

# GENERAL NOTES

REQUIRED SPECIAL INSPECTIONS	
ITEM	SECTION
SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION	1704.7
STRUCTURAL CONCRETE OVER 2500 PSI	1704.4
WELDING - SHOP AND FIELD	1704.3.1
HIGH STRENGTH BOLTS	1704.3.3
ANCHOR BOLTS, EXPANSION ANCHORS, AND EPOXY ANCHORS IN CONCRETE	1704.4

ABBREVIATIONS LIST	
2X	2" NOMINAL WIDTH
4X	4" NOMINAL WIDTH
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AFF	ABOVE FINISH FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BOT	BOTTOM OF STEEL
BRG	BOTTOM, BOTTOM OF BEARING
CJ	CENTER JOINT
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONN	CONNECTION
CONST	CONTINUOUS
DIA	DIAMETER
EQ	EQUAL
ELEV	ELEVATION
EQ	EQUAL
EW	EACH WAY
FF	FOUNDATION
FIN	FINISHED FLOOR
FIELD	FIELD VERIFY
GA	GAUGE
GC	GENERAL CONTRACTOR
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
INFO	INFORMATION
KSI	KIPS PER SQUARE INCH
L	LENGTH
LEH	LONG EDGE HORIZONTAL
LEV	LONG EDGE VERTICAL
LLV	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
OSB	ORIENTED STRAND BOARD
PAF	POWER ACTUATED FASTENERS
PCF	POUNDS PER CUBIC FOOT
PJ	PANEL JOINT
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PLY	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
QTY	QUANTITY
REF	REFERENCE, REFER TO
REIN	REINFORCING
REQ	REQUIRED
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
SCH	SCHEDULE
SDI	STEEL DECK INSTITUTE
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SPECS	SPECIFICATIONS
STL	STEEL
STRUC	STRUCTURAL
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOP	TOP OF PIER
TOS	TOP OF STEEL
TRANS	TRANSVERSE
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VF	VERIFY IN FIELD
WP	WORK POINT

## GENERAL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO THOROUGHLY UNDERSTAND AND COMPLY WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS FOR THE PROJECT. ANY DEVIATION FROM THE CONTRACT DRAWINGS AND SPECIFICATIONS MUST BE APPROVED IN WRITING BY THE ENGINEER OF RECORD. DEVIATIONS FROM THE CONTRACT DRAWINGS AND SPECIFICATIONS NOT APPROVED BY THE ENGINEER OF RECORD (INCLUDING, BUT NOT LIMITED TO, CONDUCTING ALL SPECIAL INSPECTIONS) WILL RESULT IN DENIAL OF A FINAL LETTER OF COMPLIANCE.

THESE GENERAL NOTES SHALL APPLY UNLESS SPECIFICALLY NOTED ON THE PLANS AND DETAILS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SHALL COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH THE ARCHITECTURAL DRAWINGS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE 2006 INTERNATIONAL BUILDING CODE.

THE STRUCTURAL SYSTEM OF THIS BUILDING IS DESIGNED TO PERFORM AS A COMPLETED UNIT. PRIOR TO COMPLETION OF THE STRUCTURE, STRUCTURAL COMPONENTS MAY BE UNSTABLE AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE TEMPORARY SHORING AND/OR BRACING AS REQUIRED FOR THE STABILITY OF THE INCOMPLETE STRUCTURE AND FOR THE SAFETY OF ALL ON-SITE PERSONNEL.

