

GENERAL NOTES

GENERAL CRITERIA

1. COORDINATION WITH OTHER DRAWINGS:

- SEE DRAWINGS OTHER THAN STRUCTURAL FOR KINDS OF FLOOR FINISH AND THEIR LOCATION, DEPRESSIONS IN FLOOR SLABS, OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL FEATURES, WALKS, RAMPS, STAIRS, CURBS, ETC.
- HOLES AND OPENINGS THROUGH WALLS, BEAMS, AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATIONS OF SUCH HOLES OR OPENINGS WITH THE PLUMBING, HVAC AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
- SEE ARCHITECTURAL DRAWINGS FOR WALLS NOT SHOWN ON STRUCTURAL DRAWINGS.
- DISCREPANCIES: COORDINATE THE DISCREPANCIES WITH OTHER DRAWINGS FOR INDIVIDUAL ITEMS. DISCREPANCIES UNCOVERED, IF ANY, SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- TYPICAL EDGE OF STRUCTURE / SLAB IS SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR TO COORDINATE LOCATIONS, DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL EXTERIOR WALL SECTIONS.
- COORDINATE ALL ELEVATOR DETAILS WITH REQUIREMENTS OF ELEVATOR SUPPLIERS DRAWINGS. PROVIDE ALL REPAIR WORK, MACHINE ROOM EQUIPMENT SUPPORT BEAMS, AND EMBEDDED ITEMS SHOWN ON THESE PLANS AND LOCATE IN COORDINATION WITH ELEVATOR SUPPLIERS DRAWINGS.
- TYPICAL CURB DETAILS ARE SHOWN ON STRUCTURAL DRAWINGS. CONTRACTOR TO COORDINATE LOCATIONS WITH ARCHITECTURAL DETAILS.

- INTENT: IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE CALLED FOR.

- TYPICAL DETAILS ARE SHOWN ON SHEETS S201 THROUGH S302 AND APPLY TO ALL CONSTRUCTION EXCEPT WHERE SHOWN DIFFERENT ON THE PLANS AND DETAILS.

- FOR DETAILS, LOCATIONS AND NUMBER OF INSERTS, EMBEDDED ITEMS, EQUIPMENT SUPPORT PADS, EQUIPMENT ANCHOR BOLTS AND SIMILAR ITEMS, REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS.

- EXISTING CONDITIONS:
 - ALL NEW CONSTRUCTION MUST BE COORDINATED WITH EXISTING SITE CONDITIONS.
 - LOCATE AND PROTECT ALL EXISTING UNDERGROUND FACILITIES.
 - REMOVE ALL MATERIAL THAT WILL INTERFERE WITH NEW BUILDING FOUNDATIONS AS PER GEOTECHNICAL CONSULTANT'S RECOMMENDATIONS.

- STRUCTURAL STABILITY:
 - THE STRUCTURE SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR STABILITY UNDER FINAL, FULLY CONSTRUCTED CONDITIONS.
 - PROVIDE SAFE AND ADEQUATE SHORING FOR ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION.
 - WHERE BACKFILL IS PLACED AGAINST WALLS, THE WALLS SHALL BE BRACED OR OTHERWISE ADEQUATELY SHORED UNTIL PERMANENT BRACING ELEMENTS OR SLABS HAVE BEEN ERECTED AND HAVE ATTAINED DESIGN STRENGTH.

MATERIAL CRITERIA

1. STRUCTURAL STEEL:

- ASTM A992 OR ASTM A572 GR. 50 AS MODIFIED BY AISI TECH. BULLETIN 3 (357) FOR ALL WIDE FLANGE STEEL SHAPES.
- ASTM A588 FOR ALL STRUCTURAL AND MISCELLANEOUS STEEL CHANNELS, ANGLES, BARS, PLATES, AND CONNECTIONS UNLESS NOTED OTHERWISE.
- ASTM A500 GRADE B (Fy = 46 KSI) FOR ALL STRUCTURAL TUBING.
- ASTM A573, TYPE E OR S, GRADE B (Fy = 36 KSI) FOR ALL STRUCTURAL PIPE.
- ASTM A573 TENSION COUPLES, UNLESS SPECIFICALLY NOTED OTHERWISE, WITH SIZES AS SHOWN ON DRAWINGS. ALL BOLTS SHALL BE TIGHTENED SO AS TO SHEAR THE SPLINE OFF THE BOLT. WHERE CLEARANCES DO NOT PERMIT, USE STANDARD A226 BOLTS, TIGHTENED AND INSPECTED IN ACCORDANCE WITH THE AISI "SPECIFICATION FOR STRUCTURAL JOINTS USING A573 TYPE E OR S BOLTS."
- ASTM F1554 GRADE 36 FOR ALL ANCHOR RODS EMBEDDED IN CONCRETE, UNLESS NOTED OTHERWISE IN DRAWINGS. PROVIDE FLAT WASHERS BETWEEN ALL NUTS AND BASE PLATES.
- ALL WELDING SHALL COMPLY WITH THE LATEST EDITION OF THE AWS STRUCTURAL WELDING CODE.
- ALL FIELD DRILLING SHALL BE DONE WITH A MAG. DRILL. FLAME CUTTING OF HOLES OR ENLARGING OF HOLES SHALL NOT BE PERMITTED.
- HEADED ANCHOR STUDS AND SHEAR STUDS SHALL BE TYPE B, IN CONFORMANCE WITH AWS D1.1 STRUCTURAL WELDING CODE. STRUCTURAL STEEL TO RECEIVE SHEAR CONNECTIONS SHALL BE CLEAN AND FREE OF PAINT. WELDING PREQUALIFICATION REQUIRED.
- STRUCTURAL STEEL TO BE FABRICATED & ERECTED IN ACCORDANCE WITH LATEST OSHA REGULATIONS.

2. STEEL JOISTS AND JOIST GIRDERS:

- STEEL JOISTS AND JOIST GIRDERS SHALL BE MANUFACTURED BY A MEMBER OF SJI.
- STEEL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST STEEL JOIST INSTITUTE SPECIFICATIONS AND OSHA REGULATIONS.
- NO CONSTRUCTION LOADS SHALL BE PLACED ON UNERIGGED JOISTS.
- WHERE COLLARS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH STRUCTURAL STEEL MEMBERS, JOISTS AT OR CLOSEST TO COLUMN LINES SHALL BE FIELD BOLTED TO PROVIDE LATERAL STABILITY DURING CONSTRUCTION.
- PROVIDE BRIDGING IN ACCORDANCE WITH THE LATEST EDITION OF SJI STANDARD SPECIFICATIONS.
- FOR CONCENTRATED LOADS NOT SHOWN ON FRAMING PLANS SEE DETAIL B55301.
- STEEL JOIST GIRDERS ARE NOTED THUS ON PLANS: D G N P K WHERE:
 - D = DEPTH IN INCHES
 - G = GIRDER TYPE
 - N = NUMBER OF JOIST SPACES
 - P = RIP LOAD ON EACH PANEL POINT

3. STEEL DECK:

- ALL STEEL DECK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST STEEL DECK INSTITUTE SPECIFICATIONS.
- SEE PLANS FOR STEEL DECK TYPE, GAGE, FINISH AND CONNECTIONS.
- PROVIDE 1/2 INCH MINIMUM BEARING AT ALL STEEL DECK SUPPORT CONDITIONS.
- ALL SPLICES AND LAPS SHALL BE A MINIMUM OF 24 INCHES AND SHALL BE CENTERED OVER SUPPORTS.
- ALL STEEL DECK SHALL BE CONTINUOUS OVER THREE SPANS WHEREVER FRAMING ALLOWS.
- OPENINGS THROUGH STEEL DECK FLOORS AND ROOFS ON FRAMING PLANS ARE NOT COMPLETE AS TO NUMBER, SIZE AND LOCATION. FOR COMPLETE INFORMATION, REFER TO DRAWINGS OTHER THAN STRUCTURAL.
- PROVIDE STANDARD ACCESSORY MATERIALS, INCLUDING BUT NOT LIMITED TO, CLOSURE STRIPS, FOUR STOPS, GORDER FILLERS, ETC. ACCORDING TO SJI RECOMMENDATIONS, TO PROVIDE TIGHT FITTING CLOSURE AT OPEN ENDS AND SIDES OF DECKING.
- ITEMS SUCH AS MECHANICAL EQUIPMENT SUPPORTS, CEILING SUPPORTS, ETC. SHOULD NOT BE SUPPORTED DIRECTLY FROM THE METAL DECK UNLESS SPECIFICALLY DETAILED.

