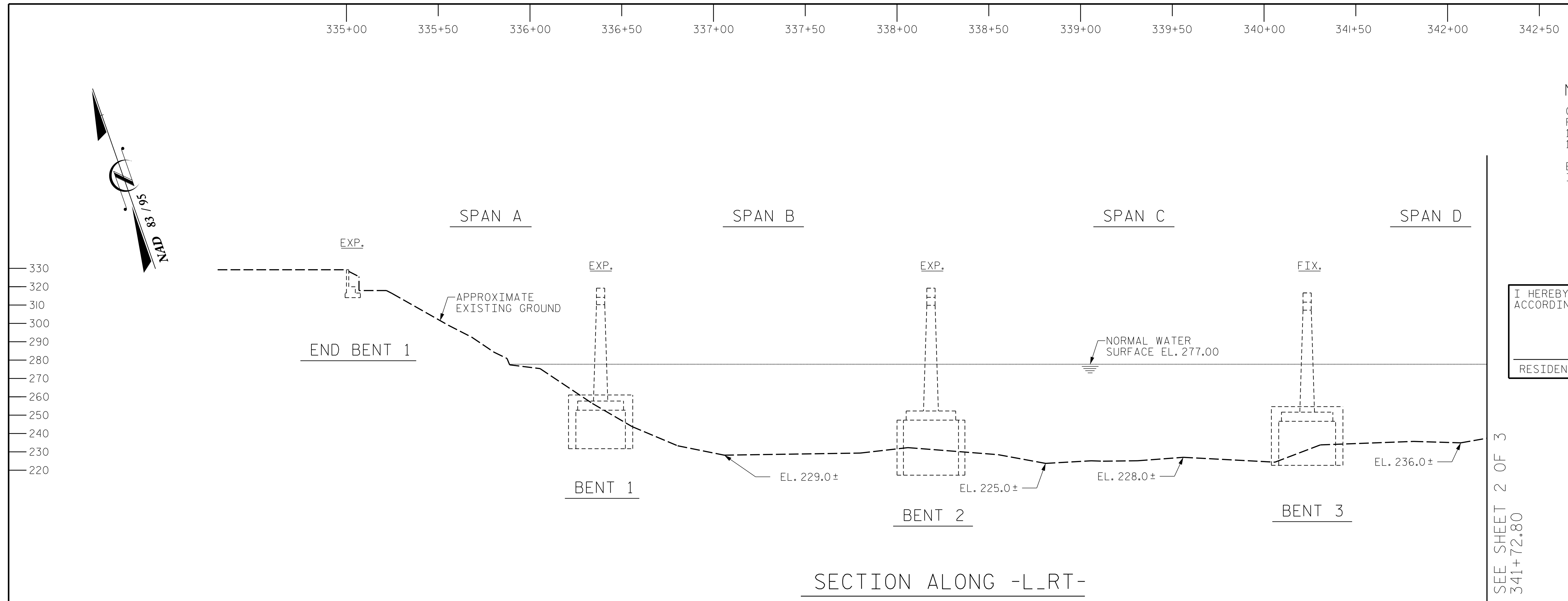


NOTES:
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE AS-BUILT PLANS DATED APRIL 6, 1979, REHABILITATION PLANS DATED JULY 1981, AND DECEMBER 15, 1987.

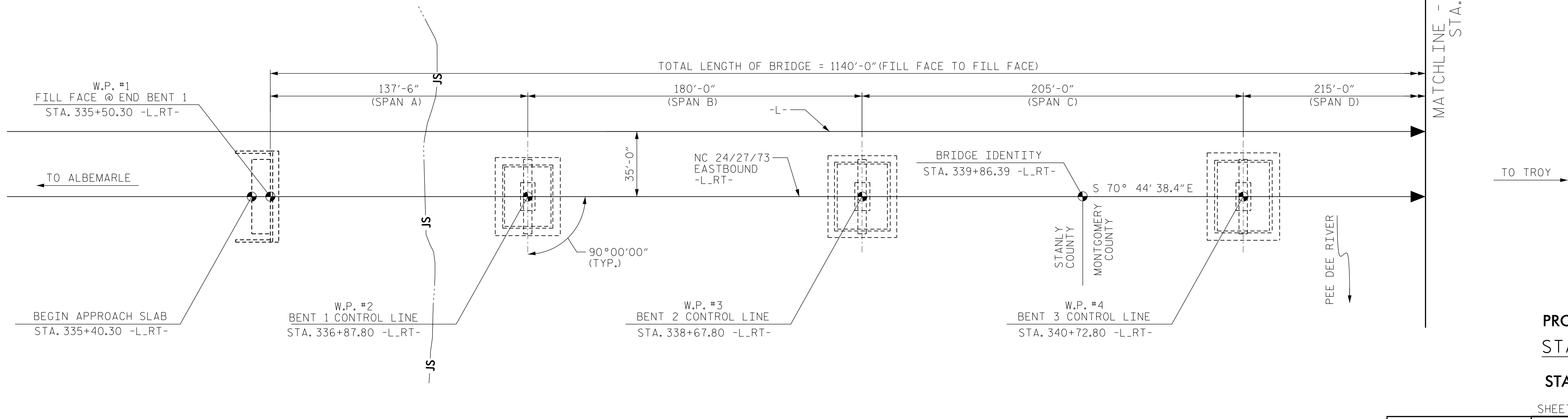
EXISTING GROUNDLINE BASED ON BEST INFORMATION AVAILABLE.

I HEREBY CERTIFY THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN

RESIDENT ENGINEER _____ DATE _____



MATCHLINE - SEE SHEET 2 OF 3 STA. 341+72.80



PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-
 SHEET 1 OF 3 REHABILITATION OF BRIDGE NO. 830050

AECOM
 AECOM TECHNICAL SERVICES, INC.
 701 CORPORATE CENTER DRIVE, SUITE 475
 RALEIGH, NC 27607
 (919) 854-6200 www.aecom.com
 AECOM License No. F-0342

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE ON NC 24/27/73 EASTBOUND OVER PEE DEE RIVER

PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

DRAWN BY : K. DONALD DATE : 08/2018
 CHECKED BY : G. COLS DATE : 08/2018
 DESIGNED BY : K. DONALD DATE : 08/2018
 DESIGN CHECKED BY : G. COLS DATE : 08/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

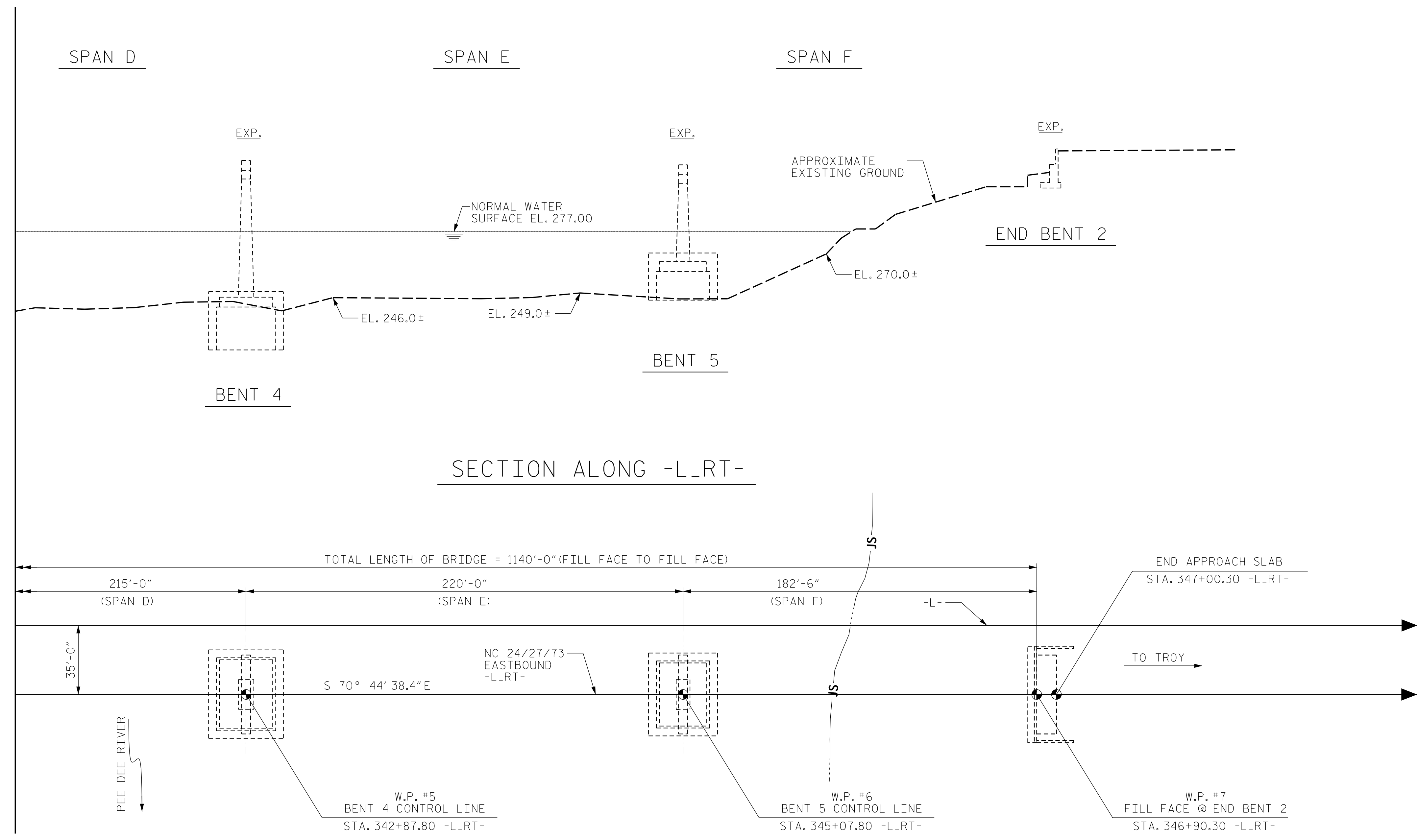
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342+00 342+50 343+00 343+50 344+00 344+50 345+00 345+50 346+00 346+50 347+00 347+50 348+00 348+50



330
320
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250
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230
220

MATCHLINE - SEE SHEET 1 OF 3
STA. 341+72.80



SECTION ALONG -L-RT-

PLAN

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

BRIDGE ON NC 24/27/73
 EASTBOUND OVER
 PEE DEE RIVER

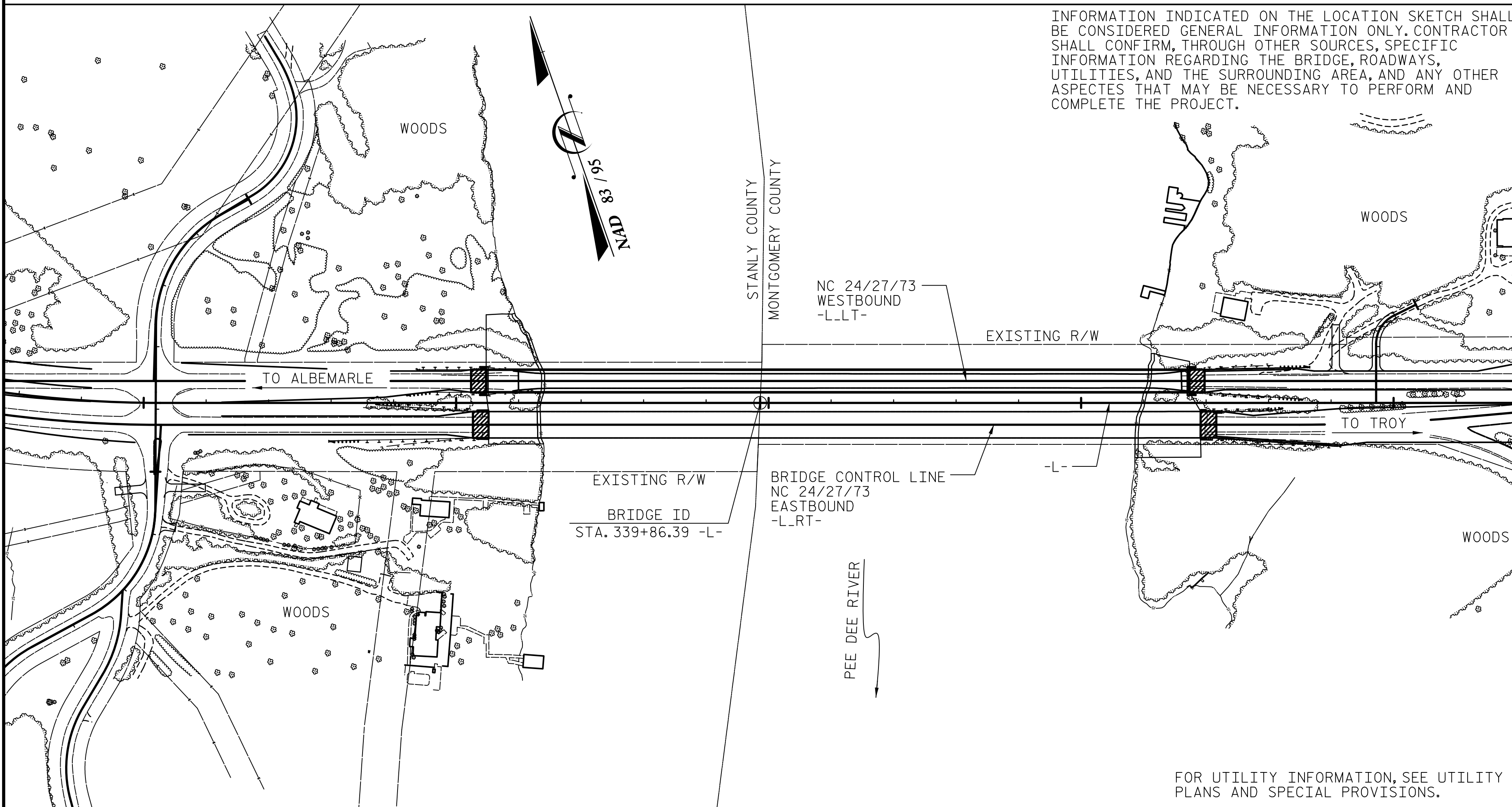
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

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 SIGNATURES COMPLETED

DRAWN BY : K. DONALD DATE : 08/2018
 CHECKED BY : G. COLS DATE : 08/2018
 DESIGNED BY : K. DONALD DATE : 08/2018
 DESIGN CHECKED BY : G. COLS DATE : 08/2018

USER: greg@k DATE: 8/27/2018
 DGN: \\S:\A\1\p00\ncascom\com\dale\proj\leas\60739718 - ASR Lake Tilley\800_CAD_GIS\910_CAD\YO_MCDOT_TIP-Structures\04 Drawings\401_DOS_B4974_SML_G02.dgn TIME: 4:24:57 PM

BENCH MARK: BM#45
 STA. 330+22.40 -L- CHISELED SQUARE ON N END CONCRETE MEDIAN, OFFSET 60.26' RIGHT
 COORDINATES: N 569232 E 1676812
 ELEV. = 361.05'



LOCATION SKETCH

GENERAL SCOPE AND SEQUENCE OF WORK:

REPLACEMENT OF EXISTING BEARINGS AT END BENTS AND BENTS.

CLEANING AND PAINTING EXISTING WEATHERING STEEL BEAMS AT END BENTS.

REMOVAL OF UNSOUND CONCRETE AND PREPARATION OF EXISTING END BENT AND BENT AREAS FOR SHOTCRETE REPAIR. EPOXY INJECTION OF CONCRETE CRACKS IN SUBSTRUCTURE. SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS. SILANE COATING OF SUBSTRUCTURE. EPOXY COATING OF SUBSTRUCTURE COLUMNS AND CAPS. EPOXY INJECTION OF CONCRETE CRACKS IN THE UNDERSIDE OF DECK.

REMOVAL OF EXISTING MODULAR JOINTS, PARTIAL REMOVAL OF BRIDGE DECK, AND REMOVAL OF END DIAPHRAGM CONCRETE AT END BENTS. RECONSTRUCTION OF DECK PORTION PREVIOUSLY REMOVED AND END DIAPHRAGM. INSTALLATION OF TEMPORARY JOINT PLATES.

PARTIAL REMOVAL TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS. REMOVAL AND REPAIR OF ANY UNSOUND AREAS OF CONCRETE IN THE DECK (CLASS II REPAIRS).

OVERLAY OF PREPARED TOP OF BRIDGE DECK WITH POLYESTER POLYMER CONCRETE (PPC). GROOVING OF PPC BRIDGE DECK.

REMOVAL TEMPORARY JOINT PLATES AND INSTALLATION OF RUBBER PLATE TYPE EXPANSION JOINTS.

TOTAL BILL OF MATERIAL

	GROOVING BRIDGE FLOOR	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECT	MOLDED RUBBER SEGMENTAL EXPANSION JOINTS	CLEANING AND PAINTING EXISTING WEATHERING STEEL	PAINTING CONTAINMENT	PCC MATERIALS	BEAM REPAIR	EPOXY COATING	SILANE TREATMENT	CONCRETE DECK REPAIRS FOR PCC OVERLAY	PLACING AND FINISHING PCC OVERLAY
	SQ. FT.	LUMP SUM	SQ. YDS.	CU. FT.	CU. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LUMP SUM	CU. YDS.	LBS.	SQ. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.
TOTAL															

TOTAL BILL OF MATERIAL (CONT.)

	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	TYPE I BRIDGE JACKING	EPOXY COATED REINFORCING STEEL	CONCRETE FOR DECK REPAIR	VOLUMETRIC MIXER	BRIDGE JOINT DEMOLITION
	SQ. YDS.	SQ. YDS.	EA.	LBS.	CU. FT.	LUMP SUM	EA.
TOTAL							

DRAWN BY : K. DONALD DATE : 08/2018
 CHECKED BY : G. COLS DATE : 08/2018
 DESIGNED BY : K. DONALD DATE : 08/2018
 DESIGN CHECKED BY : G. COLS DATE : 08/2018

NOTES:

THIS STRUCTURE HAS NOT BEEN ANALYZED OR LOAD RATED FOR CURRENT OR PAST DESIGN SPECIFICATIONS.

NO HYDRAULIC ANALYSIS HAS BEEN PERFORMED AND NO HYDRAULIC DATA HAS BEEN SHOWN.

FOR OTHER DEISNG DATA AND GENERAL NOTES SEE SHEET SN.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

THE CONTRACTOR SHALL HAVE NO CLAIM WAHTSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION OR AECOM FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THAT SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE CONSTRUCTION DEBRIS AND SHOTBLASTING OR SIMILAR MATERIAL DOES NOT ENTER ACTIVE TRAVEL LANES.

EXISTING DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK. SEALS SHALL BE REMOVED UPON COMPLETION OF DECK OVERLAY. CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS ADJACENT TO ACTIVE TRAVEL LANE(S) SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW-THROUGH OF THE DECK.

REHAB OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR ANY DEMOLITION WORK IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

CONTRACTOR SHALL FIELD VERIFY STATIONS, DIMENSIONS, AND ELEVATIONS BEFORE ORDERING OR FABRICATING ANY MATERIALS.

THE CLASS AA CONCRETE IN THE BRIDGE DECK AND SUPERSTRUCTURE PORTIONS BEING REPLACED SHALL CONTAIN FLY ASH OR GROUND GRANULATED LAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 024-5 AND 1024-6 OF THE STANDARD SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR THIS SUBSTITUTION AS IT IS CONSIDERED INCIDENTAL TO THE COST OF THE CONCRETE FOR DECK SLAB.

ALL DIMENSIONS ARE FOR THE STRUCTURE AT 60 DEGREES FAHRENHEIT. INSTALLATION OF JOINTS AND REPLACEMENT OF BEARINGS SHALL BE PERFORMED AT A TEMPERATURE BETWEEN 40 AND 90 DEGREES FAHRENHEIT.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS, AND CONSTRUCTION SEQUENCES.

FOR PAINTING OF EXISTING WEATHERING STEEL, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR PPC OVERLAY, PPC MATERIALS AND PLACING & FINISHING PPC OVERLAY, SEE POLYESTER POLYMER CONCRETE OVERLAY SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR PPC, SEE SPECIAL PROVISIONS.

FOR CLASS II SURFACE PREPARATION, SCARIFYING BRIDGE DECK, AND SHOTBLASTING OF BRIDGE DECK, SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

FOR RUBBER PLATE-TYPE JOINTS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE EPOXY COATING AND DEBRIS REMOVAL SPECIAL PROVISIONS.

FOR BEARING REPLACEMENT, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

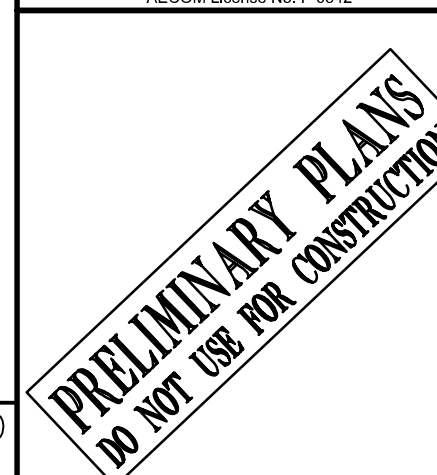
FOR MATERIAL STORAGE, SEE SPECIAL PROVISIONS

PROJECT NO. 15BPR.43

STANLY/MONTGOMERY COUNTY

STATION: 339+86.39 -L-

SHEET 3 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

BRIDGE ON NC 24/27/73
 EASTBOUND OVER
 PEE DEE RIVER

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.

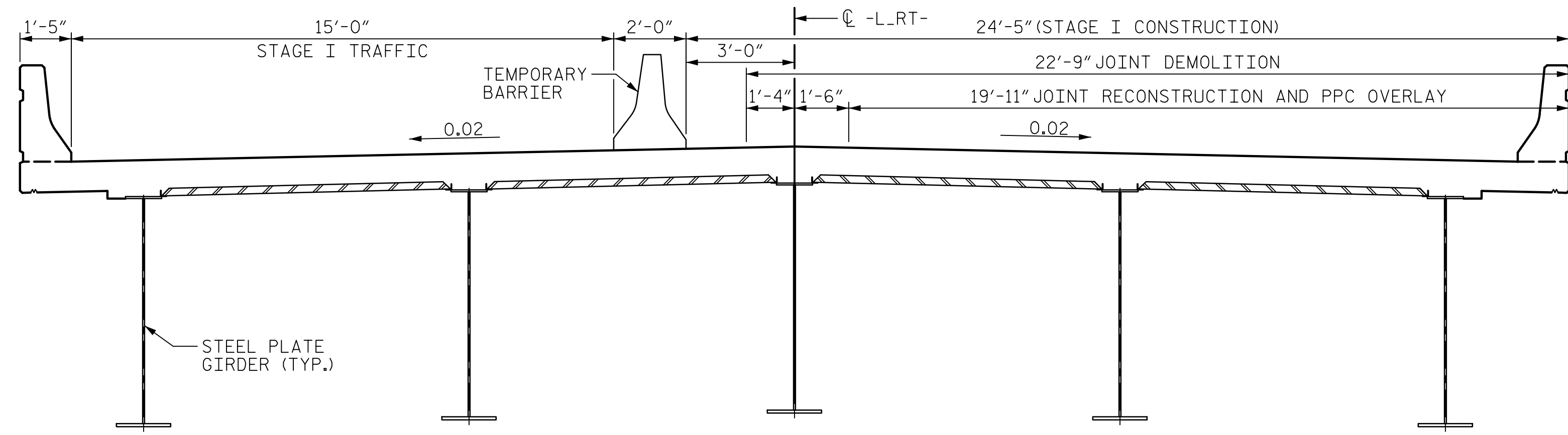
S-5
 TOTAL SHEETS
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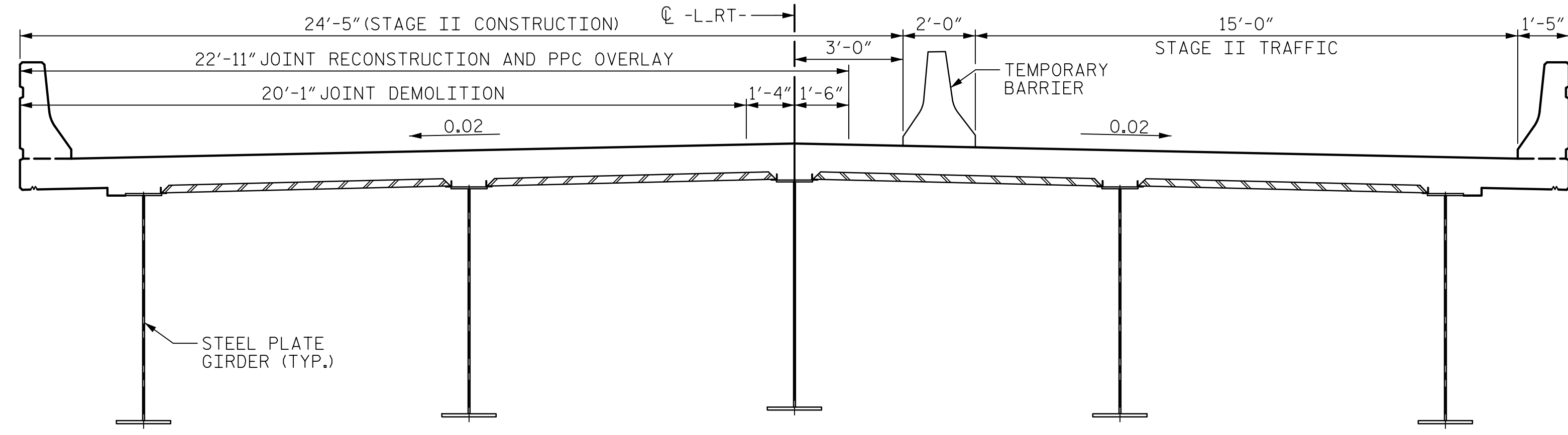
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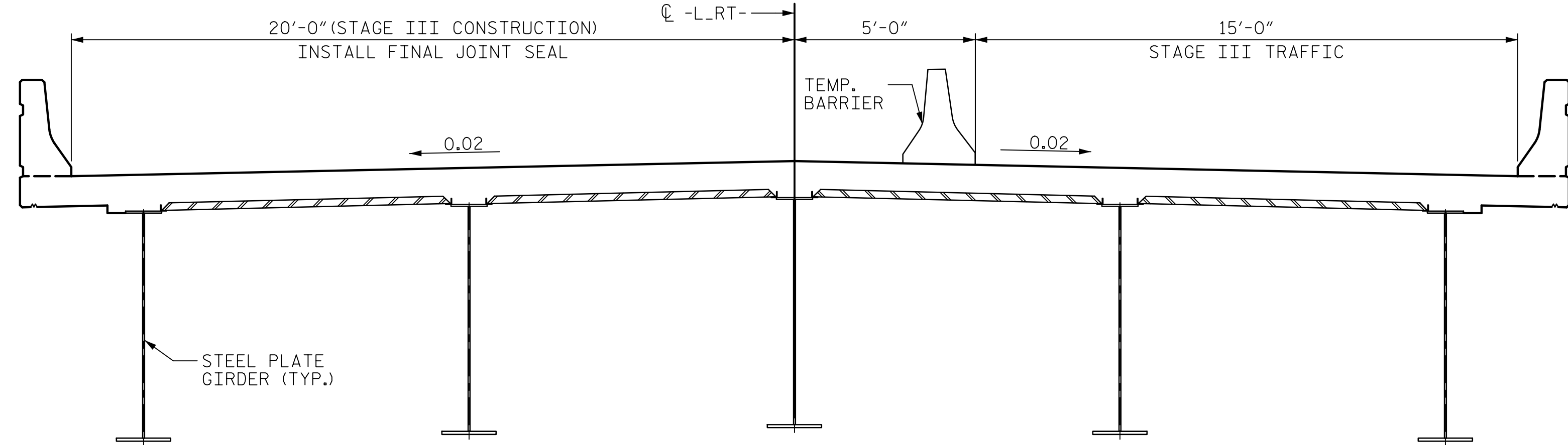
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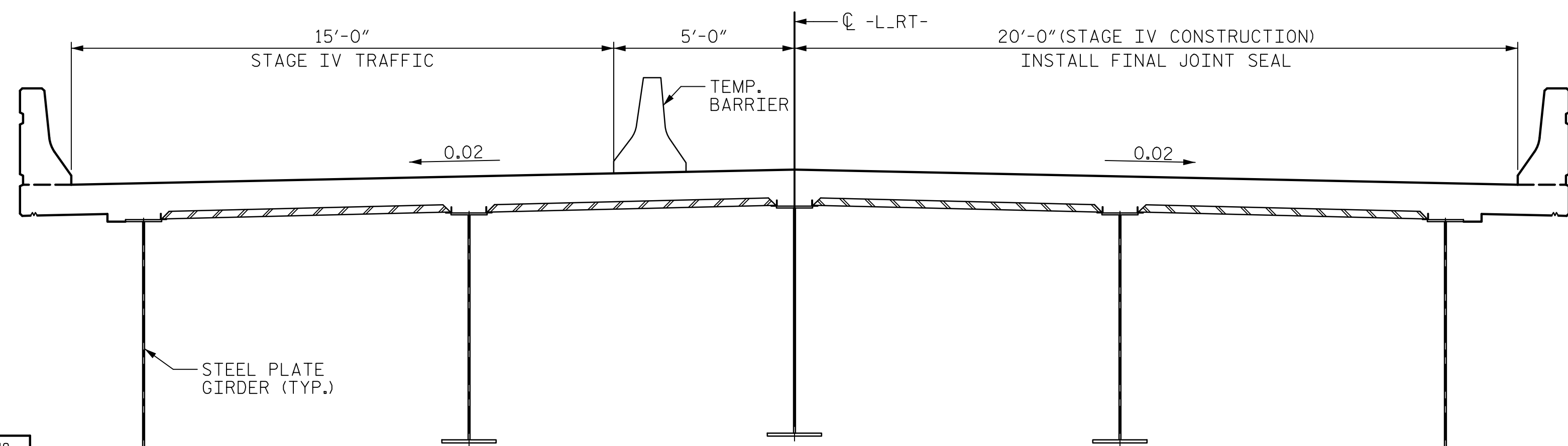
STAGE I CONSTRUCTION



STAGE II CONSTRUCTION



STAGE III CONSTRUCTION



STAGE IV CONSTRUCTION

NOTES:

BRIDGE JACKING AND BEARING REPLACEMENT SHALL BE COMPLETED PRIOR TO JOINT REPLACEMENT AND DECK RESURFACING.

STAGE I CONSTRUCTION

1. MAINTAIN ONE LANE OF EASTBOUND TRAFFIC ON LEFT SIDE OF BRIDGE AS SHOWN.
2. REMOVE DECK PORTION AND END DIAPHRAGMS AT END BENTS. RECONSTRUCT AS SHOWN ON JOINT REPLACEMENT SHEETS.
3. INSTALL TEMPORARY JOINT PLATES.
4. MILL/SCARCIFY BRIDGE DECK TO LIMITS SHOWN.

STAGE II CONSTRUCTION

1. SHIFT TRAFFIC TO RIGHT SIDE AS SHOWN.
2. REMOVE DECK PORTION AND END DIAPHRAGMS AT END BENTS. RECONSTRUCT AS SHOWN ON JOINT REPLACEMENT SHEETS.
3. INSTALL TEMPORARY JOINT PLATES.
4. MILL/SCARCIFY BRIDGE DECK TO LIMITS SHOWN.

STAGE III CONSTRUCTION

1. MAINTAIN TRAFFIC ON RIGHT SIDE.
2. REMOVE TEMPORARY PLATE JOINT AS NECESSARY.
3. INSTALL FINAL JOINT SEAL TO CROWN. EPOXY-SET JOINT ANCHORS.

STAGE IV CONSTRUCTION

1. SHIFT TRAFFIC TO LEFT SIDE AS SHOWN.
2. REMOVE REMAINING TEMPORARY PLATE JOINT.
3. INSTALL FINAL JOINT SEAL TO CROWN. EPOXY-SET JOINT ANCHORS.

