TIP PROJECT: I-5861

CONTRACT: DJ00465

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

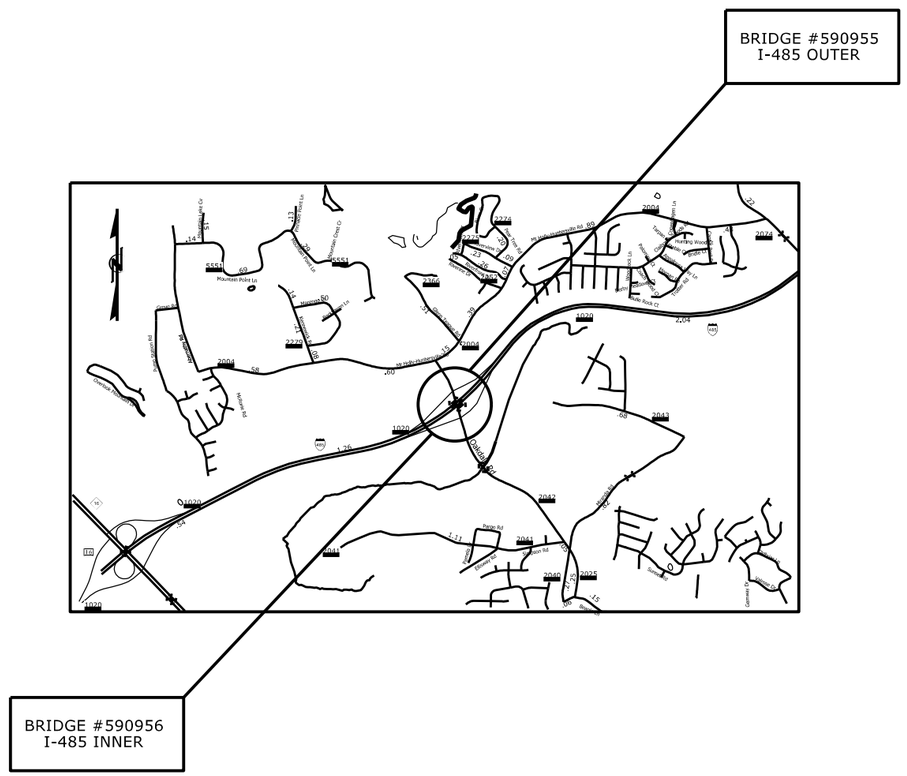
MECKLENBURG COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5861	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
53064.1.1	0485053	P.E.
53064.3.1	0485053	CONST.

LOCATION: ***INTERCHANGE OF I-485 AND OAKDALE ROAD SR 2042 AT MP 11.42 TO MP 11.48 OUTER AND MP 54.15 TO MP 54.21 INNER***

TYPE OF WORK: ***BRIDGE REHABILITATION: SILANE DECK TREATMENT AND PPC OVERLAY ON BRIDGE APPROACH AND ROADWAY SLABS***



DESIGN DATA

ADT 2021	=	84,500
K	=	%
D	=	%
T	=	% *
V	=	70 MPH
* TTST	=	DUAL

PROJECT LENGTH

LENGTH OF STRUCTURAL PROJECT 53064.3.1 = 0.08 MI

LENGTH OF ROADWAY PROJECT 53064.3.1 = 0.04 MI

TOTAL LENGTH OF STRUCTURAL & ROADWAY PROJECT 53064.3.1 = 0.12 MI

Prepared in the Office of:
DIVISION OF HIGHWAYS
DIVISION 10

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A

LETTING DATE: JULY 19, 2023

JOHN H. EDMONDS
PROJECT ENGINEER

JOHN H. EDMONDS
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

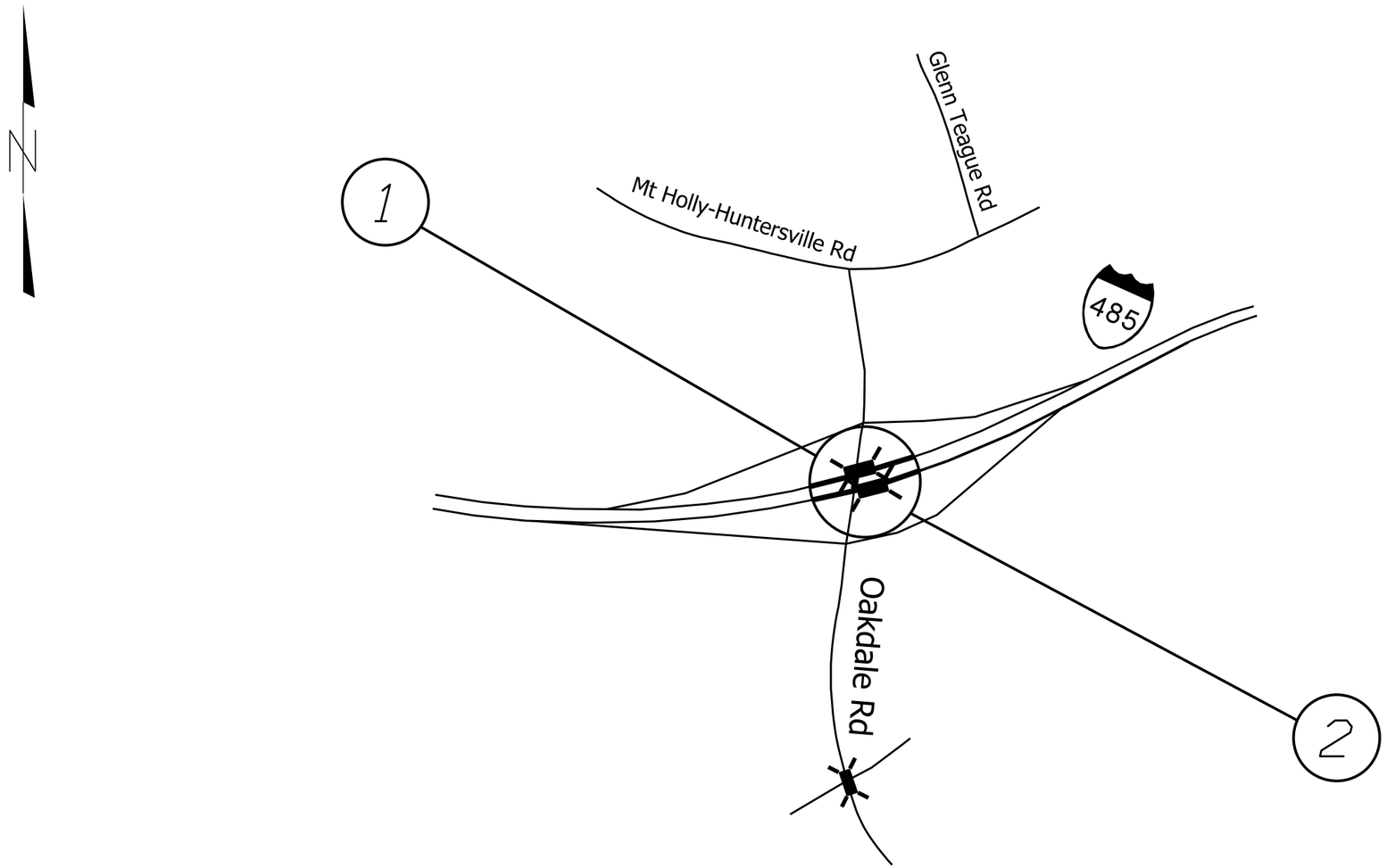
P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.			
WBS NO.	53064.3.1		



MAP	DESCRIPTION
#1 I-485 OUTER AT OAKDALE ROAD BRIDGE# 590955	FROM ASPHALT PAVEMENT JOINT WB TO ASPHALT PAVEMENT JOINT
#2 I-485 INNER AT OAKDALE ROAD BRIDGE #590956	FROM ASPHALT PAVEMENT JOINT EB TO ASPHALT PAVEMENT JOINT

I-5861
I-485 AT OAKDALE ROAD INTERCHANGE
MECKLENBURG COUNTY

		REVISIONS	
SCALE	-NA-		
DATE	8/19		
DWG. BY	JHE		
DESIGN BY	JHE		
APPROVED			

TIP PROJECT: I-5861

CONTRACT: DJ00465

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

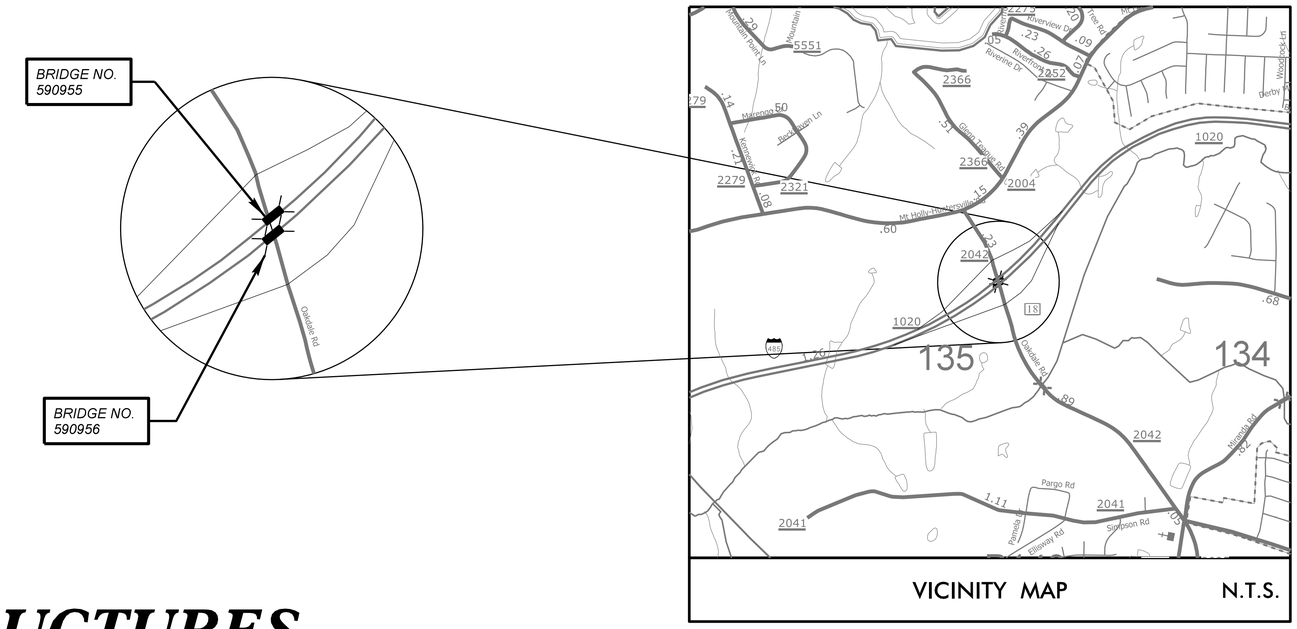
MECKLENBURG COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5861	1	15

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
53064.1.1	0485053	P.E.
53064.3.1	0485053	CONST.

TYPE OF WORK: BRIDGE PRESERVATION – POLYMER CONCRETE (PC) OVERLAY, SILANE DECK TREATMENT, SHOTBLASTING OF DECK, JOINT WORK.

