

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, chases, grooves, inserts.
- 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.
- 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. U.S.P. company products may be substituted in accordance with the following schedule:

Simpson (Specified)	U.S.P. (Alternate)	Simpson (Specified)	U.S.P. (Alternate)
A34	MP34	STB24	STB24
A35	MTA1	STB28	STB28
LTP4	MP4F	STB34	STB34
ITT	THO	HPAHD22	HPAHD22
HS/LIT	THF	STAD10	STAD10
LUS	JUS	STAD14	STAD14
MIT	THO	HTT22	HTT22
T822	RT16T	PHD6	PHD6
ST6224	KST724	PHD8	PHD8
ST6236	KST734	TDX10	TDX10
MS146	KST748	HD14A	APB14
MS160	KST760	HD18	TB9
MS172	KST772	MIT	THO
CS6	RS150	LTT	LTS
CM8TC16	CM8TC16	HUS	THD
MA8	FA3	MILU	THF (used w/ stiffeners only)
PAHD42	PAHD42		

DIVISION 6: WOOD

06030 FASTENERS AND SUPPORTS:

- Generic nails shall be of steel wire and conform with ASTM F 1667 Standard Specification for Drive 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 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-515).
- 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 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	Wire Gauge	Head Dia.	Pre-bore Drill Dia.
8d Joist Hanger (Simp. NB)	1-1/2"	13#	10-1/4"	28#
8d Paslode	1-1/2"	13#	11	28#
8d Ring Shank	2-3/8"	12#	10-1/4"	28#
8d Common	2-1/2"	13#	10-1/4"	28#
10d Joist Hanger (Simp. NIO)	1-1/2"	14#	9	31#
10d Paslode	1-1/2"	14#	9	31#
10d Plywood	2-1/4"	14#	9	31#
10d Ring	2-1/2"	13#	10	31#
10d Common	3"	14#	9	31#
16d Joist Hanger (Simp. N16)	2-1/2"	16#	8	34#
16d Paslode	2-1/2"	16#	8	34#
16d Short (Framer)	3-1/4"	13#	10-1/4"	28#
16d Box	3-1/2"	15#	10	34#
16d Sinker	3-1/4"	14#	9	34#
16d Common	3-1/2"	14#	9	34#
20d Common	4"	15#	6	40#
20d Simpson N20A, Ring	1-3/4"	19#	6	40#
20d Simpson N20AN, Ring	2-1/8"	19#	6	40#
40d Common	5"	25#	4	46#
50d Simpson N54A, Ring	2-1/2"	25#	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, Adhesives 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 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.

- 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. I211, I258, 4448, 4458, NER 208, NER 393, NER 418, NER 421, NER 422, NER 432, NER 443, NER 469.

- Leg screws shall conform with ANSI/AISI 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 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 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 leg bolt heads and nuts bearing on wood. Leg bolts shall be installed in accordance with the following:

Leg Screwing Schedule:

Bolt Diameter	Hole For Unthreaded Shank	Hole For Threaded Shank
1/4 inch	1/4 inch	5/32 inch
3/8 inch	3/8 inch	15/64 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	23/64 inch
1 inch	1 inch	23/32 inch

- Round washers shall be ANSI/AISI 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 Outside Dia.	Square Washer Thickness
1/4 inch	5/16 inch	3/4 inch	1/16 inch	3/4 inch	3/16 inch
3/8 inch	1/2 inch	5/8 inch	1/16 inch	5/8 inch	3/16 inch
1/2 inch	5/8 inch	1-3/8 inch	5/64 inch	1-1/2 inch	1/4 inch
5/8 inch	11/16 inch	1-3/4 inch	9/64 inch	2-1/2 inch	5/16 inch
3/4 inch	13/16 inch	2 inch	5/32 inch	2-3/4 inch	5/16 inch
7/8 inch	1 1/16 inch	2-1/4 inch	11/64 inch	3 inch	3/8 inch
1 inch	1 1/16 inches	2-1/2 inch	11/64 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 U.S. 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:

Lumber Grade Schedule:

