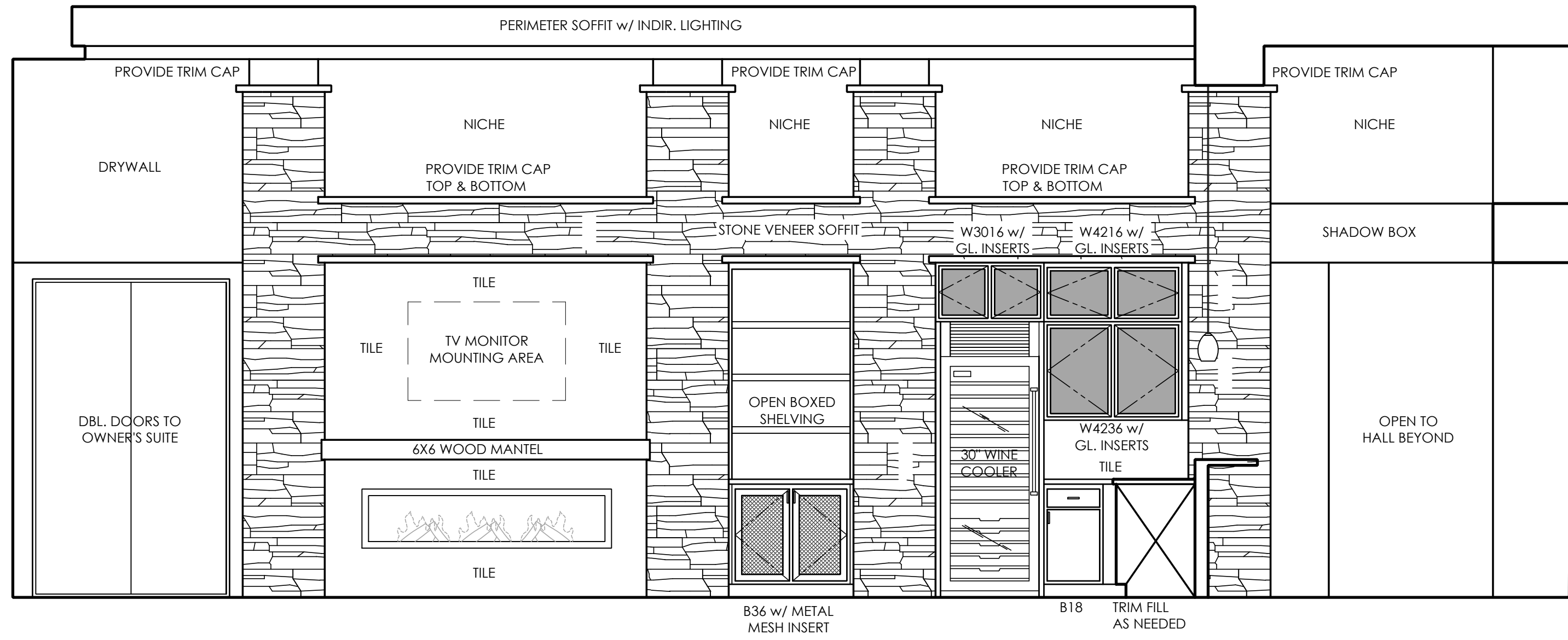


C POWDER

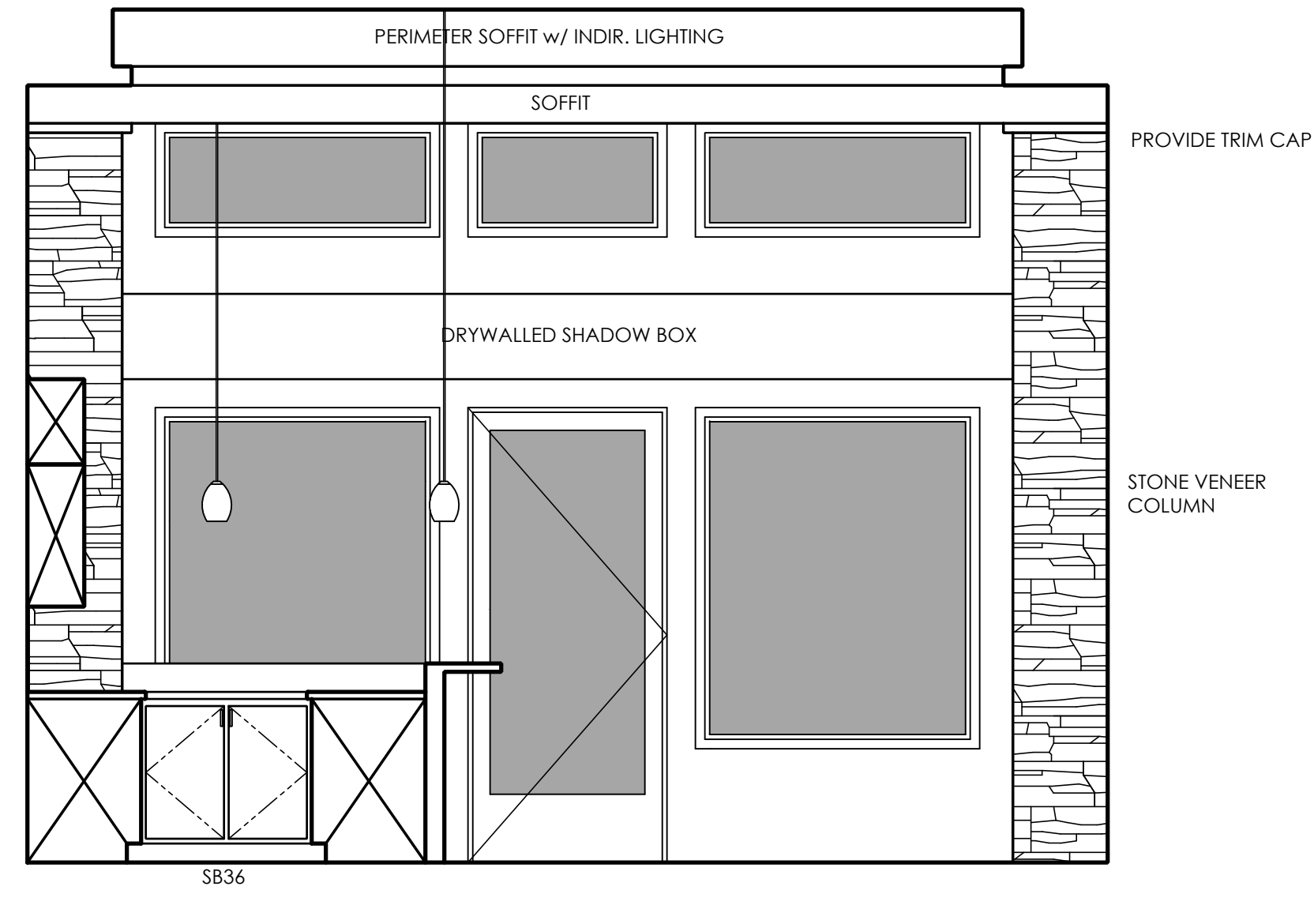
NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

A3.1
thru
A3.2
INTERIOR
ELEVATIONS
SYMBOL

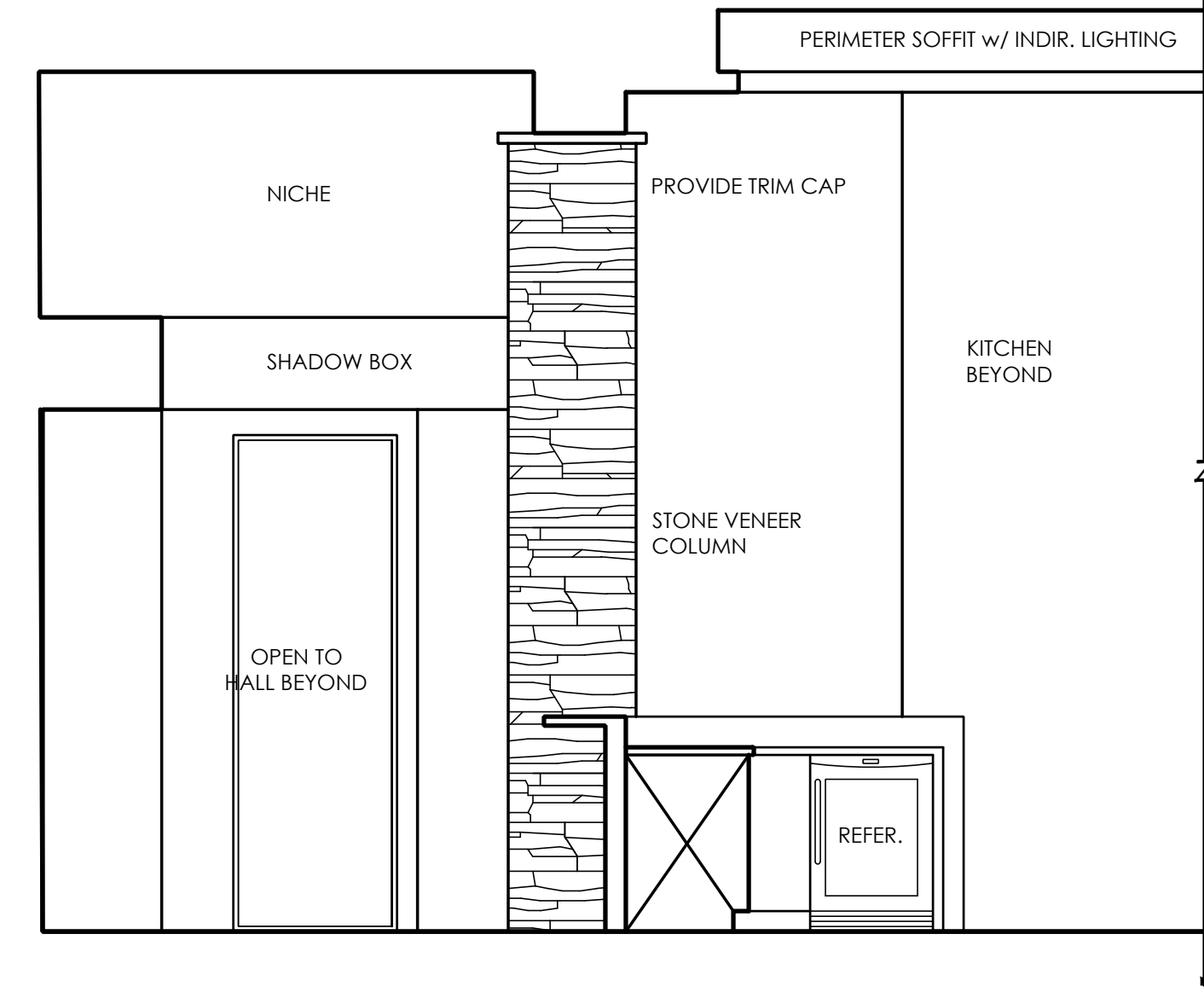
THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. ■ DO NOT SCALE DRAWINGS ■ NOTIFY DESIGNERS IMMEDIATELY PRIOR TO PROCEEDING WITH WORK SHOULD ANY DISCREPANCIES OCCUR. DESIGNERS ASSUME NO RESPONSIBILITY OF WORK IN PLACE	
PROJECT: The Peters Residence 31587/31589 CROW'S NEST DR. PARKER, AZ APN: 311-53-070J	
CONTRACTOR:	
REVISIONS:	
SCALE: 3/8" = 1'-0" DRAWN: S.L. 2/15/22 DATE: 21 MARCH 2025	
JOB #: 2024-05 CHECKED: S.L. 2 SHEET	
A3.1 © COPYRIGHT 2025	



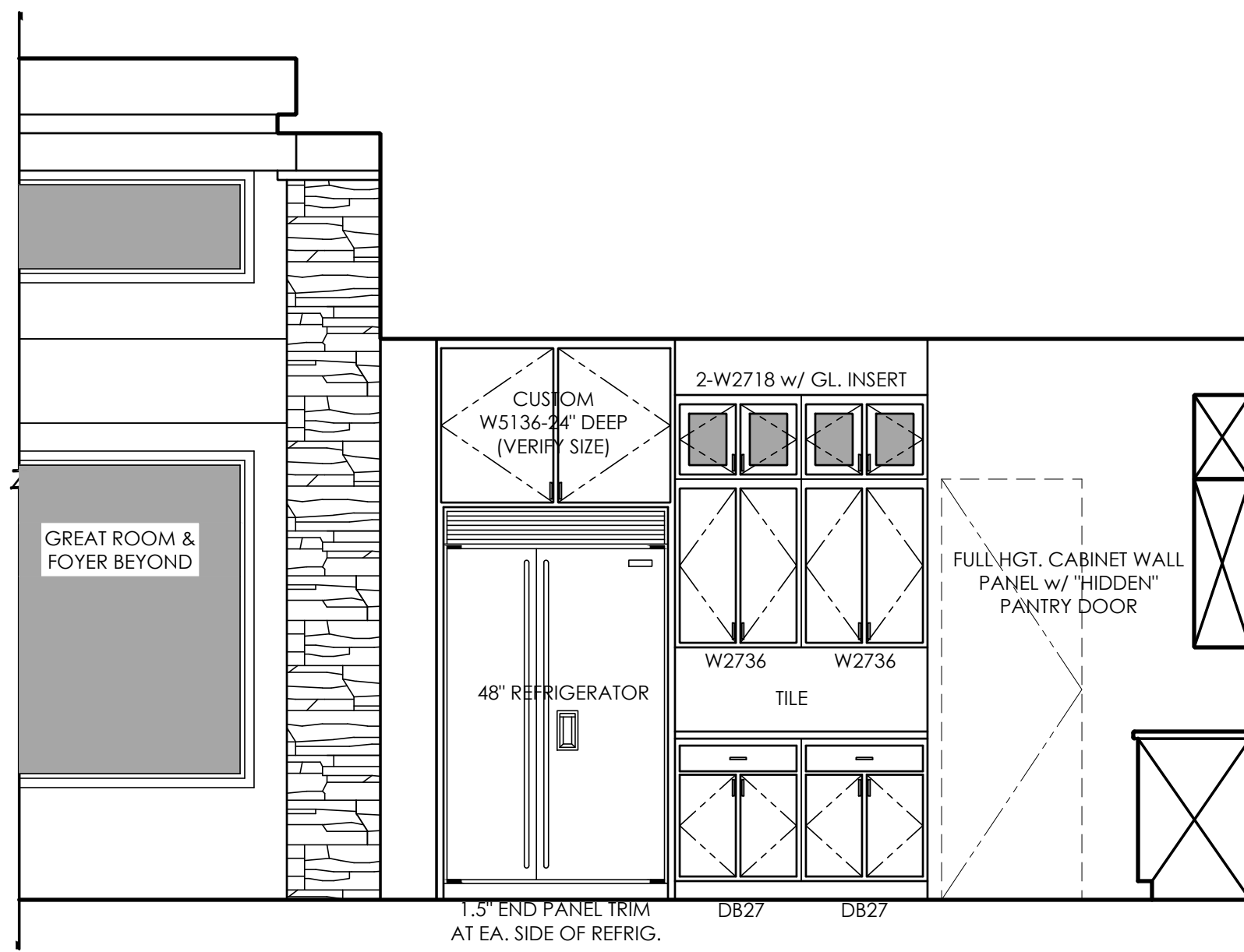
A GREAT ROOM / FIREPLACE / BAR



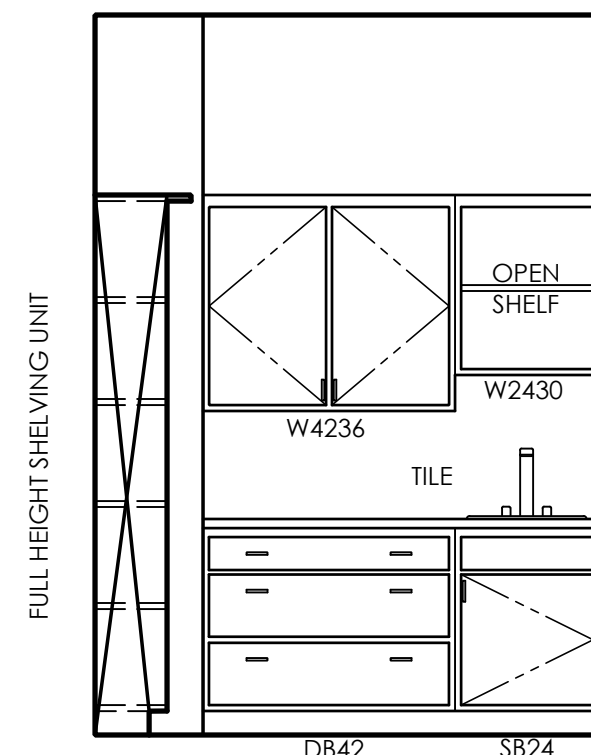
B GREAT ROOM / BAR / FOYER



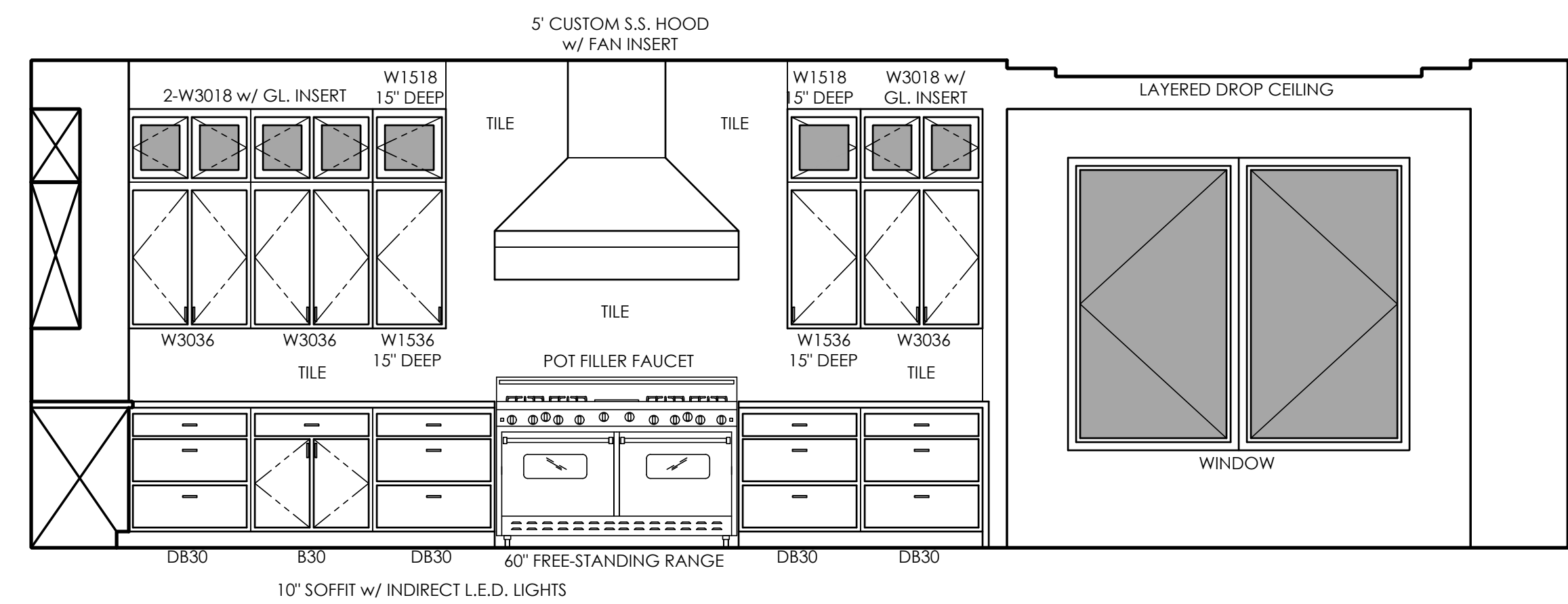
C FOYER / BAR / GREAT ROOM



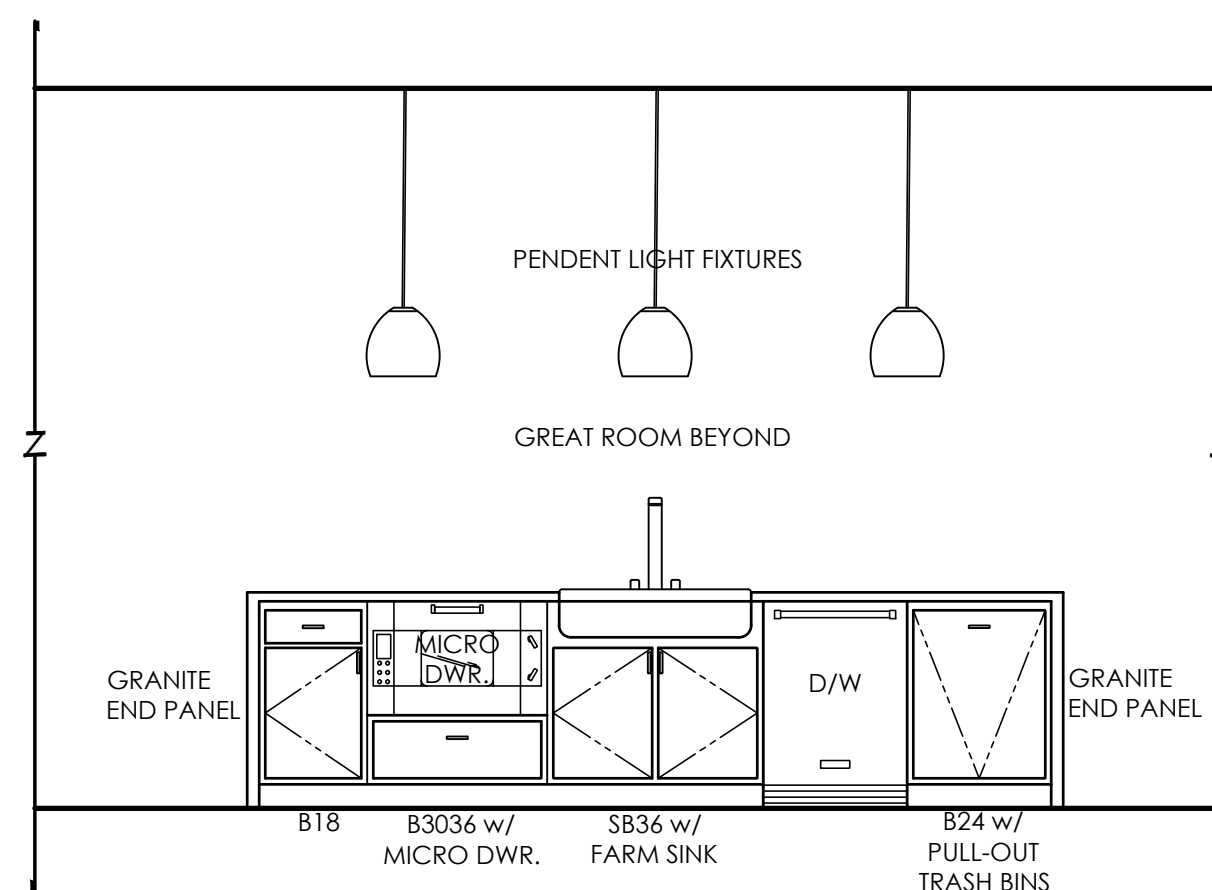
B KITCHEN



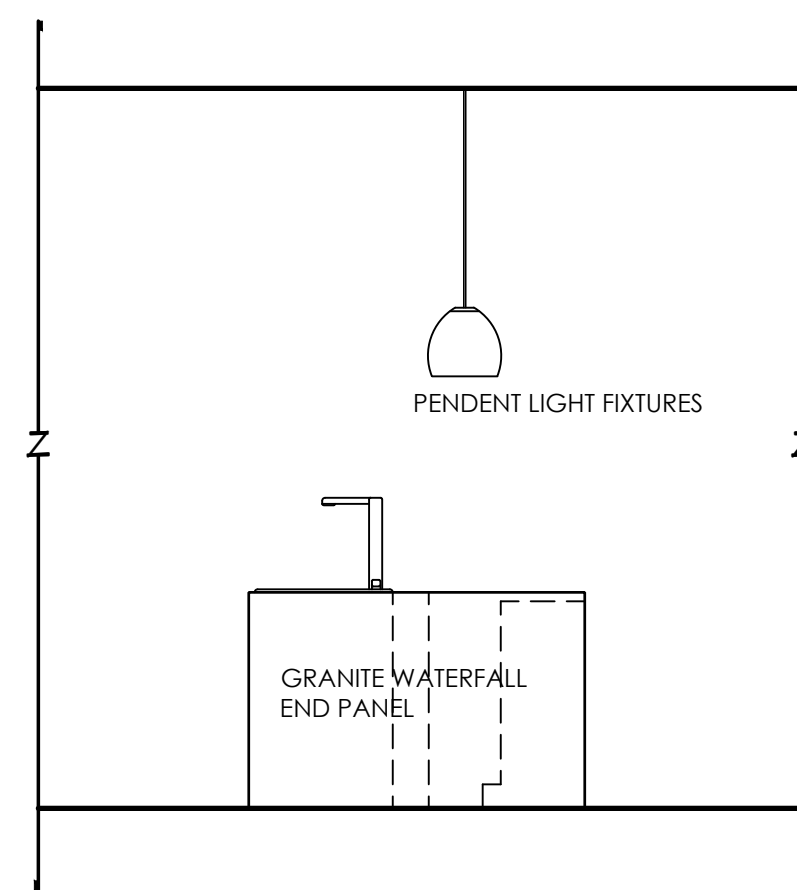
C KITCHEN / PANTRY



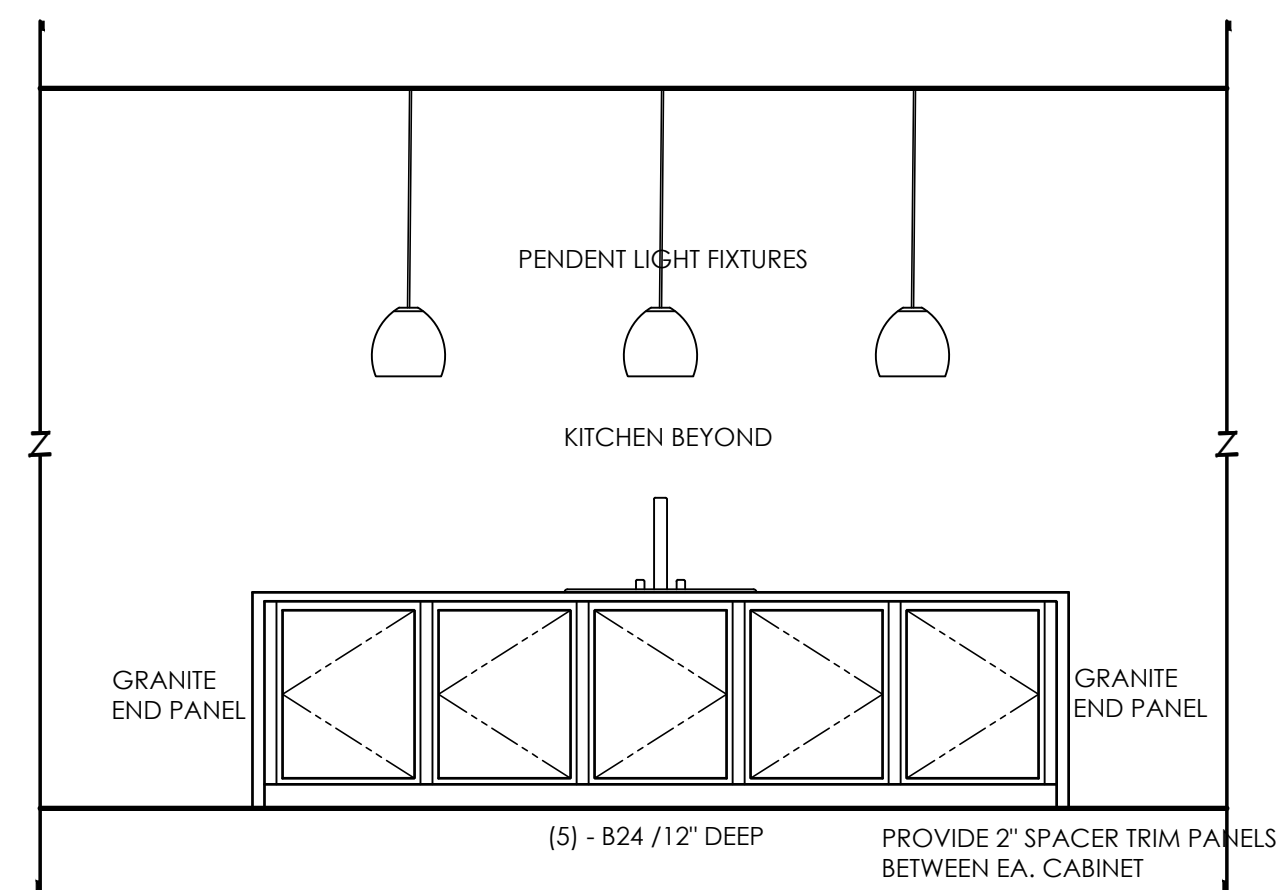
C KITCHEN



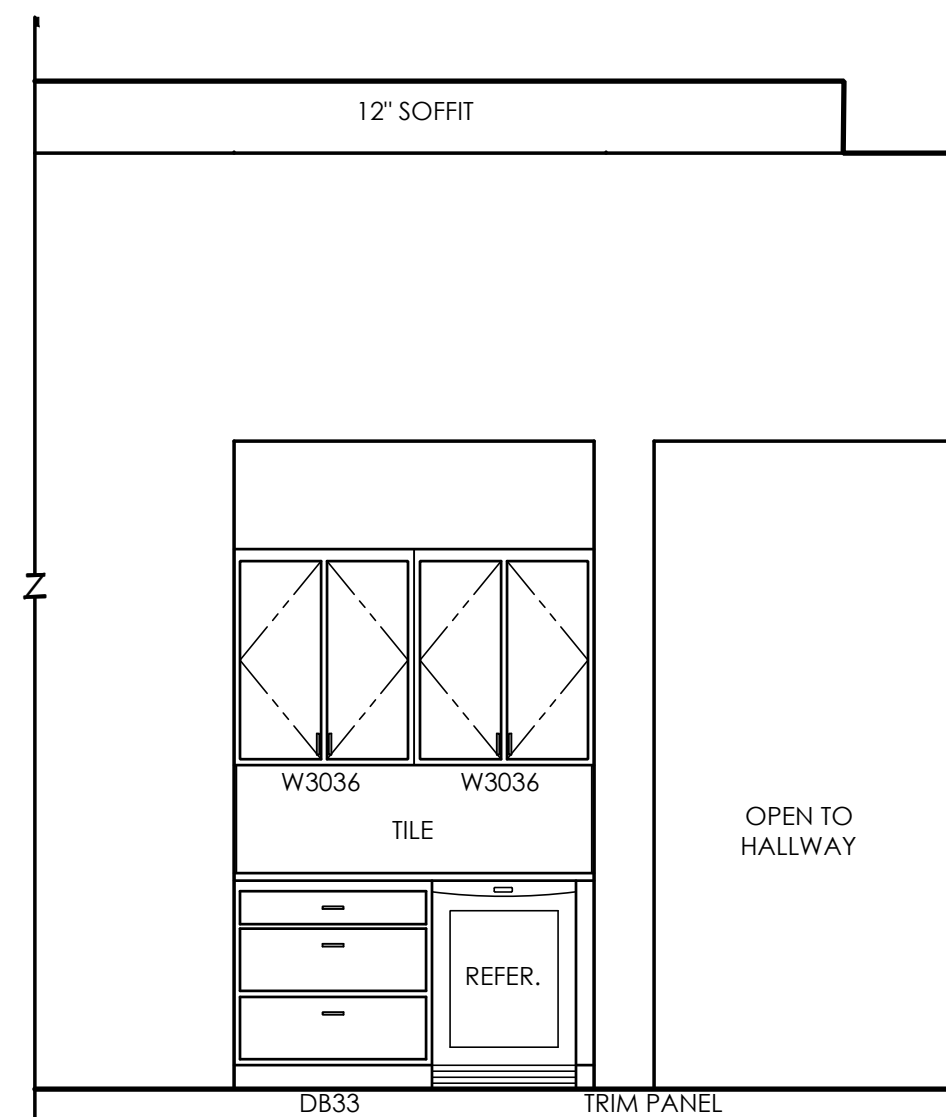
A KITCHEN ISLAND



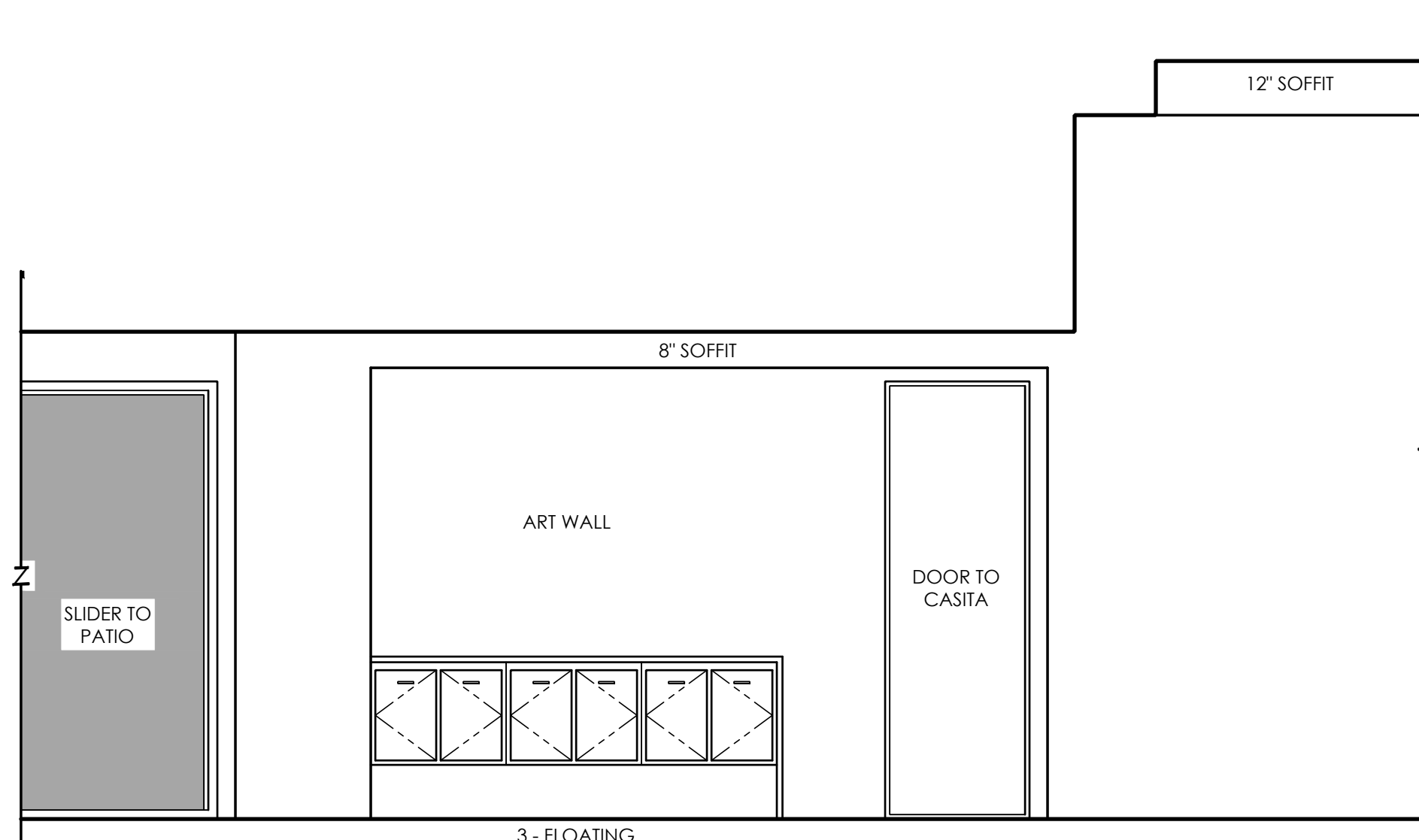
B KITCHEN ISLAND (OPPOSITE END SIM.)



C KITCHEN ISLAND



D EXERCISE ROOM BAR



A HALL NICHE at CASITA ENTRY

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
AND ALL CURRENT GOVERNING CODES.

CONTRACTOR:

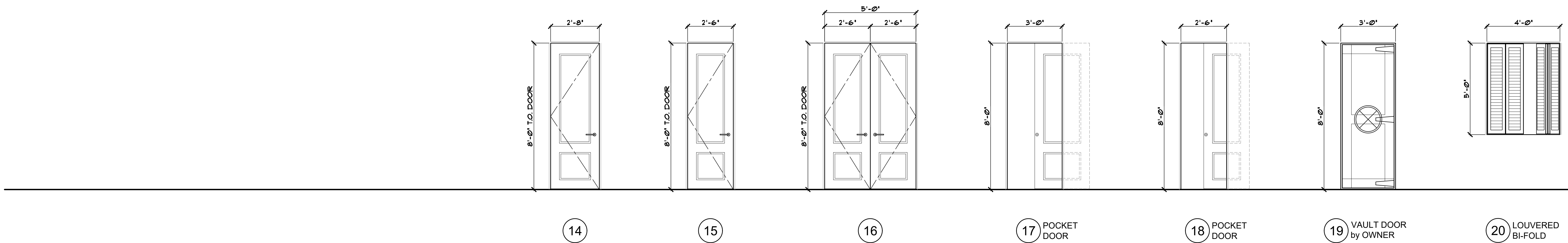
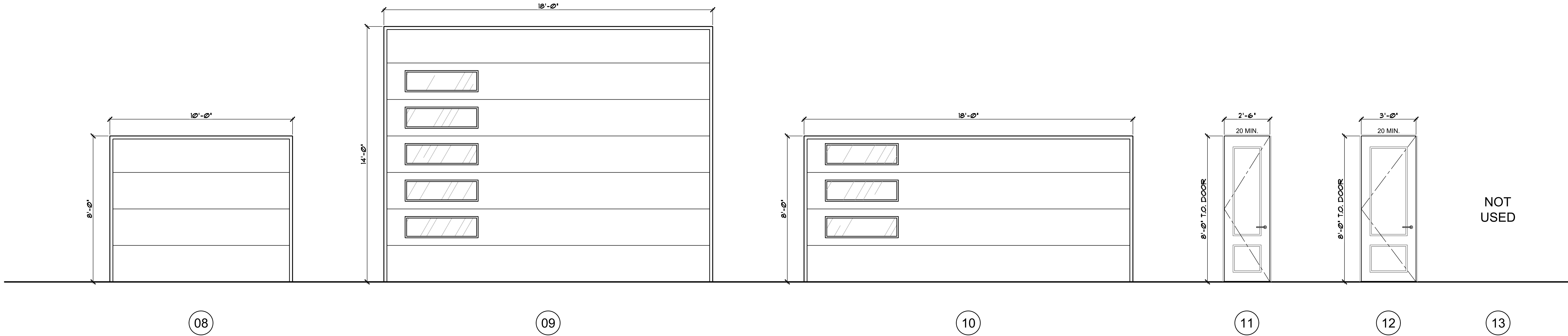
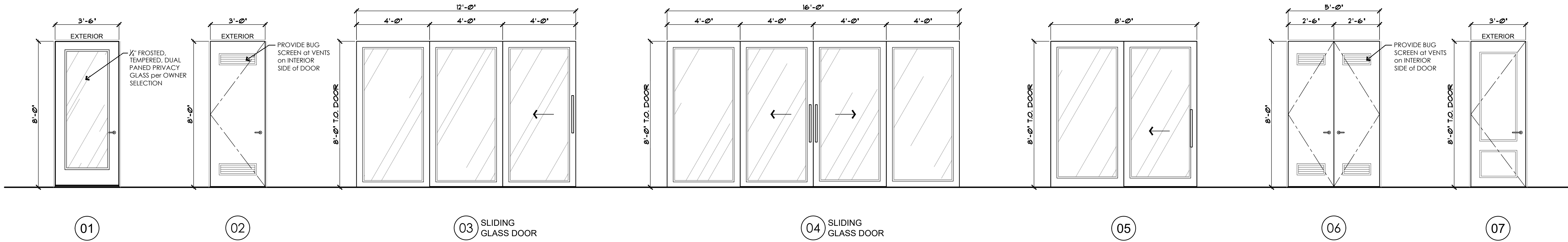
PROJECT:
The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR USE OF THESE DRAWINGS WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. IS PROHIBITED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR THE PROTECTION OF THIS PLAN TO AVOID ERRORS. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES, AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

REVISIONS:	
1	
2	
3	

SCALE: 3/8" = 1'-0"	JOB #: 2024-05
DRAWN: S.L.Z./S.L.Z.	CHECKED: S.L.Z.
DATE: 21 MARCH 2025	

SHEET
A3.2
© COPYRIGHT 2025



DOOR NOTES:

- ALL INTERIOR DOORS TO BE SOLID CORE MASONITE WITH WOOD FRAMES. VERIFY FINISH WITH OWNER.
- INTERIOR DOORS TO HAVE ADJUSTABLE ANCHORS - 3 PER JAMB. EXTERIOR DOORS SHALL HAVE 3 COUNTERSUNK HOLES PER JAMB FOR SCREW CONNECTION TO WOOD STUDS.

zettel group inc.

CUSTOM DESIGN AND PLANNING

Post Office Box 157
Lake Havasu City, AZ 86405-0157
Ph (928) 453.3910
www.zettelgroup.com

CONTRACTOR:

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. NO REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. IS PERMITTED. THE CONTRACTOR ON THE JOB SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

◆ DOOR DETAILS

REVISIONS:	
△	
△	
△	

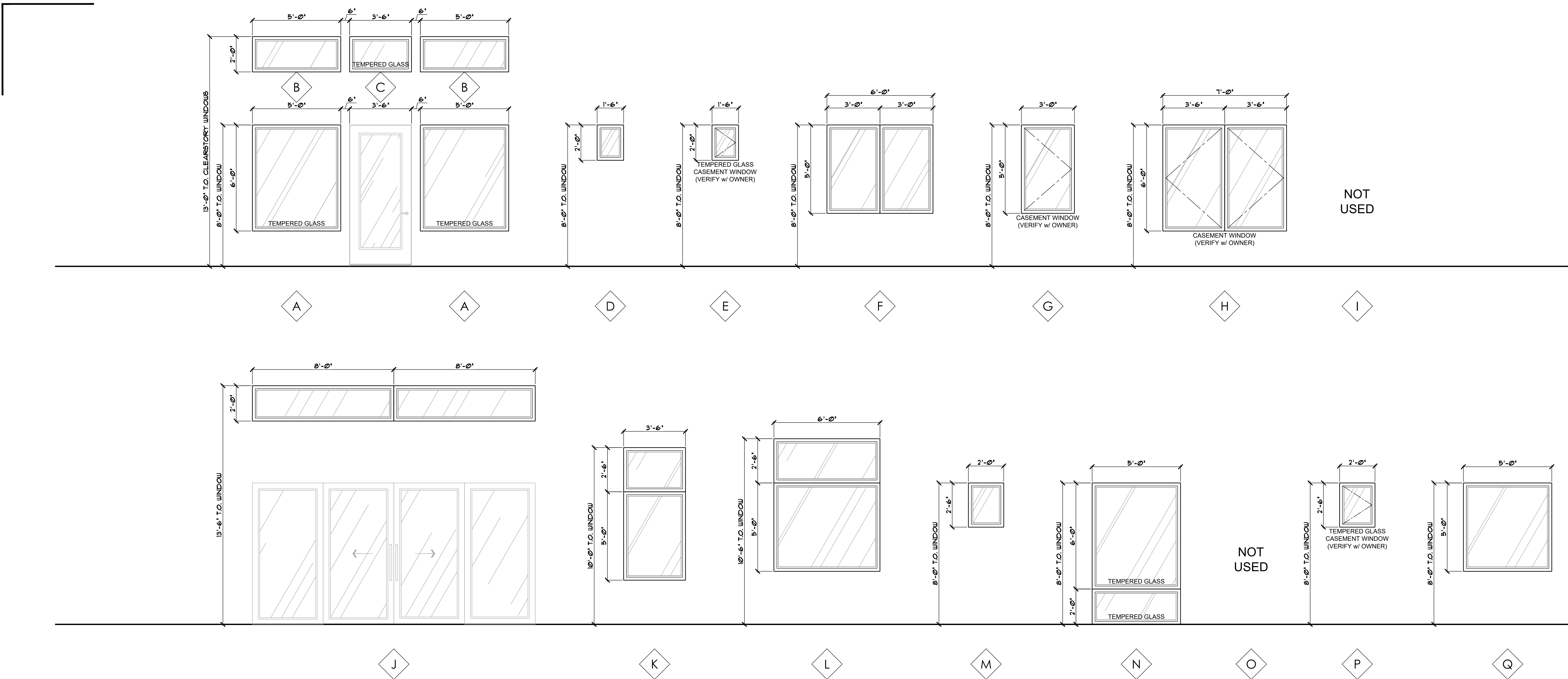
SCALE: 3/8" = 1'-0"	JOB #: 2024-05
DRAWN: S.L.Z.	CHECKED: S.L.Z.
DATE: 24 APRIL 2025	

SHEET

A3.3

© COPYRIGHT 2025

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.



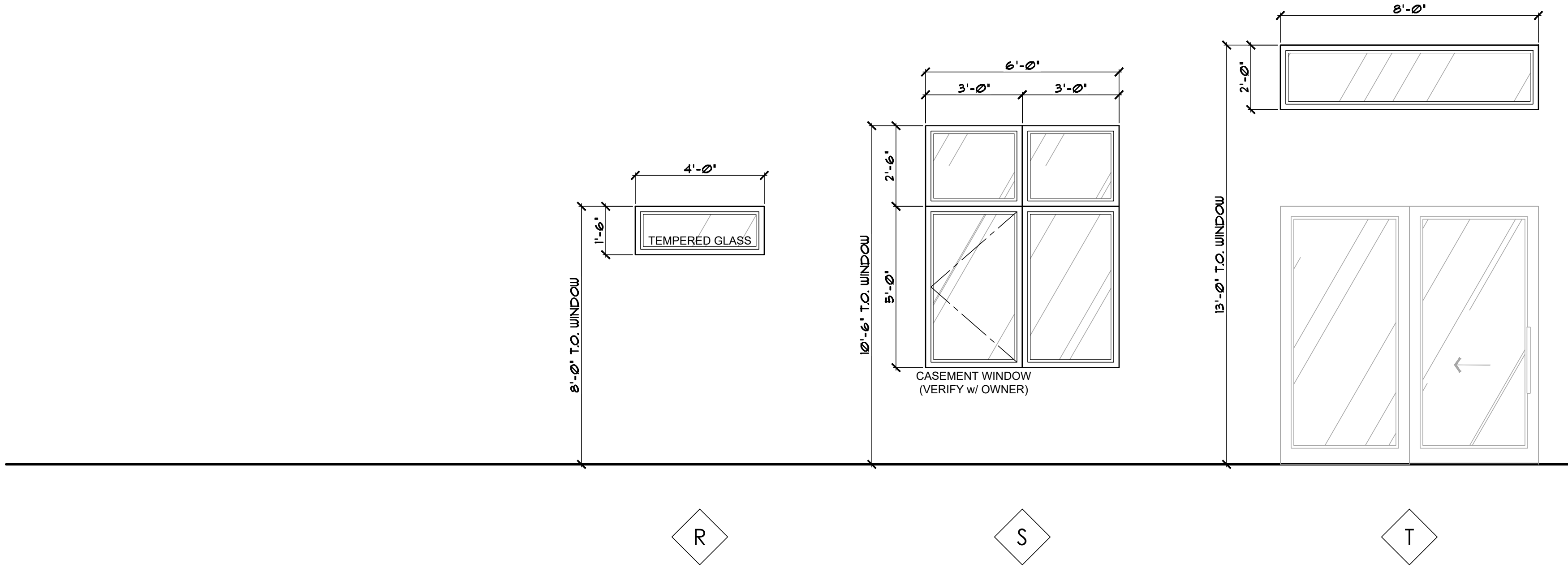
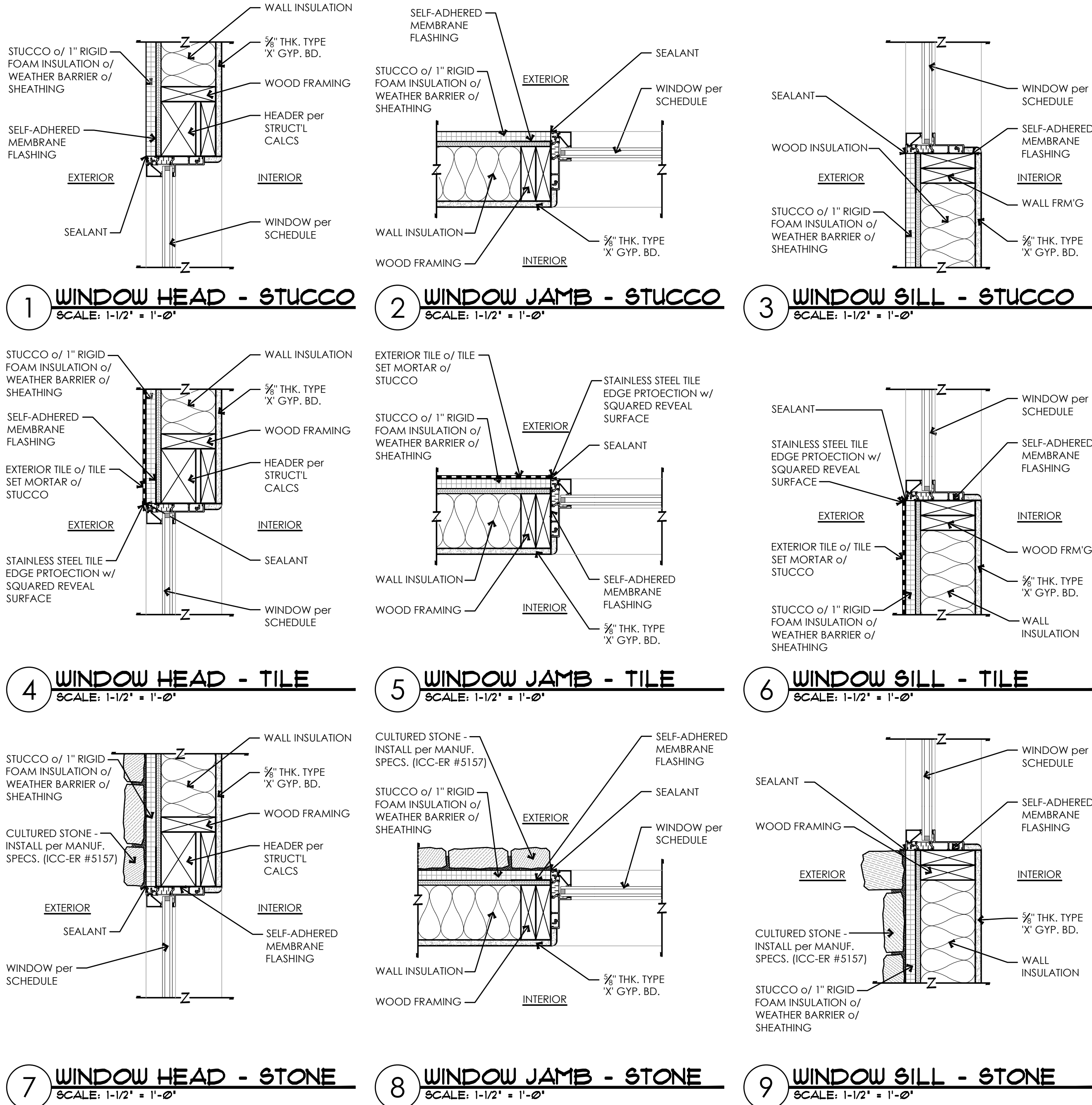
WINDOW NOTES:

1. ALL GLASS SHALL BE DUO-GLAZED BRONZE TINT w/ 1/2" AIRSPACE SEPARATION on BRONZE FINISH ALUMINUM FRAMES (UNLESS NOTED OTHERWISE).
2. ALL GLASS DOORS SHALL HAVE TEMPERED SAFETY GLAZING GLASS. TYPE and THICKNESS to COMPLY w/ IRC SECTION R308.4.
3. ALL WINDOWS or GLAZING WITHIN 24" of a DOOR MUST BE TEMPERED.
4. SHOWER DOOR and GLASS ENCLOSURES MUST BE TEMPERED.
5. ALL WINDOWS WITHIN SHOWERS and TUB AREAS MUST COMPLY w/ IRC SECTION R308.4 and R308.9.
6. GLASS BLOCK SHALL BE INSTALLED per IRC R610.

zettel group inc.
CUSTOM DESIGN AND PLANNING
Post Office Box 157
Lake Havasu City, AZ 86405-0157
Ph (928) 453.3910
www.zettelgroup.com

CONTRACTOR:

PROJECT:
The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J



NOTE:
ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

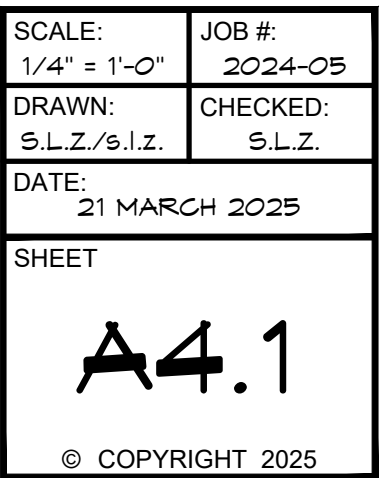
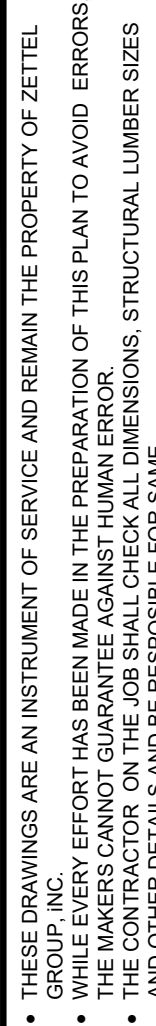
◆ WINDOW DETAILS

REVISIONS:	
△	
△	
△	

SCALE: AS NOTED	JOB #: 2024-05
DRAWN: S.L.Z.	CHECKED: S.L.Z.
DATE: 24 APRIL 2025	
SHEET	

A3.4

© COPYRIGHT 2025



	KEYNOTE LEGEND	
	NOTE: NOT ALL KEYNOTES USED ON THIS SHEET	
1.	DASH FINISH STUCCO (COLOR per OWNER SELECTION) - INSTALL per MANUF. SPECS. [ICC-ER #11394]	
	2. CONCRETE ROOF TILE (ICC-ER #1215) of TWO LAYERS of 30B FELT or SHEATHING w/ PRE-MG'FD ROOF TRUSSES at 24" O.C.	
	3. CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #1447 - INSTALL per MANUF. SPECS. - REFER to DETAIL on SHEET A4.1.	
	4. WOOD FRAMED and STUCCO WRAPPED FASCIA	
	5. WOOD FRAMED and STUCCO WRAPPED TRIM	
	6. WOOD FRAMED and STUCCO WRAPPED NON-STRUCTURAL POP-OUT	
	7. INSULATED OVERHEAD SECTIONAL GARAGE DOOR w/ TINTED TENSORED GLASS PANELS	
	8. 6" SQUARE STEEL TUBE COLUMN per STRUCTURAL DRAWINGS	
	9. PRE-FABRICATED STEEL SHADE STRUCTURE per DETAILS on SHEET A4.1 - FINAL DESIGN per OWNER SELECTION	
10.	2" WOOD FRAMED STUCCO WRAPPED DETAIL KEY	

- ① DOOR TAG
REFER to SHEET A3.3 for ADDITIONAL
INFORMATION
- ⬡ WINDOW TAG
REFER to SHEET A3.4 for ADDITIONAL
INFORMATION

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

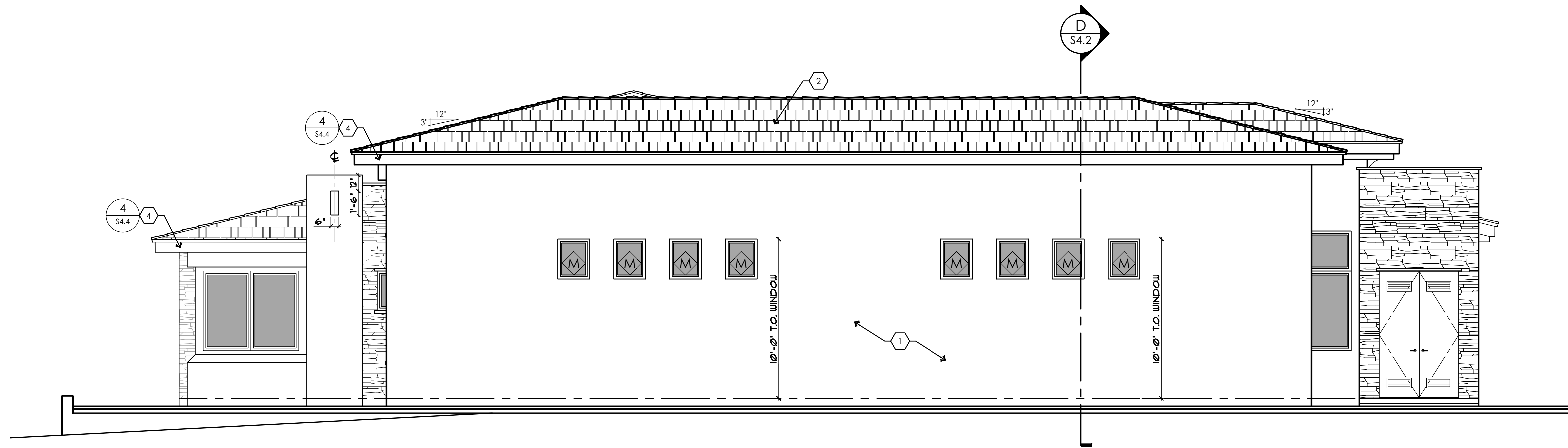
CONTRACTOR:

PROJECT:
The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

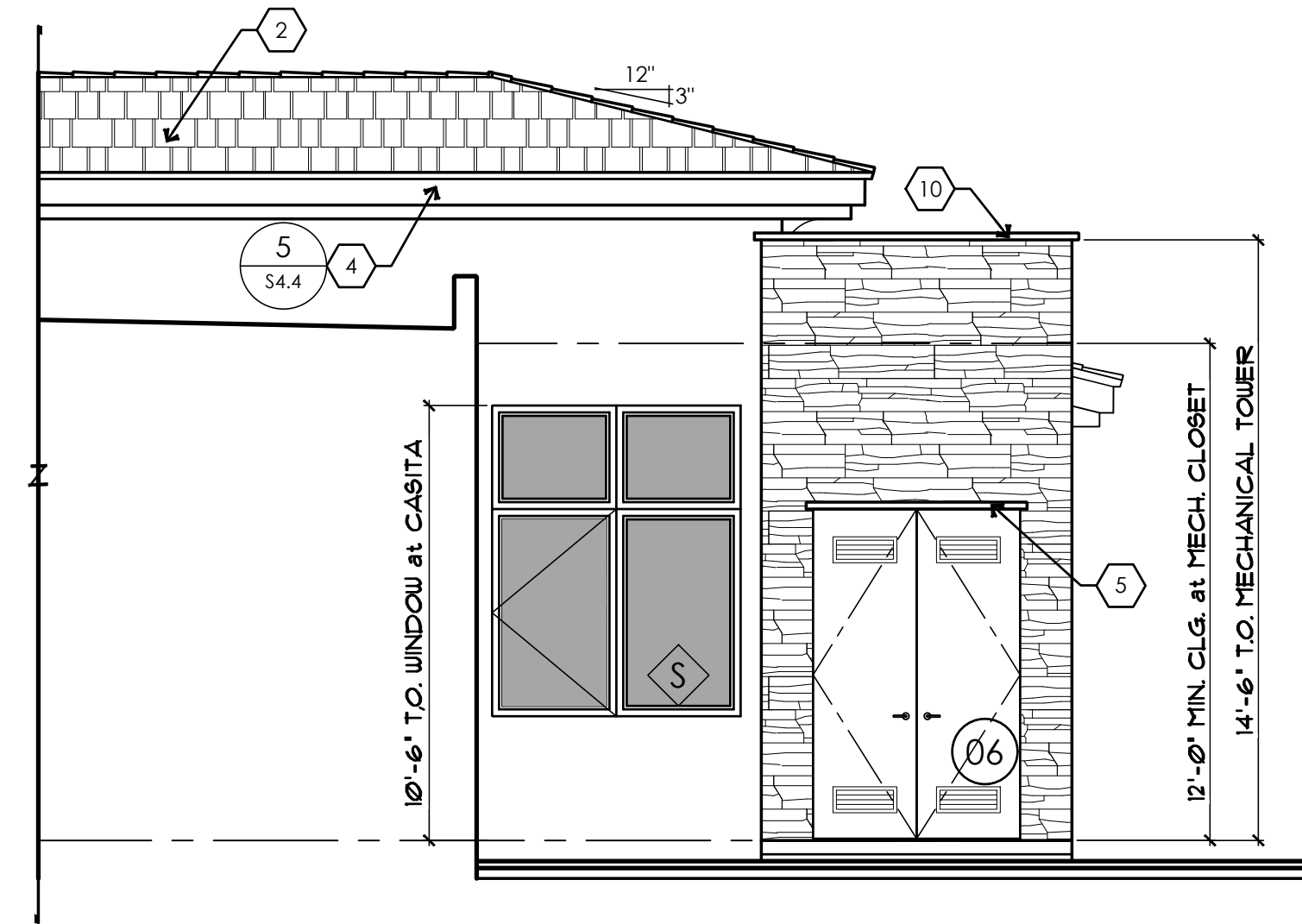
THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

