STRUCTURAL NOTES

1. APPLICABLE CODES:

A. These general notes apply to all structural drawings. This project is designed in accordance with the International Residential Code (IRC), 2015 Edition, and the 'Minimum Design Loads for Buildings and Other Structures" (ASCE 7-10) and The Pikes Peak Regional Building Code, (2017 Edition).

B. All material and workmanship shall be in accordance with applicable provisions of the codes specified above.

2. LOADS USED IN DESIGN:

A. Roof Snow Load: . . . . 30 psf
Roof Dead Load: . . . . .25 psf
B. Floor Live Load: . . . . 40 psf
Floor Dead Load: . . . . .10 psf
C. Wind: Ultimate Wind Speed, V3s . . . . . . 130 mph
Exposure . . . . 'C'
Wind Importance Factor, Iw 1.0

3. COORDINATION:

A. DO NOT SCALE. The layout shown is based solely on architectural plans and other written documentation by Pikes Peak Habitat for Humanity, for Carter 3 BR1S Master, last received 12-04-19. Changes affecting the layout shown must be specific and clearly conveyed to Rocky Mountain Group in written form as a change for inclusion into these plans. Contractor and/or client shall verify all dimensions and layout prior to construction. All dimensions on structural drawings shall be checked against architectural drawings and any discrepancies shall be brought to the attention of the Architect and Engineer immediately. Refer to mechanical, electrical and architectural drawings for openings not shown on structural drawings.

B. Shop drawings shall be prepared by the fabricator. Copying of these construction documents for use as shop drawings will not be permitted. Design team shall have 10 working days to review and return shop drawings for acceptance or resubmittal.

C. All temporary shoring shall be the responsibility of the contractor. Removing or modifying partition or bearing walls could result in cosmetic damage. Shoring of the existing structure, prior to modification of the wall is the responsibility of the contractor. It should be noted that the process of shoring and modification of the wall can result in cracks appearing in the drywall or brittle finishes, such as stucco or tile floor. This cracking is typically aesthetic in nature and could occur throughout the house. RMG is not responsible for cosmetic damage that may occur.

D. Design is void after two years from original date of issue, unless updated to acceptable codes and practices at that time.

E. A preconstruction meeting with personnel of Rocky Mountain Group, the architect, contractor and appropriate subcontractors is strongly recommended prior to construction to discuss structural plans.

4. STRUCTURAL STEEL:

A. Structural steel, including cast in angles, plates or other sections shall be detailed and erected in accordance with the American Institute of Steel Construction (AISC) Specifications and Code of Standard Practice, latest edition.

B. All wide flange and channel structural steel shall conform to ASTM A992. All other structural shapes and miscellaneous steel shall conform to ASTM A36 unless otherwise noted. Tube steel columns shall conform to ASTM A500, Grade-B. Pipe columns shall conform to ASTM A53.

C. Shop connections shall be welded with E70xx electrodes and ground smooth where exposed. Field connections shall be made with bolts conforming to ASTM A325N unless otherwise noted. Field welds shall be made with E70xx electrodes. All welding shall be in accordance with AWS "Structural Welding Code", latest edition and performed by certified, licensed welder.

D. All beam connections not detailed on the drawings shall be standard framed beam connections as shown in Table II and III of the AISC "Manual of Steel Construction", latest edition, designed to carry the full capacity of the uniformly loaded member, unless noted otherwise.

E. Field Quality Control: Inspect in accordance with AISC specifications. Materials engineer shall visually inspect all field welded connections and visually inspect all bolted connections to ascertain that all welds, bolts, nuts and required washers have been installed and are of proper type and that all facing surfaces have been brought into snug contact.

5. WOOD:

A. Framing lumber shall be Hem Fir (unless noted otherwise) and as follows or better:

2x4 studs . . . . Stud Grade
2x6 or larger studs. . . .#2 Grade
Plates. . . . .#3 Grade
Joists and Rafters . . . . #2 Grade
2x and 4x Beams . . . . . . #2 Grade
6x or larger Beams . . . .#1 Grade Beam and Stringer
Glu-Lam Beams . . . . 24F-V4 DF/DF unless noted otherwise
Posts. . . . . #1 Grade Post and Timber

B. All wood construction shall be in conformance with the provisions of "The National Design Specification for Wood Construction", latest edition.

C. Laminated Veneer Lumber (LVL) and prefab joists shall be manufactured by 'TrusJoist' or equivalent or shall meet APA Performance Standards, and installed per manufacturers specifications. Supplier shall furnish shop drawings showing all joists, bridging, blocking and miscellaneous accessories for review by the structural engineer prior to fabrication.

D. Where not otherwise shown on plans, all nailing or screwing shall be as indicated in the Building Code. All sheathing must be nailed. Adhesives SHALL NOT be used in place of nailing.

