



**COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET**
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

December 16, 2016

CALL NO. 100
CONTRACT ID NO. 161270
ADDENDUM # 1

Subject: Rockcastle County, NHPP IM 0753 (092)
Letting December 21, 2016

- (1) Revised - Plans
- (2) Revised - Special Note - Pages 25-28 of 172
- (3) Revised - Utilities & Rail Certification - Pages 45-46(a) of 172
- (4) Revised - Bid Items - Pages 168-172 of 172
- (5) Added - Special Note - Pages 1-4 of 4

Proposal revisions are available at <http://transportation.ky.gov/Construction-Procurement/>.

Plan revisions are available at <http://www.lynnimaging.com/kytransportation/>.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

A handwritten signature in cursive script that reads "Rachel Mills".

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:ks
Enclosures



An Equal Opportunity Employer M/F/D

GENERAL SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
ROCKCASTLE	8-6.3	R2C

ITEM	DESCRIPTION	UNIT	MAINLINE	KY 1505 APPROACH	KY 3275 APPROACH													TOTAL
2726	STAKING	LUMP SUM	1															1
2731	REMOVING EXISTING STRUCTURE (KY 1505)	LUMP SUM		1														1
2731	REMOVING EXISTING STRUCTURE (KY 3275)	LUMP SUM			1													1
8904	CRASH CUSHION TYPE VI CLASS C	EACH	4															4
20432ESI12	REMOVE CRASH CUSHION (11)	EACH	5															5
2898	RELOCATE CRASH CUSHION	EACH	3															3
3171	CONCRETE BARRIER WALL TYPE 9T (TEMPORARY)	LIN FT	52,108															52,108
5950	EROSION CONTROL BLANKET*	SQ YD	1,100	100														1,200
5963	INITIAL FERTILIZER	TON	1.77															1.77
5964	20-10-10 FERTILIZER	TON	10.5	0.40	0.10													11
5992	AGRICULTURAL LIMESTONE	TON	106															106
5985	SEEDING & PROTECTION	SQ YD	189,141	15,029	2,014													206,184
23607EC	PAVE MARK THERMO-LANE REDUCTION ARROW	EACH	6															6
6510	PAVEMENT STRIPING - TEMPORARY - 4"	LIN FT			2,400													2,400
6542	PAVEMENT STRIPING PERM - THERMOPLASTIC 6 IN - WHITE	LIN FT	74,325															74,325
6543	PAVEMENT STRIPING PERM - THERMOPLASTIC 6 IN - YELLOW	LIN FT	49,700															49,700
24489EC	INLAID PAVEMENT MARKER B W/R	EACH	2,464															2,464
20911ED	3000 PSI GROUT MIX	CU YD	96.5															96.5
6401	FLEXIBLE DELINEATOR POST-M/W	EACH	175															175
24814EC	PIPELINE INSPECTION	LIN FT	7,818	80	52													7,950
1015	INSPECT & CERTIFY EDGE DRAIN SYSTEM	LS	1															1
2157	PAVED DITCH TYPE 1	SQ YD	17.25															17.25
2598	FABRIC GEOTEXTILE TYPE III	SQ YD	1,350															1,350
2599	FABRIC GEOTEXTILE TYPE IV	SQ YD	6,000															6,000
2600	FABRIC GEOTEXTILE TYPE IV FOR PIPE	SQ YD	14,500	215	140													14,855
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	4															4
6514	PAVE STRIPING PERM PAINT 4 IN	LIN FT		4,000	1,400													5,400
6511	PAVE STRIPING TEMP PAINT 6 IN	LIN FT	280,908															280,908
3225	TUBULAR MARKERS (8)	EACH	34															34
2696	SHOULDER RUMBLE STRIPS-SAWED	LIN FT	93,193															93,193
10020NS	FUEL ADJUSTMENT	DOLLAR	492,661															492,661
10030NS	ASPHALT ADJUSTMENT	DOLLAR	649,856															649,856
24885ED	RADAR SPEED SIGN	EACH	2															2
24783EC	CONTROL SYSTEM FOR INCIDENT MANAGEMENT	LUMP SUM	1															1
24470ED	PERMEABLE PAVEMENT DRAIN	SQ YD	51															51
24779EC	INTELLIGENT COMPACTION FOR SOIL	CU YD	66,866															66,866
24780EC	INTELLIGENT COMPACTION FOR AGGREGATE	TON	84,149															84,149
24781EC	INTELLIGENT COMPACTION FOR ASPHALT	TON	225,396															225,396

NOTES:

- ⑧ USE FLEX-GUIDE FG300 MODEL EFX OR EQUIVALENT. DAMAGED MARKERS SHALL BE REPLACED AND REPLACEMENT IS INCIDENTAL TO THE ORIGINAL INSTALLATION.
- ⑪ REMOVAL OF THE CONCRETE BARRIER WALL TRANSITION WILL BE INCIDENTAL TO THIS ITEM.

* FOR USE IN LOCATIONS DIRECTED BY THE ENGINEER.

GENERAL SUMMARY

FILE NAME: M:\TRANSPORTATION\1630-04 1-75 REWORK\SUBMITTALS\8-6-3\CONTRACT PLANS AND PROPOSED\CONTRACT PLAN SET\ROADWAY\ADDENDUM NO. 1
 USER: slevans
 DATE PLOTTED: December 15, 2016
 E-SHEET NAME:
 MicroStation v8.11.7.443

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REVISED DEC. 15, 2016

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 USER: slevans
 DATE PLOTTED: December 15, 2016
 E-SHEET NAME:
 MicroStation v8.11.7.443

* FOR USE IN LOCATIONS DIRECTED BY THE ENGINEER.

PAVING SUMMARY

ITEM CODE	ITEM	UNIT	MAINLINE	KY 1505	KY 3275	MEDIAN CROSSOVER & TRANSITION	MAINTENANCE OF TRAFFIC	TOTAL PROJECT
1	DENSE GRADED AGGREGATE BASE ①	TON	75,348	957	237	7,607		84,149
18	DRAINAGE BLANKET TYPE II ASPH. ③	TON	85,875			2,095		87,970
214	CL3 ASPHALT BASE 1.00D PG64-22 ④	TON	2,882	1,211	302			4,395
217	CL4 ASPHALT BASE 1.00D PG64-22	TON	74,396			3,638		78,034
219	CL4 ASPHALT BASE 1.00D PG76-22 ⑤	TON	26,754					26,754
339	CL3 ASPHALT SURFACE 0.38D PG64-22	TON	3,804	300	68		1,710	5,882
342	CL4 ASPHALT SURFACE 0.38A PG76-22	TON	18,814			964		19,778
194	LEVELING & WEDGING PG76-22	TON	4,395					4,395
103	ASPHALT SEAL COAT (2.40"/SY)	TON	50					50
100	ASPHALT SEAL AGGREGATE (20.0"/SY)	TON	414					414
2007EC	LONGITUDINAL JOINT ADHESIVE	LIN FT	186,384					186,384
2677	ASPHALT PAVE MILLING & TEXTURING	TON	600				1,710	2,310
2676	MOBILIZATION FOR MILL & TEXTURING	LS	1					1

NOTES

- ALL ASPHALT MIXTURES SHALL BE ESTIMATED AT 110 LBS. PER SQ. YD. PER INCH OF DEPTH, UNLESS NOTED OTHERWISE.
- ① ESTIMATED AT 115 LBS. PER SQ. YD. PER INCH OF DEPTH.
- ② ESTIMATED AT 100 LBS. PER SQ. YD. PER INCH OF DEPTH
- ③ ESTIMATED AT 95 LBS. PER SQ. YD. PER INCH OF DEPTH
- ④ INCLUDES 23 TONS FOR PERMEABLE PAVEMENT DRAINS
- ⑤ INCLUDES 60 TONS FOR PERMEABLE PAVEMENT DRAINS

SPECIFICATIONS

ALL REFERENCES TO THE STANDARD SPECIFICATIONS ARE TO THE 2012 EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH 2016 SUPPLEMENTAL SPECIFICATIONS. ALL REFERENCES TO THE AASHTO SPECIFICATIONS ARE TO THE 17th EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

DESIGN LOAD AND METHOD

THIS BRIDGE IS DESIGNED FOR HS25 LIVE LOAD OR ALTERNATE MILITARY LOADING, WHICHEVER PRODUCES THE GREATER STRESS. THE HS25 LIVE LOAD IS ARRIVED AT BY INCREASING THE STANDARD HS20-44 TRUCK AND LANE LOADS AS SPECIFIED IN THE AASHTO SPECIFICATIONS BY 25%. ALL REINFORCED CONCRETE MEMBERS ARE DESIGNED BY THE LOAD FACTOR METHOD AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS.

DESIGN WIND LOAD

THIS BRIDGE IS DESIGNED FOR A WIND LOAD BASED ON A WIND VELOCITY OF 100 mph.

MATERIALS DESIGN SPECIFICATIONS

FOR CLASS 'A' REINFORCED CONCRETE
F'C = 3500 psi,
FOR CLASS 'AA' REINFORCED CONCRETE
F'C = 4000 psi,
FOR STEEL REINFORCEMENT
FY = 60,000 psi.

SLOPE PROTECTION

USE CRUSHED AGGREGATE SLOPE PROTECTION IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

REINFORCEMENT

DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE TO CENTER OF BARS UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS. CLEAR DISTANCE TO FACE OF CONCRETE IS 2 INCHES, UNLESS OTHERWISE NOTED. EPOXY COAT BARS DESIGNATED BY THE SUFFIX (E) IN ACCORDANCE WITH SECTION 811.10 OF THE STANDARD SPECIFICATIONS. USE STIRRUP BEND DIAMETERS FOR BARS DESIGNATED BY SUFFIX (S) IN A BILL OF REINFORCEMENT.

BEVELED EDGES

BEVEL ALL EXPOSED EDGES 7/8" UNLESS OTHERWISE NOTED.

COMPLETION OF THE STRUCTURE

THE CONTRACTOR IS REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. MATERIAL, LABOR OR CONSTRUCTION OPERATIONS, NOT OTHERWISE SPECIFIED, ARE TO BE INCLUDED IN THE BID ITEM MOST APPROPRIATE TO THE WORK INVOLVED. THIS MAY INCLUDE COFFERDAMS, SHORING, EXCAVATIONS, BACKFILLING, REMOVAL OF ALL OR PARTS OF EXISTING STRUCTURES, PHASE CONSTRUCTION, INCIDENTAL MATERIALS, LABOR OR ANYTHING ELSE REQUIRED TO COMPLETE THE STRUCTURE.

DIMENSIONS

DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL DIMENSIONS.

TEMPORARY SUPPORTS

TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING 'TOP OF BEAM' ELEVATIONS.

SHOP DRAWINGS

SUBMIT SHOP DRAWINGS THAT ARE REQUIRED BY THE PLANS AND SPECIFICATIONS DIRECTLY TO THE CONSULTANT. IF ANY CHANGES IN THE DESIGN PLANS ARE PROPOSED BY A FABRICATOR OR SUPPLIER, SUBMIT THOSE CHANGES TO THE CONSULTANT THROUGH THE CONTRACTOR.

FOUNDATION DATA

SEE FOUNDATION LAYOUT SHEETS.

PILES

ANY COMMONLY UTILIZED HAMMER ALLOWED BY THE DIVISION OF CONSTRUCTION WILL BE ADEQUATE TO DRIVE THE PILES TO BEDROCK WITHOUT ENCOUNTERING EXCESSIVE BLOW COUNTS AND OVERSTRESSING THE PILES. HAMMER ENERGY ON THE ORDER OF 4.2 TO 4.0 FT-KIPS WILL BE NEEDED TO DRIVE THE 12-INCH PILES TO BEDROCK. HOWEVER, THE KYTC STANDARD SPECIFICATIONS RECOMMENDS A MINIMUM HAMMER ENERGY OF 10.0 FT-KIPS. THE CONTRACTOR SHALL SUBMIT HIS PILE DRIVING SYSTEMS TO THE KENTUCKY TRANSPORTATION CABINET FOR APPROVAL PRIOR TO THE INSTALLATION OF THE FIRST PILE. APPROVAL OF THE PILE DRIVING SYSTEM BY THE ENGINEER WILL BE SUBJECT TO SATISFACTORY FIELD PERFORMANCE OF THE PILE DRIVING PROCEDURES.

PILE POINTS

PROVIDE PILE POINTS FOR ALL POINT BEARING PILES. ENSURE PILE POINTS ARE IN ACCORDANCE WITH SECTION 604 OF THE SPECIFICATIONS AND OF THE TYPE AS SHOWN ON THE FOUNDATION LAYOUT SHEET.

FOOTING EXCAVATION:

ENSURE EXCAVATION FOR FOOTINGS IS IN ACCORDANCE WITH SUBSECTION 603.03.03 OF THE SPECIFICATIONS. RAISING OF THE BOTTOM OF THE FOOTING IS NOT ALLOWED.

FALL PROTECTION:

PROVIDE FLOORING FOR WORKERS IN SITUATIONS WHERE THE DANGER FROM A FALL IS COMPOUNDED BY THE TRAFFIC AND FOR PROTECTION TO THE TRAFFIC. IF TEMPORARY FLOORING IS NECESSARY IN ADDITION TO SLAB FORMS, THE FLOORING IS TO BE DESIGNED USING THE SUM OF DEAD LOAD AND LIVE VERTICAL LOADS. INCLUDE 50 PSF OF HORIZONTAL SURFACES AND THE WEIGHT OF ANY MATERIAL OR EQUIPMENT THAT IS PLACED OR ALLOWED TO FALL DURING CONSTRUCTION OR DEMOLITION IN THE LIVE LOAD COMPUTATION. SUBMIT THE FLOORING DESIGN ALONG WITH THE FALSEWORK DESIGN TO THE ENGINEER FOR APPROVAL. EXTEND TEMPORARY FLOORING ACROSS TRAFFIC LANES, RAMPS, AND USABLE SHOULDERS OF HIGHWAYS AND 8 (EIGHT) FEET BEYOND THE OUTER RAILS OF TRACKS FOR RAILWAYS. CONSIDER ALL PHASES OF FURNISHING AND REMOVING THE FLOORING AS INCIDENTAL TO THE CONTRACT. THIS ITEM MAY BE CONSIDERED IN ADDITION TO ANY REQUIREMENT SET FORTH IN SUBSECTION 107.01.01 OF THE SPECIFICATIONS.

COFFERDAMS FOR PIERS:

COFFERDAMS MAY BE REQUIRED FOR PIERS 1 AND 3. PROVISIONS INCLUDE, BUT ARE NOT LIMITED TO SECTION 206.06 AND SECTION 105.02 OF THE SPECIFICATIONS. INCLUDE ALL COSTS FOR COFFERDAMS AND TEMPORARY SHORING IN THE PRICE BID FOR 'FOUNDATION PREPARATION'.

SUPERSTRUCTURE SLAB:

ENSURE THE SUPERSTRUCTURE SLAB IS POURED CONTINUOUSLY IN EACH PHASE, OUT TO OUT, BEFORE ALLOWING ANY CONCRETE TO SET.

SAWCUTTING EXISTING CONCRETE:

PRIOR TO THE REMOVAL OF THE EXISTING CONCRETE MASONRY, CUT THE SURFACE WITH A CONCRETE SAW TO A DEPTH OF 1 INCH TO FACILITATE A NEAT LINE. INCLUDE THE COST OF CUTTING CONCRETE IN THE BID FOR REMOVING CONCRETE MASONRY.

REMOVE EXISTING STRUCTURE:

THE EXISTING BRIDGE SHALL BE REMOVED IN STAGES TO COINCIDE WITH THE PHASED CONSTRUCTION OF THE NEW BRIDGE. PAVEMENT BREAKERS EXCEEDING 40 LBS. SHALL NOT BE USED TO REMOVE THE DECK ADJACENT TO PORTIONS OF THE EXISTING BRIDGE WHICH ARE TO REMAIN IN SERVICE DURING PHASE I. CONCRETE REMOVAL SHALL BE DONE CAREFULLY AND IN AN APPROVED MANNER SO AS NOT TO DAMAGE EXISTING BRIDGE PORTIONS BEING USED TO MAINTAIN TRAFFIC. ANY DAMAGE TO PORTIONS OF THE BRIDGE WHICH ARE TO BE USED TO MAINTAIN TRAFFIC OR WHICH WILL REMAIN IN THE FINISHED STRUCTURE SHALL BE REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.

PHASED CONSTRUCTION

ALL PHASE I CONSTRUCTION SHOWN ON THESE PLANS SHALL BE COMPLETED AND OPENED TO TRAFFIC BEFORE BEGINNING PHASE II. SEE ROADWAY PLANS FOR MAINTENANCE OF TRAFFIC NOTES.

MASTIC TAPE

MASTIC TAPE USED TO SEAL JOINTS IS TO MEET THE REQUIREMENTS OF ASTM C-877 TYPE I, II, OR III. THE JOINT IS TO BE COVERED WITH 12-INCH WIDE 12-INCH WIDE MASTIC TAPE. PRIOR TO APPLICATION, THE JOINT SURFACE SHALL BE CLEAN AND FREE OF DIRT, DEBRIS, OR DELETERIOUS MATERIAL. PRIMER, IF REQUIRED BY THE TAPE MFR., SHALL BE APPLIED FOR A MINIMUM WIDTH OF NINE INCHES ON EACH SIDE OF THE JOINT.

MASTIC TAPE SHALL BE EITHER:

EZ-WRAP RUBBER BY PRESS-SEAL GASKET CORPORATION,
SEAL WRAP BY MAR MAC MANUFACTURING CO. INC.,
CADILLOC BY THE UP RUBBER CO. INC.
OR APPROVED EQUAL.

MASTIC TAPE SHALL COVER THE JOINT CONTINUOUSLY UNLESS OTHERWISE SHOWN IN THE PLANS. MASTIC TAPE SHALL BE SPLICED BY LAPPING A MINIMUM OF SIX INCHES AND IN ACCORDANCE WITH THE MFRS. RECOMMENDATIONS WITH THE OVERLAP RUNNING DOWNHILL.

THE COST OF LABOR, MATERIALS, AND INCIDENTAL ITEMS FOR FURNISHING AND INSTALLING MASTIC TAPE SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR CONCRETE CLASS 'AA' AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

These Plans Were Originally Set Up For Staged Construction. However, Due To A Late Change, The Bridge Shall Be Constructed Without Staging. As Such, Construction Joints Shown In These Plans For Staging Shall Be Eliminated. The Contractor May Opt To Adhere To The Reinforcing Details And Schedules In These Plans, Or He May Opt To Present An Alternate Reinforcing Schedule Which Eliminates The Splices In The Transverse Slab Reinforcement And The Splices In The Cap Reinforcement In The Piers And End Bents.

REVISION		DATE
DATE: 2016	CHECKED BY	
DESIGNED BY: JLB	JAC	
DETAILED BY: SF	HLW	

**Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS**

COUNTY
ROCKCASTLE

ROUTE CR 2	CROSSING INTERSTATE 75
GENERAL NOTES	

ITEM NUMBER		<small>SHEET NO.</small> S2
8-6.3		<small>DRAWING NO.</small> 25340

FILE NAME: S:\STRUCTURES\11630-04 ROCKCASTLE I-75 UPDATE PLANS\FINAL REVISED PLANS\25340 - HURRICANE SCHOOL RD\ADDENDUM 2016-12-16\25340_002_GENERAL_NOTES.DWG
USER: cw11loms
DATE PLOTTED: December 16, 2016
E-SHEET NAME: MicroStation v8.11.7.443

FILE NAME: S:\STRUCTURES\11630-04 ROCKCASTLE E-75 UPDATE PLANS\FINAL REVISED PLANS\25340 - HURRICANE SCHOOL RID\FRL2016\DATA\ES25340_002.GENERAL_NOTES.DGN
 USER: mcferguson
 DATE: PLOTTED: November 16, 2016
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ENSURE EXCAVATION FOR FOOTINGS IS IN ACCORDANCE WITH SUBSECTION 603.03.03 OF THE SPECIFICATIONS. RAISING OF THE BOTTOM OF THE FOOTING IS NOT ALLOWED.

FALL PROTECTION:

PROVIDE FLOORING FOR WORKERS IN SITUATIONS WHERE THE DANGER FROM A FALL IS COMPOUNDED BY THE TRAFFIC AND FOR PROTECTION TO THE TRAFFIC. IF TEMPORARY FLOORING IS NECESSARY IN ADDITION TO SLAB FORMS, THE FLOORING IS TO BE DESIGNED USING THE SUM OF DEAD LOAD AND LIVE VERTICAL LOADS. INCLUDE 50 PSF OF HORIZONTAL SURFACES AND THE WEIGHT OF ANY MATERIAL OR EQUIPMENT THAT IS PLACED OR ALLOWED TO FALL DURING CONSTRUCTION OR DEMOLITION IN THE LIVE LOAD COMPUTATION. SUBMIT THE FLOORING DESIGN ALONG WITH THE FALSEWORK DESIGN TO THE ENGINEER FOR APPROVAL. EXTEND TEMPORARY FLOORING ACROSS TRAFFIC LANES, RAMPS, AND USABLE SHOULDERS OF HIGHWAYS AND 8 (EIGHT) FEET BEYOND THE OUTER RAILS OF TRACKS FOR RAILWAYS. CONSIDER ALL PHASES OF FURNISHING AND REMOVING THE FLOORING AS INCIDENTAL TO THE CONTRACT. THIS ITEM MAY BE CONSIDERED IN ADDITION TO ANY REQUIREMENT SET FORTH IN SUBSECTION 107.01.01 OF THE SPECIFICATIONS.

COFFERDAMS FOR PIERS:

COFFERDAMS MAY BE REQUIRED FOR PIERS 1 AND 3. PROVISIONS INCLUDE, BUT ARE NOT LIMITED TO SECTION 206.06 AND SECTION 105.02 OF THE SPECIFICATIONS. INCLUDE ALL COSTS FOR COFFERDAMS AND TEMPORARY SHORING IN THE PRICE BID FOR *FOUNDATION PREPARATION*.

SUPERSTRUCTURE SLAB:

ENSURE THE SUPERSTRUCTURE SLAB IS POURED CONTINUOUSLY IN EACH PHASE, OUT TO OUT, BEFORE ALLOWING ANY CONCRETE TO SET.

SAWCUTTING EXISTING CONCRETE:

PRIOR TO THE REMOVAL OF THE EXISTING CONCRETE MASONRY, CUT THE SURFACE WITH A CONCRETE SAW TO A DEPTH OF 1 INCH TO FACILITATE A NEAT LINE. INCLUDE THE COST OF CUTTING CONCRETE IN THE BID FOR REMOVING CONCRETE MASONRY.


REMOVE EXISTING STRUCTURE:

THE EXISTING BRIDGE SHALL BE REMOVED IN STAGES TO COINCIDE WITH THE PHASED CONSTRUCTION OF THE NEW BRIDGE. PAVEMENT BREAKERS EXCEEDING 40 LBS. SHALL NOT BE USED TO REMOVE THE DECK ADJACENT TO PORTIONS OF THE EXISTING BRIDGE WHICH ARE TO REMAIN IN SERVICE DURING PHASE I. CONCRETE REMOVAL SHALL BE DONE CAREFULLY AND IN AN APPROVED MANNER SO AS NOT TO DAMAGE EXISTING BRIDGE PORTIONS BEING USED TO MAINTAIN TRAFFIC. ANY DAMAGE TO PORTIONS OF THE BRIDGE WHICH ARE TO BE USED TO MAINTAIN TRAFFIC OR WHICH WILL REMAIN IN THE FINISHED STRUCTURE SHALL BE REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.

PHASED CONSTRUCTION

ALL PHASE I CONSTRUCTION SHOWN ON THESE PLANS SHALL BE COMPLETED AND OPENED TO TRAFFIC BEFORE BEGINNING PHASE II. SEE ROADWAY PLANS FOR MAINTENANCE OF TRAFFIC NOTES.

These Plans Were Originally Set Up For Staged Construction. However, Due To A Late Change, The Bridge Shall Be Constructed Without Staging. As Such, Construction Joints Shown In These Plans For Staging Shall Be Eliminated. The Contractor May Opt To Adhere To The Reinforcing Details And Schedules In These Plans, Or He May Opt To Present An Alternate Reinforcing Schedule Which Eliminates The Splices In The Transverse Slab Reinforcement And The Splices In The Cap Reinforcement In The Piers And End Bents.

REVISION		DATE	
DATE: 2016	CHECKED BY		
DESIGNED BY: JLB	JAC		
DETAILED BY: SF	HLW		
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS			
COUNTY			
ROCKCASTLE			
ROUTE CR 2	CROSSING INTERSTATE 75		
GENERAL NOTES			
PREPARED BY			SHEET NO.
			S2
			DRAWING NO. 25340

ITEM NUMBER
8-6.3

PILE RECORD FOR POINT BEARING PILES						
Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS
END BENT #1						
1	1196.134			70	150	
2						
3						
4						
5						
6						
7						
8	1196.134			70	150	

Definitions of Terms

PILE CUT-OFF ELEVATION: Elevation of the top of pile in the finished structure.

PILE LENGTH IN PLACE: Actual pile length below the Pile Cut-Off Elevation in the finished structure.

POINT OF PILE ELEVATION AS DRIVEN: Actual point of pile elevation in the finished structure.

DESIGN AXIAL LOAD: Service load carried by each pile as estimated from structural design calculations.

REQUIRED FIELD BEARING: Pile bearing value required to achieve 'refusal' for the size of pile used, according to The Division Of Construction Guidance Manual, this value is taken as 150 tons for HP 12x53 steel H-Piles.

CALCULATED FIELD BEARING: Pile bearing value in place calculated using the appropriate pile driving formula in Section 604.05.07(B) of the Standard Specifications.

Field Data

For each pile, The Project Engineer shall record the following on this sheet: Pile Length In Place, Point of Pile Elevation as Driven, and the Calculated Field Bearing. Submit this record to:

Director, Division Of Bridge Design
Station E3-16-01
200 Mero Street
Frankfort, KY 40622-0001

This pile record does not replace other pile records the Project Engineer is required to keep and submit.

Use HPI2X53 in accordance with BPS-003 C.E.

Use reinforced pile points capable of keying into sloping rock surfaces and seating the piles in the shale.

Any commonly utilized hammer allowed by the Division of Construction will be adequate to drive the piles to bedrock without encountering excessive blow counts and overstressing the piles. The Contractor shall submit his pile driving system to the Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to the satisfactory field performance of the pile driving procedures.

