

Thursday, October 13, 2016 1:55:50 PM

GENERAL

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE STATE AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO:
 - 2009 INTERNATIONAL BUILDING CODE
 - ANSI/ASCE 7-05 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"
 - ACI 318-08 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
 - ACI 308-10 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
 - AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION
 - AISI COLD FORMED STEEL DESIGN MANUAL, 2008
 - ACI 530-08/ASCE 5-08/TMS 402-08 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"

ANY DISCREPANCIES BETWEEN THE ABOVE LISTED CODES AND THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH AFFECTED WORK.
- ALL WORK SHALL BE PERFORMED BY PERSONS QUALIFIED IN THEIR TRADE AND LICENSED TO PRACTICE SUCH TRADE IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH ANY ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS IN ADDITION TO SPECIFICATIONS AND ANY SHOP DRAWINGS PROVIDED BY SUBCONTRACTORS AND SUPPLIERS.
- ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS SHALL BE VERIFIED IN THE FIELD BY THE GENERAL CONTRACTOR (G.C.) AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF WORK.
- UNLESS OTHERWISE NOTED, DETAILS, SECTIONS, AND NOTES SHOWN ON THESE DRAWINGS SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR DETAILS.
- THESE DRAWINGS DO NOT SHOW THE SIZE, LOCATION, OR TYPE OF OPENINGS IN THE FOUNDATION SYSTEM FOR ELECTRICAL, PLUMBING, OR MECHANICAL EQUIPMENT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING THESE ITEMS.
- ALL SHOP DRAWINGS PROVIDED BY OTHERS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE FABRICATION OF MATERIAL OR THE PURCHASE OF NON-RETURNABLE STOCK. QUANTITY AND DIMENSIONAL REVIEW IS THE CONTRACTOR'S RESPONSIBILITY.
- REFER TO THESE DRAWINGS, CIVIL DRAWINGS, AND THE GEOTECHNICAL REPORT FOR UNDER-DRAIN AND PERIMETER DRAIN REQUIREMENTS IF APPLICABLE.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING AND/OR SHORING NEEDED TO HOLD THE STRUCTURE IN A SAFE AND STABLE POSITION UNTIL THE BUILDING IS COMPLETE. CONSULT AN INDEPENDENT ENGINEER IF DESIGN ASSISTANCE OR REVIEW IS NEEDED.
- THE BUILDING PERMIT APPLICANT (e.g. OWNER, CONTRACTOR) MUST PROVIDE SPECIAL INSPECTIONS PER THE REQUIREMENTS OF CHAPTER 17 OF THE 2009 INTERNATIONAL BUILDING CODE AND FURNISH INSPECTION REPORTS TO THE CODE OFFICIAL AND TO THE ENGINEER OF RECORD. THE TESTING/INSPECTION AGENCY(S) MUST BE APPROVED BY THE ENGINEER OF RECORD. SEE SHEET S0.02 FOR THE SCHEDULE OF SPECIAL INSPECTIONS.
- THE ENGINEER, AT HIS/HER OPTION, MAY PROVIDE THE CONTRACTOR WITH ELECTRONIC FILES FOR HIS/HER CONVENIENCE AND USE IN THE PREPARATION OF SHOP DRAWINGS. DATA CONTAINED ON THESE ELECTRONIC FILES ARE THE ENGINEER'S INSTRUMENT OF SERVICE AND MAY NOT BE ELECTRONICALLY COPIED FOR REUSE AS SHOP DRAWINGS. THESE ELECTRONIC FILES ARE NOT CONSTRUCTION DOCUMENTS. THE CONTRACTOR IS NOT RELIEVED OF HIS/HER DUTY TO FULLY COMPLY WITH THE CONTRACT DOCUMENTS. THIS INCLUDES THE NEED TO CONFIRM AND COORDINATE ALL DIMENSIONS AND DETAILS. TAKE FIELD MEASUREMENTS, VERIFY FIELD CONDITIONS, AND COORDINATE THE CONTRACTOR'S WORK WITH THAT OF OTHER CONTRACTORS FOR THE PROJECT. THE CONTRACTOR MAY NOT MANUALLY ALTER THE HARD COPIES OF THE CONSTRUCTION DOCUMENTS AND REUSE THEM AS SHOP DRAWINGS.