E. Metal connectors to be provided by 'Simpson Strong-Tie' or equivalent.

F. APA rated OSB may be used in lieu of plywood with prior approval from Engineer of Record.

G. Wood roof and floor trusses shall be designed by others unless noted otherwise. Calculated live load deflection of trusses shall not exceed 1/360 for floors and 1/240 for roof of the overall span length. The truss supplier shall provide shop drawings and calculations prepared and stamped by a structural engineer registered in the state of Colorado for review by the Engineer of Record to verify they conform to requirements of the basic structure. These shop drawings shall show the locations of all trusses, connection plate sizes & capacity and the size & grade of lumber to be used. Truss fabrication shall not proceed until completion of shop drawing review by the Engineer of Record. Truss manufacturer or contractor shall provide blocking at bearing locations and bridging/lateral bracing as required for truss stability.

H. Site fabricated trusses are to be adequately shored and installed by qualified personnel. Appropriate bracing shall be in place at all times.
Rocky Mountain Group is not responsible for the construction sequence of site built trusses.

I. Floor sheathing shall conform to the provisions of tables: R503.1, R503.2.1.1(1), or R503.2.1.1(2) in the 2015 IRC.

J. The contractor shall not cut, notch or otherwise modify joists, beams, or trusses without the written consent of the Engineer of Record.

STRUCTURAL LEGEND

(X / SX)	DETAIL # OR LETTER / SHEET DETAIL IS ON	(D)	DROPPED BEAM
(1)	SEE PLAN NOTES	E.N.	EDGE NAILING
(S1)	SHEAR WALL SCHEDULE	(E)	EXISTING
	SOLID BOX INDICATES LOAD FROM ABOVE (CONTINUE POST DOWN TO FOUNDATION BELOW)	F.F.	FINISH FLOOR
	OPEN BOX INDICATES LOAD FROM ABOVE (CARRIED BY BEAM OR HEADER BELOW)	(F)	FLUSH BEAM
	HANGER (PER PLAN)	G.T.	GIRDER TRUSS
	HEADER / BEAM	K	KING STUD
	SHEAR WALL	K.P.	KING POST
	BEARING WALL (INTERIOR)	LVL	LAMINATED VENEER LUMBER
	JOIST/RAFTER SPAN (BEAR ON BEAM)	M+L	MICRO-LAM
	JOIST/RAFTER SPAN (FLUSH FRAME TO BEAM)	O.C.	ON CENTER
		O.S.B.	ORIENTED STRAND BOARD
		PL	PLATE
		P.T.	PRESSURE TREATED
		SIM	SIMILAR
A.F.F.	ABOVE FINISH FLOOR	S.P.N.	SILL PLATE NAILING
A.B.	ANCHOR BOLT	T	TRIMMER
CANT	CANTILEVER	T.O.	TOP OF
℄	CENTER LINE	TYP	TYPICAL
CONT	CONTINUOUS	V-L	VERSA-LAM
⌀	DIAMETER		

SHEAR WALL SCHEDULE

SHEAR WALL AS REQUIRED PER PLAN	FOUNDATION ANCHOR / BOTTOM PLATE NAILING	
(3) ½" OR 7/16" A.P.A. RATED SHEATHING W/ 8d NAILS @ 6" O.C. EDGE AND BOUNDARY NAILING	EXTERIOR/ INTERIOR:	½"⌀ A.B.'s @ 48" O.C. / 16d NAILS @ 8" O.C.
(4) ½" OR 7/16" A.P.A. RATED SHEATHING W/ 8d NAILS @ 4" O.C. EDGE AND BOUNDARY NAILING	EXTERIOR/ INTERIOR:	½"⌀ A.B.'s @ 32" O.C. / 16d NAILS @ 5" O.C.
(5) ½" OR 7/16" A.P.A. RATED SHEATHING W/ 8d NAILS @ 3" O.C. EDGE AND BOUNDARY NAILING	EXTERIOR/ INTERIOR:	½"⌀ A.B.'s @ 24" O.C. / 16d NAILS @ 4" O.C.

NOTES:
1) A.P.A. RATED SHEATHING SHEAR PANELS REQUIRE ALL PANEL EDGES TO BE BACKED WITH 2" NOMINAL OR WIDER FRAMING. FIELD NAILS SHALL BE SPACED @ 12" O.C. FOR FRAMING MEMBER SPACING OF 16" O.C. FIELD NAILS SHALL BE SPACED @ 6" O.C. FOR FRAMING MEMBER SPACING OF 24" O.C.