Use	Grade Mark	Grading Rules
Exterior bearing wall	Spruce-Fine-Fir # 1	WWPA or WCLIB
Exterior nonbearing wall	Spruce-Fine-Fir # 2	WWPA or WCLIB
Interior bearing wall	Spruce-Fine-Fir # 1	WWPA or WCLIB
Interior nonbearing wall	Spruce-Fine-Fir # 2	WWPA or WCLIB
2x8 & deeper studs	Douglas Fir-Larch # 1	WWPA or WCLIB
2x4, 3x4, 4x4 plates	Douglas Fir-Larch # 2	WWPA or WCLIB
2x6, 3x6, 4x6 & deeper plates	Douglas Fir-Larch # 2	WWPA or WCLIB
3x4 & 4x4 studs & posts	Douglas Fir-Larch # 2	WWPA or WCLIB
4x6 & deeper square posts	Douglas Fir-Larch # 2	WWPA or WCLIB
6x6 & larger square posts	Douglas Fir-Larch # 1	WWPA or WCLIB
6x8 & larger rectangular posts	Douglas Fir-Larch # 1	WWPA or WCLIB
2x4 joists & rafters	Douglas Fir-Larch # 2	WWPA or WCLIB
2x6 & deeper joists & rafters	Douglas Fir-Larch # 2	WWPA or WCLIB
4x6 & 4x12 beams	Douglas Fir-Larch # 2	WWPA or WCLIB
4x14 & 4x16 beams	Douglas Fir-Larch # 1	WWPA or WCLIB
6x8, 6x10, 10x12 & deeper beams	Douglas Fir-Larch # 1	WWPA or WCLIB

- Lumber grading agencies shall be:

Lumber Grading Agencies Schedule:

Grading rules	Lumber Grading Agencies	Mark
WWPA or WCLIB:	California Lumber Inspection Service Pacific Lumber Inspection Bureau, Inc. Timber Products Inspection West Coast Lumber Inspection Bureau Western Wood Products Association	WWPA WCLIB
NLGA:	Alberta Forest Products Association California Lumber Inspection Service Canadian Lumber Inspection Bureau Cariboo Lumber Manufacturers Association Central Forest Products Association Interior Lumber Manufacturers Association Macdonald Inspection Maritime Lumber Bureau Ontario Lumber Manufacturers Association Pacific Lumber Inspection Bureau, Inc. Quebec Lumber Manufacturers Association	ALMA CFLA CFLM ILMA MLMA OLMA

- Lumber shall be dry and well seasoned, and the moisture content shall not exceed 18% 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. 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, AWPAC Standard C-2 Lumber, Timbers, Bridges and Misc. Ties-Pressure Treatment. Wood product panels required to be preservative treated shall be plant treated in accordance with American Wood Preservers Association, AWPAC Standard C-2, Pressure-Treated Lumber. 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 AWPAC 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.

- Wood product panels (plywood, composite panels, wafer board, oriented strand board, structural particleboard) shall be in conformance with UBC Sec. 23-2, based on U.S. Product Standard PS 1, Construction and Industrial Plywood or shall conform with U.S. Product Standard PS 2, Pressure-Treated Lumber-Based Structural 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 GA937) by Timber, Inc., Inc., Inc., Eugene, Oregon, (ICBO report no. NER GA125). 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.

Wood Panel Grade Schedule:

Use	Product Standard	Panel Grade APA or TECO	Ply #	Minimum Exposure Durability
Roof sheathing:	PS 1, PS 2	Rated Sheathing or Sheathing Span	3/5	Exposure 1
Floor sheathing:	PS 1, PS 2	Rated Stud-I-Floor or Floor Span	4/3	Exposure 1
Wall sheathing 3/8":	PS 1, PS 2	Rated Sheathing or Sheathing Span (I)	3/3	Exposure 1
Wall sheathing 1/2":	PS 1, PS 2	Rated Sheathing or Sheathing Span (I)	4/3	Exposure 1
Flating sheath:	PS 1 only	Structural I	5/5	Exposure 1

