Oct 18, 2010

THE FOLLOWING BUILDING CODES AND STANDARDS SHALL BE REFERENCED DURING CONSTRUCTION:

IBC 2003	EDITION OF THE IBC INTERNATIONAL BUILDING CODE
ASCE 7	AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
ACI 301	AMERICAN CONCRETE INSTITUTE SPECIFICATION FOR STRUCTURAL CONCRETE
AISC	AMERICAN CONCRETE INSTITUTE SPECIFICATION FOR STRUCTURAL CONCRETE
ACI 318	AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
NDS	NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION BY NATIONAL FOREST PRODUCTS ASSOCIATION, 2001.

REFERENCE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. REFERENCE MECHANICAL, ELECTRICAL, AND ARCHITECTURAL PLANS FOR SIZES AND LOCATIONS OF WALL AND SLAB OPENINGS, DUCTS, PIPING, CURBS, AND EQUIPMENT PADS. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, OR NOTES ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION.

EXISTING DIMENSIONS AND CONDITIONS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING CONSTRUCTION AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION OR FABRICATION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF DEVIATIONS OR CHANGES ARE REQUIRED TO THE CONTRACT DOCUMENTS OR APPROVED SHOP DRAWINGS DUE TO INTERFERENCES, FABRICATION ERRORS, OR OTHER CAUSES.

THE STRUCTURE IS SELF-SUPPORTING AND STABLE AFTER THE ENTIRE BUILDING IS COMPLETELY CONSTRUCTED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCING DURING CONSTRUCTION AND ERECTION TO PROVIDE AND ENSURE LOCAL AND OVERALL STABILITY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION AND ERECTION. THE CONTRACTOR SHALL RETAIN A LICENSED STRUCTURAL ENGINEER TO DESIGN TEMPORARY BRACING/SHORING AND DETERMINE WHERE THE TEMPORARY BRACING/SHORING IS NEEDED.

GENERAL NOTES

SCALE: NTS

LIVE LOAD:
ALL AREAS = 40 PSF

SNOW LOADS:
GROUND SNOW LOAD, Pg = 60 PSF
SNOW EXPOSURE FACTOR, Ce = 1.0
SNOW LOAD IMPORTANCE FACTOR, I = 1.0
FLAT ROOF SNOW LOAD, Pf = 42 PSF + DRIFT

DESIGN CRITERIA

SCALE: NTS

ALL CONCRETE WORK, INCLUDING MATERIAL SELECTION, ADMIXTURES, MIXING, AND PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH APPLICABLE BUILDING CODES. IN ADDITION, REFERENCE THE FOLLOWING CONCRETE STANDARDS AND SPECIFICATIONS:

ACI 318	AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
ACI 301	AMERICAN CONCRETE INSTITUTE SPECIFICATIONS FOR STRUCTURAL CONCRETE
ACI 305	STANDARD SPECIFICATION FOR HOT WEATHER CONCRETING
ACI 306	STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING
ACI 308	STANDARD PRACTICE FOR CURING CONCRETE

REQUIRED CONCRETE PARAMETERS ARE AS FOLLOWS:

LOCATION	MAX W/C RATIO	f'c	AIR-ENTRAINMENT
FOUNDATIONS, FOOTINGS, & FOUNDATION WALLS	.52	3,000 PSI	5-7%

WHERE: W/C = WATER TO CEMENT RATIO AND
f'c = COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS

MAXIMUM AGGREGATE SIZE SHALL BE ¾", IN CONFORMANCE WITH ASTM C33.
USE PORTLAND CEMENT TYPE II, IN CONFORMANCE WITH ASTM 150.
AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C 260.
ADMIXTURES SHALL CONFORM TO "SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE" ASTM C 494.
FLY ASH USED AS ADMIXTURES SHALL CONFORM TO ASTM C 618.
CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE IS NOT PERMITTED.

MAXIMUM SLUMP AFTER THE ADDITION OF A WATER-REDUCING ADMIXTURE IS 8 INCHES.

CONCRETE EXPOSED TO FREEZING AND THAWING, INCLUDING FOUNDATIONS, FOOTINGS, FOUNDATION WALLS, AND EXTERIOR WALKWAYS SHALL BE AIR ENTRAINED WITH AIR CONTENT BETWEEN 5% AND 6%. CONTRACTOR SHALL NOT PLACE CONCRETE ON FROZEN GROUND OR IN WATER. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING NEAR-FREEZING OR FREEZING WEATHER. REFERENCE ACI 306, AS NOTED ABOVE, FOR RECOMMENDATIONS FOR COLD WEATHER CONCRETING.

ANCHOR BOLTS SHALL CONFORM TO ASTM A307. ANCHOR BOLTS SHALL HAVE HEAVY HEX NUTS AND LOCK WASHERS.

