

GENERAL PLAN NOTES:

- 1. All work not detailed, specified or noted shall be constructed the same as similar work shown in the construction documents. Where the work is not detailed, specified or noted it shall be in accordance with accepted trade standards for good and workmanship like construction.
2. Refer to Architectural drawings for elevation and location of roofs, floors, walls, partitions and non-structural elements together with their general configurations, size and location of door and window openings roof and floor openings, size and location of elements such as but not limited to drains, curbs, depressed areas, level changes, chasters, grooves, inserts.
3. Refer to Mechanical, Plumbing, Heating and Air Conditioning, and Electrical drawings for size and location of elements such as but not limited to pipe and conduit runs, sleeves and box outs, and hangers and equipment supports.
4. All dimensions on the structural drawings shall be compared with those on the architectural drawings by the Contractor prior to construction. The Contractor shall notify the Architect and Structural Engineer of discrepancies.

HARDWARE SUBSTITUTION SCHEDULE:

Hardware shown on the Structural Drawings is Simpson Strong-Tie company products. USFP company products may be substituted in accordance with the following schedule:

Table with columns: Simpson (Specified), USFP (Alternate), Simpson (Specified), USFP (Alternate). Lists various hardware items like bolts, nuts, washers, and anchors with their respective specifications.

DIVISION 5: WOOD

0600 FASTENERS AND SUPPORTS:

- 1. Generic nails shall be of steel wire and conform with ASTM F 1667 Standard Specification for Driven Fasteners, Nails, Spikes, and Staples. All nails shown on the drawings, and not specified otherwise, shall be sinker or common nails. Sinker, box or other variation of nails may not be substituted for common nails when common nails are shown on the drawings. Paslode nails shall be substituted for joist hanger nails of the same size. Paslode nails shall be manufactured by ITW Paslode, Vernon Hills, Illinois (ICBO ER-5173).
2. Pneumatic nails may be substituted for generic nails provided they are of the same dimensions as generic nails with the exception of the nail head. Pneumatic nail dimensions may be larger in diameter than generic nails by up to the size of a common nail with the same penny classification. The head may, in addition to being of a standard-diameter round-head type, be a T-shaped or modified round-head. Pneumatic nails shall be ICBO approved.
3. Nail sizes shall conform with the following table. When necessary to prevent splitting of the wood, a prebored pilot hole shall be drilled.

Table: Nail Size Schedule. Columns: Nail Size & Name, Nail Length, Wire Dia., Head Dia., Pre-bore Drill Dia. Lists various nail types and their dimensions.

4. Adhesives used to attach floor sheathing to framing shall conform with American Plywood Association Specification APG-O1, Adhesives for Field-Gluing Plywood to Wood Framing. The Adhesive shall be certified as conforming to APG-O1 by a testing agency approved by the Building Official or accepted by the Federal Housing Administration. Adhesive shall meet the requirements for wet condition of service. Alternatives may be used only with specific approval of the Structural Engineer, and only upon submittal of a listing of adhesives to be substituted.

5. Manufactured hardware shall be one of the following. Alternatives may be used only with specific approval of the Structural Engineer, and only upon submittal of a listing of products and sizes to be substituted.

- a) Simpson Company products, Brea, California, (ICBO report nos. D11, D56, 4448, 4435, NER 209, NER 393, NER 415, NER 421, NER 422, NER 432, NER 443, NER 468.

6. Lag screws shall conform with ANSI/ASME B 18.21, Square and Hex Bolts and Screws (inch Series). Lead holes shall be bored prior to installation for the full length of the lag bolt. The threaded portion of the lag bolt shall be inserted in its lead hole by turning with a wrench, not by driving with a hammer. Soap or other lubricant shall be used on the screws or in the lead hole to facilitate insertion and prevent damage to screw. In determining the penetration of the threaded portion of lag screw into a member, the reduced portion (threaded or gasket point) of the shank shall not be considered as part of the penetration. Washers shall be used under all lag bolt heads and nuts bearing on wood. Lag bolts shall be installed in accordance with the following:

Table: Lag Screwing Schedule. Columns: Hole For Diameter, Hole For Unthreaded Shank, Hole For Threaded Shank. Lists hole sizes for different lag screw diameters.

7. Round washers shall be ANSI/ASME B 18.22, Plain Washers. Square washers shall be of mild steel. Washers shall be used under all bolt heads and nuts bearing on wood. Machine bolts shall be installed in accordance with the following:

Table: Washer Schedule. Columns: Washer Diameter, Washer Inside Dia., Round Washer Thickness, Round Washer Outside Dia., Square Washer Side Length, Square Washer Thickness. Lists washer specifications.

Note: Round washers that are Type A Plain Washers, Wide (standard plate) conform with the above dimensions.

0610 ROUGH CARPENTRY:

1. Solid framing lumber shall be graded and marked in conformance with Western Wood Products Association (WWPA) Standard Grading and Dressing Rules or with West Coast Lumber Inspection Bureau (WCLIB) Standard Grading Rules for West Coast Lumber or with National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber, as noted below. Grading shall be performed by an agency certified by the American Lumber Standards Committee, Germantown, Maryland. Alternatives lumber grades, species and grading agencies may be used only with specific approval of the Structural Engineer, and only upon submittal listing lumber grades, species and grading agencies to be substituted.

2. Lumber grades shall at least be:

Table: Lumber Grade Schedule. Columns: Use, Lumber Grading Agency, Mark. Lists lumber grades for various uses like exterior bearing wall, interior bearing wall, etc.

3. Lumber grading agencies shall be:

Table: Lumber Grading Agencies Schedule. Columns: Grading rules, Lumber Grading Agencies, Mark. Lists grading agencies like WWPA, WCLIB, NLGA and their respective marks.

4. Lumber shall be dry and well seasoned, and the moisture content shall not exceed 19% at the time the structure is wrapped. All lumber shall be air-seasoned not less than 30 days before being covered with finishing materials unless tests are made of its moisture content.

5. All wood resting on or abutting to concrete or masonry (mid sill) shall be preservative treated Douglas Fir. All wood embedded in concrete or in contact with soil shall be preservative treated Douglas Fir. In so far as practical all working of the wood shall be done prior to the preservative treatment. All treatment shall be in a plant except that cuts may be field treated. Cuts penetrating into the treated zone of the wood shall be field treated when they would result in the cut surface resting on, abutting to or being in contact with concrete, masonry or soil. After installation, exterior exposed surfaces shall be protected with a minimum of two coats of sealer. Framing or drywall shall cover interior surfaces. Treatment shall be as follows:

a) Plant treatment: Solid framing lumber required to be preservative treated shall be plant treated in accordance with American Wood Preservers Association, AWWPA Standard C-7, Lumber, Timbers, Bridges and Piles. Timber Pressure Treatment. Wood product panels required to be preservative treated shall be plant treated in accordance with American Wood Preservers Association, AWWPA Standard C-9, Plywood-Preservative Treatment. Treatment shall be appropriate for the location of the wood being either above ground or ground contact. Treatment shall be with Ammoniacal Copper Zinc Arsenate (Chromonite) or A grade mark indicated conformance to the treating standard and the type of treatment shall be affixed to the material. The inspection agency shall be independent of the treating plant. The inspection agency shall be under the supervision of the American Wood Preservers Bureau. Inspection shall be in accordance with AWWPA LP Standards.

b) Field treatment: Solid framing lumber and wood product panels required to be preservative treated shall be field treated with copper Naphthenate Solution containing a minimum of 2.0% copper metal. Application shall be in accordance with the manufacturer's directions.

6. Wood product panels (plywood, composite panels, wafer board, oriented strand board, structural particleboard) shall be in conformance with USC Std. No. 23-2, based on US Product Standard PS 1, Construction and Industrial Plywood or shall conform with US Product Standard PS 2, Performance Standard for Wood-Based Structural Panels. Panels as noted below indicating conformance to the appropriate standard shall be affixed to the material by an independent grading agency. Grading shall be performed by the APA - The Engineered Wood Association, Tacoma, Washington, (ICBO report no. NER Q438) or by Timberco, Inc. d/b/a, Teco, Eugene, Oregon, (ICBO report no. NER Q438). Panels which may have an edge or surface permanently exposed to the weather or to moisture shall have an exposure durability of Exterior Grade, except that roof sheathing exposed only on the underside need only be Exposure 1. The spacing in inches of roof and floor supports over which panels are applied shall not exceed the Span Rating of the panels. The number of ply and layers shall be at least that given below. Alternative grades, thickness, indices, species and grading agencies may be used only with specific approval of the Structural Engineer, and only upon submittal of a listing of grades, thickness, indices, species, and grading agencies to be substituted.

Table: Wood Panel Grade Schedule. Columns: Use, Product Standard, Panel Grade, Min. Exposure, Minimum Exposure. Lists panel grades for roof, floor, wall, and ceiling uses.

Footnote: (1) Panel grade shall be Structural I where specifically noted in Shear Wall Schedule.

0618 GLUED LAMINATED TIMBER:

1. Materials, manufacture, fabrication, and quality control shall conform with ANSI/APA C 1901, Structural Glued-Laminated Timber.

2. The glued laminated timber members shall be Western species and provide stress values that meet or exceed the requirements for combination symbols as shown below:

Table: Combination Symbol. Columns: Species - outer, Species - inner, Fb, Fv, E. Lists material combinations and their properties.

- a) Glue-Lam beams and headers (GLB) shall be 24F-18E, unless noted otherwise per plan.
b) 24F-18E beams and headers may be flat or with standard camber.
c) 24F-V4 beams are to be used for simple spans and have standard camber.
d) 24F-V8 beams are to be used for continuous spans and cantilevers and shall have zero camber, unless a specific value is noted per plan.
e) Standard camber shall be 3000 ft. radius.

3. Moisture content at time of glued laminated timber fabrication shall not exceed 16%.

4. Adhesives shall meet the requirements for wet condition of service.

5. Stock glued laminated timber members shall each be marked indicating conformance to ANSI/APA C 1901, Custom glued laminated timber members shall each have a Certificate of Inspection indicating conformance to ANSI/APA C 1901. The Certificate shall be issued by the American Institute of Timber Construction, Englewood, Colorado (ICBO report no. NER0236) or by the Western Wood Products Association, Portland, Oregon, (ICBO report no. NER-09-220) or by the APA - The Engineered Wood Association, Tacoma, Washington, (ICBO report no. NER Q437). A copy of the certificate shall be provided to the Building Official prior to erection of the prior to erection of the framing and to the Architect and Structural Engineer.

6. Glued laminated timber members exposed to weather shall be pressure treated in accordance with American Institute of Timber Construction, AITC Standard I09, Standard for Preservative Treatment of Structural Glued-Laminated Timber, and American Wood Preservers Association, AWWPA Standard C-7, Pressure Treatment of Structural Glued-Laminated Timber. Treatment shall be with a grade mark or a certificate indicating conformance to the treating standard and the type of treatment shall be affixed to the material or provided to the Building Official prior to erection of the framing and to the Architect and Structural Engineer. The inspection agency shall be independent of the treating plant. The inspection agency shall be under the supervision of the American Wood Preservers Bureau. After installation, exterior exposed surfaces shall be protected with a minimum of two coats of sealer. Interior surfaces shall be covered by framing or drywall.

CEILING JOIST SPAN:

Table: Ceiling Joist Span. Columns: Size and Spacing, Max. Span. Lists joist sizes and their maximum spans.

CEILING JOIST TO BE SFF No. 1 OR No. 2

0618 CERTIFIED GLUED LUMBER (RMT)

1. Certified Glued Lumber (RMT) materials, manufacture, fabrication, and quality control shall conform with WCLIB Standard No.1, Standard Grading and Dressing Rules No.1.

2. Certified Glued Lumber (RMT) shall be of a species and provide stress values that meet or exceed the requirements for the solid saw members specified.

3. Moisture content at time of glued-laminated timber fabrication shall not exceed 15%.

4. Adhesives shall meet the requirements for wet condition of service.

5. Certified glued-lumber (RMT) members shall each be marked indicating conformance to the specifications. The stamp shall be issued by the West Coast Lumber Inspection Bureau (WCLIB).

6. Certified Glued Lumber (RMT) members may not be exposed to weather.

1. Certified Glued Lumber (RMT) may have zero camber.

0618-AZ LAMINATED VENEER LUMBER, PARALLEL STRAND LUMBER, & TIMBER STRAND LUMBER:

1. Manufactured Laminated Veneer Lumber (LVL) and Parallel Strand Lumber (PSL) and Timber Strand Lumber (LSL) shall be the following. Alternatives may be used only with specific approval of the Structural Engineer, and only upon submittal of a listing of products and sizes to be substituted.

- a) LVL: True Joist Products, Boies, Idaho (ICC EB E9R-1387).

Table: LVL Grade Schedule. Columns: Size noted on plan, Grade & Grade Mark, Fb, Fv, E. Lists LVL grades and their properties.

Table: PSL Grade Schedule. Columns: Size noted on plan, Grade & Grade Mark, Fb, Fv, E. Lists PSL grades and their properties.

Table: LSL Grade Schedule. Columns: Size noted on plan, Grade & Grade Mark, Fb, Fv, E. Lists LSL grades and their properties.

Table: LVL Grade Schedule. Columns: Size noted on plan, Grade & Grade Mark, Fb, Fv, E. Lists LVL grades and their properties.

