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EXP: 04/05/2024

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Revised:

POST-INSTALLED ANCHORS

FOR ANCHORS ON THE CONSTRUCTION DOCUMENTS NOT NOTED WITH A SPECIFIC PRODUCT TYPE OR MANUFACTURER, THE CONTRACTOR SHALL USE APPROVED ANCHORS SPECIFIED IN THE TABLE BELOW.

1. THE FOLLOWING PRODUCTS SHALL BE INSTALLED PER THE REQUIREMENTS OF THE REFERENCED PRODUCT APPROVALS SHOWN BELOW, UNLESS NOTED OTHERWISE.
2. NO SUBSTITUTIONS SHALL BE MADE FOR POST-INSTALLED ANCHORS SHOWN ON THE CONSTRUCTION DOCUMENTS WITHOUT PRIOR APPROVAL OF THE ENGINEER OF RECORD. SUBSTITUTION REQUESTS SHALL INCLUDE CALCULATIONS PREPARED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT OCCURS, DEMONSTRATING THAT THE PROPOSED ANCHORS HAVE PERFORMANCE VALUES EQUIVALENT TO OR HIGHER THAN THOSE SHOWN ON THE DRAWINGS.

ITEM	APPROVED PRODUCTS	ICC#
EXPANSION ANCHOR (CONCRETE)	HILTI KWIK BOLT TZ SIMPSON STRONG BOLT 2 DEWALT POWER STUD + SD2	ESR-1917 ESR-3037 ESR-2502
ADHESIVE ANCHOR (CONCRETE)	HILTI HIT-HY 200 SIMPSON SET-XP DEWALT AC200+ DEWALT PURE110+ DEWALT AC100+ GOLD	ESR-3187 ESR-2508 ESR-4027 ESR-3598 ESR-2582
SCREW ANCHOR (CONCRETE)	HILTI HUS-EZ SIMPSON TITEN HD DEWALT SCREW-BOLT + DEWALT SNAKE +	ESR-3027 ESR-2713 ESR-3889 ESR-2272

STRUCTURAL STEEL

1. DETAIL, FABRICATE, ERECT, IDENTIFY AND PAINT STRUCTURAL STEEL ACCORDING TO AISC SPECIFICATIONS; EXCEPT CONTRACTOR SHALL USE THE ARCHITECTURAL DRAWINGS IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS FOR DIMENSIONS AND STRUCTURAL STEEL NOT SHOWN ON THE STRUCTURAL DOCUMENTS.
2. MATERIAL:
   A. M, MT, S, ST, HP, C, MC AND L SHAPES: ASTM A36; F_Y = 36 KSI.
   B. STEEL HOLLOW STRUCTURAL SECTIONS (HSS):
      ASTM A500 (COLD ROLLED):
      GRADE B:
      F_Y = 46 KSI (SQUARE, RECTANGULAR)
      F_Y = 42 KSI (ROUND)
   C. STEEL PLATES:
      ASTM A36; F_Y = 36 KSI
3. CONNECT ALL MEMBERS WITH SEMI-FINISHED MACHINE BOLTS, ASTM A307, GRADE A, UNLESS NOTED OTHERWISE ON DRAWINGS.
4. GALVANIZED BOLTS (WHERE SHOWN ON DRAWINGS): HOT-DIPPED GALVANIZED ACCORDING TO ASTM A153, CLASS C.
5. ANCHOR RODS:
   A. ASTM F1554, GR. 36; F_Y = 36 KSI
   B. PROVIDE WITH STANDARD WASHERS AND NUTS.
   C. GALVANIZE RODS (WHERE NOTED ON DRAWINGS) ACCORDING TO ASTM A153, CLASS C. OVER-TAP NUTS TO CLASS 2A FIT BEFORE GALVANIZING, ACCORDING TO ASTM A563.
8. PROVIDE BEVELED WASHERS AT BOLT HEADS OR NUTS BEARING ON SLOPING SURFACES.
9. WELDING:
   A. CONFORM WITH AWS SPECIFICATIONS.
   B. WELDERS TO BE QUALIFIED UNDER AWS AND WABO SPECIFICATIONS.
   C. WELDS TO METAL DECK, METAL STUDS OR OTHER COLD-FORMED METALS: CONFORM TO AWS D1.3.
   D. WELDING OF REINFORCING STEEL: AS NOTED IN "CONCRETE REINFORCING STEEL" PORTION OF STRUCTURAL NOTES.
   E. WELDS TO GALVANIZED STEEL AND AREAS DAMAGED BY WELDING, FLAME CUTTING OR HANDLING: CLEAN, DRY AND REMOVE OIL, GREASE, SALT AND CORROSIVE PRODUCTS. APPLY ORGANIC COLD GALVANIZING COMPOUND WITH A MINIMUM OF 94% ZINC DUST IN THE DRY FILM. APPLY IN MULTIPLE COATS TO ACHIEVE AN 8 MIL THICKNESS.
10. CONTRACTOR TO DESIGN AND PROVIDE ERECTION AIDS (BOLTS, CLIPS, SHIMS, SEATS, ETC.) REQUIRED TO FACILITATE CONSTRUCTION.
11. EMBEDDED STEEL ASSEMBLIES: HOT-DIP GALVANIZE ACCORDING TO ASTM A123, WHERE NOTED ON DRAWINGS.

