NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS NOTED OTHERWISE. TYPICAL DETAILS ARE TO BE ISED FOR ALL CONDITIONS WHERE THE DETAIL IS APPLICABLE, WHETHER OR NOT NOTED ON PLAN. TYPICAL DETAILS MAY BE SLIGHTLY ALTERED IF REQUIRED DUE TO PROJECT CONDITIONS, ONLY WHEN SUBMITTED AND THE ENGINEER'S APPROVAL IS OBTAINED PRIOR TO PERFORMING THE WORK ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS, WITH THE EXCEPTION OF STRUCTURAL MEMBER SIZES, ARE SENERATED BY OTHER DISCIPLINES. ANY DIMENSIONS OR ELEVATIONS OMITTED OR NOT SHOWN ON THE STRUCTURAL DRAWINGS SHOULD BE DETAINED FROM THE DRAWINGS OF THE OTHER DISCIPLINES. STRUCTURAL DRAWINGS ARE NOT "STAND-ALONE" DOCUMENTS AND SHOULD BE USED N CONJUNCTION WITH, AND COORDINATED WITH THE SPECIFICATIONS, ARCHITECTURAL DRAWINGS AND ALL OTHER DISCIPLINE'S DRAWINGS. IF

IF DIFFERENCES OCCUR WITHIN OR BETWEEN DRAWINGS AND SPECIFICATIONS REGARDING MATERIALS, STRENGTHS OR QUANTITIES, THE BETTER MATERIAL, HIGHER STRENGTH, AND GREATER QUANTITY INDICATED, SPECIFIED OR NOTED SHALL BE PROVIDED

THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER AND ARCHITECT PRIOR TO

REPRODUCTIONS OF STRUCTURAL DRAWINGS FOR SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED, UNLESS WRITTEN APPROVAL IS REQUESTED BY THE CONTRACTOR AND IT IS GRANTED BY SLATE STRUCTURAL ENGINEERS.

DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION. THESE DRAWINGS DO NOT DEFINE SCOPE OF CONTRACTOR OR SUBCONTRACTOR CONTRACTS.

AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING MEANS AND METHODS OF ONSTRUCTION AND SAFETY OF PERSONS AND PROPERTY. THE ENGINEER'S PRESENCE OR REVIEW OF WORK AT THE JOBSITE IS FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT ONLY AND IS NOT EVER TO BE CONSTRUED AS A REVIEW OF MEANS AND METHODS OF CONSTRUCTION AND

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR PROTECTING THE COMPLETED OR INCOMPLETED STRUCTURAL FRAMING FROM DAMAGE DUE TO TEMPORARY CONSTRUCTION LOADINGS.

COSTS OF INVESTIGATION AND/OR REDESIGN DUE TO CONTRACTOR ERRORS WILL BE AT THE CONTRACTOR'S EXPENSE ). ANY APPROVED CONTRACTOR REQUESTED CHANGES TO THESE DRAWINGS WILL BE DONE AT NO COST TO THE OWNER. APPROVAL OF CONTRACTOR REQUESTED CHANGES IN NO WAY STATES OR IMPLIES APPROVAL OF A CHANGE IN SCOPE OR CHANGE IN CONTRACT COST.

UNLESS EXPLICITLY NOTED AS "ISSUED FOR BID". THESE DRAWINGS ARE NOT SUITABLE FOR OBTAINING BIDS FROM GENERAL OR SUBCONTRACTORS. BIDDING OF DRAWINGS PRIOR TO DESIGN COMPLETION AND "ISSUED FOR BID" IS DONE AT THE SOLE RISK OF THE BIDDING CONTRACTOR. ADDITIONS OR CORRECTIONS TO DRAWINGS THAT ARE BID PRIOR TO DESIGN COMPLETION AND "ISSUED FOR BID" WILL NOT BE ONSIDERED AS DESIGN ERRORS OR OMISSIONS. STRUCTURAL DESIGN, BY NATURE, CANNOT BE COMPLETE PRIOR TO COMPLETION OF ARCHITECTURAL AND MECHANICAL DRAWINGS

SEF ARCHITECTURAL DRAWINGS. SPECIFICATIONS. AND OTHER DOCUMENTS FOR ALL WATER/DAMPROOFING, FIREPROOFING AND UTILITIY DETAILS AND REQUIREMENTS. COORDINATE ALL UNDERGROUND UTILITY REQUIREMENTS WITH THE CIVIL/MEP DRAWINGS. ALL UTILITES SHALL BE ABOVE/BELOW FOOTING AND NOT LOCATED WITHIN THE FOOTINGS. NOTIFY ENGINEER OF RECORD IF OTHERWISE IE THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY. THE CONTRACTOR MUST PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. THIS SKETCH MUST BE SUBMITTED TO AND APPROVAL MUST BE

2 ALL REFERENCES TO WATER/DAMPROOFING FIREPROOFING AND UTILITIES ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY

GRANTED BY THE ENGINEER PRIOR TO PERFORMING THE WORK SUBMIT SHOP DRAWINGS SUCH THAT BY THE TIME THEY ARE RECEIVED BY SLATE STRUCTURAL ENGINEERS. THERE WILL BE AT LEAST 14 DAYS BEFORE REVIEWED SUBMITTALS WILL BE NEEDED. ANY REVIEW THAT IS REQUIRED MORE EXPEDIENTLY WILL BE AT THE CONTRACTOR'S EXPENSE. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL CERTIFYING THAT HE HAS VERIFIED ALL FIELD MEASUREMENTS CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION AND OMPLIANCE WITH THE CONTRACT DOCUMENTS. IF REVIEW OF AN INCOMPLETE SHOP DRAWING IS REQUIRED, THAT SHOP DRAWING SHALL BE CLEARLY MARKED AS INCOMPLETE. THE AREA THAT NEEDS TO BE REVIEWED SHALL BE CLEARLY NOTED WITH AN EXPLANATION FOR THE REASON

IN NO CASE SHALL HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-0" FROM ANY FOUNDATION/BASEMENT WALL. IF THE CONTRACTOR EEMS IT NECESSARY TO OPERATE SUCH EQUIPMENT CLOSER THEN 8'-0", THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND, AT HIS OWN EXPENSE, PROVIDE ADEQUATE SUPPORTS OR WALL BRACES TO WITHSTAND THE ADDITIONAL LOADS SUPERIMPOSED FROM SUCH EQUIPMENT.

16. SIZE AND/OR LOCATION OF OPENINGS. SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, DEPRESSIONS, ETC. SHOWN ON THE STRUCTURAL DOCUMENTS ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE TO COORDINATE ALL CONTRACT DOCUMENTS TO DETERMINE THE SIZE AND/OR LOCATION OF OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, DEPRESSIONS, ETC. SIZE AND/OR LOCATION OF EXISTING STRUCTURES AND UTILITIES SHOWN ON THE STRUCTURAL DOCUMENTS ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY BY FIELD MEASUREMENTS/INVESTIGATION THE SIZE AND/OR LOCATION OF ALL EXISTING STRUCTURES AND UTILITIES.

THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED SHOWING DESIGNS OF METAL STAIRS, METAL RAILINGS AND CONNECTIONS TO STRUCTURE TAKING INTO ACCOUNT THE VERTICAL AND LATERAL LOADS STATED IN THE GOVERNING CODES. WHERE HEADERS OR OTHER TYPES OF STRUCTURAL MEMBERS HAVE BEEN DESIGNATED ON THE STRUCTURAL CONTRACT DOCUMENTS TO SUPPORT THE STAIRS, THE CONNECTIONS FROM THE STAIRS SHALL BE DESIGNED SO THAT NO ECCENTRIC OR TORSIONAL FORCES ARE IMPOSED ON THESE STRUCTURAL MEMBERS. IF ECCENTRIC INECTIONS ARE USED, CONTRACTOR SHALL PROVIDE BRACING ELEMENTS FOR ALL SUPPORTING STEEL TO ELIMINATE THE TORSIONAL EFFECTS OF THE ECCENTRIC CONNECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL EMBEDDED ITEMS AND HARDWARE AS REQUIRED PER THE STAIR DESIGN.

STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATING EQUIPMENT. MOUNT VIBRATING EQUIPMENT ON VIBRATION ISOLATORS, ). EXACT LOCATIONS OF ROOF PENETRATIONS TO BE COORDINATED BY THE GENERAL CONTRACTOR BETWEEN STEEL/JOIST/DECK/HVAC

## **EXISTING CONDITIONS/DEMOLITION**

SUBCONTRACTORS SEE DETAIL FOR ROOF FRAME REQUIREMENTS.

FOR PARTIAL APPROVAL.

SHORING, BRACING, PROTECTION, AND UNDERPINNING OF EXISTING AND ADJACENT STRUCTURES DURING CONSTRUCTION, INCLUDING ALL DESIGN RESPONSIBILITIES, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE SIGNED AND SEALED CALCULATIONS AND DRAWINGS TO OWNER. PROTECT AND MAINTAIN THE INTEGRITY OF ADJACENT STRUCTURES, BUILDINGS AND STREETS, ALL EXISTING DIMENSIONS, ELEVATIONS, AND LOCATIONS OF EXISTING STRUCTURES, OR RELATIVE TO EXISTING STRUCTURES, THAT ARE SHOWN ON THE STRUCTURAL DOCUMENTS WILL BE VERIFIED BY FIELD MEASUREMENTS PERFORMED BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER.

THE STRUCTURAL DOCUMENTS HAVE BEEN PREPARED BASED ON AVAILABLE KNOWLEDGE OF EXISTING CONDITIONS. IF. DURING DEMOLITION.

EXCAVATION OR CONSTRUCTION, ACTUAL CONDITIONS ARE DISCOVERED TO DIFFER FROM THOSE INDICATED ON THE DOCUMENTS, THE ARCHITECT ALL STRUCTURAL DEMOLITION MUST BE COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. SELECTIVELY DEMOLISH STRUCTURAL COMPONENTS AS REQUIRED TO CONSTRUCT NEW WORK, PRIOR TO ANY DEMOLITION WORK, AN

NGINEERING SURVEY REPORT OF THE STRUCTURE SHALL BE PREPARED BY THE CONTRACTOR TO DOCUMENT THE CONDITION OF THE FRAMING, LOORS, AND WALLS. ANY ADJACENT STRUCTURE WHERE OCCUPANTS MAY BE EXPOSED SHALL BE SIMILARLY REVIEWED. WHERE NEW FRAMING IS TO BE CONNECTED TO AN EXISTING STRUCTURE WITH BRICK OR CMU VENEER. THE VENEER SHALL BE REMOVED SUFFICIENTLY TO PERMIT CONNECTION OF THE NEW FRAMING DIRECTLY TO THE BUILDING SUPERSTRUCTURE. NEW BRICK OR CMU SHALL BE NSTALLED TO MATCH THE EXISTING ADJACENT SURFACES. MAINTAIN A 1/2" SEPARATION BETWEEN THE BRICK OR CMU AND THE NEW FRAMING,

CONTRACTOR TO FIELD VERIEY ALL EXISTING FINISHED FLOOR FLEVATIONS PRIOR TO FABRICATION OF STEEL REGINS, PROVIDE ALLOWANCE FOR ADDITIONAL LEVELING MATERIAL IN AREAS OF BREAK THROUGH TO THE EXISTING STRUCTURE TO ENSURE FINISHED FLOOR ELEVATION OF NEW

JNLESS NOTED OTHERWISE ON DRAWINGS. FILL GAPS WITH BACKER RODS AND SEALANTS.

CONTRACTOR SHALL RETAIN INDIVIDUAL TO PERFORM SITE SAFETY DEMOLITION PLAN, ENGINEERING STUDY AND ALL OTHER SERVICES RELATED TO DEMOLITION IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS.

### STRUCTURAL SPECIAL INSPECTIONS THE QUALIFIED AGENCY RETAINED BY THE OWNER FOR THESE SPECIAL INSPECTION SERVICES SHALL BE APPROVED BY THE OWNER. THE

ARCHITECT, AND THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION. AN OUTLINE OF THE SCOPE OF SERVICES TO BE PERFORMED BY HE INSPECTING AGENCY IS TO BE SUBMITTED PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH SECTION 1704 OF THE INTERNATIONAL BUILDING CODE, AND ALL APPLICABLE STATE AND LOCAL REQUIREMENTS, AN NDEPENDENT APPROVED AGENCY SHALL MAKE PERIODIC AND/OR CONTINUOUS INSPECTIONS OF THE CONSTRUCTION PROGRESS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS

STEEL CONSTRUCTION CONCRETE CONSTRUCTION

SECTION 1704.4, TABLE 1704.4

SECTION 1705.2, TABLE 1705.2.3, AISC 360 SECTION 1705.3. TABLE 1705.3 SECTION 1705.6, TABLE 1705.6

SECTION 1704.7, TABLE 1704.7 IN ACCORDANCE WITH SECTIONS 1707.1 THROUGH 1707.5 (1705.12.1 THROUGH 1705.12.9 FOR IBC 2015) OF THE INTERNATIONAL BUILDING CODE ND ALL APPLICABLE STATE AND LOCAL REQUIREMENTS, AN INDEPENDENT APPROVED AGENCY SHALL MAKE PERIODIC AND/OR CONTINUOUS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE OF THE CONSTRUCTION PROGRESS.

NO GEOTECHNICAL REPORT IS PROVIDED. BOTTOM OF FOOTINGS IS ASSUMED TO BEAR ON SOIL CAPABLE OF SAFELY SUPPORTING 2000 PSE PRIOR TO CONSTRUCTION, THE SERVICES OF A QUALIFIED GEOTECHNICAL ENGINEER SHALL BE RETAINED. THE GENERAL CONTRACTOR IS HEREIN RESPONSIBLE FOR PERFORMING ALL EARTHWORK OPERATIONS IN STRICT ACCORDANCE WITH GEOTECHNICAL ENGINEERING REQUIREMENTS. IF THE OUNDATION RECOMMENDATIONS AND/OR DESIGN VALUES DIFFER FROM THAT ASSUMED, MODIFICATON TO THE DESIGN/DRAWINGS MAY BE SUBGRADE OF ALL FOOTINGS MUST BE INSPECTED UNDER THE SUPERVISION OF AND APPROVED BY A REGISTERED SOILS ENGINEER BEFORE PLACING ANY CONCRETE. APPROVAL IN WRITING MUST INDICATE THE SOIL IS ADEQUATE TO SAFELY SUSTAIN SPECIFIED SOIL BEARING PRESSURE. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 3 FEET BELOW EXTERIOR FINISH GRADE. ALL FOOTING ELEVATIONS SHOWN ON

PLAN ARE THE BEST APPROXIMATIONS BASED ON AVAILABLE DATA. GENERAL CONTRACTOR MAY ALTER FOOTING ELEVATIONS FOR REASONS INCLUDING, BUT NOT LIMITED TO, REVISED GEOTECHNICAL OR CIVIL INFORMATION, UNFORESEEN CONDITIONS, ACTUAL INVERT ELEVATIONS.

