



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J.R. "JOEY" HOPKINS  
SECRETARY

December 13, 2023

**Addendum No. 1**

RE: Contract # C204684

WBS # 38332.3.1, 48030.3.3

FEDERAL AID # BRNHP-0023(32), BRSTP-0019(49)

**Haywood County (B-3186, B-5898)**

BRIDGES #155 AND 158 OVER RICHLAND CREEK ON US-23/74 AND  
BRIDGE #168 OVER US-19 AND US-23 ON US-23/74.

**December 19, 2023 Letting**

To Whom It May Concern:

Reference is made to the proposal and plans furnished to you on this project.

The following revisions have been made to the Pavement Marking Plans.

Sheet No.	Revision
PMP-1 thru PMP-5	Final Pavement Marking Schedule revised.
PMP-4 thru PMP-5	Merge arrows added, gore area striping revised.

Please void the above listed Sheets in your Plans and staple the revised Sheets thereto.

The following revisions have been made to the Signing Plans.

Sheet No.	Revision
SIGN-1	Quantities revised, removal of plan submittal block, and Roadway Standard Drawing list updated.
SIGN-2	Overhead Sign Assembly dimensions revised.
SIGN-2A	Existing Sign identifier numbers added, sizes revised.
SIGN-3 thru SIGN-5	Font, symbol, and panel sizes revised in sign designs. Milemarker signs clarified. Some signs modified to freeway sign size standards.
SIGN-6 thru SIGN-9	Added route labels and cardinal directions to roadways, revised project notes, and corrected sign number labels.

Please void the above listed Sheets in your Plans and staple the revised Sheets thereto.

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
CONTRACT STANDARDS AND DEVELOPMENT  
1591 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900  
Fax: (919) 250-4127  
Customer Service: 1-877-368-4968

Location:  
1020 BIRCH RIDGE DR.  
RALEIGH, NC 27610

Website: [www.ncdot.gov](http://www.ncdot.gov)

The following revision has been made to the Structures Plans.

<b>Sheet No.</b>	<b>Revision</b>
S2-04	Note added for removal of existing structure.

Please void the above listed Sheet in your Plans and staple the revised Sheet thereto.

The following revisions have been made to the proposal.

<b>Page No.</b>	<b>Revision</b>
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 12-13-2023".
G-9	The Project Special Provision entitled <b>SPECIALTY ITEMS</b> has been revised to reflect quantity changes below.

Please void the above listed existing Pages in your proposal and staple the revised Pages thereto.

On the item sheets the following pay item revisions have been made:

<u><b>Item</b></u>	<u><b>Description</b></u>	<u><b>Old Quantity</b></u>	<u><b>New Quantity</b></u>
0110-4025000000-E 901	CONTRACTOR FURNISHED, TYPE A SIGN	615 SF	813 SF
0111-4025000000-E 901	CONTRACTOR FURNISHED, TYPE B SIGN	43 SF	56 SF
0112-4025000000-E 901	CONTRACTOR FURNISHED, TYPE E SIGN	113 SF	180 SF
0113-4025000000-E 901	CONTRACTOR FURNISHED, TYPE F SIGN	35 SF	77 SF
0114-4048000000-E 902	REINFORCED CONCRETE SIGN FOUNDATIONS	6 CY	8 CY
0117-4060000000-E 903	SUPPORTS, BREAKAWAY STEEL BEAM	452 LB	779 LB
0118-4066000000-E 903	SUPPORTS, SIMPLE STEEL BEAM	5,416 LB	6,628 LB

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0119-4072000000-E 903	SUPPORTS, 3-LB STEEL U-CHANNEL	270 LF	370 LF
0121-4102000000-N 904	SIGN ERECTION, TYPE E	11 EA	13 EA
0123-4109000000-N 904	SIGN ERECTION, TYPE A (OVERHEAD)	2 EA	DELETED
0124-4109000000-N 904	SIGN ERECTION, TYPE B (OVERHEAD)	1 EA	DELETED
0129-4116100000-N 904	SIGN ERECTION, RELOCATE TYPE D (GROUND MOUNTED)	2 EA	DELETED
0132-4152000000-N 907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	3 EA	2 EA
0281-4116100000-N 904	SIGN ERECTION, RELOCATE TYPE B (GROUND MOUNTED)	NEW ITEM	2 EA
0282-4725000000-E 1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	NEW ITEM	3 EA

The Contractor's bid must include these pay item revisions.

The electronic bidding file has been updated to reflect these revisions. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

DocuSigned by:  
  
 F81B6038A47A442...

Ronald E. Davenport, Jr., PE  
 State Contract Officer

RED/cms  
 Attachments

cc: Mr. Boyd Tharrington, PE  
Ms. Wanda H. Payne, PE  
Mr. Ken Kennedy, PE  
Mr. Malcolm Bell  
Project File (2)

Mr. Forrest Dungan, PE  
Ms. Jaci Kincaid  
Mr. Jon Weathersbee, PE

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No. 1 DATED 12-13-2023**

DATE AND TIME OF BID OPENING: **Dec 19, 2023 AT 02:00 PM**

CONTRACT ID C204684  
WBS 38332.3.1, 48030.3.3

FEDERAL-AID NO. BRNHP-0023(32), BRSTP-0019(49)  
COUNTY HAYWOOD  
T.I.P NO. B-3186, B-5898  
MILES 0.641  
ROUTE NO. US-23/74  
LOCATION BRIDGES #155 AND 158 OVER RICHLAND CREEK ON US-23/74 AND  
BRIDGE #168 OVER US-19 AND US-23 ON US-23/74.

TYPE OF WORK GRADING, DRAINAGE, PAVING, AND STRUCTURES.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY & STRUCTURE PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

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Once the Engineer has determined that the permanent vegetation establishment requirement has been achieved at an 80% vegetation density (the amount of established vegetation per given area to stabilize the soil) and no erodible areas exist within the project limits, the Contractor will be notified to remove the remaining erosion control devices that are no longer needed. The Contractor will be responsible for, and shall correct any areas disturbed by operations performed in permanent vegetation establishment and the removal of temporary erosion control measures, whether occurring prior to or after placing traffic on the project.

Payment for *Response for Erosion Control, Seeding and Mulching, Repair Seeding, Supplemental Seeding, Mowing, Fertilizer Topdressing, Silt Excavation, and Stone for Erosion Control* will be made at contract unit prices for the affected items. Work required that is not represented by contract line items will be paid in accordance with Articles 104-7 or 104-3 of the *2018 Standard Specifications*. No additional compensation will be made for maintenance and removal of temporary erosion control items.

**CONSTRUCTION MORATORIUM:**

(7-15-14)

SP1 G18A

No tree cutting will be allowed from **April 1** through **October 15** of any year.

**MAJOR CONTRACT ITEMS:**

(2-19-02)

104

SP1 G28

The following listed items are the major contract items for this contract (see Article 104-5 of the *2018 Standard Specifications*):

<b>Line #</b>	<b>Description</b>
6	Borrow Excavation
13	Temporary Shoring
239	Soil Nail Retaining Walls
258	Reinforced Concrete Deck Slab

**SPECIALTY ITEMS:**

(7-1-95)(Rev. 7-20-21)

108-6

SP1 G37

Items listed below will be the specialty items for this contract (see Article 108-6 of the *2018 Standard Specifications*).