CONCRETE NOTES

SCALE: NTS

USE DEFORMED BILLET-STEEL REINFORCING BARS, GRADE 60, IN CONFORMANCE WITH ASTM A615. REINFORCEMENT SHALL BE ACCURATELY PLACED AND SUPPORTED PRIOR TO CONCRETE PLACEMENT, AND SHALL BE SECURED AGAINST DISPLACEMENT.

MINIMUM CONCRETE COVER FOR REINFORCEMENT	
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3 INCHES

REINFORCEMENT HOOKS SHALL CONFORM TO STANDARD HOOKS ACCORDING TO ACI 318.
WELDING OF REINFORCEMENT IS NOT PERMITTED, U.N.O.

CONCRETE REINFORCMENT NOTES

SCALE: NTS

ALL LUMBER SHALL BE VISUALLY GRADED AND STAMPED WITH GRADE DESIGNATION, SPECIES, AND ADDITIONAL INSPECTION INFORMATION, U.N.O..

CARE SHALL BE TAKEN TO PROTECT TIMBER FROM WEATHER AND DAMPNESS. DO NOT STACK IN SUCH A WAY AS TO CAUSE WARPING OR PREVENT ADEQUATE AIR CIRCULATION.

WOOD GRADES AND SPECIES:
1. SPRUCE-PINE-FIR, No.1/No.2 OR BETTER FOR TYPICAL LUMBER (JOISTS, WALLS, ETC) U.N.O.
2. USE SOUTHERN YELLOW PINE FOR EXTERIOR EXPOSURE APPLICATIONS AND WHERE SHOWN ON DRAWINGS AS PRESERVATIVE PRESSURE TREATED LUMBER (PT OR PPT).
3. WHERE NOTED LVL ON DRAWINGS, PROVIDE VERSA LAM 3100 BY BOISE CASCADE, OR EQUIVALENT, WHICH HAS THE FOLLOWING MINIMUM ALLOWABLE STRESSES:

A. LVL PROPERTIES:
Fb = 3100 PSI Fc = 2510 PSI (PARALLEL TO GRAIN)
Fv = 285 PSI Fc = 750 PSI (PERPENDICULAR TO GRAIN)
Ft = 1555 PSI E = 2,000,000 PSI

STRUCTURAL LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19%.

PROVIDE PRESSURE TREATED OR WOLVANIZED LUMBER FOR ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE.

NOMINAL SIZES ARE TYPICALLY REFERENCED ON THE DRAWINGS. PROVIDE ACTUAL SIZES AS SET FORTH IN U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD PS20-99.

ALL PLYWOOD SHALL BE APA RATED CDX SHEATHING:
1. USE ½" PLYWOOD WALL SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO WALL STUDS. STAGGER PANEL ENDS AND BLOCK ALL PANEL EDGES.
2. USE ⅜" PLYWOOD ROOF SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO FRAMING. STAGGER PANEL ENDS. USE SHEATHING CLIPS BETWEEN SHEETS WHERE BLOCKING IS NOT REQUIRED.
3. USE ¾" PLYWOOD FLOOR SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO FRAMING. STAGGER PANEL ENDS.

PROVIDE FULL DEPTH BLOCKING AT ENDS AND INTERIOR SUPPORTS OF ALL JOISTS AND RAFTERS WHERE JOISTS AND RAFTERS FRAME OVER SUPPORTS. PROVIDE 1x3 DIAGONAL BRIDGING OR FULL DEPTH SOLID BLOCKING FOR EACH 8'-0" OF SPAN FOR ALL JOISTS AND RAFTERS.

WHERE BEAMS ARE LABELED ON PLAN, DO NOT SPLICE BEAM NOR ANY PLY OF BEAM BETWEEN SUPPORTS.

FASTENERS SHALL COMPLY WITH RECOMMENDED FASTENING SCHEDULE OF REFERENCED BUILDING CODE, U.N.O. ON DRAWINGS, SPIKE TOGETHER ALL FRAMING MEMBERS WHICH ARE BUILT-UP USING A MINIMUM OF 2-ROWS OF 16d NAILS AT 12" O.C. STAGGERED, UNLESS OTHERWISE NOTED IN BOCA OR ON THE DRAWINGS. NAIL MULTIPLE LVL'S TOGETHER AS RECOMMENDED BY THE MANUFACTURER USING A MINIMUM OF 2-ROWS OF 16d NAILS AT 12" o.c. STAGGERED. ALL FASTENERS, NUTS, AND WASHERS SHALL BE HOT-DIPPED GALVANIZED.