## DESIGN CRITERIA

BUILDING CODE: 2006 INTERNATIONAL BUILDING CODE

1. GRAVITY LOADS:	
A. DEAD LOADS	
1) ROOF	20 PSF
2) ROOF MECHANICAL ZONE	75 PSF
B. LIVE LOADS	
1) ROOF	20 PSF MIN. OR SNOW LOAD 100 PSF
2) FLOOR	
C. SNOW LOADS	
1) GROUND SNOW LOAD, P <sub>g</sub>	5 PSF
2) IMPORTANCE FACTOR, I	1.0
2. LATERAL LOADS	
A. WIND LOADS	
1) WIND SPEED	95 MPH
2) IMPORTANCE FACTOR, I	1.0
3) EXPOSURE	"B"
B. DESIGN WIND PRESSURE COMPONENTS AND CLADDING	
1) WALLS (TYPICAL)	25 PSF
2) ROOF UPLIFT (NET)	14 PSF
C. DESIGN WIND PRESSURE MWFRS	
0-15 FT	18.6 PSF
15-20 FT	19.7 PSF
D. SEISMIC LOADS	
1) SEISMIC IMPORTANCE FACTOR, I	1.0
2. OCCUPANCY CATEGORY	
3) SPECTRAL RESPONSE COEFFICIENTS	II
A) SDS	0.137
B) SD1	0.044
4) SITE CLASS	D
5) SPECTRAL RESPONSE ACCELERATIONS	
A) SS	0.128
B) S1	0.028
6) SEISMIC DESIGN CATEGORY	A

FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL INVESTIGATION AND REPORT PREPARED BY ROCK ENGINEERING AND TESTING LABORATORY DATED SEPTEMBER 26, 2012 (RETL JOB NO. G212253).

## FOUNDATION NOTES

- FOR A DISTANCE OF 5'-0" OUTSIDE THE BUILDING LINE, REMOVE AT LEAST 36" OF TOP SOIL, VEGETATION (TREE STUMPS AND MAJOR ROOT SYSTEMS SHOULD BE COMPLETELY REMOVED), DEBRIS, ETC., AND ANY ADDITIONAL AMOUNT REQUIRED TO ENSURE THAT THE FINAL GRADING WILL PROVIDE A MINIMUM OF 48" OF SELECT FILL BELOW THE BOTTOM OF THE SLAB. REMOVAL OF SURFICIAL SOIL CAN BE STOPPED IF LIMESTONE IS ENCOUNTERED.
- REWORK AND COMPACT THE TOP 6" OF THE EXPOSED SUBGRADE TO 95% OF THE MAXIMUM DENSITY AT 2% TO 3% ABOVE OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM METHOD D 698 USING A COMPACTIVE EFFORT OF 7.16 FT-LB./CU.IN.. DO NOT ALLOW THE EXPOSED SUBGRADE TO DRY OUT PRIOR TO PLACING THE STRUCTURAL FILL.
- FILL BACK TO REQUIRED GRADE WITH MATERIAL SELECTED AND COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS BELOW. FILL SHOULD EXTEND AT LEAST 5'-0" BEYOND THE FOUNDATION PERIMETER AND SLOPE DOWN AT NOT MORE THAN ONE TO TWO SLOPE TO NATURAL SOIL EXCEPT AT DEEP BEAM CORNERS.
- SELECT FILL, WHEN PROPERLY SLAKED AND TESTED BY STANDARD LABORATORY METHODS, SHALL MEET THE FOLLOWING REQUIREMENTS:
 