LOCATION OF BRIDGES: NO. 590955 ON ON I–485 WBL OVER SR2042 (OAKDALE RD) BETWEEN N.C. 16 AND SR2074
NO. 590956 ON ON I–485 EBL OVER SR2042 (OAKDALE RD) BETWEEN N.C. 16 AND SR2074



STRUCTURES

DESIGN DATA

BRIDGE 590955 – ADT 2021 – 77,000

BRIDGE 590956 – ADT 2021 – 77,000

PROJECT LENGTH

BRIDGE NO. 590955 – 0.029 MILE

BRIDGE NO. 590956 – 0.030 MILE

Prepared In the Office of:
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610

2018 STANDARD SPECIFICATIONS

LETTING DATE :

JUNE 30, 2023

T. H. CARROLL, P.E.
PROJECT ENGINEER

A. A. COLE, P.E.
PROJECT DESIGN ENGINEER

PROJECT: I-5861

CONTRACT: DJ00465

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

MECKLENBURG COUNTY

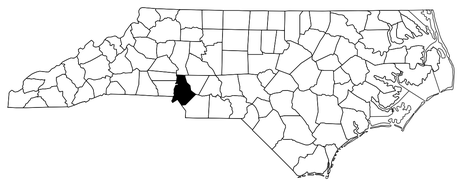
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5861	1A	15

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
53064.1.1		P.E.
53064.3.1	0485053	CONST.

LOCATION OF BRIDGES: NO. 590955 ON ON I–485 WBL OVER SR2042 (OAKDALE RD) BETWEEN N.C. 16 AND SR2074
NO. 590956 ON ON I–485 EBL OVER SR2042 (OAKDALE RD) BETWEEN N.C. 16 AND SR2074

INDEX OF STRUCTURES SHEETS

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION



TYPE OF WORK:

BRIDGE PRESERVATION – POLYMER CONCRETE (PC) OVERLAY, SILANE DECK TREATMENT, SHOTBLASTING OF DECK, JOINT WORK.

Prepared in the Office of:
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610

8/26/21

TOTAL BILL OF MATERIAL

BRIDGE No.	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	POURABLE SILICONE JOINT SEALANT	POLYESTER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	CONCRETE DECK REPAIR FOR PC OVERLAY	PLACING & FINISHING PC OVERLAY	SCARIFYING BRIDGE DECK	SILANE DECK TREATMENT	SHOTBLASTING BRIDGE DECK
	SQ.YDS.	SQ.YDS.	LN. FT.	CU. YDS.	CU.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.	SQ.YDS.
590955	9,513	-	269.9	51.2	51.2	-	1057	1057	985	2,042
590965	6,993	2.7	269.3	37.6	37.6	2.7	777	777	1057	1,834
TOTAL	16,506	2.7	539.2	88.8	88.8	2.7	1,834	1,834	2,042	3,876

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590955,590956

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green 2C7028B6BB61448...

05/16/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

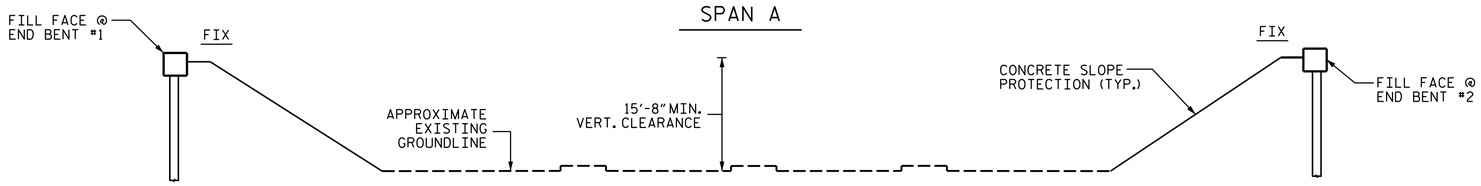
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOTAL BILL OF MATERIALS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-01
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 3/2023
CHECKED BY : B. L. GREEN DATE : 5/2023

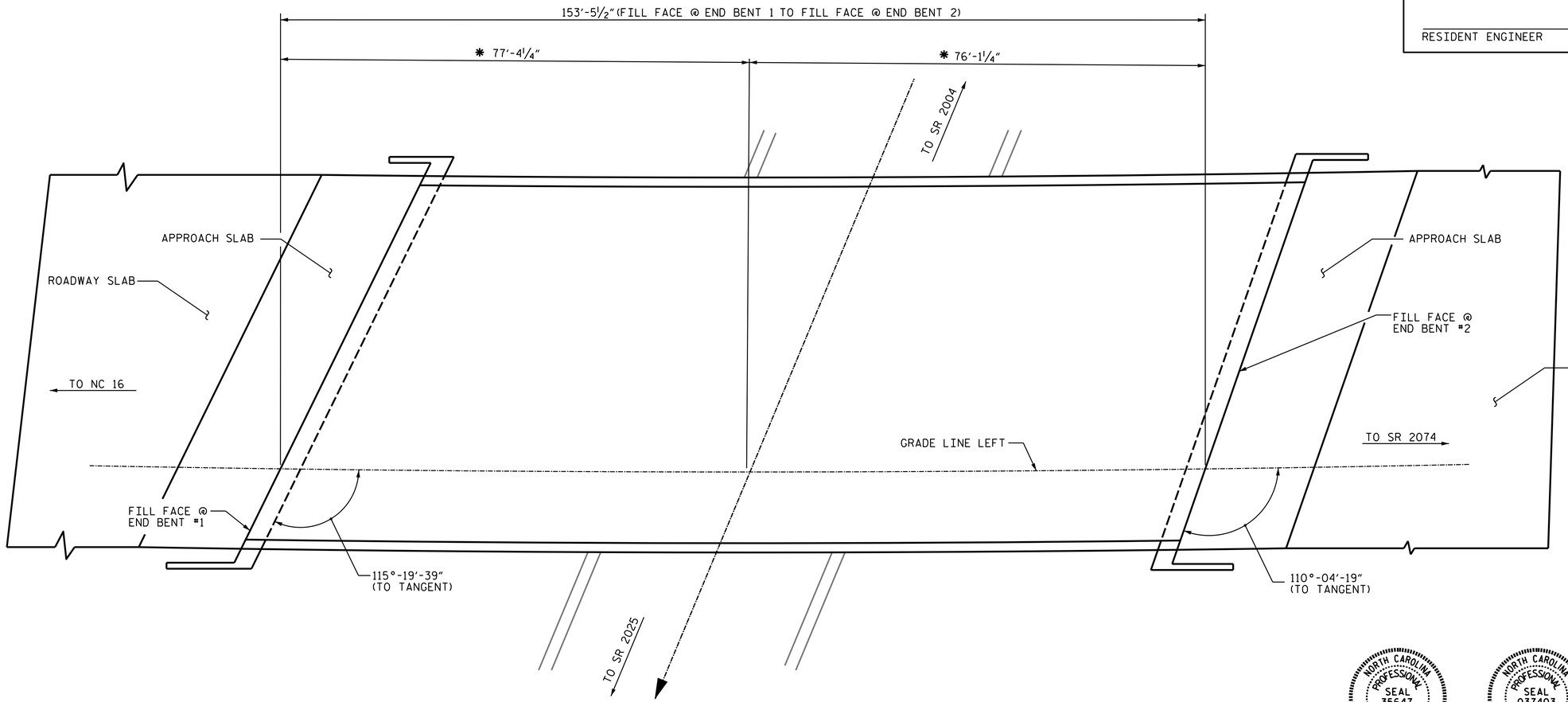
5/5/2023
S:\DPG3\I-5861Checking\FinalPlans\400_005_I5861_SMU_ BM_S1.dgn
bgreen



END BENT 1

END BENT 2

SECTION ALONG GRADE LINE (LEFT LANE)



PLAN

* (RADIAL)

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/13/2021.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS /ROUTINE INSPECTION.

SCOPE OF WORK

PREPARE CONCRETE DECK SURFACE FOR SILANE DECK TREATMENT BY SHOTBLASTING METHOD.

REMOVE ASPHALT AND PARTIALLY REMOVE APPROACH SLAB AND ROADWAY SLAB CONCRETE BY SCARIFICATION AND SHOTBLASTING METHOD.

REPAIR ANY DECK, APPROACH SLAB, AND ROADWAY SLAB CONCRETE FOR PC OVERLAY AND SILANE TREATMENT.

OVERLAY PREPARED APPROACH SLAB AND ROADWAY SLAB WITH POLYMER CONCRETE (PC).

GROOVE PC APPROACH SLABS AND ROADWAY SLABS.

APPLY SILANE DECK TREATMENT.

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

RESIDENT ENGINEER DATE

NORTH CAROLINA PROFESSIONAL SEAL 35647 ENGINEER ADAM A. COLE

DocuSigned by: 05/16/2023

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: 05/16/2023

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590955

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON NORTH CHARLOTTE OUTER LOOP OVER SR 2042 (OAKDALE ROAD) BETWEEN NC 16 AND SR 2074 (LEFT LANE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-01
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : RON SAHA DATE : 3/2023

CHECKED BY : GHOLAMREZA KOUCHEKI DATE : 3/2023

5/5/2023
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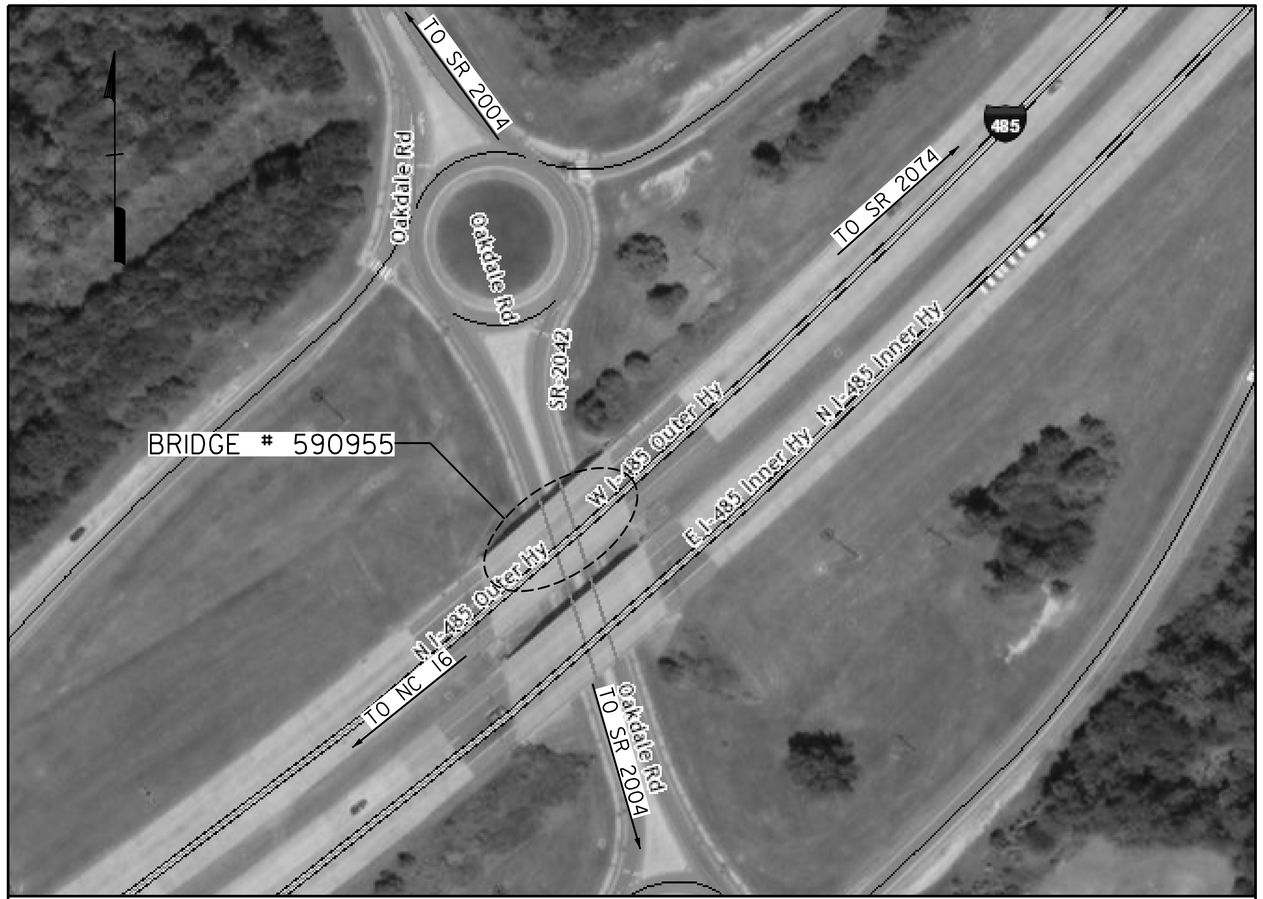

LOCATION SKETCH

NOTES

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. 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 WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OF ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS 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.

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

WORK ON THE BRIDGE(S) SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USE PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CONTROL OF TRAFFIC AND LIMITS OF PHASING OF CON STRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

FOR SCARIFYING APPROACH SLAB AND ROADWAY SLABS, SHOTBLASTING APPROACH SLAB AND ROADWAY SLABS, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

FOR PLACING AND FINISHING POLYMER CONCRETE OVERLAY, GROOVING APPROACH AND ROADWAY SLABS, POLYESTER POLYMER CONCRETE MATERIALS AND EPOXY POLYMER CONCRETE MATERIALS, SEE POLYMER CONCRETE OVERLAY SPECIAL PROVISION.

THE EXISTING APPROACH SLAB AND ROADWAY SLABS SHALL BE REPAIRED AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER AFTER SCARIFICATION AND PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE PC OVERLAY.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT THE FOLLOWING ITEM(S) LISTED WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THE FOLLOWING ITEM(S) LISTED, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN THE PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK 15 ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM NO.	DESCRIPTION	UNIT
1.	CONCRETE DECK REPAIR FOR POLYMER CONCRETE OVERLAY	SQ. YD.

BRIDGE COORDINATES

BRIDGE No.	LATITUDE	LONGITUDE
590955	35°-19'-58.84"	80°-54'-43.07"

TOTAL BILL OF MATERIAL

BRIDGE NO. 590955	GROOVING BRIDGE FLOORS	POURABLE SILICONE JOINT SEALANT	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	PLACING & FINISHING POLYMER CONCRETE OVERLAY	SCARIFYING BRIDGE DECK	SILANE DECK TREATMENT	SHOTBLASTING BRIDGE DECK
	SQ. FT.	LN. FT.	CU. YDS.	CU. YDS.	SQ. YD.	SQ. YDS.	SQ. YDS.	SQ. YDS.
TOTAL	9513.0	269.9	51.2	51.2	1057.0	1057.0	985.0	2042

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590955

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green 05/16/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON
NORTH CHARLOTTE OUTER LOOP
OVER SR 2042 (OAKDALE ROAD)
BETWEEN NC 16 AND SR 2074
(LEFT LANE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-02
1			3			TOTAL SHEETS
2			4			15

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : E. BAYISSA DATE : 02/2023
CHECKED BY : A. SORSENGINH DATE : 03/2023
DESIGN ENGINEER OF RECORD: _____ DATE : _____

5/10/2023
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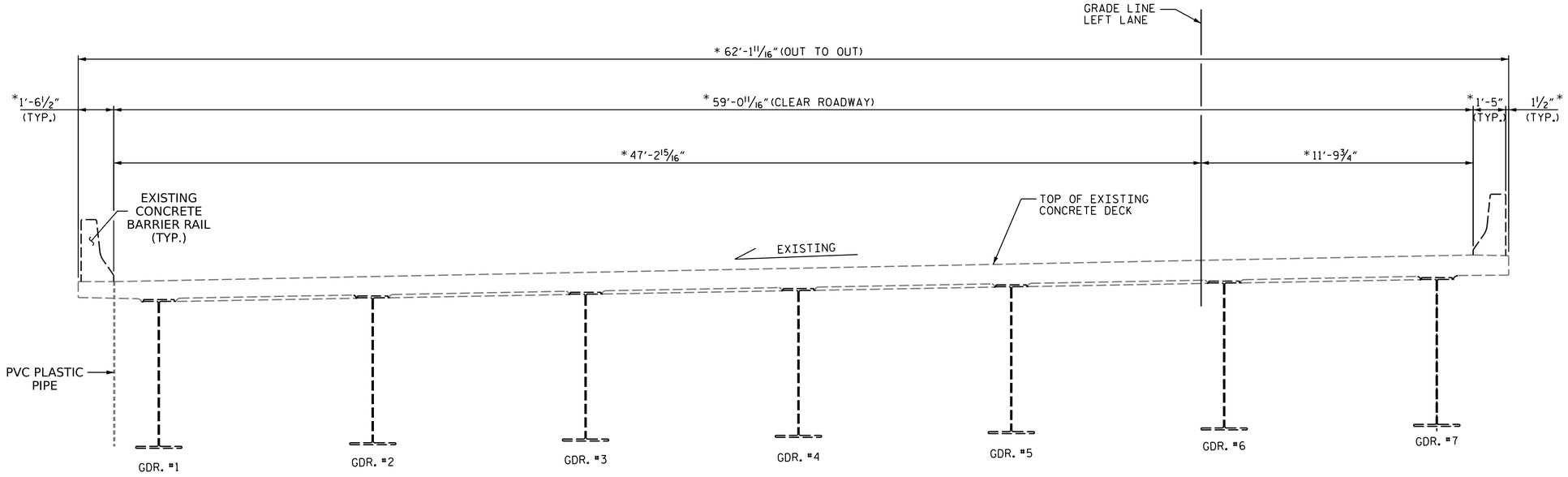
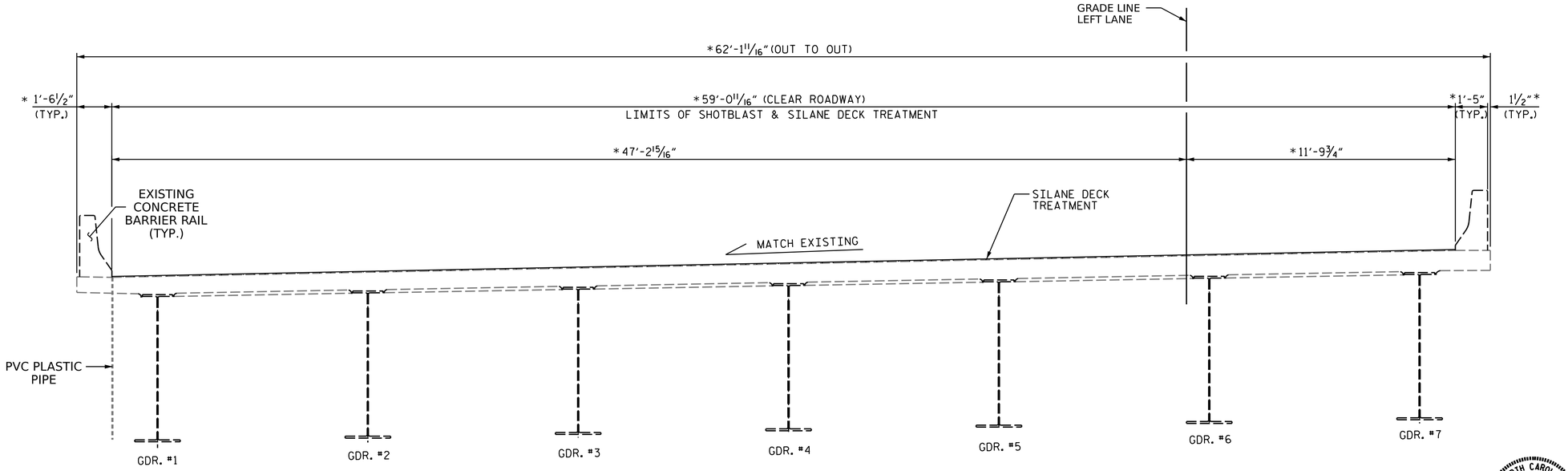


EXISTING TYPICAL SECTION

* RADIAL DIMENSION



PROPOSED TYPICAL SECTION

* RADIAL DIMENSION

NOTE:

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTH. SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND DECK SEAL PLACEMENT.

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590955

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION & SILANE DECK TREATMENT DETAIL

(LEFT LANE)

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green 2C7028B6BB61448...
05/16/2023

DRAWN BY : GHOLAMREZA KOUCHEKI DATE : 2023
CHECKED BY : A. SORSENGINH DATE : 2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-03
1			3			TOTAL SHEETS
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5/5/2023
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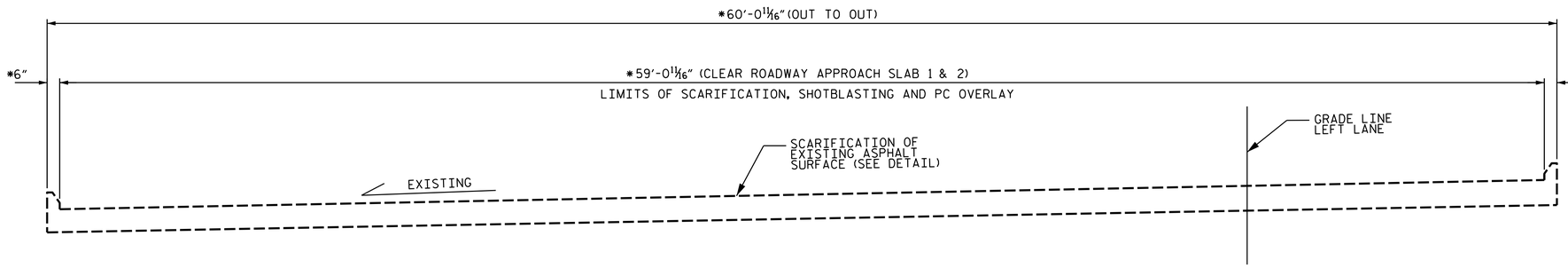
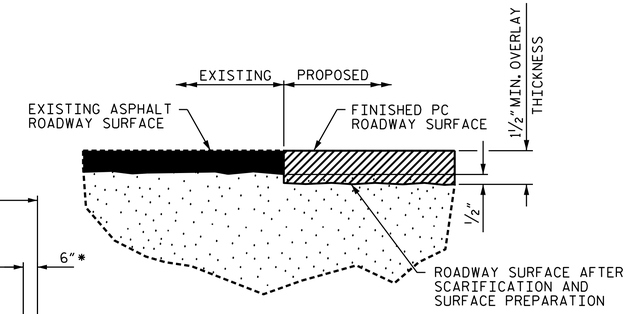


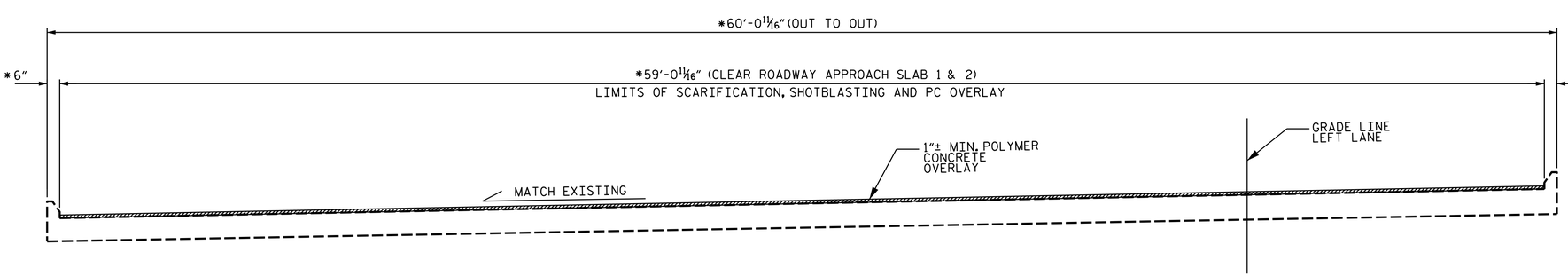
TYPICAL SECTION - APPROACH SLAB & ROADWAY SLAB

(EXISTING)
*RADIAL DIMENSION



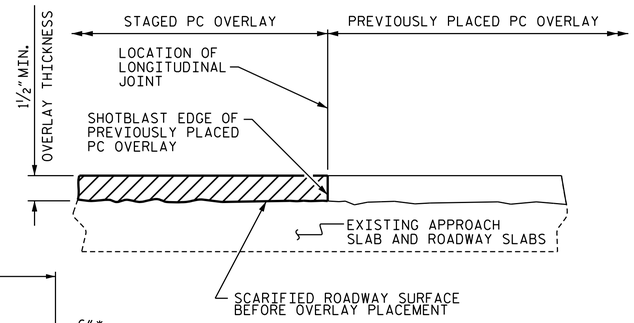
DETAIL FOR POLYMER CONCRETE OVERLAY

FINISHED SURFACE ELEVATION SHALL PROVIDE SMOOTH TRANSITION FROM ROADWAY TO BRIDGE DECK. THAT SURFACE ELEVATION IS ANTICIPATED TO APPROXIMATELY MATCH EXISTING ASPHALT SURFACE ELEVATION. ACTUAL THICKNESS OF PC OVERLAY MAY VARY TO PROVIDE THIS TRANSITION. REMOVE ALL ASPHALT AND MINIMUM ½" OF EXISTING CONCRETE SURFACE.



TYPICAL SECTION - APPROACH SLAB & ROADWAY SLAB

(PROPOSED)
*RADIAL DIMENSION



STAGED PC OVERLAY JOINT

(AS NEEDED)

PROJECT NO. I-5861
MECKLENBURG COUNTY
BRIDGE NO. 590955

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION & PC OVERLAY DETAIL

(LEFT LANE)

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green
2C7D5B6B6B61448...
05/16/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-04
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : E. BAYISSA DATE : 02/2023
CHECKED BY : A. SORSENGINH DATE : 02/2023

5/16/2023
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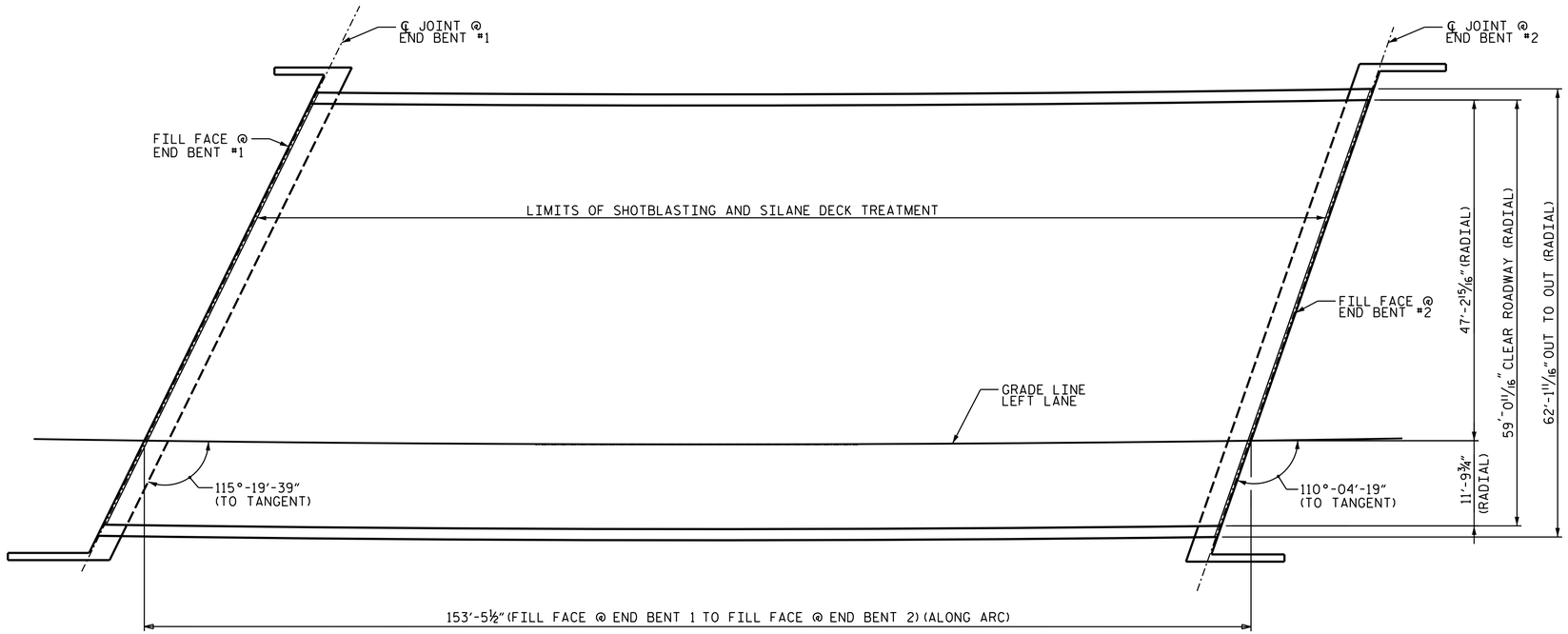

PLAN

NOTES:

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

DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE CONCRETE DECK REPAIR SPECIAL PROVISION.

FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

DECK SURFACE REPAIR QUANTITY TABLE

TOP OF DECK REPAIR - SPAN A

	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	985.0 SQ. YDS.	
SILANE DECK TREATMENT	985.0 SQ. YDS.	

PROJECT NO. I-5861
MECKLENBURG COUNTY
BRIDGE NO. 590955

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green
05/16/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION & SILANE DECK TREATMENT

(LEFT LANE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-05
1			3			TOTAL SHEETS
2			4			15

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : E. BAYISSA DATE : 02/2023
CHECKED BY : A. SORSENGINH DATE : 03/2023

5/5/2023
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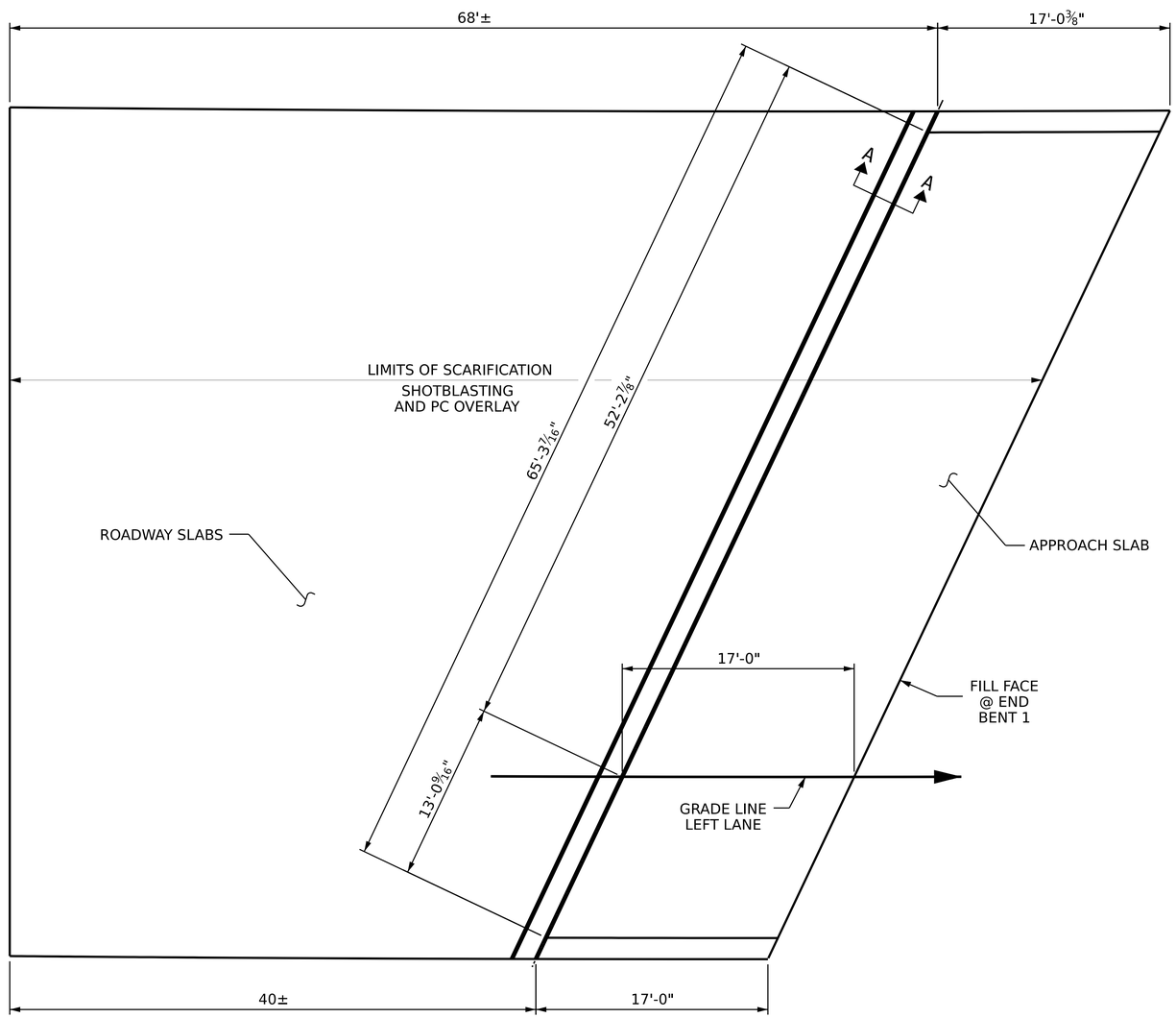
bgreen

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

APPROX. CLASS II SURFACE PREPARATION

APPROACH SLAB AND ROADWAY SLAB QUANTITIES		
	ESTIMATE	ACTUAL
GROOVING BRIDGE FLOORS	4203 SQ. FT.	
POURABLE SILICONE JOINT SEALANT	137.4 LN. FT.	
PC MATERIALS	22.6 CY.YD.	
PLACING AND FINISHING PC OVERLAY	467 SQ. YDS.	
SCARIFYING BRIDGE DECK	467 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	467 SQ. YDS.	



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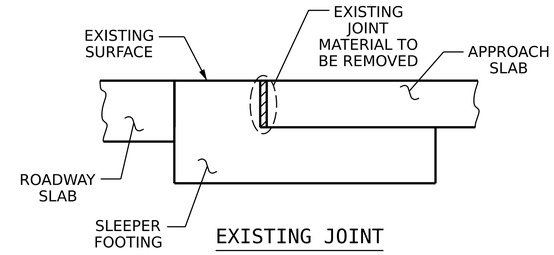
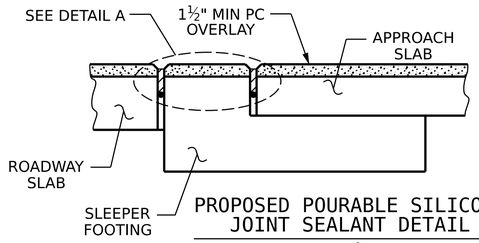
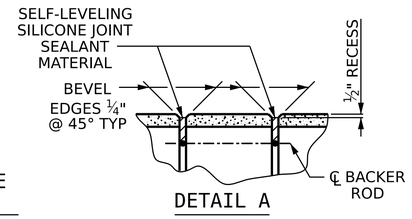


EXISTING JOINT



PROPOSED POURABLE SILICONE JOINT SEALANT DETAIL

SAW CUT SHALL BE ¼" ABOVE THE SEAL PLUS 1" BELOW THE BOTTOM OF THE SEAL.



DETAIL A

SECTION A-A

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590955

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION AND OVERLAY

APPROACH SLAB AND ROADWAY SLABS AT END BENT 1 (LEFT LANE)

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green
05/16/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-06
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : A.S./GHOLAMREZA KOUCHEKI DATE : 11/2020
CHECKED BY : A. SORSENGINH DATE : 3/2023

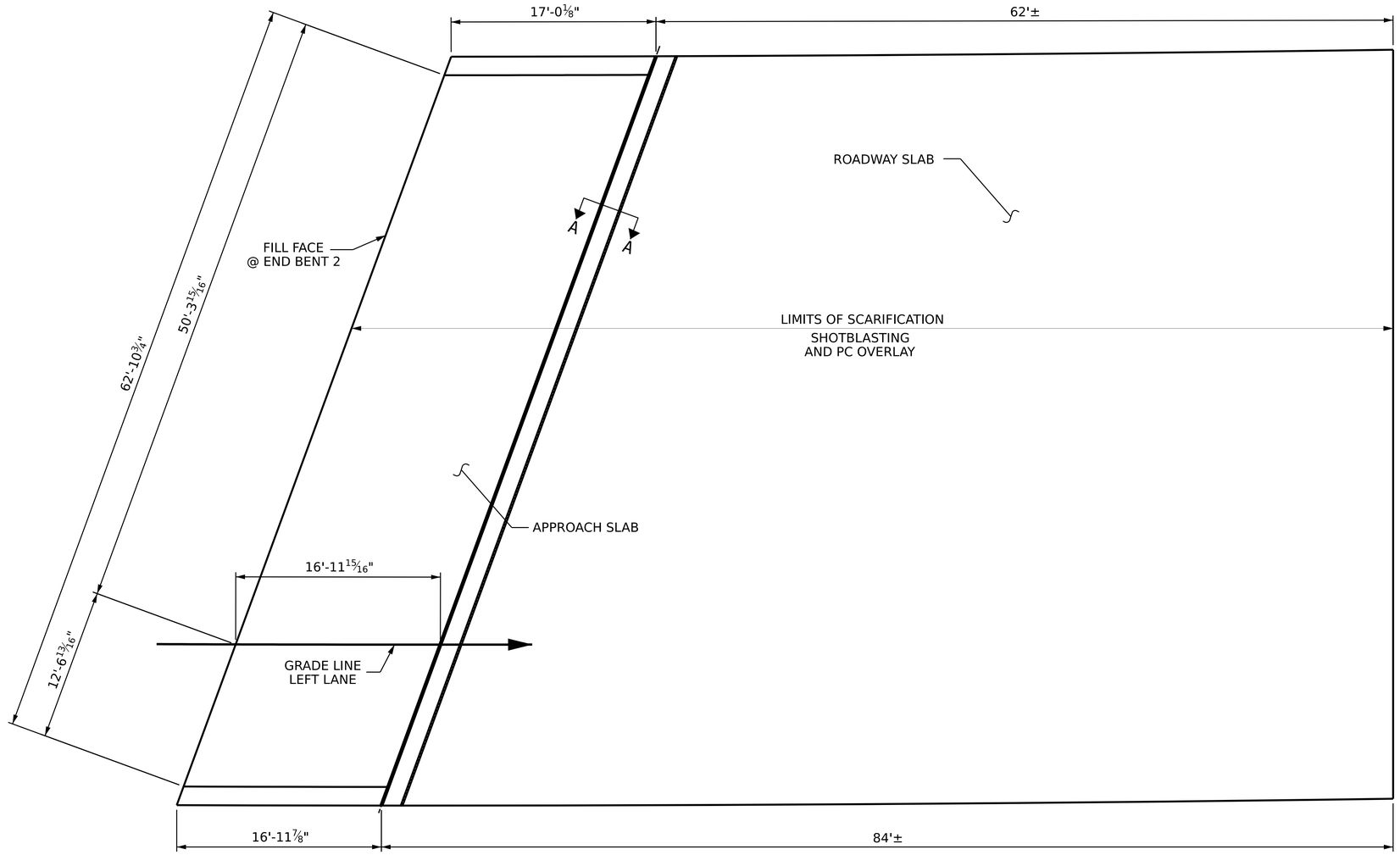
5/5/2023
S:\DPG3\I-5861Checking\Left Lane\I-5861-SMU-AS-I-590955.dgn
bgreen

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

APPROACH SLAB & ROADWAY SLAB QUANTITIES		
	ESTIMATE	ACTUAL
GROOVING BRIDGE FLOORS	5310 SQ. YDS.	
POURABLE SILICONE JOINT SEALANT	132.5 LN. FT.	
PC MATERIALS	28.6 CY.YD.	
PLACING AND FINISHING PC OVERLAY	590 SQ. YDS.	
SCARIFYING BRIDGE DECK	590 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	590 SQ. YDS.	

APPROX. CLASS II SURFACE PREPARATION



PLAN @ END BENT 2

PROJECT NO. I-5861

MECLENBURG COUNTY

BRIDGE NO. 590955

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION AND OVERLAY

APPROACH SLAB AND ROADWAY SLAB AT END BENT 2 (LEFT LANE)

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green 2C7D2B86B6B61448...
05/16/2023

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-07
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : A.S./GHOLAMREZA KOUCHEKI DATE : 11/2020
CHECKED BY : A. SORSENGINH DATE : 3/2023

5/5/2023
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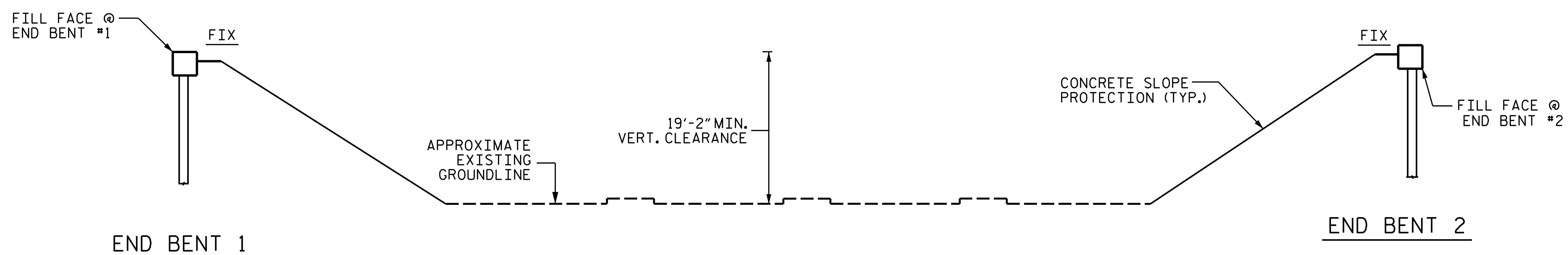
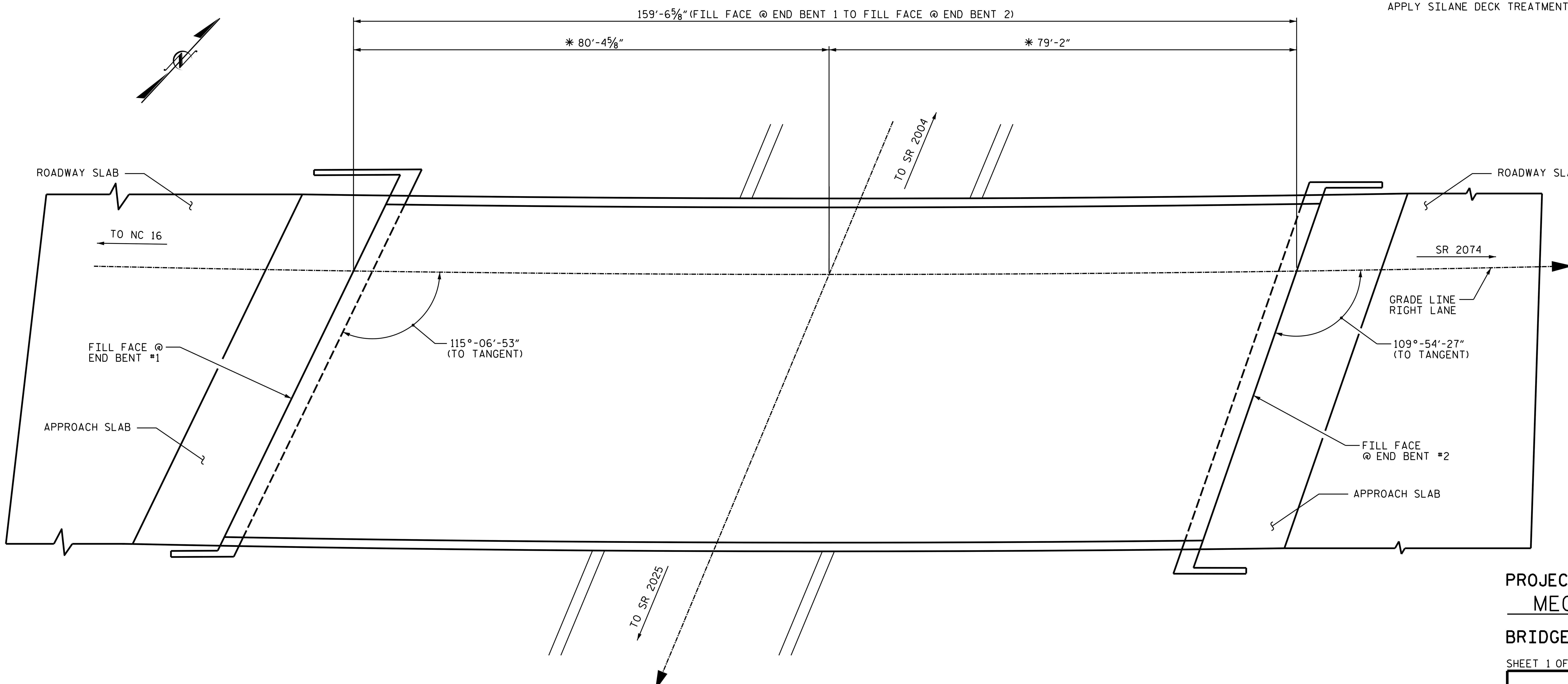
SPAN A



SECTION ALONG GRADE LINE (RIGHT LANE)



PLAN

* (RADIAL)

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/09/2019.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ ROUTINE INSPECTION.

SCOPE OF WORK

PREPARE CONCRETE DECK SURFACE FOR SILANE DECK TREATMENT BY SHOTBLASTING METHOD.

REMOVE ASPHALT AND PARTIALLY REMOVE APPROACH SLAB AND ROADWAY SLAB CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.

REPAIR ANY DECK, APPROACH SLAB AND ROADWAY SLAB CONCRETE FOR PC OVERLAY AND SILANE TREATMENT.

OVERLAY PREPARED APPROACH SLAB AND ROADWAY SLAB WITH POLYMER CONCRETE (PC).

GROOVE PC APPROACH SLABS AND ROADWAY SLABS.

APPLY SILANE DECK TREATMENT.

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590956

SHEET 1 OF 2

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

RESIDENT ENGINEER DATE

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green 05/16/2023

NORTH CAROLINA PROFESSIONAL SEAL 35647 ENGINEER ADAM A. COLE

DocuSigned by: 05/16/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON NORTH CHARLOTTE OUTER LOOP OVER SR 2042 (OAKDALE ROAD) BETWEEN NC 16 AND SR 2074 (RIGHT LANE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-01
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : RON SAHA DATE : 3/2023
CHECKED BY : GHOLAMREZA KOUCHEKI DATE : 3/2023

5/5/2023
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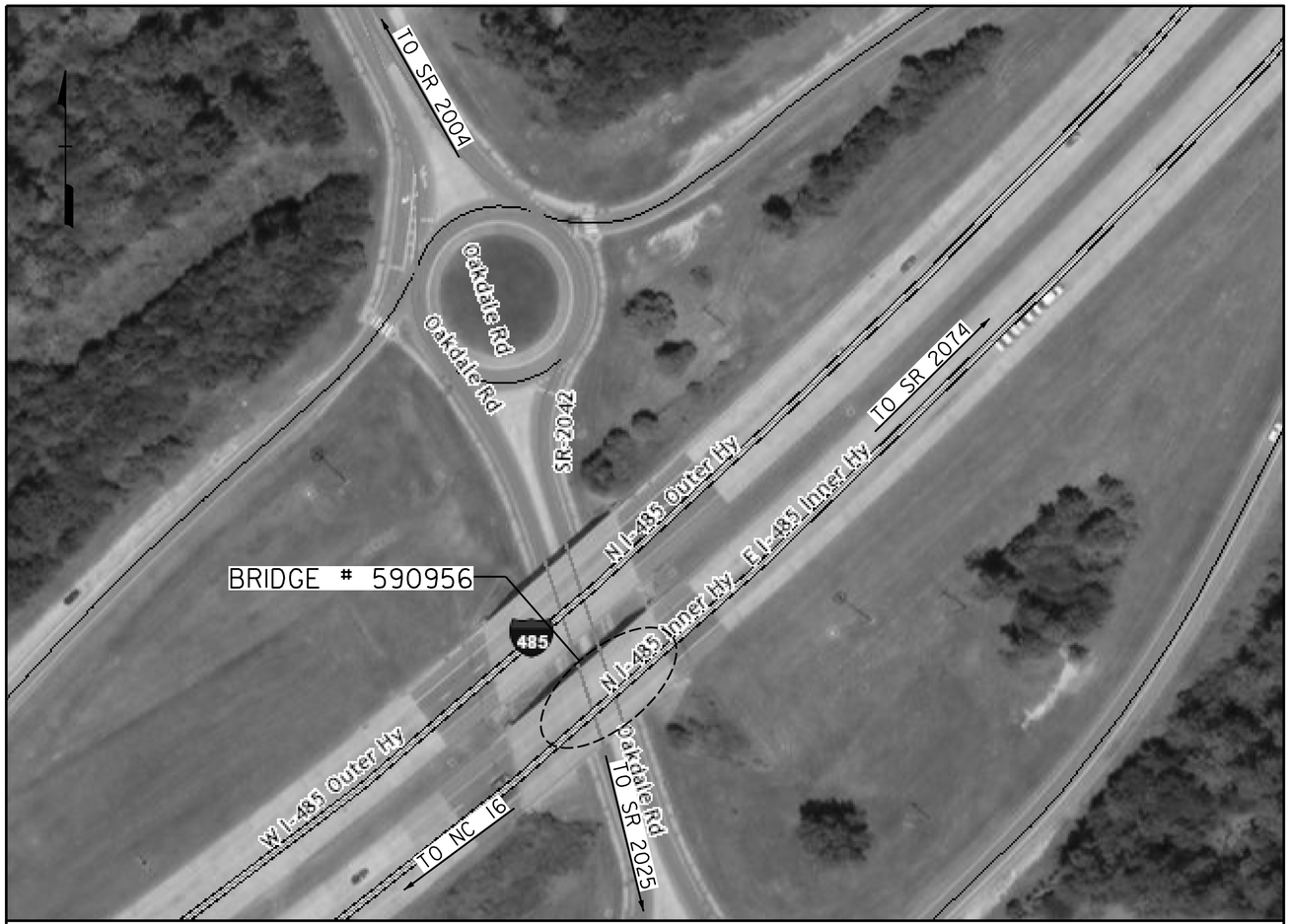

LOCATION SKETCH

NOTES

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. 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 WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OF ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS 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.

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

WORK ON THE BRIDGE(S) SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USE PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CONTROL OF TRAFFIC AND LIMITS OF PHASING OF CON STRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

FOR SCARIFYING APPROACH SLAB AND ROADWAY SLAB, SHOTBLASTING APPROACH SLAB AND ROADWAY SLAB, AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

FOR PLACING & FINISHING POLYMER CONCRETE OVERLAY, GROOVING APPROACH AND ROADWAY SLABS, POLYESTER POLYMER CONCRETE MATERIALS AND EPOXY POLYMER CONCRETE MATERIALS, SEE POLYMER CONCRETE OVERLAY SPECIAL PROVISION.

THE EXISTING APPROACH SLAB AND ROADWAY SLABS SHALL BE REPAIRED AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER AFTER SCARIFICATION AND PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE PC OVERLAY.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT THE FOLLOWING ITEM(S) LISTED WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THE FOLLOWING ITEM(S) LISTED, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN THE PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK 15 ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM NO.	DESCRIPTION	UNIT
1.	CONCRETE DECK REPAIR FOR FOR SILANE DECK TREATMENT	SQ. YD.

BRIDGE COORDINATES

BRIDGE No.	LATITUDE	LONGITUDE
590956	35°-19'-58.01"	80°-54'-43.04"

TOTAL BILL OF MATERIAL

BRIDGE NO. 590955	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	POURABLE SILICONE JOINT SEALANT	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	CONCRETE DECK REPAIR FOR PPC OVERLAY	PLACING & FINISHING POLYMER CONCRETE OVERLAY	SCARIFYING BRIDGE DECK	SILANE DECK TREATMENT	SHOTBLASTING BRIDGE DECK
	SQ. FT.	SQ. YDS.	LN. FT.	CU. YDS.	CU. YDS.	SQ. YDS.	SQ. YD.	SQ. YDS.	SQ. YDS.	SQ. YDS.
TOTAL	6993.0	2.7	269.3	37.6	37.6	2.7	777.0	777.0	1057.0	1834.0

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590956

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON
NORTH CHARLOTTE OUTER LOOP
OVER SR 2042 (OAKDALE ROAD)
BETWEENNC 16 AND SR 2074
(RIGHT LANE)

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green
05/16/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-02
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : E. BAYISSA DATE : 02/2023
CHECKED BY : A. SORSENGINH DATE : 03/2023
DESIGN ENGINEER OF RECORD: _____ DATE : _____

5/10/2023
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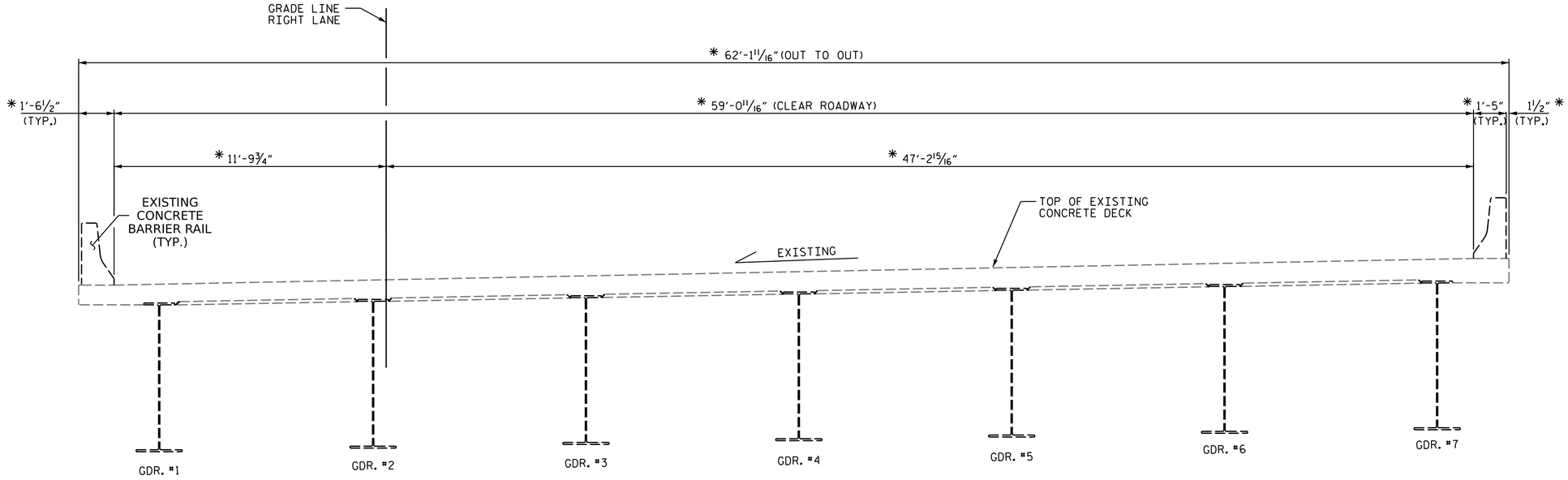
eabayissa

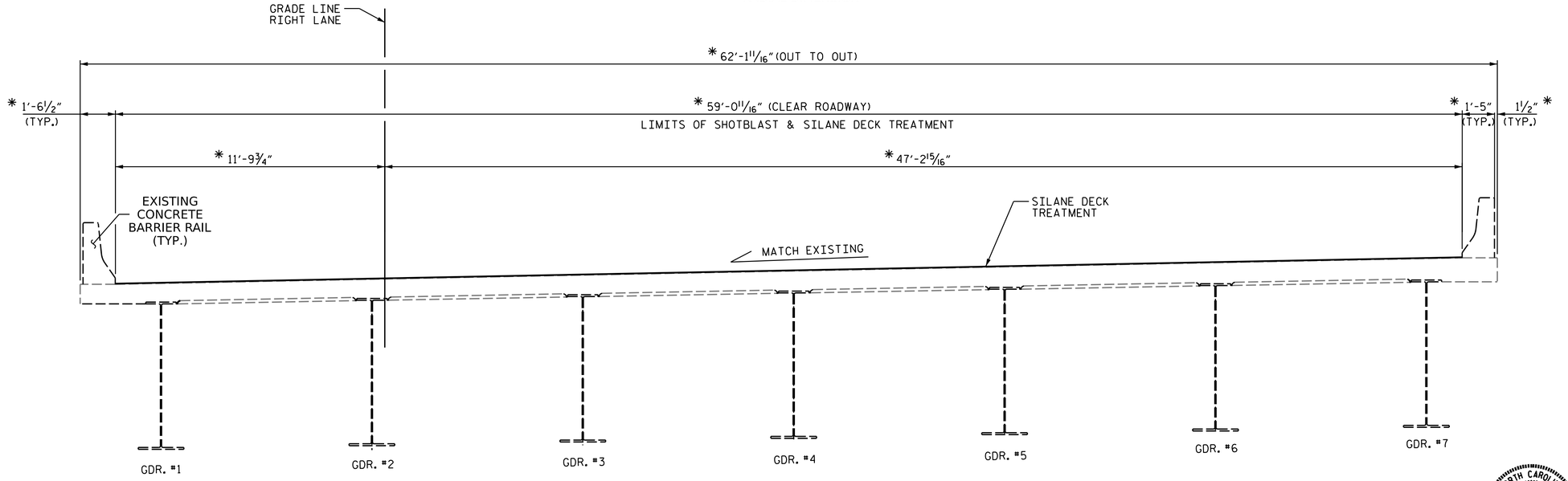
NOTE:

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTH. SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND DECK SEAL PLACEMENT.



EXISTING TYPICAL SECTION

* RADIAL DIMENSION



PROPOSED TYPICAL SECTION

* RADIAL DIMENSION

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590956

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green

05/16/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION & SILANE DECK TREATMENT DETAIL

(RIGHT LANE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-03
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : GHOLAMREZA KOUCHEKI DATE : 2022

CHECKED BY : A. SORSENGINH DATE : 2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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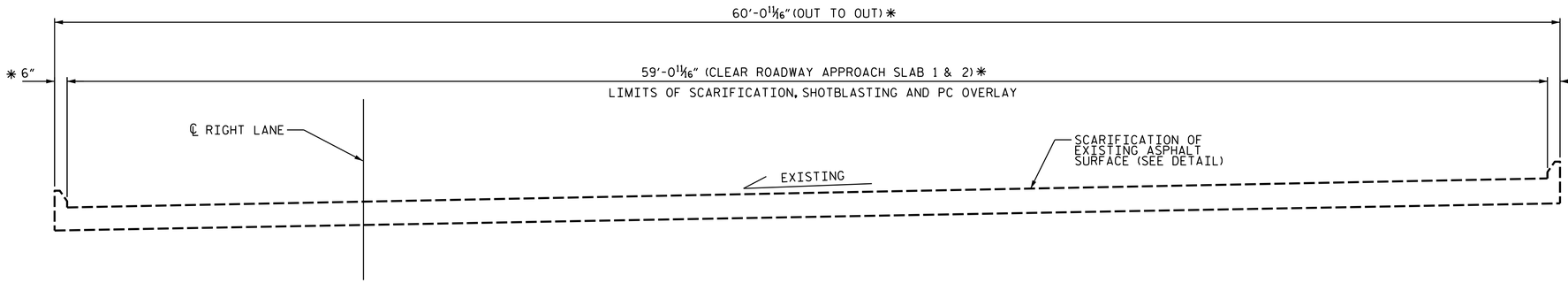
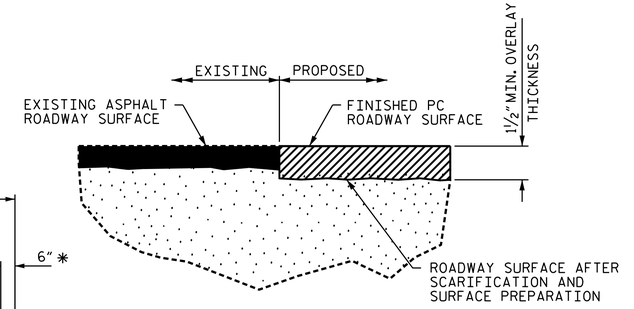


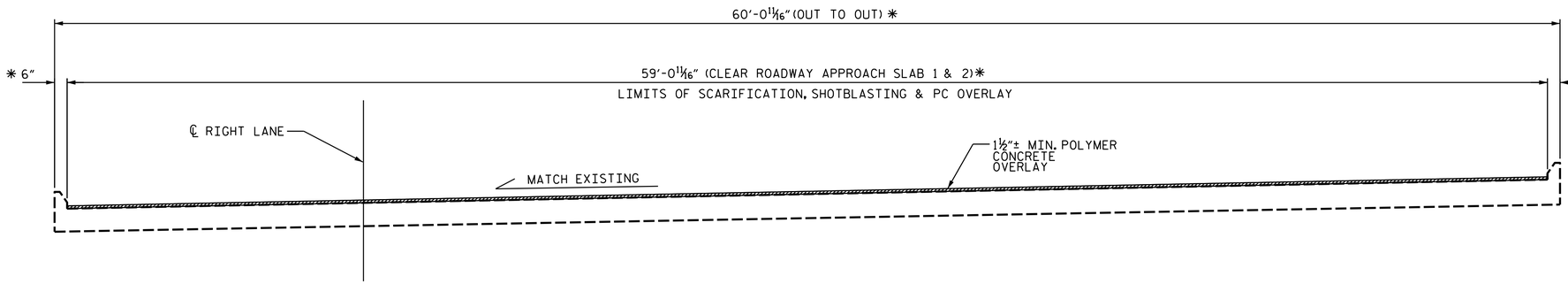
TYPICAL SECTION - APPROACH SLAB & ROADWAY SLAB

(EXISTING)
✱ RADIAL DIMENSION



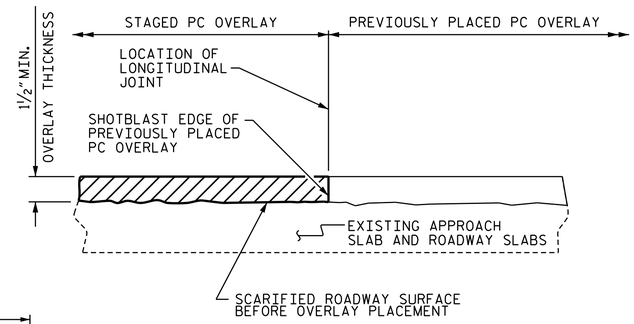
DETAIL FOR POLYMER CONCRETE OVERLAY

FINISHED SURFACE ELEVATION SHALL PROVIDE SMOOTH TRANSITION FROM ROADWAY TO BRIDGE DECK. THAT SURFACE ELEVATION IS ANTICIPATED TO APPROXIMATELY MATCH EXISTING ASPHALT SURFACE ELEVATION. ACTUAL THICKNESS OF PC OVERLAY MAY VARY TO PROVIDE THIS TRANSITION. REMOVE ALL ASPHALT AND MINIMUM ½″ OF EXISTING CONCRETE SURFACE.



TYPICAL SECTION - APPROACH SLAB & ROADWAY SLAB

(EXISTING)
✱ RADIAL DIMENSION



STAGED PC OVERLAY JOINT

(AS NEEDED)

PROJECT NO. I-5861
MECKLENBURG COUNTY
BRIDGE NO. 590956

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green 2C7D2B8B8B861448...
05/16/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION & PC OVERLAY DETAIL

(RIGHT LANE)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-04
1			3			TOTAL SHEETS
2			4			15

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DRAWN BY : E. BAYISSA DATE : 02/2023
CHECKED BY : A. SORSENGINH DATE : 03/2023

5/16/2023
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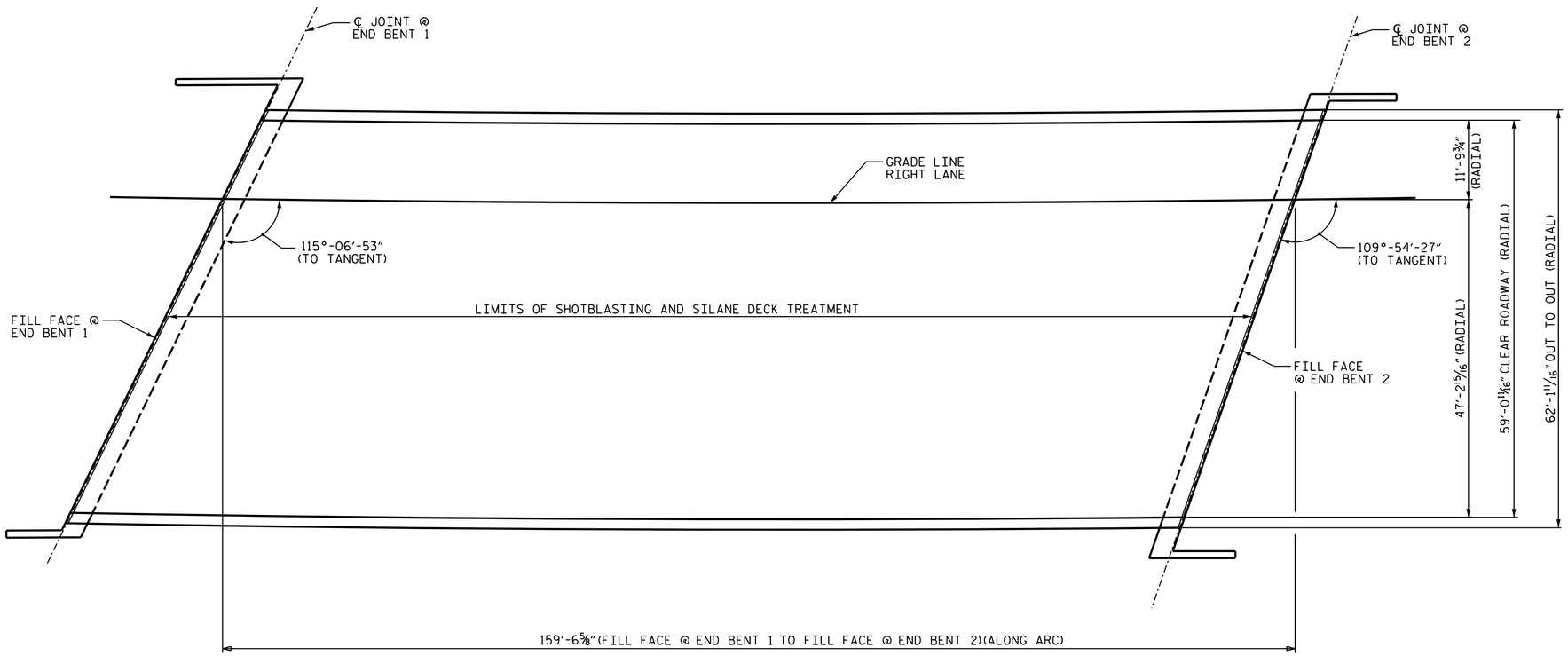

PLAN

NOTES:

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

DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR AFTER REMOVAL OF UNSOUND CONCRETE. (MIN. 2" CLEAR TO SAWCUT). SEE CONCRETE DECK REPAIR SPECIAL PROVISION.

FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

DECK SURFACE REPAIR QUANTITY TABLE

TOP OF DECK REPAIR - SPAN A

	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1057.0 SQ. YDS.	
SILANE DECK TREATMENT	1057.0 SQ. YDS.	

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590956

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green
05/16/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION & SILANE DECK TREATMENT

(RIGHT LANE)

DRAWN BY : E. BAYISSA DATE : 02/2023
CHECKED BY : A. SORSENGINH DATE : 02/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-05
1			3			TOTAL SHEETS
2			4			15

5/5/2023
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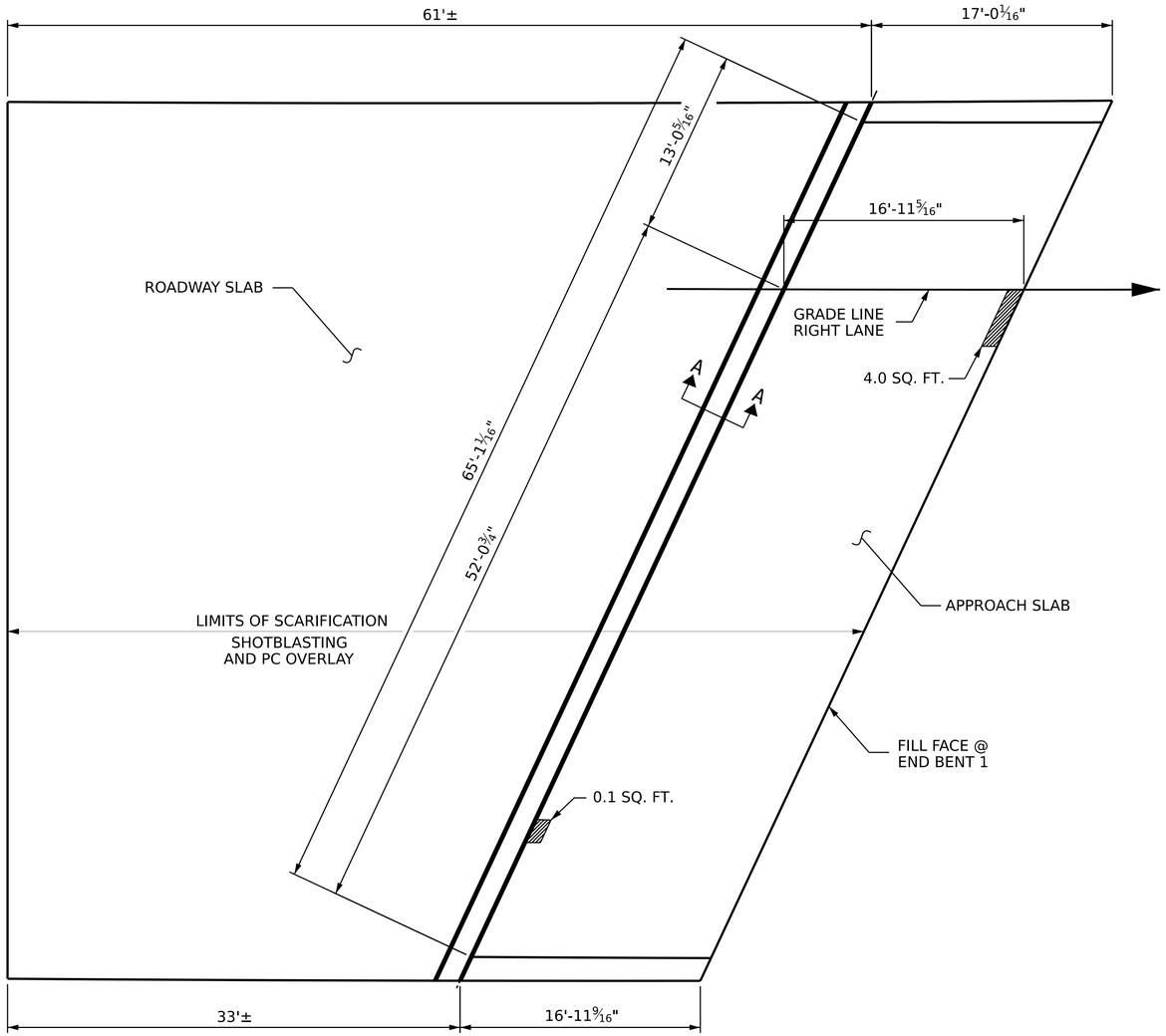
bgreen

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

APPROX. CLASS II SURFACE PREPARATION

APPROACH SLAB AND ROADWAY SLAB QUANTITIES		
	ESTIMATE	ACTUAL
GROOVING BRIDGE FLOORS	3780 SQ. FT.	
CLASS II SURFACE PREPARATION	0.5 SQ. YDS.	
POURABLE SILICONE JOINT SEALANT	137.0 LN. FT.	
PC MATERIALS	20.3 CY.YD.	
CONCRETE DECK REPAIR FOR PC OVERLAY	0.5 SQ. YDS.	
PLACING AND FINISHING PC OVERLAY	420 SQ. YDS.	
SCARIFYING BRIDGE DECK	420 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	420 SQ. YDS.	



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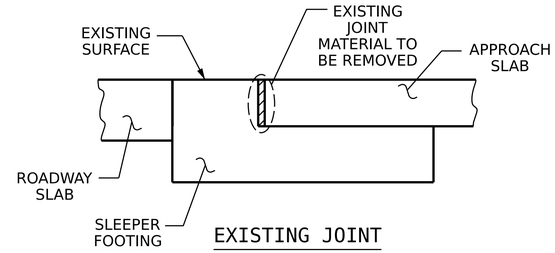
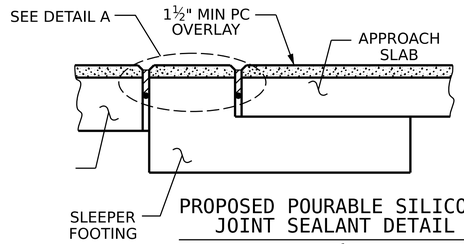
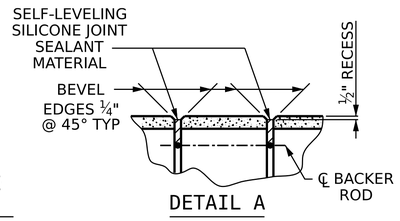


EXISTING JOINT



PROPOSED POURABLE SILICONE JOINT SEALANT DETAIL

SAW CUT SHALL BE ¼" ABOVE THE SEAL PLUS 1" BELOW THE BOTTOM OF THE SEAL.



DETAIL A

SECTION A-A

PROJECT NO. I-5861

MECKLENBURG COUNTY

BRIDGE NO. 590956

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION AND OVERLAY

APPROACH SLAB AND ROADWAY SLABS AT END BENT 1 (RIGHT LANE)

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green 3C7D3B8B8B81448...
05/16/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-06
1			3			TOTAL SHEETS
2			4			15

DRAWN BY : A.S./GHOLAMREZA KOUCHEKI DATE : 11/2020
CHECKED BY : A. SORSENGINH DATE : 3/2023

5/5/2023
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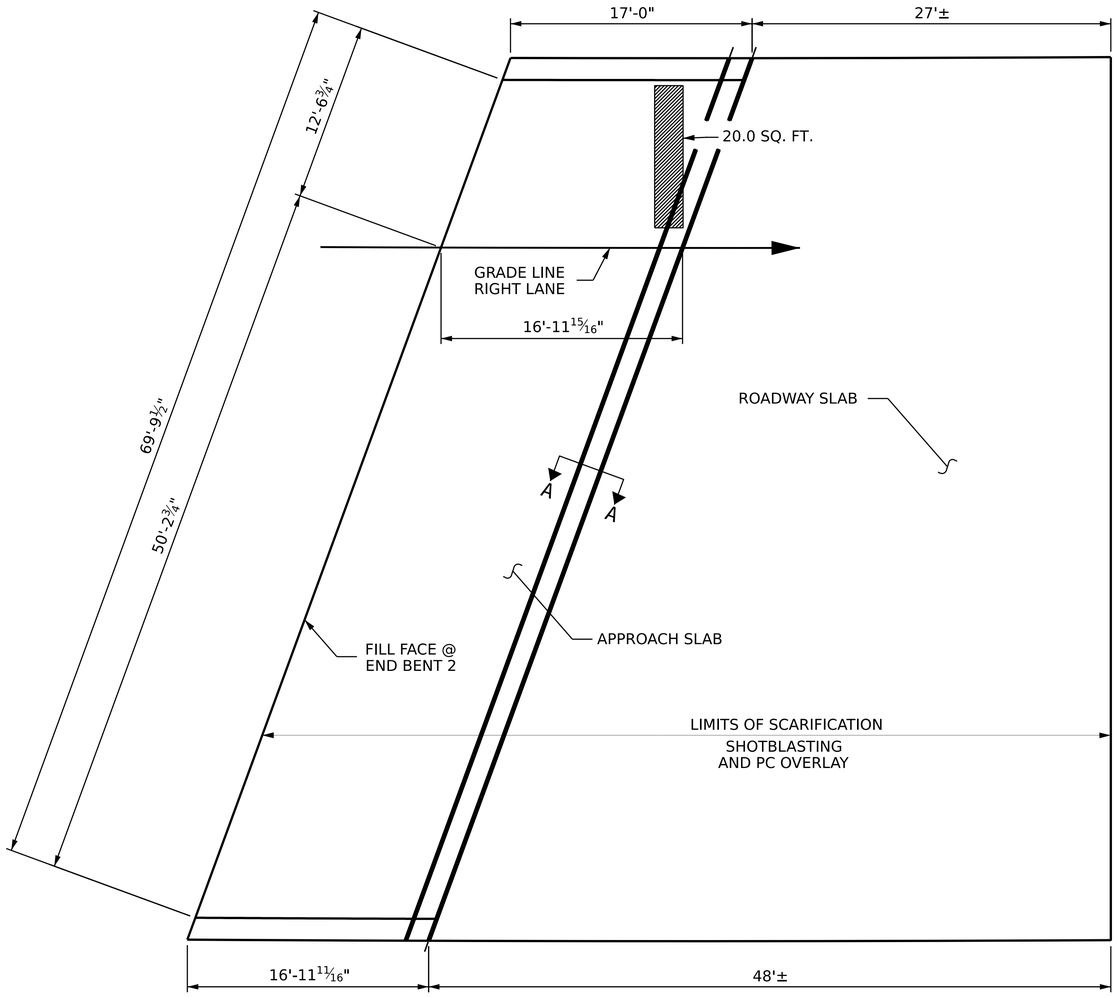
bgreen

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

APPROX. CLASS II SURFACE PREPARATION

APPROACH SLAB AND ROADWAY SLAB QUANTITIES		
	ESTIMATE	ACTUAL
GROOVING BRIDGE FLOORS	3213 SQ. FT.	
CLASS II SURFACE PREPARATION	2.2 SQ. YDS.	
POURABLE SILICONE JOINT SEALANT	132.3 LN. FT.	
PC MATERIALS	17.3 CY.YD.	
CONCRETE DECK REPAIR FOR PC OVERLAY	2.2 SQ. YDS.	
PLACING AND FINISHING PC OVERLAY	357 SQ. YDS.	
SCARIFYING BRIDGE DECK	357 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	357 SQ. YDS.	



PLAN @ END BENT 2

PROJECT NO. I-5861
MECKLENBURG COUNTY
BRIDGE NO. 590956
SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION AND OVERLAY

APPROACH SLAB AND ROADWAY SLABS AT END BENT 2 (RIGHT LANE)

NORTH CAROLINA PROFESSIONAL SEAL 037403 ENGINEER BRANDON L. GREEN

DocuSigned by: Brandon Green 05/16/2023

DRAWN BY : A.S./GHOLAMREZA KOUCHEKI DATE : 11/2020
CHECKED BY : A. SORSENGINH DATE : 3/2023

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-07
1			3			TOTAL SHEETS
2			4			15

5/5/2023
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STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF	
STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION	
GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR	
UNTREATED - EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE ¾" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN