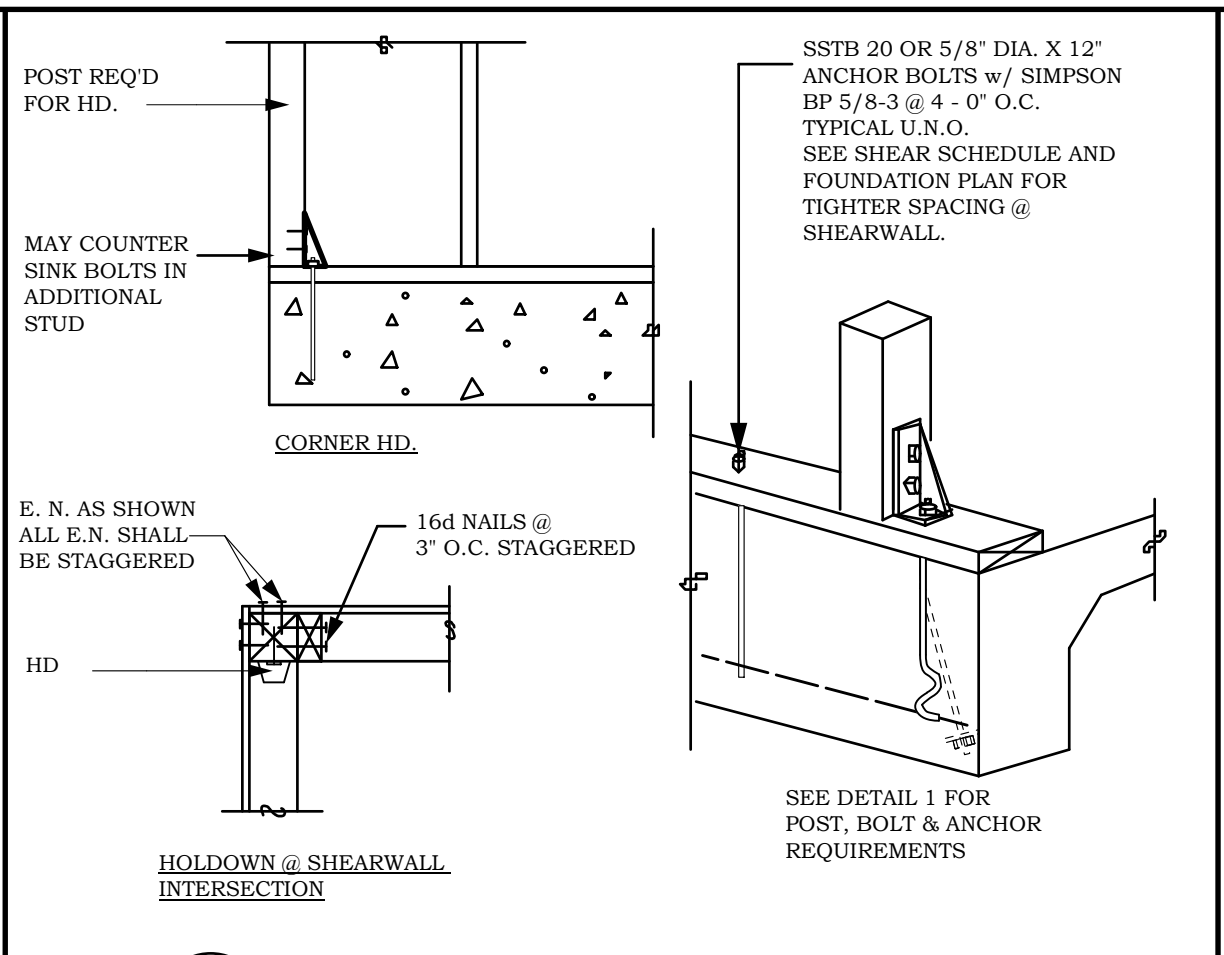
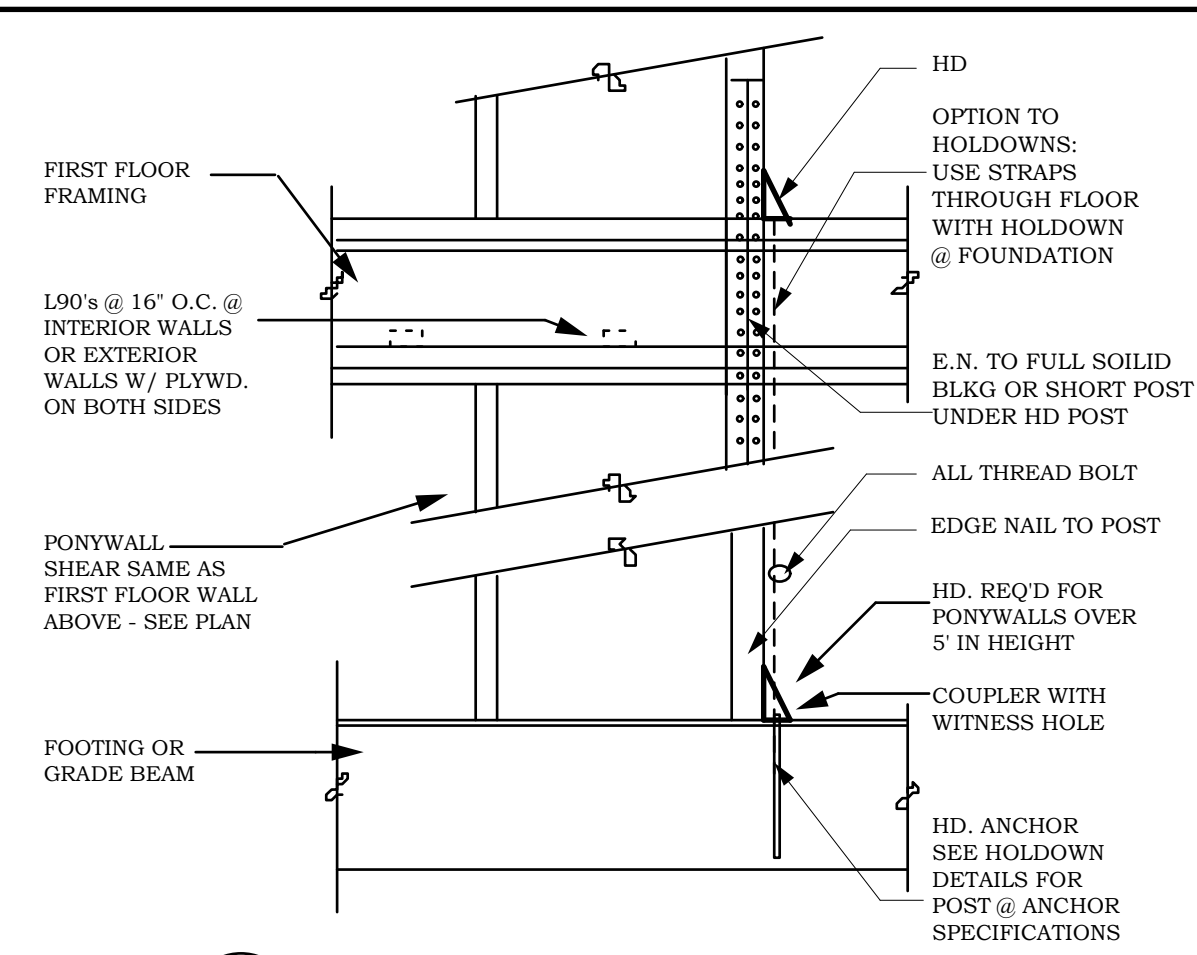