DO NOT BACKFILL ANY BASEMENT WALLS WITH AN UNBALANCED HEIGHT OF SOIL GREATER THAN THREE FEET UNTIL ELEVATED FLOOR IS IN-PLACE AND THE WALL HAS REACHED ITS DESIGN STRENGTH OR THE WALLS ARE ADEQUATELY BRACED EXPOSED CONCRETE/CMU WALLS SHALL HAVE CONTROL JOINTS AT 30 FEET MAXIMUM ON CENTER UNLESS NOTED OTHERWISE. WALLS WITH NTEGRAL COLUMN PIERS OR PILASTERS SHALL BE POURED MONOLITHICALLY AND SHALL HAVE A FORMED CONTROL JOINT ON ONE SIDE OF EACH PIER ON THE EXPOSED FACE OF THE WALL. JOINTS SHALL BE FILLED WITH AN APPROVED SEALANT.

CONSTRUCTABILITY. ETC. CONTRACTOR SHALL NOTIFY ARCHITECT AND OBTAIN WRITTEN APPROVAL PRIOR TO ANY MODIFICATIONS.

REINFORCING STEEL SHALL BE WITHIN TOLERANCES SET FORTH IN ACI 117, AND HAVE THE SPECIFIED CLEAR COVER, UNLESS NOTED THERWISE ON DRAWINGS:

CONCRETE POURED AGAINST EARTH CONCRETE EXPOSED TO EARTH OR WEATHER: #6 OR LARGER

BEAMS (STIRRUPS AND MAIN REINFORCING)

CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: LUMNS (TIES AND MAIN REINFORCING) SLABS, WALLS, JOISTS: #14 OR #18 BARS #11 OR SMALLER

CLEAR COVER SHALL BE CLEARLY SHOWN ON ALL REINFORCING BAR DETAIL DRAWINGS.

ALL CONCRETE SHALL BE READY-MIX AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF: SPREAD FOOTINGS/WALL FOOTINGS/FOUNDATION WAL

BASEMENT WALLS/RETAINING WALLS PIERS-MATCH WALL STRENGTH

(MINIMUM OF 3,000 PSI)

CONCRETE SLABS ON METAL DECK

HAVE A MINIMUM OF 500 LBS. OF CEMENT PER CUBIC YARD. SLUMP (AT POINT OF CONCRETE PLACEMENT) SHALL BE 3 INCH MINIMUM AND 6 NCH MAXIMUM. CONCRETE EXPOSED TO WEATHER SHALL HAVE 5 PERCENT AIR ENTRAINMENT. CONCRETE NOT EXPOSED TO WEATHER SHALL NOT CONTAIN AN AIR-ENTRAINING AGENT, SUBMIT MIX DESIGNS FOR REVIEW.

NORMAL-WEIGHT CONCRETE TO BE GIVEN A HARD-TROWELED FINISH SHALL NOT CONTAIN AN AIR-ENTRAINING AGENT. TOTAL AIR CONTENT FOR THIS CONCRETE SHOULD NOT EXCEED 3 PERCENT (AT POINT OF CONCRETE PLACEMENT). ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE LATEST ACI BUILDING CODE (ACI 318). THE ACI DETAILING MANUAL (ACI 315). AND THE SPECIFICATIONS FOR STRUCTURAL

ALL REINFORCING STEEL SHALL BE MANUFACTURED FROM HIGH STRENGTH BILLET STEEL CONFORMING TO ASTM DESIGNATION A615 GRADE 60. WWF SHALL COMPLY WITH ASTM A185.

LAP ALL REINFORCING BARS 62 DIAMETERS. LAP ALL WWF A MINIMUM OF SIX INCHES.

ALL INSERTS AND SLEEVES SHALL BE CAST-IN-PLACE. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND LOCATIONS OF ALL OPENINGS PIPE SLEEVES, ETC. AS REQUIRED BY ALL TRADES BEFORE THE CONCRETE IS POURED. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL MECHANICAL. AND ELECTRICAL DRAWINGS. AS WELL AS THE STRUCTURAL DRAWINGS FOR THE LOCATION. NUMBER. AND SIZE OF ALL OPENINGS. SLEEVES, ETC. HOWEVER, OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INSTALLED ONLY AFTER APPROVAL BY THE STRUCTURAL ENGINEER IS OBTAINED. DRAWINGS SHALL BE SUBMITTED FOR REVIEW SHOWING LOCATIONS AND DIMENSIONS OF ALL OPENINGS SLEEVES, ETC. IN CAST-IN-PLACE CONCRETE SLABS, BEAMS, WALLS, COLUMNS, AND FOUNDATIONS. THESE DRAWINGS SHALL BE COORDINATED BY THE CONTRACTOR. OPENINGS AND SLEEVES THROUGH CAST-IN-PLACE CONCRETE FRAMING IS PROHIBITED EXCEPT WHERE THOSE SLEEVES AND OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS OR WHERE THEY ARE SHOWN ON THE APPROVED SLEEVE AND OPENING DRAWINGS THAT HAVE BEEN SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. SAW-CUTTING, CORING, OR DRILLING OF SLEEVES OR OPENING THROUGH PREVIOUSLY CAST CONCRETE IS NOT PERMITTED EXCEPT WHERE SPECIFICALLY REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER.

LIGHTWEIGHT CONCRETE SHALL BE USED FOR FRAMED FLOORS AS NOTED ON THE DRAWINGS. TOTAL AIR CONTENT AT POINT OF CONCRETE PLACEMENT SHALL BE LIMITED TO 5.5 PERCENT (PLUS OR MINUS 1.5 PERCENT) FOR HARD TROWELED FINISHED AREAS. THIS CONCRETE IS TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND AN IN-PLACE DRY DENSITY OF 107 - 113 POUNDS PER CUBIC FOOT OR PER THE REQUIREMENTS SET FORTH IN THE FIRE RATING SPECIFICATIONS.

7. SUBMIT ALL REINFORCING SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION.

8. FOR CONCRETE SLABS ON METAL DECK, FLOORS SHALL BE POURED TO THE THICKNESS SHOWN ON DOCUMENTS, NOT TO A LEVEL LINE.

THE CONTRACTOR SHALL INSTALL FLOOR LEVELING MATERIAL AND PERFORM OTHER CORRECTIVE MEASURES IN ALL AREAS, INCLUDING BUT NOT LIMITED TO, AREAS WHERE FLOOR FINISH PROVISIONS DO NOT COMPLY WITH THE FLATNESS AND LEVELNESS REQUIREMENT

EMBEDDED CONDUIT WITHIN CONCRETE SLAB ON METAL DECK IS NOT ALLOWED.

ACCORDANCE WITH SSPC- SP3 PRIOR TO PAINTING

ALL STRUCTURAL STEEL SHALL BE FABRICATED AND FRECTED IN ACCORDANCE WITH THE LATEST AISC CODE. ALL CONNECTIONS INCLUDING AT HSS SECTIONS. SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE LATEST AISC CODE. UNLESS INDICATED OTHERWISE ON TRACT DOCUMENTS, IN ADDITION TO THE SHEAR CONNECTION, INCLUDE AS A MINIMUM, 4X4X3/8 ANGLES TOP AND BOTTOM OR ENDPLATE AT ALL ISS BEAMS/GIRDERS TO COLUMN CONNECTIONS. ALL WIDE FLANGE SHAPES SHALL BE ASTM A992. ALL OTHER STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS NOTED OTHERWISE, LL STEEL RECTANGULAR/SQUARE HOLLOW STRUCTURAL SECTIONS SHALL BE ASTM A500 GRADE C, FY = 50 KSI, ALI STEEL ROLIND HOLLOW STRUCTURAL SECTIONS SECTIONS SHALL BE ASTM A500 GRADE C. EY = 46 KSL ALL STEEL SHALL HAVE A SHOP COAT OF RUST INHIBITIVE PAINT. DELETE PAINT ON ALL STEEL TO RECEIVE SPRAYED-ON FIREPROOFING OR CONCRETE ENCASEMENT, AS NOTED ON ARCHITECTURAL DOCUMENTS. ORIENT ALL MILL CAMBER UPWARD DURING FABRICATION AND ERECTION. ALL STEEL SHALL BE THOROUGHLY CLEANED IN

ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS. AS DESCRIBED IN "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE", AWS D1.1 LATEST EDITION, TO PERFORM THE TYPE OF WORK REQUIRED. UNLESS OTHERWISE NOTED, ALL CONNECTIONS SHALL BE BOLTED WITH MINIMUM 3/4-INCH DIAMETER A325 OR A490 HIGH STRENGTH BEARING TYPE BOLTS OR WELDED. THE FABRICATOR IS RESPONSIBLE FOR THE SELECTION, DESIGN, AND DETAILING OF ALL CONNECTIONS, INCLUDING BUT NOT LIMITED TO MOMENT CONNECTIONS, BRACED FRAME CONNECTIONS, AND TRUSS CONNECTIONS, NOT FULLY DETAILED ON THE CONTRACT DRAWINGS THIS INCLUDES TO DESIGN DETAIL FURNISH AND INSTALL STIFFENERS CONTINUITY PLATES DOUBLER PLATES OR OTHER NECESSARY ADDITIONAL LOCAL STRENGTHENING MEASURES AS REQUIRED. MEMBER SIZES INDICATED ON THE DRAWINGS ARE BASED ON MEMBER BEHAVIOR AWAY FROM CONNECTIONS. INFILL BEAM CONNECTIONS MAY BE ONE-SIDED CONNECTIONS, UNLESS NOTED OTHERWISE. ALL GRAVITY MOMENT CONNECTIONS SHALL BE BOLTED WITH MINIMUM 3/4-INCH DIAMETER A325 OR A490 HIGH STRENGTH SLIP CRITICAL BOLTS OR WELDED.

UNLESS OTHERWISE NOTED, DETAILS INDICATED ON DRAWINGS INDICATE GENERAL CRITERIA FOR DESIGN AND DETAILING OF CONNECTIONS. DETAILS INDICATED ON DRAWINGS ARE NOT INTENDED TO CONVEY COMPLETE CONNECTOR SIZES, PLATE SIZES, WELD SIZES, NUMBER OF BOLTS, OR ANY OTHER SPECIFIC INFORMATION THAT IS OBTAINED THROUGH DESIGNING OF AN INDIVIDUAL CONNECTION FOR A GIVEN SET OF LOADS. THESE DETAILS DO NOT SHOW ERECTION AIDS. PROVIDE ERECTION AIDS AS REQUIRED AND REMOVE THEM AFTER WORK IS COMPLETE.

4. ALL ANCHOR RODS TO BE ASTM F1554 GRADE 36, UNLESS NOTED OTHERWISE. 5. ALL ALUMINUM AND STEEL MEMBERS SHALL BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND CORROSIVE EFFECTS.

ALL STEEL WELDING RODS SHALL BE E70XX. SUBMIT ALL STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION. SHOP DRAWINGS SHALL SHOW COMPLETE BOLTING AND WELDING INFORMATION, BOTH SHOP AND FIELD. ALL WELDING INFORMATION SHALL USE AMERICAN WELDING SOCIETY SYMBOLS. SHOP OR FIELD

SPLICING OF ANY STRUCTURAL STEEL SECTION WHERE NOT DETAILED ON THE CONTRACT DOCUMENTS IS STRICTLY PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD 3. CONNECTIONS FOR ALL NON-COMPOSITE AND COMPOSITE BEAM/GIRDERS NOT CONNECTED TO COLUMNS SHALL BE DESIGNED FOR A MINIMUM UNFACTORED REACTION OF 15 KIPS. UNLESS NOTED GREATER ON DRAWINGS

STEEL FABRICATOR IS SOLELY RESPONSIBLE FOR SURVEYING AND VERIFICATION OF EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO THE LOCATION, ELEVATION, AND DIMENSIONS OF EXISTING WALLS AND FRAMING. 10. IF UNISTRUT FRAMING DIFFERS FROM DOCUMENTS, IT SHALL BE DESIGNED, FABRICATED AND ERECTED BY PREFABRICATED FRAMING MANUFACTURER, I.E. UNISTRUT, POWERSTRUT OR APPROVED EQUAL. MANUFACTURER IS RESPONSIBLE FOR COORDINATION AND COMPLIANCE WITH ARCHITECTURAL AND EQUIPMENT REQUIREMENTS/PARAMETERS INCLUDING STRENGTH AND DEFLECTION AND SHALL SUBMIT SEALED CALCULATIONS AND SHOP DRAWINGS WHICH COMPLY WITH ALL APPLICABLE CODES FOR REVIEW BY ENGINEER. UNISTRUT REQUIREMENTS FOR THE FIT-OUT ARE TO BE COORDINATED WITH THE ARCHITECTURAL DOCUMENTS AND MANUFACTURER FOR PATIENT LIFTS, LIGHTS, ETC. (DESIGN, FABRICATION AND

ERECTION ARE BY THE GENERAL CONTRACTOR 11. ALL LINTELS AND SHELF ANGLES WITHIN EXTERIOR WALLS SHALL BE HOT DIP GALVANIZED.

ANY POINTS OF WELDING SHALL BE TOUCHED UP IN THE FIELD WITH A ZINC-RICH PAINT BY THE STEEL ERECTOR. ALL EXPOSED STEEL (INCLUDING BUT NOT LIMITED TO DUNNAGE FRAMING, SCREEN WALL FRAMING, CANOPY FRAMING, ETC.) SHALL BE HOT

ANY POINTS OF WELDING SHALL BE TOUCHED UP IN THE FIELD WITH A ZINC-RICH PAINT BY THE STEEL ERECTOR. SPANDREL ANGLE AT PERIMETER EDGE OF FLOOR SLAB/ROOF SHALL BE ADJUSTABLE. SHIP ANGLE LOOSE AND SET WITH STRING LINE IN FIELD FOR VERTICAL AND HORIZONTAL ALIGNMENT AFTER STEEL IS FULLY ERECTED TO A MAXIMUM TOLERANCE OF 1/4 INCH HORIZONTAL PER AY/PER FLOOR AND MUST BE SET PLUMB BY STEEL ERECTOR PRIOR TO STUD ERECTION. ANGLE MUST BE INSTALLED IN ONE LENGTH PER BAY. SEE

PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF THE WEB OF BEAMS AT POINTS OF CONCENTRATED LOADS INCLUDING BEAMS UPPORTING COLUMNS OR RUNNING OVER THE TOPS OF COLUMNS, OR OTHER BEAMS, MINIMUM STIFFENER PLATE THICKNESS SHALL BE 3/8 INCH OR FLANGE THICKNESS OF COLUMN ABOVE OR BELOW OR BEAM WEB THICKNESS ABOVE OR BELOW, WHICHEVER IS GREATER. 5. ALL POST-INSTALLED EXPANSION ANCHORS FASTENED INTO CONCRETE SHALL BE HILTI KWIK BOLT TZ WITH MATERIAL TYPE, DIAMETER, AND EMBEDMENT PER DOCUMENTS, UNI ESS NOTED OTHERWISE, ALL POST-INSTALLED ADHESIVE ANCHORS FASTENED INTO CONCRETE AND REINFORCING BAR DOWELING INTO CONCRETE SHALL USE HILTI HIT-RE 500-SD EPOXY ADHESIVE ANCHORING SYSTEM IN HAMMER-DRILLED HOLES WITH ROD TYPE, DIAMETER, EMBEDMENT AND SPACING/EDGE DISTANCE PER DOCUMENTS, UNLESS NOTED OTHERWISE ALL PIPING RUNS LARGER THAN 4' DIAMETER SHALL BE HUNG DIRECTLY FROM STEEL BEAMS AND NOT THE CONCRETE SLAB/METAL DECK