<b>Line #</b>	<b>Description</b>
92-99	Guardrail
100-105	Fencing
110-122, 125-128, 130-133, 281	Signing
155-156, 159-160, 162, 282	Long-Life Pavement Markings
163	Permanent Pavement Markers
165-196, 198-199	Erosion Control
197	Reforestation
200-234	Signals/ITS System
249-251, 253-254	Drilled Piers

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>ROADWAY ITEMS</b>						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	2 ACR		
0004	0057000000-E	226	UNDERCUT EXCAVATION	1,250 CY		
0005	0063000000-N	SP	GRADING	Lump Sum	L.S.	
0006	0106000000-E	230	BORROW EXCAVATION	85,000 CY		
0007	0127000000-N	235	EMBANKMENT SETTLEMENT GAUGES	4 EA		
0008	0134000000-E	240	DRAINAGE DITCH EXCAVATION	180 CY		
0009	0141000000-E	240	BERM DITCH CONSTRUCTION	180 LF		
0010	0192000000-N	260	PROOF ROLLING	7 HR		
0011	0195000000-E	265	SELECT GRANULAR MATERIAL	1,000 CY		
0012	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	2,200 SY		
0013	0199000000-E	SP	TEMPORARY SHORING	21,500 SF		
0014	0223000000-E	275	ROCK PLATING	1,725 SY		
0015	0248000000-N	SP	GENERIC GRADING ITEM TYPE 1 BRIDGE APPROACH FILL, STATION 24+42.26 -L- RT	Lump Sum	L.S.	
0016	0248000000-N	SP	GENERIC GRADING ITEM TYPE 1 BRIDGE APPROACH FILL, STATION 24+70.00 -L- LT	Lump Sum	L.S.	
0017	0248000000-N	SP	GENERIC GRADING ITEM TYPE 2 BRIDGE APPROACH FILL, STATION 32+21.34 -L- LT	Lump Sum	L.S.	

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	0262000000-N	SP	GENERIC GRADING ITEM VW PIEZOMETER	2 EA		
0019	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	650 TON		
0020	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	2,020 SY		
0021	0342000000-E	310	*** SIDE DRAIN PIPE (12")	48 LF		
0022	0342000000-E	310	*** SIDE DRAIN PIPE (24")	24 LF		
0023	0342000000-E	310	*** SIDE DRAIN PIPE (48")	784 LF		
0024	0343000000-E	310	15" SIDE DRAIN PIPE	16 LF		
0025	0344000000-E	310	18" SIDE DRAIN PIPE	336 LF		
0026	0345000000-E	310	24" SIDE DRAIN PIPE	164 LF		
0027	0348000000-E	310	*** SIDE DRAIN PIPE ELBOWS (12")	3 EA		
0028	0348000000-E	310	*** SIDE DRAIN PIPE ELBOWS (15")	1 EA		
0029	0348000000-E	310	*** SIDE DRAIN PIPE ELBOWS (18")	2 EA		
0030	0348000000-E	310	*** SIDE DRAIN PIPE ELBOWS (24")	2 EA		
0031	0348000000-E	310	*** SIDE DRAIN PIPE ELBOWS (48")	1 EA		
0032	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	1,640 LF		
0033	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	1,388 LF		
0034	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	588 LF		



County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0035	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	780 LF		
0036	0576000000-E	310	*** CS PIPE CULVERTS, ***** THICK (12", 0.064")	20 LF		
0037	0582000000-E	310	15" CS PIPE CULVERTS, 0.064" THICK	132 LF		
0038	0588000000-E	310	18" CS PIPE CULVERTS, 0.064" THICK	180 LF		
0039	0600000000-E	310	30" CS PIPE CULVERTS, 0.079" THICK	44 LF		
0040	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (12", 0.064")	2 EA		
0041	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (15", 0.064")	6 EA		
0042	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (18", 0.064")	10 EA		
0043	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (30", 0.079")	2 EA		
0044	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (18", 0.500")	264 LF		
0045	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (24", 0.500")	48 LF		
0046	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (30", 0.500")	36 LF		
0047	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (18", 0.500")	264 LF		
0048	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (24", 0.500")	48 LF		
0049	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (30", 0.500")	36 LF		
0050	0995000000-E	340	PIPE REMOVAL	2,100 LF		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0051	1004500000-E	505	GENERIC GRADING ITEM GEOTEXTILE FOR SUBGRADE STABILIZATION	31,056 SY		
0052	1099500000-E	505	SHALLOW UNDERCUT	5,583 CY		
0053	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	20,611 TON		
0054	1110000000-E	510	STABILIZER AGGREGATE	50 TON		
0055	1121000000-E	520	AGGREGATE BASE COURSE	2,820 TON		
0056	1220000000-E	545	INCIDENTAL STONE BASE	200 TON		
0057	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (1-1/2")	3,340 SY		
0058	1330000000-E	607	INCIDENTAL MILLING	1,410 SY		
0059	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	6,120 TON		
0060	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	6,230 TON		
0061	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	7,930 TON		
0062	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	1,045 TON		
0063	1577000000-E	620	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	60 TON		
0064	1662000000-E	650	OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-1 MODIFIED	920 TON		
0065	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	100 TON		
0066	1840000000-E	665	MILLED RUMBLE STRIPS (ASPHALT CONCRETE)	10,710 LF		
0067	2022000000-E	815	SUBDRAIN EXCAVATION	361 CY		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0068	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	1,075 SY		
0069	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	181 CY		
0070	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	1,075 LF		
0071	2070000000-N	815	SUBDRAIN PIPE OUTLET	3 EA		
0072	2077000000-E	815	6" OUTLET PIPE	18 LF		
0073	2190000000-N	828	TEMPORARY STEEL PLATE COVERS FOR MASONRY DRAINAGE STRUCTURE	21 EA		
0074	2209000000-E	838	ENDWALLS	7 CY		
0075	2253000000-E	840	PIPE COLLARS	2.55 CY		
0076	2275000000-E	SP	FLOWABLE FILL	59 CY		
0077	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	76 EA		
0078	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	109.1 LF		
0079	2364200000-N	840	FRAME WITH TWO GRATES, STD 840.20	19 EA		
0080	2365000000-N	840	FRAME WITH TWO GRATES, STD 840.22	25 EA		
0081	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	1 EA		
0082	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	1 EA		
0083	2396000000-N	840	FRAME WITH COVER, STD 840.54	3 EA		
0084	2407000000-N	840	STEEL FRAME WITH TWO GRATES, STD 840.37	26 EA		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0085	2473000000-N	SP	GENERIC DRAINAGE ITEM TEMPORARY PIPE TEE	10 EA		
0086	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	250 LF		
0087	2556000000-E	846	SHOULDER BERM GUTTER	3,720 LF		
0088	2577000000-E	846	CONCRETE EXPRESSWAY GUTTER	1,000 LF		
0089	2619000000-E	850	4" CONCRETE PAVED DITCH	640 SY		
0090	2724000000-E	857	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	930 LF		
0091	2752000000-E	SP	GENERIC PAVING ITEM CONCRETE CAP FOR SINGLE FACED BARRIER FILL	280 LF		
0092	3001000000-N	SP	IMPACT ATTENUATOR UNITS, TYPE TL-3	1 EA		
0093	3030000000-E	862	STEEL BEAM GUARDRAIL	9,200 LF		
0094	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	20 EA		
0095	3210000000-N	862	GUARDRAIL END UNITS, TYPE CAT-1	6 EA		
0096	3287000000-N	SP	GUARDRAIL END UNITS, TYPE TL-3	4 EA		
0097	3317000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE B- 77	12 EA		
0098	3360000000-E	863	REMOVE EXISTING GUARDRAIL	8,300 LF		
0099	3387000000-N	SP	TEMPORARY GUARDRAIL ANCHOR UNITS, TYPE ***** (THRIE-BEAM)	4 EA		
0100	3503000000-E	866	WOVEN WIRE FENCE, 47" FABRIC	1,980 LF		
0101	3509000000-E	866	4" TIMBER FENCE POSTS, 7'-6" LONG	110 EA		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0102	3515000000-E	866	5" TIMBER FENCE POSTS, 8'-0" LONG	70 EA		
0103	3536000000-E	866	CHAIN LINK FENCE, 48" FABRIC	1,150 LF		
0104	3542000000-E	866	METAL LINE POSTS FOR 48" CHAIN LINK FENCE	96 EA		
0105	3548000000-E	866	METAL TERMINAL POSTS FOR 48" CHAIN LINK FENCE	9 EA		
0106	3628000000-E	876	RIP RAP, CLASS I	2,290 TON		
0107	3635000000-E	876	RIP RAP, CLASS II	50 TON		
0108	3649000000-E	876	RIP RAP, CLASS B	1,105 TON		
0109	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	5,365 SY		
0110	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (A)	813 SF		
0111	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (B)	56 SF		
0112	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (E)	180 SF		
0113	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (F)	77 SF		
0114	4048000000-E	902	REINFORCED CONCRETE SIGN FOUNDATIONS	8 CY		
0115	4054000000-E	902	PLAIN CONCRETE SIGN FOUNDATIONS	1 CY		
0116	4057000000-E	SP	OVERHEAD FOOTING	48 CY		
0117	4060000000-E	903	SUPPORTS, BREAKAWAY STEEL BEAM	779 LB		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0118	4066000000-E	903	SUPPORTS, SIMPLE STEEL BEAM	6,628 LB		
0119	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	370 LF		
0120	4082100000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE AT STA ***** (40+60.00 -L- LT)	Lump Sum	L.S.	
0121	4102000000-N	904	SIGN ERECTION, TYPE E	13 EA		
0122	4108000000-N	904	SIGN ERECTION, TYPE F	2 EA		
0125	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (A)	3 EA		
0126	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (B)	1 EA		
0127	4114000000-N	904	SIGN ERECTION, MILEMARKERS	2 EA		
0128	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (A)	1 EA		
0130	4138000000-N	907	DISPOSAL OF SUPPORT, STEEL BEAM	3 EA		
0131	4149000000-N	907	DISPOSAL OF SIGN SYSTEM, OVERHEAD	1 EA		
0132	4152000000-N	907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	2 EA		
0133	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U- CHANNEL	15 EA		
0134	4402000000-E	SP	HIGH VISIBILITY STATIONARY SIGNS	1,457 SF		
0135	4407000000-E	SP	HIGH VISIBILITY PORTABLE SIGNS	400 SF		
0136	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	60 SF		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0137	4415000000-N	1115	FLASHING ARROW BOARD	4 EA		
0138	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	4 EA		
0139	4422000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	50 DAY		
0140	4423000000-N	SP	WORK ZONE DIGITAL SPEED LIMIT SIGNS	8 EA		
0141	4424000000-N	SP	WORK ZONE PRESENCE LIGHTING	24 EA		
0142	4432000000-N	SP	HIGH VISIBILITY DRUMS	67 EA		
0143	4434000000-N	SP	SEQUENTIAL FLASHING WARNING LIGHTS	48 EA		
0144	4445000000-E	1145	BARRICADES (TYPE III)	12 LF		
0145	4447000000-E	SP	PEDESTRIAN CHANNELIZING DEVICES	24 LF		
0146	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	10 EA		
0147	4470000000-N	1160	REMOVE & RESET TEMPORARY CRASH CUSHION	9 EA		
0148	4480000000-N	1165	TMA	2 EA		
0149	4485000000-E	1170	PORTABLE CONCRETE BARRIER	2,720 LF		
0150	4490000000-E	1170	PORTABLE CONCRETE BARRIER (ANCHORED)	9,370 LF		
0151	4500000000-E	1170	REMOVE AND RESET PORTABLE CONCRETE BARRIER	4,490 LF		
0152	4505000000-E	1170	REMOVE & RESET PORTABLE CONCRETE BARRIER (ANCHORED)	9,240 LF		
0153	4510000000-N	1190	LAW ENFORCEMENT	1,000 HR		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0154	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	300 EA		
0155	4688000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)	18,374 LF		
0156	4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	1,400 LF		
0157	4825000000-E	1205	PAINT PAVEMENT MARKING LINES (12")	6,658 LF		
0158	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	8 EA		
0159	4847500000-E	SP	WORK ZONE PERFORMANCE PAVEMENT MARKING LINES, 6"	53,552 LF		
0160	4847600000-E	SP	WORK ZONE PERFORMANCE PAVEMENT MARKING LINES, 12"	1,344 LF		
0161	4855000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (6")	39,940 LF		
0162	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM PAINT PAVEMENT MARKING LINES 12" (BLACK)	11,619 LF		
0163	4905100000-N	SP	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER	172 EA		
0164	5255000000-N	1413	PORTABLE LIGHTING	Lump Sum	L.S.	
0165	6000000000-E	1605	TEMPORARY SILT FENCE	15,630 LF		
0166	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	1,320 TON		
0167	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	3,155 TON		
0168	6012000000-E	1610	SEDIMENT CONTROL STONE	2,560 TON		
0169	6015000000-E	1615	TEMPORARY MULCHING	16.5 ACR		
0170	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	800 LB		