MAXIMUM LIQUID LIMIT	40%
MINIMUM PLASTICITY INDEX	5
MAXIMUM PLASTICITY INDEX	18
- SAMPLES OF PROPOSED SELECT FILL SHALL BE FURNISHED TO THE TESTING LABORATORY 7 DAYS PRIOR TO INSTALLATION TO PERMIT TIME FOR SPECIFICATION COMPLIANCE INSPECTION AND APPROVAL.
- SELECT FILL SHALL BE COMPACTED IN THE FIELD IN LOOSE LIFTS NOT TO EXCEED 8" TO A MAXIMUM OF 95% OF MAXIMUM LABORATORY DENSITY (FILL SHALL BE WITHIN 2% OF OPTIMUM MOISTURE CONTENT DURING COMPACTON) AS DETERMINED BY ASTM METHOD D 698 USING A COMPACTIVE EFFORT OF 7.16 FT-LB./CU.IN.. FIELD DENSITIES SHALL BE CHECKED IN ACCORDANCE WITH ASTM D-2922.
- LABORATORY MOISTURE-DENSITY CURVE OR CURVES AS REQUIRED AND RESULTS OF AT LEAST 2 FIELD DENSITY CHECKS PER LIFT ARE TO BE SUBMITTED TO THE ARCHITECT OR ENGINEER.
- BEAM TRENCHES SHALL BE CUT DIRECTLY INTO COMPACTED FILL TO PLAN DIMENSIONS AND SACKING OF TRENCHES WILL BE PERMITTED FOR INSIDE OF PERIMETER BEAMS. IN CASE SACKING IS USED, DENSITY TESTING WILL NOT BE PERFORMED CLOSER THAN 4'-0" FROM THE INSIDE OF THE PERIMETER BEAM FACE.
- ALL FOUNDATION EXCAVATIONS SHALL BE EXTENDED TO FINAL GRADE AND THE FOOTINGS CONSTRUCTED AND POURED AS SOON AS POSSIBLE TO MINIMIZE POTENTIAL DAMAGE (DUE TO WETTING AND/OR DRYING) TO BEARING SOILS. FOUNDATION CONCRETE SHOULD NOT BE PLACED ON SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR SEEPAGE.

## CONCRETE NOTES

- ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE (ACI) SPECIFICATION, ACI 301-05 AND THE BUILDING CODE REQUIREMENTS, ACI 318-08.
- ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE "ACI DETAILING MANUAL", PUBLICATION SP-66, LATEST EDITION, ACI 315, LATEST EDITION, AND ACI 315R, LATEST EDITION.

## 3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:

ALL CONCRETE	3,000 PSI
MINIMUM CEMENT CONTENT	4.5 SACKS/CY
MAXIMUM WATER/CEMENT RATIO	0.55
SUMP RANGE	2" MIN. - 5"

## MAX.

TYPE C OR F FLY ASH CAN BE SUBSTITUTED FOR CEMENT 20% TO 25% BY WEIGHT. CALCIUM CHLORIDE IS NOT ACCEPTABLE FOR USE IN MIX. FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE. RETAIN A QUALIFIED TESTING LABORATORY TO MAKE CONCRETE CYLINDERS AND PERFORM COMPRESSIVE TESTS. A MINIMUM OF THREE CYLINDERS SHALL BE TAKEN PER 50 CUBIC YARDS OF CONCRETE. WITH ONE TEST AT 7 DAYS AND TWO AT 28 DAYS. COARSE AND FINE AGGREGATES SHALL COME FROM SOURCES LISTED ON THE "CONCRETE RATED SOURCE QUALITY CATALOG" BY THE TEXAS DEPARTMENT OF TRANSPORTATION AS NON REACTIVE SOURCES PUBLISHED 1-21-11. SOURCES OF RIVER GRAVEL AND SAND SHALL HAVE NO MARCASITE OR IRON PYRITE PRESENT AT THE PRODUCTION FACILITY.

REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60.

STANDARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:

SLABS ON GRADE (TOP)	2 IN.
GRADE BEAMS AND PIERS	
TOPS	1 1/2 IN.
SIDES	3 IN.
BOTTOMS	3 IN.
OTHER	1 1/2 IN.

AT CORNERS AND "T" INTERSECTIONS OF ALL BEAMS EXTEND 4 CORNER BARS EQUAL TO THE SCHEDULED STEEL IN THE ADJACENT BEAMS 2'-0" EACH WAY, 2 BARS TOP AND 2 BARS BOTTOM. PROVIDE CORNER BARS AT ALL INTERMEDIATE REINFORCING BARS IN WALLS AND DEEP BEAMS.

ALL ACCESSORIES SHALL BE IN ACCORDANCE WITH THE "ACI DETAILING MANUAL", PUBLICATION SP-66, LATEST EDITION, ACI 315, LATEST EDITION, AND ACI 315R, LATEST EDITION. PROVIDE CONCRETE BRICK CHAIRS AT ALL BEAMS AND SLABS TO SUPPORT REINFORCING STEEL AT A SPACING NOT TO EXCEED 4'-0" O.C. IN ANY DIRECTION.

PROVIDE CONTROL JOINTS IN ALL SLABS AT A SPACING NOT TO EXCEED 15'-0" O.C. EACH WAY. JOINT DEPTH SHALL BE A MINIMUM OF 1/4 THE SLAB THICKNESS. IF JOINTS ARE SAW-CUT, THE CUTTING SHALL TAKE PLACE IMMEDIATELY AFTER FINISHING THE SLAB. JOINTS SHALL NOT BE LOCATED IN LINE WITH AND ABOVE GRADE BEAMS. COORDINATE LOCATION OF JOINTS WITH ARCHITECT.

VERTICAL JOINTS IN FLOOR SLABS ARE TO BE SHOWN ON PLANS. NO HORIZONTAL JOINTS WILL BE PERMITTED IN SLABS OR BEAMS UNLESS NOTED OTHERWISE.

INCLUDE AN ALLOWANCE FOR .5 TONS OF REINFORCING STEEL (ANY SIZE) TO BE USED AS DIRECTED IN THE FIELD FOR SPECIAL CONDITIONS (LABOR PLACING THE SAME TO BE INCLUDED). UPON COMPLETION OF THE PROJECT REBATE ANY AMOUNT REMAINING TO THE OWNER.

LAP LENGTHS FOR BARS SCHEDULED AND DETAILED "CONT." SHALL BE:

FOR 3000 PSI CONCRETE	
#3 BARS - 17 INCHES	#7 BARS - 49 INCHES
#4 BARS - 22 INCHES	#8 BARS - 56 INCHES
#5 BARS - 28 INCHES	#9 BARS - 63 INCHES
#6 BARS - 33 INCHES	#10 BARS - 71 INCHES
	#11 BARS - 79 INCHES

CONCRETE PLACED BY PUMPING SHALL MEET THE FOLLOWING REQUIREMENTS:

- COARSE AGGREGATE SHALL BE GRADED FROM A MAXIMUM OF 1" DOWN.
- MAXIMUM ALLOWABLE INCREASE IN CEMENT FACTOR SHALL BE 1/2 SACK PER CUBIC YARD OVER NORMAL MIX DESIGN.
- MAXIMUM WATER CEMENT RATIO SHALL CONFORM TO NOTE 3 OF THIS SECTION. IF MORE WORKABILITY IS REQUIRED, AN ADMIXTURE MAY BE USED.
- MAXIMUM WEIGHT RATIO OF FINE AGGREGATES TO COARSE AGGREGATES SHALL NOT EXCEED 2/3.

REFER TO ACI 301-05, SECTION 800, FOR OTHER PUMPING REQUIREMENTS.

WELDING OR HEAT BENDING OF REINFORCING BARS SHALL NOT BE PERMITTED, UNLESS APPROVED BY THE ENGINEER.

PROVIDE 3 - 3'-0" LONG #4 DIAGONAL REINFORCING BARS AT ALL REINTRANT CORNERS.

DURING PLACEMENT OF CONCRETE, USE A TREMIE OR OTHER MEANS TO LIMIT FREE FALL OF CONCRETE TO 5'-0".

PROVIDE 1/2" DIAMETER X 10" LONG HOT DIPPED GALVANIZED ANCHOR BOLTS AT 4'-0" O.C. IN THE FOUNDATION AT THE LOCATIONS OF ALL EXTERIOR WOOD FRAMED WALLS.

EXTEND ALL GRADE BEAMS A MINIMUM OF 2'-0" BELOW EXISTING GRADE.

