

SEE SHEET 2 FOR LIST OF SHEETS

STATE OF VERMONT AGENCY OF TRANSPORTATION



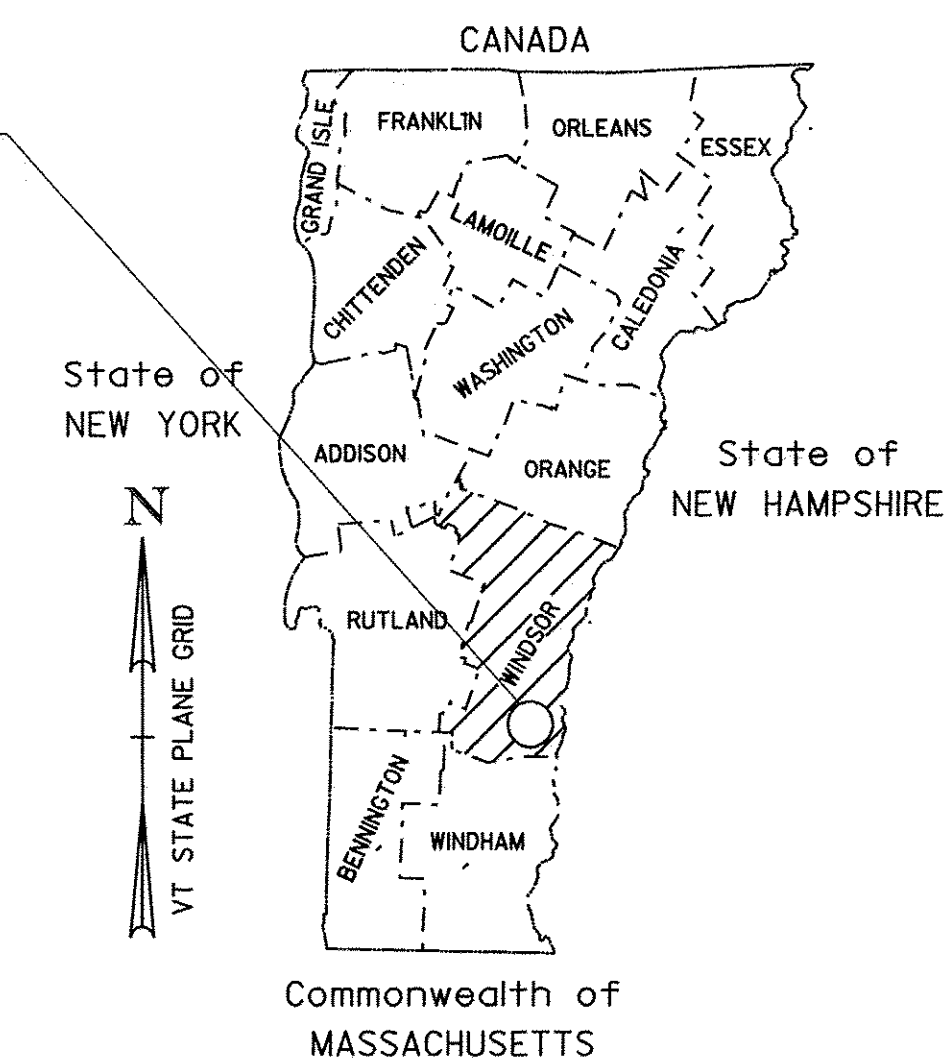
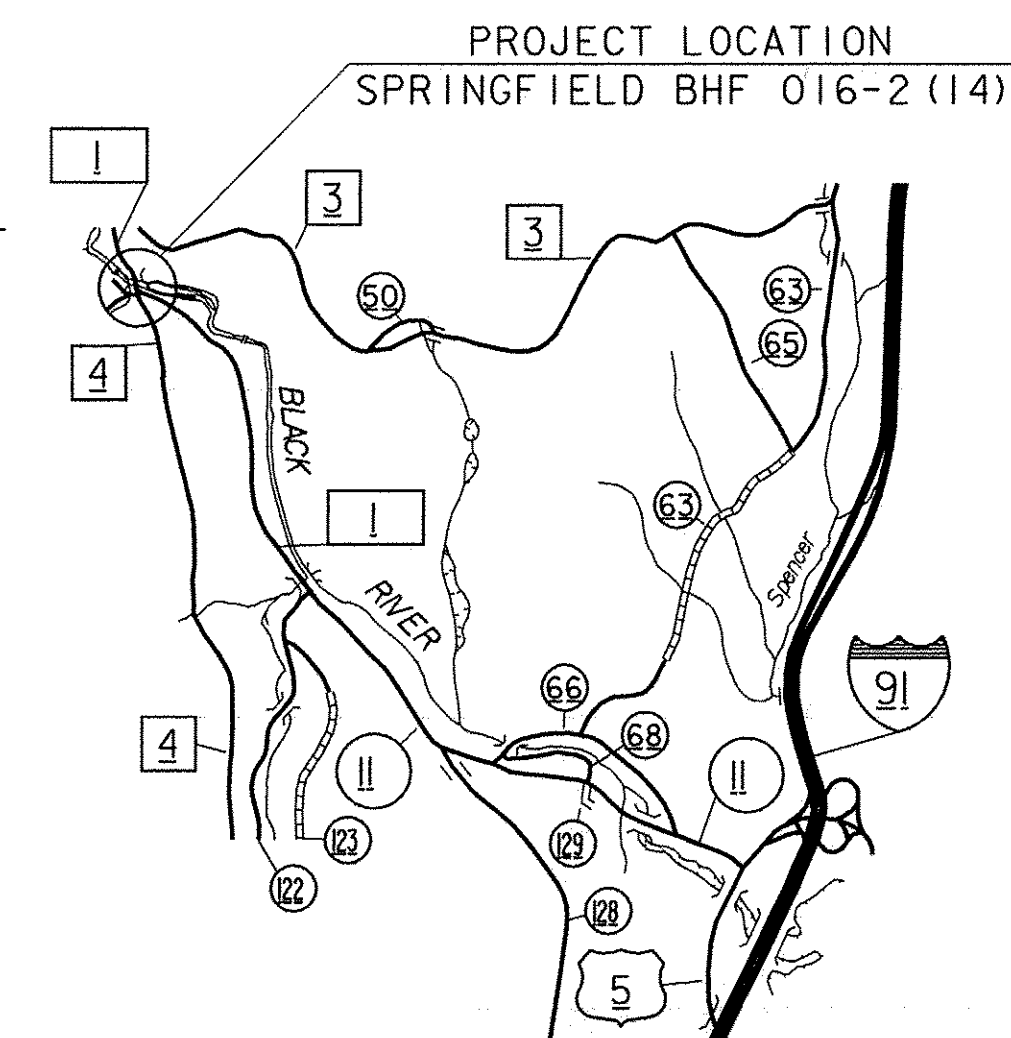
PROPOSED IMPROVEMENT

BRIDGE PROJECT TOWN OF SPRINGFIELD COUNTY OF WINDSOR VT. 11 MINOR ARTERIAL BRIDGE NO. 64

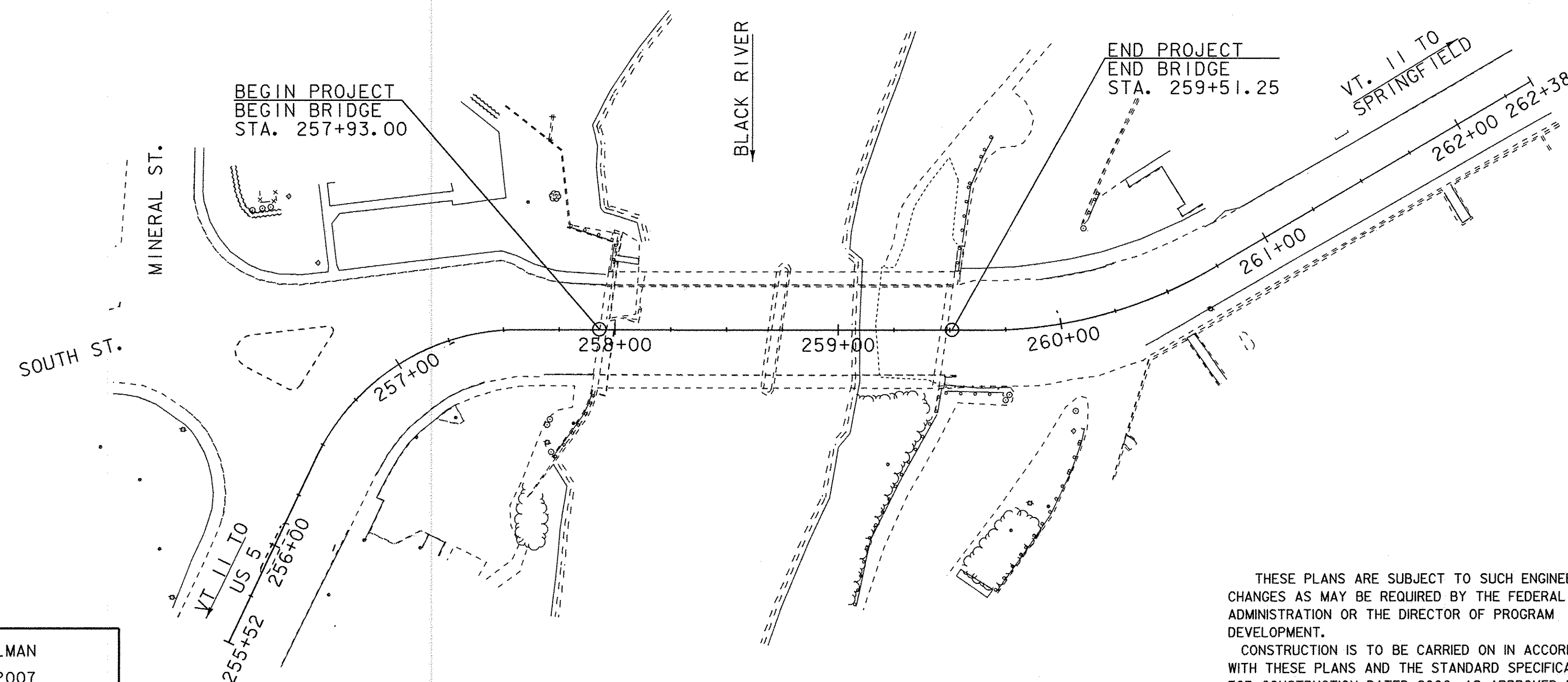
PROJECT LOCATION: BEGINNING ON VT. 11 APPROXIMATELY 3.25 MILES NORTHWESTERLY OF THE INTERSECTION OF VT. 11 AND US RTE. 5 AND EXTENDING NORTHERLY 158.25'.

PROJECT DESCRIPTION: THE REHABILITATION OF THE EXISTING SUPERSTRUCTURE ALONG WITH RELATED APPROACH ROADWAY WORK.

LENGTH OF STRUCTURE: 158.25 FEET
LENGTH OF ROADWAY: 0.00 FEET
LENGTH OF PROJECT: 158.25 FEET



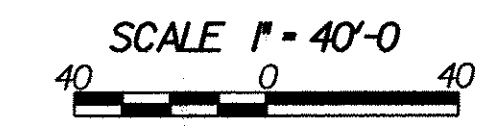
RECORD PLANS	
CONTRACTOR:	COLD RIVER BRIDGES, LLC- KEENE, NH
RESIDENT ENGINEER:	JEREMY REED
CONSTRUCTION BEGAN:	JUNE 1, 2009
CONSTRUCTION COMPLETE:	AUGUST 4, 2010
RECORD PLANS BY:	JEREMY REED & AMOS KEMPTON
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	<i>Jeremy Reed</i> RESIDENT ENGINEER
DATE	12/7/11
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	



CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : R. GILMAN
SURVEYED DATE : JUNE 2007

DATUM
VERTICAL : NAVD 88
HORIZONTAL : NAD 83 (96)



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>[Signature]</i>	DATE 2-26-09
PROJECT MANAGER : R. WHITCOMB	
PROJECT NAME :	SPRINGFIELD
PROJECT NUMBER :	BHF 016-2 (14)
SHEET 1 OF	SHEETS 72

PRELIMINARY INFORMATION SHEET

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LIST OF STANDARDS

C-10	CURBING	2/11/2008
C-2A	CEMENT CONCRETE SIDEWALK, CONCRETE CURB	10/14/2005
C-2B	CEMENT CONCRETE SIDEWALK, GRANITE CURB	10/14/2005
C-3A	SIDEWALK RAMPS	3/10/2008
C-3B	SIDEWALK RAMPS AND MEDIAN ISLANDS	3/10/2008
D-15	PRECAST RENF. CONC. MANHOLE GRATES (BICYCLE SAFE)	6/1/1994
	CAST IRON GRATE WITH FRAME, TYPE D	
	CAST IRON GRATE WITH FRAME, TYPE E	
E-100	CONSTRUCTION APPROACH SIGNS	1/2/2004
E-100A	SIDE ROAD CONSTRUCTION SIGNS - APPROACH SIGNS	1/2/2004
E-101	CONSTRUCTION SIGN DETAILS	6/30/2003
E-102	CONSTRUCTION SIGN DETAILS	6/30/2003
E-102A	CONSTRUCTION SIGN DETAILS	5/1/2004
E-106	TRAFFIC CONTROL - MISCELLANEOUS DETAILS	3/1/2004
E-107	DELINEATION, BARRICADES AND DETOURS FOR U-TURNS ON DIVIDED HIGHWAY	6/30/2003
E-107A	BREAKAWAY BARRICADE DETAILS	8/8/1995
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS	12/8/2008
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	8/8/1995
E-142	REGULATORY SIGN DETAILS	9/20/1995
E-143	REGULATORY SIGN DETAILS	6/15/2004
E-173	PULL BOXES AND JUNCTION BOXES	8/9/1995
E-164	SQUARE STEEL SIGN POST	5/20/1999
E-191	PAVEMENT MARKING DETAILS	2/1/1999
E-192	PAVEMENT MARKING DETAILS	10/12/2000
E-193	PAVEMENT MARKING DETAILS	8/18/1995
G-1B	BOX BEAM GUARDRAIL	6/1/1994
G-18	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER	6/1/1994

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA Date: April 2008

DRAINAGE AREA : 191.5 sq. mi.
 CHARACTER OF TERRAIN : Large mostly forested watershed
 STREAM CHARACTERISTICS : incised, confined, sinuous
 NATURE OF STREAMBED : Gravel with some exposed ledge

PEAK FLOW DATA

Q 2.33 =	2,000 cfs	Q 50 =	5,000
Q 10 =	3,500	Q 100 =	7,000
Q 25 =	4,300	Q 500 =	10,000

DATE OF FLOOD OF RECORD: November 1927
 ESTIMATED DISCHARGE: 24,000 cfs at confluence with Connecticut River
 WATER SURFACE ELEV.: Unknown
 NATURAL STREAM VELOCITY: @ Q50 = 7.9 fps
 ICE CONDITIONS: Moderate
 DEBRIS: Moderate
 DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
 IS ORDINARY RISE RAPID? No
 IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes
 IF YES, DESCRIBE: Multiple dams upstream

WATERSHED STORAGE: 1% HEADWATERS: _____
 UNIFORM: X
 IMMEDIATELY ABOVE SITE: _____

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Two span rolled beam bridge
 YEAR BUILT: 1949
 CLEAR SPAN(NORMAL TO STREAM): 152 ft
 VERTICAL CLEARANCE ABOVE STREAMBED: 24.7 ft
 WATERWAY OF FULL OPENING: 2,330 sq. ft
 DISPOSITION OF STRUCTURE: Rehabilitation
 TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	332.9 ft	VELOCITY =	8.3 fps
Q10 =	334.9	"	8.9 fps
Q25 =	335.7	"	9.1 fps
Q50 =	336.4	"	9.3 fps
Q100 =	338.3	"	9.6 fps

LONG TERM STREAMBED CHANGES: None

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: n/a
 RELIEF ELEVATION: 353.5 ft
 DISCHARGE OVER ROAD @Q100: n/a

UPSTREAM STRUCTURE

TOWN: Springfield DISTANCE: 2,000 ft
 HIGHWAY #: Park St STRUCTURE #: Br 79
 CLEAR SPAN: 70 ft CLEAR HEIGHT: 37 ft
 YEAR BUILT: _____ FULL WATERWAY: _____
 STRUCTURE TYPE: Concrete Arch

DOWNSTREAM STRUCTURE

TOWN: Springfield DISTANCE: 2,600 ft
 HIGHWAY #: Bridge St STRUCTURE #: Br 43
 CLEAR SPAN: 119 ft CLEAR HEIGHT: 13 ft
 YEAR BUILT: 1989 FULL WATERWAY: 1,213 sq ft
 STRUCTURE TYPE: Welded plate girder

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS	TRUCK						
	H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY	45	60					
POSTED	63	85	102		77	79	93
OPERATING		101	22	146	92	94	

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2010	11800	1200	52	6.8	950
2030	14600	1500	52	10.3	1800

20 year ESAL for flexible pavement from 2010 to 2030 : 8,007,000
 40 year ESAL for flexible pavement from 2010 to 2050 : 19,301,000
 Design Speed : 25 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Two span rolled beam bridge

CLEAR SPAN(NORMAL TO STREAM): 152 ft
 VERTICAL CLEARANCE ABOVE STREAMBED: 24.7 ft
 WATERWAY OF FULL OPENING: 2,330 sq. ft

WATER SURFACE ELEVATIONS AT:

Q2.33 =	332.9 ft	VELOCITY =	8.3 fps
Q10 =	334.9	"	9
Q25 =	335.7	"	9
Q50 =	336.4	"	9
Q100 =	338.3	"	10

IS THE ROADWAY OVERTOPPED BELOW Q100: No
 FREQUENCY: n/a
 RELIEF ELEVATION: 353.5 ft
 DISCHARGE OVER ROAD @Q100: n/a

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 349.7 ft
 VERTICAL CLEARANCE: @ Q50 = 13.3 ft

SCOUR: Not calculated, no substructure work

REQUIRED CHANNEL PROTECTION: No work in the channel

PERMIT INFORMATION

AVERAGE DAILY FLOW: 400 cfs DEPTH OR ELEVATION:
 ORDINARY LOW WATER: 175 Depth = 2.5'
 ORDINARY HIGH WATER: 850 Depth = 4.5'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: N/A
 CLEAR SPAN (NORMAL TO STREAM): _____
 VERTICAL CLEARANCE ABOVE STREAMBED: _____
 WATERWAY AREA OF FULL OPENING: _____

ADDITIONAL INFORMATION

DESIGN CRITERIA

- DESIGN LIVE LOAD AASHTO HS-25
- DESIGN SPAN TWO SPANS OF 77' C/L BRG. TO C/L BRG.
- ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A
ON LEDGE N/A
- ALLOWABLE LOAD FOR PILING N/A
TYPE N/A
ESTIMATED LENGTH N/A
- STRUCTURAL STEEL AASHTO M270MM270 GRADE 36 OR 50 (PAINTED)
- REINFORCING STEEL GRADE 60
- CONCRETE, HIGH PERFORMANCE CLASS A fc: 4000 psi
CONCRETE, HIGH PERFORMANCE CLASS B fc: N/A
- DESIGN SOIL UNIT WEIGHT 140 pcf
- DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL N/A

TRAFFIC MAINTENANCE

- IS TRAFFIC TO BE MAINTAINED? YES
IF YES, ON EXISTING STRUCTURE? YES (COMBINATION OF BRIDGE & DETOUR)
OR ON TEMPORARY BRIDGE? NO
ONE OR TWO-WAY TRAVEL? ONE-WAY ON BRIDGE (WESTBOUND)
- TRAFFIC CONTROL SIGNALS REQUIRED? NO
- ARE SIDEWALKS REQUIRED? YES, USE EXISTING SIDEWALK
IF SO, ON WHAT SIDE? DOWN STREAM FOR PHASE ONE.

AND THE NEW SIDEWALK UPSTREAM DURING PHASE TWO.

PROJECT NAME: **SPRINGFIELD**
 PROJECT NUMBER: **BHF 016-2(14)**

FILE NAME: 06j004str/s06j004pi.xls PLOT DATE: 2/27/2009
 PROJECT LEADER: R. WHITCOMB DRAWN BY: D. PETERSON
 DESIGNED BY: D. PETERSON CHECKED BY: C. CARLSON
PRELIMINARY INFORMATION SHEET SHEET 2 OF 72

GENERAL

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO BRIDGE DESIGN SPECIFICATIONS, DATED 2002, AND ITS LATEST REVISIONS.
- DURING THIS PROJECT, EASTBOUND VT 11 TRAFFIC WILL BE MAINTAINED ON A ONE WAY DETOUR ON TOWN OF SPRINGFIELD STREETS. WESTBOUND TRAFFIC WILL BE MAINTAINED BY PHASED CONSTRUCTION OF THE NEW SUPERSTRUCTURE.
- EXISTING DIMENSIONS:** THESE PLANS WERE PREPARED BASED ON INFORMATION OBTAINED FROM REFERENCE PLAN SHEETS 62 - 72. DIMENSIONS AND ANGLES OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ENSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER. NO EXTRA PAYMENT WILL BE MADE FOR OBTAINING THE NECESSARY MEASUREMENTS.
- ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

EARTHWORK AND RELATED ITEMS

- ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE" SHALL INCLUDE:
 - BRIDGE RAILING (REMOVAL ONLY - METAL ELEMENTS WILL BE REUSED)
 - CONCRETE DECK, CURTAIN WALLS, AND SIDEWALKS REMOVED TO BRIDGE SEAT ELEVATIONS
 - BEAM 10, SPAN 1
 - ALL EXISTING BEARINGS
 - DIAPHRAGMS TO BE REPLACED WITH NEW DIAPHRAGMS AS INDICATED ON SHEET 25
 - FOUR EXISTING ORNAMENTAL LIGHT POSTS (REMOVAL ONLY - LIGHT POSTS/LUMINARIES WILL BE REUSED)
 - EXISTING SEWER LINE ON BRIDGE AND ITS SUPPORT STRUCTURE

STRUCTURAL STEEL

- NEW BEAM 10, NEW DIAPHRAGMS, CONNECTION PLATES, DRIP PLATES AND SEWER SUPPORT BEAMS WILL BE PAID FOR UNDER THE ITEM 506.50 "STRUCTURAL STEEL, ROLLED BEAM".
- THE NEW COVER PLATE INSTALLED ON BEAM 2 WILL BE PAID FOR UNDER ITEM 506.60, "STRUCTURAL STEEL".
- THE STRUCTURAL STEEL AND ALL WORK ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE WEBS AT THE PIER WILL BE PAID FOR UNDER THE ITEM 506.75, "STRUCTURAL STEEL". SHORING OF THE BEAMS UNDER REPAIR SHALL BE PAID FOR UNDER ITEM 502.10, "SHORING SUPERSTRUCTURE". SHORING SHALL CONSIST OF SUPPORTING THE BEAM IN PLACE AND PROVIDING A MEANS OF MAINTAINING THE FLANGE TO FLANGE DISTANCE AND INTEGRITY.
- ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 270M/M 270, GRADE 36 OR 50 (PAINTED).
- CONNECTIONS NOT DETAILED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
- ALL NEW STRUCTURAL STEEL ELEMENTS SUBJECT TO TENSION SHALL MEET THE CHARPY V-NOTCH REQUIREMENTS. THESE MEMBERS ARE DESIGNATED BY (CVN).
- THE METHOD OF REMOVING THE EXISTING WELDS CONNECTING SEWER SUPPORT BEAMS TO THE BRIDGE BEAMS SHALL BE SUBMITTED TO THE STRUCTURES ENGINEER. SUBMIT IN ACCORDANCE WITH SUBSECTION 105.03 OF THE STANDARD SPECIFICATIONS. NO WORK SHALL BE DONE ON THE REMOVAL UNTIL THE METHOD IS APPROVED. ALL WELD MATERIAL SHALL BE GROUND FLUSH WITH BOTTOM OF FLANGE. COSTS OF THIS WORK SHALL BE INCIDENTAL TO ITEM 529.20.
- THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS TO BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.

PAINTING

- ALL EXISTING STRUCTURAL STEEL SHALL BE PAINTED. 100% OF ALL EXISTING STRUCTURAL STEEL PAINT COATING IS TO BE REMOVED AND THE STEEL SURFACES SHALL BE FIELD PREPARED FOR PAINTING, AS PER SECTION 513.
- ALL NEW STEEL ELEMENTS UNDER PAY ITEMS 506.50, "STRUCTURAL STEEL, ROLLED BEAM", 506.60, "STRUCTURAL STEEL" AND ITEM 506.75 "STRUCTURAL STEEL" SHALL BE GIVEN AN APPROVED SHOP APPLIED PAINTING SYSTEM PER SPECIFICATION 513.

- THE PAINT SYSTEM USED IN THE FIELD AND THE SHOP APPLIED PAINT SYSTEM SHALL BE COMPATIBLE AND PROVIDED FROM THE SAME MANUFACTURER.
- COLOR OF THE FINAL COAT OF PAINT SHALL BE GREEN (COLOR CHIP 14062) IN ACCORDANCE WITH FEDERAL STANDARD NO. 595. AND SUBSECTION 708.03.
- AFTER THE FINAL COAT OF PAINT HAS BEEN APPLIED AND HAS THOROUGHLY CURED, THE BEAM ENDS AT THE ABUTMENTS AND PIERS SHALL BE GREASED PER SECTION 513. PAYMENT FOR THE GREASE SHALL BE INCLUDED IN THE UNIT PRICED BID FOR ITEM 513.30, "STRUCTURAL STEEL PAINTING, FIELD APPLIED." THE COLOR OF THE GREASE SHALL BE GREEN.

CONCRETE

- DECK (INCLUDING CURTAIN WALLS AND SIDEWALKS) SHALL BE HIGH PERFORMANCE CLASS A CONCRETE AND SHALL BE PAID FOR UNDER ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A".
- THE DECK IS TO BE POURED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A TRANSVERSE CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH X 1 INCH.
- WATER REPELLENT, SILANE (ITEM 514.10) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES. SEE SUPPLEMENTAL SPECIFICATION 514.
- JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- ALL SUPERSTRUCTURE REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 507.17, "EPOXY COATED REINFORCING STEEL" EXCEPT IN NEW BRIDGE RAILING, WHICH SHALL BE PAID FOR UNDER ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)". CUTTING AND REPAIRING DAMAGED AREAS OF COATED REINFORCING STEEL SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 507.04 OF THE STANDARD SPECIFICATIONS.
- MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS INDICATED IN THE PLANS.

UTILITIES

- THE CONTRACTOR SHALL INSTALL PROTECTIVE MEASURES AND USE EXTREME CARE TO ENSURE THAT NO DAMAGE OCCURS TO THE EXISTING PHONE LINES, FIRE ALARM, WATER LINE AND SEWER LINE. ANY COSTS ASSOCIATED WITH THE PROTECTION WILL BE CONSIDERED INCIDENTAL TO THE ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".
- THE EXISTING SEWER LINE LOCATED ON THE DOWNSTREAM SIDE OF THE STRUCTURE WILL BE REPLACED WITH A NEW SEWER LINE ON THE UPSTREAM FASCIA AS SHOWN ON CONSULTANT DRAWING SHEETS U2 THRU U5. PAYMENT FOR ALL WORK AND MATERIALS ASSOCIATED WITH THE SEWER LINE BETWEEN SEWER MANHOLES #3 AND #4 WILL BE PAID FOR UNDER ITEM 900.645, "SEWER MAIN ON BRIDGE", **EXCEPT FOR THE SEWER SUPPORT BEAMS.**
- ALL OTHER SEWER LINE WORK DETAILED ON SHEETS U1 THRU U5 SHALL BE PAID FOR UNDER THEIR RESPECTIVE CONTRACT PAY ITEMS. ITEM 628.42, "TRANSFER TO NEW SYSTEM, SANITARY SEWER" SHALL INCLUDE ALL SEWAGE TRANSFER WORK DESCRIBED ON SHEETS U1 THRU U5 INCLUDING TEMPORARY BYPASS PUMPING. COSTS OF WORK AND MATERIALS ASSOCIATED WITH ABANDONING EXISTING MANHOLES AND SEWER PIPES SHALL ALSO BE INCLUDED IN THIS ITEM. WHERE EXISTING MANHOLES AND/OR PIPES ARE TO BE COMPLETELY REMOVED, PAYMENT SHALL BE MADE UNDER APPROPRIATE TRENCH EXCAVATION AND BACKFILL ITEMS. WHERE BACKFILL MATERIALS SHOWN ON SHEETS U1 THRU U5 DIFFER FROM MATERIALS SPECIFIED IN STANDARD SPECIFICATIONS, THE STANDARD SPECIFICATIONS SHALL CONTROL.
- THE EXISTING WATER LINE SHALL REMAIN IN PLACE DURING THE CONSTRUCTION OF THE NEW SUPERSTRUCTURE. THE WATER LINE IS SUPPORTED BY DIAPHRAGMS BETWEEN BEAMS 2 AND 3 AND BEAMS 12 AND 13. THE CONTRACTOR SHALL CONSTRUCT WALL SLEEVES AND PLACE A "LINK-SEAL" AT EACH CURTAIN WALL AS DETAILED ON SHEET U4 OF CONSULTANT UTILITY DETAILS. THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CONCRETE CLASS A". IF NECESSARY AND WITH THE PERMISSION OF THE TOWN, THE WATERLINE MAY BE SHUT DOWN FOR SHORT PERIODS OF TIME. CONTACT WATER DEPARTMENT SUPERINTENDENT, JEFF STRONG, AT (802)886-2208 FOR PERMISSION AND TIME RESTRICTIONS.

BRIDGE RAILING

- ALL METAL ELEMENTS OF THE EXISTING BRIDGE RAILING SHALL BE REMOVED. CARE MUST BE UTILIZED IN THE REMOVAL OF THE RAILING TO PREVENT DAMAGE TO THE RAILING AND CONNECTIONS. THE REMOVAL OF THE RAILING ELEMENTS WILL BE PAID FOR UNDER ITEM 509.20, "PARTIAL REMOVAL OF STRUCTURE".
- ALL THE METAL RAILING ELEMENTS SHALL BE CLEANED, PAINTED AND REPAIRED IN ACCORDANCE WITH SPECIFICATION SECTIONS 506 AND 513. THE FINAL COAT OF PAINT SHALL BE GREEN (COLOR CHIP 14062). THE WORK WILL BE PAID FOR UNDER ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)".
- ANY MISSING OR DAMAGED METAL RAIL ELEMENTS SHALL BE REPLACED IN KIND. THE RESIDENT ENGINEER SHALL DETERMINE WHICH PIECES OF THE RAILING NEED REPLACEMENT OR REPAIR WITH PAYMENT MADE UNDER ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)".
- PRIOR TO THE REMOVAL OF THE EXISTING BRIDGE RAILING, THE CONTRACTOR SHALL TAKE DETAILED MEASUREMENTS AND MAKE DRAWINGS AS NECESSARY OF THE EXISTING RAIL ELEMENTS TO ENSURE THAT THE RAILING IS RECONSTRUCTED TO THE EXISTING DIMENSIONS AND APPEARANCE.

TRAFFIC CONTROL

- THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING, INSTALLING AND MAINTAINING ALL ON AND OFF PROJECT DETOUR SIGNS. SEE TRAFFIC CONTROL SHEETS: 12-21. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL."
- ANY REMOVAL, COVERING AND/OR RESETTING OF EXISTING TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE INCIDENTAL TO THE ITEM 641.10, TRAFFIC CONTROL.
- PEDESTRIAN TRAFFIC SHALL BE MAINTAINED. PEDESTRIANS WILL BE DETOURED TO EITHER THE UPSTREAM OR DOWNSTREAM SIDEWALK DURING CONSTRUCTION DEPENDING ON WHICH CONSTRUCTION PHASE IS BEING UNDERTAKEN.
- ALL TEMPORARY PAVEMENT MARKINGS USED ON THE DETOUR SHALL BE PAID UNDER ITEM 641.10, "TRAFFIC CONTROL" AND SHALL MEET THE REQUIREMENTS OF SECTION 646.
- FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. IF THE CONTRACTOR MUST RESTRICT ACCESS, THEY MUST NOTIFY THE PROPERTY OWNERS AND TOWN IN ADVANCE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL."
- TWO PORTABLE CHANGEABLE MESSAGE SIGNS ARE INCLUDED IN THE CONTRACT AND ARE TO BE LOCATED AND DISPLAY MESSAGES AS DIRECTED BY THE ENGINEER.

ENERGY ATTENUATOR NOTES

- ENERGY ABSORPTION ATTENUATORS WILL BE PLACED AS SHOWN ON THE TRAFFIC CONTROL SHEETS. THE ENERGY ABSORPTION ATTENUATORS FOR THIS PROJECT SHALL BE SUITABLE FOR A NARROW WIDTH APPLICATION AND SHALL BE INSTALLED AS SHOWN ON THE TRAFFIC CONTROL PLANS SHEETS. THESE ATTENUATORS WILL BE PAID AS ITEM, 621.56, "ENERGY ABSORPTION ATTENUATOR."
- THE ATTENUATORS SHALL MEET THE REQUIREMENTS OF THE LATEST VERSION OF THE AASHTO "ROADSIDE DESIGN GUIDE" AND SHALL BE DESIGNED FOR A 4500 LB VEHICLE TRAVELING AT 25 MPH.

MISCELLANEOUS

- THE CONTRACTOR SHALL REMOVE, CLEAN, REPAIR AND PAINT THE ORNAMENTAL LIGHT POSTS AT EACH CORNER OF THE BRIDGE AND REINSTALL ON NEW CONCRETE RAILING POSTS AT EACH CORNER OF THE BRIDGE. THE FINAL COAT OF PAINT SHALL BE BLACK. CLEANING AND PAINTING THE LIGHT POSTS SHALL BE DONE IN ACCORDANCE WITH SECTION 513. ALL COSTS FOR REMOVING, REFURBISHING AND REINSTALLING THE LIGHT POSTS SHALL BE INCLUDED UNDER ITEM 900.620, SPECIAL PROVISION (REMOVING, REFURBISHING AND RESETTING LIGHT POST).

VOID
SEE REVISED

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	s06j004gen.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	C. CARLSON
GENERAL NOTES	
PLOT DATE:	23-MAR-2009
DRAWN BY:	C. CARLSON
CHECKED BY:	D. PETERSON
SHEET	3 OF 72

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO BRIDGE DESIGN SPECIFICATIONS, DATED 2002, AND ITS LATEST REVISIONS.
2. DURING THIS PROJECT, EASTBOUND VT 11 TRAFFIC WILL BE MAINTAINED ON A ONE WAY DETOUR ON TOWN OF SPRINGFIELD STREETS. WESTBOUND TRAFFIC WILL BE MAINTAINED BY PHASED CONSTRUCTION OF THE NEW SUPERSTRUCTURE.
3. **EXISTING DIMENSIONS:** THESE PLANS WERE PREPARED BASED ON INFORMATION OBTAINED FROM REFERENCE PLAN SHEETS 62 - 72. DIMENSIONS AND ANGLES OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ENSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER. NO EXTRA PAYMENT WILL BE MADE FOR OBTAINING THE NECESSARY MEASUREMENTS.
4. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

EARTHWORK AND RELATED ITEMS

5. ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE" SHALL INCLUDE:
 - BRIDGE RAILING (REMOVAL ONLY - METAL ELEMENTS WILL BE REUSED)
 - CONCRETE DECK, CURTAIN WALLS, AND SIDEWALKS REMOVED TO BRIDGE SEAT ELEVATIONS
 - BEAM 10, SPAN 1 **ALL BEAMS**
 - ALL EXISTING BEARINGS
 - **ALL** DIAPHRAGMS TO BE REPLACED WITH NEW DIAPHRAGMS AS INDICATED ON SHEET 25
 - FOUR EXISTING ORNAMENTAL LIGHT POSTS (REMOVAL ONLY - LIGHT POSTS/LUMINARIES WILL BE REUSED)
 - EXISTING SEWER LINE ON BRIDGE AND ITS SUPPORT STRUCTURE

STRUCTURAL STEEL

6. NEW BEAM 10, NEW DIAPHRAGMS, CONNECTION PLATES, DRIP PLATES AND SEWER SUPPORT BEAMS WILL BE PAID FOR UNDER THE ITEM 506.50 "STRUCTURAL STEEL, ROLLED BEAM".
- ~~7. THE NEW COVER PLATE INSTALLED ON BEAM 2 WILL BE PAID FOR UNDER ITEM 506.60, "STRUCTURAL STEEL".~~
8. THE STRUCTURAL STEEL AND ALL WORK ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE WEBS AT THE PIER WILL BE PAID FOR UNDER THE ITEM 506.75, "STRUCTURAL STEEL". SHORING OF THE BEAMS UNDER REPAIR SHALL BE PAID FOR UNDER ITEM 502.10, "SHORING SUPERSTRUCTURE". SHORING SHALL CONSIST OF SUPPORTING THE BEAM IN PLACE AND PROVIDING A MEANS OF MAINTAINING THE FLANGE TO FLANGE DISTANCE AND INTEGRITY.
9. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 270M/M 270, GRADE ~~36 OR 50 W (PAINTED)~~.
10. CONNECTIONS NOT DETAILED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
11. ALL NEW STRUCTURAL STEEL ELEMENTS SUBJECT TO TENSION SHALL MEET THE CHARPY V-NOTCH REQUIREMENTS. THESE MEMBERS ARE DESIGNATED BY (CVN).
- ~~12. THE METHOD OF REMOVING THE EXISTING WELDS CONNECTING SEWER SUPPORT BEAMS TO THE BRIDGE BEAMS SHALL BE SUBMITTED TO THE STRUCTURES ENGINEER. SUBMIT IN ACCORDANCE WITH SUBSECTION 105.03 OF THE STANDARD SPECIFICATIONS. NO WORK SHALL BE DONE ON THE REMOVAL UNTIL THE METHOD IS APPROVED. ALL WELD MATERIAL SHALL BE GROUND FLUSH WITH BOTTOM OF FLANGE. COSTS OF THIS WORK SHALL BE INCIDENTAL TO ITEM 529.20.~~
13. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS TO BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.

PAINTING

14. ALL EXISTING STRUCTURAL STEEL SHALL BE PAINTED. 100% OF ALL EXISTING STRUCTURAL STEEL PAINT COATING IS TO BE REMOVED AND THE STEEL SURFACES SHALL BE FIELD PREPARED FOR PAINTING, AS PER SECTION ~~513~~.
- ~~15. ALL NEW STEEL ELEMENTS UNDER PAY ITEMS 506.50, "STRUCTURAL STEEL, ROLLED BEAM", 506.60, "STRUCTURAL STEEL" AND ITEM 506.75 "STRUCTURAL STEEL" SHALL BE GIVEN AN APPROVED SHOP APPLIED PAINTING SYSTEM PER SPECIFICATION 513.~~

16. ~~THE PAINT SYSTEM USED IN THE FIELD AND THE SHOP APPLIED PAINT SYSTEM SHALL BE COMPATIBLE AND PROVIDED FROM THE SAME MANUFACTURER.~~
- ~~17. COLOR OF THE FINAL COAT OF PAINT SHALL BE GREEN (COLOR CHIP 14062) IN ACCORDANCE WITH FEDERAL STANDARD NO. 595 AND SUBSECTION 708.03.~~
- ~~18. AFTER THE FINAL COAT OF PAINT HAS BEEN APPLIED AND HAS THOROUGHLY CURED, THE BEAM ENDS AT THE ABUTMENTS AND PIERS SHALL BE GREASED PER SECTION 513. PAYMENT FOR THE GREASE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 513.30, "STRUCTURAL STEEL PAINTING, FIELD APPLIED." THE COLOR OF THE GREASE SHALL BE GREEN.~~

CONCRETE

19. DECK (INCLUDING CURTAIN WALLS AND SIDEWALKS) SHALL BE HIGH PERFORMANCE CLASS A CONCRETE AND SHALL BE PAID FOR UNDER ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A".
20. THE DECK IS TO BE POURED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A TRANSVERSE CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.
21. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH X 1 INCH.
22. WATER REPELLENT, SILANE (ITEM 514.10) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES. SEE SUPPLEMENTAL SPECIFICATION 514.
23. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
24. ALL SUPERSTRUCTURE REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 507.17, "EPOXY COATED REINFORCING STEEL" EXCEPT IN NEW BRIDGE RAILING, WHICH SHALL BE PAID FOR UNDER ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)". CUTTING AND REPAIRING DAMAGED AREAS OF COATED REINFORCING STEEL SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 507.04 OF THE STANDARD SPECIFICATIONS.
25. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS INDICATED IN THE PLANS.

UTILITIES

26. THE CONTRACTOR SHALL INSTALL PROTECTIVE MEASURES AND USE EXTREME CARE TO ENSURE THAT NO DAMAGE OCCURS TO THE EXISTING PHONE LINES, FIRE ALARM, WATER LINE AND SEWER LINE. ANY COSTS ASSOCIATED WITH THE PROTECTION WILL BE CONSIDERED INCIDENTAL TO THE ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".
27. THE EXISTING SEWER LINE LOCATED ON THE DOWNSTREAM SIDE OF THE STRUCTURE WILL BE REPLACED WITH A NEW SEWER LINE ON THE UPSTREAM FASCIA AS SHOWN ON CONSULTANT DRAWING SHEETS U2 THRU U5. PAYMENT FOR ALL WORK AND MATERIALS ASSOCIATED WITH THE SEWER LINE BETWEEN SEWER MANHOLES #3 AND #4 WILL BE PAID FOR UNDER ITEM 900.645, "SEWER MAIN ON BRIDGE", **EXCEPT FOR THE SEWER SUPPORT BEAMS**.
28. ALL OTHER SEWER LINE WORK DETAILED ON SHEETS U1 THRU U5 SHALL BE PAID FOR UNDER THEIR RESPECTIVE CONTRACT PAY ITEMS. ITEM 628.42, "TRANSFER TO NEW SYSTEM, SANITARY SEWER" SHALL INCLUDE ALL SEWAGE TRANSFER WORK DESCRIBED ON SHEETS U1 THRU U5 INCLUDING TEMPORARY BYPASS PUMPING. COSTS OF WORK AND MATERIALS ASSOCIATED WITH ABANDONING EXISTING MANHOLES AND SEWER PIPES SHALL ALSO BE INCLUDED IN THIS ITEM. WHERE EXISTING MANHOLES AND/OR PIPES ARE TO BE COMPLETELY REMOVED, PAYMENT SHALL BE MADE UNDER APPROPRIATE TRENCH EXCAVATION AND BACKFILL ITEMS. WHERE BACKFILL MATERIALS SHOWN ON SHEETS U1 THRU U5 DIFFER FROM MATERIALS SPECIFIED IN STANDARD SPECIFICATIONS, THE STANDARD SPECIFICATIONS SHALL CONTROL.
29. THE EXISTING WATER LINE SHALL REMAIN IN PLACE DURING THE CONSTRUCTION OF THE NEW SUPERSTRUCTURE. THE WATER LINE IS SUPPORTED BY DIAPHRAGMS BETWEEN BEAMS 2 AND 3 AND BEAMS 12 AND 13. THE CONTRACTOR SHALL CONSTRUCT WALL SLEEVES AND PLACE A "LINK-SEAL" AT EACH CURTAIN WALL AS DETAILED ON SHEET U4 OF CONSULTANT UTILITY DETAILS. THIS WORK WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CONCRETE CLASS A". IF NECESSARY AND WITH THE PERMISSION OF THE TOWN, THE WATERLINE MAY BE SHUT DOWN FOR SHORT PERIODS OF TIME. CONTACT WATER DEPARTMENT SUPERINTENDENT, JEFF STRONG, AT (802)886-2208 FOR PERMISSION AND TIME RESTRICTIONS.

BRIDGE RAILING

30. ALL METAL ELEMENTS OF THE EXISTING BRIDGE RAILING SHALL BE REMOVED. CARE MUST BE UTILIZED IN THE REMOVAL OF THE RAILING TO PREVENT DAMAGE TO THE RAILING AND CONNECTIONS. THE REMOVAL OF THE RAILING ELEMENTS WILL BE PAID FOR UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".
31. ALL THE METAL RAILING ELEMENTS SHALL BE CLEANED, PAINTED AND REPAIRED IN ACCORDANCE WITH SPECIFICATION SECTIONS 506 AND 513. THE FINAL COAT OF PAINT SHALL BE GREEN (COLOR CHIP 14062). THE WORK WILL BE PAID FOR UNDER ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)".
32. ANY MISSING OR DAMAGED METAL RAIL ELEMENTS SHALL BE REPLACED IN KIND. THE RESIDENT ENGINEER SHALL DETERMINE WHICH PIECES OF THE RAILING NEED REPLACEMENT OR REPAIR WITH PAYMENT MADE UNDER ITEM 900.640, "SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)".
33. PRIOR TO THE REMOVAL OF THE EXISTING BRIDGE RAILING, THE CONTRACTOR SHALL TAKE DETAILED MEASUREMENTS AND MAKE DRAWINGS AS NECESSARY OF THE EXISTING RAIL ELEMENTS TO ENSURE THAT THE RAILING IS RECONSTRUCTED TO THE EXISTING DIMENSIONS AND APPEARANCE.
- TRAFFIC CONTROL**
34. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING, INSTALLING AND MAINTAINING ALL ON AND OFF PROJECT DETOUR SIGNS. SEE TRAFFIC CONTROL SHEETS: 12-21. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL."
35. ANY REMOVAL, COVERING AND/OR RESETTING OF EXISTING TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE INCIDENTAL TO THE ITEM 641.10, TRAFFIC CONTROL.
36. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED. PEDESTRIANS WILL BE DETOURED TO EITHER THE UPSTREAM OR DOWNSTREAM SIDEWALK DURING CONSTRUCTION DEPENDING ON WHICH CONSTRUCTION PHASE IS BEING UNDERTAKEN.
37. ALL TEMPORARY PAVEMENT MARKINGS USED ON THE DETOUR SHALL BE PAID UNDER ITEM 641.10, "TRAFFIC CONTROL" AND SHALL MEET THE REQUIREMENTS OF SECTION 646.
38. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. IF THE CONTRACTOR MUST RESTRICT ACCESS, THEY MUST NOTIFY THE PROPERTY OWNERS AND TOWN IN ADVANCE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL."
39. TWO PORTABLE CHANGEABLE MESSAGE SIGNS ARE INCLUDED IN THE CONTRACT AND ARE TO BE LOCATED AND DISPLAY MESSAGES AS DIRECTED BY THE ENGINEER.

ENERGY ATTENUATOR NOTES

40. ENERGY ABSORPTION ATTENUATORS WILL BE PLACED AS SHOWN ON THE TRAFFIC CONTROL SHEETS. THE ENERGY ABSORPTION ATTENUATORS FOR THIS PROJECT SHALL BE SUITABLE FOR A NARROW WIDTH APPLICATION AND SHALL BE INSTALLED AS SHOWN ON THE TRAFFIC CONTROL PLANS SHEETS. THESE ATTENUATORS WILL BE PAID AS ITEM, 621.56, "ENERGY ABSORPTION ATTENUATOR."
41. THE ATTENUATORS SHALL MEET THE REQUIREMENTS OF THE LATEST VERSION OF THE AASHTO "ROADSIDE DESIGN GUIDE" AND SHALL BE DESIGNED FOR A 4500 LB VEHICLE TRAVELING AT 25 MPH.

MISCELLANEOUS

42. THE CONTRACTOR SHALL REMOVE, CLEAN, REPAIR AND PAINT THE ORNAMENTAL LIGHT POSTS AT EACH CORNER OF THE BRIDGE AND REINSTALL ON NEW CONCRETE RAILING POSTS AT EACH CORNER OF THE BRIDGE. THE FINAL COAT OF PAINT SHALL BE BLACK. CLEANING AND PAINTING THE LIGHT POSTS SHALL BE DONE IN ACCORDANCE WITH SECTION 513. ALL COSTS FOR REMOVING, REFURBISHING AND REINSTALLING THE LIGHT POSTS SHALL BE INCLUDED UNDER ITEM 900.620, SPECIAL PROVISION (REMOVING, REFURBISHING AND RESETTING LIGHT POST).

ADDITIONAL NOTES DUE TO CONTRACTOR'S PROPOSAL TO USE NEW STEEL

ITEM 506.75, "STRUCTURAL STEEL", SHALL INCLUDE ALL NEW STRUCTURAL STEEL REQUIRED TO CONSTRUCT THE NEW SUPERSTRUCTURE AS DETAILED IN THE REVISED PLANS DATED MAY 26, 2009. FINAL LUMP SUM PAYMENT FOR THIS ITEM SHALL INCLUDE BUT NOT BE LIMITED TO GIRDBERS, CONNECTION PLATES, BEARING STIFFENERS, DIAPHRAGMS AND THE SUPPORT BEAMS FOR THE NEW SEWER LINE.

ITEM 502.10, "SHORING SUPERSTRUCTURE", SHALL INCLUDE BOTH THE TEMPORARY AND PERMANENT SUPPORT OF THE EXISTING TELEPHONE AND FIRE ALARM CONDUITS AND THE WATERLINE. LUMP SUM PAYMENT FOR THIS ITEM SHALL INCLUDE PROVIDING AND INSTALLING PERMANENT SUPPORT MECHANISMS ACCEPTABLE TO THE TOWN AND VTEL FOR THEIR RESPECTIVE UTILITY.

REV.	BY	DATE	DESCRIPTION
3	RW	5/26/09	ADDED & DELETED NOTES

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	s06j004gen.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	C. CARLSON
GENERAL NOTES	
PLOT DATE:	03-APR-2012 11:19
DRAWN BY:	C. CARLSON
CHECKED BY:	D. PETERSON
SHEET	3 OF 72

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
	ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS			
	880						880		CY	COMMON EXCAVATION	203.15							
			10	290			300		CY	TRENCH EXCAVATION OF EARTH	204.20							
				15			15		CY	TRENCH EXCAVATION OF ROCK	204.21							
				1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22							
					4		4		CY	STRUCTURE EXCAVATION	204.25							
				100	4		104		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30							
	420						420		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10							
	750		10				760		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35							
	7				2		9		CWT	EMULSIFIED ASPHALT	404.65							
	1						1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50							
					322		322		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33							
					1		1		LS	SHORING SUPERSTRUCTURE	502.10							
					40		40		EACH	SHORING SUPERSTRUCTURE BEARINGS	502.11							
					19510		19510		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50							
					1620		1620		LB	STRUCTURAL STEEL	506.60							
					1		1		LS	STRUCTURAL STEEL	506.75							
					57750		57750		LB	EPOXY COATED REINFORCING STEEL	507.17							
					1		1		LS	SHEAR CONNECTORS (2720 - 7/8" x 7")	508.15							
					1		1		LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25							
					1		1		LS	STRUCTURAL PAINTING, FIELD APPLIED	513.30							
					1		1		LS	CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD	513.36							
					1		1		LS	SURFACE PREPARATION, SHOP	513.40							
					1		1		LS	SURFACE PREPARATION, FIELD	513.41							
					40		40		GAL	WATER REPELLENT, SILANE	514.10							
					104		104		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10							
					850		850		SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20							
					1		1		LS	MAINTENANCE OF STRUCTURES AND APPROACHES	527.10							
					1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20							
					40		40		EACH	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	531.10							
				6			6		EACH	SANITARY SEWER MANHOLE	604.22							
	6						6		EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40							
	2			2			4		EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42							
	2						2		EACH	CAST IRON GRATE WITH FRAME, TYPE D	604.47							
				6			6		EACH	CAST IRON COVER WITH FRAME, SEWER	604.56							
			10				10		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25							
			10				10		CY	STONE FILL, TYPE I	613.10							
	285						285		LF	VERTICAL GRANITE CURB	616.21							
	240						240		LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28							
	5						5		TON	BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS	616.47							
	36						36		SF	DETECTABLE WARNING SURFACE	618.30							

PROJECT NAME:	Springfield
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	s06j004qpfbuilder
PROJECT MANAGER:	R. WHITCOMB
DESIGNED BY:	D. PETERSON
CHECKED BY:	C. CARLSON
QUANTITY SHEET #1	
PLOT DATE:	03/31/2009
DRAWN BY:	D. PETERSON
CHECKED BY:	C. CARLSON
SHEET	4 OF 72

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
				ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
				3						3		EACH	ENERGY ABSORPTION ATTENUATOR	621.56				
				25						25		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
				272						272		LF	TEMPORARY TRAFFIC BARRIER	621.90				
				216						216		LF	REMOVE AND RESET TEMPORARY TRAFFIC BARRIER	621.95				
							61			61		LF	PVC SEWER PIPE (6")(SDR 35)	628.35				
							22			22		LF	PVC SEWER PIPE (8")(SDR 35)	628.35				
							237			237		LF	PVC SEWER PIPE (12")(SDR 35)	628.35				
							11			11		LF	PVC SEWER PIPE (18")(SDR 35)	628.35				
							1			1		LS	TRANSFER TO NEW SYSTEM, SANITARY SEWER	628.42				
				5						5		EACH	ADJUST ELEVATION OF VALVE BOX	629.20				
				100						100		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
				1500						1500		HR	FLAGGERS	630.15				
									1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
									1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
									1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
									1	1		LS	TESTING EQUIPMENT, PROTECTIVE COATINGS	631.18				
									1	1		LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
					520					520		HR	EMPLOYEE TRAINEESHIP	634.10				
				1						1		LS	MOBILIZATION/DEMobilIZATION	635.11				
				1						1		LS	TRAFFIC CONTROL	641.10				
				2						2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15				
				1518						1518		LF	DURABLE 4 INCH WHITE LINE	646.400				
				1154						1154		LF	DURABLE 4 INCH YELLOW LINE	646.410				
				39						39		LF	DURABLE 6 INCH WHITE LINE	646.420				
				123						123		LF	DURABLE 24 INCH STOP BAR	646.480				
				55						55		EACH	DURABLE LETTER OR SYMBOL	646.490				
				73						73		LF	DURABLE CROSSWALK MARKING	646.500				
				285						285		LF	PAINTED CURB	646.81				
				3152						3152		SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85				
							20			20		SY	GEOTEXTILE FOR SILT FENCE	649.51				
							10			10		LB	SEED	651.15				
							10			10		LB	SEED, WINTER RYE	651.17				
							100			100		LB	FERTILIZER	651.18				
							0.25			0.25		TON	AGRICULTURAL LIMESTONE	651.20				
							0.25			0.25		TON	HAY MULCH	651.25				
				10			20			30		CY	TOPSOIL	651.35				
							1			1		LS	EPSC PLAN	652.10				
							50			50		HR	MONITORING EPSC PLAN	652.20				
							1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
							10			10		CY	VEHICLE TRACKING PAD	653.35				

PROJECT NAME: **Springfield**
PROJECT NUMBER: **BHF 016-2(14)**
FILE NAME: s06j004qnbuilder PLOT DATE: 03/31/2009
PROJECT MANAGER: R. WHITCOMB DRAWN BY: D. PETERSON
DESIGNED BY: D. PETERSON CHECKED BY: C. CARLSON
QUANTITY SHEET #2 SHEET 5 OF 72

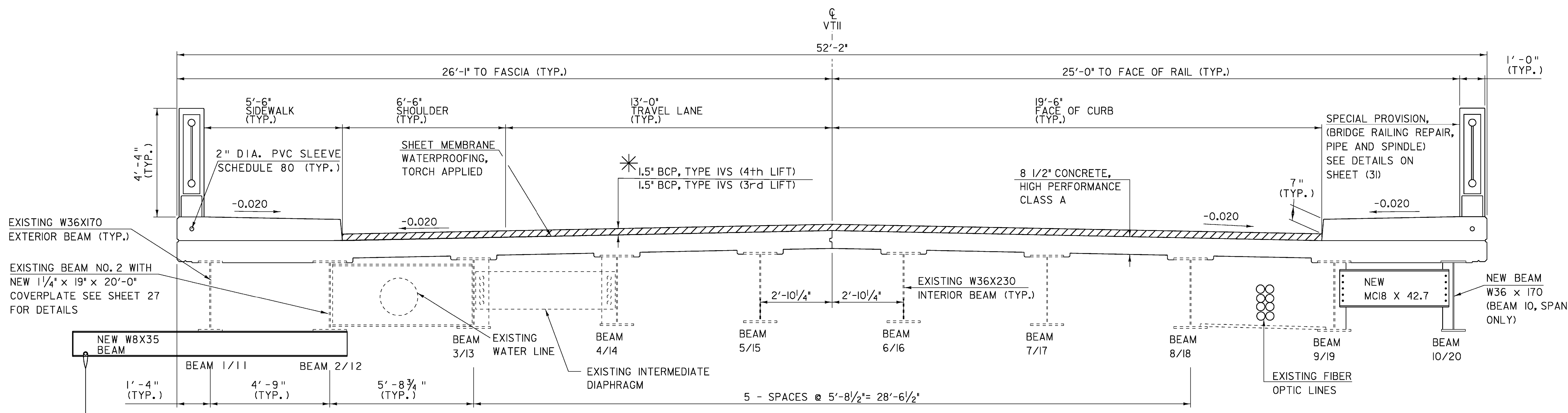
N.A.B.I - NOT A BID ITEM

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
				ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						5				5		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
						200				200		LF	PROJECT DEMARCATION FENCE	653.55				
				5						5		SF	TRAFFIC SIGNS, TYPE A	675.20				
				135						135		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
				28						28		EACH	REMOVING SIGNS	675.50				
				27						27		EACH	ERECTING SALVAGED SIGNS	675.60				
				380						380		LF	WIRED CONDUIT (2") (PVC)	678.23				
								3		3		EACH	JUNCTION BOX	678.26				
				1						1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
								4		4		EACH	SPECIAL PROVISION (REMOVING, REFURBISHING, AND RESETTING LIGHT POST)	900.620				
				27						27		LF	SPECIAL PROVISION (BOX BEAM GUARDRAIL, PAINTED)	900.640				
								326		326		LF	SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)	900.640				
							1			1		LS	SPECIAL PROVISION (SEWER MAIN ON BRIDGE) (12")	900.645				N.A.B.I. - NOT A BID ITEM
				1						1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650				
				1						1		LU	SPECIAL PROVISION (MXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650				
				538				115		653		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

QUANTITY SHEET 4

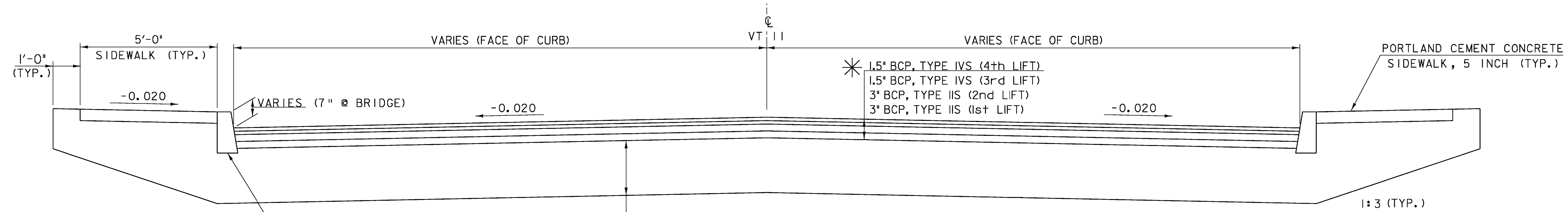
SUMMARY OF BRIDGE QUANTITIES										TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
	ABUTMENT NO. 1		ABUTMENT NO. 2	SUPER-STRUCTURE		PIER	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS			
	2		2				4	CY	STRUCTURE EXCAVATION	204.25						
	2		2				4	CY	GRANULAR BACKFILL FOR STRUCTURES	204.30						
				2			2	CWT	EMULSIFIED ASPHALT	404.65						
				322			322	CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33						
				1			1	LS	SHORING SUPERSTRUCTURE	502.10						
	10		10			20	40	EACH	SHORING SUPERSTRUCTURE BEARINGS	502.11						
				19510			19510	LB	STRUCTURAL STEEL, ROLLED BEAM	506.50						
				1620			1620	LB	STRUCTURAL STEEL	506.60						
				1			1	LS	STRUCTURAL STEEL	506.75						
				57750			57750	LB	EPOXY COATED REINFORCING STEEL	507.17						
				1			1	LS	SHEAR CONNECTORS (2720 - 7/8" x 7")	508.15						
				1			1	LS	STRUCTURAL PAINTING, SHOP APPLIED	513.25						
				1			1	LS	STRUCTURAL PAINTING, FIELD APPLIED	513.30						
				1			1	LS	CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD	513.36						
				1			1	LS	SURFACE PREPARATION, SHOP	513.40						
				1			1	LS	SURFACE PREPARATION, FIELD	513.41						
	4		4	30		2	40	GAL	WATER REPELLENT, SILANE	514.10						
				104			104	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10						
				850			850	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20						
				1			1	LS	MAINTENANCE OF STRUCTURES AND APPROACHES	527.10						
				1			1	EACH	PARTIAL REMOVAL OF STRUCTURE	529.20						
	10		10			20	40	EACH	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	531.10						
				3			3	EACH	JUNCTION BOX	678.26						
						4	4	EACH	SPECIAL PROVISION (REMOVING, REFURBISHING, AND RESETTNG LIGHT POST)	900.620						
				326			326	LF	SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)	900.640						
				115			115	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680						



TYPICAL BRIDGE SECTION

SCALE 1/2" = 1'-0"

* BCP SHALL BE READ AS BITUMINOUS CONCRETE PAVEMENT AND SHALL BE PAID FOR UNDER PAY ITEM 900.68, 'SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)'.



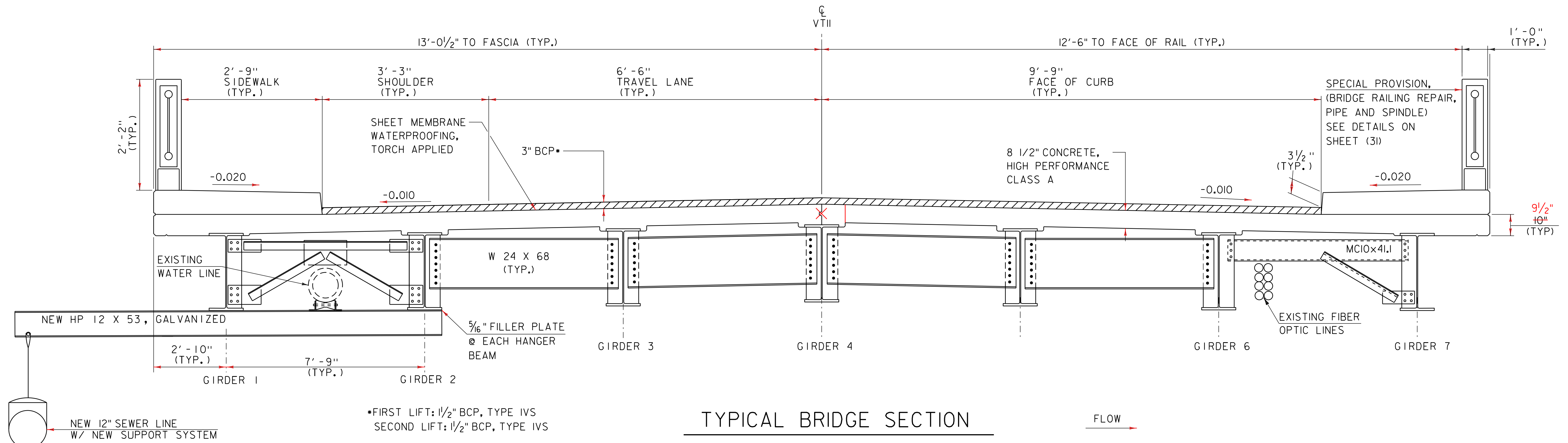
ROADWAY SECTION

SCALE 1/2" = 1'-0"

MATERIAL ITEM	TOLERANCE
PAVEMENT	± 1/4" TOTAL THICKNESS
BASE COURSE	± 1/2"
SUBBASE	± 1"

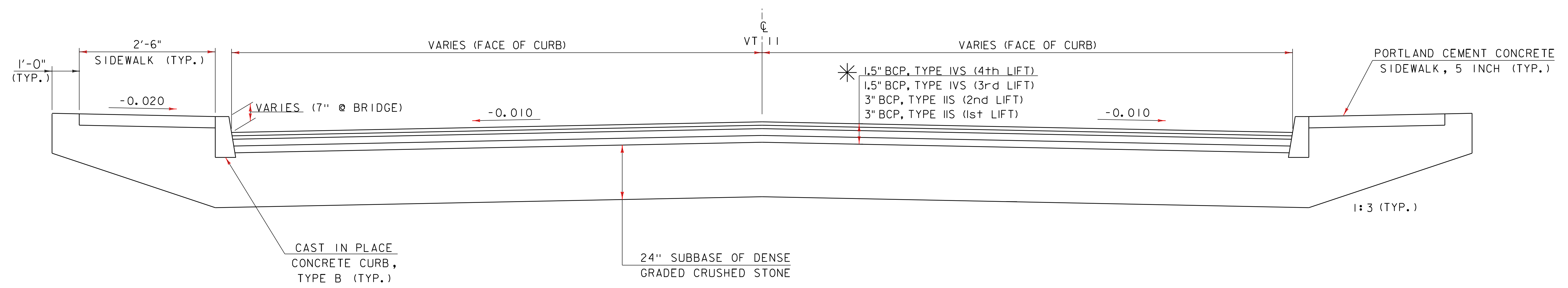
VOID
SEE REVISED
SHEET

PROJECT NAME: SPRINGFIELD	PLOT DATE: 19-MAR-2009
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: C. MOONEY
FILE NAME: s06J004sup.dgn	CHECKED BY: D. PETERSON
PROJECT LEADER: R. WHITCOMB	SHEET 8 OF 72
DESIGNED BY: C. CARLSON	
TYPICAL SHEET	



TYPICAL BRIDGE SECTION

SCALE 1/2" = 1'-0"



ROADWAY SECTION

SCALE 1/2" = 1'-0"

MATERIAL ITEM	TOLERANCE
PAVEMENT	3/64" TOTAL THICKNESS
BASE COURSE	3/64"
SUBBASE	3/64"

REV.	BY	DATE	DESCRIPTION
1	LBB	5/26/09	REVISED FRAMING PLAN AND BANKING

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	s06j004sup.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	C. CARLSON
TYPICAL SHEET	
PLOT DATE:	03-APR-2012 11:20
DRAWN BY:	C. MOONEY
CHECKED BY:	D. PETERSON
SHEET	8 OF 72

GPS CONTROL POINTS

HVCTRL #93

HANDLY
 NORTH = 291658.25
 EAST = 1644850.71
 ELEV. = 427.46

TO REACH FROM THE INTERSECTION OF VT ROUTES 11 AND 106 IN SPRINGFIELD GO SOUTHEAST ALONG VT ROUTE 11 FOR 0.5 MI (0.8 KM) TO A CONCRETE SPILLWAY CARRYING THE BLACK RIVER AND THE MARK ON THE RIGHT. THE STATION IS LOCATED 17.5 M (57.4 FT) WEST SOUTHWEST OF AND 2 M (6.6 FT) LOWER THAN THE SOUTHWEST EDGE OF PAVEMENT OF VT ROUTE 11, 7.2 M (23.6 FT) SOUTHWEST OF POLE 5A, 0.9 M (3.0 FT) WEST SOUTHWEST OF THE NORTHWEST CORNER OF A SINGLE STORY BUILDING, AND 1.2 M (3.9 FT) EAST OF THE WEST EDGE OF THE CONCRETE SPILLWAY FOR THE BLACK RIVER.

HVCTRL #94

ONEILL
 NORTH = 292646.17
 EAST = 1643742.51
 ELEV. = 450.23

TO REACH FROM THE INTERSECTION OF VT ROUTES 11 AND 106 IN SPRINGFIELD GO SOUTHEAST ALONG VT ROUTE 11 FOR 0.25 MI (0.40 KM) TO THE MARK ON THE LEFT. OWNERSHIP - FRANCES W. ONEILL 108 VT RT RIVER STREET, SPRINGFIELD, VT. THE STATION IS LOCATED 10.0 M (32.8 FT) NORTH NORTHEAST OF AND 1.0 M (3.3 FT) HIGHER THAN THE NORTHEAST EDGE OF PAVEMENT OF VT ROUTE 11, 8.3 M (27.2 FT) EAST SOUTHEAST OF THE CENTERLINE OF A PAVED DRIVE, 5.5 METERS (18.0 FT) SOUTH OF THE SOUTHWEST CORNER OF A 1/2 STORY HOUSE (108), AND 6.2 M (20.3 FT) WEST SOUTHWEST OF THE SOUTHEAST CORNER OF HOUSE 108.

GPS CONTROL POINTS

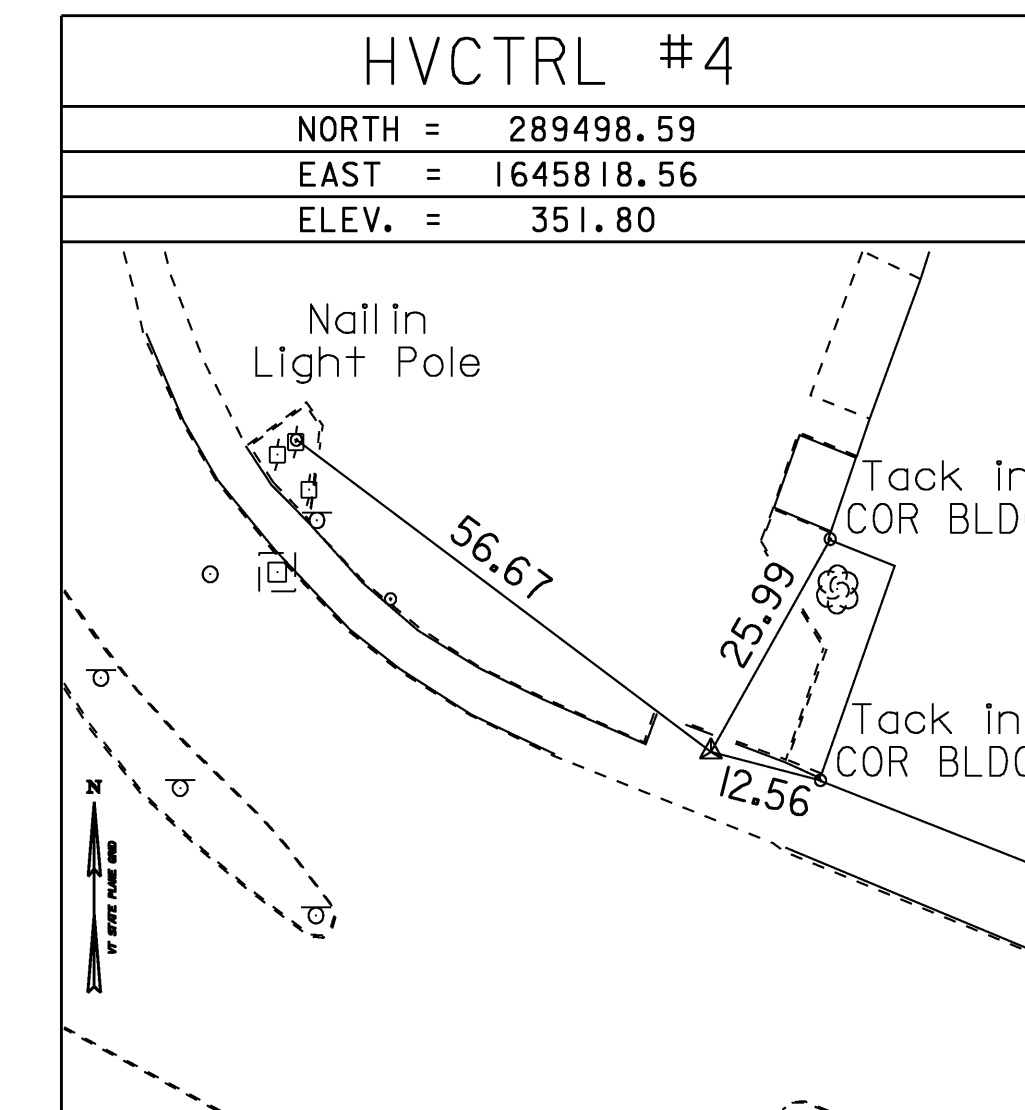
HVCTRL #3

A98006
 NORTH = 290068.23
 EAST = 1645556.12
 ELEV. = 367.12

DESCRIBED BY VERMONT GEODETIC SURVEY 1998 (CHR) GENERAL LOCATION, SPRINGFIELD, VT. TO REACH FROM THE INTERSECTION OF VT ROUTE 11, PARK STREET, AND VT ROUTE 143 GO SOUTH ALONG VT ROUTE 11 FOR 0.2 MI (0.3 KM) TO THE SPRINGFIELD POST OFFICE ON THE LEFT AND THE SITE OF THE MARK ON THE LEFT. THE MARK IS SET IN THE TOP OF A FLAT SHELF IN THE WEST END OF A 2.1 M (6.9 FT) X 0.3 M (1.0 FT) SLOPING CONCRETE WALL ON THE SOUTH SIDE OF THE CONCRETE STEPS LEADING TO THE FRONT (WEST) ENTRANCE TO THE POST OFFICE. IT IS 1.9 M (6.2 FT) EAST OF AND ABOUT 0.4 M (1.3 FT) HIGHER THAN THE EAST EDGE OF PAVEMENT OF VT ROUTE 11, 16.3 M (53.5 FT) SOUTHWEST OF THE NORTHWEST CORNER OF THE POST OFFICE, 13.6 M (44.6 FT) NORTHWEST OF THE SOUTHWEST CORNER OF THE POST OFFICE, AND 0.1 M (0.3 FT) EAST OF THE WEST END OF THE CONCRETE WALL. NOTE, MARK IS SUITABLE FOR GPS WHEN FOLIAGE IS GONE.

*Main Traverse Completed 05/24/07 by R.Gilman P.C. & P.Winters

TRAVERSE TIES



ALIGNMENT TIES

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83(96)
ADJUSTMENT	Compass

PROJECT NAME:	Springfield
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	06J004\survey\06J004t1.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	D. PETERSON
TIE SHEET	
PLOT DATE:	04-MAR-2009
DRAWN BY:	R. Bullock
CHECKED BY:	C. CARLSON
SHEET	9 OF 72

NEW SIDEWALK RAMP TYPE 1
 257+49.25 RT
 259+66.04 LT
 259+77.35 RT

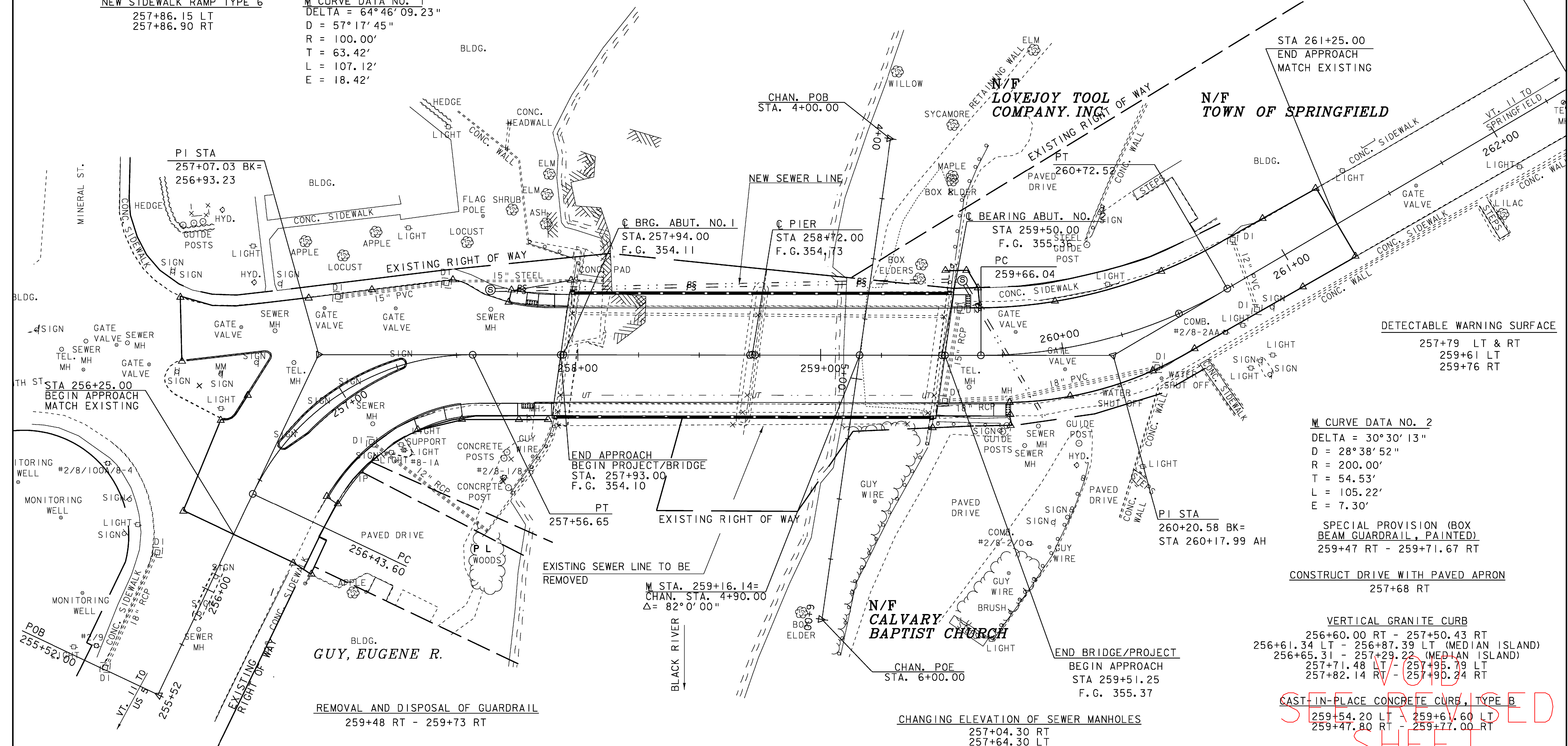
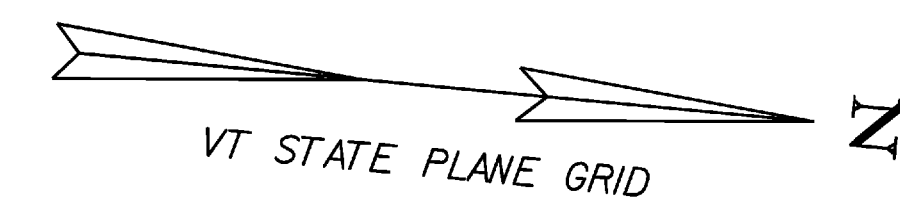
NEW SIDEWALK RAMP TYPE 6
 257+86.15 LT
 257+86.90 RT

ADJUST ELEVATION OF VALVE BOX
 256+85.88 LT
 257+09.30 LT
 257+30.66 LT
 259+81.07 LT
 259+99.52 RT

CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES
 256+99 RT 260+34 RT
 257+19 LT 260+58 RT
 259+75 RT 260+85 LT

CAST IRON GRATE WITH FRAME, TYPE D
 259+51.25 RT
 259+57.29 LT

M CURVE DATA NO. 1
 DELTA = 64°46'09.23"
 D = 57°17'45"
 R = 100.00'
 T = 63.42'
 L = 107.12'
 E = 18.42'



DETECTABLE WARNING SURFACE
 257+79 LT & RT
 259+61 LT
 259+76 RT

M CURVE DATA NO. 2
 DELTA = 30°30'13"
 D = 28°38'52"
 R = 200.00'
 T = 54.53'
 L = 105.22'
 E = 7.30'

SPECIAL PROVISION (BOX BEAM GUARDRAIL, PAINTED)
 259+47 RT - 259+71.67 RT

CONSTRUCT DRIVE WITH PAVED APRON
 257+68 RT

VERTICAL GRANITE CURB
 256+60.00 RT - 257+50.43 RT
 256+61.34 LT - 256+87.39 LT (MEDIAN ISLAND)
 256+65.31 - 257+29.22 (MEDIAN ISLAND)
 257+71.48 LT - 257+95.79 LT
 257+82.14 RT - 257+90.24 RT

CAST-IN-PLACE CONCRETE CURB, TYPE B
 259+54.20 LT - 259+61.60 LT
 259+47.80 RT - 259+77.00 RT

PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2 (14)
 FILE NAME: 006J004/str/s06J004bdr.dgn PLOT DATE: 20-MAR-2009
 PROJECT LEADER: R. WHITCOMB DRAWN BY: D. PETERSON
 DESIGNED BY: D. PETERSON CHECKED BY: C. CARLSON
 LAYOUT SHEET SHEET 10 OF 72

BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS
 256+73 LT - 256+87.50 LT

SPECIAL PROVISION, (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)
 257+97 LT - 259+54 LT
 257+90 RT - 259+47 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
 256+60 RT - 257+89.80 RT
 257+71.50 LT - 257+96 LT
 259+47.80 RT - 259+77.00 RT
 259+54.20 LT - 259+61.60 LT



VOID
SEE REVISION SHEET

NEW SIDEWALK RAMP TYPE 1
 257+49.25 RT
 259+66.04 LT
 259+77.35 RT

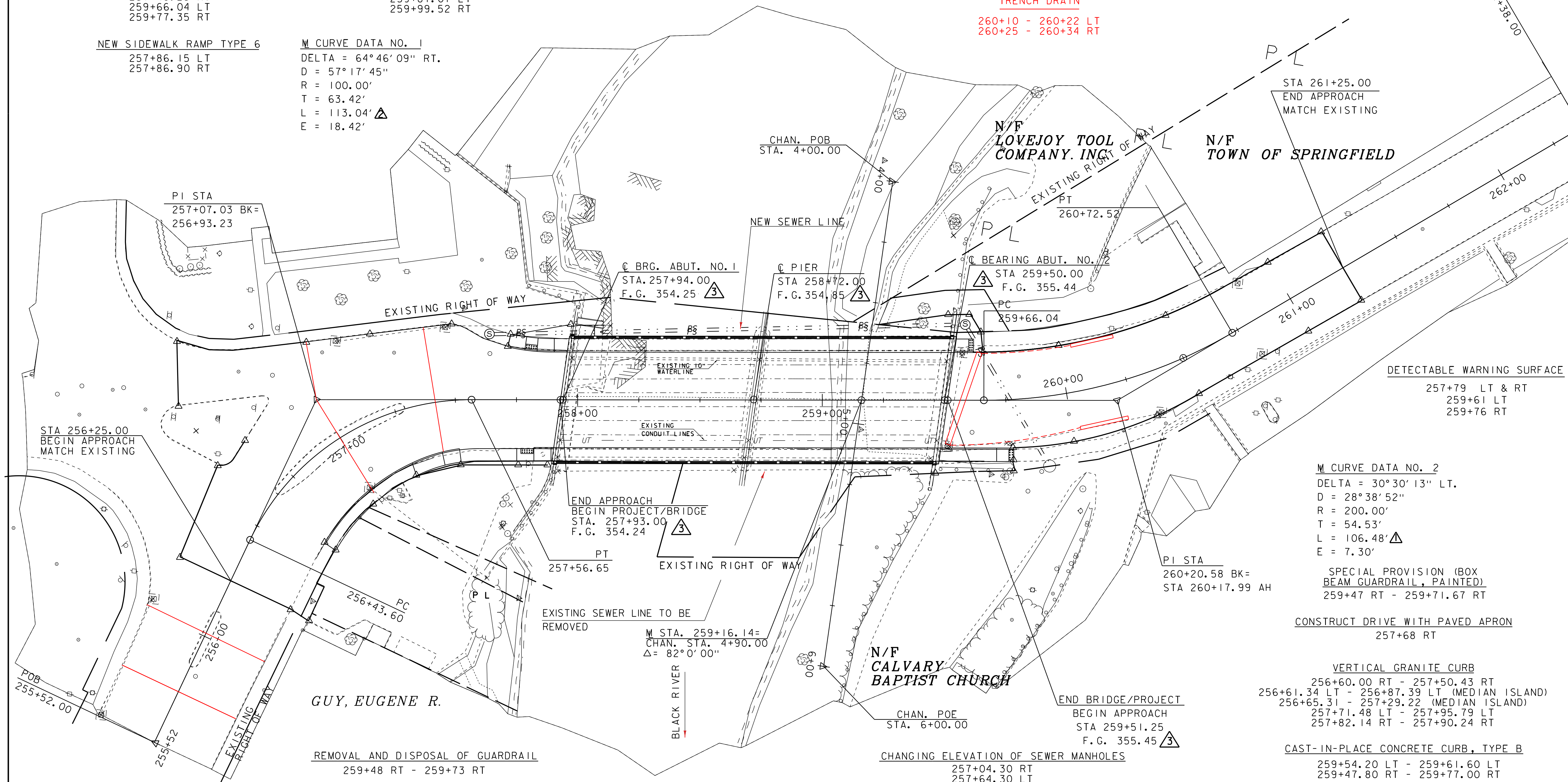
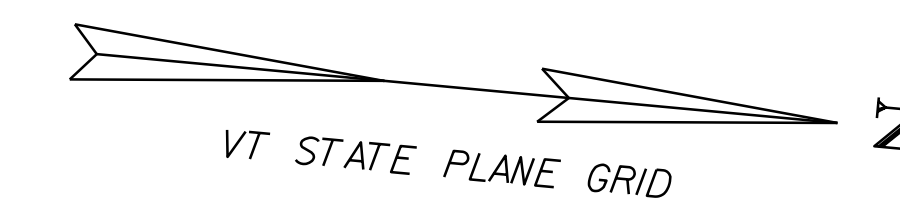
NEW SIDEWALK RAMP TYPE 6
 257+86.15 LT
 257+86.90 RT

ADJUST ELEVATION OF VALVE BOX
 256+85.88 LT
 257+09.30 LT
 257+30.66 LT
 259+81.07 LT
 259+99.52 RT

M CURVE DATA NO. 1
 DELTA = 64°46'09" RT.
 D = 57°17'45"
 R = 100.00'
 T = 63.42'
 L = 113.04' Δ
 E = 18.42'

CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES
 256+99 RT 260+34 RT
 257+19 LT 260+58 RT
 259+75 RT 260+85 LT

CAST IRON GRATE WITH FRAME, TYPE D
 259+51.25 RT
 259+57.29 LT
TRENCH DRAIN
 260+10 - 260+22 LT
 260+25 - 260+34 RT



STA 256+25.00
 BEGIN APPROACH
 MATCH EXISTING

PI STA
 257+07.03 BK=
 256+93.23

BRG. ABUT. NO. 1
 STA. 257+94.00
 F.G. 354.25

PIER
 STA 258+72.00
 F.G. 354.85

BEARING ABUT. NO. 2
 STA 259+50.00
 F.G. 355.44
 259+66.04

STA 261+25.00
 END APPROACH
 MATCH EXISTING

DETECTABLE WARNING SURFACE
 257+79 LT & RT
 259+61 LT
 259+76 RT

M CURVE DATA NO. 2
 DELTA = 30°30'13" LT.
 D = 28°38'52"
 R = 200.00'
 T = 54.53'
 L = 106.48' Δ
 E = 7.30'

SPECIAL PROVISION (BOX BEAM GUARDRAIL, PAINTED)
 259+47 RT - 259+71.67 RT

CONSTRUCT DRIVE WITH PAVED APRON
 257+68 RT

VERTICAL GRANITE CURB
 256+60.00 RT - 257+50.43 RT
 256+61.34 LT - 256+87.39 LT (MEDIAN ISLAND)
 256+65.31 - 257+29.22 (MEDIAN ISLAND)
 257+71.48 LT - 257+95.79 LT
 257+82.14 RT - 257+90.24 RT

CAST-IN-PLACE CONCRETE CURB, TYPE B
 259+54.20 LT - 259+61.60 LT
 259+47.80 RT - 259+77.00 RT

REMOVAL AND DISPOSAL OF GUARDRAIL
 259+48 RT - 259+73 RT

BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS
 256+73 LT - 256+87.50 LT

SPECIAL PROVISION, (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)
 257+97 LT - 259+54 LT
 257+90 RT - 259+47 RT

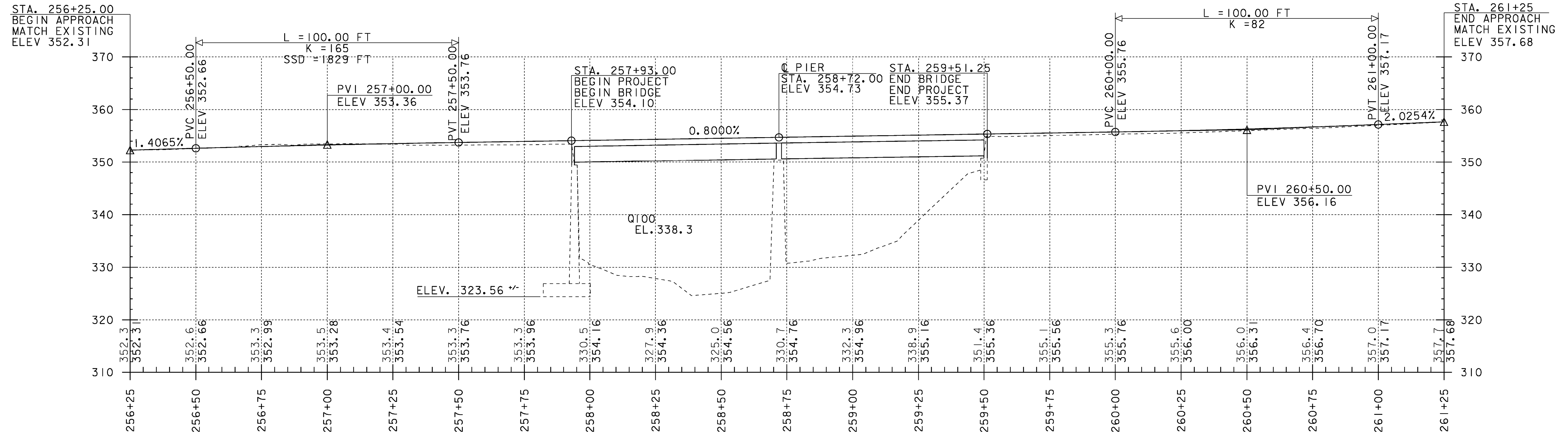
PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
 256+60 RT - 257+89.80 RT
 257+71.50 LT - 257+96 LT
 259+47.80 RT - 259+77.00 RT
 259+54.20 LT - 259+61.60 LT



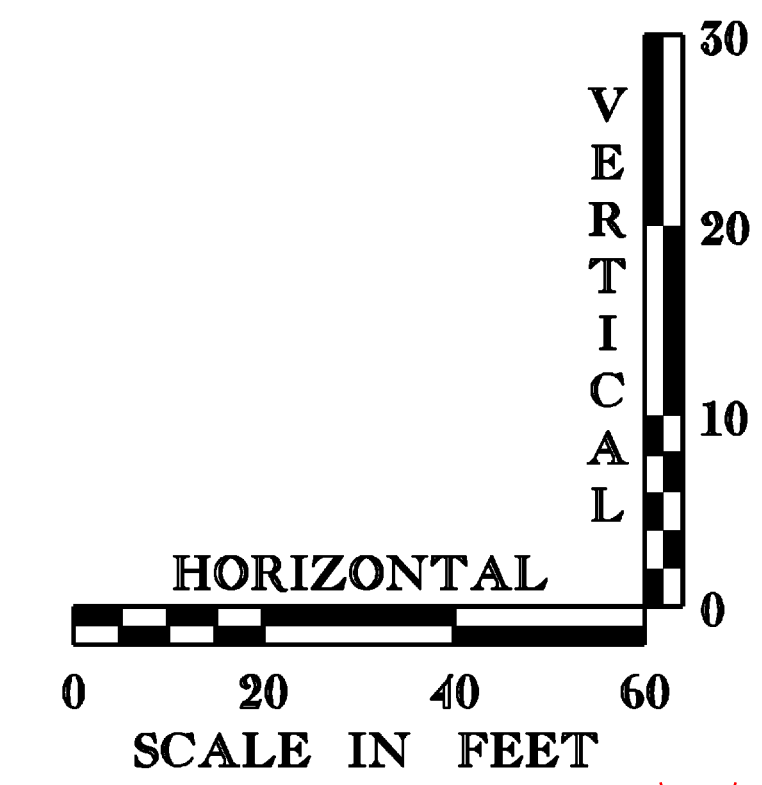
REV.	BY	DATE	DESCRIPTION
Δ	DRP	4/24/09	REVISED LENGTH (L) OF CURVE NO. 2
Δ	DRP	4/27/09	REVISED LENGTH (L) OF CURVE NO. 1
Δ	LBB	5/26/09	REVISED ELEVATIONS

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2 (14)
FILE NAME:	006j004/str/s06j004bdr.dgn
PLOT DATE:	03-APR-2012 11:20
PROJECT LEADER:	R. WHITCOMB
DRAWN BY:	D. PETERSON
DESIGNED BY:	D. PETERSON
CHECKED BY:	C. CARLSON
LAYOUT SHEET	SHEET 10 OF 72

VT III



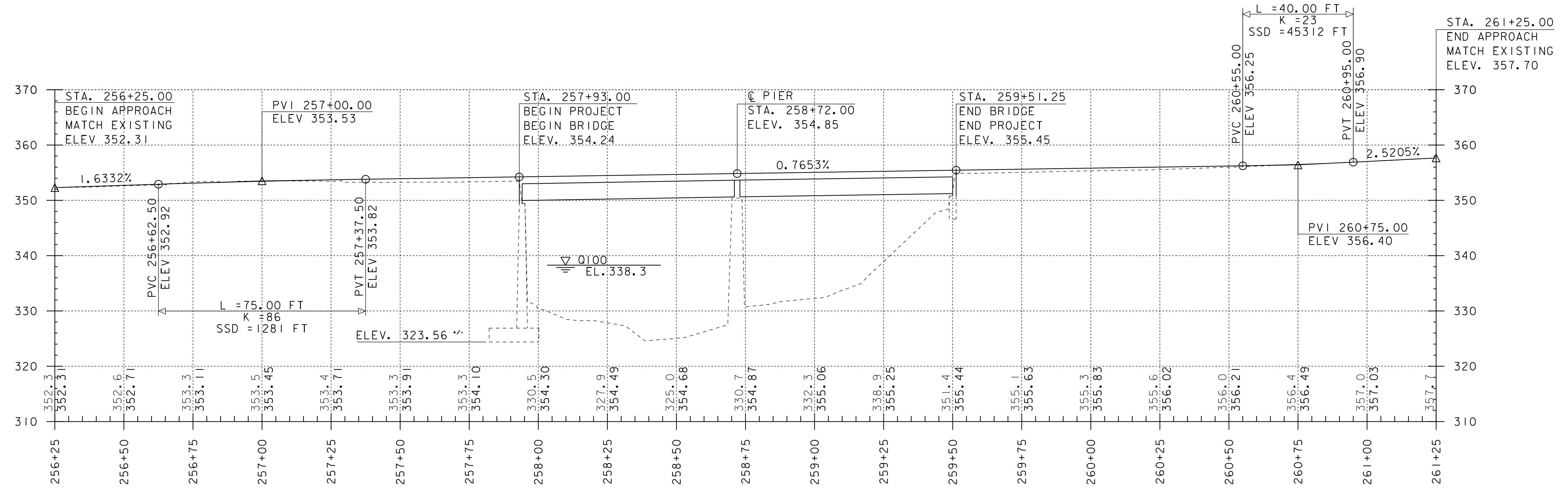
GRADES SHOWN TO THE NEAREST TENTH ARE OLD
 GROUND ALONG THE MAINLINE. GRADES SHOWN
 TO THE NEAREST HUNDREDTH ARE FINISH GRADE
 ALONG THE MAINLINE.



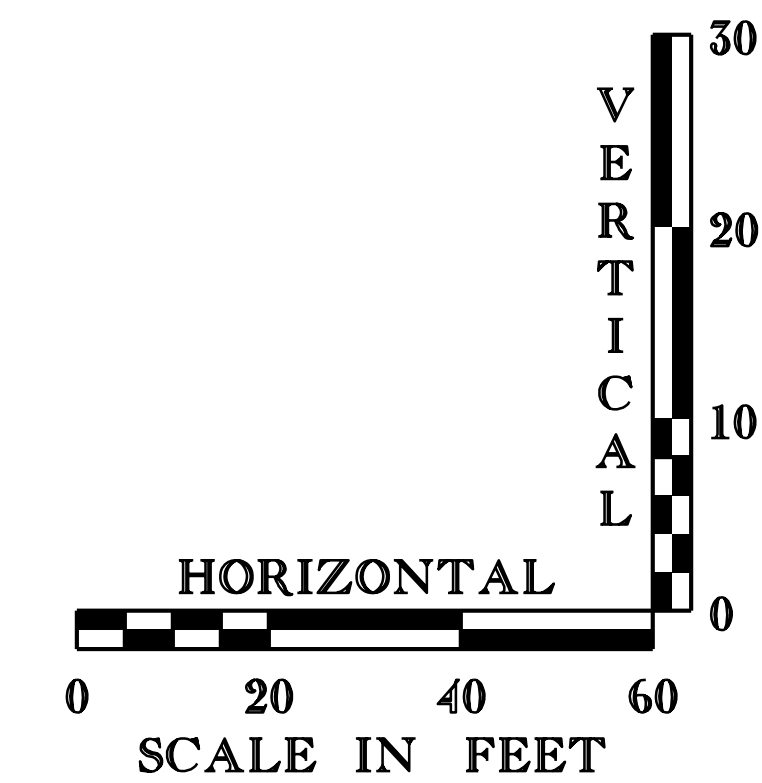
VOID
 SEE REVISED
 SHEET

PROJECT NAME: SPRINGFIELD	
PROJECT NUMBER: BHF 016-2(14)	
FILE NAME: 06j004/str/s06j004xsl.dgn	PLOT DATE: 04-MAR-2009
PROJECT LEADER: R. WHITCOMB	DRAWN BY: D. PETERSON
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
PROFILE SHEET	SHEET II OF 72

VT 11

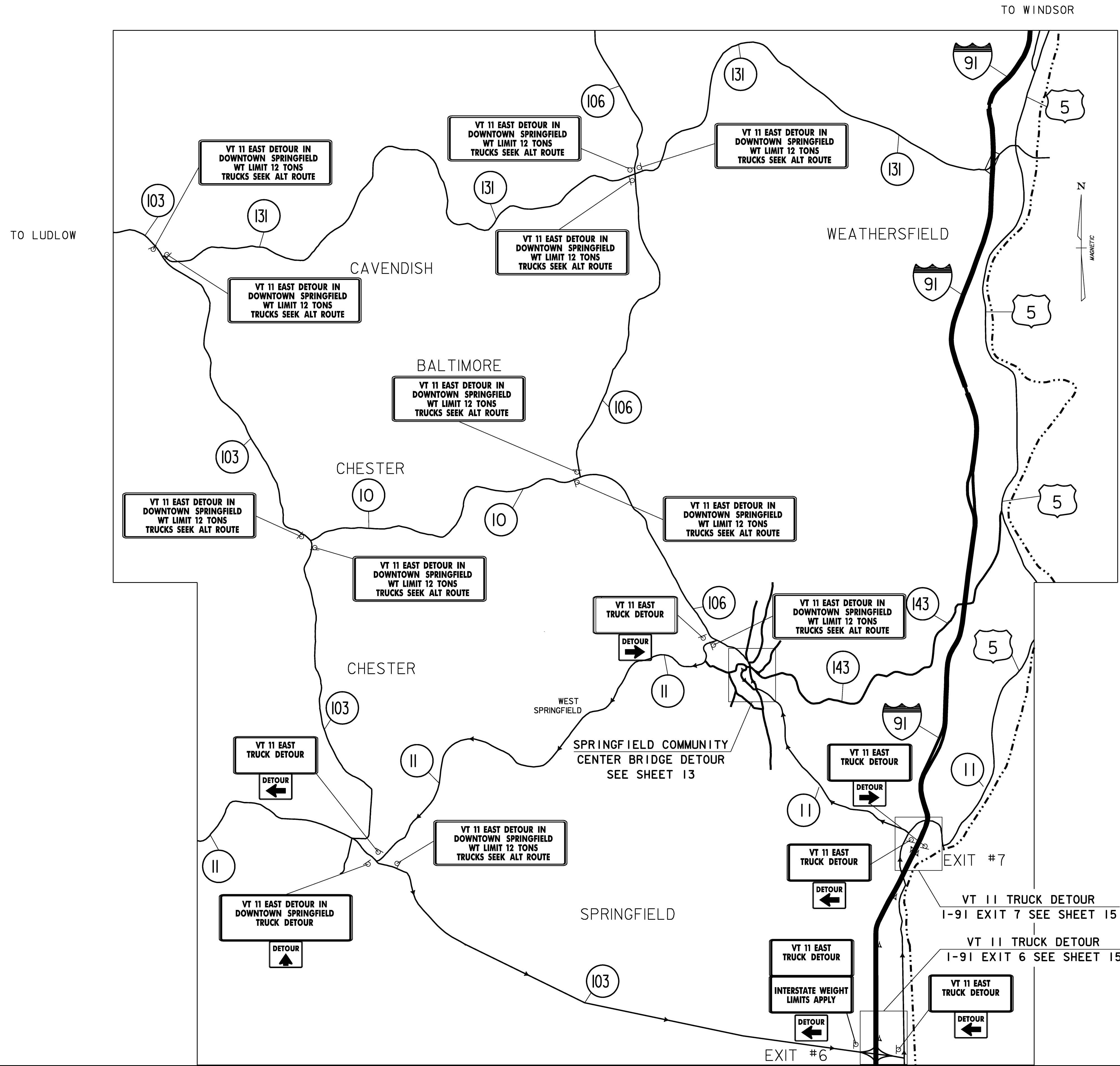


GRADES SHOWN TO THE NEAREST TENTH ARE OLD GROUND ALONG THE MAINLINE. GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG THE MAINLINE.

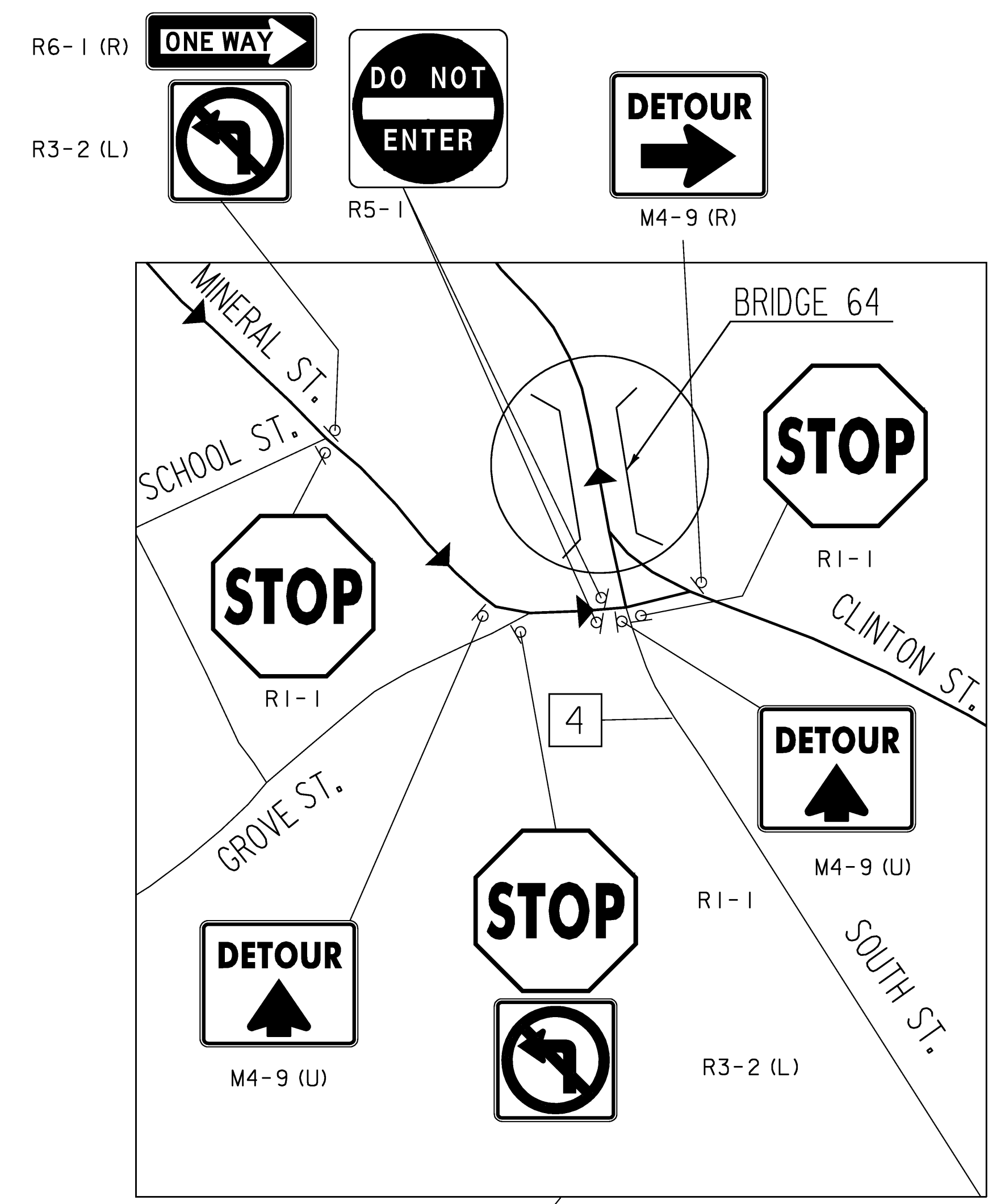
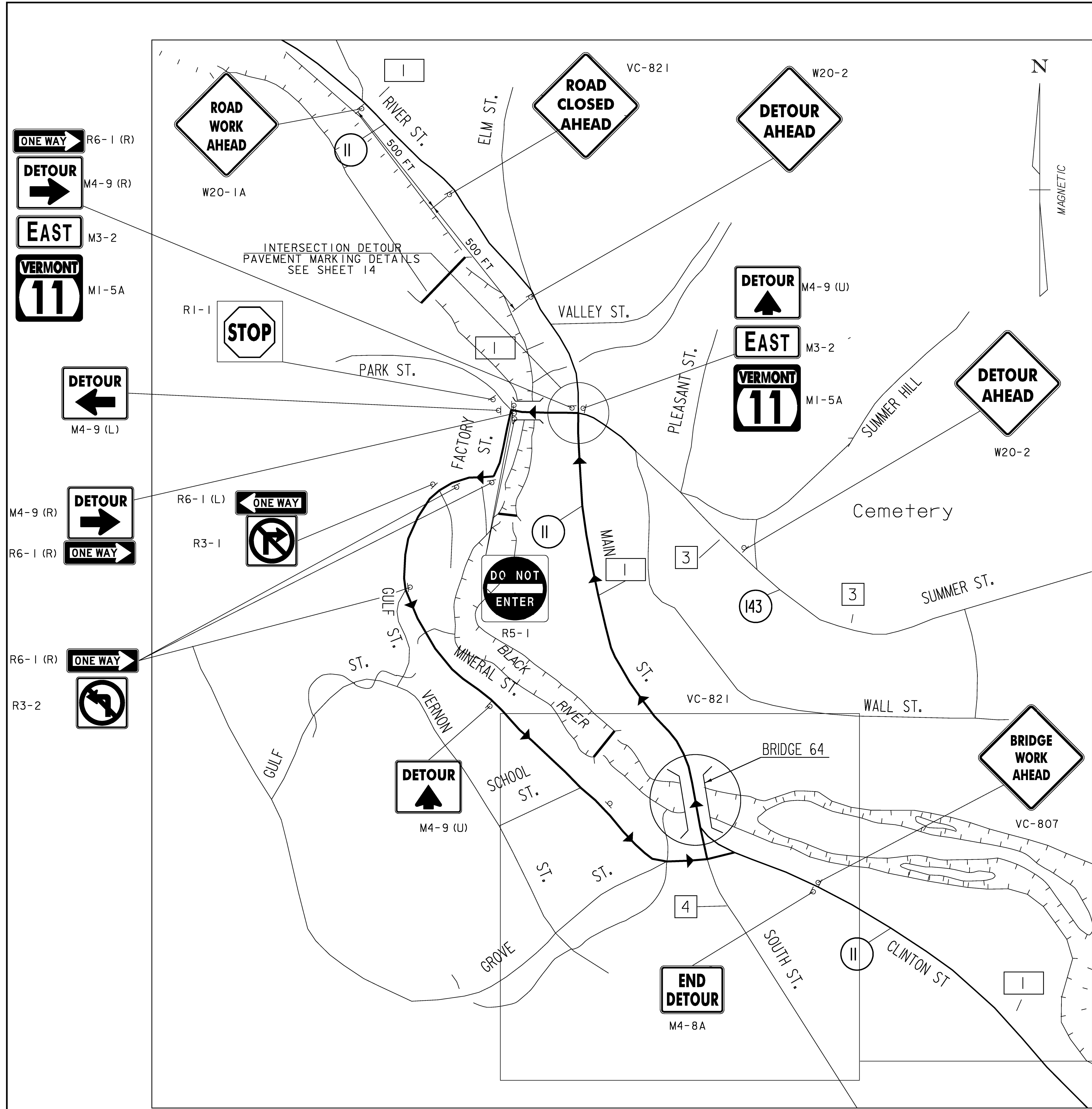


REV.	BY	DATE	REVISION
△	LBB	5/26/09	REVISED FINISH GRADE

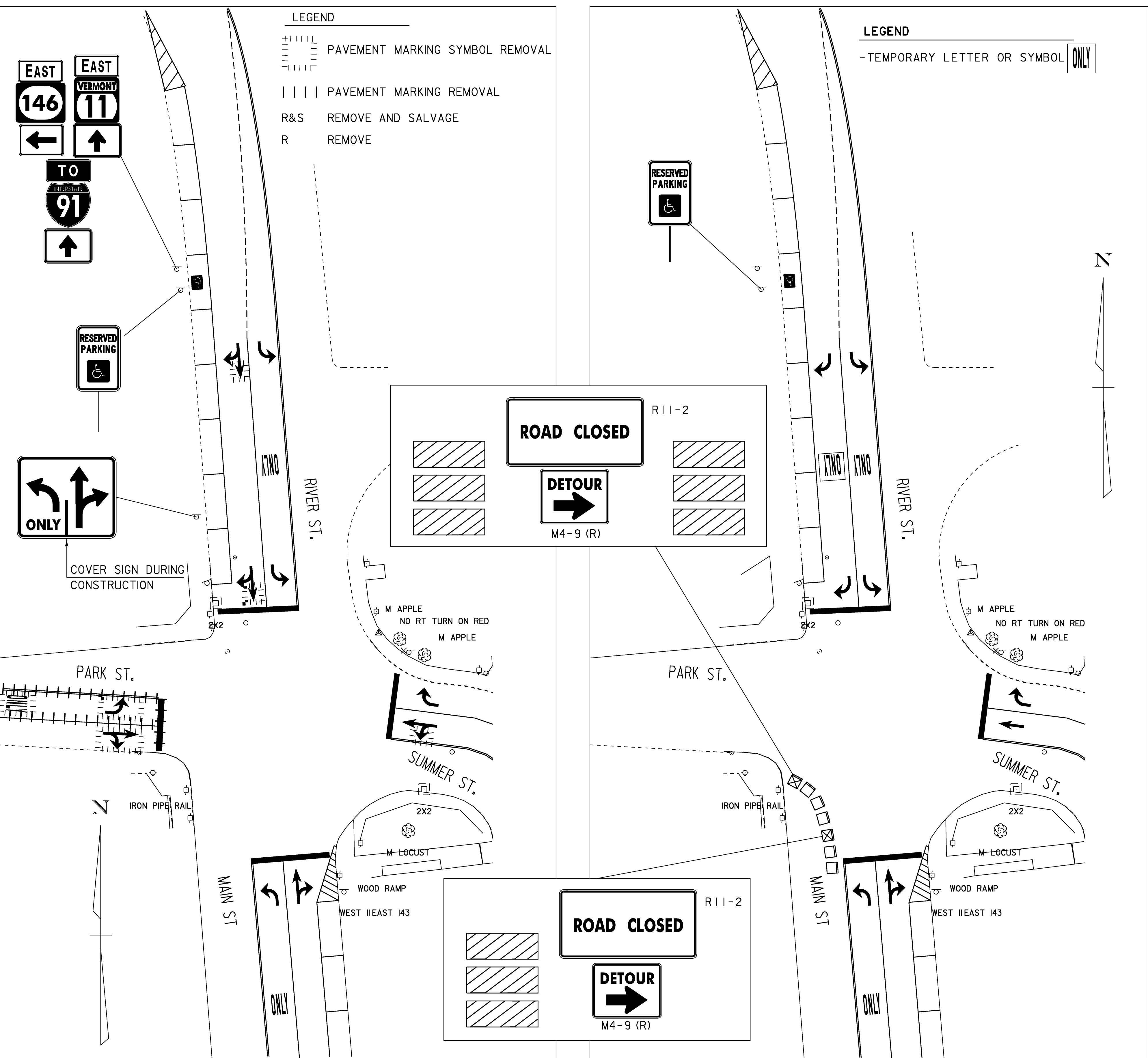
PROJECT NAME: SPRINGFIELD	PLOT DATE: 03-APR-2012 11:20
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: C. CARLSON
FILE NAME: s06j004gen.dgn	CHECKED BY: D. PETERSON
DESIGNED BY: C. CARLSON	SHEET 11 OF 72
GENERAL NOTES	



PROJECT NAME: SPRINGFIELD	
PROJECT NUMBER: BHF 016-2 (14)	
FILE NAME: 06J004/str/s06J004det.dgn	PLOT DATE: 04-MAR-2009
PROJECT LEADER: R. WHITCOMB	DRAWN BY: D. PETERSON
DESIGNED BY: D. PETERSON	CHECKED BY: C. CARLSON
TRAFFIC CONTROL SHEET 1	SHEET 12 OF 72

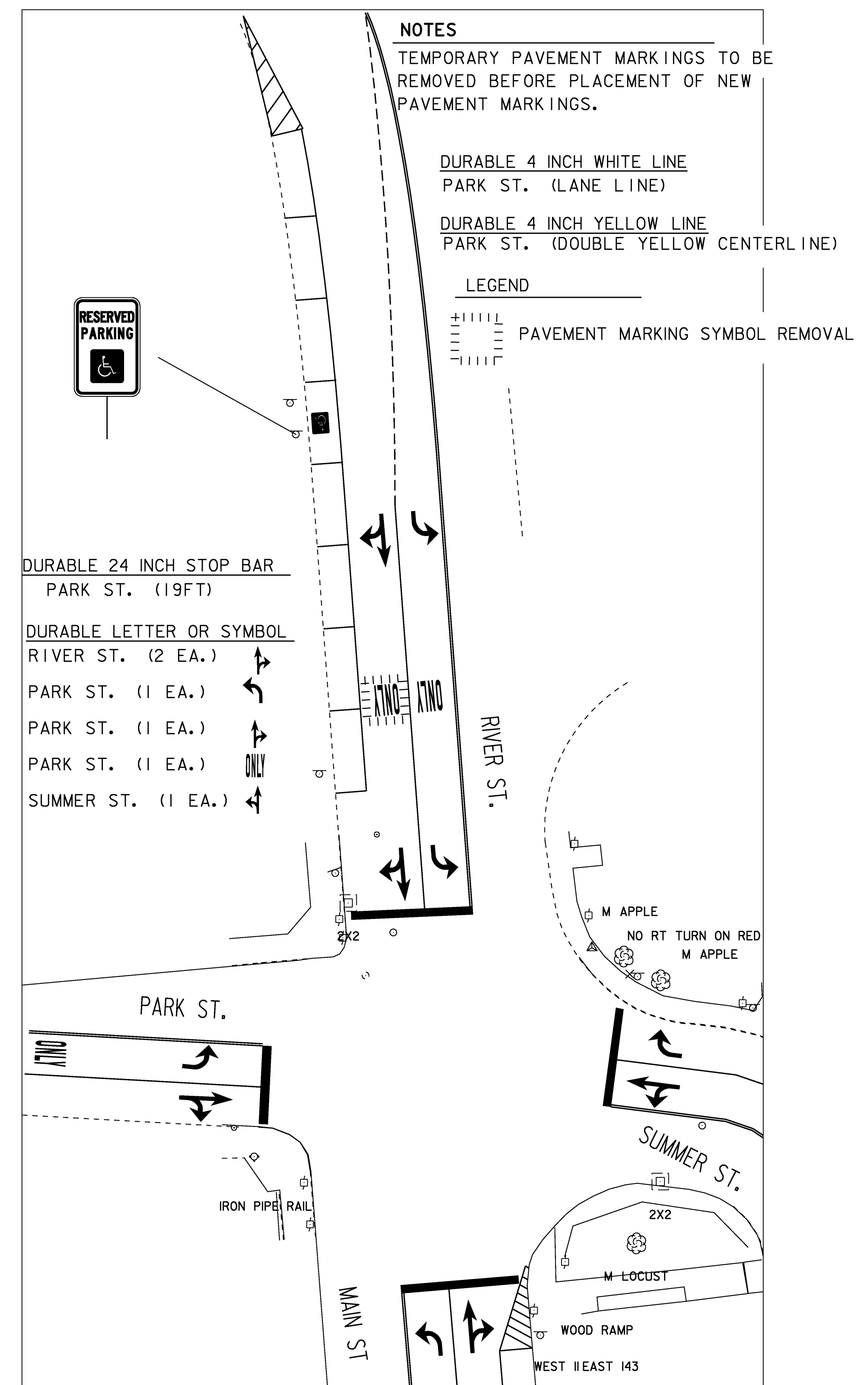


PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2 (14)
 FILE NAME: 06J004/str/s06J004det.dgn PLOT DATE: 04-MAR-2009
 PROJECT LEADER: R. WHITCOMB DRAWN BY: D. PETERSON
 DESIGNED BY: D. PETERSON CHECKED BY: C. CARLSON
 TRAFFIC CONTROL SHEET 2 SHEET 13 OF 72



EXISTING PAVEMENT MARKING AND SIGN LAYOUT

CONSTRUCTION PAVEMENT MARKING AND SIGN LAYOUT

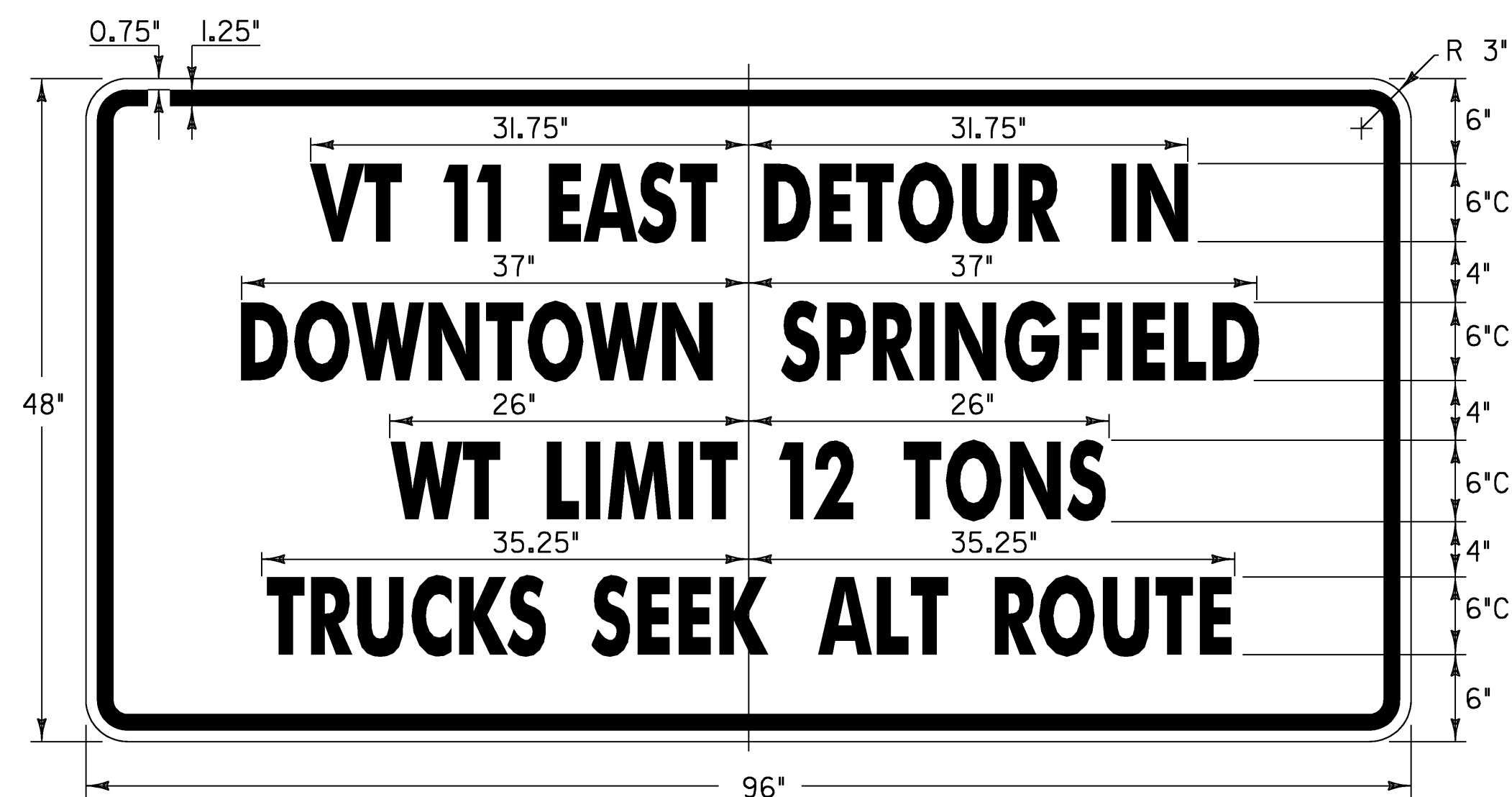


FINAL PAVEMENT MARKING AND SIGN LAYOUT

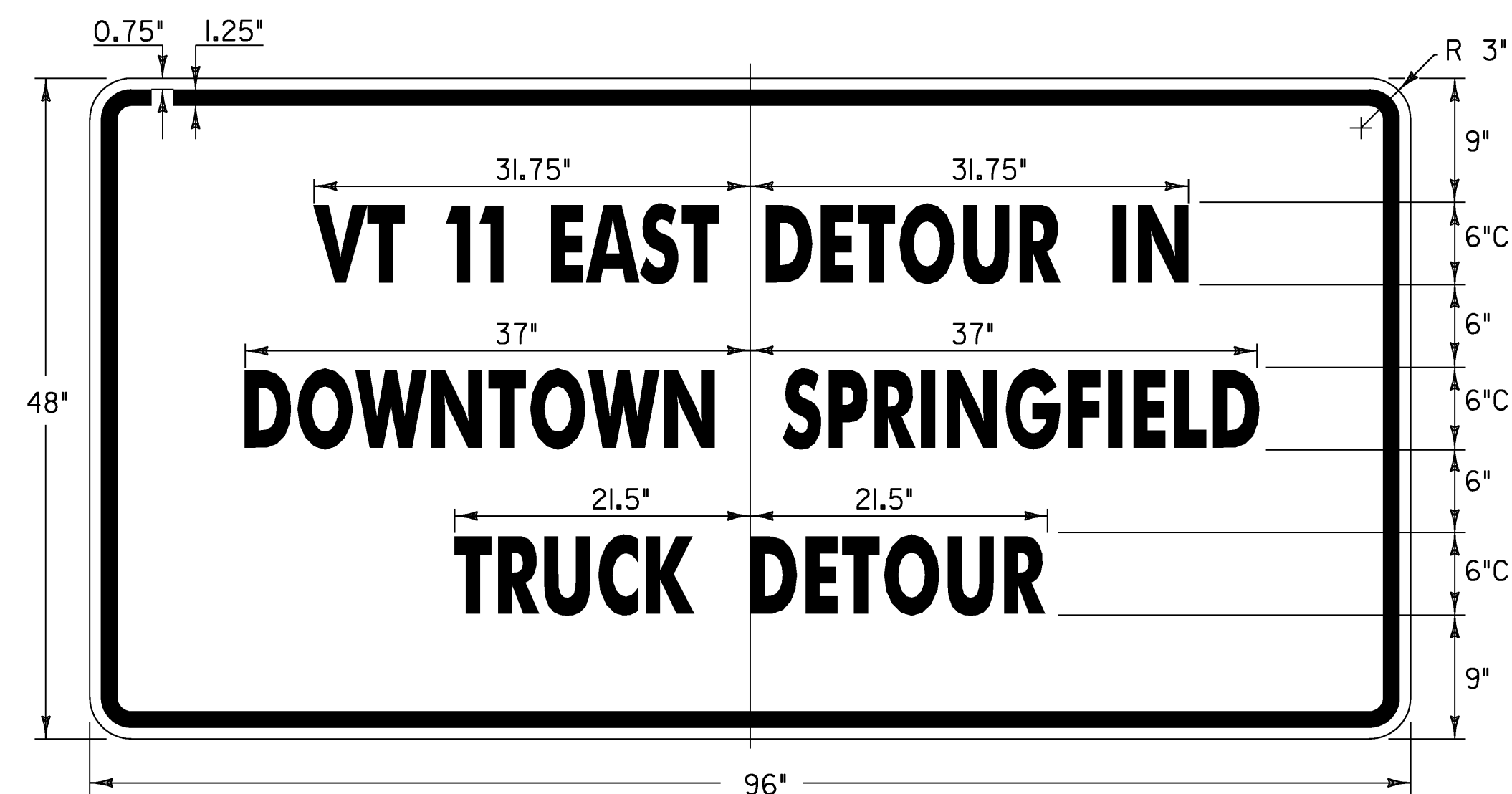
PROJECT NAME: SPRINGFIELD	PLOT DATE: 04-MAR-2009
PROJECT NUMBER: BHF 016-2 (14)	DRAWN BY: D. PETERSON
FILE NAME: 06J004/str/s06J004det.dgn	CHECKED BY: C. CARLSON
PROJECT LEADER: R. WHITCOMB	SHEET 14 OF 72
DESIGNED BY: D. PETERSON	
TRAFFIC CONTROL SHEET 3	

NTS

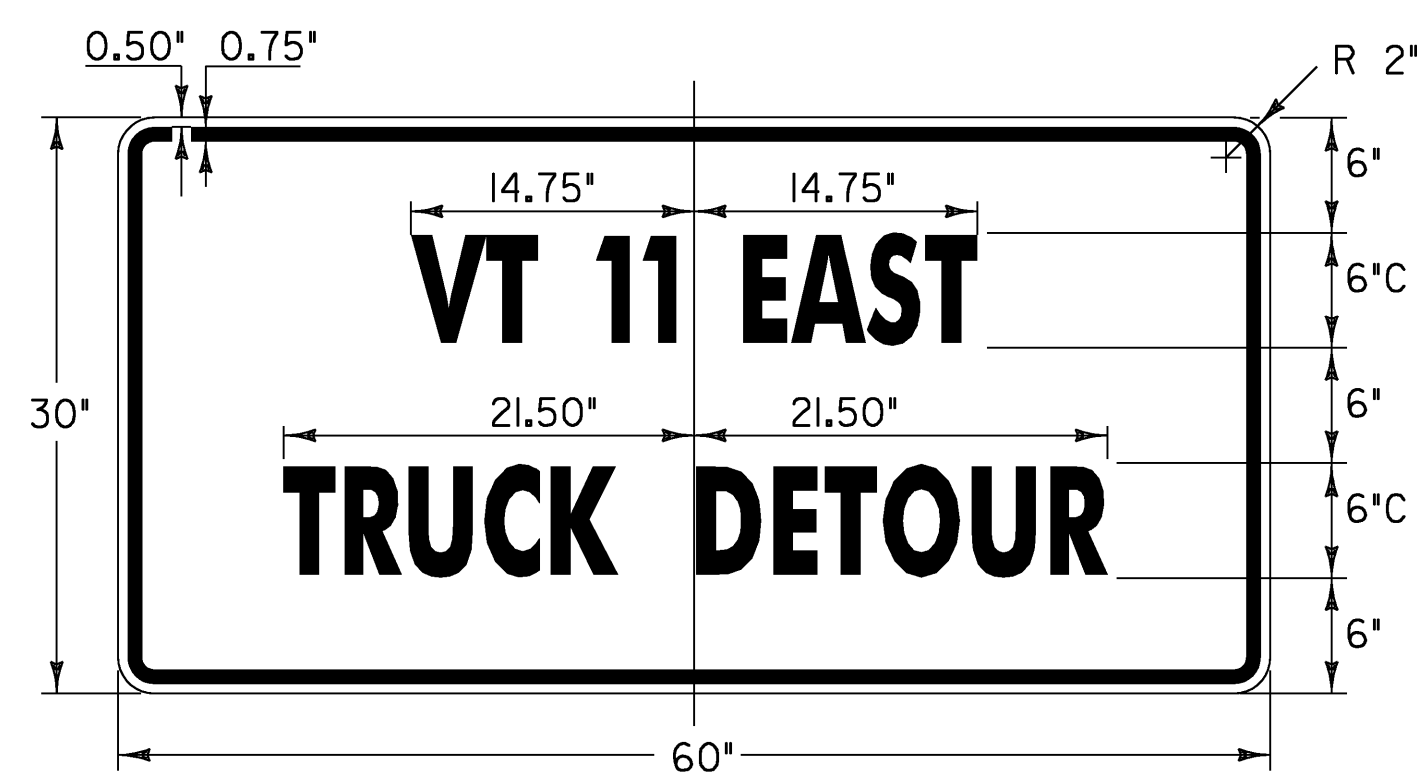
QUANTITY OF SIGNS	SIGN LEGEND	SIGN DIMENSIONS		FLANGED CHANNEL lbs/ft
		WIDTH (In)	HEIGHT (In)	
11	VT 11 EAST DETOUR IN DOWNTOWN SPRINGFIELD WT LIMIT 12 TONS TRUCKS SEEK ALT ROUTE	96	48	x
1	VT 11 EAST DETOUR IN DOWNTOWN SPRINGFIELD TRUCK DETOUR	96	48	x
6	VT 11 EAST TRUCKS DETOUR	60	30	x
1	INTERSTATE WEIGHT LIMITS APPLY	60	30	x
2	ROAD CLOSED R11-2	60	30	x
1	ROAD WORK AHEAD W20-1A	36	36	x
2	DETOUR AHEAD W20-2	36	36	x
1	ROAD CLOSED AHEAD W20-3	36	36	x
1	BRIDGE WORK AHEAD VC-807	36	36	x
1	BRIDGE CLOSED AHEAD VC-821	36	36	x
1	BRIDGE CLOSED 500 FT VC-821	36	36	x
5	DETOUR M4-9(U)	30	24	x
8	DETOUR M4-9(R)	30	24	x
5	DETOUR M4-9(L)	30	24	x
2	END DETOUR M4-8A	24	18	x
4	VERMONT 11 MI-6A	24	24	x
3	EAST M3-2	24	12	x
1	WEST M3-4	24	12	x
5	STOP RI-1	30	30	x
5	R3-2	24	24	x
6	DO NOT ENTER R5-1	30	30	x



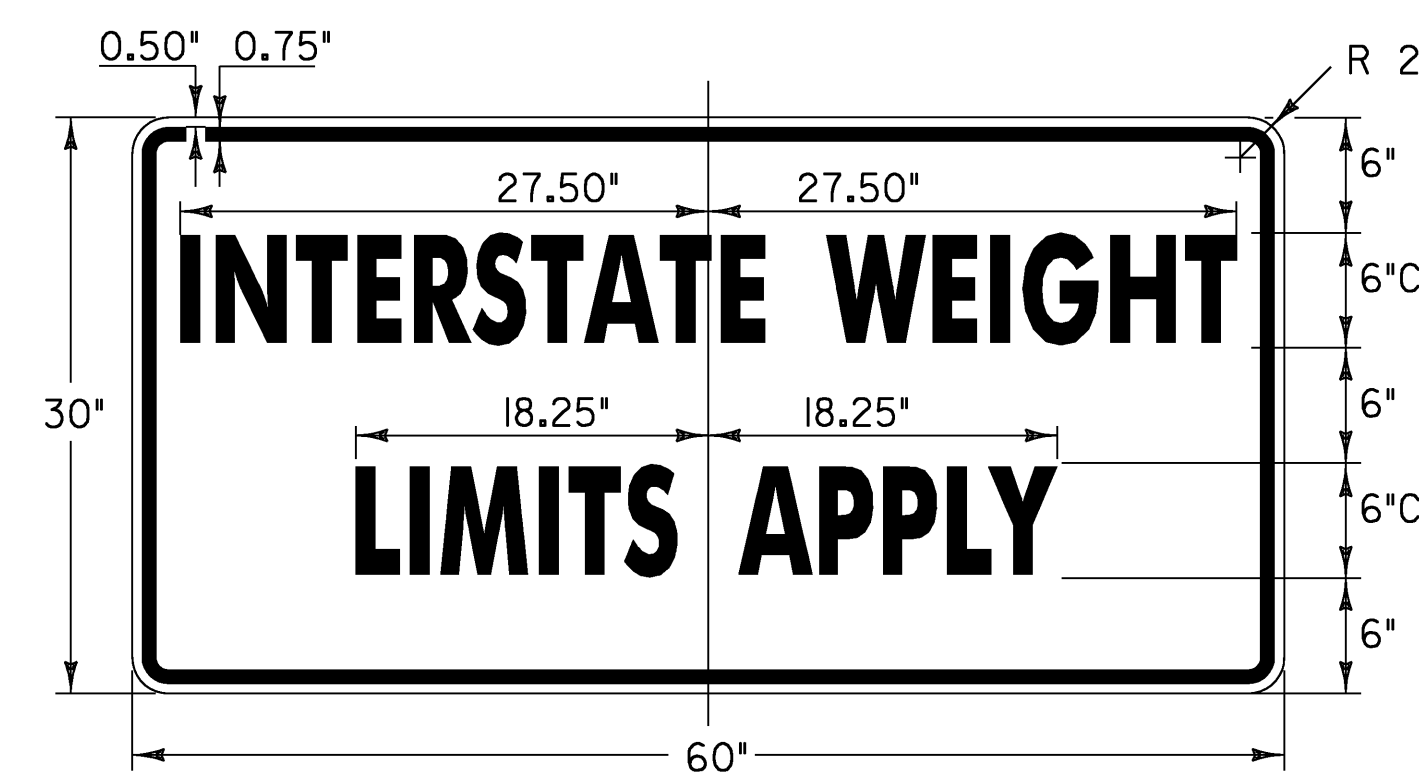
BLACK TEXT & BORDER WITH ORANGE BACKGROUND



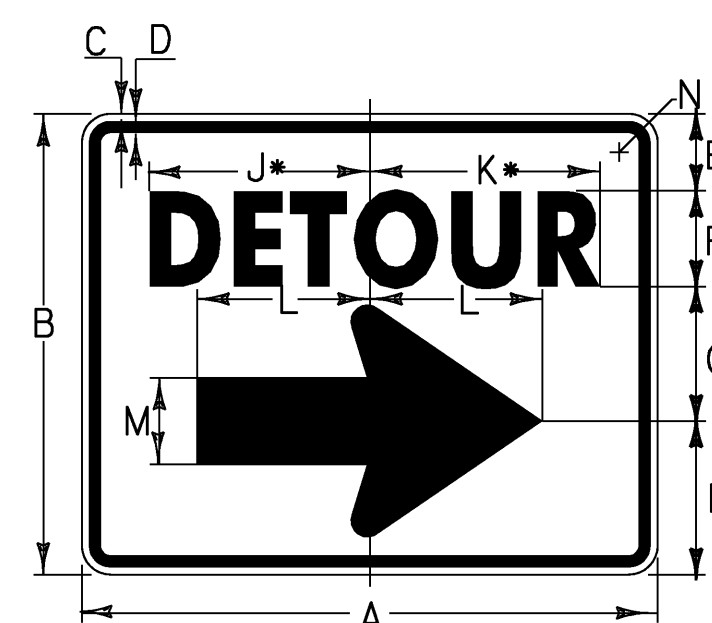
BLACK TEXT & BORDER WITH ORANGE BACKGROUND



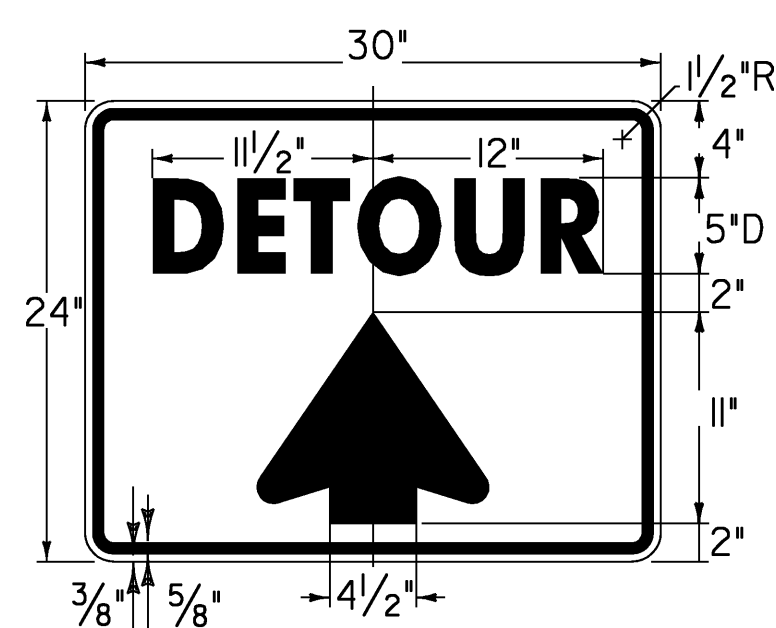
BLACK TEXT & BORDER WITH ORANGE BACKGROUND



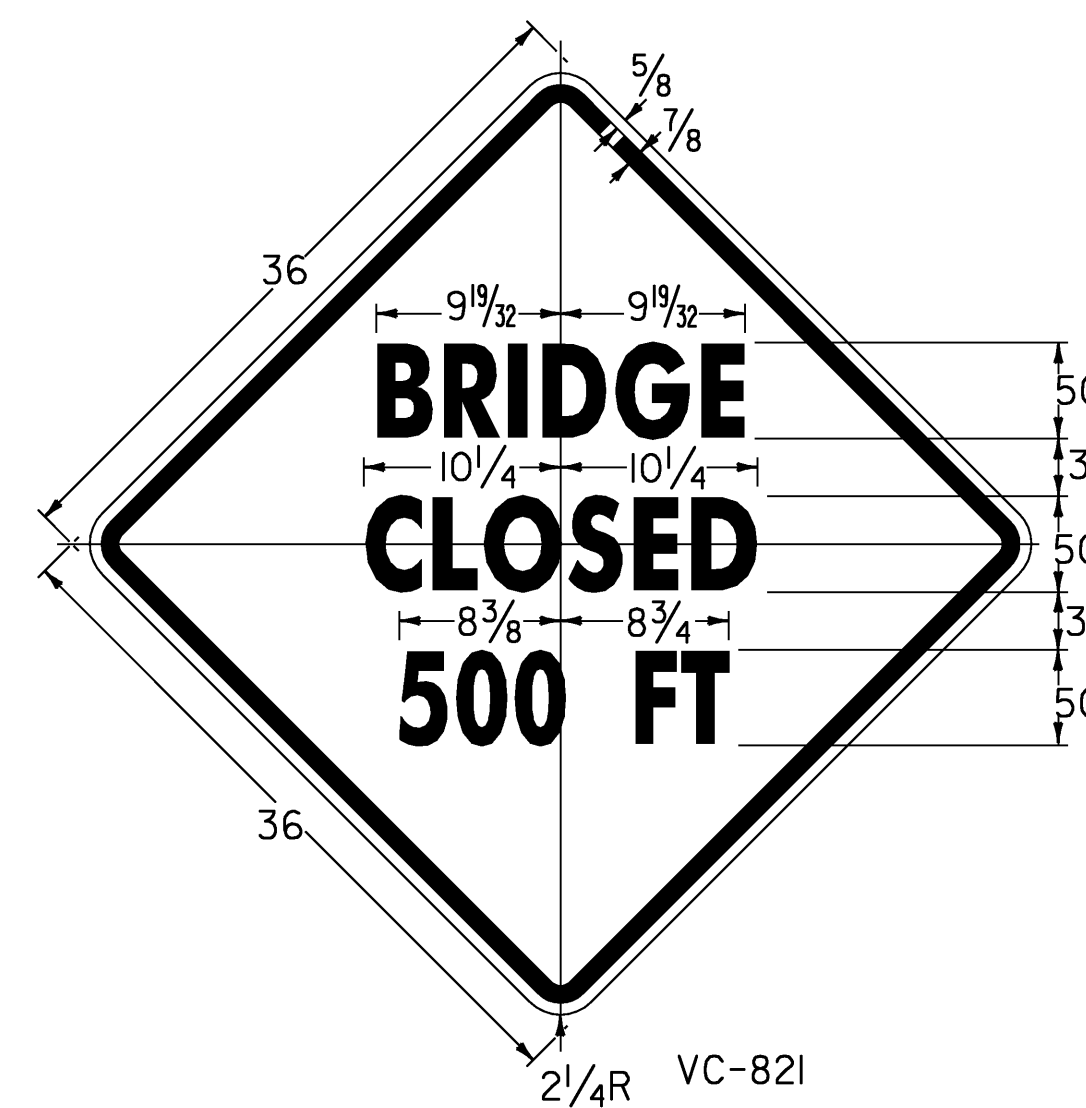
BLACK TEXT & BORDER WITH ORANGE BACKGROUND



M4-9(R) BLACK TEXT & BORDER WITH ORANGE BACKGROUND



M4-9(U) BLACK TEXT & BORDER WITH ORANGE BACKGROUND



COLORS: BLACK BORDER AND TEXT NON (REFL.) ORANGE BACKGROUND (REFL.)

SIGN	DIMENSIONS (INCHES)												
	A	B	C	D	E	F	G	H	J	K	L	M	N
STD.	30	24	3/8	5/8	4	5D	7	8	11 1/2	12	9	4 1/2	1 1/2
SPECIAL	48	36	5/8	7/8	6	8D	10	12	19 1/2	20 1/4	13 1/2	7	2 1/4
SPECIAL	60	48	3/4	1 1/4	8	10D	14	16	23	24	18	9	3

* REDUCE SPACING 40%

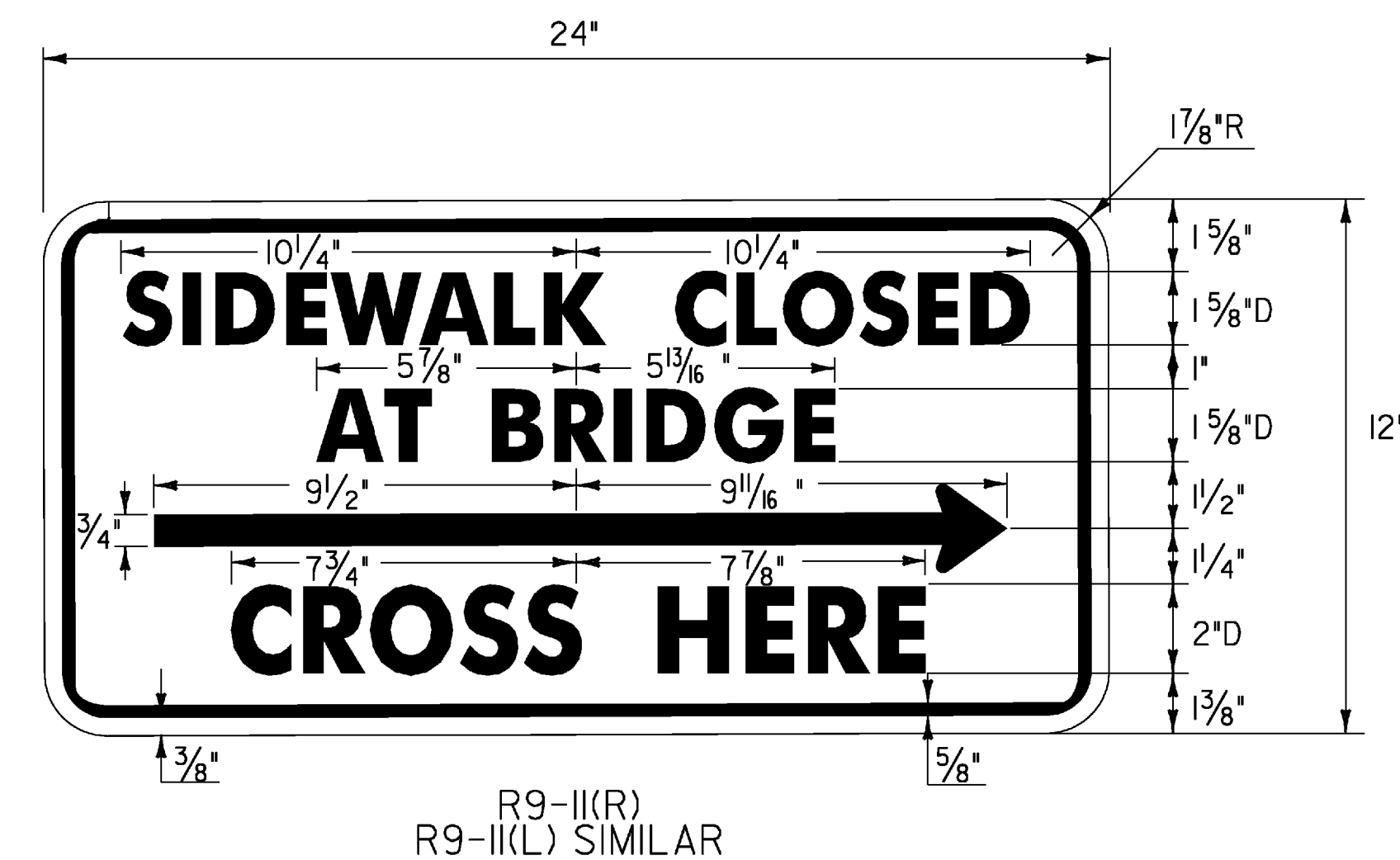
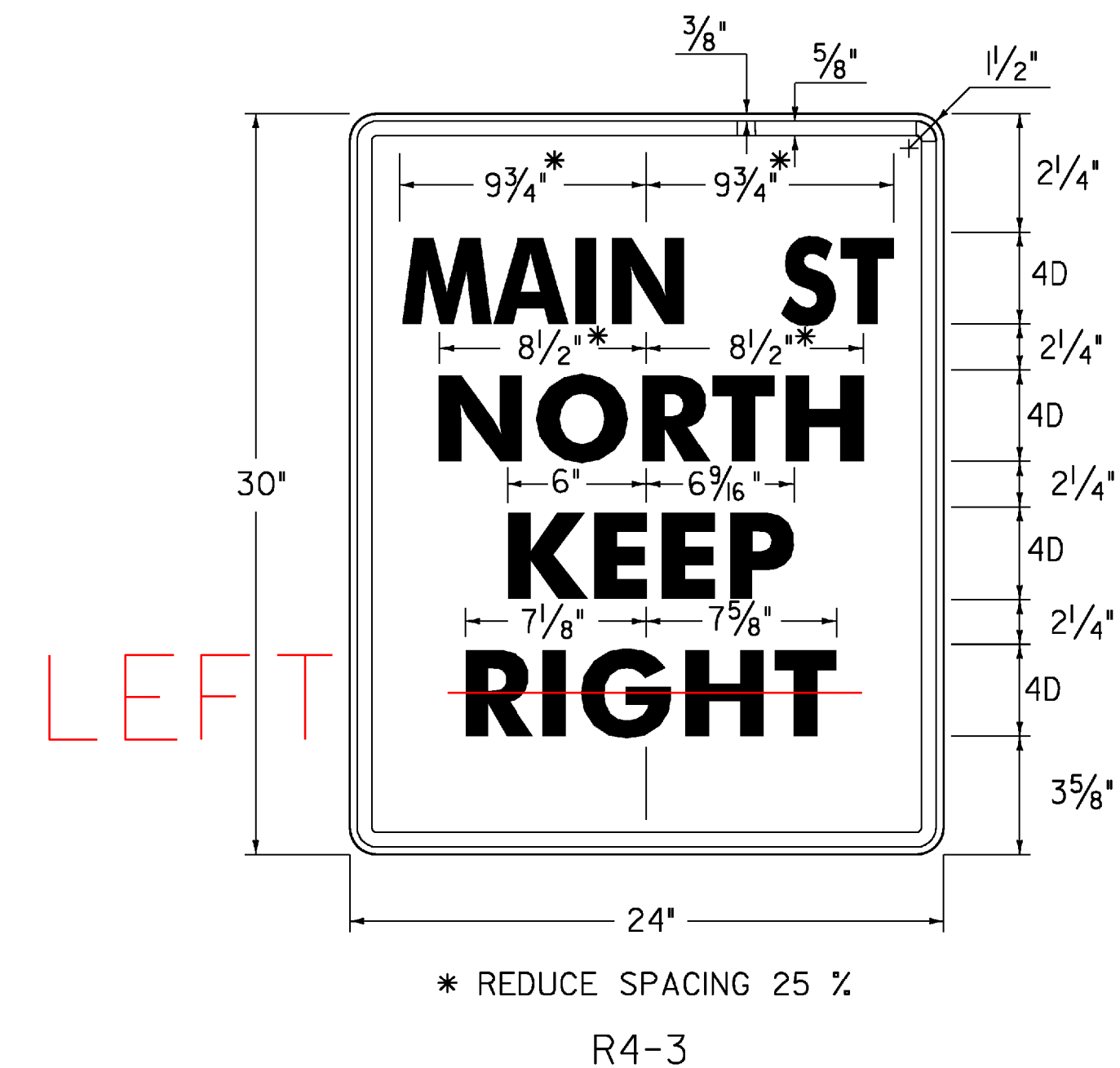
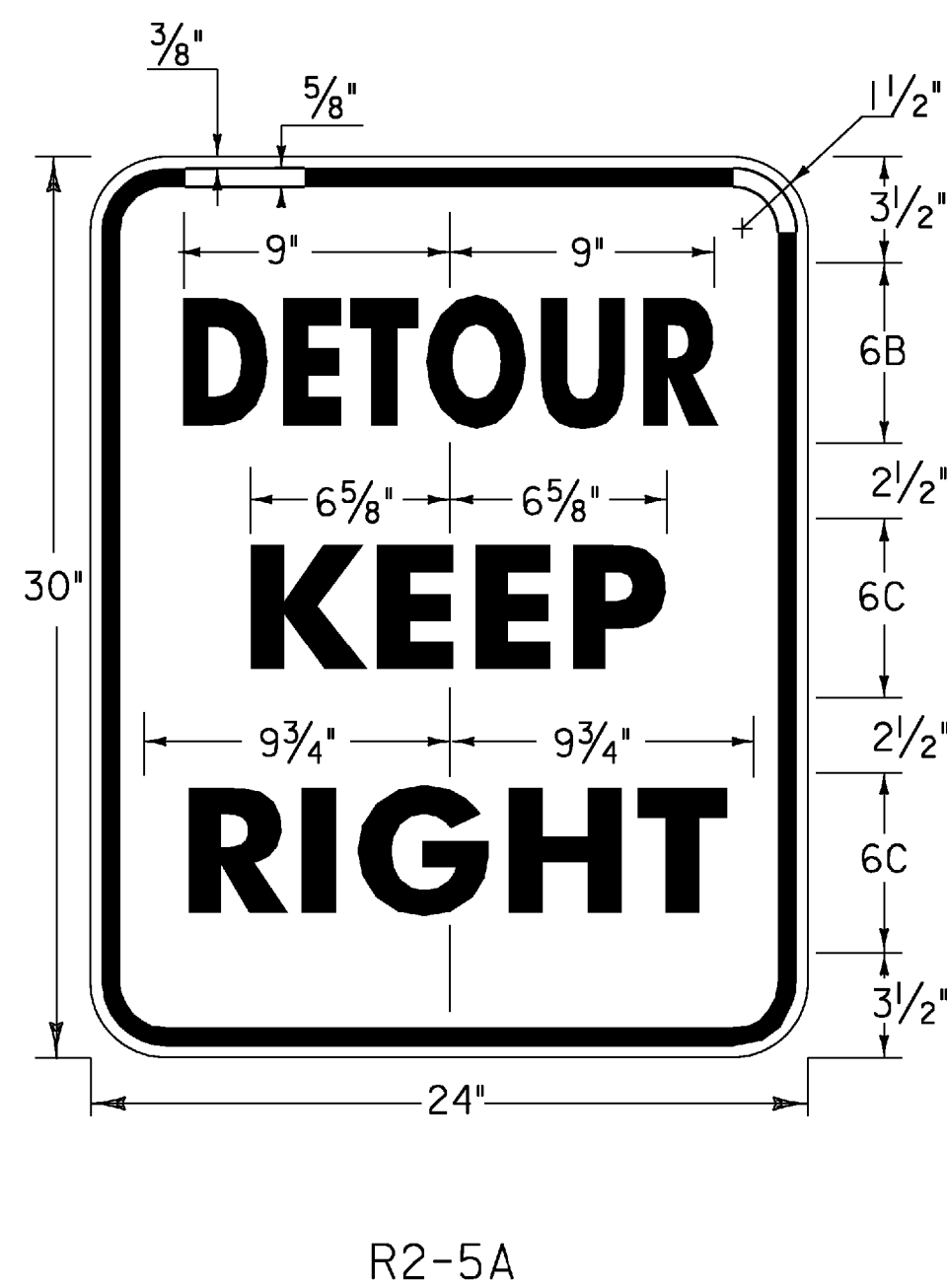
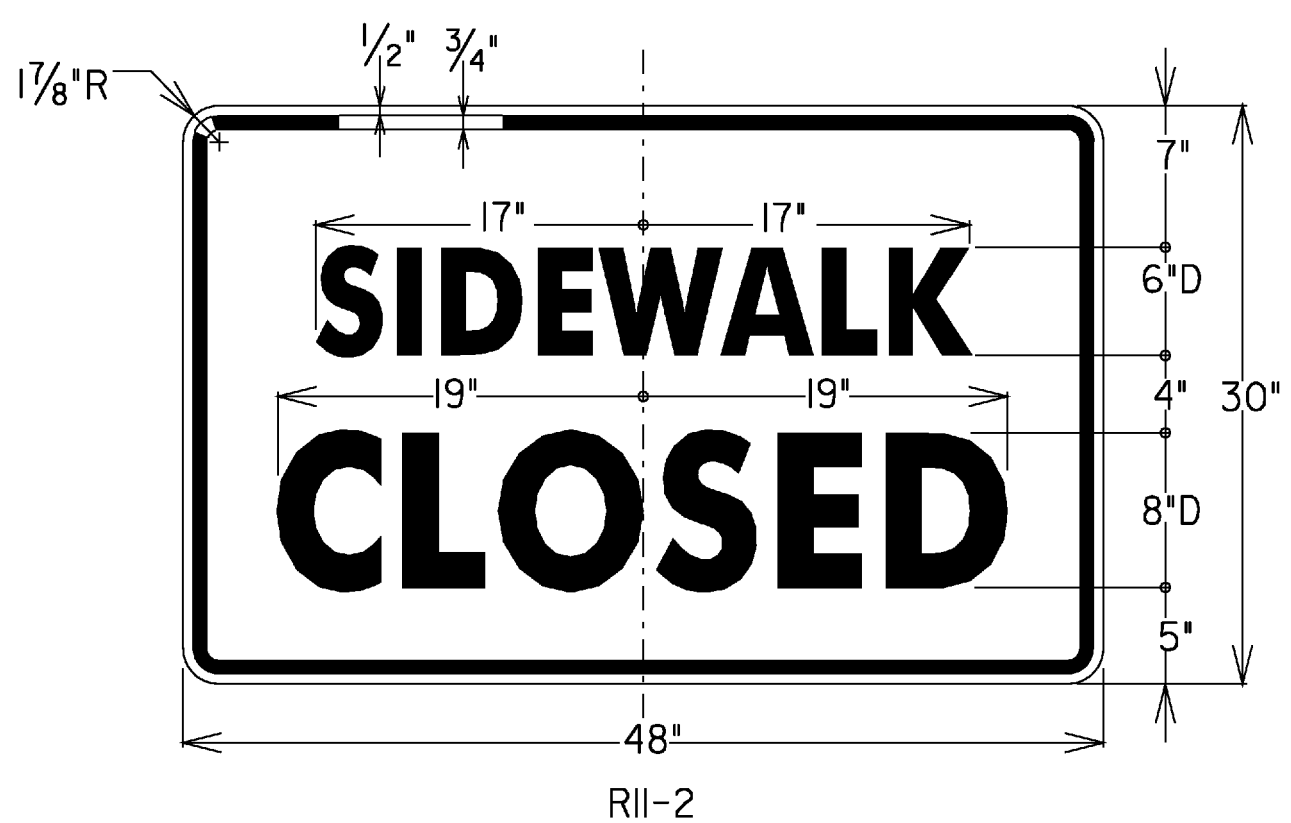
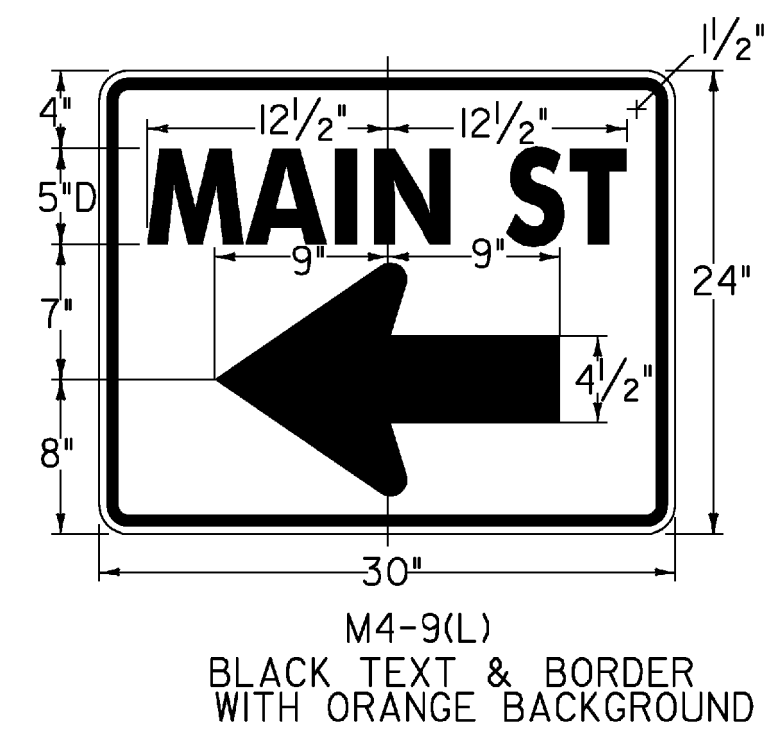
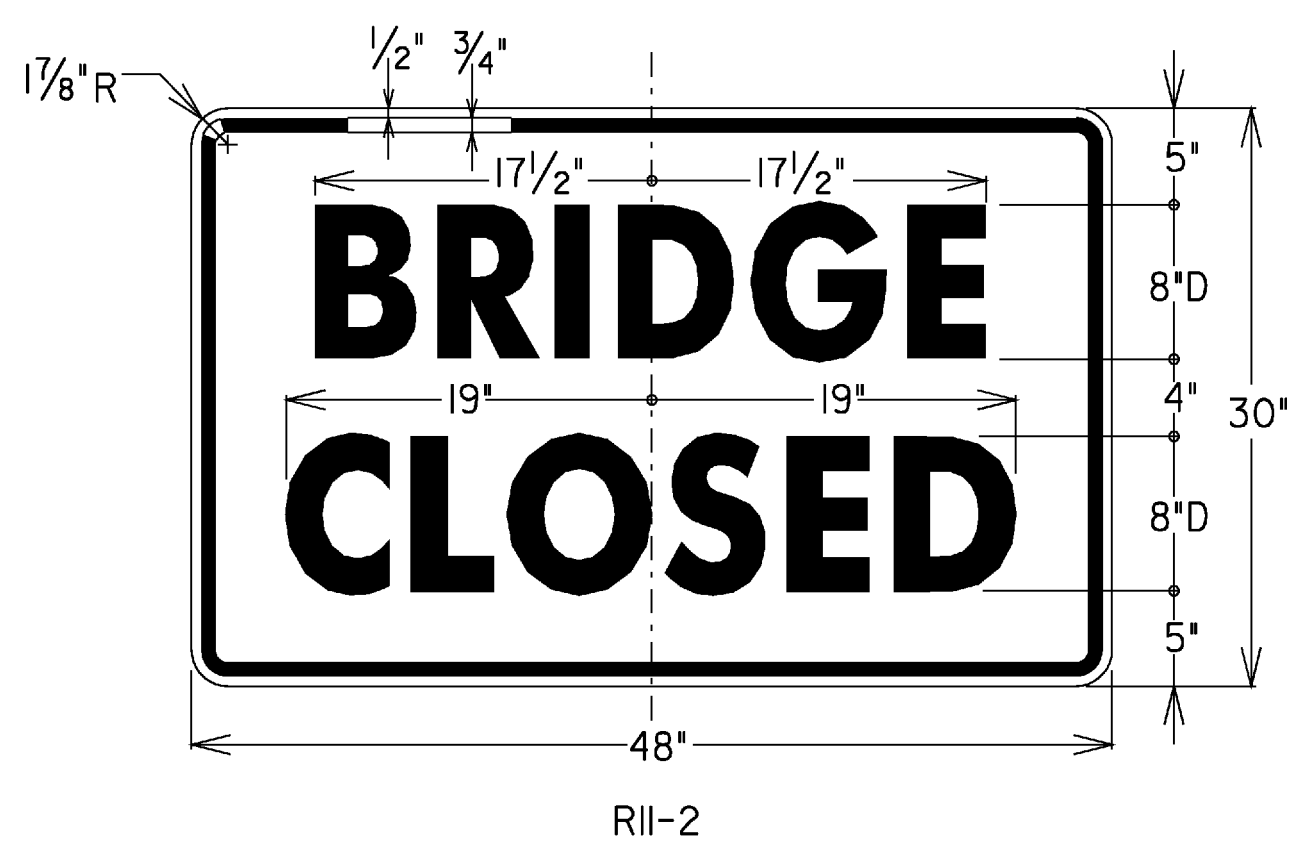
PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2(14)

FILE NAME: 06J004/Str/s06J004def.dgn
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. CARLSON
DETOUR SIGN SUMMARY SHEET #1

PLOT DATE: 19-MAR-2009
DRAWN BY: D. PETERSON
CHECKED BY: C. CARLSON
SHEET 16 OF 72

QUANTITY OF SIGNS	SIGN LEGEND	SIGN DIMENSIONS		FLANGED CHANNEL lbs/ft
		WIDTH (in)	HEIGHT (in)	
1	R6-I(L)	36	12	x
6	R6-I(R)	36	12	x
1	M6-2R	24	24	x
3	W11-2 (FLUORESCENT YELLOW GREEN)	30	30	x
3	W16-7P (FLUORESCENT YELLOW GREEN)	24	12	x
1	R9-II(R)	24	12	x
2	R9-II(L)	24	12	x
1	R11-2	60	30	x
2	R11-2	60	30	x
1	M4-9(L)	30	24	x
1	R4-3	24	30	x
1	R2-5A	24	30	x
21	E-107a M			

SEE STD. E-121M FOR SIGN PLACEMENT

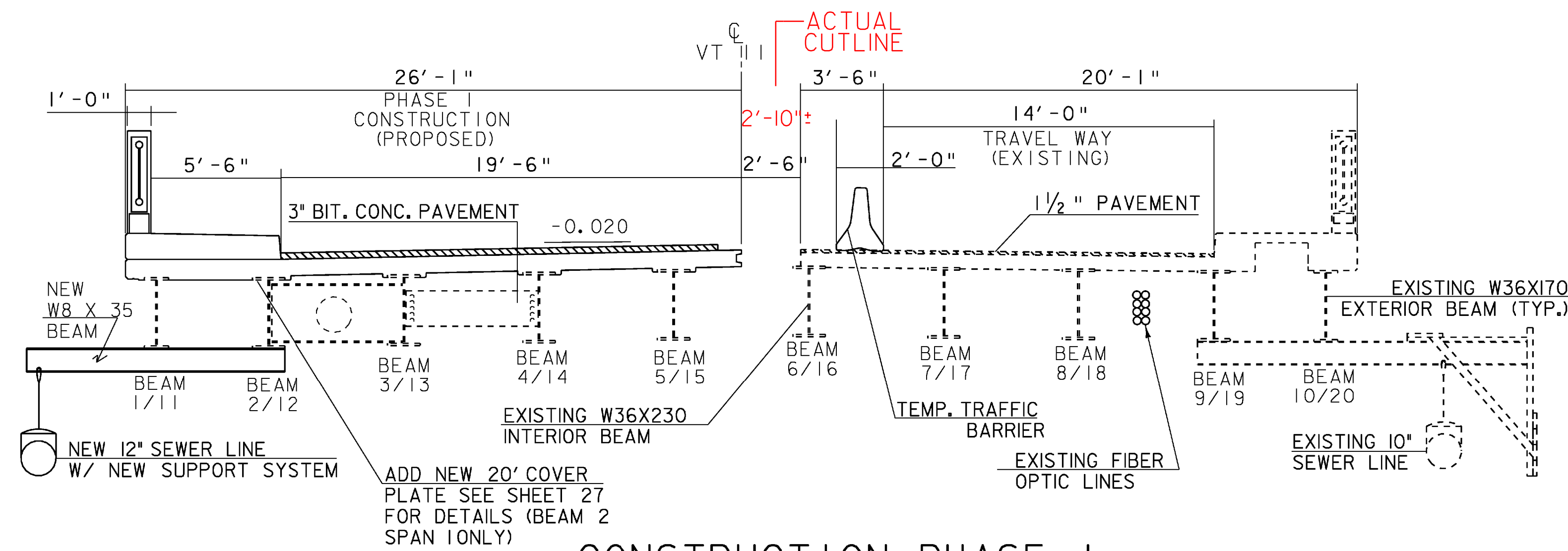


PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2(14)

FILE NAME: 06J004/Str/s06J004det.dgn
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. CARLSON
DETOUR SIGN SUMMARY SHEET #2

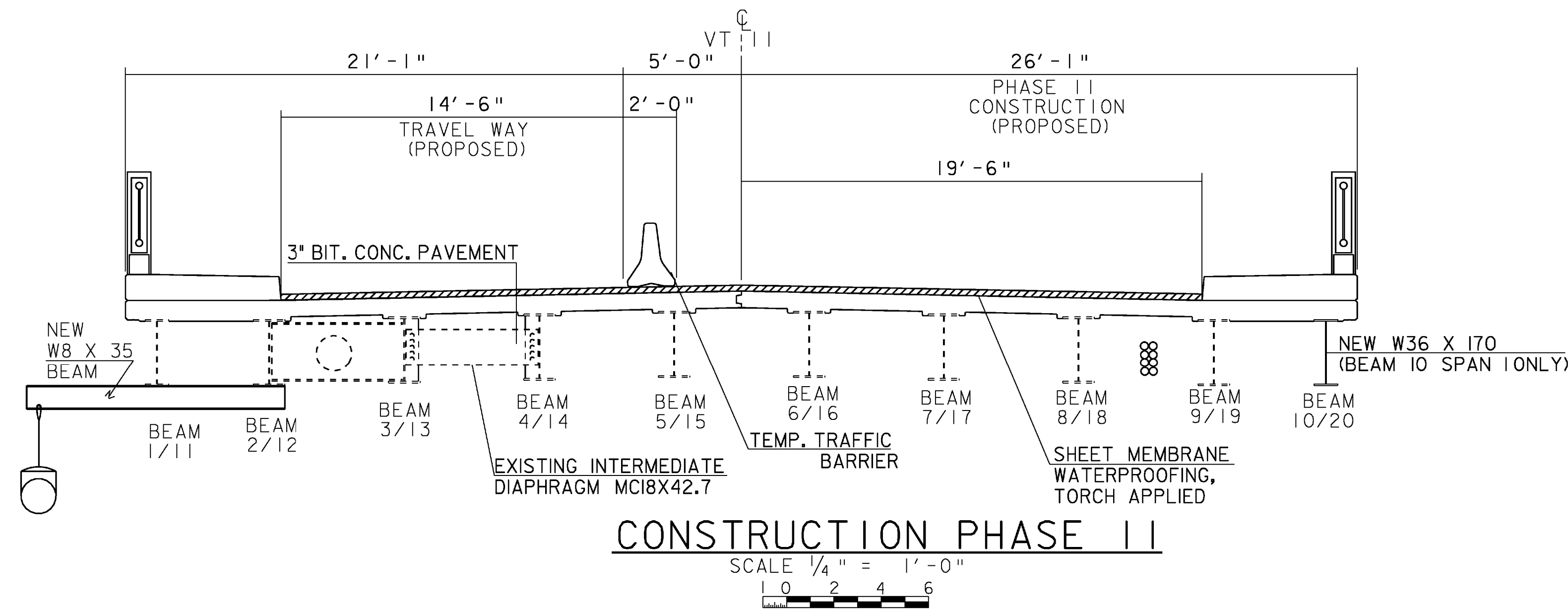
PLOT DATE: 19-MAR-2009
DRAWN BY: D. PETERSON
CHECKED BY: C. CARLSON
SHEET 17 OF 72

MOVED CUTLINE BECAUSE
NEW GIRDER WILL BE @
CENTERLINE. 1ST POUR
WILL BE +0'-0" RT. OF
CENTERLINE.



CONSTRUCTION PHASE I

SCALE 1/4" = 1'-0"



CONSTRUCTION PHASE II

SCALE 1/4" = 1'-0"

SUGGESTED CONSTRUCTION PHASING

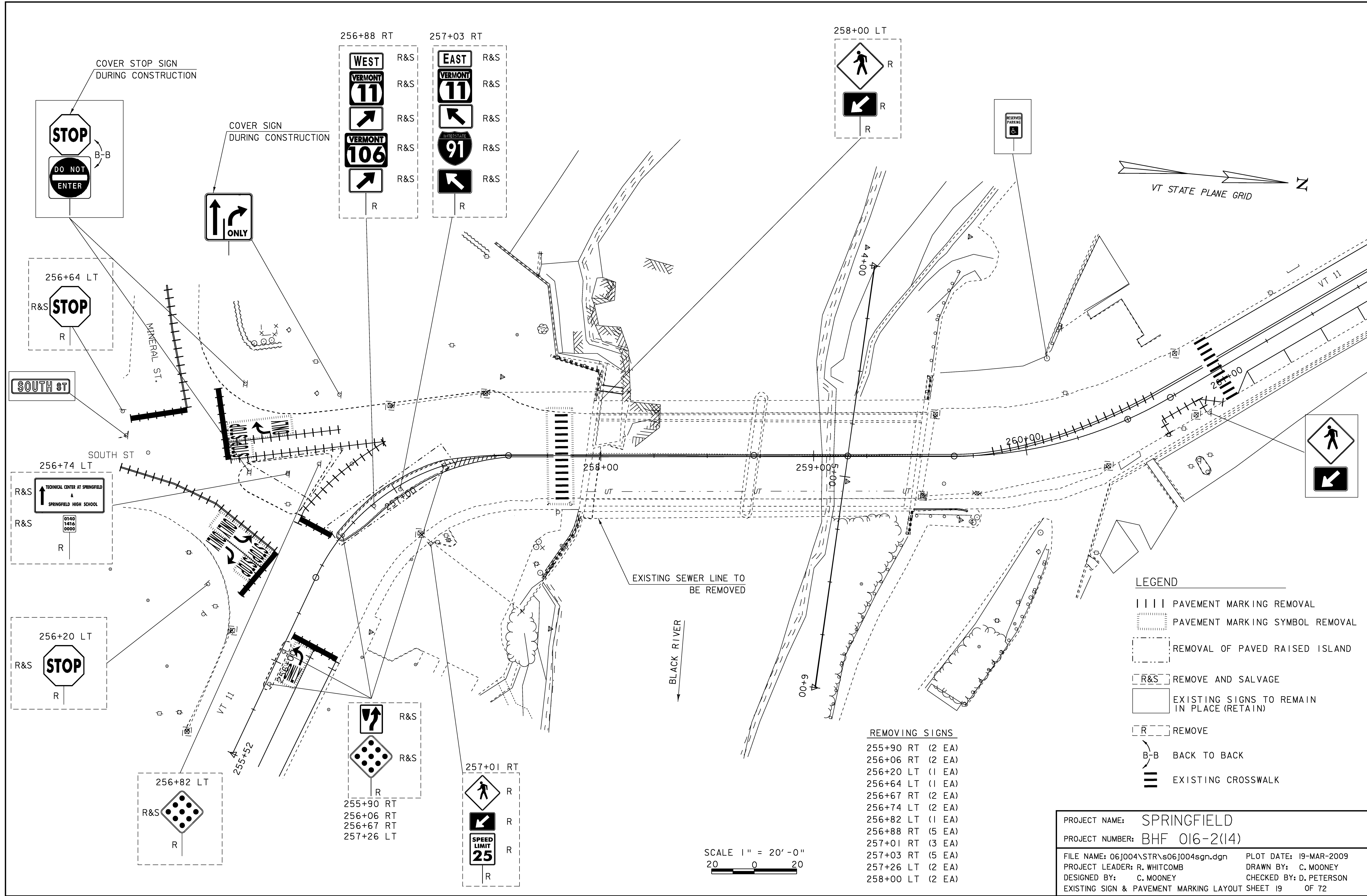
PHASE I

1. INSTALL EROSION CONTROL MEASURES.
2. INSTALL TEMPORARY TRAFFIC BARRIER.
3. MOVE TRAFFIC TO THE EASTERN SIDE OF THE BRIDGE.
4. DISCONNECT ONE END OF DIAPHRAGMS ON EAST SIDE OF BEAM 5/15 PRIOR TO PHASE I SUPERSTRUCTURE REMOVAL.
5. REMOVE EXISTING CONCRETE DECK AND BRIDGE RAILING TO LIMITS SHOWN.
6. CLEAN AND REPAIR EXISTING BEAMS, INSTALL NEW BEARINGS AND NEW COVER PLATE ON BEAM 2.
7. INSTALL NEW SUPPORT SYSTEM FOR SEWER LINE AND NEW SEWER LINE.
8. CONSTRUCT NEW CONCRETE BRIDGE DECK, SIDEWALK AND BRIDGE RAIL.
9. INSTALL SHEET MEMBRANE WATERPROOFING AND PLACE 3" BITUMINOUS CONCRETE PAVEMENT (TWO LIFTS).