PROJECT NO. 15BPR.43
STANLY/MONTGOMERY COUNTY
STATION: 339+86.39 -L-



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

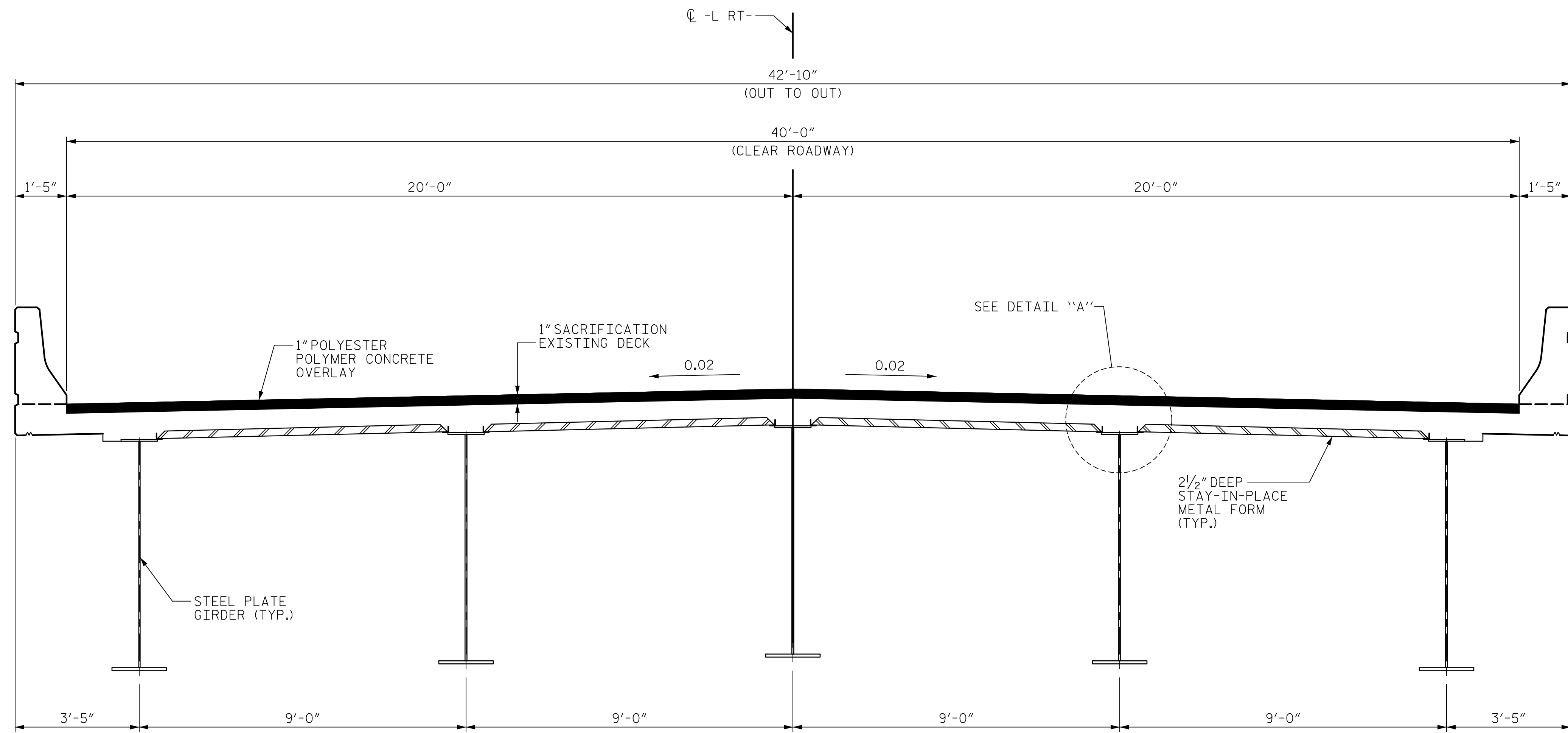
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SUPERSTRUCTURE					
JOINT REPLACEMENT & RESURFACING CONSTRUCTION SEQUENCE					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					32
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DRAWN BY : T.B. STUMP DATE : 08/2018
CHECKED BY : G.R. COLS DATE : 08/2018
DESIGNED BY : DATE :
DESIGN CHECKED BY : DATE :

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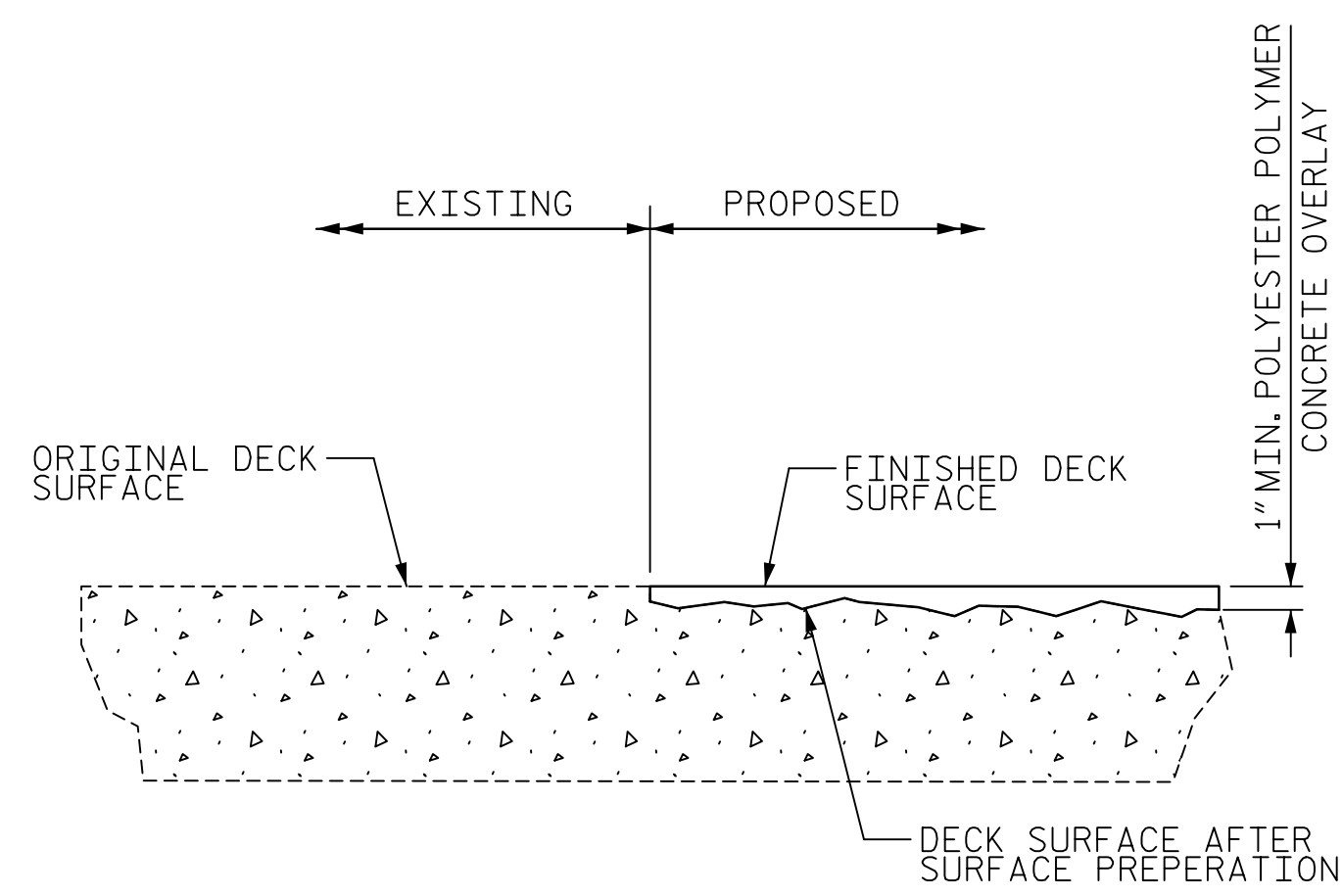
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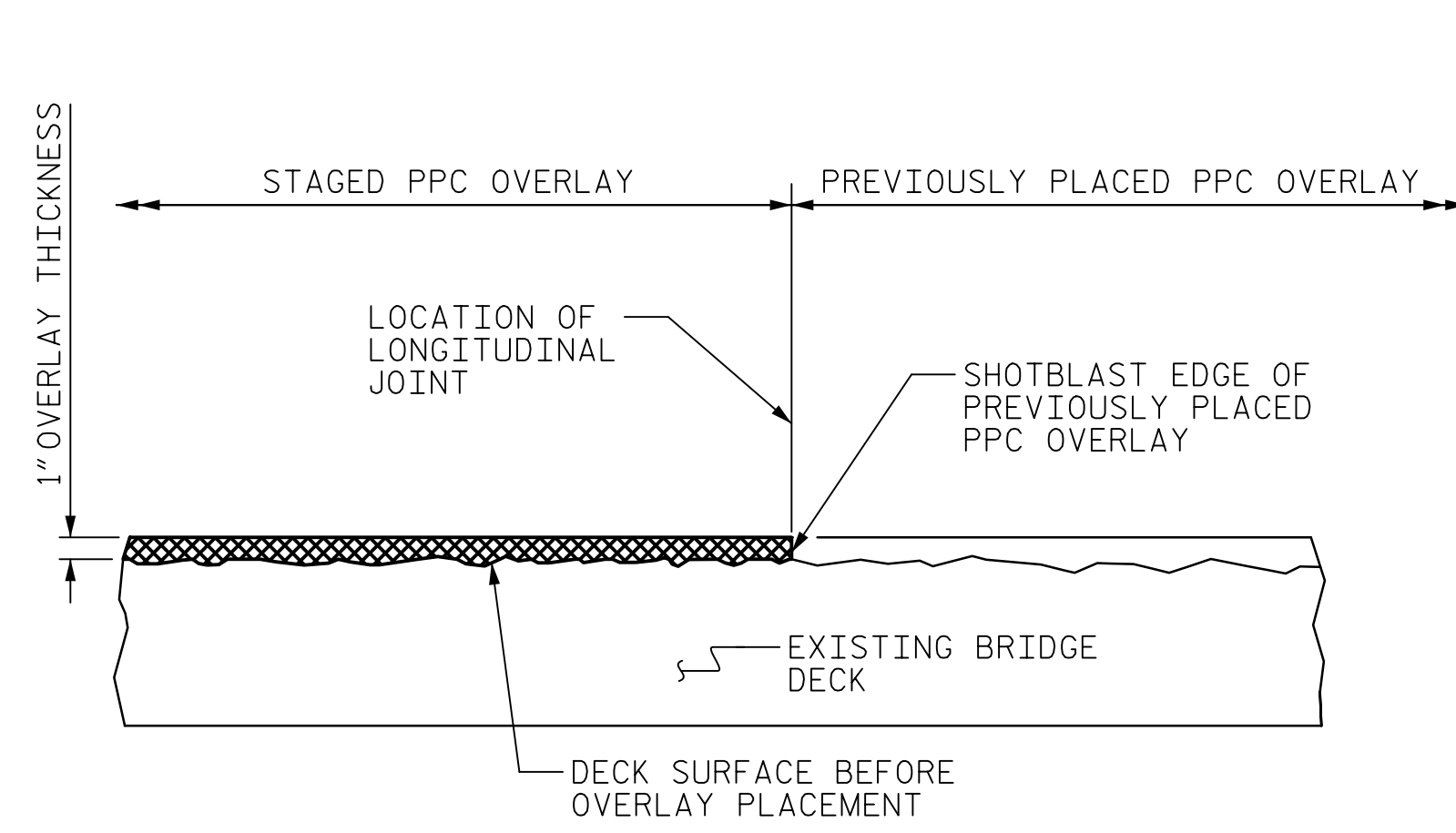
TYPICAL SECTION

NOTES:

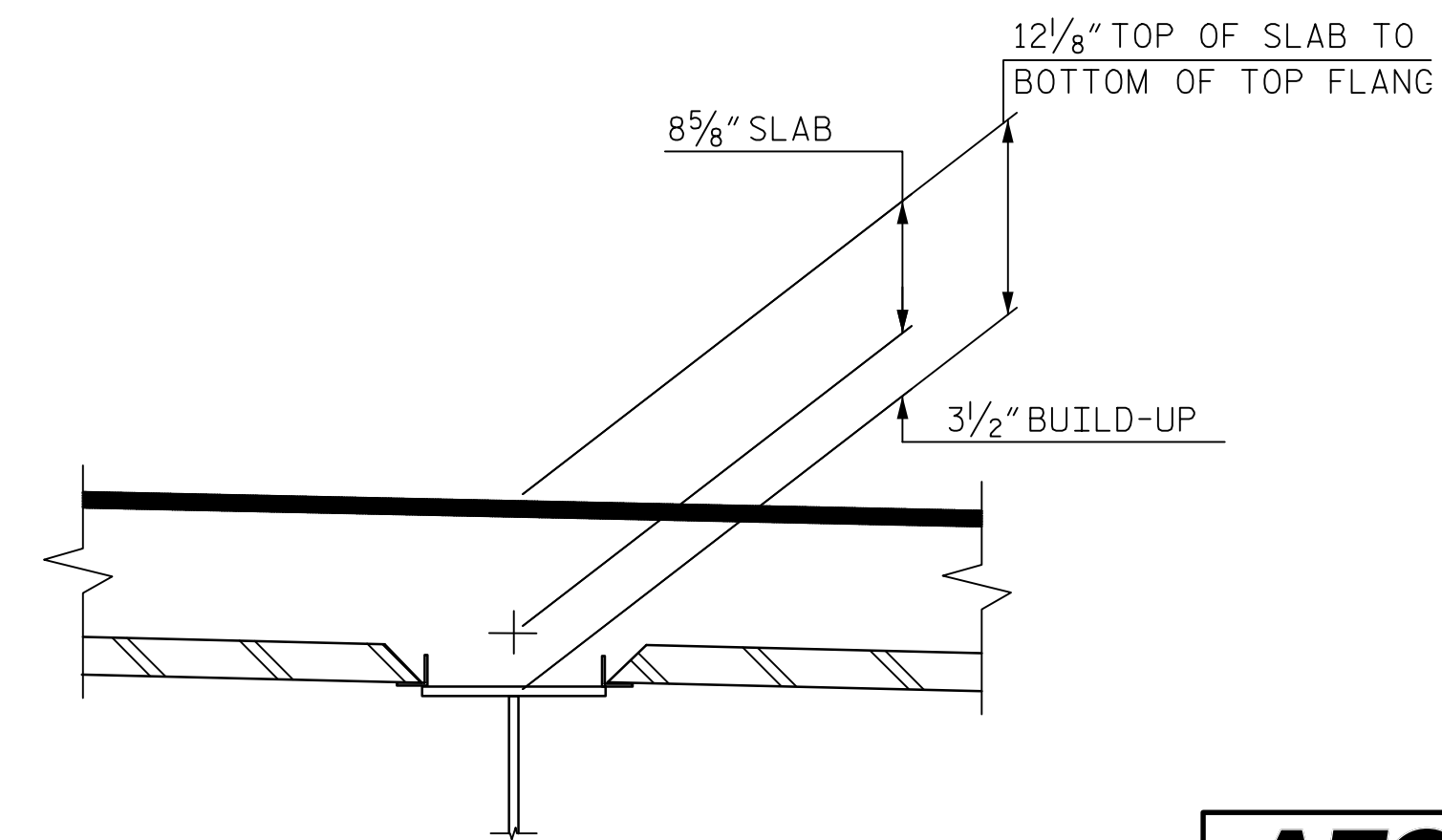
SEE TRANSPORTATION MANAGEMENT PLANS AND STRUCTURE CONSTRUCTION SEQUENCE SHEET FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYESTER POLYMER CONCRETE PLACEMENT.



DETAIL FOR PLOYESTER POLYMER CONCRETE OVERLAY



STAGED PPC OVERLAY JOINT (AS NEEDED)



DETAIL "A"

PROJECT NO. 15BPR.43
STANLY/MONTGOMERY COUNTY
STATION: 339+86.39 -L-

SHEET 1 OF 2

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AECOM TECHNICAL SERVICES, INC.
701 CORPORATE CENTER DRIVE, SUITE 475
RALEIGH, NC 27607
(919) 854-6200 www.aecom.com
AECOM License No. F-0342

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
TYPICAL SECTION
AND
PPC OVERLAY
DETAILS

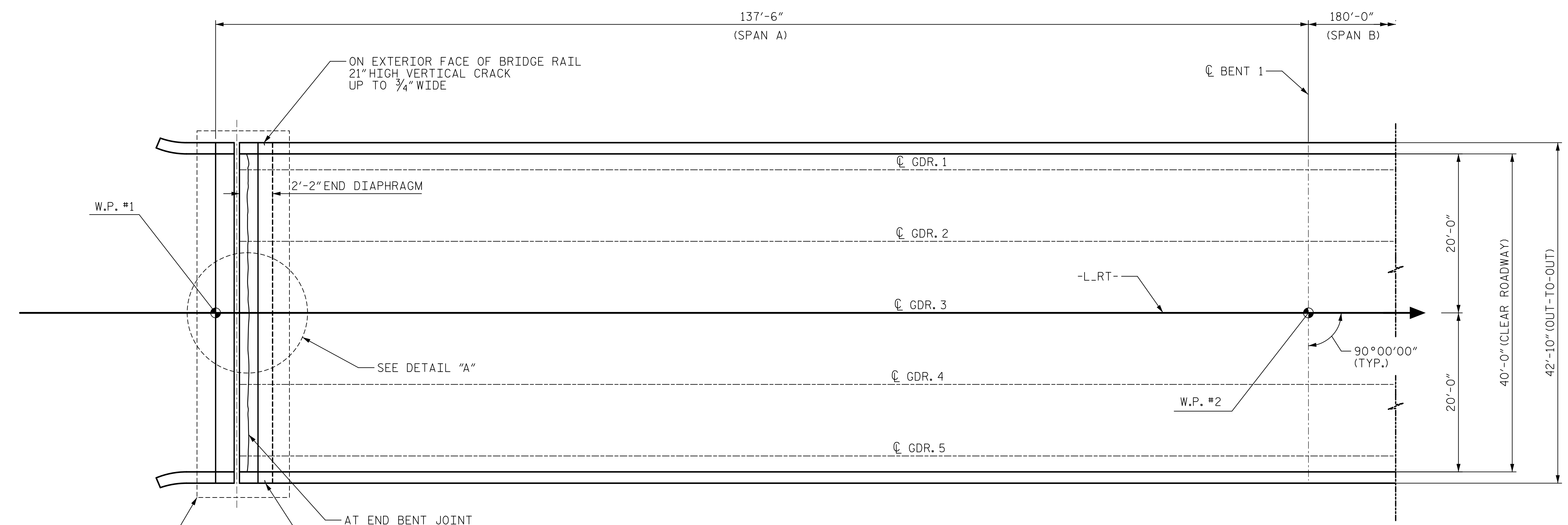
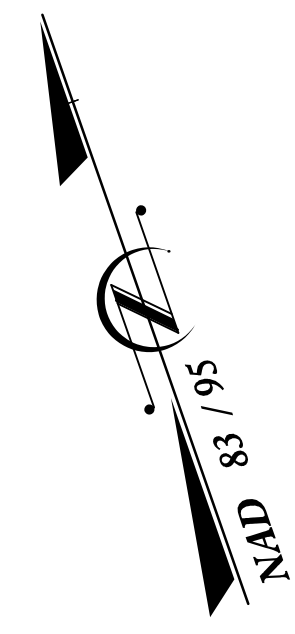
DRAWN BY : T.B. STUMP DATE : 08/2018
CHECKED BY : G.R. COLS DATE : 08/2018
DESIGNED BY : DATE :
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REVISIONS						SHEET NO. S-04
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			32

REPAIR QUANTITY TABLE

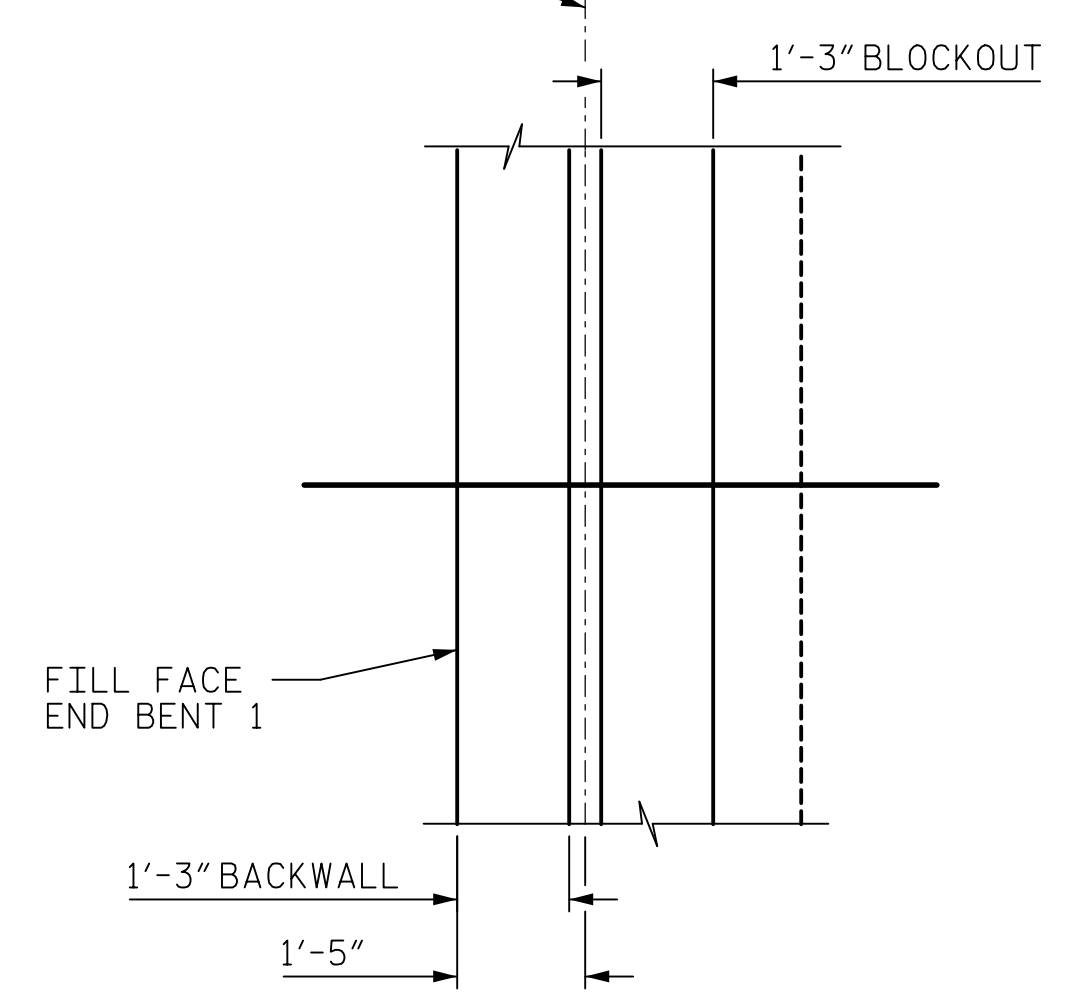
TOP OF DECK REPAIRS		
SPAN A		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	XXX SY	
CLASS II SURFACE PREPARATION	XXX SY	
CONCRETE DECK REPAIR FOR PCC OVERLAY	XXX SY	
SHOTBLASTING BRIDGE DECK	XXX SY	
PCC MATERIAL	XXX CY	
PLACING AND FINISHING PCC OVERLAY	XXX SY	
GROOVING BRIDGE FLOORS	XXX SF	



FOR PARTIAL DECK, BARRIER RAIL AND JOINT REMOVAL AND RECONSTRUCTION SEE JOINT REPLACEMENT SHEETS.

AT END BENT JOINT
FULL WIDTH OF ROADWAY
3/4" WIDE CRACK

ON EXTERIOR FACE OF BRIDGE RAIL
43" HIGH VERTICAL CRACK
UP TO 1/4" WIDE



PLAN OF SPAN A

FOR STAGING LIMITS SEE CONSTRUCTION SEQUENCE SHEET

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

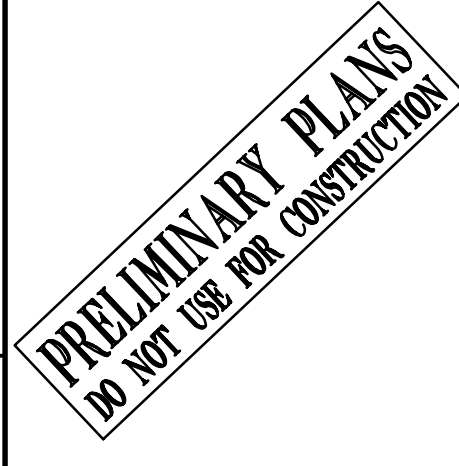
SHEET 1 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

PLAN OF SPANS SPAN A



DRAWN BY : K. DONALD	DATE : 08/2018
CHECKED BY : G. COLS	DATE : 08/2018
DESIGNED BY : K. DONALD	DATE : 08/2018
DESIGN CHECKED BY : G. COLS	DATE : 08/2018

DETAIL A

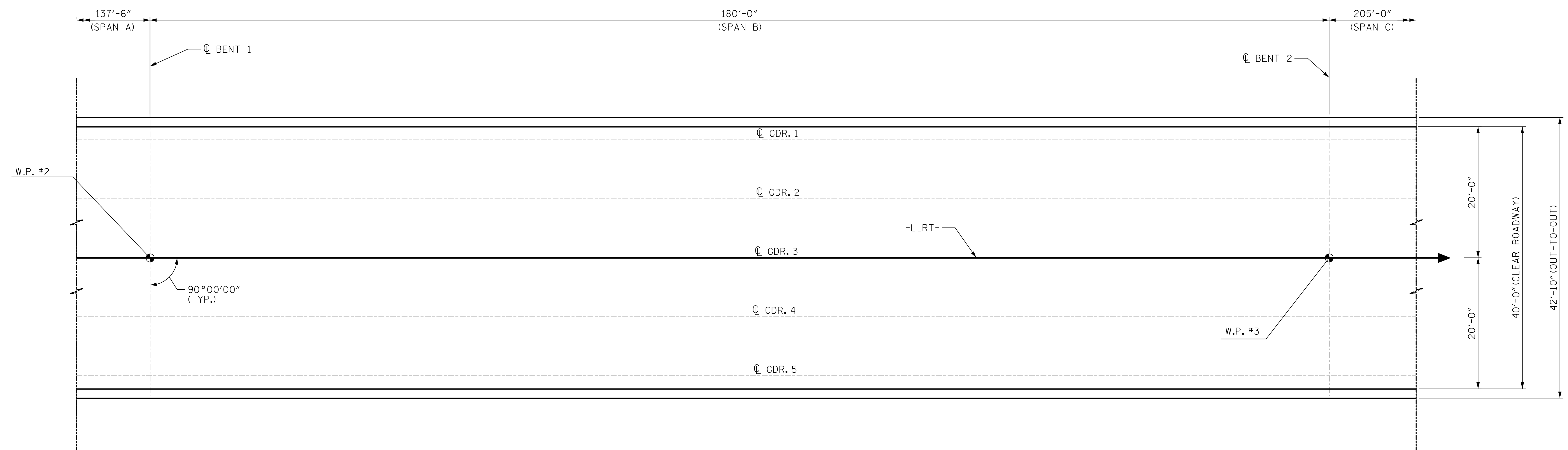
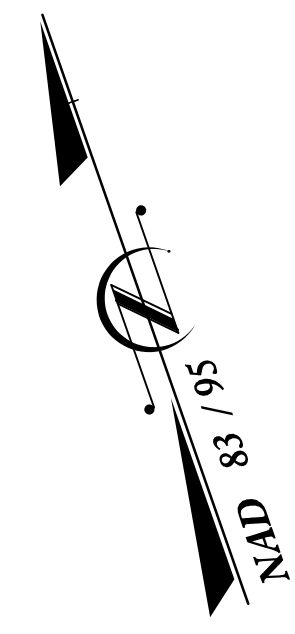
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1			3			TOTAL SHEETS
2			4			32

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REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS		
SPAN B		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	XXX SY	
CLASS II SURFACE PREPARATION	XXX SY	
CONCRETE DECK REPAIR FOR PCC OVERLAY	XXX SY	
SHOTBLASTING BRIDGE DECK	XXX SY	
PCC MATERIAL	XXX CY	
PLACING AND FINISHING PCC OVERLAY	XXX SY	
GROOVING BRIDGE FLOORS	XXX SF	



PLAN OF SPAN B

FOR STAGING LIMITS SEE CONSTRUCTION SEQUENCE SHEET

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

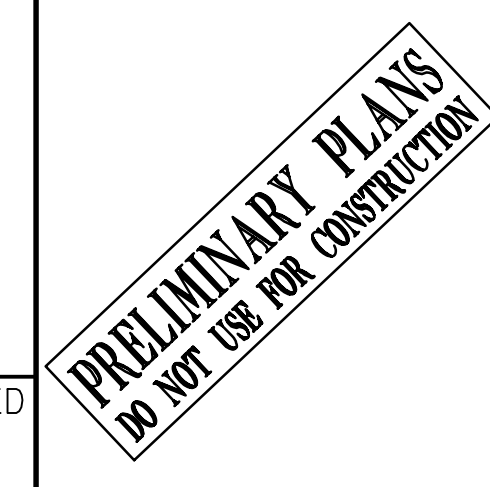
SHEET 2 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

PLAN OF SPANS SPAN B



DRAWN BY : K. DONALD	DATE : 08/2018
CHECKED BY : G. COLS	DATE : 08/2018
DESIGNED BY : K. DONALD	DATE : 08/2018
DESIGN CHECKED BY : G. COLS	DATE : 08/2018

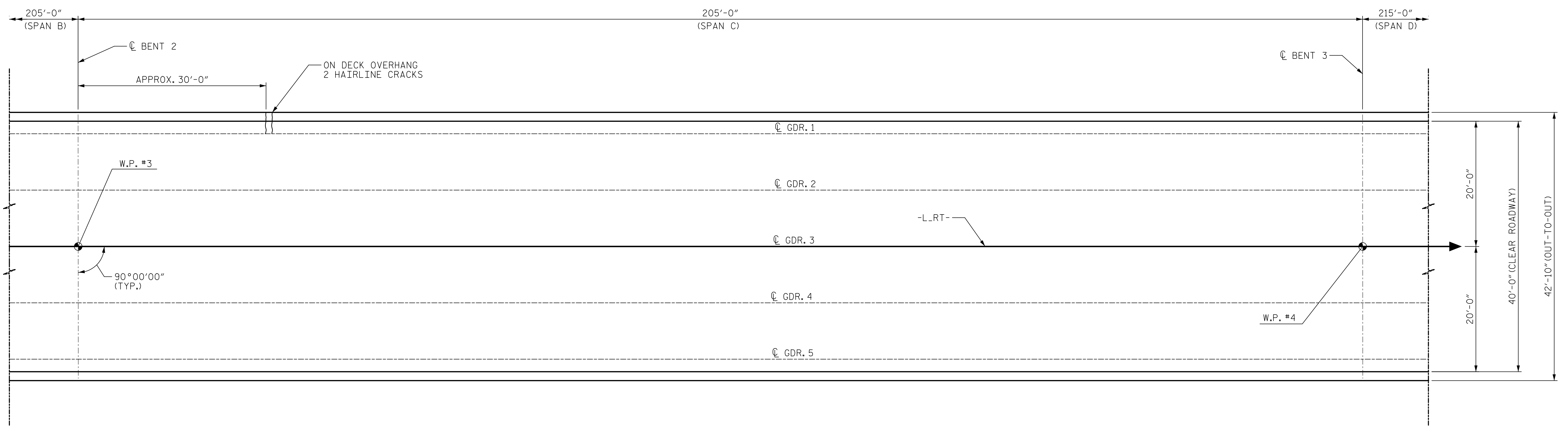
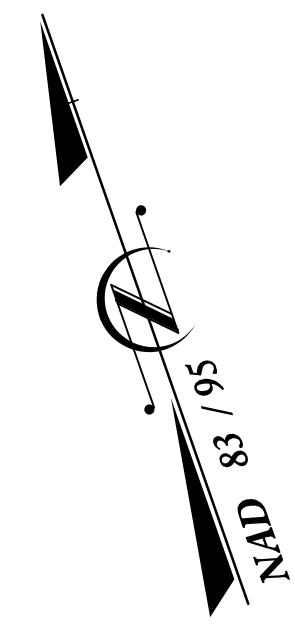
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

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REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS		
SPAN B		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	XXX SY	
CLASS II SURFACE PREPARATION	XXX SY	
CONCRETE DECK REPAIR FOR PCC OVERLAY	XXX SY	
SHOTBLASTING BRIDGE DECK	XXX SY	
PCC MATERIAL	XXX CY	
PLACING AND FINISHING PCC OVERLAY	XXX SY	
GROOVING BRIDGE FLOORS	XXX SF	



