

STRUCTURAL SPECIFICATIONS

FOUNDATIONS:
 GEOTECHNICAL INVESTIGATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH SECTIONS 1803A.3 THROUGH 1803A.6, EXCEPTION, GEOTECHNICAL REPORTS ARE NOT REQUIRED FOR ONE-STORY, WOOD-FRAME AND LIGHT-STEEL-FRAME BUILDINGS OF TYPE I OR TYPE V CONSTRUCTION AND 4,000 SQUARE FEET OR LESS IN FLOOR AREA, NOT LOCATED WITHIN EARTHQUAKE FAULT ZONES OR SEISMIC HAZARD ZONES AS SHOWN IN THE MOST RECENTLY PUBLISHED MAPS FROM THE CALIFORNIA GEOLOGICAL SURVEY (CGS), ALLOWABLE FOUNDATION AND LATERAL SOIL PRESSURE VALUES MAY BE DETERMINED FROM TABLE 1806A.2 PER CBC SECTION 1806A.2

CONCRETE
 PROVIDE NECESSARY SHIMS ON FOOTINGS NOT LEVEL WITHIN THE 1/2" ALLOWABLE TOLERANCE. THE DISTRICT SHALL PROVIDE CLEAR AND UNOBSTRUCTED ACCESS TO THE SITE. THE DISTRICT IS RESPONSIBLE FOR ALL SURVEYING, STAKING THE BUILDING CORNERS, SETTING THE FINISH FLOOR ELEVATION, RIGGING, CRANING, EXCAVATION, SPOIL REMOVAL, AND BACKFILL.
 THE FOUNDATION AND THE METHOD OF FASTENING THE UNITS SHALL BE AS SHOWN ON DRAWINGS WHERE APPLICABLE. HIGH STRENGTH GROUT SHALL BE EMBECO 865 NON-SHRINK, METALLIC AGGREGATE GROUT OR A DSA APPROVED EQUAL.
 THE DESIGN OF CONCRETE FOUNDATIONS WILL BE AS FOLLOWS:

- FURNISH AND INSTALL ALL CONCRETE WORK AS SHOWN ON THE DRAWINGS AND AS SPECIFIED.
- EXCEPT AS MODIFIED BY THE REQUIREMENTS SPECIFIED HEREIN AND/OR THE DETAILS ON THE DRAWINGS, ALL WORK INCLUDED IN THIS SECTION SHALL CONFORM TO THE APPLICABLE PROVISIONS OF CODES AND STANDARDS.
 - ALL WORK AND MATERIALS SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS, AND CHAPTER 19.
 - AMERICAN CONCRETE INSTITUTE (ACI): BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318-08.
 - SOCIETY FOR TESTING AND MATERIALS (ASTM): THE SPECIFICATIONS AND STANDARDS HEREINAFTER REFERENCED TO SHALL BE OF THE LATEST EDITION.
- CONCRETE FOUNDATION TESTS AND INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE ARCHITECT AND/OR INSPECTOR.
- DESIGN MIXES SHALL BE AS SPECIFIED IN TITLE 24. CONCRETE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS: (UNLESS REQUIRED OTHERWISE PER ACI 318-08 TABLE 4.3.1)
 - CONCRETE COMPRESSIVE STRENGTH FC_c - 3000 PSI
 - WATER-CEMENT RATIO SHALL NOT EXCEED 0.60 BY WEIGHT
 - PORTLAND CEMENT TYPE I
 - OR EQUAL - ACCEPTED
- FORMS SHALL BE SUBSTANTIAL, PLUMB, LEVEL, SQUARE, TRUE TO LINE, WATER TIGHT AND ACCURATE TO THE DIMENSIONS REQUIRED.
- THE ARCHITECT SHALL APPROVE LOCATION OF:
 - OPENINGS FOR MECHANICAL AND ELECTRICAL: PROVIDE FOR OPENINGS IN THE CONCRETE WITH THE TRADE(S) INVOLVED AND INSTALL SLEEVES AS MAY BE REQUIRED.
 - OPENINGS FOR VENT WELLS FOR UNDER FLOOR VENTILATION: PROVIDE FOR ALL OPENINGS IN THE CONCRETE WITH THE TRADE(S) INVOLVED. INSTALL ALL SLEEVES AS MAY BE REQUIRED.
- VARIANCE IN CONCRETE SLAB SURFACE SHALL BE NO MORE THAN 1/16" IN 10 FEET
- ALL CEMENT SHALL BE TYPE 1 OR 11 PER ASTM C-150, (UNLESS REQUIRED OTHERWISE PER CBC 1802A.2.3)
- WATER CONTENT SHALL NOT EXCEED 7 1/4 GALLONS PER SACK OF CEMENT (UNLESS REQUIRED OTHERWISE PER ACI 318-08 TABLE 4.3.1)
- AGGREGATE SHALL BE 3/4" TO 1 1/2" MAXIMUM SIZE BUT NOT MORE THAN 3/4" OF MINIMUM CLEAR BAR SPACING
- ANCHOR BOLTS, DOWELS, REINFORCING STEEL, AND EMBEDDED ITEMS ARE TO BE SECURELY TIED IN PLACE BEFORE CONCRETE IS POURED.
- REFER TO ARCHITECTURAL, ELECTRICAL, AND MECHANICAL PLANS FOR SLEEVES, INSERTS CURBS, DERESSED AREAS, AND ETC.
- CONCRETE MIX REQUIRED: CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN FOR FOOTINGS TO PROFESSIONAL OF RECORD FOR APPROVAL PRIOR TO POURING CONCRETE.