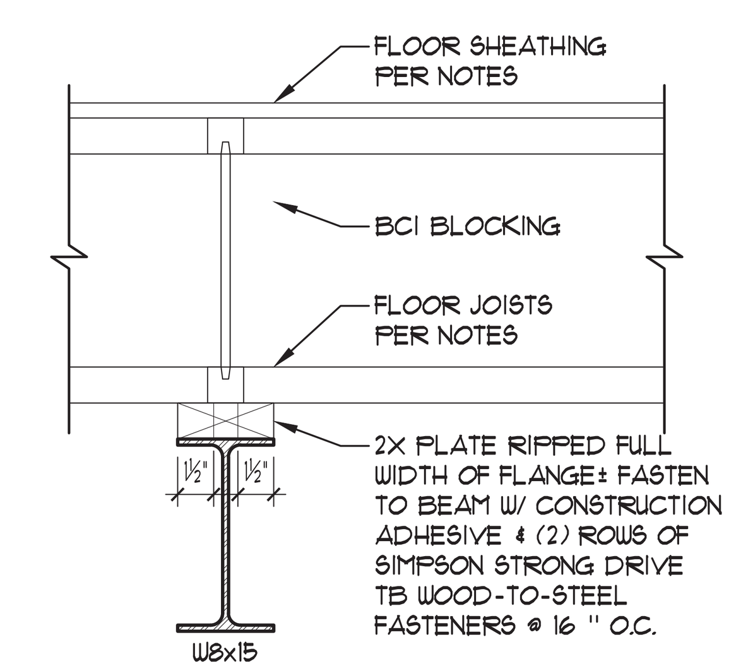
HOLDOWN SCHEDULE

(A)	SIMPSON STHD14RJ OR HTT5
(B)	SIMPSON STHD14 OR HTT5

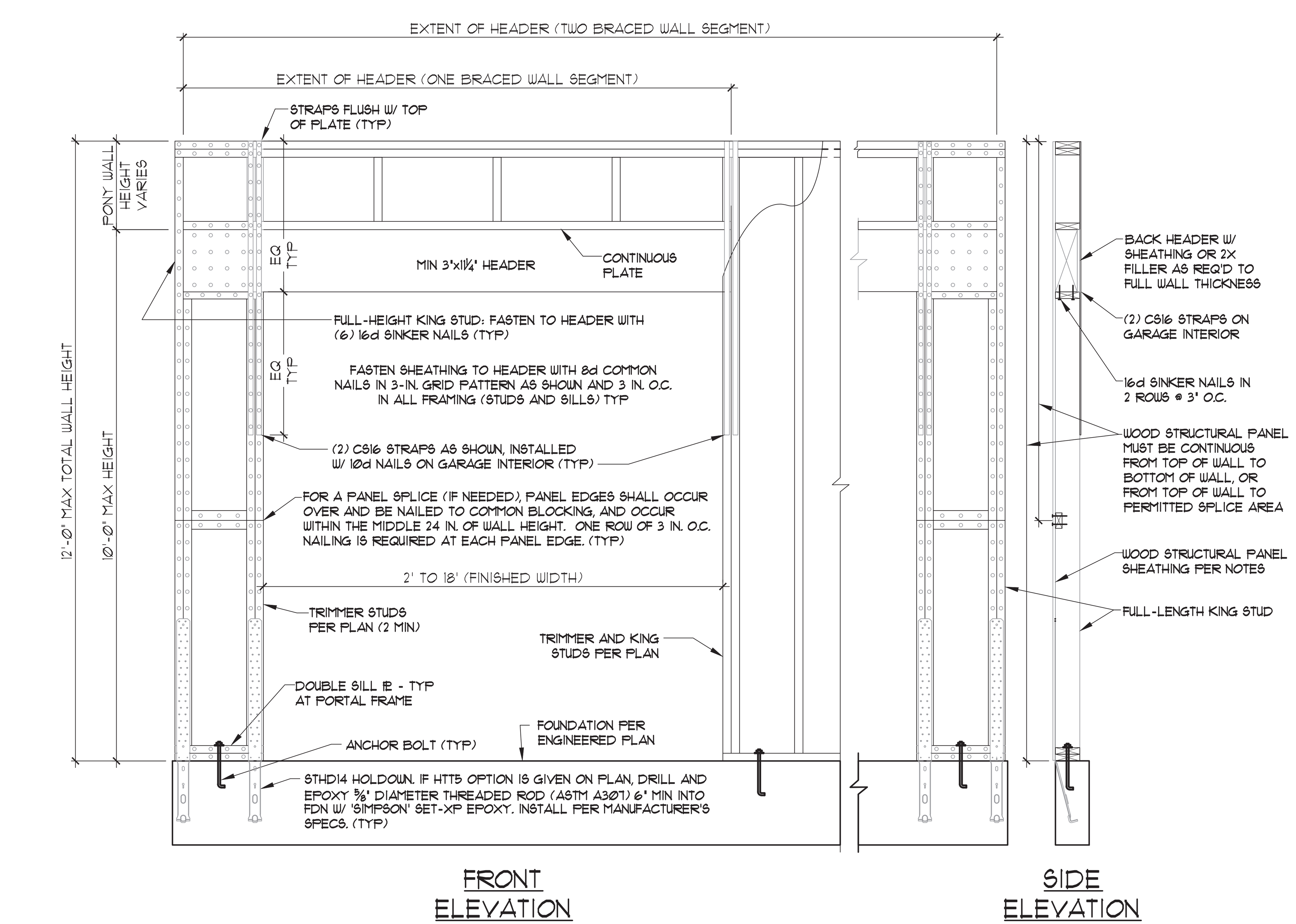
LOCATE HOLDOWNS 2" FROM WALL CORNERS OR EDGES OF OPENINGS (U.N.O.)

GENERAL PLAN NOTES

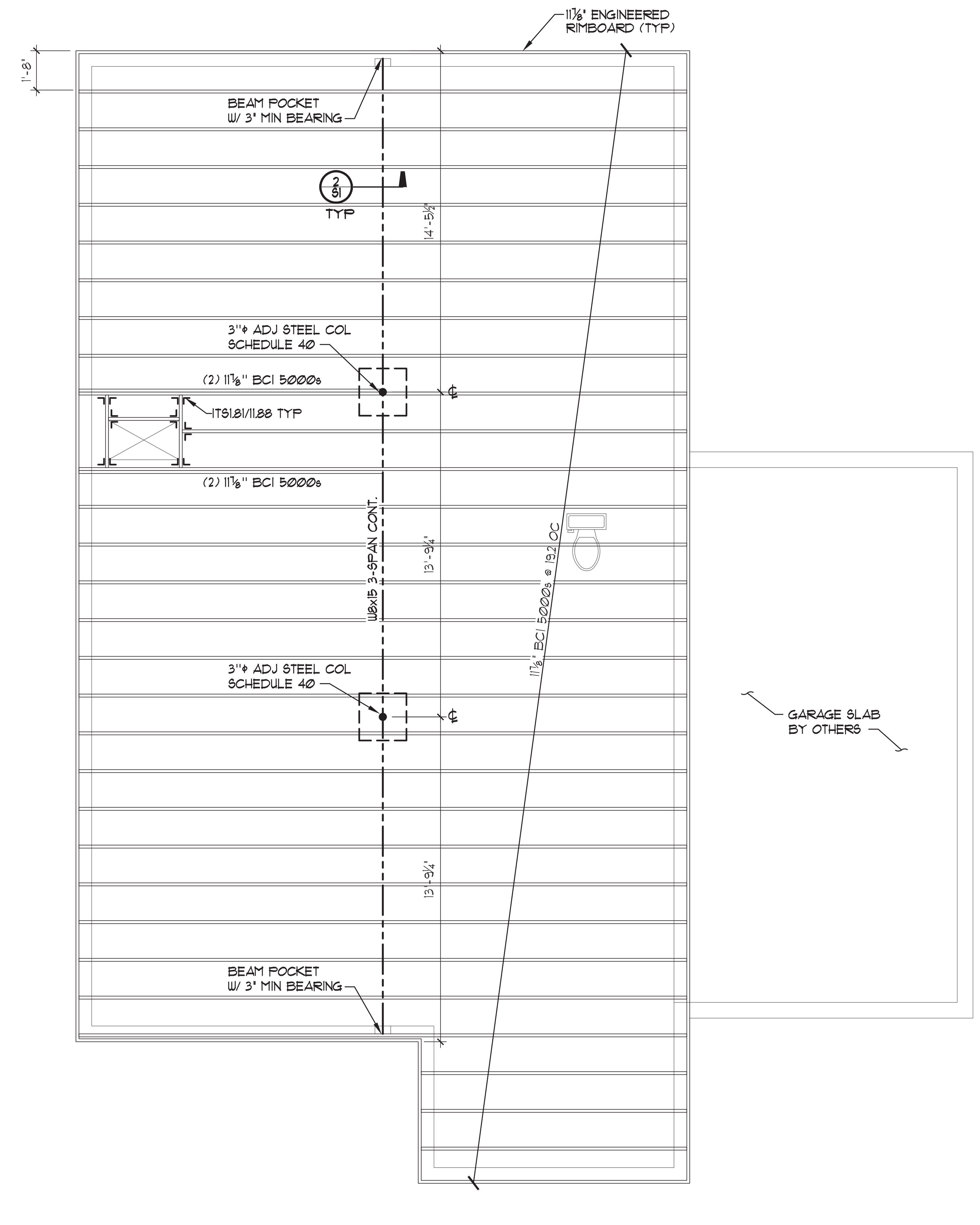
* **ROOF SHEATHING:** 7/16" (MIN) APA RATED OSB OR PLYWOOD W/ 8d NAILS @ 6" O.C. ALONG ALL SUPPORTED PANEL EDGES AND 12" O.C. IN FIELD
* **TRUSS / RAFTER ANCHORING:** PROVIDE (1) 'SIMPSON' **H2.5T** CLIP PER PLY MIN. @ EA. TRUSS TO TOP PLATE BEARING LOCATIONS. (TYP. - UNLESS NOTED OTHERWISE)
* **BEAMS & MULTIPLE-PLY TRUSSES:** SHALL HAVE A MIN. OF (1) 2x4/6 STUD COLUMN PER PLY AT EACH BEARING LOCATION (TYP. - UNLESS NOTED OTHERWISE)
* **EXTERIOR WALLS:** SHALL BE 2x6 STUDS @ 16" O.C. (TYP. - UNLESS NOTED OTHERWISE). EXTERIOR WALLS TO BE CONTINUOUSLY SHEATHED W/ 7/16" OSB W/ 8d's @ 6" O.C. AT PANEL EDGES AND 12" O.C. IN THE FIELD (TYP - UNLESS NOTED OTHERWISE)
* **INTERIOR WALLS:** SHALL BE 2x STUDS @ 16" O.C. RE: ARCH'L PLANS FOR THICKNESSES (TYP. - UNLESS NOTED OTHERWISE)
* **HEADER SIZE:** SHALL BE (2) 2x8 MIN. W/ (1) KING STUD AND (1) TRIMMER AT EA. END (TYP. - UNLESS NOTED OTHERWISE)
* **BUILT-UP STUD COLUMNS:** SHALL BE CONTINUED DOWN TO FOUNDATION OR OTHER SUPPORTING MEMBER. BUILT-UP COLUMNS SHALL BE BLOCKED SOLID AT THE FLOOR SYSTEM
* **MULTI-PLY BEAMS:** CONSISTING OF (3) OR MORE MEMBERS SHALL BE SECURED TOGETHER W/ (1) 1/2"⌀ THRU BOLT @ 16" O.C. STAGGERED (OFFSET EA. BOLT 2 1/2" FROM ℄ OF BEAM)
* **FLUSH FRAMED (SIDE LOADED):** BUILT-UP LVL BEAMS CONSISTING OF (3) OR MORE MEMBERS SHALL BE SECURED TOGETHER W/ (2) 1/2"⌀ THRU BOLTS @ 16" O.C. (OFFSET EACH BOLT 2 1/2" FROM ℄ OF BEAM)
* **DROP FRAMED (TOP LOADED):** BUILT-UP LVL BEAMS CONSISTING OF (4) OR MORE MEMBERS SHALL BE SECURED TOGETHER W/ (2) ROWS OF 1/2"⌀ THRU BOLTS STAGGERED @ 24" O.C. (OFFSET EACH BOLT 2 1/2" FROM ℄ OF BEAM)