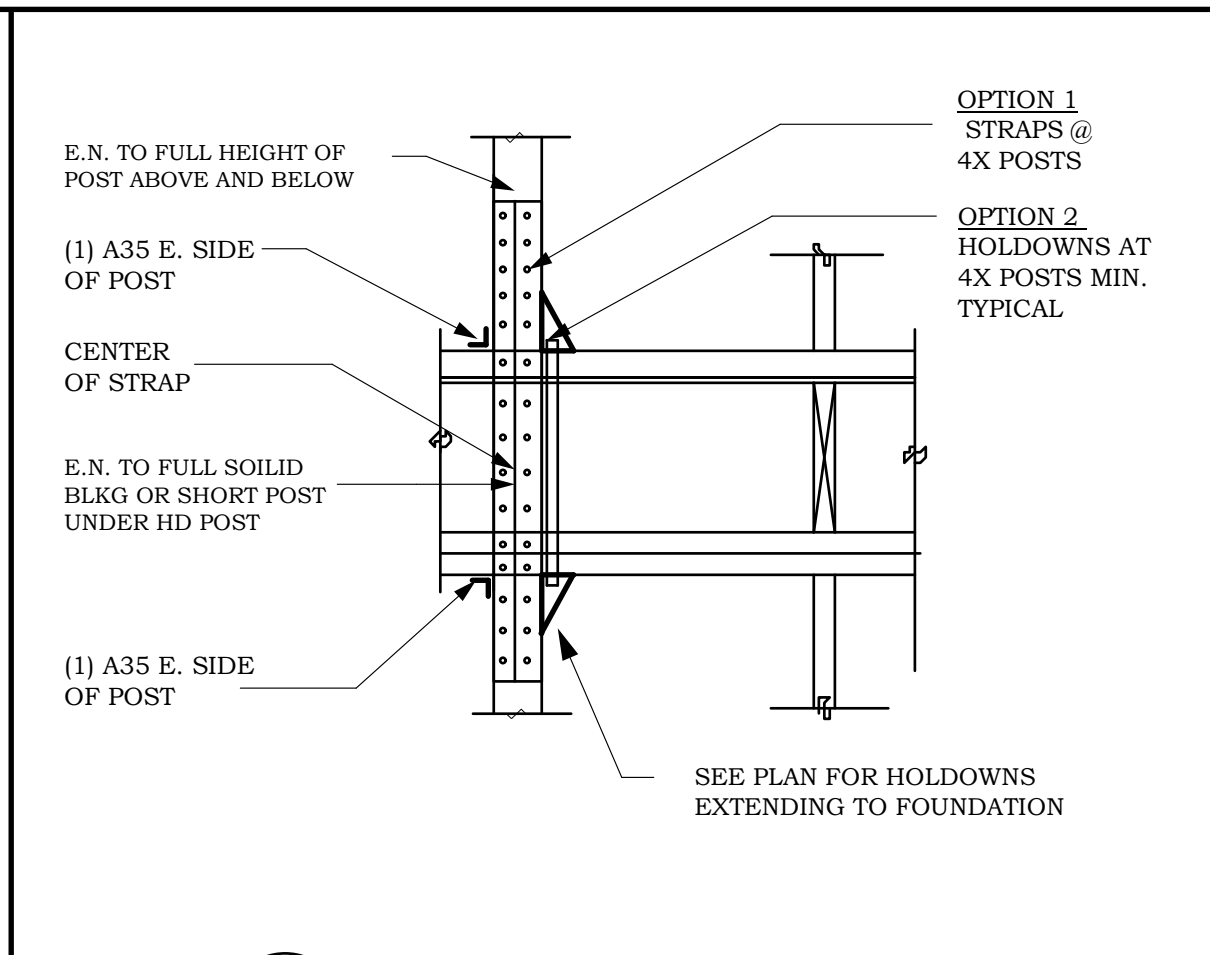
1 HOLDOWN - RAISED FLOOR - EXISTING OR NEW FOUNDATION