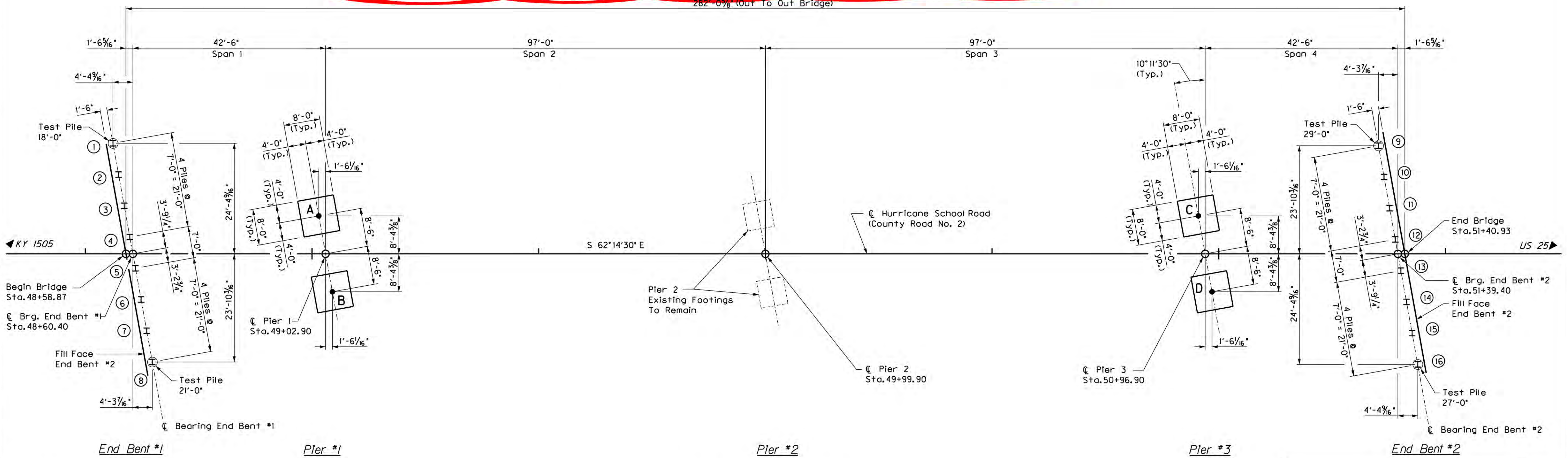
PILE RECORD FOR POINT BEARING PILES						
Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS
END BENT #2						
9	1197.656			70	150	
10						
11						
12						
13						
14						
15						
16	1197.656			70	150	

Driving Criteria

Drive point bearing piles to refusal and verify that the Calculated Field Bearing equals or exceeds the Required Field Bearing.

PRACTICAL REFUSAL: Drive point bearing piles to practical refusal. For this project minimum blow requirements are reached after total penetration becomes 1/2 inch or less for 10 consecutive blows, practical refusal is obtained after the pile is struck and additional 10 blows with total penetration of 1/2 inch or less. Advance the production piling to the driving resistances specified above and to depths determined by the test pile(s) and subsurface data sheet(s). Immediately cease driving operations if the pile visibly yields or becomes damaged during driving. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production and test piles if directed by the Engineer.

282-0% (Out To Out Bridge)



FOUNDATION LAYOUT

I Denotes HPI2 x 53 Vertical Piles

Spread Footing Record Pier #1		
Point	Plan Footing Elevation	As-Built Footing Elevation
A	1175.440	
B	1175.440	

The Project Resident Engineer is to record the 'As-Built Footing Elevation' taken at the bottom of footing and submit one copy of this sheet to:

Kentucky Transportation Cabinet
Division of Bridge Design
Station: E3-16-01
200 Mero Street
Frankfort, KY 40622

If the spread footing foundation is stepped due to unsuitable material found at the given elevation, record the location and elevation of the step as well.

Spread Footing Record Pier #3		
Point	Plan Footing Elevation	As-Built Footing Elevation
C	1165.011	
D	1165.011	

Footing is designed for a maximum pressure of 20.3 KSF. The allowable bearing capacity is 30 KSF.

REVISION		DATE
DESIGNED BY: JLB	CHECKED BY: JAC	
DATE: 2016	DETAILED BY: SF	
Commonwealth of Kentucky		
DEPARTMENT OF HIGHWAYS		
COUNTY		
ROCKCASTLE		
ROUTE	CROSSING	
CR 2	INTERSTATE 75	
FOUNDATION LAYOUT		
ITEM NUMBER	PREPARED BY:	SHEET NO.
8-6.3	V&M Vaughn & Melton Consulting Engineers	S8 DRAWING NO. 25340

FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE E-15 UPDATE PLANS\FINAL REVISED PLANS\25340 - HURRICANE SCHOOL ROAD ADDENDUM 2016-12-16\25340-008 FOUNDATION LAYOUT.DWG
 USER: awilliams
 DATE PLOTTED: December 16, 2016
 E-SHEET NAME: MicroStation v8.11.7.443

FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE I-75 UPDATE PLANS\FINAL REVISED PLANS\25340 - HURRICANE SCHOOL RD\FR_2016\UPDATE\AS25340_008_FOUNDATION_LAYOUT.DGN
 USER: FrJohnson
 DATE PLOTTED: November 16, 2016
 E-SHEET NAME: MicroStation v8.11.7.443

PILE RECORD FOR POINT BEARING PILES					
Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS
END BENT #1					
1	1196.134			70	150
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Definitions of Terms

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PILE LENGTH IN PLACE: Actual pile length below the Pile Cut-Off Elevation in the finished structure.

POINT OF PILE ELEVATION AS DRIVEN: Actual point of pile elevation in the finished structure.

DESIGN AXIAL LOAD: Service load carried by each pile as estimated from structural design calculations.

REQUIRED FIELD BEARING: Pile bearing value required to achieve 'refusal' for the size of pile used, according to The Division Of Construction Guidance Manual. This value is taken as 150 tons for HP 12x53 steel H-Piles.

CALCULATED FIELD BEARING: Pile bearing value in place calculated using the appropriate pile driving formula in Section 604.03.07(B) of the Standard Specifications.

Driving Criteria

Drive point bearing piles to refusal and verify that the Calculated Field Bearing equals or exceeds the Required Field Bearing.

Field Data

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Director, Division Of Bridge Design
 Station E3-16-01
 200 Mero Street
 Frankfort, KY 40622-0001

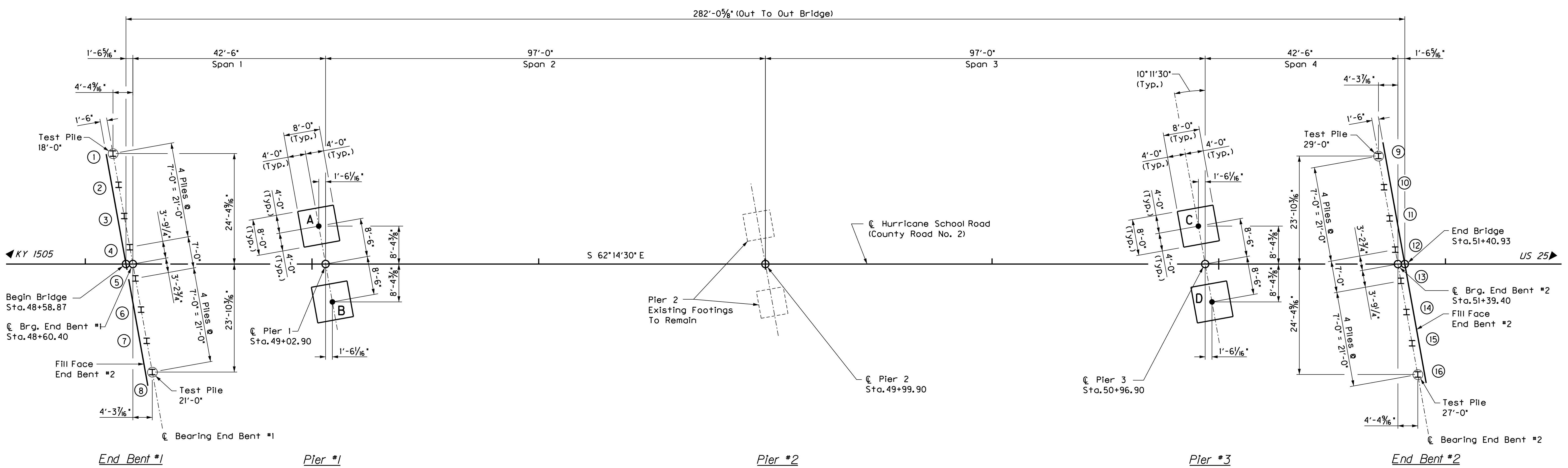
This pile record does not replace other pile records the Project Engineer is required to keep and submit.

Use HPI2X53 in accordance with BPS-003 C.E.

Use reinforced pile points capable of keying into sloping rock surfaces and seating the piles in the shale.

Any commonly utilized hammer allowed by the Division of Construction will be adequate to drive the piles to bedrock without encountering excessive blow counts and over-stressing the piles. The Contractor shall submit his pile driving system to the Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to the satisfactory field performance of the pile driving procedures.

PILE RECORD FOR POINT BEARING PILES					
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END BENT #2					
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10					
11					
12					
13					
14					
15					
16	1197.656			70	150



FOUNDATION LAYOUT

I Denotes HPI2 x 53 Vertical Piles

Spread Footing Record Pier #1		
Point	Plan Footing Elevation	As-Built Footing Elevation
A	1175.440	
B	1175.440	

The Project Resident Engineer is to record the 'As-Built Footing Elevation' taken at the bottom of footing and submit one copy of this sheet to:

Kentucky Transportation Cabinet
 Division of Bridge Design
 Station: E3-16-01
 200 Mero Street
 Frankfort, KY 40622

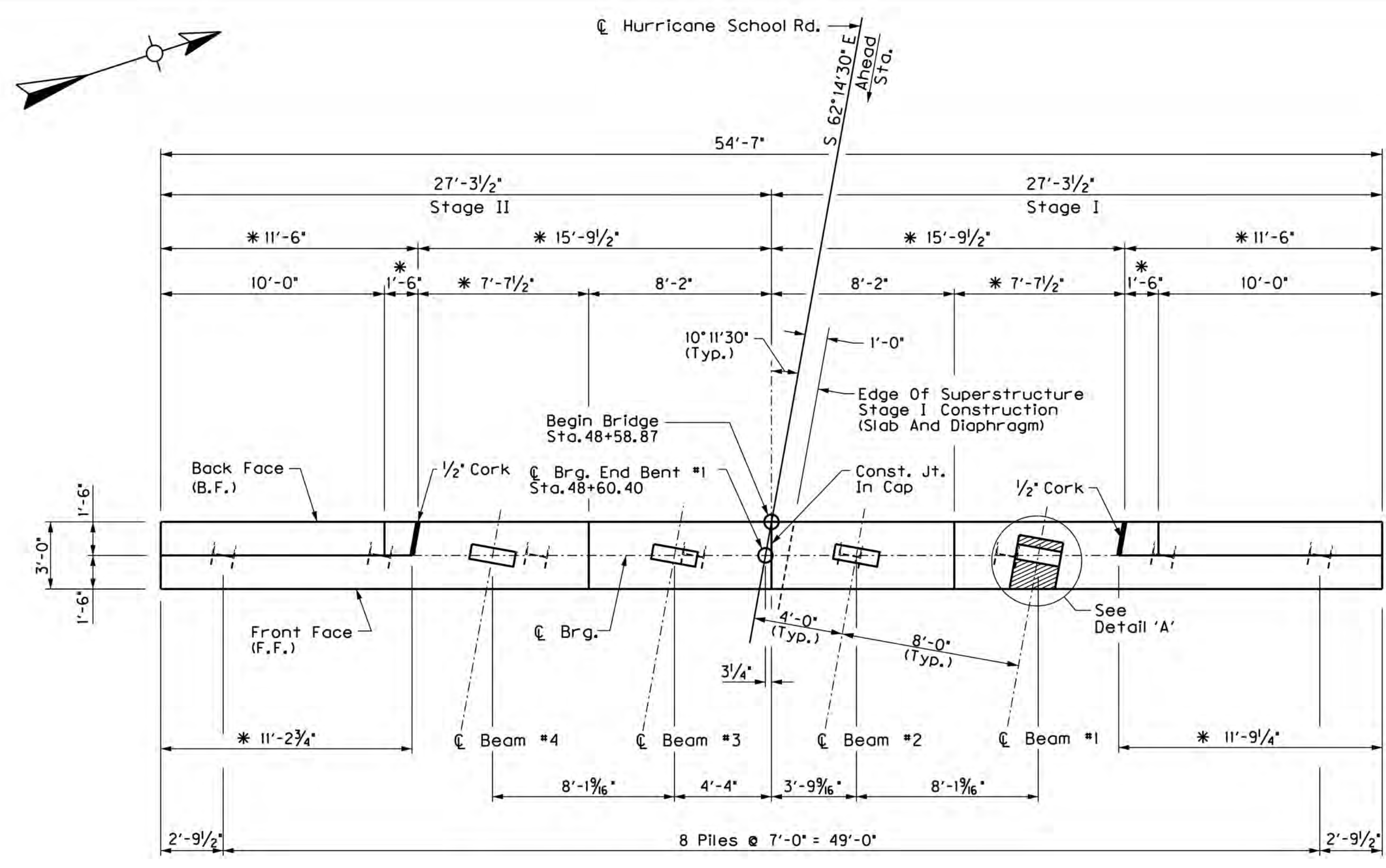
If the spread footing foundation is stepped due to unsuitable material found at the given elevation, record the location and elevation of the step as well.

Spread Footing Record Pier #3		
Point	Plan Footing Elevation	As-Built Footing Elevation
C	1165.011	
D	1165.011	

Footing is designed for a maximum pressure of 20.3 KSF. The allowable bearing capacity is 30 KSF.

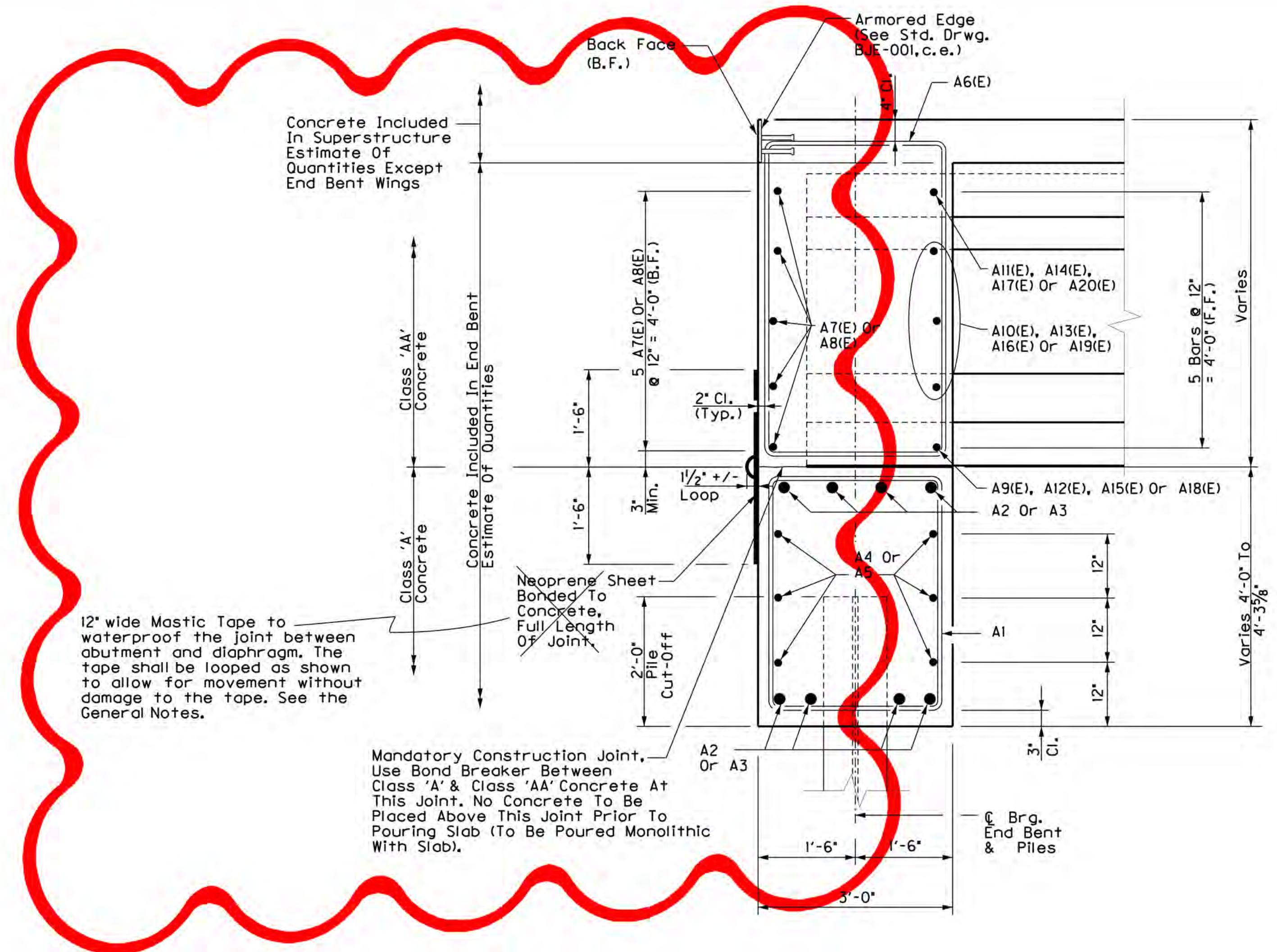
REVISION		DATE
DATE: 2016	CHECKED BY: JAC	
DESIGNED BY: JLB	JAC	
DETAILED BY: SF	HLW	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY ROCKCASTLE		
ROUTE CR 2	CROSSING INTERSTATE 75	
FOUNDATION LAYOUT		
ITEM NUMBER	PREPARED BY	
8-6.3	V&M Vaughn & Melton Consulting Engineers	
	SHEET NO. 8 DRAWING NO. 25340	

FILE NAME: S:\STRUCTURES\16-04 ROCKCASTLE 17-15 UPDATE PLANS\FINAL REVISED PLANS\25340 - HURRICANE SCHOOL - ROCKCASTLE 16-12-16\25340-009.END.BENT.DETAILS.DWG
 USER: awilliams
 DATE PLOTTED: December 16, 2016
 E-SHEET NAME: MicroStation v8.11.7.443

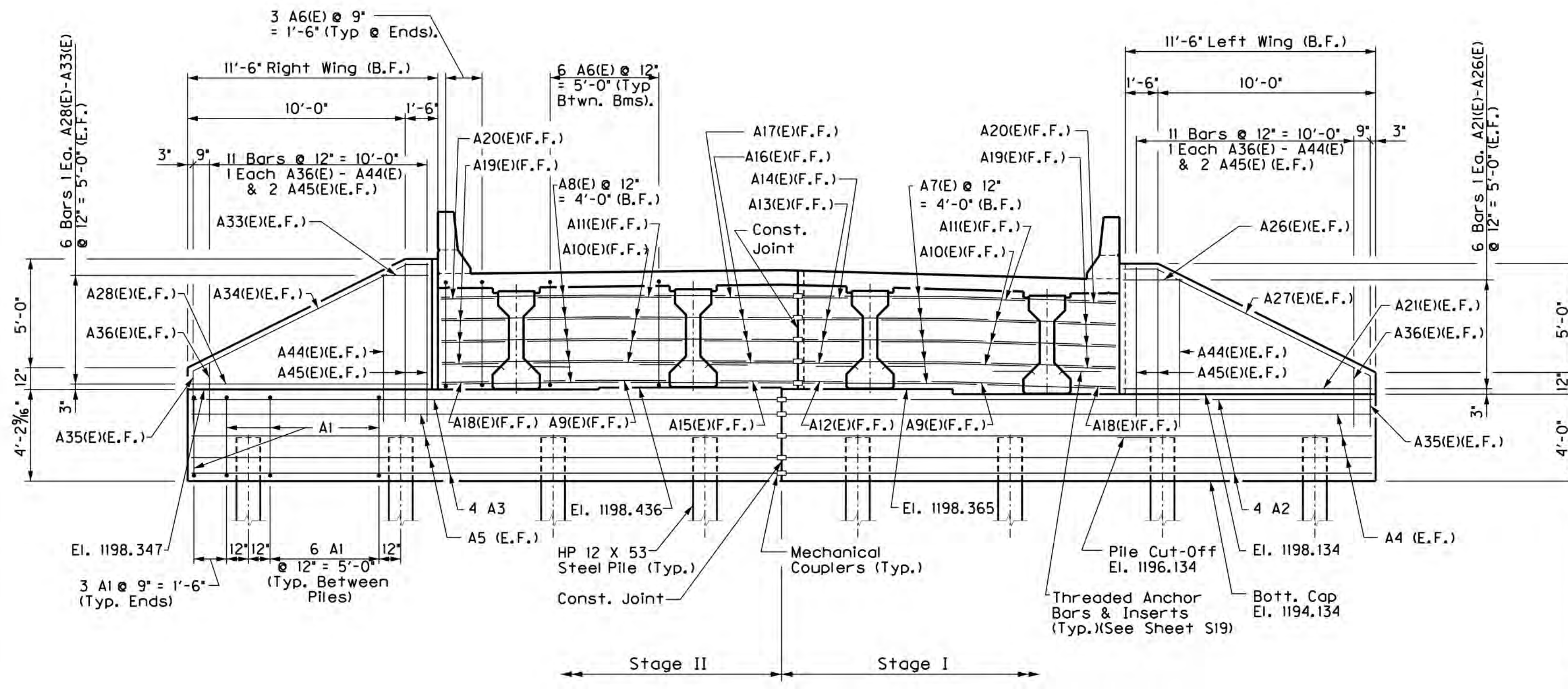


PLAN

*Dimensions To Edge Of Concrete



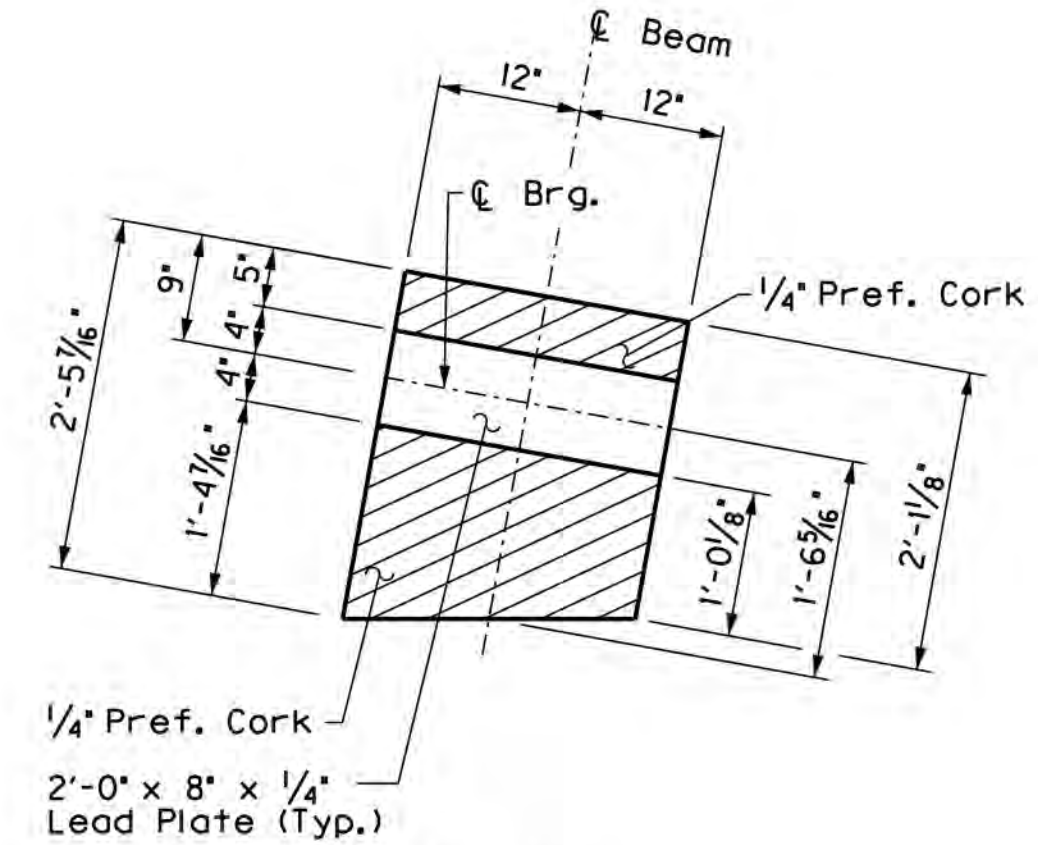
SECTION THRU CAP



ELEVATION

(Looking Back)
(Dimensions Shown Along Back Face Unless Otherwise Noted)

Note: Mechanical Couplers Are Incidental To Steel Reinforcement.



DETAIL 'A'

These Plans Were Originally Set Up For Staged Construction. However, Due To A Late Change, The Bridge Shall Be Constructed Without Staging. As Such, Construction Joints Shown In These Plans For Staging Shall Be Eliminated. The Contractor May Opt To Adhere To The Reinforcing Details And Schedules In These Plans, Or He May Opt To Present An Alternate Reinforcing Schedule Which Eliminates The Splices In The Transverse Slab Reinforcement And The Splices In The Cap Reinforcement In The Piers And End Bents.