County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0171	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	6 TON		
0172	6024000000-E	1622	TEMPORARY SLOPE DRAINS	870 LF		
0173	6029000000-E	SP	SAFETY FENCE	760 LF		
0174	6030000000-E	1630	SILT EXCAVATION	7,700 CY		
0175	6036000000-E	1631	MATTING FOR EROSION CONTROL	40,000 SY		
0176	6037000000-E	SP	COIR FIBER MAT	2,130 SY		
0177	6042000000-E	1632	1/4" HARDWARE CLOTH	1,245 LF		
0178	6048000000-E	SP	FLOATING TURBIDITY CURTAIN	1,710 SY		
0179	6070000000-N	1639	SPECIAL STILLING BASINS	22 EA		
0180	6071012000-E	SP	COIR FIBER WATTLE	440 LF		
0181	6071020000-E	SP	POLYACRYLAMIDE (PAM)	1,050 LB		
0182	6071030000-E	1640	COIR FIBER BAFFLE	675 LF		
0183	6071050000-E	SP	*** SKIMMER (1-1/2")	4 EA		
0184	6071050000-E	SP	*** SKIMMER (2")	1 EA		
0185	6084000000-E	1660	SEEDING & MULCHING	15 ACR		
0186	6087000000-E	1660	MOWING	14 ACR		
0187	6090000000-E	1661	SEED FOR REPAIR SEEDING	200 LB		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0188	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.5 TON		
0189	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	325 LB		
0190	6108000000-E	1665	FERTILIZER TOPDRESSING	9.75 TON		
0191	6111000000-E	SP	IMPERVIOUS DIKE	20 LF		
0192	6114500000-N	1667	SPECIALIZED HAND MOWING	35 MHR		
0193	6114800000-N	SP	MANUAL LITTER REMOVAL	8 MHR		
0194	6114900000-E	SP	LITTER DISPOSAL	2 TON		
0195	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	100 EA		
0196	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	6 EA		
0197	6126000000-E	SP	STREAMBANK REFORESTATION	0.13 ACR		
0198	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE	50 EA		
0199	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION DEVICE CLEANOUT	150 EA		
0200	7279000000-E	1715	TRACER WIRE	850 LF		
0201	7300000000-E	1715	UNPAVED TRENCHING (***** (1, 2")	375 LF		
0202	7300000000-E	1715	UNPAVED TRENCHING (***** (1, 4")	350 LF		
0203	7300000000-E	1715	UNPAVED TRENCHING (***** (2, 2")	100 LF		
0204	7300000000-E	1715	UNPAVED TRENCHING (***** (4, 1-1/4")	350 LF		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0205	7301000000-E	1715	DIRECTIONAL DRILL (*****) (1, 2")	200 LF		
0206	7301000000-E	1715	DIRECTIONAL DRILL (*****) (2, 2")	400 LF		
0207	7312000000-N	1716	JUNCTION BOX (***** (SPECIAL OVERSIZED)	3 EA		
0208	7324000000-N	1716	JUNCTION BOX (STANDARD SIZE)	8 EA		
0209	7348000000-N	1716	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)	4 EA		
0210	7360000000-N	1720	WOOD POLE	3 EA		
0211	7432000000-E	1722	2" RISER WITH HEAT SHRINK TUBING	1 EA		
0212	7528000000-E	1730	DROP CABLE	1,225 LF		
0213	7540000000-N	1731	SPLICE ENCLOSURE	3 EA		
0214	7552000000-N	1731	INTERCONNECT CENTER	5 EA		
0215	7566000000-N	1733	DELINEATOR MARKER	4 EA		
0216	7568000000-N	SP	FURNISH FIBER-OPTIC RESTORATION KIT	1 EA		
0217	7613000000-N	SP	SOIL TEST	2 EA		
0218	7614100000-E	SP	DRILLED PIER FOUNDATION	16 CY		
0219	7648000000-N	1746	RELOCATE EXISTING SIGN	2 EA		
0220	7980000000-N	SP	GENERIC SIGNAL ITEM 5/8" x 10' GROUNDING ELECTRODE	18 EA		
0221	7980000000-N	SP	GENERIC SIGNAL ITEM CCTV CAMERA LOWERING SYSTEM	4 EA		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0222	7980000000-N	SP	GENERIC SIGNAL ITEM CCTV METAL POLE	2 EA		
0223	7980000000-N	SP	GENERIC SIGNAL ITEM DIGITAL CCTV CAMERA ASSEMBLY	4 EA		
0224	7980000000-N	SP	GENERIC SIGNAL ITEM DMS ACCESS LADDER	1 EA		
0225	7980000000-N	SP	GENERIC SIGNAL ITEM DMS PEDESTAL STRUCTURE	1 EA		
0226	7980000000-N	SP	GENERIC SIGNAL ITEM DYNAMIC MESSAGE SIGN TYPE 2C	1 EA		
0227	7980000000-N	SP	GENERIC SIGNAL ITEM EQUIPMENT CABINET DISCONNECT	3 EA		
0228	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET EDGE SWITCH	6 EA		
0229	7980000000-N	SP	GENERIC SIGNAL ITEM FIELD EQUIPMENT CABINET	5 EA		
0230	7980000000-N	SP	GENERIC SIGNAL ITEM METER BASE/DISCONNECT COMBINATION PANEL	3 EA		
0231	7980000000-N	SP	GENERIC SIGNAL ITEM VARIABLE SPEED DRILL	4 EA		
0232	7990000000-E	SP	GENERIC SIGNAL ITEM #4 SOLID BARE GROUNDING CONDUCTOR	600 LF		
0233	7990000000-E	SP	GENERIC SIGNAL ITEM 3-WIRE COPPER FEEDER CONDUCTORS	550 LF		
0234	7990000000-E	SP	GENERIC SIGNAL ITEM 4-WIRE COPPER FEEDER CONDUCTORS	50 LF		
0281	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (B)	2 EA		
0282	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	3 EA		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>WALL ITEMS</b>						
0235	8504000000-E	460	CONCRETE BARRIER RAIL WITH MOMENT SLAB	1,011 LF		
0236	8801000000-E	SP	MSE RETAINING WALL NO **** (W4)	2,535 SF		
0237	8801000000-E	SP	MSE RETAINING WALL NO **** (W5)	16,980 SF		
0238	8801000000-E	SP	MSE RETAINING WALL NO **** (W7)	5,350 SF		
0239	8802010000-E	SP	SOIL NAIL RETAINING WALLS	11,625 SF		
0240	8802015100-N	SP	SOIL NAIL VERIFICATION TESTS	6 EA		
0241	8802015110-N	SP	SOIL NAIL PROOF TESTS	36 EA		
<b>STRUCTURE ITEMS</b>						
0242	8007000000-N	400	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP STRUCTURE AT STA ***** (23+84.15 -DET01- EB)	Lump Sum	L.S.	
0243	8017000000-N	SP	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP ACCESS AT STA ***** (24+42.26 -L- RT)	Lump Sum	L.S.	
0244	8017000000-N	SP	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP ACCESS AT STA ***** (24+70.00 -L- LT)	Lump Sum	L.S.	
0245	8035000000-N	402	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (24+42.26 -L- RT)	Lump Sum	L.S.	
0246	8035000000-N	402	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (24+70.00 -L- LT)	Lump Sum	L.S.	
0247	8035000000-N	402	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (32+21.34 -L- LT)	Lump Sum	L.S.	
0248	8065000000-N	SP	ASBESTOS ASSESSMENT	Lump Sum	L.S.	

