GENERAI UNLESS NOTED OTHERWISE, ALL WORK SHALL CONFORM TO THE REOUIREMENTS OF THE LATEST BUILDING CODE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS AT THE JOB SITE, AND TO FULLY COORDINATE ALL DIMENSIONS AND CONDITIONS OF DETAILS WITH OTHER DISCIPLINES. ANY FIELD CONDITIONS REQUIRING CONSTRUCTION THAT IS DIFFERENT FROM THAT SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. ANY CONFLICTING DETAILS SHOWN IN THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE CONSTRUCTION OF SAID DETAIL. DO NOT SCALE DRAWINGS. ANY QUESTIONS REGARDING THE CONSTRUCTION DOCUMENTS SHALL BE SUBMITTED TO THE ARCHITECT IN THE FORM OF A WRITTEN REQUEST FOR INFORMATION (RFI).

ALL SUPPORT OF CONSTRUCTION LOADS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL SHORING AND BRACING REOUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING THE CONSTRUCTION PROCESS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK SHALL BE DONE IN ACCORDANCE WITH OSHA REQUIREMENTS. POTENTIAL CONFLICTS BETWEEN THESE DOCUMENTS AND OSHA REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL PROCEDURES OF SOIL EXCAVATION. BACK FILL, AND SUPPORT OF ADJACENT PROPERTY DURING EARTHWORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL DIMENSIONS INDICATED ON PLANS SHALL BE TO FACE OF STUDS, FACE OF CONCRETE BLOCK, FACE OF ROUGH CONCRETE, CENTERLINE OF COLUMNS, BOTTOM OF METAL DECK, AND TOP OF SLAB, UNLESS NOTED OTHERWISE REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT INDICATED ON STRUCTURAL DRAWINGS. THE FOLLOWING DESIGN CRITERIA SHALL BE ENFORCED.

GOVERNING BUILDING CODE: IBC 2015 RISK CATEGORY: II (IBC TABLE 1604.5)

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- ROOF LOAD . ROOF DEAD LOAD: 25 PSF . ROOF LIVE LOAD: 20 PSF (NON-CONCURRENT WITH ROOF SNOW LOAD)
- ROOF SNOW LOAD:
- A. GROUND SNOW LOAD Pg = 21 PSF (ELEVATION= 2,750 FT)
- B. FLAT ROOF SNOW LOAD Pf = 15 PSF (SNOW DRIFT PER ASCE 7-10)
- C. SNOW EXPOSURE FACTOR Ce = 1.0
- D. SNOW LOAD IMPORTANCE FACTOR Is = 1.0E. THERMAL FACTOR Ct = 1.0

LOOR LOAI

- DEAD: 60 PSF (4" CONCRETE SLAB OVER METAL DECK)
- LIVE: 100 PSF (RESTAURANT) LIVE: 125 PSF (WALKIN COOLER/FREEZER/ KITCHEN AREA/ STORAGE)
- BASIC WIND SPEED: 115 MPH (ULTIMATE)
- WIND EXPOSURE TYPE: C WIND IMPORTANCE FACTOR, Iw= 1.0
- 4. INTERNAL PRESSURE COEFFICIENT= ± 0.18

SEISMIC USE GROUP II SEISMIC IMPORTANCE FACTOR Ie= 1.0

- SITE COEFFICIENTS
- A. Ss = 0.510g, Fa=1.2, SMS=0.612g, SDS = 0.408g
- B. S1 = 0.160g, Fv=1.65, SM1=0.264g, SD1 = 0.176g C. Ct = 0.02
- D. SOIL SITE CLASS= C
- E. SEISMIC DESIGN CATEGORY= C

4. BASIC LFRS = LIGHT FRAMED WALL WITH SHEAR WALLS

- A. RESPONSE MODIFICATION COEFFICIENT R=6.5 B. SYSTEM OVERSTRENGTH FACTOR g=3
- C. DEFLECTION AMPLIFICATION FACTOR Cd=4
- D. W WEIGHT OF STRUCTURE:
- E. DESIGN BASE SHEAR = 0.063W (ULTIMATE), 0.045W (SERVICE) F. DESIGN PROCEDURE: EQUIVALENT LATERAL FORCE

FLOOR L/360

- ROOF L/240 . WALL WITH EFIC OR STUCCO L/360
- 7. WALL WITH STONE CLADDING L/600

TERNATE

LTERNATE PRODUCTS OF SIMILAR STRENGTH, NATURE AND FORM FOR SPECIFIED ITEMS MAY BE SUBMITTED WITH ADEOUATE TECHNICAL DOCUMENTATION TO THE ARCHITECT/ENGINEER FOR REVIEW. ALTERNATE MATERIALS THAT ARE SUBMITTED WITHOUT ADEOUATE TECHNICAL DOCUMENTATION OR THAT SIGNIFICANTLY DEVIATE FROM THE DESIGN INTENT OF MATERIALS SPECIFIED MAY BE RETURNED WITHOUT REVIEW. ALTERNATES THAT REQUIRE SUBSTANTIAL EFFORT TO REVIEW WILL NOT BE REVIEWED UNLESS AUTHORIZED BY THE OWNER.

DISCREPANCIES:

N CASE OF DISCREPANCIES BETWEEN THE GENERAL NOTES, SPECIFICATIONS PLAN/DETAILS OR REFERENCE STANDARDS, THE ARCHITECT/ENGINEER SHALL DETERMINE WHICH SHALL GOVERN. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK. SHOULD ANY DISCREPANCY BE FOUND IN THE CONTRACT DOCUMENTS, THE CONTRACTOR WILL BE DEEMED TO HAVE INCLUDED IN THE PRICE THE MOST EXPENSIVE WAY OF COMPLETING THE WORK, UNLESS PRIOR TO THE SUBMISSION OF THE PRICE, THE CONTRACTOR ASKS FOR A DECISION FROM THE ARCHITECT AS TO WHICH SHALL GOVERN. ACCORDINGLY, ANY CONFLICT IN OR BETWEEN THE CONTRACT DOCUMENTS SHALL NOT BE A BASIS FOR ADJUSTMENT IN THE CONTRACT PRICE.

SITE VERIFICATION

HE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE. CONFLICTS BETWEEN THE DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.