PLAN OF SPAN C

FOR STAGING LIMITS SEE CONSTRUCTION SEQUENCE SHEET

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

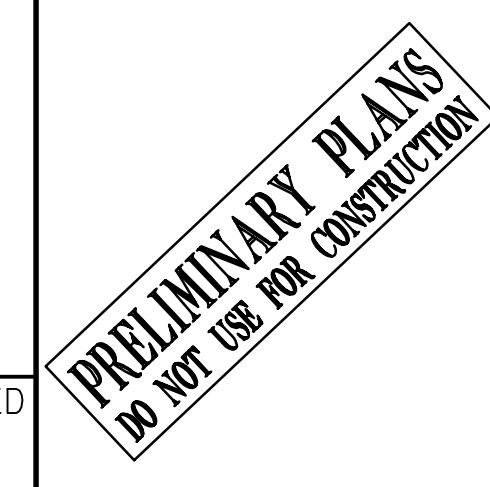
SHEET 3 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

PLAN OF SPANS SPAN C



DRAWN BY : K. DONALD	DATE : 08/2018
CHECKED BY : G. COLS	DATE : 08/2018
DESIGNED BY : K. DONALD	DATE : 08/2018
DESIGN CHECKED BY : G. COLS	DATE : 08/2018

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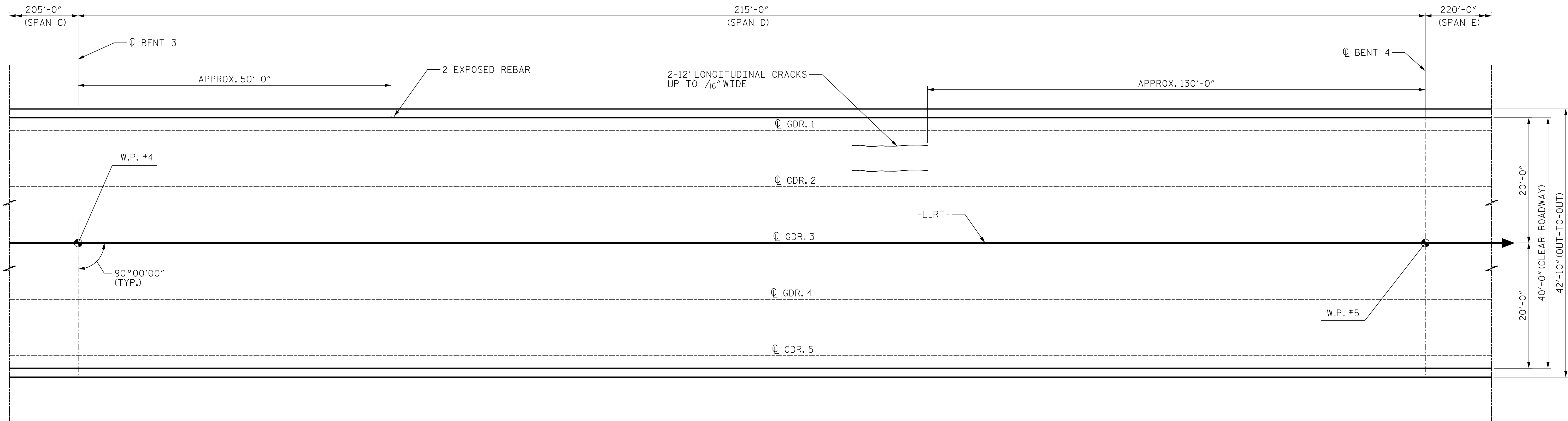
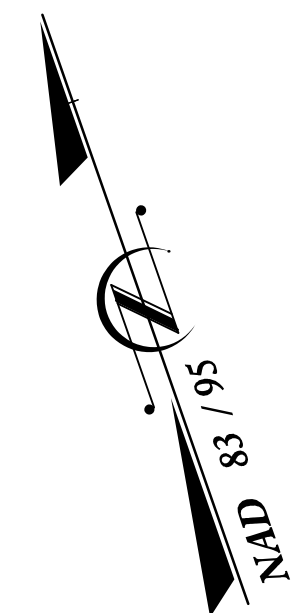
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
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REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS
SPAN B

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	XXX SY	
CLASS II SURFACE PREPARATION	XXX SY	
CONCRETE DECK REPAIR FOR PCC OVERLAY	XXX SY	
SHOTBLASTING BRIDGE DECK	XXX SY	
PCC MATERIAL	XXX CY	
PLACING AND FINISHING PCC OVERLAY	XXX SY	
GROOVING BRIDGE FLOORS	XXX SF	



PLAN OF SPAN D

FOR STAGING LIMITS SEE CONSTRUCTION SEQUENCE SHEET

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

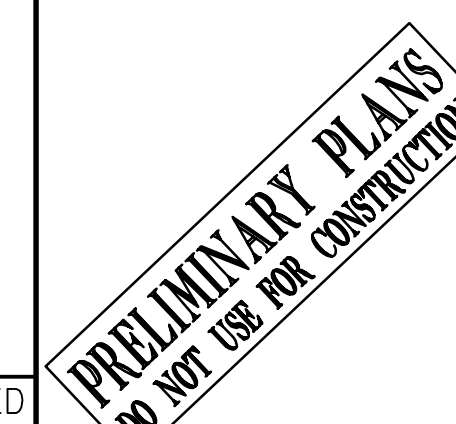
SHEET 4 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

PLAN OF SPANS SPAN D



REVISIONS

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2			4		

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TOTAL SHEETS	32

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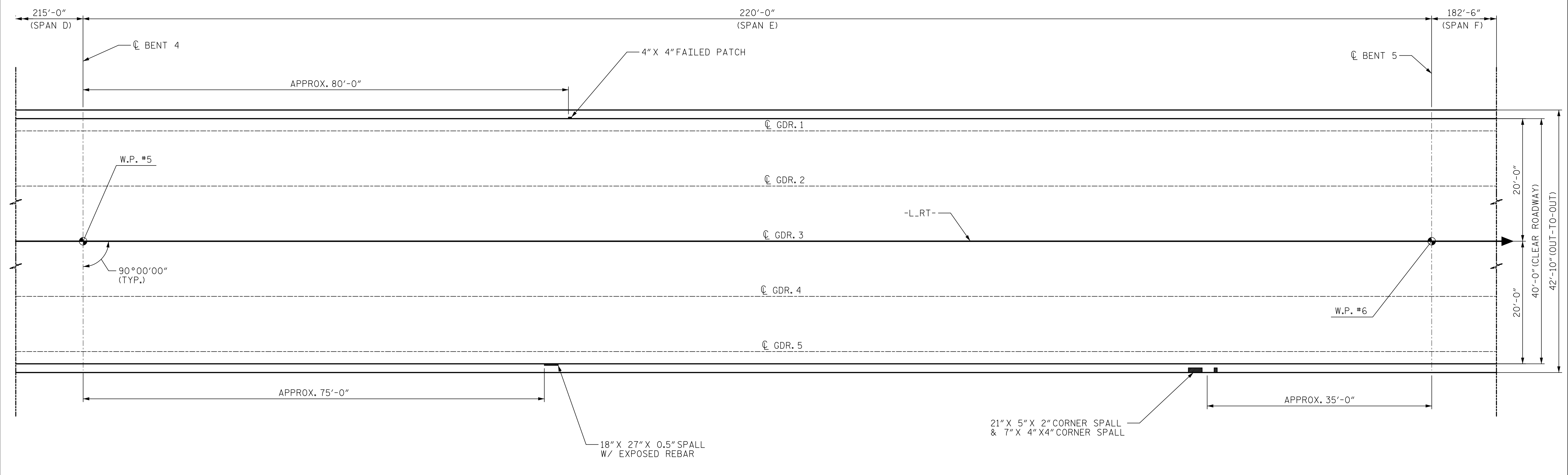
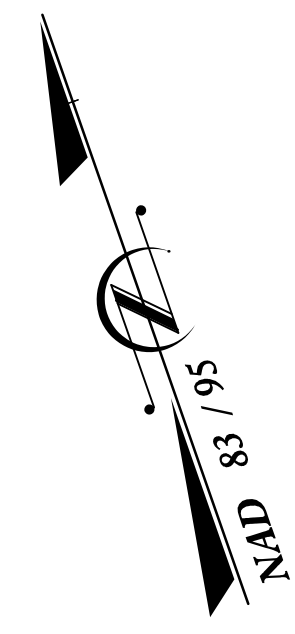
DRAWN BY : K. DONALD	DATE : 08/2018
CHECKED BY : G. COLS	DATE : 08/2018
DESIGNED BY : K. DONALD	DATE : 08/2018
DESIGN CHECKED BY : G. COLS	DATE : 08/2018

DATE: 8/28/2018
 TIME: 5:52:25 PM

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REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS		
SPAN B		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	XXX SY	
CLASS II SURFACE PREPARATION	XXX SY	
CONCRETE DECK REPAIR FOR PCC OVERLAY	XXX SY	
SHOTBLASTING BRIDGE DECK	XXX SY	
PCC MATERIAL	XXX CY	
PLACING AND FINISHING PCC OVERLAY	XXX SY	
GROOVING BRIDGE FLOORS	XXX SF	



PLAN OF SPAN E

FOR STAGING LIMITS SEE CONSTRUCTION SEQUENCE SHEET

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

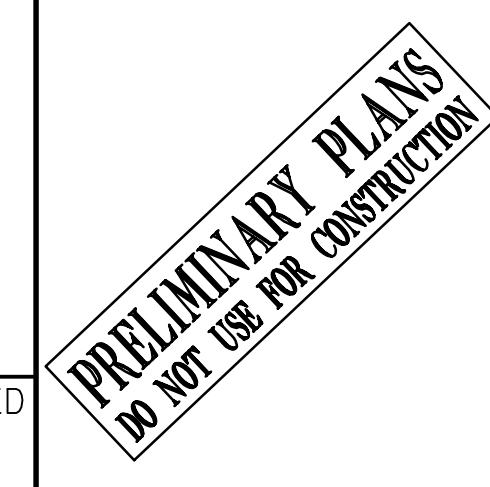
SHEET 5 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

PLAN OF SPANS SPAN E



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DATE: 8/27/2018
 TIME: 4:32:00 PM

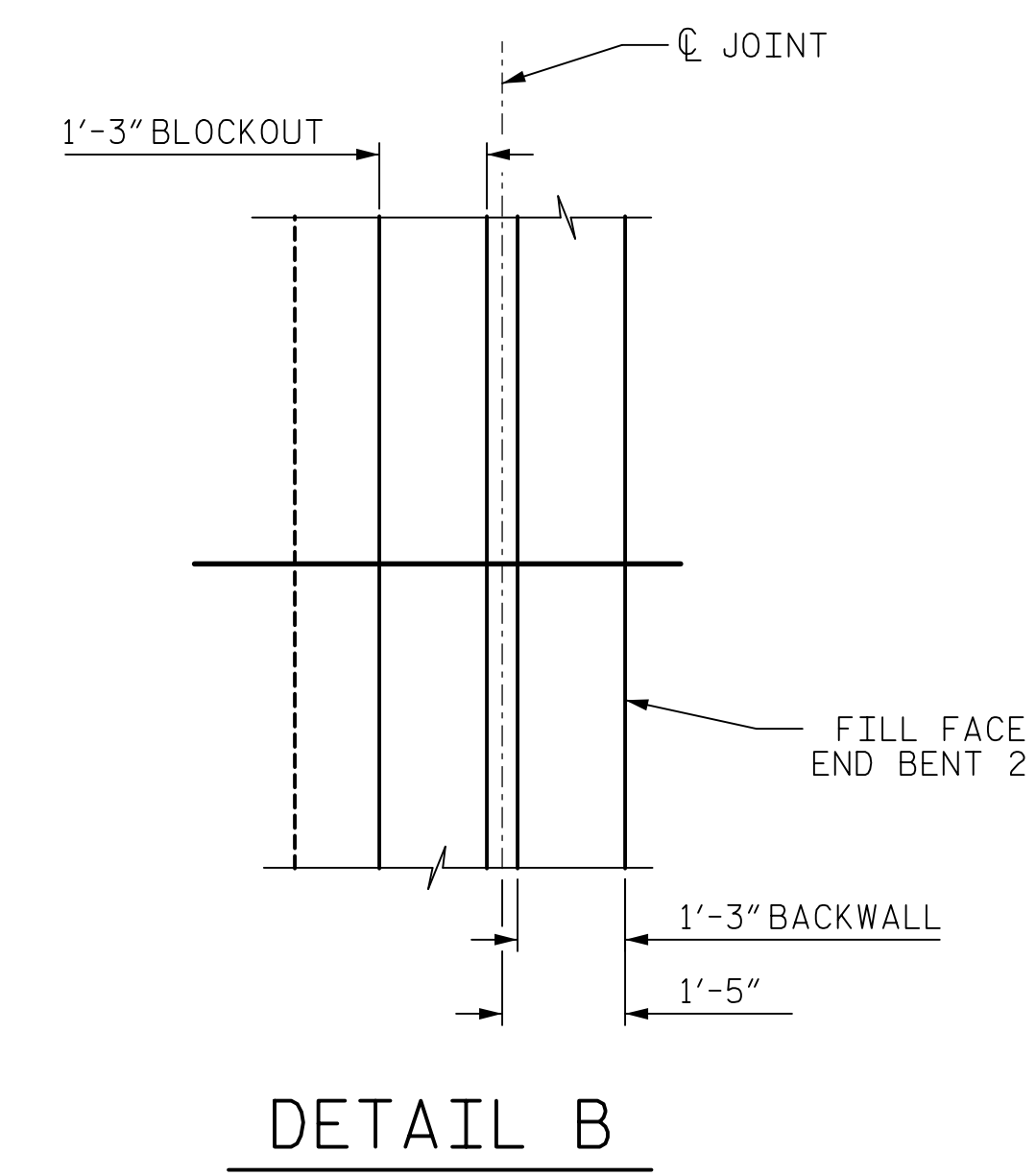
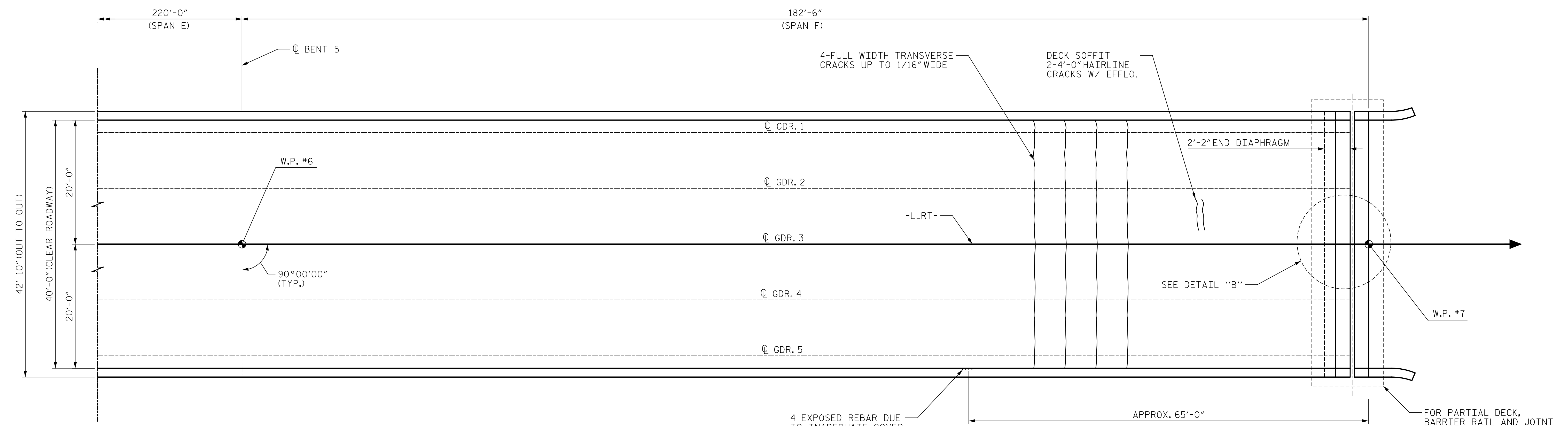
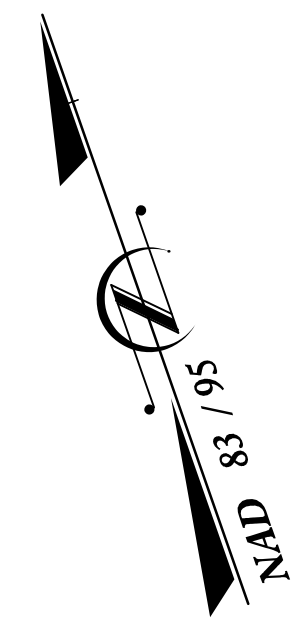
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REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS		
SPAN B		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	XXX SY	
CLASS II SURFACE PREPARATION	XXX SY	
CONCRETE DECK REPAIR FOR PCC OVERLAY	XXX SY	
SHOTBLASTING BRIDGE DECK	XXX SY	
PCC MATERIAL	XXX CY	
PLACING AND FINISHING PCC OVERLAY	XXX SY	
GROOVING BRIDGE FLOORS	XXX SF	

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TIME: 4:34:35 PM

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PLAN OF SPAN F

FOR STAGING LIMITS SEE CONSTRUCTION SEQUENCE SHEET

PROJECT NO. 15BPR.43
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SHEET 6 OF 6

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AECOM TECHNICAL SERVICES, INC.
 701 CORPORATE CENTER DRIVE, SUITE 475
 RALEIGH, NC 27607
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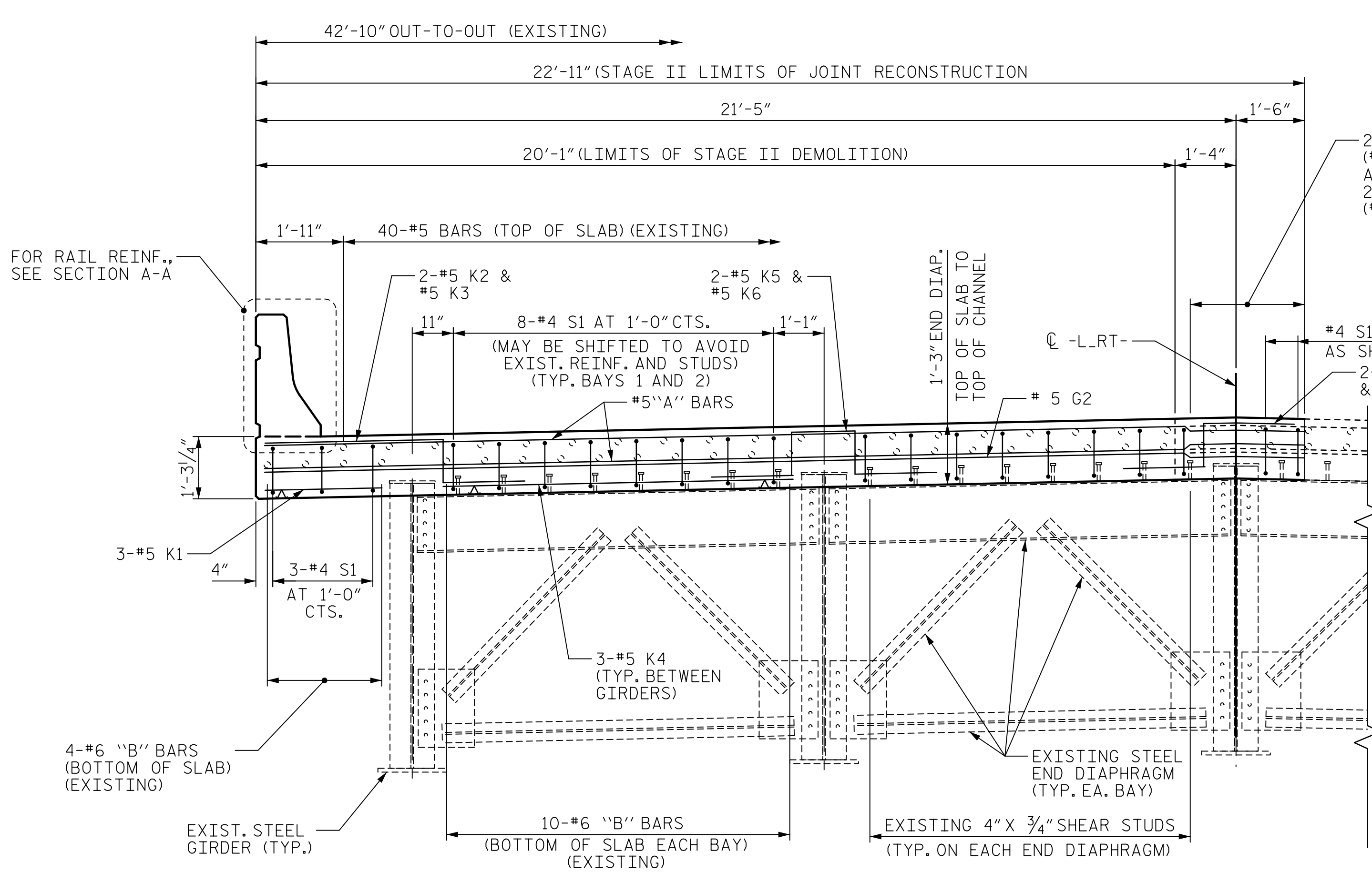
SUPERSTRUCTURE

PLAN OF SPANS
 SPAN F

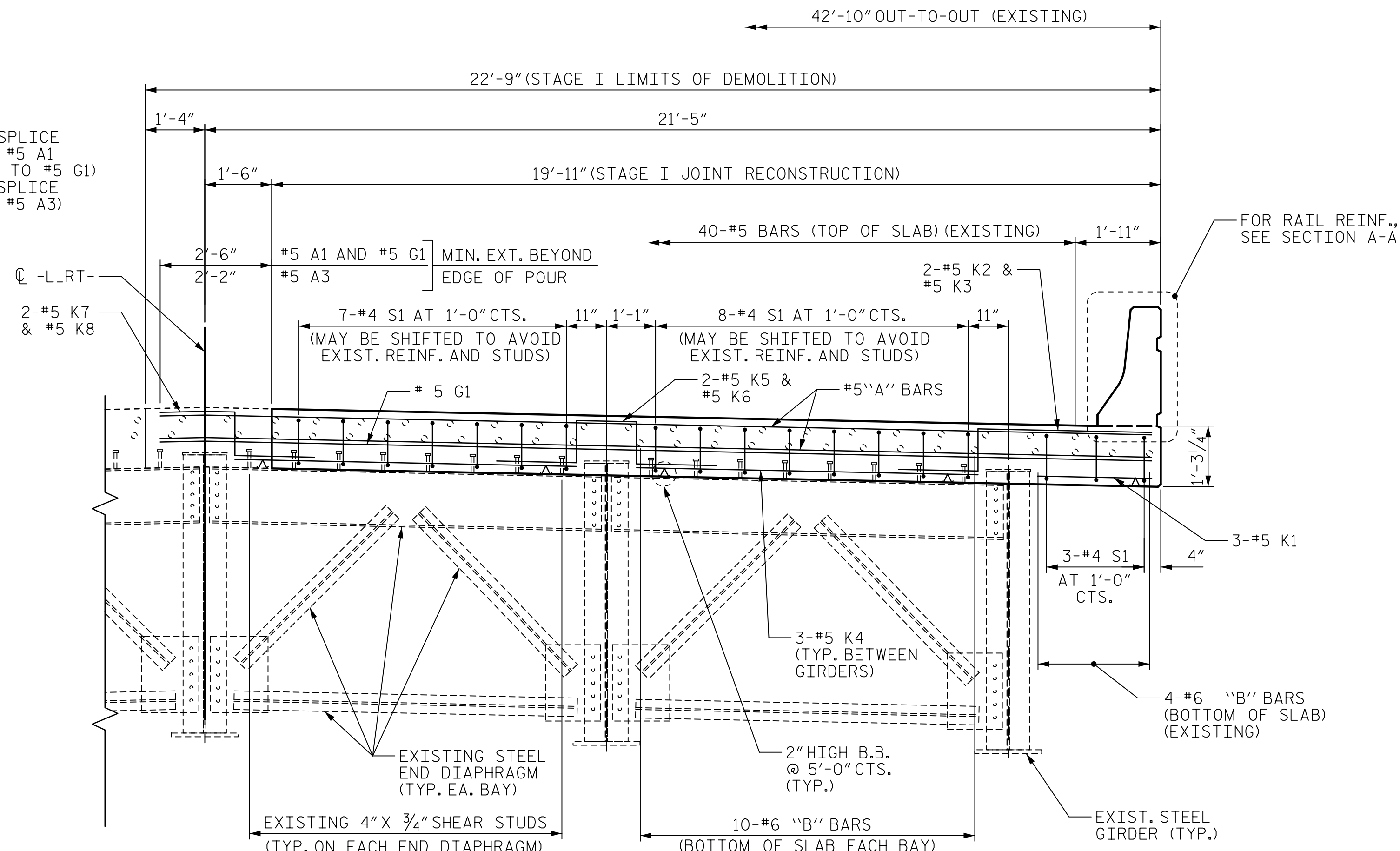
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
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DESIGNED BY : K. DONALD	DATE : 08/2018
DESIGN CHECKED BY : G. COLS	DATE : 08/2018

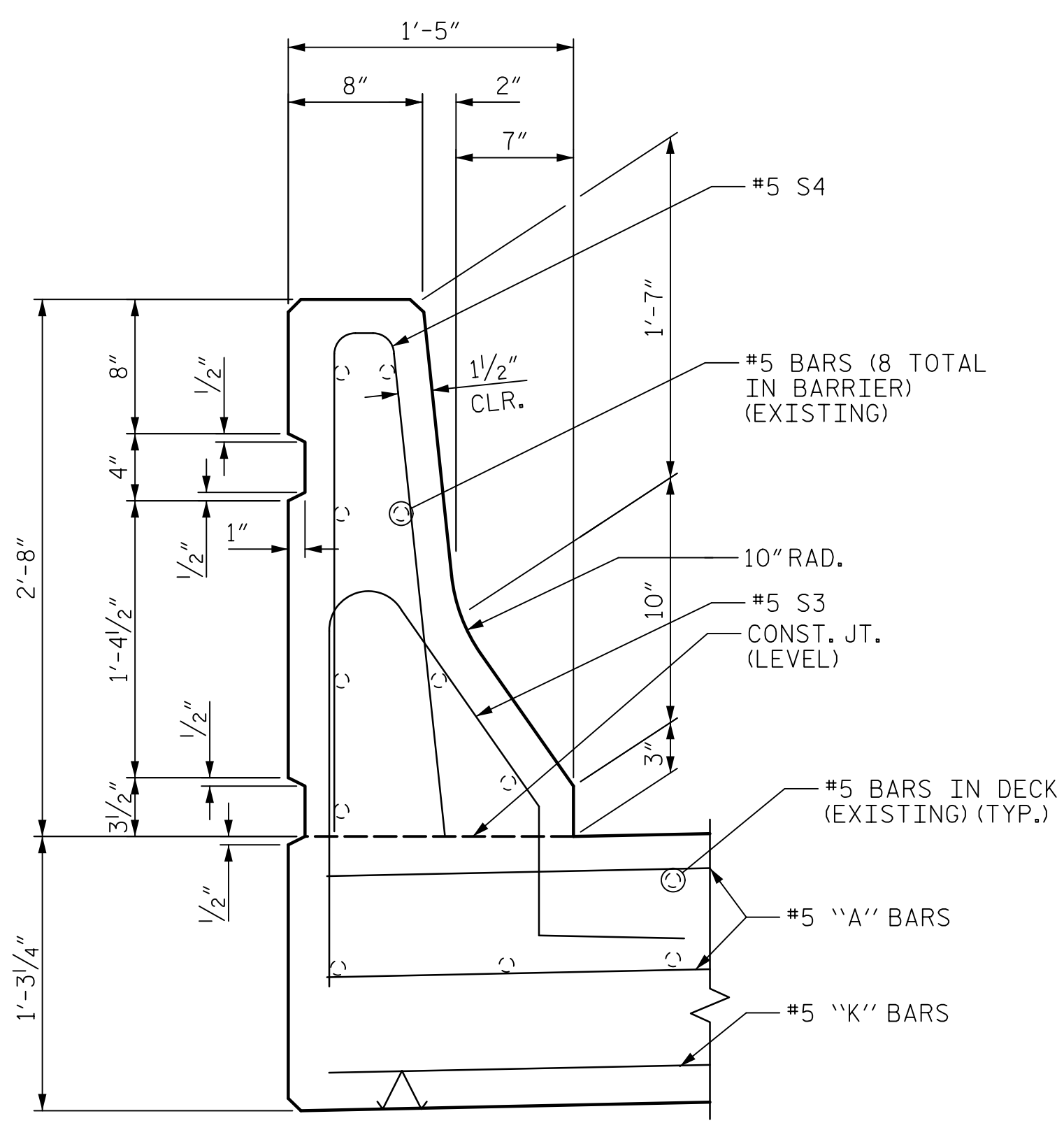
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TYPICAL SECTION - STAGE II
(SEE TYPICAL SECTION SHEET FOR ADDITIONAL DIMENSIONS)

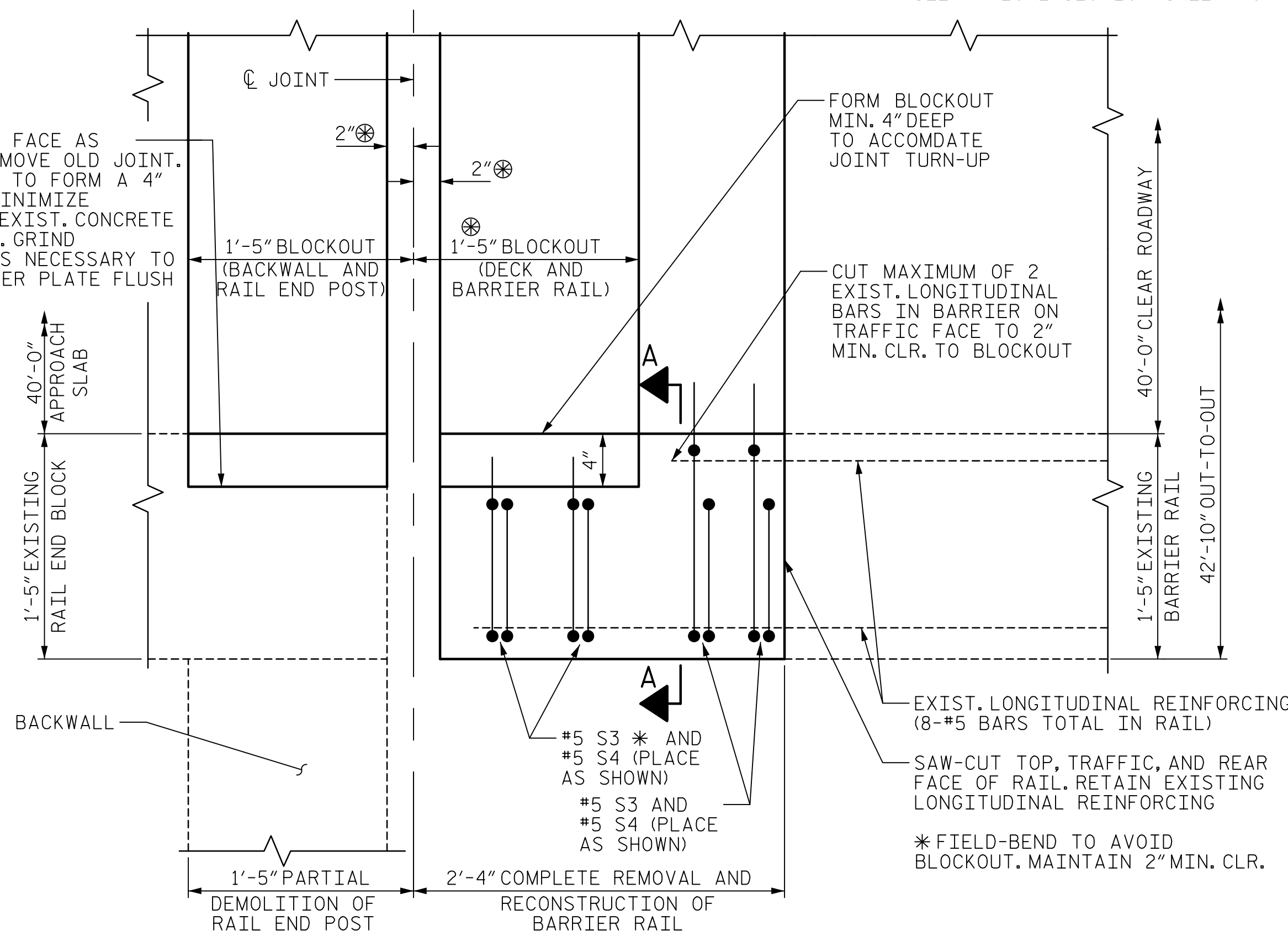


TYPICAL SECTION - STAGE I
(SEE TYPICAL SECTION SHEET FOR ADDITIONAL DIMENSIONS)



SECTION A-A

SAW-CUT TRAFFIC FACE AS NECESSARY TO REMOVE OLD JOINT. REMOVE CONCRETE TO FORM A 4\"/>



PLAN OF BARRIER RAIL AND RAIL END POST MODIFICATIONS

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-
 SHEET 1 OF 4



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SUPERSTRUCTURE
 JOINT REPLACEMENT
 TYPICAL SECTION
 AND DETAILS

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 DESIGNED BY : G.R. COLS DATE : 08/2018
 DESIGN CHECKED BY : K.E. MUENCH DATE : 08/2018

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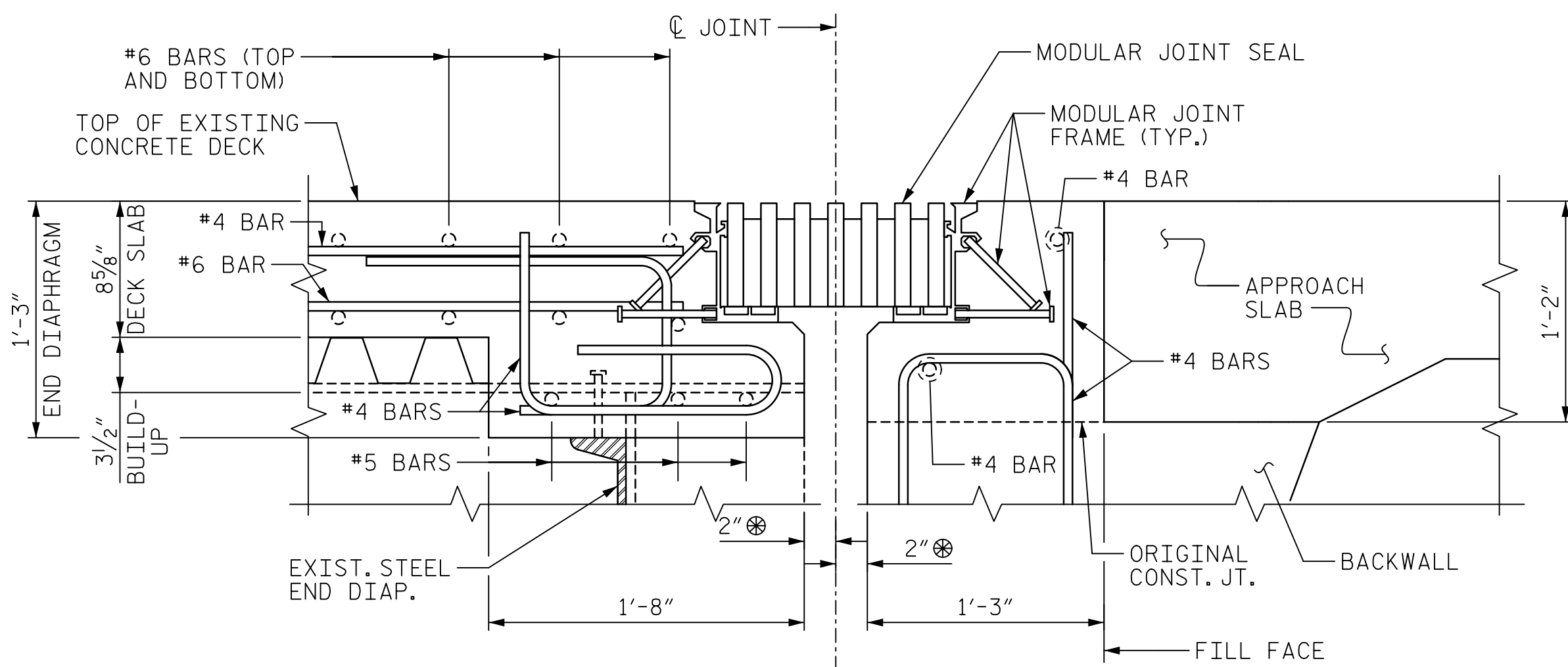
⊗ DIMENSION AT 60°F.

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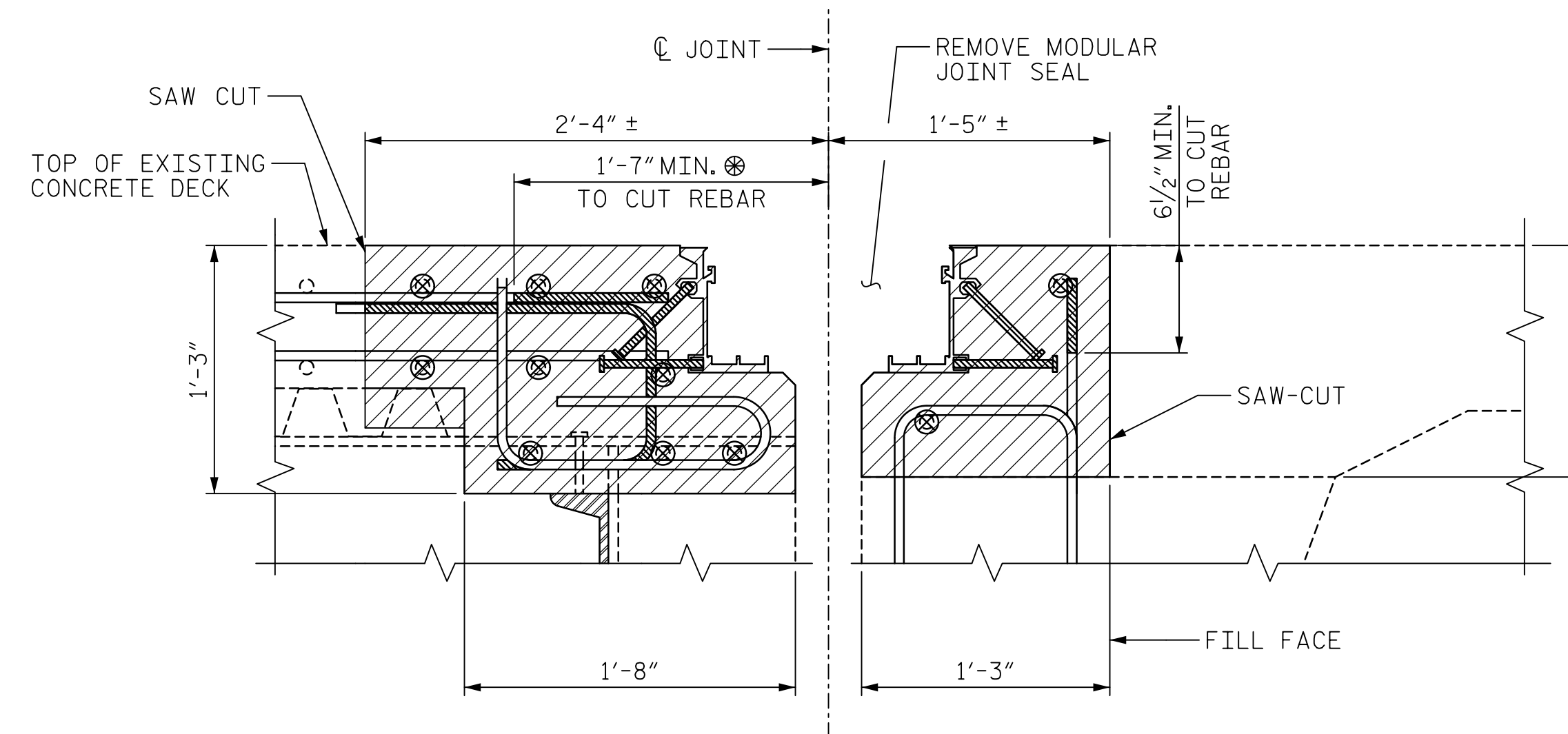
JOINT DEMOLITION AND CONSTRUCTION SEQUENCE

1. REMOVE EXISTING MODULAR JOINT SEAL.
2. SAW-CUT CONSTRUCTION JOINT AT APPROACH SLAB-BACKWALL INTERFACE, FULL DEPTH, SAW-CUT DECK TO MIN. 1/2" DEEP.
3. MECHANICALLY REMOVE CONCRETE IN AREAS INDICATED AND CUT REINFORCEMENT TO LIMITS SHOWN. CARE SHALL BE TAKEN NOT TO DAMAGE SHEAR STUDS OR STRUCTURAL STEEL.
4. PLACE PROPOSED REINFORCEMENT AND POUR NEW DECK, END DIAPHRAGM AND TOP PORTION OF BACKWALL. ALLOW CONCRETE TO REACH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI BEFORE REMOVING FORMWORK.
5. INSTALL TEMPORARY PLATE JOINT.
6. AFTER DECK OVERLAY IS COMPLETE IN BOTH STAGES, REMOVE TEMPORARY JOINT PLATES. INSTALL FINAL RUBBER PLATE-TYPE JOINT PER MANUFACTURER'S SPECIFICATIONS.



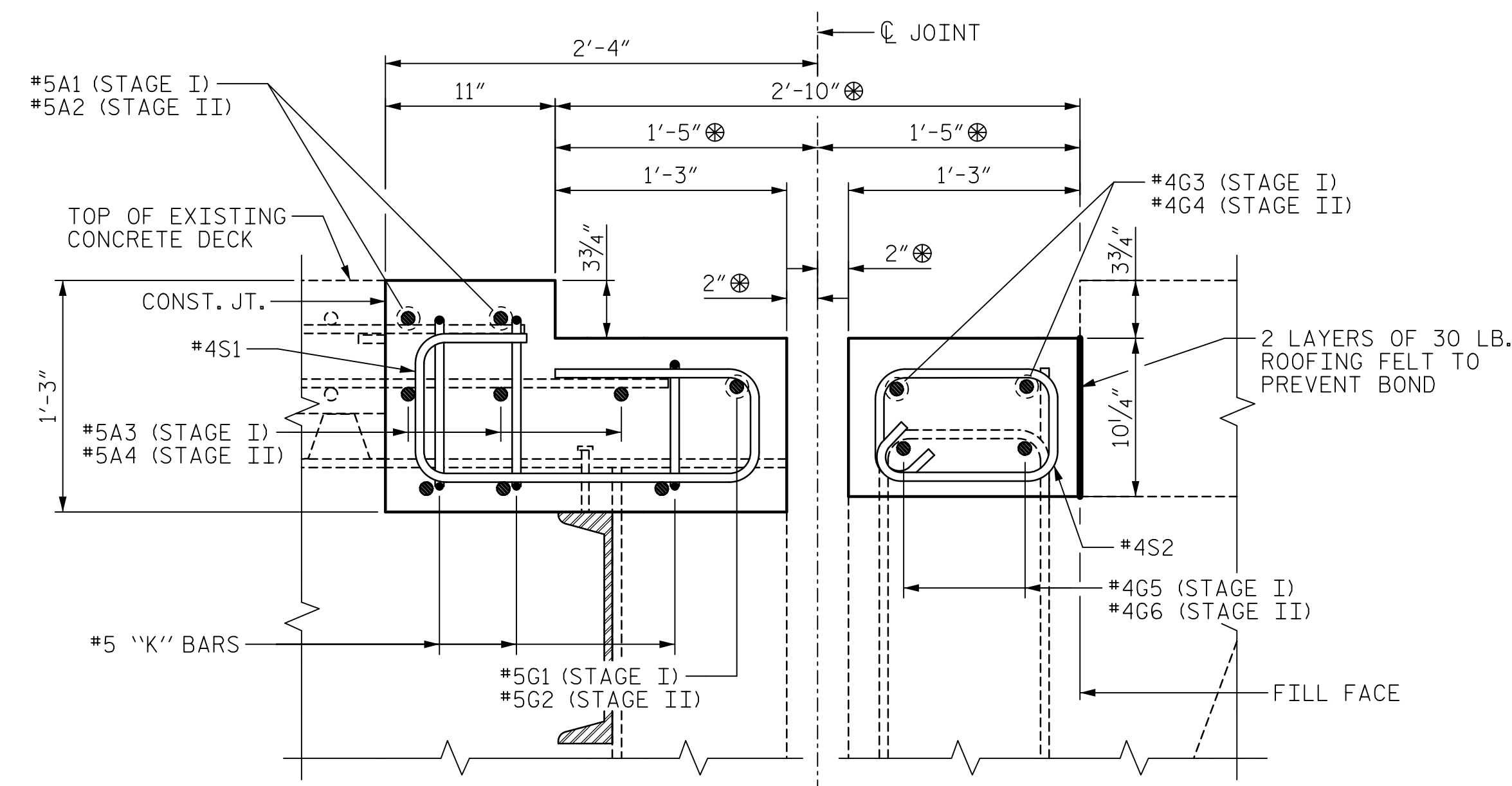
EXISTING JOINT CONDITIONS

INFORMATION SHOWN BASED ON BEST DATA AVAILABLE.



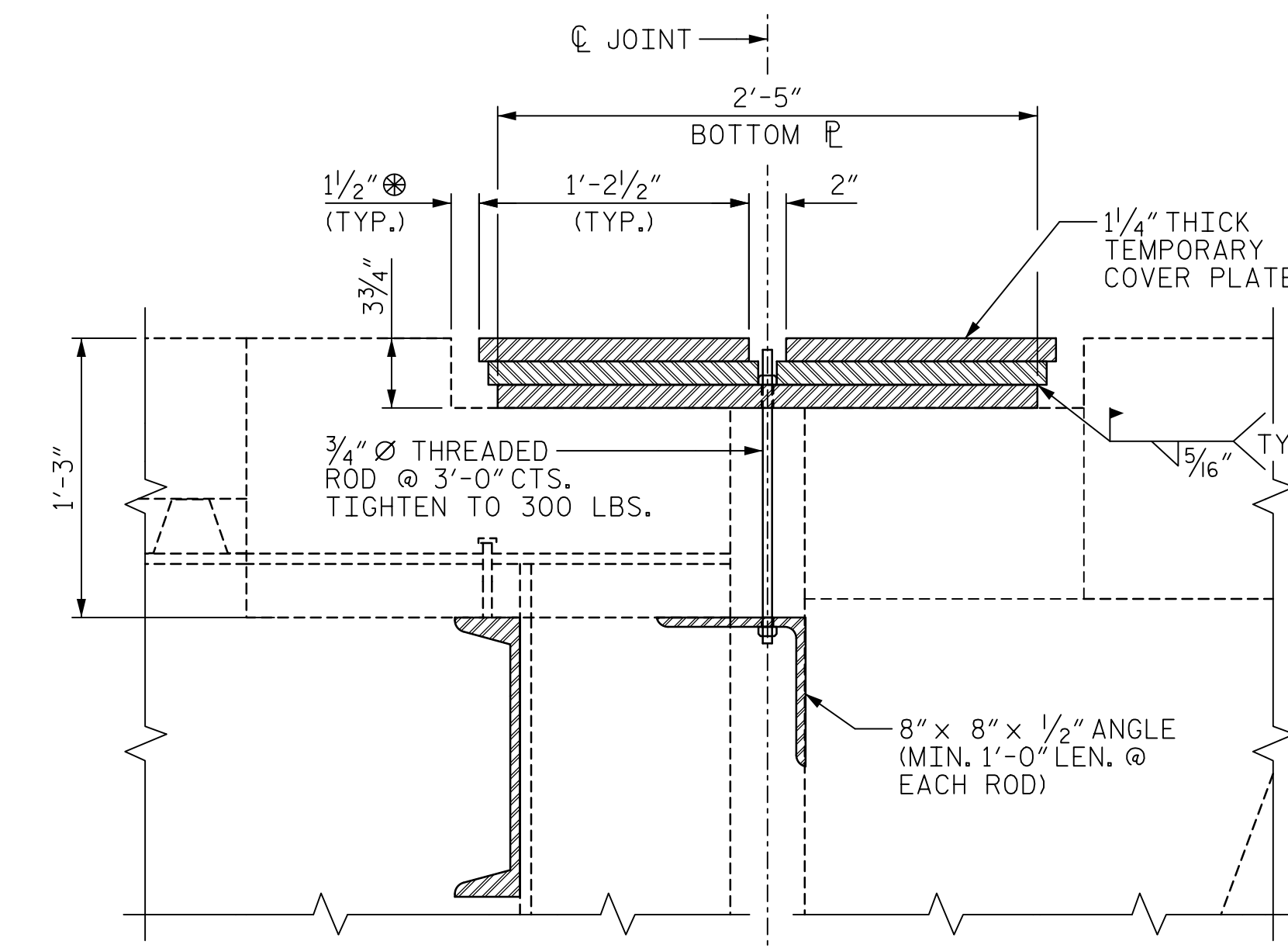
EXISTING TO BE REMOVED

- EXISTING CONCRETE TO BE REMOVED
- EXISTING REBAR TO BE REMOVED
- EXISTING REBAR TO BE REMOVED

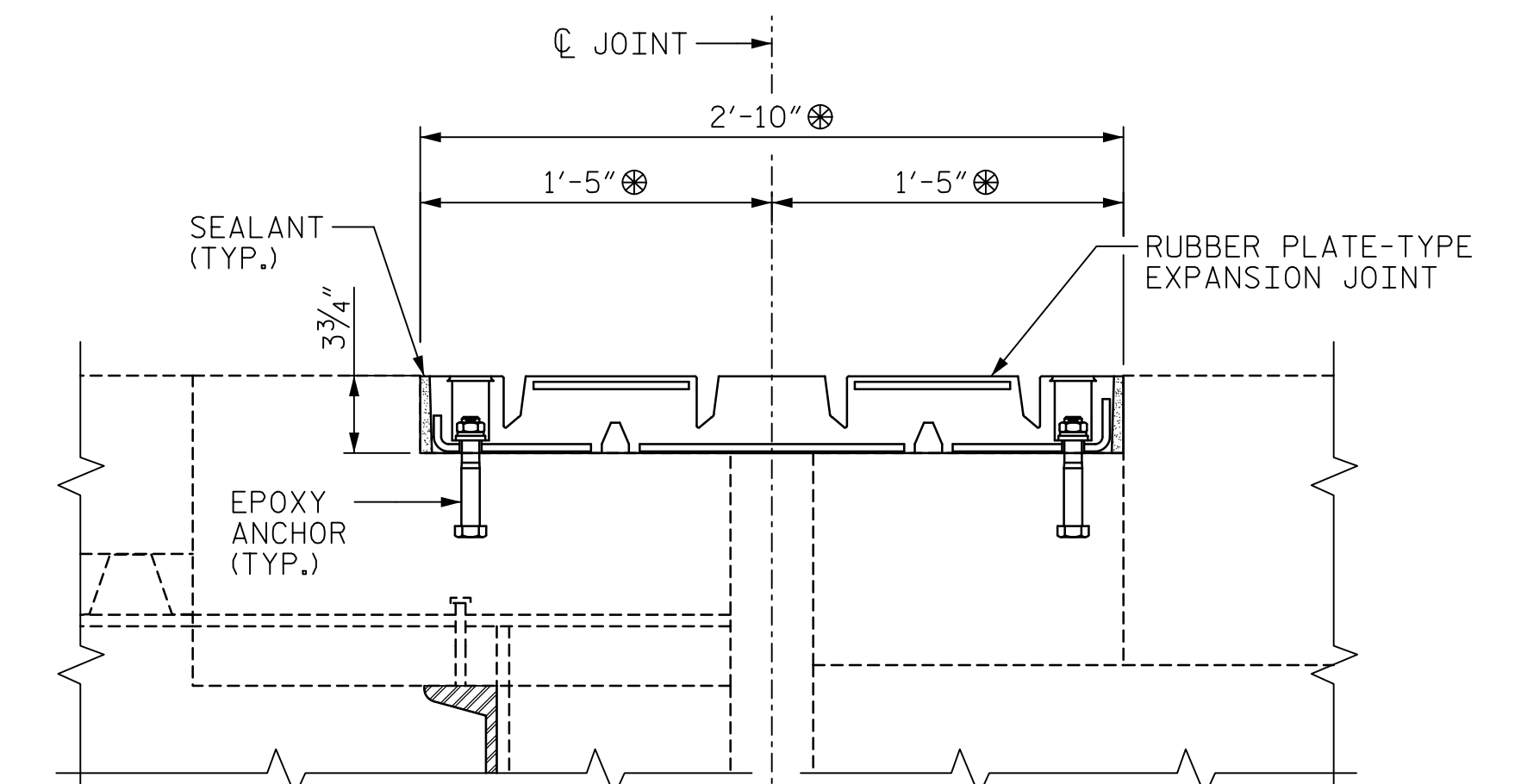


DECK, END DIAPHRAGM, AND BACKWALL RECONSTRUCTION

- NEW CONCRETE
- NEW REBAR
- NEW REBAR



TEMPORARY JOINT REPLACEMENT



FINAL JOINT CONDITIONS

SECTION B-B

⊗ DIMENSION AT 60° F

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

SHEET 2 OF 4



STATE OF NORTH CAROLINA
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 RALEIGH
 SUPERSTRUCTURE
 JOINT REPLACEMENT
 DEMO & CONSTRUCTION
 SEQUENCE

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DESIGNED BY :	DATE :
DESIGN CHECKED BY :	DATE :

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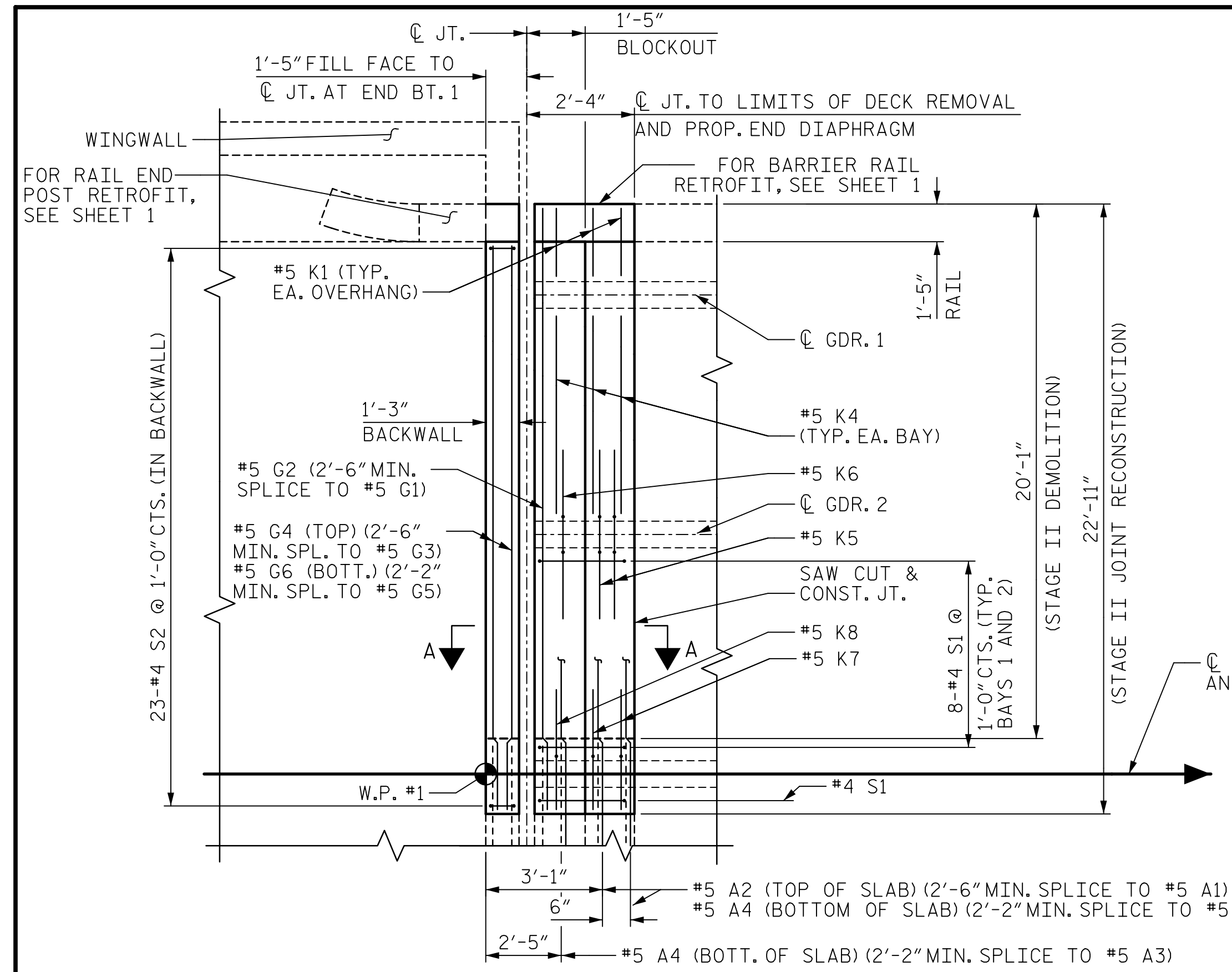
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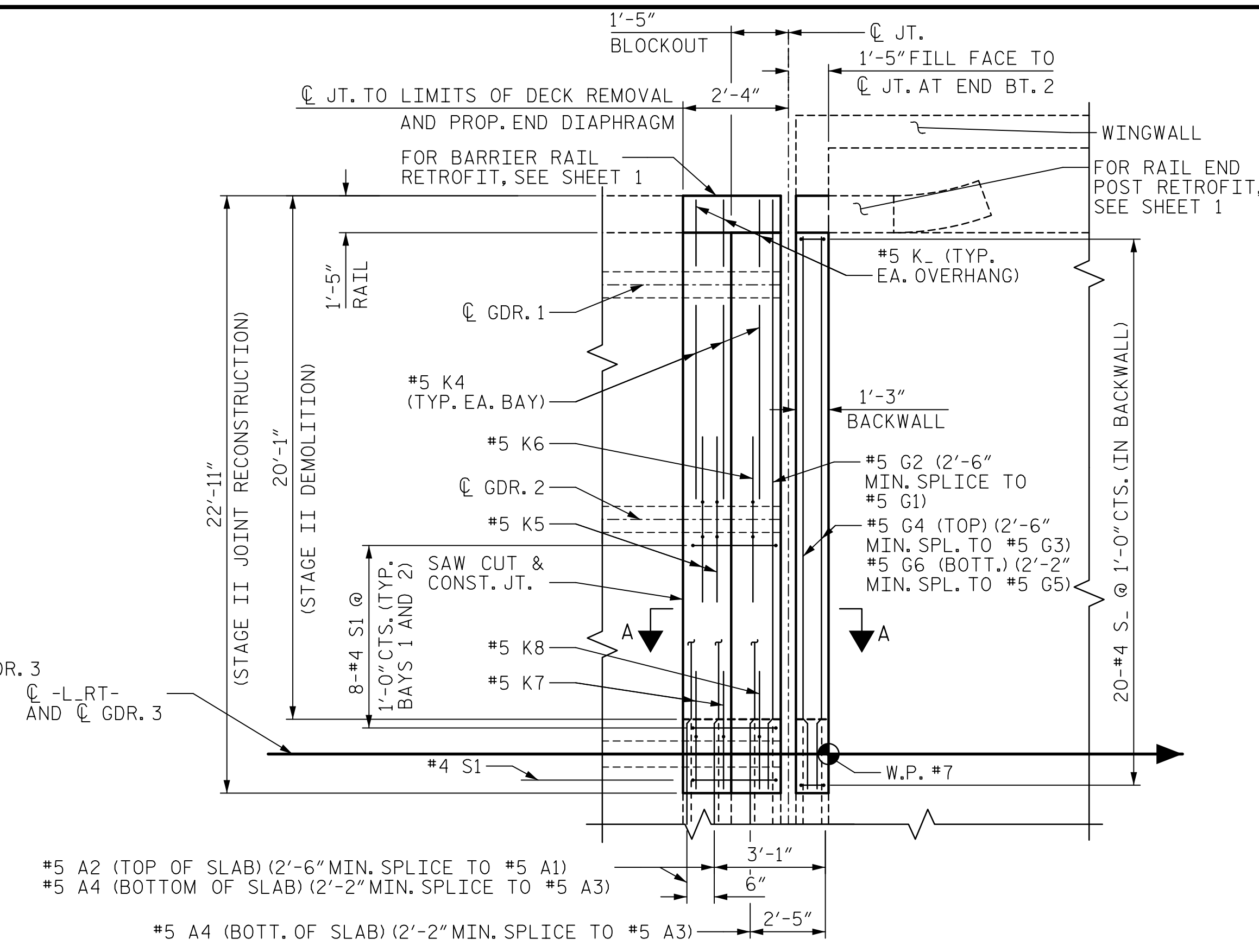
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NOTES:
DECK RECONSTRUCTION IN A STAGE SHALL BE COMPLETE PRIOR TO PPC OVERLAY.



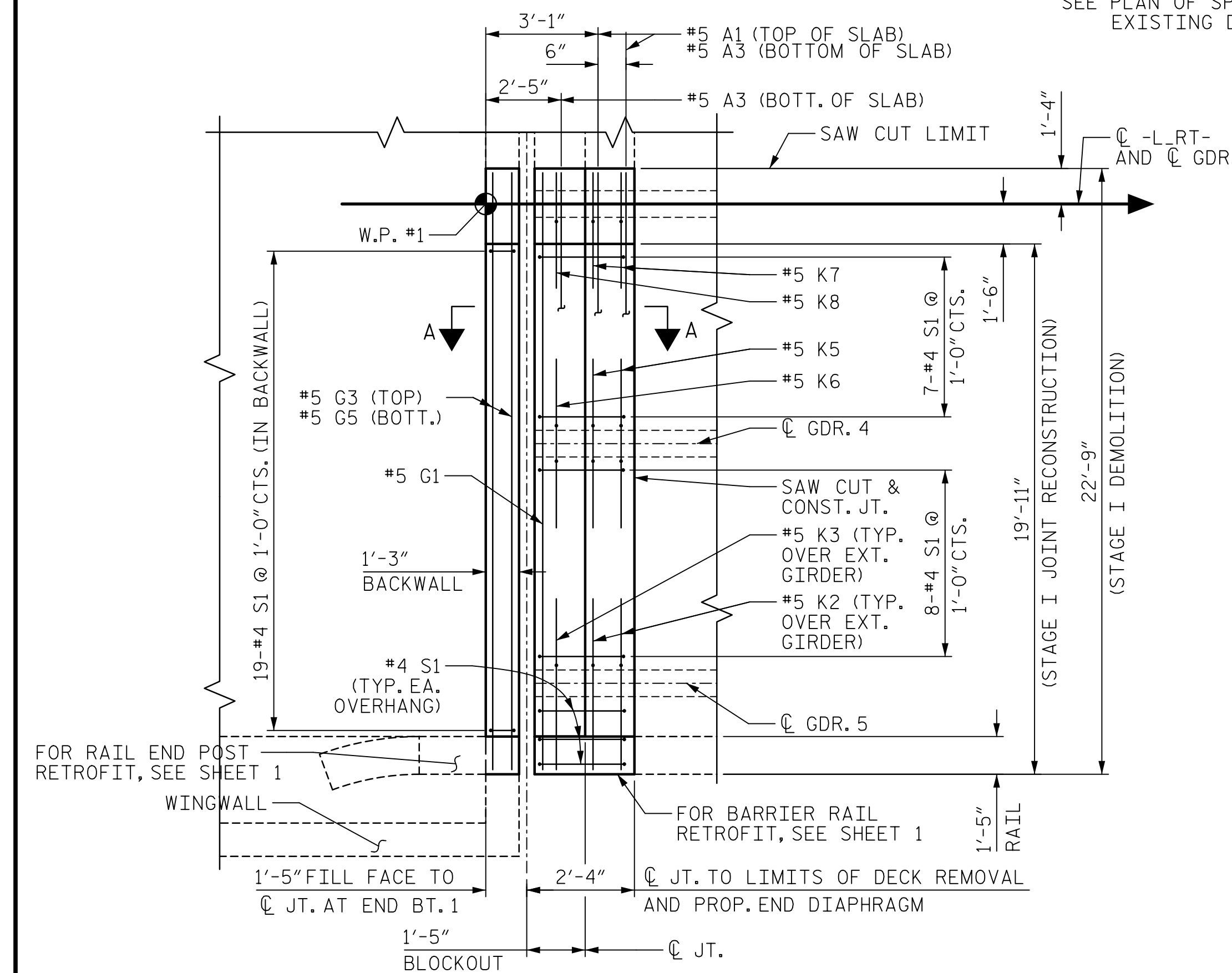
PARTIAL PLAN AT END BENT 1
(SEE STAGE I PLAN FOR OTHER TYPICAL BARS NOT SHOWN)



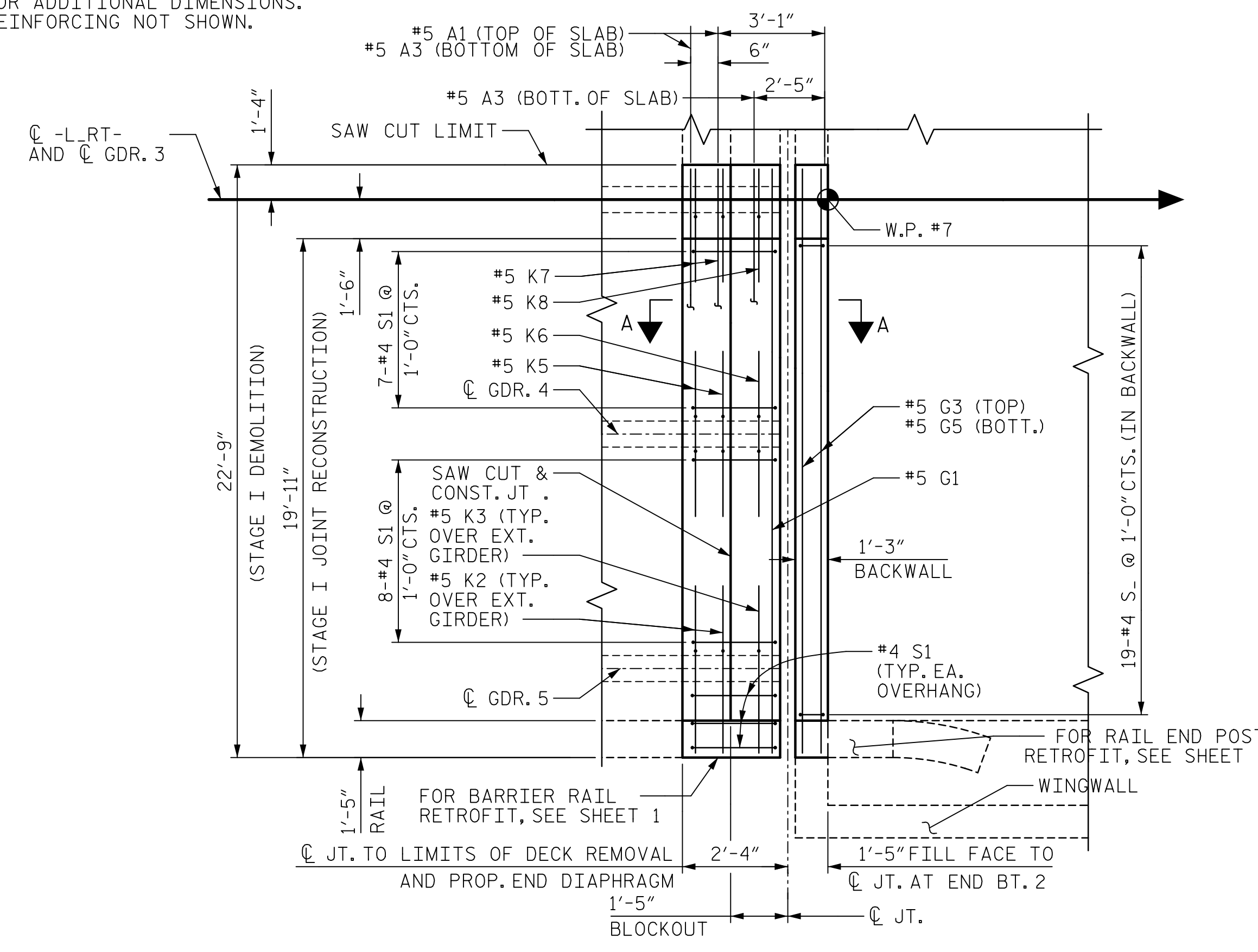
PARTIAL PLAN AT END BENT 2
(SEE STAGE I PLAN FOR OTHER TYPICAL BARS NOT SHOWN)

JOINT RECONSTRUCTION - STAGE II

SEE PLAN OF SPANS FOR ADDITIONAL DIMENSIONS.
EXISTING DECK REINFORCING NOT SHOWN.



PARTIAL PLAN AT END BENT 1
(SEE STAGE II PLAN FOR OTHER TYPICAL BARS NOT SHOWN)



PARTIAL PLAN AT END BENT 2
(SEE STAGE II PLAN FOR OTHER TYPICAL BARS NOT SHOWN)

JOINT RECONSTRUCTION - STAGE I

SEE PLAN OF SPANS FOR ADDITIONAL DIMENSIONS.
EXISTING DECK REINFORCING NOT SHOWN.

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STATION: 339+86.39 -L-
SHEET 3 OF 4

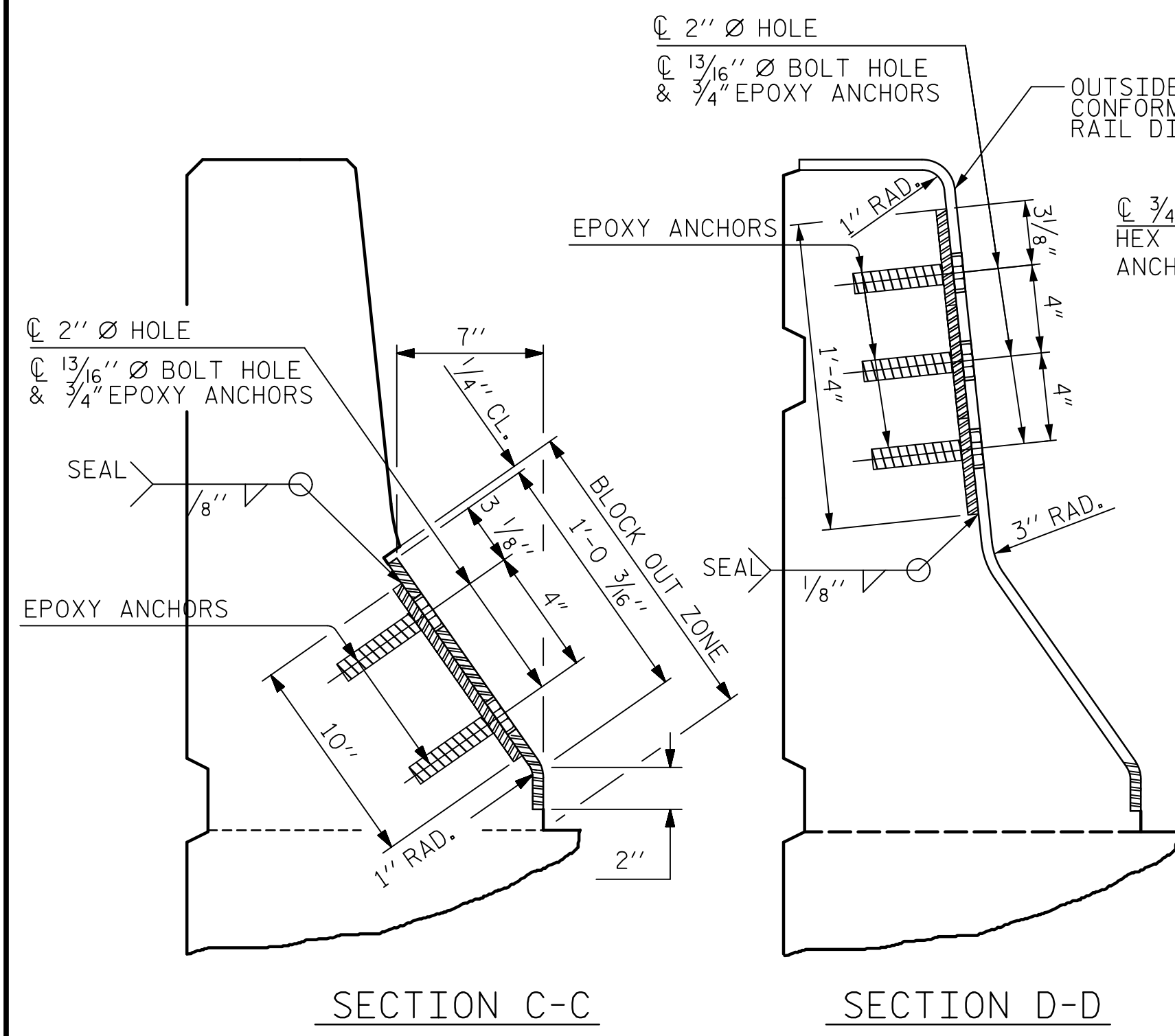
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AECOM TECHNICAL SERVICES, INC.
701 CORPORATE CENTER DRIVE, SUITE 475
RALEIGH, NC 27607
(919) 854-6200 www.aecom.com
AECOM License No. F-0342

PRELIMINARY PLANS
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUPERSTRUCTURE					
JOINT REPLACEMENT PLAN VIEW					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-XX
TOTAL SHEETS					32

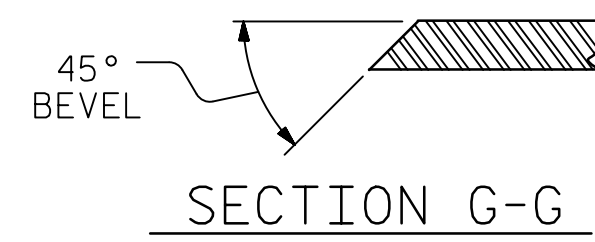
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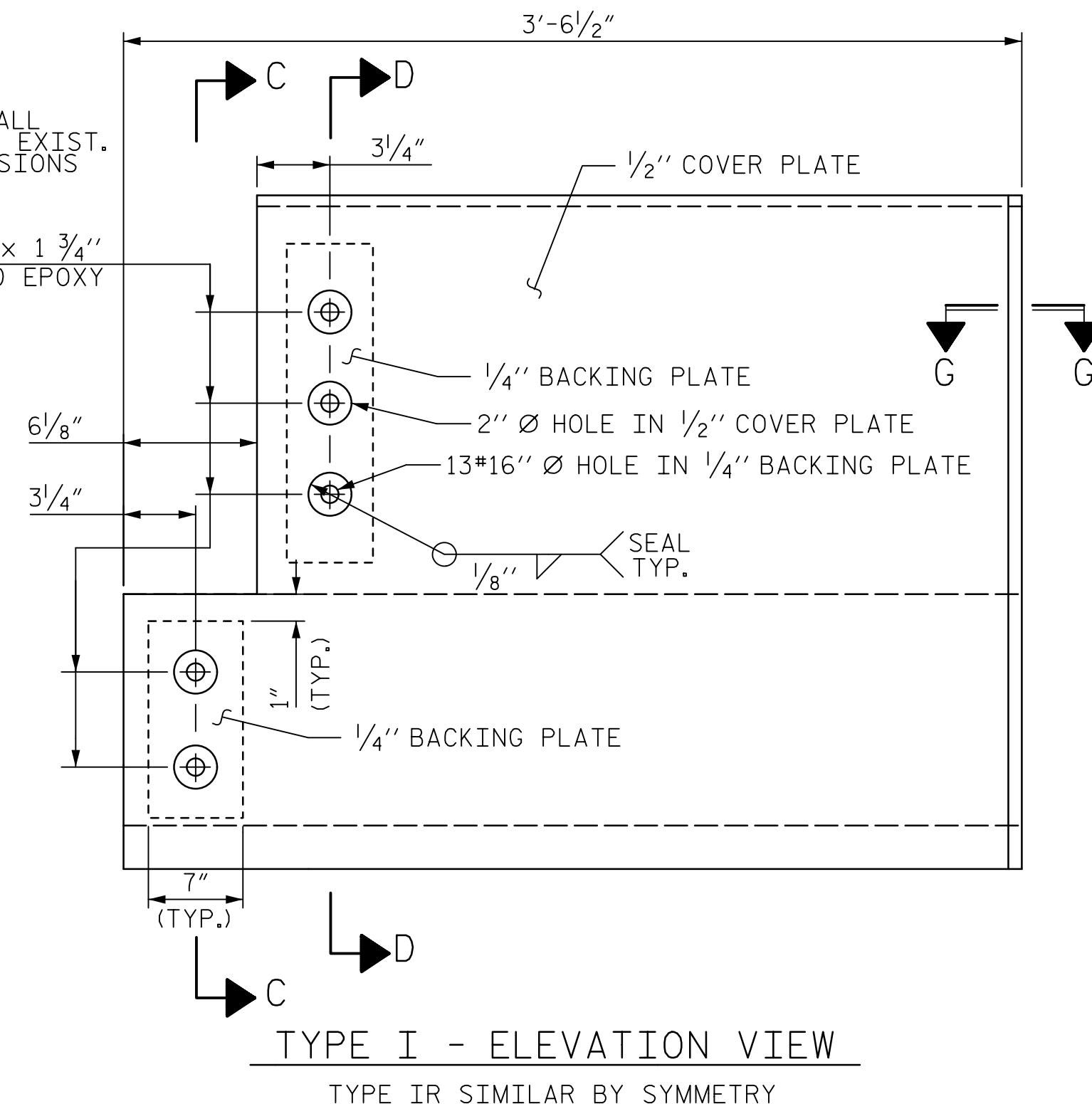
SECTION C-C

SECTION D-D



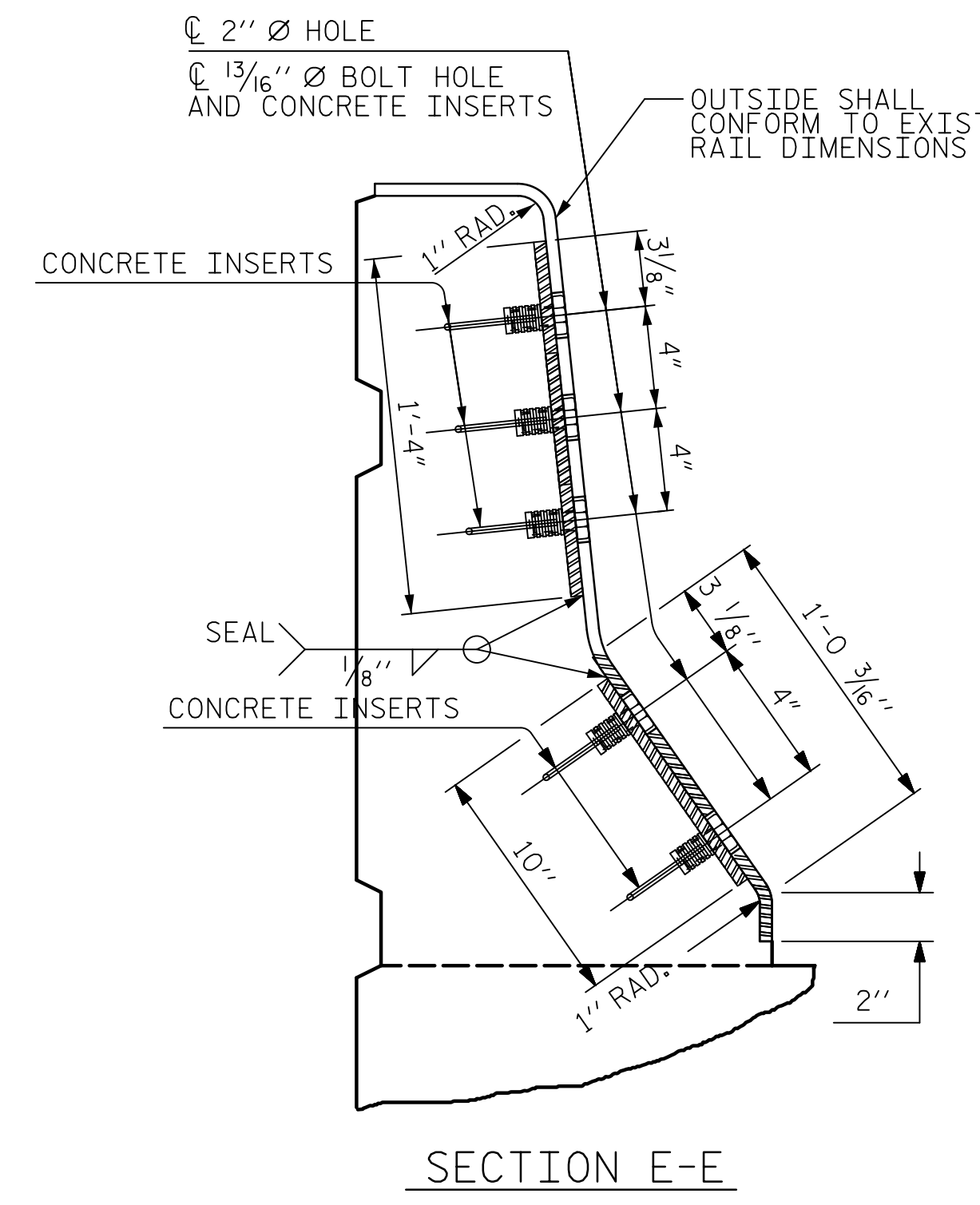
SECTION G-G

	SKREW ANGLE	TOTAL MOVEMENT ALONG C ROADWAY
END BENT #1	90°-00'-00"	4 7/8"
END BENT #2	90°-00'-00"	4 7/8"

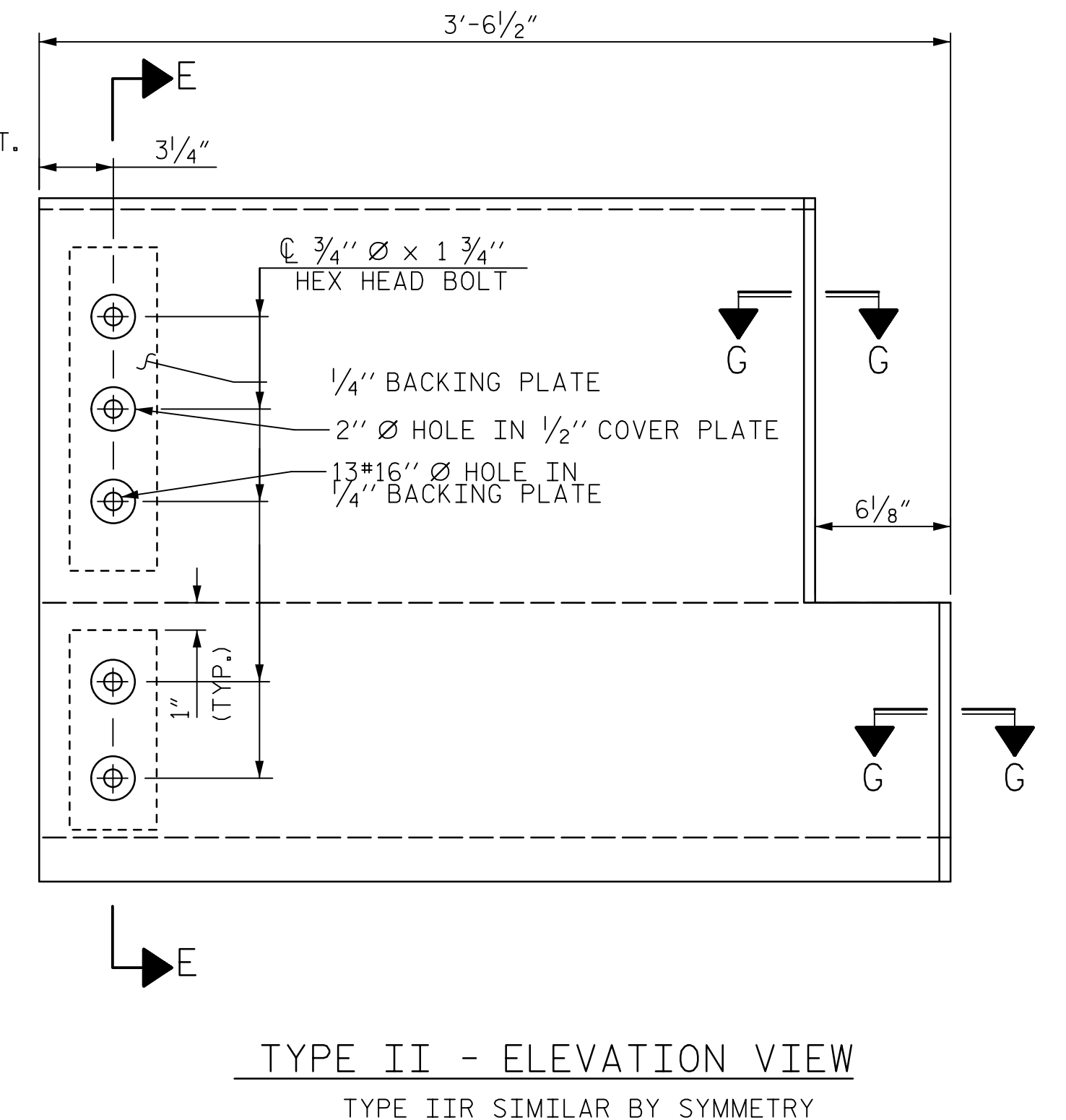


TYPE I - ELEVATION VIEW

TYPE IR SIMILAR BY SYMMETRY



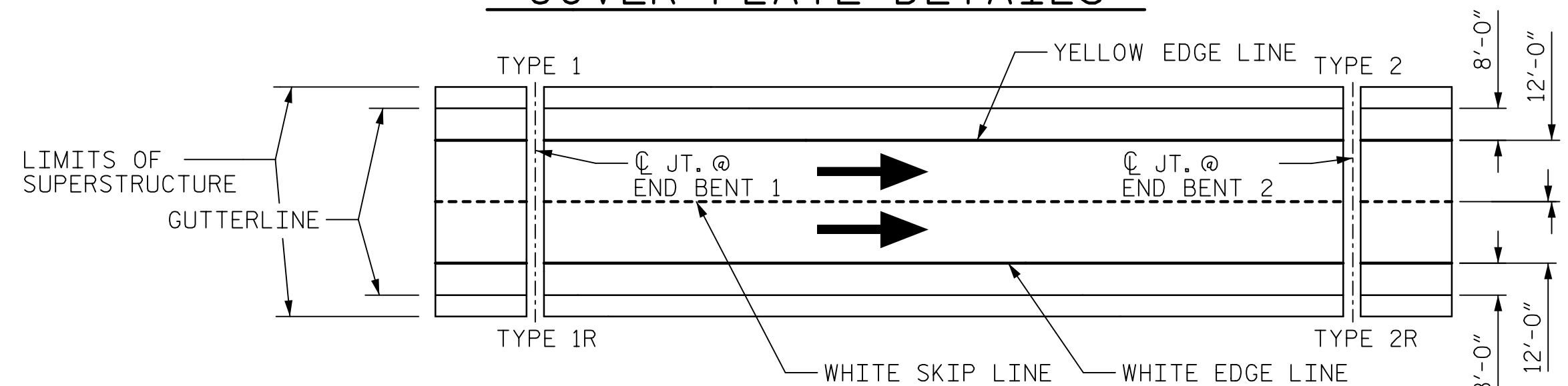
SECTION E-E



TYPE II - ELEVATION VIEW

TYPE IIR SIMILAR BY SYMMETRY

COVER PLATE DETAILS



PAVEMENT MARKING ALIGNMENT AND COVER PLATE LOCATIONS

NOTES

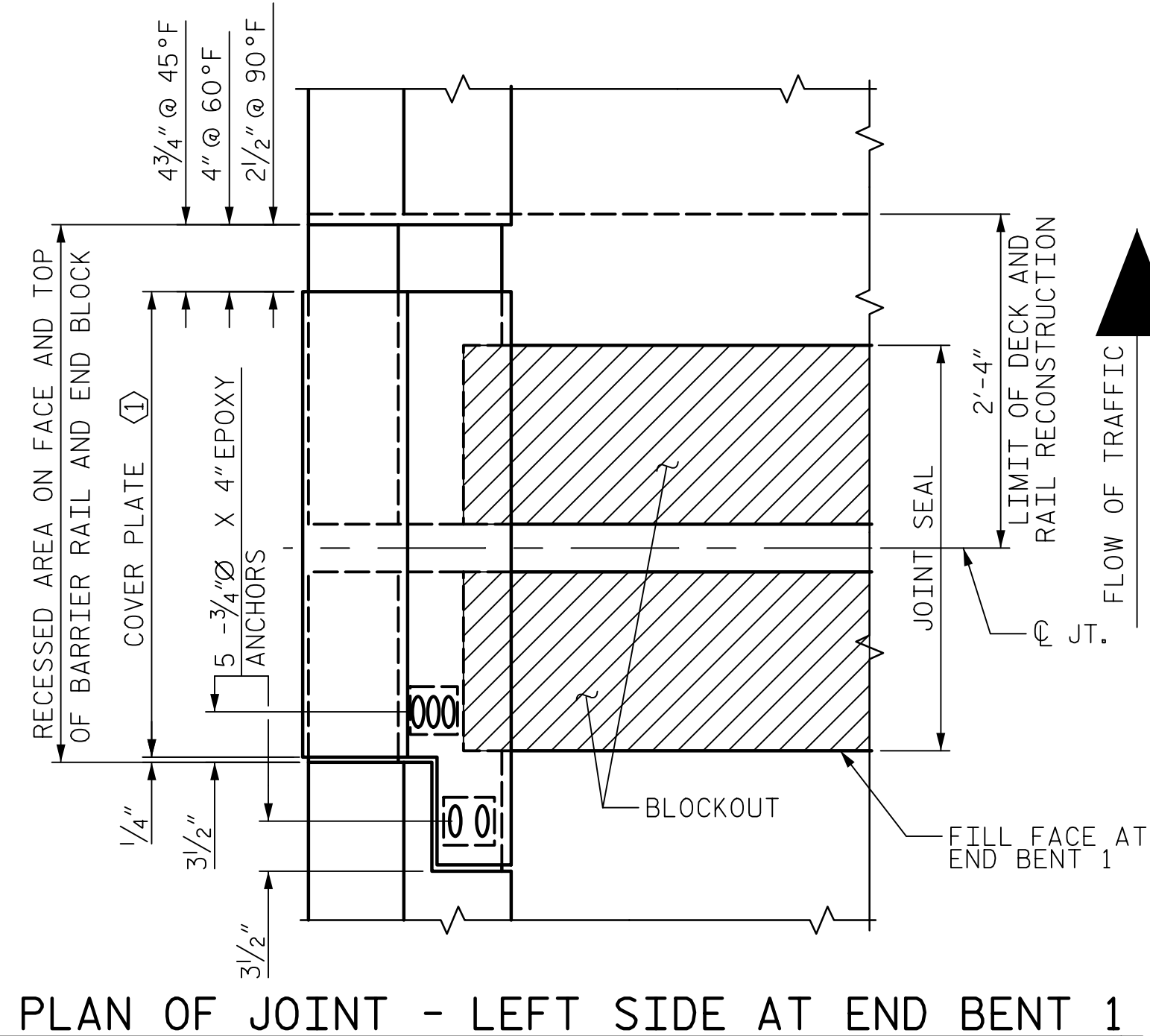
FOR RUBBER PLATE-TYPE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

THE STEEL PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 OR APPROVED EQUAL AND BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. AT THE CONTRACTOR'S OPTION, THE PLATES MAY BE METALLIZED AFTER FABRICATION. SEE SPECIAL PROVISIONS FOR THERMAL SPRAYED COATINGS (METALLIZATION).

THE 3/4" Ø HEX HEAD BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL.

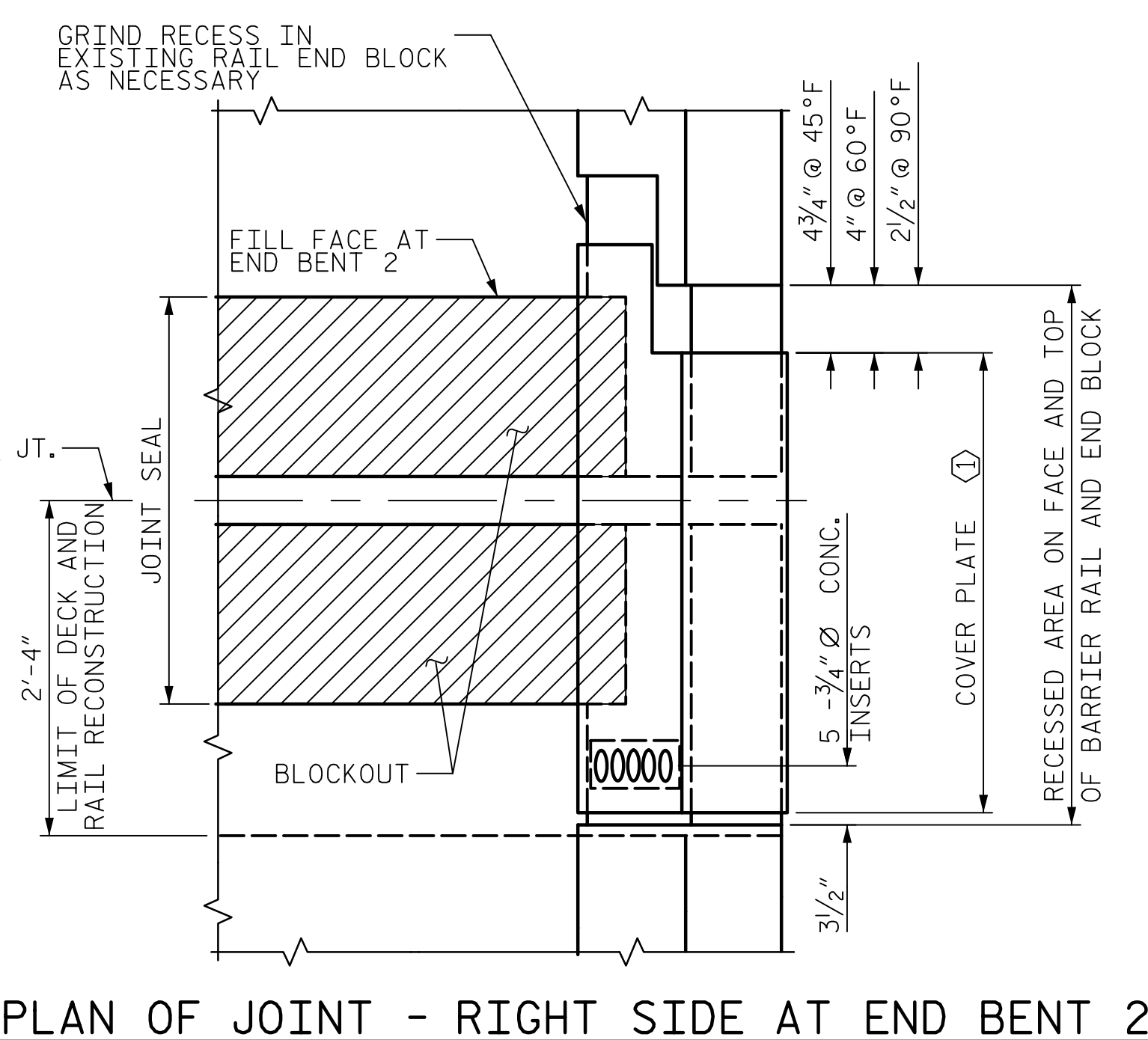
THE 3/4" CONCRETE INSERTS SHALL BE CLOSED-END FERRULES WITH LOOPED WIRE STRUTS ATTACHED TO THEM. THE INSERTS SHALL CONFORM TO AASHTO M169, GRADE 12L14 AND SHALL HAVE A TENSILE WORKING LOAD CAPACITY OF 3000 LBS.

NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE COVER PLATE. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR "MOLDED RUBBER SEGMENTAL EXPANSION JOINTS."