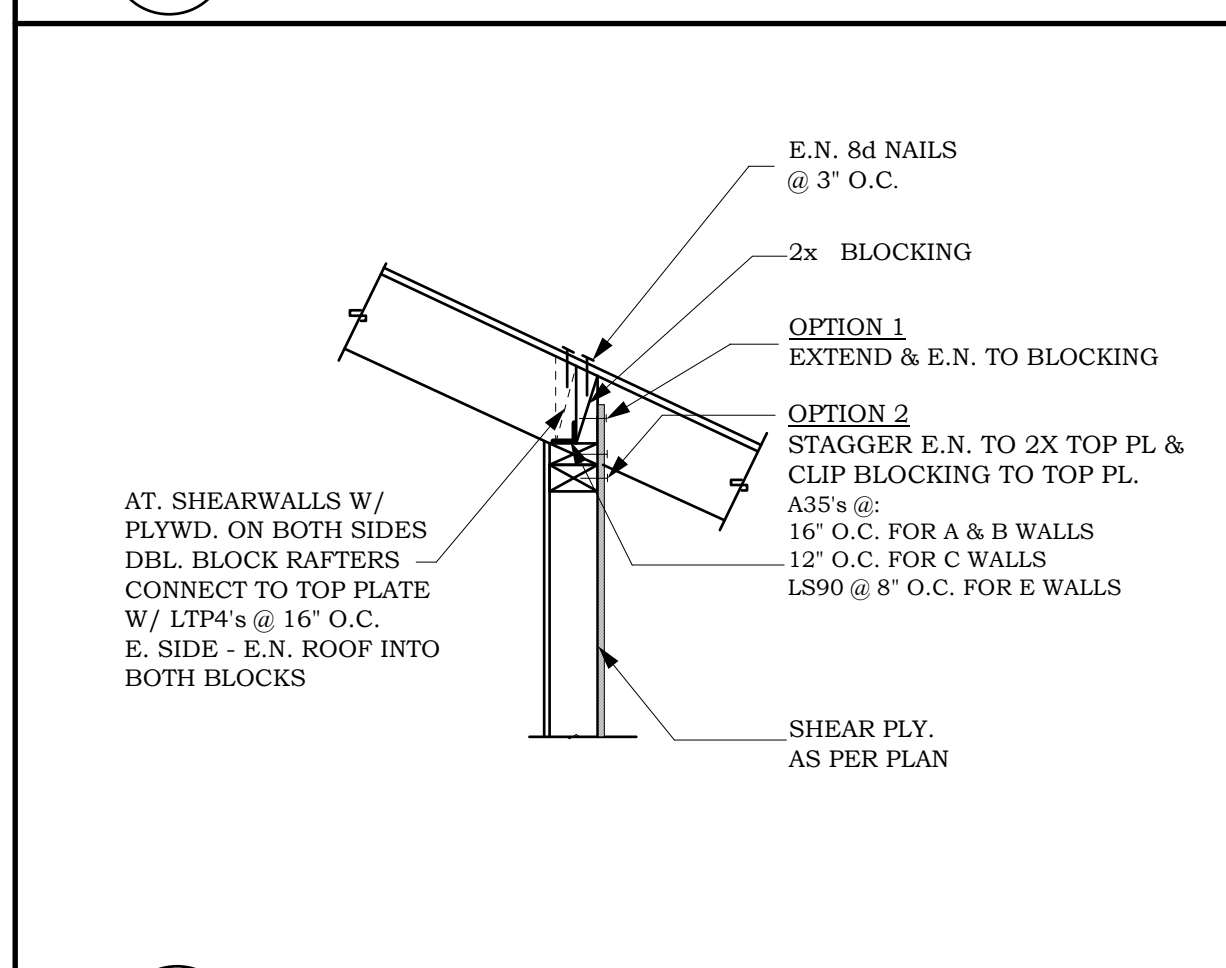
2 HOLDOWN - SLAB ON GRADE



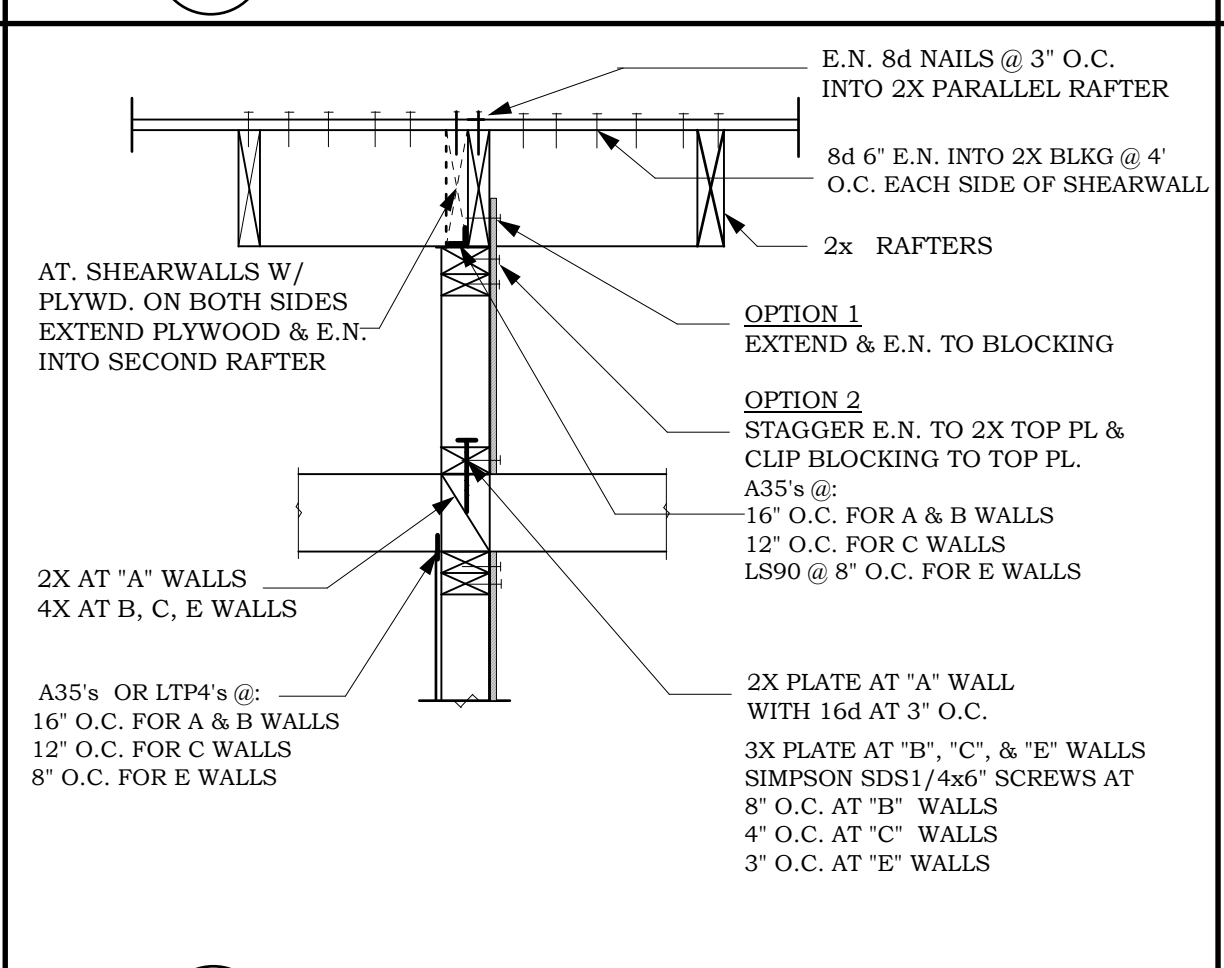
3 HOLDOWN - PONYWALL OR TWO STORY



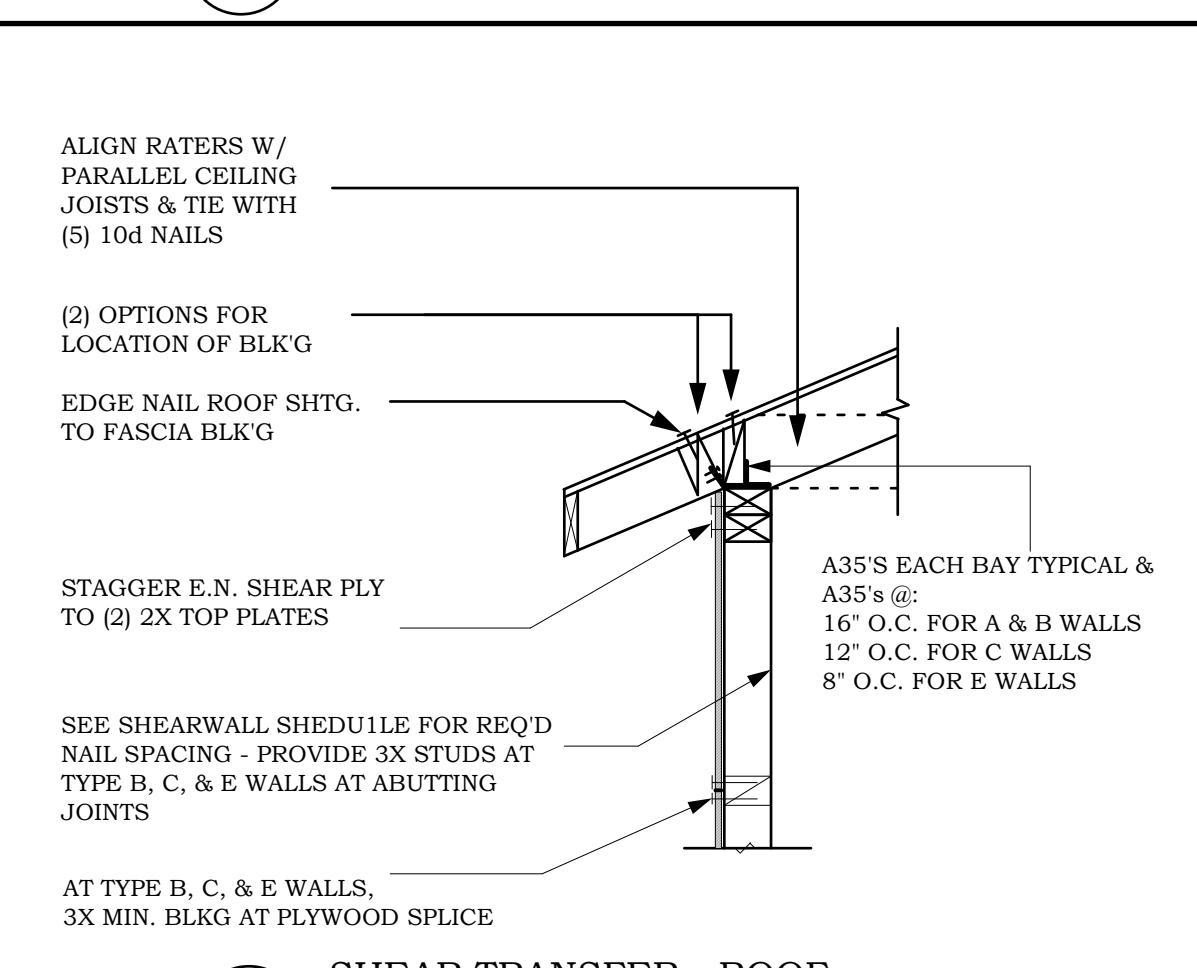
4 HOLDOWN OR STRAP THROUGH FLOOR



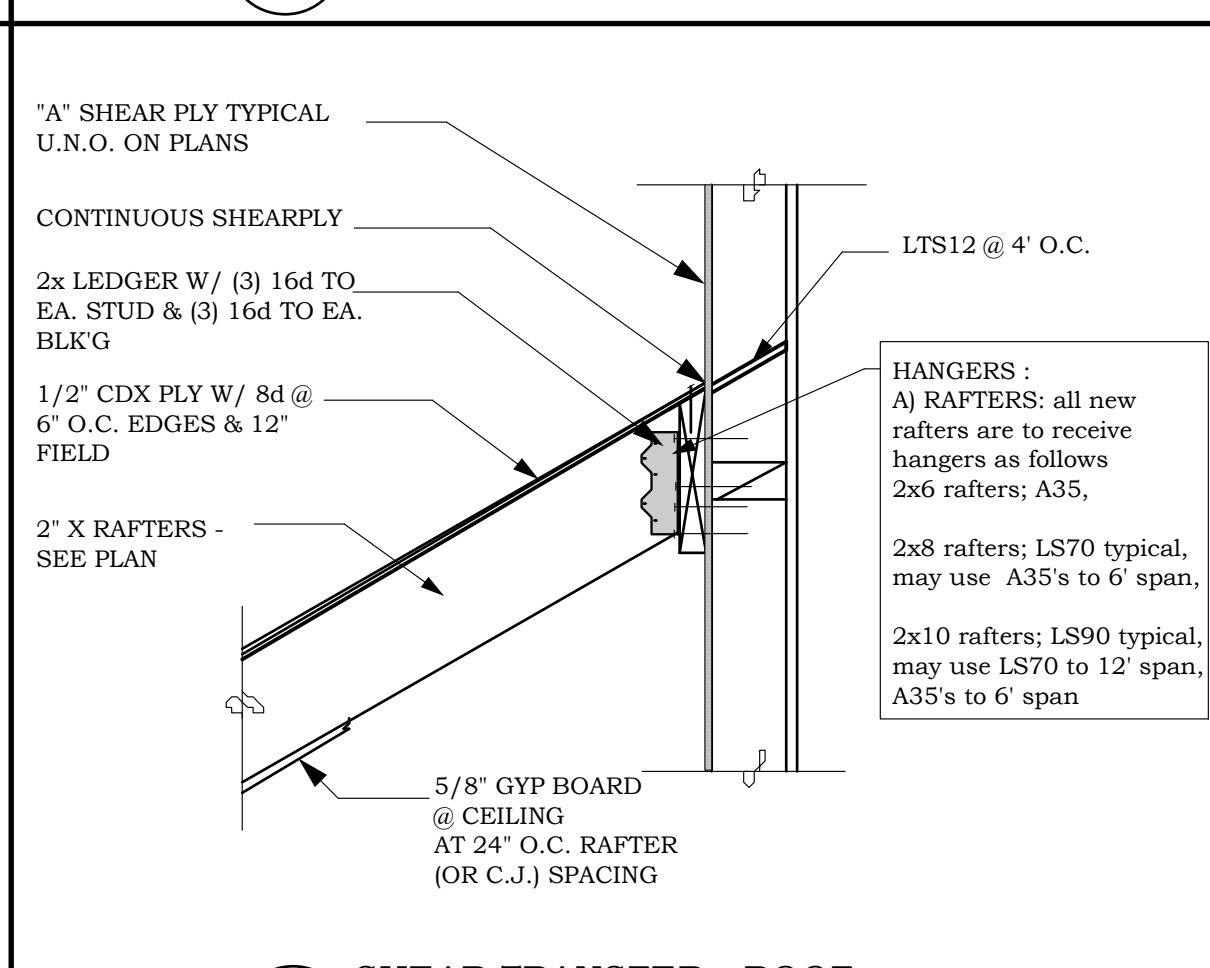
5 SHEAR TRANSFER - ROOF SHEARWALL PERPENDICULAR TO ROOF RAFTERS



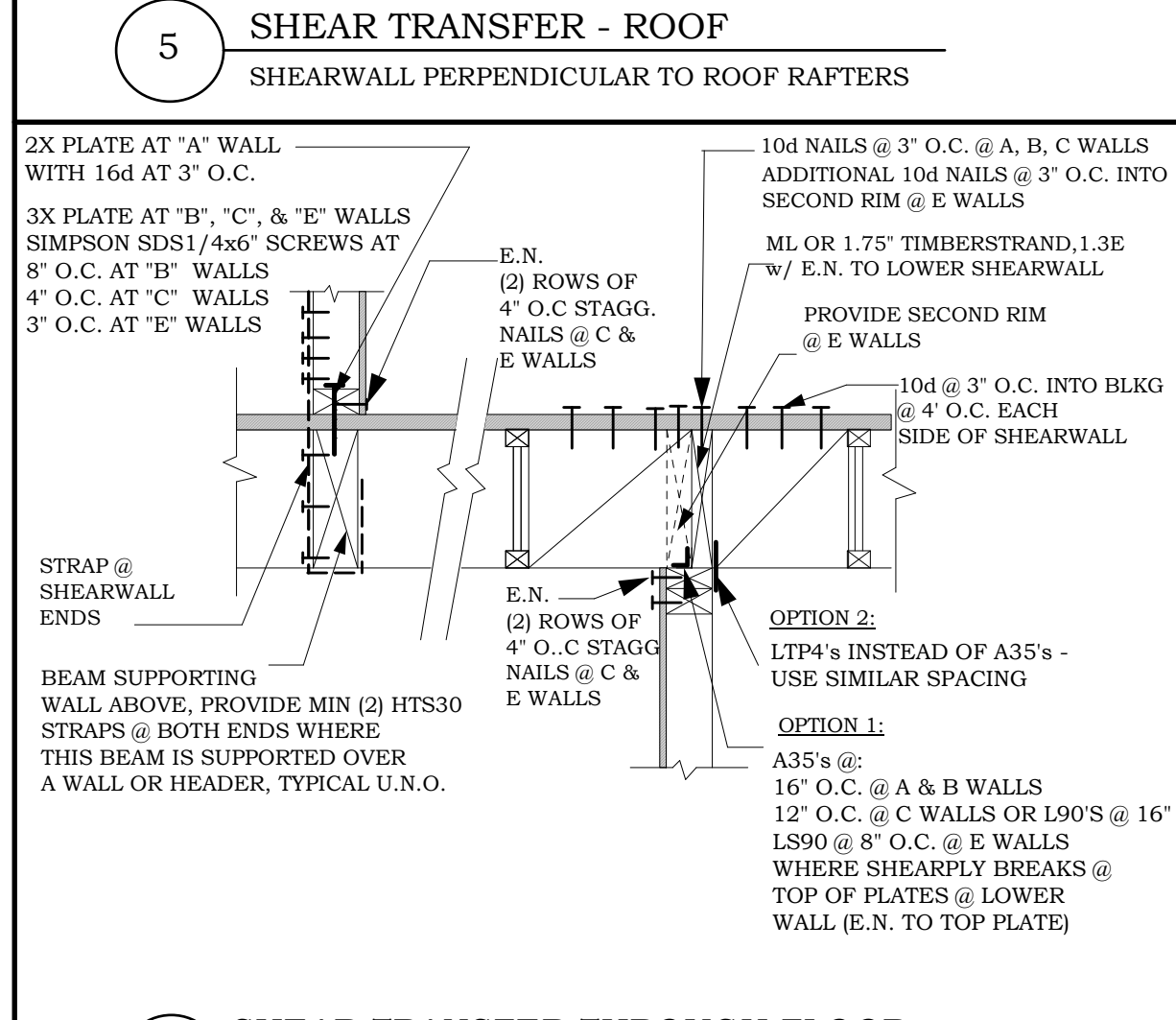
6 SHEAR TRANSFER - ROOF SHEARWALL PARALLEL TO ROOF RAFTERS



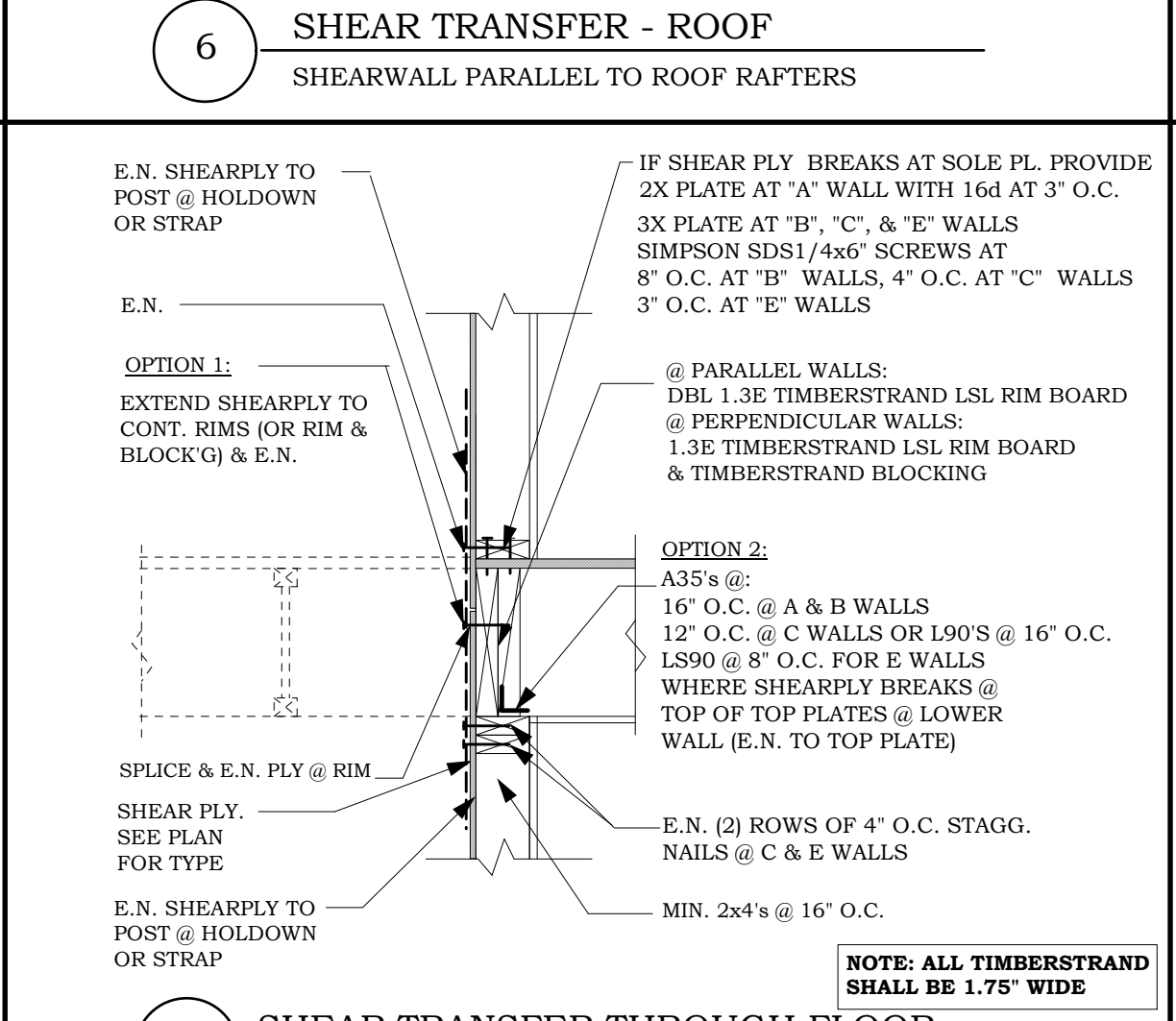
7 SHEAR TRANSFER - ROOF ROOF EAVE DETAIL



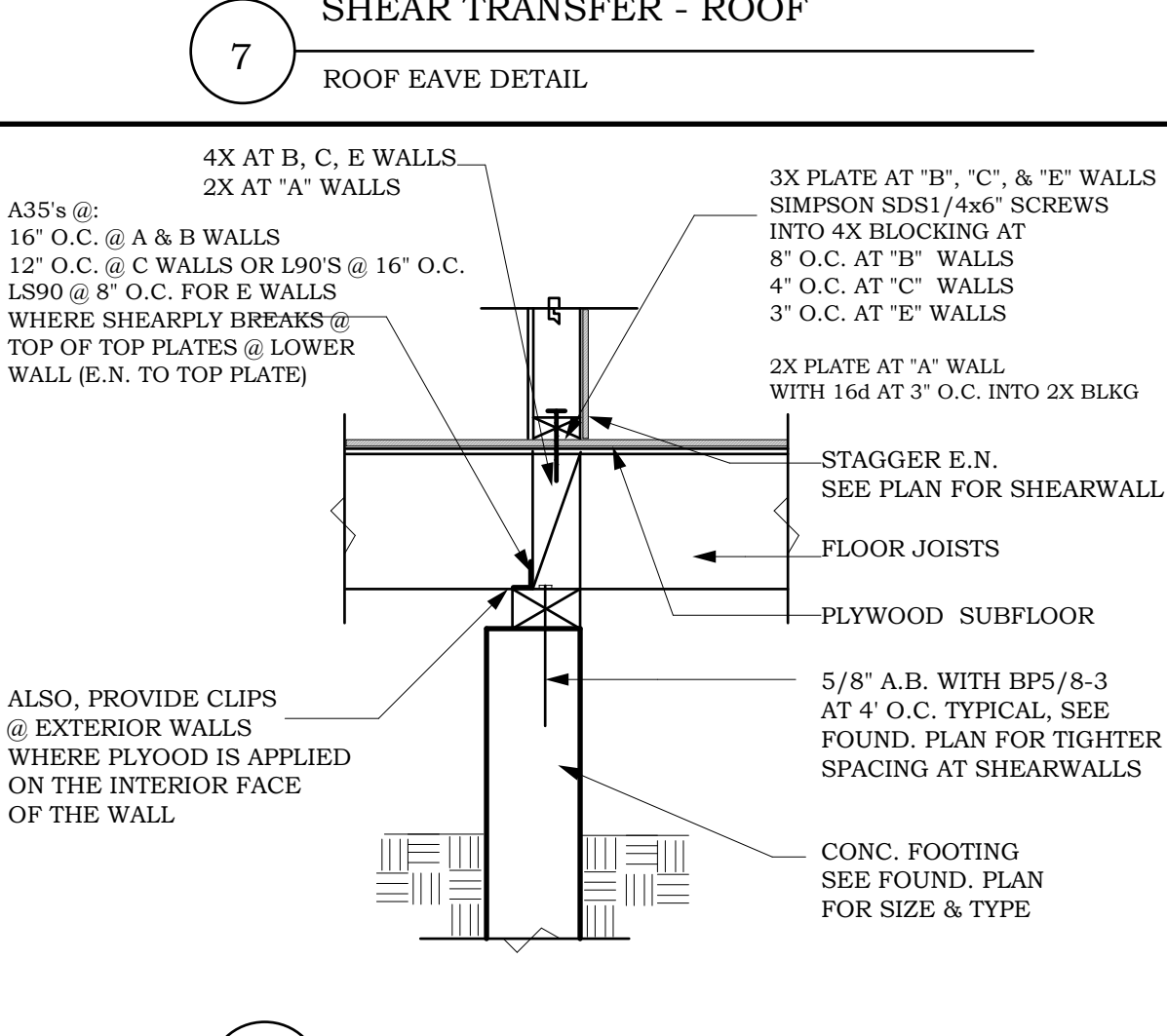
8 SHEAR TRANSFER - ROOF LOWER ROOF



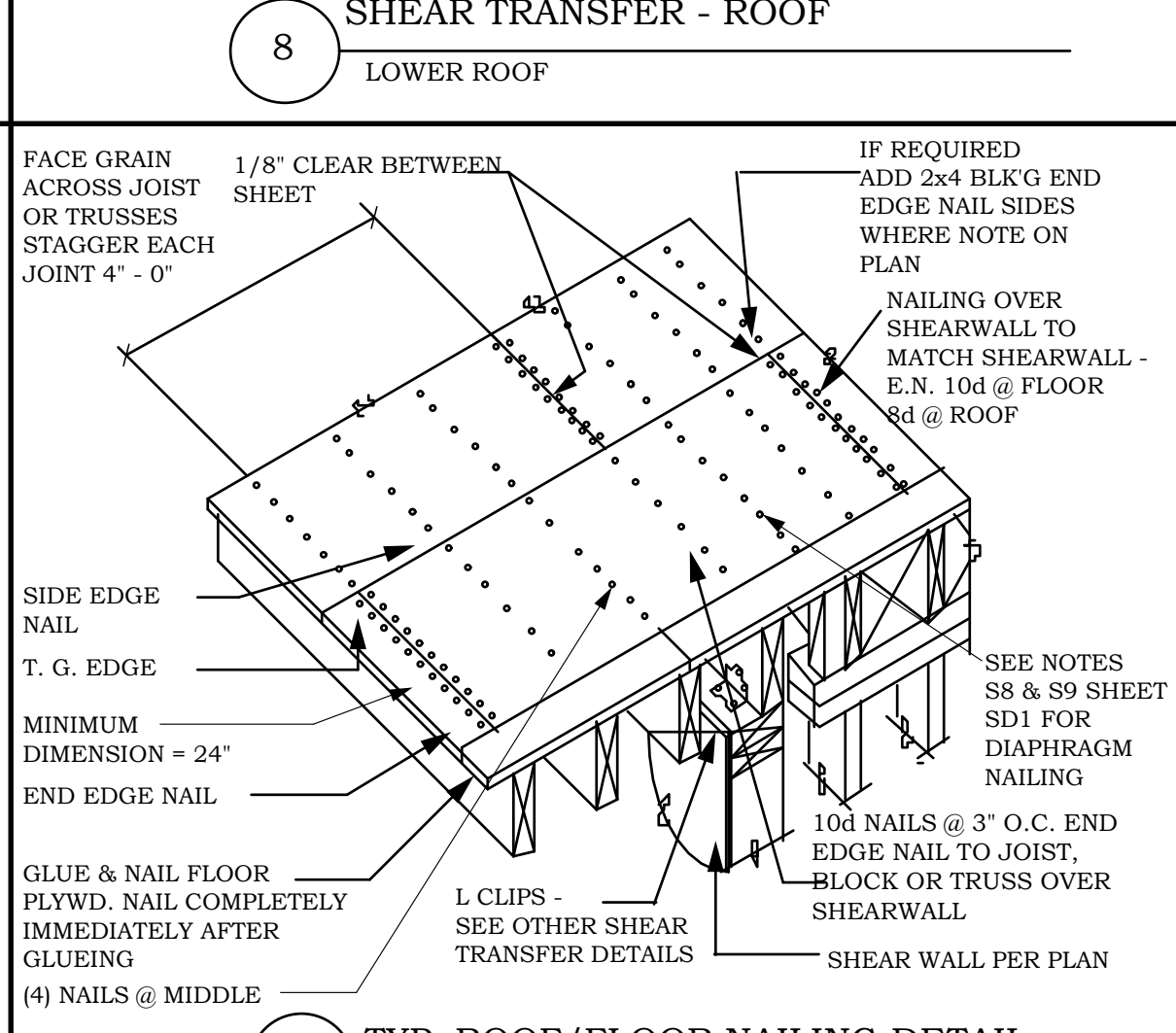
9 SHEAR TRANSFER THROUGH FLOOR - WALLS DON'T STACK



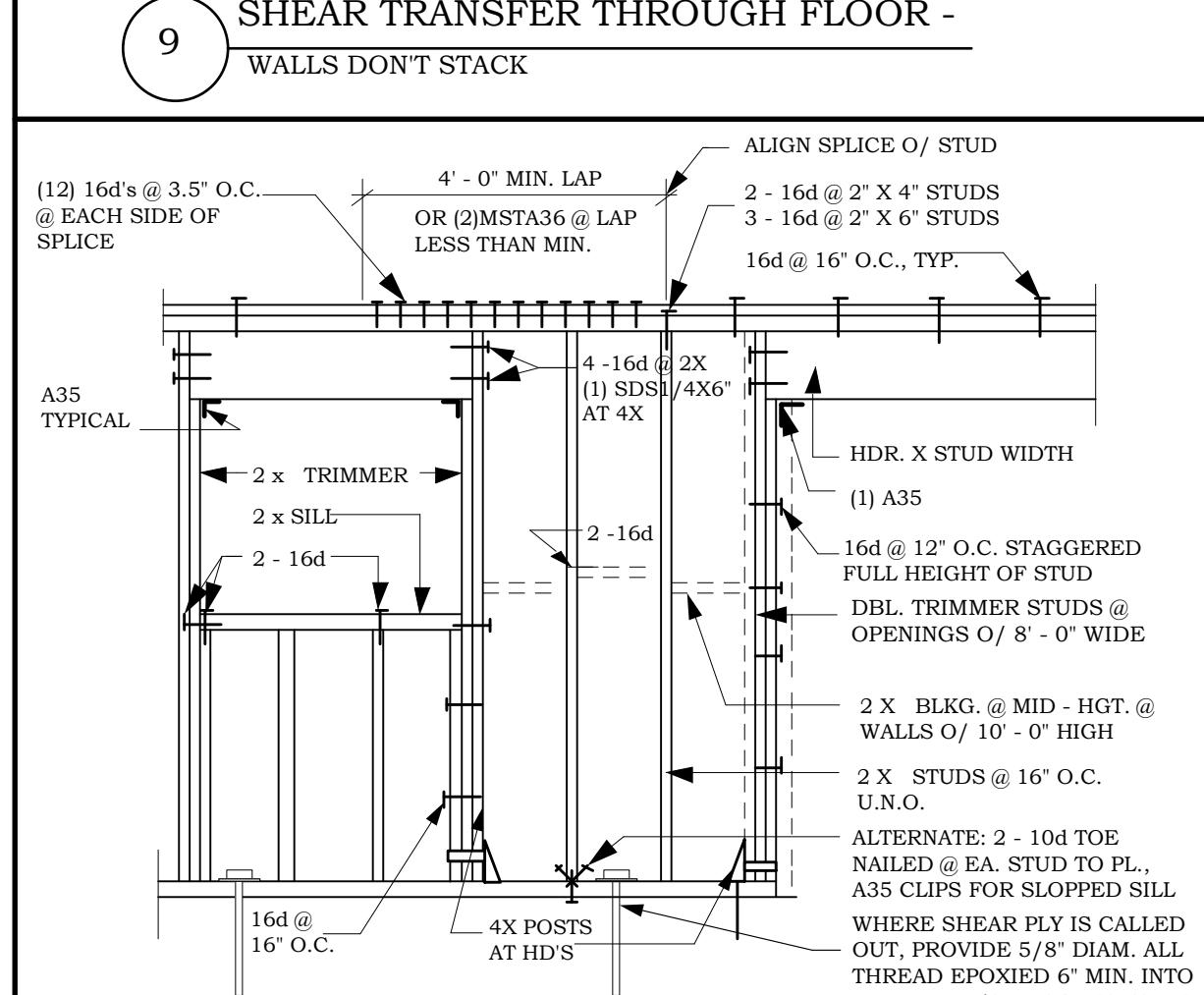
10 SHEAR TRANSFER THROUGH FLOOR - WALLS STACK - EITHER INTERIOR OR EXTERIOR



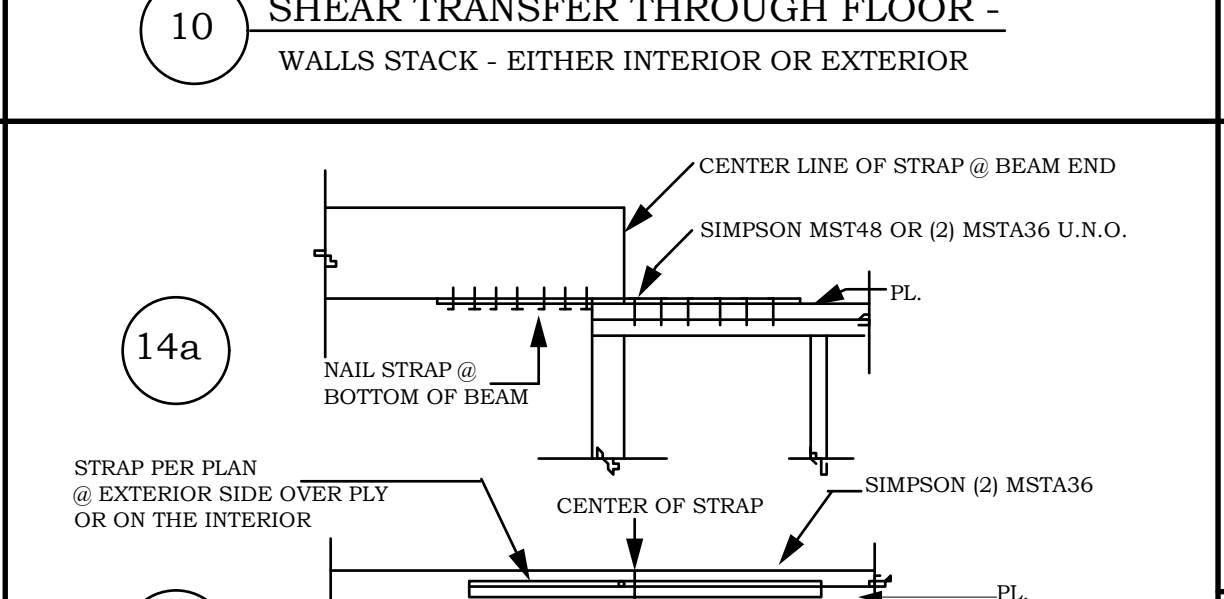
11 SHEAR TRANSFER AT FOUNDATION



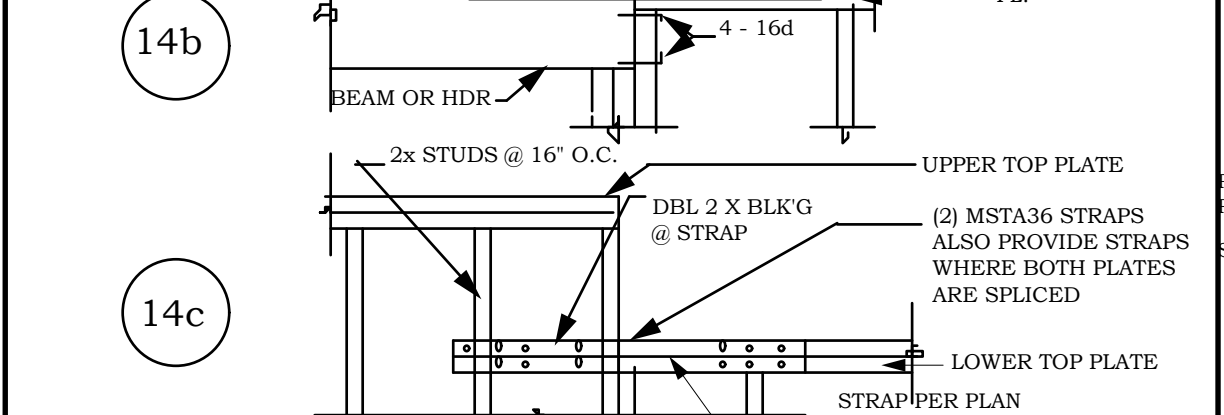
12 TYP. ROOF/FLOOR NAILING DETAIL



13 TYPICAL STUD WALL DETAIL (INCLUDING SHEARWALL)



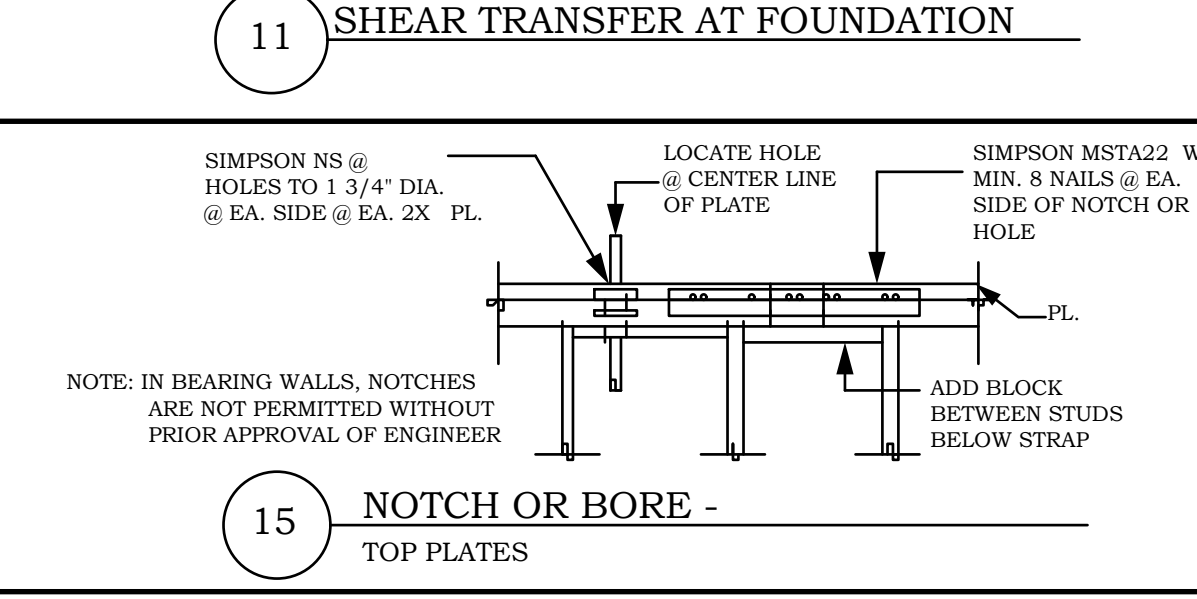
14a DRAG STRAP DETAIL BEAM, HEADER & TOP PLATES



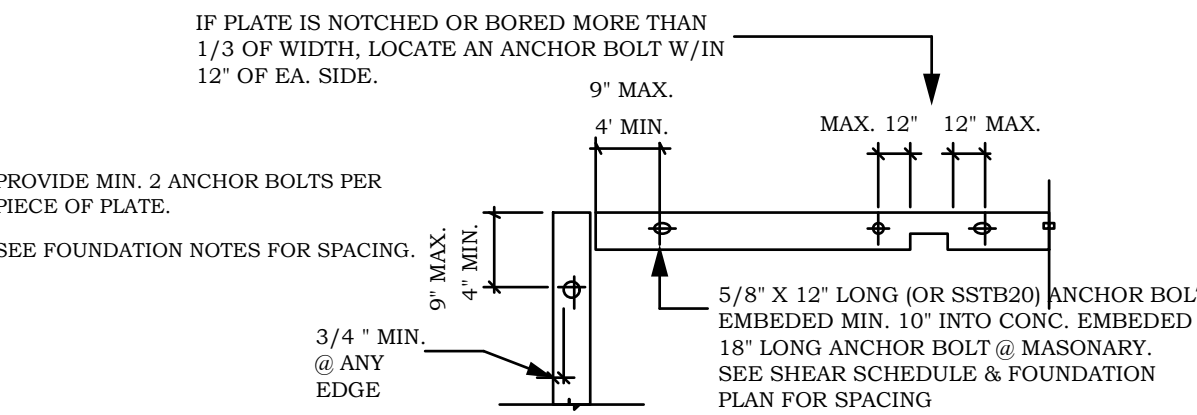
14b DRAG STRAP DETAIL BEAM, HEADER & TOP PLATES



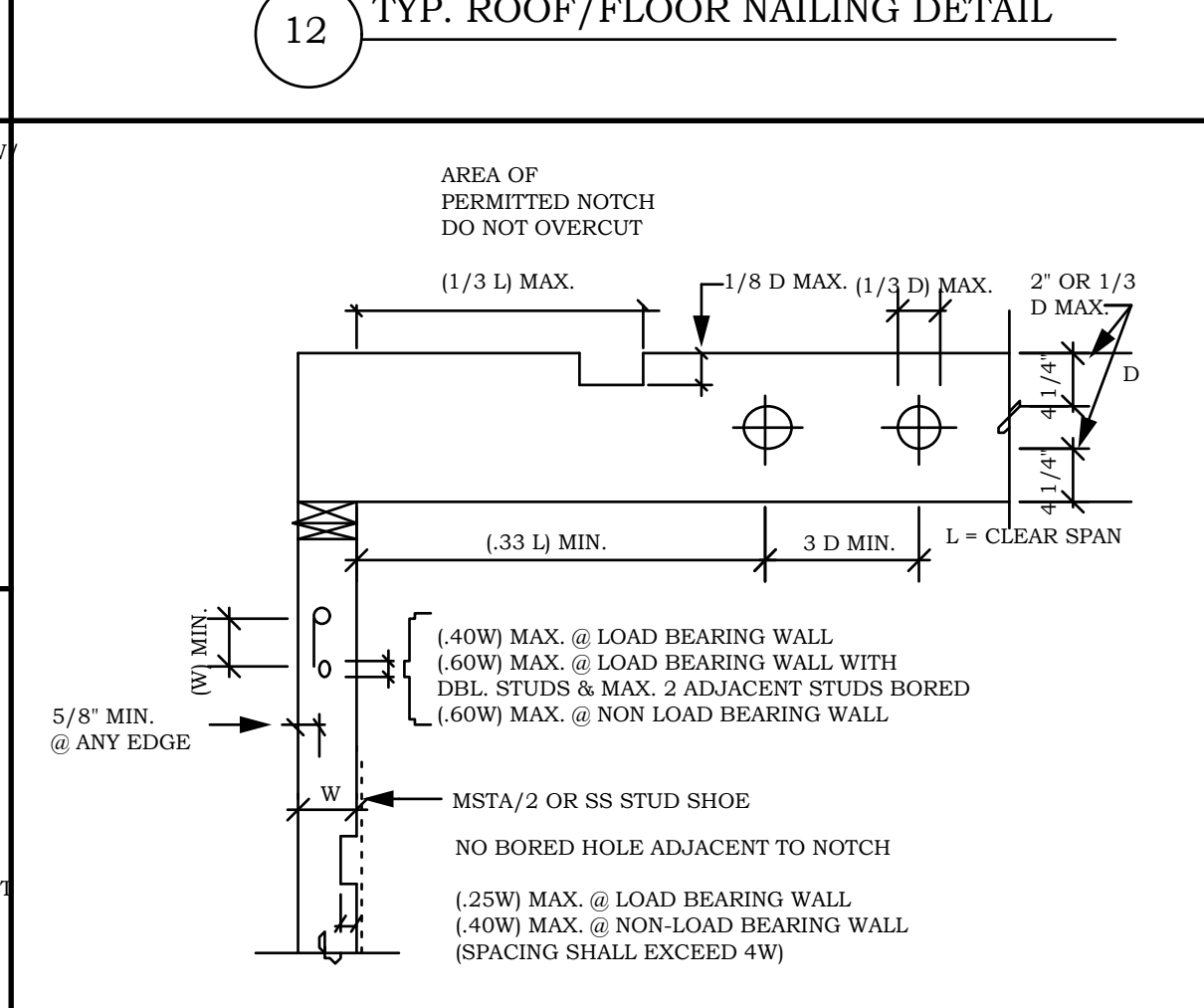
14c DRAG STRAP DETAIL BEAM, HEADER & TOP PLATES



15 NOTCH OR BORE - TOP PLATES



16 NOTCH OR BORE - SILL PLATE



17 NOTCH & BORE LIMITS AT STUDS & JOISTS

STRUCTURAL NOTES:

CONTRACTOR IS RESPONSIBLE FOR ALL DIMENSIONS AND GRADES. CONTRACTOR SHALL VERIFY ALL CONDITIONS IN FIELD AND NOTIFY THIS OFFICE OF ANY DISCREPANCIES FOR CLARIFICATION AND/OR RESOLUTION, PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL ALSO VERIFY EXISTING CONDITIONS AND REPORT TO THE ENGINEER IF ANY OF THE FOLLOWING IS FOUND:

- DIMENSIONS ARE INCORRECT.
- THE EXISTING BUILDING IS OUT OF SQUARE LEVEL.
- FOUNDATION IS CRACKED.
- DRYROT OR TERMITE DAMAGE.
- ANY EXISTING CONDITIONS NOT SHOWN ON THEW DRAWINGS.

CONTRACTOR SHALL MEET WITH THE ENGINEER AT LEAST 2 WEEKS PRIOR TO START OF CONSTRUCTION OR DEMOLITION. ENGINEER TO REVIEW FOUNDATION PRIOR TO CONCRETE POUR(S). ENGINEER SHALL ALSO REVIEW SHEAR WALLS AND HOLDOWNS. NOTIFY ENGINEER AT LEAST 72 HOURS IN ADVANCE.

ALL WORK SHALL CONFORM WITH 2016 CALIFORNIA BUILDING CODE & 2015 INTERNATIONAL BUILDING CODE AS WELL AS ALL APPLICABLE LOCAL CODES IN EFFECT AT THE TIME OF CONSTRUCTION.

