

GENERAL PLAN NOTES:

- 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.
- 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, chamfers, grooves, insets.
- Refer to Mechanical, Plumbing, Heating and Air Conditioning, and Electrical drawings for size and location of elements such as but not limited to pipes and conduit runs, sleeves and box out, and hangers and equipment supports.
- 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. USF company products may be substituted in accordance with the following schedule:

Simpson (Specified)	USF (Alternate)	Simpson (Specified)	USF (Alternate)
A34	MP34	SSTB24	STB24
A35	MTA1	SSTB28	STB28
LTR4	MPF4	SSTB34	STB34
ITT	THO	HP4HD22	HP4HD22
US4UT	THF	SSTDIO	STDIO
US6	US6	STHD14	STHD14
MIT	THO	HTT22	HTT22
T822	RT16T	FHD6	FHD6
ST6224	K8T24	FHD8	FHD8
ST6236	K8T24	HD10A	TDX10
MBT48	K8T48	HD14A	ADB14
MBT60	K8T60	HD18	T818
MBT72	K8T72	LTT	THD
CS16	RSBEO	LTT	THD
CS18TC16	CS18TC16	LHS	LTD
MA8	FA3	MIL	THF (used w/ stiffeners only)
FAHD42	FAHD42		

DIVISION 6: WOOD

06050 FASTENERS AND SUPPORTS:

- Generic nails shall be of steel wire and conform with ASTM F 1667 Standard Specification for *Common Nails, Staples, and Staples*. All nails shown on the drawings, and not specified otherwise, shall be sinker or common nails. Sinker, box or other configuration 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-5175).
- Pneumatic nails may be substituted for generic nails provided they are of the same diameter and length as the generic nails and the nail head pneumatic nail dimensions may be larger in diameter than generic nails by up to the size of a common nail within the same penny weight 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.
- Nail sizes shall conform with the following table. When necessary to prevent splitting of the wood, a prebored pilot hole shall be drilled.

Nail Size Schedule:	Nail Length Dia.	Wire Dia.	Wire Gauge	Head Dia.	Pre-bore Drill Dia.
8d Joist Hanger (Simp. NB)	1-1/2"	131"	10-1/4"	281"	
8d Paslode	1-1/2"	131"	10-1/4"	281"	
8d Ring Shank	2-3/8"	120"	11	291"	
8d Common	2-1/2"	131"	10-1/4"	281"	
10d Joist Hanger (Simp. NO)	1-1/2"	148"	9	312"	
10d Paslode	1-1/2"	148"	9	312"	
10d Plywood	2-1/4"	148"	9	312"	
10d Plywood Ring	2-3/8"	135"	10	312"	
10d Common	2"	148"	9	312"	
10d Joist Hanger (Simp. N16)	1-1/2"	162"	8	344"	
16d Paslode	2-1/2"	162"	8	344"	
16d Short (Framer)	3-1/4"	131"	10-1/4"	281"	
16d Box	3-1/2"	132"	10	344"	
16d Sinker	3-1/4"	148"	9	344"	
16d Common	3-1/2"	162"	8	344"	1/8" or no. 30 drill gage
20d Box	4"	148"	9	375"	1/8" or no. 30 drill gage
20d Common	4"	162"	8	375"	1/8" or no. 30 drill gage
20d Simpson N20A, Ring	1-3/4"	192"	6	406"	1/8" or no. 30 drill gage
20d Simpson N20AN, Ring	2-1/8"	192"	6	406"	1/8" or no. 30 drill gage
40d Common	5"	225"	4	469"	1/4" or no. 14 drill gage
60d Simpson N54A, Ring	2-1/2"	290"	3		3/16" or no. 14 drill gage

- Adhesives used to attach floor sheathing to framing shall conform with American Plywood Association Specification AFG-O, *Adhesive for Field-Gluing Plywood to Wood Framing*. The Adhesive shall be certified as conforming to AFG-O 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 use. Alternatives may be used only with specific approval of the Structural Engineer, and only upon submittal of a listing of adhesives to be substituted.
- 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.
 - Simpson Company products, Eureka, California, (ICBO report nos. U11, U26, 444B, 493B, NER 209, NER 393, NER 419, NER 421, NER 422, NER 432, NER 443, NER 469).
- Leg screws shall conform with ANSI/ASME B 18.21, *Square and Hex Bolts and Screws (Type S)*. Lead holes shall be bored prior to installation for the full length of the leg bolt. The threaded portion of the leg 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 screws. In determining the penetration of the threaded portion of leg screws into a member, the reduced portion (threaded or gimlet point) of the shank shall not be considered as part of the penetration. Washers shall be used under all leg bolt heads and nuts bearing on wood. Leg bolts shall be installed in accordance with the following:

Leg Screwing Schedule:		Hole For Threaded Shank	
Bolt Diameter	Unthreaded Shank	Hole For Threaded Shank	Threaded Shank
1/4 inch	1/4 inch	5/32 inch	
3/8 inch	3/8 inch	5/16 inch	
1/2 inch	1/2 inch	1/2 inch	
5/8 inch	5/8 inch	13/32 inch	
3/4 inch	3/4 inch	1/2 inch	
7/8 inch	7/8 inch	3/4 inch	
1 inch	1 inch	23/32 inch	

- Washer washers shall be ANSI/ASME B 18.21, *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:
- | Washer Schedule: | | | | | |
|------------------|--------------------|---------------------------|------------------------|---------------------------|-------------------------|
| Bolt Diameter | Washer Inside Dia. | Round Washer Outside Dia. | Round Washer Thickness | Square Washer Side Length | Square Washer Thickness |
| 1/4 inch | 5/16 inch | 3/4 inch | 1/16 inch | 3/4 inch | |
| 3/8 inch | 7/16 inch | 1 inch | 3/64 inch | | |
| 1/2 inch | 9/16 inch | 1-3/8 inch | 5/64 inch | 2 inch | 3/16 inch |
| 5/8 inch | 1 1/16 inch | 1-3/4 inch | 3/64 inch | 2-1/2 inch | 1/4 inch |
| 3/4 inch | 1 3/16 inch | 2 inch | 3/32 inch | 2-3/4 inch | 5/16 inch |
| 7/8 inch | 1 5/8 inch | 2-1/4 inch | 1/64 inch | 3 inch | 3/8 inch |
| 1 inch | 1 7/8 inches | 2-1/2 inch | 1/64 inch | 3-1/2 inch | 3/8 inch |
- Note: Round washers that are Type A Plain Washers, Wide (standard plate) conform with the above dimensions.

06100 ROUGH CARPENTRY:

- 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.
- Lumber grades, shall at least be:

Use	Lumber Grade Schedule:	Grade Mark	Grading Agency
Exterior bearing wall	WUPA or WCLIB	Spruce-Pine-Fir #1 / #2	WUPA or WCLIB
Interior nonbearing wall	WUPA or WCLIB	Spruce-Pine-Fir #1 / #2	WUPA or WCLIB
Interior bearing wall	WUPA or WCLIB	Spruce-Pine-Fir #1 / #2	WUPA or WCLIB
Interior nonbearing wall	WUPA or WCLIB	Spruce-Pine-Fir #1 / #2	WUPA or WCLIB
2x8 4 deeper studs:	WUPA or WCLIB	Spruce-Pine-Fir #1 / #2	WUPA or WCLIB
2x4, 3x4, 4x4 plates:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
2x6, 3x6, 4x6 4 deeper plates:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
3x4 4x4 studs 4 posts:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
4x6 4 deeper studs 4 posts:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
6x6 4 larger square posts:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
6x8 4 larger rectangular posts:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
2x4 joists 4 rafters:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
2x6 4 deeper joists 4 rafters:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
4x6 to 6x6 beams:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
6x8, 8x10, 10x12 4 deeper beams:	WUPA or WCLIB	Douglas Fir-Larch #2	WUPA or WCLIB
- Lumber grading agencies shall be:

Grading Agency	Lumber Grading Agencies	Mark
WUPA or WCLIB:	California Lumber Inspection Service Pacific Lumber Inspection Bureau, Inc. Timber Products Inspection West Coast Lumber Inspection Bureau Western Wood Products Association	W P L C W
NLGA:	Alberta Forest Products Association California Lumber Inspection Service Canadian Lumberman's Association Caribbean Lumber Manufacturers Association Central Forest Products Association Interior Lumber Manufacturers Association Midwestern Inspection Maritime Lumber Bureau Ontario Lumber Manufacturers Association Pacific Lumber Inspection Bureau, Inc. Quebec Lumber Manufacturers Association	ALB CAL CAN CLF INT ML OLMA Q

- 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.

- All wood resting on or abutting to concrete or masonry (mud 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 drysill shall cover interior surfaces. Treatment shall be as follows:
 - Plant treatment: Solid framing lumber required to be preservative treated shall be plant treated in accordance with American Wood Preservers Association, AWPFA Standard C-2, *Lumber, Timbers, Bridges and Misc. Treatments*. Wood product panels required to be preservative treated shall be plant treated in accordance with American Wood Preservers Association, AWPFA Standard C-3, *Plywood, Formwork, Treatments*. Treatments 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 AWPFA Standards.
 - 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.
- Wood product panels (plywood, composite panels, water board, oriented strand board, structural particleboard) shall be in conformance with UBC Section 23-2, based on US Product Standard PS 1, *Construction and Industrial Plywood* or shall conform with U.S. Product Standard PS 2, *Performance Standard for Wood-Based Structural-Use Panels*, as noted below. A grade mark 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 Q4391) or by Timberco, Inc. dba. Teco, Eugene, Oregon, (ICBO report no. NER Q4395). 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, 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, species, and grading agencies to be substituted.

Use	Product Label	Panel Grade	APA or Teco	Ply #	Minimum Exposure Durability
Roof sheathing	PS 1, PS 2	Rated Sheathing or Sheathing Span		3/3	Exposure 1
Floor sheathing	PS 1, PS 2	Rated Plywood-Floor or Floor Span		4/3	Exposure 1
Wall sheathing 3/8"	PS 1, PS 2	Rated Sheathing or Sheathing Span (1)		3/3	Exposure 1
Wall sheathing 1/2"	PS 1, PS 2	Rated Sheathing or Sheathing Span (1)		4/3	Exposure 1
Plating stock	PS 1 only	Structural I		5/5	Exposure 1

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

06180 GLUED LAMINATED TIMBER:

- Materials, manufacture, fabrication, and quality control shall conform with ANSI/AITC A 1901, *Structural Glued-Laminated Timber*.
- 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:

Combination	Species - outer Lams / Core Lams	Fb	Fv	E
24F-LBE	US, SP, US, SP	2400 psi	1600 psi	1800,000 psi
24F-V4	DF, DF	2400 psi	1850 psi	1800,000 psi
24F-V8	DF/DF	2400 psi	2400 psi	1800,000 psi

 - Glue-Lam beams and headers (GLB) shall be 24F-LBE, unless noted otherwise per plan.
 - 24F-LBE beams and headers may be flat or with standard camber.
 - 24F-V4 beams are to be used for simple spans and have standard camber.
 - 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.
- Standard camber shall be 3000 N. radius.
- Moisture content at time of glued laminated timber fabrication shall not exceed 16%.
- Adhesives shall meet the requirements for wet condition of service.
- Stock glued laminated timber members shall each be marked indicating conformance to ANSI/AITC A 1901. Custom glued laminated timber members shall each have a Certificate of Inspection indicating conformance to ANSI/AITC A 1901. The Certificate shall be issued by the American Institute of Timber Construction, Englewood, Colorado (ICBO report no. NER Q2796) or by the Western Wood Products Association, Portland, Oregon, (ICBO report no. NER-Q2202) or by the APA, The Engineered Wood Association, Tacoma, Washington, (ICBO report no. NER Q4391). 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.

Size and Spacing	Max. Span
2x4 at 16" oc.	10'-0"
2x6 at 16" oc.	16'-0"
2x8 at 16" oc.	18'-0"
2x10 at 16" oc.	20'-0"

CEILING JOIST TO BE 8FF No. 1 OR No. 2

- Certified Glued Lumber (RMT): materials, manufacture, fabrication, and quality control shall conform with WCLIB Standard No. 17, *Standard Grading and Dressing Rules No. 17*.
- 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.
- Moisture content at time of glued-laminated timber fabrication shall not exceed 16%.
- Adhesives shall meet the requirements for wet condition of service.
- 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).
- Certified Glued Lumber (RMT) members may not be exposed to weather.
- Certified Glued Lumber (RMT) may have zero camber.

06183-AZ LAMINATED VENEER LUMBER, PARALLEL STRAND LUMBER, 4 TIMBER STRAND LUMBER:

- Manufactured Laminated Veneer Lumber (LVL) and Parallel Strand Lumber (PSL), and Timber Strand Lumber (TSL) 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.
 - Level True Joist Products, Boise, Idaho (ICC E5 EBR-1587).
- | LVL Grade Schedule: | Grade & Grade Mark | Fb | Fv | E |
|---------------------|--------------------|----------|---------|--------------|
| 1-3/4 inch wide | Micro-Lam LVL | 2600 psi | 285 psi | 1900,000 psi |
- | PSL Grade Schedule: | Grade & Grade Mark | Fb | Fv | E |
|---------------------|--------------------|----------|---------|---------------|
| 1-3/4 inch wide | Parallel PSL | 2500 psi | 250 psi | 2,000,000 psi |
| 2-1/8 inch wide | Parallel PSL | 2500 psi | 250 psi | 2,000,000 psi |
| 3-1/2 inch wide | Parallel PSL | 2500 psi | 250 psi | 2,000,000 psi |
| 5-1/4 inch wide | Parallel PSL | 2500 psi | 250 psi | 2,000,000 psi |
- | LSL Grade Schedule: | Grade & Grade Mark | Fb | Fv | E |
|---------------------|-----------------------------|----------|---------|---------------|
| 1-1/4 inch wide | Timber Strand LSL Rim Board | 1100 psi | 400 psi | 1,500,000 psi |
| 1-3/4 inch wide | Timber Strand LSL | 2600 psi | 285 psi | 1,900,000 psi |
| 3-1/2 X 3-1/4 | Timber Strand LSL | 1100 psi | 400 psi | 1,500,000 psi |
| 3-1/2 X 3-1/2 | Timber Strand LSL | 2325 psi | 310 psi | 1,500,000 psi |
| 3-1/2 X 1-1/4 | Timber Strand LSL | 1100 psi | 400 psi | 1,500,000 psi |
| 3-1/2 X 1-1/8 | Timber Strand LSL | 2325 psi | 310 psi | 1,500,000 psi |
| and deeper | Timber Strand LSL | 2325 psi | 310 psi | 1,500,000 psi |
- Louisiana Pacific products, Portland, Oregon (ICC report no. 5004)

06190 WOOD TRUSSES, LIGHT METAL PLATE CONNECTED, DESIGN BUILD:

- Materials, manufacture, fabrication, and quality control shall conform to ANSI/TPI National Design Standard for *Metal Plate Connected Wood Trusses*.
- Steel metal plate connectors shall conform to UBC section 2321 and shall be ICBO approved.
- 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.
- 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.
- Light metal plate connected trusses shall be designed to support the more critical of the loads noted or the deflection limits noted.

Roof Trusses:	Deflection Limitations, all cases:
Dead Load, including truss weight	21 PBF
Live Load, typ.	16 PBF
Stucco Soffits	40 PBF to both chord
Live Load, flat roofs (< 4 in D slope)	20 PBF
Lateral Load	As noted on plans or 2000' min.
Deflection Limitations, all cases:	
Vert. deflection under dead and live load	Span / 240 or 3/4" max.
Vert. deflection under live load	Span / 360 or 3/4" max.
Vert. deflection between adj. trusses	1/2" max.
Horz. deflection under dead and live load	3/8" max.

Floor Trusses:	Deflection Limitations, all cases:
Dead Load, including truss weight	16 PBF
Live Load	40 PBF
Partition Load	5 PBF
Lateral Load	As noted on plans or 2000' min.
Deflection Limitations, all cases:	
Vert. deflection under dead and live load	Span / 240 or 3/4" max.
Vert. deflection under live load only	Span / 480 or 3/4" max.
Vert. deflection between adj. trusses	1/2" max.

- 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.
- 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.
- Installation of trusses shall be in accordance with the truss manufacturer's directions.
- Breaching, bridging and blocking of trusses shall be in accordance with the more restrictive of the manufacturer's directions or the Construction Documents.
- 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.
 - Identity of the company manufacturing the truss.
 - The design load.
 - The spacing of trusses.
- Trusses shall be cambered to relieve loading on non-bearing partitions.

DIVISION 8 FINISHES

- 08100 EXTERIOR CEMENT PLASTER (STUCCO) FOR APPLICATION TO WOOD FRAMING:**
 - Exterior plaster (stucco) shall be installed in accordance with IBC section 2502.
 - Wire lath shall be attached to all studs and to top and bottom plates. Where sweep screeds occur at plates, 6 penny galvanized box nails may be used in place of staples.
- 08200 GYPSUM WALLBOARD FOR APPLICATION TO WOOD FRAMING:**
 - Gypsum wallboard shall be installed in accordance with IBC section 2508.
 - Gypsum wallboard shall be attached to all studs and to top and bottom plates. Where blocking is required, it shall be attached thereto also.
 - Nails for attachment of drywall to wood shall conform with ASTM C 54, *Nails for the Application of Gypsum Wallboard*.

BORM

ENGINEERS

COSTA MESA • BEVERLY HILLS • LOS ANGELES • PHOENIX • TUCSON
PESQUERA • HOUSTON • INGLEWOOD

PHOENIX OFFICE:
19820 North 7th Street, Suite 210
Phoenix, Arizona 85024
(623) 869-0601 Telephone
(623) 869-0609 Facsimile

CORPORATE OFFICE:
555 Anton Boulevard, Suite 850
Costa Mesa, California 92626
(714) 513-1500 Telephone
(714) 513-1555 Facsimile

E-Mail: webmail@borm.com
www.borm.com

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