FRAMING LUMBER

1. LUMBER SPECIES: DOUGLAS FIR-LARCH GRADE LUMBER ACCORDING TO RULES OF WEST COAST LUMBER INSPECTION BUREAU (WCLIB).
2. LUMBER GRADES:

SIZE CLASSIFICATION	GRADE
A. INTERIOR BEARING WALL STUDS	NO. 2
B. JOISTS	NO. 1
C. BEAMS	NO. 1
D. POSTS	NO. 1
E. BLOCKING, PLATES, BRIDGING	NO. 2

3. MAXIMUM MOISTURE CONTENT: 19% AT 3x OR LESS (LEAST DIMENSIONS) MEMBERS.
4. PROVIDE SOLID BLOCKING (SAME DEPTH OF MEMBER) AT ALL POINTS OF BEARING (MAXIMUM SPACING OF 8'-0" O.C.) AT JOISTS WITH A 5:1 OR GREATER DEPTH-TO-THICKNESS RATIO OR WHERE 1 EDGE OF JOIST IS NOT ATTACHED TO SHEATHING, WALLBOARD, BRACING, ETC.
5. PLATES AND LEDGERS
   A. PLATES AND LEDGERS USED IN INTERIOR CONDITIONS (LUMBER AND FASTENERS ARE INSIDE OR CONCEALED BY MOISTURE BARRIER, ROOFING, ETC.) AND IN CONTACT WITH CONCRETE OR MASONRY ARE TO BE ZINC BORATE OR SBX/DOT PRESERVATIVE TREATED WOOD. FASTENERS, PLATES AND NUTS IN CONTACT WITH TREATED WOOD TO BE PLAIN CARBON.
   B. PLATES AND LEDGERS USED FOR EXTERIOR CONDITIONS (EXPOSED TO EXTERIOR ENVIRONMENT IN ANY CIRCUMSTANCE) TO BE PRESSURE TREATED. FASTENERS, PLATES, NUTS, HANGER CLIPS, ETC. ARE TO BE HOT DIPPED GALVANIZED WITH A MINIMUM COATING WEIGHT OF 2.0 OZ PER SQUARE FOOT. NAILS ARE TO BE DOUBLE HOT DIPPED GALVANIZED.

WOOD STRUCTURAL PANELS

1. PLYWOOD MATERIAL:
   A. GRADE: C-D, UNLESS NOTED OTHERWISE.
   B. SHALL BE MANUFACTURED WITH EXTERIOR GLUE ACCORDING TO UNITED STATES PRODUCT STANDARD PS1-09.
   C. SHALL BEAR THE AMERICAN PLYWOOD ASSOCIATION (APA) TRADEMARK.
2. NAILS IN CONTACT WITH PRESSURE-TREATED PANELS SHALL BE DOUBLE HOT DIPPED GALVANIZED, EXCEPT WHEN IN CONTACT WITH ZINC BORATE OR SBX/DOT TREATMENT.
3. SHEATHING TYPES:
   A. CEILING SHEATHING 5/8" INDEX 40/20
4. PANEL LAYOUT AND INSTALLATION:
   A. LAY OUT PANELS WITH END JOINTS STAGGERED, UNLESS NOTED OTHERWISE.
   B. LAY OUT PANELS TO ELIMINATE WIDTHS LESS THAN 1'-0" AT ROOFS, UNLESS ALL EDGES OF UNDERSIZED PIECES ARE SUPPORTED BY BLOCKING.
   C. PROVIDE PANEL SPACING ACCORDING TO APA RECOMMENDATIONS.
   D. NAIL ACCORDING TO SCHEDULE AND DRAWINGS.
7. PROTECT ROOF PANELS FROM EXTREME WET CONDITIONS.

