

07 - PASSENGER PLATFORM INDEX OF DRAWINGS

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DESIGNED BY:


 AECOM
 500 ENTERPRISE DRIVE
 ROCKY HILL, CT 06067

DESIGNED BY:


 VB TECHNOLOGIES

FINAL PLANS FOR REVIEW

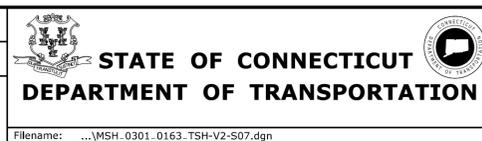
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THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 3/28/2016

DESIGNER/DRAFTER:

 CHECKED BY:



SIGNATURE/
BLOCK:

PROJECT TITLE:

**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

TOWN:

STAMFORD

DRAWING TITLE:

**PASSENGER PLATFORM
INDEX OF DRAWINGS**

PROJECT NO.
301-163

DRAWING NO.
SCS-00

SHEET NO.
02.07.000

GENERAL NOTES:

- SPECIFICATIONS:
CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 816 (2004)
INCLUDING SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 2014 AND SPECIAL PROVISIONS.
- FOR DESIGN SPECIFICATIONS FOR TRACK, ARCHITECTURAL STATION WALLS, AND BRIDGE.
SEE SHEETS T-01, A-01, S-01, WR-03, WS-01, RESPECTIVELY.
- NIGHT WORK WILL BE PERMITTED AS NOTED IN THE SPECIAL PROVISION AND AS
AUTHORIZED BY THE ENGINEER. WHEN THE CONTRACTOR PERFORMS NIGHTTIME OPERATIONS,
THE WORK AREA SHALL BE ILLUMINATED TO THE SATISFACTION OF THE ENGINEER.
THE LIGHTING SHALL BE SHIELDED TO AVOID GLARE TO TRAFFIC, TRAINS, PEDESTRIANS,
AND SURROUNDING COMMUNITIES AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE REQUIRED TO PROTECT HIS WORKERS AT ALL TIMES IN
CONFORMANCE WITH APPLICABLE OSHA REGULATIONS.
- THERE MAY BE CONCURRENT CONSTRUCTION CONTRACTS IN THE STAMFORD AREA.
THE CONTRACTOR WILL BE REQUIRED TO COORDINATE WITH THE OTHER CONTRACTORS
AND SCHEDULE HIS OPERATIONS SO AS TO CAUSE MINIMUM DISRUPTION TO TRAFFIC
AND TO PREVENT DELAYS FOR THE COMPLETION OF THE WORK.
- THE CONTRACTOR WILL NOT BE PERMITTED TO DROP WASTE CONCRETE DEBRIS AND
OTHER MATERIAL TO THE AREA BELOW OR ADJACENT TO THE BRIDGE. PROTECTIVE DEVICES
SHALL BE USED TO CATCH ALL MATERIALS AND WASTE CONCRETE. IF THE ENGINEER
DETERMINES THAT ADEQUATE PROTECTIVE DEVICES ARE NOT BEING EMPLOYED,
THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.
PRIOR TO BEGINNING INSTALLATION OF ANY PROTECTIVE DEVICE, PLAN FOR PROTECTION
SHOULD BE SUBMITTED TO THE ENGINEER AND RAILROAD FOR APPROVAL.
- THE CONTRACT DRAWINGS ARE BASED ON ORIGINAL DESIGN DRAWINGS FOR
STATE PROJECT NOS. 135-206 AND 301-006, 1995 (STRUCTURAL, ARCHITECTURAL,
MECHANICAL, CIVIL, ELECTRICAL). ACTUAL CONDITIONS MAY VARY FROM WHAT IS
SHOWN ON THESE DRAWINGS. SEE SPECIAL PROVISIONS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, CONFIGURATIONS,
AND DETAILS NECESSARY TO PERFORM THE WORK ADEQUATELY.
- CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING TO
UNLOAD STRUCTURAL ELEMENTS TO BE REMOVED AND TO RESIST ALL GRAVITY LOADS,
LIVE LOADS, AND LATERAL FORCES. PRIOR TO DEMOLITION, CONTRACTOR SHALL SUBMIT
DETAILS AND CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER
REGISTERED IN THE STATE OF CONNECTICUT. OF THE PROPOSED SHORING, BRACING,
AND DEMOLITION SEQUENCE TO THE ENGINEER FOR REVIEW. REVIEW BY THE ENGINEER
SHALL IN NO WAY RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE SAFETY
AND INTEGRITY OF STRUCTURES.
- CONTRACTOR SHALL COORDINATE REMOVAL OF STRUCTURAL, ARCHITECTURAL,
MECHANICAL, AND ELECTRICAL COMPONENTS. NOT ALL OF THESE COMPONENTS ARE
SHOWN ON THE DEMOLITION DRAWINGS (FOR EXAMPLE, LIGHTING FIXTURES AND
TELEPHONE LINES).
- REINFORCEMENT IS TYPICALLY NOT SHOWN ON DEMOLITION DRAWINGS.
REINFORCEMENT THAT CROSSES THE INTERFACE BETWEEN A PORTION TO REMAIN AND
A PORTION TO BE REMOVED SHALL REMAIN IN ITS ENTIRE LENGTH OR IT MAY BE CUT
OFF SUCH THAT A LENGTH EQUAL TO GREATER THAN 32 BAR DIAMETERS REMAINS.
DOWELS THAT ARE FOUND TO HAVE A LENGTH THAT IS SHORTER THAN REQUIRED
ARE NOT REQUIRED SHALL NOT BE CUT. REINFORCEMENT THAT IS WHOLLY WITHIN
A STRUCTURAL ELEMENT TO REMAIN SHALL NOT BE CUT OR DAMAGED. REINFORCEMENT
THAT IS ACCIDENTALLY CUT OR DAMAGED MAY REQUIRE REMEDIAL WORK TO BE
DECIDED BY THE ENGINEER ON A CASE BY CASE BASIS.
- MATERIALS, UNLESS OTHERWISE NOTED, BECOME THE PROPERTY OF THE CONTRACTOR
AND SHALL BE REMOVED FROM THE SITE AS SOON AS POSSIBLE AFTER DEMOLITION.
- IN AREAS OF ARCHITECTURALLY EXPOSED CONCRETE WHERE A BREAK IN THE CONCRETE
IS REQUIRED, CONTRACTOR SHALL PRE-SAWCUT THE SURFACE TO PROVIDE A STRAIGHT,
CLEAN EDGE AND SHALL PROTECT THE EDGE AGAINST ACCIDENTAL DAMAGE.
- CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES,
AS MAY BE REQUIRED TO PERFORM THE WORK CONTRACTED IN THESE PLANS AND
SPECIFICATIONS AND THE COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE
APPROPRIATE ITEM OF THE CONTRACT. ALSO THE TIME DURATION FOR ACQUIRING THESE
PERMITS SHALL BE APPROPRIATELY CONSIDERED IN SCHEDULING OF THE WORK.

UTILITIES NOTES:

- LOCATION OF UTILITIES, PUBLIC AND/OR PRIVATE, INDICATED AS EXISTING AND/OR TO
BE CONSTRUCTED AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THEIR EXACT
LOCATION SHALL BE DETERMINED IN THE FIELD. ADDITIONAL UTILITY LINES, WHETHER
ABANDONED OR IN SERVICE, MAY EXIST AND IT SHALL BE THE CONTRACTOR'S
RESPONSIBILITY TO CONDUCT HIS OPERATIONS AND TAKE THE NECESSARY PRECAUTIONS
TO PREVENT INTERFERENCE WITH OR DAMAGE TO THESE OR OTHER FACILITIES DURING
THE COURSE OF CONSTRUCTION. AFTER DETERMINATION OF THE INFORMATION IT SHALL
BE SHOWN ON AS-BUILT PLANS AND SUBMITTED TO THE DEPARTMENT FOR INFORMATION
PURPOSES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE GENERAL COST OF THE PROJECT.
- IN THE EVENT THE CONTRACTOR DAMAGES ANY EXISTING UTILITY CAUSING AN
INTERRUPTION IN SERVICE, HE SHALL COMMENCE WORK AS INSTRUCTED TO RESTORE
SERVICE AND MAY NOT CEASE HIS REPAIR WORK UNTIL SERVICE IS RESTORED.
ALL CORRECTIVE UTILITY WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER
AND THE SUBJECT UTILITY OWNER. COST OF REPAIR WORK AND INTERRUPTION OF SERVICE
SHALL BE SUSTAINED BY THE CONTRACTOR.

PROPERTY DAMAGE NOTES:

- THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE CAUSED BY HIS
OPERATIONS TO THE EXISTING STRUCTURE AND/OR PART OF EXISTING STRUCTURE
WHICH IS INTENDED TO REMAIN IN SERVICE. ANY DAMAGE TO THE EXISTING STRUCTURE
WHICH IS NOT PART OF THE INTENDED WORK SHALL BE REPAIRED OR REPLACED BY THE
CONTRACTOR WITHOUT COST TO THE STATE AND TO THE SATISFACTION OF THE ENGINEER.
- CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR SAFETY OF STRUCTURES DURING
DEMOLITION AND SHALL TAKE ADEQUATE PRECAUTIONS TO PREVENT DAMAGE TO ANY
REMAINING PART OF THE STRUCTURE OR TO ANY COMPONENTS THAT ARE BEING STORED
FOR LATER REUSE. ANY DAMAGE, IF INCURRED, SHALL BE RECTIFIED TO THE SATISFACTION
OF THE ENGINEER AND AT NO ADDITIONAL COST TO THE STATE.

FINAL DESIGN REVIEW

<p>THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.</p>			<p>DESIGNER/DRAFTER: B.A./S.F.C.</p> <p>CHECKED BY: N.S.V.</p>	 <p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p> <p>Filename: ...\\SB_MSH_PLATFORM_301_163_S-01_NOTES-1.dgn</p>	<p>SIGNATURE/ BLOCK:</p>	<p>PROJECT TITLE: STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION</p>	<p>TOWN: STAMFORD</p> <p>DRAWING TITLE: GENERAL NOTES-1</p>	<p>PROJECT NO. 301-163</p> <p>DRAWING NO. S-01</p> <p>SHEET NO. 02.07.001</p>
REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 3/7/2016				

STATION GENERAL NOTES:

ALLOWABLE DESIGN STRESSES

- 1. CLASS 'A' CONCRETE $f_c = 3,000$ PSI
- 2. CLASS 'F' CONCRETE $f_c = 4,000$ PSI
- 3. REINFORCEMENT (ASTM A615 GRADE 60) $f_s = 24,000$ PSI
- 4. STRUCTURAL STEEL (ASTM A709 GRADE 50) $f_s = 27,000$ PSI (THICKNESS LIMITATION = 4")

FASTENERS

- 1. ANCHOR BOLTS ASTM A307 OR A193 GRADE B8, CLASS 2.
- 2. HIGH STRENGTH BOLTS ASTM A325 - FRICTION CONNECTION- SLIP CRITICAL.

CONCRETE

- 1. CONCRETE MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:

CAST-IN-PLACE:
 CONCRETE CAST AGAINST EARTH: 3"
 CONCRETE EXPOSED TO EARTH
 (BUT NOT CAST AGAINST) OR WEATHER:
 #5 BARS AND SMALLER 2"
 #6 BARS THROUGH #18 BARS 2"

CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
 SLABS AND WALLS:

#11 BARS AND SMALLER 1"
 #14 BARS AND #18 BARS: 2"
 BEAMS AND COLUMNS 2"

- 2. REINFORCEMENT MAY BE LAP SPLICED OR EMBEDDED AS INDICATED ON THE DRAWINGS. WHERE LENGTH IS NOT INDICATED, LAP SPLICE LENGTH SHALL BE 32 BAR DIAMETERS.
- 3. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. THE CONTRACTOR SHALL PROVIDE ADDITIONAL BARS OR STIRRUPS FOR THIS PURPOSE.
- 4. EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1" UNLESS OTHERWISE NOTED.
- 5. CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE PLANS WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

CAST-IN-PLACE CONCRETE

- 1. CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM 28 DAY DESIGN STRENGTH OF 4000 PSI (CLASS F) FOR STRUCTURAL SLABS, BEAMS, COLUMNS, WALLS, AND ALL FOUNDATIONS.
- 2. CONCRETE REINFORCEMENT SHALL BE ASTM A615 GRADE 60 EPOXY COATED FOR SLABS, UNCOATED FOR FOUNDATIONS.
- 3. ALL CONCRETE SHALL BE AIR-ENTRAINED UNLESS OTHERWISE NOTED.
- 4. CALCIUM NITRATE ADDITIVE ALLOWED FOR PLATFORM SLABS, STAIRS, AND PRECAST PLATFORM UNITS.

PRESTRESSED CONCRETE

- 1. CONCRETE 28 DAY STRENGTH f_c SHALL BE 5,500 PSI.
- 2. ULTIMATE COMPRESSIVE CYLINDER STRENGTH OF CONCRETE SHALL NOT BE LESS THAN 4500 PSI AT TRANSFER OF PRESTRESSING FORCE.
- 3. PRESTRESSED CONCRETE EXTREME FIBER STRESS IN TENSION AT SERVICE LOADS (AFTER ALL PRESTRESS LOSSES) SHALL BE $f_t = 0$ PSI.
- 4. CONTRACTOR MAY ALTER PATTERN OF STRANDS, BUT SHALL MAINTAIN INITIAL PRESTRESS FORCE AND ECCENTRICITY.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICES WHICH SHALL BE ADEQUATE FOR THE SAFETY FACTORS REQUIRED BY THE ERECTION PROCEDURE.
- 6. THE END OF BEAMS SHALL BE VERTICAL AFTER ERECTION AND APPLICATION OF FULL DEAD LOAD.
- 7. THE DRILLING OF HOLES IN PRESTRESSED TEE BEAMS OR THE USE OF POWER ACTUATED TOOLS ON PRESTRESSED TEE BEAMS WILL NOT BE PERMITTED.
- 8. NO PROTRUSION ALLOWED AT EDGES.
- 9. MINIMUM COVER FOR PRESTRESSING SHALL BE 1 1/2".
- 10. FOR BEAMS WHICH SHALL HAVE A LONGITUDINAL SHEAR KEY JOINT, NO SUPERIMPOSED DEAD OR LIVE LOADS SHALL BE APPLIED TO THE ADJACENT BEAMS UNTIL THE GROUT IN THE SHEAR KEYS HAS FULLY CURED.
- 11. FOR ADDITIONAL PRESTRESSED CONCRETE NOTES, SEE SHEET S-11.

PLATFORMS AND CANOPIES

- 1. DESIGN CODES, MANUALS, AND SPECIFICATIONS:
 ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE LATEST REVISION OF ACI 318.
 STEEL STRUCTURES AND COMPONENTS SHALL BE DESIGNED IN ACCORDANCE WITH LATEST REVISION OF "SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS BY AISC".

2003 INTERNATIONAL BUILDING CODE.

STATE BUILDING CODE - 2005 CT SUPPLEMENT.

STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 816 (2004) STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION.

- 2. MINIMUM LOADS AND FORCES:
 STRUCTURES CATEGORY: III (STRUCTURES REPRESENTING A SUBSTANTIAL HAZARD TO THE HUMAN LIFE IN THE EVENT OF FAILURE)
 GROUND SNOW LOAD, Pg: 30 PSF
 (SNOW LOAD ON ROOF OR CANOPY; SNOW DRIFT LOAD AS APPLICABLE)
 BASIC WIND SPEED (3 SEC. GUST): 105 MPH, EXPOSURE B.
 PEDESTRIAN AREAS: 100 PSF UNIFORM LIVE LOAD
 HANDRAILS: HORIZONTAL FORCE OF 150 PLF AND VERTICAL FORCE OF 100 PLF APPLIED SEPARATELY OR IN COMBINATION
- 3. CONNECTIONS:
 ALL CONNECTIONS MADE IN THE FIELD SHALL BE BOLTED EXCEPT AS SHOWN ON PLANS. BOLTS SHALL BE HIGH STRENGTH FRICTION TYPE ASTM A325, UNLESS OTHERWISE NOTED. SHOP WELDED CONNECTIONS SHALL BE AS PER ANSI/AWS D1.5-(LATEST EDITION).
- 4. BONDING AND GROUNDING WILL BE ACCOMPLISHED AS THE WORK PROGRESSES TO ASSURE THAT NO POTENTIAL DIFFERENCE WILL EXIST IN ANY PHASE OF CONSTRUCTION.

FOUNDATIONS

- 1. ALLOWABLE BEARING PRESSURES:
 PLATFORM FOUNDATION: 1.5 TSF - FILL - SOIL
 BOTTOM SURFACE OF ANY FOUNDATION SHALL BE TAKEN DOWN TO MINIMUM OF 4 FEET BELOW THE ADJACENT FINAL GRADE.
- 2. NO BLASTING SHALL BE PERMITTED FOR STATION FOUNDATIONS.
- 3. FOUNDATIONS ARE TO BE PLACED ON 12" OF GRANULAR FILL CONFORMING TO THE REQUIREMENTS OF CONNDOT FORM 816 SECTION 2.14.
- 4. ELEVATIONS SHOWN ON THE DRAWINGS AT WHICH FOUNDATIONS BEAR ARE APPROXIMATE AND MAY VARY TO SUIT SUBSURFACE SOIL CONDITIONS. ANY BOTTOM OF FOOTING LOCATIONS SHOWN ON THE DRAWINGS ARE TO BE FIELD VERIFIED AND ADJUSTED AS REQUIRED SO THAT FOUNDATIONS BEAR ON MATERIAL OF AT LEAST THE CAPACITY NOTED ABOVE.

SEISMIC REQUIREMENTS

- 1. SEISMIC LOADS, MCE SPECTRAL ACCELERATIONS:
 $S_s = 0.262$ $S_1 = 0.063$,
- 2. SEISMIC PERFORMANCE CATEGORY 'C'

ABBREVIATIONS

- 1. FOR ABBREVIATIONS, SEE SHEET XXXX.

PROCEDURE FOR PLACING NEW CONCRETE AGAINST EXISTING CONCRETE

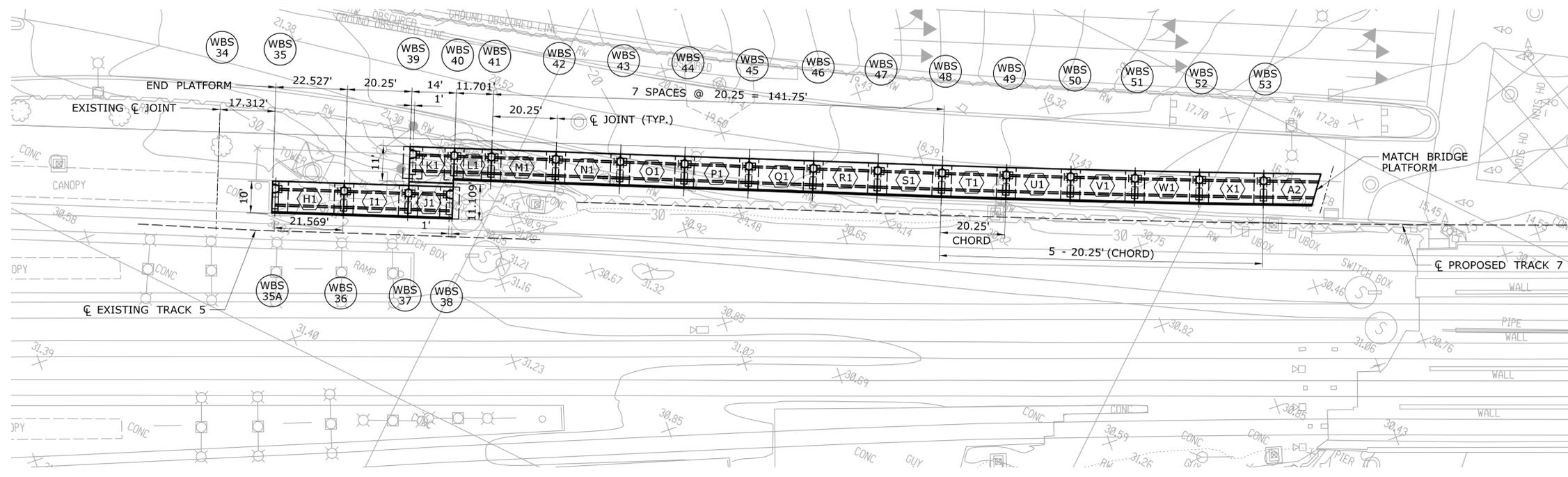
- 1. ROUGHEN SURFACE OF EXISTING CONCRETE TO 1/4" MINIMUM AMPLITUDE AND CLEAN OFF LOOSE SCALE UNLESS OTHERWISE NOTED.
- 2. LOCATE EXISTING REINFORCEMENT WITH PACHOMETER PRIOR TO DRILLING HOLES IN EXISTING CONCRETE. ANY DAMAGE TO EXISTING CONCRETE OR REINFORCEMENT SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE. DRILL HOLES AS INDICATED ON PLAN AND BLOW CLEAN. IF REINFORCEMENT IS ENCOUNTERED WHILE DRILLING, ABANDON HOLE AND REDRILL. FILL ABANDONED HOLES WITH GROUT.
- 3. GROUT REINFORCEMENT ACCORDING TO SPECIFICATIONS.
- 4. COAT ROUGHENED SURFACE OF CONCRETE WITH MORTAR PRIOR TO PLACING NEW CONCRETE.

STRUCTURAL STEEL

- 1. WELDING DETAILS, PROCEDURES AND TESTING METHODS SHALL CONFORM TO THE AWS D1J LATEST REVISION, UNLESS OTHERWISE NOTED ON THE PLANS.
- 2. BOLTED FIELD SPLICES, OTHER THAN THOSE INDICATED ON THE PLANS WILL NOT BE ALLOWED EXCEPT WITH THE WRITTEN PERMISSION OF THE ENGINEER PRIOR TO THE SUBMISSION OF THE SHOP PLANS. IF ALLOWED, THESE SPLICES SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE COST OF THESE SPLICES, INCLUDING THE COST OF DESIGN, SHALL BE AT NO EXTRA EXPENSE TO THE STATE.
- 3. WELDED FIELD SPLICES, OTHER THAN THOSE INDICATED ON THE PLANS, WILL NOT BE ALLOWED EXCEPT WITH THE WRITTEN PERMISSION OF THE ENGINEER PRIOR TO THE SUBMISSION OF APPROVED SHOP PLANS. IF ALLOWED, THESE SPICES SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE COST OF THESE SPLICES, INCLUDING THE COST OF DESIGN AND THE NONDESTRUCTIVE TESTING OF THEIR WELDS, AS DETERMINED BY THE ENGINEER, SHALL BE AT NO EXTRA EXPENSE TO THE STATE.
- 4. ALL SHOP AND FIELD GROOVE WELDS IN THE WEB AND FLANGS SHALL BE COMPLETELY INSPECTED BY RADIOGRAPHIC OR ULTRASONIC TESTING AND FINISHED SMOOTH AND FLUSH WITH THE BASE METAL ON ALL SURFACES BY GRINDING IN THE DIRECTION OF APPLIED STRESS LEAVING SURFACES FREE FROM DEPRESSIONS. CHIPPING MAY BE USED PROVIDED IT IS FOLLOWED Y SUCH GRINDING (THE GRINDING SHALL NOT REDUCE THE THICKNESS OF THE BASE METAL BY MORE THAN 1/32 OF AN INCH OR 5% OF THE THICKNESS, WHICHEVER IS SMALLER.
- 5. ALL WEB TO FLANGE AND WEB TO BEARING STIFFENER FILLET WIELDS SHALL BE INSPECTED BY THE MAGNETIC PARTICLE METHOD. AT LEAST ONE (1) FOOT OF EVERY TEN (10) FOOT LENGTH OF FILLET WELD AND ONE (1) FOOT OF EACH FILLET WELD LESS THAN TEN (10) FEET IN LENGTH SHALL BE TESTED. IF UNACCEPTABLE DISCONTINUITIES ARE FOUND IN ANY TEST LENGTH OF WELD, THE FULL LENGTH OF THE WELD, OR FIVE (5) FEET ON EITHER SIDE OF THE TEST LENGTH, WHICHEVER SHALL BE TESTED.
- 6. SHOP WEB SPLICES SHALL BE LOCATED WITHIN THE MIDDLE OF THE THIRD OF THE SPAN.
- 7. SHOP FLANGE SPLICES SHALL BE LOCATED WITHIN A MINIMUM OF SIX (6) INCHES FROM WEB SPLICES.
- 8. STIFFENERS AND CONNECTION PLATES SHALL BE LOCATED A MINIMUM OF SIX (6) INCHES FROM THE FLANGE OR WEB SPLICES.
- 9. BEARING STIFFENERS AND THE ENDS OF GIRDERS SHALL BE VERTICAL AFTER THE FULL DEAD LOADS.
- 10. INTERMEDIATE STIFFENERS SHALL BE PLACED IN PAIRS ON OPPOSITE SIDES OF THE WEBS.
- 11. THE STRUCTURAL STEEL FABRICATORS SHALL BE CERTIFIED UNDER THE AISC QUALITY CONTROL PROGRAM, CATEGORY III, MAJOR STEEL BRIDGES.
- 12. ALL FASTENERS SHALL BE ASTM A325 HIGH STRENGTH BOLTS WITH HEAVY HEX HEADS. NUTS AND WASHERS UNDER THE TURNED ELEMENT.

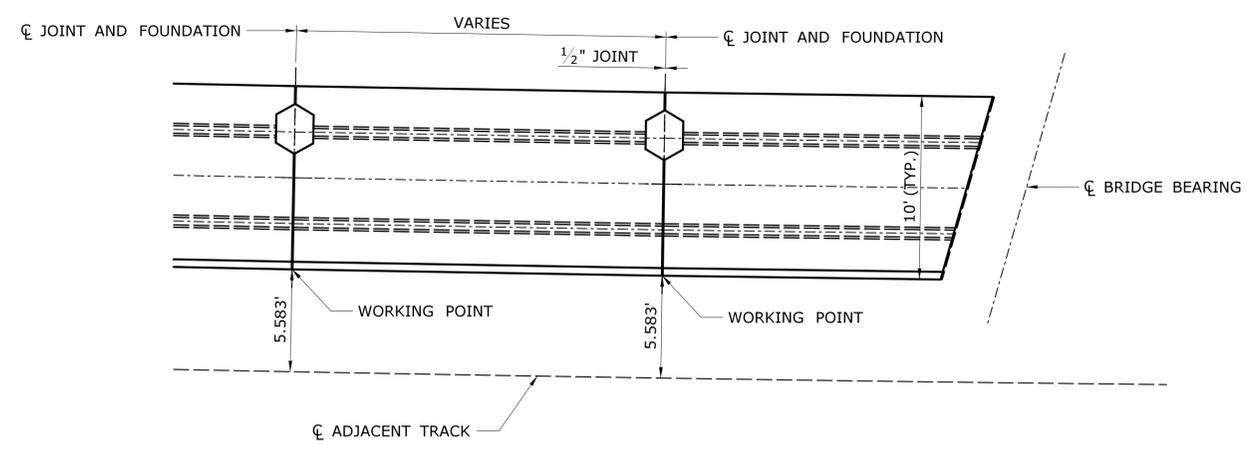
FINAL DESIGN REVIEW

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Plotted Date: 3/7/2016			Filename: ...\\SB_MSH_PLATFORM_301_163_5-02_NOTES-2.dgn	DRAWING TITLE: GENERAL NOTES-2		SHEET NO. 02.07.002		
REV.	DATE	REVISION DESCRIPTION	SHEET NO.					