- b) Louisiana Pacific products, Portland, Oregon (ICC report no. 5004).

Table: LVL Grade Schedule. Columns: Size noted on plan, Grade & Grade Mark, Fb, Fv, E. Lists LVL grades and their properties.

2. Manufactured Laminated Veneer Lumber (LVL) and Parallel Strand Lumber (PSL) and Timber Strand Lumber (LSL) shall be fabricated in the shop of a licensed fabricator. All pieces shall be stamped with the manufacturer's logo.

3. Parallel Strand Lumber (PSL) exposed to weather shall be preservative treated. Laminated Veneer Lumber (LVL) and Timber Strand Lumber (LSL) shall not be exposed to weather. Treatment shall be in accordance with AWWPA Standard C-9 for above ground use exposed to weather. Treatment shall be Chromated Copper Arsenate with a retention level of not less than 0.40 lb/cu ft. to a depth of 0.50 in. After installation, exterior exposed surfaces shall be protected with a minimum of two coats of sealer. Interior surfaces shall be covered by framing or drywall. A certificate indicating conformance to AWWPA C-9 and the type of treatment shall be affixed to the material. A copy of the certificate shall be provided to the Building Official prior to erection of the framing and to the Architect and Structural Engineer.

0619 WOOD TRUSSES, LIGHT METAL PLATE CONNECTED, DESIGN BUILD:

1. Materials, manufacture, fabrication, and quality control shall conform to ANSI/APA National Design Standard for Metal Plate Connected Wood Trusses.

2. Steel metal plate connectors shall conform to USC Section 2321 and shall be ICBO approved.

3. Lumber species for truss chords shall be: Douglas Fir-Larch, Spruce Pine-Fir or Hem-Fir.

All lumber shall be surface dry or kiln dried to a moisture content less than 19% before fabrication.

4. The manufacturer shall retain the services of a qualified licensed engineer to design the trusses. The truss manufacturer shall be responsible for the adequacy of the design.

5. Light metal plate connected trusses shall be designed to support the more critical of the loads noted or the deflection limits noted.

- a) Roof Trusses.

Table: Roof Trusses Loading Conditions. Columns: Loading Condition, Value. Lists loading conditions for roof trusses.

Deflection Limitations, all cases:

Table: Roof Trusses Deflection Limitations. Columns: Deflection Limitation, Value. Lists deflection limits for roof trusses.

6. The manufacturer shall have a Quality Control Inspection Agency or Individual, approved by the Building Official, attest to the trusses manufacture in accordance with IBC Section 2303.4 and the ICBO approval for the metal plate connectors.

7. The manufacturer shall design for and specify all fasteners, hangers, and hardware that support truss to truss, truss to beam, or truss to ledger connections.

8. Installation of trusses shall be in accordance with the truss manufacturer's directions.

- 9. Bracing, bridging and blocking of trusses shall be in accordance with the more restrictive of the manufacturer's directions or the Construction Documents.

10. Each truss shall be legibly branded, marked or otherwise have permanently affixed thereto the following information located within 2 feet of the center of the span on the face of the bottom chord.

- a) Identity of the company manufacturing the truss.
b) The design load.
c) The spacing of trusses.

11. Trusses shall be cambered to relieve loading on non-bearing partitions.

DIVISION 5 FINISHES

0910 EXTERIOR CEMENT PLASTER (STUCCO) FOR APPLICATION TO WOOD FRAMING:

1. Exterior plaster (stucco) shall be installed in accordance with IBC section 2502.

2. Wire Lath shall be attached to all studs and to top and bottom plates. Where deep screeds occur at plates, 6 penny galvanized box nails may be used in place of staples.

0920 GYPSUM WALLBOARD FOR APPLICATION TO WOOD FRAMING:

1. Gypsum wallboard shall be installed in accordance with IBC section 2508.

2. Gypsum wallboard shall be attached to all studs and to top and bottom plates. Where blocking is required, it shall be attached thereto also.

3. Nails for attachment of drywall to wood shall conform with ASTM C 514, Nails for the Application of Gypsum Wallboard.



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REFER TO 5N SHEETS FOR ALL NOTES AND SPECIFICATIONS

PROJECT: Broadway at San Marcos

OWNER/DEVELOPER: Liberty Homes

ARCHITECT/DESIGNER: MDW Designs

SHEET: STRUCTURAL NOTES & SPECIFICATIONS

REFERENCE DATE: 03-28-07 ISSUED FOR: CLIENT DELIVERY 03-29-07

ENGINEER OF RECORD:

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