PHASE II

1. RELOCATE TEMPORARY TRAFFIC BARRIER FOR PHASE 2 CONSTRUCTION. MOVE VEHICULAR TRAFFIC TO WESTERN SIDE OF BRIDGE.
2. SHORE AND PROTECT UTILITIES ON EASTERN SIDE. TRANSFER SEWER FLOW TO NEW SEWER LINE AND REMOVE EXISTING SEWER LINE AND SUPPORTS.
3. REMOVE CONCRETE DECK, SIDEWALK AND BRIDGE RAILING TO LIMITS SHOWN.
4. REMOVE BEAM 10 AND THE DIAPHRAGMS BETWEEN BEAMS 9 AND 10.
5. CLEAN, REPAIR AND PAINT EXISTING BEAMS.
6. INSTALL NEW STRUCTURAL STEEL AND BEARINGS.
7. CONSTRUCT NEW CONCRETE BRIDGE DECK.
8. CONSTRUCT SIDEWALK AND BRIDGE RAILING.
9. COMPLETE APPROACH WORK.
10. REMOVE ALL TEMPORARY TRAFFIC BARRIER FROM BRIDGE.
11. INSTALL BARRELS.
12. COMPLETE INSTALLATION OF SHEET MEMBRANE WATERPROOFING AND PLACEMENT OF 3" BITUMINOUS CONCRETE PAVEMENT (TWO LIFTS).
13. PLACE NEW PAVEMENT MARKINGS.
14. COMPLETE MISCELLANEOUS CONSTRUCTION.

PROJECT NAME:	SPRINGFIELD	PLOT DATE:	04-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	DRAWN BY:	C. MOONEY
FILE NAME:	06J004\str\06J004trf.dgn	CHECKED BY:	C. CARLSON
PROJECT LEADER:	R.WHITCOMB	SHEET 18	OF 72
DESIGNED BY:	D. PETERSON		
PHASE CONSTRUCTION TYPICALS			



256+88 RT 257+03 RT

WEST	R&S	EAST	R&S
VERMONT 11	R&S	VERMONT 11	R&S
↑	R&S	↓	R&S
VERMONT 106	R&S	INTERSTATE 91	R&S
↑	R&S	↓	R&S
↑	R	↓	R

258+00 LT

↑	R
↓	R
↓	R

COVER STOP SIGN DURING CONSTRUCTION

STOP

DO NOT ENTER

B-B

COVER SIGN DURING CONSTRUCTION

↑

↑

ONLY

256+64 LT

R&S

STOP

R

SOUTH ST

256+74 LT

R&S

↑

TECHNICAL CENTER AT SPRINGFIELD & SPRINGFIELD HIGH SCHOOL

0140
1416
0000

R

256+20 LT

R&S

STOP

R

256+82 LT

R&S

↑

R

255+90 RT

R&S

↑

R

256+06 RT

R&S

↑

R

256+67 RT

R&S

↑

R

257+26 LT

R

257+01 RT

↑

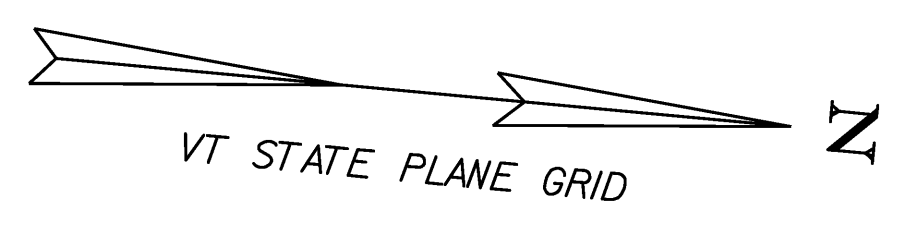
R

↓

R

SPEED LIMIT 25

R



EXISTING SEWER LINE TO BE REMOVED

BLACK RIVER

- LEGEND**
- |||| PAVEMENT MARKING REMOVAL
 - ▤ PAVEMENT MARKING SYMBOL REMOVAL
 - ▭ REMOVAL OF PAVED RAISED ISLAND
 - R&S REMOVE AND SALVAGE
 - ▭ EXISTING SIGNS TO REMAIN IN PLACE (RETAIN)
 - R REMOVE
 - B-B BACK TO BACK
 - ≡ EXISTING CROSSWALK

- REMOVING SIGNS**
- 255+90 RT (2 EA)
 - 256+06 RT (2 EA)
 - 256+20 LT (1 EA)
 - 256+64 LT (1 EA)
 - 256+67 RT (2 EA)
 - 256+74 LT (2 EA)
 - 256+82 LT (1 EA)
 - 256+88 RT (5 EA)
 - 257+01 RT (3 EA)
 - 257+03 RT (5 EA)
 - 257+26 LT (2 EA)
 - 258+00 LT (2 EA)

SCALE 1" = 20'-0"

20 0 20

PROJECT NAME: **SPRINGFIELD**

PROJECT NUMBER: **BHF 016-2(14)**

FILE NAME: 06J004\STR\s06J004sgn.dgn PLOT DATE: 19-MAR-2009

PROJECT LEADER: R. WHITCOMB DRAWN BY: C. MOONEY

DESIGNED BY: C. MOONEY CHECKED BY: D. PETERSON

EXISTING SIGN & PAVEMENT MARKING LAYOUT SHEET 19 OF 72

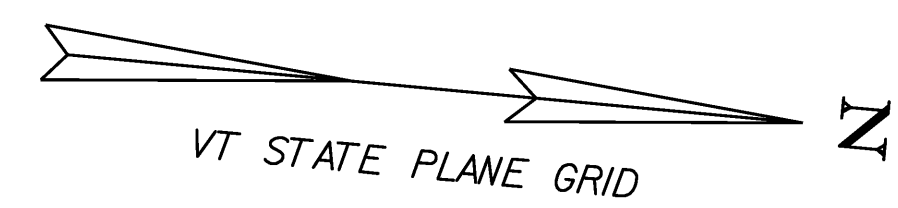
- LEGEND**
- ⊗ REFLECTORIZED PLASTIC DRUMS (SEE STD. E-106)
 - ▭ PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER (SEE STD. G-18)
 - ▭ TYPE III BARRICADE (SEE STD. E-107)
 - ▭ TYPE III BARRICADE (MOD.) (SEE STD. E-107A)
 - TEMPORARY (4 inch) WHITE OR YELLOW LINE
 - ENERGY ABSORPTION ATTENUATOR (SEE GENERAL NOTES SHEET REGARDING ATTENUATORS)
 - FLOW OF TRAFFIC
 - ▭ TEMPORARY CROSSWALK MARKING
 - ▭ DETECTABLE WARNING SURFACE
 - ▭ EXISTING CROSSWALK MARKING

PORTLAND CEMENT CONCRETE
SIDEWALK, 5' INCH

STA. 256+06.83 RT - 256+25.70 RT
 STA. 256+09.06 LT - 256+23.32 LT
 STA. 256+31.60 LT - 256+36.34 LT (51' LEFT)
 STA. 256+80.89 LT - 256+92.50 LT (61' LEFT)

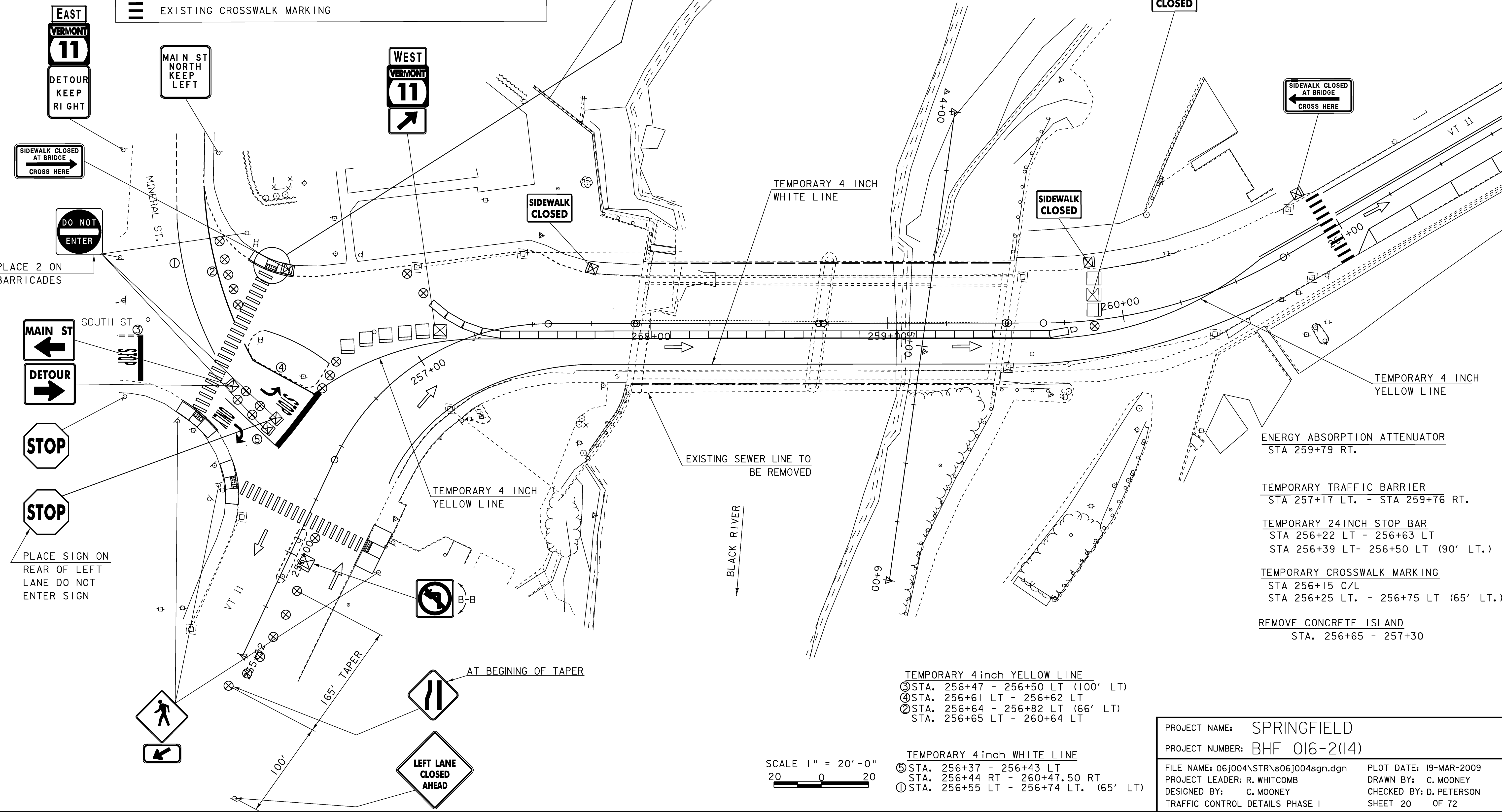
TEMPORARY LETTER OR SYMBOL

STA. 256+45 LT STOP
 STA. 256+53 LT STOP
 STA. 256+53 LT ↶
 STA. 256+53 LT ONLY



DETECTABLE WARNING SURFACE

STA 256+18 LT
 STA 256+18 RT
 STA 256+36 LT
 STA 256+85 LT



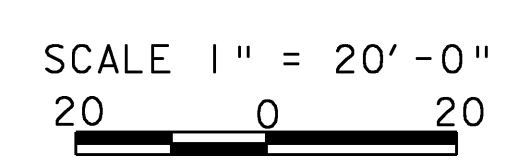
- ENERGY ABSORPTION ATTENUATOR
STA 259+79 RT.
- TEMPORARY TRAFFIC BARRIER
STA 257+17 LT. - STA 259+76 RT.
- TEMPORARY 24 INCH STOP BAR
STA 256+22 LT - 256+63 LT
STA 256+39 LT - 256+50 LT (90' LT.)
- TEMPORARY CROSSWALK MARKING
STA 256+15 C/L
STA 256+25 LT. - 256+75 LT (65' LT.)
- REMOVE CONCRETE ISLAND
STA. 256+65 - 257+30

TEMPORARY 4 inch YELLOW LINE

③ STA. 256+47 - 256+50 LT (100' LT)
 ④ STA. 256+61 LT - 256+62 LT
 ② STA. 256+64 - 256+82 LT (66' LT)
 STA. 256+65 LT - 260+64 LT

TEMPORARY 4 inch WHITE LINE

⑤ STA. 256+37 - 256+43 LT
 STA. 256+44 RT - 260+47.50 RT
 ① STA. 256+55 LT - 256+74 LT. (65' LT)



PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2(14)

FILE NAME: 06J004\STR\s06J004sgn.dgn PLOT DATE: 19-MAR-2009
 PROJECT LEADER: R. WHITCOMB DRAWN BY: C. MOONEY
 DESIGNED BY: C. MOONEY CHECKED BY: D. PETERSON
 TRAFFIC CONTROL DETAILS PHASE I SHEET 20 OF 72

EAST
VERMONT
11
DETOUR
KEEP
RIGHT

WEST
VERMONT
11

MAIN ST
NORTH
KEEP
LEFT

SIDEWALK CLOSED
AT BRIDGE
CROSS HERE

DO NOT
ENTER

PLACE 2 ON
BARRICADES

MAIN ST
SOUTH ST
DETOUR

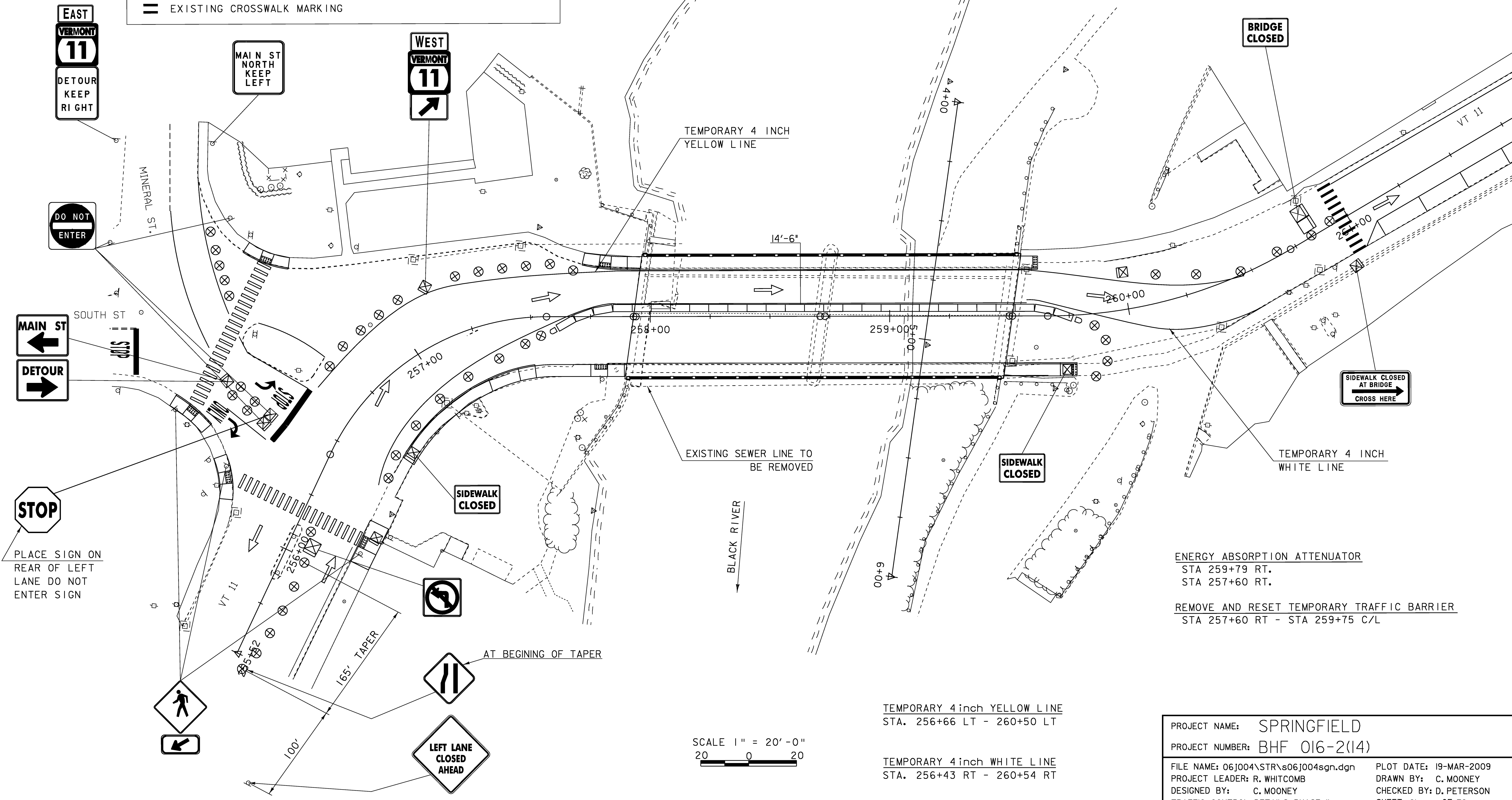
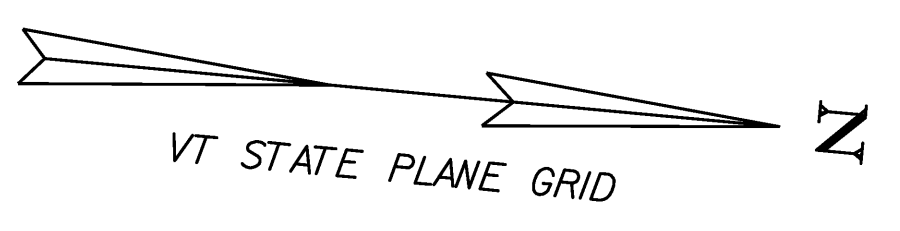
STOP

STOP

PLACE SIGN ON
REAR OF LEFT
LANE DO NOT
ENTER SIGN

LEFT LANE
CLOSED
AHEAD

LEGEND	
	REFLECTORIZED PLASTIC DRUMS (SEE STD. E-106)
	PRECAST CONCRETE TEMPORARY TRAFFIC BARRIER (SEE STD. G-18)
	TYPE III BARRICADE (SEE STD. E-107)
	TYPE III BARRICADE (MOD.) (SEE STD. E-107A)
	TEMPORARY (4 inch) WHITE OR YELLOW LINE
	ENERGY ABSORPTION ATTENUATOR (SEE GENERAL NOTES SHEET REGARDING ATTENUATORS)
	FLOW OF TRAFFIC
	TEMPORARY CROSSWALK MARKING
	DETECTABLE WARNING SURFACE
	EXISTING CROSSWALK MARKING

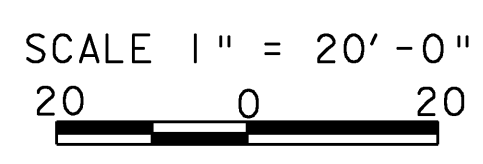


ENERGY ABSORPTION ATTENUATOR
 STA 259+79 RT.
 STA 257+60 RT.

REMOVE AND RESET TEMPORARY TRAFFIC BARRIER
 STA 257+60 RT - STA 259+75 C/L

TEMPORARY 4 inch YELLOW LINE
 STA. 256+66 LT - 260+50 LT

TEMPORARY 4 inch WHITE LINE
 STA. 256+43 RT - 260+54 RT



PROJECT NAME:	SPRINGFIELD	PLOT DATE:	19-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	DRAWN BY:	C. MOONEY
FILE NAME:	06J004\STR\s06J004sgn.dgn	CHECKED BY:	D. PETERSON
PROJECT LEADER:	R. WHITCOMB	TRAFFIC CONTROL DETAILS PHASE II	SHEET 21 OF 72
DESIGNED BY:	C. MOONEY		

NOTES

- 1) TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO PLACEMENT OF DURABLE PAVEMENT MARKINGS
- 2) FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS.

259+75 RT
256+88 RT

256+74 LT
257+03 RT

DURABLE 6 INCH WHITE LINE
256+65 LT - 257+04 LT EDGE LINE/ISLAND

DURABLE 4 INCH WHITE LINE
256+10 RT - 256+13 RT TRAVEL LANE
256+10 RT - 256+13 RT EDGE LINE
256+48 RT - 261+25 RT EDGE LINE
256+77 LT - 261+25 LT EDGE LINE
256+69 LT - 257+07 LT TRAVEL LANE

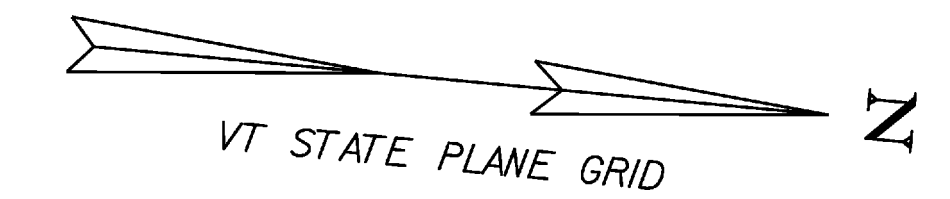
257+82 LT

LEGEND

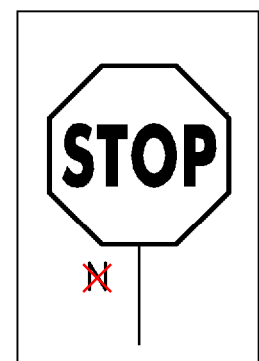
S SALVAGE
N NEW

TRAFFIC SIGNS, TYPE A

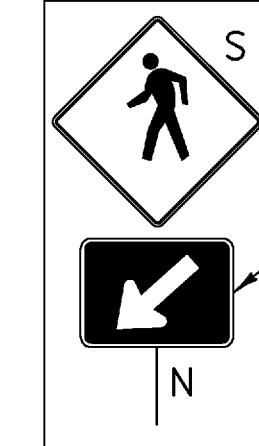
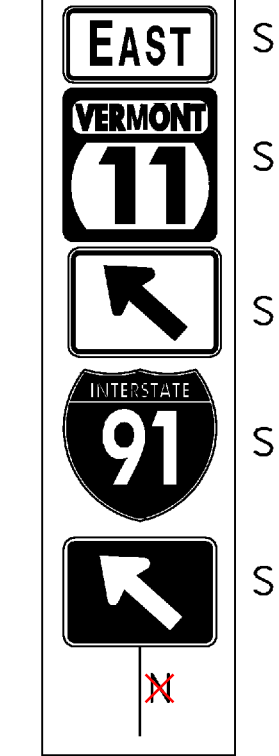
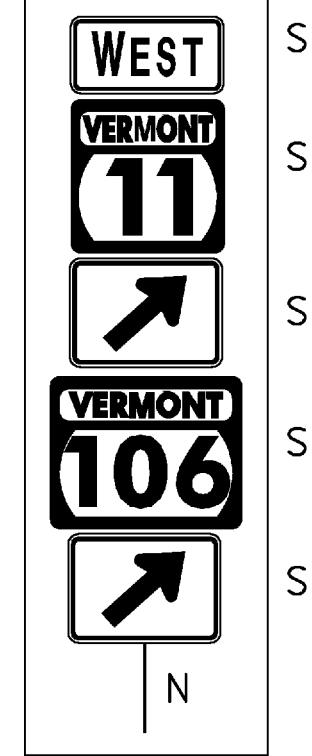
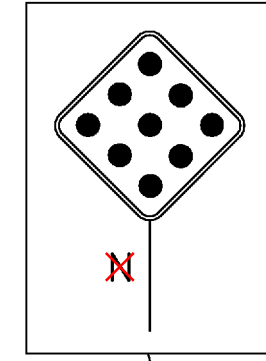
257+01 RT



256+64 LT



256+82 LT

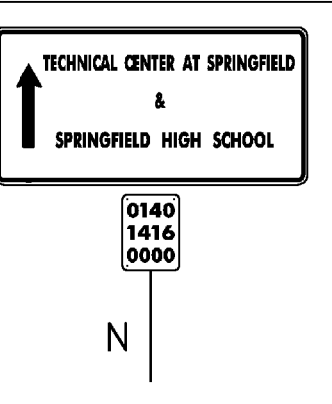


USE SIGNS PURCHASED FOR TEMPORARY CROSSWALK

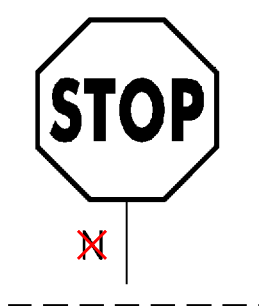
MINERAL ST.

SOUTH ST

256+74 LT



256+20 LT



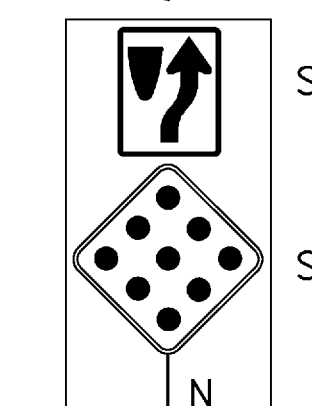
*TEMPORARY SIDEWALK RAMPS AND CURB TO BE RECONSTRUCTED

*PORTLAND CEMENT CONCRETE CURB (ACTUAL LOCATION TO BE ADJUSTED IN THE FIELD)

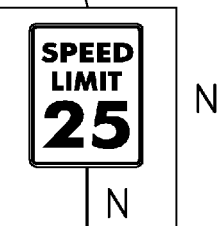
STA. 256+06.83 RT - 256+25.70 RT
STA. 256+09.06 LT - 256+36.34 LT (51' LEFT)
STA. 256+80.89 LT - 256+92.50 LT (61' LEFT)

*PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (ACTUAL LOCATION TO BE ADJUSTED IN THE FIELD)

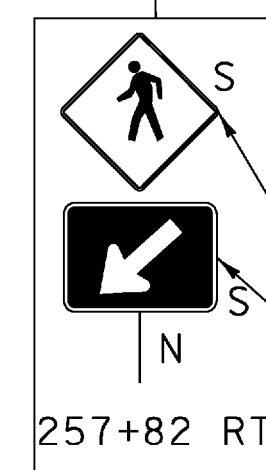
STA. 256+06.83 RT - 256+25.70 RT
STA. 256+09.06 LT - 256+36.34 LT (51' LEFT)
STA. 256+80.89 LT - 256+92.50 LT (61' LEFT)



255+90 RT
256+06 RT
256+67 RT
257+26 LT



257+01 RT (SEE STD. E-142) (R2-1)



USE SIGNS PURCHASED FOR TEMPORARY CROSSWALK

DURABLE 4 INCH YELLOW LINE
256+65 LT - 260+64 LT (DOUBLE)
SOUTH ST 17 FT (DOUBLE)
SOUTH ST 42 FT

SCALE 1" = 20'-0"
20 0 20

ERECTING SALVAGED SIGNS

- 255+90 RT (2 EA)
- 256+06 RT (2 EA)
- 256+20 LT (1 EA)
- 256+64 LT (1 EA)
- 256+67 RT (2 EA)
- 256+74 LT (2 EA)
- 256+82 LT (1 EA)
- 256+88 RT (5 EA)
- 257+03 RT (5 EA)
- 257+26 LT (2 EA)
- 257+82 LT (2 EA)
- 257+82 RT (2 EA)

DURABLE CROSSWALK MARKING

257+82 (41 FT)
260+97 (32 FT.)

DURABLE 24 INCH STOP BAR

256+14 RT (24 FT)
256+65 LT (18 FT)
256+66 LT - 256+78 LT (32 FT)
256+18 LT - 256+46 LT (30 FT)

DURABLE LETTER OR SYMBOL

256+70 LT	STOP	256+43 LT	STOP
256+73 LT	STOP	256+45 LT	STOP
256+79 LT	ONLY	256+46 LT	ONLY
256+83 LT	ONLY	256+65 LT	STOP
256+00 RT	ONLY		
256+10 RT	STOP		
256+35 LT	STOP		
256+38 LT	ONLY		
256+40 LT	ONLY		

PROJECT NAME: SPRINGFIELD

PROJECT NUMBER: BHF 016-2(14)

FILE NAME: 06J004\STR\06J004sgn.dgn

PROJECT LEADER: R. WHITCOMB

DESIGNED BY: C. MOONEY

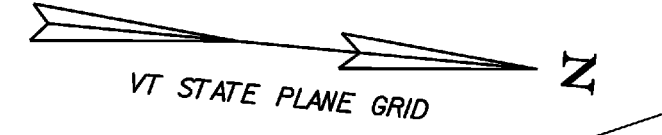
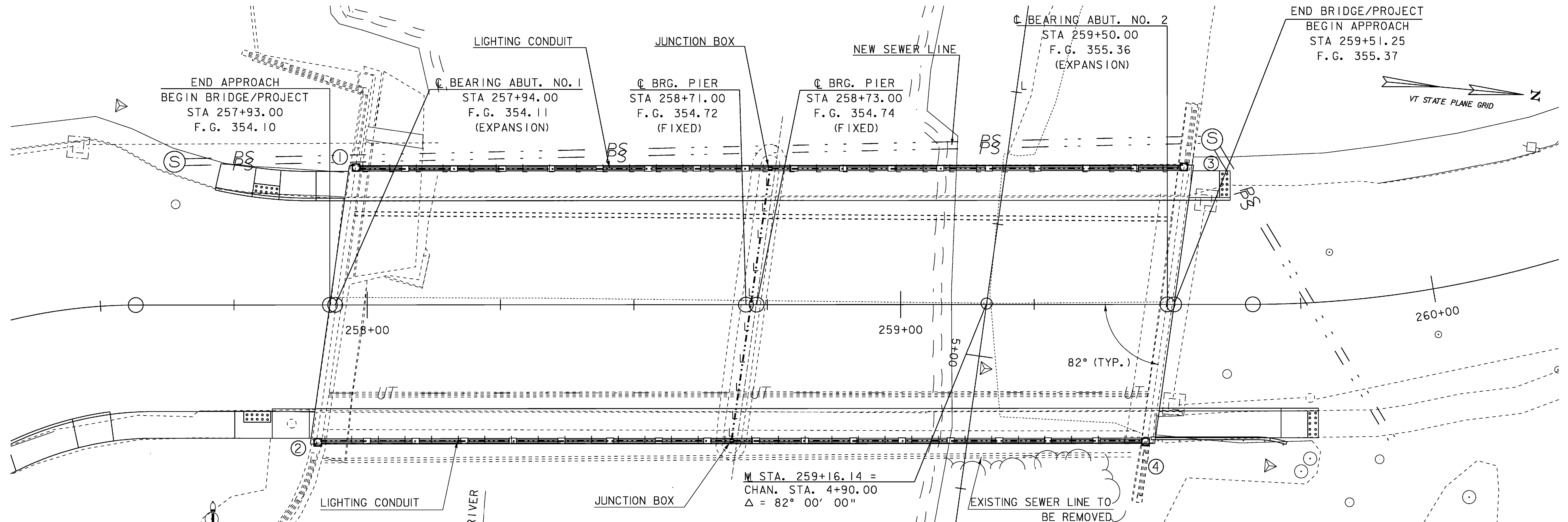
FINAL SIGN & PAVEMENT MARKING LAYOUT

PLOT DATE: 19-MAR-2009

DRAWN BY: C. MOONEY

CHECKED BY: D. PETERSON

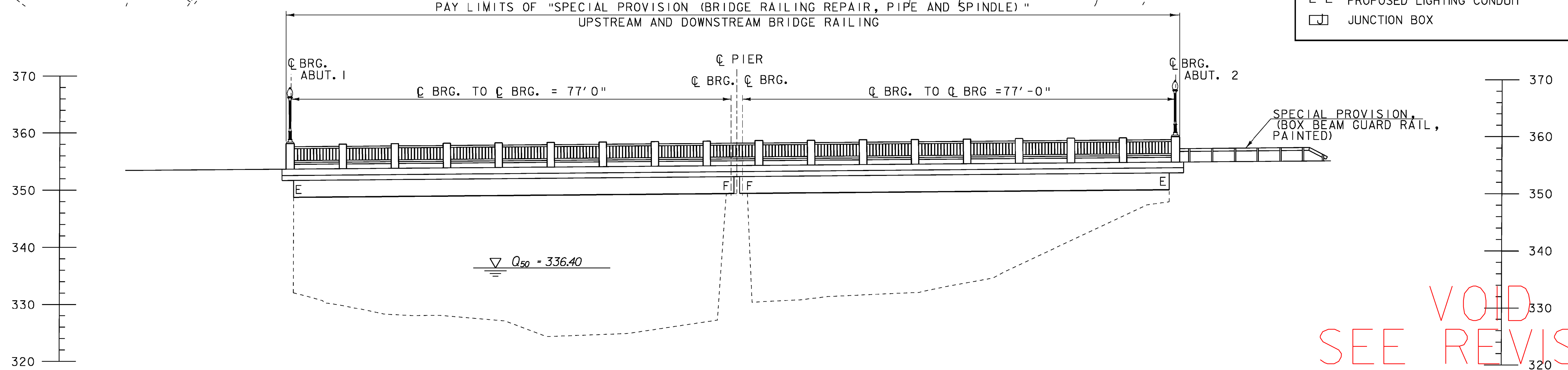
SHEET 22 OF 72



PLAN

SCALE 1" = 10'-0"

STREET LIGHTING LEGEND	
①	LIGHT POLE NUMBER
⊕	LIGHT BASE
≡≡≡	PROPOSED LIGHTING CONDUIT
⊞	JUNCTION BOX

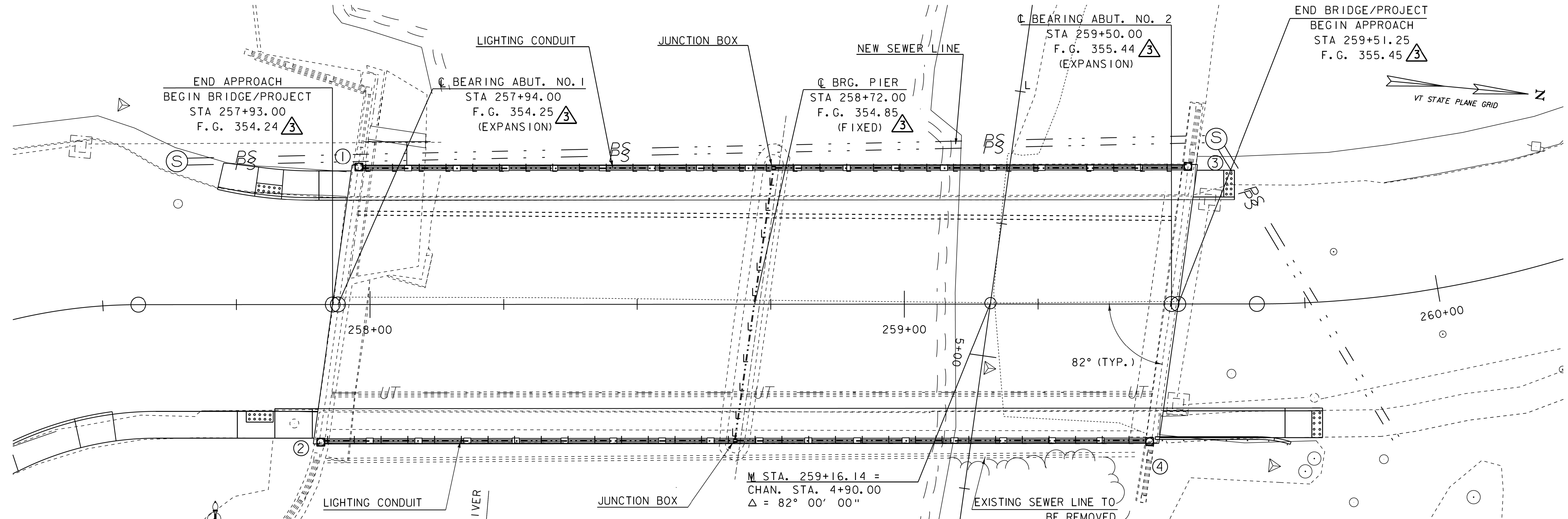


ELEVATION

SCALE 1" = 10'-0"

VOID
SEE REVISED
SHEET

PROJECT NAME: SPRINGFIELD	PLOT DATE: 19-MAR-2009
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: D. PETERSON
FILE NAME: 06J004/str/s06J004pe.dgn	CHECKED BY: C. CARLSON
PROJECT LEADER: R. WHITCOMB	SHEET 23 OF 72
DESIGNED BY: D. PETERSON	
PLAN AND ELEVATION SHEET	

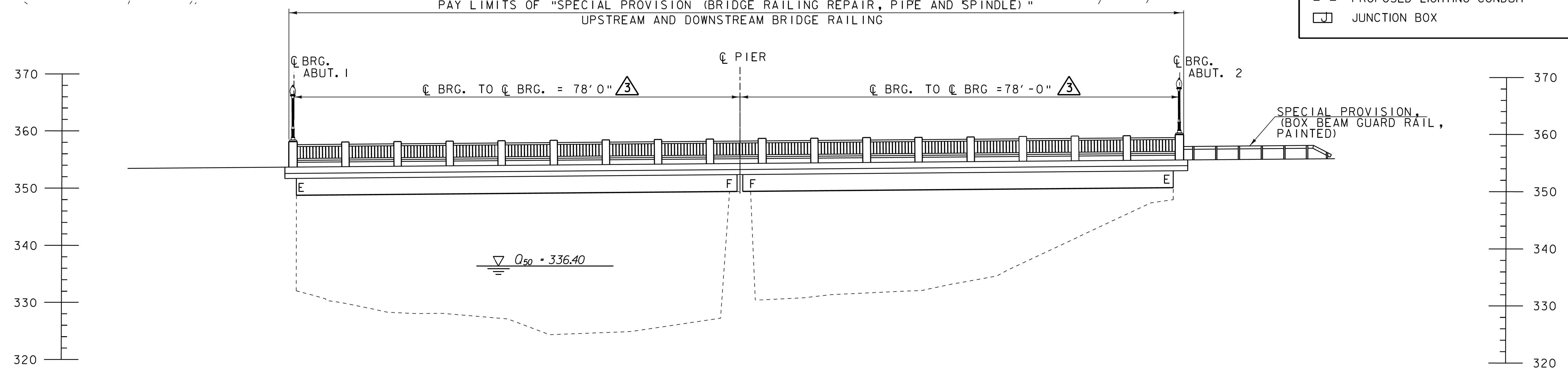


PLAN

SCALE 1" = 10'-0"

STREET LIGHTING LEGEND

- ① LIGHT POLE NUMBER
- ⊕ LIGHT BASE
- ≡≡≡ PROPOSED LIGHTING CONDUIT
- ☐ JUNCTION BOX



ELEVATION

SCALE 1" = 10'-0"

REV.	BY	DATE	DESCRIPTION
3	LBB	5/26/09	CHANGED FINISH GRADE AND LENGTH TO CL BEARING

PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2(14)
 FILE NAME: 06j004/str/s06j004pe.dgn
 PROJECT LEADER: R. WHITCOMB
 DESIGNED BY: D. PETERSON
 PLAN AND ELEVATION SHEET

PLOT DATE: 10-AUG-2011
 DRAWN BY: D. PETERSON
 CHECKED BY: C. CARLSON
 SHEET 23 OF 72

STREET LIGHTING NOTES

A. CONDUIT AND JUNCTION BOXES

1. 2 INCH (INSIDE DIAMETER) CONDUIT SHALL BE USED THROUGHOUT THE PROJECT. ALL CONDUIT SHALL BE PVC SCHEDULE 80 CONDUIT AS DETAILED IN THESE PLANS.
2. SEE SUBSECTION 679.04 CONCERNING THE PLACING OF CONDUIT, PULL BOXES AND JUNCTION BOXES.

B. GROUNDING

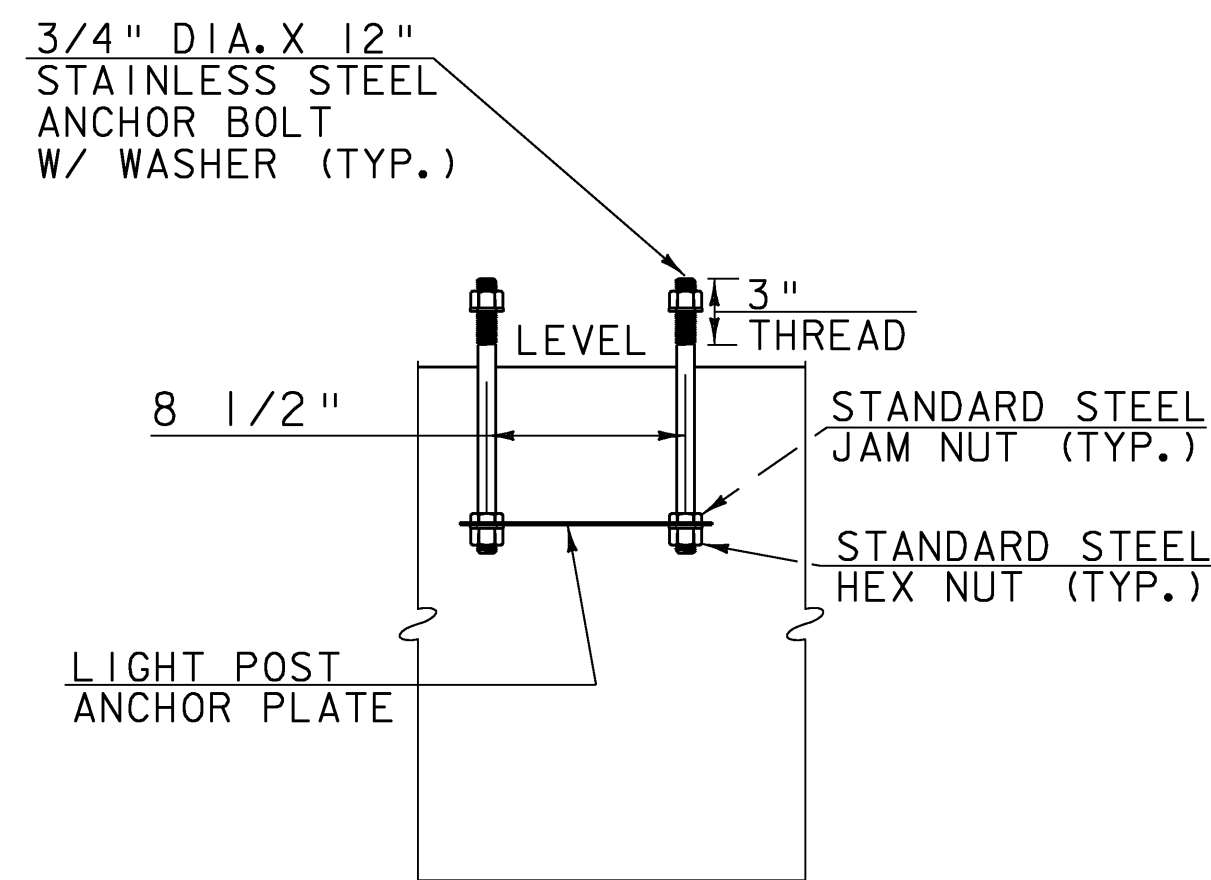
1. ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.
2. SEE SUBSECTION 679.08 CONCERNING GROUNDING AND TESTING.

C. LUMINAIRES, POLES, ANCHOR BASES

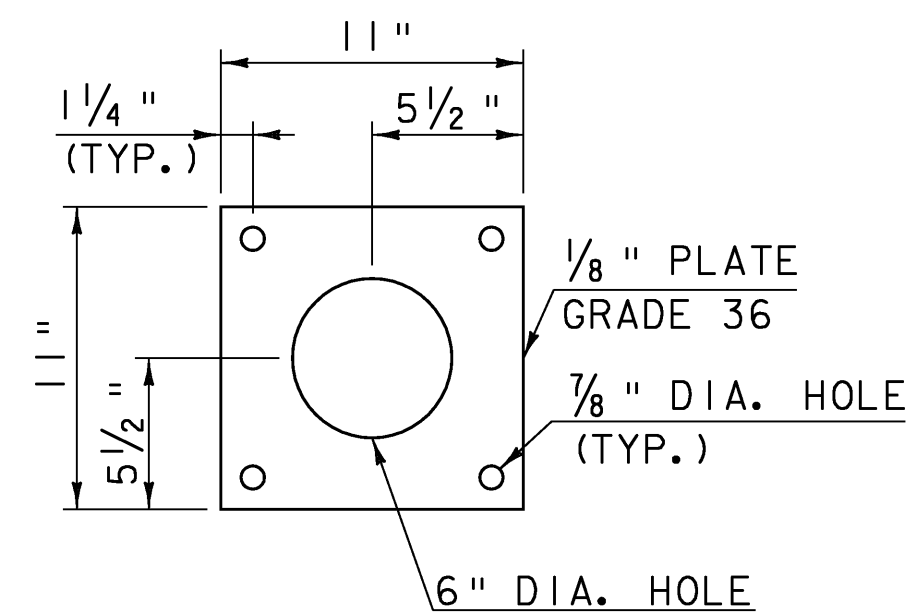
1. EACH EXISTING POLE SHALL BE MOUNTED TO A NEW RAILING POST WITH FOUR ANCHOR BOLTS, NUTS, AND WASHERS. SEE "LIGHT POST BASE DETAILS" ON SHEET 31 FOR ANCHORAGE TO BRIDGE. POLE WIRING ACCESS SHALL BE THROUGH THE EXISTING HANDHOLE IN POLE BASE.
2. LAMPS SHALL BE "175 WATT HIGH PRESSURE SODIUM".

D. WIRE

1. ALL WIRING BETWEEN THE METER AND THE FIRST POLE AND/OR PULLBOX AND BETWEEN POLES AND/OR PULLBOXES SHALL BE COPPER AND CONFORM TO SUBSECTION 679.02 (c). ALL WIRE SHALL HAVE TYPE XHHW INSULATION OR EQUIVALENT.
2. ALL CONDUITS SHALL INCLUDE A GROUNDING CONDUCTOR.
3. SEE SUBSECTIONS 678.09, 679.06 AND 679.07 CONCERNING ELECTRIC POWER SERVICE AND WIRING.



LIGHT POST ANCHOR ASSEMBLY
(NTS)



LIGHT POST ANCHOR PLATE
(NTS)

E. GENERAL

1. ALL ELECTRICAL MATERIAL AND INSTALLATION SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE, STATE AND LOCAL CODES AND THE LOCAL UTILITY COMPANY REQUIREMENTS.
2. THE LOAD ON EACH BRANCH OF A THREE WIRE CIRCUIT SHALL BE AS BALANCED AS POSSIBLE. LOAD TO NEUTRAL.
3. CONDUIT LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE DETERMINED IN THE FIELD.
4. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES WITH UNDERGROUND FACILITIES WHEN EXCAVATING IN THE AREA OF THESE UTILITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR CONTACTING AND SCHEDULING WORK WITH LOCAL UTILITIES WITH FACILITIES IN THE PROJECT AREA FOR LOCATION OF POWER SOURCES.
5. ONE PHOTOCELL FOR THE LIGHTING CIRCUIT SHALL BE LOCATED AT THE POWER SOURCE OR SOME COMMON POINT, AS DIRECTED BY THE ENGINEER.
6. THE CONTRACTOR MAY OPEN THE BRIDGE TO TRAFFIC WITHOUT THE STREET LIGHTING IN OPERATION.
7. IF THE LOCATION OF THE POWER SOURCE, JUNCTION BOX, AND METER VARIES FROM THE PROPOSED LOCATIONS SHOWN ON THE PLANS, THE NEW LOCATION WILL BE APPROVED BY THE ENGINEER AND THE TOWN OF SPRINGFIELD.

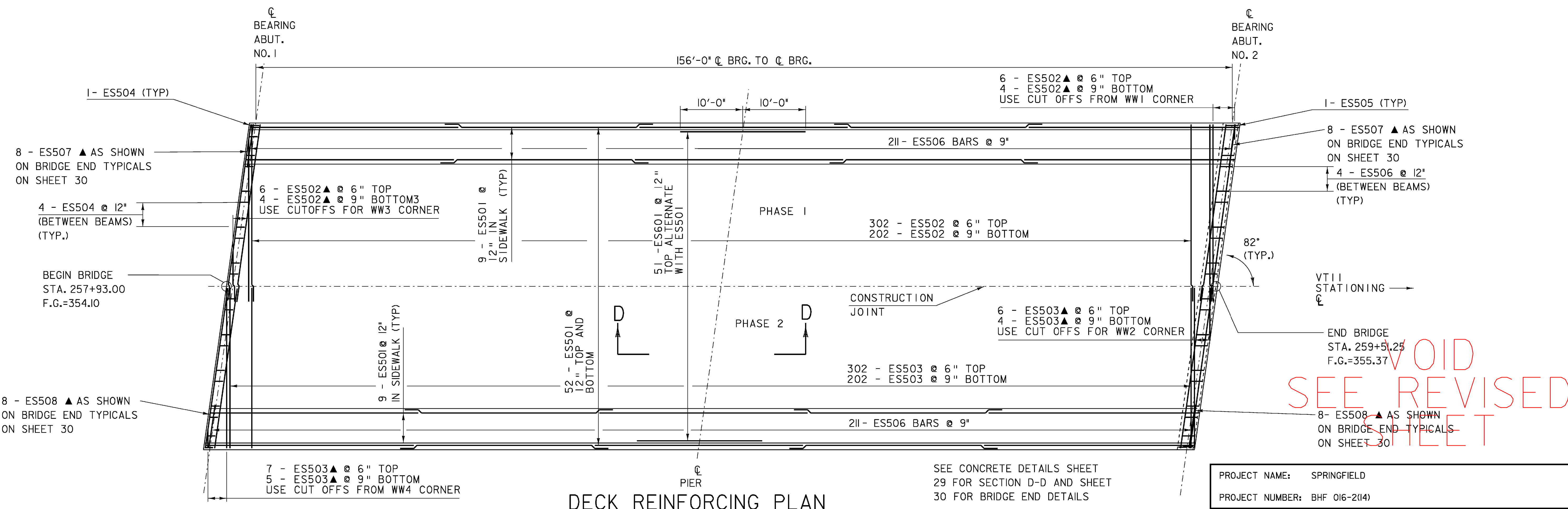
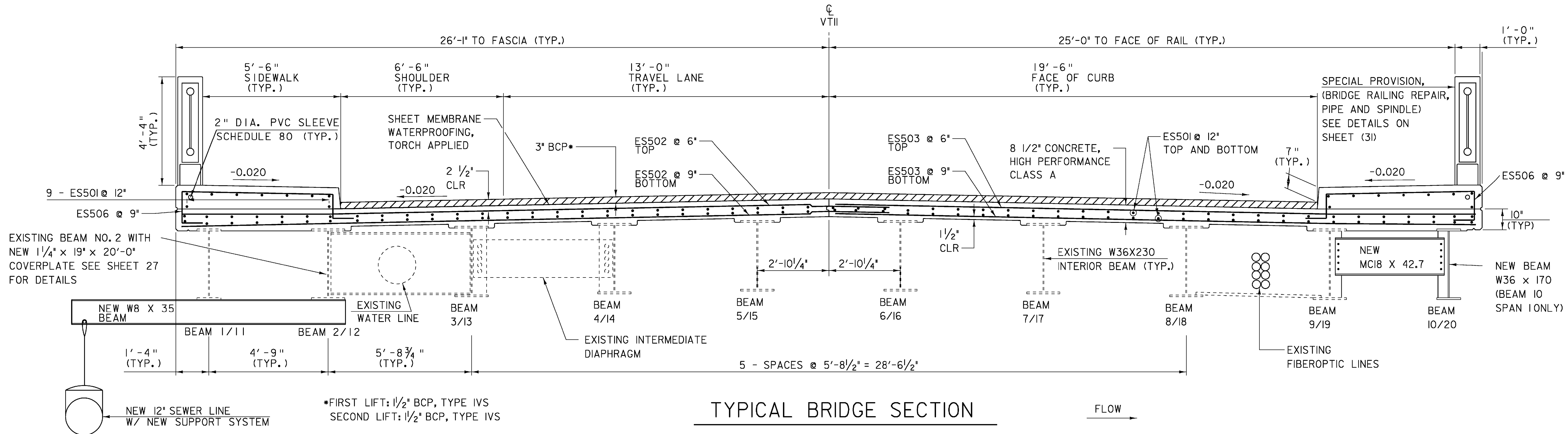
F. WORK TO BE PERFORMED BY THE CONTRACTOR

1. COORDINATE ALL ITEMS REGARDING PROJECT POWER WITH THE TOWN OF SPRINGFIELD BEFORE COMMENCING WORK.
2. REMOVE, CLEAN AND PAINT EXISTING POLES.
3. INSTALL ALL EXISTING LIGHT POLES AND LUMINAIRES, LAMPS, WIRING AND DISCONNECT PLUG KITS.
4. INSTALL ALL JUNCTION BOXES, THE CONDUIT, PHOTOCELL AND WIRING AS DETAILED ON PLAN DRAWINGS.
5. INSTALL REMOTE TWO RELAYS WITH CIRCUIT BREAKERS FOR AUTOMATIC SWITCHING OF THE TWO LIGHTING CIRCUITS.
6. THE CONTRACTOR IS DIRECTED TO SUBSECTION 679.09 REGARDING POWER COSTS FOR THE STREET LIGHTING.
7. PAYMENT FOR THE LIGHTING WORK SHALL BE MADE UNDER 900.620, "SPECIAL PROVISION (REMOVING, REFURBISHING, AND RESETTING LIGHT POST)."

PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2(14)

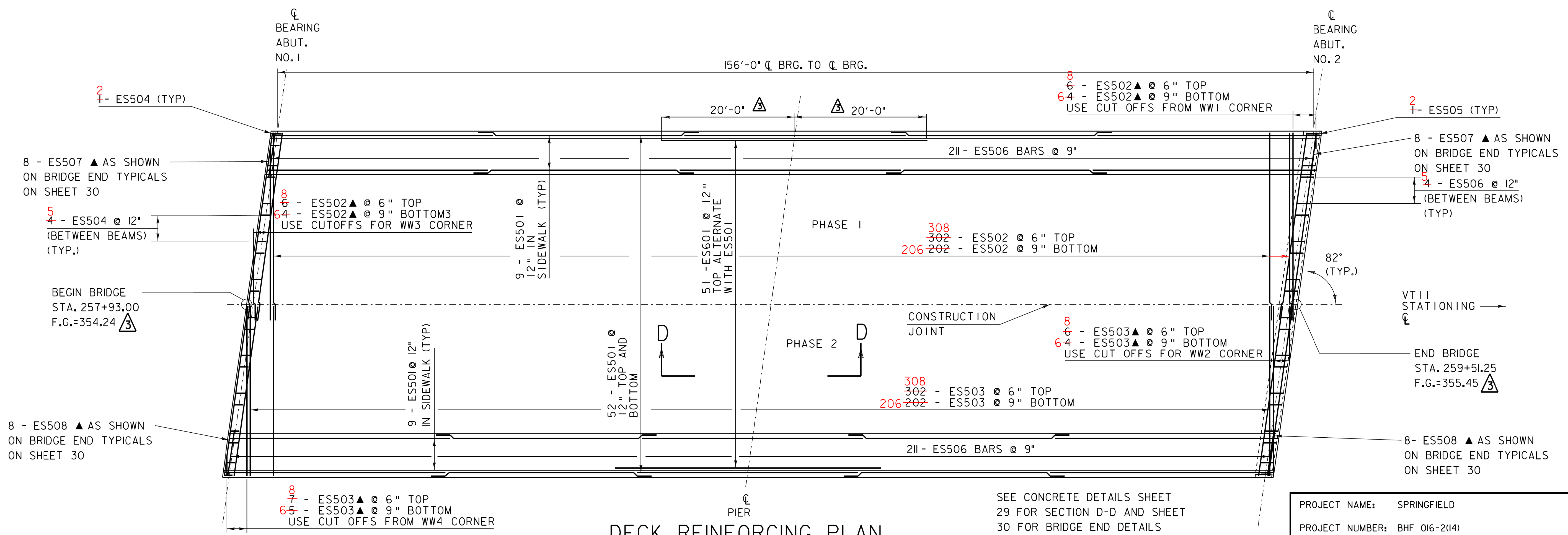
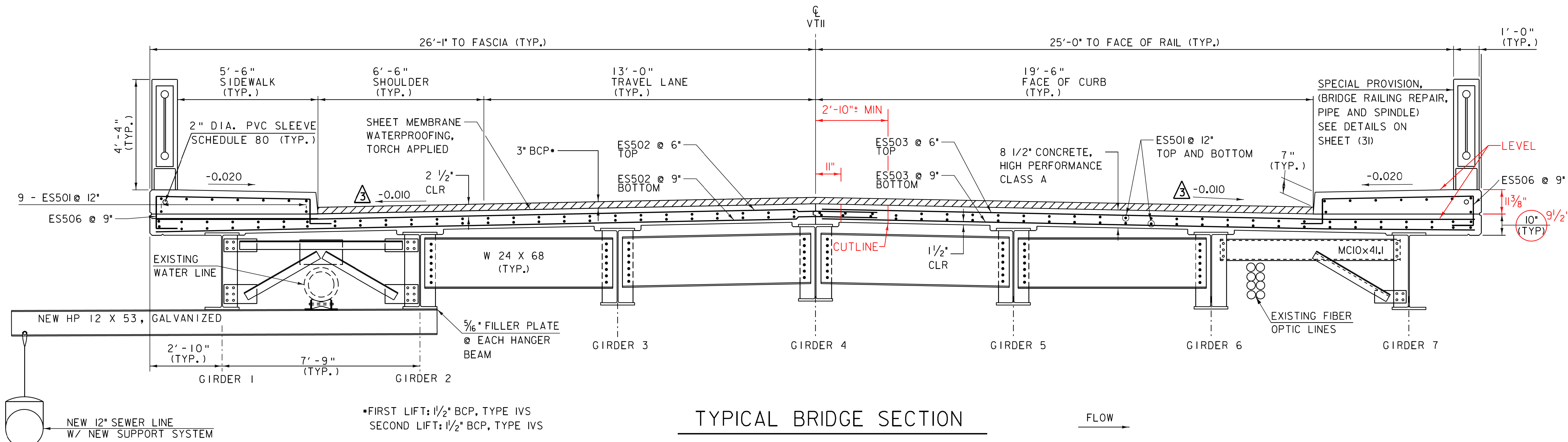
FILE NAME: s06j004rall.dgn
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. CARLSON
LIGHTING NOTES SHEET

PLOT DATE: 04-MAR-2009
DRAWN BY: D. PETERSON
CHECKED BY: C. CARLSON
SHEET 24 OF 72



VOID
SEE REVISED
SHEET

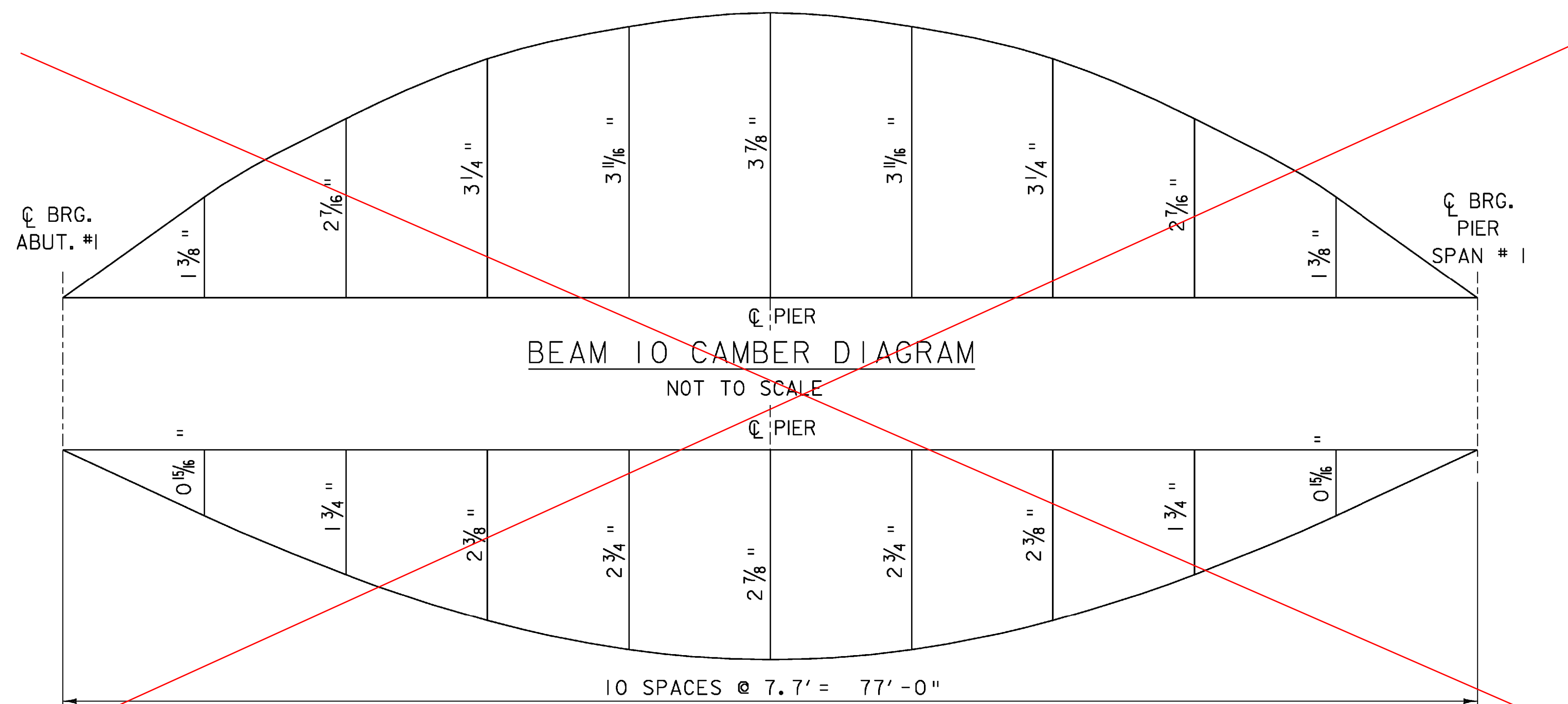
PROJECT NAME:	SPRINGFIELD	FILE NAME:	s06j004sup.dgn	PLOT DATE:	04-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	PROJECT LEADER:	R. WHITCOMB	DRAWN BY:	C. MOONEY
		DESIGNED BY:	C. CARLSON	CHECKED BY:	D. PETERSON
		DECK REINFORCING PLAN		SHEET 25	OF 72



REV.	BY	DATE	DESCRIPTION
1	LBB	5/26/09	REVISED BANKING AND FINISHED GRADE

PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2(14)
 FILE NAME: s06j004sup.dgn
 PROJECT LEADER: R. WHITCOMB
 DESIGNED BY: C. CARLSON
 DECK REINFORCING PLAN

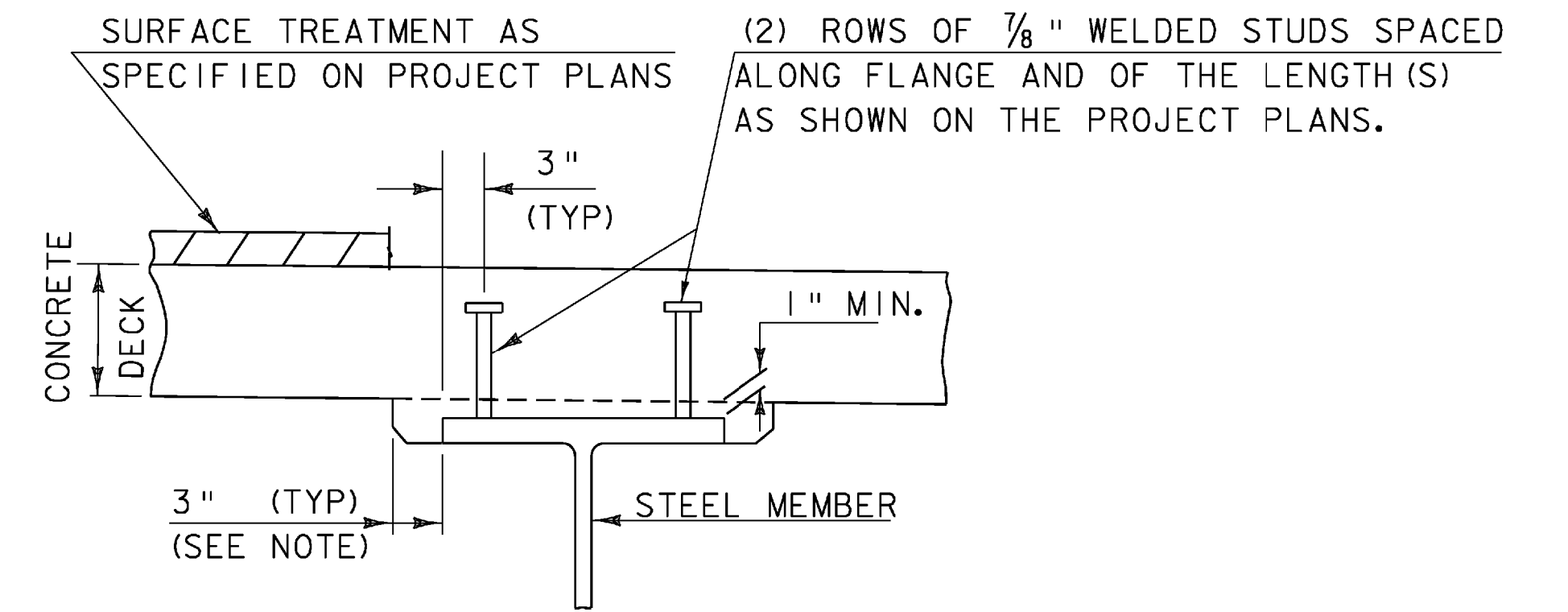
PLOT DATE: 09-AUG-2011
 DRAWN BY: C. MOONEY
 CHECKED BY: D. PETERSON
 SHEET 25 OF 72



BEAM 10 DEAD LOAD DEFLECTION DIAGRAM
NOT TO SCALE

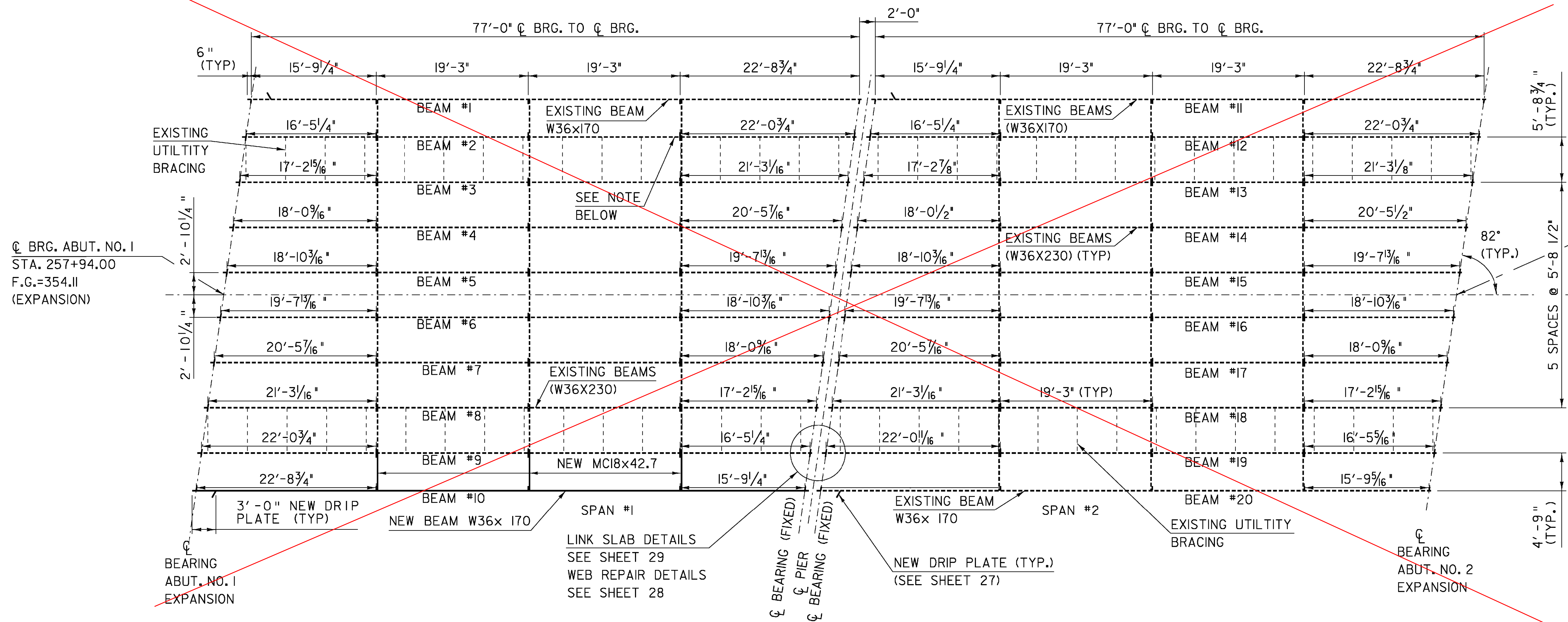
NOTES:

CAMBER AND DEFLECTION MEASUREMENTS ARE GIVEN @ TENTH POINTS. DEAD LOAD DEFLECTIONS INCLUDE GIRDER SELFWEIGHT.



NOTE: THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. SYSTEMS SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURES ENGINEER. ALL VOIDS SHALL BE FILLED WITH POLYURETHANE JOINT SEALER OR AN EQUIVALENT PRODUCT FROM THE APPROVED PRODUCTS LIST. COST SHALL BE INCIDENTAL TO ADJACENT CONCRETE ITEM

HAUNCH AND SHEAR CONNECTOR DETAIL
(NOT TO SCALE)



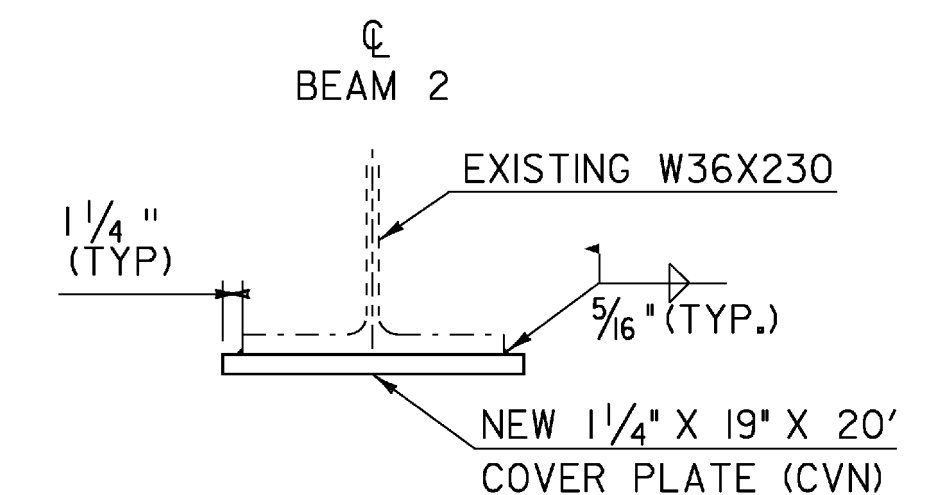
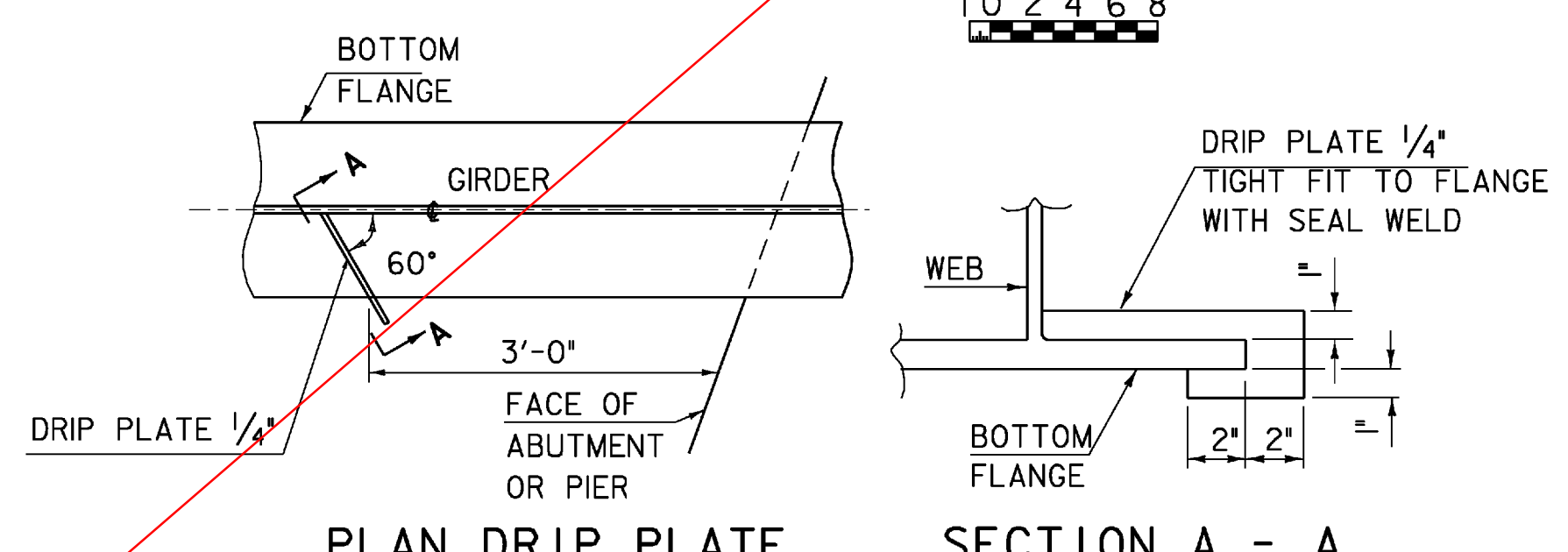
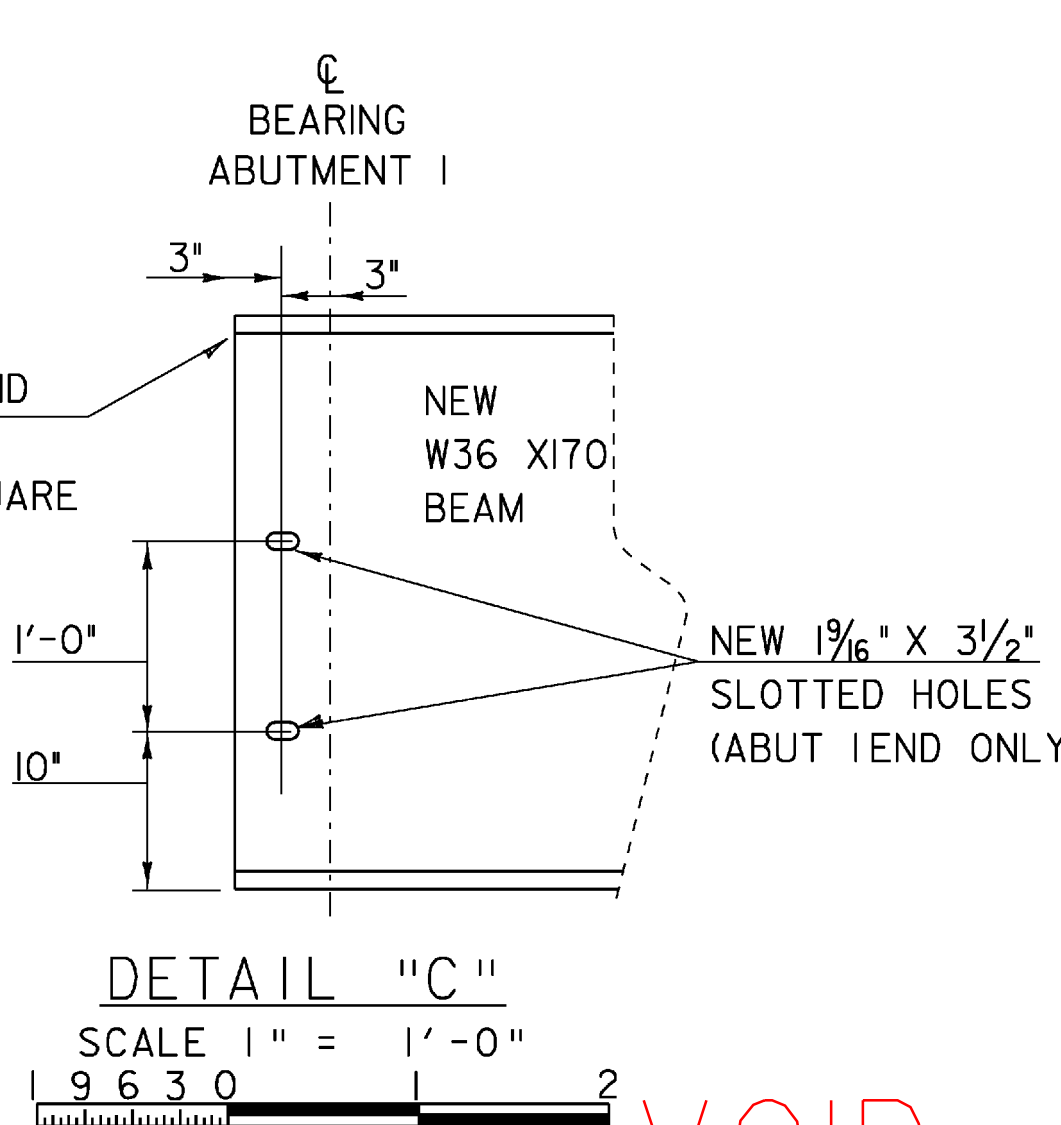
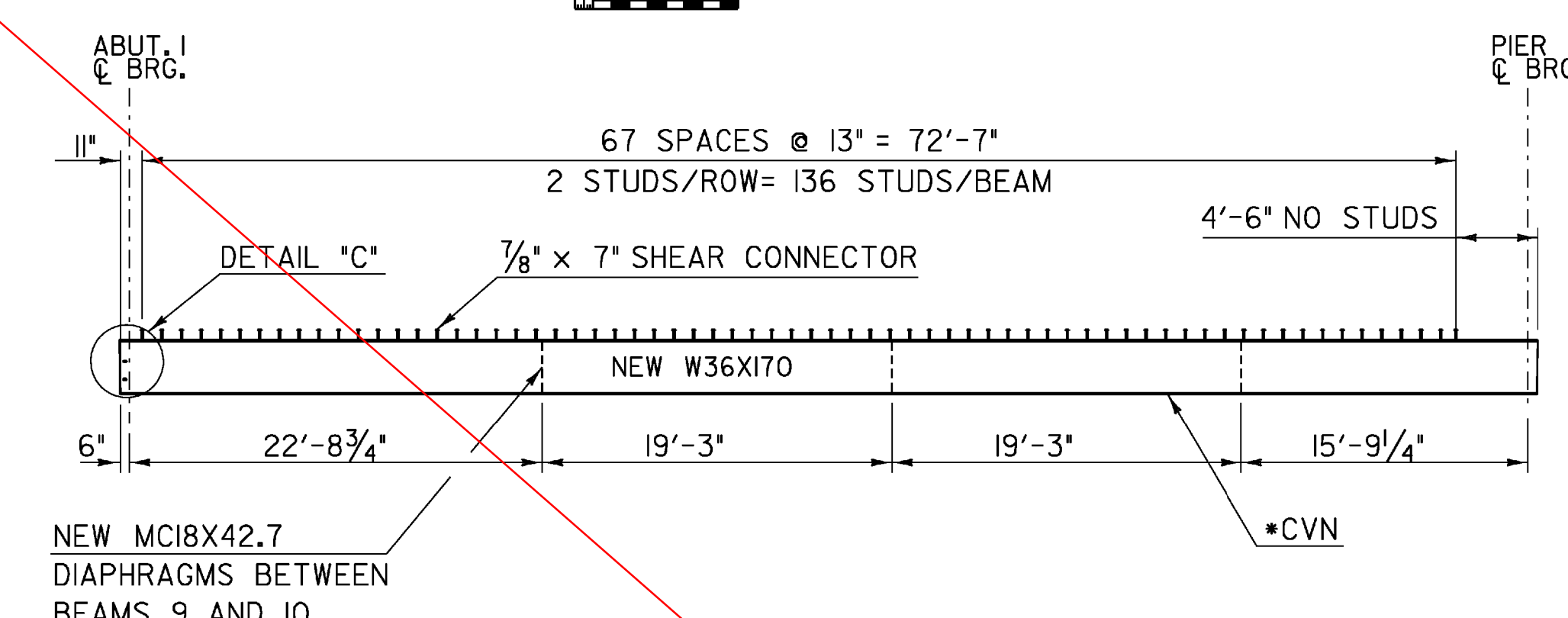
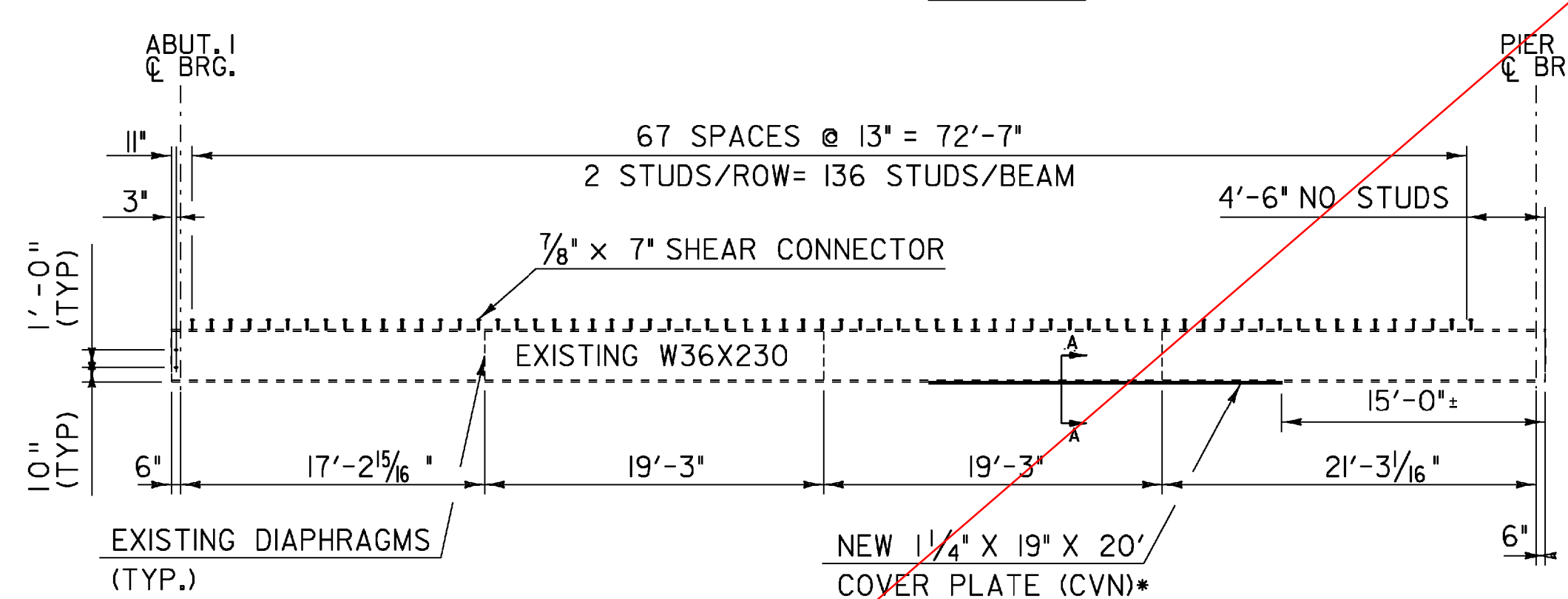
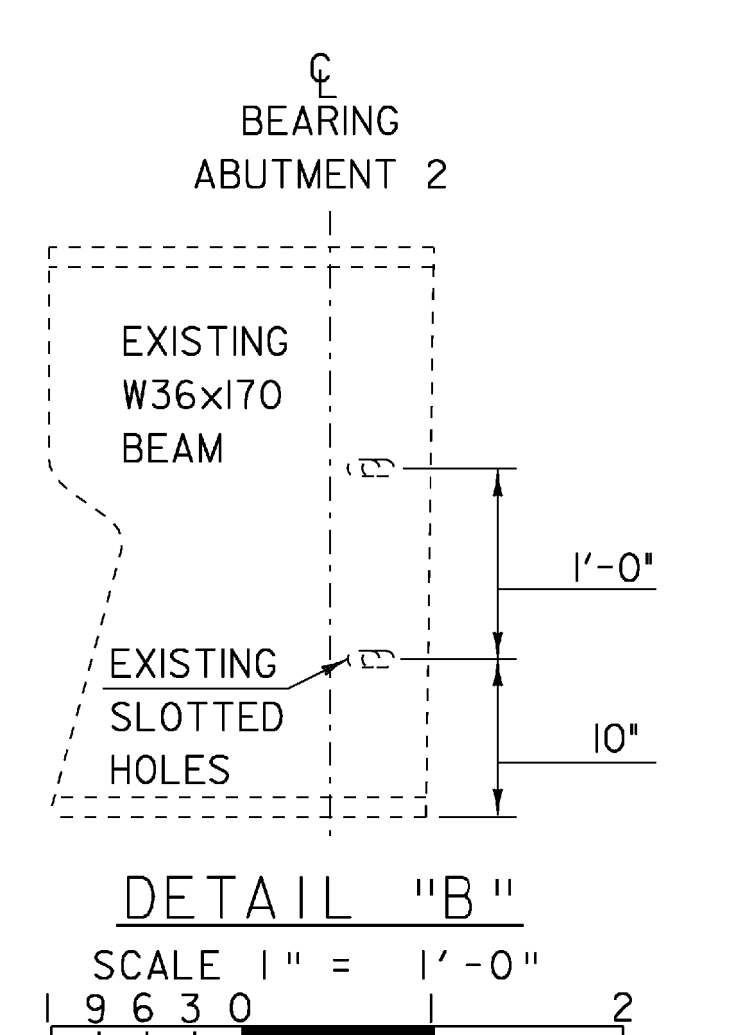
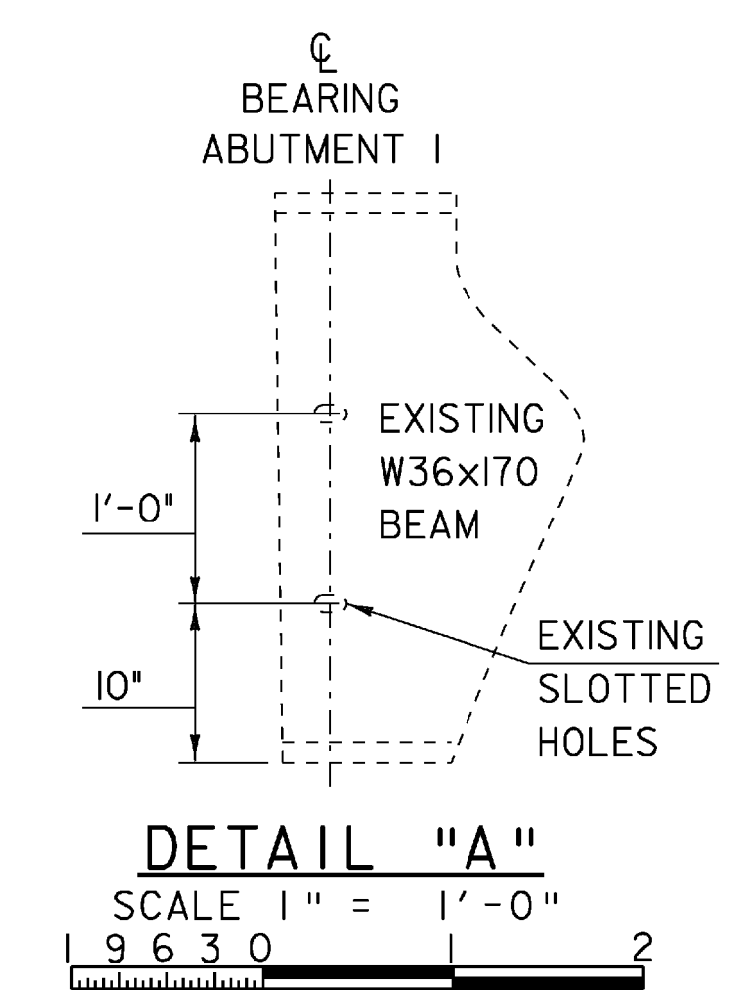
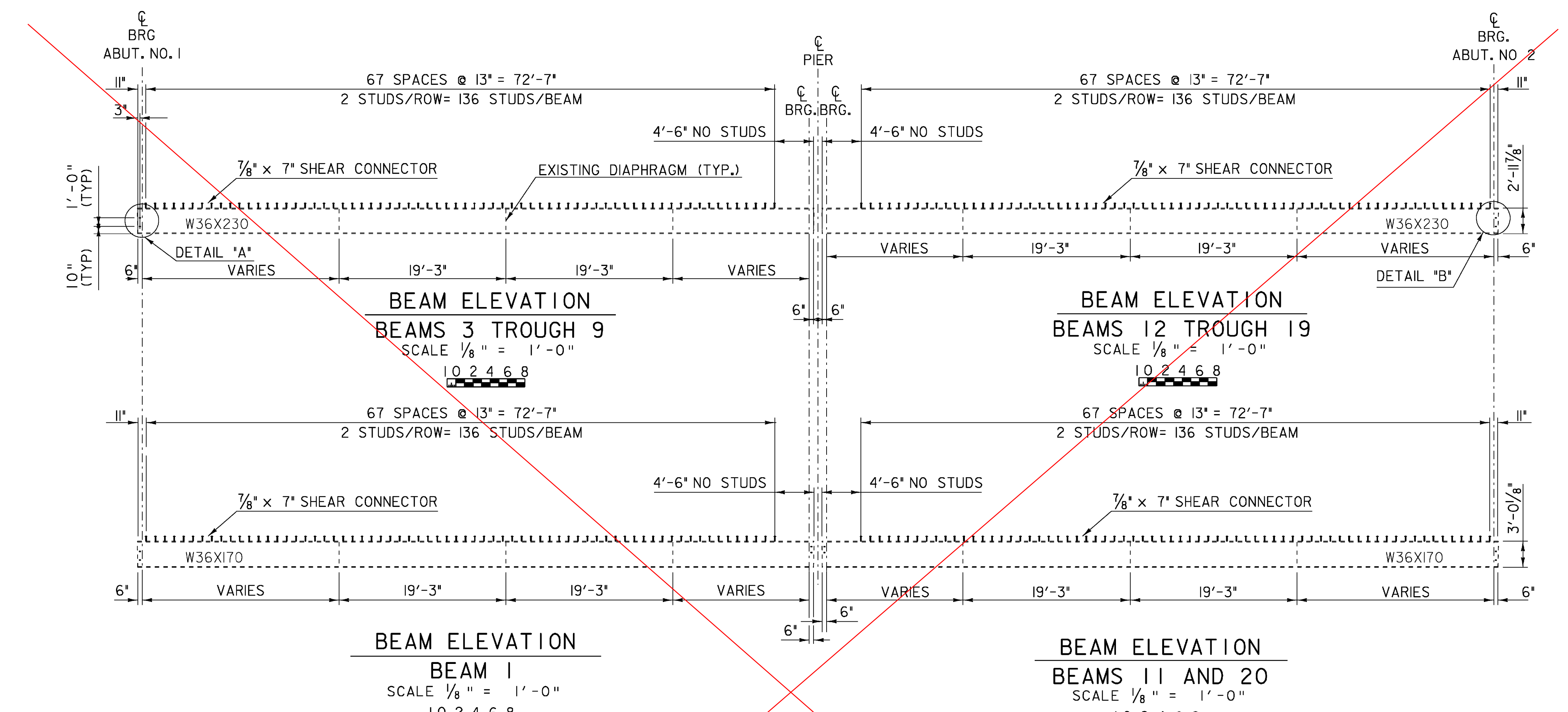
FRAMING PLAN

SCALE 1/8" = 1'-0"
10 2 4 6 8

NOTE
THE EXISTING BEAM 2 IS A W36x230 ADD NEW COVER PLATE 1 1/4"x19"x20'-0" (SEE "BEAM ELEVATION - BEAM 2" DETAIL ON SHEET 27 FOR MORE INFORMATION)

SEE REVISED SHEET 25A

PROJECT NAME:	SPRINGFIELD	FILE NAME:	s06j004sup.dgn	PLOT DATE:	24-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	PROJECT LEADER:	R. WHITCOMB	DRAWN BY:	C. MOONEY
		DESIGNED BY:	C. CARLSON	CHECKED BY:	D. PETERSON
		FRAMING PLAN		SHEET 26	OF 72

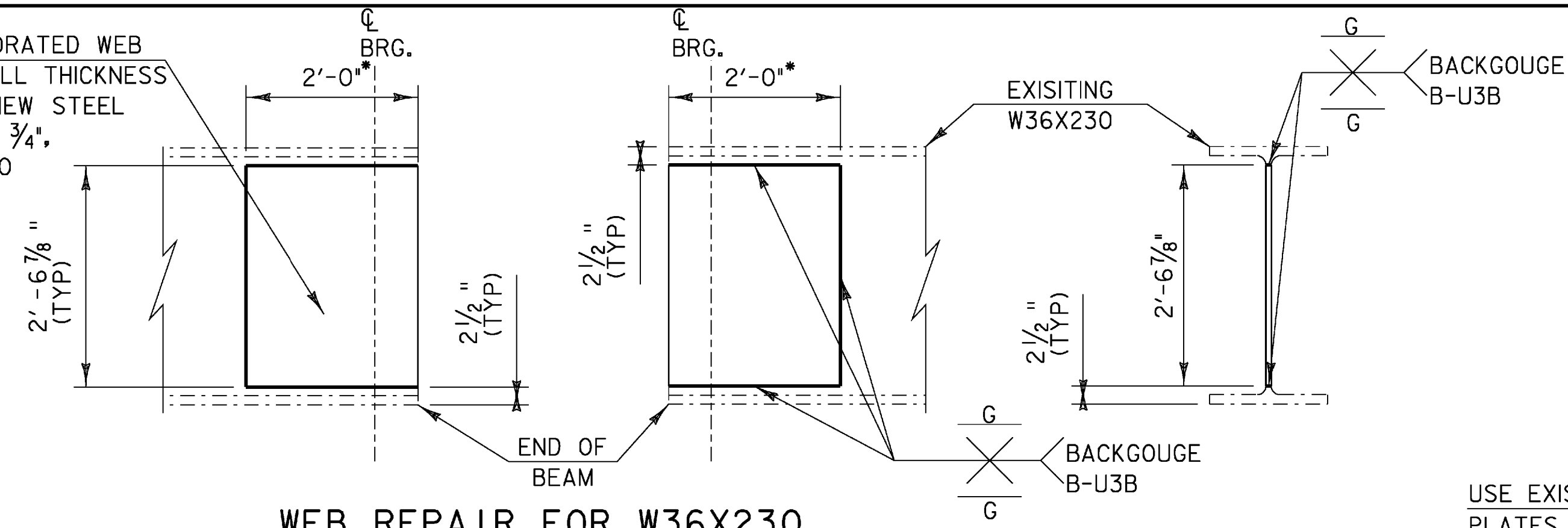


NOTE:
DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF BEAM NO. 10 AT ABUTMENT NO. 1.

PROJECT NAME:	SPRINGFIELD	PLOT DATE:	04-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	DRAWN BY:	C. MOONEY
FILE NAME:	s06j004sup.dgn	DESIGNED BY:	C. CARLSON
PROJECT LEADER:	R. WHITCOMB	STRUCTURAL STEEL ELEVATION SHEET	CHECKED BY: D. PETERSON
			SHEET 27 OF 72

VOID

REMOVE DETERIORATED WEB TO AREA OF FULL THICKNESS
 REPLACE WITH NEW STEEL PLATE 30 7/8" X 3/4",
 GRADE 36 OR 50

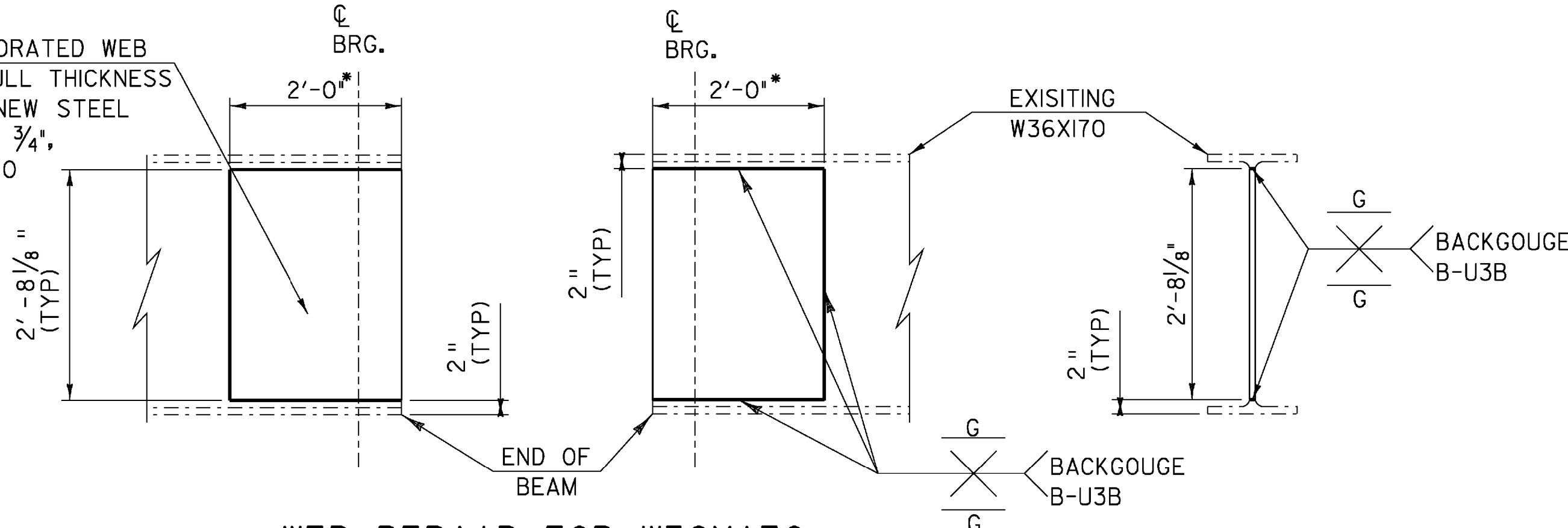


WEB REPAIR FOR W36X230

BEAMS AT PIER

SCALE 3/4" = 1'-0"

REMOVE DETERIORATED WEB TO AREA OF FULL THICKNESS
 REPLACE WITH NEW STEEL PLATE 32 1/8" X 3/4",
 GRADE 36 OR 50

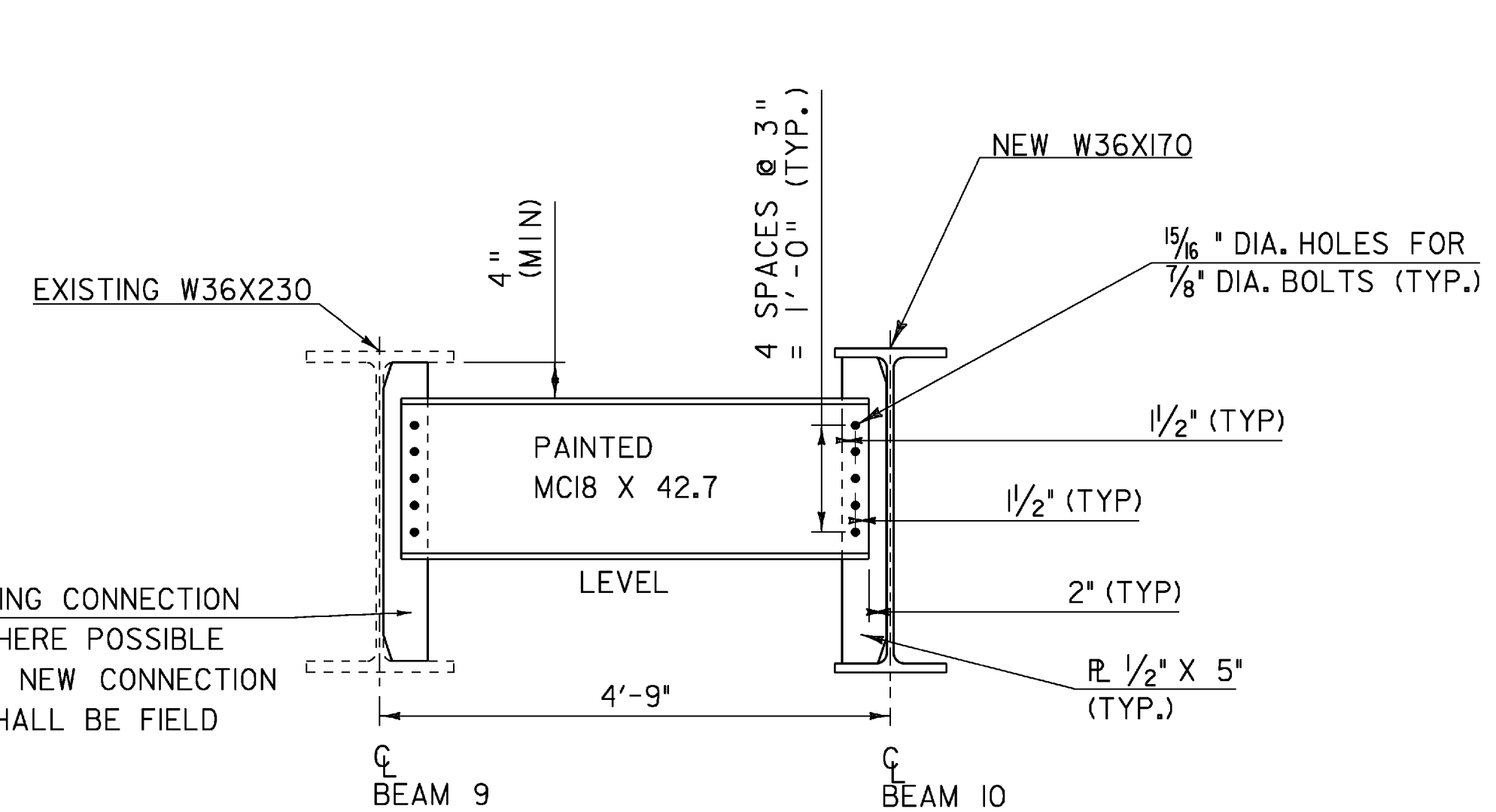


WEB REPAIR FOR W36X170

BEAMS AT PIER

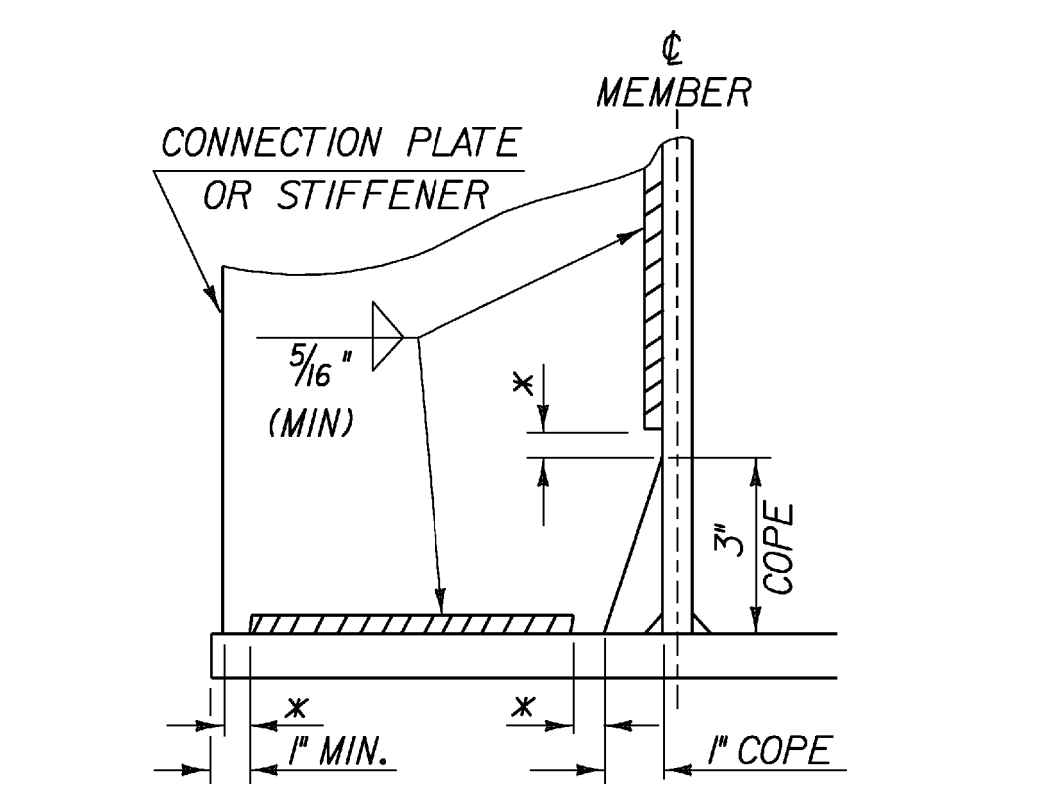
SCALE 3/4" = 1'-0"

* APPROXIMATE DIMENSION, CONTRACTOR SHALL FIELD VERIFY THIS DIMENSION WITH RESIDENT ENGINEER. THE WEB REPAIR LENGTH MAY BE MORE OR LESS THAN 2'-0"



INTERMEDIATE DIAPHRAGMS BETWEEN BEAMS 9 AND 10

SCALE 3/4" = 1'-0"



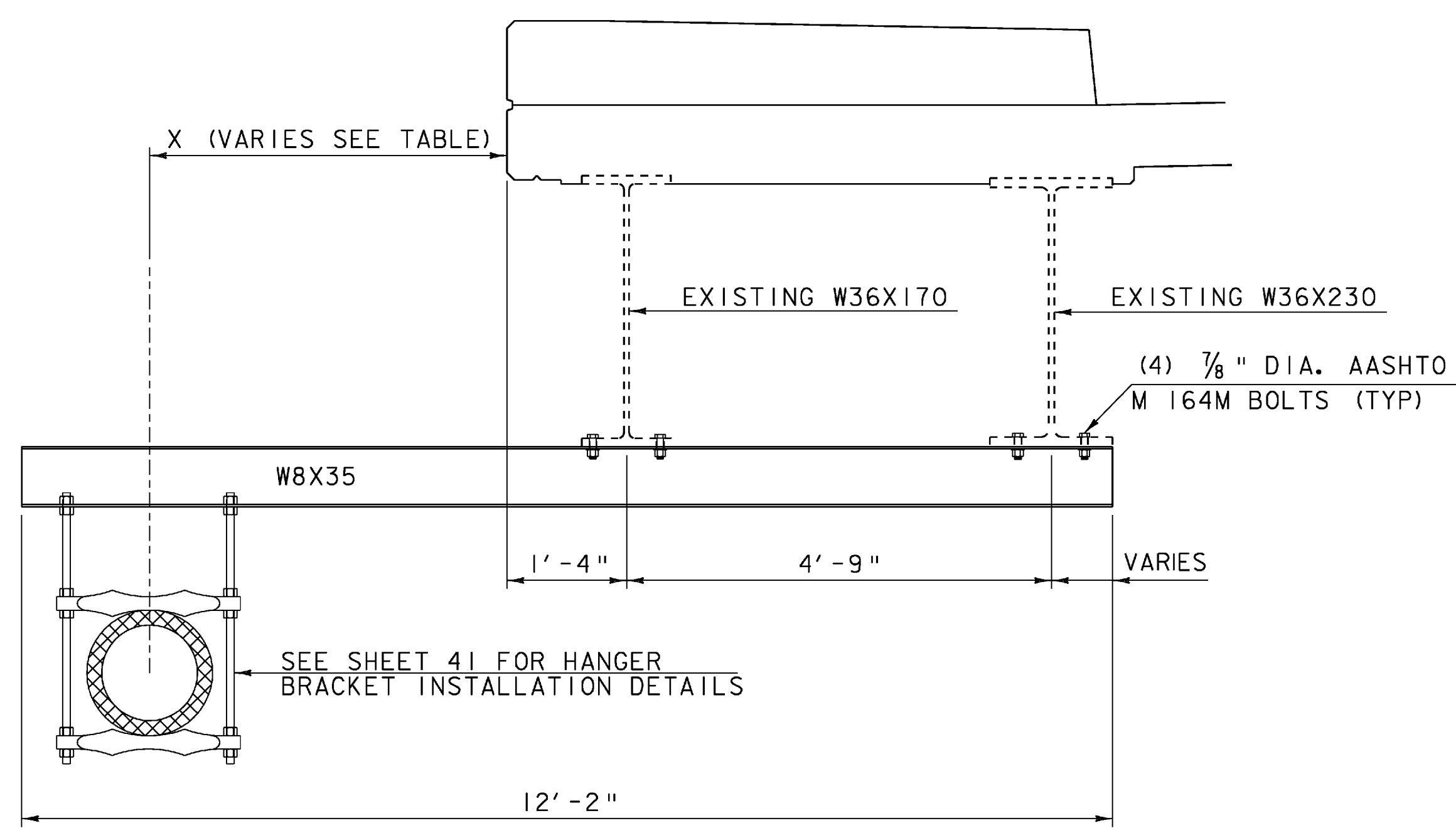
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

* NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

NOTE:
 SEWER HANGER BEAMS (SHB) ARE NUMBERED WITH SHBI CLOSEST TO ABUTMENT NO. 1

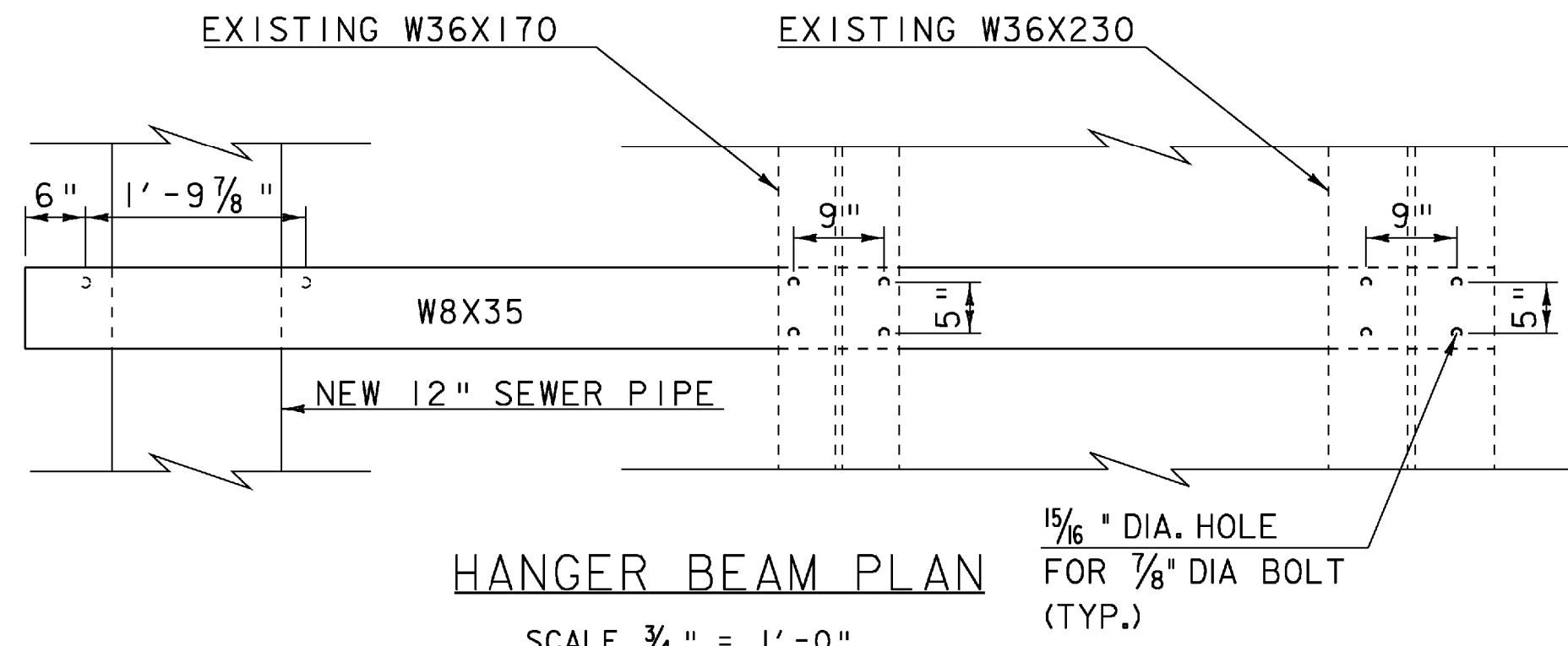
BEAM #	L (FT)	X (FT)
SHB1	12'-2"	2'-4 3/4"
SHB2	12'-2"	2'-9"
SHB3	12'-2"	3'-1 1/4"
SHB4	12'-2"	3'-5 1/2"
SHB5	12'-2"	3'-9 3/4"
SHB6	12'-2"	4'-0"
SHB7	12'-2"	4'-0"
SHB8	12'-2"	4'-0"
SHB9	12'-2"	4'-0"
SHB10	12'-2"	4'-0"
SHB11	12'-2"	4'-0"
SHB12	12'-2"	4'-0"
SHB13	12'-2"	4'-0"

SCALE 3/4" = 1'-0"



HANGER BEAM ELEVATION

SCALE 3/4" = 1'-0"

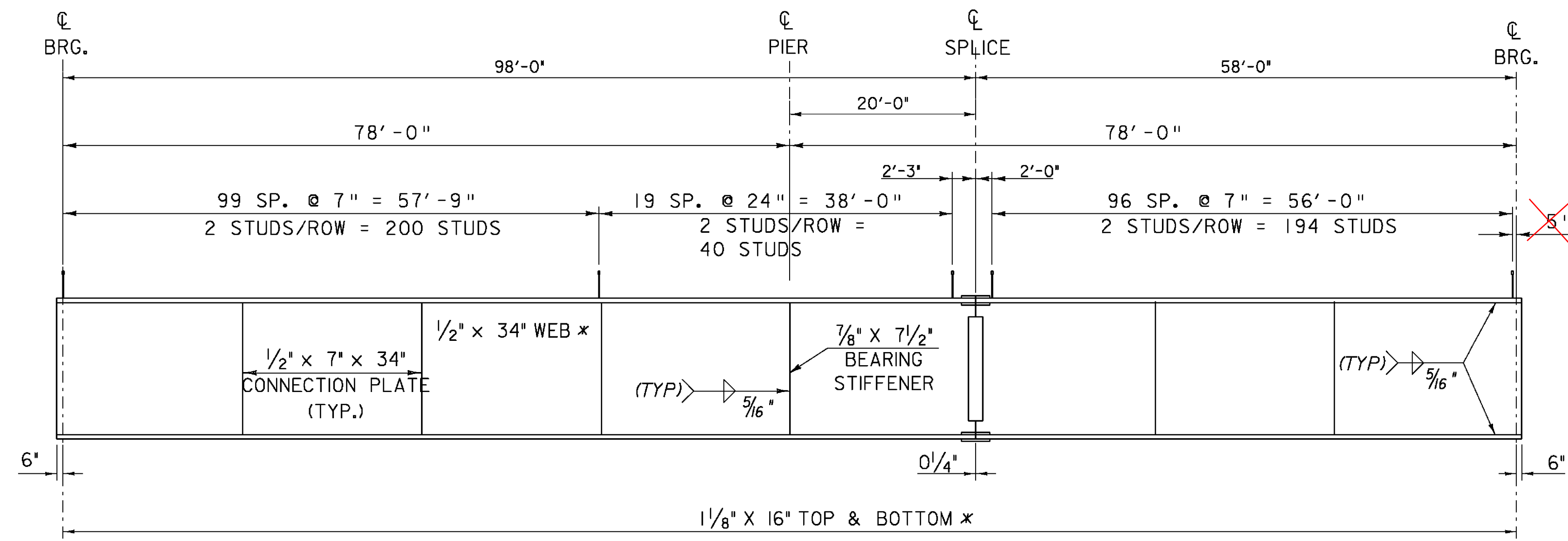


HANGER BEAM PLAN

SCALE 3/4" = 1'-0"

VOID
 SEE REVISED SHEET

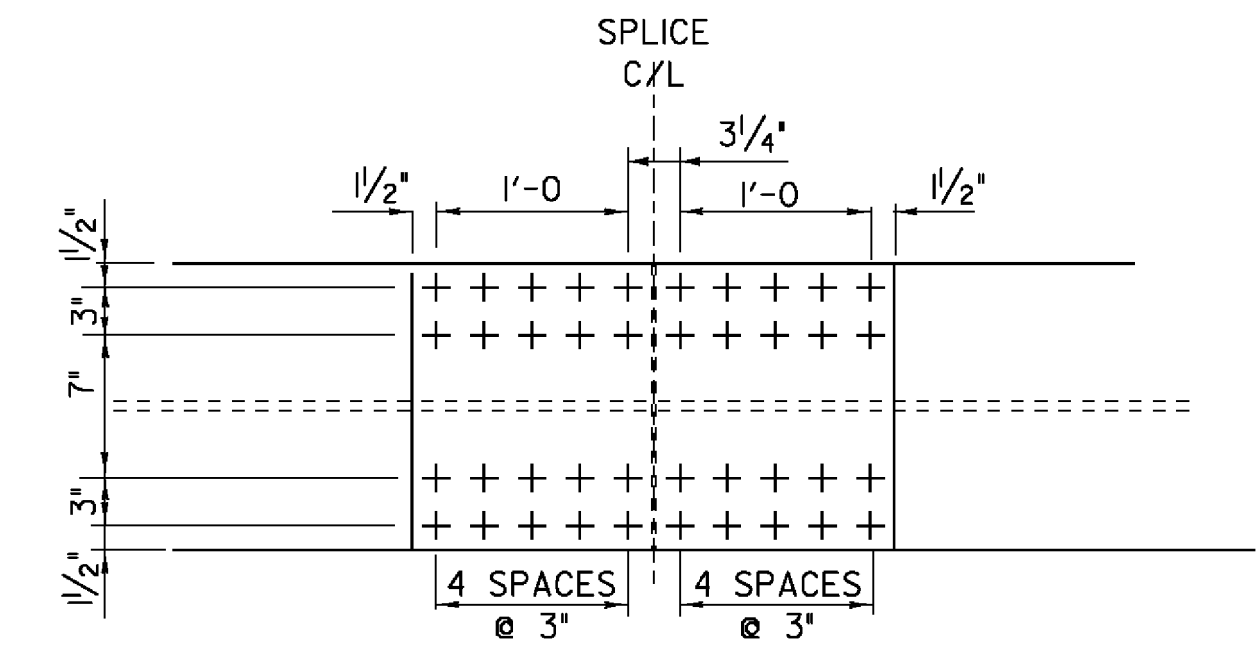
PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2(14)
 FILE NAME: s06j004sup.dgn
 PROJECT LEADER: R. WHITCOMB
 DESIGNED BY: C. CARLSON
 STRUCTURAL STEEL REPAIR DETAILS
 PLOT DATE: 24-MAR-2009
 DRAWN BY: C. MOONEY
 CHECKED BY: D. PETERSON
 SHEET 28 OF 72



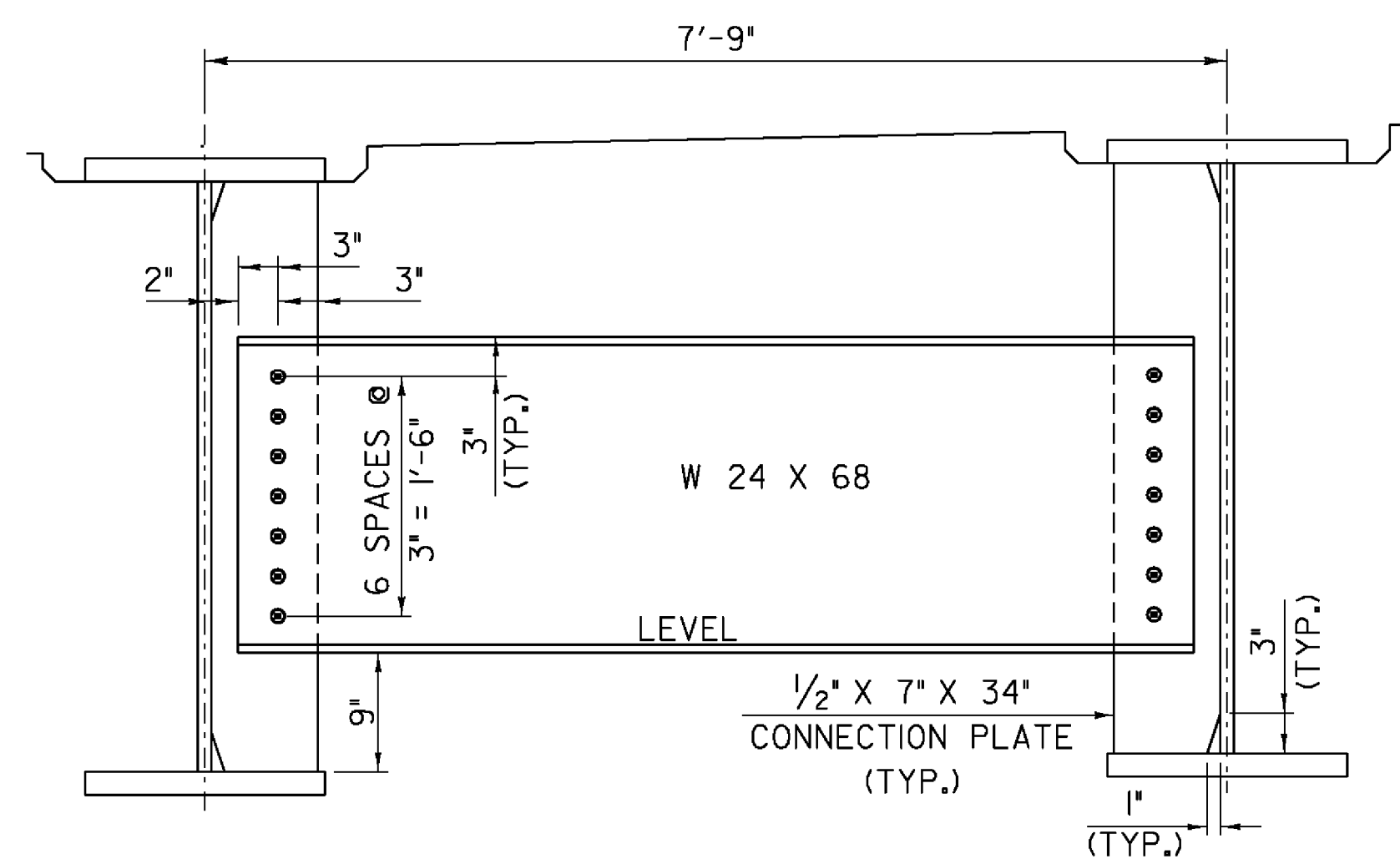
GIRDER ELEVATION

HORIZONTAL SCALE 1" = 10'-0"
VERTICAL SCALE 1" = 2'-0"

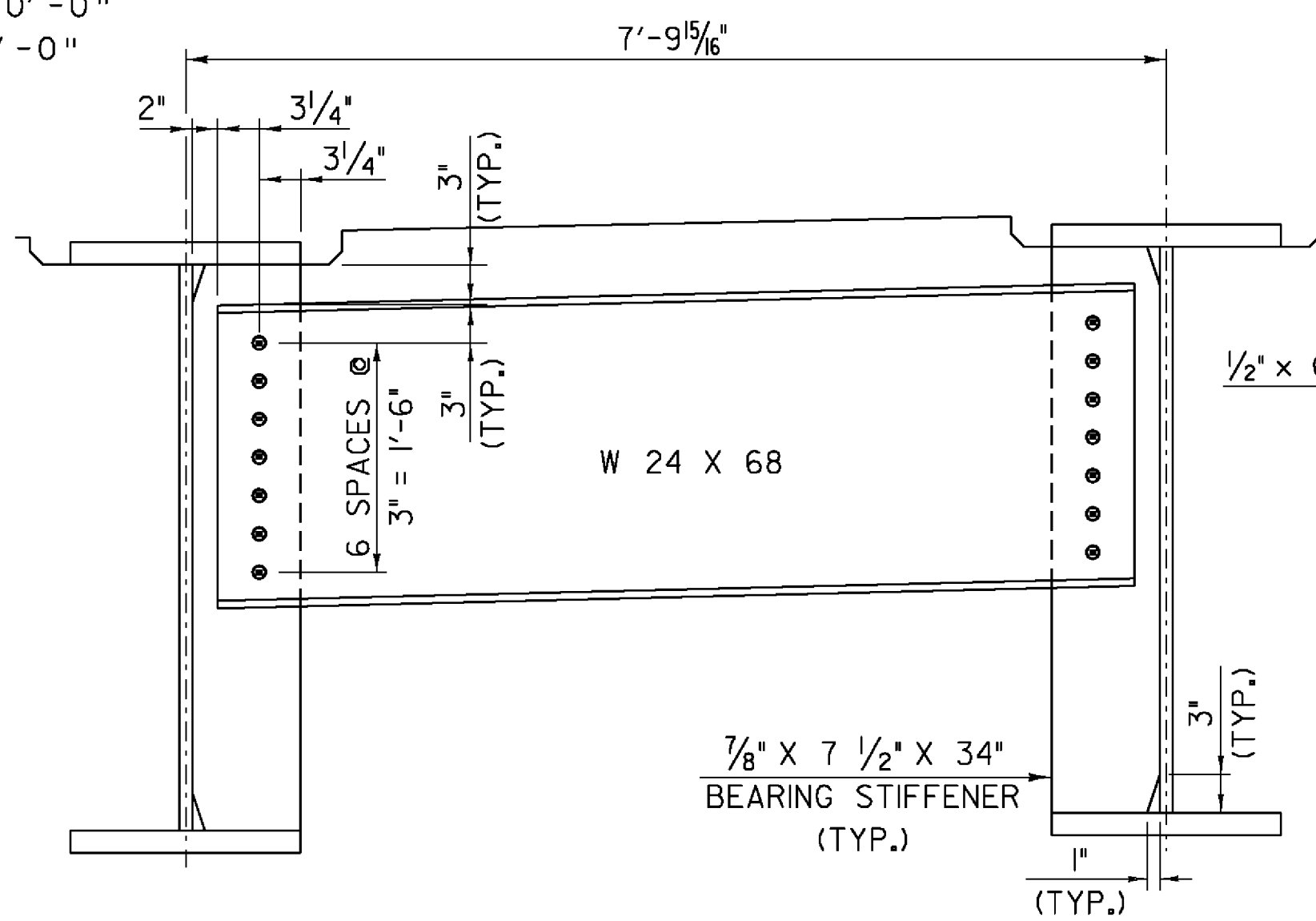
* CVN ~ CHARPY V NOTCH TESTING



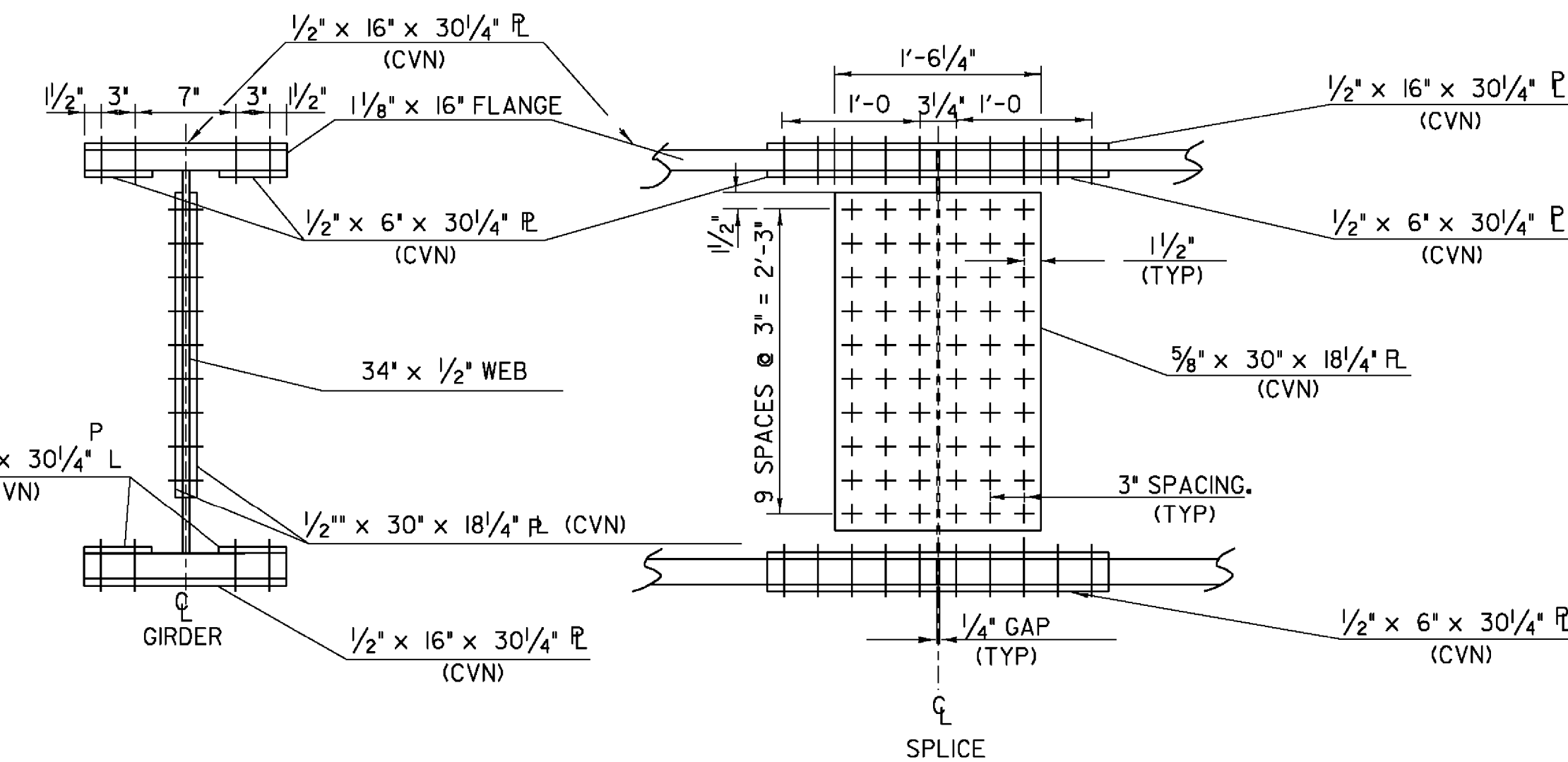
**PLAN VIEW
TOP & BOTTOM
(TYP)**



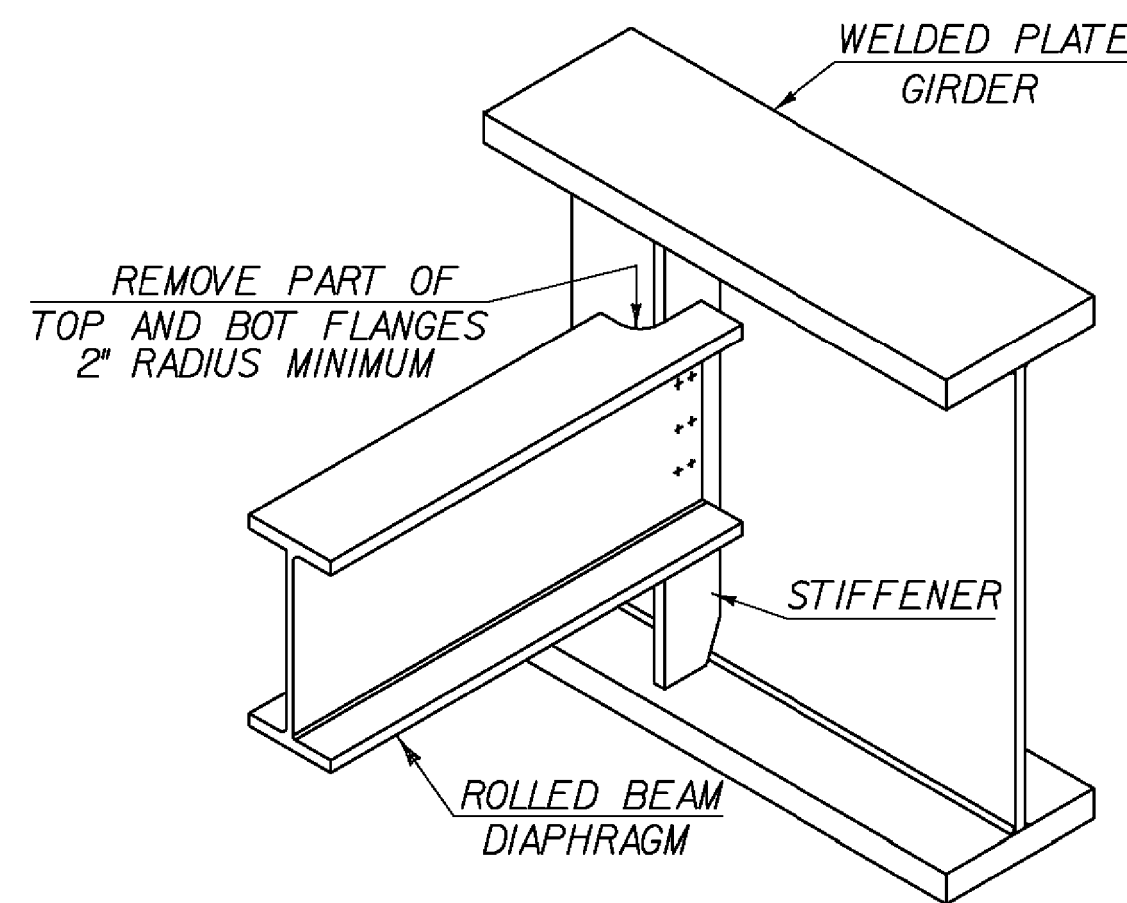
**TYPICAL INTERMEDIATE DIAPHRAGM DETAIL
(NTS)**



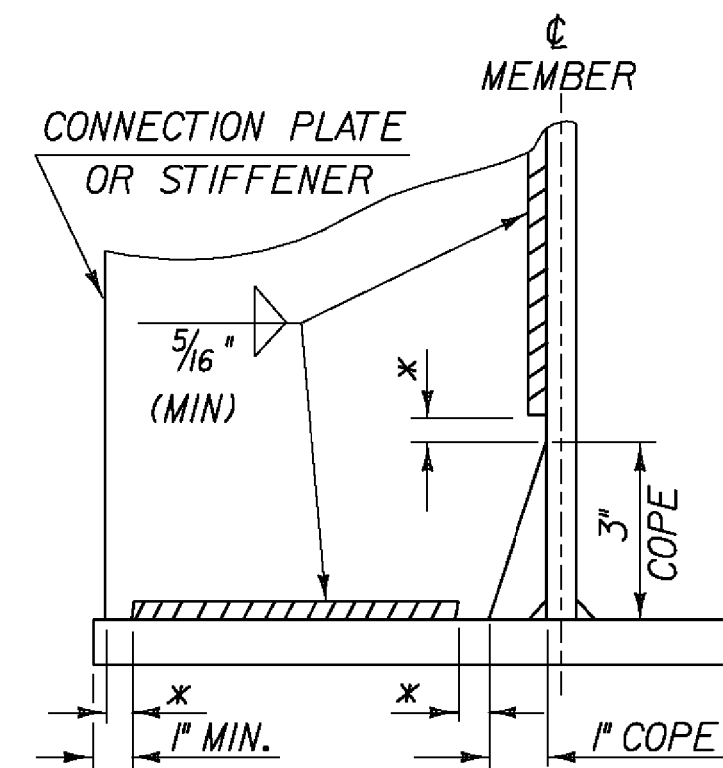
**TYPICAL PIER DIAPHRAGM
DETAIL
(NTS)**



**SPRINGFIELD BHF 016-2(14)
(NEW DESIGN)
SPLICE DETAIL SPAN #2
(NTS)**

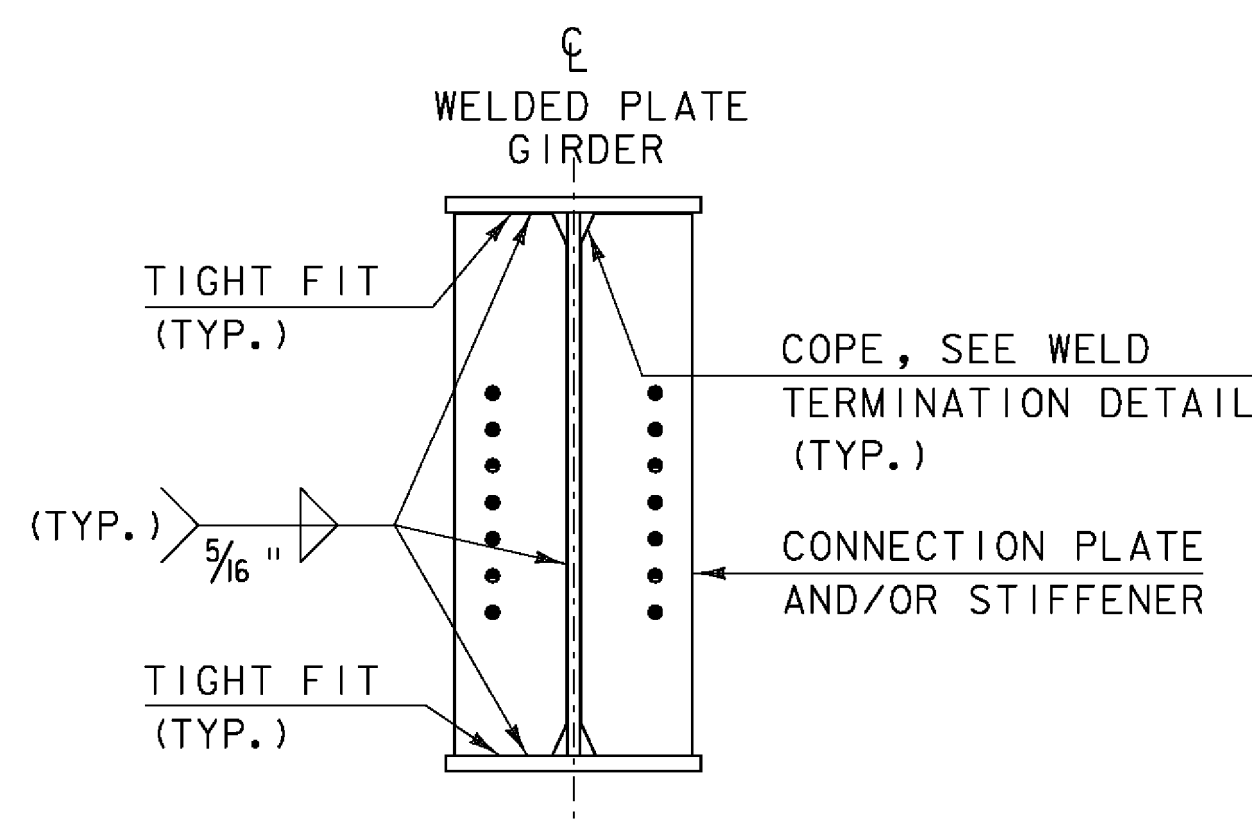


ROLLED BEAM USED AS DIAPHRAGM

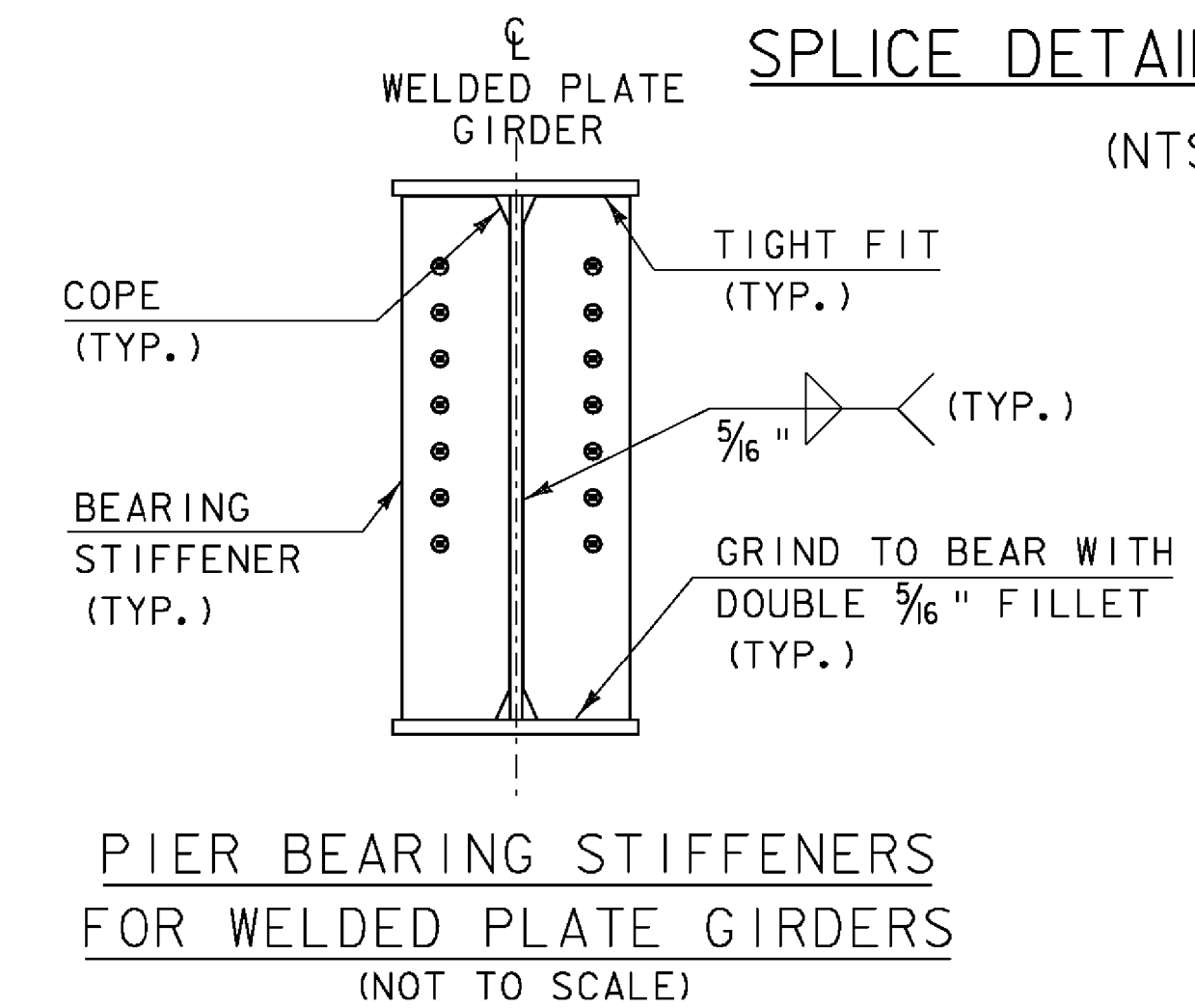


**WELD TERMINATION AND COPING
DETAILS FOR STEEL MEMBERS**

* NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)



**INTERMEDIATE CONNECTION PLATES
AND/OR STIFFENERS FOR WELDED
PLATE GIRDERS
(NOT TO SCALE)**



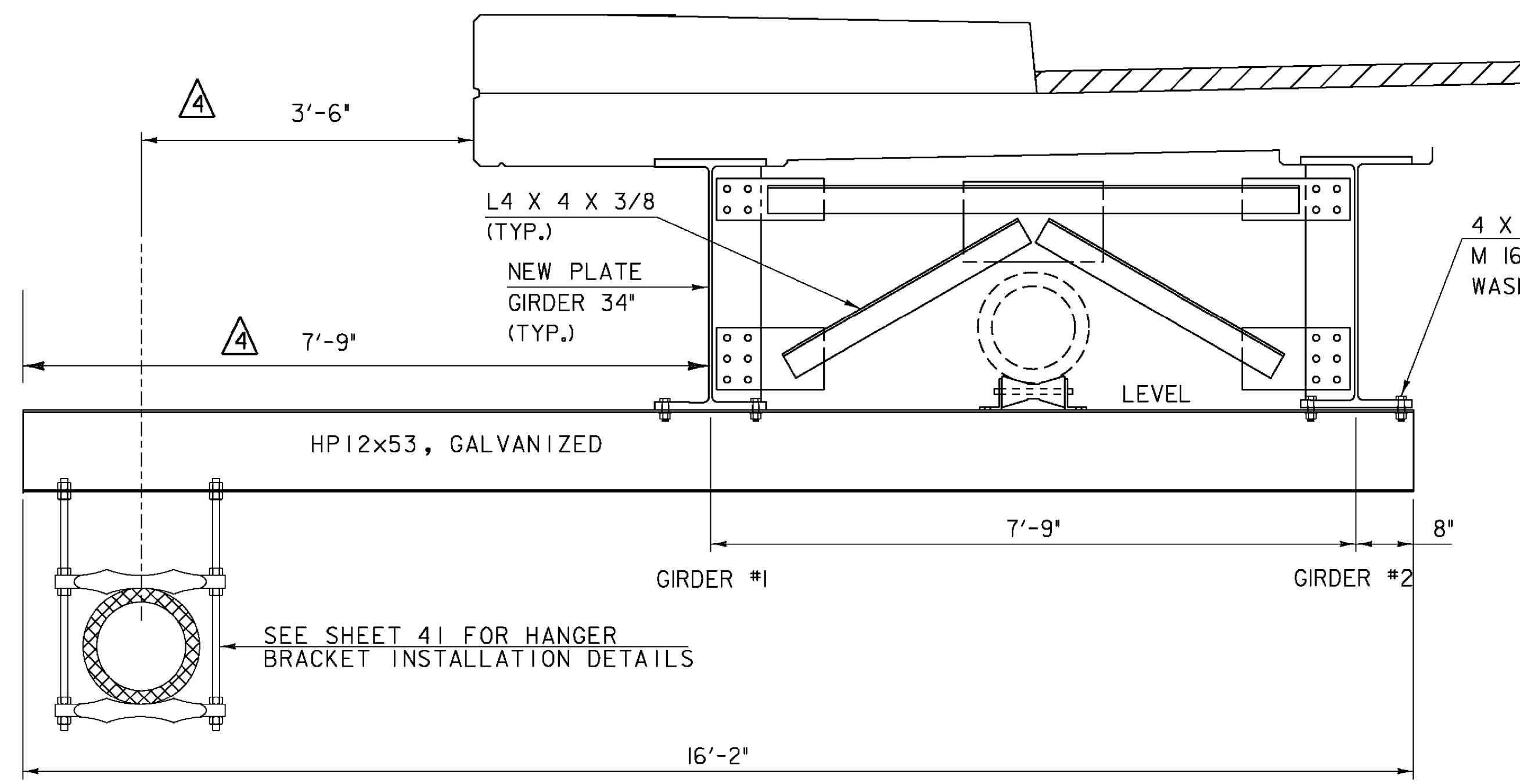
**PIER BEARING STIFFENERS
FOR WELDED PLATE GIRDERS
(NOT TO SCALE)**

REV.	BY	DATE	DESCRIPTION
3	LBB	5/26/09	REVISED GIRDERS

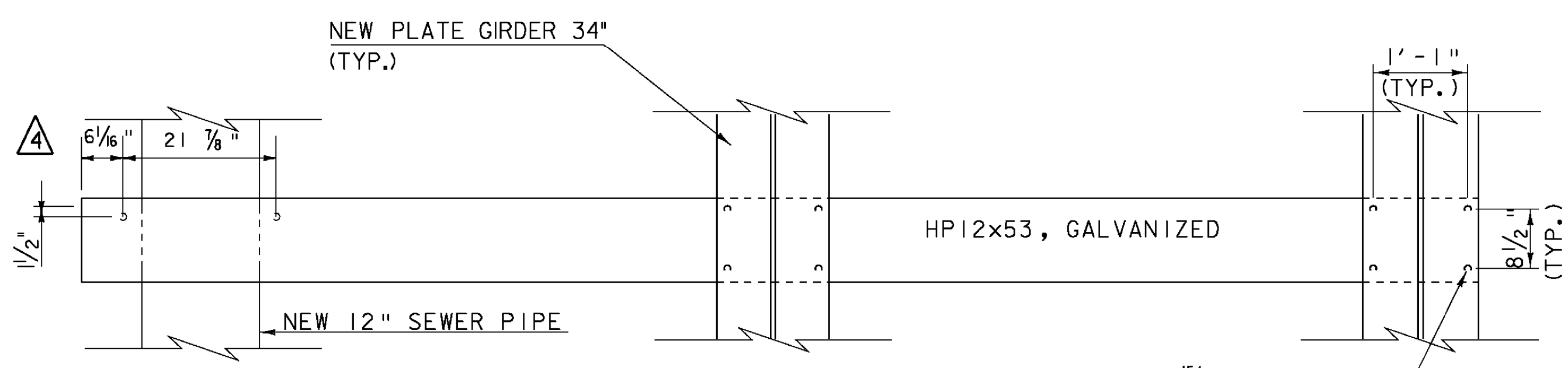
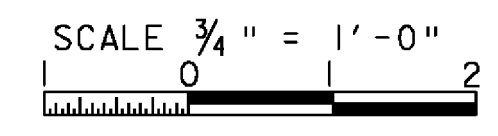
PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2(14)

FILE NAME: s06j004sup.dgn
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. CARLSON
VE GIRDER ELEVATION

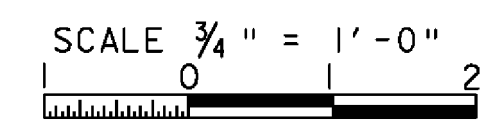
PLOT DATE: 29-MAY-2009
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 28A OF 72



HANGER BEAM ELEVATION



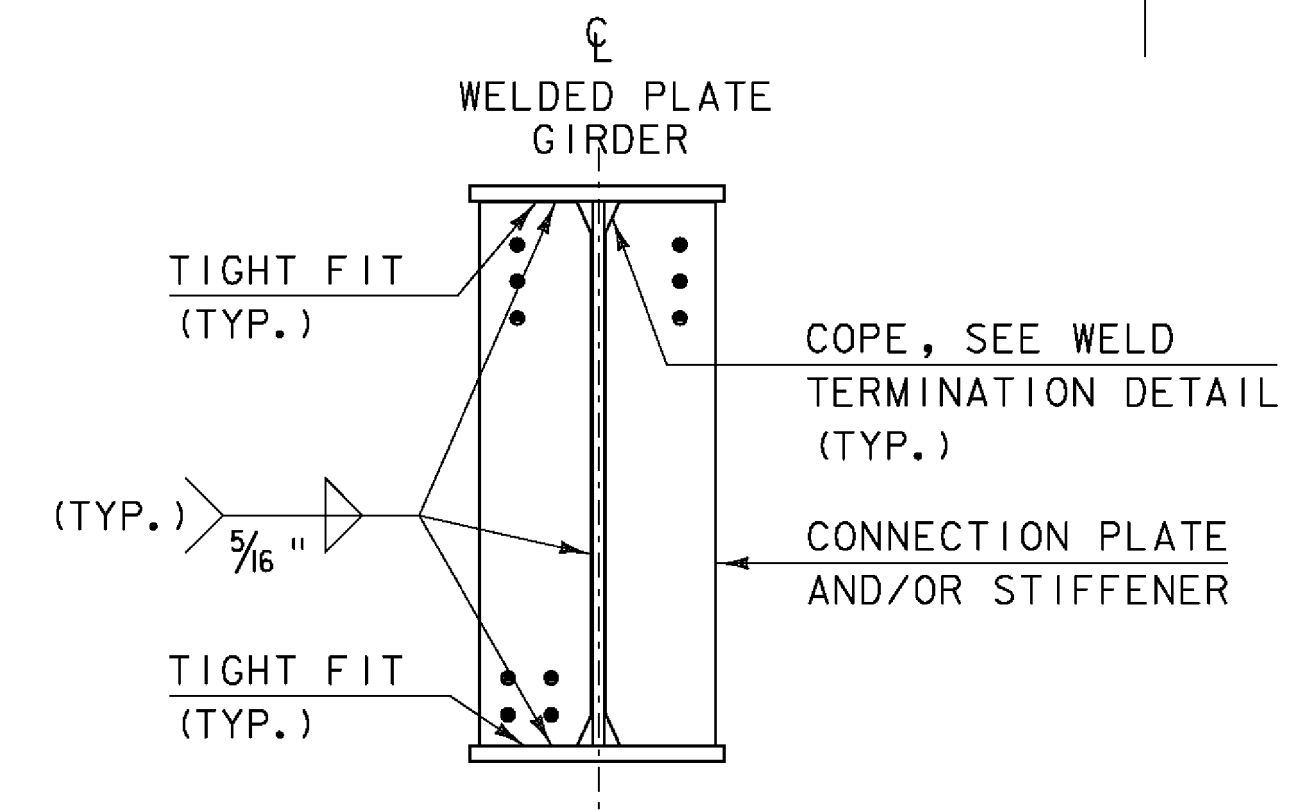
HANGER BEAM PLAN



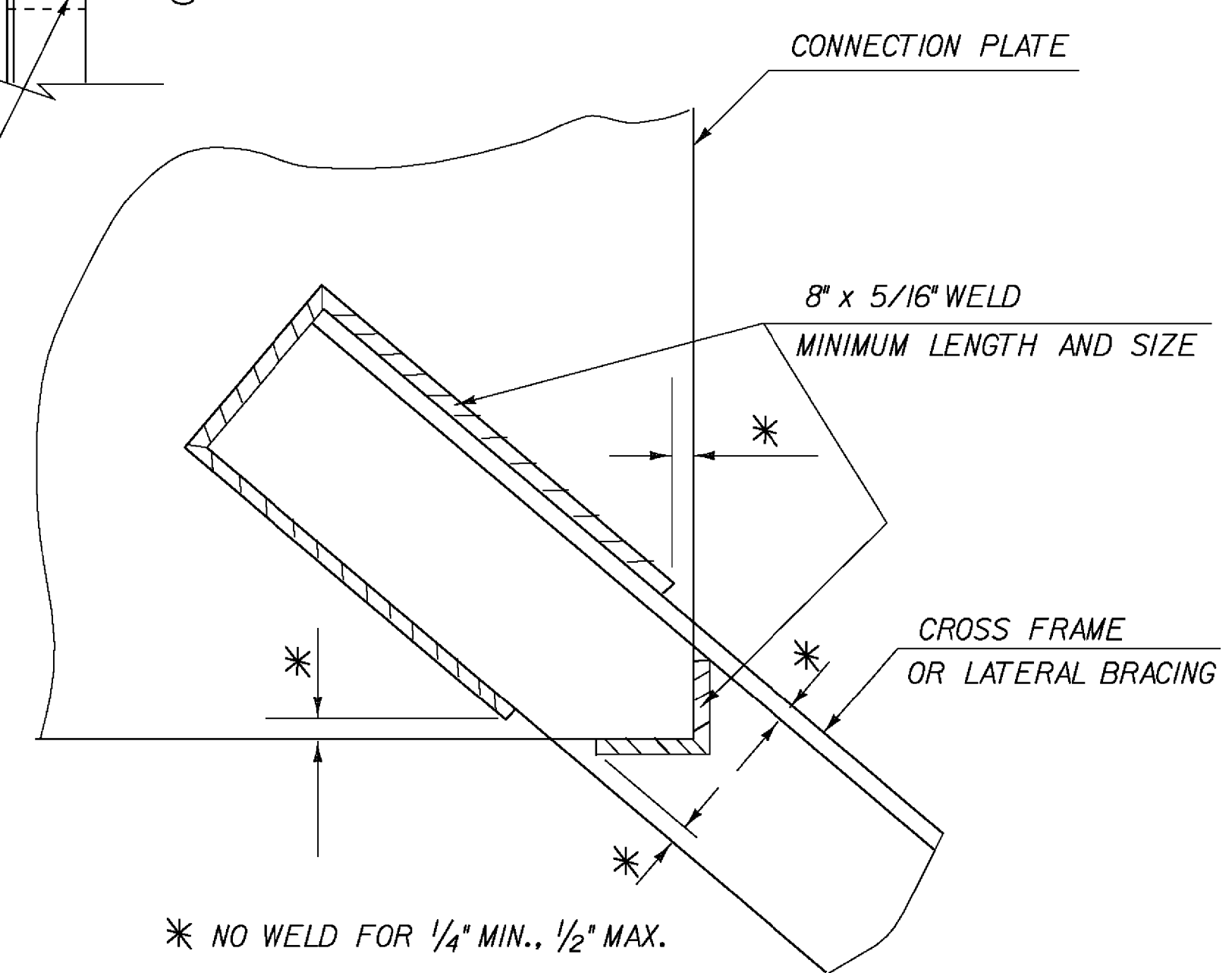
NOTE:
SEWER HANGER BEAMS (SHB) ARE NUMBERED WITH SHBI CLOSEST TO ABUTMENT NO. 1

BEAM #	L (FT)	X (FT)
SHB1	16'-8"	2'-4 3/4"
SHB2	16'-8"	2'-9"
SHB3	16'-8"	3'-1 1/4"
SHB4	16'-8"	3'-5 1/2"
SHB5	16'-8"	3'-9 3/4"
SHB6	16'-8"	4'-0"
SHB7	16'-8"	4'-0"
SHB8	16'-8"	4'-0"
SHB9	16'-8"	4'-0"
SHB10	16'-8"	4'-0"
SHB11	16'-8"	4'-0"
SHB12	16'-8"	4'-0"
SHB13	16'-8"	4'-0"

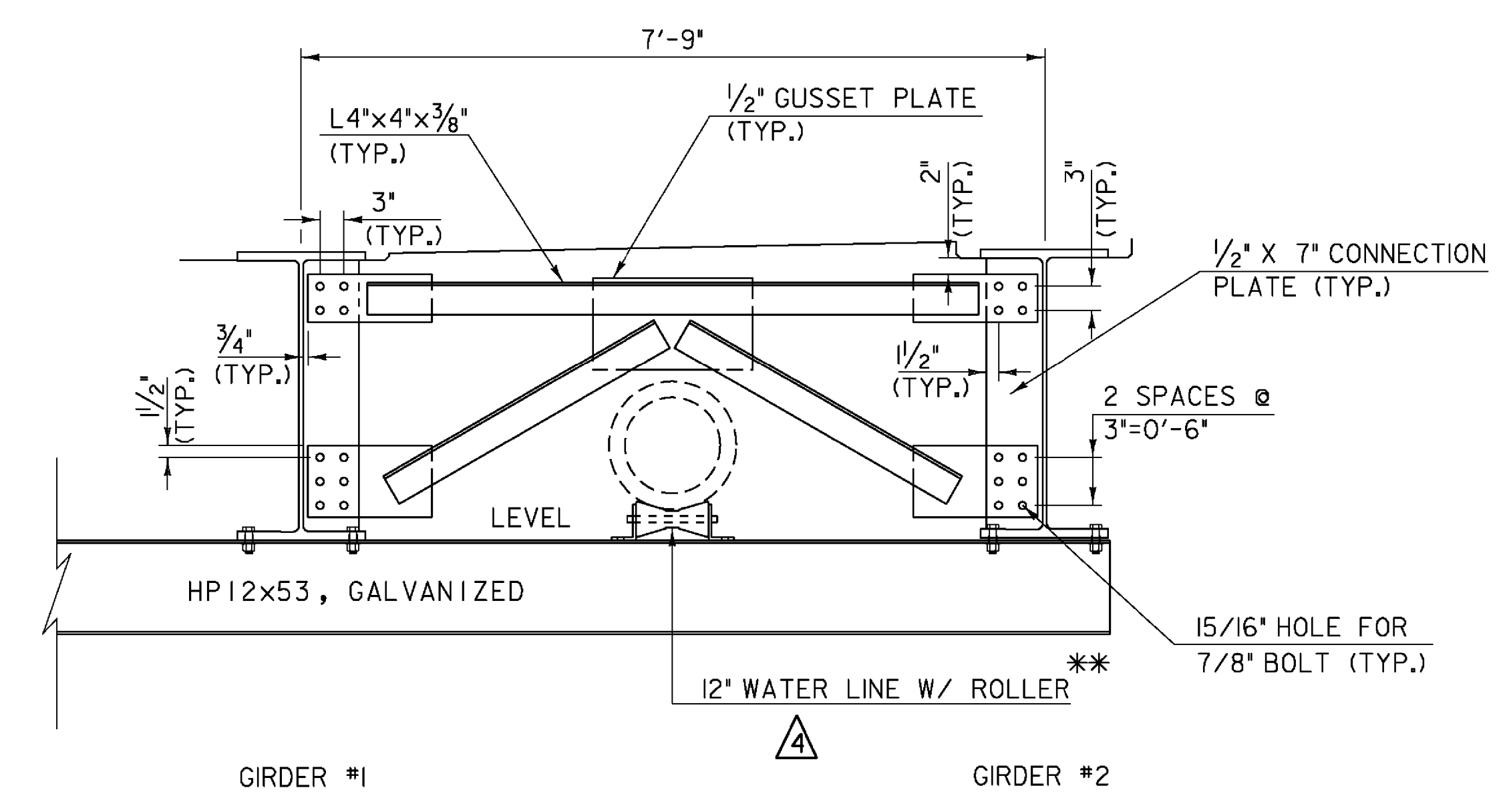
HANGER BEAM SETTING TABLE



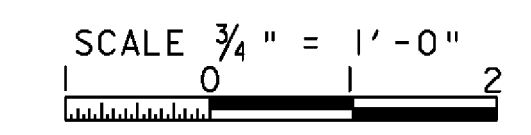
INTERMEDIATE CONNECTION PLATES FOR CROSS FRAME B (NOT TO SCALE)



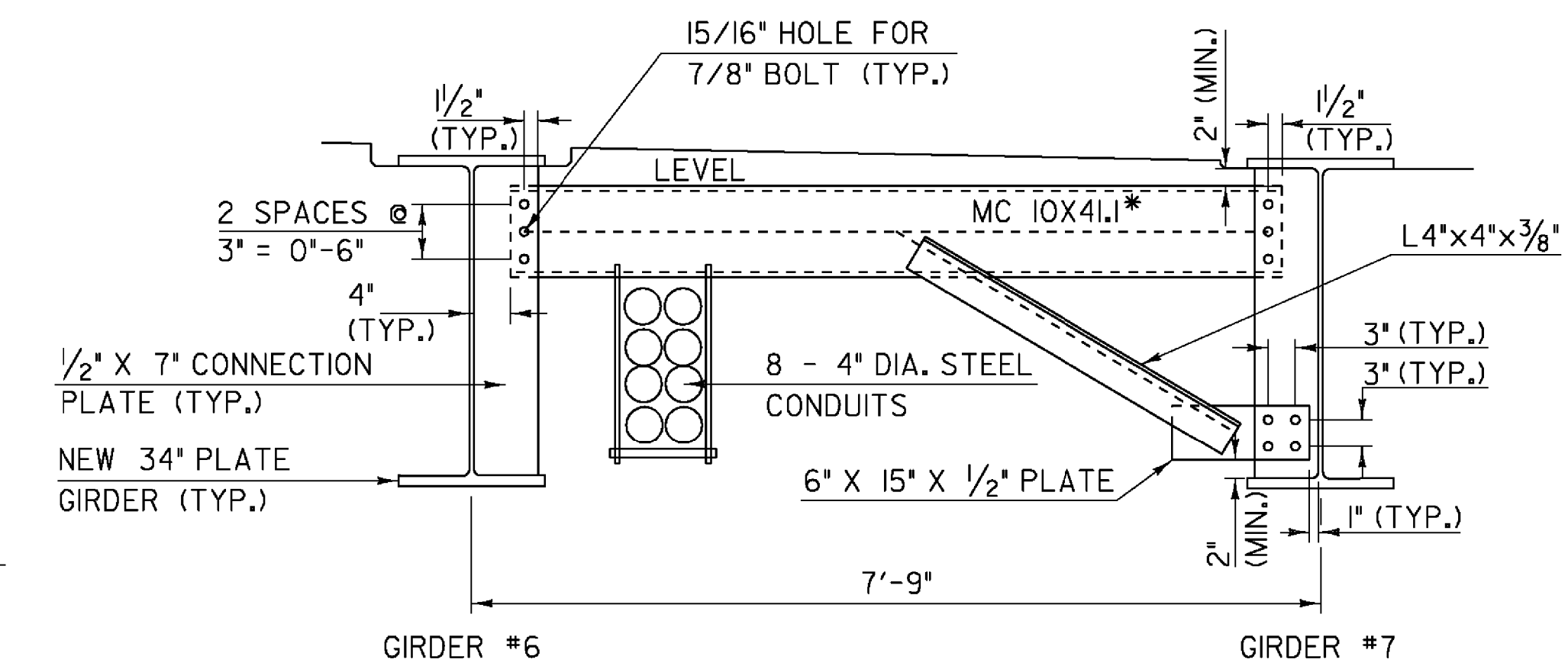
WELD LOCATION DETAIL AT CROSS FRAMES AND LATERAL BRACING



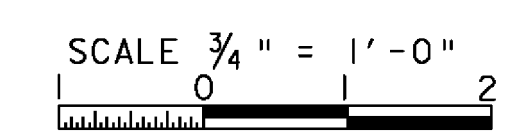
CROSS FRAME A DETAIL



** THE DETAIL FOR CROSS FRAME A APPLIES ONLY IF THE WATERLINE IS MOVED TO THE CENTER OF BAY 1. IF THE WATERLINE IS NOT MOVED THE CONTRACTOR SHALL SUPPLY A LATERAL BRACING SYSTEM BETWEEN GIRDER 1 AND GIRDER 2.



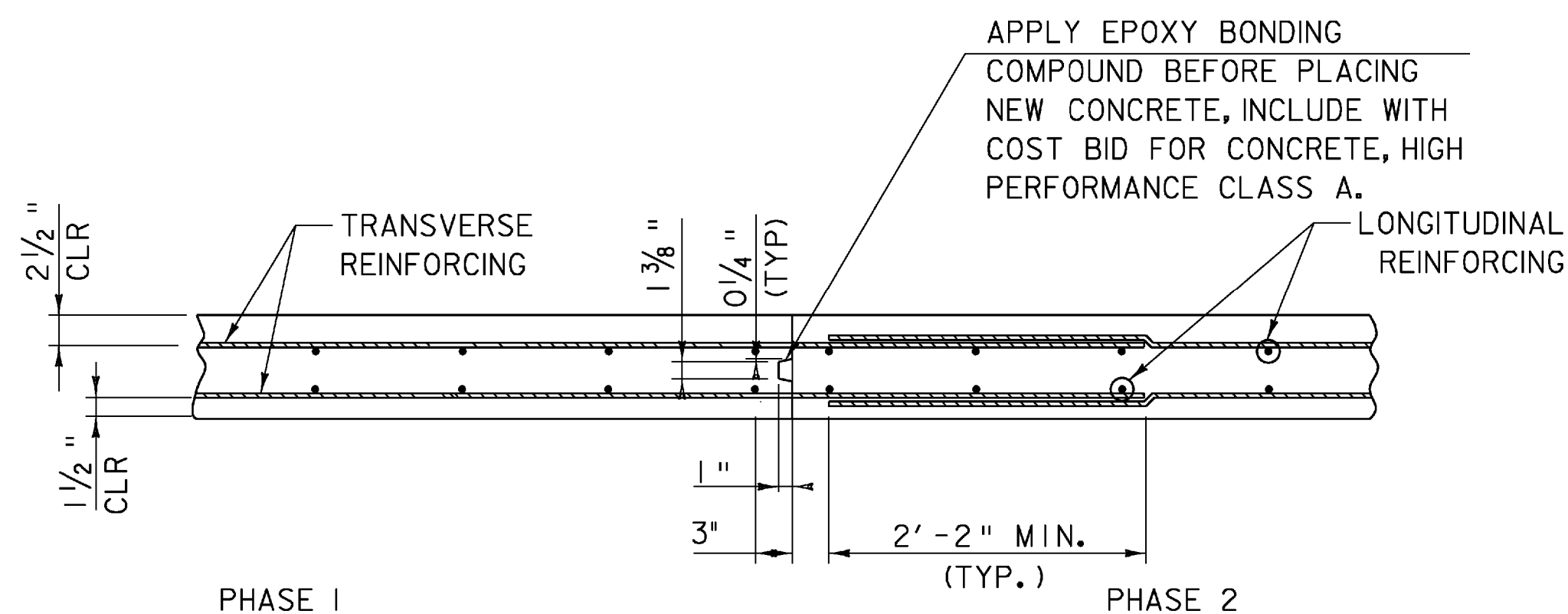
CROSS FRAME B DETAIL



* MC10x41.1 AT THE PIER SHALL BE 7'-1 5/16" LONG.