SYSTEM. ANY SUPPLEMENTAL STEEL REQUIRED FOR BUILDING SYSTEMS (MECHANICAL, ELECTRICAL, PLUMBING, ETC.) IS NOT BY SLATE STRUCTURAL

STEEL ROOF DECK SHALL BE PAINTED 1 1/2" 22 GAGE TYPE B METAL DECK GRADE 33 (MINIMUM FY = 33 KSI) AS MANUFACTURED BY CANAM OF APPROVED EQUAL. MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE. RÒOF DECK FABRICATÍON AND INSTALLATION MUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS. SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, PIPES, OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL DECK. ATTACH TYPE B METAL ROOF DECK TO STRUCTURAL STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS (4 WELDS PER 36" WIDE SHEET PER SUPPORT). FASTEN SIDE JOINTS TOGETHER WITH #10 SELF DRILLING SCREWS, OR WELD, AT MID - SPAN BETWEEN SUPPORTS. INCREASE FASTENER SIZE AND/OR DECREASE FASTENER SPACING AS REQUIRED PER FACTORY MUTUAL REQUIREMENTS IF ROOF ASSEMBLY IS REQUIRED TO

USE WELDING WASHERS ON ALL CONNECTIONS OF STEEL DECK WITH METAL THICKNESS LESS THAN 22 GAGE TO STRUCTURAL STEEL

4. IN AREAS OF WARPED ROOF DECK USE, SELF DRILLING SCREWS FOR CONNECTIONS OF STEEL ROOF DECK TO STRUCTURAL STEEL SUPPORTS SCREW SIZES SHALL COMPLY WITH MANUFACTURER'S REQUIREMENTS. ATTACH DECK TO ALL SUPPORTING MEMBERS. FLOOR DECK SHALL BE AS SHOWN ON DRAWINGS AS MANUFACTURED BY UNITED STEEL DECK, INC. OR APPROVED EQUAL. MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE. FLOOR DECK FABRICATION AND INSTALLATION MUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL FLOOR DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.

COMPOSITE SHEAR STUDS SHALL BE WELDED THROUGH STEEL DECK. SHEAR STUDS SHALL BE HEADED STUDS MADE FROM LOW CARBON STEEL FY=60 KSL CONFORMING TO ASTM A108 AND SHALL BE INSTALLED IN ACCORDANCE WITH AWS D1.1 7. FLOORS HAVE BEEN DESIGNED AS COMPOSITE BEAM AND COMPOSITE DECK. BEAM/DECK SHORING IS NOT REQUIRED. LARGE DEAD LOAD DEFLECTIONS ARE ANTICIPATED IN UNCAMBERED MEMBERS. THE CONTRACTOR MAY, AT HIS/HER OPTION AND COST, UTILIZE BEAM AND/OR DECK

ATTACH LOK-FLOOR COMPOSITE METAL DECK TO STRUCTURAL STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS (4 WELDS PER 36" WIDE SHEET PER SUPPORT). FASTEN SIDE JOINTS WITH #10 SELF-DRILLING SCREW, OR WELD, AT 3'-0" ON-CENTER MAXIMUM BETWEEN SUPPORTS NO CONDUIT SHALL BE PLACED WITHIN CONCRETE SLABS ON METAL DECK WITHOUT COMPLIANCE WITH THE LATEST VERSION OF THE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND OBTAIN WRITTEN

MASONRY UNITS SHALL BE TYPE N-1 MEDIUM WEIGHT ASTM C90 SOLID (GREATER THAN OR EQUAL TO 75 PERCENT SOLID MATERIAL) OR ASTM C90 HOLLOW GROUTED SOLID BELOW GRADE. ASTM C90 HOLLOW ABOVE GRADE WITH MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI EXĆEPT TAIRTOWERS AND ELEVATOR SHAFTS WHICH ARE TO BE C90 HOLLOW GROUTED SOLID FOR FULL HEIGHT. ALL CMU SHALL BE LAID IN A FULL BED OF MORTAR. CONSTRUCT COLUMN PIERS INTEGRALLY WITH FOUNDATION WALLS AND CONTINUE WALL REINFORCEMENT THROUGH THE PIER. GROUT COLUMN PIERS AND WALLS MONOLITHICALLY.

FOLLOWING ARE THE BLOCK STRENGTHS REQUIRED:

ASTM C90 SOLID 1900 PSI ON GROSS AREA OF INDIVIDUAL UNITS. ASTM C90 HOLLOW 1900 PSI ON NET AREA OF INDIVIDUAL UNITS.

IVANY 3000 PSI ON NET AREA OF INDIVIDUAL UNITS. ALL MORTAR SHALL BE ASTM C270 TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. EXCEPT IVANY BLOCK WHICH SHALL BE LAID USING ASTM C270 TYPE M MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. FROM FIELD OBTAINED TEST GROUT SHALL BE A HIGH SLUMP MIX IN ACCORDANCE WITH ASTM SPECIFICATION C476 HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3000

LAID UP MASONRY DESIGN F'M IS 1500 PSI FOR STANDARD CONCRETE MASONRY AND 2000 PSI FOR IVANY. IVANY COMPRESSIVE STRENGTH TO BE DETERMINED BY PRISM TEST METHOD IN ACCORDANCE WITH ASTM C1314. 6. IVANY BLOCK UNITS SHALL BE MANUFACTURED BY FIZZANO BROTHERS OR APPROVED EQUAL.

VERTICAL REINFORCING SHALL BE ASTM A615, GRADE 60 DEFORMED BARS. MINIMUM LAP SPLICE LENGTHS TO BE PER TABLE 1 (U.N.O. ON PLANS) AND SHALL BE AS FOLLOWS:

MECHANICAL SPLICING DEVICES WHICH ARE RATED TO DEVELOP 125 PERCENT OF FY OF THE BAR MAY BE SUBSTITUTED. SUBMIT PRODUCT DATA FOR ENGINEERING APPROVAL ALL CONCRETE MASONRY SHALL BE CONSTRUCTED AND ERECTED IN ACCORDANCE WITH THE LATEST ACI MASONRY CODE (ACI 530/ASCE 5/TMS 402) AND SPECIFICATIONS (ACI 530.1/ASCE 6/TMS 602). PROVIDE HOT-DIPPED GALVANIZED TRUSS TYPE OR LADDER TYPE HORIZONTAL JOINT REINFORCEMENT, MINIMUM 9 GA, AT 16 INCHES ON CENTER VERTICAL IN ALL MASONRY WALLS. SPACE HORIZONTAL JOINT REINFORCEMENT AT 8 INCHES ON CENTER IN ALL PARAPETS. USE SHOP

10. AS A MINIMUM, ALL CORES CONTAINING VERTICAL REINFORCING ARE TO BE GROUTED SOLID.

LIGHT GAUGE METAL FRAMING . MANUFACTURER MUST SUBMIT LITERATURE INDICATING THAT THE MEMBERS SUPPLIED PROVIDE THE REQUIRED STRENGTH AND STIFFNESS. MANUFACTURER AND/OR SUPPLIER TO PREPARE SIGNED AND SEALED CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER AND UBMIT SHOP DRAWINGS FOR REVIEW INDICATING CAPACITY OF MEMBERS, FRAMING DETAILS, CONNECTIONS, BRACING, BRIDGING AND ALL OTHER APPURTENANCES OF MEMBERS TO CONFORM TO LOAD CRITERIA AS DIRECTED BY CONTRACTOR/CONSTRUCTION MANAGER.