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0249	8105500000-E	411	***-*** DIA DRILLED PIERS IN SOIL (4'-6")	112.2 LF		
0250	8105600000-E	411	***-*** DIA DRILLED PIERS NOT IN SOIL (4'-6")	67.8 LF		
0251	8111000000-E	411	PERMANENT STEEL CASING FOR ***- *** DIA DRILLED PIER (4'-6")	97.8 LF		
0252	8112730000-N	450	PDA TESTING	6 EA		
0253	8113000000-N	411	SID INSPECTIONS	6 EA		
0254	8115000000-N	411	CSL TESTING	6 EA		
0255	8121000000-N	412	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION ***** (24+42.26 -L- RT)	Lump Sum	L.S.	
0256	8121000000-N	412	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION ***** (24+70.00 -L- LT)	Lump Sum	L.S.	
0257	8121000000-N	412	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION ***** (32+21.34 -L- LT)	Lump Sum	L.S.	
0258	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	26,971 SF		
0259	8161000000-E	420	GROOVING BRIDGE FLOORS	28,644 SF		
0260	8182000000-E	420	CLASS A CONCRETE (BRIDGE)	661.9 CY		
0261	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (24+42.26 -L- RT)	Lump Sum	L.S.	
0262	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (24+70.00 -L- LT)	Lump Sum	L.S.	
0263	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (32+21.34 -L- LT)	Lump Sum	L.S.	
0264	8217000000-E	425	REINFORCING STEEL (BRIDGE)	105,280 LB		

County: HAYWOOD

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0265	8238000000-E	425	SPIRAL COLUMN REINFORCING STEEL (BRIDGE)	7,070 LB		
0266	8328200000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** STEEL PILES (HP 14 X 73)	102 EA		
0267	8384000000-E	450	HP 14 X 73 STEEL PILES	4,555 LF		
0268	8391000000-N	450	STEEL PILE POINTS	102 EA		
0269	8393000000-N	450	PILE REDRIVES	33 EA		
0270	8503000000-E	460	CONCRETE BARRIER RAIL	1,573.55 LF		
0271	8531000000-E	462	4" SLOPE PROTECTION	165.5 SY		
0272	8608000000-E	876	RIP RAP CLASS II (2'-0" THICK)	1,410 TON		
0273	8622000000-E	876	GEOTEXTILE FOR DRAINAGE	1,565 SY		
0274	8657000000-N	430	ELASTOMERIC BEARINGS	Lump Sum	L.S.	
0275	8706000000-N	SP	EXPANSION JOINT SEALS	Lump Sum	L.S.	
0276	8727000000-N	SP	ELECTRICAL CONDUIT SYSTEM FOR SIGNALS AT STA ***** (24+70.00 -L- LT)	Lump Sum	L.S.	
0277	8860000000-N	SP	GENERIC STRUCTURE ITEM TEMPORARY OVERBUILD AND REMOVAL	Lump Sum	L.S.	
0278	8867000000-E	SP	GENERIC STRUCTURE ITEM 54" FIB PRESTRESSED CONCRETE GIRDERS	2,070.5 LF		
0279	8867000000-E	SP	GENERIC STRUCTURE ITEM 63" FIB PRESTRESSED CONCRETE GIRDER	1,632.6 LF		
0280	8867000000-E	SP	GENERIC STRUCTURE ITEM GLASS FIBER REINFORCED POLYMER (GFRP) BAR	9,230 LF		





STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN  
HAYWOOD COUNTY

LOCATION: B-3186, BRIDGES 430155 AND 430158 OVER RICHLAND CREEK ON US 23/74  
B-5898, BRIDGE 430168 OVER US 19/23 ON US 23/74

INDEX

SHEET NO.	DESCRIPTION
PMP - 1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP - 2 THRU PMP - 5	PAVEMENT MARKING PLANS

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

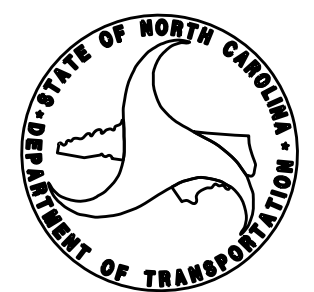
STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

FINAL PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
<b>THERMOPLASTIC</b>	
T20	WHITE EDGELINE (6", 90 MIL)
T22	10FT. WHITE SKIP (6", 90 MIL)
T23	3 FT. - 9 FT./SP WHITE MINISKIP (6", 90 MIL)
T30	YELLOW EDGELINE (6", 90 MIL)
T50	WHITE GORELINE (12", 90 MIL)
T53	WHITE SOLID LANE LINE (12", 90 MIL)
T79	MERGE ARROW (90 MIL)

N.C.D.O.T CONTACT INFORMATION

KELVIN JORDAN SIGNING & DELINEATION REGIONAL ENGINEER  
SIGNING & DELINEATION PROJECT DESIGN ENGINEER



GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
US 23/74	THERMOPLASTIC	NON-CAST IRON SNOWPLOWABLE
US 19 RAMP	THERMOPLASTIC	NONE

- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
- E) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
- F) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS AND TREAT WITH APPROVED PRIMER ON CONCRETE BRIDGE DECKS PRIOR TO PLACING THERMOPLASTIC PAVEMENT MARKING MATERIAL.
- G) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.
- H) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF COLD APPLIED PLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS ON ASPHALT OR CONCRETE ROADWAYS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE COLD APPLIED PAY ITEM.