17044.4.3. WAIVER OF BATCH PLAN INSPECTION
 A. WHEN BATCH PLAN INSPECTION IS WAIVED, THE FOLLOWING REQUIREMENTS SHALL APPLY:
 1. QUALIFIED TECHNICIAN OF THE TESTING LABORATORY SHALL CHECK THE FIRST BATCHING AT THE START OF DAY.
 2. LICENSED WEIGHMASTER TO POSITIVELY IDENTIFY MATERIALS AS TO QUANTITY AND CERTIFY TO EACH LOAD BY A TICKET.
 3. BATCH TICKETS, INCLUDING ACTUAL MATERIAL QUANTITIES AND WEIGHTS SHALL ACCOMPANY THE LOAD AND SHALL BE TRANSMITTED TO THE INSPECTOR OF RECORD BY A TRUCK DRIVER WITH LOAD IDENTIFIED THEREON. THE LOAD SHALL NOT BE PLACED WITHOUT A BATCH TICKET IDENTIFYING THE MIX. THE INSPECTOR WILL KEEP A DAILY RECORD OF PLACEMENTS, IDENTIFYING EACH TRUCK, ITS LOAD, TIME OF RECEIPT AND APPROXIMATE LOCATION OF DEPOSIT IN THE STRUCTURE AND WILL TRANSMIT A COPY OF THE DAILY RECORD TO THE ENFORCEMENT AGENCY.
 4. AT THE END OF THE PROJECT, THE WEIGHMASTER SHALL FURNISH AN AFFIDAVIT TO THE ENFORCEMENT AGENCY CERTIFYING THAT ALL CONCRETE FURNISHED CONFORMS IN EVERY PARTICULAR TO PROPORTIONS ESTABLISHED BY MIX DESIGNS.

REINFORCING STEEL:
 1. MATERIAL: ALL REINFORCING STEEL SHALL BE BILLET STEEL PER ASTM A-615 GRADE 40, EXCEPT #3 ANCHOR REINFORCEMENT SHALL BE GRADE 60.
 2. SPLICES: ALL SPLICES SHALL BE LAPPED A MINIMUM 48" #5 BARS AND 30" #4 BARS UNLESS OTHERWISE DETAILED.
 3. REINFORCING FABRICATION AND PLACEMENT: FABRICATION AND PLACING OF REINFORCING SHALL CONFORM TO THE "CODE OF STANDARD PRACTICE AND SPECIFICATIONS FOR PLACING REINFORCEMENT OF THE CONCRETE REINFORCING STEEL INSTITUTE."
 4. MINIMUM COVERAGE: ALL REINFORCING SHALL HAVE THE FOLLOWING MINIMUM COVERAGE WITH CONCRETE:

| LOCATION | AMOUNT |
|--|--------|
| FORMED EARTH | 2" |
| CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH | 3" |
| WALL-EXPOSED FACE | |
| #5 OR SMALLER | 2" |
| #6 OR LARGER | 2" |
| WALL-UNEXPOSED FACE | 3/4" |

STRUCTURAL STEEL:
 1. ALL STRUCTURAL STEEL OTHER THAN TUBE AND PIPE COLUMNS SHALL CONFORM TO ASTM A-36.
 2. TUBE COLUMNS SHALL CONFORM TO ASTM A500 GRADE B
 3. PIPE COLUMNS SHALL CONFORM TO ASTM A501 OR ASTM A53, TYPE E OR S, GRADE B.
 STEEL FRAME BUILDING/STEEL FRAME CONSTRUCTION SHALL MEET THE MINIMUM DESIGN REQUIREMENTS OF STUD SPACING, ETC. PER LATEST EDITION OF 2010 CALIFORNIA BUILDING CODE. ALL WORK AND MATERIALS SHALL CONFORM TO THE "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES," AMERICAN INSTITUTE OF STEEL CONSTRUCTION, TITLE 24, CCR, AND UNIFORM BUILDING CODE. STRUCTURAL STEEL SHALL BE MADE EITHER THE OPEN-HEARTH OR ELECTRIC FURNACE PROCESS ONLY AND SHALL CONFORM TO THE "SPECIFICATION FOR STRUCTURAL STEEL," ASTM DESIGNATION A36, CURRENT EDITION.

ROOF FRAMING, FLOOR FRAMING, AND WALL FRAMING SHALL BE PER MANUFACTURER'S PC PLANS AND PER APPLICABLE CODES.
 ALL STRUCTURAL MEMBERS BELOW THE SUB-FLOOR, IE, GIRDERS, JOISTS, HEADERS, BLOCKING, SHALL BE STEEL. MINIMUM JOIST SPACING SHALL BE PER PLAN.
 ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AISC STANDARD SPECIFICATIONS, THE APPLICABLE REGULATORY AGENCY AND THE AMERICAN IRON AND STEEL INSTITUTE SPECIFICATIONS FOR DESIGN OR LIGHT GAUGE STEEL STRUCTURAL MEMBERS. WELDING SHALL COMPLY WITH THE PERTINENT PROVISIONS OF THE APPLICABLE REGULATORY AGENCY. ALL WELDING SHALL BE DONE BY OPERATORS WHO ARE QUALIFIED AS PRESCRIBED IN THE QUALIFICATION PROCEDURE OF THE AMERICAN WELDING SOCIETY TO PERFORM THE TYPE OF WORK REQUIRED.
 STEEL SHALL BE COATED WITH ONE SHOP COAT OF MANUFACTURER'S STANDARD CHASSIS PAINT OR EQUAL.

BOLTS:
 ALL COMMON BOLTS AND ANCHOR BOLTS SHALL CONFORM TO ASTM A-307.
STRUCTURAL WELDING: SPECIAL INSPECTOR REQUIRED
 GENERAL: DURING THE WELDING OF ANY MEMBER OR CONNECTION THAT IS DESIGNED TO RESIST LOADS AND FORCES REQUIRED BY THIS CODE.
 ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE-RESISTING SYSTEMS SHALL BE MADE WITH A FILLER METAL THAT HAS A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FTLBS AT MINUS 20 DEGREES F AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

ALL STRUCTURAL WELDING SHALL BE BY "ELECTRIC ARC PROCESS" PER AWS STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. ALL LIGHT GAUGE STEEL (SHEET STEEL) SHALL BE WELDED PER AWS D1.3. ALL REINFORCING STEEL SHALL BE WELDED WITH LOW HYDROGEN RODS PER AWS D1.4, OR REINFORCING STEEL SHALL CONFORM TO ASTM A-706. ALL SHOP WELDED MUST BE PERFORMED BY "APPROVED" WELDERS IN A SHOP OF A LICENSED FABRICATOR. ALL FIELD WELDING SHALL BE PERFORMED BY "APPROVED" WELDERS. ELECTRODES SHALL BE E70XX FOR STRUCTURAL STEEL AND E80XX FOR LIGHT GAUGE STEEL.
 THE SPECIAL INSPECTOR NEED NOT BE CONTINUOUSLY PRESENT DURING WELDING OF THE FOLLOWING ITEMS, PROVIDED THE MATERIALS, WELDING PROCEDURES AND QUALIFICATION OF WELDERS ARE VERIFIED PRIOR TO THE START OF WORK: PERIODIC INSPECTIONS ARE MADE OF WORK IN PROGRESS, AND A VISUAL INSPECTION OF ALL WELDS IS MADE PRIOR TO SHIPMENT OF SHOP WELDING.

- FLOOR AND ROOF DECK WELDING.
- WELDED STUDS WHEN USED FOR STRUCTURAL DIAPHRAGM OR COMPOSITE SYSTEMS.
- WELDED SHEET STEEL FOR COLD-FRAMED STEEL FRAMING MEMBERS SUCH AS STUDS AND JOISTS WHICH ARE NOT PART OF MOMENT FRAME.
- SINGLE PASS FILLET WELDS NOT EXCEEDING 5/16".

MATERIAL SHALL BE IDENTIFIED BY MARKING OR STAMPING THE I.D. NUMBER ON STRUCTURAL STEEL COMPONENTS BY LICENSED FABRICATION SHOP.
 ALL BUTT, BEVEL, GROOVE, VEE, U AND J WELDS SHALL BE PREQUALIFIED COMPLETE PENETRATION WELDS.
 FILLER MATERIAL FOR WELDING: SHIELDED METAL-ARC: AWS A5.1 OR 15.5 E70XX ELECTRODES.
 HOLES IN STRUCTURAL STEEL SHALL NOT BE PERMITTED UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
 STRUCTURAL STEEL SHALL BE THOROUGHLY CLEANED BY SCRAPING OR WIRE BRUSHING AND SHOP PRIMED.
 ALL STEEL WORK, INCLUDING WELD AND CONNECTIONS EXCEPT WHERE ENTIRELY ENCASED IN CONCRETE SHALL BE GIVEN COAT OF ACCEPTABLE METAL PROTECTION WELL WORKED INTO JOINTS AND OPEN SPACES.

COLD-FORMED STEEL FRAMING:
 STRUCTURAL LIGHT-GAUGE AS LISTED BELOW, SEE PLAN FOR MINIMUM YIELD.
 MATERIAL THICKNESS 0.120" OR LESS: ASTM A-1011/A GRADE 33 (LNU)
 MATERIAL THICKNESS 0.135" : ASTM A-1011/A GRADE 40

| DESIGNATION THICKNESS (INCHES) | MINIMUM DELIVERED THICKNESS (INCHES) |
|--------------------------------|--------------------------------------|
| 0.018 | 0.017 |
| 0.030 | 0.029 |
| 0.038 | 0.034 |
| 0.048 | 0.046 |
| 0.060 | 0.057 |
| 0.075 | 0.071 |
| 0.105 | 0.100 |
| 0.120 | 0.114 |
| 0.135 | 0.128 |

ALL WELDING SHALL BE IN CONFORMANCE WITH AWS D1.3, "STRUCTURAL WELDING CODE - SHEET STEEL". QUALIFICATION OF WELDERS SHALL BE IN ACCORDANCE WITH AWS D1.1, CHAPTER 5, PART C, "WELDER QUALIFICATIONS".
 BOLTS, SCREWS, ETC. EXPOSED TO THE EXTERIOR SHALL BE GALVANIZED
 MACHINE BOLTS USED SHALL CONFORM TO SPECIFICATIONS OF ASTM STANDARD A-307.
NOTE:
 (C) CJP GROOVE WELD NDT
 ULTRASONIC TESTING SHALL BE PERFORMED ON 100 PERCENT OF CJP GROOVE WELDS IN MATERIALS 5/16 IN. (8mm) THICK OR GREATER. ULTRASONIC TESTING IN MATERIALS LESS THAN 5/16 IN. (8 mm) THICK IS NOT REQUIRED. MAGNETIC PARTICLE TESTING SHALL BE PERFORMED ON 25 PERCENT OF ALL BEAM-TO-COLUMN CJP GROOVE WELDS.

WOOD:
FRAMING: ALL FRAMING LUMBER SHALL BE GRADE MARKED BY AN APPROVED GRADING AGENCY AND SHALL BE OF THE FOLLOWING MINIMUM GRADES OR BETTER, PER WCLD RULES #18.
 PLATES AND BLOCKING - STANDARD GRADE OR BETTER
 STUDS AND HEADER = DF #2 OR BETTER
WEATHING:
 AMERICAN PLYWOOD ASSOCIATION PS 1-95. EACH SHEET SHALL BE GRADE MARKED BY THE AMERICAN PLYWOOD ASSOCIATION, AND SHALL CONFORM TO THE REQUIREMENTS OF STANDARD GRADE GROUP 1 OR BETTER GRADE STAMPED AND IDENTIFIED UNDER THE PROCEDURES AND QUALIFICATIONS SET FORTH BY PS 1-95.

- PLYWOOD SUB FLOOR: 1 1/8" TAG UNBLOCKED PLYWOOD. PROVIDE SEAMLESS WOVEN POLYFLEX BOTTOM BOARD FOR MOISTURE PROTECTION
- OPTIONAL PLYWOOD ROOF DECK: APA RATED 3/4" TAG OSB OR EQUIVALENT RATED SHEATHING WITH APPROVAL FROM DSA
- EXTERIOR WALL SIDING:
 - STANDARD: 5/8" DURATEMP OR 5/8" SMART PANEL
 - OPTIONAL: 5/8" MDO
 - OPTIONAL: 1/2" OSB OR CDX PLYWOOD FOR PLASTER/STUCCO FINISH
- EXTERIOR WALL SIDING ATTACHMENT:
 FASTENERS USED FOR THE ATTACHMENT OF EXTERIOR WALL COVERINGS SHALL BE HOT-DIPPED GALVANIZED, MECHANICALLY DEPOSITED ZINC-COATED, STAINLESS STEEL, SILICON BRONZE OR COPPER PER CBC SECTION 2304.8.1.1

TREATED WOOD:
 ALL WOOD INCLUDING WOOD SHEATHING IN CONTACT WITH CONCRETE OR MASONRY AND LOCATED WITHIN 6" OF GROUND LEVEL SHALL BE "PRESSURE TREATED" BY AND "APPROVED PROCESS" OR SHALL BE "FOUNDATION GRADE" MATERIAL (CBC SECTION 2304.11.2.2).
 1. ALL ROUGH LUMBER SHALL BE DF #2 OR BETTER.
 2. FASTEN WOOD BESIDES USING SCREWS.
 ALL POWER DRIVEN FASTENERS SHALL BE HILTI FASTENERS ICC® ESR-1663, AND RAMSEP POWER DRIVEN FASTENERS (ICC® ESR-1798), OR SIMPSON POWER DRIVEN FASTENERS (ICC® ESR-2138), OR OTHER EQUIVALENT PRODUCTS WITH ICC REPORTS AND APPROVED BY DSA.