2 FLOOR FRAMING DETAIL
S1 SCALE: 1 1/2" = 1'-0"



1 PORTAL FRAME DETAIL - WITH HOLDOWN
S1 SCALE: 1/2" = 1'-0"



ALL ELEVATIONS

FIRST FLOOR FRAMING PLAN

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

ROCKY MOUNTAIN GROUP

RMG ENGINEERS ARCHITECTS EMPLOYEE OWNED

Architectural Structural Forensics

Geotechnical Materials Testing Civil, Planning

2910 AUSTIN BLUFFS PKWY, SUITE 100, COLORADO SPRINGS, CO 80918
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SOUTHERN COLORADO, DENVER METRO, NORTHERN COLORADO

COLORADO LICENSED PROFESSIONAL ENGINEER 55591 2/26/20

FRAMING PLANS
CARTER 3 BR1S MASTER
EL PASO COUNTY, CO

HABITAT FOR HUMANITY

SHEET NAME: MAIN FLOOR FRAMING PLAN, NOTES AND DETAILS

PROJECT STATUS: SUBMITTAL SET

ARCH/ENG:	CXM
DRAWN:	FHZ
CHECKED:	MDT
DATE	02-05-2020

#	REVISION	DATE
1	GENERAL NOTES	2-26-20

JOB NO. 174403

SHEET NO. S1

MASTERS / HABITAT FOR HUMANITY

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HOLDOWN SCHEDULE

(A)	SIMPSON STHD14RJ OR HTT5
(B)	SIMPSON STHD14 OR HTT5

LOCATE HOLDOWNS 2" FROM WALL CORNERS OR EDGES OF OPENINGS (U.N.O.)

SHEAR WALL SCHEDULE

SHEAR WALL AS REQUIRED PER PLAN	FOUNDATION ANCHOR / BOTTOM PLATE NAILING	
(3) ½" OR 7/16" A.P.A. RATED SHEATHING W/ 8d NAILS @ 6" O.C. EDGE AND BOUNDARY NAILING	EXTERIOR/ INTERIOR:	½"ϕ A.B.'s @ 48" O.C. / 16d NAILS @ 8" O.C.
(4) ½" OR 7/16" A.P.A. RATED SHEATHING W/ 8d NAILS @ 4" O.C. EDGE AND BOUNDARY NAILING	EXTERIOR/ INTERIOR:	½"ϕ A.B.'s @ 32" O.C. / 16d NAILS @ 5" O.C.
(5) ½" OR 7/16" A.P.A. RATED SHEATHING W/ 8d NAILS @ 3" O.C. EDGE AND BOUNDARY NAILING	EXTERIOR/ INTERIOR:	½"ϕ A.B.'s @ 24" O.C. / 16d NAILS @ 4" O.C.

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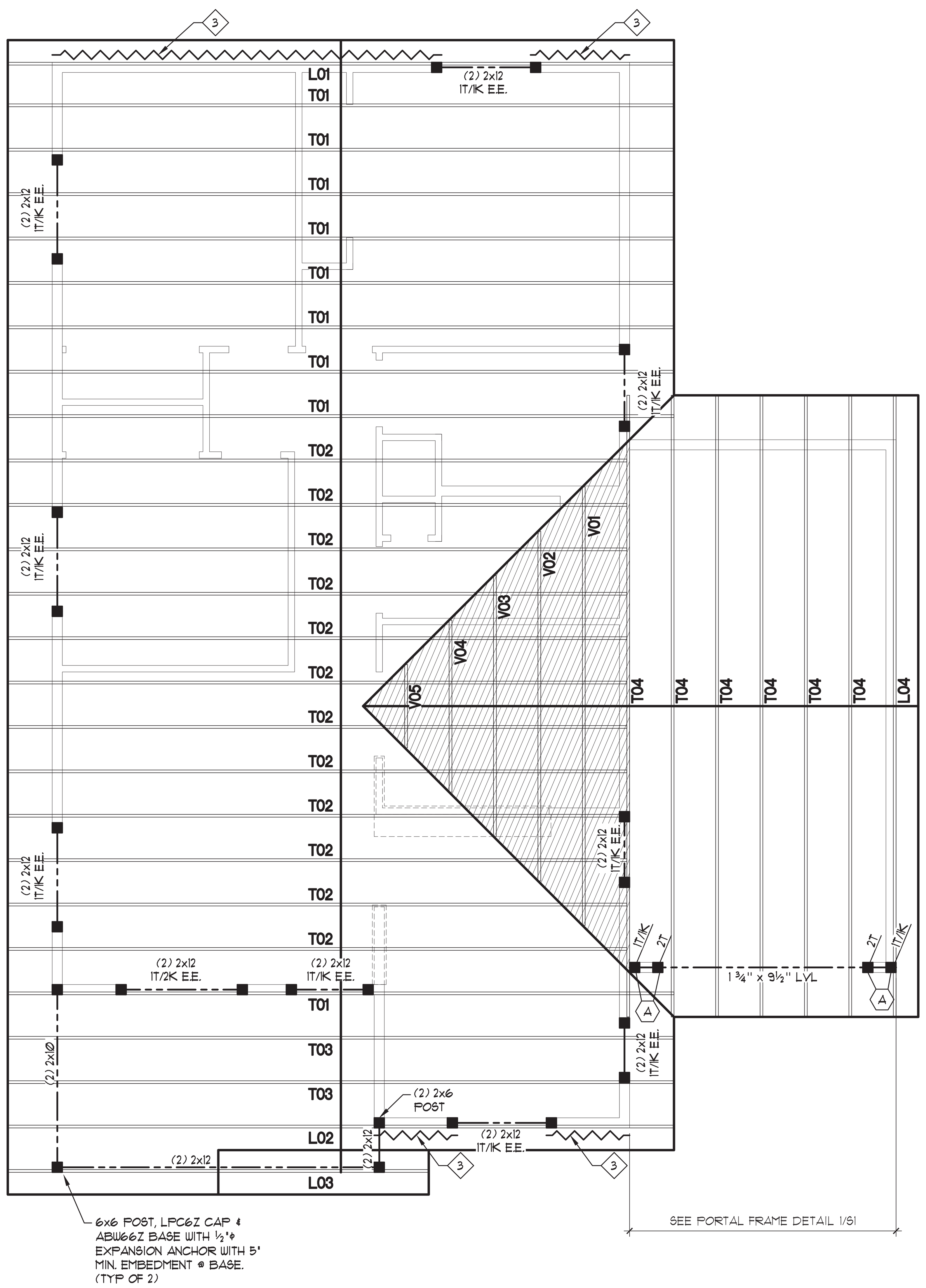
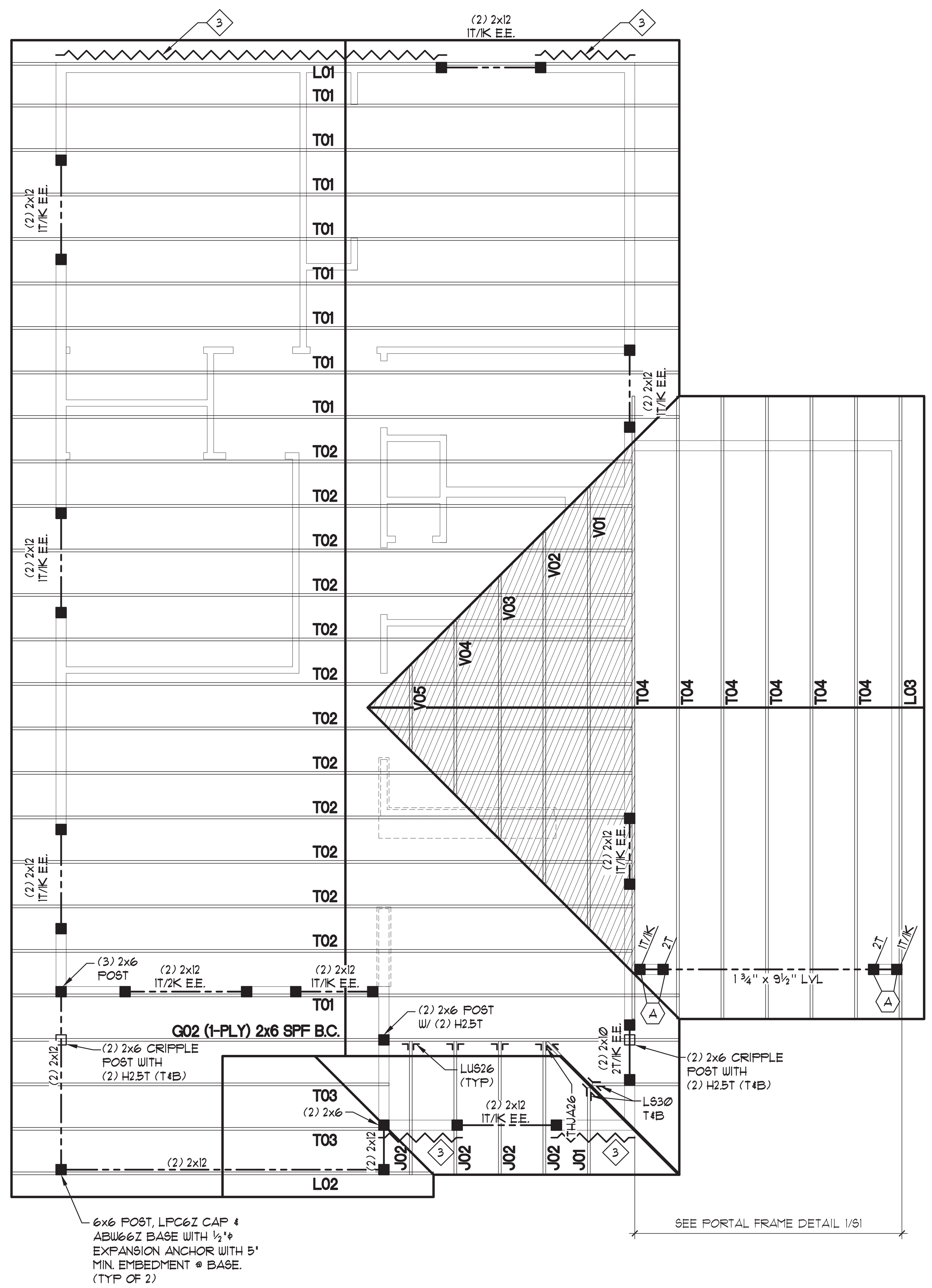