PLAN PREPARED BY:

JEFFREY KOONTZ, P.E. PROJECT ENGINEER  
KALEAB MAREGN, PE DESIGN ENGINEER



NC FIRM LICENSE No-F-0342  
5438 Wade Park Blvd, Suite 200  
Raleigh, NC 27607  
(919) 854-6200 • (919) 854-6259(FAX)

B-3186/B-5898

PMP 1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

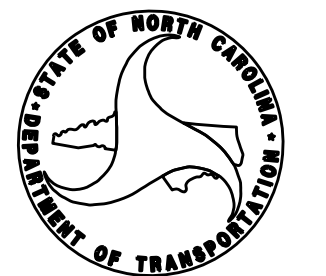
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DATE: 12/12/2023

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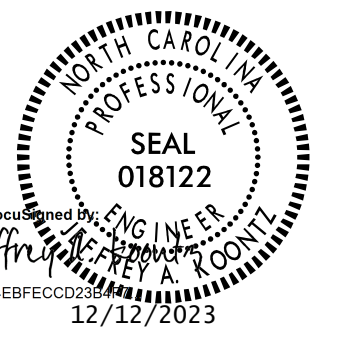
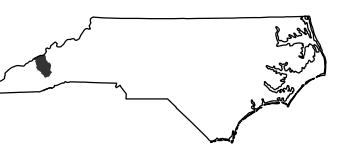


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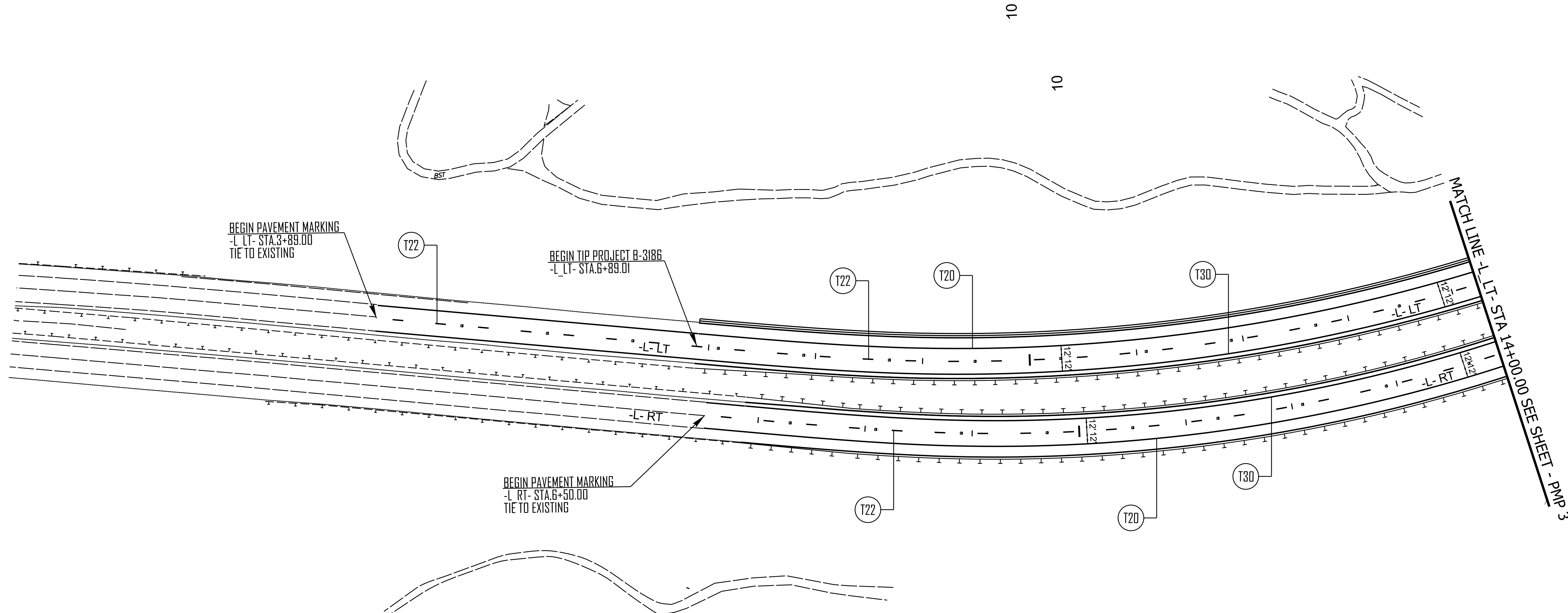
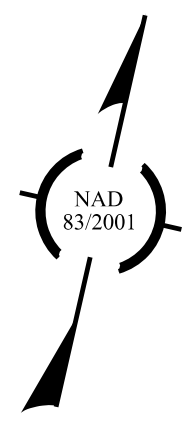
T.I.P.: B-3186 / B-5898

CONTRACT: C204684



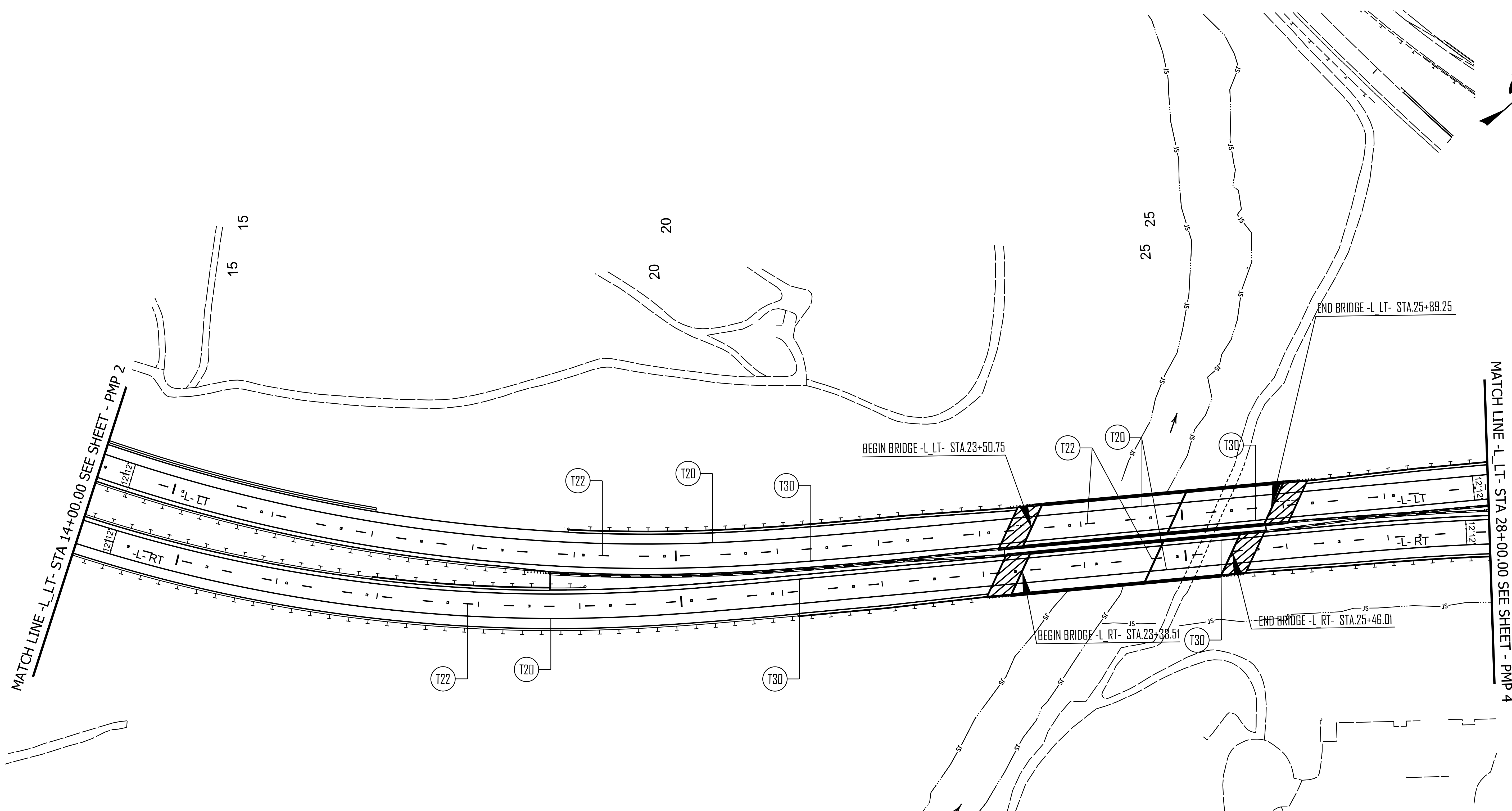
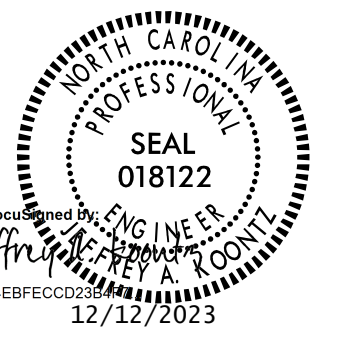
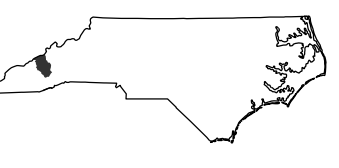
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PREPARED BY  
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NC FIRM LICENSE No. F-0342  
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919-854-6200



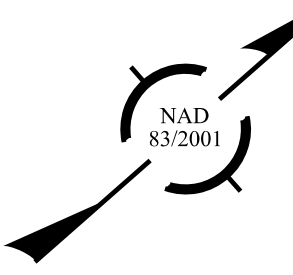
### FINAL PAVEMENT MARKING SCHEDULE

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<b>THERMOPLASTIC</b>	
T20	WHITE EDGELINE (6", 90 MIL)
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T79	MERGE ARROW (90 MIL)



**FINAL PAVEMENT MARKING SCHEDULE**

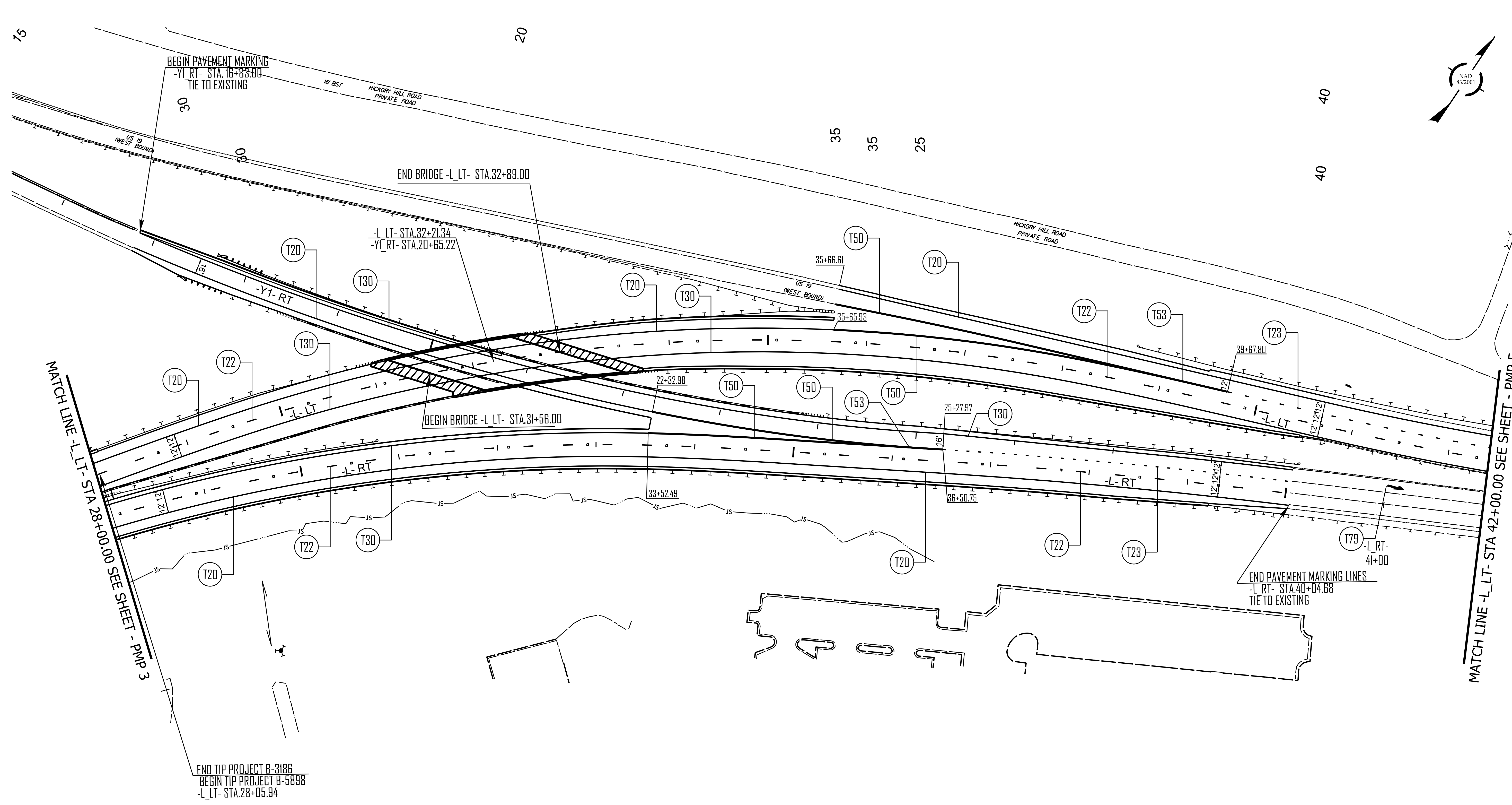
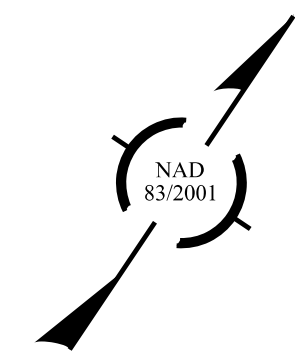
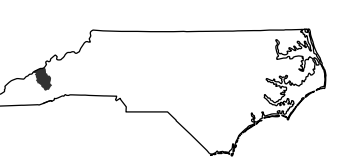
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MATCH LINE -L-LT- STA 14+00.00 SEE SHEET - PMP 2

MATCH LINE -L-LT- STA 28+00.00 SEE SHEET - PMP 4

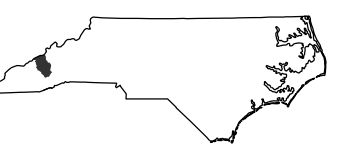
RICHLAND CREEK



### FINAL PAVEMENT MARKING SCHEDULE

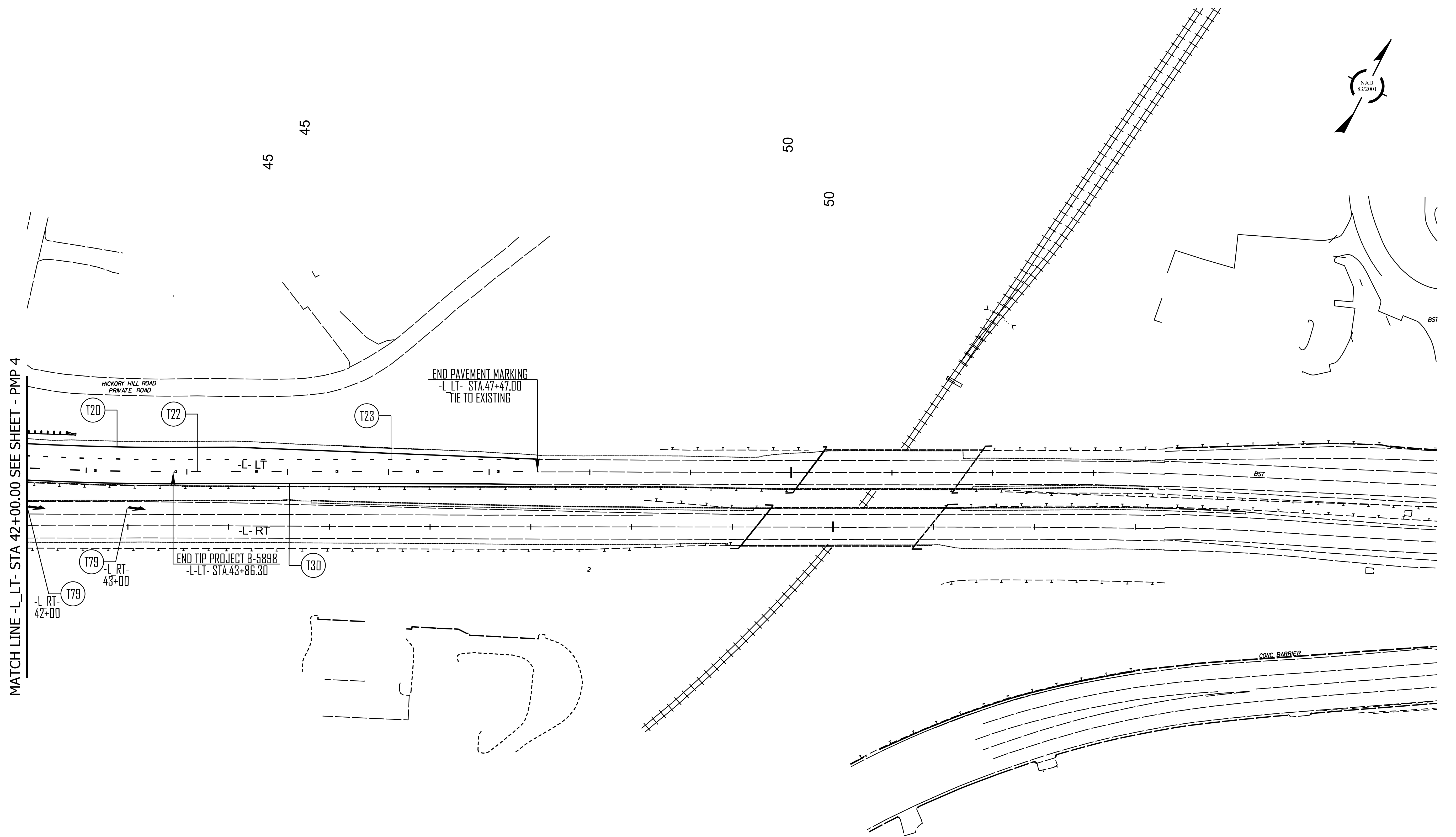
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END TIP PROJECT B-3186  
BEGIN TIP PROJECT B-5898  
-L-LT- STA. 28+05.94



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PREPARED BY  
**AECOM**  
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Raleigh, NC 27607  
919-854-6200



**FINAL PAVEMENT MARKING SCHEDULE**

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# STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

## SIGNING PLAN HAYWOOD COUNTY

LOCATION: B-3186, BRIDGES 430155 AND 430158 OVER RICHLAND CREEK ON US 23/74  
B-5898, BRIDGE 430168 OVER US 19/23 ON US 23/74

B-3186 / B-5898

SIGN I

NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

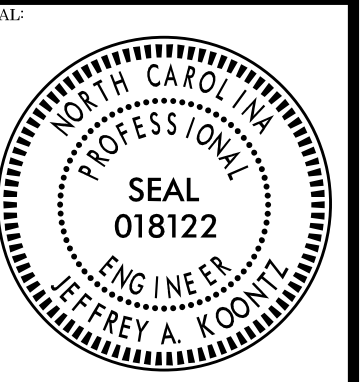
Designed by:

APPROVED: *Jeffrey D. Koontz*

DATE: 12/12/2023

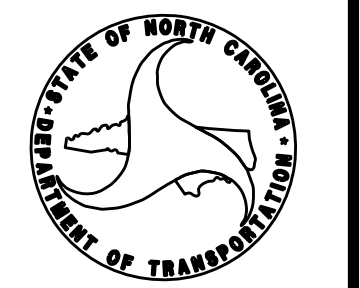
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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

CONTRACT: C204684



T.I.P.: B-3186 / B-5898

CONTRACT: C204684

### ROADWAY STANDARD DRAWING

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STD. NO.	TITLE
901.10	TYPE 'A' SIGNS
901.20	TYPE 'B' SIGNS
901.50	ARROWS AND SHIELDS
901.70	SIGN STRINGERS AND SUPPORT SPACING
901.80	SIGN MOUNTING DETAILS - FOR TYPE A AND TYPE B SIGNS
903.10	GROUND MOUNTED SIGN SUPPORTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.20	SECONDARY SIGN MOUNTING
904.40	MILEPOST AND PLACEMENT
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

### GENERAL NOTES

- THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.
- A) ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS UNLESS OTHERWISE INDICATED ON THE PLANS.
  - B) WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.
  - C) ALL EXISTING SIGNS ON 'U' CHANNEL POSTS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
  - D) WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
  - E) THE BACKGROUND FOR TYPE 'E' AND 'F' SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
  - F) SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.
  - G) DO NOT BEGIN FABRICATION FOR TYPES A & B SIGNS MOUNTED ON OVERHEAD STRUCTURES OR STEEL SUPPORTS UNTIL 'S' DIMENSIONS HAVE BEEN FIELD VERIFIED.
  - H) COORDINATE LOGO SIGNS WITH DARRYN KNIGHT (828-631-1154) AT DIVISION 14.

### SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY			UNIT
			B-3186	B-5898	TOTAL	
DESC. NO	SECT. NO.					
402500000-E	901	CONTRACTOR FURNISHED, TYPE A SIGN	273	540	813	SF
402500000-E	901	CONTRACTOR FURNISHED, TYPE B SIGN	28	28	56	SF
402500000-E	901	CONTRACTOR FURNISHED, TYPE E SIGN	68	112	180	SF
402500000-E	901	CONTRACTOR FURNISHED, TYPE F SIGN	59	18	77	SF
404800000-E	902	REINFORCED CONCRETE SIGN FOUNDATIONS	6	2	8	CY
405400000-E	902	PLAIN CONCRETE SIGN FOUNDATIONS	0	1	1	CY
405700000-E	SP	OVERHEAD FOOTING	0	40	40	CY
406000000-E	903	SUPPORTS, BREAKAWAY STEEL BEAM	779	0	779	LB
406600000-E	903	SUPPORTS, SIMPLE STEEL BEAM	4528	2100	6628	LB
407200000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	150	220	370	LF
408210000-N	906	SUPPORTS, OVERHEAD SIGN STRUCTURE "A" AT STA -L_LT- 40+60	0	1	1	LS
410200000-N	904	SIGN ERECTION, TYPE E	5	8	13	EA
410800000-N	904	SIGN ERECTION, TYPE F	1	1	2	EA
411000000-N	904	SIGN ERECTION, TYPE A (GROUND MOUNTED)	1	2	3	EA
411000000-N	904	SIGN ERECTION, TYPE B (GROUND MOUNTED)	1	0	1	EA
411400000-N	904	SIGN ERECTION, MILEMARKERS	2	0	2	EA
411610000-N	904	SIGN ERECTION, RELOCATE TYPE A (GROUND MOUNTED)	0	1	1	EA
411610000-N	904	SIGN ERECTION, RELOCATE TYPE B (GROUND MOUNTED)	2	0	2	EA
413800000-N	907	DISPOSAL OF SUPPORT, STEEL BEAM	2	1	3	EA
415200000-N	907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	1	1	2	EA
414900000-N	907	DISPOSAL OF SIGN SYSTEM, OVERHEAD	0	1	1	EA
415500000-N	904	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	8	7	15	EA