GLUE LAMINATED MEMBERS

1. MEMBER SPECIES: WESTERN
2. MEMBER GRADE:
   A. SIMPLE SPANS: 24F-V4.
   B. CONTINUOUS OR CANTILEVERED SPANS: 24F-V8.
3. MATERIAL STANDARDS:
   A. ALLOWABLE STRESSES: AITC 117.
   B. MANUFACTURE AND FABRICATION: AITC A190.1
4. MANUFACTURE AND FABRICATION:
   A. FABRICATE WITH WATERPROOF GLUES.
   B. SHAPE TOP OF MEMBERS TO ROOF SLOPE. ADD LAMINATIONS AS REQUIRED FOR SHAPING.
   C. PROVIDE STANDARD 3500 FOOT RADIUS CAMBER, UNLESS NOTED OTHERWISE ON DRAWINGS.
5. IDENTIFY MEMBERS WITH THE APA-EWS MARK OF AMERICAN WOOD SYSTEMS OR MEMBER INSPECTION IS REQUIRED BY AN INDEPENDENT TESTING LAB.
6. ERECT MEMBERS ACCORDING TO AITC SPECIFICATIONS.

ENGINEERED WOOD PRODUCTS

1. CONFORM WITH ALL APPLICABLE PROVISIONS OF THE IBC.
2. WOOD PRODUCT MANUFACTURER: iLEVEL BY WEYERHAEUSER.
   A. TJI RESIDENTIAL I-JOISTS
      a. FURNISH ALL END AND INTERMEDIATE STIFFENERS, BLOCKING AND/OR SHEAR PANELS, METAL BRIDGING ASSEMBLIES AND HANGERS, AS REQUIRED TO PROVIDE A COMPLETE FLOOR OR ROOF STRUCTURAL SYSTEM. TOP AND BOTTOM CHORDS OF JOISTS SHALL BE MANUFACTURED FROM LVL MATERIAL AND SHALL BE EQUAL TO OR GREATER THAN DIMENSION INDICATED ON THE DRAWINGS. DEPTHS OF JOISTS OR JOIST SPACINGS MAY NOT BE CHANGED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
      b. FURNISH COMPLETE ENGINEERING SHOP DRAWINGS.
3. DO NOT NOTCH OR DRILL STRUCTURAL MEMBERS, EXCEPT AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO INSTALLATION.
4. SPRINKLER LINE ATTACHMENTS:
   A. CONFORM WITH NFPA PAMPHLET 13A AND iLEVEL BY WEYERHAEUSER PUBLICATION "GUIDELINES FOR SPRINKLER SYSTEM INSTALLATION WITH TRUS JOIST".
   B. LOADS HUNG FROM JOISTS:
      a. DO NOT EXCEED 30 POUNDS AT ANY 1 POINT.
      b. DO NOT EXCEED A TOTAL LOAD (IN POUNDS) OF 6 TIMES THE SPAN LENGTH (IN FEET) ON ANY 1 JOIST, UNLESS NOTED OTHERWISE.
      c. LOADS EXCEEDING 100 POUNDS: ATTACHMENT TO BE APPROVED PRIOR TO INSTALLATION.
5. METAL CONNECTIONS IN CONTACT WITH PRESSURE TREATED LUMBER TO BE HOT DIPPED GALVANIZED, EXCEPT WHEN IN CONTACT WITH ZINC BORATE OR SBX/DOT PRESERVATIVE TREATMENT, INCLUDING, BUT NOT LIMITED TO: NAILS, SCREWS, LAG BOLTS, WASHERS, PLATES. BOLTS AND HANGERS, FOR SIMPSON STRONG-TIE CONNECTORS AND FASTENERS, OR APPROVED. SEE "OTHER WOOD CONNECTIONS" FOR FURTHER INFORMATION.

NAILING AND CONNECTION SCHEDULE

1. MINIMUM NUMBER OF NAILS FOR WOOD MEMBERS, UNLESS NOTED OTHERWISE ON DRAWINGS.
2. NAILS IN CONTACT WITH PRESSURE-TREATED LUMBER SHALL BE DOUBLE HOT DIPPED GALVANIZED EXCEPT WHEN IN CONTACT WITH ZINC BORATE OR SBX/DOT PRESERVATIVE TREATMENT.
3. NAIL TYPE: BOX OR SINKER, UNLESS NOTED OTHERWISE ON DRAWINGS.

CONNECTION	NAILS
STUDS TO PLATES - END NAIL	(2) 16d COMMON OR (3) 10d
OR STUDS TO PLATES - TOE NAIL	(4) 10d
TOP PLATES & BOTTOM PLATES	
- SPIKE TOGETHER	10d AT 8" OC
- LAP AND INTERSECTIONS	(4) 10d EACH SIDE JOINT
CEILING JOISTS	
- TO PLATES OR BEAMS - TOE NAIL	(2) 10d
BLOCKING TO PLATE - TOE NAIL	(2) 10d
BLOCKING TO JOISTS - EACH END	(2) 10d
CORNER STUDS	10d AT 12" OC
2x LAMINATED BEAMS	10d AT 12" 2 ROWS STAGGERED

PLYWOOD AND GYPSUM BOARD SHEATHING CONNECTIONS

1. ALL NAILS SHALL BE COMMON, UNLESS NOTED OTHERWISE
2. NAILS IN CONTACT WITH PRESSURE-TREATED PLYWOOD SHALL BE DOUBLE HOT DIPPED GALVANIZED, EXCEPT WHEN IN CONTACT WITH ZINC BORATE OR SBX/DOT PRESERVATIVE TREATMENT.
3. CEILING FRAMING SHEATHING 5/8" INDEX 40/20
   A. NAILING:

AT EDGES OF EACH SHEET, BLOCKING & WALLS	10d AT 6" OC
AT INTERIOR OF SHEETS	10d AT 12" OC
AT BOUNDARIES OF ROOF	10d AT 6" OC

4. WALL SHEATHING 5/8" GYPSUM WALLBOARD
   A. FASTENING: TYPE S OR W DRYWALL SCREWS

AT EDGES OF EACH SHEET TO STUDS & PLATES	NO. 6 X 1-1/4" LONG AT 8" OC
AT INTERIOR OF EACH SHEET	NO. 6 X 1-1/4" LONG AT 12" OC
AT BOUNDARIES OF WALL	NO. 6 X1-1/4" LONG AT 8" OC

OTHER WOOD CONNECTIONS

1. FRAMING CONNECTORS: SIMPSON STRONG-TIE OR APPROVED.
   A. FILL ALL NAIL HOLES WITH NAILS AS SPECIFIED BY THE CONNECTOR MANUFACTURER, UNLESS NOTED OTHERWISE.
   B. CONNECTORS IN CONTACT WITH PRESSURE-TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED (2.0 OZ / SQUARE FOOT COATING), EXCEPT WHEN IN CONTACT WITH ZINC BORATE OF SBX/DOT PRESERVATIVE TREATMENT.
   C. HANGERS TO DEVELOP BENDING STRENGTH OF MEMBERS, UNLESS NOTED OTHERWISE ON DRAWINGS.
2. ANCHOR BOLTS: ASTM A307 OR ASTM A36.
3. ANCHOR BOLTS, LAG BOLTS, EXPANSION ANCHORS, PLATE WASHERS AND THREADED RODS IN CONTACT WITH PRESSURE-TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED (2.0 OZ / SQUARE FOOT COATING), EXCEPT WHEN IN CONTACT WITH ZINC BORATE OR SBX/DOT PRESERVATIVE TREATMENT.
4. PROVIDE STANDARD PLATE WASHERS UNDER HEADS OR NUTS OF BOLTS BEARING ON WOOD. SEE SHEAR WALL SCHEDULE FOR SQUARE WASHER REQUIREMENTS AT SHEAR WALLS.
5. ANCHOR ALL PLATES AND LEDGERS WITH A MINIMUM OF 3 ANCHORS PER PIECE.