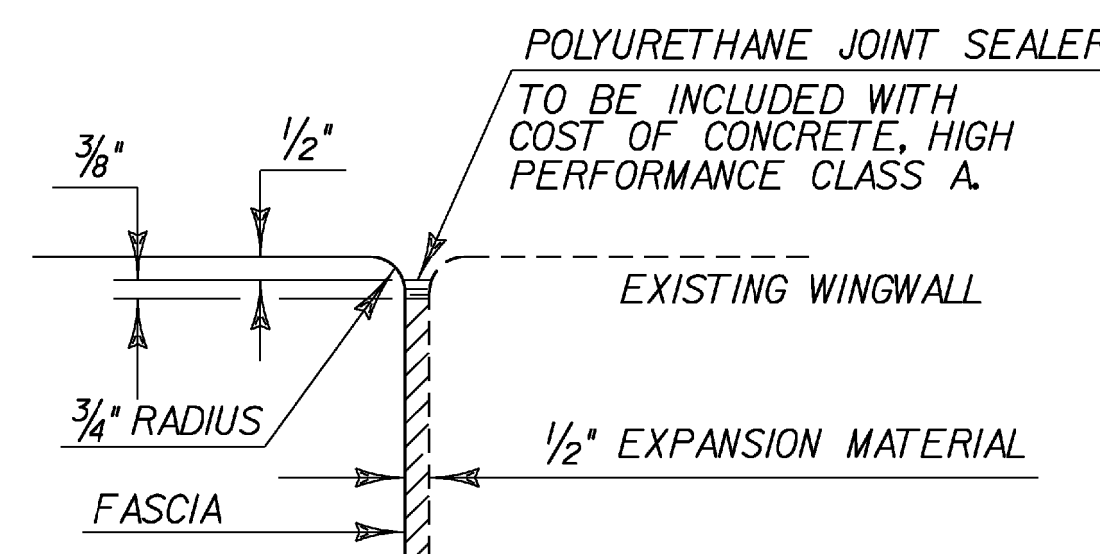
REV.	BY	DATE	DESCRIPTION
A	LBB	5/26/09	REVISED HANGER AND CROSS FRAME
A	CWC	6/18/09	REVISED SEWER SUPPORT LENGTH

PROJECT NAME:	SPRINGFIELD	PLOT DATE:	18-JUN-2009
PROJECT NUMBER:	BHF 016-2(14)	DRAWN BY:	D. PETERSON
FILE NAME:	s06j004sup.dgn	DESIGNED BY:	C. CARLSON
PROJECT LEADER:	R. WHITCOMB	CHECKED BY:	C. CARLSON
VE CROSS FRAME DETAILS			SHEET 28 OF 72

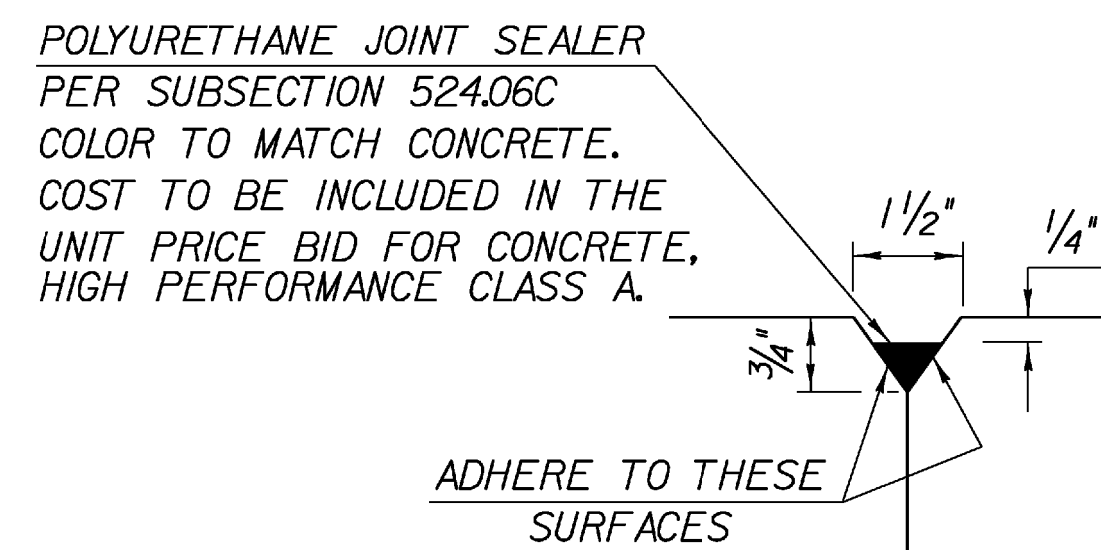


**LONGITUDINAL BRIDGE SLAB
CONSTRUCTION JOINT DETAIL**

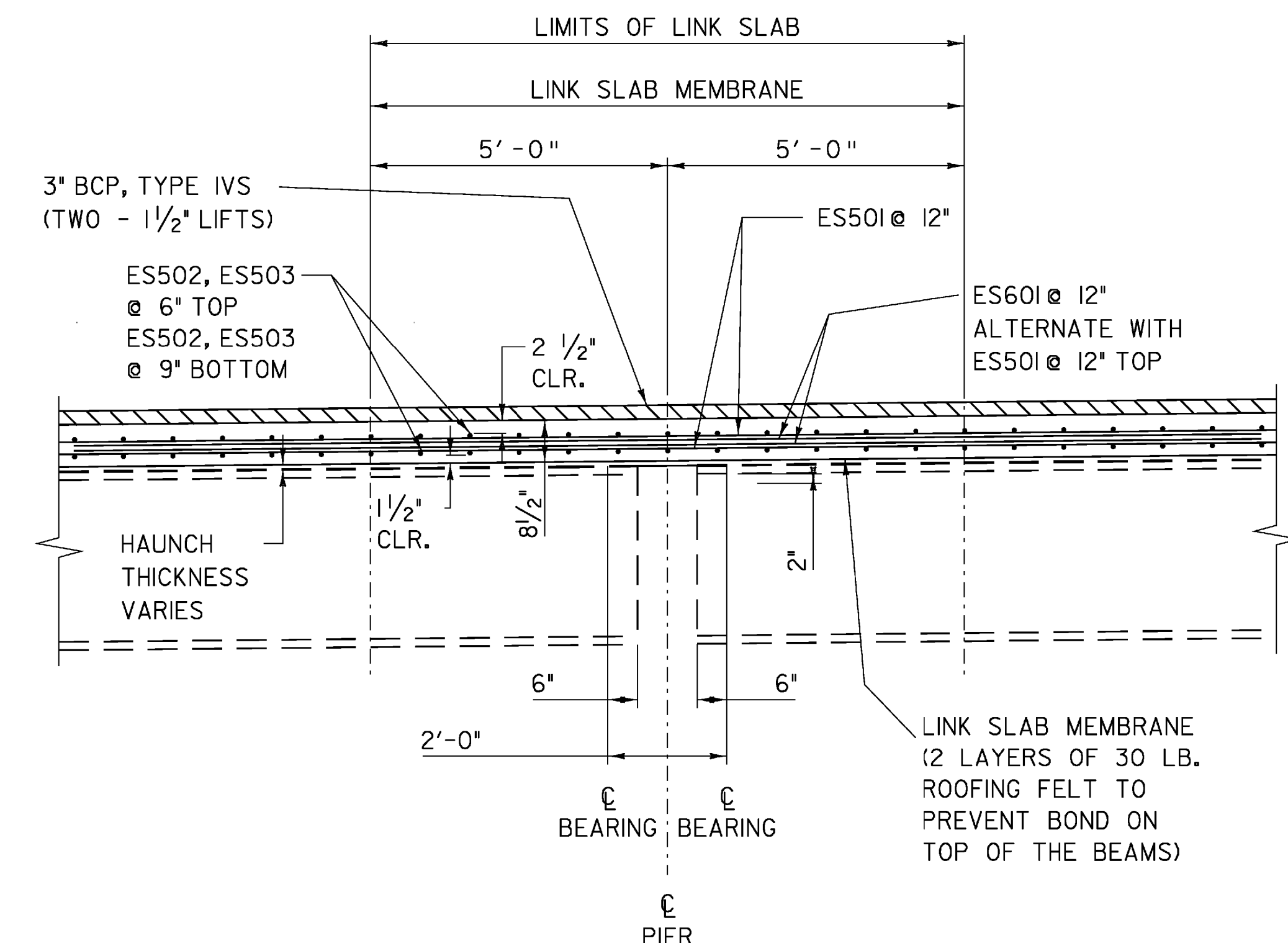
SCALE 1" = 1'-0"
9 6 3 0 2



**JOINT BETWEEN FASCIA
AND WINGWALL**



DETAIL "B"



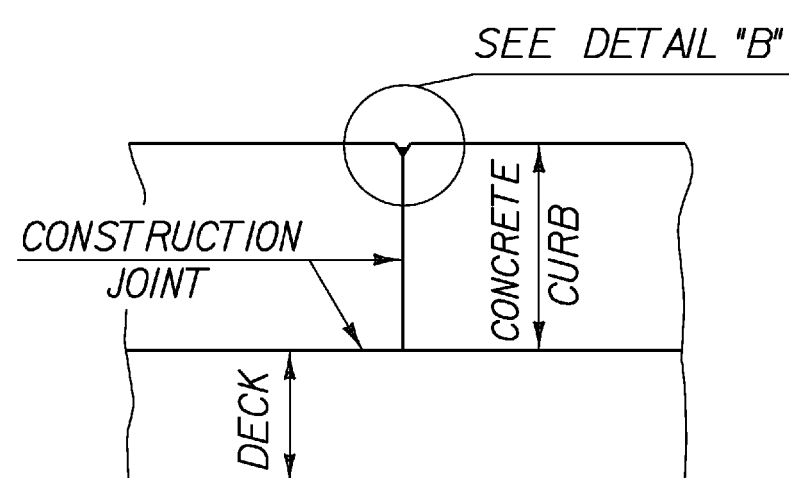
**SECTION D-D
LINK SLAB DETAIL**

SEE LINK SLAB NOTES

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

SHEET MEMBRANE NOTES:

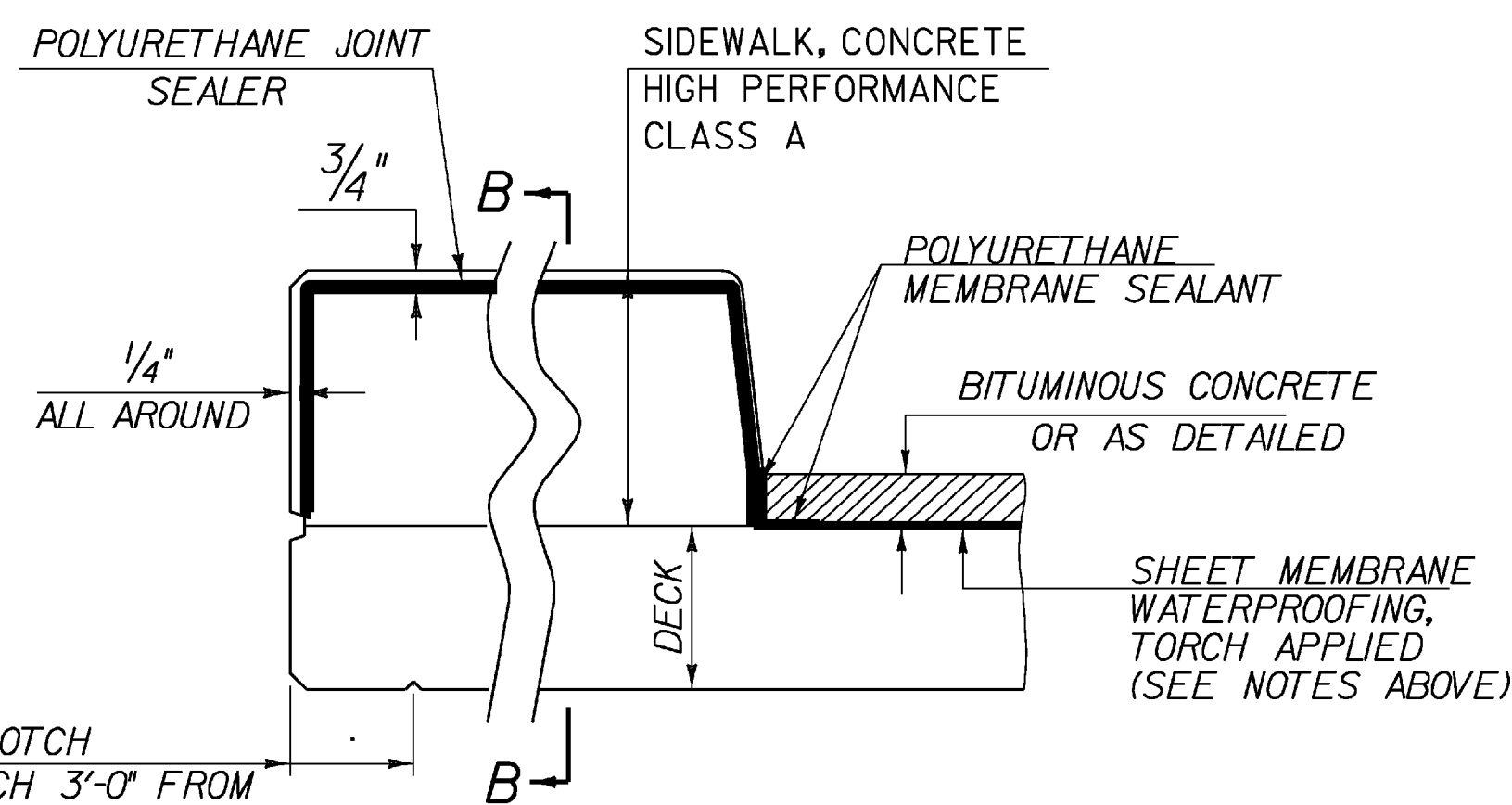
1. PREPARE THE SURFACE OF THE FACE OF THE SIDEWALK TO BE SEALED WITH POLYURETHANE MEMBRANE SEALANT IN ACCORDANCE WITH SUBSECTION 519.04 SURFACE PREPARATION. (PAYMENT FOR POLYURETHANE MEMBRANE SEALANT SHOULD BE INCLUDED IN ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED".)
2. SHEET MEMBRANE WATERPROOFING, TORCH APPLIED: EXTEND SHEET MEMBRANE WATERPROOFING TO FACE OF SIDEWALK.



SECTION B - B

SIDEWALK NOTES:

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION. IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.
3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND 7'-0" EACH SIDE OF THE CENTERLINE OF EACH PIER.
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.
5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



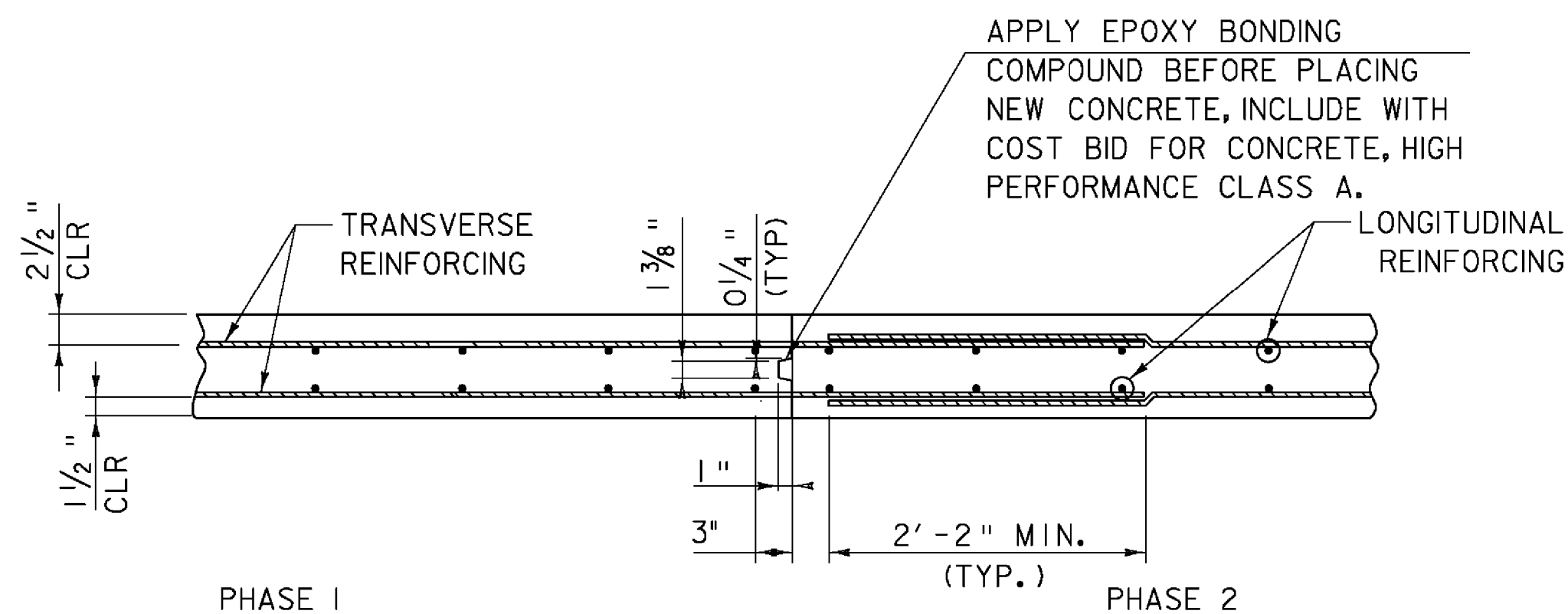
**TYPICAL SECTION THROUGH
CONCRETE SIDEWALK CONSTRUCTION JOINT**

LINK SLAB NOTES:

1. THE TOP OF THE BEAM IN THE REGION OF THE LINK SLAB SHALL BE SMOOTH AND FREE OF SHEAR CONNECTORS. NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.
2. THE COST OF THE LINK SLAB MEMBRANE SHALL BE INCIDENTAL TO PAY ITEM 501.33 "CONCRETE, HIGH PERFORMANCE CLASS A".

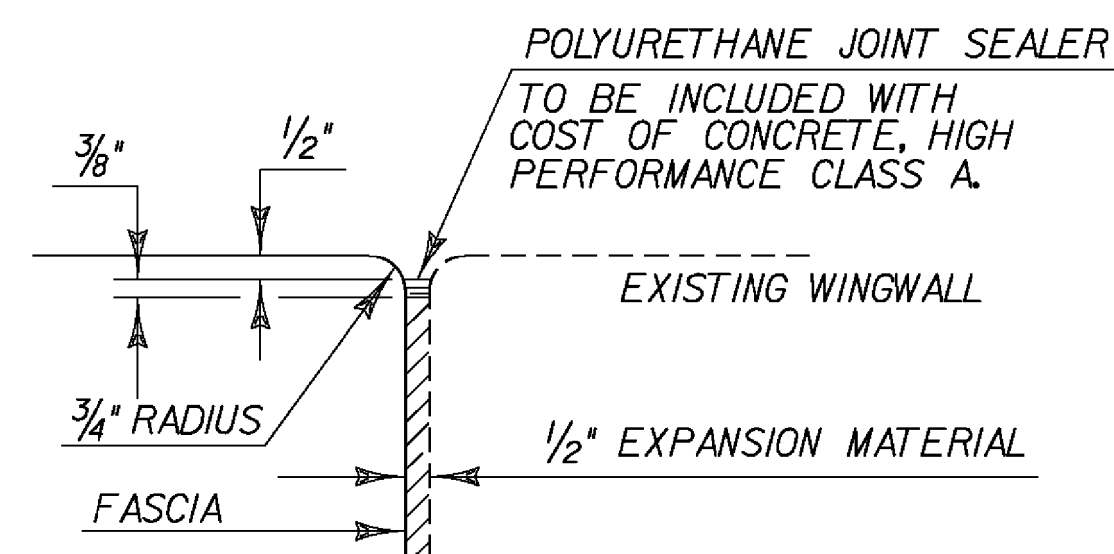
VOID
SEE REVISED
SHEET

PROJECT NAME: SPRINGFIELD	PLOT DATE: 04-MAR-2009
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: C. MOONEY
FILE NAME: s06j004sup.dgn	CHECKED BY: D. PETERSON
PROJECT LEADER: R. WHITCOMB	SHEET 29 OF 72
DESIGNED BY: C. CARLSON	
CONCRETE DETAILS	

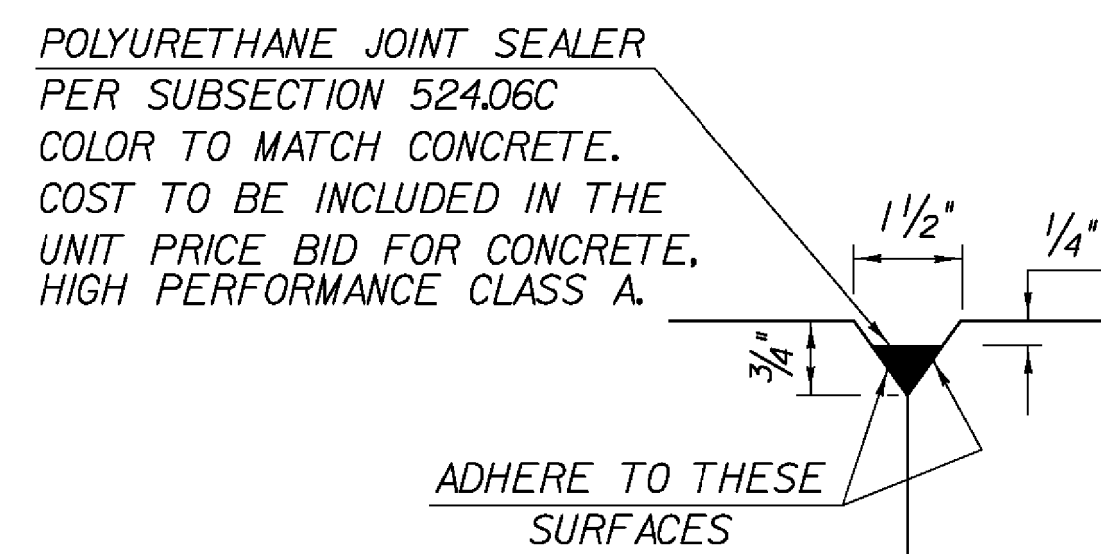


**LONGITUDINAL BRIDGE SLAB
CONSTRUCTION JOINT DETAIL**

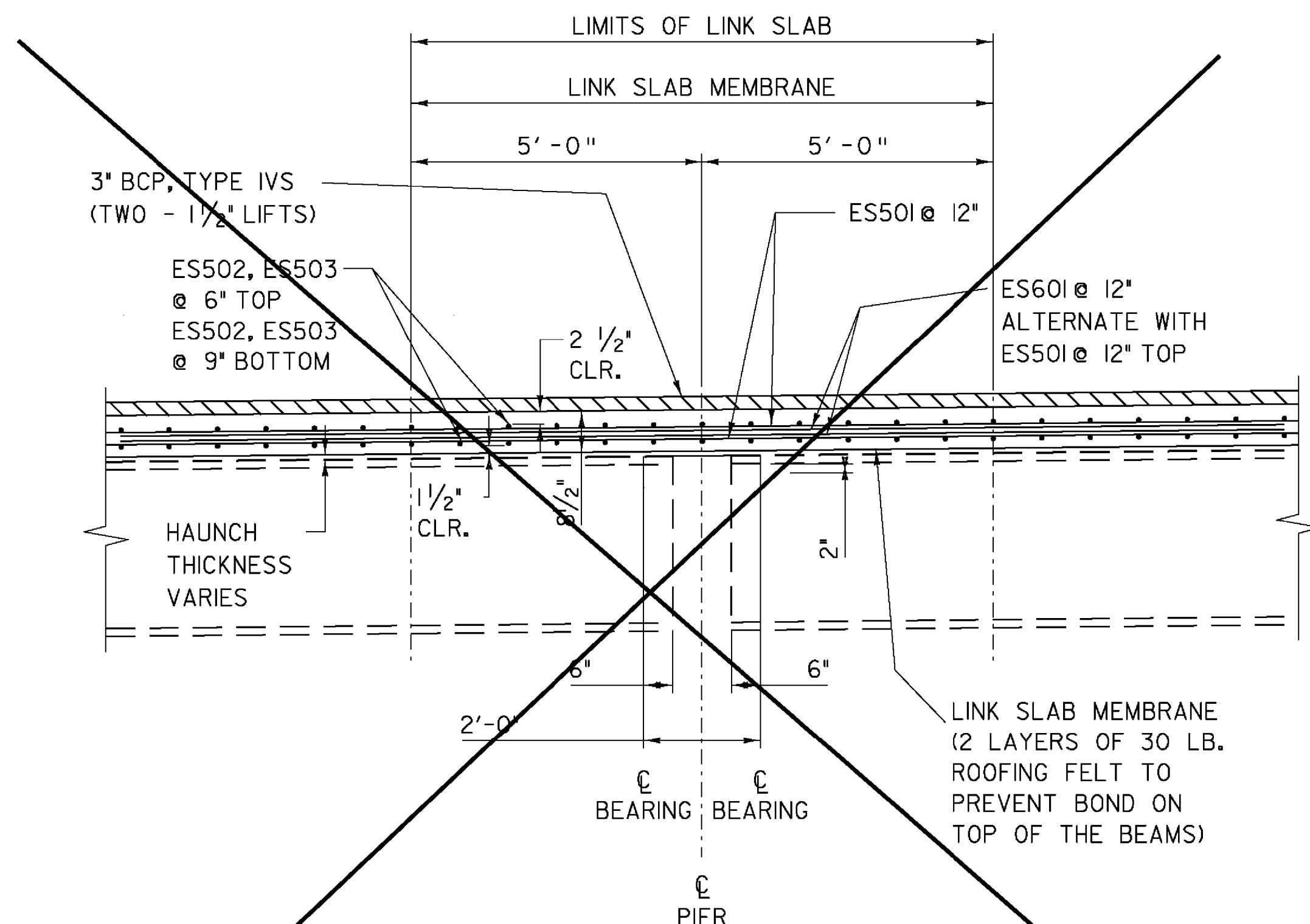
SCALE 1" = 1'-0"
0 1 2



**JOINT BETWEEN FASCIA
AND WINGWALL**



DETAIL "B"



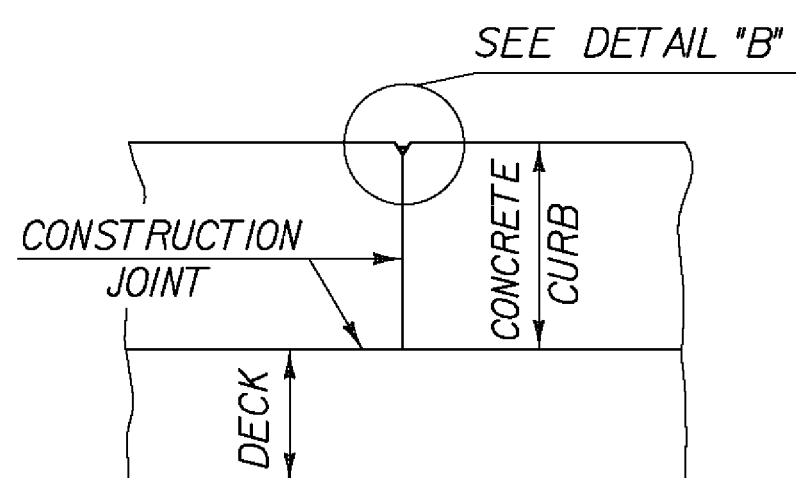
**SECTION D-D
LINK SLAB DETAIL**

SEE LINK SLAB NOTES

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

SHEET MEMBRANE NOTES:

1. PREPARE THE SURFACE OF THE FACE OF THE SIDEWALK TO BE SEALED WITH POLYURETHANE MEMBRANE SEALANT IN ACCORDANCE WITH SUBSECTION 519.04 SURFACE PREPARATION. (PAYMENT FOR POLYURETHANE MEMBRANE SEALANT SHOULD BE INCLUDED IN ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED".)
2. SHEET MEMBRANE WATERPROOFING, TORCH APPLIED: EXTEND SHEET MEMBRANE WATERPROOFING TO FACE OF SIDEWALK.



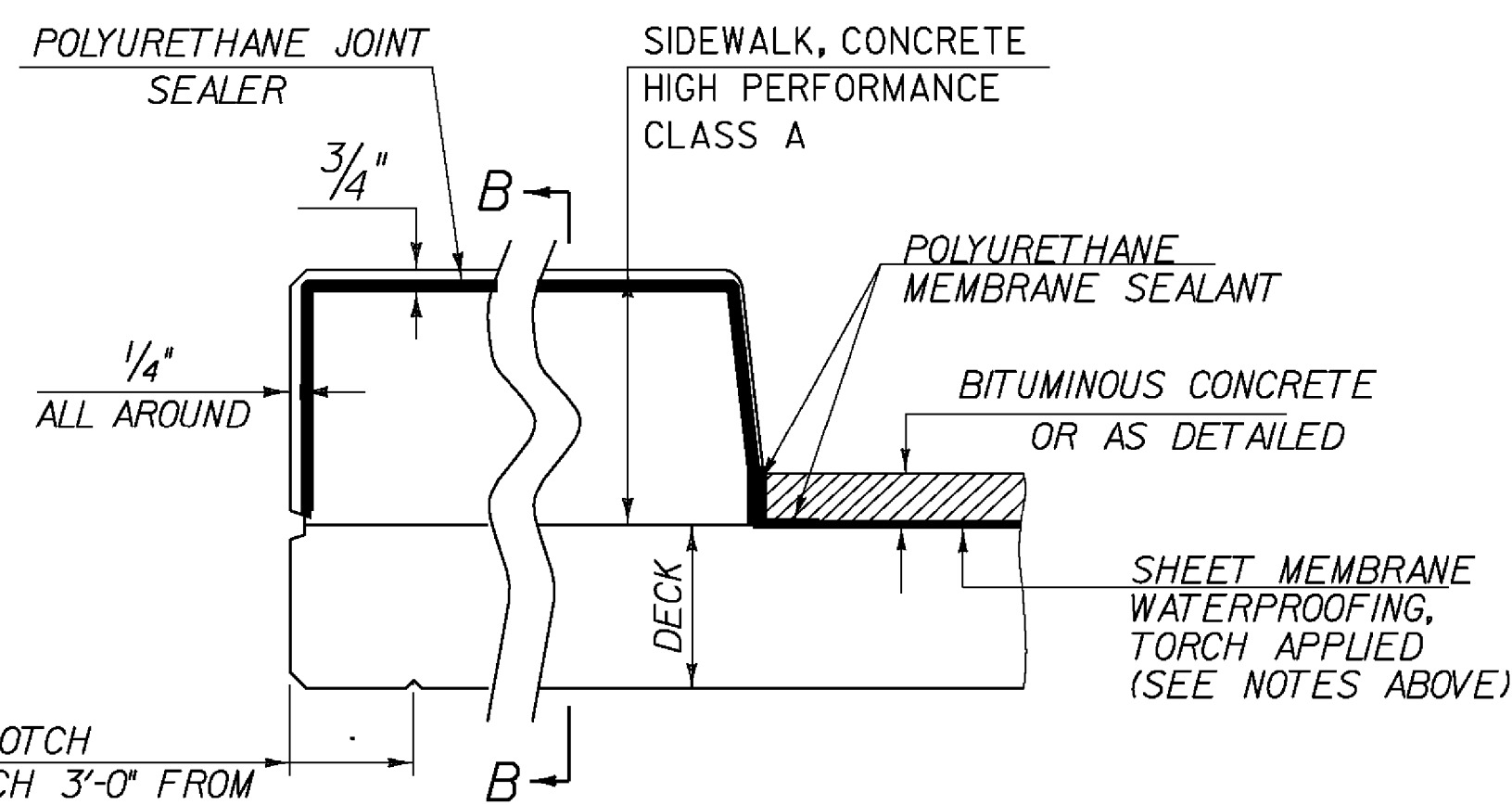
SECTION B - B

SIDEWALK NOTES:

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION. IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.
3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND 7'-0" EACH SIDE OF THE CENTERLINE OF EACH PIER.
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.
5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.

LINK SLAB NOTES:

1. THE TOP OF THE BEAM IN THE REGION OF THE LINK SLAB SHALL BE SMOOTH AND FREE OF SHEAR CONNECTORS. NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.
2. THE COST OF THE LINK SLAB MEMBRANE SHALL BE INCIDENTAL TO PAY ITEM 501.33 "CONCRETE, HIGH PERFORMANCE CLASS A".

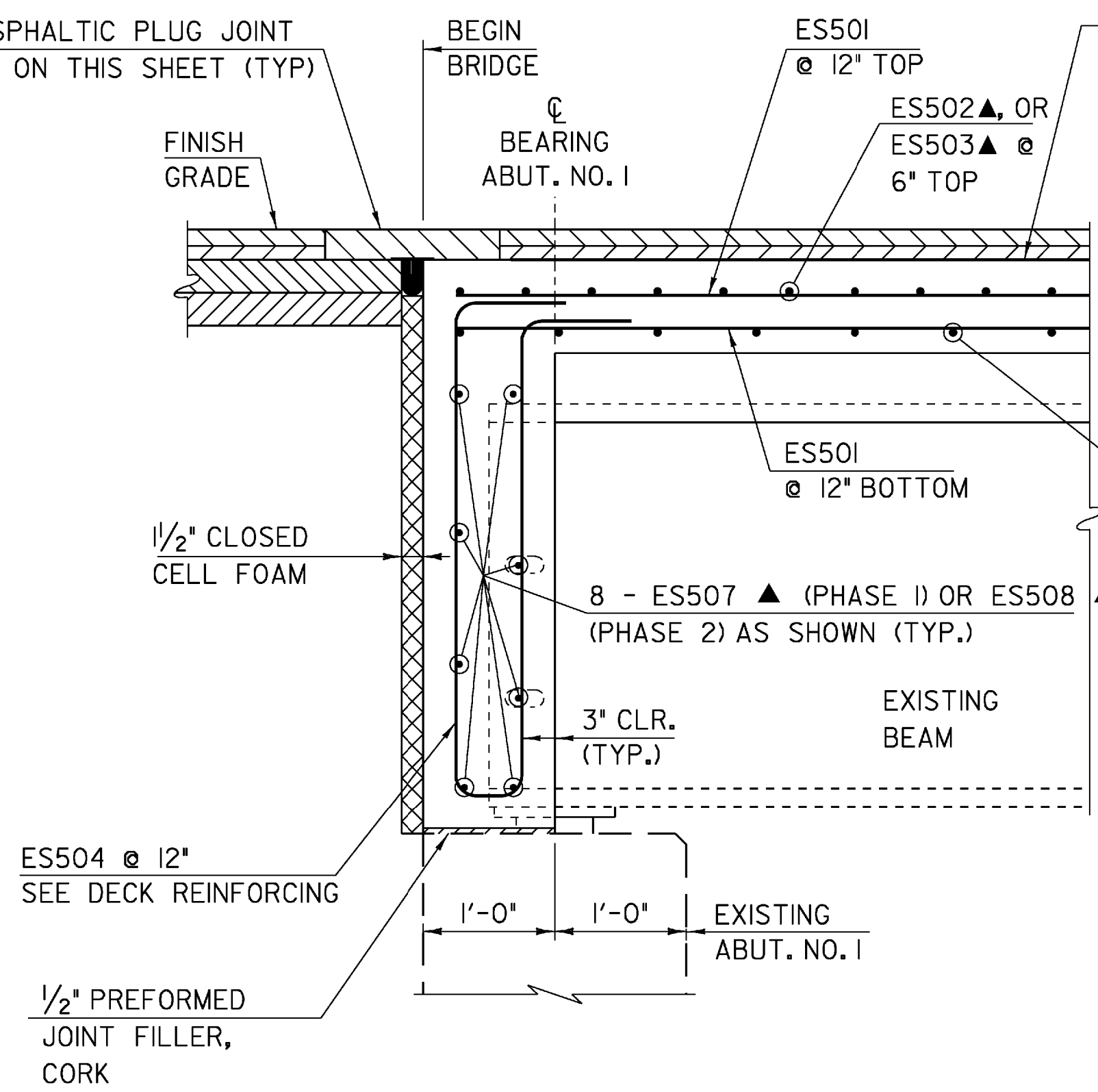


**TYPICAL SECTION THROUGH
CONCRETE SIDEWALK CONSTRUCTION JOINT**

REV.	BY	DATE	DESCRIPTION
△	LBB	5/26/09	REVISED HANGER AND CROSS FRAME

PROJECT NAME:	SPRINGFIELD	PLOT DATE:	29-MAY-2009
PROJECT NUMBER:	BHF 016-2(14)	DRAWN BY:	C. MOONEY
FILE NAME:	s06j004sup.dgn	CHECKED BY:	D. PETERSON
PROJECT LEADER:	R. WHITCOMB	CONCRETE DETAILS	SHEET 29 OF 72
DESIGNED BY:	C. CARLSON		

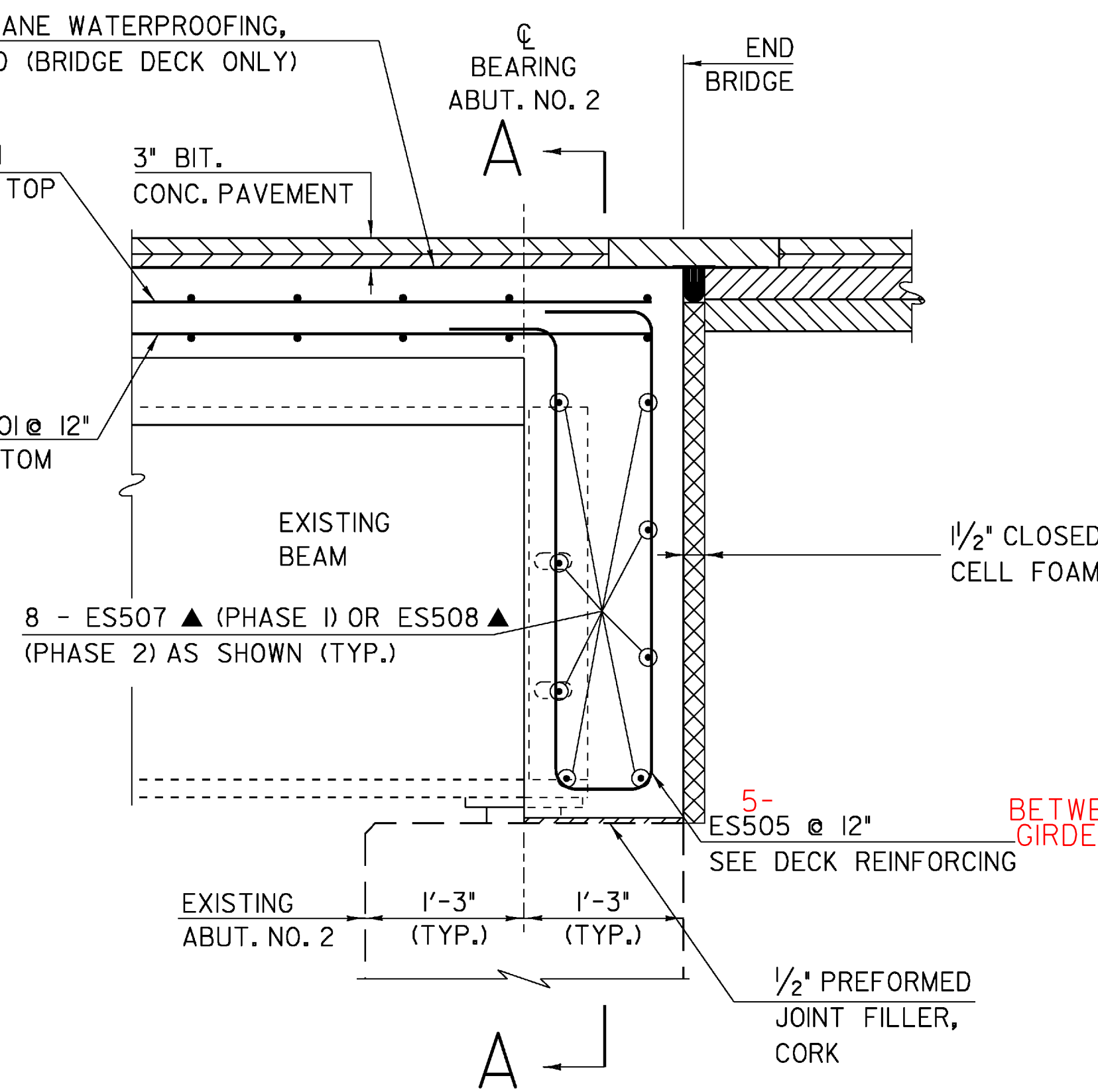
SEE ASPHALTIC PLUG JOINT
DETAIL ON THIS SHEET (TYP)



**ABUTMENT NO. 1
BRIDGE END DETAIL**

SCALE 1" = 1'-0"
1 9 6 3 0 2

SHEET MEMBRANE WATERPROOFING,
TORCH APPLIED (BRIDGE DECK ONLY)



**ABUTMENT NO. 2
BRIDGE END DETAIL**

SCALE 1" = 1'-0"
1 9 6 3 0 2

ASPHALTIC PLUG JOINT NOTES

1. INSTALLATION

A. LOCATE THE JOINT CENTRALLY OVER THE DECK EXPANSION GAP OR FIXED JOINT MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.

B. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.

C. BLAST CLEAN THE JOINT AREA OF DEBRIS AND ASPHALT. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.

D. REPAIR SPALLED AND DEFECTIVE CONCRETE WITH AN APPROVED MATERIAL AS AGREED UPON BY THE ENGINEER.
E. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.

F. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.

G. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRESTAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.

H. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.

I. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

J. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

K. PROTECT JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.

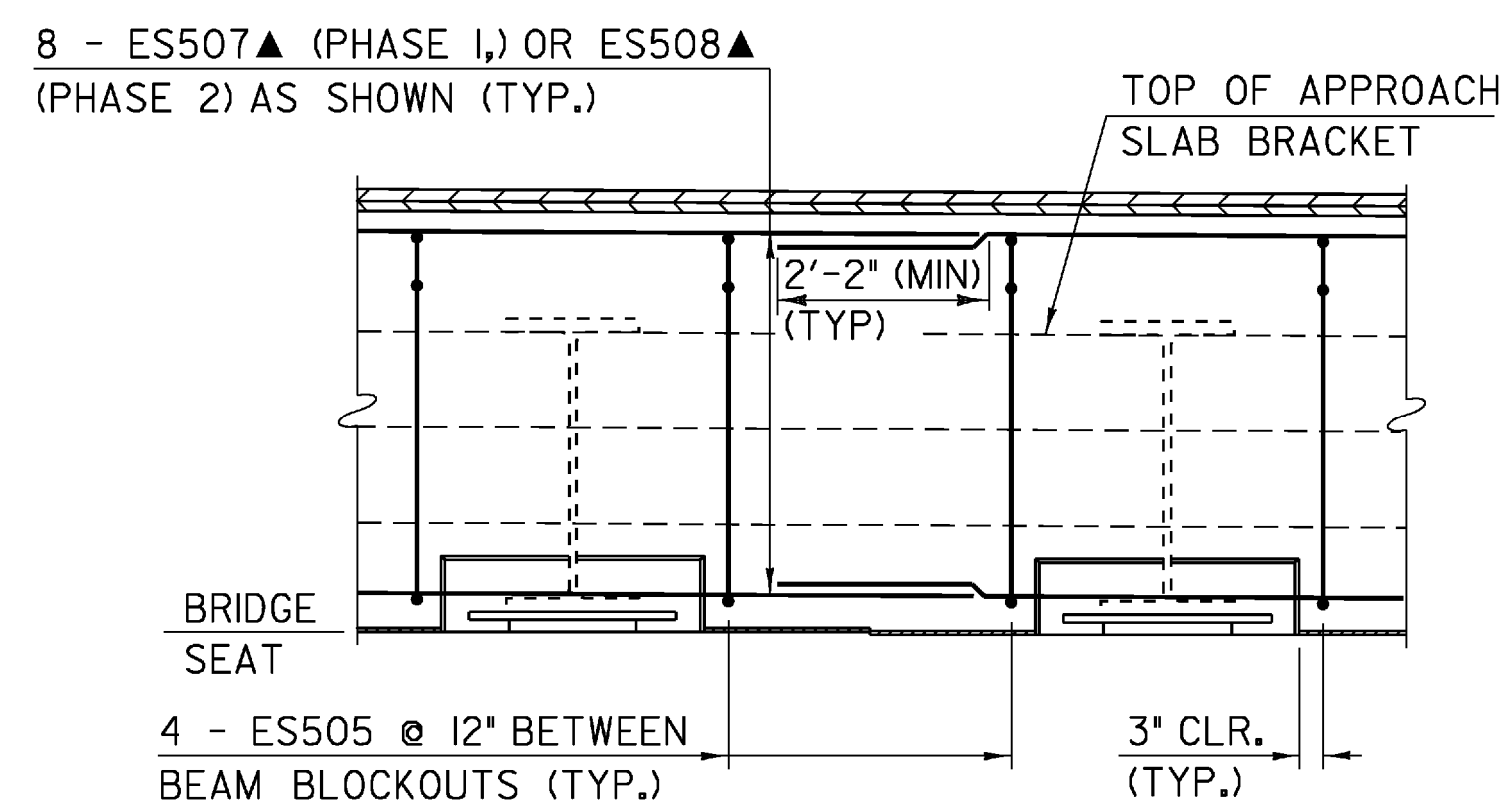
2. WEATHER LIMITATIONS.

(APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER):

A. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.

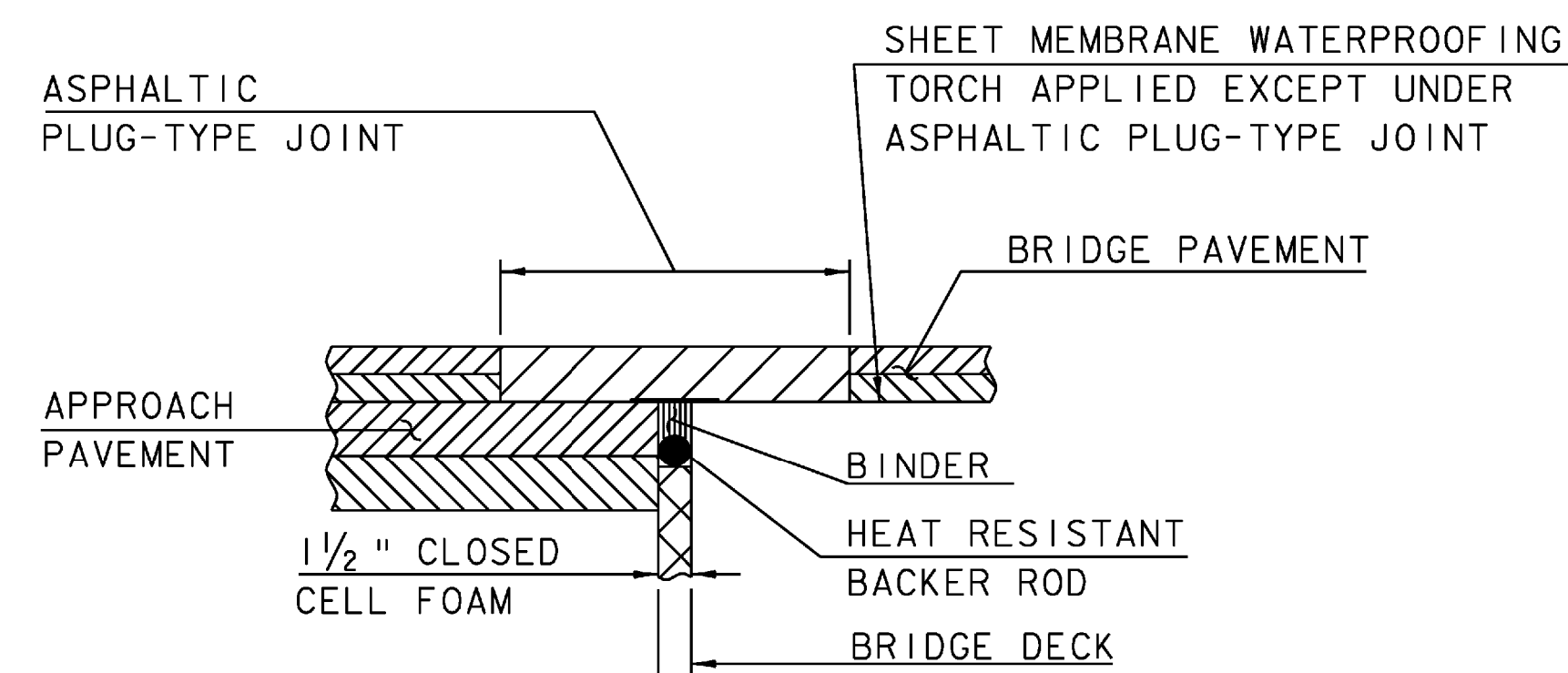
B. THE ROAD SURFACE IS DRY.

C. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.



SECTION A-A

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



**ASPHALTIC PLUG-TYPE
JOINT DETAIL**

(NOT TO SCALE)

NOTE:

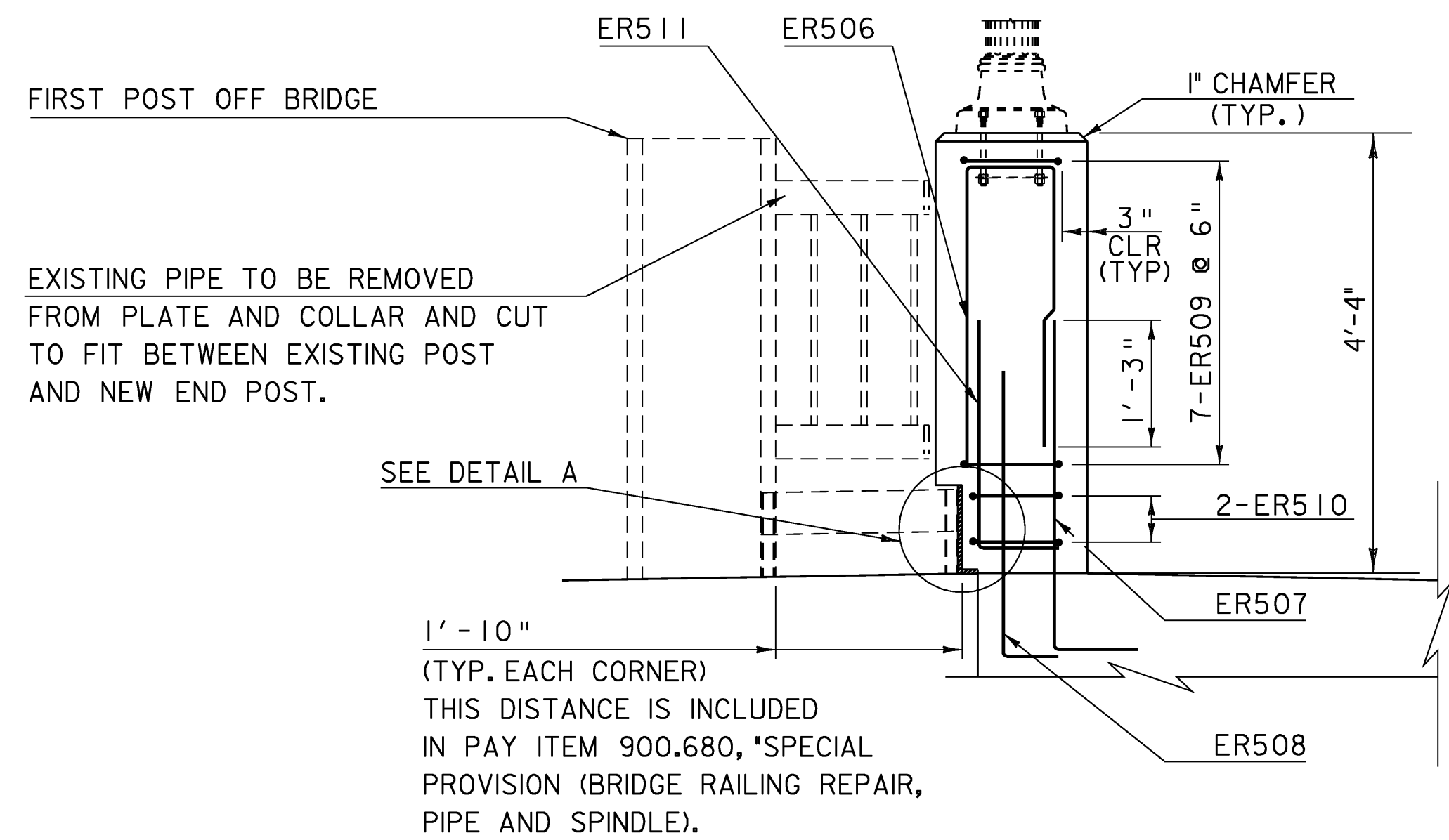
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: SPRINGFIELD

PROJECT NUMBER: BHF 016-2(14)

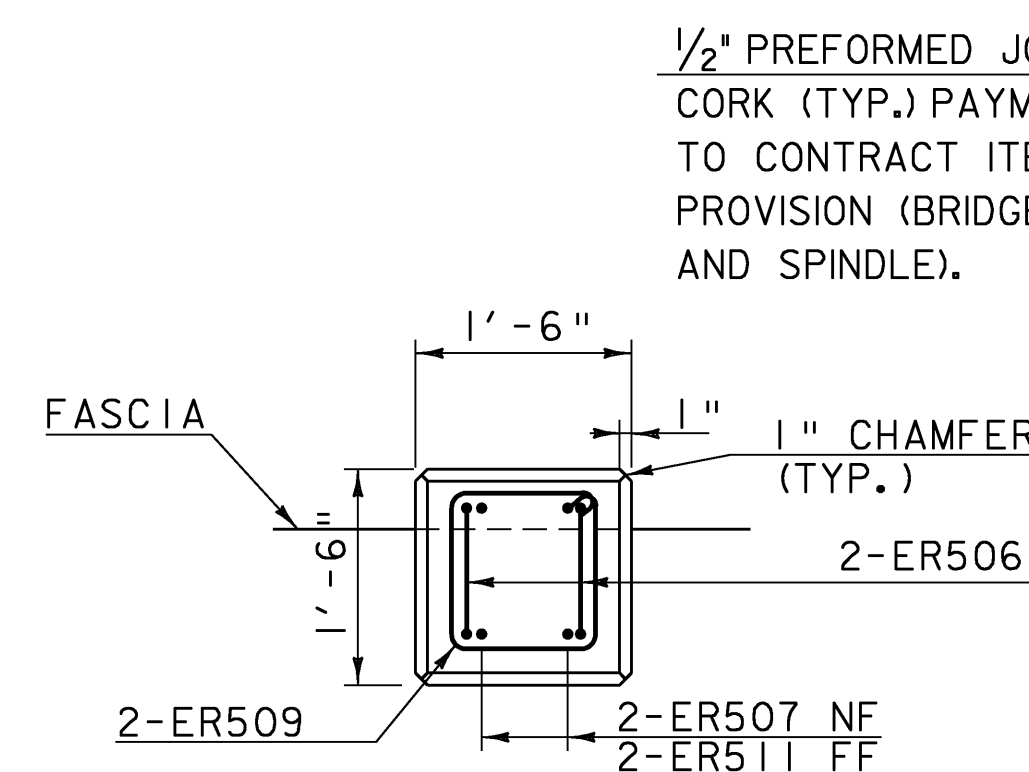
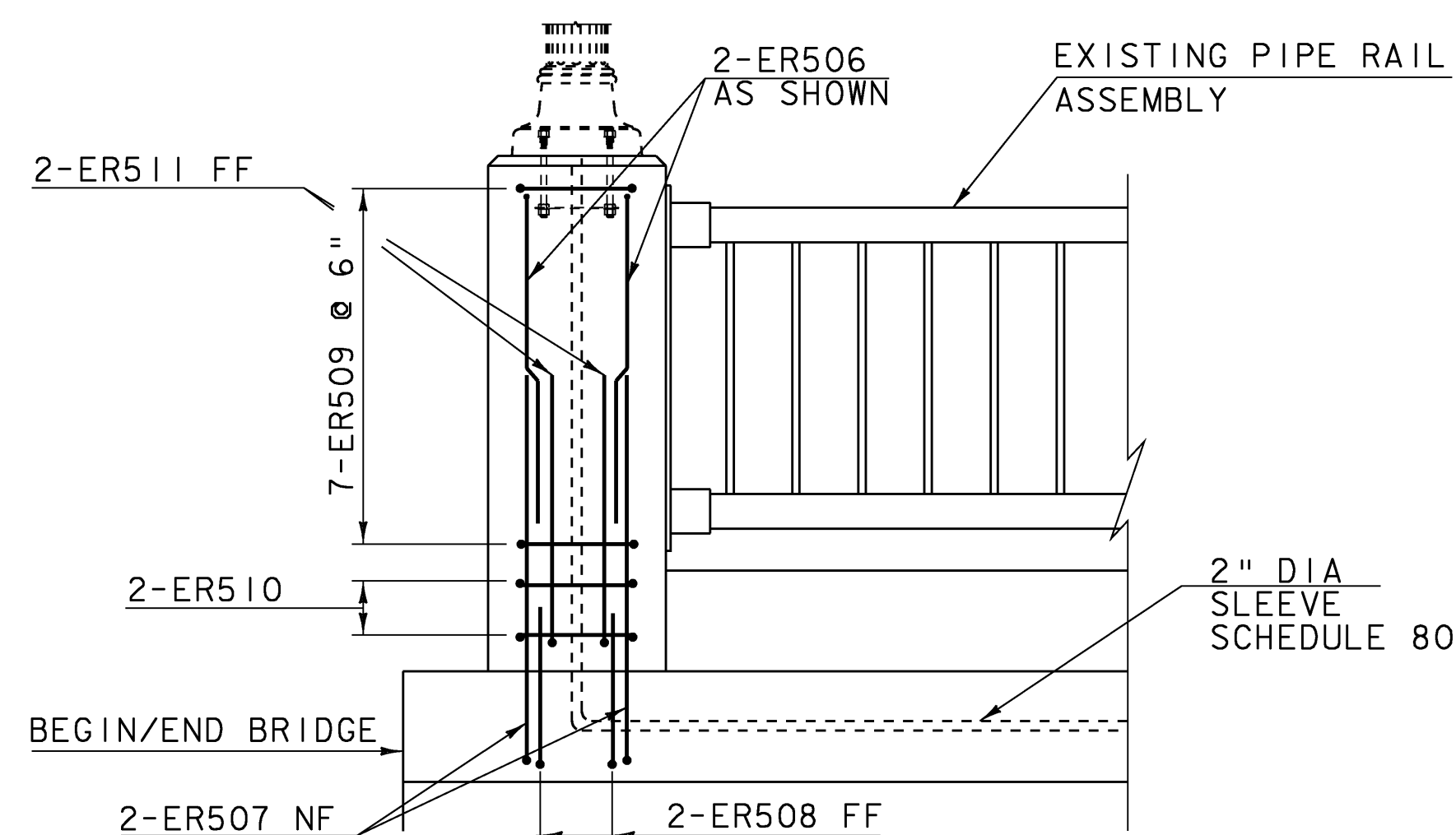
FILE NAME: s06j004sup.dgn
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE END DETAILS

PLOT DATE: 04-MAR-2009
DRAWN BY: D. PETERSON
CHECKED BY: C. CARLSON
SHEET 30 OF 72



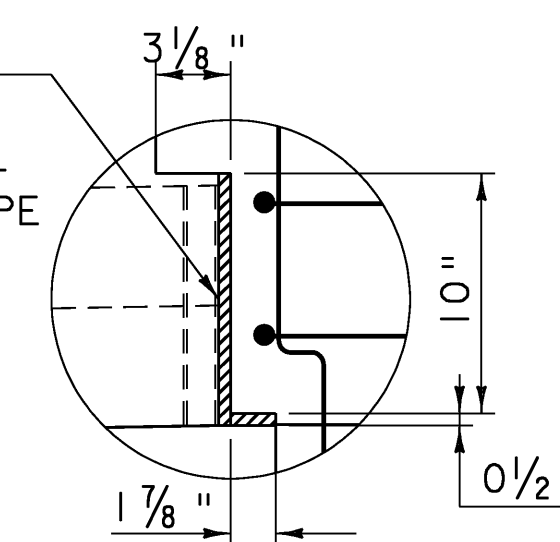
END POST DETAILS

SCALE $\frac{3}{4}$ " = 1'-0"



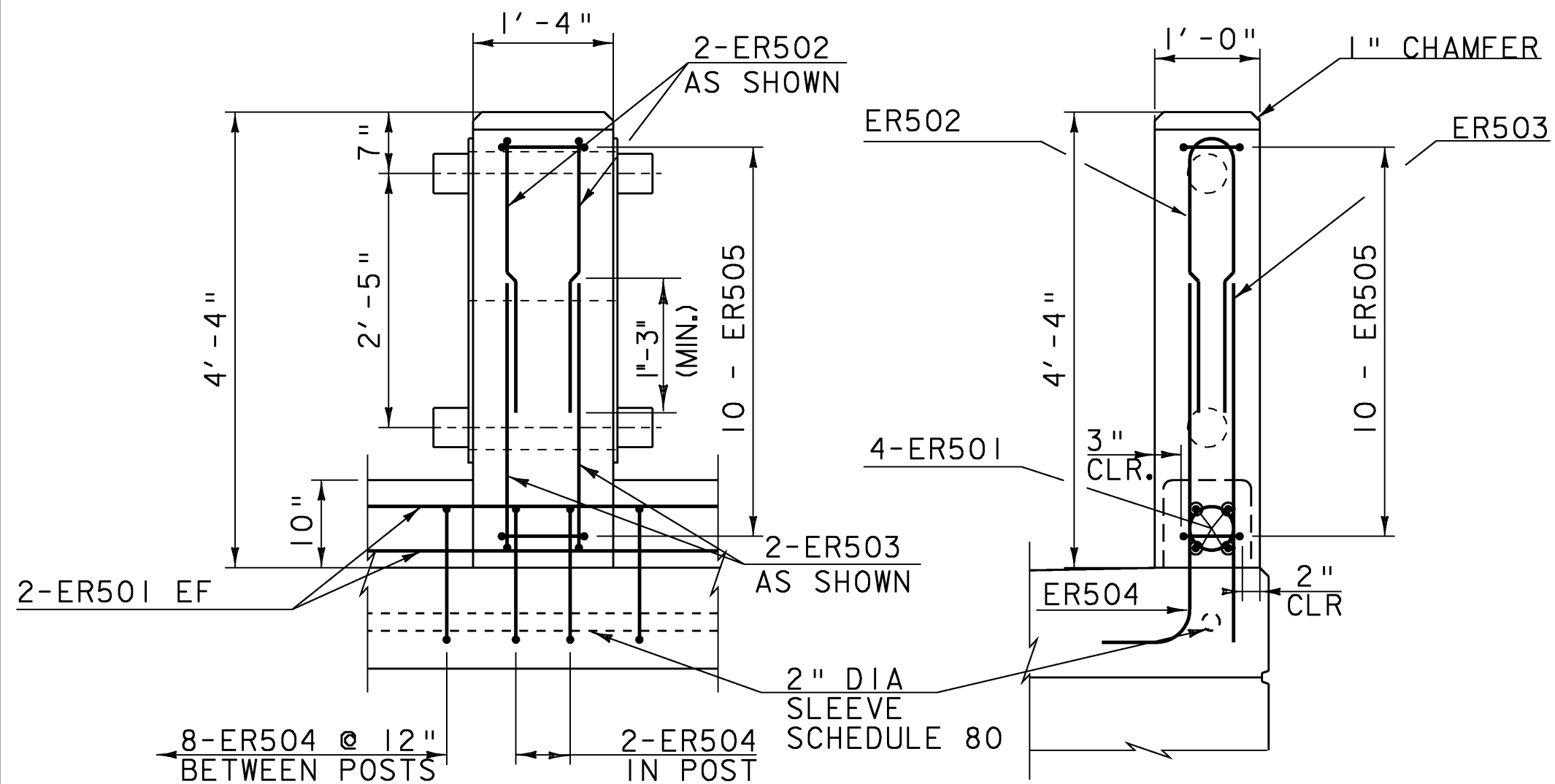
SECTION B-B

SCALE $\frac{3}{4}$ " = 1'-0"



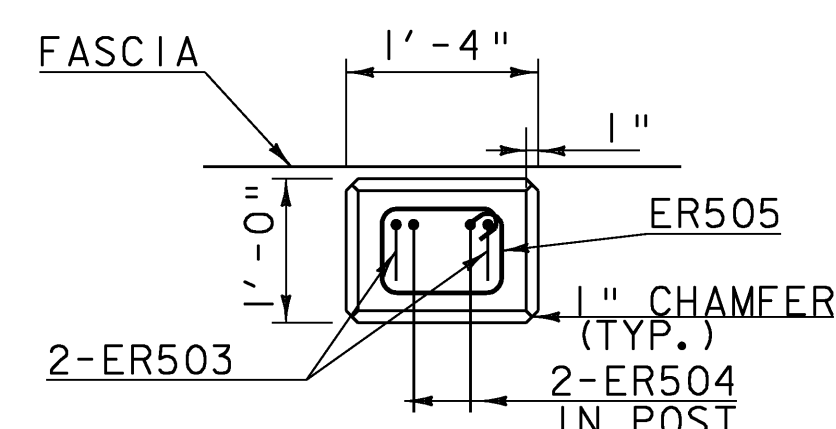
DETAIL A

SCALE $1 \frac{1}{2}$ " = 1'-0"

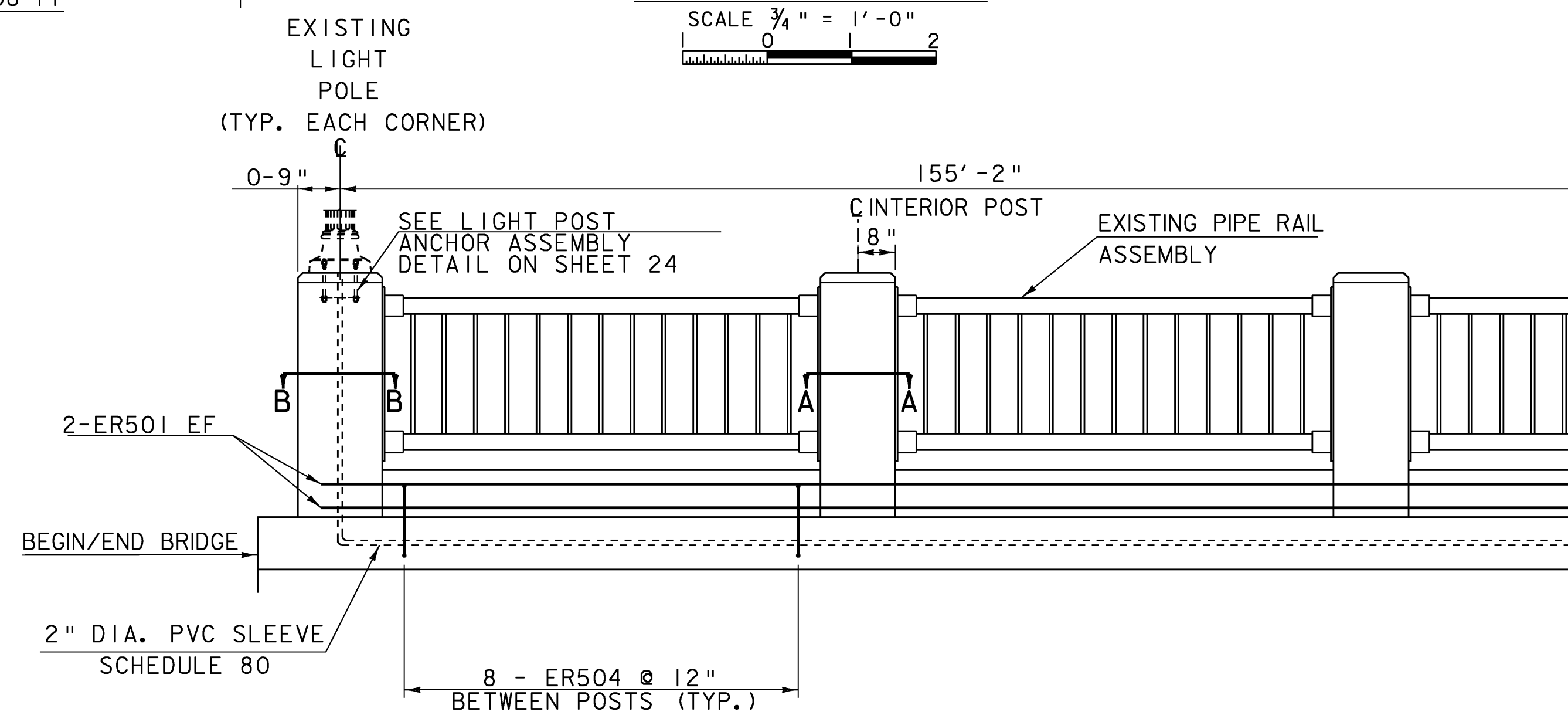


INTERIOR POST DETAIL

SCALE $\frac{3}{4}$ " = 1'-0"



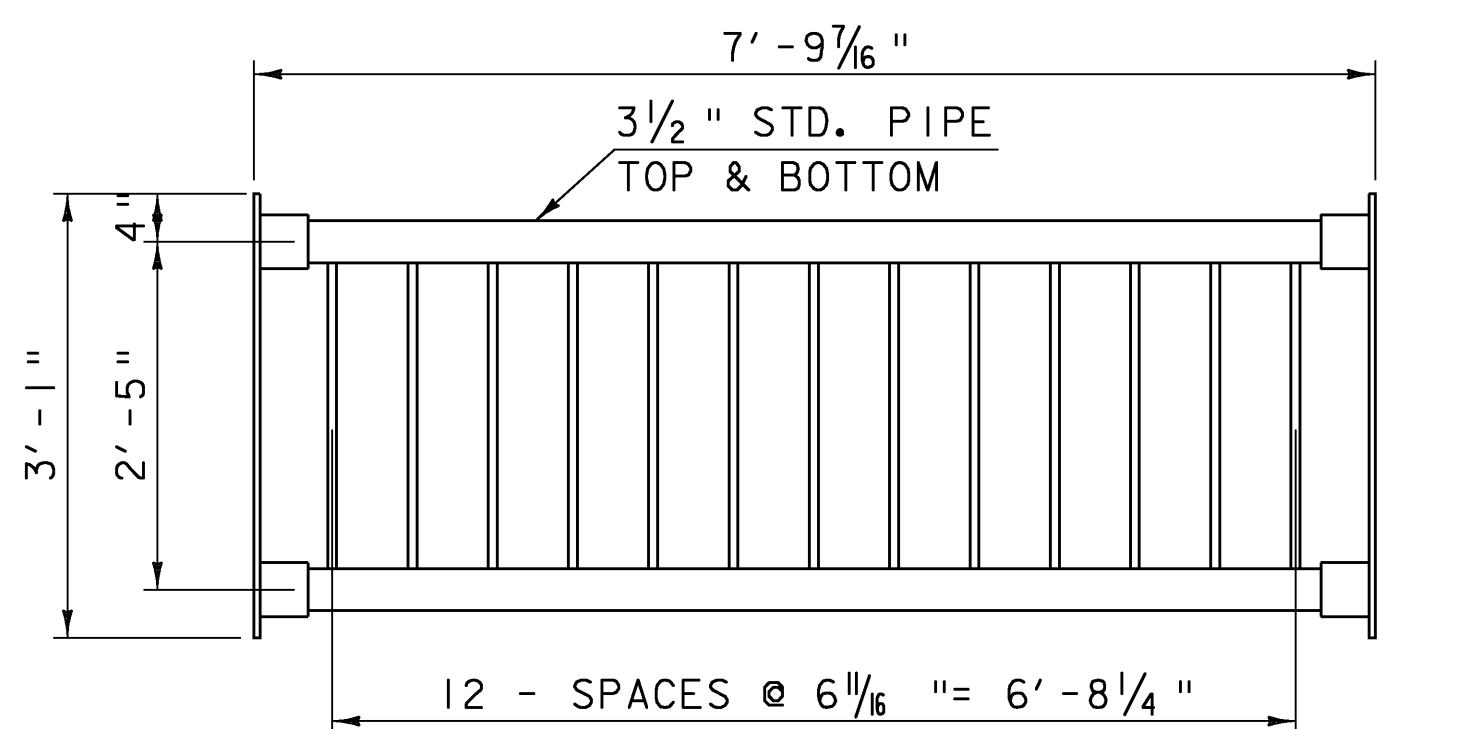
SECTION A-A



BRIDGE RAIL ELEVATION

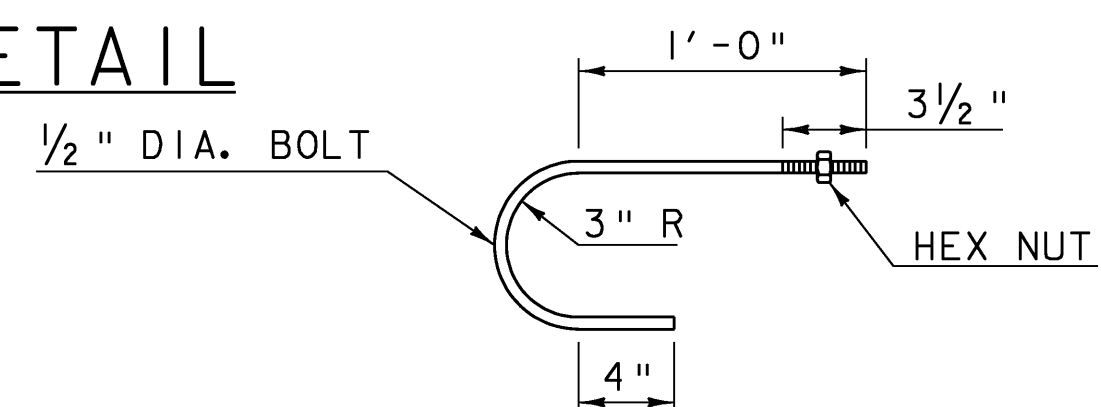
SCALE $\frac{1}{2}$ " = 1'-0"

SEE THE GENERAL NOTES, SHEET 3 FOR INFORMATION REGARDING THE EXISTING PIPE RAILING.



EXISTING PIPE RAIL DETAIL

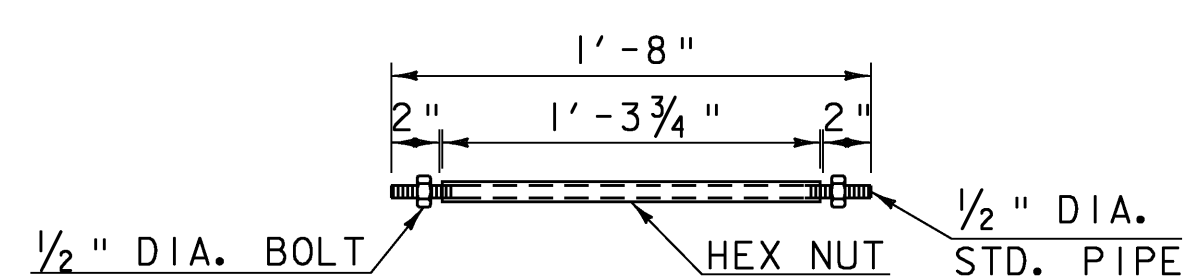
SCALE $\frac{3}{4}$ " = 1'-0"



HOOK BOLT DETAIL

SCALE $1 \frac{1}{2}$ " = 1'-0"

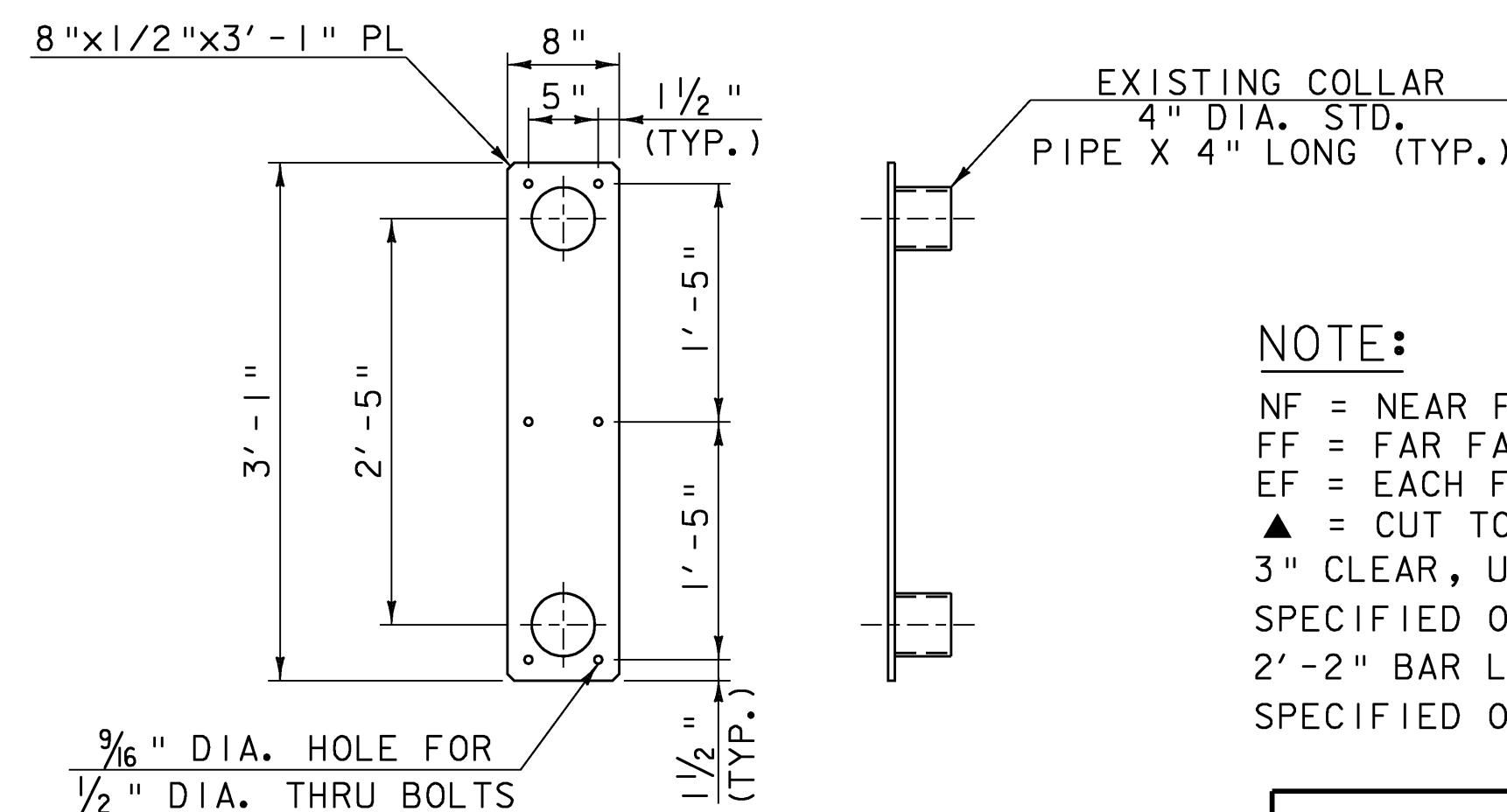
(USE 6 AT EACH END POST LOCATION)



THRU BOLT DETAIL

SCALE $1 \frac{1}{2}$ " = 1'-0"

(USE 6 AT EACH INTERIOR POST LOCATION)



EXISTING PLATE AND COLLAR DETAIL

SCALE 1" = 1'-0"

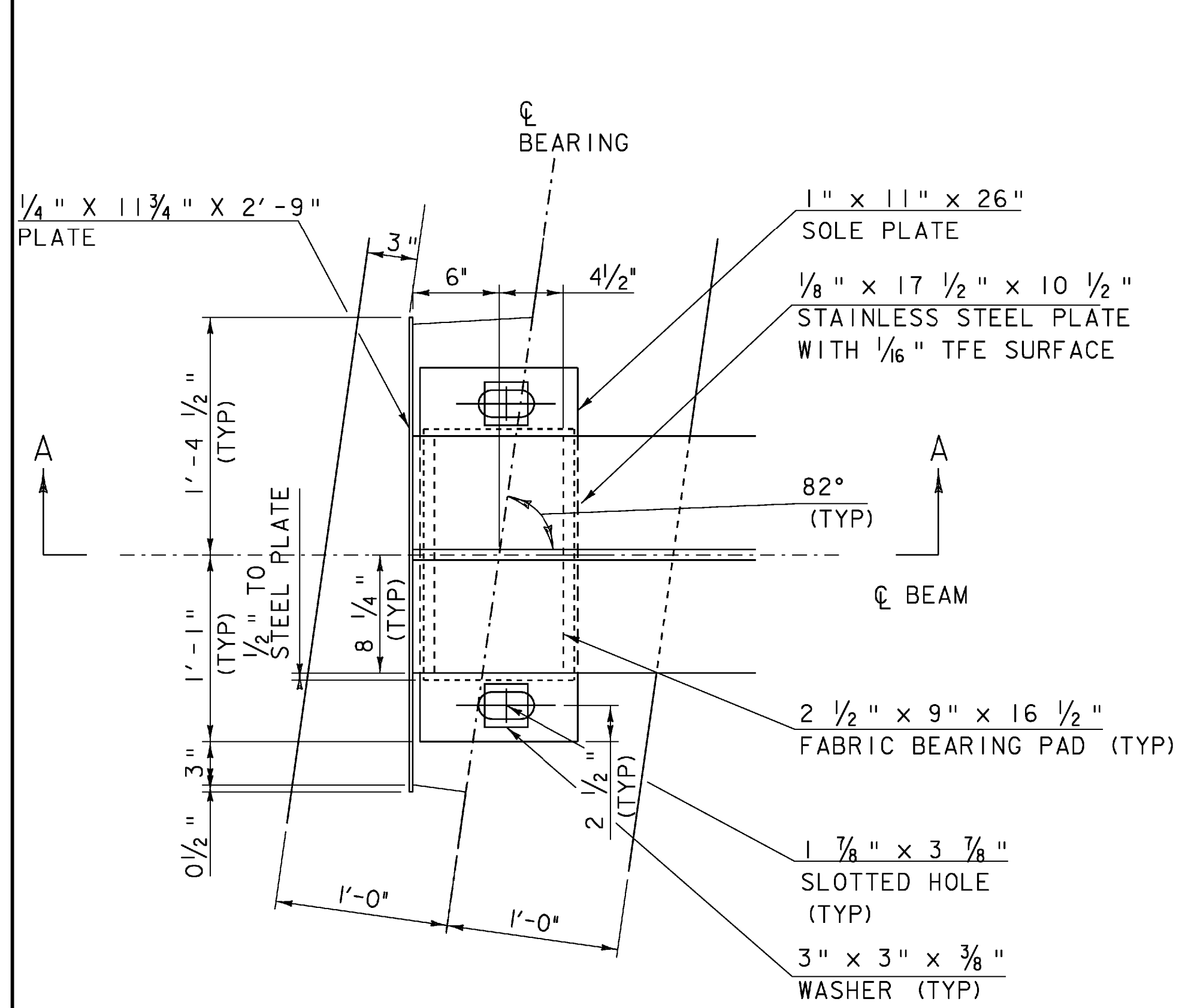
NOTE:

- NF = NEAR FACE
- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

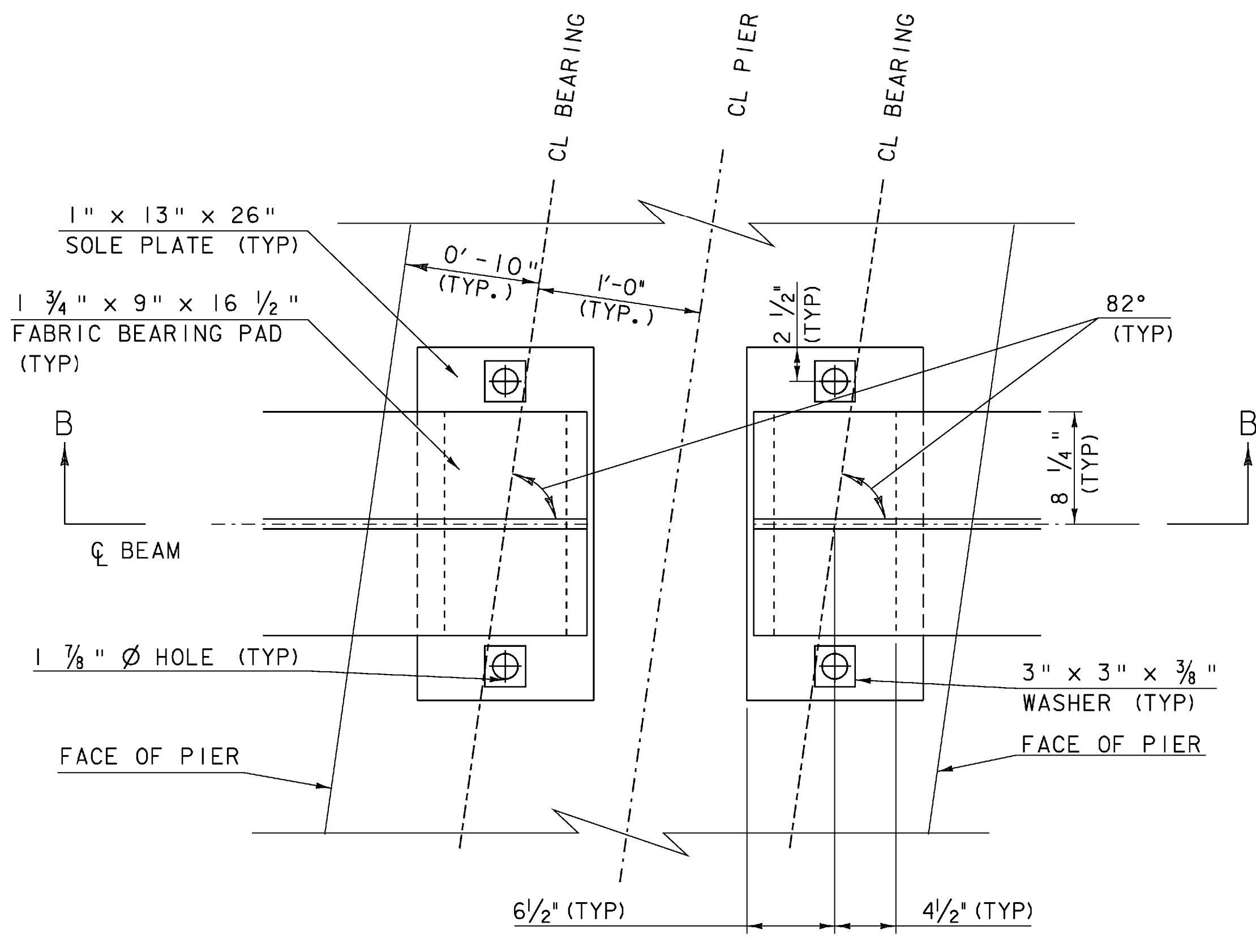
PROJECT NAME: Springfield
PROJECT NUMBER: BHF 016-2(14)

FILE NAME: s06j004rall.dgn
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: D. PETERSON
BRIDGE RAIL DETAILS

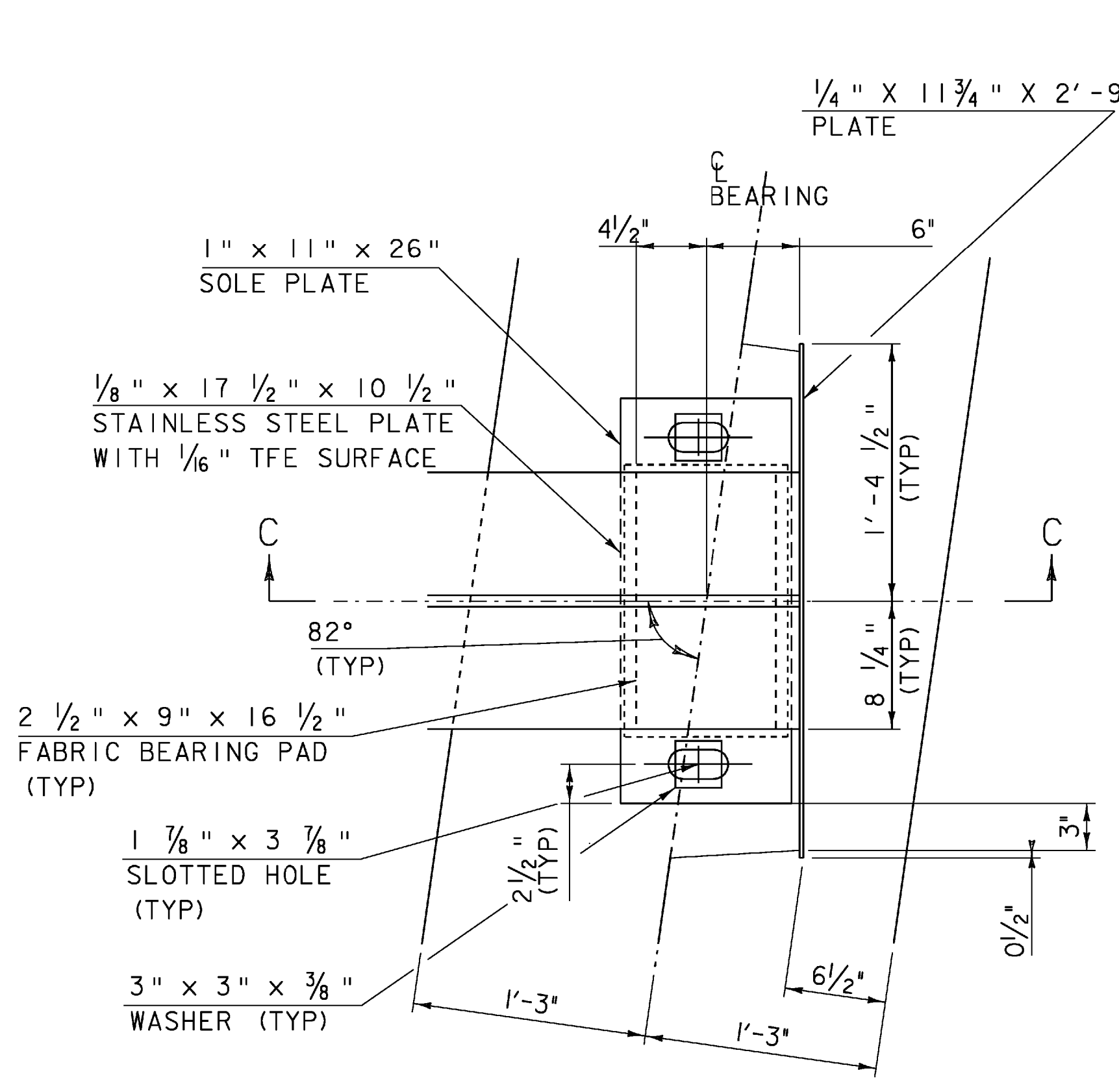
PLOT DATE: 04-MAR-2009
DRAWN BY: D. PETERSON
CHECKED BY: C. CARLSON
SHEET 31 OF 72



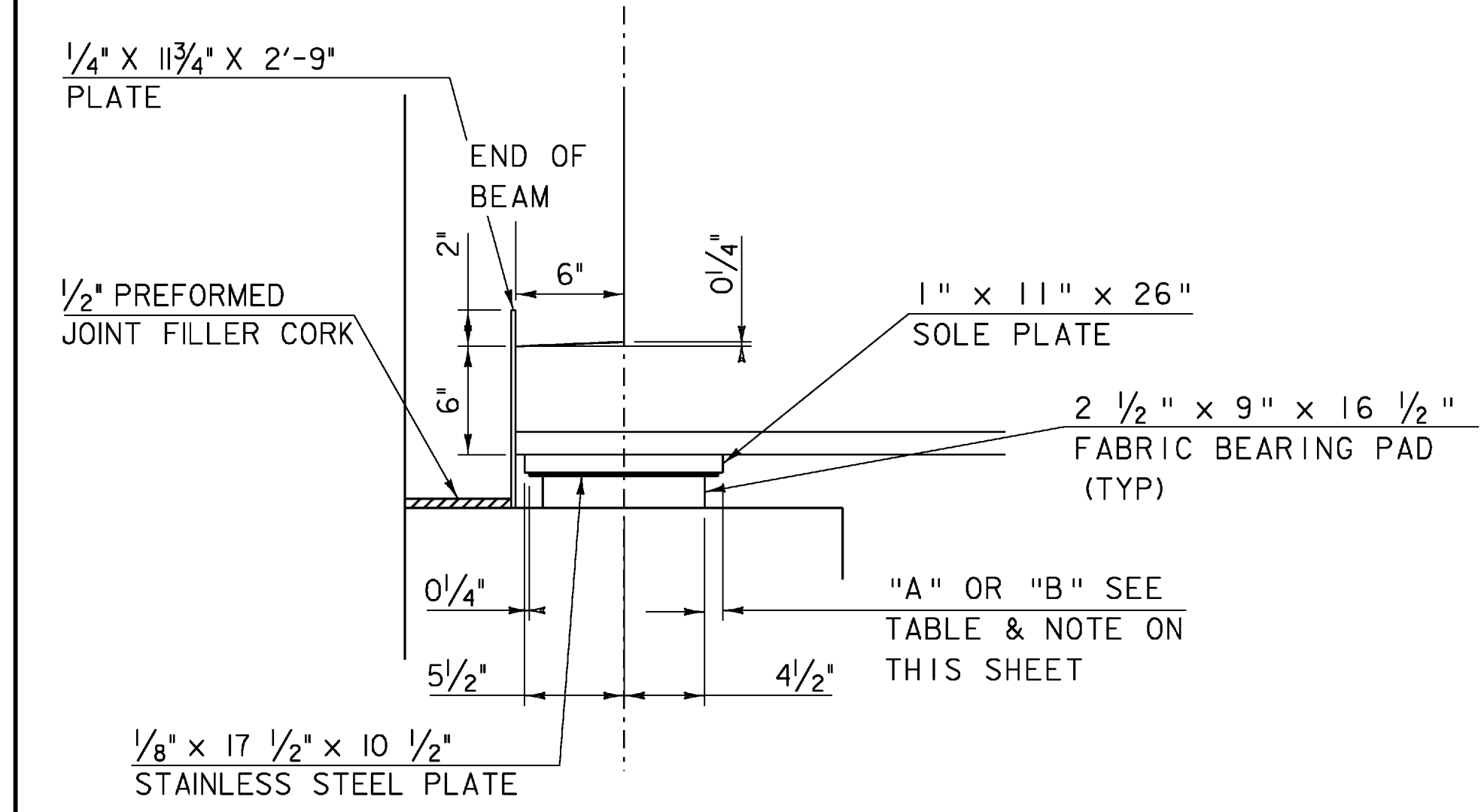
EXPANSION BEARING
BEAMS 2 THROUGH 9
ABUTMENT 1
 SCALE 1/2" = 1'-0"



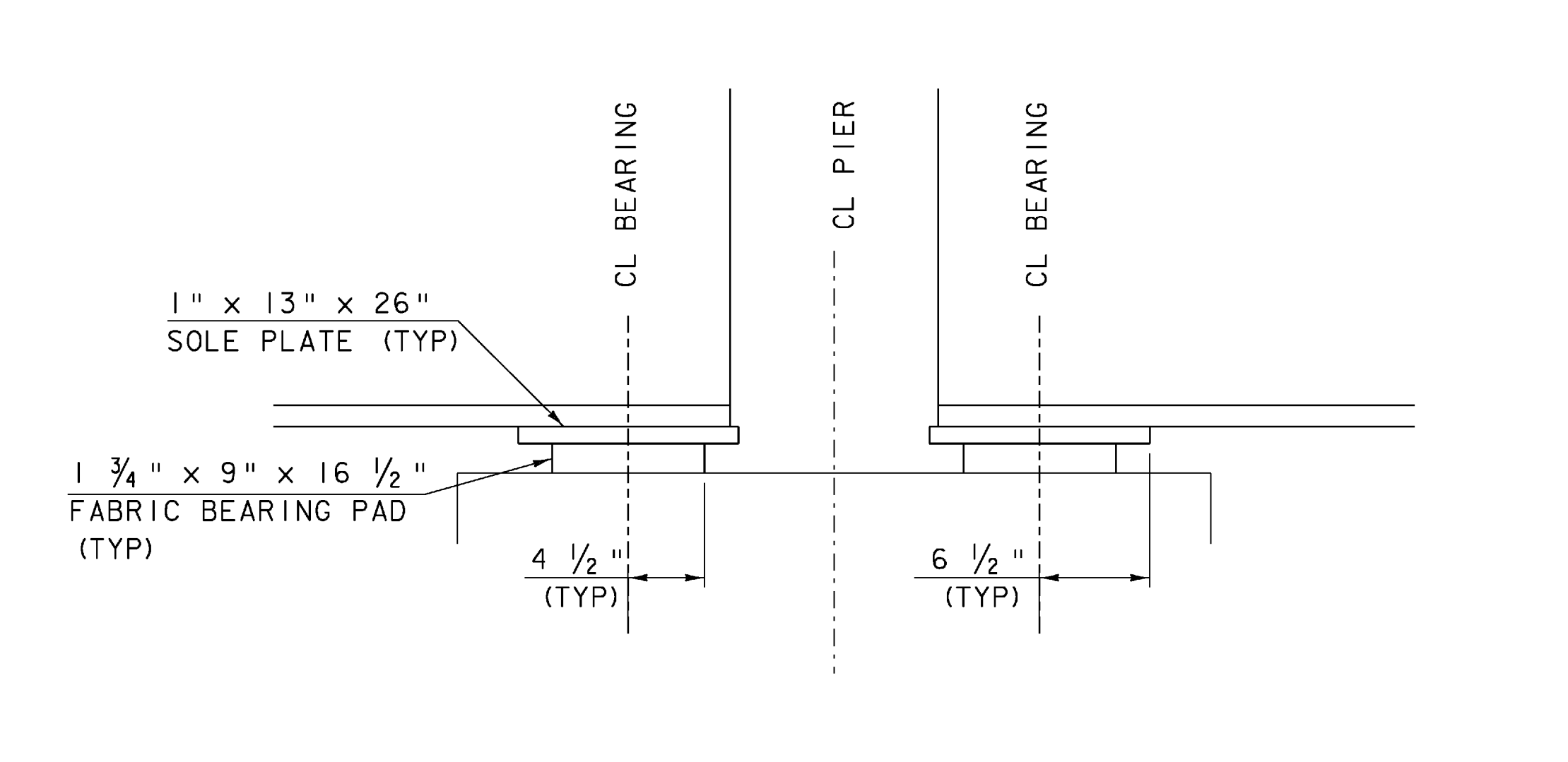
FIXED BEARING
PIER 1 BEAMS 2 THROUGH 9
PIER 2 BEAMS 12 THROUGH 19
 SCALE 1/2" = 1'-0"



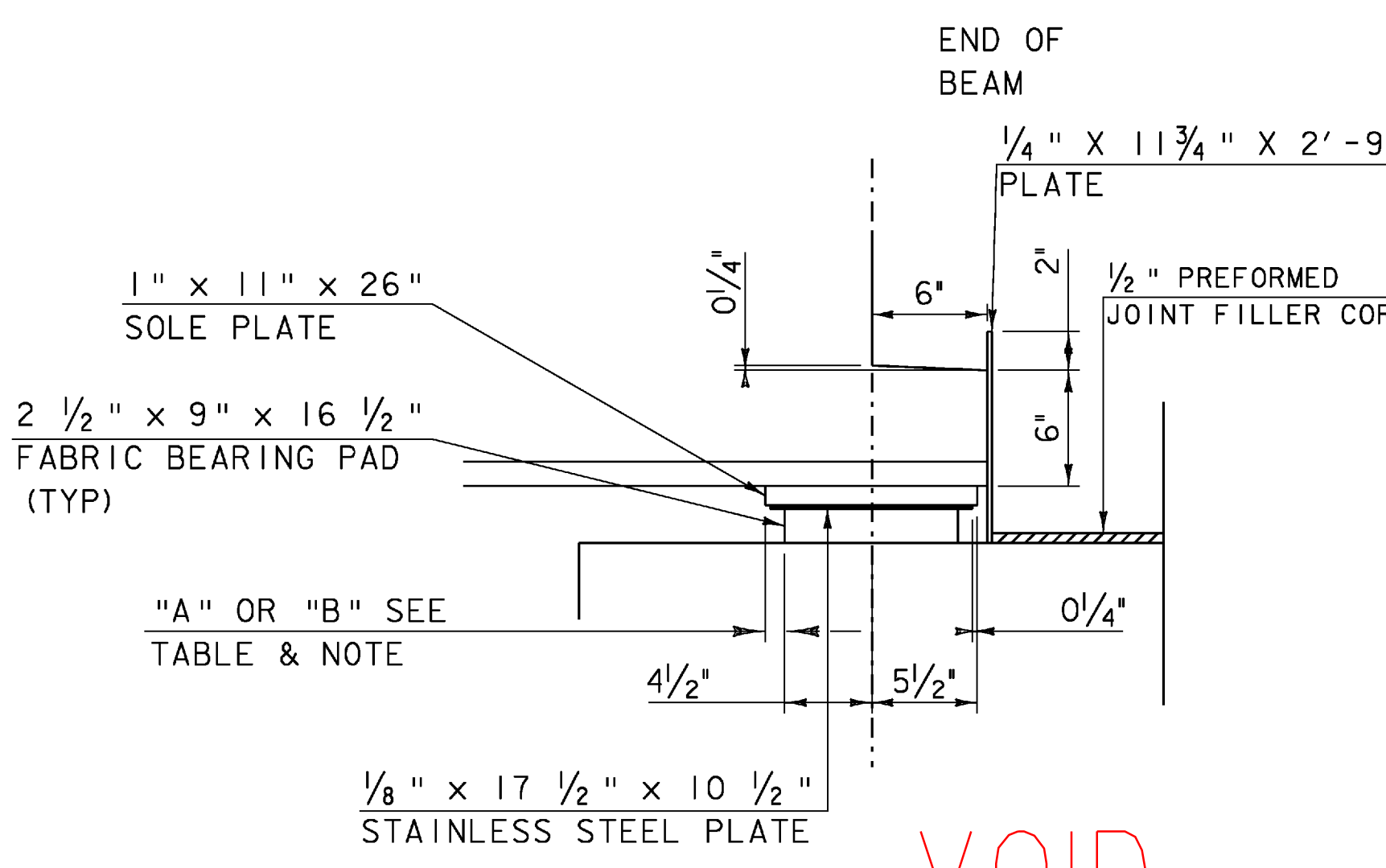
EXPANSION BEARING
BEAMS 12 THROUGH 19
ABUTMENT 2
 SCALE 1/2" = 1'-0"



SECTION A-A
 SCALE 1/2" = 1'-0"



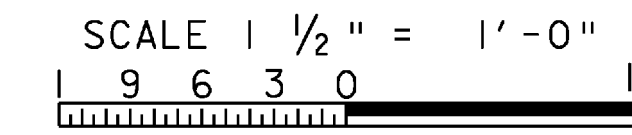
SECTION B-B
 SCALE 1/2" = 1'-0"



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

BEAMS 2 - 9 & 12 - 19	"A"	"B"
TEMPERATURE		
0	1 5/8"	1 3/8"
15	1 1/2"	1 1/4"
30	1 3/8"	1 1/8"
45	1 1/4"	1"
60	1 1/8"	7/8"
75	1"	3/4"
90	7/8"	5/8"
105	3/4"	1/2"

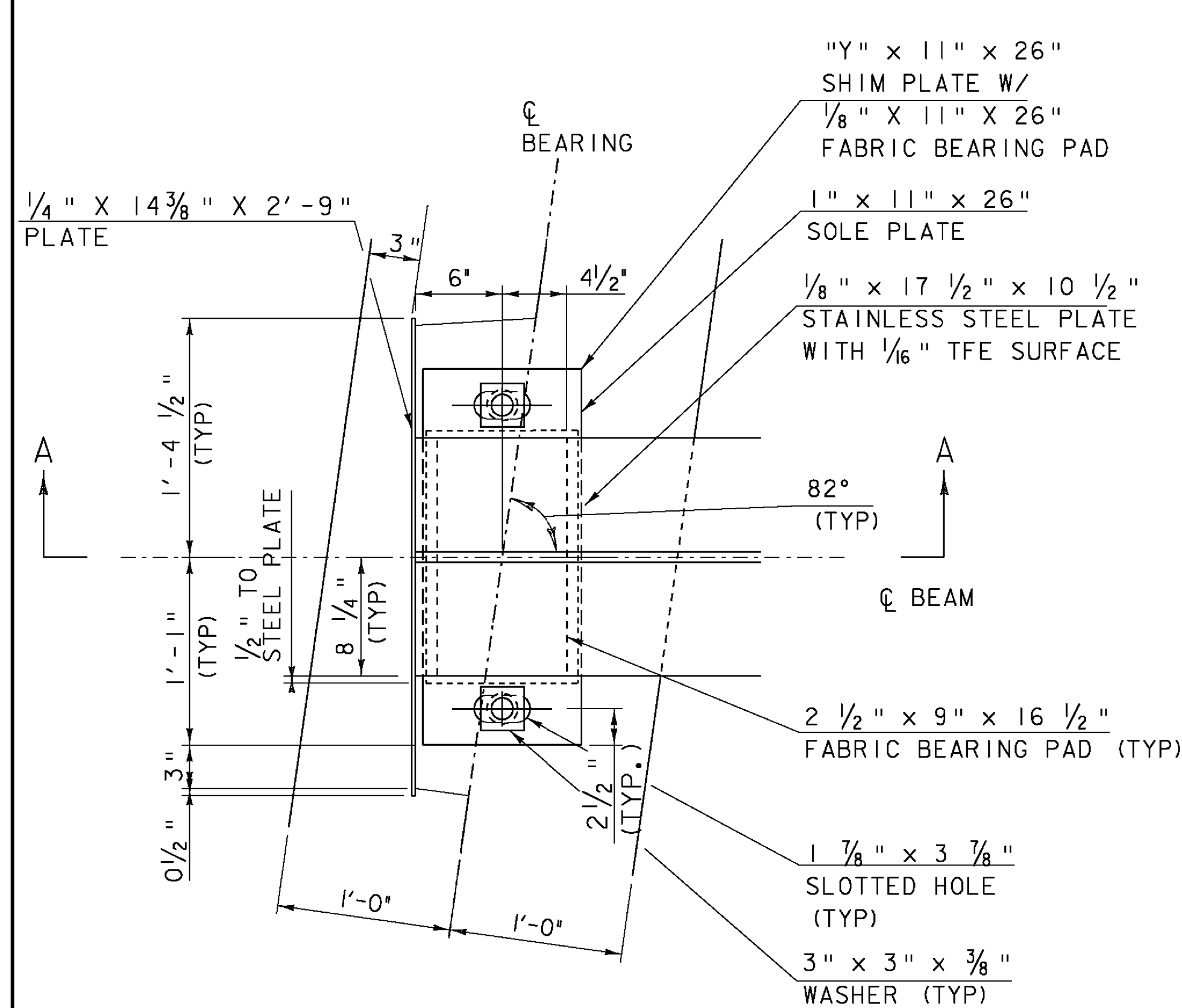
NOTE:
 THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED BEFORE DEAD LOAD IS ADDED TO THE GIRDERS. THE "B" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED AFTER THE DECK AND SIDEWALK HAVE BEEN POURED. THE DIFFERENCE IS THE THEORETICAL ELONGATION OF THE BOTTOM FLANGE DUE TO THE DEAD LOAD DEFLECTION FROM THE DECK AND SIDEWALK. THE FINAL "B" DISTANCE MUST BE REACHED WITHIN 1/8".



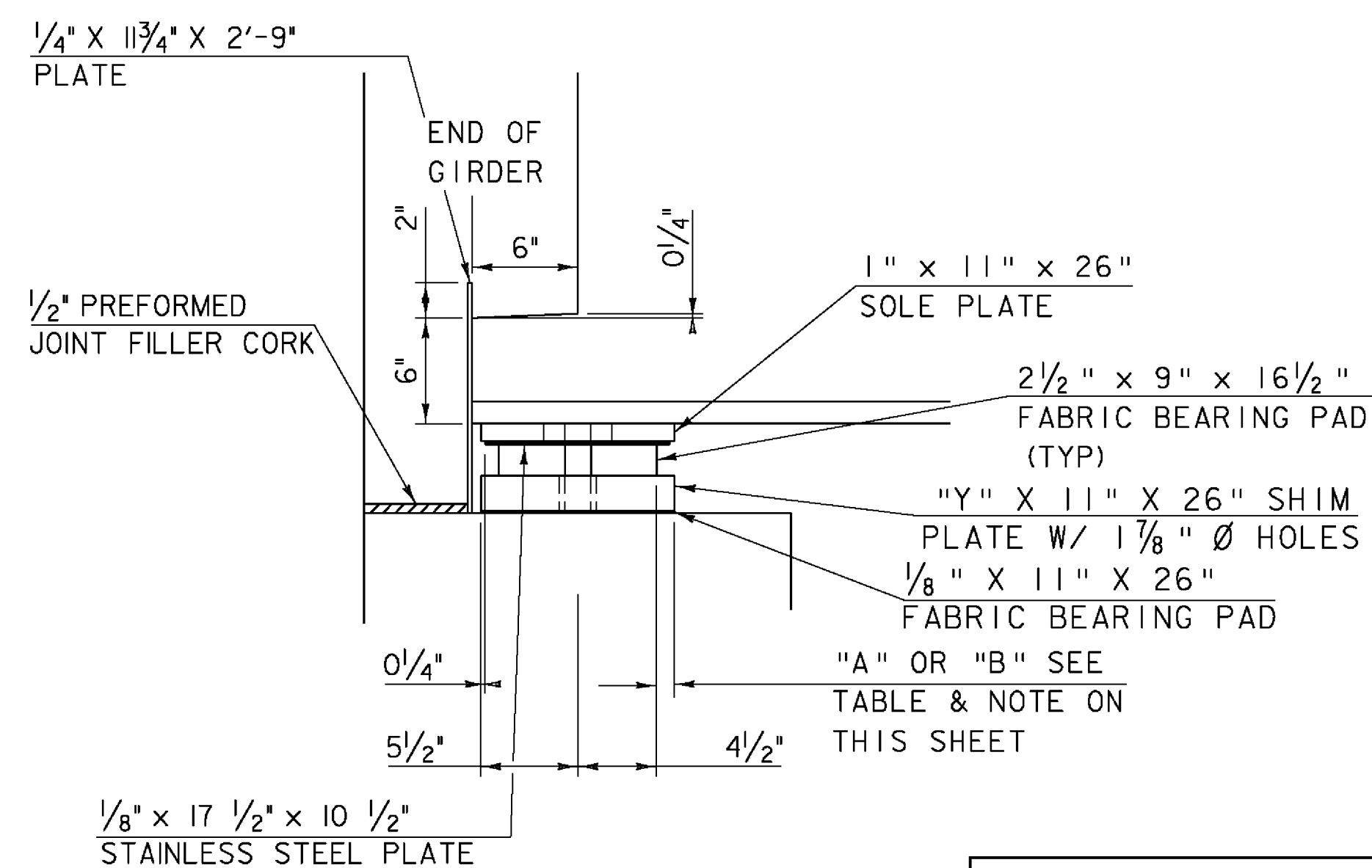
PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2(14)
 FILE NAME: s06j004sup.dgn
 PROJECT LEADER: R. WHITCOMB
 DESIGNED BY: C. CARLSON
 INTERIOR BEARING DETAILS

PLOT DATE: 04-MAR-2009
 DRAWN BY: C. MOONEY
 CHECKED BY: D. PETERSON
 SHEET 32 OF 72

VOID
SEE REVISED
SHEET

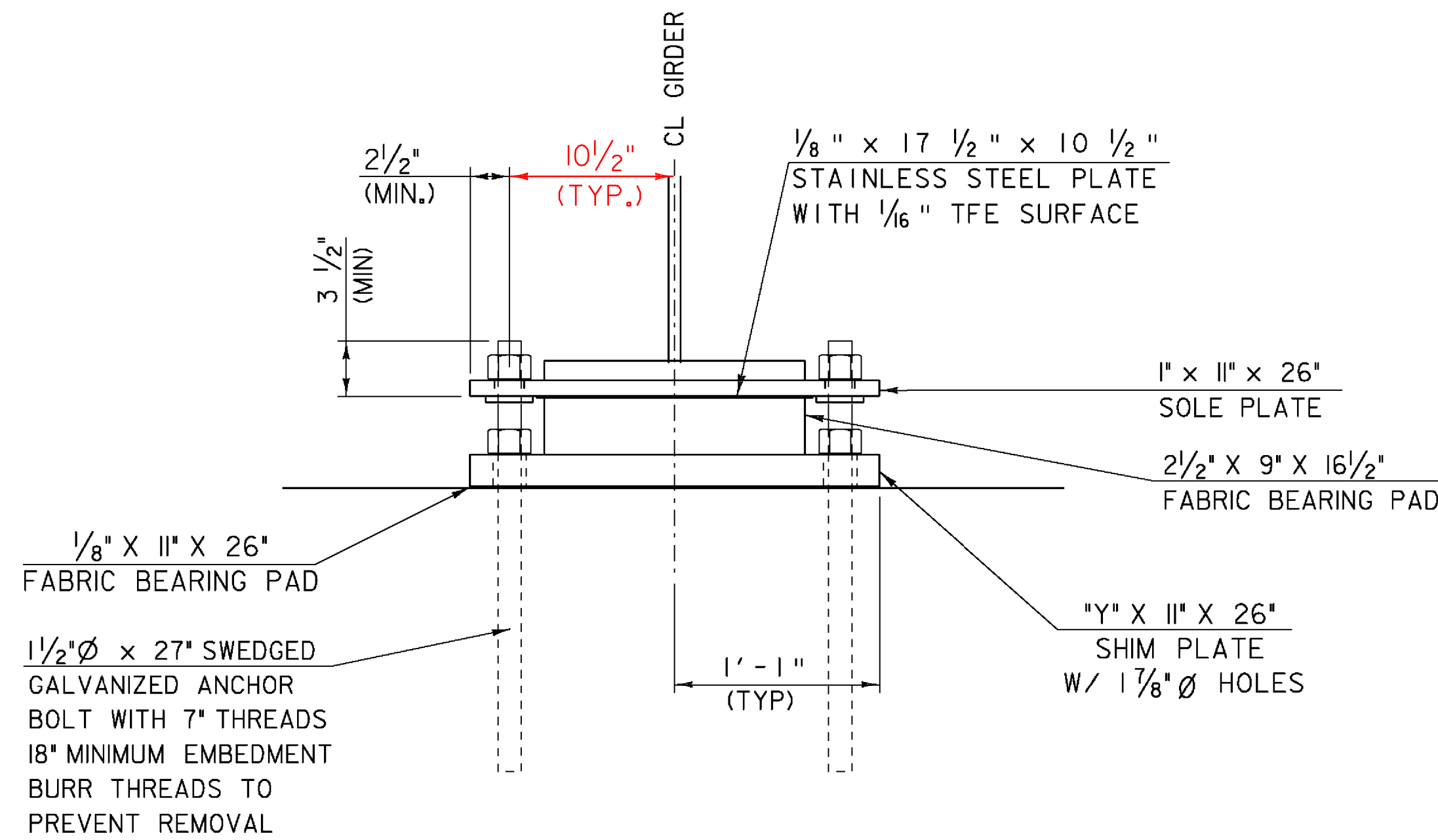


EXPANSION BEARING
GIRDERS 1 THROUGH 7
ABUTMENT 1
SCALE 1/2" = 1'-0"
(SHIM PLATE NOT SHOWN)

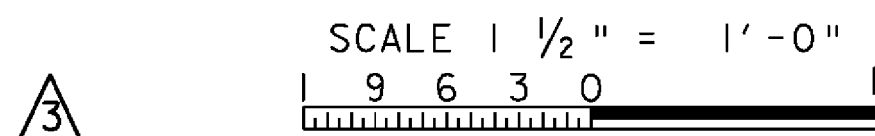


SECTION A-A
SCALE 1/2" = 1'-0"

GIRDERS 1 - 7 TEMPERATURE	"A"	"B"
0	1 5/8"	1 3/8"
15	1 1/2"	1 1/4"
30	1 3/8"	1 1/8"
45	1 1/4"	1"
60	1 1/8"	7/8"
75	1"	3/4"
90	7/8"	5/8"
105	3/4"	1/2"



SHIM PLATE DETAIL



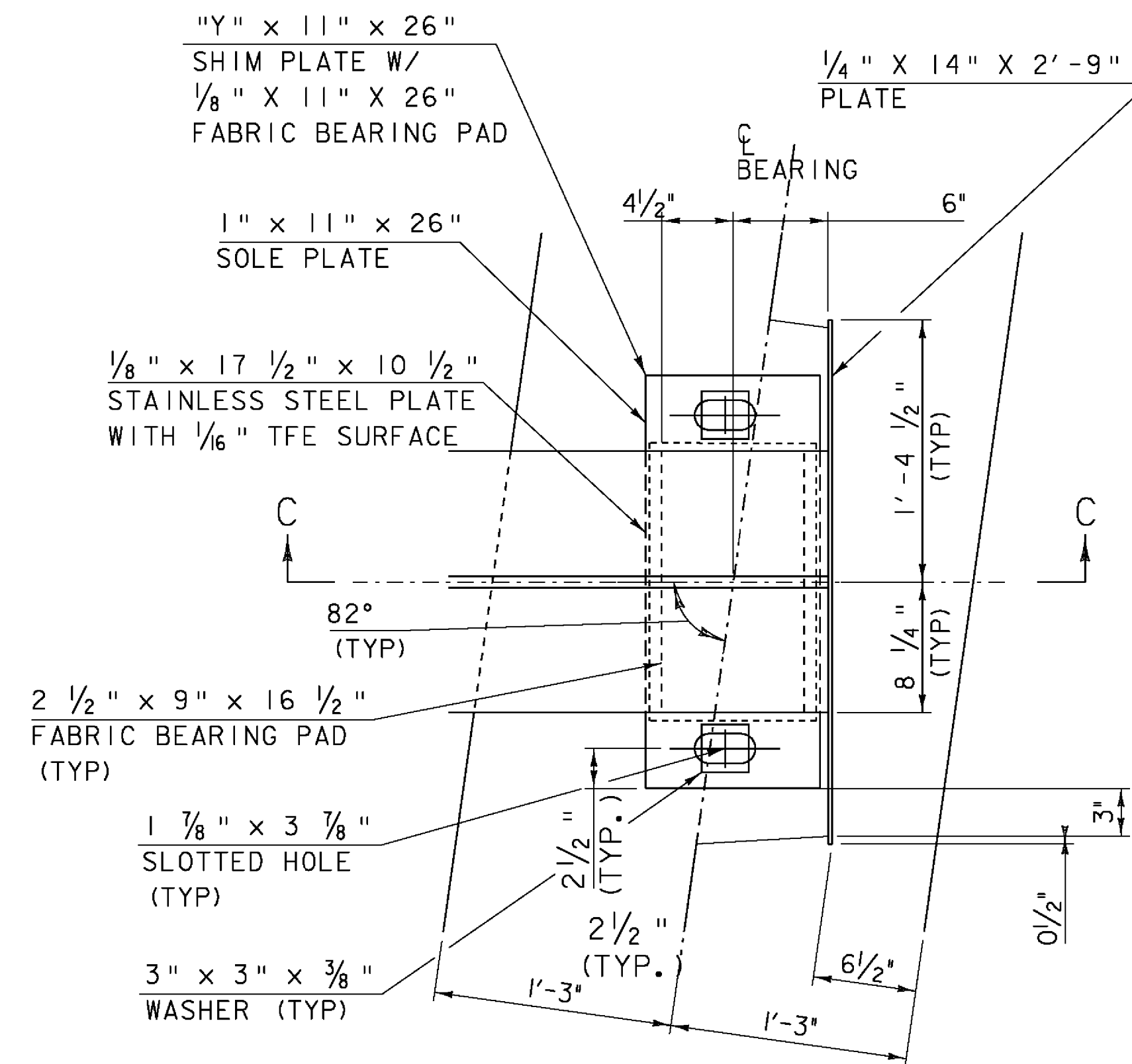
SHIM PLATES @ ABUT. 1 & 2

GIRDER NO.	ABT. NO. 1 "Y"	ABT. NO. 2 "Y"
1	2 1/2"	2"
2	2"	1 1/2"
3-7	2 1/2"	2"

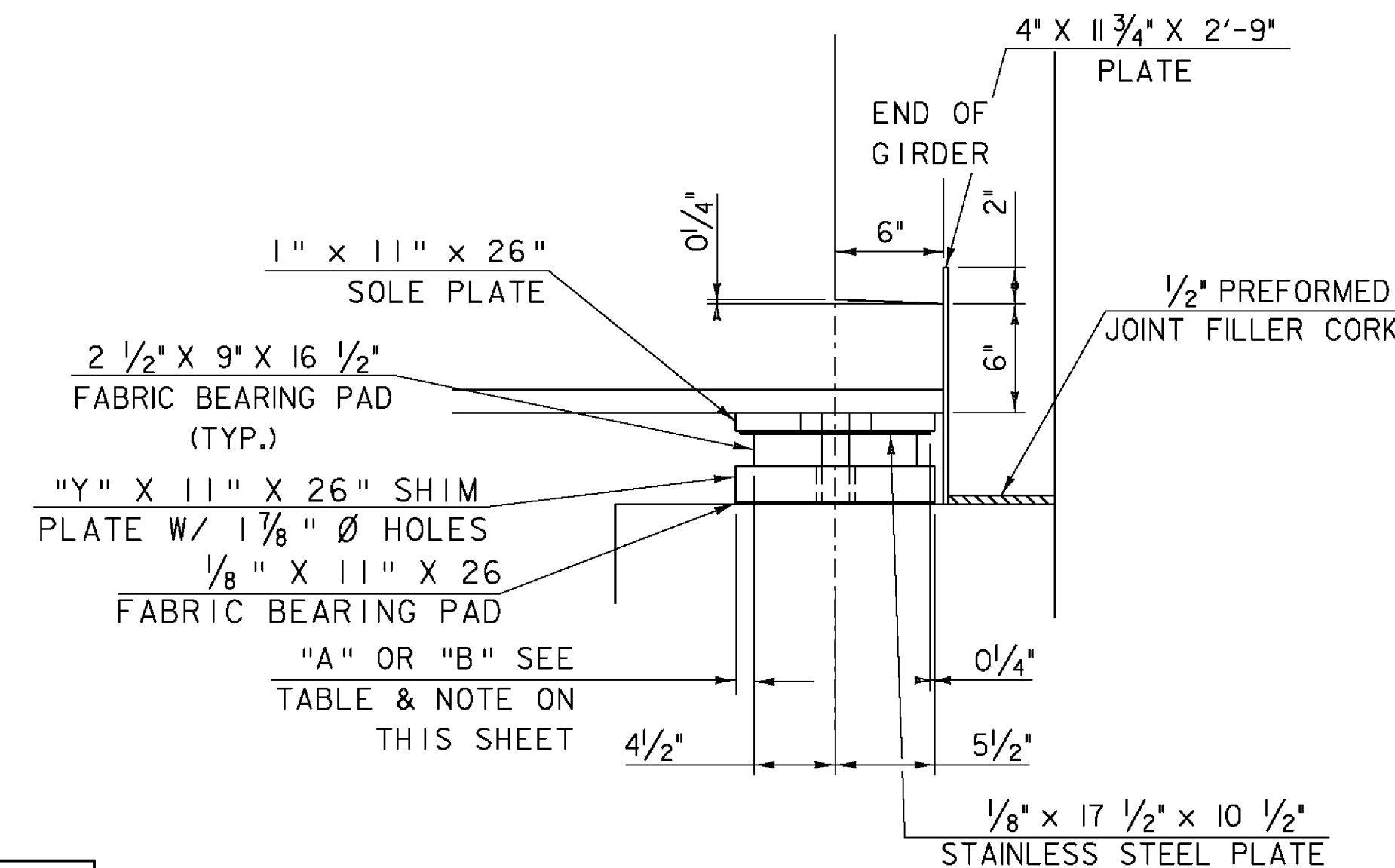
SHIM PLATES SHALL BE CONSIDERED INCIDENTAL TO ITEM 531.10, BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD

REV.	BY	DATE	DESCRIPTION
3	LBB	5/26/09	REVISED - ADDED SHIM PLATE

NOTE:
THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED BEFORE DEAD LOAD IS ADDED TO THE GIRDERS. THE "B" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED AFTER THE DECK AND SIDEWALK HAVE BEEN POURED. THE DIFFERENCE IS THE THEORETICAL ELONGATION OF THE BOTTOM FLANGE DUE TO THE DEAD LOAD DEFLECTION FROM THE DECK AND SIDEWALK. THE FINAL "B" DISTANCE MUST BE REACHED WITHIN 1/8".



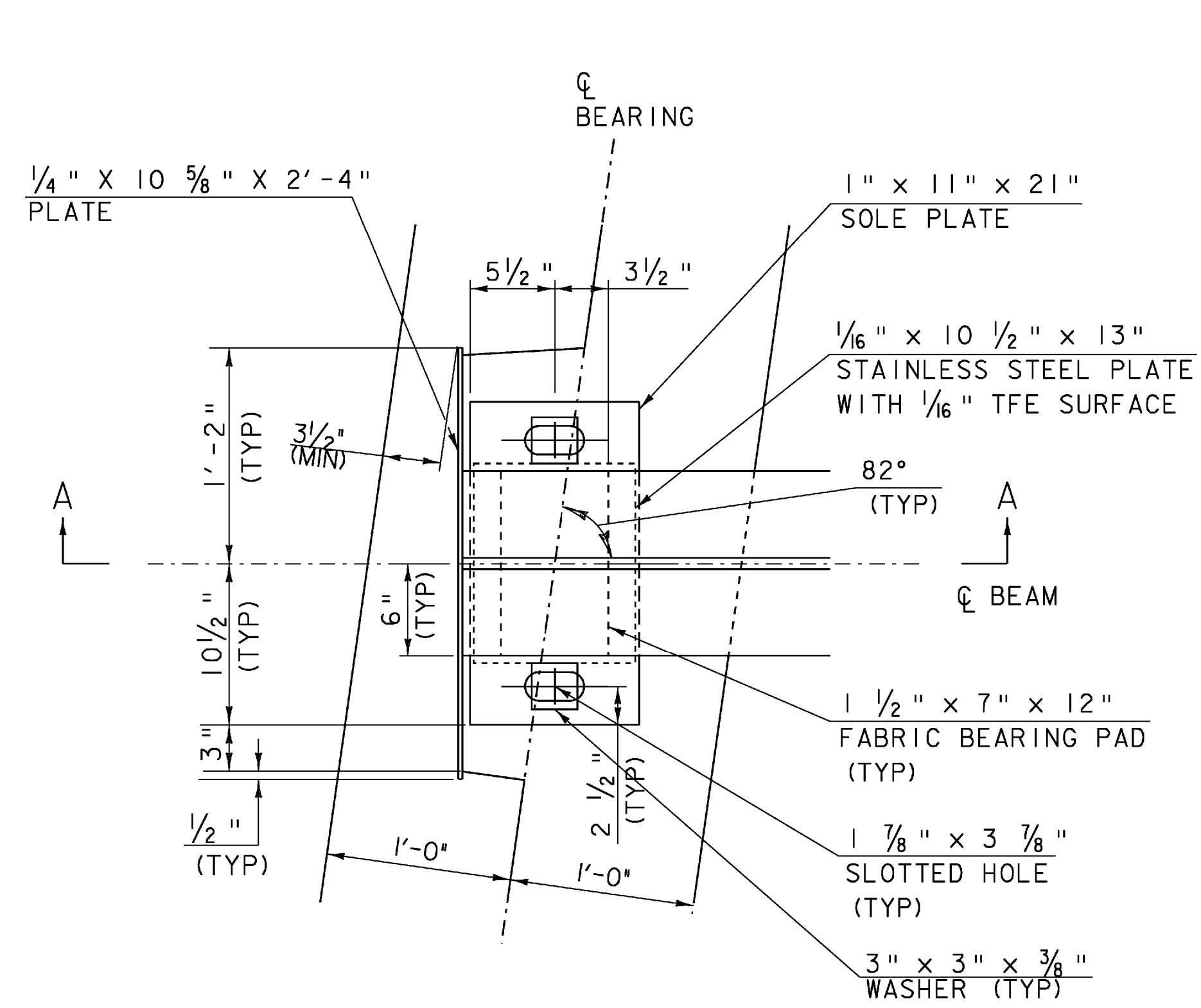
EXPANSION BEARING
GIRDERS 8 THROUGH 14
ABUTMENT 2
SCALE 1/2" = 1'-0"
(SHIM PLATE NOT SHOWN)



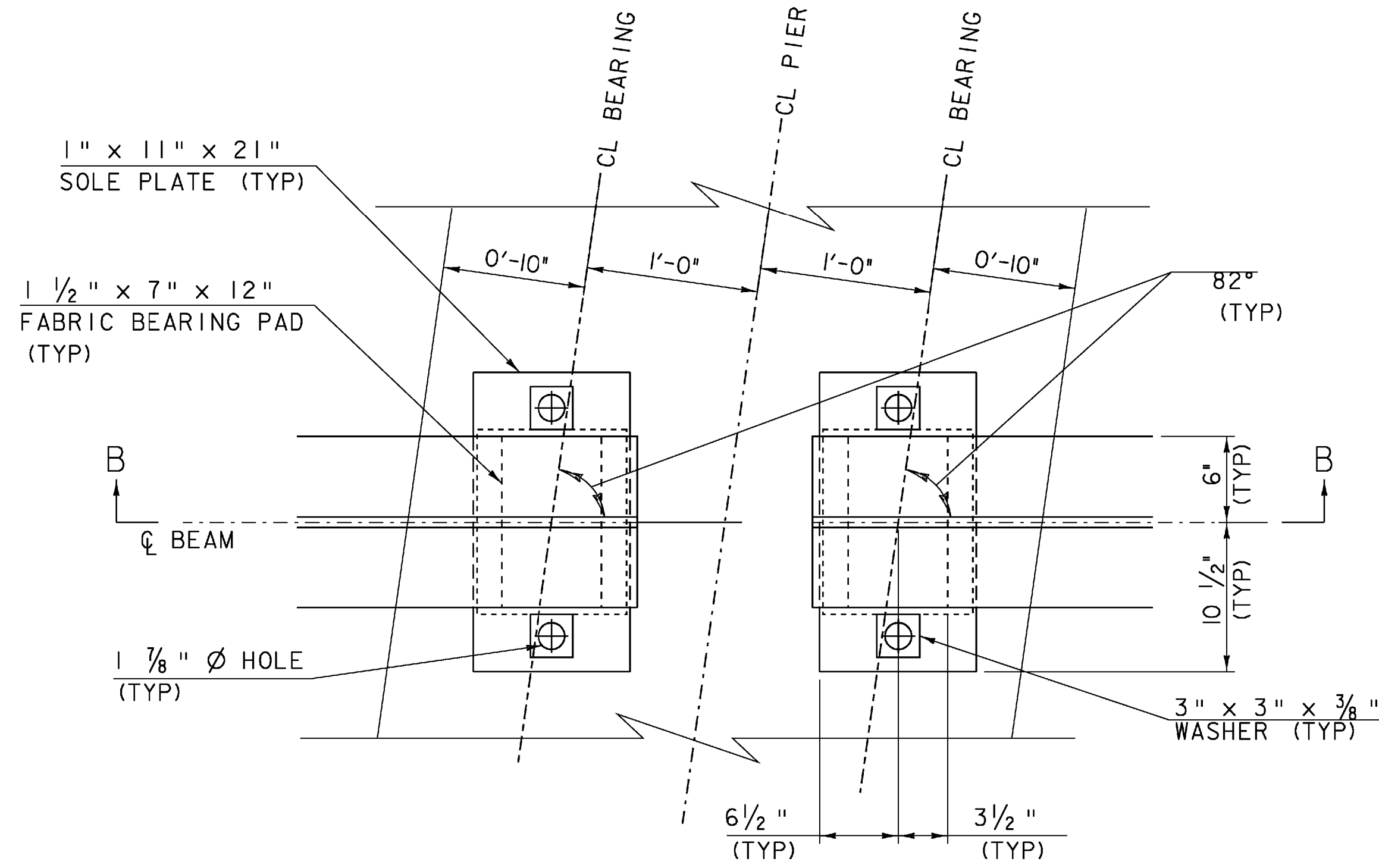
SECTION C-C

SCALE 1/2" = 1'-0"

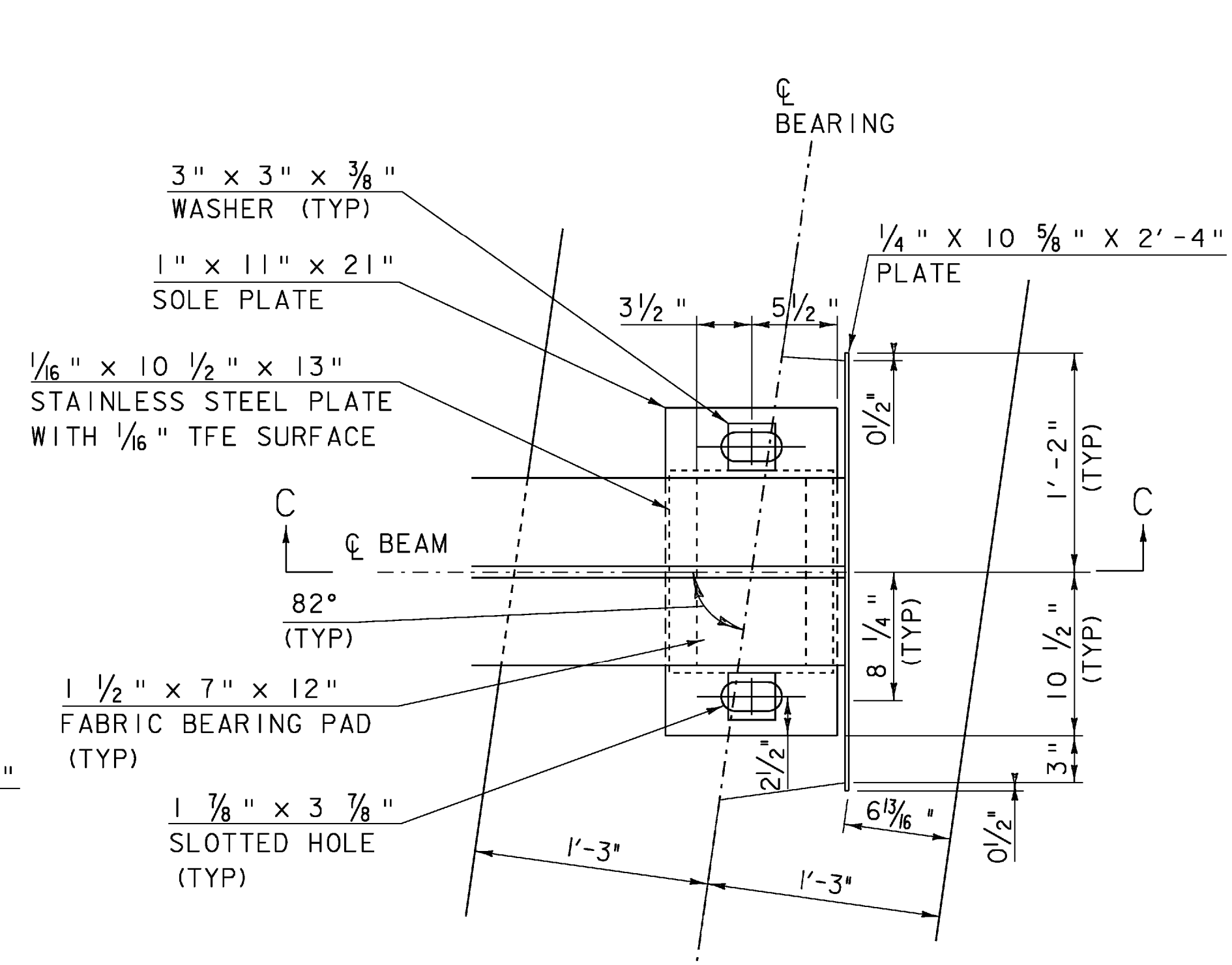
PROJECT NAME: SPRINGFIELD	PLOT DATE: 29-MAY-2009
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: C. MOONEY
FILE NAME: s06j004sup.dgn	CHECKED BY: D. PETERSON
PROJECT LEADER: R. WHITCOMB	SHEET 32 OF 72
DESIGNED BY: C. CARLSON	
INTERIOR BEARING DETAILS	



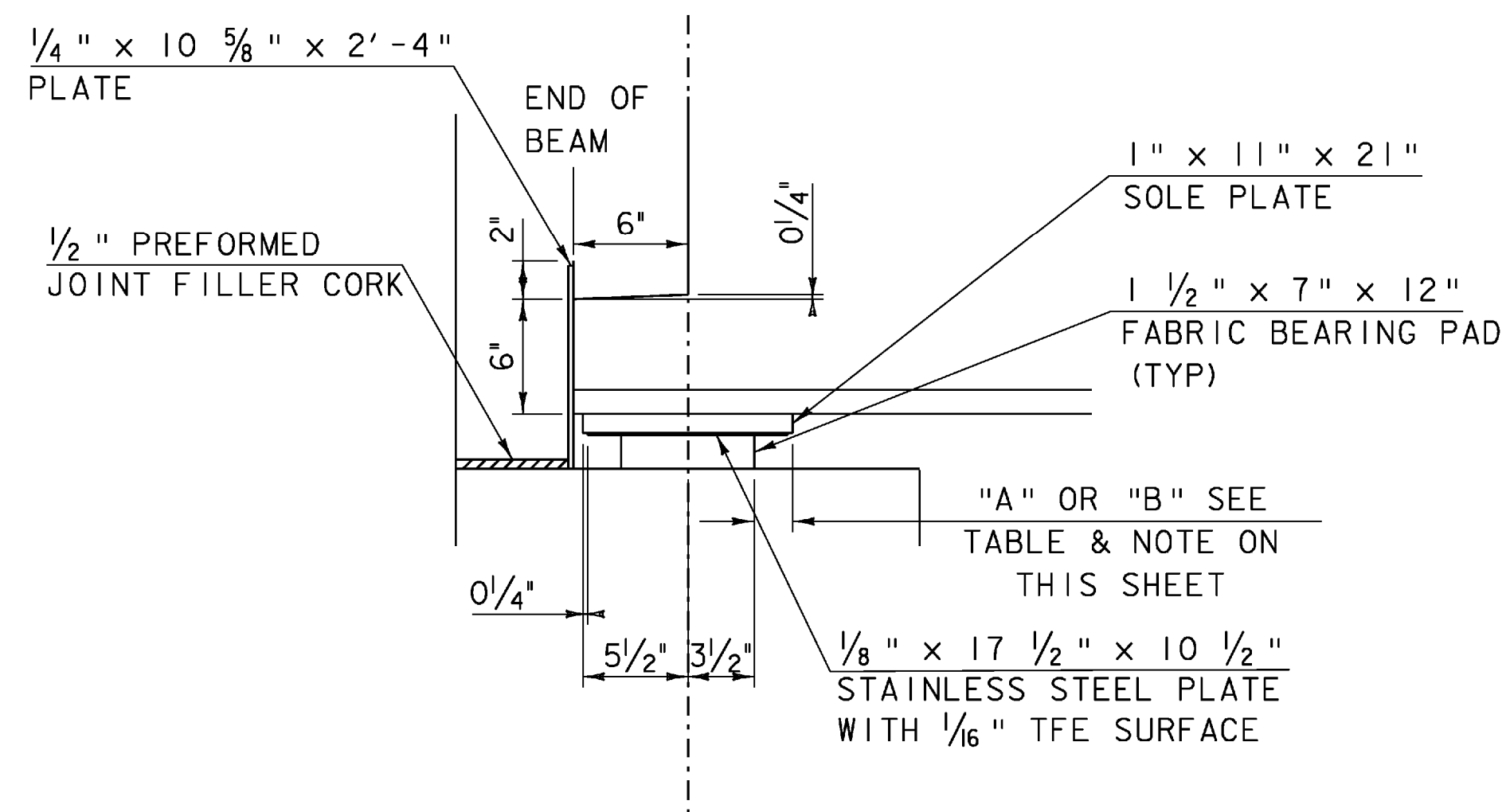
EXPANSION BEARING
BEAMS 1 AND 10
ABUTMENT 1
SCALE 1 1/2" = 1'-0"



FIXED BEARING
PIER 1 BEAMS 1 AND 10
PIER 2 BEAMS 11 AND 20
SCALE 1 1/2" = 1'-0"

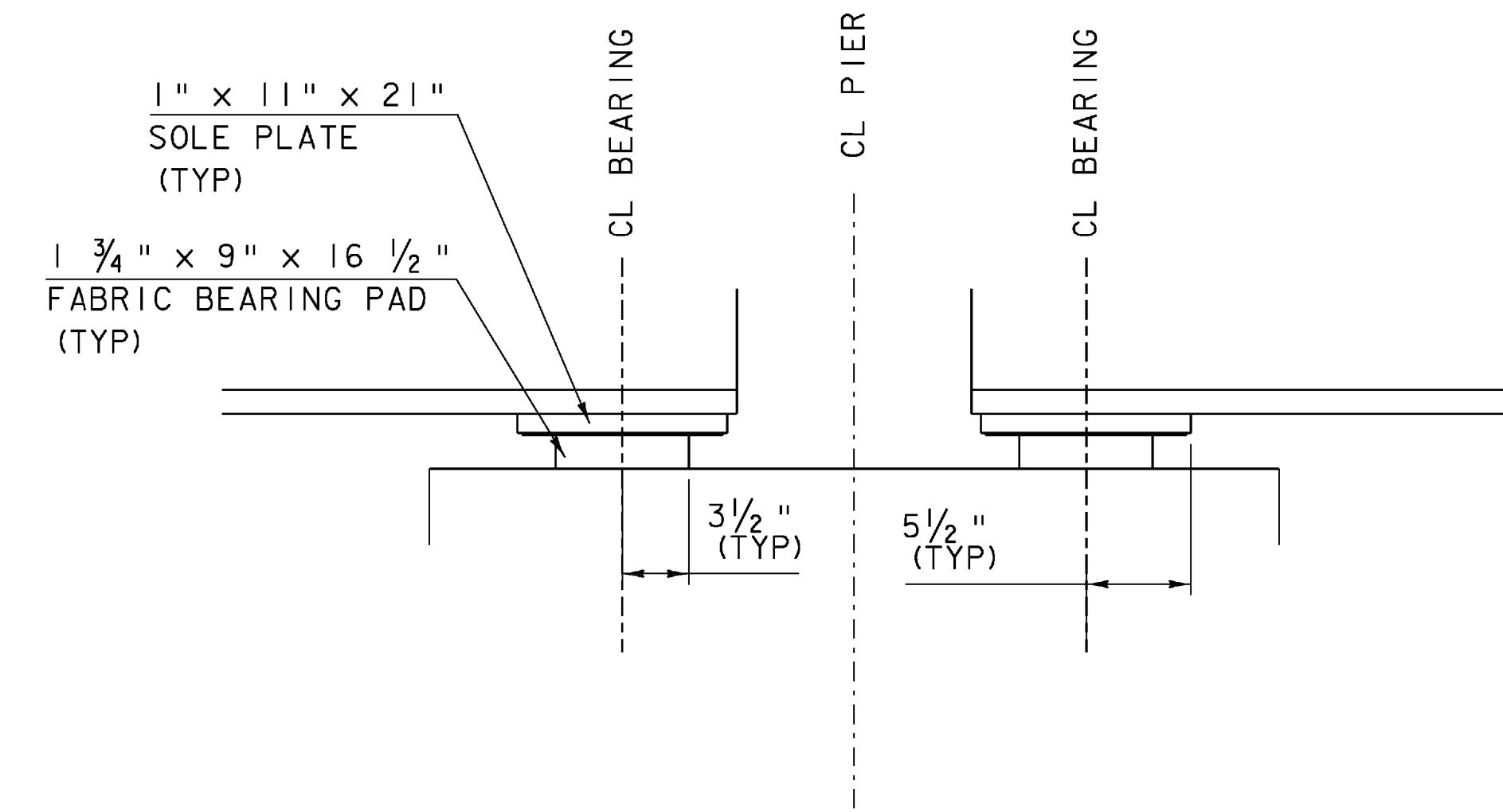


EXPANSION BEARING
BEAMS 11 AND 20
ABUTMENT 2
SCALE 1 1/2" = 1'-0"



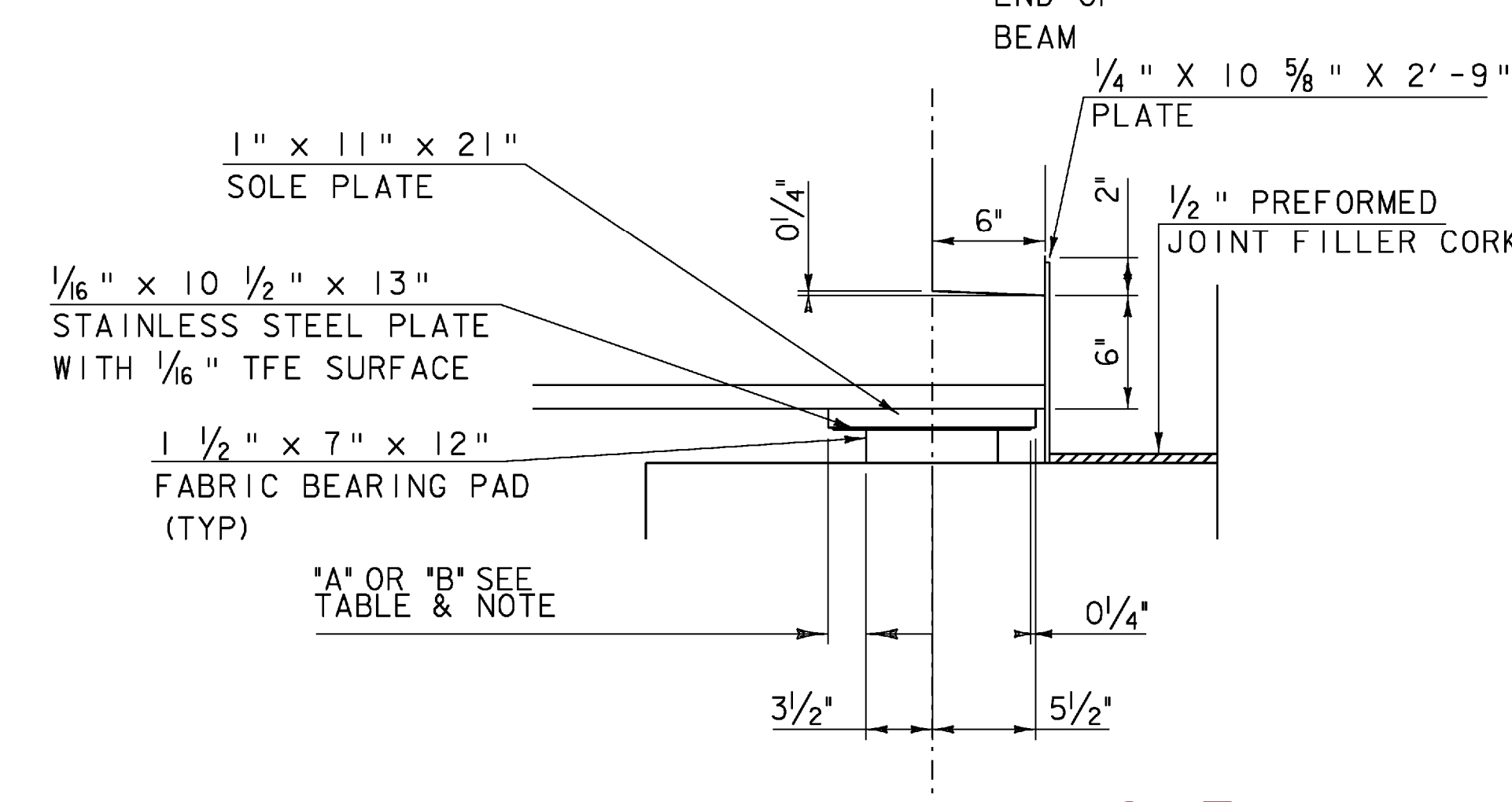
SECTION A-A
SCALE 1 1/2" = 1'-0"

BEAMS 1&10; 11 & 20		
TEMPERATURE	"A"	"B"
0	2 3/8"	2 5/8"
15	2 1/4"	2 1/2"
30	2 1/8"	2 3/8"
45	2"	2 1/4"
60	1 7/8"	2 1/8"
75	1 3/4"	2"
90	1 5/8"	1 7/8"
105	1 1/2"	1 3/4"



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

NOTE:
THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED BEFORE DEAD LOAD IS ADDED TO THE GIRDERS. THE "B" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED AFTER THE DECK AND SIDEWALK HAVE BEEN POURED. THE DIFFERENCE IS THE THEORETICAL ELONGATION OF THE BOTTOM FLANGE DUE TO THE DEAD LOAD DEFLECTION FROM THE DECK AND SIDEWALK. THE FINAL "B" DISTANCE MUST BE REACHED WITHIN 1/8".



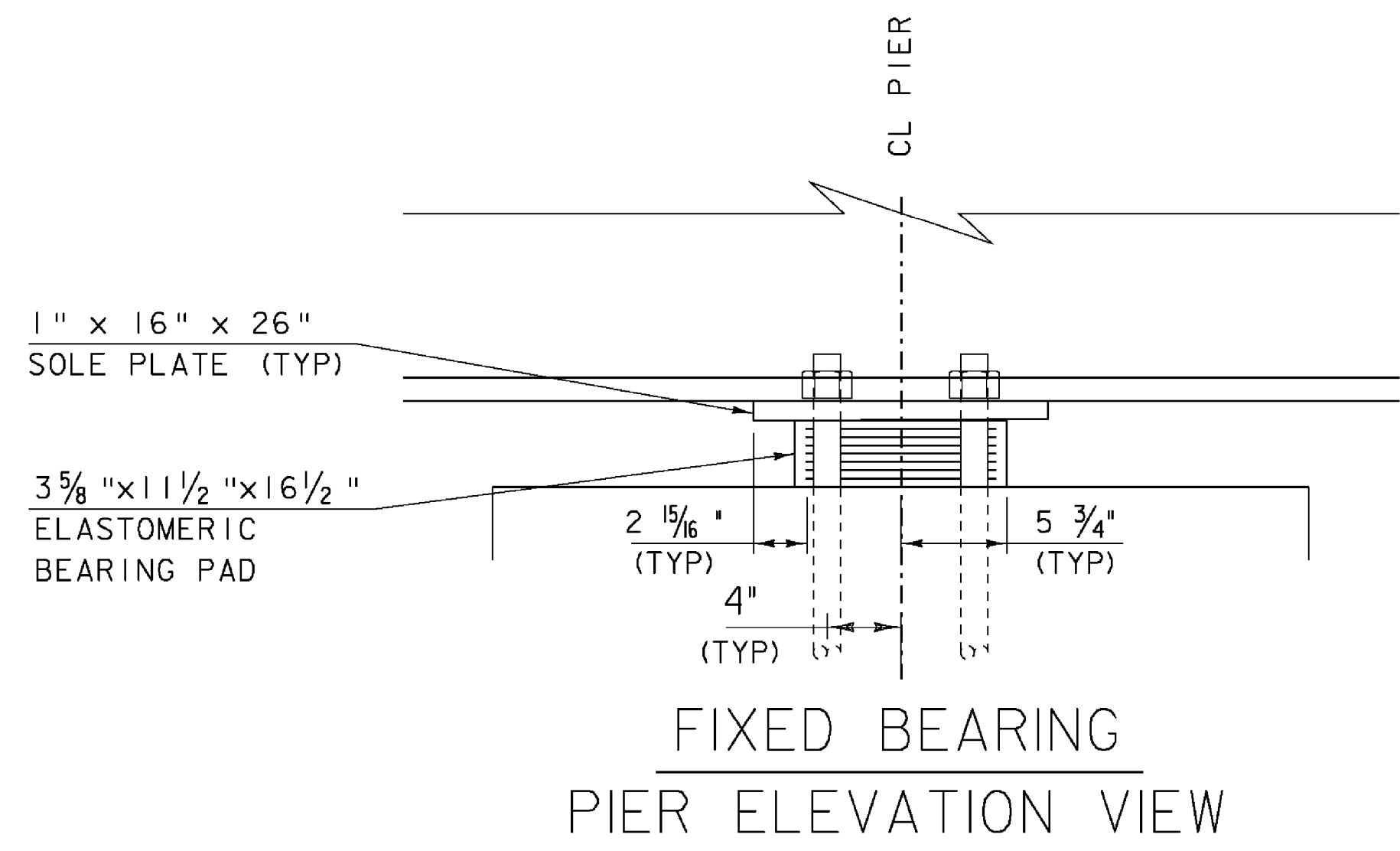
SECTION C-C
SCALE 1 1/2" = 1'-0"

VOID
REVISED
SHEET

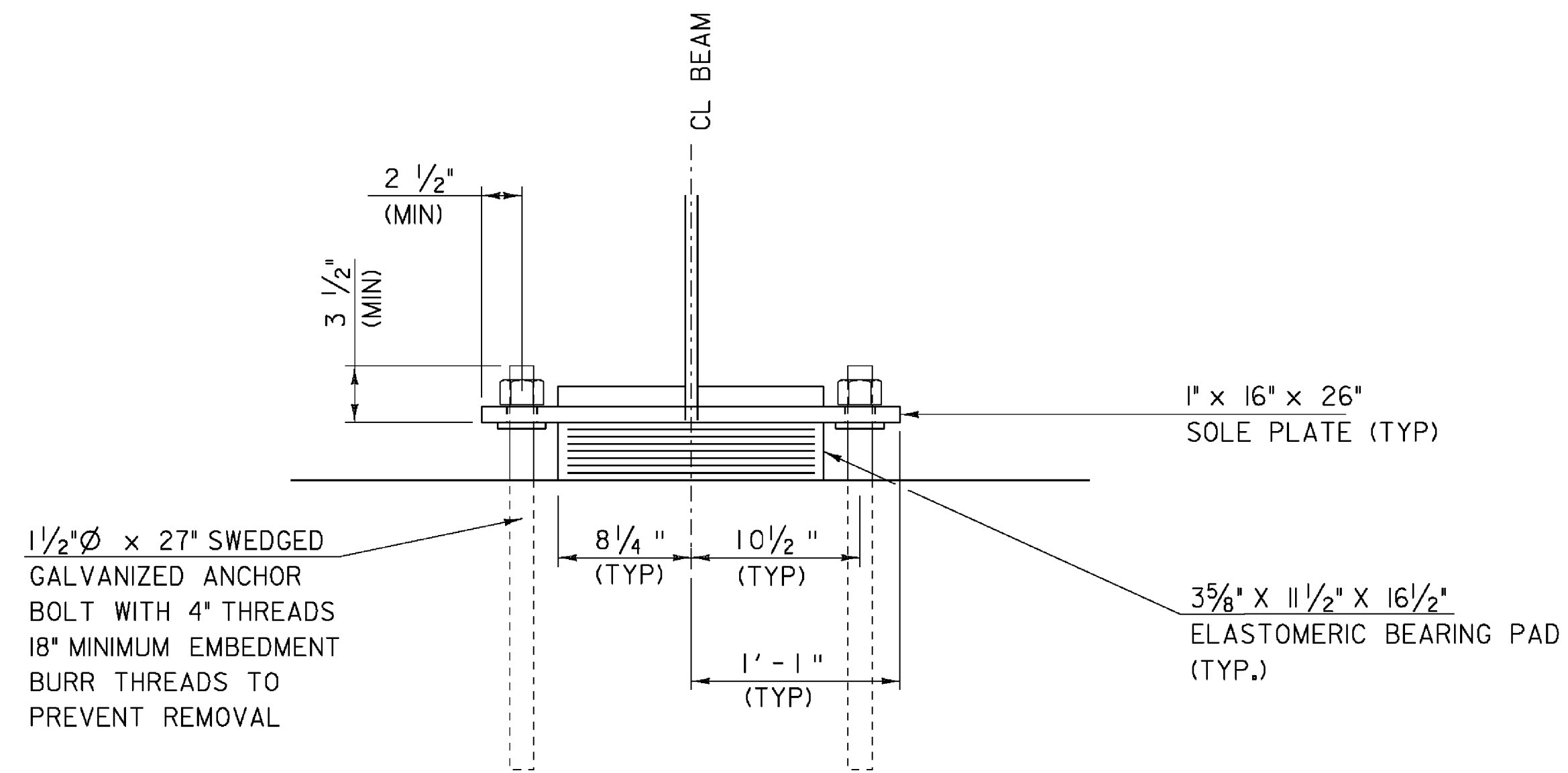
SCALE 1 1/2" = 1'-0"

PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2(14)
FILE NAME: s06j004sup.dgn
PROJECT LEADER: R. WHITCOMB
DESIGNED BY: C. CARLSON
FASCIA BEARING DETAILS

PLOT DATE: 04-MAR-2009
DRAWN BY: C. MOONEY
CHECKED BY: D. PETERSON
SHEET 33 OF 72

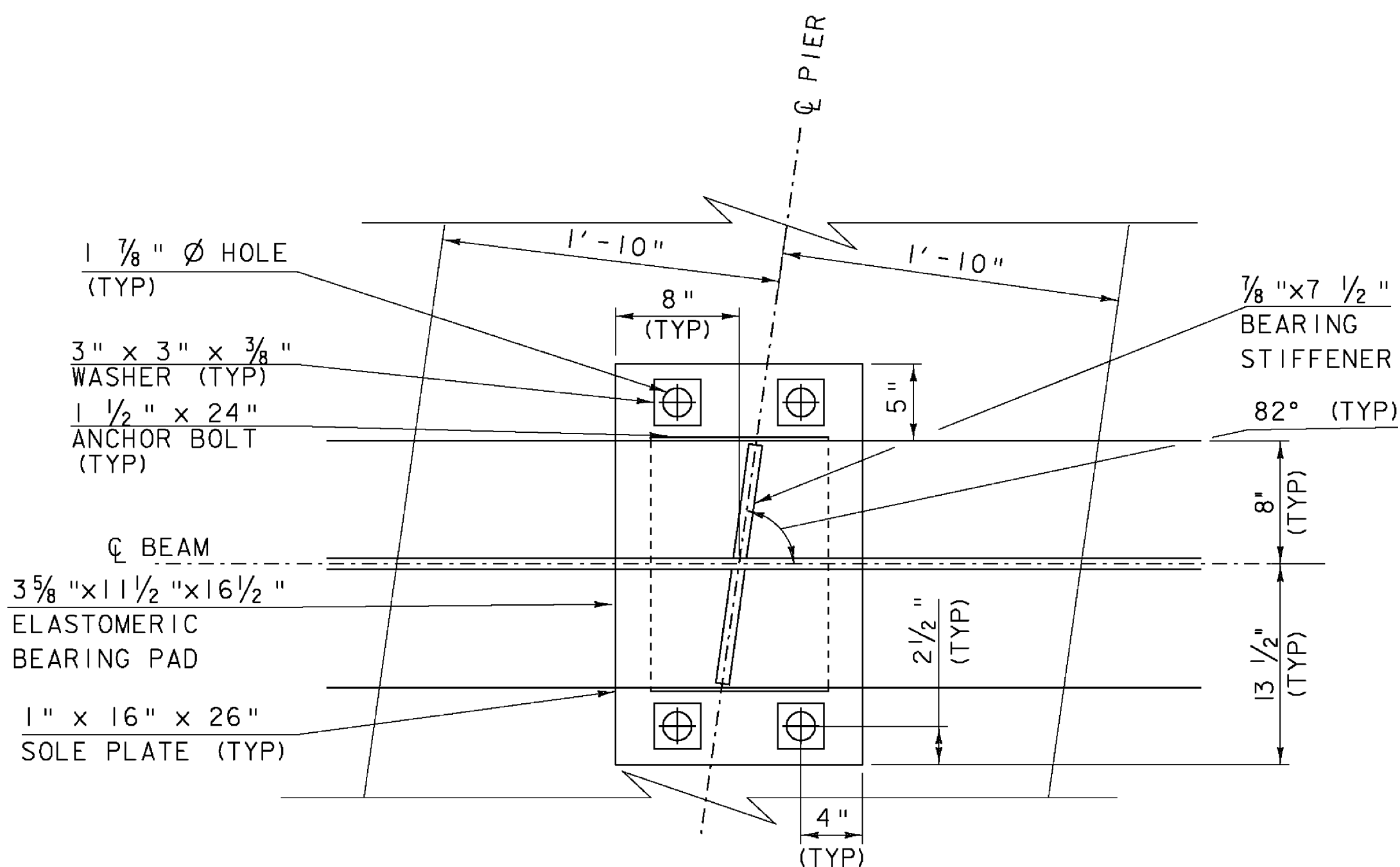


SCALE 1/2" = 1'-0"
 1 9 6 3 0 1



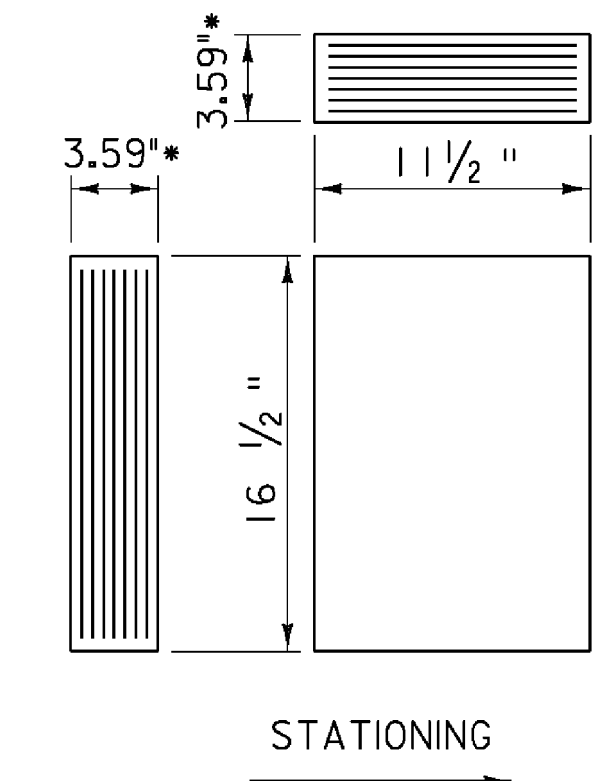
FIXED BEARING PIER SECTION

SCALE 1/2" = 1'-0"
 1 9 6 3 0 1



FIXED BEARING PIER PLAN VIEW

SCALE 1/2" = 1'-0"
 1 9 6 3 0 1



ELASTOMERIC BEARING DETAIL

SCALE 1/2" = 1'-0"
 1 9 6 3 0 1

NOTES

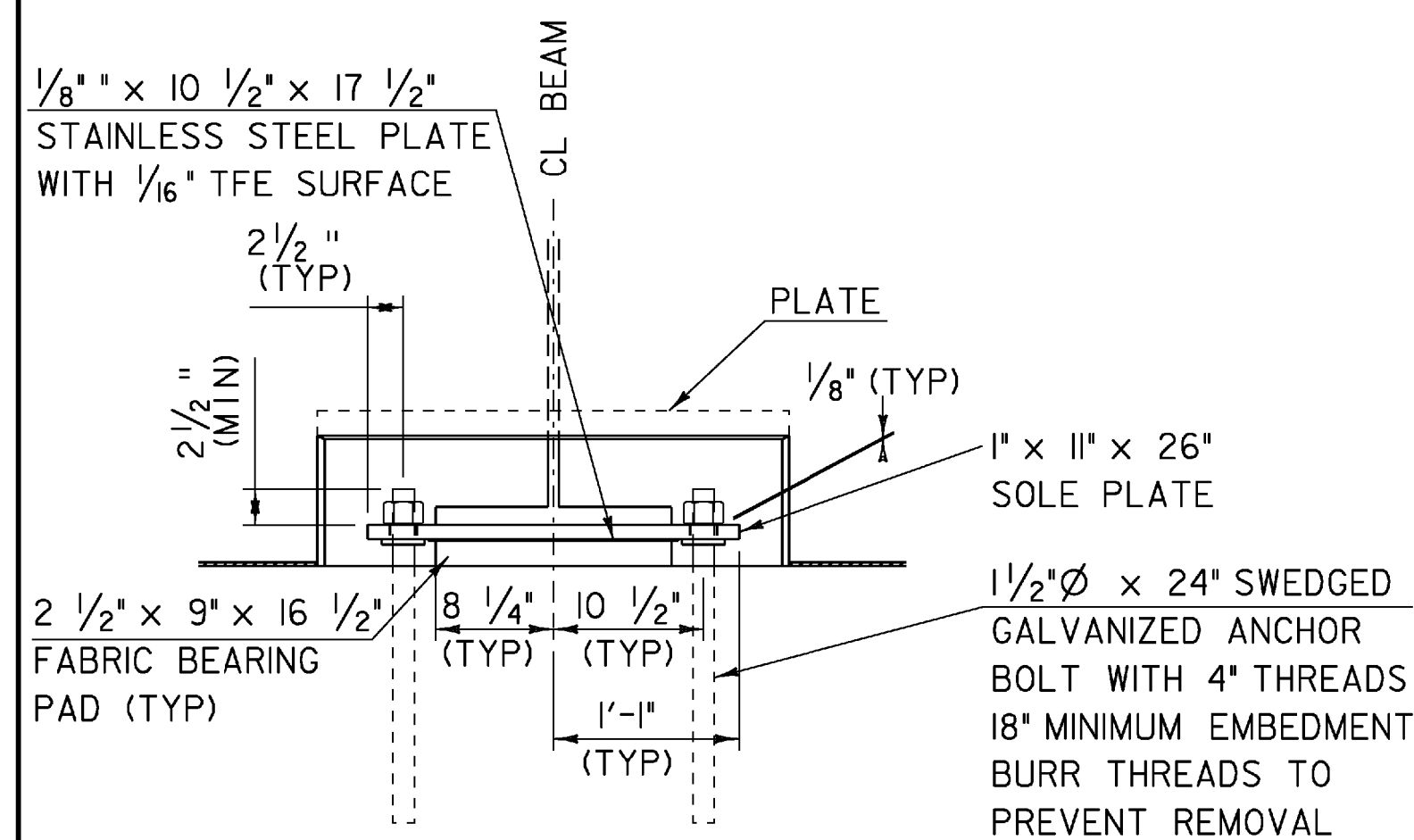
- ALTERNATE CONFIGURATIONS FOR ELASTOMERIC BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE BEARING SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE LOADS AND CRITERIA SHOWN ON THIS SHEET AND MAINTAIN THE ANCHORAGE SYSTEM SHOWN. THE BEARINGS SHALL BE DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" 2002 EDITION AND ITS LATEST REVISIONS.
- THE BEARING SHAPE FACTOR SHALL BE BETWEEN 5.0 AND 12.0.
- ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMERIC SHALL BE STEEL GRADE 50. NO FABRIC REINFORCEMENT WILL BE PERMITTED.
- ELASTOMERIC BEARINGS REINFORCED WITH STEEL SHALL HAVE A 1/8" EDGE SEAL OF ELASTOMERIC INTEGRAL WITH THE BEARING OVER ALL PLATES.
- ALL MATERIALS AND FABRICATION SHALL BE PER AASHTO DIVISION II SECTION 18.2 AND AASHTO MATERIAL SPECIFICATION M25I.
- DESIGN CRITERIA:
 - TEMPERATURE RANGE: 80 F
 - 60 DUROMETER ELASTOMERIC
 - DESIGN ROTATION: 0.016 rad
 - REACTION/BEAM:

RDL: 154 kips
 RLL+: 145 kips

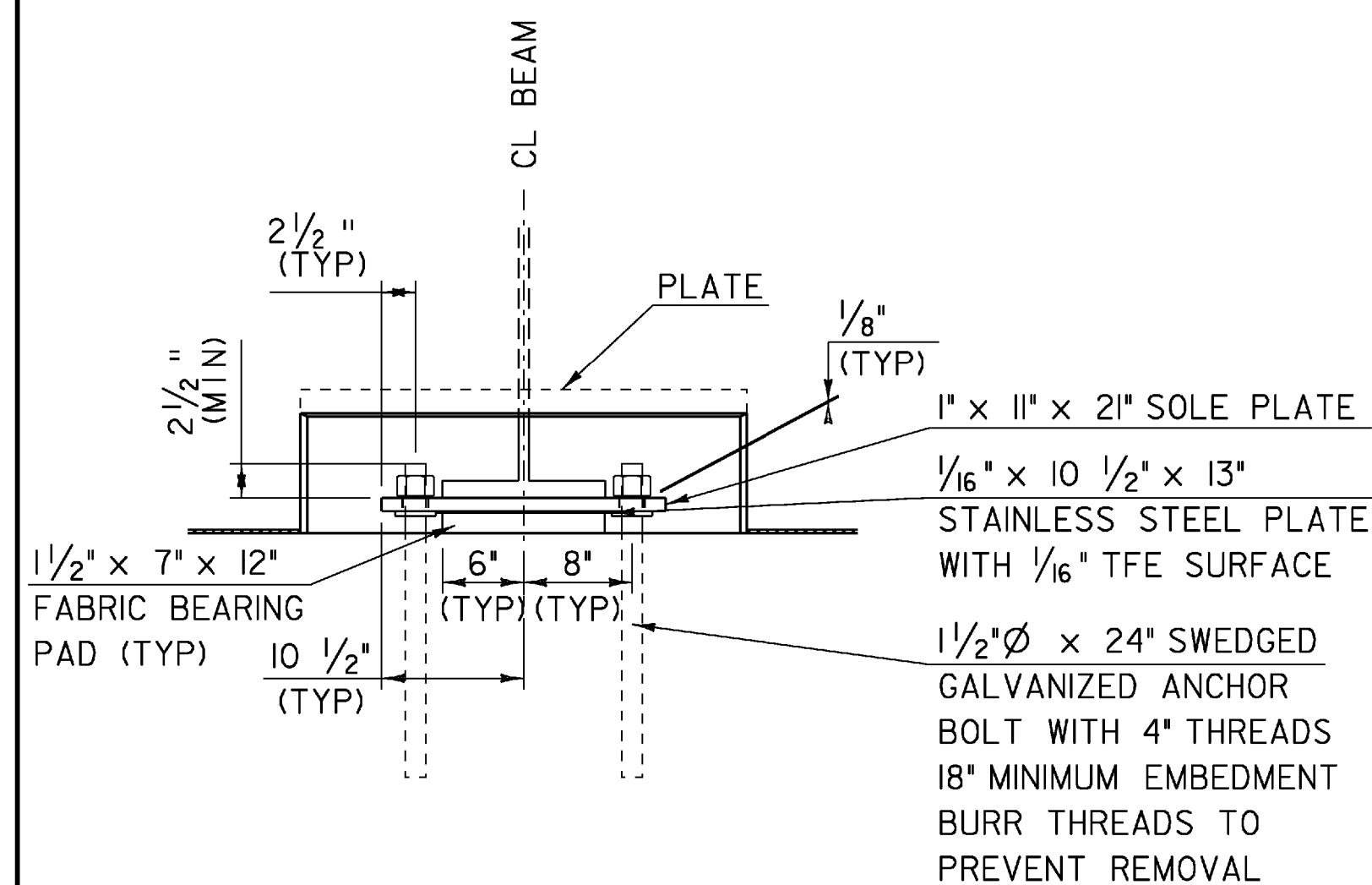
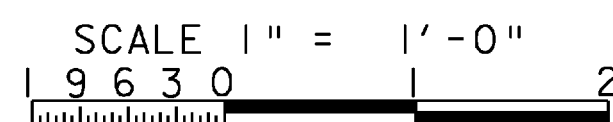
REV.	BY	DATE	DESCRIPTION
3	CAM	5/26/09	CHANGE IN BEARING DESIGN TO ACCOMMODATE NEW PLATE GIRDERS

FIXED BEARING DETAILS

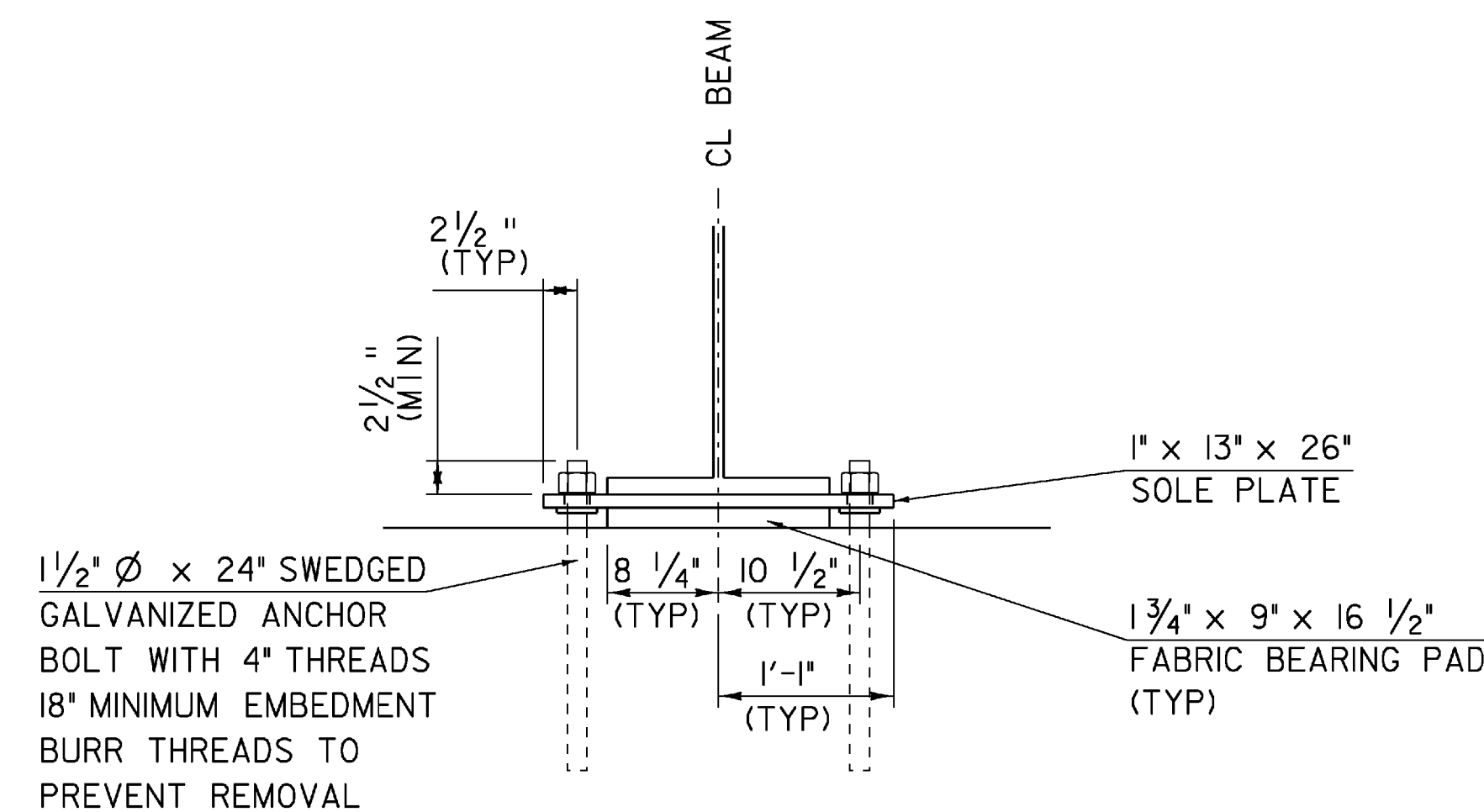
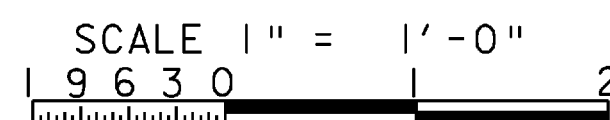
PROJECT NAME: SPRINGFIELD	PLOT DATE: 29-MAY-2009
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: C. MOONEY
FILE NAME: s06j004sup.dgn	CHECKED BY: D. PETERSON
PROJECT LEADER: R. WHITCOMB	SHEET 33 OF 72
DESIGNED BY: C. CARLSON	
FASCIA BEARING DETAILS	



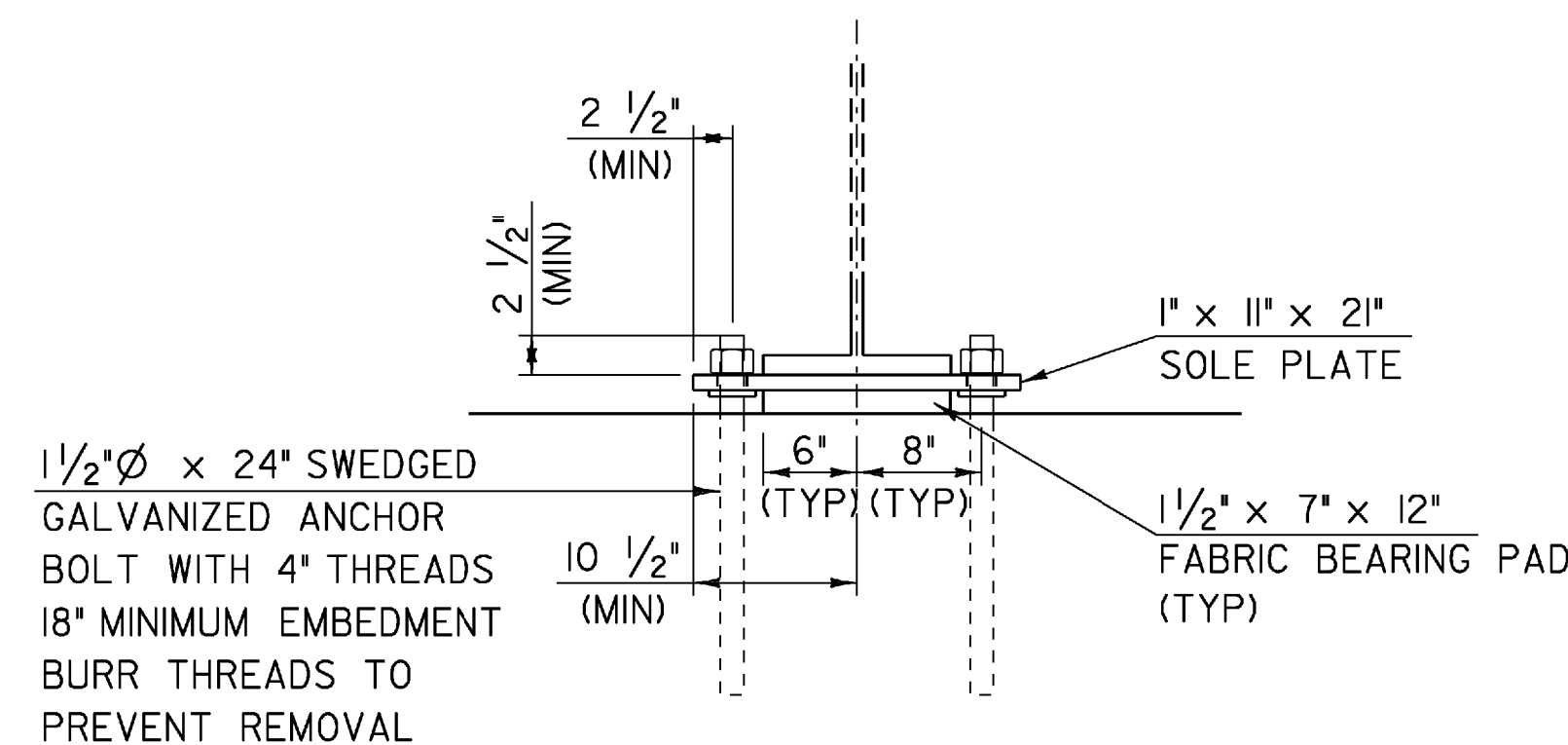
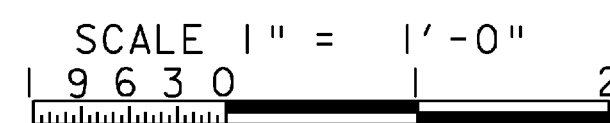
EXPANSION BEARING
 ABUTMENT 1 BEAMS 2 THROUGH 9
 ABUTMENT 2 BEAMS 12 THROUGH 19



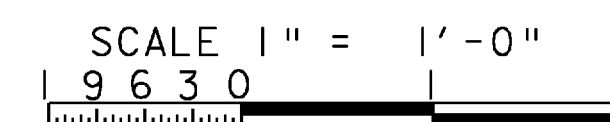
EXPANSION BEARING
 ABUTMENT 1 BEAMS 1 AND 10
 ABUTMENT 2 BEAMS 11 AND 20



FIXED BEARING
 PIER (C/L BRG SPAN 1)
 BEAMS 2 THROUGH 9
 PIER (C/L BRG SPAN 2)
 BEAMS 12 THROUGH 19



FIXED BEARING
 PIER (C/L BRG SPAN 1)
 BEAMS 1 AND 10
 PIER (C/L BRG SPAN 2)
 BEAMS 11 AND 20



BEARING NOTES

- BEARINGS SHALL BE PAID FOR UNDER ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 AND 731. FABRICATION DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED AND INCLUDE ANY NECESSARY WELDING OR BONDING PROCEDURES.
- NEW 1 1/2" ANCHOR BOLTS SHALL BE INSTALLED BY DRILLING HOLES AND GROUTING THE BOLTS INTO THE ABUTMENT OR PIER SEATS. DRILLING AND GROUTING THE ANCHOR BOLTS SHALL BE INCIDENTAL TO ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD". ANCHOR BOLTS SHALL HAVE A MINIMUM EMBEDMENT OF 18" INTO CONCRETE AND SHALL CONFORM TO STANDARD SPECIFICATION 714.08.
- THE FIELD WELD CONNECTING THE BOTTOM FLANGE WITH THE BEARING DEVICE SHALL BE MADE WITH E7018 ELECTRODES. THE CONTRACTOR SHALL ENSURE THE HEAT FROM WELDING DOES NOT DAMAGE THE BEARING PAD. AREAS OF GALVANIZING OR METALIZING DAMAGED BY WELDING AND/OR HANDLING SHALL BE REPAIRED IN ACCORDANCE WITH SECTION 513. WELD PROCEDURES MUST BE SUBMITTED FOR REVIEW.
- ALTERNATE CONFIGURATIONS FOR BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE DESIGN LOADS AND CRITERIA SHOWN ON THIS SHEET AND SHALL MAINTAIN THE ANCHORAGE SYSTEM SHOWN.
- MASONRY SURFACES UNDER BEARINGS SHALL BE SMOOTH AND LEVEL BEFORE INSTALLING BEARING DEVICES. EXISTING ANCHOR BOLTS SHALL BE CUT FLUSH AND SMOOTH WITH THE BRIDGE SEAT. THIS WORK SHALL BE INCIDENTAL TO ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD"
- BEARINGS MUST BE INSTALLED BEFORE THE DIAPHRAGMS AND ANCHOR BOLTS ARE INSTALLED.