DESIGN LOADS

- THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2009 INTERNATIONAL BUILDING CODE TO SUPPORT THE VARIOUS TYPES OF STRUCTURAL AND ARCHITECTURAL SYSTEMS AND THE FOLLOWING MINIMUM LIVE LOADS:

UNIFORMLY DISTRIBUTED LIVE LOADS

RESIDENTIAL - MULTIFAMILY DWELLINGS	40 PSF
PRIVATE ROOMS AND CORRIDORS SERVING THEM	40 PSF
PUBLIC ROOMS AND CORRIDORS SERVING THEM	100 PSF

SNOW

BASIC GROUND SNOW LOAD	Pg = 60 PSF
FLAT ROOF SNOW LOAD	Pf = 40.2 PSF
SNOW EXPOSURE FACTOR	Ce = 1.0
THERMAL FACTOR	Ct = 1.1
LOAD IMPORTANCE FACTOR	I _s = 1.0

WIND

WIND SPEED	100 MPH
EXPOSURE	C
IMPORTANCE FACTOR	Iw = 1.0
INTERNAL PRESSURE COEFFICIENT	Gcpi = +/- .18

WIND PRESSURE ON WALL COMPONENTS AND CLADDING
EFFECTIVE WIND AREA = 10 SF

ZONE 4 INWARD	ZONE 5 INWARD	ZONE 4 OUTWARD	ZONE 5 OUTWARD
29 PSF	29 PSF	32 PSF	39 PSF

SEISMIC

SITE CLASS	D
SEISMIC DESIGN CATEGORY	B
OCCUPANCY CATEGORY	II

BASIC SEISMIC FORCE-RESISTING SYSTEM:
CONCENTRICALLY BRACED STEEL FRAMES
ANALYSIS FORCE PROCEDURE = EQUIVALENT LATERAL FORCE

MAPPED SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS	S _s = 0.240
MAPPED SPECTRAL RESPONSE ACCELERATION AT 1s PERIOD	S ₁ = 0.078
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS	SD _s = 0.256
DESIGN SPECTRAL RESPONSE ACCELERATION AT 1s PERIOD	SD ₁ = 0.125
IMPORTANCE FACTOR	I _e = 1.0
RESPONSE MODIFICATION FACTOR	R = 3
DEFLECTION AMPLIFICATION FACTOR	C _d = 3
SEISMIC RESPONSE COEFFICIENT	C _s = .054
DESIGN BASE SHEAR	V = 354 K

SOIL BEARING

- REFER TO GEOTECHNICAL REPORT BY HALEY AND ALDRICH, INC.(H&A), OF PORTLAND, MAINE DATED 2016 FOR SITE PREPARATION, FROST PROTECTION, FOUNDATION DRAINAGE, WATERPROOFING, BACKFILL MATERIAL, COMPACTION AND OTHER PERTINENT INFORMATION AND RECOMMENDATIONS. ALSO REFER TO H&A FOR PILE REQUIREMENTS AND SPECIFICATIONS.
- REFER TO H&A SPECIFICATIONS FOR PILE TESTINGS, INSTALLATION REQUIREMENTS AND OTHER RELEVANT INFORMATION.
- NO FOOTING, PILE CAP OR GRADE BEAM MAY BE PLACED IN WATER OR ON FROZEN GROUND. ALL EXTERIOR CONSTRUCTION MUST BE CARRIED DOWN TO A MINIMUM OF 48 INCHES BELOW FINISHED ADJACENT EXTERIOR GRADE.

STEEL PILES

- THE STRUCTURE IS TO BE SUPPORTED BY HP12X53 STEEL PILES, ARRANGED AS SHOWN, PER REQUIREMENTS OUTLINED IN SPECIFICATIONS.
- THE PILES MUST HAVE AN AVAILABLE ALLOWABLE CAPACITY OF 60 TON FOR SUPPORT OF THE BUILDING SUPERSTRUCTURE. THE PILES MUST BE INSTALLED/DRIVEN TO A MINIMUM ULTIMATE CAPACITY TO ACCOUNT FOR DOWNDRAW LOADING FROM SITE FILLING AND CORROSION CONSIDERATIONS AS DETERMINED BY H&A.
- PRIOR TO PRODUCTION PILE DRIVING, THE CONTRACTOR MUST INSTALL A MINIMUM OF FOUR (4) INDICATOR PILES. EACH INDICATOR PILE MUST BE DYNAMICALLY LOAD TESTED USING PDA EQUIPMENT IN ACCORDANCE WITH THE SPECIFICATIONS PER H&A.
- A MAXIMUM OF ONE (1) SPLICE PER PILE WILL BE ALLOWED. SPLICING AND WELDING MUST BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.
- COORDINATE ALL PILE DRIVING AND TESTING REQUIREMENTS WITH GEOTECHNICAL ENGINEER.

REINFORCING STEEL

- ALL REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60.
- WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A1064. USE FLAT SHEETS ONLY.
- ALL REINFORCING SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL.
- WHERE CONTINUOUS BARS ARE REQUIRED, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS, LAP AT NECESSARY SPLICES, AND SPLICES SHALL BE STAGGERED AND HOOKED AT DISCONTINUOUS ENDS. LAP LENGTHS SHALL BE AS SHOWN OR NOTED ON THE DRAWINGS. IF LAP/SPLICE LENGTHS ARE NOT INDICATED FOLLOW ACI STANDARDS.

SLAB-ON-GRADE CONTROL JOINTS

- SLAB CONTROL JOINTS SHALL BE SAW CUT IMMEDIATELY AFTER FINISHING. JOINT DEPTH SHALL BE A MINIMUM 1/4 OF THE THICKNESS OF THE SLAB.
- JOINTS ARE SPACED TO CONTROL THE LOCATION OF CRACKS THAT MAY OCCUR DUE TO CURING SHRINKAGE AND THE THERMAL MOVEMENT OF CONCRETE. WELDED WIRE FABRIC DOES NOT INHIBIT CRACKING, BUT HOLDS CONCRETE TIGHTLY TOGETHER AFTER CRACKING HAS OCCURRED. IN ORDER TO BETTER CONTROL RANDOM CRACKING OF CONCRETE THE FOLLOWING MEASURES ARE RECOMMENDED:
 - SUPPLY A WELL COMPACTED AND CONSISTENT SUBGRADE.
 - LIMIT THE VOLUME OF WATER IN THE MIX.
 - SUPPLY ADEQUATE CURING MEASURES. WET CURE OR USE CURING SEALERS.
 - LIMIT JOINT SPACING TO 2 TIMES THE SLAB THICKNESS IN FEET.
- SLAB CURLING IS A PROBLEM WHICH HAS BECOME MORE PREVALENT WITH HIGH STRENGTH CONCRETE. THE FOLLOWING MEASURES IN ADDITION TO THOSE STATED ABOVE ARE RECOMMENDED TO LIMIT CURLING OF CONCRETE SLABS-ON-GRADE:
 - CURE THE SLAB PROPERLY.
 - USE HIGHER QUANTITY OF COARSE AGGREGATES IN THE MIX.
 - USE A LOWER AMOUNT OF CEMENT.