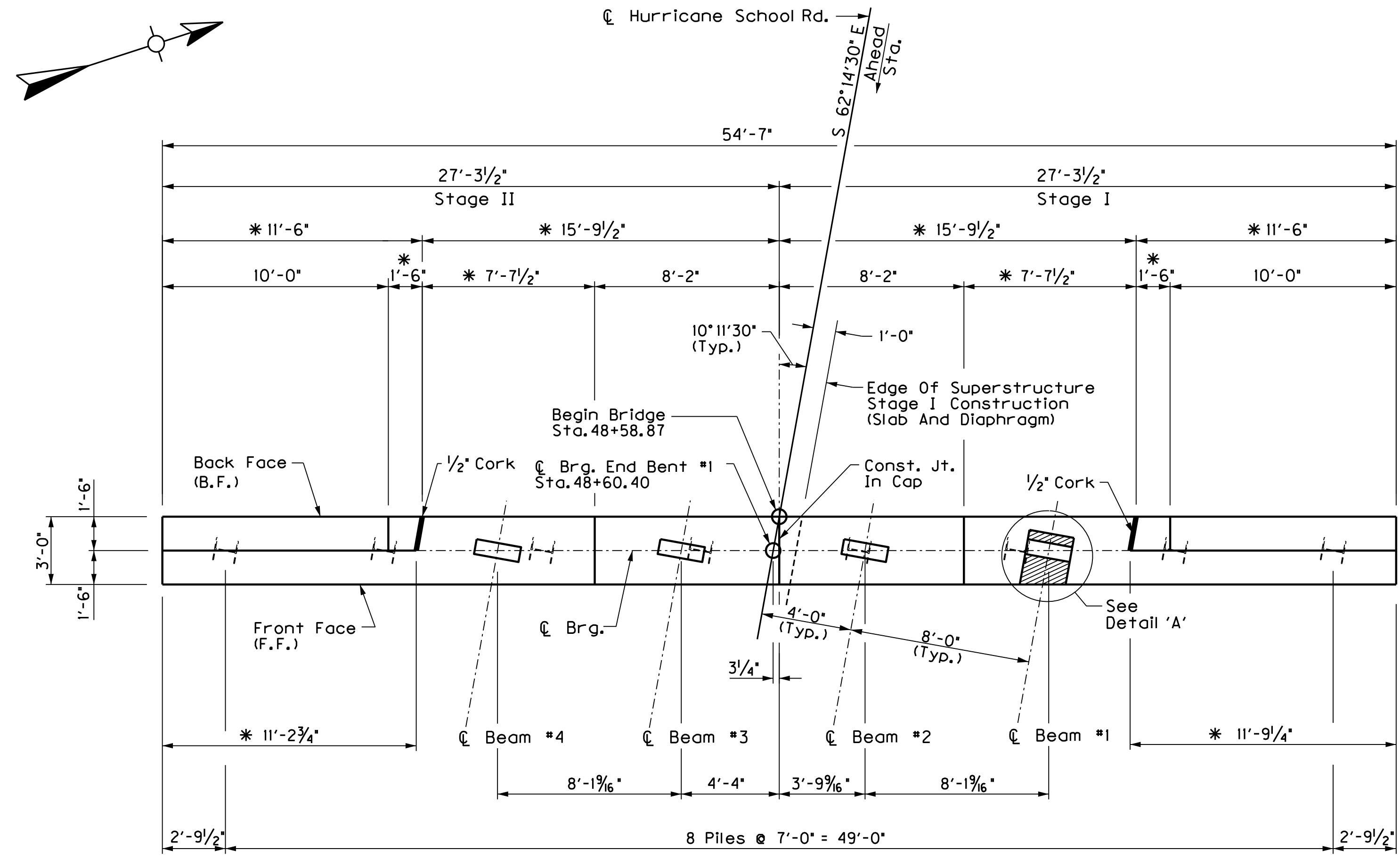
ESTIMATE OF QUANTITIES		
ITEM	QUANTITY	UNIT
CONCRETE CLASS 'A'	25.2	CU. YD.
CONCRETE CLASS 'AA'	19.4	CU. YD.
STEEL REINFORCEMENT	2159	LBS.
EPOXY COATED REINFORCEMENT	1157	LBS.

REVISION	DATE

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY
ROCKCASTLE
ROUTE
CR 2 CROSSING
INTERSTATE 75
END BENT #1 DETAILS

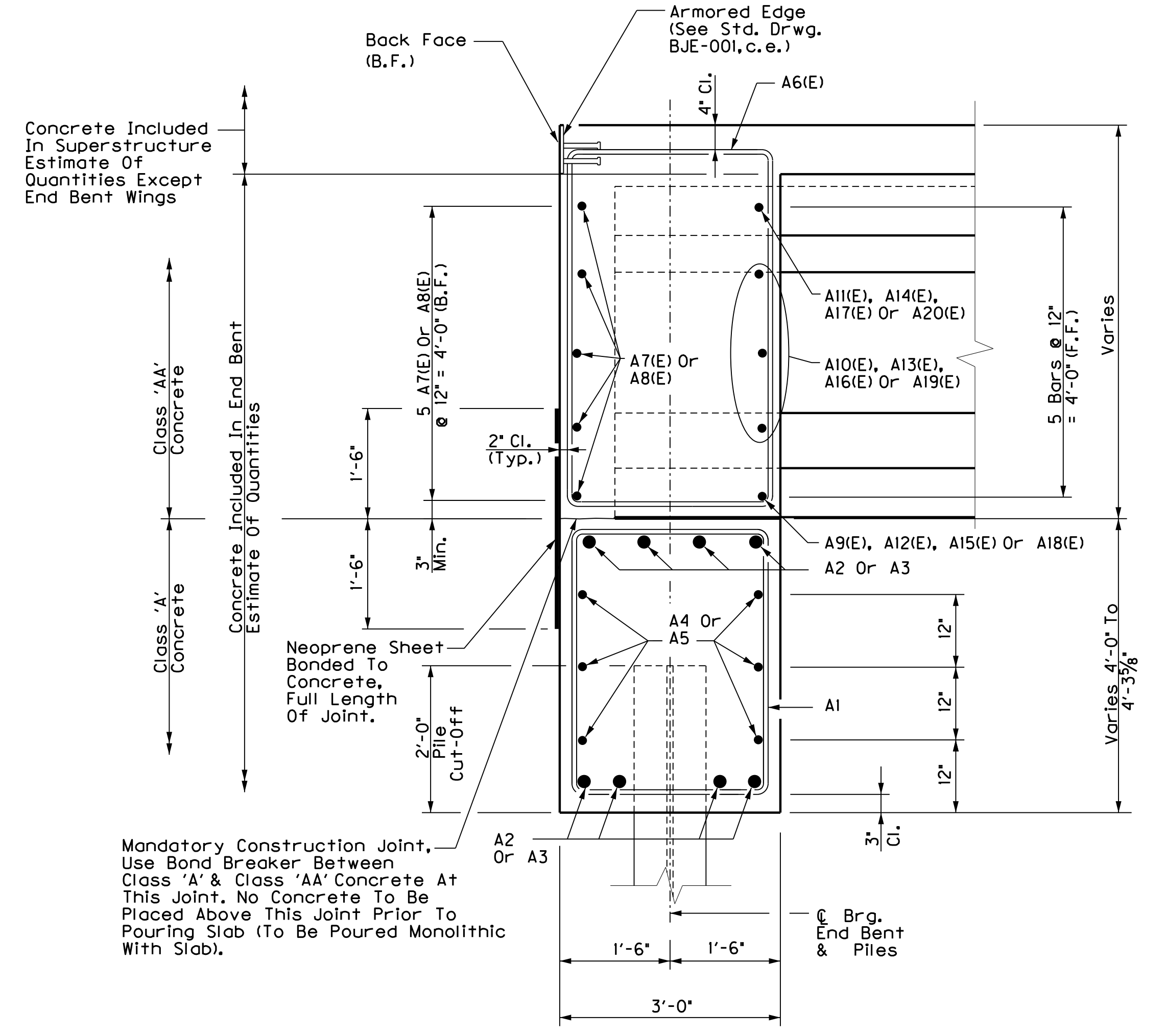
ITEM NUMBER	8-6.3		SHEET NO. S9 DRAWING NO. 25340

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 USER: moferguson
 DATE PLOTTED: November 16, 2016
 E-SHEET NAME: MicroStation v8.11.7.443

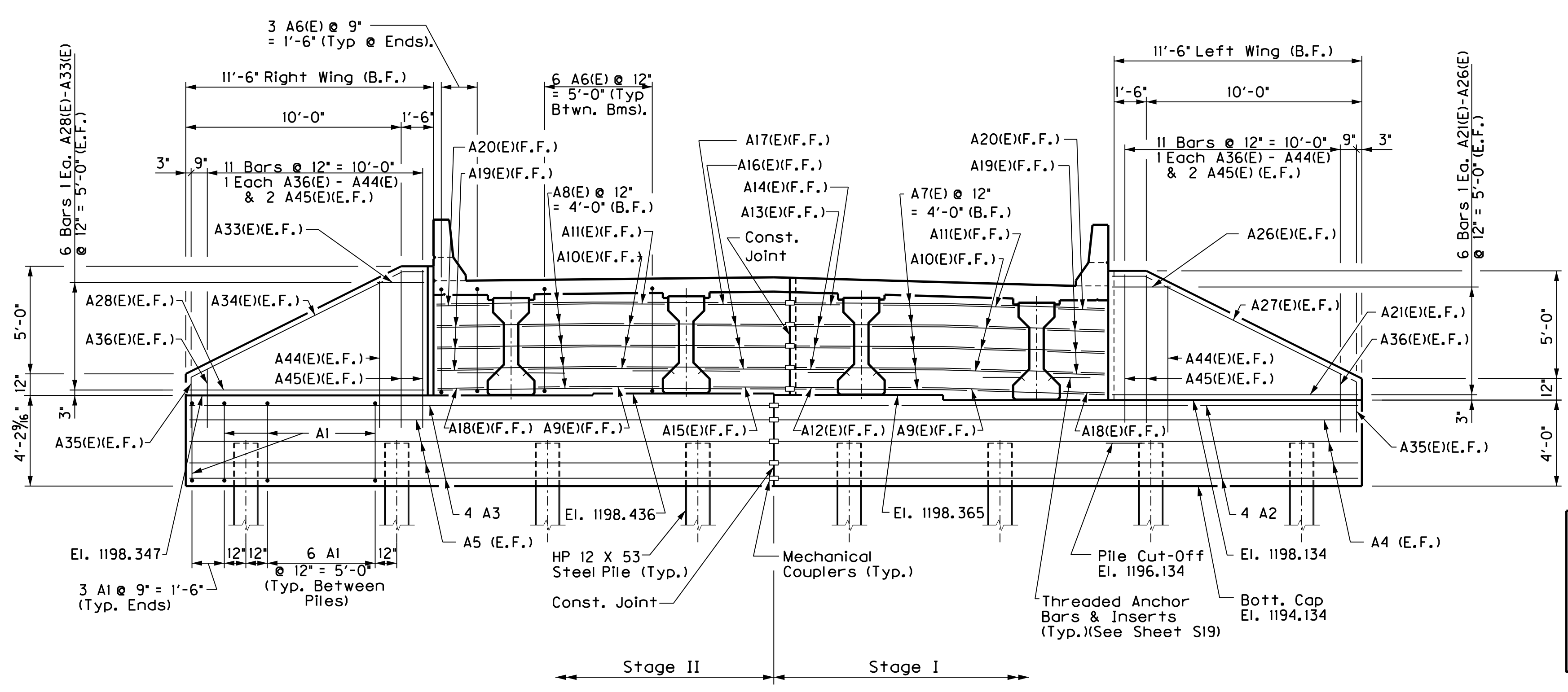


PLAN

*Dimensions To Edge Of Concrete



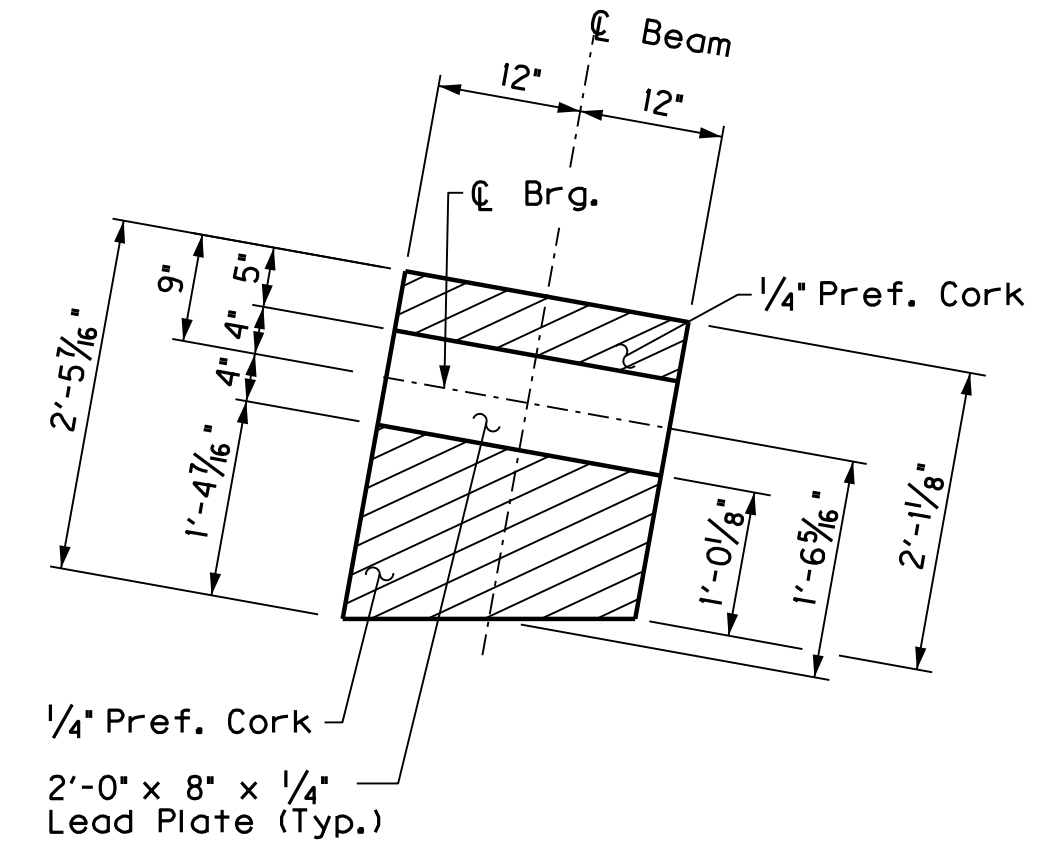
SECTION THRU CAP



ELEVATION

(Looking Back)
(Dimensions Shown Along Back Face Unless Otherwise Noted)

Note: Mechanical Couplers Are Incidental To Steel Reinforcement.



DETAIL 'A'

These Plans Were Originally Set Up For Staged Construction. However, Due To A Late Change, The Bridge Shall Be Constructed Without Staging. As Such, Construction Joints Shown In These Plans For Staging Shall Be Eliminated. The Contractor May Opt To Adhere To The Reinforcing Details And Schedules In These Plans, Or He May Opt To Present An Alternate Reinforcing Schedule Which Eliminates The Splices In The Transverse Slab Reinforcement And The Splices In The Cap Reinforcement In The Piers And End Bents.

ESTIMATE OF QUANTITIES		
ITEM	QUANTITY	UNIT
CONCRETE CLASS 'A'	25.2	CU. YD.
CONCRETE CLASS 'AA'	19.4	CU. YD.
STEEL REINFORCEMENT	2159	LBS.
EPOXY COATED REINFORCEMENT	1157	LBS.

REVISION	DATE

DATE: 2016
 DESIGNED BY: JLB
 CHECKED BY: JAC
 DETAILED BY: SF
 HLW

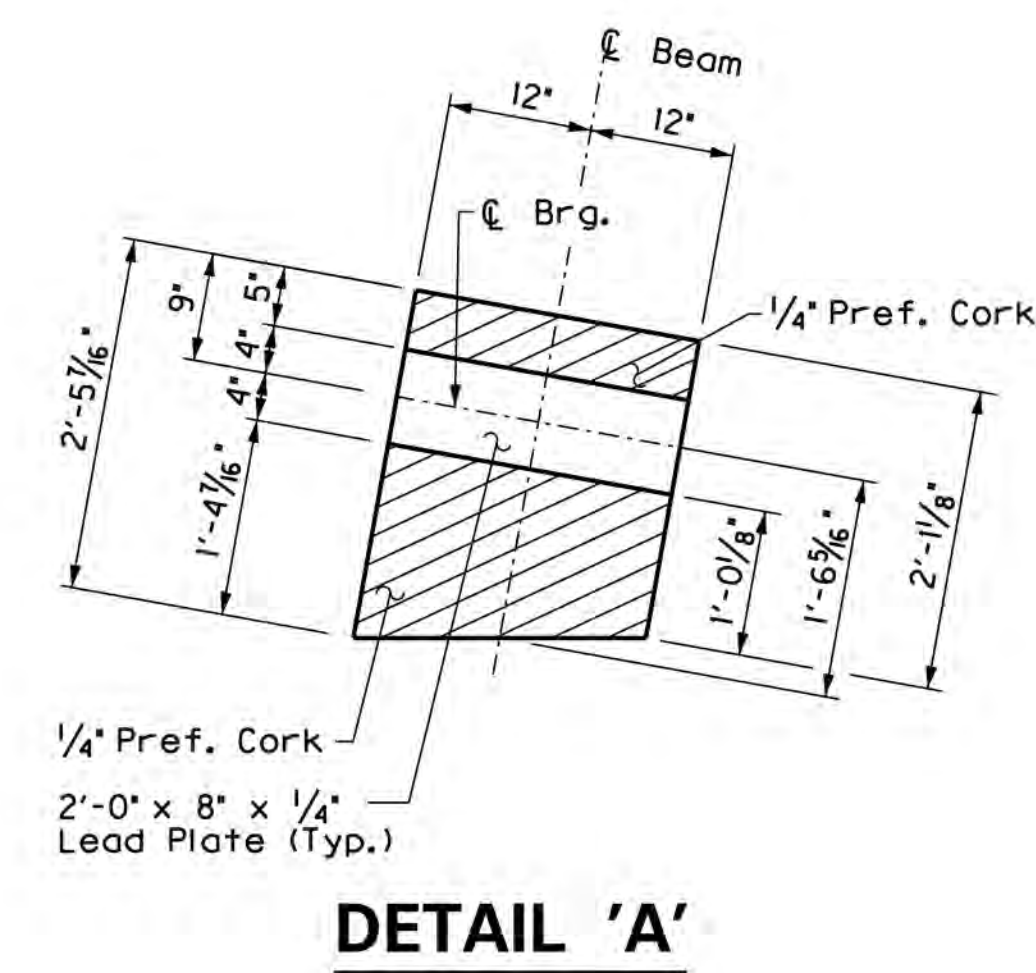
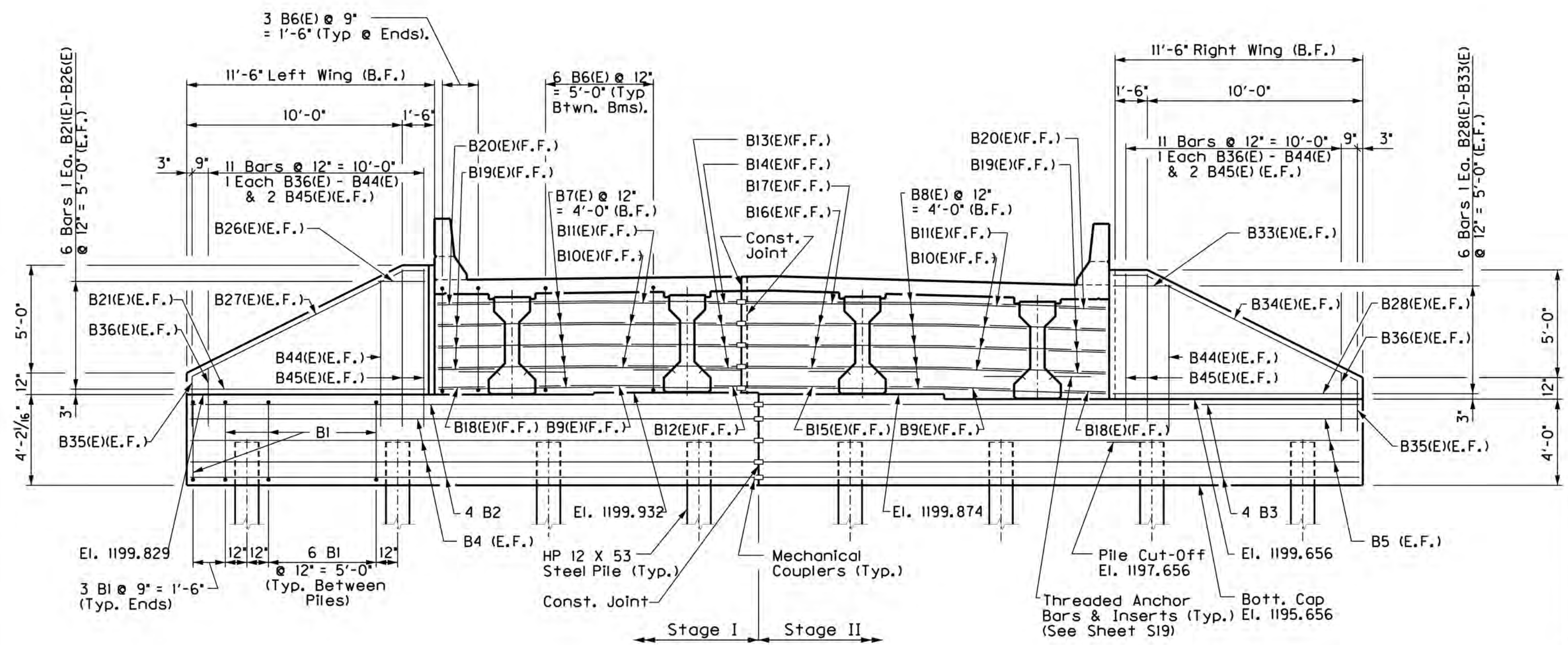
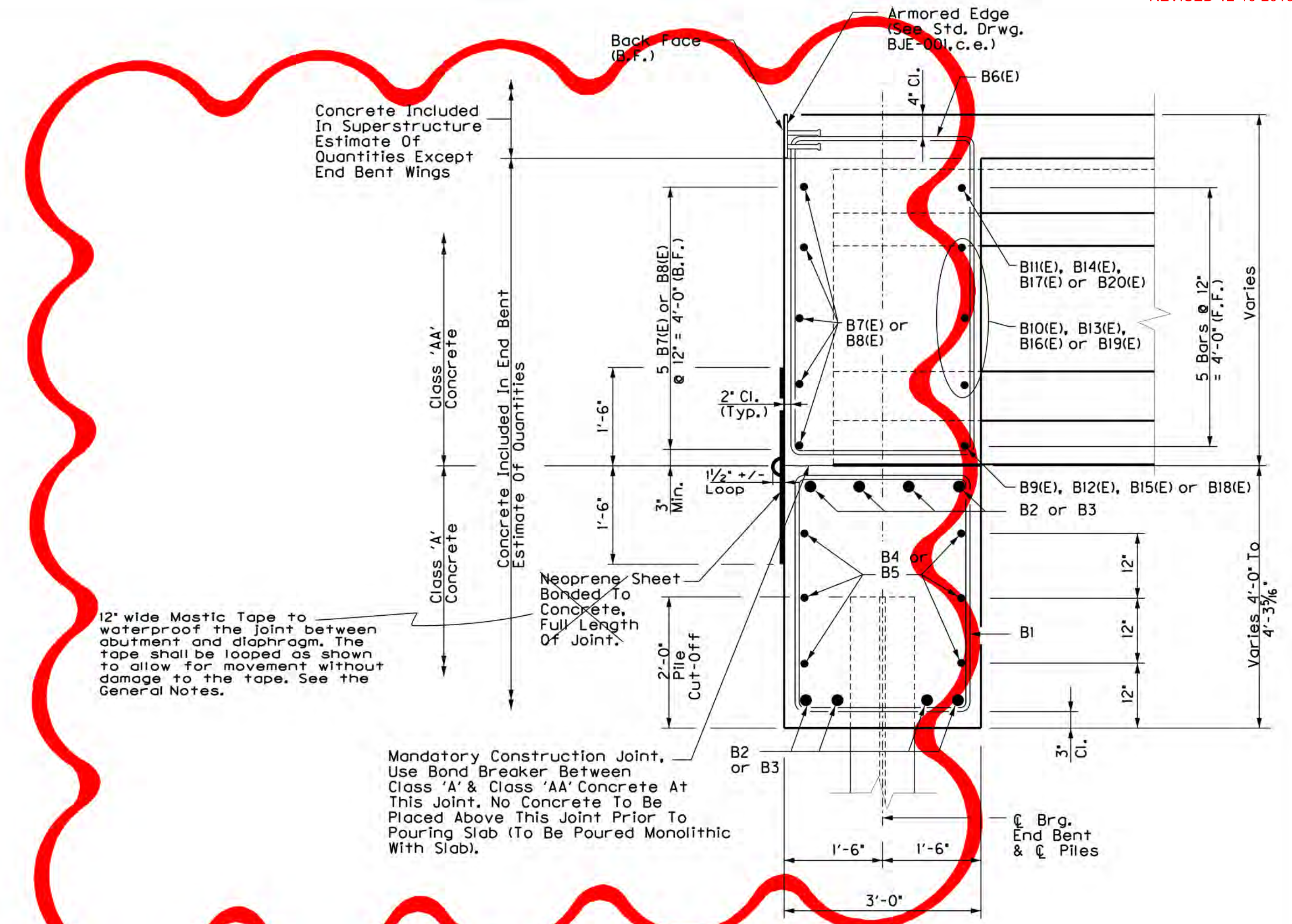
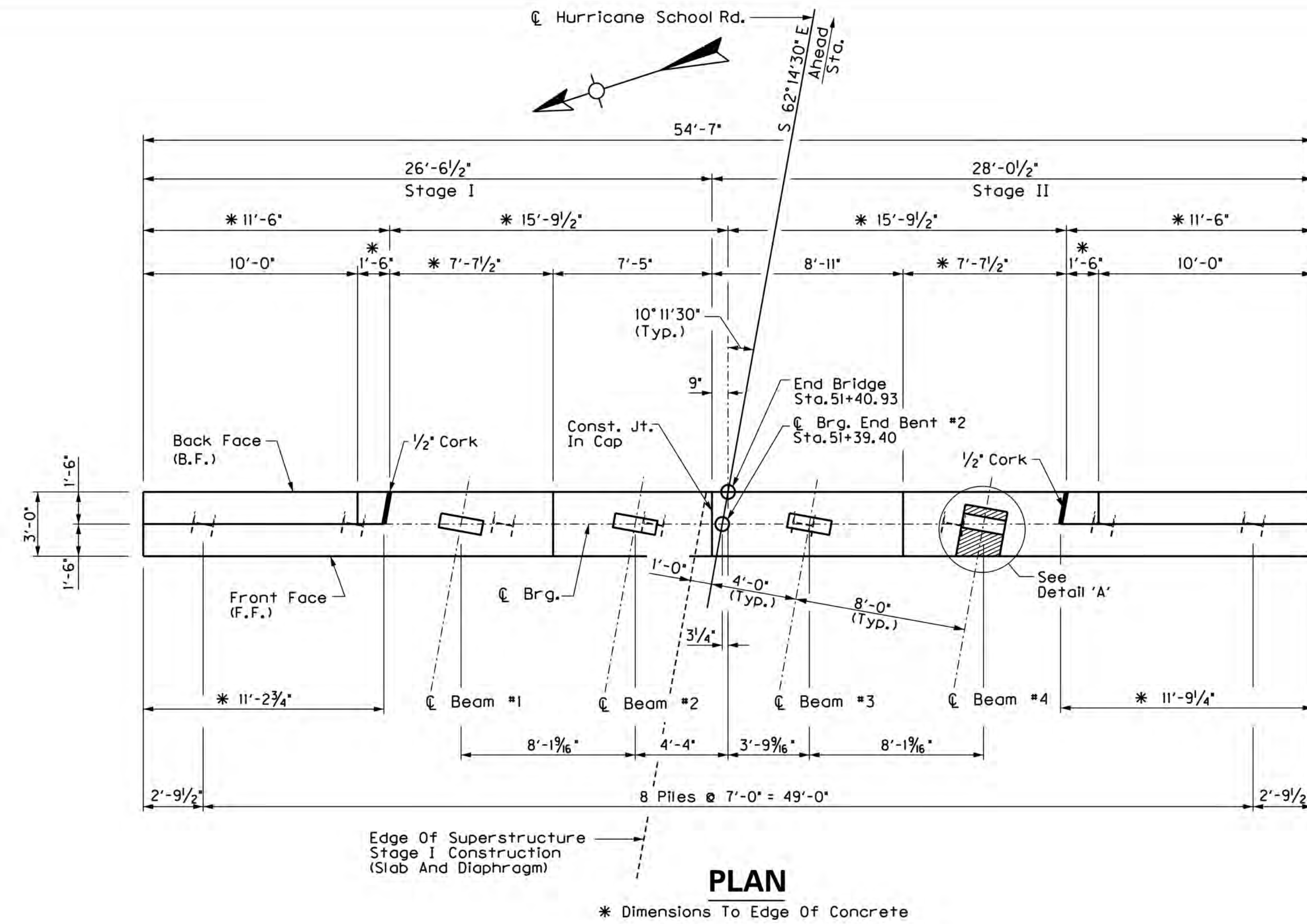
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY
ROCKCASTLE

ROUTE: **CR 2** CROSSING: **INTERSTATE 75**

END BENT #1 DETAILS

ITEM NUMBER	8-6.3

FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\25340 - ROCKCASTLE SCHOOL - HURRICANE SCHOOL - ROAD\REVISED PLANS\25340 - HURRICANE SCHOOL - ROAD\REVISED PLANS\25340.DWG; BENT 2-DETAIL 1.DWG
 USER: awilliams
 DATE PLOTTED: December 16, 2016
 E-SHEET NAME: MicroStation v8.11.7.443



ESTIMATE OF QUANTITIES		
ITEM	QUANTITY	UNIT
CONCRETE CLASS 'A'	25.1	CU. YD.
CONCRETE CLASS 'AA'	19.4	CU. YD.
STEEL REINFORCEMENT	2159	LBS.
EPOXY COATED REINFORCEMENT	1157	LBS.