CONCRETE SHALL BE CONTINUOUSLY CURED FOR A PERIOD OF 7 DAYS FOLLOWING PLACEMENT BY ANY OF THE FOLLOWING METHODS:

- FOGGING WITH WATER
- APPLYING AN APPROVED SPRAY ON CONCRETE CURING COMPOUND C COVERING WITH A POLY MEMBRANE

PROVIDE STEGO WRAP 15 MIL VAPOR BARRIER OR APPROVED EQUAL UNDER ALL CONCRETE SLABS AND GRADE BEAMS. VAPOR BARRIER SHALL CONFORM TO ASTM E 1745 CLASS A REQUIREMENTS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND ASTM E 1643-98. DO NOT TEAR OR PUNCTURE VAPOR BARRIER.

SHOP DRAWINGS SHALL BE PREPARED FOR ALL REINFORCING STEEL AND SUBMITTED FOR REVIEW BY THE ENGINEER. ENGINEER'S REVIEW WILL COVER BAR SIZES, AND GENERAL AGREEMENTS BUT NOT DIMENSIONS OR QUANTITIES. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS. ANY REPRODUCED DRAWINGS WILL BE REJECTED AND RESUBMITTAL WILL BE REQUIRED.

## 21. HOT WEATHER CONCRETE:

THE TEMPERATURE OF CONCRETE AS PLACED SHALL NOT EXCEED 90°F UNLESS OTHERWISE SPECIFIED OR PERMITTED. LOSS OF SLUMP, FLASH SET, OR COLD JOINTS DUE TO TEMPERATURE OF CONCRETE AS PLACED WILL NOT BE ACCEPTABLE. WHEN TEMPERATURE OF CONCRETE EXCEEDS 90°F, OBTAIN AGREEMENT, WHEN REQUIRED, OF PROPOSED PRECAUTIONARY MEASURES. WHEN TEMPERATURE OF STEEL REINFORCEMENT IS GREATER THAN 120°F, FOG STEEL REINFORCEMENT, EMBEDMENTS, SUBGRADE AND FORMS WITH WATER IMMEDIATELY BEFORE PLACING CONCRETE. REMOVE STANDING WATER BEFORE PLACING CONCRETE. REDUCE TIME BETWEEN PLACING AND START OF CURING BY AVOIDING DELAYS DURING CONSTRUCTION. IN THE EVENT OF ANY DELAY DURING CONSTRUCTION PROTECT CONCRETE WITH TEMPORARY COVERINGS, SUCH AS POLYETHYLENE SHEETING OR SPRAY APPLY AN EVAPORATION RETARDER IMMEDIATELY AFTER FINISHING TO MINIMIZE EVAPORATION. APPLY A SUITABLE CURING MATERIAL SUCH AS A CURING COMPOUND, WET BURLAP, OR CURING PAPER.

## TIMBER NOTES

UNLESS OTHERWISE NOTED, ALL STRUCTURAL FRAMING LUMBER SHALL BE CLEARLY MARKED NO. 2 K.D. PINE BY THE SOUTHERN PINE INSPECTION BUREAU (SPIB) WITH A MINIMUM F<sub>b</sub> = 1000 PSI IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS). ALL WALL STUDS SHALL BE S-P-F LUMBER, NO. 2 OR BETTER. ALL STUDS SHALL BE CONTINUOUS - NO FINGER JOINTED STUDS WILL BE PERMITTED.

SOLID 2" BLOCKING SHALL BE PROVIDED AT THE ENDS AND POINTS OF SUPPORT OF ALL WOOD JOISTS, RAFTERS, AND PURLINS, AND SHALL BE PLACED BETWEEN SUPPORTS IN ROWS NOT EXCEEDING 8'-0" O.C. MAX. VERTICALLY. END NAIL WITH 2-16d NAILS OR SIDE TOE NAIL WITH 2-16d NAILS. ALL BLOCKING SHALL BE SAME DEPTH AS MEMBERS BEING BLOCKED.

