

INTERPRETATION OF DRAWINGS

GENERAL:

1. ALL CONSTRUCTION SHALL CONFORM TO THE 1994 EDITION OF THE UNIFORM BUILDING CODE.
2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION, THESE MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION, NOR WILL THE STRUCTURAL ENGINEER BE RESPONSIBLE FOR CONSTRUCTION SITE SAFETY, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERE TO.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COORDINATE SITE CONDITIONS WITH THE DRAWINGS PRIOR TO CONSTRUCTION, ANY DISCREPANCIES AND OMISSIONS SHALL BE RESOLVED WITH THE ARCHITECT. DO NOT USE SCALED DIMENSIONS.
4. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOFS SO AS NOT TO EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
5. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN. WHERE NO SPECIFIC DETAIL IS SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. FOR BIDDING PURPOSES, WHERE ANY MEMBER OR STRUCTURAL ELEMENT IS SHOWN BUT NOT CALLED OUT ON THE PLANS OR DETAILS, THE LARGEST SIMILAR MEMBER OR ELEMENT USED IN THE PROJECT SHALL BE UTILIZED.
6. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND CIVIL DRAWINGS FOR LOCATION AND DETAILS OF BLOCKOUTS, INSERTS AND OPENINGS, CURBS, EQUIPMENT BASES AND PADS, SITE WORK ITEMS, ETC. AND DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
7. APPROVED EQUAL OPTIONS ARE FOR THE CONTRACTOR'S CONVENIENCE. IF AN OPTION IS CHOSEN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY AND COORDINATION OF ALL DETAILS.
8. ALL DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY INDICATED OR NOT. TYPICAL DETAILS MAY OR MAY NOT BE CUT ON THE DRAWINGS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.
9. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.
10. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE THE PROJECT IS LOCATED IN.

DESIGN LOADS:

ROOF LIVE LOAD = 20 PSF (REDUCIBLE)
RAVADA DEAD LOAD = 10 PSF
ROOF UPLIFT WIND LOAD = 6.8 PSF (NET)

WIND: BASIC WIND SPEED = 75 MPH, EXPOSURE "B", I = 1.0
SEISMIC: ZONE 2B, Z = 0.2, I = 1.0, C = 2.75, R_w = 6

FOUNDATIONS:

1. FOUNDATION DESIGN BASED ON SOILS REPORT # 64975108 BY TERRACON DATED APRIL 4, 1997. DESIGN SOIL BEARING PRESSURE = 2,500 PSF AT 1'-6" BELOW LOWEST ADJACENT FINISHED GRADE. SPREAD FOOTINGS SHALL BEAR ON FIRM UNDISTURBED SOIL AND/OR ENGINEERED FILL PER THE SOILS REPORT AND TYPICAL EARTHWORK DETAIL. ALL CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOILS REPORT. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR ANY GEOTECHNICAL ASPECTS OF THIS PROJECT.
2. CONTRACTOR SHALL EMPLOY A REGISTERED SOILS ENGINEER TO PERFORM NECESSARY TESTING AND INSPECTIONS FOR QUALITY CONTROL AND TO ENSURE THAT THE REQUIREMENTS OF THE SOILS REPORT ARE COMPLIED WITH. TEST REPORTS SHALL BE SUBMITTED DIRECTLY TO THE ARCHITECT AND ENGINEER FROM THE SOILS ENGINEER, WITH COPY TO CONTRACTOR. INCLUDE THE FOLLOWING INFORMATION IN THE REPORTS:
 - TEST REPORT ON BORROW MATERIALS
 - VERIFICATION OF EACH FOOTING SUBGRADE
 - FIELD DENSITY TEST REPORTS
 - ONE OPTIMUM MOISTURE-MAXIMUM DENSITY CURVE FOR EACH TYPE OF SOIL ENCOUNTERED
3. FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, EXISTING FOUNDATIONS, ETC., ENCOUNTERED DURING SITE CLEARING OR EXCAVATION, SHALL BE BROUGHT TO THE ATTENTION OF THE SOILS ENGINEER IMMEDIATELY.
4. ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED AS DIRECTED BY THE SOILS ENGINEER.
5. SLOPE ALL EXTERIOR FINISHED GRADES AWAY FROM THE BUILDING TO ENSURE NO PONDING OF WATER OCCURS AROUND BUILDINGS.

CAST-IN-PLACE CONCRETE:

1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".
2. CONCRETE SHALL BE READY MIXED CONCRETE IN ACCORDANCE WITH ASTM C94, MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:

SLABS ON GRADE	2,500 PSI
MAXIMUM 4" SLUMP FOR SLABS ON GRADE, 4" FOR OTHER FOUNDATIONS	2,500 PSI
CURBS AND SIDEWALKS	2,500 PSI
3. CEMENT SHALL CONFORM TO ASTM C150, TYPE II. AGGREGATE PER ASTM C33. LIGHTWEIGHT AGGREGATE PER ASTM C330. MAXIMUM 4" SLUMP FOR SLABS ON GRADE, 4" FOR OTHER CONCRETE. CONCRETE CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE FIELD-VERIFIED 3" MAXIMUM SLUMP PRIOR TO ADDING ADMIXTURE AND 8" MAXIMUM SLUMP AT PLACEMENT. MIX DESIGNS SHALL BE DESIGNED BY THE CONCRETE PRODUCTION FACILITY IN ACCORDANCE WITH ACI 301 AND REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.
4. CONCRETE SHALL BE FREE OF CHLORIDE. NO FLY ASH ADDITIVES SHALL BE USED IN CONCRETE WHEN USED IN FLATWORK OR ARCHITECTURALLY EXPOSED CONCRETE. WHEN USED, FLY ASH SHALL CONFORM TO ASTM C618, CLASS F. FLY ASH SHALL NOT REPLACE MORE THAN 15% OF CEMENT BY WEIGHT.
5. PROVIDE SLEEVES FOR UTILITY OPENINGS IN CONCRETE BEFORE PLACING CONCRETE. DO NOT CUT ANY CONFLICTING REINFORCING FOR REINFORCING IS MAINTAINED.
6. NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE INSTALLED WITHOUT APPROVAL OF THE ENGINEER.
7. CONCRETE SHALL NOT BE DROPPED MORE THAN FIVE FEET VERTICALLY WITHOUT USE OF TREMS.
8. CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAT EXCAVATIONS PROVIDED THE REQUIRED CONCRETE COVERAGE FOR REINFORCING IS MAINTAINED.
9. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDERLOOR DUCTS, ETC. CAST CLOSURE POUR AROUND COLUMNS AFTER DEAD LOAD IS APPLIED UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT. ALL CONCRETE SLABS ON GRADE SHALL BE BOUNDED BY CONTROL JOINTS, KEYS OR SAW CUT SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 400 SQUARE FEET. KEYS, CONSTRUCTION JOINTS KEYS NEED NOT OCCUR AT EXPOSED EDGES DURING POURING. ALL JOINTS JOINTS MAY BE SAW CUT.
10. CONCRETE WHICH HAS CONTAINED WATER FOR MORE THAN 90 MINUTES (60 MINUTES IF AIR TEMPERATURE EXCEEDS 85°) SHALL NOT BE USED. TEMPERING OF CONCRETE AFTER INITIAL SET HAS OCCURRED IS NOT PERMITTED.
11. CURE EXPOSED CONCRETE FOR A MINIMUM OF 7 DAYS IN ACCORDANCE WITH ACI 301 PROCEDURES IN ORDER TO PREVENT CRACKING. CURE WITH CURING AND SEALING COMPOUND, MOST CURING, MOISTURE-RETAINING COVER CURING, OR COMBINATIONS THEREOF.
12. CONCRETE COMPRESSIVE STRENGTH AND SLUMP SHALL BE TESTED PER ASTM C31, C39 AND C143. PROVIDE 3 CYLINDERS PER TEST FOR EACH DAY'S CONCRETE PLACEMENT OR AS DIRECTED BY THE ARCHITECT. TEST ONE CYLINDER AT 7 DAYS AND TWO AT 28 DAYS. TESTING SHALL BE DONE BY A QUALIFIED TESTING LABORATORY.

REINFORCING STEEL:

1. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 (F_y = 60 KSI) DEFORMED BARS FOR ALL BARS #4 AND LARGER. ASTM A615, GRADE 40 (F_y = 40 KSI) DEFORMED BARS FOR ALL BARS #3 AND SMALLER. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60 (F_y = 60 KSI) LOW ALLOY DEFORMED BARS. WIRE PER ASTM A82. WELDING OF REINFORCING SHALL BE ACCORDING TO AWS D1.4. NO TACK WELDING OF REINFORCING BARS ALLOWED.
2. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE LATEST EDITIONS OF ACI 318 AND THE CRSI "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION", AND AS MODIFIED BY THE DRAWINGS.
3. ALL REINFORCING STEEL SHALL BE ACCURATELY PLACED AND SUPPORTED BY GALVANIZED METAL CHAIRS, SPACERS OR WANGERS. PROVIDE THE FOLLOWING MINIMUM CLEAR CONCRETE COVERAGE:
 - CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - EXPOSED TO EARTH OR WEATHER: #6 AND LARGER: 2"
 - #5 AND SMALLER: 1 1/2"
4. ALL OTHERS PER LATEST EDITION OF ACI 318.
5. UNLESS NOTED OTHERWISE, LAP SPICES IN CONCRETE SHALL BE CLASS "B" TENSION LAP SPICES (2'-0" MINIMUM) PER THE LATEST EDITION OF ACI 318. STAGGER ALTERNATE SPICES A MINIMUM OF ONE LAP LENGTH. LAP WELDED WIRE FABRIC SO THAT THE OVERLAP BETWEEN OUTERMOST CROSS WIRES OF EACH SHEET IS NOT LESS THAN THE CROSS WIRE SPACING PLUS 2 INCHES. ALL SPICE LOCATIONS SUBJECT TO APPROVAL AND SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS. EXTEND ALL HORIZONTAL REINFORCING CONTINUOUS AROUND CORNERS AND INTERSECTIONS OR PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.
6. REINFORCING BAR SPACINGS OVER ARE MAXIMUM ON CENTERS. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SKEW HOOKS AS REQUIRED FOR CONCRETE COVER. SECURELY TIE ALL BARS IN POSITION BEFORE PLACING CONCRETE.
7. SPLICED BARS SHALL BE PLACED AT THE SAME EFFECTIVE DEPTH UNLESS NOTED OTHERWISE. REINFORCING BARS NOTED "CONTINUOUS" OR WITH LENGTH NOT SHOWN SHALL BE FULLY CONTINUOUS AND SPLICED ONLY AS SHOWN, OR WHERE APPROVED BY THE ENGINEER.
8. REINFORCING BAR HOOKS SHALL BE STANDARD ACI HOOKS UNLESS NOTED OTHERWISE.

MASONRY:

1. MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF UBC CHAPTER 21 AND ACI 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".
2. HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N, TYPE I, F_m = 1500 PSI, NET COMPRESSIVE STRENGTH OF 1800 PSI PER ASTM C140, RUNNING BOND.
3. MORTAR SHALL CONFORM TO ASTM C270, TYPE S WITH 28 DAY COMPRESSIVE STRENGTH OF 1800 PSI, TESTED PER UBC STANDARD 21-16. MASONRY CEMENT, PRE-MIXED MORTAR AND RETARDANT ADDITIVES SHALL NOT BE USED.
4. GROUT SHALL CONFORM TO ASTM C476, FINE OR COARSE GROUT, WITH 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI, TESTED PER UBC STANDARD 21-18. GROUT SHALL BE FREE OF FLY ASH AND/OR CHLORIDE.
5. HORIZONTAL JOINT REINFORCING SHALL BE LADDER TYPE IN MASONRY WALLS WITH NO. 3 GAGE WIRE CONFORMING TO ASTM A82. PROVIDE MINIMUM 12" LAPS AT ALL SPLICES.
6. SEE DETAILS AND NOTES ON DRAWINGS FOR SIZE AND SPACING OF REINFORCING BARS. LAP SPICES OF REINFORCING IN MASONRY, UNLESS NOTED OTHERWISE, SHALL BE MINIMUM 40 BAR DIAMETERS FOR GRADE 40 BARS AND 48 BAR DIAMETERS FOR GRADE 60 BARS. WHERE TWO VERTICAL BARS ARE LOCATED IN ONE CELL, LAP SPICES SHALL BE 52 BAR DIAMETERS FOR GRADE 40 BARS AND 63 BAR DIAMETERS FOR GRADE 60 BARS. REINFORCING SHALL BE SECURED AGAINST DISPLACEMENT WITH WIRE POSITIONERS AT EACH GROUT LIFT AND AT INTERVALS NOT EXCEEDING 8'-0" VERTICALLY. PROVIDE VERTICAL DOWELS FROM FOOTINGS CONTINUOUS THROUGH STEM WALLS INTO MASONRY ABOVE. DOWELS SHALL MATCH SIZE AND SPACING OF ALL VERTICAL REINFORCING. EXTEND ALL HORIZONTAL BOND BEAM REINFORCING IN MASONRY CONTINUOUS AROUND CORNERS AND INTERSECTIONS OR PROVIDE BENT CORNER BARS TO MATCH AND LAP HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND INTERSECTIONS. ALL REINFORCING IN MASONRY SHALL BE ACCURATELY LOCATED PRIOR TO GROUTING AND THE POSITION MAINTAINED DURING GROUTING.
7. ALL CELLS AND COURSES WITH REINFORCING AND ADDITIONAL GROUT SPACES AS REQUIRED BY THE DRAWINGS SHALL BE FILLED SOLID WITH GROUT. MAXIMUM GROUT LIFT 8'-0" WITH EACH GROUT POUR STOPPING 1-1/2 INCHES BELOW THE TOP COURSE OF LIFT. PROVIDE CLEANOUTS IF GROUT LIFT EXCEEDS 4'-0". PLACE GROUT CONTINUOUSLY. DO NOT INTERRUPT GROUTING FOR MORE THAN ONE HOUR. MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING AND AGAIN ABOUT 5 MINUTES LATER. RODDING OF GROUT IS NOT ACCEPTABLE.
8. UNLESS NOTED OTHERWISE ON THE DRAWINGS, PROVIDE VERTICAL MASONRY CONTROL JOINTS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24'-0". COORDINATE LOCATIONS WITH ARCHITECT.
9. MORTAR SHALL BE TESTED FOR THE FIRST DAY'S WORK AND EVERY 3 DAYS THEREAFTER, OR AS DIRECTED BY ARCHITECT.
10. GROUT SHALL BE TESTED FOR EACH LIFT OR FOR EACH 2,000 SQUARE FEET OF WALL, WHICHEVER PROVIDES THE GREATEST AMOUNT OF TESTING, OR AS DIRECTED BY ARCHITECT. PROVIDE 3 SAMPLES PER MORTAR OR GROUT TEST. TEST ONE SAMPLE AT 7 DAYS AND TWO AT 28 DAYS. ALL TESTING DONE BY A QUALIFIED TESTING LABORATORY.
11. ERECTED MASONRY SHALL BE SPRAYED EVERY 8 HOURS FOR 48 HOURS FOLLOWING INSTALLATION WHEN THE AIR TEMPERATURE EXCEEDS 100° OR WHEN THE AIR TEMPERATURE EXCEEDS 90° AND THE WIND VELOCITY IS GREATER THAN 8 MPH DURING THE FIRST 48 HOURS AFTER ERECTION.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM WITH THE LATEST AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES", AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN, INCLUDING COMMENTARY, AND APPLICABLE PROVISIONS OF AWS "STRUCTURAL WELDING CODE". PARAGRAPH 4.2.1 OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IS HEREBY MODIFIED BY DELETION OF THE FOLLOWING SENTENCE: "THIS APPROVAL CONSTITUTES THE OWNER'S ACCEPTANCE OF ALL RESPONSIBILITY FOR THE DESIGN ADEQUACY OF ANY DETAIL CONFIGURATION OF CONNECTIONS DEVELOPED BY THE FABRICATOR AS PART OF HIS PREPARATION OF THESE SHOP DRAWINGS."
2. STRUCTURAL SHAPES AND PLATES SHALL BE ASTM A36 (F_y = 36 KSI). STRUCTURAL TUBE SHAPES SHALL BE ASTM A500, GRADE B (F_y = 46 KSI).
3. BOLTS SHALL BE ASTM A307.
4. ANCHOR BOLTS AND PLAIN THREADED BARS AND ANCHORS SHALL BE ASTM A36 OR A307, GRADE A.
5. BOLTS, ANCHOR BOLTS, EXPANSION BOLTS, ETC., SHALL BE INSTALLED WITH STEEL WASHERS.
6. WELDING ELECTRODES SHALL CONFORM TO AWS D1.1. GRADE E70XX. E80 SERIES ELECTRODES SHALL BE USED FOR ASTM A706 REINFORCING BARS. ALL WELDING SHALL BE DONE BY WELDERS HOLDING VALID CERTIFICATES ISSUED BY AN ACCEPTED TESTING AGENCY AND HAVING CURRENT EXPERIENCE IN TYPE OF WELDS SHOWN ON THE DRAWINGS OR NOTES. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS. FULL PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.
7. BEAMS, COLUMNS AND BRACES SHALL NOT BE SPLICED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
8. DEFORMED BAR ANCHOR STUDS SHALL BE NELSON D2L GRANULAR FLOW-FILLED REBAR STUDS OR APPROVED EQUAL MADE FROM LOW CARBON COLD ROLLED STEEL WITH A MINIMUM TENSILE STRENGTH OF 70,000 PSI. STUD WELDING INSPECTION AND TESTING SHALL CONFORM TO AWS D1.1.
9. BRYPACK FOR COLUMN BASE PLATES SHALL BE FIVE STAR GROUT OR AN EQUAL NON-METALLIC SHRINKAGE-RESISTANT GROUT.
10. PROVIDE FABRICATOR'S STANDARD RUST-INHIBITING PRIMER SHOP PAINT FOR ALL STEEL SURFACES EXCEPT SURFACES ENCASED IN CONCRETE, OR TO RECEIVE SPRAY-APPLIED FIREPROOFING.

EXPANSION BOLTS AND EPOXY BOLTS: (SPECIAL INSPECTION REQUIRED)

1. EXPANSION BOLTS USED IN CONCRETE SHALL BE A "WELJ-IT ANCHOR BOLT" BY WELJ-IT, INSTALLED IN ACCORDANCE WITH ICBO REPORT NO. 13021.
2. EXPANSION BOLTS USED IN CONCRETE MASONRY SHALL BE A "DYNABOLT" BY ITW RAMSEY/REDHEAD, INSTALLED IN ACCORDANCE WITH ICBO REPORT NO. 1372.
3. EPOXY BOLTS USED IN CONCRETE OR CONCRETE MASONRY SHALL BE A THREADED ROD WITH THE "TIT C-100" ADHESIVE SYSTEM BY HELL, INSTALLED IN ACCORDANCE WITH ICBO REPORT NO. 4016.
4. CONTRACTOR MAY SUBSTITUTE EXPANSION OR EPOXY BOLTS OF EQUAL VALUE IN THE SPECIFIED MATERIAL WITH A CURRENT ICBO REPORT.

STEEL DECK:

1. STEEL DECK SHALL CONFORM TO ASTM A511 GRADE C FOR PAINTED DECK. STEEL DECK SHALL HAVE CURRENT ICBO OR CABO APPROVAL.
2. STEEL ROOF DECK SHALL BE 1 1/2" DEEP, 36" WIDE, 22 GAGE PAINTED STEEL, WITH A MINIMUM YIELD STRESS OF 33,000 PSI WITH A MINIMUM 4-S = 0.187 INCHES*3 AND I = 0.175 INCHES*4 PER FOOT OF WIDTH. DECK SHALL BE ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AS 3 SPAN MINIMUM AND SHALL BE ATTACHED FOR A MINIMUM DIAPHRAGM SHEAR CAPACITY OF 240 PLF USING THE FOLLOWING MINIMUM ATTACHMENTS:
 - WELD DECK TO SUPPORTING MEMBERS WITH 5 - 1/2" DIAMETER OR 3/8" X 1" PUDDLE WELDS PER SHEET AT ENDS, END LAPS, AND AT INTERMEDIATE SUPPORTS, AND AT 12 O.C. AT PERIMETER EDGES, OPENING EDGES AND MEMBERS RUNNING PARALLEL TO THE DECK. SEAM ATTACHMENT SHALL BE BUTT JOINTS PUNCHED AT 24" O.C.
3. ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAGE STEEL DECK WORK. ALL WELDING DONE BY E60 (MINIMUM) SERIES LOW HYDROGEN RODS. ALL EXPOSED WELDS SHALL BE DE-SLAGGED, CLEANED AND PRIMED WITH A ZINC-RICH PRIMER AND TOUCHED-UP WITH PAINT.
4. THE FIRST SHEET OF STEEL DECK ADJACENT AND PARALLEL TO WALLS, PERIMETER MEMBERS, OR MEMBERS IDENTIFIED AS CHORD, COLLECTOR, OR DRAG MEMBERS (ON ONE OR BOTH SIDES AS APPLICABLE) SHALL BE FULL PANEL WELD SHEETS.

PLYWOOD:

1. ALL PLYWOOD SHALL CONFORM TO PRODUCT STANDARD 1-83 OR APA PRG-108 AND HAVE AN EXTERIOR OR EXPOSURE I DURABILITY CLASSIFICATION, AND SHALL BEAR THE STAMP OF AN ICBO APPROVED TESTING AGENCY. LAP UP ROOF WITH LONG DIMENSION PERPENDICULAR TO SUPPORTS AND STAGGER JOINTS. ON ROOFS WHERE PLYWOOD IS LAD UP WITH THE LONG DIMENSION PARALLEL TO SUPPORTS, USE A MINIMUM OF 5-PLY PLYWOOD. AT ROOFS, USE PLYCLIPS AT MIDSPAN OF UNSUPPORTED EDGES. AT WALLS, PROVIDE 2 X WOOD BLOCKING AT ALL UNSUPPORTED EDGES. ALL NAULING SHALL BE WITH COMMON NAILS U.N.O.. ALL PLYWOOD SHALL BE OF THE FOLLOWING MINIMUM THICKNESS, SPAN/INDEX RATIO, AND SHALL BE SCREWED AS FOLLOWS:

USE	THICKNESS	SPAN/INDEX RATIO	ATTACHMENT TO METAL DECK
ROOF	1/2"	32/16	3/16" RIVETS AT 24" O.C. EACH WAY (15 RIVETS PER SHEET MINIMUM)

SHOP DRAWINGS:

1. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ANY ITEMS REQUIRED BY THE ARCHITECTURAL SPECIFICATIONS. CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
2. THE GENERAL CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMITTAL. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE ARCHITECT FOR CLARITY, ALL ROOF, FLOOR AND WALL OPENINGS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS. FOR EXACT DIMENSIONS, LOCATIONS, JOINTS AND SCORE LINES, SEE ARCHITECTURAL DRAWINGS.
3. FOR CLARITY, ALL ROOF, FLOOR AND WALL OPENINGS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL STRUCTURAL DETAILS. VERIFY ALL SIZES, WEIGHTS AND LOCATIONS OF MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTS, ETC. WITH MECHANICAL AND ELECTRICAL ENGINEERS THROUGH ARCHITECT.
5. DETAILS MARKED "TYPICAL" MAY OR MAY NOT BE CUT ON PLANS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.
6. THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO ALLOW OR NOT ALLOW ANY CHANGES TO THE ORIGINAL CONTRACT DRAWINGS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW.
7. THE SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DRAWINGS. ITEMS OMITTED OR SHOWN INCORRECTLY AND WHICH ARE NOT NOTED AS ALLOWED BY THE STRUCTURAL ENGINEER OR ARCHITECT ARE NOT TO BE CONSIDERED CHANGES TO THE ORIGINAL CONTRACT DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ITEMS OMITTED OR SHOWN INCORRECTLY ARE CONSTRUCTED IN ACCORDANCE WITH THE ORIGINAL CONTRACT DRAWINGS.
8. ALL ENGINEERING DESIGNS AND LAYOUTS PERFORMED BY OTHERS SHALL BE SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ARIZONA.
9. REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS AND COMPLETENESS SHALL REST WITH THE CONTRACTOR.
10. SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF MAJOR ERRORS ARE FOUND DURING REVIEW.
11. NO MORE THAN TWO SETS OF BLUELINE PRINTS AND ONE SET OF REPRODUCIBLES WILL BE REVIEWED FOR ANY INDIVIDUAL SUBMITTAL.
12. ALLOW A MINIMUM OF FIVE WORKING DAYS FOR REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER.

SPECIAL INSPECTIONS:

1. SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED INSPECTOR APPROVED BY THE ARCHITECT AND THE BUILDING OFFICIAL.
2. SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED INSPECTOR UNDER THE DIRECT SUPERVISION OF A STATE REGISTERED STRUCTURAL ENGINEER WHO IS FAMILIAR WITH THE STRUCTURAL DESIGN OF THIS PROJECT. THE SPECIAL INSPECTION CERTIFICATE SHALL BE SEALED BY THE SUPERVISING STRUCTURAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MINIMUM OF 24 HOURS NOTICE TO THE SPECIAL INSPECTOR AND THE TESTING LABORATORY PRIOR TO BEGINNING ANY WORK FOR WHICH SPECIAL INSPECTION OR TESTING IS REQUIRED.
3. ALL INSPECTION SERVICES SHALL BE PROVIDED BY THE CONTRACTOR.
4. SPECIAL INSPECTIONS ARE REQUIRED DURING THE FOLLOWING OPERATIONS PER UBC CHAPTER 17:
 - A. GRADING, EXCAVATION AND FILLING: DURING EARTHWORK EXCAVATIONS, GRADING AND FILLING AS REQUIRED TO SATISFY REQUIREMENTS OF UBC CHAPTER 18 AND APPENDIX CHAPTER 33 AND PLACEMENT OF ENGINEERED FILL.
 - B. WELDING: DURING ALL STRUCTURAL FIELD WELDING AND SHOP WELDING EXCEPT WELDING PERFORMED IN THE SHOP OF A BUILDING OFFICIAL APPROVED FABRICATOR.
5. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
 - A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
 - B. 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 ENGINEER OR ARCHITECT OF RECORD AND THE BUILDING OFFICIAL.
 - C. UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

TYPICAL NOTES

1. FOR APPLICABLE CODES AND STANDARDS, MATERIAL STRENGTHS AND CONSTRUCTION REQUIREMENTS, SEE GENERAL STRUCTURAL NOTES AND SPECIFICATIONS.
2. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION - RESOLVE ANY DISCREPANCY WITH ARCHITECT. DO NOT SCALE DRAWINGS.
3. FOR CLARITY, ALL EXTERIOR SLABS AND SIDEWALKS MAY NOT BE SHOWN. FOR EXACT DIMENSIONS, LOCATIONS, JOINTS AND SCORE LINES, SEE ARCHITECTURAL DRAWINGS.
4. FOR CLARITY, ALL ROOF, FLOOR AND WALL OPENINGS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. FOR FRAMING AT OPENINGS, SEE TYPICAL STRUCTURAL DETAILS. VERIFY ALL SIZES, WEIGHTS AND LOCATIONS OF MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTS, ETC. WITH MECHANICAL AND ELECTRICAL ENGINEERS THROUGH ARCHITECT.
5. DETAILS MARKED "TYPICAL" MAY OR MAY NOT BE CUT ON PLANS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	DESCRIPTION	LOCATION
(211)	DETAIL CUT SHOWN ON PLAN	SEE SHEET S301 FOR FOUNDATION DETAILS SEE SHEET S401 FOR FRAMING DETAILS
(T16)	TYPICAL DETAIL	SEE SHEET S102 FOR TYPICAL DETAILS
F	PLAN NOTE	SEE PLAN NOTES ON EACH PLAN SHEET
F1	FOOTING DESIGNATION	
SC1	STEEL COLUMN DESIGNATION	
M1	CMU COLUMN DESIGNATION	SEE FOUNDATION/FRAMING PLANS AND APPLICABLE SCHEDULES
B1	BEAM DESIGNATION	