♦ EXTERIOR ELEVATIONS

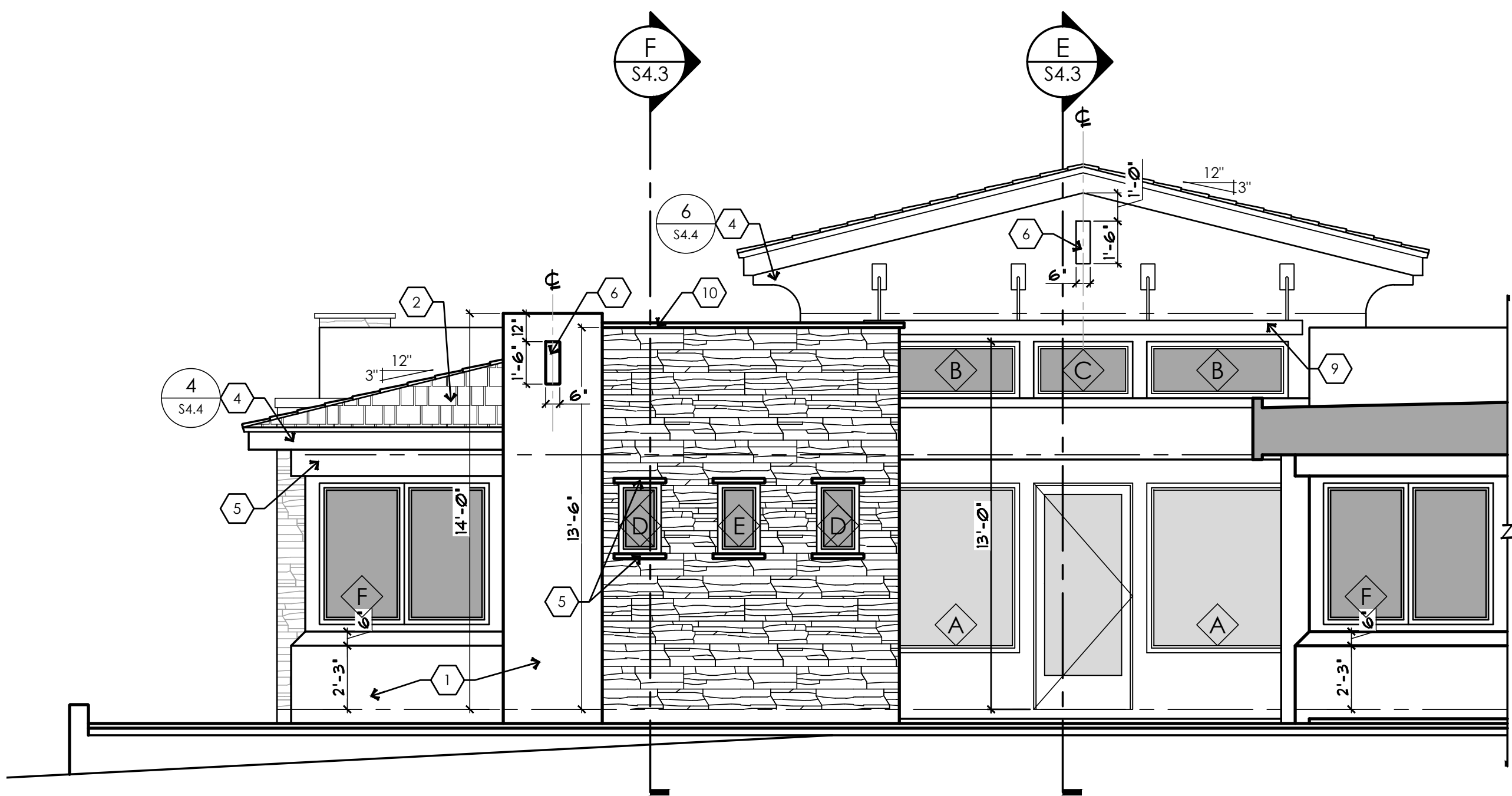
REVISIONS:	
△	
△	
△	
SCALE:	JOB #:
1/4" = 1'-0"	2024-05
DRAWN:	CHECKED:
S.L.Z./S.L.Z.	S.L.Z.
DATE:	
21 MARCH 2025	
SHEET	
A4.2	
© COPYRIGHT 2025	



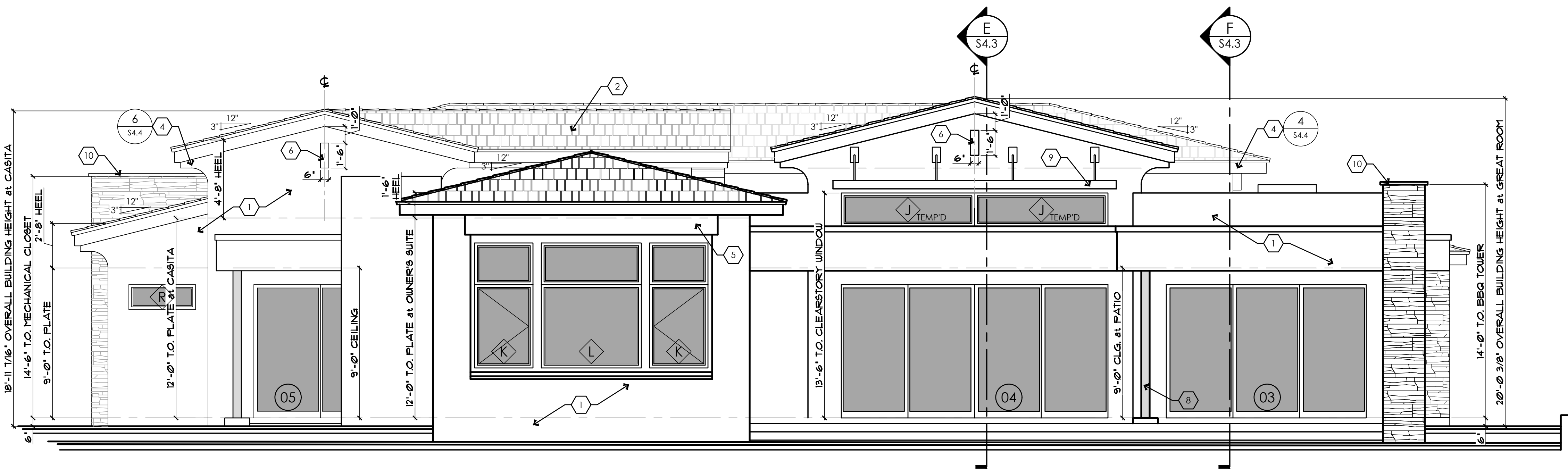
RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



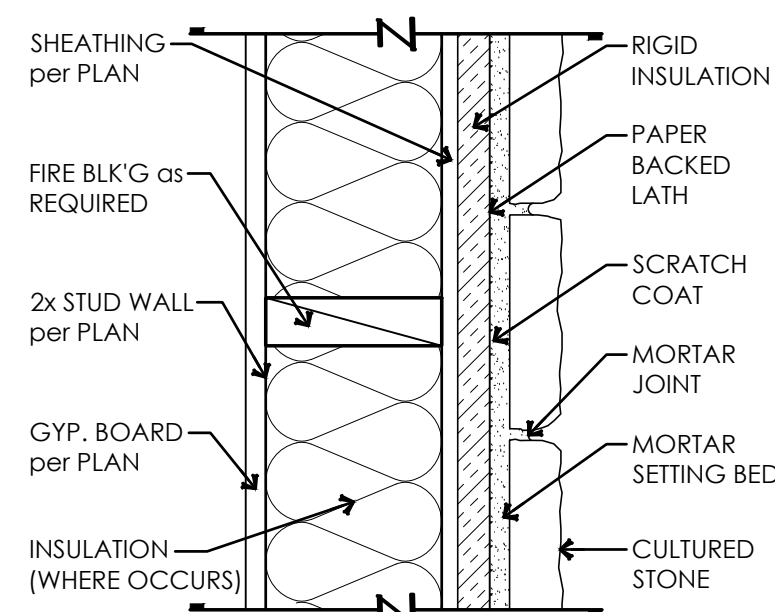
PARTIAL RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



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



LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"



**CULTURED STONE
INSTALLATION DETAIL**
NOT TO SCALE

KEYNOTE LEGEND	
NOTE: NOT ALL KEYNOTES USED ON THIS SHEET	
1.	DASH FINISH STUCCO (COLOR per OWNER SELECTION) - INSTALL per MANUF. SPECS (ICC-ER #1194)
2.	CONCRETE ROOF TILE (ICC-ER #1215) or TWO LAYERS of 30lb FELT or SHEATHING or PRE-MFG'd ROOF TRUSSES at 24" O.C.
3.	CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #4147 - INSTALL per MANUF. SPECS. - REFER to DETAIL on SHEET A4.1.
4.	WOOD FRAMED and STUCCO WRAPPED FASCIA
5.	WOOD FRAMED and STUCCO WRAPPED TRIM
6.	WOOD FRAMED and STUCCO WRAPPED NON-STRUCTURAL POP-OUT
7.	INSULATED OVERHEAD SECTIONAL GARAGE DOOR w/ TINTED TEMPERED GLASS PANELS
8.	6" SQUARE STEEL TUBE COLUMN per STRUCTURAL DRAWINGS
9.	PRE-FABRICATED STEEL SHADE STRUCTURE per DETAILS on SHEET A4.1 - FINAL DESIGN per OWNER SELECTION
10.	2" WOOD FRAMED STUCCO WRAPPED DETAIL KEY

REFER to BUILDING SECTIONS for
ADDITIONAL PLATE / CEILING
HEIGHT INFORMATION

- 01 DOOR TAG
REFER to SHEET A3.3 for ADDITIONAL
INFORMATION
- WINDOW TAG
REFER to SHEET A3.4 for ADDITIONAL
INFORMATION

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

ELECTRICAL SYMBOL LEGEND
NOT ALL SYMBOLS MAY BE USED

- SURFACE MOUNTED CEILING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED CAN LIGHT FIXTURE
- MINI RECESSED CAN LIGHT FIXTURE
- 1x4' SURFACE MOUNTED LED LIGHT FIXTURE
- VAPOR PROOF RECESSED LIGHT FIXTURE
- EXHAUST FAN - 50 CFM MIN - VENTED TO OUTSIDE
- EXHAUST FAN - 50 CFM MIN - VENTED TO OUTSIDE VAPOR PROOF LENSE & GR at SHOWERS
- CEILING FAN
- SMOKE DETECTOR (CLG MOUNT) 3' FROM R/A AND CEILING FANS
- CARBON MONOXIDE DETECTOR

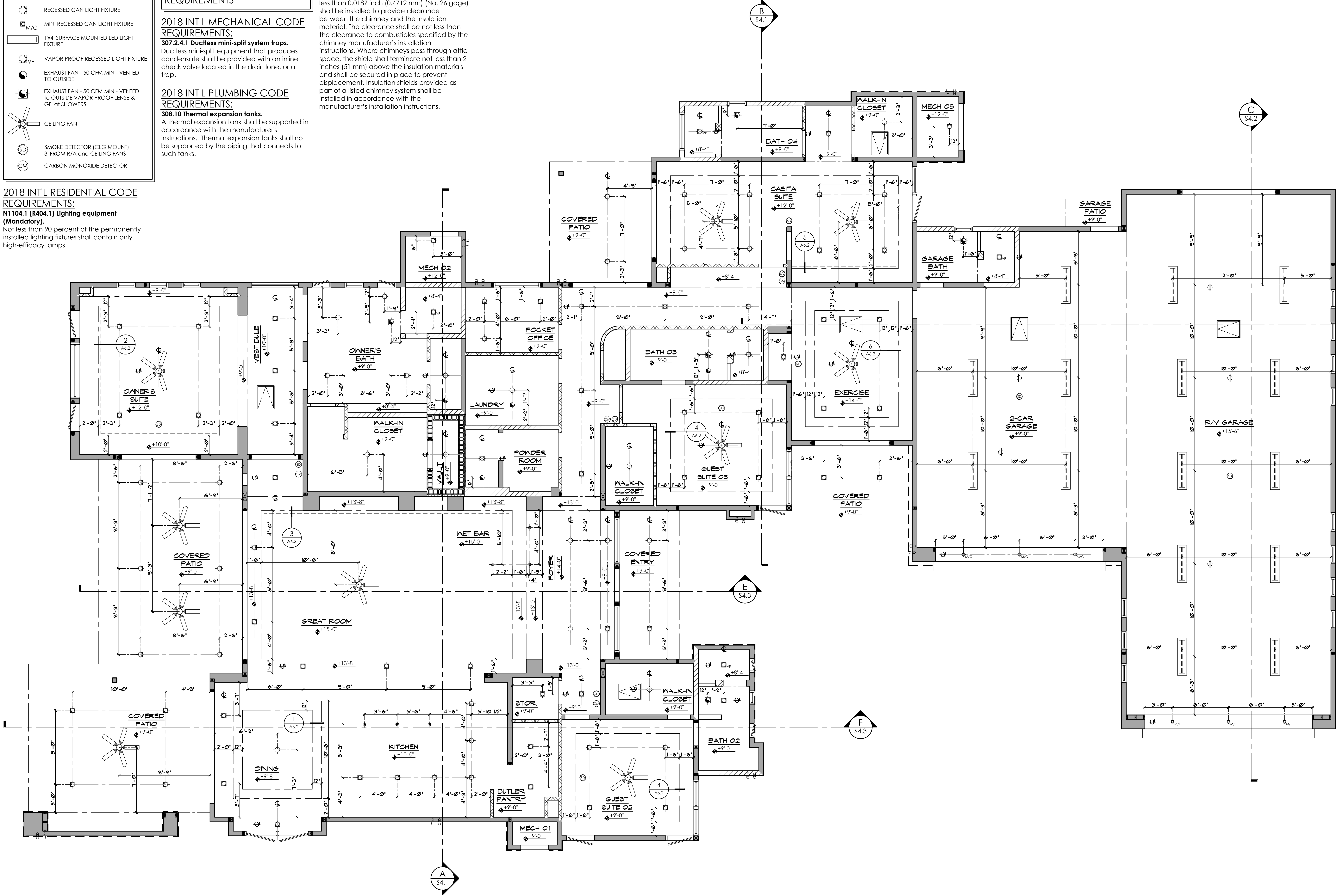
NOTE:
REFER to SHEET A6.2 for
ADDITIONAL ELECTRICAL,
MECHANICAL and PLUMBING
REQUIREMENTS

**2018 INT'L MECHANICAL CODE
REQUIREMENTS:**
307.2.4.1 Ductless mini-split system traps.
Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain line, or a trap.

**2018 INT'L PLUMBING CODE
REQUIREMENTS:**
308.10 Thermal expansion tanks.
A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

**2018 INT'L RESIDENTIAL CODE
REQUIREMENTS:**
R1005.8 Insulation shield.
Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

**2018 INT'L RESIDENTIAL CODE
REQUIREMENTS:**
N1104.1 (R404.1) Lighting equipment (Mandatory).
Not less than 90 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.



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

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

CONTRACTOR:

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS PLAN TO AVOID ERRORS. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.	
REFLECTED CEILING PLAN	
REVISIONS:	
△	
△	
△	

SCALE: 1/4" = 1'-0"	JOB #: 2024-05
DRAWN: S.L.Z./S.L.Z.	CHECKED: S.L.Z.
DATE: 21 MARCH 2025	
SHEET	
A5.1	
© COPYRIGHT 2025	

ELECTRICAL SYMBOL LEGEND		
NOT ALL SYMBOLS MAY BE USED		
	SURFACE MOUNTED CEILING LIGHT FIXTURE	
	PENDANT LIGHT FIXTURE	
	RECESSED CAN LIGHT FIXTURE	
	MINI RECESSED CAN LIGHT FIXTURE	
	WALL MOUNTED LIGHT FIXTURE	
	UNDER CABINET L.E.D. TASK LIGHT	
	1x4 SURFACE MOUNTED LED LIGHT FIXTURE	
	PHOTO CELL WALL LIGHT FIXTURE	
	VAPOR PROOF RECESSED LIGHT FIXTURE	
	EXHAUST FAN - 50 CFM MIN - VENTED TO OUTSIDE	
	EXHAUST FAN - 50 CFM MIN - VENTED TO OUTSIDE VAPOR PROOF LENSE & GFCI AT SHOWERS	
	CEILING FAN	
	RECESSED STEP LIGHT	
	SMOKE DETECTOR (CLG MOUNT) 3' FROM R/A and CEILING FANS	
	CARBON MONOXIDE DETECTOR	
	SINGLE SWITCH	
	3-WAY SWITCH	
	WEATHER PROOF SWITCH	
	AUTOMATIC DOOR SWITCH	
	110v DUPLEX OUTLET	
	110v DUPLEX OUTLET - HIDDEN	
	110v DUPLEX OUTLET - HALF HOT	
	220v OUTLET	
	GROUND FAULT INTERRUPT OUTLET	
	GROUND FAULT INTERRUPT OUTLET - WEATHER PROOF	
	DUPLEX OUTLET - FLOOR MOUNTED	
	JUNCTION BOX	
	220v CIRCUIT for HVAC	
	GAS or LP VALVE	
	HOSE BIBB w/ SHUT OFF / BUBBLER 'T'	
	AIR HOSE QUICK DISCONNECT STUB	

NOTE:
REFER TO SHEET A6.2 for
ADDITIONAL ELECTRICAL,
MECHANICAL and PLUMBING
REQUIREMENTS

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R1005.8 Insulation shield.
Where factory-built chimneys pass through installed assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L MECHANICAL CODE REQUIREMENTS:

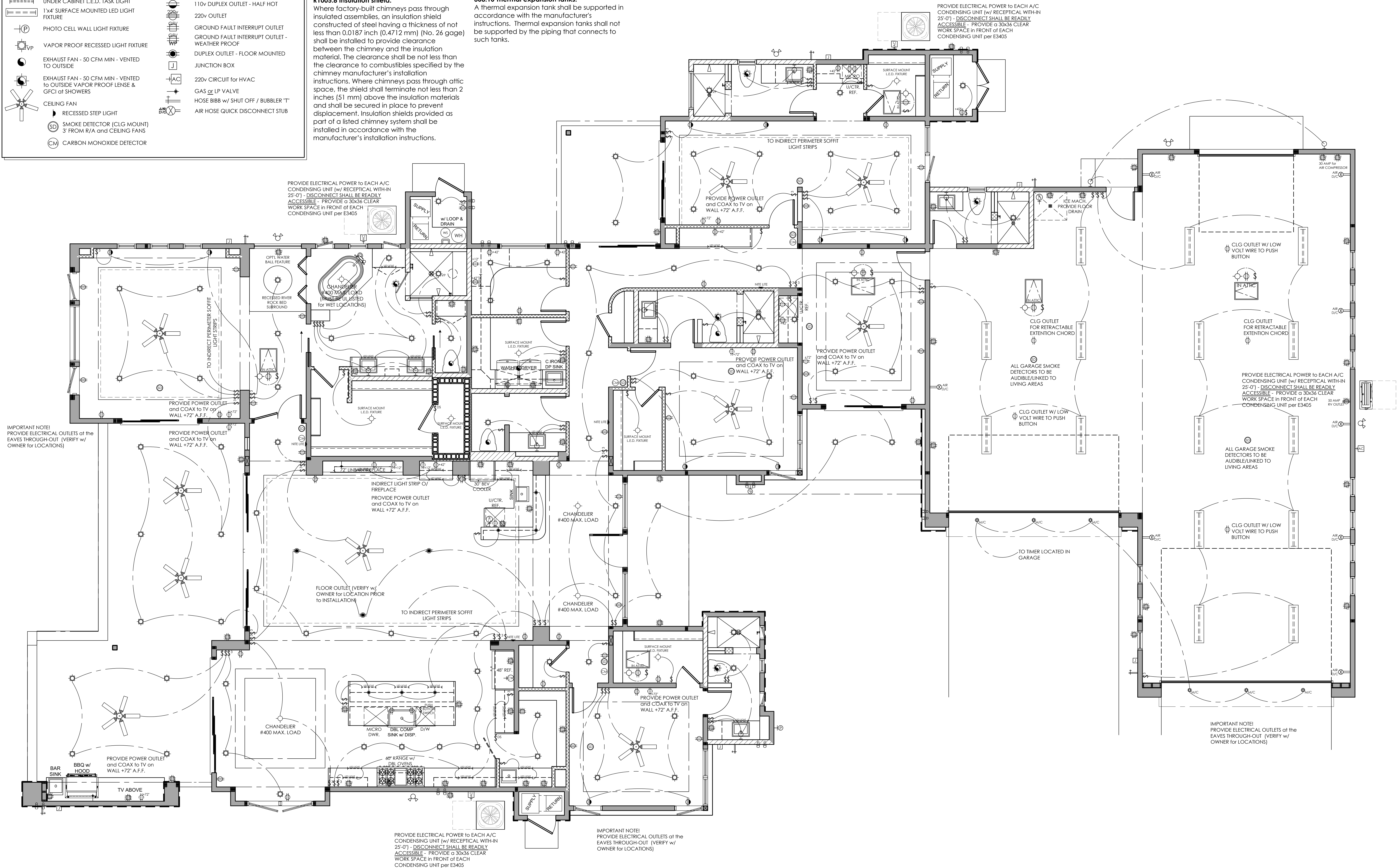
307.2.4.1 Ductless mini-split system traps.
Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain line, or a trap.

2018 INT'L PLUMBING CODE REQUIREMENTS:

308.10 Thermal expansion tanks.
A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

N1104.1 (R404.1) Lighting equipment (Mandatory).
Not less than 90 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.



CONTRACTOR:

PROJECT:

The PETERS Residence
31587/31589 CROW'S NEST DRIVE
PARKER, AZ / APN 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS PLAN TO AVOID ERRORS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS PLAN TO AVOID ERRORS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS PLAN TO AVOID ERRORS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS PLAN TO AVOID ERRORS.

REVISIONS:	
△	
△	
△	

SCALE: 1/4" = 1'-0"	JOB #: 2024-05
DRAWN: S.L.Z./S.L.Z.	CHECKED: S.L.Z.
DATE: 21 MARCH 2025	

SHEET
A6.1
© COPYRIGHT 2025

ELECTRICAL PLAN

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

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

2018 IRC MECHANICAL REQUIREMENTS:

M1411.6 Locking access port caps.

Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise secured to prevent unauthorized access.

M1502.3 Duct termination.

Exhaust ducts shall terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. If the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than 3 feet (914 mm) in any direction from openings into buildings. Exhaust duct terminations shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination.

M1502.3.1 Exhaust termination outlet and passageway size.

The passageway of dryer exhaust duct terminals shall be undiminished in size and shall provide an open area of not less than 12.5 square inches (8065 mm2).

M1502.4.2 Duct installation.

Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation. (Note: Dryer ducts shall be no less than 4 inches in diameter; therefore, they shall be installed in a wall space greater than 4 inches in width.)

M1502.4.6 Length identification.

Where the exhaust duct equivalent length exceeds 35 feet (10 668 mm), the equivalent length of the exhaust duct shall be identified on a permanent label or tag. The label or tag shall be located within 6 feet (1829 mm) of the exhaust duct connection. (Note: Duct labeling is no longer required unless the equivalent duct length exceeds 35 feet as allowed by M1502.4.5.2 and M1502.4.5.3)

M1503.6 Makeup air required.

Where one or more gas, liquid or solid fuel-burning appliance that is neither direct-vent nor uses a mechanical draft venting system is located within a dwelling unit's air barrier, each exhaust system capable of exhausting in excess of 400 cubic feet per minute (0.19 m3/s) shall be mechanically or passively provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with not fewer than one damper complying with Section M1503.6.2. (Note: Make-up air for exhaust systems in excess 400 CFM is no longer required unless natural draft appliances are provided in the residence.)

2018 INT'L PLUMBING CODE REQUIREMENTS:

308.10 Thermal expansion tanks.

A thermal expansion tank shall be supported in accordance with the manufacturer's instructions. Thermal expansion tanks shall not be supported by the piping that connects to such tanks.

2018 INT'L MECHANICAL CODE REQUIREMENTS:

307.2.4.1 Ductless mini-split system traps.

Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain lone, or a trap.

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R1005.8 Insulation shield.

Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall be not less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2 inches (51 mm) above the insulation materials and shall be secured in place to prevent displacement. Insulation shields provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instructions.

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

N1104.1 (R404.1) Lighting equipment (Mandatory).

Not less than 90 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:

R702.3.7 Water-resistant gypsum backing board.

Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1178, C1278 or C1396. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

R702.3.7.1 Limitations.

Water-resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

R702.4.2 Backer boards.

Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.

2018 IRC ELECTRICAL REQUIREMENTS:

E3703.5 Garage branch circuits.

Not less than one 120-volt, 20-ampere branch circuit shall be installed to supply receptacle outlets in attached garages and in detached garages with electric power. This circuit shall not have other outlets.

Exception: This circuit shall be permitted to supply readily accessible outdoor receptacle outlets.

E3902.8 Bathtub or shower stall receptacles.

125-volt, single phase, 15- and 20-ampere receptacles that are located within 6 feet (1829 mm) of the outside edge of a bathtub or shower stall shall have ground-fault circuit-interrupter protection for personnel. [210.8(A)(8)]

E3902.9 Laundry areas.

125-volt, single-phase, 15- and 20-ampere receptacles installed in laundry areas shall have ground-fault circuit-interrupter protection for personnel. [210.8(A)(9)]

E3902.10 Kitchen dishwasher branch circuit.

Ground-fault circuit-interrupter protection shall be provided for outlets that supply dishwashers in dwelling unit locations. [210.8(D)]

E3902.16 Arc-fault circuit-interrupter protection.

Branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreations rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected by any of the following: [210.12(A)]

- A listed combination-type arc-fault circuit interrupter, installed to provide protection of the entire branch circuit. [210.12(A)(1)]
- A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit. [210.12(A)(2)]
- A listed supplemental arc-protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:
 - The branch-circuit wiring shall be continuous from the branch-circuit over-current device to the outlet branch-circuit arc-fault circuit interrupter.
 - The maximum length of the branch-circuit wiring from the branch-circuit over-current device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 - The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit. [210.12(A)(3)]
- A listed outlet branch-circuit-type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit over-current protective device where all of the following conditions are met:
 - The branch-circuit wiring shall be continuous from the branch-circuit over-current device to the outlet branch-circuit arc-fault circuit interrupter.
 - The maximum length of the branch-circuit wiring from the branch-circuit over-current device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.
 - The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.
 - The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination-type AFCI and shall be listed as such. [210.12(A)(4)]
- Where metal outlet boxes and junction boxes and RMC, IMC, EMT, Type MC or steel-armored Type AC cables meeting the requirements of Section E3908.8, metal wireways or metal auxiliary gutters are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(5)]
- Where a listed metal or nonmetallic conduit or tubing or Type MC cable is enclosed in not less than 2 inches (50.8 mm) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit-type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(6)]

Exception: AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel-sheathed armored cable Type AC or Type MC meeting the requirements of Section E3908.8.

(Note: Arc-fault protection is now required for circuits in kitchens and laundry areas.)

E4001.11.1 Faceplate grounding.

Snap switches, including dimmer and similar control switches, shall be connected to an equipment grounding conductor and shall provide a means to connect metal faceplates to the equipment grounding conductor, whether or not a metal faceplate is installed. Metal faceplates shall be grounded. Snap switches shall be considered to be part of an effective ground-fault current path if either of the following conditions is met:

- The switch is mounted with metal screws to a metal box or metal cover that is connected to an equipment grounding conductor or to a nonmetallic box with integral means for connecting to an equipment grounding conductor.
- An equipment grounding conductor or equipment bonding jumper is connected to an equipment grounding termination of the snap switch. [404.9(B)]

E4002.14 Tamper-resistant receptacles.

In areas specified in Section E3901.1, 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles shall be listed tamper-resistant receptacles. [406.12(A)]

Exception: Receptacles in the following locations shall not be required to be tamper resistant:

- Receptacles located more than 5.5 feet (1676 mm) above the floor.
- Receptacles that are part of a luminaire or appliance.
- A single receptacle for a single appliance or a duplex receptacle for two appliances where such receptacles are located in spaces dedicated for the appliances served and, under conditions of normal use, the appliances are not easily moved from one place to another. The appliances shall be cord-and-plug-connected to such receptacles in accordance with Section E3909.4. [406.12(A) Exception]

GENERAL ELECTRICAL NOTES:

- Electrical plan is strictly diagrammatic. Contractor to obtain engineering when requested by local building officials. All work must conform to the latest IBC, IRC, plumbing, mechanical and electrical codes.
- Provide electrical service w/ 26' copper ground embedment w/ 2" concrete cover. Provide water bond near bottom of footing (MIN. 4" AWG.)
- Provide electrical service to HVAC unit(s). Verify location w/ contractor.
- Pre-wire all ceiling fans as shown.
- Plumb for natural gas (if used) for water heater. Raise fixture 18" from floor and provide vehicle barrier.
- Smoke detector to be placed 3'-0" MIN. from return air, A/C vents and ceiling fans.
- Verify w/ owner and/or contractor for:
 - Preferred locations for T.V. and phone outlets.
 - Any changes to the electrical layout.
- Verify w/ owner and/or contractor for any additional amenities.
- Provide switched outlets along perimeter of roof line for Christmas lights.
- Provide GFCI protection and bonding of metal parts at all vapor proof light fixtures.

R314.3 Smoke Alarm Location.

Smoke alarms shall be installed in the following locations:

- In each sleeping room.
- Outside each separate sleeping area in the immediate vicinity of the bedrooms.
- On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
- Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.

R314.3.1 Installation near cooking appliances.

Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section R314.3.

- Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking appliance.
- Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking appliance.
- Photoelectric smoke alarms shall not be installed less than 6 feet (1828 mm) horizontally from a permanently installed cooking appliance.

R314.5 Combination alarms.

Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of smoke alarms.

R315.1 General.

Carbon monoxide alarms shall comply with Section R315.

R315.1.1 Listings.

Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.

R315.2 Where required.

Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2.

R315.2.1 New construction.

For new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.

- The dwelling unit contains a fuel-fired appliance.
- The dwelling unit has an attached garage with an opening that communicates with the dwelling unit.

R315.3 Location.

Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

R315.4 Combination alarms.

Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

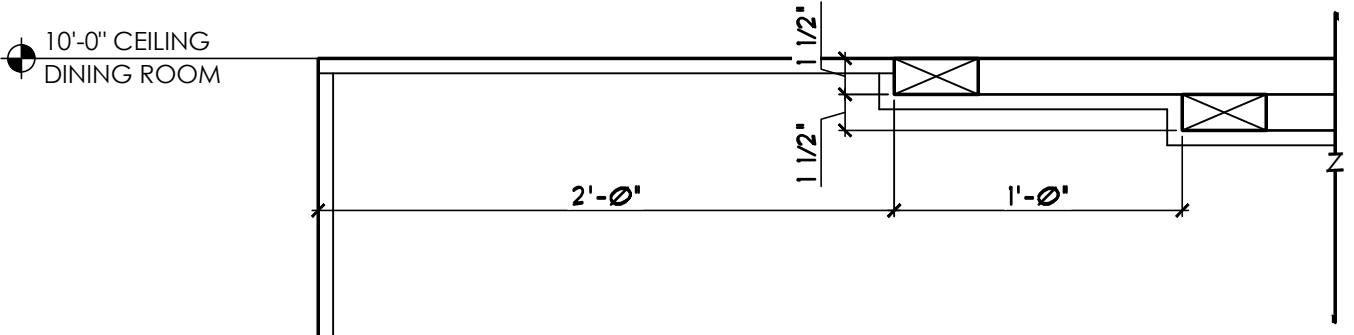
2017 NAT'L ELECTRICAL CODE REQUIREMENTS:

406.12 Tamper-resistant receptacles.

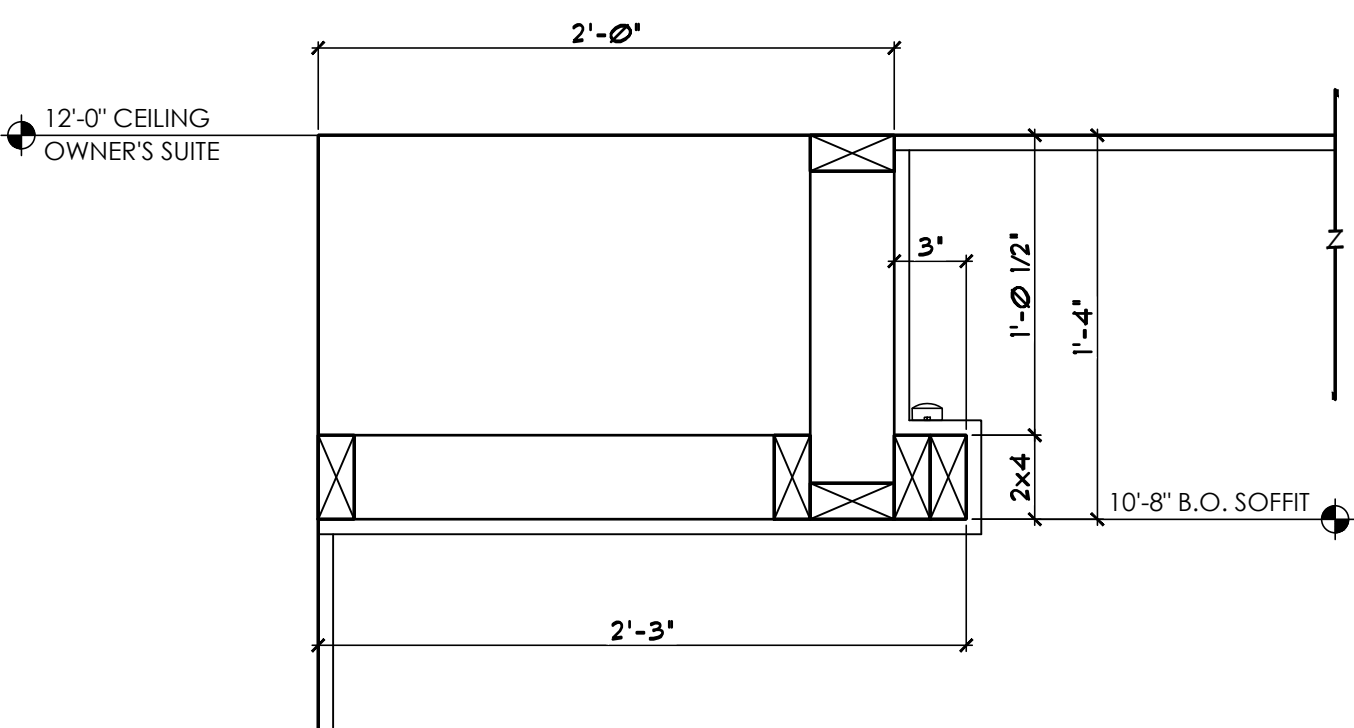
All 15- and 20-ampere, 125- and 250-volt non-locking-type receptacles in the areas specified in 406.129(1) - (7) shall be listed tamper-resistant receptacles.

- Dwelling units in all areas specified in 210.52 and 550.13
- Guest rooms and guest suites of hotels and motels
- Child care facilities
- Preschools and elementary education facilities
- Business offices, corridors, waiting rooms, and the like in clinics, medical and dental offices and outpatient facilities.
- Subset if assembly occupancies described in 518.2, to include places of waiting transportation, gymnasiums, skating rinks and auditoriums.
- Dormitories

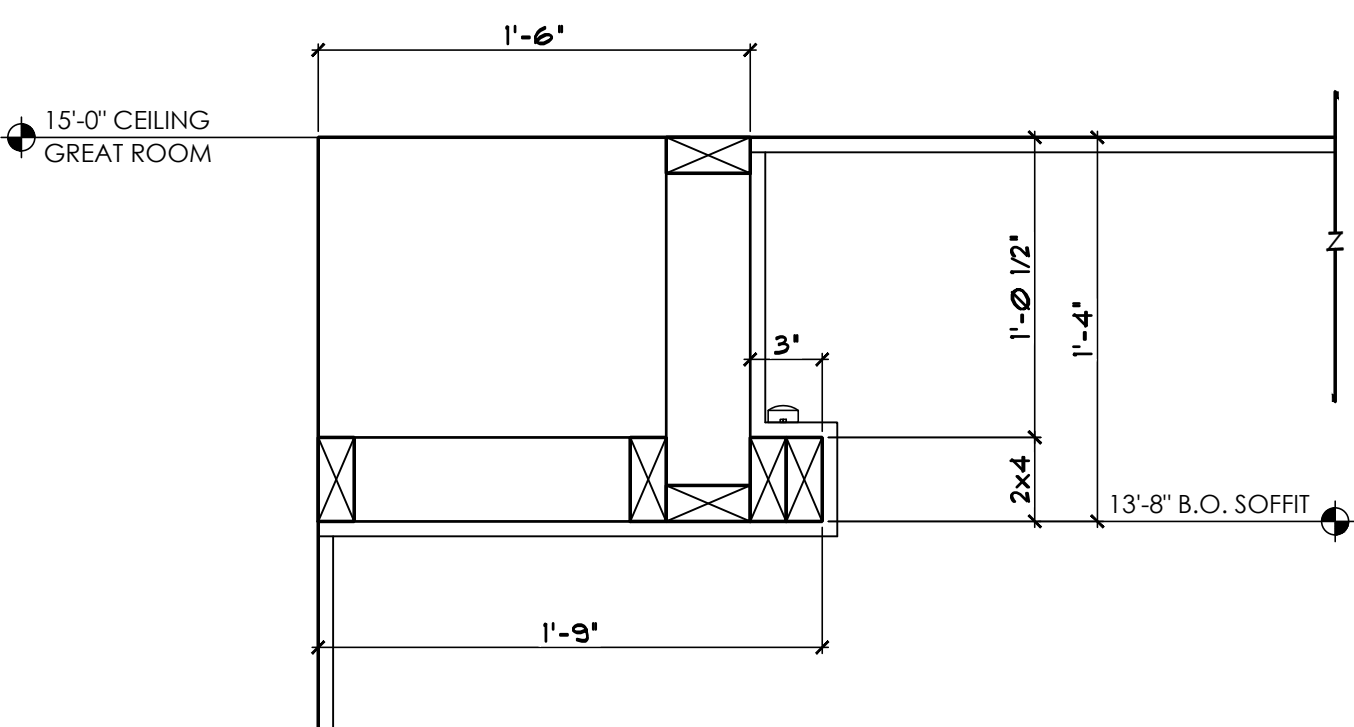
(Note: Items 4 through 7 are new requirements for tamper-resistant receptacles.)



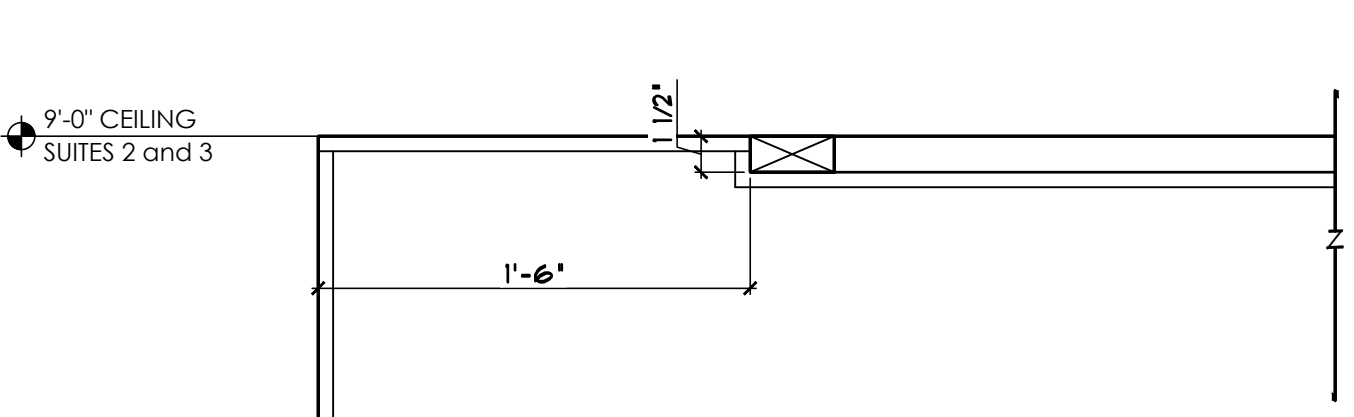
1 SOFFIT at DINING ROOM
NOT TO SCALE



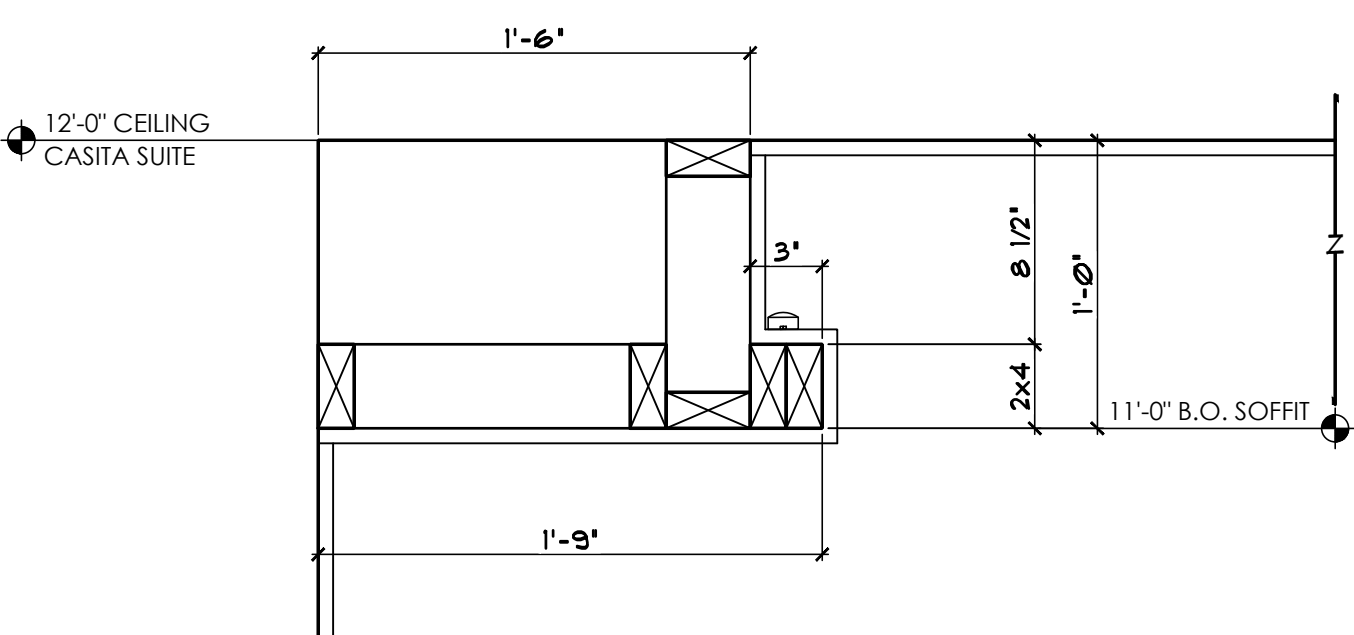
2 SOFFIT at OWNER'S SUITE
NOT TO SCALE



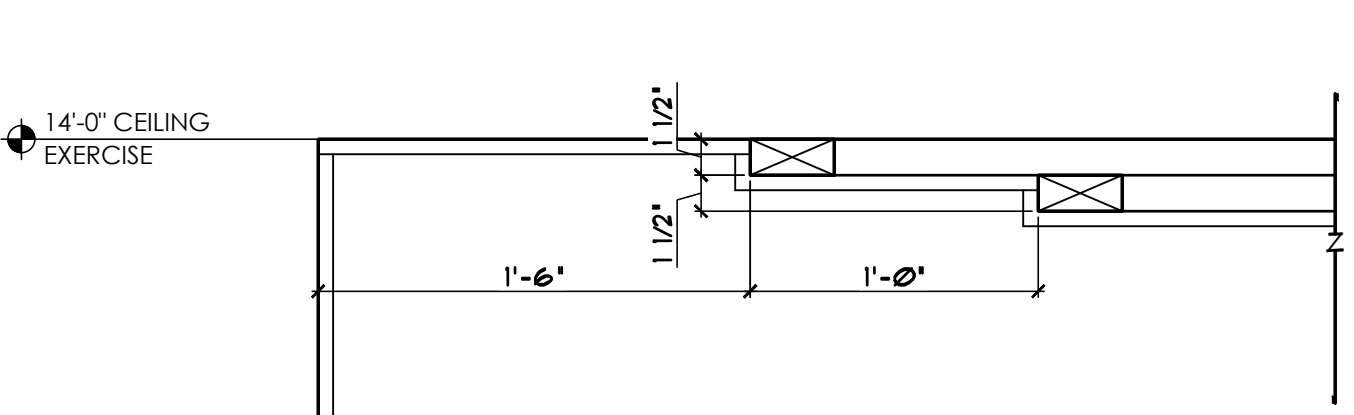
3 SOFFIT at GREAT ROOM
NOT TO SCALE



4 SOFFIT at GUEST SUITES 2 and 3
NOT TO SCALE



5 SOFFIT at CASITA SUITE
NOT TO SCALE



6 SOFFIT at BAR ROOM
NOT TO SCALE

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

CONTRACTOR:

PROJECT:

The PETERS Residence
31587/31589 CROW'S NEST DRIVE
PARKER, AZ / APN 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. THE USER AGREES TO HOLD ZETTEL GROUP, INC. HARMLESS FROM AND INDEMNIFY ZETTEL GROUP, INC. FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, THAT MAY BE ASSERTED AGAINST OR INCURRED BY ZETTEL GROUP, INC. OR ITS EMPLOYEES, AGENTS, OR SUBCONTRACTORS, IN CONNECTION WITH THE PREPARATION OF THIS PLAN TO AVOID ERRORS. THE CONTRACTOR, ON THE JOB SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

♦ GENERAL MECH., ELECTRICAL
♦ and PLUMBING NOTES

REVISIONS:	
Δ	
Δ	
Δ	

SCALE: NO SCALE	JOB #: 2024-04
DRAWN: S.L.Z./S.L.Z.	CHECKED: S.L.Z.
DATE: 05 NOVEMBER 2024	
SHEET	

A6.2

© COPYRIGHT 2024

OPTION:

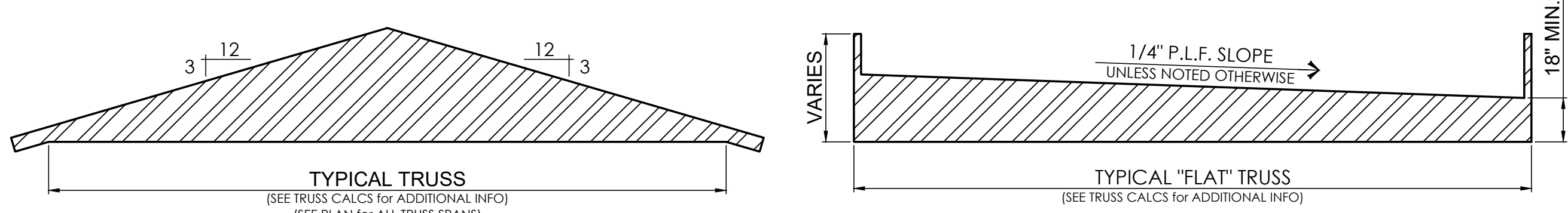
R806.5 Unvented attic and unvented enclosed rafter assemblies.

Unvented attics and unvented enclosed roof framing assemblies created by ceilings that are applied directly to the underside of the roof framing members and structural roof sheathing applied directly to the top of the roof framing members/rafters, shall be permitted where all the following conditions are met:

- The unvented attic space is completely within the building thermal envelope.
- Interior Class I vapor retarders are not installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof framing assembly.
- Where wood shingles or shakes are used, a minimum ¼-inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
- In Climate Zones 5, 6, 7 and 8, any air-impermeable insulation shall be a Class II vapor retarder, or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.
- Insulation shall comply with Item 5.3 and either Item 5.1 or 5.2:
 - Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing
 - Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.
 - Where air-permeable insulation is installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table R806.5 for condensation control.
 - Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing in accordance with Item 5.1.1 and shall be in accordance with the R-values in Table R806.5 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.
 - Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.
 - In Climate Zones 1, 2 and 3, air-permeable insulation installed in unvented attics shall meet the following requirements:
 - An approved vapor diffusion port shall be installed not more than 12 inches (305 mm) from the highest point of the roof, measured vertically from the highest point of the roof to the lower edge of the port.
 - The port area shall be greater than or equal to 1:600 of the ceiling area. Where there are multiple ports in the attic, the sum of the port areas shall be greater than or equal to the area requirement.
 - The vapor-permeable membrane in the vapor diffusion port shall have a vapor permeance rating of greater than or equal to 20 perms when tested in accordance with Procedure A of ASTM E96.
 - The vapor diffusion port shall serve as an air barrier between the attic and the exterior of the building.
 - The vapor diffusion port shall protect the attic against the entrance of rain and snow.
 - Framing members and blocking shall not block the free flow of water vapor to the port. Not less than a 2-inch (51 mm) space shall be provided between any blocking and the roof sheathing. Air-permeable insulation shall be permitted within that space.
 - The roof slope shall be greater than or equal to 3:12 (vertical/horizontal).
 - Where only air-permeable insulation is used, it shall be installed directly below the structural roof sheathing.
 - Air-impermeable insulation, if any, shall be directly above or below the structural roof sheathing and is not required to meet the R-value in Table 806.5. Where directly below the structural roof sheathing, there shall be no space between the air-impermeable insulation and air-permeable insulation.
 - The air shall be supplied at a flow rate greater than or equal to 50 CFM (23.6 L/s) per 1,000 square feet (93 m2) of ceiling. The air shall be supplied from ductwork providing supply air to the occupiable space when the conditioning system is operating. Alternatively, the air shall be supplied by a supply fan when the conditioning system is operating.
- Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

TABLE R806.5 INSULATION for CONDENSATION CONTROL

CLIMATE ZONE	MINIMUM RIGID BOARD on AIR-IMPERMEABLE INSULATION R-VALUE ^a
2B and 3B tile roof only	0 (none required)
1, 2A, 2B, 3A, 3B, 3C	R-5
4C	R-10
4A, 4B	R-15
5	R-20
6	R-25
7	R-30
8	R-35



TRUSS NOTES:

- ALL TRUSSES SHALL BE DESIGNED BY A STATE REGISTERED CIVIL ENGINEER AS REQ'D.
- ALL TRUSSES SHALL BE 24" O.C. MAX.
- FIELD VERIFY ALL TRUSS SPANS PRIOR TO ORDERING AND FABRICATION.

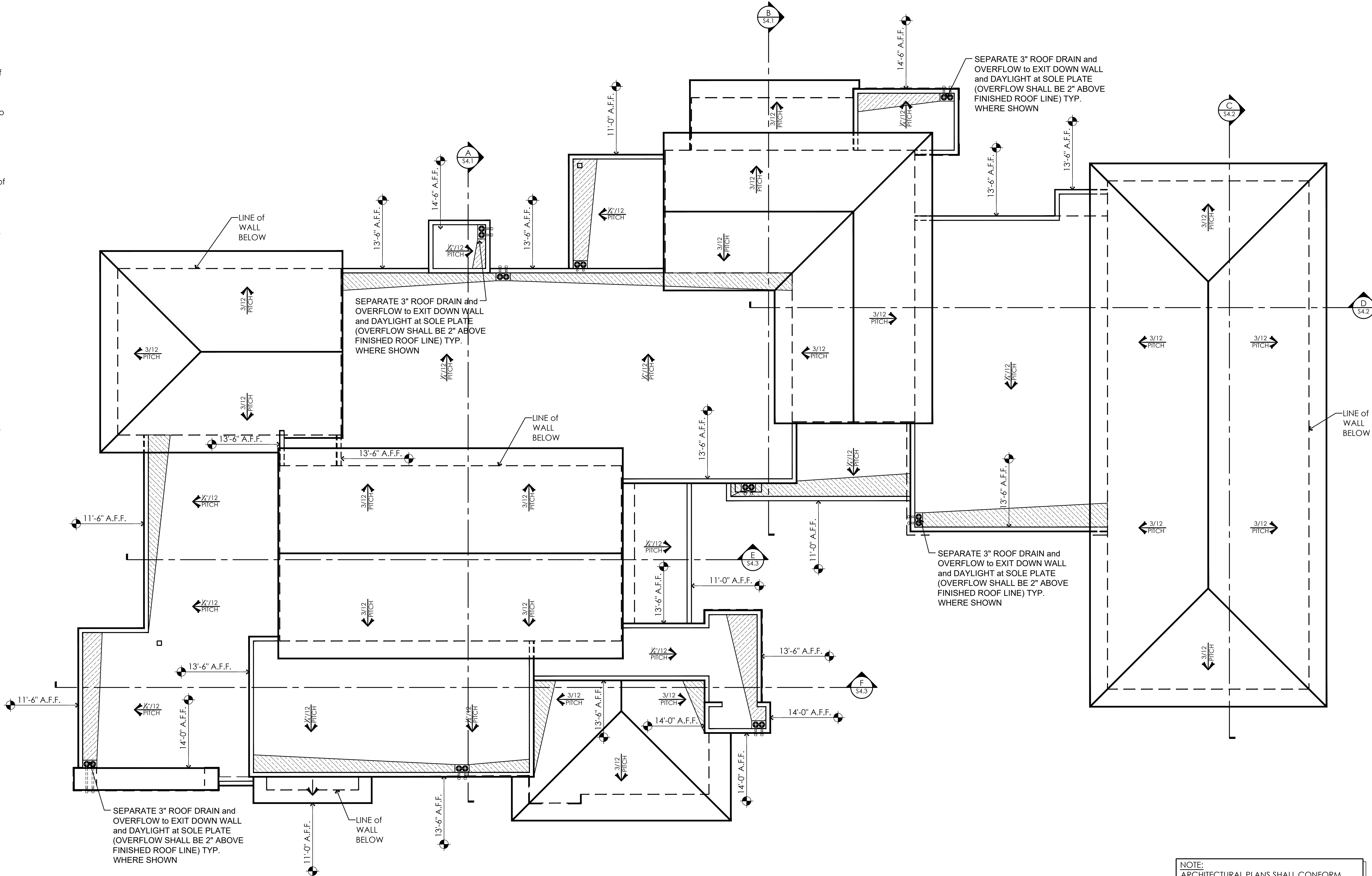
OPTION:

ATTIC VENTING NOT REQUIRED IF CEILING INSULATION IS APPLIED DIRECTLY TO THE UNDERSIDE OF THE ROOF DECK per 2018 IRC SECTION R806.4 Conditioned Attic Assemblies.

"Unvented conditioned attic assemblies (spaces between the ceiling joist of the top story and the roof rafters) are permitted under the following conditions:

- No interior vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly.
- An air-impermeable insulation is applied in direct contact to the underside/interior of the structural roof deck.

EXCEPTION: In Zones 2B and 3B, insulation is not required to be air impermeable.



ROOF DRAINAGE PLAN

SCALE: 3/16" = 1'-0"

NOTE: ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

CONTRACTOR:

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR USE OF THESE DRAWINGS WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. IS PROHIBITED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CHECKING ALL DIMENSIONS, MATERIALS, AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.	
REVISIONS:	
△	
△	
△	

SCALE: 1/4" = 1'-0"	JOB #: 2024-05
DRAWN: S.L.Z./S.L.Z.	CHECKED: S.L.Z.
DATE: 21 MARCH 2025	
SHEET	

A7.1

© COPYRIGHT 2025



Post Office Box 157
Lake Havasu City, AZ 86405-0157
Ph (928) 453.3910
www.zetteltgroup.com

CONTRACTOR:

PROJECT: The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

◆ THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC.

◆ WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THIS PLAN TO AVOID ERRORS, THE CONTRACTOR ON THE JOB SHALL CHECK ALL DIMENSIONS, STRUCTURAL MEMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

REVISIONS:	
	
	
	

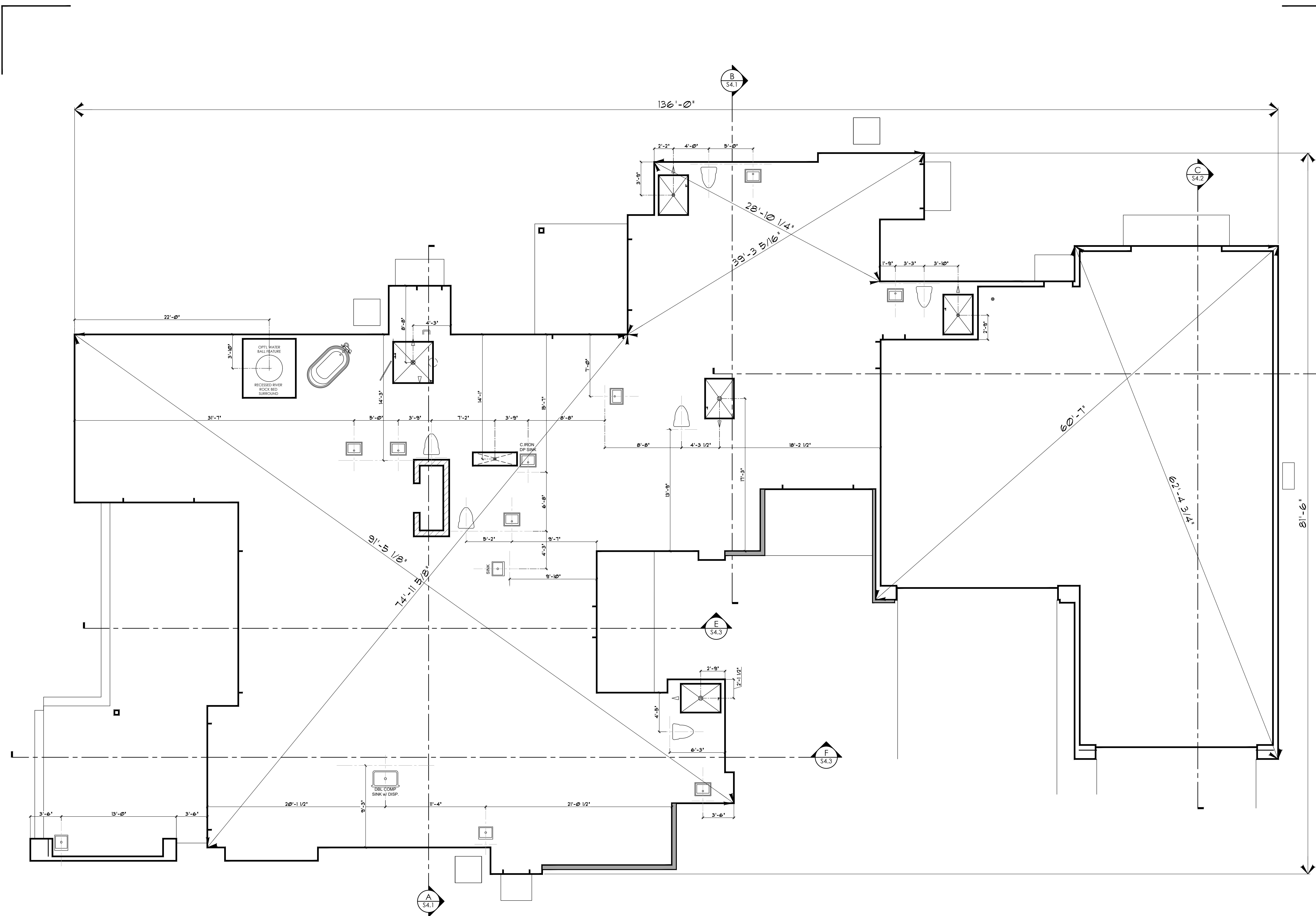
SCALE: 1/4" = 1'-0"	JOB #: 2024-03
DRAWN: S.L.Z.	CHECKED: S.L.Z.