CAST-IN-PLACE-CONCRETE

- ALL WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-08) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301)
- INTERIOR SLABS ON GRADE TO BE OF THICKNESS SHOWN ON DRAWINGS WITH WELDED WIRE FABRIC. OVERLAP SHEETS MINIMUM 6" AND TIE TOGETHER. CHAIR ON BRICKS OR BOLSTERS.
- PROVIDE A 10-MIL POLYETHYLENE MOISTURE VAPOR RETARDER DIRECTLY BELOW ALL INTERIOR SLABS ON GRADE, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS. OVERLAP SEAMS A MINIMUM 6" AND TAPE AS REQUIRED TO MAINTAIN POSITION.
- ALL FOOTINGS ARE TO REST ON UNDISTURBED SOIL OR CLEAN GRANULAR FILL COMPACTED IN LAYERS OF 12" OR LESS TO 95% COMPACTION.
- MINIMUM CONCRETE PROTECTION FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
CONCRETE CAST AGAINST EARTH: 3 INCHES
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
1-1/2 INCHES FOR #5 BARS AND SMALLER
2 INCHES FOR #6 BARS AND GREATER
- CALCIUM CHLORIDE IS PROHIBITED IN ANY CONCRETE MIX.
- CONCRETE SHALL BE ADEQUATELY PROTECTED FROM HOT OR COLD WEATHER AS REQUIRED BY ACI PUBLICATIONS 305 AND 306, RESPECTIVELY.
- ALL CONCRETE FOR WALLS, FOOTINGS, AND SLABS-ON-GRADE SHALL BE NORMAL-WEIGHT, 3/4" AGGREGATE AND ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS (U.N.O.). CYLINDERS SHALL BE TAKEN AND TESTED IN ACCORDANCE WITH ACI RECOMMENDATIONS.
- CONCRETE FOR SLABS-ON-DECK SHALL BE NORMAL-WEIGHT, 3/4" AGGREGATE AND ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS (U.N.O. ON PLANS).
- SLAB CONTROL JOINTS, WHERE SHOWN, SHALL BE SAW CUT IMMEDIATELY AFTER FINISHING. JOINTS SHALL BE AT MINIMUM 1/4 OF THE THICKNESS OF THE SLAB.
- WALL CONTROL JOINTS SHALL BE PLACED AS SHOWN ON THE DRAWINGS OR AT A MAXIMUM OF 40 FEET ON CENTER.
- BACKFILL BOTH SIDES OF THE FOUNDATION WALL SIMULTANEOUSLY TO THE MAXIMUM HEIGHT POSSIBLE.
- ALL CONCRETE SHALL BE CURED BY AN APPROVED METHOD AS PRESCRIBED BY ACI.
- MID-RANGE WATER REDUCERS (MRWR) ARE REQUIRED FOR ALL CONCRETE MIXES.
- MAXIMUM WATER TO CEMENT RATIO FOR MIXES WITH MRWR:
FOR 3000 PSI CONCRETE 0.5
FOR 4000 PSI CONCRETE 0.45
- MINIMUM CEMENT QUANTITIES:
FOR 3000 PSI CONCRETE 517 LB./CY
FOR 4000 PSI CONCRETE 611 LB./CY
- MAXIMUM CONCRETE SLUMP:
FOR MIXES WITH MRWR 7 IN
- USE AIR-ENTRAINING ADMIXTURES IN CONCRETE SUBJECT TO FREEZING AND THAWING, THIS INCLUDES EXTERIOR FOUNDATION WALLS AND FOOTINGS, EXTERIOR PIERS, AND EXTERIOR SLABS. AIR CONTENT AT POINT OF DELIVERY TO BE 6 PERCENT, PLUS OR MINUS 1.5 PERCENT.
- DO NOT USE AIR-ENTRAINING ADMIXTURES IN CONCRETE FOR INTERIOR SLABS ON GRADE AND SLABS ON STEEL DECK. AIR CONTENT OF TROWELED FINISH FLOORS NOT TO EXCEED 3 PERCENT. SOME LIGHTWEIGHT CONCRETE MAY REQUIRE THE USE OF AIR-ENTRAINING ADMIXTURES FOR INTERIOR SLABS ON STEEL DECK.
- REINFORCING BARS AND ALL EMBEDDED ITEMS, INCLUDING ANCHOR BOLTS, MUST BE ACCURATELY PLACED AND ADEQUATELY SUPPORTED BEFORE CONCRETE IS PLACED. "WET-STICKING" OF ANCHOR BOLTS, VERTICAL PIER REINFORCING OR VERTICAL WALL REINFORCING IS NOT ACCEPTABLE (EXCEPT FROST WALL DOWELS).

