

GENERAL STRUCTURAL NOTES

- DESIGN CODE: 2009 INTERNATIONAL BUILDING CODE
- ROOF DESIGN LOADS:
 - GROUND SNOW LOAD: 60 PSF
 - ROOF DEAD LOAD: 15 PSF
 - ROOF LIVE LOAD: 45 PSF
 - WIND EXPOSURE FACTOR: 1.0
 - SNOW REINFORCEMENT FACTOR: 1.0
 - ROOF THERMAL FACTOR: C1 = 1.0
 - MECHANICAL/ELECTRICAL LOAD: 3 PSF
- WIND LOADS:
 - BASIC WIND SPEED: 120 MPH
 - WIND LOAD IMPORTANCE FACTOR: 1.0
 - EXPOSURE CATEGORY: B
 - INTERNAL PRESSURE COEFFICIENT GCPI: +/- 0.25
 - WIND LOADS: USE ASCE 1-05 FIGURE 6-3 METHOD 1 WIND PRESSURES FOR 120 MPH BASIC WIND SPEED, A = 1.0
- SEISMIC LOADS:
 - SEISMIC IMPORTANCE FACTOR: 1.0
 - SEISMIC CATEGORY: 2
 - SEISMIC DESIGN CATEGORY: C
 - SEISMIC DESIGN CATEGORY: 2
 - SEISMIC FORCE RESISTING SYSTEM: B
 - ORDINARY STEEL MOMENT FRAMES NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
 - ANALYSIS PROCEDURE: SHEAR = 0.13 K EQUIVALENT LATERAL FORCE
- UNO: UNLESS NOTED OTHERWISE
- CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY CONDITIONS DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS AND SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY CONDITIONS THAT PREVENT CONTRACTORS COMPLETION OF THE WORK AS SHOWN ON THE DRAWINGS.

FOUNDATION NOTES

- DESIGN BEARING CAPACITY: 3.0 KSF
- PROVIDE MIN. 4'-6" OF SOIL COVER ABOVE BOTTOM OF EXTERIOR FOOTINGS
- PLACE FOOTINGS ON A MINIMUM OF 6" OF CRUSHED STONE OVERLAYS ON COMPACTED STRUCTURAL FILL OR UNDISTURBED NATIVE SOIL.
- UNDER SLABS REMOVE TOPSOIL AND UNSUITABLE MATERIALS. FILL OVER EXCAVATED AREAS WITH COMPACTED STRUCTURAL FILL. PROVIDE MIN. 12" OF COMPACTED STRUCTURAL FILL UNDER SLAB.
- UNDER SLABS AND FOOTINGS COMPACT MATERIAL TO 95% OF MAX. DENSITY DETERMINED BY ASTM D1557 MODIFIED.
- BACKFILL BOTH SIDES OF FOUNDATION WALLS AT THE SAME TIME DO NOT BACKFILL UNTIL 7 DAYS AFTER PLACING CONCRETE BACKFILL MATERIAL = STRUCTURAL FILL.
- THE FOOTING SUBGRADE SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTING FOUNDATIONS.
- REFER TO CIVIL DRAWINGS AND THE PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

CONCRETE NOTES

- DESIGN CODE: ACI 318-09
- MIN. 28 DAY COMPRESSIVE STRENGTH: 3000 PSI
- SEE SPECIFICATIONS FOR MIN. CEMENT CONTENT WHICH MAY DIFFER FROM TYPICAL CONCRETE MIXES.
- REINFORCEMENT:
 - GRADE 60 ASTM A63
 - WELDED WIRE FABRIC: ASTM A655 FLAT SHEETS ONLY
- MIN. CONCRETE COVER: 3" FOR CONCRETE CAST AGAINST SOIL OTHERWISSE
- PROVIDE CONTROL JOINT OR CONSTRUCTION JOINTS IN FOUNDATION WALLS AT 40' O.C. MAX. SPACING. LOCATE JOINTS TO MATCH JOINTS IN MASONRY WHERE POSSIBLE. IF CONTROL JOINTS IN MASONRY OCCUR AT COLUMN PIER OFFSET JOINT IN FOUNDATION TO EDGE OF PIER.
- SPRICE LENGTHS (UNLESS SHOWN OTHERWISE):
 - HORIZONTAL BARS IN WALLS:
 - #4 2'-5"
 - #5 3'-0"
 - #6 4'-0"
 - #7 4'-0"
 - #8 4'-0"
 - #9 4'-0"
 - LONGITUDINAL BARS IN FOOTINGS:
 - #4 2'-5"
 - #5 3'-0"
 - #6 4'-0"
 - #7 4'-0"
 - #8 4'-0"
 - #9 4'-0"
- WELDED WIRE FABRIC = 6"
- COORDINATE PENETRATIONS THROUGH CONCRETE WITH ARCHITECTURAL, MECHANICAL, AND CIVIL DRAWINGS.