CONTINUOUS INSPECTION:
 INSPECTOR TO PROVIDE CONTINUOUS FIELD INSPECTION.
 IN-PLANT INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION IN-PLANT
METALS, STRUCTURAL, AND MISC. STEEL:
 CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, AND SERVICES REQUIRED FOR STRUCTURES AND MISCELLANEOUS STEEL AS SPECIFIED AND INDICATED IN THE DRAWINGS.
 MATERIALS: ALL STRUCTURAL STEEL TESTING SHALL COMPLY WITH TITLE 24, SECTION 2212A.1.
 STEEL SHAPES: ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-36, OPEN HEARTH OR ELECTRIC FURNACE ONLY.

STEEL TUBES: ALL STRUCTURAL TUBES SHALL CONFORM TO REQUIREMENTS OF ASTM A-500 GRADE B (BY-48KS) OR ASTM A53, TYPICAL.
 STEEL SHEETS: STEEL SHEETS FOR LIGHT GAUGE STEEL SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-1011/A, GRADE 40 U.O.N. SHEET METAL FLOOR STOPS AND FLASHINGS SHALL BE MINIMUM 0.030 THICKNESS AND SHALL BE GALVANIZED.
ERECTION:
 ALL STRUCTURAL STEEL SHALL BE ERECTED TRUE, STRAIGHT, PLUMB AND TO ITS DESIGNED LOCATION. TEMPORARY BRACING OR SHORING SHALL BE INSTALLED WHERE NECESSARY TO TAKE CARE OF LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING ERECTION EQUIPMENT AND THE OPERATION OF SAME. CONNECTIONS SHALL BE ADEQUATE TO WITHSTAND STRESSES TO WHICH THEY ARE NORMALLY SUBJECTED. CONNECTIONS SHALL BE STEEL, EXCEPT AS OTHERWISE NOTED. FIELD CONNECTIONS SHALL BE BOLTED OR WELDED AS SHOWN ON THE DRAWINGS.

SHOP PAINT:
 * EXPOSED STEEL COATED WITH ONE SHOP COAT OF PRIMER.
 * NON-EXPOSED STEEL COATED WITH ON SHOP COAT OF PRIMER.
 * ALL SURFACES THOROUGHLY CLEANED BY EFFECTIVE MEANS PRIOR TO APPLICATION OF SHOP COATS.
POWER DRIVEN FASTENERS FOR BILL PLATE, WOOD NAILERS TO STEEL COLLINGS, AND SHEET METAL TO STRUCTURAL STEEL:
 ALL POWER DRIVEN FASTENERS SHALL BE HILTI FASTENERS ICC® ESR-1663, OR RAMSEP POWER DRIVEN FASTENERS (ICC® ESR-1798), OR SIMPSON POWER DRIVEN FASTENERS (ICC® ESR-2138), OR OTHER EQUIVALENT PRODUCTS WITH ICC REPORTS AND APPROVED BY DSA.

WOOD ROUGH CARPENTRY:
 THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS AND STEPS NECESSARY TO PROTECT ALL COMPLETED, SEMI-COMPLETED, AND TEMPORARY WORK FROM COMMENCEMENT OF PROJECT TO COMPLETE. SEMI-COMPLETION OF SAME ANY PORTION OF THE WORK DAMAGED OR DISFIGURED SHALL BE SATISFACTORILY REPAIRED OR REPLACED AND THE WORK AS A WHOLE LEFT WITHOUT BLEMISH AT FINAL ACCEPTANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ALL NECESSARY MEASUREMENTS AT THE BUILDING, THE ACCURATE FITTING OF ALL WORK AND PROPER ACCOMMODATION OF OTHER TRADES.
DESCRIPTION OF WORK:
 THIS SECTION INCLUDES FURNISHING OF ALL LABOR, MATERIAL, TOOLS, EQUIPMENT, TRANSPORTATION, AND FACILITIES TO COMPLETE ROUGH CARPENTRY AS INDICATED IN THE DRAWINGS AND AS SPECIFIED HEREIN.