SPECIAL INSPECTION PROGRAM

INSPECTION TASK / TYPE OF WORK	CONTINUOUS*	PERIODIC*	COMMENTS
CONCRETE			
BOLTS CAST IN CONCRETE	X		
STRUCTURAL WELDING			
SINGLE PASS FILLET WELDS NOT EXCEEDING 5/16"		X	
GROOVE WELDS (FULL OR PARTIAL PENETRATION)	X		
WOOD			
WOOD DIAPHRAGM & SHEAR WALL FASTENING		X	
WOOD STUD SHEAR WALL FASTENING		X	

SPECIAL INSPECTION PROGRAM FOOTNOTES:

1. PROVIDE SPECIAL INSPECTION, SPECIAL TESTING, REPORTING AND COMPLIANCE PROCEDURES ACCORDING TO CHAPTER 17 OF THE INTERNATIONAL BUILDING CODE WITH THE WASHINGTON STATE AMENDMENTS.
2. SPECIAL INSPECTOR QUALIFICATIONS: DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION IN QUESTION.
3. PRIOR TO THE BEGINNING OF CONSTRUCTION, REVIEW THE SPECIAL INSPECTION REQUIREMENTS WITH THE ARCHITECT, ENGINEER, BUILDING OFFICIAL, GENERAL CONTRACTOR AND SPECIAL INSPECTORS.
4. DUTIES OF THE SPECIAL INSPECTOR INCLUDE, BUT ARE NOT LIMITED TO:
   A. OBSERVE THE WORK FOR CONFORMANCE WITH THE APPROVED PERMIT DRAWINGS AND SPECIFICATIONS. BRING DISCREPANCIES TO THE IMMEDIATE ATTENTION OF THE GENERAL CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE ENGINEER AND TO THE BUILDING OFFICIAL.
   B. FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, ARCHITECT, ENGINEER, GENERAL CONTRACTOR AND OWNER IN A TIMELY MANNER.
   C. SUBMIT A FINAL REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED, AND WHETHER THE WORK IS IN CONFORMANCE WITH THE APPROVED PERMIT DRAWINGS AND SPECIFICATIONS.
5. DUTIES OF THE GENERAL CONTRACTOR INCLUDE, BUT ARE NOT LIMITED TO:
   A. NOTIFY SPECIAL INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST 24 HOURS BEFORE INSPECTION IS REQUIRED.
   B. MAINTAIN ACCESS TO WORK REQUIRING SPECIAL INSPECTION UNTIL IT HAS BEEN OBSERVED AND INDICATED TO BE IN CONFORMANCE BY THE SPECIAL INSPECTOR AND APPROVED BY THE BUILDING OFFICIAL.
   C. PROVIDE THE SPECIAL INSPECTOR WITH ACCESS TO APPROVED PERMIT DRAWINGS AND SPECIFICATIONS AT THE JOB SITE.
   D. MAINTAIN JOB-SITE COPIES OF ALL REPORTS SUBMITTED BY THE SPECIAL INSPECTOR.
6. DEFINITIONS:
   A. CONTINUOUS INSPECTION: THE SPECIAL INSPECTOR IS OBSERVING THE WORK REQUIRING SPECIAL INSPECTION AT ALL TIMES.
   B. PERIODIC INSPECTION: THE SPECIAL INSPECTOR IS ON SITE AS REQUIRED TO CONFIRM THAT THE WORK REQUIRING SPECIAL INSPECTION IS IN CONFORMANCE.

SPECIAL TESTING REQUIREMENTS

1. STRUCTURAL FILL OR BACK-FILL: VERIFY COMPACTION WITH RANDOM FIELD DENSITY TESTS.
2. STRUCTURAL CONCRETE: SAMPLE AND TEST ACCORDING TO STRUCTURAL NOTES.
3. STRUCTURAL MASONRY: SAMPLE AND TEST ACCORDING TO STRUCTURAL NOTES.

STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION, IN ACCORDANCE WITH SECTION 1709 OF THE INTERNATIONAL BUILDING CODE, SHALL BE PERFORMED BY KRAMER GEHLEN & ASSOCIATES, INC. IN THE FOLLOWING SEQUENCE. THE GENERAL CONTRACTOR SHALL CONTACT THE STRUCTURAL ENGINEER OF RECORD 5 WORKING DAYS PRIOR TO COMPLETION OF THE STAGE INDICATED BELOW TO COORDINATE THE DATE OF OBSERVATION:

1. STEEL FRAMING
   A. AFTER INSTALLATION
2. WOOD FRAMING
   A. AFTER INSTALLATION OF SHEAR WALL SHEATHING
   B. AFTER CEILING DIAPHRAGM IS NAILED

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STRUCTURAL NOTES

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