STRUCTURAL STEEL NOTES

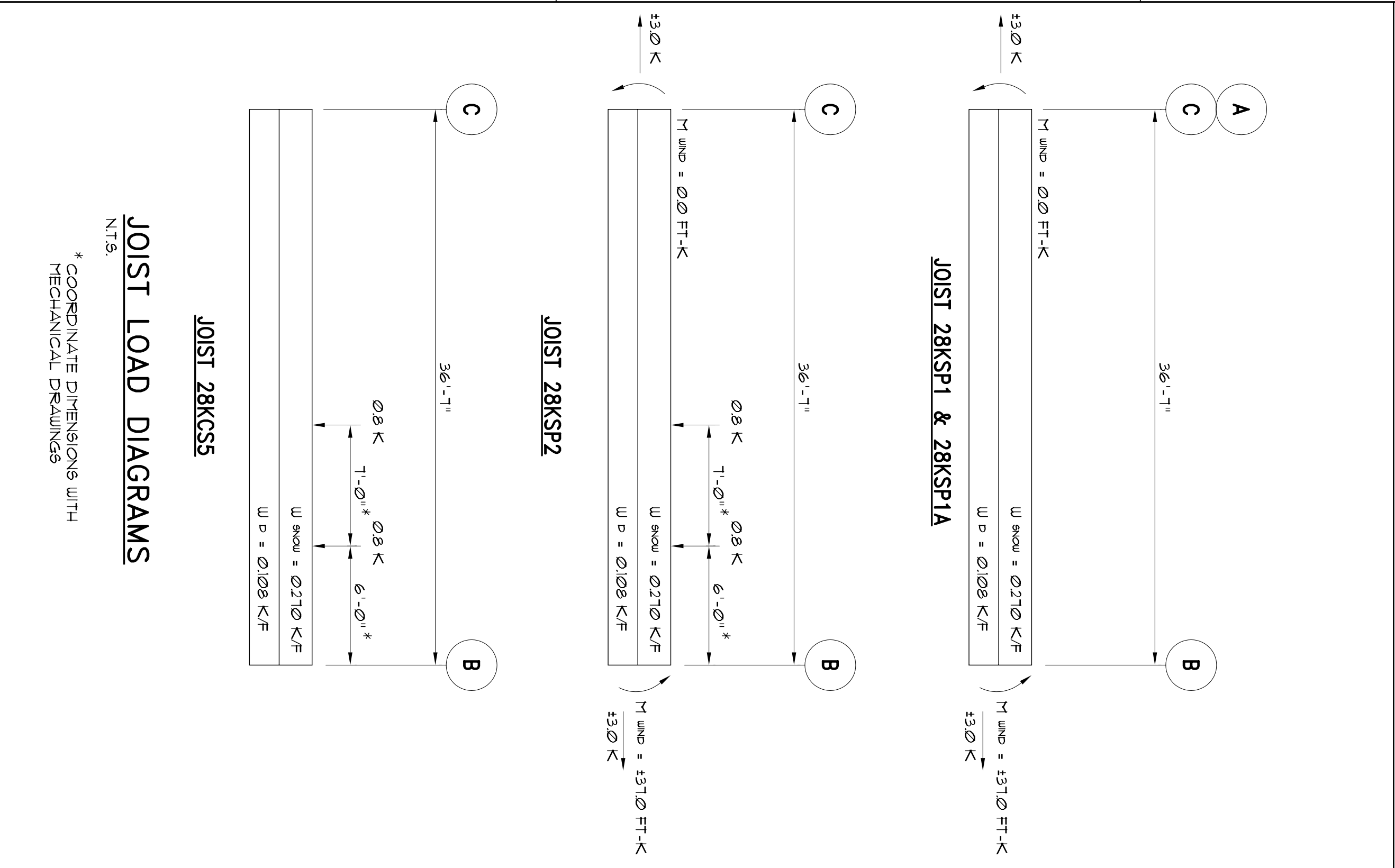
- DESIGN SPECIFICATION: AISC 360-09 ALLOWABLE STRENGTH DESIGN
- LATERAL LOAD RESISTANCE AND STABILITY IN THE COMPLETED STRUCTURE IS PROVIDED BY STEEL MOMENT FRAMES. METAL ROOF DECK SERVES AS A HORIZONTAL DIAPHRAGM THAT DISTRIBUTES LATERAL LOADS TO THE FRAMES. THE FRAMES CARRY THE LATERAL LOADS TO THE FOUNDATION. THE STRUCTURE IS NOT STABLE UNTIL ALL MOMENT FRAMES, JOINT CONNECTIONS, DIAPHRAGMS, AND DIAPHRAGM CONNECTIONS ARE COMPLETE.
- STRUCTURAL STEEL:
 - ASTM A992 FOR WELDED PLATE SHEARS
 - ASTM A500 GRADE B FOR TUBES
 - ASTM A53 TYPE E OR B GRADE B FOR PIPES
 - ASTM A36 FOR ALL OTHER SHAPES AND PLATES
- CONNECTIONS:
 - FIELD BOLTED ASTM A325N BOLTS EXCEPT WHERE FIELD WELDING IS SHOWN
 - MIN. YIELD 36 KSI
 - ANCHOR BOLTS: E70 EYEBRODES WELDING
- DESIGN AND DETAIL SIMPLE SHEAR CONNECTIONS USING ALLOWABLE STRENGTH DESIGN PROVISIONS OF PARTS 9 AND 10, AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION.
- CONNECTIONS WITH BOLTS SUBJECT TO SHEAR ONLY ARE DESIGNATED AS SNUG-TIGHT CONNECTIONS REQUIRING TIGHTENING ONLY. BOLTS SUBJECT TO TENSION OR SHEAR AND TENSION MUST BE FULLY TIGHTENED. PROVIDE TENSION CONTROL BOLTS FOR FULLY TIGHTENED CONNECTIONS.
- WHERE SHOWN END REACTIONS AND MEMBER FORCES ARE IN KI-FT. WHERE BEAM REACTIONS ARE NOT SHOWN DESIGN AND DETAIL CONNECTIONS FOR ONE-HALF OF THE ALLOWABLE LOAD CARRYING CAPACITY OF THE BEAM BUT NOT LESS THEN 6 KI-FT SERVICE LOAD.
- ROOF MUST PROVIDE DIAPHRAGM ACTION.
 - ROOF DECK: WELD TO SUPPORTING MEMBERS USING 3/8" DIA. PUDDLE WELDS IN A 36/4 PATTERN
 - PROVIDE (2) 1/2" HEX HEAD SCREWS PER SPAN FOR SIBELAP CONNECTIONS
- IF SINGLE PLATE SHEAR CONNECTIONS ARE USED AT HSS COLUMNS, BEAM WEBS OR COLUMN WEBS, LIMIT THE PLATE THICKNESS TO 16X HSS WALL OR WEB THICKNESS.