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

06101 GLUED LAMINATED TIMBER:

- Materials, manufacture, fabrication, and quality control shall conform with ANSI/AITC A 190.1, 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 Symbols - outer Lams / Core Lams

Symbol	Species	Fp	Fp reverse	Fv	E
24F-18E	US, SP, US, SP	2400 psi	1600 psi	185 psi	1800,000 psi
24F-14	US, SP, US, SP	2400 psi	1850 psi	240 psi	1800,000 psi
24F-12	US, SP, US, SP	2400 psi	2400 psi	240 psi	1800,000 psi

- Glue-Lam beams and headers (GLB) shall be 24F-18E, unless noted otherwise per plan.
- 24F-18E 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 ft. 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 190.1. Custom glued laminated timber members shall each have a Certificate of Inspection indicating conformance to ANSI/AITC A 190.1. The Certificate shall be issued by the American Institute of Timber Construction, Englewood, Colorado (ICBO report no. NER 206) or by the Western Wood Products Association, Portland, Oregon, (ICBO report no. NER GA 210) or by the APA, The Engineered Wood Association, Tacoma, Washington, (ICBO report no. NER GA937). 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.

- Glued laminated timber members exposed to weather shall be pressure treated in accordance with American Institute of Timber Construction, AITC Standard 103, Standard for Pressure-Treated Lumber, or by the American Wood Preservers Association, AWPAC Standard C-28, Pressure-Treated Lumber, as noted below. 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

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

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

06102 CERTIFIED GLUED LUMBER (RMT)

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

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

06103-AZ LAMINATED VENEER LUMBER, PARALLEL STRAND LUMBER, & TIMBER STRAND LUMBER:

- 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) 1 Level True Joist Products, Boise, Idaho (ICC ES E9R-1387).

LVL Grade Schedule:

Size noted on plan	Grade & Grade Mark	Fp	Fv	E
1-3/4 inch wide	Micro-Lam LVL	2600 psi	285 psi	1,800,000 psi

PSL Grade Schedule:

Size noted on plan	Grade & Grade Mark	Fp	Fv	E
1-3/4 inch wide	Parallel PSL	2900 psi	290 psi	2,000,000 psi
2-1/16 inch wide	Parallel PSL	2900 psi	290 psi	2,000,000 psi
3-1/2 inch wide	Parallel PSL	2900 psi	290 psi	2,000,000 psi
5-1/4 inch wide	Parallel PSL	2900 psi	290 psi	2,000,000 psi
7 inch wide	Parallel PSL	2900 psi	290 psi	2,000,000 psi

LSL Grade Schedule:

Size noted on plan	Grade & Grade Mark	Fp	Fv	E
1-3/4 inch wide	Timber Strand PSL Rim Board	1100 psi	400 psi	1,300,000 psi
1-3/4 inch wide	Timber Strand LSL	2600 psi	285 psi	1,800,000 psi
3-1/2 x 9-1/2	Timber Strand LSL	1100 psi	310 psi	1,500,000 psi
3-1/2 x 11-1/4	Timber Strand LSL	1100 psi	400 psi	1,500,000 psi
3-1/2 x 11-7/8 and deeper	Timber Strand LSL	2325 psi	310 psi	1,550,000 psi

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

LVL Grade Schedule:

Size noted on plan	Grade & Grade Mark	Fp	Fv	E
1-3/4 inch wide	Gang-Lam LVL	2650 psi	280 psi	1,900,000 psi
3-1/2 inch wide	Gang-Lam LVL	2950 psi	290 psi	2,000,000 psi
5-1/4 inch wide	Gang-Lam LVL	2950 psi	290 psi	2,000,000 psi

- 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.

- 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 AWPAC Standard C-28 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 AWPAC C-28 and the type of treatment shall be made by the fabricator. 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.

06100 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:
 - Loading Conditions:
 - Dead Load, including truss weight: 21 PSF
 - Live Load, top: 16 PSF
 - Stucco soffit: 40 PSF to bott. chord
 - Live Load, flat roofs (< 4 in 12 slope): 20 PSF