DATE: 21 MARCH 2025

SHEET

A8.1

© COPYRIGHT 2025



NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

PLUMBING FIXTURE LOCATION PLAN
SCALE: 1/4" = 1'-0"

ANY REPRODUCTIONS OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. ■ DO NOT SCALE DRAWINGS ■ NOTIFY DESIGNERS IMMEDIATELY PRIOR TO PROCEEDING WITH WORK SHOULD ANY DISCREPANCIES OCCUR. DESIGNERS ASSUME NO RESPONSIBILITY OF WORK IN PLACES

BASIS OF DESIGN

- GOVERNING BUILDING CODE 2018 IBC
- GRAVITY DESIGN:
 - ROOF DEAD LOAD (FLAT ROOF) 20 PSF
 - ROOF DEAD LOAD (SINGLES, METAL, MEMBRANE) 25 PSF
 - ROOF LIVE LOAD 20 PSF
- SEISMIC DESIGN:
 - LATERAL SYSTEM SHEAR WALL
 - ZONE C
 - $S=0.189$ $S=0.113$ $S_{D1}=0.282$ $S_{D2}=0.178$ $R=5$ 1.0
 - SITE CLASS (ASSUMED) D
 - RISK CATEGORY II
- WIND DESIGN:
 - BASIC WIND SPEED 99 MPH
 - EXPOSURE C
- SOILS:
 - SOIL BEARING PRESSURE (ASSUMED) 1500 PSF

GENERAL

- THE GENERAL CONTRACTOR SHALL:
 - BECOME FAMILIAR WITH ALL PORTIONS OF THE CONTRACT DOCUMENTS AND ENSURE THAT ALL SUBCONTRACTORS ARE FAMILIAR WITH THOSE PORTIONS PERTAINING TO THEIR AREA OF WORK. NO DEVIATIONS WILL BE ALLOWED UNLESS AGREED UPON BY ALL PARTIES IN WRITING PRIOR TO CONSTRUCTION OR FABRICATION.
 - VERIFY ALL DIMENSIONS AND ELEVATIONS. COORDINATE ALL DOORS, WINDOWS, NON-BEARING INTERIOR AND EXTERIOR WALLS, ELEVATIONS, SLOPES, STAIRS, CURBS, DRAINS, RECESSES, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES, CHAMFERS, KERFS, ETC.
 - FIELD VERIFY ALL SITE CONDITIONS AND IMMEDIATELY NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER REGARDING ACTUAL CONDITIONS AT THE SITE WHICH ARE NOT PER THE DRAWINGS.
 - COORDINATE ALL WORK BETWEEN THE VARIOUS TRADES AND SUBCONTRACTORS. REPORT ANY MODIFICATIONS TO THE STRUCTURAL PORTION OF THE BUILDING BY OTHER TRADES TO THE ARCHITECT AND STRUCTURAL ENGINEER.
 - BE RESPONSIBLE FOR SAFETY AND PROTECTION IN AND AROUND THE JOB SITE AND/OR ADJACENT PROPERTIES.
- CONTRACT DOCUMENTS:
 - REFER TO THE SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE DRAWINGS.
 - DETAILS, SECTIONS AND NOTES SHOWN ON THE STRUCTURAL DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO ALL SIMILAR SITUATIONS ELSEWHERE, UNLESS NOTED OR SHOWN OTHERWISE.
 - THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE OVER SHOP DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.
 - INFORMATION ON DRAWINGS INDICATING EXISTING CONDITIONS IS BASED ON BEST PRESENT KNOWLEDGE, BUT MAY NOT BE ENTIRELY ACCURATE AND MUST BE FIELD VERIFIED.
- BUILDING CODE COMPLIANCE:
 - INSPECTION, TESTING, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND STANDARDS. ASTM AND IBC DESIGNATIONS SHALL BE AS AMENDED TO LATEST DATE UNLESS NOTED OTHERWISE.
- COORDINATION:
 - COORDINATE AND VERIFY ROOF, FLOOR, AND WALL OPENINGS REQUIRED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND/OR OTHER DRAWINGS PRIOR TO CONSTRUCTION. REPORT OPENINGS REQUIRED WHICH ARE NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW.
 - COORDINATE ANY CONSTRUCTION SITUATION NOT COVERED BY THESE PLANS, GENERAL NOTES, OR SPECIFICATIONS WITH THE ARCHITECT AND STRUCTURAL ENGINEER.
- CONSTRUCTION SEQUENCE, SHORING, AND BRACING REQUIREMENTS:
 - THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE METHOD, MEANS, AND SEQUENCE OF ALL STRUCTURAL ERECTION EXCEPT WHEN SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. THE CONTRACTOR SHALL TEMPORARY SHORING AND BRACING AS HIS METHOD OF ERECTION REQUIRES TO PROVIDE ADEQUATE VERTICAL AND LATERAL SUPPORT DURING ERECTION. THIS SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT MEMBERS ARE PLACED AND ALL FINAL CONNECTIONS ARE COMPLETED, INCLUDING ALL ROOF AND FLOOR ATTACHMENTS.
 - SHORING AND SUPPORTING FORM WORK FOR SUSPENDED CONCRETE OR MASONRY MATERIAL SHALL REMAIN IN PLACE AND SHALL NOT BE REMOVED UNTIL THE STRUCTURAL MEMBERS HAVE ACQUIRED SUFFICIENT STRENGTH TO SAFELY SUPPORT THEIR OWN WEIGHT AND ANY ADDITIONAL CONSTRUCTION, STORAGE, AND/OR OTHER LOADS TO WHICH THEY MAY BE SUBJECTED. IN NO CASE SHALL THEY BE REMOVED PRIOR TO 7 DAYS. RE-SHORING SHALL BE IMMEDIATELY INSTALLED UPON REMOVAL OF SUCH FORMS AND SHALL REMAIN IN PLACE UNTIL 28 DAYS AFTER PLACING OF MATERIAL OR UNTIL MATERIAL HAS REACHED ITS 28 DAY DESIGN STRENGTH, WHICHEVER IS LONGER. DO NOT REMOVE LARGE AREAS OF SHORING BEFORE STARTING RE-SHORING PROCEDURES.
 - NON-BEARING INTERIOR WALLS SHALL BE ADEQUATELY BRACED TO THE STRUCTURE ABOVE WITH ALLOWANCE FOR DEFLECTION OF THE STRUCTURE ABOVE AND/OR BELOW.
 - BUILDING WALLS WHICH RETAIN EARTH MUST BE BRACED AT THE TOP. DO NOT BACKFILL UNLESS BRACING IS PROVIDED OR UNTIL THE COMPLETE FLOOR OR ROOF SYSTEM IS IN PLACE, TYPICAL, UNLESS NOTED OTHERWISE.
- OMISSIONS AND/OR CONFLICTS:
 - OMISSIONS IN AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER AND SHALL BE RESOLVED BY THE SAME BEFORE PROCEEDING WITH ANY WORK INVOLVED.
- IN CASE OF CONFLICTS IN THE STRUCTURAL WORK, THE MOST STRINGENT REQUIREMENTS, AS DIRECTED BY THE ARCHITECT AND STRUCTURAL ENGINEER, SHALL BE IMPLEMENTED AT NO ADDITIONAL COST TO THE OWNER.
- MISCELLANEOUS:
 - DURING AND AFTER CONSTRUCTION, THE CONTRACTOR AND/OR OWNER SHALL KEEP THE LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN.
 - OBSERVATION VISITS TO THE SITE BY REPRESENTATIVES OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHALL NOT BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
- SUBMITTALS:
 - THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION, ERECTION, INSTALLATION, OR OTHERWISE BEING INCORPORATED INTO THE WORK.
 - REINFORCING STEEL SHOP DRAWINGS.
 - STRUCTURAL STEEL SHOP DRAWINGS.
 - ENGINEERED TRUSS DRAWINGS.
 - * THESE SUBMITTALS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF LICENSE OF THE ENGINEER OF RECORD.
 - A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE REVIEW OF ALL SUBMITTALS BY THE ARCHITECT AND STRUCTURAL ENGINEER.
 - REQUESTS FOR SUBSTITUTIONS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER IN WRITING. REASONS FOR THE REQUEST AND COST DIFFERENTIALS SHALL BE INCLUDED IN THE REQUESTS. SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED IN WRITING BY THE ARCHITECT AND STRUCTURAL ENGINEER.

SITE PREPARATION

- REQUIREMENTS:
 - DO NOT PLACE FOOTINGS OR FOUNDATIONS ON DISTURBED SOILS, UNDOCUMENTED FILL, DEBRIS, FROZEN SOIL, OR IN PONDED WATER.
 - ALL UNSUITABLE SOILS AND VEGETATION, SUCH AS TOPSOIL, ORGANIC SOILS, UNDOCUMENTED FILL, DISTURBED NATIVE SOILS, AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED FROM BELOW FOOTINGS, FOUNDATIONS, AND FLOOR SLABS.

CONCRETE

- CODES AND STANDARDS:
 - CONCRETE WORK SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI) EDITIONS OF:
 - ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
 - ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
 - ACI 347, "RECOMMENDED PRACTICE FOR CONCRETE FORM WORK".
- MATERIALS:
 - CEMENT SHALL CONFORM TO ASTM C150, TYPE II, PORTLAND CEMENT.
 - HARD ROCK AGGREGATES SHALL CONFORM TO ASTM C33. LIGHTWEIGHT AGGREGATES SHALL CONFORM TO ASTM C330.
 - WATER SHALL BE POTABLE.
 - AIR ENTRAINMENT SHALL CONFORM TO ASTM C680.
 - FLY ASH SHALL CONFORM TO ASTM C618.
 - CALCIUM CHLORIDE SHALL NOT BE USED.
- MIX DESIGNS:
 - ONLY ONE TYPE OF CONCRETE SHALL BE PLACED AT THE SITE AT ANY GIVEN TIME.
 - A MIX DESIGN THAT PRODUCES THE LOWEST SLUMP COMPATIBLE WITH PROPER PLACEMENT SHALL BE USED. 4" MAXIMUM.
 - CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING:

TYPE OF CONCRETE MEMBER	MINIMUM STRENGTH AT 28 DAYS (PSI)	MAX. W/C (RATIO)	DRY WEIGHT (PCF)	MAX. AGGREGATE SIZE (INCHES)	AIR ENTRAINMENT (%)	MIN. CEMENT PER YARD (LBS)
FOOTINGS:	2500	0.50	145	0'-0 3/4"	3 ±-1	517
FOUNDATION WALLS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564
SLAB ON GRADE:						
INTERIOR	2500	0.45	145	0'-0 3/4"	3 ±-1	564
EXTERIOR	2500	0.45	145	0'-0 3/4"	6 ±-1	564
SLABS ON DECK:						
LT. WT.*	2500	0.53	110	0'-0 3/4"	6 ±-1	564
COLUMNS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564
BEAMS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564

- WT. CONCRETE SHALL HAVE A MIN. SPLITTING TENSILE STRENGTH OF 450 PSI.
- LIMIT FLY ASH TO 15% OF THE TOTAL CEMENTITIOUS MATERIAL.
- PEA GRAVEL AGGREGATE AND/OR PLASTICIZER MAY BE USED IN CONGESTED AREAS WHEN REQUIRED TO PROPERLY FILL ALL Voids AND/OR FOR WORKABILITY. (CONTRACTOR'S OPTION).

- CONSTRUCTION:
 - CONCRETE SHALL BE PROPERLY VIBRATED DURING PLACEMENT.
 - PRIOR TO PLACING CONCRETE, CHECK WITH ALL TRADES TO ENSURE PROPER PLACEMENT OF OPENINGS, BLOCK OUTS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, EMBOS, DOWELS, ETC. ANCHORS, BOLTS AND DOWELS SHALL BE PLACED PRIOR TO CASTING CONCRETE.
 - CONSTRUCTION JOINTS AND BULKHEADS SHALL BE FORMED WITH A KEY WAY. ALL CONTACT SURFACES, NEW OR EXISTING, AT CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED PRIOR TO CASTING ADJACENT POUR.
 - OPENINGS IN FLOORS AND/OR WALLS SHALL HAVE ADDITIONAL REINFORCING AROUND ALL SIDES OF THE OPENING EQUIVALENT TO THE BARS CUT BY THE OPENING WITH HALF ON EACH SIDE OF THE OPENING OR 2-#5 BARS, WHICHEVER IS GREATER, UNLESS NOTED OTHERWISE. BARS PARALLEL TO THE PRINCIPAL REINFORCING SHALL RUN FULL LENGTH OF THE SPAN. BARS IN THE OTHER DIRECTION SHALL RUN 24 INCHES BEYOND THE EDGE OF THE OPENING OR END WITH A STANDARD HOOK. ALSO PROVIDE 2-#5 x 4'-0" DIAGONAL BARS AT EACH CORNER OF EACH OPENING.
 - NO PENETRATION SHALL BE ALLOWED THROUGH ANY CONCRETE BEAM, JOIST, COLUMN, PIER, OR JAMB WITHOUT THE ARCHITECT'S AND STRUCTURAL ENGINEER'S PRIOR WRITTEN APPROVAL. PENETRATIONS SHALL BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.
- FOOTINGS:
 - FOOTINGS SHALL BEAR ON PROPERLY PREPARED MATERIAL. SEE THE SITE PREPARATION NOTES.
 - FOOTINGS SHALL BE CENTERED BELOW THE WALL AND/OR COLUMN ABOVE, TYPICAL, UNLESS NOTED OTHERWISE.
 - EXTERIOR FOOTINGS SHALL BEAR BELOW THE EFFECTS OF Frost.
 - PROVIDE 2x4 BEVELED KEYWAYS IN ALL CONTINUOUS WALL FOOTINGS.
 - STAGGER FOOTING CONSTRUCTION JOINTS FROM WALL CONSTRUCTION JOINTS ABOVE BY AT LEAST 6 FEET.
 - REINFORCING IN CONTINUOUS FOOTINGS SHALL BE CONTINUOUS AT CORNERS AND/OR INTERSECTIONS BY PROVIDING PROPER LAP LENGTHS AND/OR CORNER BARS.
 - NO PENETRATIONS SHALL BE ALLOWED THROUGH ANY CONCRETE FOOTING. WHEN CONFLICTS ARISE BETWEEN UNDERGROUND PLUMBING, UTILITIES, ETC., THE FOOTING SHALL BE STEPPED DOWN BELOW THE CONFLICT AND A CONCRETE WALL, PIER, COLUMN, ETC. SHALL BE EXTENDED TO THE FOOTING AS REQUIRED.
 - H. BEARING SURFACES FOR FOOTINGS WHICH ARE, OR BECOME, UNDERMINED DURING CONSTRUCTION SHALL BE BACKFILLED WITH A LEAN-MIX CONCRETE (1000 PSI MIN.).
- SLABS ON GRADE:
 - INTERIOR SLABS ON GRADE SHALL BE A MINIMUM OF 4 INCHES THICK. SHALL BEAR ON 4 INCH MINIMUM LAYER OF FRESH-DRAINING GRAVEL, AND SHALL BE REINFORCED WITH #4 BARS AT 24" O.C. BOTH WAYS, TYPICAL, UNLESS NOTED OTHERWISE. PROVIDE CHAIRS WITH SAND PLATES FOR PROPER PLACEMENT.
 - LARGE AREAS OF INTERIOR SLABS ON GRADE SHALL BE PLACED IN STRIPS NOT TO EXCEED 120 FEET IN LENGTH NOR 30 FEET IN WIDTH WHICH ARE SUBDIVIDED BY CONSTRUCTION AND/OR CONTRACTION (CONTROL) JOINTS INTO ROUGHLY SQUARE AREAS, WHOSE SIDES SHALL NOT EXCEED 16 FEET IN EITHER DIRECTION.
 - SEE ARCHITECTURAL FOR EXTERIOR SLABS ON GRADE, TYPICAL, UNLESS NOTED OTHERWISE.

MASONRY VENEER ANCHOR TIES

- PRODUCTS:
 - MASONRY VENEER ANCHOR TIES SHALL BE ONE OF THE FOLLOWING:
 - DOWEL ANCHORS.
 - DIK-10 SEISMIC CLIP INTERLOCK SYSTEM BY HOMMANN & BARNARD.
 - ARCHITECT AND STRUCTURAL ENGINEER APPROVED TWO PIECE ADJUSTABLE HOT-DIPPED GALVANIZED TIES.
- INSTALLATION:
 - MAXIMUM SPACING SHALL BE 16" O.C. HORIZONTAL AND VERTICAL.
 - PROVIDE CONTINUOUS HORIZONTAL GALVANIZED #9 WIRE IN CENTER THIRD OF MORTAR JOINTS AT 16" O.C. ENGAGE #9 WIRE WITH ALL ANCHOR TIES.
 - CONSTRUCTION JOINTS IN MASONRY VENEER WALLS SHALL BE PROVIDED AS PER THE ARCHITECTURAL DRAWINGS, AND SHALL BE SPACED AT A MAXIMUM OF 10'-0" O.C. FOR MASONRY BLOCK VENEER.

REINFORCING STEEL

- CODES AND STANDARDS:
 - REINFORCING STEEL SHALL COMPLY WITH:
 - AMERICAN CONCRETE INSTITUTE BUILDING CODE & COMMENTARY ACI 318.
 - AMERICAN CONCRETE INSTITUTE "DETAILING MANUAL", ACI 315 (OR SP-86).
- MATERIALS:
 - REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS AND SHALL CONFORM TO ASTM A615, GRADE 60, WITH A DESIGN YIELD STRENGTH OF 60,000 PSI, EXCEPT AS NOTED BELOW.
 - DOWELS TO BE BENT IN THE FIELD DURING CONSTRUCTION SHALL BE ASTM A615, GRADE 40 OR ASTM A706, GRADE 60, "LOW ALLOY STEEL".
 - REINFORCING TO BE WELDED SHALL BE ASTM A706, GRADE 60, "LOW ALLOY STEEL".
 - MASONRY JOINT REINFORCING SHALL BE MANUFACTURED FROM WIRE WHICH CONFORMS TO ASTM A82.

- CONSTRUCTION:
 - REINFORCING SHALL BE DETAILED, BOLSTERED, AND SUPPORTED PER ACI 315.
 - REINFORCING STEEL SHALL BE FREE OF LOOSE, FLAKY RUST, SCALE, CRACKS, OIL, DIRT, AND OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND.
 - REINFORCING SHALL BE CONTINUOUS IN WALLS, BEAMS, COLUMNS, SLABS, FOOTINGS, ETC.
 - SPLICES IN CONTINUOUS REINFORCING SHALL BE MADE IN AREAS OF COMPRESSION AND/OR AT PORTIONS OF MINIMUM STRESS. TYPICAL, UNLESS NOTED OTHERWISE. LAP SPLICES SHALL BE 40 BAR DIAMETERS LONG IN CONCRETE AND 48 BAR DIAMETERS LONG IN MASONRY. MINIMUM LAP SHALL BE 24 INCHES LONG. DOWELS SHALL HAVE A MINIMUM OF 30 BAR DIAMETERS EMBEDMENT. TENSION SPLICES SHALL BE USED IN CONCRETE WHEN SPECIFICALLY NOTED, USE A CLASS S SPLICE. SPLICES IN TOP BARS IN SUSPENDED SLABS AND BEAMS SHALL BE MADE AT MID SPAN. SPLICES IN BOTTOM BARS IN SUSPENDED SLABS AND BEAMS SHALL BE MADE AT SUPPORTS.
 - BENDS SHALL BE MADE COLD. DO NOT USE HEAT. BENDS SHALL BE DONE IN THE FABRICATOR'S SHOP UNLESS SPECIFICALLY NOTED FOR THE FIELD. DO NOT UN-BEND OR RE-BEND A PREVIOUSLY BENT BAR.
 - REINFORCING STEEL IN CONCRETE SHALL BE SECURELY ANCHORED AND TIED IN PLACE PRIOR TO PLACING CONCRETE AND SHALL BE POSITIONED WITH THE FOLLOWING MINIMUM COVER:

- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH..... 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER:
 - #6 AND LARGER..... 2"
 - #5 AND SMALLER..... 1 1/2"
- CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
 - SLABS AND WALLS, #1 AND SMALLER..... 3/4"
 - BEAMS AND COLUMNS, MAIN REINFORCING OR TIES..... 1 1/2"
 - SLABS ON GRADE..... CENTER OF SLAB
- REINFORCING STEEL IN MASONRY SHALL BE PLACED PRIOR TO GROUTING AND SHALL BE PLACED, POSITIONED, AND LOCATED ACCORDING TO THE STRUCTURAL DRAWINGS. IT SHALL BE SECURED AGAINST DISPLACEMENT AT INTERVALS NOT TO EXCEED 200 BAR DIAMETERS OR TEN FEET.

- NO REINFORCING STEEL SHALL BE WELDED UNLESS SPECIFICALLY NOTED AS SUCH. USE EPOXY ELECTRODES AND ASTM A706 REINFORCING. COMPLY WITH AISC REQUIREMENTS.
- EPOXY COATED REINFORCING BARS SHALL BE USED WHEN SPECIFICALLY NOTED. INCREASE LAP SPICE LENGTHS AS REQUIRED BY THE IBC.

STRUCTURAL STEEL

- CODES AND STANDARDS:
 - STRUCTURAL STEEL WORK SHALL COMPLY WITH:
 - THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY".
 - ASTM "CODE OF STANDARD PRACTICE" EXCLUDING SECTIONS 1.5.1, 3.3 (EXCEPT SENTENCES 4.2, 7.5.4, AND 7.11.5).
 - THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE", EXCLUDING ITEMS CONFLICTING WITH AISC REQUIREMENTS.
- MATERIALS:
 - STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A572 GRADE 50 ENHANCED STEEL. STRUCTURAL STEEL PLATES SHALL CONFORM TO ASTM A58.
 - STRUCTURAL TUBE STEEL SHALL CONFORM TO ASTM A500, GRADE B, WITH A MINIMUM YIELD STRENGTH Fy=46 KSI.
 - STRUCTURAL PIPE SHALL CONFORM TO ASTM A53, WITH A MINIMUM YIELD STRENGTH Fy=36 KSI.
 - HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325. ALL OTHER BOLTS SHALL CONFORM TO ASTM A307 OR BETTER.
 - WELDED ANCHOR STUDS AND DEFORMED BAR ANCHORS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
- CONSTRUCTION:
 - FABRICATION SHALL BE DONE IN AN APPROVED FABRICATOR'S SHOP.
 - CAMBER IN BEAMS SHALL BE AS INDICATED ON PLANS.
 - PROVIDE A SHOP COAT OF PAINT ON ALL STEEL ITEMS, EXCEPT AT AREAS OF WELDING AND/OR BOLTING.
 - USE HIGH STRENGTH (8000 PSI MINIMUM AT 28 DAYS), NON-SHRINK, LIQUID EPOXY GROUT BENEATH ALL STEEL BASE PLATES AND BEARING PLATES. MIX GROUT WITH SAND OR PEA GRAVEL, AS RECOMMENDED BY THE MANUFACTURER. PLACE GROUT AS SOON AS STEEL MEMBER HAS BEEN PROPERLY POSITIONED AND ALIGNED.
 - WHERE STRUCTURAL STEEL WELD FLANGE, PIPE, OR TUBE SECTIONS ARE EMBEDDED IN CONCRETE OR MASONRY AND REINFORCING BARS BUTT TO IT, DEFORMED BAR ANCHORS OR REINFORCING BARS WITH THE SAME SIZE AND SPACING AS THE ADJACENT REINFORCING BARS, 48 BAR DIAMETERS LONG, SHALL BE WELDED TO THE STRUCTURAL STEEL. THE MANUFACTURER'S WELDING PROCEDURES SHALL BE ADHERED TO.
- BOLTED CONNECTIONS:
 - BOLTS SHALL BE 3/4" DIAMETER, UNLESS NOTED OTHERWISE.
 - BOLT SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE.
 - STEEL TO STEEL BOLTED CONNECTIONS SHALL BE MADE WITH ASTM A505 HIGH STRENGTH BOLTS AND NUTS, UNLESS NOTED OTHERWISE. BOLTS SHALL CARRY THE IDENTIFYING MARK OF THREE (3) RADIAL LINES.
 - ALL OTHER BOLTED CONNECTIONS SHALL BE MADE WITH BOLTS AND NUTS CONFORMING TO ASTM A307 UNLESS NOTED OTHERWISE, INCLUDING ANCHOR BOLTS.
 - BOLTED CONNECTIONS SHALL BE TIGHTENED AND SHALL HAVE WASHERS AS REQUIRED BY AISC UNLESS NOTED OTHERWISE.
 - ENLARGING OF HOLES SHALL BE ACCOMPLISHED BY MEANS OF DRAMING. DO NOT USE A TORCH ON ANY BOLT HOLES.
- WELDED CONNECTIONS:
 - WELDED CONNECTIONS SHALL BE MADE USING LOW HYDROGEN MATCHING FILLER MATERIAL ELECTRODES, UNLESS NOTED OTHERWISE.
 - WELDERS SHALL BE CURRENTLY CERTIFIED ACCORDING TO AWS WITHIN THE LAST 12 MONTHS. ALL WELDING PROCEDURES SHALL BE PRE-QUALIFIED. WELDERS SHALL FOLLOW WELDING PROCEDURES.
 - WELDING AND GAS CUTTING SHALL BE DONE PER AWS.
 - WELDS SHALL HAVE THE SLAG REMOVED.

GENERAL FRAMING NOTES

- CODES AND STANDARDS:
 - MASONRY WALL CONSTRUCTION SHALL CONSIST OF OF GRADE N, TYPE II, MEDIUM WEIGHT OR NORMAL-WEIGHT, CLOSED END, CONCRETE MASONRY UNITS (CMU's) CONFORMING TO ASTM C90.
 - MORTAR SHALL BE TYPE "S" AS DEFINED BY THE ACI AND SHALL CONFORM TO ASTM C270, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. IT SHALL CONSIST OF 1.0 PART PORTLAND CEMENT, 0.25 TO 0.5 PARTS RETARDED LIME OR PUTTY LIME, AND 3.5 TO 4.5 PARTS SAND. ALL MEASUREMENTS ARE PARTS BY VOLUME. NO ADDITIVES ARE ALLOWED.
 - GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. IT SHALL BE OF A FLUID, CONSISTENT AND SHALL CONSIST OF A MINIMUM OF 1.0 PART PORTLAND CEMENT, 2.25 TO 3.0 PARTS SAND, AND MAY CONTAIN AN ADDITIONAL 1 TO 2 PARTS FINE GRAIN FILLER. IF GROUT IS USED OR MORE IN EVERY DIRECTION, ALL MEASUREMENTS ARE PARTS BY VOLUME. DO NOT USE FLY ASH IN GROUT.
 - PREISM TESTS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF Fm=1500 PSI AT 28 DAYS.
- CONSTRUCTION:
 - ALL MASONRY BLOCK SHALL BE STORED UNDER COVER AT THE JOB SITE.
 - FACE SHELLS SHALL BE FULLY BODDED.
 - MORTAR JOINTS SHALL BE TOOLED CONCAVE.
 - DO NOT USE MORTAR FOR GROUT.
 - DO NOT USE ANY FROZEN MATERIAL.

- VERIFY ALL BEAM SIZES WITH ENGINEERING SPECIFICATIONS.
- ALL BEAMS AND HEADERS OVER 48" SHALL BE SUPPORTED BY DOUBLE TRIMMERS UNLESS NOTED OTHERWISE.
- TRUSS MANUFACTURER SHALL PROVIDE ENGINEERING SPECS. FOR ALL TRUSSES.
- USE 7/16" O.S.B. OR CDX PLYWOOD SHEATHING WITH 64 NAILS @ 6" O.C. AT EDGES OF ROOF 104 NAILS @ 4" O.C. AT GABLE ENDS SPACE NAILS 12" O.C. ON INTERMEDIATE MEMBERS STAGGER SHEATHING JOINTS PLYWOOD PERP. TO RAFTERS AND TRUSSES
- SOLID BLOCK BETWEEN TRUSSES. HOLD DOWN EVERY 3RD BLOCK FOR ATTIC VENTILATION.
- ALL OVER FRAME AREAS TO HAVE FULL ROOF SHEATHING BELOW.
- PROVIDE SQUASH BLOCKING AT RIM JOIST BELOW ALL POSTS FROM ROOF, HEADER OR BEAM POINT LOADS.
- PROVIDE DOUBLE FLOOR JOISTS BELOW ALL PARALLEL BEARING WALLS
- ALL FRAMING LUMBER SHALL BE HEM FIR OR BETTER UNLESS A HIGHER GRADE IS NOTED OTHERWISE.
- GLULAM BEAMS SHALL BE 24F-V4 D/P/DF FOR SINGLE SPANS AND 24F-V8 D/P/DF FOR MULTIPLE SPANS, AND CANTILEVERED SPANS.
- ALL RAFTERS AND JOISTS OVER THREE FEET LONG SHALL BE HANGEROED IF NOT SUPPORTED BY MORTAR BRACKING. ALL HANGERS AND OTHER WOOD CONNECTIONS MUST BE DESIGNED TO CARRY THE CAPACITY OF THE MEMBER THAT THEY ARE SUPPORTING.
- FRAMING CONNECTIONS NOTED ON THE DRAWINGS ARE SIMPSON STRONGTIE OR EQUAL. INSTALL WITH THE CATALOG DESIGNATED CONNECTOR IN EACH HOLE.
- NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED OR APPROVED BY ENGINEER.
- LAG SCREWS SHALL BE INSERTED IN A DRILLED PILOT HOLE 60%-75% OF THE SHANK DIAMETER BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. ALL NUTS, BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH AN OVERSIZED WASHER.
- NAILS TO BE COMMON WIRE UNLESS OTHERWISE NOTED
- ALL BOLT HOLES SHALL BE DRILLED WITH A BIT 1/32" TO 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER.
- ALL JOINTS IN WALL SHEATHING SHALL OCCUR IN THE MIDDLE OF A PLATE OR BLOCK AND NAILS ON EACH SIDE OF THE JOINT WITH EDGE NAILING PER SHEARWALL SCHEDULE.
- ALL OVER BUILT ROOF RAFTERS SHALL BE BRACED VERTICALLY TO THE TRUSSES BELOW AT 6'-0" O.C. MAXIMUM IN ORDER TO BRACE THE LOAD EVENLY OVER THE TRUSSES.
- PROVIDE 1/2" MINIMUM CLEARANCE BETWEEN TOP PLATE OF INTERIOR PARTITIONS AND BOTTOM CHORD OF TRUSSES (TO ENSURE THAT LOADING WILL BE AS DESIGNED).
- DOUBLE TOP PLATE WITH MINIMUM 48" LAP SPICE.
- COLUMNS AND POSTS LOCATED ON CONCRETE OR MASONRY FLOORS OR DECKS EXPOSED TO THE WEATHER OR TO WATER SPLASH OR IN BASEMENTS, AND WHICH SUPPORT PERMANENT STRUCTURES, SHALL BE SUPPORTED BY CONCRETE PIERS OR METAL PIERSTABS PROJECTING ABOVE FLOORS UNLESS APPROVED WOOD OF NATURAL RESISTANCE NO DECAY OR TREATED WOOD IS USED. THE PIERSTABS SHALL PROJECT SPACES AT LEAST 4" ABOVE EXPOSED EARTH AND AT LEAST 1" ABOVE SUCH FLOORS.
- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE IBC, AND LOCAL ORDINANCES.
- CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION.

WOOD TRUSS NOTES

- BOTTOM CHORDS OF TRUSSES, ACTING AS CEILING MEMBERS MUST BE ABLE TO SUPPORT A 10 PSF LIVE LOAD PER IBC REQUIREMENTS.
- THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF THE PRE-ENGINEERED TRUSSES, AND SHALL DESIGN THE TRUSSES PER ATTACHED ENGINEERING SPECS.
- THE TRUSSES SHALL BE DESIGNED TO CARRY ANY ADDITIONAL LOADS DUE TO MECHANICAL UNITS, OVERHEAD DUCTS, ROOF OVERSILLS, ETC.
- THE TRUSSES SHALL ALSO BE DESIGNED PER THE IBC, AND LOCAL ORDINANCES.
- ALL MEMBERS SHALL BE DESIGNED FOR COMBINED STRESSES, BASED ON THE WORST LOADING CONDITION.
- THE TRUSS MANUFACTURER SHALL INDICATE PROPER BRACING OF COMPRESSION CHORD MEMBERS @ 6'-0" LONG (OR LONGER), AS WELL AS BRACING FOR TRUSS ERECTION.
- ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE TRUSSES PER THE TRUSS MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. NO WEB OR CHORD MEMBERS SHALL BE MODIFIED IN THE FIELD.
- THE PROJECT ENGINEER, OR ENGINEER OF RECORD, IS NOT RESPONSIBLE FOR THE PRE-ENGINEERED TRUSSES, NOR FOR THE INSTALLATION ETC. OF THE TRUSSES. TRUSS PLANT SHALL PROVIDE LICENSED ENGINEERED PLAN, CONTRACTOR TO VERIFY TRUSS LAYOUT IS CONSISTENT WITH THESE PLANS. ENGINEER SHOULD BE NOTIFIED OF ANY DEVIATION.
- FABRICATION OF TRUSSES SHALL BE AS APPROVED BY TPI EXCEPT THAT THIS SPECIFICATION SHALL GOVERN WHEN IT EXCEEDS TPI REQUIREMENTS.
- FABRICATE TRUSSES FROM APPROVED SHOP DRAWINGS.
- FABRICATE TRUSSES IN JOGS WITH MEMBERS ACCURATELY CUT TO PROVIDE GOOD BRACING AT JOINTS. JOINTS SHALL BE ACCEPTABLE IF THE AVERAGE OPENING BETWEEN ENDS OF MEMBERS IMMEDIATELY AFTER FABRICATION IS LESS THAN 1/16", EXCEPT THAT TRUSS COMPRESSION CHORD JOINTS AT SPLICES AND RIDGES SHALL HAVE FULL CONTACT BETWEEN MEMBERS.
- EACH CHORD SECTION SHALL BE INVOLVED IN TWO PANEL POINTS BEFORE BEING SPLICED.
- PROVIDE 1/8" CAMBER FOR EACH 6 FEET OF TRUSS UNLESS OTHERWISE INDICATED.
- TRUSS FABRICATORS USING METAL PLATES SHALL HAVE PLANT INSPECTED FOUR TIMES PER YEAR BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH TPI REGULATIONS AND COPIES OF INSPECTIONS MADE AVAILABLE TO OWNER UPON REQUEST.

MASONRY

- CODES AND STANDARDS:
 - MASONRY WORK SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".
- MATERIALS:
 - MASONRY WALL CONSTRUCTION SHALL CONSIST OF OF GRADE N, TYPE II, MEDIUM WEIGHT OR NORMAL-WEIGHT, CLOSED END, CONCRETE MASONRY UNITS (CMU's) CONFORMING TO ASTM C90.
 - MORTAR SHALL BE TYPE "S" AS DEFINED BY THE ACI AND SHALL CONFORM TO ASTM C270, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. IT SHALL CONSIST OF 1.0 PART PORTLAND CEMENT, 0.25 TO 0.5 PARTS RETARDED LIME OR PUTTY LIME, AND 3.5 TO 4.5 PARTS SAND. ALL MEASUREMENTS ARE PARTS BY VOLUME. NO ADDITIVES ARE ALLOWED.
 - GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. IT SHALL BE OF A FLUID, CONSISTENT AND SHALL CONSIST OF A MINIMUM OF 1.0 PART PORTLAND CEMENT, 2.25 TO 3.0 PARTS SAND, AND MAY CONTAIN AN ADDITIONAL 1 TO 2 PARTS FINE GRAIN FILLER. IF GROUT IS USED OR MORE IN EVERY DIRECTION, ALL MEASUREMENTS ARE PARTS BY VOLUME. DO NOT USE FLY ASH IN GROUT.
 - PREISM TESTS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF Fm=1500 PSI AT 28 DAYS.
- CONSTRUCTION:
 - ALL MASONRY BLOCK SHALL BE STORED UNDER COVER AT THE JOB SITE.
 - FACE SHELLS SHALL BE FULLY BODDED.
 - MORTAR JOINTS SHALL BE TOOLED CONCAVE.
 - DO NOT USE MORTAR FOR GROUT.
 - DO NOT USE ANY FROZEN MATERIAL.

- GROUT SHALL BE POURED IN ACCORDANCE WITH LOW LIFT PROCEDURES PER THE IBC, TYPICAL, UNLESS NOTED OTHERWISE.
- GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING AND RECONSOLIDATED AFTER EXCESS MOISTURE HAS BEEN ABSORBED BUT BEFORE WORKABILITY IS LOST.
- ALL CELLS WHICH CONTAIN REINFORCING, BOLTS, ANCHORS, ETC. AND AS OTHERWISE SPECIFIED SHALL BE GROUTED SOLID. ALL CELLS WHICH ARE TO BE GROUTED SHALL BE CLEAN AND FREE FROM DELETERIOUS MATERIALS.
- GROUT SOLID AROUND ALL JOIST AND BEAM ENDS, TYPICAL UNLESS NOTED OTHERWISE.
- HOLES FOR BOLTS IN MASONRY FACE OR END SHELLS SHALL HAVE A DIAMETER TWO INCHES LARGER THAN THE BOLT DIAMETER AND THE HOLE SHALL BE FILLED WITH GROUT.
- NO PENETRATION SHALL BE ALLOWED THROUGH ANY MASONRY BEAM, COLUMN, PIER, OR JAMB WITHOUT THE ARCHITECT'S AND STRUCTURAL ENGINEER'S PRIOR WRITTEN APPROVAL. PENETRATIONS SHALL BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.
- PRIOR TO PLACING MASONRY, CHECK WITH ALL TRADES TO ENSURE PROPER PLACEMENT OF OPENINGS, BLOCK OUTS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, EMBOS, DOWELS, ETC.
- WALLS:
 - MASONRY WALLS SHALL BE CONSTRUCTED UTILIZING COMMON RUNNING BOND, TYPICAL, UNLESS NOTED OTHERWISE.
 - MASONRY WALLS SHALL BE BUILT AS AN INTEGRAL UNIT AT CORNERS AND INTERSECTIONS. REINFORCING SHALL BE CONTINUOUS AND BACK TO BACK END SHELLS SHALL BE REMOVED.
 - MASONRY WALLS SHALL BE REINFORCED AS FOLLOWS, UNLESS NOTED OTHERWISE.

WALL THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
6"	1-#4 @ 32" O.C.	1-#4 @ 48" O.C.
8"	1-#6 @ 32" O.C.	2-#5 @ 48" O.C.
10"	1-#6 @ 32" O.C.	2-#6 @ 48" O.C.
12"	1-#6 @ 32" O.C.	2-#6 @ 48" O.C.

- PROVIDE LARGER-TYPE JOINT REINFORCING CONSISTING OF 2-#9 WIRES (3-#9 WIRES AT VENEER) AT 16" O.C. HORIZONTALLY IN ALL MASONRY WALLS. SEE PLANS, SCHEDULES, AND DETAILS FOR OTHER REINFORCING REQUIREMENTS.
- PLACE VERTICAL REINFORCING IN THE CENTER OF THE WALL UNLESS EACH FACE IS SPECIFIED OR UNLESS NOTED OTHERWISE.
- VERTICAL REINFORCING SHALL BE DOWELED TO CONCRETE FOOTING OR FOUNDATION WALL BELOW AND TO STRUCTURE ABOVE WITH THE SAME SIZE BAR AND SPACING, TYPICAL, UNLESS NOTED OTHERWISE.
- PROVIDE VERTICAL REINFORCING IN GROUTED CELL AT ALL CORNERS AND INTERSECTIONS.
- PROVIDE CORNER BARS AT ALL INTERSECTIONS AND CORNERS.
- USE SAME SIZE BAR AND SPACING AS THE HORIZONTAL REINFORCING.
- HORIZONTAL REINFORCING SHALL TERMINATE AT THE ENDS OF WALLS AND AT OPENINGS WITH A STANDARD HOOK.
- HORIZONTAL REINFORCING SHALL OCCUR AT THE TOP AND BOTTOM CORNERS OF ALL MASONRY WALLS EXCEPT THE BOTTOM CORNER. HORIZONTAL REINFORCING MAY BE OMITTED WHEN THE WALL IS DOWELED TO A CONCRETE FOUNDATION WALL BELOW.
- OPENINGS IN WALLS WHICH EXCEED 24 INCHES IN EITHER DIRECTION SHALL BE REINFORCED WITH A MINIMUM OF 2-#5 BARS IN GROUTED SPACE ON ALL SIDES OF THE OPENING. TYPICAL, UNLESS NOTED OTHERWISE. VERTICAL BARS SHALL EXTEND THE FULL HEIGHT OF THE WALL BETWEEN PARTITIONS. HORIZONTAL BARS SHALL EXTEND A MINIMUM OF 24 INCHES BEYOND THE EDGES OF THE OPENING.

- PENETRATIONS THROUGH ANY MASONRY WALL SHALL BE BUILT INTO THE WALL AS THE WALL IS BEING CONSTRUCTED AND SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
- CONSTRUCTION JOINTS IN REINFORCED MASONRY WALLS SHALL NOT OCCUR AT THE EDGE OF BEAM SUPPORTS AND SHALL BE PROVIDED PER THE STRUCTURAL DRAWINGS.
- WHERE HORIZONTAL REINFORCING BARS JOINT CONCRETE WALLS, COLUMNS, OR PILASTERS, REINFORCING SHALL BE CONTINUOUS. ALSO, A KEY SHALL BE PROVIDED BETWEEN THE MASONRY AND THE CONCRETE. FILL KEY WITH GROUT.

- BEAMS:
 - BEAMS SHALL BE BUILT AS AN INTEGRAL PART WITH THE SUPPORT. NO TOOTH OR DOWEL ONLY WILL BE PERMITTED. MASONRY UNITS WITH ONE END OPEN-ENDED SHALL BE USED IN ALL MASONRY BEAMS. BACK-TO-BACK END SHELLS ARE NOT ALLOWED. GROUT ALL MASONRY BEAMS SOLID FOR FULL DEPTH AND WIDTH SHOWN IN MASONRY BEAM SCHEDULE.
 - REINFORCING IN THE MASONRY BEAM SCHEDULE IS AN ADDITION TO STANDARD WALL REINFORCING.
 - HORIZONTAL REINFORCING BARS IN THE TOP OF THE MASONRY BEAM SHALL BE PLACED IN THE TOP 4 INCHES OF THE BEAM AND SHALL EXTEND A MINIMUM OF 24 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING OR SHALL BE HOOKED IF REQUIRED.
 - HORIZONTAL REINFORCING BARS IN THE BOTTOM OF THE MASONRY BEAM SHALL BE PLACED IN THE BOTTOM 4 INCHES OF THE BEAM AND SHALL EXTEND A MINIMUM OF 24 INCHES BEYOND THE EDGE OF THE OPENING OR SHALL BE HOOKED IF REQUIRED.
 - VERTICAL REINFORCING BARS SHALL HOOK AROUND THE BOTTOM REINFORCING BARS. THEY SHALL ALSO HOOK AROUND THE TOP HORIZONTAL REINFORCING BARS OR EXTEND INTO THE WALL ABOVE THE MASONRY BEAM A MINIMUM OF 48 BAR DIAMETERS.
 - DO NOT SPICE HORIZONTAL TOP OR BOTTOM BARS, TYPICAL, UNLESS NOTED OTHERWISE.

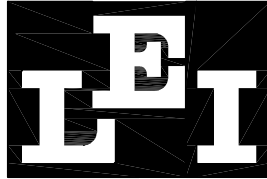
- FOR OPENINGS NOT SHOWN, USE SIMILAR BEAM AS SHOWN IN THAT WALL OR TYPE OF WALL FOR SIMILAR OPENINGS. VERIFY WITH THE STRUCTURAL ENGINEER.
- USE THE FOLLOWING MASONRY BEAM SIZES FOR OPENINGS IN NON-BEARING MASONRY WALLS:

WIDTH OF OPENING (FEET)	BEAM WIDTH (INCHES)	BEAM DEPTH (INCHES)	HORIZONTAL REINFORCING
UP TO 4'-0"	SAME AS WALL	16	2 #5 BOTTOM
UP TO 6'-0"	SAME AS WALL	24	2 #5 TOP & BOTTOM
UP TO 10'-0"	SAME AS WALL	32	2 #5 TOP & BOTTOM
- FOR WALL OPENINGS CONTACT THE STRUCTURAL ENGINEER. SEE THE MASONRY BEAM SCHEDULE FOR ADDITIONAL INFORMATION.

- COLUMNS:
 - GROUT JAMBS SOLID FOR FULL HEIGHT OF WALL (FLOOR TO FLOOR AND/OR ROOF) AT SIDES OF OPENING. ONE CELL FOR EACH 4'-0" OF SPAN OR PORTION THEREOF. REINFORCE WITH 2-#6 VERTICAL BARS IN EACH GROUTED CELL WITH ONE BAR PLACED AT EACH FACE OF WALL, TYPICAL, UNLESS NOTED OTHERWISE. SEE PLANS, SCHEDULES, AND DETAILS FOR OTHER REINFORCING REQUIREMENTS.

SPECIAL INSPECTION

- SPECIAL INSPECTION SHALL BE REQUIRED FOR THE FOLLOWING ITEMS PER CHAPTER 17 OF THE IBC.
 - INSTALLATION OF POST-INSTALLED CONCRETE ANCHORS PER MANUFACTURER'S SPECIFICATIONS



ENGINEERS

SURVEYORS

PLANNERS

3302 No. Main Street
Spanish Fork, UT 84660
PH: 801-798-0555
Fax: 801-798-9393
office@lei-eng.com
www.lei-eng.com

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

* THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF THE GROUP INC.
* WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THIS PLAN TO AVOID ERRORS, THE MAKERS CANNOT
GUARANTEE THE ACCURACY OF THE INFORMATION CONTAINED HEREIN.
* THE CONTRACTOR, ON THE BASIS OF THESE DRAWINGS, SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS
AND BE RESPONSIBLE FOR SAME.

♦ STRUCTURAL
♦ NOTES & SCHEDULES

REVISIONS:



SCALE: 1/4"=1'-0"
DRAWN: EBM
DATE: 06 MAY 2025
JOB #: 2025-2154
CHECKED: LEI ENG R

SHEET

SO.1

© COPYRIGHT 2019

FOOTING SCHEDULE												
DESIG.	LENGTH	WIDTH	DEPTH	LENGTHWISE REINFORCEMENT				CROSSWISE REINFORCEMENT				NOTE
				QTY.	SIZE	LENGTH	SPACING	QTY.	SIZE	LENGTH	SPACING	
FT1A	CONT.	12"	20"	2	#4	CONT.	EQ.	-	-	-	-	1250 PLF (1) TOP, (1) BOTTOM
FT1B	CONT.	12"	14"	2	#4	CONT.	EQ.	-	-	-	-	1288 PLF (1) TOP, (1) BOTTOM
FT1C	CONT.	24"	14"	4	#4	CONT.	EQ.	-	-	-	-	2650 PLF (2) TOP, (2) BOTTOM
FT1D	CONT.	24"	14"	8	#4	CONT.	EQ.	-	-	-	-	(4) TOP, (4) BOTTOM
FT2A	CONT.	12"	16"	2	#4	CONT.	EQ.	-	-	-	-	1300 PLF (1) TOP, (1) BOTTOM
FT2A	CONT.	18"	12"	2	#4	CONT.	EQ.	-	-	-	-	2025 PLF
FT3	24"	24"	12"	3	#4	18"	EQ.	3	#4	18"	EQ.	5400 LBS
FT4	30"	30"	12"	4	#4	24"	EQ.	4	#4	24"	EQ.	8438 LBS
FT5	36"	36"	12"	4	#4	30"	EQ.	4	#4	30"	EQ.	12150 LBS
FT6	42"	42"	12"	5	#4	36"	EQ.	5	#4	36"	EQ.	16536 LBS
FT7	78"	60"	16"	12	#4	72"	EQ.	9	#4	54"	EQ.	43875 LBS (2) MATS

1. FC-2500 PSI, 140,000 PSI, NO SPECIAL INSPECTION REQUIRED.
2. FOOTINGS SHALL BEAR ON SUFFICIENT UNDISTURBED NATIVE SOILS OR STRUCTURAL COMPACTED FILL (95% COMPACTION), SPECIFIED AND TESTED BY A REGISTERED GEOTECHNICAL ENGINEER.
3. ALL FOOTINGS SHALL BEAR A MINIMUM OF 12" BELOW GRADE OR BELOW THE FROST LINE OF THE LOCALITY, WHICHEVER IS DEEPER.

LEI CONSULTING ENGINEERS AND SURVEYORS, INC. IS NOT A GEOTECHNICAL ENGINEER AND HAS NOT PERFORMED ANY SOIL BEARING OR SLOPE ANALYSIS. LEI HAS DESIGNED THE FOUNDATION IN ACCORDANCE WITH THE MAXIMUM BEARING PRESSURE ALLOWED WHEN NO GEOTECHNICAL REPORT IS PROVIDED. LEI IS NOT LIABLE FOR DAMAGE OR REPAIRS CAUSED BY SETTLEMENT RESULTING FROM OUTSIDE FACTORS OR POOR SOIL CONDITIONS. THE HOMEOWNER/CONTRACTOR ASSUME ALL RISK ASSOCIATED WITH CONSTRUCTION WITHOUT AN ADEQUATE GEOTECHNICAL INVESTIGATION.

SHEAR WALL SCHEDULE									
DESIG.	MATERIAL	6d NAILS		1/2" x 16 GAGE STAPLES		5" ANCHOR BOLT SPACING		CAPACITY	
		EDGE	FIELD	EDGE	FIELD			WIND	SEISMIC
1	3/4" OSB OR CDX PLYWOOD	6"	12"	3/2"	12"	32" O.C.	339	241	2.45
2	3/4" OSB OR CDX PLYWOOD	4"	12"	2"	12"	24" O.C.	495	350	2.45
PF	PORTAL FRAME - SEE DETAILS 37/S2.3, 41/S2.3, 5/S1.2, & 18/S1.2								
S1	SIMPSON WSWH 24x14 HIGH STRENGTH WOOD SHEAR WALL - SEE DETAILS 38/S2.3, 39/S2.3, 6/S1.2, & 14/S1.2								
S2	SIMPSON WSWH 24x14 HIGH STRENGTH WOOD SHEAR WALL - SEE DETAILS 38/S2.3, 39/S2.3, 6/S1.2, & 18/S1.2								

NOTES: 1. WALL STUDS ARE TO BE SPACED AT 16" O.C. U.N.O.
2. SHEATH ABOVE AND BELOW OPENINGS IN REINFORCED SHEAR WALLS AS PER THE ADJACENT SHEAR WALL DESIGNATION ON EACH SIDE OF THE OPENING.
3. USE (2) KING STUDS AT EACH END OF SHEAR PANELS SHEAR WALL CROWNED U.N.O.
4. ALL PANEL EDGES SHALL BE BLOCKED WITH 2x OR WIDER FRAMING WITH EDGE NAILING AT ALL SUPPORTS AND PANEL EDGES U.N.O.
5. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
6. FRAMING AT ADJOINING PANEL EDGES AND BELL PLATES SHALL BE 3x OR WIDER FOR EDGE NAILING 3" O.C. OR LESS. NAILS AT ADJOINING PANEL EDGES AND INTO BELL PLATES SHALL BE STAGGERED. (DOUBLE 2x FRAMING BUTT-CH-NAILED WITH STAGGERED 16d NAILS WITH SPACING EQUAL TO THE SHEAR WALL EDGE NAILING IS AN ADEQUATE SUBSTITUTE FOR 3x FRAMING.)

HOLDOWN SCHEDULE

SYMBOL	HOLDOWN/STRAP
●	LSTD8 HOLDOWN SEE DETAIL 15/S1.2
■	ISTHD10 HOLDOWN SEE DETAIL 15/S1.2
▲	STHD14 HOLDOWN SEE DETAIL 15/S1.2
X	HDU2-SDS2.5 RETROFIT HOLDOWN w/ 3/4" DIA. A36 THREADED ROD ANCHOR EMBEDDED 6" INTO FOOTING w/ SIMPSON ET-3G OR AT-3G EPOXY SEE DETAIL 16/S1.2

BEAM SCHEDULE			
DESIG.	QTY.	SIZE	TYPE
RB1	1	4x6	DF-L#2
RB2	1	4x8	DF-L#2
RB3	1	6x6	DF-L#2
RB4	1	4x10	DF-L#2
RB5	1	5/8" x 12"	GLULAM
RB6	1	6x10	DF-L#2
RB7	1	6x10	DF-L#2
RB8	1	6x10	DF-L#2
RB9	1	6x10	DF-L#2
RB10	1	6x10	DF-L#2
RB11	1	6x10	DF-L#2
RB12	1	5/8" x 15"	GLULAM
RB13	1	4x8	DF-L#2
RB14	1	6x12	DF-L#2
RB15	1	6x12	DF-L#2
RB16	1	5/8" x 13/2"	GLULAM
RB17	1	8/2" x 13/2"	GLULAM
OR	1	W10x30	A992-50 STEEL
RB18	1	8/2" x 13/2"	GLULAM
OR	1	W10x30	A992-50 STEEL
RB19	1	5/8" x 15"	GLULAM
RB20	1	5/8" x 12"	GLULAM
RB21	1	6x10	GLULAM
RB22	-	NOT USED	-
RB23	1	6x10	DF-L#2
RB24	1	6x10	DF-L#2

RAFTER SCHEDULE

DESIG.	RAFTER
RR1	2x4 DF-L#2 @ 24" O.C.
RR2	2x12 DF-L#2 @ 24" O.C.

LEDGER SCHEDULE

DESIG.	LEDGER
L1	2x6 DF-L#2 w/ (2) SDSWS22500DB WOOD SCREWS INTO EACH STUD (16" O.C.)

HANGER SCHEDULE

DESIG.	HANGER
H1	LUS24
H2	LTHA26
H3	TJC37 (MAX)
H4	MUS26
H5	HHUS26-2
H6	HUS26
H7	HUC66
H8	HUCS 25/11-SDS
H9	HGLT9 (H=13/2")
H10	HUC46
H11	WP610

SIMPSON WSWH NOTES

- STRONG WALL HIGH STRENGTH WOOD SHEAR WALLS SHALL BE INSTALLED AS PER SIMPSON SPECIFICATIONS.
- WSWH MAY BE FIELD TRIMMED TO A MINIMUM HEIGHT OF 74/2", (TRIM TOP OF WALL ONLY - DO NOT TRIM FROM SIDES OR BOTTOM).
- DRILLING HOLES IN WSWH IS NOT ALLOWED EXCEPT AS SPECIFICALLY ALLOWED BY THE MANUFACTURER. (REFER TO SIMPSON SPECIFICATIONS)
- ANCHOR BOLT NUTS SHOULD BE FINGER TIGHT PLUS 1/2 TURN.
- TOP CONNECTION INSTALLS WITH A COMBINATION OF SDS25600 HEAVY-DUTY CONNECTOR SCREWS & SWS16150 STRONG-WALL SCREWS.
- TAKE PRECAUTION WHEN INSTALLING CAST-IN-PLACE BOLTS AT CONCRETE FOUNDATION (NO RETROFIT OPTION IS AVAILABLE)
- CONTACT A LOCAL SIMPSON REPRESENTATIVE WITH QUESTIONS REGARDING THE INSTALLATION OF SIMPSON STRONG WALLS.

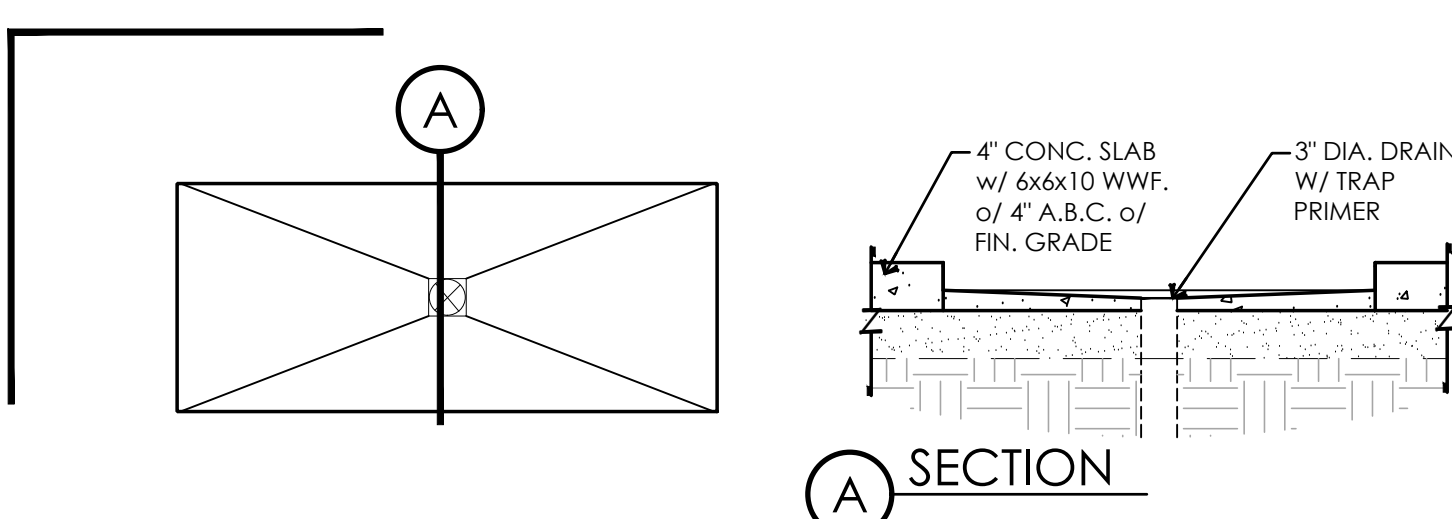
FRAMING NOTES

- PLANS ARE NOT COMPLETE WITHOUT THE STRUCTURAL CALCULATIONS.
- REFER TO SHEET S0.0 FOR THE GENERAL STRUCTURAL NOTES.
- ROOF SHEATHING SHALL BE APA RATED 3/4" OSB OR CDX PLYWOOD WITH 8d NAILS AT 6" O.C. EDGE, 12" O.C. FIELD.
- FLOOR SHEATHING SHALL BE APA RATED 3/4" T&G WITH 10d NAILS OR SIMPSON WSNLT2LS #8 WOOD SCREWS AT 6" O.C. EDGE, 12" O.C. FIELD.
- EXTERIOR STUD WALLS SHALL BE 2x6 @ 16" O.C. U.N.O.
- USE (10) 16d NAILS BETWEEN TOP PLATE SPLICE POINTS ON ALL EXTERIOR AND SHEAR WALLS. PROVIDE A 4'-0" MINIMUM LAP SPLICE.
- INSTALL ALL SIMPSON HARDWARE PER MANUFACTURER'S SPECIFICATIONS.
- HOLDOWNS SHALL BE INSTALLED ON (2) FULL HEIGHT KING STUDS (MINIMUM).
- OVERBUILD ROOF RAFTERS SHALL BE 2x4 DF-L#2 AT 24" O.C. U.N.O.
- ALL DETAILS SHALL APPLY IN ALL SIMILAR SITUATIONS.
- ALL LUMBER NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE PRESERVATIVE TREATED OR OF A DECAY RESISTANT SPECIES. CONTACT LEI ENGINEERS AND SURVEYORS, INC. IF A DIFFERENT SPECIES IS TO BE USED.

POST SCHEDULE

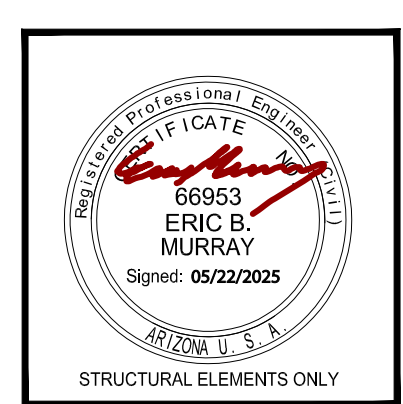
DESIG.	POST SIZE
P1	(1) 2x
P2	(2) 2x
P3	(3) 2x
P4	(4) 2x
P5	(5) 2x
P6	4x4
P7	6x6
P8	6x12
P9	6x8x3/4" HSS A500 GR. B-46

- NOTES:
- POSTS INDICATE NUMBER OF TRIMMER STUDS WHEN SPECIFIED AT HEADERS. ALL OTHER POST DESIGNATIONS REFER TO FULL HEIGHT KING STUDS U.N.O.
 - INSTALL (1) TRIMMER AND (1) KING STUD EACH SIDE OF EACH OPENING U.N.O.
 - INSTALL (1) TRIMMER STUDS AT EACH SIDE OF OPENINGS GREATER THAN 8" WIDE U.N.O.
 - INSTALL (2) KING STUDS EACH SIDE OF OPENINGS GREATER THAN 8" WIDE U.N.O.
 - 2x BUILT-UP POSTS SHALL BE THE SAME WIDTH OF THE WALL IN WHICH THEY ARE FRAMED U.N.O.
 - NAIL EACH PLY OF 2x BUILT-UP POSTS W/ 16d NAILS @ 6" O.C. STAGGERED U.N.O.
 - POSTS THAT ARE NOT FRAMED WITH A STUD WALL SHALL BE BRACED WITH BC OR AC POST CAP AND PS OR N/A POST BASE U.N.O.