STRUCTURAL ABBREVIATIONS

ABB.	DESCRIPTION	MAX. MCJ MIN.	MAXIMUM MASONRY CONTROL JOINT MINIMUM
A.F.	ABOVE FINISHED FLOOR	N.I.C.	NOT IN CONTRACT NOT TO SCALE
A.B.	ANCHOR BOLT(S)	BSP	OPPOSITE ON CENTER
A.C.I.	AMERICAN CONCRETE INSTITUTE	O.C.	
A.S.C.	AMERICAN SOCIETY OF STEEL CONSTRUCTION	PCI	PRESTRESSED CONCRETE INSTITUTE
A.T.C.	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	PRE-ENG	PRE-ENGINEERED
APA	AMERICAN PLYWOOD ASSOCIATION	CMU	CONCRETE MASONRY UNIT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	CON	CONTINUOUS
AWS	AMERICAN WELDING SOCIETY	PSF	POUNDS PER SQUARE FOOT
CABO	COUNCIL OF AMERICAN BUILDING OFFICIALS	PI	POST-TENSIONING INSTITUTE
C.I.	CONCRECTION JOINT	RS	ROUGH SAWN
CLR	CLEAR	SW	SIMILAR
CMU	CONCRETE MASONRY UNIT	(SLV)	SHORT LEG VERTICAL
CON	CONTINUOUS	(SSV)	SHORT SIDE VERTICAL
CRSI	CONCRETE REINFORCING STEEL INSTITUTE	T & G	TONGUE AND GROOVE
CTJ	CONCRETE JOINT	PLT	PLATE THICKNESS
d	PENNY (INCH)	W	WEB THICKNESS
D.F.	DOUGLAS FIR-LARCH	TS	TUBE SECTION
EQ	EQUAL	TYP	TYPICAL
F.FE	FINISHED FLOOR ELEVATION	U.B.C.	UNIFORM BUILDING CODE
GLB	GLUED-LAMINATED BEAM	U.N.O.	UNLESS NOTED OTHERWISE
G.S.N.	GENERAL STRUCTURAL NOTES	W.W.F.	WELDED WIRE FABRIC
ICBO	INTERNATIONAL COUNCIL OF BUILDING OFFICIALS		
K	KIP(S)		
LBS	POUNDS		
(L.V.)	LONG LEG VERTICAL		
(S.V.)	SHORT SIDE VERTICAL		

ONE HOUR
FIRE - RESISTIVE
CONSTRUCTION
THROUGHOUT

PLANS APPROVED
SEP 14 2000
BUILDING & SAFETY
CITY OF LAS VEGAS

COORDINATION/PLAN CHECK
8/6/99

DESIGN
REVIEW
DESIGN DEVELOPMENT
CONSTRUCTION DOCUMENTS
BID/PRICING PACKAGE
CONSTRUCTION ISSUE

DATE ISSUED
3/3/98

DRAWN BY
JDJ

CHECKED BY
DLP

PROJECT NO.
96244

CADD FILE
S101.DWG

DRAWING NO.

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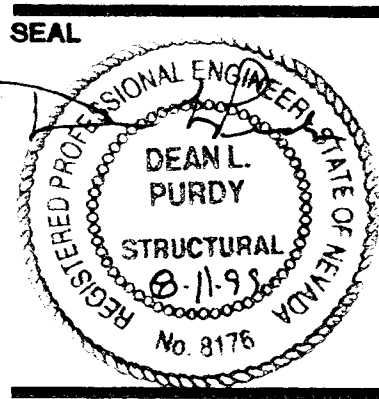
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PARK AND SPORTS FIELDS
SPORTS PARK PHASE ONE
SUMMERLIN VILLAGE 11/12
LAS VEGAS, NEVADA

COORDINATION/PLAN CHECK
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S101
GENERAL
STRUCTURAL
NOTES