REVISION	DATE

DATE: 2016
 DESIGNED BY: JLB
 CHECKED BY: JAC
 DETAILED BY: SF
 HLW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
 COUNTY
ROCKCASTLE

ROUTE: CR 2
 CROSSING: INTERSTATE 75
END BENT #2 DETAILS

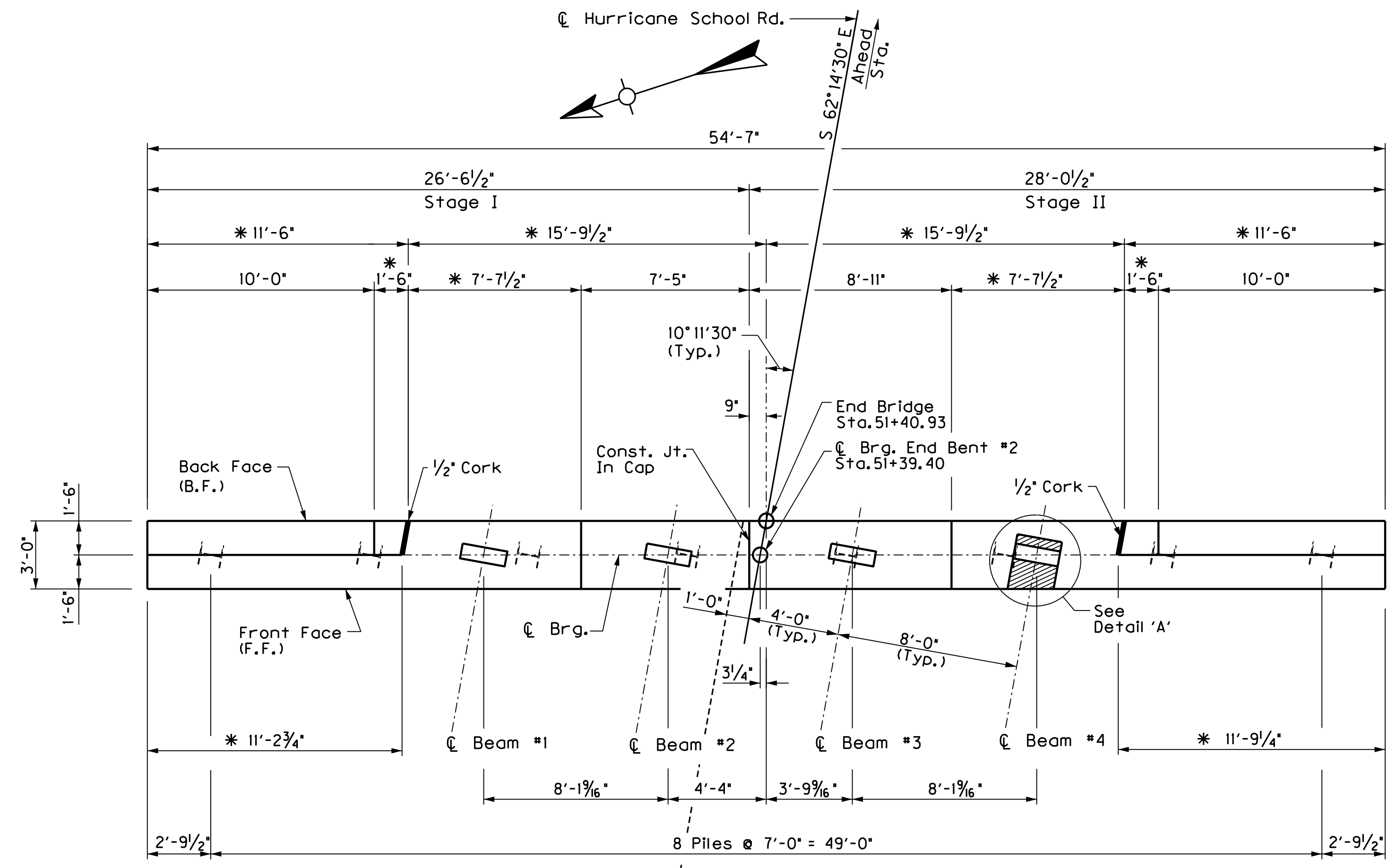
SHEET NO.
S16
 DRAWING NO.
25340

These Plans Were Originally Set Up For Staged Construction. However, Due To A Late Change, The Bridge Shall Be Constructed Without Staging. As Such, Construction Joints Shown In These Plans For Staging Shall Be Eliminated. The Contractor May Opt To Adhere To The Reinforcing Details And Schedules In These Plans, Or He May Opt To Present An Alternate Reinforcing Schedule Which Eliminates The Splices In The Transverse Slab Reinforcement And The Splices In The Cap Reinforcement In The Piers And End Bents.

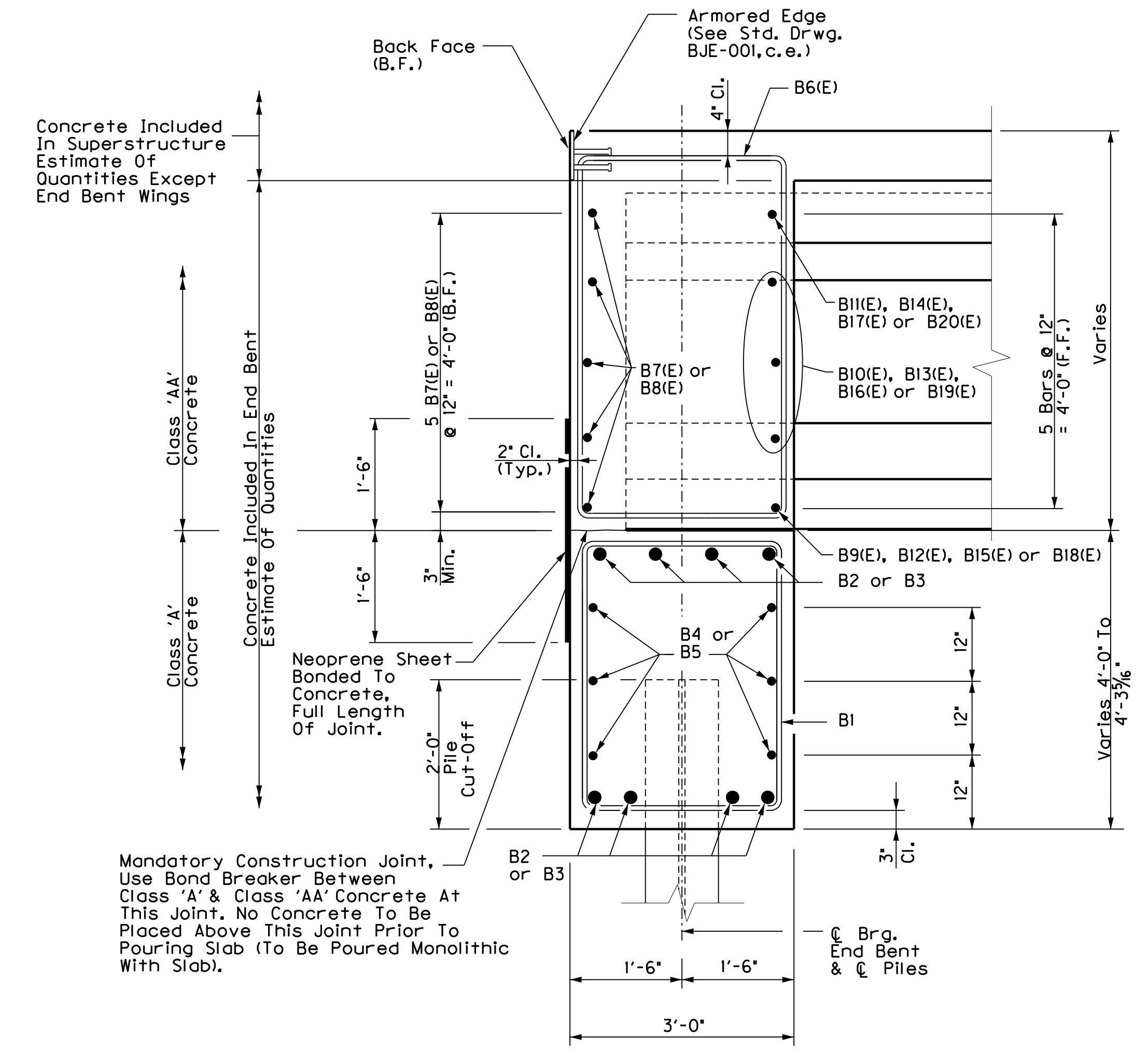
ITEM NUMBER	8-6.3
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V&M
Vaughn & Melton
 Consulting Engineers

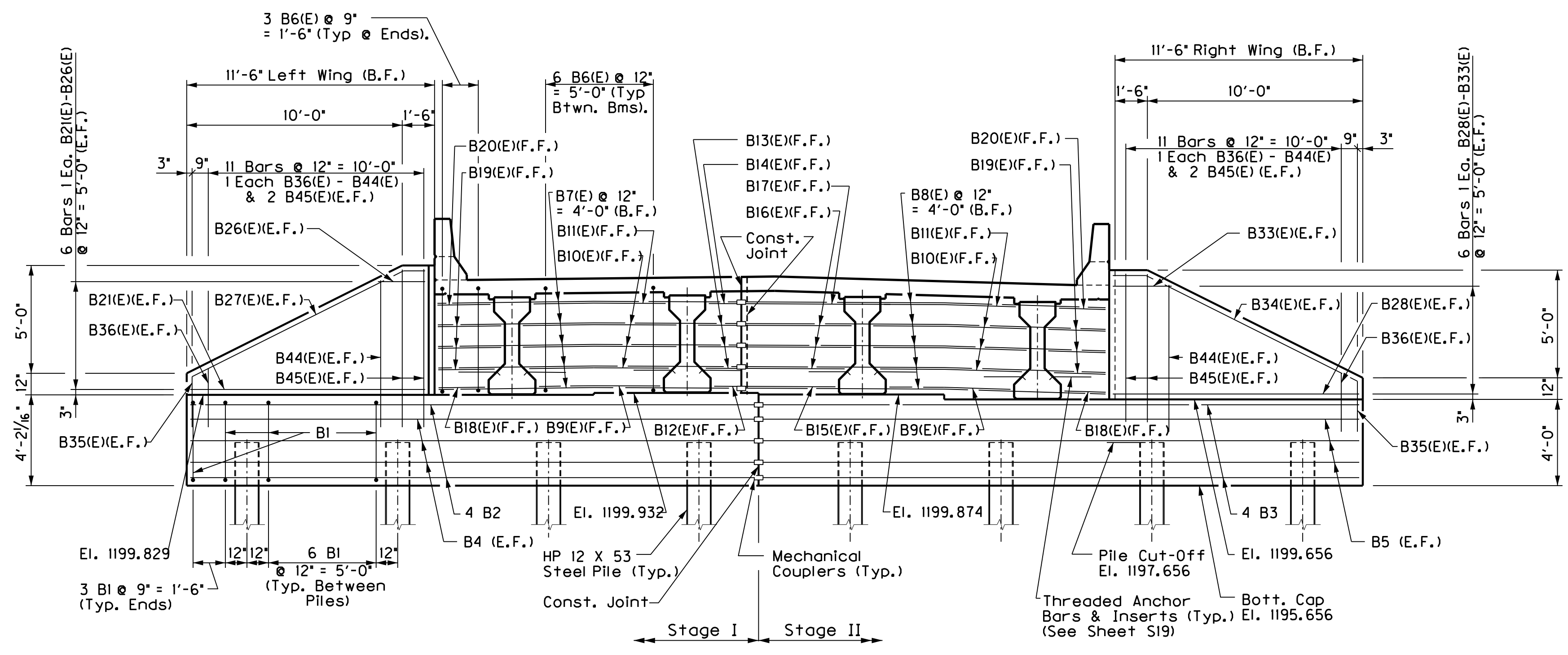
FILE NAME: S:\STRUCTURES\11630-04 ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\25340 - HURRICANE SCHOOL RD.VR1_2016\UPDATE\25340_016_END_BENT_2.DETAIL.SCDWG
 USER: moferguson
 DATE PLOTTED: November 16, 2016
 E-SHEET NAME: MicroStation v8.11.7.443



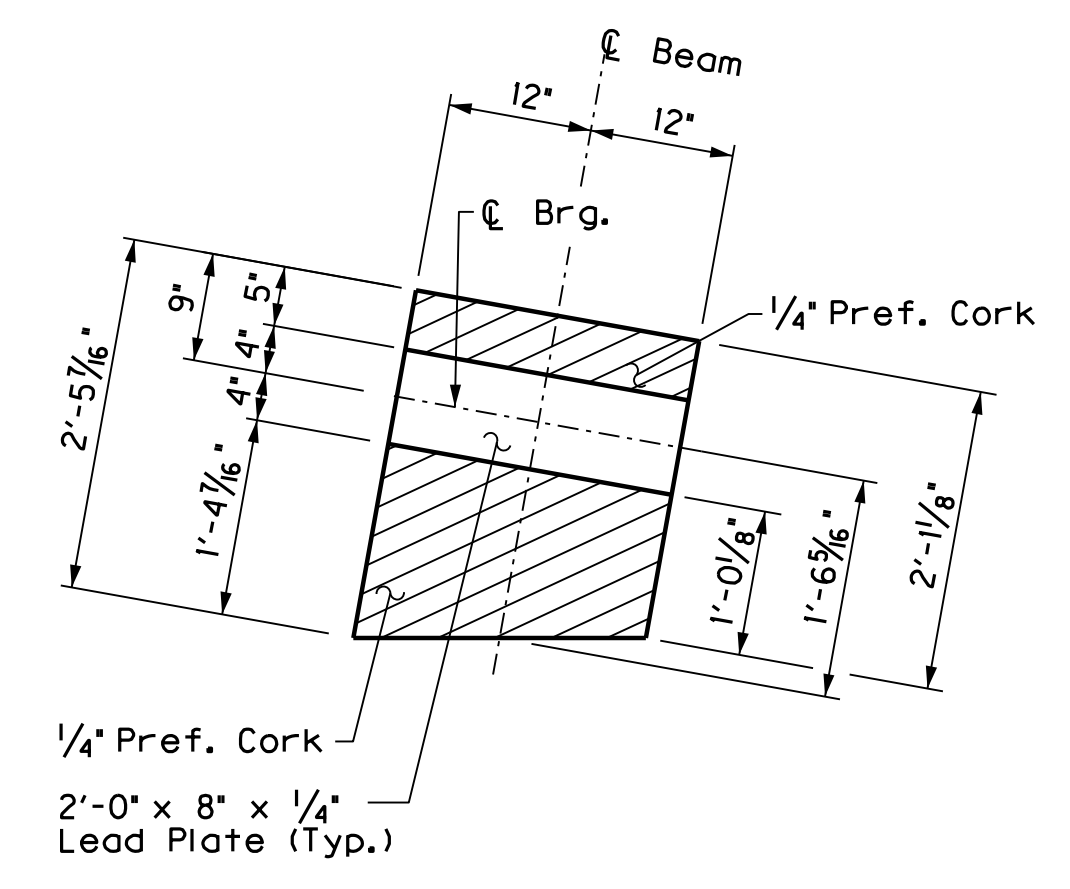
PLAN
 * Dimensions To Edge Of Concrete



SECTION THRU CAP



ELEVATION
 (Looking Ahead)
 (Dimensions Shown Along Back Face Unless Otherwise Noted)
 Note: Mechanical Couplers Are Incidental To Steel Reinforcement.



DETAIL 'A'

ESTIMATE OF QUANTITIES		
ITEM	QUANTITY	UNIT
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CONCRETE CLASS 'AA'	19.4	CU. YD.
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REVISION		DATE
DATE: 2016	DESIGNED BY: JLB	CHECKED BY: JAC
Commonwealth of Kentucky		
DEPARTMENT OF HIGHWAYS		
COUNTY		
ROCKCASTLE		
ROUTE	CROSSING	
CR 2	INTERSTATE 75	
END BENT #2 DETAILS		
ITEM NUMBER	PREPARED BY	SHEET NO.
8-6.3		S16
V&M		DRAWING NO.
Vaughn & Melton		25340
Consulting Engineers		

FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE I-75 UPDATE PLANS\FINAL REVISED PLANS\25341 - KY 1505\FRL_2016\UPDATE\NS25341_S02_GENERAL.N
 USER: rjohnson
 DATE PLOTTED: September 27, 2016
 E-SHEET NAME:
 MicroStation v8.11.7.443

SPECIFICATIONS

ALL REFERENCES TO THE STANDARD SPECIFICATIONS ARE TO THE 2012 EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH 2016 SUPPLEMENTAL SPECIFICATIONS. ALL REFERENCES TO THE AASHTO SPECIFICATIONS ARE TO THE 17th EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

DESIGN LOAD AND METHOD

THIS BRIDGE IS DESIGNED FOR HS25 LIVE LOAD OR ALTERNATE MILITARY LOADING, WHICHEVER PRODUCES THE GREATER STRESS. THE HS25 LIVE LOAD IS ARRIVED AT BY INCREASING THE STANDARD HS20-44 TRUCK AND LANE LOADS AS SPECIFIED IN THE AASHTO SPECIFICATIONS BY 25%. ALL REINFORCED CONCRETE MEMBERS ARE DESIGNED BY THE LOAD FACTOR METHOD AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS.

DESIGN WIND LOAD

THIS BRIDGE IS DESIGNED FOR A WIND LOAD BASED ON A WIND VELOCITY OF 100 mph.

MATERIALS DESIGN SPECIFICATIONS

FOR CLASS 'A' REINFORCED CONCRETE
 F'C = 3500 psi.
 FOR CLASS 'AA' REINFORCED CONCRETE
 F'C = 4000 psi.
 FOR STEEL REINFORCEMENT
 FY = 60,000 psi.

SLOPE PROTECTION

USE CRUSHED AGGREGATE SLOPE PROTECTION IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

REINFORCEMENT

DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE TO CENTER OF BARS UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS. CLEAR DISTANCE TO FACE OF CONCRETE IS 2 INCHES, UNLESS OTHERWISE NOTED. EPOXY COAT BARS DESIGNATED BY THE SUFFIX (E) IN ACCORDANCE WITH SECTION 811.10 OF THE STANDARD SPECIFICATIONS. USE STIRRUP BEND DIAMETERS FOR BARS DESIGNATED BY SUFFIX (S) IN A BILL OF REINFORCEMENT.

BEVELED EDGES

BEVEL ALL EXPOSED EDGES 7/8' UNLESS OTHERWISE NOTED.

COMPLETION OF THE STRUCTURE

THE CONTRACTOR IS REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. MATERIAL, LABOR OR CONSTRUCTION OPERATIONS, NOT OTHERWISE SPECIFIED, ARE TO BE INCLUDED IN THE BID ITEM MOST APPROPRIATE TO THE WORK INVOLVED. THIS MAY INCLUDE COFFERDAMS, SHORING, EXCAVATIONS, BACKFILLING, REMOVAL OF ALL OR PARTS OF EXISTING STRUCTURES, PHASE CONSTRUCTION, INCIDENTAL MATERIALS, LABOR OR ANYTHING ELSE REQUIRED TO COMPLETE THE STRUCTURE.

DIMENSIONS

DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60 DEGREES FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONTAL DIMENSIONS.

TEMPORARY SUPPORTS

TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING *TOP OF BEAM* ELEVATIONS.

SLAB POURING SEQUENCE

THE POURING SEQUENCE OF THE SLAB MAY NOT BE CHANGED WITHOUT THE WRITTEN APPROVAL OF THE DESIGN ENGINEER.

SHOP DRAWINGS

SUBMIT SHOP DRAWINGS THAT ARE REQUIRED BY THE PLANS AND SPECIFICATIONS DIRECTLY TO THE CONSULTANT. IF ANY CHANGES IN THE DESIGN PLANS ARE PROPOSED BY A FABRICATOR OR SUPPLIER, SUBMIT THOSE CHANGES TO THE CONSULTANT THROUGH THE CONTRACTOR.

FOUNDATION DATA

SEE FOUNDATION LAYOUT SHEETS.

PILES

ANY COMMONLY UTILIZED HAMMER ALLOWED BY THE DIVISION OF CONSTRUCTION WILL BE ADEQUATE TO DRIVE THE PILES TO BEDROCK WITHOUT ENCOUNTERING EXCESSIVE BLOW COUNTS AND OVERSTRESSING THE PILES. HAMMER ENERGY ON THE ORDER OF 6.5 FT-KIPS WILL BE NEEDED TO DRIVE THE 12-INCH PILES TO BEDROCK. HOWEVER, THE KYTC STANDARD SPECIFICATIONS RECOMMENDS A MINIMUM HAMMER ENERGY OF 10.0 FT-KIPS. THE CONTRACTOR SHALL SUBMIT HIS PILE DRIVING SYSTEMS TO THE KENTUCKY TRANSPORTATION CABINET FOR APPROVAL PRIOR TO THE INSTALLATION OF THE FIRST PILE. APPROVAL OF THE PILE DRIVING SYSTEM BY THE ENGINEER WILL BE SUBJECT TO SATISFACTORY FIELD PERFORMANCE OF THE PILE DRIVING PROCEDURES.

WAITING PERIOD FOR DRIVING PILES AT END BENTS

AFTER APPROACH EMBANKMENTS ARE CONSTRUCTED TO FULL-HEIGHT, THE FOUNDATION SOILS SHALL BE ALLOWED TO CONSOLIDATE PRIOR TO INSTALLATION OF PILES AT THE END BENT POSITIONS. IT IS ESTIMATED THAT 90 PERCENT CONSOLIDATION OF THE FOUNDATION SOILS WILL BE COMPLETE WITHIN APPROXIMATELY 8 DAYS FOLLOWING CONSTRUCTION OF THE APPROACH EMBANKMENTS TO THEIR FULL HEIGHTS.

PRE-DRILLING OF PILES

PRE-DRILLING OF THE PILES MAY BE NECESSARY TO ADVANCE THE PILES TO THE REQUIRED BEARING ELEVATION. 24-INCH DIAMETER HOLES SHALL BE DRILLED INTO SOLID ROCK. THE HOLES SHALL BE BACKFILLED WITH SAND OR PEA GRAVEL. A TEMPORARY CASING MIGHT BE REQUIRED TO PREVENT COLLAPSE OF THE HOLE. IF USED, THE CASING SHALL BE REMOVED, AS THE HOLE IS BEING BACKFILLED. PILES SHALL THEN BE DRIVEN TO REFUSAL. PILES SHALL BE DRIVEN TO A MINIMUM LENGTH OF 10 FEET. INCLUDE ANY COST FOR PREDRILLING INTO THE UNIT PRICE BID FOR THE PILING.

PILE POINTS

PROVIDE PILE POINTS FOR ALL POINT BEARING PILES. ENSURE PILE POINTS ARE IN ACCORDANCE WITH SECTION 604 OF THE SPECIFICATIONS AND OF THE TYPE AS SHOWN ON THE FOUNDATION LAYOUT SHEET.

FOOTING EXCAVATION:

ENSURE EXCAVATION FOR FOOTINGS IS IN ACCORDANCE WITH SUBSECTION 603.03.03 OF THE SPECIFICATIONS. RAISING OF THE BOTTOM OF THE FOOTINGS IS NOT ALLOWED.

FALL PROTECTION:

PROVIDE FLOORING FOR WORKERS IN SITUATIONS WHERE THE DANGER FROM A FALL IS COMPOUNDED BY THE TRAFFIC AND FOR PROTECTION TO THE TRAFFIC. IF TEMPORARY FLOORING IS NECESSARY IN ADDITION TO SLAB FORMS, THE FLOORING IS TO BE DESIGNED USING THE SUM OF DEAD LOAD AND LIVE VERTICAL LOADS. INCLUDE 50 PSF OF HORIZONTAL SURFACES AND THE WEIGHT OF ANY MATERIAL OR EQUIPMENT THAT IS PLACED OR ALLOWED TO FALL DURING CONSTRUCTION OR DEMOLITION IN THE LIVE LOAD COMPUTATION. SUBMIT THE FLOORING DESIGN ALONG WITH THE FALSEWORK DESIGN TO THE ENGINEER FOR APPROVAL. EXTEND TEMPORARY FLOORING ACROSS TRAFFIC LANES, RAMPS, AND USABLE SHOULDERS OF HIGHWAYS AND 8 (EIGHT) FEET BEYOND THE OUTER RAILS OF TRACKS FOR RAILWAYS. CONSIDER ALL PHASES OF FURNISHING AND REMOVING THE FLOORING AS INCIDENTAL TO THE CONTRACT. THIS ITEM MAY BE CONSIDERED IN ADDITION TO ANY REQUIREMENT SET FORTH IN SUBSECTION 107.01.01 OF THE SPECIFICATIONS.

COFFERDAMS:

COFFERDAMS MAY BE NECESSARY FOR CONSTRUCTION OF SUBSTRUCTURE. INCLUDE THE COST OF THIS WORK IN THE BID FOR FOUNDATION PREPARATION.

APPROACH SLAB

THE UNIT PRICE BID PER SQUARE YARD OF APPROACH SLAB SHALL INCLUDE THE COST OF CLASS "AA" CONCRETE, EPOXY-COATED REINFORCEMENT, 4 INCH DGA, TAR PAPER, AND ALL LABOR AND MATERIAL REQUIRED ACCORDING TO PLANS.

ITEM NUMBER				SHEET NO.	
8-6.3				S2	
		DRAWING NO.		25341	

REVISION		DATE
DATE: 2016	CHECKED BY	
DESIGNED BY: JLB	JAC	
DETAILED BY: SF	HLW	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS <small>COUNTY</small> ROCKCASTLE		
ROUTE KY 1505	CROSSING INTERSTATE 75	
GENERAL NOTES		
PREPARED BY		SHEET NO.

FILE NAME: S:\STRUCTURES\1630-04-ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\25341 - RY 1505\ADDENDUM 2016-12-16\AS25341.S02_CHEMICAL
 USER: awilliams
 DATE PLOTTED: December 16, 2016
 E-SHEET NAME:
 MicroStation v8.11.7.443

SPECIFICATIONS

ALL REFERENCES TO THE STANDARD SPECIFICATIONS ARE TO THE 2012 EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH 2016 SUPPLEMENTAL SPECIFICATIONS. ALL REFERENCES TO THE AASHTO SPECIFICATIONS ARE TO THE 17th EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

DESIGN LOAD AND METHOD

THIS BRIDGE IS DESIGNED FOR HS25 LIVE LOAD OR ALTERNATE MILITARY LOADING, WHICHEVER PRODUCES THE GREATER STRESS. THE HS25 LIVE LOAD IS ARRIVED AT BY INCREASING THE STANDARD HS20-44 TRUCK AND LANE LOADS AS SPECIFIED IN THE AASHTO SPECIFICATIONS BY 25%. ALL REINFORCED CONCRETE MEMBERS ARE DESIGNED BY THE LOAD FACTOR METHOD AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS.

DESIGN WIND LOAD

THIS BRIDGE IS DESIGNED FOR A WIND LOAD BASED ON A WIND VELOCITY OF 100 mph.

MATERIALS DESIGN SPECIFICATIONS

FOR CLASS 'A' REINFORCED CONCRETE
 F'C = 3500 psi.
 FOR CLASS 'AA' REINFORCED CONCRETE
 F'C = 4000 psi.
 FOR STEEL REINFORCEMENT
 FY = 60,000 psi.

SLOPE PROTECTION

USE CRUSHED AGGREGATE SLOPE PROTECTION IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

REINFORCEMENT

DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE TO CENTER OF BARS UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS. CLEAR DISTANCE TO FACE OF CONCRETE IS 2 INCHES, UNLESS OTHERWISE NOTED. EPOXY COAT BARS DESIGNATED BY THE SUFFIX (E) IN ACCORDANCE WITH SECTION 811.10 OF THE STANDARD SPECIFICATIONS. USE STIRRUP BEND DIAMETERS FOR BARS DESIGNATED BY SUFFIX (S) IN A BILL OF REINFORCEMENT.

BEVELED EDGES

BEVEL ALL EXPOSED EDGES 7/8" UNLESS OTHERWISE NOTED.

COMPLETION OF THE STRUCTURE

THE CONTRACTOR IS REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. MATERIAL, LABOR OR CONSTRUCTION OPERATIONS, NOT OTHERWISE SPECIFIED, ARE TO BE INCLUDED IN THE BID ITEM MOST APPROPRIATE TO THE WORK INVOLVED. THIS MAY INCLUDE COFFERDAMS, SHORING, EXCAVATIONS, BACKFILLING, REMOVAL OF ALL OR PARTS OF EXISTING STRUCTURES, PHASE CONSTRUCTION, INCIDENTAL MATERIALS, LABOR OR ANYTHING ELSE REQUIRED TO COMPLETE THE STRUCTURE.

DIMENSIONS

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TEMPORARY SUPPORTS

TEMPORARY SUPPORTS OR SHORING WILL NOT BE PERMITTED UNDER THE GIRDERS WHEN POURING THE CONCRETE FLOOR SLAB OR WHEN TAKING "TOP OF BEAM" ELEVATIONS.

SLAB POURING SEQUENCE

THE POURING SEQUENCE OF THE SLAB MAY NOT BE CHANGED WITHOUT THE WRITTEN APPROVAL OF THE DESIGN ENGINEER.

SHOP DRAWINGS

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FOUNDATION DATA

SEE FOUNDATION LAYOUT SHEETS.

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WAITING PERIOD FOR DRIVING PILES AT END BENTS

AFTER APPROACH EMBANKMENTS ARE CONSTRUCTED TO FULL-HEIGHT, THE FOUNDATION SOILS SHALL BE ALLOWED TO CONSOLIDATE PRIOR TO INSTALLATION OF PILES AT THE END BENT POSITIONS. IT IS ESTIMATED THAT 90 PERCENT CONSOLIDATION OF THE FOUNDATION SOILS WILL BE COMPLETE WITHIN APPROXIMATELY 8 DAYS FOLLOWING CONSTRUCTION OF THE APPROACH EMBANKMENTS TO THEIR FULL HEIGHTS.

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COFFERDAMS:

COFFERDAMS MAY BE NECESSARY FOR CONSTRUCTION OF SUBSTRUCTURE. INCLUDE THE COST OF THIS WORK IN THE BID FOR FOUNDATION PREPARATION.

APPROACH SLAB

THE UNIT PRICE BID PER SQUARE YARD OF APPROACH SLAB SHALL INCLUDE THE COST OF CLASS 'AA' CONCRETE, EPOXY-COATED REINFORCEMENT, 4 INCH DGA, TAR PAPER, AND ALL LABOR AND MATERIAL REQUIRED ACCORDING TO PLANS.

MASTIC TAPE

MASTIC TAPE USED TO SEAL JOINTS IS TO MEET THE REQUIREMENTS OF ASTM C-877 TYPE I, II, OR III. THE JOINT IS TO BE COVERED WITH 12-INCH WIDE 12-INCH WIDE MASTIC TAPE. PRIOR TO APPLICATION, THE JOINT SURFACE SHALL BE CLEAN AND FREE OF DIRT, DEBRIS, OR DELETERIOUS MATERIAL. PRIMER, IF REQUIRED BY THE TAPE MFR., SHALL BE APPLIED FOR A MINIMUM WIDTH OF NINE INCHES ON EACH SIDE OF THE JOINT.

MASTIC TAPE SHALL BE EITHER:

EZ-WRAP RUBBER BY PRESS-SEAL GASKET CORPORATION.
 SEAL WRAP BY MAR MAC MANUFACTURING CO. INC. ,
 CADILLOC BY THE UP RUBBER CO. INC.
 OR APPROVED EQUAL.

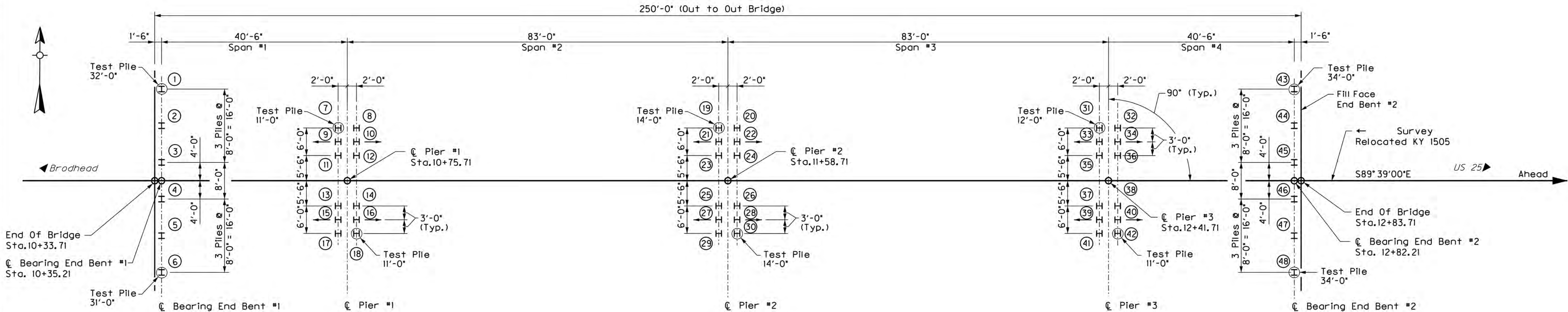
MASTIC TAPE SHALL COVER THE JOINT CONTINUOUSLY UNLESS OTHERWISE SHOWN IN THE PLANS. MASTIC TAPE SHALL BE SPLICED BY LAPPING A MINIMUM OF SIX INCHES AND IN ACCORDANCE WITH THE MFRS. RECOMMENDATIONS WITH THE OVERLAP RUNNING DOWNHILL.

THE COST OF LABOR, MATERIALS, AND INCIDENTAL ITEMS FOR FURNISHING AND INSTALLING MASTIC TAPE SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR CONCRETE CLASS 'AA' AND NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE.

REVISION		DATE
DATE: 2016	CHECKED BY	
DESIGNED BY: JLB	JAC	
DETAILED BY: SF	HLW	
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY ROCKCASTLE		
ROUTE KY 1505	CROSSING INTERSTATE 75	
GENERAL NOTES		
ITEM NUMBER	PREPARED BY	SHEET NO.
8-6.3	V&M Vaughn & Melton Consulting Engineers	S2
		DRAWING NO. 25341

PILE RECORD FOR POINT BEARING PILES						PILE RECORD FOR POINT BEARING PILES						PILE RECORD FOR POINT BEARING PILES						PILE RECORD FOR POINT BEARING PILES						PILE RECORD FOR POINT BEARING PILES																	
Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS	Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS	Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS	Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS	Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS							
END BENT #1						PIER #1						PIER #2						PIER #3						END BENT #2																	
1	1004.621			70	150		7	982.613			70	150		19	983.643			70	150		31	980.935			70	150		43	1002.867			70	150		44						
2							8							20							32							45							46						
3							9							21							33							47							48	1002.867			70	150	
4							10							22							34																				
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Pre-Drilling Of Piles May Be Required At Piers To Achieve Minimum Pile Lengths Of 11'-0" (10 Feet Below Footing). Cost Of Pre-Drilling Shall Be Incidental To The Unit Price Bid For Piles Steel - HP 12x53.



FOUNDATION LAYOUT

PRACTICAL REFUSAL: Drive point bearing piles to practical refusal. For this project minimum blow requirements are reached after total penetration becomes 1/2 inch or less for 10 consecutive blows, practical refusal is obtained after the pile is struck and additional 10 blows with total penetration of 1/2 inch or less. Advance the production piling to the driving resistances specified above and to depths determined by the test pile(s) and subsurface data sheet(s). Immediately cease driving operations if the pile visibly yields or becomes damaged during driving. If hard driving is encountered because of dense strata or an obstruction, such as a boulder before the pile is advanced to the depth anticipated, the Engineer will determine if more blows than the average driving resistance specified for practical refusal is required to further advance the pile. Drive additional production and test piles if directed by the Engineer.

H Denotes HP12 x 53 Vertical Piles
 H Denotes HP12 x 53 Battered Piles (3:12 Batter @ Piers)

Definitions of Terms	Field Data
PILE CUT-OFF ELEVATION: Elevation of the top of pile in the finished structure.	For each pile, The Project Engineer shall record the following on this sheet: Pile Length In Place, Point of Pile Elevation as Driven, and the Calculated Field Bearing. Submit this record to: Director, Division Of Bridge Design Station E3-16-01 200 Mero Street Frankfort, KY 40622-0001
PILE LENGTH IN PLACE: Actual pile length below the Pile Cut-Off Elevation in the finished structure.	This pile record does not replace other pile records the Project Engineer is required to keep and submit.
POINT OF PILE ELEVATION AS DRIVEN: Actual point of pile elevation in the finished structure.	Use HP12x53 in accordance with BPS-003 C.E.
DESIGN AXIAL LOAD: Service load carried by each pile as estimated from structural design calculations.	Use reinforced pile points capable of keying into sloping rock surfaces and seating the piles in the shale.
REQUIRED FIELD BEARING: Pile bearing value required to achieve 'refusal' for the size of pile used, according to The Division Of Construction Guidance Manual. This value is taken as 150 tons for HP 12x53 steel H-Piles.	Any commonly utilized hammer allowed by the Division of Construction will be adequate to drive the piles to bedrock without encountering excessive blow counts and over-stressing the piles. The Contractor shall submit his pile driving system to the Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to the satisfactory field performance of the pile driving procedures.
CALCULATED FIELD BEARING: Pile bearing value in place calculated using the appropriate pile driving formula in Section 604.93.01(B) of the Standard Specifications.	
Driving Criteria	
Drive point bearing piles to refusal and verify that the Calculated Field Bearing equals or exceeds the Required Field Bearing.	

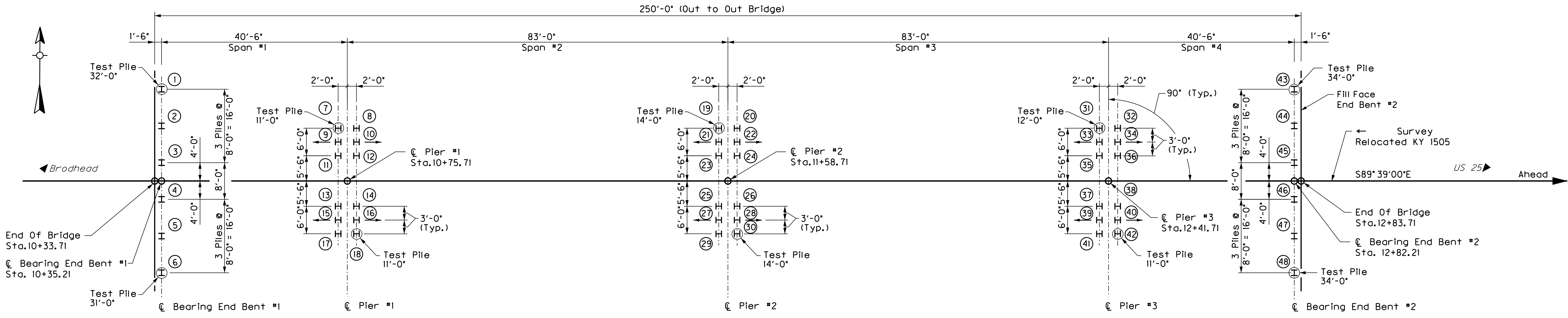
REVISION	DATE
DATE: 2016	CHECKED BY:
DESIGNED BY: JLB	JAC
DETAILED BY: SF	HLW
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS	
COUNTY ROCKCASTLE	
ROUTE KY 1505	CROSSING INTERSTATE 75
FOUNDATION LAYOUT	
ITEM NUMBER	PREPARED BY
8-6.3	V&M Vaughn & Melton Consulting Engineers
	SHEET NO. S8 DRAWING NO. 25341

FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\25341 - KY 1505\ADDENDUM 2016-12-16\S25341_S08_PILING.DWG
 DATE: December 16, 2016
 MICROSTATION: V8.11.7.443

FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\FINAL REVISED PLANS\25341 - KY 1505\FRL_2016\UPDATE US25341_S08_FOUNDATION
 USER: rjohnson
 DATE PLOTTED: September 12, 2016
 E-SHEET NAME: MicroStation v8.11.7.443

PILE RECORD FOR POINT BEARING PILES						PILE RECORD FOR POINT BEARING PILES						PILE RECORD FOR POINT BEARING PILES						PILE RECORD FOR POINT BEARING PILES						PILE RECORD FOR POINT BEARING PILES										
Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS	Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS	Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS	Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS	Pile No.	Pile Cut-off Elevation In Place FEET	Pile Length In Place FEET	Point of Pile Elevation As Driven FEET	Design Axial Load TONS	Required Field Bearing TONS	Calculated Field Bearing TONS
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Definitions of Terms

PILE CUT-OFF ELEVATION: Elevation of the top of pile in the finished structure.

PILE LENGTH IN PLACE: Actual pile length below the Pile Cut-Off Elevation in the finished structure.

POINT OF PILE ELEVATION AS DRIVEN: Actual point of pile elevation in the finished structure.

DESIGN AXIAL LOAD: Service load carried by each pile as estimated from structural design calculations.

REQUIRED FIELD BEARING: Pile bearing value required to achieve 'refusal' for the size of pile used, according to The Division Of Construction Guidance Manual. This value is taken as 150 tons for HP 12x53 steel H-Piles.

CALCULATED FIELD BEARING: Pile bearing value in place calculated using the appropriate pile driving formula in Section 604.03.07(B) of the Standard Specifications.

Driving Criteria

Drive point bearing piles to refusal and verify that the Calculated Field Bearing equals or exceeds the Required Field Bearing.

Field Data

For each pile, The Project Engineer shall record the following on this sheet: Pile Length In Place, Point of Pile Elevation as Driven, and the Calculated Field Bearing. Submit this record to:

Director, Division Of Bridge Design
 Station E3-16-01
 200 Mero Street
 Frankfort, KY 40622-0001

This pile record does not replace other pile records the Project Engineer is required to keep and submit.

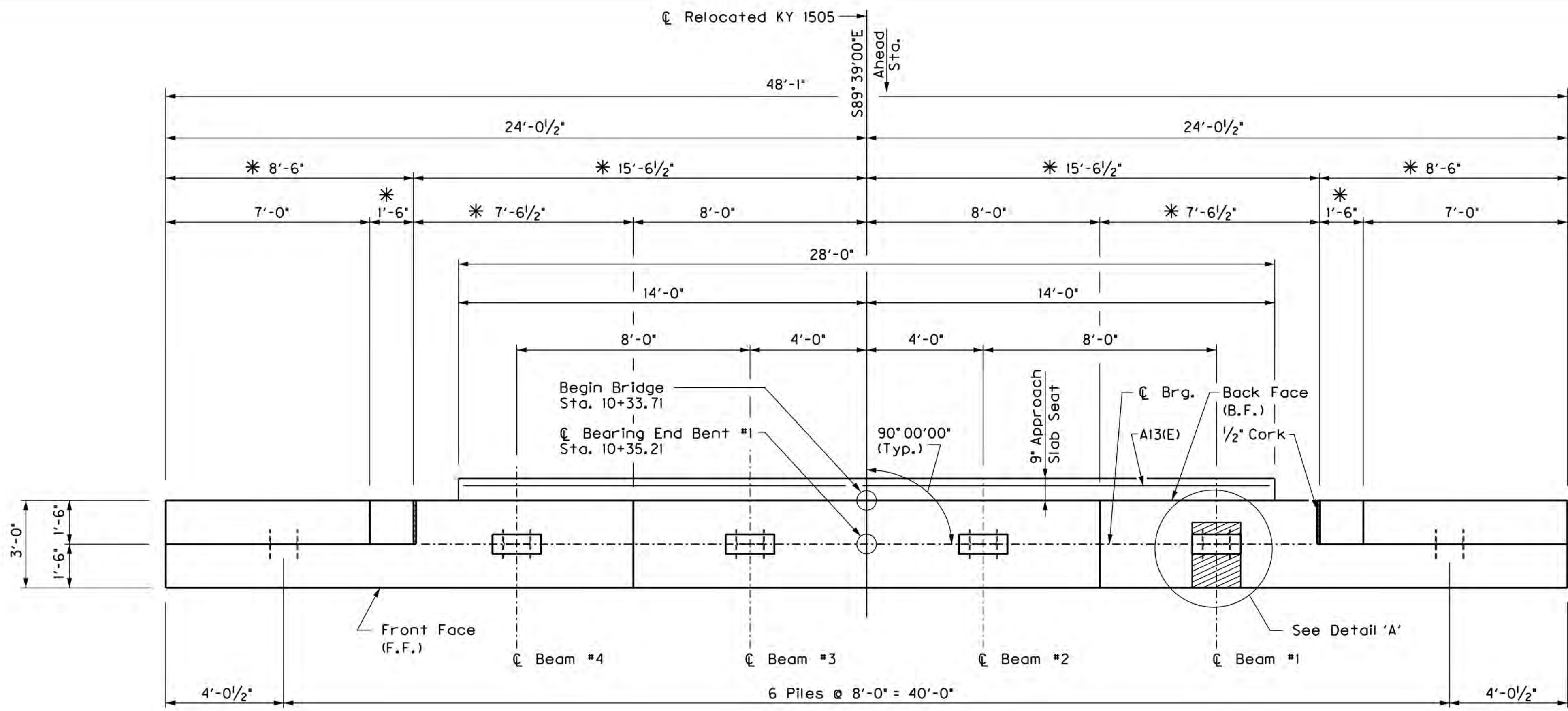
Use HPI2X53 in accordance with BPS-003 C.E.

Use reinforced pile points capable of keying into sloping rock surfaces and seating the piles in the shale.

Any commonly utilized hammer allowed by the Division of Construction will be adequate to drive the piles to bedrock without encountering excessive blow counts and over-stressing the piles. The Contractor shall submit his pile driving system to the Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to the satisfactory field performance of the pile driving procedures.

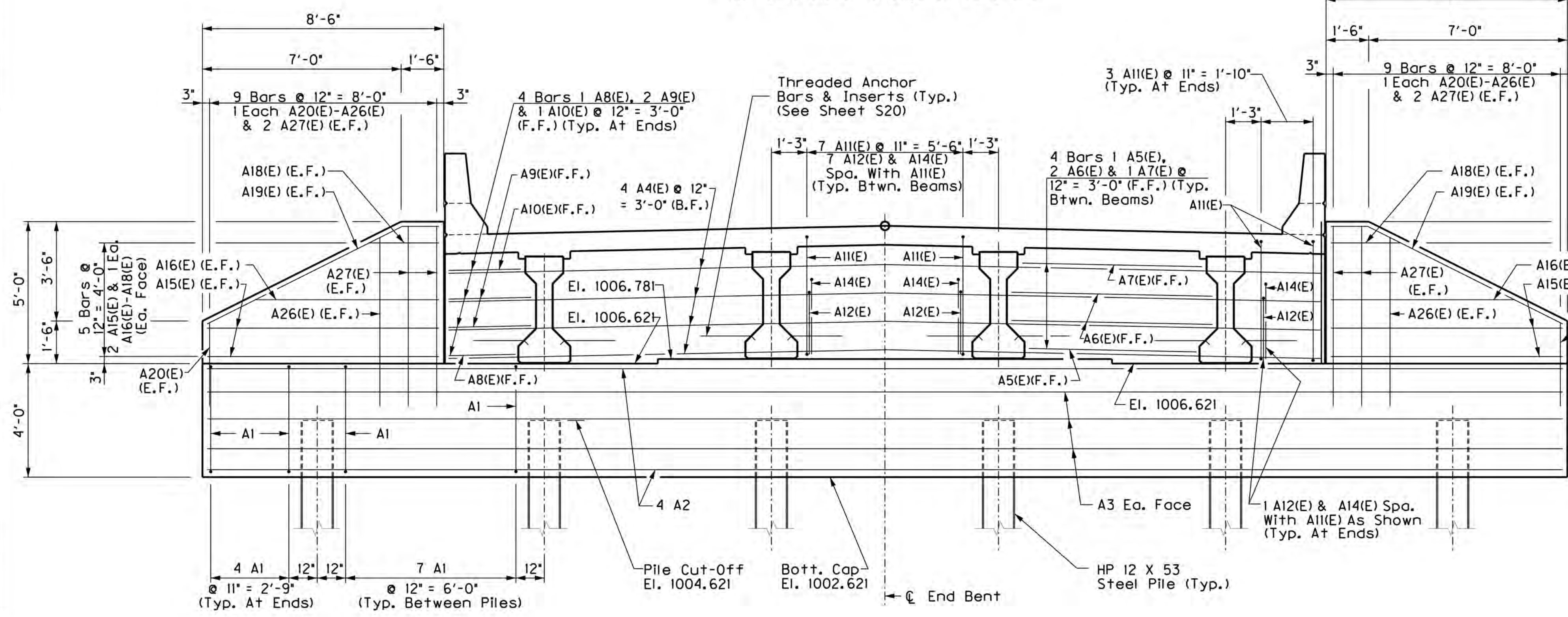
REVISION	DATE
DATE: 2016	CHECKED BY:
DESIGNED BY: JLB	JAC
DETAILED BY: SF	HLW
Commonwealth of Kentucky	
DEPARTMENT OF HIGHWAYS	
COUNTY	
ROCKCASTLE	
ROUTE	CROSSING
KY 1505	INTERSTATE 75
FOUNDATION LAYOUT	
ITEM NUMBER	PREPARED BY
8-6.3	V&M
	Vaughn & Melton Consulting Engineers
	SHEET NO. 25341

FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\25341 - RY 1605\ADDENDUM - 2016-12-16\AS25341L502_P10.DWG
 USER: hlv/llh
 DATE PLOTTED: December 16, 2016
 E-SHEET NAME: MicroStation v8.11.7.443