4. LIGHTGAGE STEEL FRAMING (20 GAGE AND HEAVIER):

- TYPICAL CONSTRUCTION DETAILS AND STEEL STUD SCHEDULE FOR LIGHTGAGE FRAMING ARE SHOWN ON SHEET S301 & S302. REFER TO ARCHITECTURAL DRAWINGS FOR SPECIFIC CONFIGURATION AND DIMENSIONS OF ALL LIGHTGAGE STEEL FRAMING NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- ALL LIGHTGAGE STEEL FRAMING SHALL CONFORM TO LATEST EDITION OF AISI "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
- WALLS SHALL BE PROVIDED WITH MANUFACTURERS STANDARD BRIDGING. (EITHER WELDED 2" X 1/8 GA. STUD OR CLIPPED COLD-ROLLED CHANNEL 1 1/2" X 16 GA.) PROVIDE BRIDGING AT 4'-0" O.C. MAXIMUM.
- PROVIDE ALL MISCELLANEOUS ACCESSORIES AND FOLLOW ERECTION PROCEDURES PER MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
- LIGHTGAGE STEEL FRAMING SHALL MEET THE MINIMUM PROPERTIES AS SHOWN IN THE STEEL STUD SCHEDULE.
- ALL TRACK SHALL BE DEEP LEG, 18 GA. MINIMUM. TRACK SHALL BE ANCHORED TO SLAB WITH 1/2" DIAMETER X 3 1/2" EMBED EXPANSION SLEEVE ANCHORS AT 4'-0" O.C. UNLESS SHOWN OTHERWISE ON PLANS.

5. CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF "SPECIFICATIONS FOR STRUCTURAL CONCRETE," ACI 301.
- BASIS FOR DESIGN, STRENGTH AT 28 DAYS:
 - Fc = 4500 PSI (NORMAL WEIGHT, AIR ENTRAINED) ALL EXPOSED CONCRETE
 - Fc = 4500 PSI (NORMAL WEIGHT, AIR ENTRAINED) ALL FOUNDATION CONCRETE (FOOTINGS, THE BEAMS, STEM WALLS, GRADE BEAMS, DRILLED PIERS)
 - Fc = 4500 PSI (NORMAL WEIGHT) ALL INTERIOR SLABS ON GRADE
 - Fc = 3000 PSI (NORMAL WEIGHT) CONCRETE OVER STEEL DECK
 - Fc = 4500 PSI (NORMAL WEIGHT) ALL OTHER CONCRETE
- ALL CONCRETE SHALL BE REINFORCED UNLESS SPECIFICALLY NOTED "NOT REINFORCED."
- TO REDUCE SHRINKAGE CRACKS, LIMIT SLAB ON GRADE POURS TO 12,000 SQ. FT. AND WALLS TO 80 FOOT LENGTHS. POURS ON STEEL DECK TO BE LIMITED TO 8000 SQ. FT. SUBMIT POUR SEQUENCE AND LAYOUT FOR APPROVAL TO ARCHITECT PRIOR TO ANY POUR.
- ALL CONCRETE IN CONTACT WITH SOIL SHALL HAVE A WATER TO CEMENT RATIO OF 0.45 AND PLACED WITH A SLUMP OF 4". USE ONLY TYPE V CEMENT.

6. REINFORCED CONCRETE MASONRY:

- BASIS FOR DESIGN: ALL MASONRY UNITS SHALL BE TYPE I WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI (NET AREA). Fm = 1500 PSI.
- MORTAR SHALL BE TYPE S.
- GROUT - Fc = 2000 PSI.
- CELLS CONTAINING REBAR SHALL BE GROUTED SOLID FROM THE BOTTOM TO THE TOP OF THE WALL IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
- ALL VERTICAL REBAR SHALL BE IN PLACE AND SECURED WITH REBAR POSITIONERS PRIOR TO GROUTING.
- UNLESS OTHERWISE NOTED, MASONRY CELLS SHALL BE GROUTED IN ACCORDANCE WITH THE LOW-LIFT METHOD AS DESCRIBED IN THE INTERNATIONAL BUILDING CODE. (MAX. 4 FT. LIFTS)
- ALL CELLS BELOW GRADE SHALL BE GROUTED SOLID UP TO GRADE.
- LAP ALL REBAR 48 BAR DIAMETERS OR 24" MINIMUM UNLESS NOTED OTHERWISE.
- ALL JOINT REINFORCEMENT IN BOND BEAMS SHALL BE CONTINUOUS AROUND CORNERS OR HAVE CORNER BARS OF THE SAME SIZE AND A LAP OF 48 BAR DIAMETERS OR 24 INCHES MINIMUM. VERTICAL REBAR SHALL CONTINUE THROUGH BOND BEAMS.
- PROVIDE STANDARD TRUSS TYPE JOINT REINFORCING AT 16" O.C. (ALTERNATE COURSES) UNLESS NOTED OTHERWISE. USE PREFABRICATED CORNERS AND TEES AT ALL WALL CORNERS AND INTERSECTIONS RESPECTIVELY.
- ALL CMU SHALL BE REINFORCED UNLESS SPECIFICALLY NOTED "NOT REINFORCED."
- TYPICAL REINFORCEMENT UNLESS OTHERWISE SHOWN:
 - 8" CMU WALLS: #4 AT 8" O.C. VERTICAL
 - 8" CMU WALLS: #4 AT 24" O.C. VERTICAL
 - 12" CMU WALLS: #6 AT 24" O.C. VERTICAL

7. REINFORCING STEEL:

- ALL REINFORCING STEEL SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) AND THE STANDARD MANUAL (ACI 315).
- USE ASTM A615 GRADE 60 FOR ALL REINFORCING STEEL #4 AND LARGER, GRADE 40 FOR #3 AND SMALLER.
- USE ASTM A118 FOR ALL WELDED WIRE FABRIC. PROVIDE IN FLAT SHEETS ONLY.
- ALL REINFORCEMENT SHALL BE CONTINUOUS. STAGGER SPLICES WHERE POSSIBLE. LAPS FOR SPLICES SHALL BE AS INDICATED ON SHEET S201, UNLESS OTHERWISE SHOWN OR NOTED.
- BAR SUPPORTS AND SPACERS FOR REINFORCING SHALL BE PROVIDED IN ACCORDANCE WITH A20 S16. CHAIRS WITH 22 GA. SAND PLATES OR PRECAST BLOCKS SHALL BE PROVIDED FOR ALL REINFORCING OF CONCRETE IN CONTACT WITH GRADE. DECK CHAIRS SHALL BE PROVIDED FOR ALL WELDED WIRE FABRIC IN SLABS OVER METAL DECK. REINFORCING SHALL BE SECURELY TIED TO SUPPORTS.
- REINFORCING SHALL NOT BE TACK WELDED OR WELDED IN ANY MANNER UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL PLANS.
- MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT (CLEAR DISTANCE):
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO WEATHER: 3"
 - CONCRETE EXPOSED TO EARTH OR WEATHER: 1 1/2" (#5 & LARGER) 1" (#5 & SMALLER)
- TYPICAL REINFORCEMENT UNLESS OTHERWISE SHOWN:
 - UP TO 8" CONCRETE WALLS: #4 AT 8" O.C. EA. WAY AT CENTER OF WALL
 - OVER 8" TO 12" CONCRETE WALLS: #4 AT 12" O.C. EA. WAY, EA. FACE
 - OVER 12" THICK: #4 AT 12" O.C. EA. WAY, EA. FACE
- ALL HORIZONTAL REINFORCING IN FOOTINGS, WALLS AND BEAMS SHALL BE CONTINUOUS AROUND CORNERS OR HAVE CORNER BARS OF THE SAME SIZE AND SPACING AS THE HORIZONTAL BARS AND LAP SPLICES PER SCHEDULE.

8. QUALITY ASSURANCE PROGRAM:

- SEISMIC FORCE RESISTING SYSTEM = SPECIAL REINFORCED MASONRY SHEARWALLS.
- SPECIAL INSPECTIONS/TESTING -
 - "SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE JURISDICTION BUILDING DEPARTMENT INSPECTIONS REQUIRED BY SECTION 169 OF THE IBC. IN ACCORDANCE WITH IBC CHAPTER 17, THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTIONS AND TESTING:

INSPECTION/TESTING	CONTINUOUS	PERIODIC	IBC REFERENCE
STEEL - MATERIAL VERIFICATION FOR HIGH-STRENGTH BOLTS, NUTS, AND WASHERS (MANUFACTURERS CERTIFICATION REQUIRED)		X	TABLE 1704.3
WELDING - COMPLETE AND PARTIAL PEN	X		
WELDING - MULTI PASS FILLET WELDS	X		
WELDING - SINGLE PASS FILLET WELDS > 3/16"	X		1704.3.1
WELDING - FLOOR AND ROOF DECK WELDS		X	
CONCRETE - REINFORCING STEEL PLACEMENT		X	1913.4
BOLTS & STUDS INSTALLED IN CONCRETE		X	
EXPANSION ANCHORS WHERE CALLED FOR IN DRAWINGS		X	1911.5
ANCHOR BOLTS		X	
ANCHOR PLATES WITH HEADED STUDS		X	
VERIFYING USE OF REQUIRED DESIGN MIX		X	1904.2.2, 1913.2, 1913.3
SUMP, AIR CONTENT AND TEMP TESTS		X	1913.10
MASONRY - MORTAR PREPARATION, MORTAR JOINTS, LOCATION OF REINFORCEMENT		X	TABLE 1704.5.1
LOCATION OF STRUCTURAL ELEMENTS, INCLUDING ANCHORS, REINFORCING BARS		X	2108.9.2.11
HOT OR COLD WEATHER PROTECTION		X	2104.4
GROUT PREPARATION		X	TABLE 1704.5.1
GROUT INSTALLATION		X	
PREPARATION OF GROUT, MORTAR AND/OR PRISMS		X	2105.2.2
TESTING - VERIFICATION OF MASONRY Tm BY:		X	
PRISM TEST (3 PRISMS PER 5000 SQ. FT. OF WALL)		X	1708.1.3
REINFORCING AND PRESTRESSING STEEL CERTIFIED MILL CERTIFICATIONS		X	1708.3

- SPECIAL INSPECTION AND TESTING REPORTS SHALL BE COMPLETED AND DISTRIBUTED AT THE COMPLETION OF EACH TASK IF A TASK IS TO TAKE LONGER THAN (3) DAYS, PROVIDE REPORTS FOR EACH DAY. PROVIDE COPIES OF REPORTS TO: CONTRACTOR, OWNER, ARCHITECT/ENGINEER, AND BUILDING OFFICIAL.
- SPECIAL INSPECTOR TO KEEP A NON-COMPLIANCE LIST DOCUMENTING ITEMS INSPECTED NOT MEETING APPROVED CONSTRUCTION DOCUMENTS AND WHEN/HOW RESOLVED.

C. STRUCTURAL OBSERVATIONS

- STRUCTURAL OBSERVATIONS SHALL BE COMPLETED AT THE FOLLOWING STAGES OF CONSTRUCTION:
 - FOUNDATION SYSTEM PRIOR TO PLACING CONCRETE.
 - STRUCTURE AND ELEVATED DECK PRIOR TO PLACING CONCRETE.
 - ROOF DECK PRIOR TO COVERING W/ MEMBRANE.
 - EXTERIOR CLADDING/VENUE SUPPORT PRIOR TO COVERING W/ FINISHES.
- STRUCTURAL OBSERVATIONS REPORTS SHALL BE DISTRIBUTED TO THE FOLLOWING: CONTRACTOR, OWNER, ARCHITECT, BUILDING OFFICIAL, SPECIAL INSPECTOR.
- APPROVED STEEL FABRICATOR: THE STRUCTURAL STEEL FABRICATOR SHALL BE APPROVED BY THE BUILDING OFFICIAL. THE FABRICATOR SHALL SUBMIT A CERTIFICATE OF APPROVAL FROM THE CITY OF LAS VEGAS, THE INTERNATIONAL CODE COUNCIL, OR THE CITY OF LOS ANGELES.

- CONTRACTOR RESPONSIBILITY: EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC-FORCE-RESISTING SYSTEM SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND TO THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:
 - ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN.
 - ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS.
 - IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL, THEIR POSITION(S) IN THE ORGANIZATION.

DESIGN CRITERIA:

THE FOLLOWING CRITERIA COVERS THE STRUCTURAL DESIGN OF THIS BUILDING STRUCTURE.

1. CODES AND MANUALS - MOST STRINGENT OF:

- INTERNATIONAL BUILDING CODE, 2006 EDITION.
- ASCE MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- SJI STANDARD SPECIFICATIONS, LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS.
- ASCE COLD FORMED STEEL MANUAL.
- ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318 - LATEST EDITION.
- NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 2005 EDITION.

2. DESIGN LOADS:

VERTICAL:

- DEAD LOADS - BUILDING IS DESIGNED FOR THE ACTUAL IN-PLACE WEIGHTS OF ALL MATERIALS SHOWN ON THE CONSTRUCTION DOCUMENTS.
- LIVE LOADS:
 - ROOF: 20 PSF (NON-REDUCIBLE)
 - CLASS ROOM (ABOVE FIRST FLOOR): 40 PSF
 - CORRIDORS: 80 PSF
 - STAIRS, WEIGHT ROOM AND AEROBICS ROOM: 100 PSF
- ADDITIONAL SUPERIMPOSED LOADS:
 - PARTITIONS: 5 PSF (10 PSF FOR SEISMIC WEIGHT)
 - D. SUSPENDED EQUIPMENT: ACTUAL WEIGHT INDICATED
 - CONCENTRATED LOAD (PER IBC 1607.4): 200 LBS.
- POSTED LOADS: A PLACED WITH THE MAXIMUM ALLOWABLE LIVE LOAD (PSF) SHALL BE PERMANENTLY POSTED IN THE FOLLOWING LOCATIONS:
 - WEIGHT ROOM (SECOND FLOOR): 100 PSF
 - AEROBICS ROOM (SECOND FLOOR): 100 PSF
 - CLASS ROOMS (SECOND FLOOR): 40 PSF

HORIZONTAL:

- WIND: BASIC WIND SPEED (3 SEC. GUST) = 90 MPH
- ANALYSIS PROCEDURE: SIMPLIFIED METHOD
- IMPORTANT FACTOR = 1.0 (TABLE 6-1)
- OCCUPANCY CATEGORY = III

B. SEISMIC:

- Vmax = 0.5 Ss Iw W/R
- V = Ss Iw W/R
- Vmax = Ss Iw (RT)
- OCCUPANCY CATEGORY = III
- IMPORTANT FACTOR, Ie = 1.25
- SITE CLASS = C
- SPECTRAL RESPONSE ACCELERATIONS:
 - Ss = 0.585 (FIGURE 1615(1))
 - S1 = 0.174 (FIGURE 1615(2))

SITE COEFFICIENTS:

- Fa = 1.174 (TABLE 1613.3.3 (1))
- Fv = 1.626 (TABLE 1613.3.3 (2))
- Ss = 0.585 (16-37)
- S1 = 0.285 (16-38)
- S2 = 0.442 (16-39)
- S3 = 0.188 (16-40)

SPECTRAL RESPONSE ACCELERATION PARAMETERS:

SEISMIC DESIGN CATEGORY:

RESPONSE MODIFICATION COEFFICIENT, R:

C. (SPECIAL REINFORCED MASONRY SHEARWALL)

DEFERRED SUBMITTAL ITEMS

- THE ITEMS INCLUDED IN PARAGRAPH 2, BELOW SHALL BE PREPARED, STAMPED AND SIGNED BY A NEVADA LICENSED PROFESSIONAL CIVIL ENGINEER AND SUPPLIED BY THE CONTRACTOR. DESIGN CALCULATIONS, PRODUCT DATA, SHOP DRAWINGS, AND OTHER INFORMATION AS REQUIRED TO COMPLETELY DEFINE AND DESCRIBE THESE ITEMS SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION AND/OR CONSTRUCTION.

2. DEFERRED STRUCTURAL ITEMS ARE:

- STEEL FLOOR AND ROOF JOISTS.
- TOT LOT STRUCTURE (SEE LANDSCAPE PLAN L3.01).
- STAIRS.
- ELEVATOR SPECIFICATIONS AND SUPPORT DETAILS.
- APPROVED STEEL FABRICATOR CERTIFICATIONS PER NOTE D.

- DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

FOUNDATION NOTES

1. GENERAL CRITERIA:

- A SUBSURFACE GEOTECHNICAL INVESTIGATION HAS BEEN PERFORMED BY NIKYO & MOORE. A REPORT OF THIS INVESTIGATION DATED 12/29/2008 AND NUMBERED 302165001 IS AVAILABLE.
- IMPORTANT ADDITIONAL INFORMATION CONCERNING SPECIFIC SOIL CONDITIONS IS CONTAINED IN THIS REPORT AND SHALL BE REVIEWED PRIOR TO START OF CONSTRUCTION. RECOMMENDATIONS FROM THE REPORT ARE LISTED BELOW AND/OR INCORPORATED IN THE DESIGN DOCUMENTS.
- THE GEOTECHNICAL INVESTIGATION REPORT CONTAINS SPECIFIC REQUIREMENTS CONCERNING CLEARING AND GRUBBING, SITE, SUBFLOOR AND BEARING SURFACE PREPARATION, STRUCTURAL FILL REQUIREMENTS, AND CONSTRUCTION REQUIREMENTS NOT NECESSARILY SHOWN ON THESE DRAWINGS. REFER ANY CONFLICTS BETWEEN THESE DRAWINGS AND THE REPORT TO THE ARCHITECT FOR DIRECTION PRIOR TO BEGINNING ANY WORK.

2. BASIS FOR DESIGN:

- ALLOWABLE SOIL BEARING PRESSURE = 1,800 PSF.

3. FIELD OBSERVATION AND TESTING REQUIREMENTS:

- EMPLOY THE SERVICES OF A REGISTERED, LICENSED GEOTECHNICAL ENGINEER TO OBSERVE ALL CONTROLLED EARTHWORK. THE GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS ON-SITE OBSERVATION BY EXPERIENCED PERSONNEL DURING CONSTRUCTION OF CONTROLLED EARTHWORK. NOTIFY THE GEOTECHNICAL ENGINEER AT LEAST TWO WORKING DAYS IN ADVANCE OF ANY FIELD OPERATIONS OF THE CONTROLLED EARTHWORK. A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHALL BE PRESENT TO CONFIRM THE COMPLETE EXCAVATION OF ANY UNCONTROLLED FILL.
- TESTS OF MATERIALS SHALL BE MADE AT THE FOLLOWING RATES:
 - ONE FIELD DENSITY TEST PER EACH 500 SQUARE YARDS OF COMPACTED SUBGRADE PRIOR TO PLACING STRUCTURAL FILL OR FLOOR SLAB CONSTRUCTION WITH A MINIMUM OF 3 TESTS.
 - ONE FIELD DENSITY TEST PER EACH 300 CUBIC YARDS OF STRUCTURAL FILL PLACED OR EACH HORIZONTAL LAYER OF STRUCTURAL FILL, WHICHEVER IS GREATER.
 - ONE MOISTURE-DENSITY CURVE FOR EACH TYPE OF MATERIAL USED, AS INDICATED BY SIEVE ANALYSIS AND PLASTICITY INDEX.
- THE GEOTECHNICAL ENGINEER SHALL SUBMIT THE RESULTS OF ALL REQUIRED TESTS TO THE ARCHITECT WITHIN 2 WORKING DAYS AFTER THE TEST.

4. SPECIFIC SOIL PREPARATION REQUIREMENTS:

- CLEARING, GRUBBING AND DEMOLITION:
 - THE FULL DEPTH OF EXISTING UNDOCUMENTED FILL AND ANY LOOSE AND/OR DISTURBED NATIVE SOILS SHALL BE REMOVED FROM PROPOSED STRUCTURE AND IMPROVEMENT AREAS.
 - REMOVE STUMPS, MATTED ROOTS AND ROOTS LARGER THAN 2 INCHES IN DIAMETER WITHIN 6 INCHES OF THE SURFACE AND AREAS ON WHICH FILL AND/OR FOOTINGS ARE TO BE CONSTRUCTED.
 - OVER-EXCAVATE NATIVE SOILS IN IMPROVEMENT AREAS ACCORDING TO THE TABLE BELOW. THE GEOTECHNICAL CONSULTANT SHALL OBSERVE AREAS TO RECEIVE FILL AT THE TIME OF GRADING TO EVALUATE EXPOSED MATERIALS AND TO DETERMINE IF REMOVAL DOWN TO MORE COMPETENT SOIL IS NEEDED.
 - DEMOLITION OF EXISTING SITE IMPROVEMENTS SHALL INCLUDE: REROUTING, REMOVING OR ABANDONMENT IN-PLACE OF UNDERGROUND UTILITIES.
 - UTILITIES SHALL BE ADEQUATELY CAPPED OR REROUTED AT THE PROJECT PERIMETERS.
 - ABANDONED UNDERGROUND UTILITY PIPES SHALL BE REMOVED, OR IF LEFT IN PLACE, THEY SHOULD BE FILLED WITH FLOWABLE FILL OR CONTROLLED LOW STRENGTH MATERIAL AND REMOVED (CLSM).
- SITE AND SUBSURFACE PREPARATION:
 - OVER-EXCAVATE ALL SOILS UNDERLYING FOOTINGS AND FLOOR SLAB AND ALL UNCONTROLLED FILL TO A MINIMUM DEPTH OF 15 FEET.
 - SCOURY ALL EXPOSED SUB GRADE SOILS TO A DEPTH OF 6 INCHES. MOISTEN TO OPTIMUM MOISTURE CONTENT +/- 2% AND COMPACT TO THE DENSITY SPECIFIED IN THESE REQUIREMENTS.
 - PLACE ALL STRUCTURAL FILL IN APPROXIMATELY HORIZONTAL LAYERS NOT GREATER THAN 6 INCHES IN THICKNESS. MOISTEN TO OPTIMUM MOISTURE CONTENT +/- 2% AND COMPACT TO DENSITY SPECIFIED IN THESE REQUIREMENTS.
 - ALL EARTHWORK FOR THE BUILDING PAD SHALL EXTEND A MINIMUM OF 5 FEET BEYOND THE PERIMETER FOOTINGS AND 2 FEET OR MORE BEYOND PLANNED FLAT WORK, PAVEMENT AREAS, AND/OR RETAINING / SCREEN WALLS. THE EXCAVATED ON-SITE SOILS MAY BE USED AS STRUCTURAL FILL PROVIDED THE RECOMMENDATIONS IN SECTION D ARE FOLLOWED. SEVERAL THIN LAYERS IF MODERATELY HARD TO HARD, MODERATELY STRAY TO STRAY CEMENTED SOILS ARE PRESENT.
 - ROCK EXCAVATION TECHNIQUES SHOULD BE ANTICIPATED DURING ROCK EXCAVATION AND/OR TRENCHING OPERATIONS. STRUCTURE FOOTINGS SHALL NOT BEAR ON BOTH CALICHE AND NON-CEMENTED SOILS. EITHER CALICHE SHALL BE OVER-EXCAVATED 12" AND REPLACED WITH STRUCTURAL FILL, OR NON-CEMENTED SOILS SHALL BE OVER-EXCAVATED 12" AND REPLACED WITH STRUCTURAL FILL. RELATIVELY SHALLOW GROUND WATER WAS ENCOUNTERED ON SITE. IN ADDITION, SOILS WITH RELATIVELY LOW BLOW COUNTS, LOW IN-PLACE DRY DENSITIES, AND HIGH MOISTURE CONTENT WERE ENCOUNTERED. RELATIVELY SHALLOW GROUND WATER AND PUMPING SUB GRADE CONDITIONS SHOULD BE ANTICIPATED DURING EXCAVATION AND GRADING OPERATIONS. THE GEOTECHNICAL ENGINEER SHALL EVALUATE PROPOSED SUB GRADE STABILIZATION METHODS PRIOR TO THEIR IMPLEMENTATION.
 - FOOTINGS MAY BE CAST DIRECTLY AGAINST THE VERTICAL SIDES OF THE EXCAVATIONS PROVIDED ALL OF THE FOLLOWING CRITERIA ARE FOLLOWED:
 - SIDE WALLS OF EXCAVATION SHALL BE BATTERED A MINIMUM OF ONE INCH HORIZONTAL TO TWELVE INCHES VERTICAL. THIS CUT SHALL BE ABLE TO REMAIN VERTICAL WITHOUT ANY SLOUGHAGE.
 - BOTTOM WIDTH OF EXCAVATIONS SHALL BE ONE INCH WIDER AT EACH SIDE THAN IS SHOWN ON DRAWINGS.
 - IF ANY SANDY OR LOOSE SOIL MATERIALS ARE ENCOUNTERED, FOOTINGS MAY NOT BE EARTH FORMED.
 - ALL REINFORCING STEEL SHALL BE CORRECTLY ALIGNED AND MAINTAINED, AND SHALL HAVE A MINIMUM OF THREE INCHES OF CONCRETE COVER WHERE CAST AGAINST EARTH.
 - DURING CASTING, ANY SOIL SLOUGHAGE SHALL BE REMOVED FROM THE WET CONCRETE.
 - FOOTINGS NOT MEETING THE ABOVE CONDITIONS SHALL BE REMOVED AND RECAST.

- STRUCTURAL FILL AND BACKFILL REQUIREMENTS:
 - STRUCTURAL FILL AND BACKFILL SHALL BE FREE OF ORGANIC MATTER, DEBRIS, OTHER DELETERIOUS MATERIAL, AND ROCK OR HARD CHUNKS LARGER THAN 4" NOMINAL DIAMETER.
 - SOLUBILITY POTENTIAL:
 - LESS THAN 1.5% (AS REFERENCED BY CLARK COUNTY DEVELOPMENT SERVICES TECHNICAL GUIDELINE TO 19-2001).
 - EXPANSION POTENTIAL:
 - LESS THAN 50 (AS EVALUATED BY ASTM D 4829).
 - IF ENCOUNTERED DURING GRADING, SOIL WITH A SOLUBILITY POTENTIAL GREATER THAN 1.5% SHALL BE ADEQUATELY BLENDED OR EXPORTED FROM THE SITE.
 - IMPORT SOIL FOR USE AS STRUCTURAL FILL OR BACKFILL SHALL CONSIST OF GRANULAR MATERIAL, MORE THAN 50% RETAINED AS NO. 200 SIEVE) WITH A LOW SOLUBILITY POTENTIAL (LESS THAN 1.5% EXPANSION POTENTIAL (E) LESS THAN 50).

- COMPACTION REQUIREMENTS:
 - SUBGRADE SOILS AND STRUCTURAL FILL MATERIALS SHALL BE COMPACTED TO THE FOLLOWING MINIMUM PERCENTAGES OF THE ASTM D1557 MAXIMUM DRY DENSITY AT +/- 2% OPTIMUM MOISTURE CONTENT.

MATERIAL	PERCENT COMPACTION
STRUCTURAL FILL	90
SUBGRADE FOR SLAB SUPPORT	90
SUBGRADE BELOW STRUCTURAL FILL	90
MISCELLANEOUS BACKFILL	90

CITY OF LAS VEGAS
11.02.07
BLDG. DEPT. REVIEW #1

CLV Plans CA - 25034
APR. 9

SCOPE OF WORK
Includes all special inspections listed under IBC Sections 1704 to 1714.
W/OT: CLV Structural Plans Examiner and RSI on site.

Special Inspection Agency to perform inspection
CLV = City of Las Vegas and to perform inspection
To schedule CLV inspections, call 202-1271
To schedule CLV business inspections, call 228-1212

Note: CLV is marked for any concrete construction in Item 3, standard inspection in accordance with Section 1905 shall apply.

Revised Inspection of marked with X

CLV SIA

1. Review Construction Plans 1704.3 & Section 1704.3.1

2. Material verification of high strength bolts, nuts, washers, and anchors

3. Manufacturer's certificate of compliance

4. Manufacturer's certificate of compliance

5. Manufacturer's certificate of compliance

6. Manufacturer's certificate of compliance

7. Manufacturer's certificate of compliance

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