

STRUCTURAL GENERAL NOTES

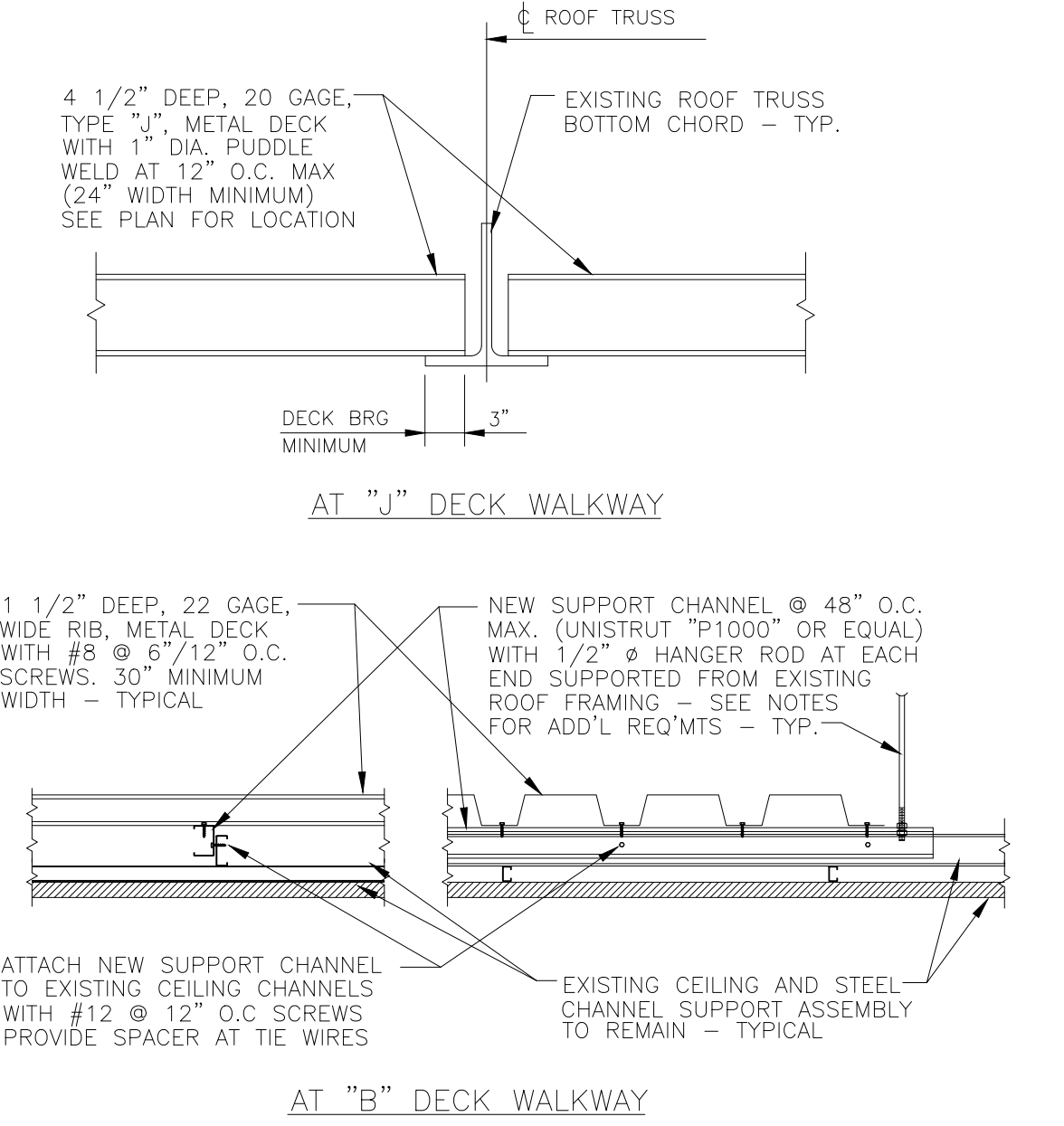
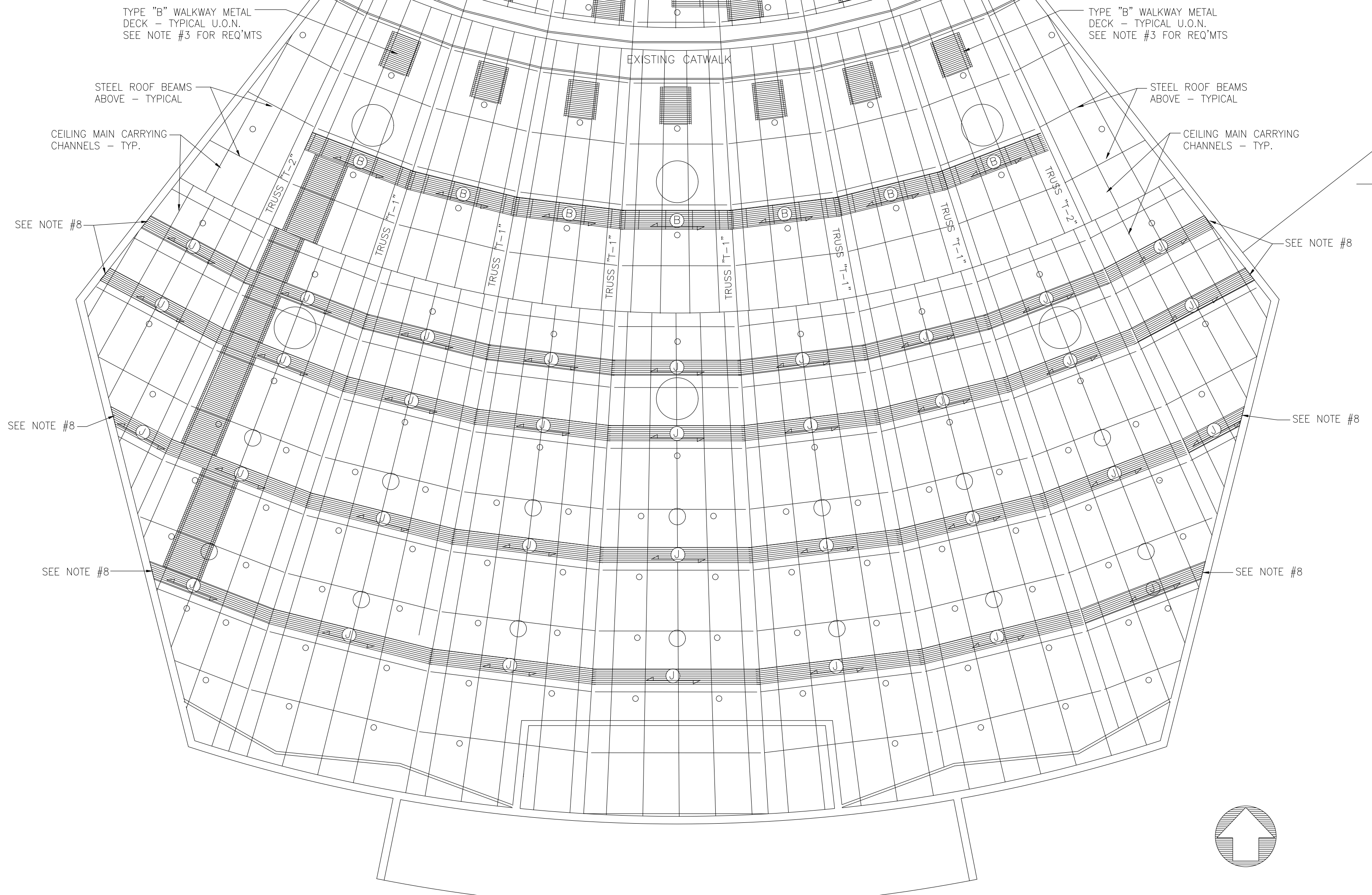
- A. GENERAL**
- SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND DETAILS. ALSO, SEE SPECIFICATIONS.
- B. DESIGN AND LOADING**
- ALLOWABLE UNIT STRESSES AND DESIGN CRITERIA IN ACCORDANCE WITH THE FOLLOWING:
 - BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACI 318
 - SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AISC 1978
 - STATE OF CONNECTICUT BASIC BUILDING CODE LATEST EDITION
 - LIVE LOAD:
 - ROOF LOADS - BASIC SNOW LOAD 30 PSF
 - FLOOR LOADS - ASSEMBLY 100 PSF
 - ALLOWABLE PRESUMPTIVE SOIL BEARING PRESSURE: 1.5 TONS/SF
 - DESIGN STRESSES AND MATERIAL:
 - CONCRETE (28-DAY STRENGTH, NORMAL WEIGHT) 3,000 PSI
 - REINFORCING STEEL ASTM A-615 F_y = 60 KS_i
 - WELDED WIRE ASTM A-185 F_y = 60 KS_i
 - STRUCTURAL STEEL ASTM A-36 F_y = 36 KS_i
 - STRUCTURAL STEEL PIPES ASTM A-53, GRADE B F_y = 35 KS_i
 - STRUCTURAL STEEL TUBES ASTM A-500, GRADE B F_y = 46 KS_i
 - BOLTS 3/4" INCH DIAMETER ASTM A-325