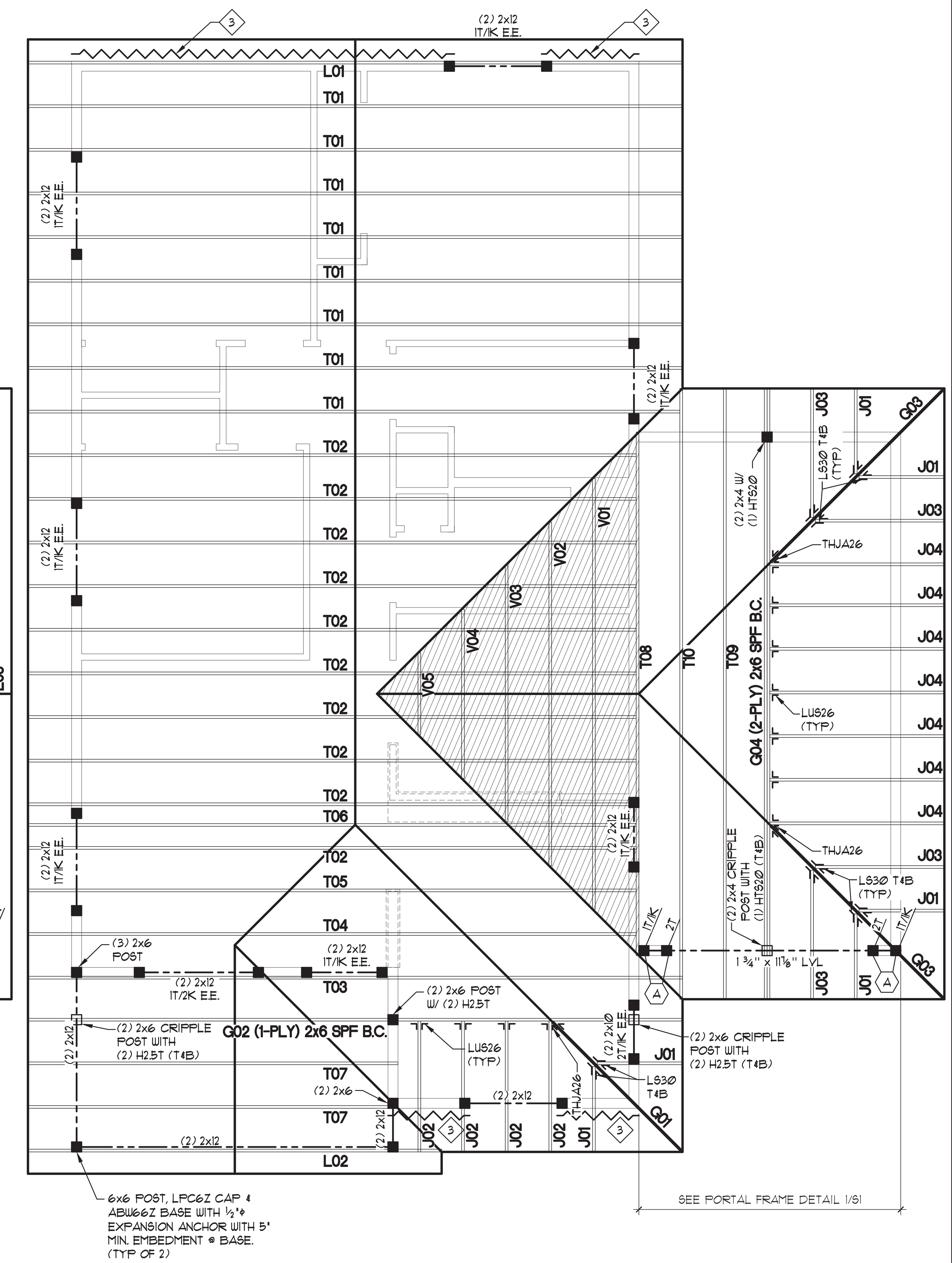
ROOF FRAMING PLAN (A)

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



ROOF FRAMING PLAN (B)

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



ROOF FRAMING PLAN (C)

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

ROCKY MOUNTAIN GROUP
RMG ENGINEERS ARCHITECTS EMPLOYEE OWNED
Architectural, Structural, Forensics
Geotechnical, Materials Testing, Civil, Planning
SOUTHERN COLORADO
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SOUTHERN COLORADO, DENVER METRO, NORTHERN COLORADO

COLORADO LICENSED PROFESSIONAL ENGINEER
MICHAEL D. THOMPSON
2/26/20
55591

FRAMING PLANS

CARTER 3 BR1S MASTER
EL PASO COUNTY, CO

HABITAT FOR HUMANITY

SHEET NAME: FLOOR FRAMING PLANS

PROJECT STATUS: SUBMITTAL SET

ARCH/ENG:	CXM
DRAWN:	FHZ
CHECKED:	MDT

DATE: 02-05-2020

#	REVISION	DATE
1	GENERAL NOTES	2-26-20

JOB NO. 174403

SHEET NO. S2 2 of 2

MASTERS / HABITAT FOR HUMANITY

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