STRUCTURAL STEEL

- STRUCTURAL STEEL WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE 2009 INTERNATIONAL BUILDING CODE.
- STRUCTURAL STEEL WORK SHALL CONFORM TO "SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (AISC CURRENT EDITION)", "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS (ASCE CURRENT EDITION)", AND "STRUCTURAL WELDING CODE (AWS D1.1-04)".
- STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO THE FOLLOWING:
 - ROLLED SHAPES AND PLATES - ASTM A36 (EXCEPT AS NOTED BELOW)
 - WIDE FLANGE SHAPES - ASTM A992, 50 KSI
 - STRUCTURAL TUBES - ASTM A500, GRADE B
 - ANCHOR RODS - ASTM F1554 GRADE 36 (HEADED BOLTS)
- ALL BOLTED CONNECTIONS SHALL USE NEW BOLTS. SLIP-CRITICAL BOLTS ARE PROHIBITED FROM ALL CONNECTIONS. SLOTTED BOLT HOLES ARE NOT PERMITTED AT BRACED FRAME CONNECTIONS. ALL BOLTS SHALL BE INSTALLED AS BEARING TO A "SNUG-TIGHTENED" CONDITION, UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL BOLTED CONNECTIONS SHALL BE DESIGNED, FABRICATED, AND INSTALLED IN COMPLIANCE WITH RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS", DATED DECEMBER 31, 2009.
- VOIDS BENEATH COLUMN BASE PLATES SHALL BE DRY PACKED WITH NON-SHRINK CONSTRUCTION GROUT BEFORE APPLICATION OF LOADS.
- WELDED CONNECTIONS SHALL BE MADE BY AWS QUALIFIED WELDERS USING FILLER MATERIAL CONFORMING TO E70XX, LOW HYDROGEN.
- PROVIDE TEMPORARY ERECTION BRACING TO HOLD STRUCTURAL STEEL FRAMING SECURELY IN PLACE. MAINTAIN BRACING UNTIL ROOF DECK AND PERMANENT LATERAL BRACING ARE FULLY INSTALLED. BRACING REQUIREMENTS ARE NOT PROVIDED BY THE E.O.R.
- STRUCTURAL STEEL SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
- FIELD CUTTING OF STRUCTURAL STEEL OR ANY MODIFICATIONS SHALL NOT BE MADE WITHOUT APPROVAL BY ENGINEER.
- ALL CONNECTIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER RETAINED BY THE FABRICATOR. SHOP DRAWINGS AND STAMPED CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. FABRICATOR'S ENGINEER SHALL BE LICENSED IN THE STATE THE PROJECT IS LOCATED, AND CARRY PROFESSIONAL LIABILITY INSURANCE WITH A MINIMUM PER INCIDENT AND ANNUAL COVERAGE OF \$1,000,000.
- ALL STEEL THAT WILL BE FIREPROOFED SHALL NOT BE PRIMED. REFER TO ARCHITECTURAL DRAWINGS FOR FIREPROOFING LOCATIONS AND REQUIREMENTS. ALL OTHER STRUCTURAL STEEL SHALL RECEIVE ONE (1) SHOP COAT OF RUST INHIBITIVE PRIMER, UNLESS WAIVED BY OWNER. COMPOSITE BEAMS WITH SHEAR STUDS SHALL HAVE UNPAINTED TOP FLANGES TO ALLOW THE WELDING OF SHEAR STUDS.
- THE STEEL FABRICATOR SHALL BE AISC CERTIFIED, OR BE ABLE TO DEMONSTRATE TO THE ENGINEER'S SATISFACTION THAT ALL AISC PROCEDURES FOR FABRICATION, QUALITY CONTROL, AND RECORD KEEPING ARE STRICTLY ADHERED TO. THE ENGINEER SHALL DETERMINE IF FABRICATOR QUALIFICATIONS ARE ACCEPTABLE.
- SHOP DRAWINGS SHALL BE PREPARED BY FABRICATOR. PHOTO COPIES OF STRUCTURAL DRAWINGS ARE NOT ACCEPTABLE.
- THE TESTING AGENCY (TO BE APPROVED BY JSN ASSOCIATES, INC.) MUST PERFORM A VISUAL INSPECTION OF ALL SHOP AND FIELD WELDS. ADDITIONALLY, ALL SHOP AND FIELD FILLET AND PARTIAL PENETRATION WELDS MUST BE SPOT TESTED AT A RATE OF ONE TEST PER MEMBER USING THE MAGNETIC PARTICLE METHOD. ONE HUNDRED PERCENT (100%) OF ALL FIELD AND SHOP FULL PENETRATION WELDS MUST BE TESTED USING THE ULTRASONIC METHOD.
- ALL HSS COLUMNS SHALL BE SEALED TO PREVENT WATER PENETRATION DURING CONSTRUCTION OR DURING SERVICE AND SHALL BE PROVIDED WITH A DRAIN HOLE NEAR THE BASE ON SIDE OF COLUMN.