ROOF FRAMING:
 PLYWOOD SHEATHING APA, PS1-95 RATED SHEATHING, CD EXPOSURE 1 P.L.J. = 48/24 (6 PLY) TAG EDGES
WORKMANSHIP:
 ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICE, SHALL BE ACCURATE AS TO MEASUREMENT AND SHALL BE CAREFULLY DONE. PLYWOOD SHEATHING SUB-FLOOR SHALL PROVIDE A SMOOTH UNIFORM SURFACE CAPABLE PROPERLY ACCEPTING A CARPET FINISH.
ROOF DIAPHRAGM:
 3/4" TAG OSB OR APA RATED SHEATHING - STRUCTURE 1 EXPOSURE 1
 SPAN RATING 48/24 MIN.
 FASTEN TO SHEET METAL SUPPORTS W/ #10 x 1 1/4" LG. SELF DRILLING SELF-TAPPING PHILLIPS FLAT-HEAD ZINC COATED TEK'S SCREWS OR 0.145 PACFAST PREFERRED FASTENERS (ICC ESR-2981) ISSUED SEPTEMBER 1 2010 AT 8" OC AT BOUNDARIES, AT 8" OC AT EDGES, AND 12" OC FIELD NAILS. MIN. 3/8" EDGE DISTANCE FOR FASTENERS TO PLYWOOD EDGE PER CBC SECTION 2306.2.2. NOTE: 0.145 PNEUMATIC FASTENER OPTION IS NOT ALLOWED ON PARAPET APPLICATIONS (PARAPET HEIGHT) HIGHER THAN 24". SEE AT STRUCTURAL STEEL APPLICATIONS - I.E. (TECH SHEETS)
FLOOR DIAPHRAGM:
 1 1/8" PLYWOOD - STURD-I-FLOOR
 EXTERIOR - TONGUE AND GROOVE EDGES
 SPAN RATING: 48"
 FASTEN TO SHEET METAL SUPPORTS W/ #10 - 24 x 1 3/4 LG. SELF-DRILLING, SELF-TAPPING PHILLIPS FLAT-HEAD ZINC COATED TEK'S SCREWS OR 0.145 PACFAST PREFERRED FASTENERS (ICC ESR-2981) ISSUED SEPTEMBER 1 2010 AT 8" OC AT BOUNDARIES, AT 8" OC AT EDGES, AND 12" OC AT INTERMEDIATE SUPPORTS. MIN. 3/8" EDGE DISTANCE FOR FASTENERS TO PLYWOOD EDGE PER CBC SECTION 2306.2.2. NOTE: 0.145 PNEUMATIC FASTENER OPTION (PACFAST PREFERRED FASTENERS) IS NOT ALLOWED FOR APPLICATIONS AT STRUCTURAL STEEL IS: FLOOR CHANNELS
 CONCRETE FLOOR DATA: LIGHTWEIGHT CONCRETE FLOOR
 STRENGTH: 3000 PSI OR 4000 PSI
 TYPE: I OR II
 DENSITY: 110 PCF - MAX

DIMENSION LUMBER ATTACHMENT TO STEEL FRAMING:
 2 x STUDS AT CORNER STEEL COLLING (NAILING STUD)
 USE: #10 - 24 x 2 1/2" LG. SELF-DRILLING SELF-TAPPING PHILLIPS FLAT-HEAD WITH WASHER ZINC COATED TEK SCREWS AT 24" O.C.
REFERENCE STANDARDS NOTES:
 INTENT OF DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE BUILDING IN ACCORDANCE WITH THE STATE OF CALIFORNIA, CALIFORNIA CODE OF REGULATIONS, PART 1, 2, 3, 4, 5, 6, 8, 9, AND 12, SUB CHAPTER 1. CALIFORNIA BUILDING CODE, 2010 EDITION, MANUAL OF STEEL CONSTRUCTION, (AISC) 13TH EDITION, AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE, AWS D1.1, AMERICAN INSTITUTE OF TIMBER CONSTRUCTION STANDARD, (AITC) 108 ARCHITECTURAL SHEET METAL MANUAL, AIA FILE NO. 124 (SMACNA) LATEST EDITION UNLESS OTHERWISE NOTED.

WORKMANSHIP:
 WORKMANSHIP AND MATERIALS SHALL BE SUCH THAT BUILDING WILL BE WEATHERTIGHT AND WATERTIGHT.
INSPECTIONS:
 A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
CHANGES:
 CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

NAILING NOTES:
 1. ALL NAILS SHALL BE COMMON UNLESS OTHERWISE NOTED
 2. MACHINE APPLIED 16D FASTENERS SHALL HAVE AN EMBEDMENT OF NOT LESS THAN 1 1/2" INTO THE SECOND MEMBER, AND SHALL BE NOT LESS THAN 3" INTO THE ABOVE NAILS SHALL ALSO BE ACCEPTABLE FOR HAND NAILING, PROVIDED THE REQUIRED EMBEDMENT IS MAINTAINED.
CONNECTION AND FASTENERS:
 ALL CONNECTIONS AND FASTENERS AS STATED ON THESE DRAWINGS CAN BE SUBSTITUTED BY AN EQUIVALENT PRODUCT WITH ICC REPORTS AND APPROVAL BY DSA.
CONNECTION OF LAG SCREWS:
 AS REQUIRED PER ANSI /A/F/A/NDS-2005, LAG SCREWS MUST BE INSTALLED INTO A PRE-DRILLED PILOT HOLE WITH A STANDARD WASHER AND TURNED WITH A WRENCH. DO NOT DRIVE IN WITH A HAMMER, OVER-TORQUING CAN SIGNIFICANTLY REDUCE THE LATERAL RESISTANCE OF THE LAG SCREW AND SHOULD BE AVOIDED.