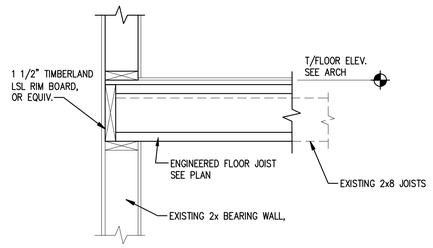
ALIGN COLUMNS SUCH THAT COLUMNS BEAR CONTINUOUSLY TO FOUNDATION SUPPORT.

PROVIDE HORIZONTAL BLOCKING FOR ALL LOAD BEARING WALLS AT 4'-0" O.C. VERTICAL, MAXIMUM.

SUBMIT SHOP DRAWINGS FOR ALL PREFABRICATED WOOD JOISTS AND WALL PANELS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

WOOD NOTES

SCALE: NTS



SECTION

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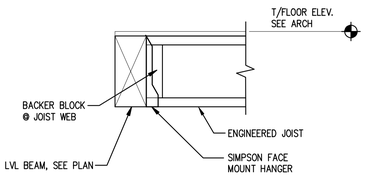

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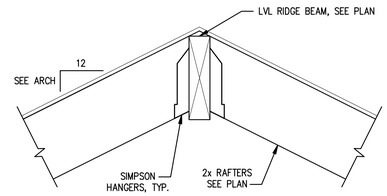

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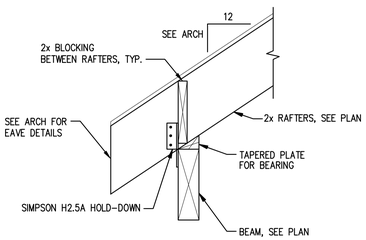

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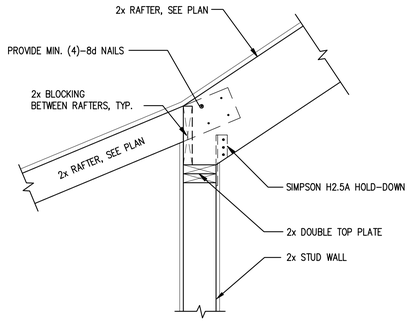

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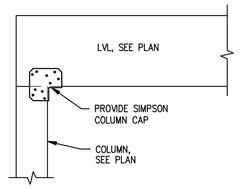

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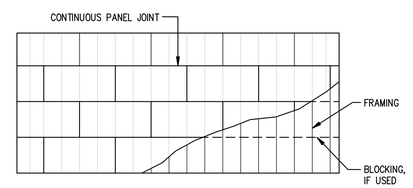
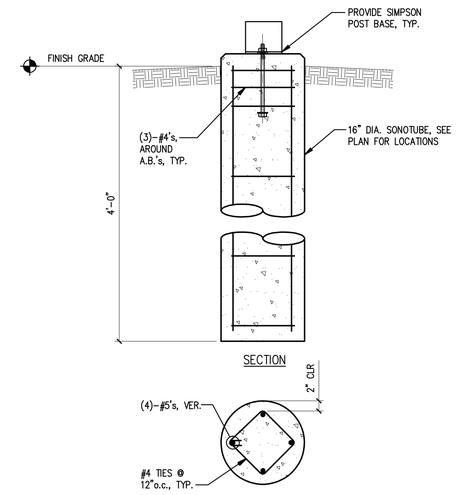


NOTES FOR TYPICAL FLOOR/ROOF SHEATHING DETAIL:
1. SEE S0.0 FOR WOOD NOTES FOR SHEATHING REQUIREMENTS.
2. USE APA RATED ⅜-INCH CDX PLYWOOD SHEATHING ON ROOF. USE APA RATED ¾-INCH PLYWOOD SHEATHING ON FLOOR.
3. ATTACH ROOF AND FLOOR DIAPHRAGMS W/8d NAILS SPACED 12" o.c. ALONG INTERMEDIATE FRAMING MEMBERS AND 6" o.c. AT SUPPORTED EDGES.
4. FLOOR AND ROOF DIAPHRAGMS ARE UNBLOCKED, EXCEPT AS NOTED ON ROOF FRAMING PLAN.
5. USE SHEATHING CLIPS BETWEEN SHEETS ON ROOF WHERE BLOCKING IS NOT REQUIRED.

TYP. FLOOR/ROOF SHEATING DETAIL

SCALE: NTS 7



SECTION

SCALE: 1"=1'-0" 8

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REVISIONS

No.	DATE	ISSUE
0	12-18-09	FOR CONSTRUCTION

SHEET TITLE:

STRUCTURAL NOTES AND DETAILS

DESIGNED:	TD
DRAWN:	TD
DATE:	04-02-09
CADD FILE:	9019-S1.dwg
PROJECT NUMBER:	9019

S2.1