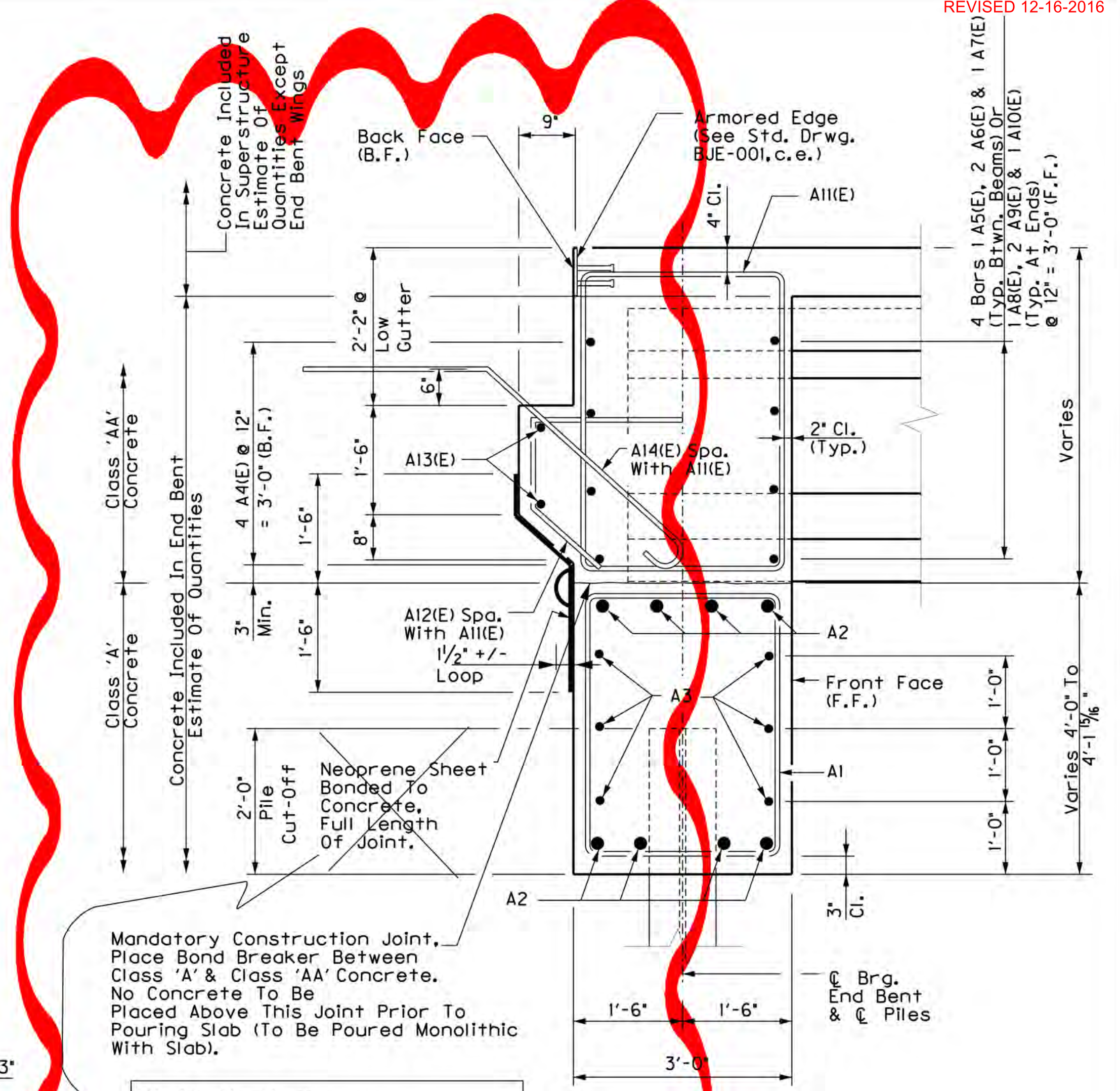
PLAN

* Dimensions To Edge Of Concrete



ELEVATION

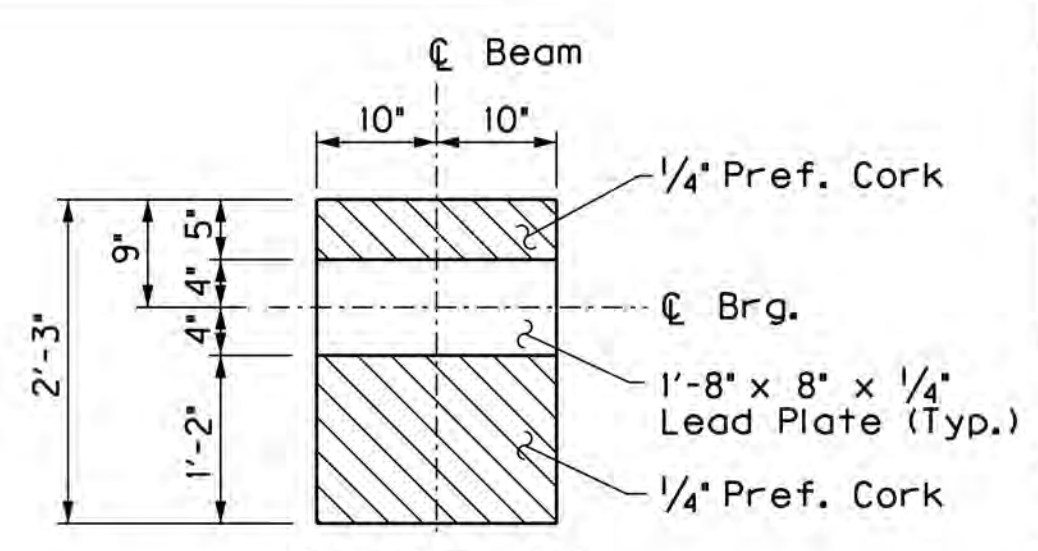
(Looking Back)
Approach Slab Seat Not Shown For Clarity.



SECTION THRU CAP

ESTIMATE OF QUANTITIES

ITEM	QUANTITY	UNIT
CONCRETE CLASS 'A'	21.7	CU. YD.
CONCRETE CLASS 'AA'	17.0	CU. YD.
STEEL REINFORCEMENT	1913	LBS.
EPOXY COATED REINFORCEMENT	1303	LBS.

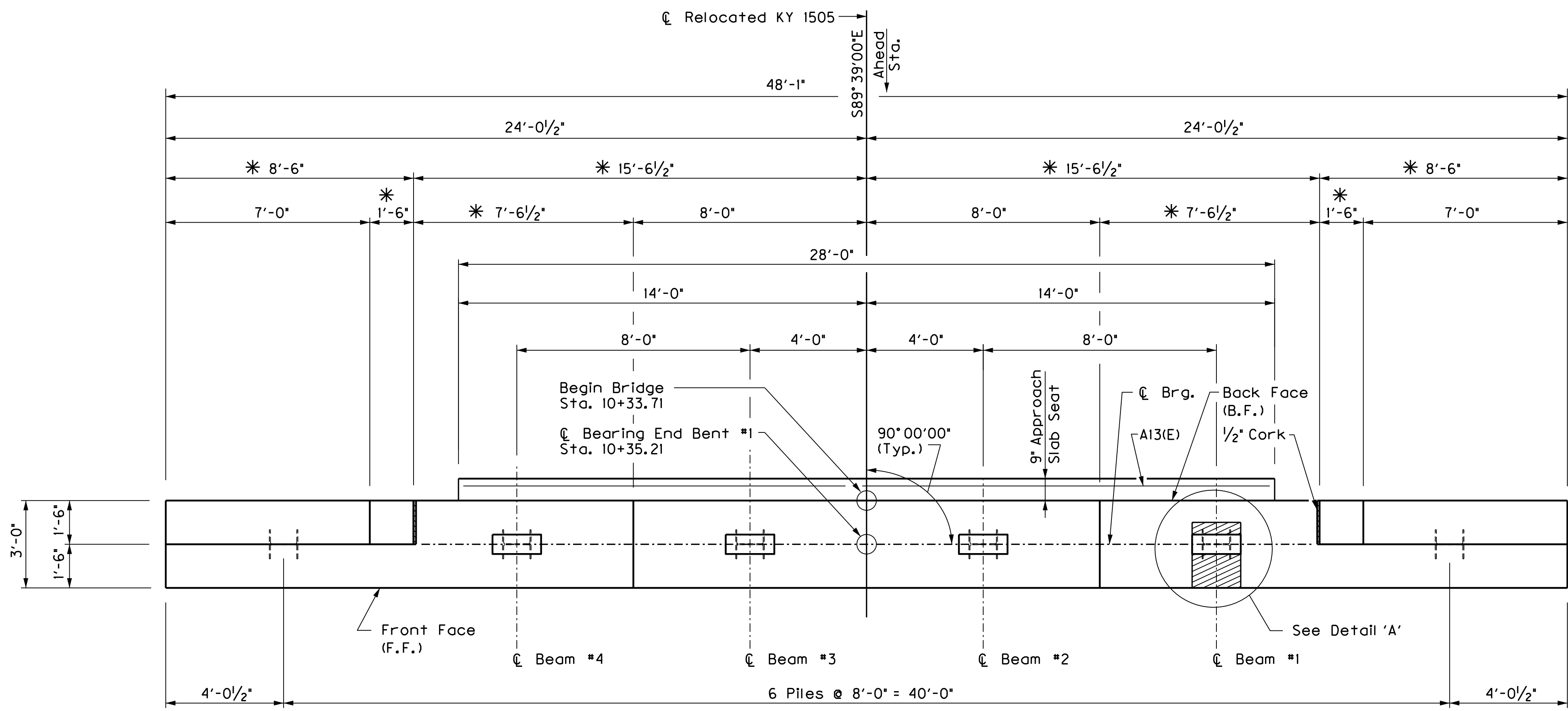


DETAIL 'A'

ITEM NUMBER	QUANTITY	UNIT
8-6.3		

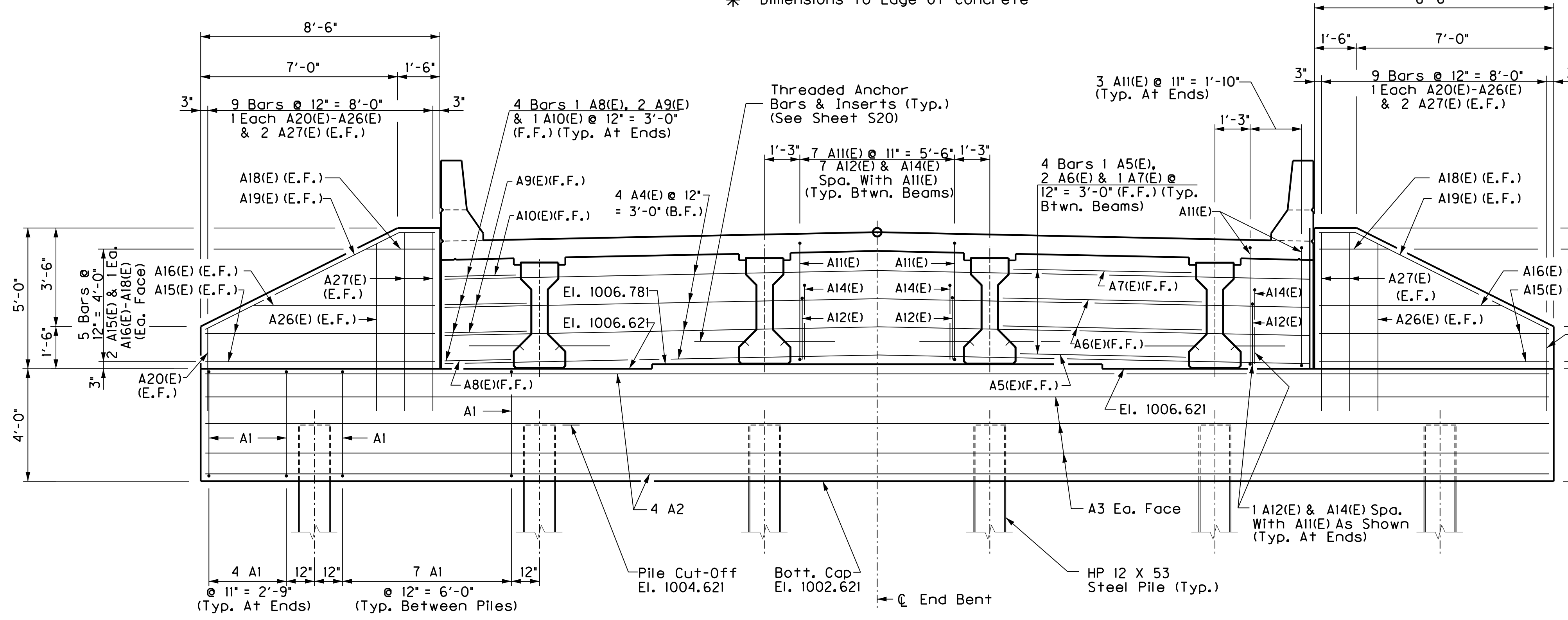
REVISION		DATE
DATE: 2016	DESIGNED BY: HLW	CHECKED BY: JAC
DESIGNED BY: HLW	DATE: 12/16/2016	DETAIL BY: SF
Commonwealth of Kentucky		
DEPARTMENT OF HIGHWAYS		
COUNTY		
ROCKCASTLE		
ROUTE	CROSSING	
KY 1505	INTERSTATE 75	
END BENT #1 DETAILS		
PREPARED BY		SHEET NO.
V&M		9
Vaughn & Melton		DRAWING NO.
Consulting Engineers		25341

FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\25341 - KY 1505\FR_12016\UPDATE\25341-S09-END.BNT
 USER: FrJohnson DATE PLOTTED: September 12, 2016
 E-SHEET NAME: MicroStation v8.11.7.443



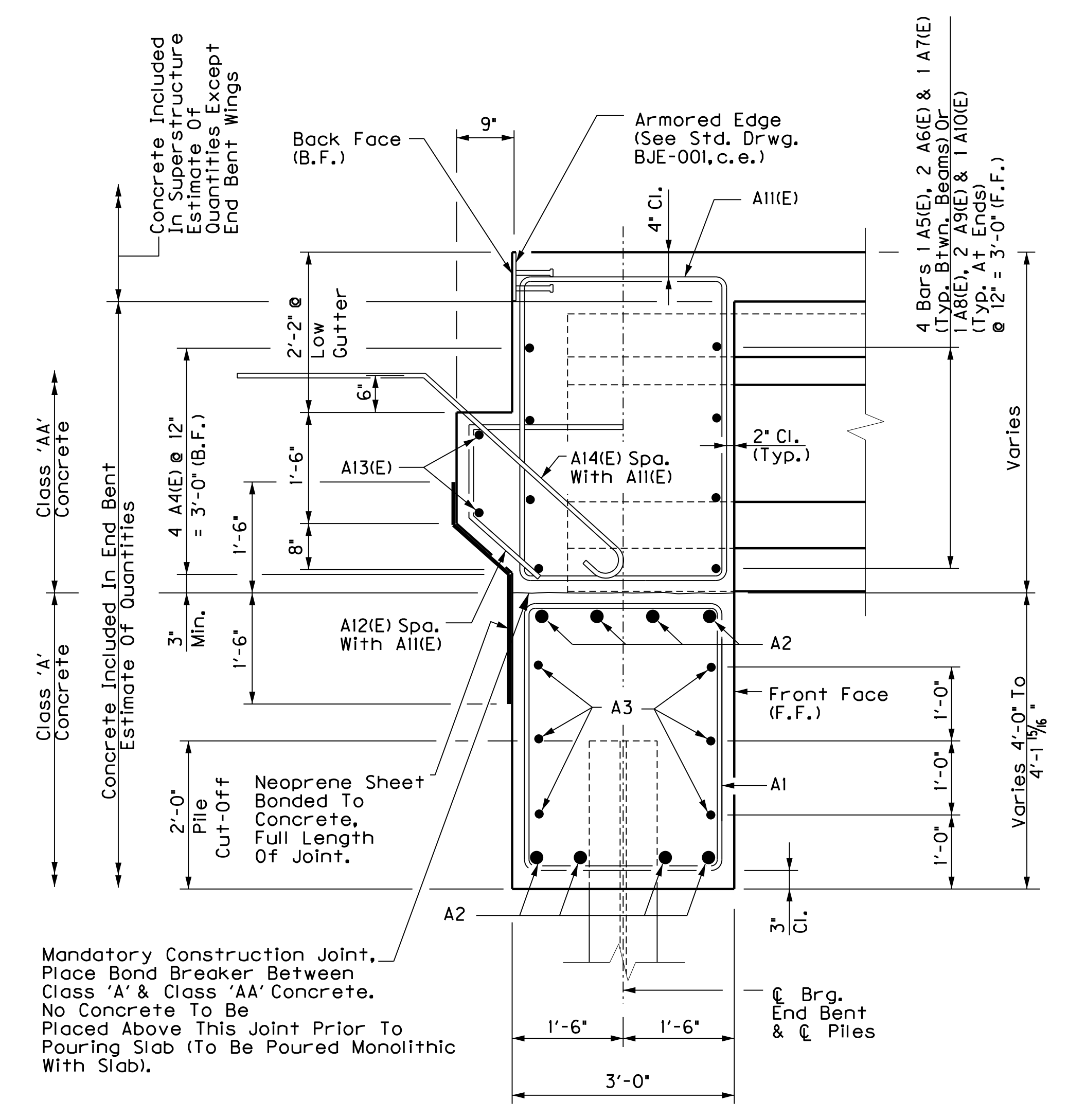
PLAN

* Dimensions To Edge Of Concrete



ELEVATION

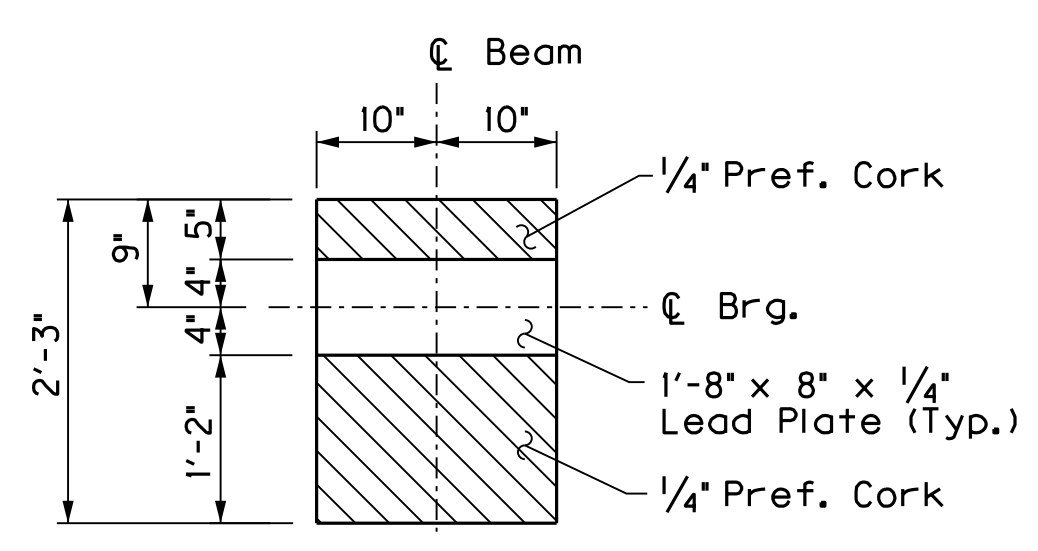
(Looking Back)
 Approach Slab Seat Not Shown For Clarity.



SECTION THRU CAP

ESTIMATE OF QUANTITIES

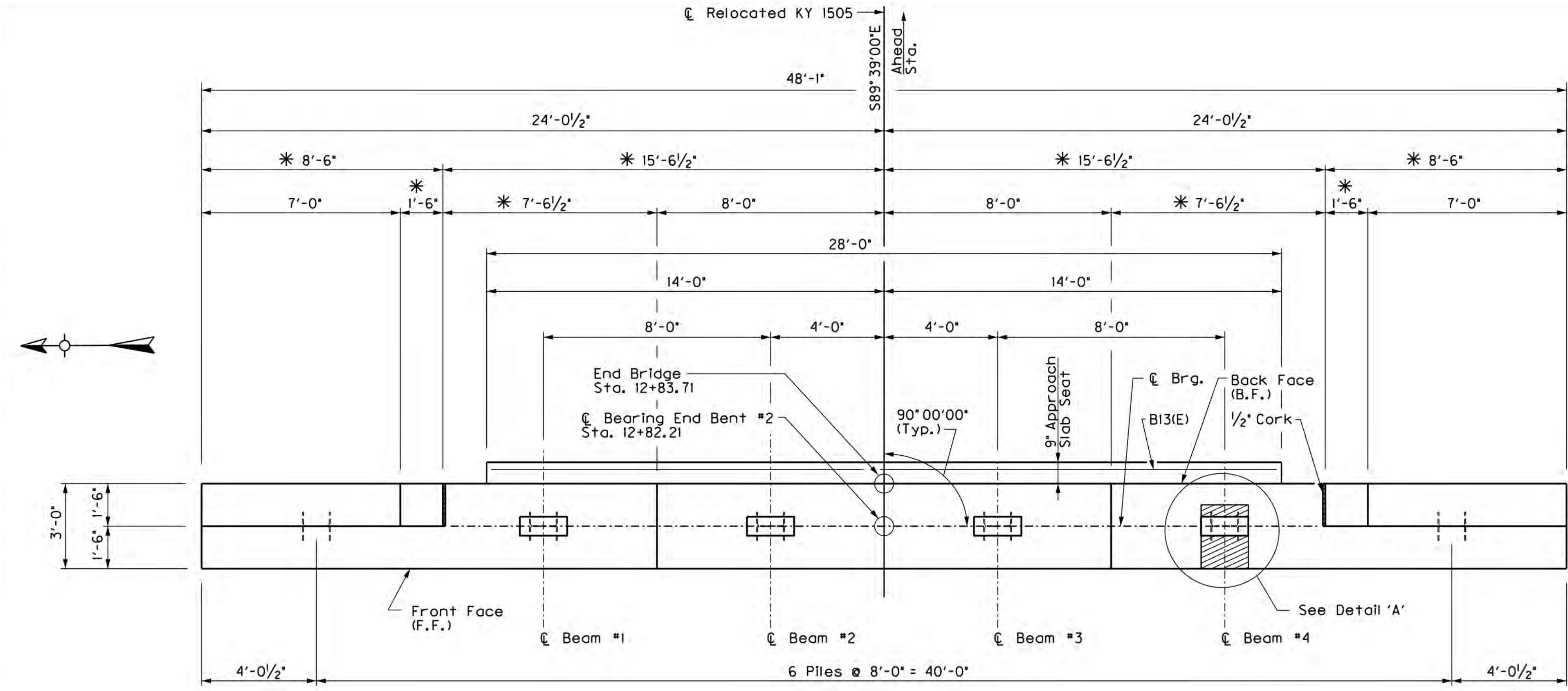
ITEM	QUANTITY	UNIT
CONCRETE CLASS 'A'	21.7	CU. YD.
CONCRETE CLASS 'AA'	17.0	CU. YD.
STEEL REINFORCEMENT	1913	LBS.
EPOXY COATED REINFORCEMENT	1303	LBS.



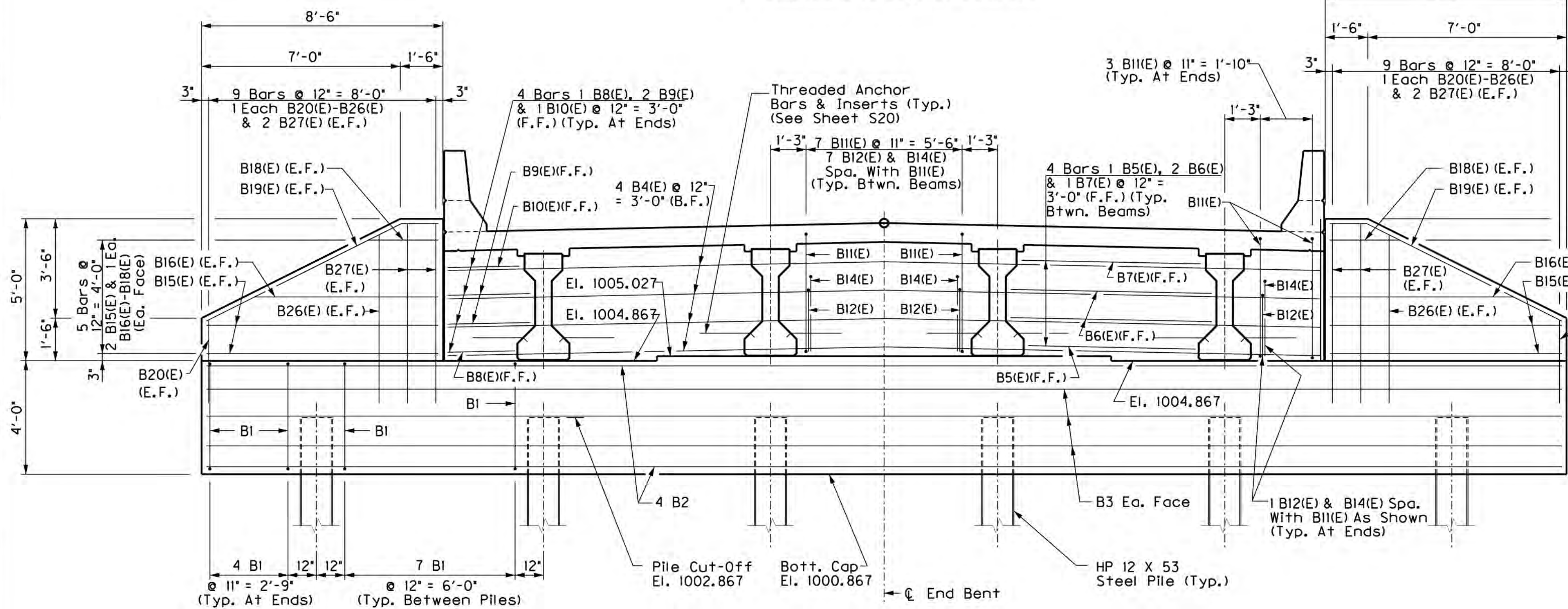
DETAIL 'A'

ITEM NUMBER	8-6.3
REVISION	DATE
DATE: 2016	CHECKED BY: JAC
DESIGNED BY: HLW	DETAILED BY: SF
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS	
COUNTY ROCKCASTLE	
ROUTE KY 1505	CROSSING INTERSTATE 75
END BENT #1 DETAILS	
PREPARED BY	SHEET NO.
V&M Vaughn & Melton Consulting Engineers	25341

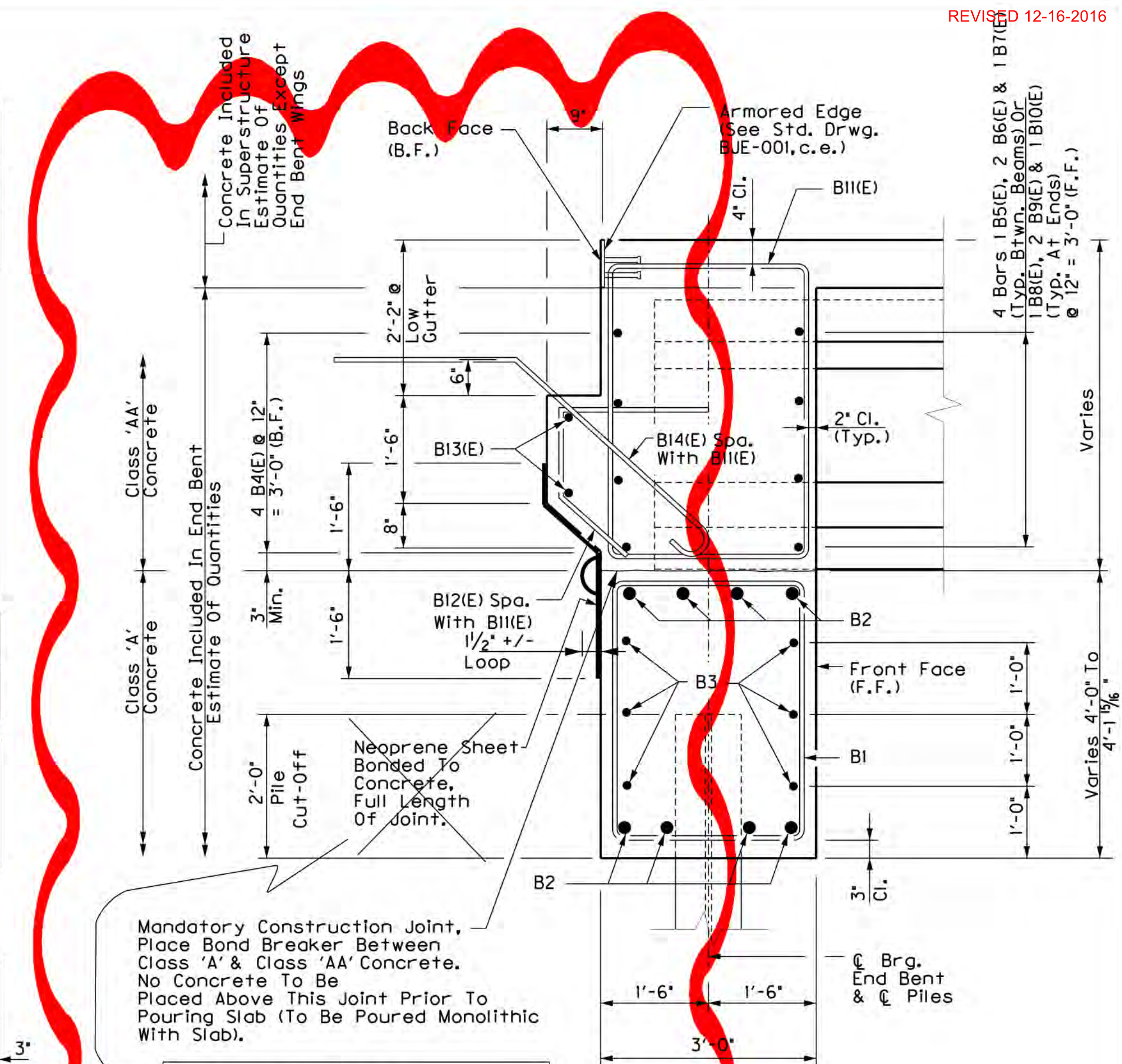
FILE NAME: S:\STRUCTURES\1630-04 ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\25341 - KY 1505\ADDENDUM 2016-12-16\AS25341\17.DWG
 USER: hhw/lls
 DATE PLOTTED: December 16, 2016
 E-SHEET NAME: MicroStation v8.11.7.443



PLAN
* Dimensions To Edge Of Concrete



ELEVATION
(Looking Ahead)
Approach Slab Seat Not Shown For Clarity.

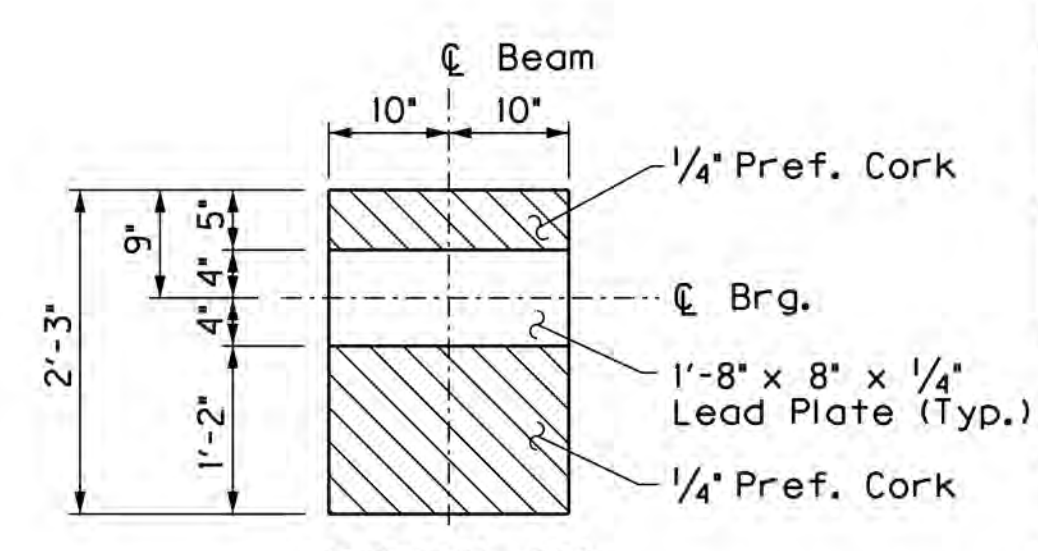


SECTION THRU CAP

Mandatory Construction Joint, Place Bond Breaker Between Class 'A' & Class 'AA' Concrete. No Concrete To Be Placed Above This Joint Prior To Pouring Slab (To Be Poured Monolithic With Slab).

12' wide Mastic Tape to waterproof the joint between abutment and diaphragm. The tape shall be looped as shown to allow for movement without damage to the tape. See the General Notes.

ESTIMATE OF QUANTITIES		
ITEM	QUANTITY	UNIT
CONCRETE CLASS 'A'	21.7	CU. YD.
CONCRETE CLASS 'AA'	17.0	CU. YD.
STEEL REINFORCEMENT	1913	LBS.
EPOXY COATED REINFORCEMENT	1303	LBS.



DETAIL 'A'

ITEM NUMBER
8-6.3

REVISION	DATE

DATE: 2016
 DESIGNED BY: HLW
 CHECKED BY: JAC
 DETAILED BY: SF
 HLW

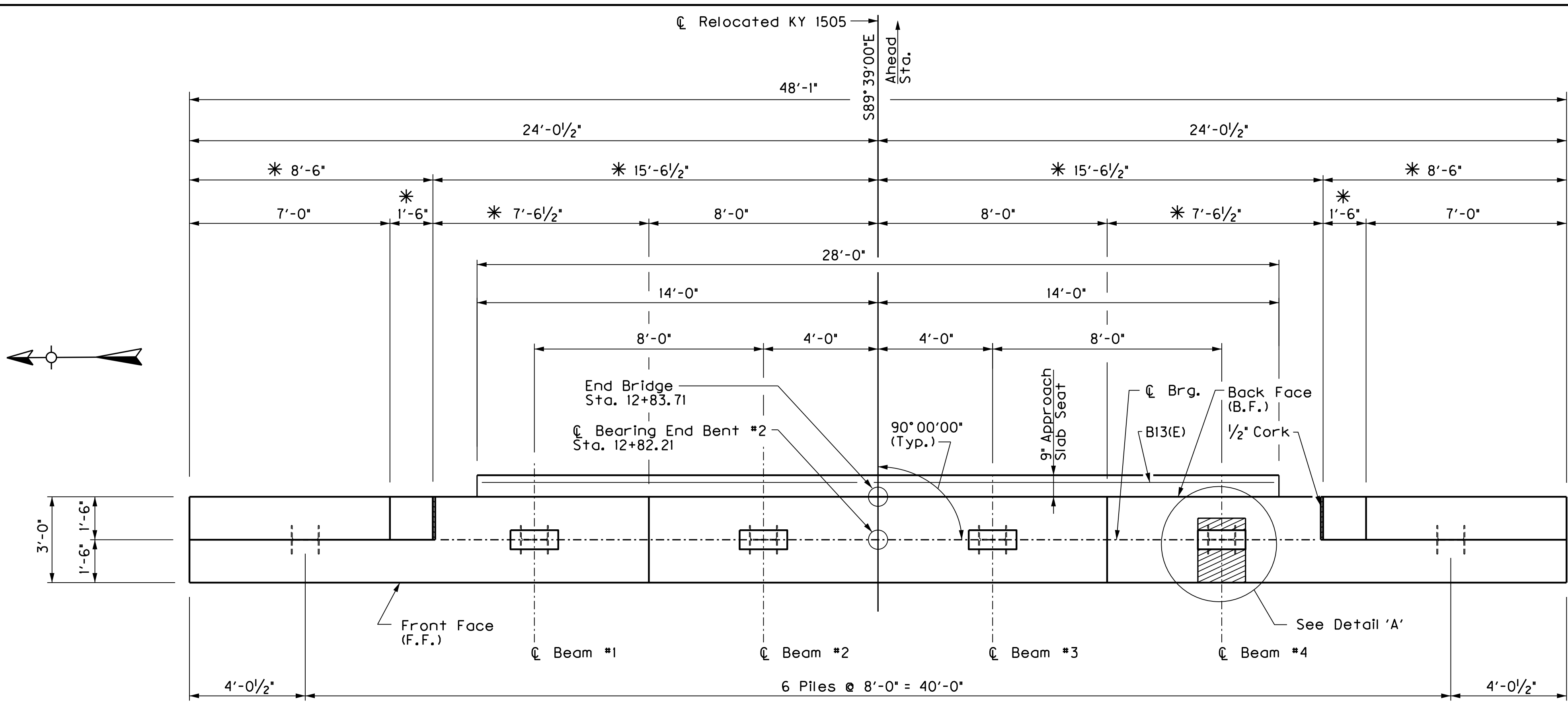
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
 COUNTY
ROCKCASTLE

ROUTE: KY 1505
 CROSSING: INTERSTATE 75
END BENT #2 DETAILS

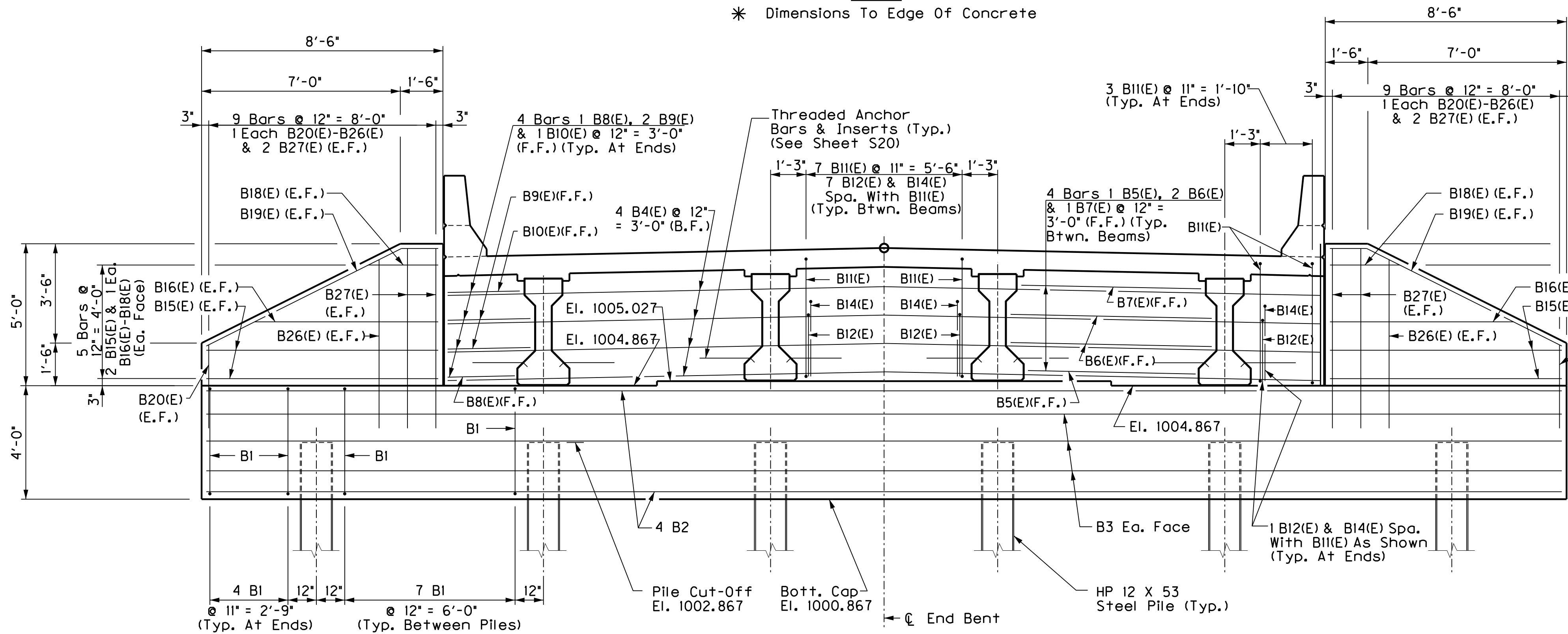
PREPARED BY: **V&M**
Vaughn & Melton
 Consulting Engineers

SHEET NO. **S17**
 DRAWING NO. **25341**

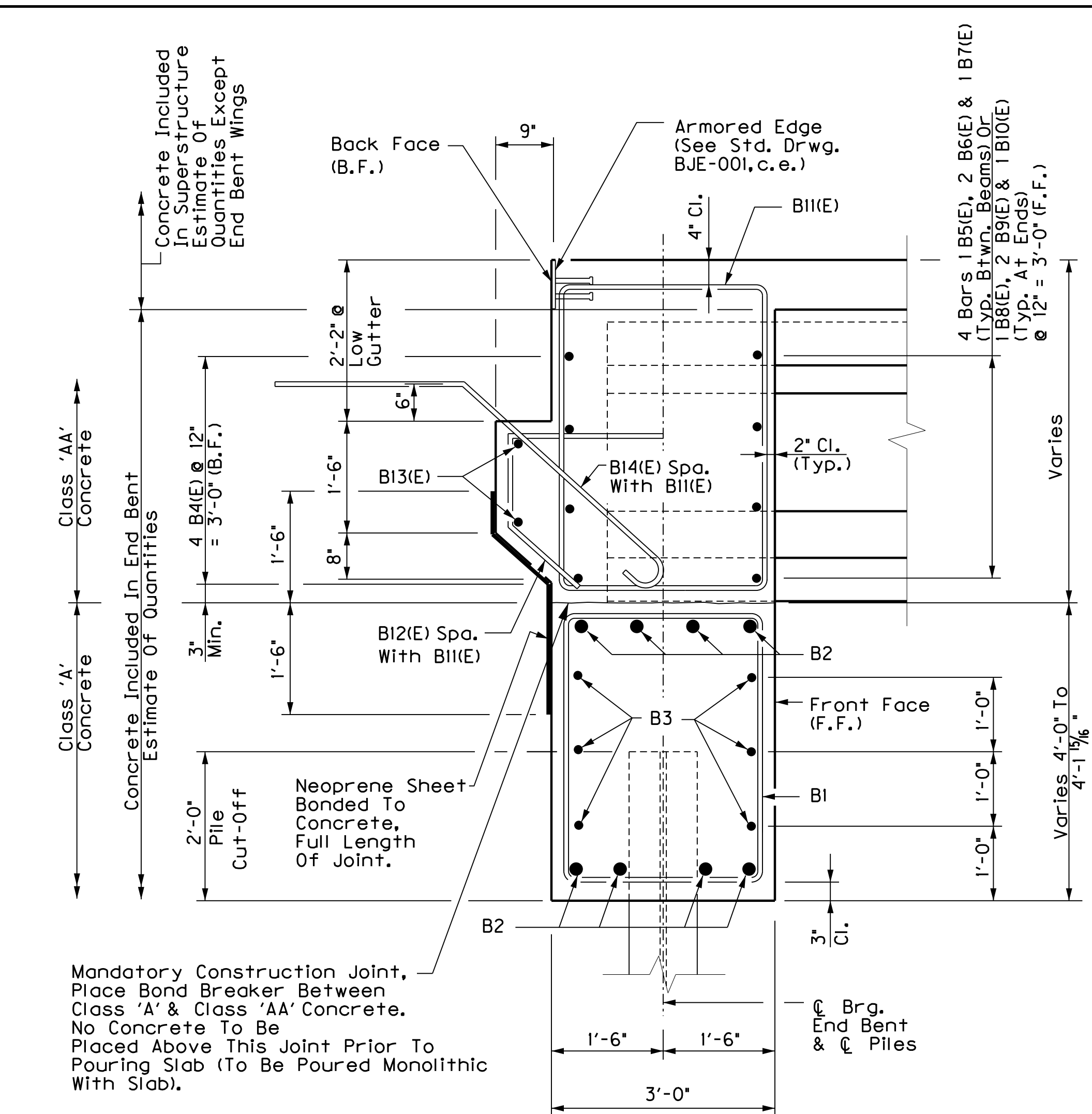
FILE NAME: S:\STRUCTURES\11630-04 ROCKCASTLE 1-75 UPDATE PLANS\FINAL REVISED PLANS\25341 - KY 1505\FRL.2016\UPDATE\25341-S17-END.BENT-1.2.dwg
 USER: FrJohnson DATE PLOTTED: September 12, 2016
 E-SHEET NAME: MicroStation v8.11.7.443



PLAN
 * Dimensions To Edge Of Concrete



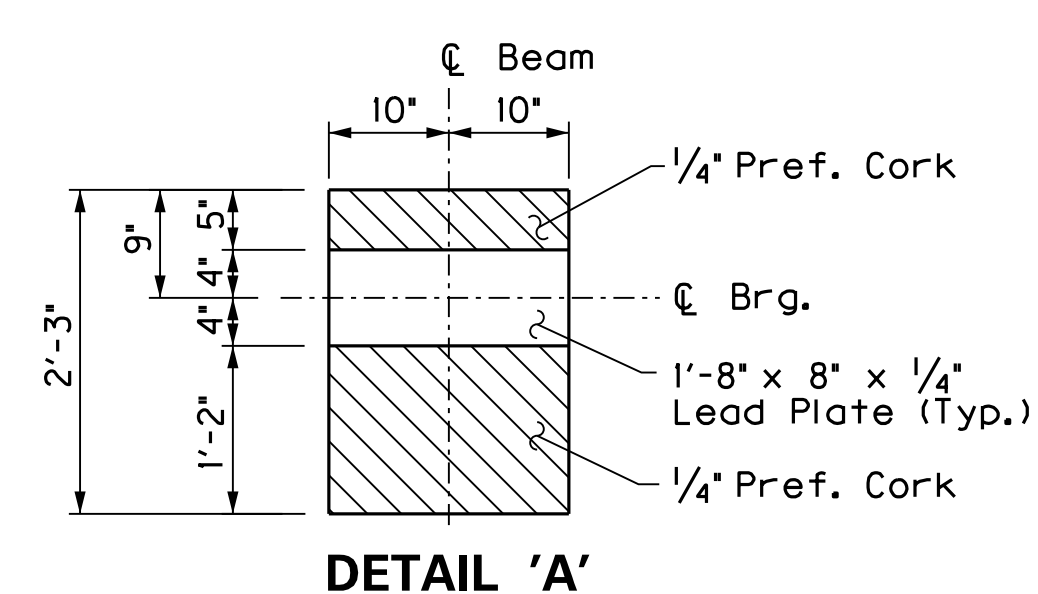
ELEVATION
 (Looking Ahead)
 Approach Slab Seat Not Shown For Clarity.



SECTION THRU CAP

Mandatory Construction Joint, Place Bond Breaker Between Class 'A' & Class 'AA' Concrete. No Concrete To Be Placed Above This Joint Prior To Pouring Slab (To Be Poured Monolithic With Slab).

ESTIMATE OF QUANTITIES		
ITEM	QUANTITY	UNIT
CONCRETE CLASS 'A'	21.7	CU. YD.
CONCRETE CLASS 'AA'	17.0	CU. YD.
STEEL REINFORCEMENT	1913	LBS.
EPOXY COATED REINFORCEMENT	1303	LBS.



DETAIL 'A'

ITEM NUMBER
8-6.3

REVISION	DATE

DATE: 2016 CHECKED BY: JAC
 DESIGNED BY: HLW
 DETAILED BY: SF

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
 COUNTY
ROCKCASTLE

ROUTE: KY 1505 CROSSING: INTERSTATE 75

END BENT #2 DETAILS

PREPARED BY: **V&M** Vaughn & Melton Consulting Engineers

SHEET NO. **S17**
 DRAWING NO. **25341**

SPECIAL NOTE FOR INTELLIGENT COMPACTION OF AGGREGATE BASES AND SOILS

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's current edition of the Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Provide and use Intelligent Compaction (IC) Rollers for compaction of Aggregate bases, soil, and soil rock mixtures.

2.0 MATERIALS AND EQUIPMENT. The Contractor shall supply sufficient numbers of rollers and other associated equipment necessary to complete the compaction requirements for the specific materials. The Contractor will determine the number of IC rollers to use depending on the scope of the project. The IC roller(s) may be utilized during production with other standard compaction equipment and shall be used for the evaluation of the compaction operations. Provide at least one (1) roller to be used on the project with the following minimum characteristics:

- 1) Are self propelled vibratory rollers equipped with machine drive power and/or accelerometers mounted in or about the drum to measure the interactions between the rollers and compacted materials in order to evaluate the applied Compactive effort. www.IntelligentCompaction.com contains a list of acceptable rollers equipped with IC technology.
- 2) IC rollers can be either smooth drums or pad footed drums based on the type needed for the aggregate base or soil types to compact.
- 3) The output from the roller is designated as the IC-MV which represents the stiffness of the materials based on the vibration of the roller drums and the resulting response from the underlying materials, or the machine drive power value.
- 4) Are equipped with integrated on-board documentation systems that are capable of displaying real-time color-coded maps of IC measurement values including the stiffness response values, location of the roller, number of roller passes, machine settings, together with the speed, the frequency and amplitude of roller drums. Ensure the display unit is capable of transferring the data by means of a USB port.
- 5) Are equipped with a mounted Global Positioning System GPS radio and receiver either a Real Time Kinematic (RTK-GPS) or Global Navigational Satellite System (GNSS) units that monitor the location and track the number of passes of the rollers. Accuracy of the positioning system must be within 12 inches.

3.0 WORK PLAN. Submit to the Engineer an IC Work Plan at the Preconstruction Conference and/or at least 2 weeks prior to beginning the corresponding construction activities. Describe in the work plan the following:

1. Compaction equipment to be used including:
 - Vendor(s)

- Roller model(s),
- Roller dimensions and weights,
- Description of IC measurement system,
- GPS capabilities,
- Documentation system,
- Software.

2. Roller data collection methods including sampling rates and intervals and data file types.

3. Transfer of data to the Engineer including method, timing, and personnel responsible. Data transfer shall occur at minimum twice per day or as directed by the Engineer. Data transfer is to be by electrical or digital means.

4. Provide the Section Engineer with a new laptop computer with the following minimum requirements: Windows 7 Pro 64bit, 2.0GHz processor, 32GB RAM, 500GB hard drive, DVD drive (reads and writes DVD/CD), and 14 inch display. This will become the property of the Cabinet upon delivery. **The Cabinet retains possession of the equipment upon completion of the project.**

5. Provide the Section Engineer the following new GPS survey equipment; this is a sole source item to ensure compatibility with the Cabinet’s existing equipment, **the Cabinet retains possession of the equipment upon completion of the project:**

Item	Part No.	Description	Quantity
1	85985-96	Kit - GNSS, SPS855 & SPS985, 900 MHz USA/CAN	1
2	IS51951-80	Option - Combo GLN/GAL/BeiDou/L5, SPS985/SPS855/SPS555H, Construction	1
3	IS50990-11	Upgrade - Precise Base, SPS985 / SPS985L / SPS855 / SPS585, Construction	1
4	56500-90	Kit - External Radio Antenna, 900MHz, Reverse Polarity	1
5	IS50990-13	Option – Premium Precise Rover, SPS985, Construction	1
6	TAB81-1	Trimble Site Tablet 10 w/SCS900, 2.4GHz radio, US WWAN, Gry/Yel, ext battery, extra radio antenna	1
7	104977-01-HH	Site Tablet 10 Pole Mount Kit	1
8	107727-01-HH	Site Tablet 10 Carry Case	1
9	SCS900-22	SCS900 Roding	1
10	SCS900-23	SCS900 Advanced Measurement	1
11	51658-10	Kit - Radio, SNB900, US/Canada	1
12	55201-00	GPS Kit - 2m Range Pole, Quick Release Bipod, Topo Shoe, Bag	1
13	28959-00-HH	Tripod - Adjustable Height, 2m for GPS	1
14	90553-TR-HH	Tripod - Dual Clamp Tri-Max with Trimble Logos	1

6. Training plan and schedule for roller operators, project foreman, project surveyors, and Cabinet personnel; including both classroom and field training from the equipment manufacturer. Training should be conducted at least 1 week before beginning IC construction. The training is to be performed by a qualified representative(s) from the IC Roller manufacture(s) to be used on the project.

4.0 CONSTRUCTION. Prior to the start of production, ensure the proper setup of the GPS, IC roller(s) and the rover(s) by conducting joint GPS correlation and verification testing between the Contractor, GPS representative and IC roller manufacturer using the same datum. Use the project datum system (Northing, Easting and Elevation) when applicable.

1. Ensure GPS correlation and verification testing includes the following minimum processes:
 - a. Establish the GPS system to be used either one with a base station or one with mobile receivers only. Ensure all components in the system are set to the correct coordinate system; then,
 - b. Verify that the roller and rover are working properly and that there is a connection with the base station; then,
 - c. Record the coordinates of the two edges where the front drum of the roller is in contact with the ground from the on-board, color-coded display; then,
 - d. Mark the locations of the roller drum edges and move the roller, and place the mobile receiver at each mark and record the readings; then, then,
2. Compare coordinates between the roller and rover receivers. If the coordinates are within 12.0 in. of each other, the comparison is acceptable. If the coordinates are not within 12.0 in., diagnose and perform necessary corrections and repeat the above steps until verification is acceptable.
3. Do not begin work until acceptable GPS correlation and verification has been obtained. The Contractor and the Department should conduct random GPS verification testing during production to ensure data locations are accurate. The recommended rate is once per day with a requirement of at least once per week.
4. A test strip is to be used for all materials (DGA, CSB, and soil) as outlined and sized in section 302.03.04 to determine optimum rolling pattern, for all materials, and the target density for aggregate bases. A new test strip will be required anytime the material changes, equipment changes, or proper compaction has not been obtained for two (2) consecutive test locations.
5. All acceptance testing shall be as outlined in Standard Specifications sections 200 and 300.
6. Any areas a minimum of 50 square feet in area not achieving the 80% of the stiffness value determined by the latest control strip shall be tested by other means approved by the Engineer. If the material doesn't pass the testing is shall be repaired based on current standards to the satisfaction of the Engineer.

5.0 MEASUREMENT. The Department will measure the total tons of aggregate base (DGA and/or CSB) and total cubic yards of soil compacted using the IC roller(s). The use of non-IC rollers is allowed on this project, but an IC roller must be used as well.

6.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

1. All areas with a minimum of 80% pass coverage and 75% required stiffness readings.
2. Payment is full compensation for all work associated with providing IC equipped rollers, transmission of electronic data files, all required survey equipment and computer, two copies of IC roller manufacturer software, and training.
3. Delays due to GPS satellite reception of signals to operate the IC equipment or IC roller breakdowns will not be considered justification for contract modifications or contract extensions.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24779EC	Intelligent Compaction for Soil	CY
24780EC	Intelligent Compaction for Aggregate	TON

UTILITIES AND RAIL CERTIFICATION NOTE

ROCKCASTLE COUNTY, NHPP IM 0753 (092)
FD52 102 0075 064-069
Interstate 75
Item No. 08-6.30

GENERAL PROJECT NOTE ON UTILITY PROTECTION

All existing utilities are to remain in service until their proposed utility relocations are complete. Holidays, bad weather, and facility outages may affect the below mentioned completion dates. It is recommended the Road Contractor contact the utility companies in order to coordinate utility relocation and roadway construction. Note: No railroads are on project.

NOTE: DO NOT DISTURB THE FOLLOWING UTILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

None when applicable

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

Windstream Communications has a pole on the northeast corner of the proposed bridge on Hurricane School Road. This line will be detached from the existing pole during construction of the new proposed bridge, and a new pole will be place back once bridge construction is complete. The contractor will be responsible for contacting Windstream prior to work in this area so that they can detach from subject pole. Windstream also has facilities south of existing KY 1505 bridge that is to be relocated by Windstream forces. This work is anticipated to be complete by March 31, 2017.

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY'S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

None when applicable

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

None when applicable

THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

- No Rail Involved Minimal Rail Involved (See Below) Rail Involved (See Below)

UTILITIES AND RAIL CERTIFICATION NOTE

ROCKCASTLE COUNTY, NHPP IM 0753 (092)
FD52 102 0075 064-069
Interstate 75
Item No. 08-6.30

UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation.

The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

UTILITIES AND RAIL CERTIFICATION NOTE

**ROCKCASTLE COUNTY, NHPP IM 0753 (092)
FD52 102 0075 064-069
Interstate 75
Item No. 08-6.30**

AREA UTILITIES CONTACT LIST

<u>Utility Company/Agency</u>	<u>Contact Name</u>	<u>Contact Information</u>
Windstream Communications	Kent Montgomery	719 N. Main St. London, KY. 40741 (606) 878-3264 kent.montgomery@windstream.com

PROPOSAL BID ITEMS

Report Date 12/16/16

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	84,149.00	TON		\$	
0020	00018		DRAINAGE BLANKET-TYPE II-ASPH	87,907.00	TON		\$	
0030	00100		ASPHALT SEAL AGGREGATE	414.00	TON		\$	
0040	00103		ASPHALT SEAL COAT	50.00	TON		\$	
0050	00194		LEVELING & WEDGING PG76-22	4,395.00	TON		\$	
0060	00214		CL3 ASPH BASE 1.00D PG64-22	4,395.00	TON		\$	
0070	00217		CL4 ASPH BASE 1.00D PG64-22	78,034.00	TON		\$	
0080	00219		CL4 ASPH BASE 1.00D PG76-22	26,754.00	TON		\$	
0090	00339		CL3 ASPH SURF 0.38D PG64-22 (REVISED: 12-16-16)	5,882.00	TON		\$	
0100	00342		CL4 ASPH SURF 0.38A PG76-22	19,778.00	TON		\$	
0110	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0120	02677		ASPHALT PAVE MILLING & TEXTURING (REVISED: 12-16-16)	2,310.00	TON		\$	
0130	20071EC		JOINT ADHESIVE	186,384.00	LF		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0140	00078		CRUSHED AGGREGATE SIZE NO 2	2,119.00	TON		\$	
0150	01005		PERFORATED PIPE EDGE DRAIN-4 IN	46,537.00	LF		\$	
0160	01006		PERFORATED PIPE EDGE DRAIN-6 IN	23,148.00	LF		\$	
0170	01010		NON-PERFORATED PIPE-4 IN	1,874.00	LF		\$	
0180	01015		INSPECT & CERTIFY EDGE DRAIN SYSTEM	1.00	LS		\$	
0190	01020		PERF PIPE HEADWALL TY 1-4 IN	47.00	EACH		\$	
0200	01021		PERF PIPE HEADWALL TY 1-6 IN	1.00	EACH		\$	
0210	01028		PERF PIPE HEADWALL TY 3-4 IN	31.00	EACH		\$	
0220	01032		PERF PIPE HEADWALL TY 4-4 IN	40.00	EACH		\$	
0230	01741		CORED HOLE DRAINAGE BOX CON-6 IN	107.00	EACH		\$	
0240	01845		ISLAND INTEGRAL CURB	333.00	LF		\$	
0250	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	223.00	EACH		\$	
0260	01985		DELINEATOR FOR BARRIER - YELLOW	612.00	EACH		\$	
0270	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	63.00	EACH		\$	
0280	01990		DELINEATOR FOR BARRIER WALL-B/W	12.00	EACH		\$	
0290	02003		RELOCATE TEMP CONC BARRIER	57,800.00	LF		\$	
0300	02014		BARRICADE-TYPE III	16.00	EACH		\$	
0310	02157		PAVED DITCH TYPE 1	17.25	SQYD		\$	
0320	02200		ROADWAY EXCAVATION	449,598.00	CUYD		\$	
0330	02262		FENCE-WOVEN WIRE TYPE 1	3,225.00	LF		\$	
0340	02265		REMOVE FENCE	3,118.00	LF		\$	
0350	02268		REMOVE & REPLACE FENCE	46,646.00	LF		\$	
0360	02360		GUARDRAIL TERMINAL SECTION NO 1	5.00	EACH		\$	
0370	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	8.00	EACH		\$	
0380	02367		GUARDRAIL END TREATMENT TYPE 1	14.00	EACH		\$	
0390	02369		GUARDRAIL END TREATMENT TYPE 2A	14.00	EACH		\$	

PROPOSAL BID ITEMS

Report Date 12/16/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	02371		GUARDRAIL END TREATMENT TYPE 7	7.00	EACH		\$	
0410	02381		REMOVE GUARDRAIL	27,785.00	LF		\$	
0420	02429		RIGHT-OF-WAY MONUMENT TYPE 1	118.00	EACH		\$	
0430	02432		WITNESS POST	22.00	EACH		\$	
0440	02488		CHANNEL LINING CLASS IV	702.30	CUYD		\$	
0450	02545		CLEARING AND GRUBBING (APPROXIMATELY 35.37 ACRES)	1.00	LS		\$	
0460	02562		TEMPORARY SIGNS	999.00	SQFT		\$	
0470	02585		EDGE KEY	336.00	LF		\$	
0480	02598		FABRIC-GEOTEXTILE TYPE III	1,350.00	SQYD		\$	
0490	02599		FABRIC-GEOTEXTILE TYPE IV	6,000.00	SQYD		\$	
0500	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	14,855.00	SQYD	\$2.00	\$	\$29,710.00
0510	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0520	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0530	02690		SAFELoading	14.00	CUYD		\$	
0540	02696		SHOULDER RUMBLE STRIPS	93,193.00	LF		\$	
0550	02726		STAKING	1.00	LS		\$	
0560	02731		REMOVE STRUCTURE (KY 1505)	1.00	LS		\$	
0570	02731		REMOVE STRUCTURE (KY 3275)	1.00	LS		\$	
0580	02898		RELOCATE CRASH CUSHION	3.00	EACH		\$	
0590	03171		CONCRETE BARRIER WALL TYPE 9T	52,108.00	LF		\$	
0600	03225		TUBULAR MARKERS	34.00	EACH		\$	
0610	04904		BARRIER MOUNTING BRACKET	21.00	EACH		\$	
0620	05950		EROSION CONTROL BLANKET	1,200.00	SQYD		\$	
0630	05963		INITIAL FERTILIZER	1.77	TON		\$	
0640	05964		20-10-10 FERTILIZER	11.00	TON		\$	
0650	05985		SEEDING AND PROTECTION	206,184.00	SQYD		\$	
0660	05992		AGRICULTURAL LIMESTONE	106.00	TON		\$	
0670	06401		FLEXIBLE DELINEATOR POST-M/W	175.00	EACH		\$	
0680	06405		SBM ALUMINUM PANEL SIGNS	624.00	SQFT		\$	
0690	06411		STEEL POST TYPE 2	296.00	LF		\$	
0700	06412		STEEL POST MILE MARKERS	8.00	EACH		\$	
0710	06510		PAVE STRIPING-TEMP PAINT-4 IN	2,400.00	LF		\$	
0720	06511		PAVE STRIPING-TEMP PAINT-6 IN	280,908.00	LF		\$	
0730	06514		PAVE STRIPING-PERM PAINT-4 IN	5,400.00	LF		\$	
0740	06542		PAVE STRIPING-THERMO-6 IN W	74,325.00	LF		\$	
0750	06543		PAVE STRIPING-THERMO-6 IN Y	49,700.00	LF		\$	
0760	08904		CRASH CUSHION TY VI CLASS C	4.00	EACH		\$	
0770	10020NS		FUEL ADJUSTMENT	492,661.00	DOLL	\$1.00	\$	\$492,661.00
0780	10030NS		ASPHALT ADJUSTMENT	649,856.00	DOLL	\$1.00	\$	\$649,856.00
0790	20432ES112		REMOVE CRASH CUSHION	5.00	EACH		\$	
0800	20911ED		HIGH SLUMP 3000 PSI GROUT	96.50	CUYD		\$	
0810	20912ND		BARRIER WALL POST	5.00	EACH		\$	
0820	21430ES508		CONC MEDIAN BARRIER TYPE 12C(50)	20,831.00	LF		\$	
0830	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	23,087.50	LF		\$	
0850	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		\$	
0860	23607EC		PAVE MARK THERMO-LANE REDUCTION ARROW	6.00	EACH		\$	

PROPOSAL BID ITEMS

Report Date 12/16/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0870	24255EC		REMOVE CABLE GUARDRAIL BARRIER SYSTEM	29,564.00	LF		\$	
0880	24470ED		PERMEABLE PAVEMENT DRAIN	51.00	SQYD		\$	
0890	24489EC		INLAID PAVEMENT MARKER	2,464.00	EACH		\$	
0900	24779EC		INTELLIGENT COMPACTION FOR SOIL	66,866.00	CUYD		\$	
0910	24780EC		INTELLIGENT COMPACTION FOR AGGREGATE	84,149.00	TON		\$	
0920	24781EC		INTELLIGENT COMPACTION FOR ASPHALT	225,396.00	TON		\$	
0930	24814EC		PIPELINE INSPECTION	7,950.00	LF		\$	
0940	24852EC		BARRIER WALL GATE	2.00	EACH		\$	
0950	24873EC		CONTROL SYSTEM FOR INCIDENT MANAGEMENT	1.00	L S		\$	
0960	24885ED		RADAR SPEED SIGN	2.00	EACH		\$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0970	00461		CULVERT PIPE-15 IN	298.00	LF		\$	
0980	00462		CULVERT PIPE-18 IN	494.00	LF		\$	
0990	00464		CULVERT PIPE-24 IN	43.00	LF		\$	
1000	00466		CULVERT PIPE-30 IN	52.00	LF		\$	
1010	00473		CULVERT PIPE-66 IN	28.00	LF		\$	
1020	00521		STORM SEWER PIPE-15 IN	14,835.00	LF		\$	
1030	00521		STORM SEWER PIPE-15 IN (CMP, NO ALTERNATE)	415.00	LF		\$	
1040	00522		STORM SEWER PIPE-18 IN	852.00	LF		\$	
1050	01202		PIPE CULVERT HEADWALL-15 IN	5.00	EACH		\$	
1060	01204		PIPE CULVERT HEADWALL-18 IN	3.00	EACH		\$	
1070	01222		PIPE CULVERT HEADWALL-66 IN	1.00	EACH		\$	
1080	01432		SLOPED BOX OUTLET TYPE 1-15 IN	5.00	EACH		\$	
1090	01450		S & F BOX INLET-OUTLET-18 IN	2.00	EACH		\$	
1100	01451		S & F BOX INLET-OUTLET-24 IN	1.00	EACH		\$	
1110	01452		S & F BOX INLET-OUTLET-30 IN	2.00	EACH		\$	
1120	01480		CURB BOX INLET TYPE B	8.00	EACH		\$	
1130	01490		DROP BOX INLET TYPE 1	6.00	EACH		\$	
1140	01559		DROP BOX INLET TYPE 13G	4.00	EACH		\$	
1150	01641		JUNCTION BOX-15 IN	2.00	EACH		\$	
1160	01643		JUNCTION BOX-24 IN	1.00	EACH		\$	
1170	01644		JUNCTION BOX-30 IN	1.00	EACH		\$	
1180	02484		CHANNEL LINING CLASS III	73.00	TON		\$	
1190	02488		CHANNEL LINING CLASS IV	90.40	CUYD		\$	
1200	21601NN		CONC MED BAR BOX INLET TY 12A2-50	2.00	EACH		\$	
1210	21602NN		CONC MED BARR BOX INLET TY 12B2-50	46.00	EACH		\$	
1220	22620NN		CONC MED BARR BOX INLET TY 12A1-50	1.00	EACH		\$	
1230	23043NS710		CONC MED BARRIER INLET TY 14B2-50	4.00	EACH		\$	
1240	23611NN		CONC MED BAR BOX INLET TY 12B1-50	53.00	EACH		\$	

Section: 0004 - BRIDGE - HURRICANE SCHOOL ROAD - DWG. 25340

PROPOSAL BID ITEMS

Report Date 12/16/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1250	02231		STRUCTURE GRANULAR BACKFILL	62.00	CUYD		\$	
1260	02998		MASONRY COATING	1,417.00	SQYD		\$	
1270	03299		ARMORED EDGE FOR CONCRETE	56.80	LF		\$	
1280	08001		STRUCTURE EXCAVATION-COMMON	436.00	CUYD		\$	
1290	08002		STRUCTURE EXCAV-SOLID ROCK	18.00	CUYD		\$	
1300	08020		CRUSHED AGGREGATE SLOPE PROT	182.00	TON		\$	
1310	08033		TEST PILES	95.00	LF		\$	
1320	08046		PILES-STEEL HP12X53	274.30	LF		\$	
1330	08094		PILE POINTS-12 IN	16.00	EACH		\$	
1340	08100		CONCRETE-CLASS A	159.30	CUYD		\$	
1350	08104		CONCRETE-CLASS AA	300.20	CUYD		\$	
1360	08150		STEEL REINFORCEMENT	24,381.00	LB		\$	
1370	08151		STEEL REINFORCEMENT-EPOXY COATED	84,580.00	LB		\$	
1380	08634		PRECAST PC I BEAM TYPE 4 (54-IN)	1,112.00	LF		\$	
1390	21532ED		RAIL SYSTEM TYPE III	564.10	LF		\$	

Section: 0005 - BRIDGE - KY 1505 OVER I-75 - DWG. 25341

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1400	02231		STRUCTURE GRANULAR BACKFILL	32.00	CUYD		\$	
1410	02998		MASONRY COATING	1,210.00	SQYD		\$	
1420	03299		ARMORED EDGE FOR CONCRETE	56.00	LF		\$	
1430	08001		STRUCTURE EXCAVATION-COMMON	193.00	CUYD		\$	
1440	08020		CRUSHED AGGREGATE SLOPE PROT	172.00	TON		\$	
1450	08033		TEST PILES	204.00	LF		\$	
1460	08046		PILES-STEEL HP12X53	618.40	LF		\$	
1470	08094		PILE POINTS-12 IN	48.00	EACH		\$	
1480	08100		CONCRETE-CLASS A	170.10	CUYD		\$	
1490	08104		CONCRETE-CLASS AA	262.30	CUYD		\$	
1500	08150		STEEL REINFORCEMENT	19,900.00	LB		\$	
1510	08151		STEEL REINFORCEMENT-EPOXY COATED	65,111.00	LB		\$	
1520	08500		APPROACH SLAB	155.60	SQYD		\$	
1530	08633		PRECAST PC I BEAM TYPE 3 (45-IN)	984.00	LF		\$	
1540	21532ED		RAIL SYSTEM TYPE III	500.00	LF		\$	

Section: 0006 - BRIDGE - CULVERT - RCBC 6' X 5' - DWG. 25430

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1550	02403		REMOVE CONCRETE MASONRY	12.00	CUYD		\$	
1560	08003		FOUNDATION PREPARATION	1.00	LS		\$	
1570	08100		CONCRETE-CLASS A	49.80	CUYD		\$	
1580	08150		STEEL REINFORCEMENT	15,502.00	LB		\$	

Section: 0007 - TRAINEES

PROPOSAL BID ITEMS

Report Date 12/16/16

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1590	02742		TRAINEE PAYMENT REIMBURSEMENT 1 CEMENT MASON	1,200.00	HOUR		\$	
1600	02742		TRAINEE PAYMENT REIMBURSEMENT 1 GROUP 2, 3 OR 4 OPERATOR	1,400.00	HOUR		\$	
1610	02742		TRAINEE PAYMENT REIMBURSEMENT 1 GROUP 2, 3 OR 4 OPERATOR	1,400.00	HOUR		\$	

Section: 0008 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1620	02568		MOBILIZATION	1.00	LS		\$	
1630	02569		DEMOBILIZATION	1.00	LS		\$	

SPECIAL NOTE FOR INLAID PAVEMENT MARKERS

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and applicable Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. This work shall consist of:

- (1) Maintain and Control Traffic; and (2) Furnish and install Inlaid Pavement Markers (IPMs) in recessed grooves; and (3) Any other work as specified by these notes and the Contract.

II. MATERIALS

The Department will sample all materials in accordance with the Department's Sampling Manual. Make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Markers. Provide reflective lenses with depth control breakaway positioning tabs. Before furnishing the markers, provide to the Engineer the manufacturer's current recommendations for adhesives and installation procedures. Use one brand and design throughout the project. Use markers meeting the specifications in the table below.

SPECIFICATIONS FOR HOUSING AND REFLECTOR	
Material:	Polycarbonate Plastic
Weight:	Housing 2.00 oz.
	Reflector 2.00oz.
Housing Size:	5.00" x 3.00" x 0.70" high
Specific Intensity of Reflectivity at 0.2° Observation Angle	
White:	3.0 at 0°entrance angle
	1.2 at 20°entrance angle
Yellow:	60% of white values
Red:	25% of white values

C. Adhesives. Use adhesives that conform to the manufacturer's recommendations.

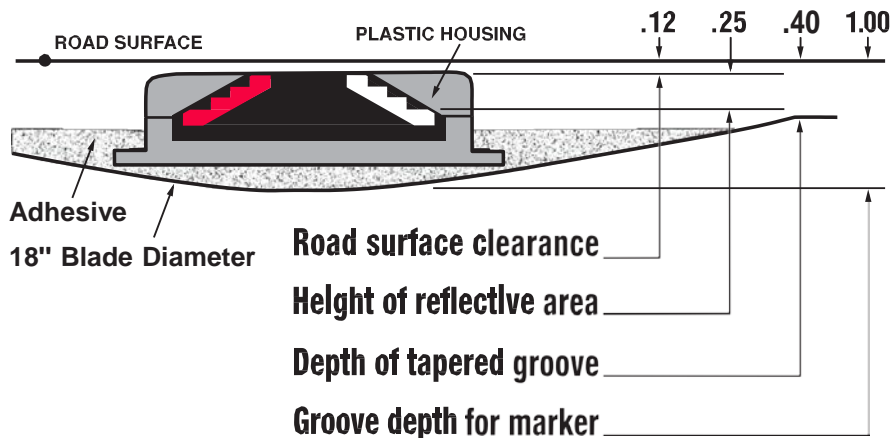
III. CONSTRUCTION

A. Experimental Evaluation. The University of Kentucky Transportation Center will be evaluating this installation of IPMs. Notify the Engineer a minimum of 14 calendar days prior to beginning work. The Engineer will coordinate the University's activities with the Contractor's work.

B. Maintain and Control Traffic. See Traffic Control Plan.

C. Installation. Install IPMs in recessed grooves cut into the final course of asphalt pavement according to the manufacturer's recommendations. Do not cut the grooves until the pavement has cured sufficiently to prevent tearing or raveling. Cut installation grooves using diamond blades on saws that accurately control groove dimensions. Remove all dirt, grease, oil, loose or unsound layers, and any other material from the marker area which would reduce the bond of the adhesive. Maintain pavement surfaces in a clean condition until placing markers.

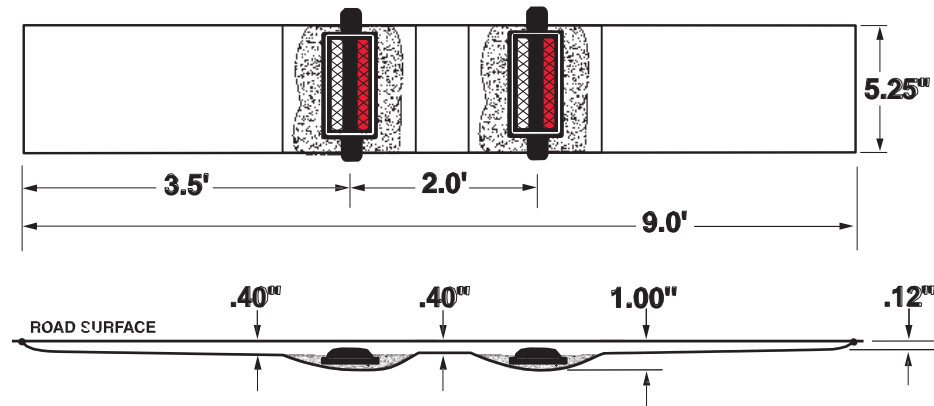
Prepare the pavement surfaces, and install the markers in the recessed groove according to the drawing below. Use an approved snowplowable epoxy adhesive. Ensure that the adhesive bed area is equal to the bottom area of the marker, and apply adhesive in sufficient quantity to force excess out around the entire perimeter of the marker. Use materials, equipment, and construction procedures that ensure proper adhesion of the markers to the pavement surface according to the manufacturer's recommendations. Remove all excess adhesive from in front of the reflective faces. If any adhesive or foreign matter cannot be removed from the reflective faces, or if any marker fails to properly adhere to the pavement surface, remove and replace the marker at no additional cost to the Department.



D. Location and Spacing. Install the markers in the pattern for high reflectivity with two (2) IPMs per groove. Locate and space markers as shown in the current standard drawings or sepias (note: use Inlaid Pavement Markers wherever Type V Pavement Markers are called for). Do not install markers on bridge decks. Do not install a marker

Inlaid Pavement Markers
Page 3 of 4

on top of a pavement joint or crack. Offset the recessed groove a minimum of 2 inches from any longitudinal pavement joint or crack and at least one inch from the painted stripe, ensuring that the finished line of markers is straight with minimal lateral deviation. Give preference to maintaining the 2-inch offset between recessed groove and joint as opposed to keeping the line of markers straight.



Place inlaid markers as much in line with existing pavement striping as possible. Place markers installed along an edge line or channelizing line so that the near edge of the plastic housing is no more than one inch from the near edge of the line. Place markers installed along a lane line between and in line with the dashes. Do not place markers over the lines except where the lines deviate visibly from their correct alignment, and then only after obtaining the Engineer's prior approval of the location.

If conflicts between recessed groove placement in relation to pavement joint and striping cannot be resolved, obtain the Engineer's approval to eliminate the marker or revise the alignment.

E. Disposal of Waste. Dispose of all removed asphalt pavement, debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for waste and Borrow.

F. Restoration. Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged features in like kind materials and design at no additional cost to the Department.

G. On-Site Inspection. Make a thorough inspection of the site prior to submitting a bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made and will not honor any claims for money or grant Contract time extensions resulting from site conditions.

H. Caution. Do not take information shown on the drawings and in this proposal and the types and quantities of work listed as an accurate or complete evaluation of the

Inlaid Pavement Markers
Page 4 of 4

material and conditions to be encountered during construction, but consider the types and quantities of work listed as approximate only. The bidder must draw his own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation or extension of Contract time if the conditions encountered are not in accordance with the information shown.

IV. MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. "INLAID PAVEMENT MARKER" shall be measured as each. One (1) installation of "INLAID PAVEMENT MARKER" will consist of grooving the pavement, removing asphalt cuttings and debris, preheating pavement to remove moisture, adhesives, and installation of two (2) markers with all lenses in accordance with this note.

Note: Each pay item of Inlaid Pavement Marker will require two markers.

V. PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Inlaid Pavement Markers. The Department will make payment for the completed and accepted quantity of completely installed "INLAID PAVEMENT MARKERS" at the Contract unit price, each. Accept payment as full compensation for all labor, equipment, materials, and incidentals to accomplish this work to the satisfaction of the Engineer. A system of one (1) groove and two (2) markers shall be paid as one "INLAID PAVEMENT MARKER". The bid item "INLAID PAVEMENT MARKER" shall be used regardless of the color and type of lenses required.