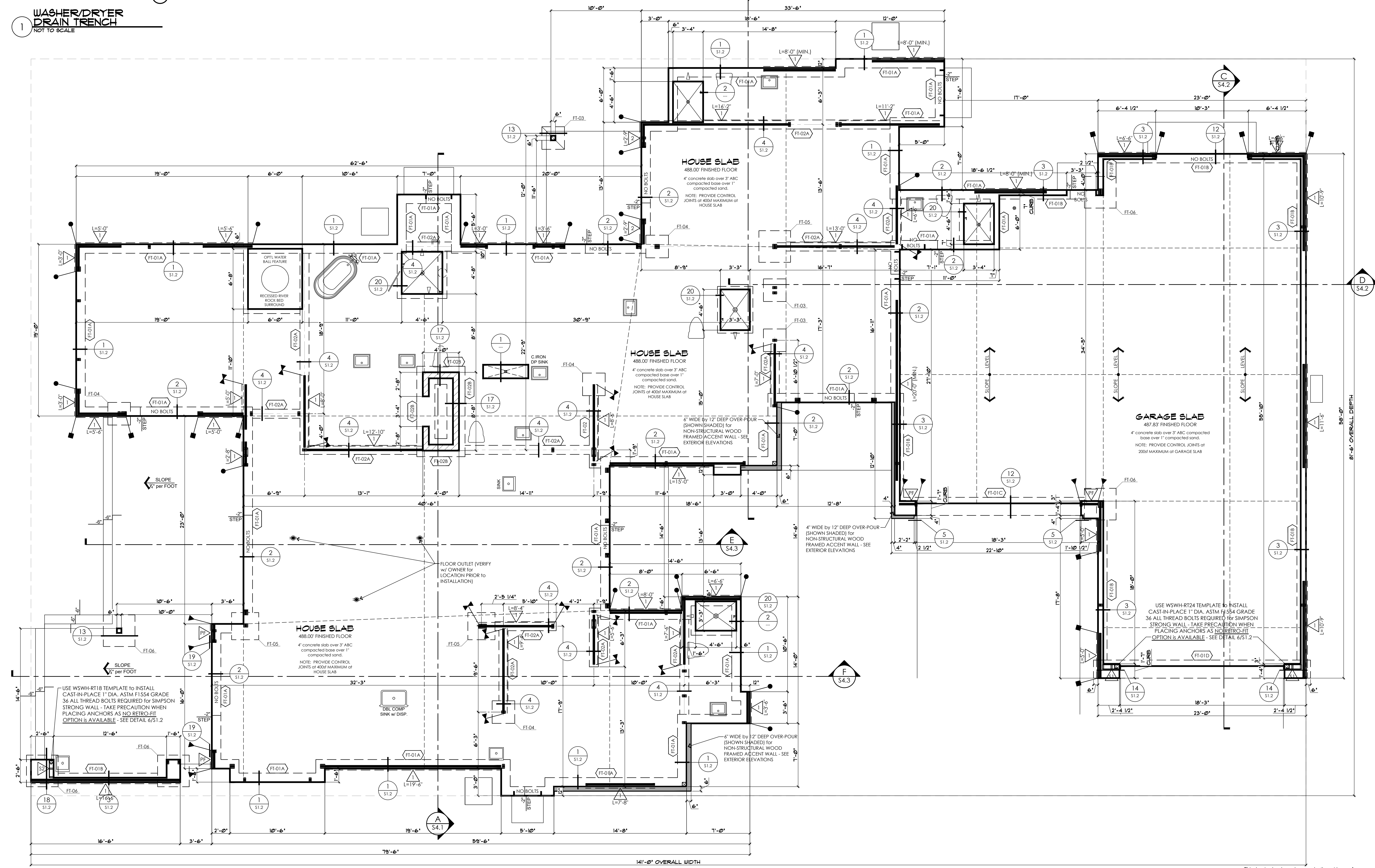


1 WASHER/DRYER DRAIN TRENCH NOT TO SCALE

NOTE:
• SEE SHEET S0.1 for STRUCT'L SCHEDULES and NOTES



LEI
ENGINEERS
SURVEYORS
PLANNERS
3302 No. Main Street
Spanish Fork, UT 84660
Ph: 801-798-0555
Fax: 801-798-9393
office@lei-eng.com
www.lei-eng.com



CONTRACTOR:

PROJECT:

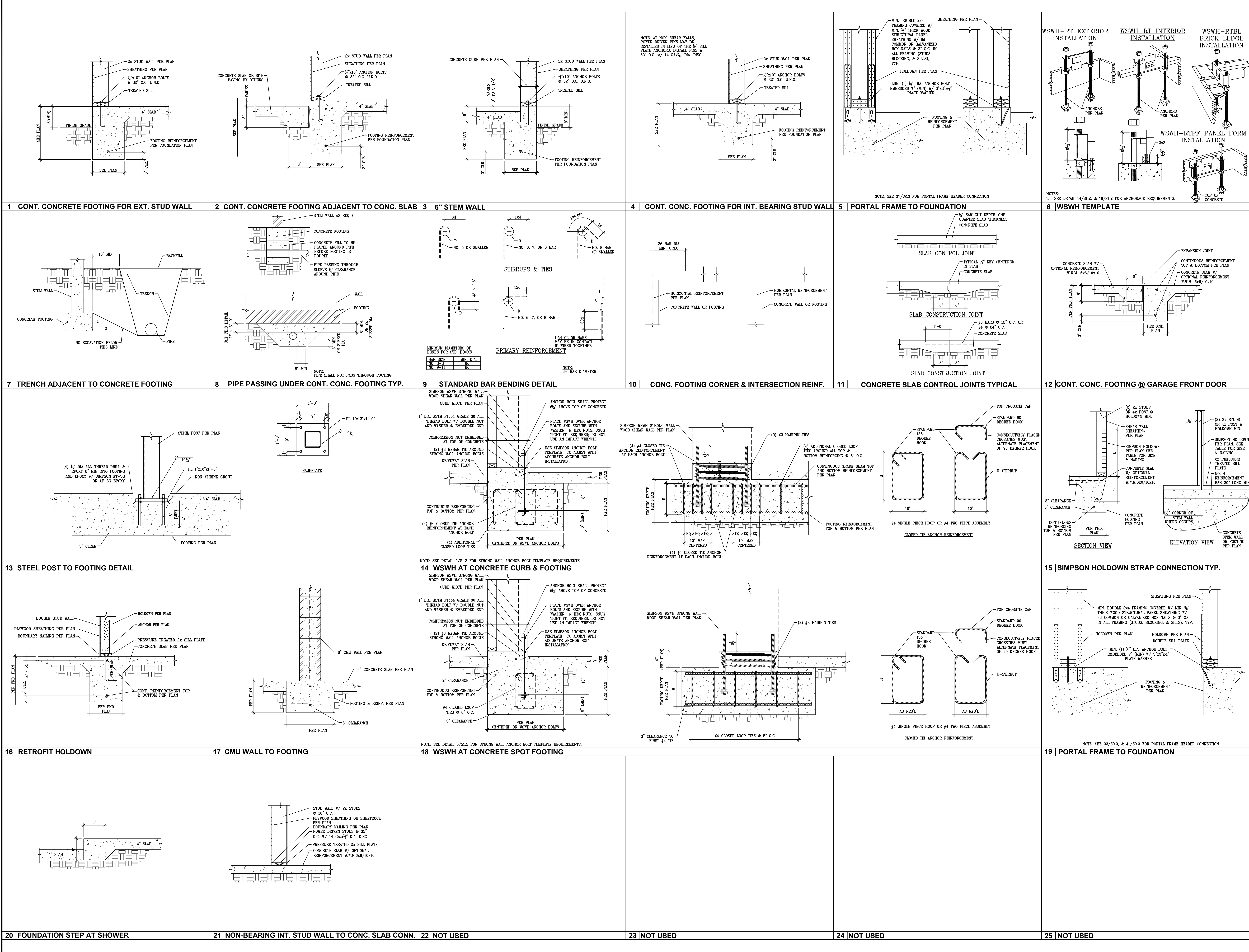
The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

REVISIONS	

SCALE: 1/4" = 1'-0"	JOB #: 2024-05
DRAWN: S1.2	CHECKED: LEI ENG'R
DATE: 21 MARCH 2025	
SHEET	
S1.1	
© COPYRIGHT 2025	

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

NOTE:
This drawing has been drawn under the guidance of LEI Consulting Engineers and Surveyors, Inc. and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of LEI Consulting Engineers and Surveyors, Inc.'s work does not exceed that of the accompanying structural calculations.



PROJECT:

The Peters Residence

31587/31589 CROW'S NEST DR.

PARKER, AZ APN: 311-53-070J

REVISIONS:

△

△

△

△

SCALE:

1/4"=1'-0"

JOB #:

2025-2154

DRAWN:

EBM

CHECKED:

LEI ENG R

DATE:

06 MAY 2025

SHEET:

S1.2

© COPYRIGHT 2019

66953

ERIC B. MURRAY

SEAL 05022005

STRUCTURAL ELEMENTS ONLY

ENGINEERS

SURVEYORS

PLANNERS

3302 No. Main Street

Spanish Fork UT 84660

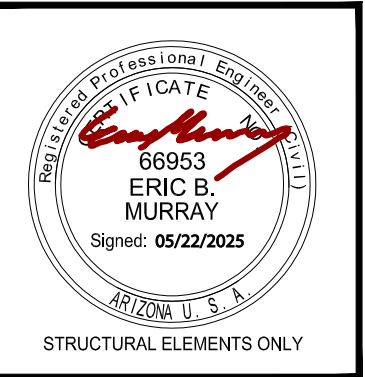
PH: 801-798-0555

Fax: 801-798-9393

office@lei-eng.com

www.lei-eng.com

NOTE:
• SEE SHEET S0.1 for STRUCT'L
SCHEDULES and NOTES



LEI
ENGINEERS
SURVEYORS
PLANNERS

3302 No. Main Street
Spanish Fork, UT 84606
Ph: 801-798-0555
Fax: 801-798-9393
office@lei-eng.com
www.lei-eng.com

CONTRACTOR:

PROJECT:
The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS PLAN TO AVOID ERRORS. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.	
REVISIONS:	
△	
△	
△	

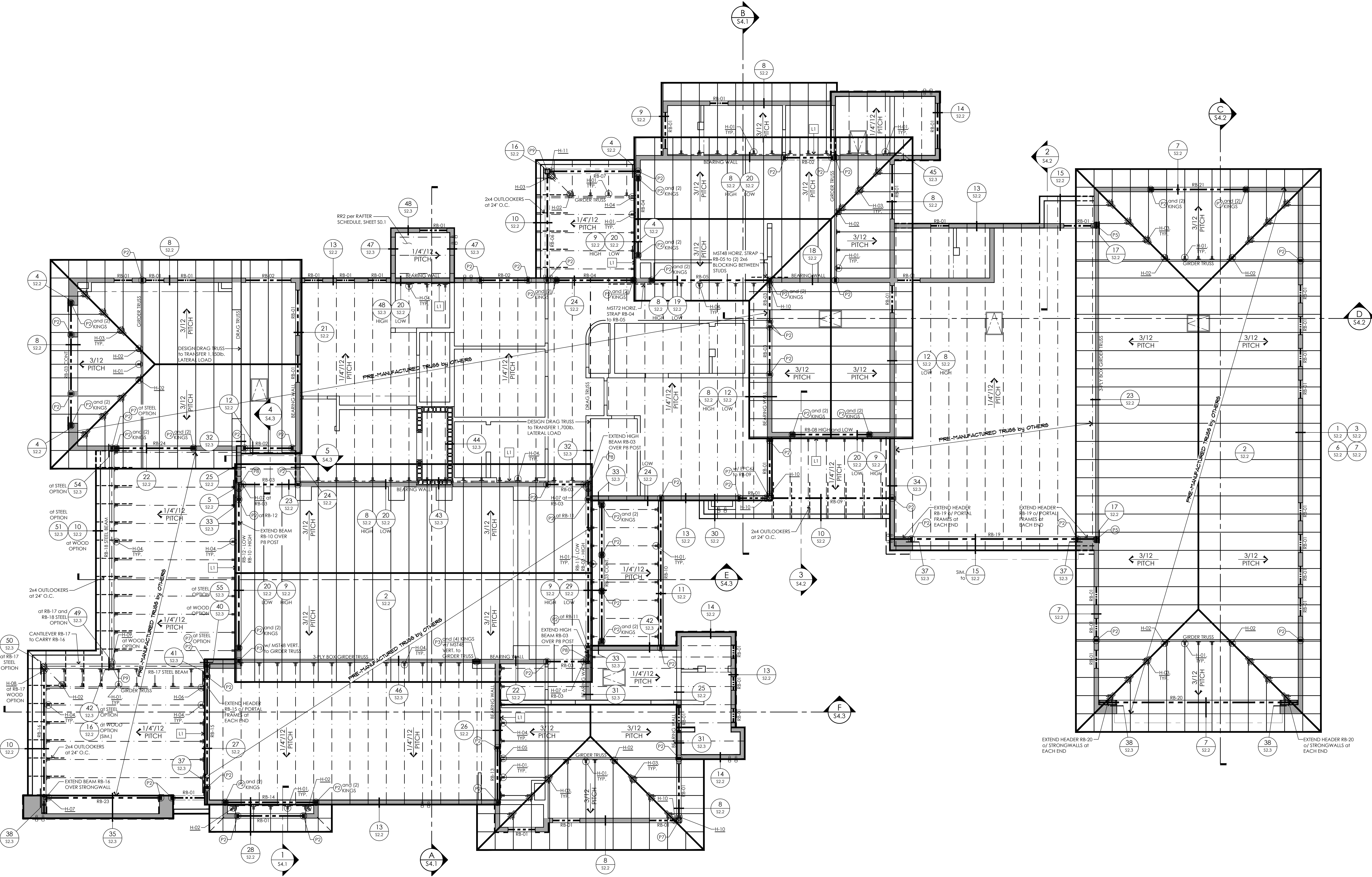
SCALE: 1/4" = 1'-0"	JOB #: 2024-05
DRAWN: S.I.Z.	CHECKED: LEI ENGR
DATE: 21 MARCH 2025	
SHEET	
S2.1	
© COPYRIGHT 2025	

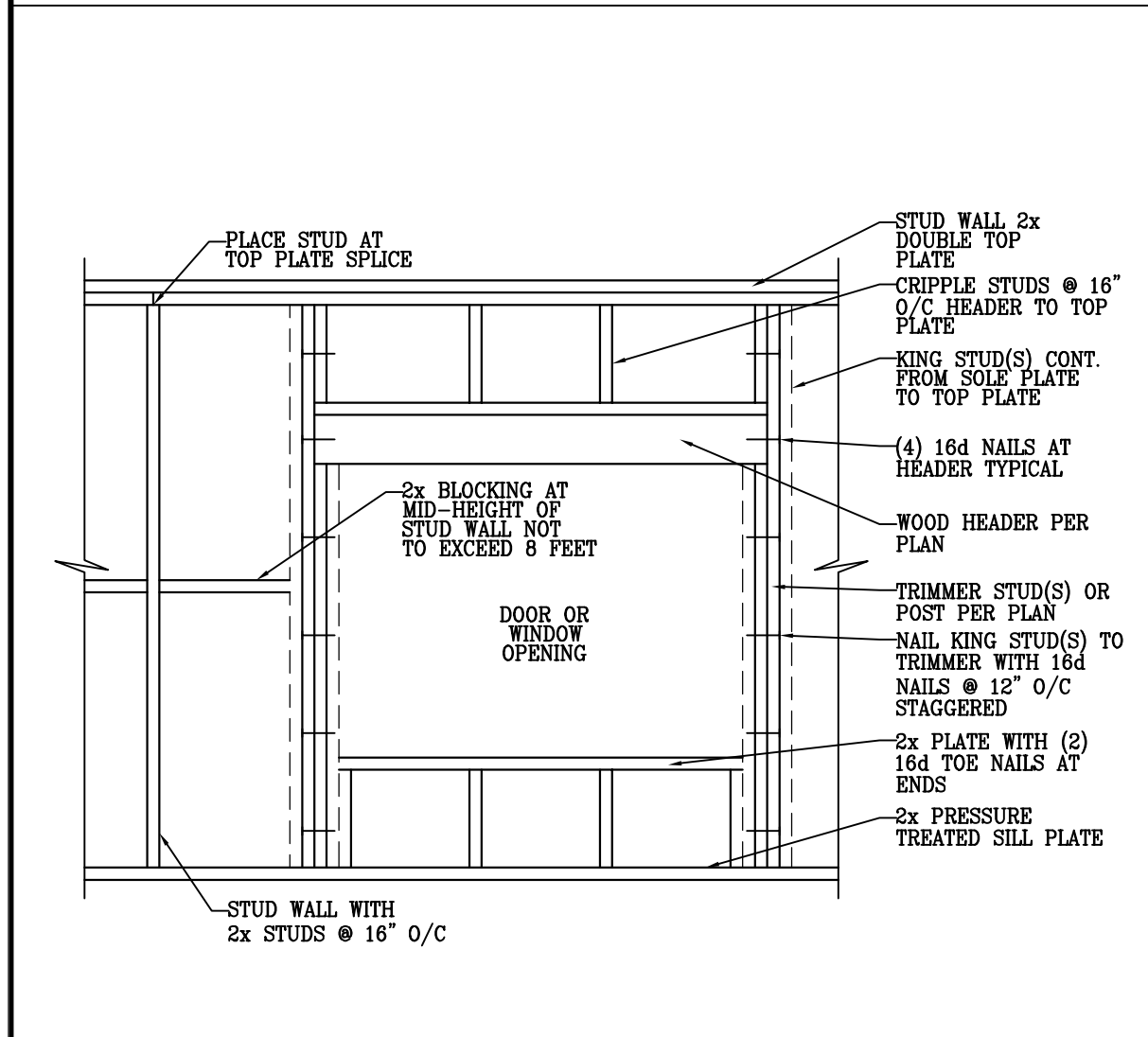
This drawing has been drawn under the guidance of
LEI Consulting Engineers and Surveyors, Inc. and has been
reviewed for compliance with the structural calculations and for
structural correctness only. The scope of **LEI Consulting Engineers
and Surveyors, Inc.**'s work does not exceed that of the
accompanying structural calculations.

NOTE:
Structural components designed according to the
2018 IRC, all other aspects of the plans shall conform
w/ 2018 IRC and all current governing codes

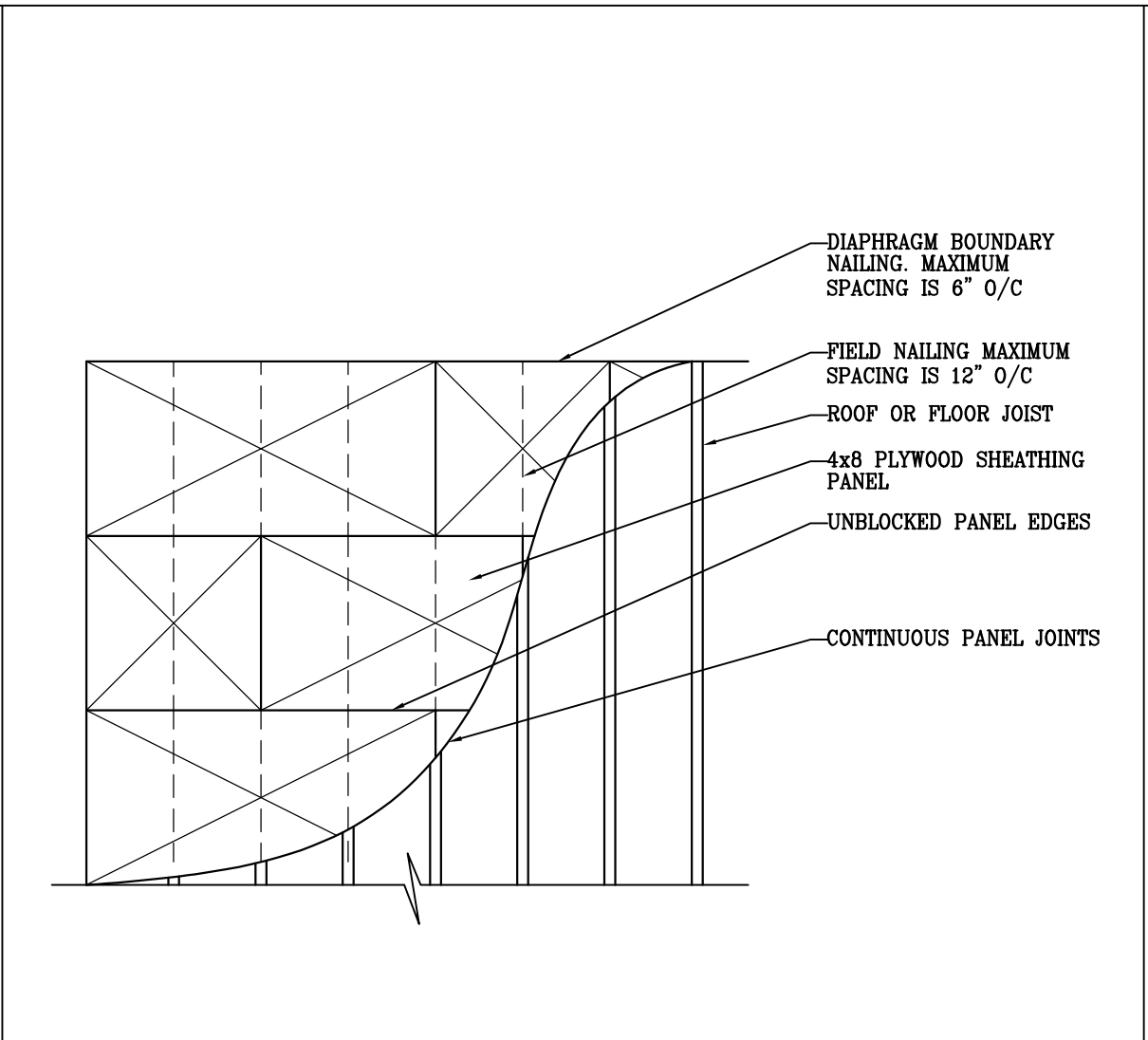
ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

ANY REPRODUCTIONS OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. ■ DO NOT SCALE DRAWINGS ■ NOTIFY DESIGNERS IMMEDIATELY PRIOR TO PROCEEDING WITH WORK SHOULD ANY DISCREPANCIES OCCUR. DESIGNERS ASSUME NO RESPONSIBILITY OF WORK IN PLACE

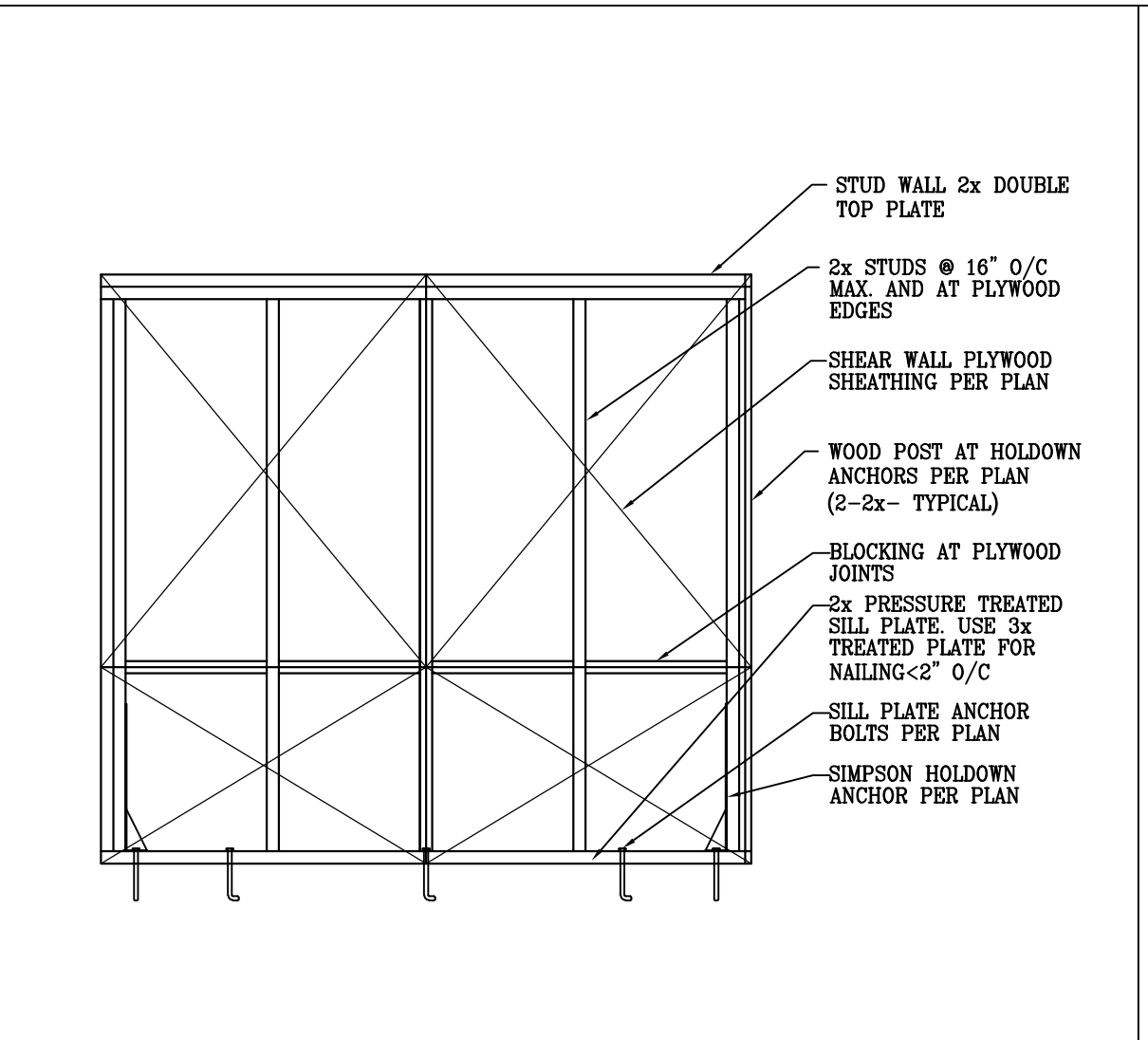




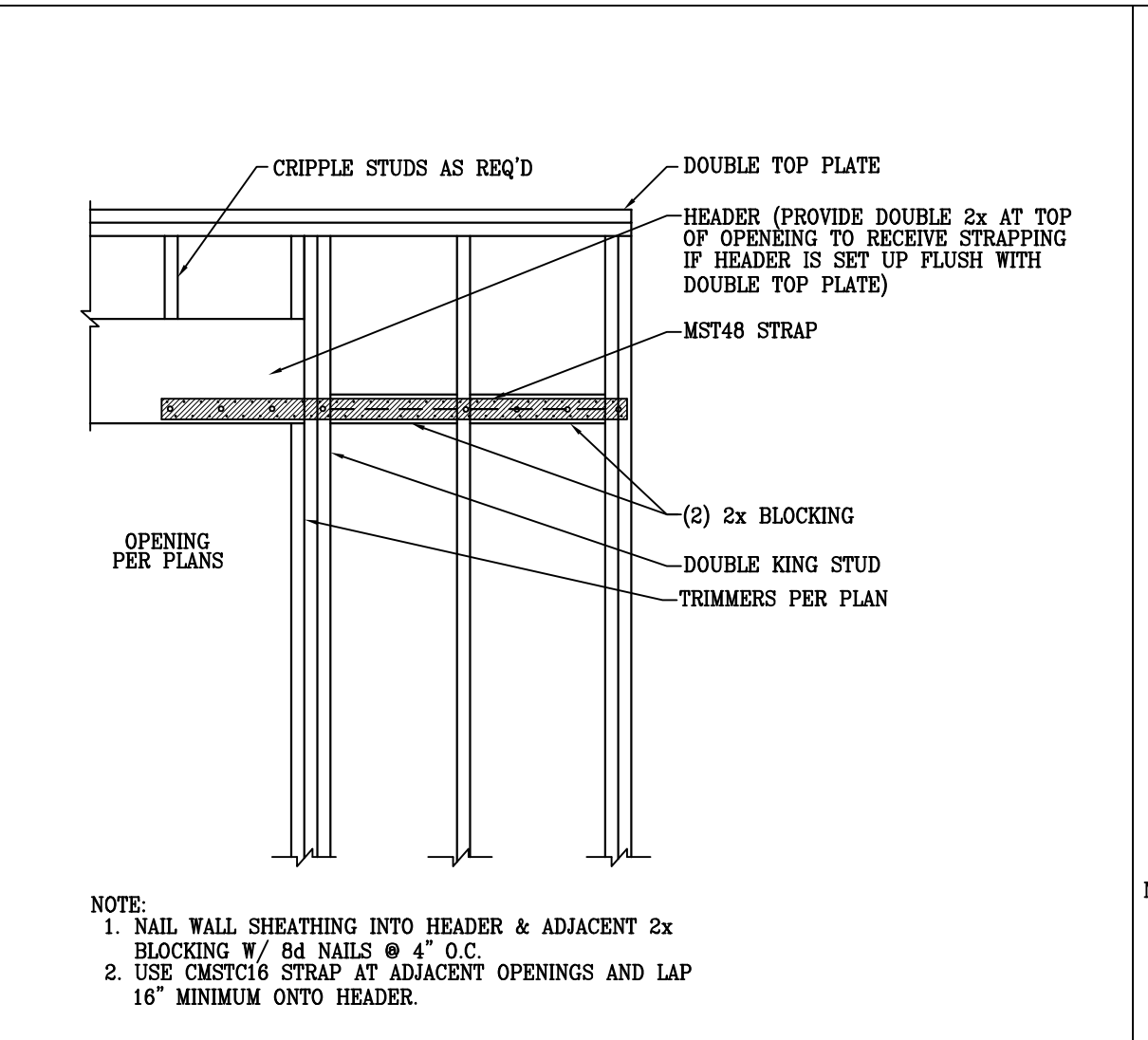
1 | TYPICAL WALL FRAMING



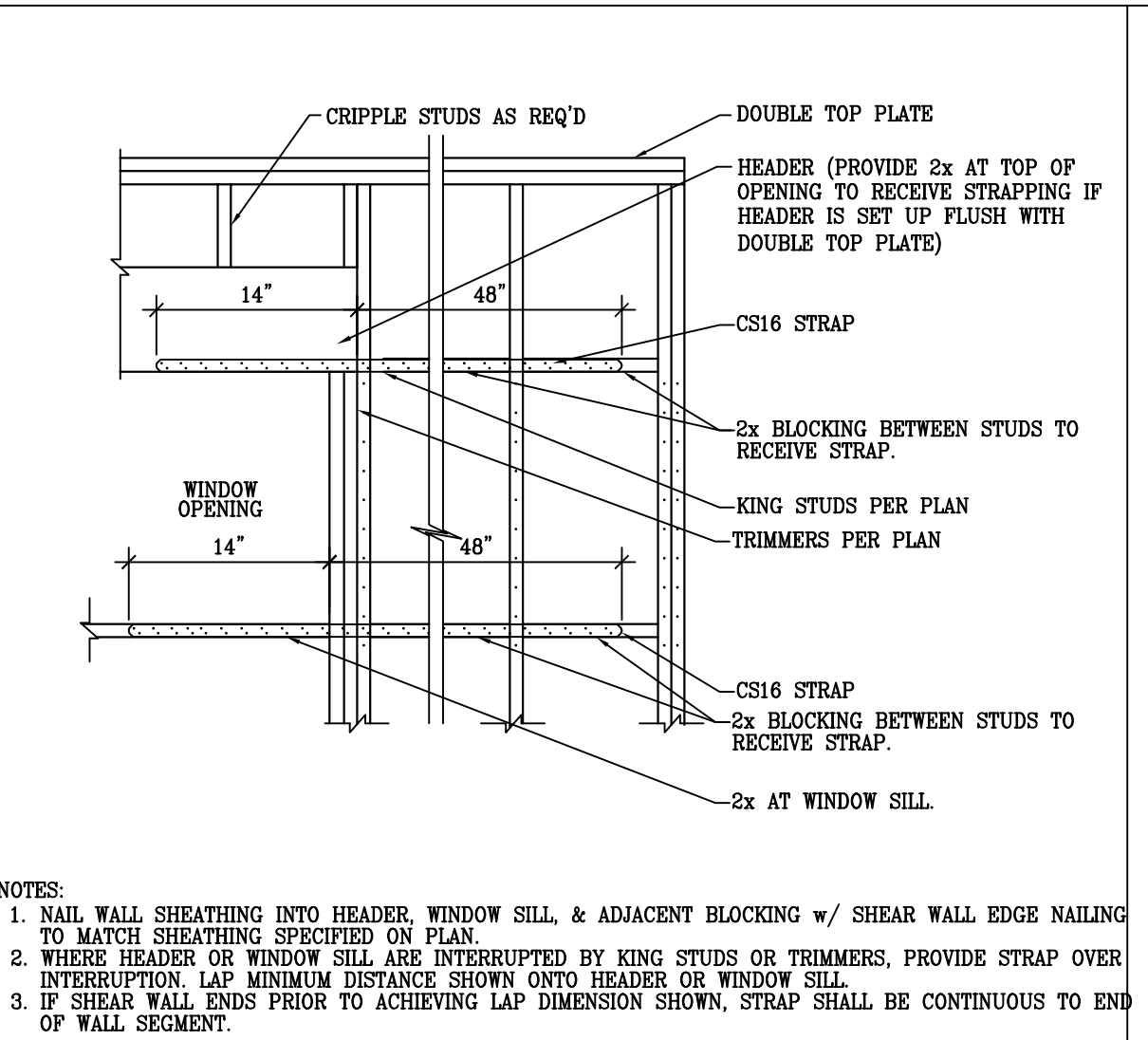
2 | TYPICAL UNBLOCKED HORIZONTAL DIAPHRAGM



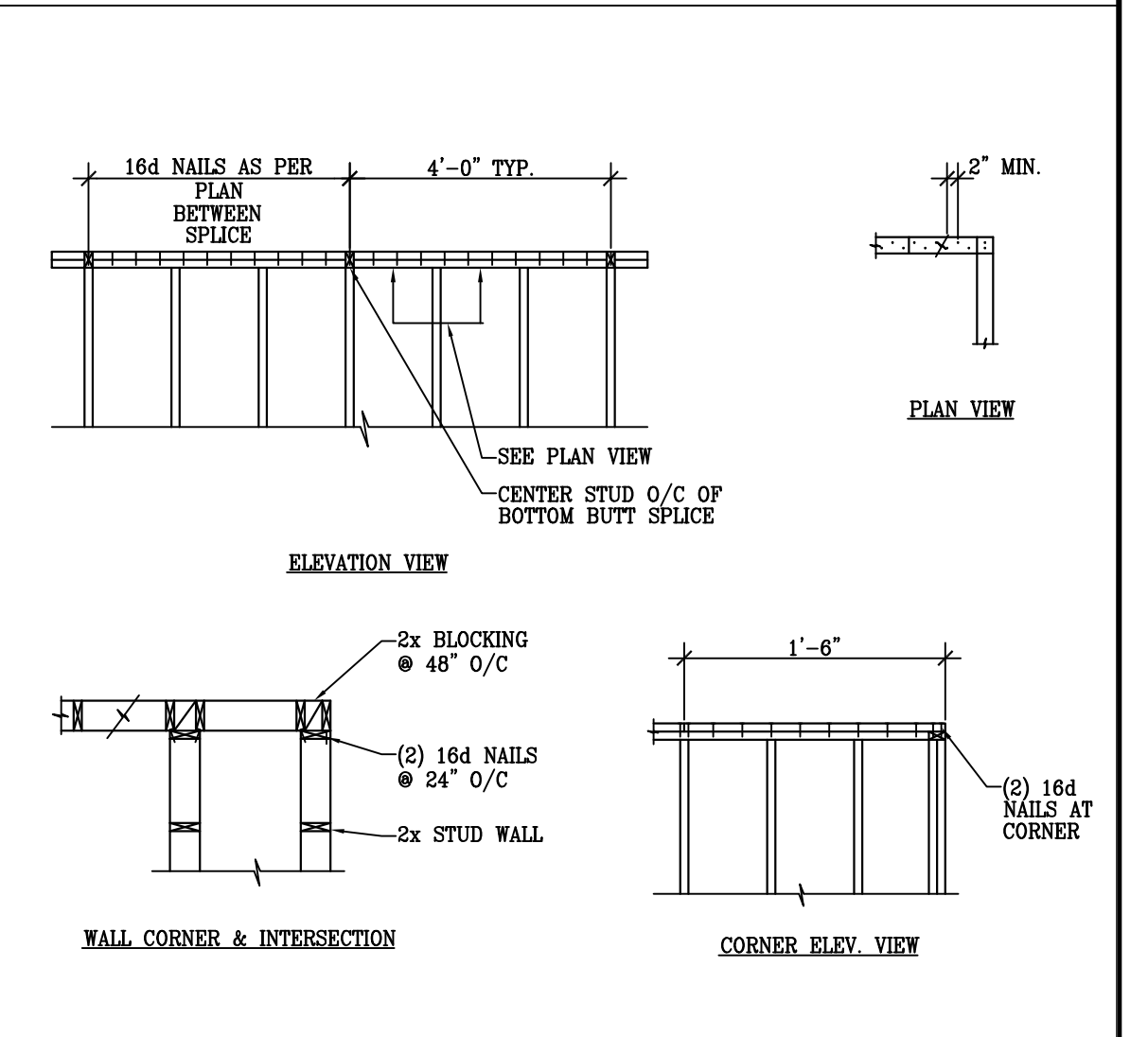
3 | TYPICAL SHEAR WALL FRAMING & CONNECTION



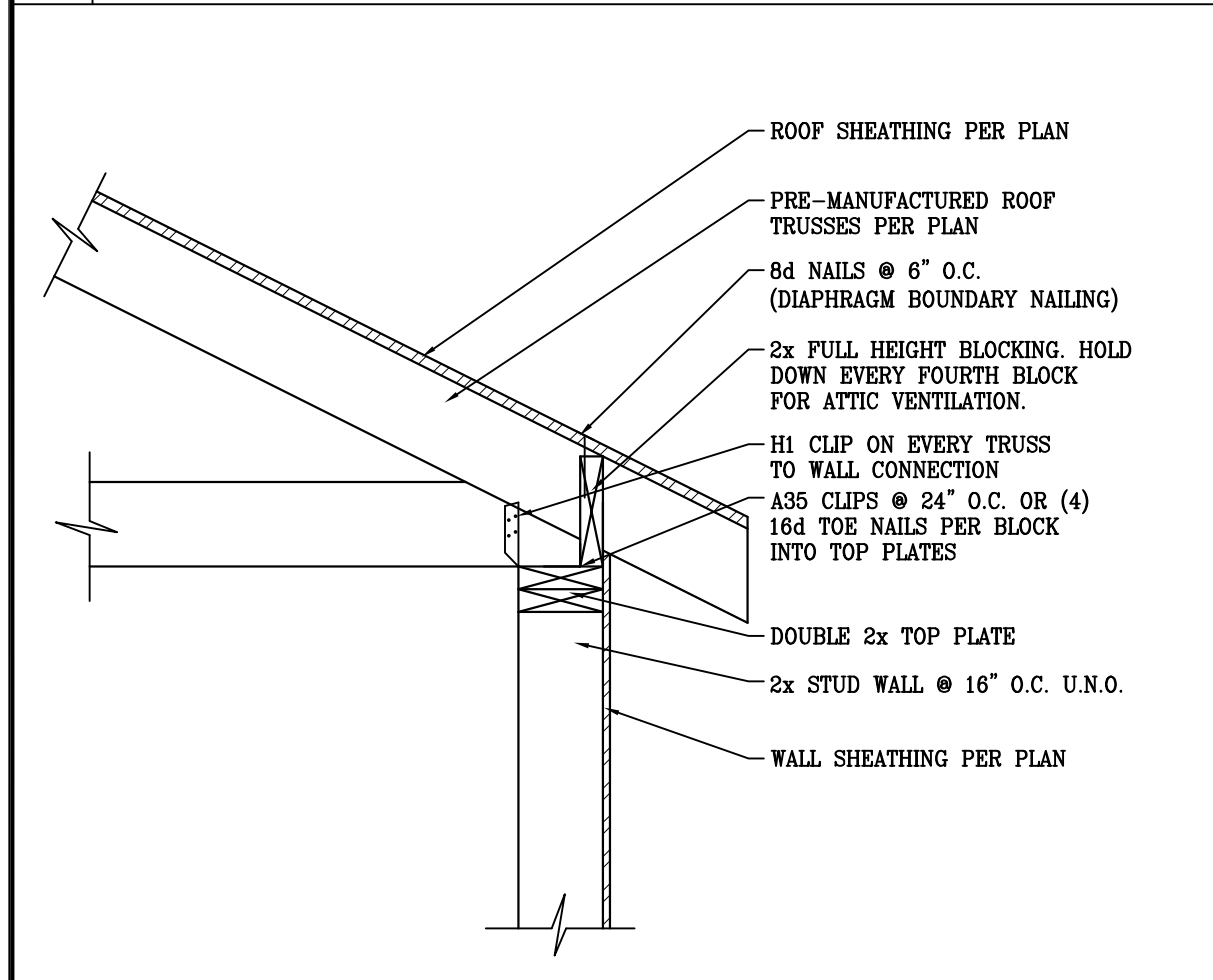
4 | HEADER BLOCKING DETAIL - PER PLANS



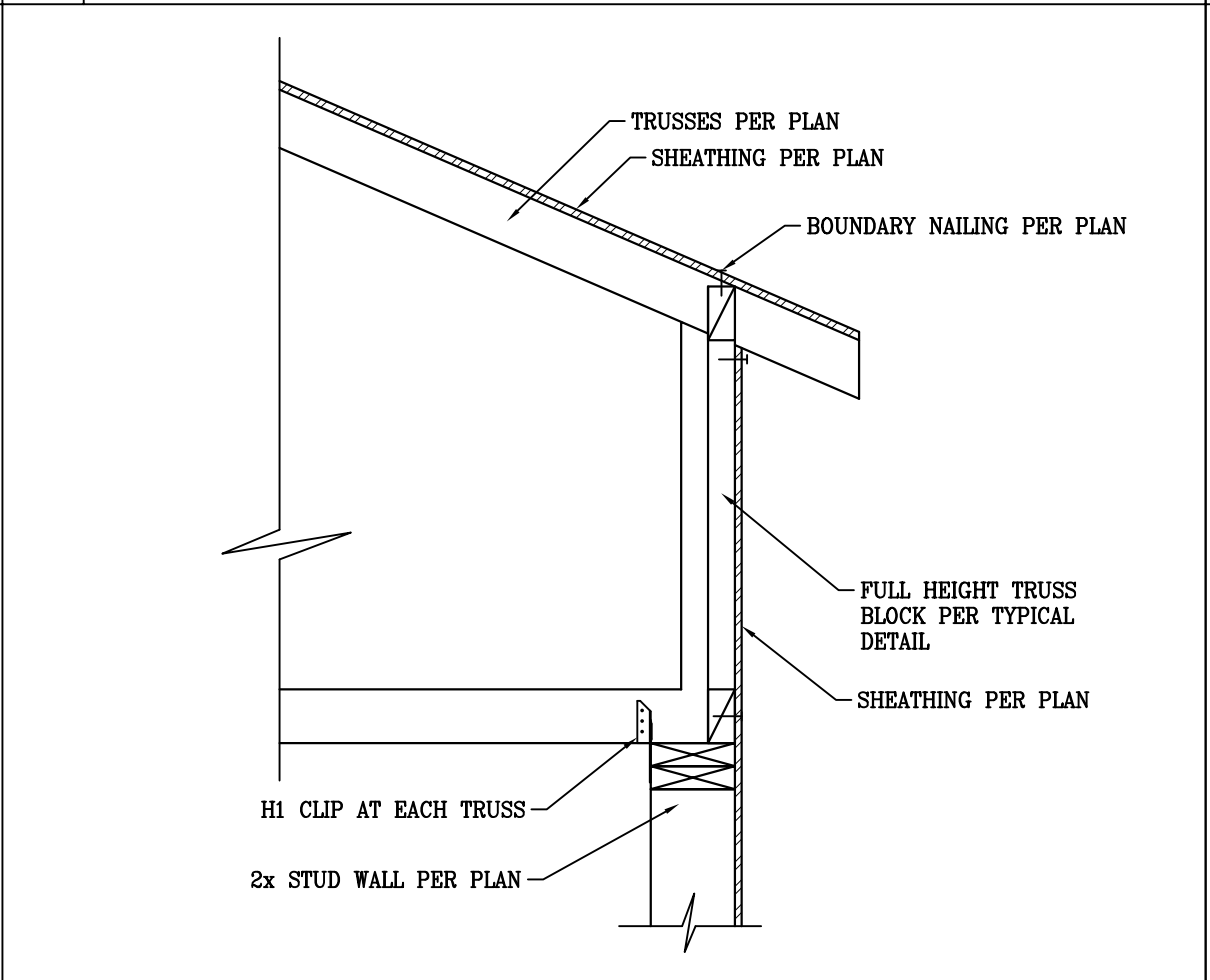
5 | BLOCK HEADER & SILL PLATE PER PLANS (FTAO)



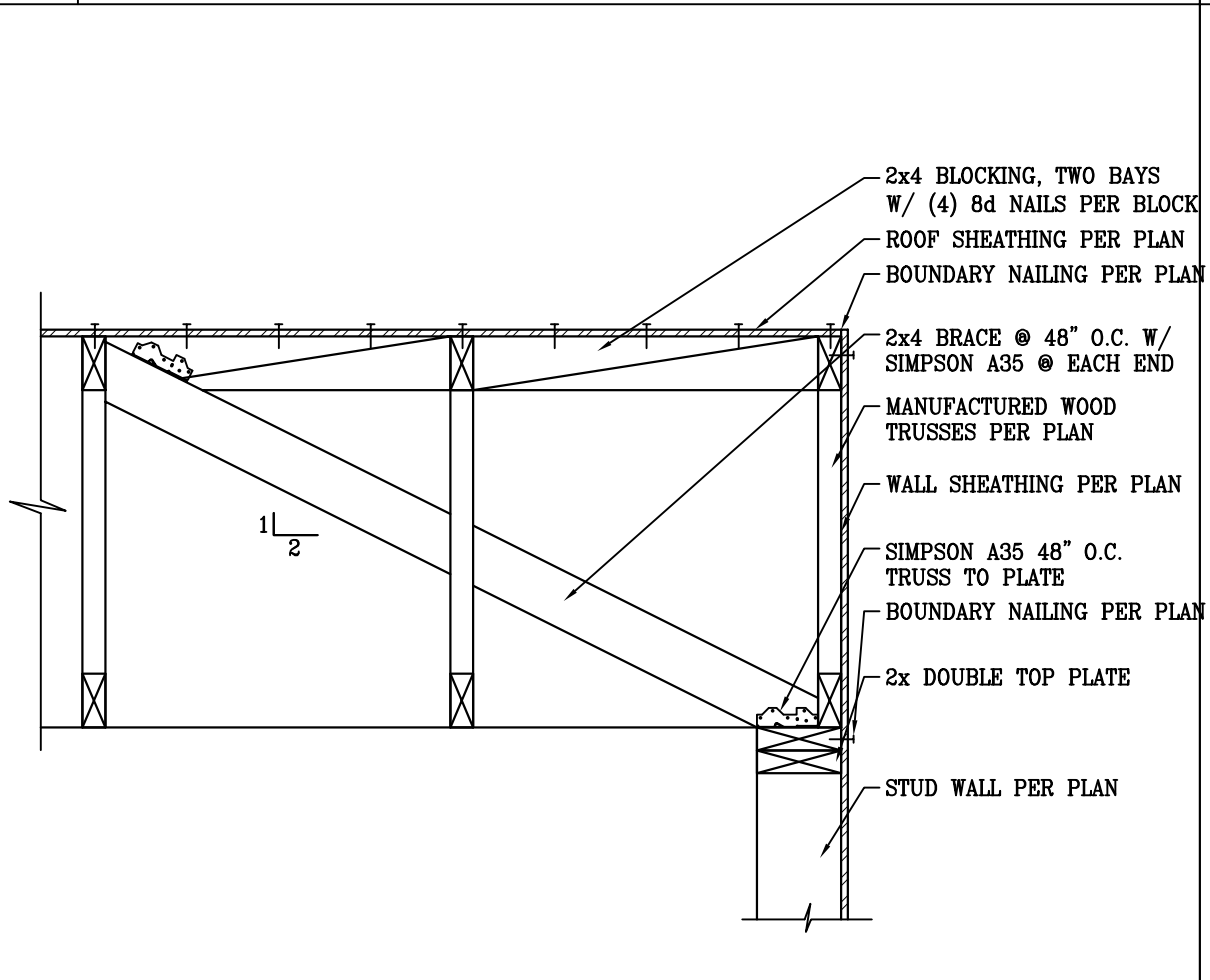
6 | TYPICAL STUD WALL TOP PLATE SPLICE CONNECTION



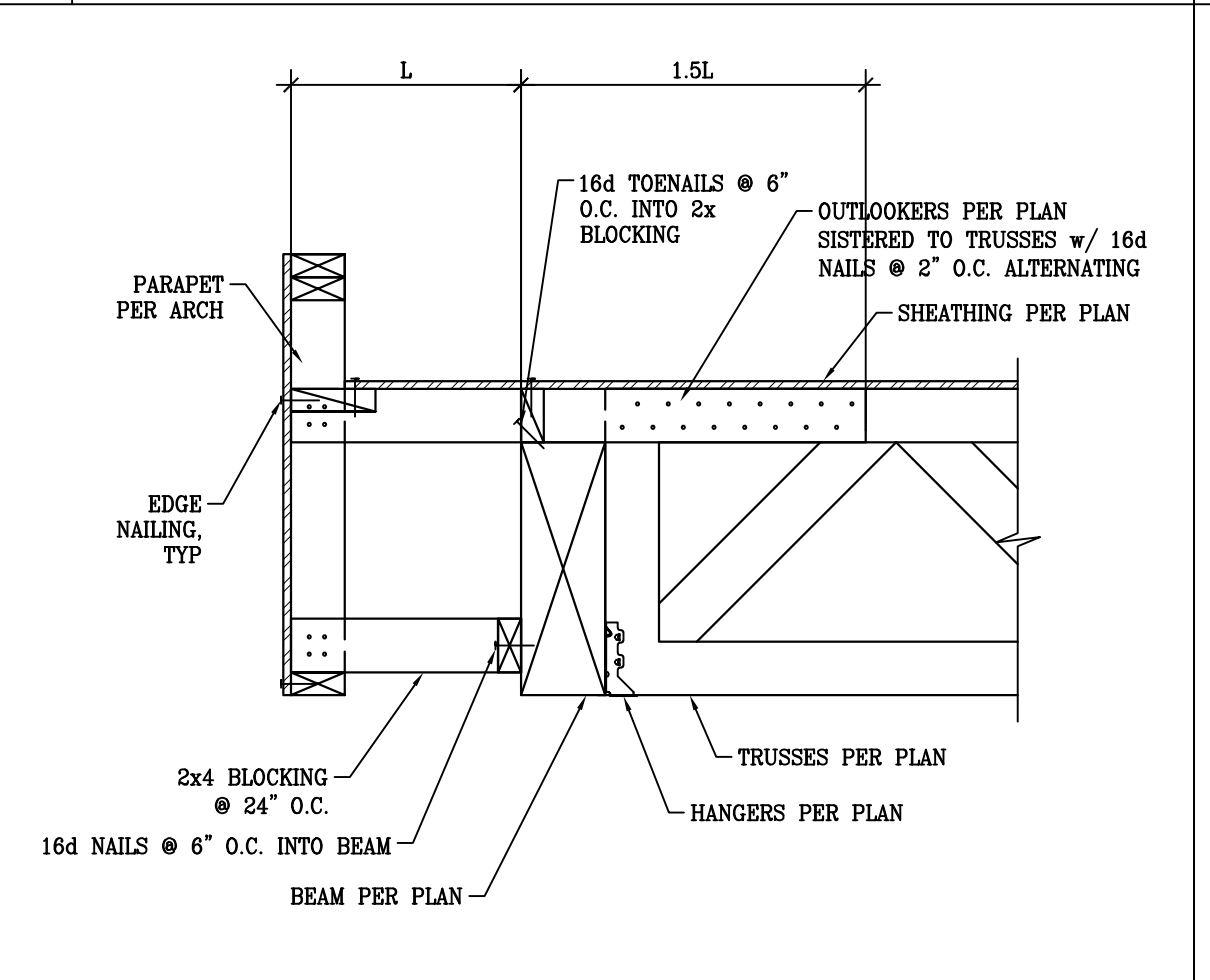
7 | ROOF TRUSS BLOCKING



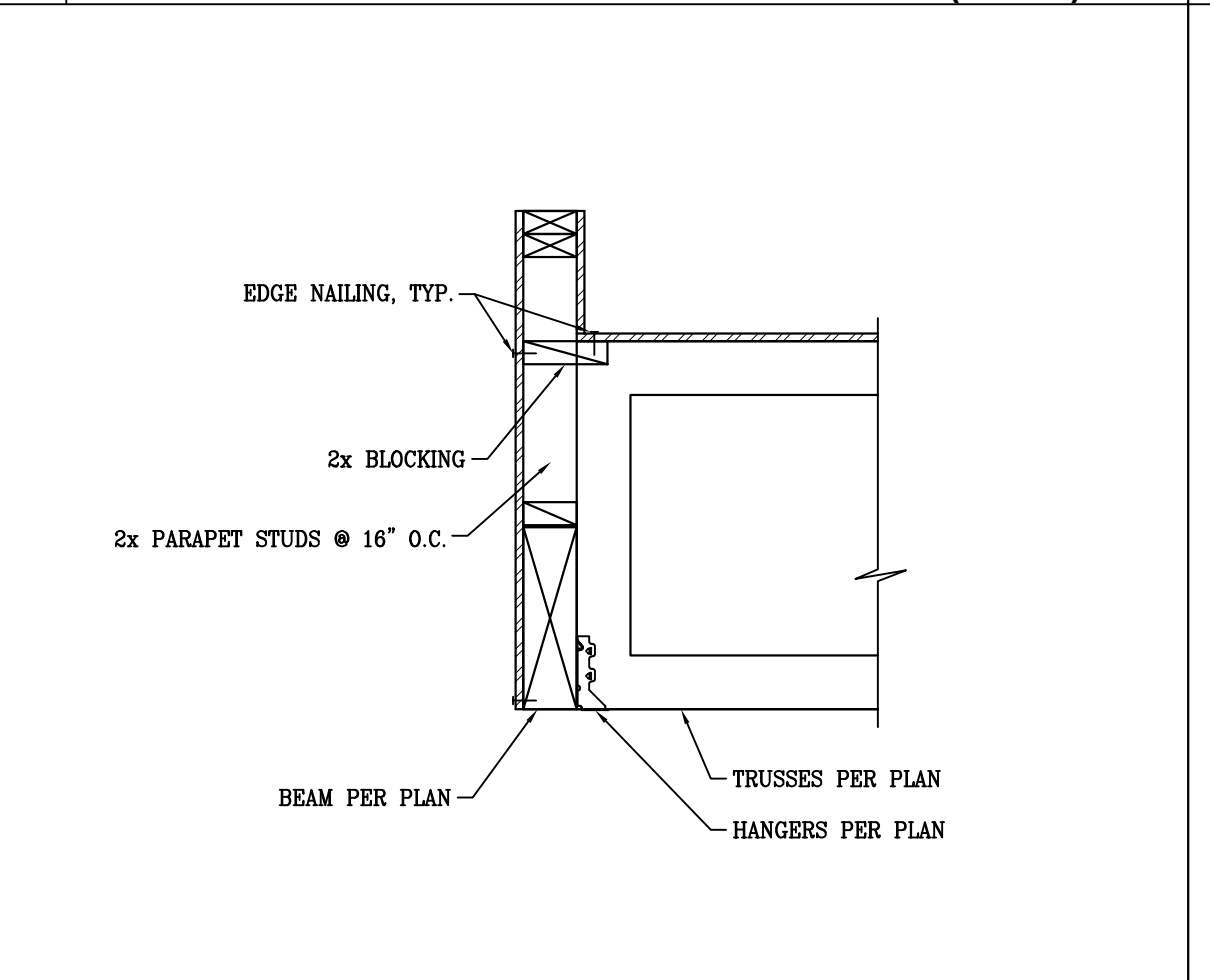
8 | TALL HEEL TRUSS TO EXTERIOR STUD WALL



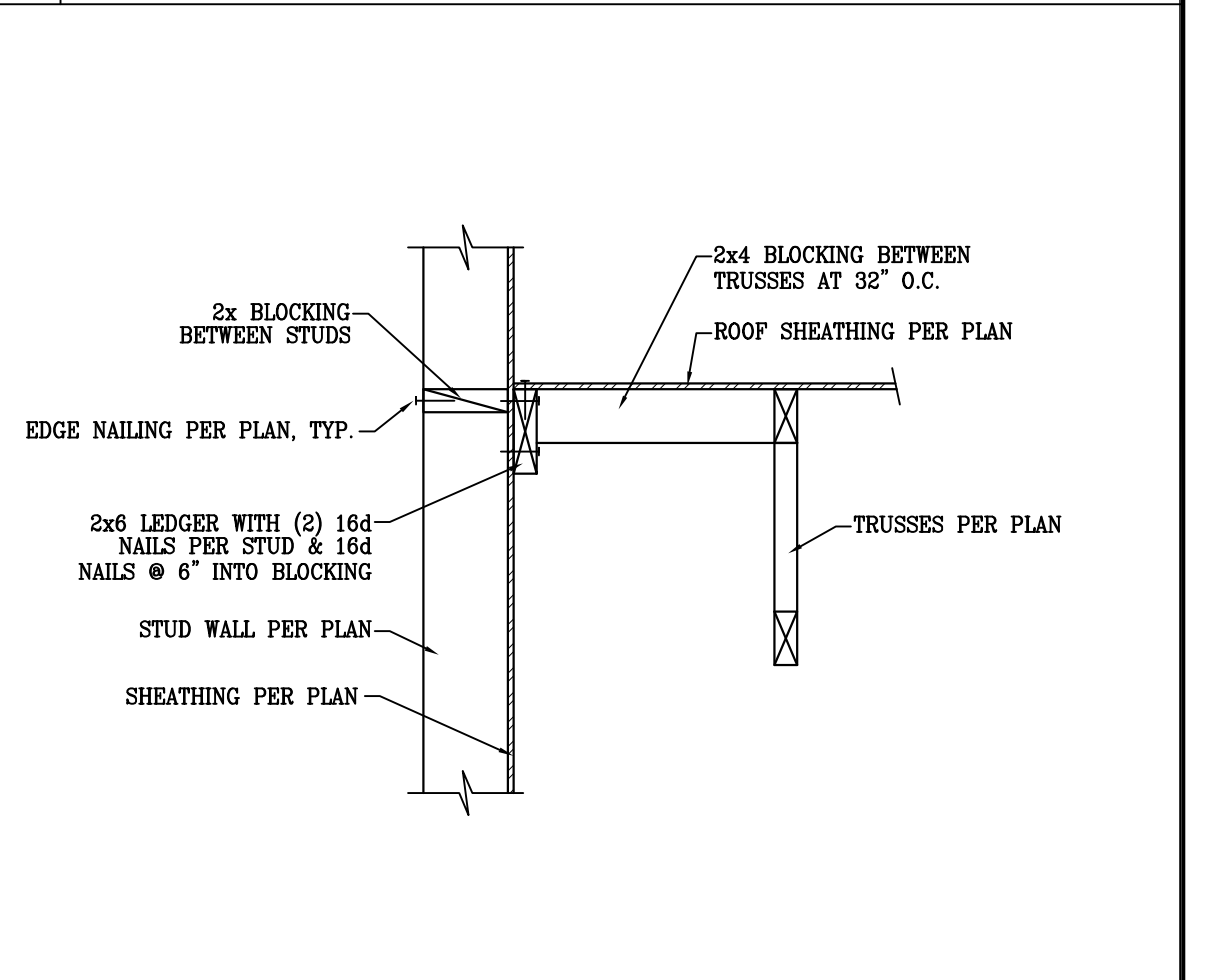
9 | GABLE END TRUSS TO STUD WALL CONNECTION



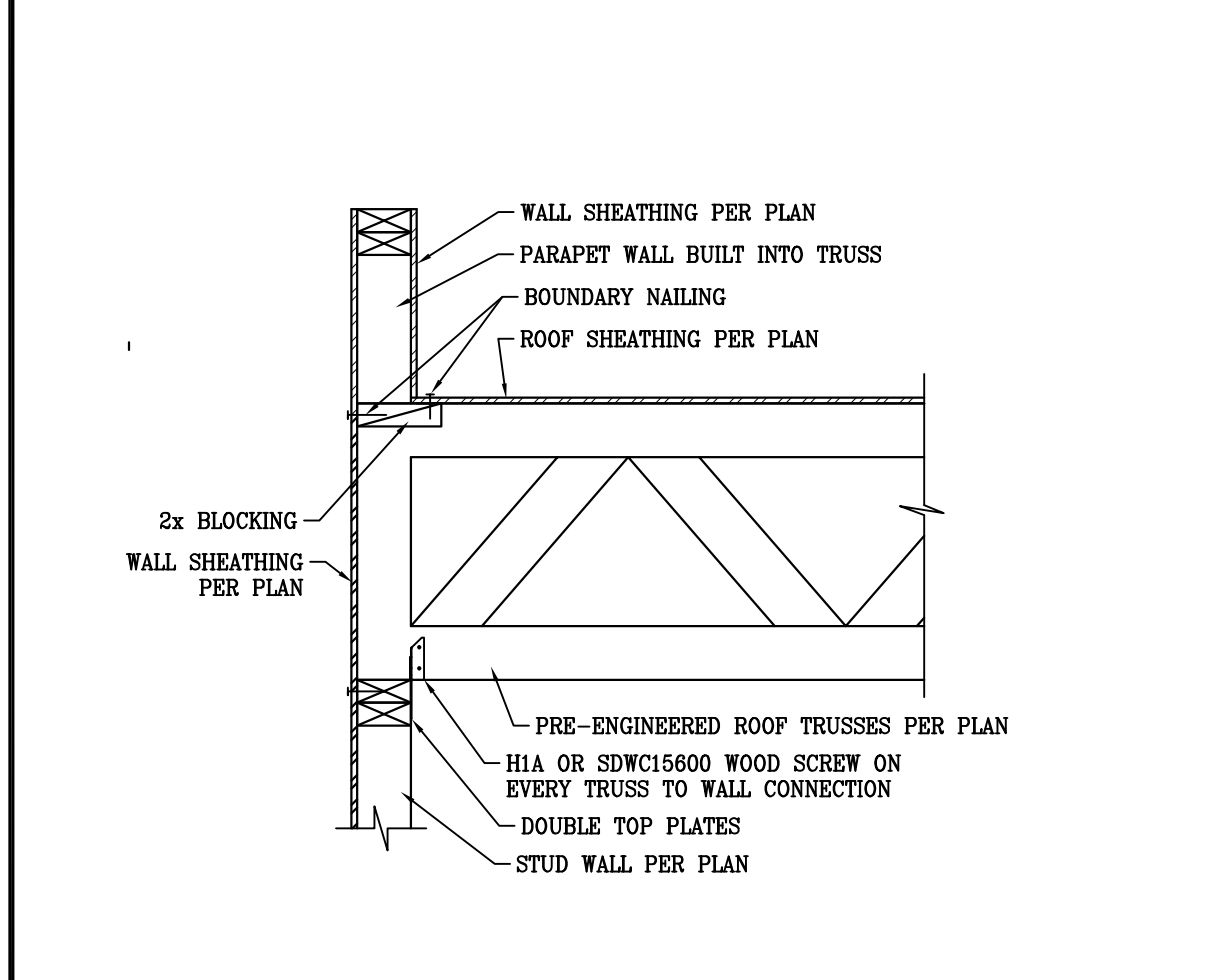
10 | OUTLOOKERS AT TRUSSES



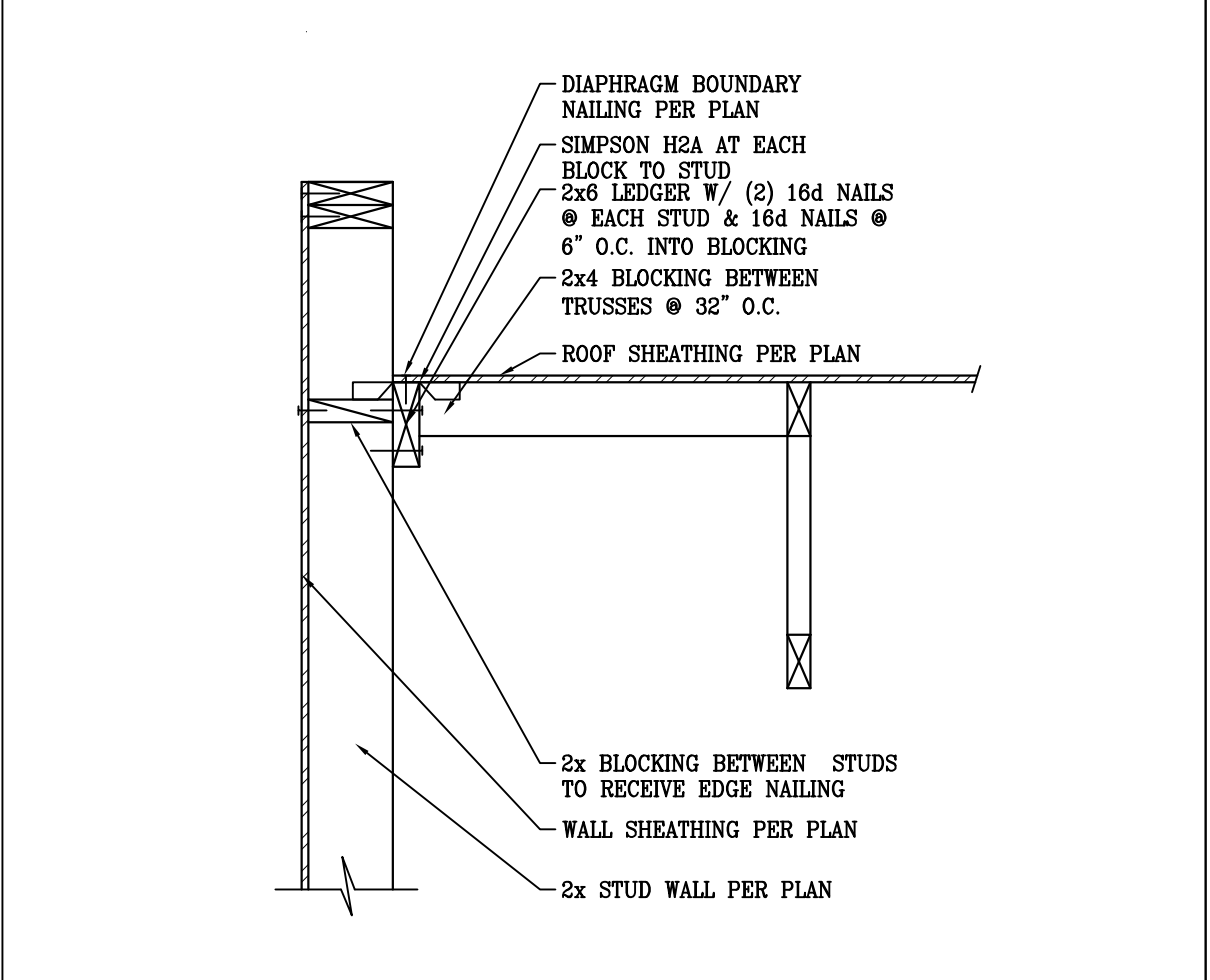
11 | TRUSS TO FLUSH BEAM



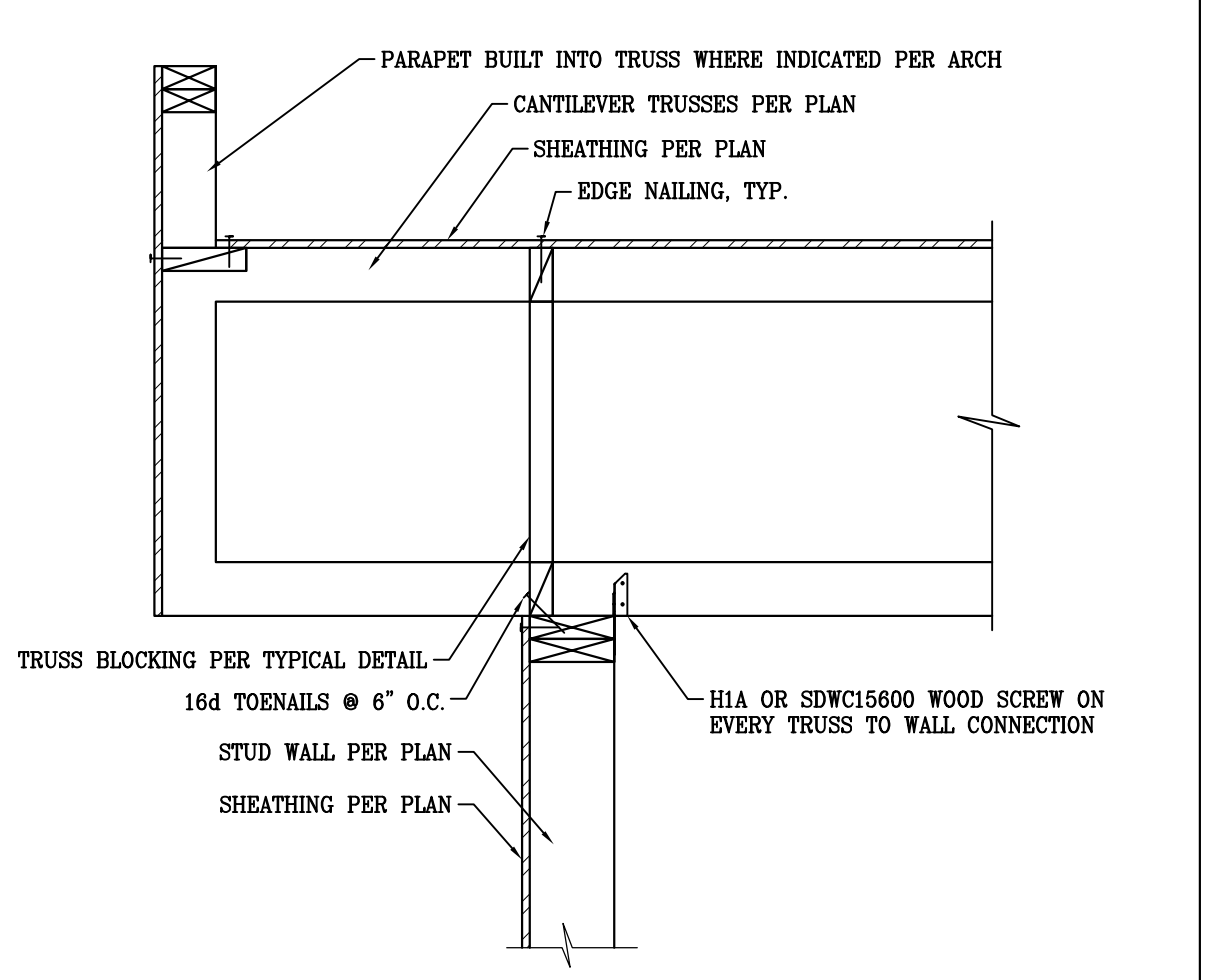
12 | LOW ROOF AT BALLOON FRAMED STUD WALL



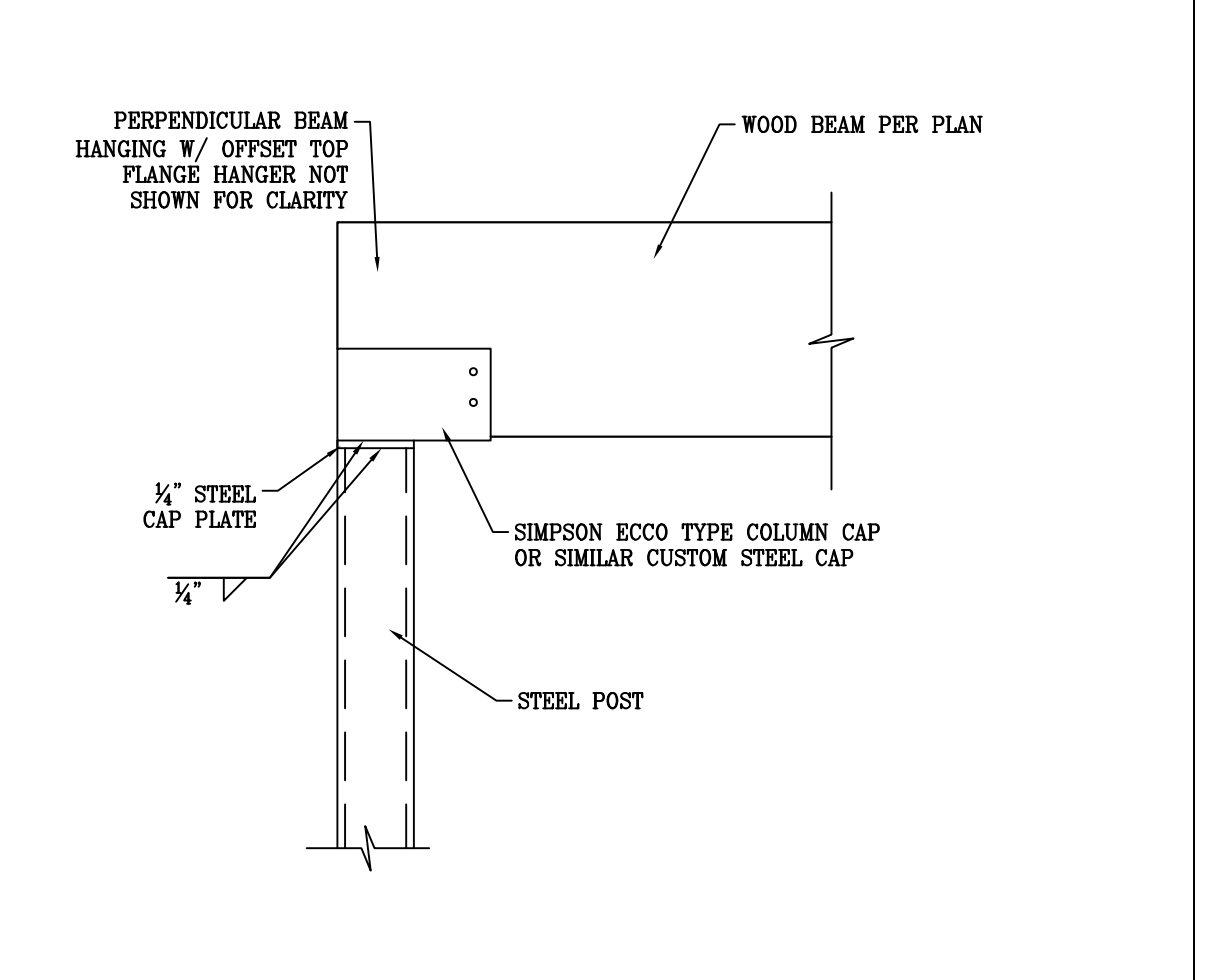
13 | ROOF TRUSSES PERPENDICULAR TO STUD WALL



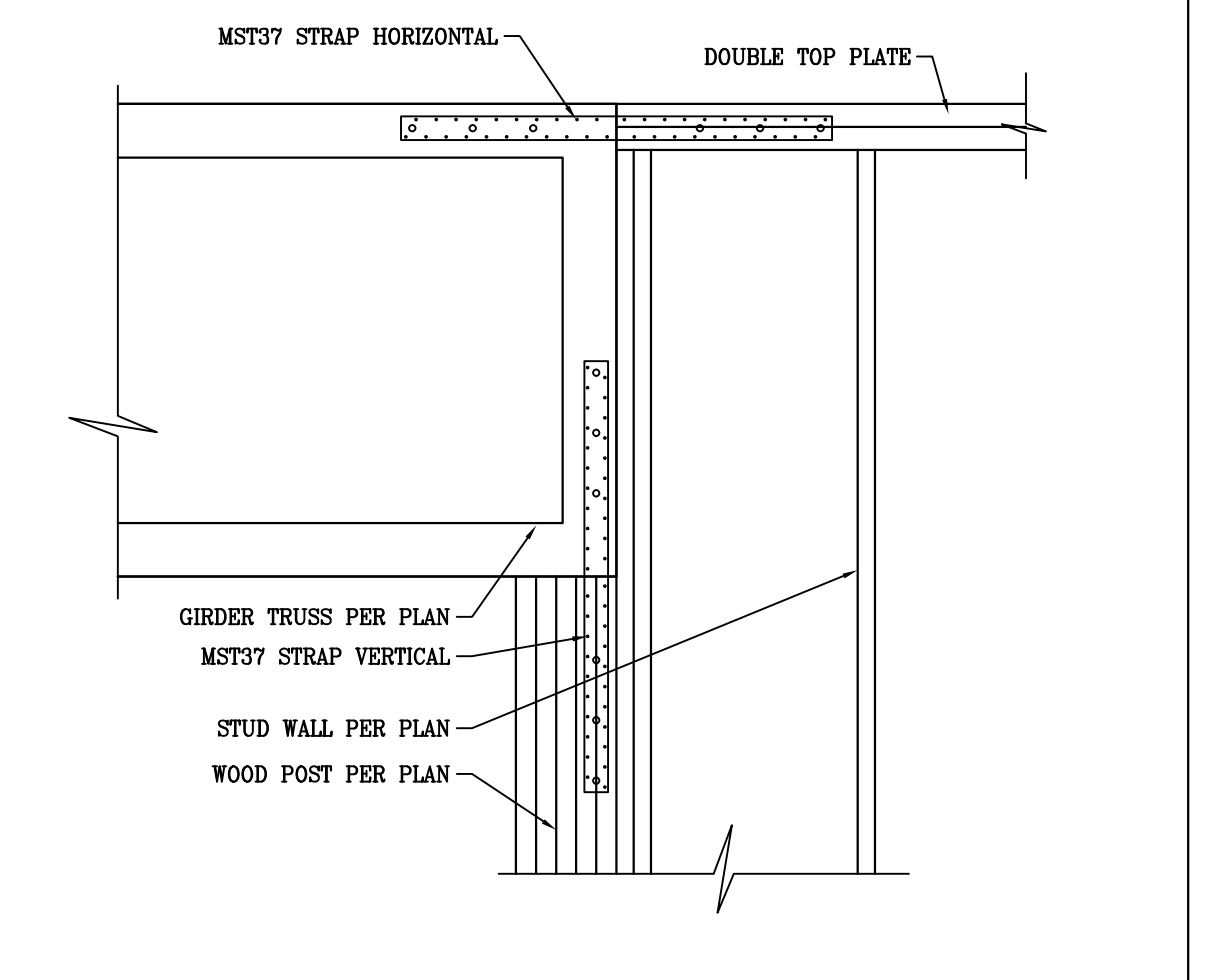
14 | PARAPET WALL WITH PARALLEL TRUSS DETAIL



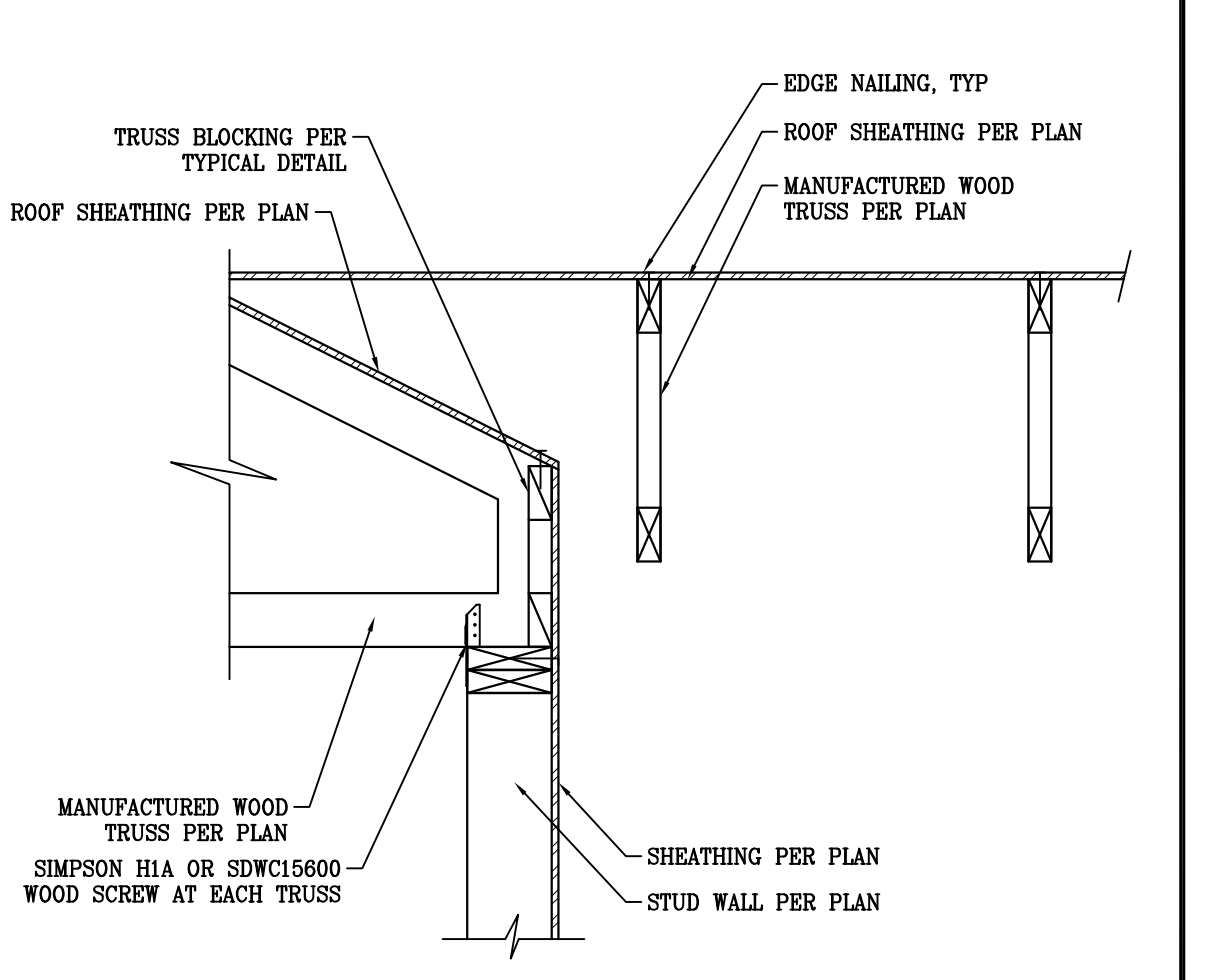
15 | CANTILEVERED TRUSSES AT STUD WALL



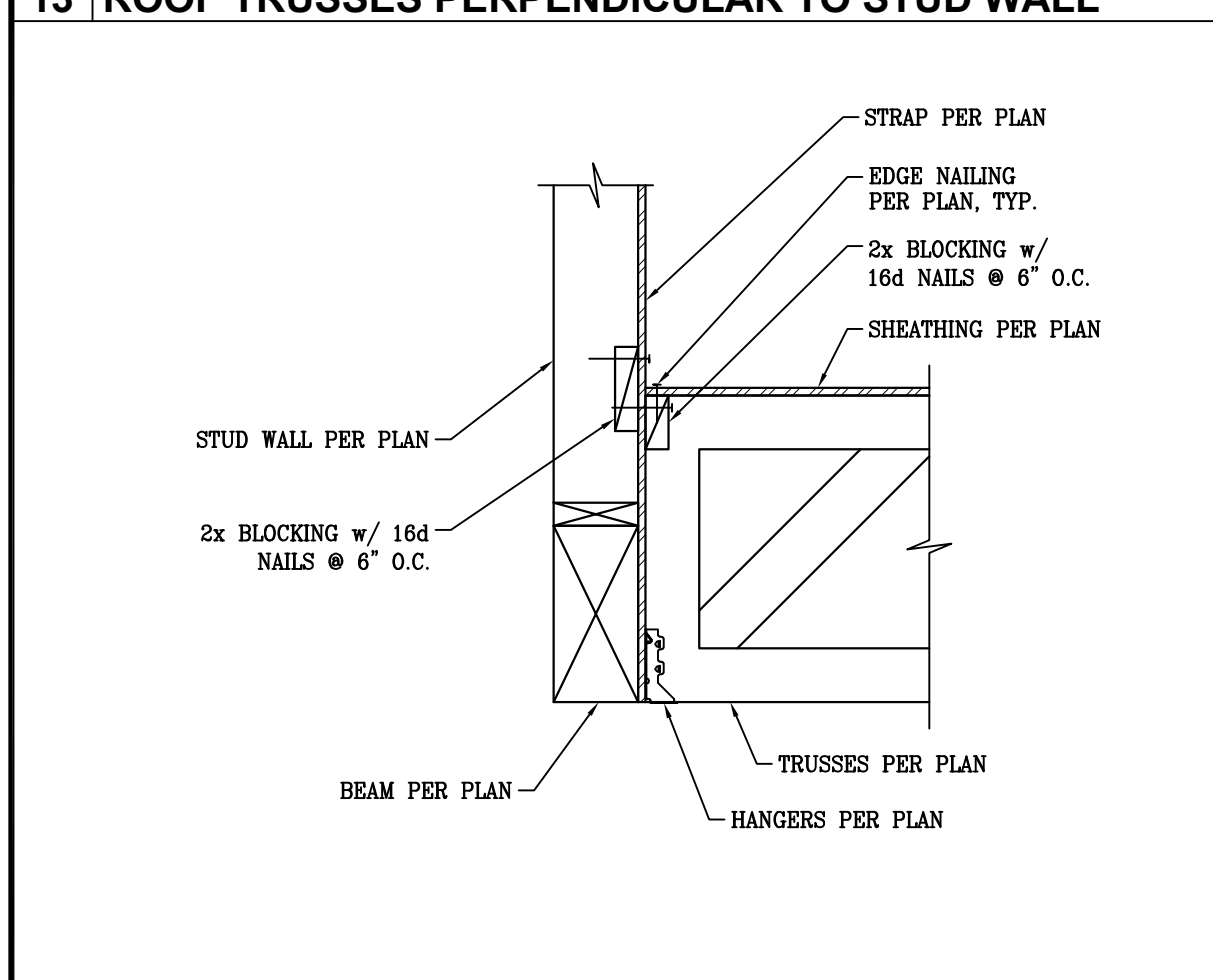
16 | WOOD BEAM TO STEEL POST CONNECTION



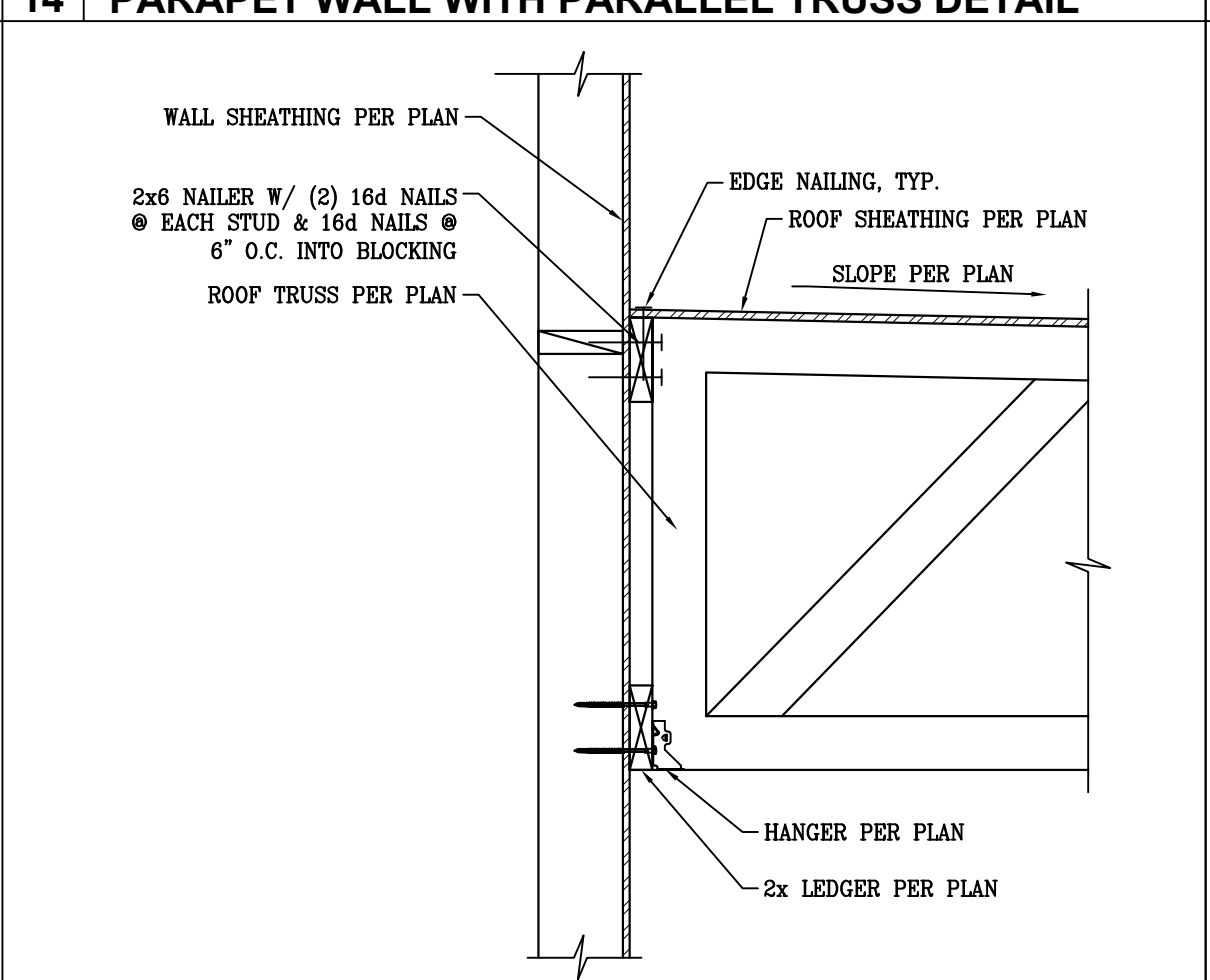
17 | BEAM PARALLEL TO STUD WALL CONNECTION



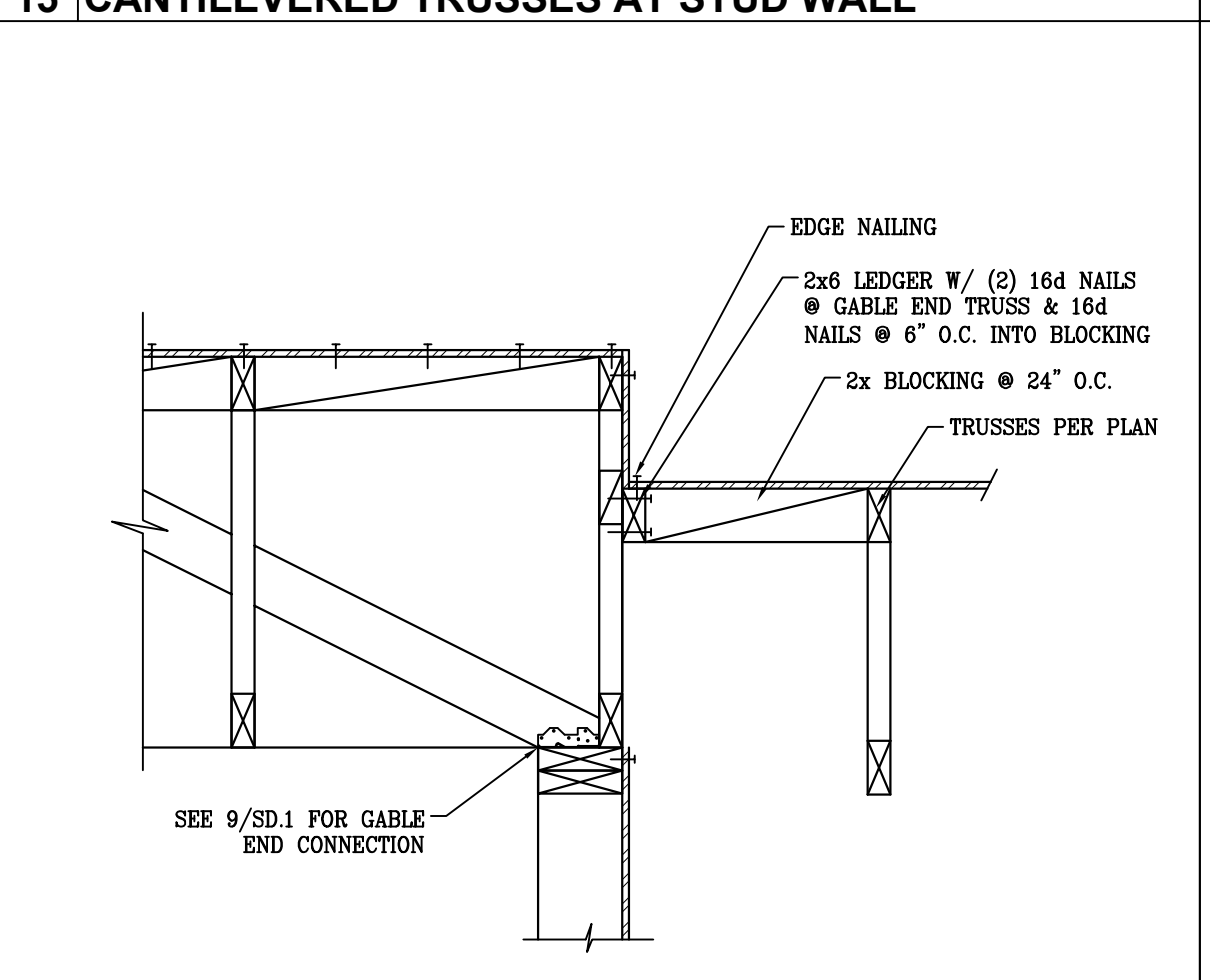
18 | WOOD TRUSS TO WALL & ROOF CONNECTION



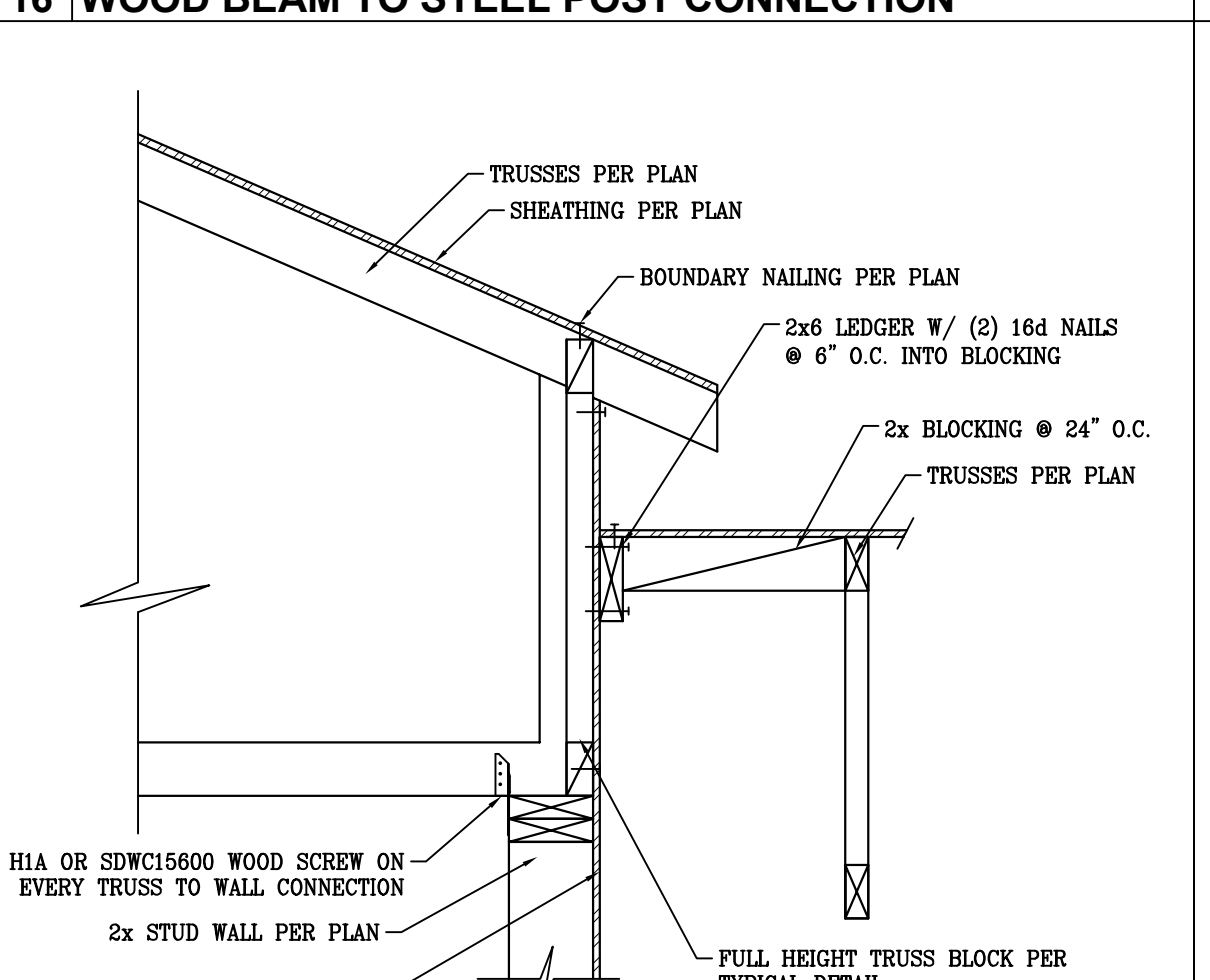
19 | LOW ROOF AT BEAM AND STUD WALL



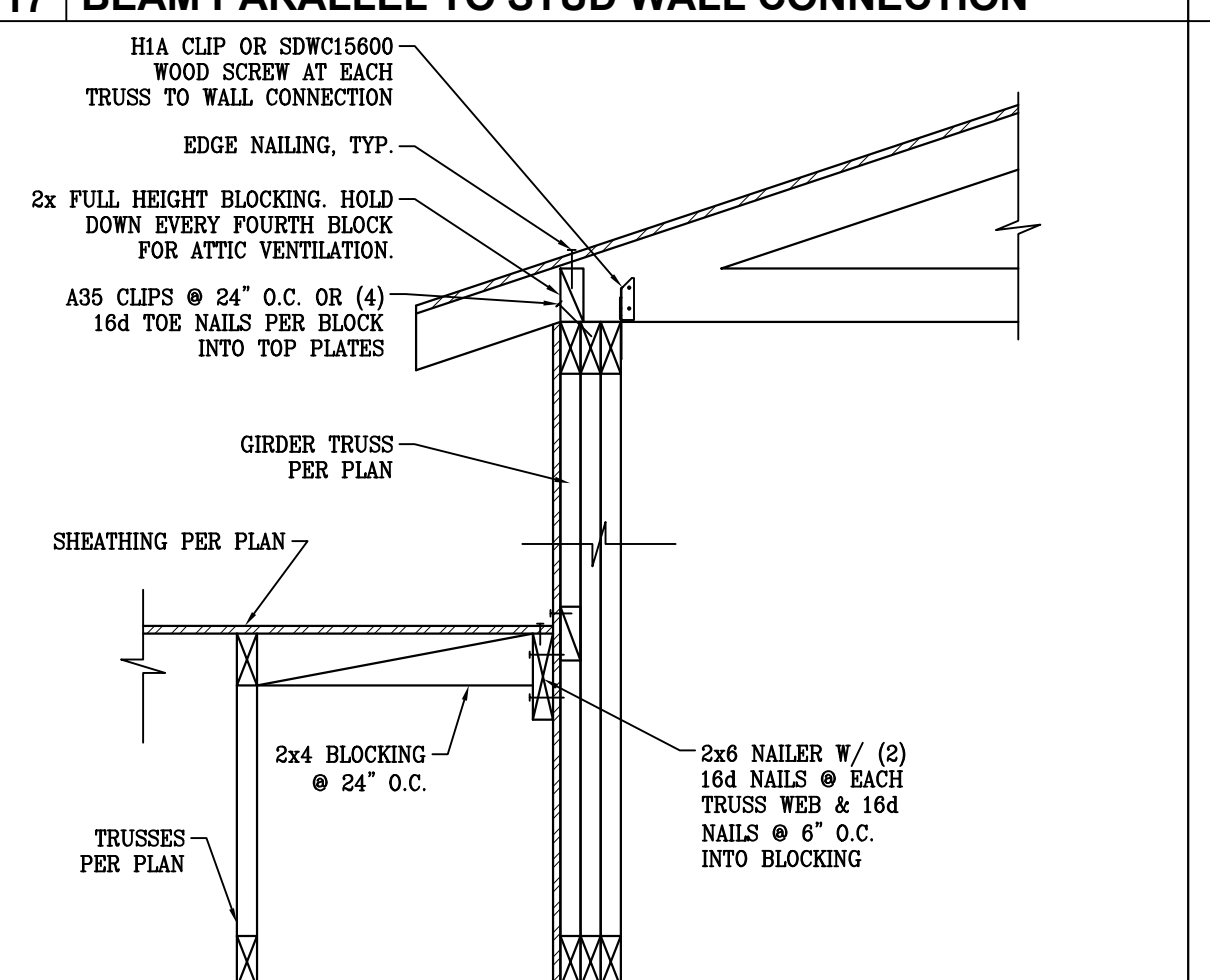
20 | LOW ROOF AT LEDGER



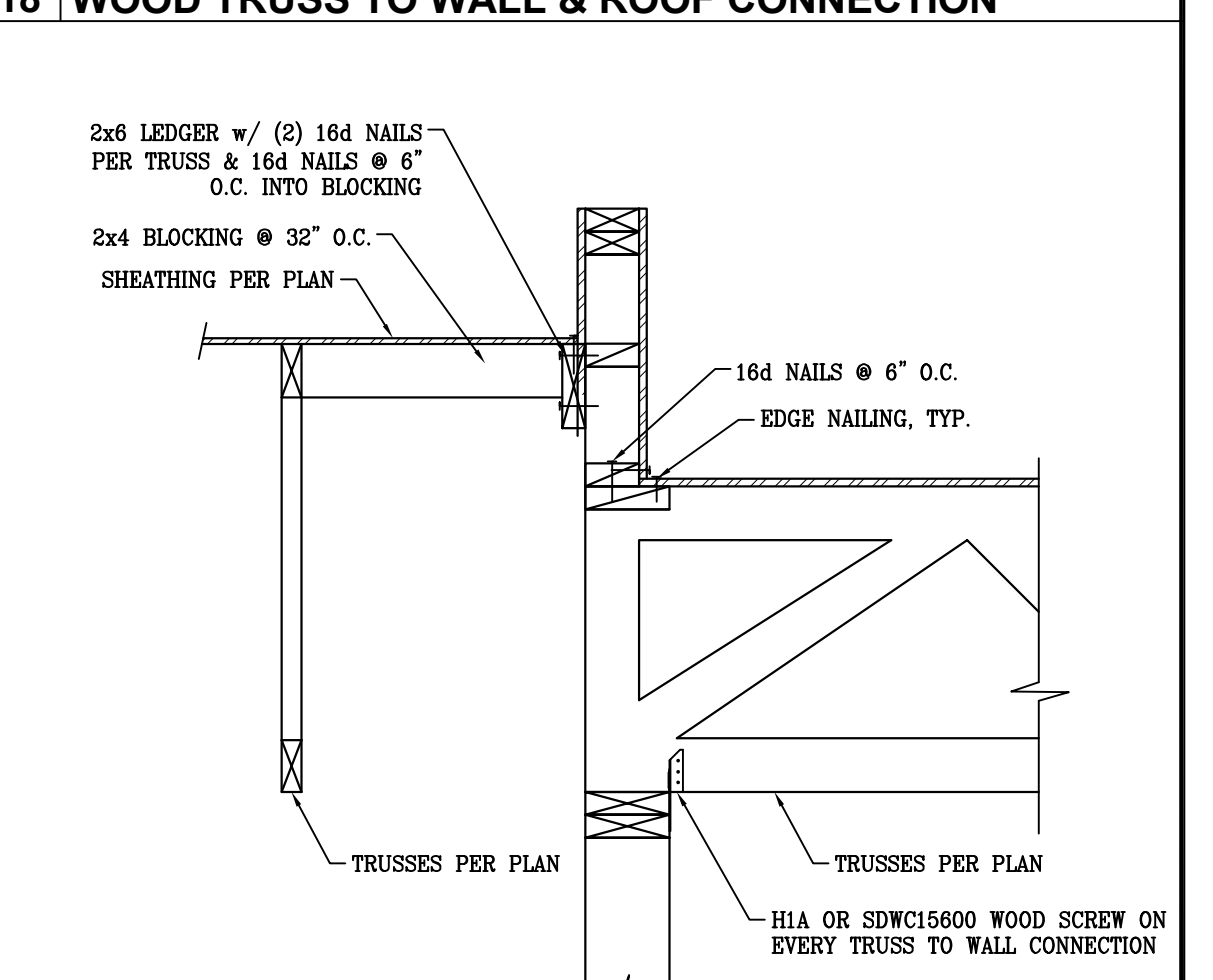
21 | GABLE END TRUSS TO STUD WALL CONNECTION



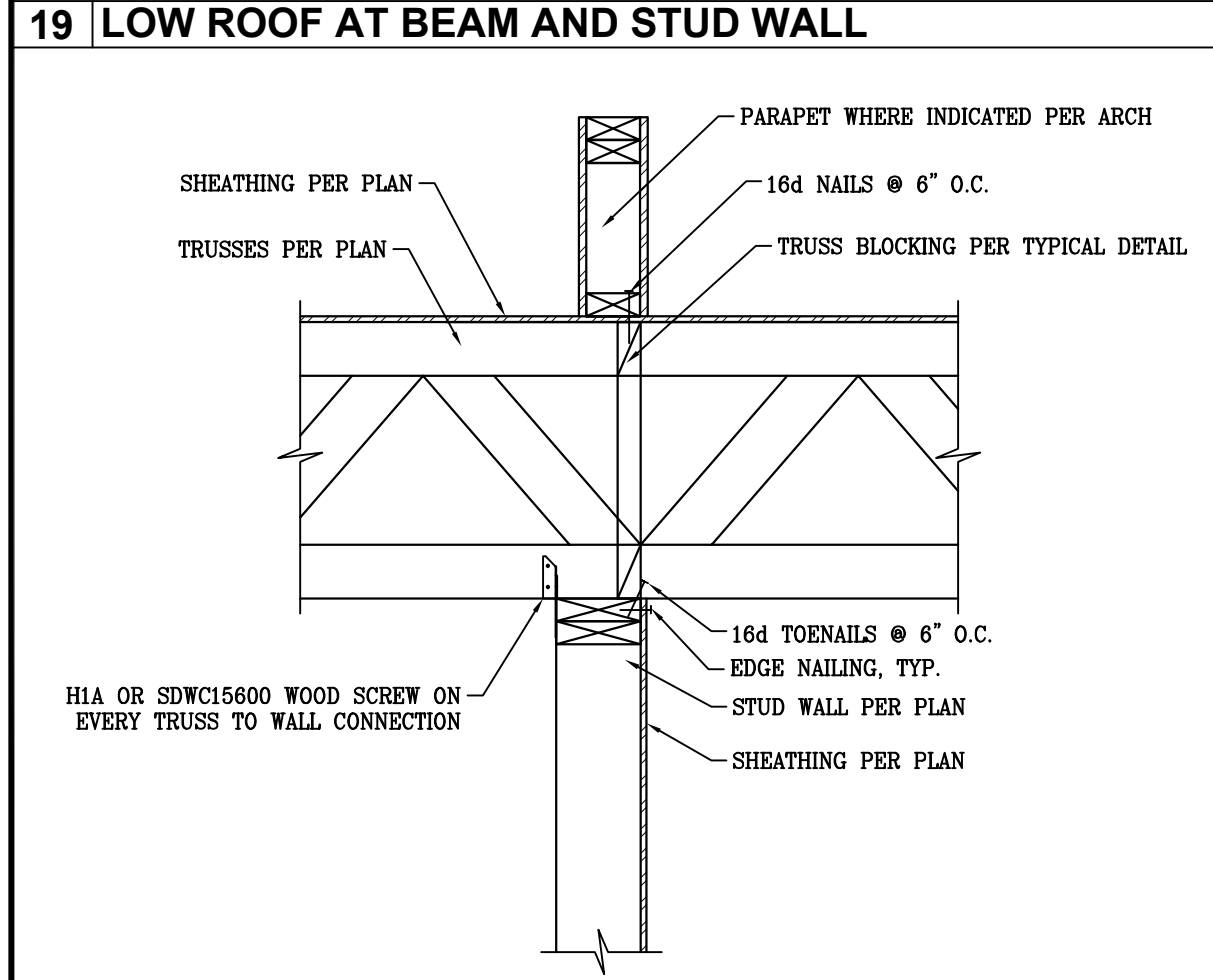
22 | LOW ROOF TO TALL HEEL TRUSS



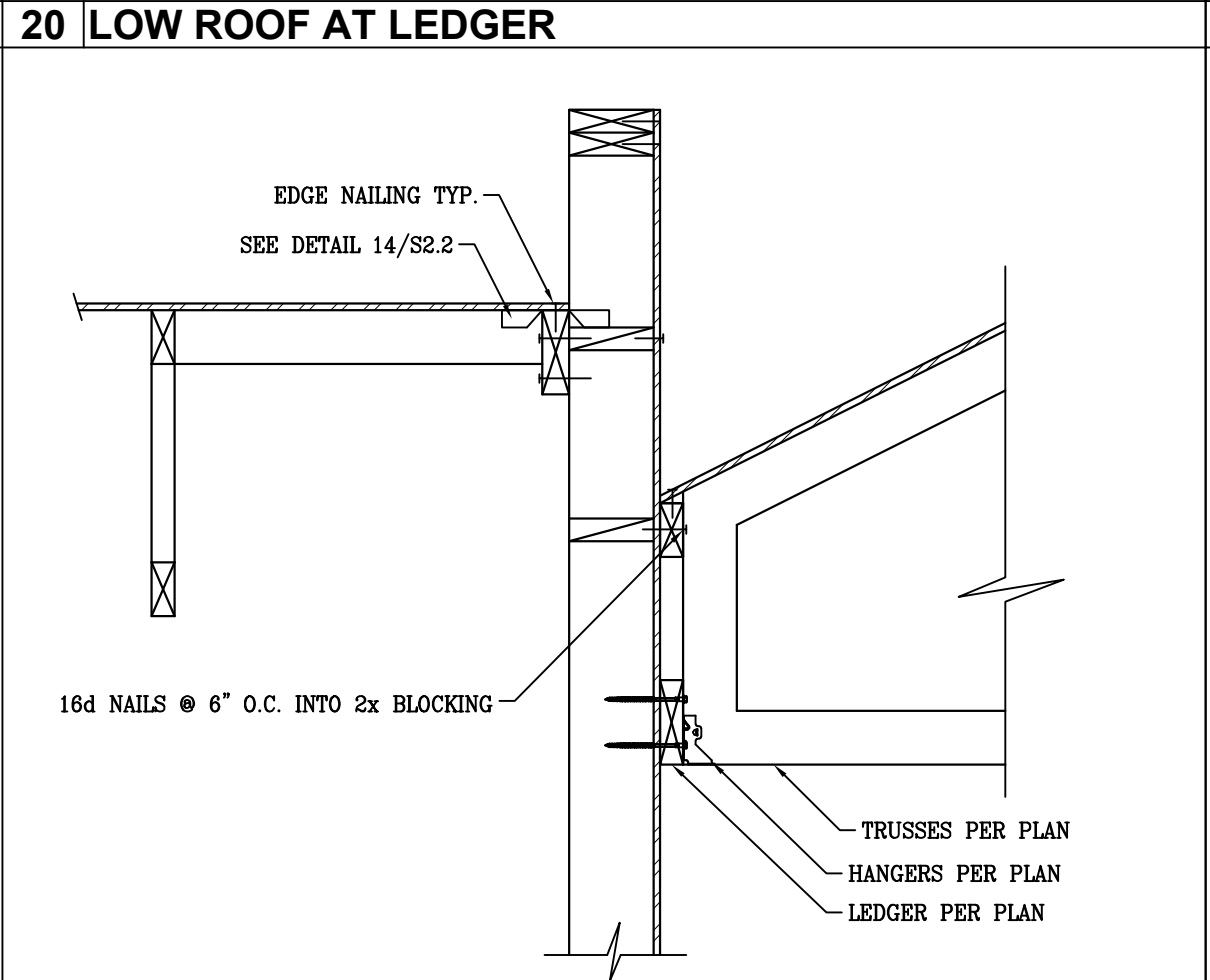
23 | TRUSSES AT BEAM



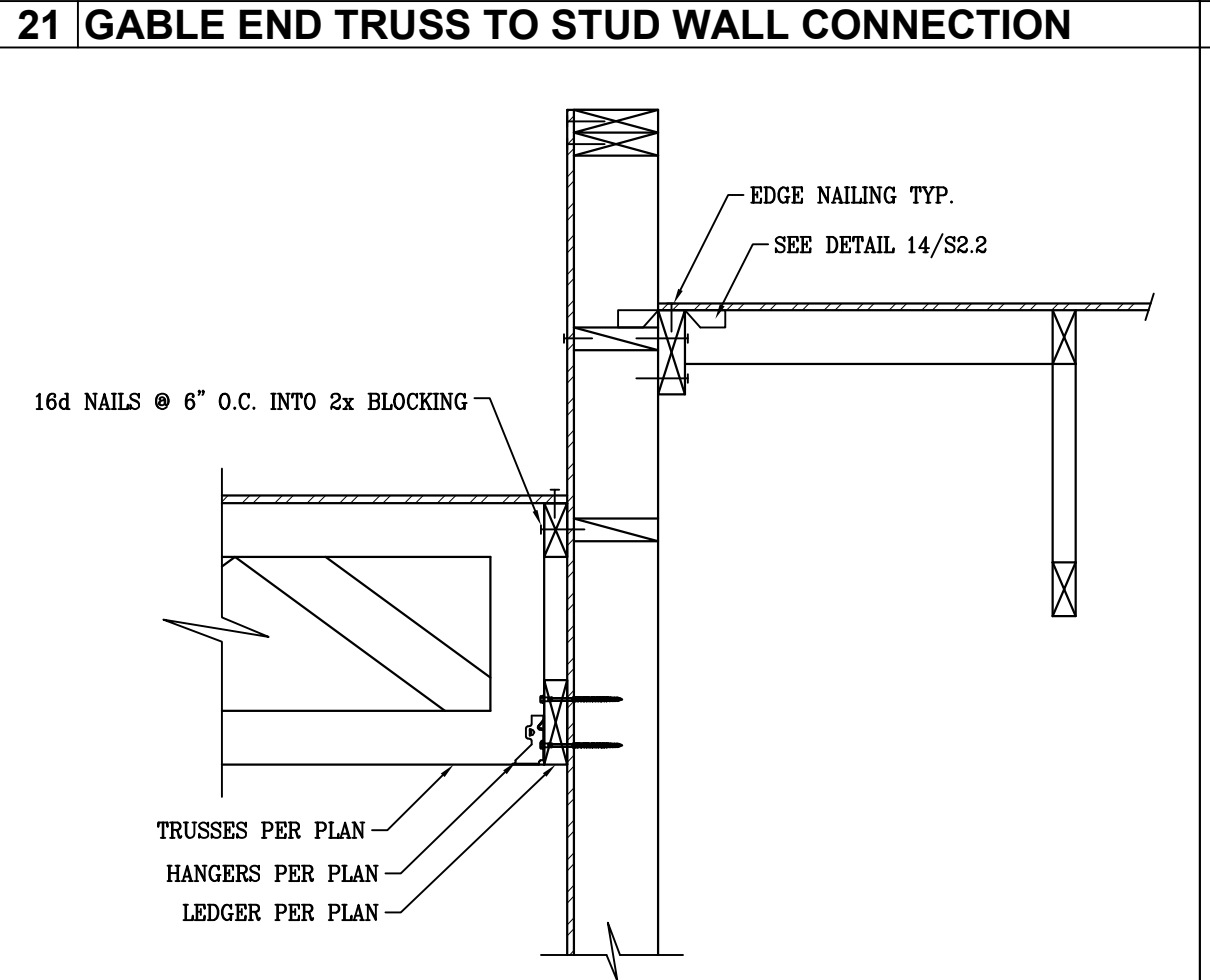
24 | TRUSSES TO STUD WALL CONNECTION



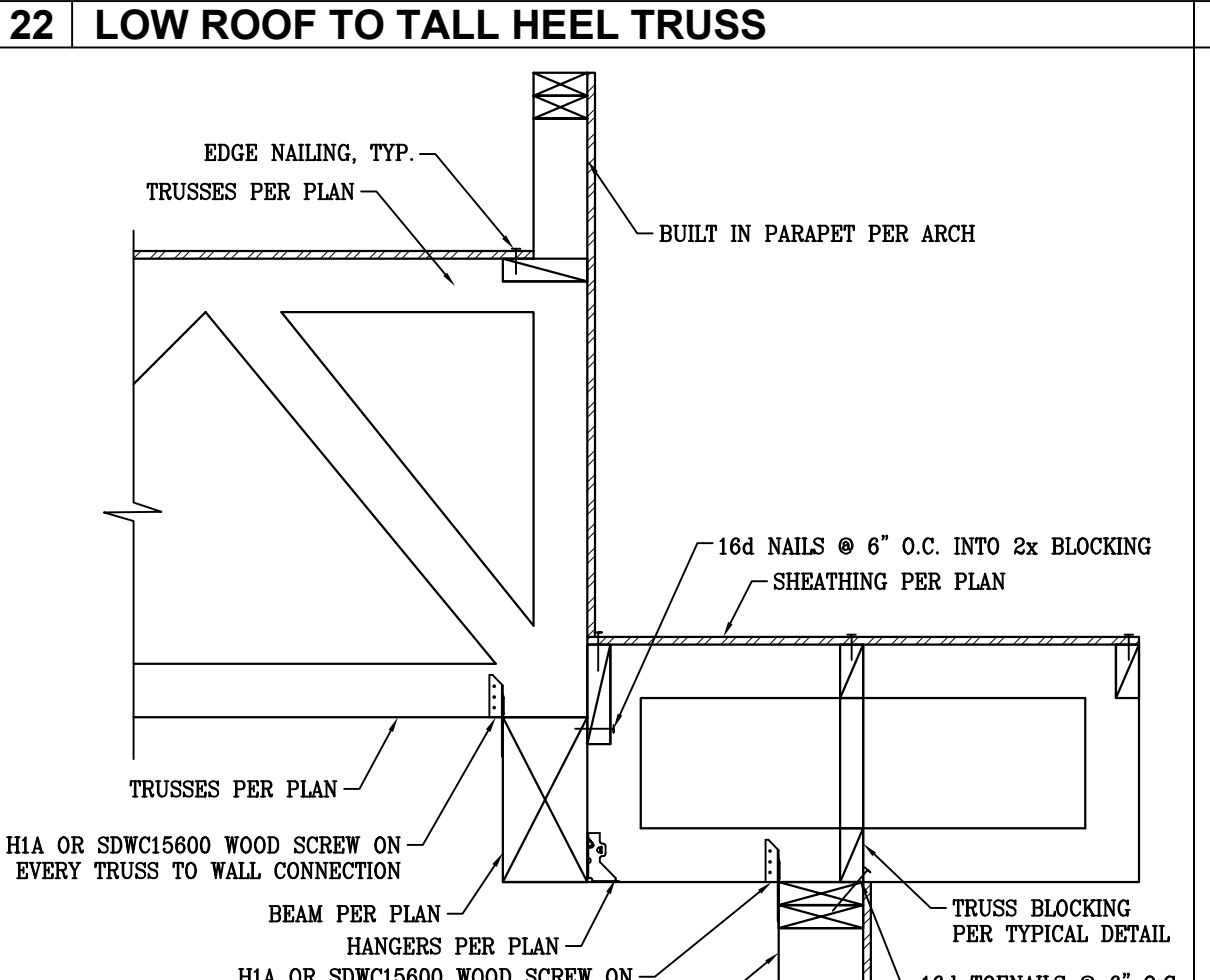
25 | SHEAR TRANSFER AT INTERIOR WALL



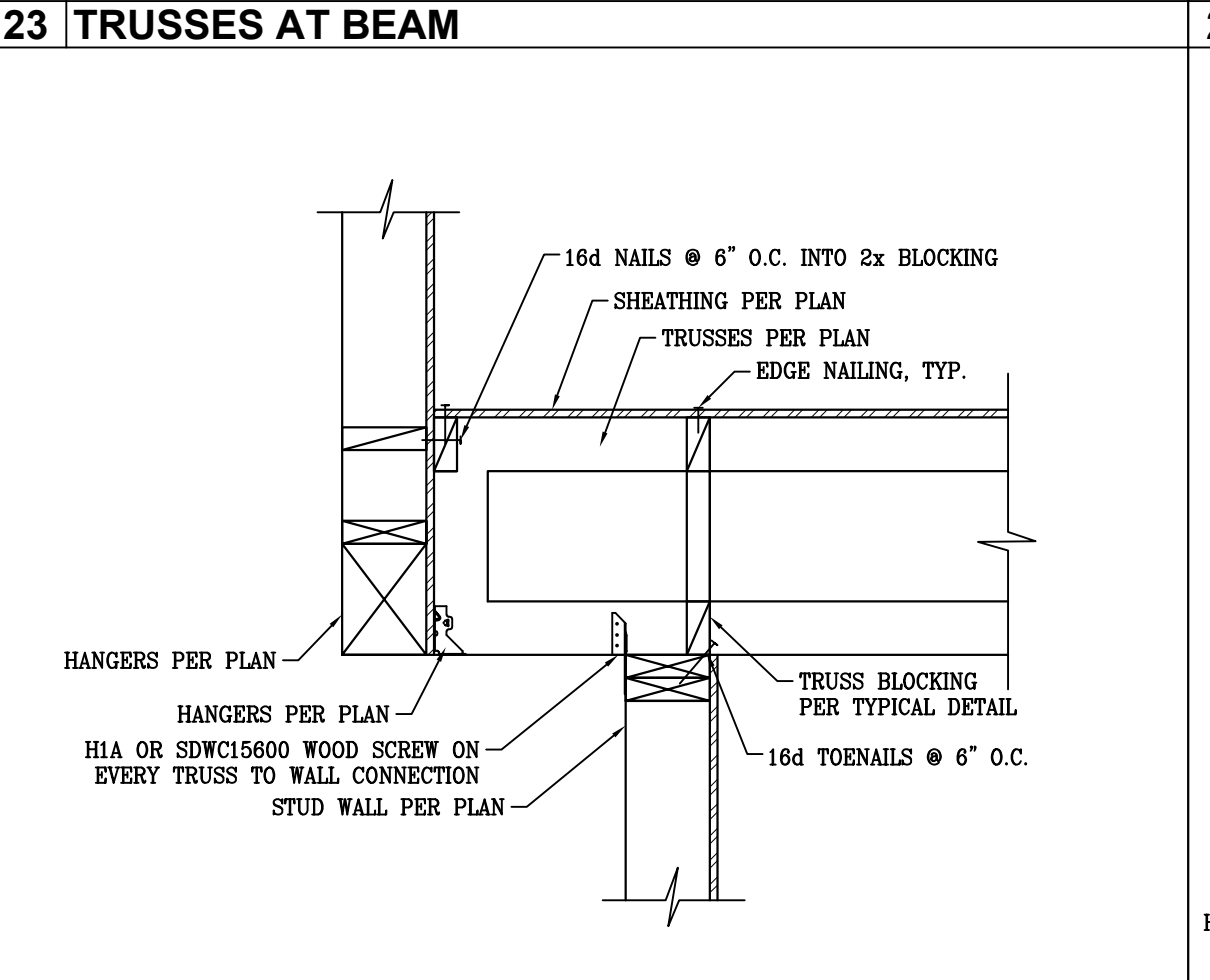
26 | LOW ROOF AT LEDGER



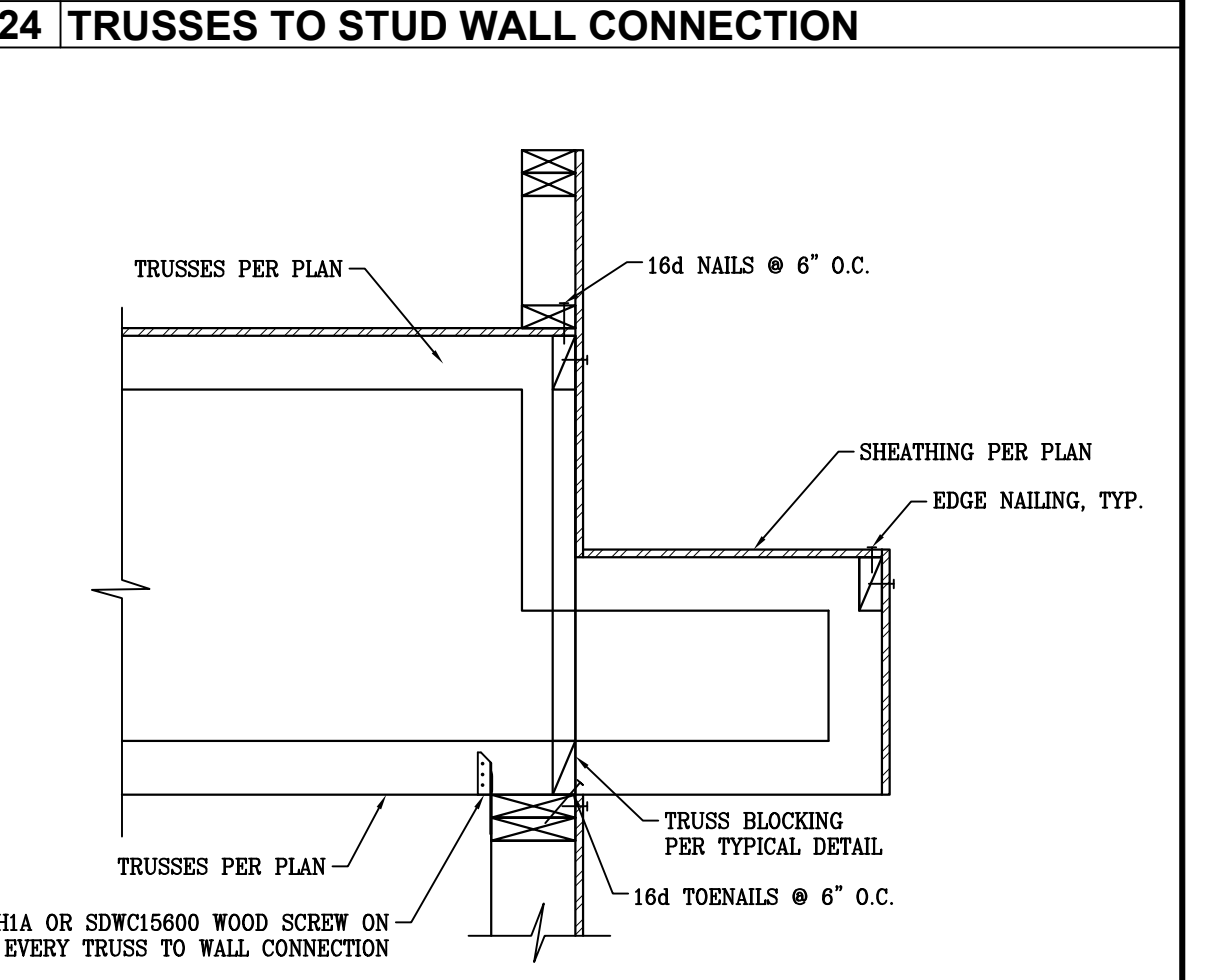
27 | LOW ROOF AT LEDGER



28 | LOW ROOF AT BEAM



29 | LOW ROOF AT BEAM



30 | TRUSS TO STUD WALL

STRUCTURAL ELEMENTS ONLY

ENGINEERS
SURVEYORS
PLANNERS

3302 No. Main Street
Spanish Fork UT 84650
PH: 801-798-0555
Fax: 801-798-9393
office@lei-eng.com
www.lei-eng.com

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

REVISIONS:

1			
2			
3			
4			

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

JOB #: 2025-2154

DRAWN: EBM

CHECKED: LEI ENG

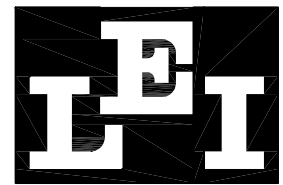
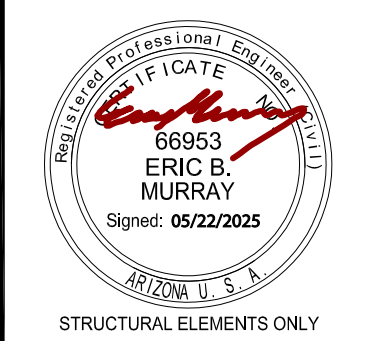
DATE: 06 MAY 2025

SHEET

♦ STRUCTURAL ♦ DETAILS

S2.2

© COPYRIGHT 2019



ENGINEERS
SURVEYORS
PLANNERS

3302 No. Main Street
Spokane Falls, WA 99060
Ph: 801-798-0555
Fax: 801-798-9393
office@lei-eng.com
www.lei-eng.com

31 TRUSSES TO STUD WALL CONNECTION	32 SHEAR WALL PARALLEL TO ROOF TRUSS CONN.	33 TRANSFER POST CONNECTION	34 TRUSSES PARALLEL TO STUD WALL	35	36 TYPICAL TRUSS BLOCKING	37 PORTAL FRAME	38 WOOD HEADER OVER WSWH-PK	39 WSWH TRIM ZONE & ALLOWABLE HOLES	40 BEAM CONNECTION	41 PORTAL FRAME	42 CANTILEVER STEEL BEAM TO STEEL POST	43 TRUSSES TO CMU WALL	44 TRUSSES TO CMU WALL	45 STUD WALL STEP-DOWN CONNECTION	46 TRUSSES TO GIRDER TRUSS	47 2x ROOF RAFTER TO WALL CONNECTION	48 2x RAFTER PARALLEL TO WALL CONNECTION	49 STEEL BEAM TO STEEL BEAM	50 CANTILEVER SUPPORTING BEAM w/ INVERTED HANGER	51 OUTLOOKERS AT TRUSSES	52 TYPICAL NAILER TO STEEL BEAM	53 TYPICAL PACKED WEB AT STEEL BEAM	54 STEEL BEAM TO WOOD POST	55 BEAM CONNECTION	56 NOT USED	57 NOT USED	58 NOT USED	59 NOT USED	60 NOT USED

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

REVISIONS:
△
△
△
△

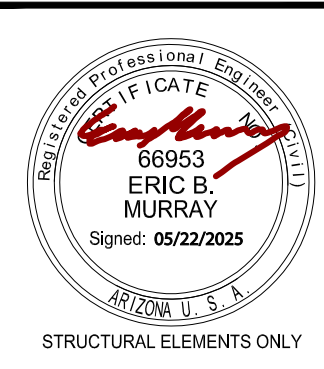
SCALE:
1/4"=1'-0"

JOB #:
2025-2154
DRAWN:
EBM
CHECKED:
LEI ENG
DATE:
06 MAY 2025
SHEET

52.3

© COPYRIGHT 2019

NOTE:
• SEE SHEET S0.1 for STRUCT'L
SCHEDULES and NOTES



LEI
ENGINEERS
SURVEYORS
PLANNERS

3302 No. Main Street
Spanish Fork, UT 84660
Ph: 801-798-0555
Fax: 801-798-9393
office@lei-eng.com
www.lei-eng.com

CONTRACTOR:

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. • DO NOT SCALE DRAWINGS • NOTIFY DESIGNERS IMMEDIATELY PRIOR TO PROCEEDING WITH WORK SHOULD ANY DISCREPANCIES OCCUR. DESIGNERS ASSUME NO RESPONSIBILITY OF WORK IN PLACE

REVISIONS:	
△	
△	
△	

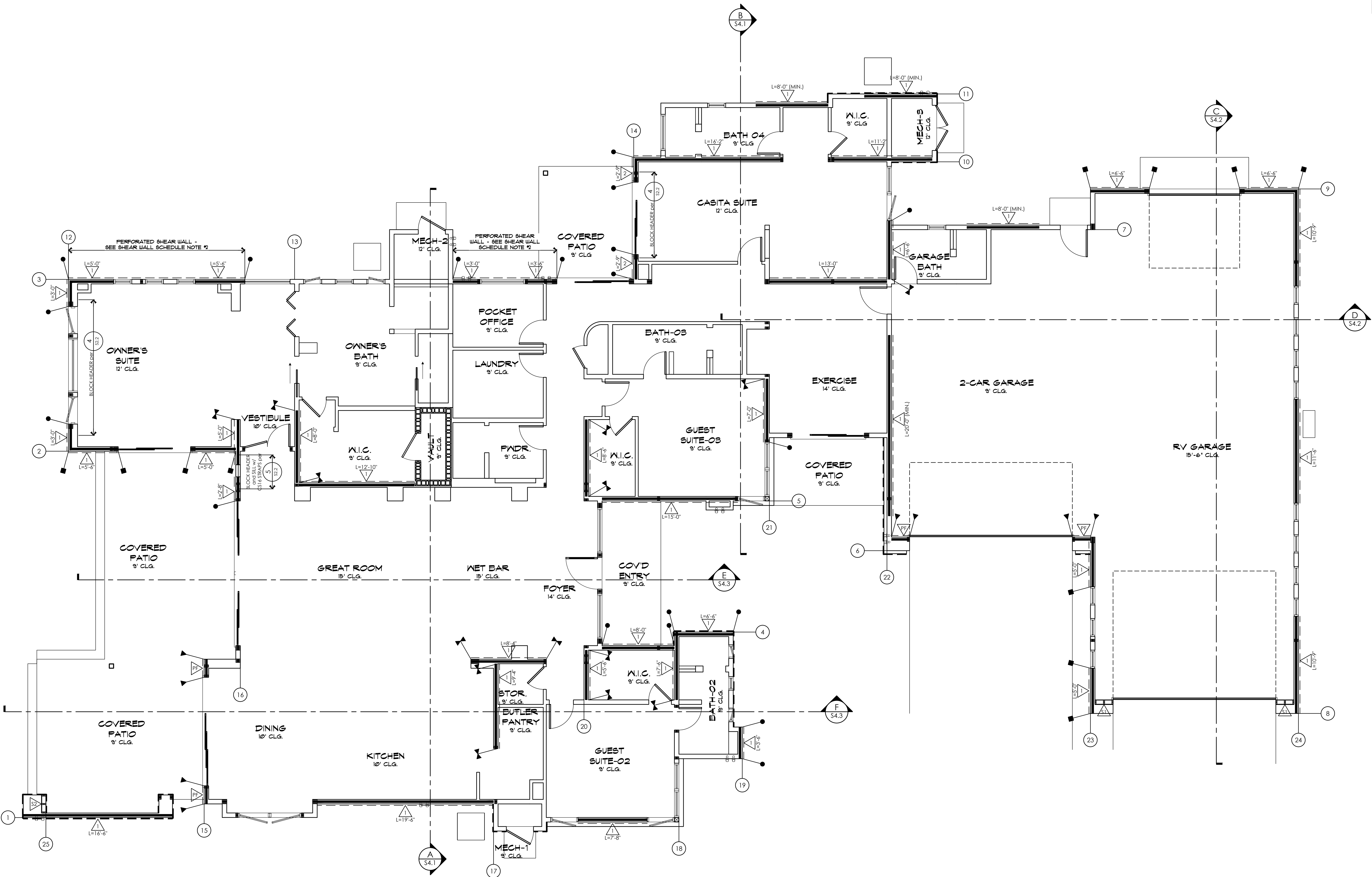
SCALE: 1/4" = 1'-0"	JOB #: 2024-05
DRAWN: S.I.Z.	CHECKED: LEI ENG'R
DATE: 21 MARCH 2025	

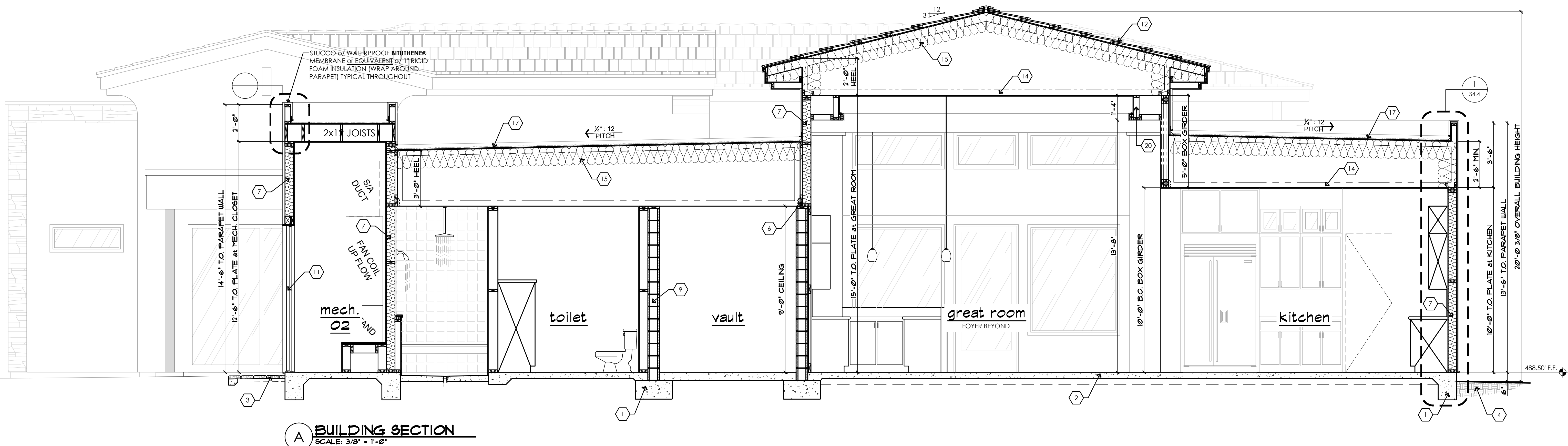
SHEET
S3.1
© COPYRIGHT 2025

This drawing has been drawn under the guidance of LEI Consulting Engineers and Surveyors, Inc. and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of LEI Consulting Engineers and Surveyors, Inc.'s work does not exceed that of the accompanying structural calculations.

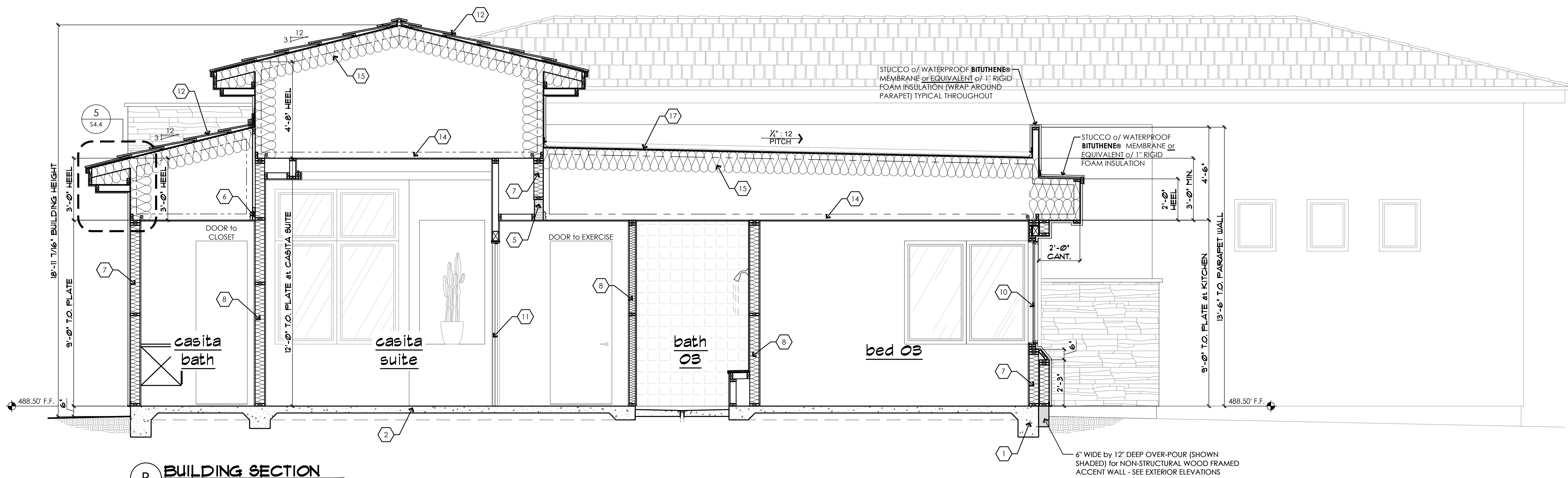
NOTE:
Structural components designed according to the 2018 IRC, all other aspects of the plans shall conform w/ 2018 IRC and all current governing codes

SHEAR WALL PLAN
SCALE: 1/4" = 1'-0"

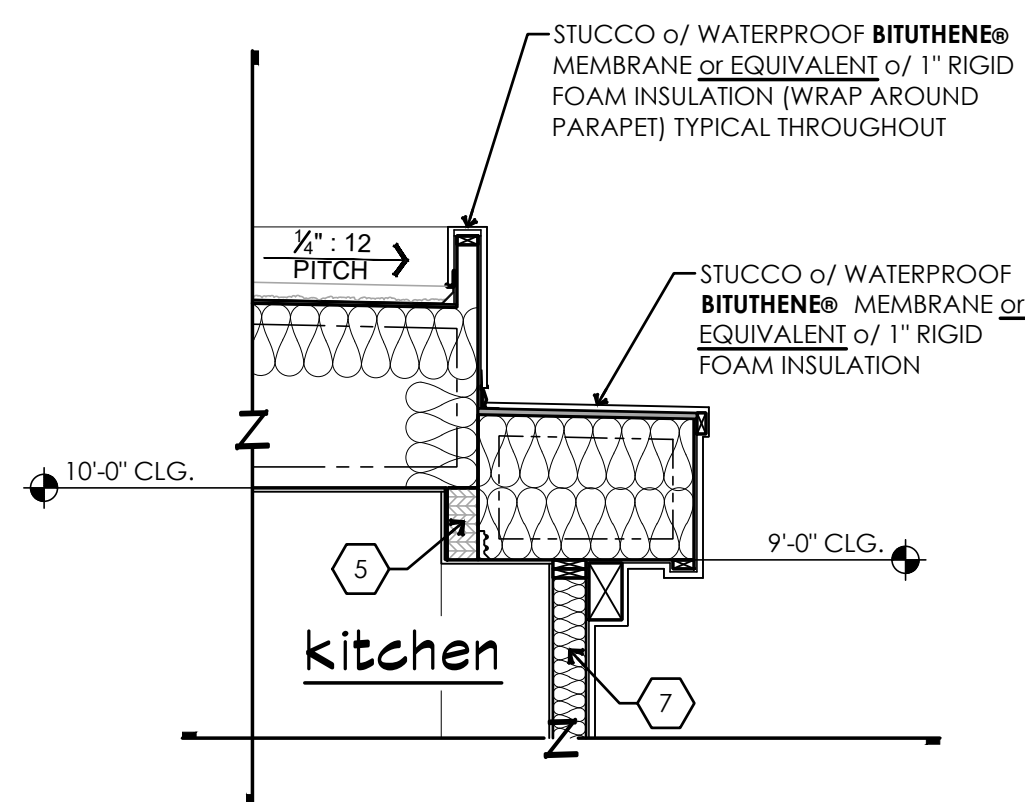




A BUILDING SECTION
SCALE: 3/8" = 1'-0"



B BUILDING SECTION
SCALE: 3/8" = 1'-0"



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

KEYNOTE LEGEND	
NOTE: NOT ALL KEYNOTES USED ON THIS SHEET	
FOUNDATION:	
1.	CONCRETE FOOTING per STRUCTL DRAWINGS
2.	CONCRETE SLAB OVER APPROVED COMPACTED SOIL per STRUCTURAL DRAWINGS
3.	CONCRETE PAVERS/CONCRETE FLATWORK per OWNER SELECTION - SLOPE AWAY FROM STRUCTURE
4.	FINISH GRADE - SLOPE AWAY FROM STRUCTURE
WALL CONSTRUCTION:	
5.	BEAM/HEADER per STRUCTURAL CALC'S
6.	LEDGER STRIP per STRUCTURAL CALC'S
7.	R20 MINIMUM EXTERIOR WALL INSULATION
8.	R11 MINIMUM SOUND BATTS at ALL INTERIOR WALLS, TYPICAL
9.	8" C.M.U. WALL per STRUCTURAL DRAWINGS
10.	DUAL GLAZE WINDOW per WINDOW SCHEDULE
11.	DOOR per DOOR SCHEDULE
FLOOR / ROOF CONSTRUCTION:	
12.	FLAT CONCRETE ROOF TILE (ICC-ER ESR 1215) of TWO LAYERS of 30lb FELT or APA-RATED SHEATHING (per STRUCTURAL CALC'S)
13.	NOT USED.
14.	PREFABRICATED ROOF TRUSSES at 24" ON CENTER UNLESS NOTED OTHERWISE
15.	R38 MINIMUM ROOF INSULATION
16.	DRAINAGE CRICKET per PLAN w/ FLASHING as REQUIRED, TYPICAL WHERE SHOWN
17.	DURO-LAST (or APPROVED EQUAL) ROOFING or 2-LAYERS of 30 LB FELT or SHEATHING or PRE-MFG'd ROOF TRUSSES at 24" ON CENTER
FINISH CONSTRUCTION:	
18.	CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #4147 - INSTALL per MANUF. SPECS
19.	WOOD FRAMED and STUCCO WRAPPED TRIM at TOP of CULTURED STONE VENEER
20.	WOOD FRAMED and 5/8" TYPE 'X' DRYWALL WRAPPED INTERIOR SOFFIT - SEE INTERIOR ELEVATIONS
21.	WOOD FRAMED and STUCCO WRAPPED EXTERIOR SOFFIT - SEE EXTERIOR ELEVATIONS

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:
R702.3.7 Water-resistant gypsum backing board.
Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1178, C1278 or C1396. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

R702.3.7.1 Limitations.
Water-resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

R702.4.2 Backer boards.
Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.

This drawing has been drawn under the guidance of **LEI Consulting Engineers and Surveyors, Inc.** and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of **LEI Consulting Engineers and Surveyors, Inc.**'s work does not exceed that of the accompanying structural calculations.

NOTE:
• **STRUCTURAL COMPONENTS** DESIGNED ACCORDING to the 2018 INTERNATIONAL BUILDING CODE and ALL CURRENT GOVERNING CODES.
• **ARCHITECTURAL ELEMENTS** of the FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

CONTRACTOR:

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

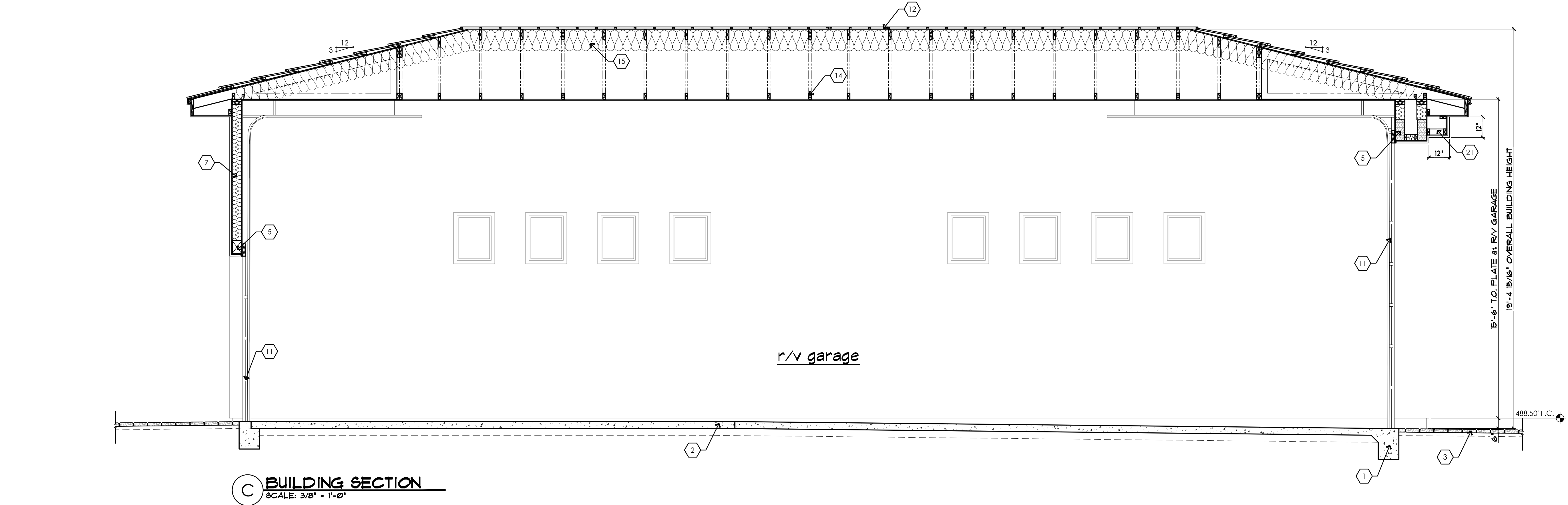
THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. THE USER SHALL NOT REPRODUCE OR TRANSMIT THESE DRAWINGS IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF ZETTEL GROUP, INC. THE CONTRACTOR, ON THE JOB, SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES, AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

REVISIONS:	
1	
2	
3	

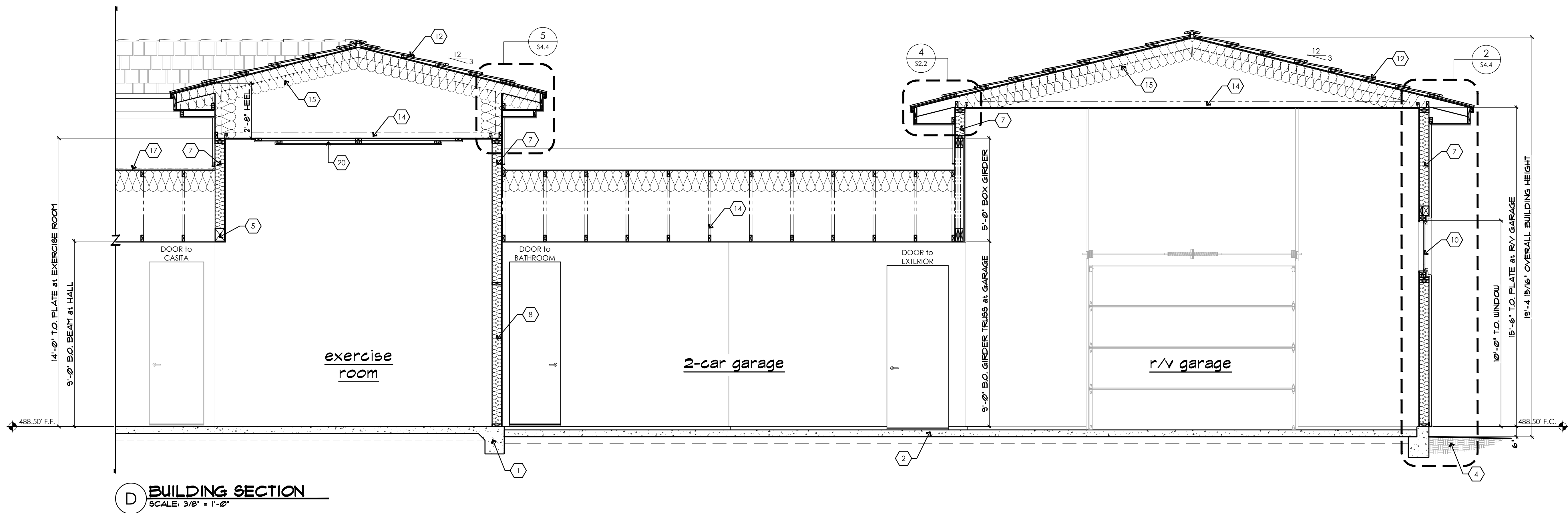
SCALE: 3/8" = 1'-0"
JOB #: 2024-05
DRAWN: S.I.Z.
CHECKED: LEI ENG'R
DATE: 21 MARCH 2025
SHEET

S4.1

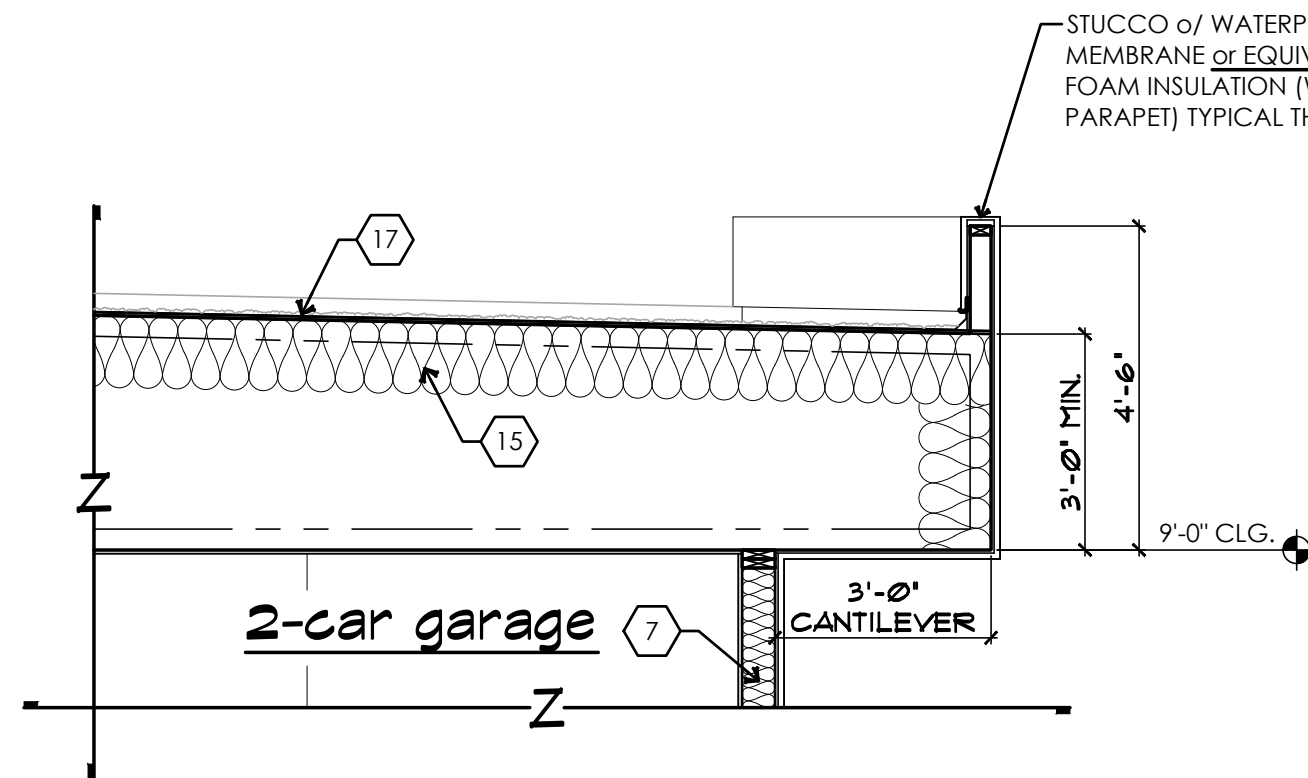
© COPYRIGHT 2025



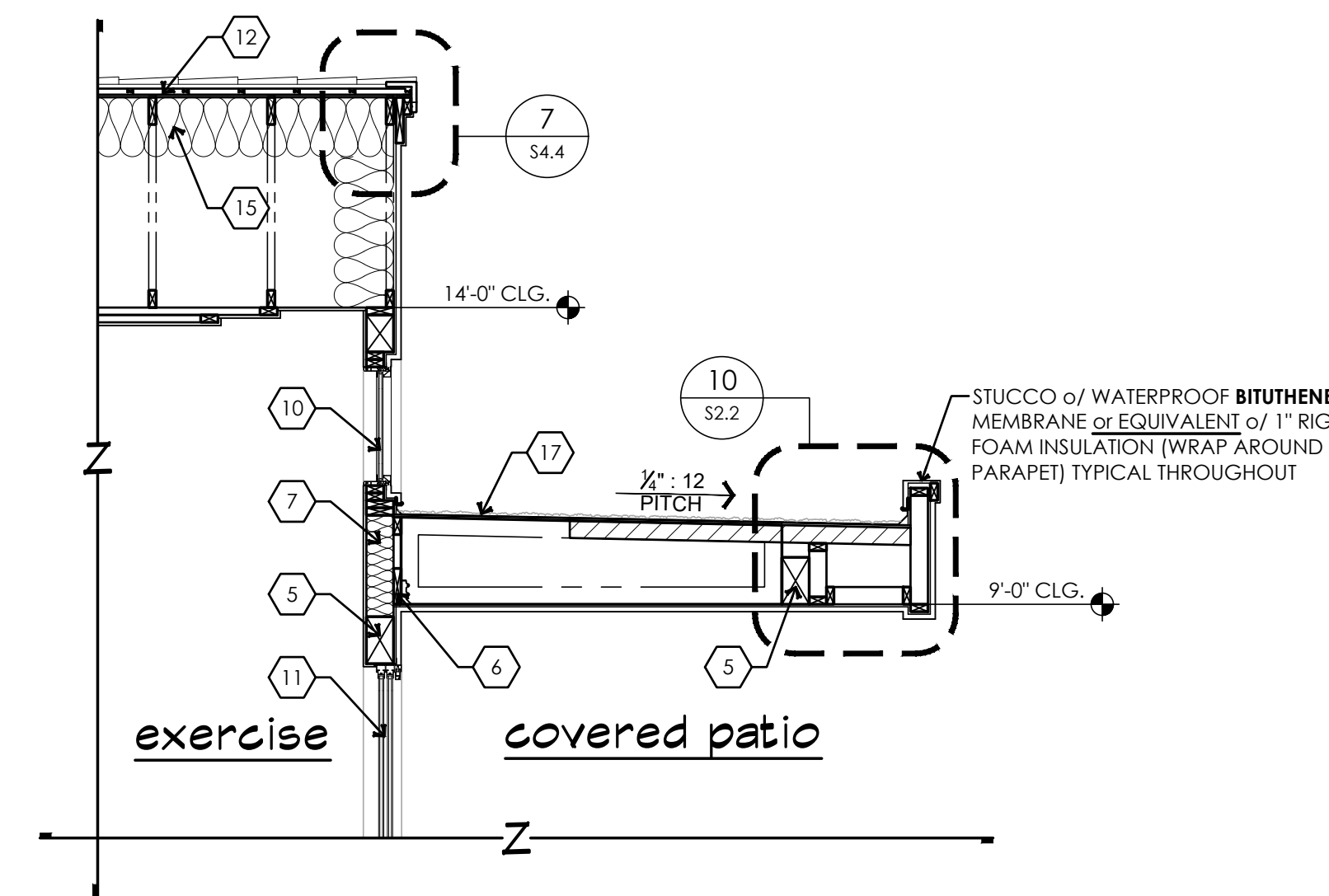
C BUILDING SECTION
SCALE: 3/8" = 1'-0"



D BUILDING SECTION
SCALE: 3/8" = 1'-0"



2 BUILDING SECTION
SCALE: 3/8" = 1'-0"



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

KEYNOTE LEGEND	
NOTE: NOT ALL KEYNOTES USED ON THIS SHEET	
FOUNDATION:	
1.	CONCRETE FOOTING per STRUCTL DRAWINGS
2.	CONCRETE SLAB OVER APPROVED COMPACTED SOIL per STRUCTURAL DRAWINGS
3.	CONCRETE PAVERS/CONCRETE FLATWORK per OWNER SELECTION - SLOPE AWAY FROM STRUCTURE
4.	FINISH GRADE - SLOPE AWAY FROM STRUCTURE
WALL CONSTRUCTION:	
5.	BEAM/HEADER per STRUCTURAL CALC'S
6.	LEDGER STRIP per STRUCTURAL CALC'S
7.	R20 MINIMUM EXTERIOR WALL INSULATION
8.	R11 MINIMUM SOUND BATT'S at ALL INTERIOR WALLS, TYPICAL
9.	8" C.M.U. WALL per STRUCTURAL DRAWINGS
10.	DUAL GLAZE WINDOW per WINDOW SCHEDULE
11.	DOOR per DOOR SCHEDULE
FLOOR / ROOF CONSTRUCTION:	
12.	FLAT CONCRETE ROOF TILE (ICC-ER ESR 1215) of TWO LAYERS of 30lb FELT o/ APA-RATED SHEATHING (per STRUCTURAL CALC'S)
13.	NOT USED.
14.	PREFABRICATED ROOF TRUSSES at 24" ON CENTER UNLESS NOTED OTHERWISE
15.	R38 MINIMUM ROOF INSULATION
16.	DRAINAGE CRICKET per PLAN w/ FLASHING as REQUIRED, TYPICAL WHERE SHOWN
17.	DURO-LAST (or APPROVED EQUAL) ROOFING o/ 2-LAYERS of 30 LB FELT o/ SHEATHING o/ PRE-MFG'd ROOF TRUSSES at 24" ON CENTER
FINISH CONSTRUCTION:	
18.	CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #4147 - INSTALL per MANUF. SPECS
19.	WOOD FRAMED and STUCCO WRAPPED TRIM at TOP of CULTURED STONE VENEER
20.	WOOD FRAMED and 5/8" TYPE 'X' DRYWALL WRAPPED INTERIOR SOFFIT - SEE INTERIOR ELEVATIONS
21.	WOOD FRAMED and STUCCO WRAPPED EXTERIOR SOFFIT - SEE EXTERIOR ELEVATIONS

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:
R702.3.7 Water-resistant gypsum backing board.
Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1178, C1278 or C1396. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

R702.3.7.1 Limitations.
Water-resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

R702.4.2 Backer boards.
Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.

This drawing has been drawn under the guidance of **LEI Consulting Engineers and Surveyors, Inc.** and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of **LEI Consulting Engineers and Surveyors, Inc.'s** work does not exceed that of the accompanying structural calculations.

NOTE:
• **STRUCTURAL COMPONENTS** DESIGNED ACCORDING to the 2018 INTERNATIONAL BUILDING CODE and ALL CURRENT GOVERNING CODES.
• **ARCHITECTURAL ELEMENTS** of the FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

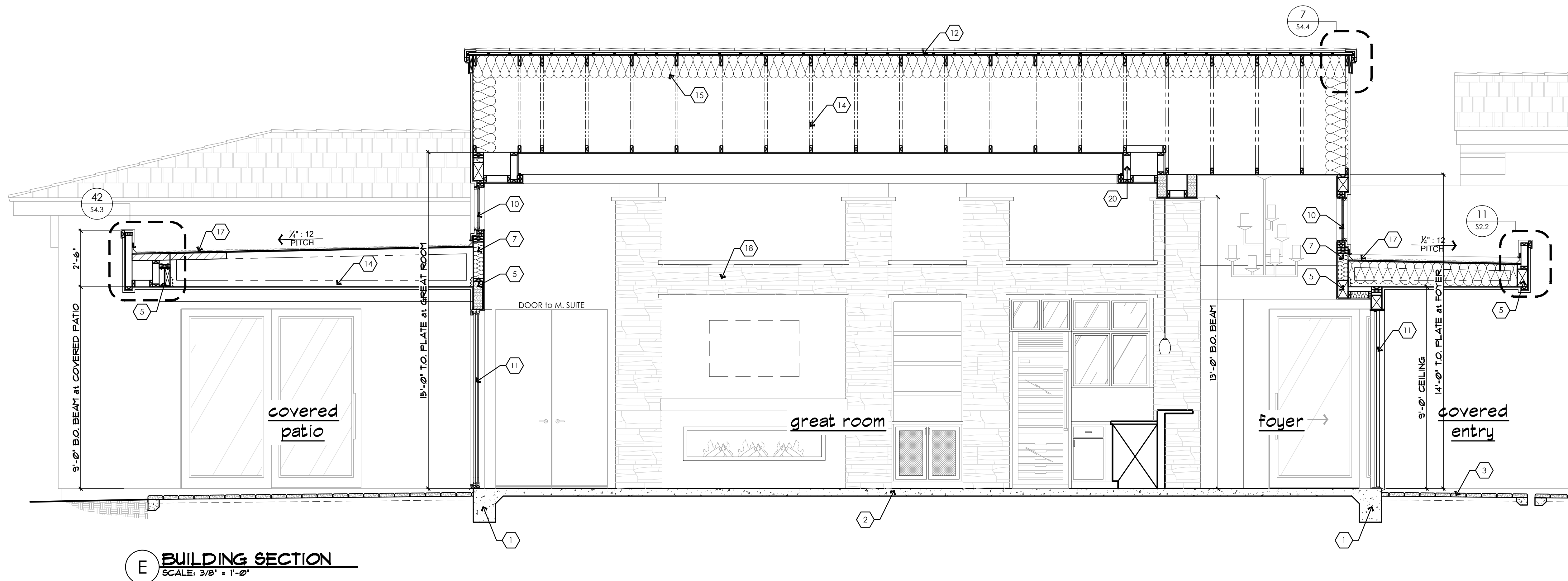
CONTRACTOR:

PROJECT:

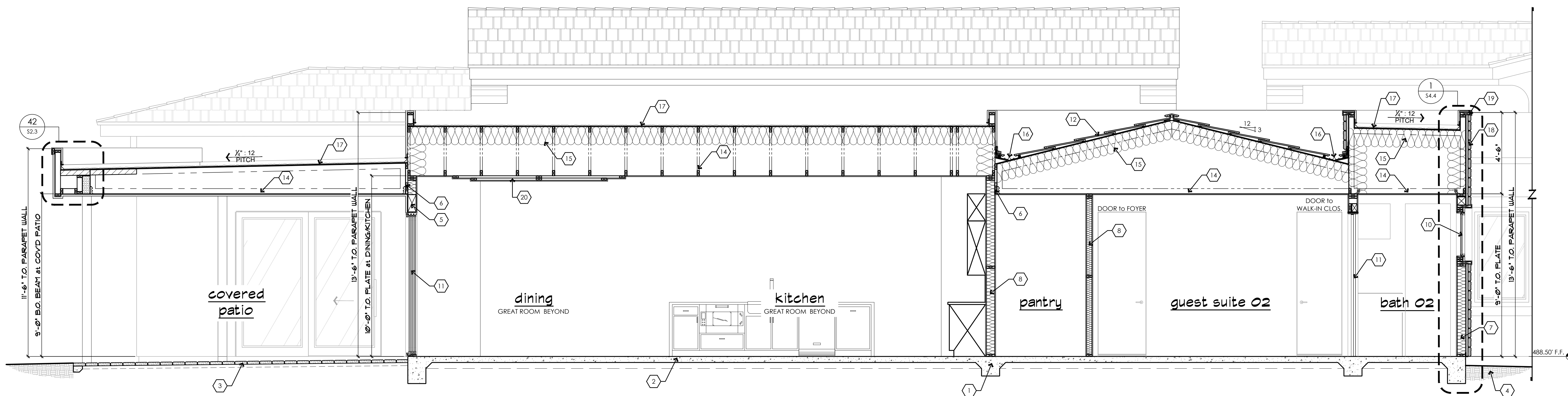
The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. ■ DO NOT SCALE DRAWINGS ■ NOTIFY DESIGNERS IMMEDIATELY PRIOR TO PROCEEDING WITH WORK SHOULD ANY DISCREPANCIES OCCUR. DESIGNERS ASSUME NO RESPONSIBILITY OF WORK IN PLACE	
• THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND OTHER DETAIL AND BE RESPONSIBLE FOR SAME	
• BUILDING SECTIONS	
REVISIONS:	
△	
△	
△	

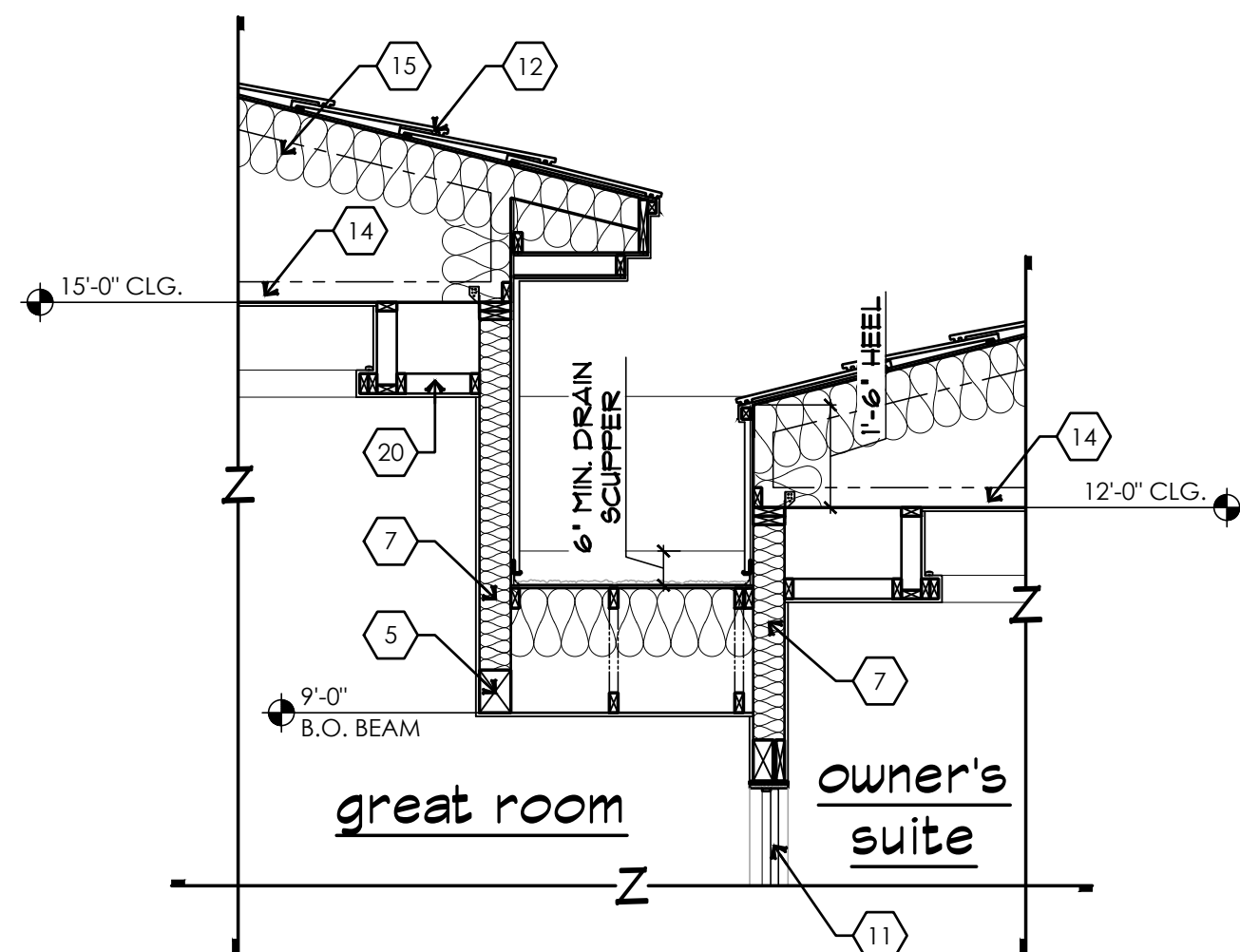
SCALE: 3/8" = 1'-0"	JOB #: 2024-05
DRAWN: S.I.Z.	CHECKED: LEI ENG'R
DATE: 21 MARCH 2025	
SHEET	
S4.2	
© COPYRIGHT 2025	



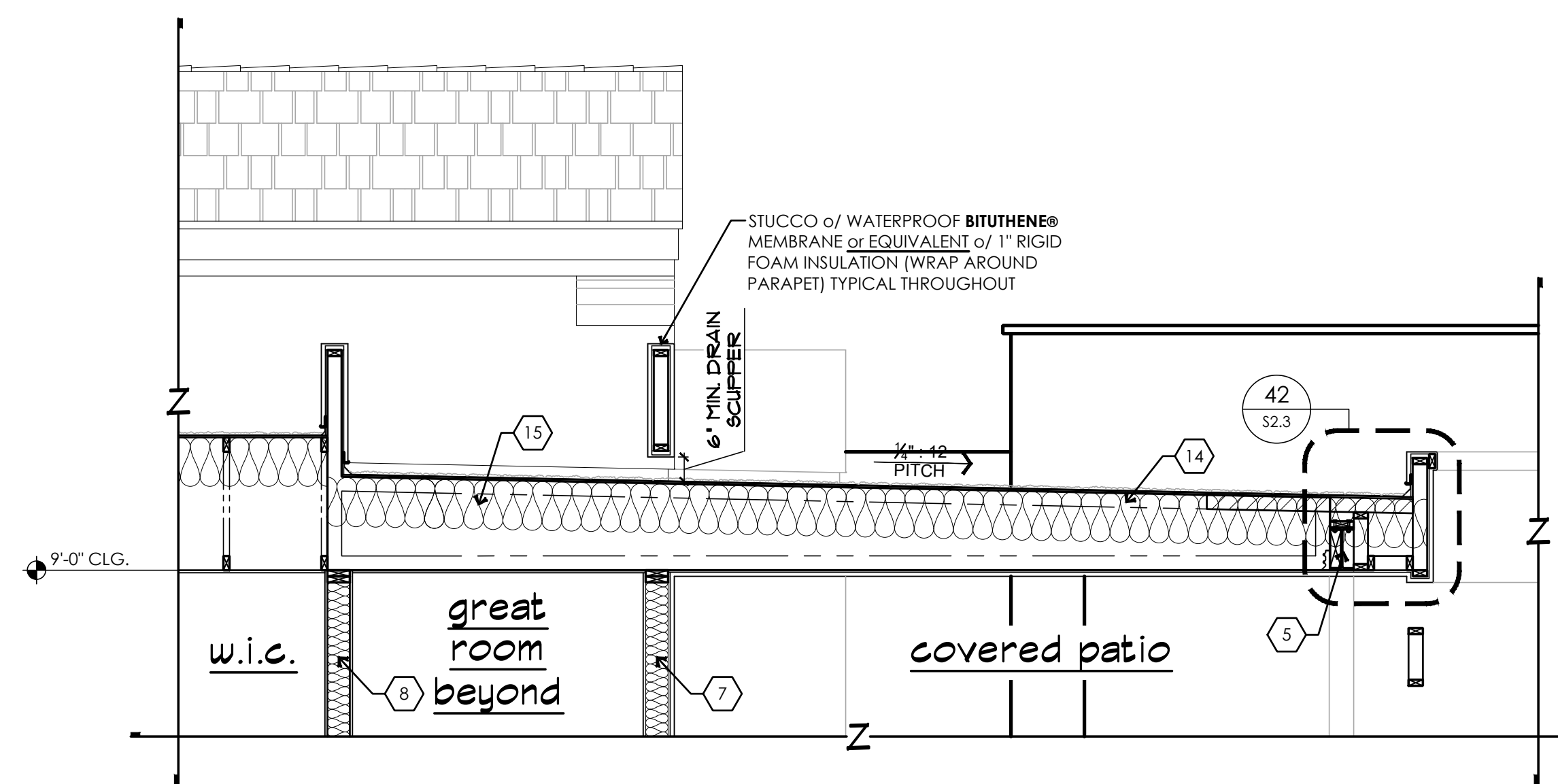
E BUILDING SECTION
SCALE: 3/8" = 1'-0"



F BUILDING SECTION
SCALE: 3/8" = 1'-0"



4 BUILDING SECTION
SCALE: 3/8" = 1'-0"



5 BUILDING SECTION
SCALE: 3/8" = 1'-0"

KEYNOTE LEGEND	
NOTE: NOT ALL KEYNOTES USED ON THIS SHEET	
FOUNDATION:	
1.	CONCRETE FOOTING per STRUCTL DRAWINGS
2.	CONCRETE SLAB OVER APPROVED COMPACTED SOIL per STRUCTURAL DRAWINGS
3.	CONCRETE PAVERS/CONCRETE FLATWORK per OWNER SELECTION - SLOPE AWAY FROM STRUCTURE
4.	FINISH GRADE - SLOPE AWAY FROM STRUCTURE
WALL CONSTRUCTION:	
5.	BEAM/HEADER per STRUCTURAL CALCS
6.	LEDGER STRIP per STRUCTURAL CALCS
7.	R20 MINIMUM EXTERIOR WALL INSULATION
8.	R11 MINIMUM SOUND BATTS at ALL INTERIOR WALLS, TYPICAL
9.	8" C.M.U. WALL per STRUCTURAL DRAWINGS
10.	DUAL GLAZE WINDOW per WINDOW SCHEDULE
11.	DOOR per DOOR SCHEDULE
FLOOR / ROOF CONSTRUCTION:	
12.	FLAT CONCRETE ROOF TILE (ICC-ER ESR 1215) or TWO LAYERS of 30lb FELT or APA-RATED SHEATHING (per STRUCTURAL CALCS)
13.	NOT USED.
14.	PREFABRICATED ROOF TRUSSES at 24" ON CENTER UNLESS NOTED OTHERWISE
15.	R38 MINIMUM ROOF INSULATION
16.	DRAINAGE CRICKET per PLAN w/ FLASHING as REQUIRED, TYPICAL WHERE SHOWN
17.	DURO-LAST (or APPROVED EQUAL) ROOFING or 2-LAYERS of 30 LB FELT or SHEATHING or PRE-MFG'd ROOF TRUSSES at 24" ON CENTER
FINISH CONSTRUCTION:	
18.	CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #4147 - INSTALL per MANUF. SPECS
19.	WOOD FRAMED and STUCCO WRAPPED TRIM at TOP of CULTURED STONE VENEER
20.	WOOD FRAMED and 5/8" TYPE 'X' DRYWALL WRAPPED INTERIOR SOFFIT - SEE INTERIOR ELEVATIONS
21.	WOOD FRAMED and STUCCO WRAPPED EXTERIOR SOFFIT - SEE EXTERIOR ELEVATIONS

2018 INT'L RESIDENTIAL CODE REQUIREMENTS:
R702.3.7 Water-resistant gypsum backing board.
Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1178, C1278 or C1396. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

R702.3.7.1 Limitations.
Water-resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

R702.4.2 Backer boards.
Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.

This drawing has been drawn under the guidance of **LEI Consulting Engineers and Surveyors, Inc.** and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of **LEI Consulting Engineers and Surveyors, Inc.**'s work does not exceed that of the accompanying structural calculations.

NOTE:
• **STRUCTURAL COMPONENTS** DESIGNED ACCORDING TO THE 2018 INTERNATIONAL BUILDING CODE AND ALL CURRENT GOVERNING CODES.

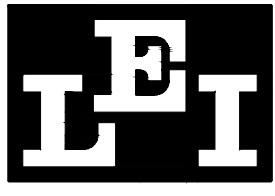
• **ARCHITECTURAL ELEMENTS** of the FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

CONTRACTOR:

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR USE OF THESE DRAWINGS WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. IS PROHIBITED. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.	
◆ BUILDING SECTION ◆	
REVISIONS:	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	
△	



ENGINEERS

SURVEYORS

PLANNERS

3302 No. Main Street
Spanish Fork, UT 84660
Ph: 801-798-0555
Fax: 801-798-9393
office@lel-eng.com
www.lel-eng.com

CONTRACTOR:

PROJECT:

The Peters Residence
31587/31589 CROW'S NEST DR.
PARKER, AZ APN: 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

REVISIONS:	
△	
△	
△	

SCALE:	JOB #:
NOTED	2024-05
DRAWN:	CHECKED:
6.1.2.	LEI ENG'R
DATE:	
21 MARCH 2025	
SHEET	

S4.4

© COPYRIGHT 2025

KEYNOTE LEGEND	
NOTE: NOT ALL KEYNOTES USED ON THIS SHEET	
FOUNDATION:	
1.	CONCRETE FOOTING per STRUCTL DRAWINGS
2.	CONCRETE SLAB OVER APPROVED COMPACTED SOIL per STRUCTURAL DRAWINGS
3.	CONCRETE PAVERS/CONCRETE FLATWORK per OWNER SELECTION - SLOPE AWAY FROM STRUCTURE
4.	FINISH GRADE - SLOPE AWAY FROM STRUCTURE
WALL CONSTRUCTION:	
5.	BEAM/HEADER per STRUCTURAL CALCS
6.	LEDGER STRIP per STRUCTURAL CALCS
7.	R20 MINIMUM EXTERIOR WALL INSULATION
8.	R11 MINIMUM SOUND BATTS at ALL INTERIOR WALLS, TYPICAL
9.	8" C.M.U. WALL per STRUCTURAL DRAWINGS
10.	DUAL GLAZE WINDOW per WINDOW SCHEDULE
11.	DOOR per DOOR SCHEDULE
FLOOR / ROOF CONSTRUCTION:	
12.	FLAT CONCRETE ROOF TILE (ICC-ER ESR 1215) of TWO LAYERS of 30lb FELT of APA-RATED SHEATHING (per STRUCTURAL CALCS)
13.	NOT USED.
14.	PREFABRICATED ROOF TRUSSES at 24" ON CENTER UNLESS NOTED OTHERWISE
15.	R38 MINIMUM ROOF INSULATION
16.	DRAINAGE CRICKET per PLAN w/ FLASHING as REQUIRED, TYPICAL WHERE SHOWN
17.	DURO-LAST (or APPROVED EQUAL) ROOFING of 2-LAYERS of 30 LB FELT of SHEATHING of PRE-MFG'd ROOF TRUSSES at 24" ON CENTER
FINISH CONSTRUCTION:	
18.	CULTURED STONE VENEER per OWNER SELECTION - ICC-ER #4147 - INSTALL per MANUF. SPECS
19.	WOOD FRAMED and STUCCO WRAPPED TRIM at TOP of CULTURED STONE VENEER
20.	WOOD FRAMED and 5/8" TYPE 'X' DRYWALL WRAPPED INTERIOR SOFFIT - SEE INTERIOR ELEVATIONS
21.	WOOD FRAMED and STUCCO WRAPPED EXTERIOR SOFFIT - SEE EXTERIOR ELEVATIONS

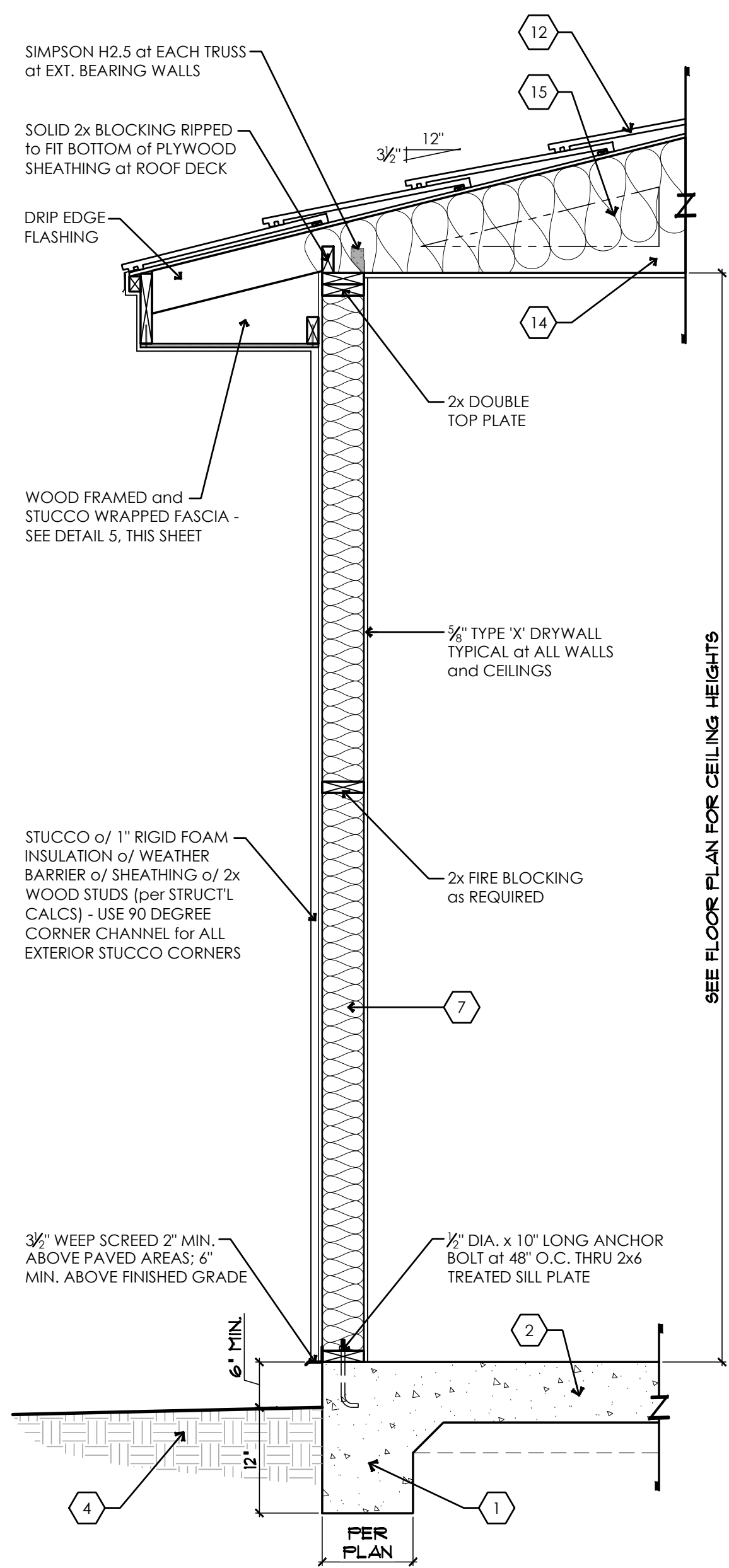
2018 INT'L RESIDENTIAL CODE REQUIREMENTS:
R702.3.7 Water-resistant gypsum backing board.
Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1178, C1278 or C1396. Use of water-resistant gypsum backing board shall be permitted on ceilings. Water-resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

R702.3.7.1 Limitations.
Water-resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

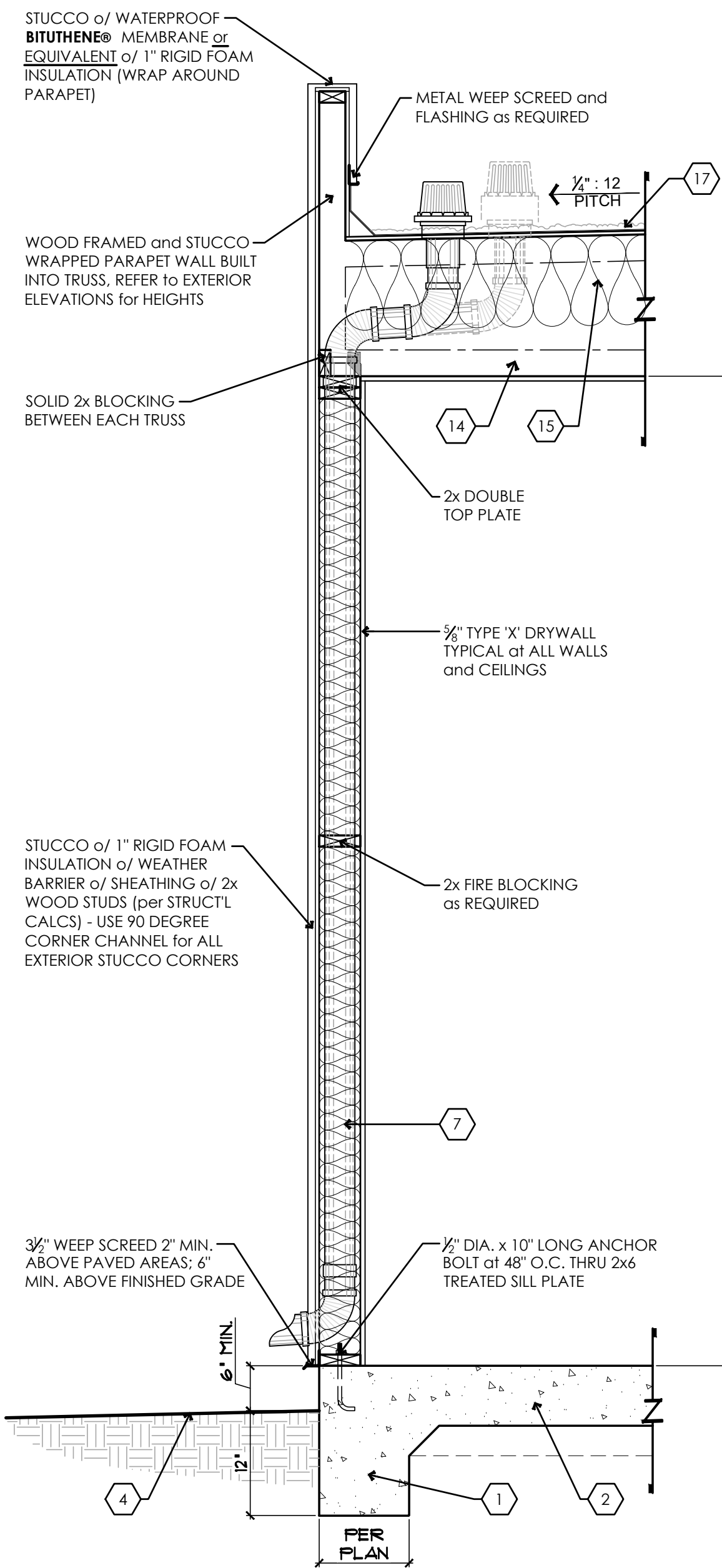
R702.4.2 Backer boards.
Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed in Table R702.4.2, and installed in accordance with the manufacturer's recommendations.

This drawing has been drawn under the guidance of **LEI Consulting Engineers and Surveyors, Inc.** and has been reviewed for compliance with the structural calculations and for structural correctness only. The scope of **LEI Consulting Engineers and Surveyors, Inc.**'s work does not exceed that of the accompanying structural calculations.

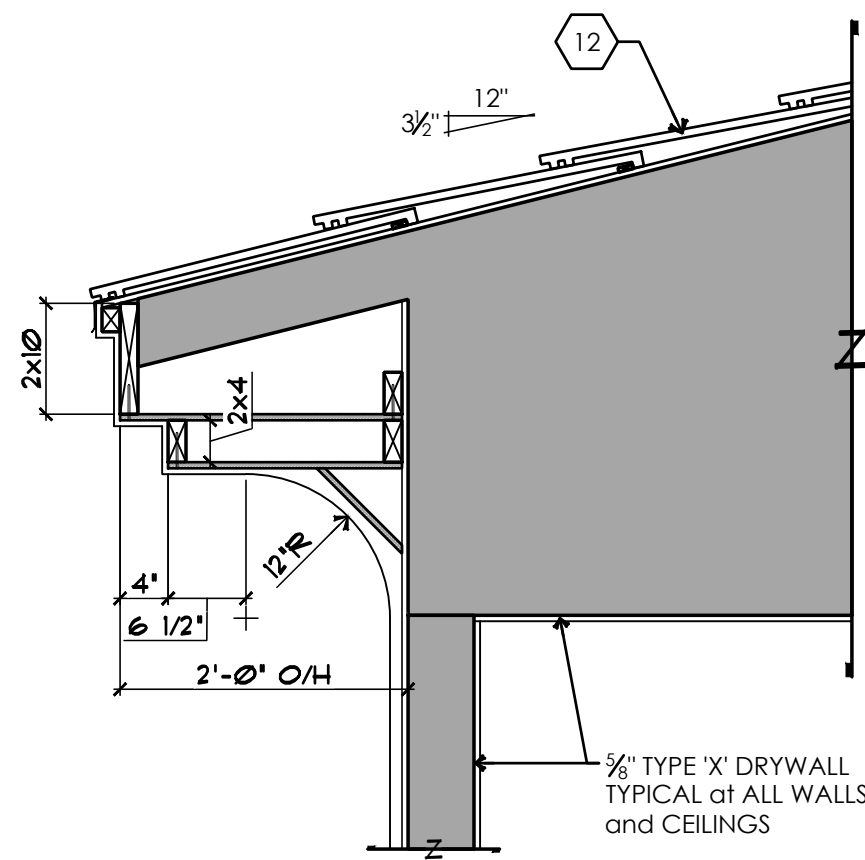
NOTE:
• STRUCTURAL COMPONENTS DESIGNED ACCORDING to the 2018 INTERNATIONAL BUILDING CODE and ALL CURRENT GOVERNING CODES.
• ARCHITECTURAL ELEMENTS of the FOLLOWING PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.



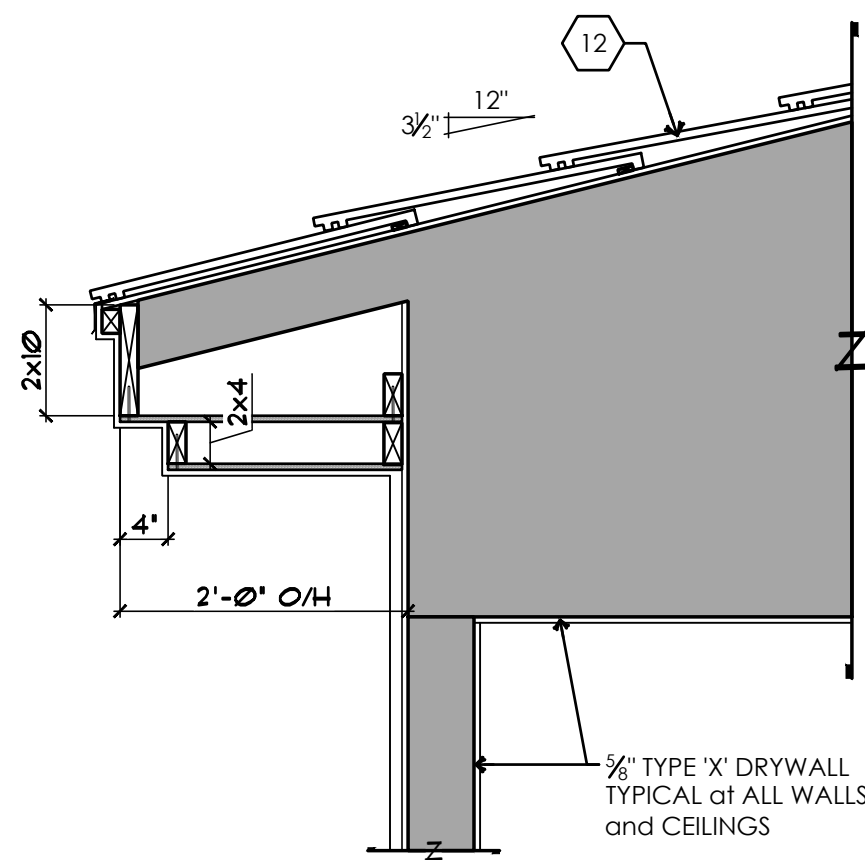
2 TYPICAL SINGLE STORY WALL
SCALE: 3/4" = 1'-0"



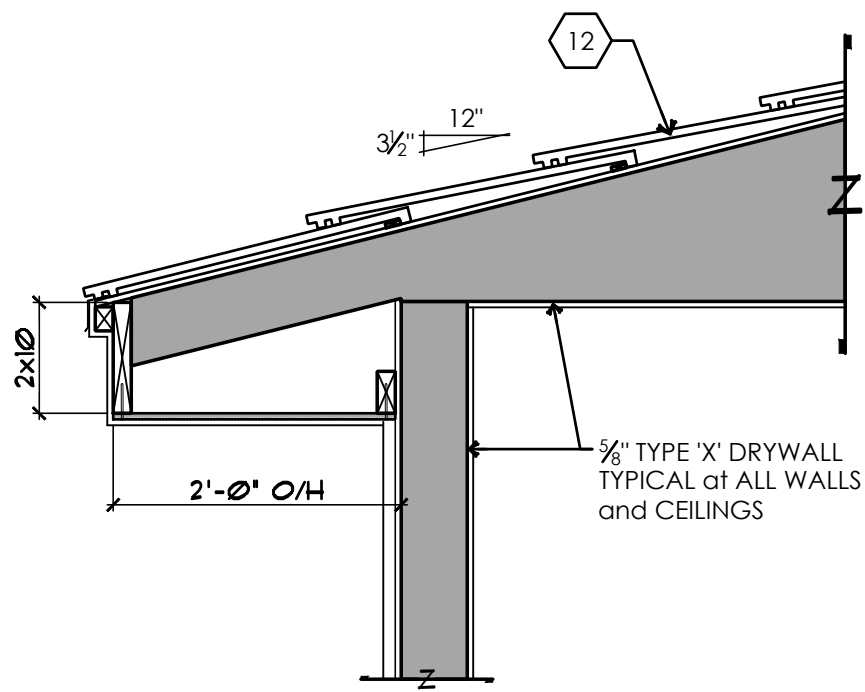
1 TYP. SINGLE STORY PARAPET WALL
SCALE: 3/4" = 1'-0"



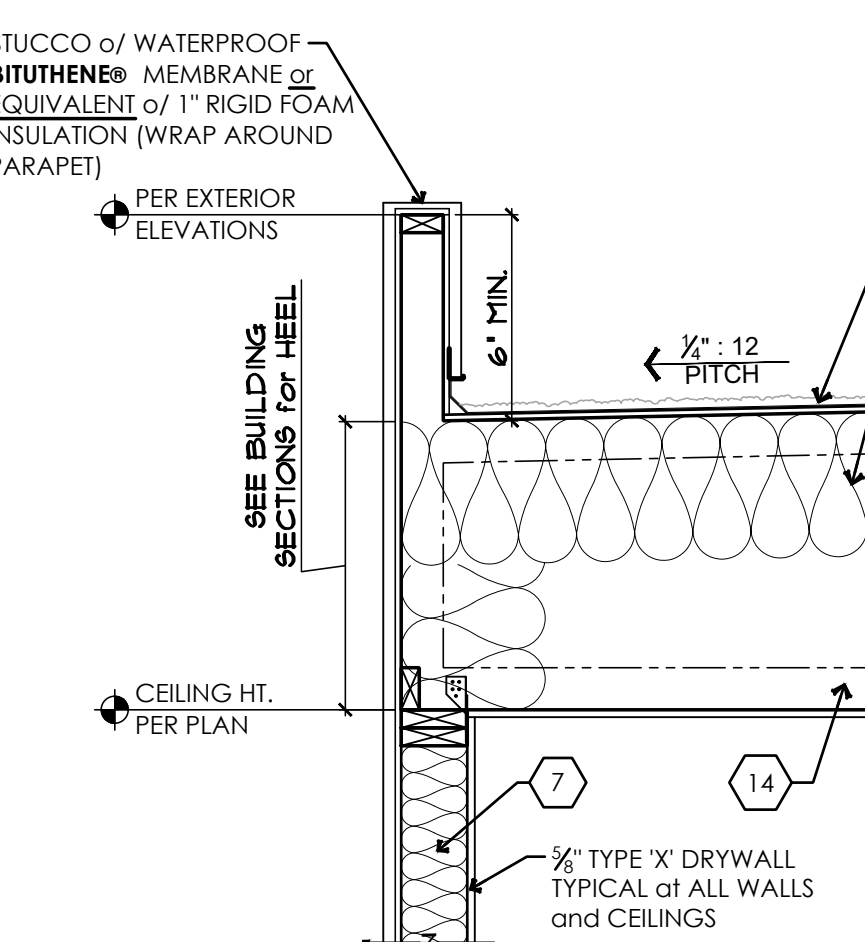
6 CURVED STUCCO FASCIA at TOWER ROOF GABLE END
SCALE: 3/4" = 1'-0"



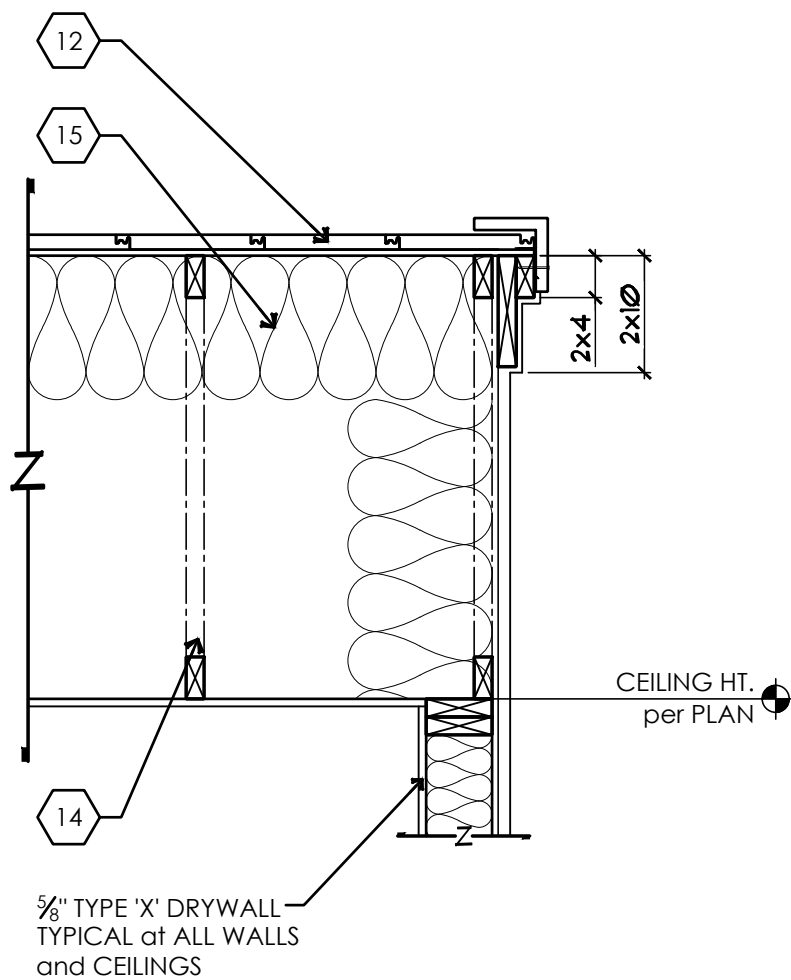
5 STUCCO FASCIA at TOWER ROOF
SCALE: 3/4" = 1'-0"



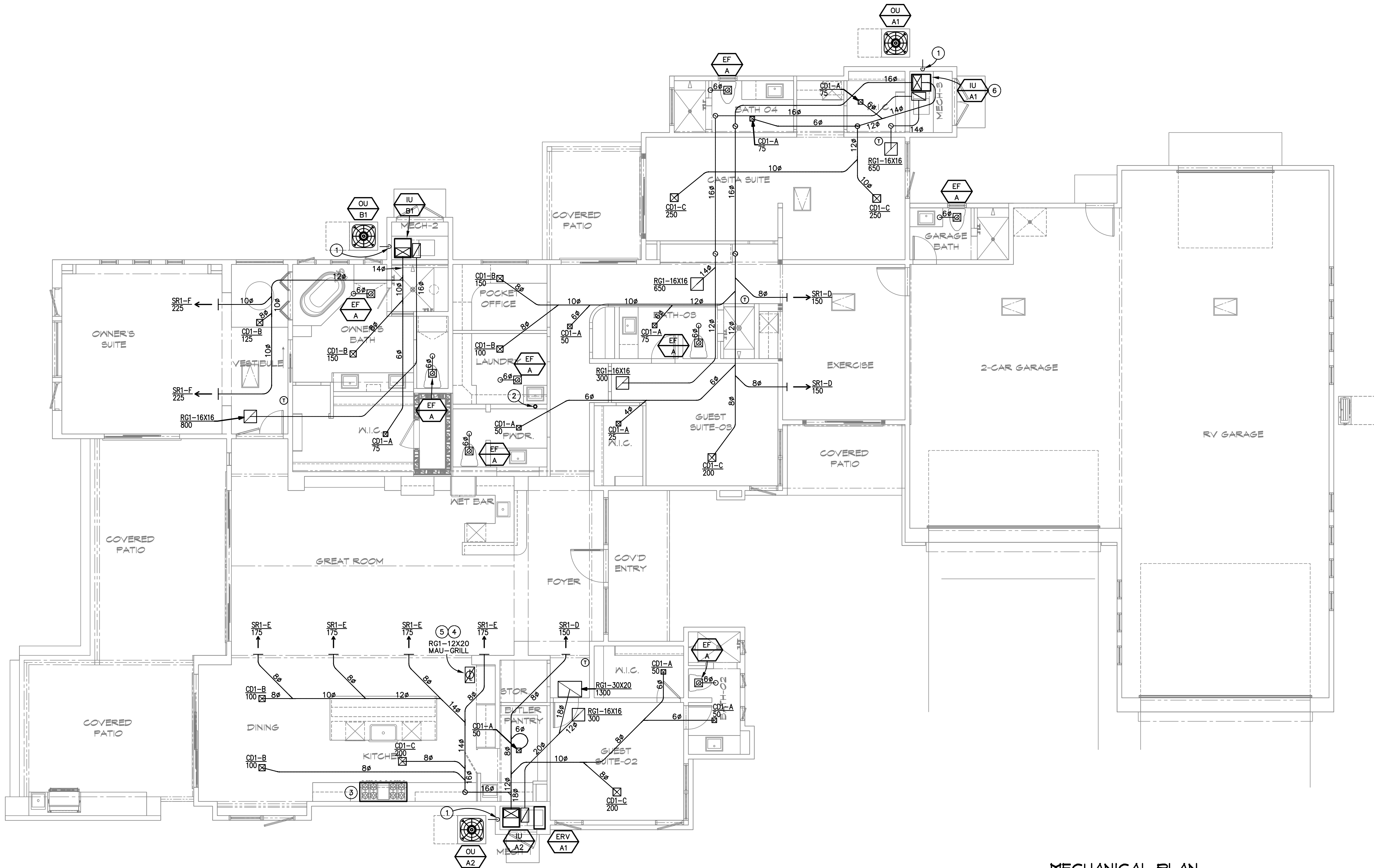
4 DETAIL at TYPICAL STUCCO FASCIA at RV GARAGE
SCALE: 3/4" = 1'-0"



3 DETAIL at PARAPET WALL
SCALE: 3/4" = 1'-0"



7 DETAIL at TYPICAL GABLE END
SCALE: 3/4" = 1'-0"



MECHANICAL PLAN
SCALE: 3/16" = 1'-0"

KEYED NOTES :

- 3/4"CD DOWN IN WALL, TERMINATE WITH 90°ELBOW 6"AFG. 3/4"OVERFLOW DRAIN TO TERMINATE IN OBSERVABLE LOCATION.
- 4"DRYER VENT THRU ROOF. TERMINATE WITH ROOF CAP
- RESIDENTIAL STYLE HOOD WOLF #PW362418 OR EQUAL, PROVIDE AT 600 CFM EXHAUST WITH INTERNAL BLOWER. HOOD TO BE INTERLOCKED WITH MAKE UP AIR DAMPER WOLF #820071 COORDINATE LOCATION ON DRAWINGS.
- PROVIDE 12X12 ROOF CAP FOR MAKE UP AIR INTAKE.
- MAKE UP AIR DAMPER WITH 12X20 FILTER GRILLE. PROVIDE 12"DUCT UP TO ROOF CAP.
- ZONE DAMPERS ON SUPPLY DUCTS TO SPLIT AIR BETWEEN ZONES.

GENERAL NOTES :

- MOUNT THERMOSTATS 60" ABOVE FINISH FLOOR TO CENTER.
- DUCTWORK AND EQUIPMENT SHOWN IS DIAGRAMMATIC. COORDINATE AND ROUTE DUCTWORK TO MEET JOB REQUIREMENTS. LOCATION OF EQUIPMENT MUST BE COORDINATED WITH ALL DISCIPLINES BEFORE FINAL LOCATIONS ARE SELECTED. WEIGHTS OF EQUIPMENT MUST BE VERIFIED AND COORDINATED WITH STRUCTURAL SYSTEMS BEFORE EQUIPMENT CAN BE INSTALLED AT JOBSITE.
- SPACE ALLOCATED FOR MECHANICAL AND OTHER WORK ABOVE THE SUSPENDED CEILINGS IS CRITICAL. LIGHT FIXTURES AND AIR DIFFUSERS HAVE BEEN LOCATED TO ACHIEVE A DEFINITE ARCHITECTURAL EFFECT AND MAY NOT BE CHANGED WITHOUT THE CONSENT OF THE ARCHITECT. BECOME FAMILIAR WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO FABRICATING AND INSTALLING ANY MATERIALS. HANG DUCTWORK AS CLOSE AS POSSIBLE TO THE STRUCTURE ABOVE, UNLESS INDICATED OTHERWISE.
- COORDINATE THE LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS.
- PLANS SHALL CONFORM TO THE 2018 IRC AS ADOPTED BY PARKER.
- ALL DIFFUSERS AND GRILLES ARE LESS THAN 20LBS, CONTRACTOR SHALL POSITIVELY ATTACH TO CEILING MAIN RUNNERS
- THERMOSTATS ARE LOW VOLTAGE PROGRAMMABLE THERMOSTATS AND ARE TO BE LOCATED AS SHOWN.
- REFER TO ARCHITECTURAL LOCATION OF DRAWINGS FOR EXACT REGISTERS, GRILLES & DIFFUSERS.
- R303.8 REQUIRED HEATING AND COOLING. WHEN THE WINTER DESIGN TEMPERATURE IN TABLE R301.2(1) IS BELOW 60° (16°C), EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING AND COOLING FACILITIES CAPABLE OF MAINTAINING A MINIMUM ROOM TEMPERATURES BETWEEN OF 70 – 68 F (20°C) AND 90° (50°C) AT A POINT 3 FEET (914 MM) ABOVE THE FLOOR AND 2 FEET (610 MM) FROM EXTERIOR WALL IN ALL HABITABLE ROOMS AT THE DESIGN TEMPERATURE. THE INSTALLATION OF ONE OR MORE PORTABLE SPACE HEATERS OR COOLERS SHALL NOT BE USED TO ACHIEVE COMPLIANCE WITH THIS SECTION.
- MANUAL S J & D – ALTERNATE METHODS HAVE BEEN SUBMITTED, LOAD CALCULATION IS SHOWN ON DRAWINGS AND IS EQUAL TO MANUAL J USING ASHREA REQUIREMENTS. REFERENCE MECHANICAL SCHEDULE FOR MANUAL S REQUIREMENTS AND THE FLOOR PLAN FOR ALL DUCT SIZES.

CONTRACTOR:

PROJECT:

The PETERS Residence
31587/31589 CROW'S NEST DRIVE
PARKER, AZ / APN 311-53-070J

• THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL. • WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THIS PLAN TO AVOID ERRORS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.	
REVISIONS:	
△	
△	
△	

SCALE:	JOB #:
AS NOTED	2024-05
DRAWN:	CHECKED:
JAS	AJN
DATE:	19 MAY 2025
SHEET	
M1.1	
© COPYRIGHT 2025	

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

AIR CONDITIONING SPECIFICATIONS

1. GENERAL REQUIREMENTS AND SCOPE OF WORK:
THE WORK INCLUDED UNDER THIS SECTION CONSISTS OF FURNISHING ALL MATERIALS, EQUIPMENT AND LABOR, AND THE PERFORMING OF ALL FUNCTIONS, EXCEPT AS OTHERWISE SPECIFIED HEREIN OR SHOWN ON THE DRAWINGS TO BE PERFORMED BY OTHERS. FOR THE INSTALLATION OF COMPLETE AND WORKING AIR CONDITIONING, HEATING AND VENTILATING SYSTEMS WHICH COMPLIES WITH ALL CODES. CHECK FIELD CONDITIONS AND MAKE MEASUREMENTS BEFORE ORDERING MATERIALS.

MAINTENANCE MANUAL SHALL INCLUDE ALL AVAILABLE MANUFACTURERS' OPERATION AND MAINTENANCE INSTRUCTIONS TOGETHER WITH THE RECORD DRAWINGS TO PROPERLY OPERATE AND MAINTAIN THE EQUIPMENT. THE MANUAL SHALL ALSO INCLUDE THE NAME, ADDRESS, AND PHONE NUMBER OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN ANY OF THE WORK SPECIFIED HEREIN.

THE CONTRACTOR MUST, AT HIS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS, PAY ALL LEGAL FEES AND CHARGES AND COMPLY WITH ALL STATE AND MUNICIPAL BUILDING AND SAFETY LAWS, ORDINANCES AND REGULATIONS RELATING TO BUILDING AND PUBLIC HEALTH & SAFETY. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE GOVERNING CODES.

THE SYSTEM SHALL HAVE A WARRANTY COVERING LABOR, MATERIALS AND EQUIPMENT FOR A PERIOD OF ONE YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE OR REPAIR ALL DEFECTIVE WORKMANSHIP, EQUIPMENT, AND MATERIALS AT NO ADDITIONAL COST TO THE OWNER.

2. CONDENSATE DRAIN PIPING:
USE PVC FOR ALL CONDENSATE DRAIN LINES WITH MINIMUM FALL 1/8" PER FOOT FROM UNITS TO APPROVED PLUMBING CONNECTION. PROVIDE TRAPS AT UNIT AND INSTALL OVERFLOW DRAINS AS REQUIRED BY MECHANICAL CODE. TEST CONDENSATE PIPING TO HIGHEST POINT IN SYSTEM AND HOLD FOR FOUR HOURS.

3. DUCTWORK:
INSTALL ALL DUCTWORK IN ACCORDANCE WITH SMACNA GUIDELINES AND LOCAL STANDARDS FOR A MINIMUM OF 1" STATIC PRESSURE. RADIUS ELBOWS SHALL HAVE A MINIMUM RADIUS OF 1.5 TIMES THE DUCT DIMENSION IN THE DIRECTION OF TURN, AND SQUARE ELBOWS SHALL HAVE SINGLE THICKNESS TURNING VANES. ALL JOINTS SHALL BE TAPED WITH GLASS CLOTH AND HARDCAST OR ADHESIVE (UL LISTED). ALL DUCT SIZES ARE TO THE INSIDE OF LINING, INCREASE OUTSIDE DIMENSIONS AS NECESSARY. COVERINGS, LININGS, ADHESIVES AND INSULATION SHALL HAVE A SPREAD INDEX OF NOT OVER 25 AND A SMOKE-DEVELOPED INDEX OF NOT OVER 50. ALL INSULATION SHALL COMPLY WITH THE INTERNATIONAL ENERGY CONSERVATION CODE.

ALL INSULATION ADHESIVES & INSTALLATION SHALL COMPLY WITH NFPA_E 84.

CONCEALED DUCTS INSIDE OF BUILDING: SHALL BE SHEET METAL WRAPPED WITH 1" THERMAL INSULATION (MINIMUM OF R-6), WITH VAPOR BARRIER COVER.

EXPOSED SQUARE DUCTS INSIDE BUILDING AND DUCTS WITHIN 10 FEET OF A MECHANICAL UNIT SHALL BE SHEET METAL LINED WITH 1" ACOUSTICAL INSULATION. EXPOSED ROUND DUCTS DO NOT REQUIRE INSULATION.

FLEX DUCT: FLEX DUCT SHALL BE CLASS 0 OR 1 AND TESTED PER UL 181.

DUCTS OUTSIDE BUILDING OR IN UNCONDITIONED CEILING OR ATTIC SHALL BE SHEET METAL LINED WITH 2" ACOUSTICAL INSULATION (MINIMUM OF R-8).

4. AIR CONDITIONING UNITS (SPLIT SYSTEM HEAT PUMP)
DESCRIPTION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO FURNISH AND INSTALL INDOOR BLOWER COIL SECTION, OUTDOOR SECTION WITH COMPRESSOR, CRANKCASE HEATER, COIL AND CONTROLS, FAN AND REFRIGERANT PIPING, OSA INTAKE, AND INSULATION INCLUDING PIPING VALVES, HANGERS, SUPPORTS, CONNECTIONS, ETC FOR A COMPLETE AND OPERATIONAL SYSTEM. ITEMS NOT LISTED BUT REQUIRED DUE TO LOCAL CODES OR OPERATIONAL REQUIREMENTS SHALL BE INCLUDED UNDER BASE BID. UNIT SHALL COME OPERATIONAL DOWN TO 20W°F AMBIENT. 1" DISPOSABLE TYPE WITH HINGED FILTER ACCESS AT REAR OF UNIT.

CONTROLS AND POWER WIRING: THE CONTROLS SHALL INCLUDE A 7-DAY PROGRAMMABLE LOW VOLTAGE ROOM THERMOSTAT EQUAL TO HONEYWELL TH8000 SERIES WITH A FAN "ON/AUTO" SWITCH AND A SYSTEM "HEAT/OFF/COOL" SWITCH. EACH UNIT SHALL BE COMPLETELY FACTORY WIRED FOR TERMINAL CONNECTIONS OF THERMOSTAT AND POWER WIRING.

REFRIGERANT ACCESSORIES REQUIRED: REFRIGERANT SYSTEMS OF LESS THAN 60 MBH SCHEDULED TOTAL CAPACITY PER COMPRESSOR (SEE DRAWINGS) SHALL BE PROVIDED WITH THE FOLLOWING ACCESSORIES, TO BE FIELD-PIPED IF NOT INCLUDED BY THE MANUFACTURER IN THE UNIT: FILTER DRYER, EXPANSION DEVICE, SITE GLASS (PLACE IMMEDIATELY UPSTREAM OF EXPANSION DEVICE), CHARGING VALVE, AND REFRIGERANT SHUT-OFF VALVE IN SUCTION AND LIQUID LINE AT OR NEAR CONDENSING UNIT.

REFRIGERANT PIPING: HARD DRAWN COPPER TUBING, TYPE "L" ESPECIALLY DESIGNATED AS AIR CONDITIONING REFRIGERANT PIPING OR PRECHARGED REFRIGERANT PIPING DESIGNED FOR SPLIT SYSTEM INSTALLATION.

DRYER SIZE SHALL BE FULL LIQUID LINE SIZE AS INDICATED ON DRAWINGS. SIGHT GLASS SHALL BE MOISTURE INDICATING TYPE. SOLENOID VALVE SHALL BE FULL LIQUID LINE SIZE WITH MANUAL OPENING STEM AND VALVE SHALL BE COMPLETELY MOISTURE PROOF. MANUAL REFRIGERANT SHUT-OFF VALVES SHALL BE REFRIGERATION SERVICE WITH BACK SEATING CONSTRUCTION AND CAP SEALS. FLEXIBLE CONNECTIONS SHALL BE PROVIDED IN EACH LIQUID LINE, HOT GAS LINE, AND EACH SUCTION LINE AT EACH PIECE OF EQUIPMENT. CONNECTIONS SHALL BE FOR REFRIGERANT SERVICE WITH BRONZE SEAMLESS CORRUGATED HOSE AND BRONZE BRADING.

REFRIGERANT PIPING CALCULATION SUBMITTAL: IN ADDITION TO THE SUBMITTAL REQUIREMENTS THE MANUFACTURER'S REPRESENTATIVE FOR EQUIPMENT PROVIDED IN THIS SPECIFICATION SHALL INCLUDE WITH ITS SUBMITTAL, TABLES AND/OR DRAWINGS OF REFRIGERANT PIPING AND ACCESSORIES, INCLUDING RECOMMENDED SIZES OF PIPES, VALVES, FITTINGS, ETC.

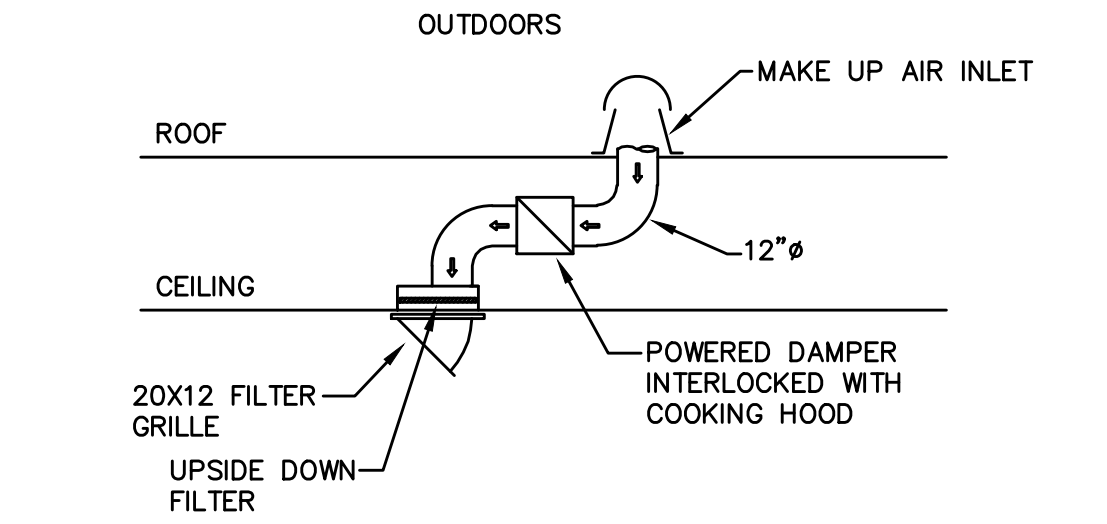
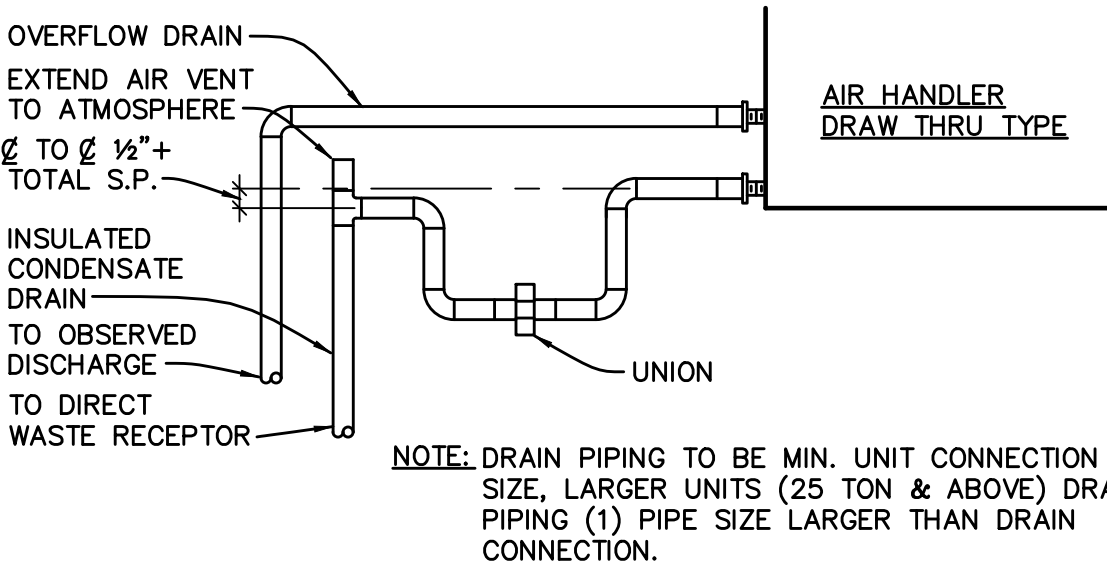
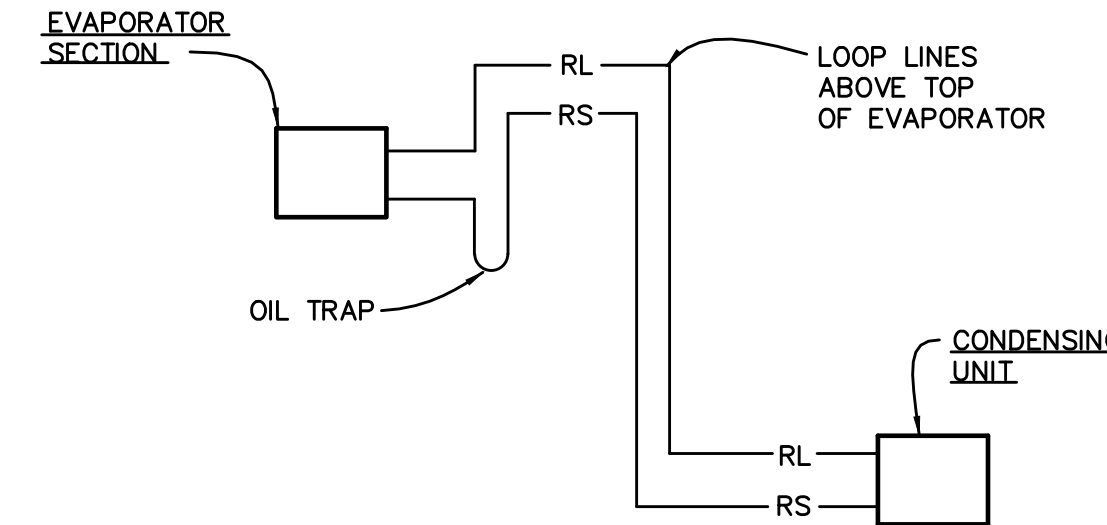
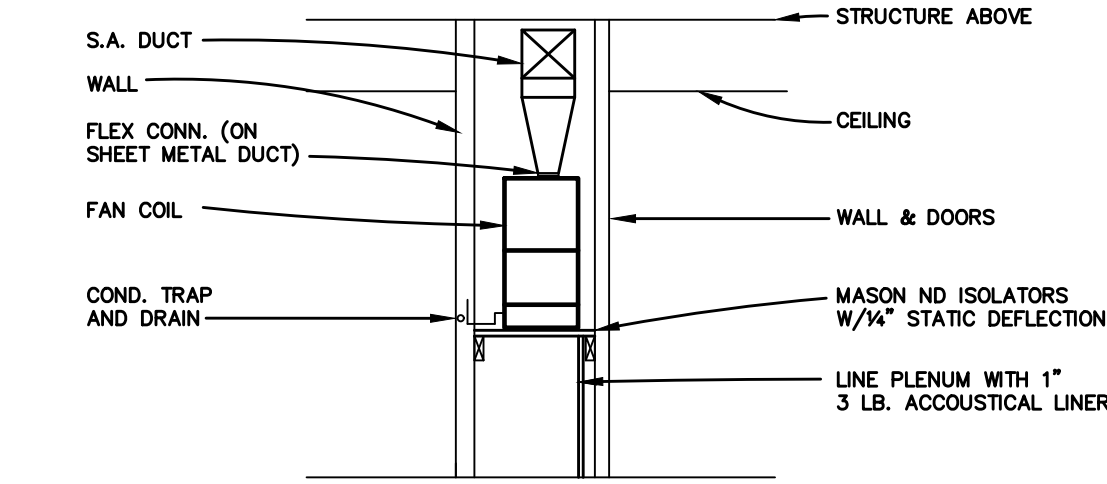
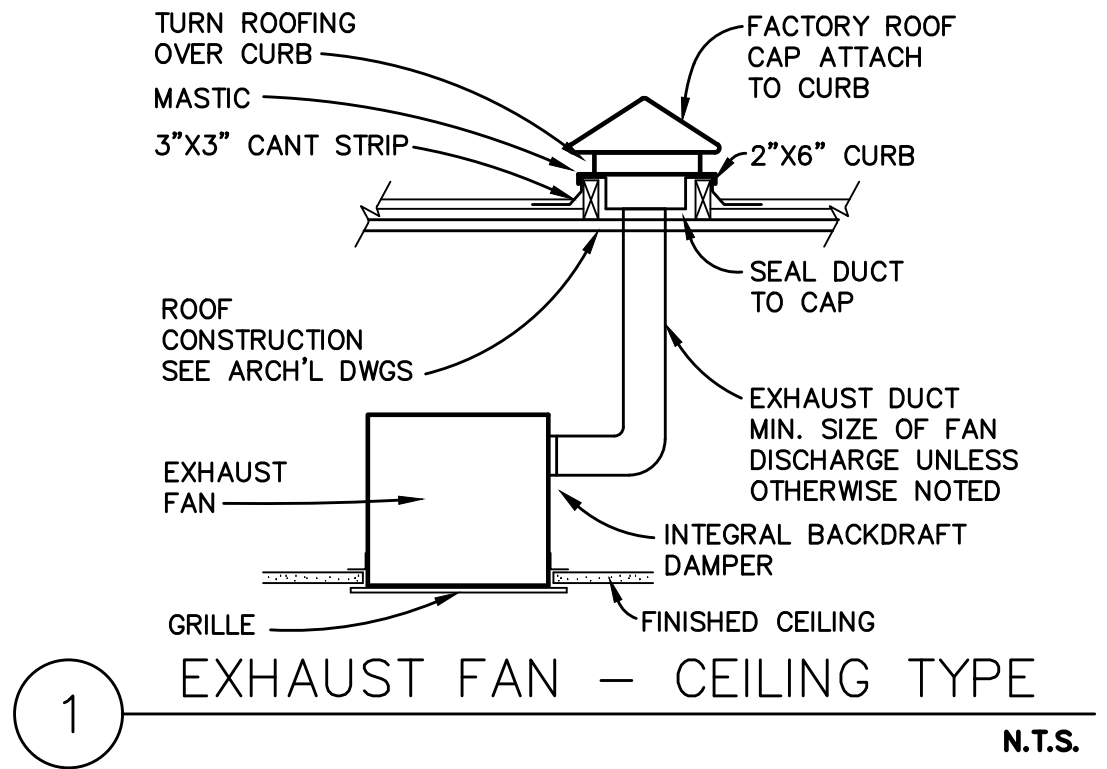
REFRIGERANT PIPING: TO BE INSTALLED BY AND UNITS STARTED UP BY A REFRIGERANT CONTRACTOR LICENSED BY THE STATE.

PIPE INSULATION: INSULATE ALL REFRIGERANT GAS PIPING WITH 1/2" THICK FLEXIBLE FOAMED PLASTIC CLOSED CELL PIPE INSULATION, "K" FACTOR OF NOT MORE THAN .26 @ 70W°F, ASTM C177-63 AND ASTM C555-64 WATER METHOD. SEAL JOINTS AND BUTT ENDS WITH FIRE RETARDANT, WATERPROOF ADHESIVE EQUAL TO ARMSTRONG 520. FINISH ALL PIPE INSULATION EXPOSED TO WEATHER WITH TWO COATS OF ARMAFLEX FINISH (OR APPROVED EQUAL). SEAL AROUND PIPE IN SLEEVES WITH SILICONE SEALANT FOR NON-FIRE RATED WALLS. SEAL AROUND PIPE IN SLEEVES PASSING THROUGH FIRE RATED WALLS OR FLOORS WITH APPROVED FIRE RATED PACKING.

5. START-UP FOR MECHANICAL EQUIPMENT
ALL UNITS SHALL BE INSPECTED, CHECKED, AND STARTED UP BY MANUFACTURER'S FACTORY CERTIFIED HVAC TECHNICIAN. UPON COMPLETION, MANUFACTURER SHALL PROVIDE ONE YEAR PARTS AND LABOR WARRANTY.

6. EXHAUST FANS
DESCRIPTION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO FURNISH AND INSTALL EXHAUST FANS AND BLOWERS FOR A COMPLETE AND OPERATIONAL SYSTEM. ITEMS NOT LISTED BUT REQUIRED DUE TO LOCAL CODES OR OPERATIONAL REQUIREMENTS SHALL BE INCLUDED UNDER BASE BID.

PROVIDE ROOF CAPS, WALL CAPS, FLASHINGS, BASES, SPEED SWITCHES, APPROVED VIBRATION ISOLATORS, INTEGRAL INLET GRILLES, INTEGRAL STARTERS AND DUCT CONNECTIONS AS INDICATED OR SPECIFIED. PROVIDE INTERNAL DISCONNECTING MEANS AND OVERLOAD PROTECTION ON ALL UNITS 1/2 HP AND SMALLER AND/OR 120 VOLT, SINGLE PHASE. TWO SPEED MOTOR SHALL BE TWO WINDING TYPE. ALL BELT DRIVEN EXHAUST FANS SHALL HAVE ADJUSTABLE MOTOR PULLEYS FOR FAN SPEED CONTROL. RATE BELTS FOR 150% OF MOTOR RATED HP. ALL FANS, EXCEPT TOILET EXHAUST FANS 200 CFM AND BELOW, SHALL BE AMCA CERTIFIED AND APPROVED.



- MAKE-UP AIR REQUIRED FOR RANGE EXHAUST IN EXCESS OF 400 CFM
- POWER DAMPER TO BE INTERLOCKED WITH RANGE HOOD BY ELECTRONIC RELAY.
- POWER DAMPER MUST HAVE AN ON/OFF SWITCH ACCESSIBLE TO THE HOME OWNER
- MAKE-UP AIR GRILLE MUST INCLUDE A FILTER ACCESSIBLE TO THE HOME OWNER

DUCTWORK SYMBOLS			
SINGLE	DOUBLE	ABBR.	DESCRIPTION
		•	RECTANGULAR DUCT
		•	ROUND DUCT
		•	45 DEG. TAP: USE AT BRANCH DUCTS ONLY
		•	DUCT SPLIT W/DAMPER: USE AT ELBOWS AND TEES. PROPORTION DUCT AREAS BY CFM'S
		•	CURVED ELBOW-MIN. RADIUS R: 1.5 WIDTH
		•	90 DEG. ELBOW WITH SINGLE RADIUS TURNING VANES
		•	FLEXIBLE DUCT CONNECTION
		FD	FIRE DAMPER
		BD	BALANCING DAMPER (USE O.B.D. UNLESS NOTED OTHERWISE)
		SA	SPIN-IN FLEX DUCT TAKE-OFF W/DAMPER
		•	SA SUPPLY AIR
		•	EXH EXHAUST AIR
		•	RA RETURN AIR
		•	T THERMOSTAT X: UNIT OR ZONE NUMBER

GRILLES, REGISTERS AND DIFFUSER SIZING SCHEDULE

CD INSTALL DIFFUSERS PER SCHEDULE BELOW. DO NOT EXCEED MAXIMUM CFM INDICATED BASIS DESIGN SCB41-O.

PROVIDE DAMPER AT GRILLE

	GRILLE SIZE	RD NECK SIZE	MAX CFM
A	6 X 6	6" DIA	90
B	8 X 8	8" DIA	170
C	10 X 10	10" DIA	310
D	12 X 12	12" DIA	440

SR1 INSTALL DIFFUSERS PER SCHEDULE BELOW. DO NOT EXCEED MAXIMUM CFM INDICATED BASIS DESIGN 951-P.

PROVIDE DAMPER AT GRILLE

	GRILLE SIZE	RD NECK SIZE	MAX CFM
A	8 X 4	6" DIA	90
B	10 X 4	8" DIA	110
C	8 X 6	8" DIA	130
D	10 X 6	8" DIA	170
E	12 X 6	8" DIA	210
F	14 X 6	10" DIA	250

MECHANICAL EQUIPMENT SCHEDULE

NOTE: 1. AMBIENT TEMPERATURE 112 F COOLING, 44 F HEATING.
2. NO EQUIPMENT/MANUFACTURE WITH LESS THAN 95% OF LISTED CAPACITIES WILL BE APPROVED. COOLING CAPACITY INCLUDES FAN HEAT.
3. FILTERS SHALL HAVE A MAXIMUM VELOCITY OF 500 FPM, 1" DEEP, 30% ATMOSPHERIC EFFICIENT.
4. PROVIDE ONE ELECTRICAL CONNECTION FOR EACH UNIT.
5. VERIFY ON PLAN FOR HORIZONTAL OR VERTICAL INSTALLATION.
6. MINIMUM UNIT EFFICIENCY OF 15 SEER WITH 2STAGE COMPRESSOR AND SUPPLY FAN.
7. ALL UNITS SHALL BE INSPECTED, CHECKED, AND STARTED UP BY MANUFACTURER'S FACTORY CERTIFIED HVAC TECHNICIAN. UPON COMPLETION, MANUFACTURER SHALL PROVIDE ONE YEAR PARTS AND LABOR WARRANTY.
8. PROVIDE FANTECH CONTROLLER FOR WHOLE HOUSE VENTILATION.
9. EXHAUST FANS IN BATHROOMS WITH A SHOWER OR TUB SHALL BE PROVIDED WITH A DELAY TIMER OR HUMIDITY/CONDENSATION CONTROL SENSOR. ALL EXHAUST FANS SHALL BE SWITCHED SEPARATE FROM LIGHTS.

UNIT													COOLING				HEATING				OSA CFM	WEIGHT LBS	NOTES
MARK	MANUFACTURER	MODEL	SEER	CFM	ESP "WG"	HP	VOLT	PH	MCA	SEN MBH	TOT MBH	ENT AIR DB	WB	COMP MBH	STG KW	VOLT	PH						
IU-A1-2	CARRIER	FT4BNXC48L00	16.5	1600	0.5	3/4	230	1	7.1	35.7	37.1	80	63	37.1	—	—	—	—	—	—	—	—	—
OU-A1-2	CARRIER	25TPA748A003	16.5	—	—	—	230	1	33.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IU-B1	CARRIER	FT4BNXB24L00	16.5	800	0.5	1/2	230	1	14.1	18.7	19.5	80	63	18.2	—	—	—	—	—	—	—	—	—
OU-B1	CARRIER	25TPA724A003	16.5	—	—	—	230	1	14.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EF-A	BROAN	ZB110	—	110	0.1	7.7W	120	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ERV-A1	FANTECH	HERO 150H-EC	—	135	0.4	16BW	120	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND: SPLIT SYSTEM: INDOOR UNIT (IU), OUTDOOR UNIT (OU), EXHAUST FAN (EF)

GRILLES, REGISTERS AND DIFFUSER SCHEDULE

NOTE: 1. PROVIDE OBD'S AT THE DIFFUSER OR GRILLE WHEN FLANGE TYPE.

MARK	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL	BORDER	FRONT BLADES	DAMPER	REMARKS
CD1	CEILING DIFFUSER	SHOEMAKER	SCB41-O	STEEL	—	HORIZONTAL	OBD	—
SR1	SUPPLY REGISTER	SHOEMAKER	951-O	STEEL	—	HORIZONTAL	OBD	—
RG1	RETURN REGISTER	SHOEMAKER	920 FG	STEEL	—	HORIZONTAL	—	—

Load Total Summary - System

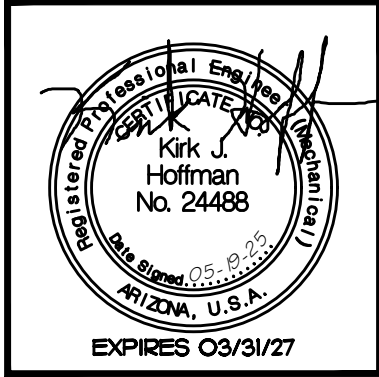
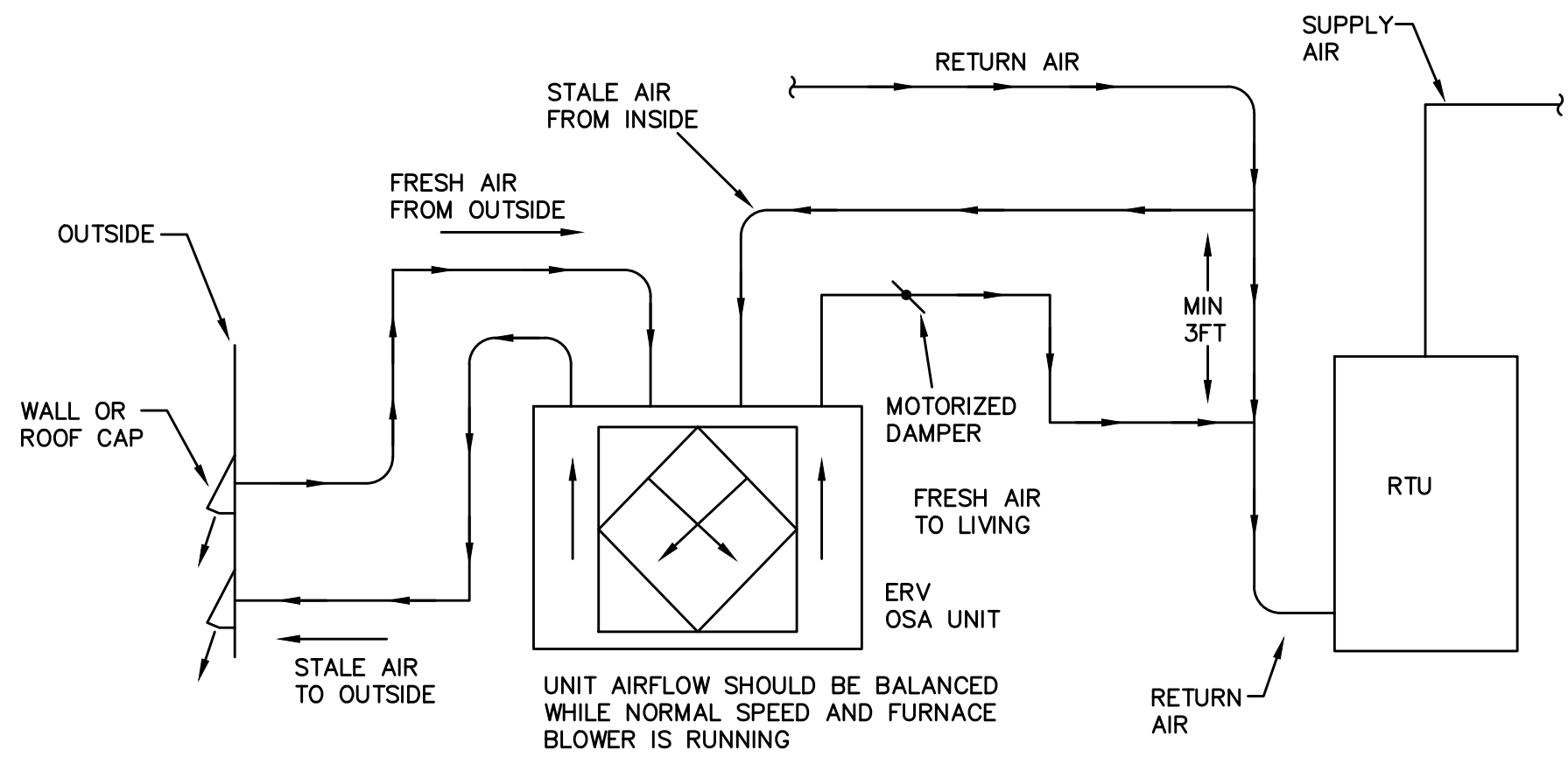
(Includes Ventilation and Plenum Loads)

ALTERNATE TO MANUAL J PER ASHRAE

Location	Area	CFM	Peak	Cooling			Heating		
				Total	Sensible	Latent	Total	Sensible	Latent
Zone TOTAL	4,020 ft²	3,370	July 5:00 p.m.	81,100	81,100	-1,400	6.8	6.8	-0.1
							595	498	
							ft² / ton	CFM / ton	CFM / ft²
							0.84	1,450	36,700
							10.8		0.36

DWELLING UNIT FLOOR AREA (SQUARE FEET)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	>7
< 1,500	30	45	60	75	90
< 1,501 - 3,000	45	60	75	90	105
< 3,001 - 4,500	60	75	90	105	120
< 4,501 - 6,000	75	90	105	120	135
< 6,001 - 7,500	90	105	120	135	150
> 7,501	105	120	135	150	165

***PER IRC M1401.3 BUILDING LOAD CALCULATIONS IN ACCORDANCE WITH ACCA MANUAL J OR OTHER APPROVED HEATING AND COOLING METHODOLOGIES.
***MEETS OR EXCEEDS THE REQUIREMENTS OF ACCA MANUAL J
- TOTAL COOLING REQUIRED 81.1, PROVIDED 90.1 WITHIN THE REQUIRED 115 PERCENT.
PER M1401.3 EXCEPTION: HEATING AND COOLING EQUIPMENT AND APPLIANCE SIZING SHALL NOT BE LIMITED TO THE CAPACITIES DETERMINED IN ACCORDANCE WITH MANUAL S WHERE EITHER OF THE FOLLOWING CONDITIONS APPLIES
- SPECIFIED EQUIPMENT USES MULTISTAGE TECHNOLOGY



Job #2025009
Tel: (480) 305-0180
Fax: (480) 305-7827
MAYEN ENGINEERING
1000 N. 10th Ave., Suite 100
Phoenix, Arizona 85003
Note: any changes made to final bid documents due to field changes will be billed hourly to the contractor.

CONTRACTOR:

PROJECT:

The PETERS Residence
31587/31589 CROW'S NEST DRIVE
PARKER, AZ / APN 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL. WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THIS PLAN TO AVOID ERRORS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, CONDITIONS, STRUCTURAL LUMBER SIZES AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

MECHANICAL SCHEDULES

REVISIONS:

△	
△	
△	

SCALE: AS NOTED	JAS	JOB #: 2024-05	CHECKED: AJN
DATE: 19 MAY 2025			
SHEET			
M2.1			
© COPYRIGHT 2025			

NOTE: ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

A

ROOM		VOLTS 240/120V 2P 3W				AIC 22K/10K					
MOUNTING SURFACE		BUS AMPS 200				MAIN BKR 200					
FED FROM METER		NEUTRAL 100%				LUGS STANDARD					
NOTE: NEW PANEL											
OKT #	CKT BKR	CIRCUIT DESCRIPTION		KVA LOAD		OKT #	CKT BKR	CIRCUIT DESCRIPTION		KVA LOAD	
		A	B					A	B		
1	50/2	OU-A1		4.02		2	20/2	OU-B1		1.69	
3					4.02	4					1.69
5	20/2	IU-A1		0.852		6	20/2	IU-B1		0.6	
7					0.852	8					0.6
9	50/2	OU-A2		4.02		10	20/1	ERV-A1		0.36	
11					4.02	12	-/1	SPACE			0
13	20/2	IU-A2		0.852		14	-/1	SPACE		0	
15					0.852	16	-/1	SPACE		0	
17	60/2	RV OUTLET		6		18	-/1	SPACE		0	
19					6	20	-/1	SPACE		0	
21	-/1	SPACE		0		22	-/1	SPACE		0	
23	-/1	SPACE		0		24	-/1	SPACE		0	
25	-/1	SPACE		0		26	-/1	SPACE		0	
27	-/1	SPACE		0		28	-/1	SPACE		0	
29	-/1	SPACE		0		30	-/1	SPACE		0	
31	-/1	SPACE		0		32	-/1	SPACE		0	
33	-/1	SPACE		0		34	-/1	SPACE		0	
35	-/1	SPACE		0		36	-/1	SPACE		0	
37	-/1	SPACE		0		38	-/1	SPACE		0	
39	-/1	SPACE		0		40	60/2	PANEL PL		0	
41	-/1	SPACE		0		42				0	

B

ROOM		VOLTS 240/120V 2P 3W				AIC 10,000					
MOUNTING SURFACE		BUS AMPS 200				MAIN BKR 200					
FED FROM METER		NEUTRAL 100%				LUGS STANDARD					
NOTE: NEW PANEL											
OKT #	CKT BKR	CIRCUIT DESCRIPTION		KVA LOAD		OKT #	CKT BKR	CIRCUIT DESCRIPTION		KVA LOAD	
		A	B					A	B		
1	20/1	GARAGE LIGHTING(AFCI)		0		2	20/1	GARAGE DOOR(GFCI BRKR)		0	
3	20/1	FOYER,GREAT,KITCH,DINING LIGHTING(AFCI)		0	0	4	20/1	GEN.GARAGE GFCI		0	0
5	20/1	COVERED PATIO LIGHTING(AFCI)		0		6	20/1	GARAGE ICE MACH. REC.(GFCI BRKR)		0	0
7	20/1	OWNER SUITE,BATH LIGHTING(AFCI)		0	0	8	20/1	EXERCISE REC(AFCI)		0	0
9	20/1	OFFICE,LAUNO,SUITE03,BATH03,EXERCISE LIGHTING(AFCI)		0		10	20/1	SUITE03,OFFICE,HALL REC(AFCI)		0	0
11	20/1	CASITA SUITE LIGHTING(AFCI)		0	0	12	20/1	BATH03,PWDR,OWNERS BATH REC(GFCI)		0	
13	20/1	SUITE02,BATH02,STOR. LIGHTING(AFCI)		0		14	30/2	DRYER		2.5	
15	20/1	REC. EXT.(GFCI)		0		16	-/1				2.5
17	20/1	OWNERS SUITE REC(AFCI)		0	0	18	20/1	WASHER (AFCI/GFCI)		0	
19	20/1	OWNERS SUITE WATER FEATURE REC.(GFCI)		0	0	20	20/1	LAUNDRY REC(AFCI/GFCI)		0	
21	20/1	CASITA U.C. REF REC(GFCI BRKR)		0	0	22	20/1	OSD (AFCI), SMK DETECT.(AFCI)(1)(2)		0	
23	20/1	CASITA MICRO REC.(AFCI)		0	0	24	20/1	FOYER,GREAT,SUITE02 REC(AFCI)		0	
25	20/1	CASITA REC(AFCI)		0	0	26	20/1	DINING REC(AFCI)		0	
27	20/1	CASITA BATH REC(GFCI)		0	0	28	20/1	COFFEE BAR REC(GFCI)		0	
29	20/1	EXERCISE U.C. REF REC(GFCI BRKR)		0	0	30	20/1	HOOD LIGHTING, RANGE GAS APPL CNTRL(AFCI)		0	
31	20/1	WET BAR COOLER BEV. REC(GFCI BRKR)		0	0	32	20/1	GAS APPL BBQ, GAS APPL FIREPLACE		0	
33	20/1	WET BAR U.C. REF REC(GFCI BRKR)		0	0	34	20/1	KITCH ISL REC(AFCI/GFCI)		0	
35	20/1	MISC. W/H		0	0	36	20/1	DISP/DW REC(AFCI/GFCI)		0	
37	-/1	SPACE		0		38	20/1	MICRO REC.(AFCI)		0	
39	-/1	SPACE		0		40	20/1	KITCH REC(AFCI/GFCI)		0	

PL

ROOM		VOLTS 240/120V 2P 3W				AIC 10,000					
MOUNTING SURFACE		BUS AMPS 60				MAIN BKR 60					
FED FROM A		NEUTRAL 100%				LUGS STANDARD					
NOTE: NEW PANEL											
OKT #	CKT BKR	CIRCUIT DESCRIPTION		KVA LOAD		OKT #	CKT BKR	CIRCUIT DESCRIPTION		KVA LOAD	
		A	B					A	B		
1	20/2	POOL PUMP		0	0	2	15/1	POOL LIGHTING (GFCI)		0	0
3					0	4	20/1	POOL REC. (GFCI)		0	0
5	20/1	GAS POOL HEATER		0	0	6	-/1	SPACE		0	0
7	-/1	SPACE		0		8	-/1	SPACE		0	0
9	-/1	SPACE		0		10	-/1	SPACE		0	0
11	-/1	SPACE		0		12	-/1	SPACE		0	0

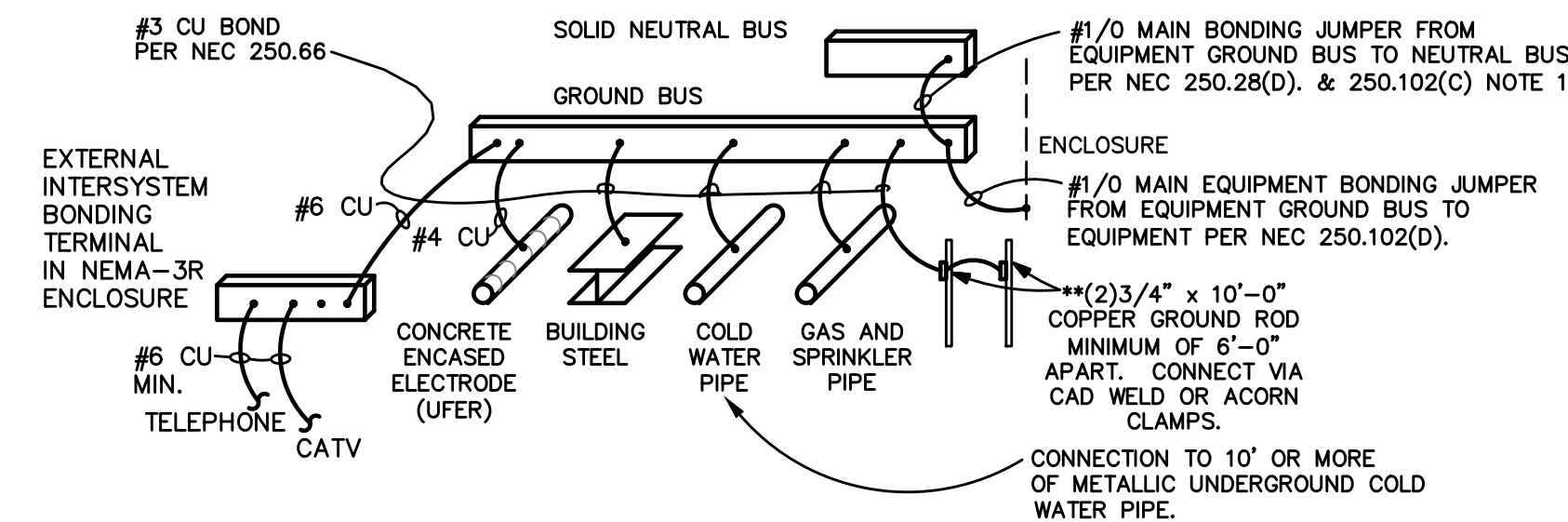
PANEL SCHEDULE KEYED NOTES :

NOTE: E.C. SHALL INSTALL HANDLE TIE DEVICE TO COMPLY WITH NEC 210.4 (B)

(1) INDICATES PROVIDE & INSTALL A LOCK-ON DEVICE RED IN COLOR.

(2) PROVIDE RED IDENTIFICATION FOR FIRE ALARM EQUIPMENT PER NEC 760.41 (A)&(B).

GENERAL EQUIPMENT SCHEDULE							
CALLOUT	SYMBOL	DESCRIPTION	VOLTS	AMPS	KVA	CALC. LOAD KVA	WIRE CALLOUT
DRYER	☼	240V DRYER	240V 2P 2W	20.83	5	5	B-14,16 3/4"C,2#10,#10G
ERV-A1	☼	FANTECH	120V 1P 2W	3	0.36	0.36	A-10 3/4"C,1#10,#10N,#10G
IU-A1	☼	INDOOR UNIT	240V 2P 2W	7.1	1.7	2.13	A-5,7 3/4"C,2#10,#10G
IU-A2	☼	INDOOR UNIT	240V 2P 2W	7.1	1.7	2.13	A-13,15 3/4"C,2#10,#10G
IU-B1	☼	INDOOR UNIT	240V 2P 2W	5	1.2	1.5	A-6,8 3/4"C,2#10,#10G
OU-A1	☼	OUTDOOR UNIT	240V 2P 2W	33.5	8.04	10.05	A-1,3 3/4"C,2#6,#10G
OU-A2	☼	OUTDOOR UNIT	240V 2P 2W	33.5	8.04	10.05	A-9,11 3/4"C,2#6,#10G
OU-B1	☼	OUTDOOR UNIT	240V 2P 2W	14.1	3.38	4.23	A-2,4 3/4"C,2#10,#10G
RV OUTLET	☼	50A RV OUTLET	240V 2P 2W	50	12	12	A-17,19 3/4"C,2#4,#10G



400A SERVICE GROUNDING DETAIL
NOT TO SCALE

FAULT CURRENT SCHEDULE																				
DEVICE	AIC RATING	L-L VOLTS	L-N VOLTS	SES/METER				FED FROM			FEEDER					DIRECTLY CONNECTED MOTOR LOAD				
				FAULT L-L	FAULT L-N	X	R	DEVICE	X	R	SIZE	X / 1000'	R / 1000'	LENGTH	X	R	KVA	FAULT	X	R
METER	22,000	240V	120V	20,955 *	.	0.005615	0.001123				(2)#3/0	0.039	0.023		0	0				
A	22K/10K	240V	120V	20,955	12,098	0.005615	0.001123	METER	0.005615	0.001123	200A BUS	0.042	0.077		0	0	24.1	401	0.2902	0.07254
PL	10,000	240V	120V	5,931	3,424	0.008298	0.01845	A	0.005615	0.001123	#4	0.048	0.31	56'	0.0027	0.0173				
B	10,000	240V	120V	9,592	5,534	0.009465	0.008181	METER	0.005615	0.001123	#3/0	0.042	0.077	92'	0.0038	0.0071				

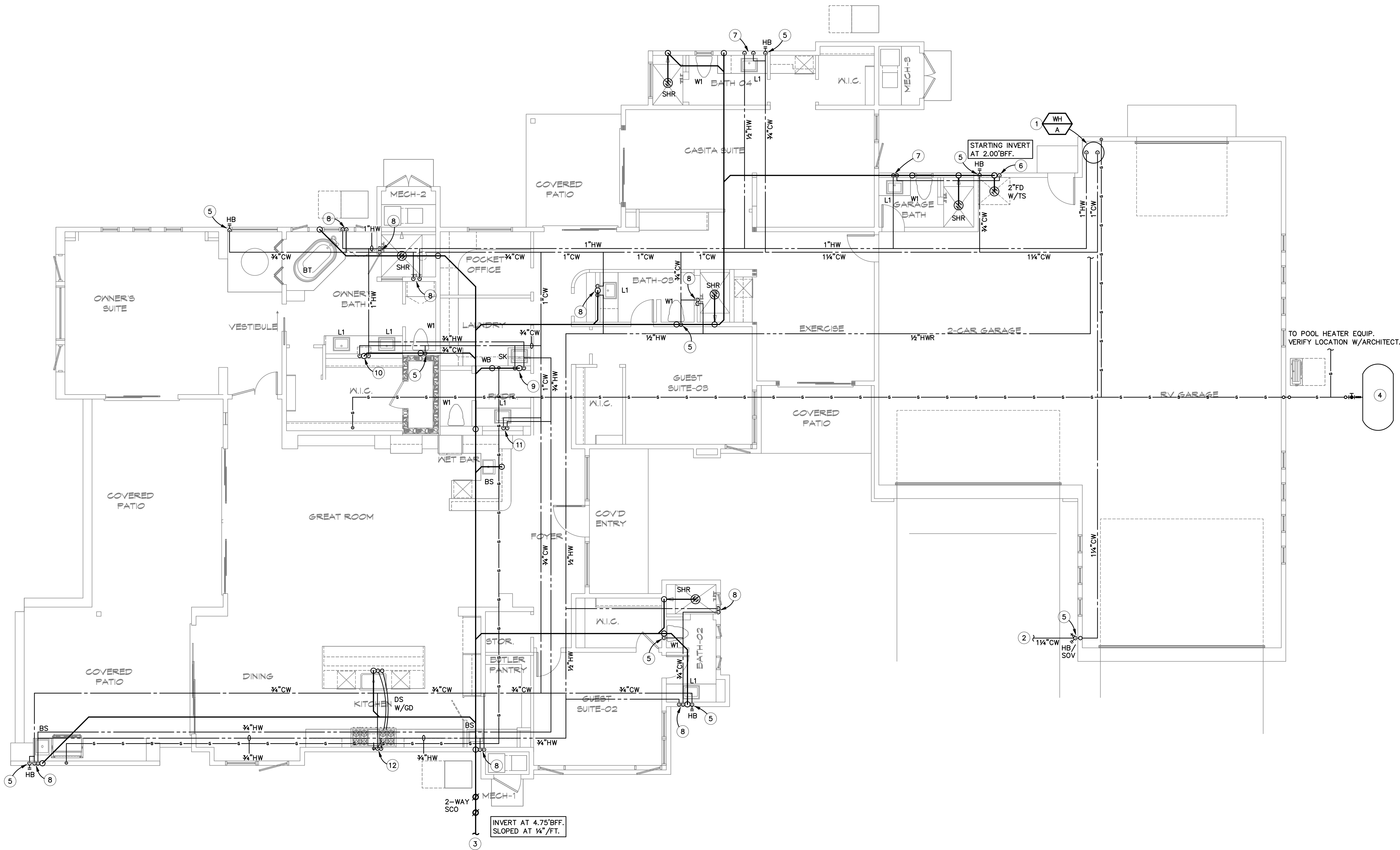
*STARTING FAULT AT SES/METER PER APS UTILITY CHART

NEC Art. 220.82: Optional Calculation - Dwelling Unit)			
SES/Meter		Qty.	VA
Gen. Ltg. & Rec. (3VA/sf)		4337	13011
Small Appliances (1500VA ea.)		6	9000
Dinning		1	1500
Laundry (1500VA ea.)		1	1500
Appliances (nameplates)			
Panel 'A'			
50amp RV Outlet		1	11520
Panel 'PL'			
Pool Pump		1	1800
Pool Heater		1	400
Pool Lighting		1	800
Pool Receptacle		1	200
Panel 'B'			
Gas Range/Oven		1	200
Water Feature		1	600
Under Counter Ref		3	2400
Dishwasher / Disposer		1	1500
Washer		1	1400
Dryer		1	5000
Gas Appl. Fireplace, BBQ		2	400
Gas Water Heater		1	200
Microwave		2	2400
Refrigerator		1	800
Ice Maker		1	800
Beverage Cooler		1	200
Total General Load			55631
First 10KVA			10000
40% of remainder			18252
Net General Load			28252
HVAC Load (larger of heating or cooling)			24432
Total Feeder Load			52684
Amps (240, 1Ph., 3W)			229

Panel 'A'		Qty.	VA
Gen. Ltg. & Rec. (3VA/sf)		0	0
Small Appliances (1500VA ea.)		0	0
Dinning		0	0
Laundry (1500VA ea.)		0	0
Appliances (nameplates)			
Panel 'A'			
Panel 'PL'			
Pool Pump		1	1800
Pool Heater		1	400
Pool Lighting		1	800
Pool Receptacle		1	200
Total General Load			3200
First 10KVA			3200
40% of remainder			0
Net General Load			3200
HVAC Load (larger of heating or cooling)			24432
Total Feeder Load			27632
Amps (240, 1Ph., 3W)			116

Panel 'B'		Qty.	VA
Gen. Ltg. & Rec. (3VA/sf)		4337	13011
Small Appliances (1500VA ea.)		6	9000
Dinning		1	1500
Laundry (1500VA ea.)		1	1500
Appliances (nameplates)			
Panel 'B'			
Gas Range/Oven		1	200
Water Feature		1	600
Under Counter Ref		3	2400
Dishwasher / Disposer		1	1500
Washer		1	1400
Dryer		1	5000
Gas Appl. Fireplace, BBQ		2	400
Gas Water Heater		1	200
Microwave		2	2400
Refrigerator		1	800
Ice Maker		1	800
Beverage Cooler		1	200
Total General Load			40591
First 10KVA			10000
40% of remainder			12364
Net General Load			22364
HVAC Load (larger of heating or cooling)			0
Total Feeder Load			22364
Amps (240, 1Ph., 3W)			93

Panel PL - POOL EQ. RM.		Qty.	VA
Gen. Ltg. & Rec. (3VA/sf)		0	0
Appliances (nameplates)			
POOL PLUMP		1	1800
Pool Heater		1	400
Pool Lighting		1	800
Pool Receptacle		1	200
Total General Load			3200
Net General Load			3200
Total Feeder Load			3200
Amps (240, 1Ph., 3W)			13



PLUMBING FLOOR PLAN

SCALE: 3/16" = 1'-0"

KEYED NOTES :

- FULL SIZE T&P TO TERMINATE AT EXTERIOR +6"A.F.G. W/ 90° ELBOW.
- EXTEND NEW 1/4" CW TO 5'-0" BEYOND BUILDING EXTERIOR. SEE CIVIL FOR CONTINUATION TO NEW 3/4"x3/4" WATER METER.
- EXTEND NEW 4"WASTE TO 5'-0" BEYOND BUILDING EXTERIOR. INVERT PER PLANS. SEE CIVIL FOR CONTINUATION.
- NEW PROPANE TANK. VERIFY SIZE AND LOCATION WITH GAS COMPANY.
- 3/4" CW DOWN IN WALL TO FIXTURE.
- 1/2" CW DOWN IN WALL TO ICEMAKER.
- 1/2" HW AND 3/4" CW DOWN IN WALL. PROVIDE 1/2" H&CW TO LAV, 1/2" H&CW TO SHR, AND 3/4" CW TO WC.
- 1/2" H&CW DOWN IN WALL TO FIXTURE.
- 1/2" H&CW DOWN IN WALL. PROVIDE 1/2" H&CW TO SK AND 1/2" H&CW TO WB.
- 1/2" H&CW DOWN IN WALL. PROVIDE 1/2" H&CW TO EACH (2) LAV.
- 1/2" HW AND 3/4" CW DOWN IN WALL. PROVIDE 1/2" H&CW TO LAV, 3/4" CW TO WC, AND ROUTE 1/2" H&CW BENEATH BAR COUNTER TO BS.
- 1/2" H&CW DOWN IN WALL AND ROUTED BELOW GRADE TO KITCHEN ISLAND. PROVIDE 1/2" H&CW TO D/S AND 1/2" HW TO DISHWASHER. COORDINATE DW CONNECTIONS IN FIELD.

GENERAL NOTES :

- EXACT LOCATION OF PLUMBING FIXTURES SHALL BE DETERMINED FROM ARCHITECTURAL DRAWINGS.
- BEFORE SUBMITTING BID, THE PLUMBING CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS AND INCLUDE IN HIS BID AN AMOUNT TO FURNISH AND INSTALL ANY FIXTURES WHICH ARE SHOWN IN ADDITION TO FIXTURES SHOWN ON THE PLUMBING DRAWINGS.
- CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF SEWERS TO WHICH NEW WASTE LINES ARE TO BE CONNECTED BEFORE MAKING UP OR INSTALLATION OF NEW WASTE SYSTEM.
- CONTRACTOR SHALL VERIFY AND COORDINATE LOCATION OF ALL PLUMBING LINES WITH DUCTWORK AND ELECTRICAL SERVICES.
- THE INSTALLATION OF ALL VALVES, UNIONS, THERMOMETERS, GAUGES, OR OTHER INDICATING OR RECORDING EQUIPMENT, OR SPECIALTIES REQUIRING FREQUENT READING, REPAIRS, ADJUSTMENT, INSPECTION, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
- ALL VENTS THROUGH ROOF SHALL BE 10'-0" REMOVED FROM ALL AIR INTAKES, EVAPORATIVE COOLERS, ETC.
- WHERE POSSIBLE, TIE VENTS TOGETHER SO THAT A MINIMUM NUMBER TERMINATE THROUGH THE ROOF.
- CONTRACTOR SHALL NOT CUT HOLES IN STRUCTURAL MEMBERS WITHOUT FIRST SECURING WRITTEN APPROVAL FROM THE ARCHITECT.
- CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
- CONTRACTOR SHALL ROUGH-IN ALL WASTES AND SUPPLIES TO SPECIAL EQUIPMENT ACCORDING TO MANUFACTURERS SHOP DRAWINGS AND MAKE FINAL CONNECTIONS. ALL SUPPLIES SHALL BE VALVED.
- ASSUMED WATER PRESSURE-CONTRACTOR SHALL VERIFY ACTUAL WATER PRESSURE PRIOR TO CONSTRUCTION. IF PRESSURE IS LESS THAN 50 PSI CONTRACTOR SHALL CONTACT THE ENGINEER FOR PIPE SIZING EVALUATION. IF PRESSURE EXCEEDS 80 PSI, A PRESSURE REDUCING VALVE SHALL BE PROVIDED. PIPING VELOCITY SHALL NOT EXCEED 8 FEET PER SECOND.
- PLANS AND WORK SHALL CONFORM TO 2018 IPC AND IFGC AS ADOPTED BY THE CITY OF PARKER.

PLUMBING SYMBOL LIST			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—GW—	GREASE WASTE (GW)	●	POINT OF CONNECTION
---	EXISTING (E)	—X—	SHUT OFF VALVE (GATE)
---	SOIL WASTE LINE (W)	—V—	CHECK VALVE
---	VENT LINE (V)	—U—	UNION
---	COLD WATER (C.W.)	—L—	LUBRICATED PLUG VALVE
---	HOT WATER (H.W.)	—H—	HOSE BIBB (H.B.)
---	HOT WATER RETURN	—B—	BRANCH RISE OFF MAIN
—C—	GAS LINE	—S.C.O.—	SURFACE CLEANOUT
—TW—	TEMPERED WATER	—F.C.O.—	FLOOR CLEANOUT
—SW—	SOFT WATER	—G—	GLOBE VALVE
---	BUILDING SEWER	—B—	BALL VALVE
⊗	FLOOR DRAIN (F.D.)	—R.D.L.—	ROOF DRAIN LEADER
⊗	FLOOR SINK (F.S.)	—O.D.L.—	OVERFLOW DRAIN LEADER
⊗	ROOF DRAIN (R.D.)	—CD—	CONDENSATE DRAIN LINE
⊗	OVER FLOW DRAIN	—ICW—	INDUSTRIAL COLD WATER

NOTE: ONLY THOSE SYMBOLS SHOWN ON THE DRAWING APPLY

PIPING MATERIALS

SANITARY WASTE AND VENT SYSTEMS

PIPING:

ABS CONFORMING TO ASTM D 2661.

DOMESTIC WATER SYSTEM

PIPING:

ABOVE GRADE: TYPE "L" HARD DRAWN COPPER, CONFORMING TO ASTM B-88. OR PEX CONFORMING TO ASTM F 876. PEX PIPING 1.5" AND LARGER MUST BE RIGID TUBING.
BELOW SLAB: TYPE "K" SOFT DRAWN COPPER, CONFORMING TO ASTM B-88, WITH PLASTIC SLEEVE.

PIPING, EXTERIOR BELOW GRADE ONLY:
PVC CONFORMING ASTM D 1785, WITH TRACER WIRE.

FUEL GAS SYSTEM

PIPING ABOVE GRADE:

BLACK STEEL PIPE, SCHEDULE 40 BLACK STEEL CONFORMING TO ASTM A-53, GRADE A OR B, SEAMLESS OR WELDED PIPE.

PIPING, EXTERIOR BELOW GRADE ONLY:

POLYETHYLENE PLASTIC PIPE
PER ASTM D 2513, PIPE SHALL BE MARKED GAS AND HAVE A TRACER WIRE MINIMUM 18 AWG

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

CONTRACTOR:

PROJECT:

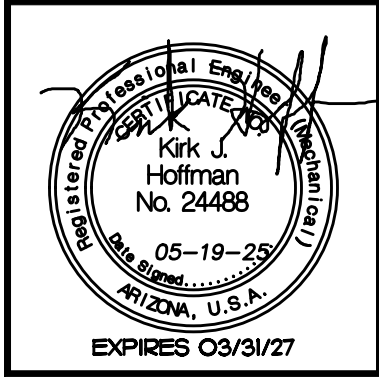
The PETERS Residence
31587/31589 CROW'S NEST DRIVE
PARKER, AZ / APN 311-53-070J

PLUMBING FLOOR PLAN

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. ■ DO NOT SCALE DRAWINGS ■ NOTIFY DESIGNERS IMMEDIATELY PRIOR TO PROCEEDING WITH WORK SHOULD ANY DISCREPANCIES OCCUR. DESIGNERS ASSUME NO RESPONSIBILITY OF WORK IN PLACE

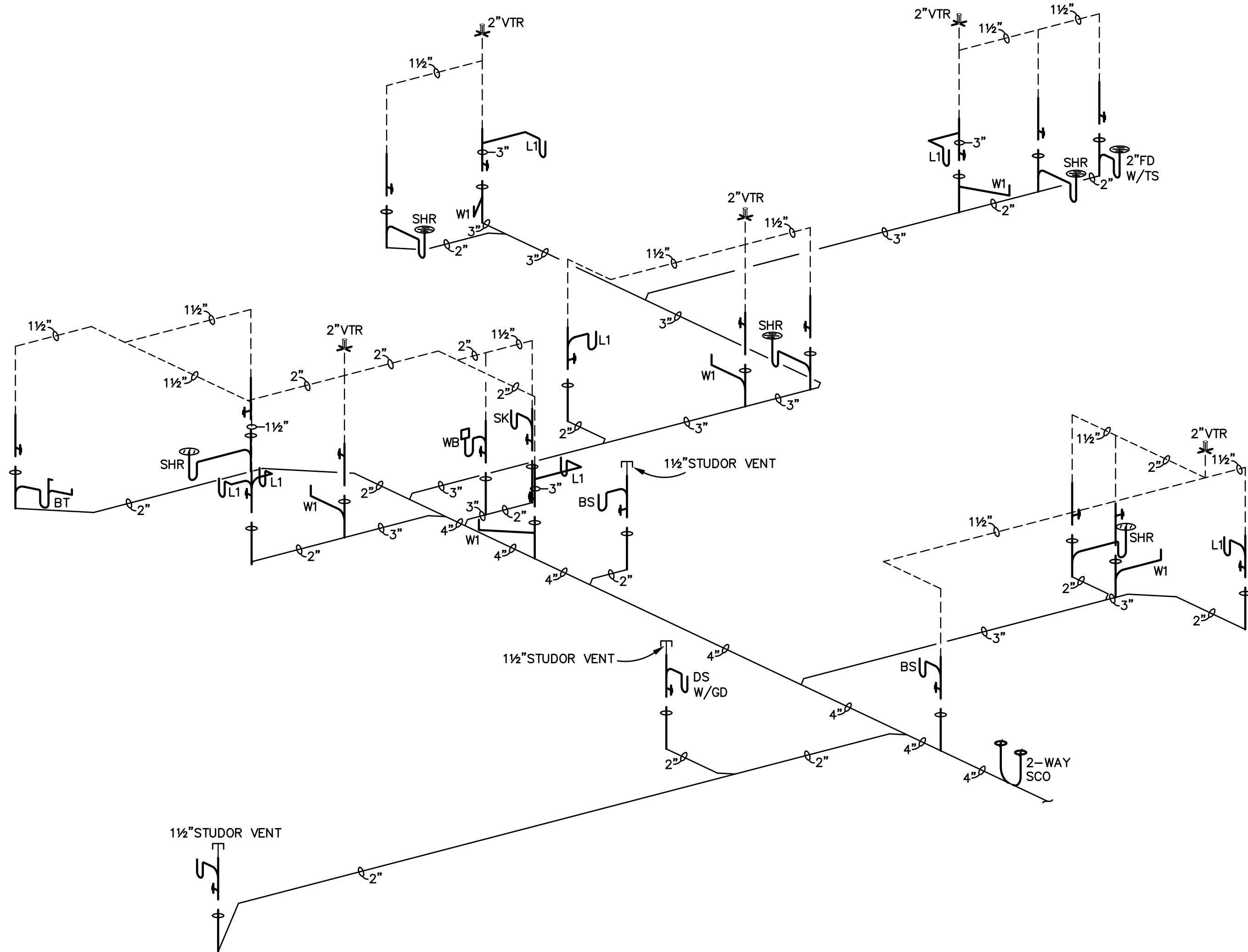
REVISIONS:	
△	
△	
△	

SCALE:	JOB #:
AS NOTED	2024-05
DRAWN:	CHECKED:
MRL	KEP
DATE:	19 MAY 2025
SHEET	
P1.1	
© COPYRIGHT 2025	

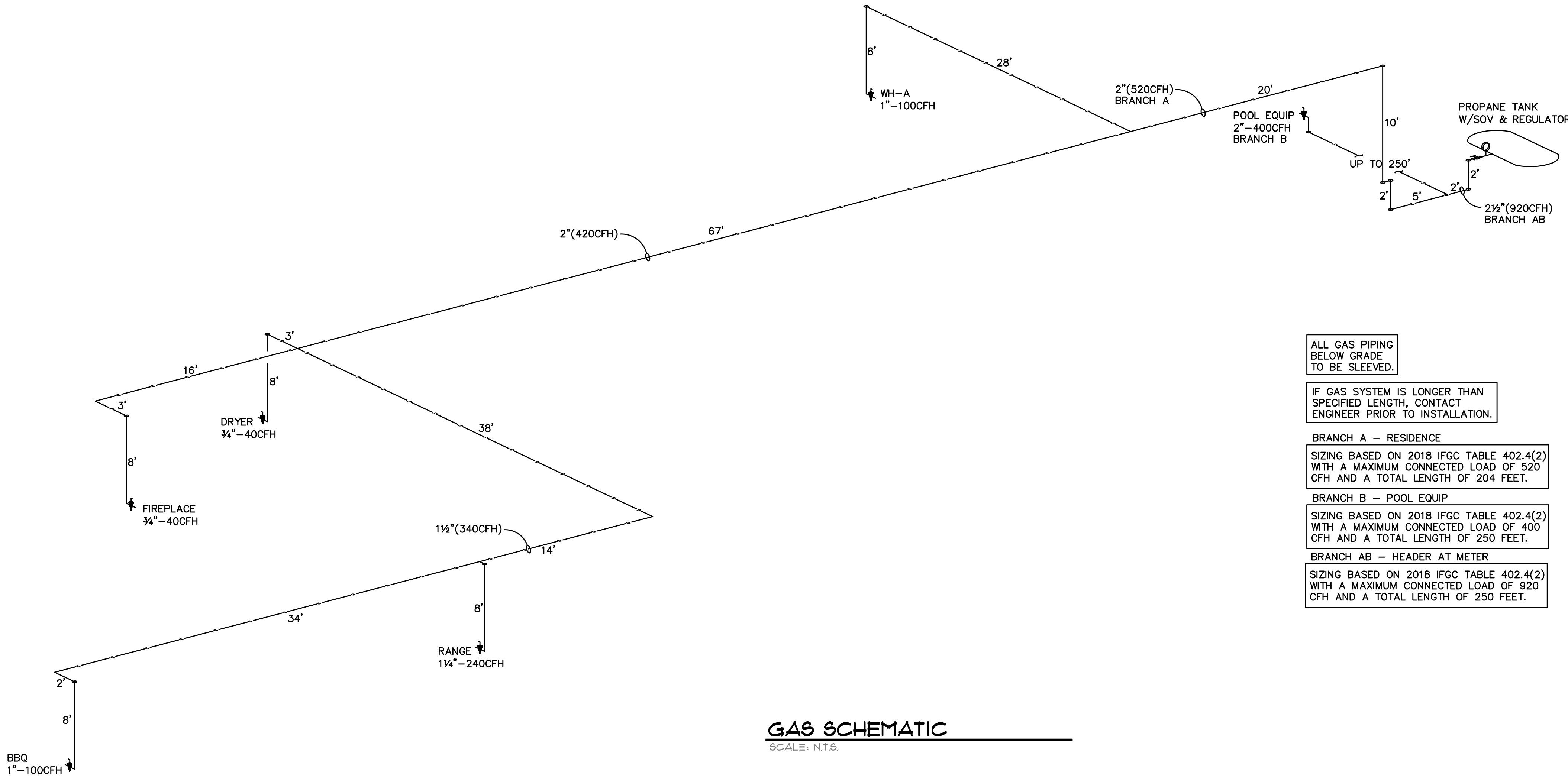


Job #2025P069
Tel: (480) 305-0180
Fax: (480) 305-7827
Rick J. Hoffman
Professional Engineer
State of Arizona
No. 24488

Note: Any changes made to final bid documents due to field changes will be billed hourly to the contractor.



WASTE & VENT SCHEMATIC
SCALE: N.T.S.



ALL GAS PIPING
BELOW GRADE
TO BE SLEEVED.

IF GAS SYSTEM IS LONGER THAN
SPECIFIED LENGTH, CONTACT
ENGINEER PRIOR TO INSTALLATION.

BRANCH A - RESIDENCE

SIZING BASED ON 2018 IFGC TABLE 402.4(2)
WITH A MAXIMUM CONNECTED LOAD OF 520
CFH AND A TOTAL LENGTH OF 204 FEET.

BRANCH B - POOL EQUIP

SIZING BASED ON 2018 IFGC TABLE 402.4(2)
WITH A MAXIMUM CONNECTED LOAD OF 400
CFH AND A TOTAL LENGTH OF 250 FEET.

BRANCH AB - HEADER AT METER

SIZING BASED ON 2018 IFGC TABLE 402.4(2)
WITH A MAXIMUM CONNECTED LOAD OF 920
CFH AND A TOTAL LENGTH OF 250 FEET.

GAS SCHEMATIC
SCALE: N.T.S.

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM
w/ 2018 INTERNATIONAL RESIDENTIAL CODE
and ALL CURRENT GOVERNING CODES.

CONTRACTOR:

PROJECT:

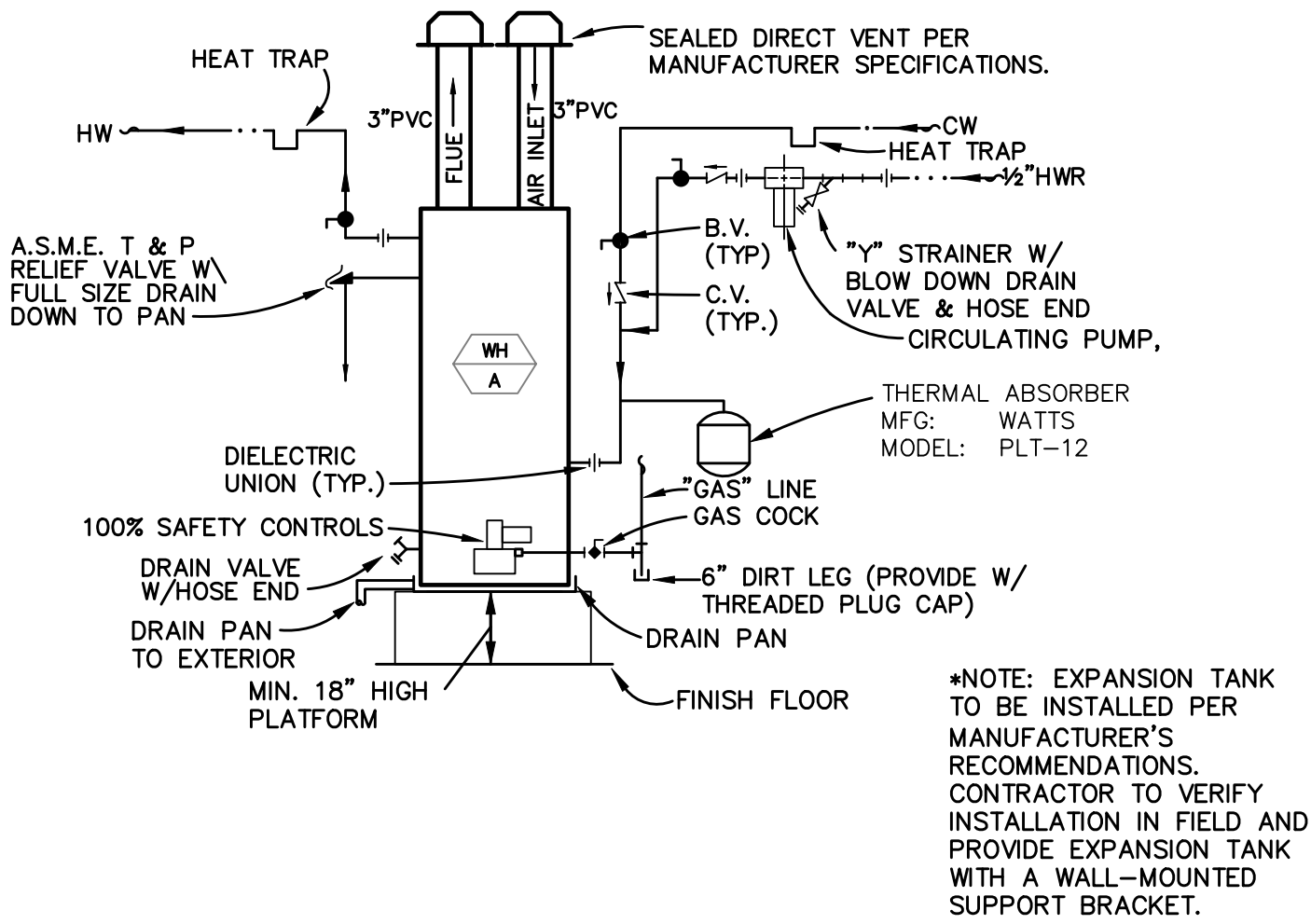
The PETERS Residence
31587/31589 CROW'S NEST DRIVE
PARKER, AZ / APN 311-53-070J

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL GROUP, INC. ANY REPRODUCTION OR RE-USE OF THESE DRAWINGS, OR ANY PORTION THEREOF, ARE PROHIBITED WITHOUT THE WRITTEN CONSENT OF ZETTEL GROUP, INC. ■ DO NOT SCALE DRAWINGS ■ NOTIFY DESIGNERS IMMEDIATELY PRIOR TO PROCEEDING WITH WORK SHOULD ANY DISCREPANCIES OCCUR. DESIGNERS ASSUME NO RESPONSIBILITY OF WORK IN PLACE	
REVISIONS:	
△	
△	
△	

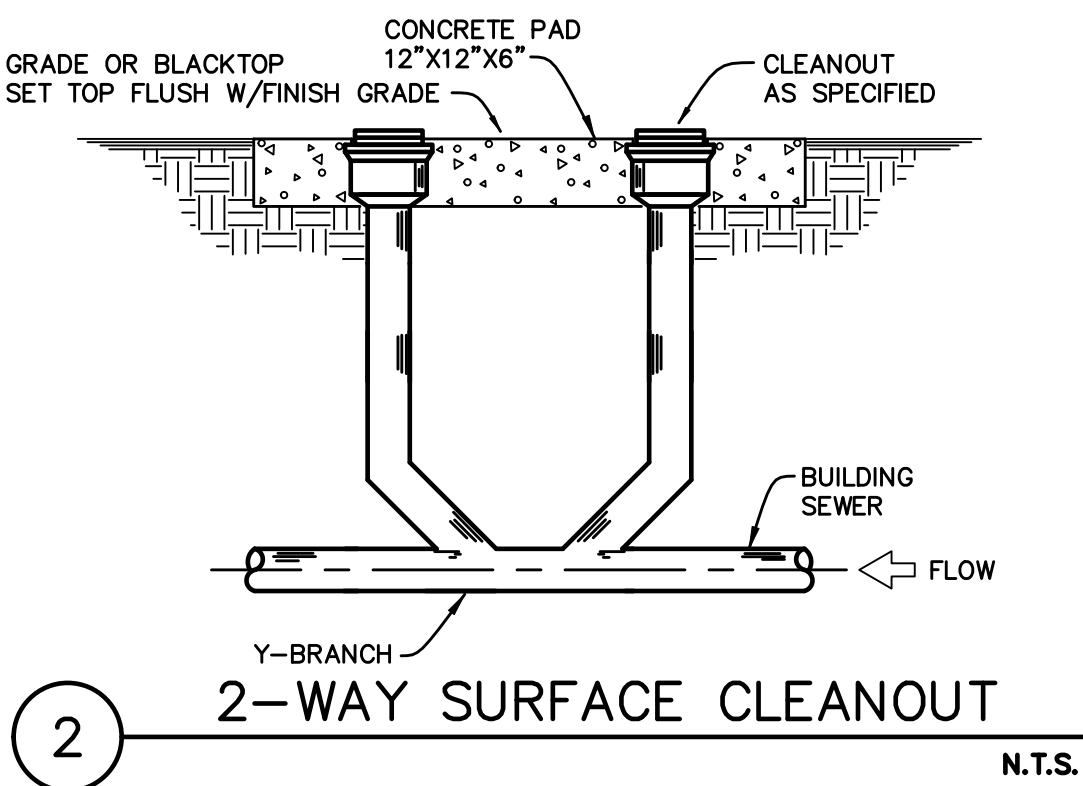
SCALE: AS NOTED	JOB #: 2024-05
DRAWN: MRL	CHECKED: KEP
DATE: 19 MAY 2025	
SHEET P2.1	
© COPYRIGHT 2025	

PLUMBING SPECIFICATIONS :

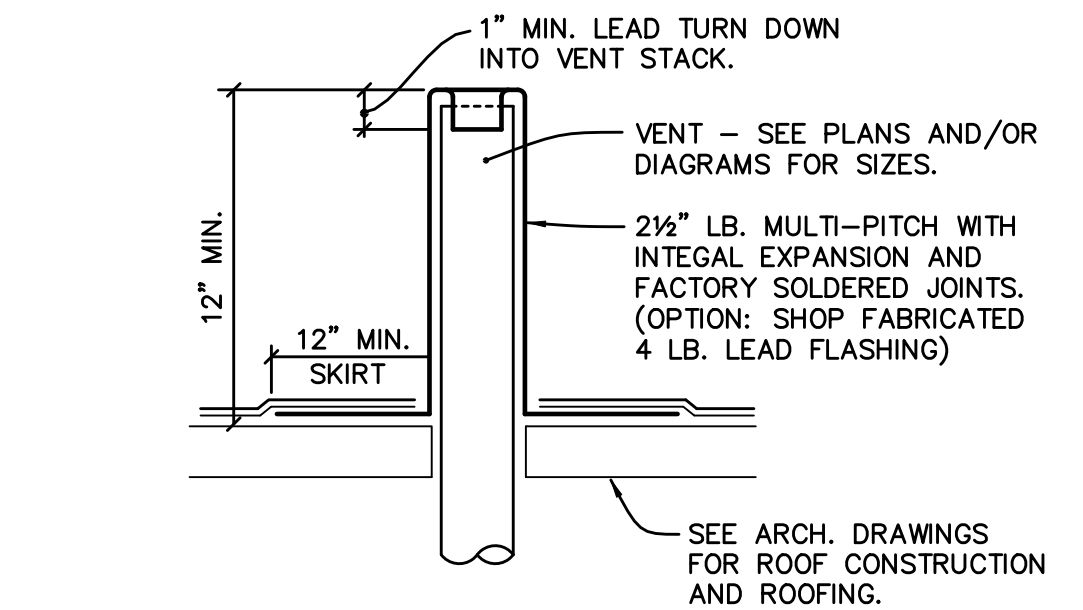
1. SCOPE
THE WORK SPECIFIED UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS, TOOLS, TRANSPORTATION, SERVICES, PERMITS, INSPECTION FEES, ETC., REQUIRED IN THE COMPLETE INSTALLATION OF PLUMBING WORK AS SPECIFIED HEREIN AND SHOWN ON ACCOMPANYING DRAWINGS AND AS REQUIRED BY THE CONDITIONS AT THE SITE. THE GENERAL AND SPECIAL CONDITIONS ARE HEREBY MADE A PART OF THIS SECTION. IN ADDITION, WORK IN THESE SECTIONS ARE GOVERNED BY ALL PROVISIONS OF THE CONTRACT DOCUMENTS.
2. SUBMITTALS
SUBMIT SHOP DRAWINGS AND ALL DATA REQUIRED IN ACCORDANCE WITH DETAILED REQUIREMENTS OF DIVISION 1, GENERAL REQUIREMENTS, FOR ALL WORK PROVIDED UNDER DIVISION 15.
3. RECORD DRAWINGS
PROVIDE RECORD DRAWINGS WHICH SHALL CLEARLY SHOW ALL DIFFERENCES BETWEEN THE CONTRACT WORK AS DRAWN AND INSTALLED. PIPING MAINS BELOW SLAB AND/OR GRADE AND ALL BRANCH LINES BELOW SLAB OR GRADE IN EXCESS OF 5 FT. IN LENGTH SHALL BE DIMENSIONED FROM COLUMNS OF ANY PERMANENT STRUCTURE. ALSO, SHOW ALL WORK ADDED TO THE CONTRACT WHICH IS NOT SHOWN ON THE CONTRACT DRAWINGS.
- RECORD DRAWINGS SHALL BE IN ACCORDANCE WITH DIVISION REQUIREMENTS.
4. EQUIPMENT LIST AND MAINTENANCE MANUAL
MAINTENANCE MANUAL SHALL INCLUDE ALL AVAILABLE MANUFACTURERS' OPERATION AND MAINTENANCE INSTRUCTIONS TOGETHER WITH THE RECORD DRAWINGS HERE IN BEFORE SPECIFIED AND ALL OTHER DIAGRAMS AND INSTRUCTIONS NECESSARY TO PROPERLY OPERATE AND MAINTAIN THE EQUIPMENT. THE MANUAL SHALL ALSO INCLUDE THE NAME, ADDRESS, AND PHONE NUMBER OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED IN ANY OF THE WORK SPECIFIED HEREIN. THE EQUIPMENT LIST AND MAINTENANCE MANUAL SHALL BE SUBMITTED IN ACCORDANCE WITH DIVISION 1, GENERAL REQUIREMENTS.
5. CODES, PERMITS, FEES, INSPECTIONS, RULES & REGULATIONS
THE CONTRACTOR MUST, AT HIS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS, PAY ALL LEGAL FEES AND CHARGES INCLUDING WATER AND SEWER DEVELOPMENT FEES, AND COMPLY WITH ALL STATE AND MUNICIPAL BUILDING AND SAFETY LAWS, ORDINANCES AND REGULATIONS RELATING TO BUILDING AND PUBLIC HEALTH AND SAFETY. ALL WORK SHALL BE IN CONFORMANCE WITH THE GOVERNING CITY CODES.
- NATURAL GAS: CONTRACTOR MUST, AT HIS OWN EXPENSE, SUBMIT ALL NECESSARY DRAWINGS TO SOUTHWEST GAS AND INCLUDE SLEEVE REQUIRED TO GAS METER LOCATION. COORDINATE LOCATIONS WITH UTILITY COMPANY.
6. EXCAVATION AND BACKFILL
COMPLETE ALL SAW CUTTING, EXCAVATION AND BACKFILL AS NECESSARY FOR THE INSTALLATION OF UNDERGROUND PIPING. COMPACT AND TAMP BACKFILL TO ORIGINAL GRADE IN ACCORDANCE WITH REQUIREMENTS AS SPECIFIED IN SECTION ENTITLED "EARTHWORK" AND REMOVE EXCESS DIRT AS DIRECTED. NO WORK SHALL BE COVERED UNTIL PROPERLY TESTED AND APPROVED. ALL PAVEMENT, SIDEWALK, PAVING, ELECTRICAL CONDUIT, ETC. CAUSED TO BE CUT OR DAMAGED BY THIS SECTION SHALL BE RESTORED TO ORIGINAL CONDITION BY WORKMEN QUALIFIED AND ACTIVE IN THE TRADES INVOLVED.
7. ELECTRIC WIRING
ALL POWER WIRING IS INCLUDED IN DIVISION 16, ELECTRICAL. THE RESPONSIBILITY FOR PROPER CONNECTIONS AND OPERATION IS INCLUDED UNDER THIS DIVISION.
8. WARRANTY
WARRANT THE SYSTEM, LABOR, MATERIALS AND EQUIPMENT FOR ONE (1) YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE OR REPAIR ALL DEFECTIVE WORKMANSHIP, EQUIPMENT, AND MATERIALS AT NO ADDITIONAL COST TO THE OWNER.
9. WORK SPECIFIED HEREIN
PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO FURNISH AND INSTALL COMPLETE PLUMBING AND PIPING SYSTEMS AS INDICATED OR SPECIFIED. INSTALL AND DELIVER ALL SYSTEMS COMPLETE, IN PERFECT WORKING ORDER, AND IN FULL ACCORDANCE WITH THE INTENT AND MEANING OF THE DRAWINGS AND SPECIFICATIONS. THE WORK, IN GENERAL, CONSISTS OF, BUT IS NOT NECESSARILY LIMITED TO, THE FOLLOWING:
- COMPLETE SANITARY PLUMBING SYSTEMS FOR THE BUILDING WITH CONNECTIONS FROM EXISTING LINE IN THE BUILDING.
- DOMESTIC WATER SYSTEM INCLUDING CONNECTION TO EXISTING STUB OUT, AND CONNECTIONS TO ALL PLUMBING FIXTURES AND EQUIPMENT.
- ROUGH-IN AND FINAL CONNECTIONS OF WASTE AND WATER TO SPECIAL EQUIPMENT SPECIFIED UNDER OTHER SECTIONS OF THESE SPECIFICATIONS OR SUPPLIED BY OWNER, INCLUDING KITCHEN EQUIPMENT, CONDENSATE DRAIN PIPING, P-TRAPS, WASTE TUBING STOPS, FLEXIBLE TUBE RISERS, ETC. AS REQUIRED.
- VALVED OUTLETS AND CONNECTIONS TO ALL HEATING, AIR CONDITIONING, OR ELECTRICAL EQUIPMENT WITH LOCATION AS REQUIRED.
- INSULATION INCLUDING DOMESTIC HOT WATER SUPPLY PIPING. PER IECC 2018 PROVIDE FOAM INSULATION OR INSULATE WITH "INSULATION HAVING A CONDUCTIVITY BETWEEN 0.21-0.28 BTU PER INCH/H x FT.SQUARED x F".
- FUEL GAS SYSTEM, INCLUDING METER, SERVICE LINE, AND VALVED CONNECTIONS TO ALL EQUIPMENT USING SAME AND INCLUDE SLEEVE REQUIRED TO GAS METER LOCATION. COORDINATE LOCATIONS WITH UTILITY COMPANY.
- PLUMBING SPECIALTIES, INCLUDING CLEAN-OUTS, DRAINS, FIXTURE SUPPORTS, INTERCEPTORS, ETC.
- PLUMBING EQUIPMENT AS SPECIFIED AND SCHEDULED.
- PLUMBING FIXTURES AS SPECIFIED.
- ADEQUATE SUPERVISION OF ERECTION, BALANCING, ADJUSTMENTS AND INSTRUCTIONS FOR PROPER OPERATION AND MAINTENANCE.
- PAYMENT FOR ALL PLUMBING PERMITS AND INSPECTION FEES.
- STERILIZATION OF POTABLE WATER SYSTEM. PEX SYSTEM SHALL BE STERILIZED WITH 50 MILLIGRAMS OF CHLORINE PER LITER FOR 24 HOURS.
10. APPROVED MANUFACTURERS
SPECIFICATION HEREIN BY BRAND NAME IS INTENDED TO ESTABLISH A STANDARD OF QUALITY. FURTHER, THIS EQUIPMENT HAS BEEN CHECKED AS TO SIZE AND WEIGHT REQUIREMENTS AND SPACE ALLOCATION HAS BEEN MADE ACCORDINGLY.
- SUBMITTAL OF EQUIPMENT BY OTHER ACCEPTABLE MANUFACTURERS MUST BE COMPLETE IN EVERY DETAIL, INCLUDING SPACE REQUIREMENTS, WEIGHT, COMPLETE PERFORMANCE DATA, AND SUPPLEMENTAL DATA REQUESTED BY THE ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURANCE THAT THE EQUIPMENT MEETS ALL THE REQUIREMENTS DETAILED IN THIS AND OTHER SECTIONS, AND INDICATED ON THE DRAWINGS.
- EACH SECTION INCLUDES A LIST OF MANUFACTURERS WHOSE EQUIPMENT IS ACCEPTABLE TO MANUFACTURE, SUBJECT TO CONFORMANCE WITH ALL DRAWINGS, SPECIFICATIONS AND ADDENDA ITEMS. CAREFUL CHECKING MUST BE MADE TO VERIFY THAT THE EQUIPMENT WILL MEET ALL CAPACITIES, REQUIREMENTS, SPACE ALLOCATIONS, AND THAT THE WEIGHTS ARE NOT EXCESSIVE.
11. MATERIALS
MANUFACTURERS INDICATE A STANDARD OF QUALITY, OTHER MANUFACTURES MUST BE APPROVED AS AN EQUAL.
- SANITARY WASTE VENT AND STORM DRAINAGE: ABS CONFORMING TO ASTM D 2861. PROVIDE EXPANSION JOINTS, "FERROCO X/J" OR EQUAL, ON ALL VERTICAL BUILDING STACKS. LOCATION AND NUMBER OF EXPANSION JOINTS SHALL BE DETERMINED BASED ON PIPE MANUFACTURER'S RECOMMENDATIONS.
- DOMESTIC WATER: TYPE "L" HARD DRAWN COPPER, CONFORMING TO ASTM B-88; OR PEX CONFORMING TO ASTM F 876. PEX PIPING 1.5" AND LARGER MUST BE RIGID TUBING.
- NATURAL GAS: PIPE, BLACK STEEL PIPE, SCHEDULE 40 BLACK STEEL CONFORMING TO ASTM A-53, GRADE A OR B, THREADED PIPING UP TO 4" DIAMETER, SEAMLESS WELDED PIPE FOR ALL LARGER SIZES.
- GENERAL: WRAP ALL GAS PIPING INSTALLED BELOW GRADE OR EXPOSED TO WEATHER IN ACCORDANCE WITH MANVILLE SPECIFICATION 220. PROVIDE CATHODIC PROTECTION FOR GAS PIPING INSTALLED BELOW GRADE.
- CLEAN OUTS: INTERIOR CONCRETE AND TILE FLOORS: "SIOUX CHIEF 834". INTERIOR FINISHED WALLS: "SIOUX CHIEF 870".
- FLOOR DRAINS: TOILET ROOMS AND FINISHED AREAS: "SIOUX CHIEF 832".
- FLOOR SINKS: EQUIPMENT ROOMS AND UNFINISHED AREAS: "WADE W-2530".
- REDUCE PRESSURE BACKFLOW PREVENTER: WATTS #5S009, STAINLESS STEEL SHALL BE USED FOR ALL FOOD APPLICATIONS
- BALL VALVES: NIBCO #S-585-70, 150# SOLDER JOINT FOR ALL LINES UP TO 2" IN DIAMETER.
- CHECK VALVES: NIBCO #S-413-Y, 150# SOLDER JOINT FOR ALL VALVES UP TO 2" IN DIAMETER.
- GLOBE VALVES: NIBCO #S-235-Y, 150# SOLDER JOINT FOR ALL VALVES UP TO 2" IN DIAMETER.
- FIXTURES: USE POLISHED CHROME PLATED, ADJUSTABLE BRASS P-TRAPS AND WASTE ARMS WITH WALL ESCUTCHEONS AT ALL EXPOSED LOCATIONS. USE POLISHED CHROME PLATED FAUCETS WITH REMOVABLE TRIP, BRASS BODY AND BRASS HANDLES. FIXTURES AND SUPPLY FITTING SHALL BE AS SPECIFIED. PROVIDE DIAPHRAGM TYPE POLISHED CHROME PLATED FLUSH VALVES WITH INTEGRAL VACUUM BREAKERS AND SCREW DRIVER STOPS. PROVIDE FIXTURE STOPS AND VALVES AHEAD OF ALL EQUIPMENT OR FIXTURES. AFTER FIXTURES ARE SET IN PLACE AND SECURED TO WALLS, CAULK ALL AROUND BETWEEN FIXTURES AND WALL WITH EITHER "DOW CORNING #780" OR G.E. CONSTRUCTION SEALANT" WHITE SILICONE CAULKING COMPOUND.
12. INSTALLATION
THE ENTIRE PLUMBING SYSTEM SHALL BE INSTALLED IN A NEAT, WORKMANLIKE, FINISHED, AND SAFE MANNER. CONCEAL ALL PIPING IN FINISHED AREAS UNLESS NOTED OTHERWISE. ALL PIPING SHALL BE ADEQUATELY SUPPORTED AND INSTALLED PARALLEL WITH THE BUILDING WALLS. THE ENTIRE INSTALLATION SHALL BE SUBJECT TO THE ARCHITECT'S APPROVAL.
13. TESTS
TEST WATER PIPING TO 100 PSI AND HOLD FOR 4 HOURS.
TEST SEWER AND VENT PIPING WITH A 10 FOOT HEAD OF WATER FOR 4 HOURS.
FUEL GAS SYSTEM: PRESSURE SHALL NOT BE LESS THAN 1½ TIMES THE MAXIMUM WORKING PRESSURE AND NOT LESS THAN 3 PSIG. DURATION SHALL BE ½ HOUR FOR EACH 500 CFH OF PIPE VOLUME. THE DURATION OF THE TEST SHALL NOT BE REQUIRED TO EXCEED 24 HOURS.
REPAIR ALL LEAKS UNTIL SYSTEMS ARE WATERTIGHT.
- END OF SECTION



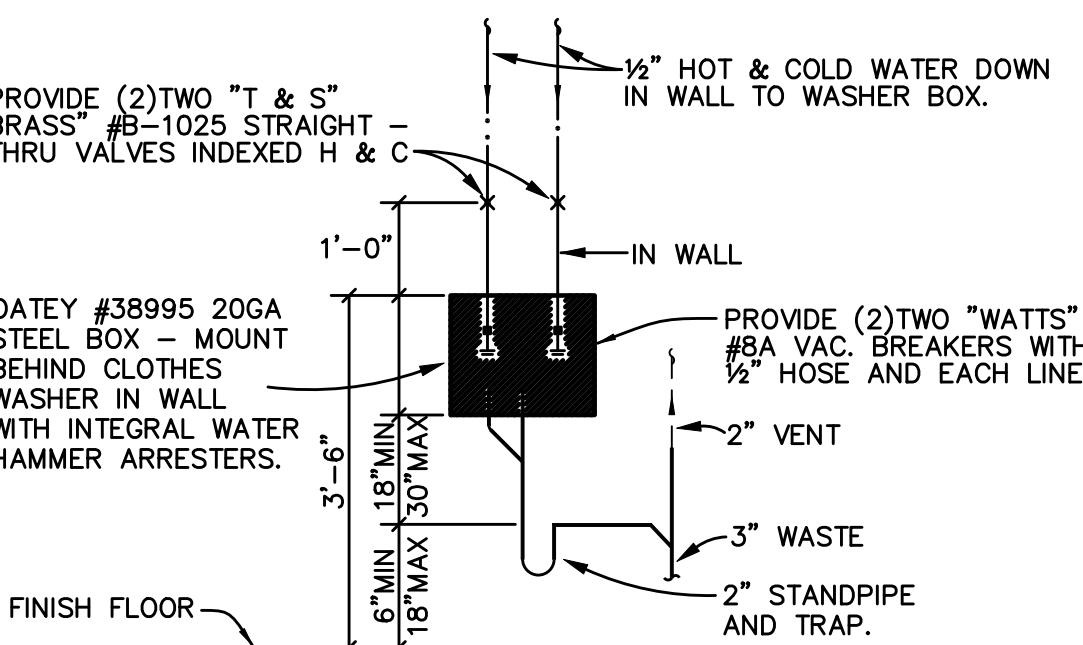
1 GAS-FIRED WATER HEATER PIPING DIAGRAM N.T.S.



2 2-WAY SURFACE CLEANOUT N.T.S.



3 VENT FLASHING N.T.S.



4 WASHER BOX CONNECTION RESIDENTIAL N.T.S.

* VERIFY EXACT FIXTURES WITH OWNER/ARCH. PRIOR TO ORDERING.
ALTERNATES TO BE APPROVED BY OWNER & ENGINEER PRIOR TO ORDERING.

PLUMBING FIXTURE SCHEDULE								
FIXTURE SPECIFICATIONS					FIXTURE CONNECTIONS			
MARK	DESCRIPTION	MANUFACTURER AND MODEL NUMBER	FITTING & CAPACITY	ACCESSORIES/REMARKS	C.W.	H.W.	WASTE	VENT
WI	WATER CLOSET FLUSH TANK	SELECTED BY OWNER	SELECTED BY OWNER	¼ TURN ANGLE STOP & FLEX RISER	¾"	—	3"	2"
L1	COUNTER MOUNTED LAVATORY ENAMELED STEEL	SELECTED BY OWNER	SELECTED BY OWNER	POP UP DRAIN, 1¼" TAILPIECE, P-TRAP & RISER	½"	½"	2"	1¼"
BT	BATH TUB	SELECTED BY OWNER	—	RITE-TEMP PRESSURE BALANCING VALVE	½"	½"	2"	1½"
SHR	SHOWER	SELECTED BY OWNER	"SIOUX CHIEF" #832-25ANQ SHOWER DRAIN	RITE-TEMP PRESSURE BALANCING VALVE	½"	½"	2"	1½"
BS	BAR SINK	SELECTED BY OWNER	SELECTED BY OWNER	¼ TURN ANGLE STOPS W/ FLEXIBLE KEY & TUBE RISERS, TAILPIECE AND P-TRAP	½"	½"	2"	1½"
SK	SINK	SELECTED BY OWNER	SELECTED BY OWNER	¼ TURN ANGLE STOPS W/ FLEXIBLE KEY & TUBE RISERS, TAILPIECE AND P-TRAP	½"	½"	2"	1½"
DS	DOUBLE SINK 2-COMPARTMENT STAINLESS STEEL (18 GA.)	SELECTED BY OWNER	SELECTED BY OWNER	¼ TURN ANGLE STOPS W/ FLEXIBLE KEY & TUBE RISERS, TAILPIECE AND P-TRAP	½"	½"	2"	1½"
GD	GARBAGE DISPOSAL	ISE BADGER 1	1/3 HP 120V 1ø	—	—	—	—	—
WB	CLOTHESWASHER BOX	"OATEY" #38995	W/ 2"DRAIN OUTLET	WITH INTEGRAL WATER HAMMER ARRESTERS	½"	½"	3"	2"
WH-A	RESIDENTIAL GAS WATER HEATER 65"X28"	"A.O. SMITH" #GDHE-75 75 GAL. CAPACITY	100 MBH INPUT NAT. GAS — 129 GPH RECOVERY @ 90"	POWER DIRECT VENT VENT THRU OUTER WALL	—	—	—	—
HB	HOSE BIBB	"WOODFORD" #14 SERIES FREEZE PROOF	¾" INLET	W/ VACUUM BREAKER BACKFLOW PREVENTER HANDLE	¾"	—	—	—

8.0 PSI DROP			
PIPE SIZE	GPM	FU (FT)	FU (FY)
½"	3	3	—
¾"	8	11	—
1"	18	25	—
1¼"	30	55	14
1½"	44	103	35
2"	77	259	135
2½"	120	479	365
3"	170	748	739

WATER CALCULATION			
STATIC PRESS. :	85 PSI		
BLDG. HEIGHT :	10		
65.00 PSI PRESS. IN MAIN			
15.00 PSI PRESS. REQ'D AT FURTHEST FIXTURE			
50.00 PSI SUBTOTAL			
6.00 PSI PRESS. DROP THRU NEW ¾" METER			
10.00 PSI DROP THRU RFBP			
34.00 PSI SUBTOTAL			
4.33 PSI DROP FOR ELEVATION			
29.67 PSI ALLOWABLE FOR PIPE FRICTION			
TOTAL LENGTH OF WTR SYSTEM = 275			
EQUIVALENT FEET OF PIPE ALLOWED FOR TEES, ELBOWS, FITTINGS, ETC. = 90.75			
TOT. DEVELOPED LENGTH OF WTR SYSTEM= 365.75			
***** ALLOWABLE FRICTION LOSS = 8.11 PSI/100'*****			
WATER FIXTURE COUNT			
6 FULL BATH GRP	3.6 FU	=	21.6 FU
1 LAV	0.7 FU	=	0.7 FU
1 KITCHEN GRP	2.5 FU	=	2.5 FU
1 LAUNDRY GRP	2.5 FU	=	2.5 FU
2 BS	1.4 FU	=	2.8 FU
2 HOSE BIBB ***	2.5 FU	=	5 FU
TOTAL FU = 35.1			
TOTAL 35 23 GPM			
***PER WATER METER WORKSHEET ONLY INCLUDE 2 HOSE BIBBS			

CONTRACTOR:

PROJECT:

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND REMAIN THE PROPERTY OF ZETTEL. WHILE EVERY EFFORT HAS BEEN MADE IN THE PREPARATION OF THIS PLAN TO AVOID ERRORS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, MATERIALS, AND OTHER DETAILS AND BE RESPONSIBLE FOR SAME.

REVISIONS:	
△	
△	
△	

SCALE:	JOB #:
AS NOTED	2024-05
DRAWN:	CHECKED:
MRL	KEP
DATE:	
19 MAY 2025	
SHEET	

NOTE:
ARCHITECTURAL PLANS SHALL CONFORM w/ 2018 INTERNATIONAL RESIDENTIAL CODE and ALL CURRENT GOVERNING CODES.

P3.1

© COPYRIGHT 2025