PRE-CONSTRUCTION MEETINGS:

HE CONTRACTOR IS RESPONSIBLE FOR COORDINATING PRE-CONSTRUCTION MEETINGS PRIOR TO COMMENCING WORK. PRE-CON MEETINGS, SCHEDULED APPROXIMATELY TWO WEEKS PRIOR TO THE START OF THE RELEVANT WORK, ARE REQUIRED FOR THE FOLLOWING PHASES OF CONSTRUCTION: POST-TENSIONED SLABS, SHOTCRETE, CONCRETE, MASONRY. ATTENDEES FOR THE PRE-CONSTRUCTION MEETING ARE TO INCLUDE CONTRACTOR, RELEVANT SUBCONTRACTORS, FABRICATORS, INSPECTORS,

ARCHITECT/ENGINEER, AND REPRESENTATIVE OF THE AUTHORITY HAVING JURISDICTION WHERE REQUIRED. MEETING AGENDAS ARE TO INCLUDE REVIEW OF THE WORK SCOPE, PROJECT SCHEDULE RELEVANT TO THE WORK, CONTACT INFORMATION OF RESPONSIBLE PARTIES. INSPECTION POINTS, REVIEW OF MATERIALS AND ANY SPECIAL CASES OR ISSUES, PROCEDURES FOR CLARIFICATIONS IF REQUIRED, TESTING AND ACCEPTANCE,

MEANS, METHODS AND SAFETY REQUIREMENTS:

IE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND ALL JOB RELATED SAFETY STANDARDS SUCH AS OSHA AND DOSH (DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH). CONTRACTOR IS RESPONSIBLE TO ADHERE TO OSHA REGULATIONS REGARDING STEEL ERECTION ITEMS SPECIFICALLY ADDRESSED ON THE LATEST OSHA REGULATIONS. BOLTING AND FIELD WELDING AT ALL MEMBER CONNECTIONS IS TO BE COMPLETED PRIOR TO THE RELEASE OF THE MEMBER FROM THE HOISTING MECHANISM UNLESS REVIEWED AND APPROVED BY THE GENERAL CONTRACTOR'S TEMPORARY BRACING AND SHORING DESIGN ENGINEER.

RACING/SHORING DESIGN ENGINEEF

HE CONTRACTOR SHALL AT HIS DISCRETION EMPLOY AN SSE, A REGISTERED PROFESSIONAL ENGINEER FOR THE DESIGN OF ANY TEMPORARY BRACING AND SHORING.

EMPORARY SHORING, BRACING:

IE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SHORING, BRACING AND OTHER ELEMENTS REOUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE WORK REOUIRED IN THE CONSTRUCTION DOCUMENTS AND THE REQUIREMENTS FOR EXECUTING IT PROPERLY

CONSTRUCTION LOADS

LOADS ON THE STRUCTURE DURING CONSTRUCTION SHALL NOT EXCEED THE DESIGN LOADS AS NOTED IN DESIGN CRITERIA & LOADS BELOW OR THE CAPACITY OF PARTIALLY COMPLETED CONSTRUCTION AS DETERMINED BY THE CONTRACTOR'S SSE FOR BRACING/SHORING.

CHANGES IN LOADING

THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY THE SER OF ANY ARCHITECTURAL, MECHANICAL, ELECTRICAL, OR PLUMBING LOAD IMPOSED ONTO THE STRUCTURE THAT DIFFERS FROM, OR THAT IS NOT DOCUMENTED ON THE ORIGINAL CONTRACT DOCUMENTS (ARCHITECTURAL / STRUCTURAL / MECHANICAL / ELECTRICA OR PLUMBING DRAWINGS). PROVIDE DOCUMENTATION OF LOCATION, LOAD, SIZE AND ANCHORAGE OF ALL UNDOCUMENTED LOADS IN EXCESS OF 400 POUNDS, PROVIDE MARKED-UP STRUCTURAL PLAN INDICATING LOCATIONS OF ANY NEW EQUIPMENT OR LOADS. SUBMIT PLANS TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

NOTE PRIORITIES

PLAN AND DETAIL NOTES AND SPECIFIC LOADING DATA PROVIDED ON THE INDIVIDUAL PLANS AND DETAIL DRAWINGS SUPPLEMENTS INFORMATION IN THE STRUCTURAL GENERAL NOTES.

PLAN INFORMATION

DIMENSIONS ARE FOR REFERENCE, CONTRACTOR TO VERIFY ALL DIMENSIONS. DIMENSIONS ARE PROVIDED BY THE ARCHITECT'S ELECTRONIC FILE. ALWAYS VERIFY THESE PLANS AND DIMENSIONS WITH THE ARCHITECT PLANS UNDER NO CIRCUMSTANCES WILL MCNEIL ENGINEERING, ITS EMPLOYEES OR AGENTS BE LIABLE FOR ANY DIRECT, INDIRECT PUNITIVE OR CONSEQUENTIAL DAMAGES THAT MAY RESULT IN ANY WAY FROM YOUR USE, MISUSE, REFERENCE TO OR RELIANCE ON ANY OF THE INFORMATION PROVIDED OR THAT RESULT FROM MISTAKES, ERRORS, OMISSIONS, INTERPRETATIONS OR DEFECTS. MCNEIL ENGINEERING EXPRESSLY DISCLAIMS ALL WARRANTIES, INCLUDING ANY EXPRESS OR

IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION HEREIN.

WHILE MCNEIL ENGINEERING MAKES EVERY EFFORT TO PRESENT ACCURATE AND RELIABLE INFORMATION, MCNEIL ENGINEERING DOES NOT ENDORSE, APPROVE OR CERTIFY THE INFORMATION PROVIDED BY OTHERS. NOR DOES MCNEIL ENGINEERING GUARANTEE ITS ACCURACY, COMPLETENESS OR TIMELINESS. USE OF THIS INFORMATION IS VOLUNTARY AND RELIANCE ON IT SHOULD ONLY BE UNDERTAKEN AFTER YOU HAVE INDEPENDENTLY VERIFIED ITS ACCURACY, COMPLETENESS AND TIMELINESS.

CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY DIMENSIONS AGAINST THE CORRESPONDING OFFICIAL CONSTRUCTION DRAWINGS. DIMENSIONS SHOWN ON THE CONSTRUCTION DOCUMENTS MUST BE VERIFIED WITH ARCHITECTURAL PLANS. IF ANY DISCREPANCIES ARE FOUND THE CONTRACTOR SHALL NOTIFY THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. MCNEIL ENGINEERING DOES NOT GUARANTEE THAT THIS ELECTRONIC MEDIA HAS NOT BEEN DAMAGED. ALTERED OR MODIFIED DURING TRANSMISSION AND/OR STORAGE. MCNEIL ENGINEERING DOES NOT GUARANTEE CHANGES ON THE ARCHITECTURAL PLANS HAVE BEEN FULLY CONVEYED AND THE TH CONSTRUCTION DOCUMENT UPDATED. ANYONE RECEIVING ELECTRONIC MEDIA MUST VERIFY ALL INFORMATION WITH THE CORRESPONDING OFFICIAL CONSTRUCTION DRAWINGS. ANY USE OR REUSE OF THIS INFORMATION SHALL BE THE FULL RESPONSIBILITY OF THE USER.

SOILS REPORT: AGEC APPLIED GEOTECH DATED JUNE 6, 2018 PROJECT NO. 2180293 AND UPDATE LETTER DATED SEPTEMBER 18, 2018 AND UPDATE LETTER DATED SEPTEMBER 18,

SOIL TO BE OBSERVED PRIOR TO PLACEMENT OF FOOTINGS. ALL FOOTING DEPTHS INDICATED ON PLANS ARE MINIMUM DEPTHS. FOOTINGS MAY BE PLACED IN NEAT EXCAVATED TRENCHES. TRENCH SHALL BE APPROVED BY INSPECTOR PRIOR TO PLACEMENT OF CONCRETE. AT LOCATIONS WHERE STRUCTURAL FILL IS REQUIRED, FILI SHALL BE PLACED IN 6" LIFTS & COMPACTED AT OPTIMUM MOISTURE CONTENT. REFER TO SOILS INVESTIGATION FOR DEPTH AND EXTENT OF STRUCTURAL FILL.

- 1. MAXIMUM NET BEARING PRESSURE = 2,000 PSF TO 2,500 PSF (NET ALLOWABLE) DEPENDING ON STRUCTURAL FILL THICKNESS AND SIZE OF FOOTING SEE SOILS REPORT AND UPDATE LETTER
- . MIN DEPTH= 12"
- . INTERIOR FOOTINGS = 12" (BOTTOM OF FOOTING FROM TOP OF GRADE) 4. LATERAL SOIL PRESSURE : ACTIVE = 45 PCF; AT REST = 65 PCF; PASSIVE = 220 PCF
- 5. SEISMIC LATERAL EARTH PRESSURE: ACTIVE = +9 PCF, AT REST = 0 PCF, PASSIVE=-14 PCF
- 6. FRICTION COEFFICIENT : 0.45
- 7. CONVENTIONAL SPREAD AND SPOT FOOTINGS WITH SLAB ON GRADE FLOORS TO BEAR DIRECTLY ON THE UDERLYING UNDISTURBED BEDROCK OR ON A ZONE OF PROPERLY COMPACTED, IMPORTED STRUCTURAL FILL PER SOILS REPORT. 8. LIQUEFACTION POTENTIAL= "LOW"

CONCRETE:

ALL CONCRETE MATERIALS SHALL COMPLY WITH THE STANDARDS SPECIFIED IN THE LATEST EDITION OF THE ACI 318 BUILDING CODE. EACH MIX DESIGN SHALL BE REVIEWED BY AN APPROVED INDEPENDENT LABORATORY, AND SHALL BE SUBMITTED TO THE ENGINEER AT LEAST 2 WEEKS PRIOR TO THE PLACEMENT OF CONCRETE. CONTRACTOR SHALL INFORM THE ENGINEER AT LEAST 2 DAYS PRIOR TO PLACING ANY CONCRETE SO THAT THE ENGINEER MAY HAVE THE OPPORTUNITY TO REVIEW THE WORK. CONCRETE TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING LABORATORY. THE TESTING AGENCY SHALL TEST (4) CYLINDERS FROM EACH CLASS OF CONCRETE USED EACH DAY. A MINIMUM OF (1) SAMPLE MUST BE TAKEN FROM EACH 150 CUBIC YARDS OF CONCRETE.

| LOCATION | SPECIAL INSPECTION | EXPOSURE CLASS | SLUMP (MAX) | AGGREGATE (MAX SIZE) | AIR CONTENT | COMPRESSIV STRENGTH (PSI) |
|------------------------------|-----------------------|-------------------|----------------|-------------------------|----------------|---------------------------------|
| FOOTINGS (INTERIOR) | NO | F0, S2, P0, C0 | 5" | 1" DIA. | 1.5% | 4,500 PSI |
| FOOTINGS (EXTERIOR) | NO | F1, S2, P0, C0 | 5" | 1" DIA. | 1.5% | 4,500 PSI |
| CONCRETE WALLS | YES | F1, S2, P0, C1 | 4" | 3/4" DIA. | 5% | 4,500 PSI |
| CONCRETE COLUMNS | YES | F1, S2, P0, C1 | 4" | 3/4" DIA. | 5% | 4,500 PSI |
| INTERIOR SLAB ON GRADE | NO | F1, S2, P0, C0 | 5" | 3/4" DIA. | 1.5% | 4,500 PSI |
| SLAB ON DECK | NO | F0, S0, P0, C0 | 4" | 3/4" DIA. | 6% | 4,000 PSI |

CONCRETE TYPE: TYPE V

MAX WATER TO CEMENT RATIO 0.45 MAX FLYASH: 25%

AIR CONTENT +- 1.5% MEASURED AT POINT OF FINAL PLACEMENT. AIR-ENTRAINING ADMIXTURES SHALL COMPLY WITH ASTM C260 (WHEN USED). CALCIUM CHLORIDE SHALL NOT BE ADDED TO THE CONCRETE MIX. UNREINFORCED CONCRETE SLABS ON GRADE MAY HAVE CALCIUM CHLORIDE NOT EXCEEDING ONE PERCENT. AIR ENTRAINMENT SHALL BE ADJUSTED FOR THE USE OF ADMIXTURES AND FLY ASH.

ANY CONCRETE THAT FAILS TO MEET SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT THE EXPENSE OF THE CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION, DESIGN, PLACEMENT AND REMOVAL OF ALL FORMWORK. ALL SHORING DURING PLACEMENT OF CONCRETE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

SEE CIVIL DRAWINGS FOR SITE CONCRETE REQUIREMENTS. IN ABSENCE OF INFORMATION, USE VALUES LISTED.

CONCRETE SHALL BE SPECIALLY INSPECTED PER, TABLE 1704.4

RE FOOTING E FOOTING ' SLAB ON G

WALLS NOT IN CONTACT WITH EARTH

PLANS.

STRUCTURAL STEE

SHOP PAINTING

ALL WELDING SHALL BE DONE BY CERTIFIED AWS WELDERS, AND COMPLY WITH THE LATEST EDITION OF THE AWS D1.1 CODE FOR WELDING IN BUILDING CONSTRUCTION. ALL FILLET WELDS TO BE 3/16" UNLESS NOTED OTHERWISE. ALL STEEL TO STEEL BOLTED CONNECTIONS SHALL BE WITH ASTM A307, UNLESS NOTED OTHERWISE. PROVIDE EDGE DISTANCE IN ACCORDANCE TO AISC TABLE J3.7 UNLESS NOTED OTHERWISE. ALL FIELD WELDS SHALL BE SPECIALLY INSPECTED PER IBC TABLE. ALL TESTING AND INSPECTION REPORTS SHALL BE SENT TO THE ENGINEER FOR REVIEW.

DRAWINGS.

STEEL DECK

DAYS TO REVIEW SHOP DRAWINGS.

AST-IN-PLACE CONCRETE COVER CONFORM TO THE FOLLOWING COVER AND CORROSION PROTECTION REQUIREMENTS

| UNLESS NOTED OTHERWISE IN THE DRAWINGS: | | | | | | | | | | |
|---|-------------|--|--|--|--|--|--|--|--|--|
| REINFORCEMENT LOCATION | MIN. COVER | | | | | | | | | |
| FOOTING BOTTOM REINFORCEMENT | 3" | | | | | | | | | |
| FOOTING TOP REINFORCEMENT | 2" | | | | | | | | | |
| SLAB ON GRADE REINFORCEMENT | 2" FROM TOP | | | | | | | | | |

CONCRETE REINFORCING

WALLS IN CONTACT WITH EARTH

ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615 GRADE 60, Fy=60,000 PSI MIN., UNLESS NOTED OTHERWISE. BARS SHALL BE TIED SECURE PRIOR TO PLACEMENT OF CONCRETE TO MAINTAIN PROPER PLACEMENT AFTER CONCRETE IS IN PLACE. LAP ALL BARS 40 DIAMETERS UNLESS NOTED OTHERWISE. SPLICE BARS ONLY WHERE SHOWN ON

3/4"

SHOP DRAWINGS OF ALL BARS AND LOCATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. NORMAL WEIGHT CONCRETE SHALL HAVE A UNIT WEIGHT OF POUNDS PER CUBIC FOOT. USE OF CALCIUM CHLORIDE IS NOT PERMITTED IN ANY CONCRETE MIXES. ALL OTHER ADDITIVES AND ADMIXTURES MUST HAVE THE WRITTEN APPROVAL OF THE ENGINEER. THE ENGINEER SHALL HAVE 10 BUSINESS DAYS TO REVIEW SHOP DRAWINGS.

ALL STRUCTURAL STEEL COMPONENTS SHALL BE FABRICATED AND ERECTED ACCORDING TO THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATIONS FOR DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", WITH " COMMENTARY", AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AS WELL AS THE FOLLOWING STANDARDS:

AISC "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A-325 OR A-490 BOLTS" APPROVED BY THE RESEARCH COUNCIL ON RIVETED AND BOLTED STRUCTURAL JOINTS OF THE ENGINEERING FOUNDATION.

AWS D1.1 "STRUCTURAL WELDING CODE". ASTM A-6 "GENERAL REQUIREMENTS FOR DELIVERY OF ROLLED STEEL PLATES, SHAPES, SHEET PILING AND BARS FOR STRUCTURAL USE".

ALL STEEL SECTIONS SHALL CONFORM TO THE FOLLOWING: WIDE FLANGE SHAPES: ASTM A572 GRADE 50 OR ASTM A992 GRADE 50.

HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE B FY MIN. = 46 KSI

ANGLES, CHANNELS, PLATES & BARS: ASTM A36.

PAINTING REQUIREMENTS: NO SHOP PAINTING WILL BE REQUIRED EXCEPT WHERE PLANS INDICATE THAT STRUCTURAL STEEL WILL BE EXPOSED TO WEATHER. (I.E. COOLING TOWER FRAMING, DOOR LINTELS, SCREEN WALLS, ETC.)

SURFACE PREPARATION: REMOVE LOOSE RUST, LOOSE MILL SCALE, AND SPATTER, SLAG OR FLUX DEPOSITS. CLEAN STEEL IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL (SSPC) SP-3 "POWER TOOL CLEANING".

PAINTING: ONE COAT OF APPROVED PRIMER APPLIED BY BRUSH, SPRAY, ROLLER OR DIP TO PRODUCE A DRY FILM THICKNESS OF NOT LESS THAN 2 MILS.

NOTE: DO NOT SHOP PAINT WHEN TEMPERATURE IS BELOW 45 DEGREES F., OR WHEN STEEL TEMPERATURE IS BELOW DEW POINT OF ATMOSPHERE OR ON WET SURFACES.

SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE ENGINEER SHALL HAVE TO BUSINESS DAYS TO REVIEW SHOP

STRUCTURAL STEEL SHALL BE SPECIALLY INSPECTED AS PER AISC 360.

ALL STEEL DECKS SHALL COMPLY WITH THE LATEST REQUIREMENTS OF THE STEEL DECK INSTITUTE. CONTRACTOR SHALL SUBMIT CURRENT ICBO REPORTS FOR EACH DECK USED TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ATTACHMENT OF STEEL DECK. DECKING LAYOUT SHALL BE SUCH THAT DECKING SPANS 3 OR MORE SPANS MINIMUM. WHERE SUCH LAYOUT IS IMPOSSIBLE, DECKING MUST MEET DESIGN CRITERIA FOR SIMPLE SPAN CONDITIONS. PROVIDE 2" MINIMUM BEARING. THE ENGINEER SHALL HAVE 10 BUSINESS

OPEN WEB STEEL JOISTS AND TRUSSES:

ALL STEEL JOIST FABRICATION AND DESIGN SHALL COMPLY WITH THE LATEST EDITION OF THE STEEL JOIST INSTITUTE "STANDARD SPECIFICATIONS AND CODE OF PRACTICE". ALL ROOF JOISTS SHALL BE CAMBERED AS SPECIFIED IN THE STEEL JOIST INSTITUTE SPECIFICATIONS, UNLESS NOTED OTHERWISE. NO JOIST OR GIRDER MAY BE ALTERED OR MODIFIED IN THE FIELD WITHOUT THE WRITTEN APPROVAL FROM THE ENGINEER. A COMPLETE SET OF SHOP DRAWINGS, ICC REPORTS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE FABRICATION OF ANY ANY MEMBERS. SUCH CALCULATIONS SHALL BE PREPARED UNDER THE DIRECTION OF A LICENSED ENGINEER IN THE STATE IN WHICH THE BUILDING IS TO BE BUILT.

AMINATED VENEER LUMBER:

ALL LAMINATED VENEER LUMBER SHALL CONFORM TO THE SPECIFICATIONS OF WEYERHAEUSER CORPORATION FOR VENEER LUMBER, OR ENGINEER APPROVED EOUIVALENT. DESIGN VALUES SHALL MEET OR EXCEED THOSE PUBLISHED VALUES IN THE WEYERHAEUSER PRODUCT GUIDE, LATEST EDITION. A COMPLETE SET OF STRUCTURAL SHOP DRAWINGS, INDICATING MEMBERS AND PLACEMENT SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE FABRICATION OF THE MEMBERS. THE ENGINEER SHALL HAVE 10 BUSINESS DAYS TO REVIEW SHOP DRAWINGS.

SHEATHING SHALL BE A.P.A. RATED, SEE PLAN FOR SPAN RATING AND THICKNESS. SHEATHING INSTALLATION:

ROOF AND FLOOR SHEATHING SHALL BE LAID WITH THE FACE GRAIN PERPENDICULAR TO THE FRAMING MEMBERS U.N.O. AND END JOINTS SHALL BE STAGGERED. WALL SHEATHING MAY BE APPLIED HORIZONTALLY OR VERTICALLY.

ALL NAILS SHALL BE COMMON WIRE NAILS U.N.O. EQUIVALENT PNEUMATIC DRIVEN NAILS MAY BE USED IF FASTENER MANUFACTURER HAS CURRENT I.C.C. APPROVAL. FASTENERS TO BE USED SHALL BE EQUIVALENT IN LATERAL AND WITHDRAWAL STRENGTH TO THE SIZE COMMON NAIL SPECIFIED.

USE EXTERIOR GRADE SHEATHING AT DECKS AND CORRIDORS.

ROOF SHEATHING

EDGE BLOCKING OF UNSUPPORTED EDGES OF SHEATHING AS NOTED ON PLANS. PLY CLIPS OR APPROVED EQUAL CONNECTOR SHALL BE INSTALLED AT MID SPAN BETWEEN EACH SUPPORT WHEN RAFTER SPACING EXCEEDS 16" AND EDGE BLOCKING IS NOT SPECIFIED.

TYPICAL NAILING SHALL BE 8d @ 6" O.C. AT SUPPORTED EDGES AND OVER SHEAR WALLS AND 8d AT 12" O.C. AT INTERMEDIATE SUPPORTS, U.N.O.

FLOOR SHEATHING EDGE BLOCKING OF UNSUPPORTED EDGES OF SHEATHING AS NOTED ON PLANS.

TYPICAL NAILING SHALL BE 10d @ 6" O.C. ALL SUPPORTED EDGES AND OVER SHEAR WALLS, AND 10d @ 12" O.C. ALL INTERMEDIATE SUPPORTS U.N.O. USE RING SHANK NAILS.

ALL FLOOR SHEATHING SHALL BE GLUED TO JOISTS. THE FIELD-GLUED FLOOR SYSTEM SHALL BE INSTALLED ACCORDING TO THE RECOMMENDATION OF THE AMERICAN PLYWOOD ASSOCIATION. GLUE SHALL BE APPLIED TO THE JOISTS AND TO THE GROOVE IN THE EDGE OF THE T & G PANELS. GLUE SHALL MEET THE REQUIREMENTS OF THE AMERICAN PLYWOOD ASSOCIATION ADHESIVE SPEC. AFG-D1 AND SHALL BE APPLIED AS DIRECTED BY THE GLUE MANUFACTURER. GLUE MAY BE APPLIED MANUALLY OR WITH PNEUMATIC OF ELECTRIC EQUIPMENT.

FRAMING LUMBER SHALL BE KILN DRIED AND SHALL MEET THE FOLLOWING MINIMUM STANDARD U.N.O. USE:

SILL PLATES 2 x 4 STANDARD OR BETTER D.F NO. 2 OR BETTER. 2 x 6, 2 x 8 ALL SILL PLATES IN CONTACT WITH CONCRETE OR MASONRY, SHALL BE PRESSURE TREATED OR CALIFORNIA REDWOOD.

HORIZONTAL FRAMING LUMBER: (UNO) NO. 2 4x4 AND SMALLER D.F. 2x ROOF JOISTS & RAFTERS D.F. NO. 2 2x FLOOR JOISTS D.F. NO. 2

ROUGH CARPENTRY

| LEDGERS | D.F. | NO. 1 |
|---------------------------------|------|---------------------------|
| HEADERS & BEAMS | D.F. | NO. 1 |
| 5 & LARGER BEAMS | D.F. | NO. 1 |
| RTICAL FRAMING LUMBER: (U.N.O.) | | |
| L STUDS | D.F. | STUD GRADE OR #2 (SEE PLA |
| L POSTS | D.F. | NO. 1 |
| L OTHER LUMBER U.N.O | D.F. | STANDARD OR BETTER. |
| | | |

FINGER-JOINTED LUMBER MAY BE USED EXCEPT AT SHEARWALL HOLDOWNS LOCATIONS.

AT EXTERIOR LOCATIONS, DECKS EXPOSED CORRIDORS, USE APA RATED SHEATHING EXTERIOR. WHERE CONSTRUCTION DELAYS ARE EXPECTED PRIOR TO PROVIDING PROTECTION USE APA RATED SHEATHING EXPOSURE 1 COMMONLY KNOWN AS "CDX".

PROVIDE A MINIMUM OF (2) STUDS UNDER ALL BEAM BEARING LOCATIONS UNO. PROVIDE A MINIMUM OF (3) STUDS UNDER ALL GIRDER TRUSS BEARING LOCATIONS UNO. WHERE POSTS OR MULTIPLE STUDS UNDER BEAMS OR HEADERS ARE IDENTIFIED ON DRAWINGS, THOSE POSTS OR MULTIPLE STUDS SHALL BE CARRIED TO THE FOUNDATION. BLOCK JOISTS AT ALL SUPPORTS. DOUBLE JOISTS UNDER PARALLEL PARTITIONS. BLOCK UNDER PERPENDICULAR PARTITIONS AT 32" O.C.

PREFABRICATED ROOF WOOD TRUSSES:

TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING STANDARDS: NATIONAL DESIGN SPECS. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION RULE NO. 16. DESIGN SPECS FOR LT. MTL. PLATE CONNECTED WOOD TRUSSES BY THE TRUSS PLATE INSTITUTE. CAMBER TRUSSES FOR 1 1/2 TIMES THE DEAD LOAD DEFLECTION.

TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING MIN. SUPERIMPOSED LOADING: ROOF TRUSSES, ASSUMED FOR TOTAL LOADING OF 20 PSF NON-CONCURRNET WITH THE FOLLOWING:

TOP CHORD DL = 10 psfLL = 20 psf, (PLUS DRIFTING PER ASCE 7)Cd = 1.0BTM. CHORD DL= 15 psf LL = 10 psf (NOT TO BE APPLIED AT THE SAME TIME AS TOP CHORD LL)

MAXIMUM DEFLECTION OF TRUSSES SHALL BE (DEAD + LIVE). ROOF - L/240

WEB MEMBERS MAY NOT BE SHOWN ON DRAWINGS. MANUFACTURER TO DETERMINE WEB MEMBER CONFIGURATION AND TRUSS CONNECTION. NO TRUSS MAY BE ALTERED OR MODIFIED IN THE FIELD WITHOUT THE WRITTEN APPROVAL FROM THE ENGINEER. A COMPLETE SET OF SHOP DRAWINGS, ICC REPORTS AND CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE FABRICATION OF ANY MEMBERS. SUCH CALCULATIONS SHALL BE PREPARED UNDER THE DIRECTION OF A LICENSED ENGINEER IN THE STATE IN WHICH THE BUILDING IS TO BE BUILT

QUALITY ASSURANCE PLAN:

SPECIAL INSPECTION AND TESTING AS REQUIRED BY THE IBC SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER UNLESS WAIVED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS/TESTS AS INDICATED BELOW, REFERRING TO THE IBC SECTION INDICATED AS APPROPRIATE, REF IBC SECTION 1704.

CONCRETE WALLS/COLUMNS STRUCTURAL STEEL

WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY AS PART OF THE QUALITY ASSURANCE AND SPECIAL INSPECTION PLAN, THE

CONTRACTOR SHALL SUBMIT TO THE BUILDING OFFICIAL AND THE OWNER A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY CONTAINING THE FOLLOWING ITEMS:

- ACKNOWLEDGMENT AND AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS.
- . ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.
- 3. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF REPORTS.
- 4. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

SHOP DRAWING DEVIATIONS:

WHEN SHOP DRAWINGS (COMPONENT DESIGN DRAWINGS) DIFFER FROM OR ADD TO THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS THEY SHALL BE DESIGNED AND STAMPED BY THE RESPONSIBLE SSE.

GENERAL CONTRACTOR'S PRIOR REVIEW:

ONCE THE CONTRACTOR HAS COMPLETED HIS REVIEW OF THE SSE COMPONENT DRAWINGS, THE SER WILL REVIEW THE SUBMITTAL ACCORDINGLY. REVIEW OF THE SPECIALTY STRUCTURAL ENGINEER'S (SSE) SHOP DRAWINGS (COMPONENT DESIGN DRAWINGS) IS FOR COMPLIANCE WITH DESIGN CRITERIA AND COMPATIBILITY WITH THE DESIGN OF THE PRIMARY STRUCTURE AND DOES NOT RELIEVE THE SSE OF RESPONSIBILITY FOR THAT DESIGN. ALL NECESSARY BRACING, TIES, ANCHORAGE, PROPRIETARY PRODUCTS SHALL BE FURNISHED AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS OR THE SSE'S DESIGN DRAWINGS AND CALCULATIONS. THESE ELEMENTS INCLUDE BUT ARE NOT LIMITED TO THE ITEMS LISTED BELOW.

GIVEN IN THE CONSTRUCTION DOCUMENTS.

DEFERRED SUBMITTAL ITEMS:

THESE DEFERRED SUBMITTALS SHALL FIRST BE SUBMITTED TO THE PROJECT ARCHITECT AND/OR ENGINEER FOR PREVIEW AND COORDINATION. UPON COMPLETION OF THE ARCHITECT/ENGINEER REVIEW, THE ARCHITECT/ENGINEER WILL SUBMIT THE DEFERRED SUBMITTALS TO THE BUILDING OFFICIAL FOR REVIEW AND APPROVAL. THE SUBMITTAL TO THE BUILDING OFFICIAL SHALL INCLUDE A LETTER STATING THAT THE ARCHITECT/ENGINEER REVIEW HAS BEEN PERFORMED AND THAT THE PLANS AND CALCULATIONS FOR THE DEFERRED SUBMITTAL ITEMS ARE FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN DRAWINGS WITH NO EXCEPTIONS.

THE FINAL SUBMITTAL SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH CONSTRUCTION WILL OCCUR AND SHALL BE AVAILABLE AT THE JOBSITE THROUGHOUT CONSTRUCTION.

CONSTRUCTION RELATED TO DEFERRED SUBMITTALS SHALL NOT COMMENCE UNTIL THE BUILDING OFFICIAL HAS APPROVED THE SUBMITTAL.

ALL MEMBERS SHALL CONFORM WITH AMERICAN AND IRON STEEL INSTITUTE (AISI) "SPECIFICATIONS FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" CURRENT EDITION.

TO THE REQUIREMENTS OF ASTM A1003-00.

ALL STRUCTURAL MEMBERS SHALL BE ZINC COATED MEETING ASTM A1003-00.

ALL FRAMING COMPONENTS SHALL BE CUT SOUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.

ALL FRAMING COMPONENTS SHALL BE PLUMBED, ALIGNED AND LEVELED.

ITEMS LISTED FOR DEFERRED SUBMITTAL SHALL BE DESIGNED BY SPECIALTY STRUCTURAL ENGINEERS LICENSED IN THE STATE OF UTAH. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW (SEE NOTES THIS SHEET). THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE ARCHITECT, ENGINEER OF RECORD AND THE BUILDING OFFICIAL

DEFERRED SUBMITTAL ITEMS METAL DECK SHOP DRAWINGS

2. OPEN WEB JOIST DESIGN AND SHOP DRAWINWG

- 3 AWNINGS 4. INTERIOR METAL STAIRS
- 5. CONCRETE DESIGN MIX

TEMS REQUIRING DEFERRED SUBMITTALS THAT ARE LISTED BELOW ARE TO BE DESIGNED AND FABRICATED BY THE MANUFACTURER ACCORDING TO SPECIFICATIONS

ALL MEMBERS SHALL BE FORMED FROM CORROSION-RESISTANT STEEL, CORRESPONDING



| PRIOR TO WEL | ווח | | лЕ | N5 / 1 | AISC 260 10). |
|--|----------------------------------|--|----------------------------|---|---|
| Verify welding procedures (WPS) | | | | Deriodia | AISC 500-10). |
| and consumable certificates | | Continuous | | Periodic | Verify type and grade of material. |
| Welder identification | | Continuous | | Periodic | A system shall be maintained by which a welder who has welded a joint |
| Fit-up groove welds | | Continuous | | Deriodia | or member can be identified. Verify joint preparation dimensions cleanliness tacking and backing |
| A ccess holes | | Continuous | | Periodic | Verify configuration and finish |
| Fit we fillet welde | | Continuous | | | Verify coniguration and misit. Verify alignment, gaps at root, cleanliness of steel surfaces, and tack wel |
| | | | × | Periodic | quality and location. |
| DURING WELD | IN | G (TABL | E N | 15.4-2, A | ISC 360-10): |
| Use of qualified welders | | Continuous | | Periodic | Verify that welders are appropriately qualified. |
| Control and handling of welding consumables | | Continuous | | Periodic | Verify packaging and exposure control. |
| Cracked tack welds | | Continuous | ⊠ | Periodic | Verify that welding does not occur over cracked tack welds. |
| Environmental conditions | | Continuous | | Periodic | Verify win speed is within limits as well as precipitation and temperature |
| WPS followed | | Continuous | | Periodic | Verify items such as settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass |
| Welding techniques | | Continuous | | Periodic | temperature maintained, and proper position. Verify interpass and final cleaning, each pass is within profile limitations |
| | | | | | and quality of each pass. |
| AFTER WELDIN | ٩Q | (TABLE | N5. | 4-3, AIS | C 360-10): |
| Welds cleaned | | Continuous | | Periodic | Verify that welds have been propyl cleaned. |
| Size, length, and location of welds | | Continuous | | Periodic | |
| welds meet visual acceptance criteria | \boxtimes | Continuous | | Periodic | |
| Arc strikes | \boxtimes | Continuous | | Periodic | |
| k-area | \boxtimes | Continuous | | Periodic | |
| Backing & weld tabs removed | \boxtimes | Continuous | | Periodic | |
| Repair activities | \boxtimes | Continuous | | Periodic | |
| Document acceptance or rejection of welded joint/member | \boxtimes | Continuous | | Periodic | |
| NONDESTRUC | ΓIV | YE TES' | ΓIN | JG (TAF | |
| | | | | | Ultrasonic testing shall be performed on 10% of CJP groove welds in |
| CJP welds (Risk Cat. II) | | Continuous | | Periodic | butt, T- and corner joints subject to transversely applied tension loading in materials 5/16-inch thick or greater. Testing rate must be increased if >5% of welds tested have unacceptable defects. |
| Size, length, and location of welds | ⊠ | Continuous | | Periodic | A reduction in the rate of ultrasonic testing is allowed per Section N5.5e. |
| Welds meet visual acceptance criteria | \boxtimes | Continuous | | Periodic | |
| Arc strikes | \boxtimes | Continuous | | Periodic | |
| PRIOR TO BOLT | ΓIN | IG (TAB | LE | N5.6-1, A | AISC 360-10): |
| > Not required if only snug-tight jo | oints a | re specified [pe | r Sect | ion N5.6(1) o | f AISC 360-10] |
| Certifications of fasteners | ⊠ | Continuous | | Periodic | |
| Fasteners marked | | Continuous | \boxtimes | Periodic | Verify that fasteners have been marked in accordance with ASIM requirements. |
| Proper fasteners for joint | | Continuous | \boxtimes | Periodic | Verify grade, type, and bolt length if threads are excluded from the shear plane. |
| Proper bolting procedure | | Continuous | | Periodic | Verify proper procedure is used for the joint detail. |
| Connecting elements | | Continuous | | Periodic | Verify appropriate faying surface condition and hole preparation, if |
| Pre-installation verification testing | | Continuous | | Periodic | Observe and document verification testing by installation personnel for |
| Proper storage | | Continuous | | Periodic | Verify proper storage of bolts, nuts, washers, and other fastener |
| > Not required if only snug-tight jo > Not required for pretensioned joi method [per Section N5.6(2) of Alton | NC oints a nts us SC 36 | G (TABLI re specified [pe ing turn-of-th-r 0-10] | E N5 rr Secti nut me | 5.6-2, AI ion N5.6(1) o thod with mat | SC 360-10): f AISC 360-10] tch-marking, direct-tension-indicators, or twist-off type tension control |
| Fastener assemblies | | Continuous | \boxtimes | Periodic | verify that fastener assemblies are of suitable condition, paced in all holes, and washers are positioned as required. |
| Snug-tight prior to pretensioning | | Continuous | \boxtimes | Periodic | Verify that joints are brought to snug-tight condition prior to pretensioning operation. |
| Fastener component | | Continuous | | Periodic | Verify that fastener component is not turned by wrench prevented from rotating. |
| Pretensioned fasteners | | Continuous | | Periodic | Verify that fasteners are Pretensioned in accordance with RCSC Specification, progressing systematically from the most rigid point |
| AFTER BOLTIN | G (| (TABLE) | N5.6 | 5-3, AISC | toward the free edges. |
| Document acceptance or rejection | | Continuous | | Periodic | |
| | | DECTI | <u></u> | | |
| UTHER STEEL | 11N2 | DI LU II | | (SECTIC | IN N5.7, AISC 360-10; TABLES J8-1 & J10-1, AISC 341-10): |
| Structural steel details | | Continuous | | Periodic | with the details shown in the construction documents, such as braces, stiffeners, member locations, and proper application of joint details at each connection. |
| Anchor rods and other embedments supporting structural steel | | Continuous | | Periodic | embeddenents supporting structural steel for compliance with construction documents. Verify the diameter, grade, type, and length of the anchor roc or embedded item, and the extent or depth of embeddenent prior to |
| Reduced heam sections (RRS) | | Continuous | | Periodia | Verify contour and finish as well as dimensional tolerances (see Table |
| | | Continuous | | D I II | J8-1 of AISC 341-10) Verify that no holes or unapproved attachments are made within the |
| Protected zones | | Continuous | | Periodic | protected zone (see Table J8-1 or AISC 341-10) Verify that no holes or unapproved attachments occur within the |
| H-piles | | Continuous | \boxtimes | Periodic | protected zones of piling (see Table J10-1 of AISC 341-10) |
| STEEL ELEMEN (TABLES N6.1, AISC 360-10; TA | JTS bles | 5 OF C(39-1 thru 39 | DМ -3, аі | POSIT (SC 341-11) | TE CONSTRUCTION |
| deck | | Continuous | | Periodic | |
| Placement and installation of steel headed stud anchors | \boxtimes | Continuous | | Periodic | |
| Document acceptance or rejection of steel elements | \boxtimes | Continuous | | Periodic | |
| | | <i>a</i> : | | Deviatio | Verify appropriate reinforcement size, spacing, and orientation; that it has not been re-bent in field, that it is correctly field and supported, and that |
| Reinforcing steel | | Continuous | <u> ^ </u> | Periodic | Hot been re-bent in nord, that it is concerny neurand similar and similar that |
| Reinforcing steel | | Continuous | | Periodic | required steel clearances have been provided. Verify that composite member is the required size. |

| Item | | | | Detailed Instructions and Frequencies |
|--|-------------|------------|----------|--|
| Reinforcing steel, including prestressing tendons | | Continuous | Periodic | Verify prior to placing concrete that reinforcing is of specified type, grad and size; that it is free of oil, dirt and rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcemen are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report. |
| Cast-in bolts & embeds | | Continuous | Periodic | Inspection of anchors or embeds cast in concrete is required when allowable loads have been increased or where strength design is used. |
| Post-installed anchors or dowels | | Continuous | Periodic | All post-installed anchors/dowels shall be specially inspected as required by the approved ICC-ES report. |
| Use of required mix design | | Continuous | Periodic | Verify that all mixes used comply with the approved construction documents; ACI 318: Ch. 4, 5.2-5.4; and IBC 1904.3, 1913.2,1913.3. |
| Concrete sampling for strength tests, slump, air content, and temperature | | Continuous | Periodic | |
| Concrete & shotcrete placement | \boxtimes | Continuous | Periodic | |
| Curing temperature and techniques | | Continuous | Periodic | Verify that the ambient temperature for concrete is kept at $>50^{\circ}F$ for at least 7 days after placement. High-early-strength concrete shall be kept at $>50^{\circ}F$ for at least 3 days. Accelerated curing methods may be used (see ACI 318:5.11.3). The ambient temperature for shotcrete shall be $>40^{\circ}F$ for the same period of time as noted for concrete. Shotcrete shall be kept continuously moist for at least 24 hours after shotcreting. All concrete materials, reinforcement, forms, fillers, and ground shall be free from frost. In hot weather conditions ensure that appropriate measures are taken to avoid plastic shrinkage cracking and that the specified water/cement ratio is not exceeded. |
| Pre-stressed concrete | \boxtimes | Continuous | Periodic | |
| Erection of precast concrete | | Continuous | Periodic | Verify that all precast elements are lifted, assembled and braced in accordance with the approved construction documents. |
| Strength verification | | Continuous | Periodic | Verify that adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons. |
| Formwork | | Continuous | Periodic | Verify that the forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents. |
| Reinforcement complying with ASTM A 615 in special moment frames, special structural walls and coupling beams | | Continuous | Periodic | Verify that ASTM A 615 reinforcing steel used in these areas complies with ACI 318: 21.1.5.2 by means of certified mill test reports. If this reinforcing steel is to be welded chemical tests shall be performed in accordance with ACI 318: 3.5.2. |

Item

| | | | | Detailed Instructions and Prequencies |
|--|------------|-------------|----------|---|
| Verify subgrade is adequate to achieve design bearing capacity | Continuous | | Periodic | Prior to placement of concrete. |
| Verify excavations extend to proper depth and material | Continuous | | Periodic | Prior to placement of compacted fill or concrete. |
| Verify that subgrade has been appropriately prepared prior to placing compacted fill | Continuous | | Periodic | Prior to placement of compacted fill. |
| Perform classification and testing of compacted fill materials | Continuous | \boxtimes | Periodic | All materials shall be checked at each lift for proper classifications and gradations not less than once for each 10,000 ft ² of surface area. |
| Verify proper materials, densities and lift thicknesses during placement and compaction. | Continuous | | Periodic | |

CONCRETE CONSTRUCTION (IBC 1705.3 & 1705.12.1)

















ROOF LAYOUT

SCALE 1/16" = 1'-0"

UPPER ROOF FRAMING PLAN

10' 15' 10' 15'

SCALE: 3/16"=1'-0"

NOTE: DO NOT SCALE PLAN. USE AS REFERENCE ONLY VERIFY ALL DIMENSIONS ON ARCHITECTURAL PLANS

S1.03

| | | | | | | | FOOT | ING | SCH | EDUL | E | | | |
|--------|--------|--------|-------|----|-------|---------------------|----------|-----|---------|-----------|---------|---|------------------|--|
| MADV | WIDTH | LENCTH | DEDTU | | REINF | INFORCING CROSSWISE | | | REINFOR | CING LENG | THWISE | DEMADUC | DEPTH OF | |
| MAKK | WIDIN | LENGIH | DEFIN | NO | SIZE | E LENGTH SPACIN | | NO | SIZE | LENGTH | SPACING | KEMAKKS | STRUCTURAL FILL* | |
| F-24 | 24" | CONT | 12" | - | - | - | - | 2 | #5 | CONT | EQ | CONTINUOUS FOOTING | 2'-0" | |
| F-36 | 36" | CONT | 14" | - | - | - | - | 3 | #5 | CONT | EQ | CONTINUOUS FOOTING | 2'-0" | |
| F-48 | 48" | CONT | 14" | - | #5 | 3'-6" | 18" O.C. | 4 | #5 | CONT | EQ | CONTINUOUS FOOTING | 3'-0" | |
| FS-3 | 3'-0" | 3'-0" | 12" | 3 | #5 | 2'-6" | EQ | 3 | #5 | 2'-6" | EQ | SPOT FOOTING | 2'-0" | |
| FS-4 | 4'-0" | 4'-0" | 12" | 4 | #5 | 3'-6" | EQ | 4 | #5 | 3'-6" | EQ | SPOT FOOTING | 2'-0" | |
| FS-4.5 | 4'-6" | 7'-6" | 12" | 7 | #5 | 4'-0" | EQ | 4 | #5 | 7'-0" | EQ | SPOT FOOTING | 2'-0" | |
| FS-6.5 | 6'-6" | 6'-6" | 14" | 7 | #5 | 6'-0" | EQ | 7 | #5 | 6'-0" | EQ | SPOT FOOTING | 3'-0" | |
| FS-7 | 7'-0" | 7'-0" | 14" | 8 | #5 | 6'-6" | EQ | 8 | #5 | 6'-6" | EQ | SPOT FOOTING | 3'-0" | |
| FS-8 | 8'-0" | 8'-0" | 16" | 10 | #5 | 7'-6" | EQ | 10 | #5 | 7'-6" | EQ | SPOT FOOTING | 3'-0" | |
| FS-9 | 9'-0" | 9'-0" | 24" | 16 | #5 | 8'-6" | EQ | 18 | #5 | 8'-6" | EQ | SPOT FOOTING PROVIDE (2) MATS OF REINFORCING PLACE HALF THE REQUIRED REINFORACING 2" FROM TOP OF FOOTING AND HALF 3" FROM BOTTOM OF FOOTING | 4'-0" | |
| FS-10 | 10'-0" | 10'-0" | 24" | 22 | #5 | 9'-6" | EQ | 22 | #5 | 9'-6" | EQ | SPOT FOOTING PROVIDE (2) MATS OF REINFORCING PLACE HALF THE REQUIRED REINFORACING 2" FROM TOP OF FOOTING AND HALF 3" FROM BOTTOM OF FOOTING | 4'-0" | |

NOTES:

*STRUCTURAL FILL PER SOILS REPORT

SEE STEPPED FOUNDATION DETAIL WHERE FOOTING STEP IS REQUIRED

| |) |) |) |) |) | | <u> </u> | |) | | | | | | | | |
|-------------------|----------|---|---|----|----|----|----------|-----|---|---|---|---|---|---|---|---|----|
| H K K | | (| | | | _(| (| - (| | (| (| (| (| (| (| (| _0 |
| DIAMETI OF BAR | <u>_</u> | | | LA | AP | | | | 1 | | | | | | | | |

| | CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE | | | | | | | | | | | | | | | |
|------------|--|---------|--------------|---------|---------|---------|---------|---------|--------|----------|---------|------|-----|---------|---------|-----|
| | | f'c = 3 | 000 psi | | | f'c =40 | 000 psi | | 1 | f'c = 5 | 000 psi | | | f'c = 6 | 000 psi | |
| REBAR | REG | ULAR | Т | OP | REG | ULAR | T | OP | REG | REGULAR | | ТОР | | REGULAR | | 'OP |
| SIZE | CL | ASS | CL | ASS | CL | ASS | CL | ASS | CLASS | | CL | ASS | CL | CLASS | | ASS |
| | A | В | A | В | A | В | A | B | А | В | А | В | A | В | A | В |
| #4 | 17" | 22" | 22" | 28" | 15" | 19" | 19" | 24" | 13" | 17" | 17" | 22" | 12" | 16" | 16" | 20" |
| #4 | 22" | 29" | 29" | 38" | 19" | 25" | 25" | 33" | 17" | 22" | 22" | 29" | 16" | 21" | 21" | 27" |
| #5 | 28" | 36" | 36" | 47" | 24" | 31" | 31" | 41" | 22" | 28" | 28" | 36" | 20" | 26" | 26" | 33" |
| #6 | 33" | 43" | 43" | 56" | 29" | 37" | 37" | 49" | 26" | 34" | 34" | 43" | 24" | 31" | 31" | 40" |
| #7 | 49" | 63" | 63" | 81" | 42" | 54" | 54" | 70" | 37" | 48" | 48" | 63" | 35" | 45" | 45" | 58" |
| #8 | 55" | 72" | 72" | 93" | 47" | 62" | 62" | 80" | 42" | 55" | 71" | 71" | 39" | 51" | 51" | 66" |
| #9 | 62" | 81" | 81" | 105" | 53" | 69" | 69" | 90" | 48" | 62" | 62" | 81" | 44" | 58" | 58" | 75" |
| #10 | 70" | 91" | 91" | 118" | 60" | 78" | 78" | 101" | 54" | 70" | 70" | 91" | 50" | 65" | 65" | 84" |
| #11 | 78" | 101" | 101" | 131" | 67" | 87" | 87" | 112" | 60" | 77" | 77" | 100" | 55" | 72" | 72" | 93" |
| CONCRE | TE REI | NFORCI | NG BAI | R LAP S | PLICE N | NOTES: | | | | | | | | | | |
| 1. THIS SO | CHEDU | LE SHA | LL BE (| JSED FO | OR ALL | SPLICE | S, UNL | ESS NO | TED OT | HERWIS | SE. | | | | | |
| 2. HORIZ | ONTAL | BARS / | ARE CL | ASSIFIE | ED AS T | OP BAR | S WHE | RE 12", | OR MOF | RE, OF F | RESH | | | | | |
| CONCE | RETE IS | CAST F | 3ELOW | THE RE | INFOR | CING BA | ARS. | | | | | | | | | |

DEPTH OF STRUCTURAL FILL PER GEOTECH **DESIGNED FOR 2000 PSF** BEARING PRESSURE ----

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ANTHONY P SCHMID

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