 - HOLLOW MASONRY UNITS ASTM C90 GRADE N-1
 - MORTAR ASTM C270 TYPE S
- C. FOUNDATION**
- ALL FOUNDATION EXCAVATIONS SHALL BE TO REQUIRED ELEVATION OR UNDISTURBED SOIL. ALL FOUNDATIONS EXCAVATIONS SHALL BE TO SOUND GROUND.
 - STRUCTURAL FILL SHALL BE APPROVED STRUCTURAL GRAVEL COMPACTED IN 8" LAYERS TO 95% OF MODIFIED OPTIMUM DENSITY.
 - BOTH SIDES OF FOUNDATION WALLS SHALL BE BACKFILLED SIMULTANEOUSLY TO PREVENT OVERTURNING OR LATERAL MOVEMENT OF WALLS.
- D. CONCRETE WORK AND REINFORCING**
- WALL FOOTING ARE TO BE 12 INCHES DEEP WITH 6-INCH PROJECTIONS, UNLESS OTHERWISE NOTED.
 - ALL FOUNDATION WALLS ARE TO BE KEYS TO FOOTINGS.
 - REINFORCING TO BE LAPPED 36 BAR DIAMETERS AT ALL CORNERS, SPLICES, DOWELS, ETC.
 - PROVIDE TWO (2) #5 BARS ON ALL SIDES AND DIAGONALLY AT CORNERS OF OPENINGS THROUGH CONCRETE WALLS. BARS TO EXTEND 2'-0" BEYOND EDGE OF OPENING.
 - UNLESS OTHERWISE NOTED, ALL FOUNDATION WALLS ARE TO BE REINFORCED WITH TWO (2) #5 BARS, CONTINUOUS TOP AND BOTTOM.
 - HORIZONTAL WALL CONSTRUCTION JOINTS WILL NOT BE PERMITTED, EXCEPT WHERE SHOWN.
