

GSN - General Structural Notes

GSN - General

- These drawings have been prepared by the Engineer of Record primarily to safeguard against major structural damage and loss of life, not to limit damage or maintain use of the structure. See the requirements of the current accepted building code, and as listed in the Basis for Design.
- Professional standards of care have been used in the preparation of these drawings, normally exercised under similar circumstances by reputable engineers in this, or similar localities.
- Design of non-structural elements (i.e. stairs, railings, non-load bearing walls, veneers, curtain walls, etc.) and their attachment is not included, and must be provided by others, unless specifically noted on these drawings.
- Design of pre-engineered structural products (i.e. wood trusses, steel joists, or pre-cast concrete elements, etc.) is not included and must be provided by others, unless specifically noted on these drawings.
- Specification references (i.e. ASTM, ACI, AWS, etc.) shall be the latest accepted version, where noted on these drawings.
- An experienced, licensed contractor, with a working knowledge of applicable codes and industry accepted standard practices, shall perform the work depicted in these drawings.
- All work shall conform to the minimum standards of the current accepted building code found in the Basis for Design, other codes, industry specific specifications, and standards listed herein. The contractor shall comply with requirements of all regulatory agencies with authority over any portion of the work. Work not specifically shown on these drawings shall conform to all applicable codes and accepted standard practices.
- The contractor shall verify all dimensions, elevations, and conditions on these drawings with the architectural drawings, and all other discipline drawings, prior to start of construction. Notify the Engineer of Record in writing before the start of construction regarding discrepancies, omissions, or variations, or if they will become the sole responsibility of the contractor. Notes and the specific details on these drawings take precedence over the Structural General Notes, and General Details.
- Construction methods are not indicated on these drawings. The contractor shall be solely responsible for all methods, sequences, and procedures of construction. The contractor shall provide adequate shoring, bracing, form work, etc. as required for the protection of life and property during construction.
- Excavation procedures, including shoring and protection of adjacent property, structures, streets and utilities, shall be performed in compliance with local building codes, regulations and safety requirement, and shall be the contractor's responsibility.
- Construction materials shall be spread out uniformly on structural systems, such that design live loads are not exceeded.
- Structural members shall not have openings, pockets, etc. larger than 6" placed in them, unless specifically noted on these drawings. When drawings by others show items in structural members not shown in the structural drawings, the Engineer of Record shall be notified in writing to determine the appropriate solution.
- Visits to the construction site by the Engineer of Record are a resource for the contractor and shall not be considered as special inspection.

GSN - Basis for Design

Governing Building Code	2015 International Building Code
Roof Loads	Pitched Roof
Floor Loads	Dead Load = 25 psf Live Load = 20 psf (reducible)
Snow Loads	Dead Load = 40 psf (Residential) Live Load = 40 psf (Residential)
Wind Design	Basic Wind Speed = 115 mph Wind Exposure = C Importance Factor = 1.0 Mean Roof Height = 25 ft.
Seismic Design	Design Category = D Site Class = D Lateral Force Resisting System = Wood Shear Walls R = 6.5 Analysis Procedure = Equivalent Method Base Shear Coefficient = 0.065 x W

GSN - Foundations

- Foundations were designed according to the minimum requirements of the current accepted building code as listed in the Basis for Design. A Geotechnical Engineer should be commissioned to provide a soils report prior to the completion of the structural design for this project. Sive Engineering will not assume any liability beyond the minimum code requirements in the event that a Geotechnical Report is not provided.
- Footings & Foundations:
 - Allowable Soil Pressure (eq. fluid weight) = 1500 psf
- Conteined Retaining Walls:
 - Active Soil Pressure (eq. fluid pressure) = 35 psf
 - Passive Soil Pressure (eq. fluid pressure) = 250 psf
 - Sliding Resistance (friction coefficient) = 0.35
- Restrained Retaining Walls:
 - Active Soil Pressure (eq. fluid pressure) = 50 psf
- Do not backfill against foundation walls more than 3'-0" in height until after the top of the concrete wall is braced by the completed interior floor systems and all elements have reached their design strength.
- All forms shall be properly braced to withstand the placement of fresh concrete.
- Footing excavations shall be clean and free from loose debris, standing water, or un-compacted material at the time of concrete placement.
- Trenches and excavations under or adjacent to foundations or slabs shall be properly backfilled and compacted. Utility trenching parallel to the foundation shall be located a minimum distance equal to the depth of the trench from the foundation. The trench may approach the foundation at 90 degrees to the structure and may not exceed two and one-half times the trench depth to the foundation may not be located closer than 8 feet from a corner of the structure.

GSN - Concrete

- Compressive strength, f_c , shall be 4500 psi and a maximum water/cement ratio of 0.45 for concrete in contact with soil. All other structural concrete f_c shall be 3000 psi. Foundation design uses 2500 psi, therefore, special inspection is not required.
- Concrete mixes shall be designed by a certified concrete testing laboratory and approved by the engineer of record.
- All concrete shall be normal weight 145 pcf with hard-rock aggregates.
- Maximum slump shall be 5 inches, and the water shall be clean and potable.
- Portland cement shall be ASTM C 150 Type V for concrete in contact with soil. Type I cement may be used elsewhere. All cement in contact with soil shall comply to the table above regarding sulfate exposure.
- Fly ash shall comply with ASTM C 418, class F, and shall be approved by the architect in writing prior to being used on the job. When used, fly ash content shall be 15%-25%. Water-cement ratio shall be based on total cementitious material.
- Aggregates shall comply with ASTM C 33. Use 3/4 inch maximum aggregate in structural concrete. 1 1/2 inch maximum in slabs on grade and 3/8 inch pea gravel in grouts. Unless specifically noted otherwise on the plans, or by written approval of the engineer of record.
- No more than 90 minutes shall elapse between concrete batching and placement of concrete unless approved in writing by the engineer of record.
- Concrete mixing, placement and quality shall be per the current accepted code (listed in the Basis for Design). Mechanically vibrate all concrete. Vibrate slabs on grade around and under floor ducts or similar elements.
- Control joints in slabs on grade shall be as noted in the general details. Saw-cut joints shall be cut to a minimum depth of 1/4. Dowelled joints shall be used where noted on plans. Do not joint post-tensioned concrete slabs on grade unless noted otherwise on plans. Splice control joints as listed below:

Slab Thickness (t)	Joint spacing (each way)
4"	10'-0"
5"	12'-6"
6"	15'-0"
- Remove all debris from forms before placing concrete. Concrete shall be carefully placed in reinforced elements to avoid segregation of aggregates. Unconfined full of concrete shall not exceed five feet, unless approved in writing by the engineer of record.
- Reinforcing, dowels, bolts, anchors, steels, embeds, etc. shall be securely positioned in the forms prior to placement of concrete.
- High early strength concrete may be used when requested by the contractor. Mix design data using field cured specimens shall be submitted for review and approval.
- Protect concrete from damage or reduced strength due to cold or hot weather in accordance with ACI 305 and 306. Contractor shall take special curing precautions to minimize shrinkage cracking of concrete slabs.

GSN - Reinforcing Steel

- Reinforcing steel shall meet ASTM A615 and shall be grade 60 deformed bars for all bars #5 and larger. Reinforcing may be grade 40 deformed bars for all bars #4 and smaller. All reinforcing to be welded shall be ASTM A106, grade 60 low alloy welded steel.
- Welded wire fabric shall meet ASTM A185. Lap all welded wire fabric at least one row of wires plus 2 inches.
- All reinforcing steel dimensions are center to center of the steel unless noted as clear (CLR) cover. Minimum cover for reinforcement shall be as follows (unless noted otherwise on the plans):

Exposure	Min. Cover	Tolerance
Cast against and permanently exposed to earth	3"	+/- 3/8"
Exposed to earth or weather	1 1/2"	+/- 3/8"
#5 bar and smaller	1 1/2"	+/- 3/8"
#6 bar and larger	2"	+/- 3/8"
Not exposed to earth or weather		
Slabs, walls and joists		
#11 and smaller	3/4"	+/- 3/8"
#14 #18	1 1/2"	+/- 3/8"
Beams and columns		
Primary reinforcing, ties, stirrups, and spirals	1 1/2"	+/- 3/8"
Slabs on grade	1 1/2"	+/- 3/8"
- Lap splices in beams, slabs and footings shall be per current governing code or lap schedule where present. Stagger splices a minimum of one lap length. The lapping of reinforcing bars shall not be allowed. Provide bent corner bars to match and lap with horizontal bars at all corners and intersections per general details. Vertical wall bars shall be spliced at or near floor lines. Splice top bars at center line of span and bottom bars at the support in spans/dels, beams, grade beam, etc. unless noted otherwise on the plans.
- Mechanical splice couplers shall have current testing report accepted by local building official and shall be capable of developing 125% of the strength of the bar.
- All reinforcing shall be bent cold, one time only. Field bending of rebar shall not be allowed unless specifically noted on the plans.
- Welding of reinforcing bars, metal inserts, and connections shall conform to AWS D1.4, and shall be made only at locations shown on plans or details.
- All welds involving reinforcing bars shall be an E90 low hydrogen electrode.
- Reinforcing bar spacing shown on the plans represents the maximum on center spacing. All bars shall be detailed and placed per the current governing code as indicated in the Basis for Design.
- Dowel all vertical reinforcing to foundation, as specified on plans or details. Securely tie all bars in location prior to placement of the concrete.
- Minimum clear spacing between rebar reinforcement shall be 1 1/2 times bar diameter, 1 1/2 times the max aggregate size, or 1" (whichever is larger).

GSN - Lap Splice Schedule

Bar Size	$f_c=3000$ psi				$f_c=4000$ psi				$f_c=5000$ psi				$f_c=6000$ psi			
	Regular		Top		Regular		Top		Regular		Top		Regular		Top	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
#3	13"	17"	17"	21"	12"	16"	16"	21"	12"	16"	16"	21"	12"	16"	16"	21"
#4	17"	22"	22"	28"	15"	19"	19"	25"	13"	17"	17"	22"	12"	16"	16"	21"
#5	21"	27"	27"	35"	18"	24"	24"	31"	16"	21"	21"	27"	15"	19"	19"	25"
#6	27"	36"	36"	46"	24"	31"	31"	40"	21"	28"	28"	36"	20"	25"	25"	33"
#7	33"	48"	48"	63"	32"	42"	42"	54"	28"	38"	38"	49"	27"	34"	34"	44"
#8	40"	54"	54"	72"	42"	55"	55"	71"	38"	49"	49"	64"	35"	45"	45"	58"
#9	52"	70"	70"	90"	54"	70"	70"	90"	48"	62"	62"	81"	44"	57"	57"	74"
#10	78"	102"	102"	132"	68"	88"	88"	115"	61"	79"	79"	102"	56"	72"	72"	94"
#11	96"	125"	125"	162"	83"	108"	108"	141"	76"	97"	97"	126"	68"	88"	88"	115"

GSN - Lap Splice Schedule Notes

- These notes shall be used for all splices, unless noted otherwise on plans.
- Class "A" splices may be used only in cases where 50% or less of the bars are spliced within the lap splice length.
- Class "B" splices may be used for all splices unless the requirements of note 2 are met.
- Ties & stirrups shall not be spliced.
- a. For bundles bars or three or less, lap splice length shall be multiples by 12.
b. For bundled bars of four or more, lap splice lengths shall be multiplied by 133.
c. Individual bar splices within a bundle shall not overlap.
d. Entire bundles shall not be lap spliced.
- For all lightweight concrete, lap lengths shall be multiplied by 13.
- For all epoxy coated bars, lap lengths shall be multiplied by 13 for top bars and 15 for bottom bars.
- Top bars are classified as horizontal bars where 12", or more, of fresh concrete is cast below the reinforcing bar.

GSN - Anchor Bolts

- Slit plate anchorage at concrete or masonry shall be 1 1/2" diameter embedded anchor bolts @ 36" o.c. (UN.C). All anchor bolts (excluding bolts for holdowns) shall be embedded 7" minimum into the concrete. Anchor bolts for holdowns shall be considered as part of the required slit plate anchor bolts, as specified in the shearwall schedule or Structural General Notes. Interior walls may be anchored to the concrete with the following (unless noted otherwise on plans):
 - Embedded anchor bolts
 - Concrete screw anchors
 - Expansion anchors
 - Powder driven fasteners (as specified below)
 - All all slits plates there shall be a minimum of two bolts per piece of plate with one bolt located not more than 12" or less than seven bolt diameters from each end of the piece of plate. A properly sized nut and washer shall be tightened on each bolt to the plate. For seismic design categories D-F, washers shall be a minimum of 0.229" thick by 3" square plate washer (refer to "Basis for Design" on this sheet for seismic design category) at exterior walls, shearwalls, and interior bearing walls where 2x slat plates are specified. Foundation plates and slits shall be the kind of wood specified in the current approved code as listed in the Basis for Design.
 - All shearwalls shall be anchored to the concrete per the shearwall schedule.
 - Where exterior wall embedded anchor bolts have been missed, damaged, or improperly located, one of the following retro-fit options may be used at the contractor's discretion:
 - Provide (1) 1/2" diameter Simpson Titen Screw Anchors (ESR-1056 & ESR-2113) concrete screw anchor. Concrete screw anchors shall be embedded a minimum of 4 1/2".
 - Epoxy bolts of the same diameter and spacing may be used in lieu of the embedded bolts. A 7" minimum embedment shall be provided for epoxy grouted bolts.
 - Where interior wall embedded anchor bolts have been missed, damaged, or improperly located, one of the following retro-fit options may be used at the contractor's discretion. Interior anchor bolts shall be defined as anchor bolts that are located a minimum of 6" from slab edges, steps, turn-downs, openings, or similar discontinuities:
 - Provide (1) 1/2" diameter Simpson Titen Screw Anchors (ESR-1056) or 1/2" diameter ITW Rammed/Reinforced LDI (ESR 5890) concrete screw anchor. Concrete screw anchors shall be embedded a minimum of 4 1/2".
 - Epoxy bolts of the same diameter and spacing may be used in lieu of the embedded bolts. A 7" minimum embedment shall be provided for epoxy grouted bolts.
 - Shot pins may be used (either Rammed 3500 series (ESR-1799) or HIT (ESR-1663)) or any other ICC-ES approved powder driven fastener with at least 200# allowable shear resistance in 2000 psi concrete per the schedule below. Install all fasteners per ICC-ES Evaluation Report and manufacturer's recommendations. Embedment shall be 1 1/4" minimum and the shot pins shall be installed such that the slit plate wood does not split. If spalling occurs, equivalent expansion bolts shall be installed per the requirements above.
- | Nail Size | Spacing | Staples & Nails Gauge | |
|-----------|---------|-----------------------|--------|
| | | 16 | 15 |
| 6d | 4" | 3 1/2" | 4" |
| 6d | 6" | 5" | 5" |
| 6d | 8" | 6 1/2" | 8" |
| 6d | 10" | 8 1/2" | 10" |
| 6d | 12" | 10" | 12" |
| 8d | 4" | 2 1/2" | 3 1/2" |
| 8d | 6" | 4" | 5" |
| 8d | 8" | 5 1/2" | 6 1/2" |
| 8d | 10" | 7 1/2" | 8" |
| 8d | 12" | 8" | 10" |
| 10d | 4" | 2" | 2 1/2" |
| 10d | 6" | 3 1/2" | 4" |
| 10d | 8" | 4 1/2" | 5 1/2" |
| 10d | 10" | 5 1/2" | 7" |
| 10d | 12" | 6 1/2" | 8" |
- | Shot Pins | Diameter | |
|------------------------------|------------------------------|------------|
| | 0.170 dia. | 0.140 dia. |
| Required anchor bolt spacing | 1 1/2" dia. bolts @ 72" o.c. | 11" |
| | 1 1/2" dia. bolts @ 60" o.c. | 9" |
| | 1 1/2" dia. bolts @ 48" o.c. | 7" |
| | 1 1/2" dia. bolts @ 40" o.c. | 6" |
| | 1 1/2" dia. bolts @ 36" o.c. | 5 1/2" |
| | 5/8" dia. bolts @ 72" o.c. | 8 1/2" |
| | 5/8" dia. bolts @ 60" o.c. | 7" |
| | 5/8" dia. bolts @ 48" o.c. | 5 1/2" |
| | 3/4" dia. bolts @ 72" o.c. | 6" |

GSN - Equivalent Spacing of Approved Fasteners

Nail Size	Spacing	16	15	14
6d	4"	3 1/2"	4"	5"
6d	6"	5"	6"	7"
6d	8"	6 1/2"	8"	9 1/2"
6d	10"	8 1/2"	10"	12"
6d	12"	10"	12"	14 1/2"
8d	4"	2 1/2"	3 1/2"	4"
8d	6"	4"	5"	6"
8d	8"	5 1/2"	6 1/2"	8"
8d	10"	7 1/2"	8"	10"
8d	12"	8"	10"	12"
10d	4"	2"	2 1/2"	3"
10d	6"	3 1/2"	4"	5"
10d	8"	4 1/2"	5 1/2"	6 1/2"
10d	10"	5 1/2"	7"	8"
10d	12"	6 1/2"	8"	9 1/2"

GSN - Wood

- Structural wood lumber design values shall comply with the latest edition of the grading rules of the Western Wood Products Association (WWPA) or the West Coast Lumber Inspection Bureau (WCLB). All sawn lumber shall be stamped with the grade match of an approved lumber grading agency. Structural sawn lumber components shall have the following minimum grade (unless noted otherwise on plans):

Use	Material
2x sill plates	Treated Douglas Fir
2x top plates	Douglas Fir Stud Grade
2x4 studs/blocking	Douglas Fir Stud Grade
2x6 studs (up to 10'-0" in height)	Douglas Fir Stud Grade
2x6 studs (over 10'-0" in height)	Douglas Fir No. 2
Joists and all other sawn lumber	Douglas Fir No. 2
6x beams and 6x post	Douglas Fir No. 1
- Glue-Laminated Beams (GLB) shall be Douglas Fir 24F-V4 unless noted otherwise on the plans. All cantilevered GLB beams shall be Douglas Fir 24F-V8. The GLB beams shall have the following minimum properties:

E=1,800,000 psi
Fv=2400 psi
Fv=165 psi

 Fabrication and handling shall conform to the latest AISC and ASTM standards. Beams shall bear an appropriate grade stamp clearly noting its design properties. Beams shall be manufactured with industry standard minimum camber (2000' radius) unless camber is specifically noted on the plans. Fabrication and handling shall conform to the latest AISC and ASTM standards. Beams shall bear an appropriate grade stamp clearly noting its design properties. Beams shall be manufactured with industry standard minimum camber (2000' radius) unless camber is specifically noted on the plans.
- Laminated Veneer Lumber (LVL) shall be Douglas Fir and manufactured in accordance with Truslot Macmillan Corporation manufacturing standards as referenced in NER-481, or approved equal. All LVL members shall have the following minimum properties:

E=1,800,000 psi
Fv=2600 psi
Fv=285 psi
Fc(parallel)=2510 psi
Fc(perpendicular)=750 psi

 When multiple LVL pieces are grouped together, they shall be fastened with (2) rows of 16d nails at 12" o.c. for member depths up to 14" in depth. LVL members greater than 14" in depth shall be used in built up sections only, and shall be fastened together with (3) rows of 16d nails at 12" o.c.
- All slabs or plates resting on concrete or masonry shall be pressure treated Douglas Fir or other locally approved chemically treated lumber.
- All beams shall be considered flush bottom unless noted otherwise on the plans. Girders and trusses and beams shall have full bearing (for example a (3) ply girder truss shall have a minimum of (3) 2x studs carried to the foundation or carrying (beam per pins) at each bearing point with (2)2x studs minimum. Nail studs together per typical nailing schedule. Beams and girder trusses (2)ply or larger) bearing on the top plate shall be attached to the top plate with an A34 framing anchor or (2) 16d toenails each side of the structural member (unless noted otherwise on the plans).
- Openings in a single level or top level of the structure shall be framed as follows:
 - Widths less than 6'-0" wide shall be framed with (1)2x king stud and (1) 2x trimmer stud each side of the opening (unless noted otherwise on the plans).
 - Widths greater than 6'-0" but less than 16'-0" shall be (2) 2x king studs and (1) 2x trimmer stud each side of the opening (unless noted otherwise on the plans).
- In exterior walls, interior bearing partitions and shear walls, any wood stud may be cut or notched to a depth not exceeding 25% of its width. Cutting or notching of the studs to a depth greater than 40% of the width of the stud is permitted in non-bearing partitions supporting no loads other than the weight of the partition. The cut or notched stud shall be mechanically reinforced per the general detail.
- A hole not greater in diameter than 40% of the stud width may be bored in any wood stud. Bored holes not greater than 60% of the width of the stud is permitted in non-bearing partitions or in any wall where each bored stud is doubled, provided not more than two such successive doubled studs are bored. In no case shall the edges of the bored hole be nearer than 5/8" to the edges of the stud. Bored holes shall not be located at the same section of stud as a cut or notch. Do not notch joists, rafters or beams, unless noted otherwise on the plans. Approval for any holes or notches not indicated on the plans shall be provided by the engineer of record, in writing, prior to the work being done on the site.
- All bolt shall be installed in holes bored with a bit 1/16" larger than the diameter of the bolt. Bolts and nuts seating on wood shall have cut steel washers under heads and nuts. Ding threads to prevent loosening. Lag bolts shall be installed in pre-drilled holes by hand turning with a wrench (not with an electric pneumatic impact tool).
- All nails (except 16d nails) shall be common nails unless specifically noted otherwise on the plans. 16d nails may be 16d sinker, 16d box, pneumatic (P-nail), or 12d common, unless noted otherwise on the plans. Nails shall be driven so that heads are flush with wood surface. Over or under driven nails will not be acceptable. Miscellaneous nailing shall be per the current approved code nailing schedule, or as listed below:

Nail Size	Shank Diameter	Length
16d common	1 1/2"	3 1/2"
HDU2 5/8"	7"	5/8"
HDU4 5/8"	7"	5/8"
HDU5 5/8"	9"	5/8"
HDU8 7/8"	10"	7/8"
HDU11 1"	12"	1"
HDU14 1"	12"	1"
HD08 7/8"	12"	7/8"
HHDC11 1"	12"	1"
HHDC14 1"	12"	1"
HD010 7/8"	12"	7/8"
- A.P.A. performance rated sheathing (O.S.B.) may be used as an alternate to plywood with prior approval of owner and/or architect. Rated sheathing shall comply with ICC-ES Evaluation Report No. ESR-2586, exposure 1, and shall have a span rating equivalent to or better than the plywood it replaces. Install per manufacturer's recommendations.
- Shear panel blocking noted on plans or details shall be constructed of 2x solid framing with 3/8" minimum plywood with 8d nails at 6" o.c. (unless noted otherwise on plans) and shall be nailed to adjacent studs/joists with minimum (2) 16d at the top and bottom of truss or framing.
- All plywood laid with face grain perpendicular to supports shall be C-D or C-C sheathing conforming to current adopted code as listed in the Basis for Design, and shall conform to the following nominal thickness, span rating, and nailing pattern below (unless noted otherwise on the plans):

Thickness	Span Rating	Edge Nailing	Field Nailing
3/8"	24/0	8d@6" o.c.	8d@12" o.c.
7/16"	24/16	8d@6" o.c.	8d@12" o.c.
15/32"	32/16	8d@6" o.c.	8d@12" o.c.
3/4"	48/24	10d@6" o.c.	10d@12" o.c.
1"	60/48	10d@6" o.c.	10d@12" o.c.
1 1/8"	48" o.c.	10d@6" o.c.	10d@12" o.c.

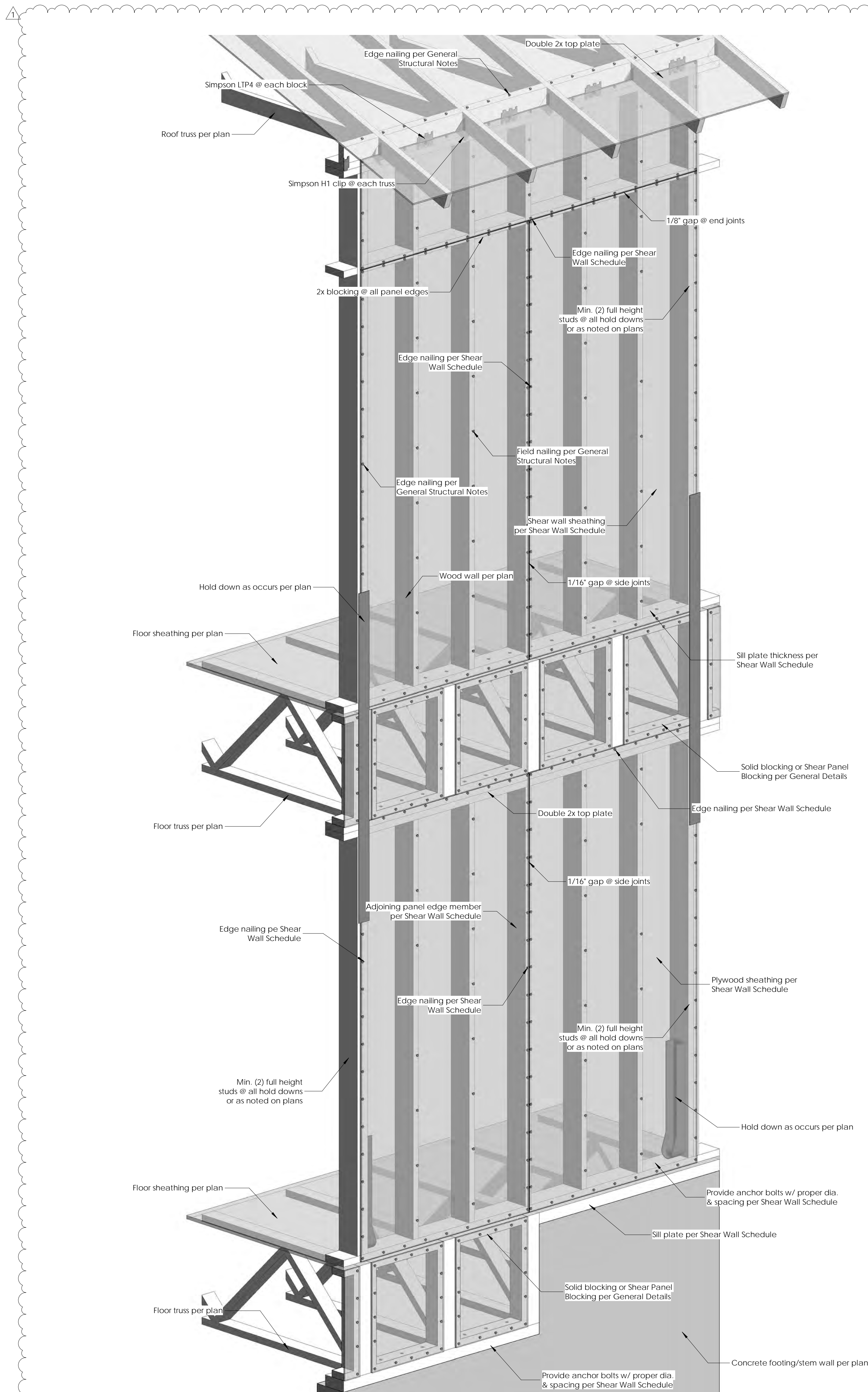
GSN - Nailing Schedule

Types of Connections	Minimum Nailing
Joists or truss top plate, sill, etc.	(3)16d, toenail
Bridging joist	(2)8d, toenail each end
Sole plate to joist or blocking	16d @ 16" o.c.
Top plate to stud	(2) 16d, end nail
Stud to sole plate	(2) 16d end nail or Simpson A34
Double or multiple built-up studs	16d @ 16" o.c. staggered, each piece
Double or multiple top plates	16d @ 16" o.c. staggered, each piece
Blocking between joists or rafters to top plate	(3)16d, toenail
Rim joist to top plate	16d @ 16" o.c., toenail
Top plates, laps and intersections	(2)16d
Continuous header, two or more laminations	16d @ 16" o.c. along each edge, each piece
Ceiling joists to top plate	(3)16d, toenail
Continuous header to stud	(3)16d, toenail
Ceiling joists, laps over partitions	(3)16d
Ceiling joists to parallel rafters	(3)16d
Rafter to truss plate	(3)16d, toenail
Built-up corner studs	16d @ 16" o.c. staggered, each piece
Built-up channel blocking @ wall intersecting shear wall	16d @ 6" o.c., each piece, up to SW4
Built-up channel blocking @ wall intersecting shear wall	16d @ 3" o.c., each piece, up to SW8
King stud to beam (end)	(2)16d @ 3" o.c. (4 min.)

GSN - Nailing Schedule Notes

- Minimum

GSN - General Structural Notes



1 00 - GSN - Typical Shear Wall 1.01
1" = 1'-0"

GSN - Special Inspections (Soils) 2015			
Type	Continuous Special Inspection	Periodic Special Inspection	
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	-	x	
2. Verify excavations are extended to proper depth and have reached proper material.	-	x	
3. Perform classification and testing of compacted fill materials.	-	x	
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	x	-	
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	-	x	

GSN - Inspection of Tasks Prior to Welding - 2015			
Inspection Tasks Prior to Welding (AISC 360-10 Table N5.4-1)			
Inspection	Quality Control	Quality Assurance	
Welding procedure specifications (WPS) available	P	P	
Manufacturer certifications for welding consumables available	P	P	
Material identification (type/grade)	O	O	
Welder identification system (The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type.)	O	O	
Fit-up of groove welds (including joint geometry)			
- Joint preparation	O	O	
- Dimensions (alignment, root opening, root face, bevel)	O	O	
- Cleanliness (condition of steel surfaces)	O	O	
- Tacking (tack weld quality and location)	O	O	
- Backing type and fit (if applicable)	O	O	
Configuration and finish of access holes	O	O	
Fit-up of fillet welds			
- Dimensions (alignment, gaps at root)	O	O	
- Cleanliness (condition of steel surfaces)	O	O	
- Tacking (tack weld quality and location)	O	O	
Check welding equipment	O	-	

GSN - Inspection of Tasks During Welding - 2015			
Inspection Tasks During Welding (AISC360-10 Table N5.4-2)			
Inspection	Quality Control	Quality Assurance	
Use of qualified welders	O	O	
Control and handling of welding consumables			
- Packaging	O	O	
- Exposure control	O	O	
No welding over cracked tack welds	O	O	
Environmental conditions			
- Wind speed within limits	O	O	
- Precipitation and temperature	O	O	
WPS followed			
- Settings on welding equipment	O	O	
- Travel speed	O	O	
- Selected welding materials	O	O	
- Shielding gas type/flow rate	O	O	
- Preheat applied	O	O	
- Interpass temperature maintained (min./max.)	O	O	
- Proper position (F, V, H, OH)	O	O	
Welding techniques			
- Interpass and final cleaning	O	O	
- Each pass within profile limitations	O	O	
- Each pass meets quality requirements	O	O	

GSN - Inspection Tasks After Welding - 2015			
Inspection Tasks After Welding (Table N5.4-3)			
Inspection	Quality Control	Quality Assurance	
Welds cleaned	O	O	
Size, length and location of welds	P	P	
Welds meet visual acceptance criteria			
- Crack prohibition	P	P	
- Weld/base-metal fusion	P	P	
- Crater cross section	P	P	
- Weld profiles	P	P	
- Weld size	P	P	
- Undercut	P	P	
- Porosity	P	P	
Arc strikes	P	P	
k-area (When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. (75 mm) of the weld.)	P	P	
Backing removed and weld tabs removed (if required)	P	P	
Repair activities	P	P	
Document acceptance or rejection of welded joint or member	P	P	

GSN - Inspection Tasks Prior to Bolting - 2015			
Inspection Tasks Prior to Bolting (AISC360-10 Table N5.6-1)			
Inspection	Quality Control	Quality Assurance	
Manufacturer's certifications available for fastener materials	O	P	
Fasteners marked in accordance with ASTM requirements	O	O	
Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O	
Proper bolting procedure selected for joint detail	O	O	
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	O	
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	P	O	
Proper storage provided for bolts, nuts, washers and other fastener components	O	O	

GSN - Inspection Tasks During Bolting - 2015			
Inspection Tasks During Bolting (Table N5.6-2)			
Inspection	Quality Control	Quality Assurance	
Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required	O	O	
Joint brought to the snug-tight condition prior to the pretensioning operation	O	O	
Fastener component not turned by the wrench prevented from rotating	O	O	
Fasteners are pretensioned in accordance with the RSCS Specification, progressing systematically from the most rigid point toward the free edges	O	O	

GSN - Inspection Tasks After Bolting - 2015			
Inspection Tasks After Bolting (AISC360-10 Table N5.6-3)			
Inspection	Quality Control	Quality Assurance	
Document acceptance or rejection of bolted connections	P	P	

GSN - Inspection Notes for Welding & Bolting - 2015
 O - Observe these items on a random basis. Operations need not be delayed pending these inspections.
 P - Perform these tasks for each welded joint or member.



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No.	Description	Date
1	Correction Letter	8/27/19

Burton Solitude Spec Home
 Think Architecture
 5151 South 900 East, Suite #200
 Salt Lake City, UT 84117



Date of 8/27/2019 10:12:17 AM

General Structural Notes (cont.)

Date 9/4/18

Drawn By BPT

Checked By BPT

S102

Scale 1" = 1'-0"

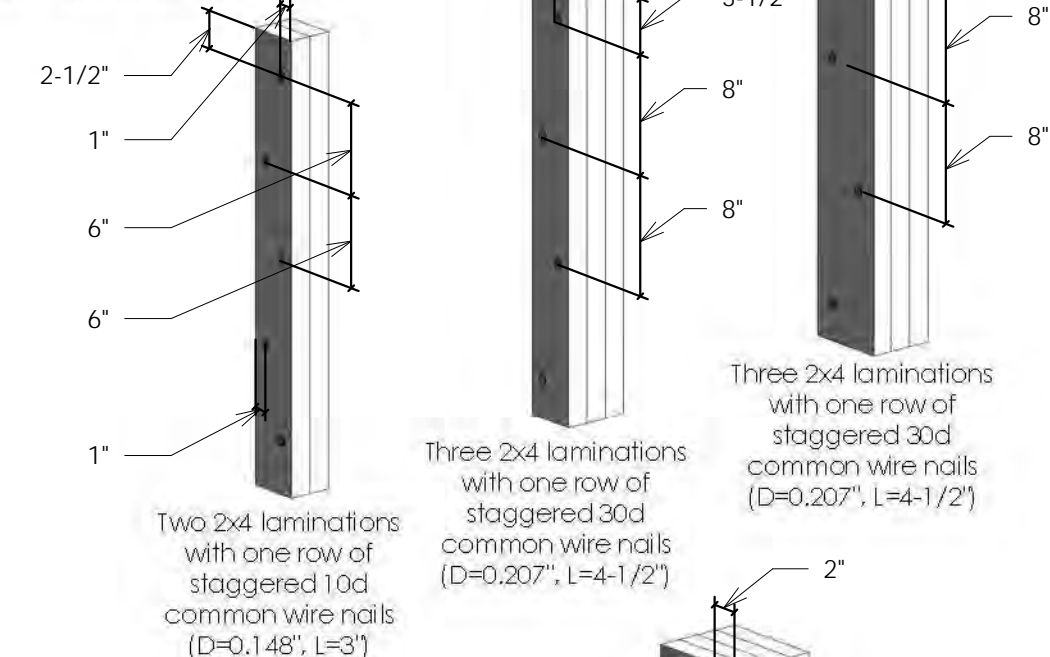
Nailed Built-up Columns

- adjacent nails are driven from opposite sides of the column
- all nails penetrate at least 3/4 of the thickness of the last lamination
- 15D ≤ end distance ≤ 18D
- 20D ≤ spacing between adjacent nails in a row ≤ 6 $\frac{1}{2}$ "
- 10D ≤ spacing between rows of nails ≤ 20D
- 6D ≤ edge distance ≤ 20D
- 2 or more longitudinal rows of nails are provided when d ≥ 3 $\frac{1}{2}$ "

Where:
 D = nail diameter
 d = depth (face width) of individual lamination
 t = thickness of thinnest lamination

When only one longitudinal row of nails is required, adjacent nails shall be staggered. When three or more longitudinal rows of nails are used, nails in adjacent rows shall be staggered.

Typical Nailing for Built-up Columns



Bolted Built-up Columns

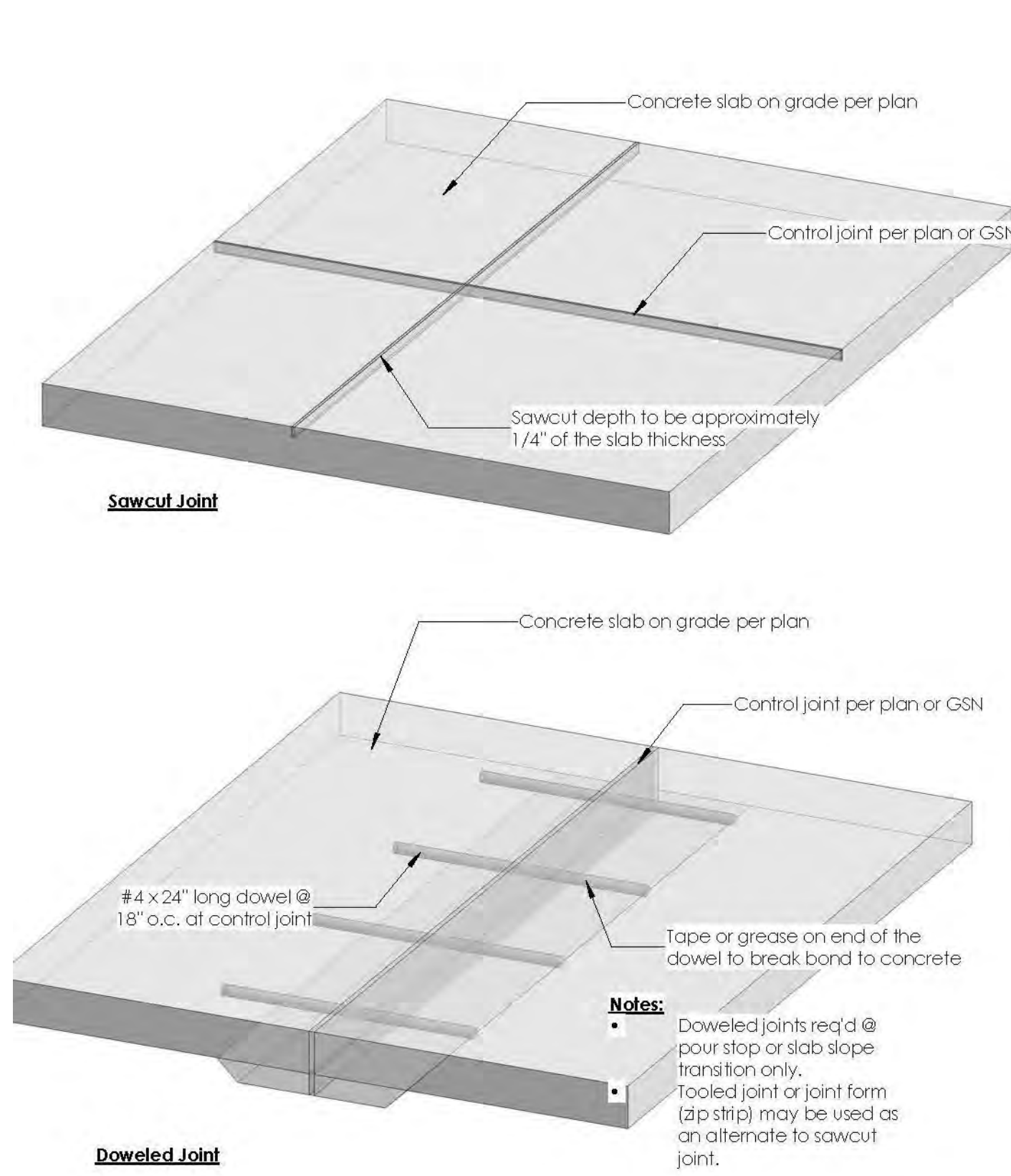
- provide a metal plate or washer between the wood and the bolt head, and between the wood and the nut
- nuts are tightened to insure that faces of adjacent laminations are in contact.
- for soft woods: 7D ≤ end distance ≤ 8.4D
- for hard woods: 5D ≤ end distance ≤ 4D
- 4D ≤ spacing between adjacent bolts in a row ≤ 6l
- 1.5D ≤ spacing between rows of bolts ≤ 10D
- 1.5D ≤ edge distance ≤ 15D
- 2 or more longitudinal rows of bolts are provided when d ≥ 3t

Where:
 D = bolt diameter
 d = depth (face width) of individual lamination
 t = thickness of thinnest lamination

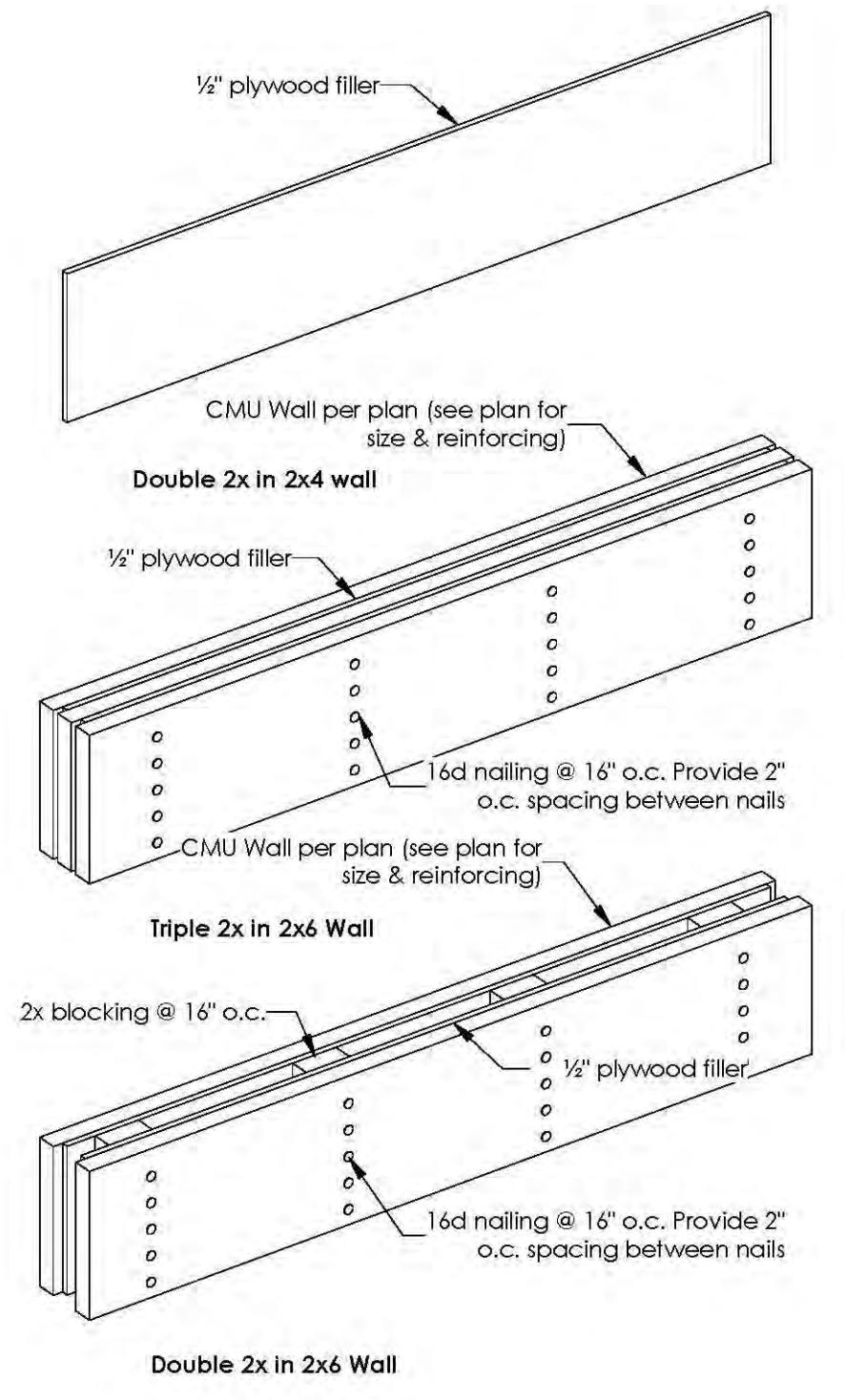
When only one longitudinal row of nails is required, adjacent nails shall be staggered. When three or more longitudinal rows of nails are used, nails in adjacent rows shall be staggered.

- Notes:**
- Provisions apply to nailed or bolted built-up columns with 2 to 5 laminations in which:
 - each lamination has a rectangular cross section and is at least 1 1/2" thick.
 - all laminations have the same depth (face width), d.
 - faces of adjacent laminations are in contact.
 - all laminations are full column length.
 - requirements indicated above are met.

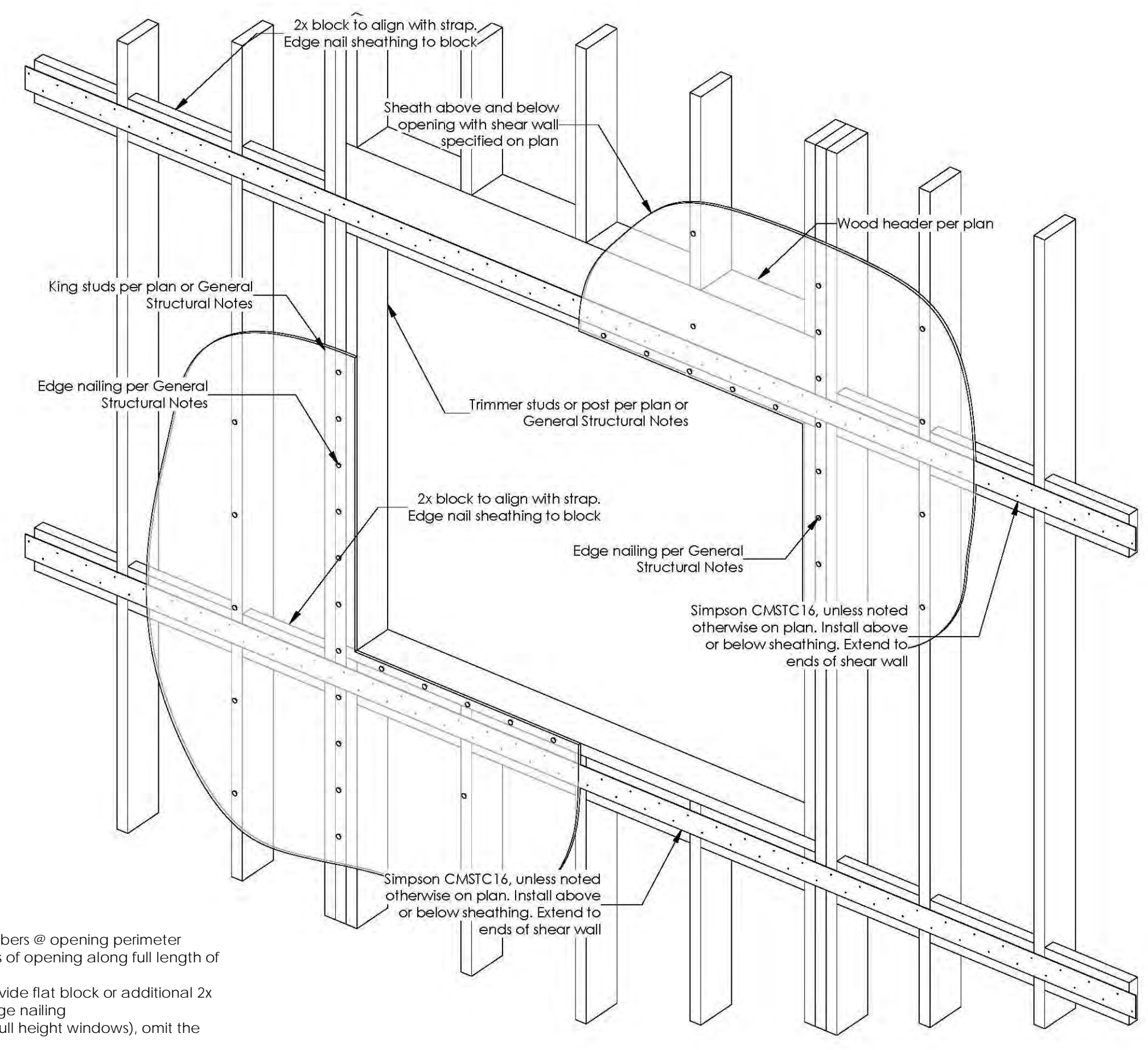
005 - GSN - Built-up Columns
 1" = 1'-0"



007 - GSN - Control Joint in Concrete Slab on Grade
 1" = 1'-0"

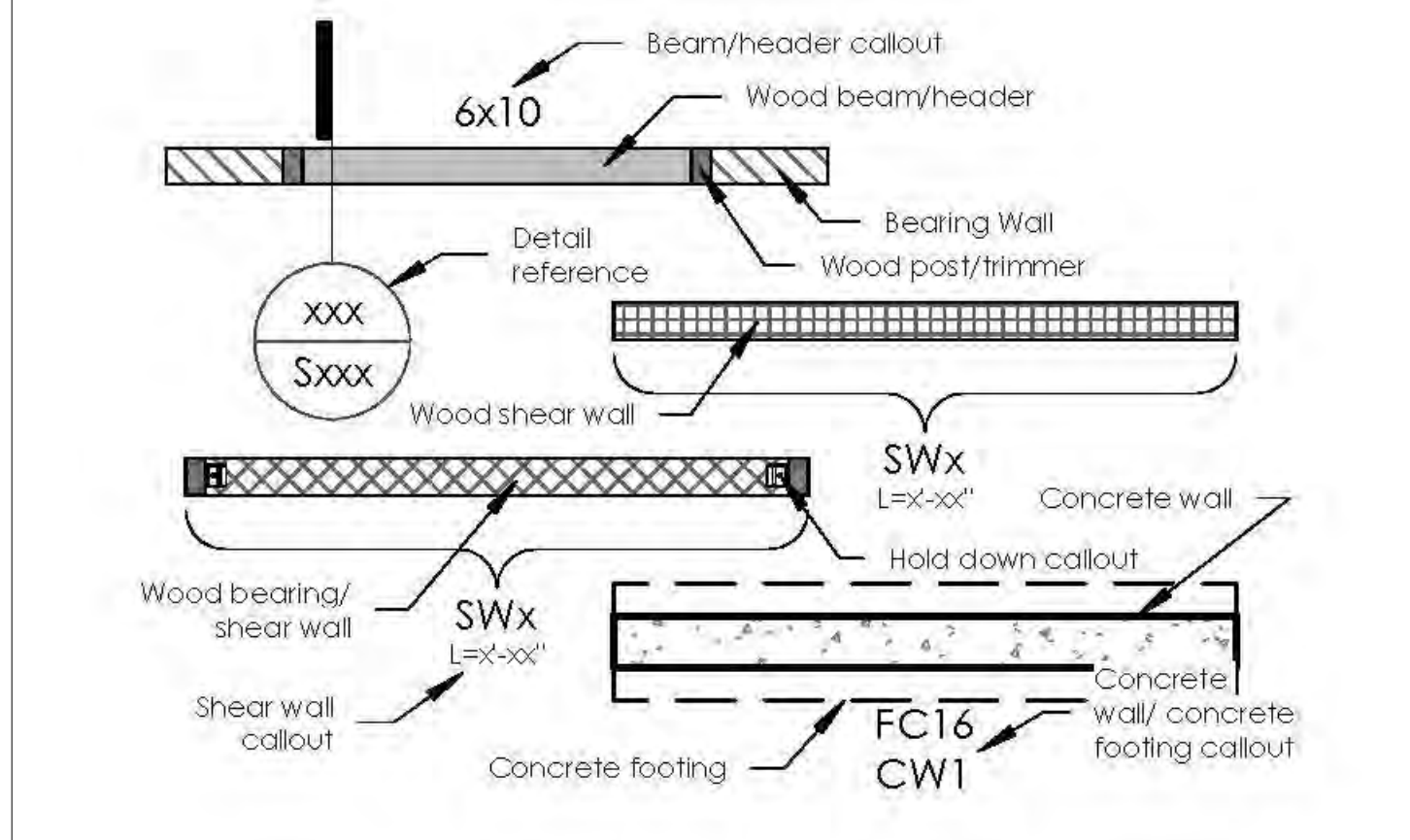


006 - GSN - Built-up Header
 1" = 1'-0"

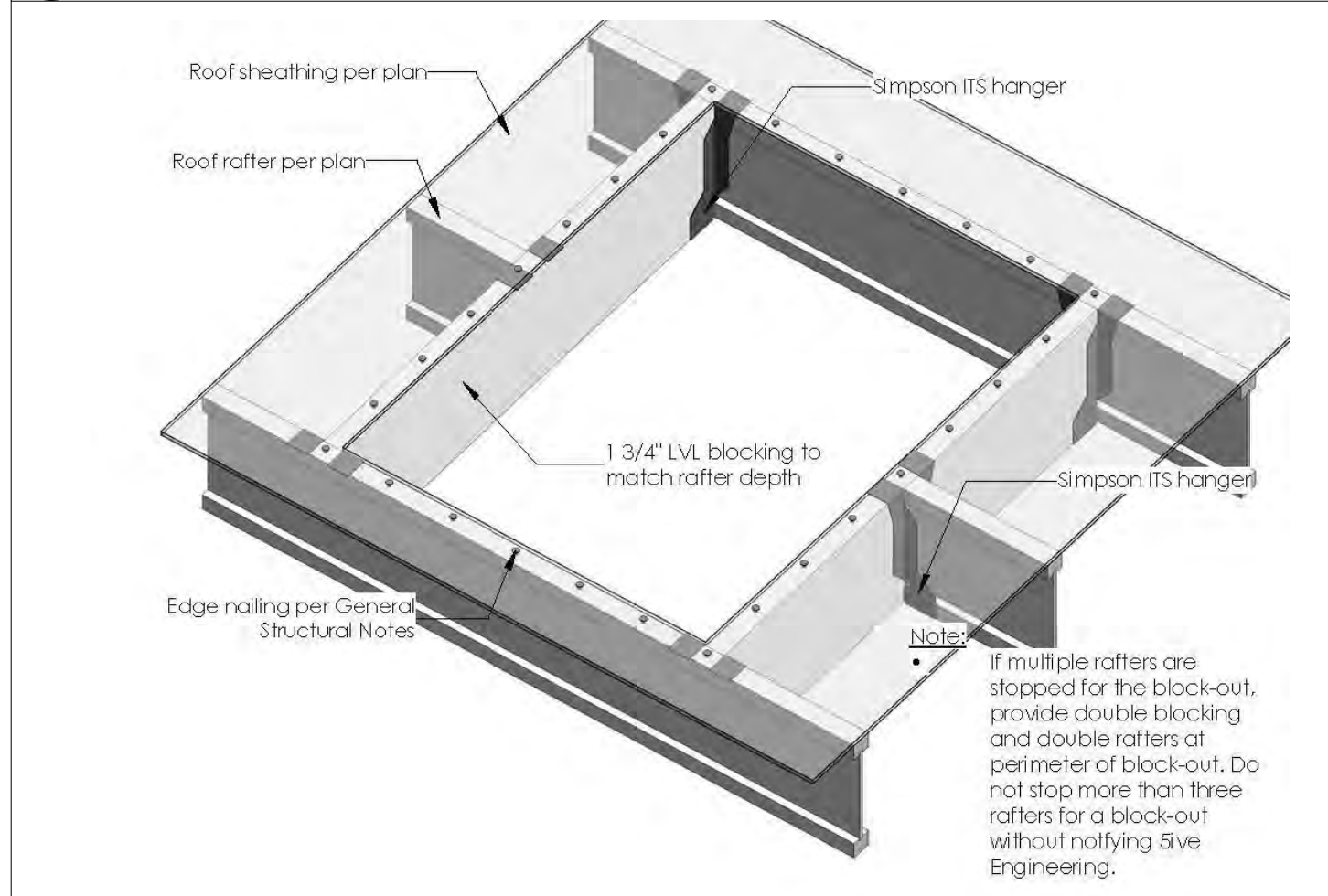


- Notes:**
- Edge nail sheathing to all members @ opening perimeter
 - Edge nail to king studs @ edges of opening along full length of member
 - For straps larger than C316, provide flat block or additional 2x blocks to receive strap and edge nailing
 - At full height openings (doors, full height windows), omit the strap below opening

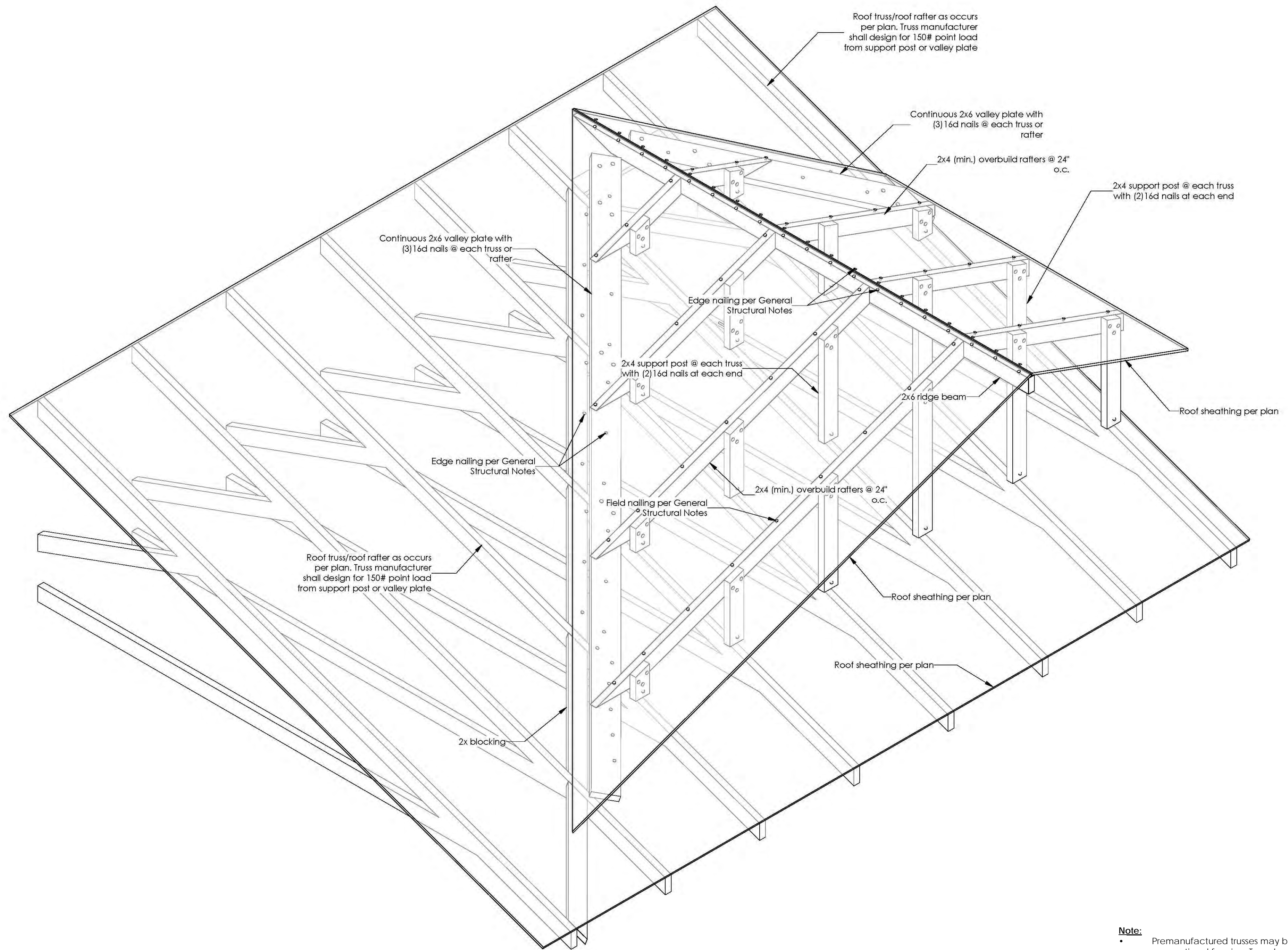
003 - GSN - Blocking & Strapping Around Large Opening
 1" = 1'-0"



001 - GSN - Legend of Symbols
 1" = 1'-0"



002 - GSN - Block-Out for Roof Drains (etc)
 1" = 1'-0"

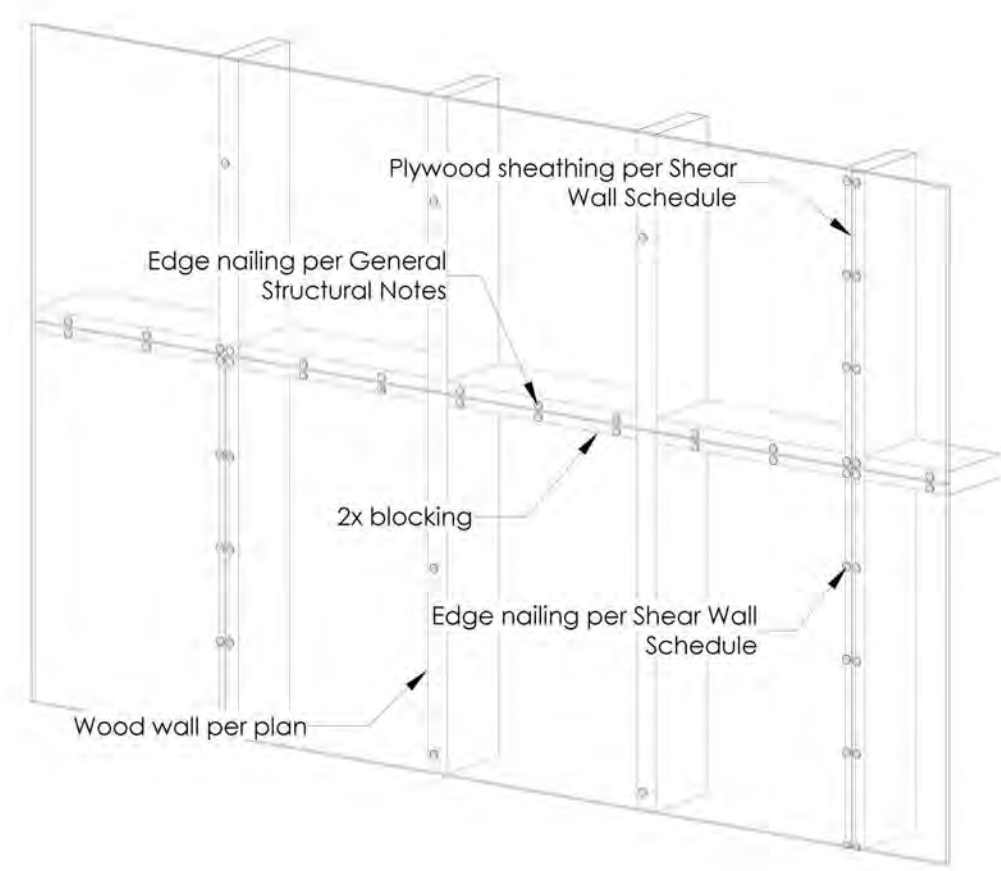


004 - GSN - Overbuild Framing
 1" = 1'-0"

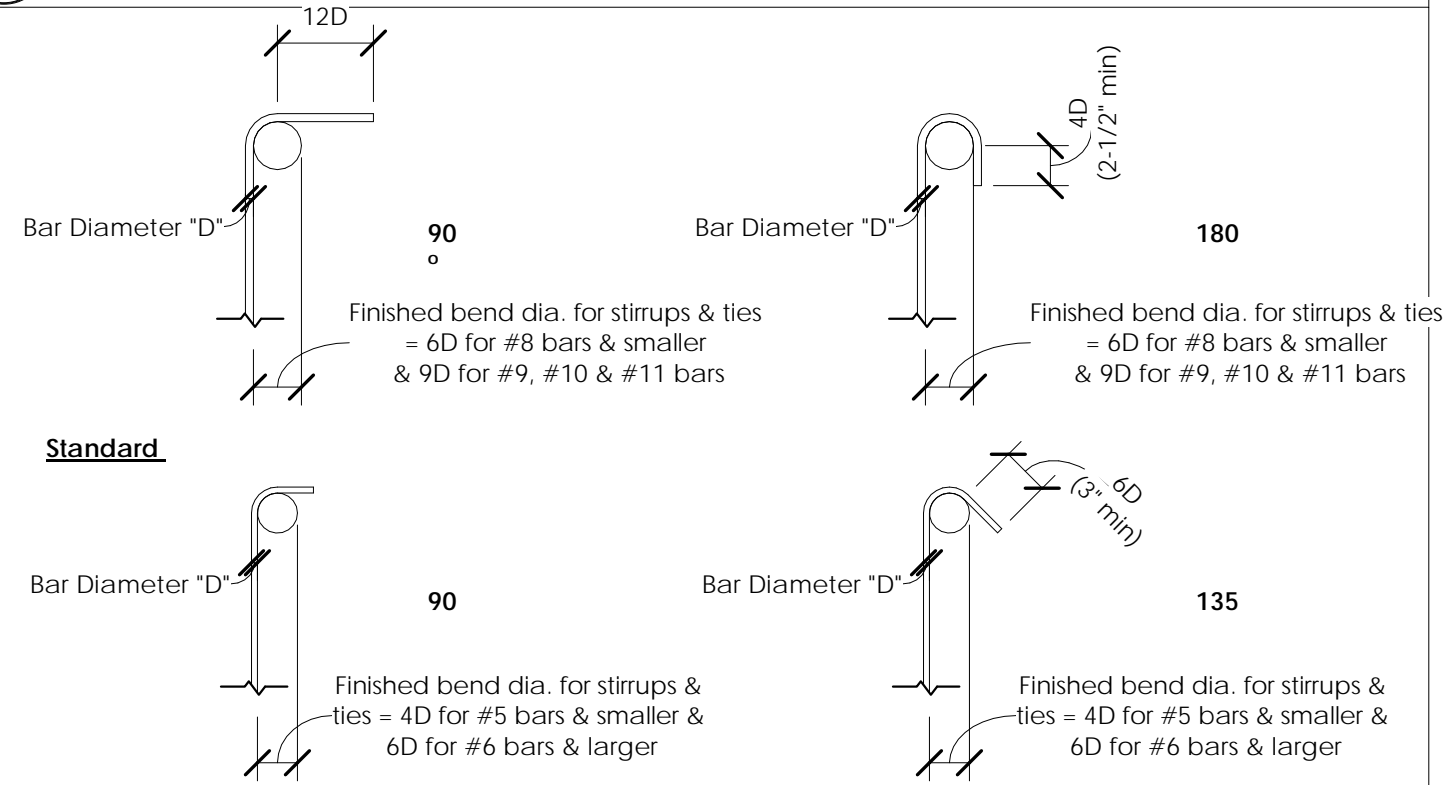
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No.	Description	Date

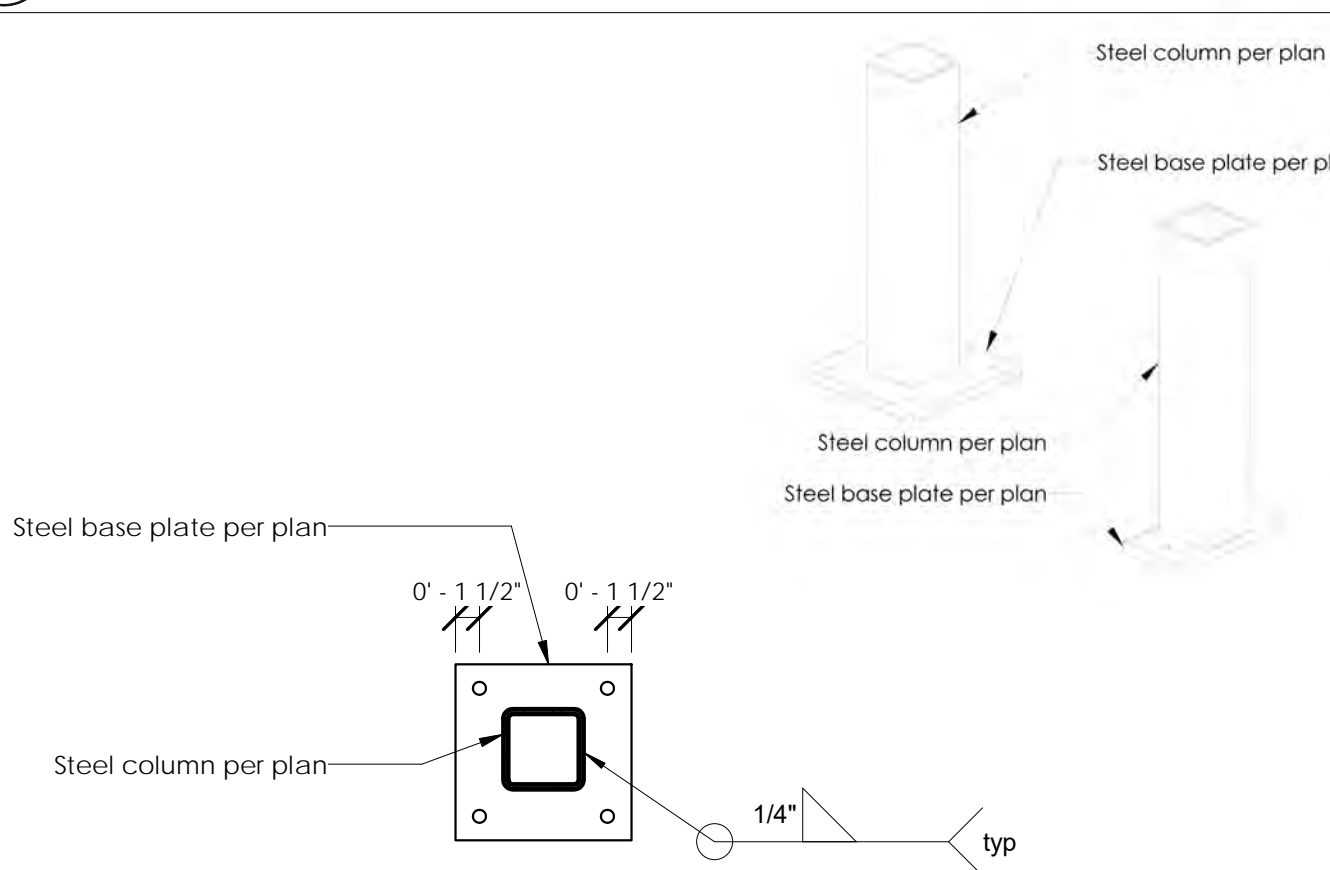




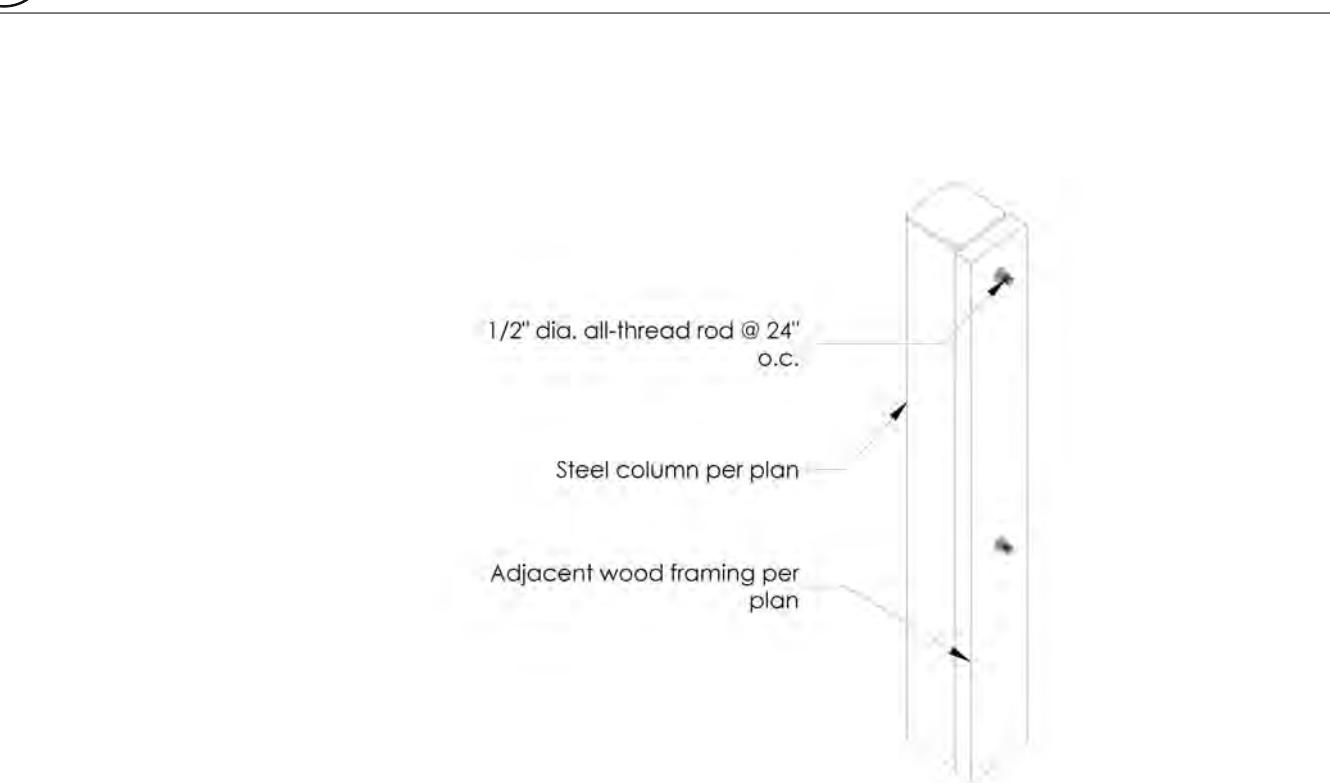
017 00 - GSN - Shear Wall Panel Joint
1" = 1'-0"



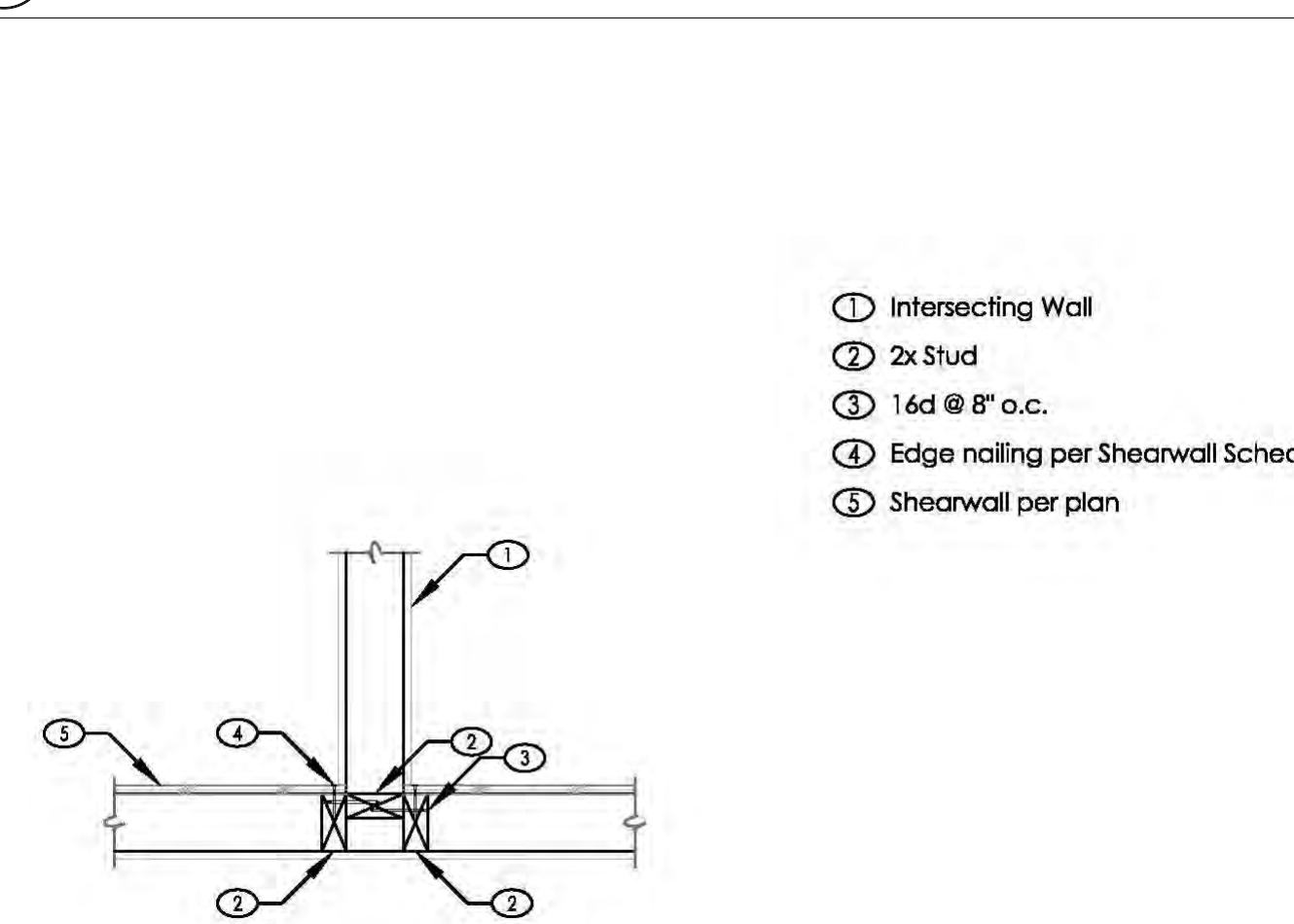
018 00 - GSN - Standard Bar Bends
1" = 1'-0"



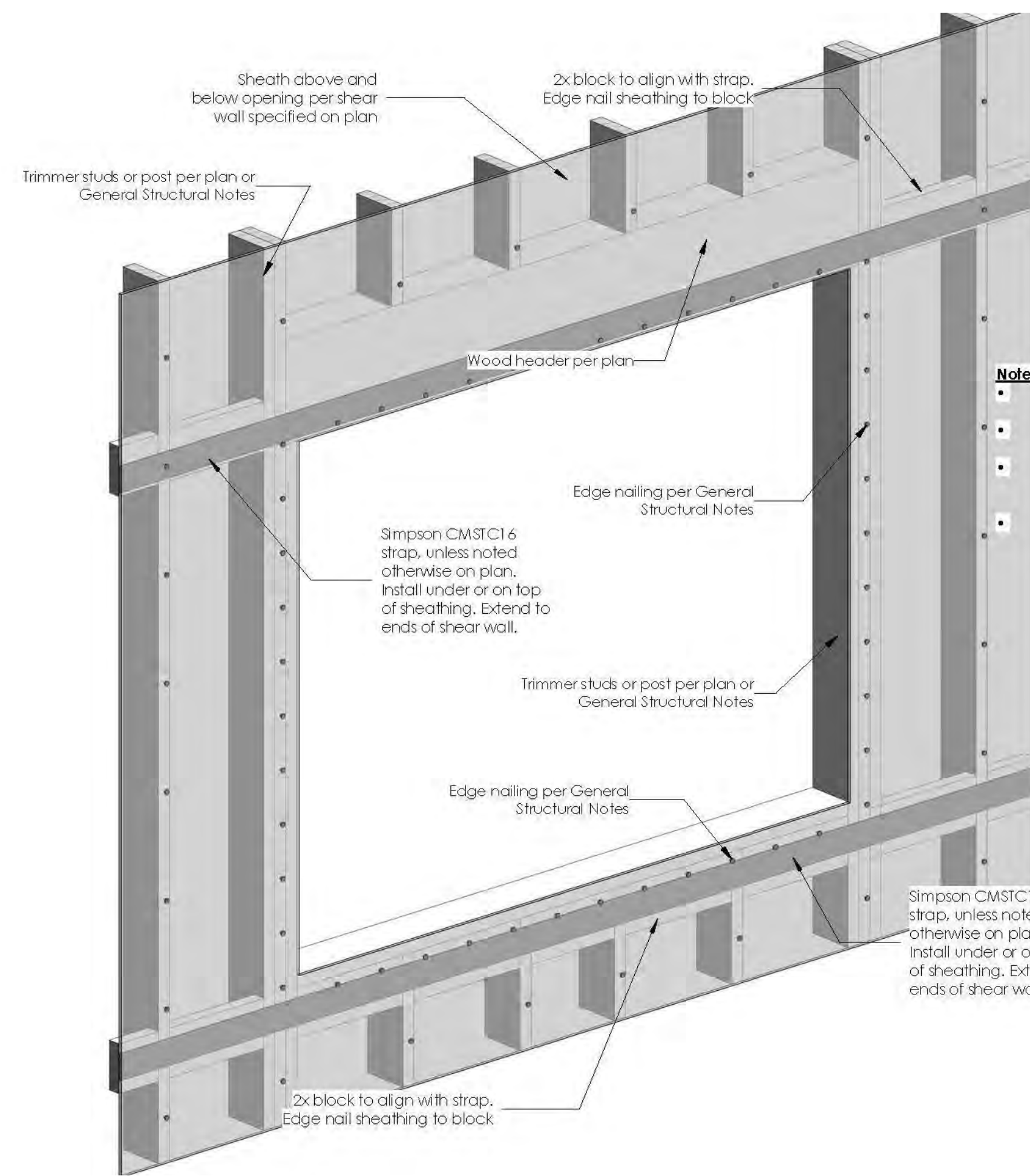
019 00 - GSN - Steel Column @ Steel Base Plate
1" = 1'-0"



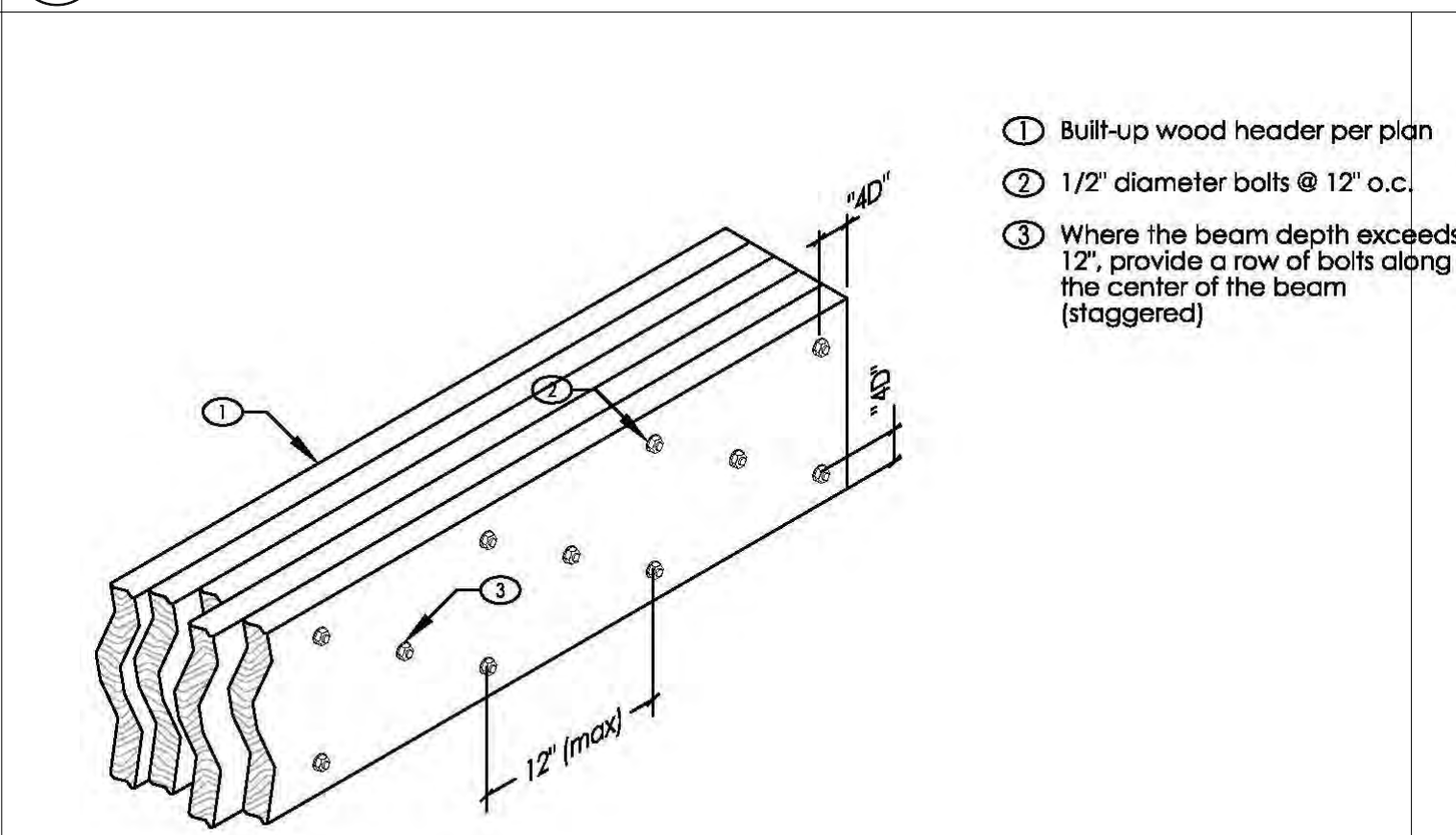
020 00 - GSN - Steel Column Adjacent to Wood Framing
1" = 1'-0"



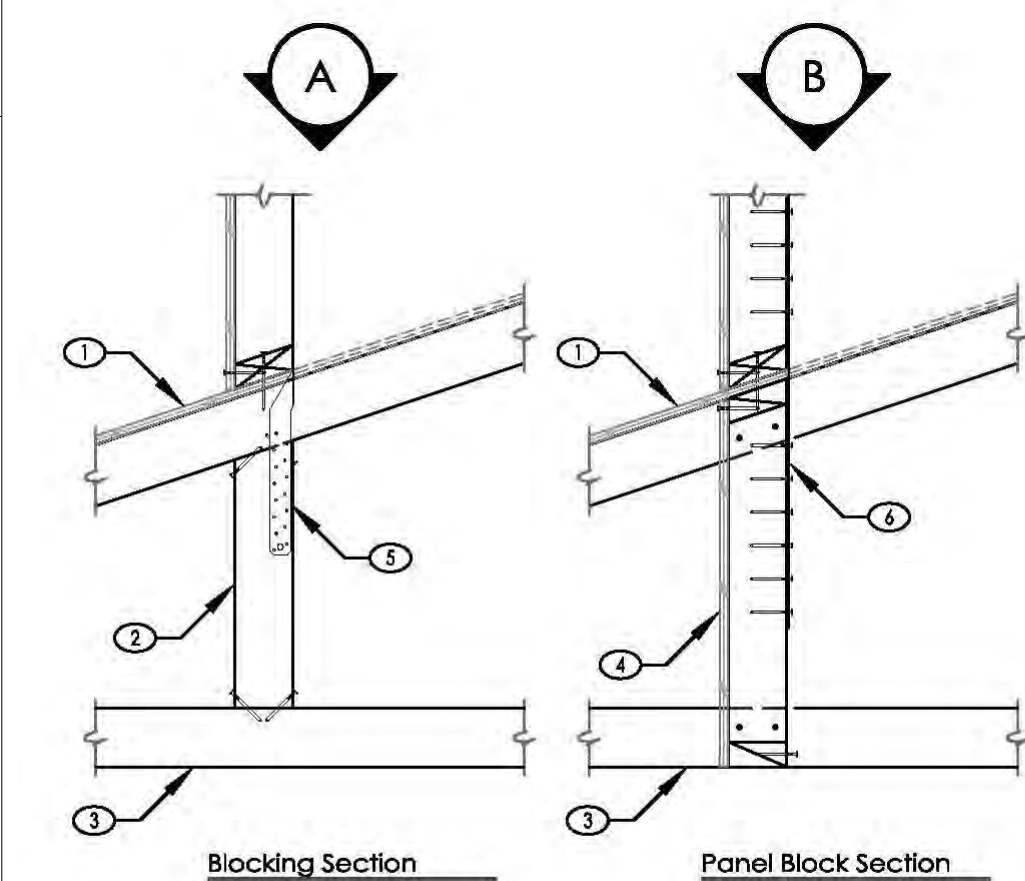
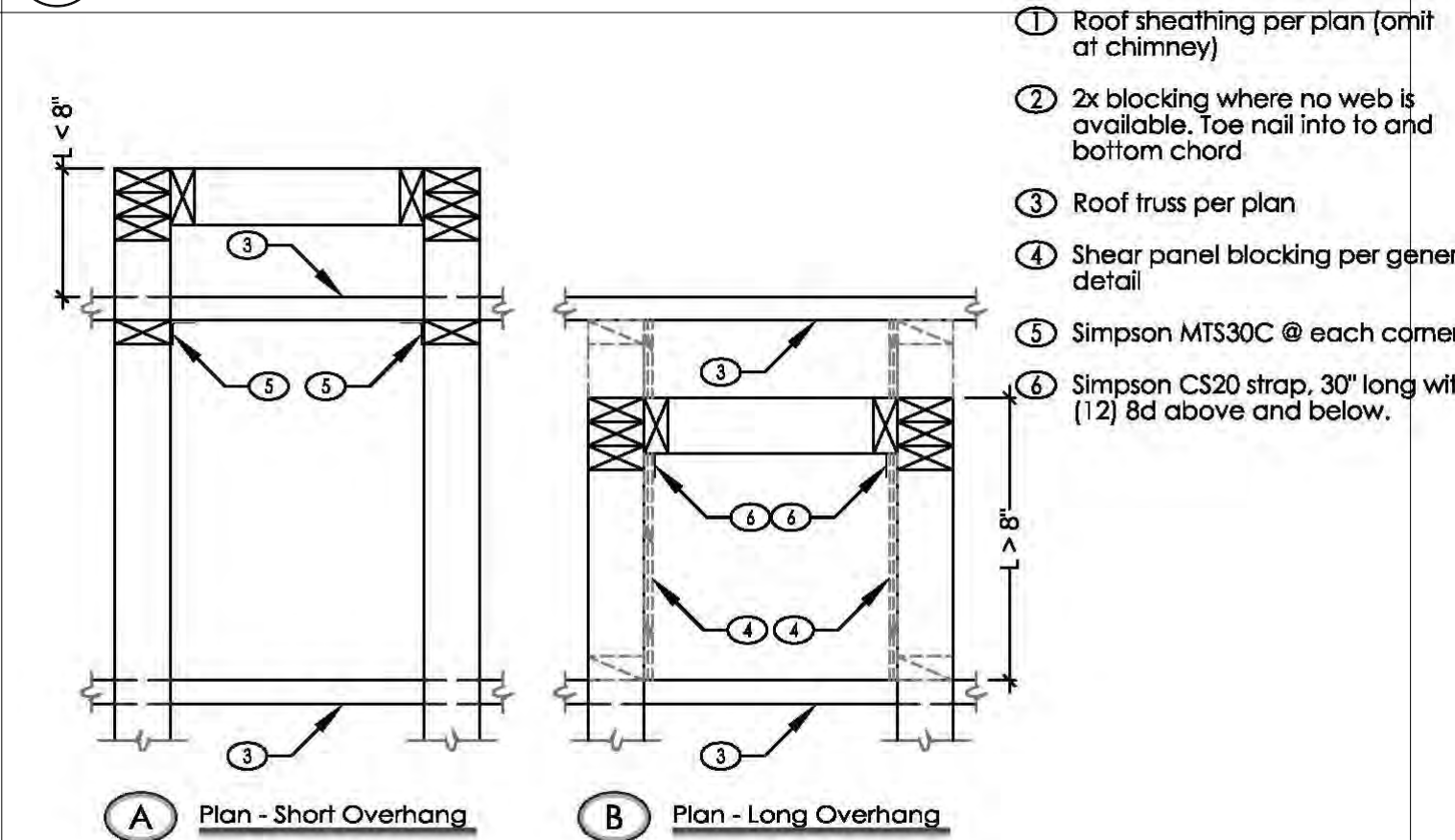
021 GSN Continuity Channel
3/8" = 1'-0"



012 00 - GSN - Large Opening in Plywood Shear Wall
1" = 1'-0"



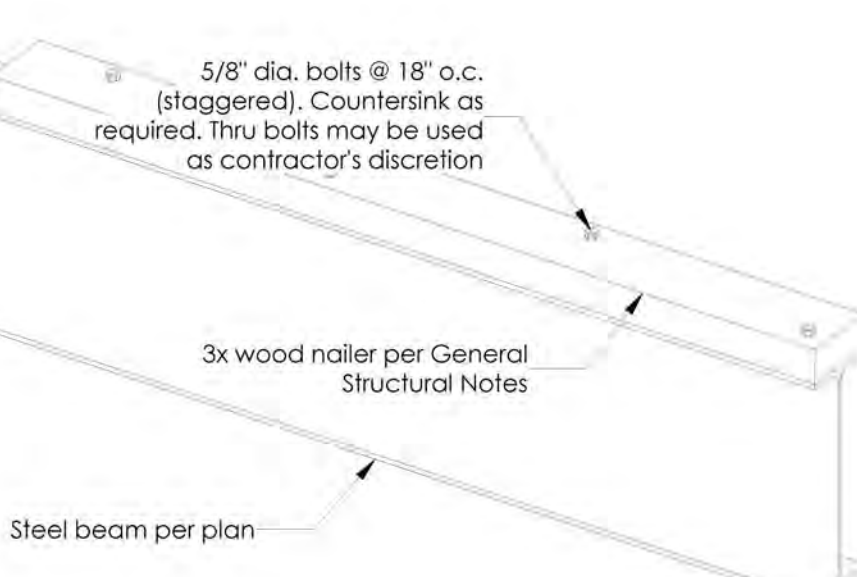
015 GSN Built-up Beam Connection
3/8" = 1'-0"



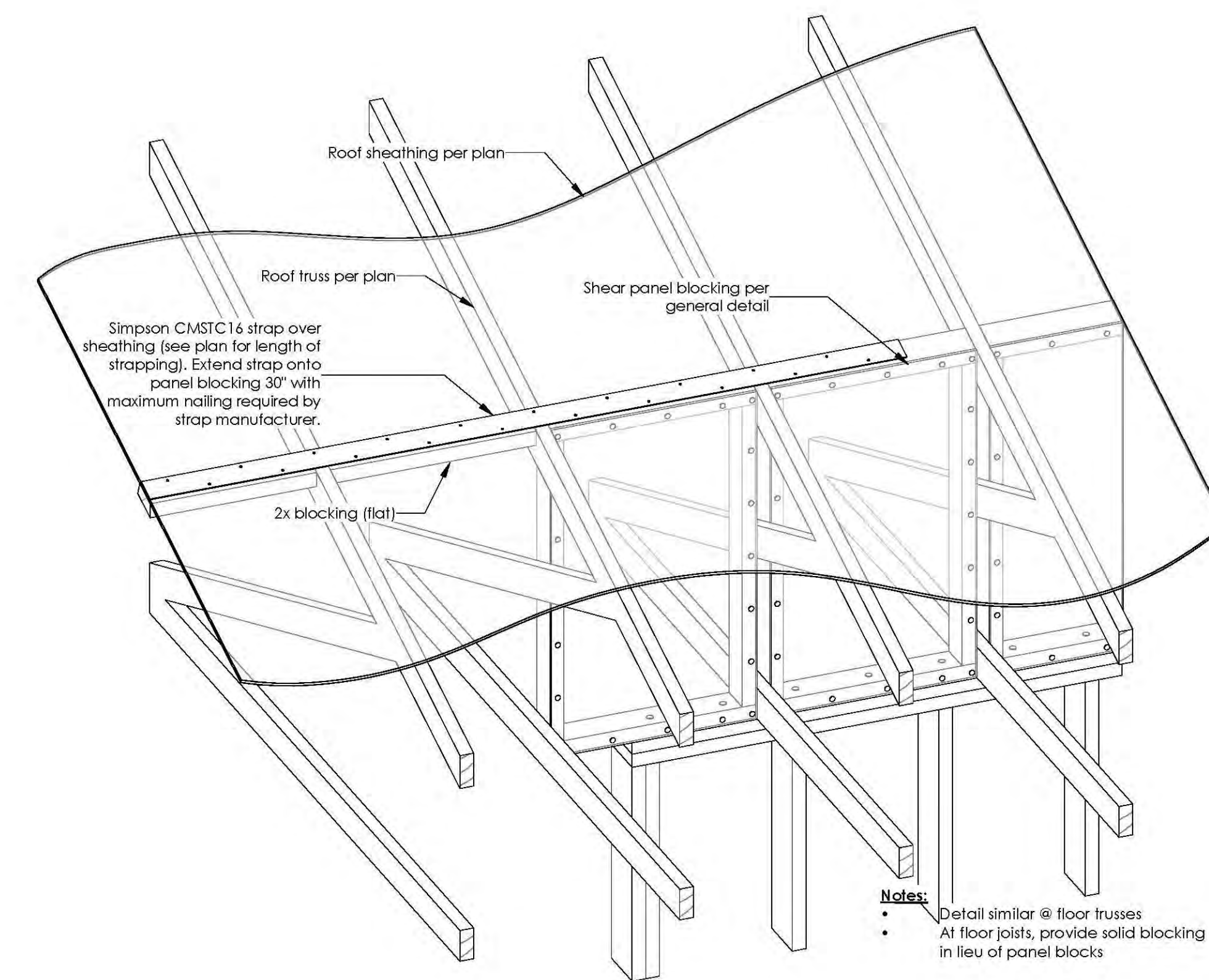
013 00 - GSN - Top Plate Splice
1" = 1'-0"

016 GSN Chimney Framing 01
3/8" = 1'-0"

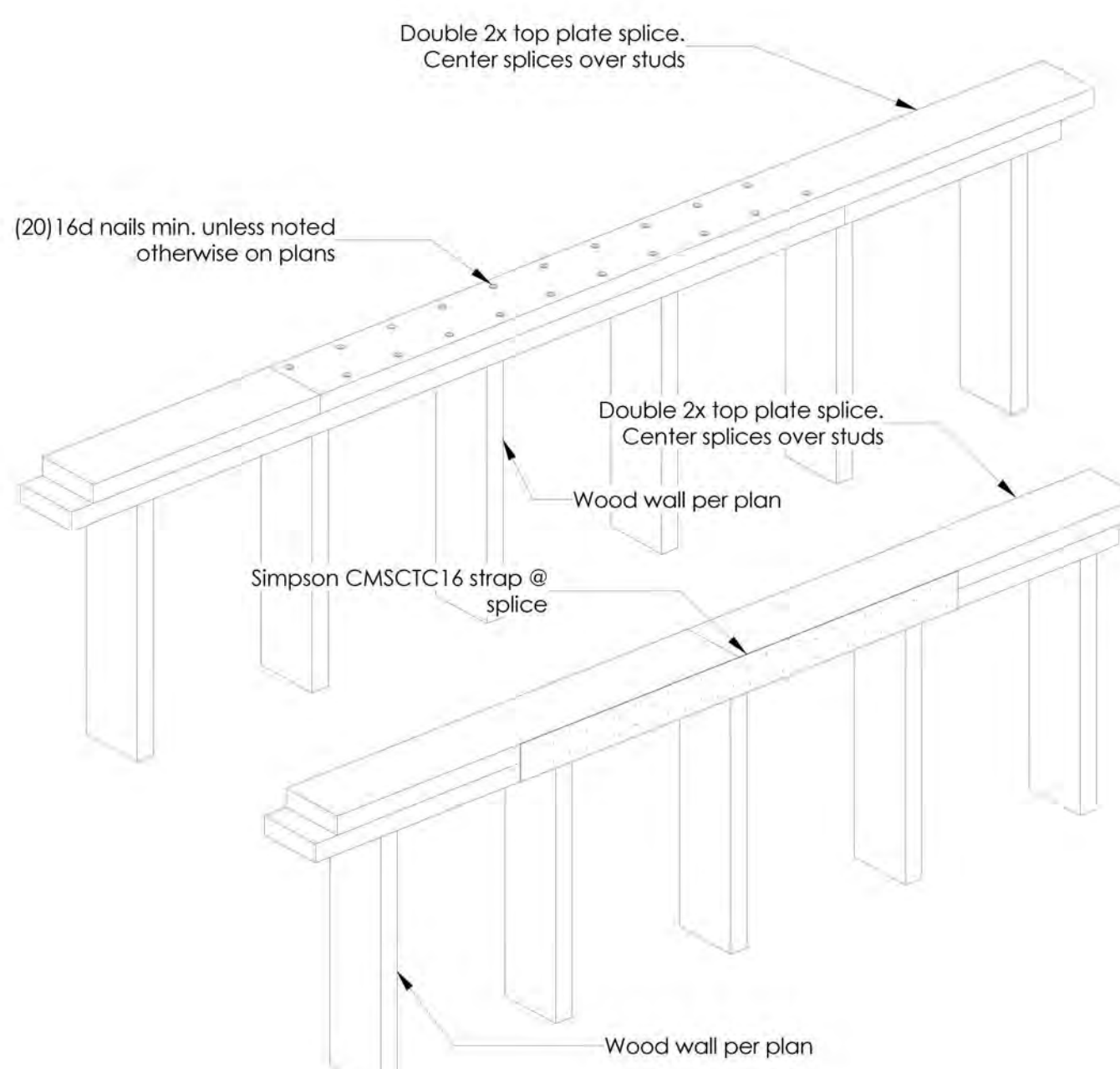
014 00 - GSN - Wood Nailer @ Steel Beam
1" = 1'-0"



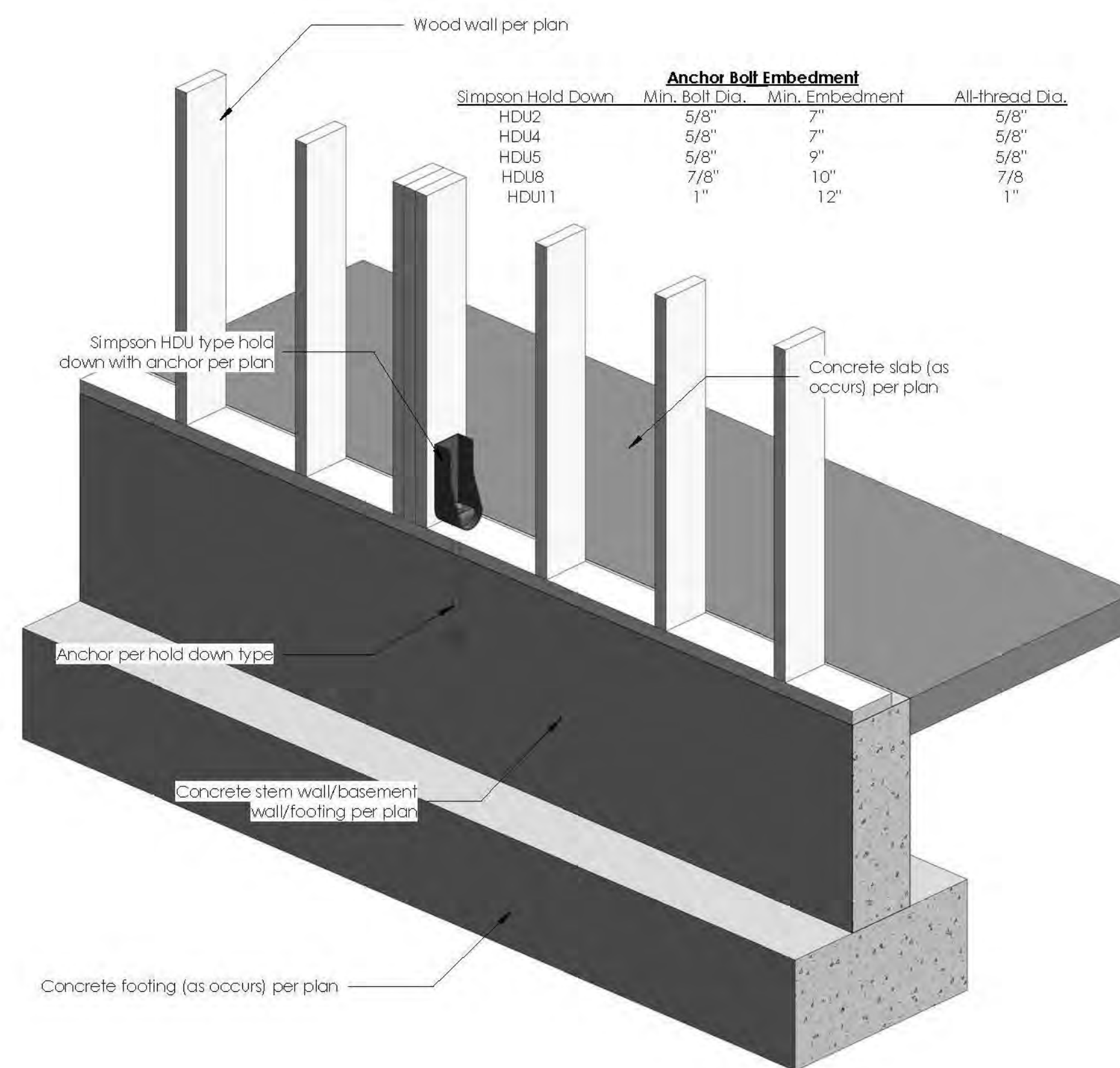
014 00 - GSN - Wood Nailer @ Steel Beam
1" = 1'-0"



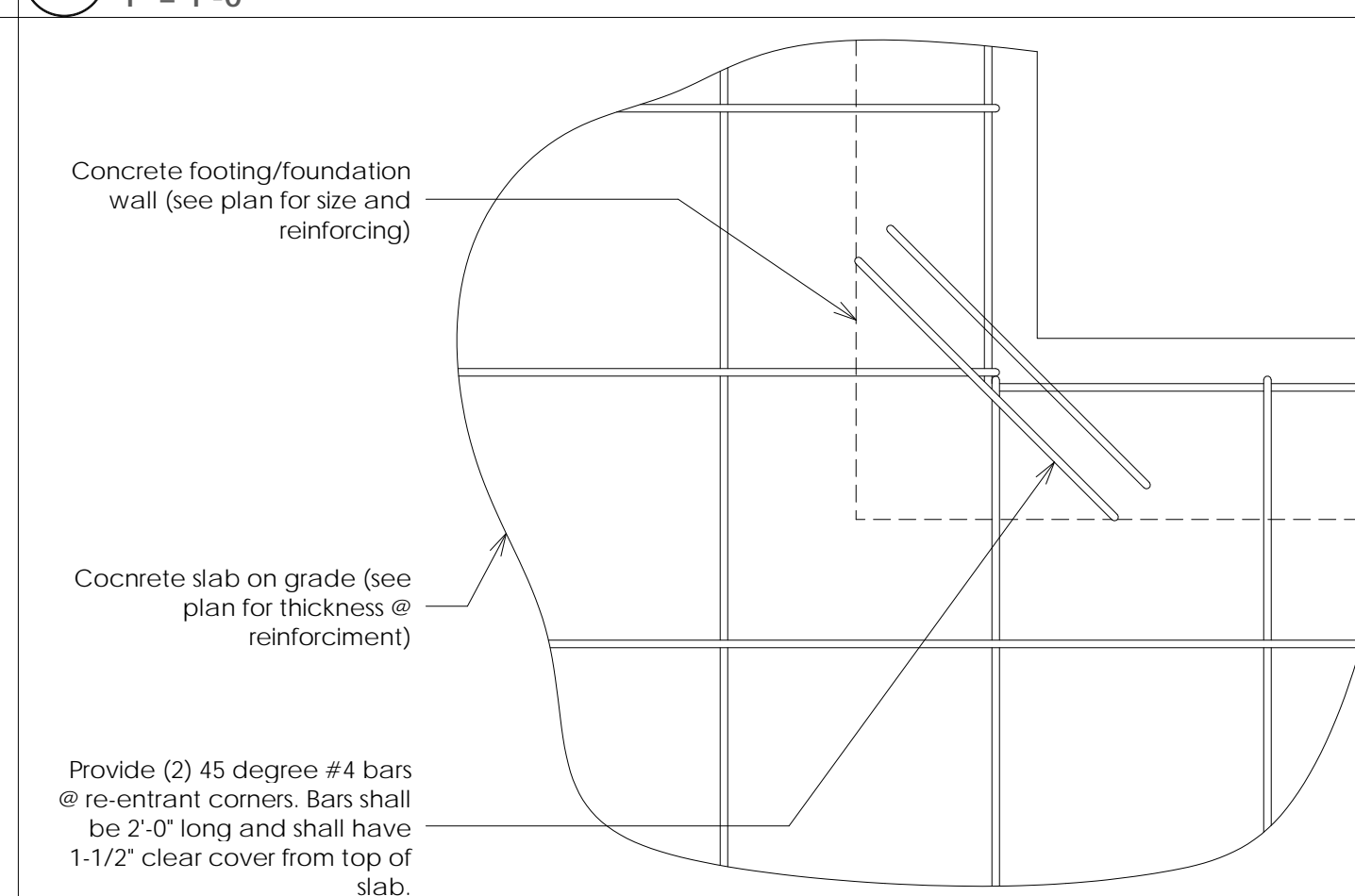
008 00 - GSN - Drag Strut @ Wood Wall
1" = 1'-0"



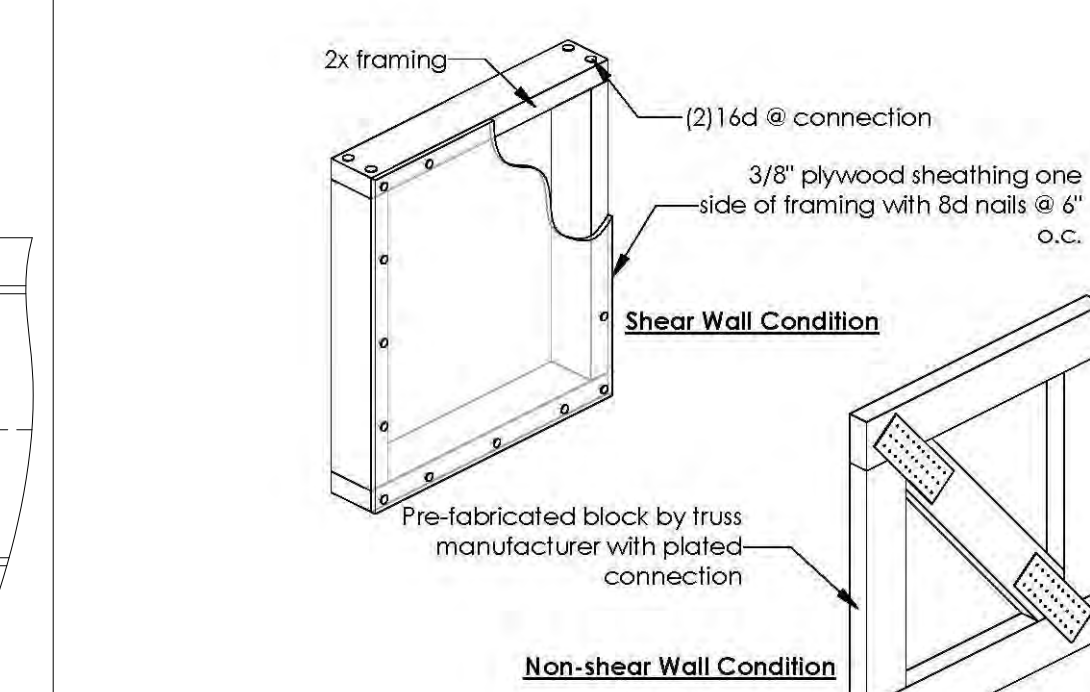
015 GSN Built-up Beam Connection
3/8" = 1'-0"



009 00 - GSN - Embedment @ Hold Down Anchor
1" = 1'-0"

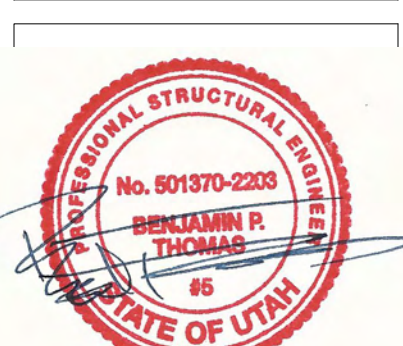


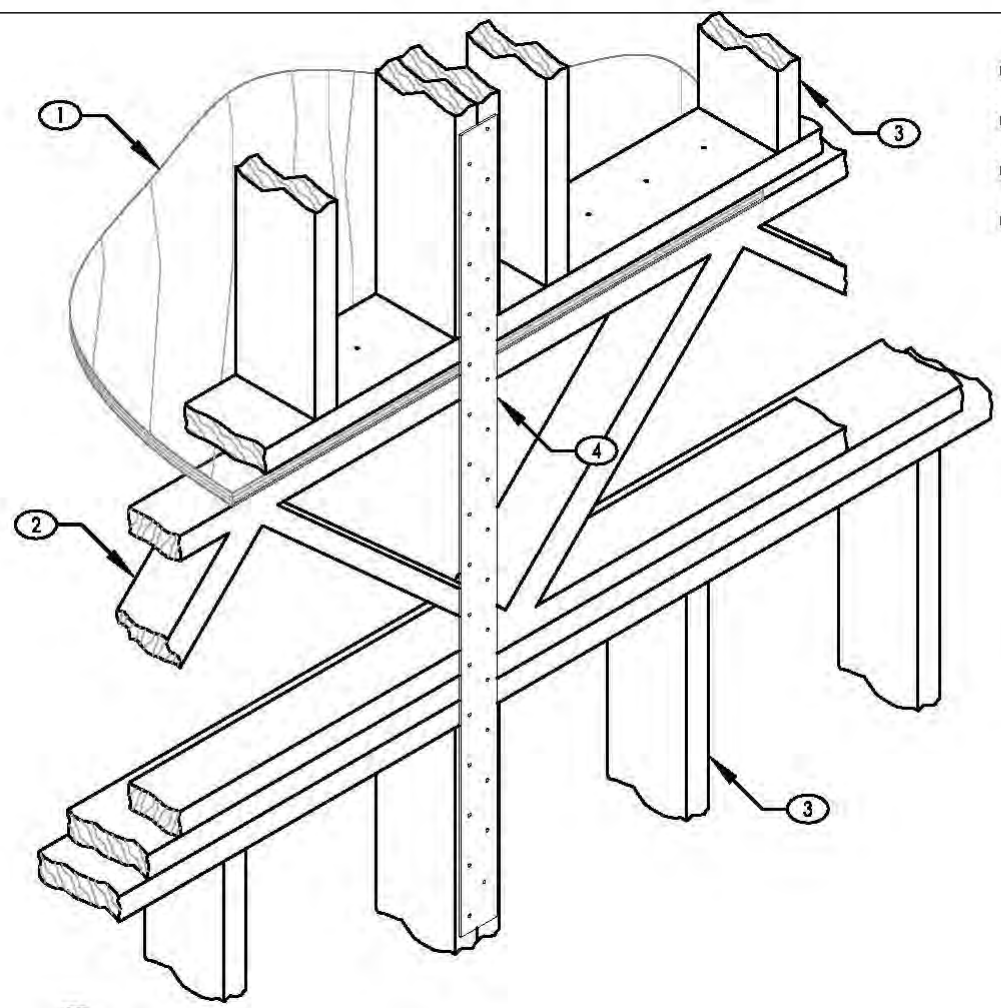
010 00 - GSN - Reinforcing @ Re-entrant Corners
1" = 1'-0"



011 00 - GSN - Panel Blocking
1" = 1'-0"

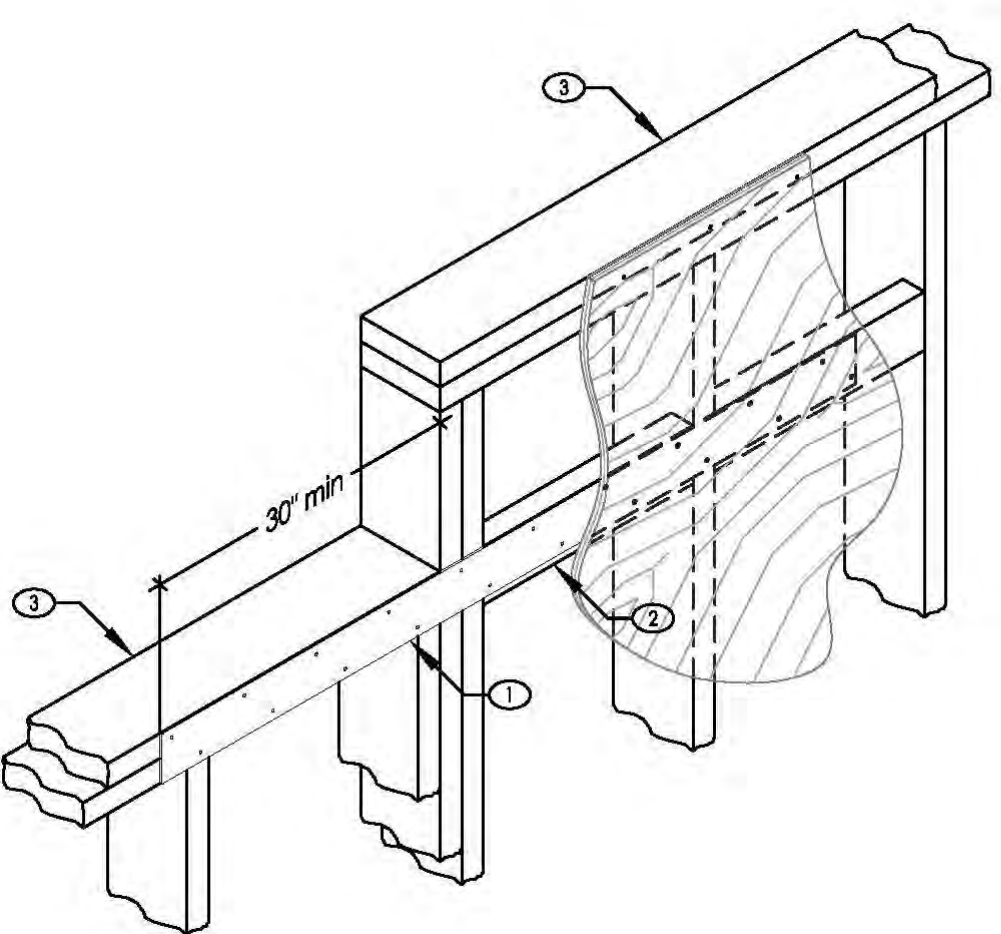
No.	Description	Date





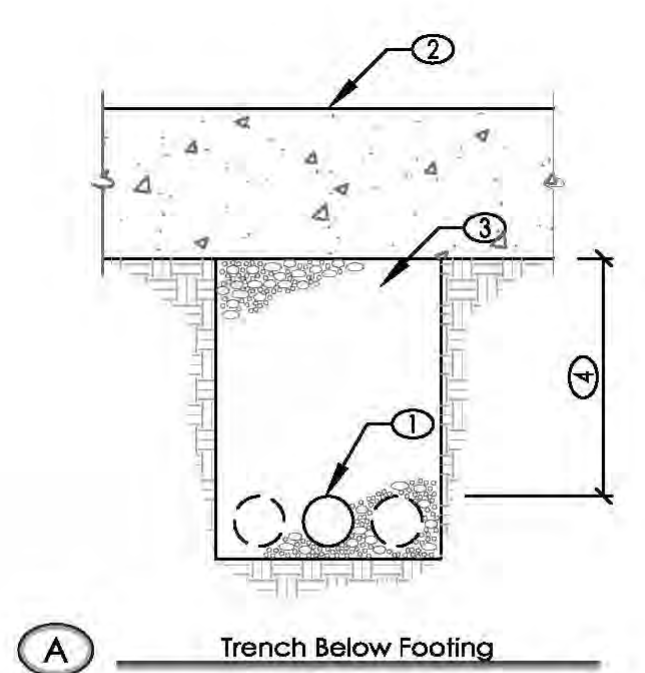
- 1 Floor sheathing per plan
- 2 Floor truss per plan
- 3 Wood wall per plan
- 4 Simpson holddown strap per plan

030 GSN Hold Down Strap @ Wood Wall
3/8" = 1'-0"



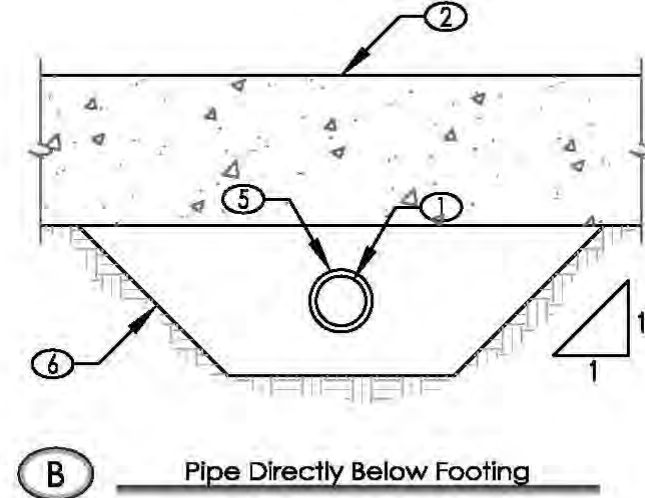
- 1 Simpson CMSTC16 top plate to blocking
- 2 2x6 flat blocking (extend 3 bays minimum)
- 3 Double 2x top plate

031 GSN Step @ Top Plate
3/8" = 1'-0"

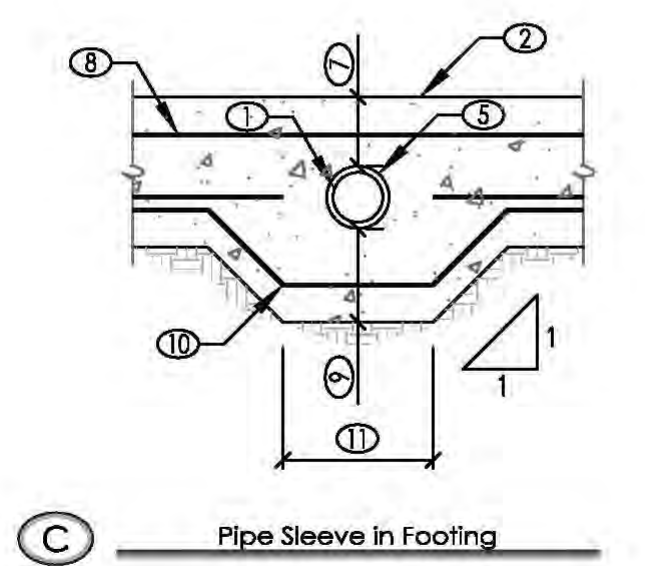


- 1 Utility pipe as occurs
- 2 Concrete footing per plan
- 3 Backfill & recompact trench per soils report
- 4 18" min. unless noted otherwise in soils report. For pipes located less than 18" below footing see details B & C
- 5 Pipe sleeve with inside dia. to allow 1/2" clearance between pipe and sleeve on all sides
- 6 Concrete fill to match footing width. See Structural General Notes for concrete mix specifications
- 7 6" min. to allow top reinforcing and embedded rebar to maintain min. concrete coverage per Structural General Notes
- 8 Top footing reinforcing per plan or (2) #4 x 48" min. centered over pipe
- 9 Thicken footing @ sleeve (6" min.) such that dimension above (per 7) plus thickened dimension equals or exceeds min. footing thickness per plan
- 10 Provide bent bars as necessary for bottom footing reinforcement to be continuous below pipe sleeve. Lap per Structural General Notes
- 11 Dimension to equal or exceed 2 times outside diameter of sleeve (12" min.)

A Trench Below Footing



B Pipe Directly Below Footing



C Pipe Sleeve in Footing

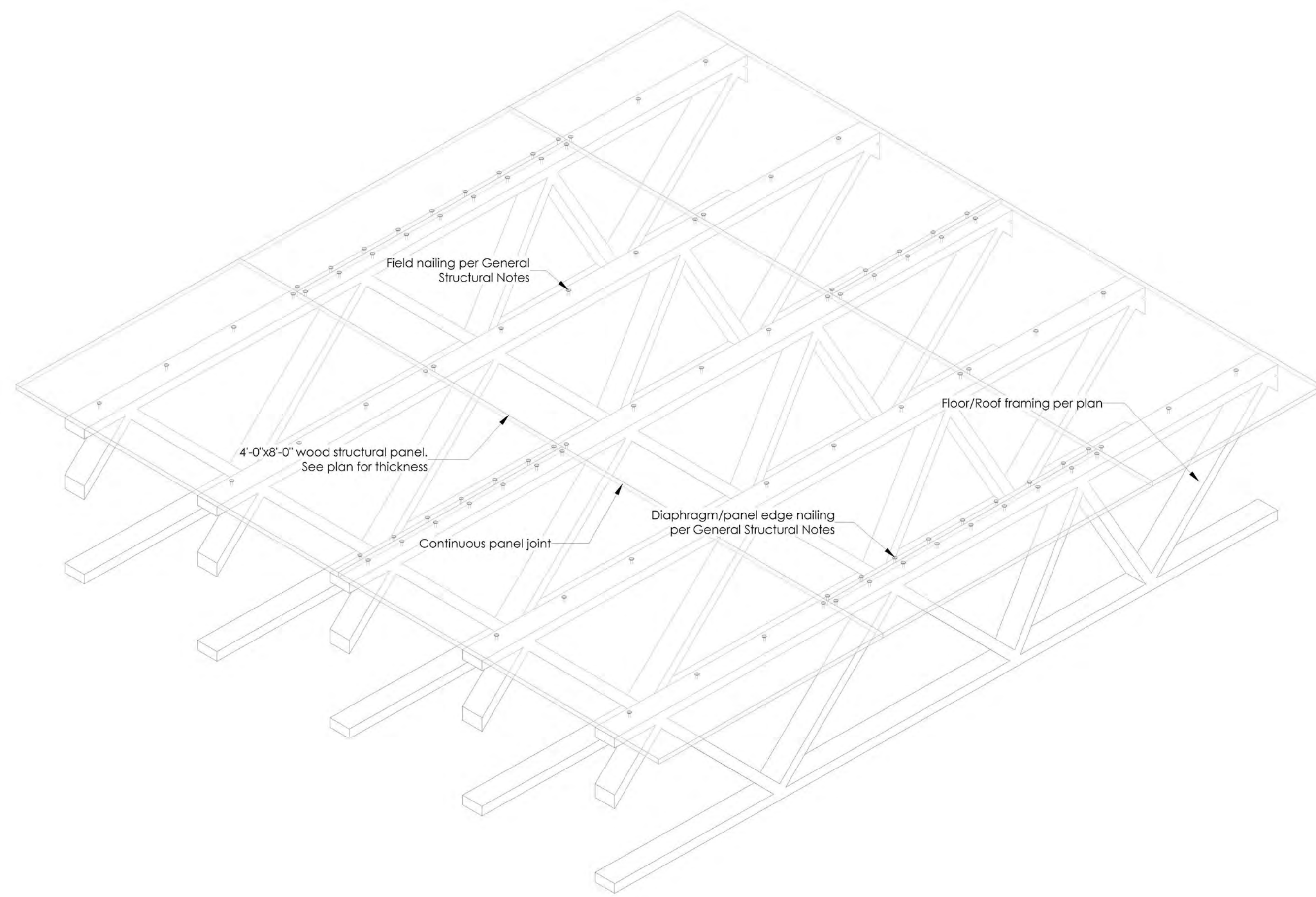
NOTES:
A. All backfill operations per detail A to be completed and approved by geotechnical engineer prior to placing concrete footings.
B. Notify engineer 48 hours min. prior to placing concrete where detail C is req'd.

032 GSN Utility Pipe @ Concrete Footing
3/8" = 1'-0"

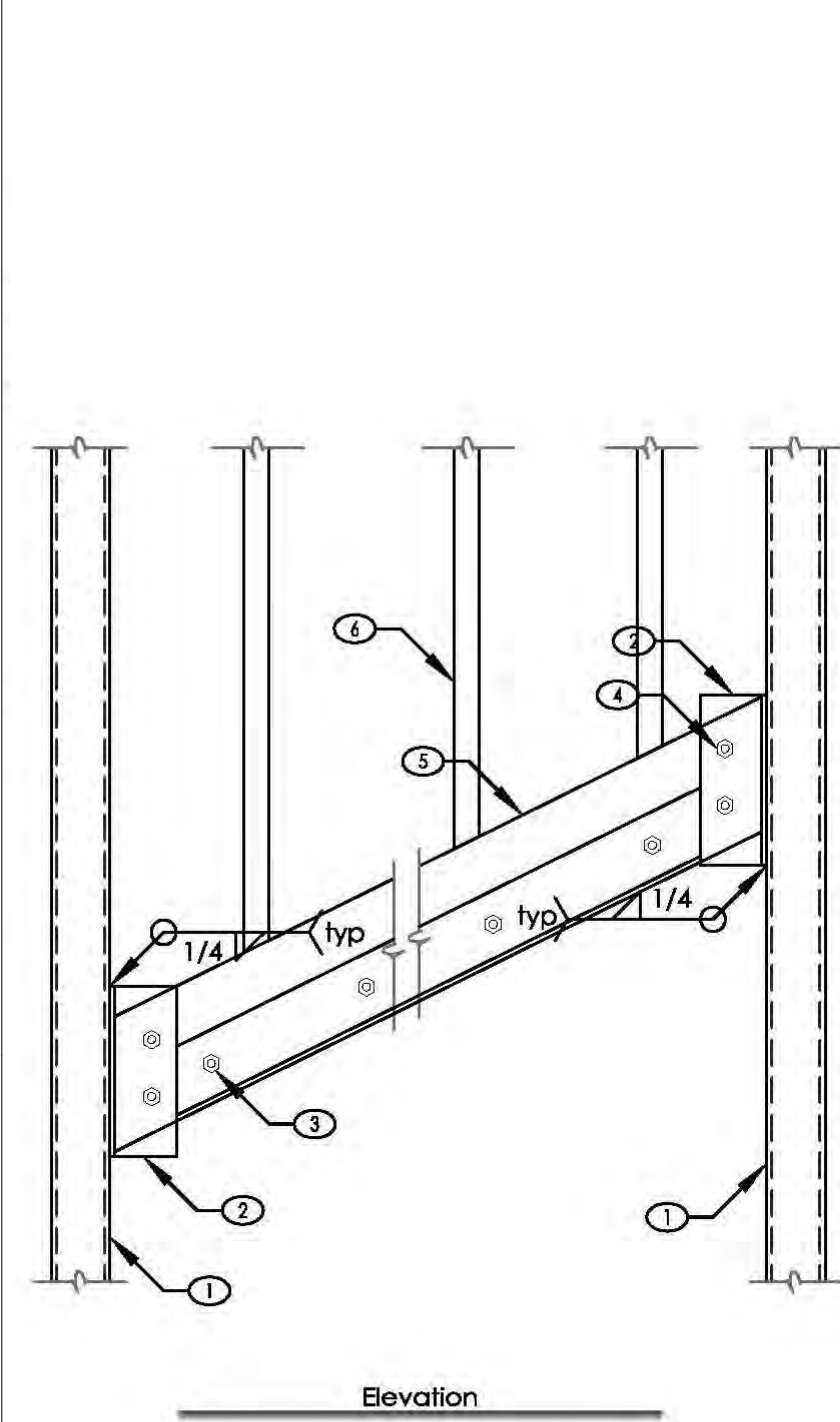


- 1 Floor sheathing per plan
- 2 Floor truss per plan
- 3 Wood wall per plan
- 4 4x6 blocking with Simpson HUS46TF hanger @ each end (not shown for clarity)
- 5 Simpson holddown strap per plan

029 GSN Hold Down Strap @ Wood Truss 02
3/8" = 1'-0"

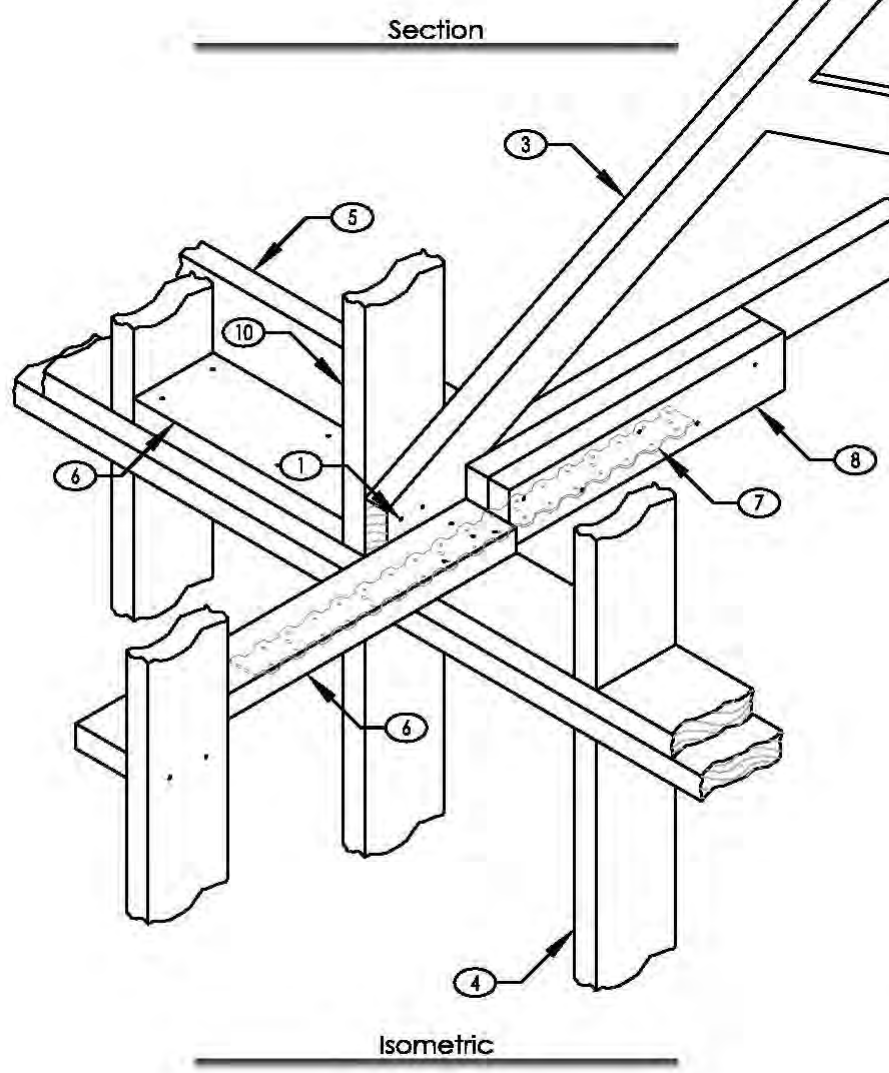
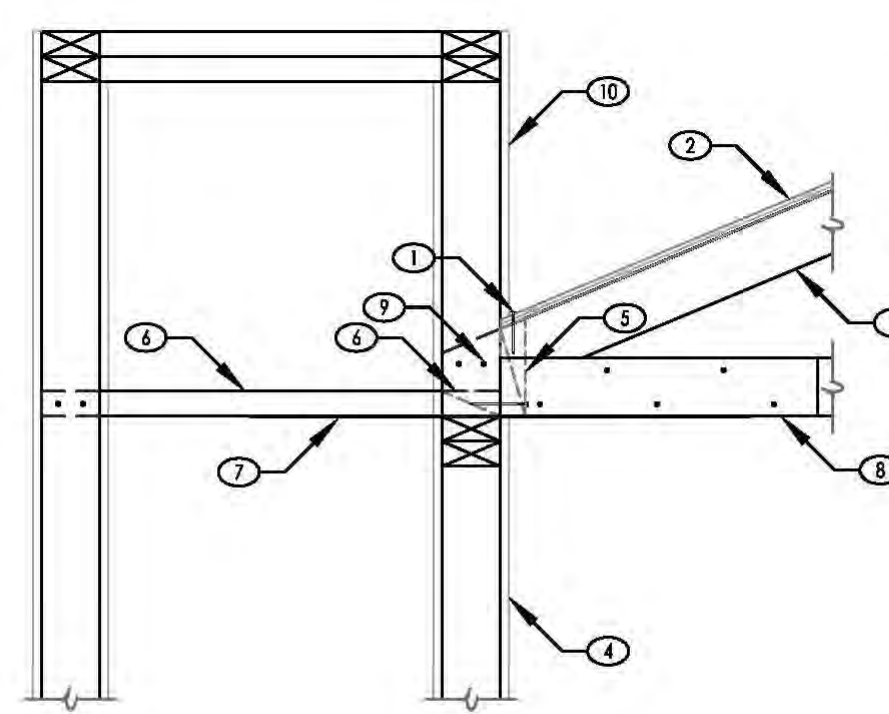


00 - GSN - Unblocked Diaphragm
1" = 1'-0"



028 GSN Chimney Framing-Veneer Ledge
3/8" = 1'-0"

- 1 Steel column per plan
- 2 Steel angle - L3x4x5/16 steel angle.
- 3 1/2" dia thru bolts @ 12" o.c.
- 4 (2) 1/2" dia thru bolts (min)
- 5 (2) 2x10
- 6 Wood trimmer studs



026 GSN Chimney Framing 02
3/8" = 1'-0"

- 1 Edge nailing per Structural General Notes
- 2 Roof sheathing per plan (not shown on isometric view for clarity)
- 3 Roof truss per plan
- 4 Wood wall per plan
- 5 2x blocking with (3) 16d nails at each block (where depth exceeds 11-1/4", use panel blocking per GSN.)
- 6 2x blocking
- 7 Simpson MSTC40
- 8 2x nailer added to truss. Length of block shall be 1/2 strap length + 4". Attach to bottom chord of truss with 16d nails @ 4" o.c. (staggered)
- 9 (2) 16d nails (truss to stud)
- 10 Pony wall (studs to match truss spacing)

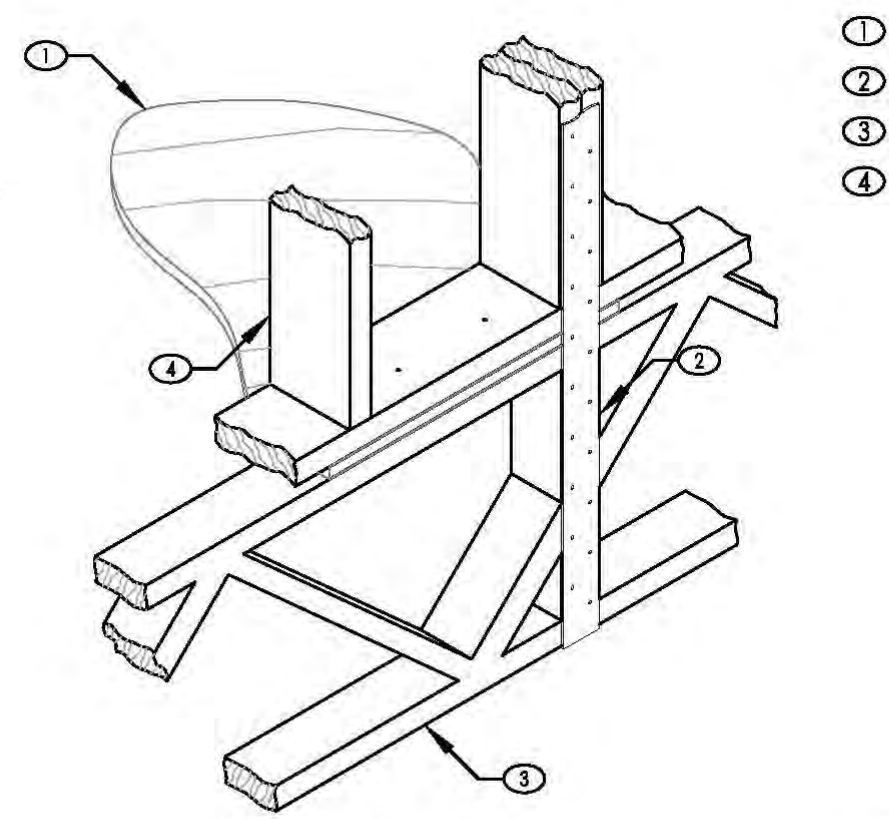
NOTES:
Sheath entire perimeter of chimney box with SW1 minimum (unless noted otherwise)

027 GSN Hold Down Strap @ Wood Truss 01
3/8" = 1'-0"

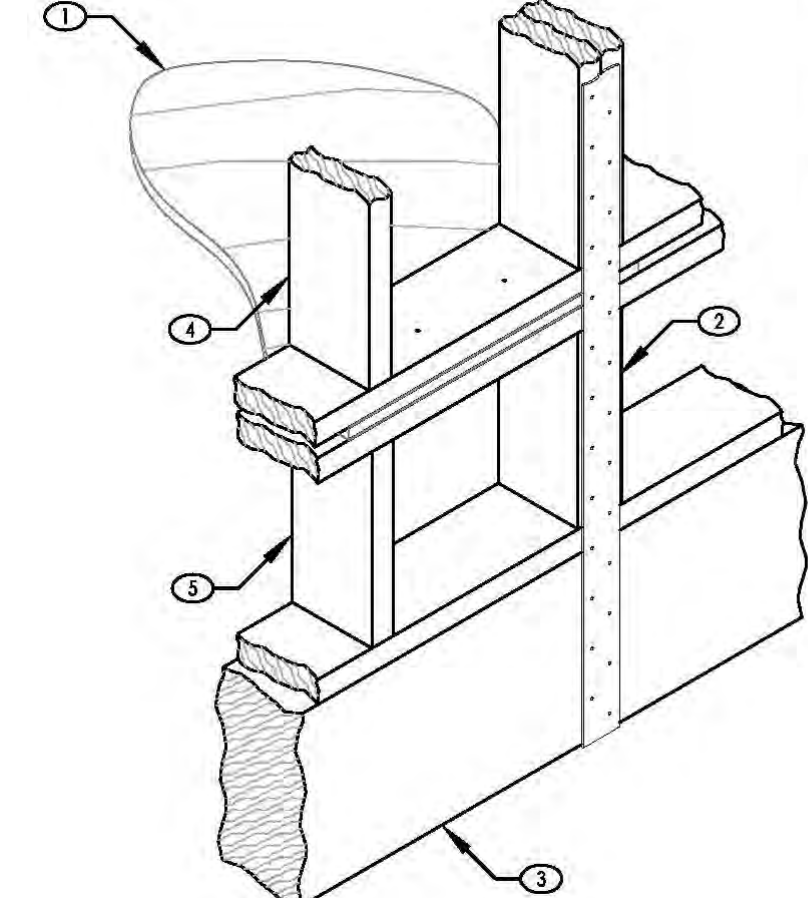
024 GSN Hold Down Strap @ Wood Beam
3/8" = 1'-0"

023 GSN Hold Down Strap @ Steel Beam
3/8" = 1'-0"

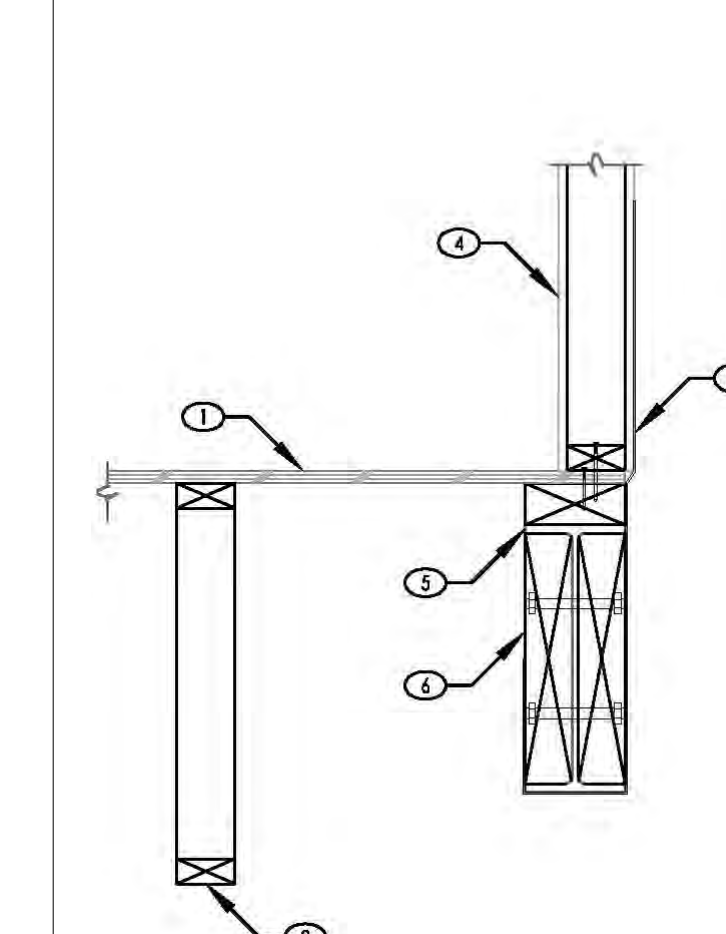
- 1 Floor sheathing per plan
- 2 Simpson holddown strap per plan
- 3 Wood truss per plan
- 4 Wood wall per plan



NOTES:
Truss designer shall provide panel joint and vertical web member at strap to receive nailing.



- 1 Floor sheathing per plan
- 2 Simpson holddown strap per plan
- 3 Wood beam per plan
- 4 Wood wall per plan
- 5 Wood cripple wall per plan



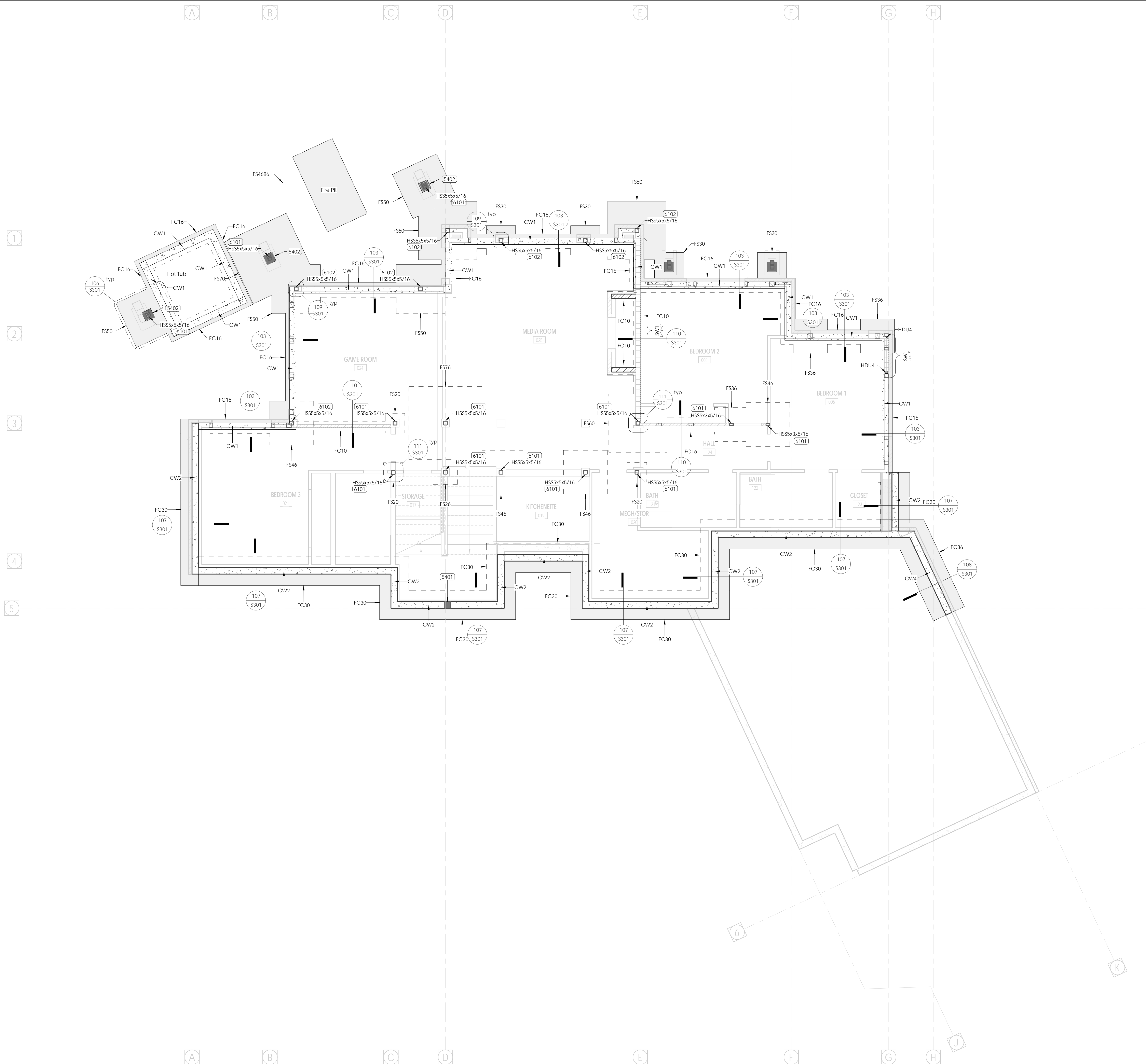
- 1 Floor sheathing per plan
- 2 Floor truss per plan (as occurs)
- 3 Simpson holddown strap per plan
- 4 Wood wall per plan
- 5 Steel beam per plan
- 6 Wood filler with (2) 3/4" dia thru bolts

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No.	Description	Date



Date of	8/27/2019 10:12:27 AM
General Details (cont.)	
Date	9/4/18
Drawn By	BPT
Checked By	BPT
S105	
Scale	As Indicated



Footing & Foundation Plan Notes

- 1 Verify all dimensions with architect prior to start of construction.
- 2 Verify locations of all inserts in slab with the architectural, mechanical, plumbing, and electrical plans prior to the placement of concrete slab.
- 3 Concrete slab on grade shall be 4" thick over 2" sand over 10 mil visqueen (vapor barrier) over 4" type II aggregate base material. Recommended reinforcement of the concrete slab shall be #3 bars at 18" o.c. each way (for best crack control results, every other bar should be cut at control joints). As an alternate, 6 x 6 - W2 1 x W2 1 welded wire fabric (in sheets), centered in slab thickness.
- 4 Anchor bolts and holddowns shall be secured in place prior to the placement of concrete, and shall be installed per the manufacturers specifications and the General Notes.
- 5 All site walls, sidewalks, or other architectural features shall be by others (unless noted otherwise).
- 6 The finished surface of the slab on grade shall be noted as 100'-0" (elevation) unless noted otherwise on the footing and foundation plan.
- 7 Size and reinforcement of isolated and continuous footings shall be per the footing schedule below.
- 8 All exterior footings shall bear below frost depth (42") according to the soils report or applicable building codes.

Keynotes

Key Note	Keynote Text
5401	Concrete pier - provide (4) #4 bars vertically full wall height with #3 ties @ 6" o.c.
5402	Concrete pier - provide 12"x12" with (1) #4 vertical bar at each corner of the pier (4 total). Provide #3 ties @ 4" o.c. full height of pier.
6101	Provide 11"x11"x3/4" base plate with (4) 3/4" diameter anchor bolts into concrete footing/pier
6102	Provide 5"x11"x3/4" base plate with (2) 3/4" diameter anchor bolts into concrete stem wall

Plywood Shear Wall Schedule

* Where 1-1/8" plywood is used for floor sheathing, use 1/4"x4" screws in lieu of 16d nails.

Mark	Sheathing Thickness	Edge Nailing	Bottom Plate Attachment	Minimum Sill Plate Thickness
SW1	3/8" plywood, blocked, one side of wall	8d @ 6" o.c.	1/2" dia. anchor bolts @ 32" o.c.	16d @ 6" o.c.
SW2	3/8" plywood, blocked, one side of wall	8d @ 4" o.c.	1/2" dia. anchor bolts @ 32" o.c.	16d @ 6" o.c.
SW3	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c.	1/2" dia. anchor bolts @ 10" o.c.	16d @ 3" o.c.
SW3 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c.	1/2" dia. anchor bolts @ 20" o.c.	16d @ 3" o.c.
SW4	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c.	1/2" dia. anchor bolts @ 8" o.c.	---
SW4 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c.	---	1/4" dia. x 5" long screws @ 6" o.c.
SW5	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 4" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 4" o.c.
SW6	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 4" o.c.
SW7	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 4" o.c.

Plywood Shear Wall Notes

- Shear wall studs shall be placed at 16" o.c. maximum. Framing and blocking at panel edges (where noted above) shall be 2x minimum, unless noted otherwise.
- Provide (2) full height studs (min.) at ends of shear walls, unless noted otherwise on plans, details, or hold down requirements. Shear walls without hold downs require (1) stud at each end of shear wall (min.) Trimmer stud may be counted as an end stud at non-bearing walls.
- Plywood may be installed either horizontally or vertically, unless noted otherwise.
- Use A.B. (Anchor Bolts) noted per G.S.N. details, and this schedule for bottom sill plate attachment at foundation. Use staggered nails as noted in the schedule for bottom plate attachment at elevated shear walls. See G.S.N. for optional shot-pins and epoxy bolts where allowed by G.S.N.
- Where sheathing is interrupted by intersecting wall, provide continuity channel per General Details.
- Multiple 2x studs at holddowns shall be stitch-nailed together with 16d sinkers at 6" o.c. (staggered).
- All field nailing shall be at 12" o.c. with the same size nail specified for edge nailing.
- Anchor bolts for shear walls shall include steel plate washers, 229"x232", in size between the sill plate and the nut. The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16" larger than the bolt diameter and a slot length not to exceed 1-3/4", provided a standard cut washer is placed between the plate washer and the nut. Where a single 2" nominal sill plate is used, (2)20d box nails shall be substituted for (2)16d common nails for the end nail connection of the stud to the sole plate.
- (2)2x framing may be used in lieu of the 3x nominal framing is called out on the schedule. (2)2x framing shall be stitch-nailed together with 16d sinkers @ 6" o.c. (staggered).

Concrete Wall Schedule

Mark	Wall Thickness	Vertical Reinforcing	Horizontal Reinforcing	Top & Bottom Bars	Notes
CW1	8"	#4 @ 12" o.c.	#4 @ 12" o.c.	(2)#4 bars	Center bars in wall
CW2	8"	#5 @ 12" o.c.	#5 @ 12" o.c.	(2)#5 bars	Provide 6" clear from soil side of wall
CW4	8"	#5 @ 8" o.c.	#5 @ 12" o.c.	(2)#5 bars	Provide 6" clear from soil side of wall

Continuous Footing Schedule

Mark	Width	Thickness	Longitudinal Reinforcing			
			No.	Size	Length	Spacing
FC10	1'-0"	1'-0"	2	#4	Continuous	Equal
FC16	1'-6"	1'-0"	3	#4	Continuous	Equal
FC26	2'-6"	1'-0"	4	#4	Continuous	Equal
FC30	3'-0"	1'-0"	5	#4	Continuous	Equal
FC36	3'-6"	1'-0"	6	#4	Continuous	Equal

Isolated Footing Schedule

Mark	Width	Length	Thickness	Crosswise Reinforcing			Longitudinal Reinforcing				
				No.	Size	Length	Spacing	No.	Size	Length	Spacing
FS20	2'-0"	2'-0"	12"	3	#4	1'-6"	Equal	3	#4	1'-6"	Equal
FS26	2'-6"	2'-6"	12"	4	#4	2'-0"	Equal	4	#4	2'-0"	Equal
FS30	3'-0"	3'-0"	12"	5	#4	2'-6"	Equal	#4	#4	2'-6"	Equal
FS36	3'-6"	3'-6"	12"	6	#4	3'-0"	Equal	6	#4	3'-0"	Equal
FS40	4'-0"	4'-0"	12"	6	#4	3'-6"	Equal	6	#4	3'-6"	Equal
FS46	4'-6"	4'-6"	12"	7	#4	4'-0"	Equal	7	#4	4'-0"	Equal
FS50	5'-0"	5'-0"	12"	8	#4	4'-6"	Equal	8	#4	4'-6"	Equal
FS60	6'-0"	6'-0"	12"	9	#4	5'-6"	Equal	9	#4	5'-6"	Equal
FS70	7'-0"	7'-0"	12"	11	#4	6'-6"	Equal	11	#4	6'-6"	Equal
FS76	7'-6"	7'-6"	12"	12	#4	7'-0"	Equal	12	#4	7'-0"	Equal
FS4686	4'-6"	8'-6"	12"	7	#4	8'-0"	Equal	15	#4	4'-0"	Equal

1 S201 - Basement Footing & Foundation Plan
1/4" = 1'-0"




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Burton Solitude Spec Home

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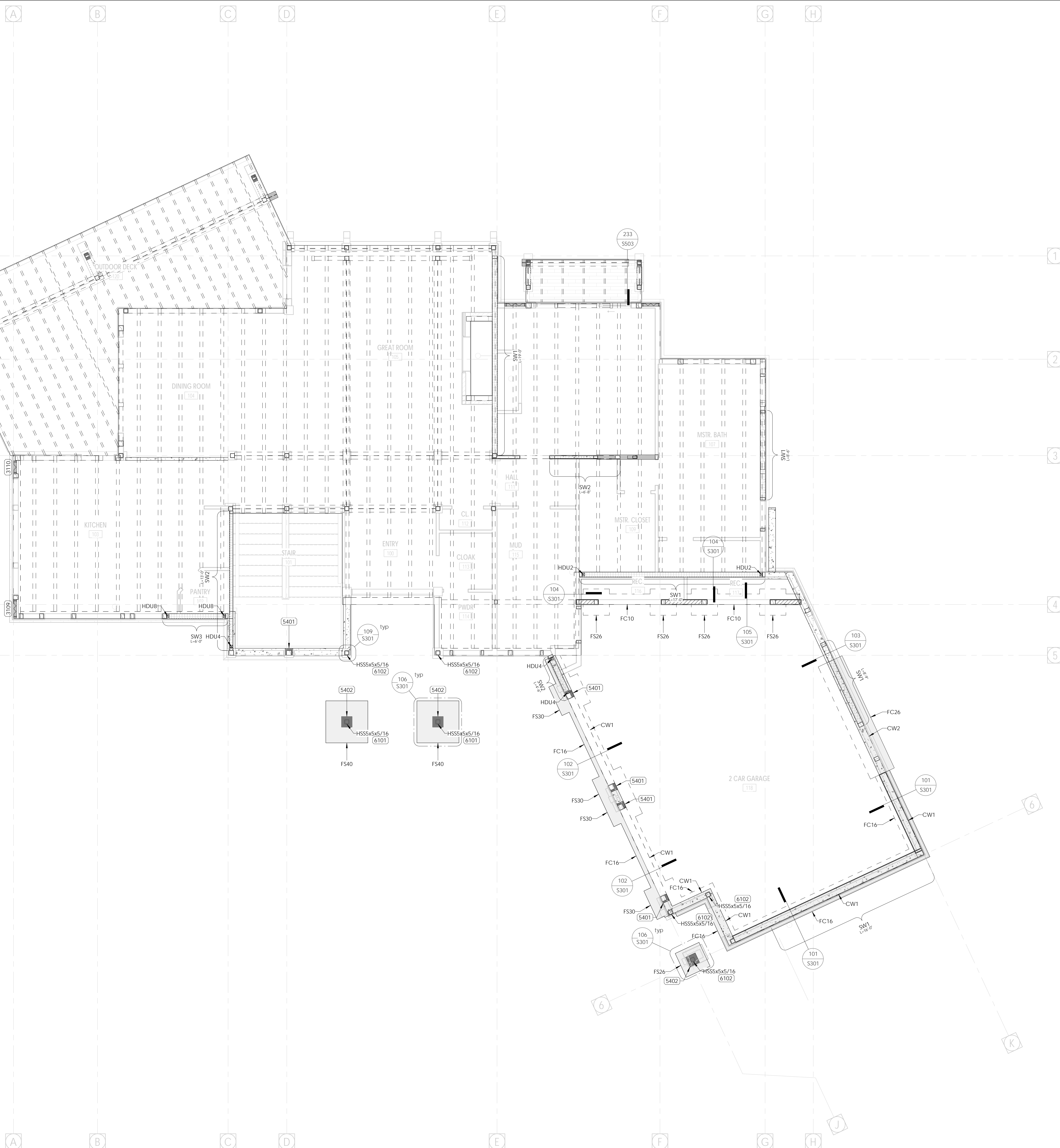
Date of
8/27/2019 10:12:29 AM

Basement Footing & Foundation Plan

Date 9/4/18
Drawn By BPT
Checked By BPT

S201

Scale 1/4" = 1'-0"



Footing & Foundation Plan Notes

- 1 Verify all dimensions with architect prior to start of construction.
- 2 Verify locations of all inserts in slab with the architectural, mechanical, plumbing, and electrical plans prior to the placement of concrete slab.
- 3 Concrete slab on grade shall be 4" thick over 2" sand over 10 mil visqueum (vapor barrier) over 4" type II aggregate base material. Recommended reinforcement of the concrete slab should be #3 bars at 18" o.c. each way (for best crack control results, every other bar should be cut at control joints). As an alternate, 6 x 6 - W2 1 x W2 1 welded wire fabric (in sheets), centered in slab thickness, may be used.
- 4 Anchor bolts and holddowns shall be secured in place prior to the placement of concrete, and shall be installed per the manufacturers specifications and the General Notes.
- 5 All site walls, sidewalks, or other architectural features shall be by others (unless noted otherwise).
- 6 The finished surface of the slab on grade shall be noted as 100'-0" (elevation) unless noted otherwise on the footing and foundation plan.
- 7 Size and reinforcement of isolated and continuous footings shall be per the footing schedule below.
- 8 All exterior footings shall bear below frost depth (42") according to the soils report or applicable building codes.

Keynotes

Key Note	Keynote Text
3109	Simpson Strong-Wall - provide Simpson SSW21x12 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
3110	Simpson Strong-Wall - provide Simpson SSW15x12 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
5401	Concrete pier - provide (4) #4 bars vertically full wall height with #3 ties @ 6" o.c.
5402	Concrete pier - provide 12"x12" with (1) #4 vertical bar at each corner of the pier (4 total). Provide #3 ties @ 4" o.c. full height of pier.
6101	Provide 11"x11"x3/4" base plate with (4) 3/4" diameter anchor bolts into concrete footing/pier
6102	Provide 5/8"x11"x3/4" base plate with (2) 3/4" diameter anchor bolts into concrete stem wall

Plywood Shear Wall Schedule

* Where 1-1/8" plywood is used for floor sheathing, use 1/4"x4" screws in lieu of 16d nails.

Mark	Sheathing Thickness	Edge Nailing	Bottom Plate Attachment	Minimum Sill Plate Thickness
SW1	3/8" plywood, blocked, one side of wall	8d @ 6" o.c.	1/2" dia. anchor bolts @ 32" o.c.	16d @ 6" o.c.
SW2	3/8" plywood, blocked, one side of wall	8d @ 4" o.c.	1/2" dia. anchor bolts @ 32" o.c.	16d @ 6" o.c.
SW3	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c.	1/2" dia. anchor bolts @ 10" o.c.	16d @ 3" o.c.
SW3 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c.	1/2" dia. anchor bolts @ 20" o.c.	16d @ 3" o.c.
SW4	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c.	1/2" dia. anchor bolts @ 8" o.c.	...
SW4 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c.	...	1/4" dia. x 5" long screws @ 6" o.c.
SW5	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 4" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 6" o.c.
SW6	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 4" o.c.
SW7	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 4" o.c.

Plywood Shear Wall Notes

- Shear wall studs shall be placed at 16" o.c. maximum. Framing and blocking at panel edges (where noted above) shall be 2x minimum, unless noted otherwise.
- Provide (2) full height studs (min.) at ends of shear walls, unless noted otherwise on plans, details, or hold downs requirements. Shear walls without hold downs require (1) stud at each end of shear wall (min.) Trimmer stud may be counted as an end stud at non-bearing walls.
- Plywood may be installed either horizontally or vertically, unless noted otherwise.
- Use A.B. (Anchor Bolts) noted per G.S.N., details, and this schedule for bottom sill plate attachment at foundation. Use staggered nails as noted in the schedule for bottom plate attachment at elevated shear walls. See G.S.N. for optional shot-pins and epoxy bolts where allowed by G.S.N.
- Where sheathing is interrupted by intersecting wall, provide continuity channel per General Details.
- Multiple 2x studs at holddowns shall be stitch-nailed together with 16d sinkers at 6" o.c. (staggered).
- All field nailing shall be at 12" o.c. with the same size nail specified for edge nailing.
- Anchor bolts for shear walls shall include steel plate washers, 229"x2"x2", in size between the sill plate and the nut. The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16" larger than the bolt diameter and a slot length not to exceed 1-3/4", provided a standard cut washer is placed between the plate washer and the nut. Where a single 3" nominal sill plate is used, (2)20d box nails shall be substituted for (2)16d common nails for the end nail connection of the stud to the sill plate.
- (2)2x framing may be used in lieu of the 3x nominal framing is called out on the schedule. (2)2x framing shall be stitch-nailed together with 16d sinkers @ 6" o.c. (staggered).

Concrete Wall Schedule

Mark	Wall Thickness	Vertical Reinforcing	Horizontal Reinforcing	Top & Bottom Bars	Notes
CW1	8"	#4 @ 12" o.c.	#4 @ 12" o.c.	(2)#4 bars	Center bars in wall
CW2	8"	#5 @ 12" o.c.	#5 @ 12" o.c.	(2)#5 bars	Provide 6" clear from soil side of wall
CW4	8"	#5 @ 8" o.c.	#5 @ 12" o.c.	(2)#5 bars	Provide 6" clear from soil side of wall


Continuous Footing Schedule

Mark	Width	Thickness	Longitudinal Reinforcing		
			No.	Size	Spacing
FC10	1'-0"	1'-0"	2	#4	Continuous
FC16	1'-6"	1'-0"	3	#4	Continuous
FC26	2'-6"	1'-0"	4	#4	Continuous
FC30	3'-0"	1'-0"	5	#4	Continuous
FC36	3'-6"	1'-0"	6	#4	Continuous

Isolated Footing Schedule

Mark	Width	Length	Thickness	Crosswise Reinforcing			Longitudinal Reinforcing			
				No.	Size	Spacing	No.	Size	Spacing	
FS20	2'-0"	2'-0"	12"	3	#4	1'-6"	Equal	3	#4	1'-6"
FS26	2'-6"	2'-6"	12"	4	#4	2'-0"	Equal	4	#4	2'-0"
FS30	3'-0"	3'-0"	12"	5	#4	2'-6"	Equal	4	#4	2'-6"
FS36	3'-6"	3'-6"	12"	6	#4	3'-0"	Equal	6	#4	3'-0"
FS40	4'-0"	4'-0"	12"	6	#4	3'-6"	Equal	6	#4	3'-6"
FS46	4'-6"	4'-6"	12"	7	#4	4'-0"	Equal	7	#4	4'-0"
FS50	5'-0"	5'-0"	12"	8	#4	4'-6"	Equal	8	#4	4'-6"
FS60	6'-0"	6'-0"	12"	9	#4	5'-0"	Equal	9	#4	5'-0"
FS70	7'-0"	7'-0"	12"	11	#4	6'-6"	Equal	11	#4	6'-6"
FS76	7'-6"	7'-6"	12"	12	#4	7'-0"	Equal	12	#4	7'-0"
FS4686	4'-6"	8'-6"	12"	7	#4	8'-0"	Equal	15	#4	4'-0"

1 S202 - Main Level Footing & Foundation Plan
1/4" = 1'-0"




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No.	Description	Date

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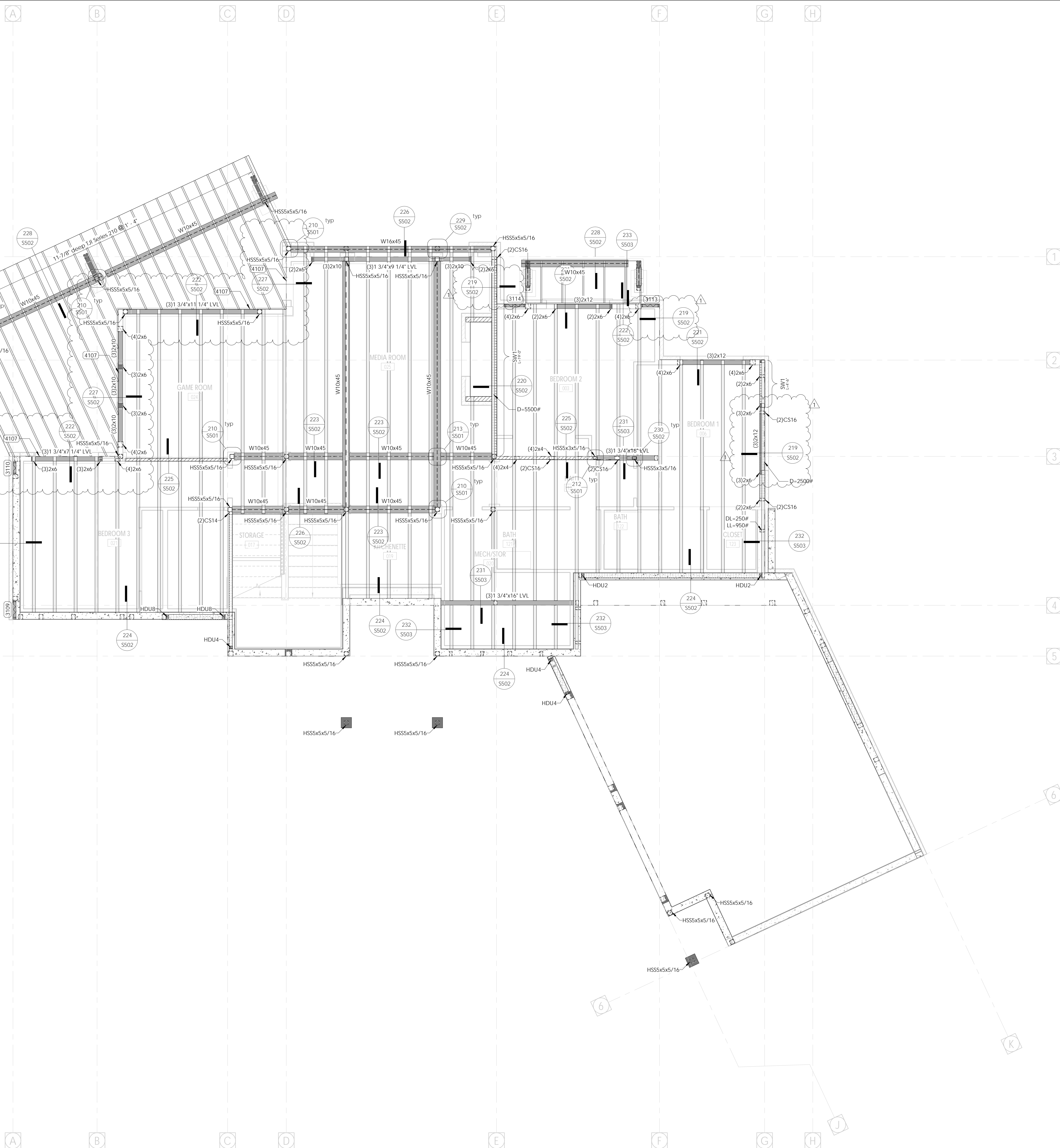
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Main Level Footing & Foundation Plan

Date 9/4/18
Drawn By BPT
Checked By BPT

S202

Scale 1/4" = 1'-0"



Floor & Low Roof Framing Plan Notes

- 1 Roof sheathing shall be 3/4" A.P.A. rated sheathing. See General Details for diaphragm attachment.
- 2 Floor sheathing shall be 3/4" or 1 1/8" A.P.A. rated sheathing. See General Details for diaphragm attachment.
- 3 Floor framing members shown on plan indicate manufactured floor trusses spaced per the manufacturer (24" o.c. typical).
- 4 Typical joint splice of the perimeter (2) 2x top plate shall have a minimum of 4'-0" overlap with (2) 16d each side of the joint. Walls shall be staggered and evenly spaced (see General Details). Top plate splice shall be located away from marked shearwalls. Where it is not feasible to overlap the top plate as indicated, a Simpson MST37 strap shall be installed, centered on the splice, and fully nailed.
- 5 All exterior walls, and interior bearing walls, shall be framed with 2x6 studs at 16" o.c. unless noted otherwise on the plans. Provide (1) trimmer stud and (1) king stud at all openings in wood framed wall.
- 6 "D-xxx#" indicates drag load to be included in the appropriate load combinations by the truss manufacturer.

Keynotes

Key Note	Keynote Text
3109	Simpson Strong-Wall - provide Simpson SSW21x12 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
3110	Simpson Strong-Wall - provide Simpson SSW15x12 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
3113	Simpson Strong-Wall - provide Simpson SSW21x10 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
3114	Simpson Strong-Wall - provide Simpson SSW24x10 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
4107	Wood ledger - provide 1-3/4"x11-7/8" LVL ledger with (8)#10 wood screws @ 16" o.c.

Plywood Shear Wall Schedule

* Where 1-1/8" plywood is used for floor sheathing, use 1/4"x4" screws in lieu of 16d nails.

Mark	Sheathing Thickness	Edge Nailing	Bottom Plate Attachment	Minimum Stud Thickness
SW1	3/8" plywood, blocked, one side of wall	8d @ 6" o.c.	A: 3" Spacing @ Foundation Bottom Plate Nails @ Floor *	2x
SW2	3/8" plywood, blocked, one side of wall	8d @ 4" o.c.	1/2" dia. anchor bolts @ 32" o.c.	2x
SW3	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c.	1/2" dia. anchor bolts @ 20" o.c.	2x
SW3 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c.	1/2" dia. anchor bolts @ 20" o.c.	3x
SW4	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c.	1/2" dia. anchor bolts @ 8" o.c.	2x
SW4 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c.	1/4" dia. x 5" long screws @ 6" o.c.	3x
SW5	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 4" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	3x
SW6	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	3x
SW7	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	3x

Plywood Shear Wall Notes

- Shear wall studs shall be placed at 16" o.c. maximum. Framing and blocking at panel edges (where noted above) shall be 2x minimum, unless noted otherwise.
- Provide (2) full height studs (min.) at ends of shear walls, unless noted otherwise on plans, details, or hold down requirements. Shear walls without hold downs require (1) stud at each end of shear wall (min.) Trimmer stud may be counted as an end stud at non-basing walls.
- Plywood may be installed either horizontally or vertically, unless noted otherwise.
- Use A,B (Anchor Bolts) noted per G.S.N. details, and this schedule for bottom all plate attachment at foundation. Use staggered nails as noted in this schedule for bottom plate attachment at elevated shear walls. See G.S.N. for optional shop pins and epoxy bolts where allowed by G.S.N.
- Where sheathing is interrupted by intersecting wall, provide continuity channel per General Details.
- Multiple 2x studs at holddowns shall be stitch-nailed together with 16d sinkers @ 6" o.c. (staggered).
- All field nailing shall be at 12" o.c. with the same size nail specified for edge nailing.
- Anchor bolts for shear walls shall include steel plate washers, 229"x3"x3", in slab between the all plate and the nut. The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16" larger than the bolt diameter and a slot length not to exceed 1-3/4", provided a standard cut washer is placed between the plate washer and the nut. Where a single 3" nominal all plate is used, (2) 16d box nails shall be substituted for (2) 16d common nails for the end nail connection of the stud to the sole plate.
- (2) 2x framing may be used in lieu of the 3x nominal framing is called out on the schedule. (2) 2x framing shall be stitch-nailed together with 16d sinkers @ 6" o.c. (staggered).

1 S401 - Basement Floor Framing Plan
1/4" = 1'-0"

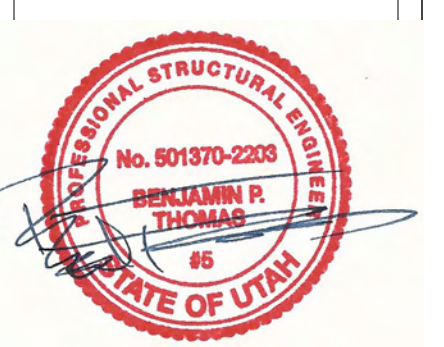


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No.	Description	Date
1	Correction Letter	8/27/19

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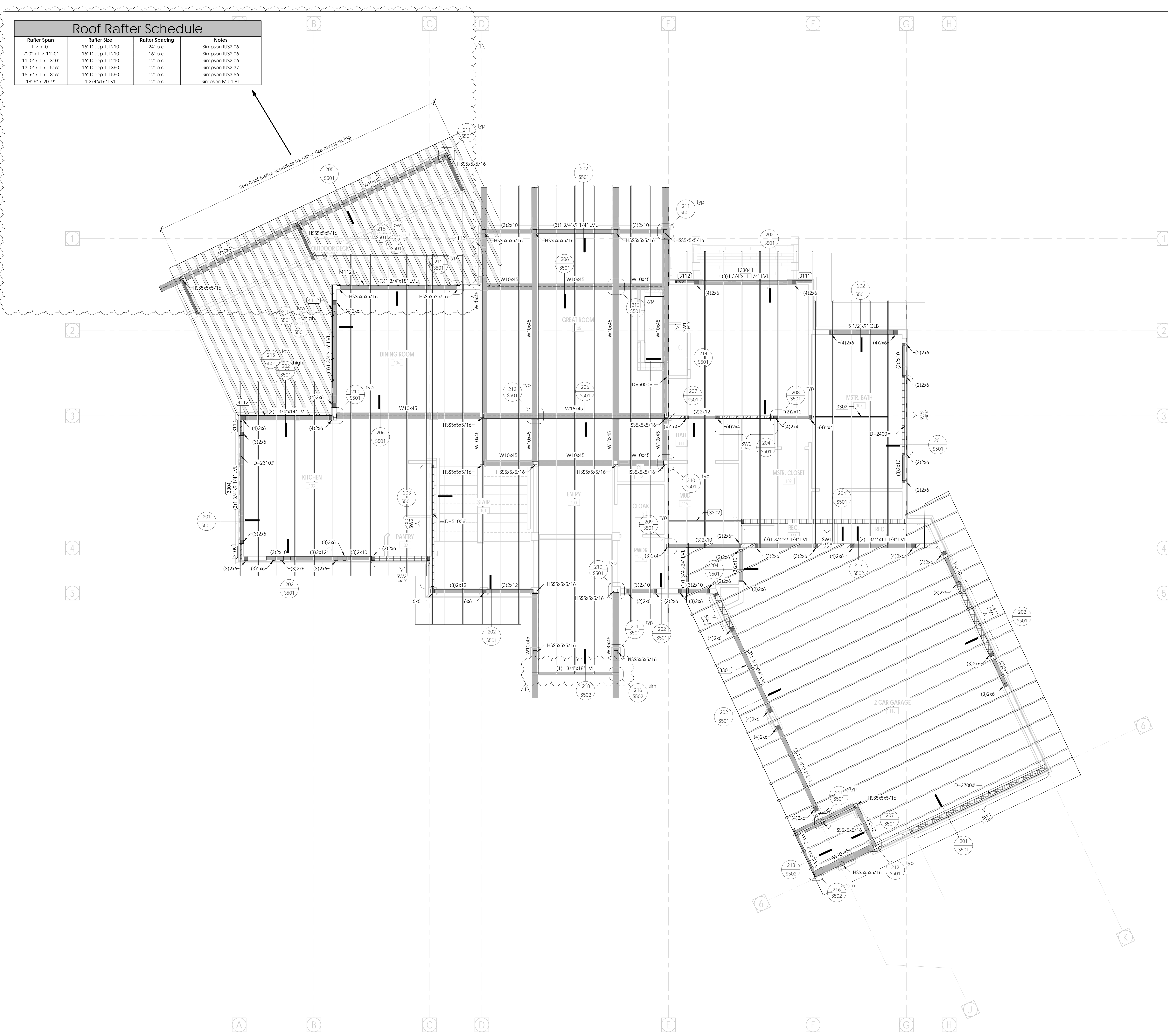
Date of
8/27/2019 10:12:37 AM

Basement
Floor Framing

Date
9/4/18
Drawn By
BPT
Checked By
BPT

S401
Scale
1/4" = 1'-0"

Rafter Span	Rafter Size	Rafter Spacing	Notes
L < 7'-0"	16" Deep TJI 210	24" o.c.	Simpson IUS2.06
7'-0" < L < 11'-0"	16" Deep TJI 210	16" o.c.	Simpson IUS2.06
11'-0" < L < 13'-0"	16" Deep TJI 210	12" o.c.	Simpson IUS2.06
13'-0" < L < 15'-4"	16" Deep TJI 360	12" o.c.	Simpson IUS2.37
15'-4" < L < 18'-4"	16" Deep TJI 560	12" o.c.	Simpson IUS3.56
18'-4" < 20'-9"	1-3/4"x16" LVL	12" o.c.	Simpson ML1.81



Roof Framing Plan Notes	
1	Roof sheathing shall be 3/4" A.P.A. rated sheathing. See General Details for diaphragm attachment.
2	Roof framing members shown on plan indicate manufactured roof trusses spaced per the manufacturer (24" o.c. typical).
3	Typical joint splice of the perimeter (2) 2x top plate shall have a minimum of 4'-0" overlap with (2) 16d each side of the joint. Nails shall be staggered and evenly spaced (see General Details). Top plate splices shall be located away from marked shear walls. Where it is not feasible to overlap the top plate as indicated, a Simpson MST3 strap shall be installed, centered on the splice, and fully nailed.
4	All exterior walls, and interior bearing walls, shall be framed with 2x6 studs at 16" o.c. unless noted otherwise on the plans. Provide (1) timber stud and (1) king stud at all openings in wood framed wall.
5	"D-xxx#" indicates drag load to be included in the appropriate load combinations by the truss manufacturer.

Keynotes	
Key Note	Keynote Text
3109	Simpson Strong-Wall - provide Simpson SSW21x12 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
3110	Simpson Strong-Wall - provide Simpson SSW15x12 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
3111	Simpson Strong-Wall - provide Simpson SSW21x11 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
3112	Simpson Strong-Wall - provide Simpson SSW24x11 steel Strong-Wall. See foundation plan for anchorage to concrete. Install per manufacturer's specifications.
3301	Sheath wall above and below window with shear wall indicated on plan. Provide edge nailing at all boundary edges. Strap with Simpson CMSTC16 strap above and below window opening per Large Opening in Shear Wall detail (See General Details).
3302	Drag stud - 2x blocking at top chord of truss with Simpson CMSTC16 strap over sheathing. Extend strap beyond end of blocking onto panel blocking / truss / beam / etc. 30" with maximum nailing required by strap manufacturer. See general details.
3304	Sheath wall above window/door with SW1 per plan. Extend header past opening over the top of the Simpson Strong-walls. Attach header to top of Simpson Strong-walls.
4112	Wood ledger - provide 1-3/4"x16" LVL ledger with (1) 1/4" dia. Simpson SDS25600 wood screws @ 16" o.c.

Plywood Shear Wall Schedule				
* Where 1-1/8" plywood is used for floor sheathing, use 1/4"x4" screws in lieu of 16d nails.				
Mark	Sheathing Thickness	Edge Nailing	Bottom Plate Attachment A.B. Spacing @ Bottom Plate Nails @ Floor	Minimum Sill Plate Thickness
SW1	3/8" plywood, blocked, one side of wall	8d @ 6" o.c.	1/2" dia. anchor bolts @ 32" o.c.	16d @ 6" o.c.
SW2	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 4" o.c.	1/2" dia. anchor bolts @ 32" o.c.	16d @ 6" o.c.
SW3	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c.	1/2" dia. anchor bolts @ 20" o.c.	16d @ 3" o.c.
SW3 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c.	1/2" dia. anchor bolts @ 18" o.c.	16d @ 3" o.c.
SW4	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c.	1/2" dia. anchor bolts @ 20" o.c.	---
SW4 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c.	---	1/4" dia. x 5" long screws @ 6" o.c.
SW5	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 4" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 4" o.c.
SW6	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 3" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 4" o.c.
SW7	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges	8d @ 2" o.c. (staggered)	5/8" dia. anchor bolts @ 16" o.c.	1/4" dia. x 5" long screws @ 4" o.c.

Plywood Shear Wall Notes	
A.	Shear wall studs shall be placed at 16" o.c. maximum. Framing and blocking at panel edges (where noted above) shall be 2x minimum, unless noted otherwise.
B.	Provide (2) full height studs (min.) at ends of shear walls, unless noted otherwise on plans, details, or hold down requirements. Shear walls without hold downs require (1) stud at each end of shear wall (min.) Timber stud may be counted as an end stud at non-bearing walls.
C.	Plywood may be installed either horizontally or vertically, unless noted otherwise.
D.	Use A.B. (Anchor Bolts) noted per G.S.N. details, and this schedule for bottom sill plate attachment at foundation. Use staggered nails as noted in this schedule for bottom plate attachment at elevated shear walls. See G.S.N. for optional shot pins and epoxy bolts where allowed by G.S.N.
E.	Where sheathing is interrupted by intersecting wall, provide continuity channel per General Details.
F.	Multiple 2x studs at holddowns shall be stitch-nailed together with 16d sinkers at 6" o.c. (staggered).
G.	All field nailing shall be at 12" o.c. with the same size nail specified for edge nailing.
H.	Anchor bolts for shear walls shall include steel plate washers, 229"x3"x3", in size between the sill plate and the nut. The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16" larger than the bolt diameter and a slot length not to exceed 1-3/4", provided a standard cut washer is placed between the plate washer and the nut. Where a single 3" nominal sill plate is used, (2) 20d box nails shall be substituted for (2) 16d common nails for the end nail connection of the stud to the sole plate.
J.	(2) 2x framing may be used in lieu of the 3x nominal framing is called out on the schedule. (2) 2x framing shall be stitch-nailed together with 16d sinkers @ 6" o.c. (staggered).



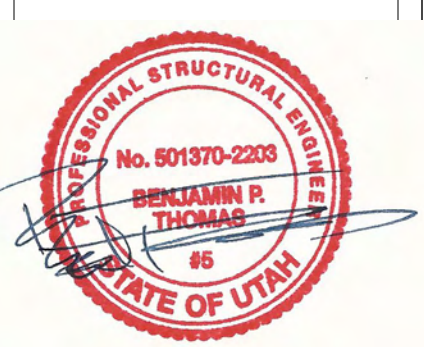
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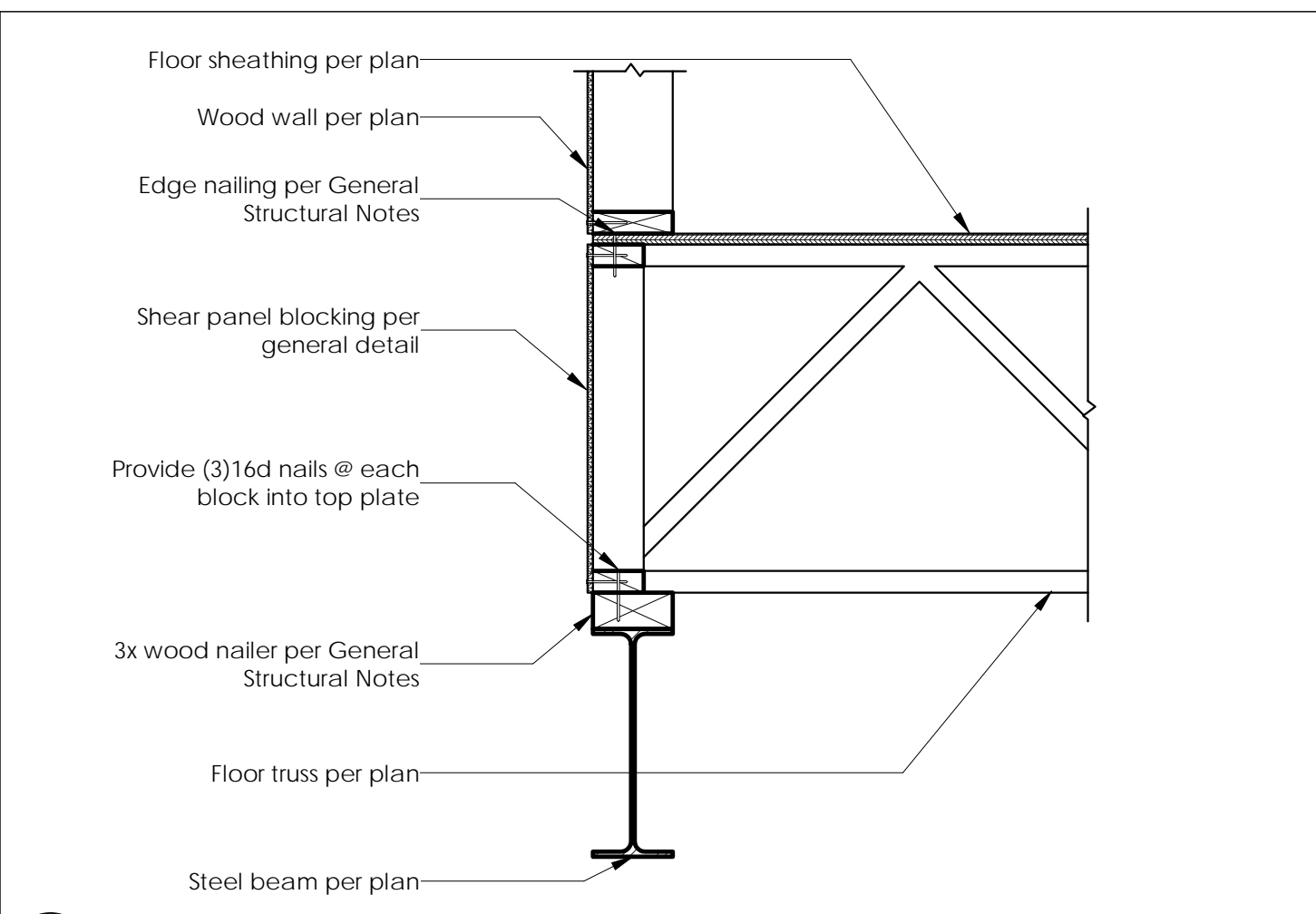
No.	Description	Date
1	Correction Letter	8/27/19

Plywood Shear Wall Schedule	
Mark	Sheathing Thickness
SW1	3/8" plywood, blocked, one side of wall
SW2	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges
SW3	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges
SW3 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges
SW4	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges
SW4 (alt)	3/8" plywood, blocked, one side of wall, 3" nominal framing @ panel edges
SW5	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges
SW6	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges
SW7	3/8" plywood, blocked, both side of wall, 3" nominal framing @ panel edges

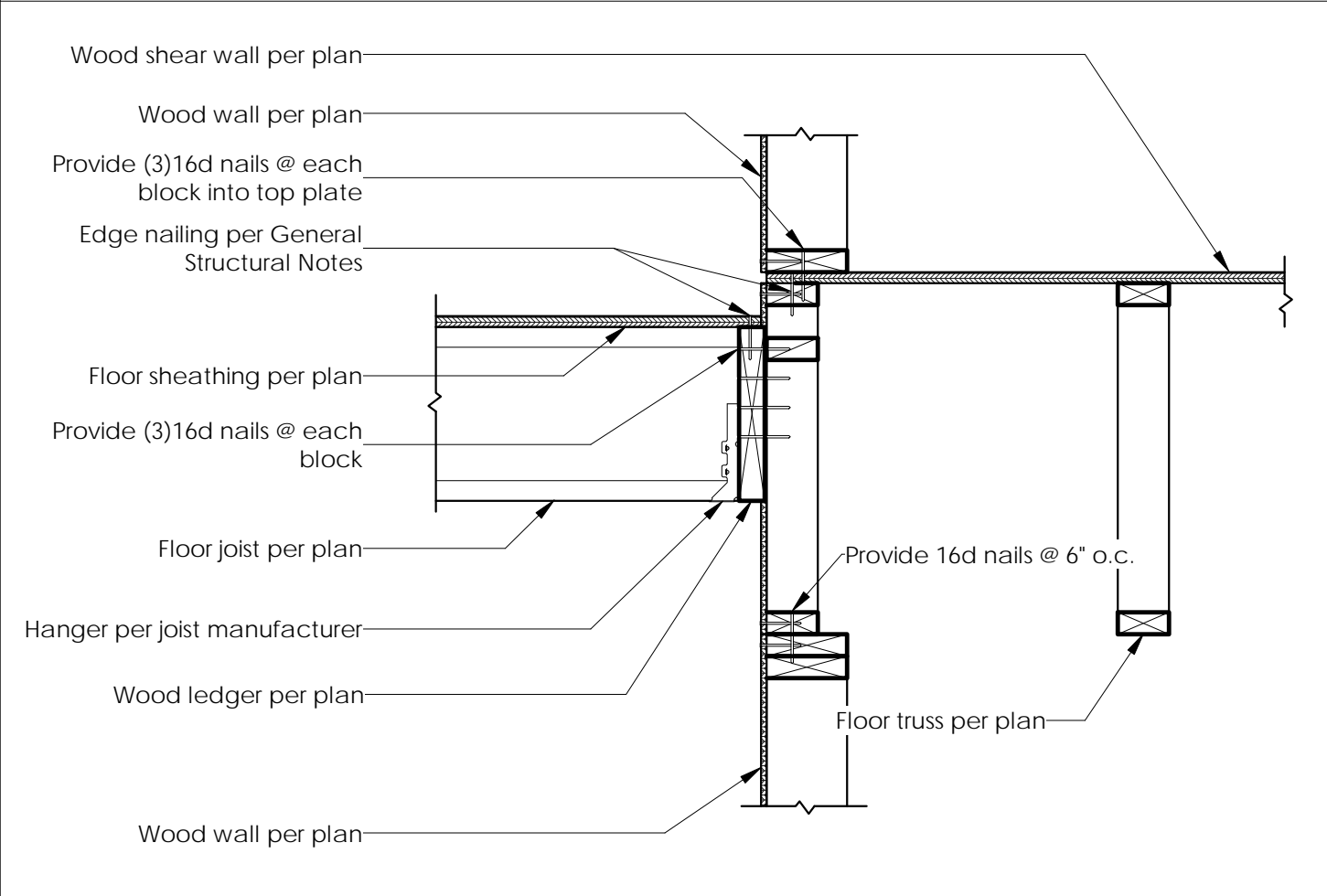
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Think Architecture
5151 South 900 East, Suite #200
Salt Lake City, UT 84117



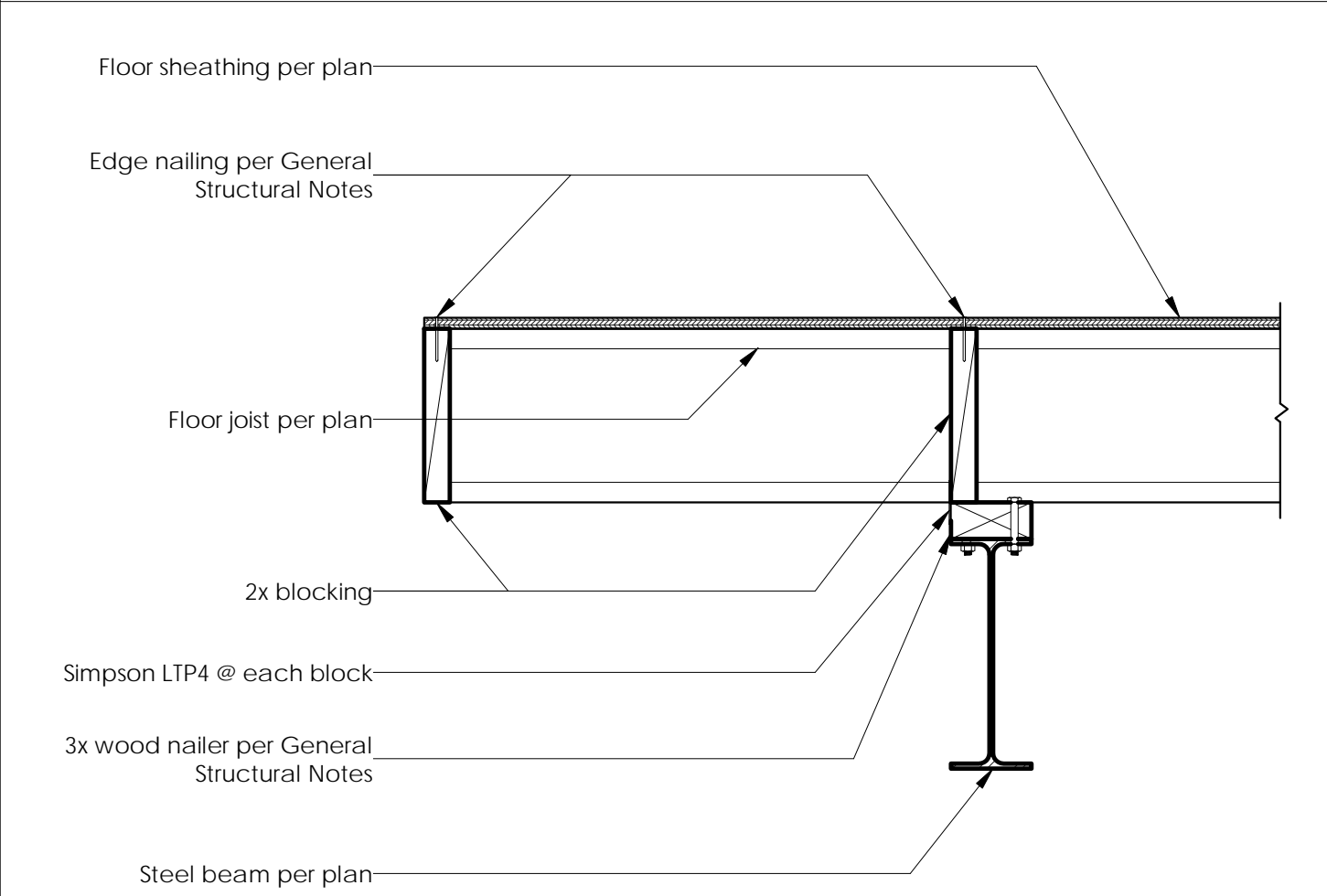
Date of	8/27/2019 10:12:45 AM
Roof Framing Plan	
Date	9/4/18
Drawn By	BPT
Checked By	BPT
S402	
Scale	1/4" = 1'-0"



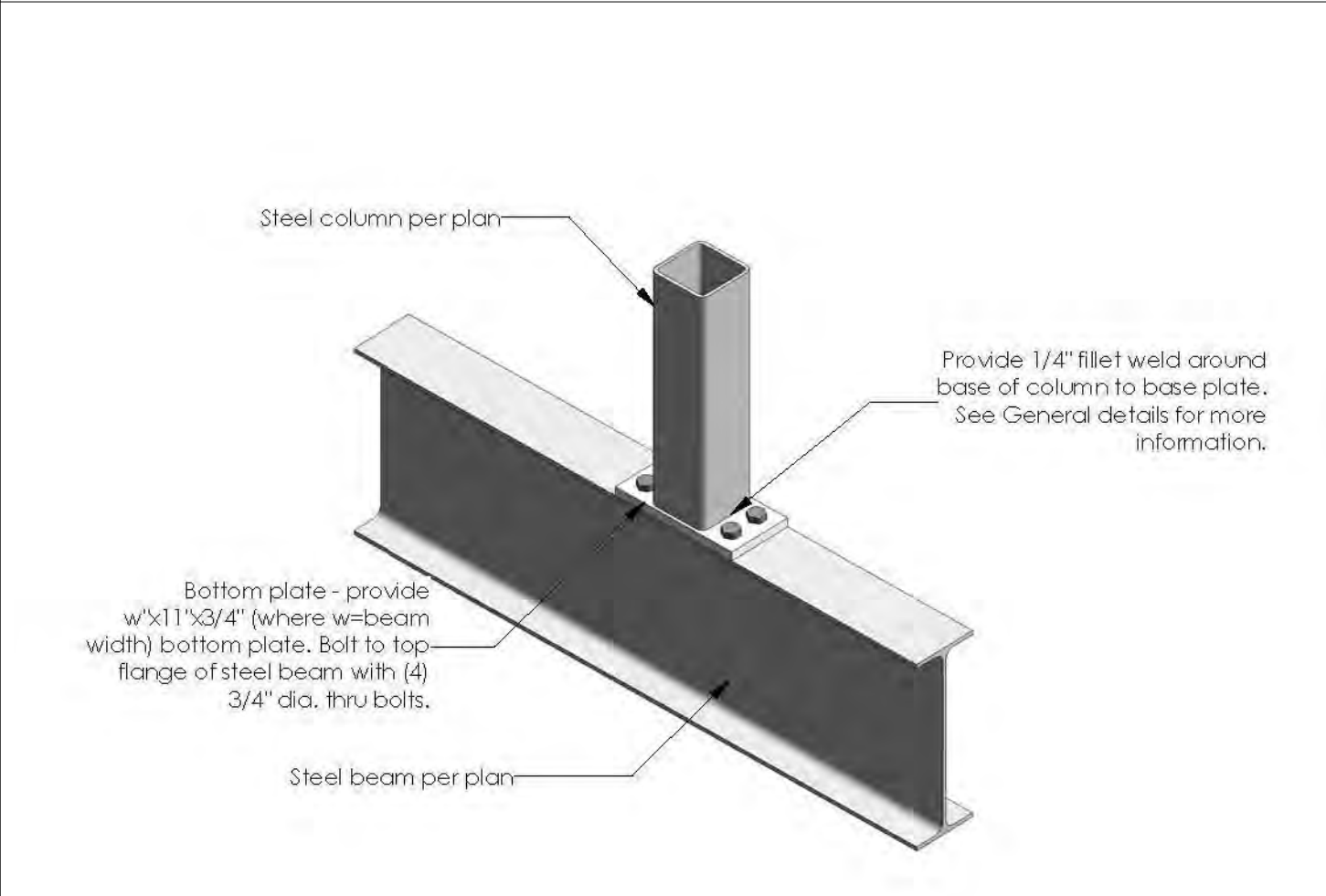
226 Floor Truss @ Steel Beam 1.01
1" = 1'-0"



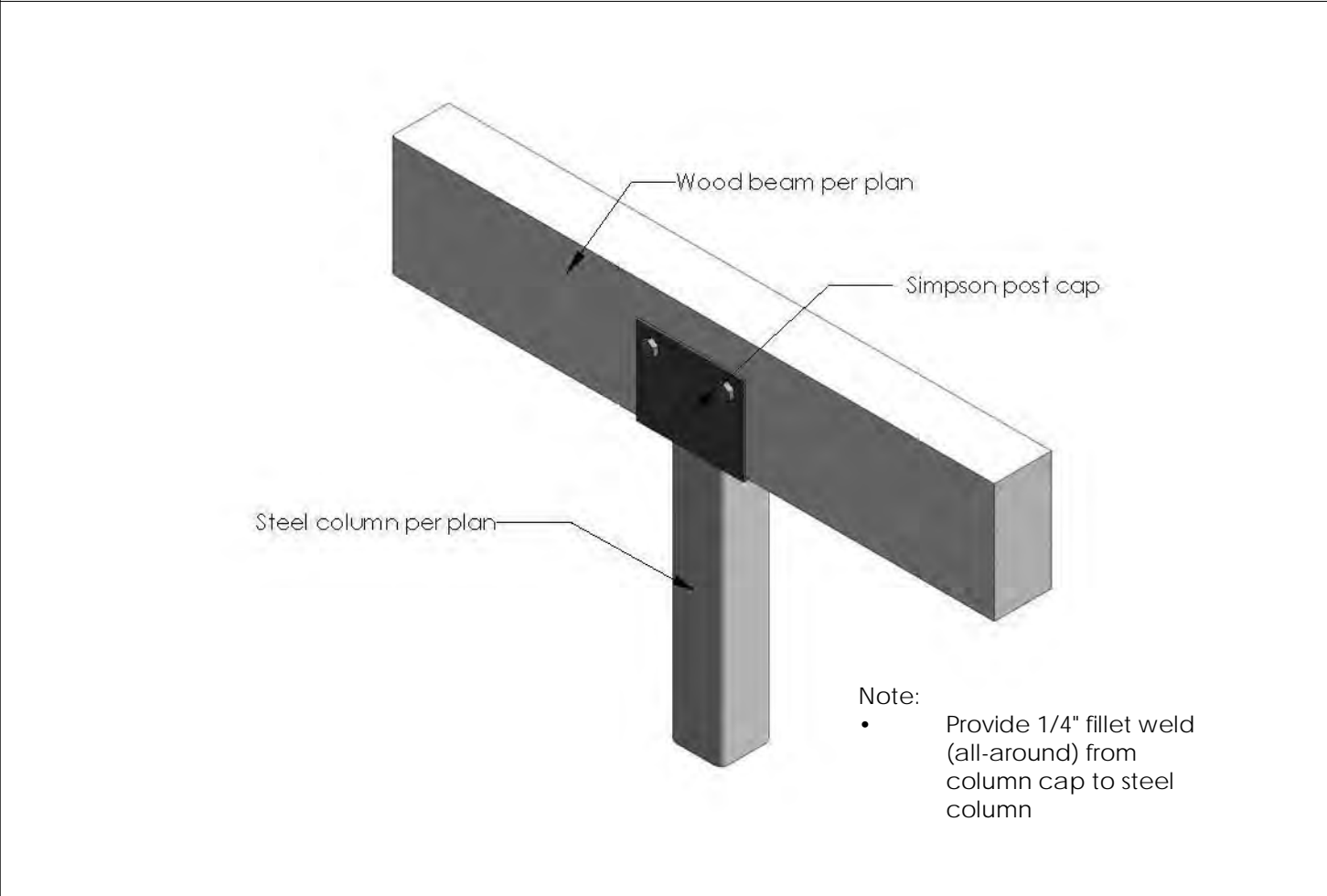
227 Floor Truss/I-Joists @ Wood Wall 1.02
1" = 1'-0"



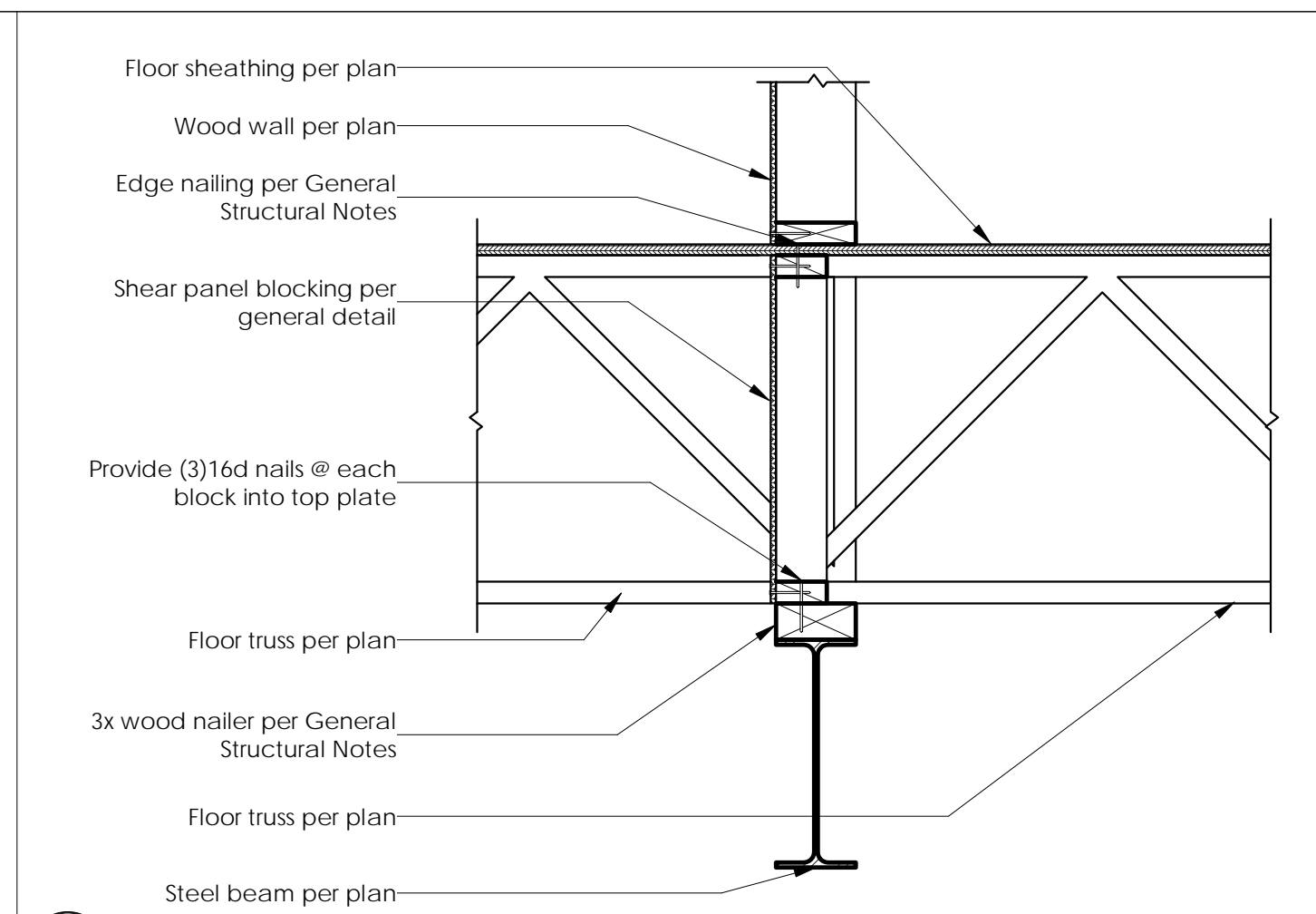
228 Floor I-Joists @ Steel Beam 1.01
1" = 1'-0"



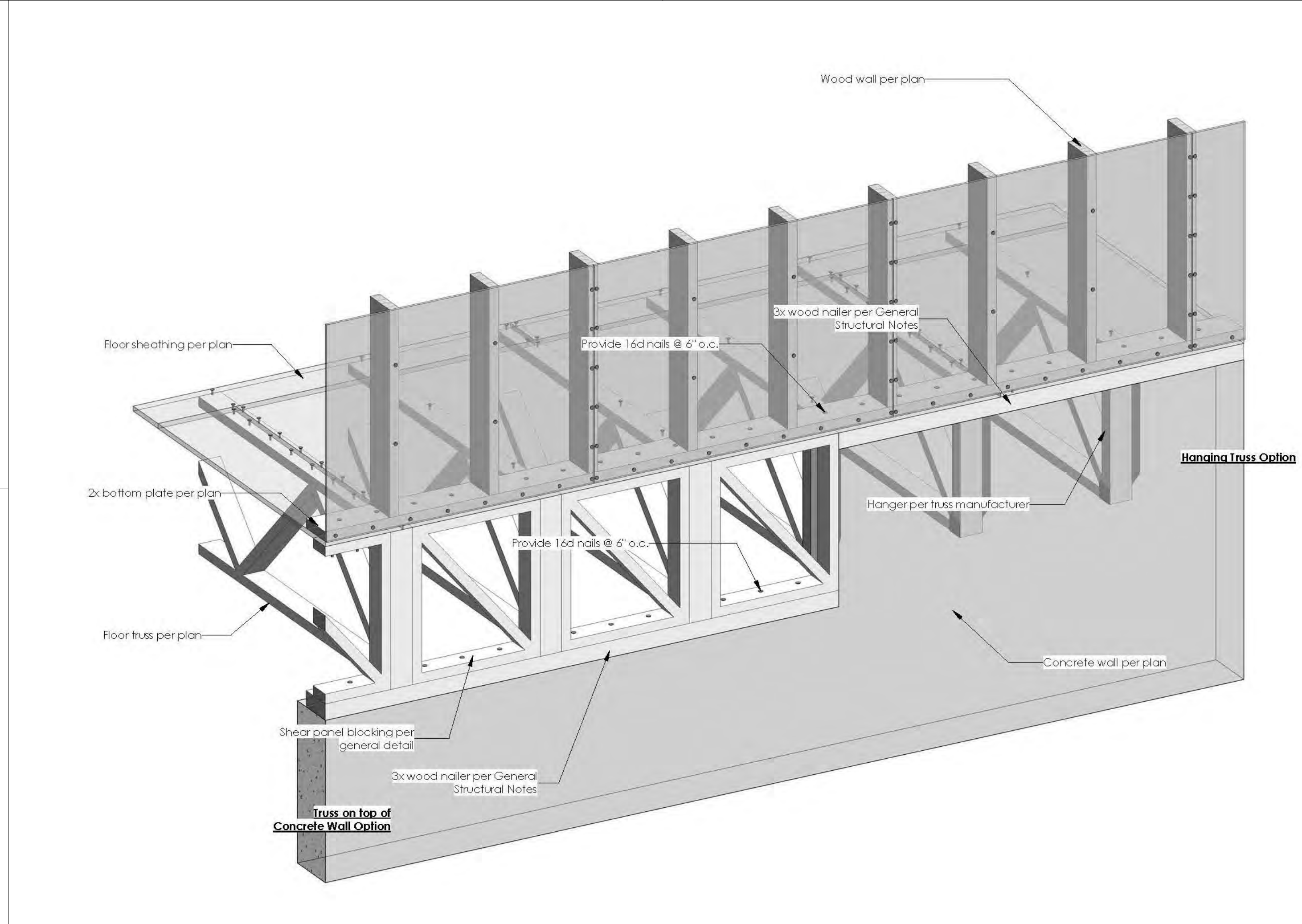
229 Steel Column @ Steel Beam 1.01
1" = 1'-0"



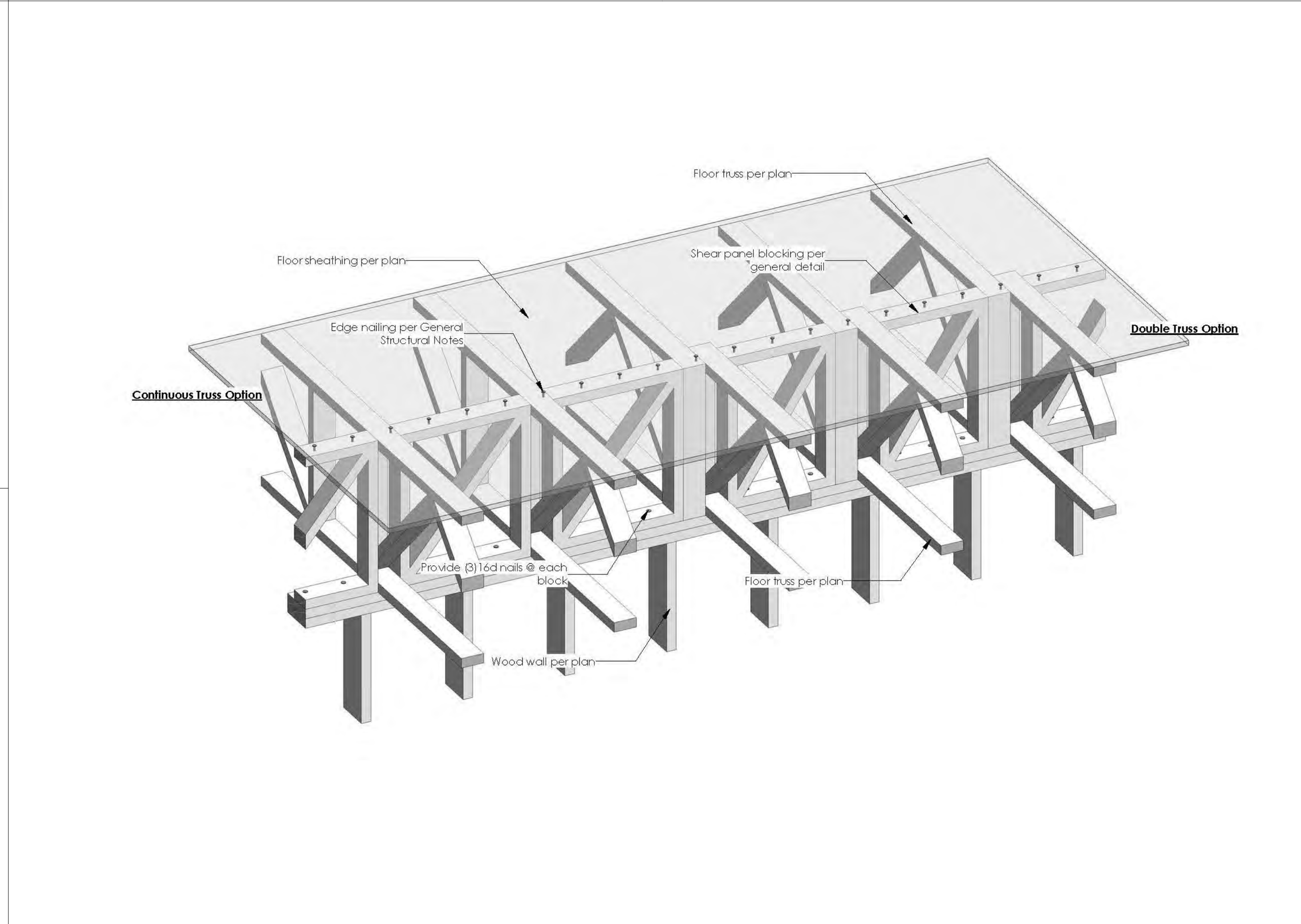
230 Wood Beam @ Steel Column 1.02
1" = 1'-0"



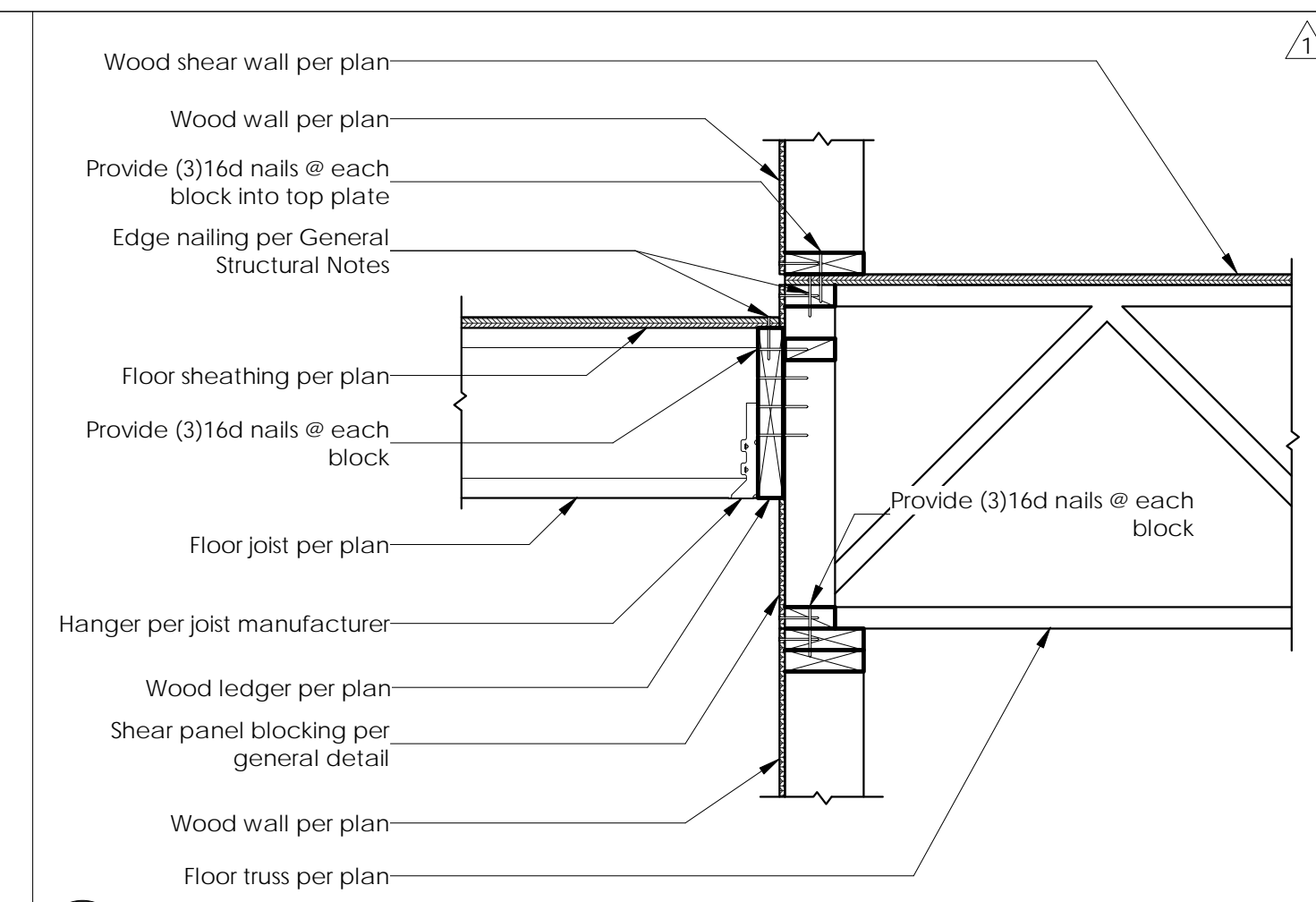
223 Floor Truss @ Steel Beam 1.02
1" = 1'-0"



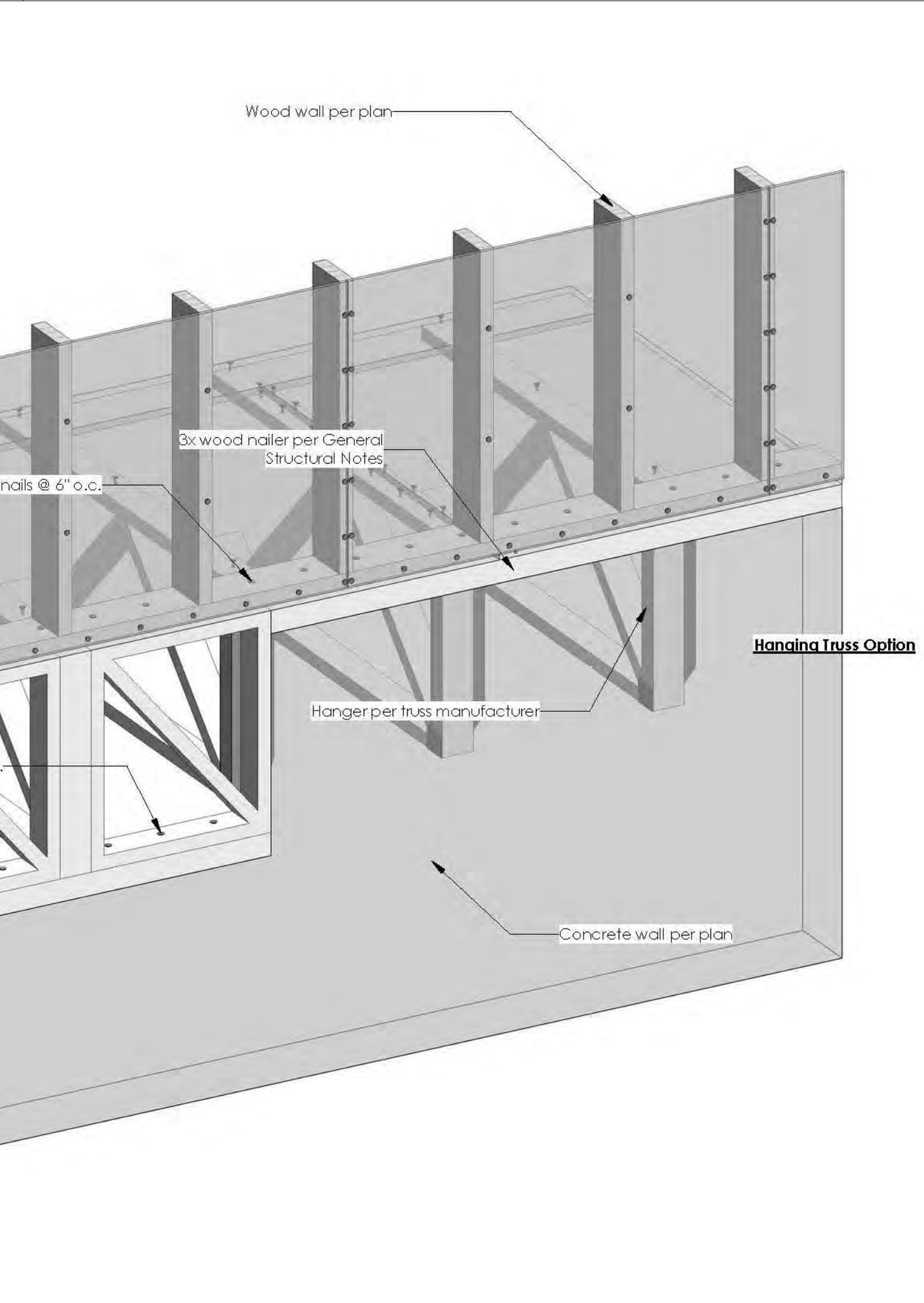
224 Floor Truss @ Concrete Wall 1.01
1" = 1'-0"



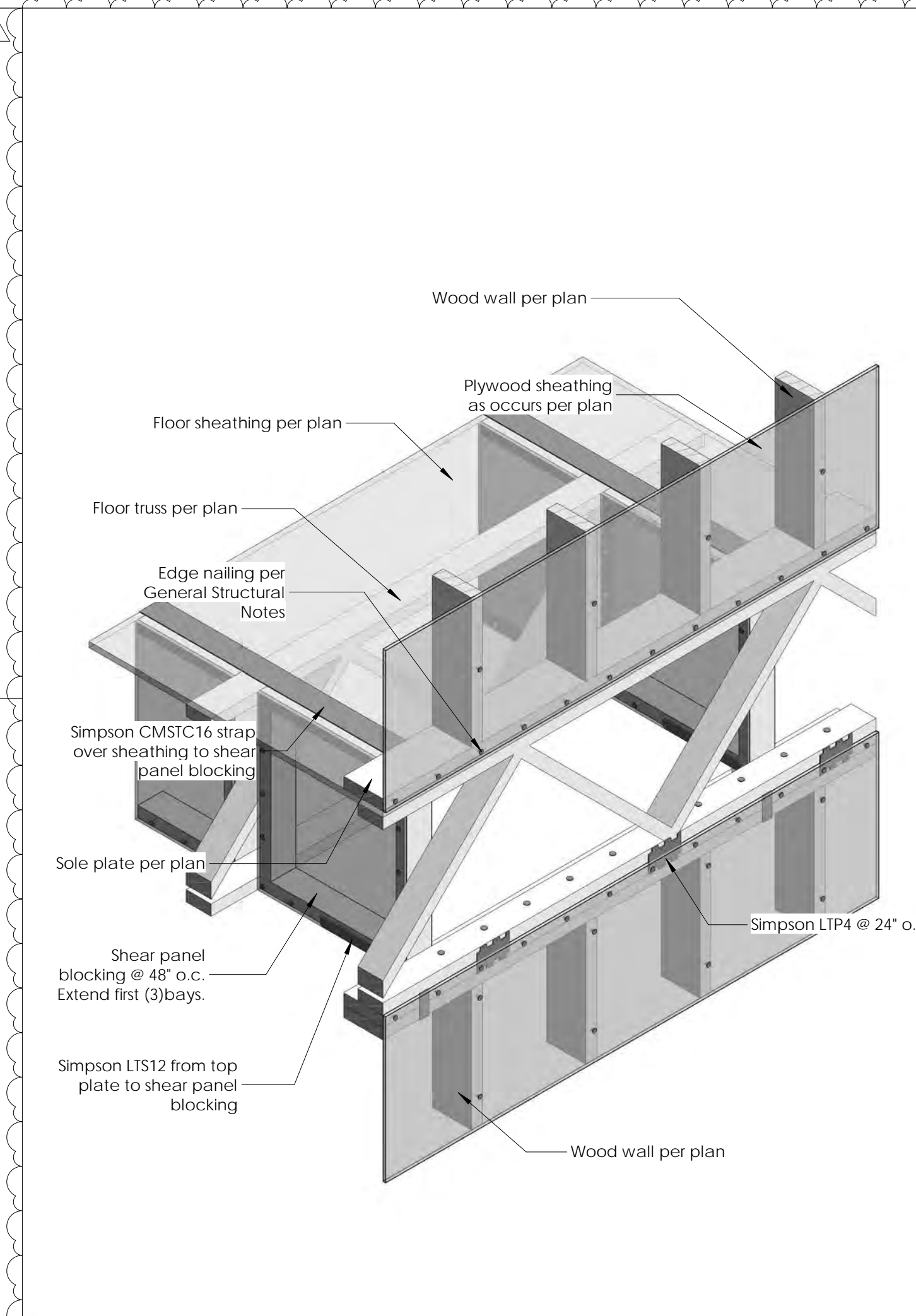
225 Floor Truss @ Wood Wall 2.01
1" = 1'-0"



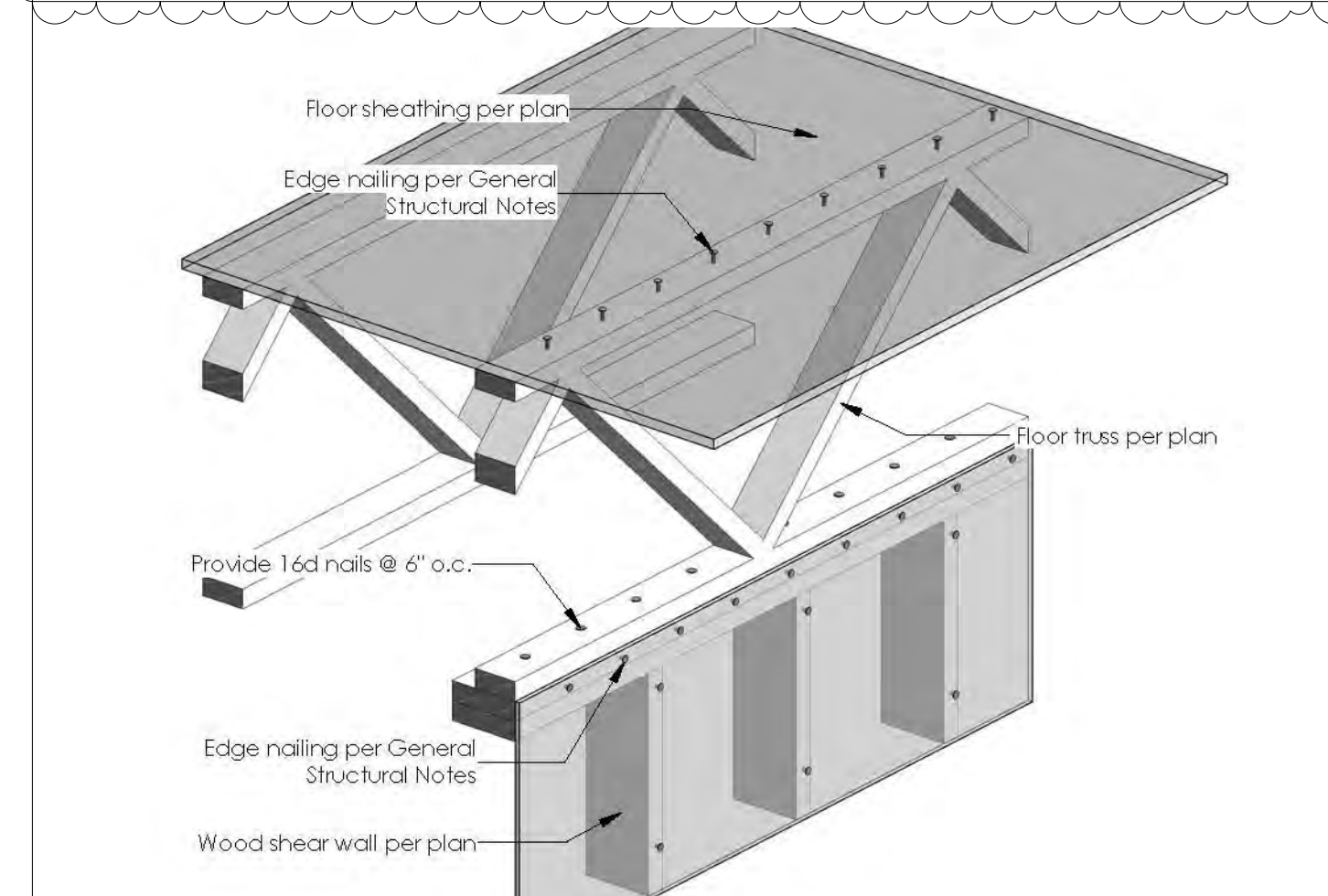
222 Floor Truss/I-Joists @ Wood Wall 1.01
1" = 1'-0"



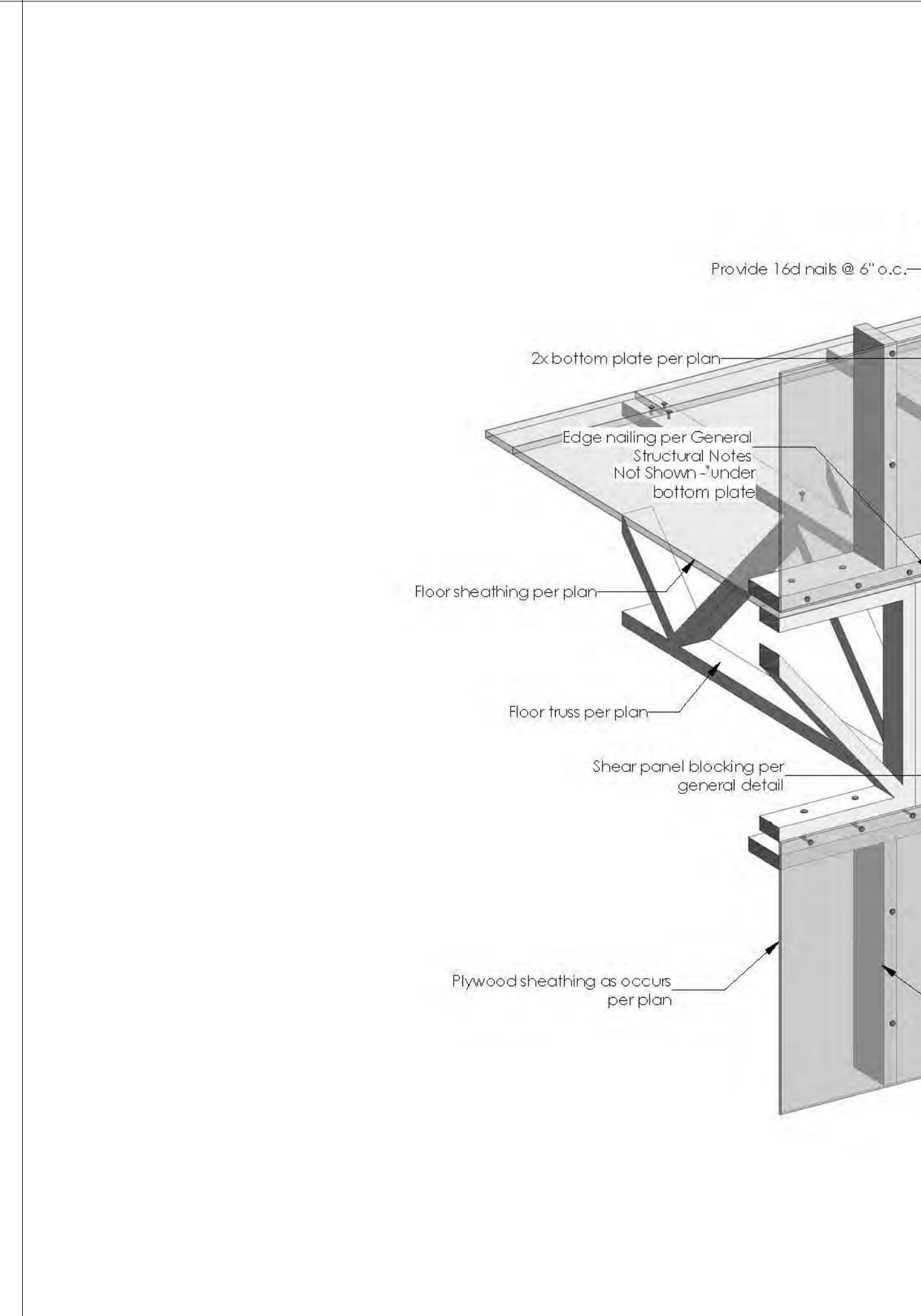
221 Floor Truss @ Wood Wall 1.01
1" = 1'-0"



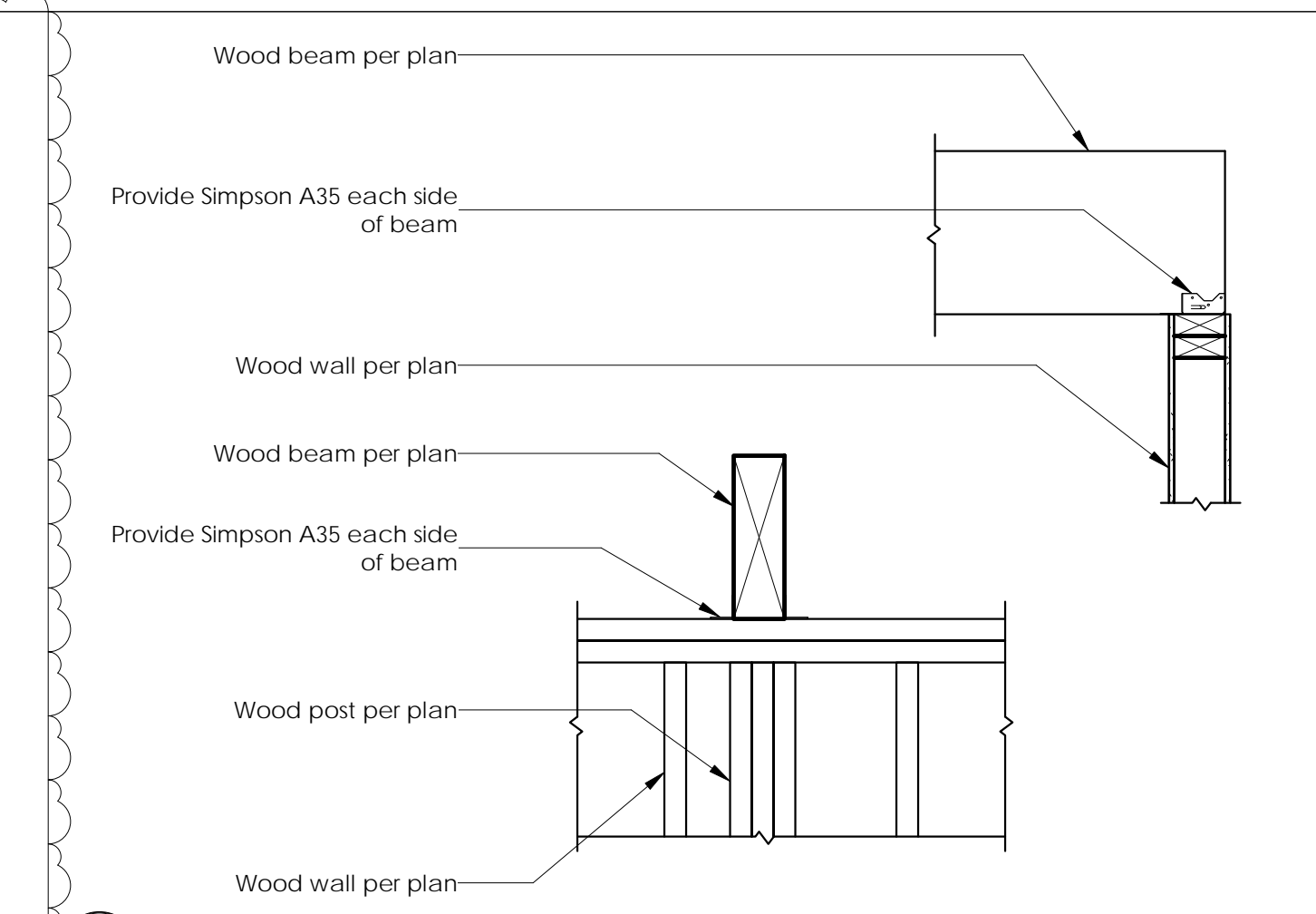
219 Floor Truss @ Wood Wall 1.02
1" = 1'-0"



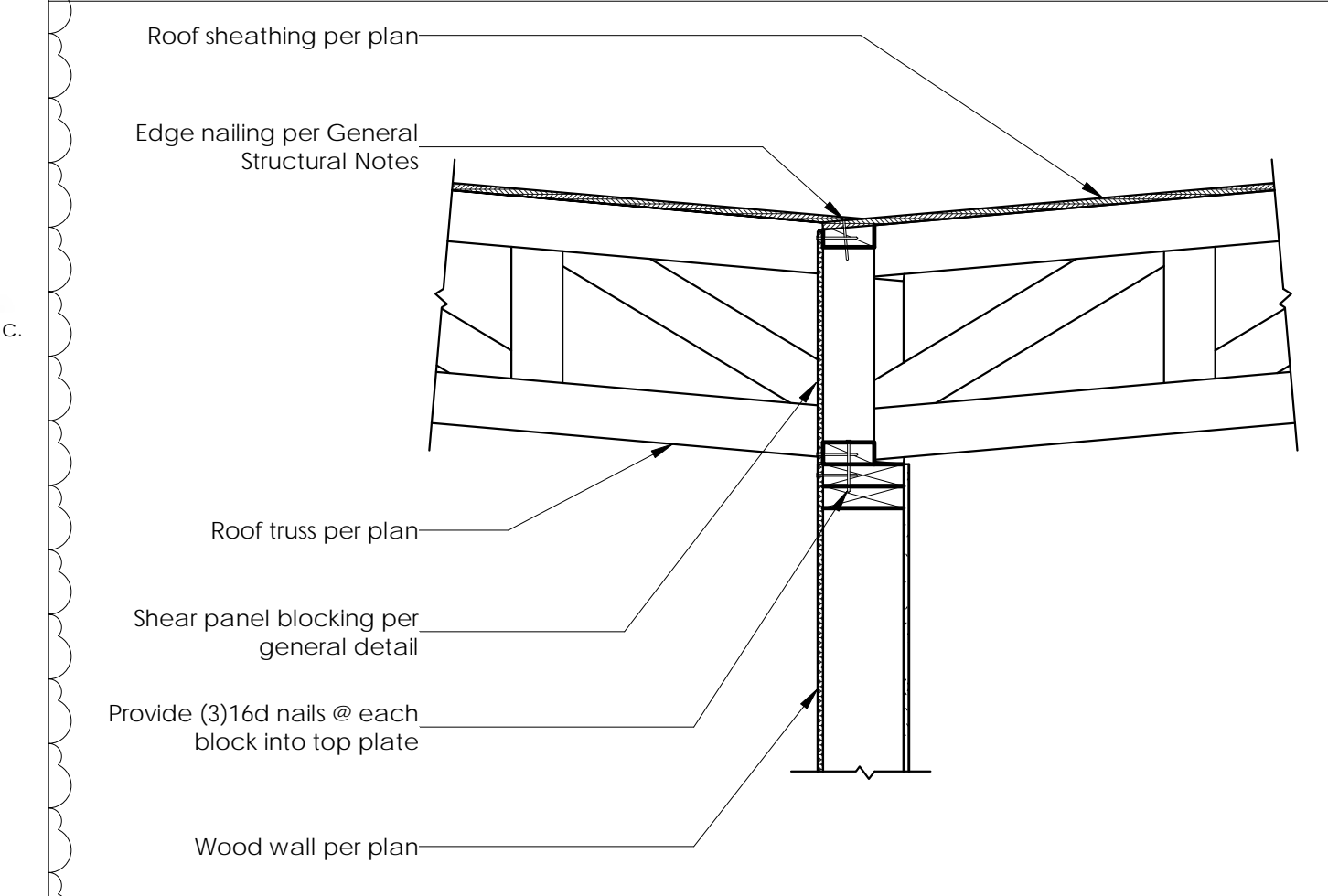
220 Floor Truss @ Wood Wall 3.01
1" = 1'-0"



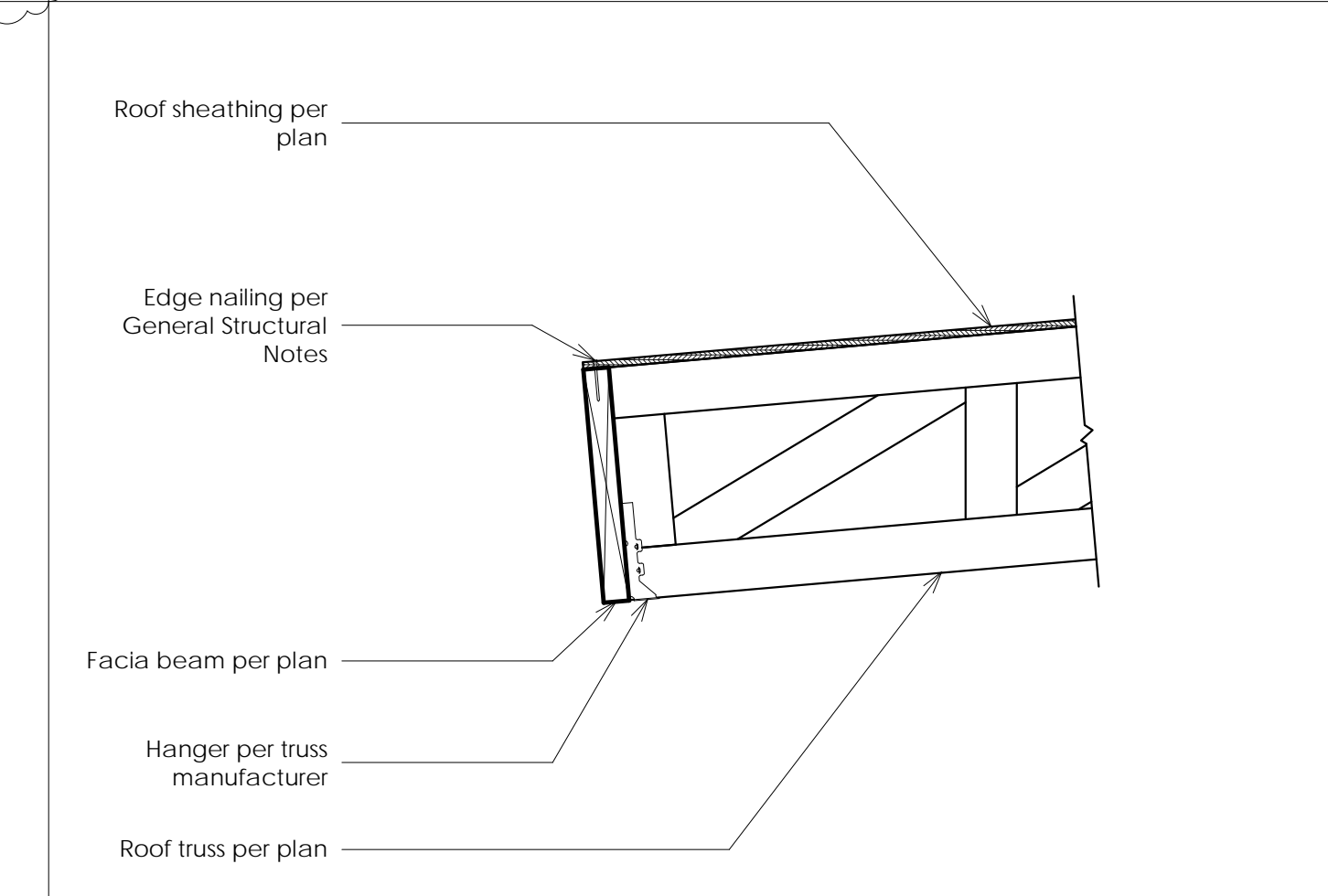
221 Floor Truss @ Wood Wall 1.01
1" = 1'-0"



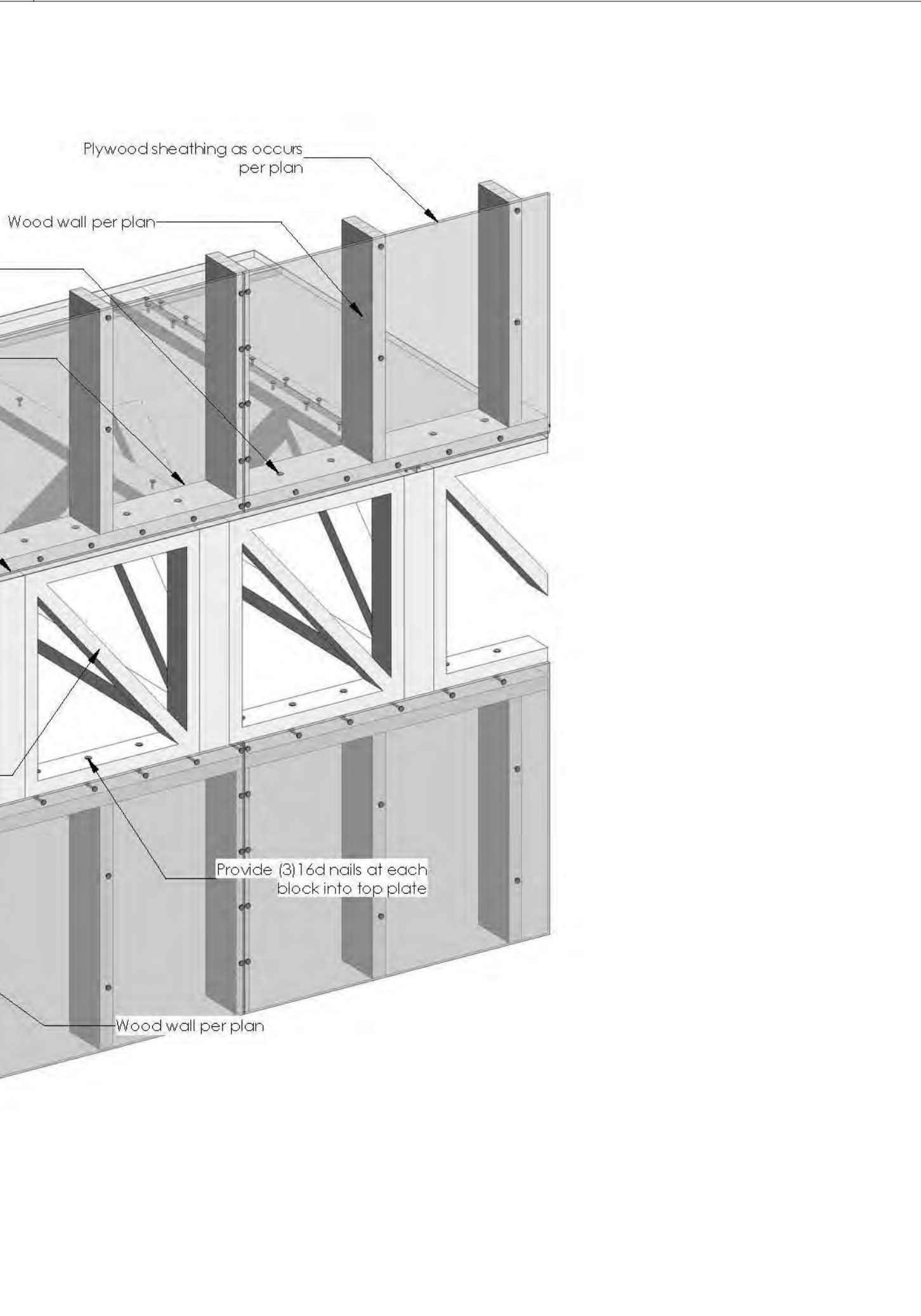
216 Wood Beam @ Wood Wall 4.01
1" = 1'-0"



217 Roof Truss @ Wood Wall 3.1
1" = 1'-0"



218 Roof Truss @ Wood Beam 2.02
1" = 1'-0"



221 Floor Truss @ Wood Wall 1.01
1" = 1'-0"



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No.	Description	Date
1	Correction Letter	8/27/18

Burton Solitude Spec Home
Think Architecture
5151 South 900 East, Suite #200
Salt Lake City, UT 84117



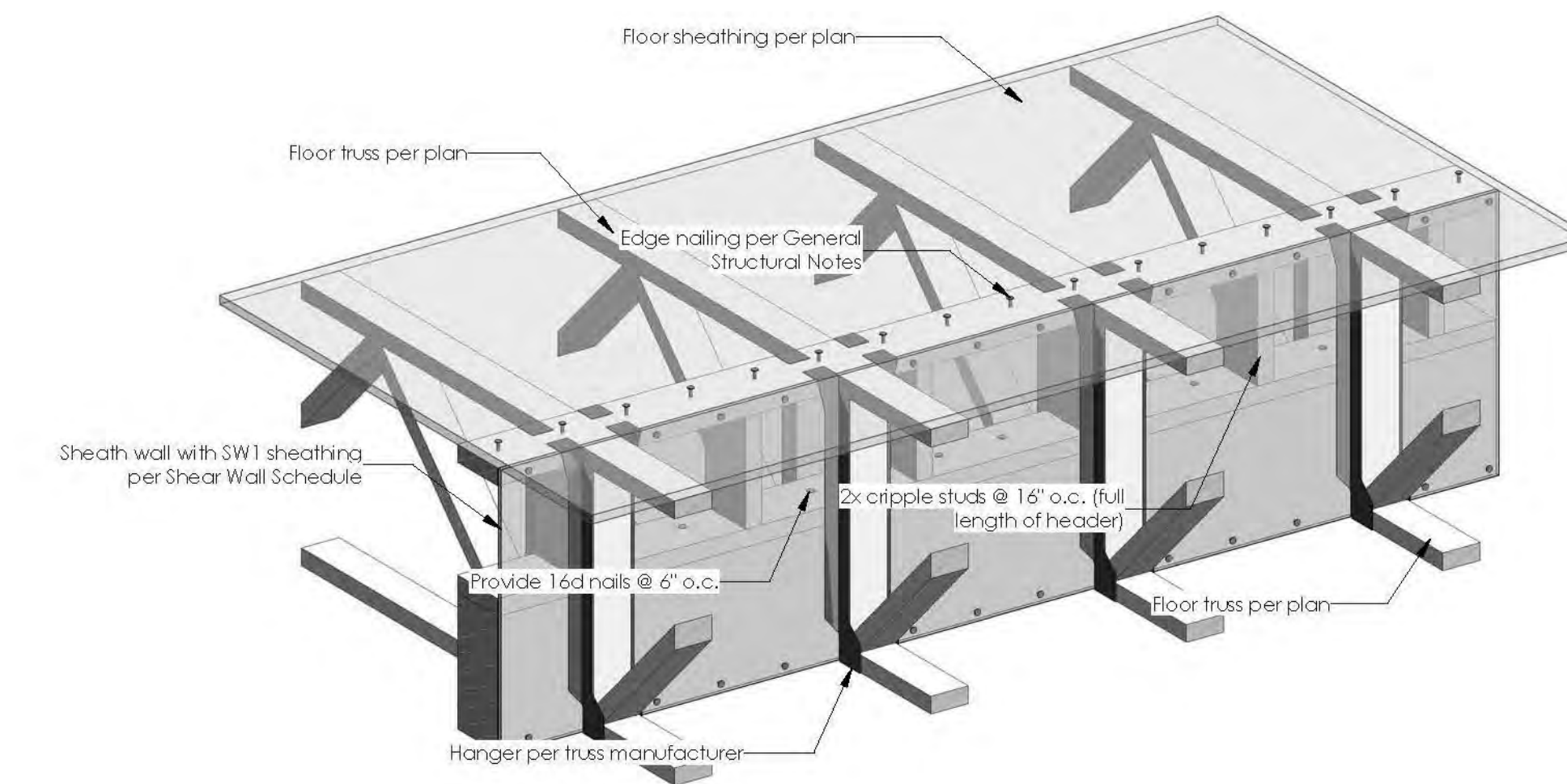
Date of 8/27/2019 10:12:53 AM

Framing Details

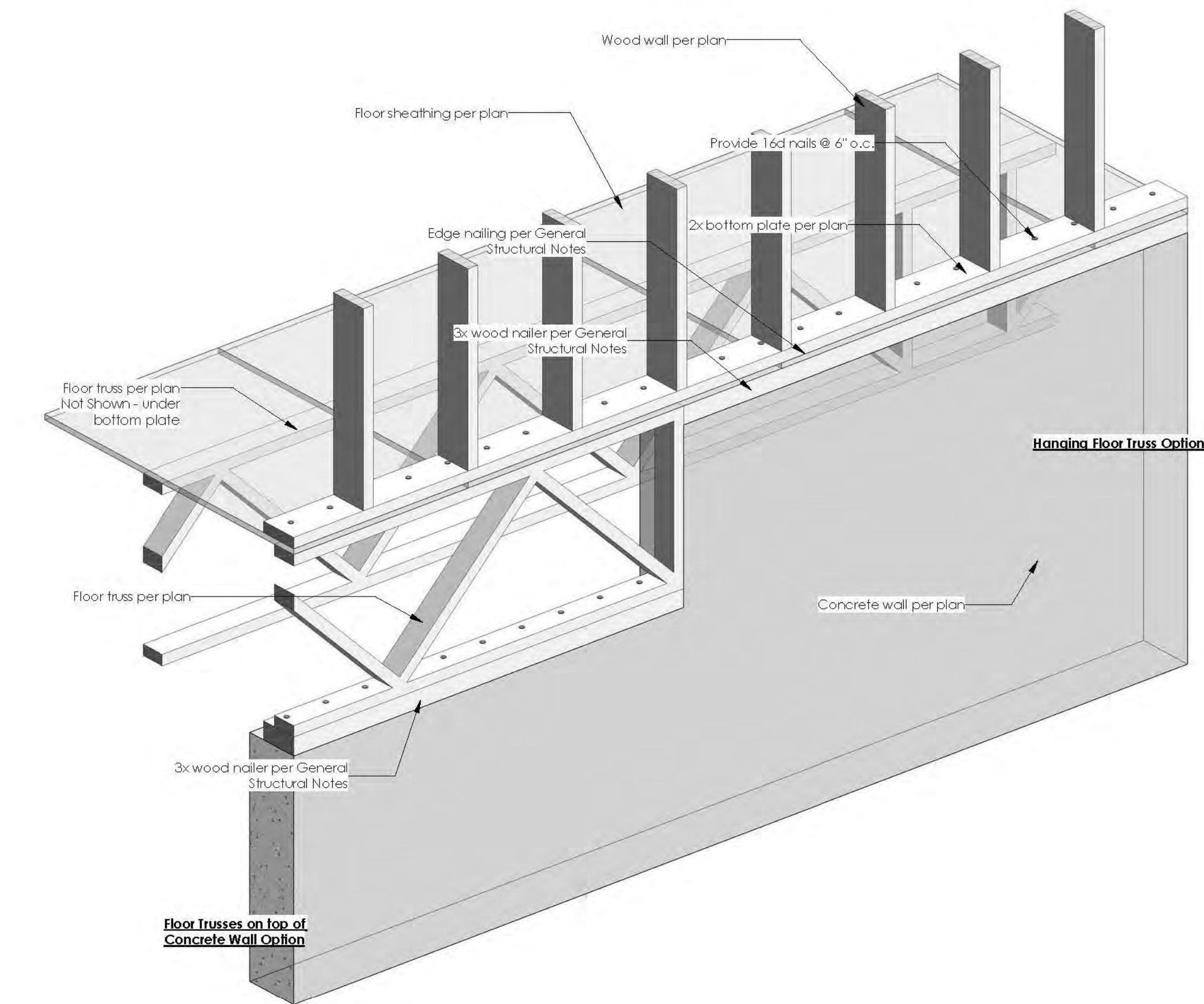
Date 9/4/18
Drawn By BPT
Checked By BPT

S502

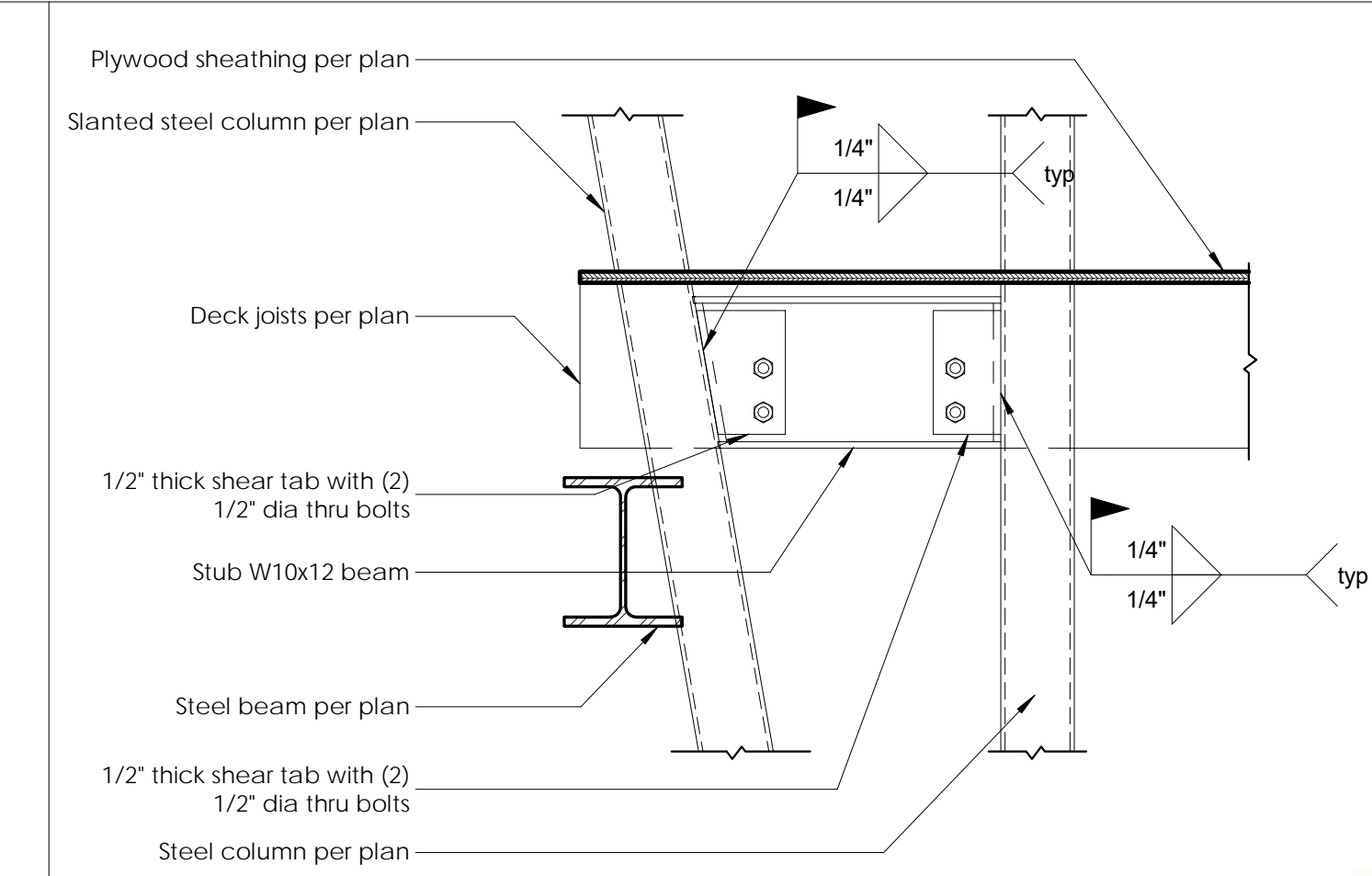
Scale 1" = 1'-0"



231 Floor Truss @ Wood Beam 1.01
1" = 1'-0"



232 Floor Truss @ Concrete Wall 2.01
1" = 1'-0"



233 Steel Beam @ Slanted Column
1" = 1'-0"

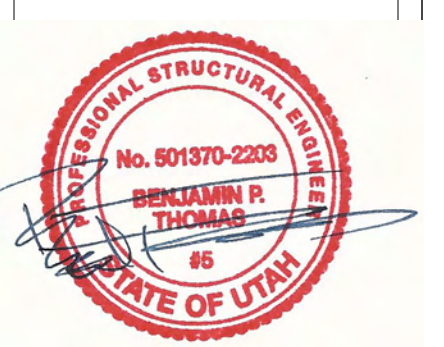


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No.	Description	Date

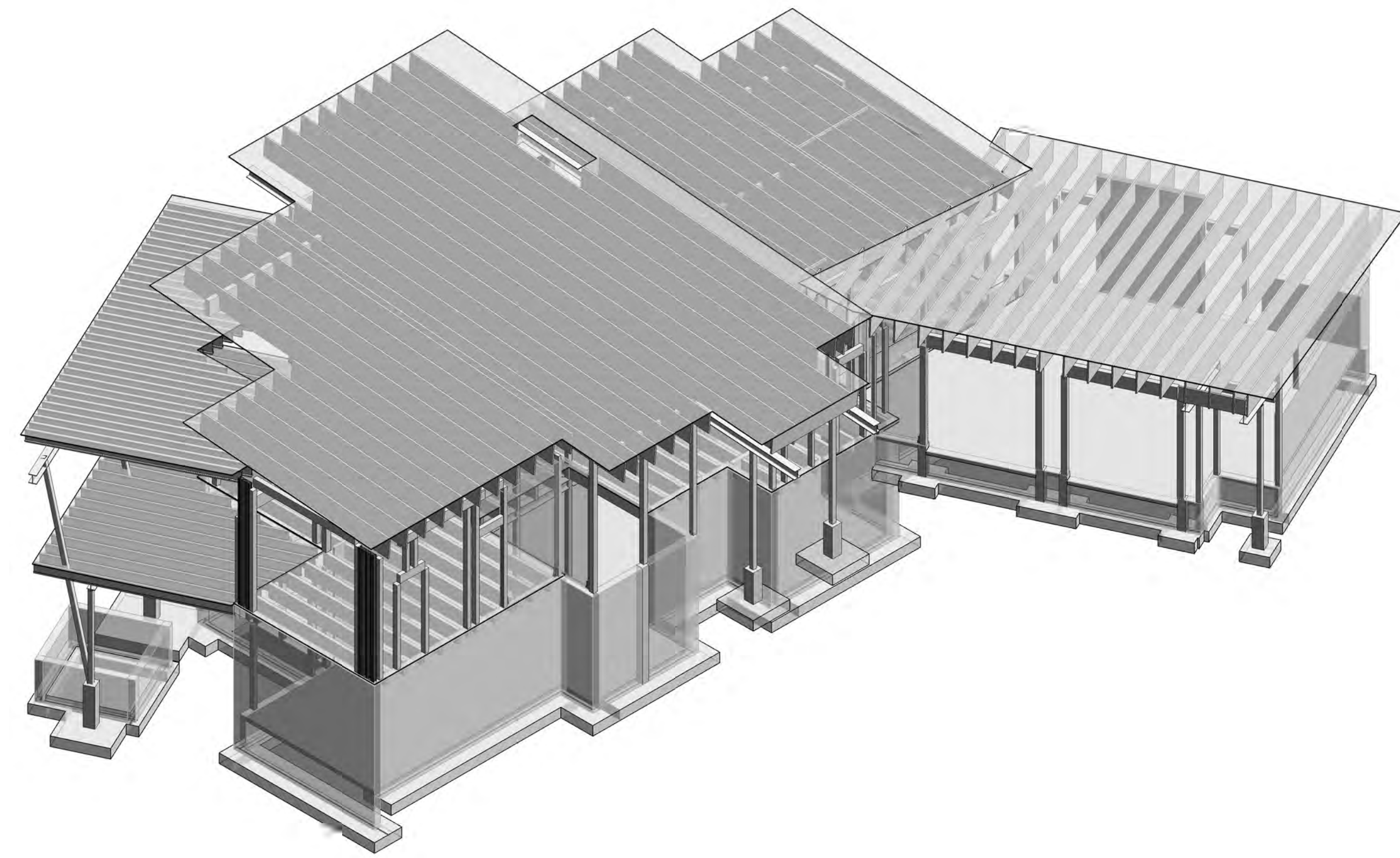
Burton Solitude Spec Home
Think Architecture
5151 South 900 East, Suite #200
Salt Lake City, UT 84117



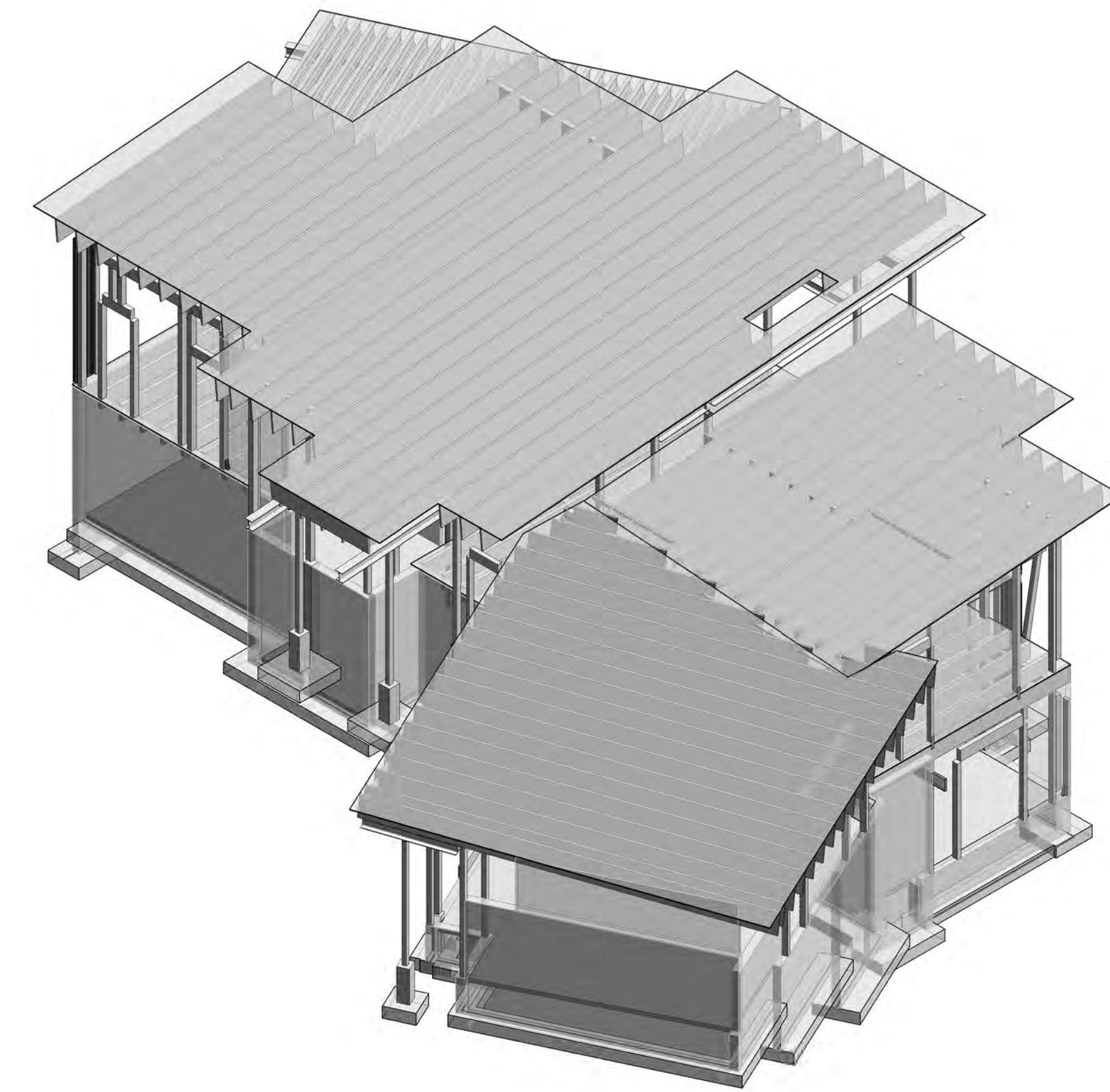
Date of 8/27/2019 10:12:53 AM

Framing Details
Date 9/4/18
Drawn By BPT
Checked By BPT

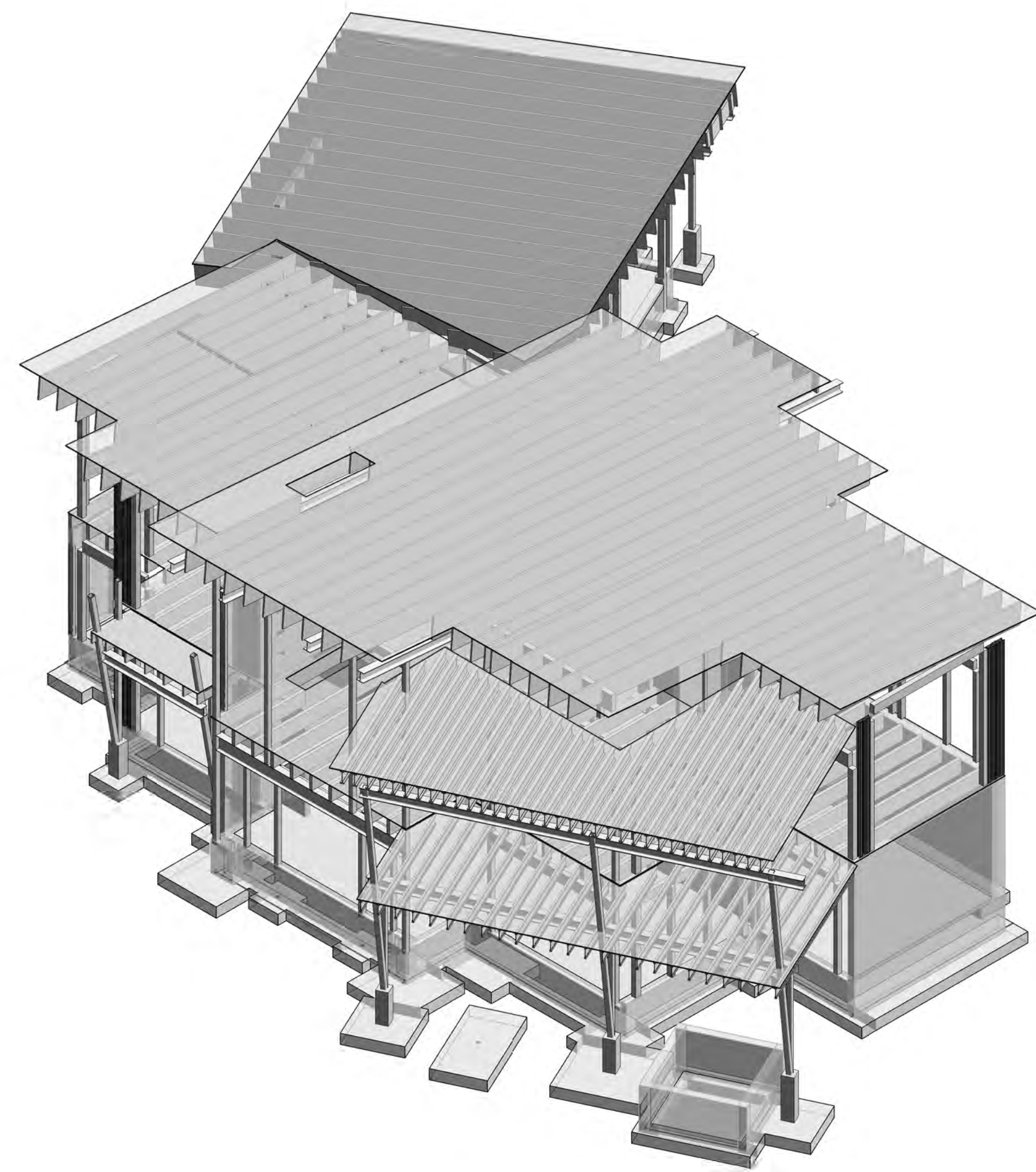
S503
Scale 1" = 1'-0"



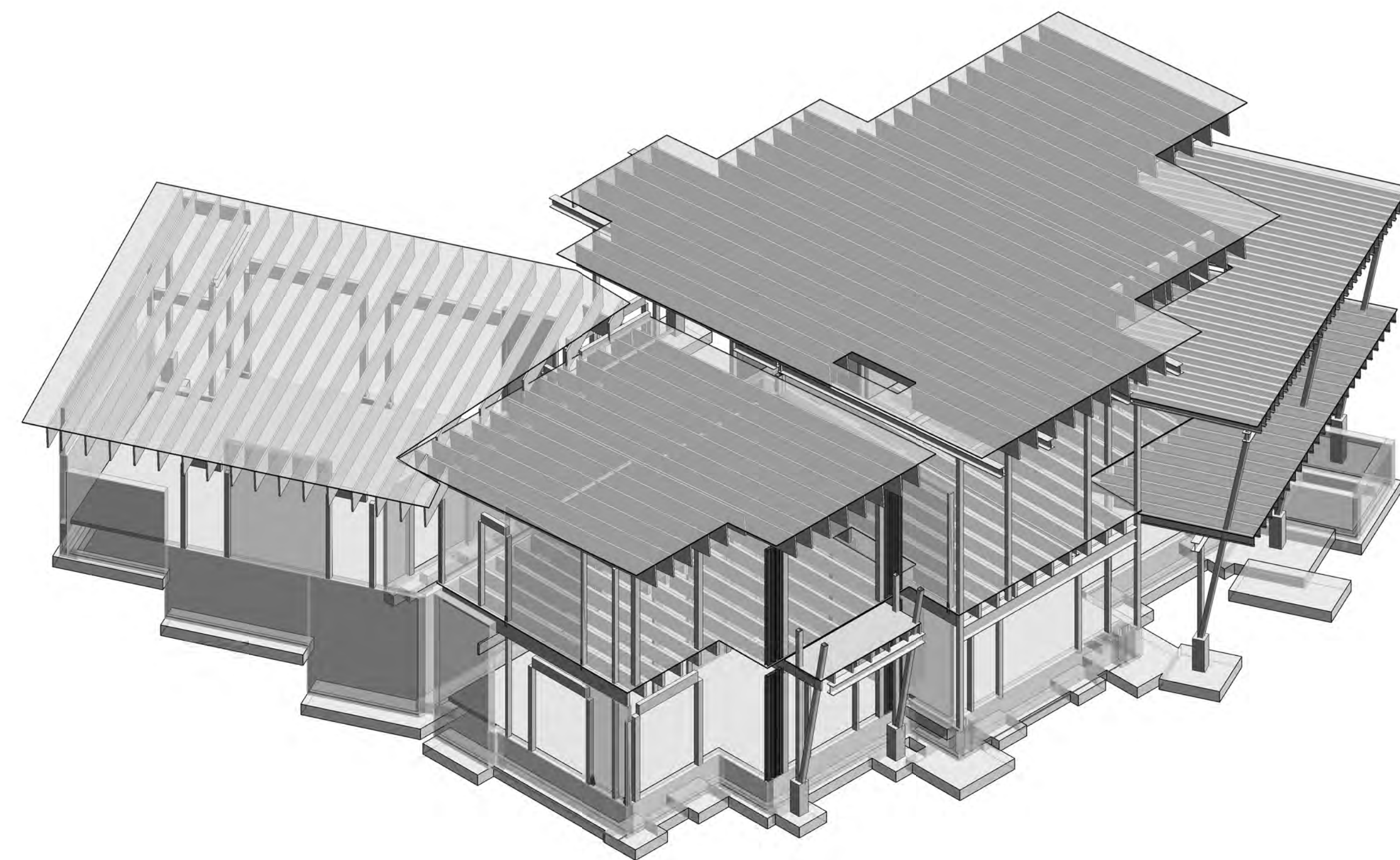
1 Front Left



2 Front Right



3 Back Left



4 Back Right



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No.	Description	Date

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Salt Lake City, UT 84117



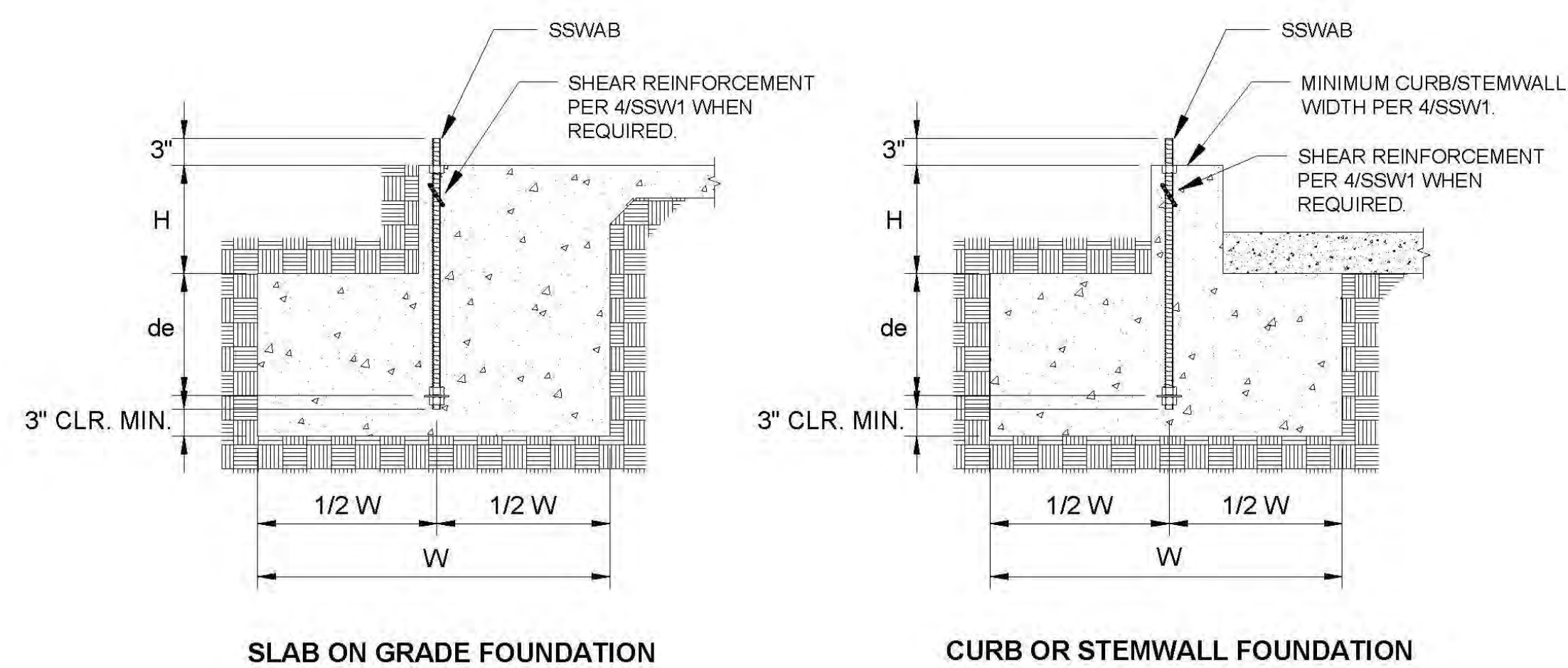
Date of
8/27/2019 10:12:58 AM

Perspective Views

Date 9/4/18
Drawn By BPT
Checked By BPT

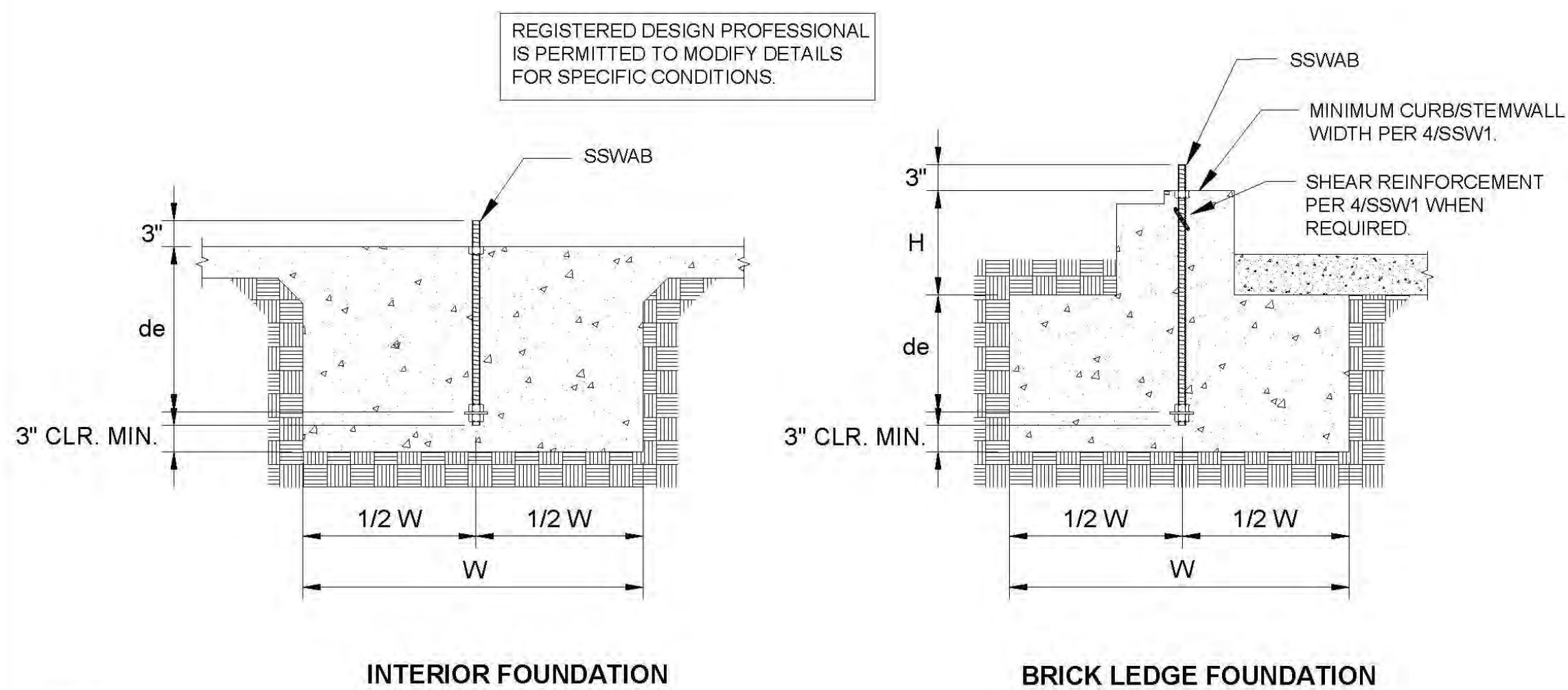
S601

Scale



SLAB ON GRADE FOUNDATION

CURB OR STEMWALL FOUNDATION



INTERIOR FOUNDATION

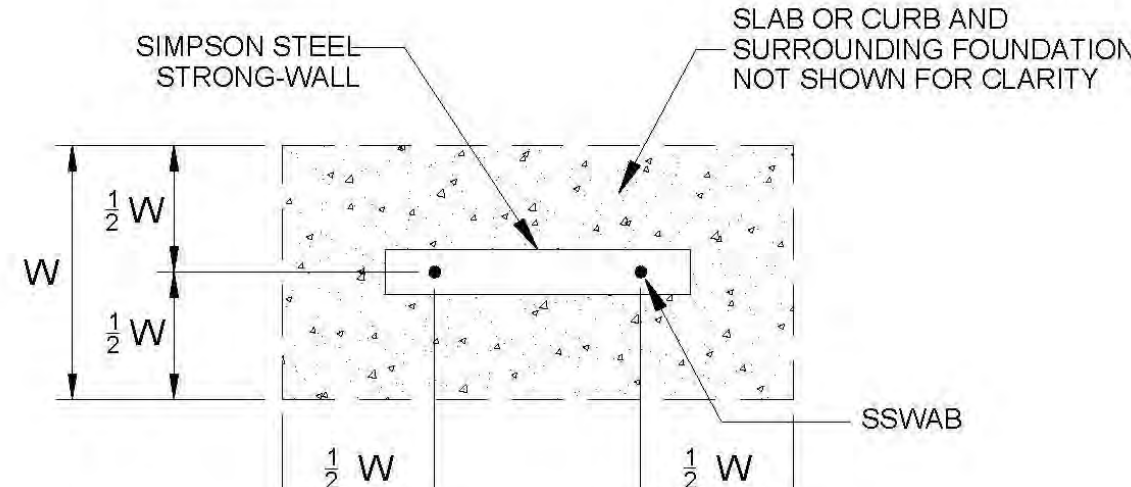
BRICK LEDGE FOUNDATION

- NOTES:
- SEE 2/SSW1 AND 3/SSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
 - SEE 4/SSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
 - MAXIMUM H = le - de. SEE 5/SSW1 AND 6/SSW1 FOR le.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS

STEEL STRONG-WALL ANCHORAGE - TYPICAL SECTIONS

1



SEE TABLES BELOW FOR DIMENSIONS
FOUNDATION PLAN VIEW

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	SSWAB 3/4" ANCHOR BOLT			SSWAB 1" ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	8,900	22	8	16,100	33	11
		HIGH STRENGTH	9,600	24	8	17,100	35	12
		HIGH STRENGTH	18,500	38	12	33,000	51	17
	UNCRAKED	STANDARD	19,900	38	13	35,300	54	18
		HIGH STRENGTH	8,900	19	7	15,700	28	10
		HIGH STRENGTH	9,600	21	7	17,100	30	10
WIND	CRACKED	STANDARD	18,300	31	11	32,900	44	15
		HIGH STRENGTH	19,900	33	11	35,300	47	16
		HIGH STRENGTH	5,100	14	6	8,200	16	6
	UNCRAKED	STANDARD	7,400	18	6	11,400	24	8
		HIGH STRENGTH	9,600	22	8	17,100	32	11
		HIGH STRENGTH	11,400	24	8	21,100	36	12
WIND	CRACKED	STANDARD	13,600	27	9	27,300	42	14
		HIGH STRENGTH	15,900	30	10	31,800	46	16
		HIGH STRENGTH	19,900	35	12	35,300	50	17
	UNCRAKED	STANDARD	5,000	12	6	8,400	14	6
		HIGH STRENGTH	7,800	16	6	12,500	22	8
		HIGH STRENGTH	9,600	19	7	17,100	28	10
UNCRAKED	STANDARD	12,500	22	8	21,900	32	11	
	HIGH STRENGTH	14,300	24	8	26,400	36	12	
	HIGH STRENGTH	17,000	27	9	31,500	40	14	
UNCRAKED	STANDARD	19,900	30	10	35,300	43	15	

- NOTES:
- ANCHORAGE DESIGNS CONFORM TO ACI 318-14 AND ACI 318-11 APPENDIX D WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
 - ANCHOR STRENGTH INDICATES REQUIRED GRADE OF SSWAB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
 - SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-11 SECTION D.3.3.4.
 - WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS.
 - THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
 - REFER TO 1/SSW1 FOR de.

SSWAB TENSION ANCHORAGE SCHEDULE 2500 PSI

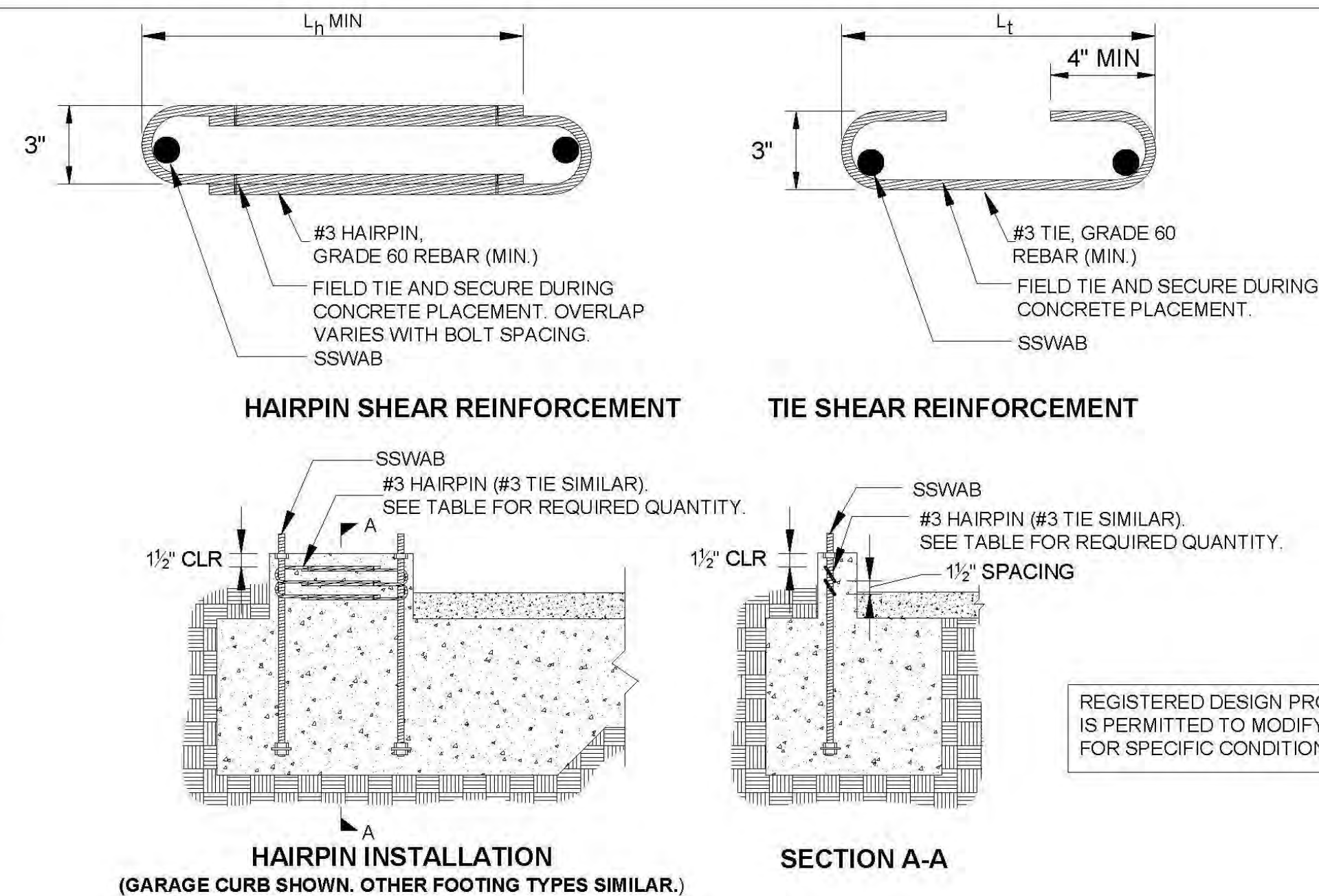
2

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	SSWAB 3/4" ANCHOR BOLT			SSWAB 1" ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
SEISMIC	CRACKED	STANDARD	9,000	20	7	15,700	29	10
		HIGH STRENGTH	9,600	21	7	17,100	31	11
		HIGH STRENGTH	18,200	32	11	33,000	46	16
	UNCRAKED	STANDARD	19,900	34	12	35,300	48	18
		HIGH STRENGTH	8,900	17	6	15,700	25	9
		HIGH STRENGTH	9,600	19	7	17,100	27	9
WIND	CRACKED	STANDARD	18,600	28	10	32,800	40	14
		HIGH STRENGTH	19,900	30	10	35,300	42	14
		HIGH STRENGTH	6,000	14	6	7,500	16	6
	UNCRAKED	STANDARD	7,300	16	6	13,500	24	8
		HIGH STRENGTH	9,600	20	7	17,100	29	10
		HIGH STRENGTH	11,600	22	8	22,700	34	12
WIND	CRACKED	STANDARD	13,500	24	8	27,400	38	13
		HIGH STRENGTH	17,000	28	10	32,300	42	14
		HIGH STRENGTH	19,900	32	11	35,300	45	15
	UNCRAKED	STANDARD	6,000	12	6	7,500	14	6
		HIGH STRENGTH	7,500	14	6	12,800	20	7
		HIGH STRENGTH	9,600	17	6	17,100	25	9
UNCRAKED	STANDARD	12,800	20	7	21,300	28	10	
	HIGH STRENGTH	14,800	22	8	28,000	32	11	
	HIGH STRENGTH	18,900	24	8	31,300	36	12	
UNCRAKED	STANDARD	19,900	27	9	35,300	39	13	

- NOTES:
- ANCHORAGE DESIGNS CONFORM TO ACI 318-14 AND ACI 318-11 APPENDIX D WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
 - ANCHOR STRENGTH INDICATES REQUIRED GRADE OF SSWAB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
 - SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-11 SECTION D.3.3.4.
 - WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
 - FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
 - SEE 1/SSW1 AND 2/SSW1 FOR W AND de.

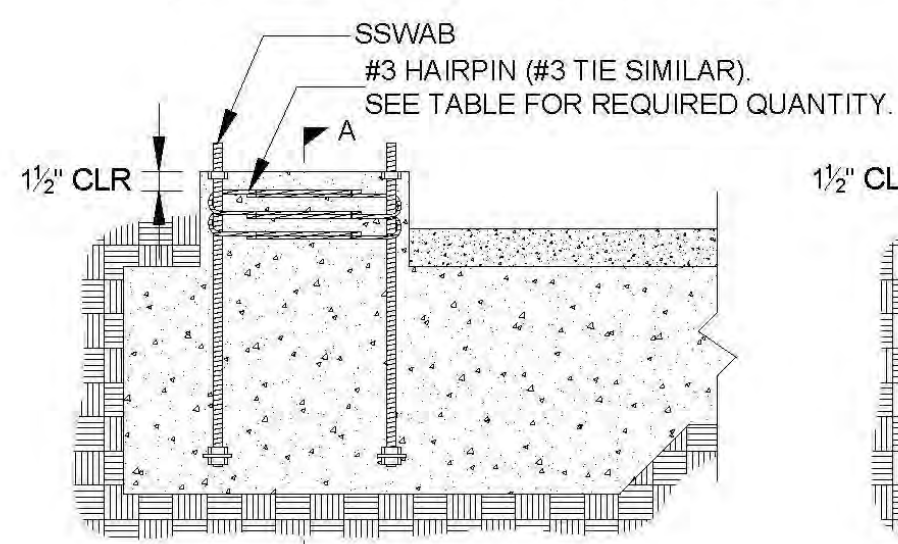
SSWAB TENSION ANCHORAGE SCHEDULE 3500/4500 PSI

3

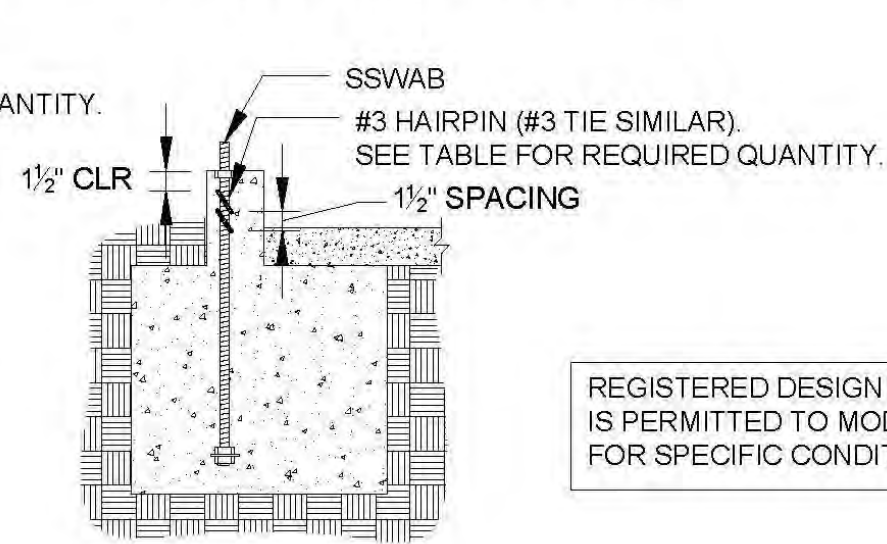


HAIRPIN SHEAR REINFORCEMENT

TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION (GARAGE CURB SHOWN, OTHER FOOTING TYPES SIMILAR.)



SECTION A-A

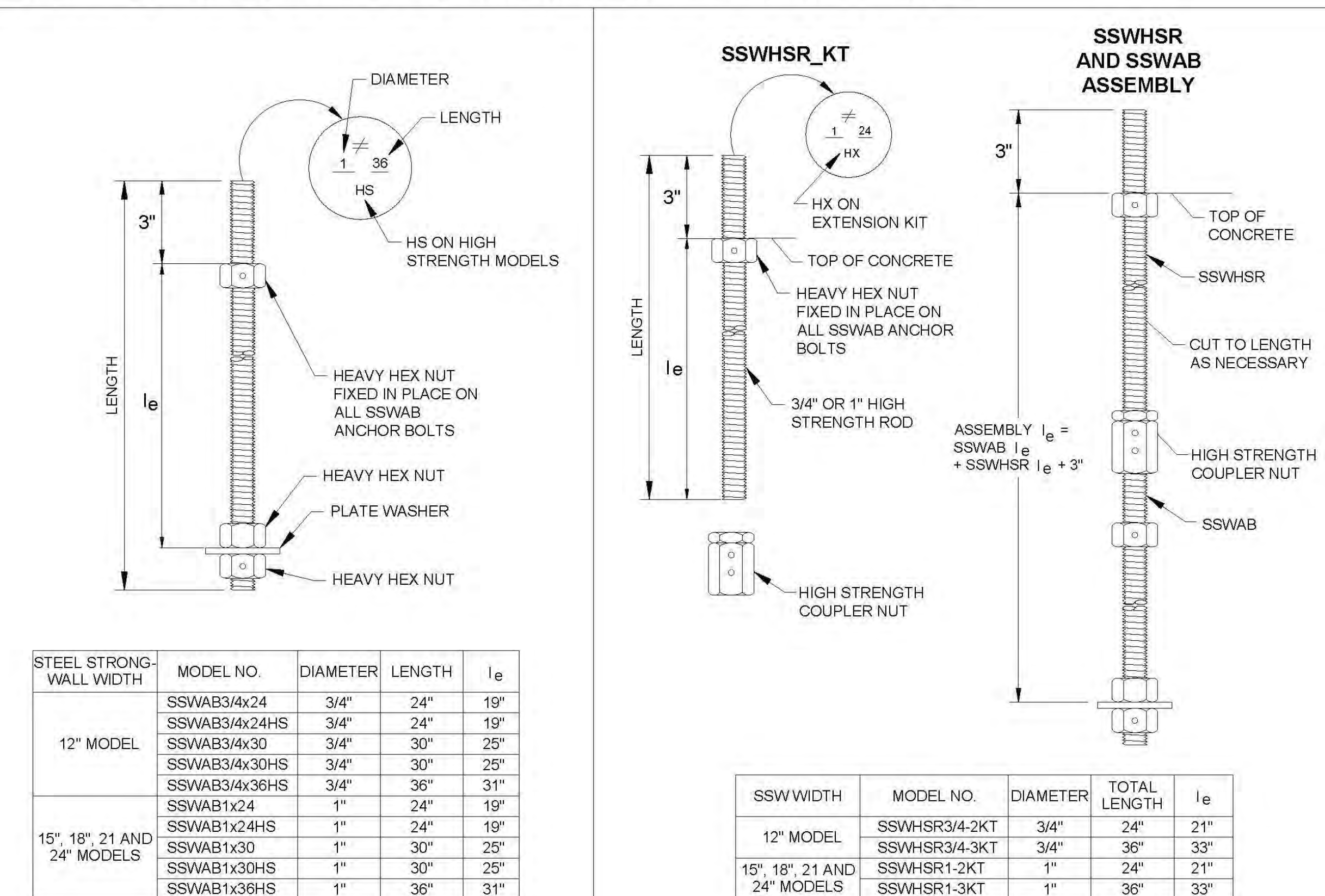
REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS

MODEL	L _h OR L _t (in)	SEISMIC ^c		WIND ^d					
		SHEAR REINFORCEMENT	MIN CURB / STEMWALL WIDTH (in)	ASD ALLOWABLE SHEAR LOAD V (lbs.) ^f					
				8" MIN CURB / STEMWALL	8" MIN CURB / STEMWALL	8" MIN CURB / STEMWALL	8" MIN CURB / STEMWALL		
SSW12	9	(1) #3 TIE	6	NONE REQUIRED	-	1230	880	1440	1030
SSW15	12	(2) #3 TIES	6	NONE REQUIRED	-	1590	1135	1810	1295
SSW18	14	(1) #3 HAIRPIN	8 ^e	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE STEEL STRONG-WALL PANEL			
SSW21	15	(2) #3 HAIRPIN	8 ^e	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE STEEL STRONG-WALL PANEL			
SSW24	17	(2) #3 HAIRPIN	8 ^e	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE STEEL STRONG-WALL PANEL			

- NOTES:
- SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-14 AND ACI 318-11 AND ASSUME MINIMUM f_c = 2,500 PSI CONCRETE. SEE DETAILS 1/SSW1 TO 3/SSW1 FOR TENSION ANCHORAGE.
 - SHEAR REINFORCEMENT IS NOT REQUIRED FOR PANELS INSTALLED ON A WOOD FLOOR, INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
 - SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
 - WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B.
 - MINIMUM CURB/STEMWALL WIDTH IS 6" WHEN STANDARD STRENGTH SSWAB IS USED.
 - USE (1) #3 TIE FOR SSW12 AND SSW15 WHEN THE STEEL STRONG-WALL PANEL DESIGN SHEAR FORCE EXCEEDS THE TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
 - CONCRETE EDGE DISTANCE FOR ANCHORS MUST COMPLY WITH ACI 318-14 SECTION 17.7.2 AND ACI 318-11 D.8.2.