DESIGN CRITERIA:

- BEARING PAD TO CONCRETE DESIGN PRESSURE = 1000 PSI MAXIMUM
- MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS.
- HORIZONTAL CAPACITY SHALL BE A MINIMUM 10% OF VERTICAL LOAD
- DESIGN LOAD PER BEARING (UNFACTORED)

	BEAMS 2-9	BEAMS 1&10	BEAMS 12-19	BEAMS 11&20
DL =	37.2 KIPS	26.6 KIPS	37.2 KIPS	26.6 KIPS
LL+I =	70.6 KIPS	31.9 KIPS	70.6 KIPS	31.9 KIPS
SDL =	9.4 KIPS	25.9 KIPS	9.4 KIPS	25.9 KIPS

- ALL JACKING AND SHORING REQUIRED TO REPLACE BEARINGS WILL BE PAID FOR UNDER ITEM 502.11, "SHORING SUPERSTRUCTURE BEARINGS". THE CONTRACTOR SHALL SUBMIT DETAILS AND CALCULATIONS FOR SHORING AND JACKING AS SPECIFIED IN SECTION 502.
- THE WORK REQUIRED TO REMOVE EXISTING BEARINGS IN ORDER TO INSTALL NEW BEARINGS AS SHOWN ON THE PLANS, SHALL BE INCLUDED IN ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".
- ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS STEEL) AS WELL AS THE 1/4" PLATE SHALL BE AASHTO M270M/M270, GRADE 36 OR 50.
- ALL BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b). IF THE BEARINGS ARE METALIZED, THEY SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN SUBSECTION 506.15. AREAS OF GALVANIZING OR METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED IN CONFORMANCE WITH ASTM A-760.
- ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE 3/8" PLATE MINIMUM. PAYMENT FOR ANCHOR BOLTS, NUTS, WASHERS AND THEIR INSTALLATIONS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD".
- EXISTING HOLES IN THE EXISTING BEAM FLANGES SHALL BE CLEANED AND FILLED WITH JOINT SEALER, POLYURETHANE AS SPECIFIED IN SUBSECTION 707.05. THIS WORK SHALL BE INCIDENTAL TO ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD".

VOID
 SEE REVISED
 SHEET

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	s06j004sup.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	C. CARLSON
BEARING ELEVATIONS AND NOTES	
PLOT DATE:	04-MAR-2009
DRAWN BY:	C. MOONEY
CHECKED BY:	D. PETERSON
SHEET	34 OF 72

BEARING NOTES

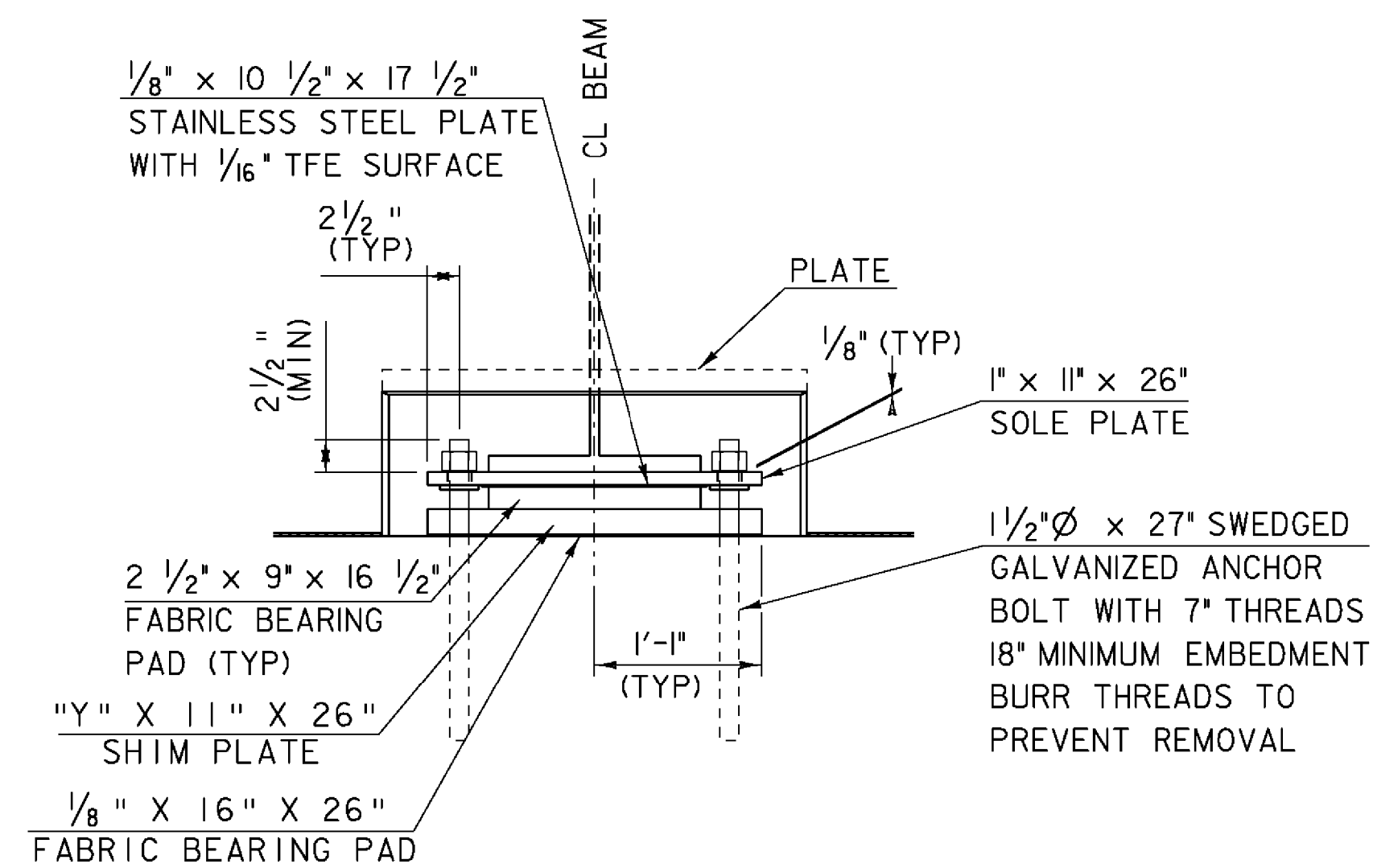
- BEARINGS SHALL BE PAID FOR UNDER ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 AND 731. FABRICATION DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED AND INCLUDE ANY NECESSARY WELDING OR BONDING PROCEDURES.
- NEW 1 1/2" ANCHOR BOLTS SHALL BE INSTALLED BY DRILLING HOLES AND GROUTING THE BOLTS INTO THE ABUTMENT OR PIER SEATS. DRILLING AND GROUTING THE ANCHOR BOLTS SHALL BE INCIDENTAL TO ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD". ANCHOR BOLTS SHALL HAVE A MINIMUM EMBEDMENT OF 18" INTO CONCRETE AND SHALL CONFORM TO STANDARD SPECIFICATION 714.08.
- THE FIELD WELD CONNECTING THE BOTTOM FLANGE WITH THE BEARING DEVICE SHALL BE MADE WITH E7018 ELECTRODES. THE CONTRACTOR SHALL ENSURE THE HEAT FROM WELDING DOES NOT DAMAGE THE BEARING PAD. AREAS OF GALVANIZING OR METALIZING DAMAGED BY WELDING AND/OR HANDLING SHALL BE REPAIRED IN ACCORDANCE WITH SECTION 513. WELD PROCEDURES MUST BE SUBMITTED FOR REVIEW.
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- MASONRY SURFACES UNDER BEARINGS SHALL BE SMOOTH AND LEVEL BEFORE INSTALLING BEARING DEVICES. EXISTING ANCHOR BOLTS SHALL BE CUT FLUSH AND SMOOTH WITH THE BRIDGE SEAT. THIS WORK SHALL BE INCIDENTAL TO ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD"
- BEARINGS MUST BE INSTALLED BEFORE THE DIAPHRAGMS AND ANCHOR BOLTS ARE INSTALLED.

DESIGN CRITERIA:

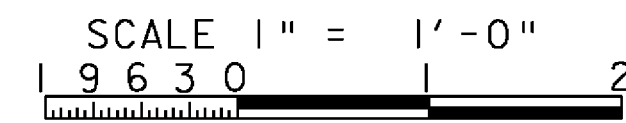
- BEARING PAD TO CONCRETE DESIGN PRESSURE = 1000 PSI MAXIMUM
- MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIAN.
- HORIZONTAL CAPACITY SHALL BE A MINIMUM 10% OF VERTICAL LOAD
- DESIGN LOAD PER BEARING (UNFACTORED)

	ABUTMENTS 1&2	PIER
DL & SDL =	48 KIPS	154 KIPS
LL+I =	76 KIPS	145 KIPS

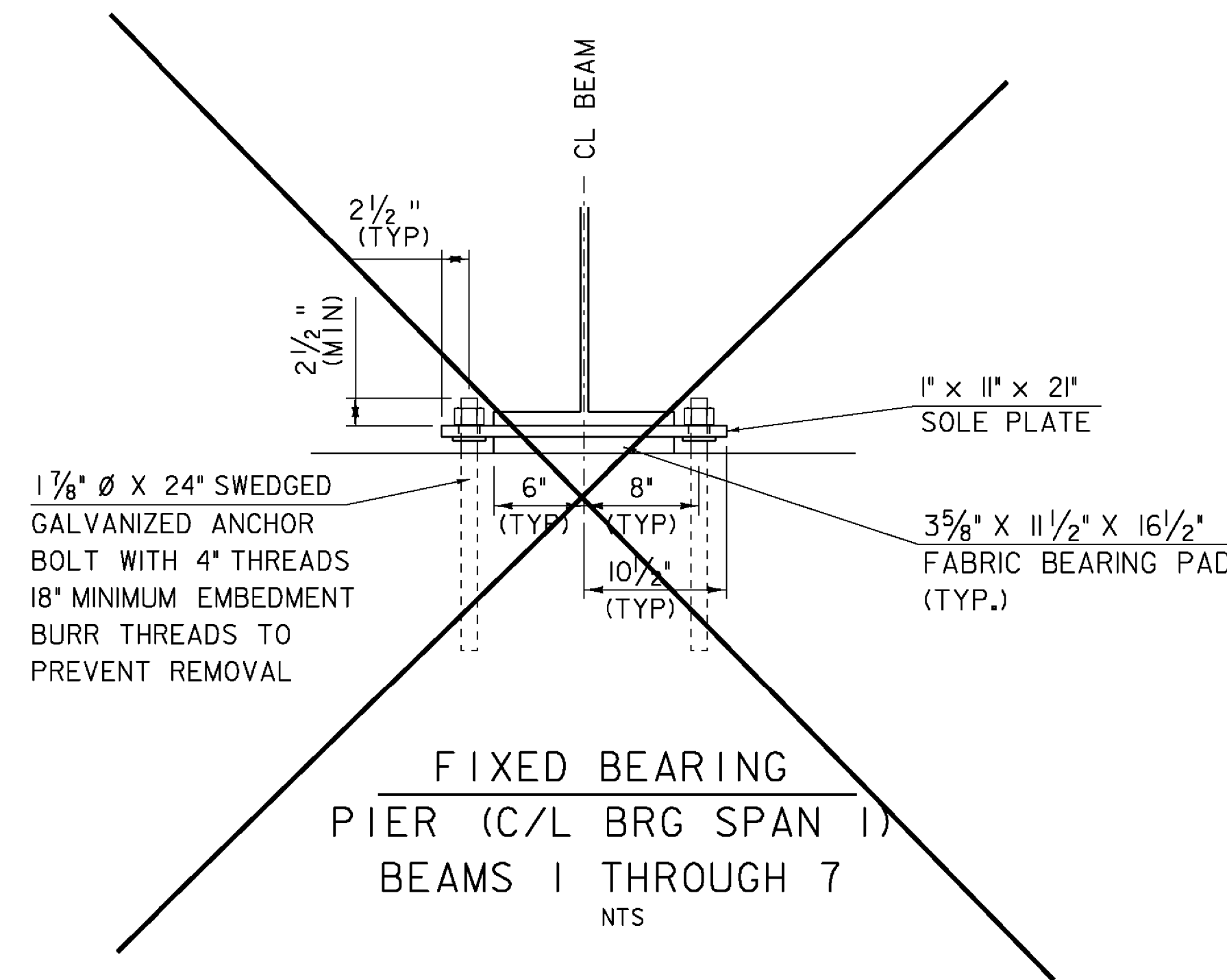
- ~~ALL JACKING AND SHORING REQUIRED TO REPLACE BEARINGS WILL BE PAID FOR UNDER ITEM 502.11, "SHORING SUPERSTRUCTURE BEARINGS". THE CONTRACTOR SHALL SUBMIT DETAILS AND CALCULATIONS FOR SHORING AND JACKING AS SPECIFIED IN SECTION 502.~~
- THE WORK REQUIRED TO REMOVE EXISTING BEARINGS IN ORDER TO INSTALL NEW BEARINGS AS SHOWN ON THE PLANS, SHALL BE INCLUDED IN ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".
- ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS STEEL) AS WELL AS THE 1/4" PLATE SHALL BE AASHTO M270M/M270, GRADE 36 OR 50.
- ALL BEARING DEVICES SHALL BE GALVANIZED OR METALIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b). IF THE BEARINGS ARE METALIZED, THEY SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN SUBSECTION 506.15. AREAS OF GALVANIZING OR METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED IN CONFORMANCE WITH ASTM A-760.
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- ~~EXISTING HOLES IN THE EXISTING BEAM FLANGES SHALL BE CLEANED AND FILLED WITH JOINT SEALER, POLYURETHANE AS SPECIFIED IN SUBSECTION 707.05. THIS WORK SHALL BE INCIDENTAL TO ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD".~~



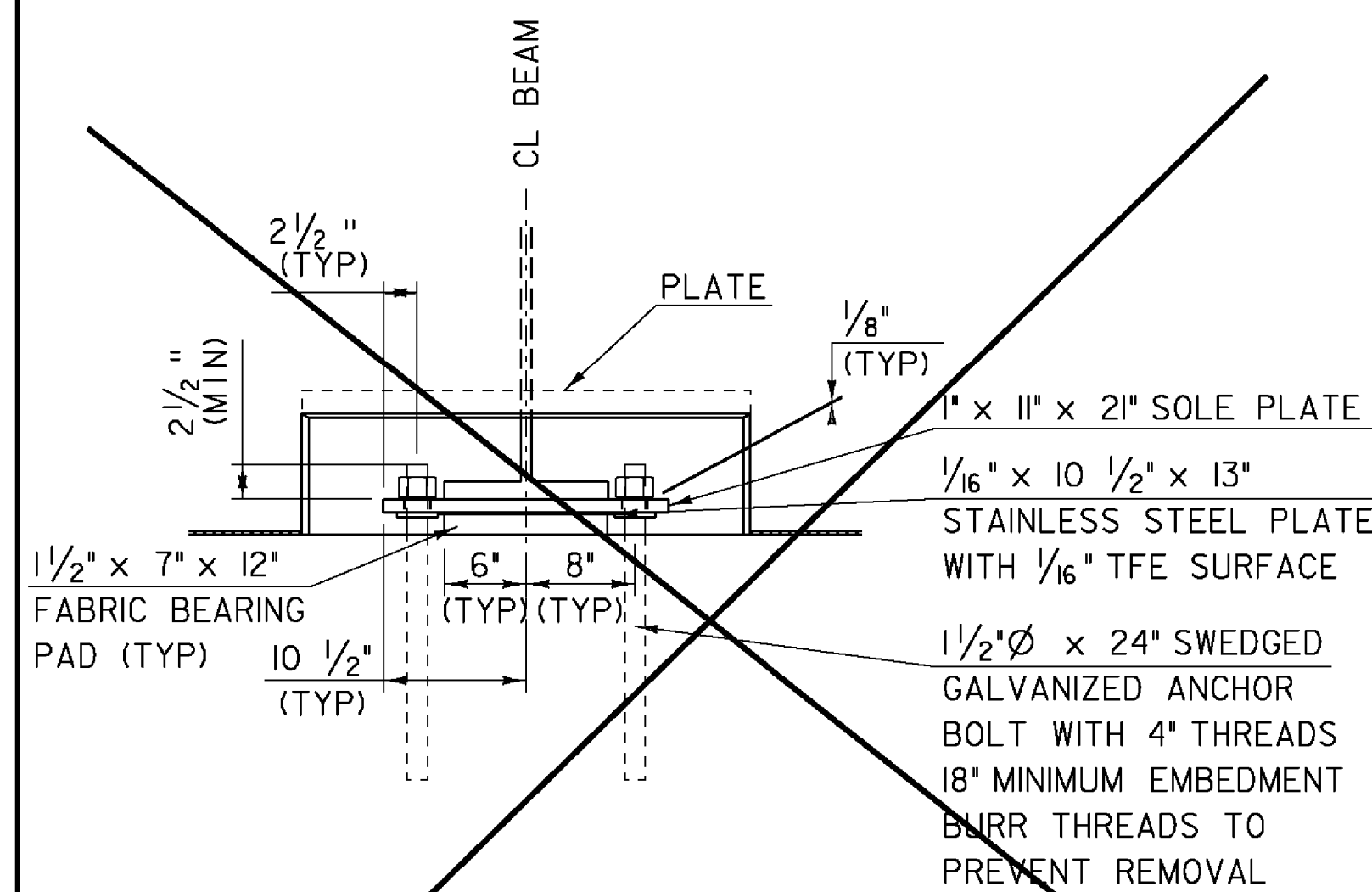
EXPANSION BEARING
GIRDERS 1 THROUGH 7



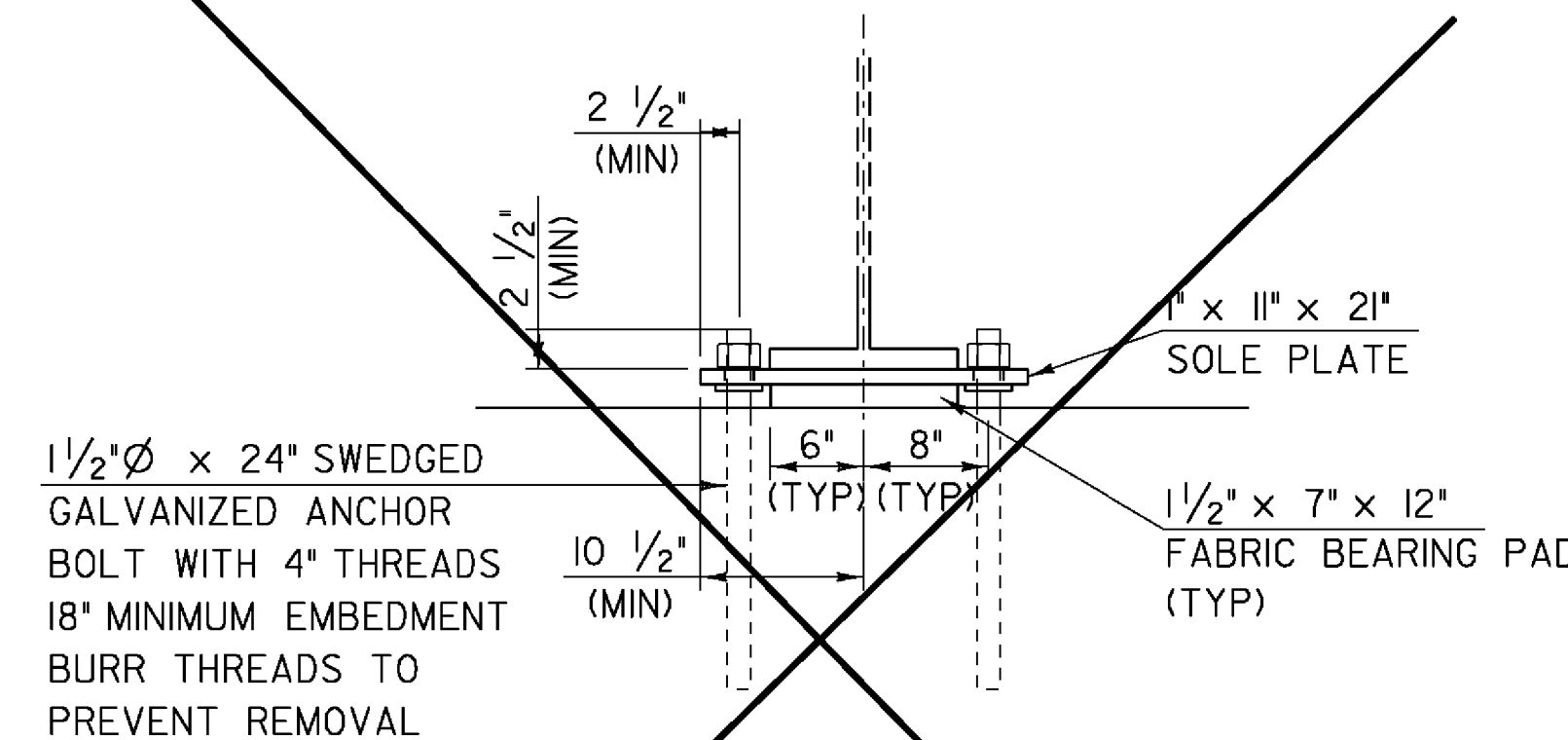
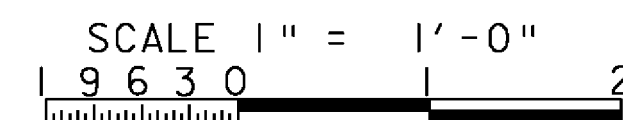
NOTE: SEE SHEET 32 FOR "Y" DIMENSION



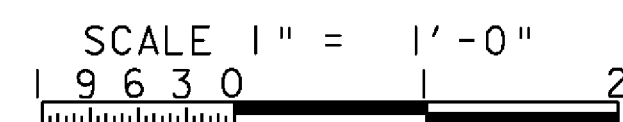
FIXED BEARING
PIER (C/L BRG SPAN 1)
BEAMS 1 THROUGH 7
NTS



EXPANSION BEARING
ABUTMENT 1 BEAMS 1 AND 10
ABUTMENT 2 BEAMS 11 AND 20

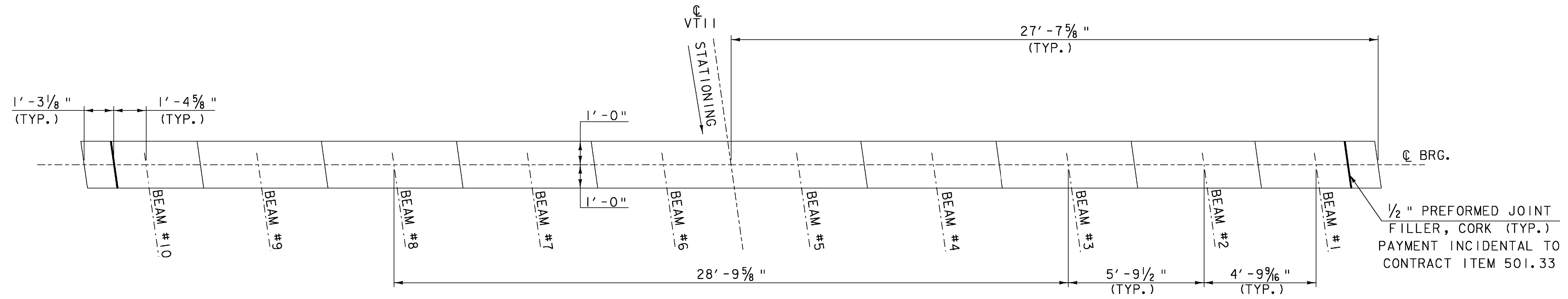


FIXED BEARING
PIER (C/L BRG SPAN 1)
BEAMS 1 AND 10
PIER (C/L BRG SPAN 2)
BEAMS 11 AND 20



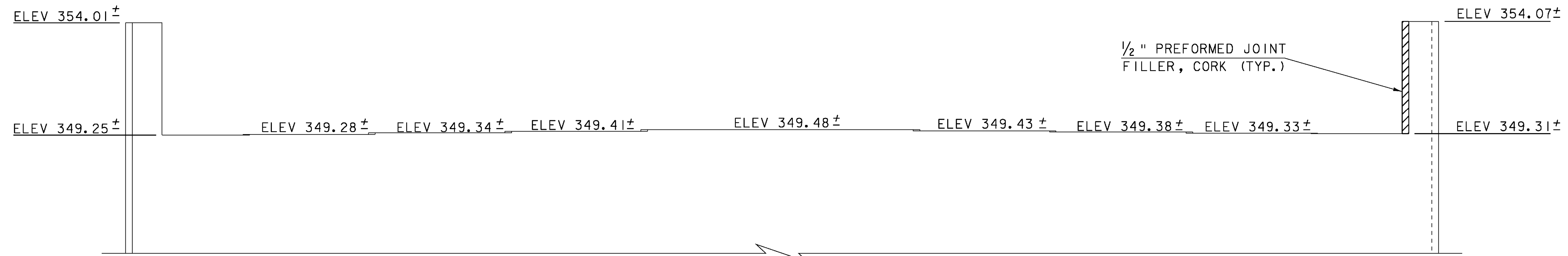
REV.	BY	DATE	DESCRIPTION
3	LBB	5/26/09	REVISED - ELIMINATED DETAILS

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	s06j004sup.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	C. CARLSON
BEARING ELEVATIONS AND NOTES	
PLOT DATE:	29-MAY-2009
DRAWN BY:	C. MOONEY
CHECKED BY:	D. PETERSON
SHEET	34 OF 72



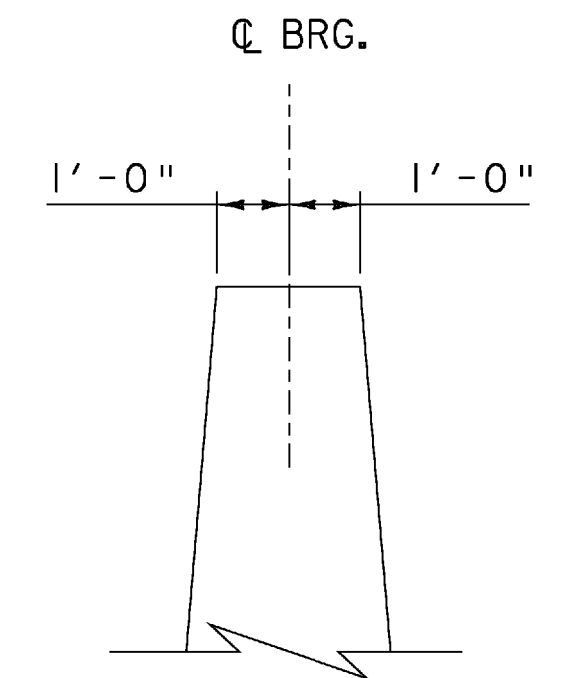
ABUTMENT NO. 1 PLAN

SCALE 3/8" = 1'-0"



ABUTMENT NO. 1 ELEVATION

SCALE 3/8" = 1'-0"

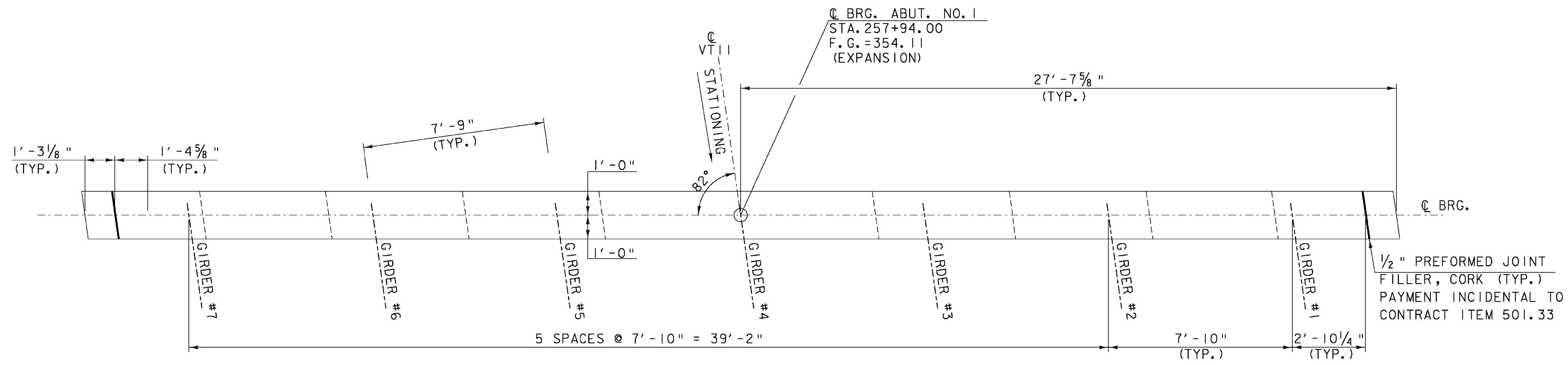


ABUTMENT NO. 1 TYPICAL SECTION

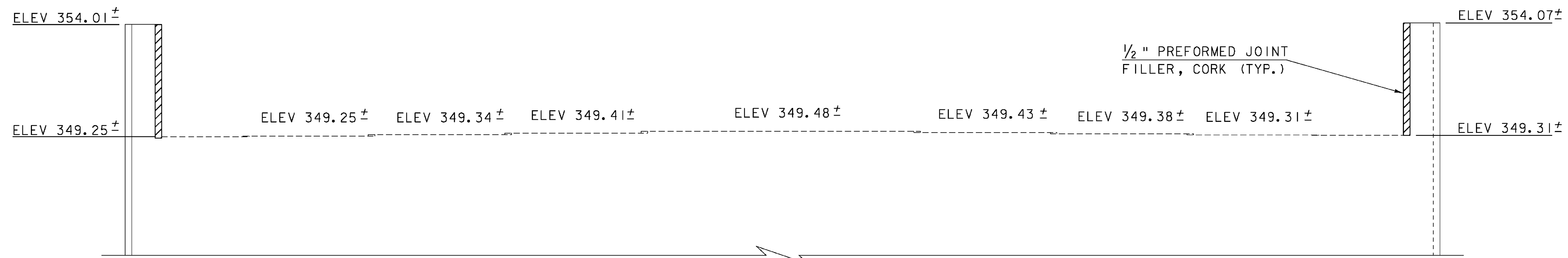
SCALE 3/8" = 1'-0"

VOID
SEE REVISED
SHEET

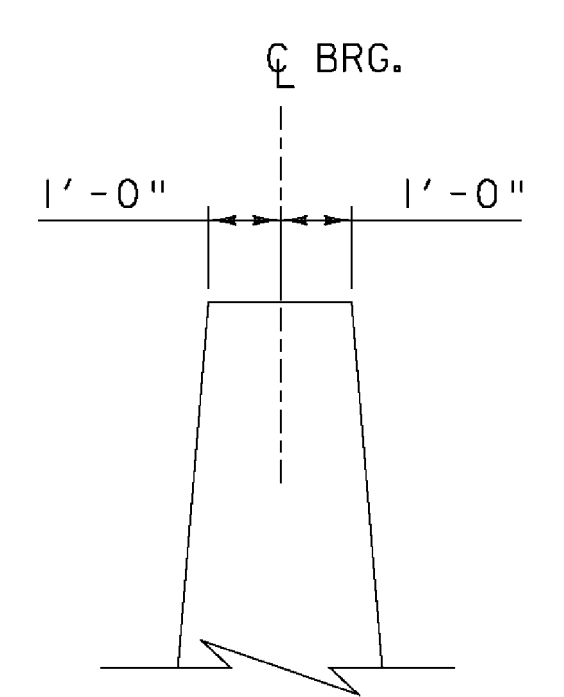
PROJECT NAME:	SPRINGFIELD	FILE NAME:	s06J004sub.dgn	PLOT DATE:	04-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	PROJECT LEADER:	R. WHITCOMB	DRAWN BY:	D. PETERSON
		DESIGNED BY:	D. PETERSON	CHECKED BY:	C. CARLSON
		ABUTMENT NO. 1 DETAILS		SHEET	35 OF 72



ABUTMENT NO. 1 PLAN
SCALE 3/8" = 1'-0"



ABUTMENT NO. 1 ELEVATION
SCALE 3/8" = 1'-0"

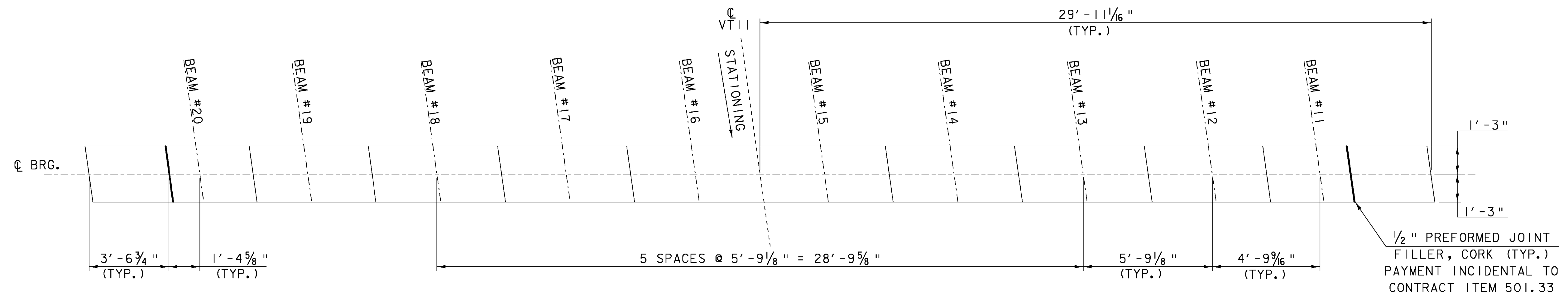


ABUTMENT NO. 1 TYPICAL SECTION
SCALE 3/8" = 1'-0"

EXISTING BRIDGE SEAT ELEVATIONS
POSTED ABOVE BRIDGE SEAT.
PROPOSED BRIDGE SEAT ELEVATION
POSTED BELOW BRIDGE SEAT

REV.	BY	DATE	DESCRIPTION
3	LBB	5/26/09	REVISED GIRDERS

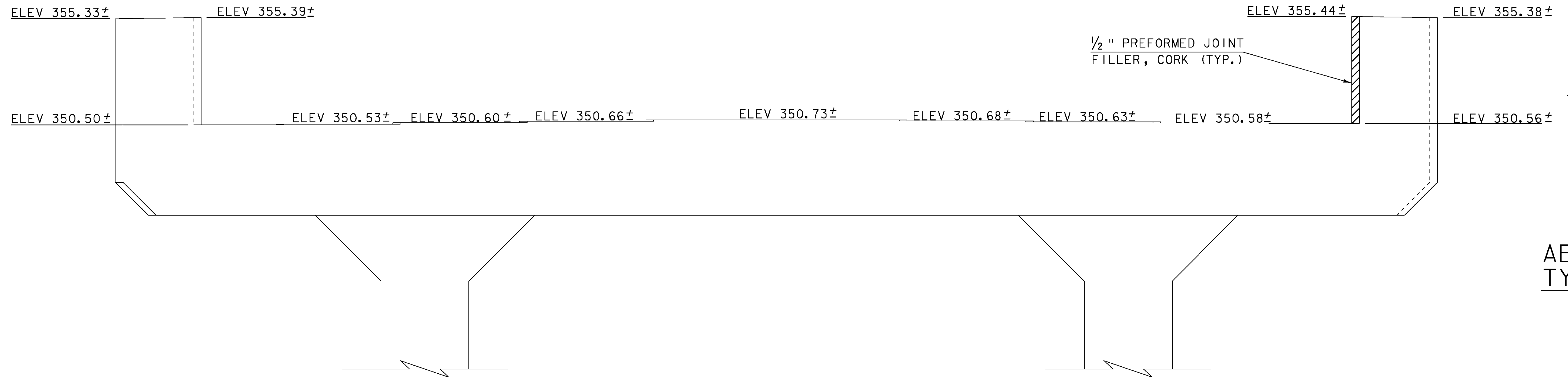
ABUTMENT 1	
PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	s06j004sub.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	D. PETERSON
ABUTMENT NO. 1 DETAILS	
PLOT DATE:	29-MAY-2009
DRAWN BY:	D. PETERSON
CHECKED BY:	C. CARLSON
SHEET	35 OF 72



ABUTMENT NO. 2 PLAN

SCALE 3/8" = 1'-0"

FLOW ←



ABUTMENT NO. 2 TYPICAL SECTION

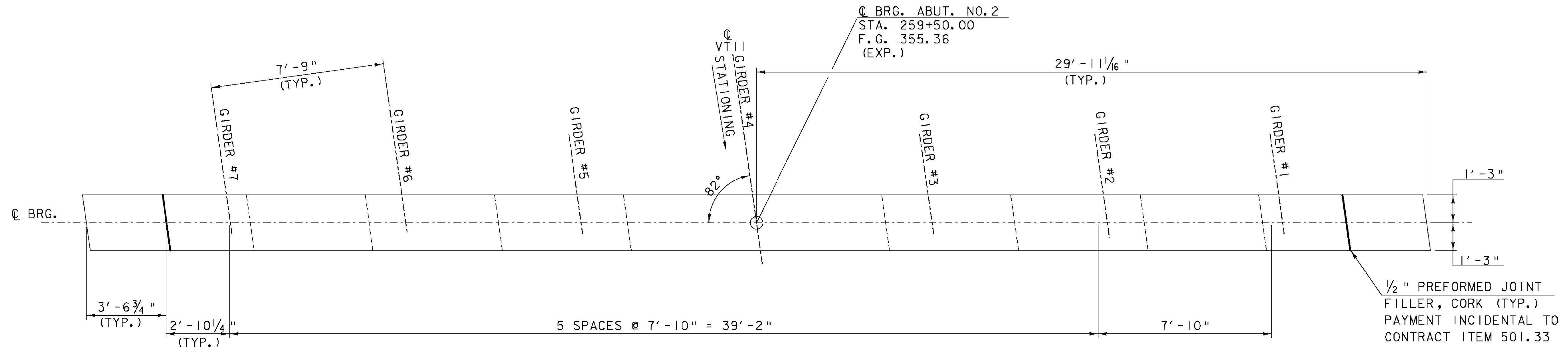
SCALE 3/8" = 1'-0"

ABUTMENT NO. 2 ELEVATION

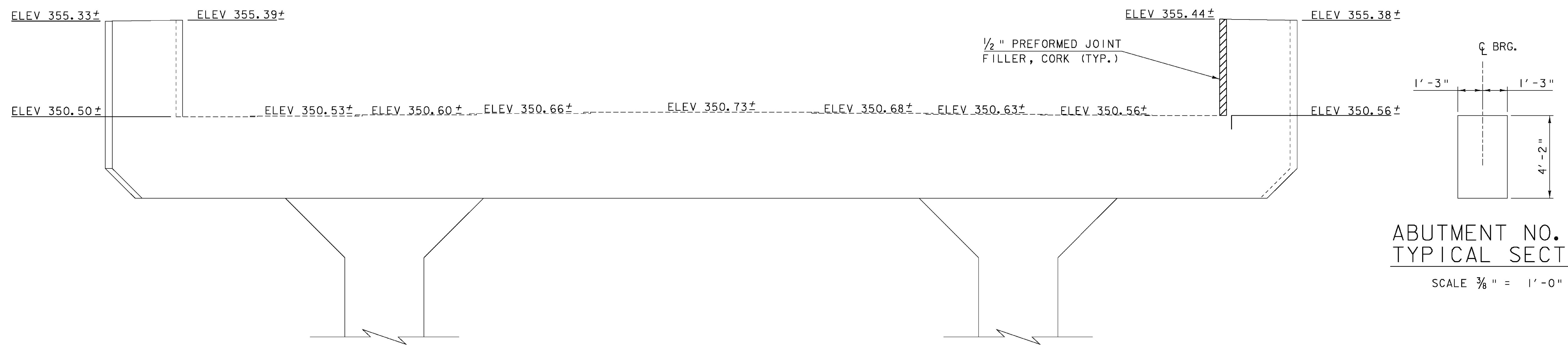
SCALE 3/8" = 1'-0"

VOID
SEE REVISED
SHEET

PROJECT NAME:	SPRINGFIELD	FILE NAME:	06J004/Str/s06J004sub.dgn	PLOT DATE:	04-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	PROJECT LEADER:	R. WHITCOMB	DRAWN BY:	D. PETERSON
		DESIGNED BY:	D. PETERSON	CHECKED BY:	C. CARLSON
		ABUTMENT NO. 2 DETAILS		SHEET	36 OF 72



ABUTMENT NO. 2 PLAN
SCALE 3/8" = 1'-0"



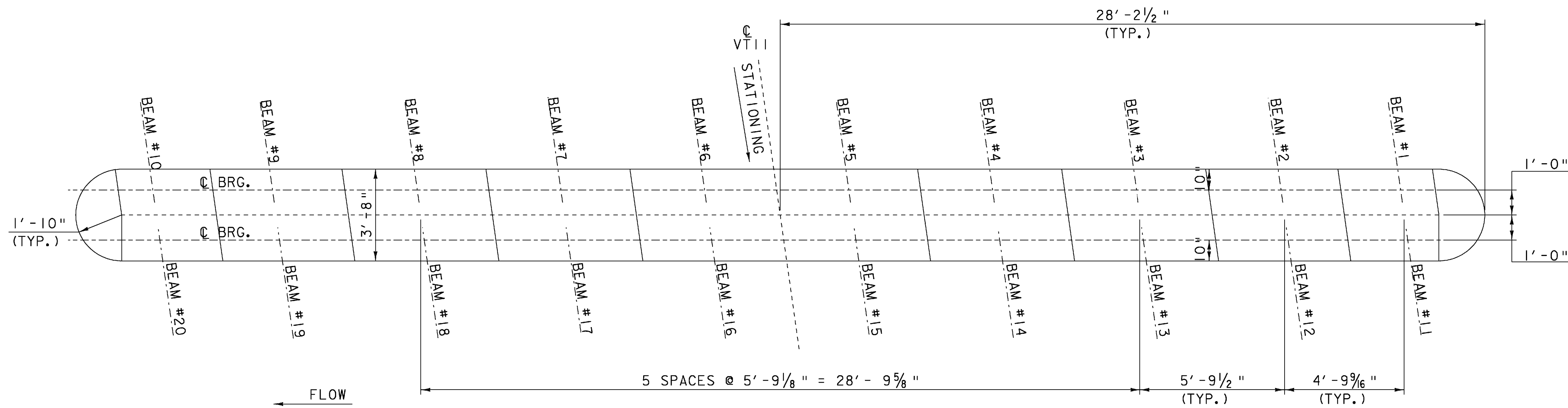
**ABUTMENT NO. 2
TYPICAL SECTION**
SCALE 3/8" = 1'-0"

EXISTING BRIDGE SEAT ELEVATIONS
POSTED ABOVE BRIDGE SEAT.
PROPOSED BRIDGE SEAT ELEVATION
POSTED BELOW BRIDGE SEAT

ABUTMENT NO. 2 ELEVATION
SCALE 3/8" = 1'-0"

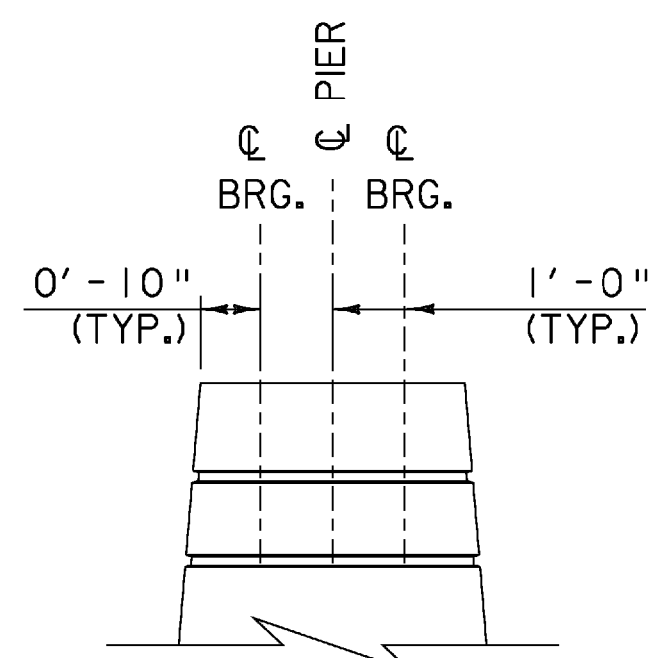
REV.	BY	DATE	DESCRIPTION
3	LBB	5/26/09	REVISED GIRDERS

ABUTMENT 2	
PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	06J004/Str/s06j004sub.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	D. PETERSON
ABUTMENT NO. 2 DETAILS	
PLOT DATE:	29-MAY-2009
DRAWN BY:	D. PETERSON
CHECKED BY:	C. CARLSON
SHEET	36 OF 72



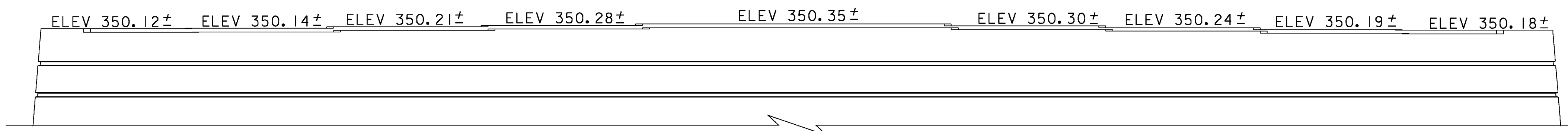
PIER PLAN

SCALE 3/8" = 1'-0"



PIER TYPICAL SECTION

SCALE 3/8" = 1'-0"

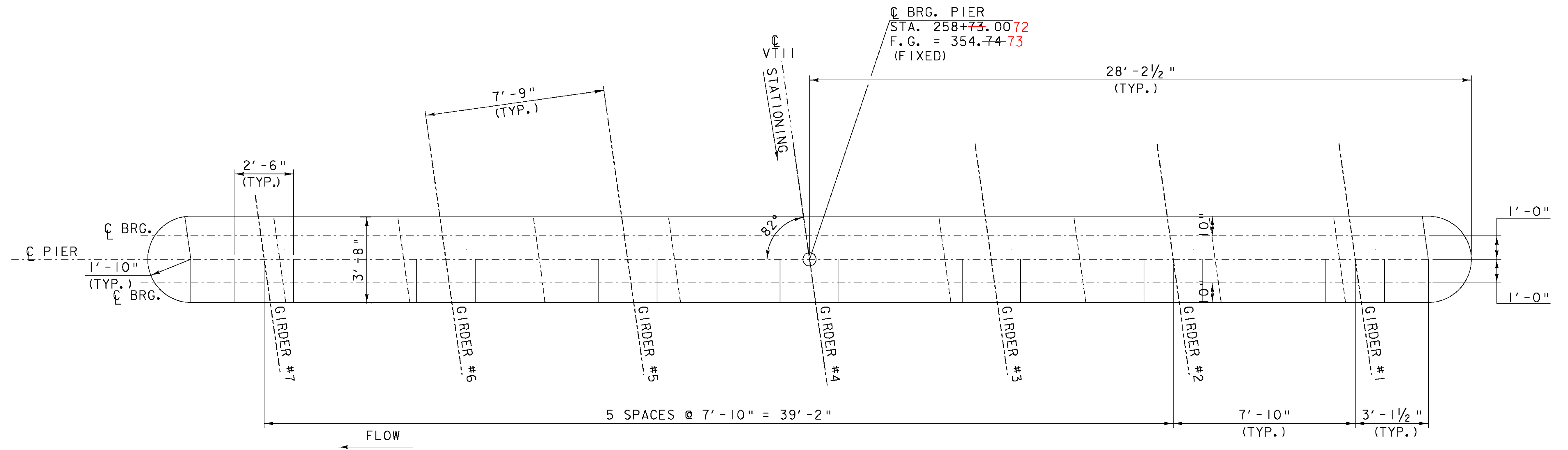


PIER ELEVATION

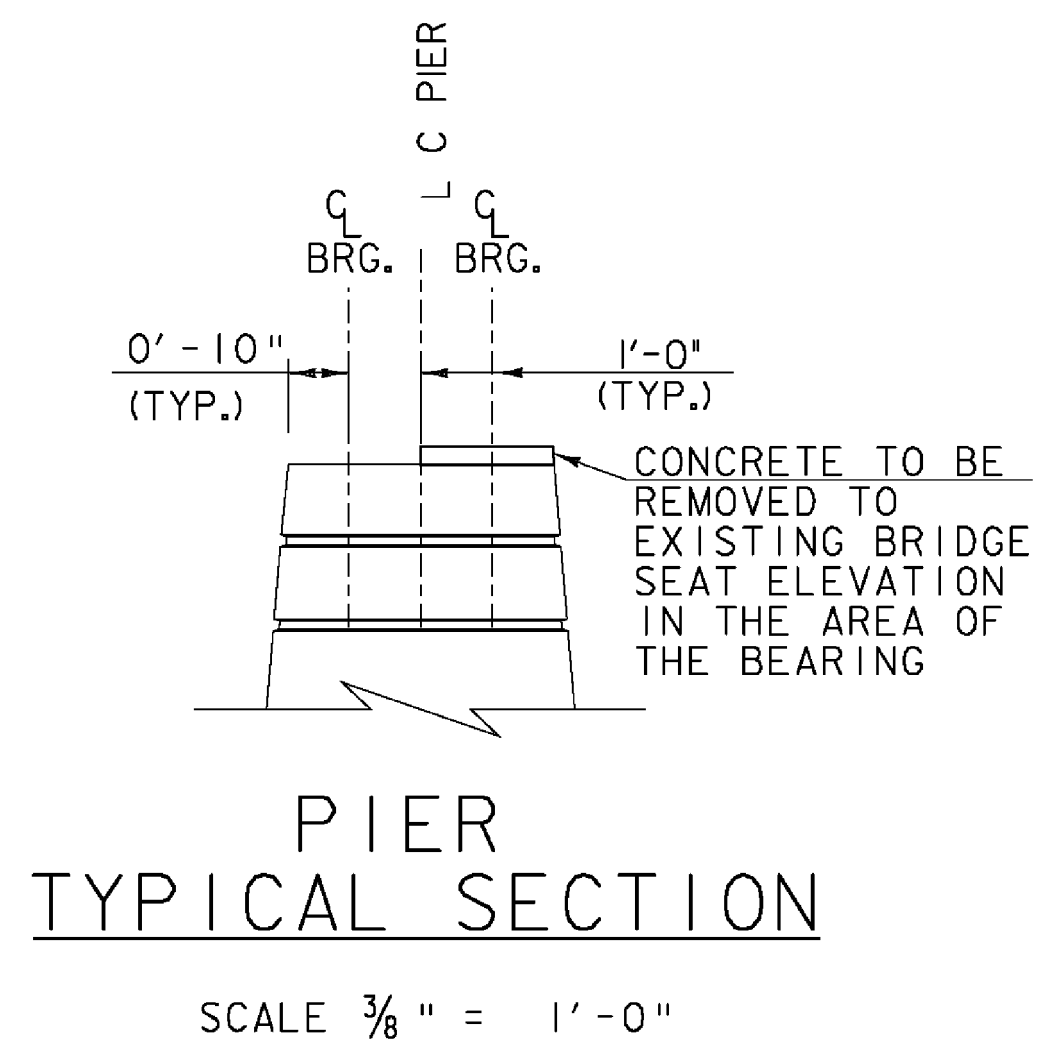
SCALE 3/8" = 1'-0"

VOID
SEE REVISED
SHEET

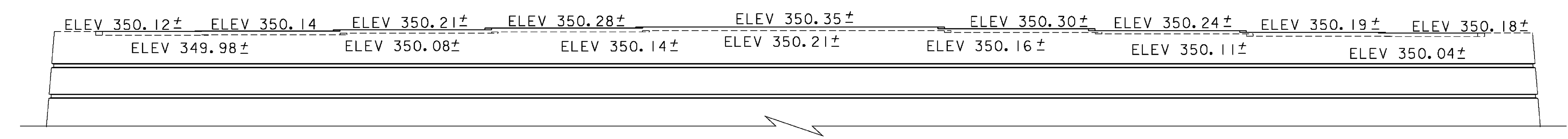
PROJECT NAME:	SPRINGFIELD	FILE NAME:	06J004/Str/s06J004sub.dgn	PLOT DATE:	04-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	PROJECT LEADER:	R. WHITCOMB	DRAWN BY:	D. PETERSON
		DESIGNED BY:	D. PETERSON	CHECKED BY:	C. CARLSON
		PIER DETAILS			SHEET 37 OF 72



PIER PLAN
SCALE 3/8" = 1'-0"



PIER TYPICAL SECTION
SCALE 3/8" = 1'-0"



PIER ELEVATION
SCALE 3/8" = 1'-0"

EXISTING BRIDGE SEAT ELEVATIONS POSTED ABOVE AND BELOW BRIDGE SEATS.

REV.	BY	DATE	DESCRIPTION
3	LBB	5/26/09	REVISED GIRDERS

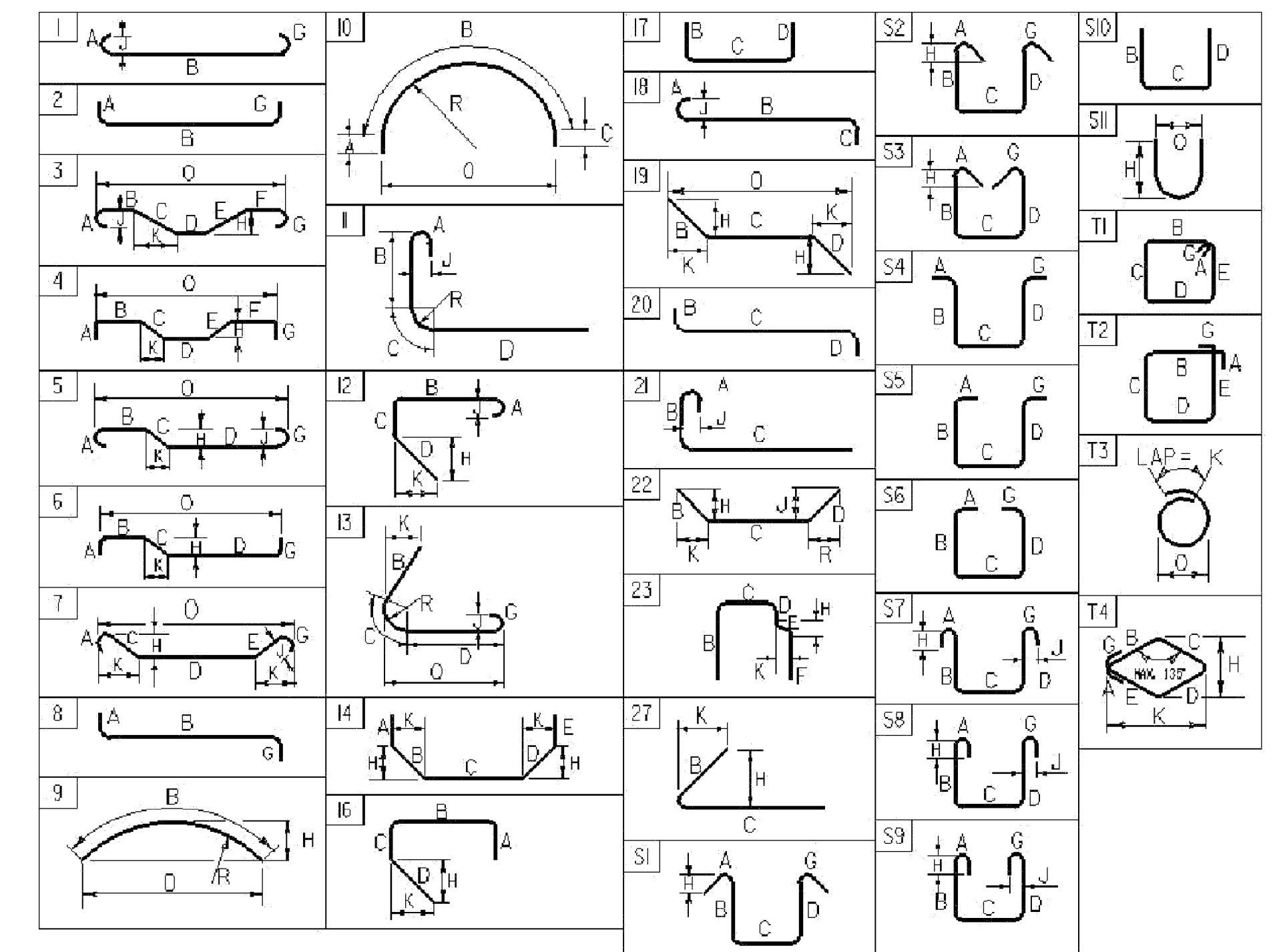
PIER	
PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	06J004/Str/s06j004sub.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	D. PETERSON
PIER DETAILS	
PLOT DATE:	29-MAY-2009
DRAWN BY:	D. PETERSON
CHECKED BY:	C. CARLSON
SHEET	37 OF 72

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O					
DECK																																								
+	591	5	33'- 4"	ES501	STR																																			
* ▲	528	5	28'- 3"	ES502	STR																																			
+ ▲	528	5	25'- 7"	ES503	STR																																			
▲	16	5	28'- 6"	ES507	STR																																			
▲	16	5	26'- 1"	ES508	STR																																			
△	53	6	20'- 0"	ES601	STR																																			
+	37	5	8'- 11"	ES504	S5	0'- 10"	3'- 6"	0'- 6"	3'- 3"																															
	36	5	9'- 2"	ES505	S5	0'- 10"	3'- 6"	0'- 9"	3'- 3"																															
	422	5	9'- 11"	ES506	S5	0'- 10"	1'- 3"	6'- 0"	1'- 0"																															
+ THE COST FOR THE BRIDGE RAILING REINFORCEMENT FOR THE CONCRETE BRIDGE POSTS DETAILED ON SHEET 31 SHALL BE INCLUDED IN THE PAY ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)"																																								
* BRIDGE RAILING																																								
△	42	5	33'- 4"	ER501	STR																																			
	64	5	5'- 5"	ER502	S11																																			
	64	5	5'- 5"	ER503	S11																																			
	336	5	3'- 11"	ER504	S5	---	1'- 4"	0'- 5"	1'- 4"																															
	336	5	2'- 8"	ER505	T1	0'- 3"	0'- 10"	0'- 6"	0'- 10"																															
	8	5	7'- 0"	ER506	S10		3'- 0"	1'- 0"	3'- 0"																															
	8	5	5'- 0"	ER507	S10		3'- 0"	2'- 0"	---																															
	8	5	3'- 2"	ER508	S10		2'- 8"	0'- 6"	---																															
	28	5	4'- 6"	ER509	T1	0'- 3"	1'- 0"	1'- 0"	1'- 0"	1'- 0"																														
	8	5	3'- 10"	ER510	T1	0'- 3"	0'- 8"	1'- 0"	0'- 8"	1'- 0"																														
	8	5	3'- 10"	ER511	S10		2'- 1"	0'- 8"	---																															

~ NOTES ~

- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- ▲ DENOTES BARS TO BE CUT IN FIELD.
- * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS			
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION	
		DIAMETER INCHES	PERIMETER INCHES
#3	0.376	0.375	1.178
#4	0.668	0.500	1.571
#5	1.043	0.625	1.963
#6	1.502	0.750	2.356
#7	2.044	0.875	2.749
#8	2.670	1.000	3.142
#9	3.400	1.128	3.544
#10	4.303	1.270	3.990
#11	5.313	1.410	4.430
#14	7.65	1.693	5.32
#18	13.60	2.257	7.09

VOID
SEE REVISED
SHEET

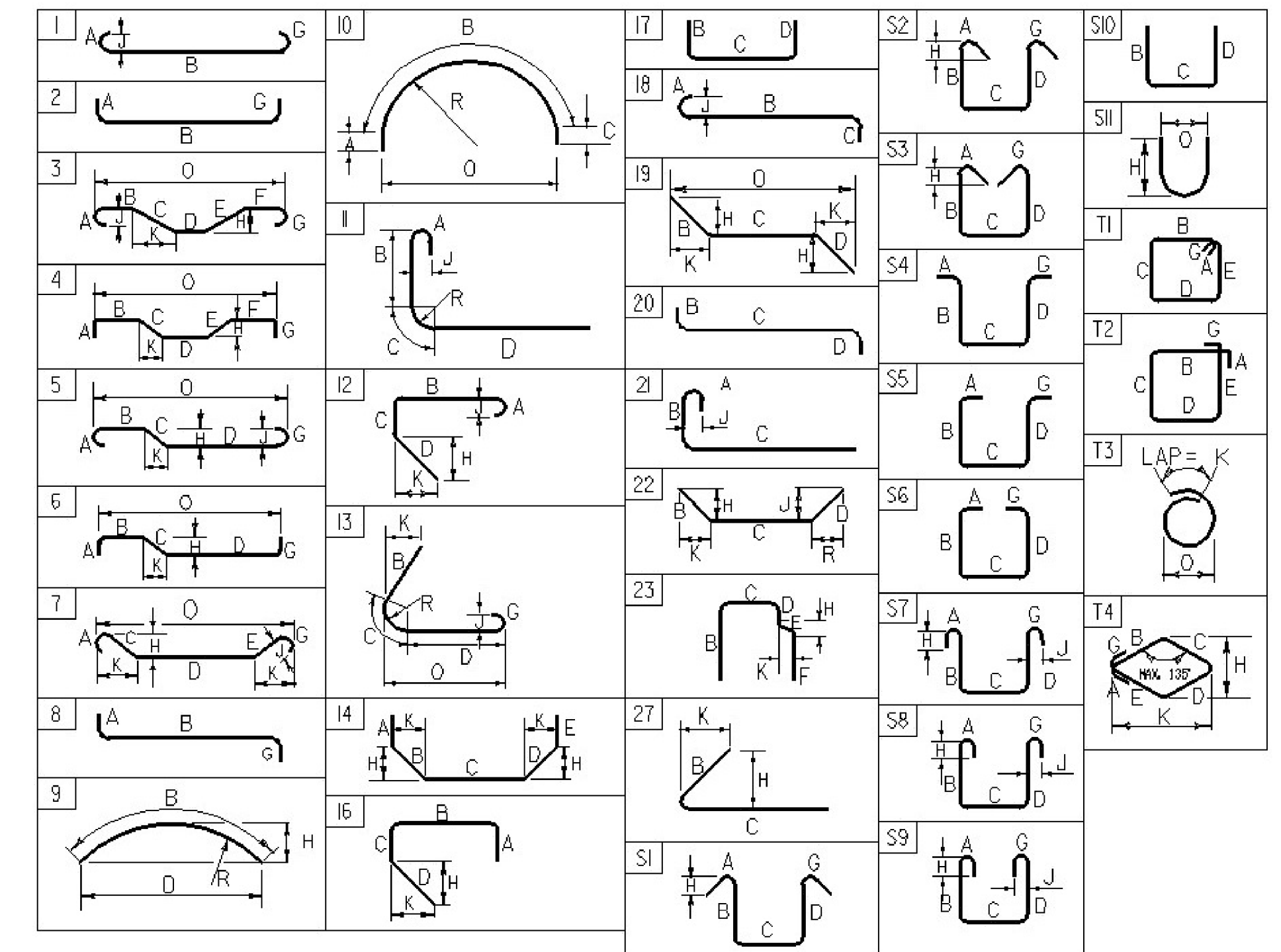
PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	s06j004rss.dgn
PROJECT MANAGER:	R. WHITCOMB
DESIGNED BY:	D. PETERSON
REINFORCING STEEL SCHEDULE	
PLOT DATE:	3/4/2009
DRAWN BY:	C. MOONEY
CHECKED BY:	D. PETERSON
SHEET	38 OF 72

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O	ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O			
DECK																																						
*	591	5	33'-4"	ES501	STR																																	
*	▲	528	5	29'-3" 28'-3"	ES502	STR																																
*	▲	528	5	24'-7" 25'-7"	ES503	STR																																
	▲	16	5	28'-6"	ES507	STR																																
	▲	16	5	26'-1"	ES508	STR																																
△	53	6	40'-0"	ES601	STR																																	
*	37	5	8'-11"	ES504	S5	0'-10"	3'-6"	0'-6"	3'-3"			0'-10"																										
	36	5	9'-2"	ES505	S5	0'-10"	3'-6"	0'-9"	3'-3"			0'-10"																										
	422	5	9'-11"	ES506	S5	0'-10"	1'-3"	6'-0"	1'-0"			0'-10"																										
* THE COST FOR THE BRIDGE RAILING REINFORCEMENT FOR THE CONCRETE BRIDGE POSTS DETAILED ON SHEET 31 SHALL BE INCLUDED IN THE PAY ITEM 900.640 "SPECIAL PROVISION (BRIDGE RAILING REPAIR, PIPE AND SPINDLE)"																																						
* BRIDGE RAILING																																						
△	42	5	33'-4"	ER501	STR																																	
	64	5	5'-5"	ER502	S11								2'-7"																									
	64	5	5'-5"	ER503	S11								2'-7"																									
	336	5	3'-11"	ER504	S5	---	1'-4"	0'-5"	1'-4"			0'-10"																										
	336	5	2'-8"	ER505	T1	0'-3"	0'-10"	0'-6"	0'-10"			0'-3"																										
	8	5	7'-0"	ER506	S10		3'-0"	1'-0"	3'-0"																													
	8	5	5'-0"	ER507	S10		3'-0"	2'-0"	---																													
	8	5	3'-2"	ER508	S10		2'-8"	0'-6"	---																													
	28	5	4'-6"	ER509	T1	0'-3"	1'-0"	1'-0"	1'-0"	1'-0"		0'-3"																										
	8	5	3'-10"	ER510	T1	0'-3"	0'-8"	1'-0"	0'-8"	1'-0"		0'-3"																										
	8	5	3'-10"	ER511	S10		2'-1"	0'-8"	---																													

~ NOTES ~

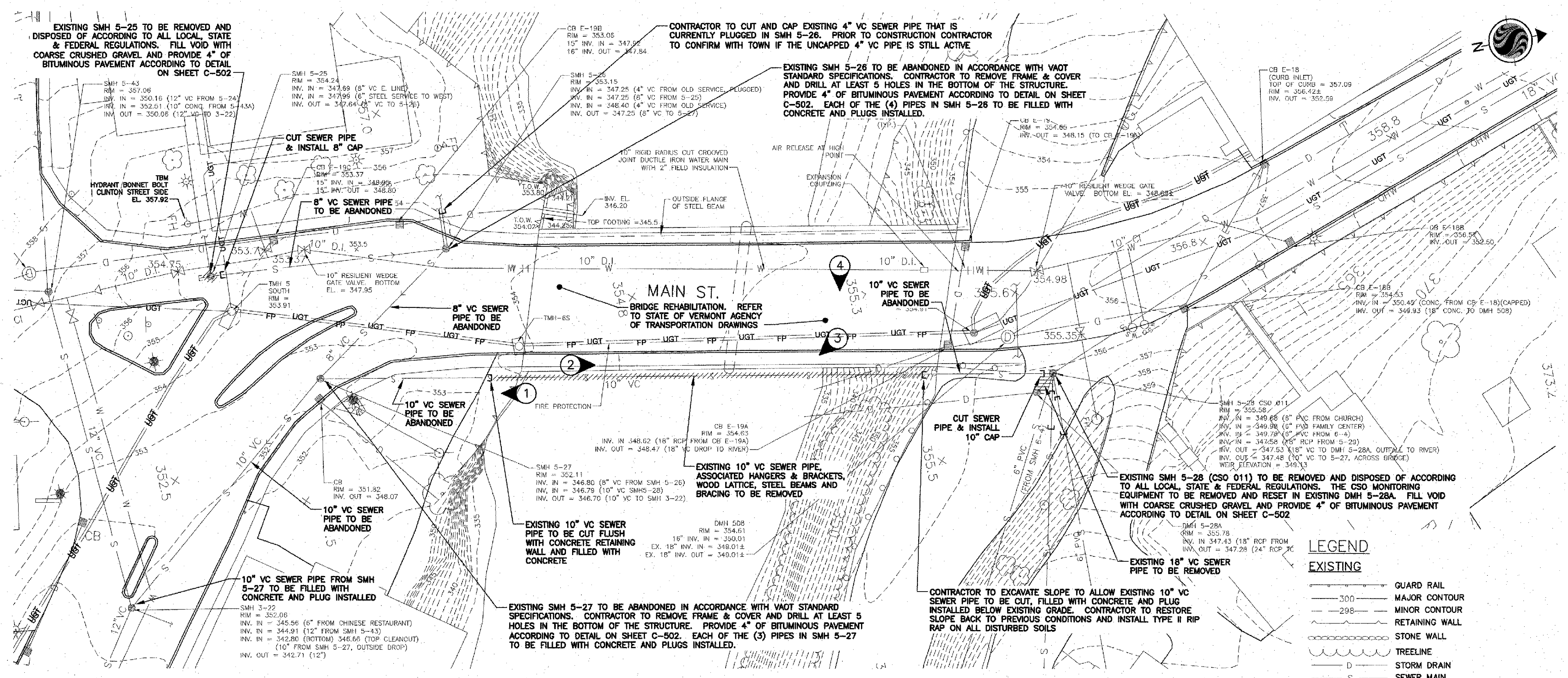
- UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
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ASTM STANDARD REINFORCING BARS				
BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

REV.	BY	DATE	DESCRIPTION
3	DRP	5/26/09	REVISED BAR LENGTH

PROJECT NAME: **SPRINGFIELD**
 PROJECT NUMBER: **BHF 016-2(14)**
 FILE NAME: s06j004rss.dgn PLOT DATE: 5/28/2009
 PROJECT MANAGER: R. WHITCOMB DRAWN BY: C. MOONEY
 DESIGNED BY: D. PETERSON CHECKED BY: D. PETERSON
REINFORCING STEEL SCHEDULE SHEET 38 OF 72



EXISTING CONDITIONS & DEMOLITION PLAN
NOT TO SCALE

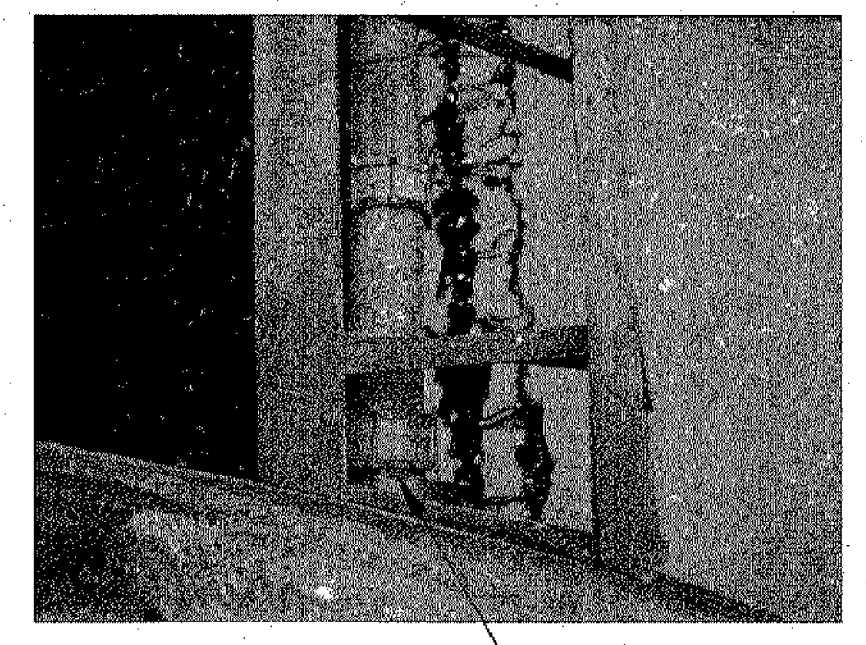


PHOTO 1
NOT TO SCALE

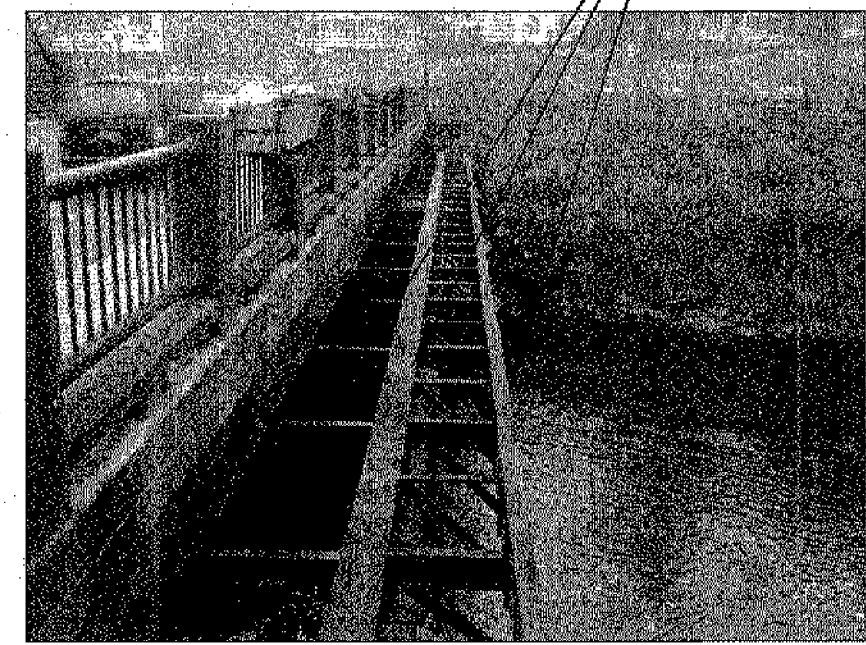


PHOTO 2
NOT TO SCALE

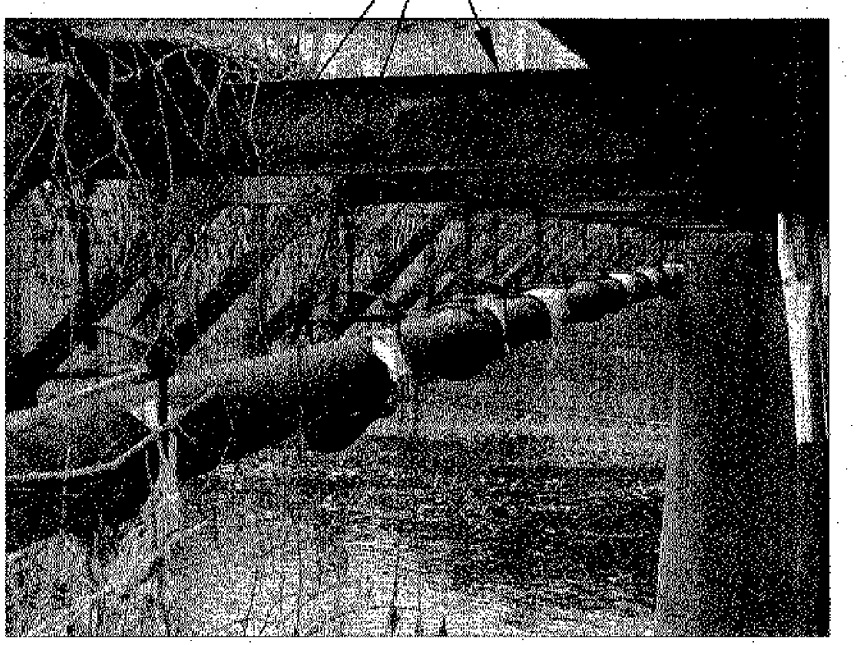


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NOT TO SCALE

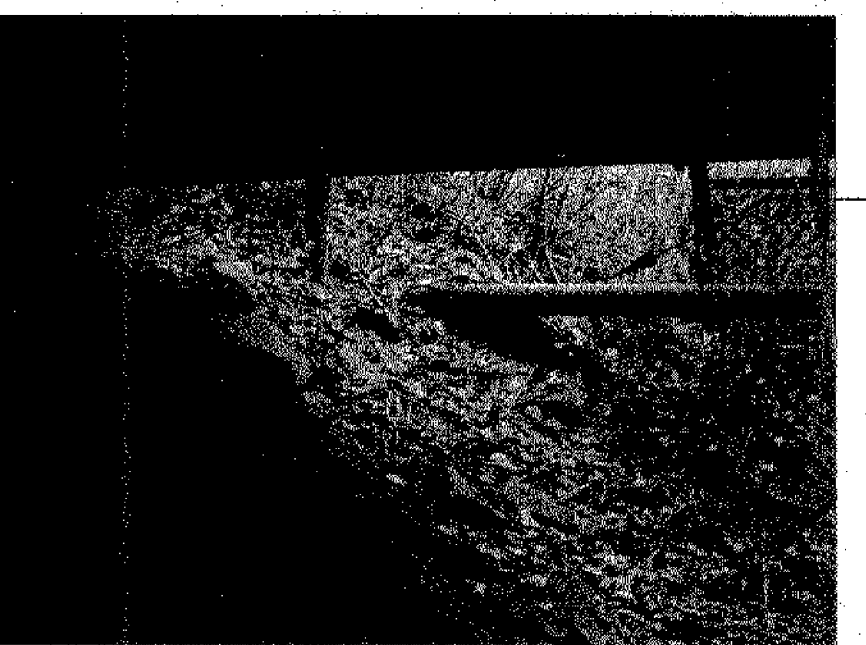


PHOTO 4
NOT TO SCALE

- LEGEND**
- EXISTING**
- 300 — GUARD RAIL
 - 298 — MAJOR CONTOUR
 - 298 — MINOR CONTOUR
 - — RETAINING WALL
 - — STONE WALL
 - — TREELINE
 - D — STORM DRAIN
 - S — SEWER MAIN
 - W — WATER MAIN
 - FP — UNDERGROUND FIRE PROTECTION LINE
 - OHW — OVERHEAD WIRES
 - UGT — UNDERGROUND TELEPHONE
 - CB — CATCH BASIN
 - ✳ — CONIFEROUS TREE
 - ⊙ — DECIDUOUS TREE
 - ⊙ DMH — DRAINAGE MANHOLE
 - ⊙ EMH — ELECTRIC MANHOLE
 - ⊙ — END CAP
 - ⊙ — FIRE HYDRANT
 - ⊙ — GATE VALVE
 - ⊙ — GUY POLE
 - ⊙ — GUY WIRE
 - ⊙ — IRON PIN
 - ⊙ — LIGHT POLE
 - ⊙ SMH — SANITARY SEWER MANHOLE
 - ⊙ — SINGLE POLE SIGN
 - ⊙ — SPOT ELEVATION
 - ⊙ — TRAVERSE POINT/STATION MARK
 - ⊙ — UTILITY POLE
 - ⊙ — WATER SHUT OFF VALVE
- DEMOLITION**
- ① — PHOTO TARGET INDICATING NUMBER AND DIRECTION OF PHOTO
 - ⊓ — CAP
 - ⊓ — HATCH INDICATING ITEMS TO BE REMOVED



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Consultants

Legend

Notes

THE TOPOGRAPHIC SURVEY WAS PREPARED BY AERIAL PHOTOGRAPHY PERFORMED BY AERODATA DIGITAL MAPPING, OSSISPEE, NH. THE CONTROL SURVEY WAS PERFORMED BY COLEMAN SURVEYS, SPRINGFIELD, VERMONT.

Revision	By	Appd.	YY.MM.DD	
1	FINAL DESIGN TO VAOT - BRIDGE SECTION	B.V.D.	C.C.K.	09.02.19
Issued		By	Appd.	YY.MM.DD
File Name: 003850-101.dwg	B.V.D.	C.C.K.	B.V.D.	09.02.09
Permit-Seal	Dem.	Chkd.	Deqn.	YY.MM.DD

PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2(14)
HIGHWAY NO.: VT 8
BRIDGE NO.: 64
OVER: BLACK RIVER
SHEET 39 OF 72

Client/Project
TOWN OF SPRINGFIELD
COMMUNITY CENTER BRIDGE
UTILITY CROSSING
Springfield, Vermont

Title
EXISTING UTILITY & DEMOLITION PLAN

Project No.	Scale	
210800385	1" = 20'	
Drawing No.	Sheet	Revision
C-101	U1 of U5	0

FINAL DESIGN
FEBRUARY 19, 2009

Stantec Consulting Services Inc.
54 Route 106
North Springfield VT U.S.A.
05150
Tel. 802.886.2261
Fax. 802.886.2260
www.stantec.com

Stantec

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Consultants

Legend

Notes

- REFER TO SHEET C-501 FOR GENERAL CONSTRUCTION / SEQUENCING NOTES
- REFER TO STATE OF VERMONT AGENCY OF TRANSPORTATION DRAWINGS FOR SITE RELATED LAYOUT INFORMATION AND DETAILS.
- REFER TO STATE OF VERMONT AGENCY OF TRANSPORTATION DRAWINGS FOR ADDITIONAL EROSION CONTROL MEASURES AND DETAILS.
- THE CONTRACTOR IS TO CONTACT DIG SAFE IN VERMONT AT (888) DIG-SAFE, A MINIMUM OF 72 HOURS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL OVERHEAD AND UNDERGROUND ELECTRIC, FIRE PROTECTION AND TELEPHONE LINES AND TAKE NECESSARY PRECAUTIONS IN STRICT ACCORDANCE WITH OSHA STANDARDS DURING CONSTRUCTION.
- ALL NEW PIPE AND SEWER MANHOLE STRUCTURES INSTALLED ARE REQUIRED TO PASS ALL REQUIRED TESTING PROCEDURES.
- STANTEC TO REVIEW AND APPROVE ALL SHOP DRAWINGS ASSOCIATED WITH SEWER MANHOLE STRUCTURES, SEWER PIPE AND ALL MATERIALS APPURTENANT FOR THE BRIDGE CROSSING.

Revision	By	Appd.	Y1.MM.DD

1 FINAL DESIGN TO VACT - BRIDGE SECTION	B.V.D.	G.C.K.	B.V.D.	08.02.19
Issued	By	Appd.	Y1.MM.DD	

File Name: 00385C-102.dwg	B.V.D.	G.C.K.	B.V.D.	08.02.09
	Dwn.	Chd.	Deqn.	Y1.MM.DD

Permit-Seal

PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2(14)
 HIGHWAY NO.: VT # 64
 BRIDGE NO.: 64
 OVER: BLACK RIVER
 SHEET 40 OF 72

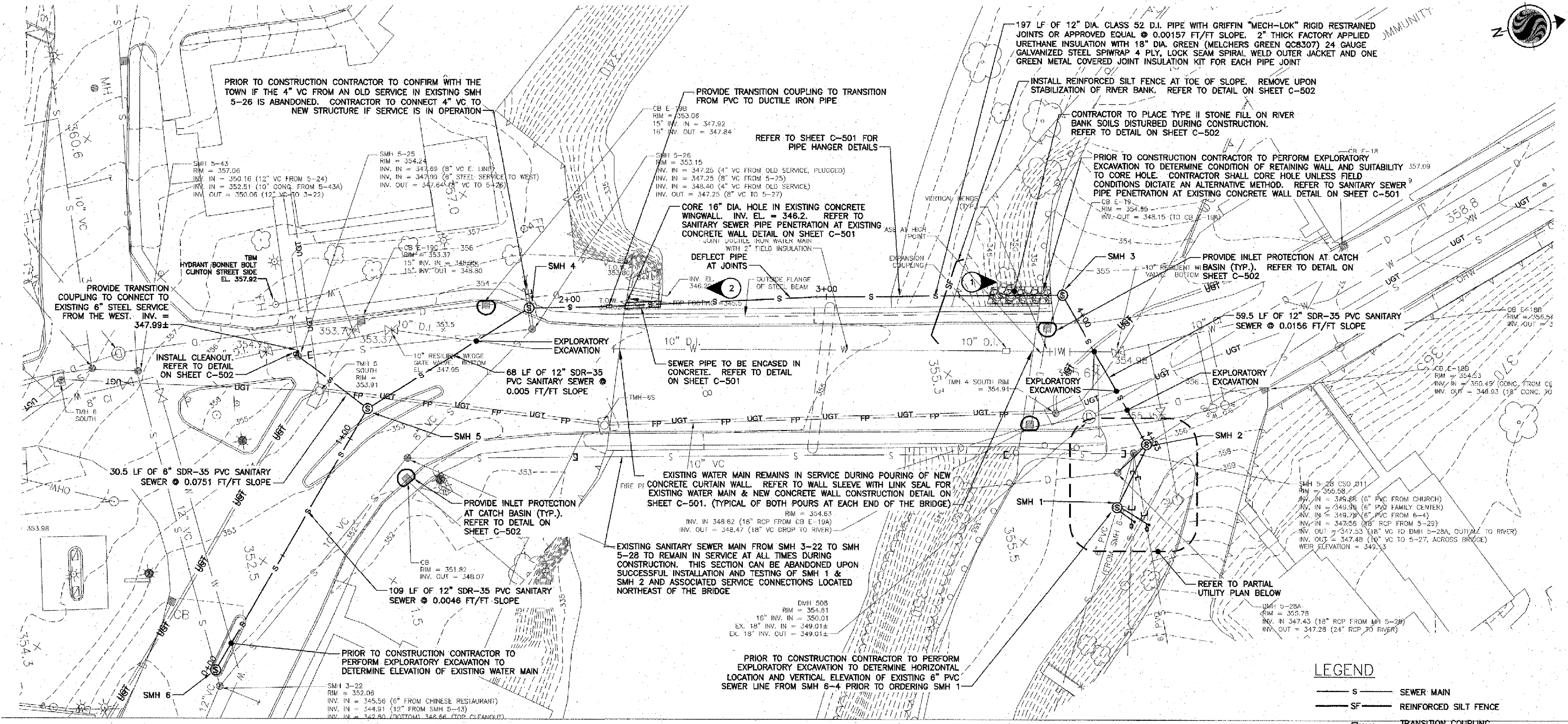
Client/Project
TOWN OF SPRINGFIELD

**COMMUNITY CENTER BRIDGE
 UTILITY CROSSING**
 Springfield, Vermont

Title
SITE UTILITY PLAN

Project No. 210800395 Scale AS SHOWN

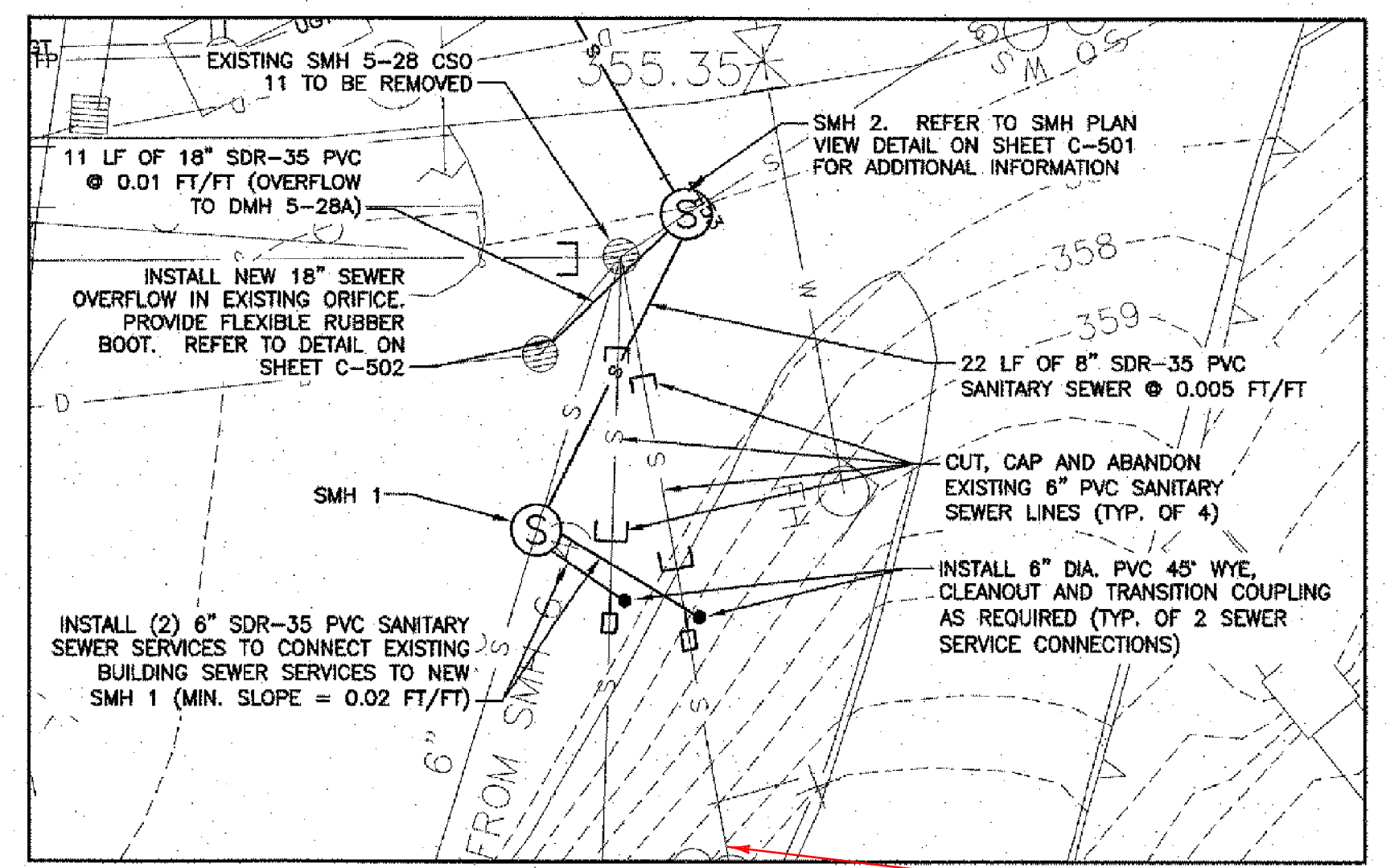
Drawing No. C-102 Sheet U2 of U5 Revision 0



PROPOSED UTILITY PLAN
 NOT TO SCALE

LEGEND

- S SEWER MAIN
- SF REINFORCED SILT FENCE
- TRANSITION COUPLING
- CLEANOUT
- ⊕ INLET PROTECTION AT CB
- ⊙ SANITARY SEWER MANHOLE CAP
- ⊙ TYPE II STONE FILL
- ① PHOTO TARGET INDICATING NUMBER AND DIRECTION OF PHOTO



PARTIAL UTILITY PLAN
 NOT TO SCALE

THIS LINE FROM CHURCH & PARSONAGE RUN DIRECTLY TO SMH2

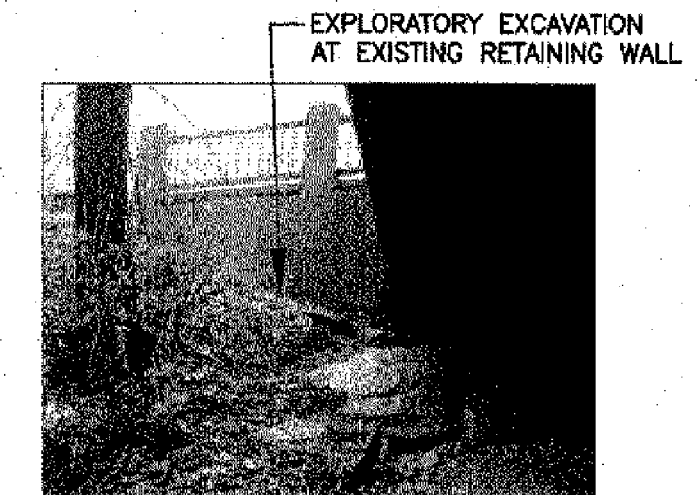


PHOTO 1
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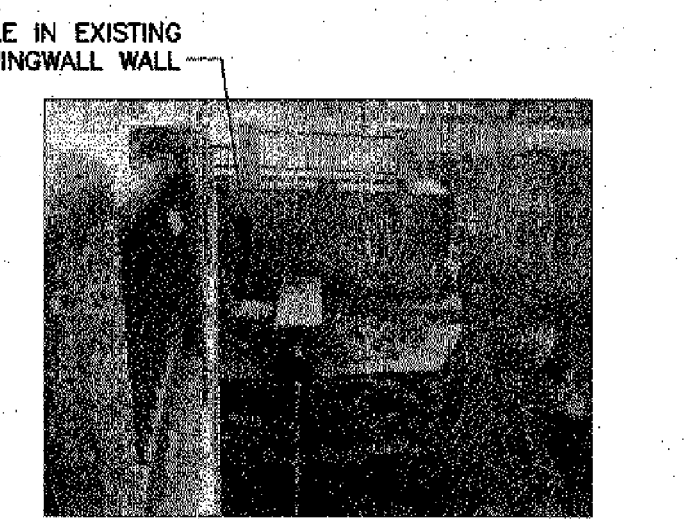
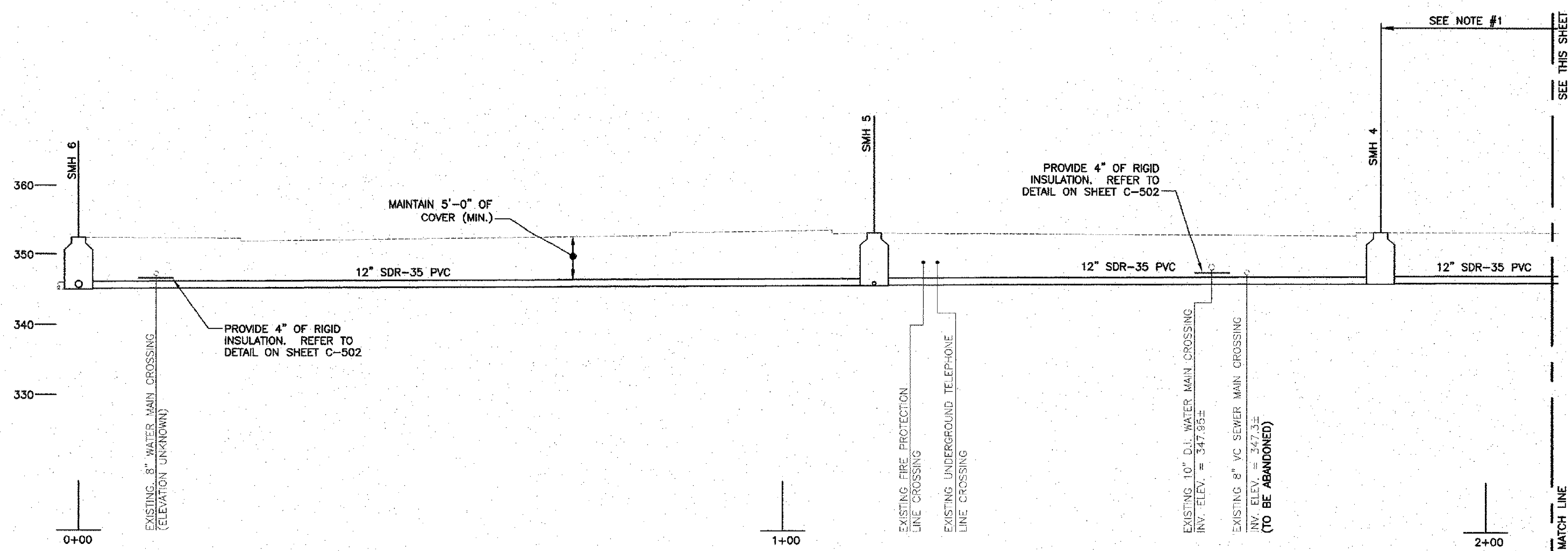


PHOTO 2
 NOT TO SCALE

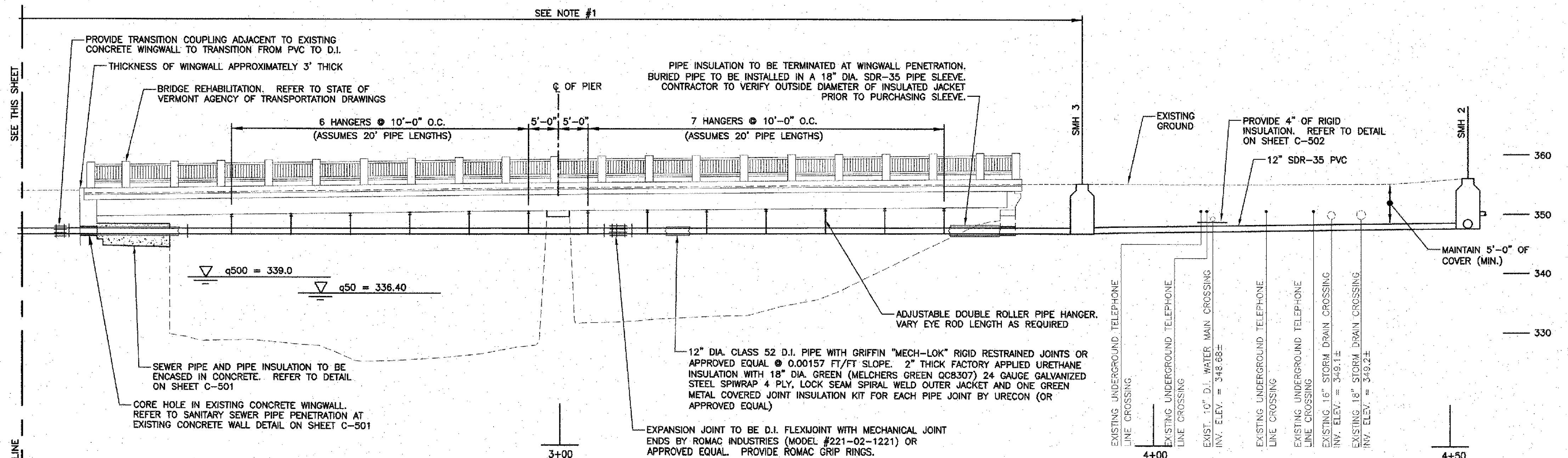
SEWER MANHOLE STRUCTURE TABLE

SMH 1 RIM = 356.7 INV. IN = TO BE DETERMINED (6" FROM EXISTING SMH 6-4) INV. IN = 350.0 (6" PVC SERVICE FROM NE) INV. IN = 350.0 (6" PVC SERVICE FROM NE) INV. OUT = 349.9
SMH 2 (5" DIA.) RIM = 356.0 INV. IN = 347.58 (FROM EXISTING SMH 5-29) INV. IN = 349.78 (FROM SMH 1) INV. OUT = 347.48 (TO SMH 3) INV. OUT = 347.53 (OUTFALL TO EXISTING DMH 5-28A) WEIR ELEV. = 349.13
SMH 3 RIM = 354.85 INV. IN = 348.55 INV. OUT = 346.45
SMH 4 RIM = 354.0 INV. IN = 348.4 (4" VC FROM OLD SERVICE) INV. IN = 346.14 (FROM SMH 3) INV. OUT = 346.04
SMH 5 RIM = 352.8 INV. IN = 345.7 (FROM SMH 4) INV. IN = 345.7 (FROM NEW CLEANOUT) INV. OUT = 345.6 (TO SMH 6)
SMH 6 RIM = 352.6 INV. IN = 345.2 (FROM EXISTING SMH 5-43) INV. IN = 345.1 (FROM SMH 5) INV. OUT = 345.0 (TO EXISTING SMH 3-22)

FINAL DESIGN
 FEBRUARY 19, 2009

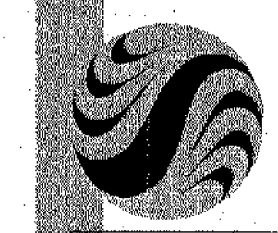


SANITARY SEWER AND BRIDGE PROFILE
NOT TO SCALE



SANITARY SEWER AND BRIDGE PROFILE
NOT TO SCALE

FINAL DESIGN
FEBRUARY 19, 2009



Stantec Consulting Services Inc.
54 Route 106
North Springfield VT U.S.A.
05150
Tel. 802.886.2261
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www.stantec.com

Stantec

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Consultants

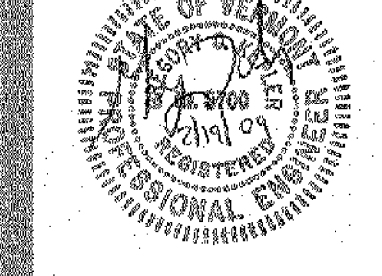
Legend

Notes

1. ALL SEWER LINE WORK IN THIS AREA TO BE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (SEWER MAIN ON BRIDGE) FROM SMH 3 TO SMH 4.

Revision	By	Appd.	YY.MM.DD	
1	FINAL DESIGN TO VAOT - BRIDGE SECTION	B.V.D.	G.C.K.	09.02.19
Issued		By	Appd.	YY.MM.DD
File Name: 003850-103_profile.dwg	B.V.D.	G.C.K.	B.V.D.	09.02.09
	Dwn.	Chkd.	Dgn.	YY.MM.DD

Permit-Seal



PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2114
HIGHWAY NO.: VT 5
BRIDGE NO.: 54
OVER: BLACK RIVER
SHEET 41 OF 72

Client/Project

TOWN OF SPRINGFIELD

COMMUNITY CENTER BRIDGE
UTILITY CROSSING
Springfield, Vermont

Title

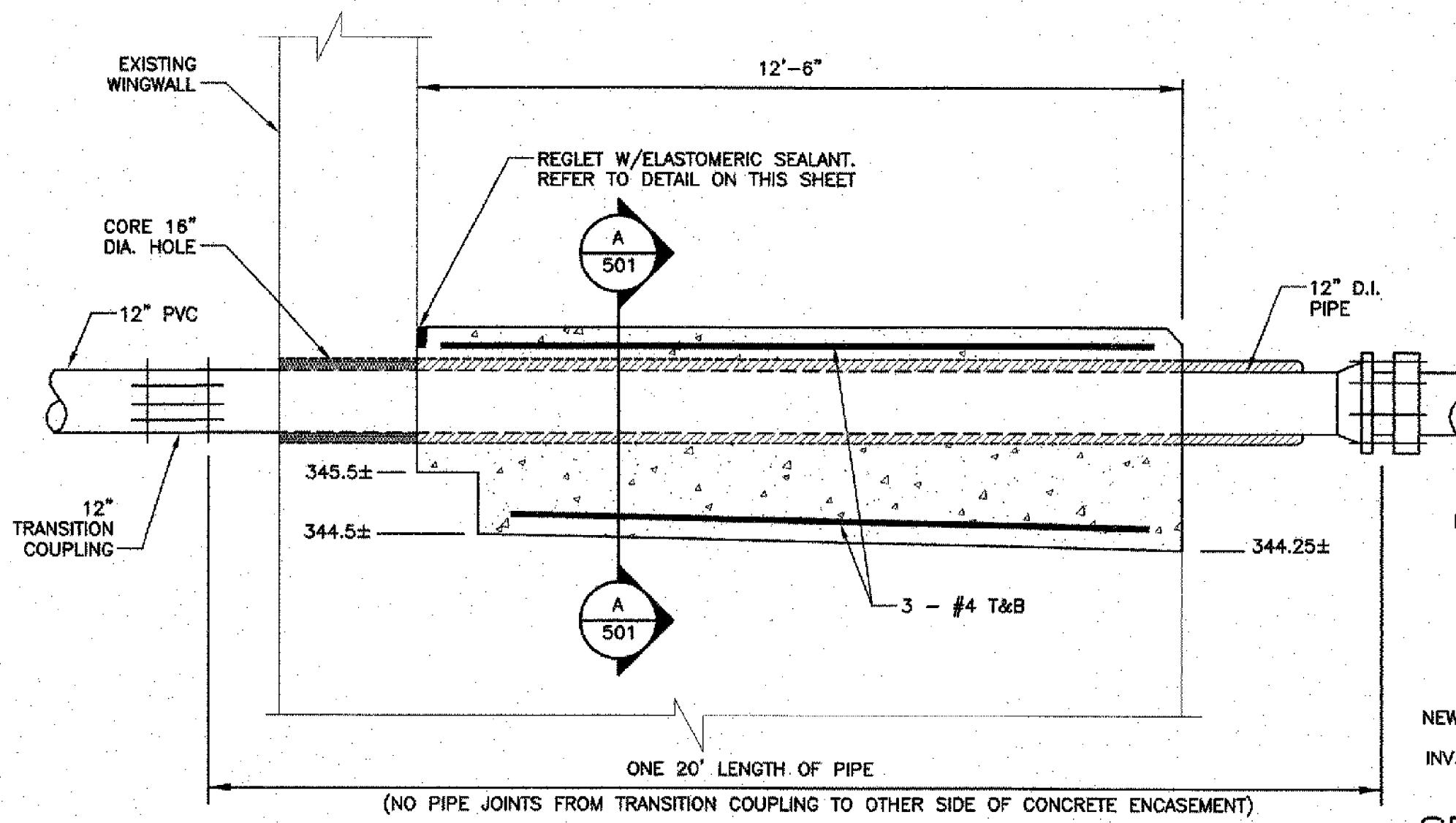
SANITARY SEWER AND BRIDGE
PROFILE

Project No.	Scale	
210800385	AS SHOWN	
Drawing No.	Sheet	Revision

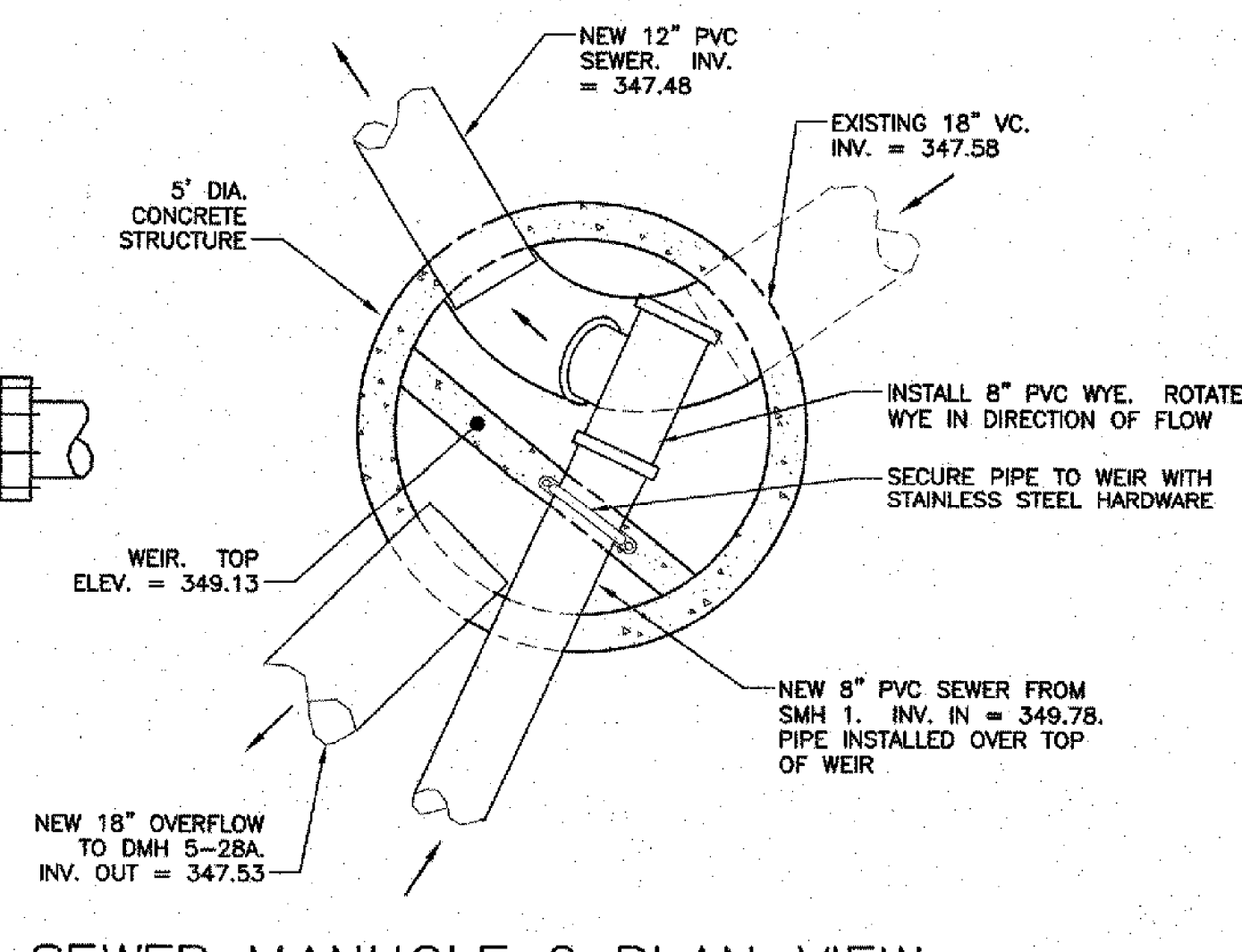
C-103 U3 of U5 0

GENERAL CONSTRUCTION SEQUENCE

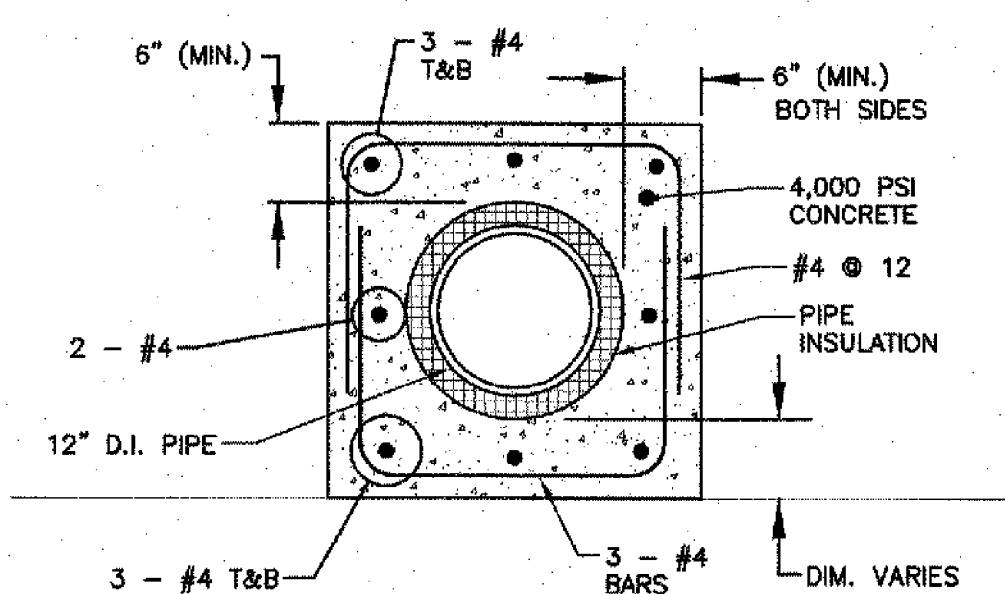
- CORE HOLE IN EXISTING CONCRETE RETAINING WALL @ STA. 2+20.
- PERFORM EXPLORATORY EXCAVATION AT EXISTING RETAINING WALL @ STA. 3+85 AND CORE HOLE IN RETAINING WALL (IF NECESSARY).
- INSTALL SMH 6 AND TIE INTO EXISTING 12" VC SEWER MAIN.
- CONSTRUCT 12" SEWER PIPE FROM SMH 6 TO SMH 5.
- INSTALL SMH 5 AND TEST SEWER PIPE AND SMH 5.
- CONSTRUCT 6" SEWER PIPE FROM SMH 5 TOWARDS EXISTING SMH 5-25.
- REMOVE EXISTING SMH 5-25 AND PROVIDE TEMPORARY BYPASS PUMPING FROM EXISTING SMH 5-25 TO EXISTING SMH 5-26.
- TEST 6" SEWER PIPE.
- CONNECT 6" SEWER PIPE TO EXISTING 6" STEEL SANITARY SEWER SERVICE WITH A TRANSITION COUPLING, WYE FITTING AND CLEANOUT.
- EXISTING 8" VC SEWER MAIN BETWEEN EXISTING SMH 5-25 AND SMH 5-26 TO BE ABANDONED IN-PLACE.
- CONTRACTOR TO CONFIRM WITH TOWN IF ANY OF THE TWO 4" VC SERVICES ENTERING EXISTING SMH 5-26 ARE ACTIVE. CONTRACTOR TO MAKE PROVISIONS TO CONNECT THE APPROPRIATE SERVICES TO SMH 4 OR CUT AND CAP ANY SERVICES THAT HAVE BEEN ABANDONED PRIOR TO ORDERING/INSTALLING SMH 4.
- CONSTRUCT 12" SEWER PIPE FROM SMH 5 TO SMH 4.
- INSTALL SMH 4 AND TEST SEWER PIPE AND SMH 5.
- CONSTRUCT 12" SEWER PIPE (BRIDGE CROSSING) FROM SMH 4 TO SMH 3.
- INSTALL SMH 3 AND TEST SEWER PIPE AND SMH 3.
- CONSTRUCT AND TEST 12" SEWER PIPE FROM SMH 3 TO SMH 2.
- CONSTRUCT SMH 2 AND PROVIDE TEMPORARY BYPASS PUMPING TO EXISTING SMH 5-28. CONSTRUCT 8" STUB FOR CONNECTION OF NEW SEWER PIPE FROM SMH 1 AND 18" STUB FOR OVERFLOW TO DMH 5-28A.
- UPON CONSTRUCTION OF SMH 2, TEMPORARY BYPASS PUMPING WILL BE REMOVED AND FLOWS FROM EXISTING SMH 5-29 WILL BE DIRECTED INTO THE NEWLY CONSTRUCTED SEWER SYSTEM. FLOWS FROM THE CHURCH, FAMILY CENTER AND THE COLLECTION LINE FROM THE EAST WILL CONTINUE TO FLOW THROUGH THE EXISTING SEWER MAIN.
- INSTALL SMH 1 AND TIE INTO EXISTING 6" PVC FROM 6-4, PROVIDE TEMPORARY BYPASS PUMPING FROM SMH 1 TO EXISTING SMH 5-28.
- CONSTRUCT AND TEST NEW 8" SEWER MAIN FROM SMH 2 TO SMH 1. CONNECT TO PREVIOUSLY CONSTRUCTED STUB @ SMH 1. REMOVE TEMPORARY BYPASS PUMPING.
- CONNECT BOTH 6" PVC SANITARY SEWER SERVICES FROM THE CHURCH AND FAMILY CENTER TO SMH 1.
- REMOVE EXISTING SMH 5-28 AND INSTALL NEW 18" PVC OVERFLOW PIPE FROM SMH 2 TO EXISTING DMH 5-28A. REMOVE AND RE-INSTALL OVERFLOW MONITORING EQUIPMENT FROM EXISTING SMH 5-28 TO EXISTING DMH 5-28A.



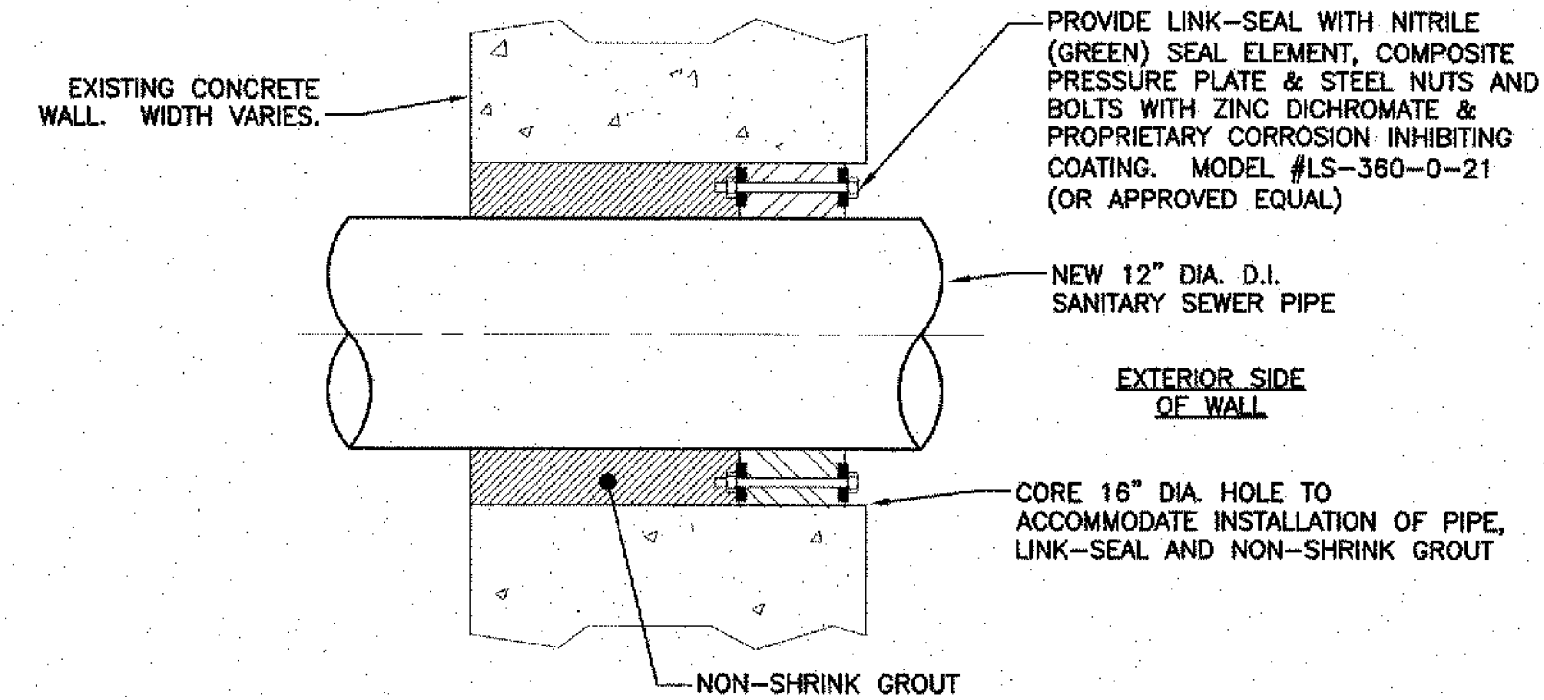
CONCRETE ENCASEMENT SECTION
NOT TO SCALE



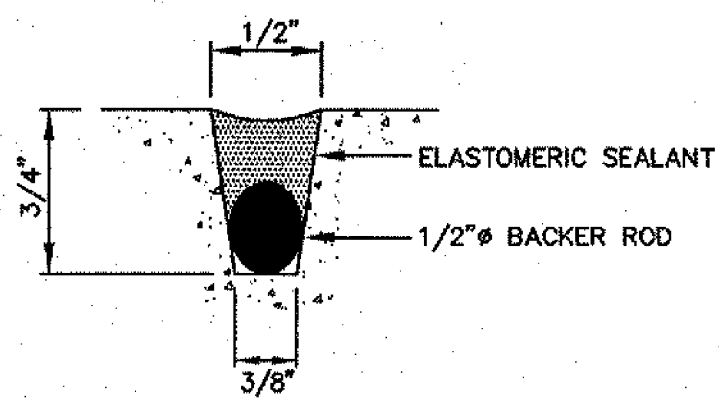
SEWER MANHOLE 2 PLAN VIEW
NOT TO SCALE



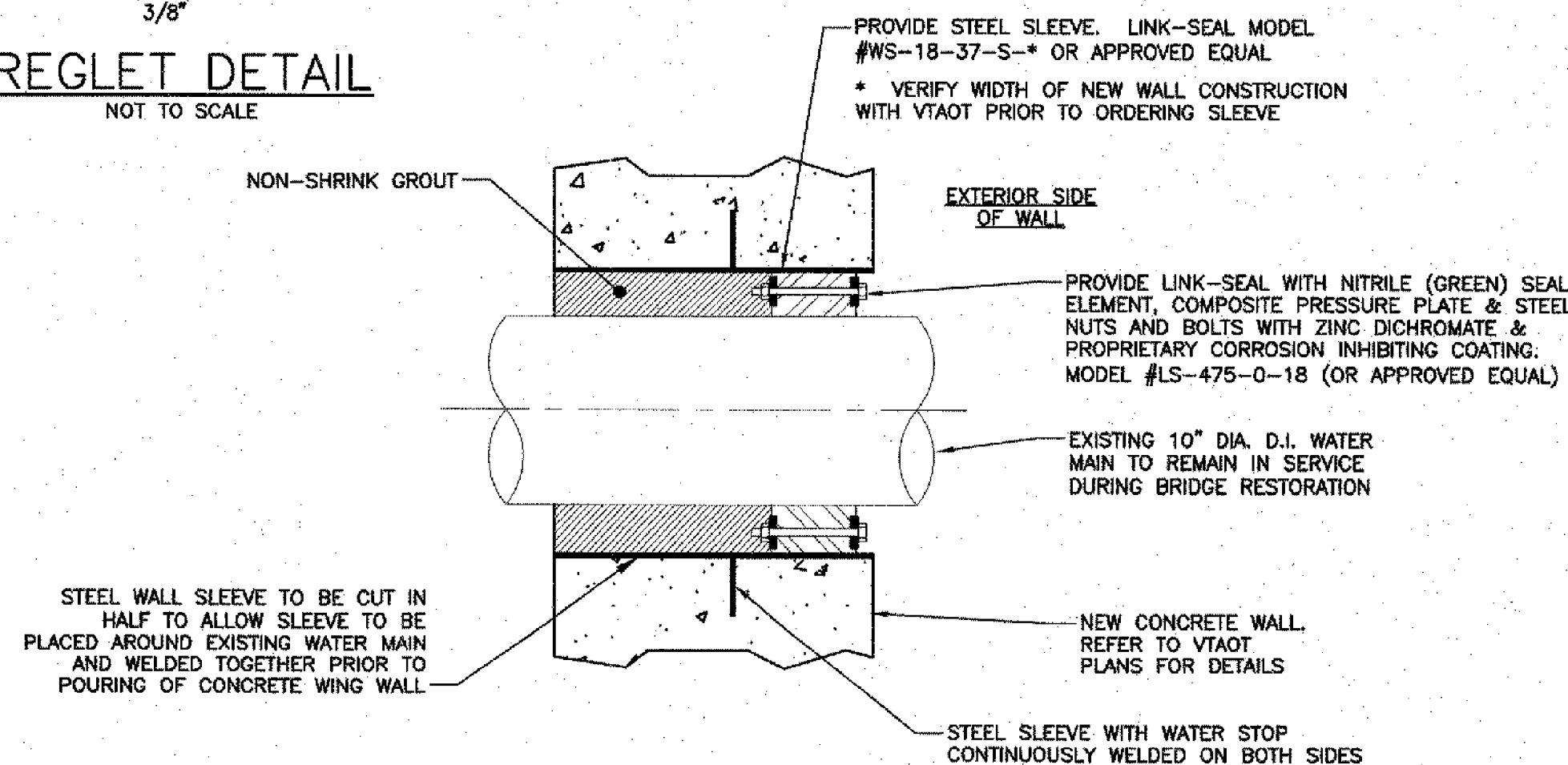
SECTION A-A
NOT TO SCALE



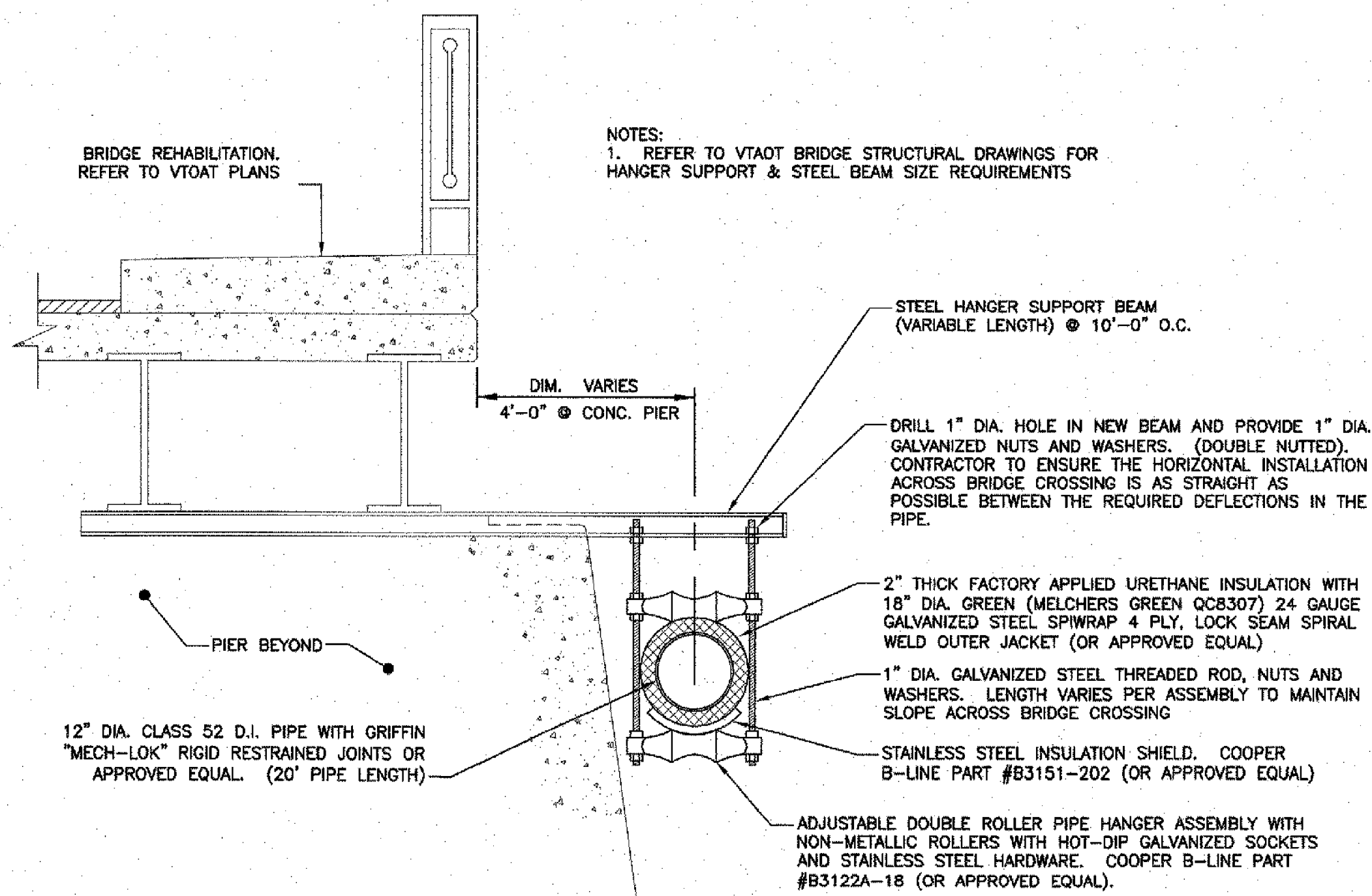
SANITARY SEWER PIPE PENETRATION AT EXISTING CONCRETE WALL DETAIL
NOT TO SCALE



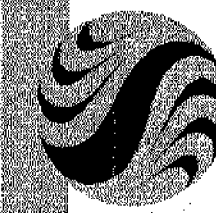
REGLET DETAIL
NOT TO SCALE



WALL SLEEVE WITH LINK SEAL FOR EXISTING WATER MAIN & NEW CONCRETE WALL CONSTRUCTION
NOT TO SCALE



MAIN STREET BRIDGE OUTRIGGER AND HANGER AT CONCRETE PIER DETAIL
NOT TO SCALE



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Legend

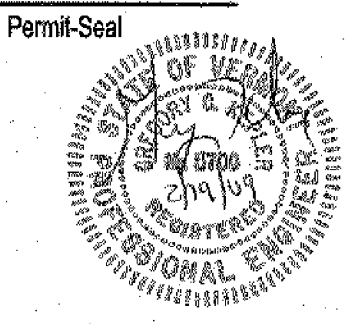
Notes

Revision	By	Appd.	YY.MM.DD

1 FINAL DESIGN TO VAOT - BRIDGE SECTION	B.V.D.	G.C.K.	09.02.19
Issued	By	Appd.	YY.MM.DD

File Name: 003850-501.dwg	B.V.D.	G.C.K.	B.V.D.	09.02.09
	Dwn.	Ckcd.	Dgn.	YY.MM.DD

Permit-Seal



PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2(14)
HIGHWAY NO.: VT 64
BRIDGE NO.: 64
OVER: BLACK RIVER
SHEET 42 OF 72

Client/Project

TOWN OF SPRINGFIELD

COMMUNITY CENTER BRIDGE
UTILITY CROSSING
Springfield, Vermont

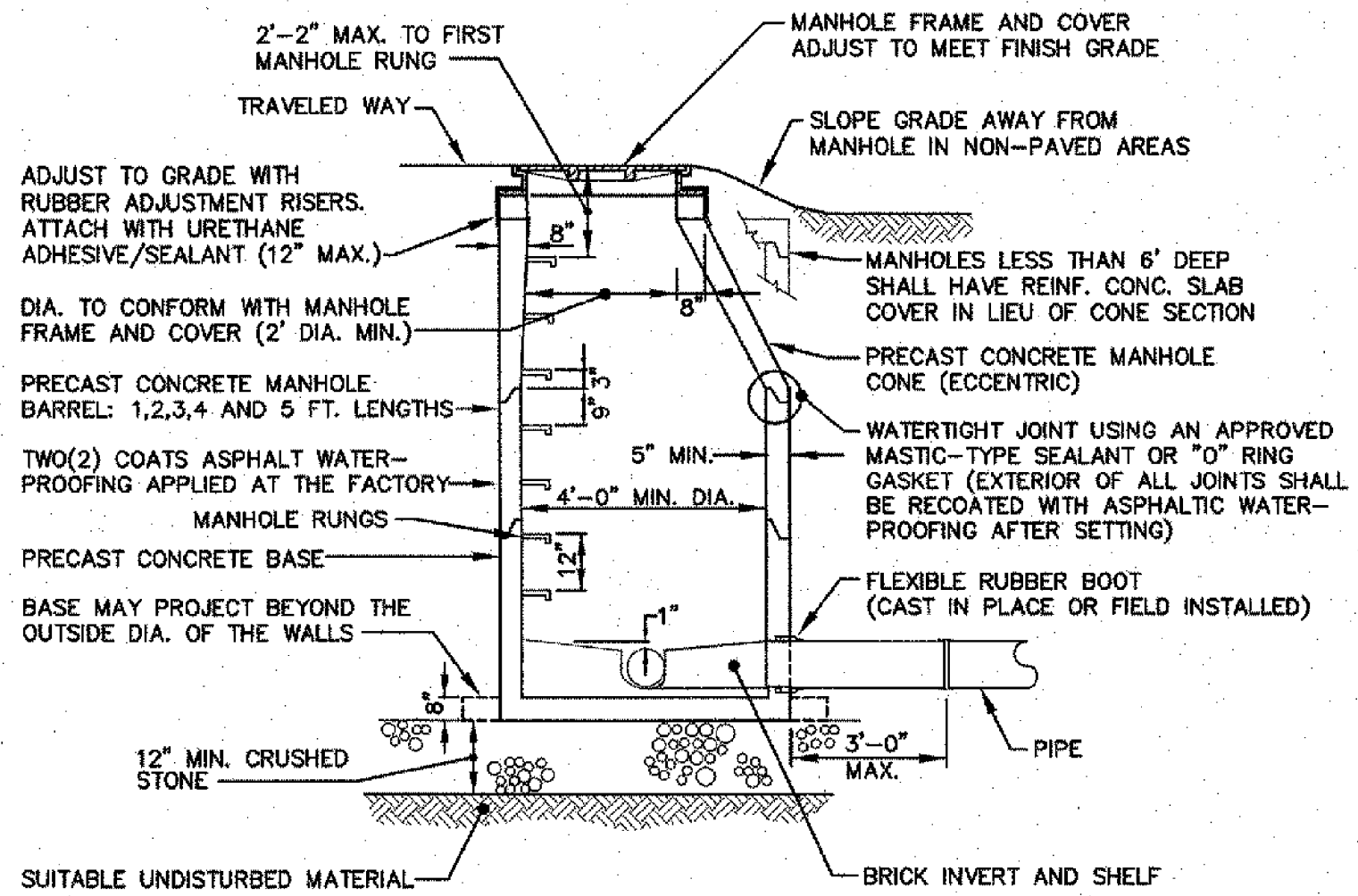
Title

GENERAL CONSTRUCTION NOTES &
PIPE SPECIALTY DETAILS

Project No. 210800385	Scale AS SHOWN
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Drawing No. C-501	Sheet U4 of U5	Revision 0
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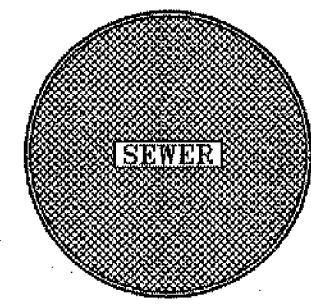
FINAL DESIGN
FEBRUARY 19, 2009



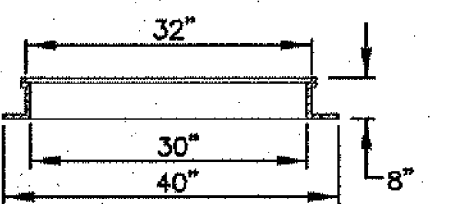
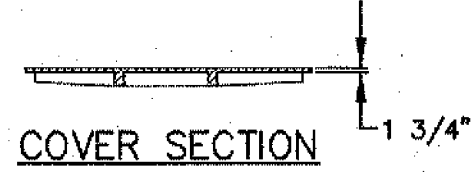
PRECAST CONCRETE MANHOLE

NOT TO SCALE

NOTE:
MANHOLE STRUCTURE TO BE CAPABLE OF SUPPORTING AASHTO H-20 LOADING



COVER PLATE
WEIGHT = 200 LBS.

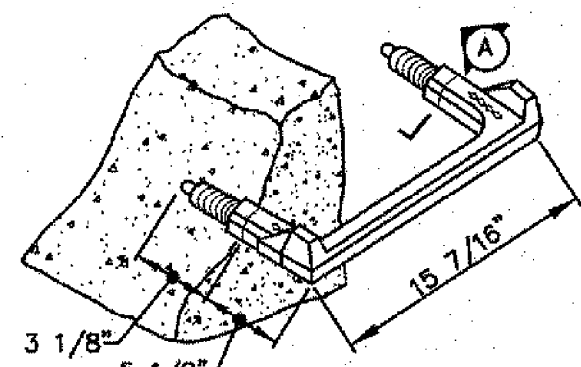


FRAME SECTION
MIN. WEIGHT = 350 LBS.

NOTE:
MANHOLE FRAME AND COVER TO BE LEBARON FOUNDRY, INC. CATALOG NO. LC 328 OR APPROVED EQUAL.

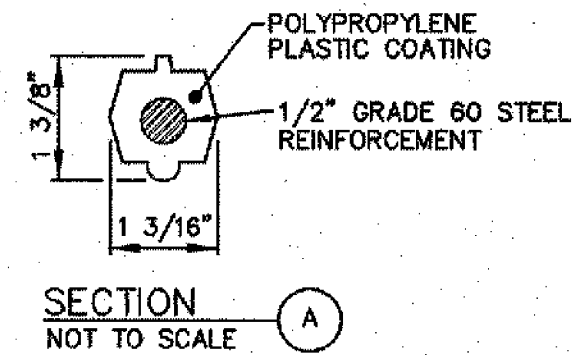
MANHOLE FRAME AND COVER DETAIL

NOT TO SCALE

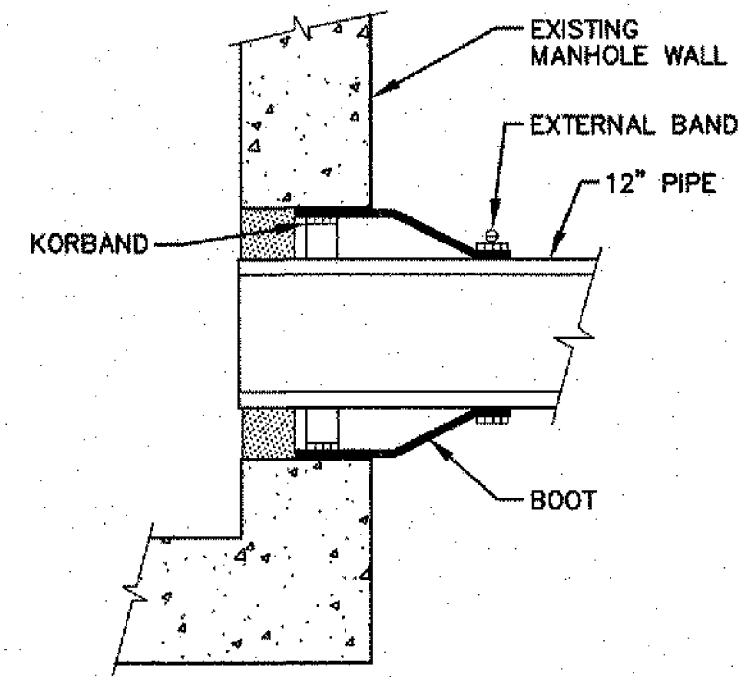


MANHOLE STEP DETAIL

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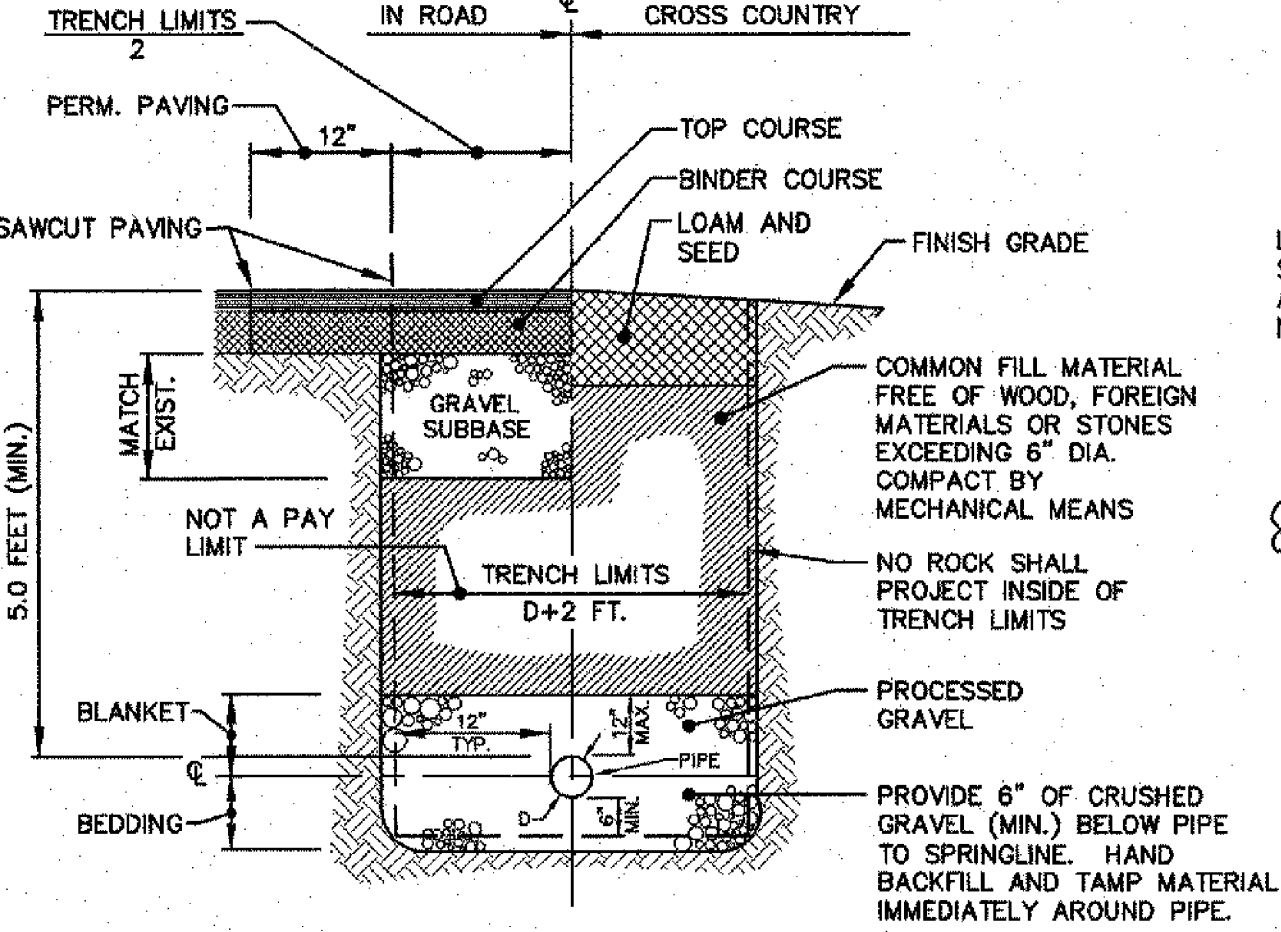


SECTION A



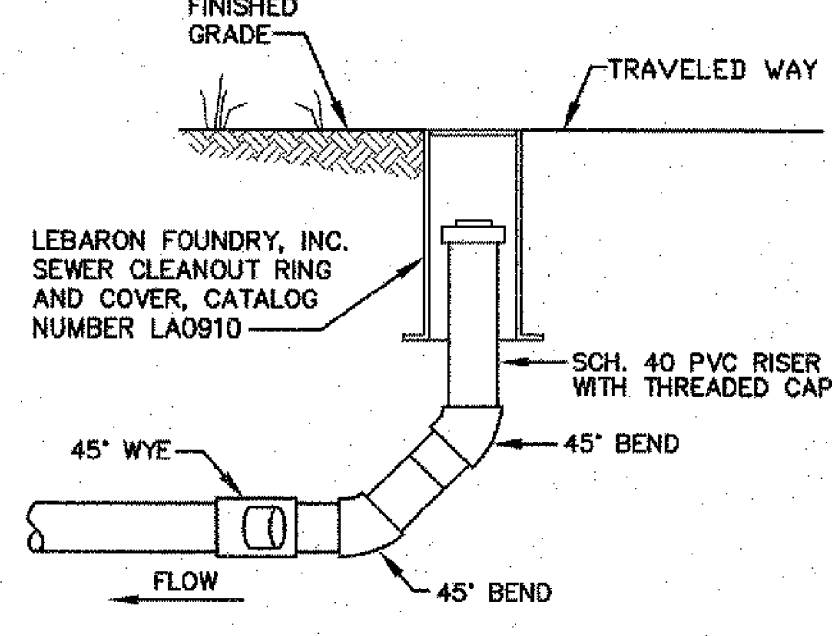
PIPE TO EXISTING SEWER MANHOLE JOINT DETAIL

NOT TO SCALE



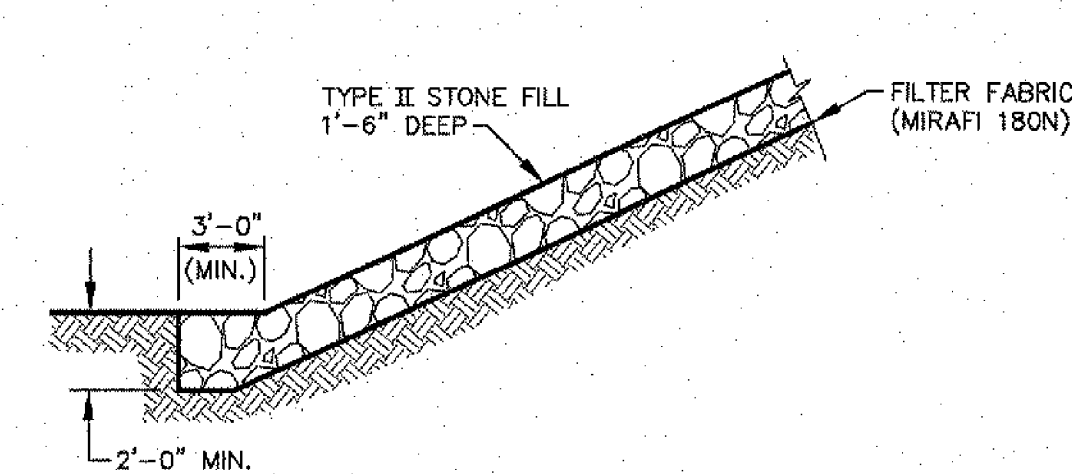
TYPICAL SANITARY SEWER TRENCH DETAIL

NOT TO SCALE



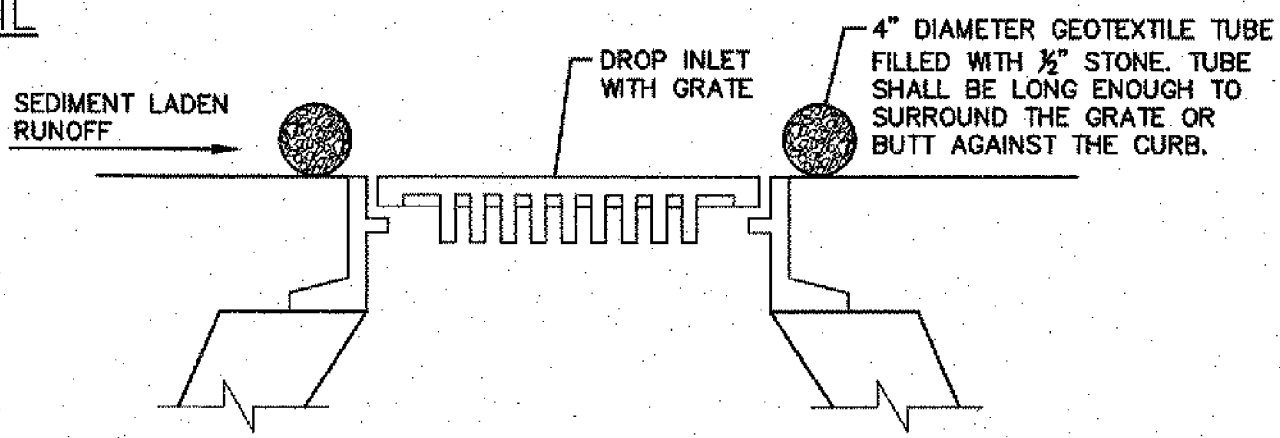
BUILDING SERVICE CLEAN OUT DETAIL

NOT TO SCALE



STONE FILL SLOPE PROTECTION DETAIL

NOT TO SCALE

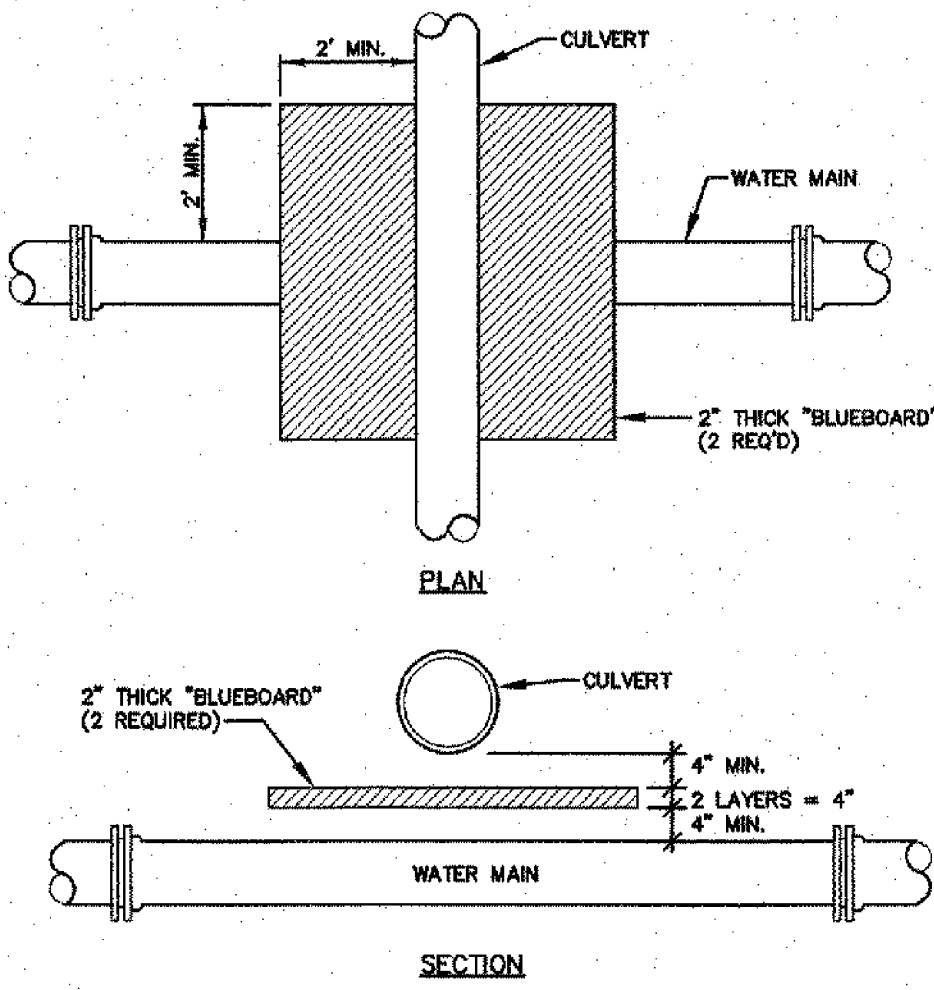


CATCH BASIN INLET PROTECTION

- MAINTENANCE:
1. CONTRACTOR TO CLEAN AFTER EVERY STORM. IF THE BARRIER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PASSES FILTERED WATER, THE SEDIMENT SHALL BE REMOVED AND THE BARRIER SHALL BE REPLACED. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 2. THE BARRIER SHALL BE REMOVED WHEN THE DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED.

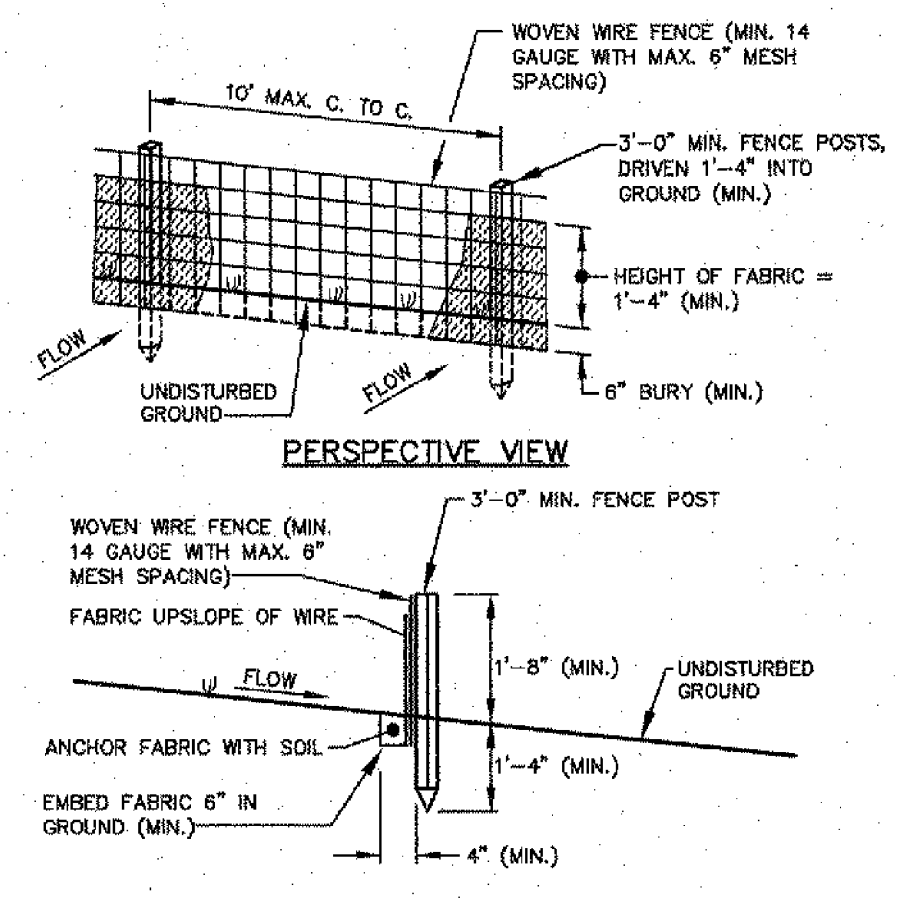
INLET PROTECTION DETAIL

NOT TO SCALE



WATER MAIN INSULATION DETAIL

NOT TO SCALE

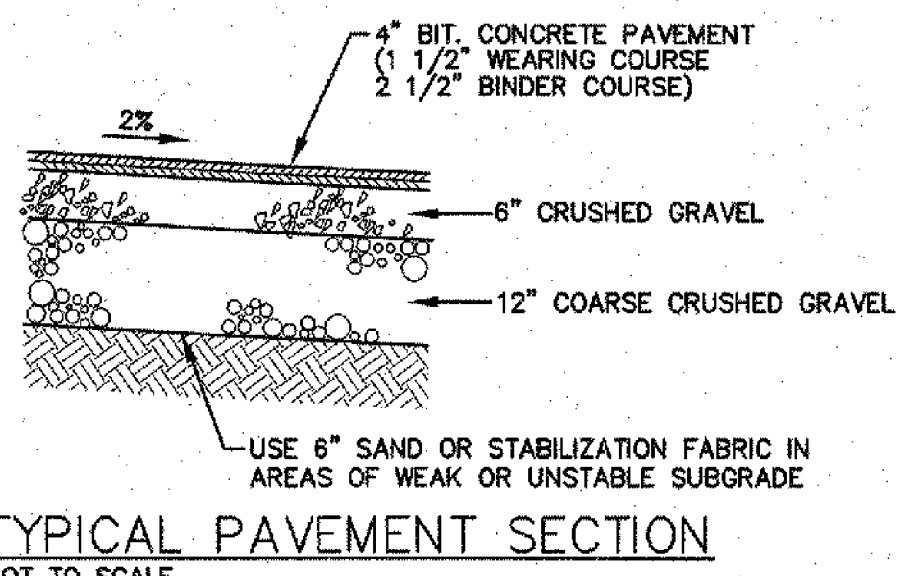


REINFORCED SILT FENCE DETAIL

- NOTES:
1. POSTS FOR ATTACHING FABRIC SHALL BE PLACED A MINIMUM OF 6' FROM TOE OF THE SLOPE.
 2. TO BE USED WHERE EXISTING GROUND SLOPES AWAY FROM THE TOE OF THE EMBANKMENT.
 3. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. WIRE FENCE REINFORCEMENT REQUIRED WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.
 4. FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6 INCH MAXIMUM MESH OPENING.
 5. WHEN TWO SECTIONS OF FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND TOLDED. CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA THON, OR APPROVED EQUAL.
 6. CONTRACTOR TO INSPECT SILT FENCE FREQUENTLY, AND REPAIR OR REPLACE ANY DAMAGED SECTIONS. REMOVE SILT FROM BEHIND THE FENCE WHEN IT HAS REACHED ONE-HALF THE HEIGHT OF THE FENCE, OR WHEN HEAVY RUNOFF OR SILTATION IS EXPECTED.

REINFORCED SILT FENCE DETAIL

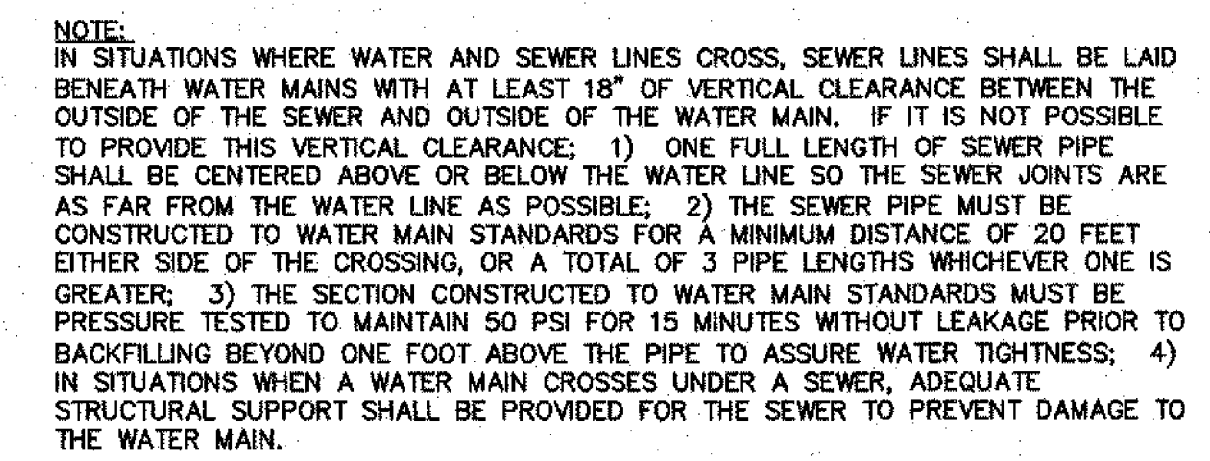
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TYPICAL PAVEMENT SECTION

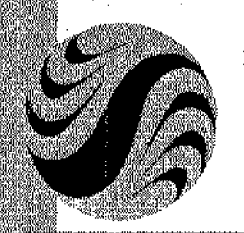
NOT TO SCALE

NOTE:
MATERIALS TO COMPLY WITH VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.



SEWER PIPE AND WATER MAIN CROSSING

NOT TO SCALE



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Legend

Notes

Revision	By	Appd.	YY.MM.DD
1			
Issued			

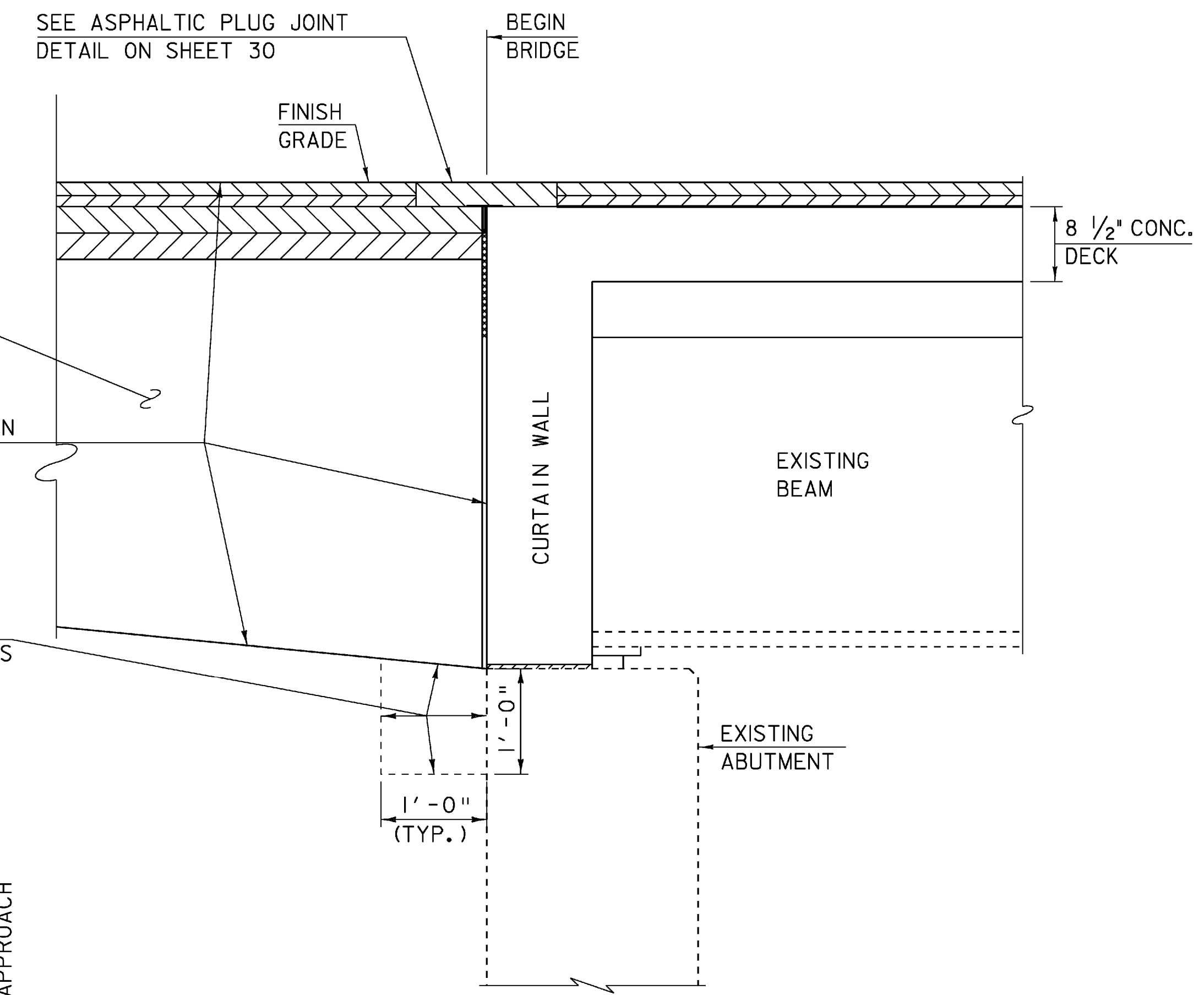
Permit-Seal
STATE OF VERMONT
Professional Engineer
PROJECT NAME: SPRINGFIELD
PROJECT NUMBER: BHF 016-2(14)
HIGHWAY NO.: VT 8
BRIDGE NO.: 64
OVER: BLACK RIVER
SHEET 43 OF 72

Client/Project
TOWN OF SPRINGFIELD
COMMUNITY CENTER BRIDGE
UTILITY CROSSING
Springfield, Vermont

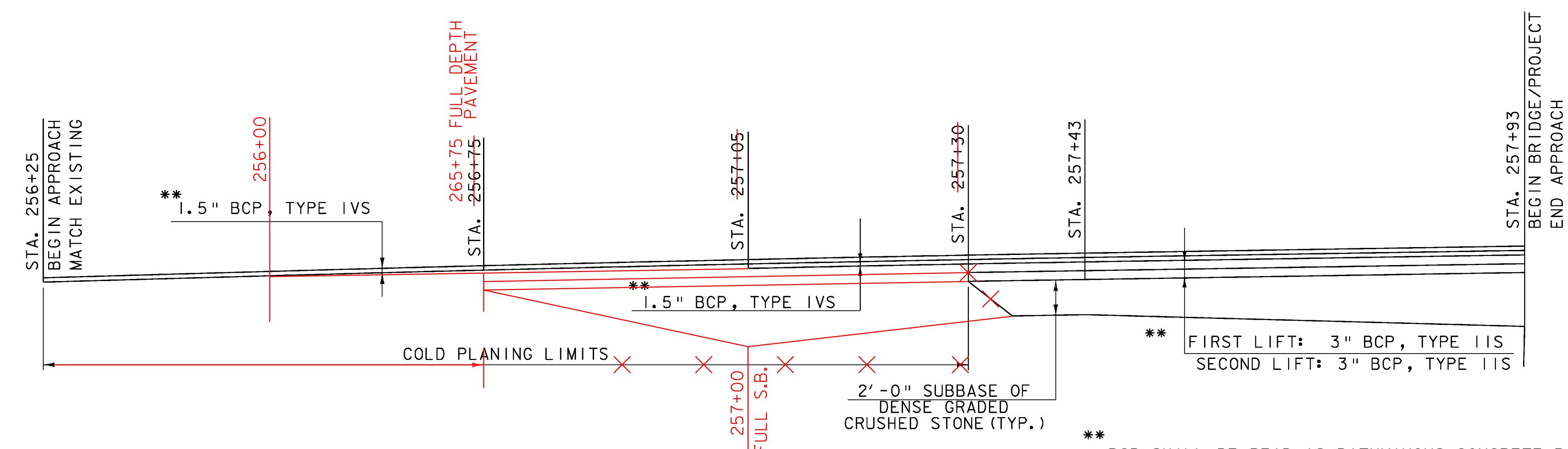
Title
MISCELLANEOUS UTILITY & SITE DETAILS

Project No.	Scale	
210800385	AS SHOWN	
Drawing No.	Sheet	Revision
C-502	U5 of U5	0

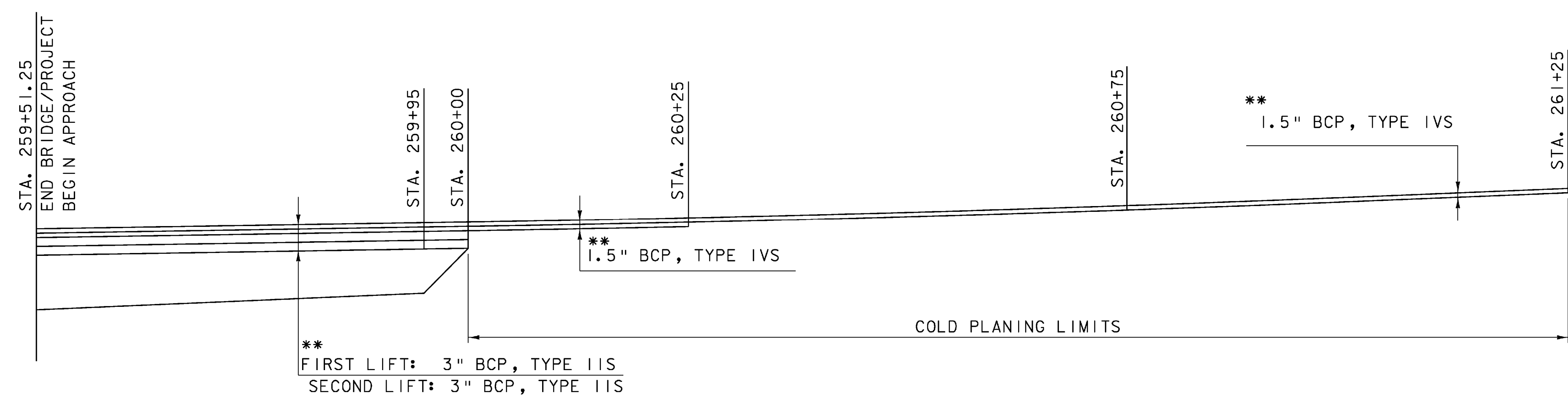
FINAL DESIGN
FEBRUARY 19, 2009



**ABUTMENT
BRIDGE END DETAIL**
SCALE: 1" = 1'-0"

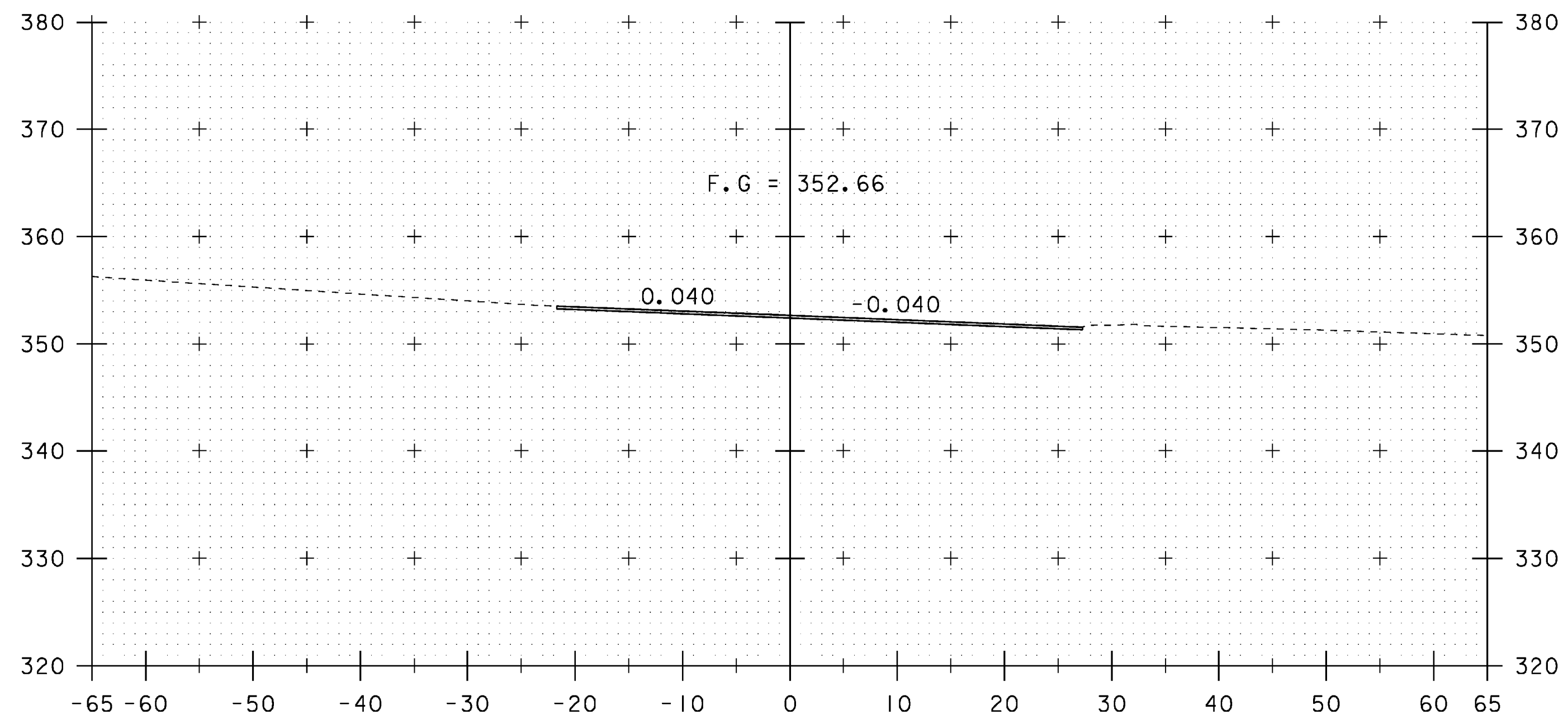


** BCP SHALL BE READ AS BITUMINOUS CONCRETE PAVEMENT AND SHALL BE PAID FOR UNDER SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)

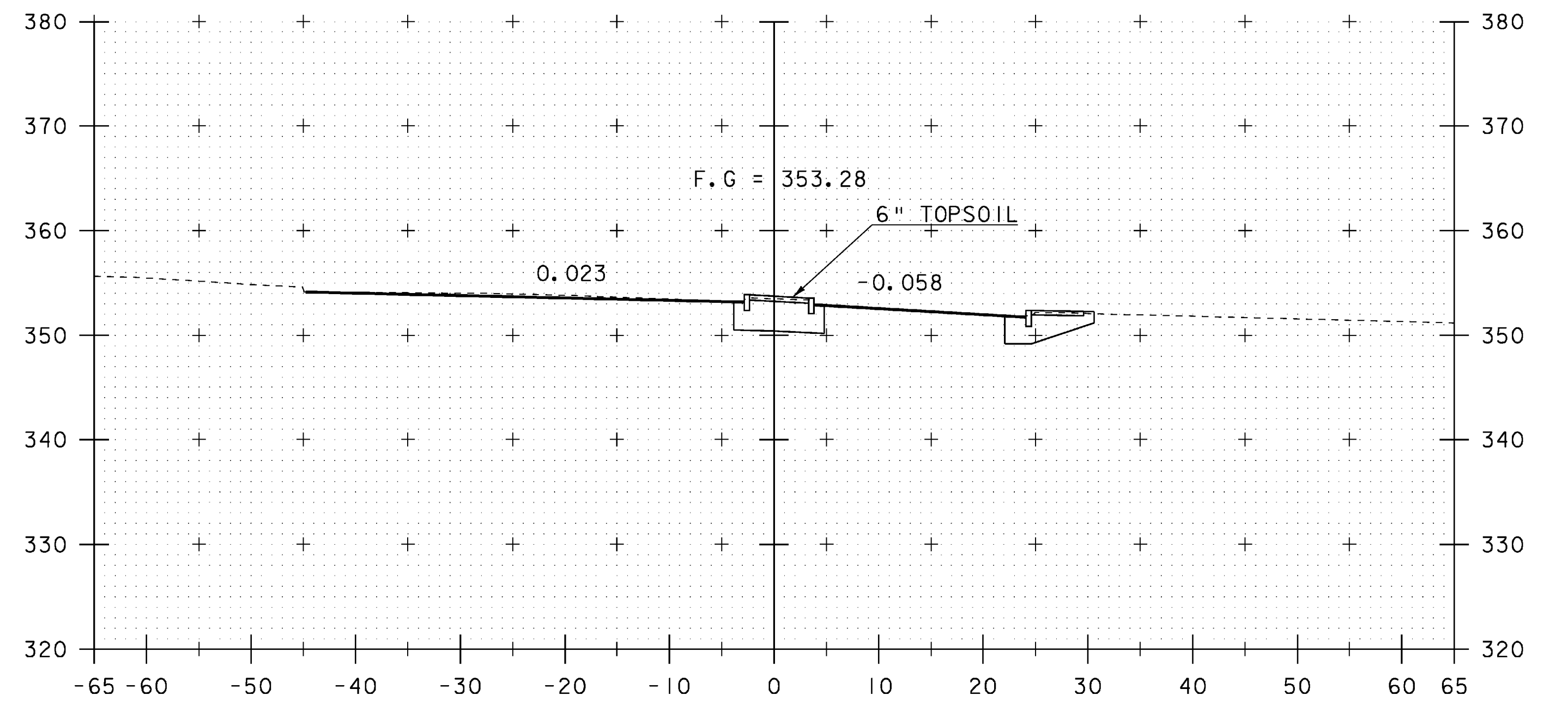


**MATERIAL TRANSITION
AND COLD PLANING LIMITS**
NOT TO SCALE

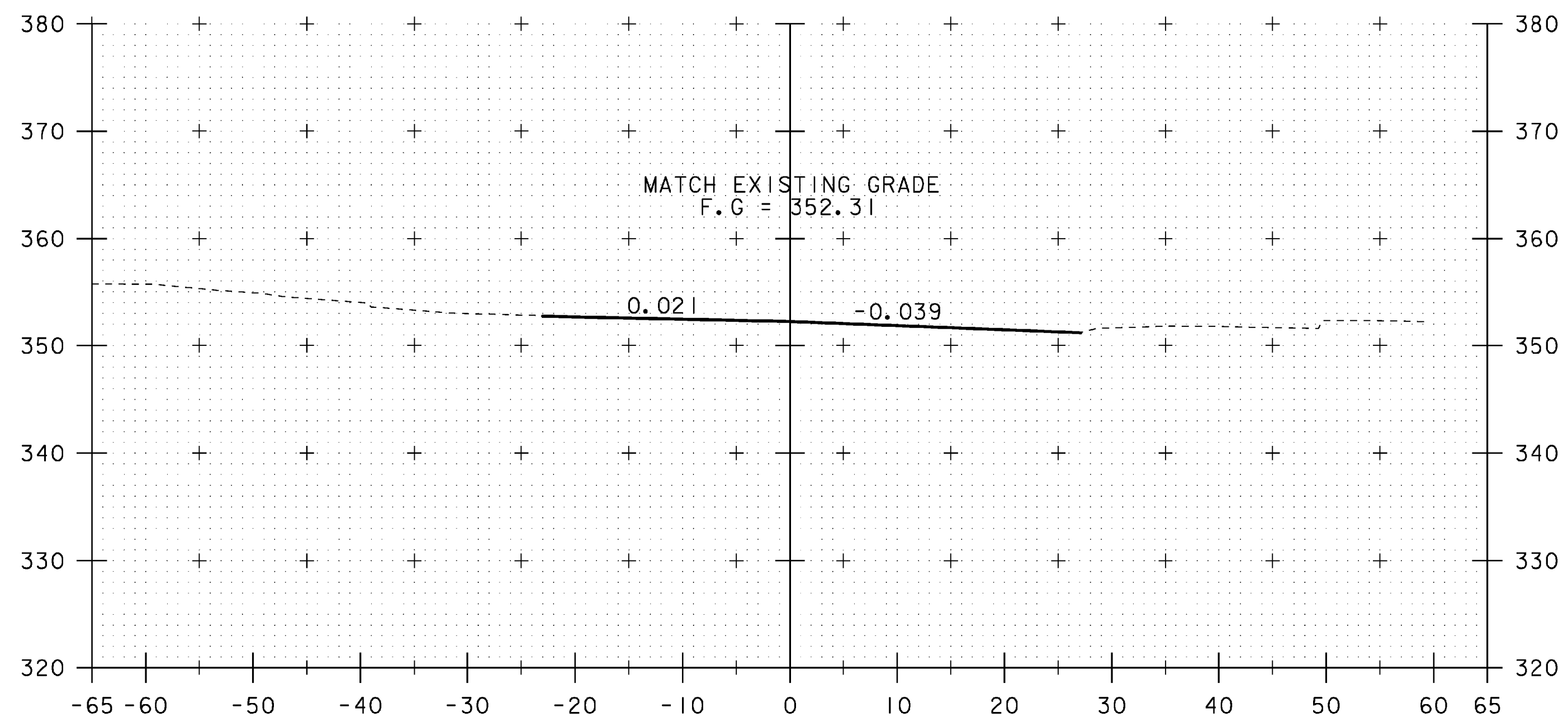
PROJECT NAME: SPRINGFIELD	PLOT DATE: 24-MAR-2009
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: D. PETERSON
FILE NAME: 06J004/str/s06J004xsl.dgn	CHECKED BY: C. CARLSON
PROJECT LEADER: R. WHITCOMB	SHEET 44 OF 72
DESIGNED BY: D. PETERSON	
MATERIAL TRANSITION DETAILS	



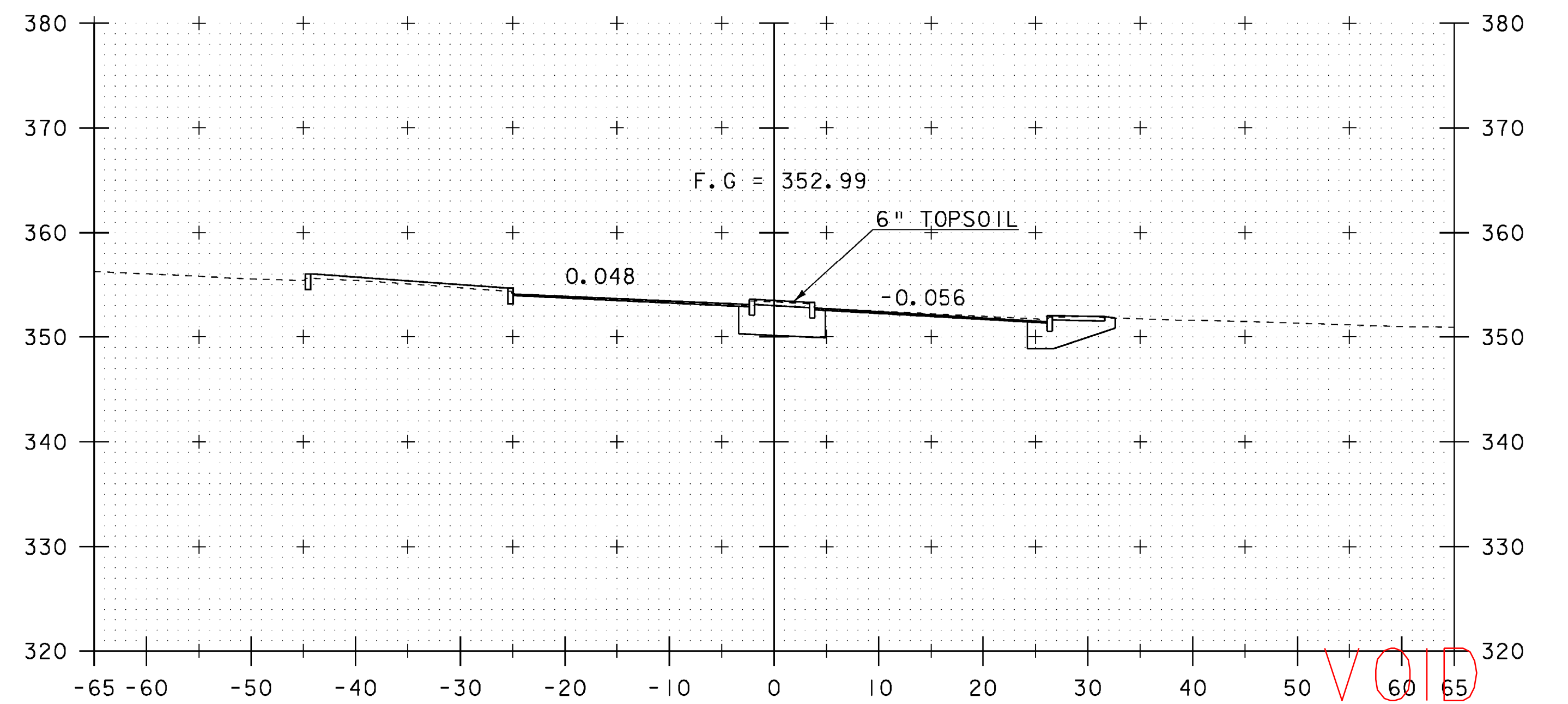
256+50



257+00



256+25



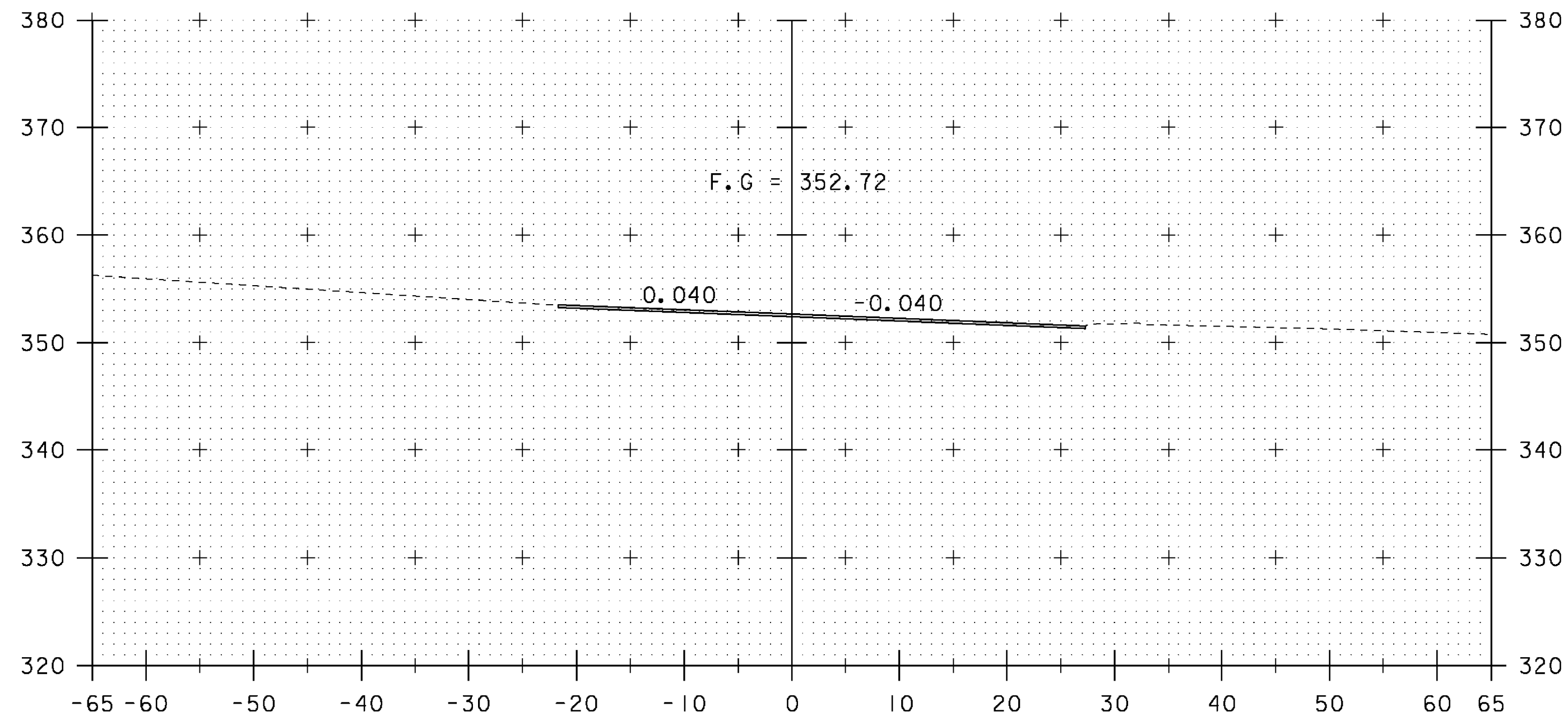
256+75

VOID
SEE REVISED
SHEET

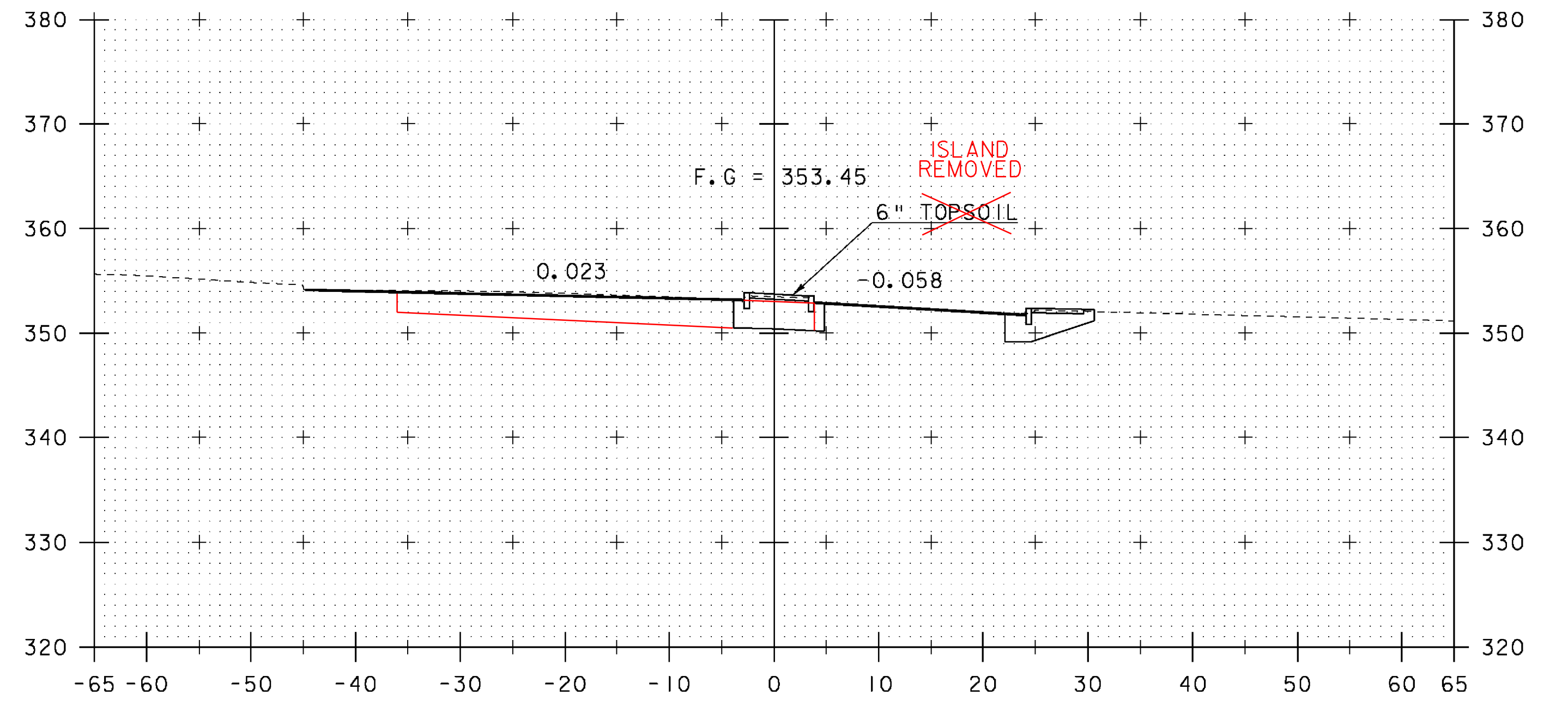
ML STA 256+25
BEGIN APPROACH
MATCH EXISTING

STA. 256+25 TO STA. 257+00

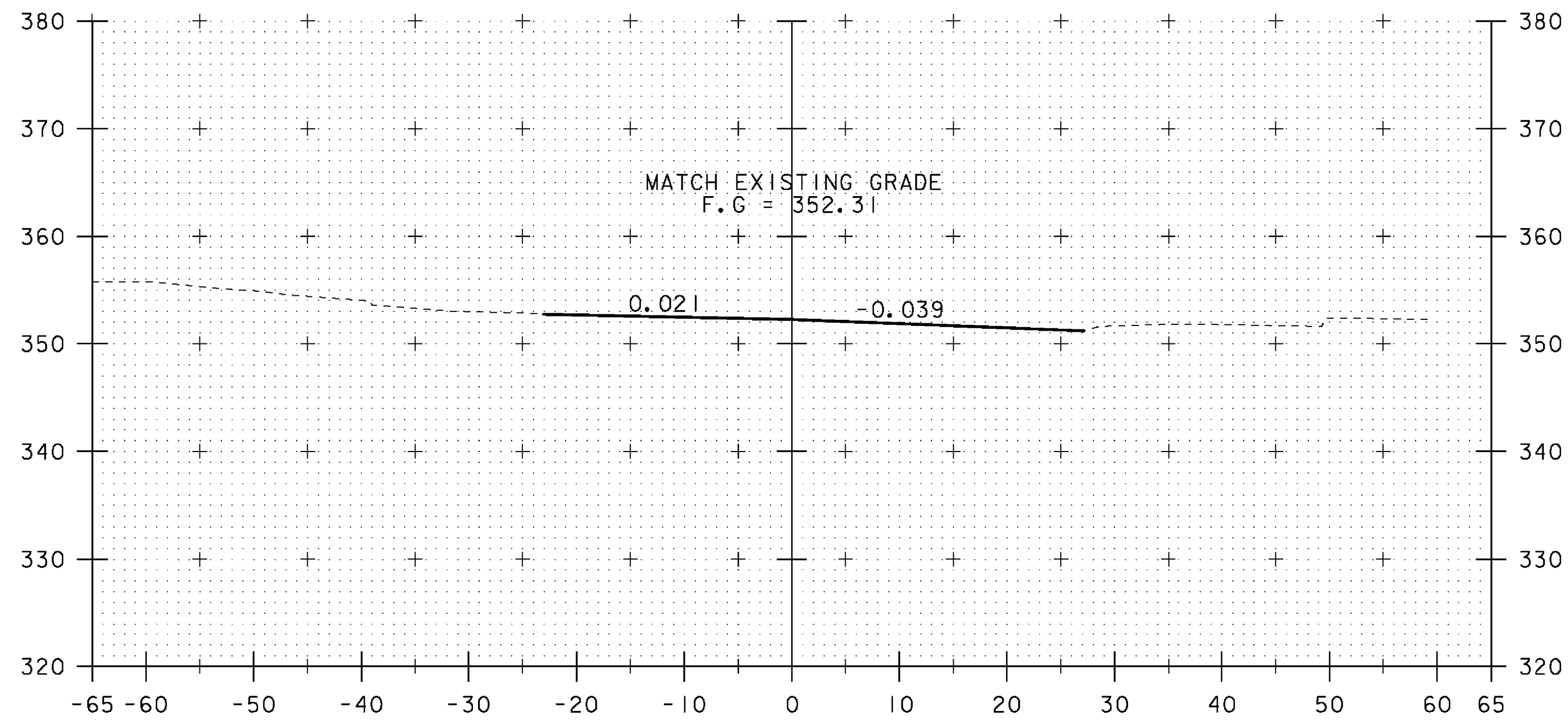
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PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: D. PETERSON
FILE NAME: 06J004/str/s06J004xsl.dgn	CHECKED BY: C. CARLSON
PROJECT LEADER: R. WHITCOMB	SHEET 45 OF 72
DESIGNED BY: D. PETERSON	
MAINLINE CROSS SECTIONS (I)	



256+50

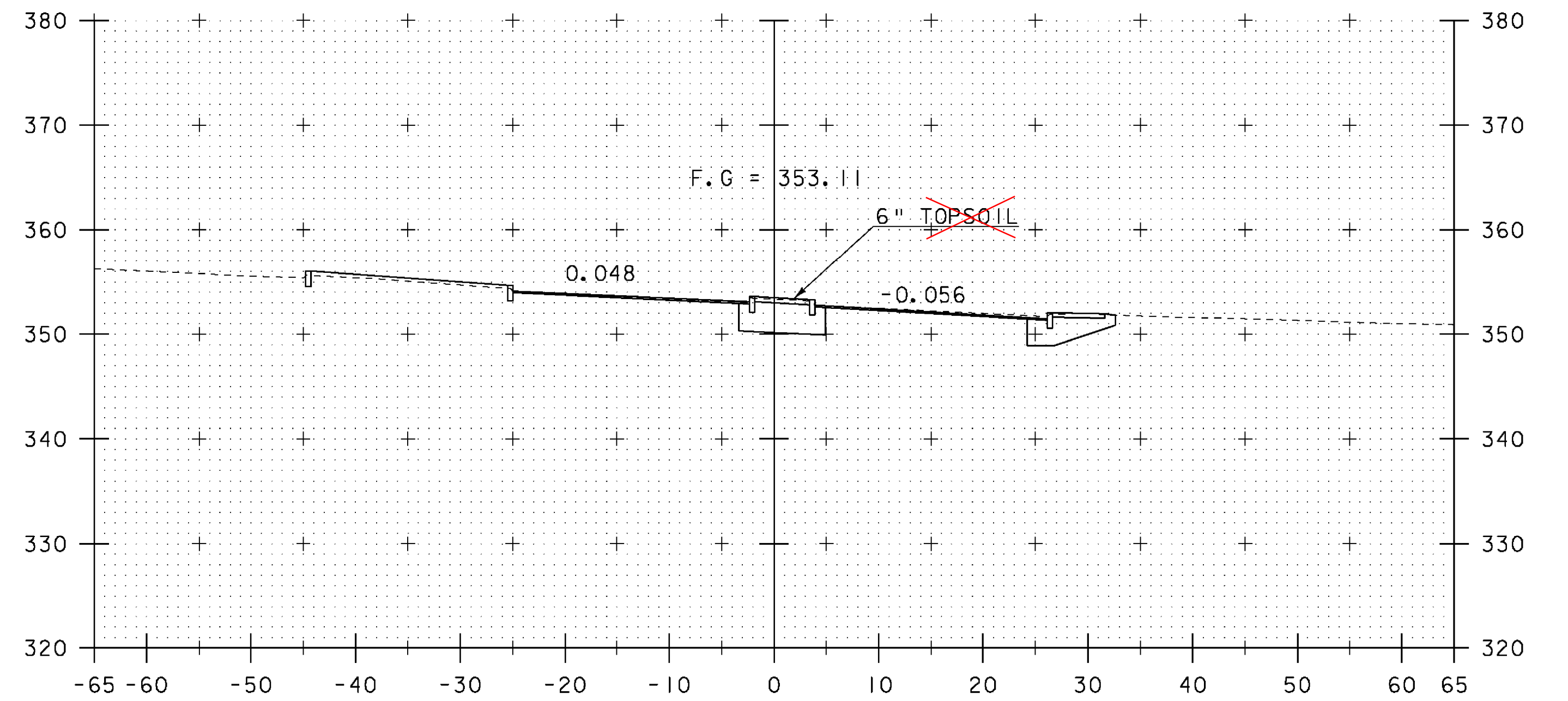


257+00



256+25

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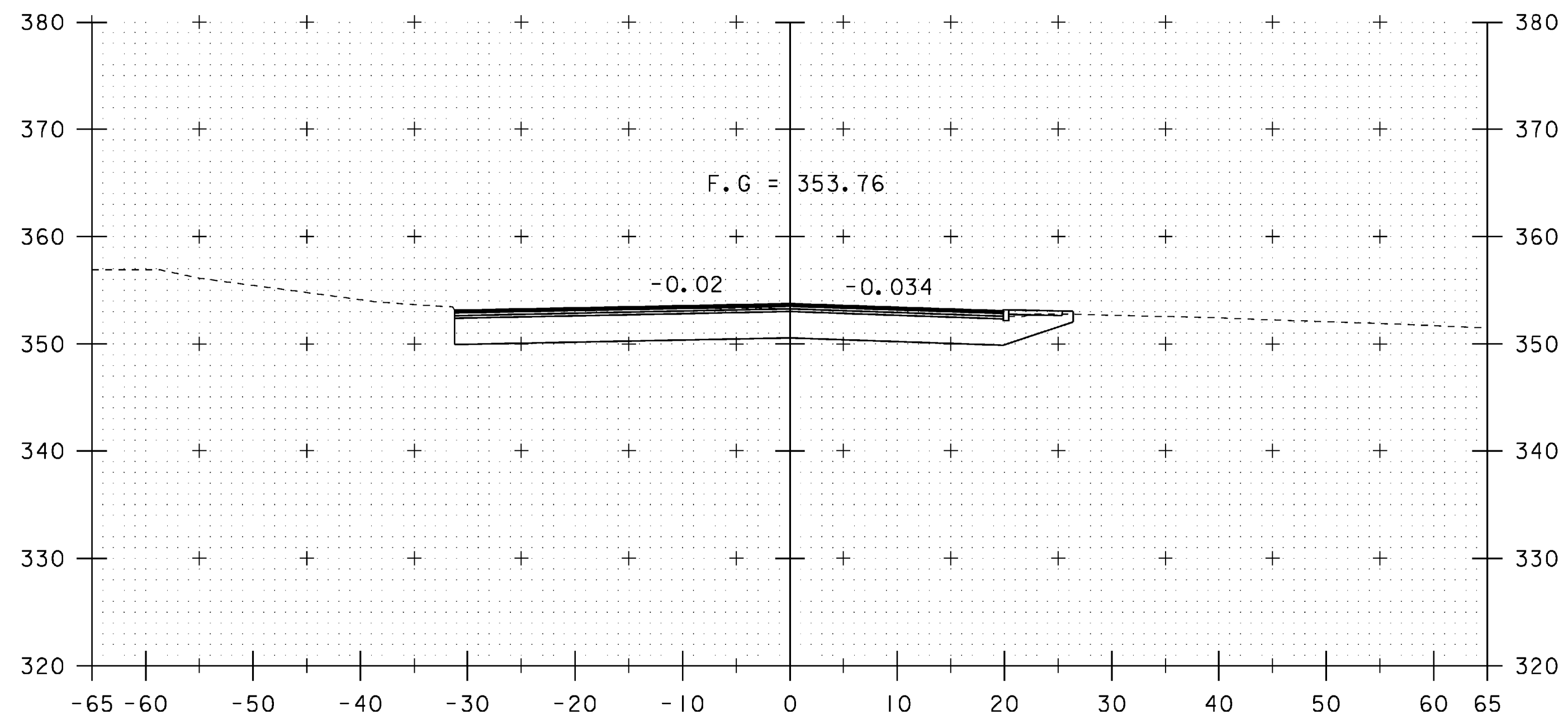


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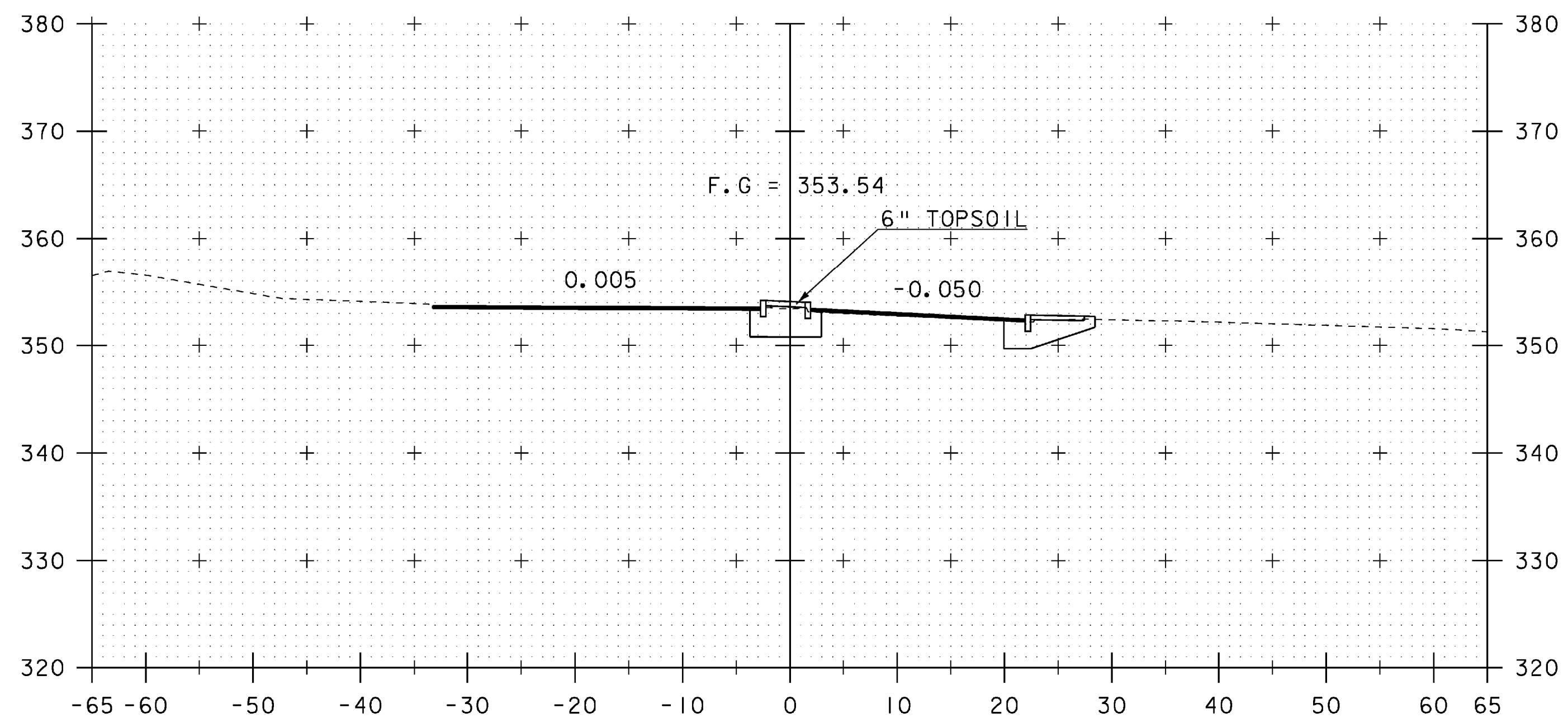
REV.	BY	DATE	REVISION
3	LBB	5/26/09	REVISED FINISH GRADE AND BANKING

PROJECT NAME:	SPRINGFIELD	PLOT DATE:	29-MAY-2009
PROJECT NUMBER:	BHF 016-2(14)	DRAWN BY:	D. PETERSON
FILE NAME:	06J004/str/s06J004xsl.dgn	DESIGNED BY:	D. PETERSON
PROJECT LEADER:	R. WHITCOMB	CHECKED BY:	C. CARLSON
MAINLINE CROSS SECTIONS (I)		SHEET	45 OF 72

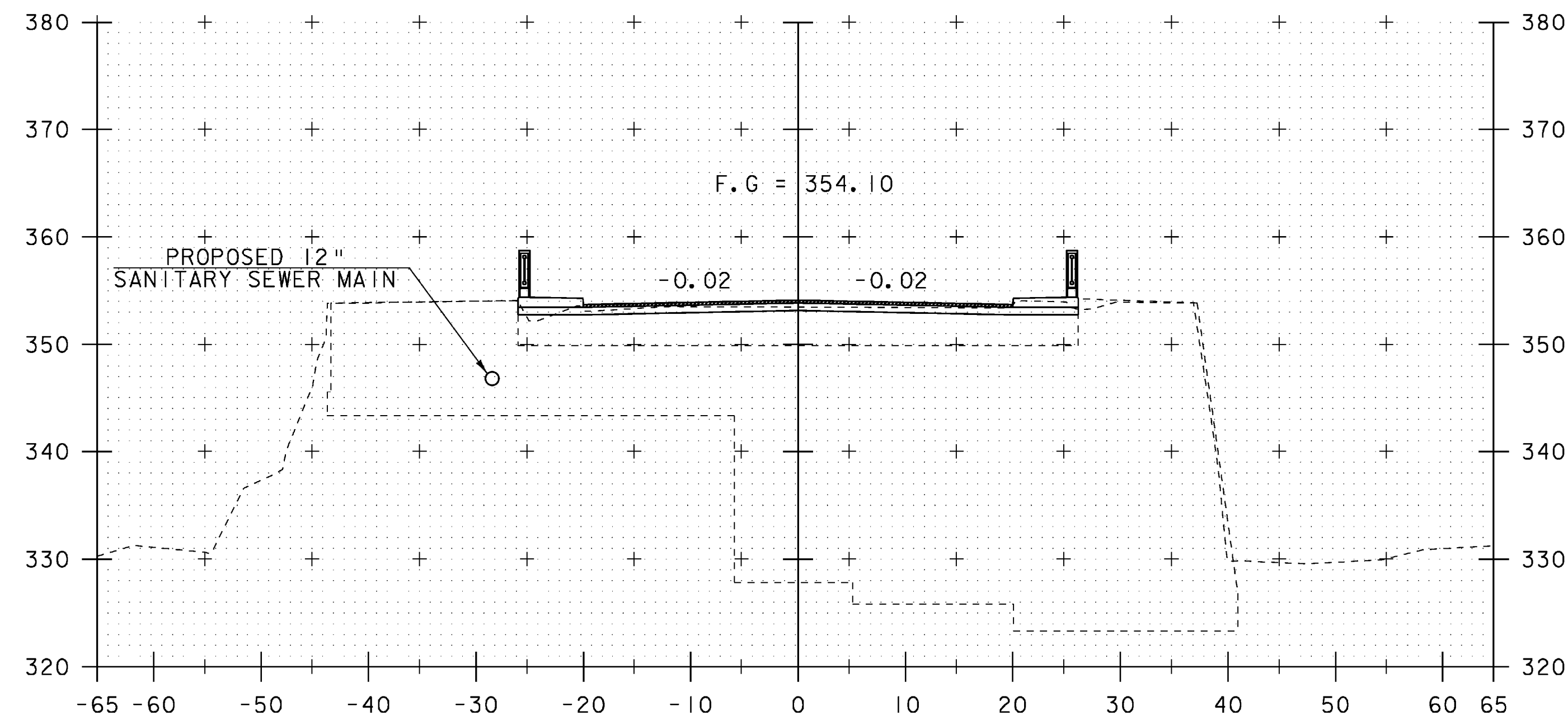
STA. 256+25 TO STA. 257+00



257+50

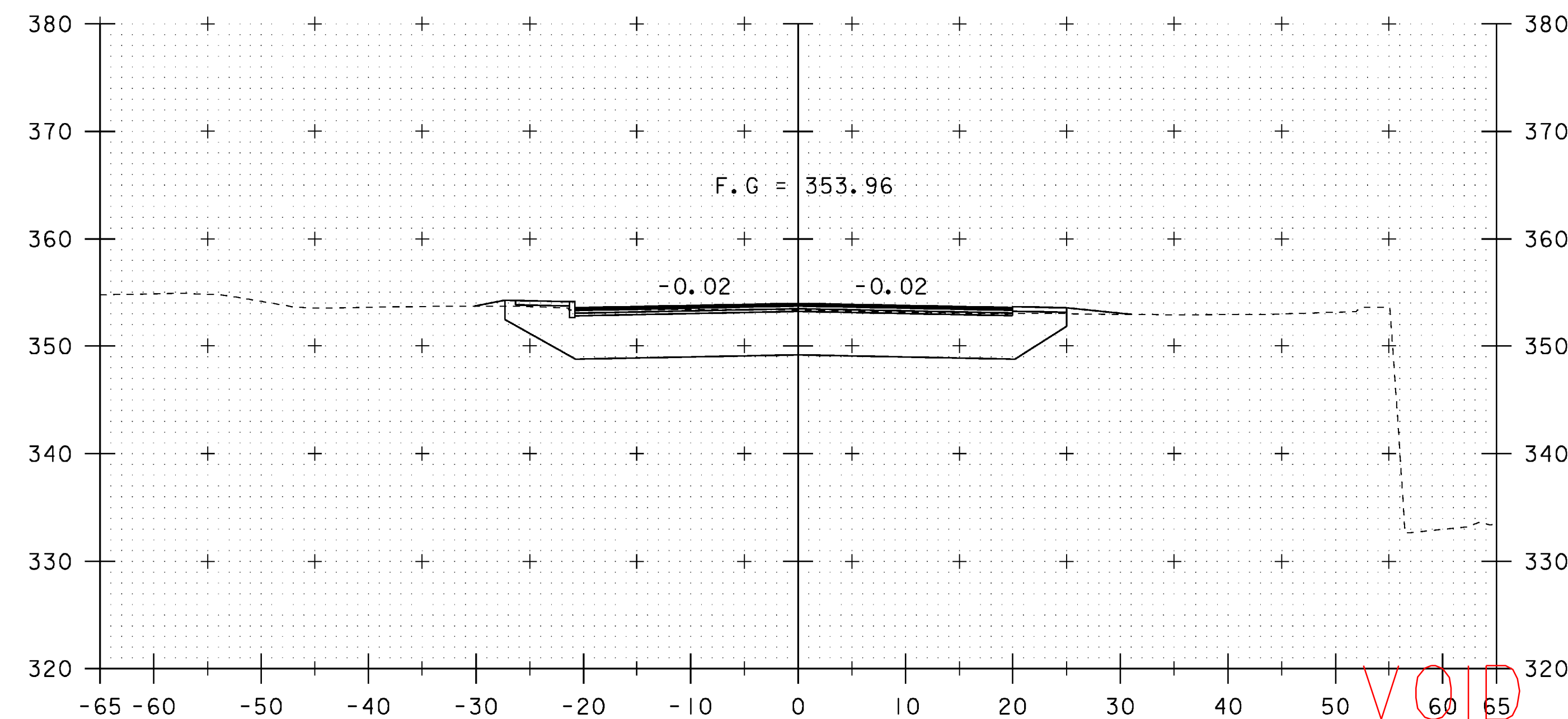


257+25



ML STA 257+93
 END APPROACH
 BEGIN PROJECT/BRIDGE
 SKEWED 8°

257+93

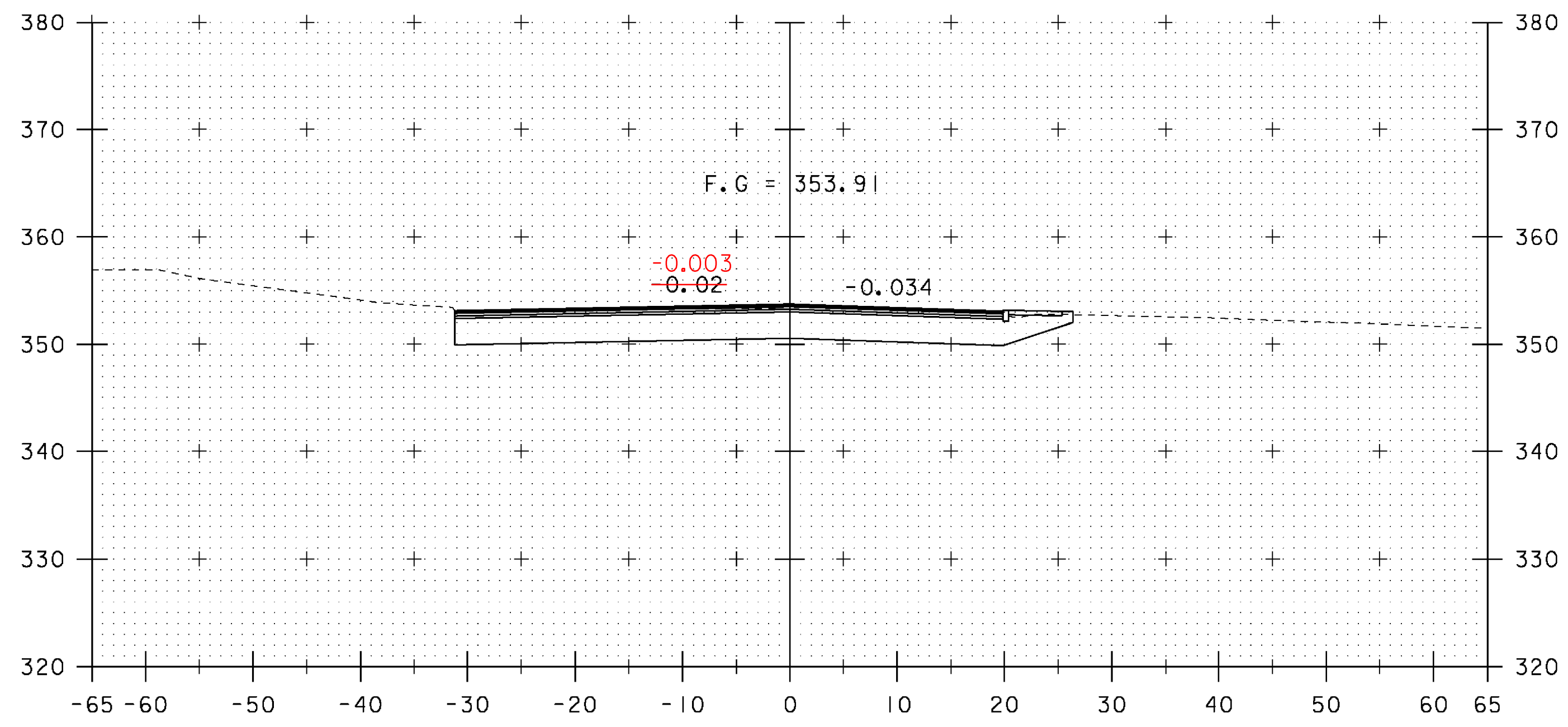


257+75

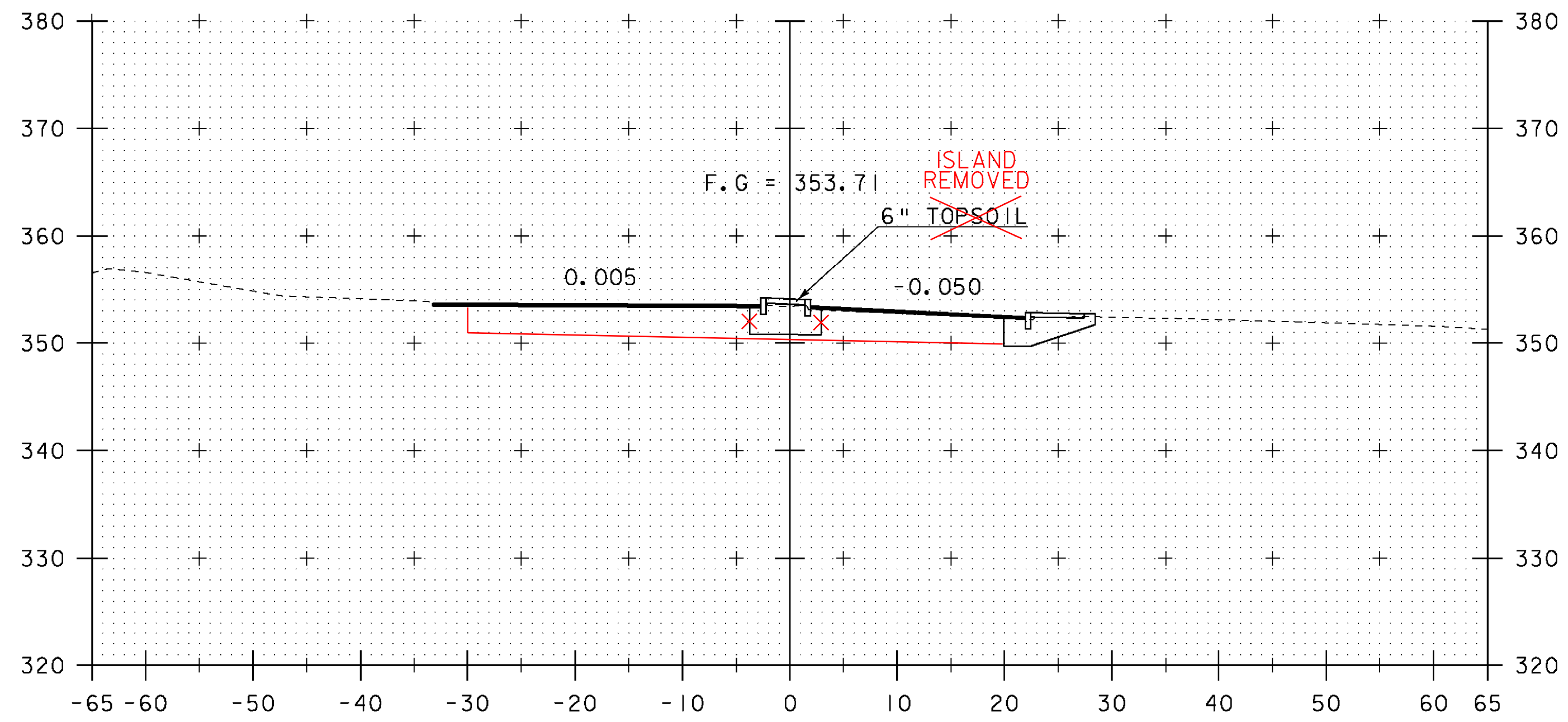
VOID
 SEE REVISED
 SHEET

STA. 257+25 TO STA. 257+93

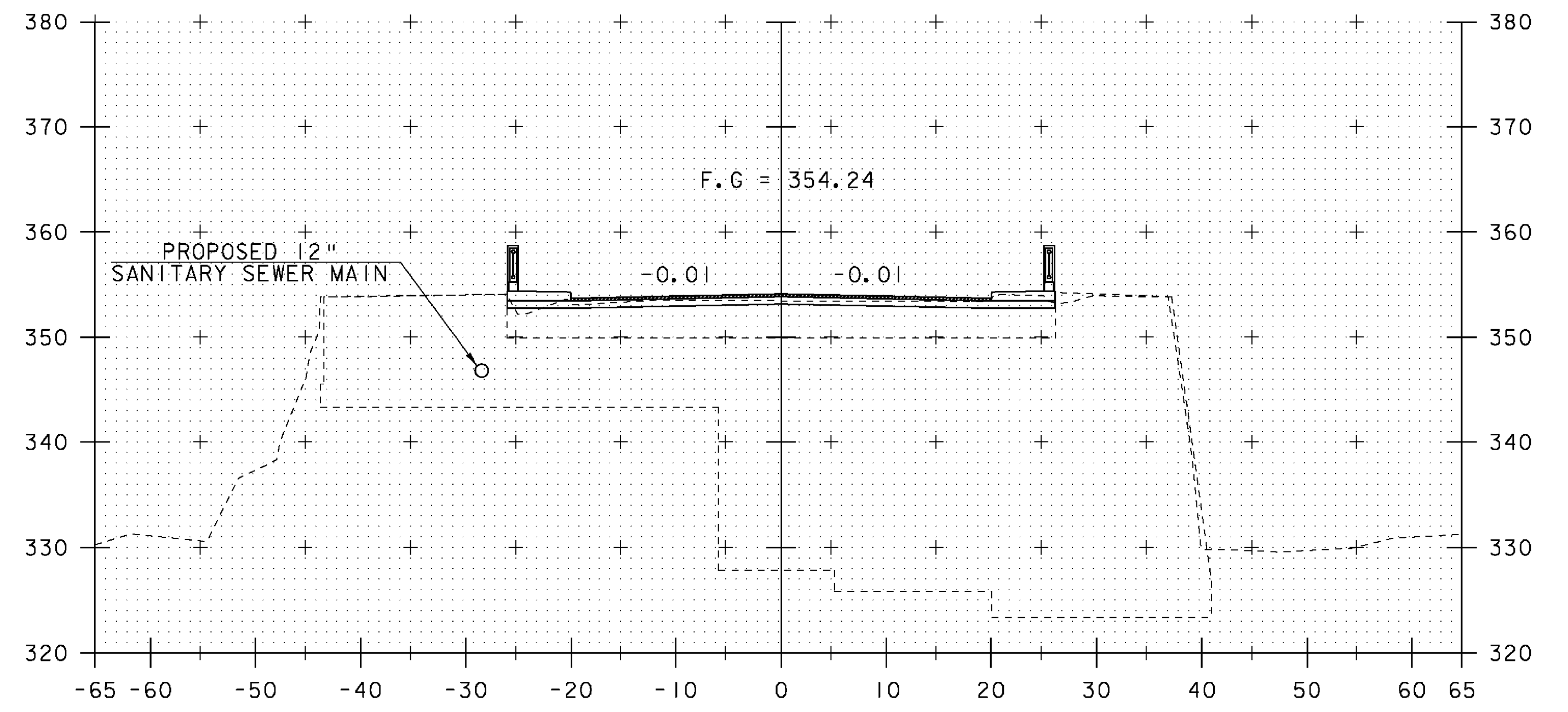
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PROJECT NUMBER:	BHF 016-2(14)	PROJECT LEADER:	R. WHITCOMB	DRAWN BY:	D. PETERSON
		DESIGNED BY:	D. PETERSON	CHECKED BY:	C. CARLSON
		MAINLINE CROSS SECTIONS (2)		SHEET	46 OF 72



257+50

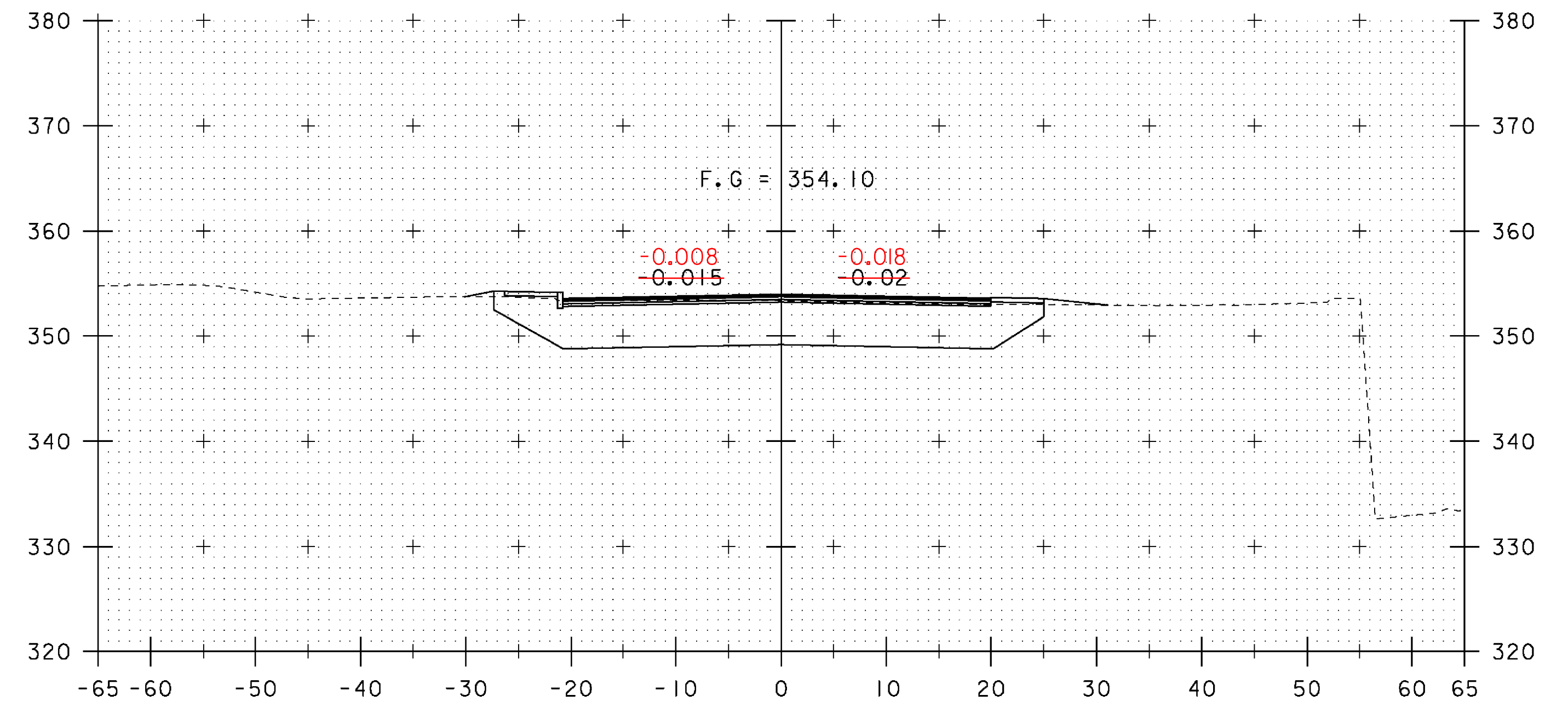


257+25



ML STA 257+93
 END APPROACH
 BEGIN PROJECT/BRIDGE
 SKEWED 8°

257+93

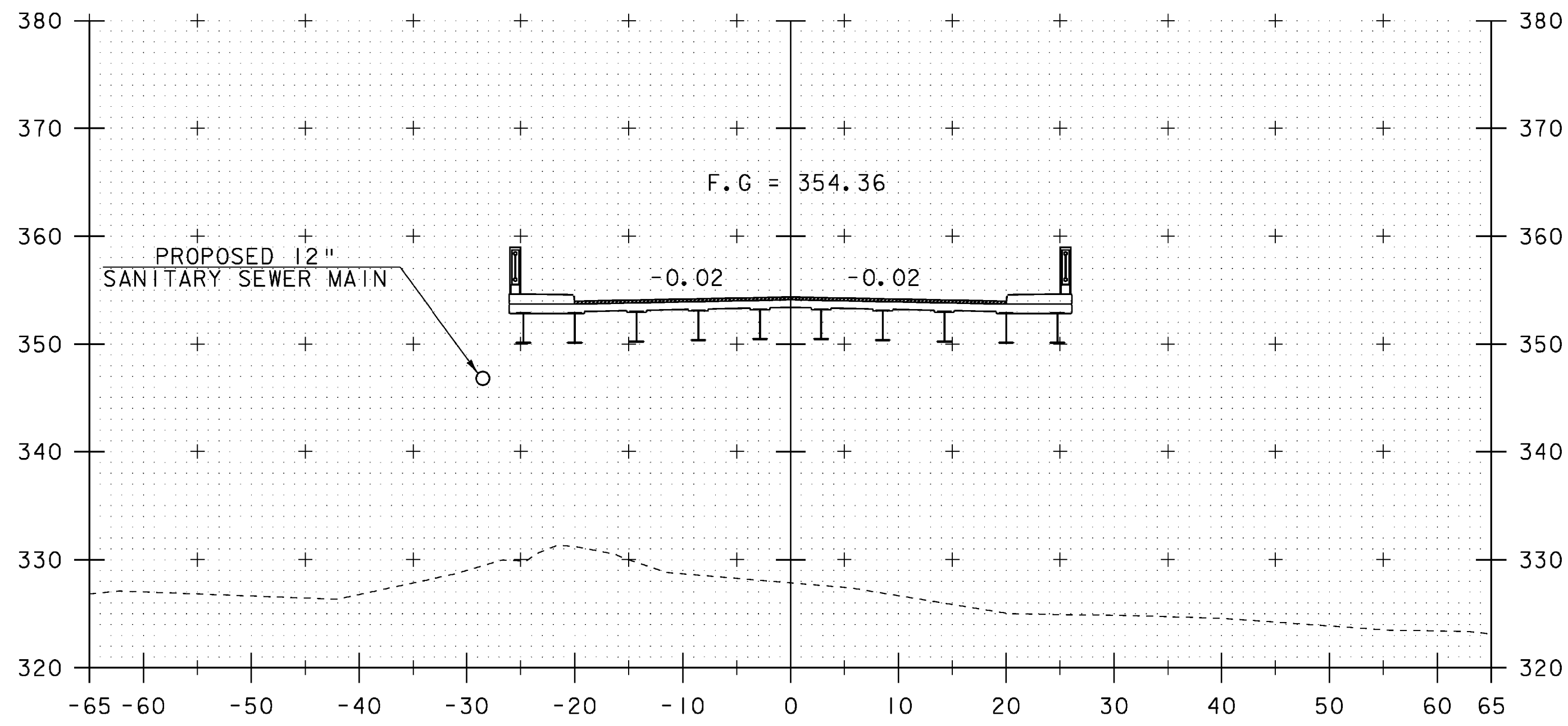


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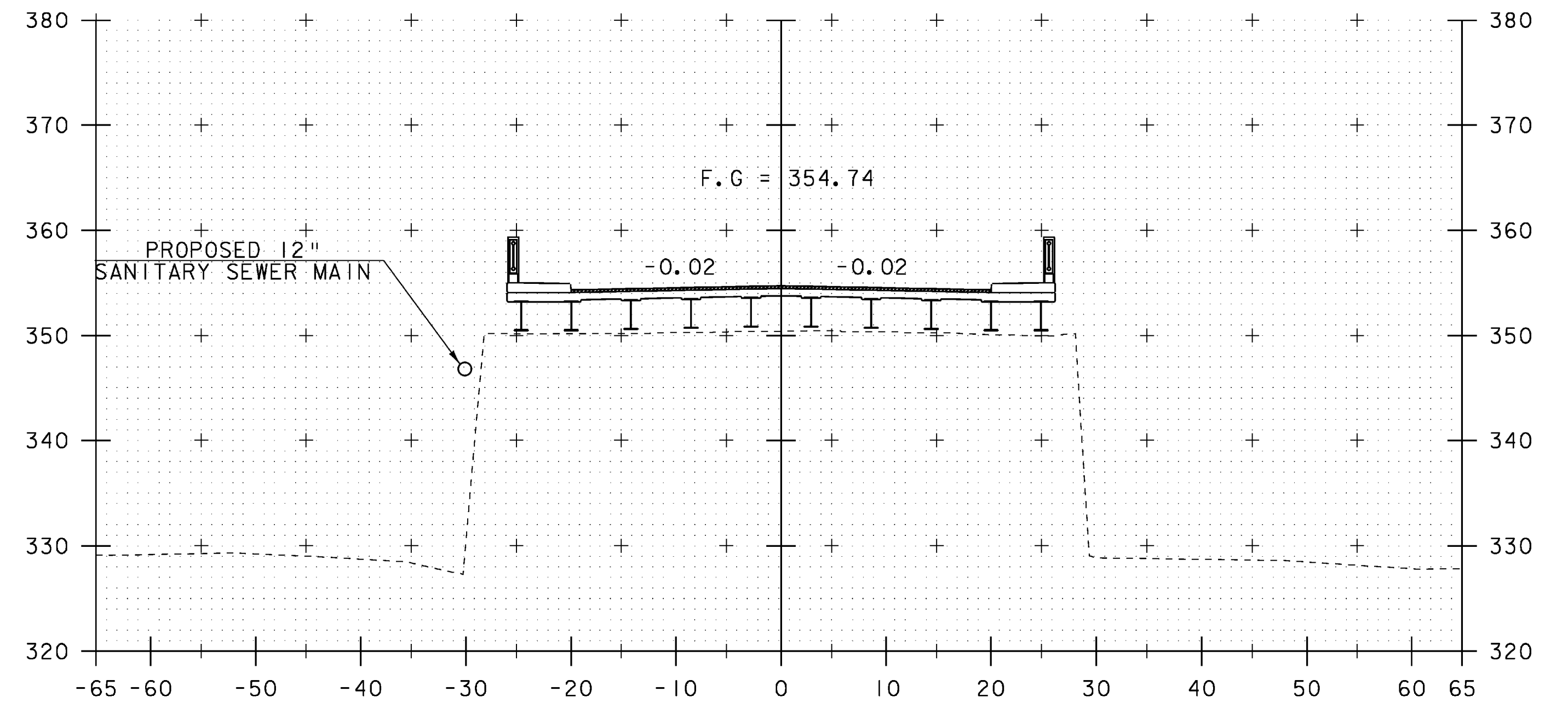
REV.	BY	DATE	REVISION
3	LBB	5/26/09	REVISED FINISH GRADE AND BANKING

PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF 016-2(14)
 FILE NAME: 06J004/str/s06J004xsl.dgn PLOT DATE: 29-MAY-2009
 PROJECT LEADER: R. WHITCOMB DRAWN BY: D. PETERSON
 DESIGNED BY: D. PETERSON CHECKED BY: C. CARLSON
 MAINLINE CROSS SECTIONS (2) SHEET 46 OF 72

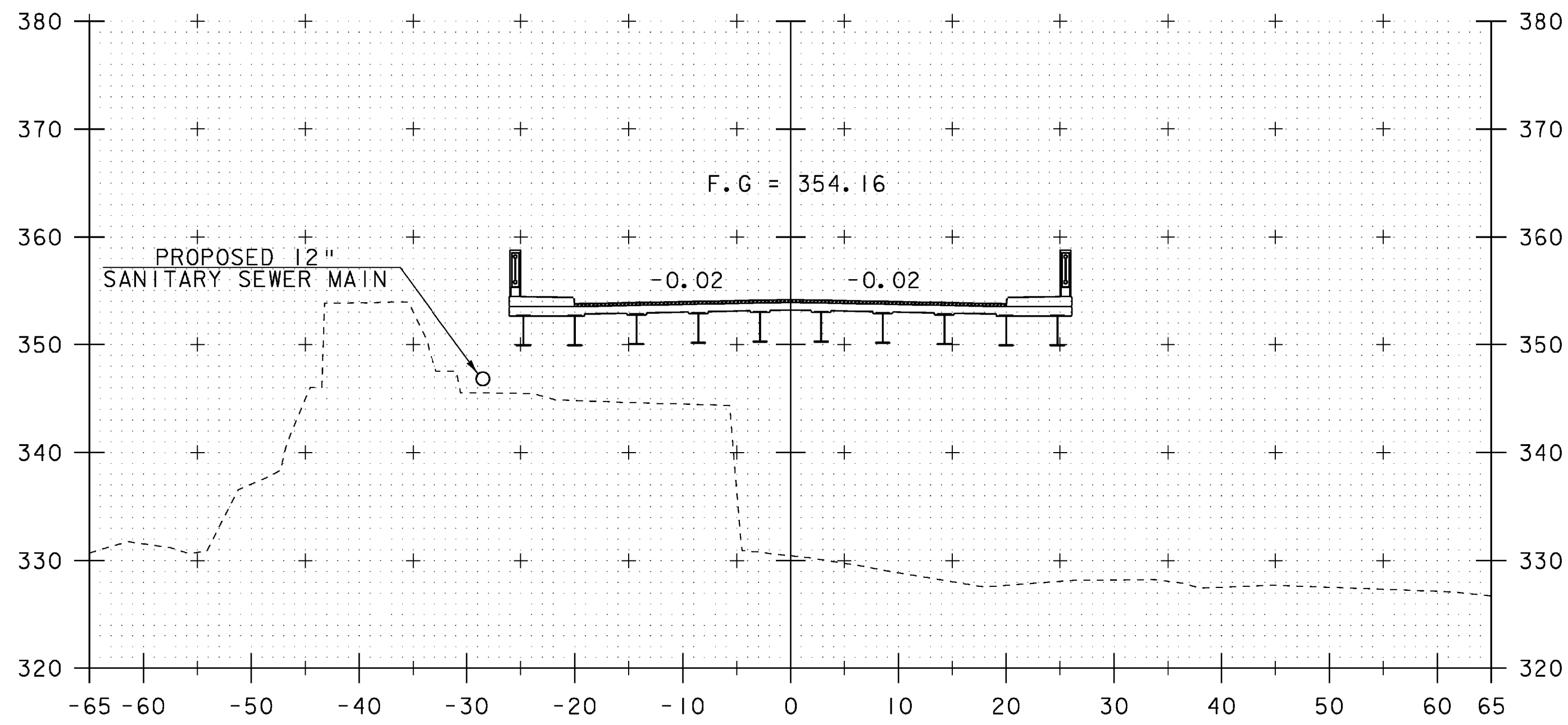
STA. 257+25 TO STA. 257+93



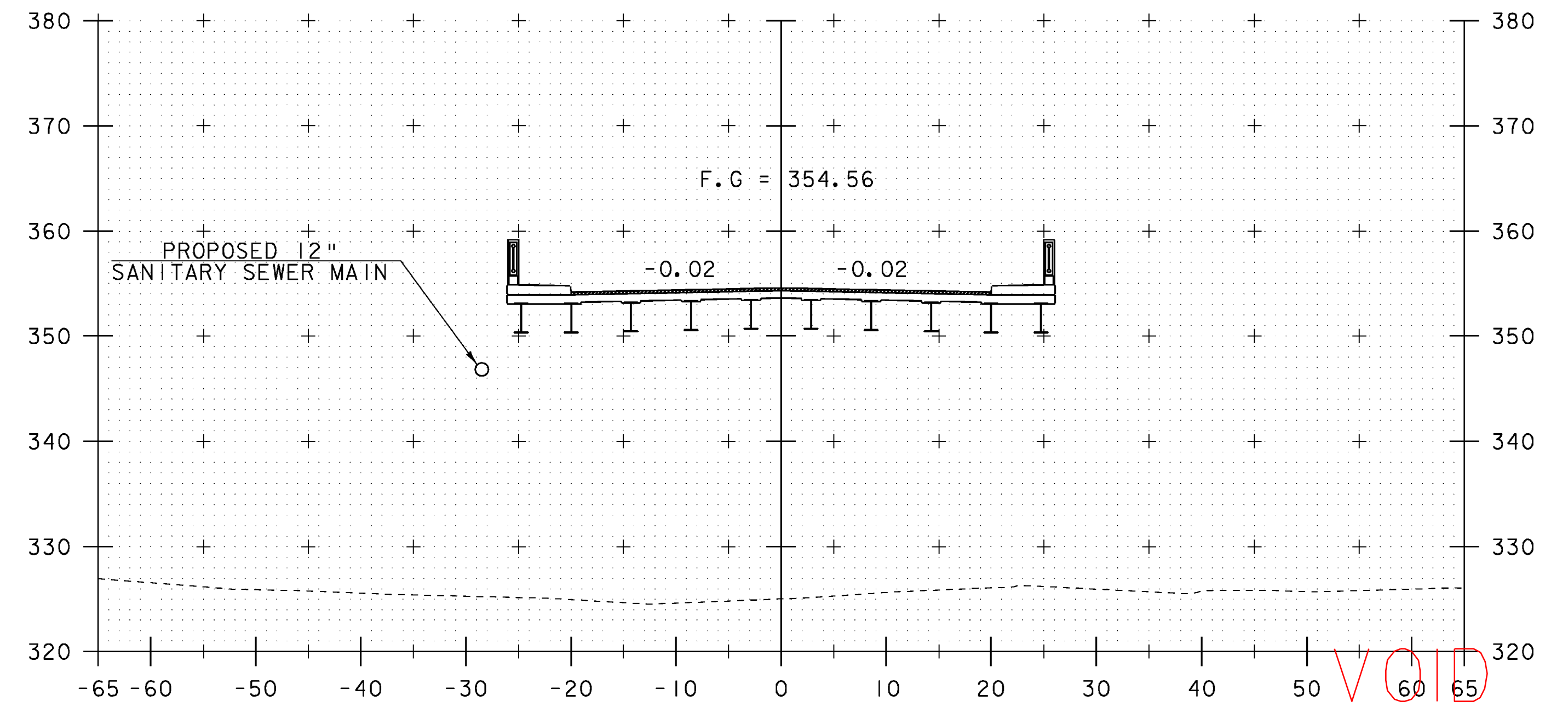
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258+72



258+00

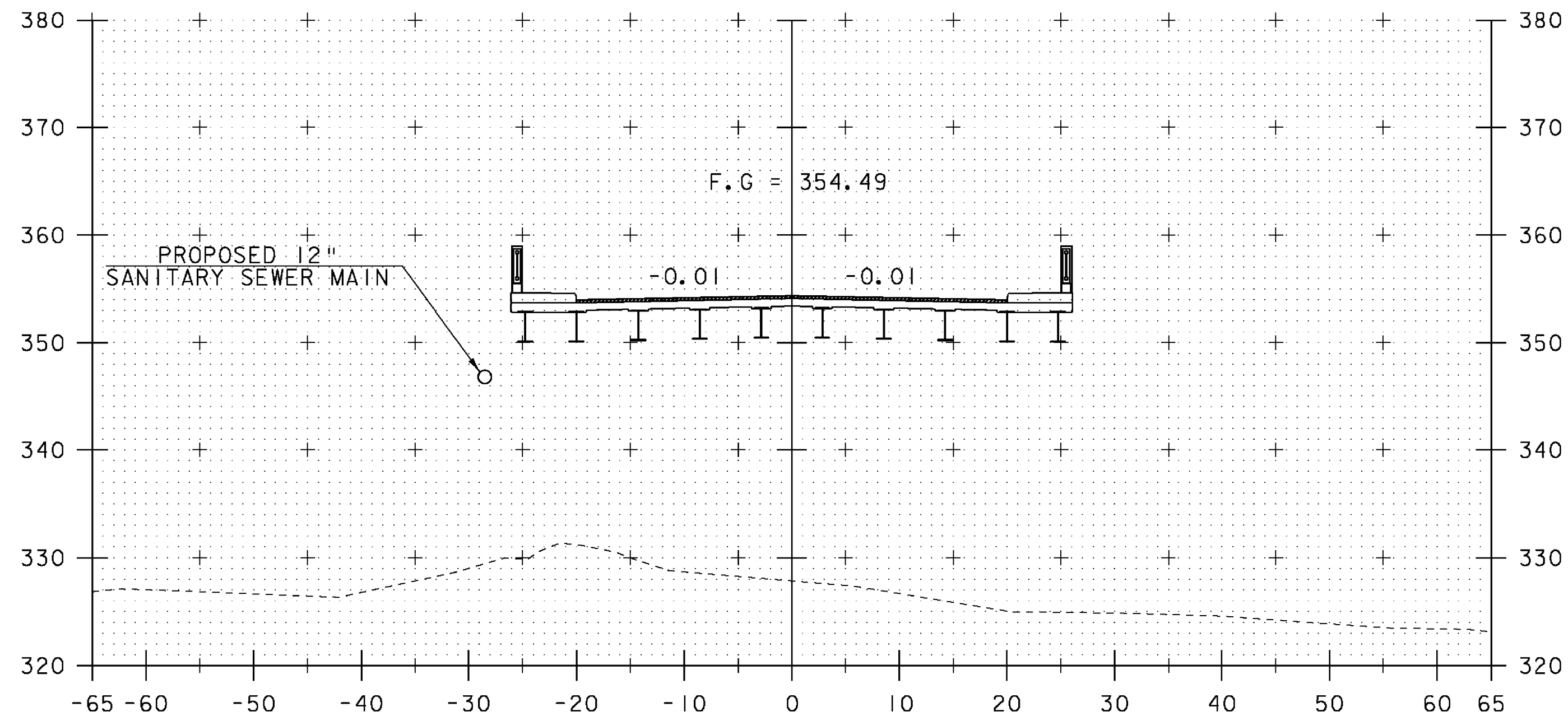


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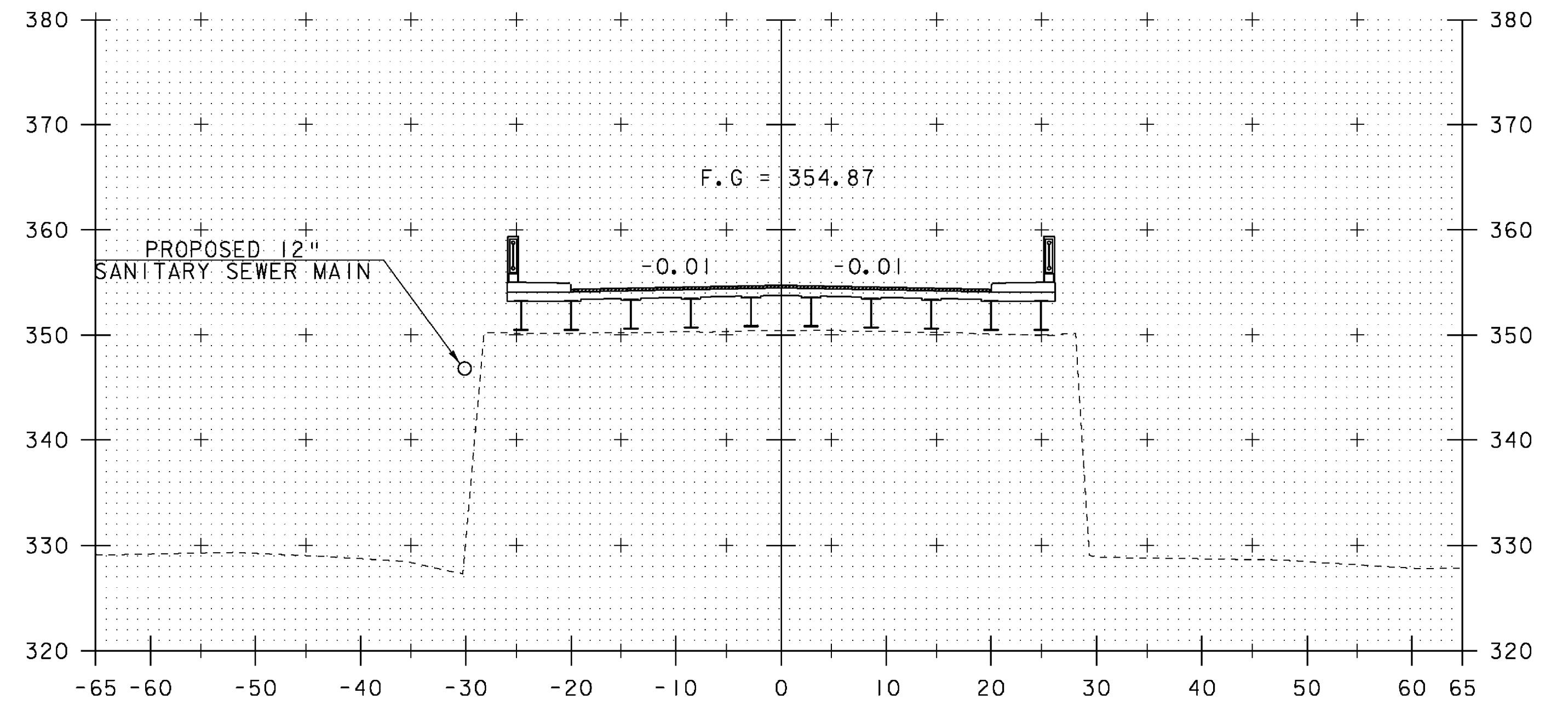
VOID
SEE REVISED
SHEET

STA. 258+00 TO STA. 258+72

PROJECT NAME:	SPRINGFIELD	FILE NAME:	06J004/str/s06J004xsl.dgn	PLOT DATE:	04-MAR-2009
PROJECT NUMBER:	BHF 016-2(14)	PROJECT LEADER:	R. WHITCOMB	DRAWN BY:	D. PETERSON
		DESIGNED BY:	D. PETERSON	CHECKED BY:	C. CARLSON
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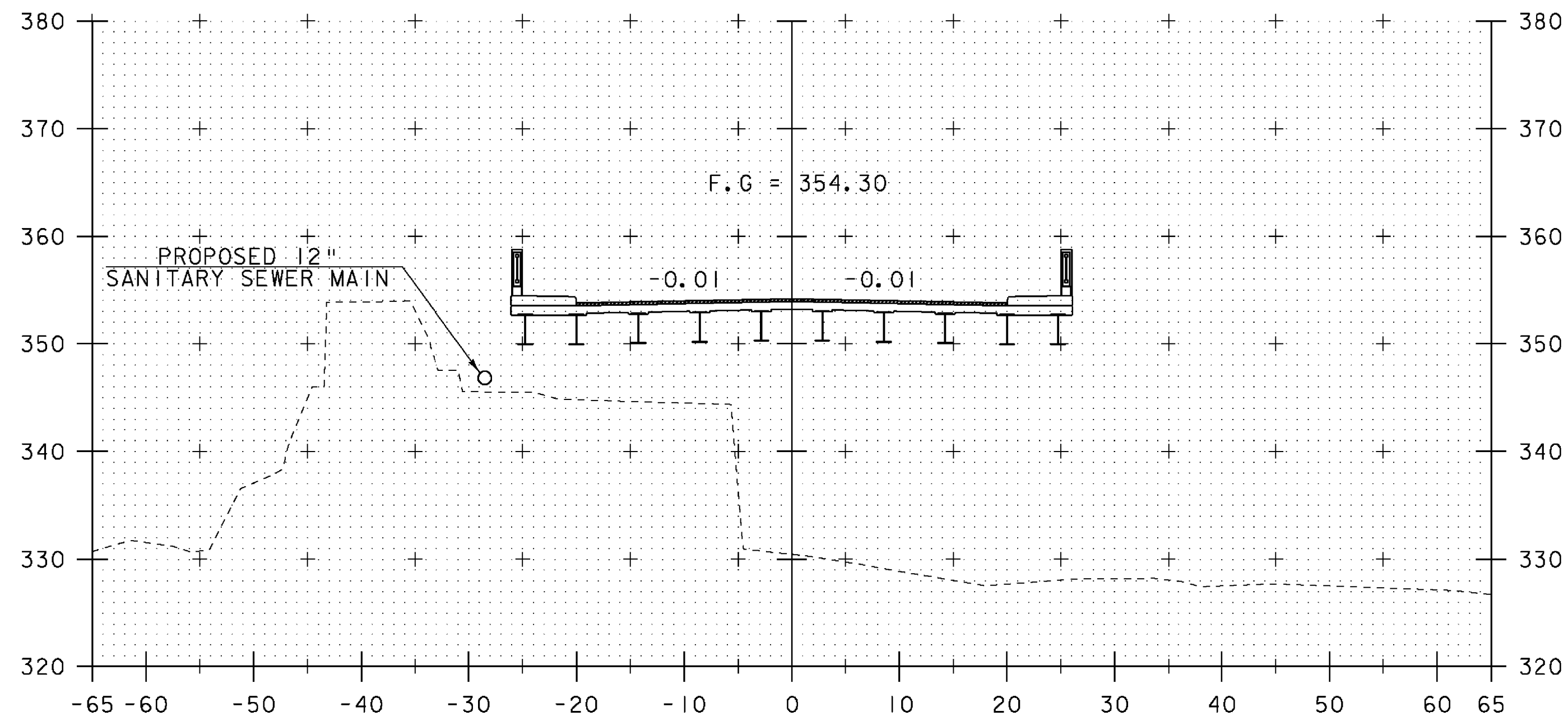


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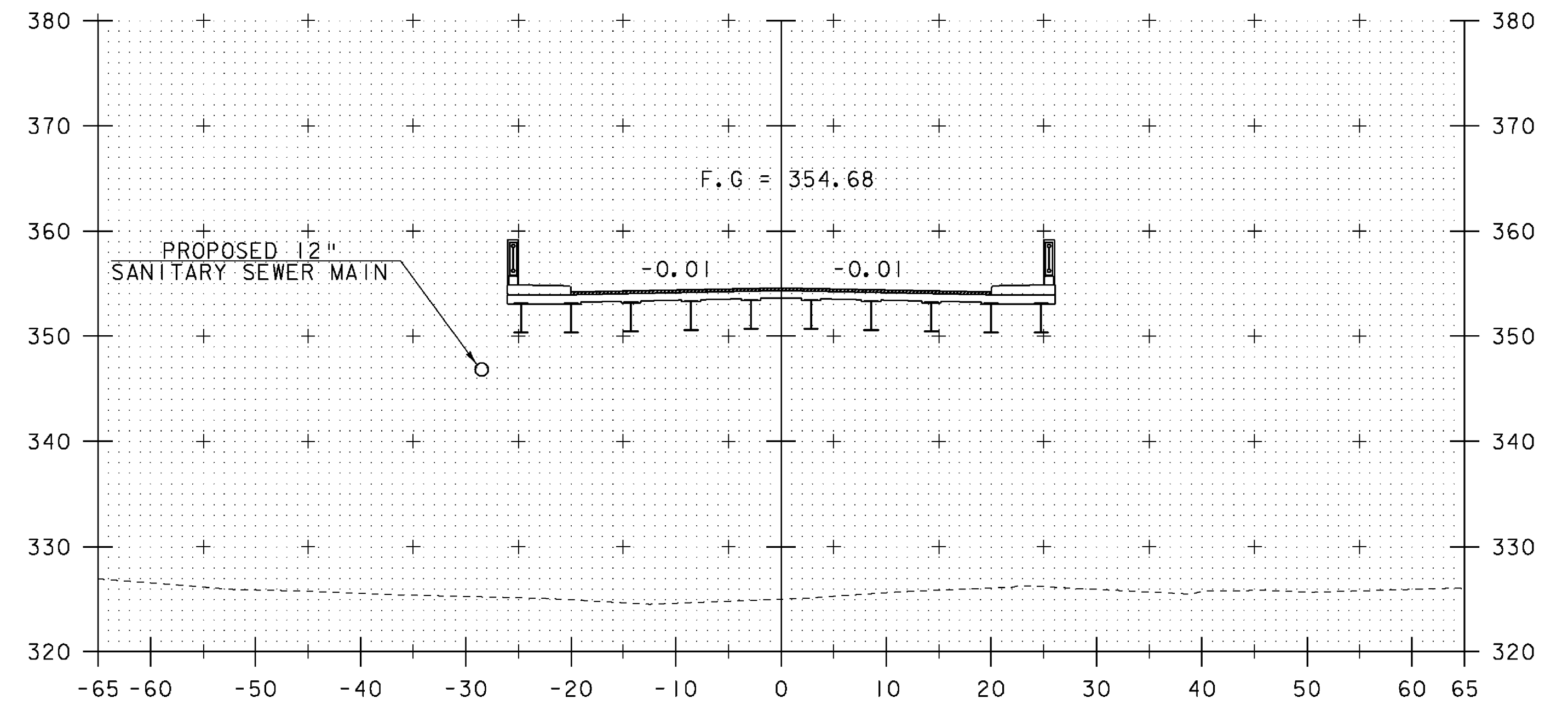


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258+72



258+00

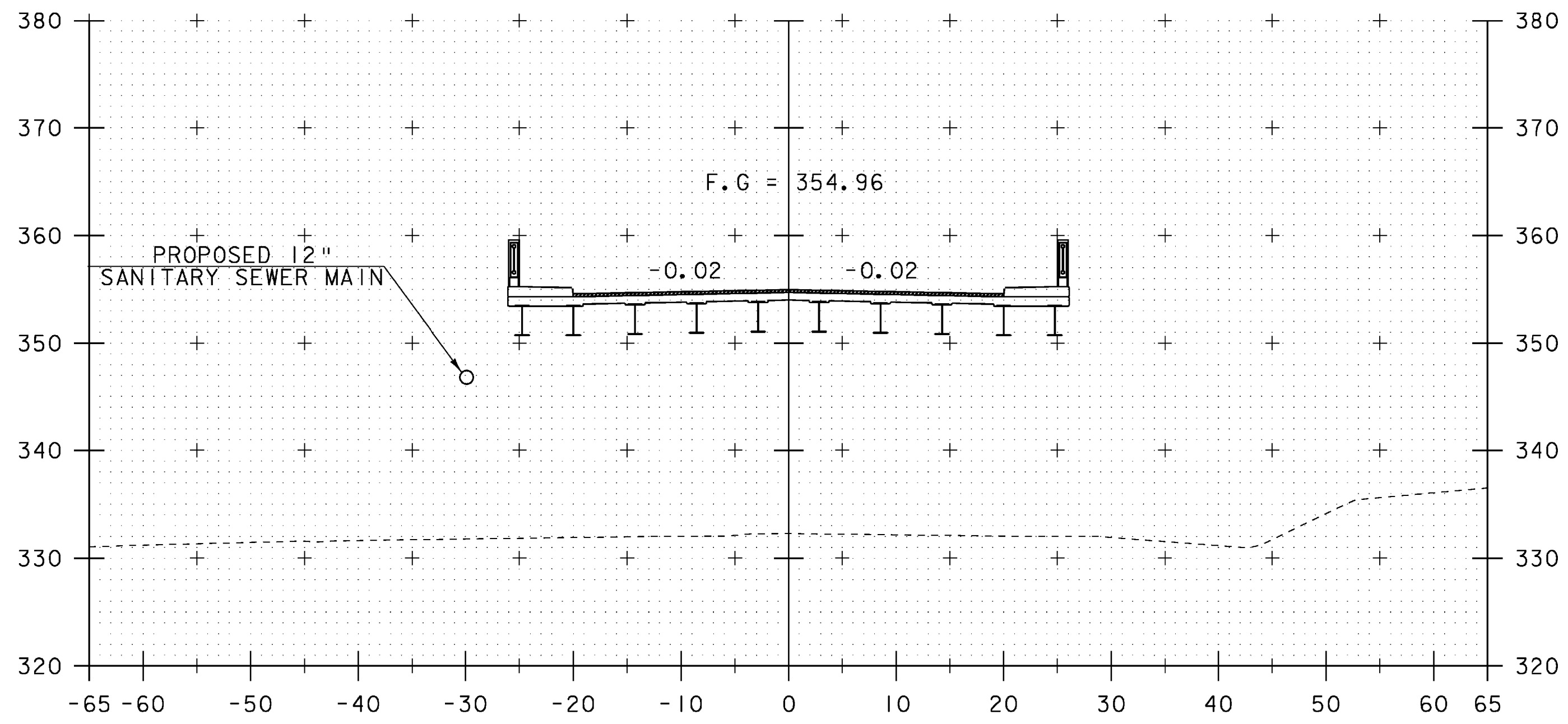


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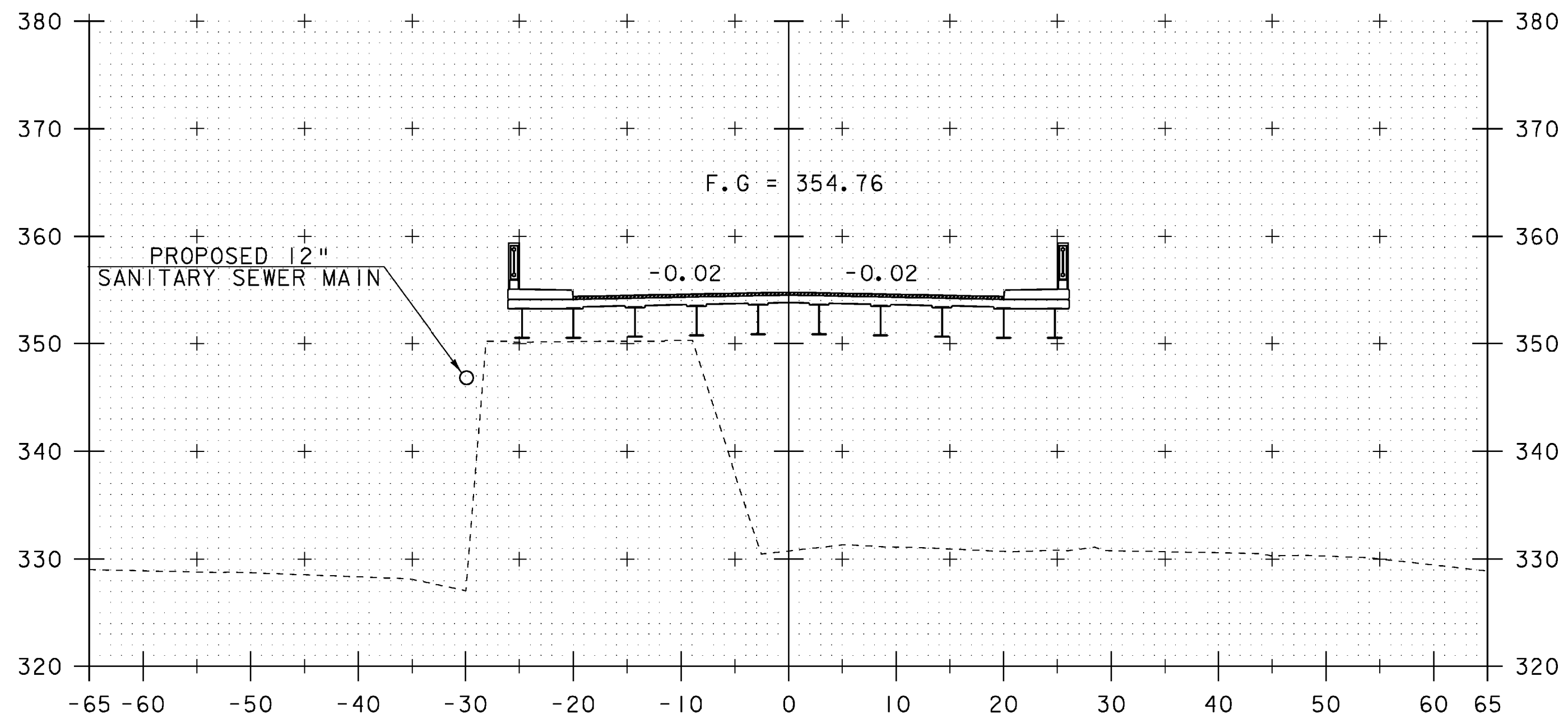
REV.	BY	DATE	REVISION
△	LBB	5/26/09	REVISED FINISH GRADE AND BANKING

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PROJECT LEADER:	R. WHITCOMB	CHECKED BY:	C. CARLSON
MAINLINE CROSS SECTIONS (3)		SHEET 47 OF 72	

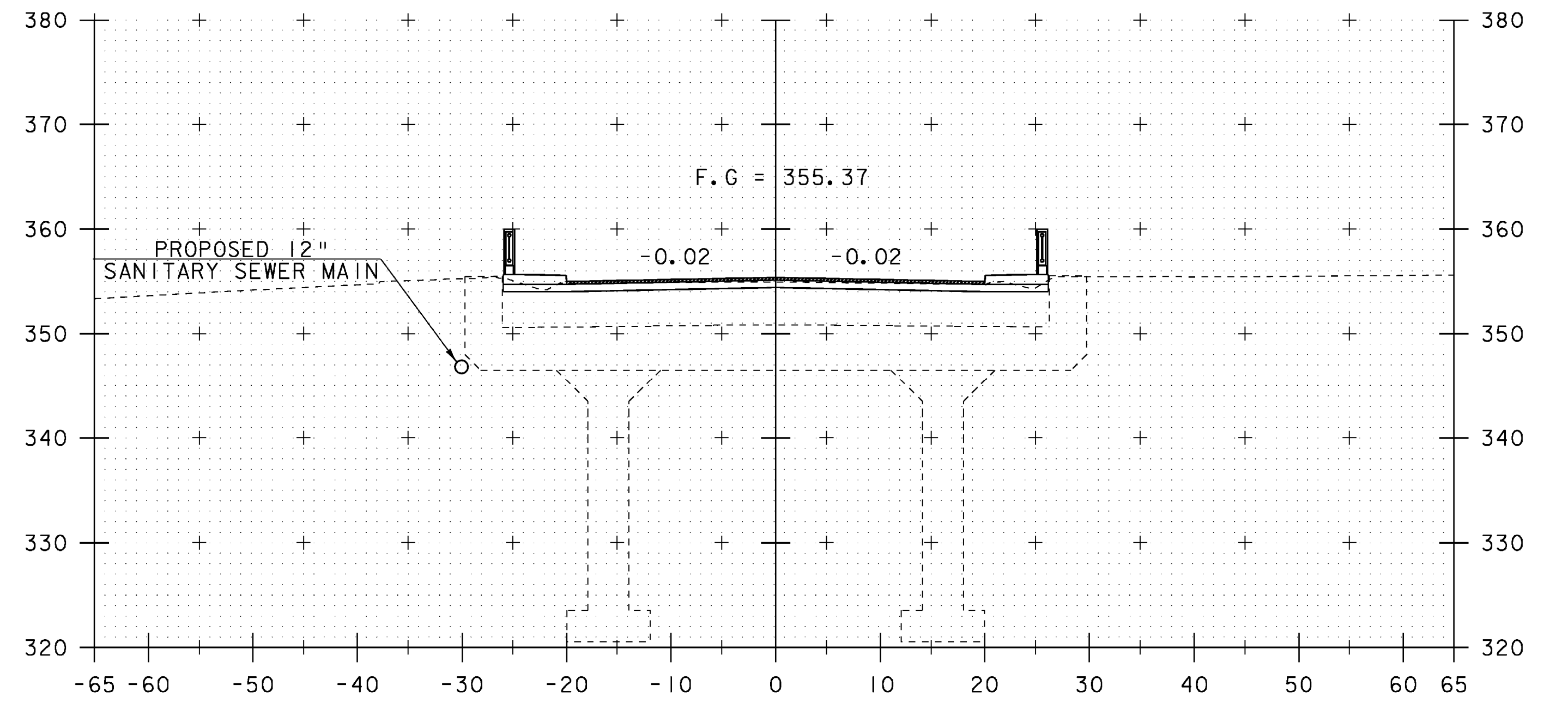
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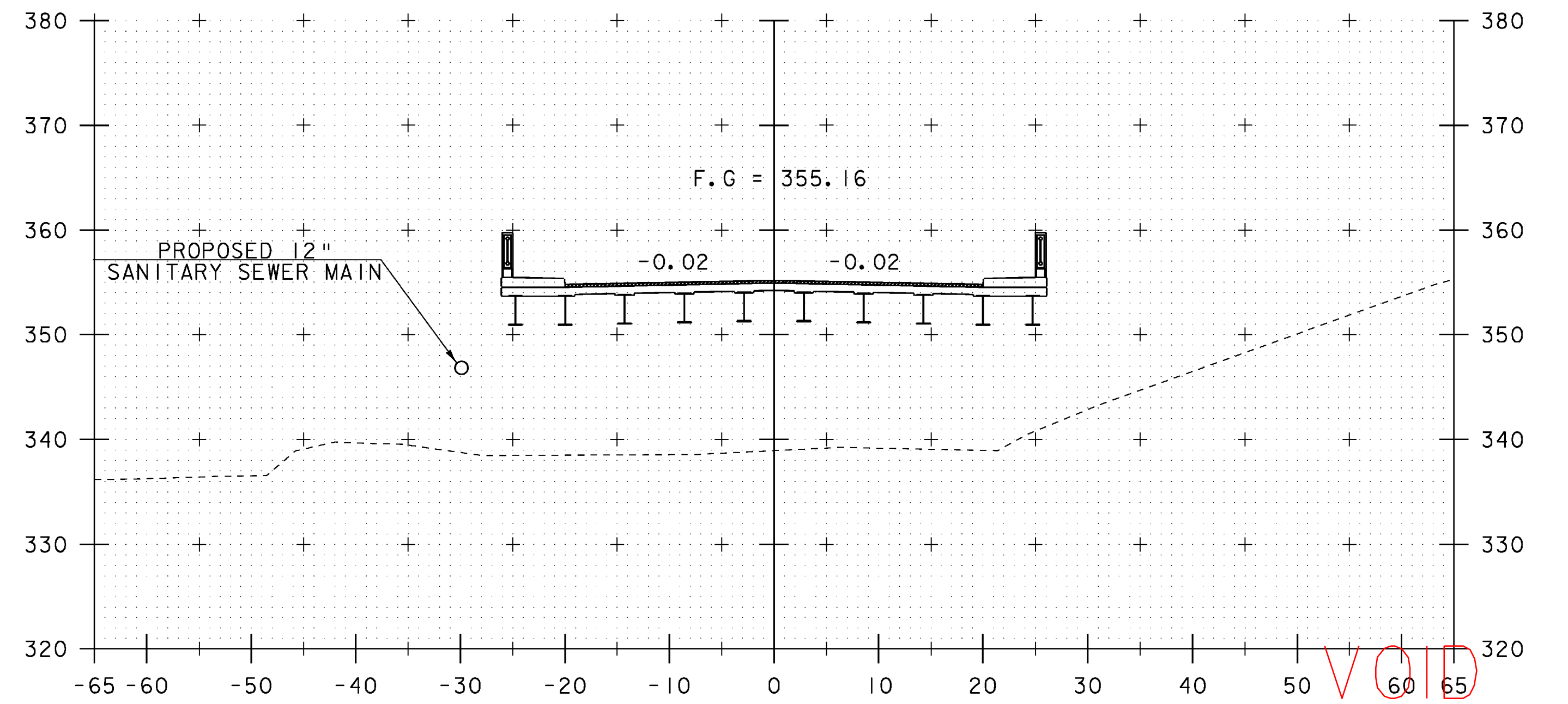


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259+51.25

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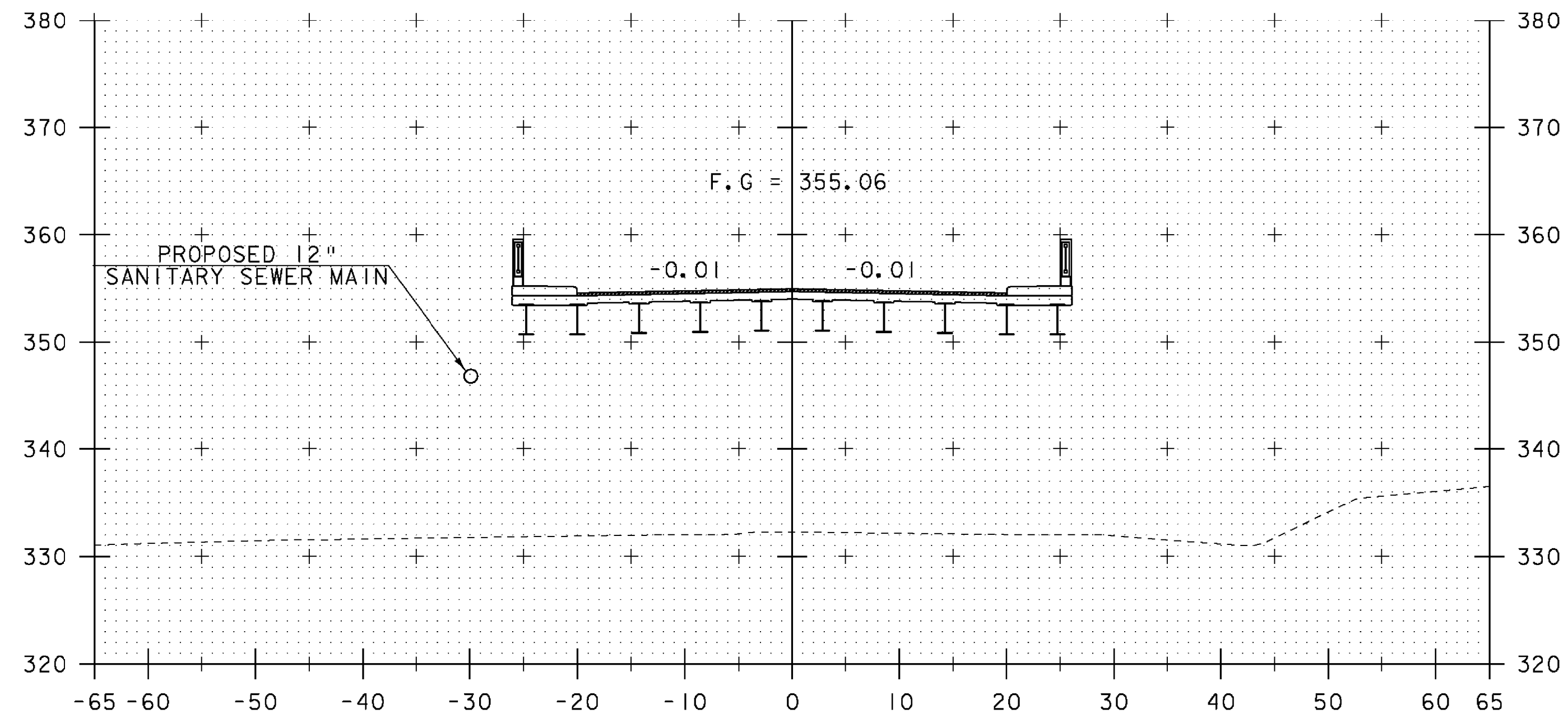


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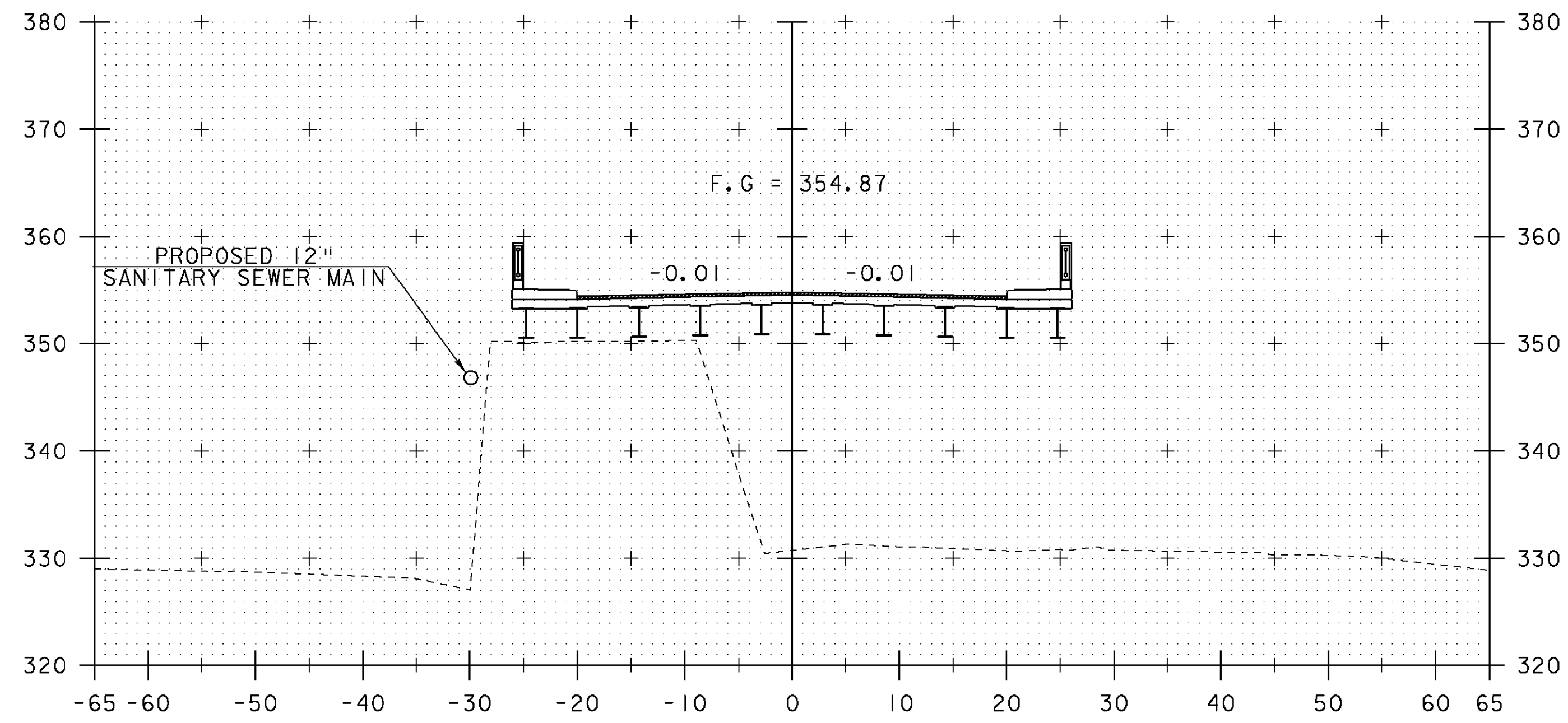
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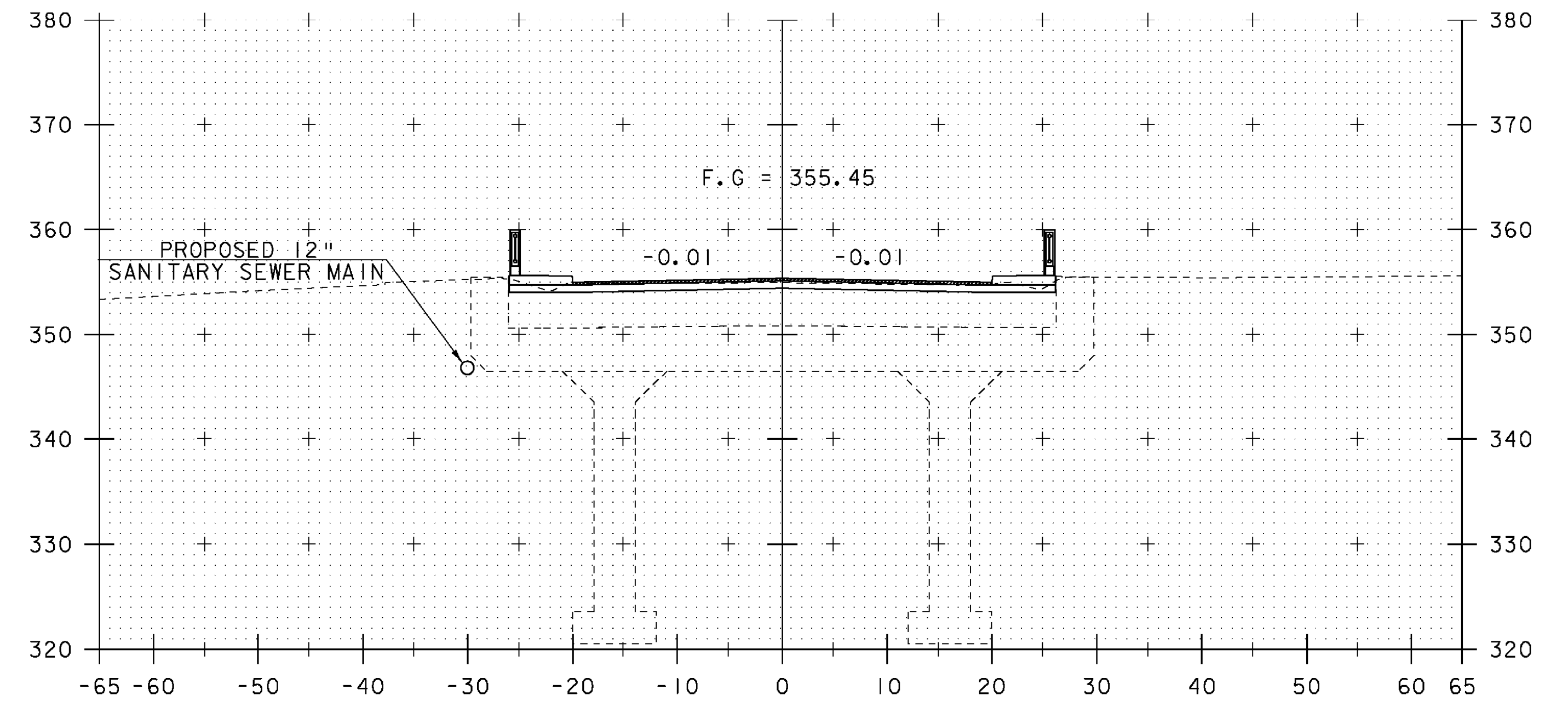
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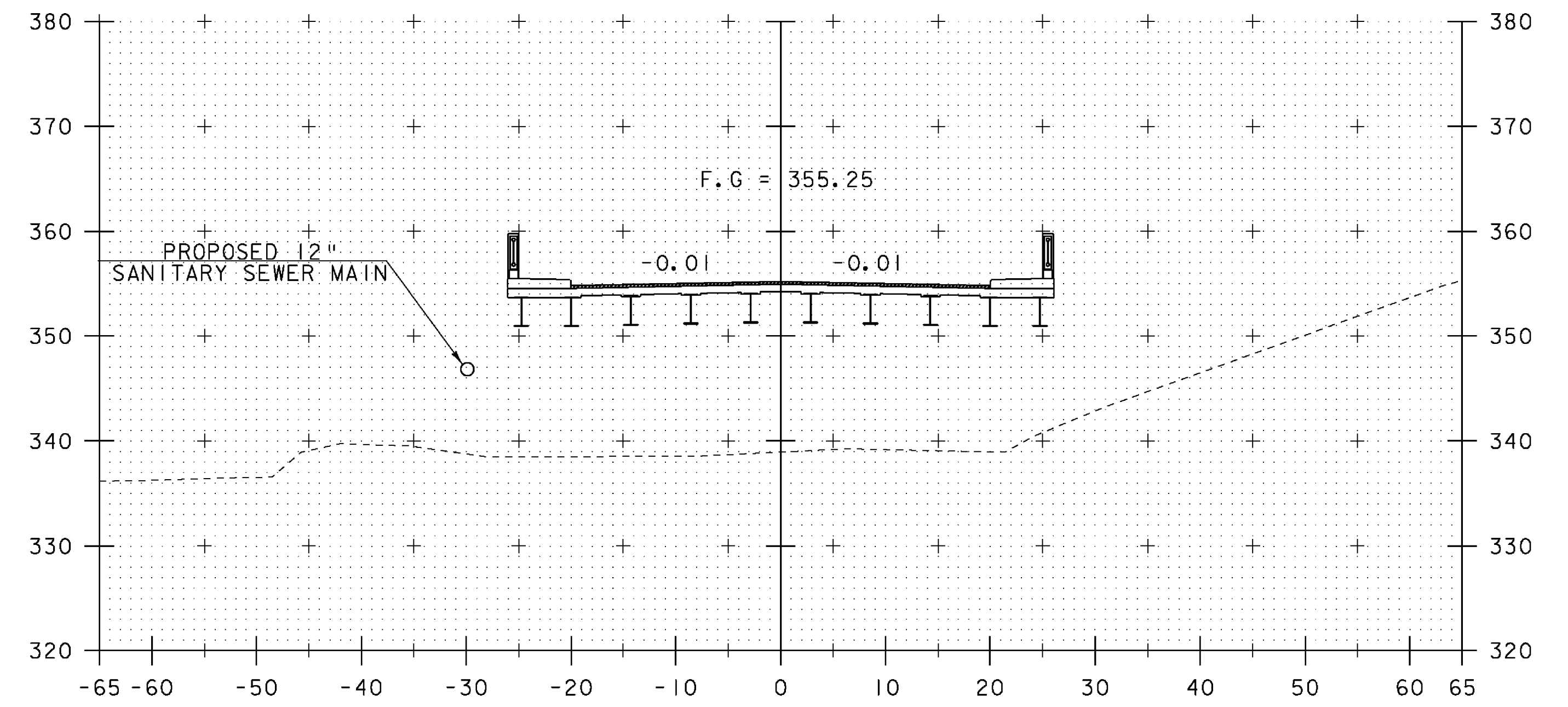


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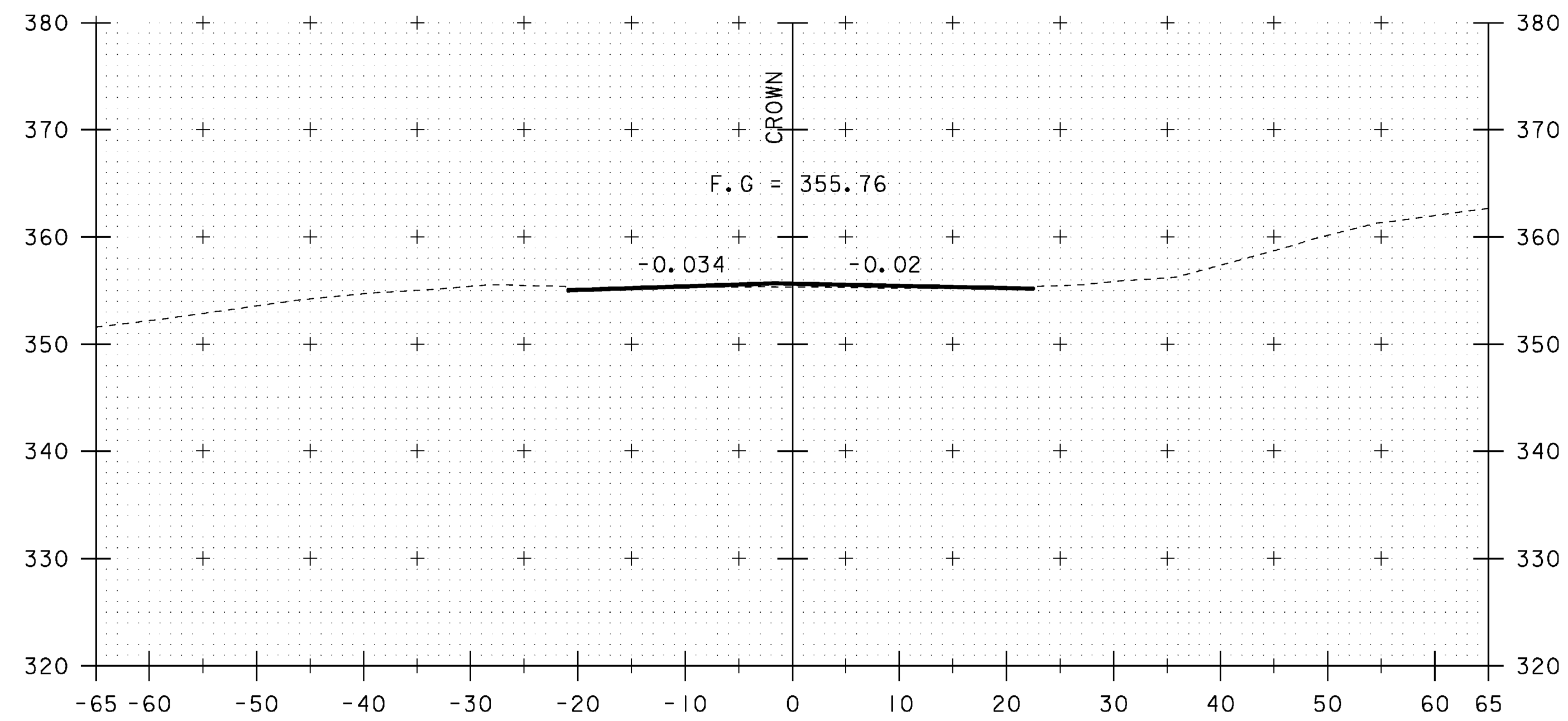


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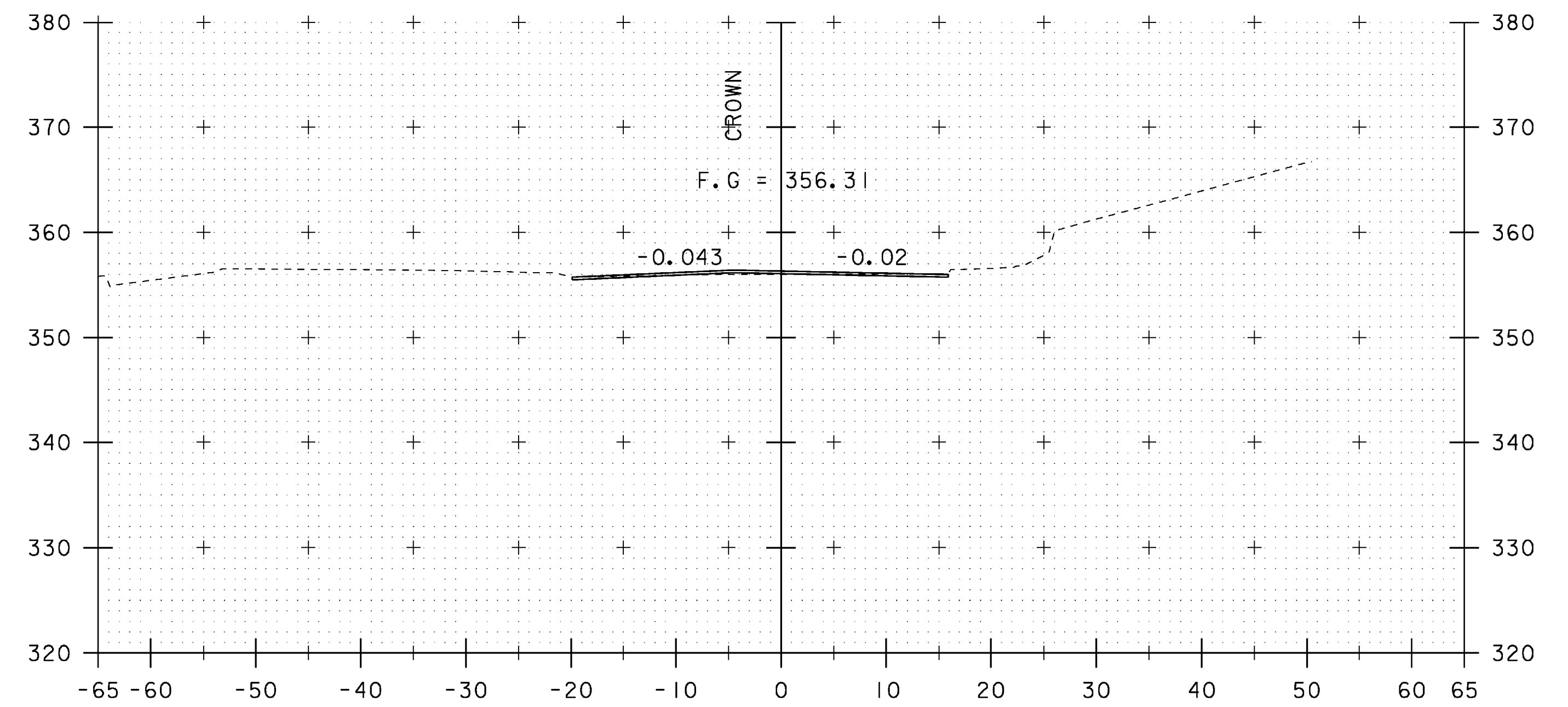
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PROJECT LEADER:	R. WHITCOMB	SHEET	48 OF 72
DESIGNED BY:	D. PETERSON		

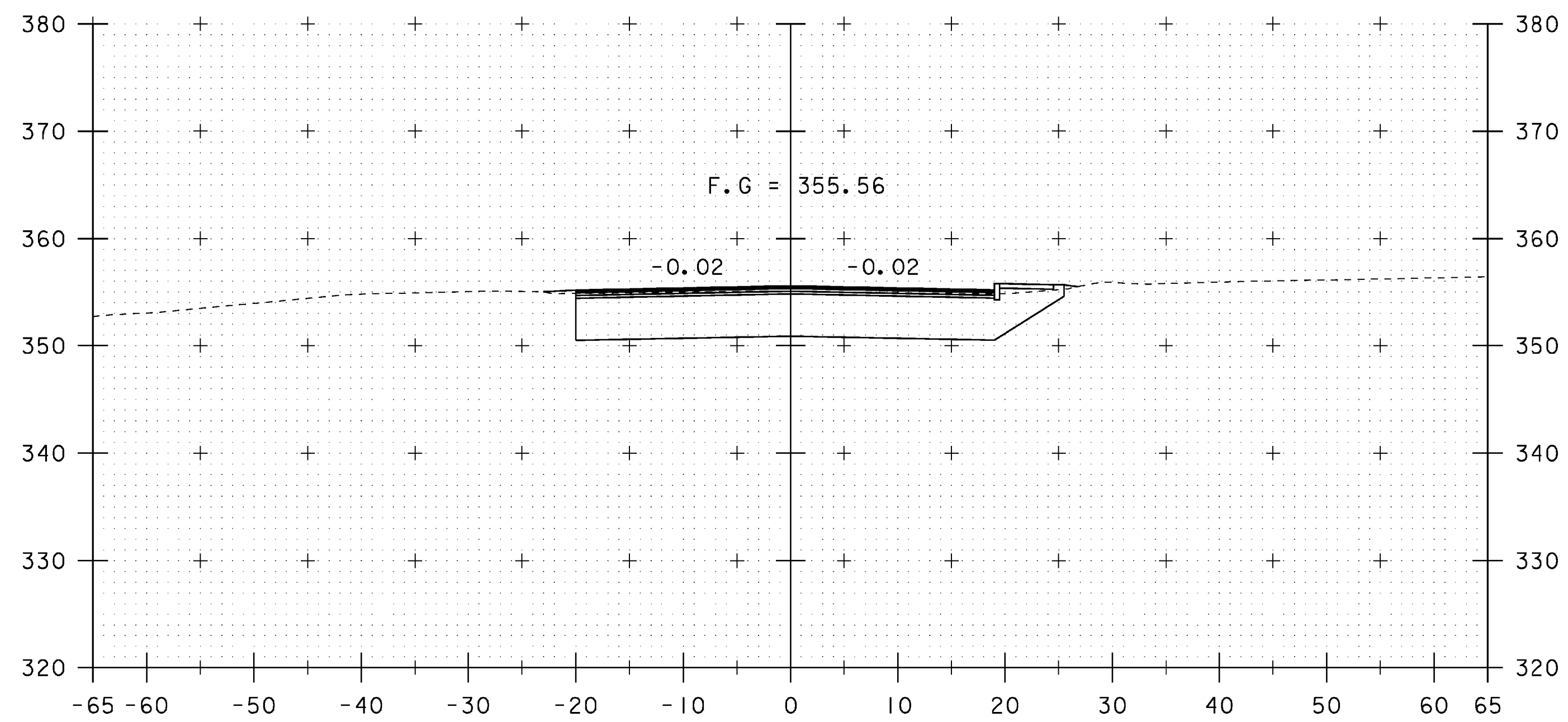
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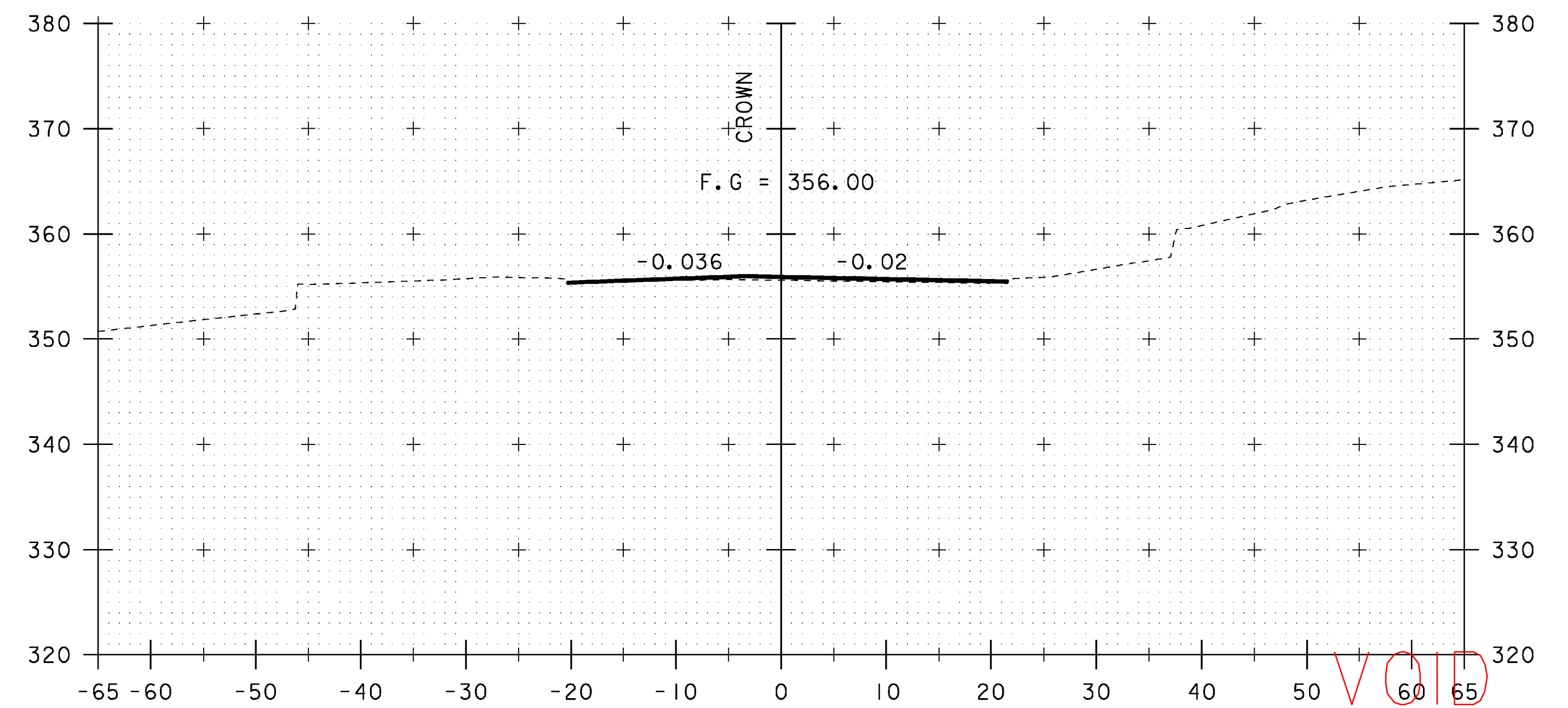
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260+50



259+75

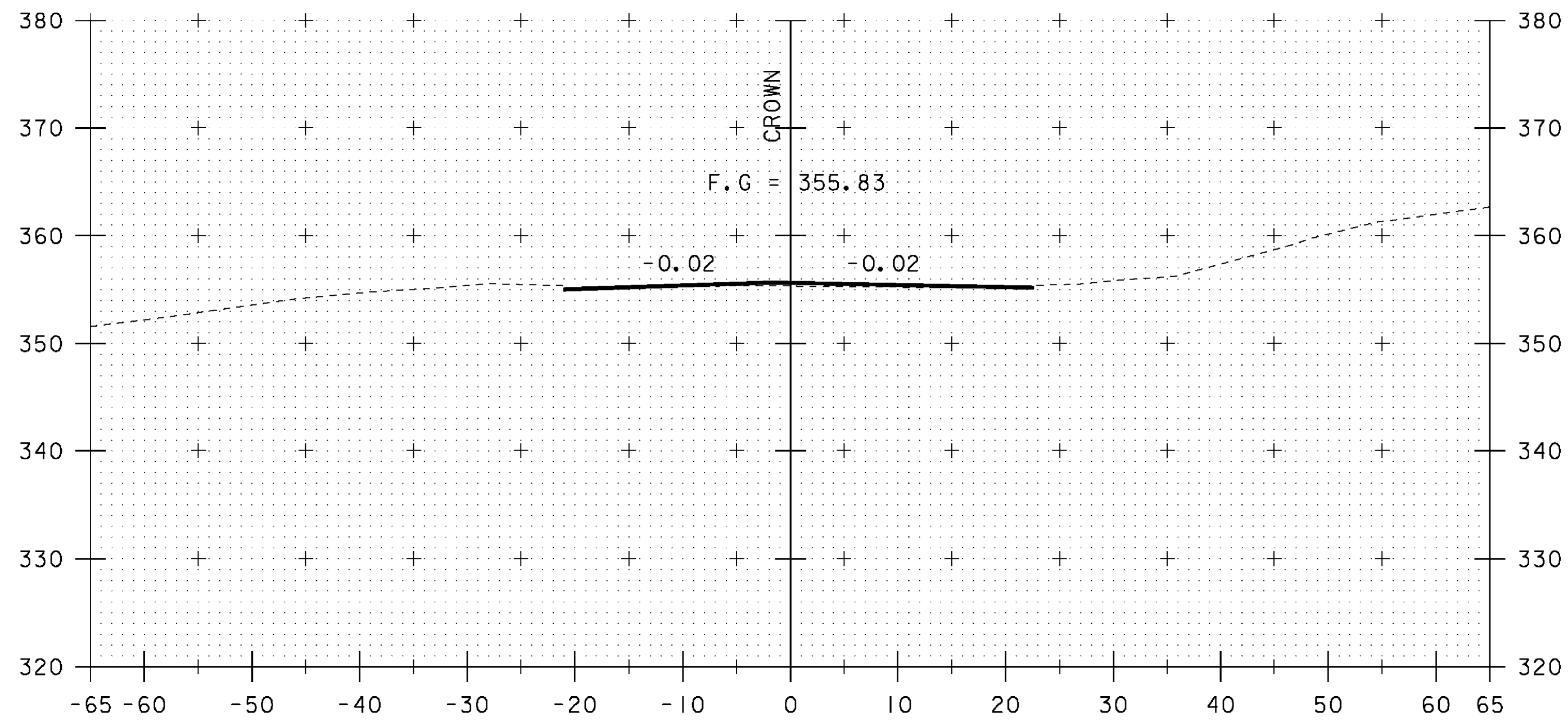


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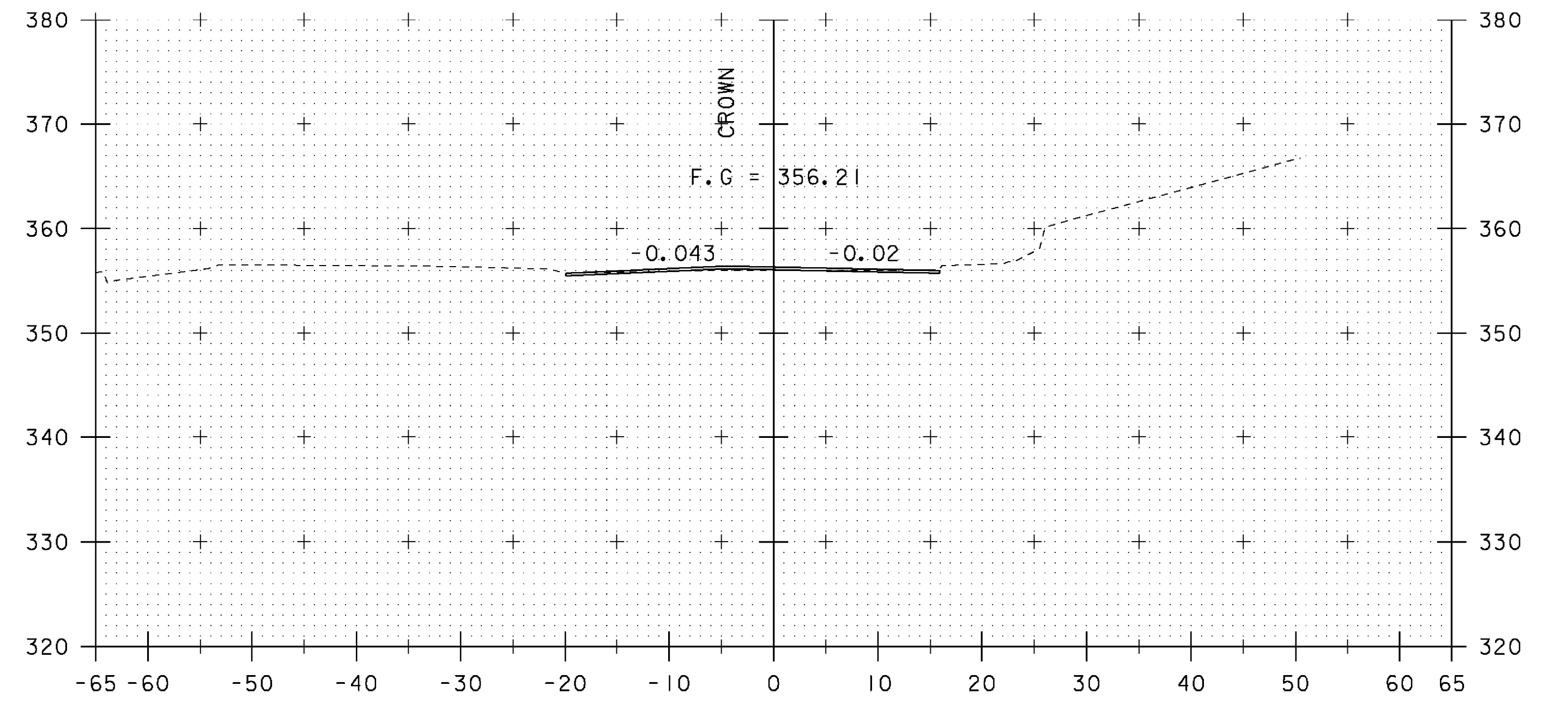
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STA. 259+75 TO STA. 260+50

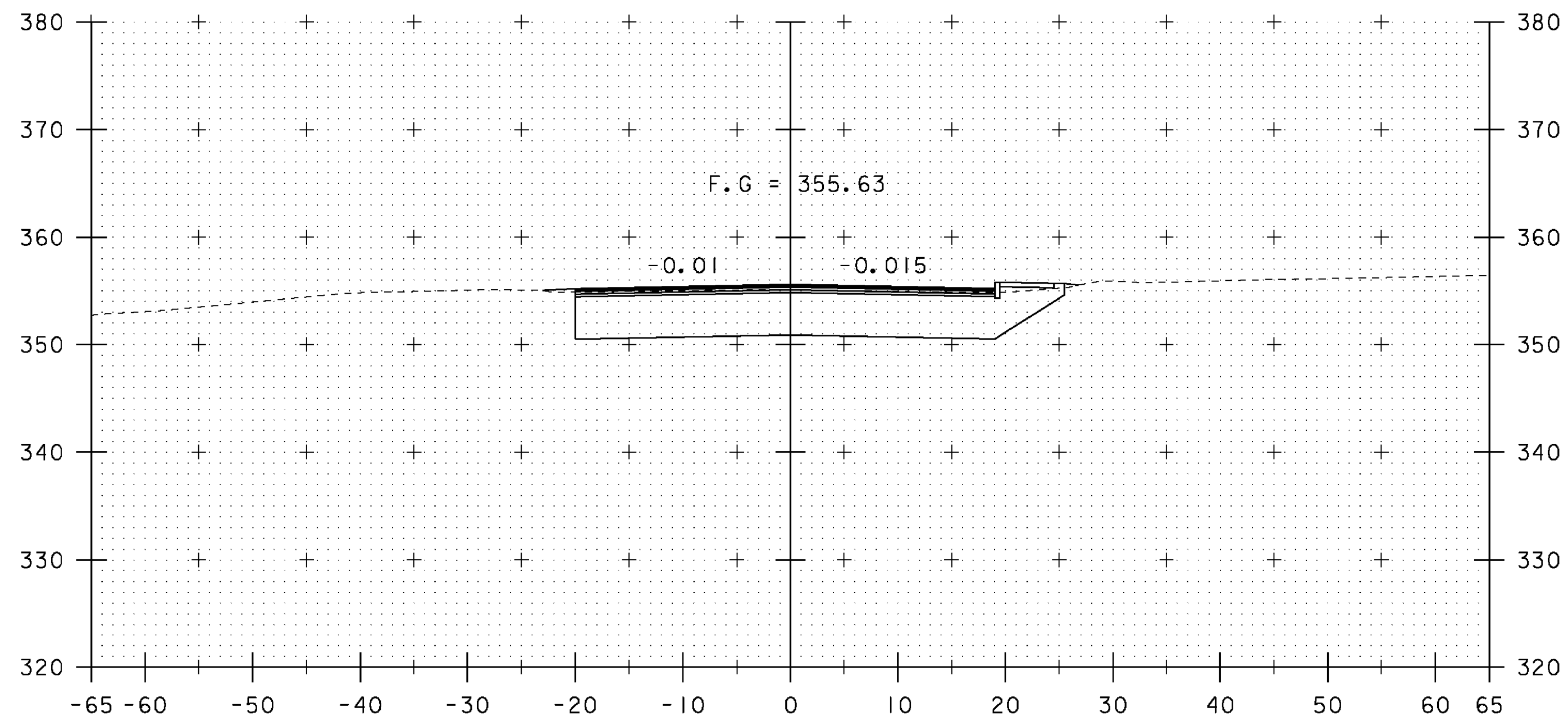
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		DESIGNED BY:	D. PETERSON	CHECKED BY:	C. CARLSON
		MAINLINE CROSS SECTIONS (5)		SHEET	49 OF 72



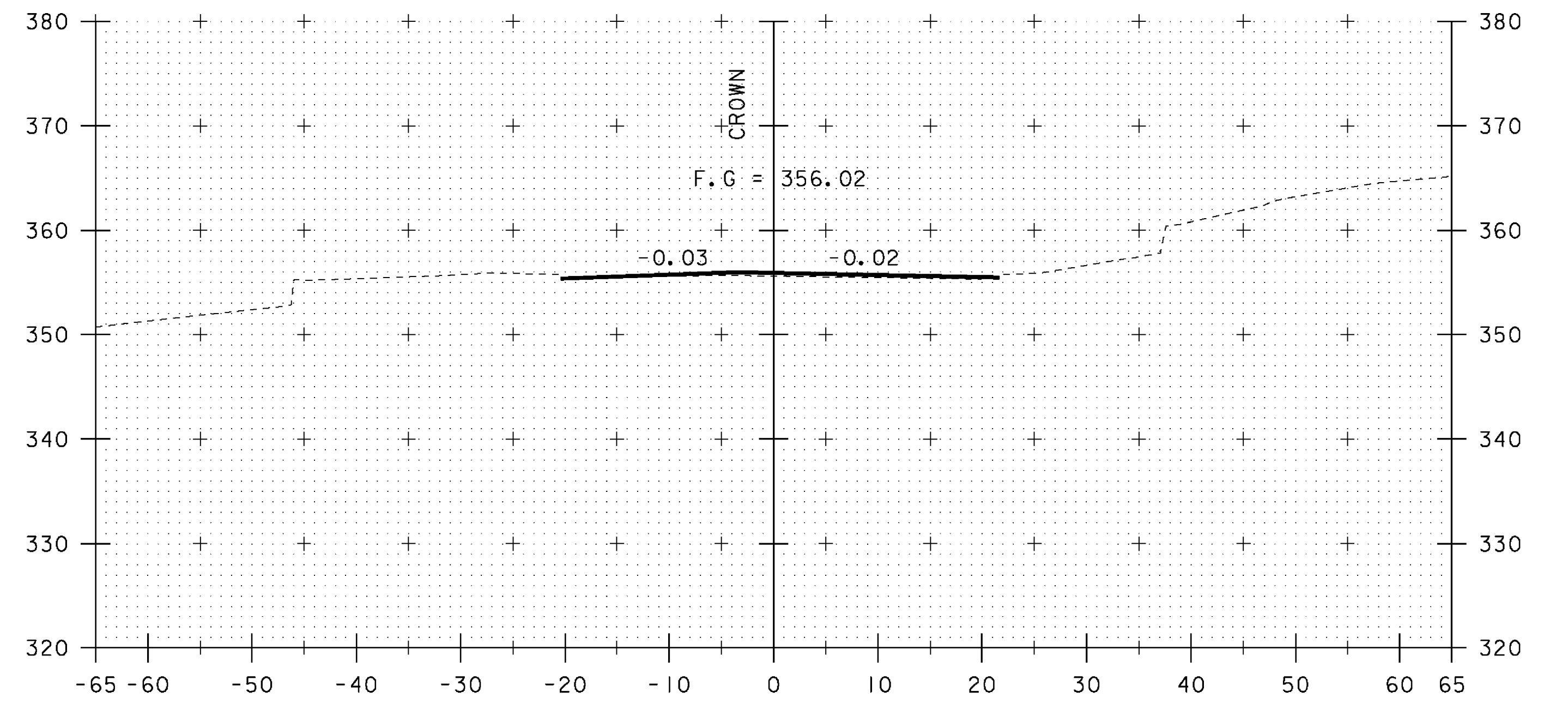
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259+75



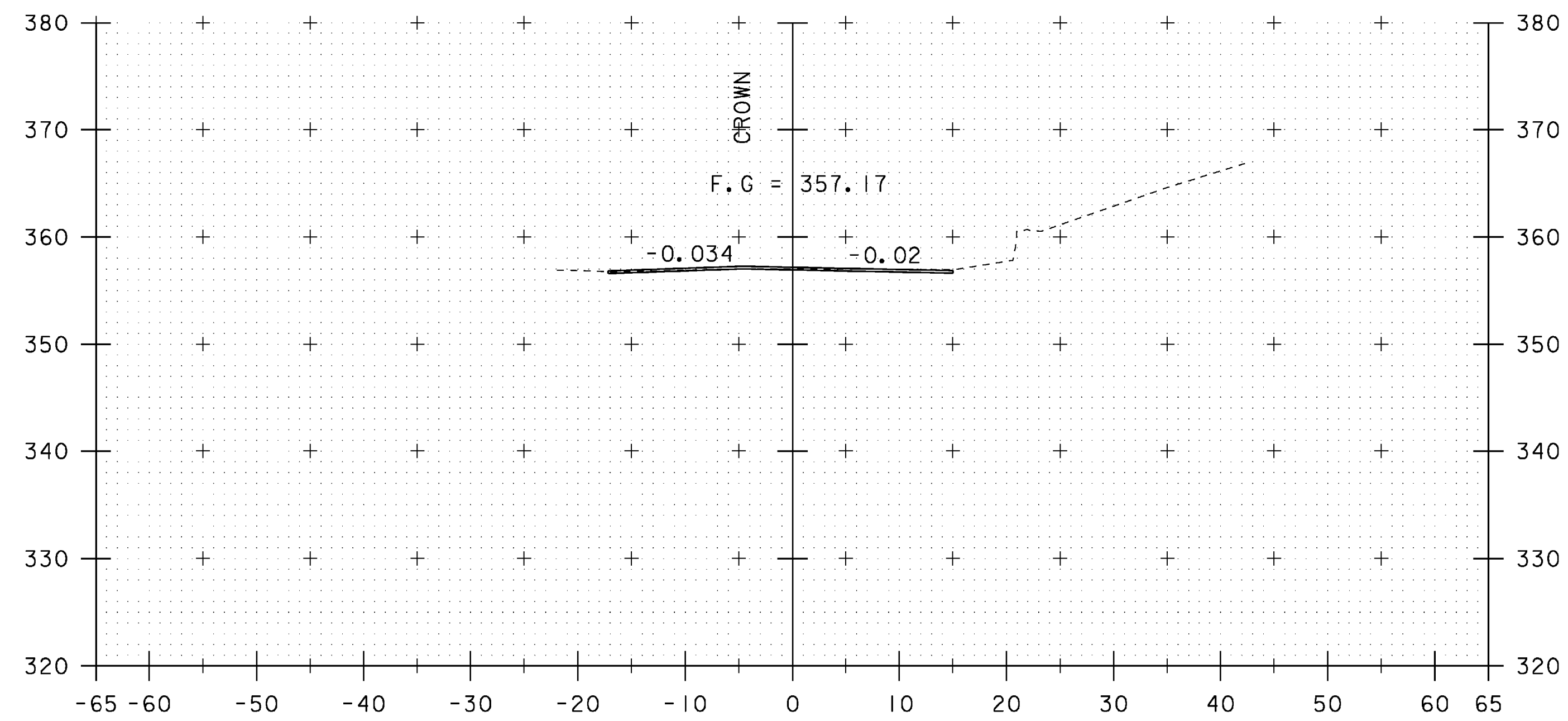
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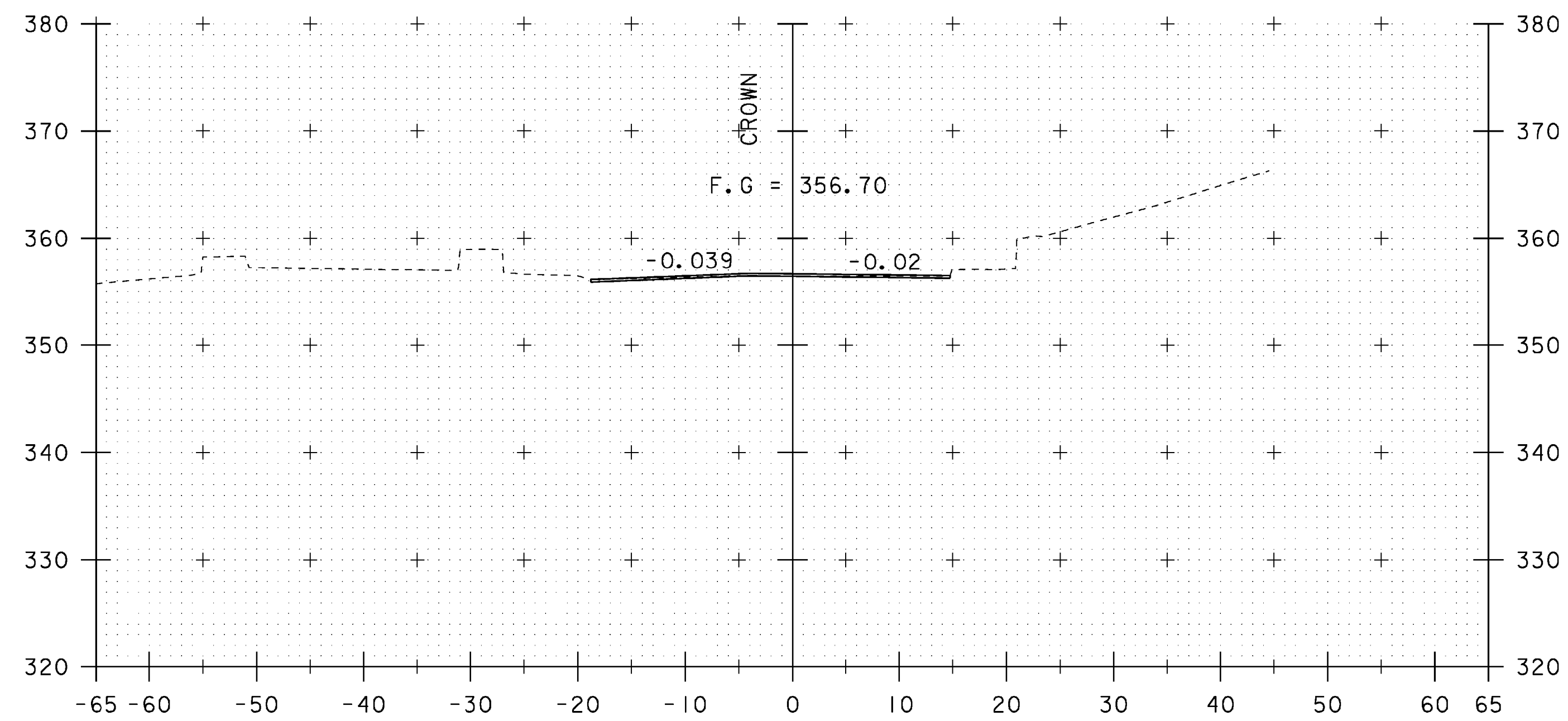
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DESIGNED BY: D. PETERSON CHECKED BY: C. CARLSON
MAINLINE CROSS SECTIONS (5) SHEET 49 OF 72

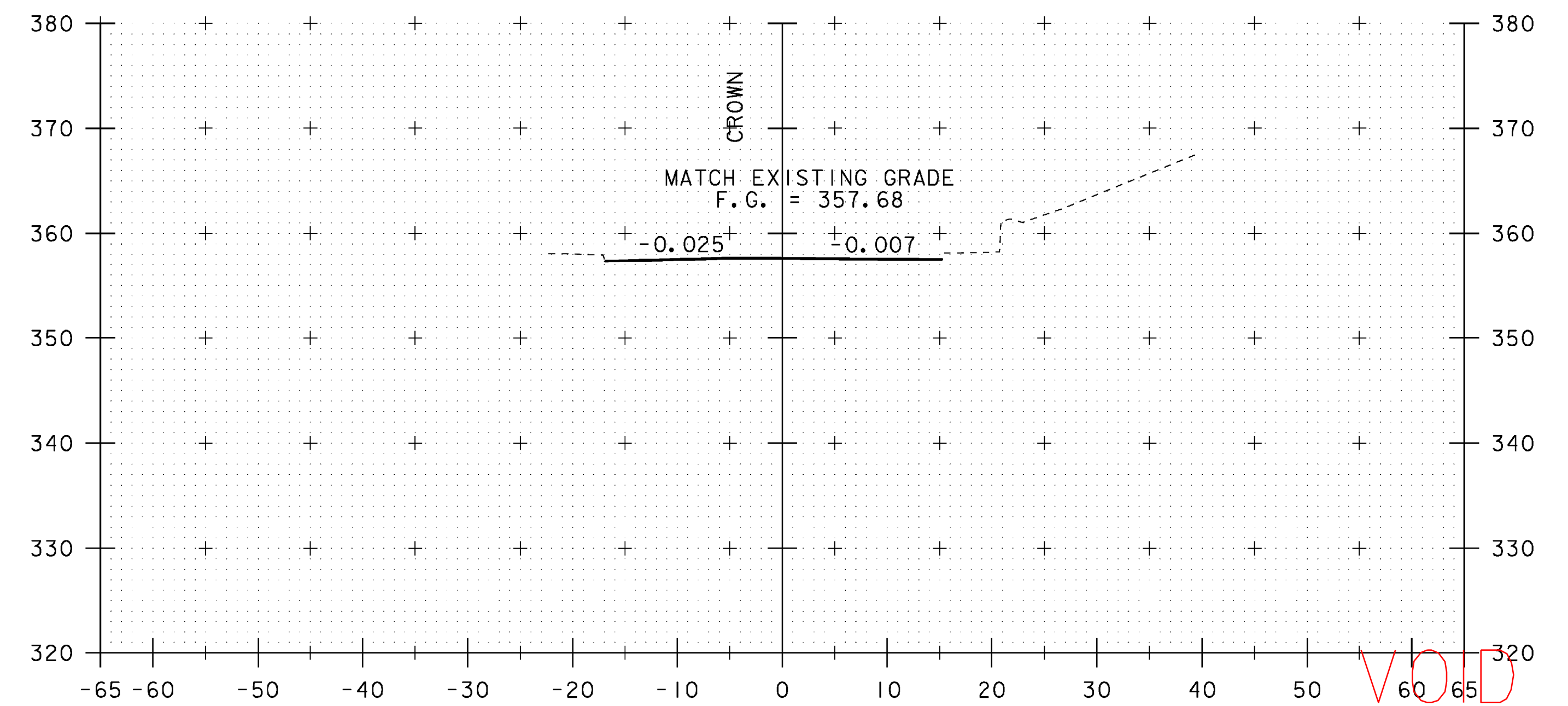
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261+00



260+75



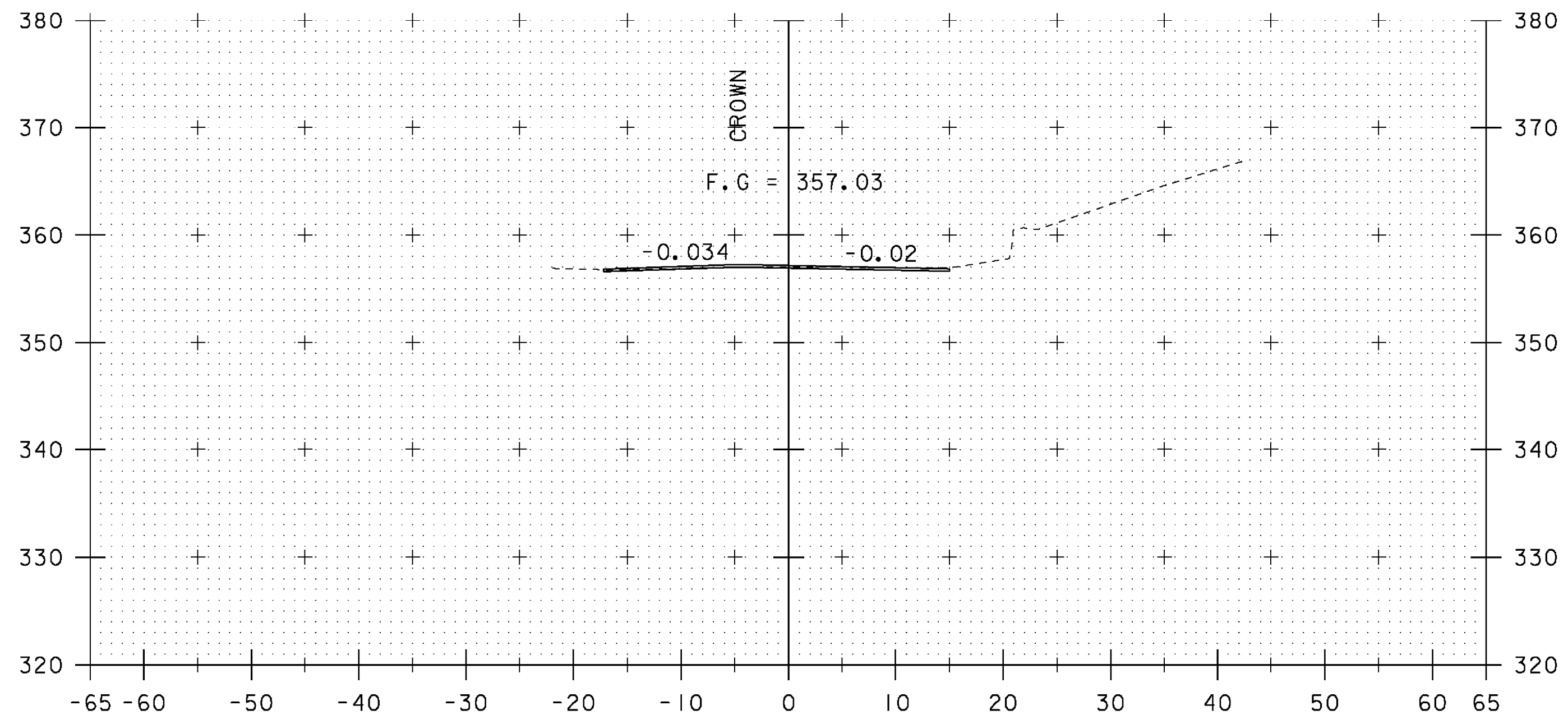
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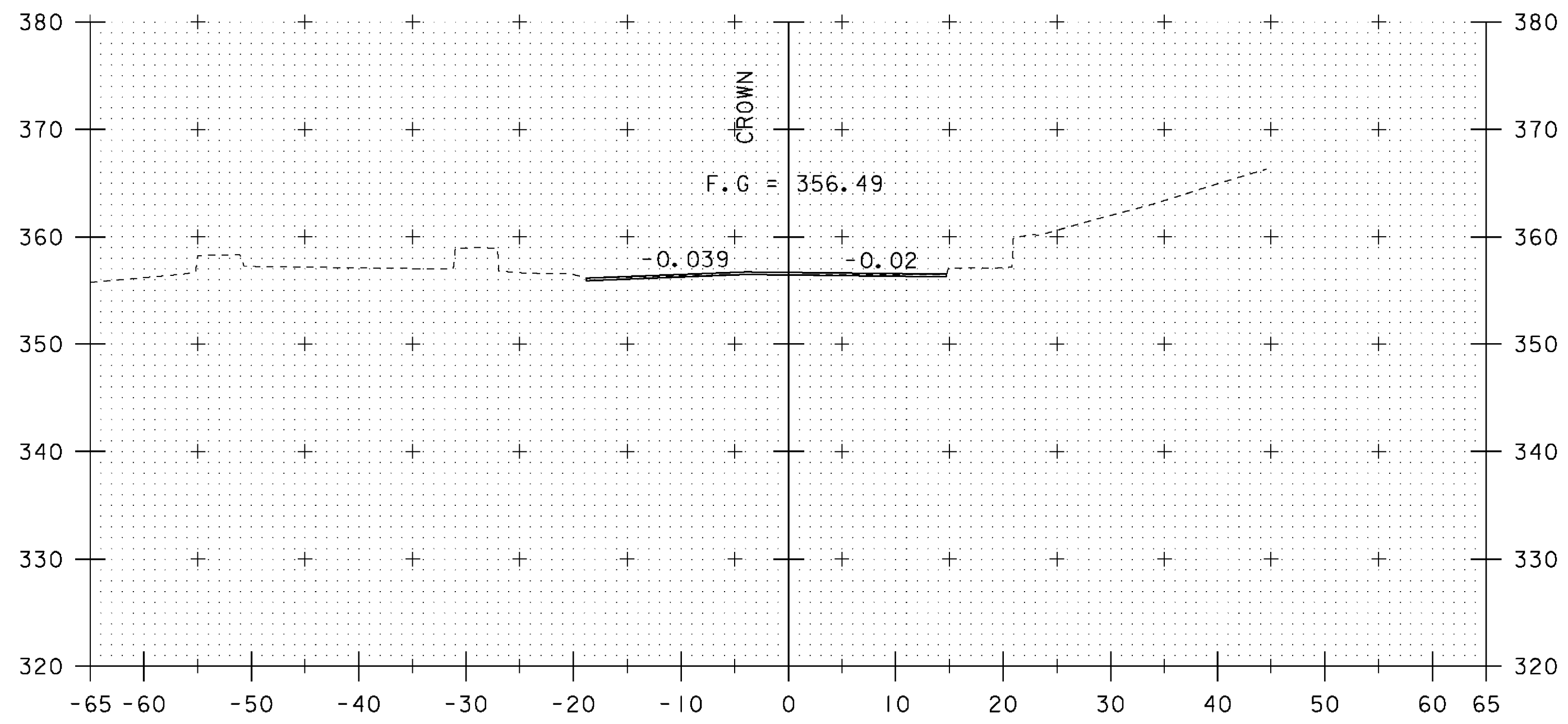
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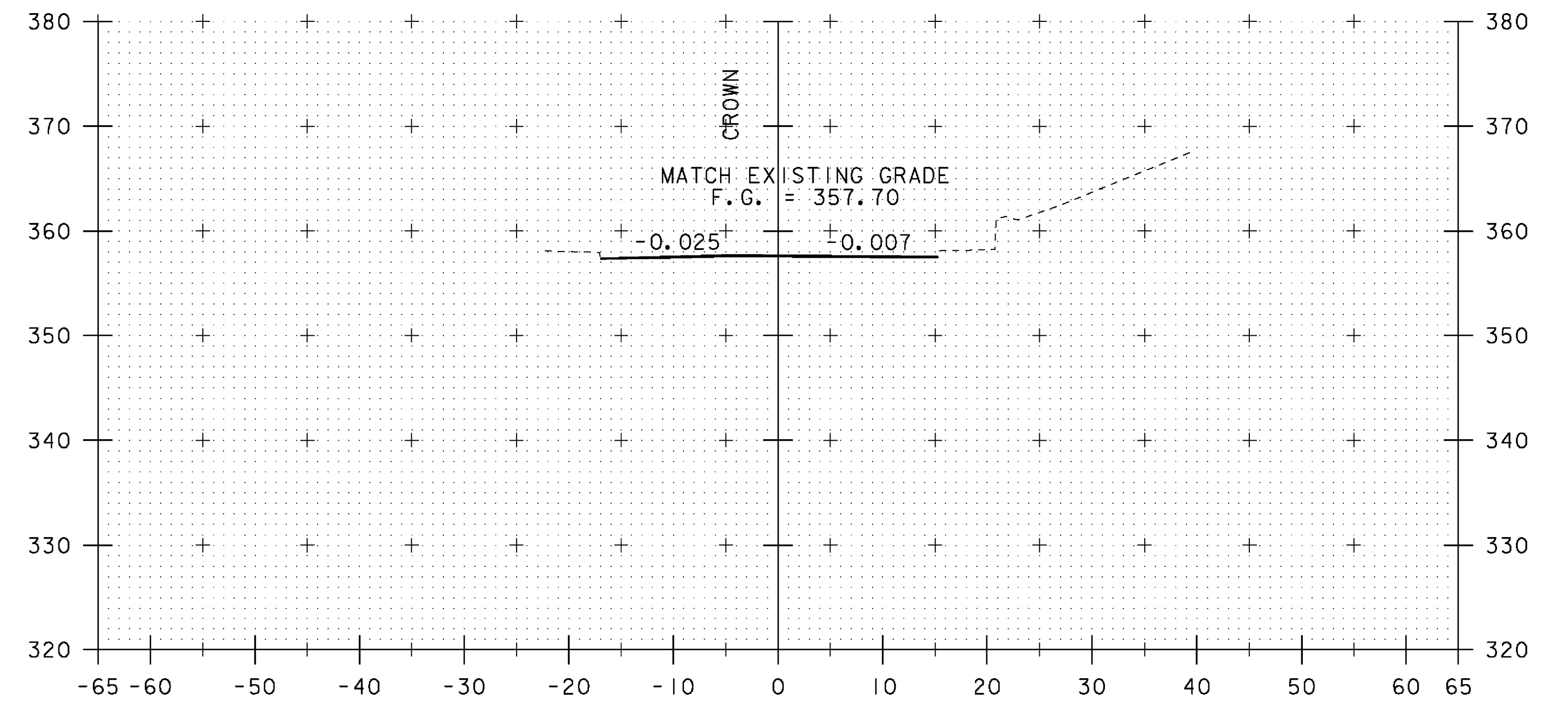
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PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: D. PETERSON
FILE NAME: 06J004/str/s06J004xsl.dgn	CHECKED BY: C. CARLSON
PROJECT LEADER: R. WHITCOMB	SHEET 50 OF 72
DESIGNED BY: D. PETERSON	
MAINLINE CROSS SECTIONS (6)	



261+00



260+75



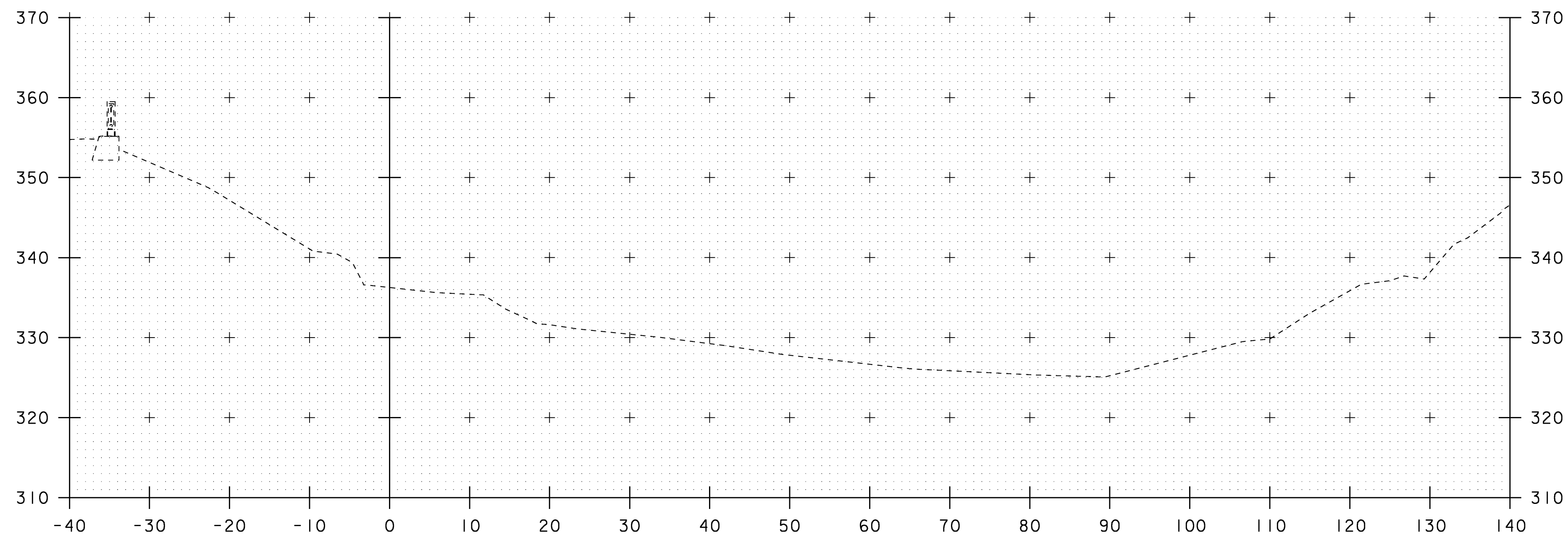
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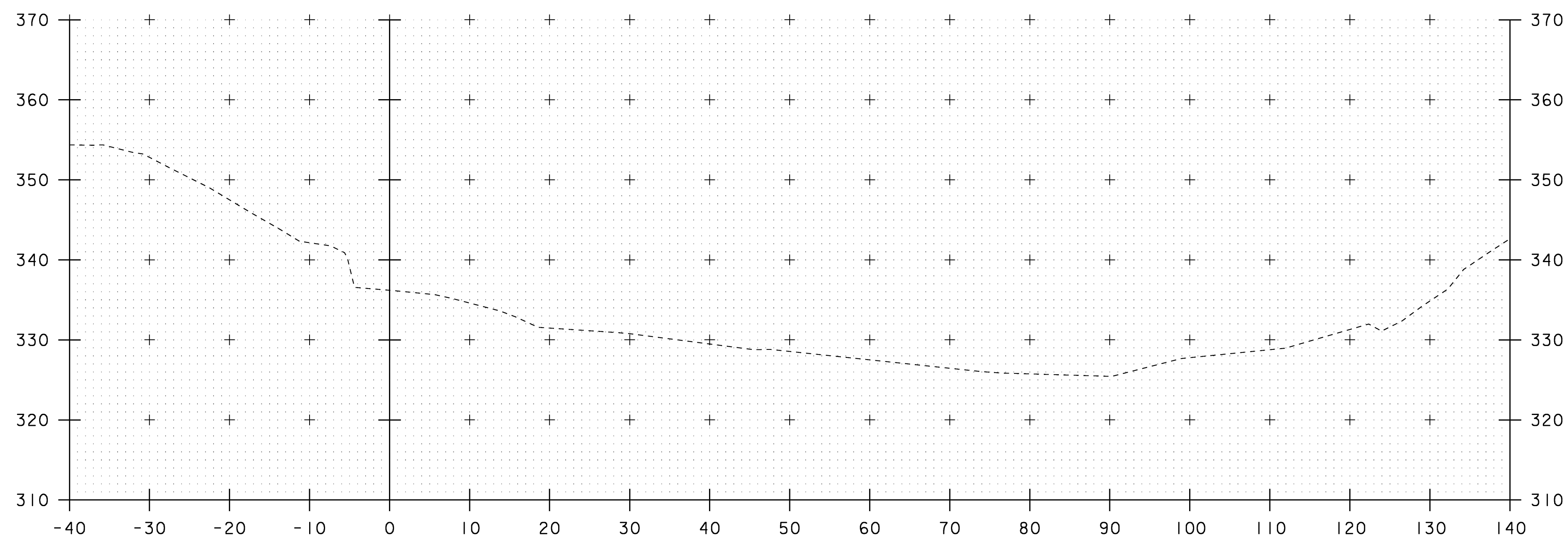
REV.	BY	DATE	REVISION
△	LBB	5/26/09	REVISED FINISH GRADE AND BANKING

STA. 260+75 TO STA. 261+25

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MAINLINE CROSS SECTIONS (6)	



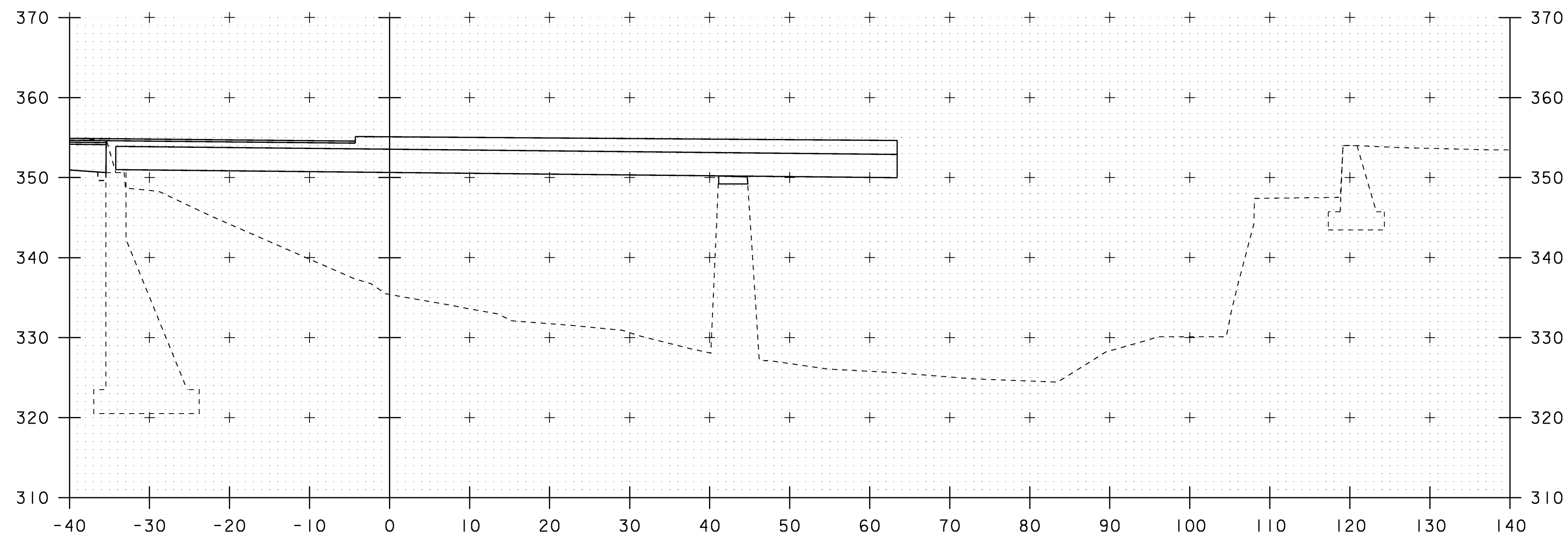
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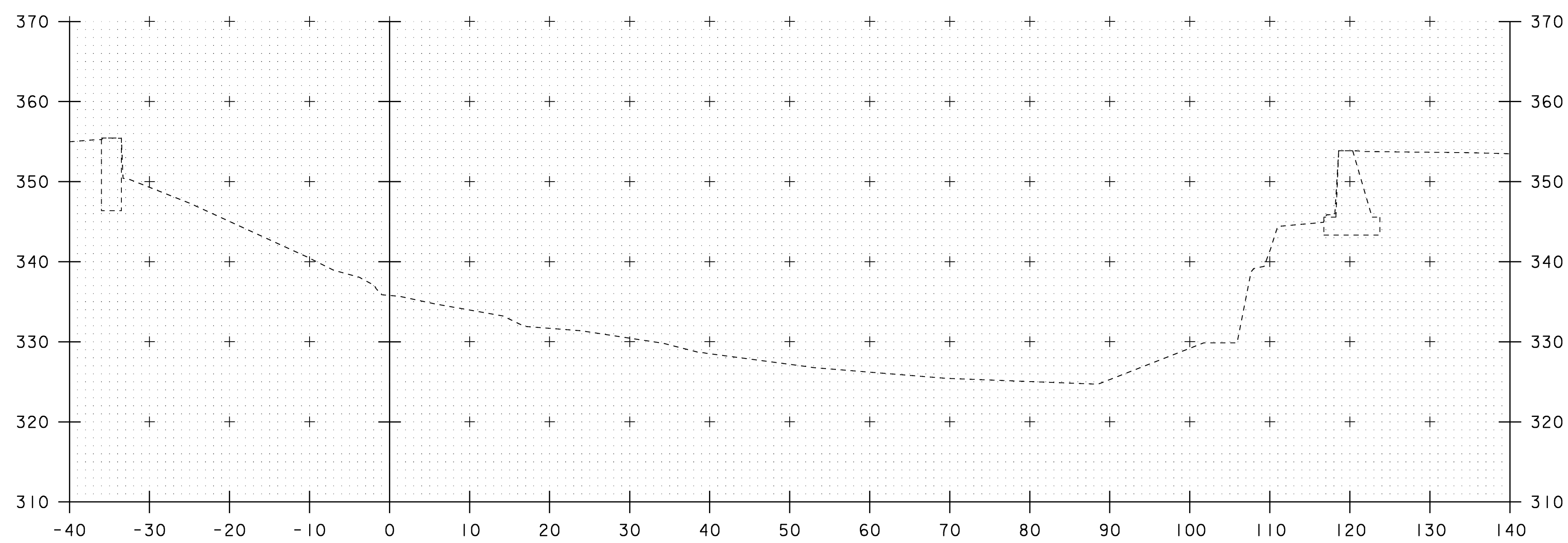
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STA. 4+40 TO STA. 4+50