STEEL DECKS

STEEL ROOF DECK SHALL BE STANDARD 18 GAGE, GALVANIZED TYPE 3N AS MANUFACTURED BY "VULCRAFT" OR APPROVED EQUAL. UNLESS OTHERWISE NOTED FASTEN ROOF DECK TO EACH SUPPORT USING 5/8" PUDDLE WELDS IN A 2/4" PATTERN. USE (2) #10 TEK SCREWS PER SPAN FOR SIDELAP FASTENERS.

- 3" DEEP MIN. FASTEN TO SUPPORTING STEEL USING 5/8" PUDDLE WELDS IN 2/4" PATTERN.
- STEEL FLOOR DECK SHALL BE GALVANIZED 9/16" FORM DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUAL. FASTEN FLOOR DECK TO EACH SUPPORT W/ 3/4" DIAMETER PUDDLE WELDS IN A 3/4" PATTERN. PROVIDE (2) #10 TEK SCREWS PER SPAN FOR SIDELAP FASTENING.
- ROOF OR FLOOR DECKS SHALL SPAN OVER THREE (3) OR MORE SUPPORTS.
- SHEET STEEL FOR GALVANIZED ROOF DECKS AND COMPOSITE FLOOR DECKS MUST CONFORM TO ASTM A653-07 "STRUCTURAL QUALITY", GRADE 33 OR HIGHER. GALVANIZING MUST CONFORM TO ASTM A924-07 WITH A MINIMUM COATING CLASS OF G60 AS DEFINED IN A653-07.
- SHEET STEEL FOR GALVANIZED NON-COMPOSITE FORM DECKS MUST CONFORM TO ASTM A653-07 "STRUCTURAL QUALITY", GRADE 80. GALVANIZING MUST CONFORM TO ASTM A924-07 WITH A MINIMUM COATING CLASS OF G60 AS DEFINED IN A653-07.

STEEL STAIRS

- STEEL STAIRS ARE TO BE DESIGNED BY THE STEEL STAIR FABRICATOR. THE DESIGN SHALL CONFORM WITH THE STRUCTURAL AND DIMENSIONAL REQUIREMENTS OF THE CONTRACT DRAWINGS AND ALL APPLICABLE CODE REQUIREMENTS.
- THE STEEL STAIR FABRICATOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO THE START OF FABRICATION. THE ENGINEER OF RECORD RESERVES THE RIGHT TO REQUEST STAMPED SHOP DRAWINGS AND CALCULATIONS.

MASONRY LOOSE LINTEL SCHEDULE

- UNLESS OTHERWISE INDICATED ON THE DRAWINGS PROVIDE AN ANGLE, PLACED WITH LONG LEG VERTICAL, FOR EACH 4" OF MASONRY THICKNESS FOR ALL MASONRY OPENINGS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

MAXIMUM OPENING	LINTEL
UP TO 3'-0"	L3-1/2 X 3-1/2 X 3/8"
3'-6" TO 4'-6"	L4 X 3-1/2 X 3/8"
4'-7" TO 6'-0"	L5 X 3-1/2 X 3/8"
6'-1" TO 8'-0"	L6 X 3-1/2 X 3/8"
8'-1" TO 11'-0"	L7 X 4 X 3/8"
- ALL LINTELS SHALL BE HOT DIP GALVANIZED.
- LINTELS SHALL BE 16" LONGER THAN MASONRY OPENING AND SHALL HAVE A MINIMUM OF 8" BEARING ON MASONRY AT EACH END. WHERE LINTEL ABUTS A COLUMN PROVIDE A STRUCTURAL CLIP ANGLE CONNECTION.
- LINTELS SHOWN ARE FOR 4" VENEER THICKNESS ONLY.

LIGHT GAGE STEEL FRAMING

- DESIGN AND INSTALLATION OF THE LIGHT GAGE STEEL FRAMING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/LIGHT GAGE SUBCONTRACTOR. REFER TO CONTRACT DOCUMENTS FOR INFORMATION AND SUBMITTAL REQUIREMENTS. JSN ASSOCIATES CAN PROVIDE LIGHT GAGE DESIGN FOR OWNER OR LIGHT GAGE CONTRACTOR UPON REQUEST.
- ALL STEEL STUDS, JOISTS, AND ACCESSORIES SHALL BE MADE OF THE TYPE, SIZE, GAGE, AND SPACING SHOWN ON THE DRAWINGS. ALL LIGHT GAGE STEEL FRAMING SHALL BE MANUFACTURED BY MARINOWARE OR APPROVED EQUAL.
- ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", S100-07.
- ALL STUDS, JOISTS AND ACCESSORIES SHALL BE MANUFACTURED PER ASTM C955. ALL STUDS, JOISTS AND ACCESSORIES SHALL BE GALVANIZED TO HAVE A MINIMUM G-60 COATING IN CONFORMANCE WITH ASTM C955. STUDS, JOISTS AND ACCESSORIES, 18 GAGE OR HEAVIER SHALL BE FORMED FROM SHEET STEEL CONFORMING TO ASTM A653, FY=50 KSI. THOSE 18 GAGE OR LIGHTER SHALL BE FORMED OF SHEET STEEL CONFORMING TO ASTM A653, FY=33 KSI.
- REFER TO MARINOWARE TECHNICAL PUBLICATION "STUD-RITE LIGHTWEIGHT STEEL FRAMING SYSTEM" FOR TECHNICAL INFORMATION, RECOMMENDATIONS, DETAILS, SUGGESTED SPECIFICATIONS, ERECTION AND BRACING.
- ALL LIGHT GAGE STUD AND TRACK COMPONENTS SHALL BE CLEARLY IDENTIFIED WITH STANDARD INDUSTRY MARKINGS OR COLOR CODING.
- ALL CURTAIN WALL STUDS SHALL BE FASTENED TO THE BOTTOM TRACK WITH A MINIMUM NO. 8 SCREW TO EACH FLANGE. AT TOP, USE 2 INCH DEFLECTION TRACK WITH A 1" GAP BETWEEN TRACK AND TOP OF STUD. FASTEN STUD TO TOP TRACK WITH A NO. 6 SCREW ON ONE SIDE ONLY FOR ERECTION PURPOSES. REMOVE SCREWS ONCE THE WALL IS STABILIZED BY BRIDGING AND/OR SHEATHING. INSTALL ONE ROW OF HORIZONTAL BRIDGING WITHIN ONE (1) FOOT OF THE TOP OF THE WALL.
- CURTAIN WALL STUDS SHALL BE OF THE WIDTHS INDICATED. CURTAIN WALL STUDS SHALL BE MIN. 20 GAGE AND SPACED TO A MAXIMUM OF 24 INCHES ON CENTER. BOTTOM TRACK SHALL BE MINIMUM 20 GAGE AND DEFLECTION TRACK SHALL BE MINIMUM 16 GAGE.
- FIELD CUTTING OF STUDS MUST BE ACCOMPLISHED BY SAWING OR SHEARING. TORCH CUTTING OF COLD-FORMED MEMBERS IS NOT ACCEPTABLE.
- NOTCHING OR COPING OF STUDS IS NOT PERMITTED UNLESS SPECIFICALLY PERMITTED PER THE LIGHT GAGE SHOP DRAWINGS.
- STUDS MAY NOT BE SPLICED UNLESS SPECIFICALLY PERMITTED PER THE SHOP DRAWINGS.
- USE A MINIMUM OF THREE (3) STUDS AT ALL EXTERIOR WALL CORNERS.
- FOR SCREWS, MAINTAIN A MINIMUM 3/4" CLEARANCE FROM ALL EDGES OF STEEL MEMBERS. MAINTAIN A MINIMUM 3/4" ON CENTER SPACING BETWEEN ADJACENT SCREWS.
- IF REQUIRED, ALL WELDED CONNECTIONS MUST CONFORM TO THE REQUIREMENTS OF AWS D1.3 "SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES", (PER EDITION REFERENCED IN THE APPLICABLE BUILDING CODE). REFER TO AWS D1.0 "WELDING ZINC COATED STEEL" AND ANSI Z49.1 FOR INFORMATION REGARDING SAFF WELDING PROCEDURES.
- MINIMUM WELD THROAT THICKNESS MUST MATCH OR EXCEED THE BASE METAL THICKNESS OF THE THINNEST CONNECTED PART UNLESS NOTED OTHERWISE.
- ALL HEADERS AND/OR BUILT-UP BEAMS MUST BE CONSTRUCTED WITH UNPUNCHED MEMBERS ONLY.
- SPLICING OF HEADERS IS NOT PERMITTED, UNLESS APPROVED BY THE DESIGN ENGINEER.
- STAMPED LIGHT GAGE SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED BY LIGHT GAGE CONTRACTOR. CONTRACTOR'S ENGINEER SHALL BE LICENSED IN THE STATE THE PROJECT IS LOCATED AND CARRY PROFESSIONAL LIABILITY INSURANCE WITH A MINIMUM PER INCIDENT AND ANNUAL COVERAGE OF \$1,000,000.
- SHOP DRAWINGS SHALL DETAIL WINDOW AND DOOR HEADERS, SILLS AND POSTS, AND CONNECTIONS. LIGHT GAGE STUDS BACKING AN EIFS SYSTEM FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR MAXIMUM DEFLECTION BUT IT SHALL NOT BE MORE THAN L2/40.
- ALL STUD WALLS SHALL HAVE HORIZONTAL BRIDGING AND CROSS BRACING INSTALLED AS RECOMMENDED BY THE MANUFACTURER. ALL BRACING SHALL BE INSTALLED BEFORE APPLICATION OF LOADS.
- CONTRACTOR'S LIGHT GAGE ENGINEER IS REQUIRED TO PERFORM SITE VISITS AS NECESSARY TO ENSURE THAT LIGHT GAGE WORK CONFORMS WITH THEIR DESIGN.

MASONRY UNIT CONSTRUCTION (BRICK ONLY)

- MASONRY CONSTRUCTION SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-08 / ASCE 5-08 / TMS 402-08).
- MASONRY SHALL CONSIST OF MASONRY UNITS (BRICKS) AND MORTAR BETWEEN UNITS. GROUT SHALL BE USED TO FILL BEAM POCKETS.
- MASONRY UNITS (BRICK) SHALL HAVE A MINIMUM NET AREA COMPRESSIVE ALLOWABLE STRENGTH OF 500 PSI.
- GROUT SHALL BE CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH (F_c) OF 2000 PSI, WITH A MAXIMUM COARSE AGGREGATE SIZE OF 3/8". SLUMP AT POINT OF PLACEMENT OF 8 TO 11 INCHES, AND DESIGNED FOR PUMPING. GROUT SHALL CONFORM TO ASTM C476 "SPECIFICATION FOR MORTAR AND GROUT FOR MASONRY."
- MORTAR FOR SHALL MEET THE APPLICABLE REQUIREMENTS OF ASTM SPECIFICATION C270, TYPE S.
- GROUT AND MORTAR SHALL BE KEPT ENTIRELY SEPARATE, AND SHALL NOT BE USED INTERCHANGEABLY.
- MORTAR PLASTICITY SHALL BE MAINTAINED BY RE-TEMPERING AS REQUIRED UP TO 2-12 HOURS AFTER ORIGINAL MIXING. MORTAR REQUIRING RE-TEMPERING AFTER THAT PERIOD SHALL BE DISCARDED.
- GROUT SHALL NOT BE RE-TEMPERED, BUT SHALL BE DISCARDED IMMEDIATELY IF PLASTICITY IS LOST BEFORE GROUT IS PLACED IN WALL. GROUT SHALL BE USED WITHIN 1-1/2 HOURS OF INITIAL MIXING.
- COLD OR HOT WEATHER MASONRY CONSTRUCTION SHALL CONFORM TO THE ACI 530-08/ASCE 5-08/TMS 402-08 SECTION 1.8 AND ACI 305 AND 306, RESPECTIVELY.
- METAL LATH SHALL BE USED TO CONFINE GROUT AS REQUIRED.
- LAY ALL MASONRY UNITS IN RUNNING BOND, UNLESS NOTED OTHERWISE.



AC HOTELS by MARRIOTT
Fore Street / Hancock Street / Thames Street
Portland, Maine

REVISION:

ISSUED: 08-12-16 FOUNDATION & STEEL PERMIT 10-14-16 FOR CONSTRUCTION

project architect: KAK
drawn by: DLS

STRUCTURAL NOTES

sheet number:
S0.01