STEEL STRONG-WALL ANCHOR BOLT SHEAR ANCHORAGE

4



STEEL STRONG-WALL WIDTH	MODEL NO.	DIAMETER	LENGTH	l _e
12" MODEL	SSWAB3/4x24	3/4"	24"	19"
	SSWAB3/4x24HS	3/4"	24"	19"
	SSWAB3/4x30	3/4"	30"	25"
	SSWAB3/4x30HS	3/4"	30"	25"
15", 18", 21 AND 24" MODELS	SSWAB1x24	1"	24"	19"
	SSWAB1x24HS	1"	24"	19"
	SSWAB1x30	1"	30"	25"
	SSWAB1x30HS	1"	30"	25"
SSWAB1x36HS	1"	36"	31"	

SSW WIDTH	MODEL NO.	DIAMETER	TOTAL LENGTH	l _e
12" MODEL	SSWHR3/4-2KT	3/4"	24"	21"
	SSWHR3/4-3KT	3/4"	36"	33"
15", 18", 21 AND 24" MODELS	SSWHR1-2KT	1"	24"	21"
	SSWHR1-3KT	1"	36"	33"

SSWAB TENSION ANCHORAGE SCHEDULE 2500 PSI

SSW ANCHOR BOLTS

SSW ANCHOR BOLT EXTENSION

SSW ANCHOR BOLT TEMPLATES

7

NO.	DATE	REVISIONS
1	9/2/2009	2006 IBC REVISIONS
2	4/16/2014	2012 IBC REVISIONS
3	8/08/2016	2015 IBC REVISIONS

SIMPSON STRONG-TIE COMPANY, INC.
 HOME OFFICE: POSTAL BLVD.
 5956 W. LAS VEGAS BLVD.
 LAS VEGAS, NV 89148
 TEL: (800) 999-5099

STEEL STRONG-WALL ANCHORAGE DETAILS ENGINEERED DESIGNS

SIMPSON Strong-Tie
 HERE IS THE REALITY

NAME _____
 DATE 8-8-2016
 SCALE N.T.S.
 CHECKED _____
 SHEET **SSW1**
 OF SHEETS
 JOB NO. _____

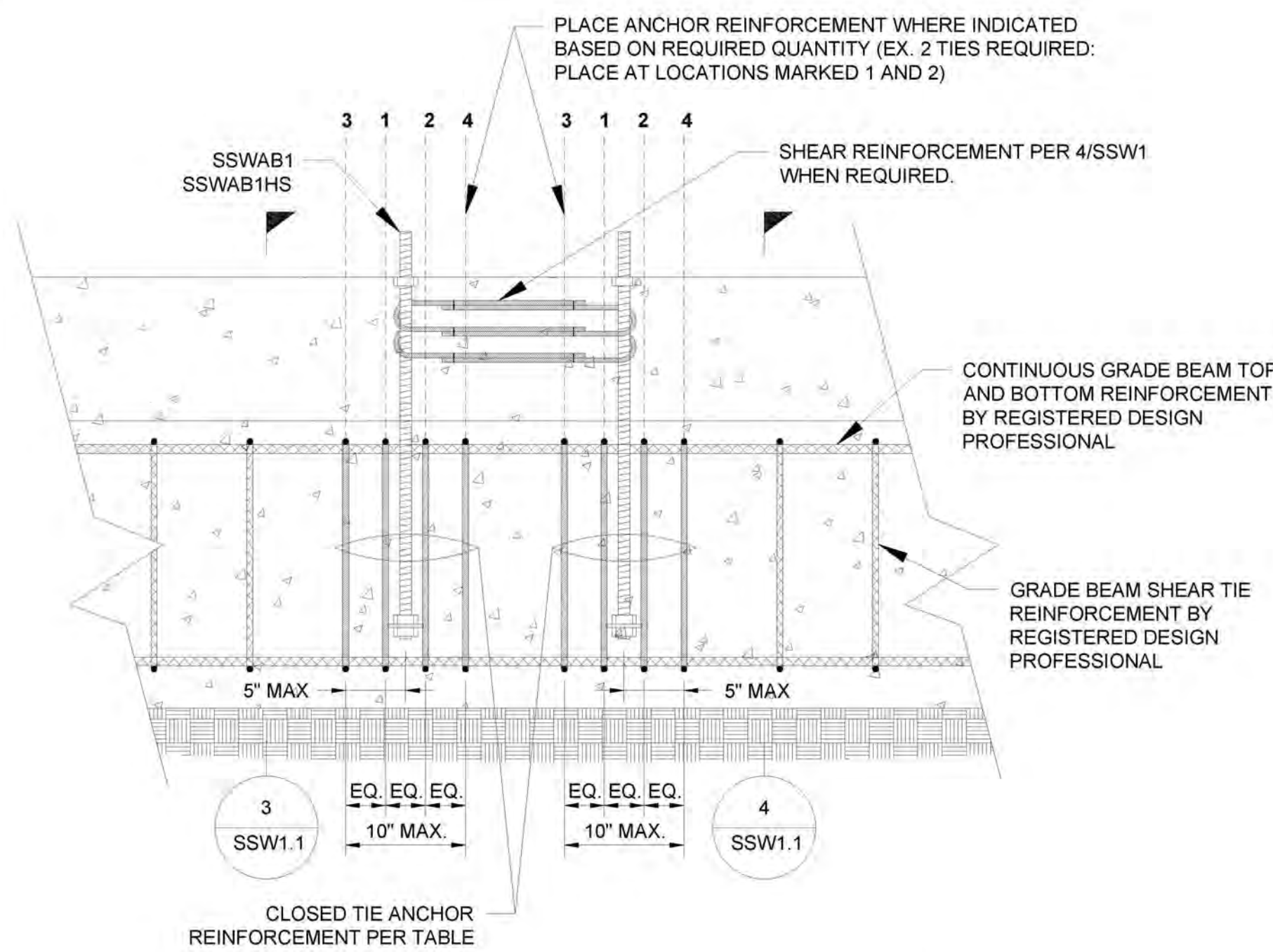
Sive ENGINEERING
 834 West 75 North
 Kayville, UT 84037
 (phone) 801 915 4525
 www.SiveEngineering.com

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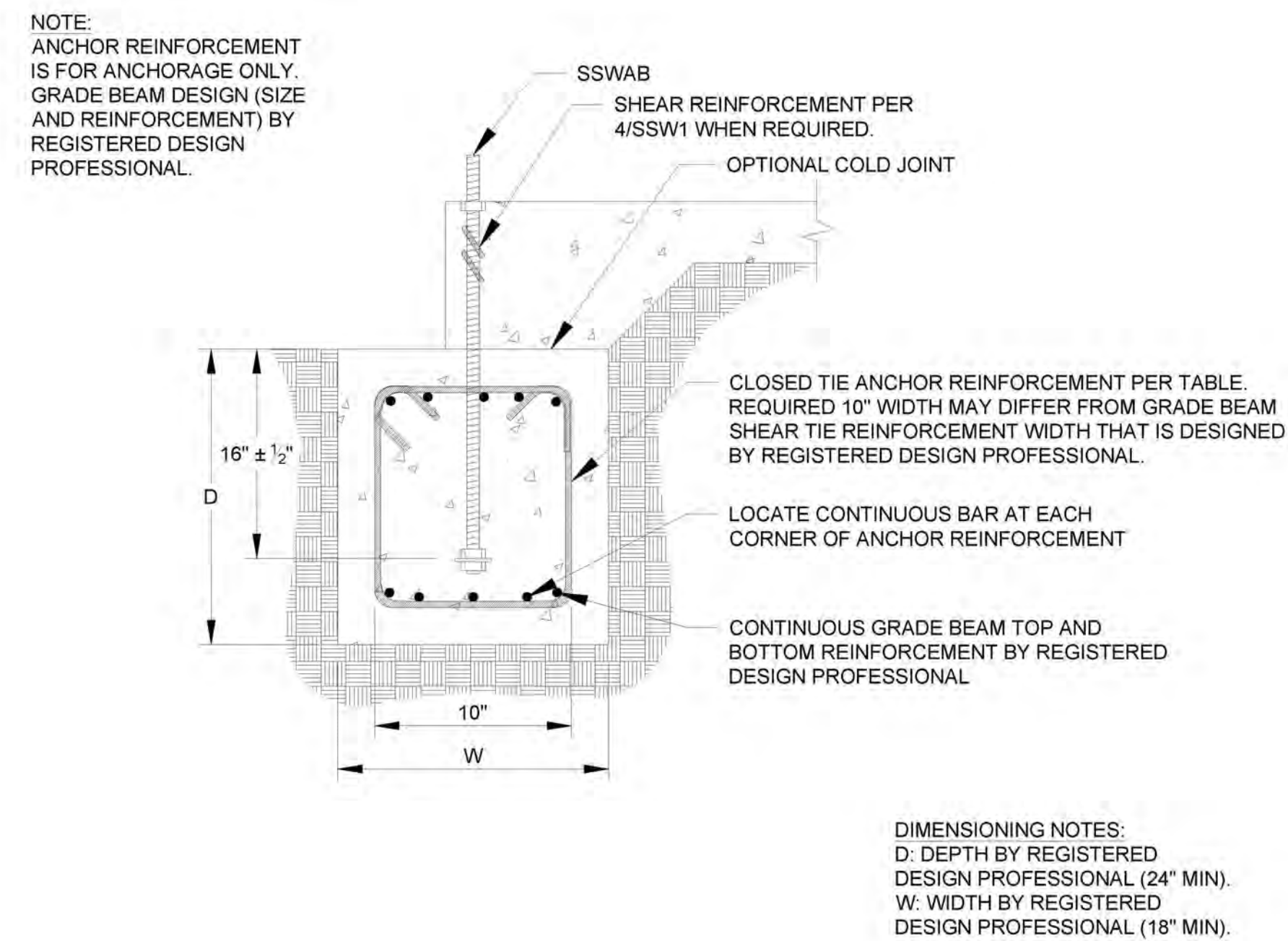
Burton Solitude Spec Home
 Think Architecture
 5151 South 900 East, Suite #200
 Salt Lake City, UT 84117

PROFESSIONAL STRUCTURAL ENGINEER
 No. 001970-2250
 THOMAS R. THOMAS
 STATE OF UTAH

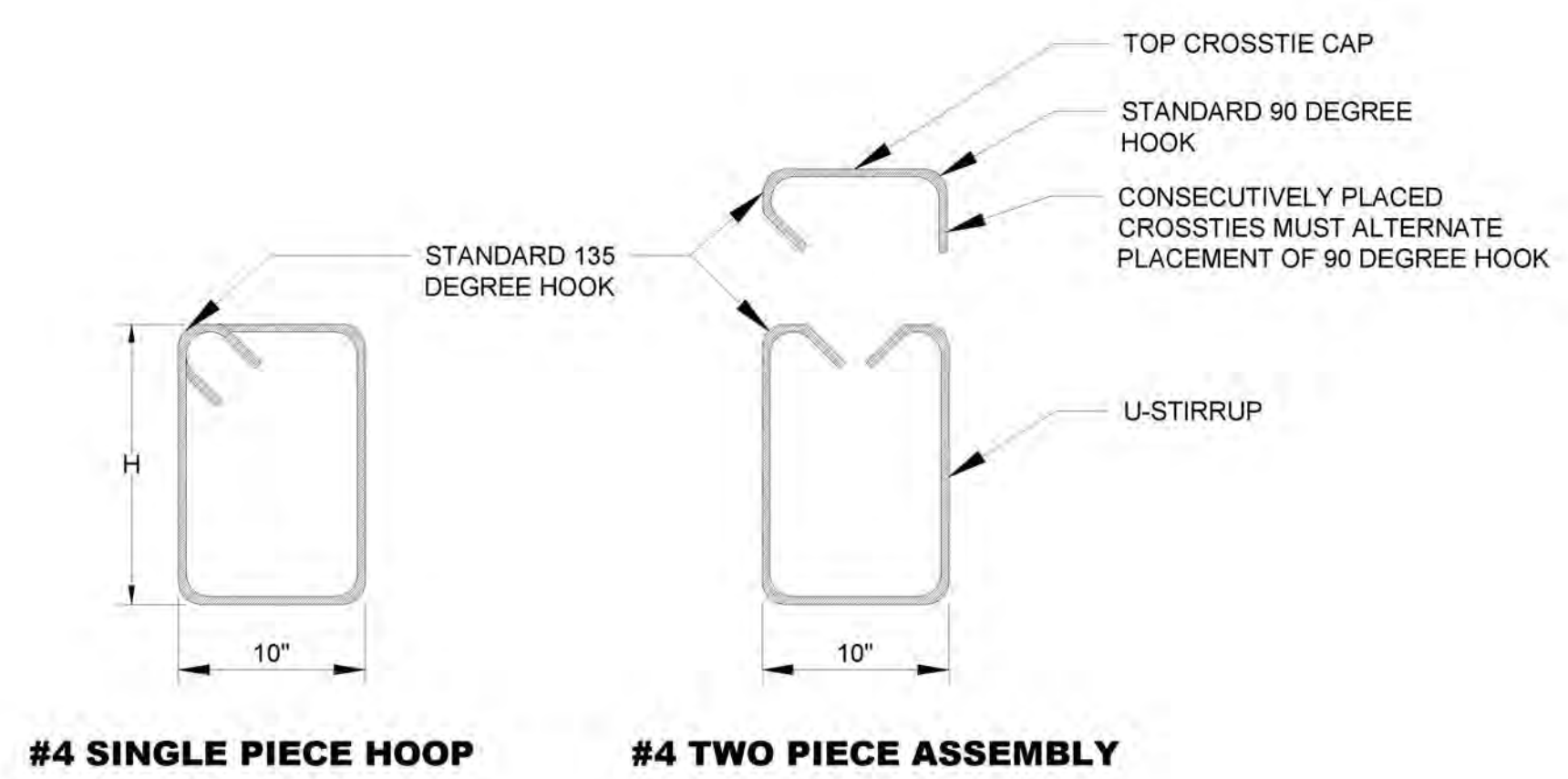
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 Date 9/4/18
 Drawn By BPT
 Checked By BPT
S701
 Scale _____



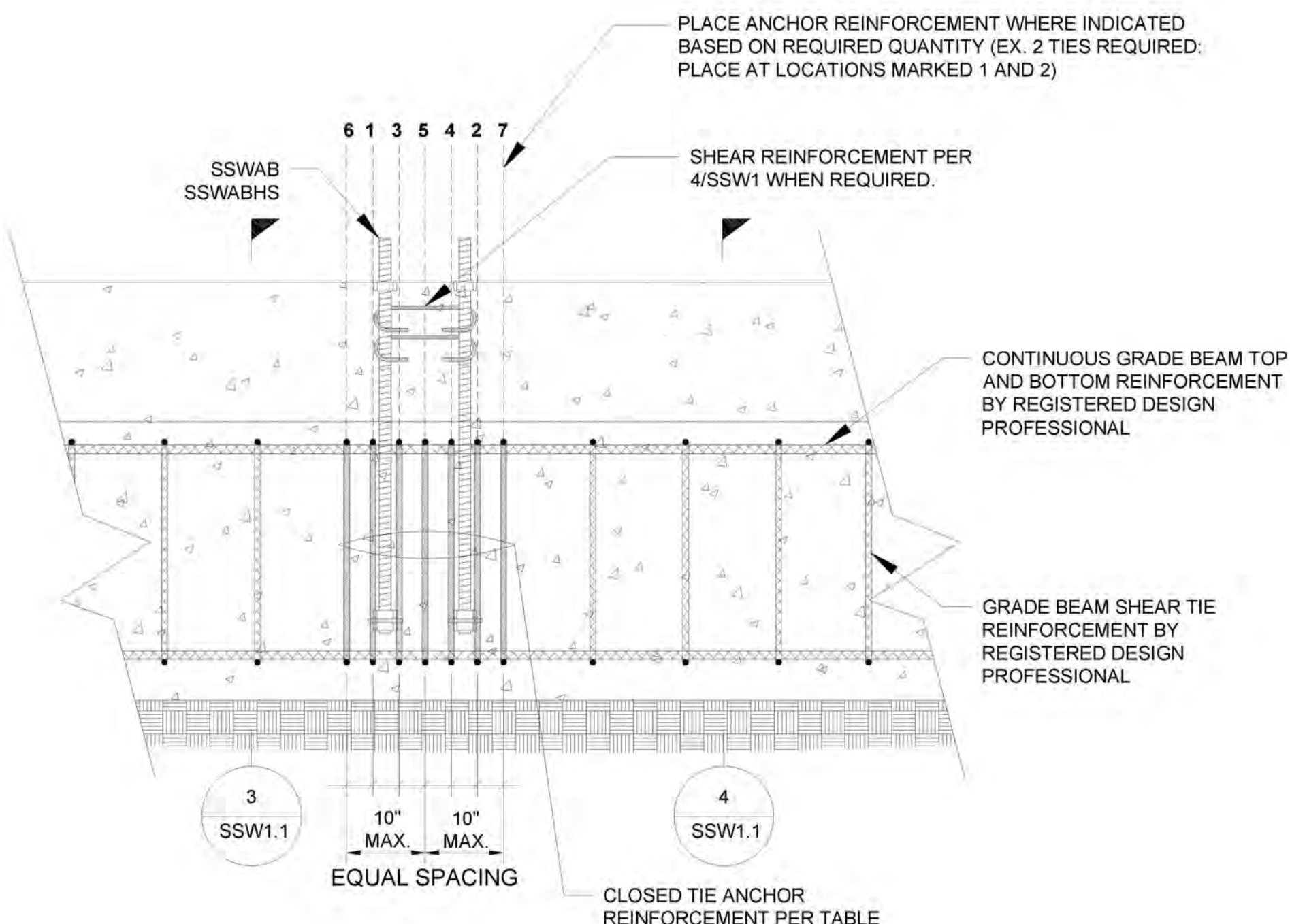
GRADE BEAM ELEVATION AT 18", 21" AND 24" WALL MODELS 1



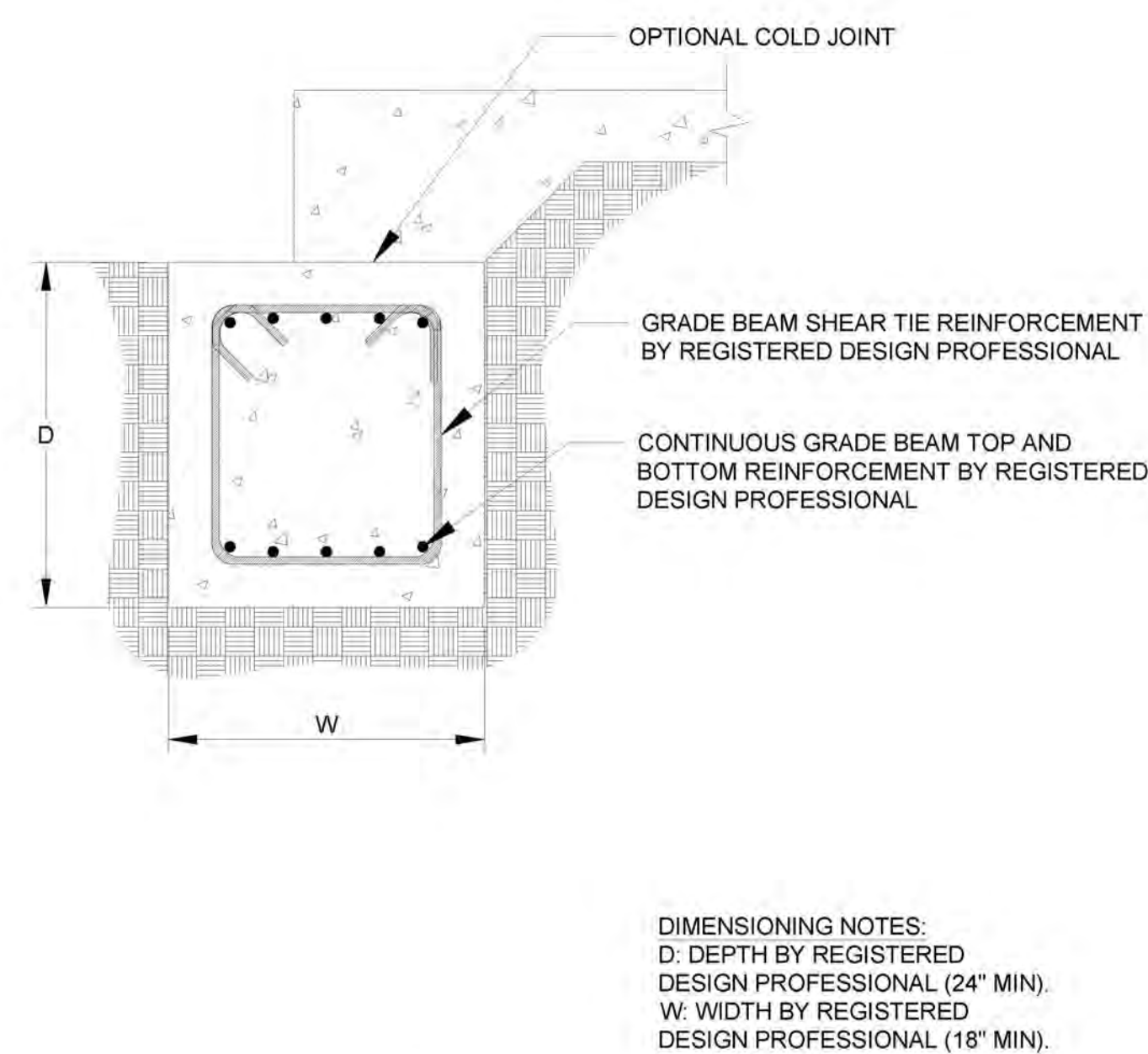
GRADE BEAM SECTION AT ANCHOR REINFORCEMENT 3



CLOSED TIE ANCHOR REINFORCEMENT 6



GRADE BEAM ELEVATION AT 12" AND 15" WALL MODELS 2



GRADE BEAM SECTION AWAY FROM ANCHOR REINFORCEMENT 4

STEEL STRONG-WALL WIDTH (in.)	ANCHOR MODEL NO.	ANCHOR DIAMETER (in.)	ANCHOR REINFORCEMENT FOR WIND AND SEISMIC 3,5,6		LRFD APPLIED DESIGN SEISMIC MOMENT (ft-lbs.) 4,5,6,7	
			STANDARD STRENGTH SSWAB	HIGH STRENGTH (HS) SSWAB	STANDARD STRENGTH SSWAB	HIGH STRENGTH (HS) SSWAB
			12" MODEL	SSWAB3/4 SSWAB3/4HS	3/4	2- #4 CLOSED TIES PER (2) SSW1.1
15" MODEL	SSWAB1 SSWAB1HS	1	4- #4 CLOSED TIES PER (2) SSW1.1	7- #4 CLOSED TIES PER (2) SSW1.1	37,000	44,000
18" MODEL			2- #4 CLOSED TIES PER (1) SSW1.1	4- #4 CLOSED TIES PER (1) SSW1.1	48,700	61,000
21" MODEL					60,300	77,000
24" MODEL					72,000	87,000

- NOTES:
- ANCHOR REINFORCEMENT CONFORMS TO ACI 318-14 SECTION 17.4.2.9 AND ACI 318-11 SECTION D.5.2.9 AND PERFORMANCE WAS VALIDATED THROUGH FULL SCALE TESTING.
 - MINIMUM CONCRETE COMPRESSIVE STRENGTH, $f_c = 2500$ psi.
 - CLOSED TIE ANCHOR REINFORCEMENT TO BE ASTM A615 GRADE 60 (MIN) #4 REBAR.
 - GRADE BEAM LONGITUDINAL AND TIE REINFORCEMENT SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL FOR FLEXURE AND SHEAR LOADING. DESIGN SHOULD CONSIDER PROJECT SPECIFIC DESIGN LOADS AND ALLOWABLE SOIL PRESSURE.
 - SIMPSON STRONG-TIE RECOMMENDS USING THE TABULATED MINIMUM LRFD APPLIED SEISMIC DESIGN MOMENT TO ENSURE GRADE BEAM DESIGN FLEXURE AND SHEAR STRENGTH IS ADEQUATE TO PREVENT PLASTIC HINGE FORMATION UNDER DEMANDS ASSOCIATED WITH ANCHORAGE FORCES CORRESPONDING TO ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-11 SECTION D.3.3.4.3.
 - DESIGNER MAY USE REDUCED MOMENT DUE TO APPLIED SSW LATERAL LOAD. MINIMUM MOMENT SHALL BE THE LESSER OF THE TABULATED MOMENT OR THE AMPLIFIED LRFD DESIGN MOMENT FOR SEISMIC: $(ASD \text{ SHEAR} / 0.7) \times D_o \times SSW \text{ HEIGHT}$ FOR GRADE BEAM DESIGN.
 - MINIMUM GRADE BEAM DESIGN MOMENT FOR WIND AND SEISMIC IN SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C: $(ASD \text{ SHEAR} / 0.8) \times SSW \text{ HEIGHT}$.
 - CLOSED TIE MAY BE SINGLE PIECE HOOP OR TWO PIECE ASSEMBLY WITH A U-STIRRUP WITH STANDARD 135 DEGREE HOOKS AND A TOP CROSS TIE CAP. SEE DETAIL 6/SSW1.1.
 - SEE DETAILS FOR GRADE BEAM ANCHOR REINFORCEMENT PLACEMENT, INSTALLATION AND SPACING REQUIREMENTS. CLOSED TIE ANCHOR REINFORCEMENT QUANTITY IS PER WALL FOR THE 12" AND 15" WALL MODELS, AND PER ANCHOR FOR THE 18", 21" AND 24" MODELS.

SSWAB ANCHOR GRADE BEAM REINFORCEMENT AND DESIGN MOMENTS 5

NO.	DATE	REVISIONS
0	10/27/2014	FIRST RELEASE
1	08/08/2016	2015 IBC REVISIONS

No.	Description	Date

SIMPSON STRONG-TIE COMPANY, INC.
 HOME OFFICE: POSTAL BLVD.
 5956 W. LAS VEGAS BLVD.
 LAS VEGAS, NV 89148
 TEL: (702) 899-5996
 FAX: (702) 899-5998

**STEEL STRONG-WALL
 ALTERNATE ANCHORAGE DETAILS
 ENGINEERED DESIGNS**

NAME: _____
 DATE: 8-8-2016
 SCALE: N.T.S.
 CHECKED: _____
 SHEET: **SSW1.1**
 OF _____ SHEETS
 JOB NO: _____

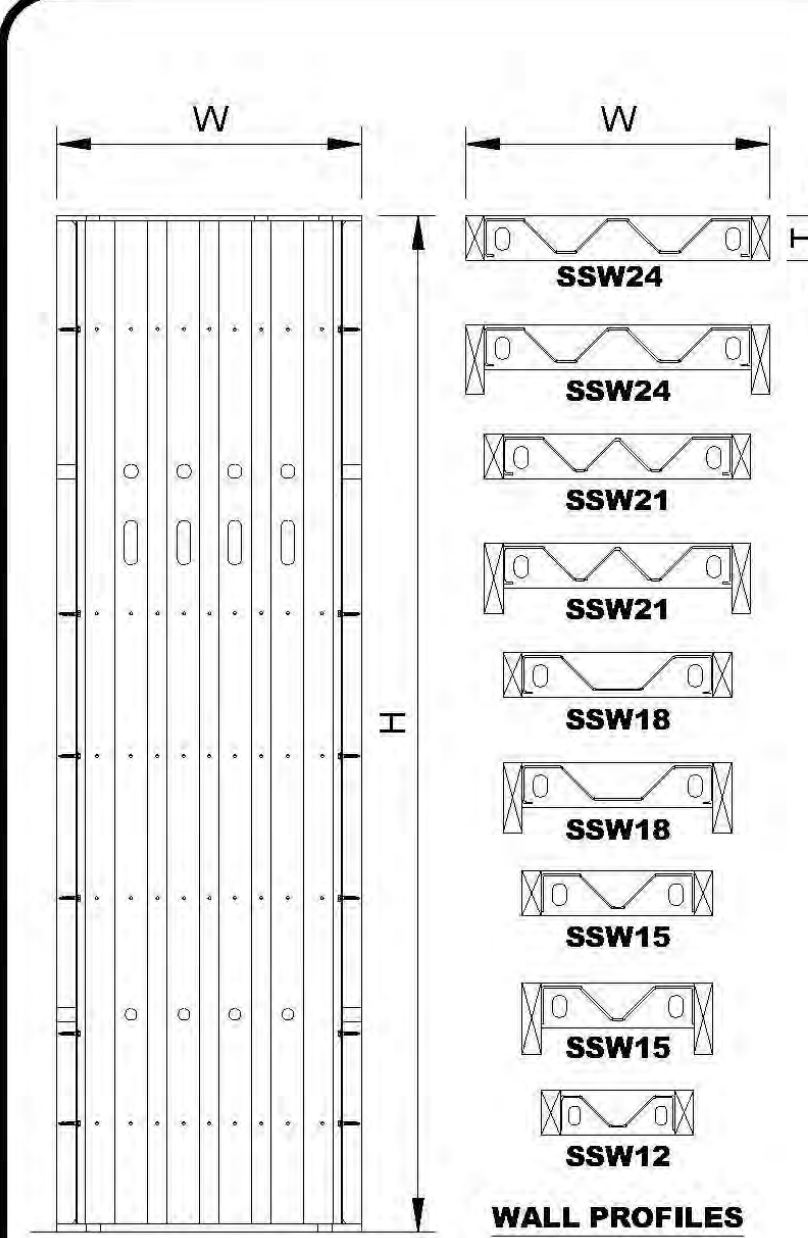
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 834 West 75 North
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Burton Solitude Spec Home
 Think Architecture
 5151 South 900 East, Suite #200
 Salt Lake City, UT 84117

Simpson Strong-Wall Details (cont.)
 Date: 9/4/18
 Drawn By: BPT
 Checked By: BPT

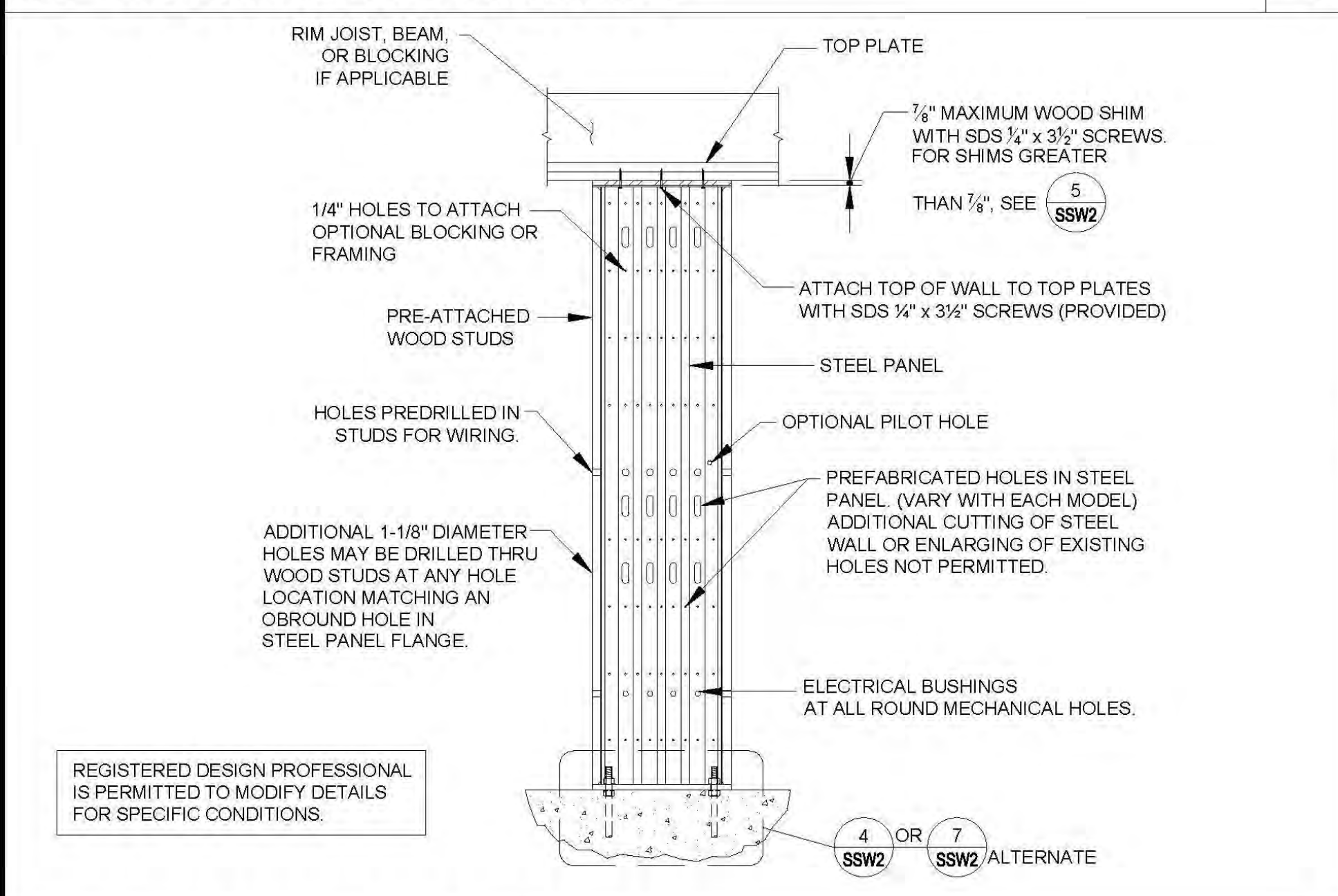
S702
 Scale: _____



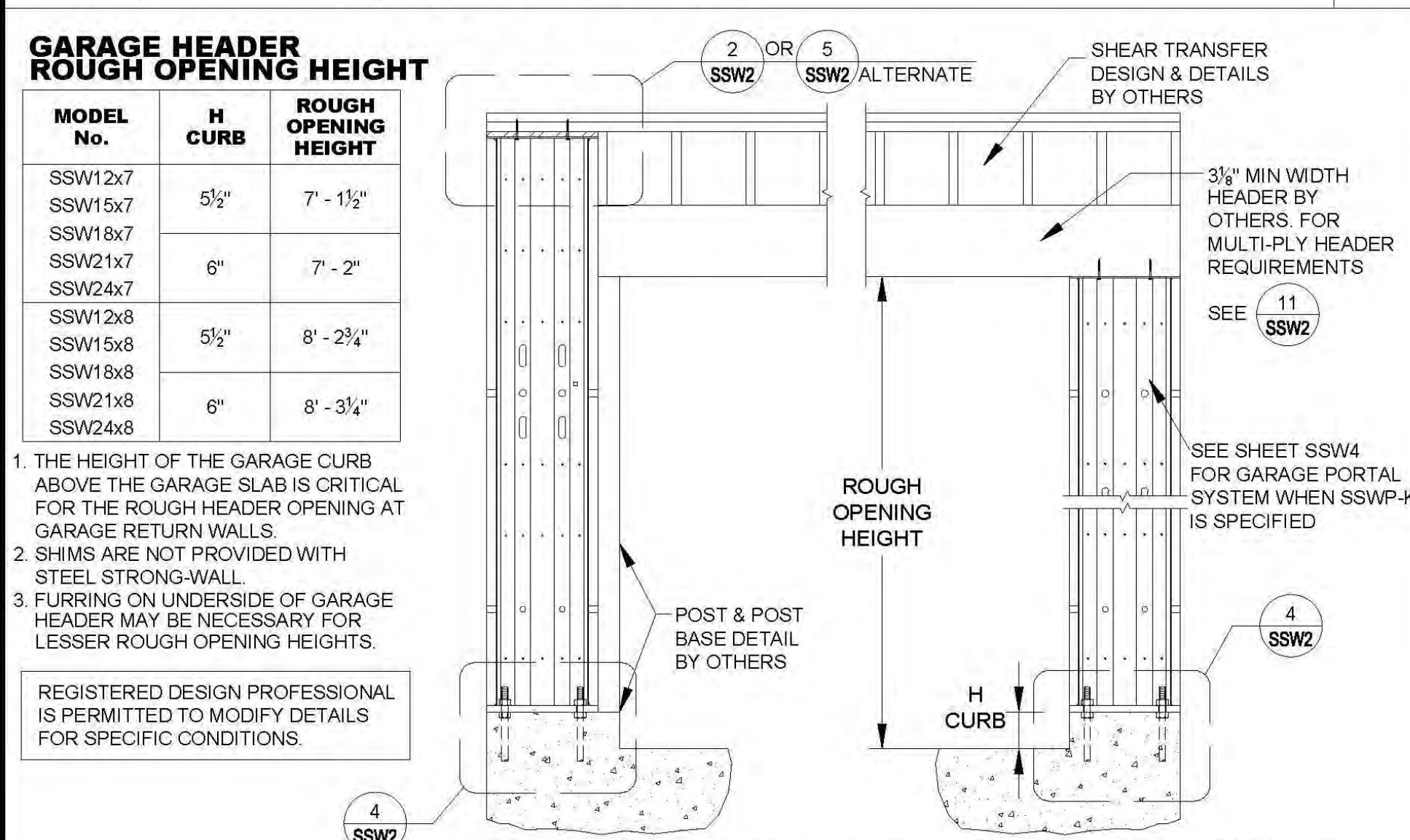
STEEL STRONG-WALL MODELS

STD. WALL MODEL NO.	-STK WALL MODEL NO.	H (in)	T (in)	HOLD-DOWN ANCHOR BOLTS	QTY. OF TOP OF WALL SCREWS
SSW12x7	--	80	3 1/2	(2) 3/4"	4
SSW15x7	--	80	3 1/2	(2) 1"	6
SSW18x7	--	80	3 1/2	(2) 1 1/4"	12
SSW21x7	--	80	3 1/2	(2) 1 1/2"	14
SSW24x7	--	80	3 1/2	(2) 1 3/4"	14
SSW12x7.4	--	85 1/2	3 1/2	(2) 3/4"	4
SSW15x7.4	--	85 1/2	3 1/2	(2) 1"	6
SSW18x7.4	--	85 1/2	3 1/2	(2) 1 1/4"	12
SSW21x7.4	--	85 1/2	3 1/2	(2) 1 1/2"	14
SSW24x7.4	--	85 1/2	3 1/2	(2) 1 3/4"	14
SSW12x8	--	93 1/4	3 1/2	(2) 3/4"	4
SSW15x8	--	93 1/4	3 1/2	(2) 1"	6
SSW18x8	--	93 1/4	3 1/2	(2) 1 1/4"	12
SSW21x8	--	93 1/4	3 1/2	(2) 1 1/2"	14
SSW24x8	--	93 1/4	3 1/2	(2) 1 3/4"	14
SSW12x8-STK	SSW15x8-STK	93 1/4	3 1/2	(2) 1"	6
SSW18x8-STK	SSW21x8-STK	93 1/4	3 1/2	(2) 1 1/4"	12
SSW24x8-STK	SSW24x8-STK	93 1/4	3 1/2	(2) 1 3/4"	14
SSW12x9	--	105 1/4	3 1/2	(2) 3/4"	4
SSW15x9	--	105 1/4	3 1/2	(2) 1"	6
SSW18x9	--	105 1/4	3 1/2	(2) 1 1/4"	12
SSW21x9	--	105 1/4	3 1/2	(2) 1 1/2"	14
SSW24x9	--	105 1/4	3 1/2	(2) 1 3/4"	14
SSW12x10	--	117 1/4	3 1/2	(2) 3/4"	4
SSW15x10	--	117 1/4	3 1/2	(2) 1"	6
SSW18x10	--	117 1/4	3 1/2	(2) 1 1/4"	12
SSW21x10	--	117 1/4	3 1/2	(2) 1 1/2"	14
SSW24x10	--	117 1/4	3 1/2	(2) 1 3/4"	14
SSW15x11	--	129 1/4	5 1/2	(2) 1"	6
SSW18x11	--	129 1/4	5 1/2	(2) 1 1/4"	12
SSW21x11	--	129 1/4	5 1/2	(2) 1 1/2"	14
SSW24x11	--	129 1/4	5 1/2	(2) 1 3/4"	14
SSW15x12	--	141 1/4	5 1/2	(2) 1"	6
SSW18x12	--	141 1/4	5 1/2	(2) 1 1/4"	12
SSW21x12	--	141 1/4	5 1/2	(2) 1 1/2"	14
SSW24x12	--	141 1/4	5 1/2	(2) 1 3/4"	14
SSW18x13	--	153 1/4	5 1/2	(2) 1"	6
SSW21x13	--	153 1/4	5 1/2	(2) 1 1/4"	12
SSW24x13	--	153 1/4	5 1/2	(2) 1 1/2"	14

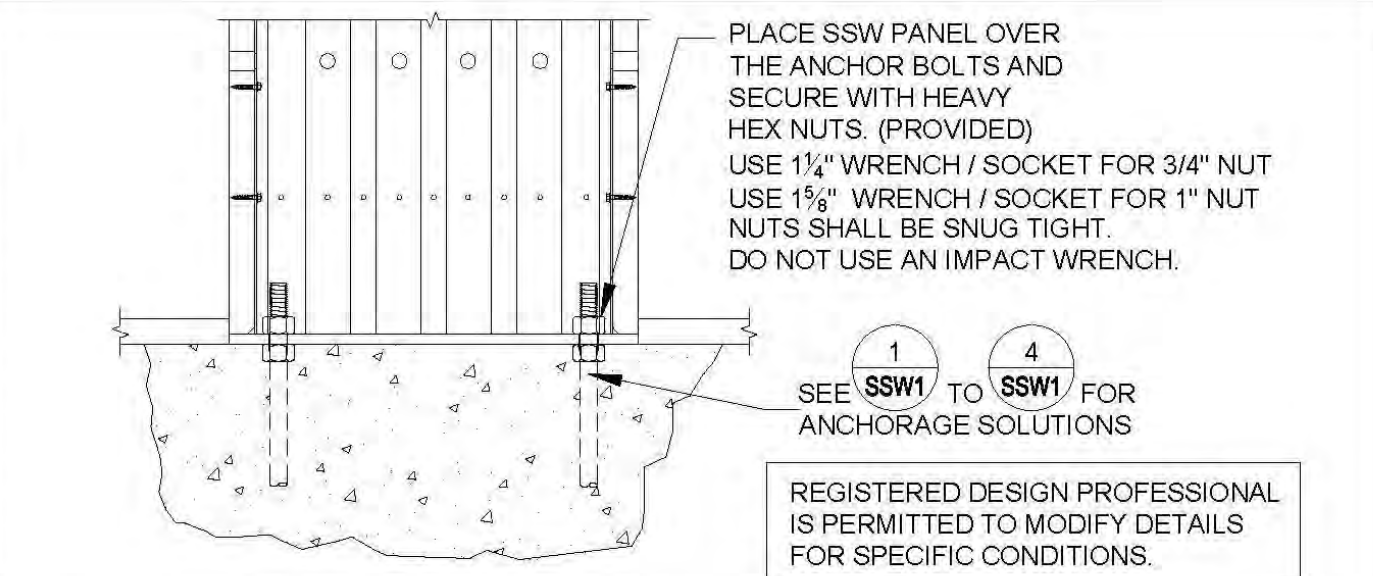
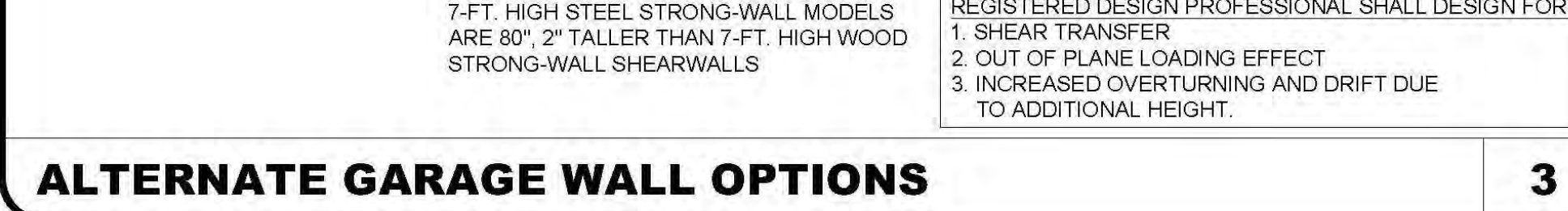
STEEL STRONG-WALL MODELS



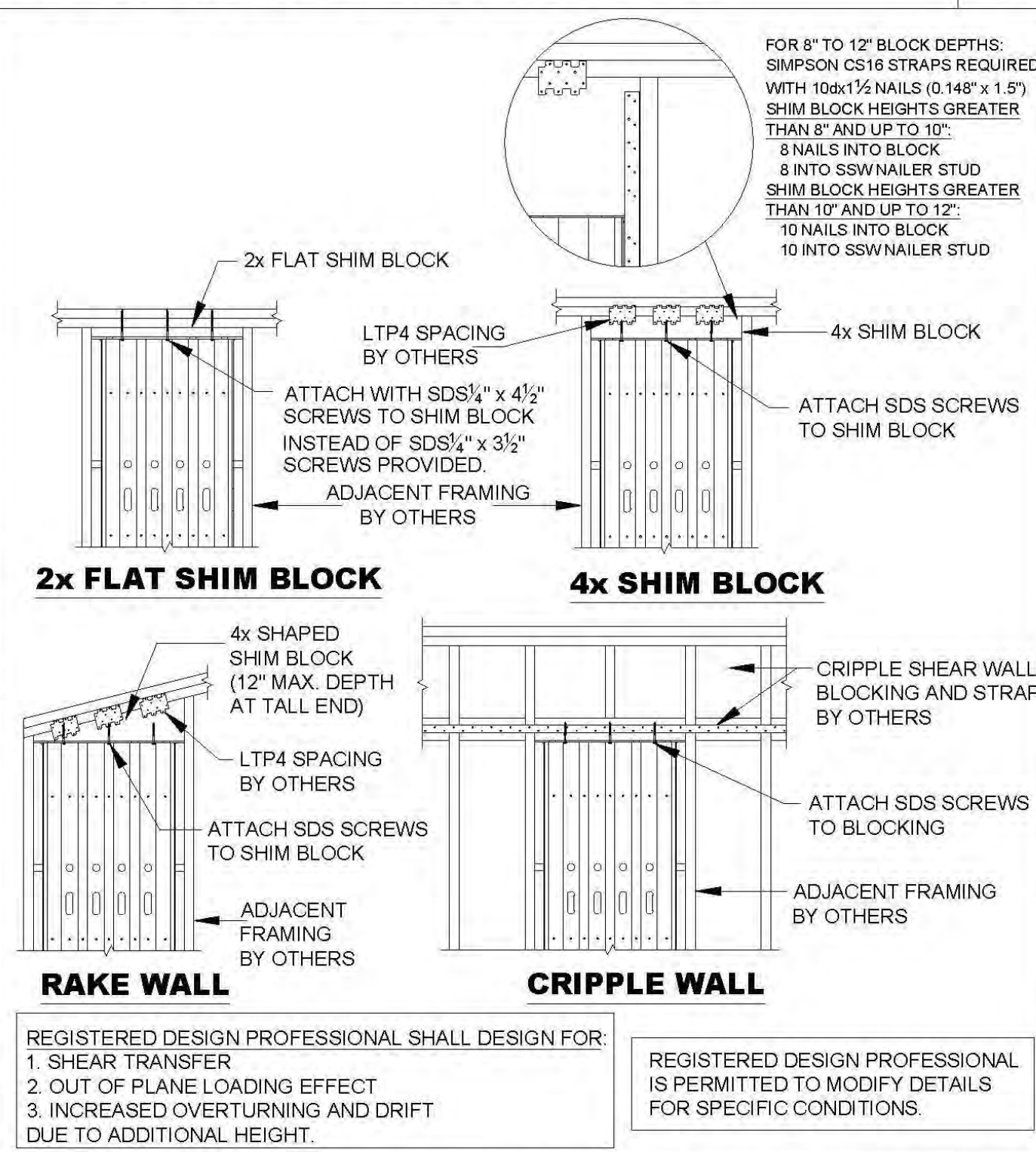
SINGLE-STORY SSW ON CONCRETE



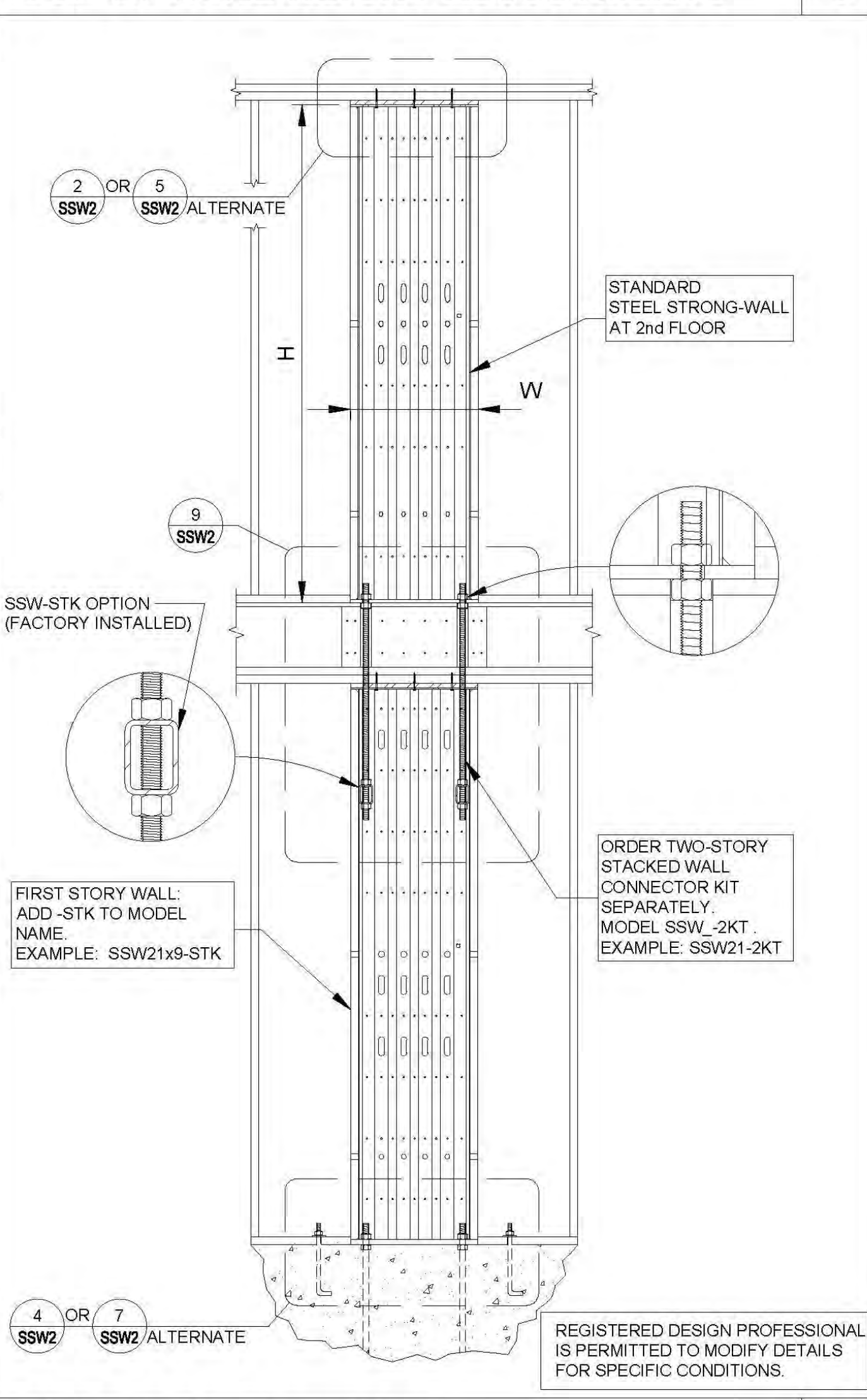
ALTERNATE GARAGE WALL OPTIONS



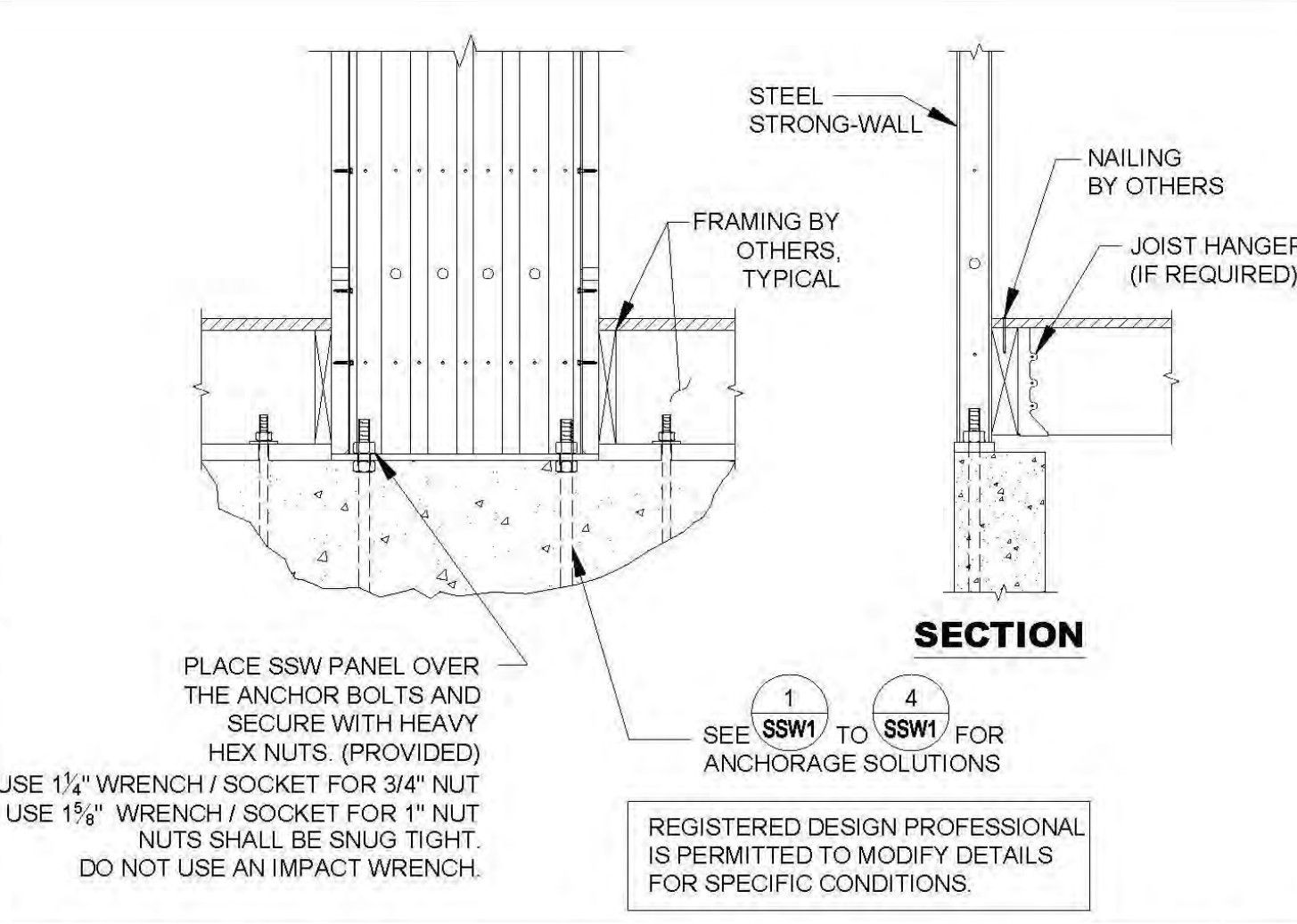
STRONG-WALL ON CONCRETE



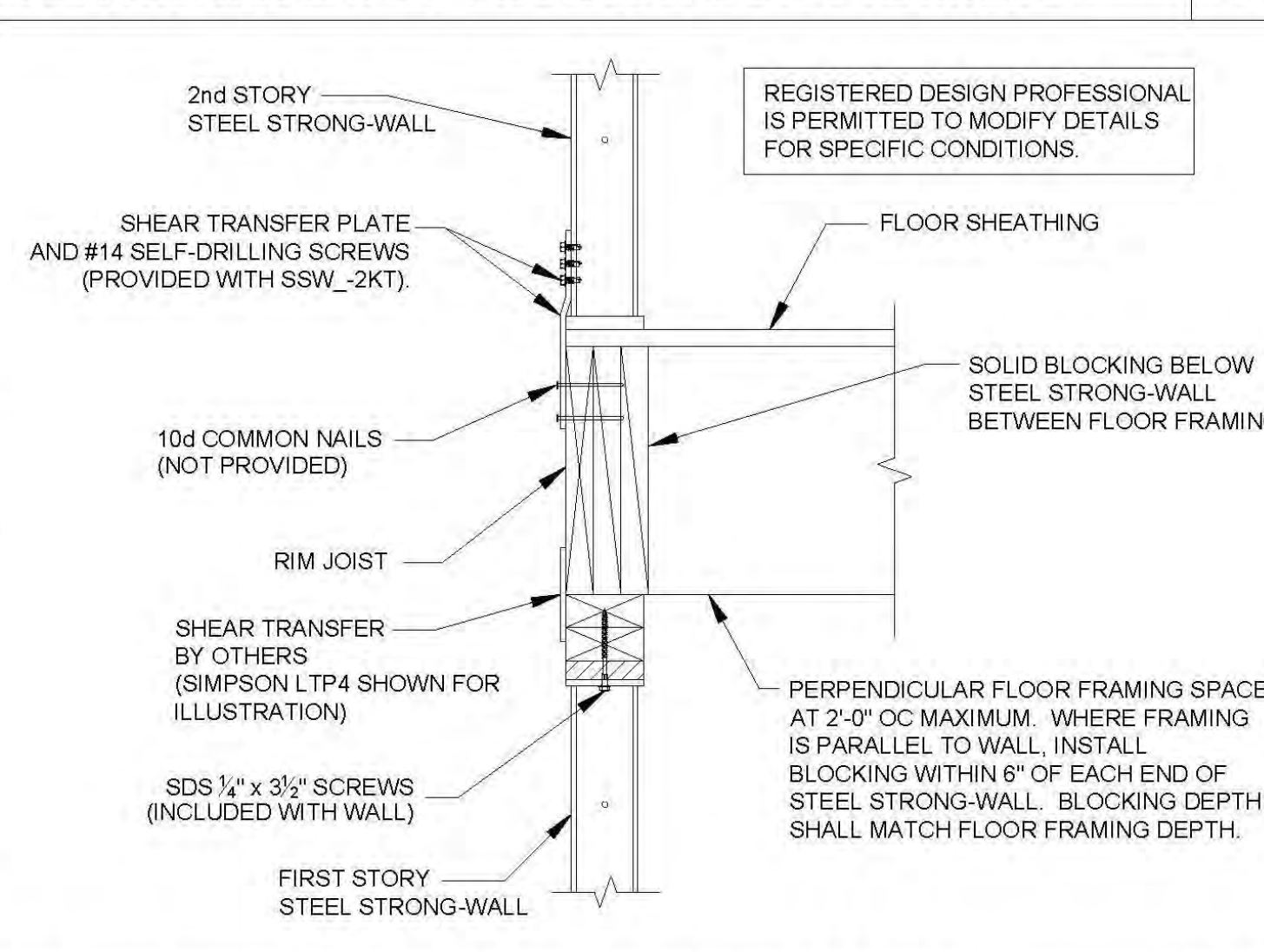
TOP OF WALL HEIGHT ADJUSTMENTS



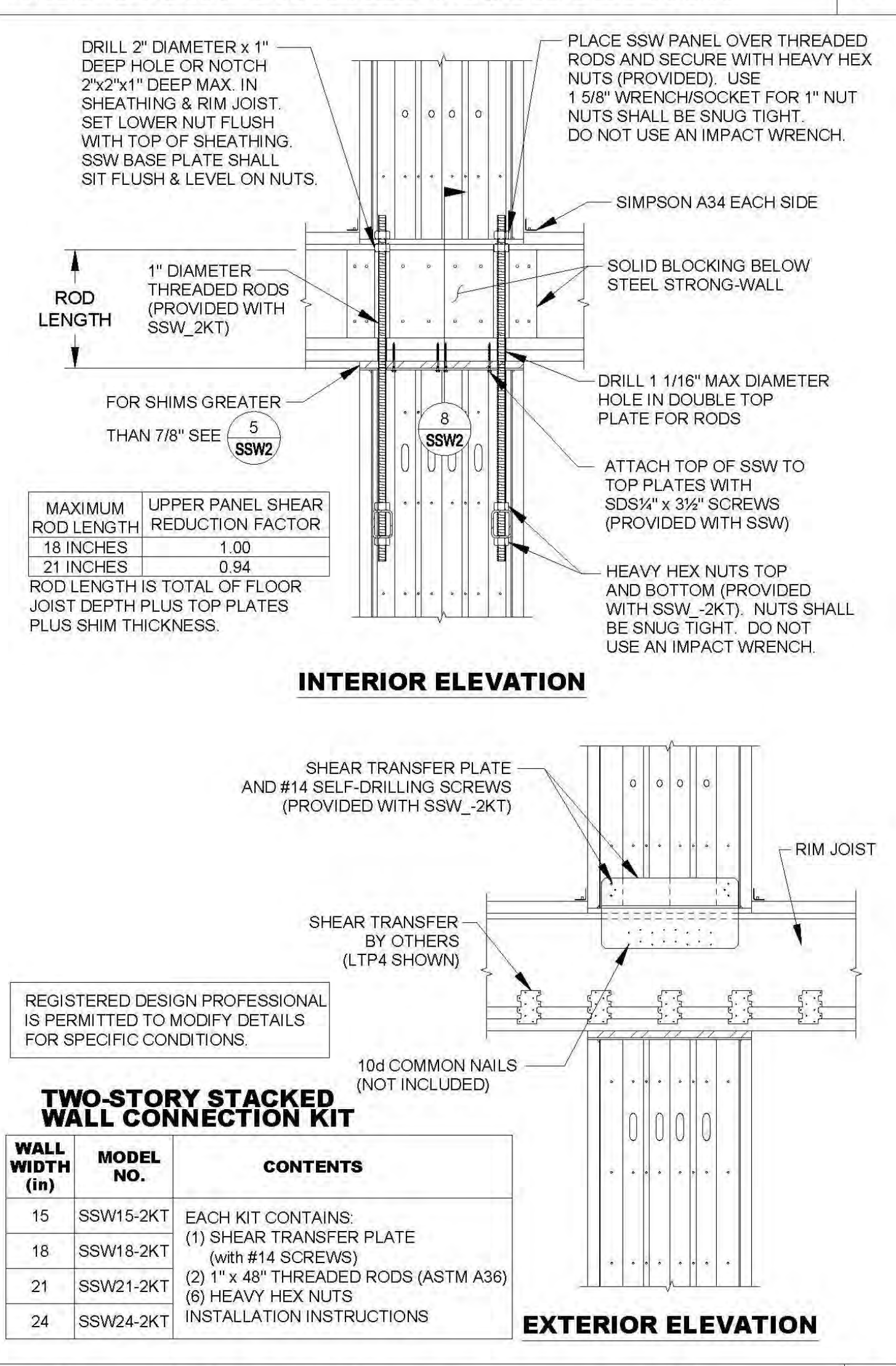
TWO-STORY STACKED



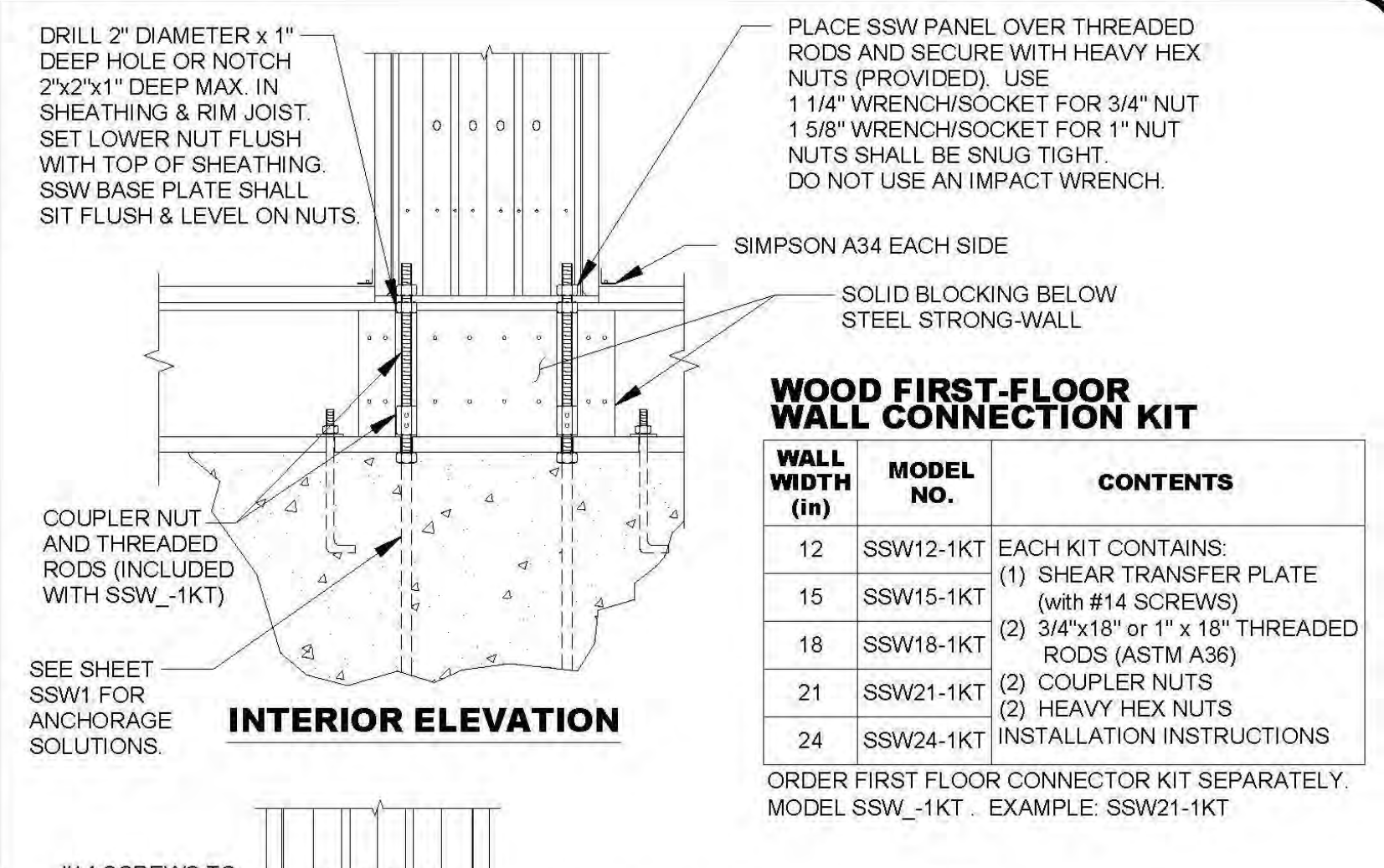
ALTERNATE 1ST FLOOR WOOD FRAMING



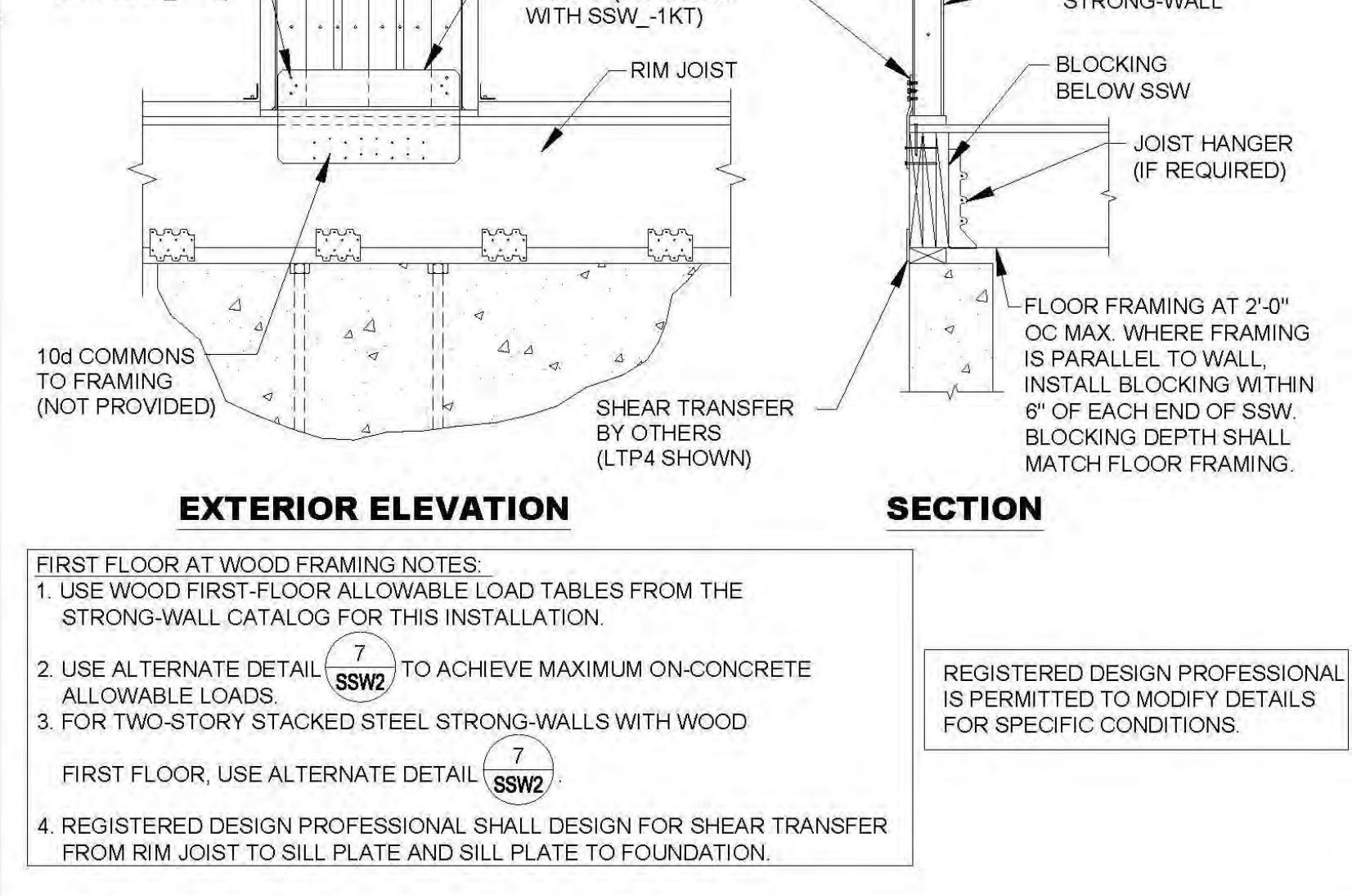
TWO-STORY STACKED FLOOR SECTION



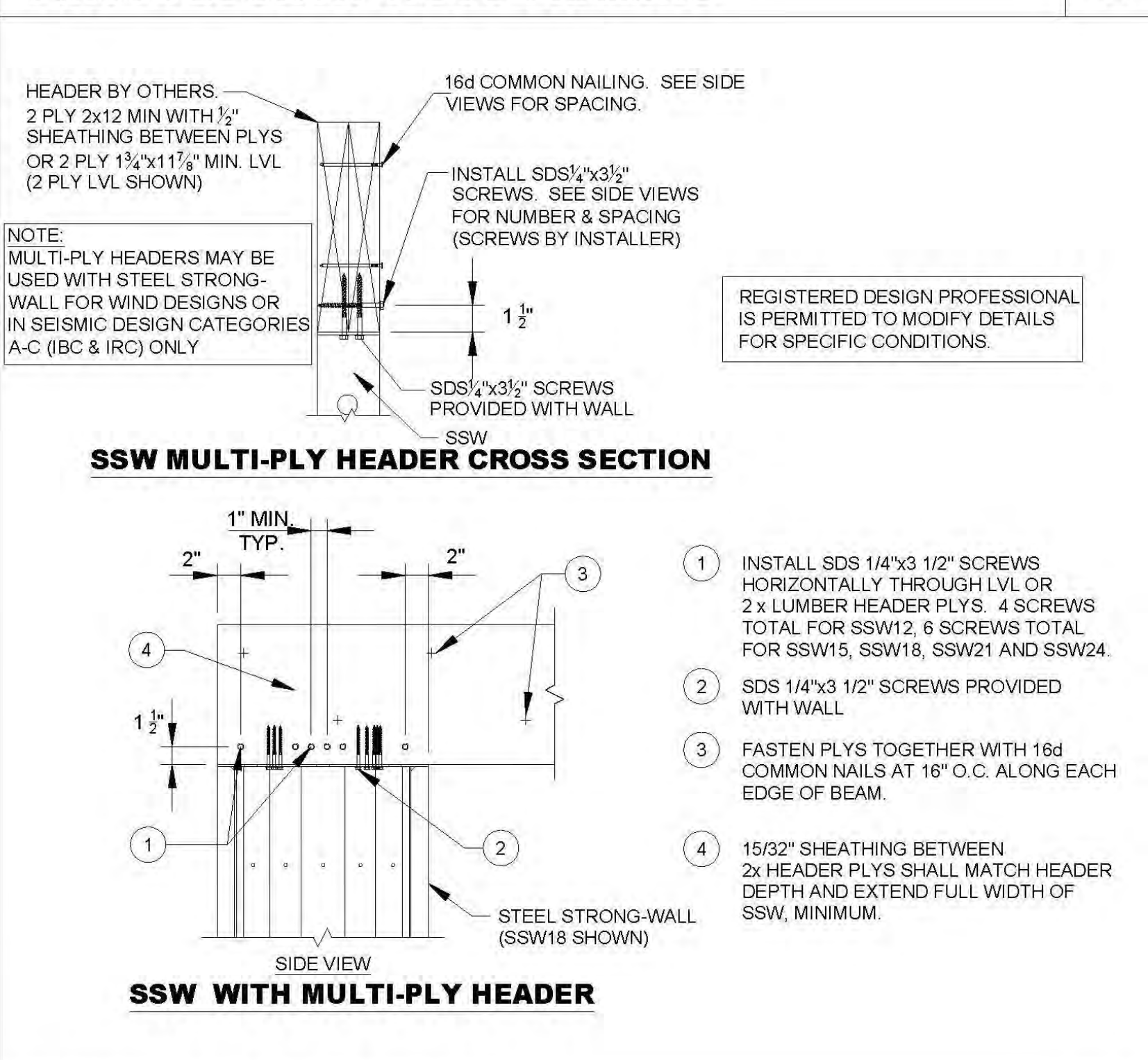
TWO-STORY STACKED FLOOR FRAMING



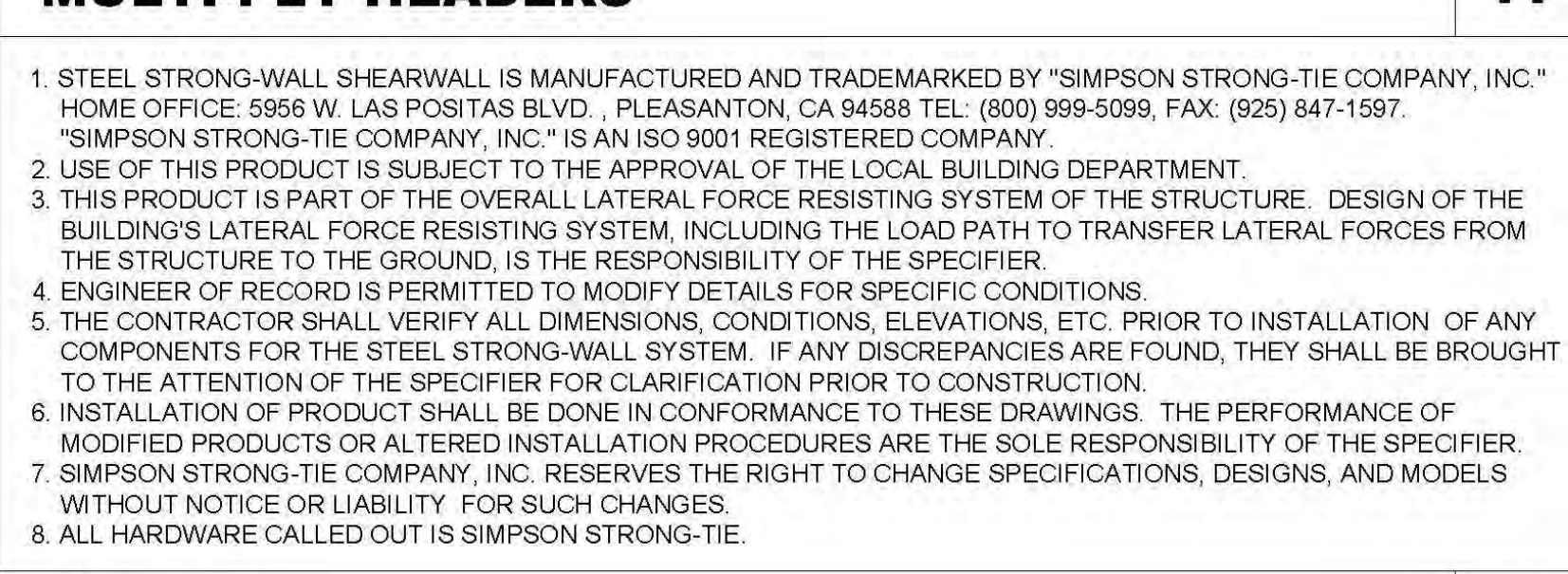
WALL FIRST-FLOOR WALL CONNECTION KIT



FIRST FLOOR AT WOOD FRAMING



MULTI-PLY HEADERS



NOTES

NO.	DATE	REVISIONS
1	9/21/2009	2008 IBC REVISIONS
2	4/16/2014	2012 IBC REVISIONS
3	6/08/2016	2015 IBC REVISIONS

SIMPSON STRONG-TIE COMPANY, INC.
Strong-Tie
 HOME OFFICE: POSTAS BLVD.,
 5956 W. LAS POSITAS BLVD.,
 SAN JOSE, CA 95138-1699
 TEL: (408) 999-5099
 FAX: (408) 999-5098

STEEL STRONG-WALL
FRAMING DETAILS
ENGINEERED DESIGNS

NAME _____
 DATE 8-8-2016
 SCALE N.T.S.
 CHECKED _____
 SHEET **SSW2**
 OF SHEETS
 JOB NO. _____

Five ENGINEERING

834 West 75 North
 Kayville, UT 84037
 (phone) 801 915 4525
 www.fiveengineering.com

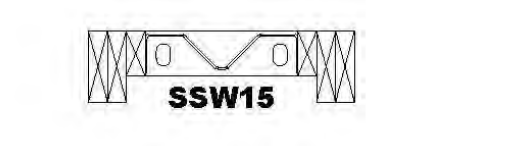
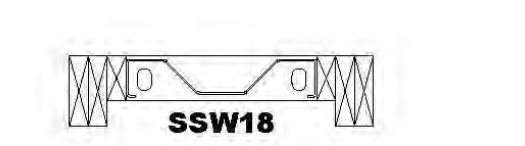
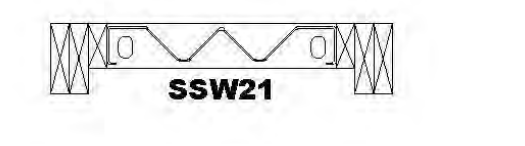
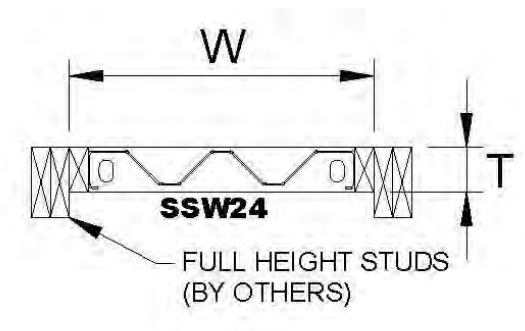
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7 Simpson Strong-Tie Company, Inc. reserves the right to change specifications, designs, and models without notice or liability for such changes.

8 All hardware called out is Simpson Strong-Tie.

Burton Solitude Spec Home
 Think Architecture
 5151 South 900 East, Suite #200
 Salt Lake City, UT 84117

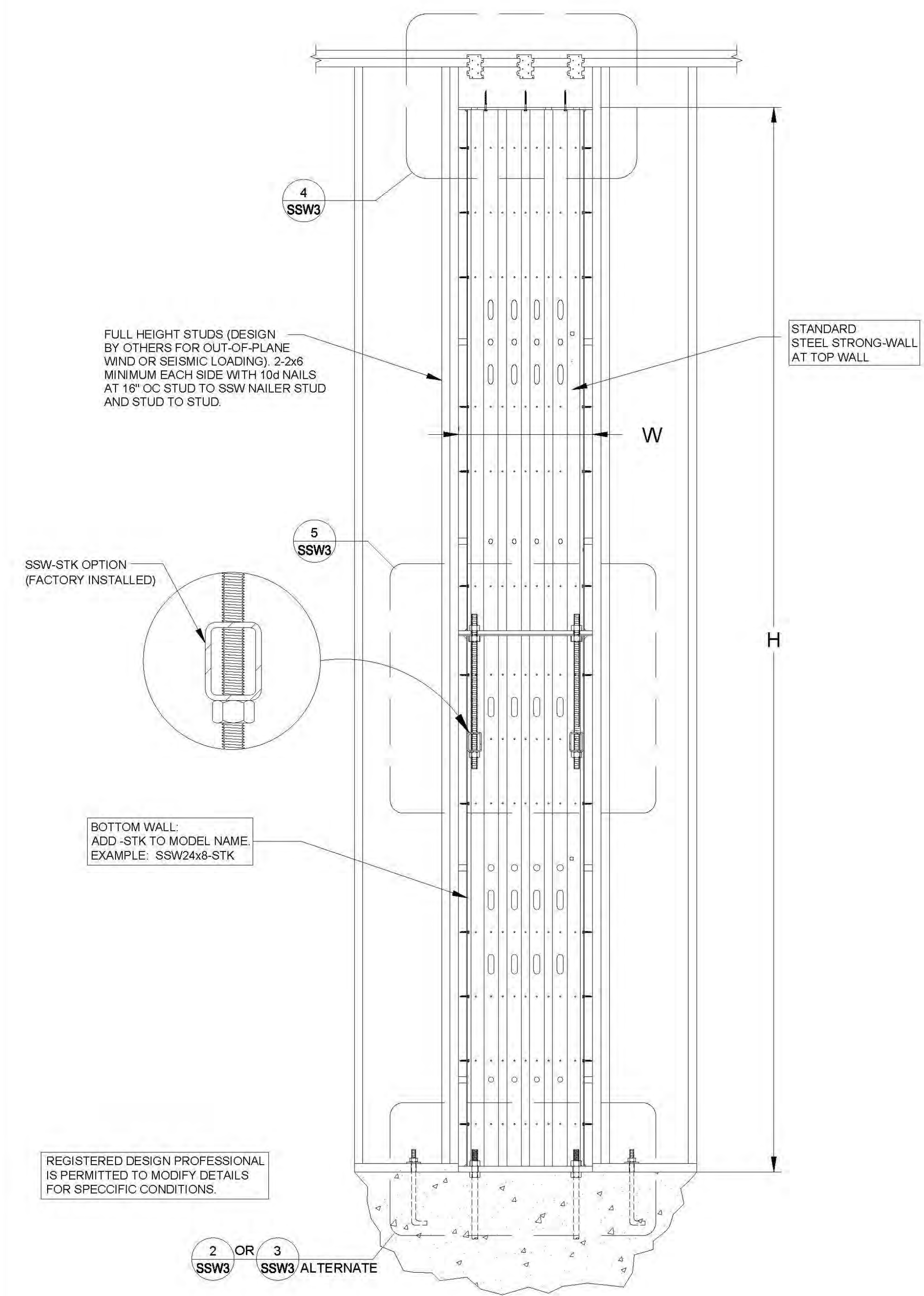
Date of 8/27/2019 10:13:18 AM
 Simpson Strong-Wall Details (cont.)
 Date 9/4/18
 Drawn By BPT
 Checked By BPT
S703
 Scale _____



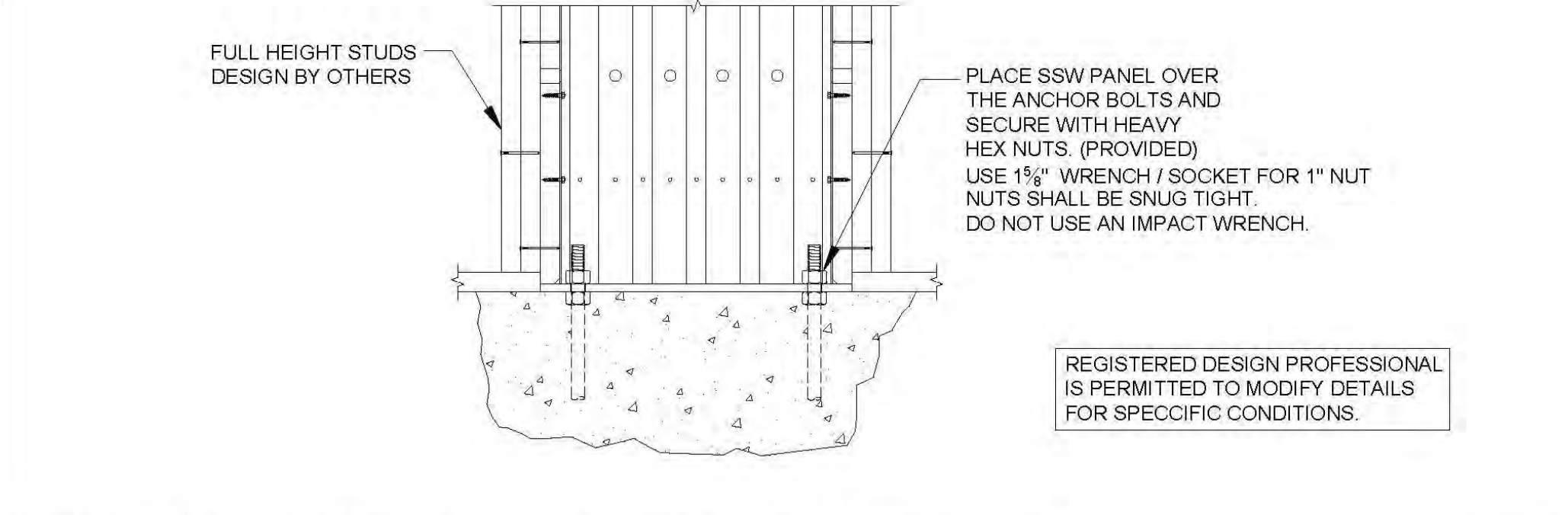
BALLOON FRAME STEEL STRONG-WALL SHOWN WITH FULL HEIGHT STUDS BY OTHERS

STEEL STRONG-WALL BALLOON FRAMING MODELS						
NOMINAL WALL HEIGHT (FT)	LOWER WALL MODEL NO.	UPPER WALL MODEL NO.	H (in)	T (in)	HOLDOWN ANCHOR BOLTS	QTY. OF WALL SCREWS
15" WALL MODELS						
15	SSW15x8-STK	SSW15x7	173 1/4	3 1/2	(2) 1"	6
16	SSW15x8-STK	SSW15x8	186 1/2	3 1/2	(2) 1"	6
17	SSW15x10-STK	SSW15x7	197 1/4	3 1/2	(2) 1"	6
18	SSW15x10-STK	SSW15x8	210 1/2	3 1/2	(2) 1"	6
19	SSW15x10-STK	SSW15x9	222 1/2	3 1/2	(2) 1"	6
20	SSW15x10-STK	SSW15x10	234 1/2	3 1/2	(2) 1"	6
18" WALL MODELS						
15	SSW18x8-STK	SSW18x7	173 1/4	3 1/2	(2) 1"	9
16	SSW18x8-STK	SSW18x8	186 1/2	3 1/2	(2) 1"	9
17	SSW18x10-STK	SSW18x7	197 1/4	3 1/2	(2) 1"	9
18	SSW18x10-STK	SSW18x8	210 1/2	3 1/2	(2) 1"	9
19	SSW18x10-STK	SSW18x9	222 1/2	3 1/2	(2) 1"	9
20	SSW18x10-STK	SSW18x10	234 1/2	3 1/2	(2) 1"	9
21" WALL MODELS						
15	SSW21x8-STK	SSW21x7	173 1/4	3 1/2	(2) 1"	12
16	SSW21x8-STK	SSW21x8	186 1/2	3 1/2	(2) 1"	12
17	SSW21x10-STK	SSW21x7	197 1/4	3 1/2	(2) 1"	12
18	SSW21x10-STK	SSW21x8	210 1/2	3 1/2	(2) 1"	12
19	SSW21x10-STK	SSW21x9	222 1/2	3 1/2	(2) 1"	12
20	SSW21x10-STK	SSW21x10	234 1/2	3 1/2	(2) 1"	12
24" WALL MODELS						
15	SSW24x8-STK	SSW24x7	173 1/4	3 1/2	(2) 1"	14
16	SSW24x8-STK	SSW24x8	186 1/2	3 1/2	(2) 1"	14
17	SSW24x10-STK	SSW24x7	197 1/4	3 1/2	(2) 1"	14
18	SSW24x10-STK	SSW24x8	210 1/2	3 1/2	(2) 1"	14
19	SSW24x10-STK	SSW24x9	222 1/2	3 1/2	(2) 1"	14
20	SSW24x10-STK	SSW24x10	234 1/2	3 1/2	(2) 1"	14

- SDS 1/2" x 3/4" SCREWS PROVIDED WITH WALL.
- SEE SSW1 FOR ANCHORAGE SOLUTIONS.
- STACKED INSTALLATION REQUIRES MINIMUM DOUBLE 2x6 STUDS EACH SIDE OF STEEL STRONG-WALL (PROVIDED BY INSTALLER). SEE DETAILS 4 & 5.

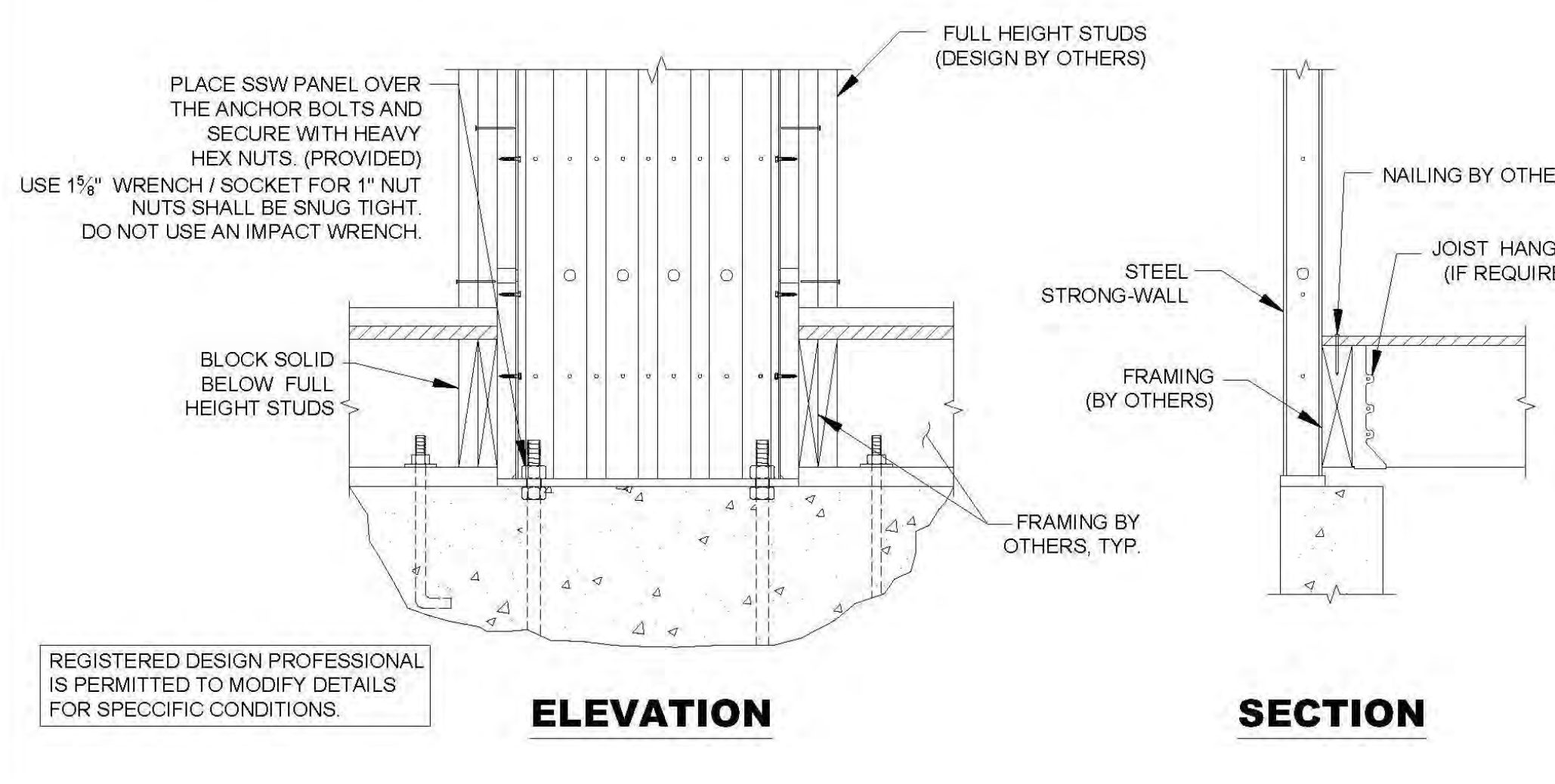


BALLOON FRAMING



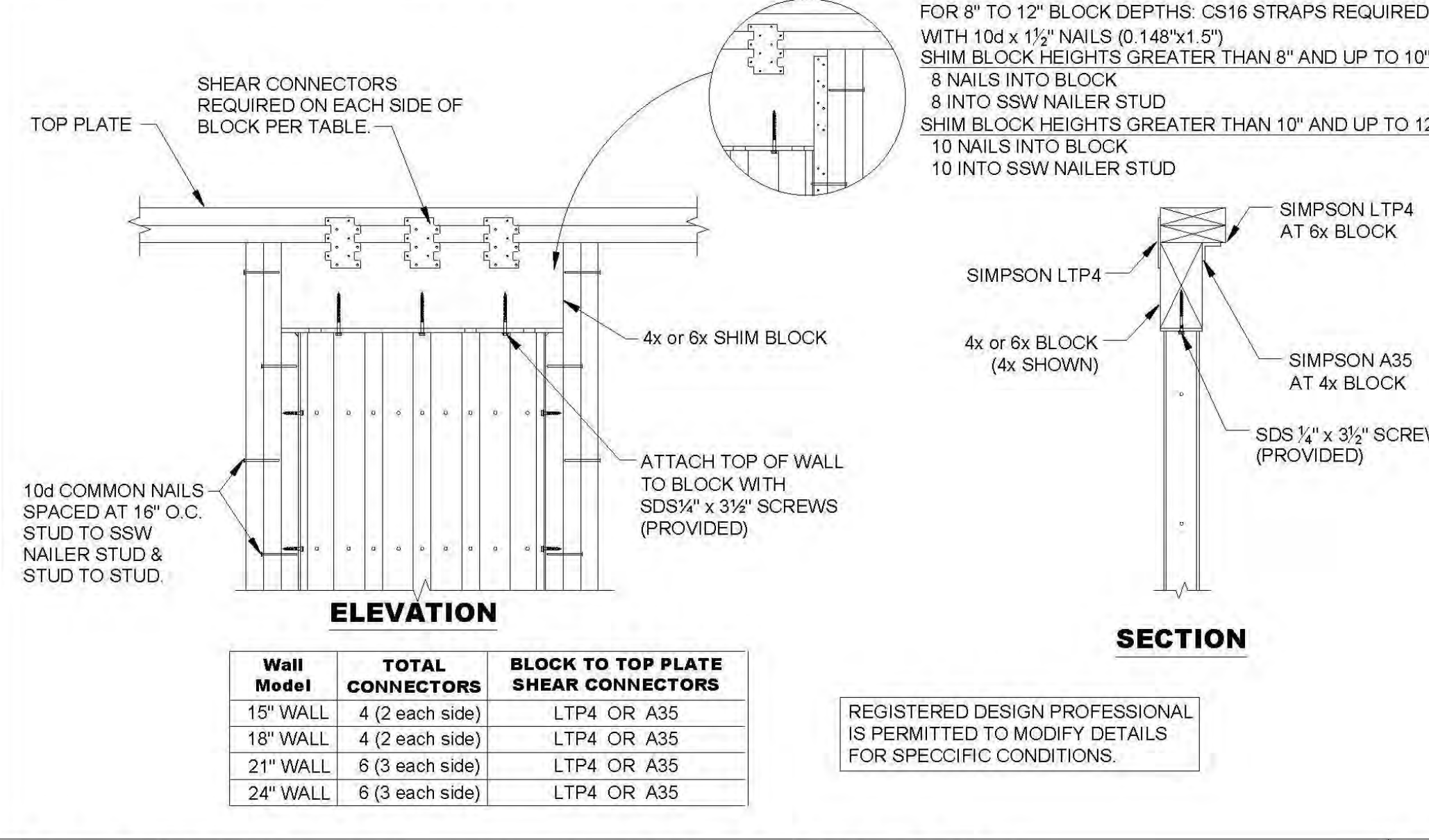
BALLOON FRAMING BASE PLATE CONNECTION

2



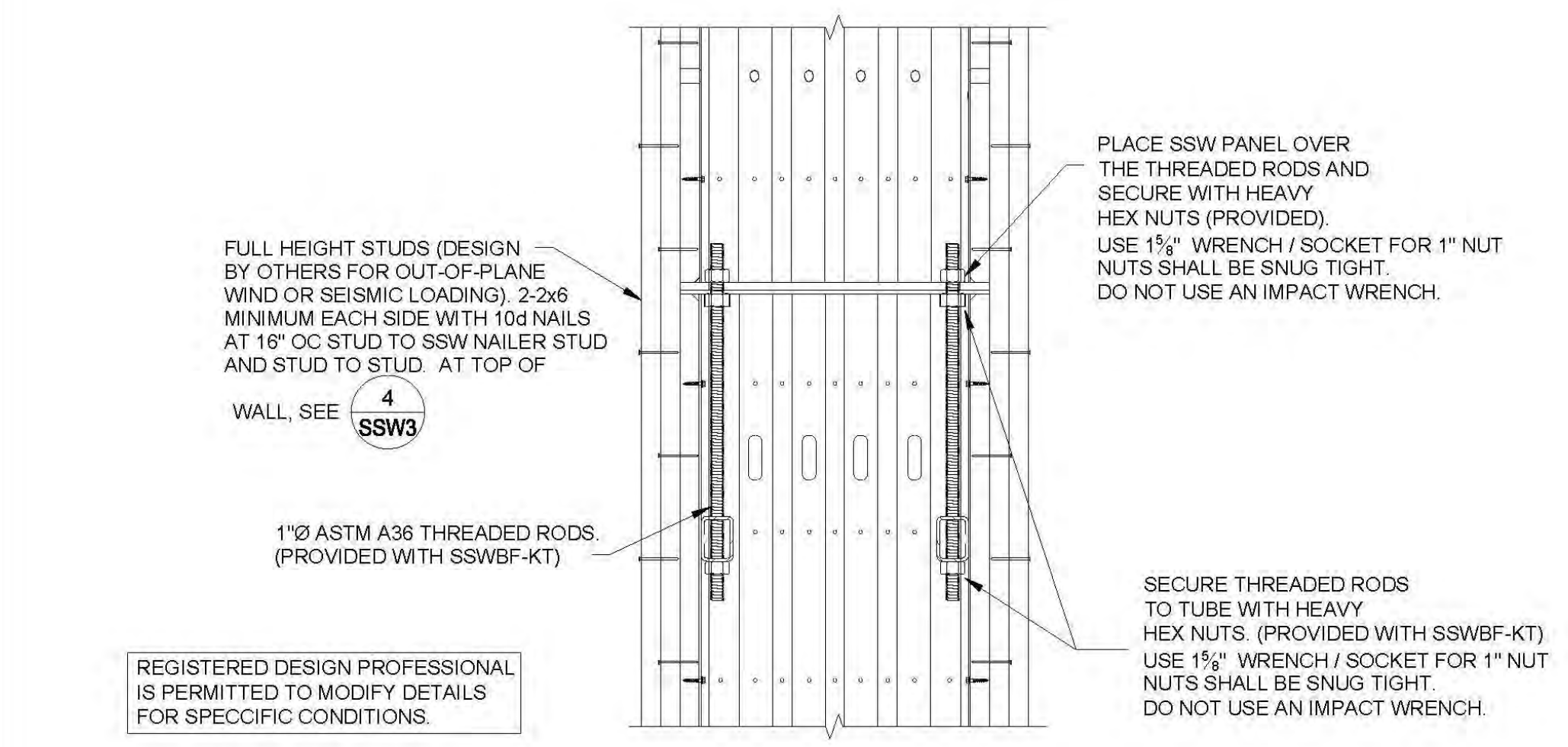
BALLOON FRAMING AT WOOD FLOOR

3



BALLOON FRAMING TOP OF WALL CONNECTION

4



BALLOON FRAMING WALL TO WALL CONNECTION

5

- STEEL STRONG-WALL SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY, INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597
- "SIMPSON STRONG-TIE COMPANY, INC." IS AN ISO 9001 REGISTERED COMPANY.
- USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
- THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE SPECIFIER.
- ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STEEL STRONG-WALL SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE SPECIFIER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
- INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE SPECIFIER.
- SIMPSON STRONG-TIE COMPANY, INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
- ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.

NOTES

7

NO.	DATE	REVISIONS
1	9/21/2009	2009 IBC REVISIONS
2	4/16/2014	2012 IBC REVISIONS
3	8/09/2016	2015 IBC REVISIONS

SIMPSON STRONG-TIE COMPANY, INC.
 HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588
 TEL: (800) 999-5099

SIMPSON Strong-Tie
 HERE IS NO EQUAL

STEEL STRONG-WALL BALLOON FRAMING DETAILS
 ENGINEERED DESIGNS

NAME: _____
 DATE: 8-8-2016
 SCALE: N.T.S.
 CHECKED: _____
 SHEET: **SSW3**
 OF SHEETS

JOB NO. _____

Sive ENGINEERING
 834 West 75 North
 Kaysville, UT 84037
 (phone) 801 915 4525
 www.SiveEngineering.com

No.	Description	Date

Burton Solitude Spec Home
 Think Architecture
 5151 South 900 East, Suite #200
 Salt Lake City, UT 84117

Professional Structural Engineer
 No. 001970-2259
 THOMAS R. THOMAS
 06
 STATE OF UTAH

Date of: 8/27/2019 10:13:21 AM
 Simpson Strong-Wall Details (cont.)
 Date: 9/4/18
 Drawn By: BPT
 Checked By: BPT
S704
 Scale: _____