CONCRETE:

- REGULAR WEIGHT HARD ROCK. MIN. 28 DAY COMPRESSIVE STRENGTH = 3000 psi AND MAX. SLUMP = 4 inch. USE TYPE II CEMENT PER ASTM C150. NO SPECIAL INSPECTION IS REQUIRED.
- ALL CAST IN PLACE CONCRETE PIERS TO BE 3000 psi. - CONCRETE SPECIAL INSPECTION IS NOT REQUIRED.
- CONCRETE COVER. MINIMUM COVER, inches (mm)

A. Concrete cast against and permanently exposed to earth:

3 (76)

B. Concrete exposed to earth or weather:

2 (51)
1 1/2 (38)

C. Concrete not exposed to weather or in contact with ground:

1 1/2 (38)
3/4 (19)

Slabs, walls, joists:

1 1/2 (38)
3/4 (19)

Beams, columns:

1 1/2 (38)
3/4 (19)

Primary reinforcement, ties, stirrups, spirals:

1 1/2 (38)

Shells, folded plate members:

3/4 (19)

No. 5 bar, W31 or D31 wire, and smaller:

1/2 (12.7)

STEEL:

- ASTM A-615 GRADE 40. SPLICES AND CORNER LAP 42 DIAMETER.
- ANCHOR BOLTS ASTM A307 5/8" X 12" APPROVED EQUAL W/ SIMPSON BP 5/8-3 @ 48" O.C. UNLESS NOTED OTHERWISE.

FRAMING: MAY USE APPROVED EQUAL OSB INSTEAD OF PLYWOOD TYPICAL EXCEPT @ FLOORING

- ALL FRAMING TO CONFORM TO CHAPTER 23 2016 C.B.C.
- ALL NAILING TO CONFORM TO TABLE 2304.10.1 2016 C.B.C.
- ALL SUB-FLOOR PLYWOOD: 3/4" INCH APA RATED T&G PLYWOOD 32/16 EXPOSURE 1 MINIMUM. GLUED AND NAILED, TYPICAL U.N.O.
- ALL SUB-FLOOR NAILING: 10d NAILS @ 6" O.C. EDGE AND 12" O.C. FIELD.
- ALL ROOF FRAMING: 12" X 4" STUDS TO 10 FEET HIGH, 2" X 6" PLYWOOD @ 16" O.C. RR SPACING. PLYWOOD SHALL BE APA RATED 24/0 EXPOSURE 1 MINIMUM, TYPICAL U.N.O.
- ALL ROOF NAILING: 8d COMMON NAILS @ 6" O.C. EDGE NAIL, AND 12" O.C. FIELD. FRAMING LUMBER: DFL NO. 2 OR BETTER. THIS INCLUDES 2" THICK TO 12" WIDE.
- STRUCTURAL LUMBER: DFL NO. 1 OR BETTER. THIS INCLUDES 4" THICK OR THICKER, AND 6" WIDE OR WIDER. EXTERIOR BEAMS TO BE TREATED.
- ALL EXTERIOR FRAMING, OR IN DIRECT CONTACT WITH CONCRETE OR EXPOSED TO HIGH MOISTURE CONDITIONS SHALL BE PRESURE PRESERVATIVE TREATED.
- ENGINEERED LUMBER: SUBMIT AITC CERTIFICATIONS TO BUILDING DEPARTMENT PRIOR TO ERECTION. TJI PRO FLOOR JOISTS: ICC REPORT NO. ESR-1153. MICROLAM: ICC REPORT NO. ESR-1387. BENDING STRESS: 2600 psi. SHEAR STRESS: 295 psi. E: 1,800 ksi. PARALLAM: ICC REPORT NO. ESR-1387. BENDING STRESS: 2900 psi. SHEAR STRESS: 290 psi. E: 2,000 ksi. GIULAM BEAMS: AIC 117 24F4. NO CAMBER U.N.O.
- DOUBLE FLOOR JOISTS UNDER ALL PARALLEL PARTITIONS TYPICAL U.N.O.
- PROVIDE SOLID BLOCKING UNDER ALL PERPENDICULAR PARTITIONS.
- WALL STUDS: USE 2" X 4" STUDS TO 10 FEET HIGH, 2" X 6" STUDS TO 16 FEET HIGH AND 2" X 8" STUDS TO 22 FEET HIGH (16" O.C. U.N.O.). DOUBLE KING STUDS @ WALL ENDS FOR WALLS OVER 10 FEET.
- CONNECTORS: SIMPSON OR APPROVED EQUAL. THIS INCLUDES ANCHORS FOR SHEAR WALLS AND STRAP TIES.
- MANUFACTURED TRUSSES BALCONY AND STAIR RAILINGS TO BE PRE-ENGINEERED. SUBMIT PLANS AND CALCULATIONS TO THE APPROPRIATE AUTHORITY PRIOR TO INSTALLATION.
- PRE-MANUFACTURED SHEAR WALLS: CONTRACTOR TO THOROUGHLY REVIEW INSTALLATION SPECIFICATIONS PRIOR TO FORMING OF FOUNDATION. HARDY FRAME: ICC REPORT NO. ES-ESR-2089. SIMPSON STRONG-WALL: ICC REPORT NO. ES-ESR-1267.
- ALL SITE AND FOUNDATION WORK SHALL BE DONE IN ACCORDANCE WITH 2016 C.B.C CHAPTER 18.
- ALL NEW FRAMING LUMBER SHALL HAVE 19% MAX MOISTURE CONTENT @ INSTALLATION.
- CONNECTORS FOR PRESURE TREATED LUMBER (NAILS, HANGERS, ANCHOR BOLTS, PLATE WASHERS, ETC) SHALL BE HOT DIPPED GALVANIZED STAINLESS STEEL SILICON BRONZE OR COPPER PER 2016 CBC 2304.9.5.
- CHROMATED COPPER ARSENATE (CCA) AS A PRESERVATIVE FOR WOOD (GREEN WOOD) SHALL BE USED PER SECTION 2315.5.3.

WALLS:

- Shop and field structural welding.
- Construction of drilled piers or piles (driving of piles; drilling of piles, testing of piles). Note that these special inspections are normally provided by the geotechnical engineer and are in addition to concrete and rebar placement special inspections, for piers provide special inspection for concrete pier compression per CBC 1808-2.22.
- Observation of soil excavation and foundation construction operations by geotechnical engineer.
- Holdown rods epoxied into ex. foundation- see 1/SD1.
- Special inspection is required on all welding.

SHEAR WALL NAILING SCHEDULE ** USE 1/2" PLYWOOD AT STUCCO WALLS. (See note S-5)

TYPE	NAILING	ANCHOR BOLT SPACING
A	3/8" INCH CDX W/ 8d @ 6" O.C. EDGES & SILL, 12" O.C. FIELD. CAP = 244 PLF	48" O.C.
B	3/8" INCH CDX W/ 8d @ 4" O.C. EDGES & SILL, @ 3x STUDS, & PLATE, STAGGER NAILING) 12" O.C. FIELD. CAP = 350 PLF	32" O.C.
C	3/8" INCH CDX W/ 8d @ 3" O.C. EDGES & SILL, @ 3x STUDS & PLATE, STAGGER NAILING) 12" O.C. FIELD. CAP = 490 PLF	16" O.C.
E	1/2" INCH STRUCTURAL 1 PLYWOOD @ 16" O.C. EDGES & SILL @ 3x STUDS & PLATE, STAGGER NAILING) 12" O.C. FIELD. CAP = 870 PLF.	12" O.C.

** USE 1/2" PLYWOOD AT STUCCO WALLS.

SW-1. AT TYPES "B", "C", & "E" SHEARWALLS, FOUNDATION SILL PLATES AND ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN 3" NOMINAL AND NAILS SHALL BE STAGGERED.

SW-2. WHERE PLYWOOD IS APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE ON 3" NOMINAL OR THICKER FRAMING AND NAILS ON EACH SIDE SHALL BE STAGGERED.

SW-3. FOR CONNECTION OF SOLE PLATES AT INTERIOR WALLS, SEE DETAILS 9, 10 & 11

SW-4. SEE NOTE S-5, THIS SHEET, FOR TYPICAL A.B. SPACING AND TABLE ABOVE FOR TIGHTER A.B. SPACING AT SHEARWALLS. TIGHTER SPACING SHOWN ON FOUNDATION PLAN GOVERNS OVER TABLE BELOW. PROVIDE MINIMUM (2)A.B. BETWEEN HOLDOWNS UNDER SHEARWALLS.

SW-5. MINIMUM SHEET DIMENSION FOR A PLYWOOD PANEL SHALL BE 24" UNLESS ALL EDGES OF UNDERSIZED SHEETS ARE SUPPORTED BY FRAMING MEMBERS OR BLOCKED PER SECTION 2315.5.3.

SW-6. USE COMMON NAIL FOR SHEAR NAILING. NAIL HEAD NOT TO PENETRATE PLYWOOD SURFACE. NO NAIL GUN IS ALLOWED AT SHEARWALLS.

SW-7. ALL NAILING SHALL BE STAGGERED.

THE ENGINEER EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE ARE NOT TO BE REPRODUCED, ALTERED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ENGINEER. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE ENGINEER SHALL BE HELD HARMLESS.

REMODEL/ADDITION:
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STRUCTURAL DETAILS & NOTES

SD-1 OF SHEETS

DATE: 05-07-18