FASTENING SCHEDULE CBC - TABLE 2304.8.1

| CONNECTION | FASTENING ^{a,m} | LOCATION |
|--|--|---|
| 1. JOIST TO BILL OR GIRDER | 3 - 8d COMMON 3 - 5" x 0.131" NAILS | TOENAIL |
| 2. BRIDGING TO JOIST | 2 - 8d COMMON (2 1/2" x 131") 2 - 3" x 0.31" NAILS | TOENAIL EACH END |
| 3. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST | 2 - 8d COMMON (2 1/2" x 131") | FACE NAIL |
| 4. WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST | 3 - 8d COMMON (2 1/2" x 131") | FACE NAIL |
| 5. 2" SUBFLOOR TO JOIST OR GIRDER | 2 - 16d COMMON | BLIND AND FACE NAIL |
| 6. SOLE PLATE TO JOIST OR BLOCKING | 16d (3 1/2" x 135") AT 16" O.C. 3"x0.131" NAILS AT 6" O.C. 3 - 16d (3 1/2" x 135") AT 16" O.C. 4 - 3"x0.131" NAILS AT 16" O.C. | TYPICAL FACE NAIL BRACED WALL PANELS |
| SOLE PLATE TO JOIST OR BLKING AT BRACED WALL PANELS | 3 - 16d (3 1/2" x 135") AT 16" O.C. 4 - 3"x0.131" NAILS AT 16" O.C. | |
| 7. TOP PLATE TO STUD | 2 - 16d COMMON (3 1/2" x 0.162") 3 - 3"x0.031" NAILS | END NAIL |
| 8. STUD TO SOLE PLATE | 4 - 8d COMMON (2 1/2"x0.131") 4 - 3"x0.131" NAILS 2 - 16d COMMON (3 1/2"x0.162") 3 - 3"x0.131" NAILS | TOENAIL END NAIL FACE NAIL |
| 9. DOUBLE STUDS | 16d (3 1/2"x0.135") AT 24" O.C. 3"x0.131" NAILS AT 12" O.C. | FACE NAIL |
| 10. DOUBLE TOP PLATES | 16d (3 1/2"x0.135") AT 24" O.C. 3"x0.131" NAILS AT 12" O.C. | TYPICAL FACE NAIL |
| DOUBLE TOP PLATES | 8 - 16d COMMON (3 1/2"x0.162") 12 - 3"x0.131" NAILS | LAP SPLICE |
| 11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE | 3 - 8d COMMON (2 1/2"x0.131") 3 - 3"x0.131" NAILS | TOENAIL |
| 12. RIM JOIST TO TOP PLATE | 8d (2 1/2"x0.131") AT 6" O.C. 3"x0.131" NAIL AT 6" O.C. | TOENAIL |
| 13. TOP PLATES, LAPS, AND INTERSECTIONS | 2 - 16d COMMON (3 1/2"x0.162") 3 - 3"x0.131" NAILS | FACE NAIL |
| 14. CONTINUOUS HEADER, TWO PIECES | 16d COMMON (3 1/2"x0.162") | 16" OC ALONG EDGE |
| 15. CEILING JOISTS TO PLATE | 3 - 8d COMMON (2 1/2"x0.131") 3 - 3"x0.131" NAILS | TOENAIL |
| 16. CONTINUOUS HEADER TO STUD | 4 - 8d COMMON (2 1/2"x0.131") | TOENAIL |
| 17. CEILING JOISTS, LAPS OVER PARTITIONS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1) | 3 - 16d COMMON (3 1/2"x0.162") TABLE 2308.10.4.1, TABLE 2308.10.4.1 4 - 3"x0.131" NAILS | FACE NAIL |
| 18. CEILING JOISTS TO PARALLEL RAFTERS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1) | 3 - 8d COMMON (2 1/2"x0.131") 3 - 3"x0.131" NAILS | FACE NAIL |
| 19. RAFTER TO PLATE (SEE SECTION 2308.10.1, TABLE 2308.10.1) | 2 - 8d COMMON (2 1/2"x0.131") 2 - 3"x0.131" NAILS | FACE NAIL |
| 20. 1" DIAGONAL BRACE TO EACH STUD AND PLATE | 2 - 8d COMMON (2 1/2"x0.131") 2 - 3"x0.131" NAILS | FACE NAIL |
| 21. 1" x 6" SHEATHING TO EACH BEARING | 3 - 8d COMMON (2 1/2"x0.131") | FACE NAIL |
| 22. WIDER THAN 1" x 6" SHEATHING TO EACH BEARING | 3 - 8d COMMON (2 1/2"x0.131") | FACE NAIL |
| 23. BUILT-UP CORNER STUDS | 16d COMMON (3 1/2"x0.162") 3"x0.131" NAILS | 24" O.C. 16" O.C. |
| 24. BUILT-UP GIRDER AND BEAMS | 20d COMMON (4"x0.192") 0.6" 3"x0.131" NAIL AT 24" O.C. 3 - 3"x0.131" NAILS 2 - 20d COMMON (4"x0.192") 3 - 3"x0.131" NAILS | FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES FACE NAIL AT ENDS AND AT EACH SPLICE |
| 25. 2" PLANKS | 16d COMMON (3 1/2"x0.162") | AT EACH BEARING |
| 26. COLLAR TIE TO RAFTER | 3 - 10d COMMON (3"x0.148") 4 - 3"x0.131" NAILS | FACE NAIL |
| 27. JACK RAFTER TO HIP | 3 - 16d COMMON (3"x0.148") 4 - 3"x0.131" NAILS | TOE NAIL |
| 28. ROOF RAFTERS TO 2-BY RIDGE BEAM | 2 - 16d COMMON (3 1/2"x0.162") 3 - 3"x0.131" NAILS 2 - 16d COMMON (3 1/2"x0.162") 3 - 3"x0.131" NAILS | FACE NAIL FACE NAIL |
| 29. JOIST TO BAND JOIST | 3 - 16d COMMON (3 1/2"x0.162") 4 - 3"x0.131" NAILS | FACE NAIL |
| 30. LEDGER STRIP | 3 - 16d COMMON (3 1/2"x0.162") 4 - 3"x0.131" NAILS | FACE NAIL AT EACH JOIST |
| 31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD ^d SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING) | 1/2" AND LESS 8d ^{c,j} 2 1/2"x0.113" NAIL 1 1/2" 16d GAGE 8d ^c or 8d ^f 19/32" TO 3/4" 8d ^c or 8d ^f 2 1/2"x0.113" NAIL 2 - 16d GAGE 8d ^c 7/8" TO 1" 10d ^g or 8d ^f 1 1/8" TO 1 1/4" 10d ^g or 8d ^f 3/4" AND LESS 8d ^c 7/8" TO 1" 8d ^f 1 1/8" TO 1 1/4" 10d ^g OR 8d ^f 1/2" AND LESS 8d ^c 5/8" 8d ^f | FACE NAIL FACE NAIL FACE NAIL FACE NAIL FACE NAIL FACE NAIL FACE NAIL |
| SINGLE FLOOR (COMBINATION SUBFLOOR-UNDERLAYMENT TO FRAMING) | NO. 11 GA ROOFING NAIL ^h 8d COMMON NAIL (2"x0.113") NO. 11 GA ROOFING NAIL ^h 8d COMMON NAIL (2 1/2" x 0.131") | |
| 32. PANEL SIDING (TO FRAMING) | 1/2" AND LESS 8d ^c 5/8" 8d ^f | |
| 33. FIBERBOARD SHEATHING ^d | 1/2" NO. 11 GA ROOFING NAIL ^h 8d COMMON NAIL (2"x0.113") 25/32" NO. 11 GA ROOFING NAIL ^h 8d COMMON NAIL (2 1/2" x 0.131") | |
| 34. INTERIOR PANELING | 1/4" 4d ^k 3/8" 6d ^k | |