ARCHITECTURALLY PRECAST CONCRETE NOTES

- PRECAST CONCRETE PANELS SUPPORTED ON STRUCTURAL STEEL ANGLES ARE ASSUMED TO BE SUPPORTED VERTICALLY ON SHIMS LOCATED APPROXIMATELY 8" FROM EACH END OF EACH PANEL (TWO SUPPORT POINTS PER PANEL).
- LATERAL ANCHORAGE IS NOT SHOWN AND IS TO BE DESIGNED BY THE PRECAST SUPPLIER INFORMATION FOR DETERMINING WIND AND SEISMIC LOADS IS SHOWN ON DRAWING 901.
- COORDINATE ALL DETAILS WITH STRUCTURAL STEEL AND ARCHITECTURAL DETAILS. STEEL ELEMENTS MAY BE REQUIRED WHICH ARE NOT SHOWN ON THE DRAWINGS. DETAILS MUST BE REVIEWED BY THE ARCHITECT AND ENGINEER.

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL NOTES (AESS)

- AESS INCLUDES EXPOSED STRUCTURAL ELEMENTS AT THE SOUTH WALL ENTRANCE CANOPY.
 - AESS BASE BID: COLOR GALVANIZED FINISH FOR ALL COMPONENTS.
 - AESS ALTERNATE 5-1: COLOR GALVANIZED FINISH FOR CURVED HSS MEMBERS. GALVANIZED STEEL FOR CANOPY BRACKETS AND PIPE ELEMENTS THAT MAY BE STAINLESS STEEL ARE DESIGNATED ON THE DRAWINGS.
- COMPLY WITH AISC "CODE OF STANDARD PRACTICE", LATEST EDITION, SECTION 10 AS AMENDED BY THESE NOTES.
 - GRIND SHEARED, PUNCHED, OR FLAME-CUT EDGES SMOOTH.
 - SHAPE ROLLED MEMBERS IN THE SHOP AND THE DURING SHIPPING TO PREVENT STRESSES RELIEVING.
 - SEAL WELD OPEN ENDS OF HSS WITH 3/8" CLOSURE PLATES.
 - WELDING STAINLESS STEEL: COMPLY WITH AWS D16, LATEST EDITION.
 - STAINLESS STEEL BOLTS: ASTM A593, TYPE 304.
 - HOT-DIP GALVANIZING.
 - COMPLY WITH ASTM A123/A123M.
 - RUGOSITY: NOT GREATER THE 4 RMS (16-20 MICRONS OF VARIATION) WHEN MEASURED BY A PROFLIGHTER OVER A 1 INCH STRAIGHT LINE. PROFLIGHTER SHALL BE CAPABLE OF OPERATING IN HIGHER INCREMENTS SURFACE BLASTING PRIOR TO APPLICATION OF FACTORY-APPLIED POST GALVANIZING WET COATINGS IS NOT ACCEPTABLE.
 - FILL VENT AND DRAIN HOLES THAT WILL BE EXPOSED IN THE FINISHED WORK BY PLUGGING WITH ZINC SOLDER AND FINING OFF SMOOTH.
 - COLOR GALVANIZING: FACTORY-APPLIED COLORGALV WITH 20-YEAR WARRANTY. CERTIFIED VOC COMPLIANT. APPLY AFTER HOT-DIP GALVANIZING AT THE SAME FACTORY WHERE HOT-DIP GALVANIZING IS DONE AS RECOMMENDED BY THE COATING MANUFACTURER.



JOIST LOAD DIAGRAMS

* COORDINATE DIMENSIONS WITH MECHANICAL DRAWINGS

FOR CONSTRUCTION

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