 - AIR-ENTRAIN ALL EXPOSED CONCRETE.
 - THE GENERAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS, INCLUDING DIMENSIONS AND LOCATIONS, OF ALL OPENINGS, EMBEDDED ITEMS, ETC., FOR MECHANICAL AND ELECTRICAL TRADES.
 - COVER FOR REINFORCING:
 - CONCRETE PLACED ON EARTH 3"
 - FORMED CONCRETE EXPOSED TO GROUND OR WEATHER 1-1/2"
 - FORMED CONCRETE NOT EXPOSED TO GROUND OR WEATHER 3/4"
- E. STEEL**
- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC 'SPECIFICATIONS FOR THE DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS'.
 - FABRICATE AND ERECT ALL BEAMS WITH MILL CAMBER UP.
 - WHEREVER WELDING IS EMPLOYED, EITHER IN FABRICATION OR ERECTION ALL SUCH WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS IN COMPLETE ACCORD WITH THE 'STRUCTURAL WELDING CODE - STEEL' OF THE AMERICAN WELDING CODE.
 - FURNISH LOOSE ANGLE LINTELS, UNLESS OTHER LINTELS ARE SPECIFICALLY INDICATED. FOR ALL OPENINGS IN MASONRY WALLS FOR DOORS, WINDOWS, DUCTS, PASS-THROUGHS, ETC. FOR EACH FOUR (4) INCHES OF MASONRY, FURNISH ONE ANGLE AS FOLLOWS:

SPAN	LINTEL
UP TO 4'-6"	L3-1/2 X 3-1/2 X 5/16
4'-6" TO 5'-6"	L4 X 3-1/2 X 5/16
5'-6" TO 6'-6"	L5 X 3-1/2 X 5/16
6'-6" TO 7'-6"	L6 X 3-1/2 X 3/8

 FOR SIX (6") INCH WALLS, USE TWO (2) ANGLES WITH 2-1/2-INCH LEGS OUTSTANDING. FOR FOUR (4") INCH WALLS, USE SIX (6) 2.5 MINIMUM SIX (6") INCH LONG BEARING FOR ALL LINTELS.
 - PROVIDE SHOP COAT OF PAINT.
 - SUBMIT SHOP DRAWINGS, INCLUDING LINTEL SCHEDULE AND SHOP PAINT.
- F. METAL DECK**
- PERMANENT METAL FLOOR DECK: 1-1/2" INCH DEEP, 20-GAUGE, GALVANIZED COMPOSITE METAL FLOOR DECK.
 - ROOF DECK: 1-1/2" INCH DEEP, 20-GAUGE, WIDE RIB METAL DECK.
 - CEILING WALKWAY DECKING:
 - 1-1/2" INCH DEEP, 20-GAUGE, WIDE RIB, TYPE "B" METAL DECK.
 - 4-1/2" INCH DEEP, 20-GAUGE, TYPE "J" METAL DECK.
 - WELD/SCREW DECK AT TWELVE (12") INCHES ON CENTER WITH PUDDLE WELDS/SELF-TAPPING SCREWS AT EVERY INTERIOR STEEL SUPPORT AND PERIMETER SUPPORT PARALLEL TO DECK SPAN AND SIX (6") INCHES ON CENTER AT ALL DECK ENDS.
 - SIDE LAPS SHALL BE FASTENED AT 24" O.C., USING SELF TAPPING SHEET METAL SCREWS.
- G. MASONRY CONSTRUCTION**
- ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF 'BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES' (ACI 530-88/ASCE 5-88).
 - ALL MASONRY SHALL BE LAID IN RUNNING BOND.
 - MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270.
 - GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM CEMENT CONTENT OF 7.0 SACKS OF PORTLAND CEMENT PER CUBIC YARD.
 - PROVIDE BOND BEAMS OR REINFORCED GROUTED UNITS WITH 2-#5 HORIZONTAL CONTINUOUS REINFORCEMENT IN ALL MASONRY WALLS AT:
 - THE BOTTOM AND TOP OF WALL OPENINGS AND SHALL EXTEND NOT LESS THAN 24 INCHES NOR LESS THAN 40 BAR DIAMETER PAST THE OPENING
 - STRUCTURALLY CONNECTED ROOF AND FLOOR LEVELS AND AT THE TOP OF WALLS
 - AT MAXIMUM SPACING OF 10 FEET UNLESS UNIFORMLY DISTRIBUTED JOINT REINFORCEMENT IS PROVIDED.
 - PROVIDE MINIMUM OF ONE #5 CONTINUOUS VERTICAL REINFORCEMENT IN ALL MASONRY WALLS AT:
 - MINIMUM OF 48 INCHES ON CENTER UNLESS OTHERWISE NOTED
 - ALL SIDES AND EDGES OF MASONRY OPENINGS AND SHALL EXTEND NOT LESS THAN 24 INCHES NOR LESS THAN 40 BAR DIAMETER PAST THE OPENING
 - ALL MASONRY CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT. GROUT SHALL BE SAME TYPE AS MORTAR.