2. DESIGN FRAMING SYSTEMS TO WITHSTAND DESIGN LOADS WITHOUT DEFLECTIONS GREATER THAN THE FOLLOWING:

NON-LOAD-BEARING WALL FRAMING: HORIZONTAL DEFLECTION OF L/600 OF THE WALL HEIGHT WITHOUT REGARD FOR CONTRIBUTION OF

3. THE CONTRACTOR IS TO REFER TO THE LIGHT GAUGE MANUFACTURER'S DOCUMENTS FOR FRAMING OF THE WALLS AND INSTALLATION OF THE

INTERMEDIATE TIES (TYP.) 8 BARS SEE NOTE 1 -(TYP.)

## 10 BARS OR MORE TYPICAL CONCRETE PIER DETAILS

1) FOR CLEAR DISTANCE BETWEEN VERTICAL BARS OF a < 6" ALTERNATE INTERMEDIATE TIES MAY BE OMITTED. 2) TOTAL NO. OF BARS SHOULD BE SPACED AROUND PERIMETER IN SUCH A WAY AS TO ACHIEVE APPROXIMATELY EQUAL SPACING. 3) THE ABOVE DETAILS APPLY ALSO AT PIERS. 4) MIN. CLEAR VERTICAL BAR SPACING SHALL BE PER REINFORCEMENT DEVELOPMENT LENGTH TABLE.

5) ALTERNATE THE LOCATION OF THE 90° AND 135° HOOKS ON

6) SEE TABLE OF COLUMN TIE SPACING THIS DRAWING.

SUCCESSIVE SETS OF TIES.

LUMBER AND ITS FASTENINGS.

DECK OR APPROVED EQUAL

ALL STRUCTURAL WOOD FRAMING SHALL BE HEM FIR #2 MINIMUM, STRESS GRADE LUMBER, OR APPROVED EQUAL. THE JNADJUSTED MINIMUM ALLOWABLE PROPERTIES ARE AS FOLLOWS:

ALL STRUCTURAL WOOD FRAMING SHALL BE GRADED AND STAMPED BY AN ACCREDITED GRADING AGENCY IN

ACCORDANCE WITH THE AMERICAN SOFTWOOD LUMBER STANDARD PS20 CONNECTIONS FOR WOOD MEMBERS NOT SPECIFICALLY NOTED ON DOCUMENTS SHALL NOT BE LESS THAN THE NUMBER AND SIZE OF NAILS AS SPECIFIED IN THE GOVERNING BUILDING CODE. ALL LVL SECTIONS SHALL BE MICROLLAM ENGINEERED LUMBER AS ENGINEERED AND MANUFACTURED BY ILEVEL OR APPROVED EQUAL. THE MINIMUM ALLOWABLE PROPERTIES FOR LVL BEAMS ARE AS FOLLOWS:

ALL PSL SECTIONS SHALL BE PARALLAM ENGINEERED LUMBER AS ENGINEERED AND MANUFACTURED BY ILEVEL OR APPROVED EQUAL. THE MINIMUM ALLOWABLE PROPERTIES FOR PSL BEAMS ARE AS FOLLOWS: 

4. ALL WOOD FRAMING AND WOOD FRAMING CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND CODES AS

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION: TIMBER CONSTRUCTION MANUAL NATIONAL FOREST AND PAPER ASSOCIATION/AMERICAN WOOD COUNCIL: NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. C. APA-THE ENGINEERED WOOD ASSOCIATION: PLYWOOD DESIGN SPECIFICATION AND PANEL DESIGN SPECIFICATION. AMERICAN WOOD-PRESERVERS ASSOCIATION STANDARDS. NATIONAL LUMBER MANUFACTURERS ASSOCIATION: NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE

TJI SERIES JOISTS SHALL BE AS ENGINEERED AND MANUFACTURED BY ILEVEL OR APPROVED EQUAL. INSTALL BRACING IND BRIDGING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SUBMIT ALL JOIST SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION. SHOP DRAWINGS TO INCLUDE ALL CONNECTION INFORMATION AND ALL BRACING, STIFFENERS, ETC. AS REQUIRED.

ALL WOOD FRAMING CONNECTIONS SHALL BE MADE USING PREFABRICATED CONNECTORS. PROVIDE STAINLESS STEEL ASTENERS, ANCHORS AND CONNECTORS WITH TREATED WOOD. TOE-NAILING IS NOT PERMITTED UNLESS NOTED OTHERWISE IN THE GOVERNING BUILDING CODE. SUBMIT MANUFACTURER'S DATA FOR REVIEW. FASTENERS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE OR APPROVED EQUAL.

ALL WOOD TRUSS MEMBERS SHALL BE FABRICATED FROM KILN DRIED SOUTHERN PINE STRESS GRADE LUMBER OR DESIGN, FABRICATION, AND INSTALLATION OF WOOD TRUSSES AND SHEET METAL CONNECTORS SHALL BE IN ACCORDANCE WITH THE FOLLOWING TRUSS PLATE INSTITUTE STANDARDS:

NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION - ANSI/TPI-1,

RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD

TRUSSES, DSB-89. GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES, BCSI LATEST EDITION. WOOD ROOF TRUSSES ARE TO BE DESIGNED FOR THE WOOD FABRICATOR BY A PROFESSIONAL ENGINEER. SEALED CALCULATIONS ALONG WITH TRUSS SUBMITTAL PACKAGE, INCLUDING A TRUSS LAYOUT SHOWING ALL BEARING WALLS/SUPPORTS, AS DEFINED IN THE INTERNATIONAL BUILDING CODE, ARE TO BE SUBMITTED FOR REVIEW PRIOR TO ANY FABRICATION. ADDITIONAL BEARING WALLS OR POSTS REQUIRED BY DESIGN BUT NOT SHOWN ON THE ORIGINAL DESIGN. RAWINGS SHALL BE HIGHLIGHTED. TRUSS FABRICATOR SHALL DESIGN AND PROVIDE PREFABRICATED HANGERS AS

REQUIRED OR TRUSS TO TRUSS CONNECTIONS. THE TRUSS MANUFACTURER MUST INCORPORATE IN THE TRUSS DESIGN

IDDITIONAL PLYS, SIMPSON TRUSS BEARING ENHANCERS, OR OTHER MEASURES AS REQUIRED TO PREVENT SILL PLATE

BEARING-TYPE FAILURE FOR THE NOTED PLATE SPECIES. HEADERS AT NON-BEARING CONDITIONS SHALL BE AS FOLLOWS:

UP TO 4'-0 (2) 2" X 6" 4'-0 TO 6'-0

1. FOR OPENING HEADERS IN NON-BEARING INTERIOR PARTITIONS, PROVIDE ONE JACK STUD AND ONE KING STUD. FOR OPENING HEADERS IN LOAD-BEARING INTERIOR PARTITIONS, PROVIDE TWO JACK STUDS AND ONE KING STUD, OR A POST AS 7. NAIL PLIES OF BUILT-UP HEADERS, BEAMS, AND STUDS/POSTS TOGETHER WITH TWO ROWS OF 10D NAILS AT 12"

18 PROVIDE MINIMUM CONTINUOUS SOLID BLOCKING OR CROSS-BRIDGING LINES AT 8'-0" O/C MAXIMUM SPACING FOR ALL ROOF TRUSSES. PROVIDE ADDITIONAL X-BRIDGING AS REQUIRED BY FABRICATOR. PROVIDE A MINIMUM OF ONE LINE OF BLOCKING/CROSS BRIDGING FOR ALL SPANS. PROVIDE STRUCTURAL PLYWOOD SHEATHING OR APPROVED EQUAL AT ALL SIDES OF CORNERS FOR WIND BRACING. CONNECTIONS OF PLYWOOD SHALL COMPLY WITH APA NAILING REQUIREMENTS FOR PLYWOOD SHEAR WALLS. NO MORE THAN

50% OF WALL SHEATHING JOINTS MAY COINCIDE WITH A CONNECTION LINE BETWEEN FLOORS. 20. PROVIDE AN ADDITIONAL JOIST OR TRUSS UNDER ALL PARTITIONS PARALLEL TO JOISTS.

PROVIDE PRESSURE TREATED OR WOLMANIZED LUMBER WHERE LUMBER IS IN CONTACT WITH CONCRETE AND/OR GROUTED MASONRY OR IS EXPOSED TO WEATHER.

A. NOMINAL N1 DOUGLAS FIR/LARCH T & G LOCK-DECK (N2 ACTUAL THK) AS MANUFACTURED BY SHELTON LAM &

B. THE MINIMUM ALLOWABLE PROPERTIES FOR WOOD DECKING ARE AS FOLLOWS:

E = 1,800,000 PSI 3. A. SHEATHING FOR ROOFS SHALL BE 5/8" APA RATED SHEATHING 32/16 EXPOSURE 1 OR SIMILARLY RATED ORIENTED STRAND ROARD (OSB) LINI ESS NOTED OTHERWISE B. SHEATHING FOR WALLS SHALL BE 7/16" APA RATED SHEATHING EXPOSURE 1 OR SIMILARLY RATED ORIENTED UNLESS NOTED OTHERWISI SHEATHING FOR FLOORS SHALL BE 3/4" APA RATED STURD-I-FLOOR 20 O/C EXPOSURE 1 T&G, OR SIMILARLY RATED ORIENTED STRAND BOARD (OSB).

ALL JOINTS IN SHEATHING SHALL BE STAGGERED. ALL EDGES IN FLOOR SHEATHING SHALL BE TONGUE & GROOVE FOR ROOF SHEATHING, USE PANEL CLIPS, TONGUE & GROOVE, OR LUMBER BLOCKING EDGE SUPPORTS AS RECOMMENDED BY APA. NAILING SHALL COMPLY WITH APA REQUIREMENTS FOR PLYWOOD FLOOR/ROOF DIAPHRAGMS, UNLESS NOTED

24. THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, AT THE END OF THE JOB, ONE (1) ELECTRONIC VERSION OF THE FINAL FIELD COPIES OF ALL TRUSS AND PREMANUFACTURED JOISTS LAY OUT SHOP DRAWINGS

**COLUMN SCHEDULE** 

		0020.	0011250			
MARK	SIZE	BASE PLAT	E ANCH	OR RODS	REMARKS	
C1	HSS6x6x3/8	1x12x1'-0"	(4	) 3/4"Ø		
C2	HSS4x4x3/8	3/4x12x1'-0'	" (4	) 3/4"Ø		
C3	W10x60	1-1/4x16x1'-4	1" (4	) 3/4"Ø		
		PIER	SCHEDUL	E		
MARK		SIZE REINFORCING			NFORCING	
P24	24"	24" x 24" CONC. (8		(8) #8 VER	8) #8 VERT. w/ #3 TIES @ 12"	
COI	_		_E (2,000 ps	of SOIL BRO	G. PRESSURE)	
		DIMENSIONS				
MARK	LENGTH	WIDTH	THICKNESS	F	REINFORCING	
F56	5'-6"	5'-6"	1'-4"		(5) #5 EWB	
F70	7'-0"	7'-0"	1'-6"		(8) #5 EWB	
F76	7'-6"	7'-6"	1'-6"		(6) #6 EWB	
~F86~~	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	~~8'-6"~~~	~1 <del>'</del> 10"~~	~~~	\(\beta\#6\E\VB\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
F6030	3'-0"	6'-0"	1'-4"	(4) #	#5 SWB (8) #5 LWB	

WALL FOOTING SCHEDULE						
	DIMEN	ISIONS				
MARK	WIDTH	DEPTH	REINFORCING			
F30.16	3'-0"	1'-4"	(5) #4 LWB #4@12" SWB			
~F4Q12~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~1'\d"~~~	(5).#5,LW,T&B#6@12",SW,T&B			
F40.16	4'-0"	1'-4"	(5) #4 LWB #6@12" SWB			
F50.16	6'-0"	1'-4"	(6) #4 LWB #6@12" SWB			

REINFORCING

(4) #4 VERT. w/#2 TIES @ 8"

(6) #4 VERT, w/#2 TIES @ 8"

\$CHEDULI

**MASONRY PIER SCHEDULE** 

NOTE: PROVIDE DOWELS TO MATCH VERTICAL REINFORCING

HORIZ. JOINT

SEE SCHEDULE

REINF. @ 16"

SIZE

MARK

MP816 | 8" x 16" CMU

MP824 | 8" x 24" CMU

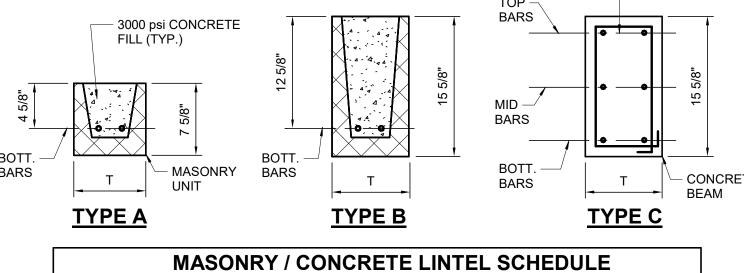
INTO FOUNDATION.

SCHEDULE

# - 3000 psi CONCRETE FILL (TYP.) - MASONRY

<u>.</u> Ę	-	-	U	INII		-	
  T	<u>TYP</u>	<u>E A</u>				<u>TYP</u>	<u>E B</u>
HORIZ. JOINT REINF. @ 16"			N	//AS	ONRY /	CONCR	ETE
	MARK	YPE	Н	Т		REINFO	RCI
NOTE:	IVIANN		''	1	TOP	вотт.	٦
SEE SCHEDULE FOR REINF.	ML1	Α	-	8"	-	(2) #5	
	ML1	Α	-	16"	-	(2) #6	
$\blacksquare$				•			

TYPICAL CMU PIER DETAILS
NOTE: IF PIER IS INCORPORATED INTO WALL, RUN HORIZ. JOINT REINF. THROUGH PIER, U.N.O.



MID BARS

SNOW DESIGN LOAD SCHEDULE

INTERNATIONAL BUILDING CODE 2018/ASCE 7-16

SYMBOL

LATERAL LOAD DESIGN SCHEDULE

INTERNATIONAL BUILDING CODE 2018/ASCE 7-16

SYMBOL

SEISMIC LOAD

SYMBOL

**GROUND SNOW LOAD** 

IMPORTANCE FACTOR

FLAT-ROOF SNOW LOAD

BASIC WIND SPEED (3 SEC. GUST)

IMPORTANCE FACTOR

RISK CATEGORY

WIND EXPOSURE CATEGORY

SHORT PERIOD SPECTRAL ACCELERATION

SEISMIC DESIGN CATEGORY

SEISMIC FORCE-RESISTING SYSTEM

DEFLECTION AMPLIFICATION FACTOR

SEISMIC BASE SHEAR

ANALYSIS PROCEDURE

FOR SEISMIC RESISTANCE

RESPONSE MODIFICATION COEFFICIENT

SITE CLASSIFICATION

) SECOND PERIOD SPECTRAL ACCELERATION

RISK CATEGORY

THERMAL FACTOR

SNOW LOAD

SNOW EXPOSURE FACTOR

VALUE

1.0

1.0

**VALUE** 

115

VALUE

0.187

0.078

**EQUIVALENT LATERA** 

**DESIGN LOAD SCHEDULE** 

(ALL LOADS SHOWN ARE IN POUNDS PER SQ. FT.)

2 2 2 2

3 3 3

8 | 8 |

10 | 10 |

| 100 | 40 | 125 | 30 |

150 70 155 55

FORCE PROCEDURE

'\*' INDICATES STRUCTURAL STEEL SYSTEM NOT SPECIFICALLY DETAILED

CONCRETE SLAB

**GYPSUM TOPPING** 

TOTAL DEAD LOAD

TOTAL LIVE LOAD

**TOTAL LOAD** 

**BUILT IN WALLS** 

**WOOD JOIST** 

CEILING

OOF & INSULATION

REFERENCE

FIGURE 7.2-1

TABLE 7.3-1

TABLE 1.5-2

TABLE 7.3-2

SECTION 7.3

REFERENCE

FIGURE 1609.3

TABLE 1604.5

SECTION 1609.4.3

REFERENCE

TABLE 1.5-2

TABLE

TABLE

SECTION

SECTION

BLDG.	BUILDING	MAX.	MAXIMUM
BM.	BEAM	MECH.	MECHANICAL
вотт.	воттом	MEZZ.	MEZZANINE
BRG.	BEARING	MFR.	MANUFACTURER
BSMT.	BASEMENT	MIN.	MINIMUM
BP_	BEARING PLATE	MISC.	MISCELLANEOUS
BTWN.	BETWEEN	MP_	MASONRY PIER
Ę	CENTERLINE	NBL	NON BEARING LINTEL
CANT.	CANTILEVER	N.T.S.	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	N.W.	NORMAL WEIGHT
COL.	COLUMN	o/c	ON CENTER
CONC.	CONCRETE	P.A.F.	POWDER ACTUATED FASTENER
CONN.	CONNECTION	PL	PLATE
CONT.	CONTINUOUS	PC	PILE CAP
CTRD.	CENTERED	P/C	PRECAST
Ø	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DWG.	DRAWING	PSI	POUNDS PER SQUARE INCH
E.F.	EACH FACE	PTN.	PARTITON
E.O.D.	EDGE OF DECK	R.E.	RIGHT END
E.O.S.	EDGE OF SLAB	REINF.	REINFORCEMENT
E.W.	EACH WAY	REQ'D.	REQUIRED
EA.	EACH	RET'G.	RETAINING
EL.	ELEVATION	S.F.	STEP FOOTING
ELEV.	ELEVATOR	S.O.G.	SLAB ON GRADE
EMBED.	EMBEDMENT	SCHED.	SCHEDULE
EQ.	EQUAL	SECT.	SECTION
EQUIP.	EQUIPMENT	SIM.	SIMILAR
EWB	EACH WAY BOTTOM	SL SIW.	SLOPE
EWT	EACH WAY TOP	SPECS.	SPECIFICATIONS
Ex.	EXISTING	STIFF.	STIFFENER
EXIST.	EXISTING	STRUCT.	STRUCTURAL
EXP.	EXPANSION	SWB	SHORT WAY BOTTOM
EXT.	EXTERIOR	T&B	TOP AND BOTTOM
FDN.		Т.	TOP AND BOTTOM
	FOUNDATION		
FIN.	FINISH	T.O.	TOP OF
FLR.	FLOOR	T.O.C.	TOP OF CONCRETE
FT.	FEET	T.O.S.	TOP OF STEEL
FTG.	FOOTING	T.S.	THICKENED SLAB
GA.	GAGE	TCELE	TOP CHORD EXTENSION LEFT END
GALV.	GALVANIZED	TCERE	TOP CHORD EXTENSION RIGHT END
GB_	GRADE BEAM	TDS	TURN DOWN SLAB
H.P.	HIGH POINT	THK.	THICK OR THICKENED
HORIZ.	HORIZONTAL	TYP.	TYPICAL
I.F.	INSIDE FACE	U.N.O.	UNLESS NOTED OTHERWISE
IN.	INCHES	V.I.F.	VERIFY IN FIELD
INFO.	INFORMATION	VERT.	VERTICAL
INT.	INTERIOR	W.R.T.	WOOD ROOF TRUSS
JT.	JOINT	w/	WITH
k	KIP	WC	WET COLUMN
k-ft	KIP-FEET	WP	WALL PLATE
	LEFT END	WWF	WELDED WIRE FABRIC

TYPICAL ABBREVIATIONS

M.E.P.

M.S.T.

**LOW POINT** 

LIGHT WEIGHT

LONG LEG HORIZONTAL

LONG LEG VERTICAL

LONG WAY BOTTOM

METAL STUD TRUSS

MECHANICAL ELECTRICAL PLUMBING

ANCHOR BOLT

ADDITIONAL

ALTERNATE

ARCHITECT

BOTTOM OF

ADDL.

ARCH.

ABOVE FINISH FLOOR

BOTTOM CHORD EXTENSION

				L.E.	LEFT END
BEAR	ING PLA	TE SCHE	DULE		С
LENGTH	WIDTH	THICK	REMARKS	S	
12"	7.5"	5/8"	w/ (2) F.B. ANG	CHS.	WIDTH OF OPENING
12"	7.5"	3/4"	w/ (2) F.B. ANG	CHS.	UP TO 2'-11"
					3'-0" TO 3'-11"
					4'-0" TO 5'-11"

CONCRETE/STEEL LINTEL SCHEDULE (NON-BEARING WALLS)						
WIDTH OF OPENING	STEEL FOR EACH 4" OF WALL THICKNESS	REINF. CONC. FOR EACH 4" OF WALL THICKNESS	REMARKS			
UP TO 2'-11"	L3 1/2x3 1/2x5/16	(1) #4 TOP & BOTTOM				
3'-0" TO 3'-11"	L4x3 1/2x5/16	(1) #4 TOP & BOTTOM				
4'-0" TO 5'-11"	L5x3 1/2x5/16	(1) #4 TOP & BOTTOM				
6'-0" TO 8'-0"	L6x3 1/2x5/16	(1) #5 TOP & BOTTOM				
8'-1" TO 10'-0"	L6x3 1/2x3/8	(1) #5 TOP & BOTTOM				

1) ALL CONCRETE LINTELS SHALL BE 4000 PSI CONCRETE AT 28 DAYS WITH GRADE 60 REINFORCING 2) ALL STEEL LINTELS SHALL BE ASTM A-36. 3) FILL CMU VOIDS SOLID (2) COURSES BELOW LINTEL BEARING. 4) ALL LINTELS SHALL HAVE 8" MINIMUM BEARING U.N.O. 5) ALL CONCRETE LINTELS SHALL BE 8" DEEP, U.N.O.

	STEEL LINTEL SCHEDULE NON-BEARING MASONRY VENEER						
	WIDTH OF OPENING	STEEL FOR EACH 4" OF WALL THICKNESS	REMARKS				
E	UP TO 5'-11"	L5x3 1/2x5/16 (LLV)					
	5'-11" TO 9'-11"	L5x5x5/16					
	10'-0" TO 12'-0"	L5x5x1/2					

1) ALL STEEL LINTELS SHALL BE ASTM A-36. 2) FILL CMU VOIDS SOLID (2) COURSES BELOW LINTEL BEARING. 3) ALL LINTELS SHALL HAVE 8" MINIMUM BEARING U.N.O.

9/13/2023





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As indicated 01.26.23

DRAWING NUMBER

DRAWN BY

DRAWING TITLE

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& SCHEDULES

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