FOUNDATION SPECIFICATIONS:

GENERAL
ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE APPLICABLE BUILDING CODE, AS WELL AS ANY OTHER REGULATING AGENCIES WITH AUTHORITY OVER ANY PORTION OF THE WORK.

CONTRACTOR/BUILDER IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS PRIOR TO SETTING FORMS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTIONS OF ARDENT ENGINEERING, LTD. ARDENT ENGINEERING, LTD. IS NOT RESPONSIBLE FOR FOUNDATION DIMENSIONS AFTER CONCRETE HAS BEEN PLACED.

EUFER GROUND TO BE LOCATED AND INSTALLED BY OTHERS AS REQUIRED BY LOCAL CODES.

FLOOR SLABS SHALL BE SEPARATED FROM ALL STRUCTURAL ELEMENTS OF THE BUILDING USING AN EXPANSION JOINT WITH A MINIMUM THICKNESS OF 1/2". ALL NON BEARING PARTITIONS ABOVE FLOOR SLABS SHALL BE CONSTRUCTED WITH A MINIMUM GAP OF 2".

ALL BRACING, TEMPORARY SUPPORTS, SHORING, ETC. DURING CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO ALL APPLICABLE CODES AND SAFETY REQUIREMENTS OF ALL GOVERNING AGENCIES.

DESIGN, MATERIALS, EQUIPMENT, AND PRODUCTS OTHER THAN THOSE DESCRIBED BELOW OR INDICATED ON THE DRAWINGS MAY BE CONSIDERED FOR USE, PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE OWNER, ENGINEER, AND GOVERNING CODE AUTHORITY.

THIS FOUNDATION DESIGN HAS BEEN COMPLETED IN ACCORDANCE WITH PERTINENT STANDARDS, RECOMMENDED SOIL PARAMETERS, ACCEPTED DESIGN PROCEDURES, AND IS BASED ON THE BEST INFORMATION AVAILABLE AT THE TIME OF COMPLETION. THIS DESIGN IS INTENDED TO MINIMIZE DIFFERENTIAL FOUNDATION MOVEMENT RESULTING FROM POSSIBLE SOIL HEAVING/ SETTLEMENT INDUCED BY SEASONAL MOISTURE CHANGES. IT MUST BE RECOGNIZED THAT FOUNDATION COMPONENTS, AND IN PARTICULAR, FLOOR SLABS AND OTHER FLAT WORK, WILL UNDERGO MOVEMENT. ADHERENCE TO THOSE DETAILS ISOLATING FLOOR SLABS FROM COLUMNS, WALLS, PARTITIONS AND OTHER STRUCTURAL COMPONENTS IS CRITICAL IN MINIMIZING DAMAGE TO THE SUPERSTRUCTURE. OWNERS SHOULD BE APPRAISED OF EXPANSIVE SOIL CONDITIONS, IF ANY, AND ADVISED TO MAINTAIN RECOMMENDED SURFACE AND SUBSURFACE DRAINAGE.

THE CONTRACTOR MUST CONTACT THIS OFFICE PRIOR TO CONSTRUCTION SHOULD ANY QUESTION ABOUT ANY ASPECT OF THIS DESIGN ARISES.

SOILS
A SOILS REPORT IS A COMPONENT OF THIS ENGINEERED FOUNDATION DESIGN AND IS A PART OF THE CONTRACT DOCUMENTS. THE SOILS REPORT CONTAINS INFORMATION (NOT NOTED IN THESE PAGES) CRITICAL TO THE PERFORMANCE AND SAFETY OF THE ENTIRE STRUCTURE.

EXCAVATION OF THE SITE SHALL BE SUCH THAT GOOD DRAINAGE IS PRESENT DURING AND AFTER CONSTRUCTION. FINAL GRADE AFTER CONSTRUCTION SHALL BE SIX INCHES OF DROP AWAY FROM THE EXTERIOR WALL OF THE BUILDING IN THE FIRST TEN FEET.

DO NOT BUILD ON ORGANIC MATERIAL, FROZEN SOIL, MUD, ICE, OR SNOW.
IF GROUNDWATER IS DISCOVERED DURING EXCAVATION, NOTIFY THE ENGINEER PRIOR TO SETTING FORMS. FILL AND COMPACT ANY SOFT SPOTS IN THE SOIL TO THE REQUIRED DENSITY. (SEE SOILS REPORT)

SOIL UNDER LOAD BEARING COMPONENTS OF THE STRUCTURE SHALL BE COMPACTED TO 95% OF THE MAXIMUM MODIFIED PROCTOR DENSITY, ASTM D698. FOUNDATIONS UTILIZING DRILLED CAISSONS OR RESISTANCE PIERS ARE EXEMPT FROM THIS REQUIREMENT.

FILL MATERIAL BELOW SLAB SUBGRADES SHALL BE COMPACTED TO 92% OF THE MAXIMUM MODIFIED PROCTOR DENSITY, ASTM D1557, OR 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY, ASTM D698.

BACKFILL AGAINST FOUNDATION WALLS SHALL BE COMPACTED TO 85% OF THE MAXIMUM MODIFIED PROCTOR DENSITY, ASTM D1557, OR 90% OF THE MAXIMUM STANDARD PROCTOR DENSITY, ASTM D698.

BACKFILL SHOULD BE COMPLETED IN 6" LIFTS, WITH EACH LIFT COMPACTED TO THE REQUIRED DENSITY. BACKFILL BOTH SIDES OF THE FOUNDATION WALL AT THE SAME TIME (WHERE APPLICABLE). EACH LIFT IN THE COMPACTION PROCESS SHALL BE COMPLETED PRIOR TO BEGINNING THE NEXT LIFT.

DO NOT BACKFILL UNTIL THE TOP OF THE WALL IS PROPERLY BRACED BY THE FLOOR SYSTEM. FLOOR JOISTS AND/OR CONCRETE SLABS MUST BE IN PLACE PRIOR TO BACKFILLING AND COMPACTION UNLESS SPECIFICALLY NOTED ON THE PLAN.

DO NOT ALLOW EXCESSIVE WATER INTO THE BACKFILL MATERIAL, DURING OR AFTER CONSTRUCTION.

CONCRETE
THIS FOUNDATION DESIGN ASSUMES CONCRETE WITH THE FOLLOWING STRENGTHS AND PROPERTIES:

ITEM	STRENGTH	SLUMP	WATER RATIO	AIR CONTENT
-SLABS	3,000 PSI	4" TO 6"	0.53	5%-7%
-WALLS	3,000 PSI	4" TO 5"	0.53	5%-7%
-FOOTINGS	3,000 PSI	4" TO 5"	0.53	5%-7%
-PIERS	3,000 PSI	4" TO 6"	0.50	5%-7%

ALL CONCRETE TO BE NORMAL WEIGHT, AIR ENTRAINED, TYPE II SULFATE RESISTANT.

NO ADDITIONAL WATER SHALL BE ADDED TO THE CONCRETE MIX WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

CONCRETE SHALL NOT BE PLACED AT TEMPERATURES BELOW 32° F WITHOUT HEATING AND/OR COVERING THE FORMS FOR 72 HOURS.

DO NOT ALLOW CONCRETE TO DROP MORE THAN 10 FEET DURING PLACEMENT INTO THE FORMS.

CONCRETE MUST BE EFFECTIVELY RODDED OR VIBRATED TO ELIMINATE VOIDS IN THE VOLUME OF THE CONCRETE ELEMENTS.

DO NOT BACKFILL AGAINST CONCRETE WALLS UNTIL SEVEN DAYS HAVE PASSED.

USE FORMWORK THAT HAS BEEN PROPERLY OILED AND BRACED.

PROVIDE JOINTS IN SLABS AT NO MORE THAN 12 FEET EACH DIRECTION.
POLYFIBER MESH MAY BE USED IN SLABS FOR CRACK CONTROL. 6X6 W1.4 X W1.4 WELDED WIRE FABRIC SHOULD BE USED WHETHER POLYFIBER MESH IS USED OR NOT. (UNLESS SPECIFIED OTHERWISE)

REINFORCEMENT
GRADE 60 REINFORCEMENT SHALL BE USED THROUGHOUT, UNLESS OTHERWISE NOTED.

REMOVE ALL DUST, SCALE, RUST, OR OTHER DEBRIS FROM THE STEEL PRIOR TO POURING CONCRETE.

ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE AT ALL INTERSECTIONS PRIOR TO POURING CONCRETE.

SUPPLY 3" CLEAR COVER FOR ALL REINFORCEMENT IN CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH. PROVIDE 2" CLEAR COVER IN ALL OTHER CASES, UNLESS DETAILED OTHERWISE.

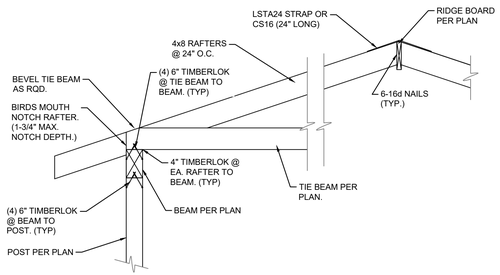
PROVIDE THE FOLLOWING MINIMUM SPLICE LENGTHS (UNLESS DETAILED OTHERWISE):
#4 BAR - 24", #5 BAR - 30", #6 BAR - 36"

PROVIDE CORNER BARS AT ALL FOUNDATION WALL CORNERS AND INTERSECTIONS. EACH 'LEG' OF THE CORNER BAR SHALL HAVE A MINIMUM LENGTH OF 24". IF THIS IS NOT POSSIBLE, HOOK THE BAR UP OR DOWN INTO THE WALL.

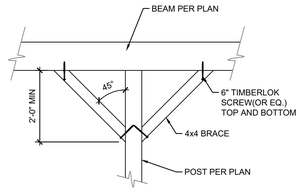
DESIGN
FOUNDATION PLANS ARE BASED ON ARCHITECTURAL PLANS BY T ANTHONY CONSTRCUTION. RECEIVED DEC. 12, 2023. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PLANS.

SOILS BEARING: **1,500 PSF** (ASSUMED) AN OPEN EXCAVATION SOIL EVALUATION BY ARDENT ENGINEERING, LTD IS REQUIRED PRIOR TO SETTING FORMS.

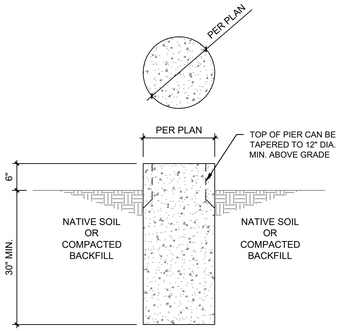
ALL FOUNDATION COMPONENTS TO HAVE A MINIMUM DEPTH OF 30" BELOW FINISHED GRADE.



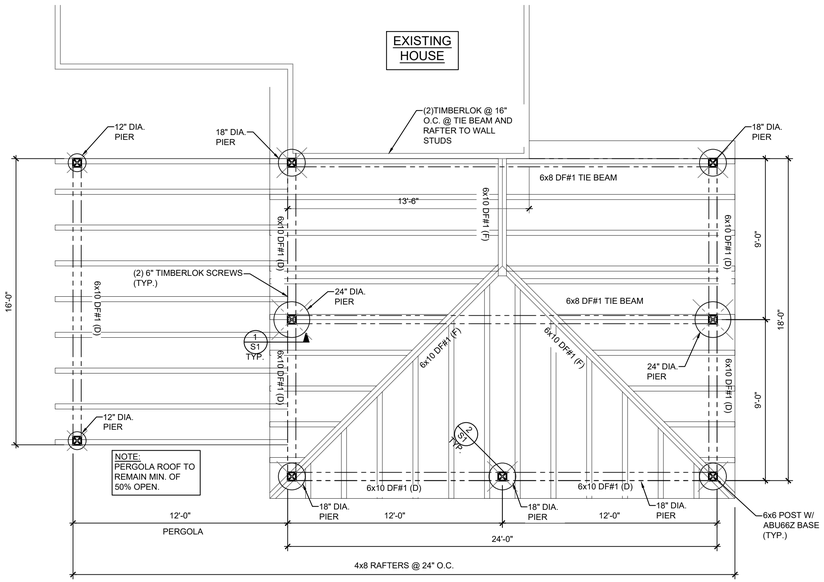
1 / S1 RAFTER/ TIE BEAM
1/2"=1'-0"



2 / S1 BRACE DETAIL
1/2"=1'-0"



5 / S1 CONCRETE PIER
3/4"=1'-0"



PATIO ROOF FRAMING PLAN
1/4" = 1'-0"

FRAMING NOTES:
- OVERFRAMED AREAS
- INDICATES 2x BEARING WALL
B.B. - BEARING BLOCK
E.E. - EACH END
- POINT LOAD FROM ABOVE
(E) -EXISTING
(D) -DROPPED BEAM
(F) -FLUSH BEAM

ALL LUMBER TO BE HEM-FIR #2 OR BETTER

ALL LIGHT GAUGE STEEL TO BE MINIMUM OF 54 MIL(16 GAGE) GALVANIZED UNLESS NOTED OTHERWISE.

GALVANIZED 12,14, AND 16 GAGE STUDS, JOISTS, AND TRACK SHALL CONFORM TO ASTM A446, WITH A MINIMUM YIELD STRENGTH OF 50 KSI.

STEEL SHALL BE GALVANIZED PER ASTM A535 G60.

POST SIZES ARE NOMINAL. ALL COLUMNS SHALL BE CONTINUED TO THE FOUNDATION OR OTHER SUPPORTING MEMBER AND SHALL BE BLOCKED SOLID AT THE FLOOR SYSTEM.

OVER-FRAMED AREAS TO BE 2x6 @ 24" O.C. WITH 2x4 CRIPPLES @ 48" O.C. TO TOP OF RAFTERS OR TOP CHORD OF TRUSSES.

INSTALL BLOCKING BETWEEN JOISTS AT CANTILEVER BEARING.

REFER TO ARCH PLAN/SECTION FOR T.O.W., T.O. SLAB, T.O. STEEL, AND T.O. FLR./STEP ELEVATIONS. IF NOT SHOWN SPECIFICALLY ON THIS PLAN.

HANGERS AND OTHER HARDWARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. REFER TO MANUF. INSTALL DETAILS FOR ALL TYPICAL SECTIONS & DETAILS IF NOT OTHERWISE NOTED PLAN.

ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 2021 IRC AND THE 2023 PIKES PEAK REGIONAL BUILDING DEPARTMENT CODES.

DESIGN LOADS:

ROOF:	30 LIVE LOAD	DECK:	40 LIVE LOAD
	15 DEAD LOAD		10 DEAD LOAD
	45 TOTAL LOAD		50 TOTAL LOAD
FLOOR:	40 LIVE LOAD		
	10 DEAD LOAD		
	50 TOTAL LOAD		

WIND: 130 MPH (Vult), 3-SECOND GUST, EXPOSURE "C"

ARDENT ENGINEERING, ltd
(719) 331-3528
4727 Shadowglen Dr.
Colorado Springs, CO 80918

REVISIONS:

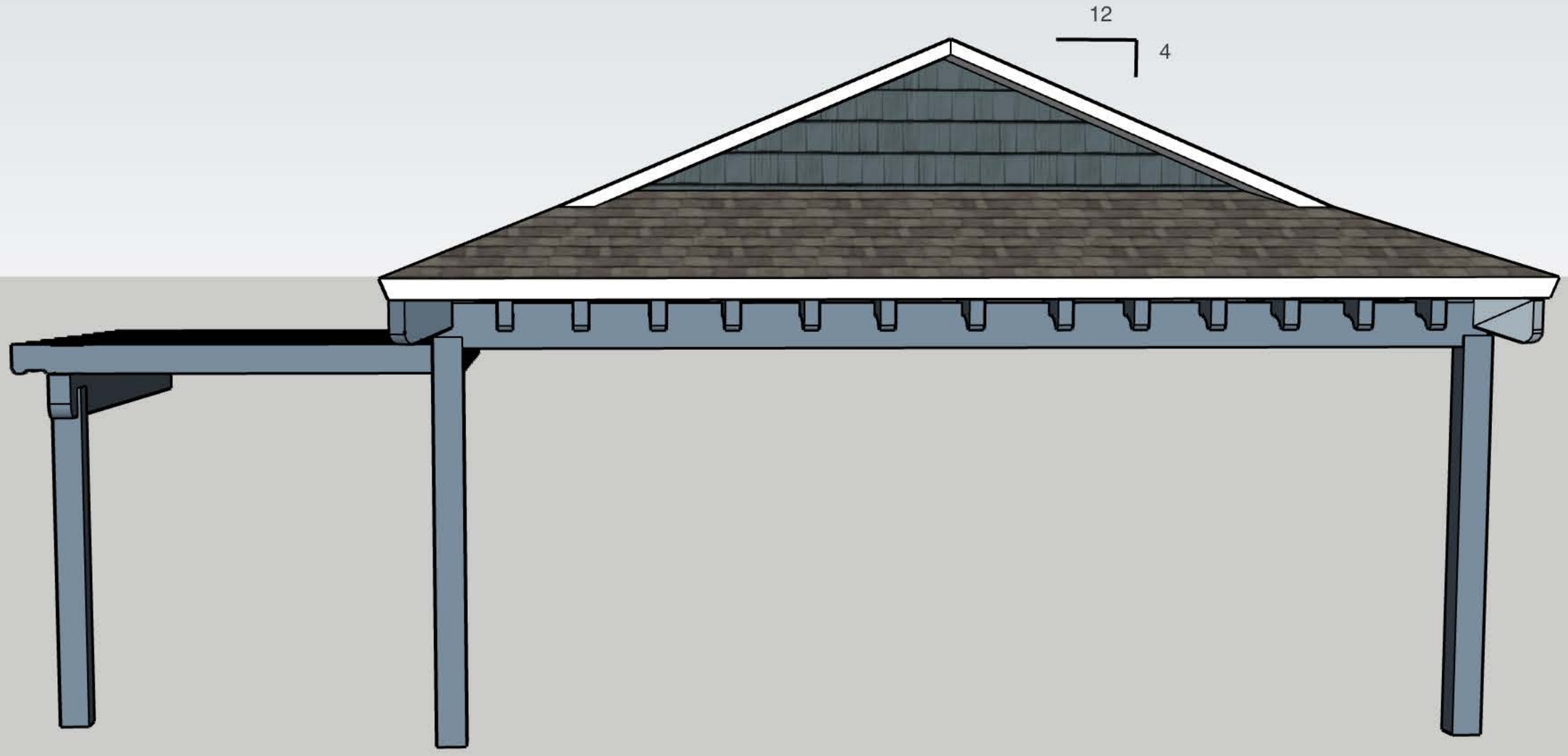
T. ANTHONY CONSTRUCTION
1724 N. NEVADA AVE.
EL PASO COUNTY, COLORADO

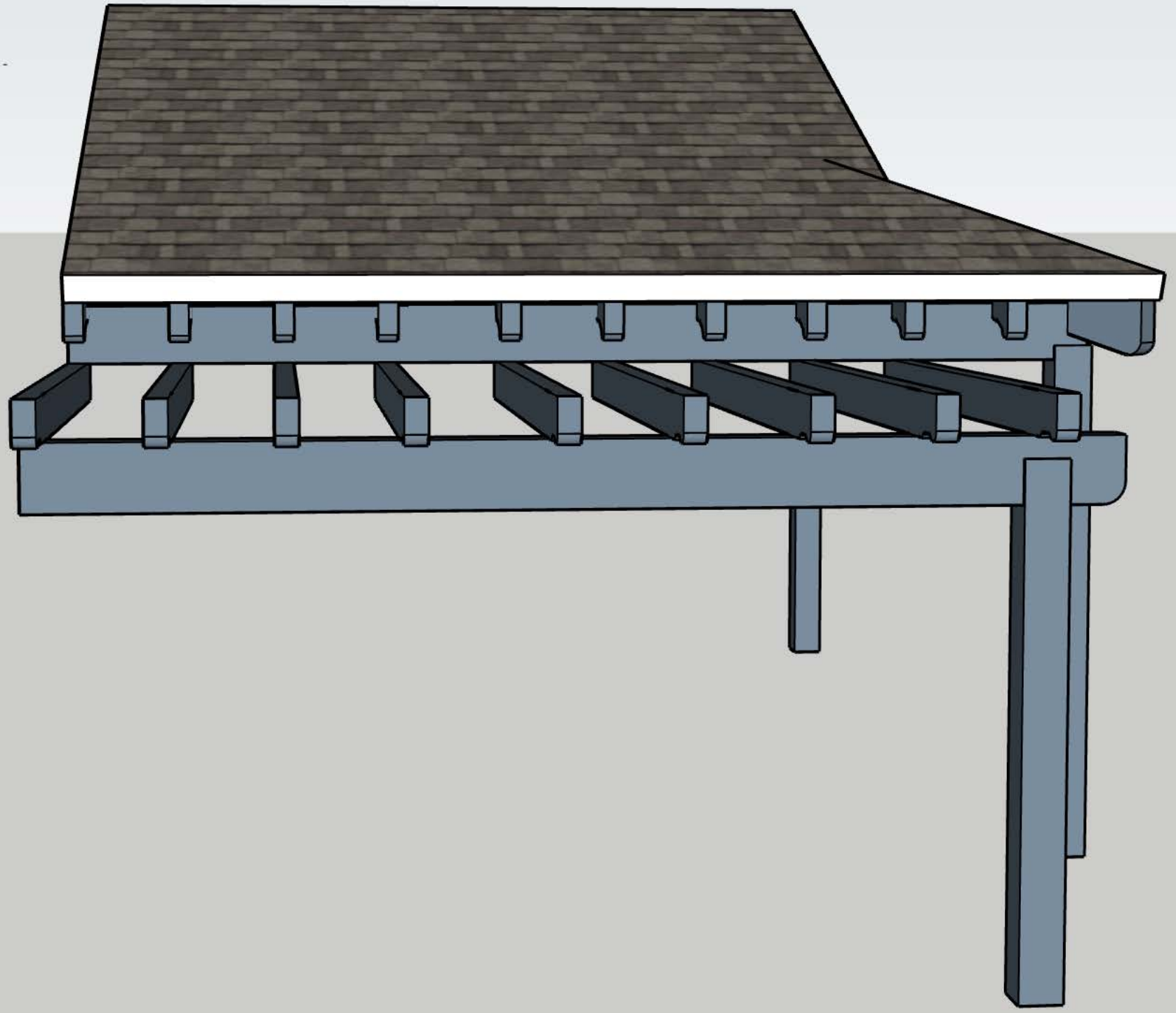
COLORADO LICENSED
BRIAN M WHITE
58657
02/02/2024
PROFESSIONAL ENGINEER

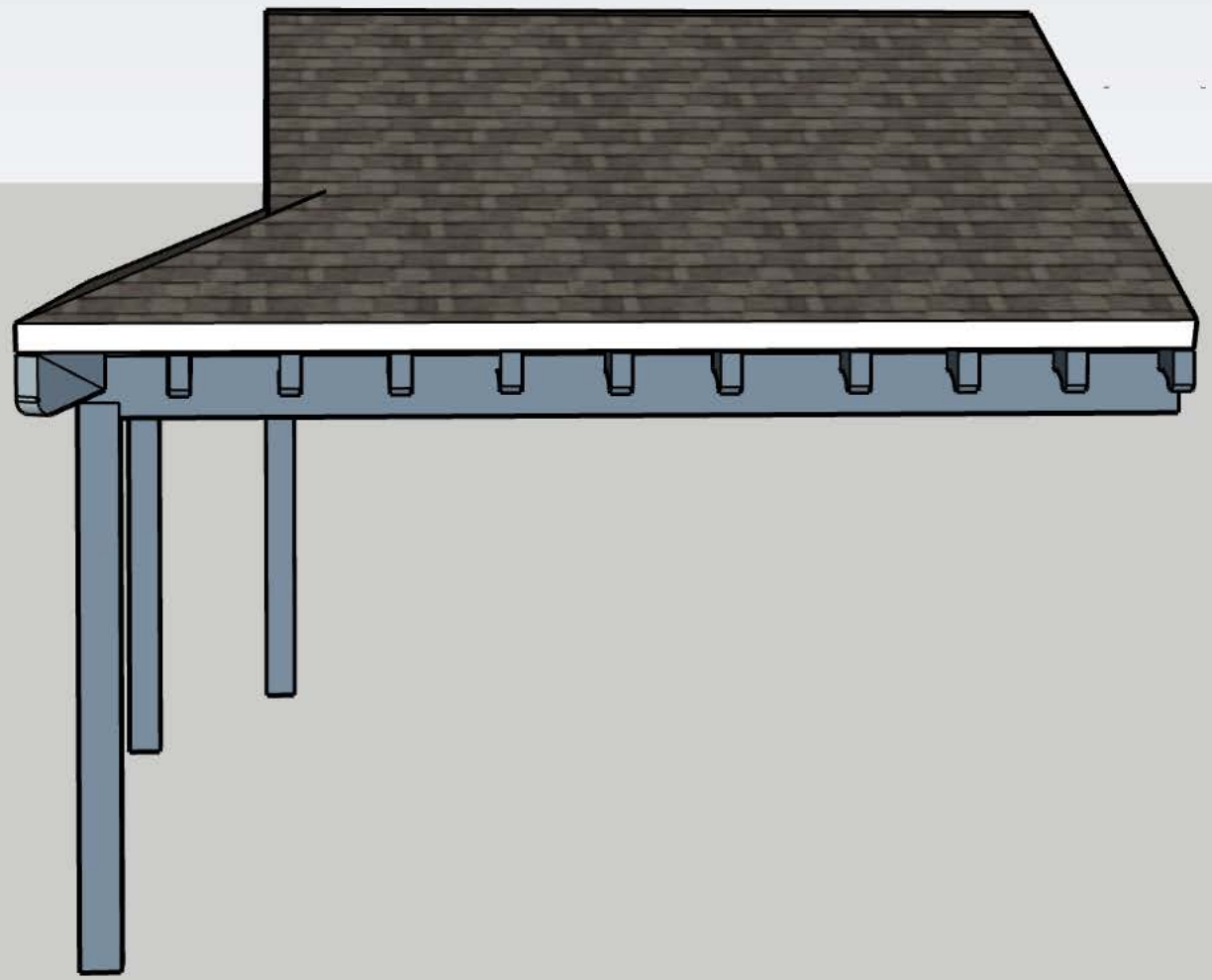
JOB NO:	23137
DATE:	FEB. 2, 2024
DRAWN BY:	BMW
CHECKED BY:	BMW

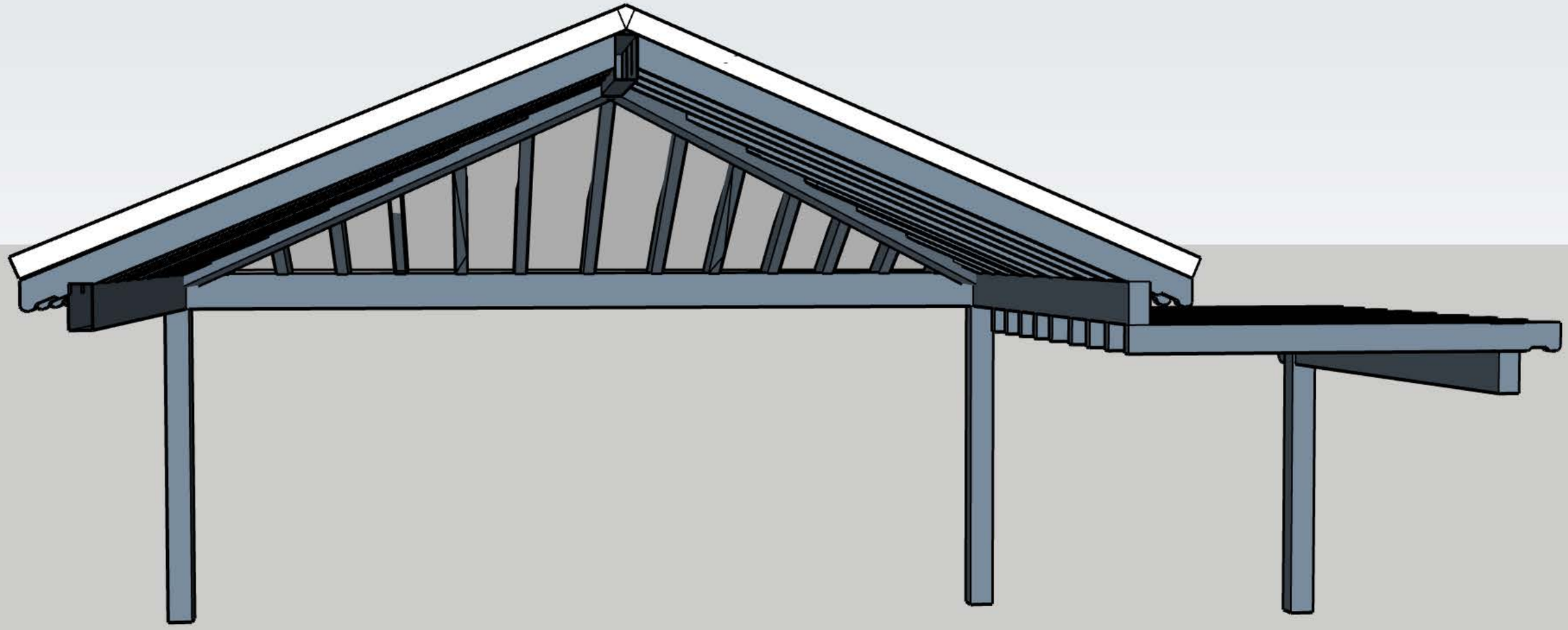
Sheet No.
S1 OF 1
Patio Roof Framing Plan

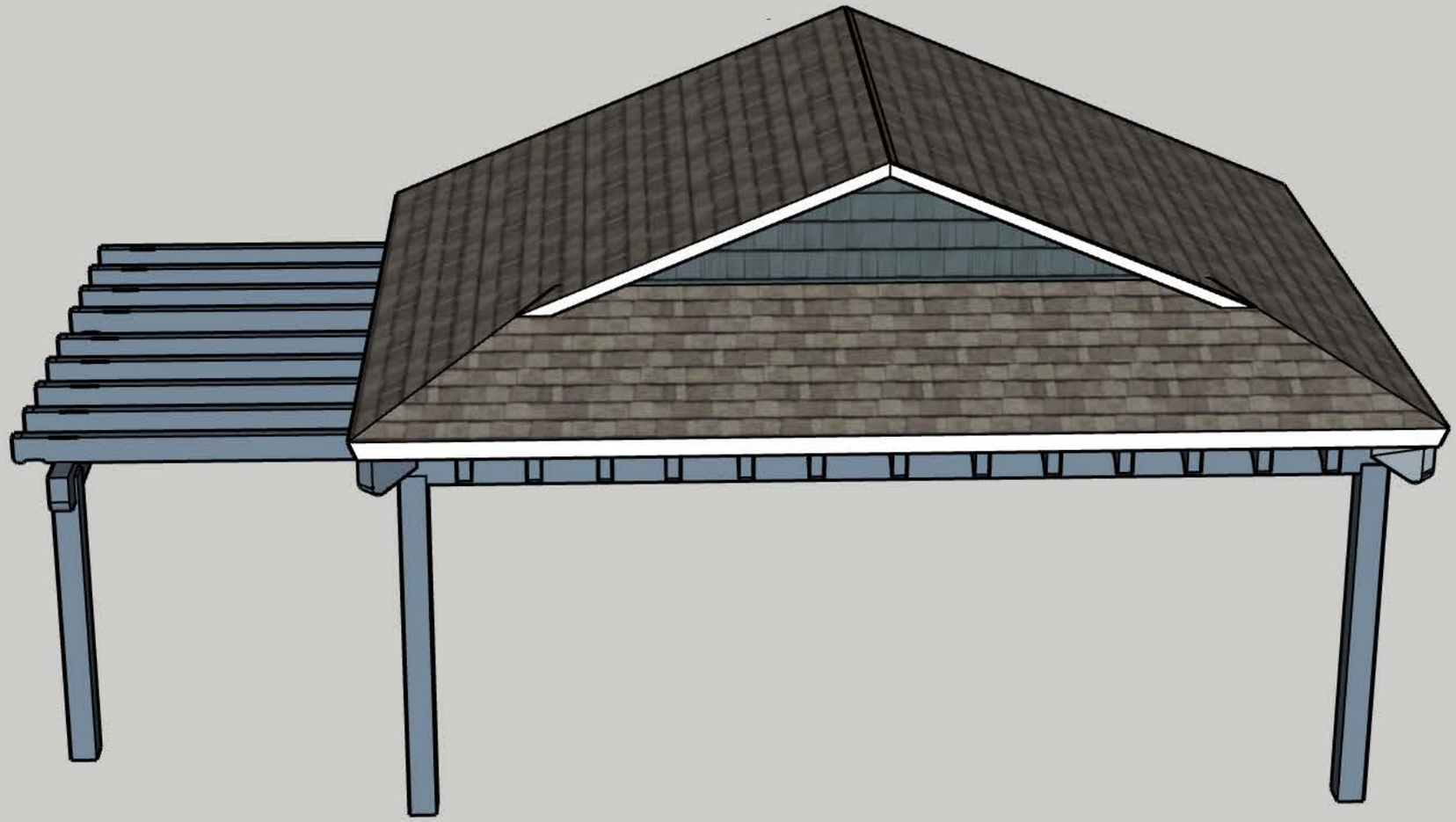
Asphalt shingles

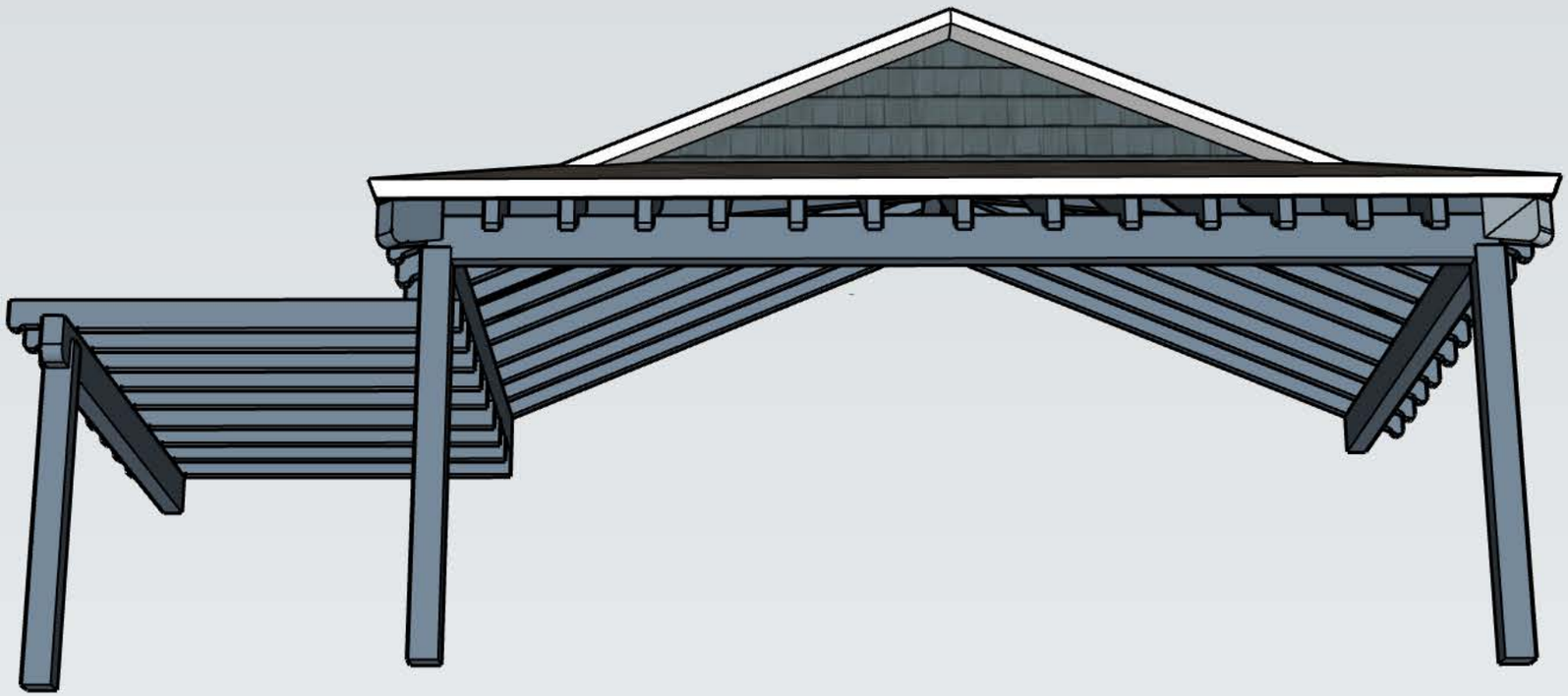












Front/East

North

South

West/Back

North
Detached
Garage

West Detached Garage

South Detached Garage

East detached Garage

East Detached Garage
East Shed

South Shed

North Shed

West Shed

View of Backyard from Alley