MATCH MARK - SEE DRAWING NO. S-04

PARTIAL PLAN
SCALE: 1" = 20'



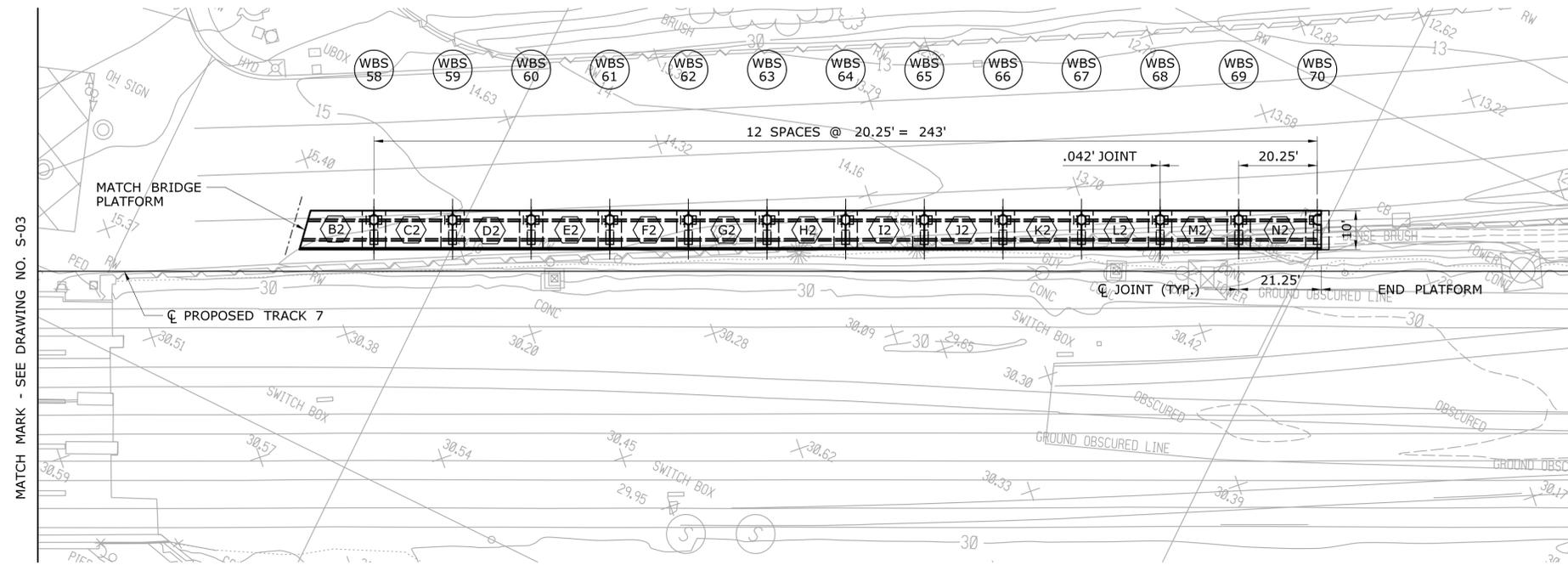
TYPICAL PLATFORM LAYOUT
SCALE: 1" = 5'

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS S-01 AND S-02.
2. DISTANCE BETWEEN CENTERLINE OF TRACK AND PLATFORM SIDE FACING TRACKS WILL BE 5'-7" PLUS 1" FOR EACH DEGREE OF CURVE. THIS ADDITIONAL CLEARANCE FOR CURVATURE OF TRACKS SHALL BE PROVIDED BY DECREASING WIDTH OF TIMBER RUB RAIL.
3. FOR PLATFORM SECTIONS AND DETAILS SEE SHEETS S-11 TO S-16.
4. DIMENSIONS FOR CANOPY, PLATFORM AND FOUNDATIONS ARE TO THE CENTERLINE OF THE CANOPY COLUMNS.

FINAL DESIGN REVIEW

		DESIGNER/DRAFTER: B.A./S.F.C. CHECKED BY: N.S.V. SCALE AS NOTED	 STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION <small>Filename: ...SB_MSH_PLATFORM_301_163_S-03_PLAN-1.dgn</small>	SIGNATURE/ BLOCK:	PROJECT TITLE: STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION	TOWN: STAMFORD	PROJECT NO. 301-163 DRAWING NO. S-03 SHEET NO. 02.07.003	
REV. DATE REVISION DESCRIPTION SHEET NO.	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	Plotted Date: 3/7/2016	STATION PLATFORM LAYOUT-1					



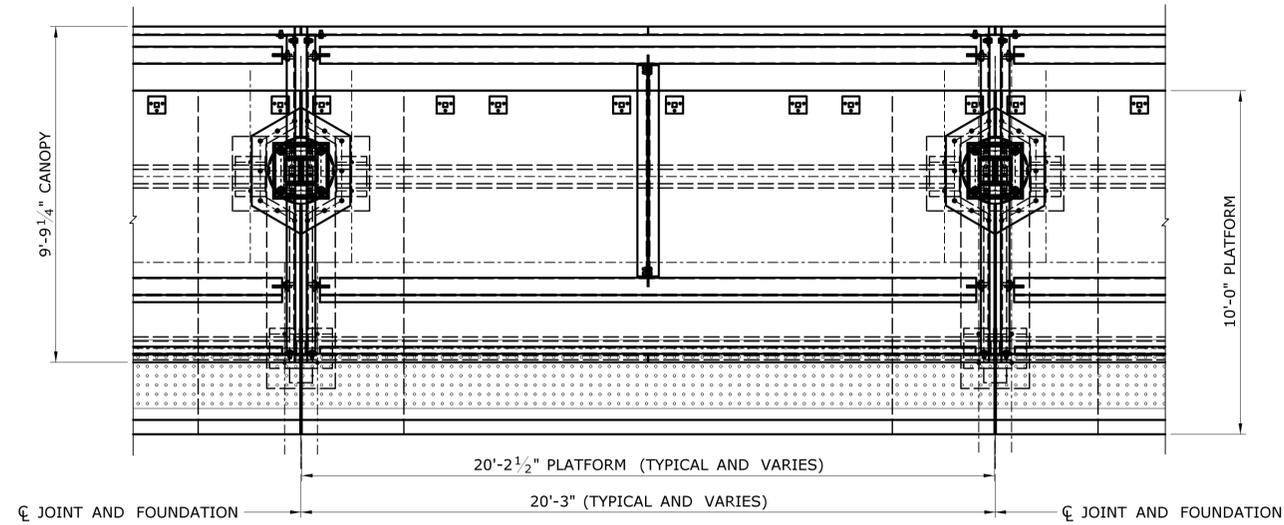
PARTIAL PLAN

NOTES:

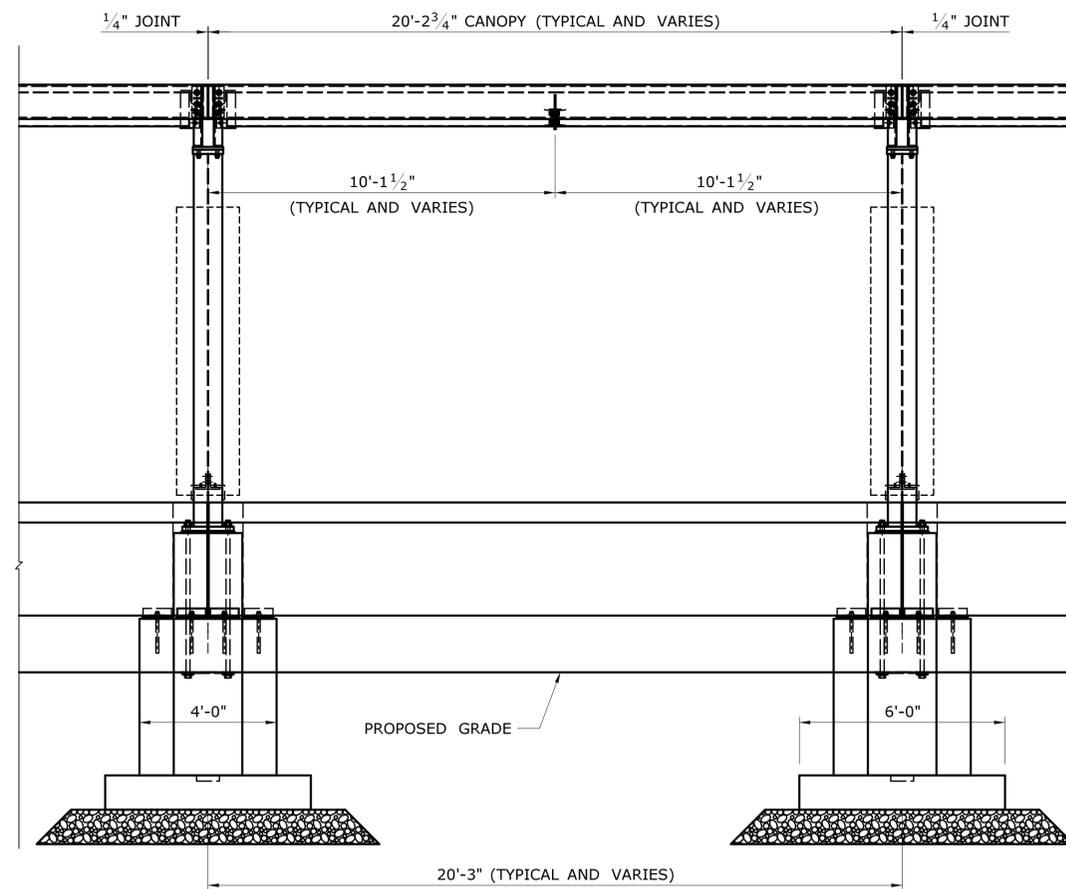
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3. FOR PLATFORM SECTIONS AND DETAILS SEE SHEETS S-11 TO S-16.
4. DIMENSIONS FOR CANOPY, PLATFORM AND FOUNDATIONS ARE TO THE CENTERLINE OF THE CANOPY COLUMNS.

FINAL DESIGN REVIEW

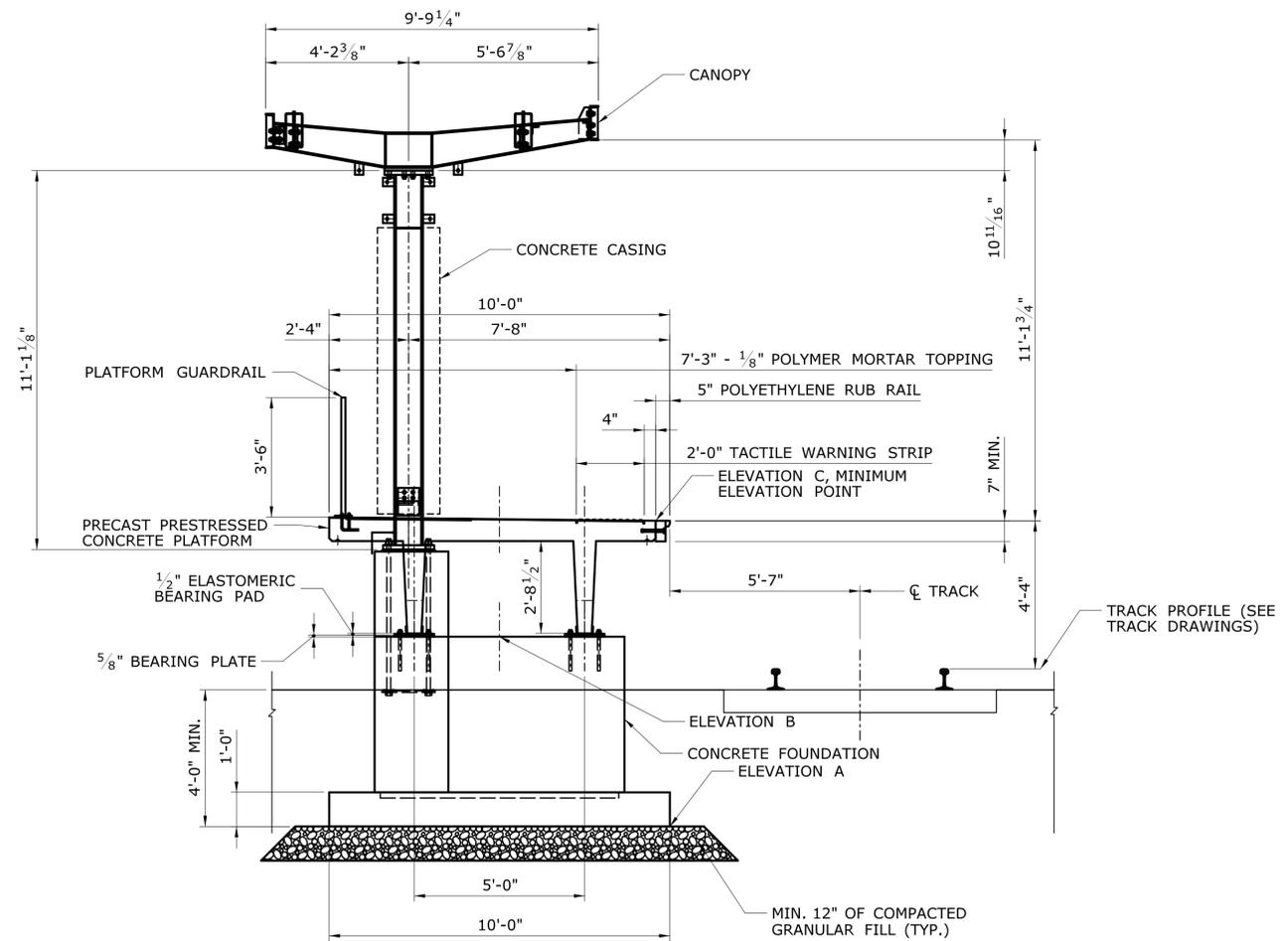
	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAFTER: B.A./S.F.C. CHECKED BY: N.S.V. SCALE IN FEET SCALE 1"=20'	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p> <p style="font-size: 8px;">Filename: ...\\SB_MSH_PLATFORM_301-163-S-04-PLAN-2.dgn</p>	SIGNATURE/ BLOCK:	PROJECT TITLE: <p>STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION</p>	TOWN: <p>STAMFORD</p>	PROJECT NO. 301-163 DRAWING NO. S-04 SHEET NO. 02.07.004						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">REV.</th> <th style="width: 60%;">DATE</th> <th style="width: 30%;">REVISION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV.	DATE	REVISION DESCRIPTION				SHEET NO. Plotted Date: 3/7/2016						
REV.	DATE	REVISION DESCRIPTION											



PLAN



ELEVATION



SECTION

NOTES:

1. FOR PLATFORM AND CANOPY LAYOUT SEE SHEETS S-03 AND S-04.
2. FOR PLATFORM SECTIONS AND DETAILS SEE SHEETS S-11 TO S-16.
3. FOR CANOPY DETAILS SEE SHEETS S-17 TO S-20.
4. CONTRACTOR SHALL ESTABLISH ELEVATIONS A, B AND C AT EACH PLATFORM AND CANOPY FOUNDATION BASED ON TRACK PROFILES AND PROPOSED GRADING. SEE SPECIAL PROVISIONS FOR SUBMITTAL OF WORKING DRAWINGS.

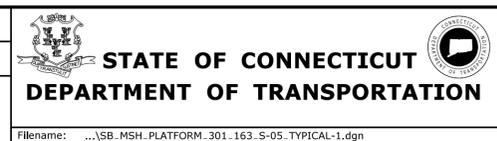
REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:
B.A./S.F.C.

CHECKED BY:
N.S.V.

SCALE: 3/8" = 1'-0"



SIGNATURE/
BLOCK:

PROJECT TITLE:
STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION

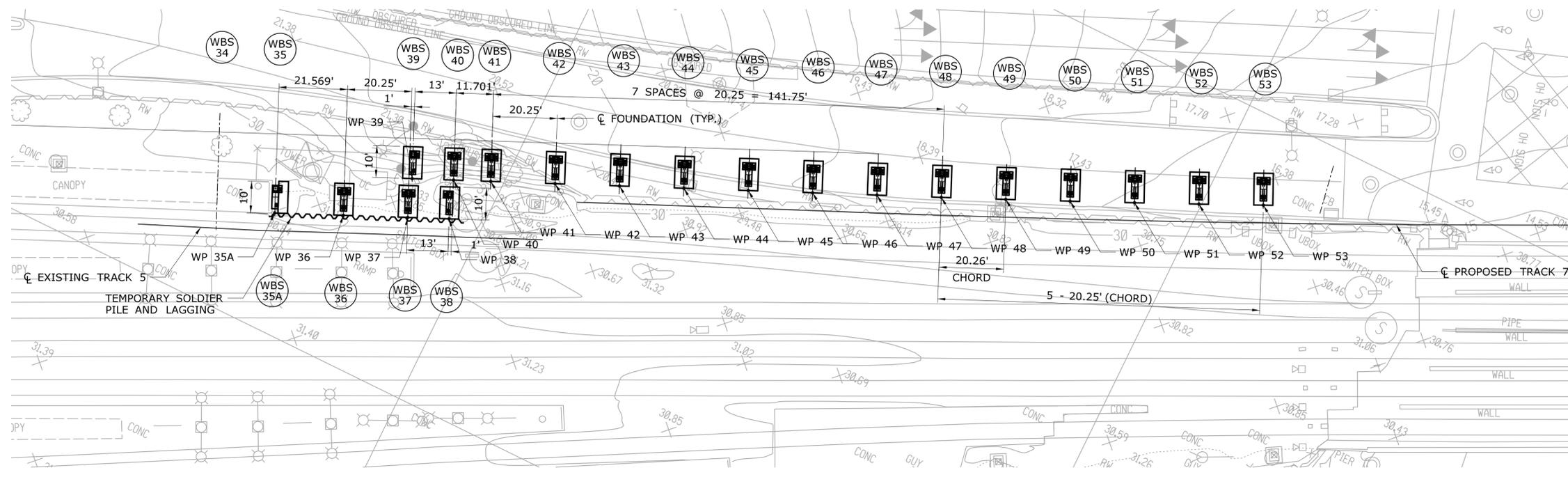
TOWN:
STAMFORD

DRAWING TITLE:
TYPICAL STATION
PLATFORM

PROJECT NO.
301-163

DRAWING NO.
S-05

SHEET NO.
02.07.005



WP	NORTH	EAST
35A	N 579035.069	E 781939.459
36	N 579043.900	E 781959.137
37	N 579052.190	E 781977.612
38	N 579057.513	E 781989.473
39	N 579063.738	E 781973.527
40	N 579069.033	E 781985.400
41	N 579073.798	E 781996.086
42	N 579082.046	E 782014.580
43	N 579090.294	E 782033.075
44	N 579098.542	E 782051.569
45	N 579106.790	E 782070.063
46	N 579115.038	E 782088.557
47	N 579123.286	E 782107.051
48	N 579131.534	E 782125.545
49	N 579139.857	E 782144.006
50	N 579148.246	E 782162.437
51	N 579156.699	E 782180.838
52	N 579165.218	E 782199.209
53	N 579173.802	E 782217.549

PARTIAL PLAN

NOTES:

- FOR GENERAL NOTES SEE SHEETS S-01 AND S-02.
- FOR FOUNDATION TYPES SEE SHEETS S-08 AND S-09.
- FOR FOUNDATION DETAILS SEE SHEET S-10.

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 3/7/2016

DESIGNER/DRAFTER:
B.A./S.F.C.

CHECKED BY:
N.S.V.

SCALE IN FEET
0 20 40
SCALE 1"=20'



SIGNATURE/
BLOCK:

PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

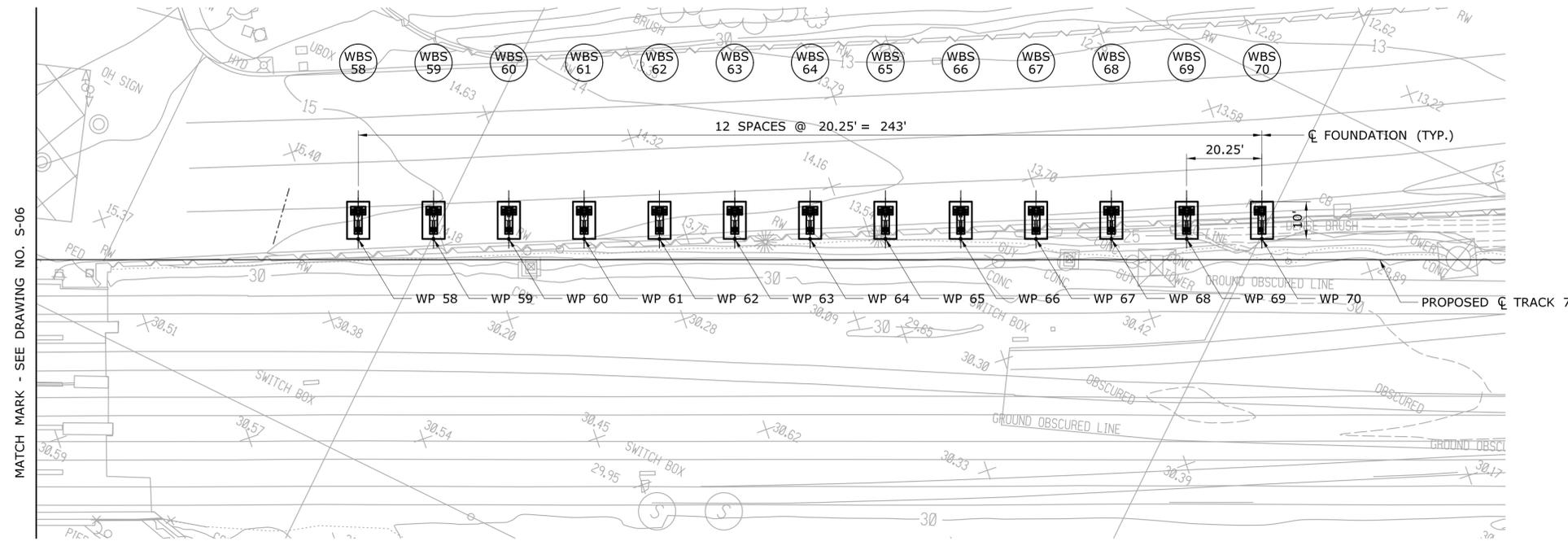
TOWN:
STAMFORD

DRAWING TITLE:
**STATION FOUNDATION
LAYOUT-1**

PROJECT NO.
301-163

DRAWING NO.
S-06

SHEET NO.
02.07.006



PARTIAL PLAN

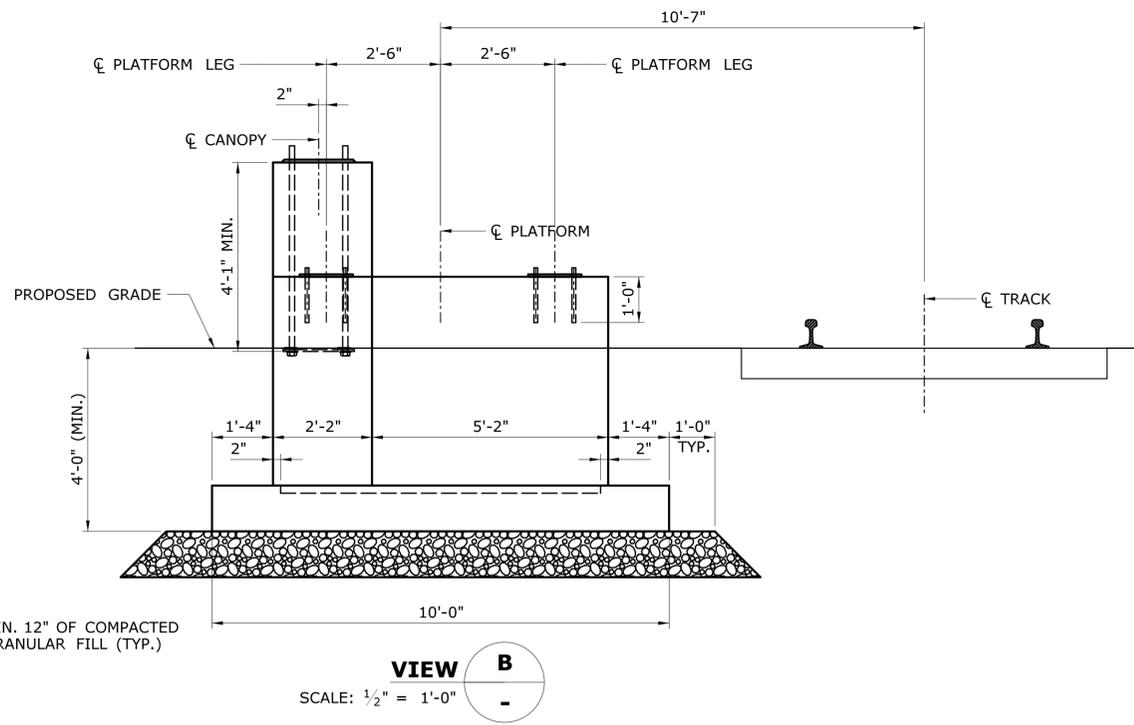
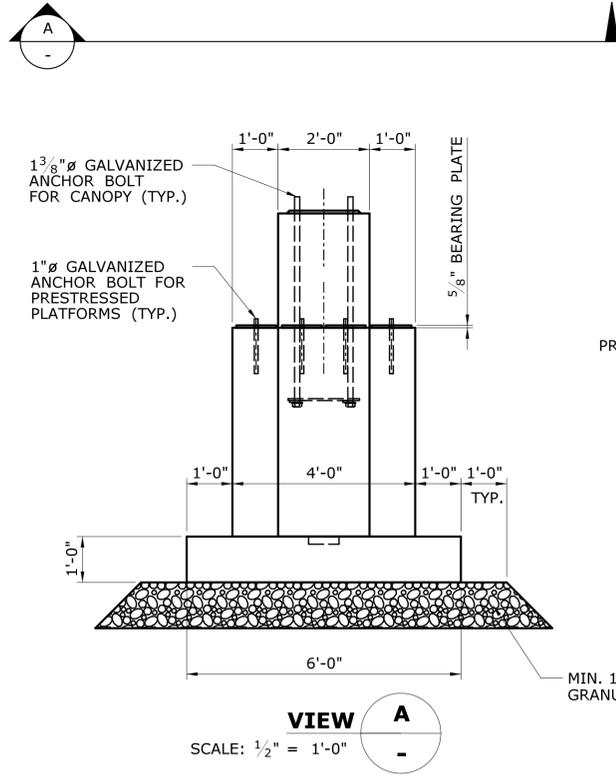
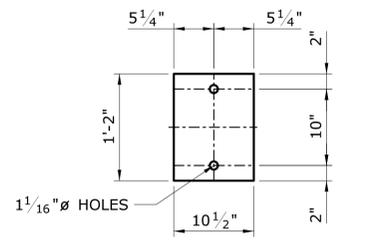
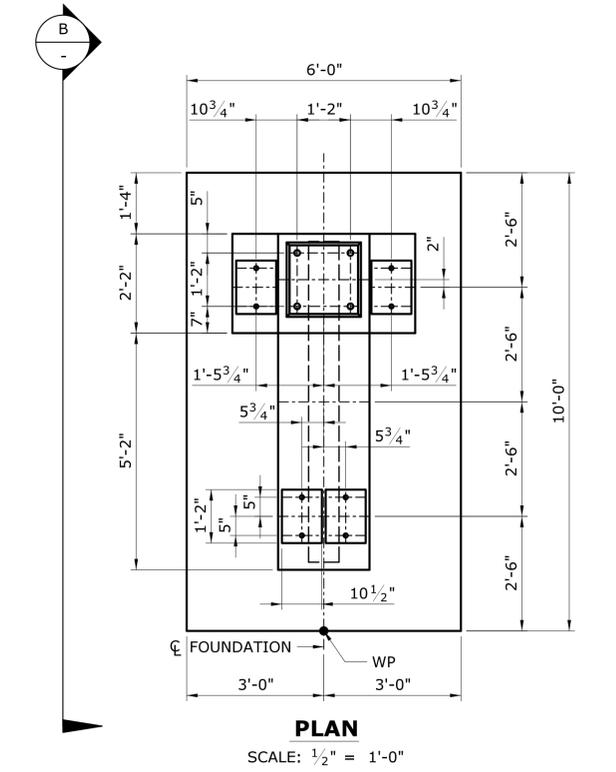
WP	NORTH	EAST
58	N 579253.594	E 782382.244
59	N 579262.490	E 782400.436
60	N 579271.386	E 782418.627
61	N 579280.282	E 782436.818
62	N 579289.178	E 782455.009
63	N 579298.074	E 782473.201
64	N 579306.970	E 782491.392
65	N 579315.866	E 782509.583
66	N 579324.762	E 782527.774
67	N 579333.658	E 782545.966
68	N 579342.554	E 782564.157
69	N 579351.450	E 782582.348
70	N 579360.346	E 782600.540

NOTES:

1. FOR GENERAL NOTES SEE SHEETS S-01 AND S-02.
2. FOR FOUNDATION TYPES SEE SHEETS S-08 AND S-09.
3. FOR FOUNDATION DETAILS SEE SHEET S-10.

FINAL DESIGN REVIEW

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	CHECKED BY: N.S.V.					DRAWING NO. S-07
REV. DATE REVISION DESCRIPTION SHEET NO.	Plotted Date: 3/7/2016	SCALE IN FEET SCALE 1"=20'	FILENAME: ..._SB_MSH_PLATFORM_301_163_S-07_FOUND-PLAN-2.dgn	DRAWING TITLE: STATION FOUNDATION LAYOUT-2	SHEET NO. 02.07.007	



FOUNDATION TYPE 1

NOTES:

- FOR GENERAL NOTES, SEE SHEET S-01 AND S-02.
- FOR FOUNDATION LAYOUT, SEE SHEETS S-03 AND S-04. WP FOR FOUNDATIONS ARE THE SAME AS THE PLATFORM WP.
- PLATFORM FOUNDATION CENTERLINES ARE PERPENDICULAR TO CONSTRUCTION BASE LINE AND ADJACENT TRACK CENTERLINE.
- CONTRACTOR SHALL ESTABLISH ELEVATIONS AT EACH PLATFORM AND CANOPY FOUNDATION BASED ON TRACK PROFILES AND PROPOSED GRADING. SEE SPECIAL PROVISIONS FOR SUBMITTAL OF WORKING DRAWINGS.
- CLASS "F" CONCRETE SHALL BE USED FOR FOOTINGS, WALLS AND PEDESTALS.
- ALL REINFORCEMENT IN FOUNDATIONS ARE PAID FOR UNDER THE ITEM "DEFORMED STEEL BARS (EPOXY-COATED)".
- CONTRACTOR SHALL SET ELEVATION OF TOP OF PIER AS SHOWN ON SHEET S-05. CONTRACTOR MAY GRIND TOP OF PIER OR USE 1/2" THICK MAXIMUM GROUT FOR ADJUSTMENT IN FIELD. GROUT SHALL CONFORM TO THE REQUIREMENTS OF CLASS "F" CONCRETE.

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER:
B.A./S.F.C.
CHECKED BY:
N.S.V.
SCALE AS NOTED

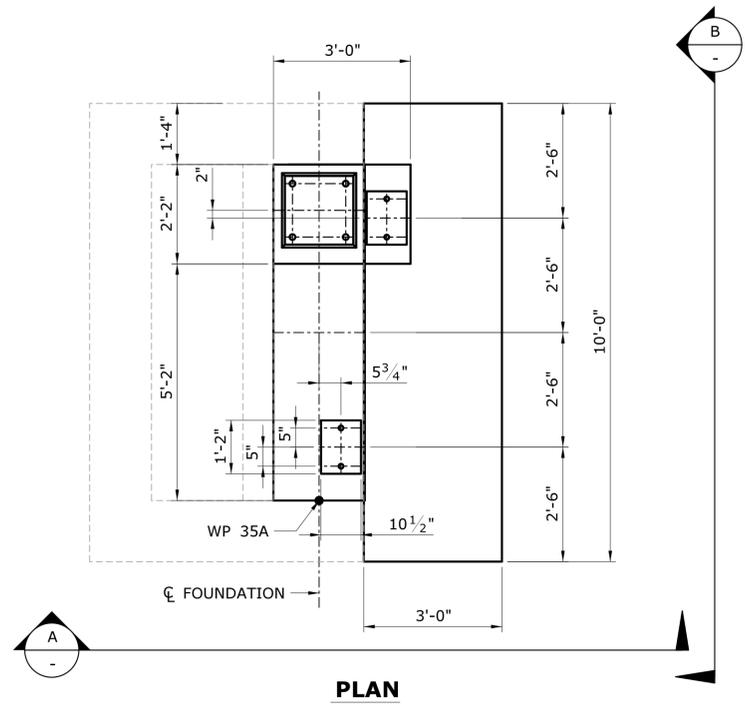


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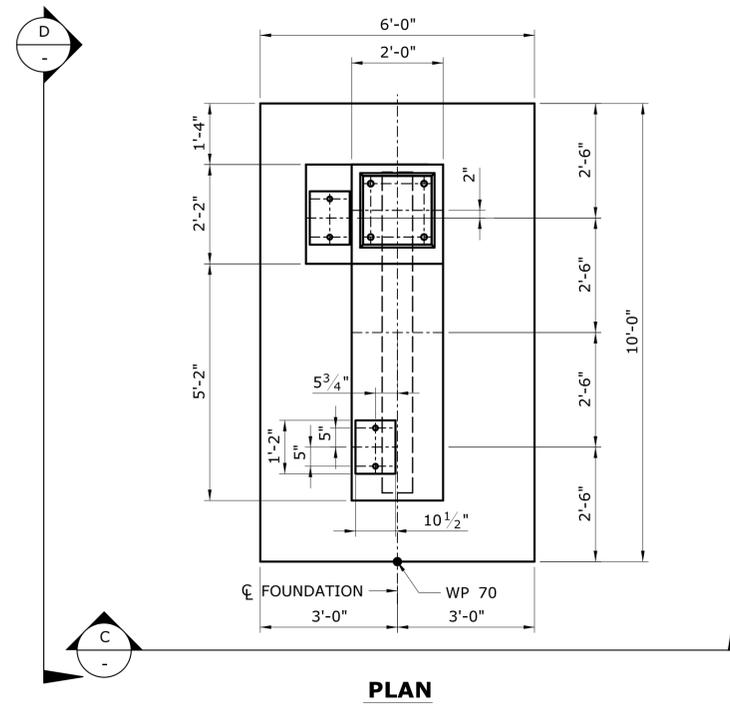
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**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

TOWN:
STAMFORD
DRAWING TITLE:
**PLATFORM FOUNDATION
TYPE 1**

PROJECT NO.
301-163
DRAWING NO.
S-08
SHEET NO.
02.07.008



PLAN

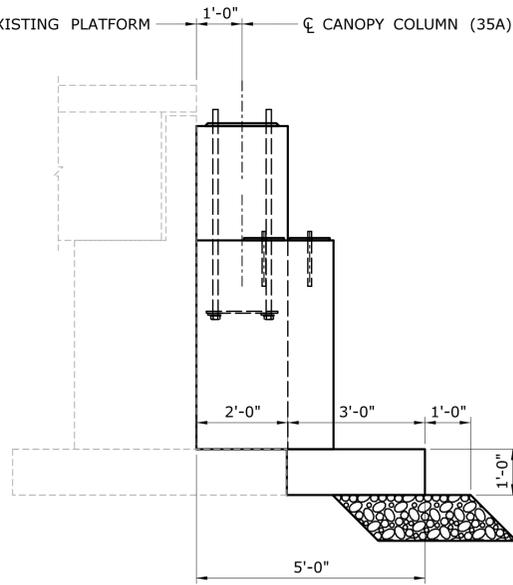


PLAN

NOTE:

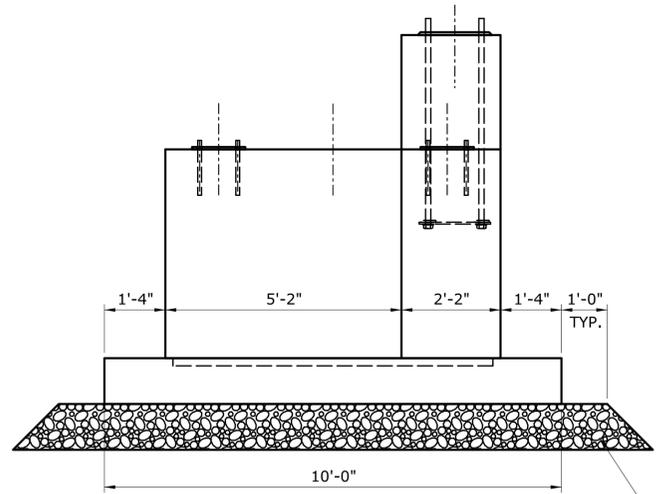
1. FOR FOUNDATION NOTES SEE SHEET S-08.

END OF EXISTING PLATFORM 1'-0" CL CANOPY COLUMN (35A)



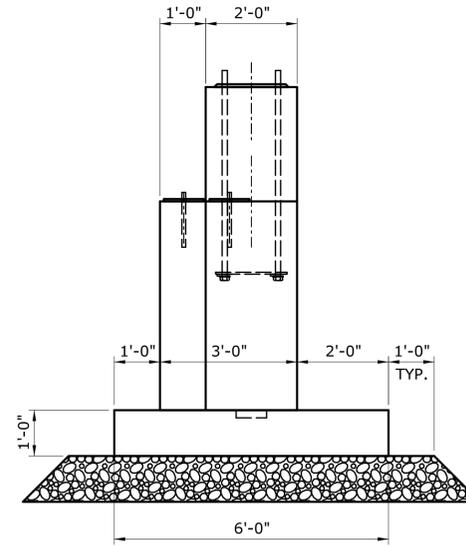
VIEW A

END FOUNDATION TYPE 2



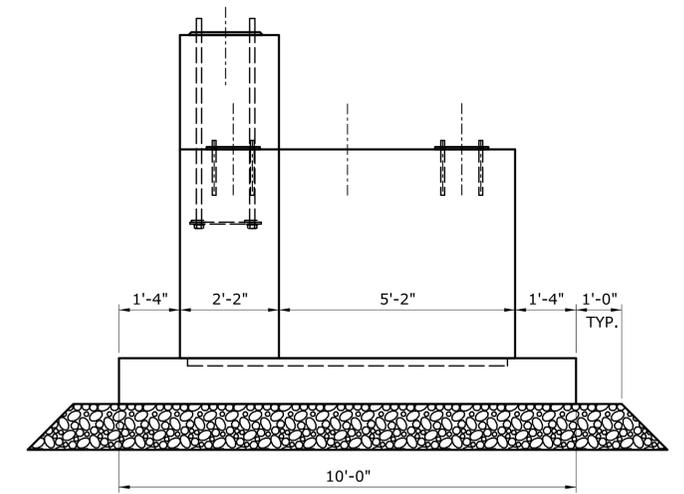
VIEW B

MIN. 12" OF COMPACTED GRANULAR FILL (TYP.)



VIEW C

END FOUNDATION TYPE 3



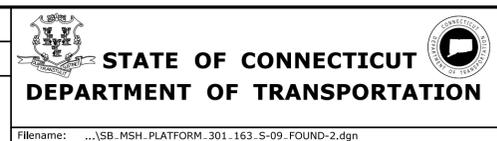
VIEW D

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER:
B.A./S.F.C.
CHECKED BY:
N.S.V.
SCALE: 1/2" = 1'-0"

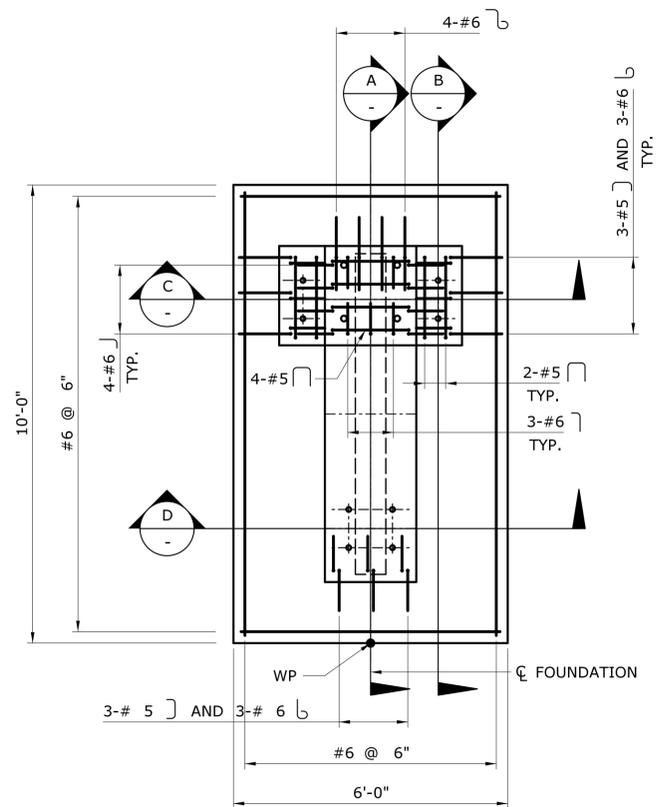


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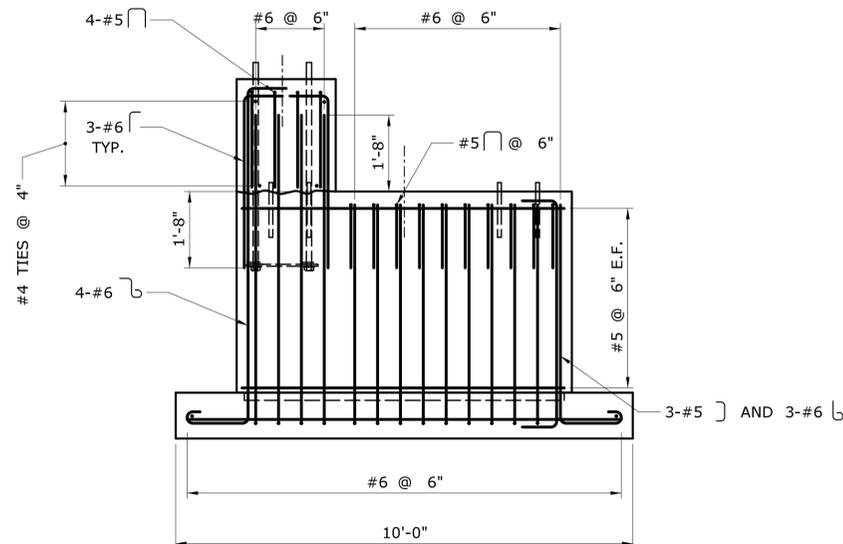
PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

TOWN:
STAMFORD
DRAWING TITLE:
**PLATFORM FOUNDATION
TYPE 2 AND TYPE 3**

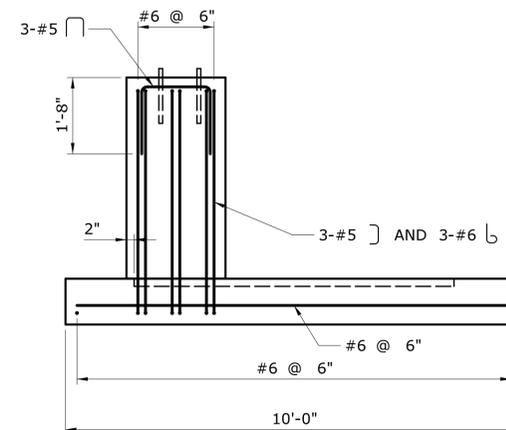
PROJECT NO.
301-163
DRAWING NO.
S-09
SHEET NO.
02.07.009



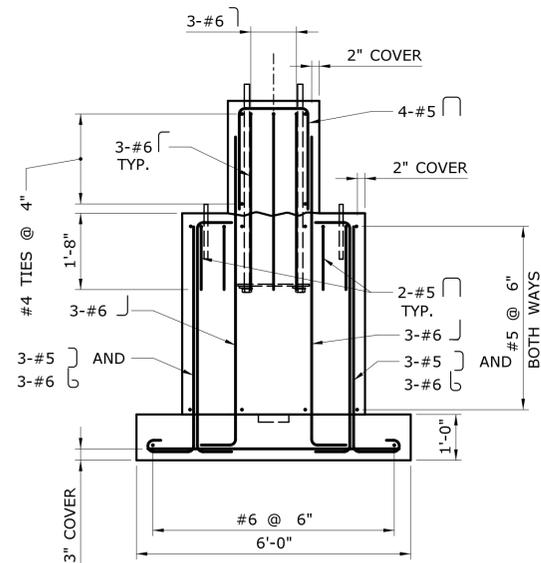
PLAN



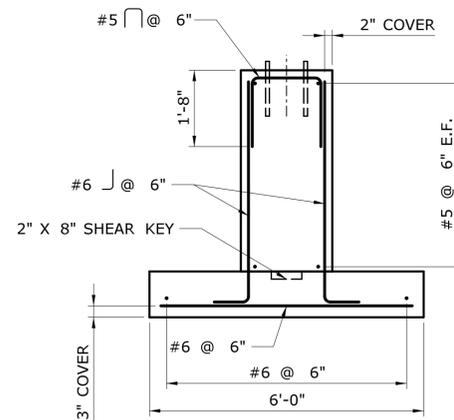
SECTION A



SECTION B



SECTION C



SECTION D

TYPICAL FOUNDATION

NOTE:

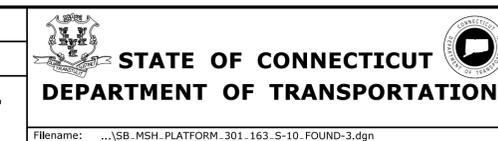
1. FOR FOUNDATION NOTES AND DETAILS SEE SHEETS S-08 AND S-09.

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER:
B.A./S.F.C.
CHECKED BY:
N.S.V.
SCALE: 1/2" = 1'-0"

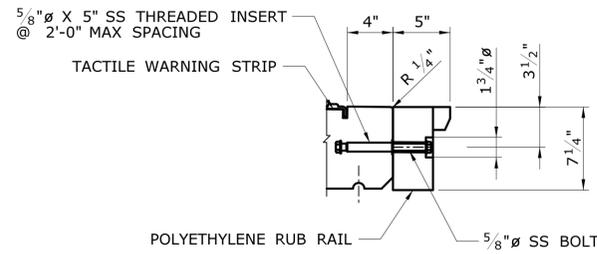


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PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

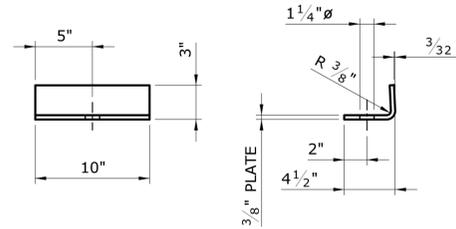
TOWN:
STAMFORD
DRAWING TITLE:
**PLATFORM FOUNDATION
REINFORCEMENT**

PROJECT NO.
301-163
DRAWING NO.
S-10
SHEET NO.
02.07.010



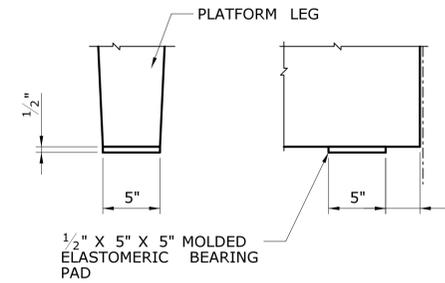
RUB RAIL DETAIL

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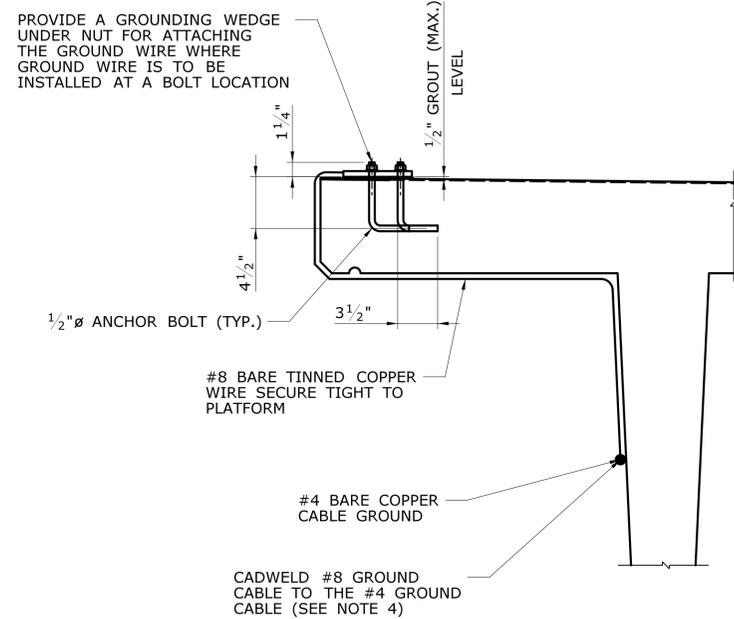
KEEPER PLATE DETAIL

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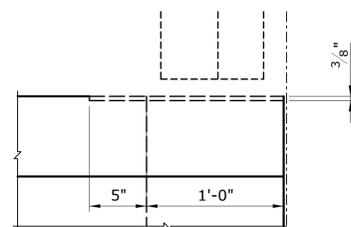
BEARING DETAIL

SCALE: 1 1/2" = 1'-0"



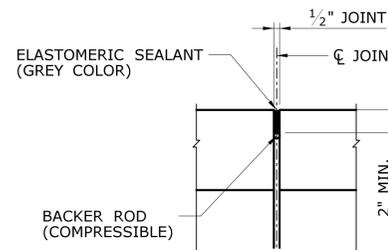
RAIL ANCHOR BOLT AND PLATFORM GROUING DETAIL

SCALE: 1 1/2" = 1'-0"



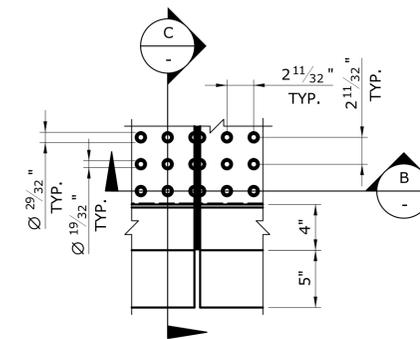
SECTION A

SCALE: 1 1/2" = 1'-0"

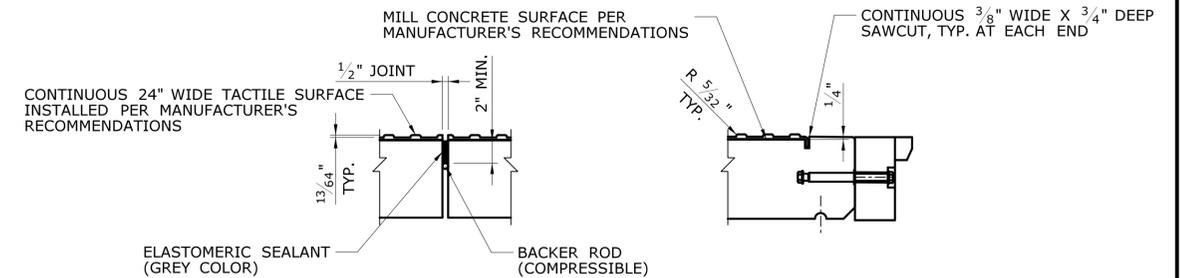


JOINT DETAIL

SCALE: 1 1/2" = 1'-0"



PLAN



SECTION B

SCALE: 1 1/2" = 1'-0"

SECTION C

SCALE: 1 1/2" = 1'-0"

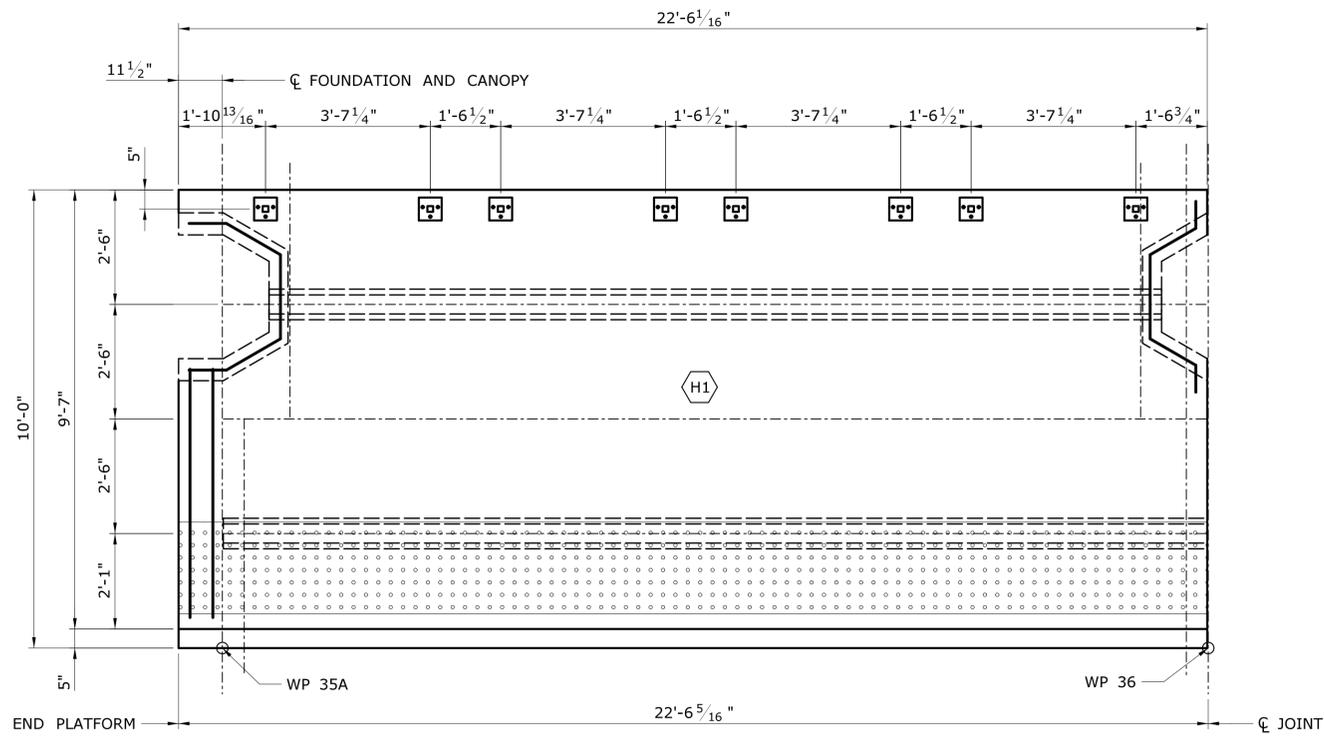
TACTILE WARNING STRIP DETAILS

NOTES:

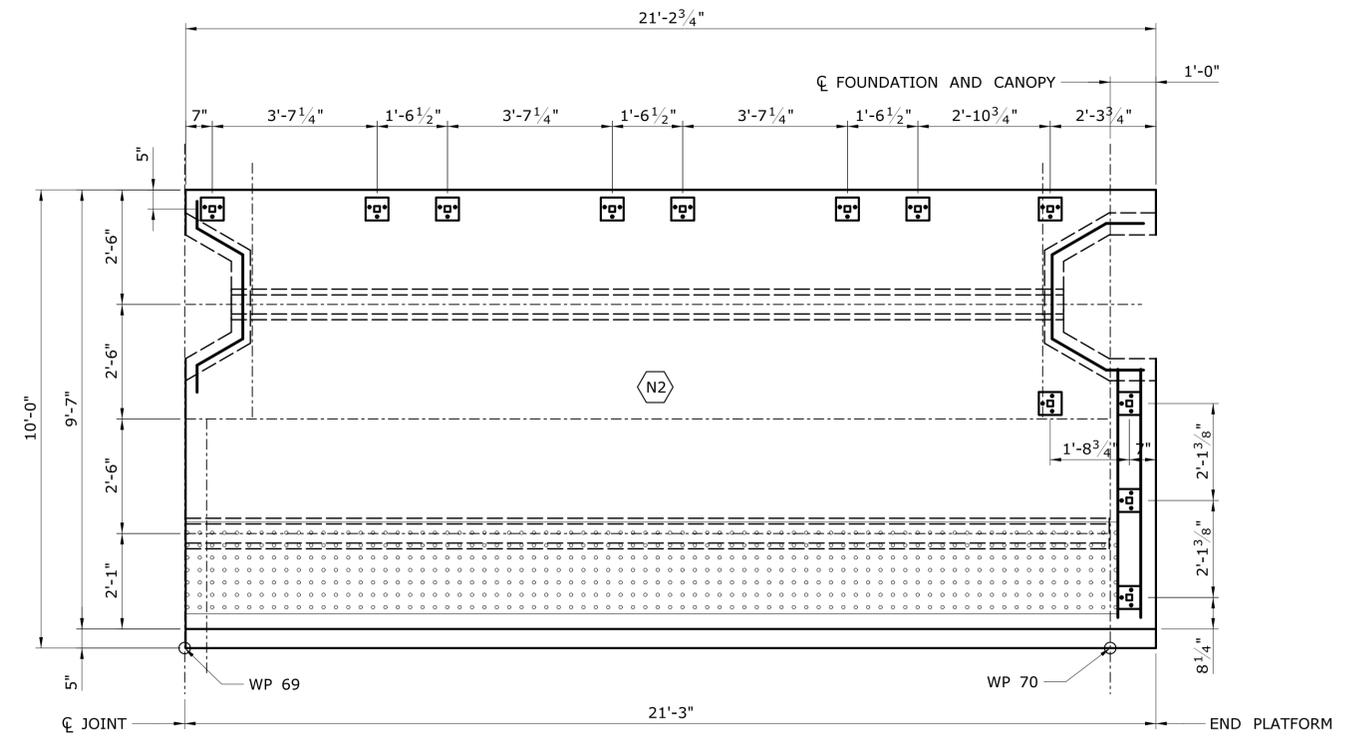
1. ALL METAL STRUCTURES, PERMANENT AND TEMPORARY ALONG WITH ASSOCIATED APPARATUS, INCLUDING BUT NOT LIMITED TO STATION PLATFORMS, CANOPIES, METAL COLUMN SUPPORTS, METAL GUARD RAILS, SIGNS, METAL AND/OR METAL AND NONCONDUCTIVE COMBINATION SEATING, SHALL BE BONDED AS TO FORM A CONDUCTIVE PATH. THERE SHALL BE NO UNACCEPTABLE POTENTIAL DIFFERENCE OR ANY HAZARDOUS TOUCH, STEP OR STEP AND TOUCH CONDITION BETWEEN THE RAIL/RAIL VEHICLE/CATENARY SYSTEM AND SURROUNDING METAL STRUCTURES IN THE ZONE OF INFLUENCES OF THE TRANSMISSION SYSTEMS. THIS IS TO BE REFLECTED BY ADHERENCE TO CURRENT CODES, ACCEPTED PRACTICES OR THE REQUIREMENTS OF THE ENGINEER.
2. EACH PLATFORM LIGHT FIXTURE STANDARD SHALL BE GROUNDED BY MEANS OF A NO. 4 BARE COPPER WIRE CONDUCTOR. A FIVE-SIXTEENTH INCH GROUNDING STUD FOR ATTACHING THE GROUNDING CONDUCTOR, SHALL BE FURNISHED AND MOUNTED INSIDE THE POLE. FOR LIGHT STANDARD GROUNDING DETAILS, SEE ELECTRICAL DRAWINGS.
3. SECONDARY BONDING AND GROUNDING SHALL BE INCLUDED UNDER THE ITEM, "PLATFORM LIGHTING AND POWER".
4. THE #4 BARE COPPER GROUND CABLE SHALL BE CONNECTED TO GROUND RODS AT EACH END OF THE PLATFORM BY EXOTHERMIC CONFIGURATION DETAIL.

FINAL DESIGN REVIEW

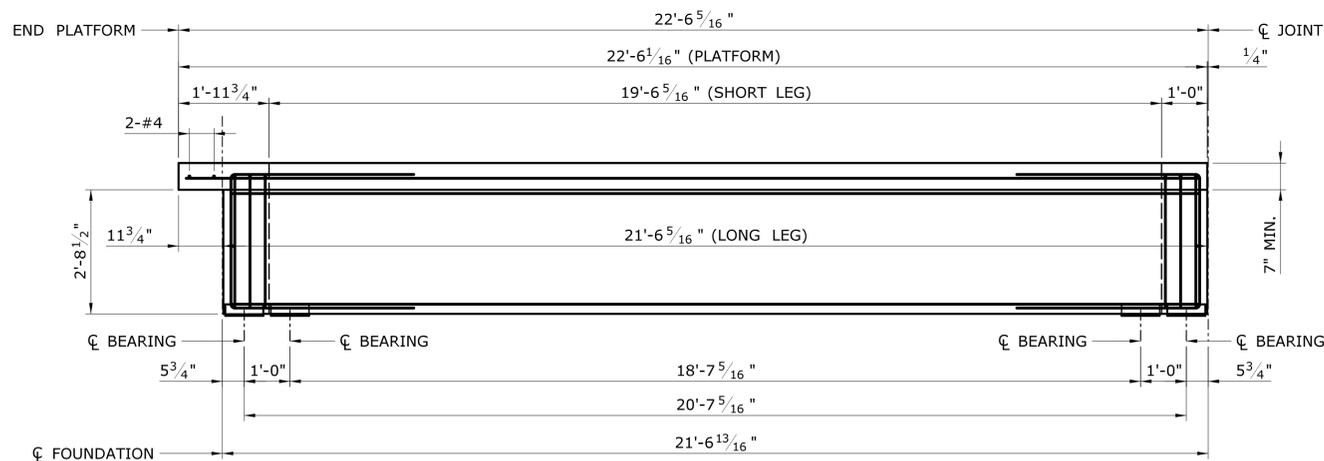
THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		DESIGNER/DRAFTER: B.A./S.F.C. CHECKED BY: N.S.V. SCALE AS NOTED	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION Filename: ...SB_MSH_PLATFORM_301_163_S-12_PLATFORM-2.dgn	SIGNATURE/ BLOCK:	PROJECT TITLE: STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION	TOWN: STAMFORD DRAWING TITLE: PLATFORM TYPICAL DETAILS	PROJECT NO. 301-163 DRAWING NO. S-12 SHEET NO. 02.07.012
REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 3/7/2016			



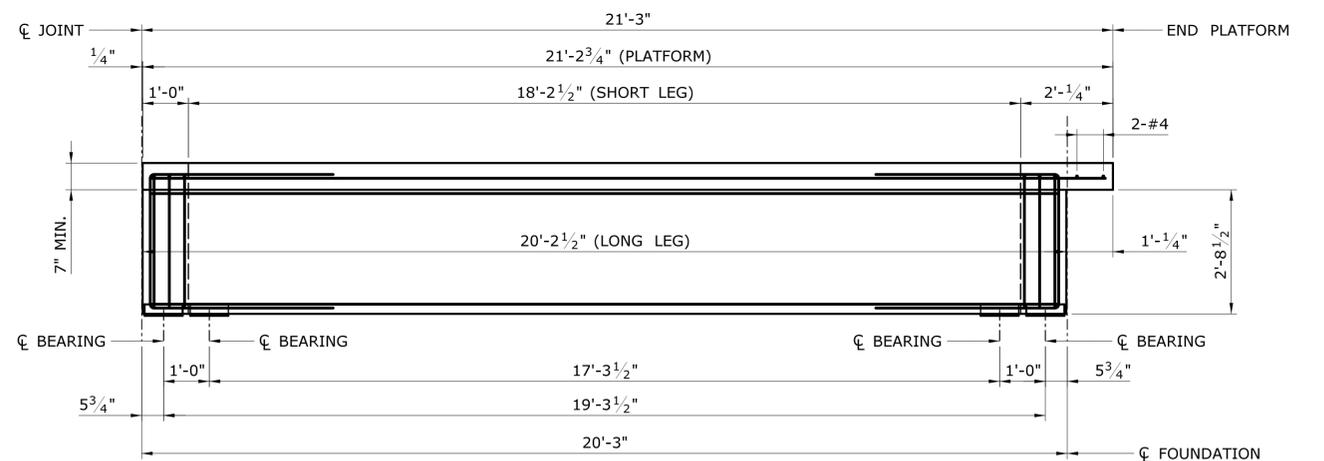
PLAN



PLAN



ELEVATION



ELEVATION

NOTES:

1. FOR PLATFORM LOCATIONS SEE SHEETS S-03 AND S-04.
2. FOR WORKING POINTS SEE SHEETS S-06 AND S-07.

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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DESIGNER/DRAFTER:
B.A./S.F.C.
CHECKED BY:
N.S.V.
SCALE: 1/2" = 1'-0"

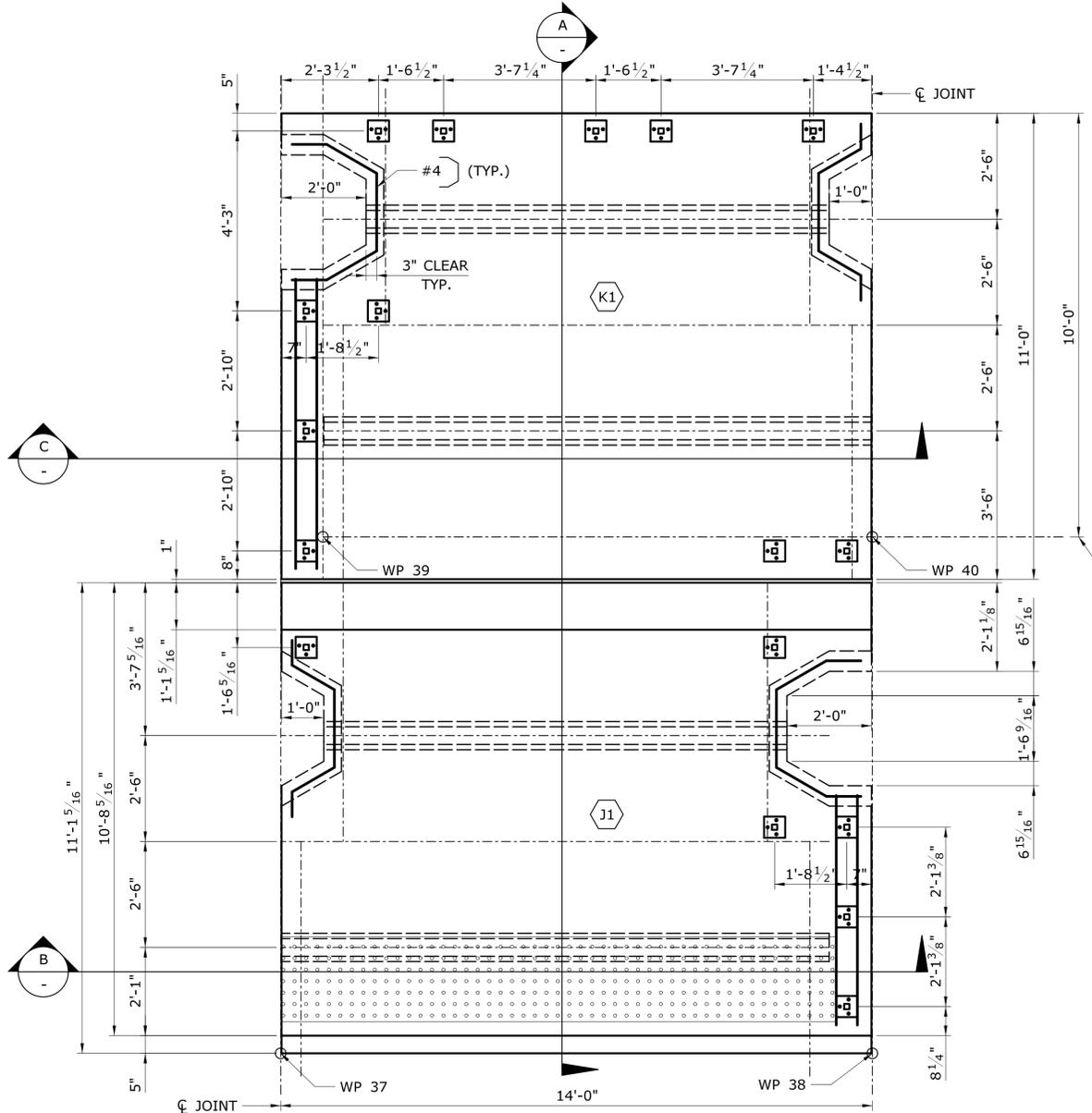


SIGNATURE/
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PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

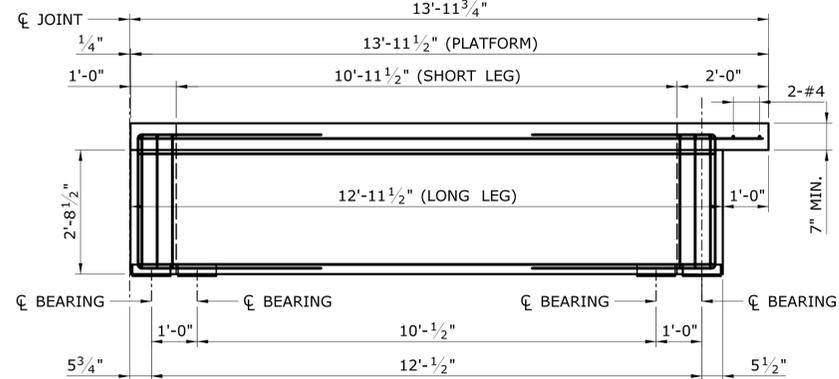
TOWN:
STAMFORD
DRAWING TITLE:
**PLATFORMS
H1 AND N2**

PROJECT NO.
301-163
DRAWING NO.
S-13
SHEET NO.
02.07.013



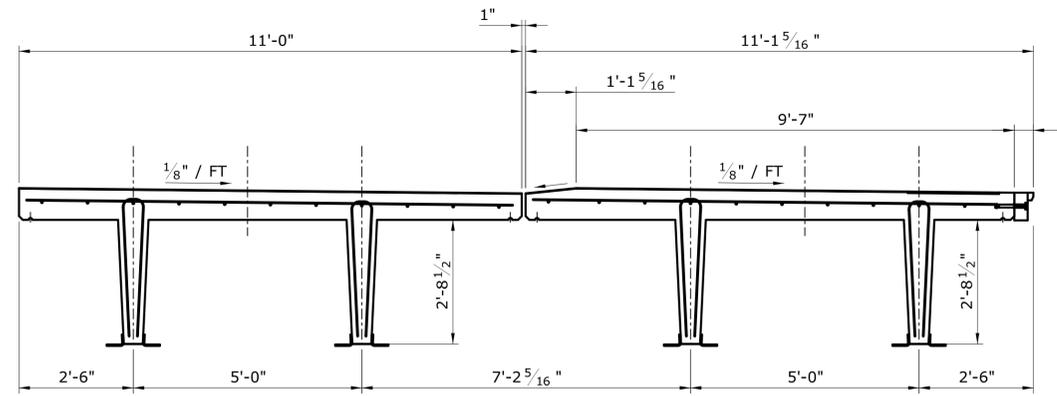
PLAN

SCALE: 1/2" = 1'-0"
13'-11 3/4"



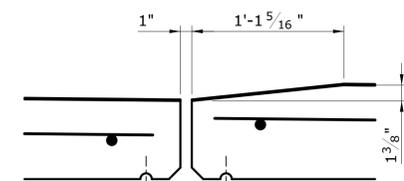
SECTION B

SCALE: 1/2" = 1'-0"



SECTION A

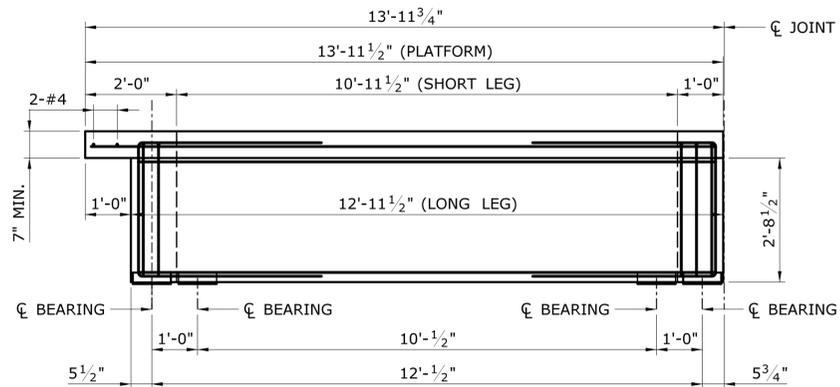
SCALE: 1/2" = 1'-0"



LONGITUDINAL JOINT DETAIL

SCALE: 1 1/2" = 1'-0"

EDGE OF PLATFORM AHEAD



SECTION C

SCALE: 1/2" = 1'-0"

- NOTES:**
- FOR PLATFORM LOCATIONS SEE SHEETS S-03 AND S-04.
 - FOR WORKING POINTS SEE SHEETS S-06 AND S-07.

FINAL DESIGN REVIEW		
STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION	TOWN: STAMFORD	PROJECT NO. 301-163 DRAWING NO. S-14 SHEET NO. 02.07.014
PLATFORMS J1 AND K1		

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

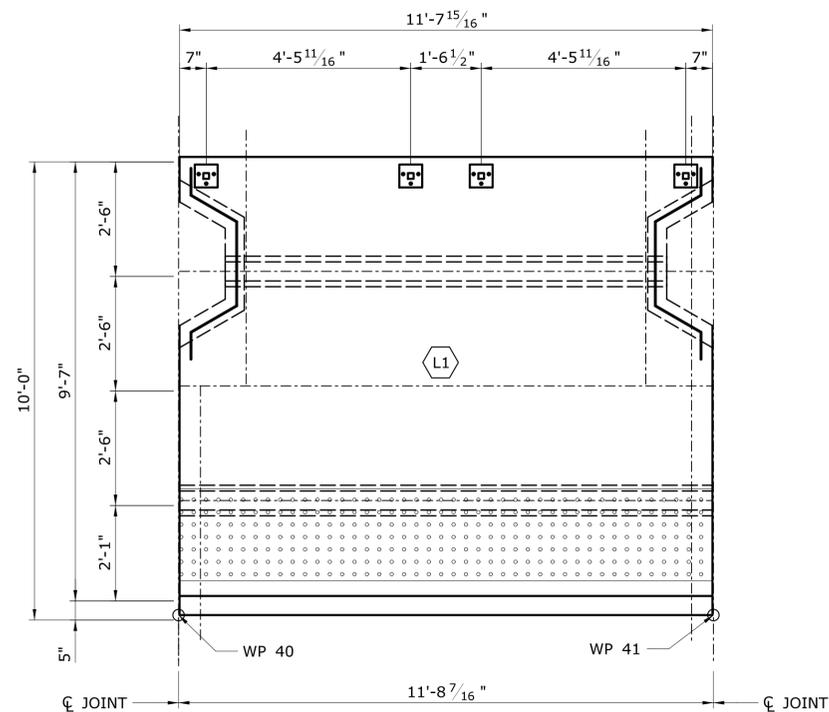
Plotted Date: 3/7/2016

DESIGNER/DRAFTER:
B.A./S.F.C.
CHECKED BY:
N.S.V.
SCALE AS NOTED

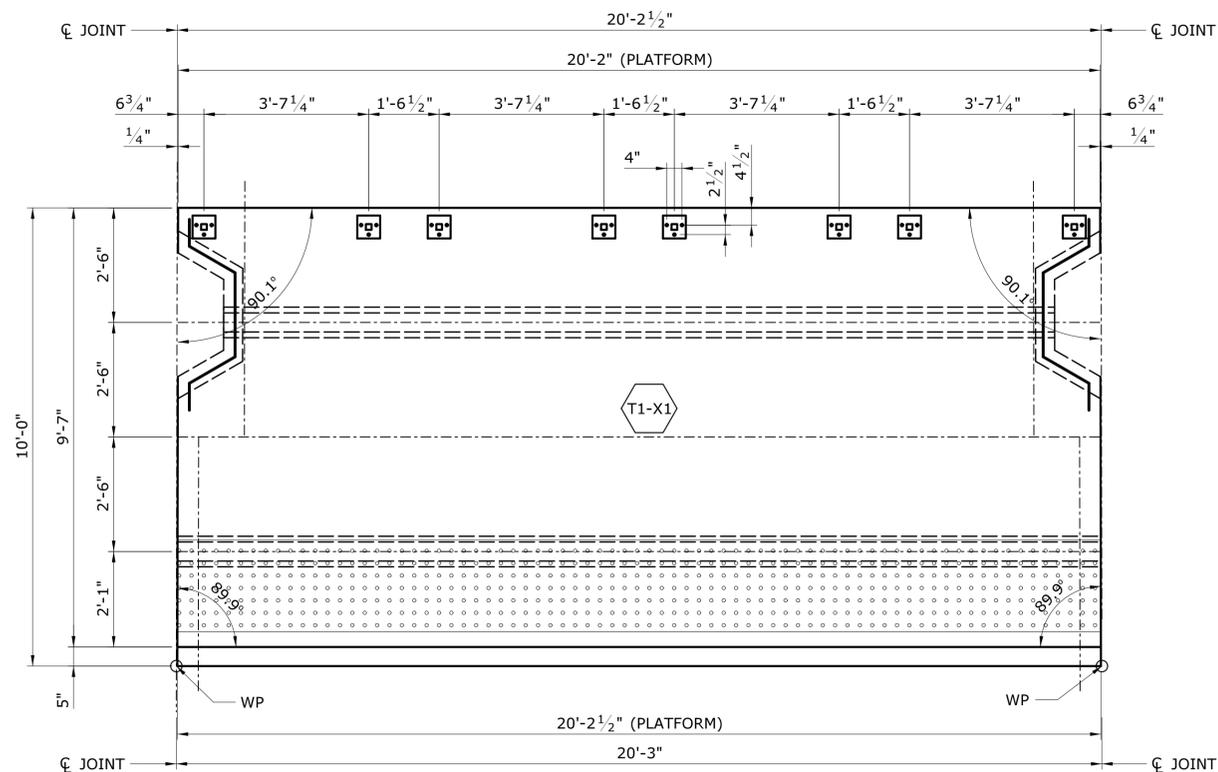


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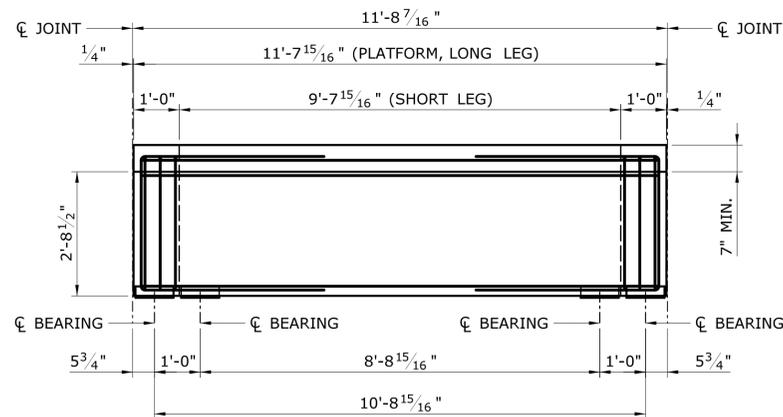
PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**



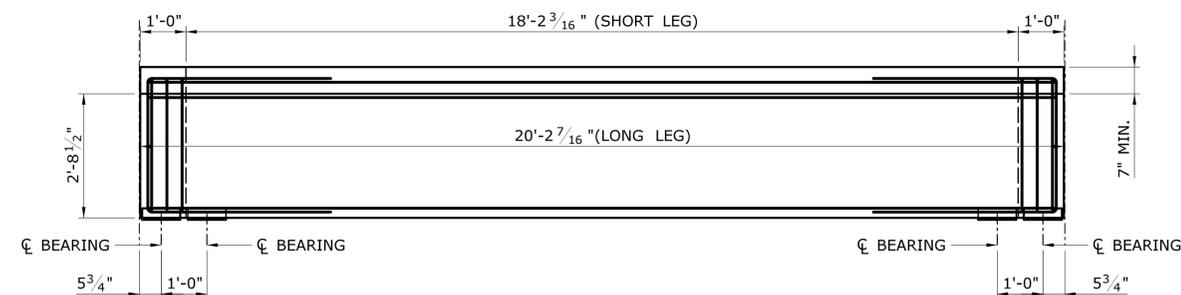
PLAN



PLAN



ELEVATION



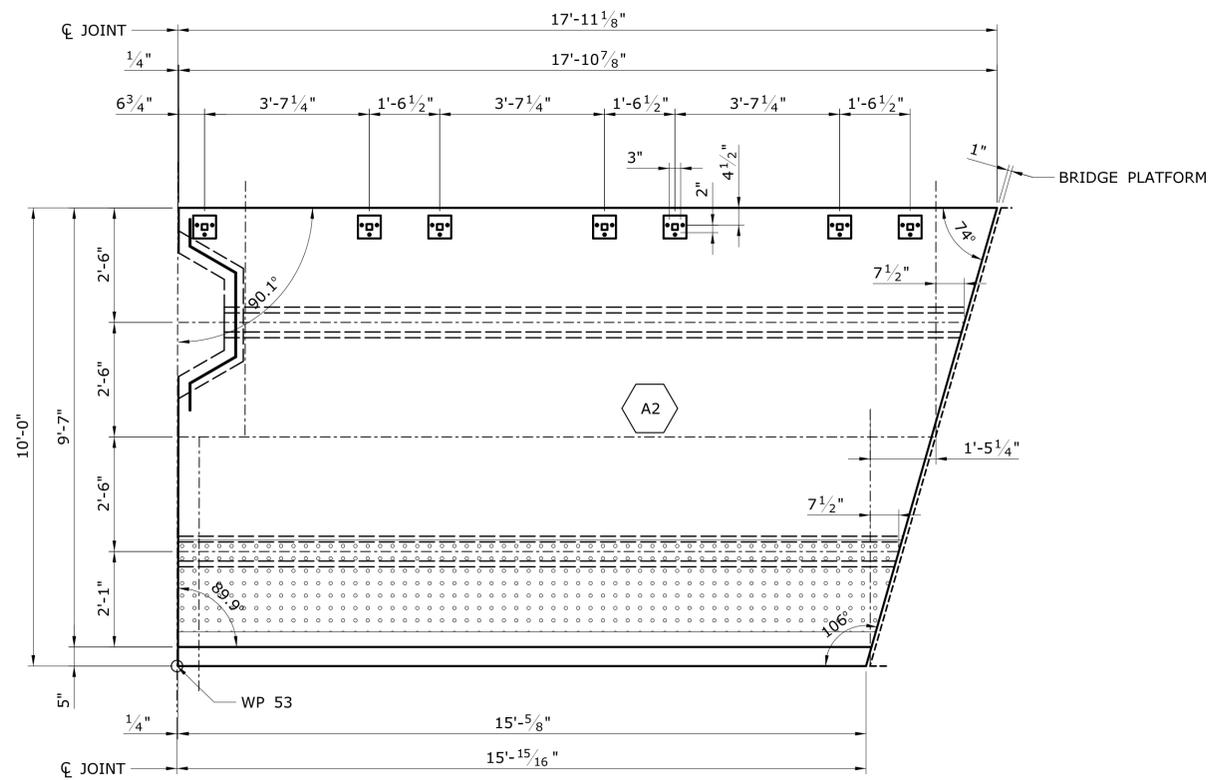
ELEVATION

NOTES:

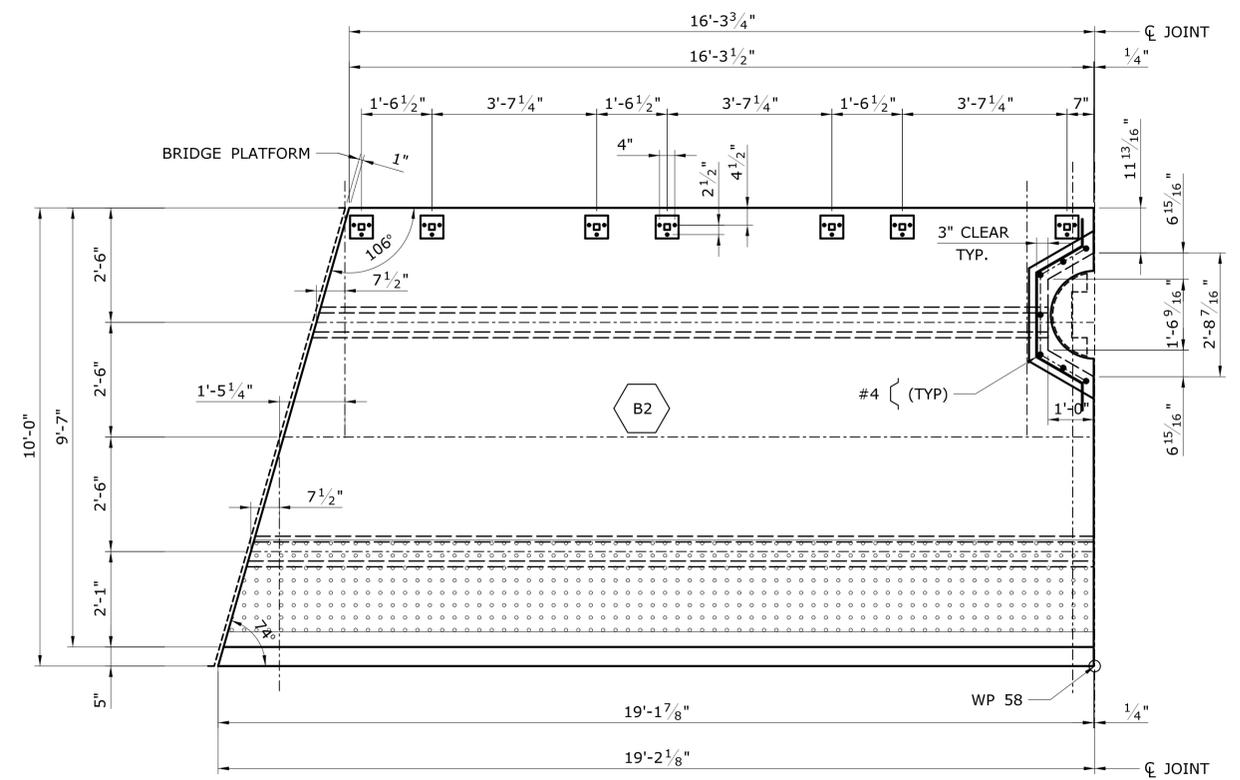
1. FOR PLATFORM LOCATIONS SEE SHEETS S-03 AND S-04.
2. FOR WORKING POINTS SEE SHEETS S-06 AND S-07.

FINAL DESIGN REVIEW

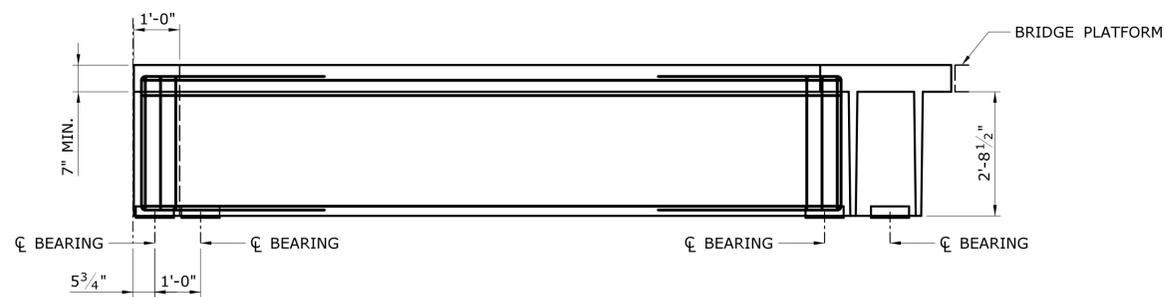
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				CHECKED BY: N.S.V.					DRAWING TITLE: PLATFORMS L1 AND T1-X1
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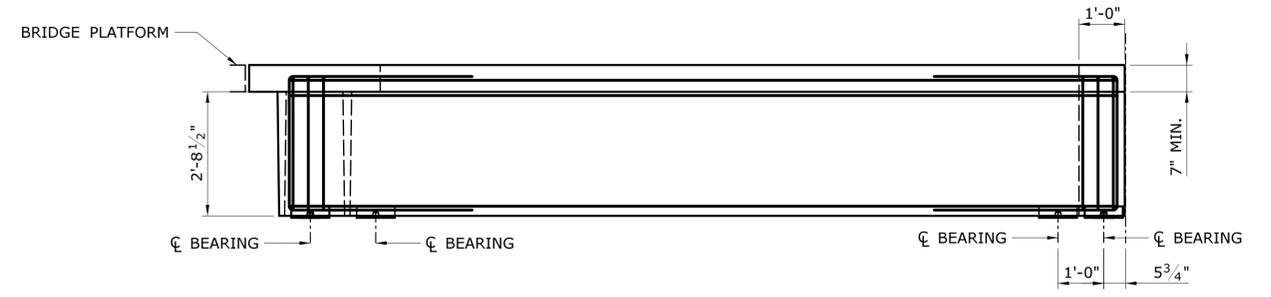
PLAN



PLAN



ELEVATION



ELEVATION

NOTES:

1. FOR PLATFORM LOCATIONS SEE SHEETS S-03 AND S-04.
2. FOR WORKING POINTS SEE SHEETS S-06 AND S-07.

FINAL DESIGN REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

DESIGNER/DRAFTER:
B.A./S.F.C.
CHECKED BY:
N.S.V.
SCALE: 1/2" = 1'-0"

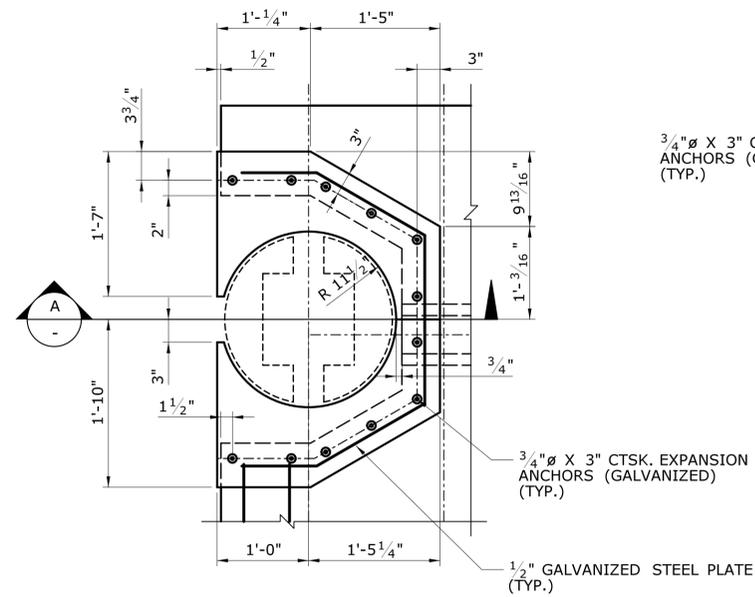


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PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

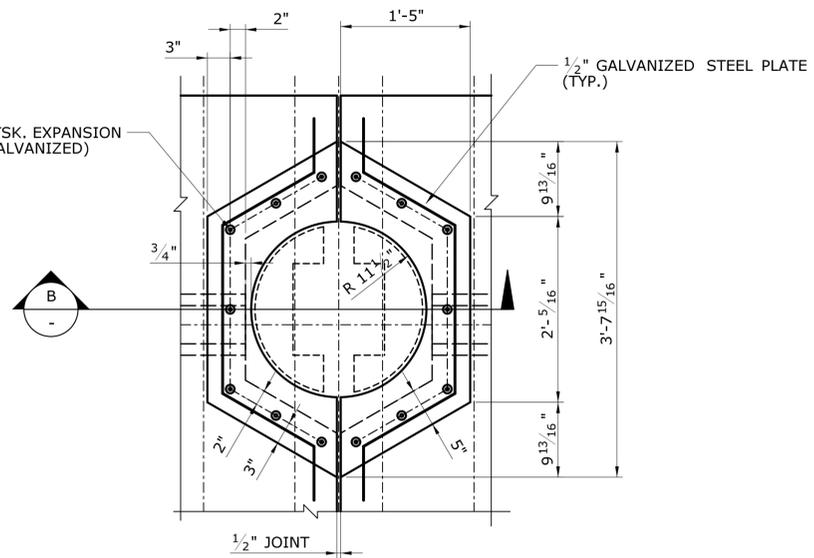
TOWN:
STAMFORD
DRAWING TITLE:
**PLATFORMS
A2 AND B2**

PROJECT NO.
301-163
DRAWING NO.
S-16
SHEET NO.
02.07.016



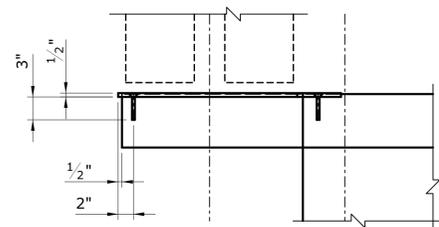
PLAN

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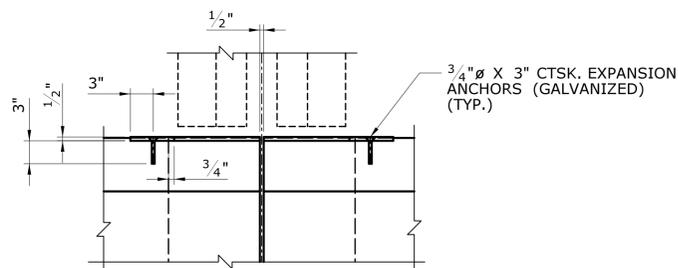
PLAN

SCALE: 1" = 1'-0"



SECTION A

SCALE: 1" = 1'-0"



SECTION B

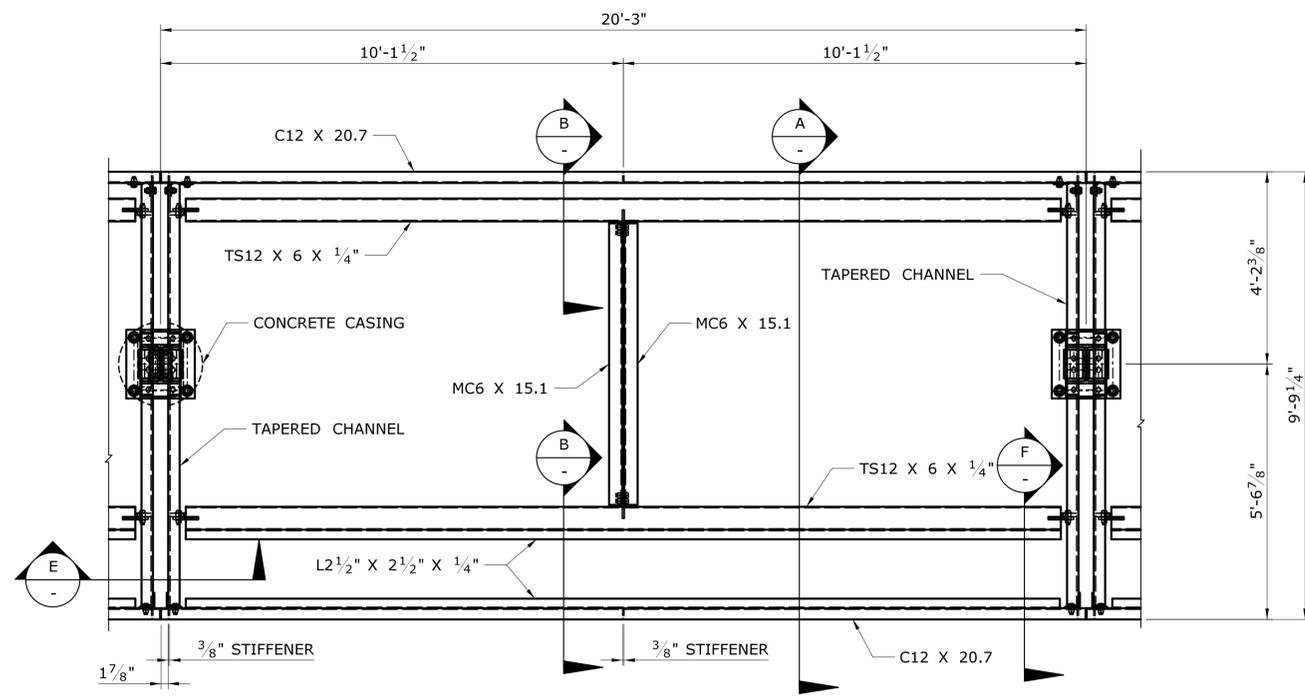
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NOTES:

1. EXPANSION ANCHOR BOLTS AND COLUMN STEEL COVER PLATES (THIS DRAWING) ARE INCLUDED UNDER THE ITEM "STRUCTURAL STEEL".
2. FOR PLATFORM PLAN, CANOPY COLUMN AND CANOPY FOUNDATIONS SEE SHEETS S-03 TO S-05.

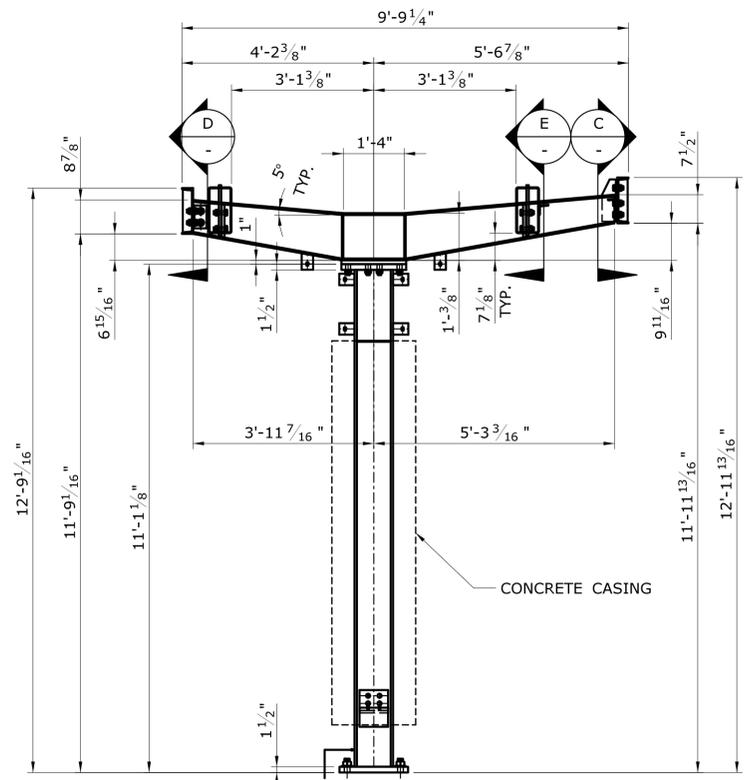
FINAL DESIGN REVIEW

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.		DESIGNER/DRAFTER: B.A./S.F.C. CHECKED BY: N.S.V. SCALE AS NOTED	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION Filename: ..._SB_MSH_PLATFORM_301_163_S-17_PLATFORM-7.dgn	SIGNATURE/BLOCK:	PROJECT TITLE: STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION	TOWN: STAMFORD DRAWING TITLE: PLATFORM MISCELLANEOUS DETAILS	PROJECT NO. 301-163 DRAWING NO. S-17 SHEET NO. 02.07.017
REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 3/7/2016			



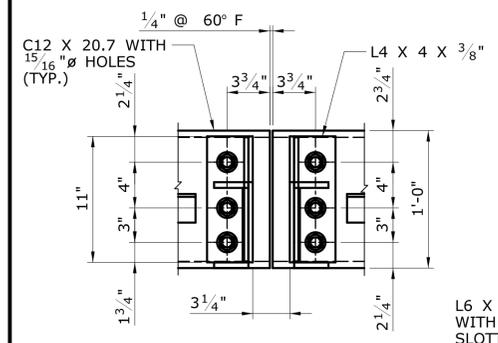
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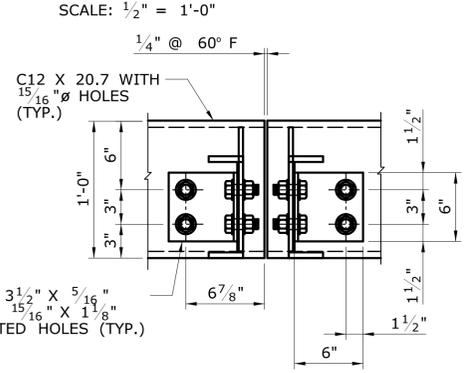
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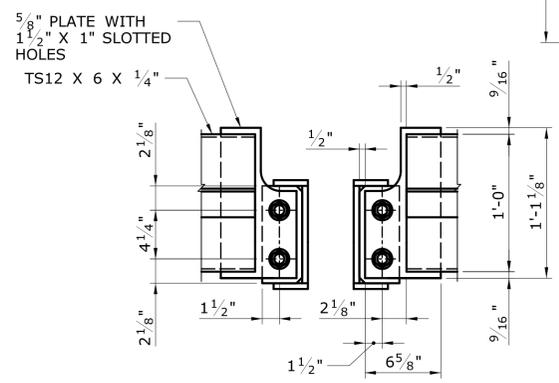
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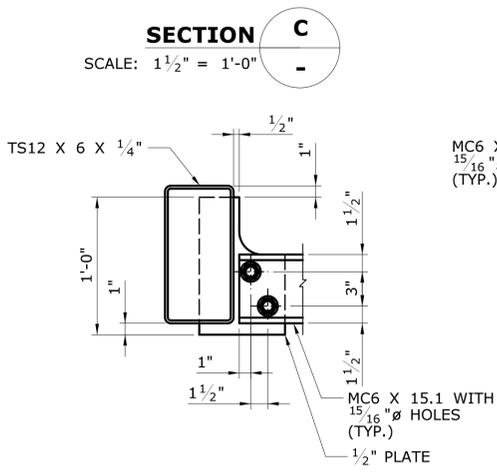
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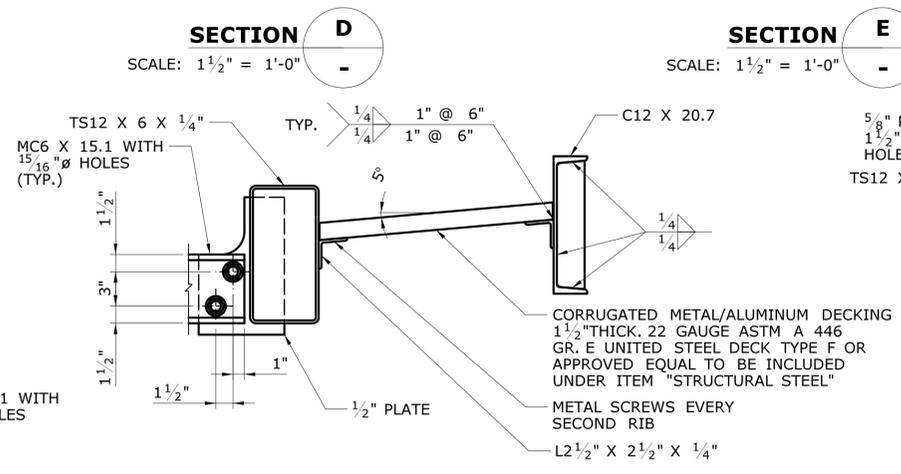
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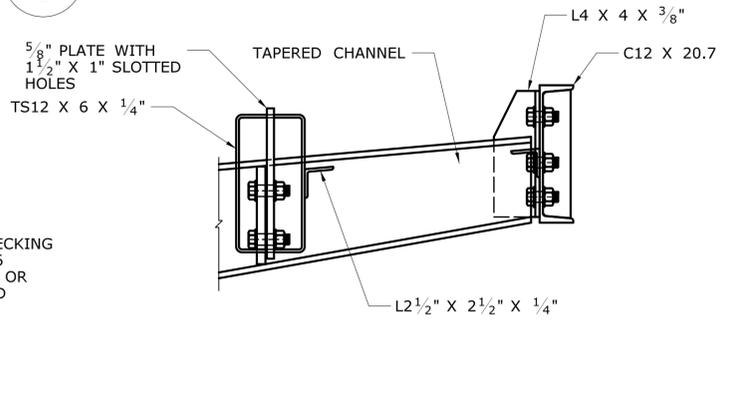
SECTION B

SCALE: 1 1/2" = 1'-0"



SECTION B

SCALE: 1 1/2" = 1'-0"



SECTION F

SCALE: 1 1/2" = 1'-0"

NOTES:

1. ALL BOLTS SHALL BE 7/8" DIAMETER ASTM A325 H.S. UNLESS OTHERWISE NOTED.
2. SHIM/FILL PLATES SHALL BE PROVIDED TO ASSURE PROPER FIT AND ALIGNMENT. ALL SHIMS/FILLS ARE INCLUDED UNDER THE ITEM "STRUCTURAL STEEL".
3. ALL STEEL TO ALUMINUM INTERFACES SHALL BE PAINTED WITH ZINC CHROMATE. PAINT PRIOR TO CONNECTION.
4. ALL STEEL TO BE GALVANIZED ASTM A709 GRADE 50 PAINTED IN ACCORDANCE WITH SPECIAL PROVISIONS. BUILT UP SECTIONS SHALL BE GALVANIZED AFTER FABRICATION.
5. ALL STRUCTURAL TUBING TO BE ASTM A500 OR A501 GRADE 1020, GALVANIZED.
6. ALL MATERIAL FABRICATION AND INSTALLATION WORK FOR STRUCTURAL STEEL CANOPIES INCLUDED UNDER THE ITEM "STRUCTURAL STEEL" UNLESS OTHERWISE NOTED.
7. GALVANIZED FASTENERS AND ACCESSORIES TO BE HOT DIPPED GALVANIZED PER ASTM A153.
8. REPAIR DAMAGE TO GALVANIZED COATINGS USING ASTM A780 ZINC RICH PAINT.
9. FOR ADDITIONAL STRUCTURAL CANOPY DETAILS SEE SHEETS S-19 AND S-20.

FINAL DESIGN REVIEW		PROJECT NO. 301-163
		DRAWING NO. S-18
STAMFORD		SHEET NO. 02.07.018
STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION		
CANOPY SECTIONS AND DETAILS		

REV.	DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 3/7/2016

DESIGNER/DRAFTER:
B.A./S.F.C.

CHECKED BY:
N.S.V.

SCALE AS NOTED

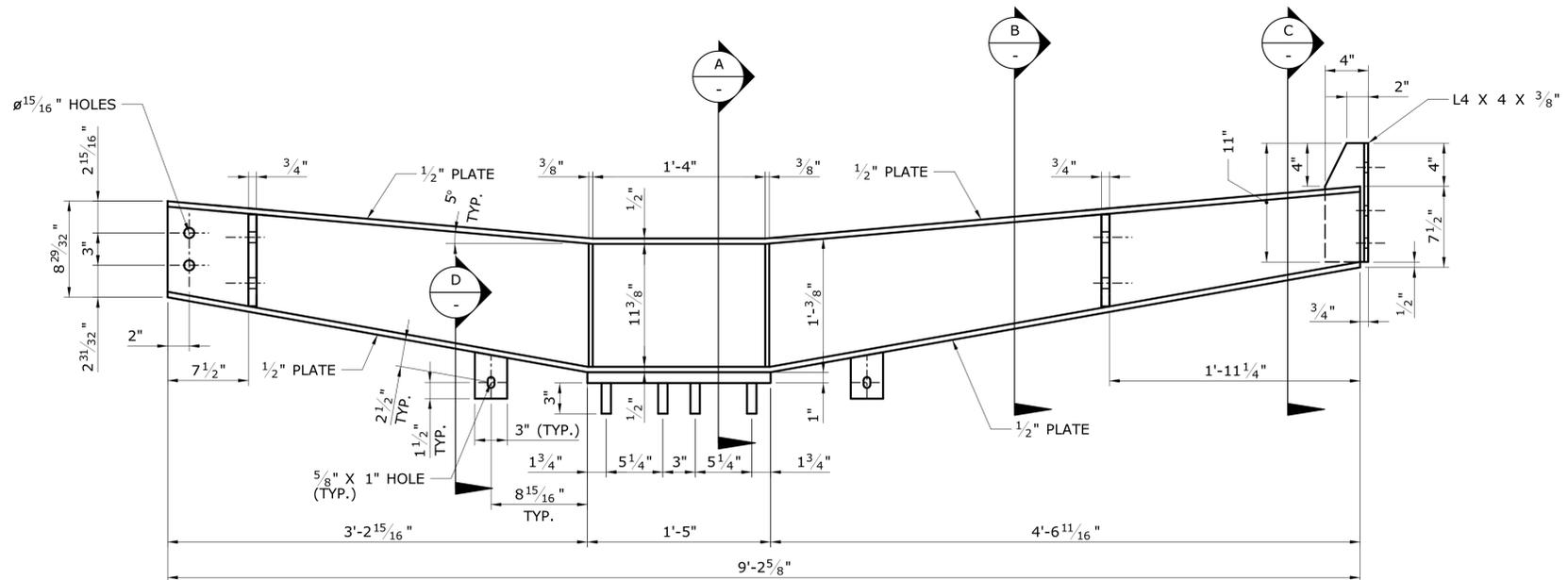
**STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION**

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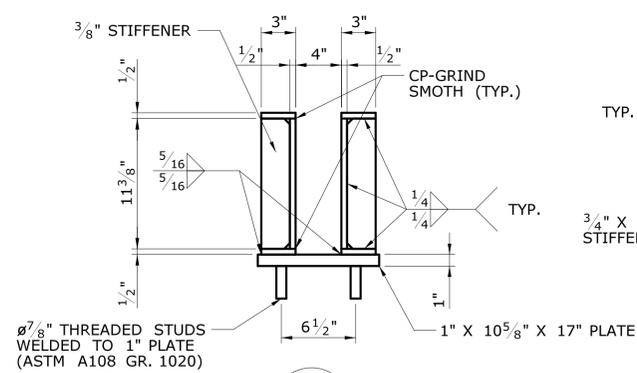
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PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

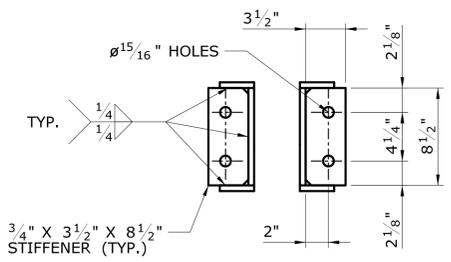
TOWN:
STAMFORD



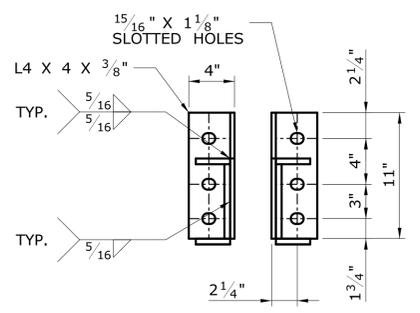
TAPERED CHANNEL DETAIL
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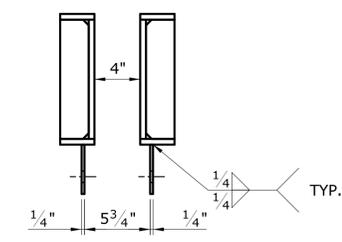
SECTION A
SCALE: 1 1/2" = 1'-0"



SECTION B
SCALE: 1 1/2" = 1'-0"



SECTION C
SCALE: 1 1/2" = 1'-0"



SECTION D
SCALE: 1 1/2" = 1'-0"

NOTE:
1. FOR STRUCTURAL CANOPY NOTES AND DETAILS SEE SHEETS S-18 AND S-19.

FINAL DESIGN REVIEW	
PROJECT NO. 301-163	DRAWING NO. S-20
TOWN: STAMFORD	
DRAWING TITLE: CANOPY DETAILS - 2	
SHEET NO. 02.07.020	

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

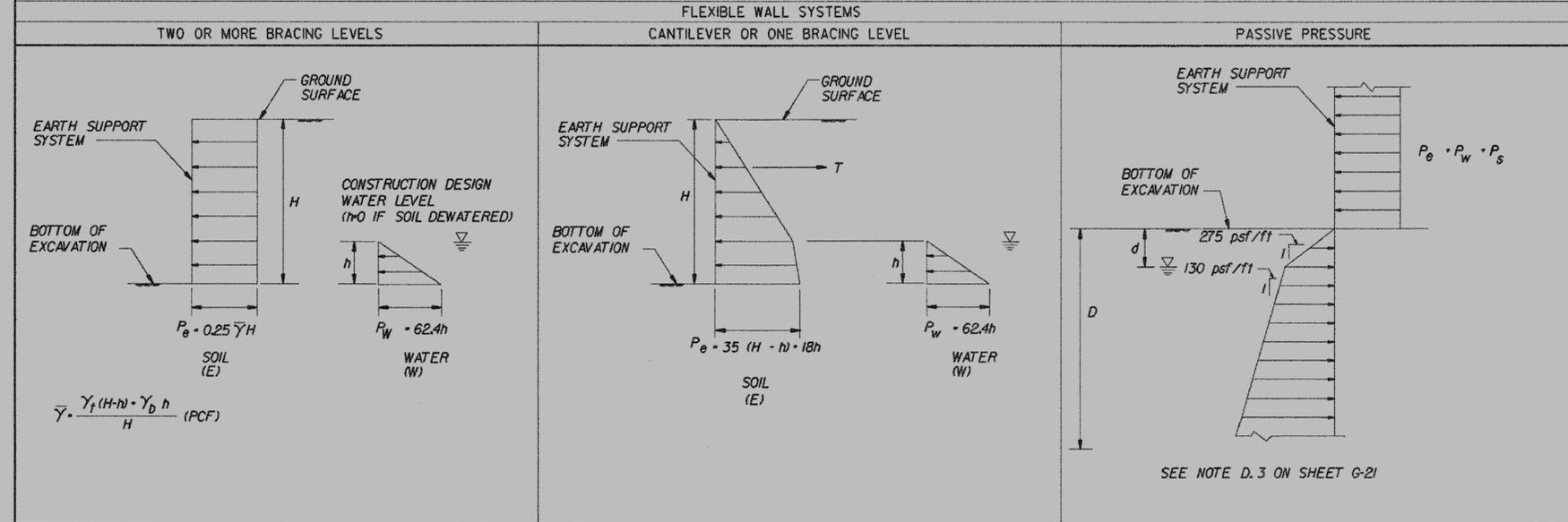
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B.A./S.F.C.
 CHECKED BY:
N.S.V.
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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

SIGNATURE/BLOCK:
 PROJECT TITLE:
STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION

Plotted Date: 3/7/2016
 Filename: ..._SB_MSH_PLATFORM_301_163_S-20_CANOPY-3.dgn

MINIMUM DESIGN LATERAL PRESSURES DUE TO SOIL AND WATER



MINIMUM DESIGN LOADS

STRUCTURE	VERTICAL LOADS		HORIZONTAL LOADS (E), (S) AND (W)	DESIGN LOADING COMBINATIONS AND ALLOWABLE UNIT STRESS
	DEAD LOADS (DL)	LIVE LOADS (LL)		
WALL SYSTEM (ELEMENTS IN CONTACT WITH RETAINED EARTH EXCEPT LAGGING)	WEIGHT OF WALL AND TEMPORARY TRESTLE WHERE APPLICABLE DECK LOADS INCLUDING WEIGHT OF DECK WHERE APPLICABLE REACTIONS FROM BRACING SYSTEM INCLUDING VERTICAL LOAD COMPONENTS OF INCLINED TIEBACKS	REACTIONS FROM ALL APPLICABLE LIVE LOADS INCLUDING AASHTO HS 20-44 OR COOPER E 80 LOADINGS AND CONSTRUCTION EQUIPMENT LOADING	LOADS FROM LATERAL EARTH PRESSURE (E) AND LATERAL SURCHARGE PRESSURES (S) AND HYDROSTATIC PRESSURE (W) AXIAL LOADS FROM END WALLS (E) * (S) * (W), WHERE APPLICABLE	100% OF (DL) * (LL) * (W) * 80% OF (E) * (S) AT 120% OF ALLOWABLE UNIT STRESSES
PRIMARY BRACING MEMBERS (MEMBERS CARRYING DIRECT LOADS INCLUDING WALES, STRUTS AND TIEBACKS)	WEIGHT OF PRIMARY BRACING MEMBER PLUS DECK LOADS, WHERE APPLICABLE		LOADS FROM WALL SYSTEM (E) * (S) * (W) AXIAL LOADS FROM END WALLS (E) * (S) * (W), WHERE APPLICABLE	FOR WALES: 100% OF (DL) * (LL) * (W) * 80% OF (E) * (S) IN BENDING * 100% OF (E) * (S) IN COMPRESSION FOR OTHER PRIMARY BRACING MEMBERS: 100% OF (DL) * (LL) * (E) * (S) * (W) ALL AT 120% OF ALLOWABLE UNIT STRESSES
SECONDARY BRACING MEMBERS (POSTS, LACING, ETC.)	WEIGHT OF SECONDARY BRACING MEMBER PLUS WEIGHT OF SUPPORTED PRIMARY BRACING MEMBER, WHERE APPLICABLE	AXIAL LOAD EQUAL TO 3% OF THE DESIGN AXIAL LOAD IN THE MORE HEAVILY LOADED ADJACENT PRIMARY BRACING MEMBER		120% OF ALLOWABLE UNIT STRESSES

LEGEND:

- DTOE PENETRATION OF TEMPORARY EARTH SUPPORT WALL (FT)
- dDEPTH OF GROUNDWATER BELOW BASE OF EXCAVATION (FT)
- DLDEAD LOAD
- EEARTH LOADS
- HEXPOSED LENGTH OF RETAINING STRUCTURE (FT)
- hHYDRAULIC HEAD; HEIGHT OF WATER LEVEL ABOVE BOTTOM OF EXCAVATION (FT)
- PeLATERAL EARTH PRESSURE (PSF)
- PsLATERAL SURCHARGE PRESSURE (PSF)
- PwLATERAL PRESSURE DUE TO WATER (PSF)
- TWALL SUPPORT (BRACE, TIEBACK, STRUT)
- γTOTAL UNIT WEIGHT (PCF)
- γbBOUYANT UNIT WEIGHT (PCF)
- γwUNIT WEIGHT OF WATER (PCF)
- KaACTIVE EARTH PRESSURE COEFFICIENT
- KpPASSIVE EARTH PRESSURE COEFFICIENT

NOTES:

1. PRESSURES SHOWN ARE IN PSF PER FOOT ALONG THE RETAINING WALL SYSTEM. FOR SOLDIER PILE AND LAGGING SYSTEMS, FORCES AND MOMENTS SHALL BE COMPUTED BY APPLYING EARTH PRESSURES OVER THE SOLDIER PILE SPACING AND PASSIVE PRESSURES OVER AN EFFECTIVE PILE WIDTH OF THREE TIMES THE FLANGE DIMENSION.

FINAL DESIGN REVIEW

REV. DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 3/7/2016	DESIGNER/DRAFTER: B.A./S.F.C.	CHECKED BY: N.S.V.	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	SIGNATURE/ BLOCK:
				PROJECT TITLE: STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION		TOWN: STAMFORD	PROJECT NO. 301-163
				DRAWING TITLE: DESIGN CRITERIA FOR EXCAVATION SUPPORT-1		SHEET NO. S-21	02.07.021

NOTES FOR ANALYSIS AND DESIGN OF EXCAVATION SUPPORT SYSTEMS

A. GENERAL

1. FLEXIBLE WALL SYSTEMS ARE CONSIDERED TO BE SOLDIER PILE AND LAGGING WALLS, AND SIMILAR SYSTEMS.
2. DESIGN OF EARTH SUPPORT SYSTEMS SHALL CONFORM TO GOOD ENGINEERING PRACTICE AND DESIGN OF THESE SYSTEMS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT STRUCTURAL MANUALS, CODES AND SPECIFICATIONS.
3. ELEMENTS SUPPORTING VERTICAL LOADS AS WELL AS LATERAL PRESSURES SHALL BE ANALYZED AS STRUCTURES SUBJECTED TO COMBINED AXIAL LOAD AND BENDING.
4. VERTICAL MEMBERS OF FLEXIBLE WALL SYSTEMS SHALL BE DESIGNED ASSUMING THE MEMBERS TO BE CONTINUOUS OVER ALL BRACING LEVELS, EXCEPT AT THE LOWEST BRACING LEVEL WHERE A HINGED CONNECTION SHALL BE ASSUMED.
5. ALL COMPRESSION MEMBER CONNECTIONS, IN ADDITION TO BEING DESIGNED FOR THEIR COMPRESSIVE LOADS, SHALL BE DESIGNED FOR TENSION AND SHEAR EQUAL TO A MINIMUM OF 10 PERCENT OF THEIR COMPRESSIVE LOAD, UNLESS ACTUAL TENSION AND SHEAR LOADS ARE GREATER.
6. STRESSES DUE TO TEMPERATURE VARIATIONS SHALL BE TAKEN INTO ACCOUNT IN THE DESIGN OF THE BRACING MEMBERS.
7. SOLDIER PILES MAY BE CONSIDERED FULLY BRACED IN THE PLANE OF THE WALL.
8. AT NO TIME SHALL THE VERTICAL DISTANCE FROM THE LOWEST INSTALLED BRACE TO THE BOTTOM OF THE EXCAVATION EXCEED 15 FT.
9. INITIAL EXCAVATION SHALL NOT EXCEED A MAXIMUM OF 7 FT. DEPTH WITHOUT PLACING A TOP BRACE.
10. THE MAXIMUM HEIGHT OF EXCAVATED FACE PRIOR TO INSTALLATION OF LAGGING SHALL NOT EXCEED 5 FEET. UNLAGGED EXCAVATION FACES SHALL NOT REMAIN OPEN OVERNIGHT.
11. EXCAVATION SHALL NOT EXCEED 3 FT. BELOW EACH BRACING LEVEL PRIOR TO INSTALLATION AND PRESTRESSING OF THE BRACING.
12. THE TOE OF EARTH SUPPORT SYSTEMS SHALL EXTEND A MINIMUM OF 10 FT. BELOW THE BOTTOM OF THE EXCAVATION UNLESS BEDROCK IS ENCOUNTERED BEFORE THIS. TOE PENETRATION REQUIREMENTS SHALL CONSIDER POTENTIAL FOR TOE KICK-IN, VERTICAL LOAD CAPACITY, BOTTOM INSTABILITY, AND HIGH SEEPAGE GRADIENTS WHICH COULD CAUSE "PIPING" IN THE BOTTOM OF THE EXCAVATION FOR SECTIONS NOT DEWATERED. REQUIRED DEPTH OF EMBEDMENT SHALL BE COMPUTED IN ACCORDANCE WITH ACCEPTED PRACTICE.
13. THE CONTRACTOR MAY SUBMIT ALTERNATIVE EARTH SUPPORT STRUCTURES FOR REVIEW BY THE ENGINEER.
14. LOADS FROM ADJACENT STRUCTURES ON THE WALLS SHALL BE DETERMINED BY THE CONTRACTOR AND REVIEWED BY THE ENGINEER.
15. IF ANY LOADINGS OR SOIL CONDITIONS OCCUR WHICH ARE NOT DESCRIBED HEREON, ADEQUATE MEASURES MUST BE TAKEN FOR THE CONDITIONS SUBJECT TO REVIEW BY THE ENGINEER.
16. OTHER SOIL PRESSURES MAY BE USED IF THE CONTRACTOR CAN DEMONSTRATE THAT ACTUAL IN-SITU CONDITIONS ARE AT VARIANCE WITH THOSE SHOWN.
17. THE DESIGN OF THE EARTH RETAINING STRUCTURE SHALL INCLUDE THE EFFECTS OF LOADS OF STREET TRAFFIC, RAILROAD LOADS, CONSTRUCTION EQUIPMENT, SUPPORTED UTILITIES AND ADJACENT STRUCTURES AND ANY OTHER LOADS THAT MUST BE CARRIED BY THE WALL DURING THE SERVICE LIFE.
18. TIMBER LAGGING, IF USED, SHALL BE OF A MINIMUM THICKNESS OF 3" FROM THE GROUND SURFACE TO A DEPTH OF 25 FEET AND 4" FOR DEPTHS BELOW 25 FEET FOR SOLDIER PILE SPACING OF 8 FEET CENTER TO CENTER OR LESS. IN THE CASE OF GREATER SOLDIER PILE SPACING GREATER THICKNESSES OF LAGGING MAY BE REQUIRED.
19. THE DEPTH OF PENETRATION OF SOLDIER BEAM BELOW EXCAVATION SUBGRADE MUST BE ANALYZED FOR THE RESISTANCE NECESSARY TO PROVIDE A SUPPORT POINT BELOW SUBGRADE. THE MAXIMUM HORIZONTAL RESISTANCE ON THE FLANGE OF SOLDIER BEAMS SHALL BE TAKEN AS THREE TIMES THE ORDINARY PASSIVE PRESSURE COMPUTED FOR THE WIDTH OF THE FLANGE.
20. THE CONTRACTOR MAY BE REQUIRED TO ADJUST CONSTRUCTION OPERATIONS IF THE ENGINEER CONSIDERS THAT BASED ON INSTRUMENTATION READINGS, EXCESSIVE SETTLEMENTS AND DEFLECTIONS MAY OCCUR.
21. FOR SOLDIER PILES AND LAGGING EXCAVATION SUPPORT SYSTEM, THE PASSIVE PRESSURE COMPUTED ON SOLDIER PILE SHOULD NOT EXCEED 80% OF THE TOTAL PASSIVE PRESSURE THAT CAN BE MOBILIZED BETWEEN ADJACENT SOLDIER PILES.
22. THE DESIGN OF EXCAVATION SUPPORTS IS PAID FOR UNDER ITEM "TEMPORARY SOLDIER PILE AND LAGGING".

B. LATERAL PRESSURES

1. LATERAL SURCHARGE PRESSURES FROM VERTICAL LOADS SUPPORTED BY THE SOIL ABOVE THE FINAL EXCAVATION LEVEL MUST BE CONSIDERED IN THE DESIGN, WHERE APPLICABLE.
2. TEMPORARY EARTH SUPPORT SYSTEMS MAY BE CONSIDERED NOT TO BE SUBJECTED TO LATERAL SURCHARGE PRESSURES FROM LOADS ASSOCIATED WITH ADJACENT STRUCTURES IF THE ADJACENT STRUCTURE IS LOCATED OUTSIDE A ZONE DEFINED BY A 1:H HORIZONTAL TO 1:VERTICAL LINE DRAWN UPWARD AND OUTWARD TOWARD THE ADJACENT STRUCTURE FROM THE BOTTOM OF THE FINAL EXCAVATION LEVEL AT THE OUTSIDE FACE OF THE TEMPORARY EARTH SUPPORT SYSTEM. REFER TO THIS SHEET FOR CRITERIA FOR CALCULATION OF SURCHARGE PRESSURES.
3. PASSIVE RESISTANCE PROVIDED BY SOIL INTERIOR OF THE EARTH RETAINING STRUCTURES MAY BE COMPUTED USING CONVENTIONAL EXPRESSIONS FOR PASSIVE PRESSURES. A SAFETY FACTOR OF 1.5 SHALL BE APPLIED FOR ALL CASES TO THE COMPUTED THEORETICAL PASSIVE RESISTANCE.
4. FOR EVALUATION OF THE LATERAL PRESSURE UNDER A GIVEN SET OF CONDITIONS, LATERAL PRESSURE FROM SURCHARGE LOADS SHALL BE ADDED TO THE LATERAL PRESSURE FROM SOIL AND WATER (HYDROSTATIC PRESSURE).

C. BRACING MEMBERS

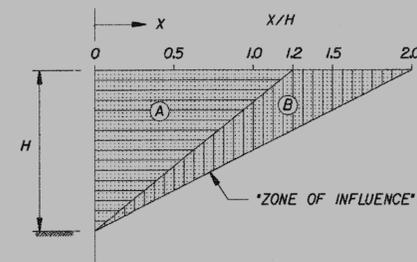
1. DESIGN OF BRACING MEMBERS SHALL SATISFY THE MOST CRITICAL CONDITIONS ANTICIPATED DURING THE CONSTRUCTION SEQUENCE.
2. BRACING MEMBERS SHALL BE STRUCTURAL STEEL.
3. ALL BRACING AND TIE BACKS SHALL BE POST TENSIONED OR PRESTRESSED TO THE FOLLOWING LIMITS:
A. CROSS-LOT BRACING - 50 PERCENT OF MAXIMUM DESIGN LOADS.
B. TIE-BACKS - 80 PERCENT OF MAXIMUM DESIGN LOADS. NO WOOD SHIMS SHALL BE USED.
4. TIEBACKS, WHERE USED, MUST DERIVE THEIR CAPACITY FROM A BONDED LENGTH LOCATED OUTSIDE A 1:H HORIZONTAL TO VERTICAL LINE DRAWN UPWARD FROM THE BOTTOM OF THE EARTH RETAINING STRUCTURES.

D. PASSIVE PRESSURES FOR TOE STABILITY

1. TO DETERMINE THE EMBEDMENT LENGTH OR TOE PENETRATION D REQUIRED TO PROVIDE TOE STABILITY, SOLVE FOR D BY MOMENT EQUILIBRIUM ($\Sigma M=0$) ABOUT THE LOWEST BRACING LEVEL. CONSIDER ONLY THE LATERAL PRESSURES ACTING ON THE WALL BELOW THE LOWEST BRACING LEVEL. LATERAL SURCHARGE PRESSURES MUST BE INCLUDED IF THE SURCHARGE PRESSURES ACT ON THE WALL BELOW THE LOWEST BRACING LEVEL. ASSUME A HINGE IN THE WALL AT THE LOWEST BRACING LEVEL.
2. TOE PENETRATION SHOULD BE NOT LESS THAN 10 FEET BELOW BOTTOM OF EXCAVATION.
3. A FACTOR OF SAFETY OF 1.5 WAS APPLIED TO THE COEFFICIENT OF PASSIVE EARTH PRESSURE FOR GRANULAR SOILS AND TO THE UNDRAINED SHEAR STRENGTH FOR COHESIVE SOILS.
4. THE DEPTH TO GROUNDWATER BELOW THE BASE OF THE EXCAVATION (d) SHOULD BE DETERMINED BY THE CONTRACTOR BASED ON HIS DEWATERING METHODS.
5. TOE PENETRATION REQUIREMENTS FOR EARTH SUPPORT WALLS SUPPORTING VERTICAL LOADS MAY BE MORE CRITICAL THAN TOE PENETRATION REQUIREMENTS TO PROVIDE TOE STABILITY AND MUST BE CONSIDERED IN THE ANALYSIS. IN ADDITION, IN SITUATIONS WHERE THE RETAINED SOIL IS NOT DEWATERED, THE DETERMINATION OF TOE PENETRATION MUST CONSIDER THE POTENTIAL FOR HIGH SEEPAGE GRADIENTS WHICH COULD CAUSE "PIPING" AT THE BOTTOM OF THE EXCAVATION.

E. CRITERIA FOR PROTECTION OF STRUCTURES

1. STRUCTURES TO BE PROTECTED INCLUDE EXISTING BUILDINGS, UTILITIES, TRACKS, TUNNELS, PAVEMENTS AND OTHER FACILITIES.
2. PROTECTION CRITERIA PRESENTED FOR FLEXIBLE WALL SYSTEMS ASSUME AVERAGE EXCAVATION AND BRACING PROCEDURES ARE UTILIZED.
3. EVALUATION OF PROTECTION REQUIREMENTS FOR STRUCTURES IS DEPENDENT ON MANY FACTORS, WHICH INCLUDE IMPLEMENTED CONSTRUCTION PROCEDURES AND DETAILS, MAGNITUDE AND TYPES OF MOVEMENT ANTICIPATED, SUBSURFACE CONDITIONS, AND PROXIMITY OF STRUCTURES TO THE EXCAVATION. AT LOCATIONS WHERE STRUCTURES ARE FOUNDED WITHIN THE ZONE OF INFLUENCE, AN EVALUATION OF PROTECTION REQUIREMENTS SHOULD BE CONDUCTED BY THE CONTRACTOR ON A CASE BY CASE BASIS, CONSIDERING ALL RELEVANT FACTORS.
4. POSITIVE MEANS OF PROTECTION ARE DEFINED AS MEASURES WHICH MAY BE TAKEN TO CONTROL GROUND MOVEMENTS TO WITHIN ACCEPTABLE LIMITS OR, MEASURES WHICH PROVIDE ADDITIONAL SUPPORT FOR AFFECTED STRUCTURES. EVALUATION OF PROTECTION REQUIREMENTS FOR STRUCTURES GENERALLY BEGINS WITH SELECTING AND IMPLEMENTING EARTH SUPPORT, EXCAVATION AND BRACING TECHNIQUES TO MINIMIZE GROUND MOVEMENTS. IF ANTICIPATED GROUND MOVEMENTS ARE STILL EXPECTED TO EXCEED ACCEPTABLE LIMITS, THEN INDIRECT OR DIRECT STRUCTURE PROTECTION MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR ON A CASE BY CASE BASIS. INDIRECT PROTECTION MEASURES INCLUDE SUCH PROCEDURES AS PROVIDING A STIFFER RETAINING SYSTEM, COMPACTION GROUTING OR SLAB/FOOTING JACKING. DIRECT PROTECTION MEASURES INCLUDE SUCH PROCEDURES AS STANDARD UNDERPINNING PITS.
5. THE CONTRACTOR SHALL CONSIDER THE EFFECTS OF VIBRATIONS ON ADJACENT STRUCTURES FROM INSTALLATION OF THE EARTH SUPPORT SYSTEM.



PROTECTION CRITERIA FOR FLEXIBLE WALL SYSTEMS

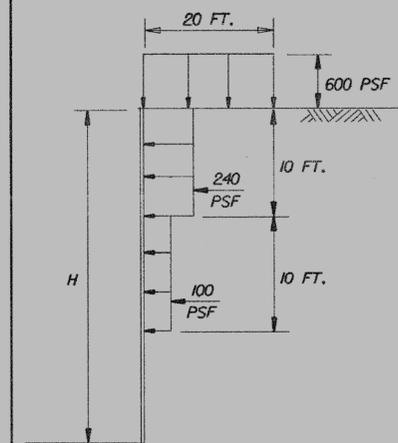
LEGEND

- ZONE OF INFLUENCE: DEFINES A ZONE WITHIN WHICH SOIL MOVEMENTS ARE EXPECTED TO OCCUR AS A RESULT OF CONSTRUCTION. PROTECTION OF STRUCTURES FOUNDED OR LOCATED WITHIN THIS ZONE MUST BE CONSIDERED BY THE CONTRACTOR.
- PROTECTION ZONE A: STRUCTURES WHICH ARE FOUNDED OR LOCATED WITHIN THIS ZONE GENERALLY WILL REQUIRE SOME POSITIVE MEANS OF PROTECTION. REFER TO NOTE 4 FOR DEFINITION OF POSITIVE MEANS OF PROTECTION.
- PROTECTION ZONE B: STRUCTURES WHICH ARE FOUNDED OR LOCATED WITHIN THIS ZONE, GENERALLY WILL NOT REQUIRE PROTECTION, UNLESS THE STRUCTURES ARE PARTICULARLY SENSITIVE TO MOVEMENTS.

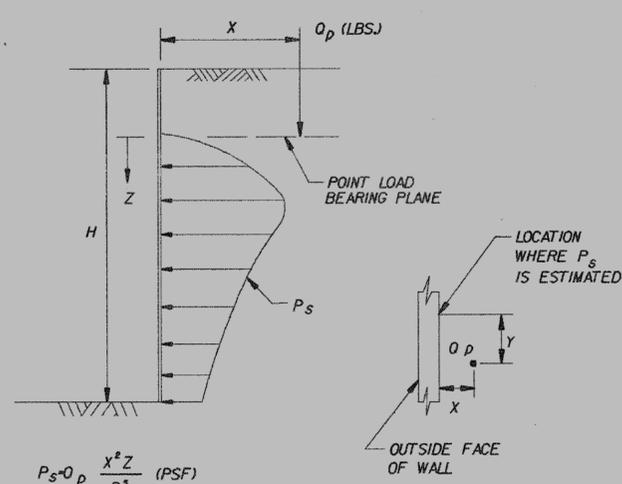
FINAL DESIGN REVIEW

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REV. DATE	REVISION DESCRIPTION	SHEET NO.		Plotted Date: 3/7/2016	Filename: ...SB_MSH_PLATFORM_301_163_S-22_PDF-2.dgn	DRAWING TITLE: DESIGN CRITERIA FOR EXCAVATION SUPPORT-2	SHEET NO. 02.07.022	

TRAFFIC AND CONSTRUCTION EQUIPMENT LOADS



POINT LOAD



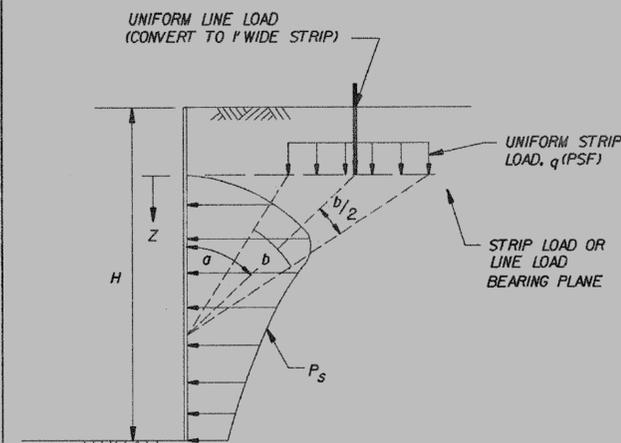
$$P_s = Q_p \frac{x^2 z}{R^2} \text{ (PSF)}$$

WHERE $R = \sqrt{x^2 + y^2 + z^2}$

REFERENCE: SPANGLER, ET AL (1982)

PLAN

LINE LOAD

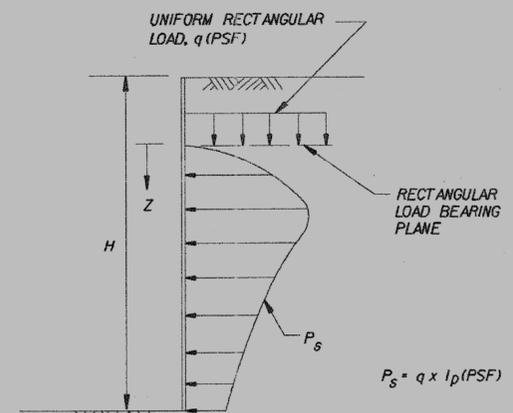


$$P_s = \frac{q}{p} \left(\frac{pb}{180} - \sin b \cos 2a \right) \text{ (psf)}$$

WHERE a AND b ARE IN DEGREES

REFERENCE: U.S.S. STEEL SHEET PILE DESIGN MANUAL (1975)

AREA LOAD



$$P_s = q \times I_p \text{ (PSF)}$$

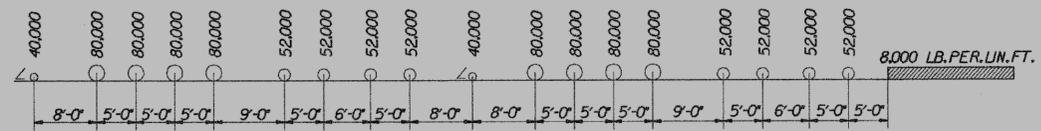
REFERENCE: SANDHU (1974)

NOTES:

1. SURCHARGE LOADS SHOWN ON THIS DRAWING MUST BE ADDED AS APPROPRIATE TO THE DESIGN LOADS RECOMMENDED ELSEWHERE FOR EARTH SUPPORT SYSTEMS.
2. LATERAL PRESSURES DUE TO TRAFFIC AND CONSTRUCTION EQUIPMENT LOADING ARE BASED ON AN ASSUMED SURFACE SURCHARGE OF 600 PSF ACTING OVER A 20 FT. WIDE INFLUENCE AREA. FOR MORE SEVERE TRAFFIC AND CONSTRUCTION AND EQUIPMENT LOADING, ADDITIONAL ANALYSES MUST BE MADE WHICH TAKE INTO ACCOUNT THE MORE CRITICAL LOADING. LATERAL PRESSURES DUE TO TRAFFIC AND CONSTRUCTION EQUIPMENT LOADING SHALL BE INCLUDED IN THE DESIGN OF ALL TEMPORARY EARTH SUPPORT SYSTEMS.
3. FOR LATERAL PRESSURES DUE TO A UNIFORM LINE LOAD, CONVERT LINE LOAD TO 1-FT. WIDE STRIP LOAD AND DETERMINE LATERAL PRESSURES FOR UNIFORM STRIP LOAD.
4. FOR UNIFORM RECTANGULAR LOADING, LATERAL PRESSURES ARE DETERMINED AT VARIOUS DEPTHS BELOW THE CORNER OF THE RECTANGULAR LOADED AREA. WHEN THE RECTANGULAR LOADED AREA IS LOCATED AT A DISTANCE BEHIND THE WALL, THE PRINCIPLE OF LOAD SUPERPOSITION SHOULD BE USED TO DETERMINE LATERAL PRESSURES AGAINST THE WALL. REFER TO "SOIL MECHANICS" BY LAMBE AND WHITMAN, P104, FOR EXAMPLE USING PRINCIPAL OF SUPERPOSITION OF LOADS.
5. RETAINING WALL SYSTEMS USING TIEBACKS SHALL BE CONSIDERED NON-YIELDING FOR THE PURPOSE OF SURCHARGE LOADING CALCULATIONS.

RAILROAD LOADING

COOPER E 80 LOADING DIAGRAM

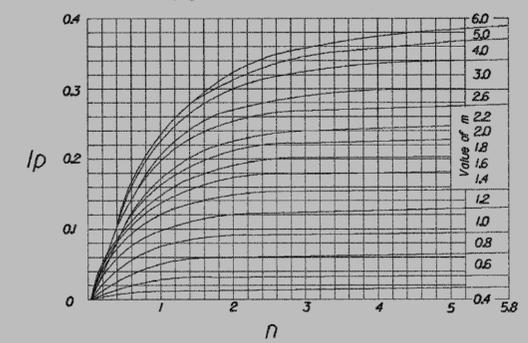
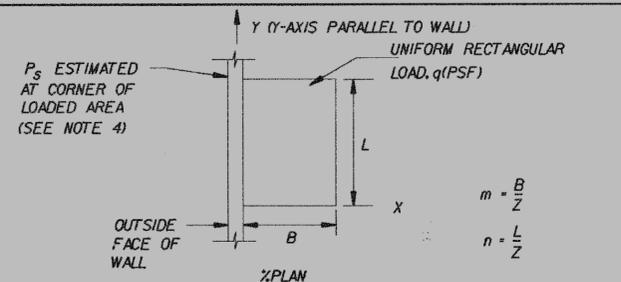


THE RAILROAD LOADINGS MAY BE CONVERTED TO A UNIFORM STRIP LOAD

LEGEND:

- P_s LATERAL SURCHARGE PRESSURE (PSF)
- q UNIFORM SURCHARGE PRESSURE (LBS)
- I_p INFLUENCE FACTOR
- Q_p POINT LOAD (LBS)

AREA LOAD - CONTINUED



FINAL DESIGN REVIEW

REV. DATE	REVISION DESCRIPTION	SHEET NO.	Plotted Date: 3/7/2016	DESIGNER/DRAFTER: B.A./S.F.C.	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION	SIGNATURE/ BLOCK:	PROJECT TITLE: STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION	TOWN: STAMFORD	PROJECT NO. 301-163
				CHECKED BY: N.S.V.					DRAWING TITLE: DESIGN CRITERIA FOR EXCAVATION SUPPORT-3
				File name: ... \SB_MSH_PLATFORM_301_163_S-23_PDF-3.dgn				DRAWING NO. 02.07.023	

STRUCTURAL STEEL NOTES:

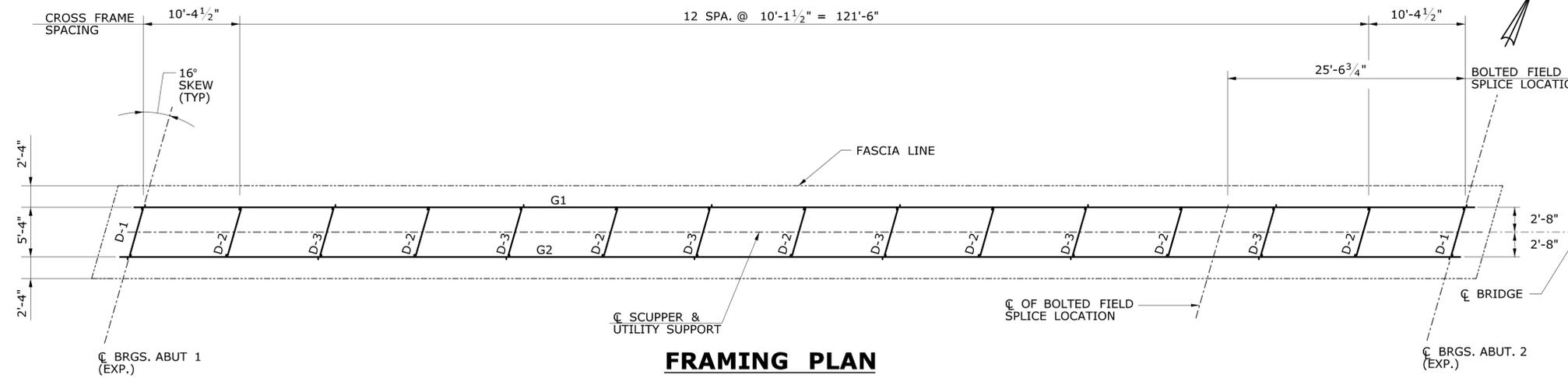
- STRUCTURAL STEEL (LOW ALLOY) SHALL CONFORM TO AASHTO M270, GRADE 50T2.
- ALL FABRICATED STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123.
- WELDING DETAILS, PROCEDURES AND TESTING METHODS SHALL CONFORM TO THE ANSI/AASHTO/AWS D1.5: 2002 - BRIDGE WELDING CODE, UNLESS OTHERWISE NOTED ON THE PLANS.
- ADDITIONAL FIELD SPLICES WILL NOT BE ALLOWED EXCEPT WITH THE WRITTEN PERMISSION OF THE ENGINEER PRIOR TO THE SUBMISSION OF SHOP PLANS. IF ALLOWED, THESE SPLICES SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE COST OF THESE SPLICES, INCLUDING THE COST OF DESIGN, SHALL BE AT NO EXTRA EXPENSE TO THE STATE.
- MULTIPLE PASS WELDS, INSPECTED BY THE MAGNETIC PARTICLE METHOD SHALL HAVE EACH PASS OR LAYER INSPECTED AND ACCEPTED BEFORE PROCEEDING TO THE NEXT PASS OR LAYER, AS DETERMINED BY THE ENGINEER.
- BEARING STIFFENERS AND THE ENDS OF GIRDERS SHALL BE VERTICAL AFTER THE APPLICATION OF FULL DEAD LOADS.
- ALL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A325, TYPE 1, EXCEPT AS NOTED OTHERWISE. ALL NUTS SHALL MEET THE REQUIREMENTS OF ASTM A653 AND ALL WASHERS SHALL MEET THE REQUIREMENTS OF ASTM F436. ALL BOLTS, NUTS AND WASHERS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50, TYPE 1 AND SHALL BE PAID FOR UNDER THE ITEM "STRUCTURAL STEEL (SITE NO. 1)".
- ALL CONTACT SURFACES ON BOLTED CONNECTIONS SHALL BE PREPARED IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR CLASS 'C' SLIP CRITICAL CONDITIONS.
- THE STRUCTURAL STEEL FABRICATORS SHALL BE CERTIFIED UNDER THE AISC QUALITY CONTROL PROGRAM AS "CATEGORY SBr - SIMPLE STEEL BRIDGES".
- THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE THE STABILITY OF ALL STRUCTURAL ELEMENTS UNTIL THE TOTAL STRUCTURE IS IN BEING.

FRAMING NOTES:

- ALL DIMENSIONS ARE HORIZONTAL AND MEASURED ALONG THE CENTERLINE OF THE WEB.
- BEARING AND STIFFENERS SHALL BE PROVIDED ON BOTH SIDES OF THE WEB.
- COST OF BEVELED SOLE PLATES SHALL BE PAID FOR UNDER THE ITEM "STRUCTURAL STEEL (SITE NO. 1)".
- END BEARING CROSS FRAME SHALL BE PARALLEL TO THE CENTERLINE OF BEARINGS.
- INTERMEDIATE CROSS FRAME SHALL BE PARALLEL TO THE CENTERLINE OF BEARING.
- NO ATTACHMENT SHALL BE FILLET WELDED, PLUG WELDED OR TACK WELDED TO THE TENSION ZONE.
- FOR CROSS FRAME DETAILS, SEE STEEL DETAILS SHEET.
- FOR LOCATION OF DIAPHRAGM CONNECTION PLATES, SEE STEEL DETAILS SHEET.
- FOR BEARING DETAILS, SEE BEARING DETAILS.
- FOR BEARING STIFFENER LAYOUT, SEE STEEL DETAILS SHEET.
- FOR DIMENSIONS OF BEVELED SOLE PLATE, SEE BEARING DETAILS.

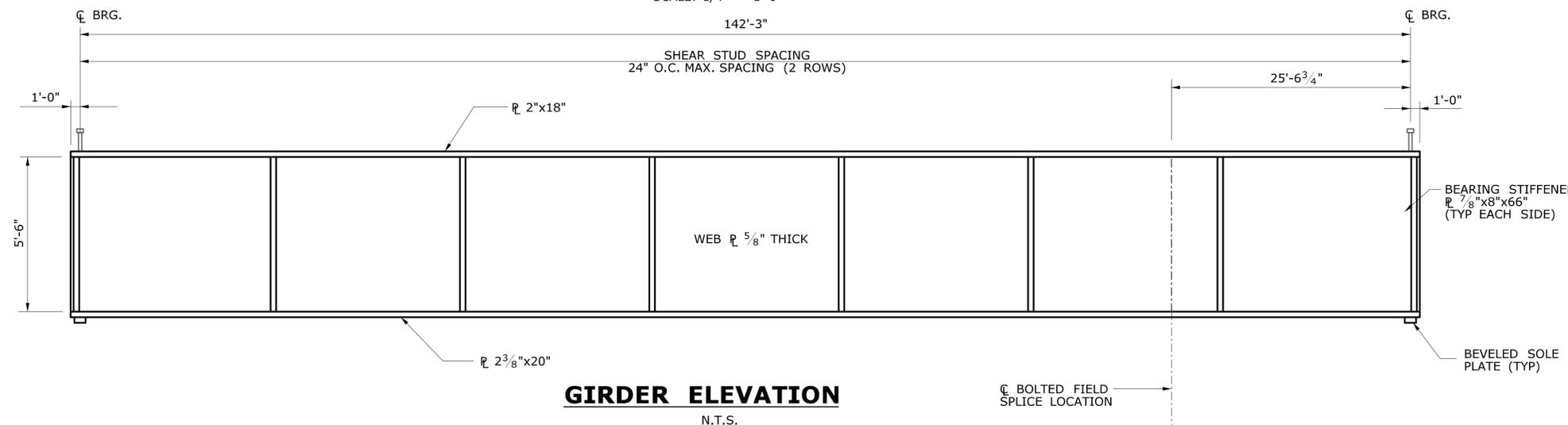
CAMBER NOTES:

- STRUCTURAL STEEL DEAD LOAD DEFLECTION INCLUDES WEIGHT OF GIRDER AND CROSS FRAMES.
- ADDITIONAL DEAD LOAD DEFLECTION INCLUDES WEIGHT OF CONCRETE SLAB.
- COMPOSITE DEAD LOAD DEFLECTION INCLUDES CANOPY.
- TOTAL CAMBER APPLIES TO THE TOP OF THE WEB AND IS MEASURED FROM THE CAMBER REFERENCE LINE.
- THE CAMBER REFERENCE LINE IS THE STRAIGHT LINE CONNECTING THE TOP OF WEB AT THE CENTERLINES OF BEARINGS FROM ONE ABUTMENT TO THE OTHER.



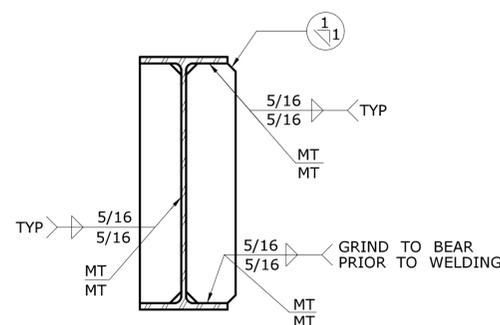
FRAMING PLAN

SCALE: 1/4" = 1'-0"



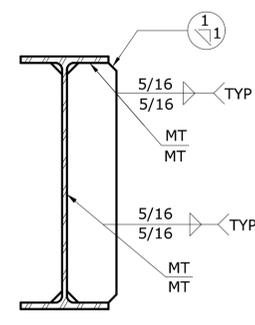
GIRDER ELEVATION

N.T.S.



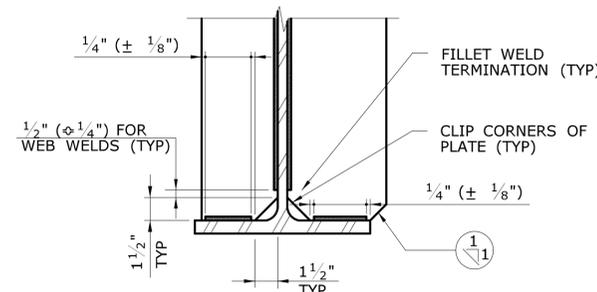
CONNECTION PLATE

N.T.S.



BEARING STIFFENER

N.T.S.



CLIP AND WELD TERMINATION DETAIL

N.T.S.

DEAD LOAD DEFLECTION AND CAMBER TABLE							
STRINGER ID	DEAD LOAD DEFLECTION AT MIDSPAN (IN)			CAMBER AT CL OF SPAN (IN)			
	STR STEEL	ADDITIONAL DL	COMPOSITE DL	TOTAL DL DEFLECTION	VERTICAL CURVE ORDINATE	EXTRA CAMBER	TOTAL
G1 & G2	X.XXX	X.XXX	X.XXX	X.XXX	X.XXX	X.XXX	X.XXX

FINAL PLANS FOR REVIEW

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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D. COSTELLO
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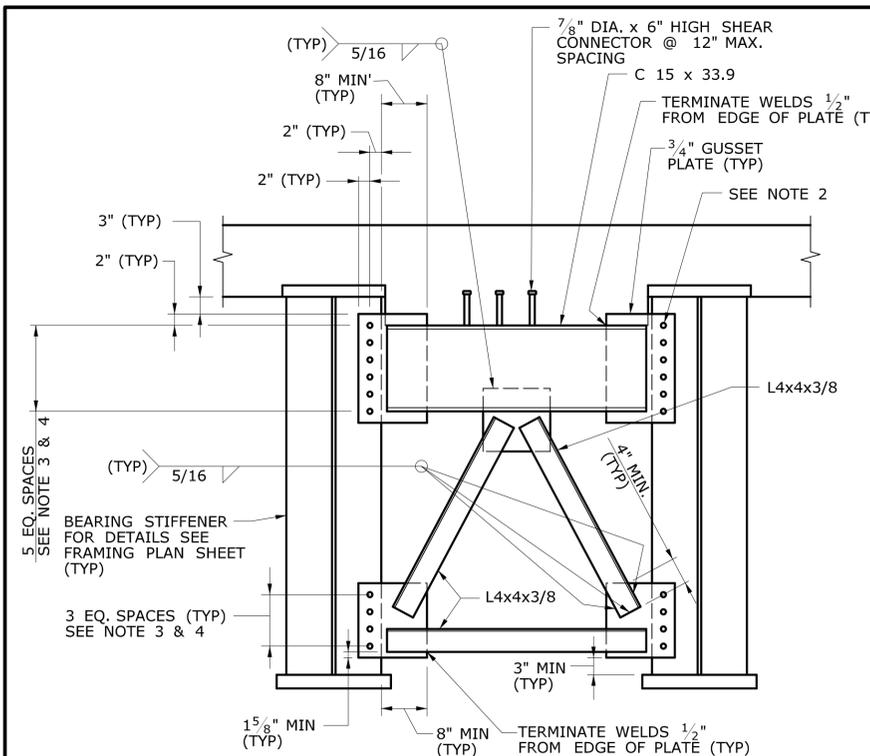
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**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

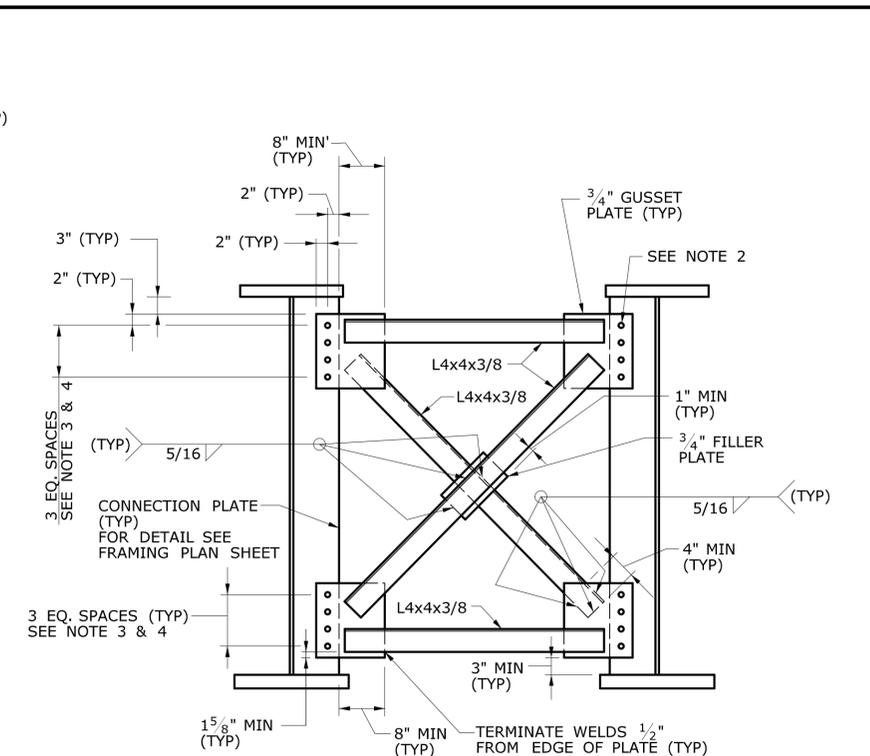
TOWN:
STAMFORD
DRAWING TITLE:
FRAMING PLAN

PROJECT NO.
301-163
DRAWING NO.
S-24
SHEET NO.
02.07.024

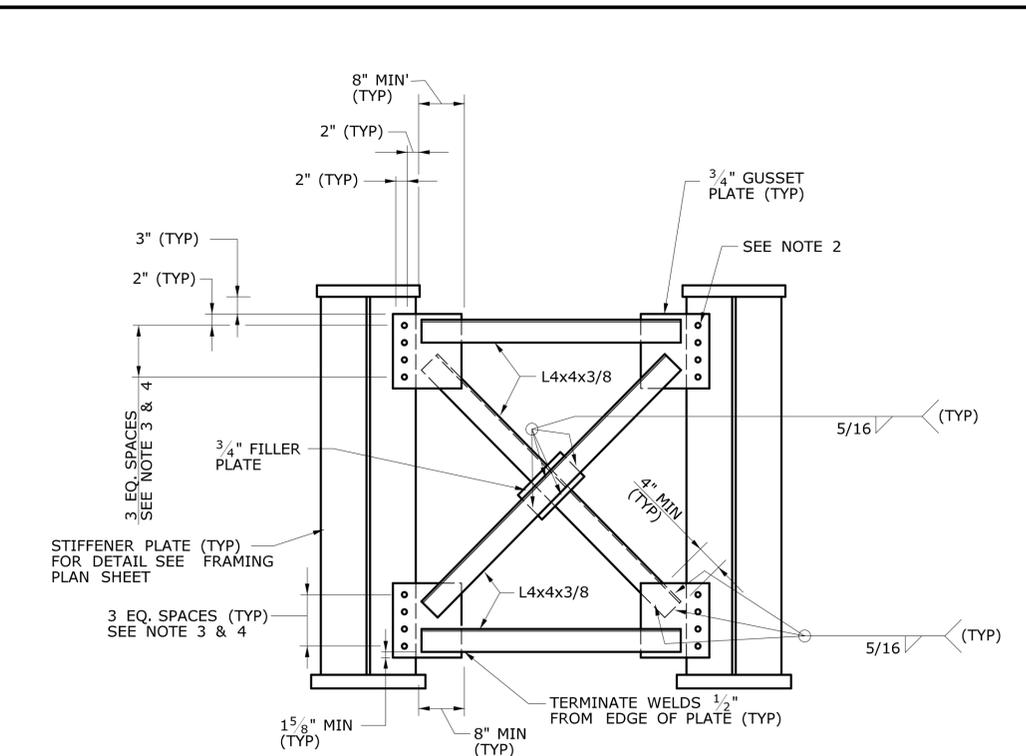
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**DIAPHRAGM SECTION - TYPE D-1
AT ABUTMENT**
SCALE: 3/4" = 1'-0"

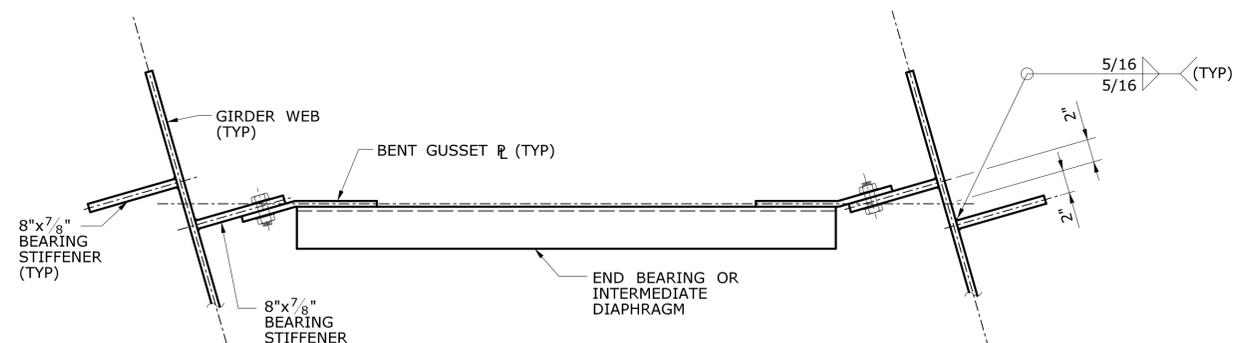


**INTERMEDIATE DIAPHRAGM
SECTION - TYPE D-2**
SCALE: 3/4" = 1'-0"

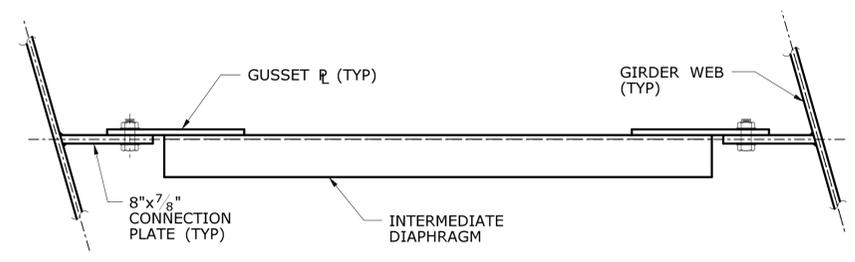


**INTERMEDIATE DIAPHRAGM
SECTION - TYPE D-3**
SCALE: 3/4" = 1'-0"

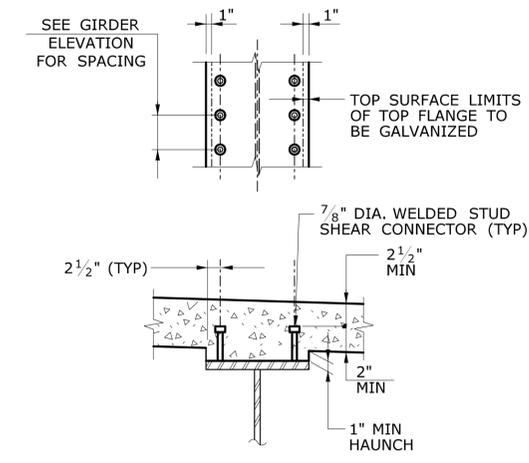
- NOTES:**
- FOR STRUCTURAL STEEL NOTES, SEE FRAMING PLAN SHEET.
 - BOLT HOLES IN MEMBER OR GUSSET PLATES SHALL BE 1" DIAMETER (STANDARD) FOR A325 BOLTS. BOLT HOLES IN TRANSVERSE INTERMEDIATE STIFFENER, BEARING STIFFENER OR CONNECTION PLATES SHALL BE 1 1/8" DIAMETER (OVERSIZED).
 - MINIMUM BOLT SPACING IS 3".
 - VERTICAL BOLT SPACING AND GUSSET PLATE DIMENSIONS SHALL BE KEPT TO A MINIMUM, WHILE STILL SATISFYING THE GEOMETRIC REQUIREMENTS RESULTING FROM MEMBER ORIENTATION, MINIMUM WELD LENGTH AND NUMBER OF BOLTS REQUIRED.
 - ALL DIAPHRAGMS ARE DETAILED IN THE WEB PLUMB POSITION AFTER ALL LOADS ARE APPLIED.



**CONNECTION PLATES AT
TYPE D-1 & D-3 DIAPHRAGM**
SCALE: 1 1/2" = 1'-0"



**CONNECTION PLATES AT
TYPE D-2 DIAPHRAGM**
SCALE: 1 1/2" = 1'-0"



SHEAR STUD DETAILS
N.T.S.

- SHEAR CONNECTOR NOTES:**
- FOR SHEAR STUD SPACING, SEE GIRDER ELEVATION, DWG. NO.
 - USE STACKED STUDS WHEN REQUIRED STUD LENGTH EXCEEDS 8".
 - PROVIDE HAUNCH REINFORCEMENT FOR HAUNCH DEPTHS GREATER THAN 4". FOR HAUNCH REINFORCEMENT DETAIL, SEE DWG. NO.

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REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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D. COSTELLO
SCALE AS NOTED

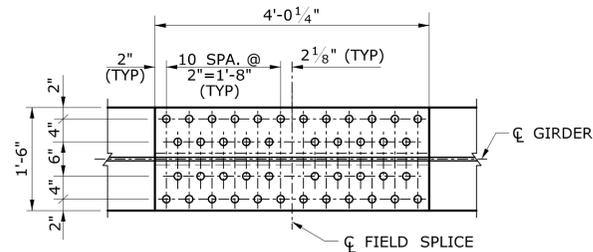


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**STAMFORD YARD
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AND TRACK 7 EXTENSION**

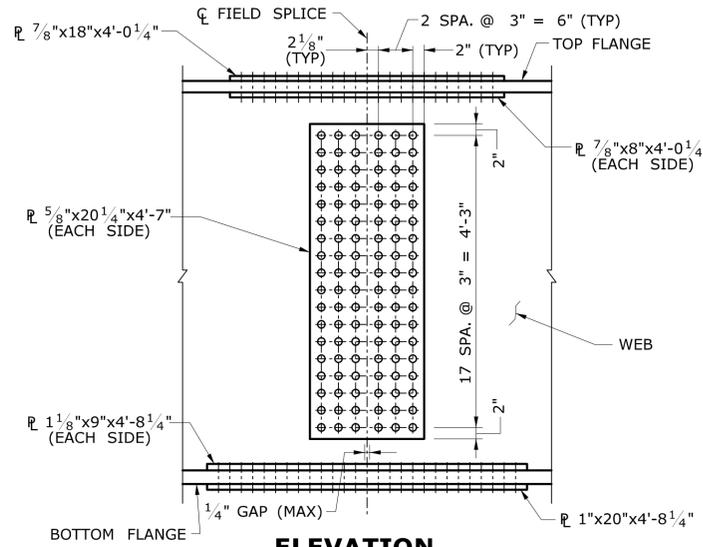
TOWN:
STAMFORD
DRAWING TITLE:
CROSS FRAME DETAILS

PROJECT NO.
301-163
DRAWING NO.
S-25
SHEET NO.
02.07.025

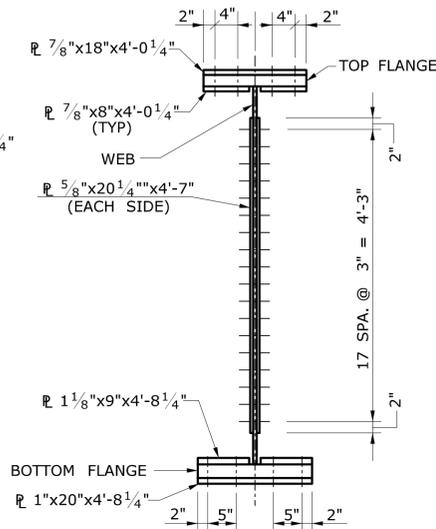


PLAN - TOP FLANGE

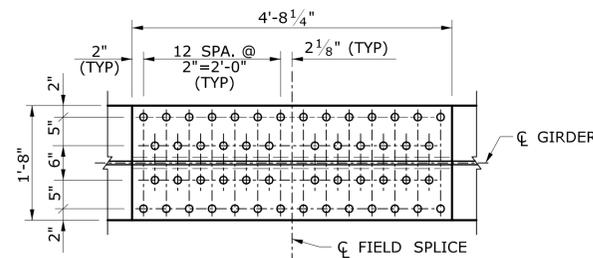
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ELEVATION



SECTION



PLAN - BOTTOM FLANGE

FIELD SPLICE

N.T.S.

FINAL PLANS FOR REVIEW

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REV.	DATE	REVISION DESCRIPTION	SHEET NO.
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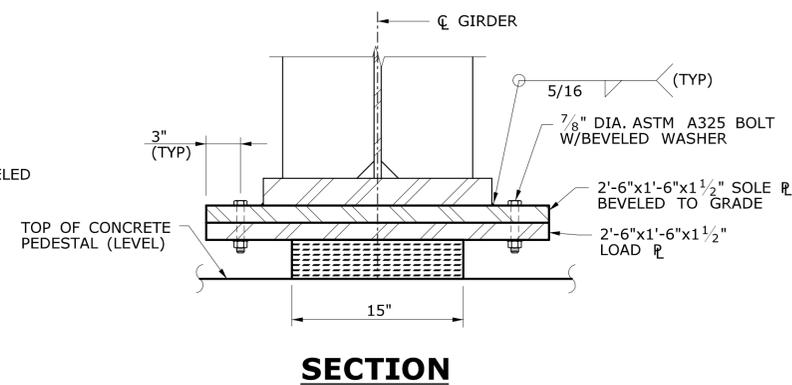
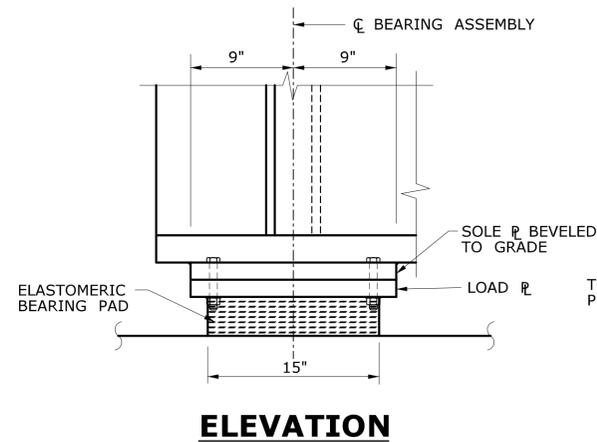
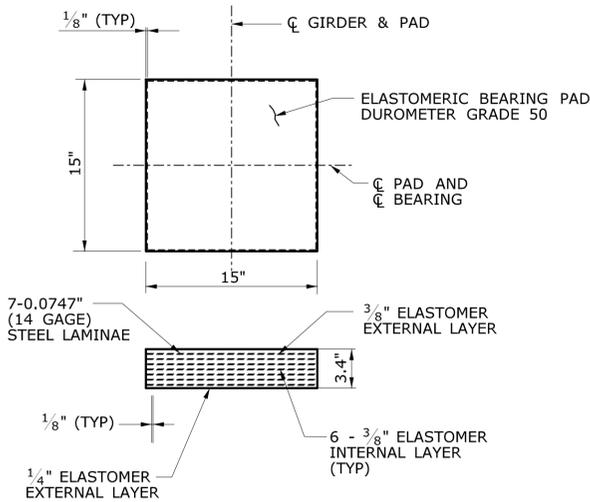
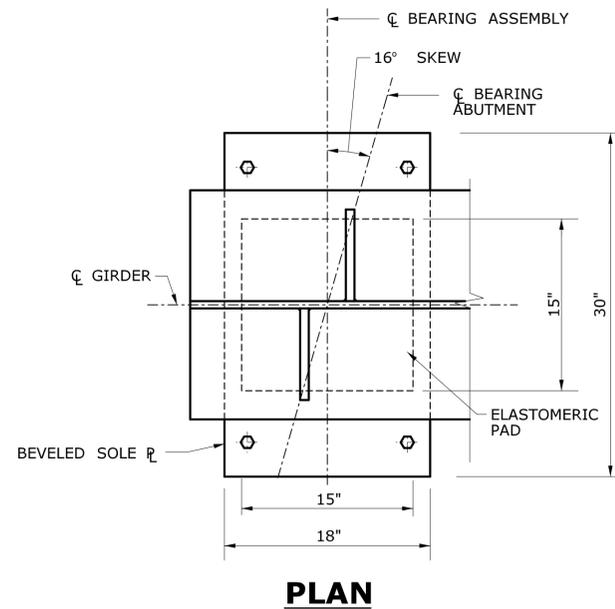


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PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

TOWN:
STAMFORD
DRAWING TITLE:
FIELD SPLICE DETAILS

PROJECT NO.
301-163
DRAWING NO.
S-26
SHEET NO.
02.07.026



ELASTOMERIC BEARING NOTES:

1. THE ELASTOMER SHALL BE GRADE 50 WITH A SHORE "A" DURAMETER HARDNESS = 50 +/- 5 POINTS AND A SHEAR MODULULUS WITHIN THE RANGE OF 0.095 KSI TO 0.130 ksi.
2. THE STEEL LAMINATE USED IN THE ELASTOMERIC BEARING SHALL CONFORM TO ASTM A709M GRADE 36, AND SHALL BE PAID FOR UNDER THE ITEM "ELASTOMERIC BEARING PADS".
3. LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
4. THE BOLTS, NUTS, AND WASHERS SHALL BE PAID FOR UNDER THE ITEM "ELASTOMERIC BEARING PADS".
5. THE BOLTED CONNECTIONS SHALL BE "SLIP-CRITICAL" CONNECTIONS WITH CLASS 'B' SURFACE CONDITION.
6. WELDING DETAILS, PROCEDURES, AND TESTING METHODS SHALL CONFORM TO ANSI/AASHTO/AMS D1.5/01.5-2002 BRIDGE WELDING CODE.
7. THE SOLE PLATES SHALL CONFORM TO ASTM A709, GRADE 50 AND SHALL BE BEVELED TO MATCH THE SLOPE OF THE STRINGER SO THAT THE BOTTOM SURFACE OF THE PLATE IS LEVEL AFTER THE APPLICATION OF FULL DEAD LOAD. THE SOLE PLATE SHALL BE INCLUDED IN THE ITEM "STRUCTURAL STEEL BRIDGE (SITE NO. 1)".
8. ELASTOMERIC BEARINGS SHALL BE INSTALLED AT THE AMBTENT TEMPERATURE BETWEEN 0 DEGREE AND 80 DEGREES FARENHEIT. CENTERLINE OF BEARING PAD AND SOLE PLATE TO BE INSTALLED AT CENTERLINE OF BEARING.
9. TOTAL BEARING DESIGN LOAD = 178 kips.
10. ALL SOLE PLATES SHALL BE BEVELED TO GRADE.

REFERENCES:

1. THE LOCATIONS OF BEARINGS, SEE DWG. "FRAMING PLAN".
2. FOR CONCRETE PEDESTAL DETAILS, SEE DWG. "ABUTMENT & WINGWALL/MISCELLANEOUS DETAILS 2".

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DESIGNER/DRAFTER:
C. CHUANG
CHECKED BY:
D. COSTELLO
SCALE AS NOTED

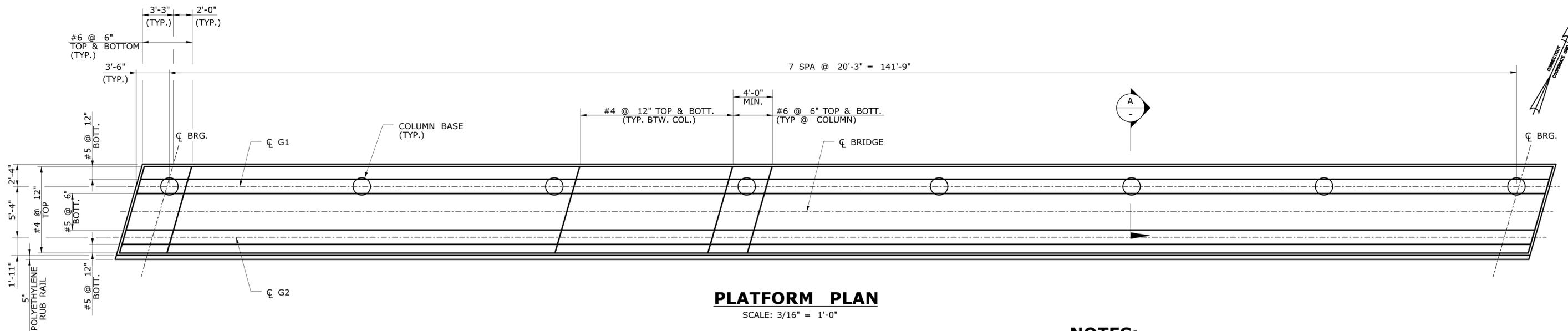


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PROJECT TITLE:
**STAMFORD YARD
CATENARY IMPROVEMENTS
AND TRACK 7 EXTENSION**

TOWN:
STAMFORD
DRAWING TITLE:
BEARING DETAILS

PROJECT NO.
301-163
DRAWING NO.
S-27
SHEET NO.
02.07.027

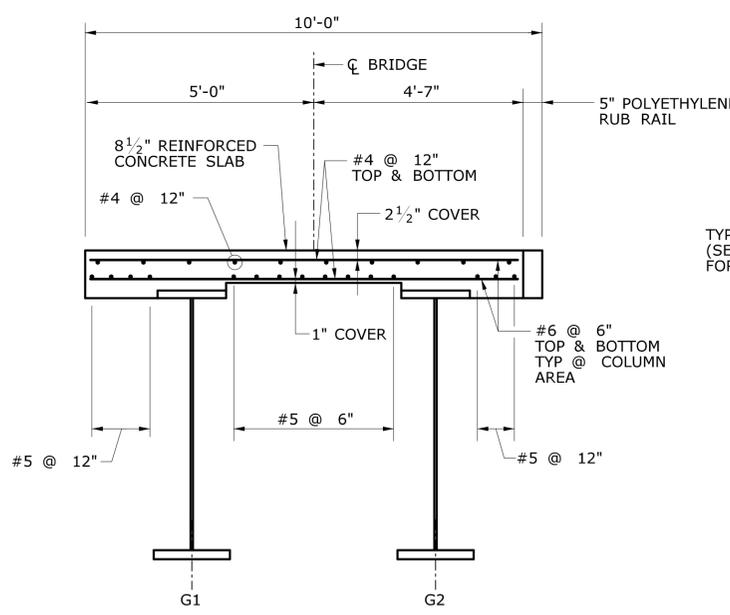


PLATFORM PLAN
SCALE: 3/16" = 1'-0"

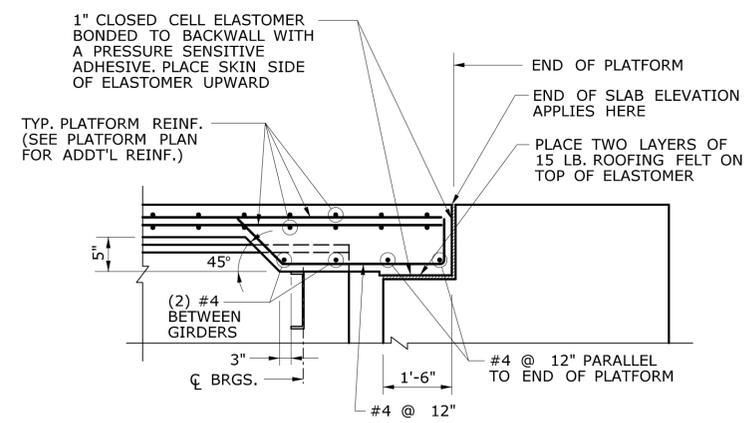
FINISHED DECK ELEVATIONS											
BEAM DESCRIPTION	ABUT. 1	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	ABUT. 2
G1	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX
G2	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX	XXX.XX

NOTES:

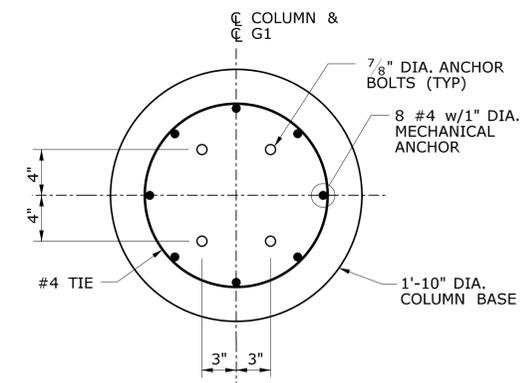
1. FINISHED PLATFORM ELEVATIONS SHOWN ON THE TABLE APPLY AT THE TOP OF THE CONCRETE PLATFORM.
2. CLASS "F" CONCRETE SHALL BE USED THROUGHOUT THE ENTIRE PLATFORM.
3. ALL REINFORCEMENT IN THE CONCRETE PLATFORM SHALL BE EPOXY COATED, UNLESS OTHERWISE NOTED, AND SHALL BE PAID FOR IN THE ITEM "DEFORMED STEEL BARS (EPOXY COATED)".
4. MAIN (TRANSVERSE) REINFORCEMENT SHALL BE PARALLEL TO THE CENTERLINE OF BEARINGS.



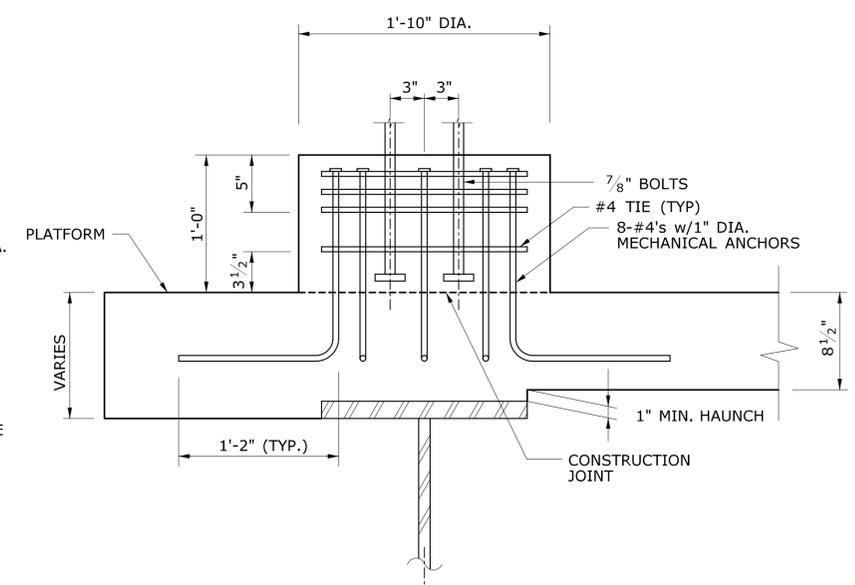
PLATFORM SECTION
SCALE: 3/8" = 1'-0"



PLATFORM END HAUNCH DETAIL
SCALE: 1/2" = 1'-0"



PLAN



A SECTION
SCALE: 1" = 1'-0"

COLUMN BASE DETAIL
SCALE: 1 1/2" = 1'-0"

FINAL PLANS FOR REVIEW

3/28/2016 P:\Projects\ConnBot\36939292\500 CADD-GIS-Graphics\510 CADD\510.04 Struc. Bridge\Platform Span\MSta_Contract_Sheet_files\SB_Br08012R_0135_0301_DET5.dgn	THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.	DESIGNER/DRAFTER: CHECKED BY: D. COSTELLO	<p>STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION</p>	SIGNATURE/ BLOCK:	PROJECT TITLE: STAMFORD YARD CATENARY IMPROVEMENTS AND TRACK 7 EXTENSION	TOWN: STAMFORD	PROJECT NO. 301-163
	REV. DATE REVISION DESCRIPTION SHEET NO. Plotted Date: 3/28/2016	SCALE AS NOTED		FILENAME: ...SB_MSH_Br08012R_0135_0301_DET5.dgn	DRAWING TITLE: DECK PLAN, SECTION AND DETAILS	SHEET NO. S-28	SHEET NO. 02.07.028