ALL CONNECTIONS FOR WOOD FRAMING MEMBERS SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE FASTENING SCHEDULE (TABLE 2304.9.1).

ALL WOOD STUD WALLS SHALL BE FULL HEIGHT WITHOUT INTERMEDIATE PLATE LINE UNLESS DETAILED OTHERWISE.

## 5. DECKING:

PLYWOOD DECKING - 23/32" FOR ROOFS, 15/32" FOR EXTERIOR SHEATHING, GRADE C-D, WITH EXTERIOR GLUE, USE 10d COMMON NAILS AT 3' O.C. AT ALL SUPPORTED EDGES, 10d AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS. ALL JOINTS IN PLYWOOD DECKING SHALL BE STAGGERED. PROVIDE SOLID 2" BLOCKING AT ALL JOINTS IN PLYWOOD SHEAR WALLS. INSTALL PANELS WITH LONG DIMENSION PERPENDICULAR TO SUPPORTING MEMBER SPAN.

1 3/4" 16 GAGE STAPLES CAN BE USED IN LIEU OF NAILS FOR EXTERIOR SHEATHING. SPACE STAPLES AT 4" O.C. AT ALL SUPPORTED EDGES AND 8" O.C. AT ALL INTERMEDIATE SUPPORTS.

ORIENTED STRAND BOARD CAN BE USED IN LIEU OF PLYWOOD WITH THE OWNER'S AND ARCHITECT'S APPROVAL.

GLUE AND NAIL ALL FLOOR DECKING TO WOOD FLOOR FRAMING MEMBERS.

ALL MEMBERS FRAMING INTO THE SIDE OF A HEADER, STEEL BEAM, HIP, VALLEY, RIDGE, TRUSS, GLUED-LAMINATED BEAM, OR ANY OTHER BEAMS SHALL BE ATTACHED USING METAL JOIST HANGERS (SIMPSON OR EQUAL).

INCLUDE AN ALLOWANCE FOR 200 BOARD FEET OF LUMBER TO BE USED AS DIRECTED IN THE FIELD FOR SPECIAL CONDITIONS NOT COVERED BY NOTE LOCATED IN LINE WITH AND ABOVE GRADE BEAMS. COORDINATE LOCATION OF JOINTS WITH ARCHITECT.

PROVIDE TRIPLE STUDS (OR GRIPPLERS) AT EACH END OF ANY HEADER, BEAM, RIDGE, VALLEY, OR HIP SPANNING OVER 10'-0" UNLESS NOTED OTHERWISE. PROVIDE DOUBLE STUDS (OR GRIPPLERS) AT EACH END OF ANY HEADER, BEAM, RIDGE, VALLEY, OR HIP SPANNING 5'-0" TO 10'-0" UNLESS NOTED OTHERWISE.

IN EXTERIOR WALLS, PROVIDE DOUBLE FULL-HEIGHT STUDS AT BOTH ENDS OF FRAMED OPENINGS THAT ARE 4'-0" OR LARGER. PROVIDE TRIPLE FULL-HEIGHT STUDS IN OPENINGS THAT ARE 6'-0" OR LARGER. AT WINDOW OPENINGS, THE SILL PLATE SHOULD BE BUILT-UP TO MATCH THE STUDS AT BOTH ENDS OF THE OPENING.