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PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: D. PETERSON
FILE NAME: 06J004/str/s06J004xsl.dgn	CHECKED BY: C. CARLSON
PROJECT LEADER: R. WHITCOMB	SHEET 51 OF 72
DESIGNED BY: D. PETERSON	
CHANNEL CROSS SECTIONS (I)	



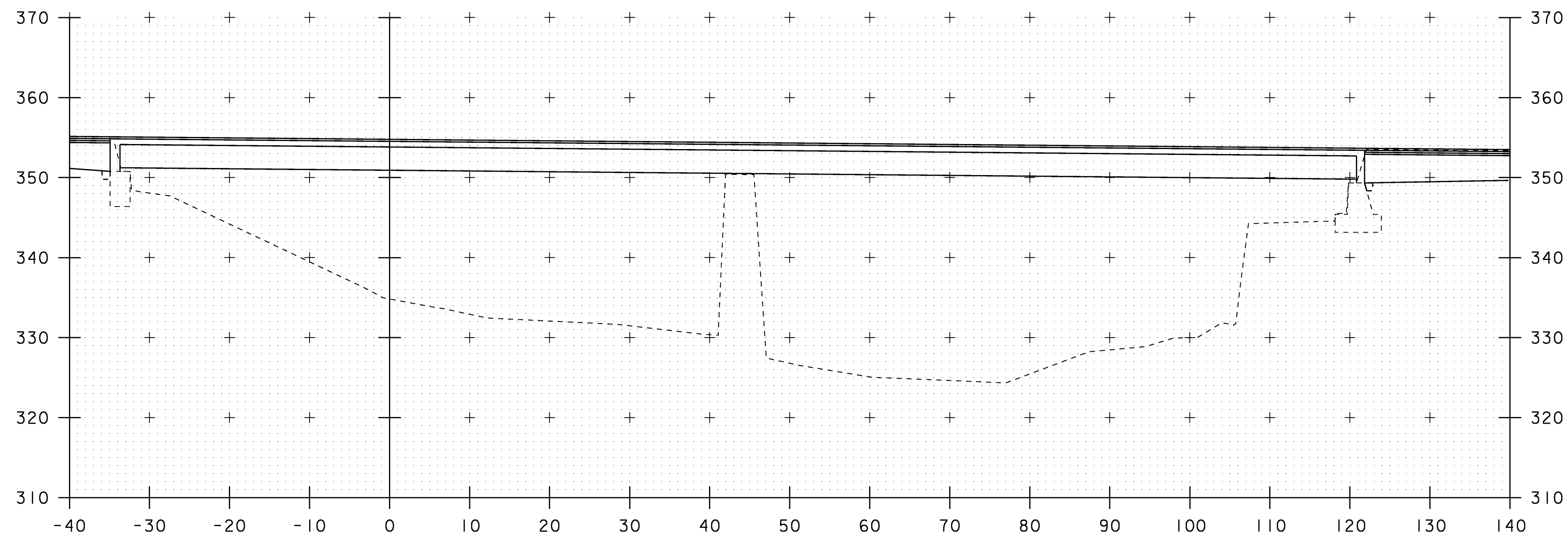
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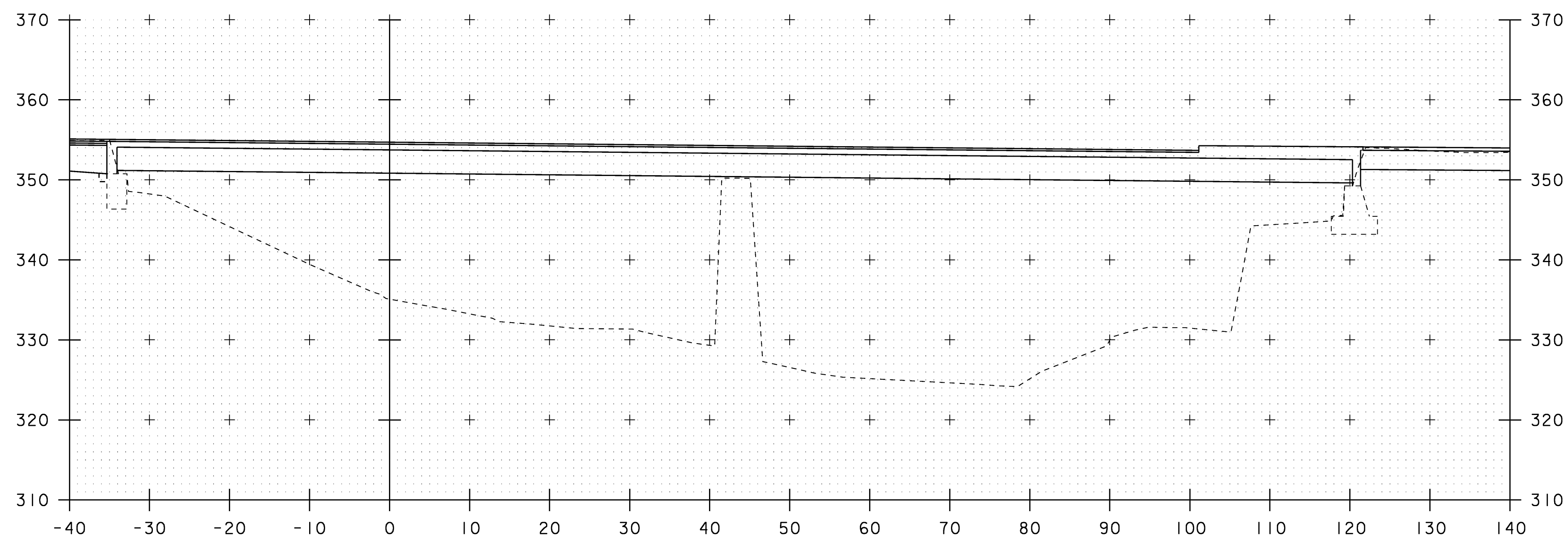
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PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: D. PETERSON
FILE NAME: 06J004/str/s06J004xsl.dgn	CHECKED BY: C. CARLSON
PROJECT LEADER: R. WHITCOMB	SHEET 52 OF 72
DESIGNED BY: D. PETERSON	
CHANNEL CROSS SECTIONS (2)	



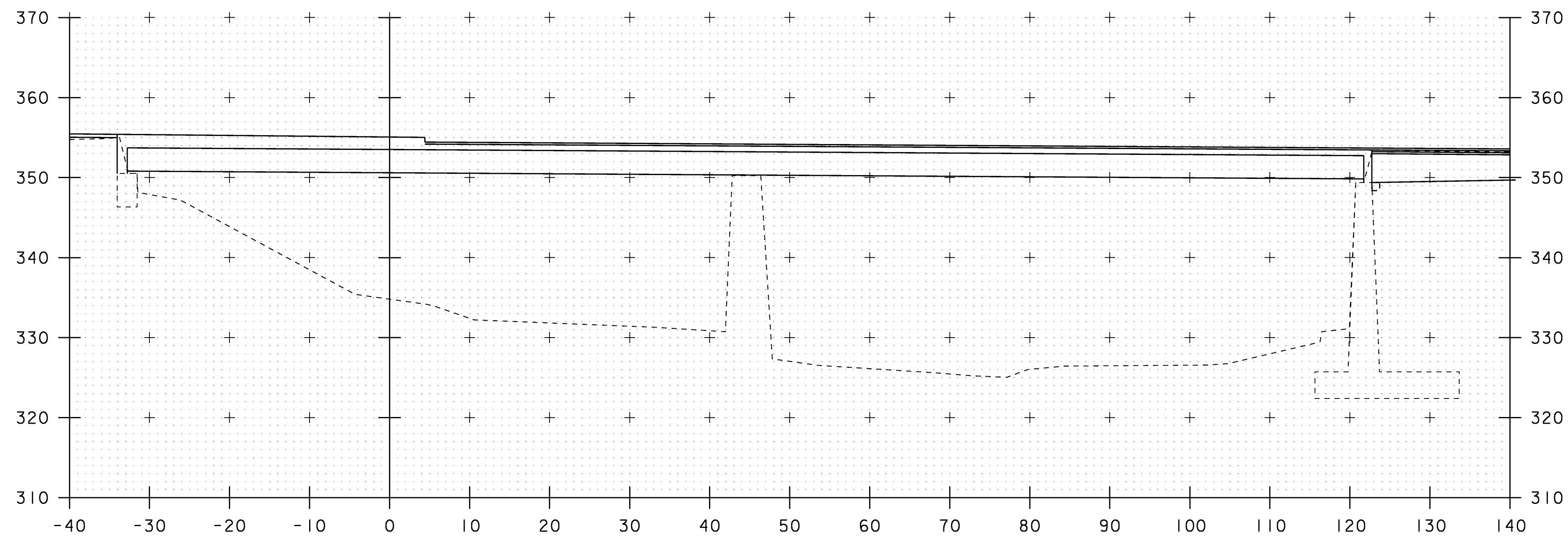
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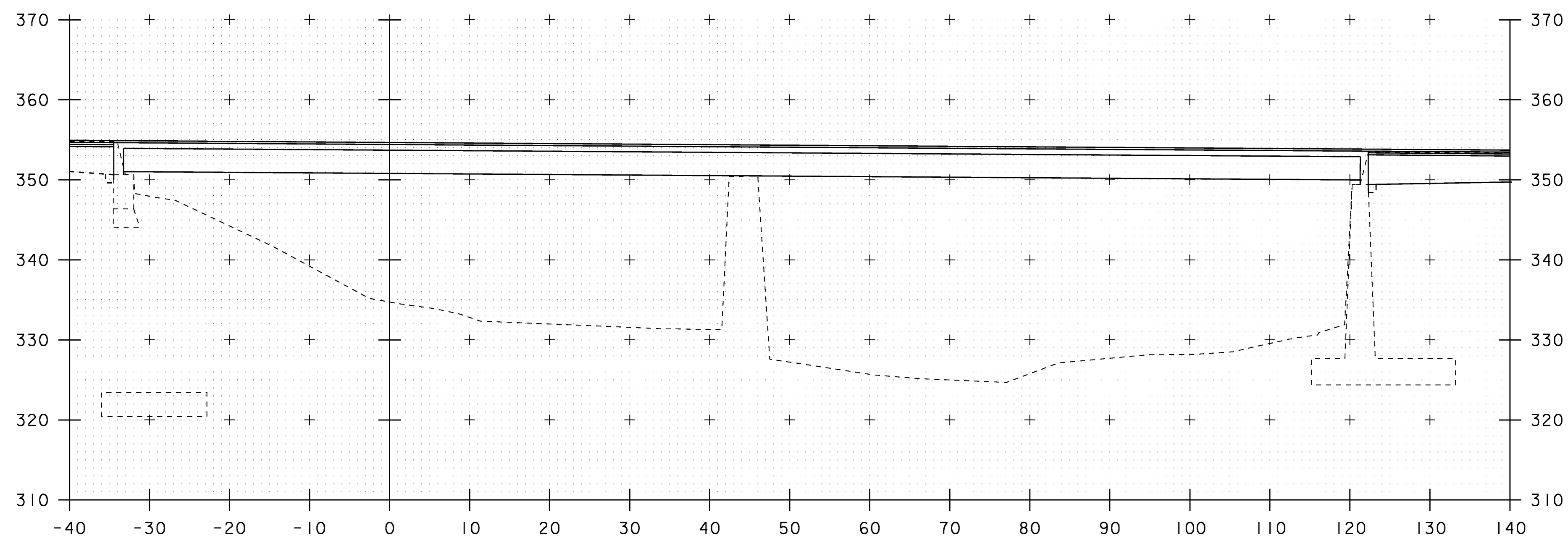
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PROJECT LEADER:	R. WHITCOMB	CHECKED BY:	C. CARLSON
CHANNEL CROSS SECTIONS (3)		SHEET 53	OF 72



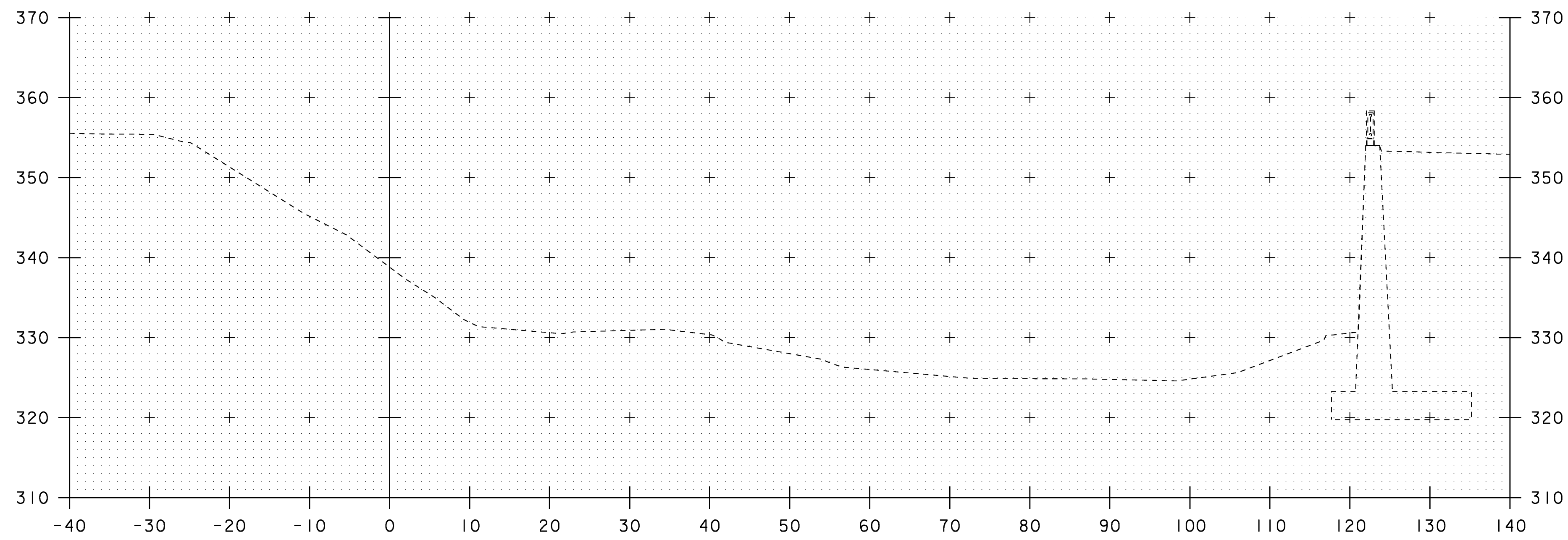
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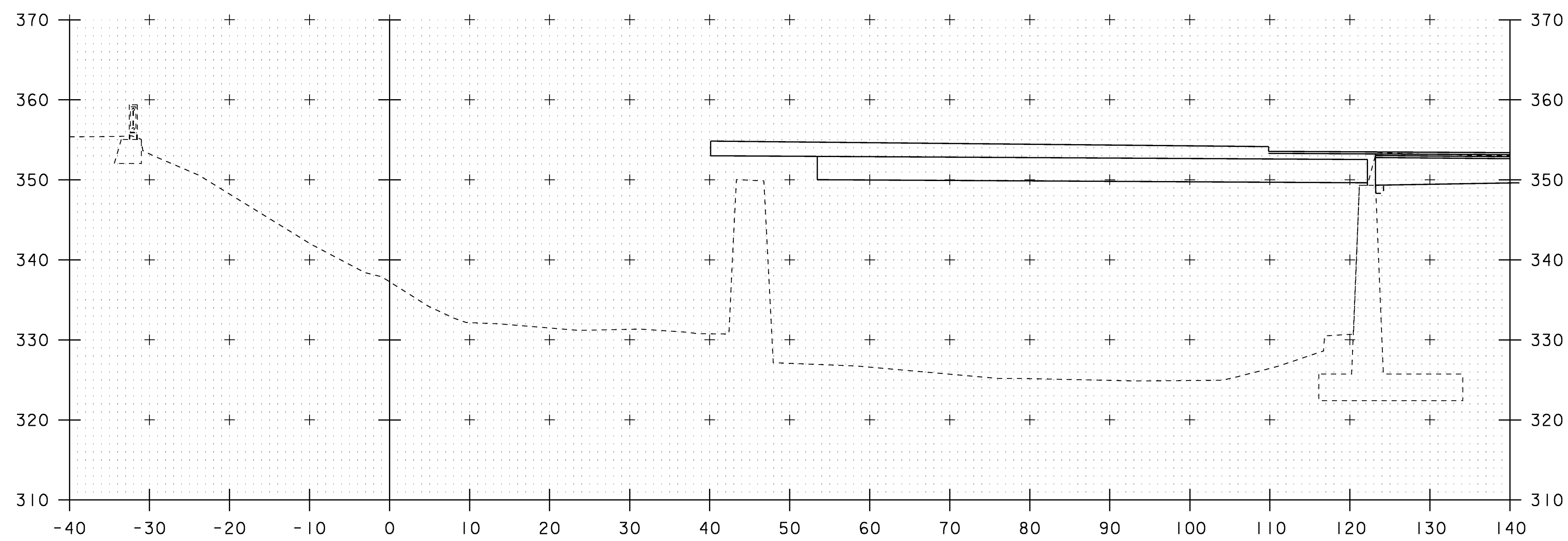
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CHANNEL CROSS SECTIONS (4)		SHEET 54	OF 72



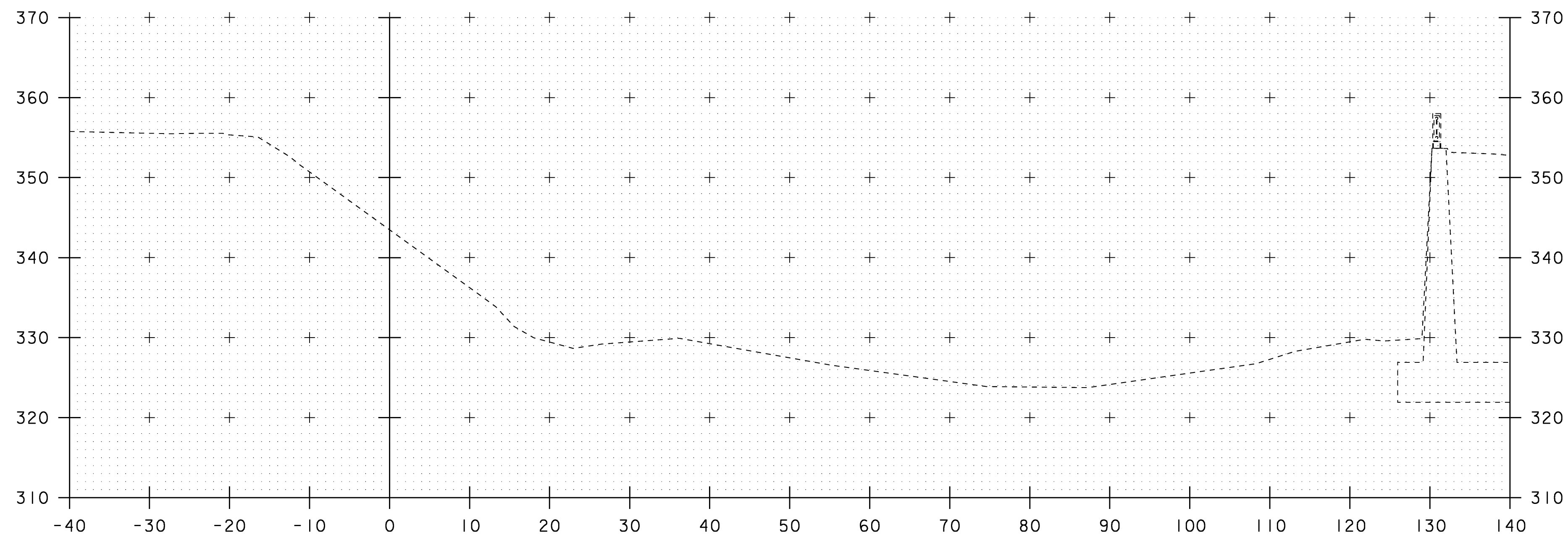
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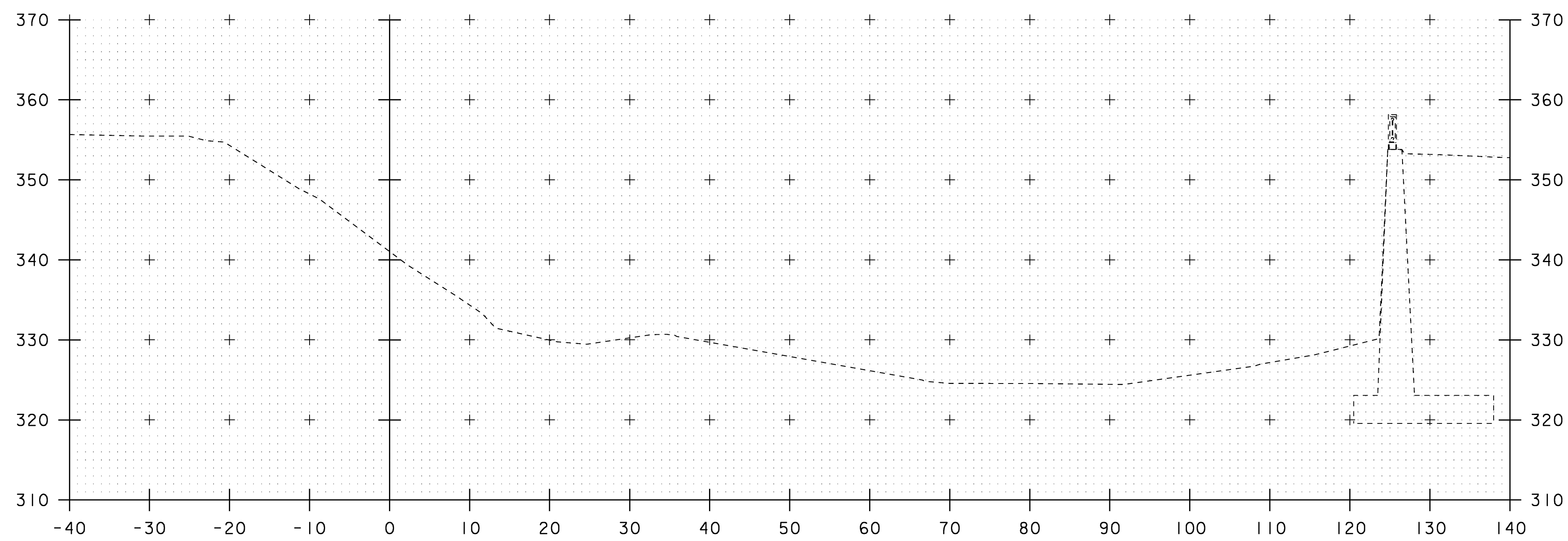
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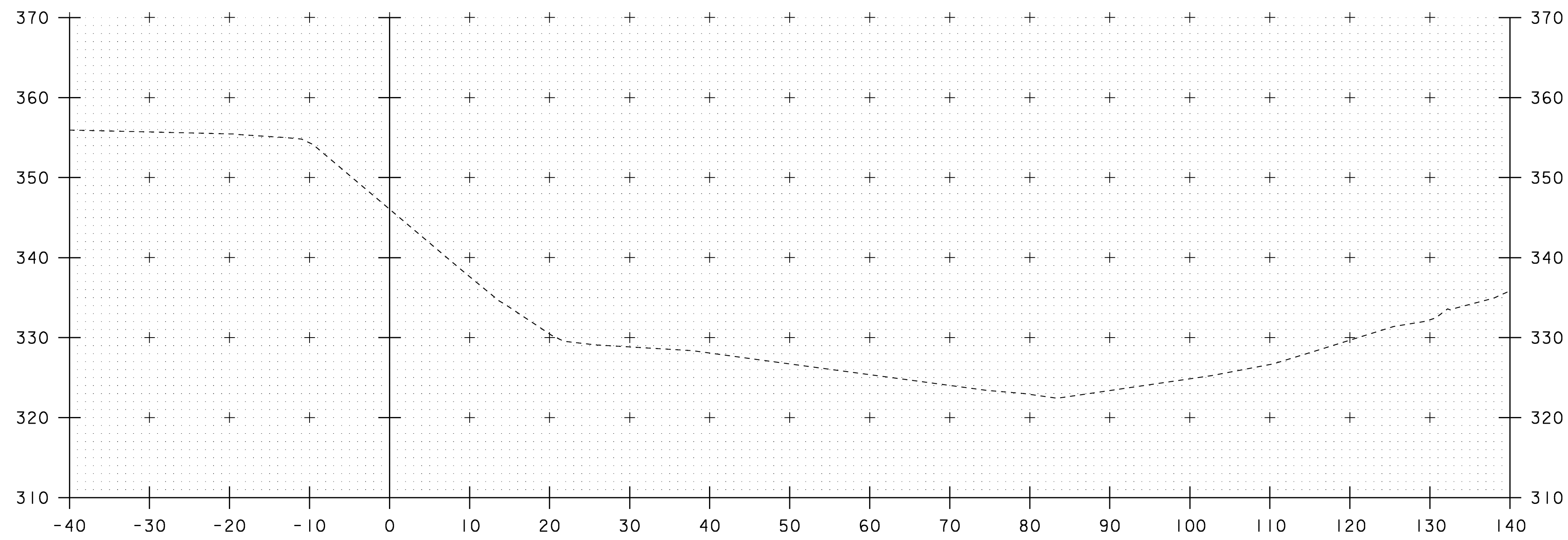
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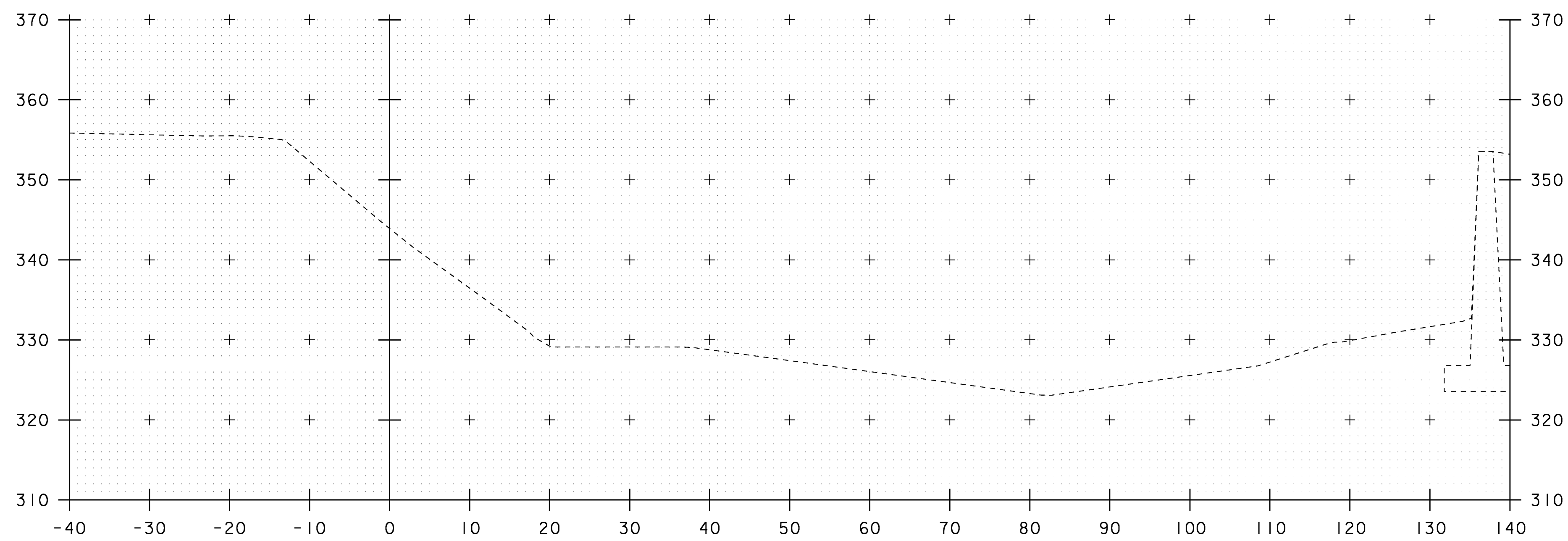
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CHANNEL CROSS SECTIONS (6)		SHEET 56	OF 72



5+70



5+60

STA. 5+60 TO STA. 5+70

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		CHECKED BY:	C. CARLSON
		CHANNEL CROSS SECTIONS (7)	SHEET 57 OF 72

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE "COMMUNITY CENTER" BRIDGE (VT 11 OVER THE BLACK RIVER). THE EXISTING TWO SPAN ROLLED BEAM BRIDGE WILL BE REHABILITATED INCLUDING A NEW DECK AT SIDEWALKS, NEW STEEL GIRDERS, CONCRETE DECK, AND SIDEWALKS AND BRIDGE RAILING. THE WORK WILL BE COMPLETED BY DETOURING EASTBOUND TRAFFIC AND ALLOWING WESTBOUND TRAFFIC TO TRAVEL ON THE BRIDGE. THE WORK WILL BE COMPLETED IN A PHASED CONSTRUCTION SEQUENCE. THE EXISTING ABUTMENTS, WINGWALLS AND PIER WILL REMAIN IN PLACE WITH MINOR REPAIRS MADE TO THE BRIDGE SEATS.

THERE WILL BE NO WORK IN THE CHANNEL AND THE ROADWAY WORK WILL BE VERY MINIMAL. ALL WORK WILL STAY WITHIN THE EXISTING RIGHT OF WAY.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.48 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THIS BRIDGE LIES WITHIN AN URBAN SETTING CONSISTING OF SIDEWALKS, DRIVE ENTRANCES TO PARKING LOTS AND A SMALL PARK.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE BLACK RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THERE ARE NO OTHER WATER BODIES OR WETLANDS WITHIN THE PROJECT AREA. THE BLACK RIVER IS A STRAIGHT, NOT BRAIDED AND A NON ANABRANCH WATER WAY. THERE ARE MULTIPLE DAMS UPSTREAM OF THE BRIDGE. THERE ARE A FEW DROP INLETS ON SITE DRAINING FROM THE ROADWAY TO THE RIVER.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT SITE IS FLAT, HOWEVER THERE ARE TWO STEEP PAVED DRIVES AT NORTHWEST CORNER AND AT THE NORTHEAST CORNER OF THE PROJECT. AT THE SOUTHERN END OF THE PROJECT THERE IS AN INTERSECTION WHERE BOTH SOUTH STREET AND MINERAL STREET MEET WITH VT 11.

BUILDINGS AROUND THE PROJECT INCLUDE THE COMMUNITY CENTER BUILDING ON THE NORTHWEST CORNER OF THE BRIDGE, A CHURCH AT THE TOP OF THE HILL ON THE NORTHEAST CORNER. ON THE SOUTHWEST CORNER IS A LARGE SENIOR CITIZENS HOME, AND ON THE SOUTHEAST CORNER IS A PARKING LOT TO AN ADJACENT RESTAURANT.

UTILITIES ON AND AROUND THIS PROJECT INCLUDE: POWER AND UTILITY POLES RUN ALONG MAINLINE AND CROSS THE RIVER DOWNSTREAM OF THE BRIDGE. SEWER, WATER, AND UNDERGROUND TELEPHONE CROSS UNDER THE BRIDGE AND ARE PRESENT UNDERGROUND ALONG THE LENGTH OF THE PROJECT.

1.2.4 VEGETATION

THE VEGETATION IN THE PROJECT AREA IS VERY MINIMAL. THE ONLY AREA OF IMPACT IS THE NORTH EAST WINGWALL WHERE APPROACH RAILING WILL BE PLACED NEXT TO THE SIDEWALK AND SOME GRASS WILL BE DISTURBED. ALL VEGETATED AREAS THAT ARE DISTURBED WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF WINDSOR, VERMONT. SOILS ON THE PROJECT SITE CONSIST OF URBAN LAND-WINDSOR-AGAWAM COMPLEX, 0 - 8 PERCENT SLOPES. THE AGAWAM PORTION OF THIS COMPLEX HAS A Kw OF 0.28 FROM 0-9 INCHES, 0.37 FROM 9-26 INCHES, 0.17 FROM 26-35 INCHES, AND 0.10 FROM 35-65 INCHES. THE WINDSOR PORTION OF THIS COMPLEX HAS A Kw OF 0.17 TO 0.10 FOR ITS DEPTH. AS SIGNIFICANT PORTIONS OF THIS PROJECT WILL BE CONSTRUCTED IN PREVIOUSLY DISTURBED AREAS IN THIS URBAN SETTING, IT WILL BE IMPORTANT TO NOTE WHETHER NATIVE MATERIAL OR PREVIOUSLY PLACED GRAVEL BACKFILL WILL BE EXPOSED AS THE PROJECT PROGRESSES.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0-0.23 = LOW EROSION POTENTIAL; 0.24-0.36 = MODERATE EROSION POTENTIAL; 0.37 AND HIGHER = HIGH EROSION POTENTIAL.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL AREA: THE ENTIRE BRIDGE IS LOCATED IN A HISTORIC DISTRICT.
ARCHEOLOGICAL AREAS: NO

PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: BLACK RIVER
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCING, DENOTED -PDF- ON THE PLANS IS USED TO DELINEATE THE LIMITS THAT THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

1.4.3 STABILIZE CONSTRUCTION EXIT

STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED AS NECESSARY.

1.4.4 INSTALL SILT FENCE

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS SHOWN ON THE PLANS OR AS NECESSARY.

1.4.5 DIVERT UPLAND RUNOFF

SWALE (STORM WATER FROM STREET COLLECTIONS DRAINAGE SYSTEM)

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

N/A

1.4.7 CONSTRUCT PERMANENT CONTROLS

SEED AND MULCH
DRAINAGE INLETS AND PIPING

1.4.8 STABILIZE EXPOSED SOILS

SEED AND MULCH

1.4.9 WINTER STABILIZATION (IF NECESSARY)

VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK)

1.4.10 STABILIZE SOIL AT FINAL GRADE

SEED AND MULCH

1.4.11 DEWATERING ACTIVITIES

N/A

1.4.12 INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

PROJECT NAME: SPRINGFIELD

PROJECT NUMBER: BHF 016-2(14)

FILE NAME: 06J004/str/s06J004ecnar.dgn PLOT DATE: 04-MAR-2009

PROJECT LEADER: R. WHITCOMB DRAWN BY: C. CARLSON



DESIGNED BY: C. CARLSON

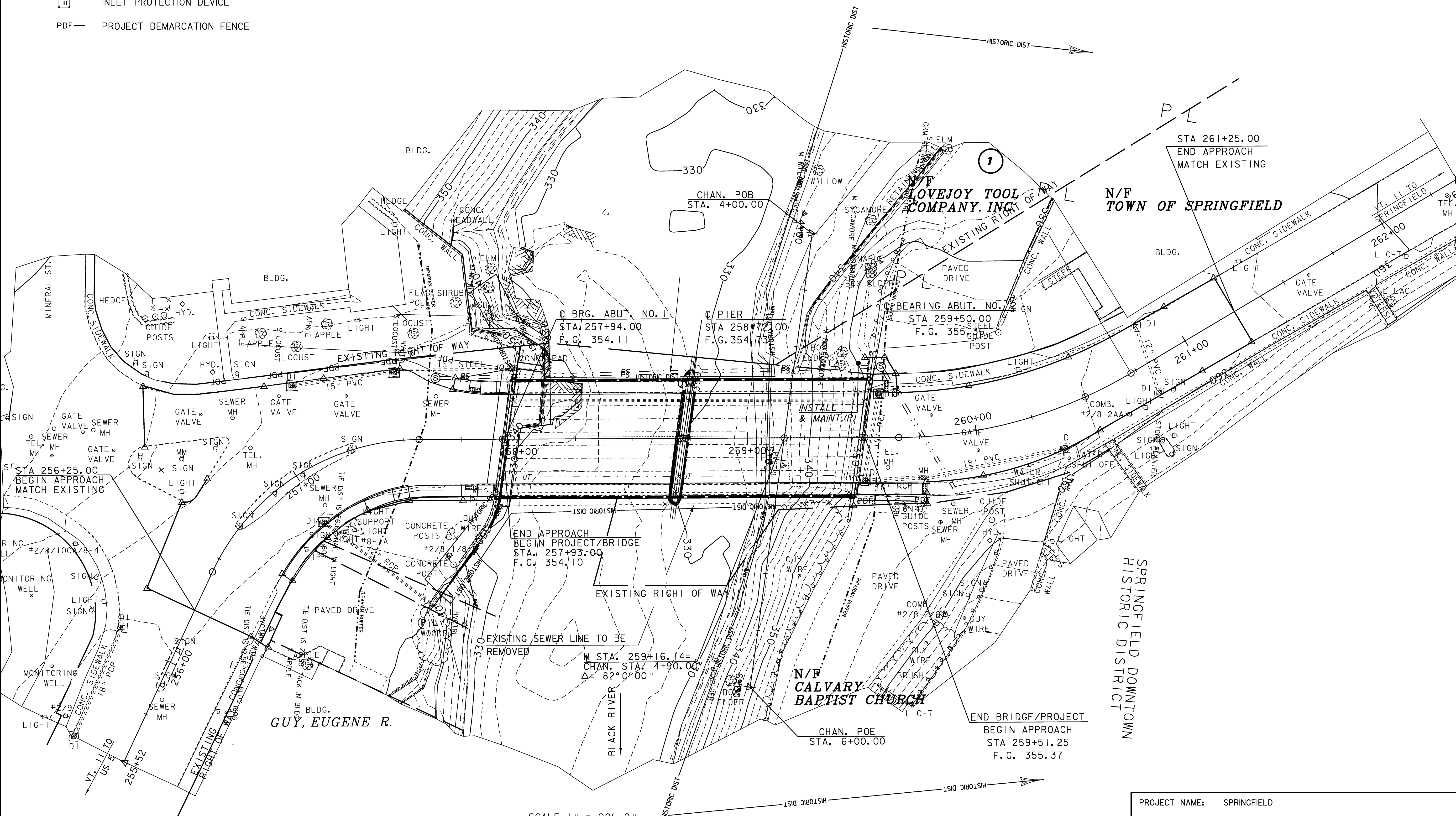
CHECKED BY: D. PETERSON

EROSION CONTROL NARRATIVE

SHEET 58 OF 72

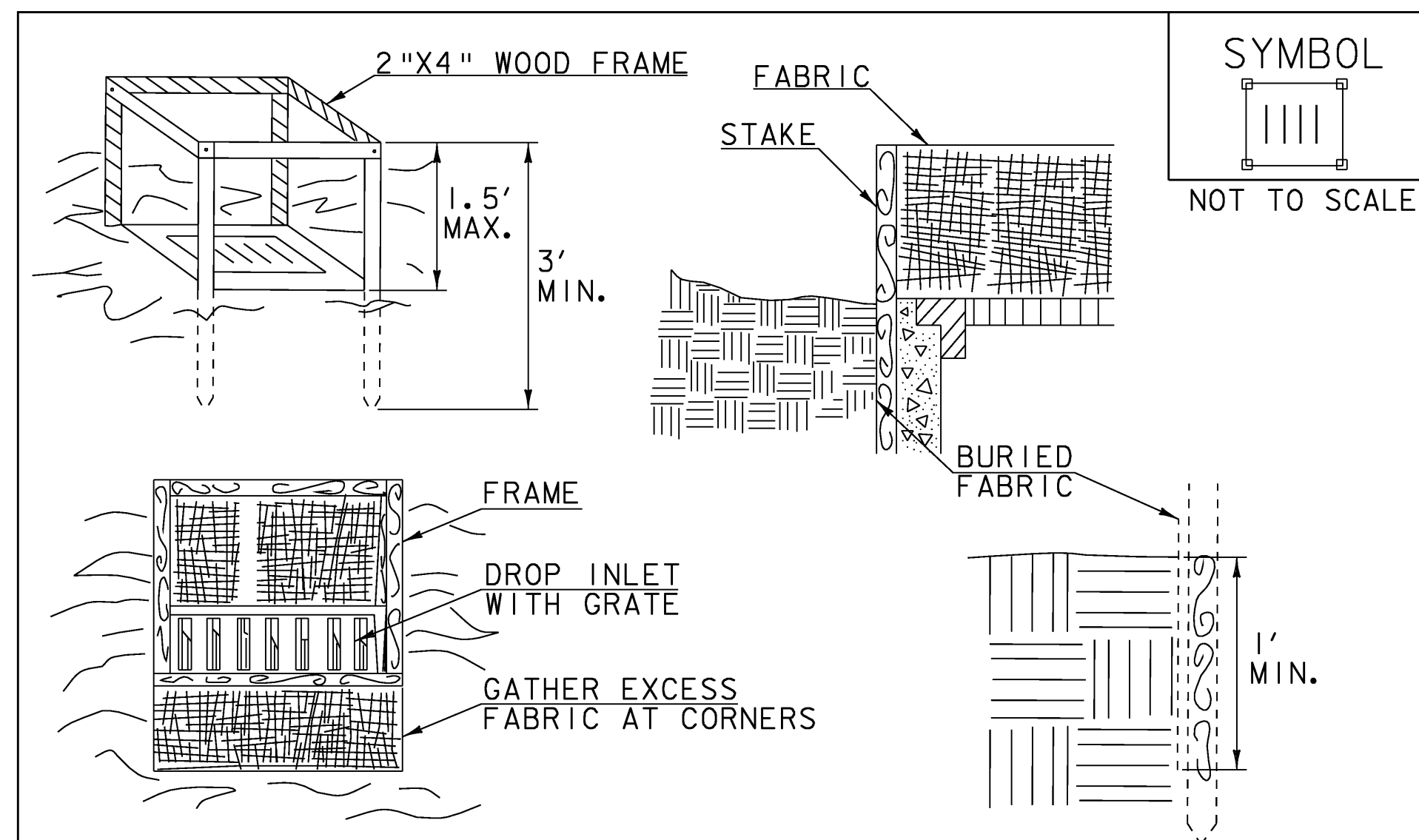
LEGEND

-  INLET PROTECTION DEVICE
-  PROJECT DEMARCATION FENCE



SCALE 1" = 20'-0"
 20 0 20

PROJECT NAME:	SPRINGFIELD
PROJECT NUMBER:	BHF 016-2(14)
FILE NAME:	06J004/str/s06J004ec.dgn
PROJECT LEADER:	R. WHITCOMB
DESIGNED BY:	C. CARLSON
EROSION CONTROL LAYOUT	
PLOT DATE:	01-APR-2009
DRAWN BY:	D. PETERSON
CHECKED BY:	D. PETERSON
SHEET	59 OF 72



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

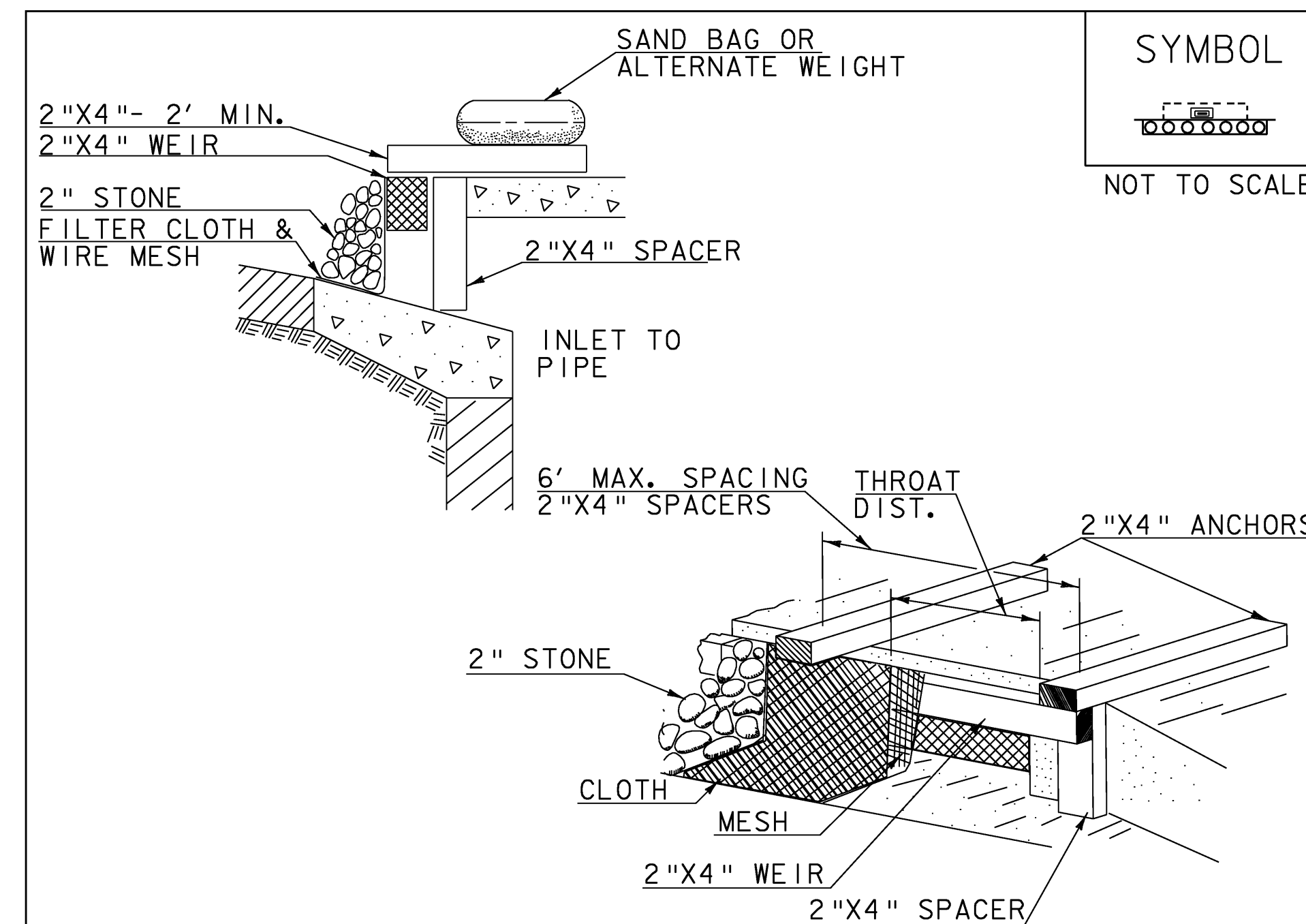
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**FILTER FABRIC
DROP INLET
PROTECTION**

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR
EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM
THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL
GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH
SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY
ITEM 653.40).

REVISIONS	
MARCH 7, 2008	WHF
JANUARY 13, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85.
2. WOODEN FRAME SHALL BE CONSTRUCTED OF 2" x 4" CONSTRUCTION GRADE LUMBER.
3. WIRE MESH ACROSS THROAT SHALL BE A CONTINUOUS PIECE 30" MINIMUM WIDTH WITH A LENGTH 4' LONGER THAN THE THROAT. IT SHALL BE SHAPED AND SECURELY NAILED TO A 2"x 4" WEIR.
4. THE WEIR SHALL BE SECURELY NAILED TO 2"x 4" SPACERS 9' LONG SPACED NO MORE THAN 6' APART.
5. THE ASSEMBLY SHALL BE PLACED AGAINST THE INLET AND SECURED BY 2"x 4" ANCHORS 2' LONG EXTENDING ACROSS THE TOP OF THE INLET AND HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHTS.
6. MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**CURB DROP INLET
PROTECTION**

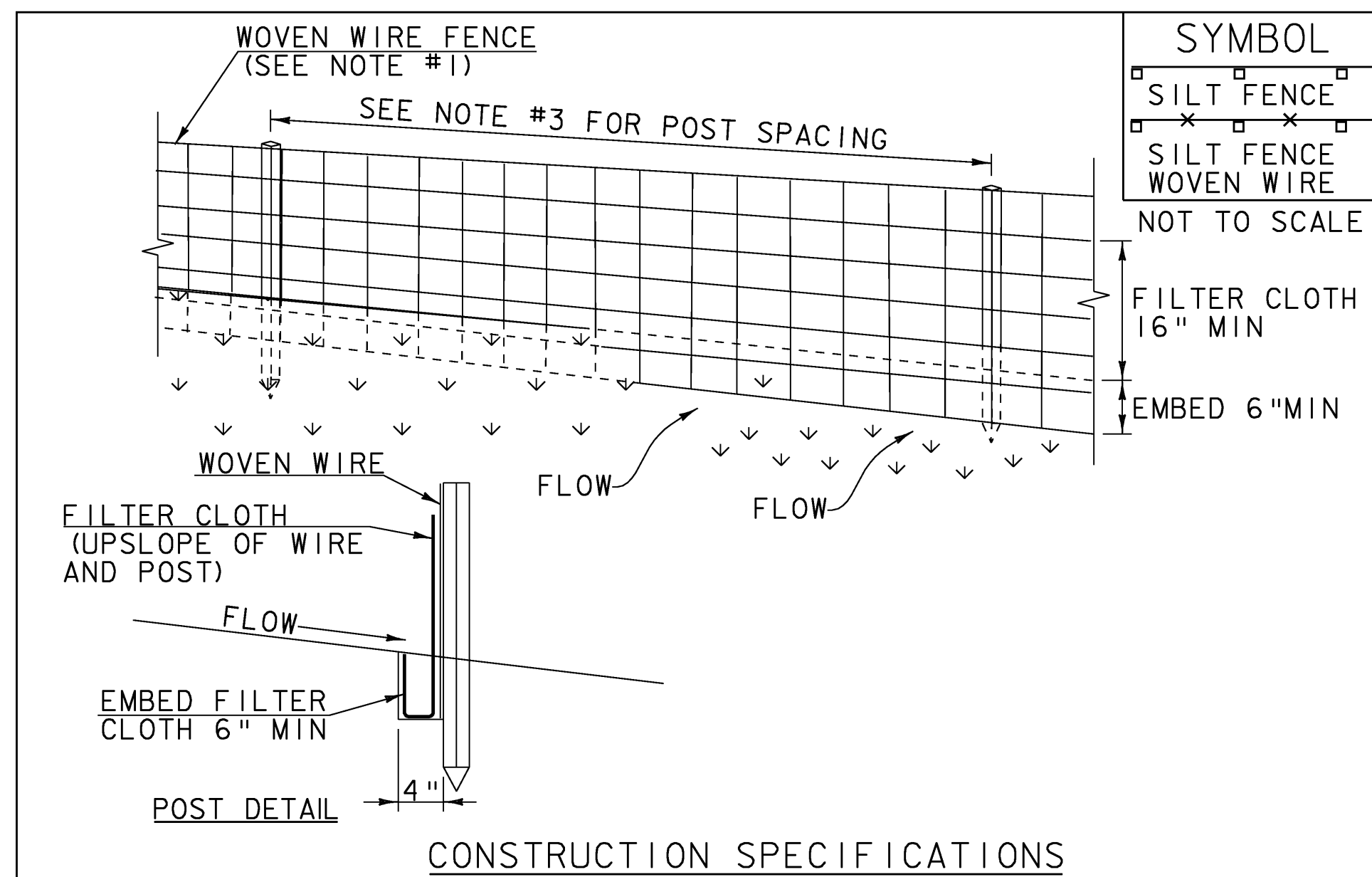
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR
EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM
THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL
GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH
SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY
ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

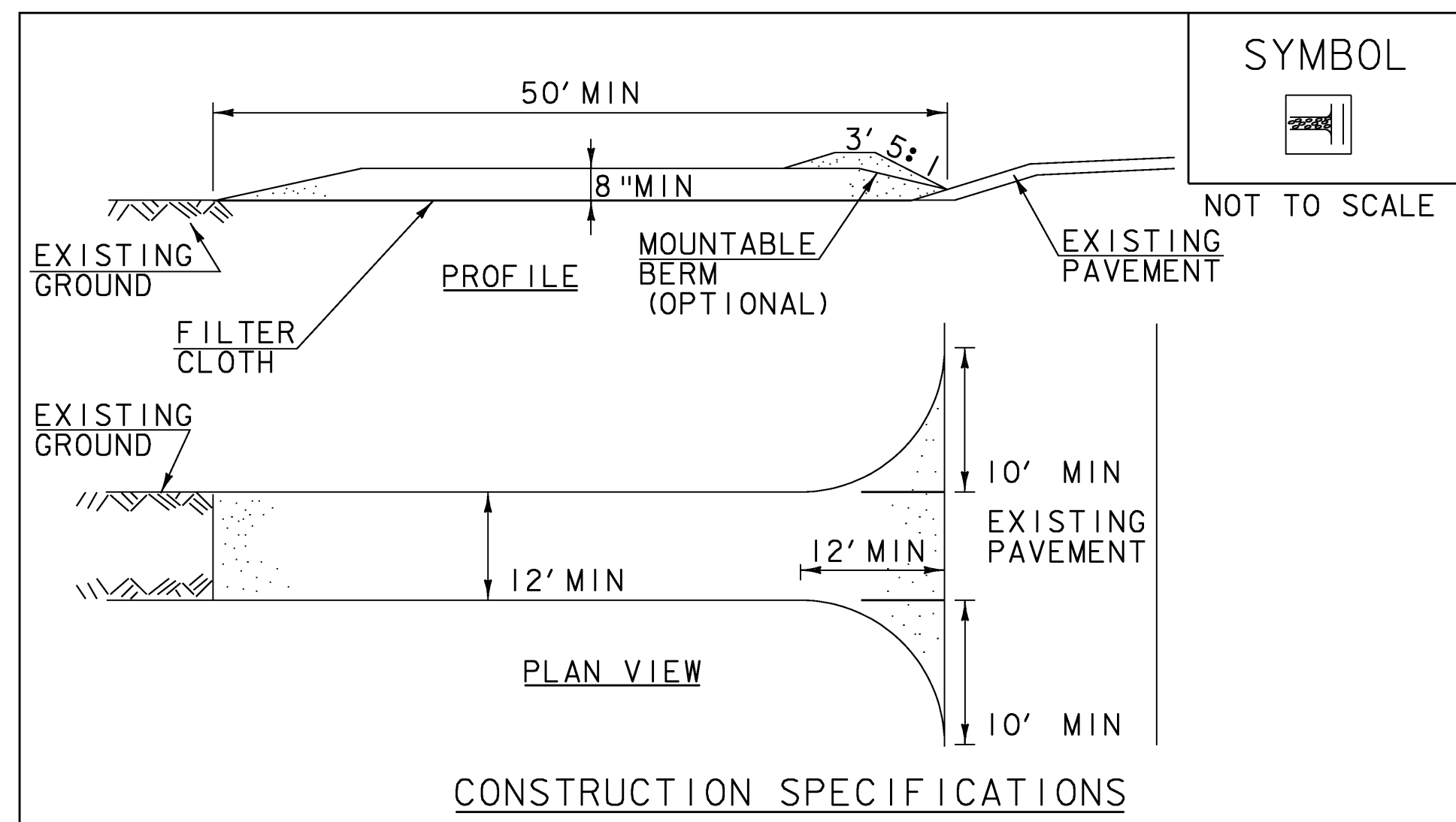
PROJECT: SPRINGFIELD	PROJECT NO. # BHF 016-2 (14)
DESIGN FILE NAME: 06j004\Structures\s06j004erodet.dgn	PLOT DATE: 23-MAR-2009
IPARM FILE NAME: 06j004epscl.i	DRAWN BY: C. CARLSON
DESIGNED BY: CONST. ENV. SECTION	CHECKED BY: D. PETERSON
SQUAD LEADER: R. WHITCOMB	
EPSC DETAIL SHEET - 1	SHEET: 60 OF 72

NTS



- CONSTRUCTION SPECIFICATIONS**
- WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
 - FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFIIOOX, STABILINKA T140N OR APPROVED EQUIVALENT.
 - POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
 - WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
 - PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	SILT FENCE
NOTES: REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.	
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).	
REVISIONS MARCH 21, 2008 WHF DECEMBER 11, 2008 WHF JANUARY 13, 2009 WHF	



- CONSTRUCTION SPECIFICATIONS**
- STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
 - THICKNESS- NOT LESS THAN 8".
 - WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
 - GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
 - SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 - MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	STABILIZED CONSTRUCTION ENTRANCE
NOTES: REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.	
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.	
REVISIONS MARCH 24, 2008 WHF JANUARY 13, 2009 WHF	

**SEEDING FORMULA
URBAN AREAS**

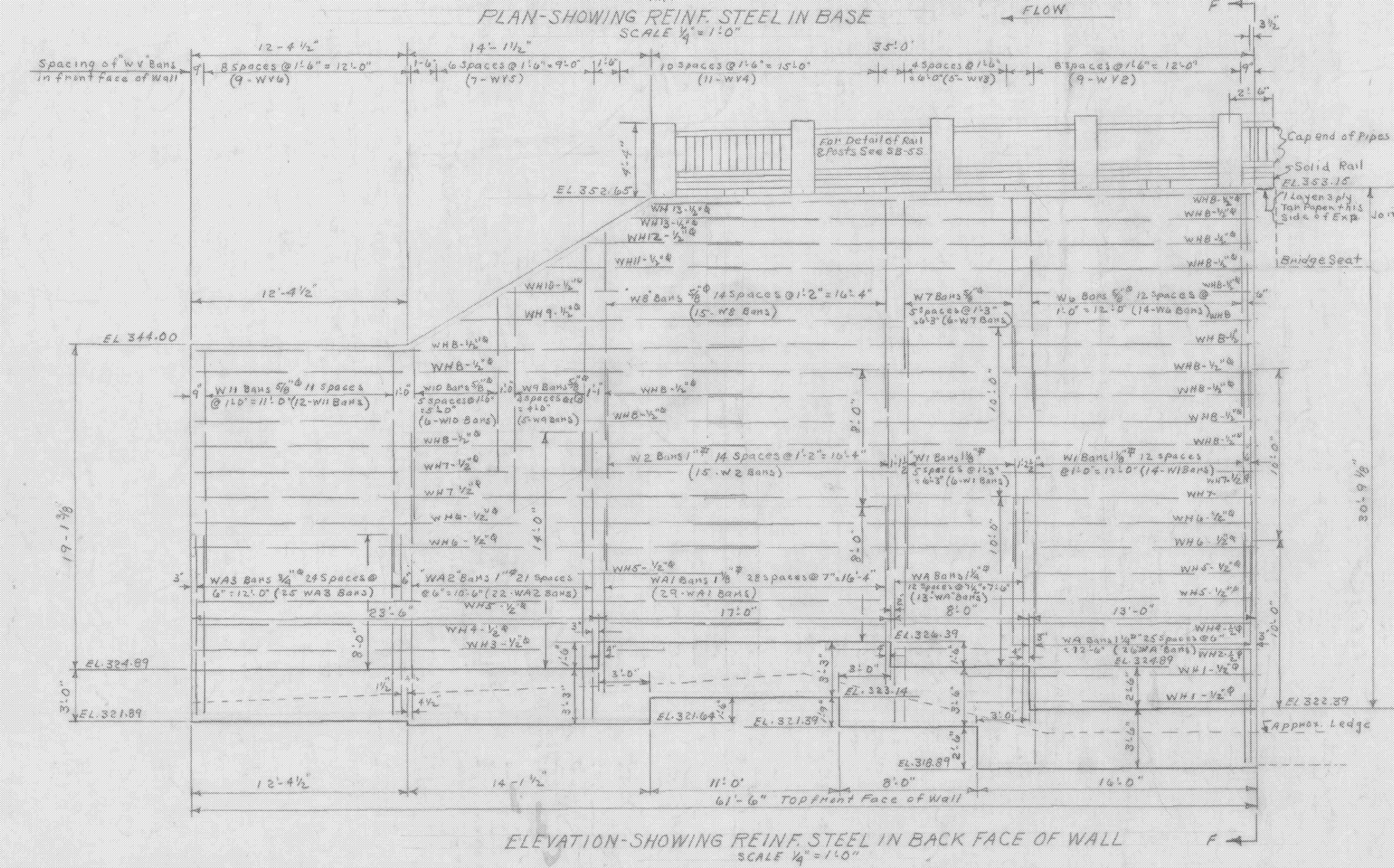
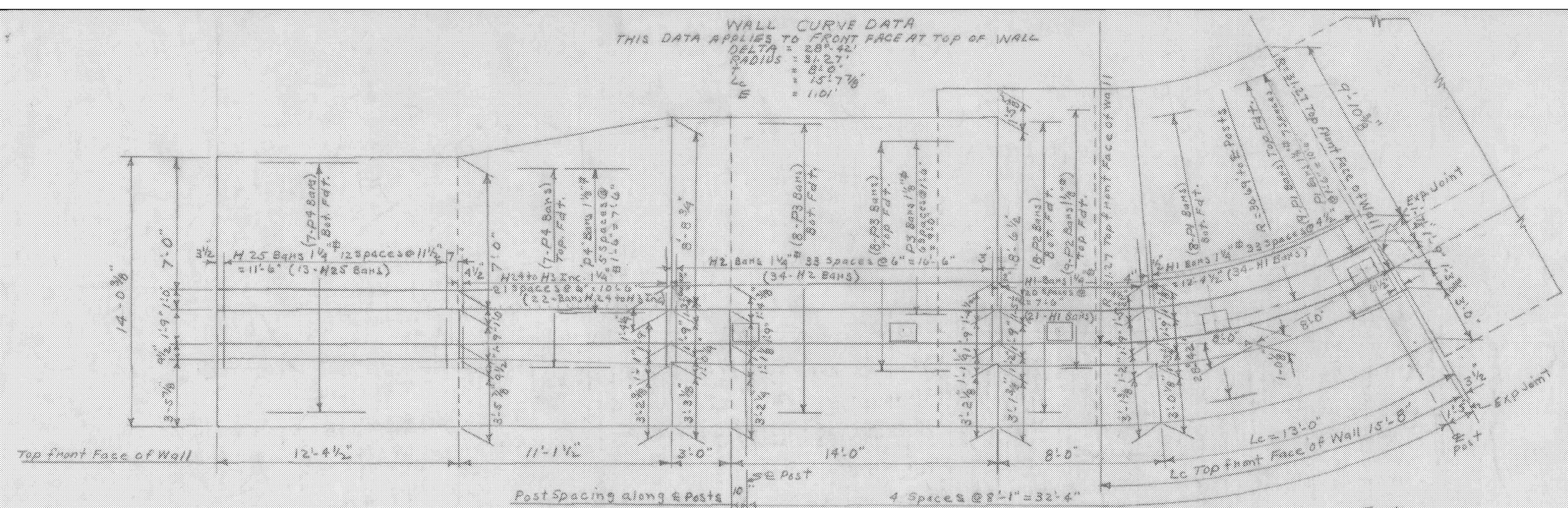
% WT.	LBS./A.	NAME	PUR %	GERM %
42.5	34.0	CREeping RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.00	80.0			

GENERAL NOTES

- SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.
- FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).
- AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.
- HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.
- TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

NTS

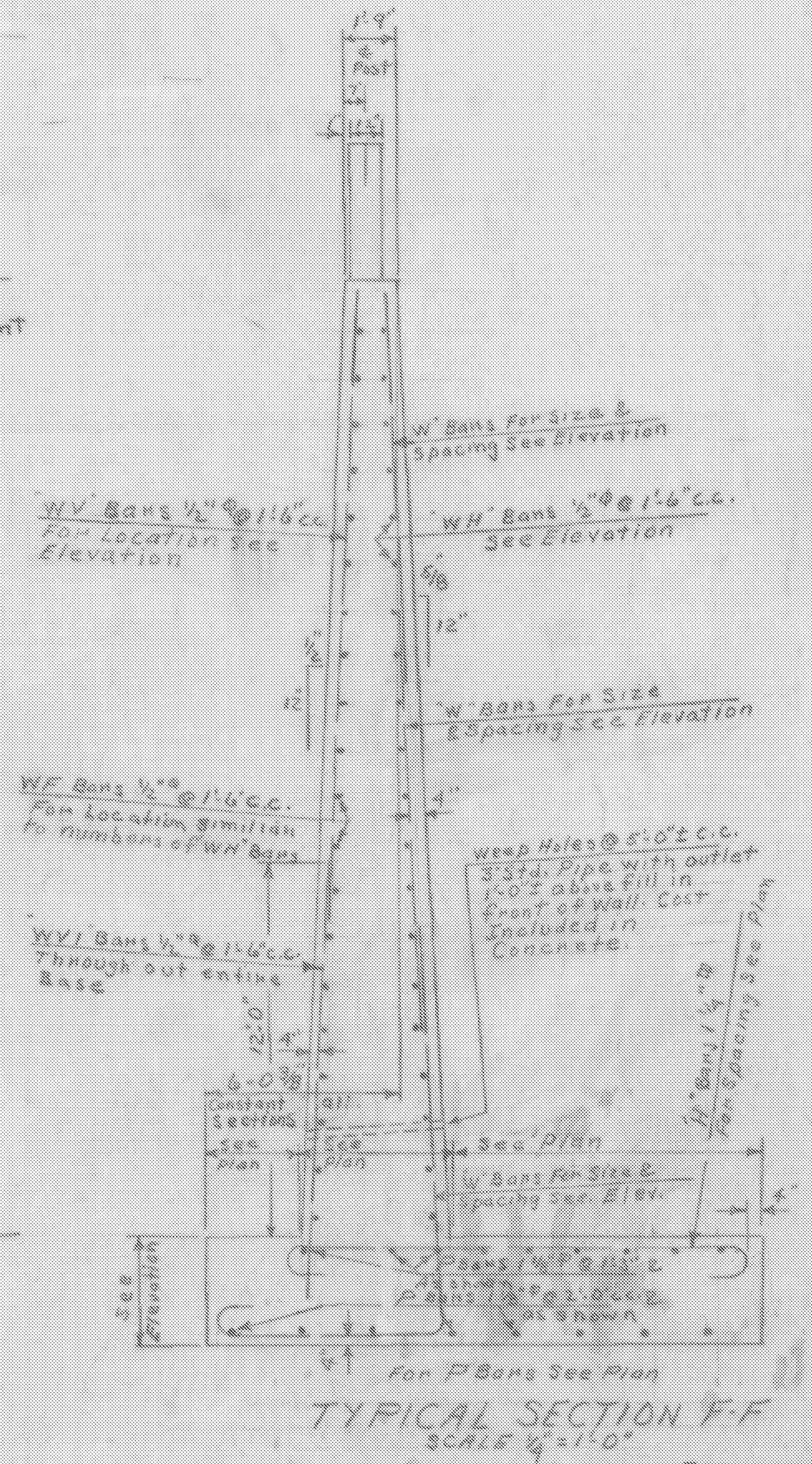
PROJECT: SPRINGFIELD	PROJECT NO. # BHF 016-2 (14)
DESIGN FILE NAME: 06j004\Structures\s06j004erodet.dgn IPARM FILE NAME: 06j004eps2.i DESIGNED BY: CONST. ENV. SECTION SQUAD LEADER: R. WHITCOMB EPSC DETAIL SHEET - 2	
PLOT DATE: 23-MAR-2009 DRAWN BY: CONST. ENV. SECT. CHECKED BY: C. CARLSON SHEET: 61 OF 72	



BAR SIZE	NO. REQ.	TOT. LENG.	X	Y	LOCATION	DETAIL
H1	1 1/4"	55	17-2	13-9	Trans. Fd.	
H2	"	34	15-2	12-3	"	
H3	"	15	15-2	12-2	"	
H4	"	1	15-7	12-1	"	
H5	"	1	15-2	12-0	"	
H6	"	1	15-5	11-1	"	
H7	"	1	15-2	11-10	"	
H8	"	1	15-3	11-9	"	
H9	"	1	5-2	11-9	"	
H10	"	1	15-1	11-7	"	
H11	"	1	15-0	11-6	"	
H12	"	1	14-11	11-5	"	
H13	"	1	8-10	11-4	"	
H14	"	1	4-9	11-3	"	
H15	"	1	14-8	11-2	"	
H16	"	1	14-7	11-1	"	
H17	"	1	14-6	11-0	"	
H18	"	1	13-5	10-11	"	
H19	"	1	14-4	10-10	"	
H20	"	1	14-1	10-7	"	
H21	"	1	14-0	10-6	"	
H22	"	1	13-11	10-5	"	
H23	"	1	13-10	10-4	"	
H24	"	1	13-9	10-3	"	
H25	"	13	13-8	10-3	"	
I2	1/2"	50	3-6		Posts & Rail	See SB-55
I3	1"	20	6-6		"	"
I4	1/2"	8	5-9		"	"
I5	3/4"	4	55-0		"	"

BAR SIZE	NO. REQ.	TOT. LENG.	X	Y	LOCATION	DETAIL
A	1 1/4"	52	19'-6"	6'-6"	10'-1"	Abut. Footing
A1	1 1/4"	13	20'-8"	6'-8"	11'-7"	Abut. Footing
R	1 1/4"	76	16'-8"	13'-2"		Abut. Footing
B	1 1/4"	12	18-6			Abut. Straight
C	1 1/4"	7	10-0			Abut. "
D	1 1/4"	7	20-6			Abut. "
E	1 1/4"	3	11-0			Abut. "
F	1 1/4"	4	21-8			Abut. "
G	1 1/4"	9	13-6			Abut. Footing
GE	1 1/4"	9	25-16			"
GS	1 1/4"	9	18-6			"
G4	1 1/4"	9	11-6			" Straight Climb access
GS	1 1/4"	9	11-6			"
I	1 1/4"	48	24-9"			Abut. Straight
K	1 1/4"	10	32-8			"
L	1 1/4"	10	35-4			"
M	1 1/4"	1	17-0			"
N	1 1/4"	2	5-0			"
OA	1 1/4"	31	4-4"			Abut. Footing
O	1 1/4"	5	25-9			Abut. "
O1	1 1/4"	12	23-3			"
O2	1 1/4"	12	21-7			"
P	1 1/4"	4	7-0			Abut. Haunch
P1	1 1/4"	19	3-0			Exp. Joint Smooth Dowels
LF	1 1/4"	10	30-4			Abut. Front Face Straight
MF	1 1/4"	1	17-0			"
NF	1 1/4"	2	5-0			"
H	3/4"	17	15-4 1/2"			Abut. Stimpups

BAR SIZE	NO. REQ.	TOT. LENG.	X	Y	LOCATION	DETAIL
WA	1 1/4"	39	21-2	16'-0"	12-9"	Vent. Back
WA1	1 1/4"	29	18-9	5-10	10-6"	"
WA2	1 1/4"	22	24-5	5-6	16-6"	"
WA3	3/4"	25	18-2	5-6	10-3"	"
W1	1 1/4"	20	18-3			" Straight
W2	1 1/4"	15	11-9			"
W3	5/8"	14	11-2			"
W4	5/8"	8	10-8			"
W5	5/8"	5	13-4			"
W6	5/8"	6	10-3			"
W7	5/8"	12	12-0			"
WH1	1/2"	2	18-6			Horn. Back
WH2	1/2"	1	24-6			"
WH3	1/2"	1	27-0			"
WH4	1/2"	1	32-5			"
WH5	1/2"	4	32-2			"
WH6	1/2"	4	31-11			"
WH7	1/2"	4	31-8			"
WH8	1/2"	16	31-6			"
WH9	1/2"	1	16-6			"
WH10	1/2"	1	13-9			"
WH11	1/2"	1	11-6			"
WH12	1/2"	1	9-0			"
WH13	1/2"	2	6-6			"
WF1	1/2"	2	14-7"			Horn. Front
WF2	"	1	22-9			"
WF3	"	1	25-3			"
WF4	"	2	31-6			"
WF5	"	4	31-6			"
WF6	"	4	31-6			"
WF7	"	4	31-6			"
WF8	"	16	31-6			"
WF9	"	1	16-6			"
WF10	"	1	13-9			"
WF11	"	1	11-0			"
WF12	"	1	9-0			"
WF13	"	2	6-6			"
WV1	"	41	14-0			Vent. Front
WV2	"	9	28-5			"
WV3	"	5	17-8			"
WV4	"	11	16-0			"
WV5	"	7	15-0			"
WV6	"	9	9-8			"
P1	1 1/4"	17	15-6			Long. Fd.
P2	1 1/4"	17	7-6			"
P3	1 1/4"	16	16-8			"
P4	1 1/4"	14	36-0			"

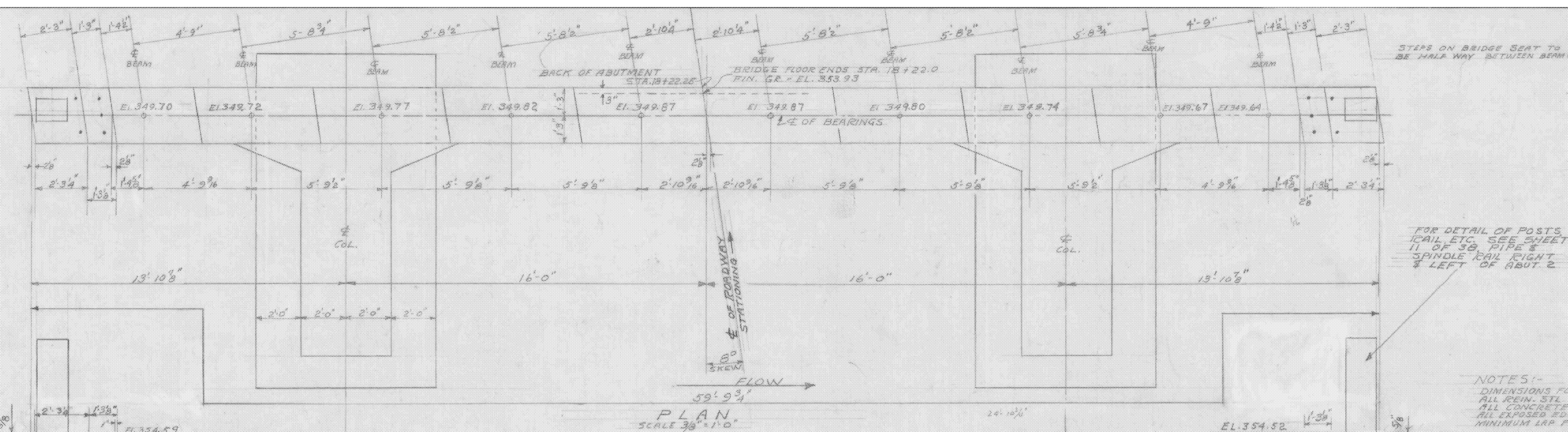


WING WALL-ABUTMENT NO. 1
COMMUNITY HOUSE BRIDGE
SPRINGFIELD

SPRINGFIELD
BHF 016-2 (14)
REFERENCE SHEET 1 OF 11
SHEET 62 OF 72

Structure Excavation	430 CY.
Concrete Class B	297 CY.
Reinforcing Steel	29,640 Lbs.
Steel Superstructure	1145 Lbs.

Designed by J.L.H. ESN
Drawn by H.L.H.
Checked by S.H. & H.R.D.
Series U No. 123 (4) Filed
Sheet 6 of 38 Sheets



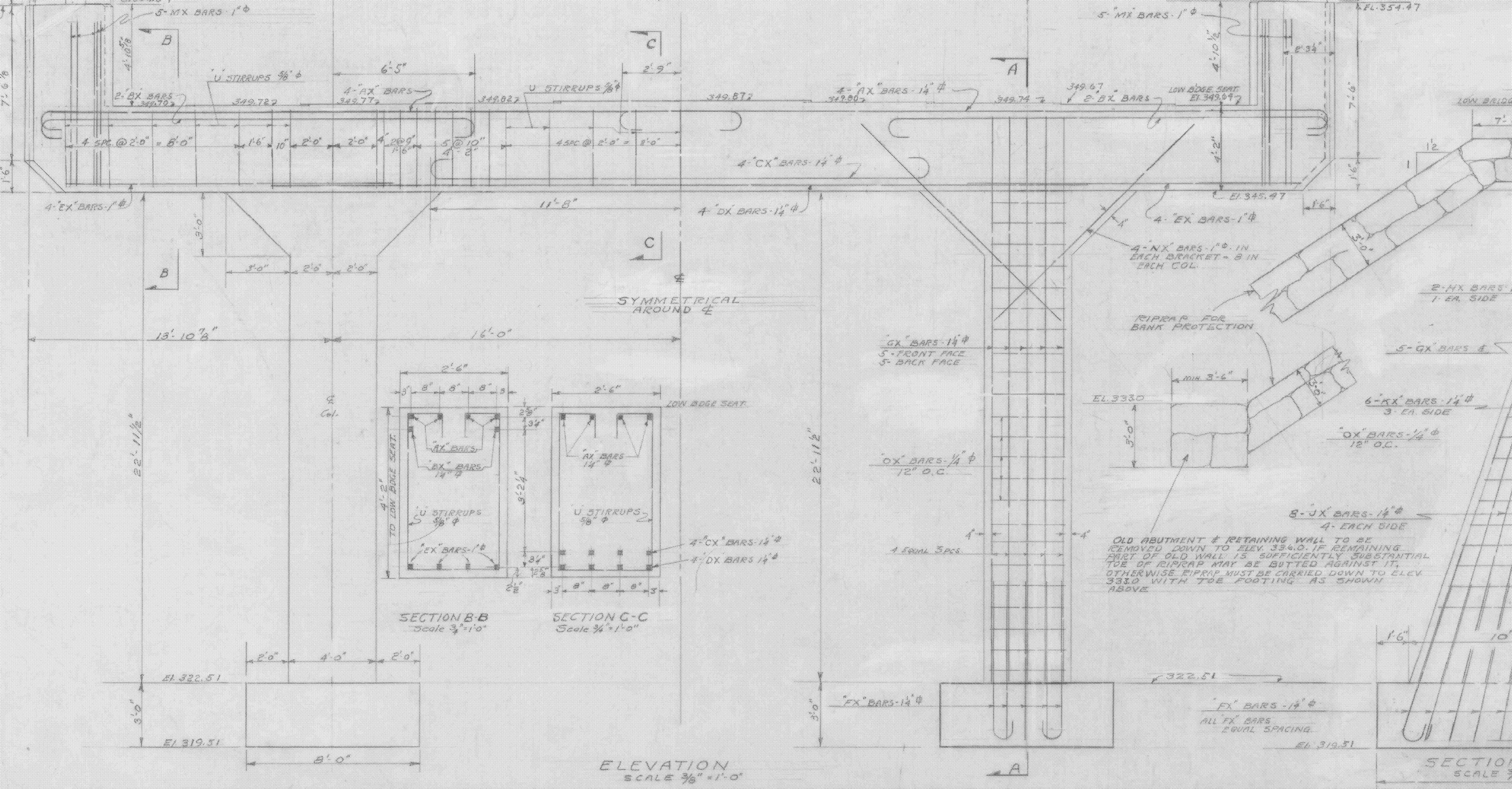
REINFORCING STEEL SCHEDULE - ABUT NO 2

BAR SIZE	NUMBER	TOTAL LENGTH	DIM. X	DETAIL
AX 1/4"	8	35'-0"	31'-6"	
BX "	4	23'-8"	19'-2"	
CX "	4	26'-0"	22'-6"	STRAIGHT
DX "	4	36'-9"	-	
EX 1/4"	8	14'-6"	-	
FX 1/4"	8	8'-9"	-	
GX 1/4"	20	26'-6"	-	STRAIGHT
HX "	4	26'-6"	-	"
JX "	16	11'-0"	-	"
KX "	12	18'-0"	-	"
MX 1" Φ	10	7'-6"	-	"
NX 1" Φ	16	13'-0"	-	"
OX 1/4"	16	30'-0"	-	CUT & BEND IN FIELD
U STIRRUPS 5/8"	41	18'-8"	-	

STEPS ON BRIDGE SEAT TO BE HALF WAY BETWEEN BEAMS.

FOR DETAIL OF POSTS, RAIL ETC. SEE SHEET 11 OF 38 PIPE & SPINDLE RAIL RIGHT & LEFT OF ABUT. 2

NOTES:-
 DIMENSIONS FOR REINFORCING STEEL TO CENTER OF BARS.
 ALL REIN. STL. TO BE INTERMEDIATE GRADE.
 ALL CONCRETE TO BE CLASS 30.
 ALL EXPOSED EDGES TO BE CHAMFERED 1"
 MINIMUM LAP FOR REIN. STL. - 45 DIAMETERS.



SPRINGFIELD
 BHF 016-2(14)
 REFERENCE SHEET 2 OF 11
 SHEET 63 OF 72

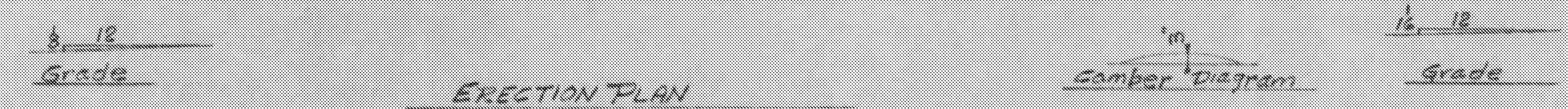
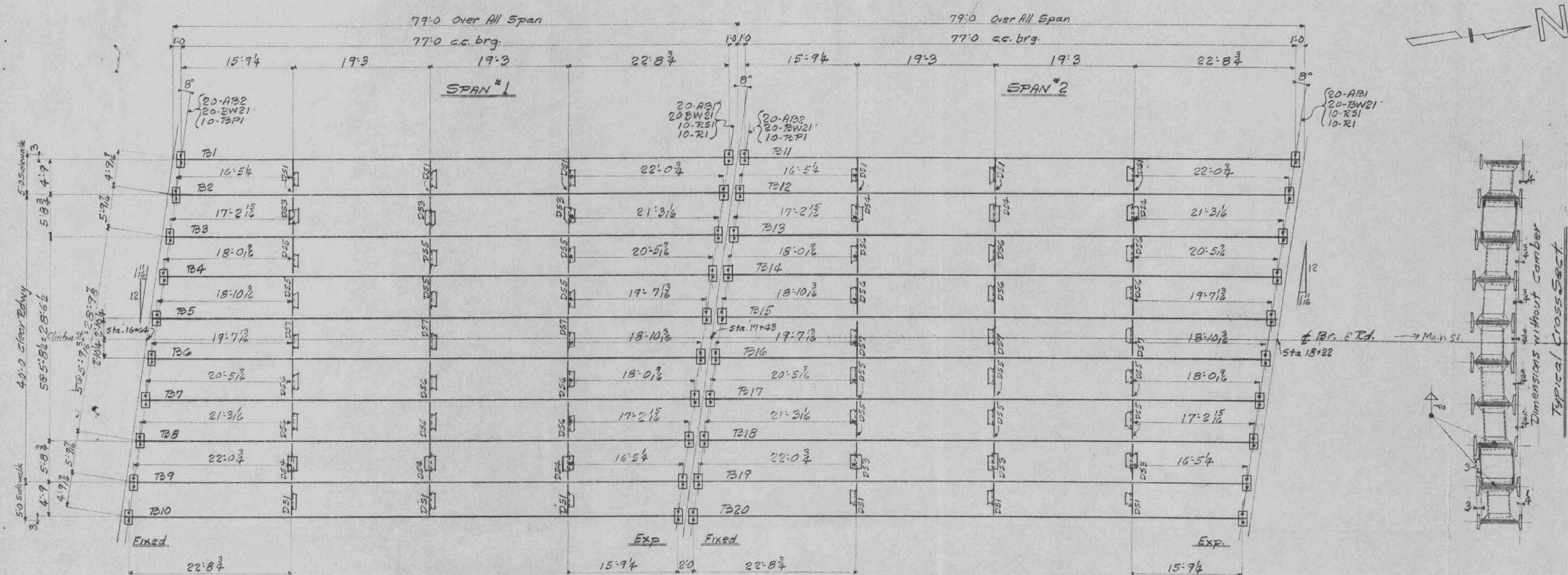
ABUTMENT NO 2
 COMMUNITY HOUSE BRIDGE
 SPRINGFIELD

ESTIMATED QUANTITIES

CONCRETE, CLASS B	96-CY
REINFORCING STEEL	12,955-LBS
STRUCTURE EXCAVATION	460-CY
CHANNEL EXCAVATION	980-CY
RIPRAP FOR BANK PROTECTION	350-CY

Surveyed by
 Designed by S/N
 Drawn by S/N
 Traced by
 Checked by J.L.H. & H.R.D. H.R.C.
 Series U No. 123(4) Filled
 Sheet 7 of 38 Sheets

Fed Road Dist. No.	State	Proj. No.	Fiscal Year
9	Vt.	123(4)	1947



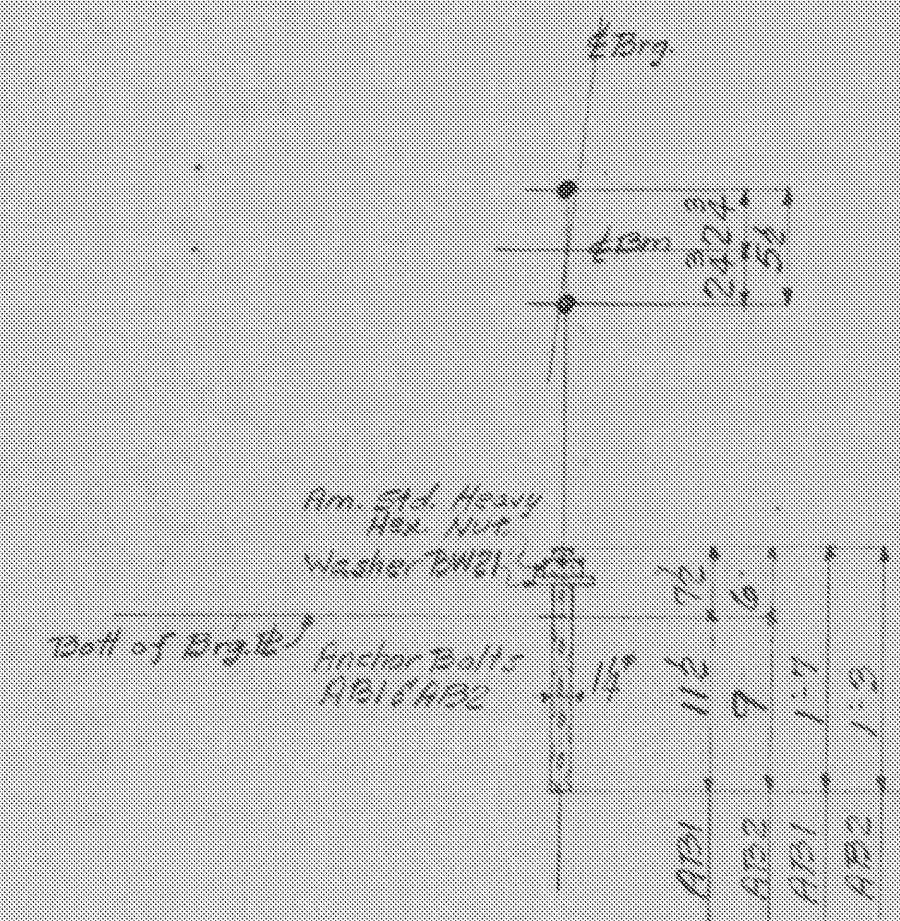
ERECTION PLAN
 Stringers Ext. B366-170
 Stringers Int. B358-230
 SC Diaphragms SC18x42-7
 Trm Diaphragms B293x108
 Dimensions on Plan are Horizontal

OK 7/19/49
 RMB

NOTES
 Holes cut block, etc for other trades must be shown on this plan at time of approval otherwise work must be done at no expense to B.S.Co. Dimensions on plan must be adhered to otherwise steel will not fit. In case of a error notify B.S.Co. at once. Members shall be erected with the marks in the same corresponding position as shown on plan.

Specs: Vt State Hwy Dept. Specs, customers Design Sh. 1, 2, 3, 4, 6 to 11 of 38.
 Anchor Bolts furnished by B.S.Co. set by others.
 Shop Paint - One Coat Red Lead as per specs Exclude railings field weld wire Field fitting up bolts &c.
 Erection and field paint by others. Welding shall conform to that of the American Welding Society.

SPRINGFIELD
 BHF 016-2 (14)
 REFERENCE SHEET 3 OF 11
 SHEET 64 OF 72



Anchor Bolt Setting

Sh. No.	Description
E1	Erection Plan
1	Brq. Details
2	Details
M1	Anchor Bolts
M2	Field Washers
SRI	Field Bolts

Cust. No. 4240
 Item 8

- RIVETS
- OPEN HOLES
- REAM
- MILLING
- PAINT
- WELDING
- SHOP CONTACT SURFACES

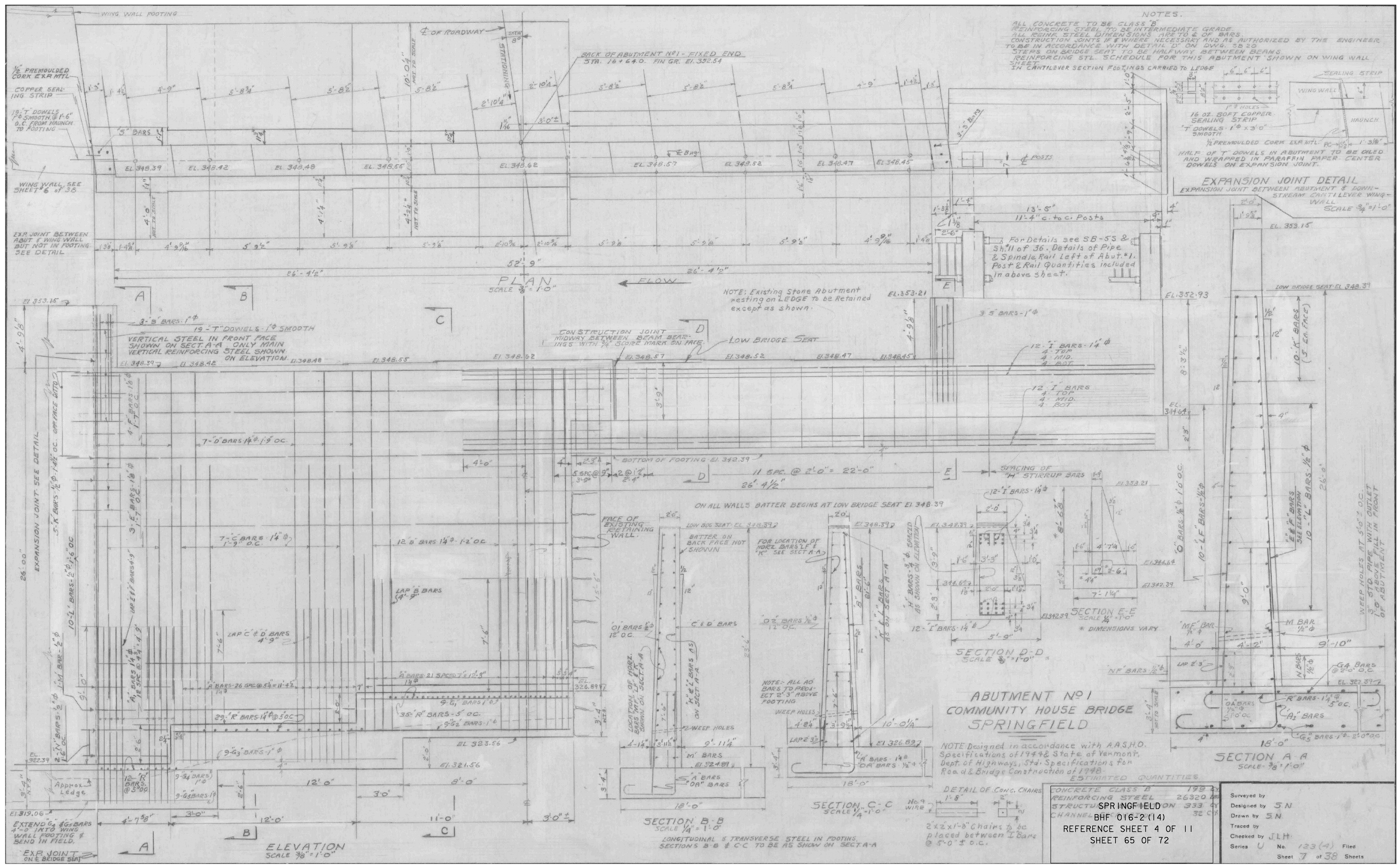
Bridge over Black River Sta. 17+43
ERECTION PLAN & ANCHOR BOLT SETTING

TEMP.	Vt. State Hwy Dept. Community
SUPT.	House Br. Springfield, Vt.
LAYOUT	Curt D.W. Miller Co. Inc. Ludlow, Mass.
FITTER	
SHOP INSP.	
EC. WKS.	
SI. SMITH	
MON.	
ERECT.	
CO. INSP.	

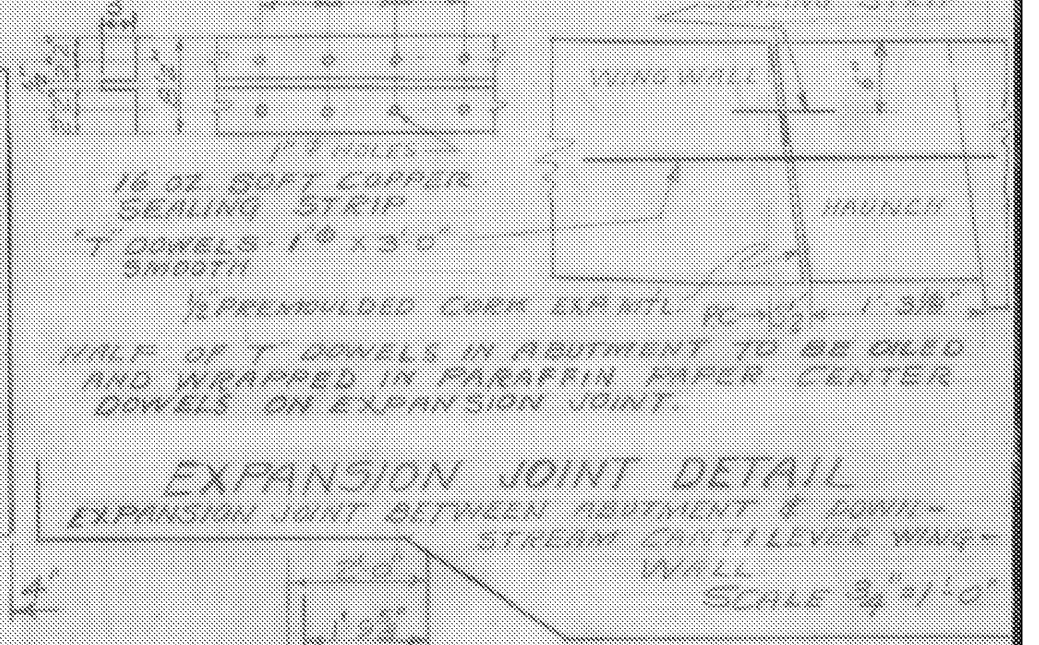
BETHLEHEM STEEL COMPANY
 FABRICATED STEEL CONSTRUCTION

BETHLEHEM DRAFTING ROOM Beth WORKS
 IN CHARGE Hoover MADE BY # 6-21-49
 CHECKED BY C.W. 7/19/49 TRACED BY
 REVISED LAST ASSEM. MK.

SHOP NO. **CONTRACT C.P. 1652** SHEET **E1**



NOTES.
 ALL CONCRETE TO BE CLASS B
 REINFORCING STEEL TO BE INTERMEDIATE GRADE
 ALL REBAR STEEL DIMENSIONS ARE TO & OF BARS
 CONSTRUCTION JOINTS IF NECESSARY AND AS AUTHORIZED BY THE ENGINEER
 TO BE IN ACCORDANCE WITH DETAIL 'D' ON DWG. SB 20
 STEPS ON BRIDGE SEAT TO BE HALFWAY BETWEEN BEAMS
 REINFORCING STL. SCHEDULE FOR THIS ABUTMENT SHOWN ON WING WALL
 SHEET
 IN CANTILEVER SECTION FOOTINGS CARRIED TO LEDGE



For Details see SB-55 & 56 of 36. Details of Pipe & Spindle Rail Left of Abut. #1. Post & Rail Quantities included in above sheet.

NOTE: Existing Stone Abutment resting on LEDGE to be Retained except as shown.

CONSTRUCTION JOINT MIDWAY BETWEEN BEAM BEARS WITH 3/4\"/>

**ABUTMENT NO. 1
 COMMUNITY HOUSE BRIDGE
 SPRINGFIELD**

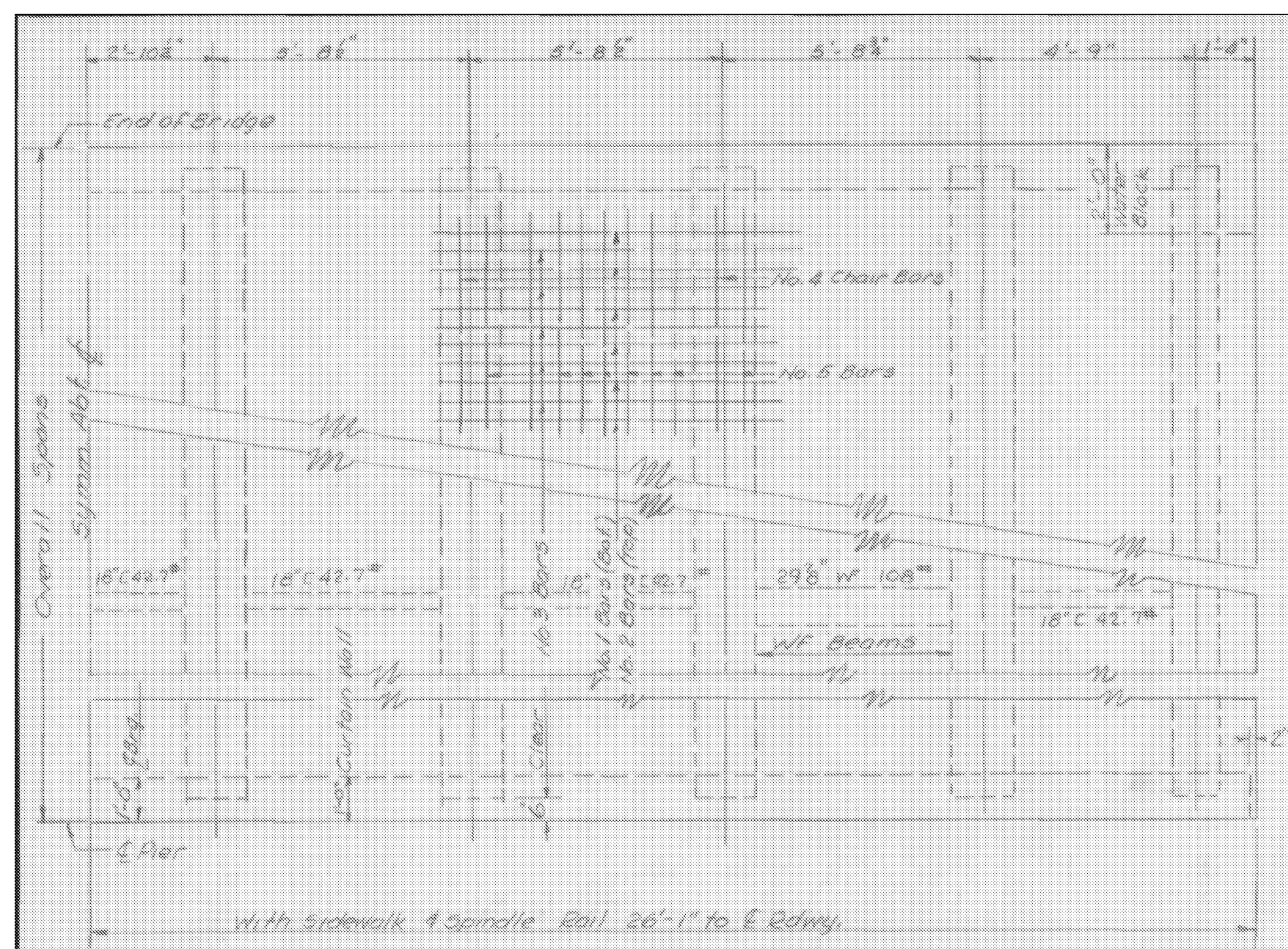
NOTE: Designed in accordance with A.A.S.H.O. Specifications of 1944 & State of Vermont, Dept. of Highways, Std. Specifications for Road & Bridge Construction of 1948.

ESTIMATED QUANTITIES

CONCRETE CLASS B	199 cu yd
REINFORCING STEEL	26320 lbs
STRUCTURAL SPRINGFIELD	333 cu yd
CHANNEL	32 cu yd

BHF 016-2(14)
 REFERENCE SHEET 4 OF 11
 SHEET 65 OF 72

Surveyed by
 Designed by J.N.
 Drawn by S.N.
 Traced by
 Checked by J.L.H.
 Series U No. 123(4) Filed
 Sheet 7 of 38 Sheets



HALF PLAN
Scale 3/8" = 1'-0"

TABLE OF QUANTITIES FOR SINGLE SPAN (SQUARE)

OVERALL SPAN	STRUCTURAL STEEL DATA							REINFORCING STEEL										CONC. CLASS B					
	SIZE	WF BEAM LENGTH	Wt. 250#	Wt. 350#	SEC. MOD.	DIM. "H"	DIM. "A"	FOR SPAN WITHOUT S.W. BARS					ADD FOR (2) S.W. BARS						TOT. WGT. WITH S.W.				
								1	2	3	4	5	6A	10	5A	7	8			9	10		
79	18" C 42.7"	78'-0"	156	242	9.49	4.11	-02	163456	87	87	87	174	24	24	24	24	20	240	68	54	24	22574	124.2

NOTES: Steel Superstructure to include WF beams, bearing plate assemblies & indicated diaphragms per span. All steel beams shall be rolled to a true circular camber full length of the beam & the middle ordinate to be as noted for various spans in the table unless otherwise noted on Plan & Profile sheet.

All Structural Steel shall be painted as specified under item 403 A-B, Standard Road & Bridge Specifications, State of Vermont, 1948.

The final coat of field paint shall be green unless otherwise directed by the Engineer.

This sheet does not include Quantities for Railing, Curbs, & Posts. Quantities are for a Single Span Square Bridge.

When Bridge is built on skew, transverse bars shall be furnished as for square span. Bars shall be cut in field to fit one skew end & cut-off ends shall be used in opposite skew end. In skew spans the #10 bars shall be lengthened, & the number of #6 series bars shall be increased. The length of beams decreases on skew spans, as indicated on detail "L" on drawing 5B#20.

All material & construction shall conform to the Standard Road & Bridge Specifications, State of Vermont, 1948 and the A.A.S.H.O. Specifications for 1944. Design for H-20(44) live loading. 25% paving allowance, dead load includes weight of beams, slab, & pipe rail.

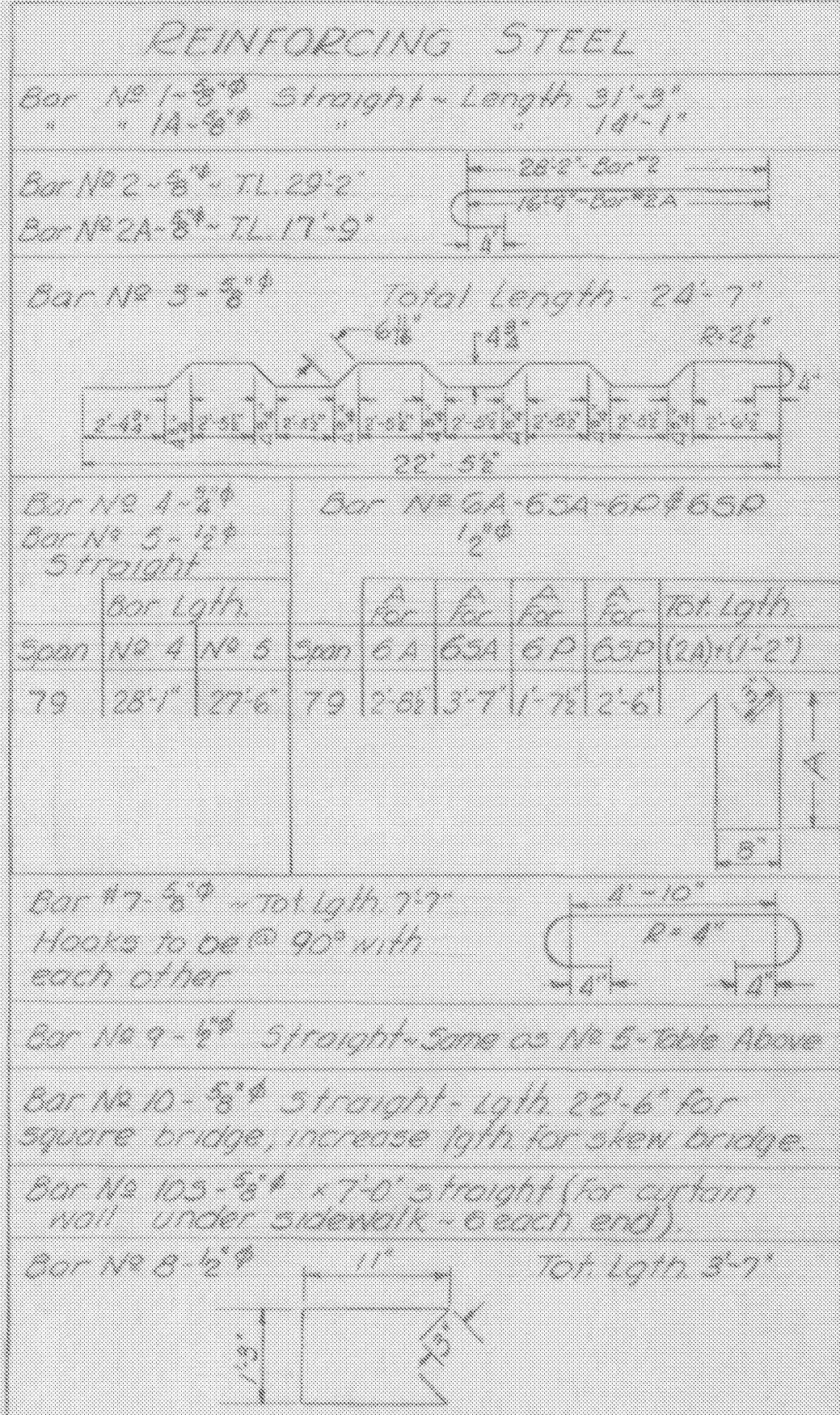
For location of Fixed & Expansion Bearings, see Plan & Profile Sheet.
For Bridges with Spindle Sidewalk Railing, see Std. Sheet 5B-55.
For Bearing Plates see Dwg. 5B#20-Detail "L". Use Assembly No. 1 for Fixed Ends - Spans 74' & up.
No. 2 for Exp. Ends - Spans 74' & up.

For details of Diaphragms, see Dwg. 5B#20-Detail "K". For diaphragms use 29# WF 108" Location as shown in Plan.

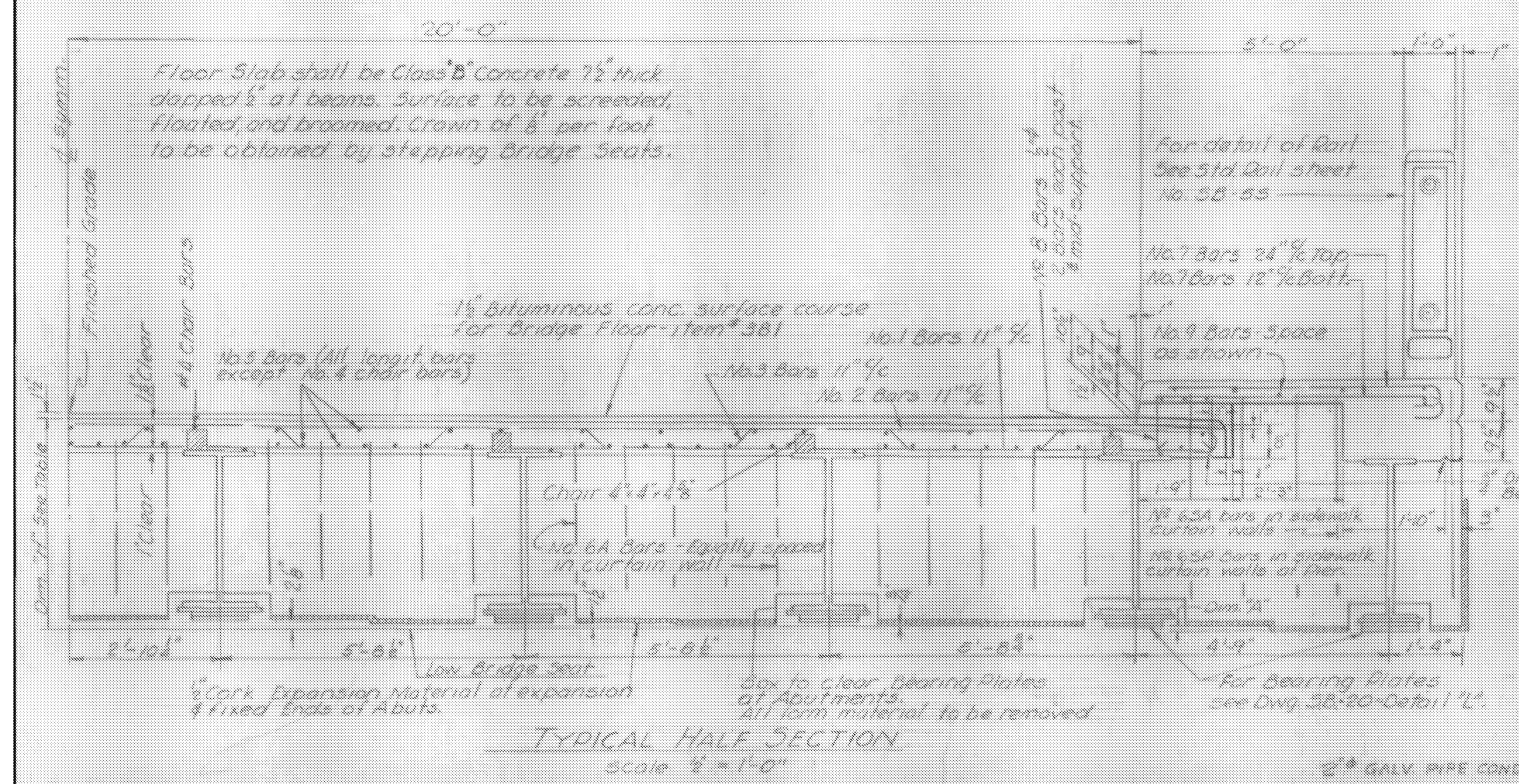
Splice Lapping of No. 1 bars shall be on one side of & Bridge & splice lapping of No. 2 bars shall be on the other side of & Bridge.

3' minimum camber likely to remain permanent will be accepted.

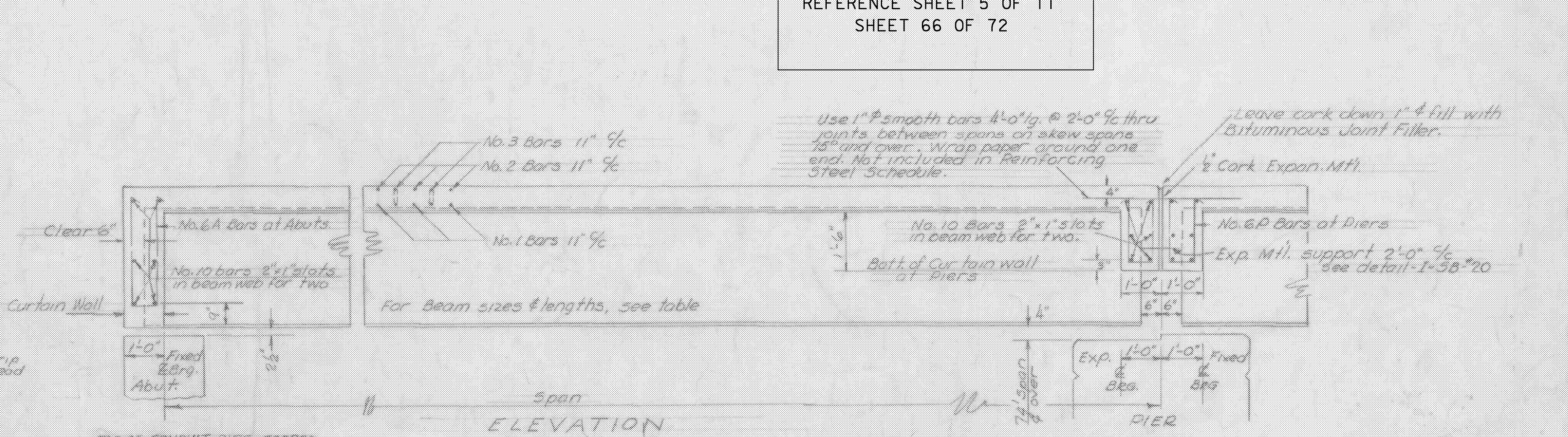
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	Vt.				



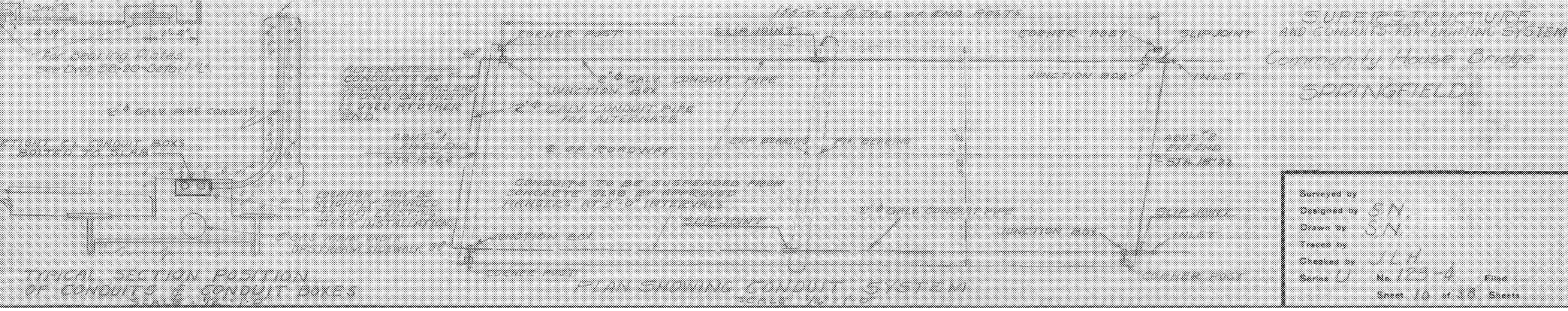
SPRINGFIELD
BHF 016-2 (14)
REFERENCE SHEET 5 OF 11
SHEET 66 OF 72



TYPICAL HALF SECTION
Scale 1/2" = 1'-0"



ELEVATION



PLAN SHOWING CONDUIT SYSTEM
Scale 1/16" = 1'-0"

CONDUIT SYSTEM NOTES.

CONTRACTOR TO SUPPLY & INSTALL CONDUIT SYSTEM FOR LIGHTS ON THE FOUR END POSTS OF BRIDGE AS SHOWN ON THIS SHEET AND IN ACCORDANCE WITH STD. DWG. 5B 20, DETAIL "M" AND AS SPECIFIED UNDER ITEM 513-B CONTRACTOR TO LEAVE ALL EXPOSED CONDUIT ENDS CAPPED & READY FOR WIRING BY OTHERS.

ANY ARRANGEMENTS MADE BETWEEN THE CONTRACTOR AND THE TOWN OF SPRINGFIELD, VILLAGE OF SPRINGFIELD AND THE CENTRAL VERMONT PUBLIC SERVICE CORP. IN REGARD TO THIS WORK, SHALL BE MADE BY THE CONTRACTOR AND WILL NOT BE A PART OF THIS CONTRACT.

JUNCTION BOXES TO BE STANDARD WATERTIGHT C.I. JUNCTION BOXES.

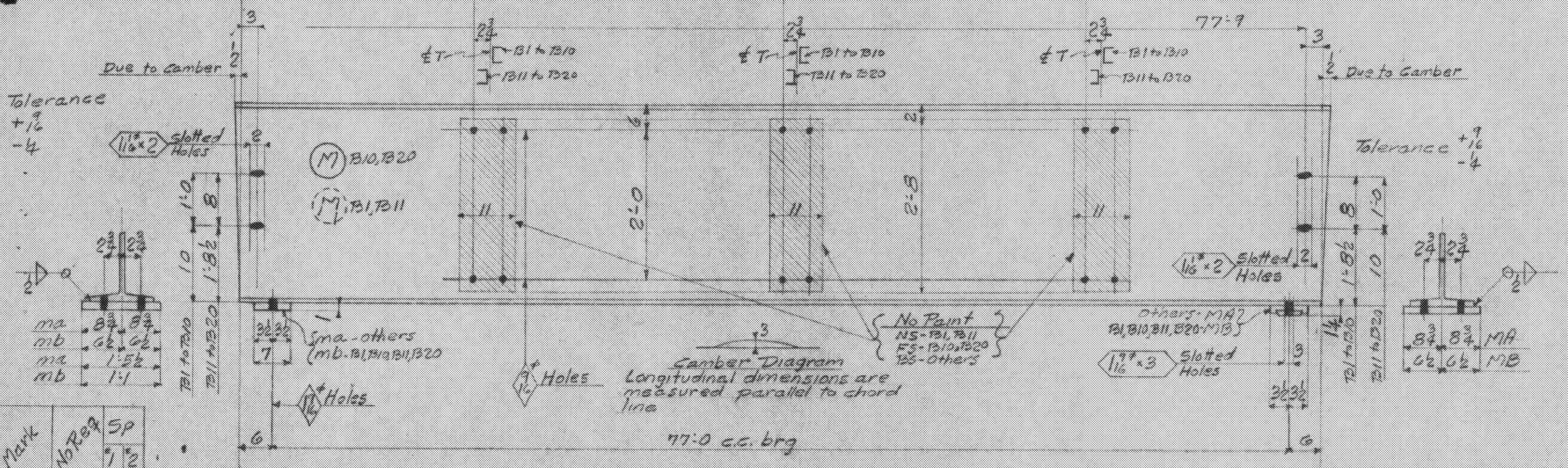
ALL EXPOSED METAL PARTS THAT ARE NOT GALVANIZED TO BE PAINTED IN ACCORDANCE WITH ITEM 403 A & B.

SUPERSTRUCTURE AND CONDUITS FOR LIGHTING SYSTEM
Community House Bridge
SPRINGFIELD

Surveyed by
Designed by S.N.
Drawn by S.N.
Traced by
Checked by J.L.H.
Series U No. 123-4 Filed
Sheet 10 of 38 Sheets

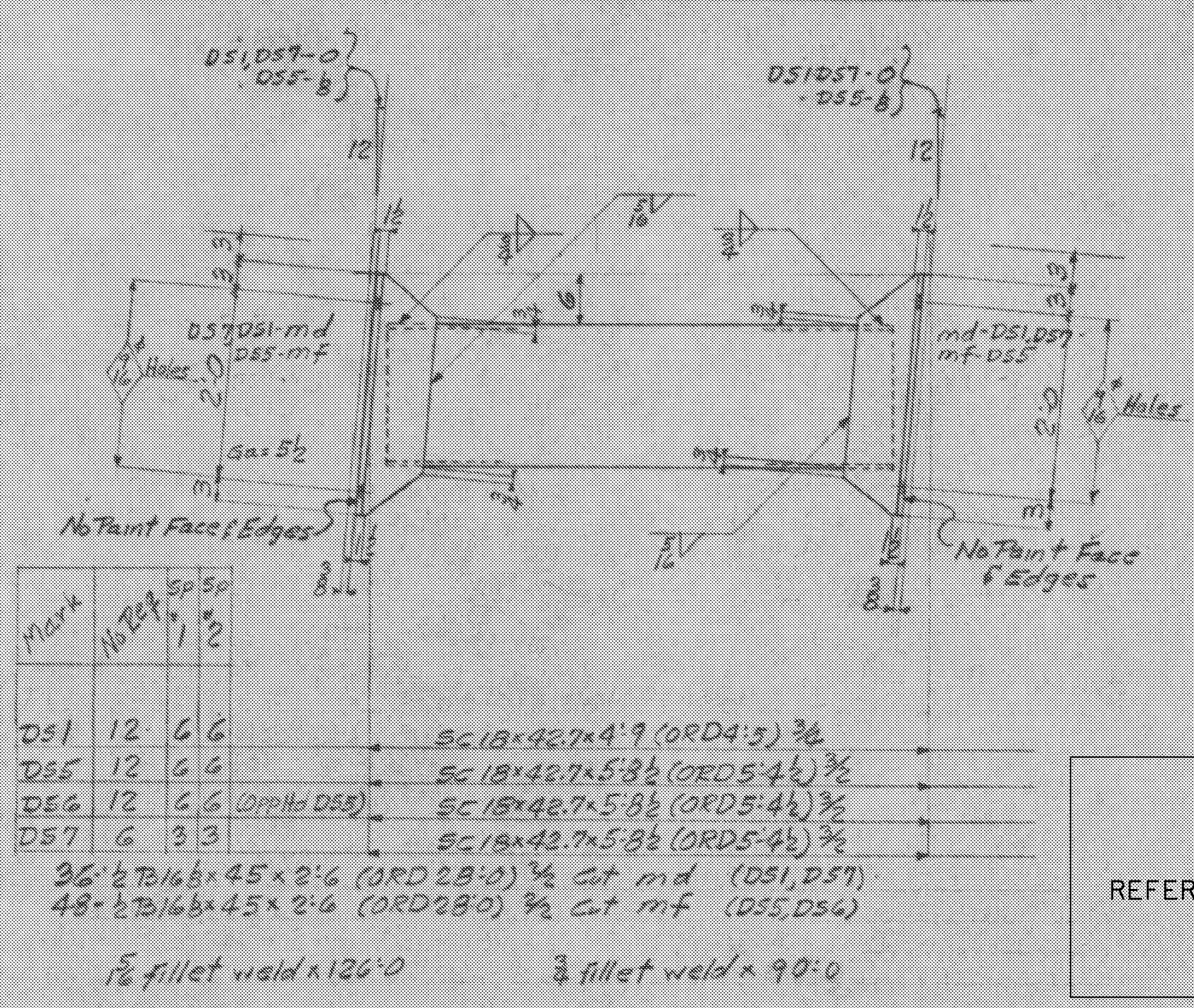
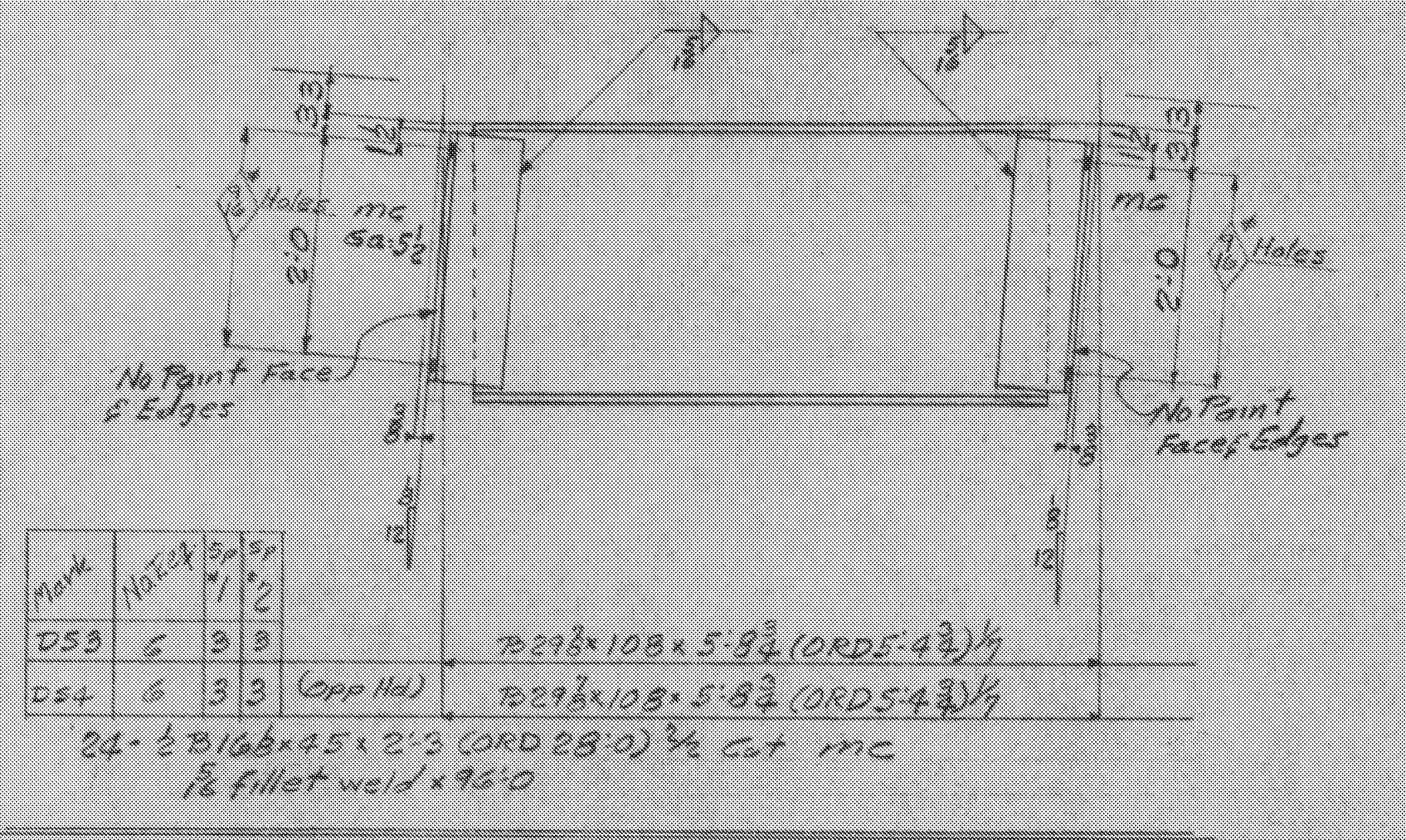
Fed Road Dist. No	State	Proj No	Figural Year
9	Vt.	123(4)	

B1	16'-0 1/2"	35'-3 1/2"	54'-6 1/2"
B2	16'-8 1/2"	35'-11 1/2"	55'-2 1/2"
B3	17'-6"	36'-7"	56'-0"
B4	18'-3 1/2"	37'-4 1/2"	56'-7 1/2"
B5	19'-1 1/4"	38'-1 1/4"	57'-4 1/2"
B6	19'-10 1/8"	38'-7 1/8"	58'-1 1/2"
B7	20'-8 1/2"	39'-4 1/2"	58'-8 1/2"
B8	21'-6 1/2"	40'-1 1/2"	59'-5 1/2"
B9	22'-4 1/2"	40'-8 1/2"	60'-2 1/2"
B10	22'-11 1/2"	41'-5 1/2"	60'-9 1/2"
B11	16'-0 1/2"	35'-3 1/2"	54'-6 1/2"
B12	16'-8 1/2"	35'-11 1/2"	55'-2 1/2"
B13	17'-6"	36'-7"	56'-0"
B14	18'-3 1/2"	37'-4 1/2"	56'-7 1/2"
B15	19'-1 1/4"	38'-1 1/4"	57'-4 1/2"
B16	19'-10 1/8"	38'-7 1/8"	58'-1 1/2"
B17	20'-8 1/2"	39'-4 1/2"	58'-8 1/2"
B18	21'-6 1/2"	40'-1 1/2"	59'-5 1/2"
B19	22'-4 1/2"	40'-8 1/2"	60'-2 1/2"
B20	22'-11 1/2"	41'-5 1/2"	60'-9 1/2"



Mark	No	Req	SP	1/2
B1	One	1		
B2	One	1		
B3	One	1		
B4	One	1		
B5	One	1		
B6	One	1		
B7	One	1		
B8	One	1		
B9	One	1		
B10	One	1		
B11	One	1		
B12	One	1		
B13	One	1		
B14	One	1		
B15	One	1		
B16	One	1		
B17	One	1		
B18	One	1		
B19	One	1		
B20	One	1		

Shop Note Diff. Wt Brms. 16-Ts 7x1x1.5 1/2 (ORD) 1/2 ma (B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B20)
 4-Ts 7x1x1.1 (ORD) 1/4 mb (B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B20)



36-T 2x16x45x2.3 (ORD 28.0) 1/2 cut md (D51, D57)
 48-T 2x16x45x2.3 (ORD 28.0) 1/2 cut mf (D55, D56)
 1/2 fillet weld x 126.0 3/8 fillet weld x 90.0

SPRINGFIELD
 BHF 016-2 (14)
 REFERENCE SHEET 6 OF 11
 SHEET 67 OF 72

Over Black River Sta. 17+43
 Details

Shop Note
 Edges of Br ma, mb curled from shear not permitted. Plane if necessary to insure flat plates

RIVETS None
 OPEN HOLES As Noted
 REAM None
 MILLING None
 PAINT One Coat Red Lead Unless Noted
 WELDING As Noted See E1
 SHOP CONTACT SURFACES No Paint

Const. No 4340
 Item B

Vt State Hwy Dept. Community House Br. Springfield, Vt.
 Carl O. Miller, Colos. Ludlow, Mass.

BETHLEHEM STEEL COMPANY
 FABRICATED STEEL CONSTRUCTION

BETHLEHEM DRAFTING ROOM Beth WORKS
 IN CHARGE Hoover MADE BY # 6-22-49
 CHECKED BY C.W.L. 9/1/49 TRACED BY
 REVISED LAST ASSEM. MK.

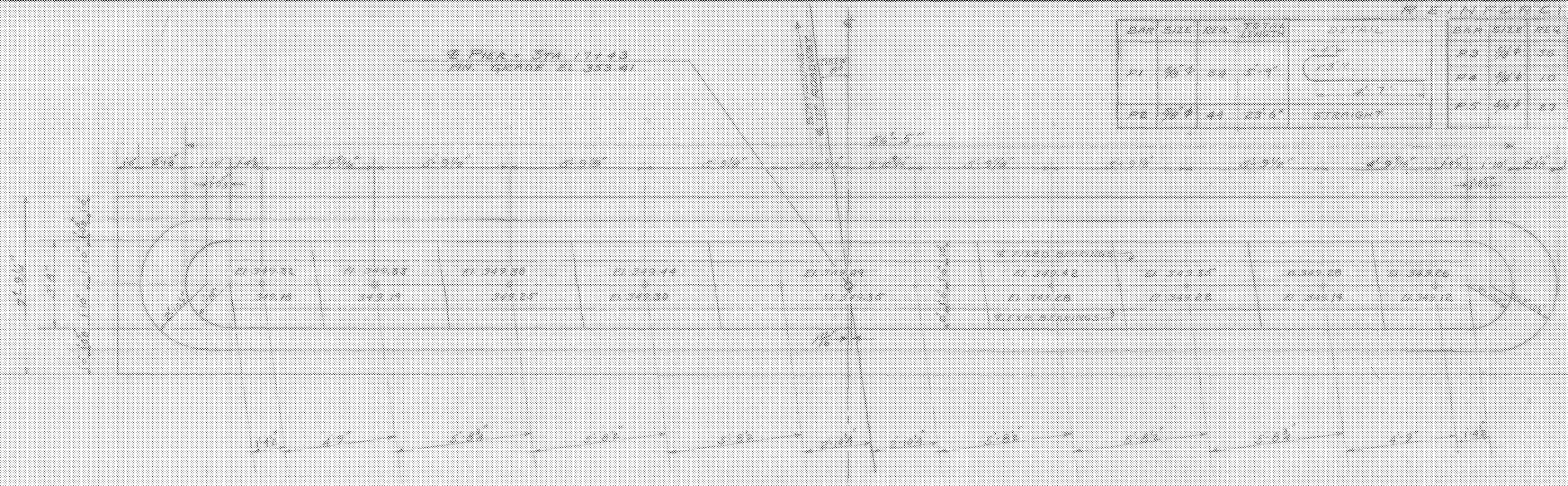
SHOP NO. CONTRACT CP1652 SHEET 2

OK 7/19/49
 LHM

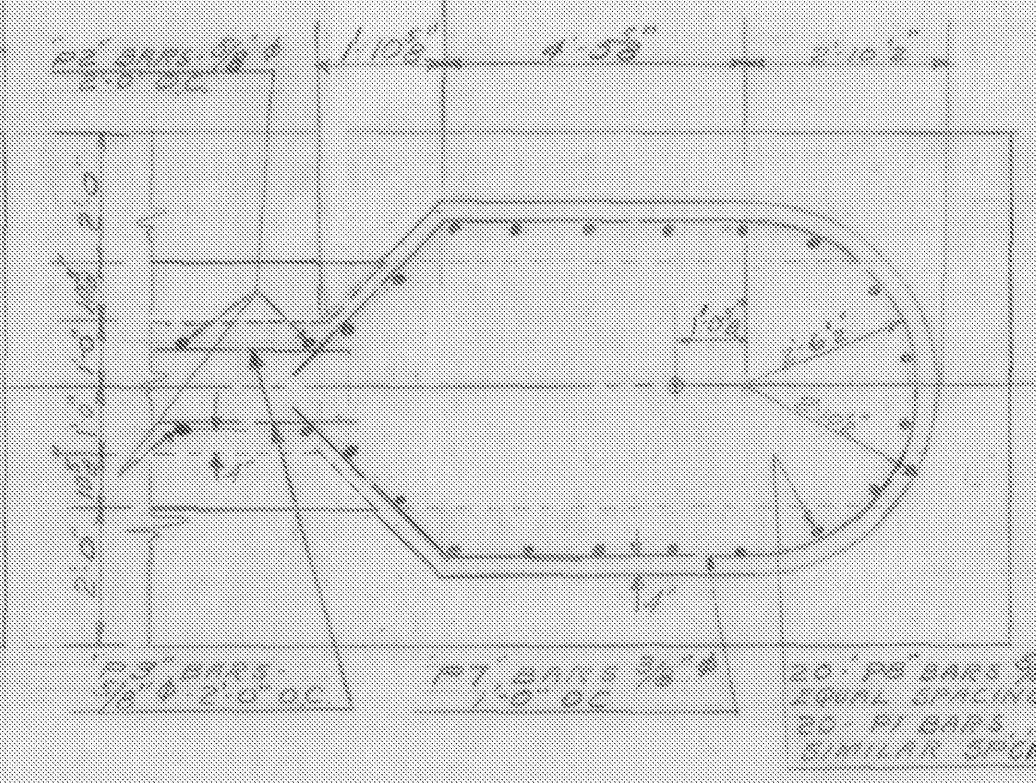
☉ PIER = STA. 17+43
FIN. GRADE EL. 353.41

REINFORCING STEEL SCHEDULE

BAR SIZE	REQ.	TOTAL LENGTH	DETAIL	BAR SIZE	REQ.	TOTAL LENGTH	DETAIL	BAR SIZE	REQ.	TOTAL LENGTH	DETAIL		
P1	5/8" φ	84	5'-9"	STRAIGHT	P3	5/8" φ	35	24'-10"	STRAIGHT (1 LAP)	P6	5/8" φ	44	7'-0"
P2	5/8" φ	44	23'-6"	STRAIGHT	P4	5/8" φ	10	21'-7"	STRAIGHT (1 LAP)	P7	5/8" φ	50	20'-4"
					P5	5/8" φ	27	3'-3"	STRAIGHT	P8	5/8" φ	40	23'-6"

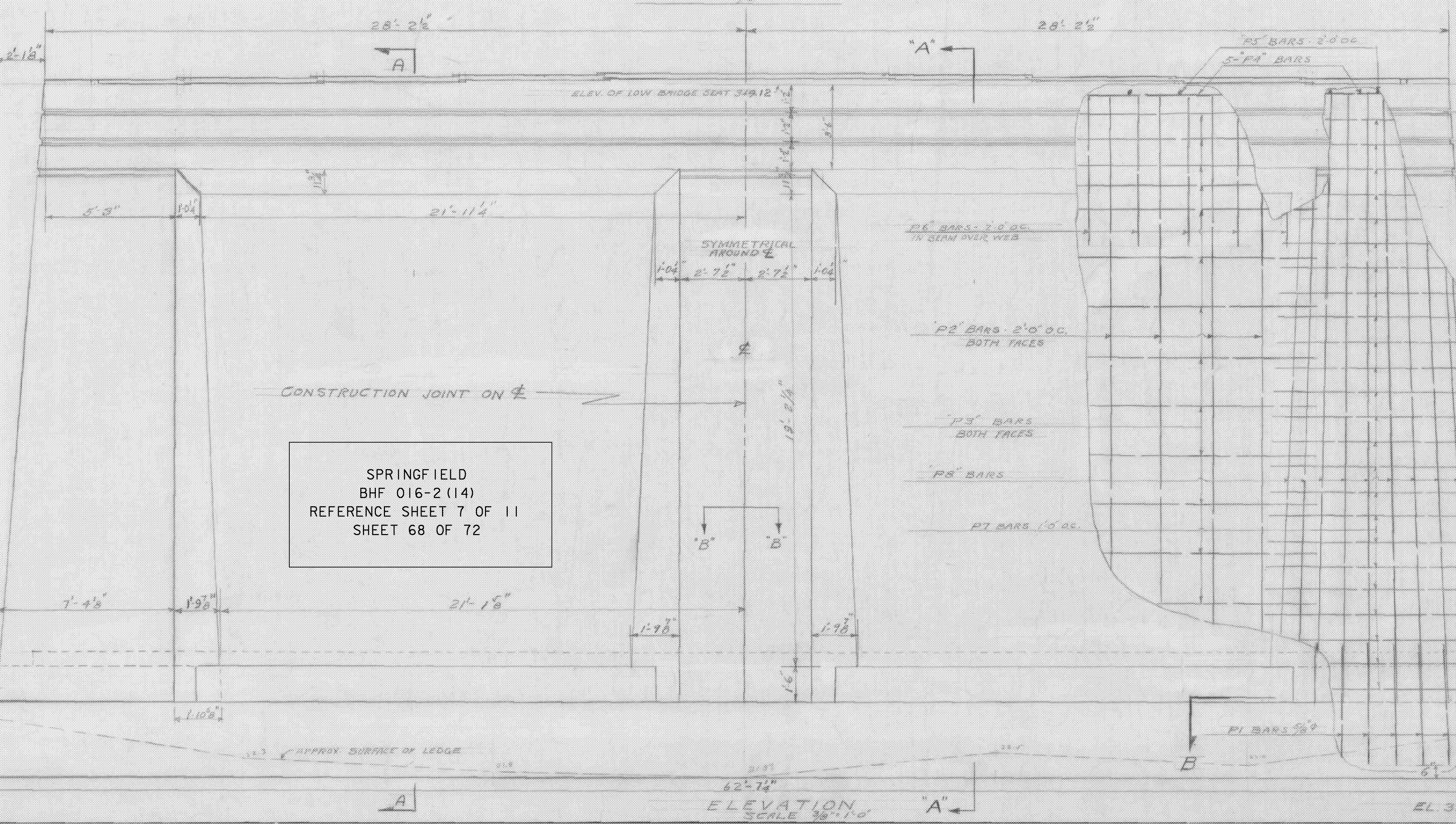


PLAN
SCALE 3/8" = 1'-0"

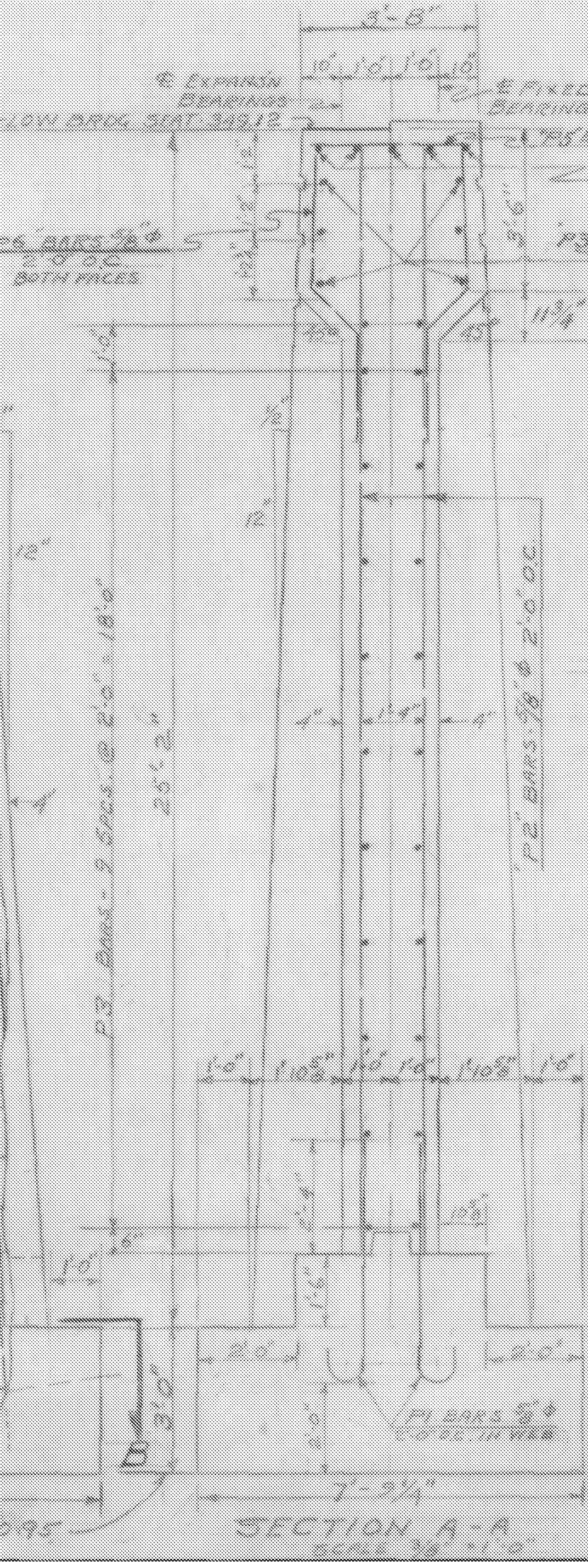


SECTIONAL PLAN B-B
SCALE 3/8" = 1'-0"

16.0Z SOFT COPPER
Sealing Strip, as per
Detail 307 at 36"
(Except that 1/2" space shall
be squeezed together)



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



SECTION A-A
SCALE 3/8" = 1'-0"

DETAIL OF CONSTRUCTION
JOINT AT E PIER.
SAME BOTH SIDES OF PIER.
To EXTEND FROM TOP OF
FOUNDATION TO TOP OF
PIER.

NOTES
ALL STEEL DIMENSIONS TO ☉ OF BARS
REINFORCING STEEL TO BE INTERMEDIATE
GRADE
ALL CONCRETE TO BE CLASS C
EXPOSED EDGES TO BE CHAMFERED 1"
CONSTRUCTION JOINT WHERE IF NECESS-
SARY AND IF AUTHORIZED BY ENGINEER
TO BE IN ACCORDANCE WITH DETAIL D' ON
PG. 24 20
SCORE MARKS IN ACCORDANCE WITH
DETAIL D, SB 2.0
STEPS ON BRIDGE SEAT TO BE HALF
WAY BETWEEN BEAMS
LONGITUDINAL STOP ON BRIDGE SEAT TO
BE ON LONGITUDINAL ☉ OF PIER
Designed in accordance with A.P.S.H.D.
specifications of 1944 & State of Vermont
Dept. of Highways, Std. Specifications for
Road Bridge, Construction of 1948
Bottom of Foundation to be ledge

PIER
COMMUNITY HOUSE BRIDGE
SPRINGFIELD

ESTIMATED QUANTITIES

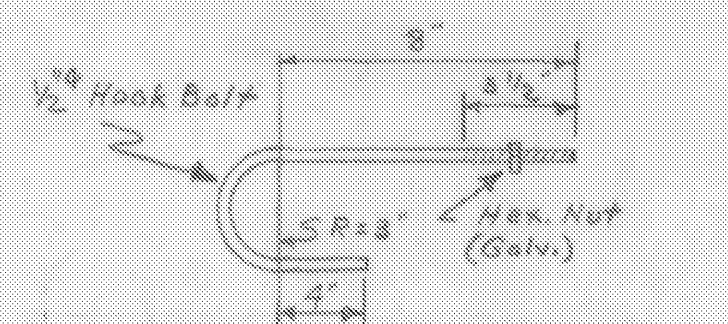
CONCRETE CLASS C	229 CY.
REINFORCING STEEL	5100 LBS.
STRUCTURE EXCAVATION	80 CY.

Surveyed by
Designed by SN
Drawn by SN
Traced by
Checked by J.L.H.
Series U No. 123 (4) Filed
Sheet 8 of 38 Sheets

SPRINGFIELD
BHF 016-2 (14)
REFERENCE SHEET 7 OF 11
SHEET 68 OF 72

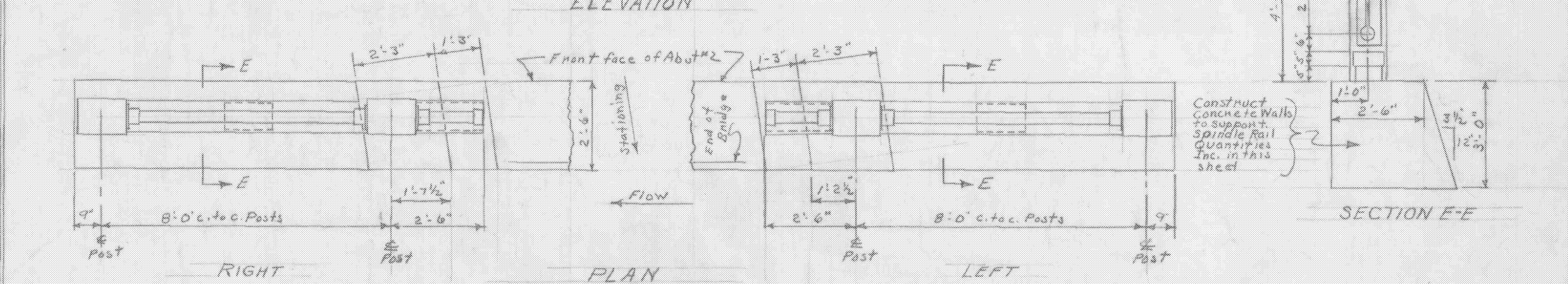
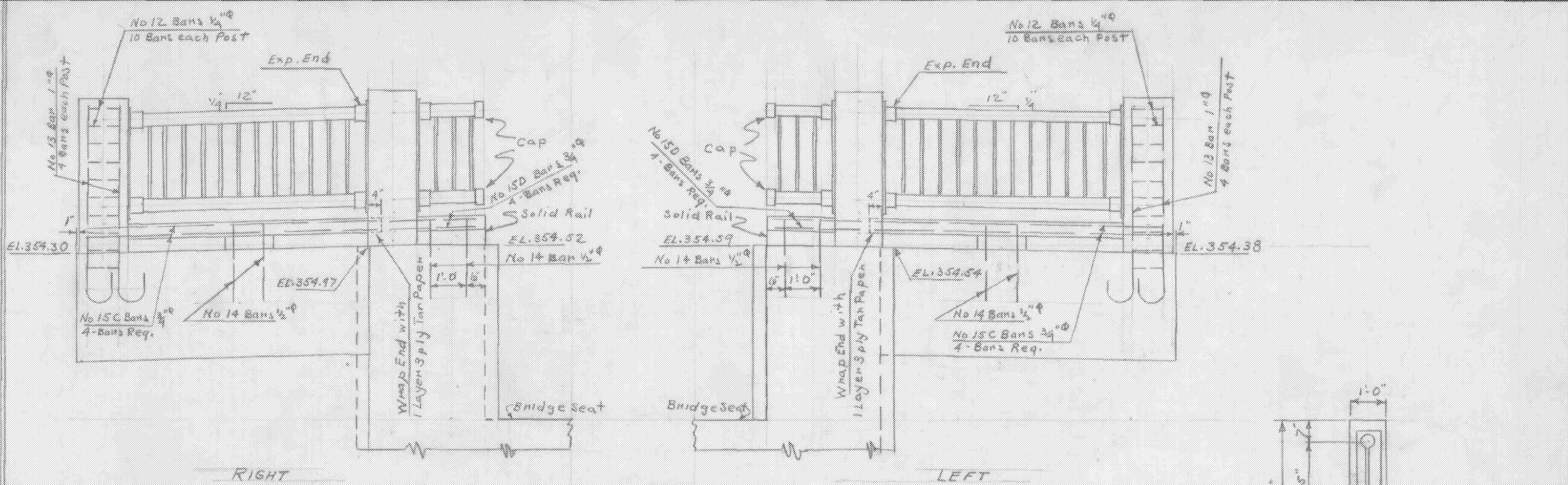
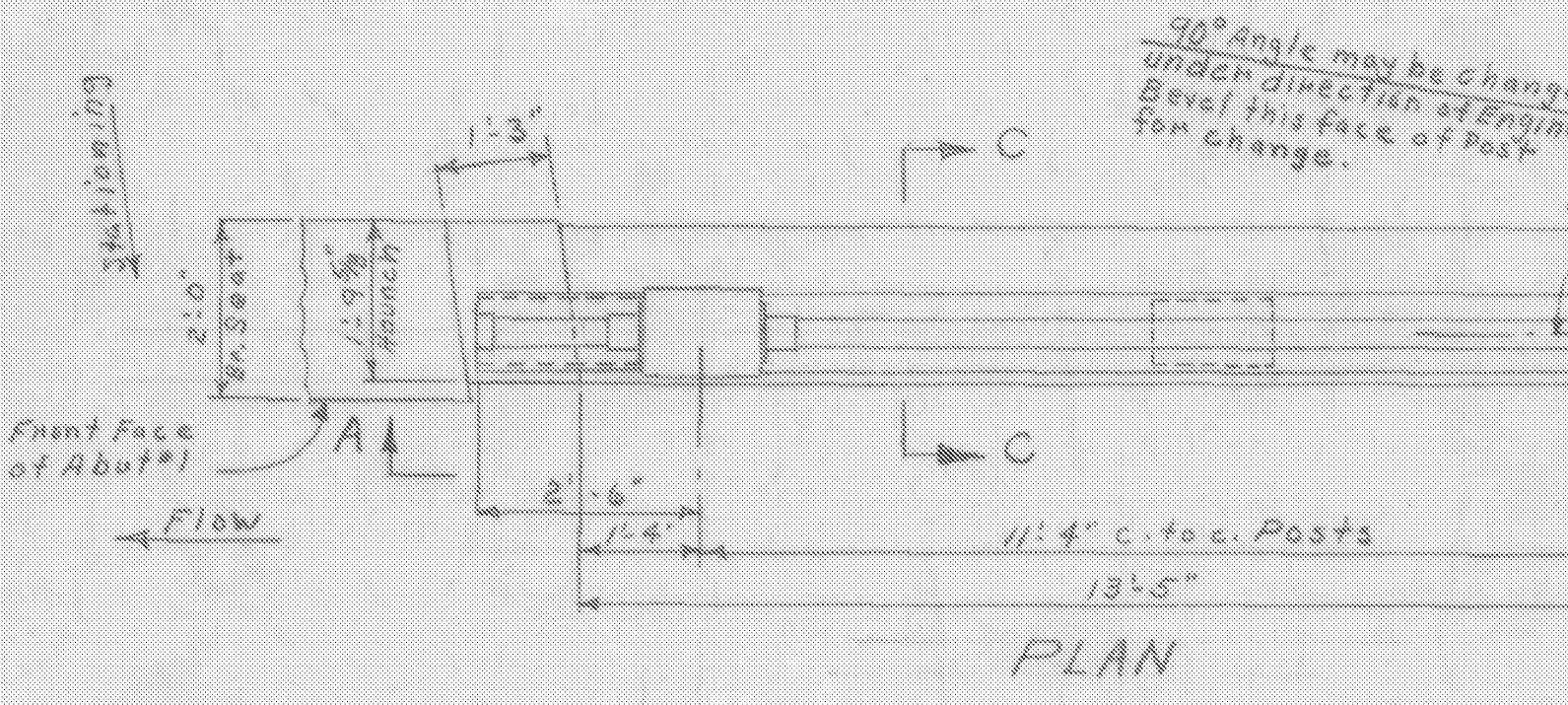
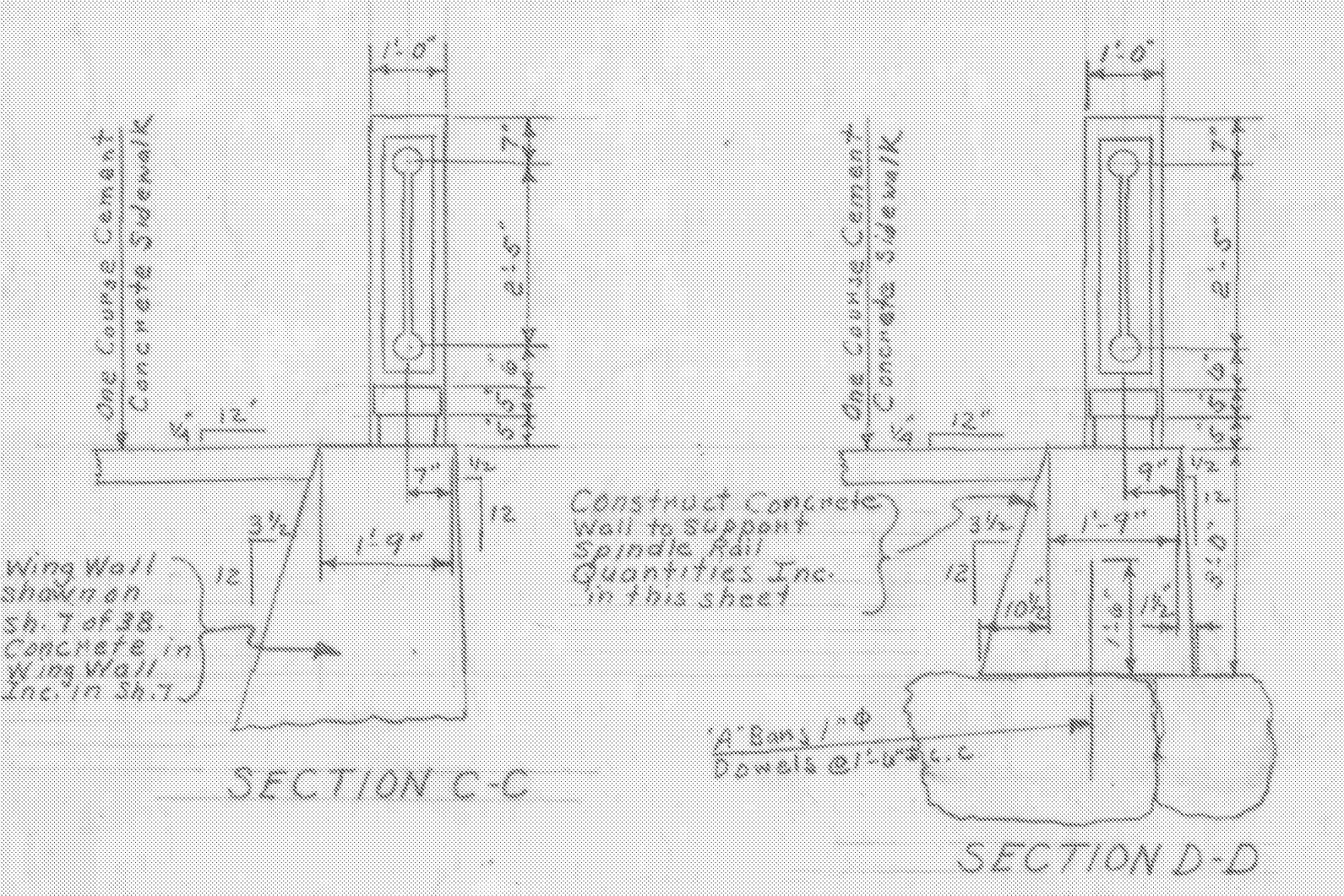
See also: 1948 (New)
Sheet 2 of 38
Final construction

DETAILS OF PIPE & SPINDLE RAIL
LEFT OF ABUTMENT #1
SCALE 1/2" = 1'-0"



Not to scale.
DETAIL OF HOOK BOLT TO BE USED IN BROAD SIDE OF CORNER POST - 6 REQ
12 HOOK BOLTS REQ. AS PER DETAIL SB-55

BAR	SIZE	No. REQ.	LENGTH	DETAILS
12	1/2"	50	3'-6"	See SB-55
13	1"	20	6'-6"	"
14	1/2"	10	5'-4 1/2"	"
15A	3/4"	4	23'-11"	Straight
15B	3/4"	4	12'-0"	Straight
A	1"	15	3'-0"	Straight - Dowels

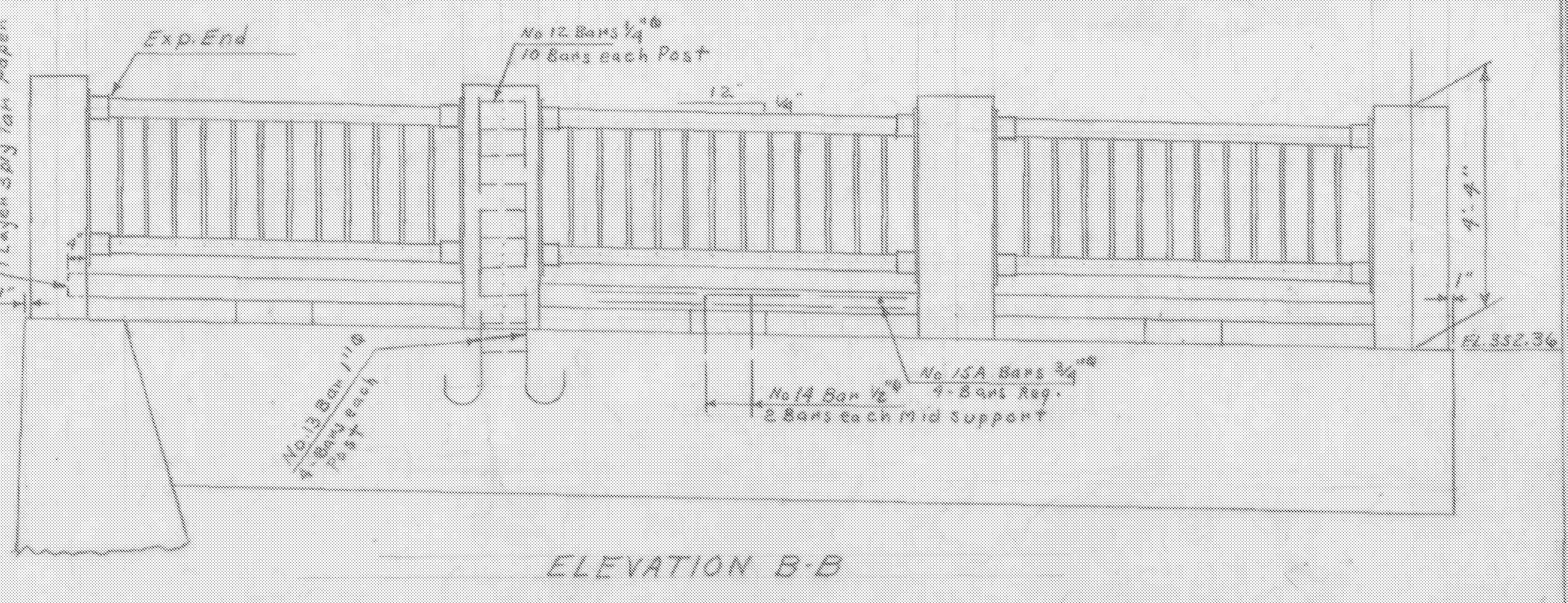
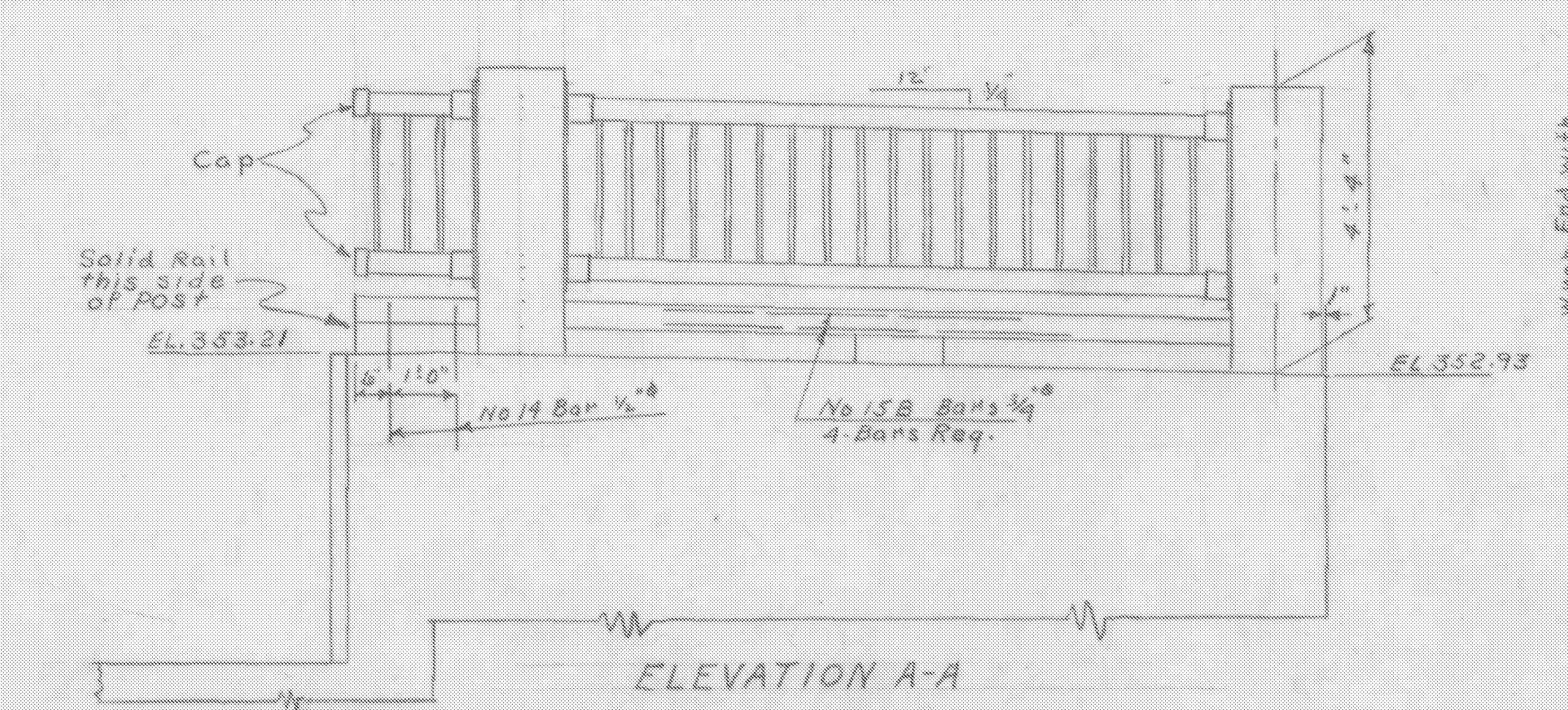


REINFORCING STEEL

BAR	SIZE	No. REQ.	LENGTH	DETAILS
12	1/2"	40	3'-6"	See SB-55
13	1"	16	6'-6"	"
14	1/2"	8	5'-4 1/2"	"
15C	3/4"	8	7'-11"	Straight
15D	3/4"	8	2'-4"	"

12 HOOK BOLTS REQ. AS PER DETAIL SB-55

DETAILS OF PIPE & SPINDLE RAIL
LEFT & RIGHT OF ABUTMENT #2
SCALE 1/2" = 1'-0"



NOTE: All Concrete to be Class B.
All reinforcing steel to be Intermediate Grade.
Quantities for Post, Rail & Wall inc. in this sheet.
For Details of Post & Rail, Connections etc. use sheet SB-55.
Drilling & Grouting of Dowels to be paid for under unit price bid for Concrete, Class B.
Designed in accordance with A.A.S.H.O. Specifications of 1944 & State of Vermont, Dept. of Highways, Std. Specifications for Road & Bridge Construction of 1948.
Pipe Railing & Connections under Steel Superstructure.

SPRINGFIELD
BHF 016-2 (14)
REFERENCE SHEET 8 OF 11
SHEET 69 OF 72

SPRINGFIELD
DETAILS OF PIPE & SPINDLE RAIL
LEFT OF ABUTMENT #1 &
LEFT & RIGHT OF ABUTMENT #2
SCALE 1/2" = 1'-0"

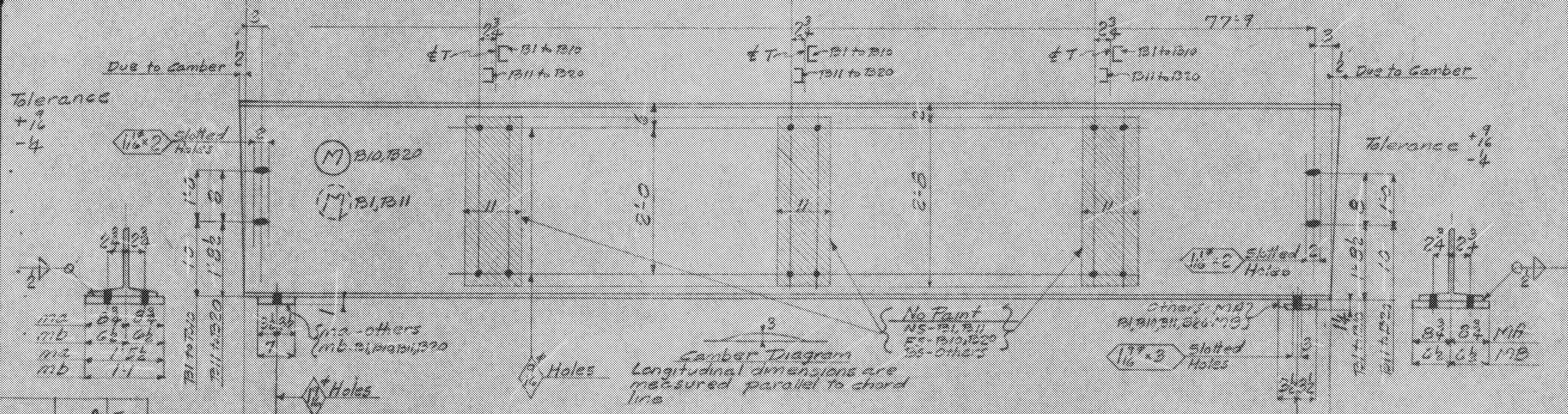
ESTIMATED QUANTITIES

ITEM	ABUT #1	ABUT #2	Surveyed by
Structure Excav.	11 CY	10 CY	
Concrete Class B	8 CY	7 CY	Designed by
Reinforcing Steel	760 LBS	410 LBS	Drawn by J.L.H.
Steel Superstructure	121 LBS	5 LBS	Traced by

Checked by S.N.
Series U No. 123(4) Filed
Sheet 11 of 38 Sheets

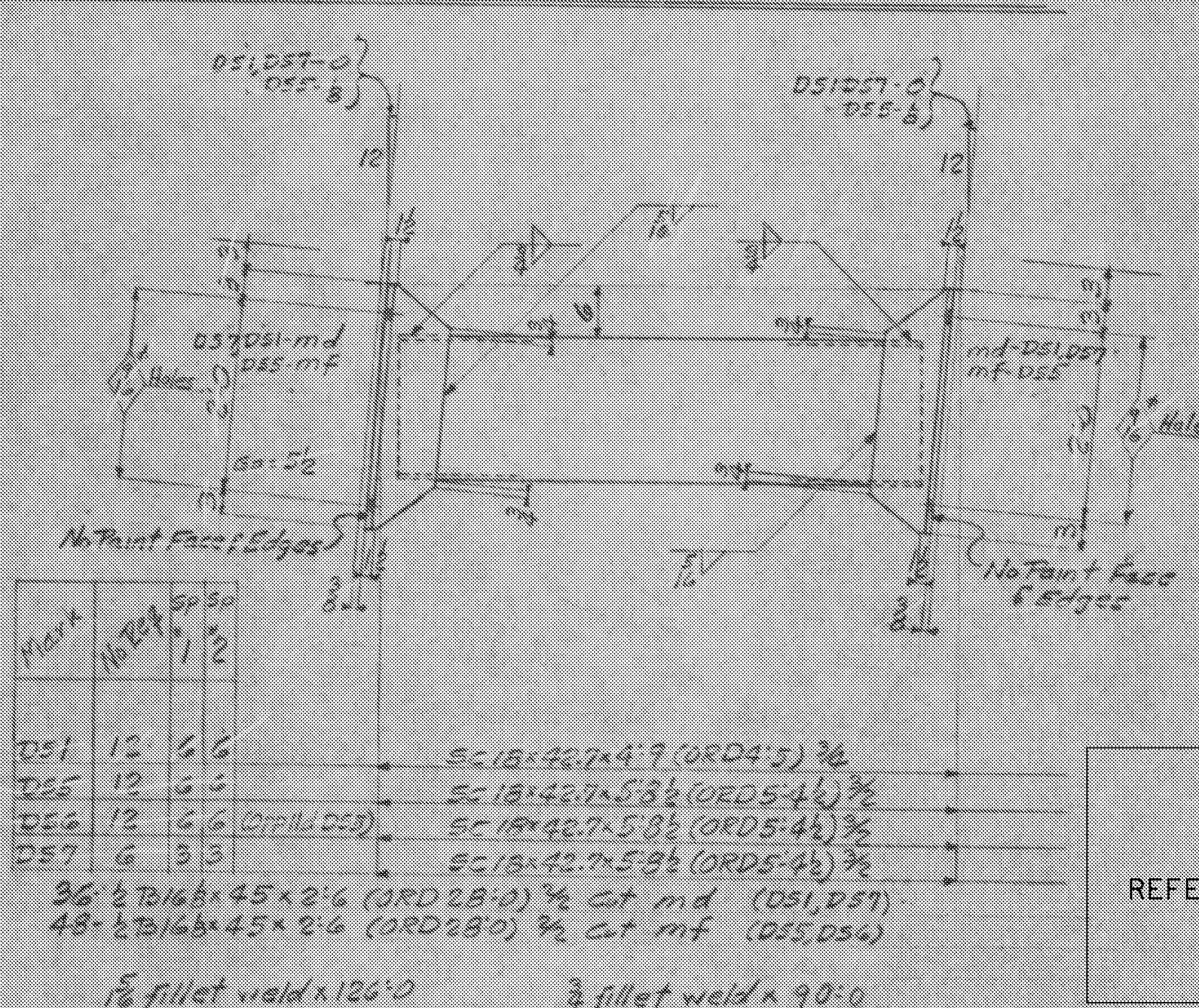
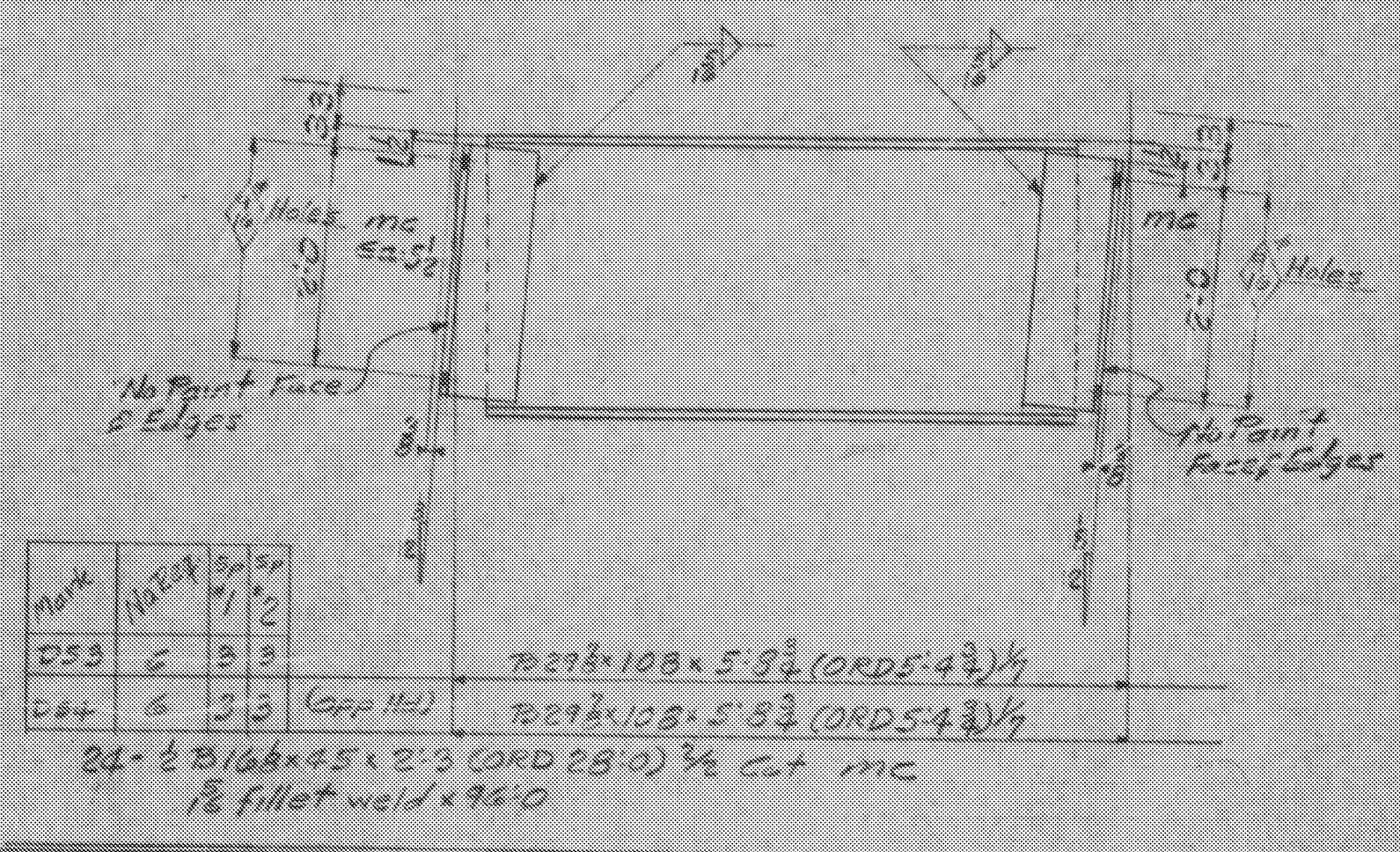
Fed Road Dist. No	State	Proj No	Fiscal Year
7	Vt.	123(4)	

B1	16'-0 1/2	35'-3 1/2	59'-6 1/2
B2	16'-8 1/2	35'-11 1/2	59'-2 1/2
B3	17'-6	36'-9	58'-0
B4	18'-0	37'-6	56'-7 1/2
B5	17'-1 1/2	36'-4 1/2	57'-7 1/2
B6	17'-10 1/2	37'-1 1/2	58'-4 1/2
B7	20'-0 1/2	39'-11 1/2	57'-0 1/2
B8	21'-9 1/2	40'-7 1/2	57'-5 1/2
B9	22'-3 1/2	41'-9 1/2	57'-9 1/2
B10	22'-11 1/2	42'-2 1/2	57'-5 1/2
B11	15'-0 1/2	35'-3 1/2	57'-6 1/2
B12	16'-8 1/2	35'-11 1/2	58'-0 1/2
B13	17'-6	36'-9	56'-7 1/2
B14	18'-0	37'-6	57'-7 1/2
B15	17'-1 1/2	36'-4 1/2	58'-4 1/2
B16	17'-10 1/2	37'-1 1/2	57'-0 1/2
B17	20'-0 1/2	39'-11 1/2	57'-5 1/2
B18	21'-9 1/2	40'-7 1/2	57'-9 1/2
B19	22'-3 1/2	41'-9 1/2	57'-5 1/2
B20	22'-11 1/2	42'-2 1/2	57'-5 1/2



Mark	No	Req	Sp	1	2
B1	One	1			
B2	One	1			
B3	One	1			
B4	One	1			
B5	One	1			
B6	One	1			
B7	One	1			
B8	One	1			
B9	One	1			
B10	One	1			
B11	One	1			
B12	One	1			
B13	One	1			
B14	One	1			
B15	One	1			
B16	One	1			
B17	One	1			
B18	One	1			
B19	One	1			
B20	One	1			

Shop Note Diff. Wt. Bms. 16 lbs MIA (B1-B19) 2012-1-10-19 } Detailed and Ordered on Sh #1.
 1/2 Fillet weld x 150'-8' 4 lbs MIB (B1, B11, B20) } Do Not Duplicate



36' 1/2 B16 x 45 x 2' 6 (ORD 28'-0) 1/2 cut md (D51, D57)
 48' 1/2 B16 x 45 x 2' 6 (ORD 28'-0) 1/2 cut mf (D55, D56)
 1/2 fillet weld x 126'-0 3/4 fillet weld x 90'-0

SPRINGFIELD
 BHF 016-2 (14)
 REFERENCE SHEET 9 OF 11
 SHEET 70 OF 72

OK 7/19/49
 JMB

Shop Note
 Edges of fs ma, mb curled from shear not permitted Plans if necessary to insure flat plates

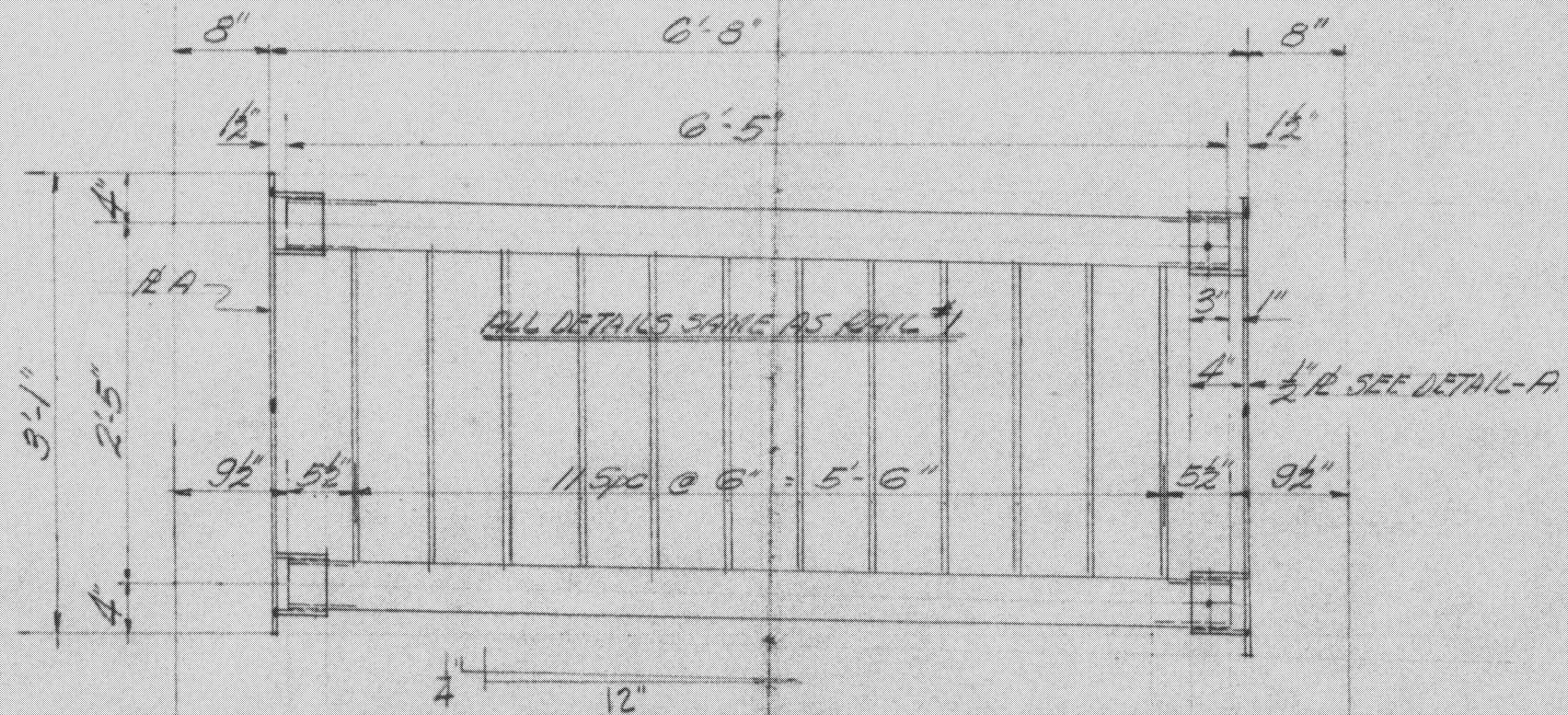
Cost No 4340
 Item B

- RIVETS None
- OPEN HOLES As Noted
- REAM None
- MILLING None
- PAINT One Coat Red Lead Unless Noted
- WELDING As Noted see E1
- SHOP CONTACT SURFACES No Paint

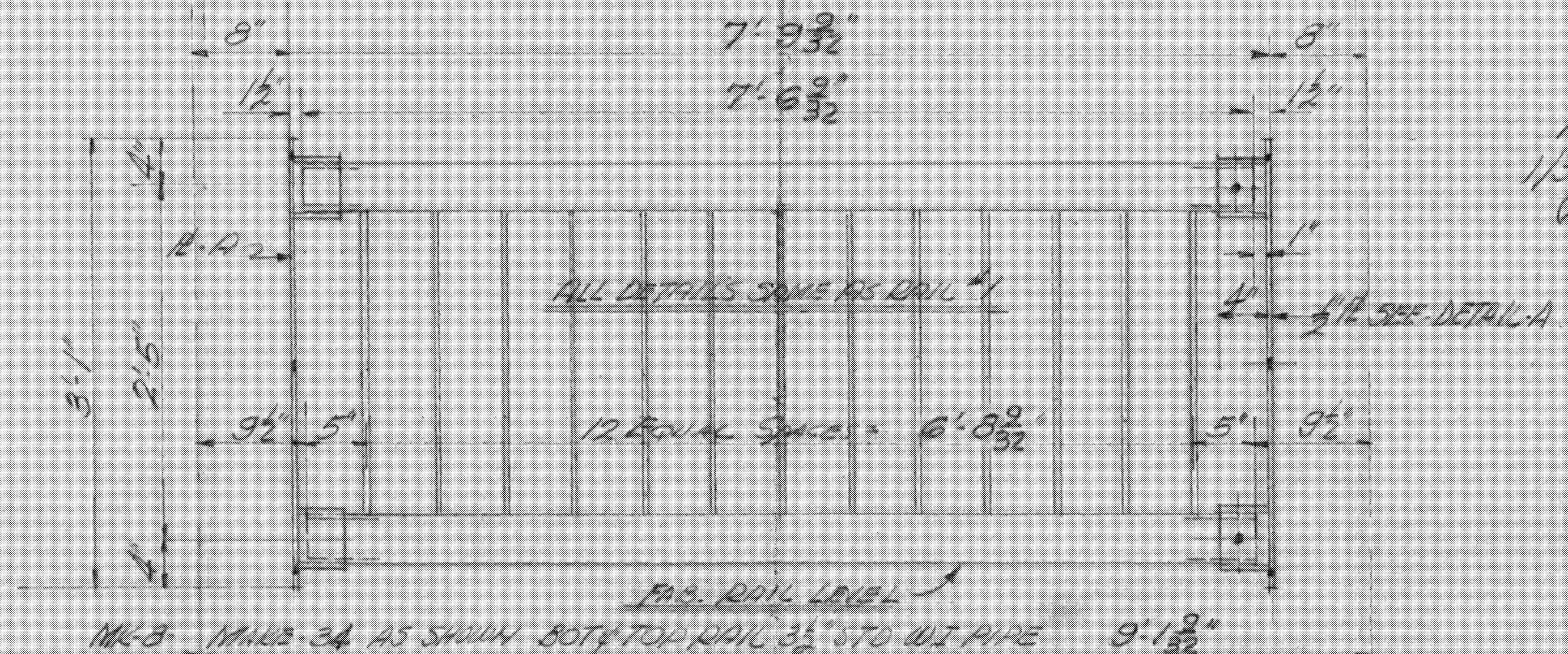
Dr Over Black River Sta. 17+43
 Details

TEMP.	
SUPT.	Vt State Hwy Dept. Community
LAYOUT	House Br. Springfield, Vt.
FITTER	Cost. J.W. Miller Co. Inc. Ludlow, Mass.
SHOP INSP.	BETHLEHEM STEEL COMPANY
PR. MK.	FABRICATED STEEL CONSTRUCTION
S. SMITH	BETHLEHEM DRAFTING ROOM Beth WORKS
MCH.	
ERECT.	
C. INSP.	
IN CHARGE	Hoover
CHECKED BY	6-22-49
REVISIONS	4/1/49
LAST ASSEM. MK.	

SHOP NO. CONTRACT C11652 SHEET 2



MK-T MAKE-2 AS SHOWN BOT&TOP RAIL 3/4" STD W.I PIPE 8'-0"



MK-B MAKE-34 AS SHOWN BOT&TOP RAIL 3/4" STD W.I PIPE 9'-1 9/32"

SPRINGFIELD
BHF 016-2(14)
REFERENCE SHEET 11 OF 11
SHEET 72 OF 72

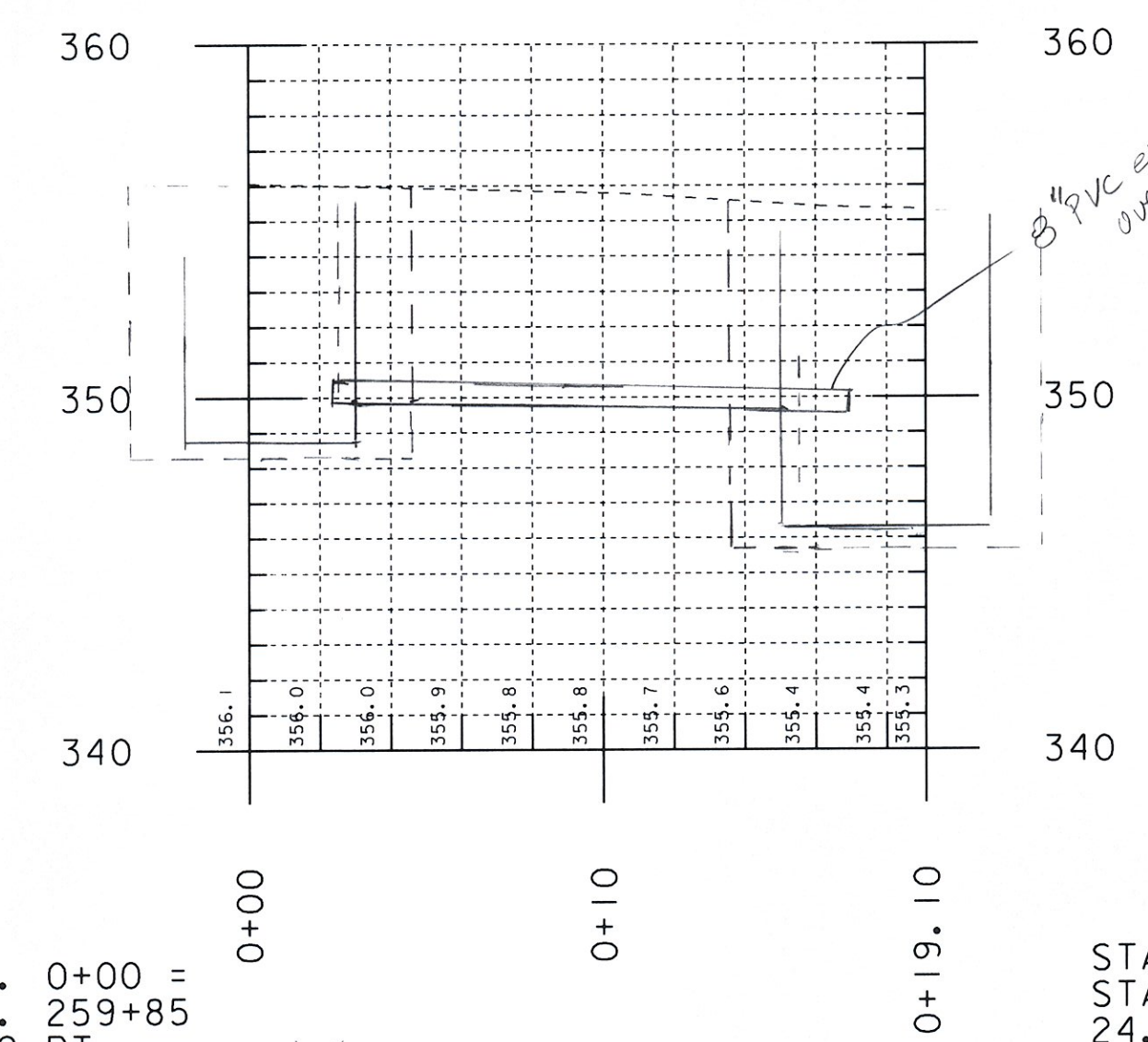
APPROVED
1/30/50 - R.H.B.
(REV NR1)

PITTSFIELD IRON WORKS
& COAL SUPPLY
158 SOUTH ST. PITTSFIELD, MASS

DETAIL Dwg. No. 2798
SIDE RAIL DETAIL
BRIDGE OVER BLACK RIVER
SPRINGFIELD VT.
DEC 31, 1949 J.F.D. W.L.

REVISION
NO. 1. CORR LENGTH & NO. REQ'D
PTB - 1/30/50 J.F.D.

SMH 1 - SMH 2

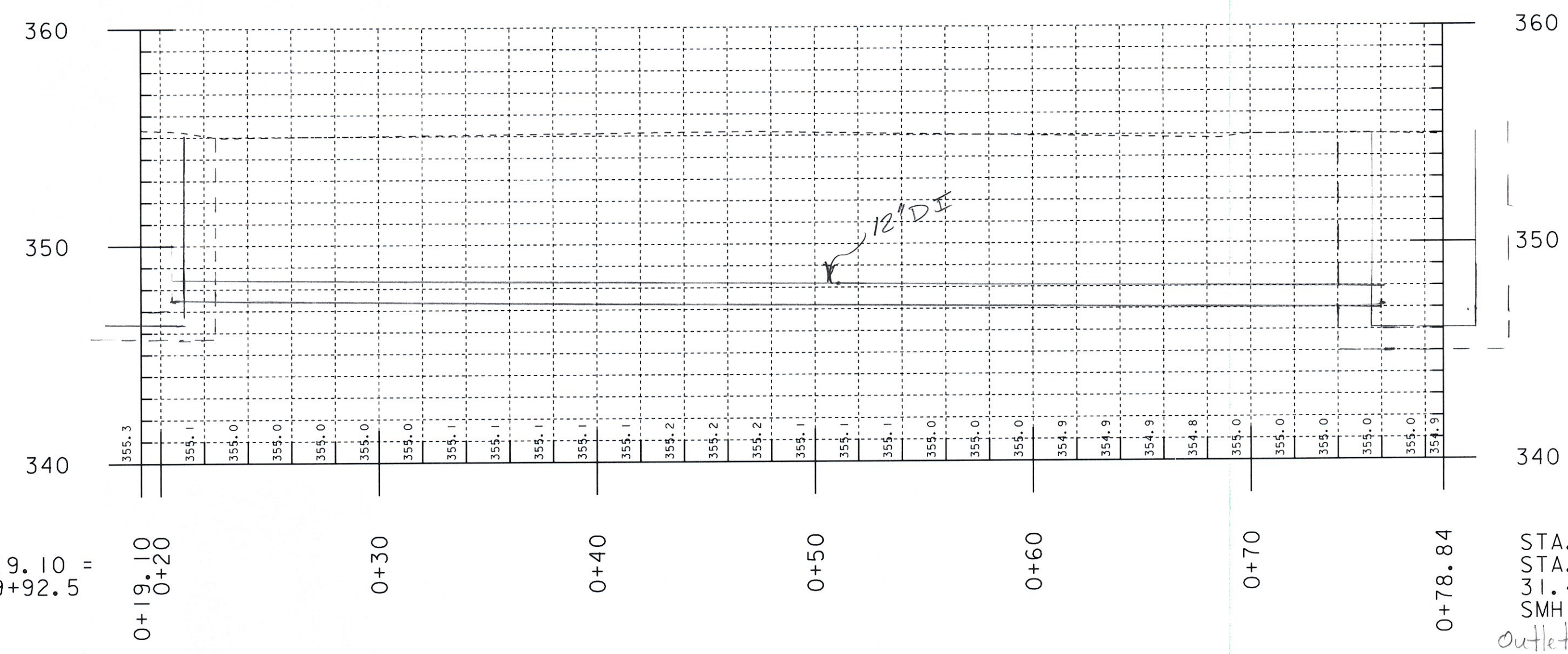


STA. 0+00 =
 STA. 259+85
 41.2 RT
 SMH 1
 4'-10" OD
 Sump
 Base
 Undercut

STA. 0+19.10 =
 STA. 259+92.5
 24.2 RT
 SMH 2
 6'-0" ID 6' OD
 Sump
 Base
 Undercut
 Bot. SMH 346.31
 Undercut 0.50

3" PVC extends 18" into MH to clear overflow weir

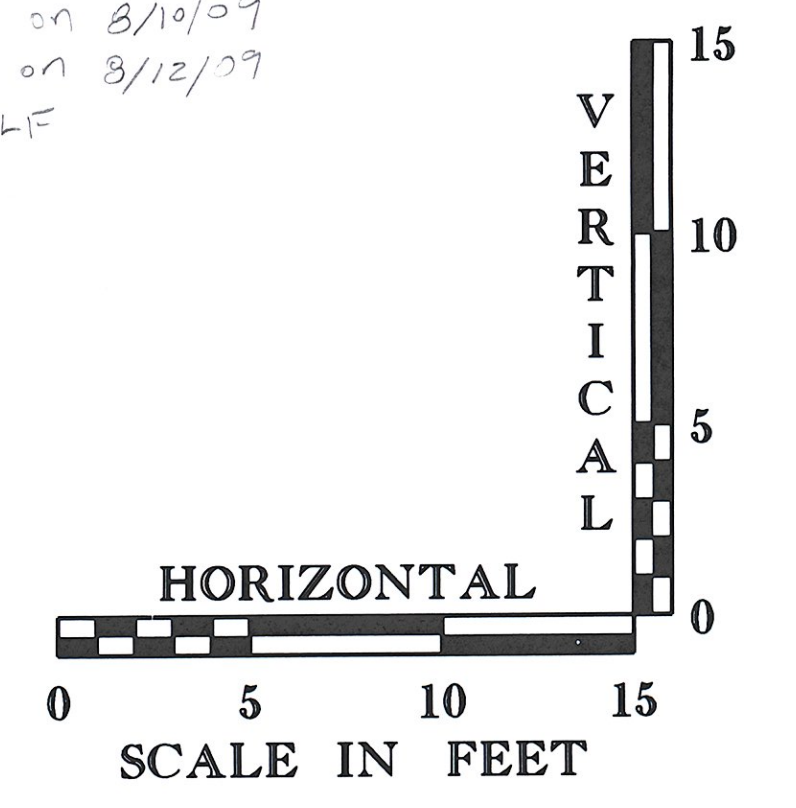
SMH 2 - SMH 3



STA. 0+19.10 =
 STA. 259+92.5
 24.2 RT
 SMH 2
 Outlet Inv 347.48
 Sump 0.50
 Base 0.67
 Undercut 346.31
 0.50
 345.8

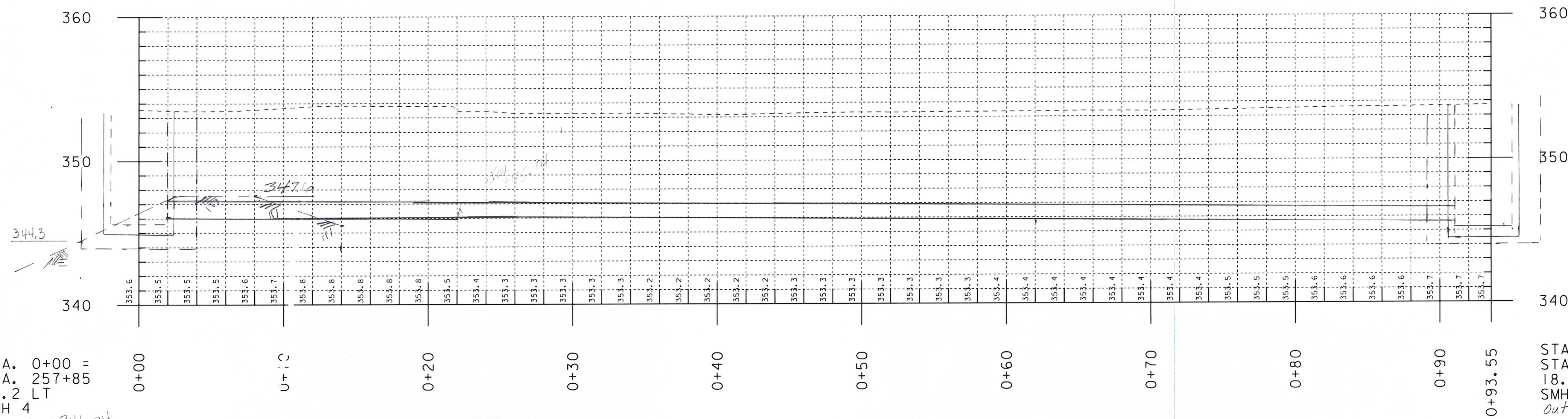
STA. 0+78.84 =
 STA. 259+70
 31.4 LT
 SMH 3 (4' Dia)
 Outlet Inv 347.12
 Sump 0.50
 Base 0.67
 Undercut 345.95
 1.00
 344.95
 345.0

12" DI SMH 3 to SMH 2
 1.5' stub in SMH 2 8/13/09
 18.0 on 8/7/09
 18.0 on 8/10/09
 18.0 on 8/12/09
 53.5 LF



PROJECT NAME: SPRINGFIELD	PLOT DATE: 26-APR-2010
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: -----
FILE NAME: ppms*/Section/-----.dgn	CHECKED BY: -----
DESIGNED BY: -----	SHEET 1 OF 3

SMH4 - SMH5

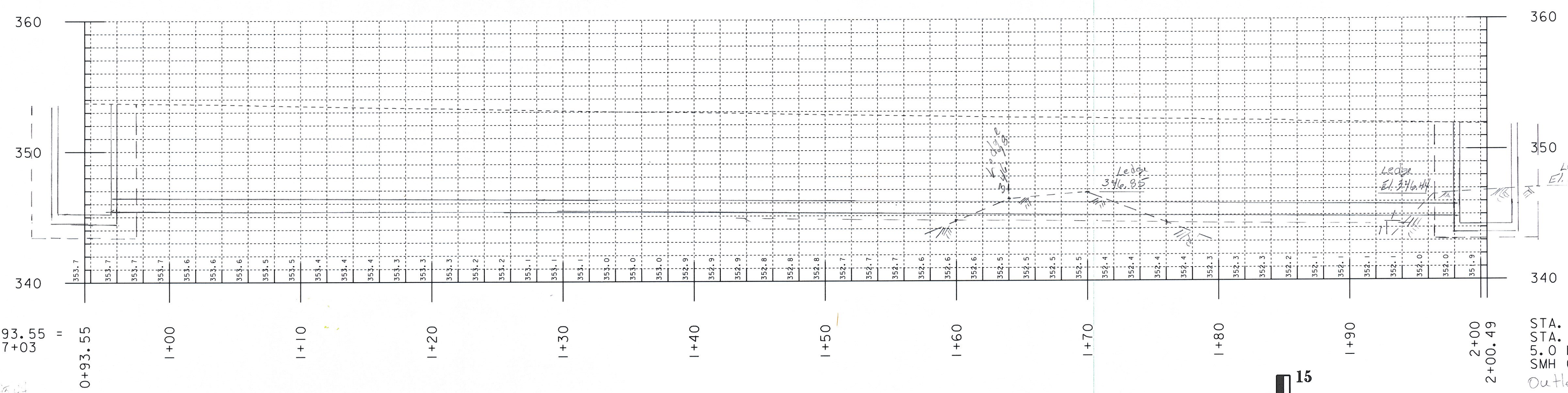


12" SDR PVC
 26' 7-28-09
 52' 7-29-09
 11' 8-5-09
 89'

STA. 0+00 =
 STA. 257+85
 31.2 LT
 SMH 4
 Inv. Out = 346.04
 Samp 0.50
 Base 0.67
 344.87
 Undercut 1.00 1.50 ✓
 343.87 343.3

STA. 0+93.55 =
 STA. 257+03
 18.1 LT
 SMH 5
 Outlet Inv. 345.44
 .5
 344.27
 Undercut 0.50
 343.77

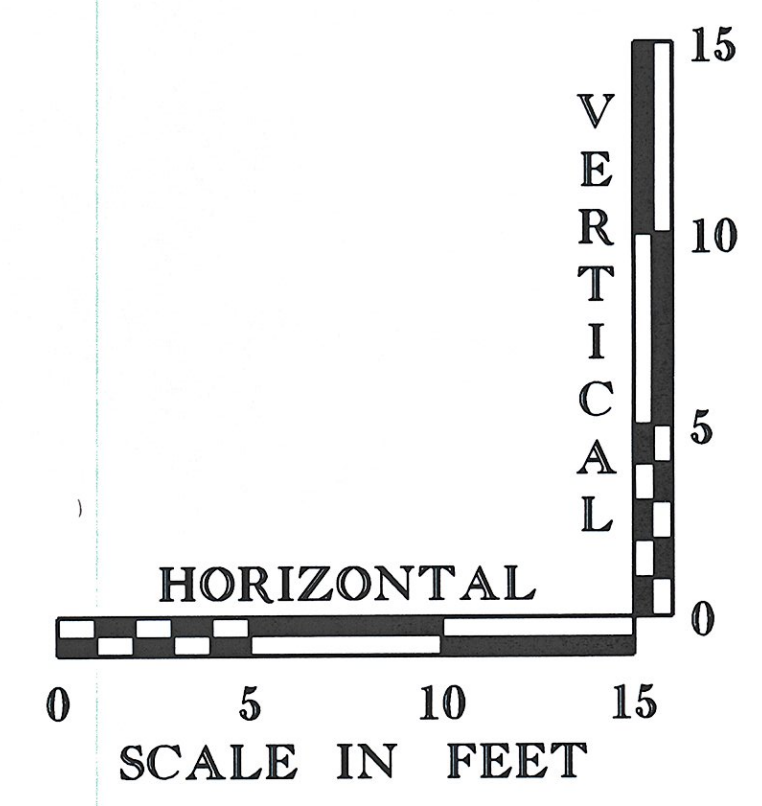
SMH5 - SMH6



12" SDR PVC
 26' 7-28-09
 52' 7-28-09
 25' 7-27-09
 103

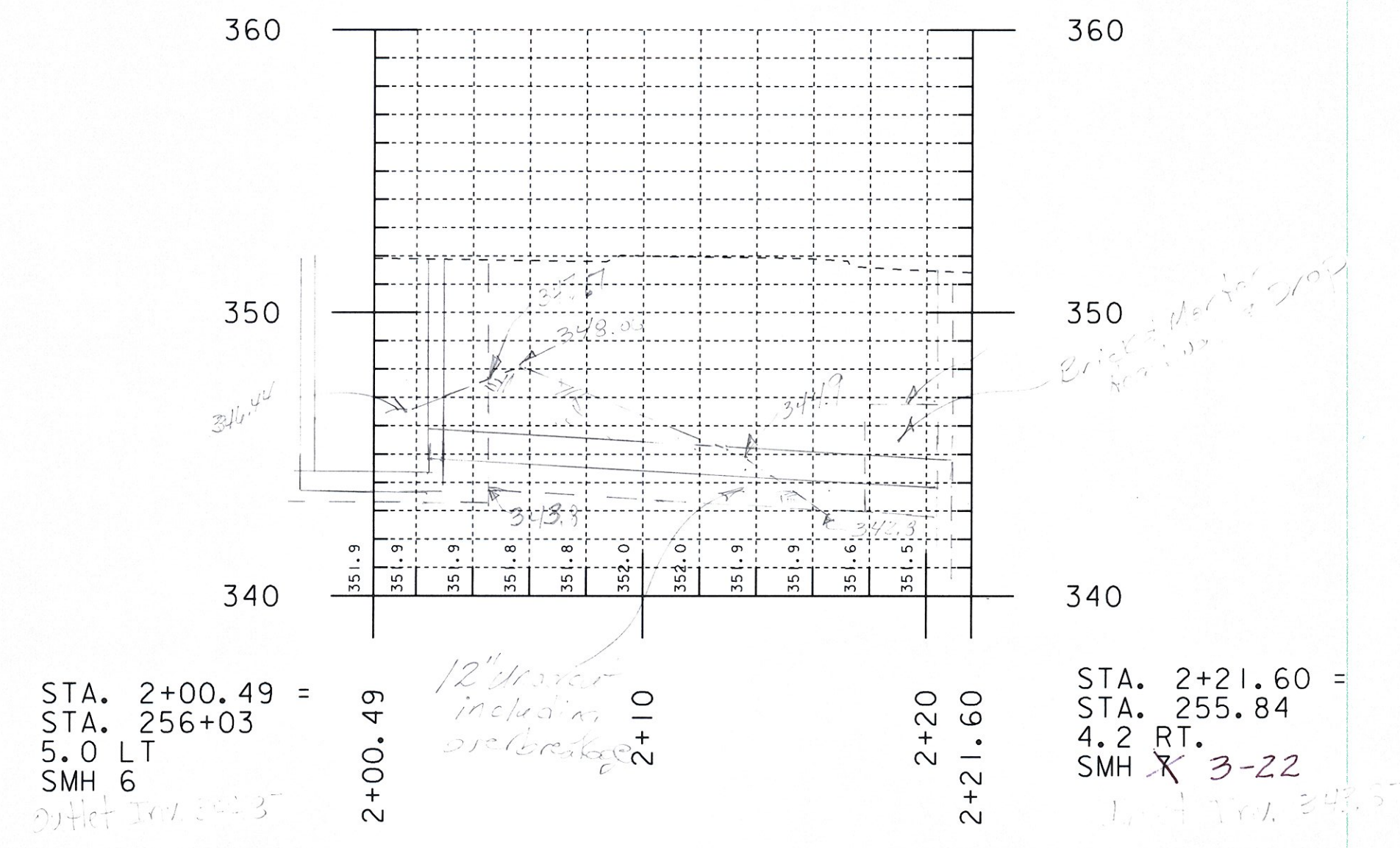
STA. 0+93.55 =
 STA. 257+03
 18.1 LT
 SMH 5
 Outlet 346.04

STA. 2+00.49 =
 STA. 256+03
 5.0 LT
 SMH 6
 Outlet Inv. 344.87
 Samp. 50
 Base 0.67
 Undercut 50
 343.27

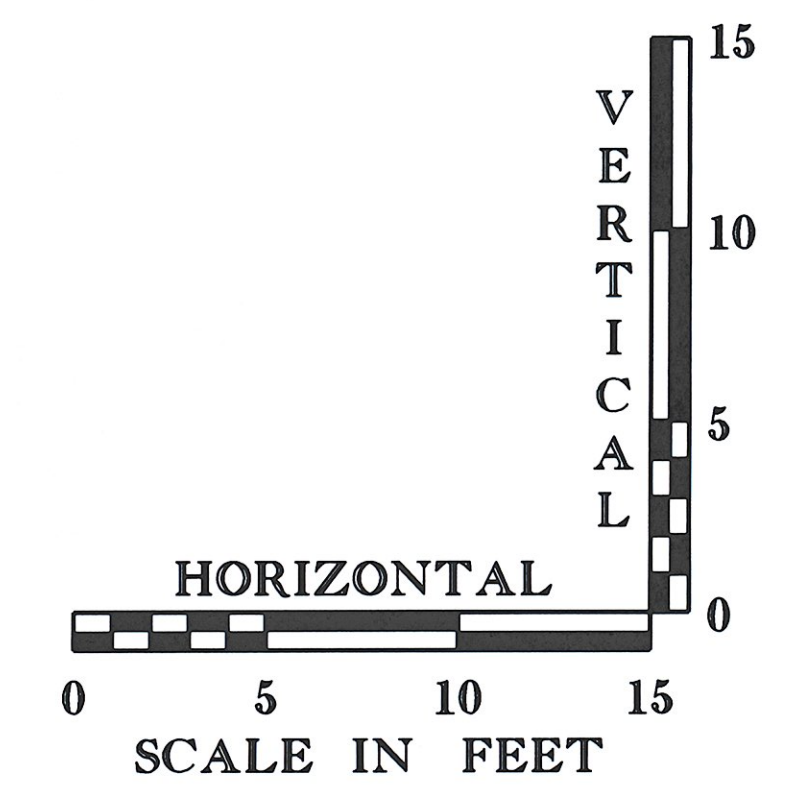
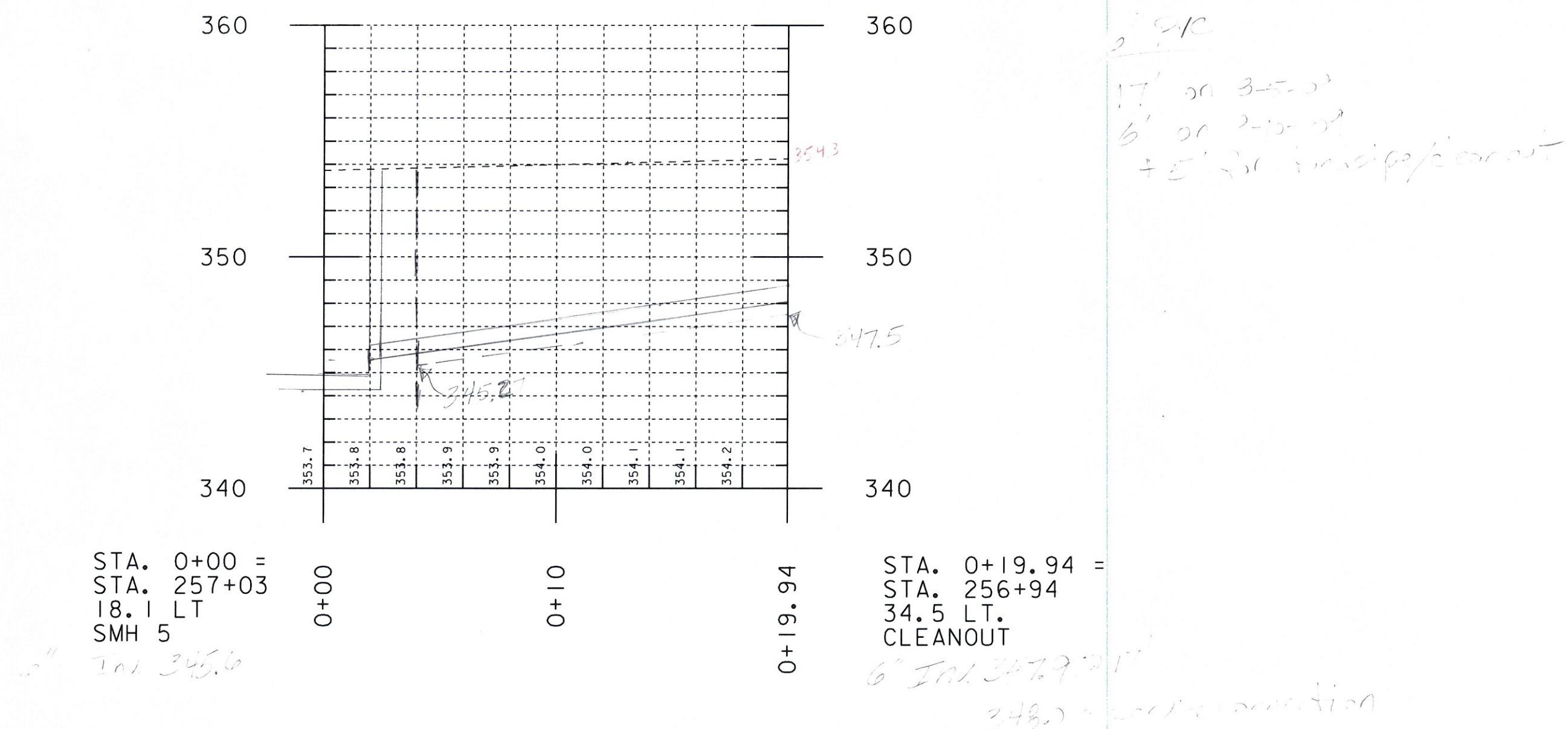


PROJECT NAME: SPRINGFIELD	PLOT DATE: 26-APR-2010
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: -----
FILE NAME: ppms*/Section/-----.dgn	CHECKED BY: -----
DESIGNED BY: -----	SHEET 2 OF 3

SMH6 - SMH ~~3-22~~ 3-22 (EXISTING)



SMH5 - CLEANOUT



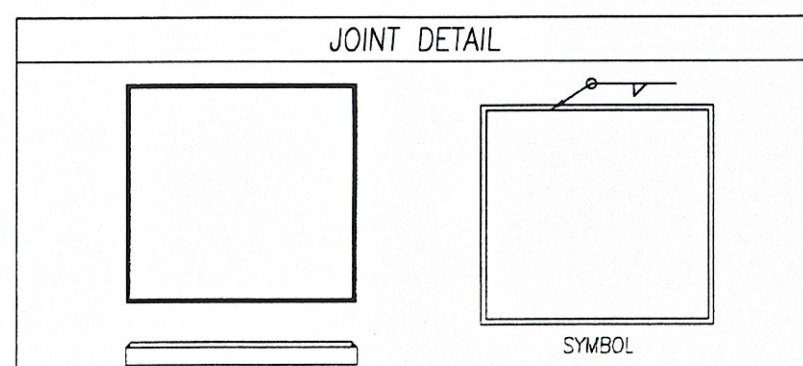
PROJECT NAME: SPRINGFIELD	PLOT DATE: 26-APR-2010
PROJECT NUMBER: BHF 016-2(14)	DRAWN BY: -----
FILE NAME: ppms#/Section/-----.dgn	CHECKED BY: -----
PROJECT LEADER: -----	SHEET 3 OF 3
DESIGNED BY: -----	

WELDING PROCEDURE SPECIFICATION
 OR
 PROCEDURE QUALIFICATION RECORD

Specification No.: 57948
 Customer: Cold River Bridge, LLC Customer P.O.#: P.O. #1010
 Base Metals: P-NO.: 8 Group NO.: to P-NO.: 1 Group NO.: 1
 Material Specification Type & Grade: T-304 S.S. to Carbon Steel Backing Plate
 Welding Process: G.T.A.W. 1/2" dia. nozzle w/gas lens
 Manual or Machine: Manual
 Position of Welding: 1-F
 Filler Metal Specification: N/A
 Filler Metal Classification: N/A
 Shielding Gas: Argon 20-30 cfm
 Single or Multiple Pass: Single
 Single or Multiple Arc: Single
 Welding Current: Direct
 Polarity: Straight
 Root Treatment: Remove all oil, grease, scale etc. on weld preparation face and adjacent plate surface
 Preheat and Interpass Temp: N/A
 Post weld Heat Treatment: N/A

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Filler Metal		Pass No.	Process	Welding Current		Fillet Size
Class	Dia. / F No.			Amperes	Voltage	
N/A	N/A	1	G.T.A.W.	100-170	19-23	Face Materials

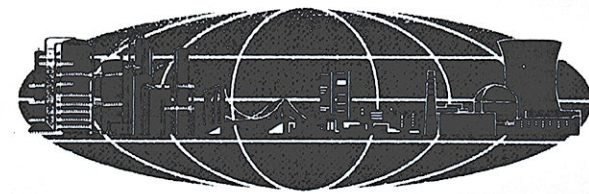


Manufacturer: Amscot Structural Products Authorized By: [Signature]
 Date: 6/23/09

AMSCOT

A World of Structural Bearings
and Custom Fabricated Metal Components.

241 E. Blackwell Street
Dover, NJ 07801



**AMSCOT STRUCTURAL PRODUCTS - PREFORMED FABRIC PAD TO PTFE
BOND PROCEDURE**

OK'D BY OK'D BY Jac
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RESUBMIT APPROVED DATE 7-8-09

FACTORY BOND PROCEDURE:

Material preparation procedure as follows:

1. Preformed fabric reinforced elastomeric pad (90 ± 5 Shore A Durometer) bond surface to be roughened by scoring full surface area with wire brush.
2. Substrate sheet to be either 1/16" phenolic sheet and shall be prepped by abrading both surfaces or 18 gauge steel sheet and shall be prepped by sand blasting both surfaces to a SSPC-SP10 classification.
3. All foreign materials to be removed from PTFE sheet, Substrate sheet (18 gauge steel and or Phenolic sheet), and Fabric Pad bonding surfaces.
4. Two part epoxy bond adhesive material; Armstrong style no. A-271 parts A and B shall be thoroughly mixed together as per manufactures mix ratio.
5. Mixed epoxy shall be applied with trowel providing uniformity of epoxy on all bonding surface areas.
6. PTFE (Polytetrafluorethylene)-(virgin, not reprocessed) shall be placed etched face surface with the applied epoxy coating against prepared substrate sheet. Epoxy coated substrate sheet opposite face shall be placed against preformed fabric pad material.
7. The fabric pad with substrate & PTFE shall be placed into hydraulic heated press for a duration of 15-20 minutes @ 180° F to allow proper cure time of epoxy material. (Longer time periods required when material pad thickness exceeds 1" thick).
8. Preformed reinforced Bearing pad bonded to PTFE shall be allowed to cool for 60 minutes before handling.
9. Excess PTFE shall be removed from perimeter of pad. Pad shall be sanded smooth on all sides.
10. Finished Preformed fabric bearing pad w/PTFE to be inspected by Q/C personnel prior to packaging for shipment.

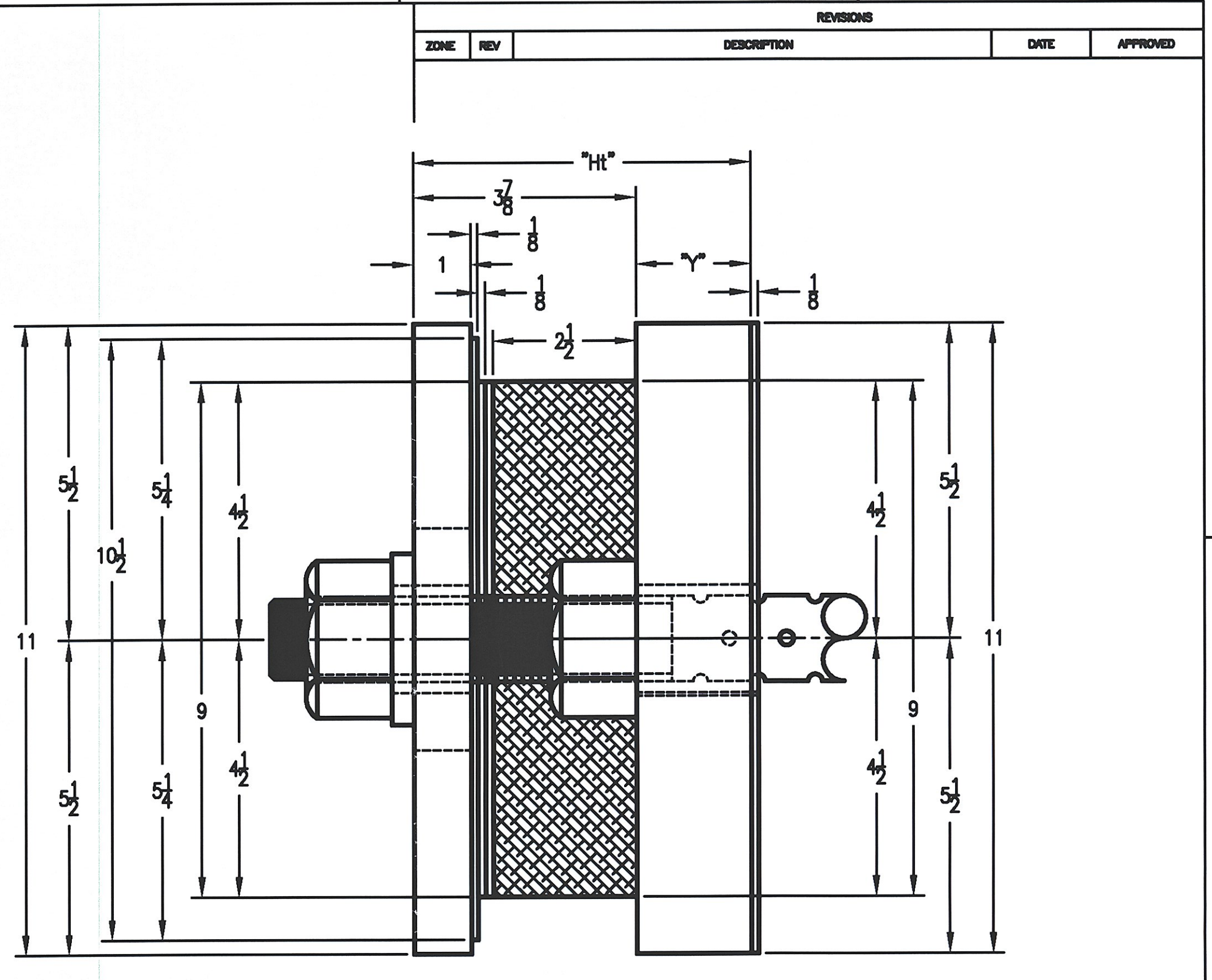
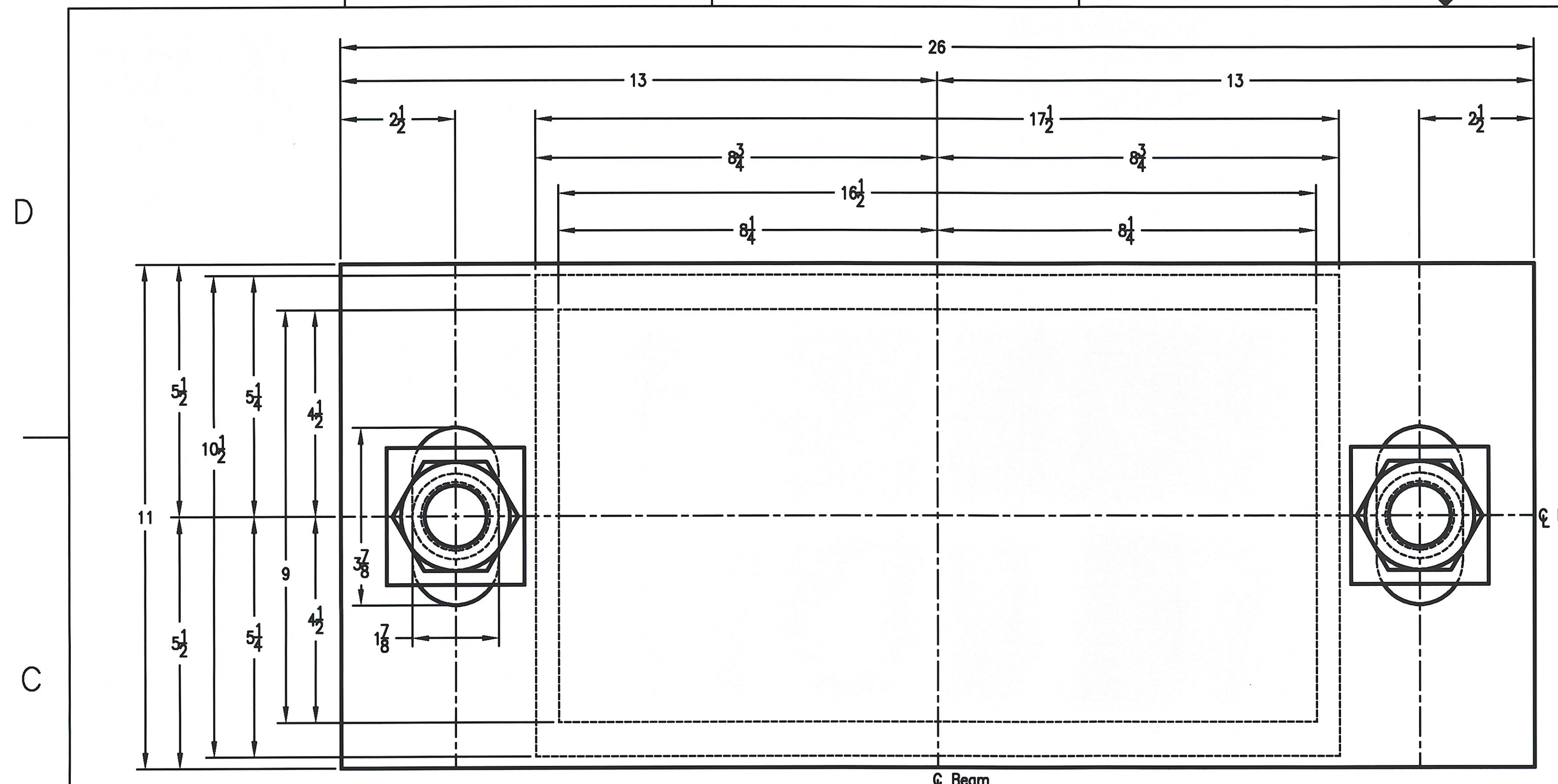
Recommended storage procedures: PTFE materials shall be kept covered from direct UV light exposure for any long periods of time.

"The Quality of the Past, The Innovation of the Future."

241 E. Blackwell Street, Dover, NJ 07801 • Tel: 973-989-8800 Fax: 973-989-5651

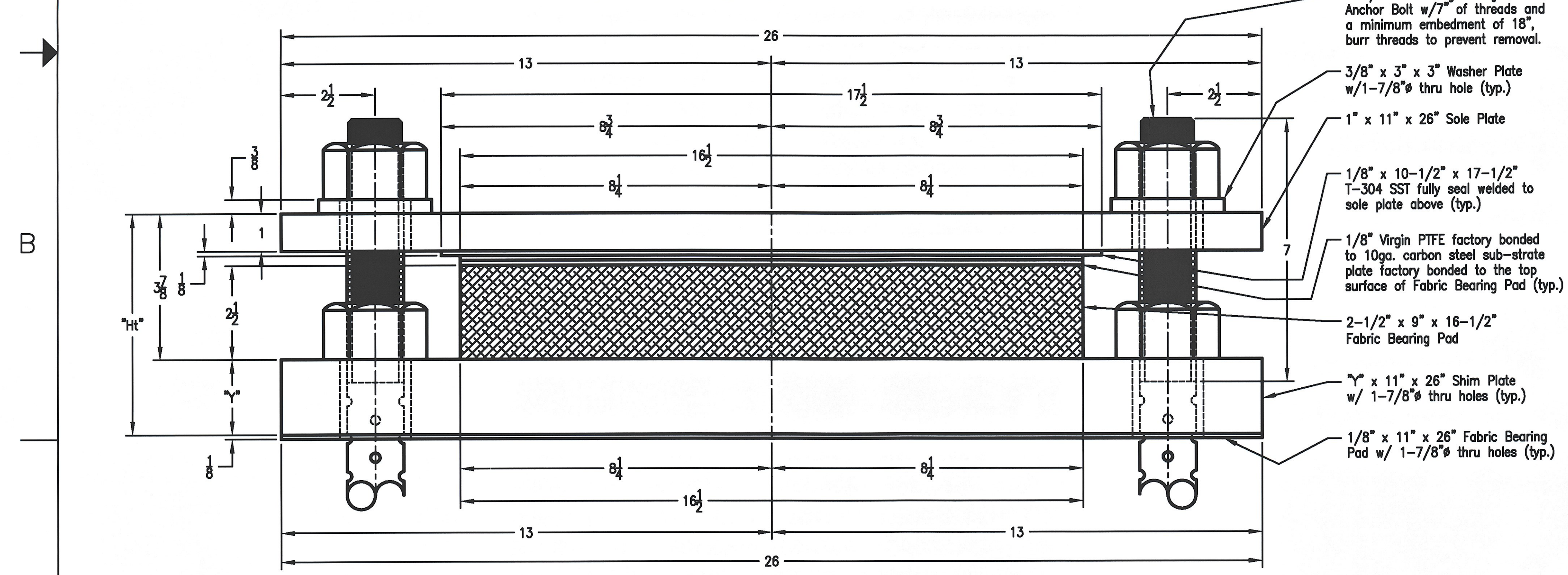
8 7 6 5 4 3 2 1

REVISIONS			
ZONE	REV	DESCRIPTION	DATE



Plan View Expansion Brg w/PTFE Surface @ Abutments

Side View Expansion Brg w/PTFE Surface @ Abutments



Elevation View Expansion Brg w/PTFE Surface @ Abutments

GIRDER NO.	QTY.	DIM "Y"	DIM "H"
#1	1	2-1/2"	6-3/8"
#2	1	2"	5-7/8"
#3 thru #7	5	2-1/2"	6-3/8"

GIRDER NO.	QTY.	DIM "Y"	DIM "H"
#1	1	2"	5-7/8"
#2	1	1-1/2"	5-3/8"
#3 thru #7	5	2"	5-7/8"

- NOTES:
- BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1984 EDITION, 1996 WITH CURRENT INTERIMS (1997 & 1998, SECTION #14).
 - THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 4 DEG. C. TO 32 DEG. C.
 - ALL STEEL IN BEARINGS SHALL BE AASHTO M270 GRADE 36, U.L.O. EXCEPT ANCHOR BOLTS AND NUTS.
 - STAINLESS STEEL SHALL BE AASHTO A240 TYPE 304 W/ 2B FINISH.
 - ALL STEEL PRODUCED IN THE U.S.A.
 - CONTACT PETER SOMOGH, COORDINATOR.
 - TOLERANCES: THICKNESS $-0+1/8$ PLAN $-0+1/8$
 - MANUFACTURING FACILITY LOCATION: AMSCOT STRUCTURAL PRODUCTS INC. 241 EAST BLACKWELL STREET DOVER, NJ 07801
 - ALL DIMENSIONS ARE IN INCHES.
 - ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS.
 - ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
 - PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC. SHALL BE GROUNDED TO A 1/16" RADIUS (TYP).
 - THE SURFACE FINISH OF THE CONTACT (SLIDING) FACE OF THE STAINLESS STEEL SHALL HAVE 2B POLISHED FINISH. MIRROR FINISH OF LESS THAN 0.25 μm (10 MICRO INCHES) RMS (ROOT MEAN SQUARE).

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 REVISED BY [Signature] APPROVED AS NOTED
 DATE 7-13-09

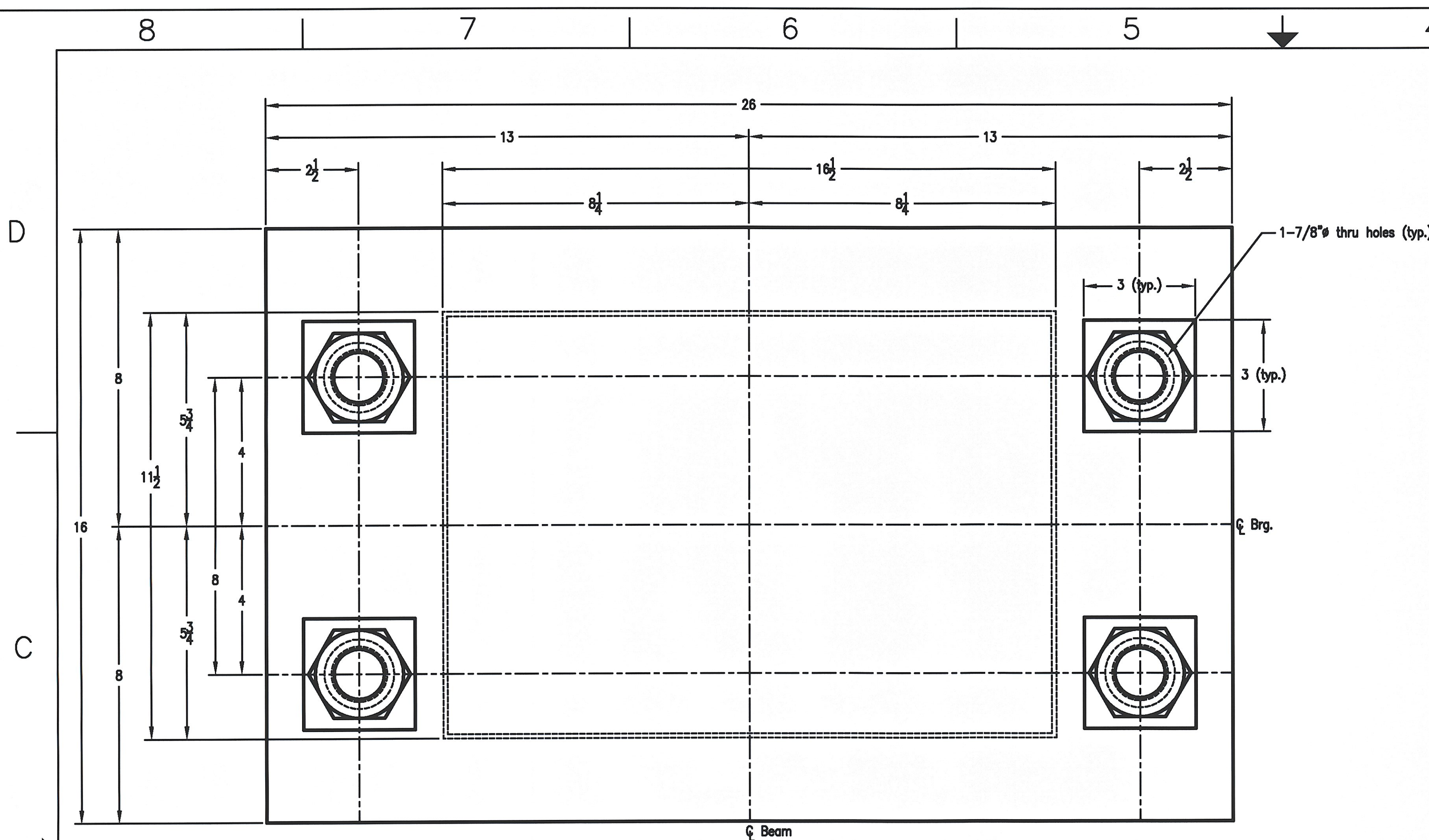
VERMONT AGENCY OF TRANSPORTATION
 PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF-016-2(14)

AMSCOT
 STRUCTURAL PRODUCTS CORP. Job No. #3231

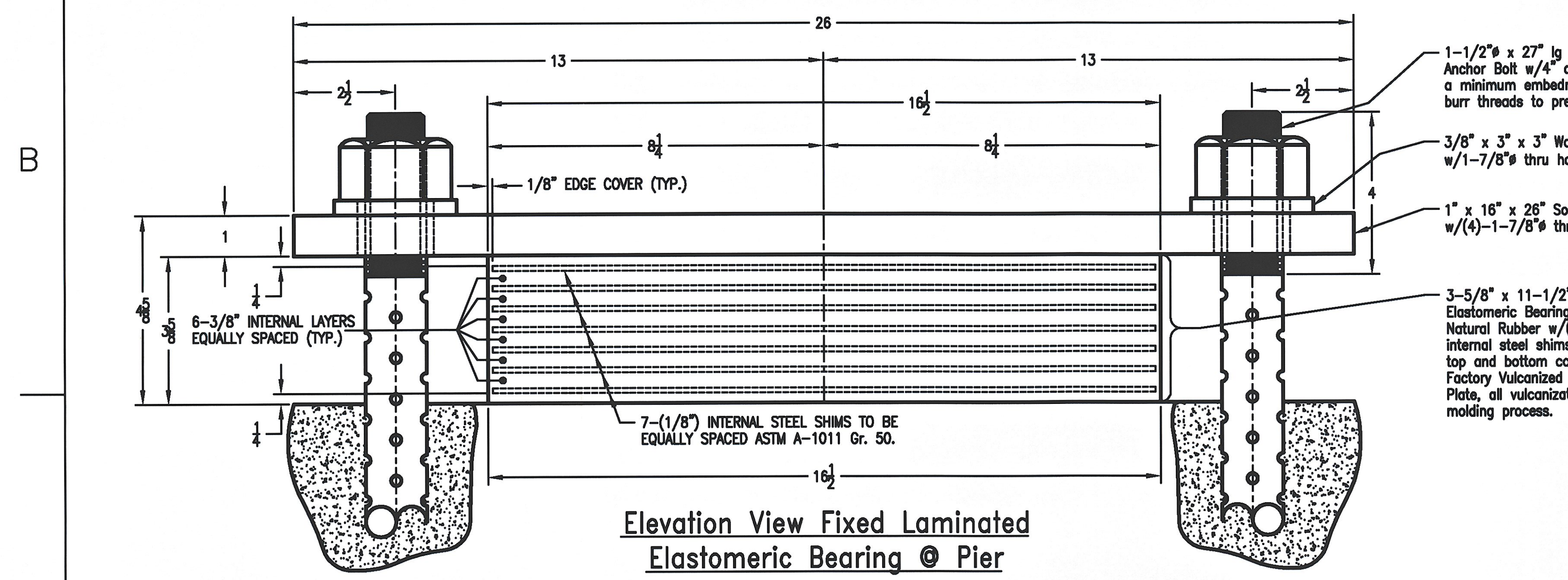
SCALE: N.T.S.	APPR'D: R.F.	DRAWN BY: P.S.
DATE: 6/8/09		REV.: 0
PREFORMED FABRIC PADS W/PTFE & SST SLIDE SURFACES		
FOR: COLD RIVER BRIDGE, LLC.	SHEET NO 1 of 2	DWG NO: CRB09A1R0.DWG

8 7 6 5 4 3 2 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



Plan View Fixed Laminated Elastomeric Bearing @ Pier



Elevation View Fixed Laminated Elastomeric Bearing @ Pier

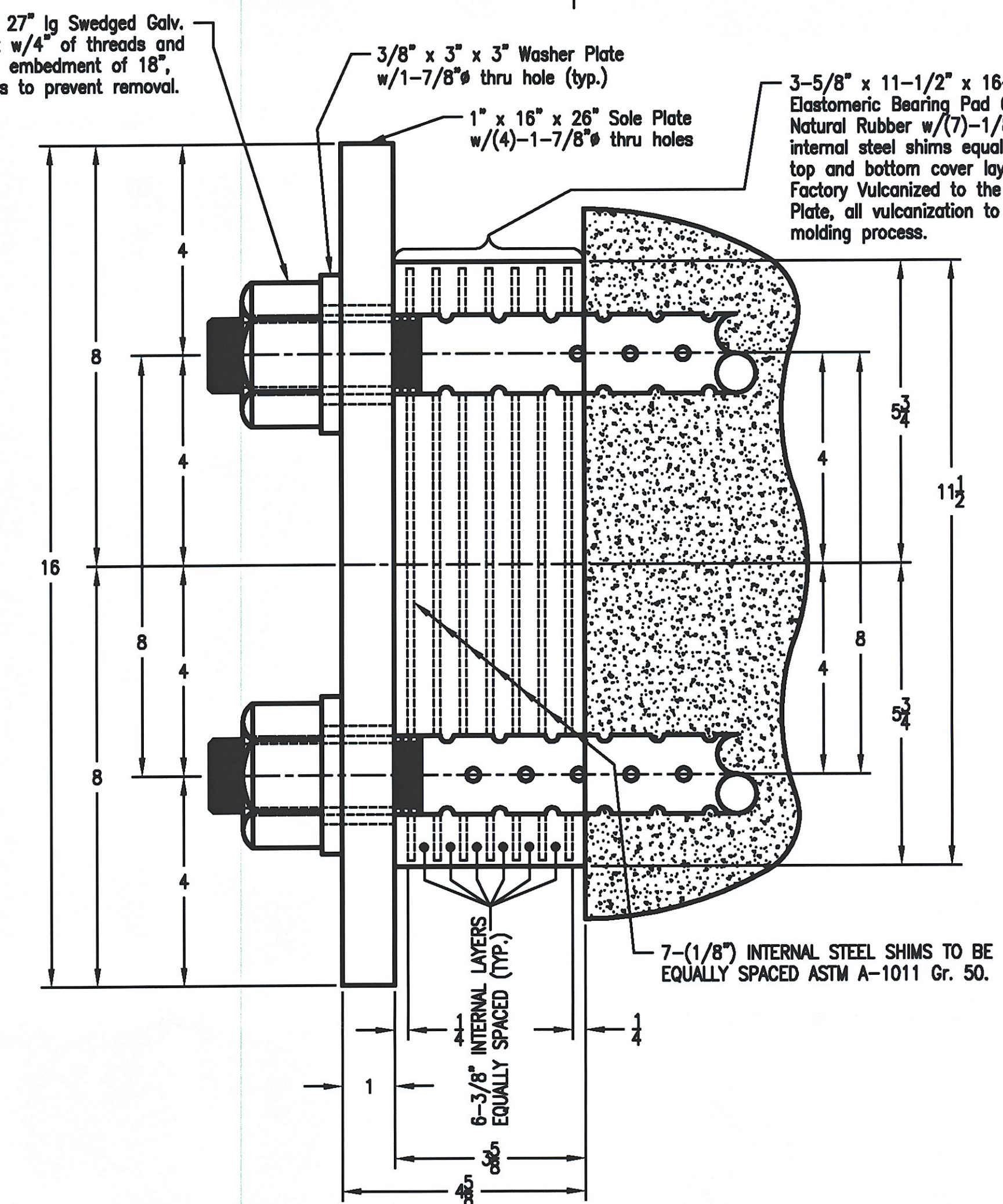
(Qty. Req'd. = 7 assy. Item No. #531.10)

1-1/2" x 27" lg Swedged Galv. Anchor Bolt w/4" of threads and a minimum embedment of 18", burr threads to prevent removal.

3/8" x 3" x 3" Washer Plate w/1-7/8" thru hole (typ.)

1" x 16" x 26" Sole Plate w/(4)-1-7/8" thru holes

3-5/8" x 11-1/2" x 16-1/2" Laminated Elastomeric Bearing Pad 60 Durometer Natural Rubber w/(7)-1/8" ASTM A-1011 Gr.36 internal steel shims equally spaced and 1/4" top and bottom cover layers (typ.) Factory Vulcanized to the above 1" thk Sole Plate, all vulcanization to occur during the primary molding process.



Side View Fixed Laminated Elastomeric Bearing @ Pier

NOTES:

- BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 10th EDITION, 1996 WITH CURRENT INTERIMS (1997 & 1998, SECTION #14).
- THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 4 DEG. C. TO 32 DEG. C.
- ALL STEEL IN BEARINGS SHALL BE AASHTO M270 GRADE 36. U.L.O. EXCEPT ANCHOR BOLTS AND NUTS
- ELASTOMERIC MATERIAL TO BE 60 DUROMETER HARDNESS.
- ALL STEEL PRODUCED IN THE U.S.A.
- CONTACT PETER SOMOGYI, COORDINATOR.
- TOLERANCES: THICKNESS -0.1/8 X/6 PLAN -0.1/8 X/6
- MANUFACTURING FACILITY LOCATION: AMSCOT STRUCTURAL PRODUCTS INC. 241 EAST BLACKWELL STREET COLUMBIA, NJ 07801
- ALL DIMENSIONS ARE IN INCHES.
- ALL BEARING DEVICES SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 508.15 AND 531.0(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS.
- ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
- PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC. SHALL BE GROUNDED TO A 1/16" RADIUS (TYP.)
- THE SURFACE FINISH OF THE CONTACT (SLIDING) FACE OF THE STAINLESS STEEL SHALL HAVE 2B POLISHED FINISH.

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 DATE 7-13-09

VERMONT AGENCY OF TRANSPORTATION
 PROJECT NAME: SPRINGFIELD
 PROJECT NUMBER: BHF-016-2(14)

AMSCOT
 STRUCTURAL PRODUCTS CORP. Job No. #3231

SCALE: N.T.S.	APPRV'D:	DRAWN BY: P.S.
DATE: 6/8/09	R.F.	REV: 0

LAMINATED ELASTOMERIC BEARING PADS NATURAL RUBBER

FOR: COLD RIVER BRIDGE, LLC. SHEET NO 2 of 2 DWG NO: CRB09A2RO.DWG

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360

Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

Material specification ASTM A 36 Gr 36-50-50w (250-345-345w)
 Welding process Submerged Arc welding - AUTO (SAW)
 Manual or machine MACHINE
 Position of welding FLAT (1sa.2)
 Filler metal specification AWS A5-17, AWS A5-23 LINCOLN
 Filler metal classification E702-EXXIK-NiL
 Flux 960 FLUX-Libco weld-LA-55 Electrode
 Shielding gas NA Flow rate NA OK'D BY JUC
 Single or multiple pass single JUN 29 2009
 Single or multiple arc single
 Welding current Direct REVISIT APPROVED
 Polarity Reverse Electrode Positive BY WJC DATE 7-8-09
 Welding progression MEET AWS SPECIFICATION
 Root treatment TO 44(19)50(10), 54(19)12(BB)-70(20)
 Preheat and interpass temperature NA
 Postheat temperature NA
 Heat Input Min 41.65 Max 65.45 PQR # 1-59.5 ST OF VT AOT
 SPRINGFIELD - Br # 64 -
 Proj # BHF 016-204

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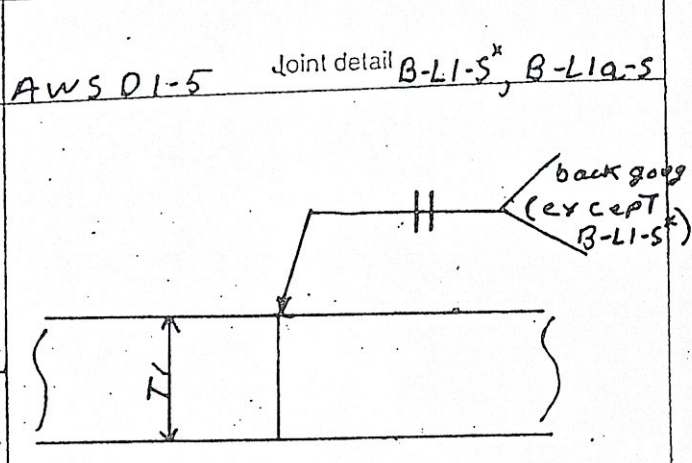
JUN 29 2009
APPROVED
DATE 7-8-09

WELDING PROCEDURE

(Metric)

Pass no.	Electrode size	Welding current		Travel speed
		Amperes	Volts	
5/32	605	29.5	18	AWS D1.5 Joint detail B-L1-S, B-L1a-S
		544.5	27.4	
		665.5	31.56	
3/8	605	29.5	457.2	T1: 3/8 (9.5) B-L1-S T1: 3/8 (15.875) B-L1a-S
		544.5	27.4	
		665.5	31.56	

* Evidence of C.V.P. is req.



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications.

Procedure no. 203 Contractor Casco Bay Steel
 Revision no. _____ Authorized By Paul G. Hoodale
 Form III-2 Date 3/2/00

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360

Fax: (207) 282-1179

WELDING PROCEDURE SPECIFICATION

Material specification ASTM A36 Gr 36-50-50w (250-345-345w)
 Welding process Submerged Arc Welding - Auto (SAW)
 Manual or machine Machine
 Position of welding Flat (H), Horizontal (HF)
 Filler metal specification AWS A5-17, AWS A5-23
 Filler metal classification E8018-ENiK-Ni1 Lincoln
 Flux 960 Flux-Lincolnweld-LA-75 Electrode
 Shielding gas NA
 Single or multiple pass Both
 Single or multiple arc Single
 Welding current Direct
 Polarity Reverse Electrode Positive
 Welding progression
 Root treatment Meet AWS specification
 Preheat and interpass temperature To 3/4 (19-50 (100) 3/4 (19) 1 1/2 (38) 70 (160) 1 1/2 (38) To 2 1/2 (63) 150 (65)
 Postheat temperature NA
 Heat Input Min 41.65 Max 65.45 PQR # 1-59.5

APPROVED BY [Signature] DATE 7-8-09
 JUN 29 2009

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 JUN 29 2009
 APPROVED
 DATE 7-8-09
 ST OF VT AOT
 Springfield-Br 64
 Proj # BHF 016-204

(Metric)

Pass no.	Electrode size	Welding current		Travel speed	AWS D1.5 Joint detail	Fillet	
		Amperes	Volts				
5/32	605	29.5	18.5	18.5	IF	5/16 To 1/2 (8 To 12.7)	
		544.5 To 665.5	27.4 To 31.56				15.3 To 20.7
3/8	Metric 605	29.5	457.2	457.2	2F	1/4 To 5/16 (6 To 8) 3/8 To 5/8 (9.5 To 15.9)	
		544.5 To 665.5	27.4 To 31.56				389.6 To 525.8

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 201
 Revision no. _____
 Form III-2

Contractor Casco Bay Steel
 Authorized By Paul E. Woodale
 Date 3/2/00

Casco Bay Steel Structures, Inc.

5 Industry Road
South Portland, Maine 04106

Phone: (207) 772-2533

Fax: (207) 772-0580

WELDING PROCEDURE SPECIFICATION

Material specification ASTM A709/A709M Grade-36(250), 50(345), 50W(345w)
 Welding process Flux Cored Arc welding
 Manual or machine Semi-Auto
 Position of welding Flat (1F) Horizontal (2F)
 Filler metal specification AWS-A5-29
 Filler metal classification E81T1-N11 - LINCOLN OUTERSHIELD 81W11-H
 Flux NA
 Shielding gas 75% AR / 25% CO₂ Flow rate 35CFH +8.6 = -3.5
 Single or multiple pass Single and Multiple
 Single or multiple arc Single
 Welding current Direct
 Polarity Reverse Electrode Positive
 Welding progression See Joint Detail
 Root treatment See AWS SPECIFICATION
 Preheat and interpass temperature 30(19) to 34(19) To 1 1/2(3F) 70(20) 1 1/2(3F) To 2 1/2(6.3) 150(65)
 Postheat temperature NA 2 1/2(6.3) 225(110)
 Heat Input Min 28.6 Max 45.0 ST OF VT AOT
40.9 RQR 2 (11.8) (1.8 kJ/in) Springfield-BR 64
(1.6 kJ/in) (Metric) Proj BHF 016-204

Pass no.	Electrode size	Welding current		Travel speed	AWS D1-5	Joint detail
		Amperes	Volts			
AS Req	1/16	275 (247.5 302.5)	28.8 (26.8 30.8)	11.6 (10.4 12.8)	1F	 To 1/2 (12.7)
		275 (247.5 302.5)	28.8 (26.8 30.8)	294.6 (264.2 325.12)		

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CHK'D BY JWC OK'D BY JWC
 JUN 29 2009
 REQUEST APPROVED
 BY Cue DATE 7/9/09

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 101 Contractor Casco Bay Steel
 Revision no. _____ Authorized By Paul E. Woodale
 Form III-2 Date _____

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360

Fax: (207) 282-117

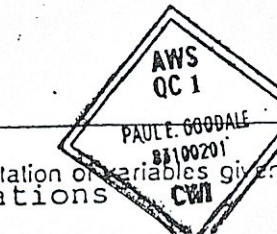
WELDING PROCEDURE SPECIFICATION

Material specification ASTM-A 909/A909M Gr 36(250) - A50(345) - A50W (345)
 Welding process Submerged Arc welding
 Manual or machine Machine
 Position of welding Horizontal (GF)
 Filler metal specification AWS A5-23
 Filler metal classification E80T5-K-Mi Elec. Lincoln
 Flux Lincoln 960 with LAD5 Flow rate NA
 Shielding gas NA
 Single or multiple pass single
 Single or multiple arc single
 Welding current DC
 Polarity DCEN
 Welding progression see Joint Detail
 Root treatment R1st clean - wire brush - free of loose scale & moisture
 Preheat and interpass temperature 24-50° 3/4" to 1 1/2" 70°, 1 1/2" to 2 1/2" 150° over 2 1/2" 225°
 Postheat temperature NA
 Heat Input Min 30.3 kJ/in Max 47.6 kJ/in PQR-FCM #9-43.3 kJ/in

WELDING PROCEDURE

Pass no.	Electrode size	Welding current		Travel speed	AWS 5-13
		Amperes	Volts		
		293	32	13 IPM	Joint detail Fillet
		270	30	11	
	3/32	322	34	14	

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 JUN 29 2009
 RESUBMIT one APPROVED [Signature]
 DATE 7/8/09



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of conditions given in applicable A.W.S. codes or contract specifications.

Procedure no. 250 Contractor Casco Bay Steel
 Revision no. _____ Authorized By Paul S. Stodab
 Form II-2 Date 12-6-06

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360

Fax: (207) 282-1171

WELDING PROCEDURE SPECIFICATION

Material specification ASTM A709/A709M = Gr. 250 (A36) - 345 (A50) - 345W (A50W)
 Welding process Submerged Arc welding - Semi-AUTO
 Manual or machine machine
 Position of welding Flat (G)
 Filler metal specification AWS A5-17 - AWS A5-23
 Filler metal classification E802-ENi1K-Ni1 Lincoln
 Flux 960 Lincoln Flux - Electrode, LA-95 Lincoln
 Shielding gas Ar Flow rate Ar
 Single or multiple pass Both
 Single or multiple arc Single Electrode Extension 1"±3/4 - 20.4"±20mm
 Welding current Direct
 Polarity DC EP
 Welding progression
 Root treatment Back gauge - Grind to AWS Specification
 Preheat and interpass temperature To 3/4 (19) 50 (60) 3/4 (19) to 1 1/2 (38) - 70 (205) 1 1/2 (38) to 2 1/2 (64) - 150 (6)
 Postheat temperature Ar over 2 1/2 (64) - 225 (110)
 Heat Input Min 50 KJ/in Max 79 KJ/in PQR #5 92RJ/14, 2BKJ/mm
 2 KJ/mm 3 KJ/mm

WELDING PROCEDURE

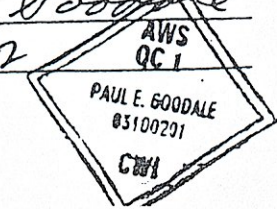
Pass no.	Electrode size	Welding current		Travel speed
		Amperes	Volts	
AS REQ	3/32	505	33	14 IPM 356 mm/min
		454	31	14 IPM
		70	30	14 IPM
		556	30	356

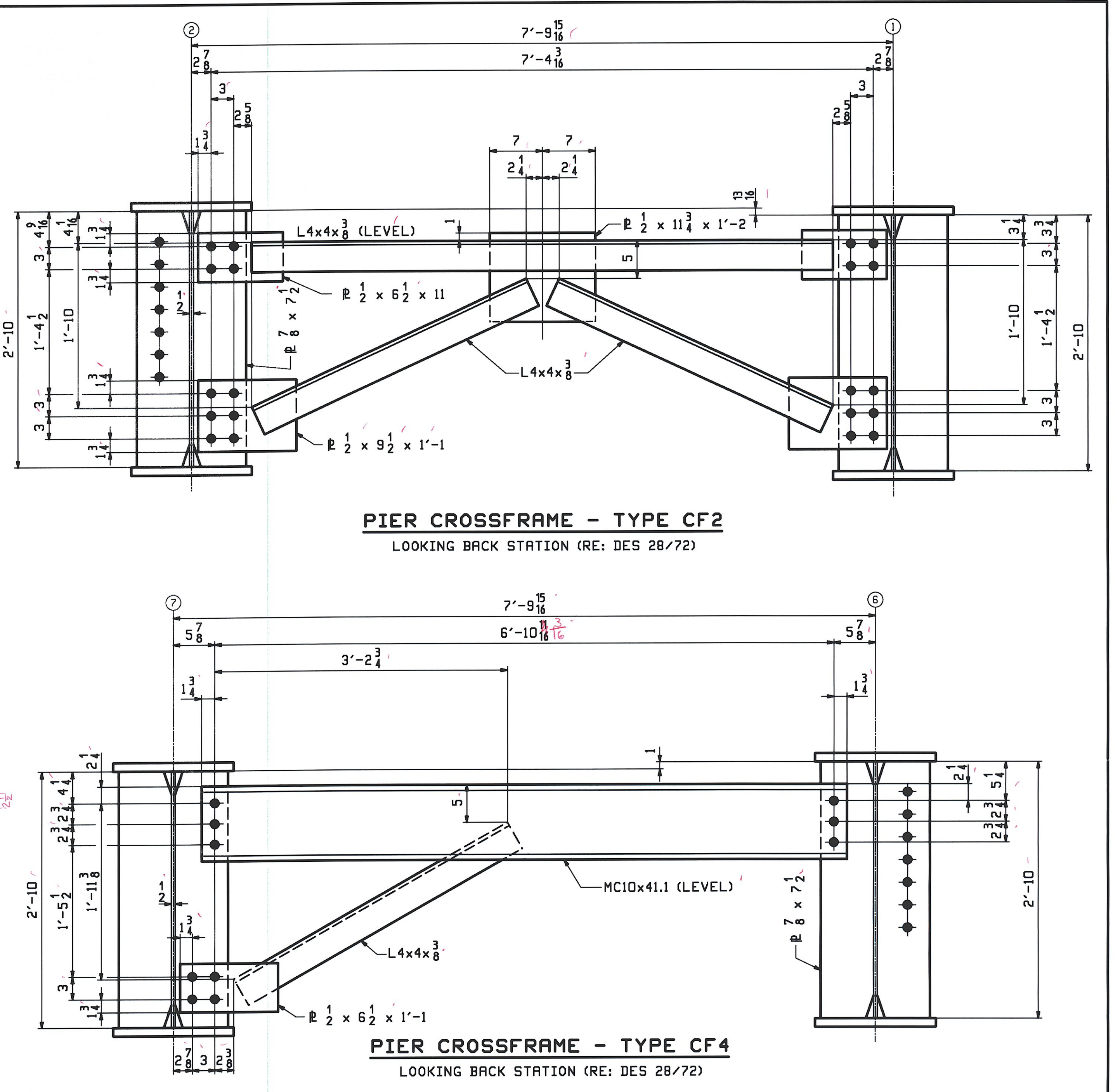
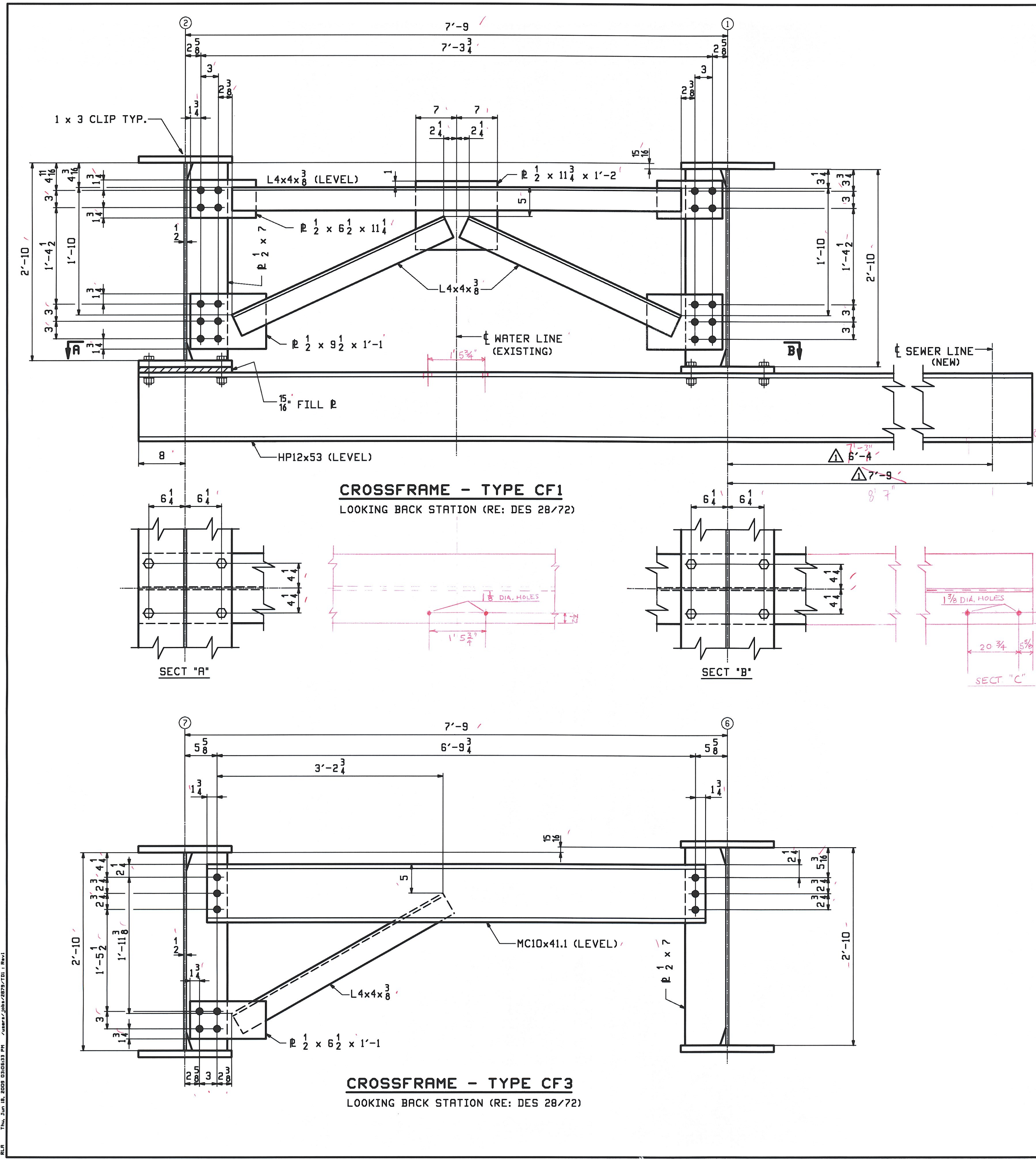
Joint detail B-L2c-S
 AWS D1-5
 T1
 f
 1/2 to 1" 1/4"
 1/2 to 3/4" 6 mm
 1" to 1 1/2" 3/8"
 1 1/2" to 2" 9.5 mm
 2" to 3" 12 mm
 3" to 5" 12 mm

VT TRANS RECEIVED
 OK'D BY JUC
 JUN 29 2009
 RESUBMITTED APPROVED
 BY CW DATE 7-9-09

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 150 Contractor Casco Bay Steel
 Revision no. _____ Authorized By Paul E. Goodale
 Form III-2 Date 11-20-2002



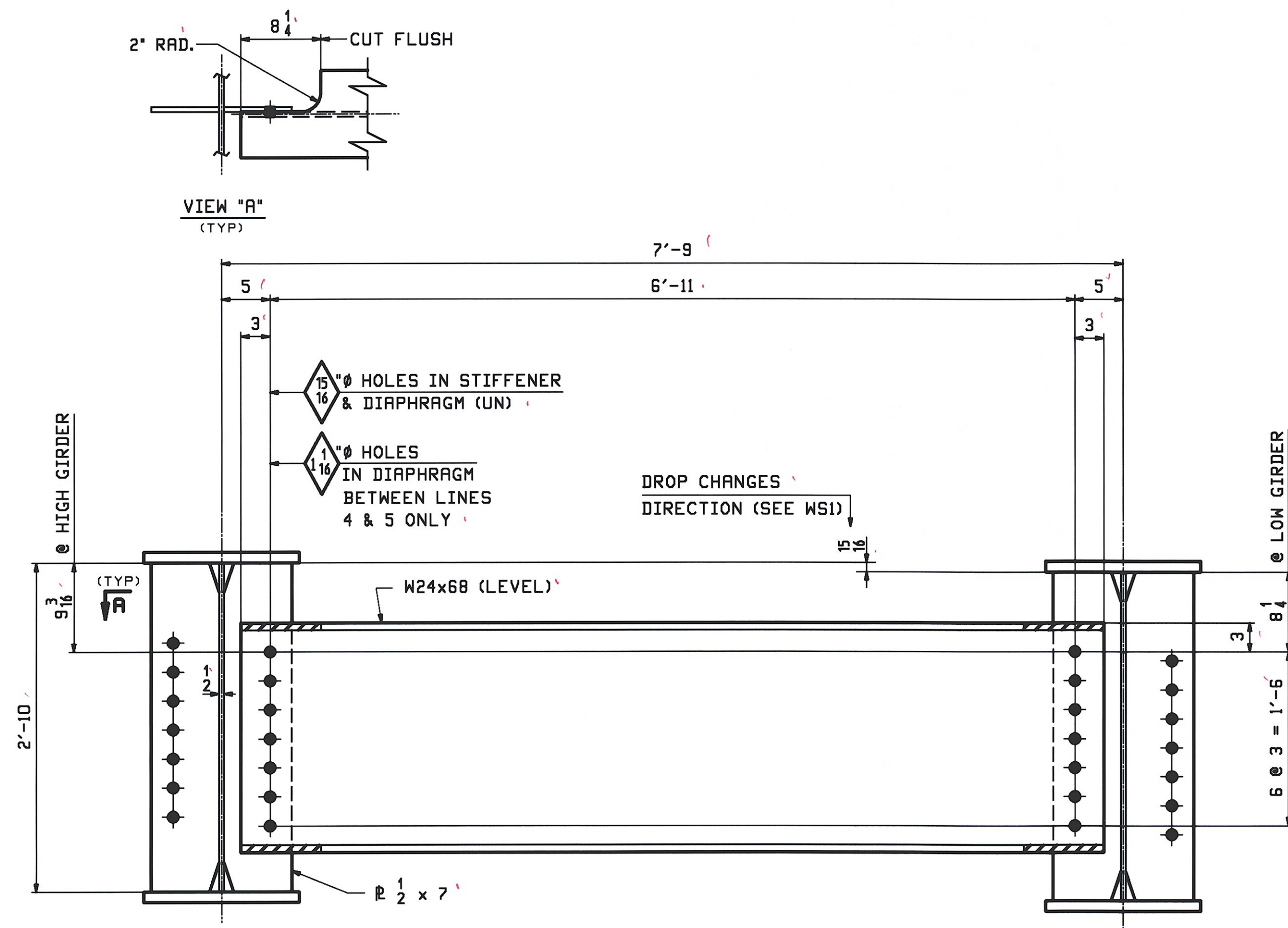


RECEIVED
 JUN 24 2009
 RESUBMIT APPROVED AS NOTED
 BY DATE

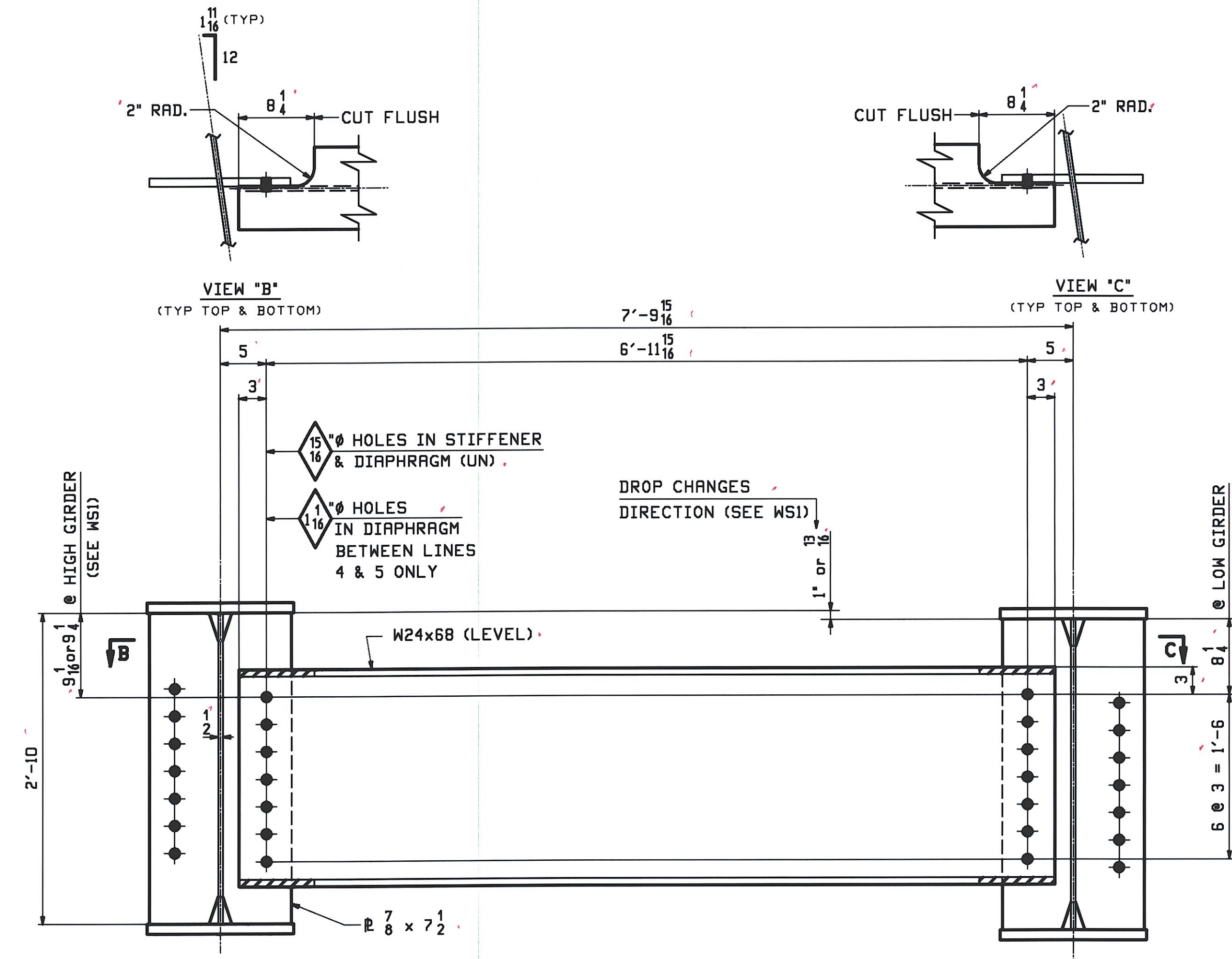
**** NOTE ****
 THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION AND CONNECTION SPACING. THIS DWG IS SUBMITTED FOR INFORMATION ONLY & IS NOT INTENDED FOR SHOP FABRICATION. DETAIL DWGS WILL SHOW ALL WELDING AND DIMENSIONS REQ'D FOR FABRICATION.

6/18	REV. SEWER LOC. & HP LENGTH	RLA	WJF		
0					
REV. DATE	REMARKS	DWN	CHK	APVL	SHOP
MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:		
M270-50W	SEE GNI	15/16"	(FIELD) 7/8"		
DESCRIPTION: LAYOUTS					
CASCO BAY STEEL STRUCTURES, INC.					
75 SPRING HILL ROAD			SACO, MAINE 04072		
PHONE (207) 282-7360			FAX. (207) 282-1179		
STRUCTURE:	VT 11 OVER BLACK RIVER	BRIDGE NO. 64	SPRINGFIELD, VERMONT	COUNTY OF WINDSOR	
LOCATION:	TOWN OF SPRINGFIELD	JOB NO.	DWG NO.		
PROJ NO.	BHF 016-2(14)	406-1	TD1		
CUSTOMER:	COLD RIVER BRIDGES, LLC	REV.			

PLT Thu Jun 18 2009 03:58:33 PM /smt/ps/ps/2879/181.RVT



DIAPHRAGM - TYPE D1
LOOKING BACK STATION (RE: DES 28A/72)



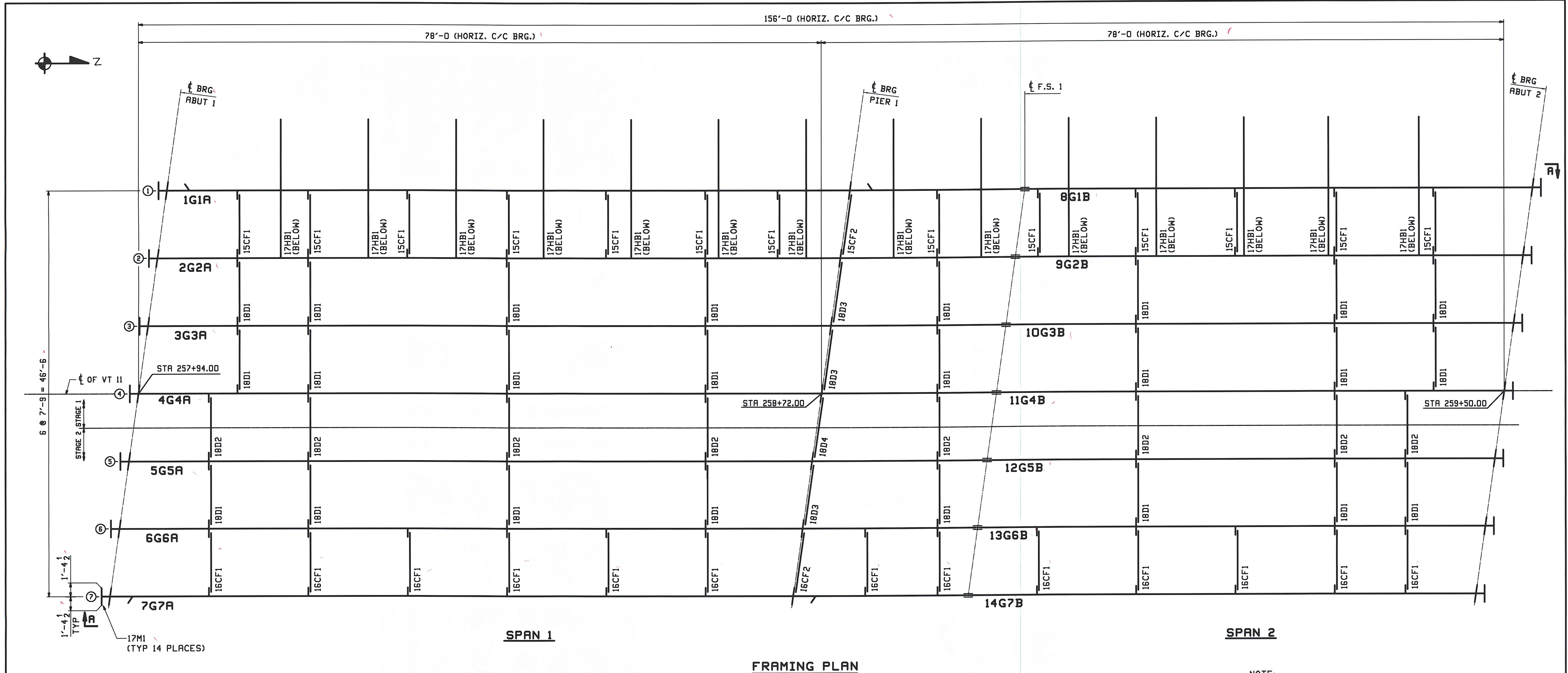
DIAPHRAGM - TYPE D2
LOOKING BACK STATION @ PIER 1 (RE: DES 28A/72)

RECEIVED
 C'D BY *DRP* OK'D BY *cul*
 JUN 24 2009
 RESUBMIT _____ APPROVED _____
 BY *cul* DATE 7-13-09

**** NOTE ****
 THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION AND CONNECTION SPACING. THIS DWG IS SUBMITTED FOR INFORMATION ONLY & IS NOT INTENDED FOR SHOP FABRICATION. DETAIL DWGS WILL SHOW ALL WELDING AND DIMENSIONS REQ'D FOR FABRICATION.

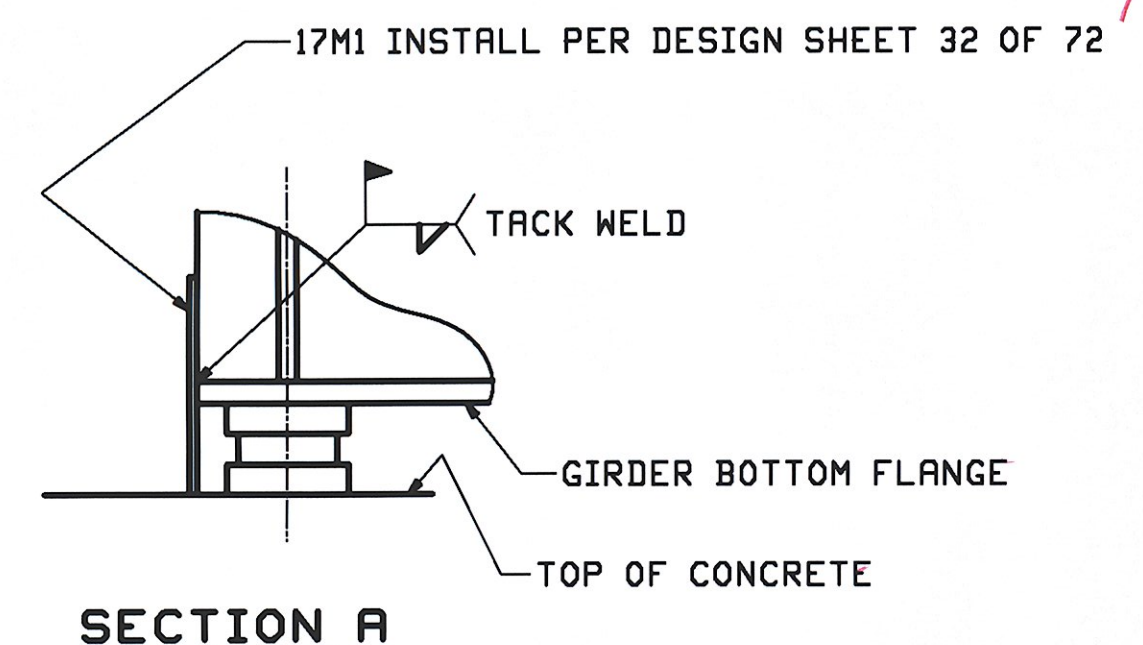
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W		SEE GNI		1 1/8" (UN)		(FIELD) 7/8"
DESCRIPTION: LAYOUTS						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN:	DATE:	
				WJF	06/09	
				CHKD:	DATE:	
				RLA	06/13	
LOCATION: TOWN OF SPRINGFIELD				JOB NO.	DWG NO.	
PROJ NO. BHF 016-2(14)				406-1	TD2	
CUSTOMER: COLD RIVER BRIDGES, LLC					REV. 1	

ALL TYP. JUN 15, 2009 09:05:59 AM /c:\p2\jsh\28A/72/1.dwg



6 @ 7'-9" = 46'-6"

1'-4 1/2" TYP



SECTION A

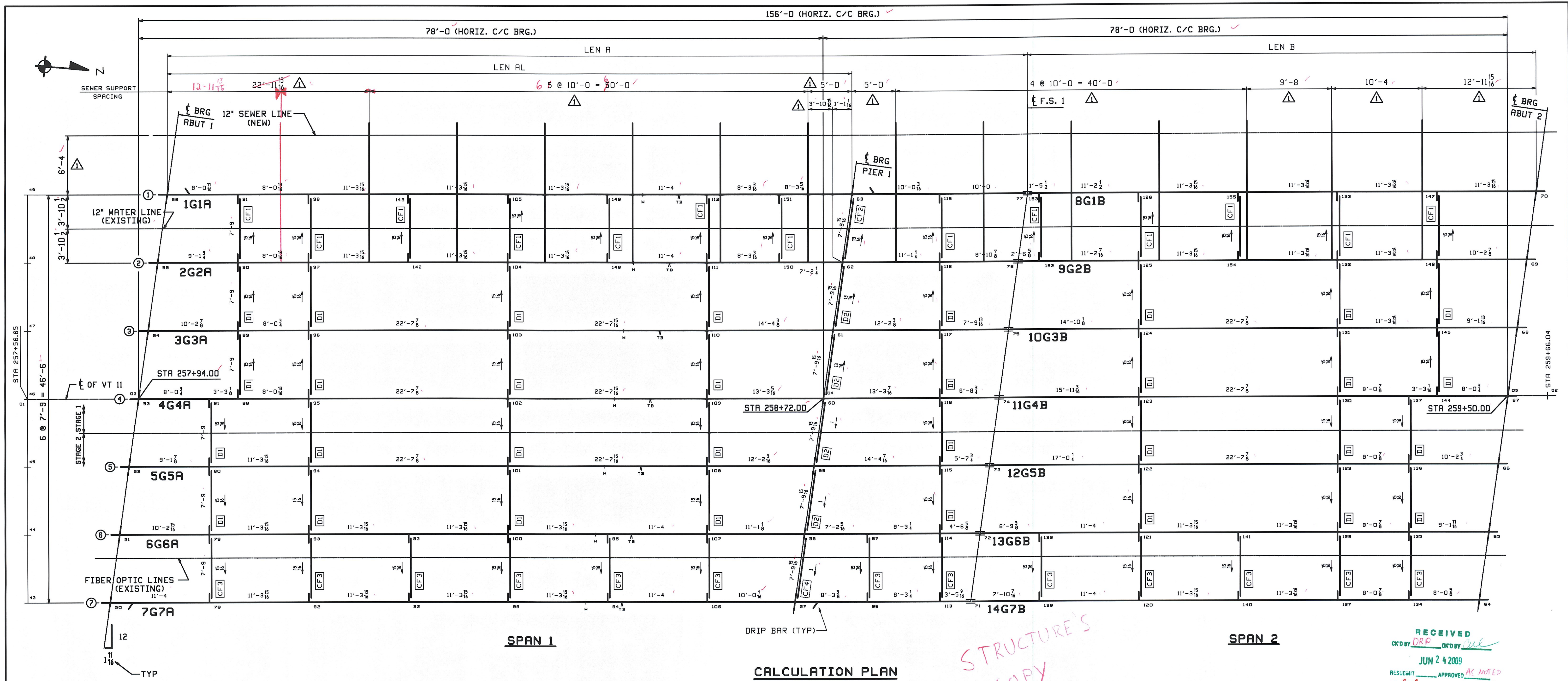
FRAMING PLAN

NOTE:
WORK THIS DRAWING WITH DRAWING E2.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
DESCRIPTION: FRAMING PLAN						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN: WJF	DATE: 06/12	
				CHKD: DO	DATE: 06/24	
LOCATION: TOWN OF SPRINGFIELD				JOB NO.	DWG NO.	
PROJ NO. BHF 016-2(14)				406-1		E1
CUSTOMER: COLD RIVER BRIDGES, LLC						REV. A

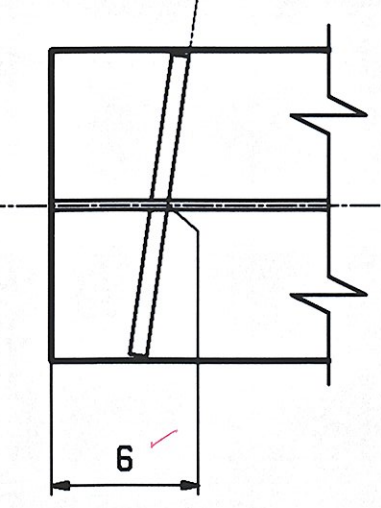
RECEIVED
 JUN 26 2009
 APPROVED
 DATE 7-17-09

10 Thu Jun 25 2009 09:58:44 PM C:\msdcs\apps\2009\2511_1003



ERECTOR NOTE:
 WRENCH TIGHTEN DIAPHRAGM BOLTS BETWEEN GIRDER LINES 4 & 5.
 BOLTS TO BE FULLY TORQUED AFTER STAGE 2 CONCRETE HAS BEEN POURED.

FRONT FACE OF BRG CURTAIN WALL



TYPICAL ABUT. 1 DETAIL
 (ABUT. 2 OPP. HAND)

**** NOTE ****
 THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DMG IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION.

- NOTES:
1. LONGITUDINAL DIMENSIONS ARE SLOPING ALONG BOTTOM OF WEBS WITH CORRECTIONS MADE FOR DL CAMBER, V.C. & GRADE (UN).
 2. TRANSVERSE DIMENSIONS ARE IN A HORIZONTAL PLANE (UN).
 3. ARROW POINTS TOWARD LOW END OF MEMBER.
 4. ENDS OF GIRDERS & BRG STIFFENERS ARE VERTICAL AFTER DL ROTATION.
 5. CROSSFRAME STIFFENERS & FIELD SPLICES ARE NORMAL TO GRADE.
 6. BOTTOM POINT NUMBERS = TOP POINT NUMBERS + 200
 7. FOR LAYOUTS SEE "TD" SHEETS.

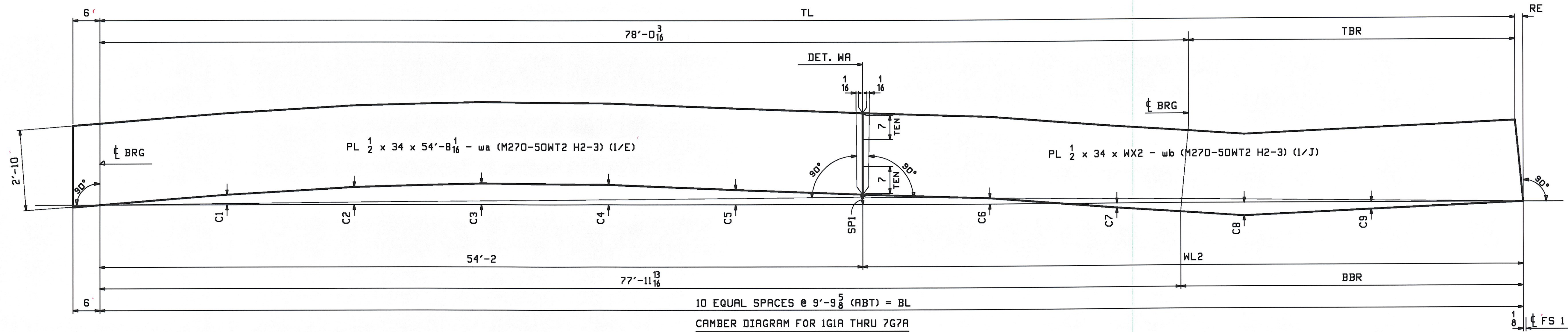
Line	DEVELOPED LENGTHS ALONG BOTTOM OF WEB			LONGIT. SLOPE		
	LEN RL	LEN A	LEN B	Abut 1	Pier 1	Abut 2
1	77'-11 13/16	98'-0	57'-11 3/4	.0077	.0077	.0077
2	77'-11 13/16	97'-11 15/16	57'-11 3/4	.0077	.0077	.0077
3	77'-11 13/16	98'-0	57'-11 3/4	.0077	.0077	.0077
4	77'-11 13/16	98'-0	57'-11 3/4	.0077	.0077	.0077
5	77'-11 13/16	98'-0	57'-11 3/4	.0077	.0077	.0077
6	77'-11 13/16	98'-0	57'-11 13/16	.0077	.0077	.0077
7	77'-11 13/16	98'-0	57'-11 13/16	.0077	.0077	.0077

STRUCTURE'S COPY

RECEIVED
 CND BY DRP OKD BY [Signature]
 JUN 24 2009
 RESUBMIT APPROVED AC NOTED
 BY [Signature] DATE 7-13-09

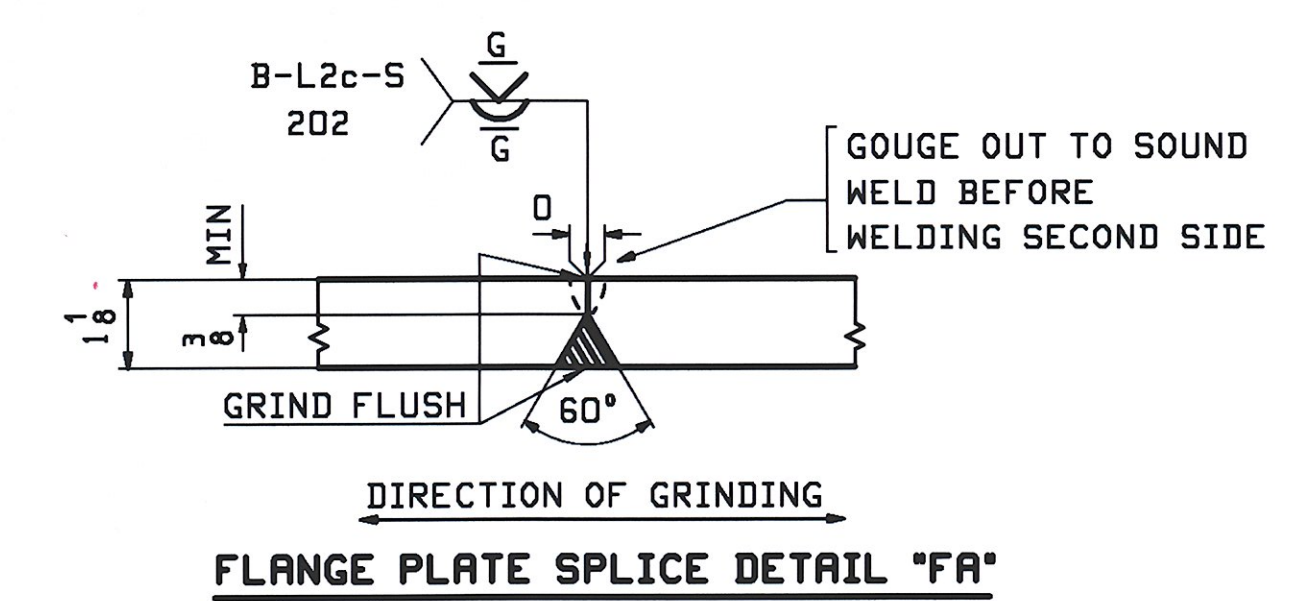
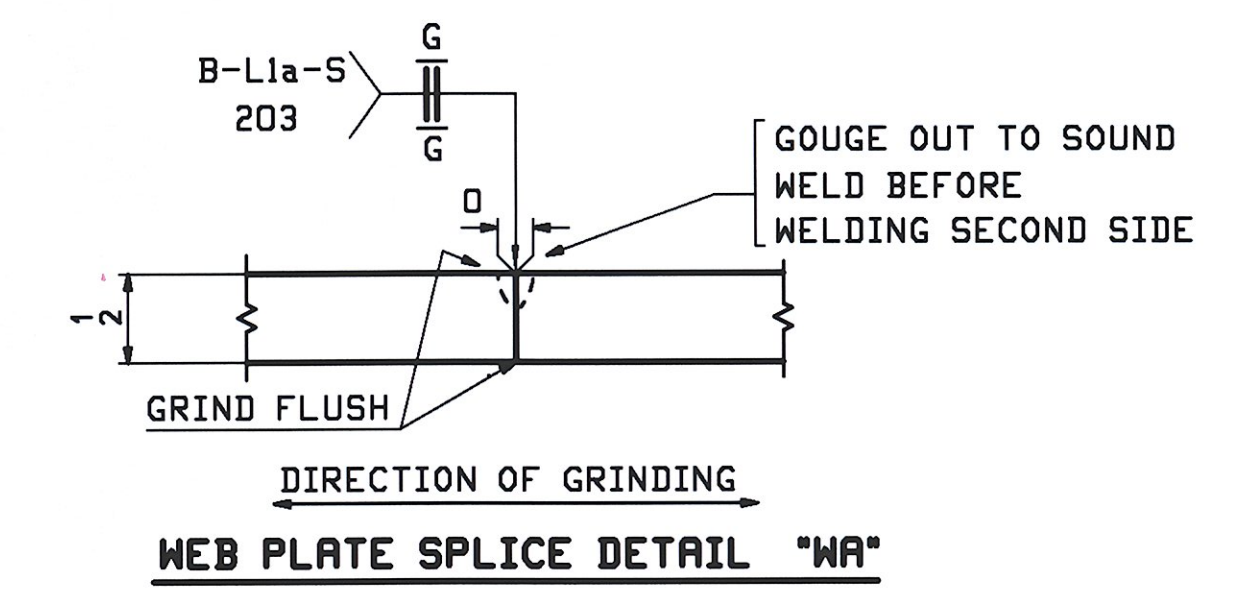
6/18	REVISED HANGER BEAM SPACING	WJF	RLA		
0					
REV. DATE	REMARKS	DWN	CHK	APVL	SHOP
MATERIAL:	SURFACE PREP. & PAINT:	HOLE:	SHOP BOLTS:		
M270-S0W	SEE GNI	NONE	NONE		
DESCRIPTION: CALCULATION PLAN					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE:	VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR	DRAWN:	DATE:		
		WJF	06/08		
		CHKD:	DATE:		
		RLA	06/13		
LOCATION:	TOWN OF SPRINGFIELD	JOB NO.	DMG NO.		
PROJ NO.	BHF 016-2(14)	406-1	WS1		
CUSTOMER:	COLD RIVER BRIDGES, LLC		REV.		

BUREAU: JUN 18 2009 02:28:28 PM C:\new\jhu\2577.dwg L1.Rvt



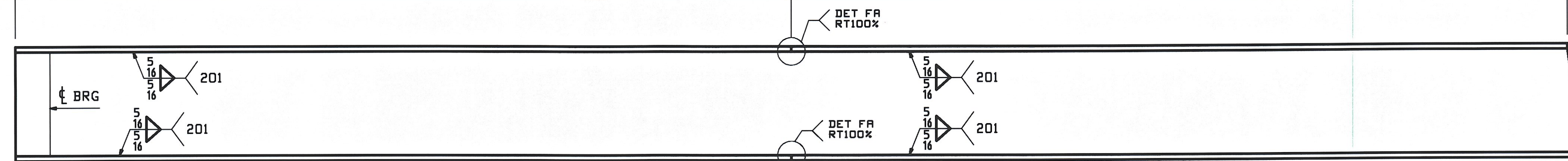
10 EQUAL SPACES @ 9'-9⁵/₈ (ABT) = BL
 CAMBER DIAGRAM FOR 1G1A THRU 7G7A

MARK	TL	BL	RE	WL2	WX2	SP1	TBR	BBR	C1	C2	C3	C4	C5	C6	C7	C8	C9
1G1A	97'-11 ¹¹ / ₁₆	97'-11 ⁷ / ₈	3/16	43'-9 ⁷ / ₈	43'-9 ¹⁵ / ₁₆	7/8	19'-11 ¹ / ₂	20'-0 ¹ / ₁₆	7/8	1/2	1 ¹³ / ₁₆	1 ¹¹ / ₁₆	1 ¹ / ₄	1/2	3/8	1/8	9/16
2G2A	97'-11 ³ / ₄	97'-11 ¹³ / ₁₆	1/16	43'-9 ¹³ / ₁₆	43'-9 ⁷ / ₈	7/8	19'-11 ⁹ / ₁₆	20'-0	7/8	1/2	1 ¹³ / ₁₆	1 ¹¹ / ₁₆	1 ¹ / ₄	1/2	3/8	1/8	5/8
3G3A	97'-11 ³ / ₄	97'-11 ⁷ / ₈	1/8	43'-9 ⁷ / ₈	43'-9 ¹⁵ / ₁₆	13/16	19'-11 ⁹ / ₁₆	20'-0 ¹ / ₁₆	7/8	1/2	1 ³ / ₄	1 ¹¹ / ₁₆	1 ³ / ₁₆	1/2	7/16	1/8	5/8
4G4A	97'-11 ³ / ₄	97'-11 ⁷ / ₈	1/8	43'-9 ⁷ / ₈	43'-9 ¹⁵ / ₁₆	13/16	19'-11 ⁹ / ₁₆	20'-0 ¹ / ₁₆	7/8	1/2	1 ³ / ₄	1 ¹¹ / ₁₆	1 ³ / ₁₆	1/2	7/16	1/8	5/8
5G5A	97'-11 ³ / ₄	97'-11 ⁷ / ₈	1/8	43'-9 ⁷ / ₈	43'-9 ¹⁵ / ₁₆	7/8	19'-11 ⁹ / ₁₆	20'-0 ¹ / ₁₆	7/8	1/2	1 ³ / ₄	1 ¹¹ / ₁₆	1 ¹ / ₄	1/2	7/16	1/8	5/8
6G6A	97'-11 ¹¹ / ₁₆	97'-11 ⁷ / ₈	3/16	43'-9 ⁷ / ₈	43'-9 ¹⁵ / ₁₆	7/8	19'-11 ¹ / ₂	20'-0 ¹ / ₁₆	7/8	1/2	1 ¹³ / ₁₆	1 ¹¹ / ₁₆	1 ¹ / ₄	1/2	3/8	1/8	9/16
7G7A	97'-11 ¹¹ / ₁₆	97'-11 ⁷ / ₈	3/16	43'-9 ⁷ / ₈	43'-9 ¹⁵ / ₁₆	7/8	19'-11 ¹ / ₂	20'-0 ¹ / ₁₆	7/8	1/2	1 ¹³ / ₁₆	1 ¹¹ / ₁₆	1 ¹ / ₄	1/2	3/8	1/8	9/16



- NOTES:**
 1. FOR GENERAL NOTES SEE DWG GNI.
 2. H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TEST AT H FREQ. FOR ZONE 2

1G1A	PL 1/8 x 16 x 58'-8 - ta (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ¹¹ / ₁₆ - tb (M270-50WT2 H2-3) 1/C
2G2A	PL 1/8 x 16 x 58'-8 - ta (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ³ / ₄ - tb (M270-50WT2 H2-3) 1/C
3G3A	PL 1/8 x 16 x 58'-8 - ta (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ³ / ₄ - tb (M270-50WT2 H2-3) 1/C
4G4A	PL 1/8 x 16 x 58'-8 - ta (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ³ / ₄ - tb (M270-50WT2 H2-3) 1/C
5G5A	PL 1/8 x 16 x 58'-8 - ta (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ³ / ₄ - tb (M270-50WT2 H2-3) 1/C
6G6A	PL 1/8 x 16 x 58'-8 - ta (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ¹¹ / ₁₆ - tb (M270-50WT2 H2-3) 1/C
7G7A	PL 1/8 x 16 x 58'-8 - ta (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ¹¹ / ₁₆ - tb (M270-50WT2 H2-3) 1/C



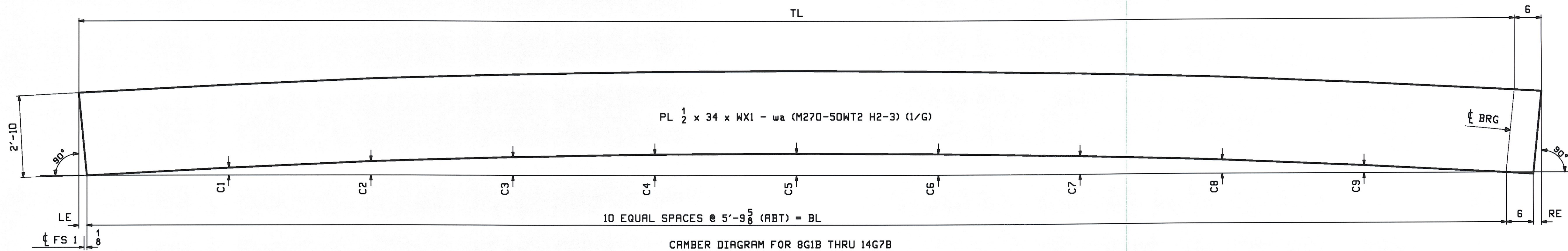
1G1A	PL 1/8 x 16 x 58'-8 - ba (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ⁷ / ₈ - bb (M270-50WT2 H2-3) 1/C
2G2A	PL 1/8 x 16 x 58'-8 - ba (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ¹³ / ₁₆ - bb (M270-50WT2 H2-3) 1/C
3G3A	PL 1/8 x 16 x 58'-8 - ba (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ⁷ / ₈ - bb (M270-50WT2 H2-3) 1/C
4G4A	PL 1/8 x 16 x 58'-8 - ba (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ⁷ / ₈ - bb (M270-50WT2 H2-3) 1/C
5G5A	PL 1/8 x 16 x 58'-8 - ba (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ⁷ / ₈ - bb (M270-50WT2 H2-3) 1/C
6G6A	PL 1/8 x 16 x 58'-8 - ba (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ⁷ / ₈ - bb (M270-50WT2 H2-3) 1/C
7G7A	PL 1/8 x 16 x 58'-8 - ba (M270-50WT2 H2-3) 1/R	PL 1/8 x 16 x 39'-9 ⁷ / ₈ - bb (M270-50WT2 H2-3) 1/C

FLANGE DIAGRAM FOR 1G1A THRU 7G7A

RECEIVED
 OK'D BY DRP OK'D BY
 JUN 24 2009
 RESUBMIT APPROVED
 BY CUC DATE 7-13-09

REV.	DATE	REMARKS	DMN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
AS NOTED		SEE GNI		NONE		NONE
DESCRIPTION: CAMBER & FLANGE DIAGRAMS						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN: WJF	DATE: 06/08	
LOCATION: TOWN OF SPRINGFIELD				CHKD: RLA	DATE: 06/16	
PROJ NO. BHF 016-2(14)				JOB NO. 406-1		DWG NO. C1
CUSTOMER: COLD RIVER BRIDGES, LLC						REV. Δ

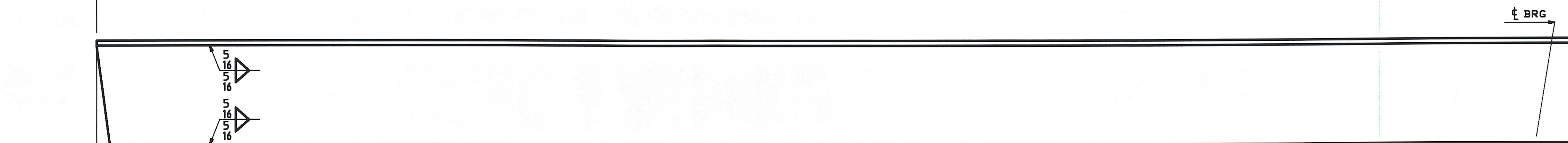
File: Job 16_2009 0228255.dwg Date: 06/24/09 11:03 AM



CAMBER DIAGRAM FOR 8G1B THRU 14G7B

MARK	TL	BL	LE	RE	WX1	C1	C2	C3	C4	C5	C6	C7	C8	C9
8G1B	58'-0 ⁷ / ₁₆	57'-11 ⁵ / ₈	1/4	9/16	58'-6 ⁷ / ₁₆	1/2	15/16	1/4	7/16	1/2	7/16	1/4	15/16	9/16
9G2B	58'-0 ³ / ₈	57'-11 ⁵ / ₈	3/16	9/16	58'-6 ³ / ₈	1/2	15/16	1/4	7/16	1/2	7/16	1/4	15/16	9/16
10G3B	58'-0 ³ / ₈	57'-11 ⁵ / ₈	1/4	1/2	58'-6 ³ / ₈	9/16	15/16	1/4	7/16	1/2	7/16	1/4	15/16	9/16
11G4B	58'-0 ³ / ₈	57'-11 ⁵ / ₈	1/4	1/2	58'-6 ³ / ₈	9/16	15/16	1/4	7/16	1/2	7/16	1/4	15/16	1/2
12G5B	58'-0 ³ / ₈	57'-11 ⁵ / ₈	1/4	1/2	58'-6 ³ / ₈	9/16	15/16	1/4	7/16	1/2	7/16	1/4	15/16	9/16
13G6B	58'-0 ⁷ / ₁₆	57'-11 ¹¹ / ₁₆	1/4	1/2	58'-6 ⁷ / ₁₆	9/16	15/16	1/4	7/16	1/2	7/16	1/4	15/16	1/2
14G7B	58'-0 ⁷ / ₁₆	57'-11 ¹¹ / ₁₆	1/4	1/2	58'-6 ⁷ / ₁₆	9/16	15/16	1/4	7/16	1/2	7/16	1/4	15/16	1/2

8G1B	PL 1 ¹ / ₈ x 16 x 58'-6 ⁷ / ₁₆ - ta (M270-50WT2 H2-3) 1/A
9G2B	PL 1 ¹ / ₈ x 16 x 58'-6 ³ / ₈ - ta (M270-50WT2 H2-3) 1/A
10G3B	PL 1 ¹ / ₈ x 16 x 58'-6 ³ / ₈ - ta (M270-50WT2 H2-3) 1/A
11G4B	PL 1 ¹ / ₈ x 16 x 58'-6 ³ / ₈ - ta (M270-50WT2 H2-3) 1/A
12G5B	PL 1 ¹ / ₈ x 16 x 58'-6 ³ / ₈ - ta (M270-50WT2 H2-3) 1/A
13G6B	PL 1 ¹ / ₈ x 16 x 58'-6 ⁷ / ₁₆ - ta (M270-50WT2 H2-3) 1/A
14G7B	PL 1 ¹ / ₈ x 16 x 58'-6 ⁷ / ₁₆ - ta (M270-50WT2 H2-3) 1/A



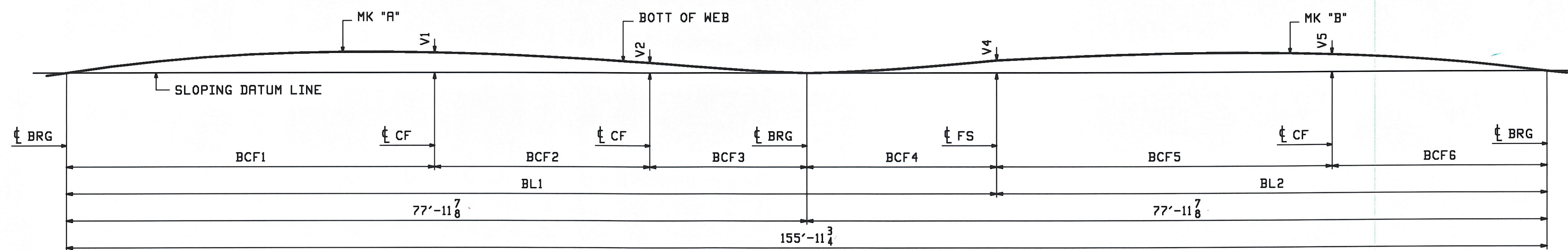
8G1B	1/4	PL 1 ¹ / ₈ x 16 x 58'-5 ⁵ / ₈ - ba (M270-50WT2 H2-3) 1/A
9G2B	3/16	PL 1 ¹ / ₈ x 16 x 58'-5 ⁵ / ₈ - ba (M270-50WT2 H2-3) 1/A
10G3B	1/4	PL 1 ¹ / ₈ x 16 x 58'-5 ⁵ / ₈ - ba (M270-50WT2 H2-3) 1/A
11G4B	1/4	PL 1 ¹ / ₈ x 16 x 58'-5 ⁵ / ₈ - ba (M270-50WT2 H2-3) 1/A
12G5B	1/4	PL 1 ¹ / ₈ x 16 x 58'-5 ⁵ / ₈ - ba (M270-50WT2 H2-3) 1/A
13G6B	1/4	PL 1 ¹ / ₈ x 16 x 58'-5 ¹¹ / ₁₆ - ba (M270-50WT2 H2-3) 1/A
14G7B	1/4	PL 1 ¹ / ₈ x 16 x 58'-5 ¹¹ / ₁₆ - ba (M270-50WT2 H2-3) 1/A

FLANGE DIAGRAM FOR 8G1B THRU 14G7B

RECEIVED
 OK'D BY DRP OK'D BY *aw*
 JUN 24 2009
 RESUBMIT APPROVED
 BY *aw* DATE 7-13-09

- NOTES:**
- FOR GENERAL NOTES SEE DWG GNI.
 - H2-3 DENOTES MATERIAL SUBJECT TO CHARPY V-NOTCH TEST AT H FREQ. FOR ZONE 2

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
AS NOTED		SEE GNI		NONE		NONE
DESCRIPTION: CAMBER & FLANGE DIAGRAMS						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN: WJF	DATE: 06/09	
				CHKD: RLA	DATE: 06/16	
LOCATION: TOWN OF SPRINGFIELD				JOB NO.	DWG NO.	
PROJ NO. BHF 016-2(14)				406-1	C2	
CUSTOMER: COLD RIVER BRIDGES, LLC				REV.	△	



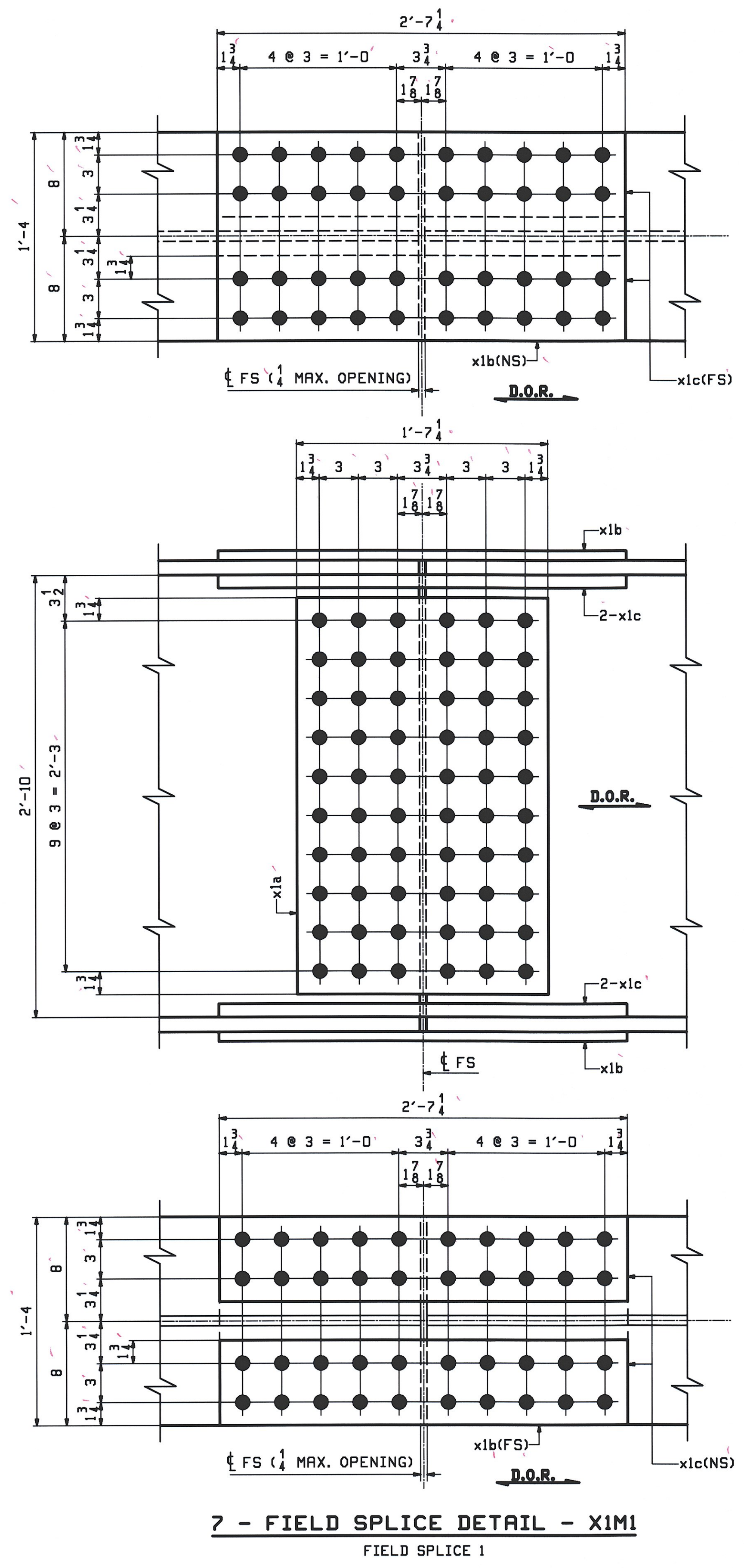
SHOP ASSEMBLY DIAGRAM

LINE	BL1	BL2	V1	V2	V4	V5	BCF1	BCF2	BCF3	BCF4	BCF5	BCF6	"A"	"B"
1	98'-0	57'-11 3/4	2 1/4 ✓	1 1/8 ✓	1 3/8 ✓	1 15/16 ✓	38'-9 7/16	22'-7 15/16	16'-6 1/2	20'-0 1/8	35'-3 7/8	22'-7 7/8	1G1A	8G1B
2	97'-11 15/16	57'-11 13/16	2 1/4 ✓	1 1/8 ✓	1 3/8 ✓	1 15/16 ✓	39'-10 1/2	22'-7 15/16	15'-5 7/16	20'-0 1/8	36'-5	21'-6 13/16	2G2A	9G2B
3	97'-11 15/16	57'-11 13/16	2 1/4 ✓	1 ✓	1 3/8 ✓	1 7/8 ✓	40'-11 9/16	22'-7 15/16	14'-4 3/8	20'-0 1/8	37'-6 1/16	20'-5 3/4	3G3A	10G3B
4	98'-0	57'-11 3/4	2 3/16	7/8	1 3/8	1 13/16 ✓	42'-0 5/8	22'-7 15/16	13'-3 5/16	20'-0 1/8	38'-7 1/16	19'-4 11/16	4G4A	11G4B
5	98'-0	57'-11 3/4	2 3/16	13/16	1 3/8	1 3/4 ✓	43'-11 1/16	22'-7 15/16	12'-2 1/4	20'-0 1/8	39'-8 1/8	18'-3 5/8	5G5A	12G5B
6	98'-0	57'-11 3/4	2 1/8	3/4	1 3/8	1 11/16 ✓	44'-2 3/4	22'-7 15/16	11'-1 3/16	20'-0 1/8	40'-9 3/16	17'-2 9/16	6G6A	13G6B
7	98'-0	57'-11 3/4	2 1/8	5/8	1 3/8	1 5/8 ✓	45'-3 13/16	22'-7 15/16	10'-0 1/8	20'-0 1/8	41'-10 1/4	16'-1 1/2	7G7A	14G7B

NOTES
FOR GENERAL NOTES SEE DWG GNI
ALL DIMENSIONS GIVEN AT BOTT OF WEB

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
DESCRIPTION: SHOP ASSEMBLY DIAGRAM						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN: WJF	DATE: 06/16	
LOCATION: TOWN OF SPRINGFIELD				CHKD: DO	DATE: 06/24	
PROJ NO. BHF 016-2(14)				JOB NO. 406-1		DWG NO. SA1
CUSTOMER: COLD RIVER BRIDGES, LLC				REV. 1		

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CHKD BY: *DSP* OK'D BY: *awc*
JUN 26 2009
RESUBMIT APPROVED
BY: *awc* DATE: 7-13-09



7 - FIELD SPLICE DETAIL - XIM1
FIELD SPLICE 1

ABN INFO		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT
		XIM1	7		FIELD SPLICE			465
2	B		14	x1a	PL 5/8 x 30 1/2	1 7 1/4	M270-50MT2 (H2-3)	
2	C		14	x1b	PL 1/2 x 16	2 7 1/4	M270-50MT2 (H2-3)	
2	D		28	x1c	PL 1/2 x 6 1/2	2 7 1/4	M270-50MT2 (H2-3)	

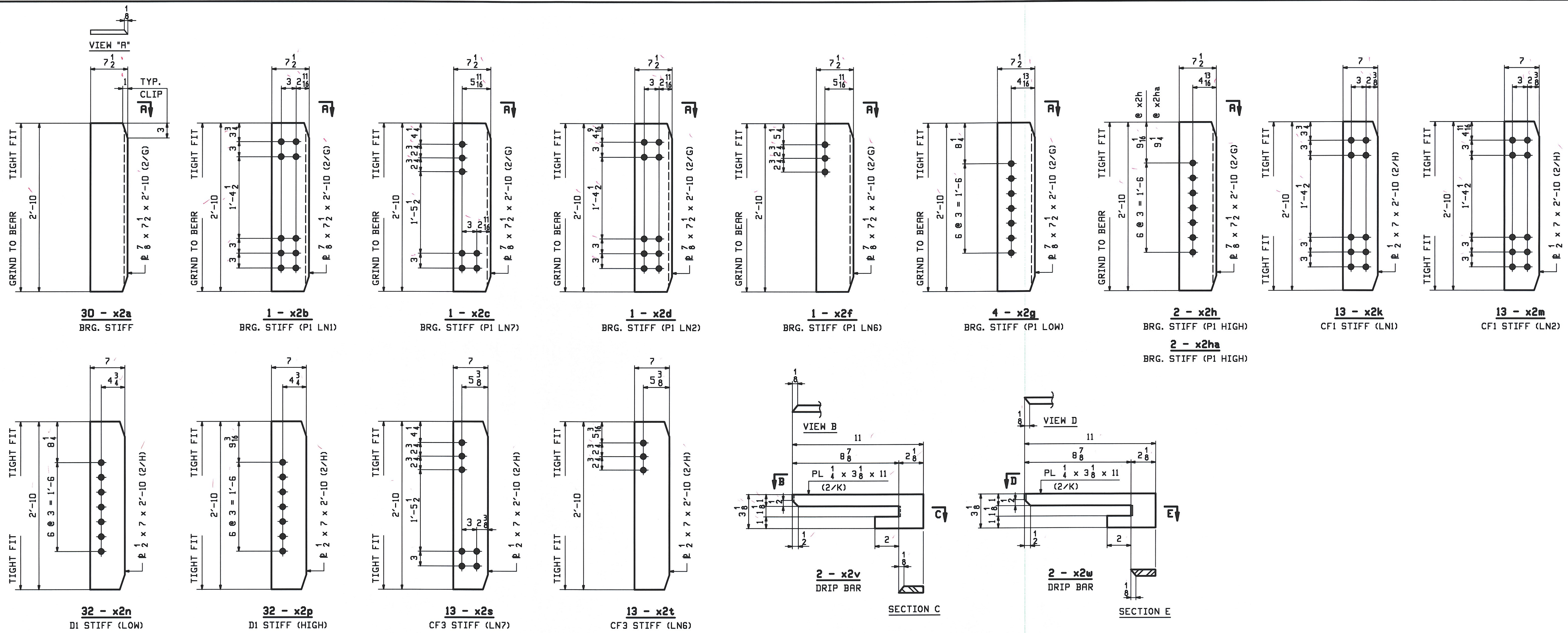
- NOTES:
- FOR GENERAL NOTES SEE DRAWING GNI.
 - HOLES IN SPLICE PLATES ARE PRE-DRILLED. ENDS OF GIRDERS ARE DRILLED FROM SOLID USING SPLICE PLATES AS A TEMPLATE.
 - D.O.R.** DENOTES DIRECTION OF MILL ROLLING.
 - H2-3 DENOTES CHARPY V-NOTCH TESTING REQUIRED.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
		MATERIAL: M270-50MT2				SHOP BOLTS: NONE
		SURFACE PREP. & PAINT: NONE				
		HOLES: 15/16" Ø				
DESCRIPTION: GIRDER STANDARDS						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR					DRAWN: WJF	DATE: 06/10
					CHKD: DO	DATE: 06/22
LOCATION: TOWN OF SPRINGFIELD			JOB NO. 406-1		DNG NO. X1	
PROJ NO. BHF 016-2(14)					REV. 1	
CUSTOMER: COLD RIVER BRIDGES, LLC						

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 JUN 26 2009
 APPROVED BY [Signature]
 DATE 7-13-09

DWG: JUN 25, 2009 09:28:28 PM / REV: JUN 25, 2009 09:28:28 PM / REV: JUN 25, 2009 09:28:28 PM

10 The File Path: C:\Users\jsh47\Documents\CASCO\VT 11\2009\0626254.Plt



NOTES:
FOR GENERAL NOTES SEE DRAWING GNI.

REV.	DATE	REMARKS	DWN	CHK	APVL
MATERIAL: M270-50M		SURFACE PREP. & PAINT: SEE GNI	HOLES: 15/16" Ø	SHOP BOLTS: NONE	
DESCRIPTION: GIRDER STANDARDS					
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179					
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR			DRAWN: WJF	DATE: 06/10	
LOCATION: TOWN OF SPRINGFIELD			CHKD: DO	DATE: 06/22	
PROJ. NO.	BHF 016-2(14)		JOB NO.	406-1	
CUSTOMER:	COLD RIVER BRIDGES, LLC		DWG NO.	X2	
					REV. ▲

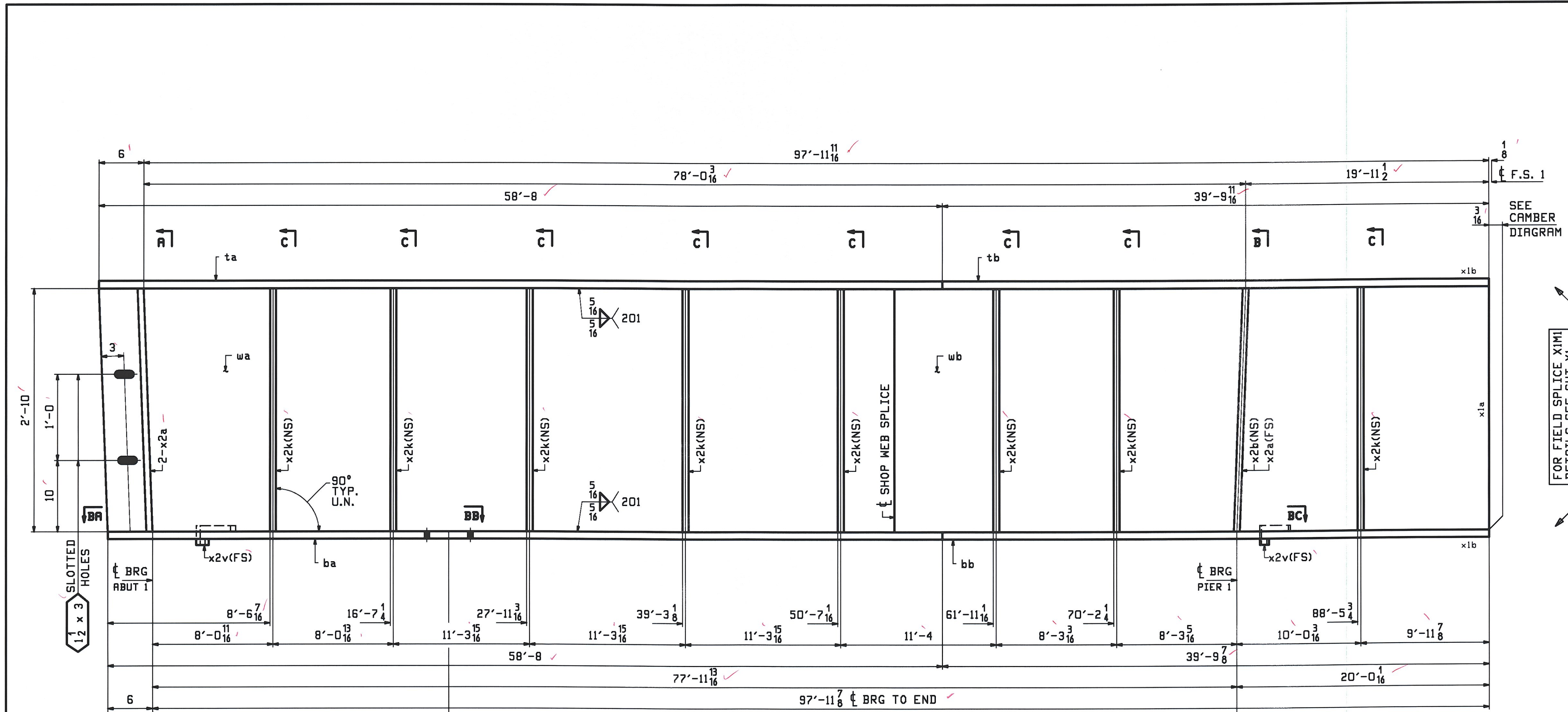
RECEIVED

OK'D BY: *[Signature]* OK'D BY: *[Signature]*

JUN 26 2009

RESUBMIT _____ APPROVED: *[Signature]*

BY: *[Signature]* DATE: 7-7-09

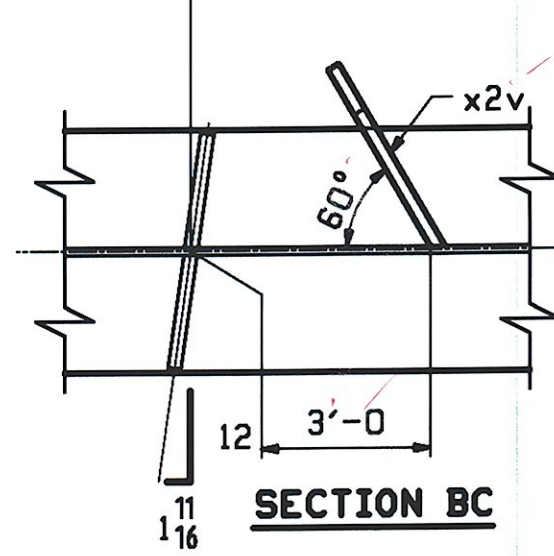
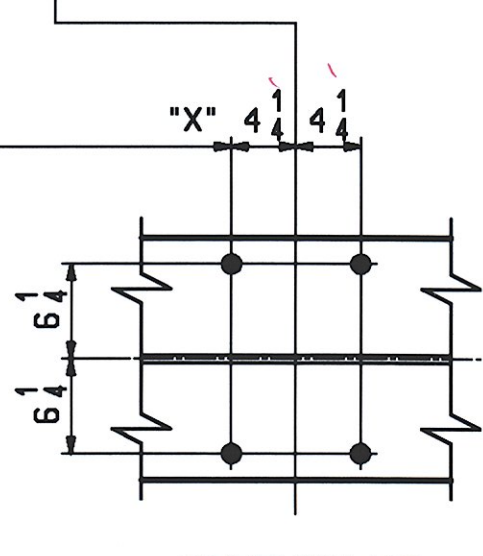
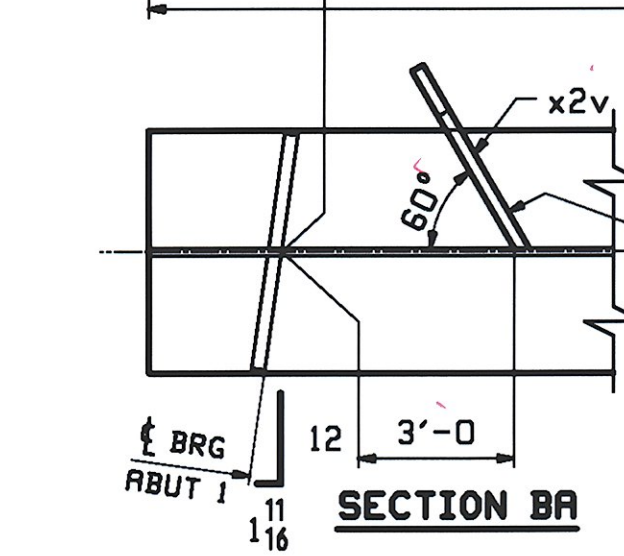


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		IG1A	1		GIRDER				18290	
1	E		1	wa	PL 1/2 x 34	54 8/16	M270-50MT2 (H2-3)			
1	J		1	wb	PL 2 x 34	43 9/16	M270-50MT2 (H2-3)			
1	A		1	ta	PL 1/8 x 15	58 8/16	M270-50MT2 (H2-3)			
1	C		1	tb	PL 1/8 x 15	39 9/16	M270-50MT2 (H2-3)			
1	A		1	ba	PL 1/8 x 15	58 8/16	M270-50MT2 (H2-3)			
1	C		1	bb	PL 1/8 x 15	39 9/16	M270-50MT2 (H2-3)			
2	G		3	x2a	PL 7/8 x 7 1/2	2 10	MIE BEV			
2	G		1	x2b	PL 8 x 7 1/2	2 10	MIE BEV			
2	H		8	x2k	PL 2 x 7	2 10				
2	K		2	x2v	PL 1/4 x 3 3/8	0 11	DRIP BARS			

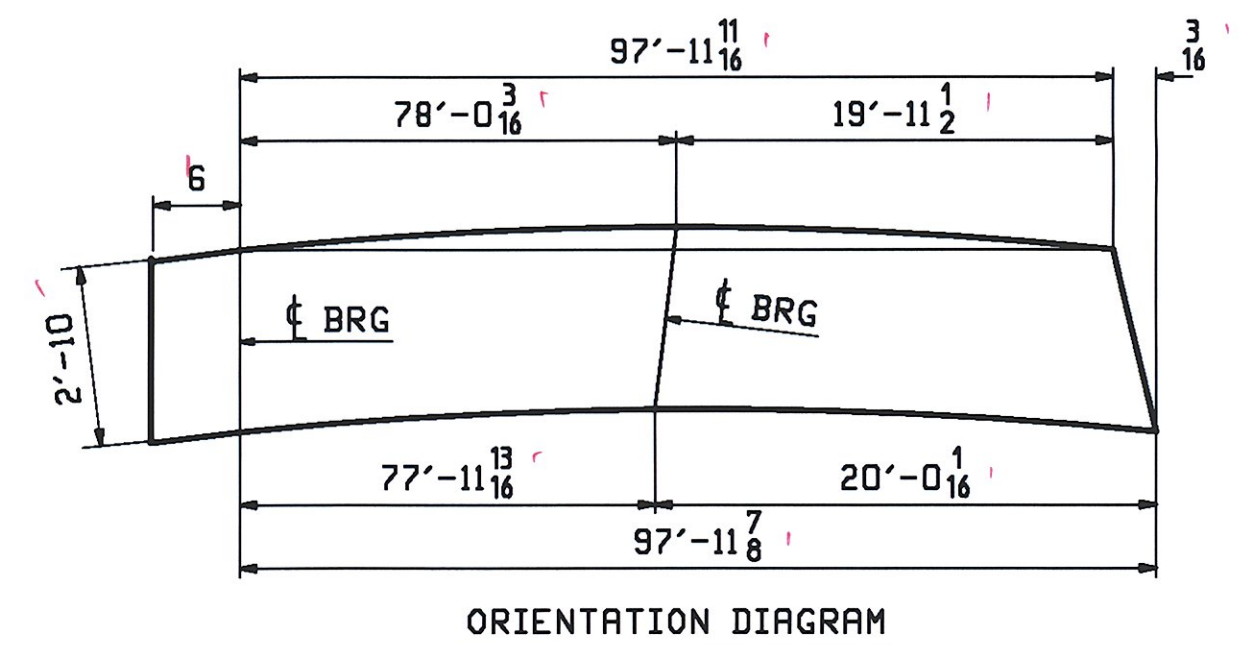
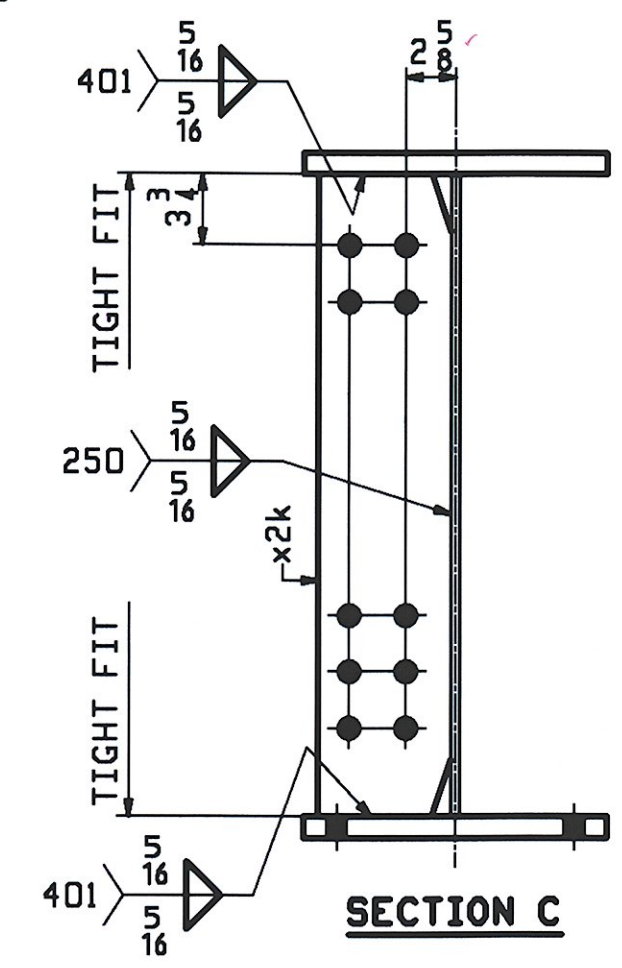
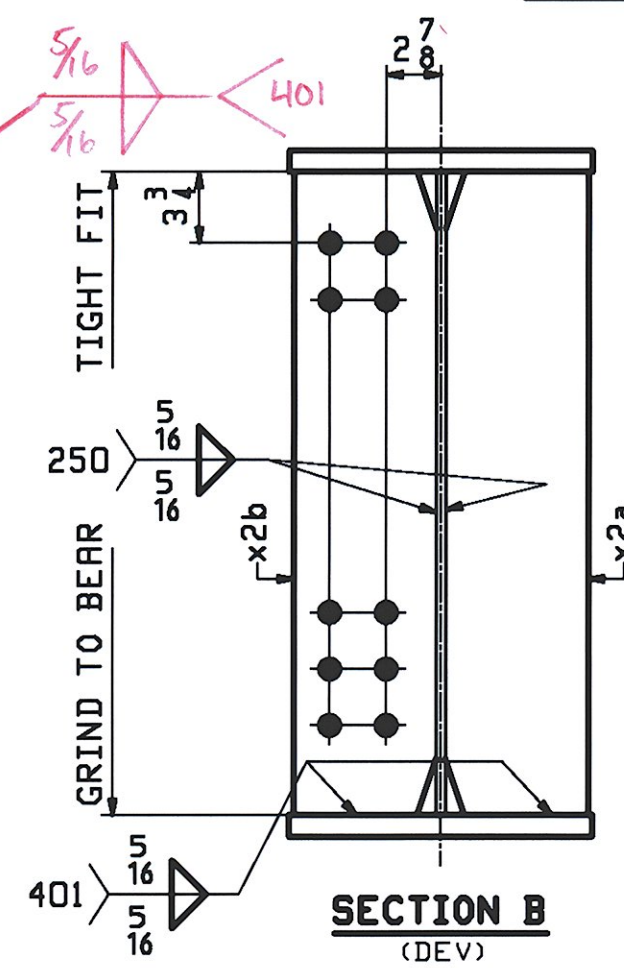
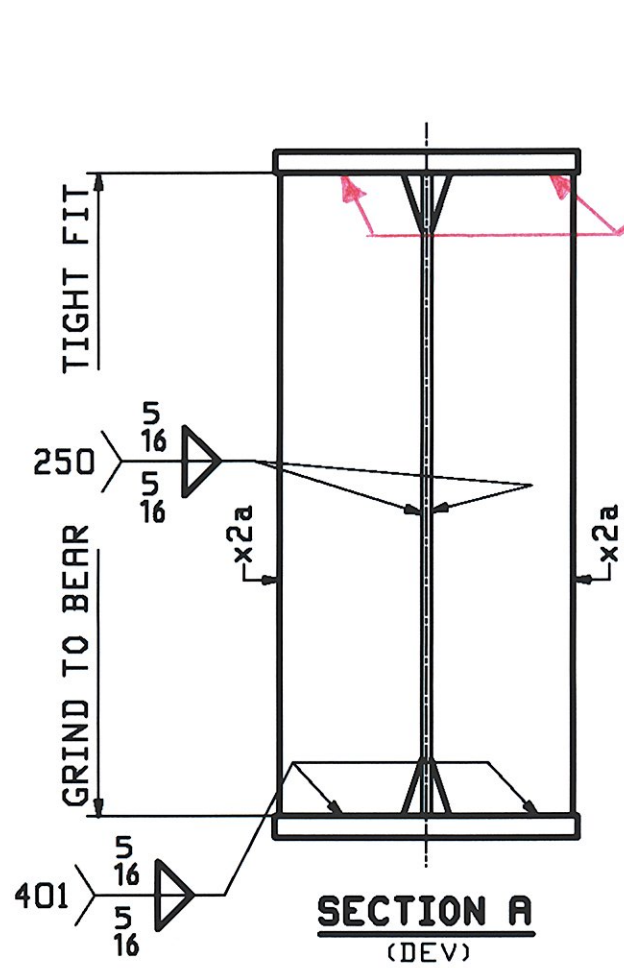
FOR FIELD SPLICE XIMI
DETAILS SEE SHT XI

ONE - GIRDER - IG1A

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER & FLANGE DIAGRAM SEE SHEET CI
FOR GENERAL NOTES SEE SHEET GNI

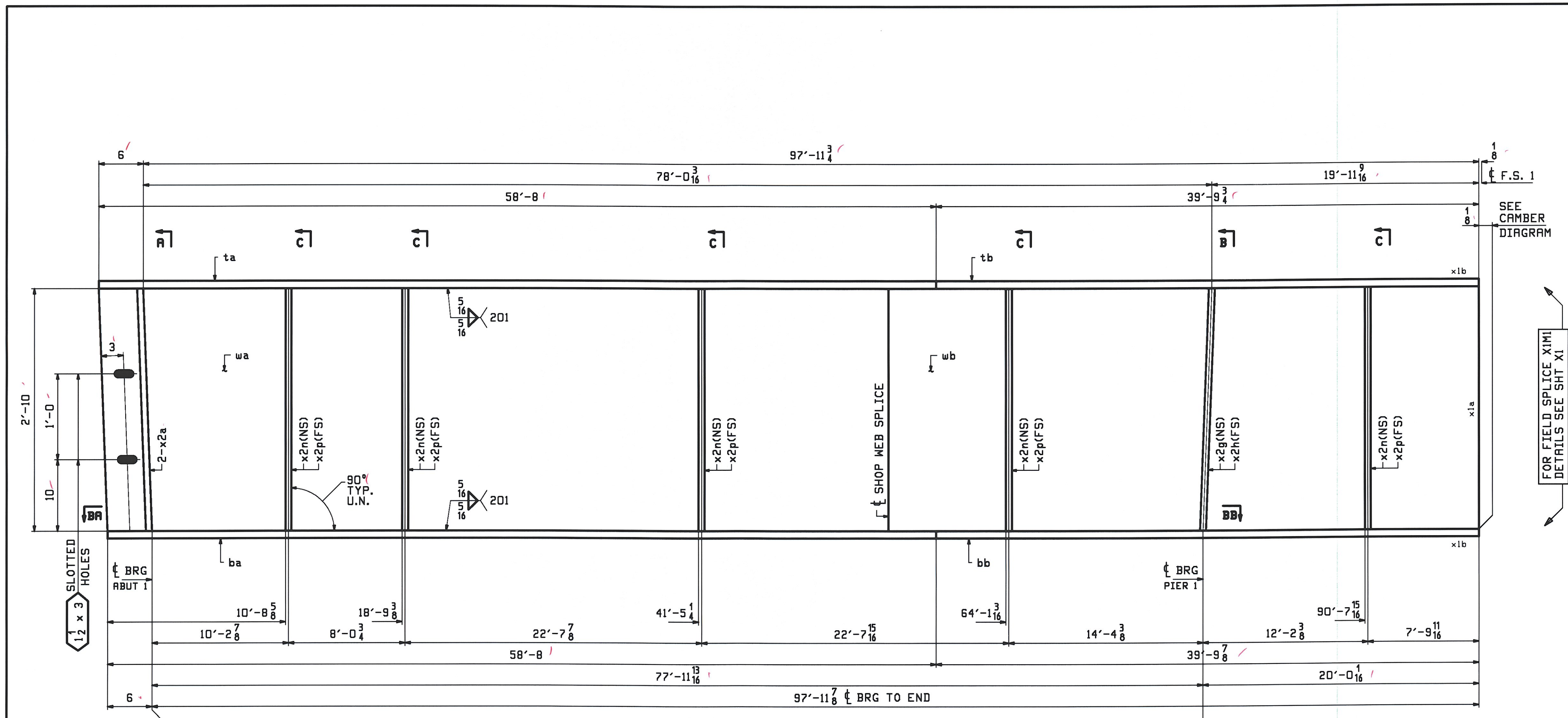


"X"
13'-9 1/16
23'-1 9/16
33'-1 9/16
43'-9 9/16
53'-9 9/16
63'-1 9/16
73'-1 9/16
83'-9 9/16
93'-1 9/16



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 JUN 26 2009
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 BY CWC DATE 7-13-09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		SHOP BOLTS:	
M270-50M (UN)		SEE GNI	5/16" U.N.		NONE	
DESCRIPTION: GIRDER - IG1A						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN:	DATE:	
				WJF	06/11	
				CHKD:	DATE:	
				DO	06/22	
LOCATION: TOWN OF SPRINGFIELD			JOB NO.	DWG NO.		
PROJ NO. BHF 016-2(14)			406-1	1		
CUSTOMER: COLD RIVER BRIDGES, LLC				REV. Δ		

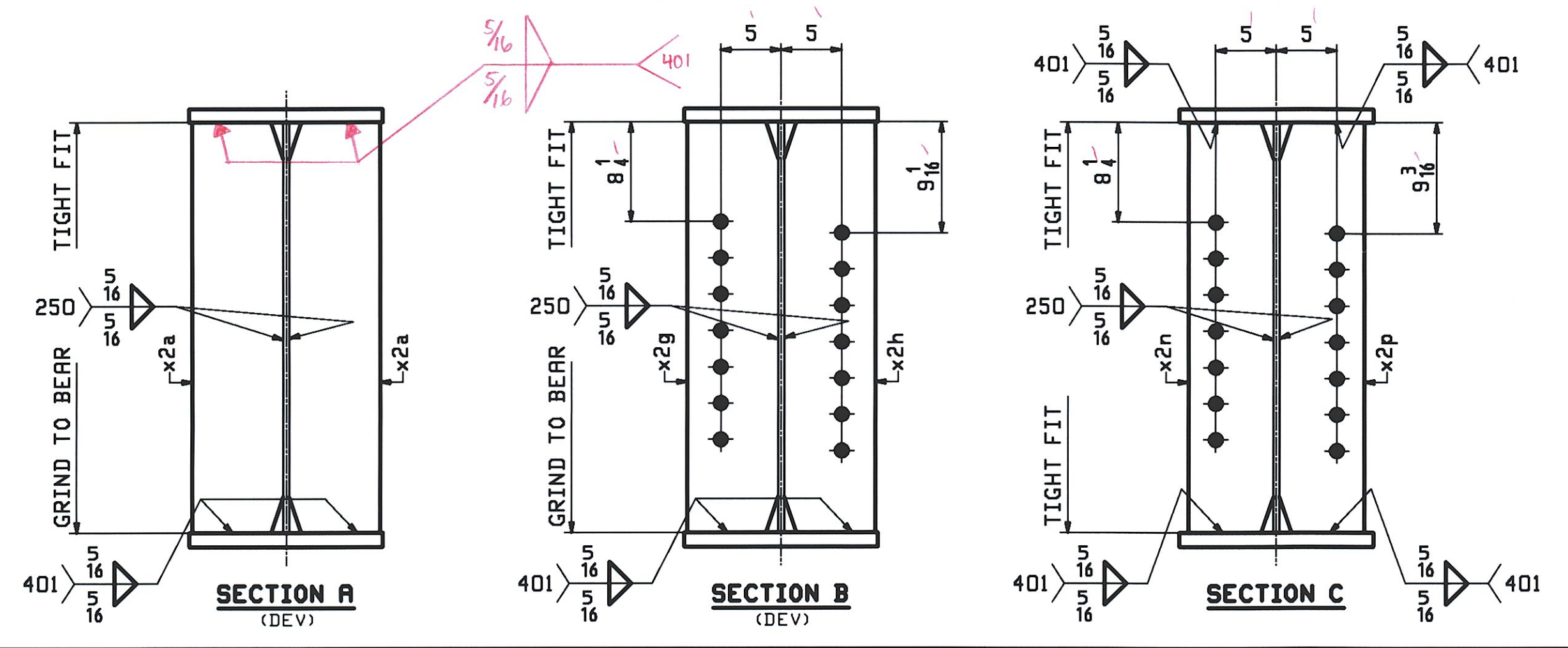
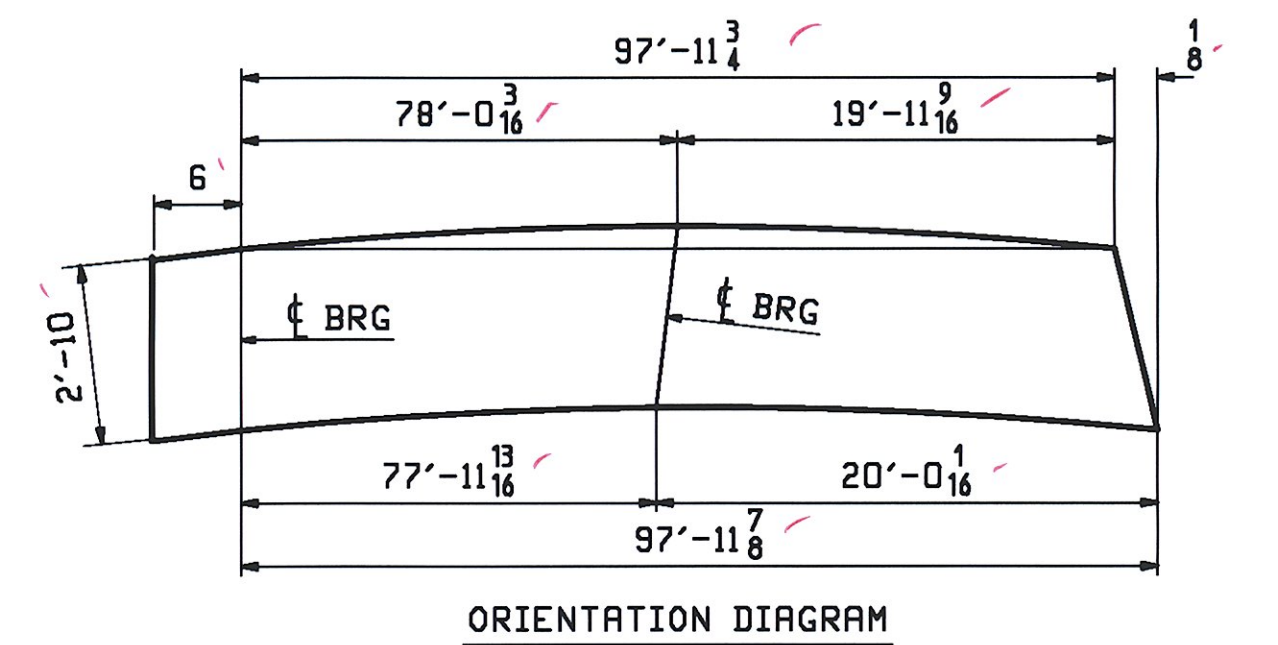
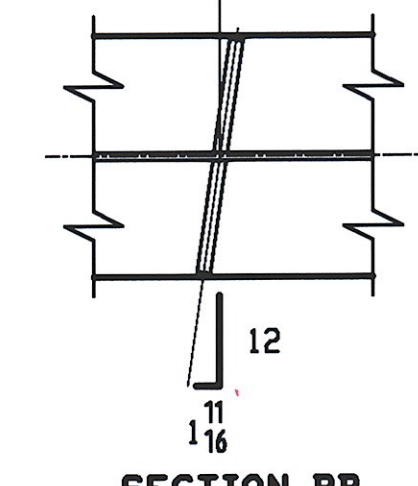
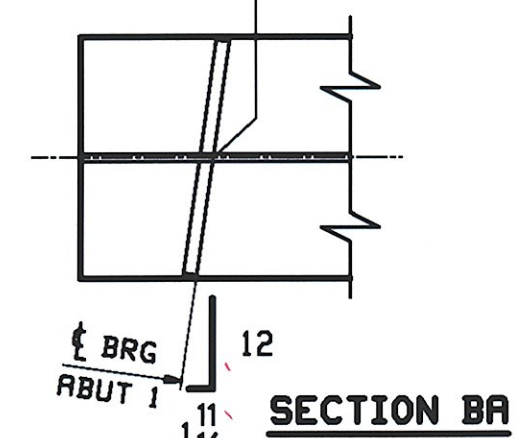


ABM INFO		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	PROCUREMENT NOTES
		3G3A	1		GIRDER			18353	
1	E	1	wa	PL 1/2 x 34	54 8 1/8	M270-50WT2 (H2-3)			
1	J	1	wb	PL 1/2 x 34	43 9 1/8	M270-50WT2 (H2-3)			
1	A	1	ta	PL 1/8 x 16	58 8	M270-50WT2 (H2-3)			
1	C	1	tb	PL 1/8 x 16	39 9 3/4	M270-50WT2 (H2-3)			
1	A	1	ba	PL 1/8 x 16	58 8	M270-50WT2 (H2-3)			
1	C	1	bb	PL 1/8 x 16	39 9 3/4	M270-50WT2 (H2-3)			
2	G	2	x2a	PL 7/8 x 7 1/2	2 10	MIE BEV			
2	G	1	x2g	PL 7/8 x 7 1/2	2 10	MIE BEV			
2	G	1	x2h	PL 7/8 x 7 1/2	2 10	MIE BEV			
2	H	5	x2n	PL 1/2 x 7	2 10				
2	H	5	x2p	PL 1/2 x 7	2 10				

FOR FIELD SPLICE XIMI
DETAILS SEE SHT XI

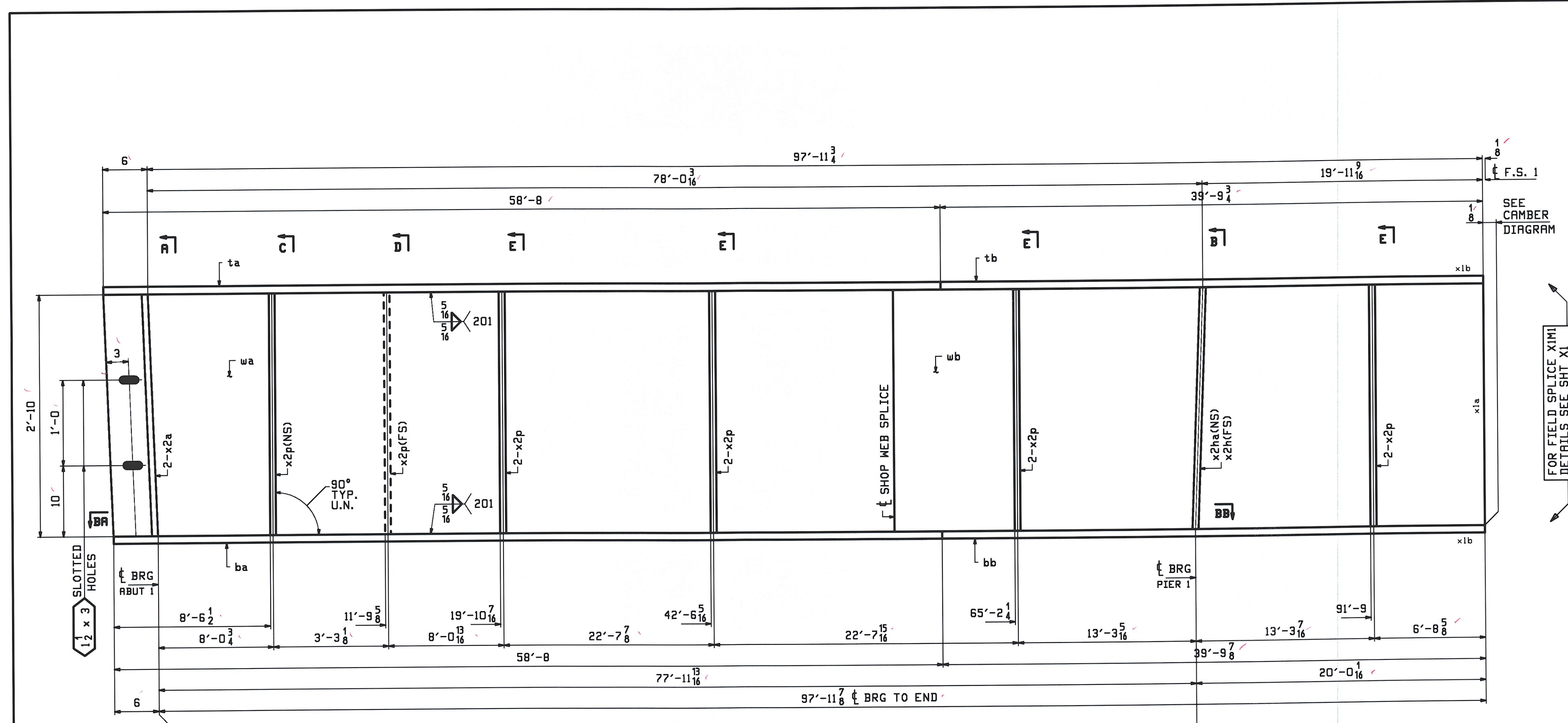
ONE - GIRDER - 3G3A

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER & FLANGE DIAGRAM SEE SHEET CI
FOR GENERAL NOTES SEE SHEET GNI



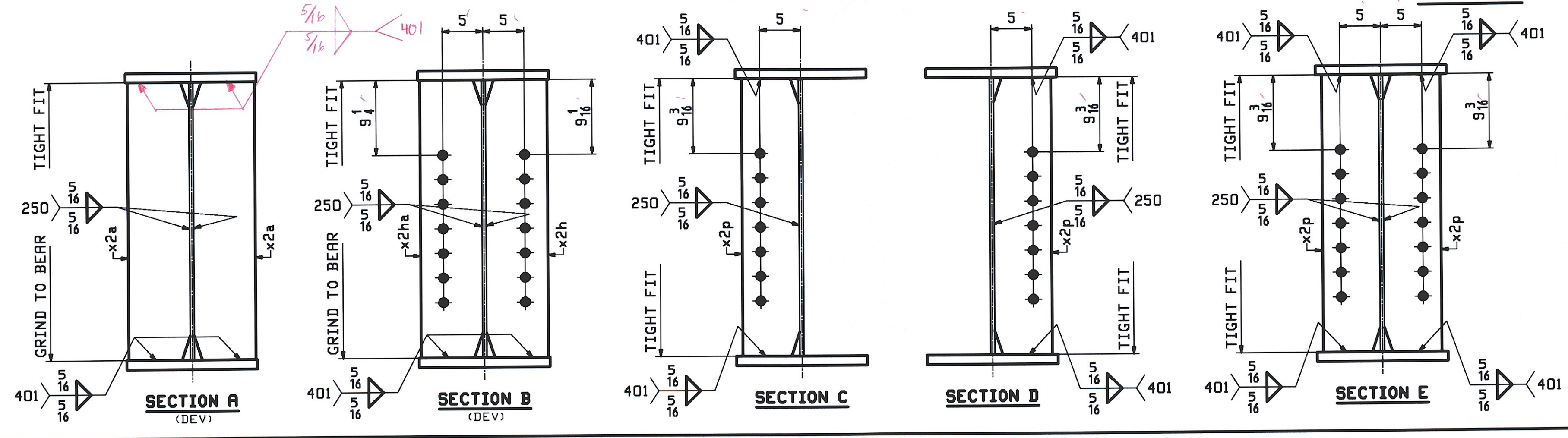
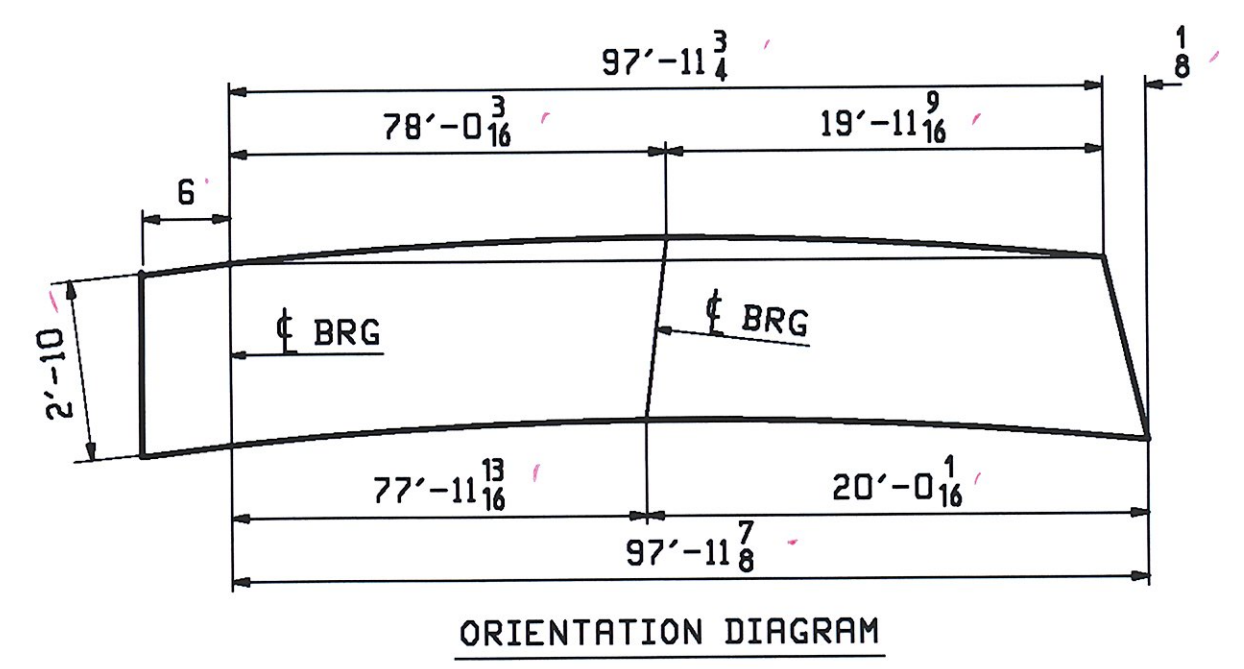
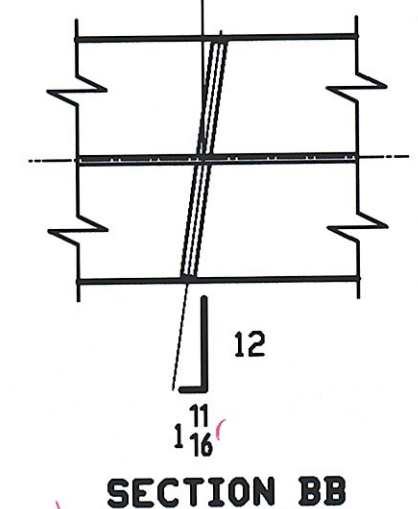
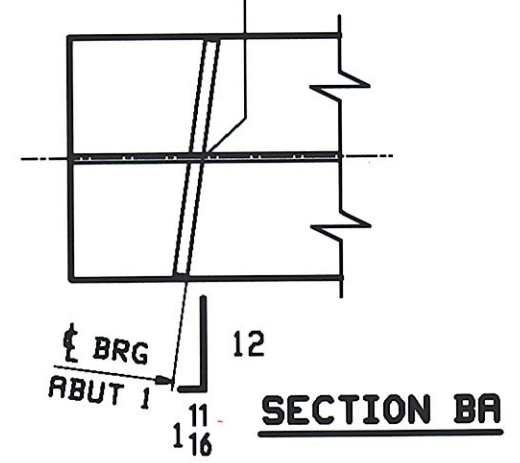
RECEIVED
 JUN 26 2009
 APPROVED AS NOTED
 BY CWC DATE 7-13-09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		SHOP BOLTS:	
M270-50W (UN)		SEE GNI	15/16" Ø U.N.		NONE	
DESCRIPTION: GIRDER - 3G3A						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER					DRAWN:	DATE:
BRIDGE NO. 64					WJF	06/12
SPRINGFIELD, VERMONT					CHKD:	DATE:
COUNTY OF WINDSOR					DO	06/22
LOCATION: TOWN OF SPRINGFIELD			JOB NO.		DWG NO.	
PROJ NO. BHF 016-2(14)			406-1		3	
CUSTOMER: COLD RIVER BRIDGES, LLC					REV.	



ONE - GIRDER - 4G4A

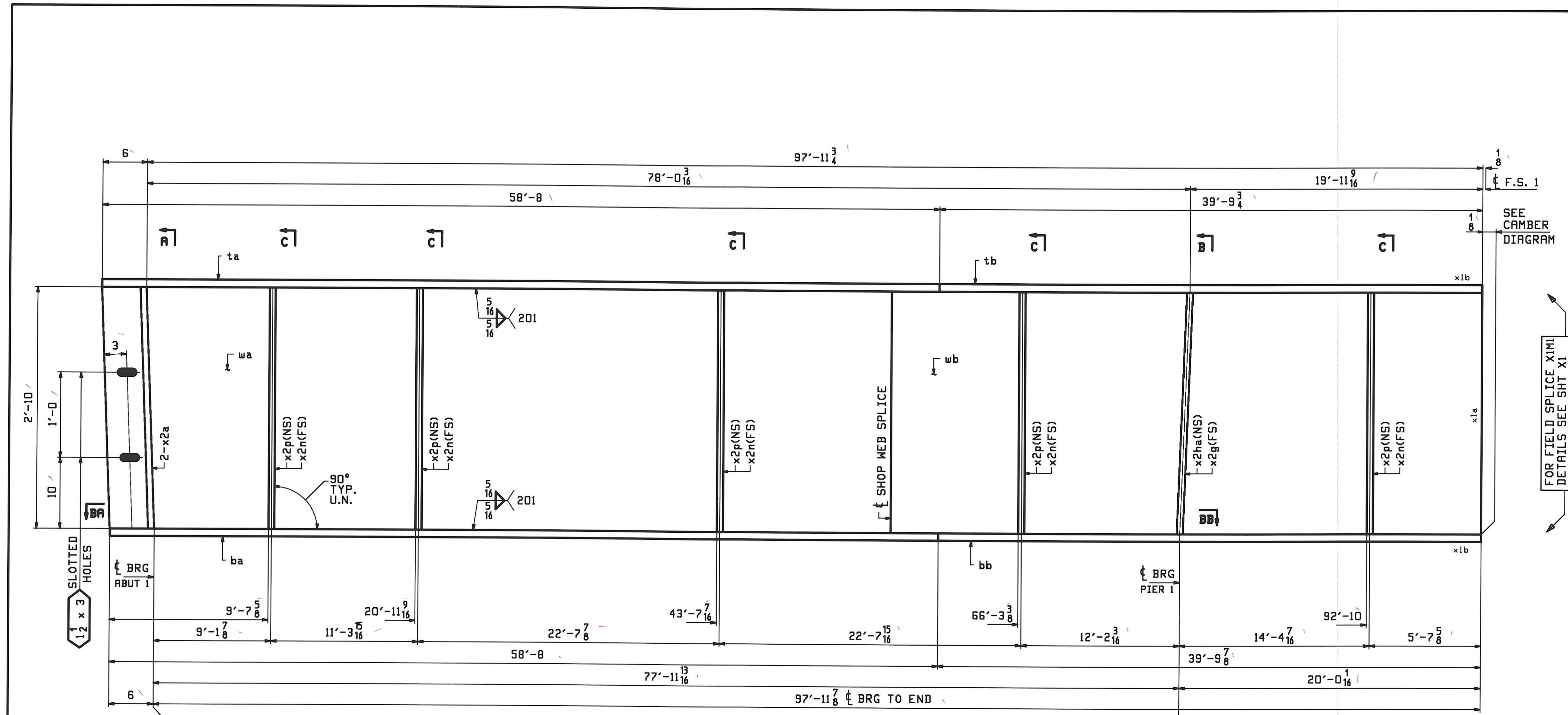
FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1
 FOR GENERAL NOTES SEE SHEET GNI



ABN INFO		SHIP	BILL OF MATERIAL		LENGTH	JOB NO.	DRAWING NO.	REV.
PAGE	LINE	MARK	QTY	MARK	FT	INCHES	REMARKS	MT
		4G4A	1					18353
				GIRDER				
1	E		1	wa	54	8 1/8	M270-SQHT2 (H2-3)	
1	J		1	wb	43	9 5/8	M270-SQHT2 (H2-3)	
1	A		1	ta	58	8	M270-SQHT2 (H2-3)	
1	C		1	tb	39	9 3/4	M270-SQHT2 (H2-3)	
1	A		1	ba	58	8	M270-SQHT2 (H2-3)	
1	C		1	bb	39	9 7/8	M270-SQHT2 (H2-3)	
2	G		2	x2a	2	10	MIE BEV	
2	G		1	x2h	2	10	MIE BEV	
2	H		10	x2p	2	10		
2	G		1	x2ha	2	10	MIE BEV	

REV.	DATE	REMARKS	DMN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PRINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE GNI		15/16" Ø U.N.		NONE
DESCRIPTION: GIRDER - 4G4A						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072		TENSOR 2879	
PHONE (207) 282-7360			FAX. (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER				DRAWN: WJF		DATE: 06/12
BRIDGE NO. 64				DATE: 06/22		
SPRINGFIELD, VERMONT				JOB NO. 406-1		DWG NO. 4
COUNTY OF WINDSOR				DATE: 06/22		
LOCATION: TOWN OF SPRINGFIELD				JOB NO. 406-1		DWG NO. 4
PROJ NO. BHF 016-2(14)				DATE: 06/22		
CUSTOMER: COLD RIVER BRIDGES, LLC				JOB NO. 406-1		REV. 1

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 JUN 26 2009
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 DATE 7.13.09

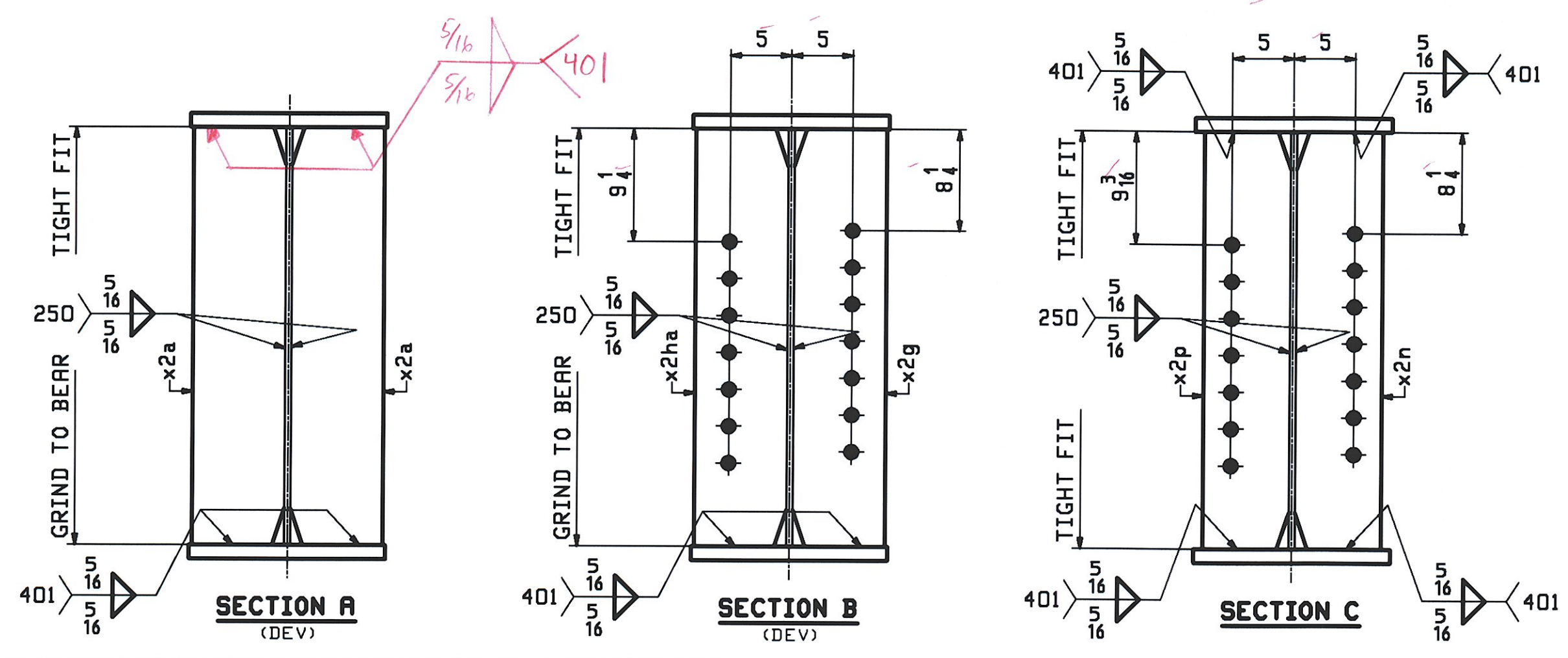
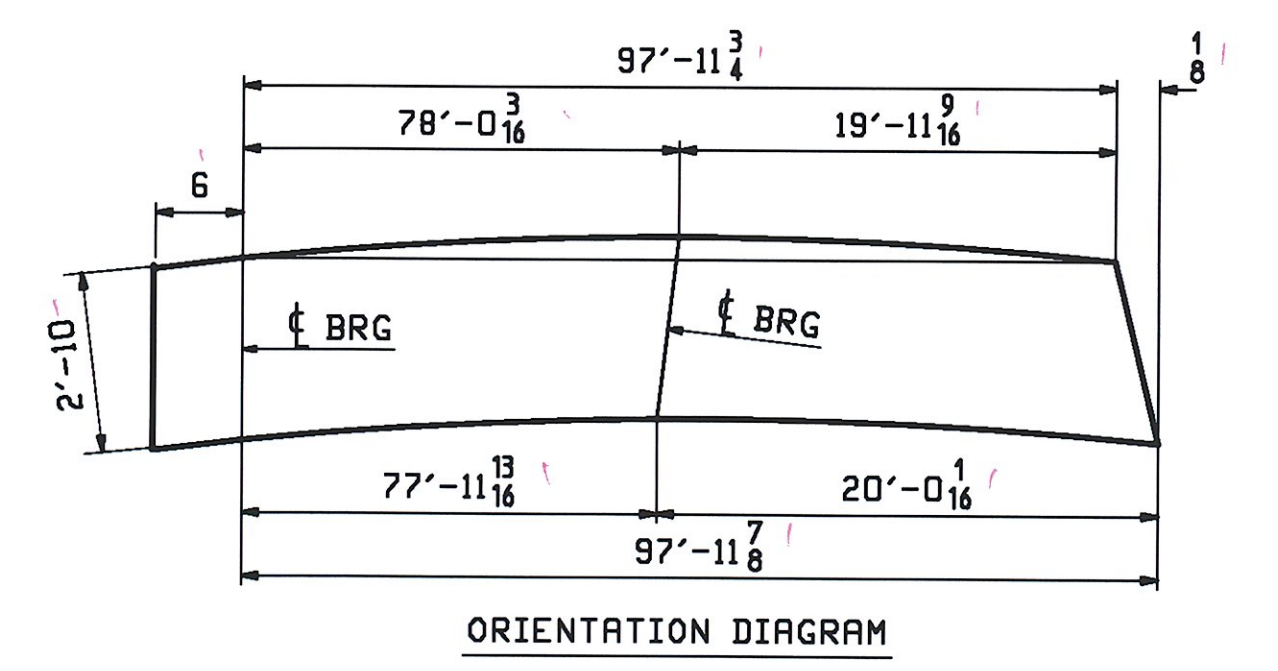
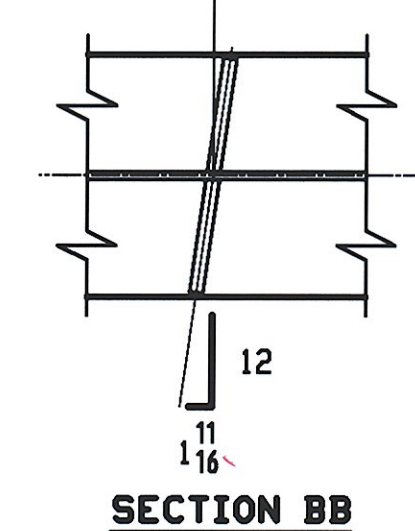
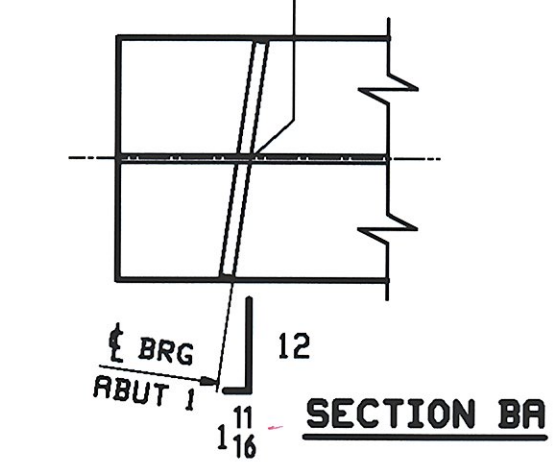


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						FT	INCHES					
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1	E		1	wa	PL 1/2 x 34	54	0 1/16	M270-50MT2 (H2-3)				
1	J		1	wb	PL 1/2 x 34	43	0 1/16	M270-50MT2 (H2-3)				
1	A		1	ta	PL 1 1/8 x 16	58	8 1/16	M270-50MT2 (H2-3)				
1	C		1	tb	PL 1 1/8 x 16	39	9 3/4	M270-50MT2 (H2-3)				
1	A		1	ba	PL 1 1/8 x 16	58	8 1/16	M270-50MT2 (H2-3)				
1	C		1	bb	PL 1 1/8 x 16	39	9 7/8	M270-50MT2 (H2-3)				
2	G		2	x2a	PL 7/8 x 7 1/2	2	10	MIE BEV				
2	G		1	x2g	PL 7/8 x 7 1/2	2	10	MIE BEV				
2	G		1	x2ha	PL 7/8 x 7 1/2	2	10	MIE BEV				
2	H		5	x2n	PL 1/2 x 7	2	10					
2	H		5	x2p	PL 1/2 x 7	2	10					

FOR FIELD SPLICE XIMI DETAILS SEE SHT XI

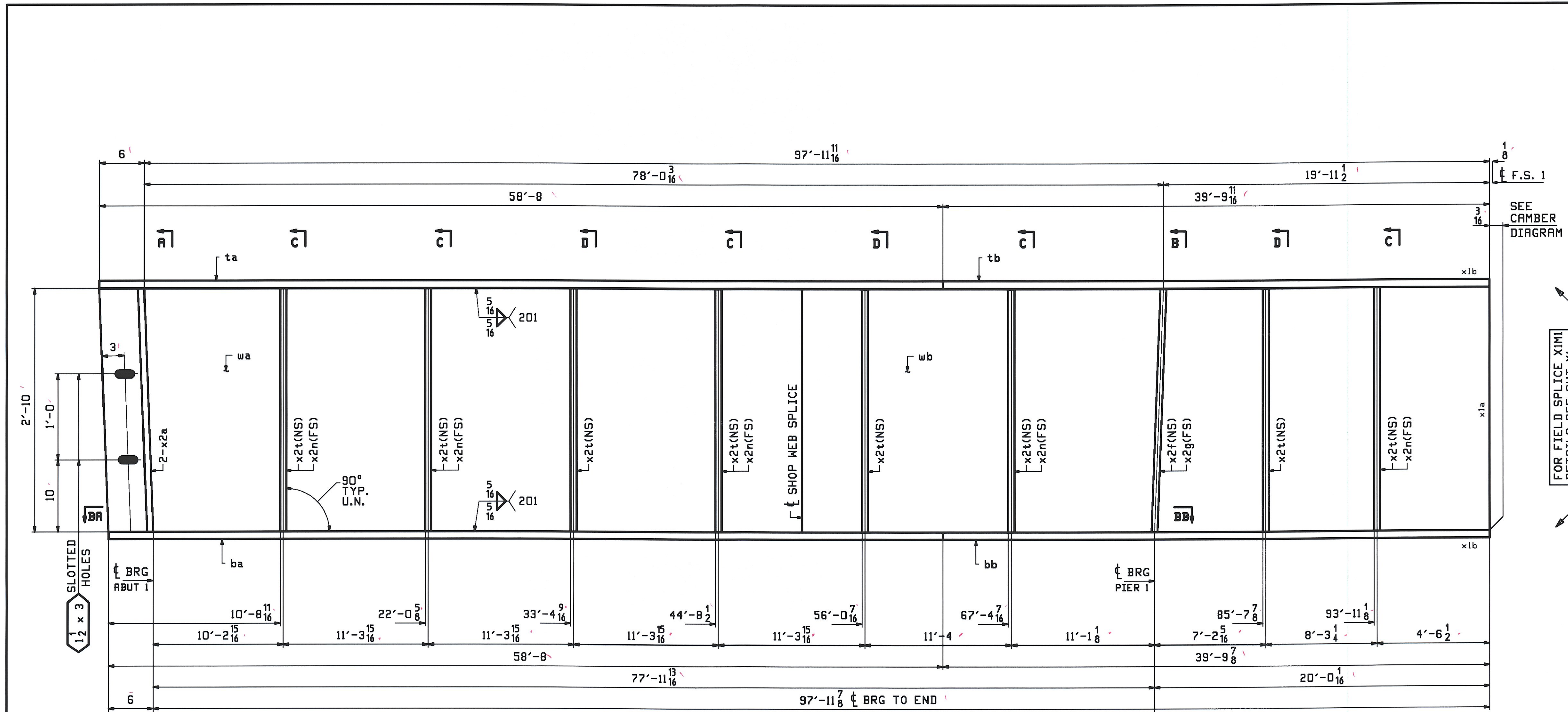
ONE - GIRDER - 5G5A

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1
 FOR GENERAL NOTES SEE SHEET GNI



RECEIVED
 JUN 26 2009
 APPROVED AS NOTED
 DATE 7-13-09

REV.	DATE	REMARKS	DMN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PRINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE GNI		5/16" U.N.		NONE
DESCRIPTION: GIRDER - 5G5A						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN:	DATE:	
				WJF	06/12	
				CHKD:	DATE:	
				DO	06/23	
LOCATION: TOWN OF SPRINGFIELD			JOB NO.	DWG NO.		
PROJ NO. BHF 016-2(14)			406-1	5		
CUSTOMER: COLD RIVER BRIDGES, LLC				REV. Δ		

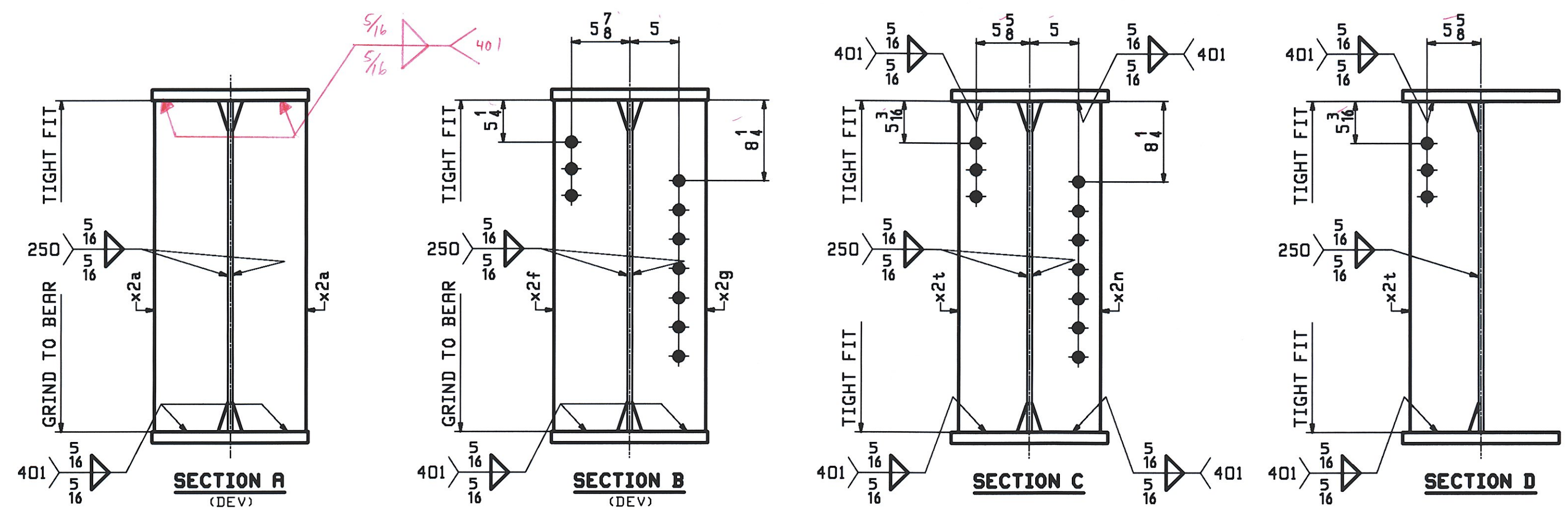
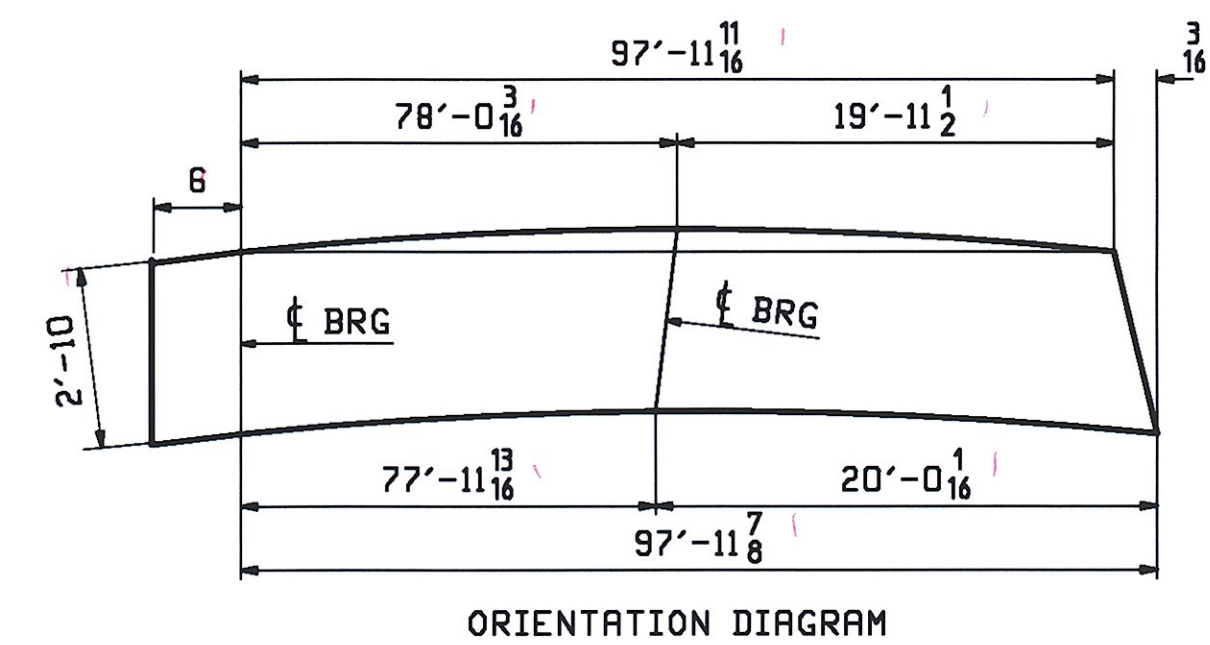
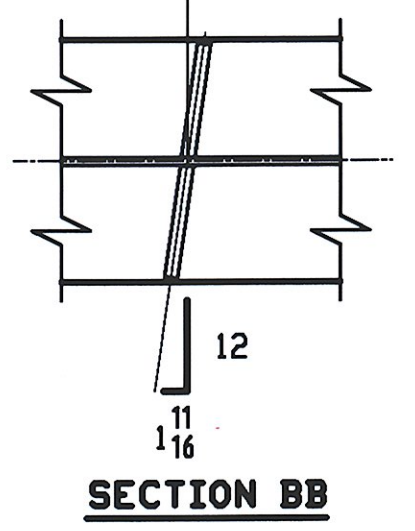
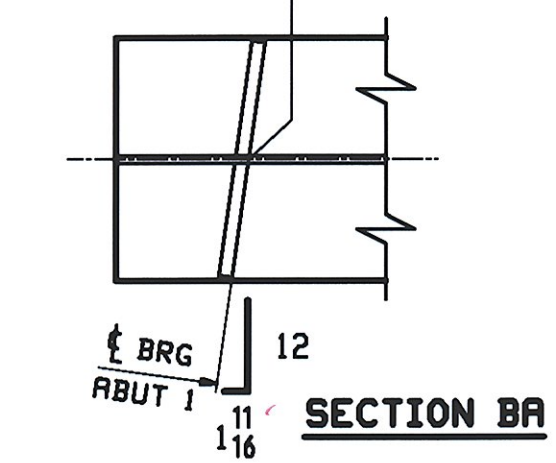


ABM INFO		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH	REMARKS	WT	PROCUREMENT NOTES
						FT			
						INCHES			
		GG6A	1		GIRDER			18454	
1	E		1	wa	PL 1/2 x 34	54 8 1/16	M270-50MT2 (H2-3)		
1	J		1	wb	PL 1/2 x 34	43 9 5/16	M270-50MT2 (H2-3)		
1	A		1	ta	PL 1/8 x 16	58 8	M270-50MT2 (H2-3)		
1	C		1	tb	PL 1/8 x 16	39 9 1/16	M270-50MT2 (H2-3)		
1	A		1	ba	PL 1/8 x 16	58 8	M270-50MT2 (H2-3)		
1	C		1	bb	PL 1/8 x 16	39 9 5/16	M270-50MT2 (H2-3)		
2	G		2	x2a	PL 7/8 x 7 1/2	2 10'	MIE BEV		
2	G		1	x2f	PL 7/8 x 7 1/2	2 10'	MIE BEV		
2	G		1	x2g	PL 7/8 x 7 1/2	2 10'	MIE BEV		
2	H		5	x2n	PL 1/2 x 7	2 10'			
2	H		8	x2t	PL 2 x 7	2 10'			

FOR FIELD SPLICE XIMI
DETAILS SEE SHT XI

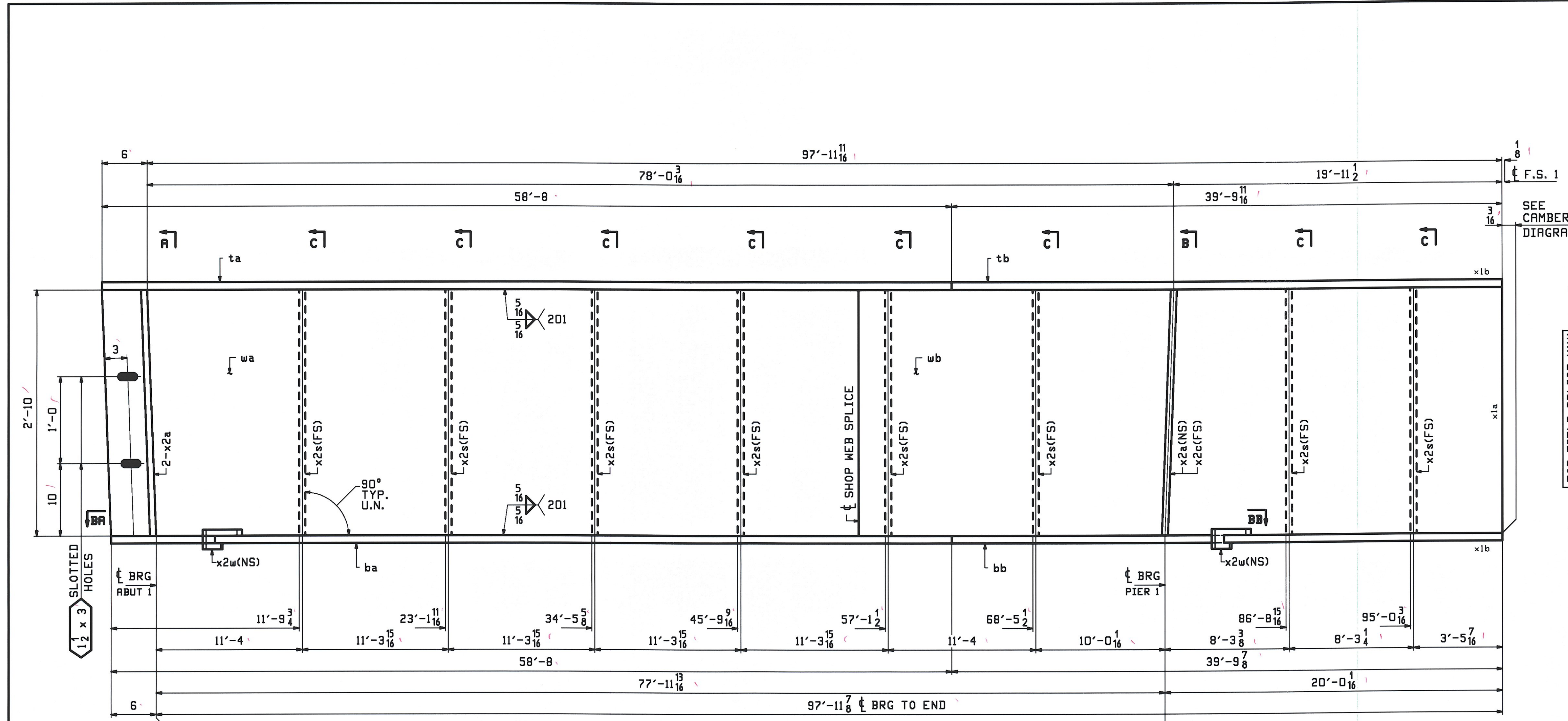
ONE - GIRDER - GG6A

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1
FOR GENERAL NOTES SEE SHEET GNI



RECEIVED
CHK'D BY DRP, OK'D BY CWC
JUN 26 2009
RESUBMIT APPROVED AS NOTED
BY CWC DATE 7-13-09

REV.	DATE	REMARKS	DMN	CHK	APVL	SHOP
0						
		MATERIAL: M270-50W (UN)				SHOP BOLTS: NONE
		SURFACE PREP. & PAINT: SEE GNI				
		HOLES: 5/16 U.N.				
DESCRIPTION: GIRDER - GG6A						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR			DRAWN: HJF	DATE: 06/12		
LOCATION: TOWN OF SPRINGFIELD			CHKD: DO	DATE: 06/23		
PROJ. NO. BHF 016-2(14)	JOB NO. 406-1	DWG NO. 6				
CUSTOMER: COLD RIVER BRIDGES, LLC						REV. Δ

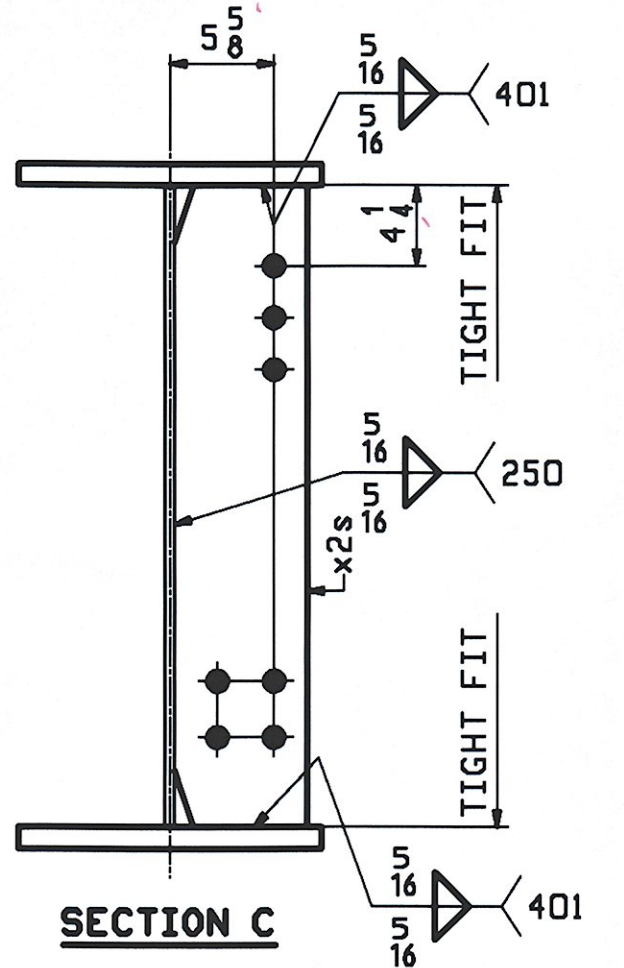
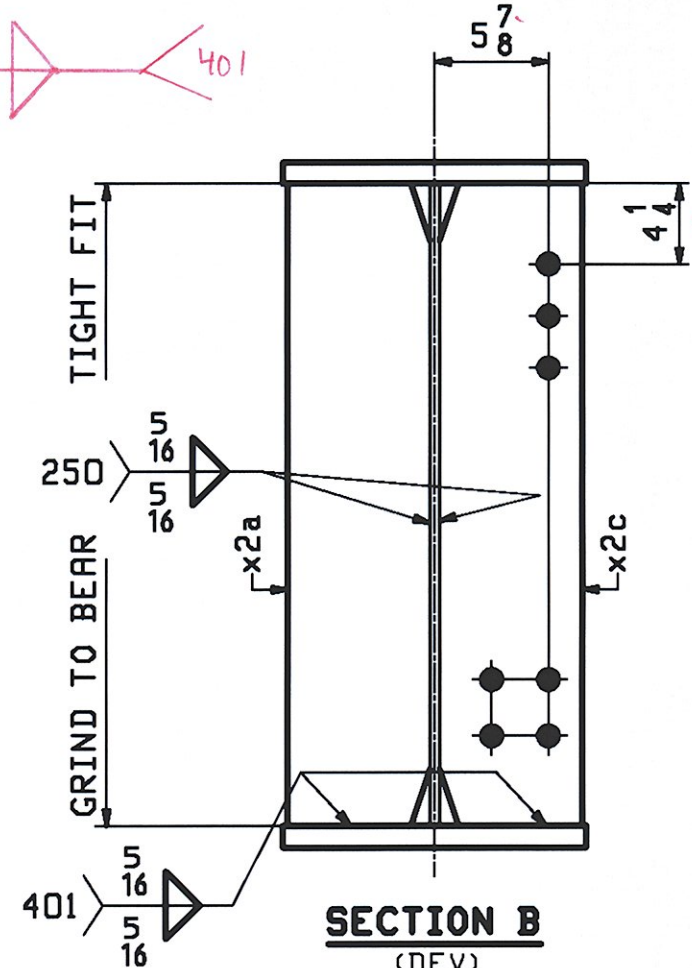
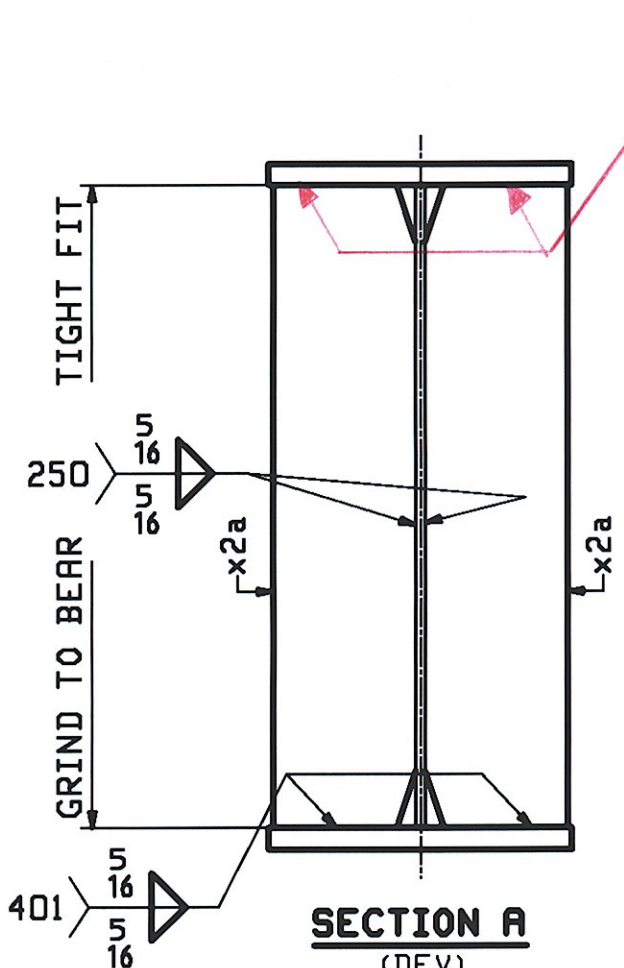
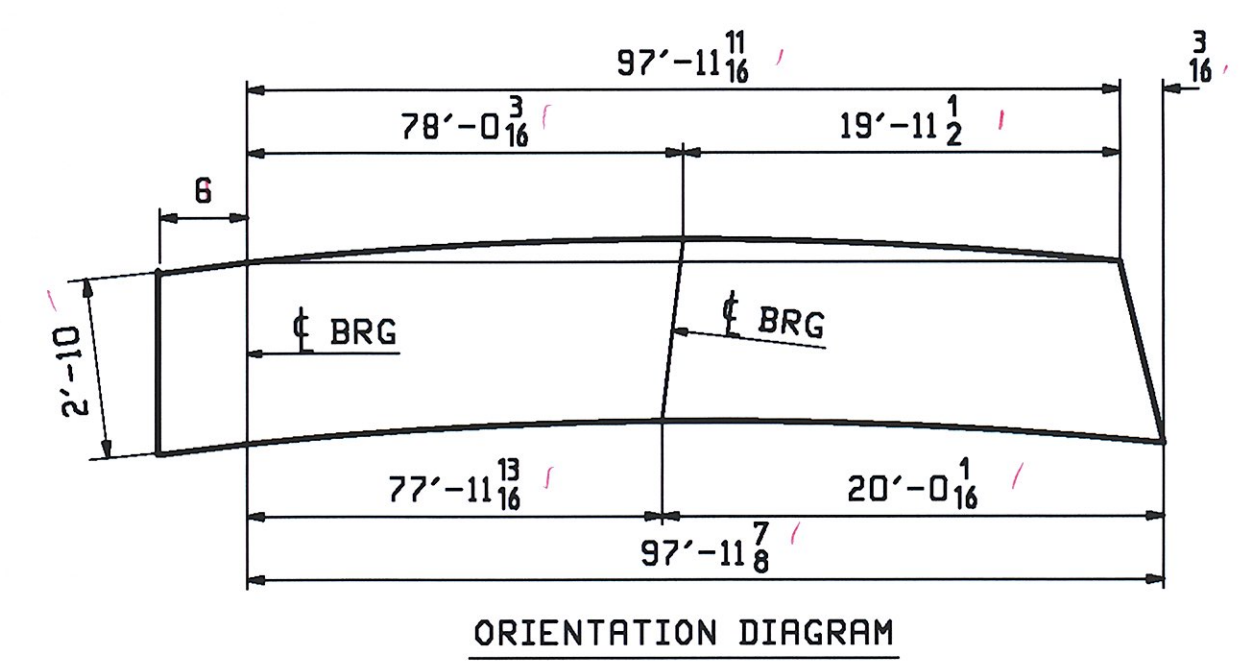
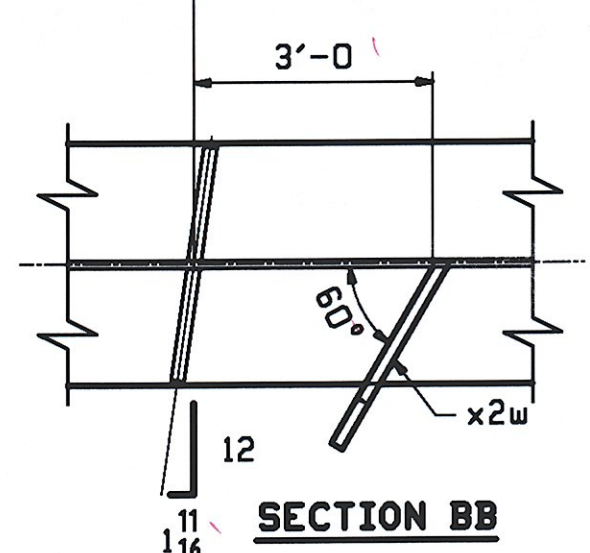
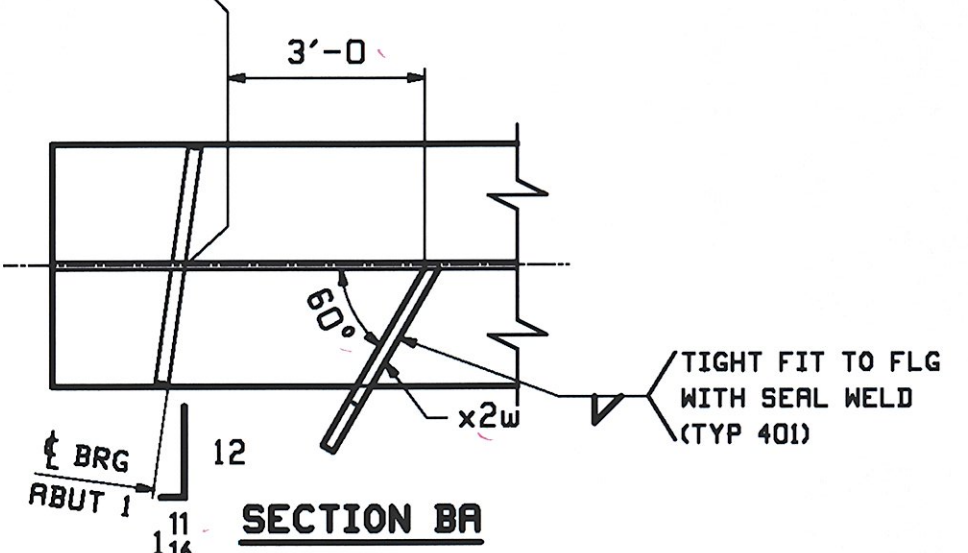


ABM INFO		BILL OF MATERIAL				JOB NO.		DRAWING NO.		REV.
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	PROCUREMENT NOTES	
		7G7A	1		GIRDER				10290	
1	E		1	wa	PL 1/2 x 3/4	54 8 1/16	M270-S0HT2 (H2-3)			
1	J		1	wb	PL 1/2 x 3/4	43 9 15/16	M270-S0HT2 (H2-3)			
1	A		1	ta	PL 1/8 x 16	58 8 1/16	M270-S0HT2 (H2-3)			
1	C		1	tb	PL 1/8 x 16	39 9 11/16	M270-S0HT2 (H2-3)			
1	A		1	ba	PL 1/8 x 16	58 8 1/16	M270-S0HT2 (H2-3)			
1	C		1	bb	PL 1/8 x 16	39 9 11/16	M270-S0HT2 (H2-3)			
2	G		3	x2a	PL 7/8 x 7 1/2	2 10	MIE BEV			
2	G		1	x2c	PL 7/8 x 7 1/2	2 10	MIE BEV			
2	H		8	x2s	PL 1/2 x 7	2 10	MIE BEV			
2	K		2	x2w	PL 1/2 x 3/8	0 11	DRIP BARS			

FOR FIELD SPLICE XIMI
DETAILS SEE SHT XI

ONE - GIRDER - 7G7A

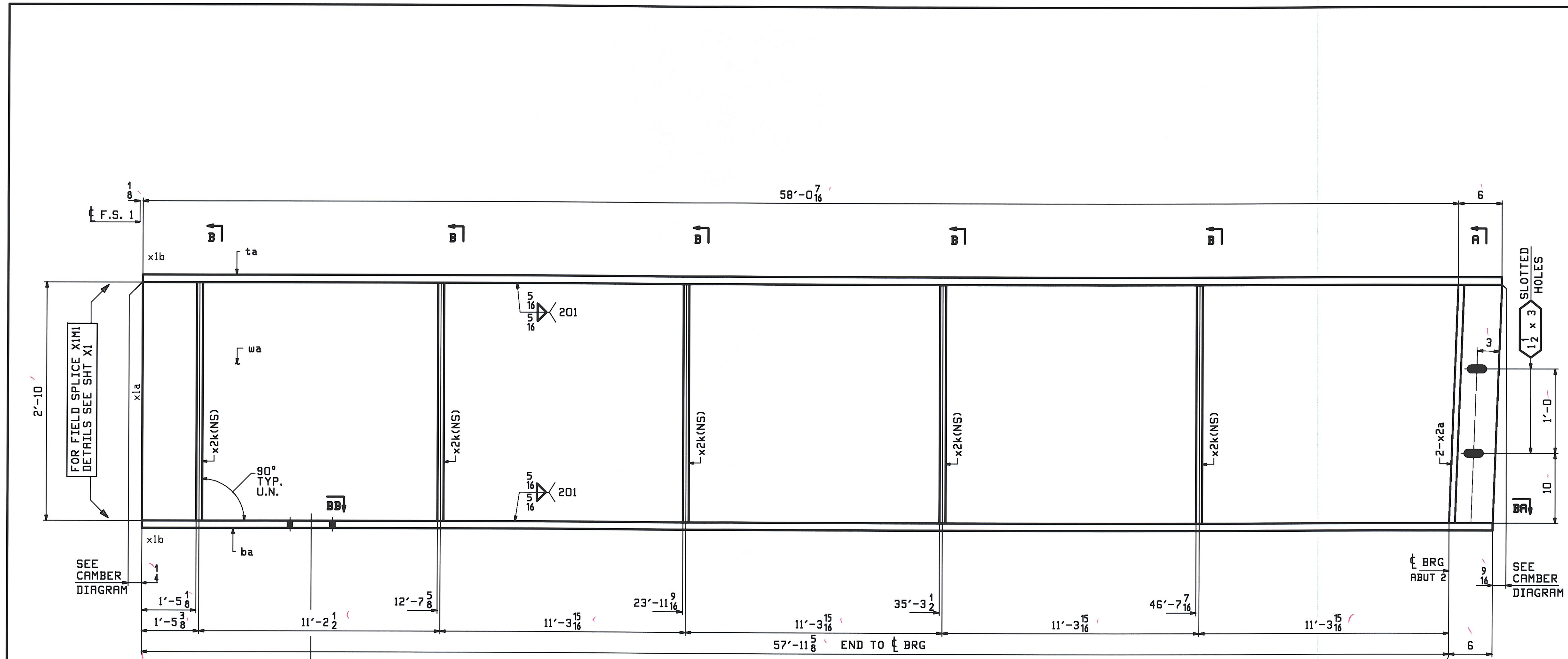
FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
FOR CAMBER & FLANGE DIAGRAM SEE SHEET C1
FOR GENERAL NOTES SEE SHEET GNI



RECEIVED
CHKD BY DEP OK'D BY CMC
JUN 26 2009
APPROVED AS NOTED
BY aue DATE 7-13-09

REV.	DATE	REMARKS	DMN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-S0W (UN)		SEE GNI		15/16" Ø U.N.		NONE
DESCRIPTION: GIRDER - 7G7A						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR			DRAWN:	DATE:		
			WJF	06/12		
			CHKD:	DATE:		
			DO	06/23		
LOCATION: TOWN OF SPRINGFIELD			JOB NO.	DWG NO.		
PROJ NO. BHF 016-2(14)			406-1	7		
CUSTOMER: COLD RIVER BRIDGES, LLC				REV. Δ		

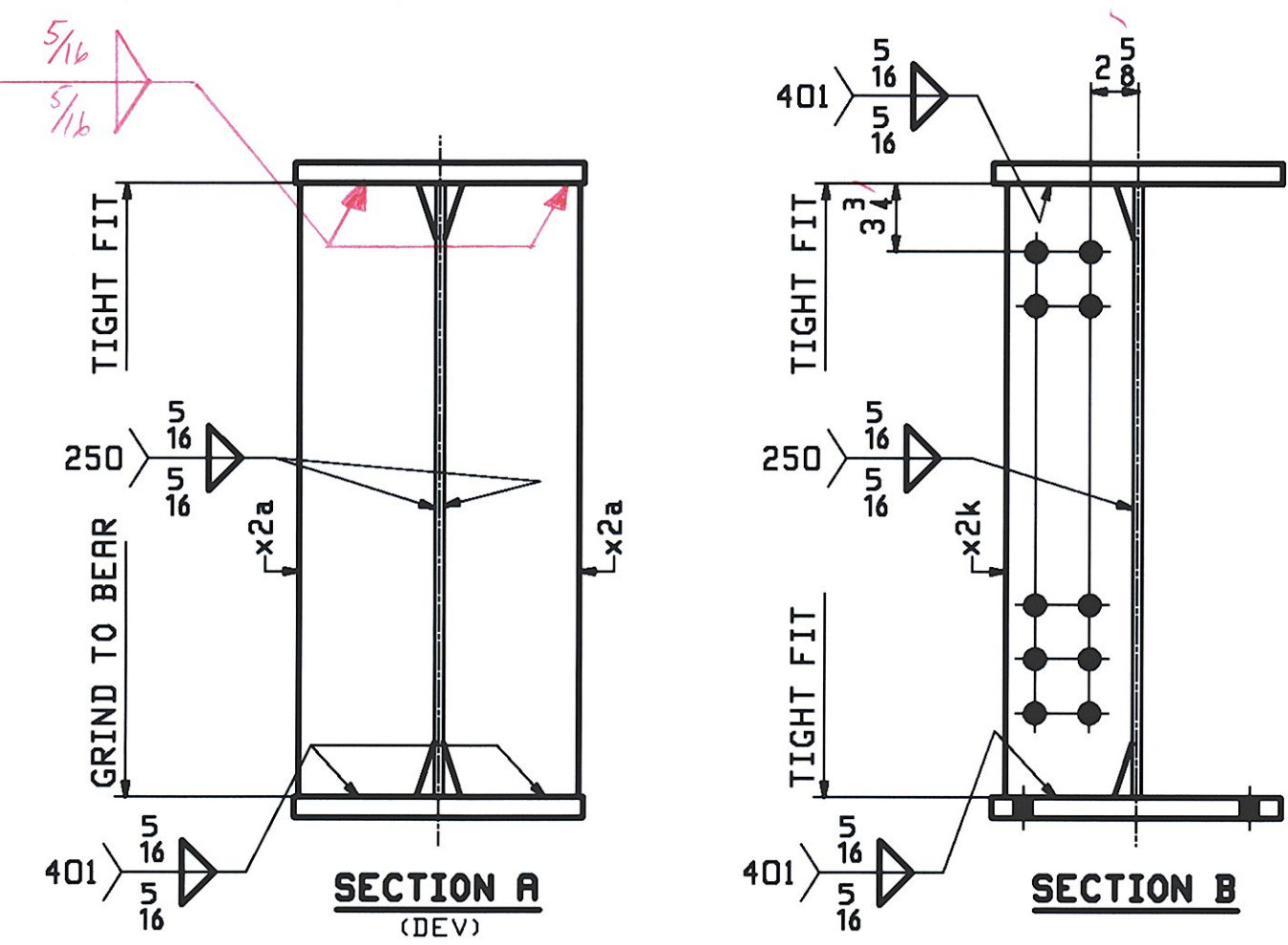
This file is the master drawing file. All other files are derived from this file.



ONE - GIRDER - 8G1B

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER & FLANGE DIAGRAM SEE SHEET C2
 FOR GENERAL NOTES SEE SHEET GNI

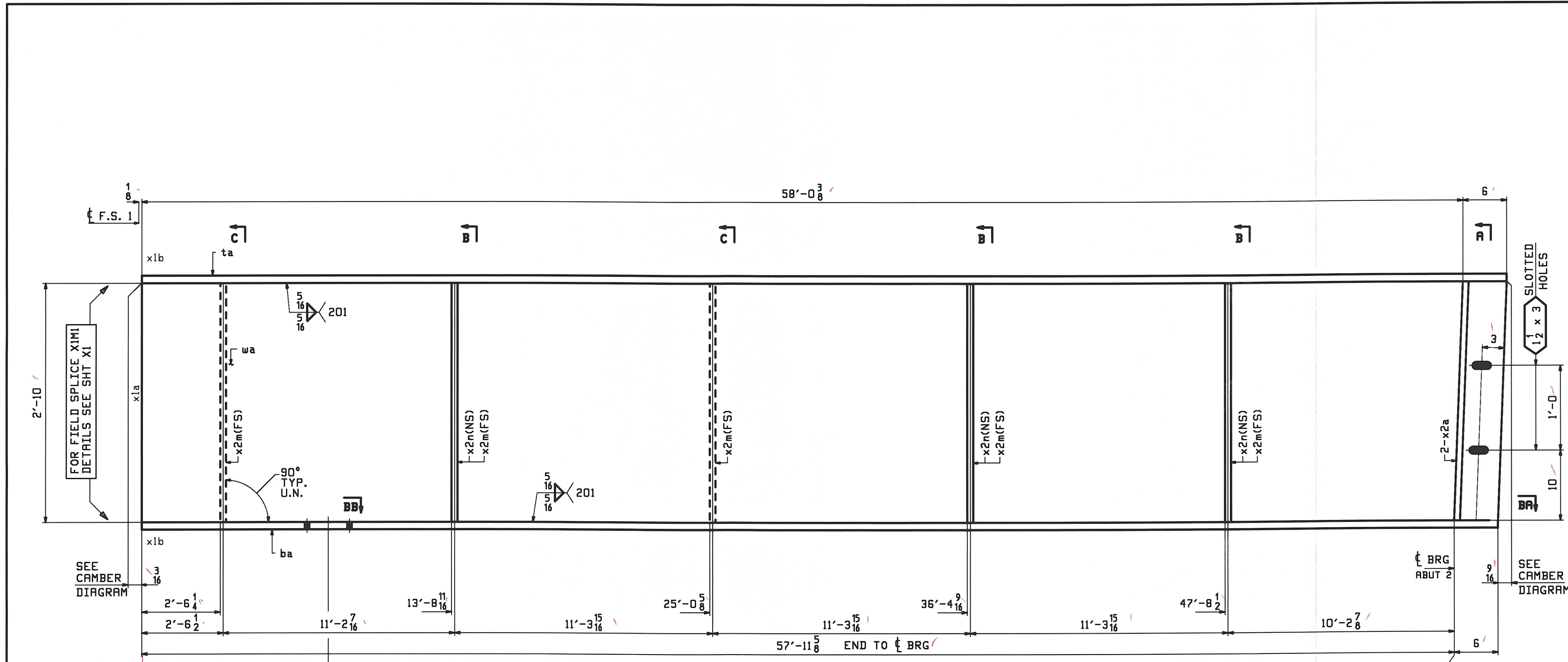
"X"
4'-7 ⁷ / ₁₆
14'-7 ⁷ / ₁₆
24'-7 ⁷ / ₁₆
34'-3 ⁷ / ₁₆
44'-7 ⁷ / ₁₆



ABM INFO		SHIP		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.
								406-1	8	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH	REMARKS	MT	PROCUREMENT	
						FT INCHES			NOTES	
		8G1B	1		GIRDER				10848	
1	G		1	wa	PL 1/2 x 34	58 6 7/16	M270-50MT2 (H2-3)			
1	A		1	ta	PL 1/8 x 16	58 6 7/16	M270-50MT2 (H2-3)			
1	A		1	ba	PL 1/8 x 16	58 5 8	M270-50MT2 (H2-3)			
2	G		2	x2a	PL 7/8 x 7 1/2	2 10	MIE BEV			
2	H		5	x2k	PL 1/2 x 7	2 10				

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 JUN 26 2009
 APPROVED AS NOTED
 DATE 7.13.09

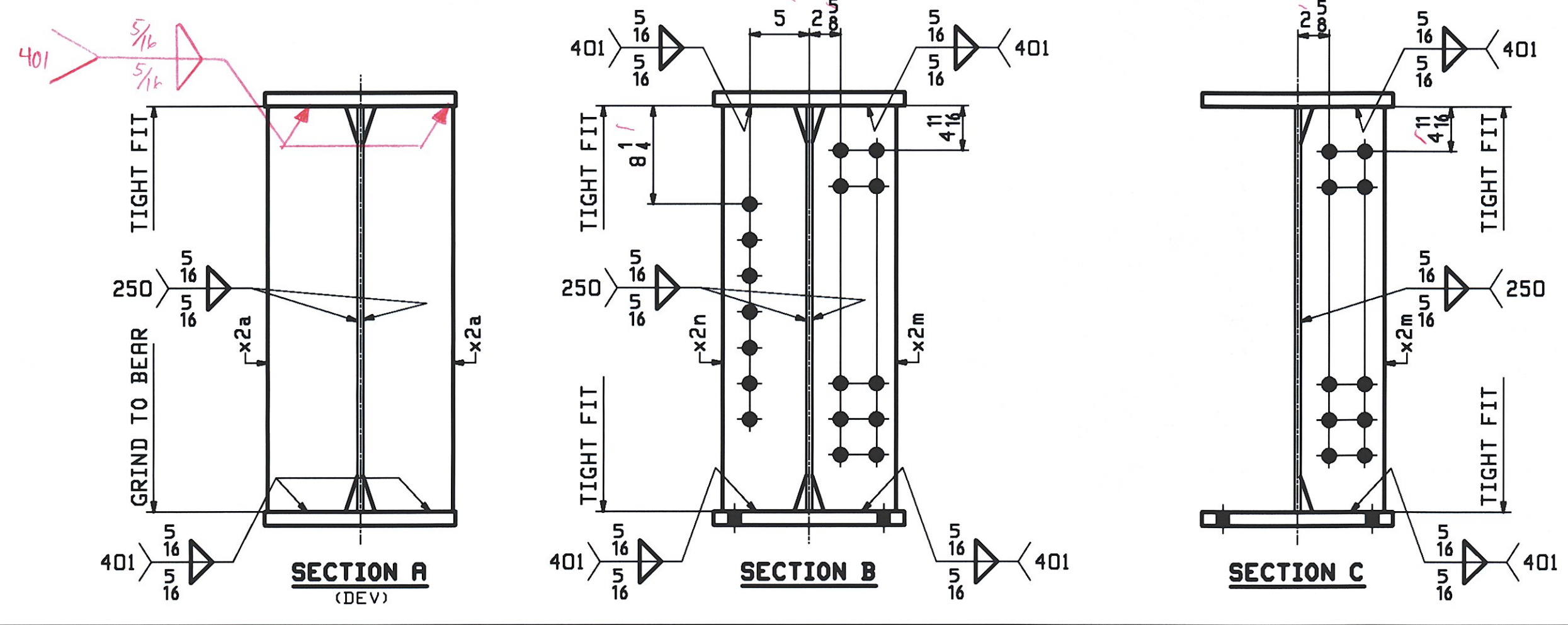
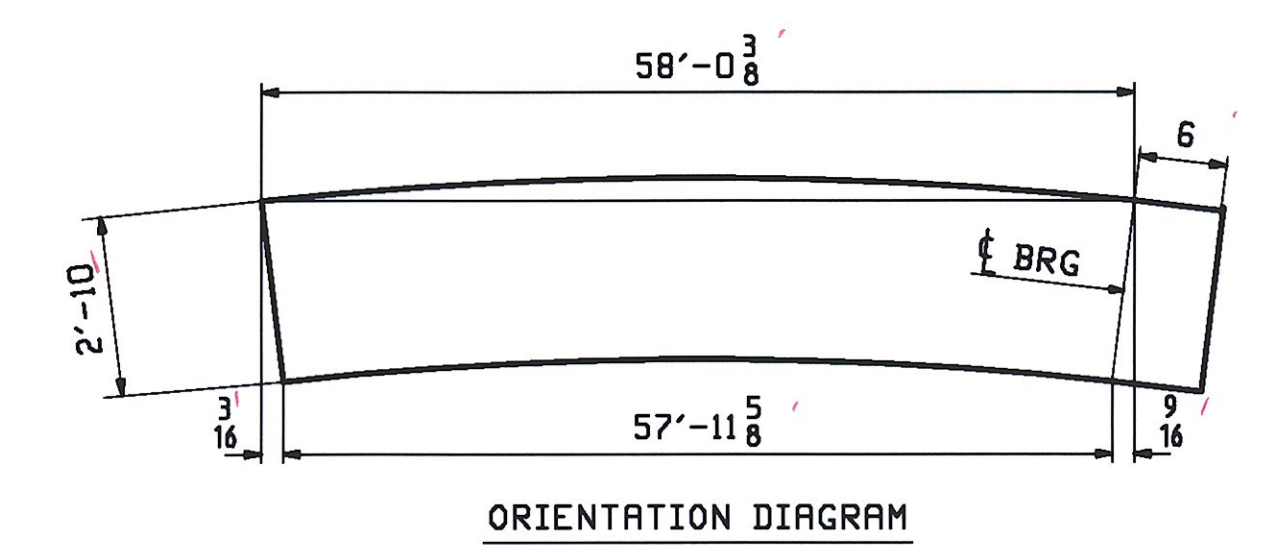
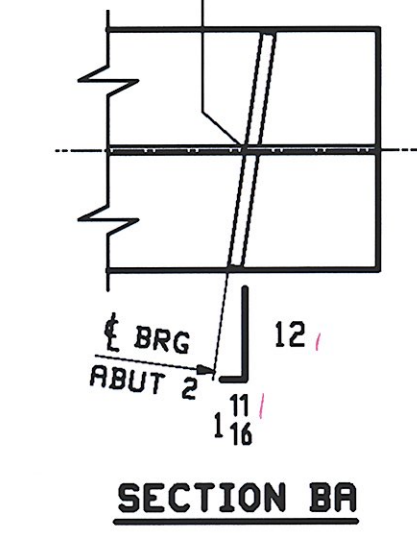
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		SHOP BOLTS:	
M270-50W (UN)		SEE GNI	15/16" Ø U.N.		NONE	
DESCRIPTION: GIRDER - 8G1B						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN:	DATE:	
				WJF	06/12	
				CHKD:	DATE:	
				DO	06/23	
LOCATION: TOWN OF SPRINGFIELD			JOB NO.	DWG NO.		
PROJ NO. BHF 016-2(14)			406-1	8		
CUSTOMER: COLD RIVER BRIDGES, LLC				REV. 1		



SECTION BB

"X"
5'-8 ⁹ / ₁₆
15'-8 ⁹ / ₁₆
25'-8 ⁹ / ₁₆
35'-4 ⁹ / ₁₆
45'-8 ⁹ / ₁₆

ONE - GIRDER - 9G2B
 FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER & FLANGE DIAGRAM SEE SHEET C2
 FOR GENERAL NOTES SEE SHEET G1

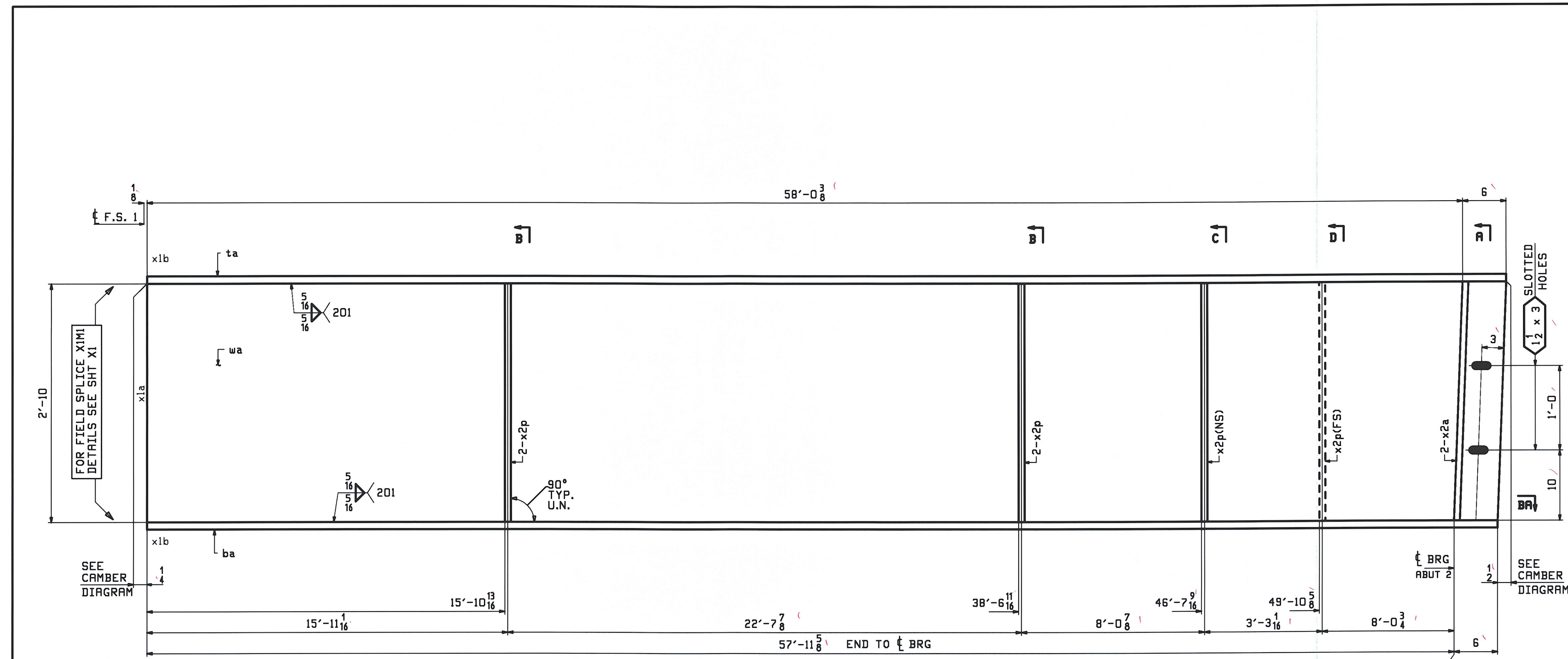


BILL OF MATERIAL						JOB NO.	DRAWING NO.	REV.	
ABM INFO		SHIP				406-1	9		
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	NT	PROCUREMENT NOTES
		9G2B	1		GIRDER			10949	
1	G		1	ua	PL 1/2 x 34	58 6 3/8	M270-50MT2 (H2-3)		
1	A		1	ta	PL 1/8 x 16	58 6 3/8	M270-50MT2 (H2-3)		
1	A		1	ba	PL 1/8 x 16	58 5 5/8	M270-50MT2 (H2-3)		
2	G		2	x2a	PL 7/8 x 7 1/2	2 10	MIE BEV		
2	H		5	x2m	PL 1/2 x 7	2 10			
2	H		3	x2n	PL 1/2 x 7	2 10			

RECEIVED
 CTD BY DEP OK'D BY *awc*
 JUN 26 2009
 RESUBMIT APPROVED AS NOTED
 BY *awc* DATE 7.13.09

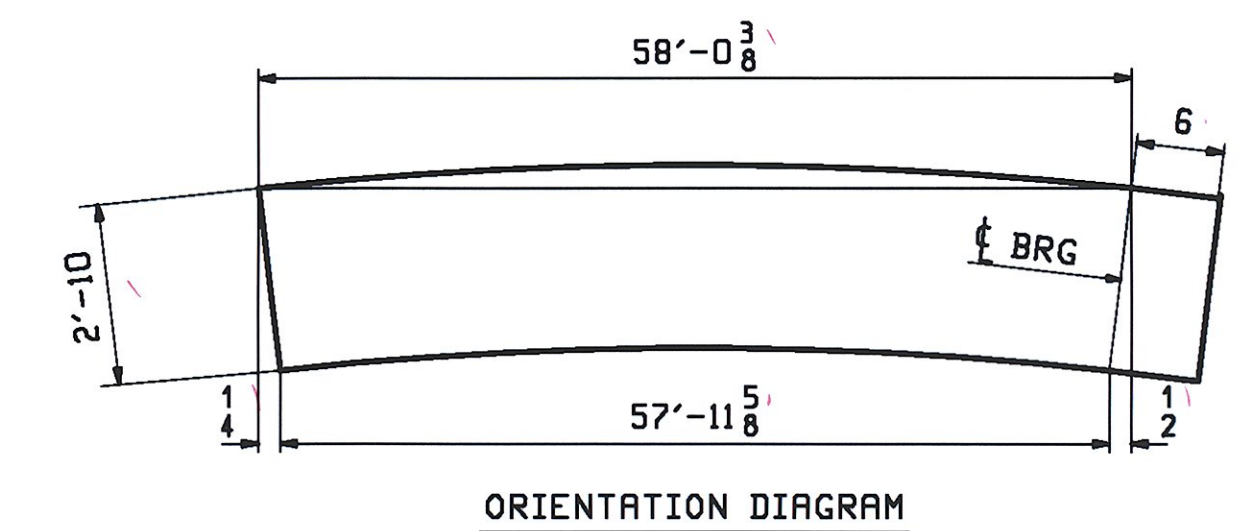
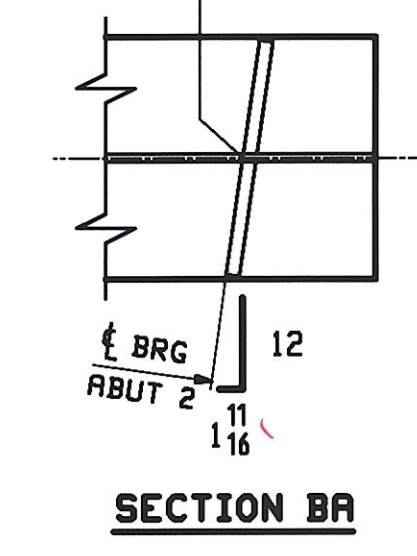
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
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MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE G1		15/16" Ø U.N.		NONE
DESCRIPTION: GIRDER - 9G2B						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX. (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER					DRAWN:	DATE:
BRIDGE NO. 64					WJF	06/12
SPRINGFIELD, VERMONT					CHKD:	DATE:
COUNTY OF WINDSOR					DO	06/23
LOCATION: TOWN OF SPRINGFIELD					JOB NO.	DWG NO.
PROJ NO. BHF 016-2(14)					406-1	9
CUSTOMER: COLD RIVER BRIDGES, LLC						REV. ▲

Thu Jun 25 2009 10:24:27 PM /user/abw/2875/1.Rwp

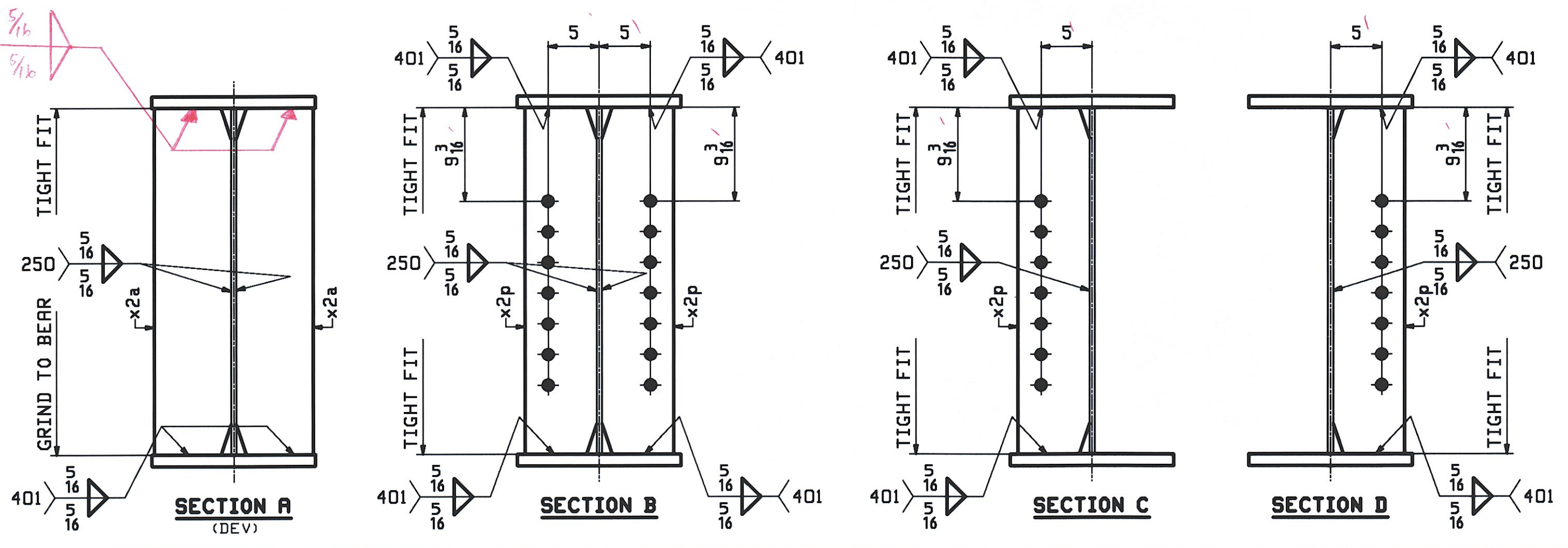


ONE - GIRDER - 11G4B

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER & FLANGE DIAGRAM SEE SHEET C2
 FOR GENERAL NOTES SEE SHEET GN1

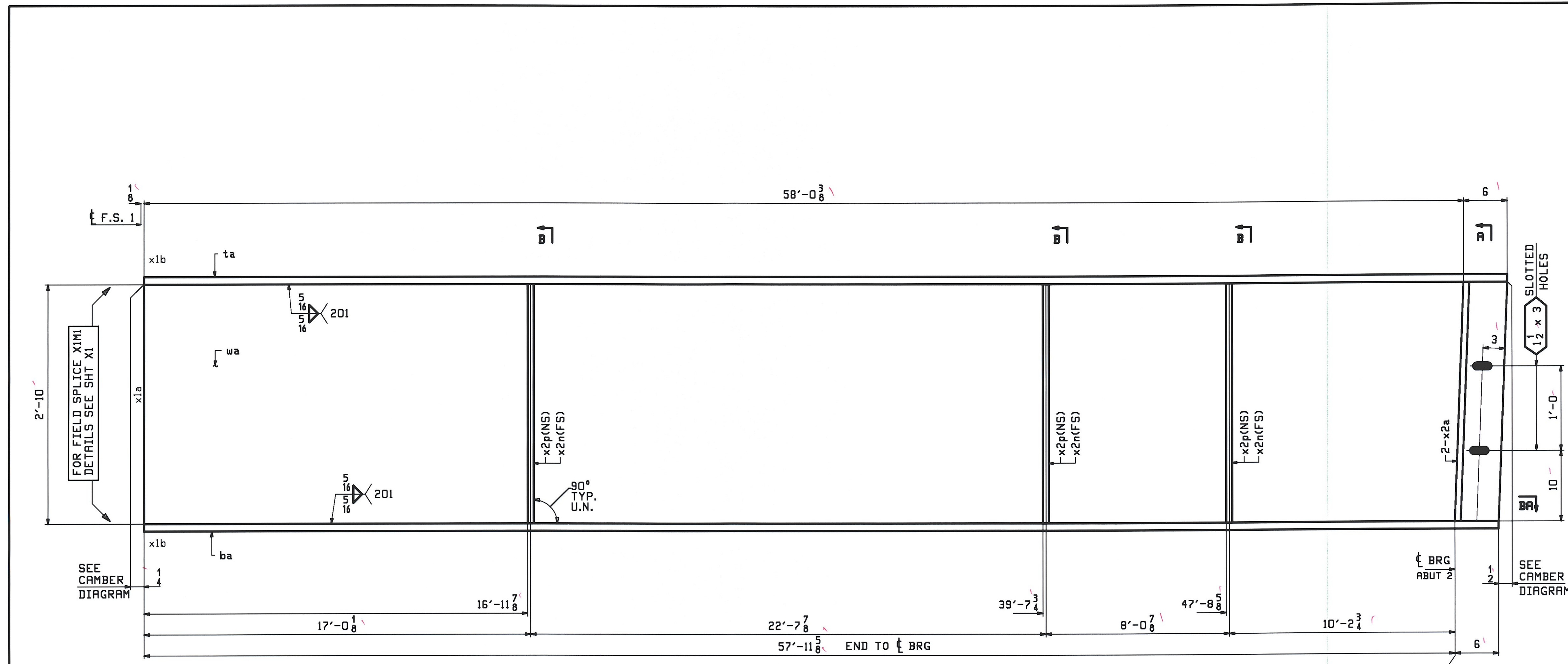


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						FT	INCHES				
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											10881
1	G		1	ua	PL 1/2 x 3/4	58	6 3/8	M270-SOMT2 (H2-3)			
1	A		1	ta	PL 1/8 x 16	58	6 3/8	M270-SOMT2 (H2-3)			
1	A		1	ba	PL 1/8 x 16	58	5 5/8	M270-SOMT2 (H2-3)			
2	G		2	x2a	PL 7/8 x 7 1/2	2	10	MIE BEV			
2	H		6	x2p	PL 1/2 x 7	2	10				



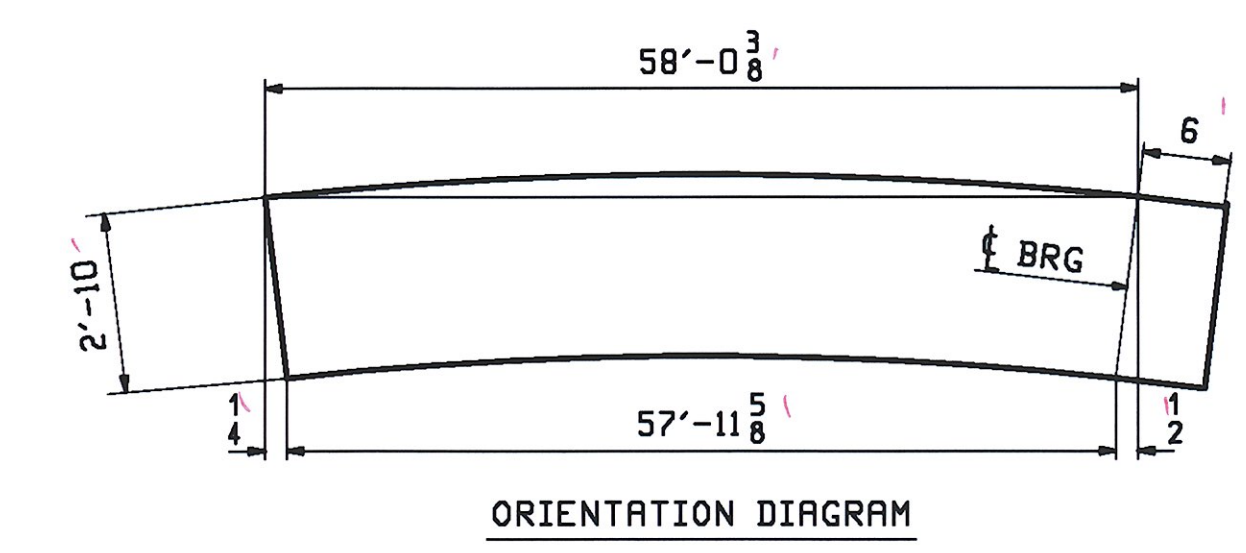
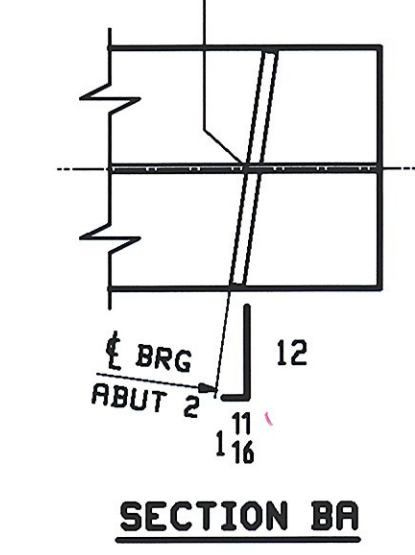
RECEIVED
 CRD BY DRP OKD BY CWC
 JUN 26 2009
 RESUBMIT APPROVED AS NOTED
 BY CWC DATE 7-13-09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
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MATERIAL:		SURFACE PREP. & PRINT:		HOLES:		SHOP BOLTS:
M270-SOM (UN)		SEE GN1		15/16" Ø U.N.		NONE
DESCRIPTION: GIRDER - 11G4B						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN: WJF	DATE: 06/12	
				CHKD: DO	DATE: 06/23	
LOCATION: TOWN OF SPRINGFIELD			JOB NO. 406-1		DNG NO. 11	
PROJ NO. BHF 016-2(14)					REV. 1	
CUSTOMER: COLD RIVER BRIDGES, LLC						

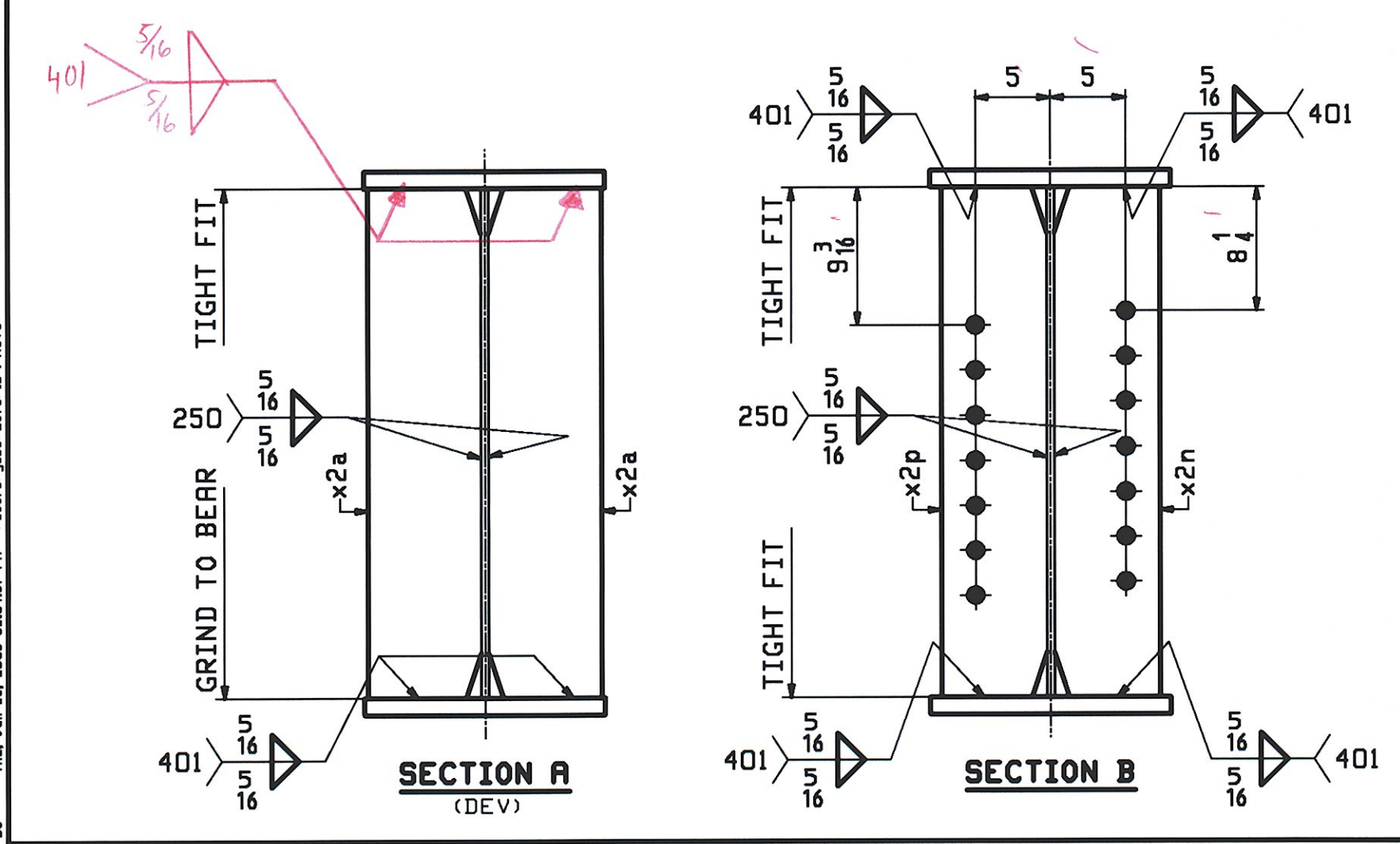


ONE - GIRDER - 12G5B

FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER & FLANGE DIAGRAM SEE SHEET C2
 FOR GENERAL NOTES SEE SHEET GN1



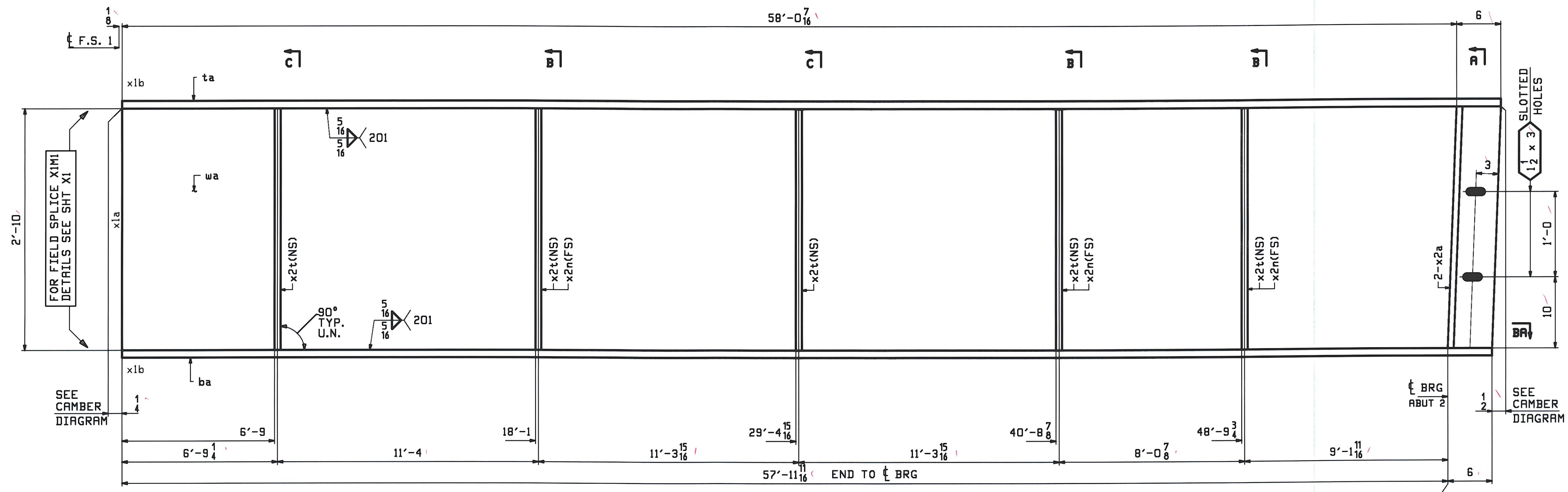
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					406-1	12			
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	MT	PROCUREMENT NOTES
		12G5B	1		GIRDER			10881	
1	G		1	wa	PL 1/2 x 34	58 6 3/8	M270-50MT2 (H2-3)		
1	A		1	ta	PL 1/8 x 16	58 6 3/8	M270-50MT2 (H2-3)		
1	A		1	ba	PL 1/8 x 16	58 5 5/8	M270-50MT2 (H2-3)		
2	G		2	x2a	PL 7/8 x 7 1/2	2 10	MIE BEV		
2	H		3	x2n	PL 1/2 x 7	2 10			
2	H		3	x2p	PL 1/2 x 7	2 10			



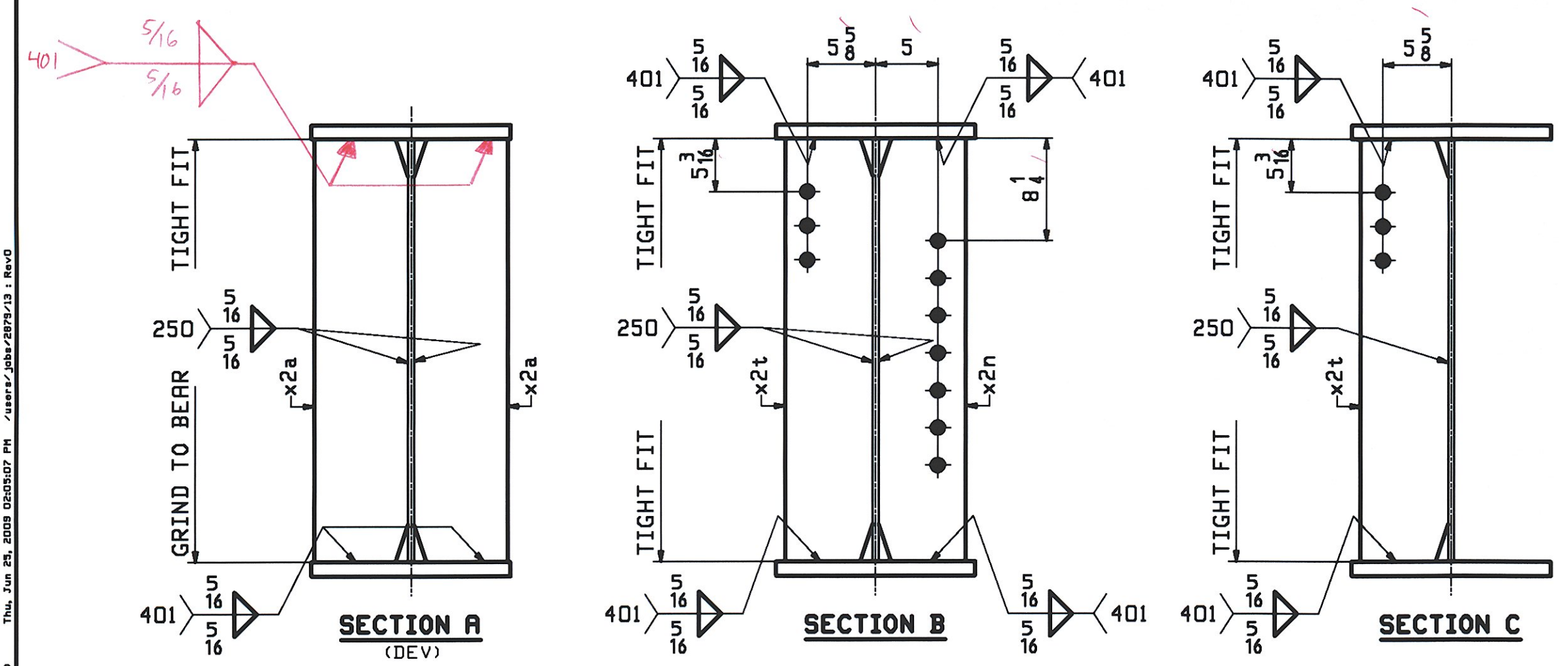
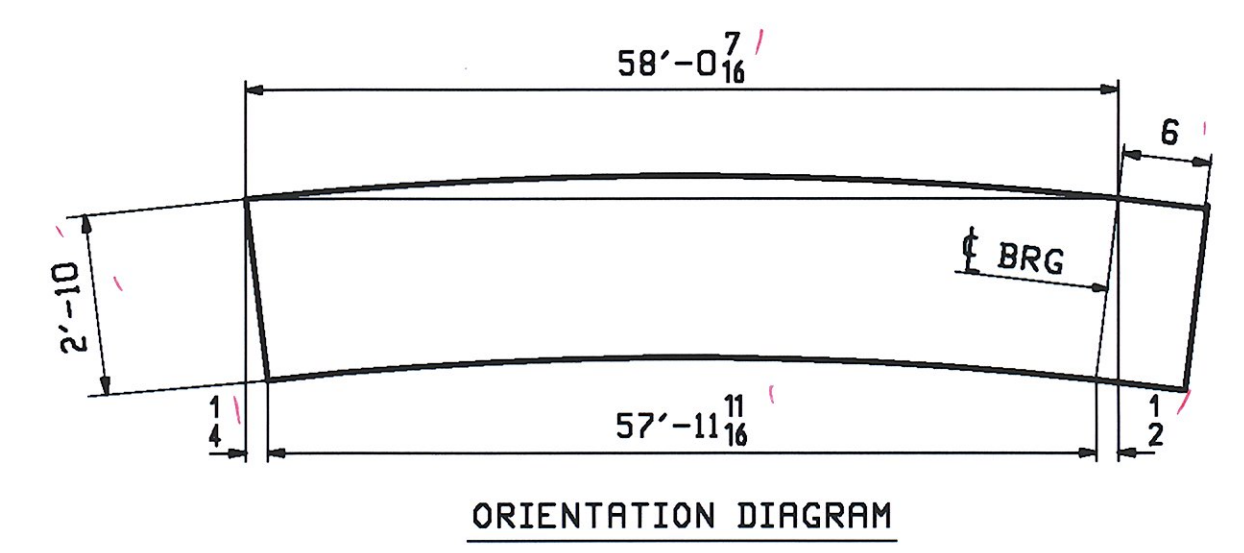
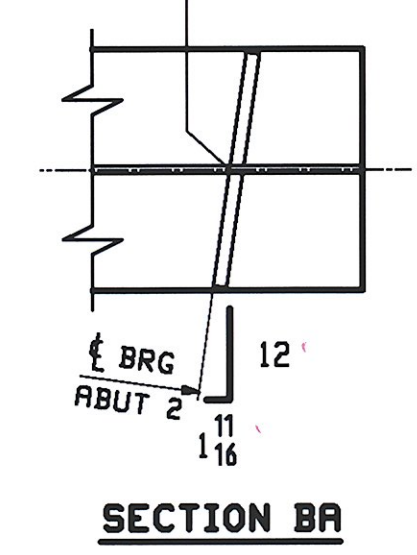
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
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MATERIAL:		SURFACE PREP. & PAINT:	HOLES:		SHOP BOLTS:	
M270-50W (UN)		SEE GN1	15/16" U.N.		NONE	
DESCRIPTION: GIRDER - 12G5B						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER				DRAWN: WJF		DATE: 06/12
BRIDGE NO. 64				CHKD: DO		DATE: 06/23
SPRINGFIELD, VERMONT						
COUNTY OF WINDSOR						
LOCATION: TOWN OF SPRINGFIELD			JOB NO. 406-1		DWG NO. 12	
PROJ NO. BHF D16-2(14)					REV. 1	
CUSTOMER: COLD RIVER BRIDGES, LLC						

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 JUN 26 2009
 APPROVED AS NOTED
 DATE 7-13-09

JOB NO.		DRAWING NO.		REV.					
406-1		13							
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	WT	PROCUREMENT NOTES
	13G6B	1			GIRDER			1095L	
1	G	1	wa	PL	$\frac{1}{2} \times 34$	58' $6\frac{7}{16}$	M270-50WT2 (H2-3)		
1	A	1	ta	PL	$\frac{1}{8} \times 16$	58' $6\frac{7}{16}$	M270-50WT2 (H2-3)		
1	A	1	ba	PL	$\frac{1}{8} \times 16$	58' $5\frac{11}{16}$	M270-50WT2 (H2-3)		
2	G	2	x2a	PL	$\frac{7}{8} \times 7\frac{1}{2}$	2' 10"	MIE BEV		
2	H	3	x2n	PL	$\frac{1}{2} \times 7$	2' 10"			
2	H	5	x2t	PL	$\frac{1}{2} \times 7$	2' 10"			

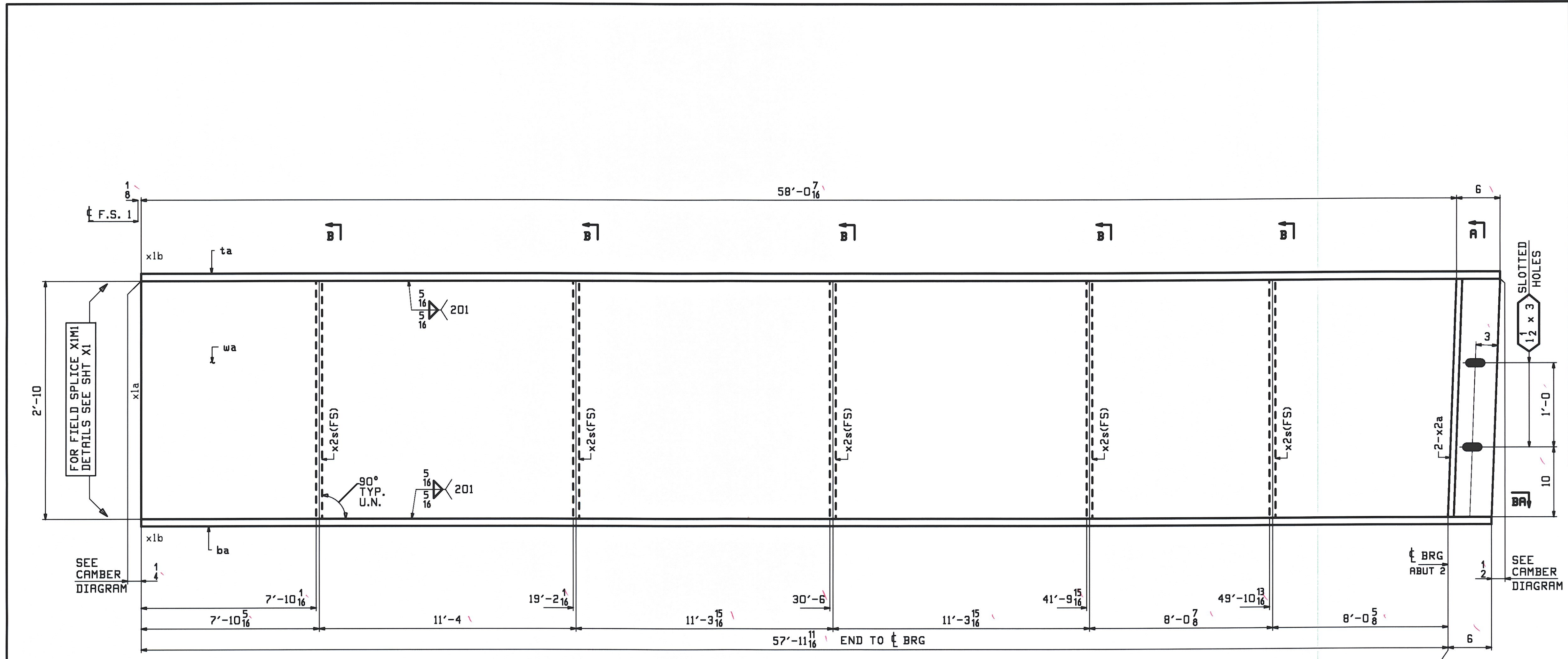


ONE - GIRDER - 13G6B
 FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER & FLANGE DIAGRAM SEE SHEET C2
 FOR GENERAL NOTES SEE SHEET GNI



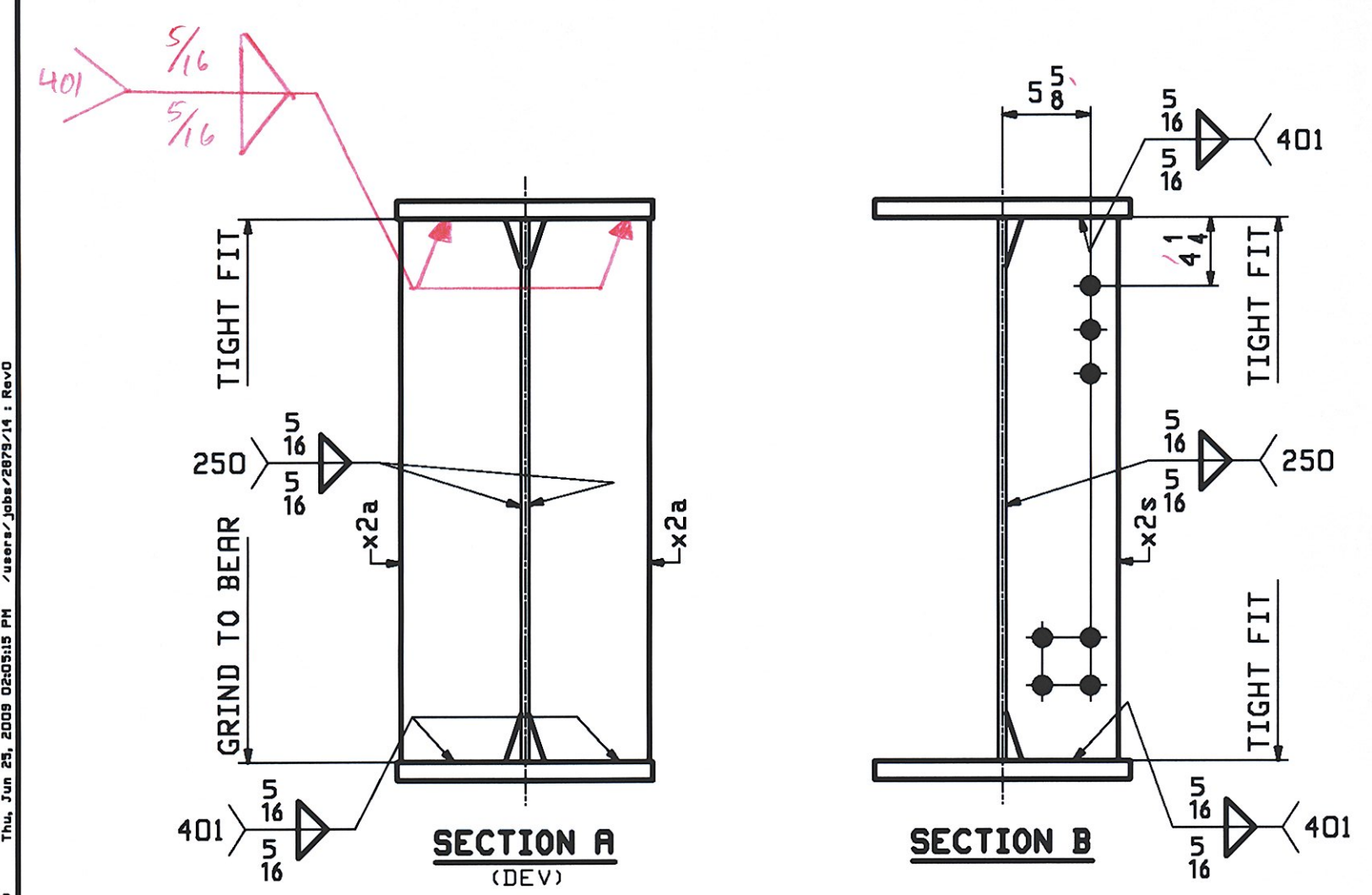
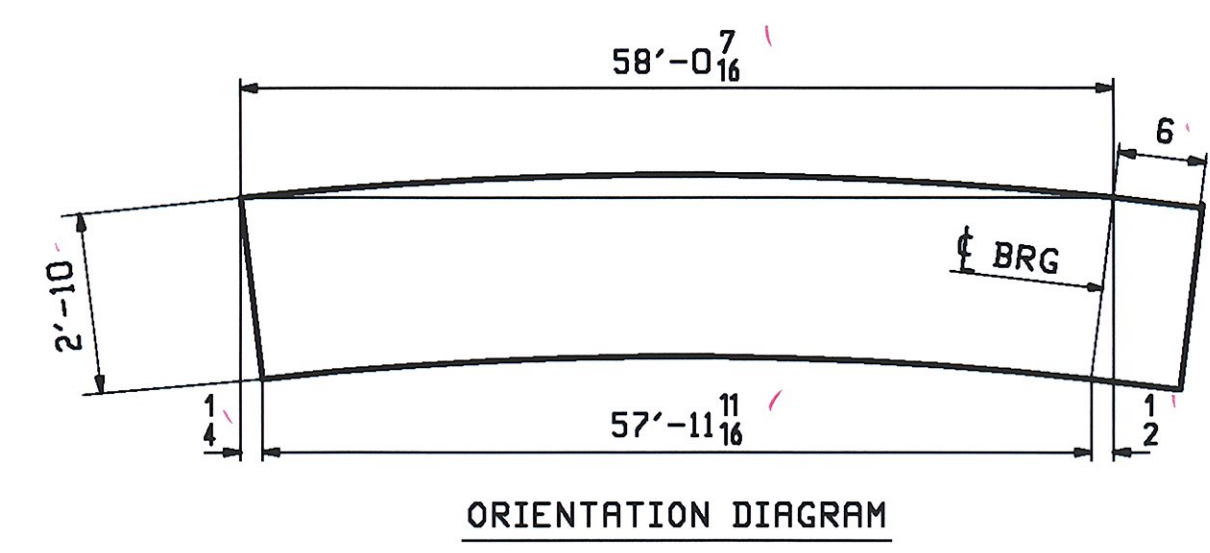
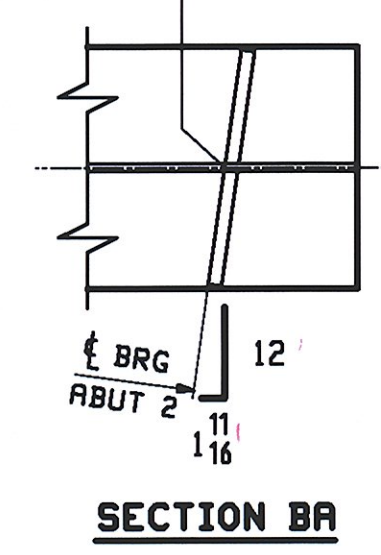
RECEIVED
 JUN 26 2009
 APPROVED AS NOTED
 BY CWC DATE 7-13-09

REV.	DATE	REMARKS	DMN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE GNI		$15\frac{15}{16}$ Ø U.N.		NONE
DESCRIPTION: GIRDER - 13G6B						
CASCO BAY STEEL STRUCTURES, INC. 75 SPRING HILL ROAD SACO, MAINE 04072 PHONE (207) 282-7360 FAX. (207) 282-1179						
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64 SPRINGFIELD, VERMONT COUNTY OF WINDSOR				DRAWN: WJF	DATE: 06/12	
LOCATION: TOWN OF SPRINGFIELD				CHKD: DO	DATE: 06/23	
PROJ NO. BHF 016-2(14)			JOB NO. 406-1		DWG NO. 13	
CUSTOMER: COLD RIVER BRIDGES, LLC					REV. Δ	



ONE - GIRDER - 14G7B

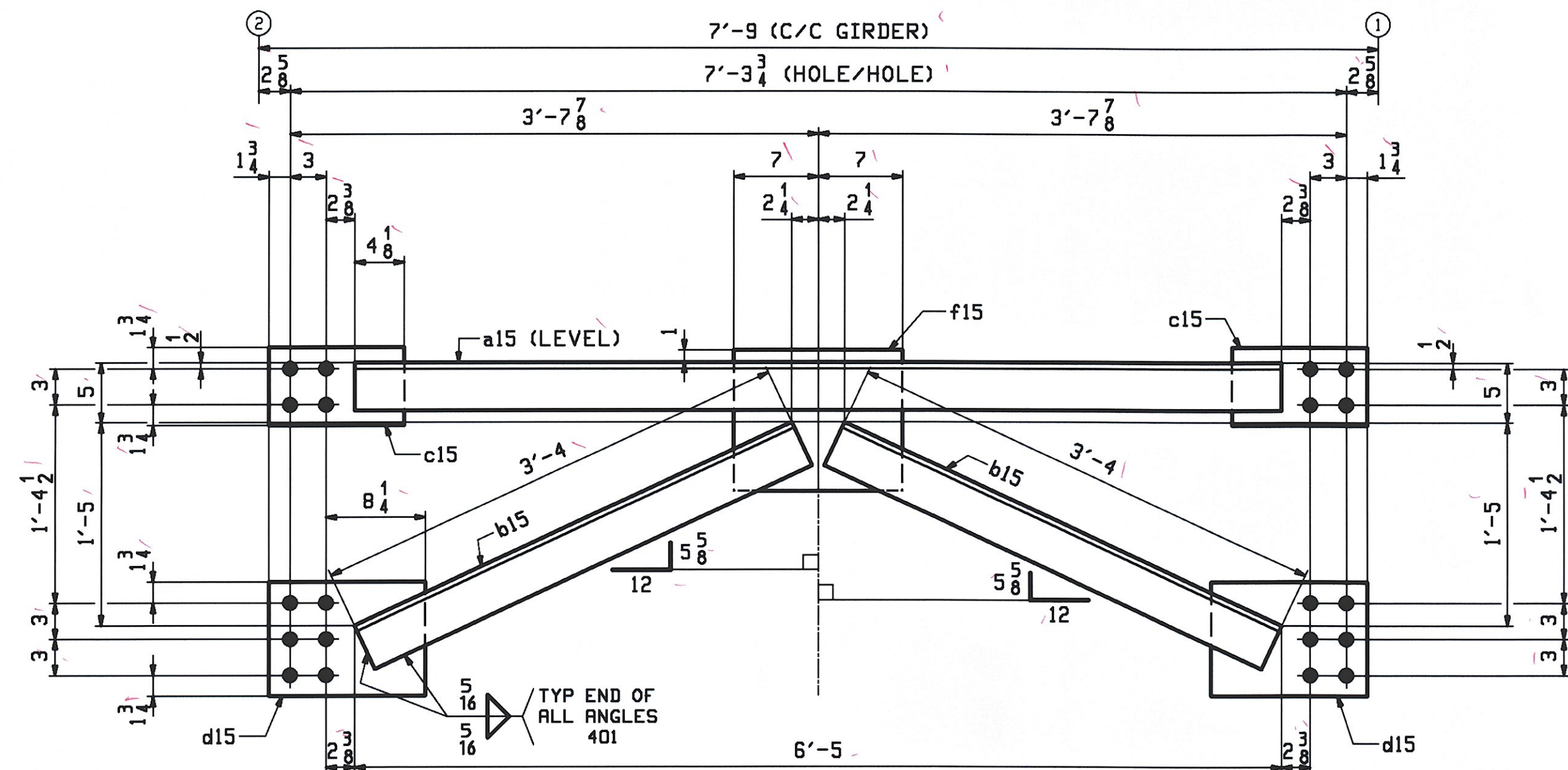
FOR FIELD SPLICE & STANDARD DETAILS SEE X SHEETS
 FOR CAMBER & FLANGE DIAGRAM SEE SHEET C2
 FOR GENERAL NOTES SEE SHEET GNI



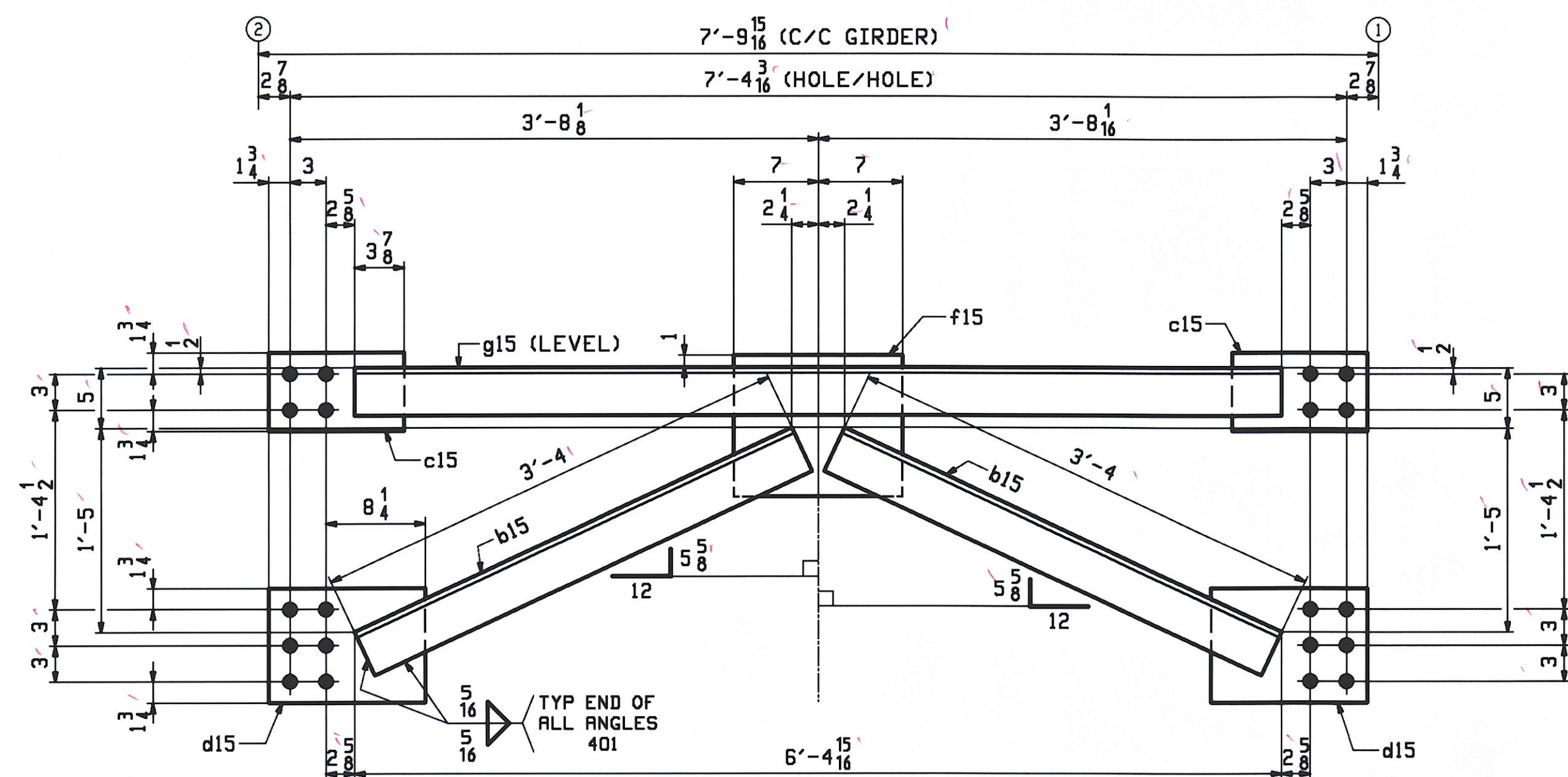
ABM INFO		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.
14G7B						406-1	14	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES	REMARKS	PROCUREMENT NOTES
					GIRDER			10848
1	G		1	wa	PL 1/2 x 34	58 6 7/16	M270-50MT2 (H2-3)	
1	A		1	ta	PL 1/8 x 16	58 6 7/16	M270-50MT2 (H2-3)	
1	A		1	ba	PL 1/8 x 16	58 5 1/16	M270-50MT2 (H2-3)	
2	G		2	x2a	PL 7/8 x 7 1/2	2 10	MIE BEV	
2	H		5	x2s	PL 1/2 x 7	2 10		

RECEIVED
 JUN 26 2009
 APPROVED AS NOTED
 BY CWC DATE 7-13-09

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE GNI		5/16" U.N.		NONE
DESCRIPTION: GIRDER - 14G7B						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX. (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER				DRAWN:	DATE:	
BRIDGE NO. 64				WJF	06/12	
SPRINGFIELD, VERMONT				CHKD:	DATE:	
COUNTY OF WINDSOR				DO	06/23	
LOCATION: TOWN OF SPRINGFIELD				JOB NO.	DWG NO.	
PROJ NO. BHF 016-2(14)				406-1	14	
CUSTOMER: COLD RIVER BRIDGES, LLC					REV. Δ	



13 - CROSSFRAMES - 15CF1



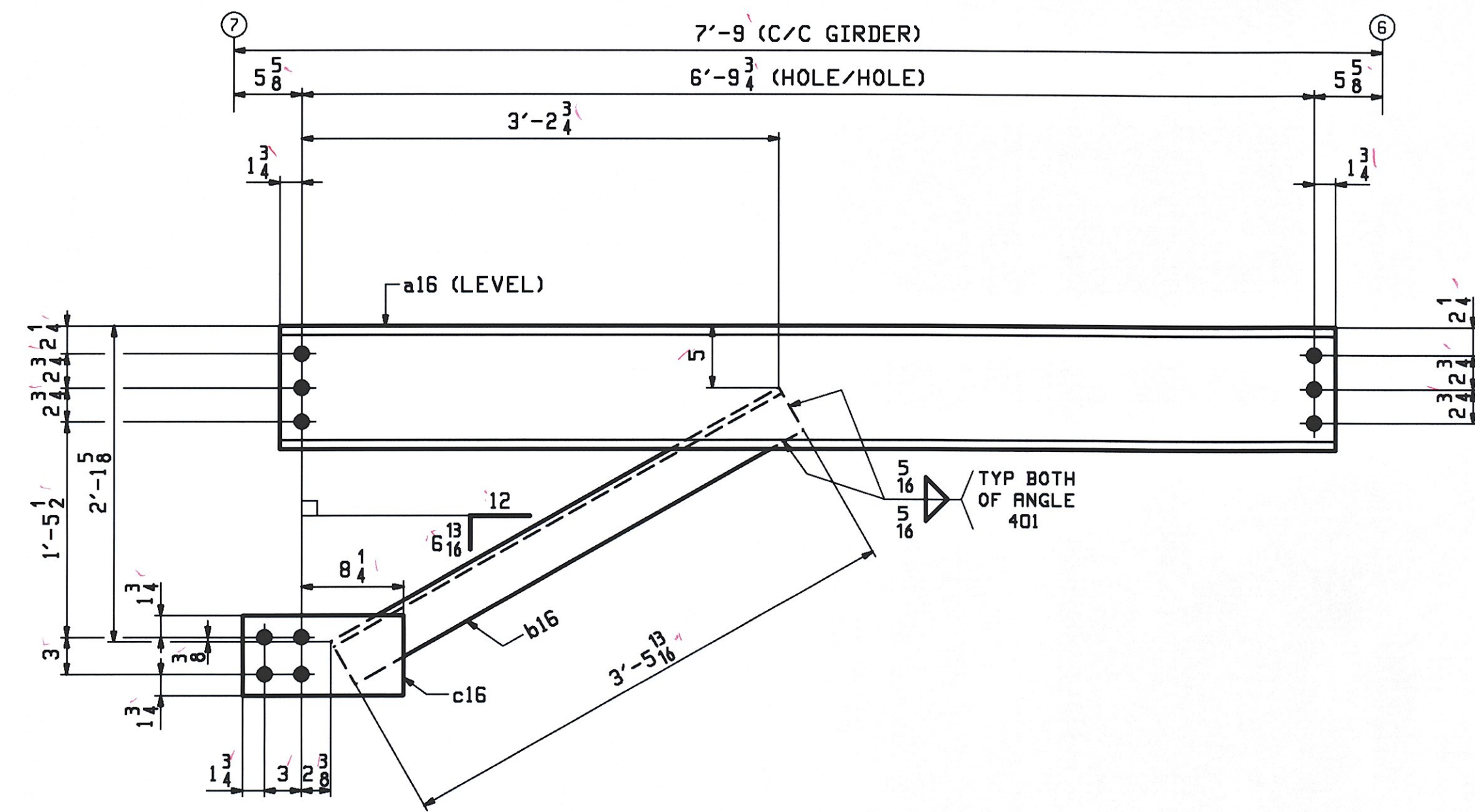
ONE - CROSSFRAME - 15CF2

ABM INFO		SHIP		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.
								406-1	15	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH FT INCHES		REMARKS	MT	PROCUREMENT NOTES
		15CF1	13		CROSSFRAME					206
3	B		13	a15	L 4x4x3/8	6	5 1/2			
3	C		26	b15	L 4x4x3/8	3	4			
3	D		26	c15	PL 1/2x6 1/2	0	11 1/4			
3	E		26	d15	PL 1/2x9 1/2	1	1			
3	F		13	f15	PL 1/2x11 1/4	1	2			
		15CF2	1		CROSSFRAME					206
3	C		2	b15	L 4x4x3/8	3	4			
3	D		2	c15	PL 1/2x6 1/2	0	11 1/4			
3	E		2	d15	PL 1/2x9 1/2	1	1			
3	F		1	f15	PL 1/2x11 1/4	1	2			
3	B		1	g15	L 4x4x3/8	6	4 1/2			

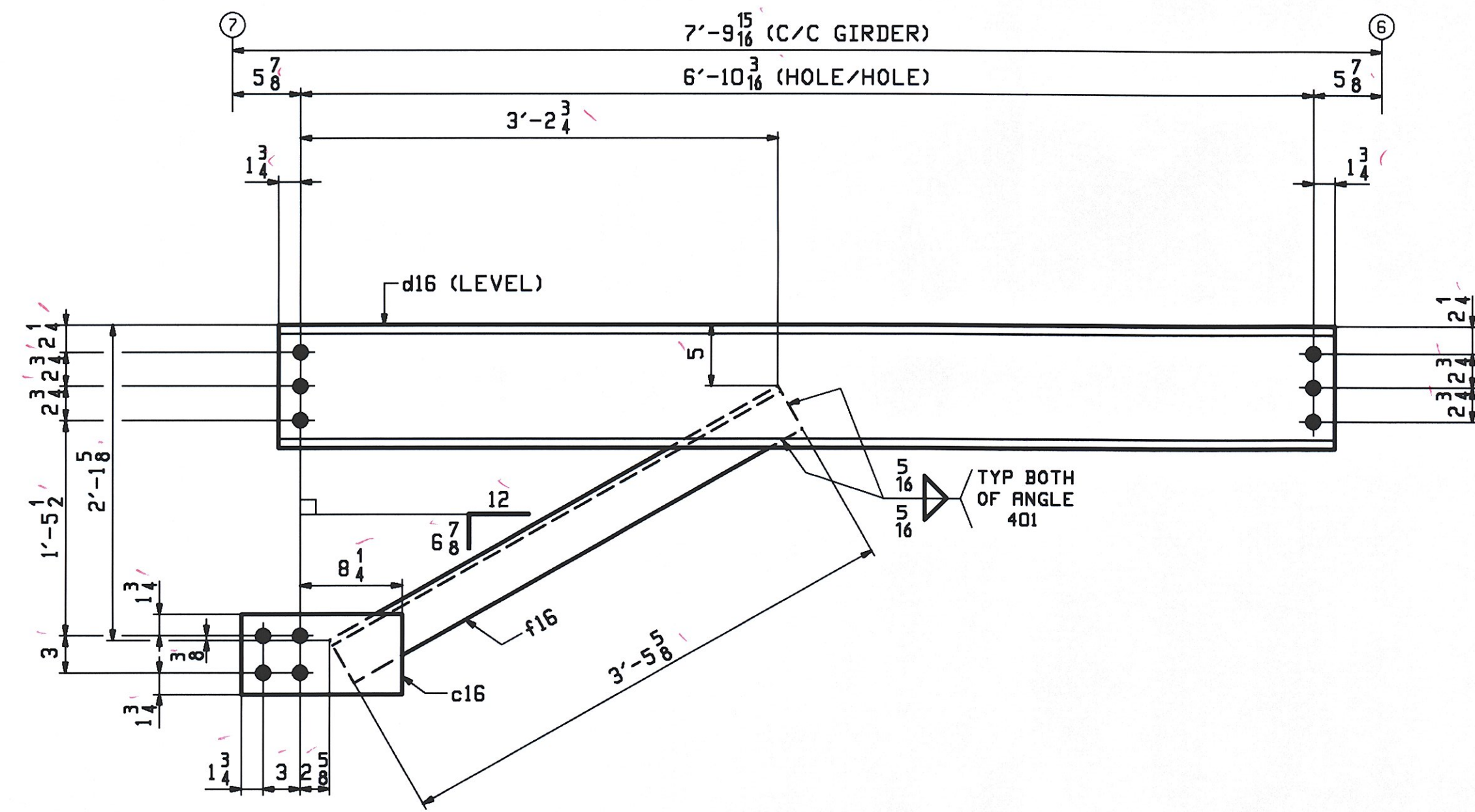
NOTES:
FOR GENERAL NOTES SEE DRAWING GNI.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE GNI		15/16" Ø U.N.		NONE
DESCRIPTION: CROSSFRAMES						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX. (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64				DRAWN:		DATE:
BRIDGE NO. 64				WJF		06/12
SPRINGFIELD, VERMONT				CHKD:		DATE:
COUNTY OF WINDSOR				DO		06/24
LOCATION: TOWN OF SPRINGFIELD				JOB NO.		DWG NO.
PROJ NO. BHF 016-2(14)				406-1		15
CUSTOMER: COLD RIVER BRIDGES, LLC						REV. ▲

RECEIVED
OK'D BY DRP OK'D BY CMC
JUN 26 2009
RESULTANT APPROVED
BY CMC DATE 7.13.09



13 - CROSSFAMES - 16CF1



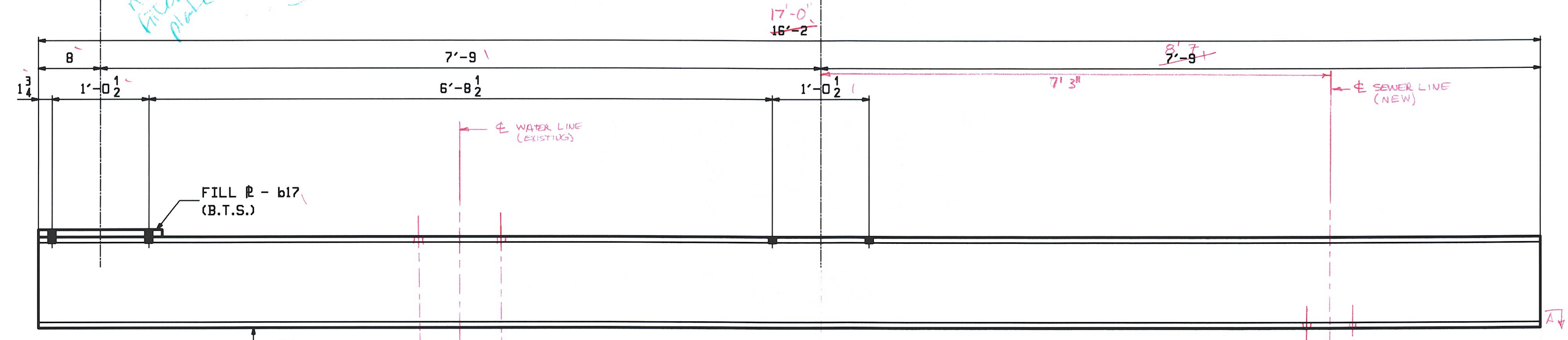
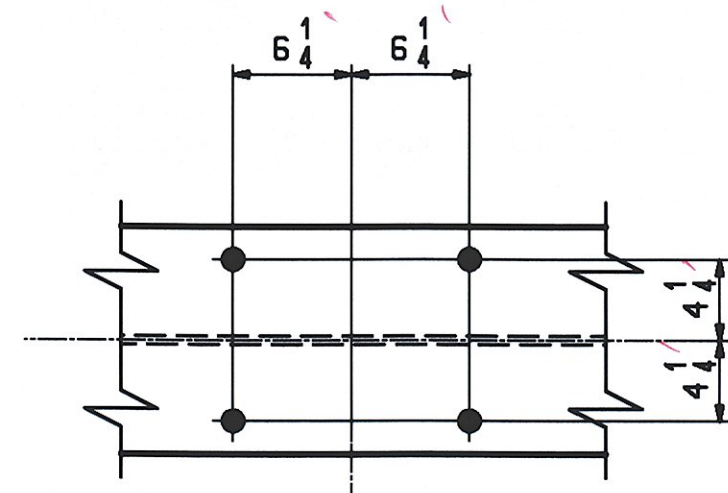
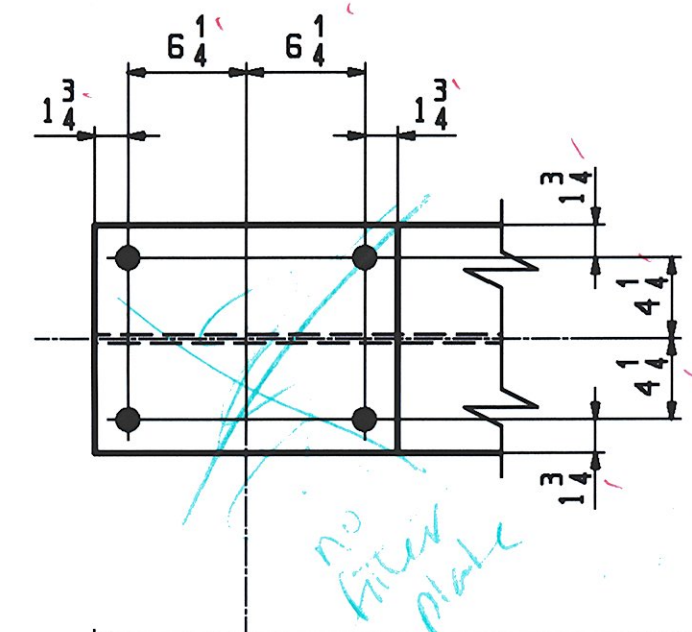
ONE - CROSSFRAME - 16CF2

ABM INFO		SHIP		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.
								406-1	16	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH	REMARKS	WT	PROCUREMENT	NOTES
						FT INCHES				
		16CF1	13		CROSSFRAME				338	
3	J		13	a16	MC 10x41.1	7 1 1/4				
3	K		13	b16	L 4x4x 3/8	3 5 3/8				
3	L		13	c16	PL 2x6 1/2	1 1				
		16CF2	1		CROSSFRAME				338	
3	L		1	c16	PL 2x6 1/2	1 1				
3	J		1	d16	MC 10x41.1	7 1 1/8				
3	K		1	f16	L 4x4x 3/8	3 5 3/8				

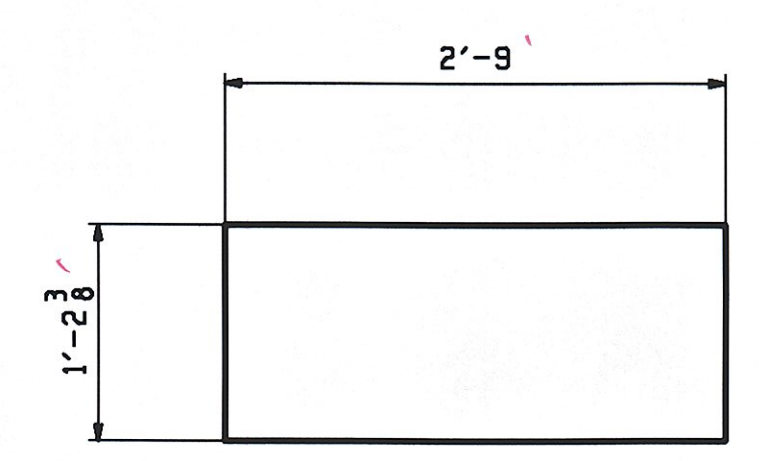
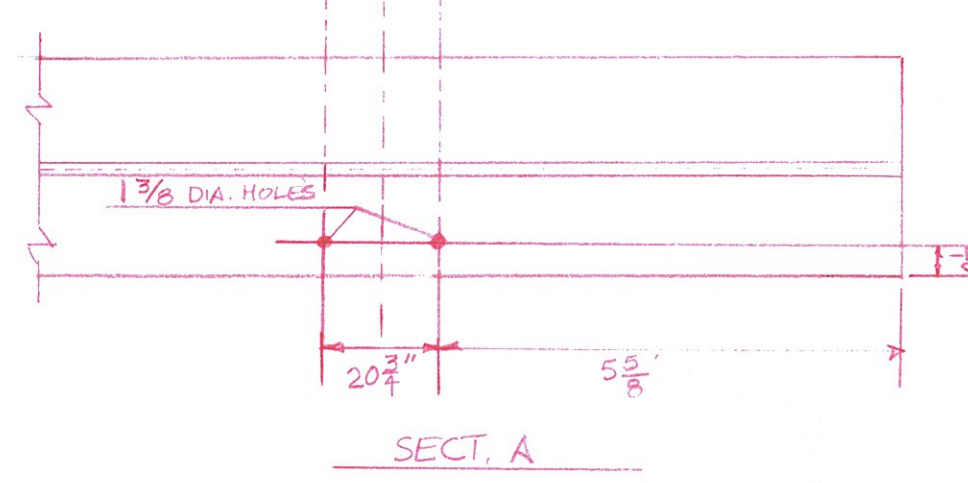
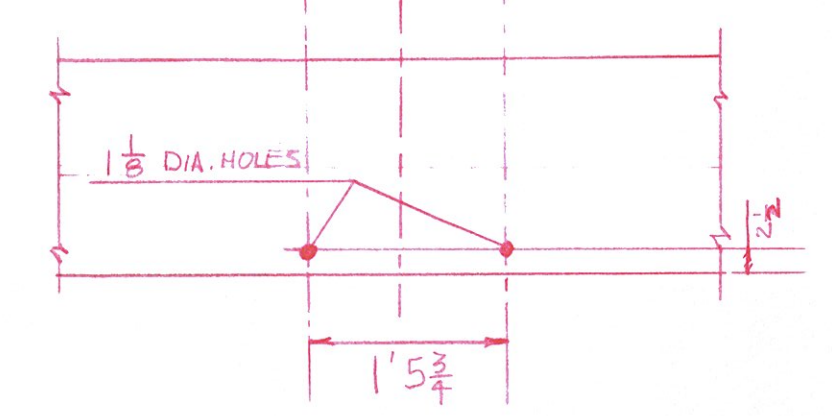
NOTES:
FOR GENERAL NOTES SEE DRAWING GNI.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE GNI		5/16" U.N.		NONE
DESCRIPTION: CROSSFRAMES						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX. (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER					DRAWN:	DATE:
BRIDGE NO. 64					WJF	06/15
SPRINGFIELD, VERMONT					CHKD:	DATE:
COUNTY OF WINDSOR					DO	06/24
LOCATION: TOWN OF SPRINGFIELD				JOB NO.		DWG NO.
PROJ NO. BHF 016-2(14)				406-1		16
CUSTOMER: COLD RIVER BRIDGES, LLC						REV. Δ

RECEIVED
 OK'D BY: *DRO* OK'D BY: *ac*
 JUN 26 2009
 RESUBMIT: _____ APPROVED: \checkmark
 BY: *CWC* DATE: *7-13-09*



14 - HANGER BEAMS - 17HB1



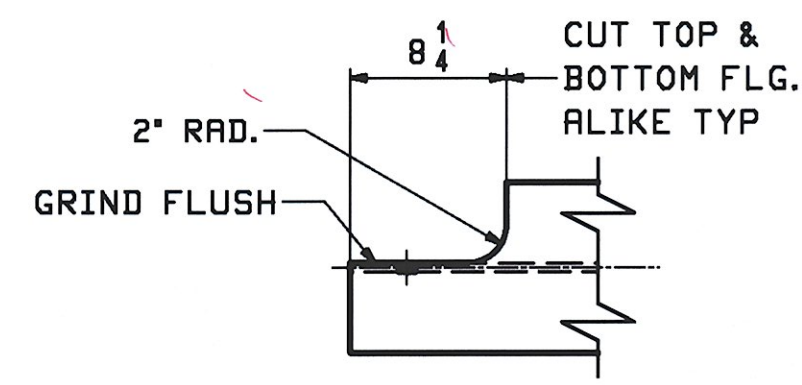
14 - END PLATES - 17M1

ABM INFO		SHIP		BILL OF MATERIAL				JOB NO.	DRAWING NO.	REV.
								406-1	17	
PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH		REMARKS	MT	PROCUREMENT NOTES
						FT	INCHES			
		17HB1	14		HANGER BEAM					1908
3	P	14	a17		HP 12x53	15	5	GRLV M270-50		
3	Q	14	b17		PL 1/2x12	1	4	FILL B.T.S. GRLV M270-36		
		17M1	14		END PLATE					34
2	M	14			PL 1/4x14 3/8	2	9			

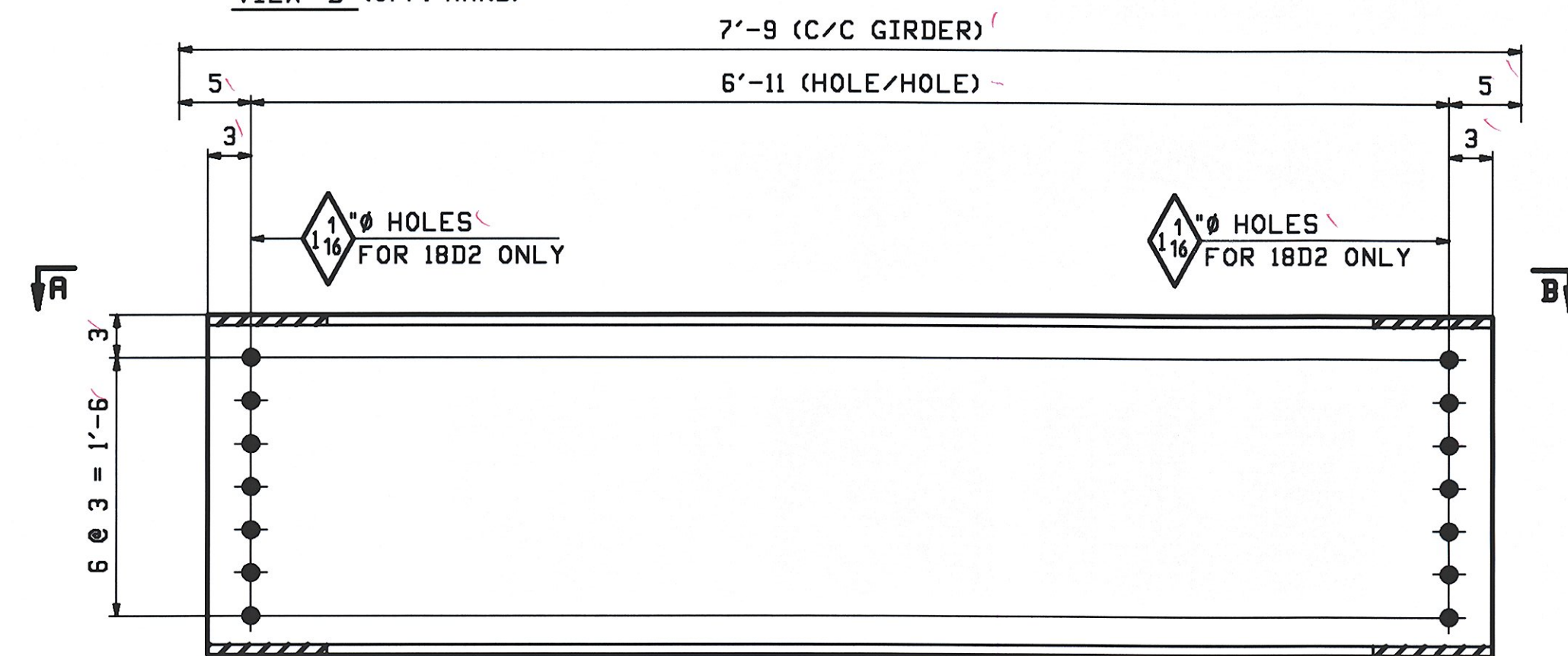
NOTES:
FOR GENERAL NOTES SEE DRAWING GNI.
B.T.S. = BOLT TO SHIP

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0						
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE GNI		15 16 U.N.		NONE
DESCRIPTION: HANGER BEAMS						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX. (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER				DRAWN:	DATE:	
BRIDGE NO. 64				WJF	06/15	
SPRINGFIELD, VERMONT				CHKD:	DATE:	
COUNTY OF WINDSOR				DO	06/24	
LOCATION: TOWN OF SPRINGFIELD				JOB NO.	DWG NO.	
PROJ NO. BHF 016-2(14)				406-1	17	
CUSTOMER: COLD RIVER BRIDGES, LLC					REV. Δ	

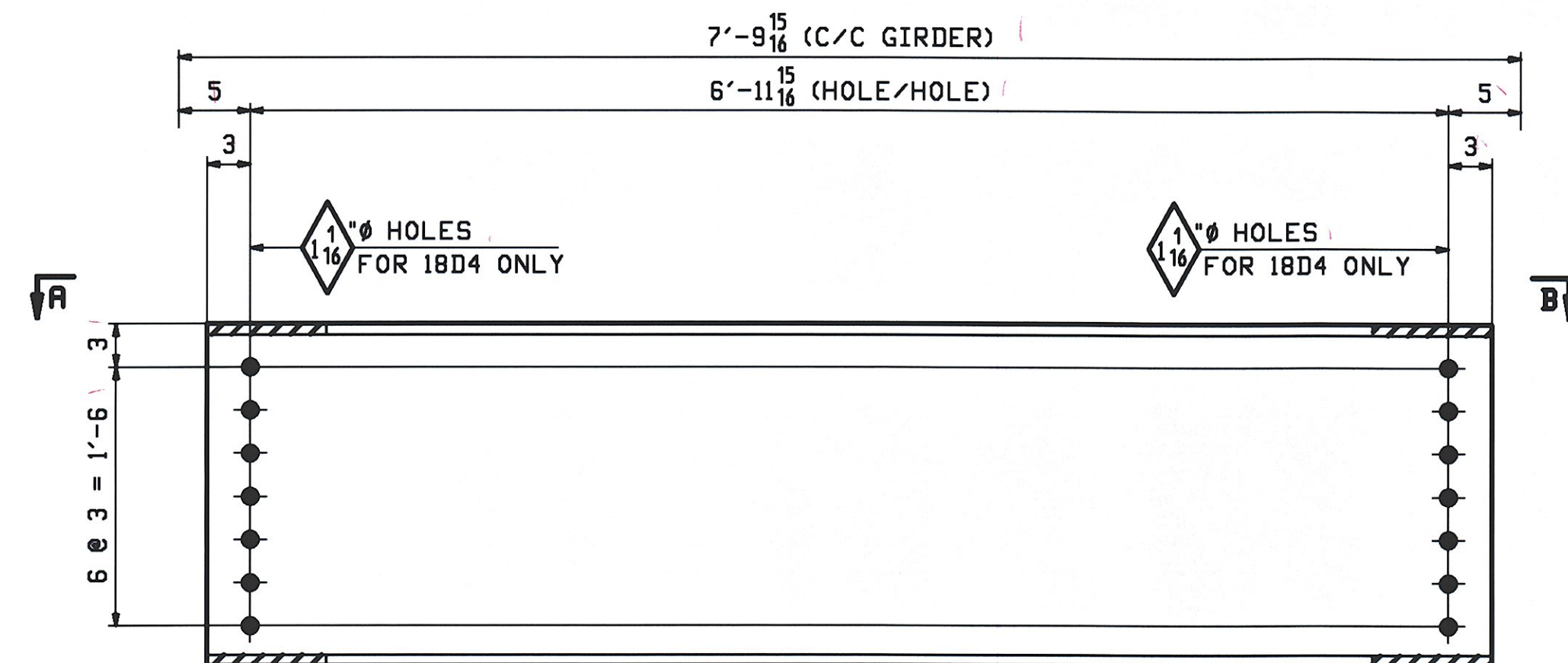
RECEIVED
CK'D BY DRP OK'D BY ME
JUN 26 2009
RESUBMIT APPROVED AS NOTED
BY CWC DATE 7-13-09



VIEW "A"
VIEW "B" (OPP. HAND)



24 - DIAPHRAGMS - 18D1
8 - DIAPHRAGMS - 18D2



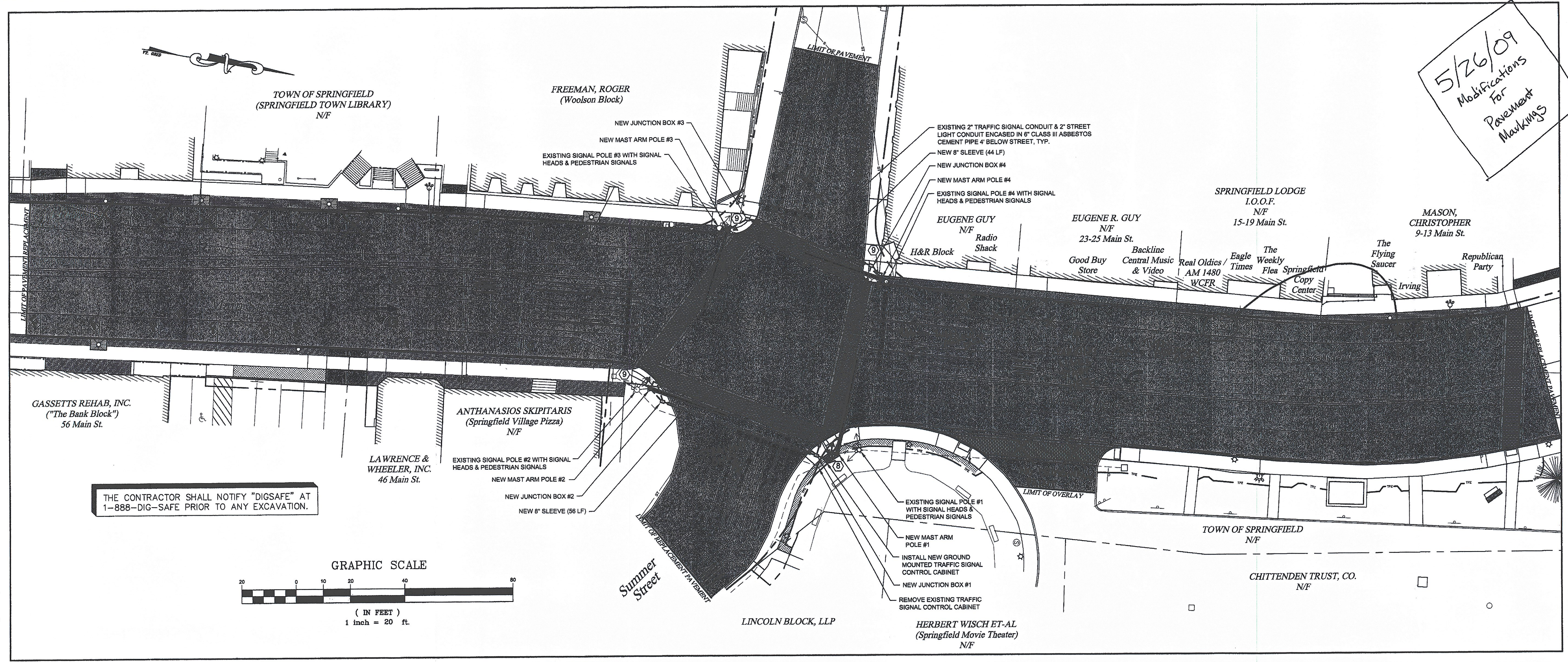
3 - DIAPHRAGMS - 18D3
1 - DIAPHRAGMS - 18D4

PAGE	LINE	MARK	QTY	MARK	MATERIAL	LENGTH		REMARKS	WT	PROCUREMENT NOTES
						FT	INCHES			
		18D1	24		DIAPHRAGM					504
3	T		24		W 24x68	7	5 1/2			
		18D2	8		DIAPHRAGM					504
3	T		8		W 24x68	7	5 1/2			
		18D3	3		DIAPHRAGM					510
3	T		3		W 24x68	7	5 15/16			
		18D4	1		DIAPHRAGM					510
3	T		1		W 24x68	7	5 15/16			

NOTES:
FOR GENERAL NOTES SEE DRAWING GNI.

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
MATERIAL:		SURFACE PREP. & PAINT:		HOLES:		SHOP BOLTS:
M270-50W (UN)		SEE GNI		15/16" U.N.		NONE
DESCRIPTION: DIAPHRAGMS						
CASCO BAY STEEL STRUCTURES, INC.						
75 SPRING HILL ROAD			SACO, MAINE 04072			
PHONE (207) 282-7360			FAX. (207) 282-1179			
STRUCTURE: VT 11 OVER BLACK RIVER BRIDGE NO. 64				DRAWN:	DATE:	
SPRINGFIELD, VERMONT				NJF	06/15	
COUNTY OF WINDSOR				CHKD:	DATE:	
				DO	06/24	
LOCATION: TOWN OF SPRINGFIELD			JOB NO.		DWG NO.	
PROJ NO. BHF 016-2(14)			406-1		18	
CUSTOMER: COLD RIVER BRIDGES, LLC					REV. Δ	

RECEIVED
CHKD BY *DJP* OK'D BY *aw*
JUN 26 2009
APPROVED \checkmark
BY *CWL* DATE 7-13-09



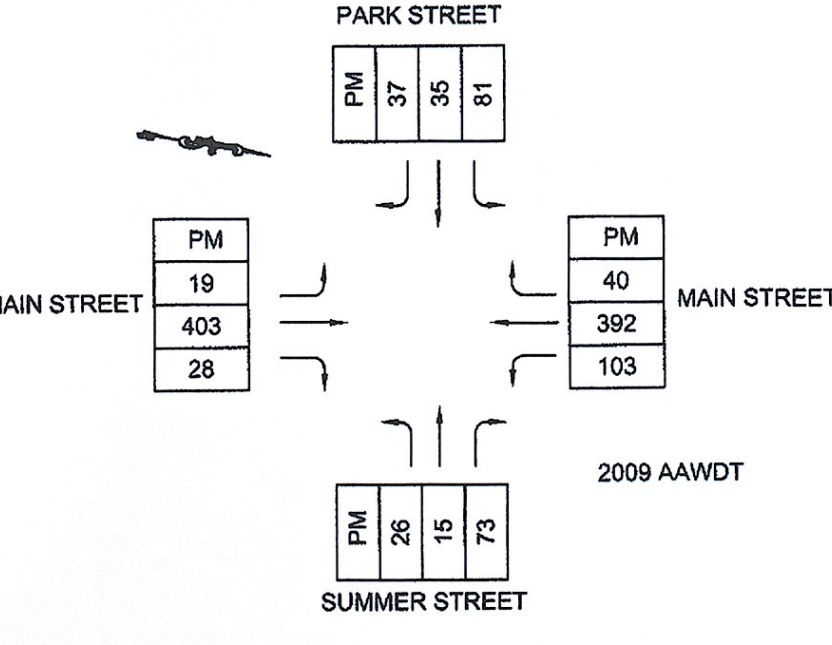
5/26/09
Modifications
For
Pavement
Markings

TRAFFIC SIGNAL LEGEND

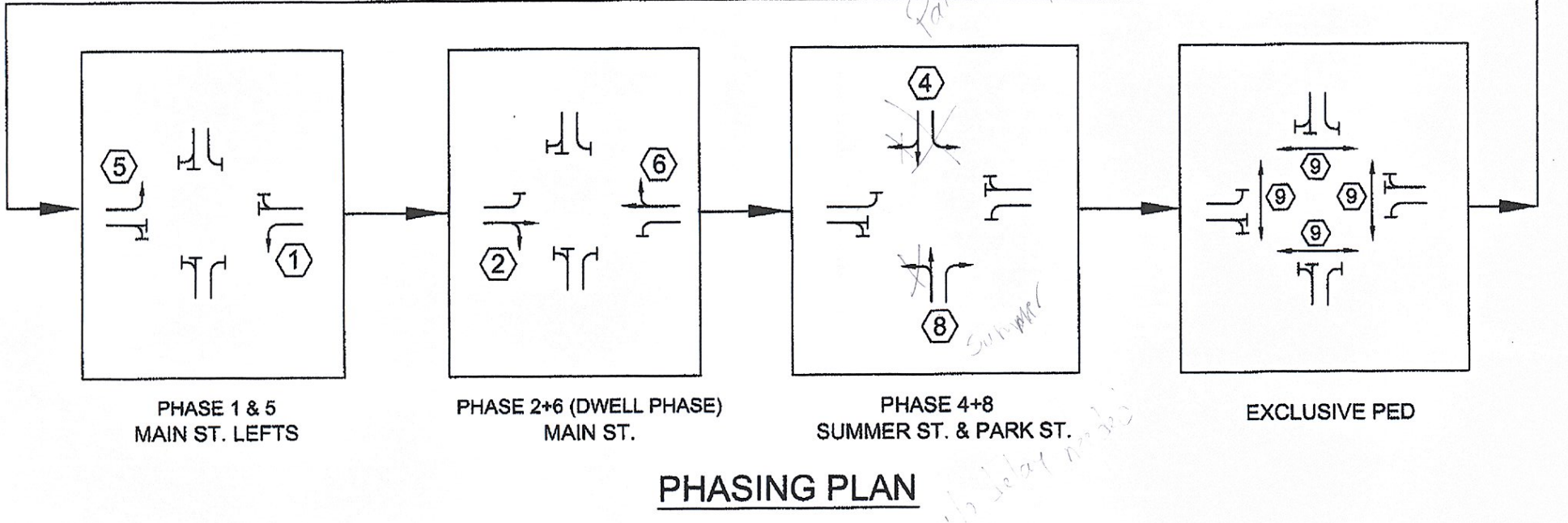
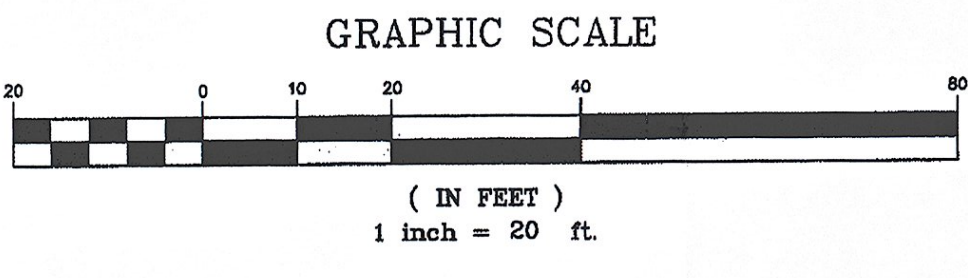
- EXISTING WIRED CONDUIT
- EXISTING CONDUIT SLEEVE
- NEW WIRED CONDUIT
- EXISTING JUNCTION BOX
- NEW JUNCTION BOX
- TRAFFIC SIGNAL HEAD
- NEW MAST ARM POLE
- NEW SIGNAL CONTROLLER
- NEW LOOP DETECTOR & LEAD-IN

PAVEMENT MARKING LEGEND

- 24" DURABLE SOLID WHITE STOPBAR
- 4" DURABLE SOLID WHITE LINE
- DOUBLE 4" DURABLE SOLID YELLOW LINE
- DURABLE 4" DOTTED WHITE LINE
- DURABLE LETTER OR SYMBOL
- PAINTED 4" SOLID WHITE LINE
- PAINTED LETTER OR SYMBOL
- 24" PAINTED SOLID WHITE STOPBAR
- DOUBLE 4" PAINTED SOLID YELLOW LINE
- PAINTED 4" DOTTED WHITE LINE



THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.



PROGRAM CONTROLLER FOR NEMA DUAL RING / FULLY ACTUATED OPERATION	PHASE 1&5 MAIN ST. LEFTS	PHASE 2+6 MAIN ST.	PHASE 4+8 PARK ST./ SUMMER ST.	PHASE 9 EXCLUSIVE PED. PHASE
VEH. EXTENSION	2	2	2	-
RT. TURN DELAY	-	-	5	-
MIN. GREEN	8	8	8	-
YELLOW CLEAR	4	4	4	⑩ NRTOR
RED CLEAR	2	2	2	MAN FLASHING HAND HAND
MAX. GREEN	10	30	12	4 15 2
FLASHING OPERATION (9:30 PM - 6:30 AM)	① + ⑤ →PY	② + ⑥ FY	④ + ⑧ FR	BLANK

FY = FLASHING YELLOW
FR = FLASHING RED

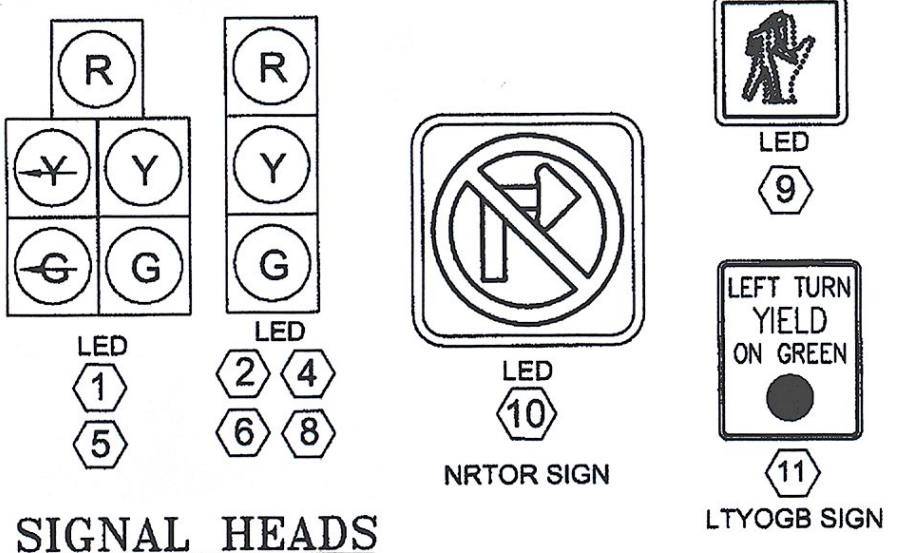
TRAFFIC SIGNAL CONDUIT SCHEDULE

FROM	TO	WIRED CONDUIT		DESCRIPTION
		1 1/2"	2"	
CONTROLLER CABINET	JUNCTION BOX #1	3'	3'	SIGNAL WIRING & LOOP WIRING
CONTROLLER CABINET	MAST ARM #1		3'	SIGNAL WIRING
CONTROLLER CABINET	LOOP #1 & #6	12'		LOOP WIRING
JUNCTION BOX #1	JUNCTION BOX #2	60'	60'	SIGNAL WIRING & LOOP WIRING
JUNCTION BOX #1	JUNCTION BOX #4	72'	72'	SIGNAL WIRING & LOOP WIRING
JUNCTION BOX #1	LOOP #8 & #8A	3'		LOOP WIRING
JUNCTION BOX #2	MAST ARM #2		7'	SIGNAL WIRING
JUNCTION BOX #2	LOOP #2 & #5	9'		LOOP WIRING
JUNCTION BOX #4	MAST ARM #4		6'	SIGNAL WIRING
JUNCTION BOX #4	JUNCTION BOX #4	48'	48'	SIGNAL WIRING & LOOP WIRING
JUNCTION BOX #3	MAST ARM #3		8'	SIGNAL WIRING
JUNCTION BOX #3	LOOP #4 & #4A	3'		LOOP WIRING

VEHICLE LOOP DETECTOR SCHEDULE

LANE	LOOP #	SIZE	TYPE	# OF TURNS	CALL PHASE	MODE	INDUCTANCE (uH)		RESISTANCE (ohms)		LEAKAGE TO GROUND (m-ohms)
							CALC.	MEAS.	CALC.	MEAS.	
MAIN ST. SB LT	①	6' x 40'	LONG	2	1	PRES.	350		0.70		
MAIN ST. NB	②	6' x 40'	LONG	2	2	PRES.	363		0.87		
PARK ST. EB TH/RT	③	6' x 40'	LONG	2	4	PRES.	373		1.00		
PARK ST. EB LT	④	6' x 40'	LONG	2	4	PRES.	375		1.04		
MAIN ST. NB LT	⑤	6' x 40'	LONG	2	5	PRES.	365		0.90		
MAIN ST. SB	⑥	6' x 40'	LONG	2	6	PRES.	352		0.73		
SUMMER ST. WB TH/LT	⑦	6' x 40'	LONG	2	8	PRES.	347		0.67		
SUMMER ST. WB RT	⑧	6' x 40'	LONG	2	8	PRES.*	344		0.63		

* DELAY ON RIGHT TURN LOOP



NOTES:

- ALL DURABLE PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH THE EXCEPTION OF THE STOP BARS WHICH SHALL BE 3M TAPE GLUED.
- EXISTING LIGHTING AND TRAFFIC SIGNAL CONDUITS TO BE ABANDONED.
- CONDUIT SLEEVES SHALL BE INSTALLED BY OPEN CUT AND SHALL BE SDR 35 PVC PIPE.
- NEW TRAFFIC SIGNAL CONTROLLER SHALL BE CONFIGURED TO ALLOW DUAL-RING CONTROL (NEMA PHASING).

DATE	REVISIONS	BY
	THESE PLANS WITH LATEST REVISIONS SHOULD ONLY BE USED FOR THE PURPOSE SHOWN BELOW.	# OF SHEETS
	<input type="checkbox"/> SKETCH/CONCEPT	
	<input type="checkbox"/> PRELIMINARY	
	<input type="checkbox"/> FINAL 85% PLANS	
	<input type="checkbox"/> CONTRACT PLANS (4-24-08)	

TOWN OF SPRINGFIELD, VERMONT
SPRINGFIELD TCSE 006
STP 016-2(15)

MAST ARM DESIGN SIGNAL LAYOUT PLAN

LD LAMOUREUX & DICKINSON
Consulting Engineers, Inc.
14 Morse Drive
Essex Junction, VT 05452
Tel: 802-878-4450

Proj. no. 05015
Survey MG/JT/JMD
Design JLC
Drawn JT/BH
Checked DLH/DJG
Date 04/25/05
Scale 1" = 20'
Sheet no. 15