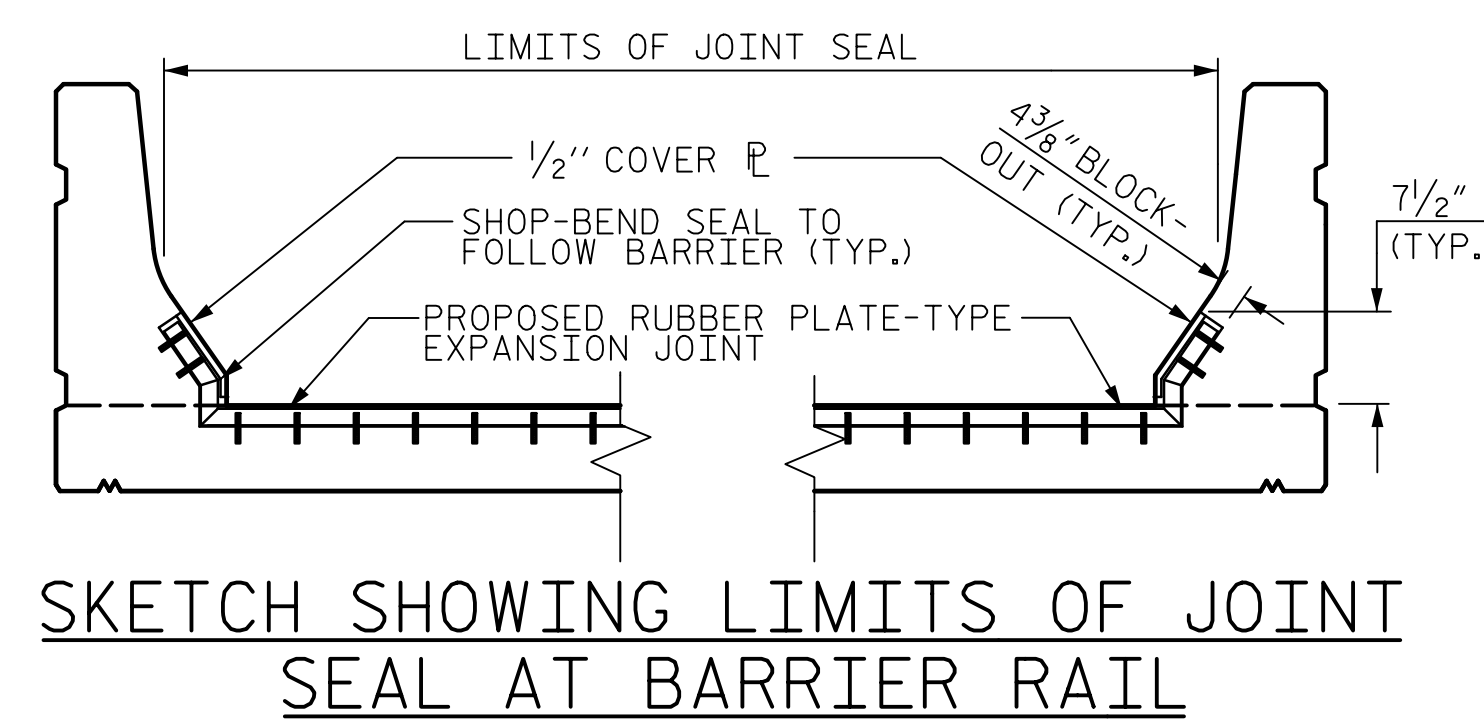
PLAN OF JOINT - LEFT SIDE AT END BENT 1

RIGHT SIDE AT END BENT 1 SIMILAR BY SYMMETRY ABOUT C BRIDGE

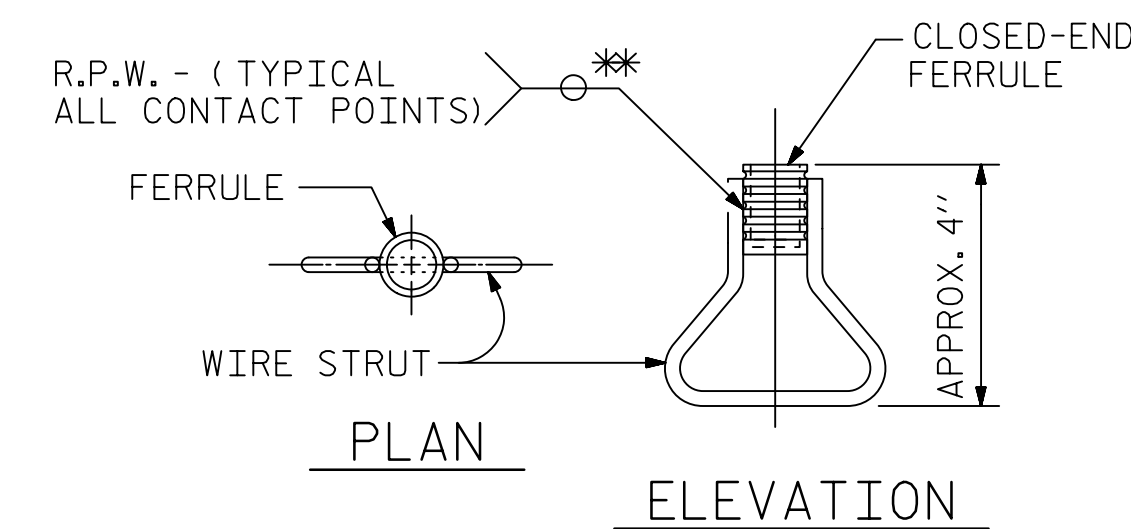


PLAN OF JOINT - RIGHT SIDE AT END BENT 2

LEFT SIDE AT END BENT 2 SIMILAR BY SYMMETRY ABOUT C BRIDGE



SKETCH SHOWING LIMITS OF JOINT SEAL AT BARRIER RAIL



CONCRETE INSERT

* EACH WELDED ATTACHMENT OF WIRE TO FERRULE SHALL DEVELOP THE TENSILE STRENGTH OF THE WIRE.

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CHECKED BY : G.R. COLS	DATE : 08/2018
DESIGNED BY :	DATE :
DESIGN CHECKED BY :	DATE :

SEE COVER PLATE ELEVATIONS FOR DETAILS AND DIMENSIONS. COVER PLATE DIMENSIONS BASED ON BEST AVAILABLE INFORMATION REGARDING EXISTING RAIL. CONTRACTOR SHALL VERIFY EXISTING RAIL DIMENSIONS FOR COMPATIBILITY WITH RAIL COVER PLATE PRIOR TO FABRICATION AND SHALL REPORT ANY DEVIATIONS TO THE ENGINEER.

PROJECT NO. 15BPR.43
STANLY/MONTGOMERY COUNTY
STATION: 339+86.39 -L-
SHEET 4 OF 4



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

JOINT REPLACEMENT COVER PLATE DETAILS

PRELIMINARY PLANS
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1			3		
2			4		

TOTAL SHEETS 32

NOTES

FOR DISC BEARINGS, SEE SPECIAL PROVISIONS.
 ALL BEARING PLATES SHALL BE AASHTO M270 GRADE 50W OR GRADE 50.
 AT ALL POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS SHALL BE FINGER-TIGHTENED PLUS AN ADDITIONAL 1/4 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.
 WHEN WELDING THE SOLE PLATE TO THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE BEARING DOES NOT EXCEED 250°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE TFE OR URETHANE DISC.
 SOLE PLATES SHOULD BE WELDED TO GIRDER FLANGES AND ANCHOR BOLTS SHOULD BE GROUTED BEFORE FALSEWORK IS PLACED.
 ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

FOR ATTACHMENT OF THE STAINLESS STEEL SHEETS TO THE STEEL SOLE PLATE AND GUIDE BARS, AS WELL AS THE TOP AND SIDE PTFE SHEETS TO THE STEEL UPPER BEARING PLATE, SEE SPECIAL PROVISIONS.

FOR THERMAL SPRAYED COATINGS (METALLIZATION), SEE SPECIAL PROVISIONS.

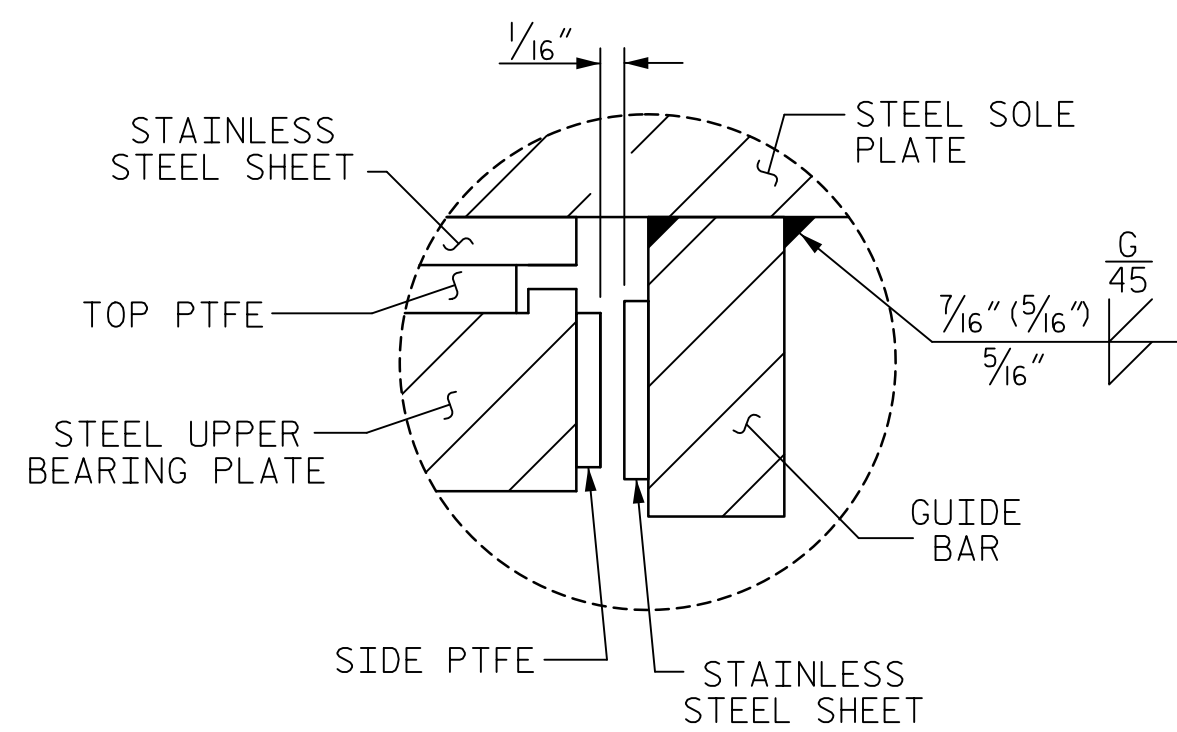
THE MINIMUM ROTATIONAL CAPACITY FOR ALL BEARINGS SHALL BE 0.02 RADIAN.

DIMENSIONS "H" ARE BASED ON EXISTING BEARING HEIGHTS. EXISTING HEIGHTS SHALL BE FIELD-VERIFIED PRIOR TO FABRICATION OF NEW BEARINGS.

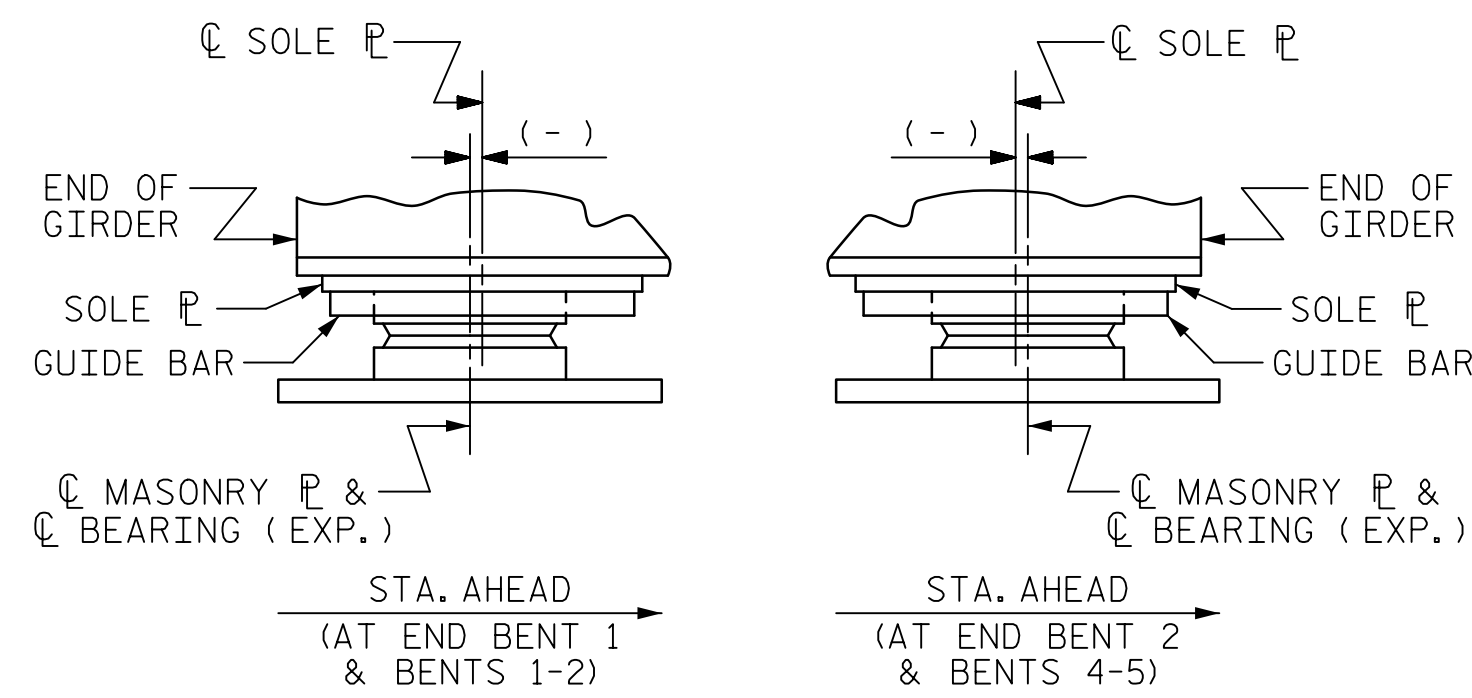
BEARING SHALL BE DESIGNED TO FIT WITH EXISTING ANCHOR BOLTS. EXISTING ANCHOR BOLT SIZES AND LOCATIONS SHOWN BASED ON BEST INFORMATION AVAILABLE. EXISTING ANCHOR BOLTS SHALL BE FIELD-MEASURED PRIOR TO BEARING FABRICATION.

PLATE SETTING DATA (EXPANSION DISC BEARINGS)				
LOCATION	TEMPERATURE AT TIME OF SETTING			*
	45° F	60° F	90° F	
EB 1	-5/8"	0"	1 3/16"	0
BT 1	-7/16"	0"	7/8"	0
BT 2	-1/4"	0"	1/2"	0
BT 3	0"	0"	0"	0
BT 4	-1/4"	0"	1/2"	0
BT 5	-1/2"	0"	1"	0
EB 2	-3/4"	0"	1 1/16"	0

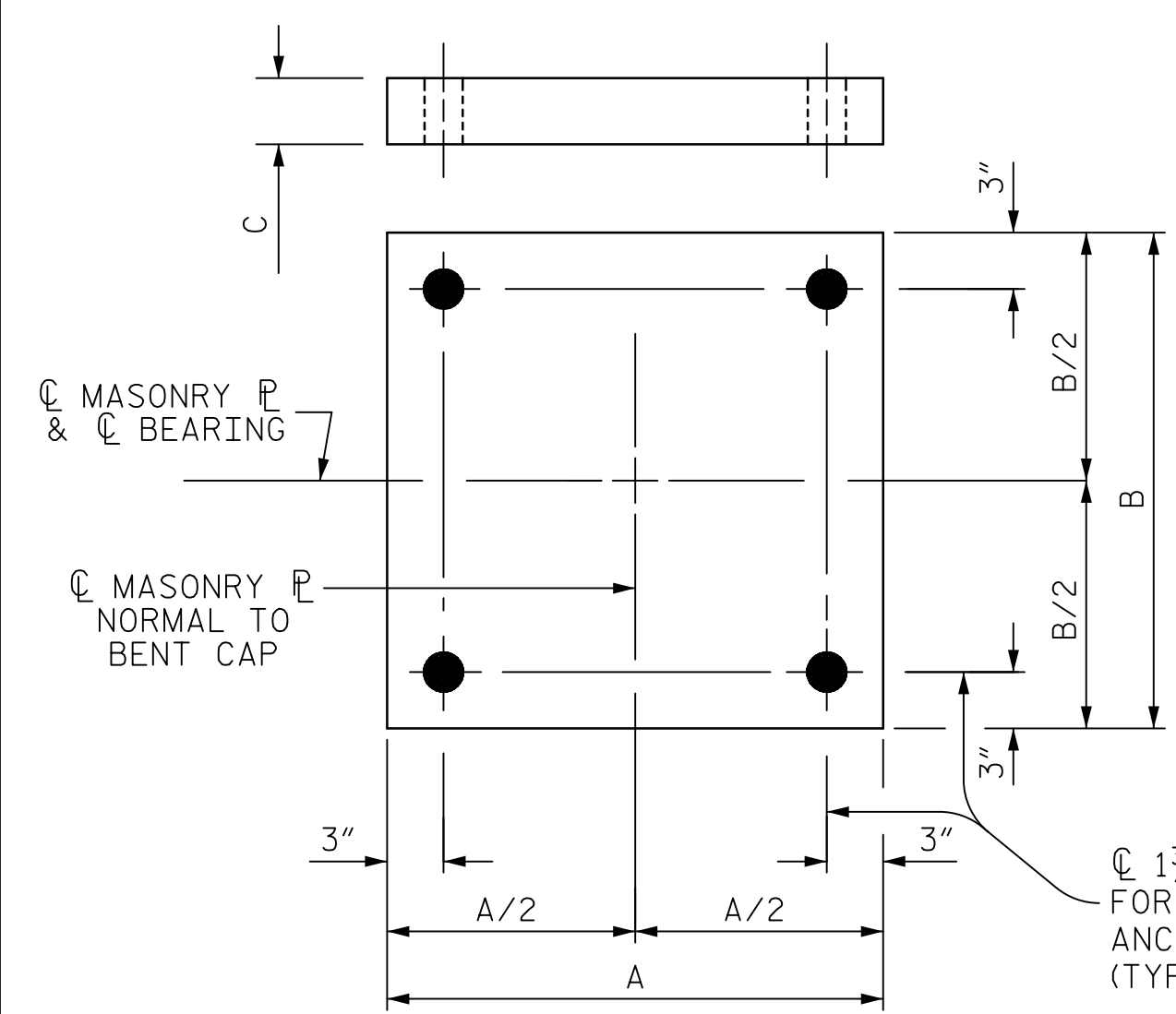
* CORRECTION FOR END ROTATION DUE TO WEIGHT OF SLAB AND COMPOSITE DEAD LOAD. (NEGLECTIBLE FOR IN-SERVICE BEARING REPLACEMENT)



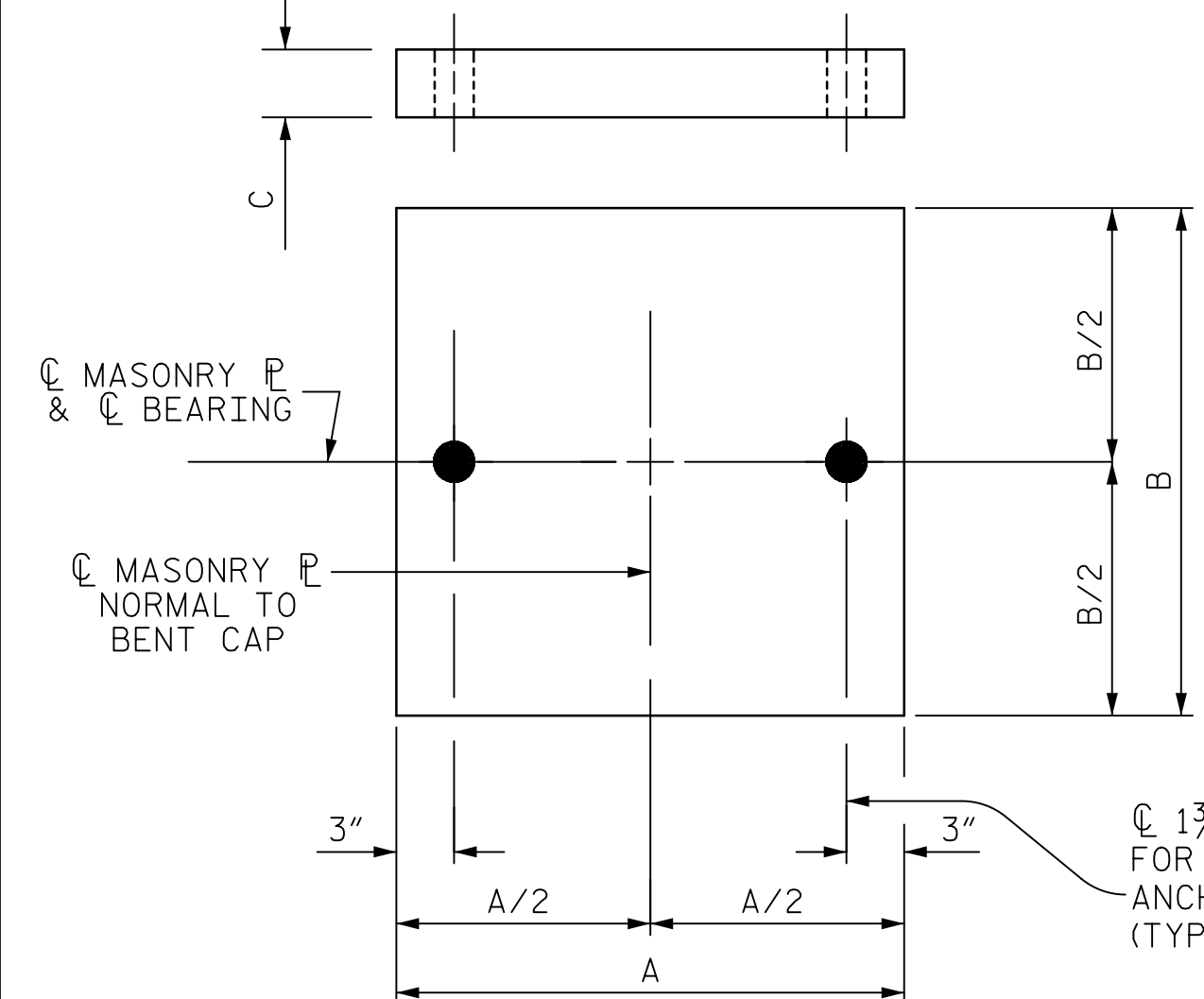
DETAIL "B"



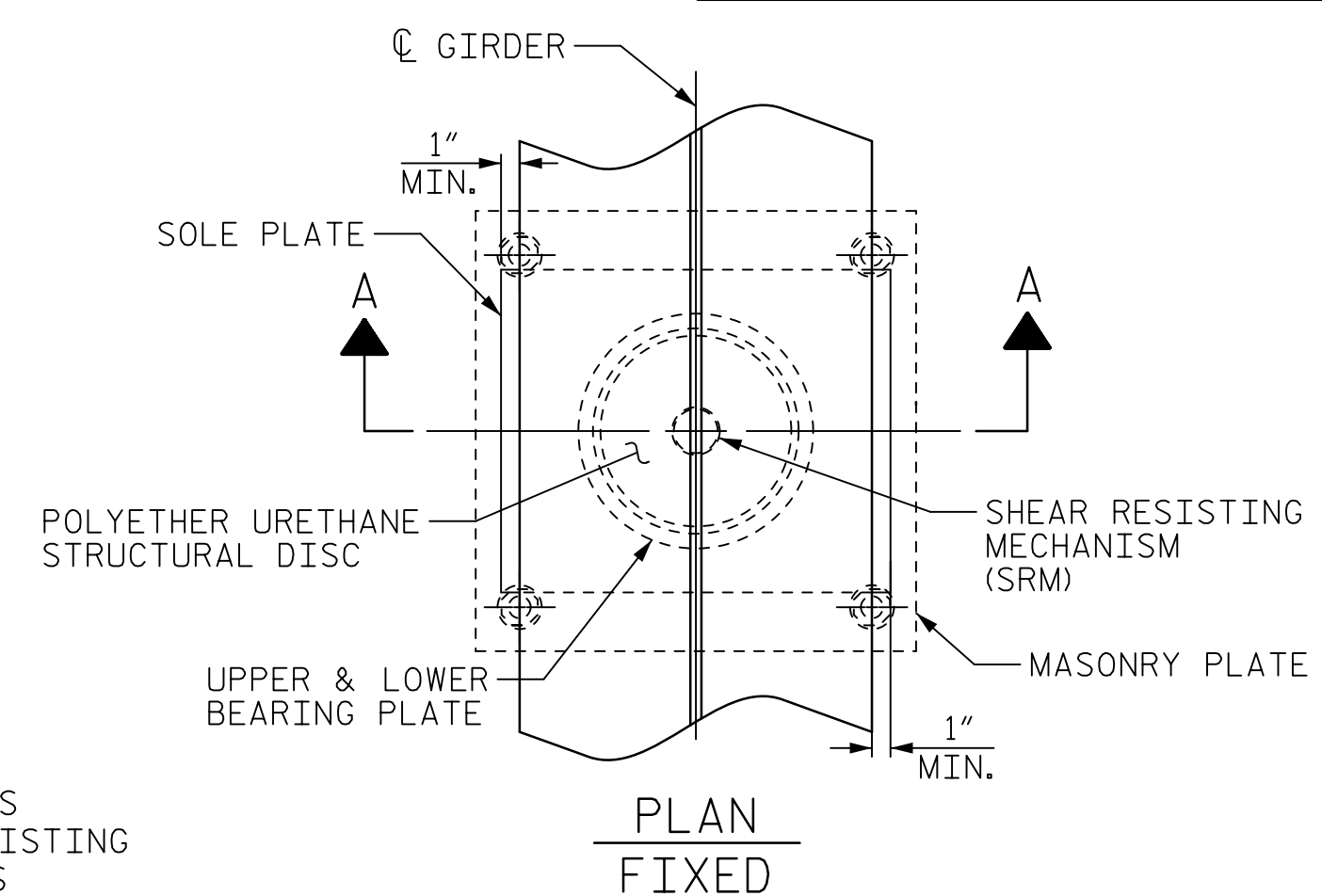
TEMPERATURE SETTING DETAIL



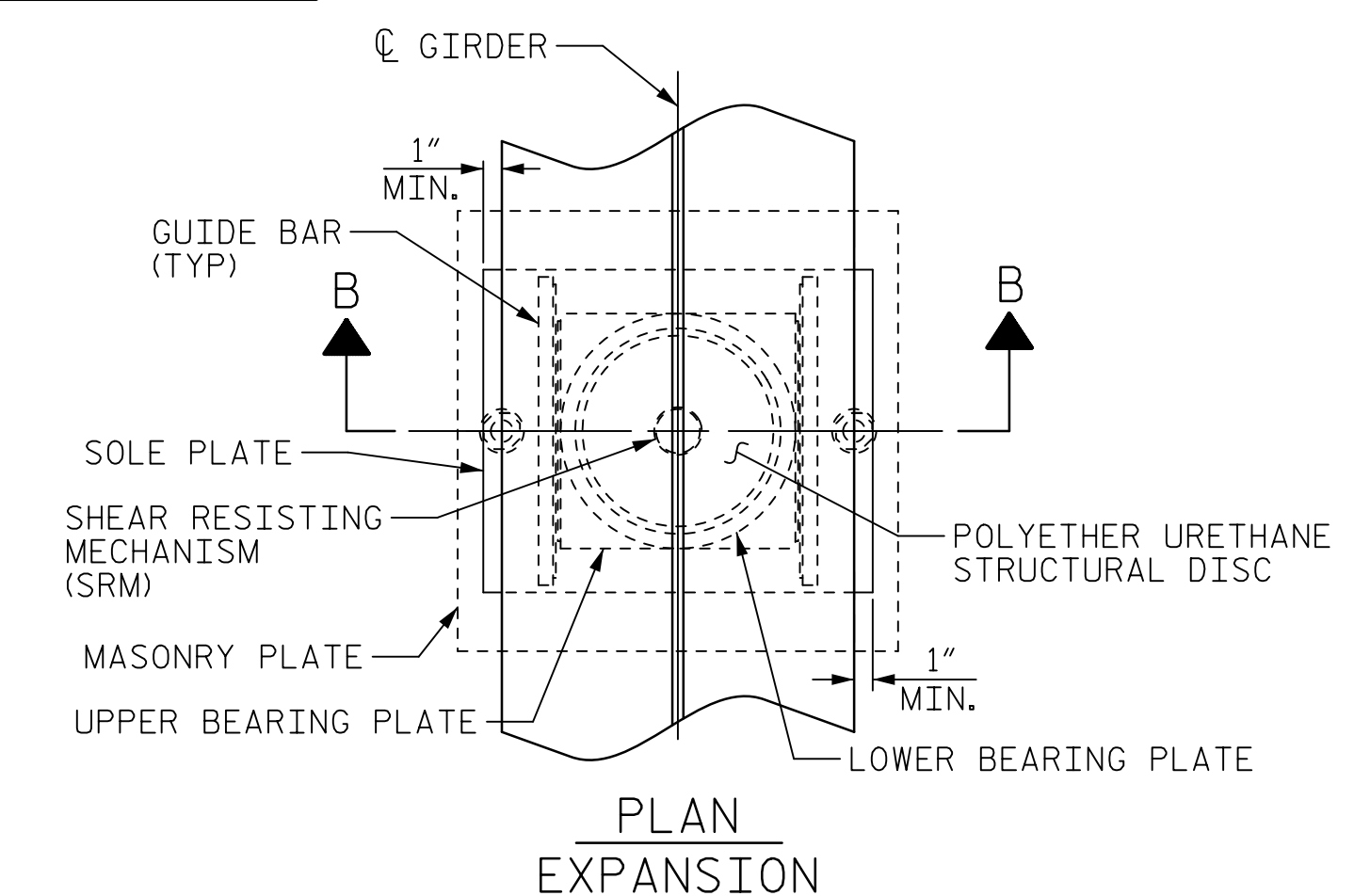
PLAN M4 (5 REQ'D.)