THE NEW GENERATION OF PRESSURE TREATED LUMBER PRODUCTS ARE HIGHLY CORROSIVE TO METAL CONNECTORS AND FASTENERS. ALL FASTENERS AND METAL CONNECTORS USED IN CONJUNCTION WITH THE NEW GENERATION OF PRESSURE TREATED LUMBER SHALL BE:

- HOT-DIPPED GALVANIZED (MIN. G185 COATING) OR TYPE 304 OR 316 STAINLESS STEEL. THESE LOCATIONS INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

- ANCHOR BOLTS AT SOLE PLATE TO FOUNDATION
- MUD SILL ANCHORS AT SOLE PLATE TO FOUNDATION
- NAILS FROM SOLE PLATE TO WALL STUDS
- NAILS AT EXTERIOR PLYWOOD SHEATHING TO SOLE PLATE
- BOLTS AT LEDGER TO CONCRETE
- JOIST TO TREATED LEDGER CONNECTIONS
- ALL HANGERS ON TREATED JOISTS
- PLYWOOD DECKING TO TREATED JOISTS
- WOOD POSTS TO CONCRETE
- NAILS AT FLOOR JOISTS AND RIM JOISTS TO SOLE PLATE
- DECK BOARDS TO TREATED JOISTS

IF PREFABRICATED TRUSSES ARE USED IN LIEU OF THE FRAMING SYSTEM SHOWN IN THESE DRAWINGS, THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS INCLUDING TRUSS LAYOUTS AND TRUSS DESIGN CALCULATIONS WITH SEAL OF REGISTERED ENGINEER IN STATE OF TEXAS FOR REVIEW. SHOP DRAWINGS SHALL ALSO INCLUDE SIZE AND LOCATION OF ALL REQUIRED BRACING MEMBERS (TEMPORARY AND PERMANENT) AND DETAILS OF ALL TRUSS TO TRUSS CONNECTIONS (EXAMPLE: HIP JACK TRUSS TO GIRDER TRUSS AND COMMON JACK TRUSSES TO GIRDER TRUSS). A REVIEW OF THE MODIFIED LOADING CONDITIONS ON THE FRAMING SYSTEM WILL BE REQUIRED. THIS REVIEW WILL BE CONSIDERED ADDITIONAL SERVICES AND WILL BE BILLED TO THE OWNER ON AN HOURLY BASIS.

ANCHOR STONE VENEER TO WALL STUDS W/ 9 GA. ADJUSTABLE WIRE-TYPE MASONRY WALL TIES AT 32" O.C. HORIZONTALLY AND 15" O.C. VERTICALLY.

PREFABRICATED WOOD TRUSSES

FOR SIZE AND LOCATION OF OPENINGS REQUIRED IN TRUSS WEBS FOR DUCTS, MECHANICAL UNITS, OR OTHER, REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS..

ALL TRUSSES SHALL BE DESIGNED FOR LOADS ACCORDING TO THE DESIGN CRITERIA OR TO THE LOADING DIAGRAMS SHOWN.

TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS, AND CALCULATIONS SEALED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE SIZE AND LOCATION OF ALL REQUIRED BRACING MEMBERS (TEMPORARY AND PERMANENT) AND DETAILS OF ALL TRUSS TO TRUSS CONNECTIONS (EXAMPLE: HIP JACK TRUSS TO GIRDER TRUSS AND COMMON JACK TRUSSES TO GIRDER (TRUSS)).

TRUSS MANUFACTURER SHALL PROVIDE A COPY OF "BUILDING COMPONENT SAFETY INFORMATION (BCSI) GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" TO TRUSS ERECTOR.

ALL ROOF TRUSSES TO BE ATTACHED TO SUPPORTING WALLS WITH SIMPSON H10A HURRICANE TIES.

CONTRACTOR TO PROVIDE AN ALLOWANCE FOR HOLDOWNS AT GIRDER TRUSSES. FINAL HOLDOWNS WILL BE DESIGNED UPON COMPLETION OF ENGINEER'S REVIEW OF TRUSS SUBMITTALS.

## LAMINATED VENEER LUMBER (LVL)

ALL LVL'S SHALL BE FABRICATED TO STANDARDS SET FORTH IN THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES) REPORT NO. ESR-1387 AND SHALL PROVIDE MINIMUM ALLOWABLE DESIGN VALUES OF 2600 PSI IN BENDING, 285 PSI IN HORIZONTAL SHEAR PERPENDICULAR TO THE GLUE LINE AND 1,900,000 PSI IN MODULUS OF ELASTICITY.

CONTRACTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATION.

THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE ENGINEER OR ARCHITECT OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.

UPON COMPLETION OF INSPECTIONS THE INSPECTING ENGINEER OR ARCHITECT SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE THE WORK IS IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

## STRUCTURAL STEEL NOTES

ALL STRUCTURAL STEEL WIDE FLANGE BEAMS SHALL CONFORM TO THE ASTM SPECIFICATION A992 (F<sub>y</sub> = 50 KSI) UNLESS OTHERWISE SHOWN OR NOTED.

ALL STRUCTURAL STEEL TUBES SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE B (F<sub>y</sub> = 46 KSI).

STRUCTURAL STEEL PLATES AND ANGLES SHALL CONFORM TO ASTM A36 (F<sub>y</sub> = 36 KSI).

ALL STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).

ALL STRUCTURAL BOLTS SHALL CONFORM TO ASTM A325 UNLESS OTHERWISE SHOWN OR NOTED. FURNISH HARDENED WASHERS AT ALL BOLTED CONNECTIONS, INCLUDING ANCHOR BOLTS.

REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR VERIFICATION OF ALL BOLTS, BLOCKING ANCHORS, ETC., FOR THE ANCHORAGE OF THEIR RESPECTIVE ITEMS.

ALL BEAMS AND COLUMNS SHALL BE FULL LENGTH WITHOUT SPLICES UNLESS OTHERWISE INDICATED ON PLANS.

ALL SHOP AND FIELD WELDS SHALL BE MADE BY WELDERS WHO HAVE BEEN QUALIFIED AND CERTIFIED TO MAKE THE REQUIRED WELDS IN ACCORDANCE WITH THE LATEST AMERICAN WELDING SOCIETY (AWS) STANDARD AWS D1.1. ELECTRODES WHICH PRODUCE A MINIMUM 70 KSI TENSILE STRENGTH WELD SHALL BE USED.

LINTELS OVER OPENINGS IN EXTERIOR WALLS UP TO 10'-0" NOT OTHERWISE COVERED SHALL BE ONE 6 X 4 X 3/8 ANGLE FOR EACH 4" OF MASONRY.

ERECTION CONNECTORS SHALL BE PROVIDED IN ORDER TO PROPERLY ALIGN STRUCTURAL STEEL MEMBERS SO THAT THEY ARE TRUE AND PLUMB WHEN WELDS ARE MADE.

SHOP DRAWINGS SHALL BE PREPARED FOR ALL STRUCTURAL STEEL AND SUBMITTED FOR REVIEW BY THE ENGINEER. ENGINEER'S REVIEW WILL COVER MEMBER SIZES, STRENGTH OF CONNECTIONS AND GENERAL ARRANGEMENTS BUT NOT DIMENSIONS OR QUANTITIES. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS. ANY REPRODUCED DRAWINGS WILL BE REJECTED AND RESUBMITTAL WILL BE REQUIRED.

INCLUDE AN ALLOWANCE FOR 250 LBS. OF STRUCTURAL STEEL TO BE USED AS DIRECTED IN THE FIELD FOR SPECIAL CONDITIONS NOT COVERED BY NOTE OR DRAWING (LABOR FOR ERECTING SAME TO BE INCLUDED). UPON COMPLETION OF THE PROJECT, REBATE OWNER ANY AMOUNT OF ALLOWANCE REMAINING.

SHOP DRAWINGS SHALL BE PREPARED FOR ALL MISCELLANEOUS STEEL ITEMS INCLUDING STAIRS AND HANDRAILS FOR REVIEW BY THE ARCHITECT AND ENGINEER. CALCULATIONS SHALL BE SUBMITTED SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS.