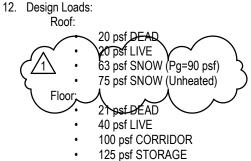
STRUCTURAL GENERAL NOTES

A. GENERAL

1. The contractor shall verify all dimensions prior to starting construction. The architect shall be notified of any

- discrepancies or inconsistencies. Dimensions shall take precedence over scale shown on drawings.
- Notes and details on drawings shall take precedence over general notes and typical notes.
- All work shall conform to the minimum standards of the following code. The 2012 edition of the International Building Code, and any other regulating agencies which have authority over any portion of the work, and those codes and
- standards listed in these notes and specifications. 5. See architectural drawings for the following:
- Size and location of all door and window openings, except as noted.
- Size and location of all interior and exterior nonbearing partitions. · Size and location of all concrete curbs, floor drains, slopes, depressed areas, changes in level, chamfers,
- grooves, inserts, etc. Size and location of floor and roof openings except as shown
- Floor and roof finishes Stair framing and details (except as shown)
- 6. See mechanical, plumbing, and electrical drawings for the following: • Pipe runs, sleeves, hangers, trenches, wall and slab openings, etc. Except as shown or noted.
- Electrical conduit runs, boxes, outlets in walls and slabs.
- Concrete inserts for electrical, mechanical or plumbing fixtures.
- Size and location of machine or equipment bases, anchor bolts for mounts.
- 7. The contract structural drawings and specifications represent the finished structure. They do not indicate the method of construction. The contractor shall provide all measures necessary to protect the structure during construction. Such measure shall include, but not be limited to, bracing, shoring for loads due to construction equipment, etc.
- Observation visits to the site by the structural engineer shall not include inspection of the above structural members. 8. Openings, pockets, etc. larger than 6 inches shall not be placed in slabs, decks, beams, joists, columns, walls, etc. unless specifically detailed on the structural drawings. Notify the structural engineer when drawings by others show openings, pockets, etc. not shown on the structural drawings, but which are located on structural members.
- 9. ASTM specifications noted shall be the latest revision. 10. Contractor shall investigate site during clearing and earthwork operations for filled excavations or buried structures
- such as cesspools, cisterns, foundations, etc. If any such structures are found, the structural engineer shall be notified
- 11. Construction materials shall be spread out if placed on floors or roof. Load shall not exceed the design live load per square foot. Provide adequate shoring and/or bracing where structure has not attained design strength.



- Velocity 105 mph (3 sec. Gust) Exposure "C"
- Risk Category = II
- 1. Importance Factor: I = 1.0 2. $S_S = 0.689$ $S_1 = 0.224$
- 3. Site Class: "D"
- 4. $S_{DS} = 0.574$ $S_{D1} = 0.321$ 5. Seismic Design Category "D"
- 6. Seismic Force Resisting System: Timber roof & floor diaphragms with wood shear walls. 7. Base Shear: V = 223.7 kips
- 8. $C_S = 0.088$
- 9. R = 6.5 10. Analysis Procedure: Equivalent lateral force method.
- Risk Category: "II"

B. FOUNDATION

1. Footings are designed based on an allowable soil pressure of 3000 PSF per the project soils report. Footings and foundations have been designed in accordance with the soils report prepared by:

| Company | Atlas Technical Consultants, LLC |
|------------|----------------------------------|
| Job Number | E213232g |
| Date | 12/14/2021 |

- Contractor shall provide for proper de-watering of excavations from surface water, ground water, seepage, etc.
- 4. Footing back fill and utility trench back fill within building area shall be mechanically compacted in layers. Flooding will not
- All abandoned footings, utilities, etc. that interfere with new construction shall be removed.

Footings shall be placed according to depths shown on the drawings.

- 6. The soil under perimeter beams and slabs shall be above optimum moisture as described in the referenced geotechnical report prior to concrete placement and shall be verified by the soils engineer. Holdown anchor bolts shall meet the requirements of detail 1/SD-1.
- 8. All 1/2" Ø anchor bolts may be replaced with ICC approved 1/2"Ø Titen HD screws or 1/2"Ø all thread rod in 5/8" Ø hole with 4" embed using Simpson SET-XP epoxy at the spacing indicated below.

ANCHOR BOLT RETROFIT TABLE

| S1, S2, NON-SHEAR | SAME AS 1/2" Ø A.B. |
|-------------------|---------------------|
| S3 & S4 | 12" O.C. |

C. CONCRETE

- 1. All phases of work pertaining to the concrete construction shall conform to the "Building Code Requirements for Reinforced Concrete" (ACI 318 latest approved edition) with modifications as noted in the drawings and
- Reinforced concrete design is by the "Ultimate Strength Design Method", ACI 318-(latest edition)
- 3. Schedule of structural concrete 28-day strengths and types: Strength PSI Location in structure

Slabs on Grade Hard rock Hard rock

- Design based on 2500 PSI, 28-day strength, special inspection is required only where indicated on foundation plans. See note "O" for P.T. tendon placement and additional information. 4. Concrete mix design shall be submitted to the engineer for approval with the following requirements:
- a. Compressive strength at age 28 days as specified above. b. Large aggregate-hardrock, 3/4" maximum size conforming to ASTM C-33
- c. Cement-ASTM C-150, Type II Portland cement
- d. Maximum slump 5-inches, max water cement ratio: 0.50 e. Minimum 6% entrained air for exterior foundation walls and concrete exposed to frost
- 5. No admixtures, except for entrained air, Hycrete or equivalent waterproofing admixture at the parking level slab, and
- as approved by the engineer. Concrete mixing operations, etc. shall conform to ASTM C-94
- Placement of concrete shall conform to ACI standard 514 and project specifications. 8. Clear coverage of concrete over outer reinforcing bars shall be as follows: Concrete poured directly against earth - 3
- inches clear, structural slabs 3/4 inches clear (top and bottom), formed concrete with earth back fill 2 inches clear. 9. All reinforcing bars, anchor bolts and other concrete inserts shall be well secured in position prior to placing concrete. 10. Provide sleeves for plumbing and electrical openings in concrete before placing. Do not cut any reinforcing that may conflict. Coring in concrete is not permitted except as shown. Notify the structural engineer in advance of conditions
- not shown on the drawings. 11. Conduit or pipe size (O.D.) shall not exceed 30% of slab thickness and shall be placed between the top and bottom reinforcing, unless specifically detailed otherwise. Concentrations of conduits or pipes shall be avoided except where
- detailed openings are provided. 12. Modulus of elasticity of concrete, when tested in accordance with ASTM C-460, shall be at least the value given by
- the equations in section (19.2.2.1) 8.5.1 of ACI 318 for the specified 28-day strength. 13. Shrinkage of concrete, when tested in accordance with ASTM C-157, shall not exceed 0.00040 inches/inch.

D. REINFORCING STEEL

- 1. Reinforcing bars shall conform to the requirements of ASTM A-615 grade 60.
- 2. All reinforcing bar bends shall be made cold Minimum lap of welded wire fabric shall be 6 inches or one full mesh and one half, which ever is greater.
- 4. All bars shall be marked so their identification can be made when the final in-place inspection is made. Rebar splices are to be: Class "B"
- Reinforcing splices shall be made only where indicated on the drawings. Dowels between footings and walls or columns shall be the same grade, size and spacing or number as the vertical reinforcing, respectively.

E. WOOD

- Framing Lumber:
- A. 2x4, and 2x6 studs: Douglas fir stud grade, U.N.O. B. 2x and 4x framing: Douglas fir larch No. 2 grade (except 2X4 and 2X6)
- C. 6x framing: Douglas fir larch No. 1 grade
- Bolt holes shall be 1/16" maximum larger than the bolt size. Re-tighten all nuts prior to closing in. 3. Standard cut washers shall be used under all sill plate anchor bolts, U.N.O. at shear walls. See the Shear Wall
- Schedule on sheet S1.1 for anchor bolt spacing and washer requirements at shear walls.
- 4. All sills or plates resting on concrete or masonry shall be pressure treated Douglas Fir. Bolts shall be placed 9 inches from the end of a plate, or from a notch greater than ½ the width of the plate, and spaced at intervals noted.
- 5. Do not notch joists, rafters or beams except where shown in details. Obtain engineer's approval for any holes or notches not detailed. Holes through sills, plates, studs and double plates in interior, bearing and shear walls shall
- conform with detail 11/S1.2.

| 6. | Connection hardware shall be by USP or Simpson Strong-Tie, or ICC approved equal. |
|----|---|
| | |

| DUAL SPECIF | DUAL SPECIFICATION TABLE | | DUAL SPECIF | ICATION TABLE |
|-------------|--------------------------|--|-------------|---------------|
| CS16 | RS150 | | HDU2 | PHD2A |
| ST6224 | KST224 | | HDU4 | PHD4A |
| A35 | MPA1 | | HDU5 | PHD5A |
| LUS24-2 | JUS24-2 | | HDU8 | PHD8A |
| H1 | RT15 | | HDU11 | UPHD11 |
| H10 | RT16A | | STHD10 | STAD10 |
| LTP4 | MP4F | | STHD14 | STAD14 |
| LSSU | LSSH | | ST1884 | |

- 7. Fastening schedule per 2018 edition of the International Building Code, table No. 2304.9.1. Unless noted otherwise. 8. All nails, bolts, holdowns, straps or other steel fasteners in contact with pressure treated timber shall be hot-dipped galvanized, stainless steel or otherwise treated or isolated to prevent chemical attack. Contractor shall verify treatment method and confirm appropriate corrosion resistance is provided in accordance with hardware supplier
- recommendations. 9. Sawn lumber is to comply with DOC PS 20.
- 10. Wood structural panels to conform to the requirements for their type in DOC PS1, PS2, or ANSI/APA PRP210. 11. Non-bearing, non-shear interior walls to be anchored to floor and /or roof as indicated on detail 10/S1.1.

F. PREFABRICATED WOOD TRUSSES

- 1. Prefabricated wood roof trusses shall be as designed by the truss manufacturer. Bridging size and spacing by truss manufacturer unless noted otherwise. Contractor shall submit shop drawings, erection drawings and design calculations sealed by an engineer, registered in the state of Idaho, for review prior to manufacture. Calculations and shop drawings shall show any special details required at bearing points. All connectors shall be Simpson or equivalent with current ICC
- 2. Truss manufacturer to design trusses for lateral load (LAT. = xxxx) in pounds, as shown on plans. Lateral loads are ASD
- level loads. Additional trusses shall be supplied as required to support mechanical equipment.

4. All truss-to-truss and truss-to-beam connectors per truss manufacturer.

5. Wood truss design to be a deferred submittal item. Truss package to be submitted to the Building Official prior to

G. GLUE LAMINATED BEAMS (GLB)

1. Glue laminated beams shall be 24F-V4 (cantilevers and continuous beams shall be 24F-V8) and have the following minimum properties; fb=2400 psi, Fv=265 psi, Fc (perpendicular)=650 psi, E=1.800.000 psi, All beams shall be fabricated using waterproof glue. Fabrication and handling per latest AITC and WCCA standards. Beams to bear grade stamp and AITC stamp and certificate. Moisture content shall be limited to 12% or less.

H. LAMINATED VENEER LUMBER (LVL)

- 1. Laminated veneer lumber to have: Fb=2600 psi, Fv=285 psi, E=1.9x10^6psi
- 2. Double & triple LVL beams shall be nailed together as follows: Provide (2) rows of 16d sinkers at 12" O.C. for beams < 11 7/8" deep

Provide (3) rows of 16d sinkers at 12" O.C. for beams > 11 7/8" deep

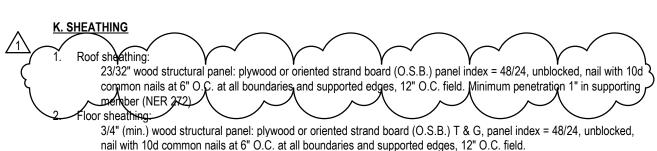
3. Beams w/ (4) or more plies shall be bolted together as indicated in the manufacturer's written specifications.

I. WOOD STRUCTURAL PANELS

- 1. All wood structural panels shall be plywood or APA rated oriented strand board. Panels shall bear the stamp of an
- approved agency. Panels shall be of the span/index rating shown on the plans. Fastening shall be indicated on the plans. 2. All plywood shall be C-D interior sheathing with exterior glue. Plywood shall be 4-ply, minimum.

J. SHOP DRAWINGS

- 1. Shop drawings shall be submitted for all structural items in addition to items required by architectural specifications. 2. The contractor shall review all shop drawings prior to submittal. Items not in accordance with contract drawings shall be flagged for review.
- 3. Verify all dimensions with architect. 4. Any changes, substitutions, or deviations from original contract drawings shall be redlined or flagged by submitting parties,
- shall be considered approved after engineers review, unless noted otherwise. 5. The engineer has the right to approve or disapprove any changes to the original drawings at anytime before or after shop
- 6. The shop drawings do not replace the original contract drawings. Items omitted or shown incorrectly and are not flagged
- by the structural engineer or architect are not to be considered changes to the original contract drawings. 7. The adequacy of engineering designs and layout performed by the others rests with the designing or submitting authority.
- 8. Reviewing is intended only as an aid to the contractor in obtaining correct shop drawings. Responsibility for corrections



Shear wall sheathing: Sheathing for shear walls shall be as indicated on the shear wall plans and schedules. Sheathing at shear walls may be installed with panels horizontal or vertical. All shear wall panels shall have minimum wood structural panel span rating of 24/0 or "Wall-16."

L. STRUCTURAL STEEL

- 1. Hot-rolled structural steel shapes & plates shall be per ASTM A36 with the following exception. All W-Flange shapes
- Structural steel pipe shall be per ASTM A53 grade B, Tube steel per ASTM A500 Grade B.
- 3. Nuts & bolts in structural steel connections shall be per ASTM 325N, with hardened washers. Design is based upon bearing type connections with thread not excluded, therefore, no special inspection required, U.N.O. in note M below.
- 4. Anchor bolts shall be per ASTM A307 and F1554, U.N.O. 5. Welds shall be by E70XX, low hydrogen electrodes, all welding shall be performed in a shop approved by the building
- 6. Grout material for base plates shall be non-metallic, non-shrink, pre-packaged grout conforming to ASTM C 1107.

M. SPECIAL INSPECTION / QUALITY ASSURANCE PLAN

- 1. The seismic lateral load resisting system consists of timber floor and roof diaphragms with wood shear walls and
- premanufactured shear walls. Special inspections A. Special inspections shall be required for the following items and those shown in the inspection tables:
- All field welding All high-strength bolting operations
- All connections of cantilever steel columns to foundations All post-installed anchorage to concrete (epoxy grout applications)
- When required by the local building department: All timber elements of the lateral force resisting system
- B. The owners shall employ special inspectors who shall provide additional inspections during construction in accordance with IBC section 17.
- C. All special inspections shall be performed by an independent certified inspector from an established testing agency, licensed and approved by the building department.
- D. The testing agency shall send copies of all structural testing and inspection reports directly to Vector Structural Engineering and all interested parties. E. All masonry construction shall require Level 1 special inspection.
- Structural testing is not required. 4. All reports shall be distributed on a monthly basis to the engineer of record, owner, contractor, and to the building official. 5. No structural observation is required. However, the engineer of record reserves the right to make field observations during construction approximately once per week.

N. DEFERRED SUBMITTALS

- 1. All deferred submittals shall be submitted to the Engineer of Record for review and approval prior to being submitted to the Building Department. Provide (2) Copies of each deferred submittal for the Architect and Engineer of Record to review prior to forwarding them to the Building department. With notation indicating
- 2. Deferred submittals must be submitted to the Building Department within 90 days from the receipt of the
- 3. All calculations and shop drawings submitted for review must be stamped (sealed) by a licensed and registered professional engineer within the state or jurisdiction of the project construction.
- 4. The engineer(s) responsible for the design of the deferred submittal shall stamp (seal) and wet-sign those documents and calculations for which they are responsible.
- 5. Contractor shall review, coordinate and markup drawings prior to submitting them to the Architect/Engineer of record for review prior to installation or fabrication.
- 6. The following items may be deferred submittals: a. Prefabricated wood trusses (See Prefabricated wood truss Section of GSN)
- b Concrete mix designs
 c. Steel shop and erection drawings d. Equipment anchorage

submittal conforms to the design of the building.

O. ICC APPROVAL SCHEDULE

| ICC- | ICC-ES ESR SCHEDULE | | | | |
|---------|---------------------|------|--|--|--|
| A35 | SIMPSON | 2606 | | | |
| CS16 | SIMPSON | 2105 | | | |
| FHA18 | SIMPSON | 2105 | | | |
| GBC | SIMPSON | 2605 | | | |
| H1 | SIMPSON | 2613 | | | |
| H10 | SIMPSON | 2613 | | | |
| HDU2 | SIMPSON | 2230 | | | |
| JUS24-2 | USP | 3445 | | | |
| KST224 | USP | 3445 | | | |
| LSSH | USP | 3446 | | | |
| LSSU | SIMPSON | 2551 | | | |
| LTP4 | SIMPSON | 2606 | | | |
| LUS24-2 | SIMPSON | 2549 | | | |
| MP4F | USP | 3445 | | | |

| MPA1 | USP | 3445 |
|----------|---------|------|
| PHD | USP | 0200 |
| RPS | SIMPSON | 2608 |
| RS150 | USP | 3445 |
| RT15 | USP | 3445 |
| RT16A | USP | 3445 |
| SDS | SIMPSON | 2236 |
| SET-XP | SIMPSON | 2508 |
| ST6224 | SIMPSON | 2105 |
| STAD | USP | 2787 |
| SW18x9 | SIMPSON | 1267 |
| TITEN HD | SIMPSON | 2713 |
| UPHD | USP | 0200 |

STRUCTURAL SHEET INDEX SHEET NAME ORIGINAL | REV # | REV DATE SHEET# S1 STRUCTURAL GENERAL NOTES S1.1 STANDARD DETAILS AND SCHEDULES • S1.2 3D VIEW • S2 FOUNDATION PLAN S3 LEVEL 2 FRAMING PLAN S4 LEVEL 3 FRAMING PLAN S5 LEVEL 4 FRAMING PLAN S6 ROOF FRAMING PLAN S6.1 HIGH ROOF FRAMING PLAN S7 LEVEL 1 SHEAR WALL PLAN S8 LEVEL 2 SHEAR WALL PLAN S9 LEVEL 3 SHEAR WALL PLAN S10 LEVEL 4 SHEAR WALL PLAN S11 ENLARGED FRAMING PLANS & ELEVATIONS SD-1 STRUCTURAL DETAILS SD-2 STRUCTURAL DETAILS •

•

SD-3 STRUCTURAL DETAILS

<u>9</u> ELEMENT DATE DESCRIPTION

LVL LAMINATED VENEER LUMBER A.B. ANCHOR BOLT ARCH'L ARCHITECTURAL DRAWINGS MFR MANUFACTURED BLDG BUILDING N.T.S. NOT TO SCALE ON CENTER BLK BLOCK BLK'G BLOCKING O.S.B ORIENTED STRAND BOARD OPT'L OPTIONAL CENTERLINE CANT'L CANTILEVERED
CLG CEILING PLATE PARALLEL STRAND LUMBER CMU CONCRETE MASONRY UNIT
COL COLUMN
CONT CONTINUOUS REQ'D SHT REQUIRED SHEET SHTH'G SHEATHING
SIM SIMILAR DBL DOUBLE DTL DETAIL

EL ELEVATION

EOR ENGINEER OF RECORD STRONG-WALL T&B TOP & BOTTOM FND FOUNDATION T.O.F. TOP OF FOOTING FTG FOOTING T.O.W. TOP OF WALL TYP. TYPICAL GL GLUE LAMINATED (BEAM) H.D. HOLD DOWN HDR HEADER U.N.O. UNLESS NOTED OTHERWISE u/ UNDER
VERT. VERTICAL
w/ WITH HORIZ. HORIZONTAL 9 LSL LAMINATED STAND LUMBER

ABBREVIATIONS

RELEASE DATE:

ABBREVIATIONS

STRUCTURAL GENERAL NOTES

100%

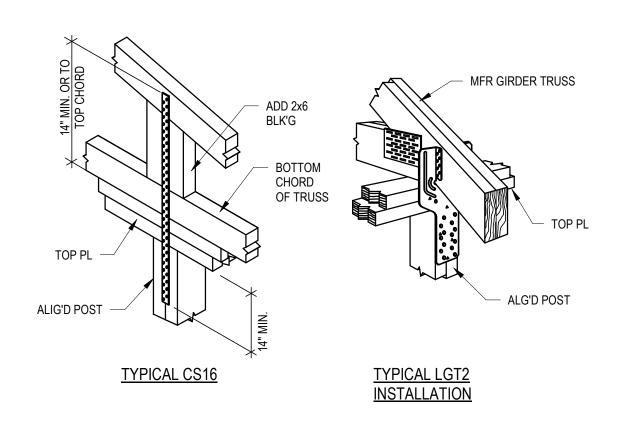
| STANDARD TRUSS TIE-DOWNS | | | | |
|---------------------------------------|--------------------|--|--|--|
| UPLIFT LOAD PER TRUSS MANUFACTURER | SIMPSON TIE-DOWN | REQ'D ALIGNED HOLDOWN & POST | | |
| < 365 LBS | H2.5 OR CS16 | NOT REQ'D | | |
| < 400 LBS | H1 OR CS16 | NOT REQ'D | | |
| < 845 LBS | H10 OR H7Z OR CS16 | NOT REQ'D | | |
| < 1265 LBS | H16 OR CS16 | HDU2 & (2) 2x4 POST | | |
| <1785 LBS | LGT2 | HDU2 & (2) 2x4 POST | | |
| < 6585 LBS | HGT-2 | (2) 2x4 POST w/ HDU4 @ BASE & (2) HDU2 @ TOP TO HGT-2. AT (1) PLY TRUSS, INSTALL 2X SHAPED FILLER ADJACENT TO TRUSS AT BEARING | | |

TIE-DOWN CAPACITIES ARE BASED ON SPRUCE PINE FIR TRUSS UPLIFT OF LESS THAN 200lbs: TIE-DOWN NOT REQ'D 3. SEE TYPICAL HOLDOWN ANCHORAGE DETAIL FOR HDU HOLDOWN INSTALLATION

| STANDARD FLOOR-TO-FLOOR STRAP | | | | |
|---------------------------------------|------------------|--------------------|--|--|
| UPLIFT LOAD PER TRUSS MANUFACTURER | SIMPSON TIE-DOWN | REQ'D ALIGNED POST | | |
| < 1705 LBS | CS16 | 2x4 POST | | |
| < 3410 LBS | (2) CS16 | (2) 2x4 POST | | |

1. INSTALL CS16 STRAPS TO 2x STUDS ABOVE AND BELOW FLOOR FRAMING. NAIL EACH END

- w/ (11) 10d NAILS. (STRAP LENGTH = 48"). . WHERE UPLIFT OCCURS ABOVE HDR OR BM, INSTALL STRAP PER SCHEDULE AT EACH
- 3. FLOOR TO FLOOR STRAPS REQ'D ALIGNED WITH ROOF TRUSS ABOVE