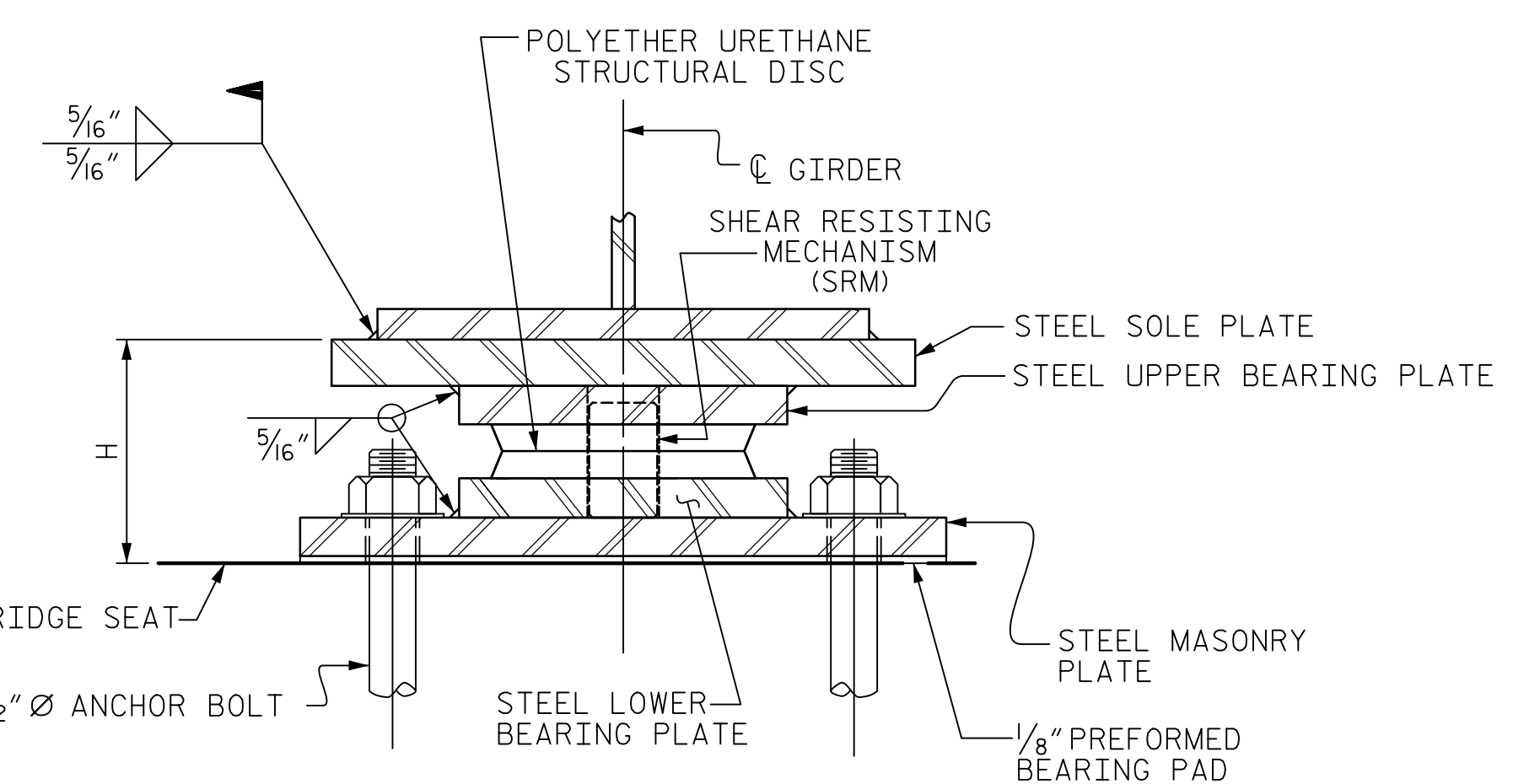
PLAN M1, M2, M3, M5, M6, M7 (30 REQ'D.)
MASONRY PLATE DETAILS



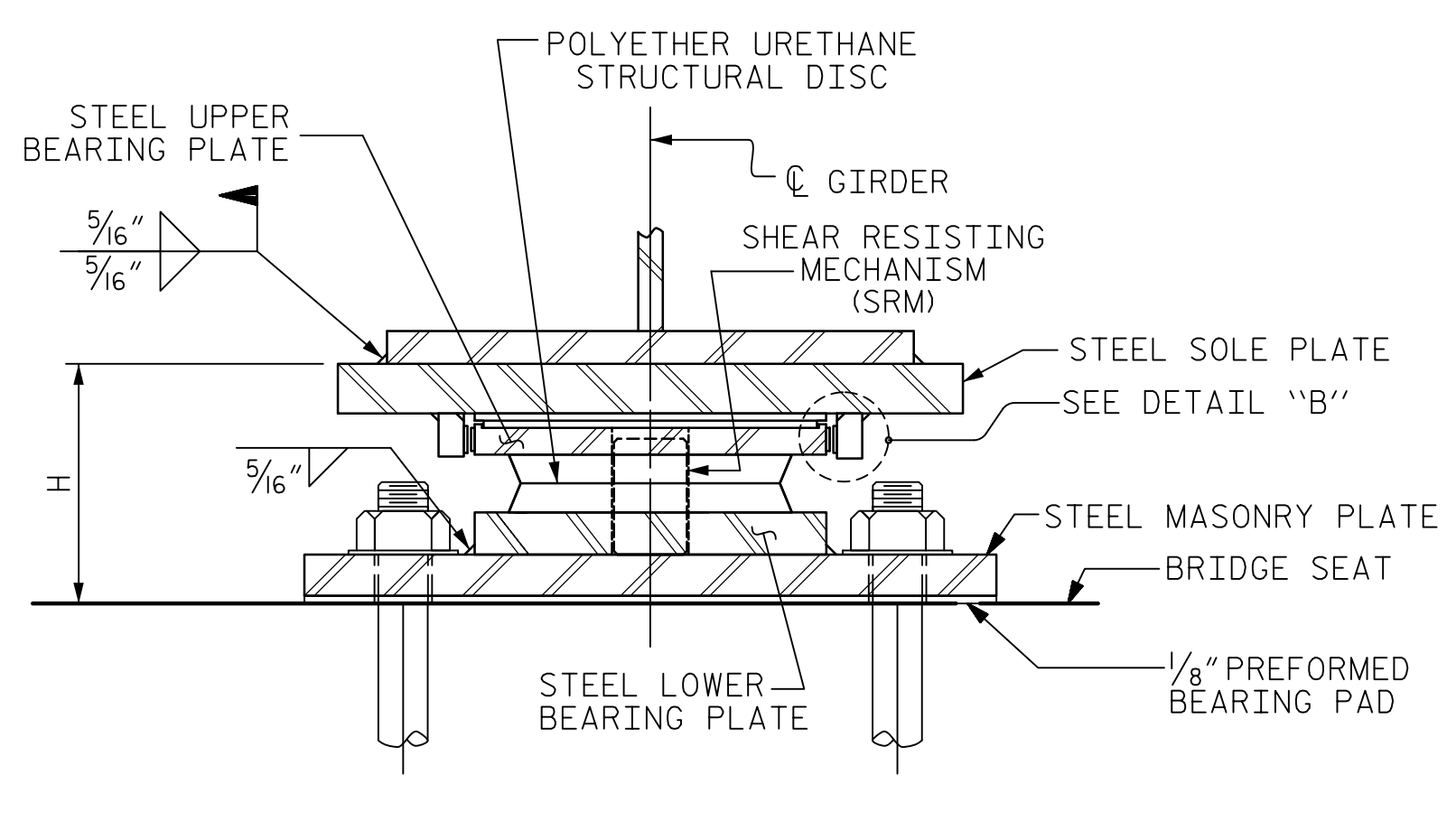
PLAN FIXED



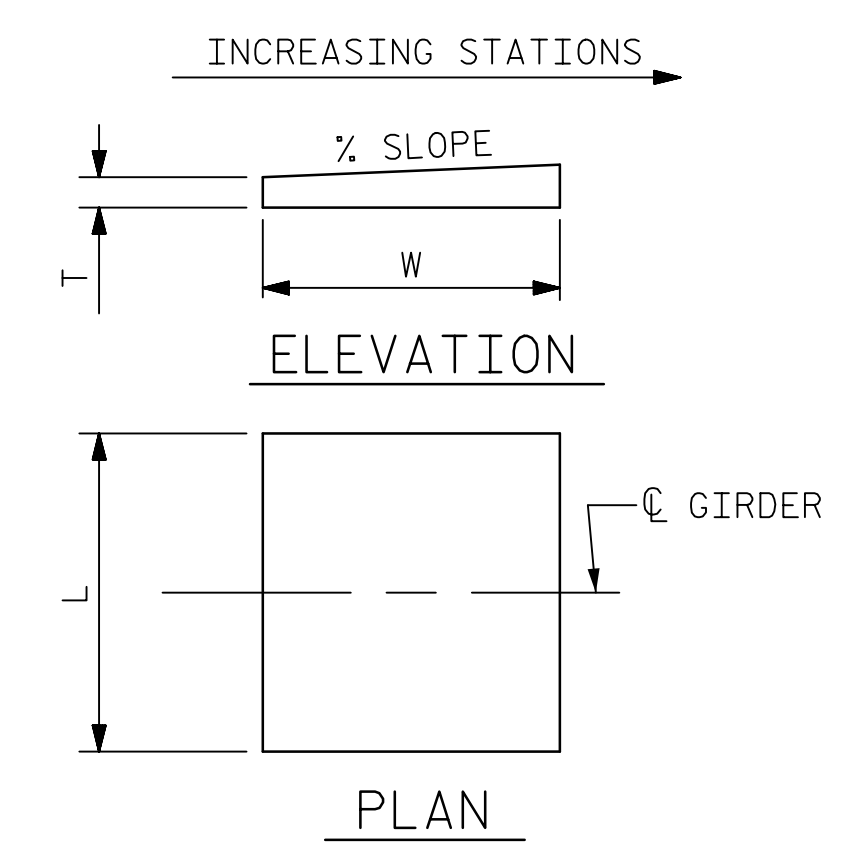
PLAN EXPANSION



SECTION A-A
DB4
FIXED



SECTION B-B
DB1-DB3, DB5-DB7
EXP.



NOTE: DIMENSIONS "W" AND "T" SHALL BE DETERMINED BY THE BEARING MANUFACTURER.

SOLE PLATE DETAILS

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

DESIGNATIONS		DIMENSIONS							LOADS AND MOVEMENT					
BEARINGS	MASONRY PLATE	LOCATION	NUMBER OF BEARINGS	BEARING H (IN.)	MASONRY PLATE A (IN.)	MASONRY PLATE B (IN.)	MASONRY PLATE C (IN.)	SOLE PLATE TOP SLOPE (%)	SOLE PLATE L (IN.)	UNFACTORED VERTICAL LOAD (KIPS)		FACTORED HORIZONTAL LOAD (KIPS)	ONE-WAY MOVEMENT (IN.)	
										DC	DW	LIVE LL+IM		
DB1 (EXP.)	M1	EB 1	5	4.82	26	26	*	0.5%	14"	76	11	114	36	2
DB2 (EXP.)	M2	BT 1	5	5.94	34 1/2	34 1/2	*	0.5%	20"	280	42	239	110	1 1/2
DB3 (EXP.)	M3	BT 2	5	6.32	36	36	*	0.5%	20"	319	46	259	124	1 3/16
DB4 (FIX.)	M4	BT 3	5	6.32	34 1/2	34 1/2	*	0.5%	20"	359	51	270	136	0
DB5 (EXP.)	M5	BT 4	5	6.32	37	37	*	0.5%	20"	366	52	272	138	1 3/16
DB6 (EXP.)	M6	BT 5	5	4.94	38	38	*	0.5%	20"	384	54	270	143	1 11/16
DB7 (EXP.)	M7	EB 2	5	5.32	27	27	*	0.5%	20"	103	15	126	45	2 3/8

* MASONRY PLATE THICKNESS TO BE DETERMINED BY BEARING MANUFACTURER.

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DISC BEARING DETAILS

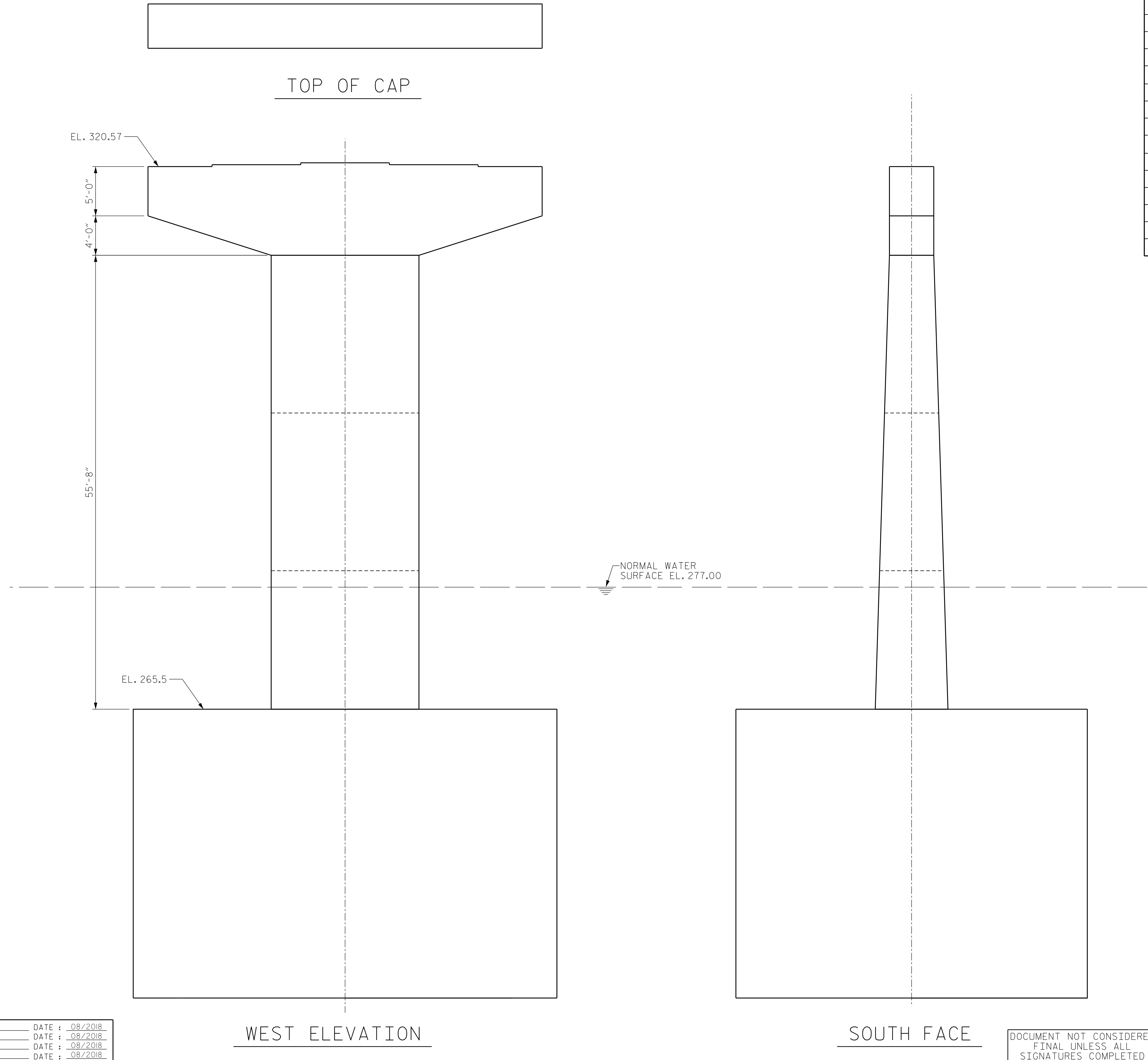
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

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ASSEMBLED BY : T.B. STUMP DATE : 08/2018
 CHECKED BY : G.R. COLS DATE : 08/2018
 DRAWN BY : TMG 08/13 REV. 12/17 MAA/THC
 CHECKED BY : EXP 10/13

DATE: 8/28/2018
TIME: 4:22:58 PM

USER: greg@k...
DGN: \\SFRAL31000\aces\me\com\dale\proj\leis\60739718 - ASR Lake Tilley\800_CAD_GIS\910_CAD\YO_MCDOT_TIP\Structures\04 Drawings\401_045_B4874_S1\U_Bldg



REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 1		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT.

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAR THE ARE OF HTE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. 15BPR.43
STANLY/MONTGOMERY COUNTY
STATION: 339+86.39 -L-

SHEET 1 OF 10

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PRELIMINARY PLANS
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SUBSTRUCTURE

BENT 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
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2			4			32

DRAWN BY : K. DONALD DATE : 08/2018
CHECKED BY : G. COLS DATE : 08/2018
DESIGNED BY : K. DONALD DATE : 08/2018
DESIGN CHECKED BY : G. COLS DATE : 08/2018

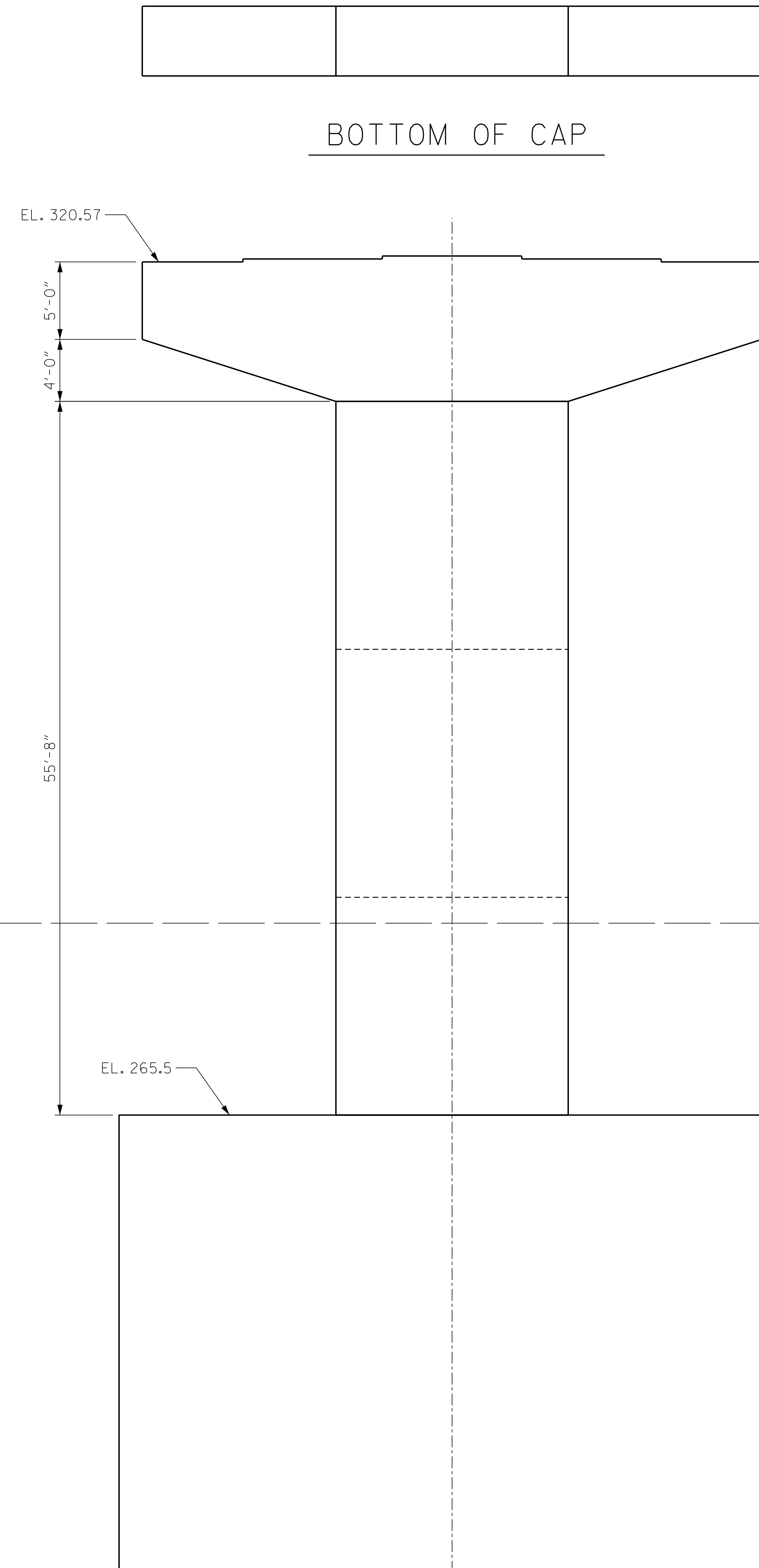
WEST ELEVATION

SOUTH FACE

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DATE: 8/28/2018
TIME: 4:23:25 PM

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BOTTOM OF CAP

EAST ELEVATION

NORTH FACE

REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 1		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT.

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAR THE ARE OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

SHEET 2 OF 10

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RALEIGH

SUBSTRUCTURE

BENT 1

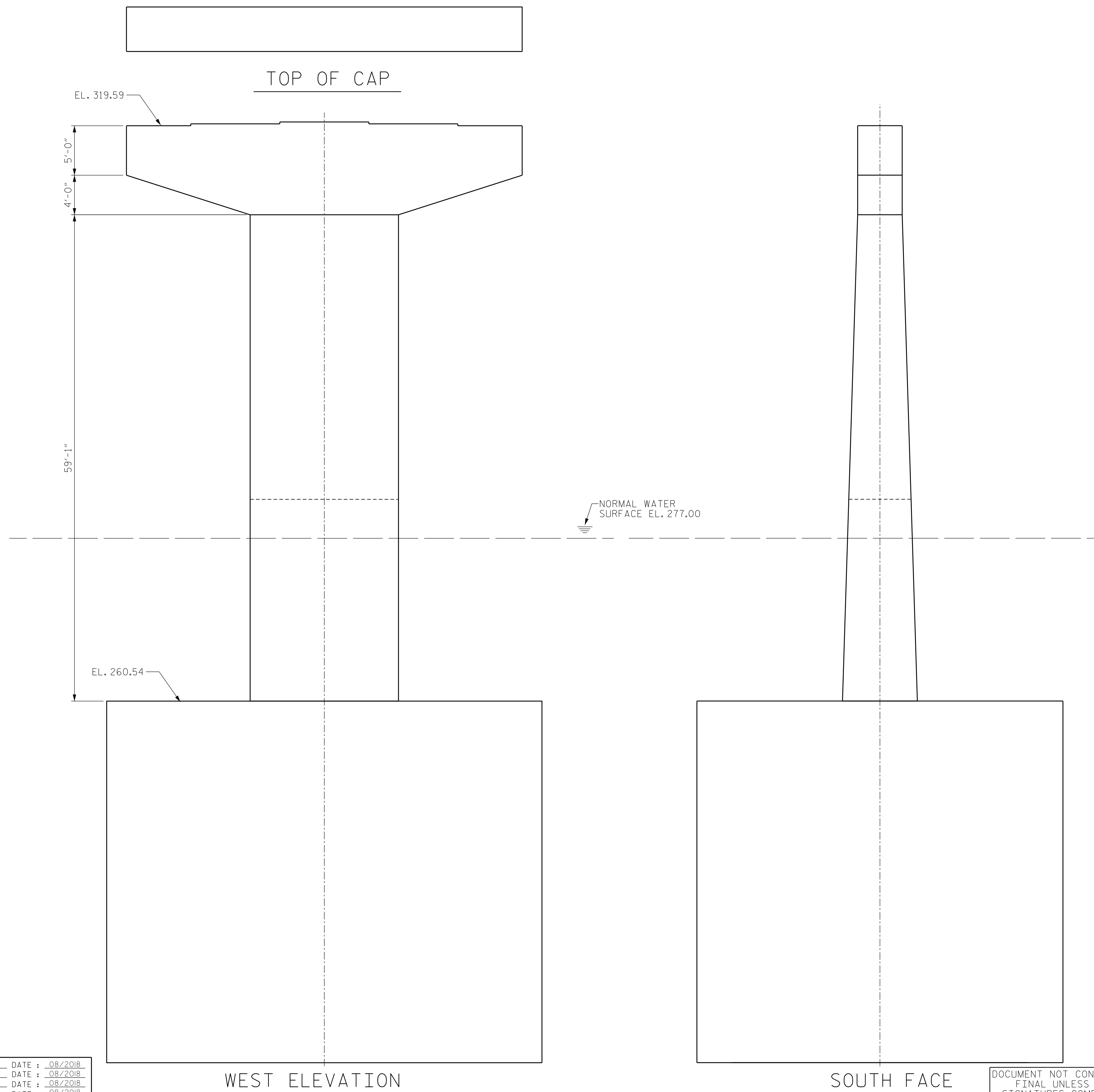
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

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 CHECKED BY : G. COLS DATE : 08/2018
 DESIGNED BY : K. DONALD DATE : 08/2018
 DESIGN CHECKED BY : G. COLS DATE : 08/2018

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 SIGNATURES COMPLETED

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REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 2		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT.

NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.
 CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAR THE ARE OF HTE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.
 CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-
 SHEET 3 OF 10

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SUBSTRUCTURE

BENT 2

PRELIMINARY PLANS
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

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 CHECKED BY : G. COLS DATE : 08/2018
 DESIGNED BY : K. DONALD DATE : 08/2018
 DESIGN CHECKED BY : G. COLS DATE : 08/2018

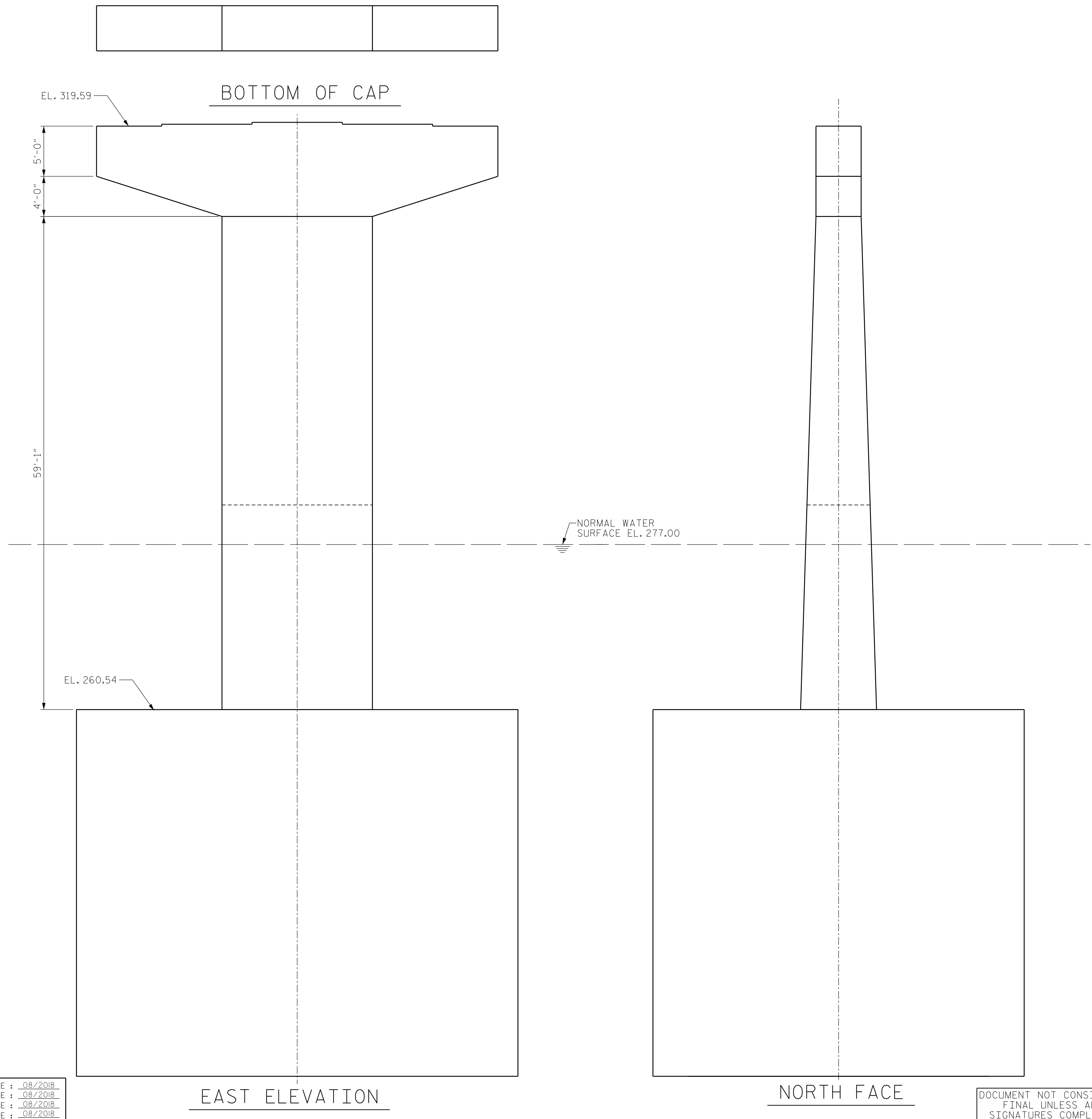
WEST ELEVATION

SOUTH FACE

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REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 2		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT.

NOTES:
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CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. 15BPR.43
STANLY/MONTGOMERY COUNTY
STATION: 339+86.39 -L-

SHEET 4 OF 10

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RALEIGH

SUBSTRUCTURE

BENT 2

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

DRAWN BY : K. DONALD DATE : 08/2018
CHECKED BY : G. COLS DATE : 08/2018
DESIGNED BY : K. DONALD DATE : 08/2018
DESIGN CHECKED BY : G. COLS DATE : 08/2018

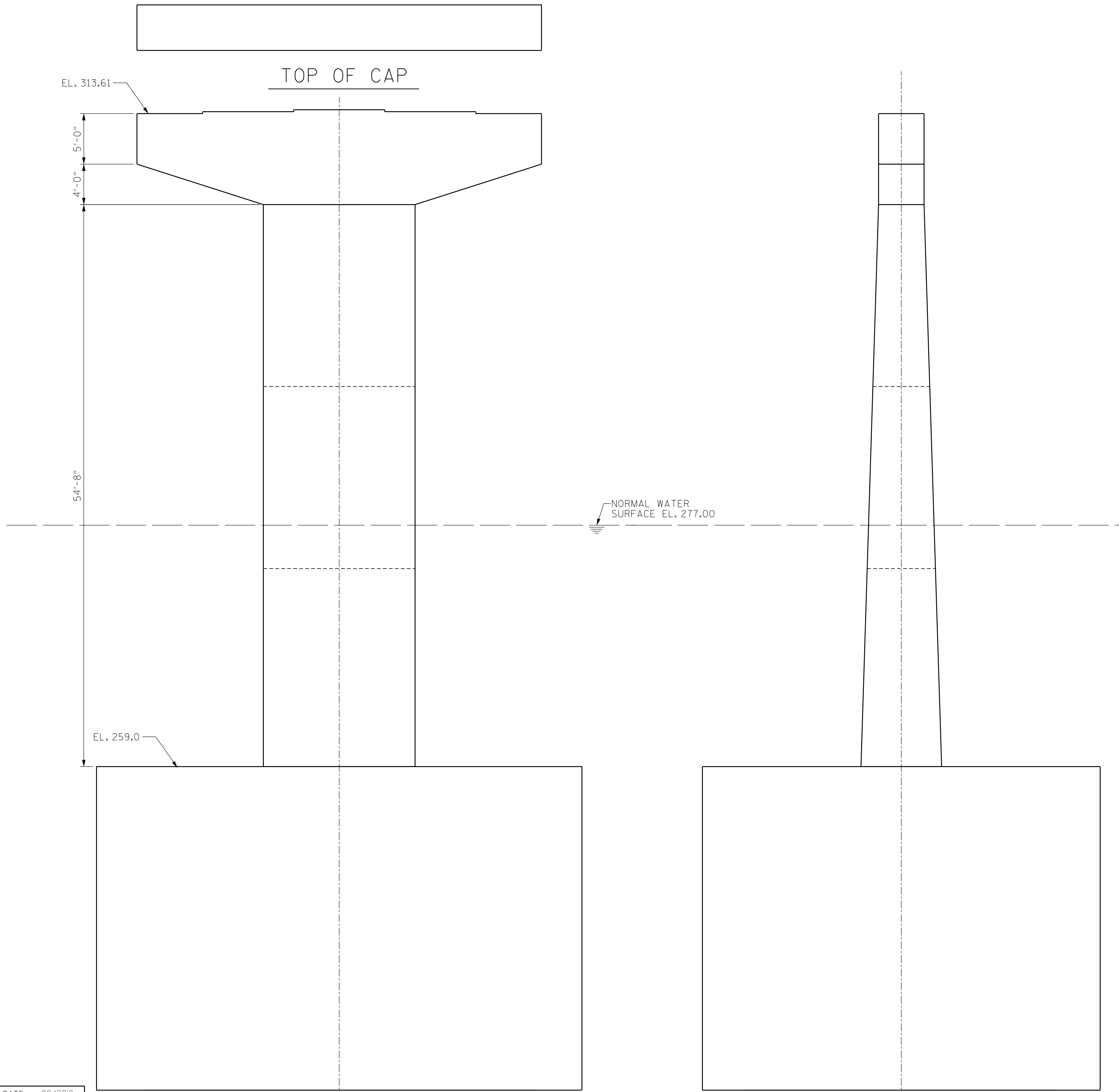
EAST ELEVATION

NORTH FACE

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REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 3		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT.

NOTES:

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CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAR THE ARE OF HTE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. 15BPR.43
 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

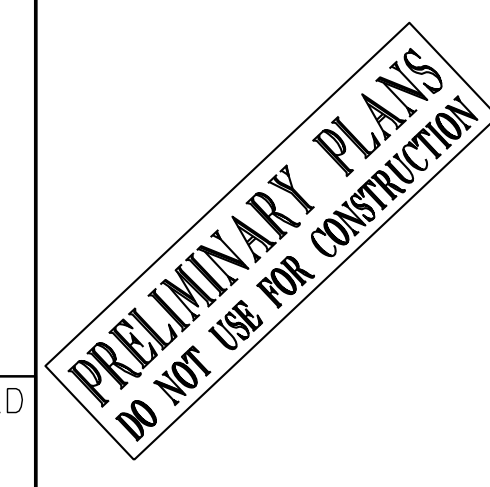
SHEET 5 OF 10



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

BENT 3



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

DRAWN BY : K. DONALD DATE : 08/2018
 CHECKED BY : G. COLS DATE : 08/2018
 DESIGNED BY : K. DONALD DATE : 08/2018
 DESIGN CHECKED BY : G. COLS DATE : 08/2018

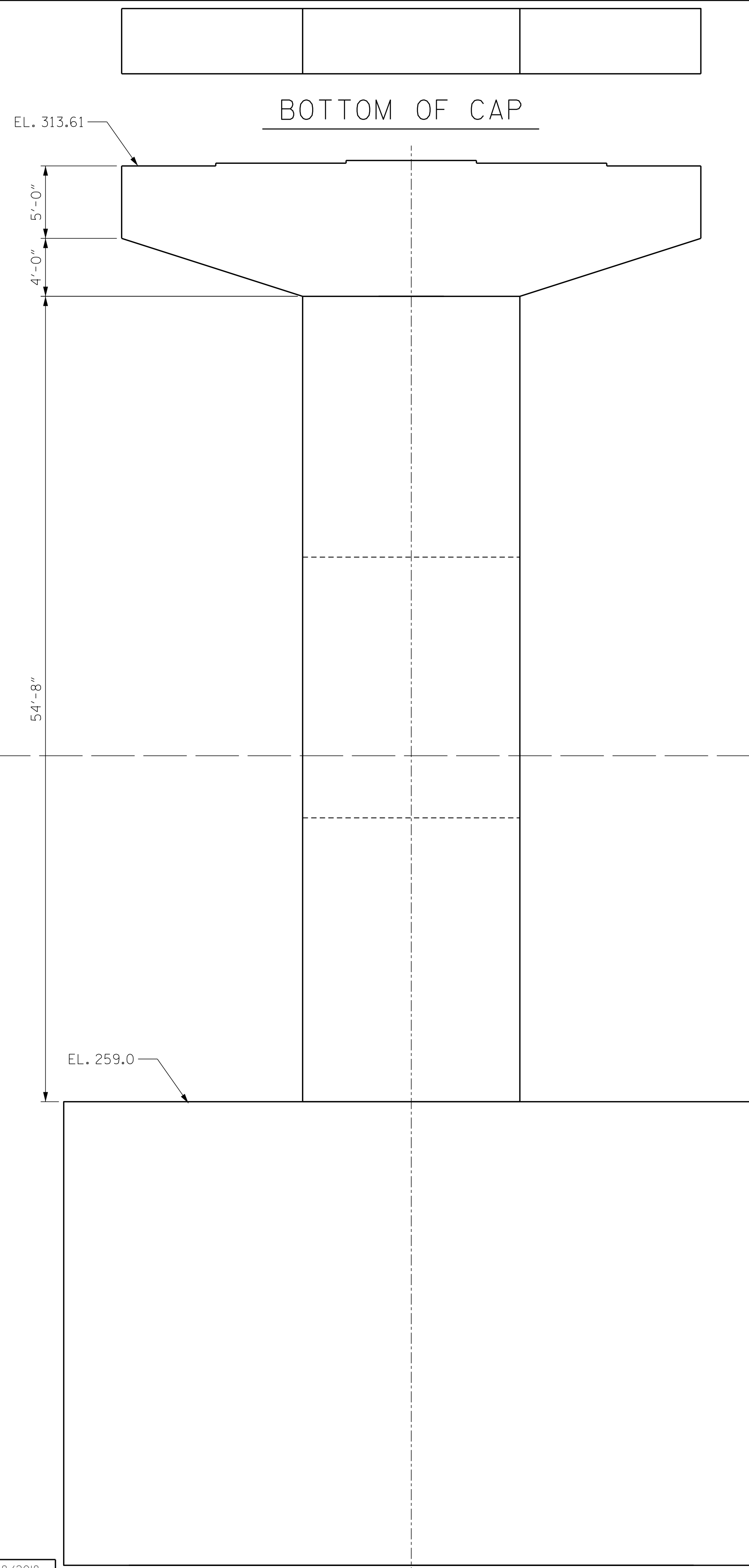
WEST ELEVATION

SOUTH FACE

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BOTTOM OF CAP

EL. 313.61

5'-0"

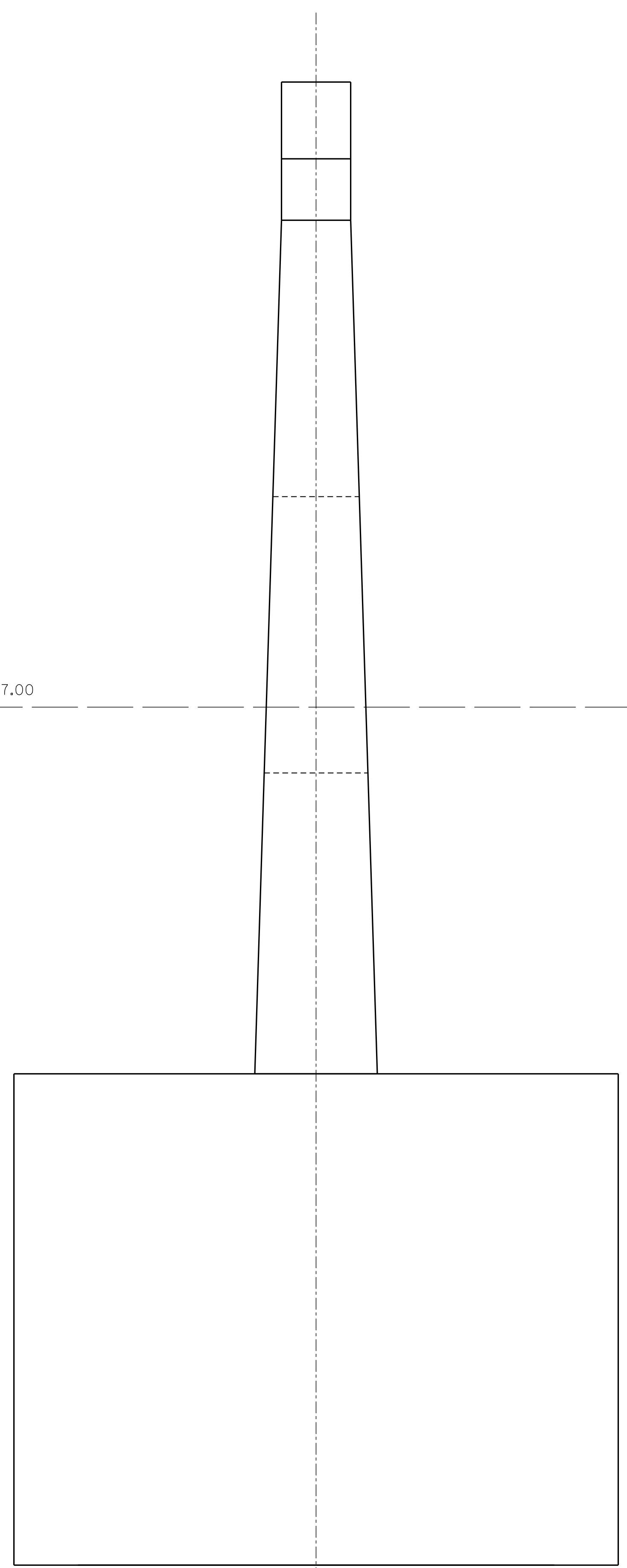
4'-0"

54'-8"

NORMAL WATER SURFACE EL. 277.00

EL. 259.0

EAST ELEVATION



NORTH FACE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 3		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT.

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CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. 15BPR.43
STANLY/MONTGOMERY COUNTY
STATION: 339+86.39 -L-

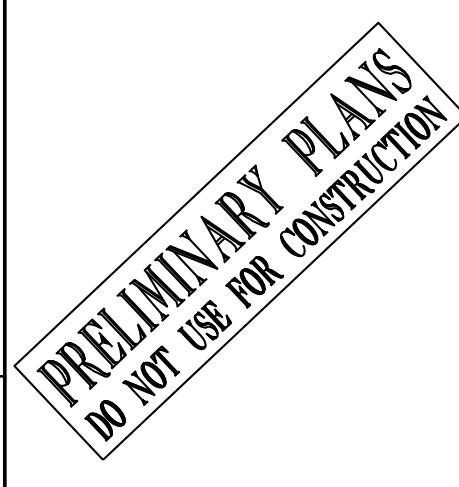
SHEET 6 OF 10



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

BENT 3

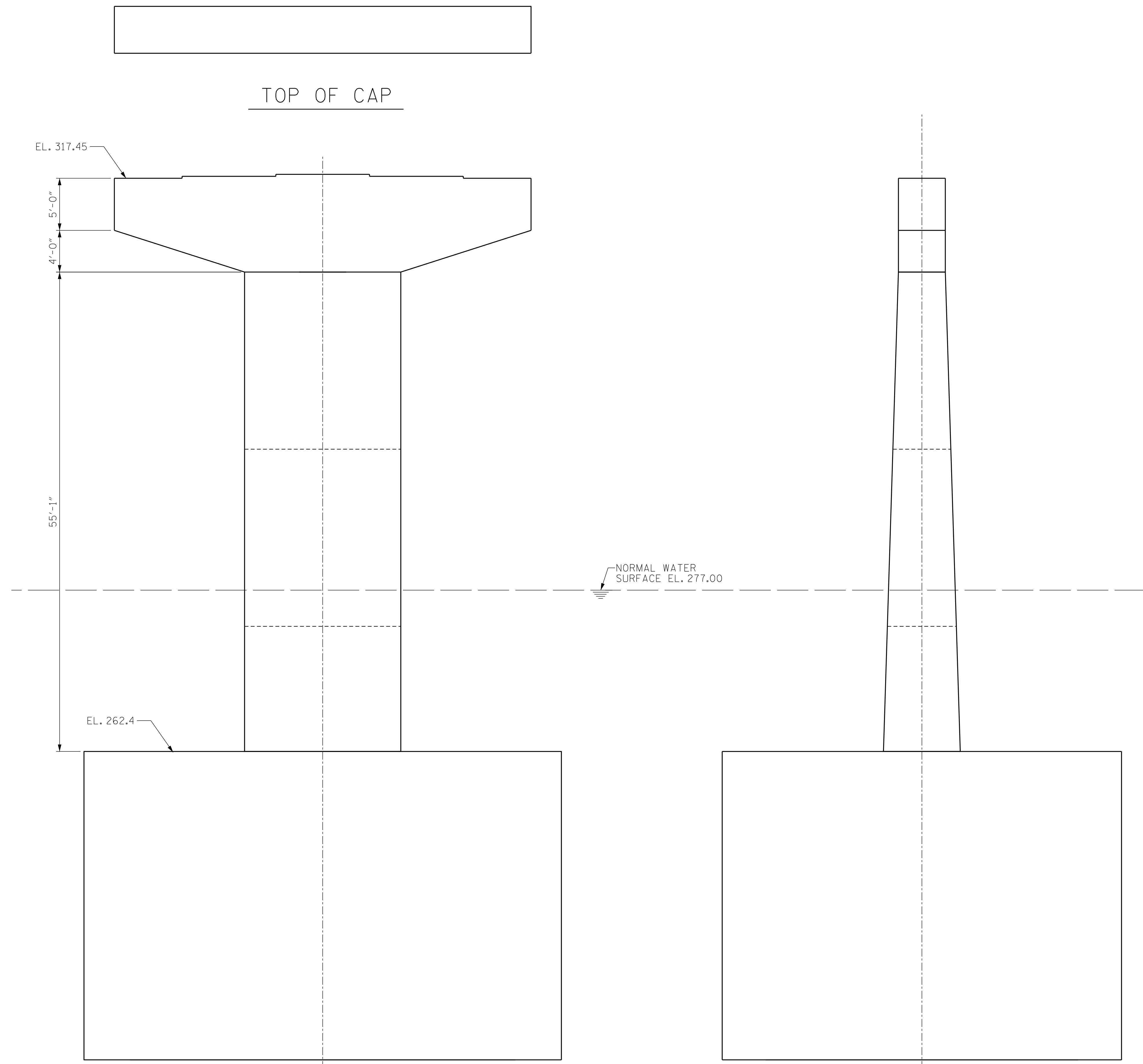


DRAWN BY : K. DONALD DATE : 08/2018
CHECKED BY : G. COLS DATE : 08/2018
DESIGNED BY : K. DONALD DATE : 08/2018
DESIGN CHECKED BY : G. COLS DATE : 08/2018

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

DATE: 8/28/2018
TIME: 4:25:45 PM

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REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 4		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT.

NOTES:
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CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAR THE ARE OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.
CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

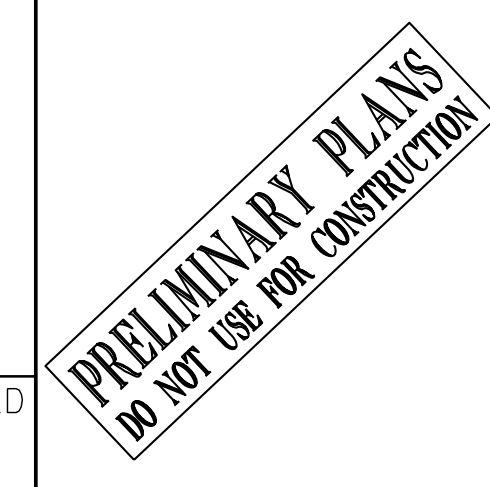
PROJECT NO. 15BPR.43
STANLY/MONTGOMERY COUNTY
STATION: 339+86.39 -L-

SHEET 7 OF 10



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE

BENT 4



DRAWN BY : K. DONALD DATE : 08/2018
CHECKED BY : G. COLS DATE : 08/2018
DESIGNED BY : K. DONALD DATE : 08/2018
DESIGN CHECKED BY : G. COLS DATE : 08/2018

WEST ELEVATION

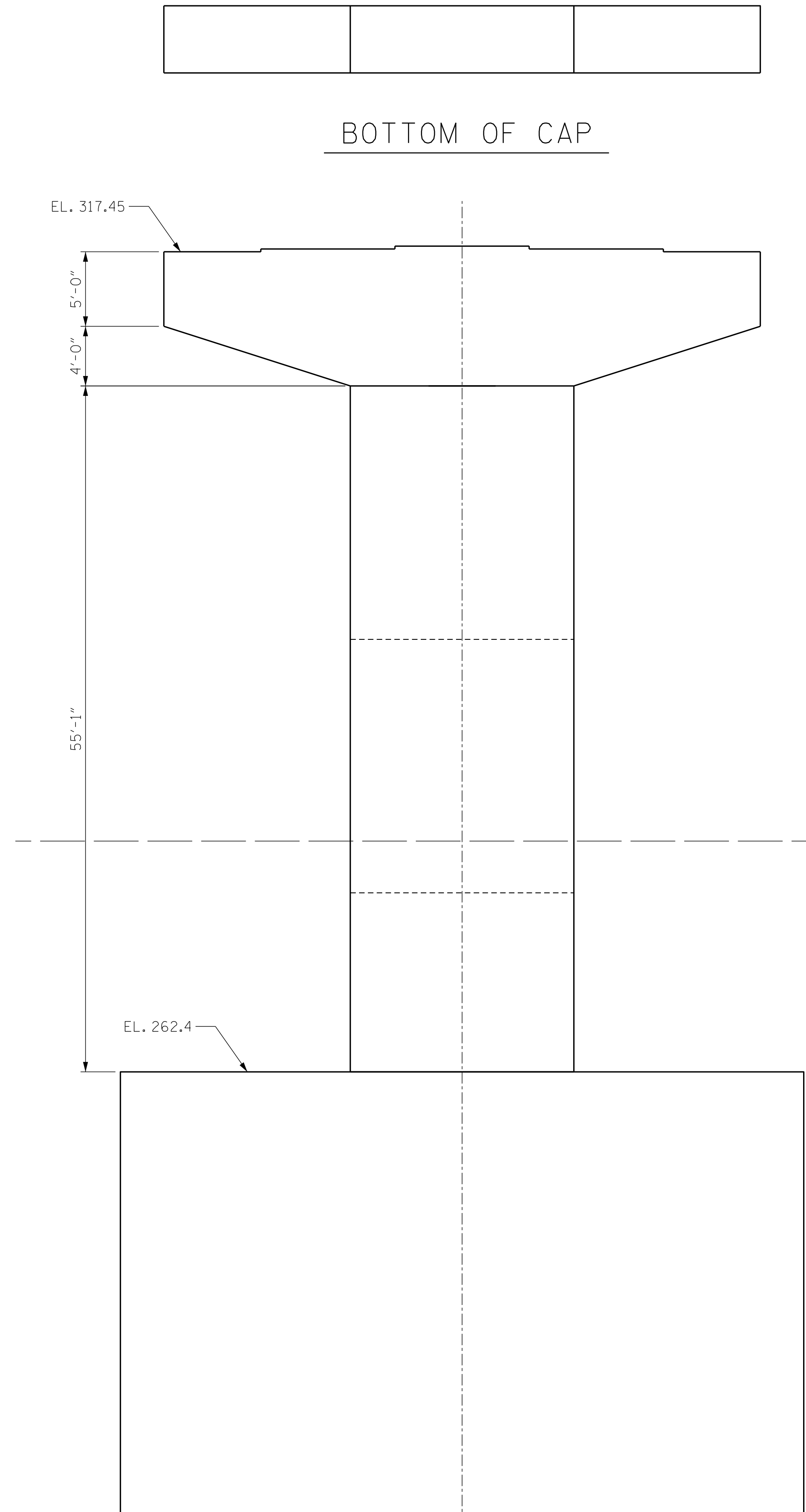
SOUTH FACE

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NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			32

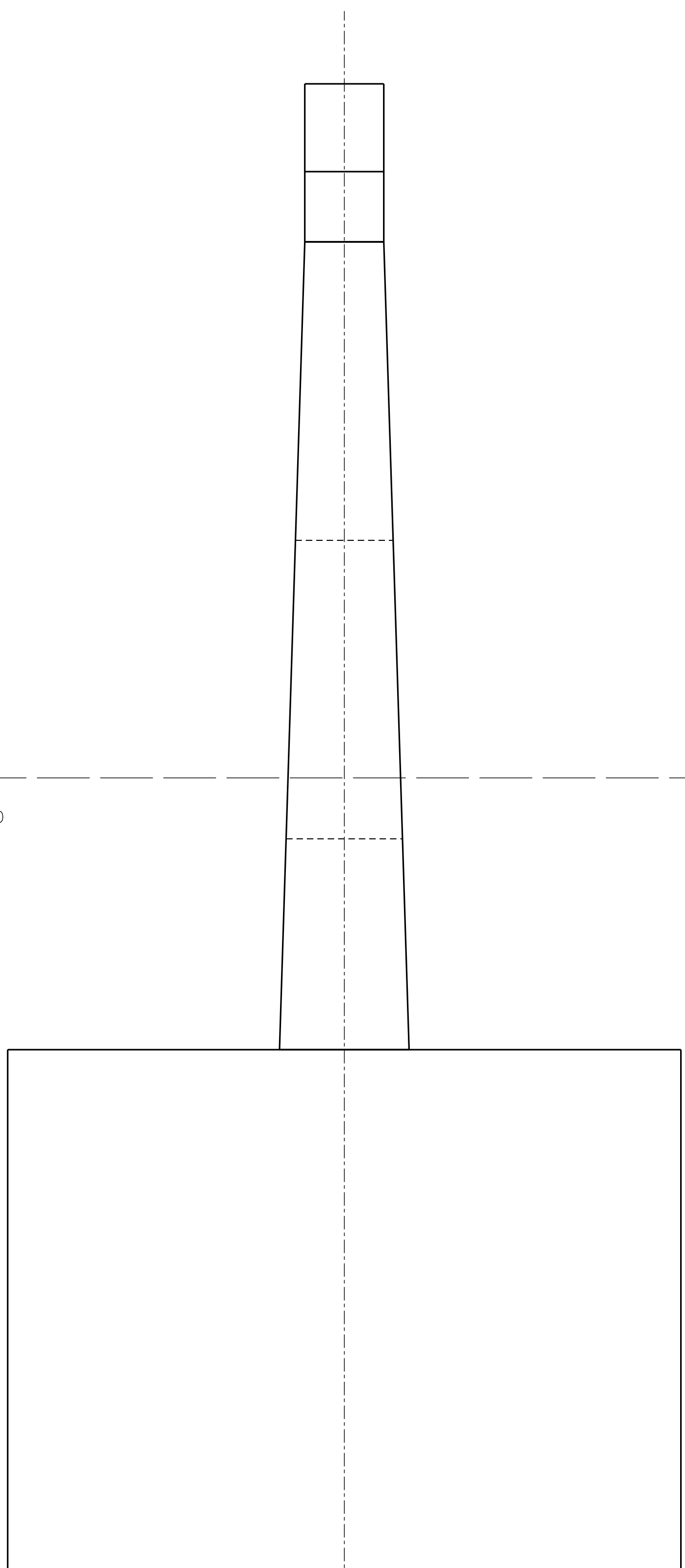
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EAST ELEVATION

NORMAL WATER SURFACE EL. 277.00



NORTH FACE

REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 4		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT.

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PROJECT NO. 15BPR.43
STANLY/MONTGOMERY COUNTY
STATION: 339+86.39 -L-

SHEET 8 OF 10



STATE OF NORTH CAROLINA
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RALEIGH
SUBSTRUCTURE
BENT 4

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

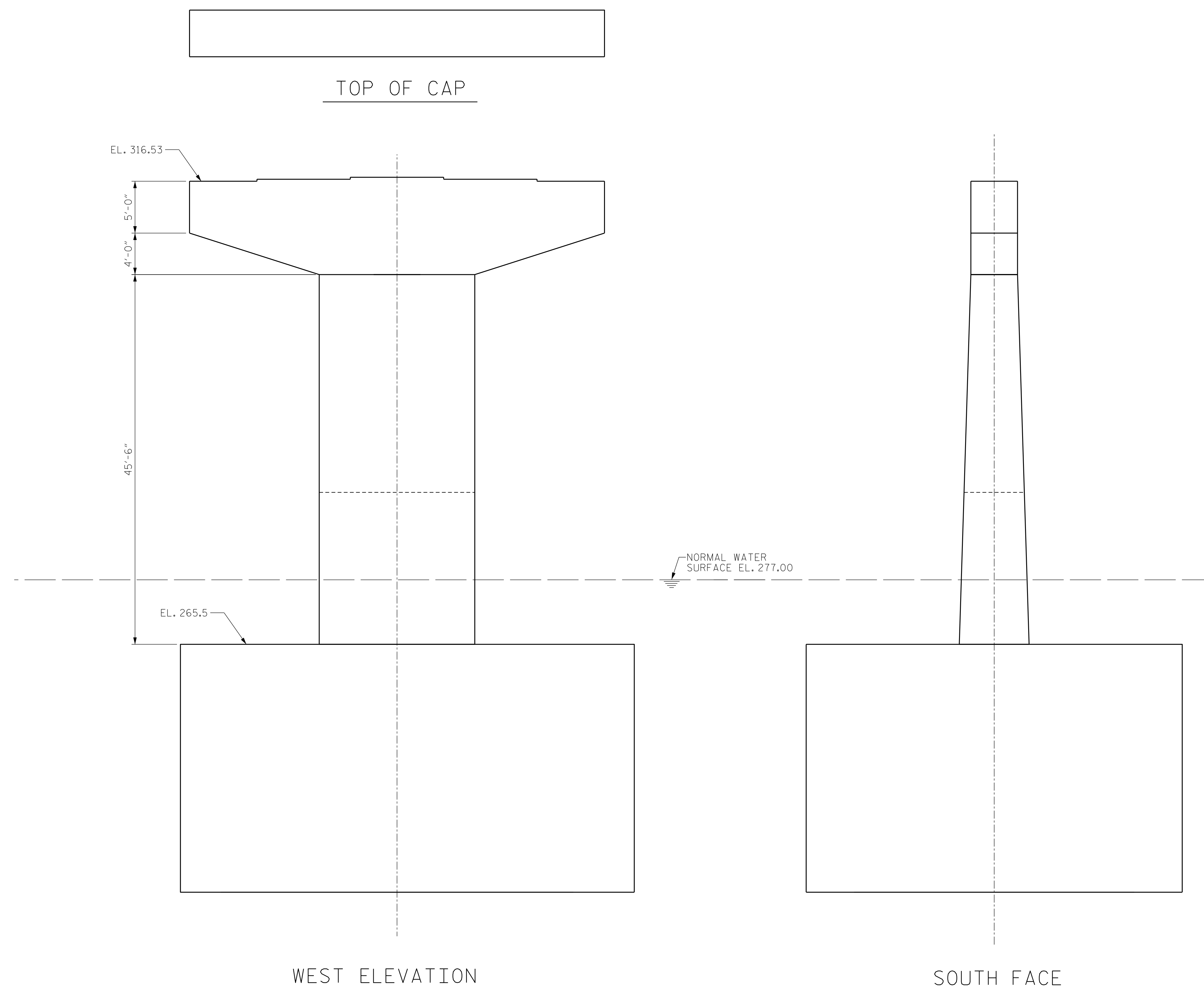
DRAWN BY : K. DONALD DATE : 08/2018
CHECKED BY : G. COLS DATE : 08/2018
DESIGNED BY : K. DONALD DATE : 08/2018
DESIGN CHECKED BY : G. COLS DATE : 08/2018

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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			32

DATE: 8/28/2018
TIME: 4:26:35 PM

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REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 5		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

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 STANLY/MONTGOMERY COUNTY
 STATION: 339+86.39 -L-

SHEET 9 OF 10

AECOM
AECOM TECHNICAL SERVICES, INC.
 701 CORPORATE CENTER DRIVE, SUITE 475
 RALEIGH, NC 27607
 (919) 854-6200 www.aecom.com
 AECOM License No. F-0342

PRELIMINARY PLANS
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STATE OF NORTH CAROLINA
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RALEIGH

SUBSTRUCTURE

BENT 5

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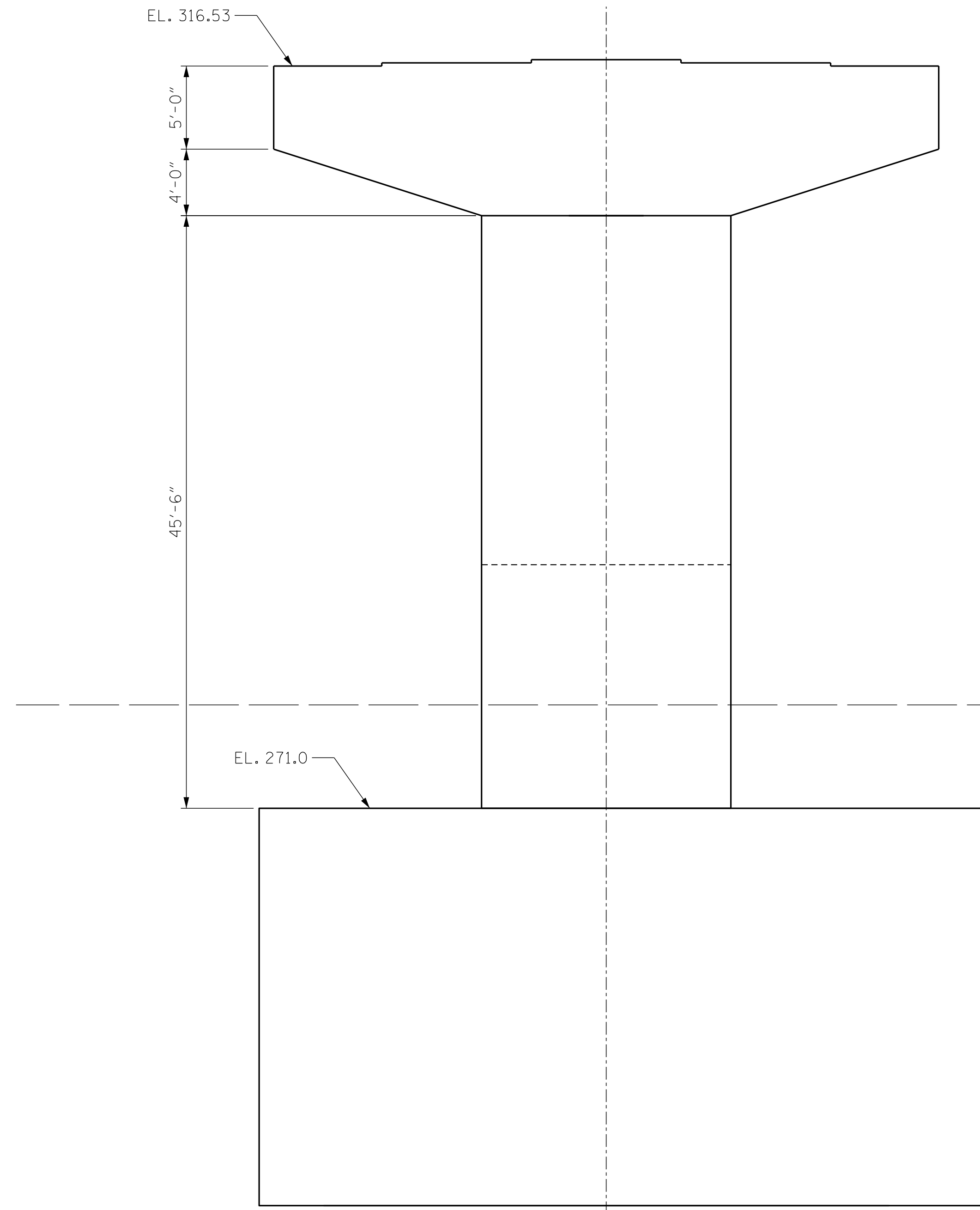
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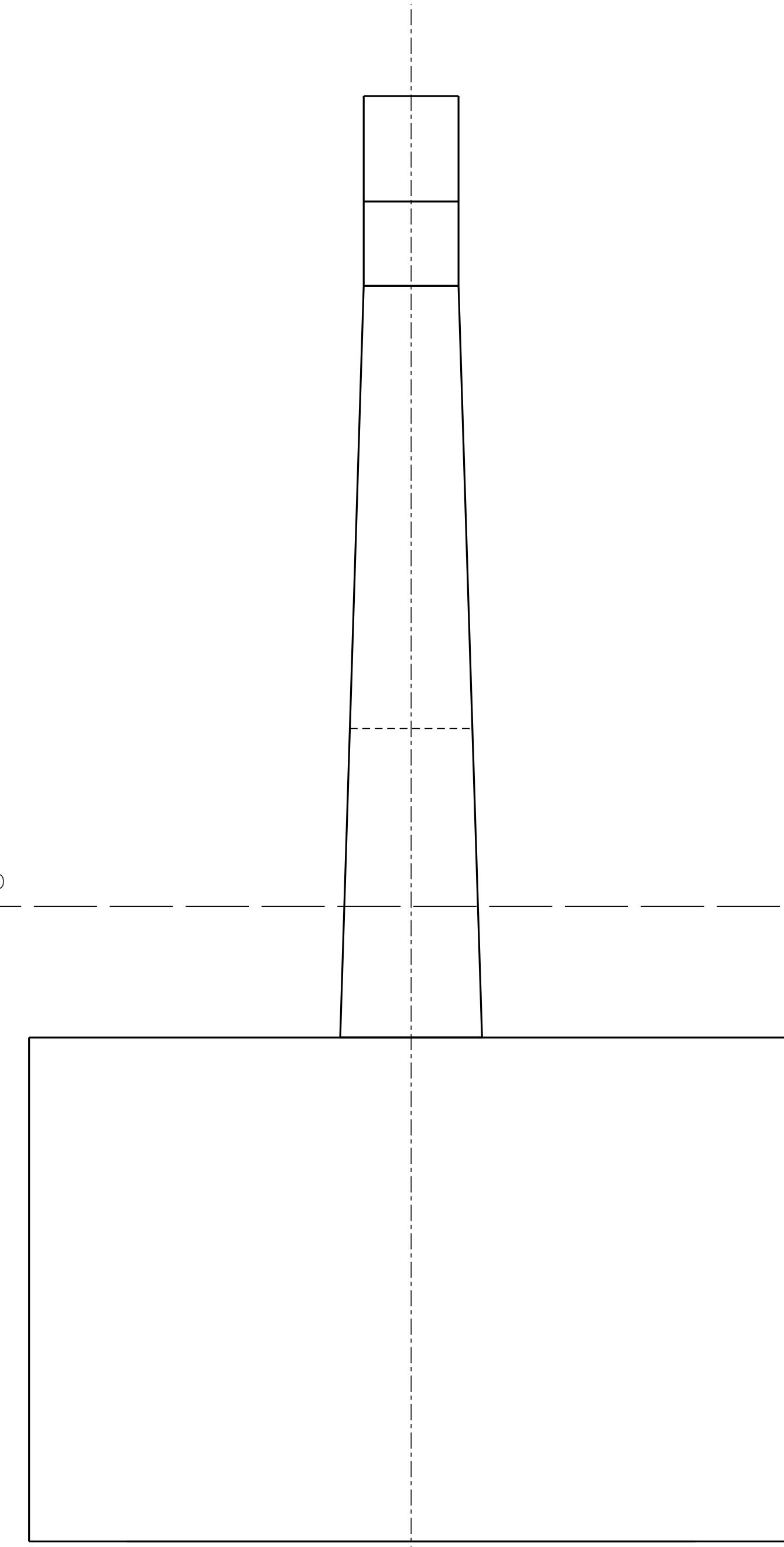
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BOTTOM OF CAP



EAST ELEVATION



NORTH FACE

DRAWN BY : K. DONALD	DATE : 08/2018
CHECKED BY : G. COLS	DATE : 08/2018
DESIGNED BY : K. DONALD	DATE : 08/2018
DESIGN CHECKED BY : G. COLS	DATE : 08/2018

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FINAL UNLESS ALL
SIGNATURES COMPLETED

REPAIR QUANTITY TABLE

BENT REPAIRS		
BENT 5		
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
CONCRETE REPAIRS		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY RESIN INJECTION		
CAP	XXX CF	
COLUMN	XXX CF	
EPOXY COATING		
CAP	XXX SF	
COLUMN	XXX SF	

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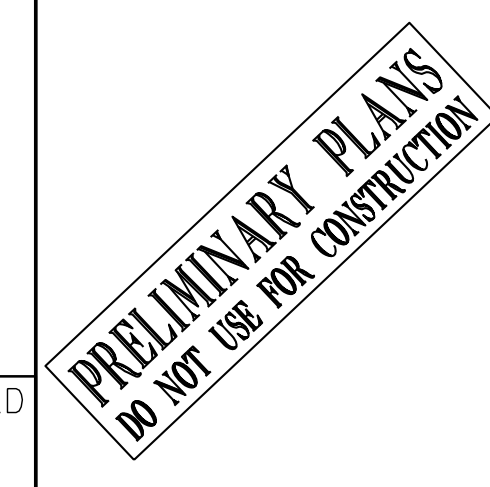
SHEET 10 OF 10



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

BENT 5



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
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