- ALL VERTICAL MASONRY REINFORCEMENT SHALL BE DOWELED (12 INCHES) MINIMUM INTO SUPPORTING FOUNDATION WALL OR FOOTING, UNLESS OTHERWISE NOTED.
 - REINFORCEMENT SHALL BE HELD IN PLACE USING POSITIONERS AT THE START, END AND SPLICES OF EACH BAR. PROVIDE ADDITIONAL SUPPORTS AT INTERVALS NOT GREATER THAN 192 BAR DIAMETERS OR 10'-0".
 - SPLICE REINFORCEMENT A MINIMUM LAP OF 30 BAR DIAMETERS OR 12 INCHES, WHICHEVER IS GREATER.
 - SINGLE WYTHE JOINT REINFORCEMENT TO BE TRUSS TYPE, 3/16" DIAMETER SIDE RODS WITH 9 GAGE GROSS TIES CONFORMING TO ASTM A82. PLACED HORIZONTALLY WITH A MAXIMUM VERTICAL SPACING OF 16 INCHES. WIRE REINFORCEMENT TO BE GALVANIZED.
 - DO NOT USE ADMIXTURES CONTAINING CHLORIDES, NITRITES OR NITRATES.
- H. ALL PURPOSE METAL FRAMING ('UNISTRUT')**
- ALL PURPOSE METAL FRAMING CHANNELS AND CONTINUOUS INSERTS SHALL BE ACCURATELY AND CAREFULLY COLD FORMED TO SIZE INDICATED FROM LOW CARBON STRIP STEEL. ONE SIDE OF THE CHANNEL SHALL HAVE A CONTINUOUS SLOT WITH INTURNED LIPS. ATTACHMENTS SHALL BE MADE TO THE FRAMING MEMBER WITH THE USE OF HARDENED THOBBED, SLOTTED NUTS WHICH ENGAGE THE INTURNED LIPS.
 - STEEL MATERIAL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS: A570 GR 33, A446 GR A, A566, AND A366.
 - ALL PURPOSE METAL FRAMING FITTINGS, UNLESS NOTED OTHERWISE, SHALL BE PUNCH PRESS MADE FROM HOT ROLLED STEEL PLATES OR STRIP AND SHALL CONFORM TO ASTM A575.
 - ALL PURPOSE METAL FRAMING NUTS SHALL BE MADE FROM STEEL BARS. AFTER ALL MACHINING OPERATIONS ARE COMPLETED, THEY ARE TO BE THOROUGHLY CASE HARDENED. THEY SHALL BE RECTANGULAR WITH THE ENDS SHAPED AS TO PERMIT A QUARTER TURN CROSSWISE IN THE FRAMING MEMBER AFTER INSERTING THROUGH THE SLOTTED OPENING IN THE CHANNEL AND PREVENT ANY FURTHER TURNING OF THE NUT. TWO TOOTHED GROOVES IN THE TOP OF THE NUT ARE TO ENGAGE THE INTURNED LIPS OF THE CHANNEL AND, AFTER BOLTING OPERATIONS ARE COMPLETED, PREVENT ANY LONGITUDINAL MOVEMENT OF THE BOLT AND NUT WITHIN THE FRAMING MEMBER. ALL BOLTS AND NUTS SHALL HAVE UNIFIED AND AMERICAN COARSE SCREW THREADS. THE STANDARD FRAMING NUT SHALL BE 1/2" AND SHALL CONFORM TO ASTM 675 GR 60 (MATERIAL DNLV). SCREWS SHALL CONFORM TO ASTM A307 AND SAE J429 GR2.

- I. FIELD MEASUREMENTS**
- CONTRACTOR SHALL VERIFY IN THE FIELD ALL MEASUREMENTS, CONDITIONS AND ELEVATIONS NECESSARY FOR HIS WORK AND SHALL ASSUME RESPONSIBILITY FOR THEIR ACCURACY.



TYPICAL CEILING WALKWAY SECTIONS

CEILING WALKWAY/FRAMING PLAN

SCALE: 3/32" = 1'-0"

- NOTES:**
- THE CONTRACTOR SHALL VERIFY ALL EXISTING ELEVATIONS, DIMENSIONS, CONDITIONS, ETC., IN THE FIELD PRIOR TO PROCEEDING WITH NEW WORK. NOTIFY ENGINEER OF ANY DISCREPANCIES FOR FURTHER INSTRUCTIONS IF REQUIRED.
 - EXISTING ROOF BEAM/TRUSS STEEL ELEVATION VARIES - VERIFY ALL ELEVATIONS IN FIELD.
 - Ⓚ INDICATES NEW 1-1/2" DEEP, 20-GAGE, TYPE "B", (30" MIN. WIDTH) METAL DECK. SUPPORT NEW CEILING WALKWAY DECK ON NEW SUPPORT CHANNELS (SEE NOTE #5) AT 48" O.C. MAXIMUM. ATTACH DECK TO NEW SUPPORT CHANNEL WITH #8 SELF-TAPPING SCREWS AT MAX. 12" O.C. AT INTERMEDIATE SUPPORTS AND 6" O.C. AT ALL ENDS.
 - Ⓛ INDICATES NEW 4-1/2" DEEP, 20-GAGE, TYPE "J", (24" MIN. WIDTH) METAL DECK. SUPPORT DECK ON EXISTING ROOF TRUSS BOTTOM CHORD FRAMING AT EACH END OF BAY SPAN. WELD TO TOP OF TRUSS BOTTOM CHORD WITH 1"x3" LONG PUDDLE WELDS AT 12" O.C. (EQUIVALENT SCREW FASTENERS MAY BE USED IF APPROVED BY ENGINEER).
 - PROVIDE NEW SUPPORT CHANNEL ("UNISTRUT P1000" OR APPROVED EQUAL) AT ALL WALKWAY METAL DECK INTERIOR SUPPORTS AND ENDS OF DECK SPAN. ATTACH NEW CHANNELS TO EXISTING CEILING MAIN CARRYING CHANNELS WITH #12 SELF-TAPPING SCREWS AT 12" O.C. MAXIMUM WITH SPACER WASHERS AS REQUIRED FOR CLEARANCE OF CEILING TIE WIRES. PROVIDE NEW 1/2" DIAMETER HANGER RODS AT EACH END OF WALKWAY CHANNEL TO NEW TRANSFER CHANNEL ("UNISTRUT P5500" OR APPROVED EQUAL). ATTACH TRANSFER CHANNEL TO EXISTING ROOF BEAMS WITH CLAMP END CONNECTIONS (SEE NOTE #6).
 - ALL CONNECTIONS TO EXISTING ROOF FRAMING MEMBERS SHALL BE MADE WITH STANDARD CLAMP CONNECTION ("UNISTRUT P1649AS" OR APPROVED EQUAL) - TYPICAL UNLESS OTHERWISE NOTED.
 - PROVIDE NEW SEISMIC HANGER REINFORCING TO EXISTING CEILING STRAP HANGER CONSTRUCTION THROUGH ENTIRE CEILING AREA AT MAX. 12'-0" O.C. AND WITHIN 4'-0" OF EDGE OF CEILING CONSTRUCTION. NEW SEISMIC HANGER REINFORCING SHALL CONSIST OF (5) - 5/16" DIAMETER AIRCRAFT CABLES TO CEILING PLANE AND ORTHOGONAL TO ROOF FRAMING SYSTEM. ALL CONNECTIONS TO EXISTING CEILING CONSTRUCTION SHALL BE MADE TO NEW SUPPORT CHANNEL ("UNISTRUT P1000" OR APPROVED EQUAL) AND TO EXISTING STEEL ROOF BEAMS WITH CLAMP CONNECTION OR ("UNISTRUT P2675 WITH CLEVIS HANGER" OR APPROVED EQUAL).
 - PROVIDE UNISTRUT SUPPORT FRAME AT ALL WALKWAY ENDS AS PER NOTE #3 ABOVE.
 - ALL NEW WALKWAY DECK SUPPORT SYSTEM SHALL BE TYPE "B" METAL DECK - TYPICAL UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DRAWING AND NOTE #3 FOR ADDITIONAL REQUIREMENTS.

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drawing title		STATE OF CONNECTICUT DEPARTMENT OF PUBLIC WORKS	
CEILING WALKWAY AND CEILING FRAMING PLAN			
R E V I S I O N S			
mark	date	description	
1	1/23/98	AS-BUILT	
DRAWING PREPARED BY		date	
SCHOENHARDT ARCHITECTS		16 OCT 95	
1 MASSACO PLACE SIMSBURY, CONNECTICUT, 06070		scale	
		3/32" = 1'-0"	
project		drawn by	
WELTE HALL CODE IMPROVEMENTS		RMS/SAL	
CENTRAL CONNECTICUT STATE UNIVERSITY NEW BRITAIN, CONNECTICUT		approved by	
		S.G.	
CAD no.		drawing no.	
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