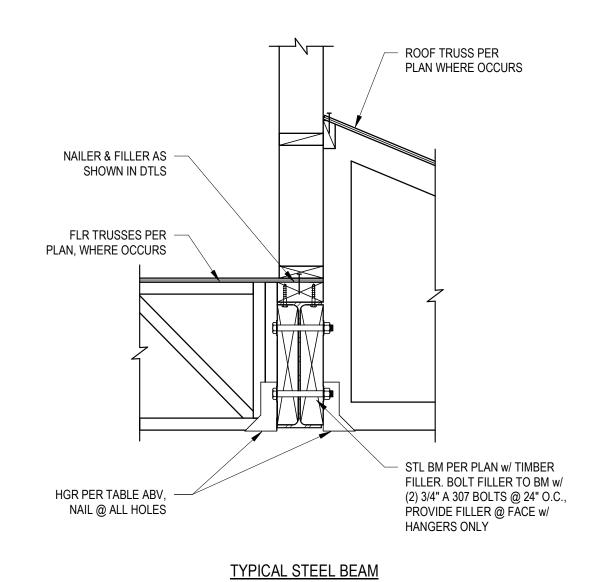


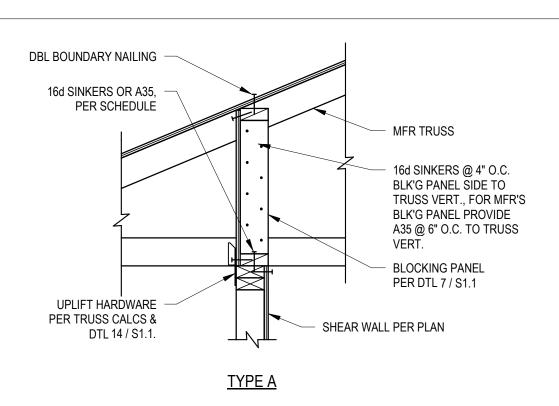
TYPICAL TRUSS ANCHORAGE

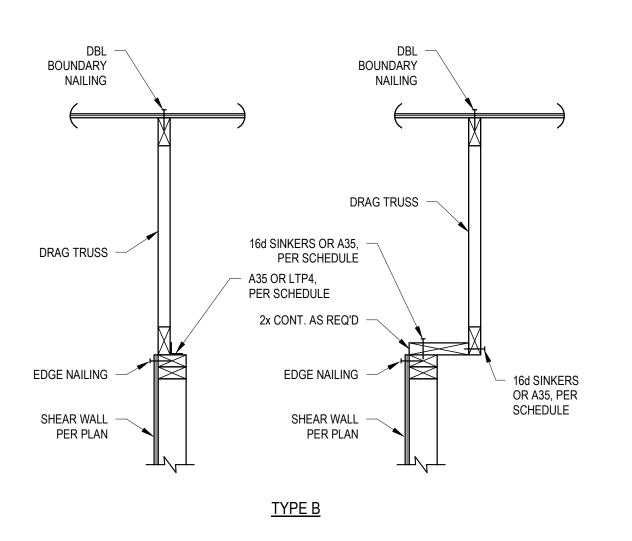
| MFR TRUSS TO BEAM HANGERS | | | | |
|---------------------------|-------------------|-------------|---|------------|
| CARRYING MEMBER | CARRIED MBR WIDTH | HANGER TYPE | MAX. REACTION (FROM TRUSS CALCS.) (LBS) | NOTES |
| STEEL OR TIMBER | 1-1/2" | LUS210 | 1275 | FACE MOUNT |
| STEEL OR TIMBER | 1-1/2" | HUS26 | 2565 | FACE MOUNT |
| STEEL OR TIMBER | 1-1/2" | HGUS26 | 3750 | FACE MOUNT |
| STEEL OR TIMBER | 1-1/2" | HGUS28 | 5720 | FACE MOUNT |
| STEEL OR TIMBER | 3" | LUS26-2 | 1000 | FACE MOUNT |
| STEEL OR TIMBER | 3" | HHUS26-2 | 2580 | FACE MOUNT |
| STEEL OR TIMBER | 3" | HGU26-2 | 3940 | FACE MOUNT |
| STEEL OR TIMBER | 3" | HGUS28-2 | 6805 | FACE MOUNT |
| STEEL OR TIMBER | 3" | HGUS210-2 | 8650 | FACE MOUNT |
| STEEL OR TIMBER | 3-1/2" | LUS46 | 1000 | FACE MOUNT |
| STEEL OR TIMBER | 3-1/2" | HHUS46 | 2580 | FACE MOUNT |
| STEEL OR TIMBER | 3-1/2" | HGUS46 | 3940 | FACE MOUNT |
| STEEL OR TIMBER | 3-1/2" | HGUS48 | 6805 | FACE MOUNT |
| STEEL OR TIMBER | 6" | HGUS26-4 | 3940 | FACE MOUNT |
| STEEL OR TIMBER | 6" | HGUS210-4 | 8780 | FACE MOUNT |
| STEEL OR TIMBER | 6" | HGUS212-4 | 9155 | FACE MOUNT |

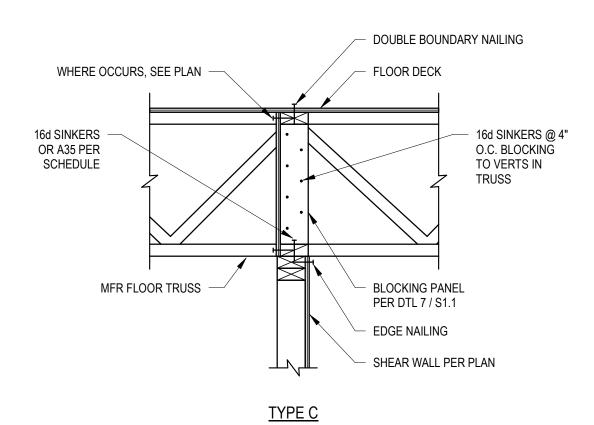
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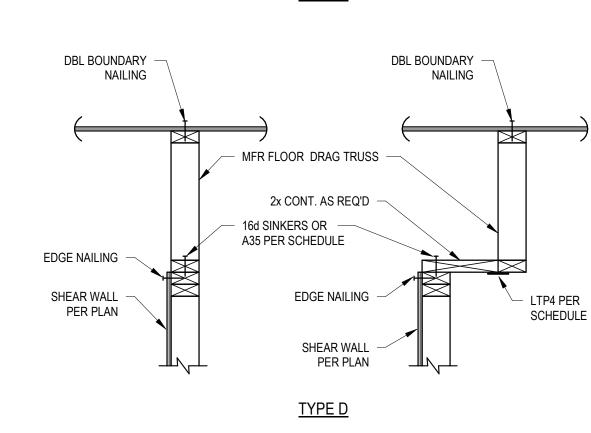
1. FOR STEEL BEAMS CARRYING FLOOR TRUSSES, PROVIDE TIMBER FILLER PER DTL BELOW. ALTERNATE HANGERS MAY BE USED AT THE CONTRACTOR'S OPTION. SUBMIT TO ENGINEER OF RECORD FOR APPROVAL. 3. HANGERS APPLICABLE FOR TIMBER BEAMS.



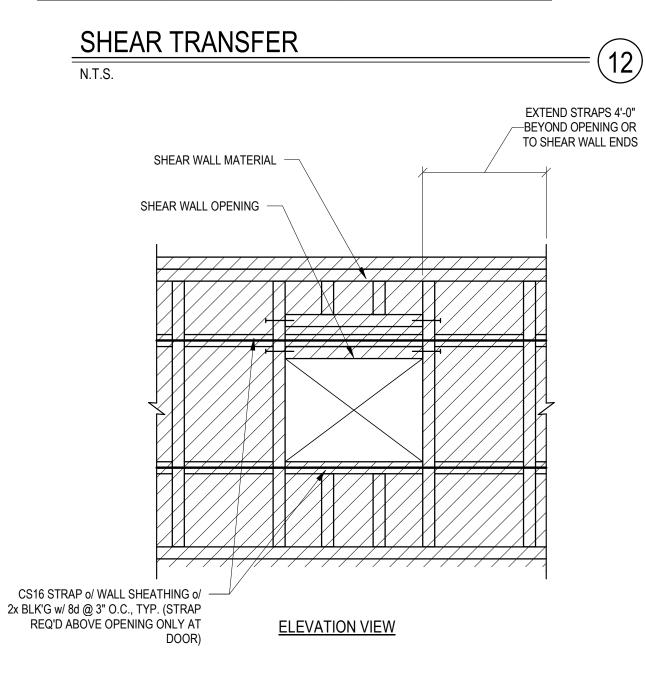


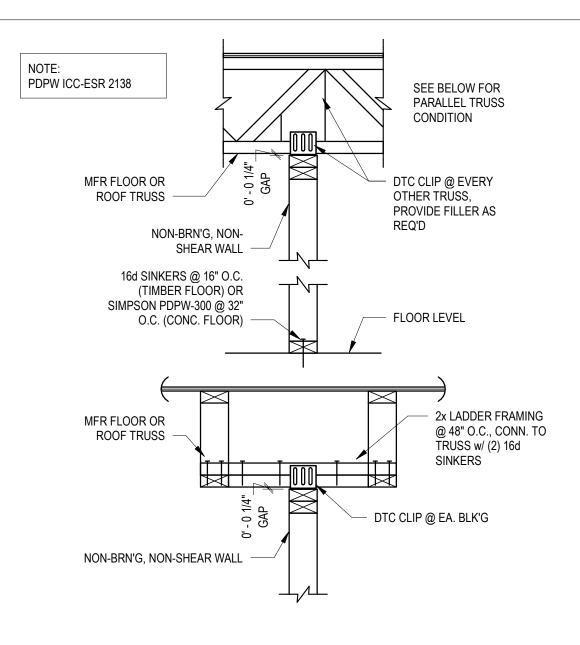




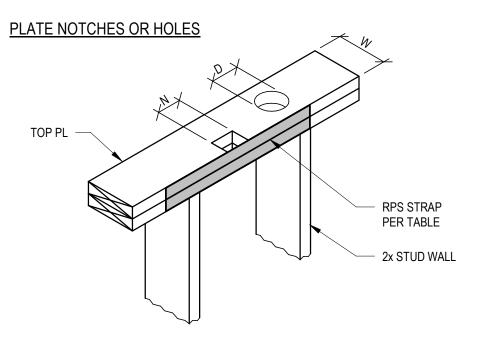


| CONNECTION SCHEDULE | | | |
|---------------------|-------------|---------------------|--|
| SHEAR WALL | A35 OR LTP4 | 16d SINKERS | |
| P1 | 18" O.C. | 6" O.C. | |
| P2 | 12" O.C. | 4" O.C. | |
| P3 | 10" O.C. | 3" O.C. (STAGGERED) | |
| P4 | 8" O.C. | 2" O.C. (STAGGERED) | |





NON-BRN'G & NON-SHEAR WALL CONN. N.T.S.

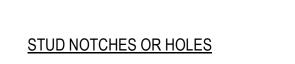


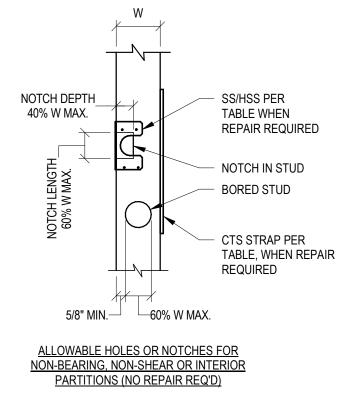
| 2x4 PLATE | 2x6 PLATE | 2x4 & 2x6 PLATE | |
|--------------|--------------|--|-----------|
| HOLE DIA 'D' | HOLE DIA 'D' | NOTCH WIDTH 'N' (MAX NOTCH DEPTH = W/2) | RPS STRAF |
| ≤ 7/8" | ≤ 1" | ≤ 1" | NONE |
| ≤ 1" | ≤ 1-3/8" | ≤ 2-1/2" | (1) RPS18 |
| ≤ 1 3/8" | ≤ 2-1/8" | ≤ 5-1/2" | (2) RPS18 |
| ≤ 2" | ≤ 3-1/4" | ≤ 12" | (2) RPS28 |
| | | | |

1. USE RPSZ FOR SILL PLATE.

- CENTER STRAPS @ NOTCH OR HOLE. WHERE ROOF TRUSS OR FLOOR JOIST IS BEARING WITHIN STUD BAY OF THE HOLE OR NOTCH, INSTALL AN ADDITIONAL STUD DIRECTLY BELOW THE TRUSS OR JOIST UNLESS NO RPS STRAP IS REQUIRED OR WHERE EXISTING STUD FACE IS WITHIN 3" OF TRUSS OR JOIST FACE.
- 4. NOTCHES & HOLES MUST BE SEPARATED BY "2xD" OR "2xN". . WHERE MULTIPLE HOLES ARE LOCATED ADJACENT TO EACH OTHER, THE STRAP REPAIR MAY BE WITH A CS16 STRAP ON EACH SIDE OF THE UPPER PLATE. THE STRAPS AND NAILING SHALL EXTEND AT LEAST 9" BEYOND EACH END OF THE WHOLE GROUP. NAILING BETWEEN THE HOLES IS NOT

REQUIRED. NAILS IN THE CS16 STRAPS MAY BE N8'S OR N10'S.



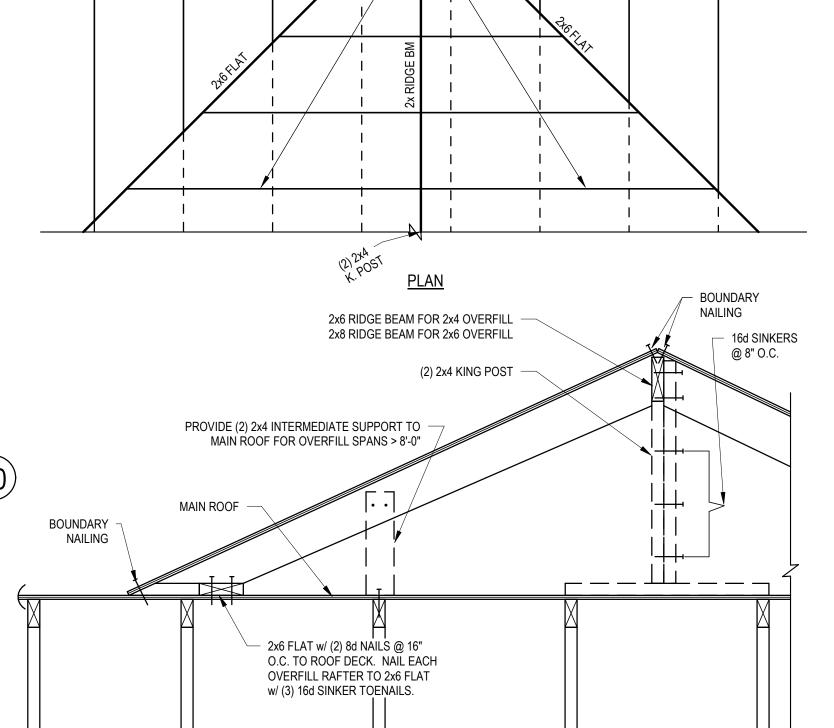


| HOLE / NOTCH SCHEDULE | | | | |
|-----------------------|----------|----------|--|--|
| HOLE / NOTCH % OF 'W' | 2x4 STUD | 2X6 STUD | | |
| 25% | 3/4" | 1-3/8" | | |
| 40% | 1-3/8" | 2-1/8" | | |
| 60% | 2" | 3-1/4" | | |

1. HOLES & NOTCHES SHALL NOT OCCUR IN THE SAME STUD. 2. WHERE HOLES OR NOTCHES EXCEED THOSE SHOWN ABOVE, REPAIR PER TABLE BELOW. 3. ALL NOTCHES IN BEARING OR SHEAR OR EXTERIOR WALLS REQUIRE REPAIRS.

| STUD HOLE REPAIR | | | | |
|------------------|---|--|--|--|
| 2x4 STUD | 2x6 STUD | REPAIR | | |
| HOLE DIA. 'D' | HOLE DIA. 'D' | REPAIR | | |
| ≤ 2-3/4" | ≤ 4-1/2" | (1) CTS218 w/ 10d | | |
| ≤ 3/4" | ≤ 1-3/8 | (1) CTS218 w/ 10d | | |
| ≤ 2-3/4" | ≤ 4-1/2" | (2) CTS218 TWO-SIDED w/ 10d | | |
| | 2x4 STUD HOLE DIA. 'D' ≤ 2-3/4" ≤ 3/4" | 2x4 STUD 2x6 STUD HOLE DIA. 'D' HOLE DIA. 'D' ≤ 2-3/4" ≤ 4-1/2" ≤ 3/4" ≤ 1-3/8 | | |

| | STUD NOTCH REPAIR | | | | | |
|---------------------------------------|-------------------|--------------|----------------|-----------------|--------------------------------|--|
| | 2x4 STUD | 2x4 STUD | 2x6 STUD | 2x6 STUD | | |
| | NOTCH DEPTH | NOTCH LENGTH | NOTCH DEPTH | NOTCH LENGTH | REPAIR | |
| NON-BEARING & NON-SHEAR & INTERIOR | ≤ 2-1/2" | ≤ 4-1/2" | ≤ 3-3/4" | ≤ 4-1/2" | (1) CTS218 w/ 10d | |
| BEARING OR SHEAR OR EXTERIOR WALL | ≤ 2-1/2" | ≤ 2-1/2" | ≤ 2-1/2" | ≤ 2-1/2" | SS w/ 10d | |
| BEARING OR SHEAR OR EXTERIOR WALL | ≤ 2-3/4" | ≤ 4-1/2" | ≤ 4-1/2" | ≤ 4-1/2" | (2) CTS218 TWO-SIDED w/ 10d | |

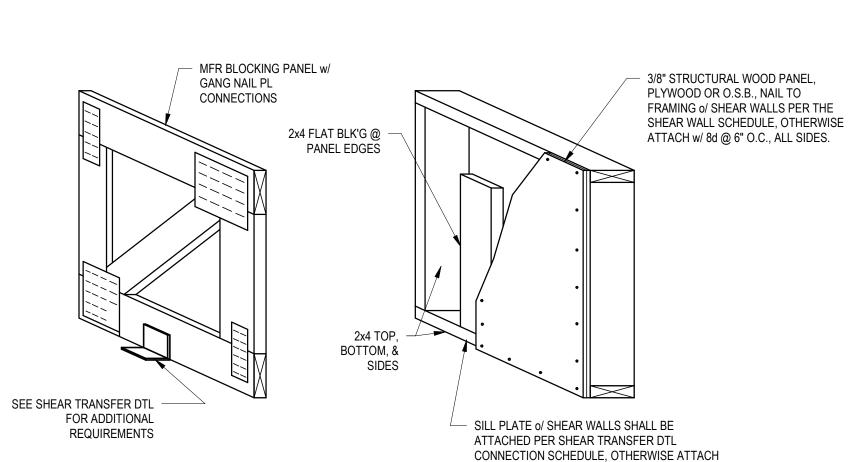


(2) 2x4 w/ LUS24-2

HGR EACH END

2x4 AT 24" O.C. OVERFILL FOR SPANS < 4'-0"

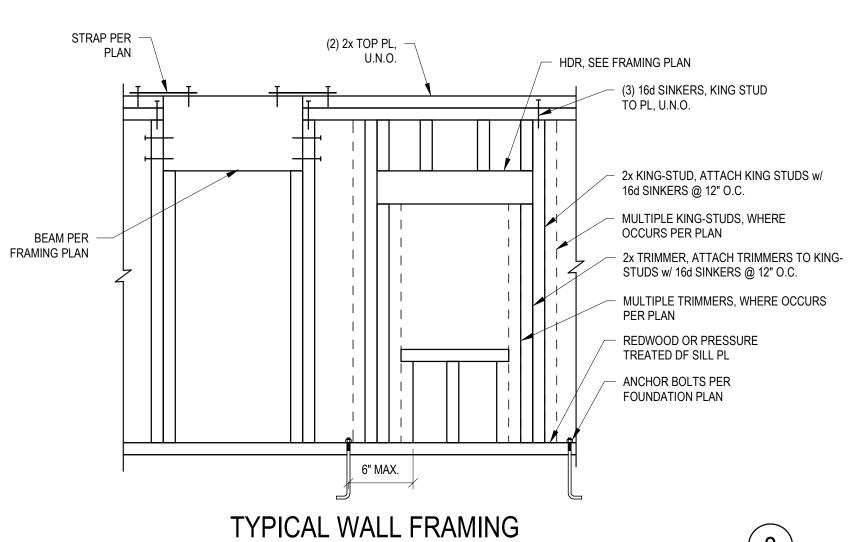
2x6 AT 24" O.C. OVERFILL FOR SPANS > 4'-0"

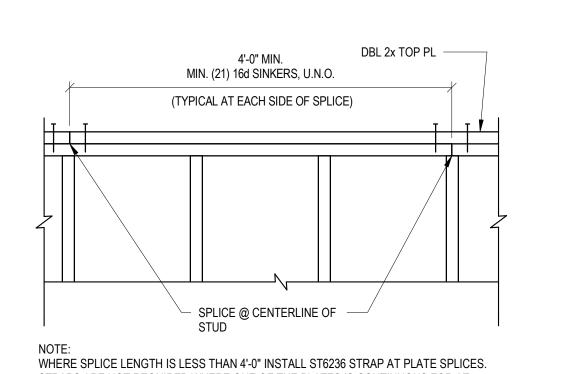


TYPICAL OVERBUILD

N.T.S.

w/ 16d SINKERS @ 8" O.C. TYPICAL BLOCKING PANEL





| NOTE: WHERE SPLICE LENGTH IS LESS THAN 4'-0" INSTALL ST6236 STRAP AT PLATE SPLICES. STRAPS ARE NOT REQUIRED WHERE ONE OF THE PLATES IS CONTINUOUS FOR AT LEAST 4'-0" IN EACH DIRECTION. |
|---|
| |

| | | | SHEAR WALL S | CHEDULE | | | |
|-----------------------|----------------------------|------------------------------|-------------------------------|---|---------|---------|------------------|
| MARK | MIN. BLOCKED | EDGE / BOUNDARY | FIELD NAILING | SOLE PL NAILING, WHERE | WALL CA | APACITY | DEFAULT SILL |
| WAKK | MATERIAL | NAILING | FIELD NAILING | OCCURS | SEISMIC | WIND | ANCHORAGE, U.N.O |
| P1 | 3/8" PLYWOOD OR O.S.B. | 8d COMMON NAILS @ 6" O.C. | 8d COMMON NAILS @ 12" O.C. | 16d SINKERS @ 6" O.C. | 260 plf | 365 plf | S1 |
| P2 | 3/8" PLYWOOD OR O.S.B. | 8d COMMON NAILS @ 4" O.C. | 8d COMMON NAILS @ 12" O.C. | 16d SINKERS @ 4" O.C. | 350 plf | 520 plf | S2 |
| P3 | 3/8" PLYWOOD OR O.S.B. | 8d COMMON NAILS @ 3" O.C. | 8d COMMON NAILS @ 12" O.C | 16d SINKERS @ 3" O.C. | 490 plf | 685 plf | S3 |
| P4 | 3/8" PLYWOOD OR O.S.B. | 8d COMMON NAILS @ 2" O.C. | 8d COMMON NAILS @ 12" O.C. | 16d SINKERS @ 2" O.C. | 640 plf | 895 plf | S4 |
| P5 | 3/8" STRUCTURAL PLYWOOD | 8d COMMON NAILS @ 2" O.C. | 8d COMMON NAILS @ 12" O.C. | 16d SINKERS @ 2" O.C. | 730 plf | - | S4 |
| P2 & P3 BOTH SIDES | 3/8" PLYWOOD OR O.S.B. | MATCH SINGLE WALL | MATCH SINGLE WALL | 16d SINKERS @ 2" O.C. (3xSOLE PLATE REQ'D) | SINGLE | WALL x2 | S4 |
| P4 & P5 BOTH SIDES | MATCH SINGLE WALL | MATCH SINGLE WALL | MATCH SINGLE WALL | SDWS22600 DB SCREWS @3" O.C. STAGGERED (3xSOLE PLATE REQ'D) | SINGLE | WALL x2 | S5 |

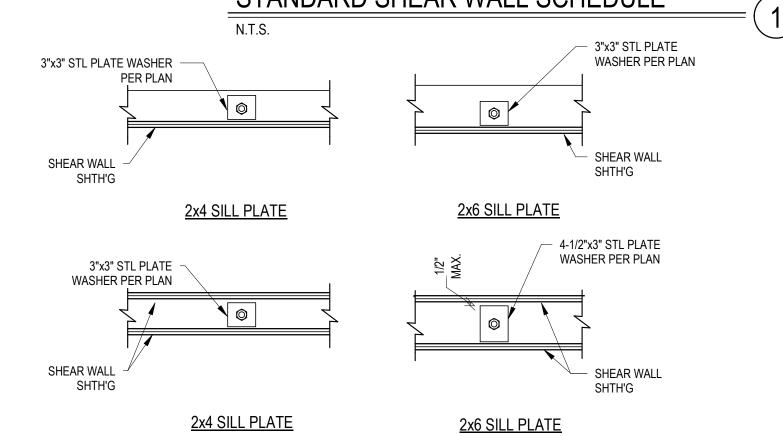
| | SILL | ANCHORAGE | SCHEDULE | | SHEAR WALL LENG | GTH TOLERANCES |
|------------|------------------------------|-------------------------|-------------------------|----------|-----------------------------|------------------------------------|
| MARK | NOMINAL SILL PL THICKNESS | 1/2"DIA A.B. SPACING | 5/8"DIA A.B. SPACING | CAPACITY | SPECIFIED SHEAR WALL LENGTH | ACCEPTABLE SHEAR WALL TOLERANCE |
| S1 | 2x | 32" O.C. | 48" O.C. | 370 plf | UP TO 3'-0" | ± 2" |
| S2 S2 | 2x | 24" O.C. | 32" O.C. | 520 plf | OVER 3'-0" AND UP TO 5'-0" | ± 3" |
| S3 | 2x | 16" O.C. | 24" O.C. | 740 plf | OVER 5'-0" AND UP TO 7'-0" | ± 4" |
| S4 | 2x | 12" O.C. | 16" O.C. | 1040 plf | OVER 7'-0" AND UP TO 10'-0" | ± 6" |
| <u>\$5</u> | 3x | 8" O.C. | 10" O.C. | 1560 plf | OVER 10'-0" | ± 8" |

1. ALL SHEAR WALLS SHALL BE FRAMED TO THE MINIMUM LENGTHS SHOWN ON THE PLANS WITH THE TOLERANCES INDICATED ON THE TABLE ABOVE, UNLESS A MINIMUM WALL LENGTH IS SHOWN ON THE PLANS.

2. ALL SHEAR WALLS SHALL TERMINATE ON AT LEAST (1) FULL HEIGHT STUD. ADDITIONAL STUDS OR SOLID POSTS SHALL BE

- INSTALLED AS REQUIRED FOR HOLDOWNS WHERE THEY OCCUR. 3. 8d COMMON NAIL SHANK DIAMETER = 0.131", 16d SINKER SHANK DIAMETER = 0.148".
- 4. FOR "P3" AND "P4" SHEAR WALLS, ALL FRAMING RECEIVING EDGE NAILING FROM ADJOINING PANEL EDGES SHALL BE 3-INCH NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED. AS AN ALTERNATE, (2) 2x STUDS MAY BE USED PROVIDED THEY ARE
- NAILED TOGETHER w/ (2) 16d SINKERS @ 6" O.C. FULL HEIGHT. 5. FOR "P2", "P3" AND "P4" DOUBLE-SIDED SHEAR WALLS, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING
- MEMBERS, OR FRAMING SHALL BE 3-INCH NOMINAL OR WIDER AT ADJOINING PANEL EDGES AND NAILS ON EACH SIDE SHALL BE STAGGERED.
- 6. ALL ANCHOR BOLTS SHALL HAVE 7" MINIMUM EMBEDMENT. . ALL SHEAR WALL ANCHOR BOLTS SHALL INCLUDE A STEEL 3"x3"x0.229" PLATE WASHER BETWEEN THE SILL PLATE AND 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. ANCHOR BOLTS & PLATE WASHERS ARE TO BE OFFSET TOWARD THE SHEATHED WALL EDGE TO LIMIT THE GAP BETWEEN THE EDGE OF WASHER TO SHEATHING TO A MINIMUM OF 1/2". WHERE BOTH SIDES OF A 2x6 WALL ARE SHEATHED, A STEEL 4-1/2"x3"x0.229" PLATE WASHER SHALL BE CENTERED ON THE SILL PLATE, PER DTL 2 / S1.1. STANDARD SHEAR WALL SCHEDULE



(@ DOUBLE-SIDED SHEAR WALL) (@ DOUBLE-SIDED SHEAR WALL) TYP. SHEAR WALL WASHERS DETAIL

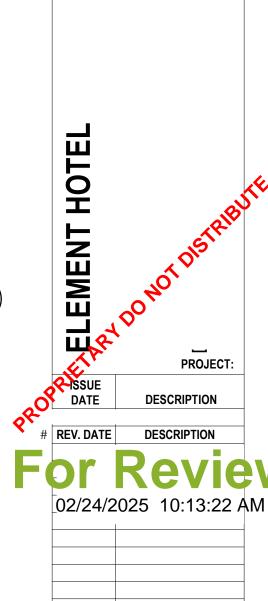
| | FOOTING SC | HEDULE | |
|-------|------------------------|----------------------------------|--|
| MARK | SIZE | REINFORCING, BOTTOM | |
| F2.0 | 2'-0" SQ. x 12" THICK | (3) #4 EACH WAY | |
| F2.5 | 2'-6" SQ. x 12" THICK | (4) #4 EACH WAY | |
| F3.0 | 3'-0" SQ. x 12" THICK | (4) #4 EACH WAY | |
| F3.5 | 3'-6" SQ. x 14" THICK | (4) #5 EACH WAY | |
| F4.0 | 4'-0" SQ. x 14" THICK | (4) #5 EACH WAY | |
| F4.5 | 4'-6" SQ. x 16" THICK | (5) #5 EACH WAY | |
| F5.0 | 5'-0" SQ. x 18" THICK | (6) #5 EACH WAY | |
| F5.5 | 5'-6" SQ. x 20" THICK | (6) #5 EACH WAY | |
| F6.0 | 6'-0" SQ. x 20" THICK | (8) #5 EACH WAY | |
| F7.0 | 7'-0" SQ. x 24" THICK | (7) #6 EACH WAY | |
| F8.0 | 8'-0" SQ. x 28" THICK | (9) #6 EACH WAY | |
| CF2.0 | 2'-0" WIDE x 12" THICK | (3) #4 CONT. | |
| CF2.5 | 2'-6" WIDE x 12" THICK | (4) #4 CONT. | |
| CF3.0 | 3'-0" WIDE x 12" THICK | (4) #4 CONT. x #4 @ 12" O.C. C.W | |
| CF4.0 | 4'-0" WIDE x 12" THICK | (6) #4 CONT. x #5 @ 12 O.C. C.W. | |

| | N.T.S. | | | | |
|------------------------------------|----------|---------------|---|-----------|----------------------------|
| | ST | UD HEIGHT TAB | LE | | |
| STUD WALL TYPE | | | NON-BEARING AND NON-SHEAR WALLS (MAX. HEIGHT) | | |
| | EXTERIOR | INTERIOR | INTERIOR | | TOP PL, RAKED WHERE OCCURS |
| 2x4 STUD @ 16" O.C. | - | 10'-0" | 13'-0" | | |
| 2x4 STUD @ 12" O.C. | - | 11'-6" | 14'-0" | | |
| (2) 2x4 STUD @ 16" O.C. | - | 13'-6" | 14'-0" | | |
| 2x4 DFL #2 @ 16" O.C. | - | 11'-0" | 13'-0" | 7// | |
| 2x4 DFL #2 @ 12" O.C. | - | 13'-0" | 14'-0" | r | |
| (2) 2x4 DFL #2 @ 16" O.C. | - | 13'-6" | 14'-0" | | |
| 2x6 STUD @ 16" O.C. | 14'-6" | 19'-0" | 20'-0" | | |
| 2x6 STUD @ 12" O.C. | 17'-0" | 21'-0" | 22'-0" | | STUD HEIGHT |
| (2) 2x6 STUD @ 16" O.C. | 21'-0" | 22'-0" | 22'-6" | | H QN |
| 2x6 DFL #2 @ 16" O.C. | 16'-6" | 19'-6" | 20'-0" | | ST |
| 2x6 DFL #2 @ 12" O.C. | 18'-6" | 21'-6" | 22'-0" | SOLE PL 🧵 | |
| (2) 2x6 DFL #2 @ 16" O.C. | 22'-6" | 22'-6" | 22'-6" | FDN ¬ | |
| 2x8 DFL #2 @ 16" O.C. | 22'-0" | 26'-6" | 27'-0" | \ \ \ | |
| 2x8 DFL #2 @ 12" O.C. | 25'-6" | 28'-0" | 30'-0" | 7 | |
| (2) 2x8 DFL #2 @ 16" O.C. | 29'-6" | 29'-6" | 30'-0" | Ĭ | I |
| 1-3/4 x 5-1/2 LVL STUDS @ 16" O.C. | 20'-6" | 21'-6" | 22'-0" | | |
| 1-3/4 x 7-1/4 LVL STUDS @ 16" O.C. | 27'-0" | 30'-0" | 30'-0" | | |

1. THIS TABLE ASSUMES IBC WIND LOADS w/ 115 mph, EXP. "C" AT EXTERIOR WALLS & 5 psf LATERAL LOAD AT INTERIOR WALLS. 2. THIS TABLE ASSUMES AXIAL DL = 710 lb/ft, LL = 760 lb/ft. AT EXTERIOR AND INTERIOR WALLS. 3. THIS TABLE ASSUMES IBC 5psf LATERAL LOAD @ INTERIOR WALLS.

STANDARD STUD TABLE

CD 4. THIS TABLE IS ONLY APPLICABLE FOR THE UPPER TWO FLOORS BEARING WALLS AND NON-BEARING WALLS. SEE FRAMING PLAN NOTES FOR WALL CALLOUTS 4001 NOT USED



STANDARD DETAILS AND SCHEDULES

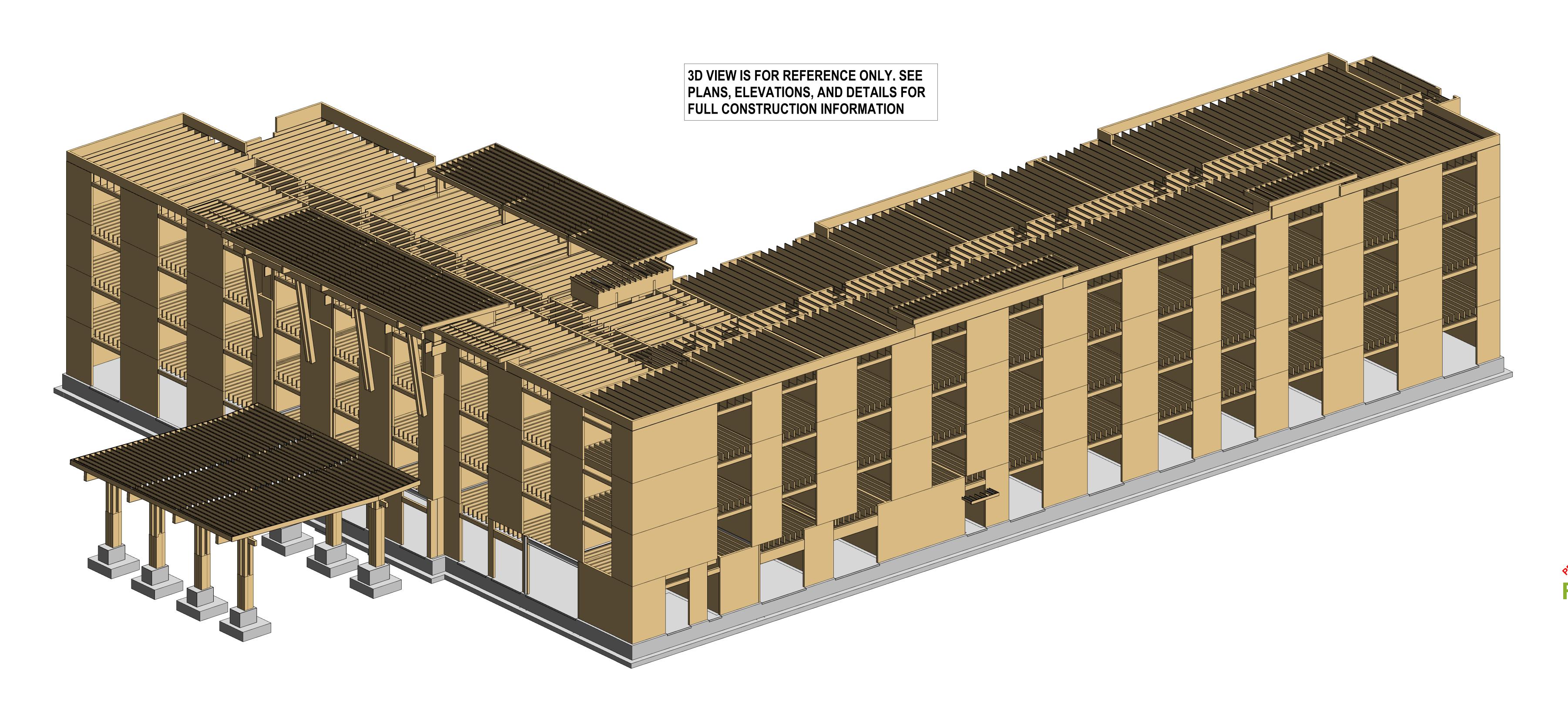
TYPICAL TRUSS HANGERS

SHEAR TRANSFER AT OPENING

= (13)

DRILLING & NOTCHING OF PLATES & STUDS (11)

TYPICAL TOP PLATE SPLICE





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