FOOTNOTES:
 a. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
 b. NAILS SPACED AT 6" ON CENTER AT EDGES, 12" AT INTERMEDIATE SUPPORTS EXCEPT 6" AT SUPPORTS WHERE SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX, OR CASING.
 c. COMMON OR DEFORMED SHANK (8d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").
 d. COMMON (8d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").
 e. DEFORMED SHANK (8d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").
 f. CORROSION-RESISTANT SIDING (8d - 1 7/8" x 0.106"; 8d - 2 3/8" x 0.128") OR CASING (8d - 2" x 0.095"; 8d - 2 1/2" x 0.113") NAIL.
 g. FASTENERS SPACED 3" ON CENTER AT EXTERIOR EDGES AND 6" ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6" ON CENTER ON THE EDGES AND 12" ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
 h. CORROSION-RESISTANT ROOFING NAILS WITH 7/16" DIAMETER HEAD AND 1 1/2" LENGTH FOR 1/2" SHEATHING AND 1 3/4" LENGTH FOR 25/32" SHEATHING.
 i. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16" CROWN AND 1 1/8" LENGTH FOR 1/2" SHEATHING AND 1 1/2" LENGTH FOR 25/32" SHEATHING. PANEL SUPPORTS AT 16" (20" IF STRENGTH AXIS IN THE LONG DIRECTION) OF THE PANEL, UNLESS OTHERWISE MARKED.
 j. CASING (1 1/2" x 0.080") OR FINISH (1 1/2" x 0.072") NAILS SPACED 6" ON PANEL EDGES, 12" AT INTERMEDIATE SUPPORTS.
 k. PANEL SUPPORTS AT 24". CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" AT INTERMEDIATE SUPPORTS.
 l. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS (2 1/2" x 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
 m. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16".
 n. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4" ON CENTER AT EDGES, 6" AT INTERMEDIATE SUPPORTS.
 o. FASTENERS SPACED 4" ON CENTER AT EDGES, 6" AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 2" ON CENTER AT EDGES, 6" AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
 p. FASTENERS SPACED 4" ON