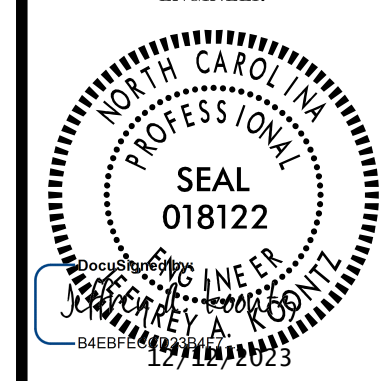
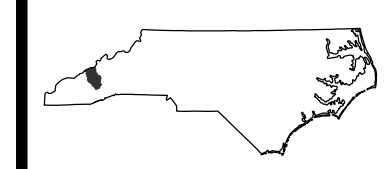
### INDEX

SHEET NO.	DESCRIPTION
SIGN-1	SIGNING PLAN TITLE AND QUANTITIES SHEET
SIGN-2	OVERHEAD STRUCTURE DETAIL
SIGN-2A	TYPE "A" AND TYPE "B" GROUND MOUNTED SIGNS
SIGN-3 & SIGN-4	SIGN DESIGNS
SIGN-5	TYPE 'E' AND 'F' INVENTORY
SIGN-6 - SIGN-9	SIGNING DETAILS

PLAN PREPARED BY: **AECOM**

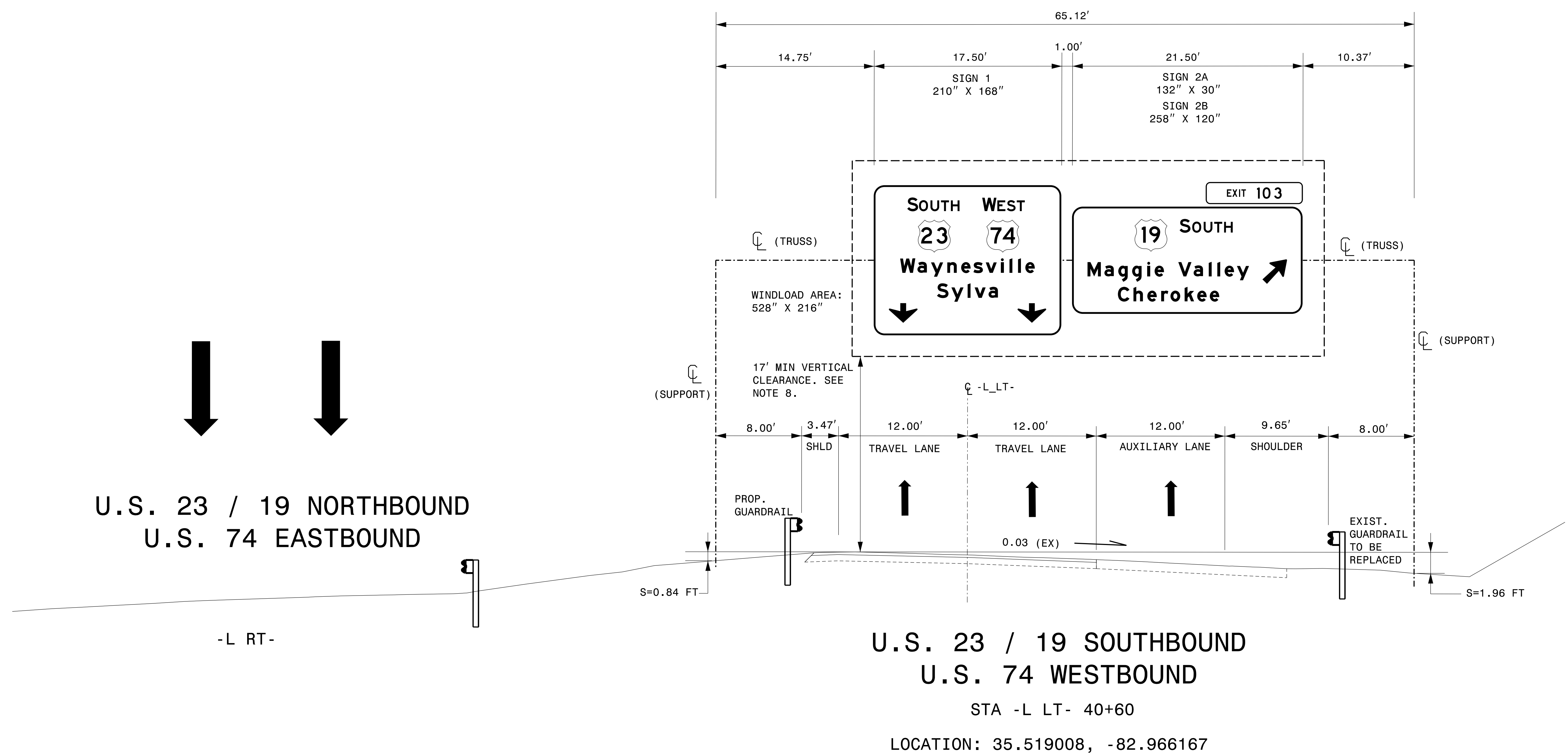
NC FIRM LICENSE No-P-0342  
5438 Wade Park Blvd., Suite 200  
Raleigh, NC 27607  
(919) 854-6200 • (919) 854-9259(FAX)

JEFFREY KOONTZ, P.E.	PROJECT ENGINEER
NICK BLOME, EI	DESIGN ENGINEER



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PREPARED BY  
**AECOM**  
NC FIRM LICENSE No. F-0342  
5438 Wade Park Blvd., Ste 200  
Raleigh, NC 27607  
919-854-6200



U.S. 23 / 19 NORTHBOUND  
U.S. 74 EASTBOUND

U.S. 23 / 19 SOUTHBOUND  
U.S. 74 WESTBOUND

STA -L LT- 40+60

LOCATION: 35.519008, -82.966167

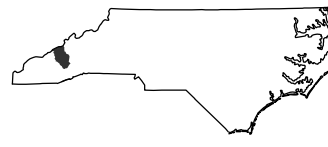
NOTES:

1. IF THE CONTRACTOR BIDS ALUMINUM SIGN STRUCTURE, EACH SHALL BE PROVIDED WITH AN APPROVED HIGHWAY TRUSS DAMPER DEVICE IN ACCORDANCE WITH AASHTO SPECIFICATIONS.
2. MOUNT SIGNS VERTICALLY CENTERED ON HORIZONTAL MEMBER OF STRUCTURE.
3. FIELD VERIFICATION SHALL BE REQUIRED FOR ALL FOOTING ELEVATIONS, PER THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. PROVIDE FIELD VERIFICATION TO THE SIGNING SECTION.
4. THE TOP OF THE FOOTING SHALL EXTEND AT LEAST 4 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.

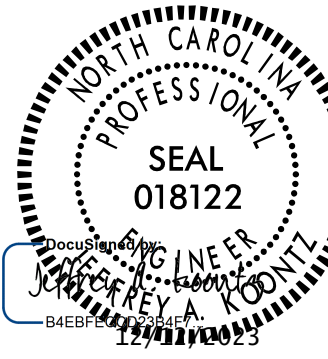
5. SIGN HANGERS AND ATTACHMENT HARDWARE SHALL BE PROVIDED AND INSTALLED ON THE ASSEMBLY TO ACCOMMODATE ALL SIGNS SHOWN IN THIS PLAN SHEET.
6. DESIGN AND CONSTRUCTION REQUIREMENTS FOR SIGN STRUCTURES SHALL ACCOMMODATE WIND VELOCITY OF 110 MPH.
7. WIND LOAD AREA FOR OVERHEAD SIGNS SHALL BE COMPUTED AT A 2' DISTANCE ABOVE, BELOW, AND ON EACH SIDE OF THE EXTENT OF THE SIGNS.
8. MAXIMUM VERTICAL CLEARANCE SHALL BE 18' AND MEASURED FROM THE BOTTOM OF THE LOWEST WIND LOAD AREA TO THE SURFACE OF THE ROADWAY.
9. SEE STANDARD 904-3(B)(3) FOR REQUIREMENTS OF NEW STRUCTURAL MEMBERS, MOUNTING HARDWARE FOR NEW SIGNS, SHOP DRAWINGS, BRACING, AND ACCESSORY HARDWARE FOR ATTACHMENTS.

**OVERHEAD SIGN ASSEMBLY "A"**  
 STA -L LT- 40+60  
 115' EAST OF EXISTING ASSEMBLY

B-3186 / B-5898  
**SIGN 2A**  
 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 HAYWOOD COUNTY



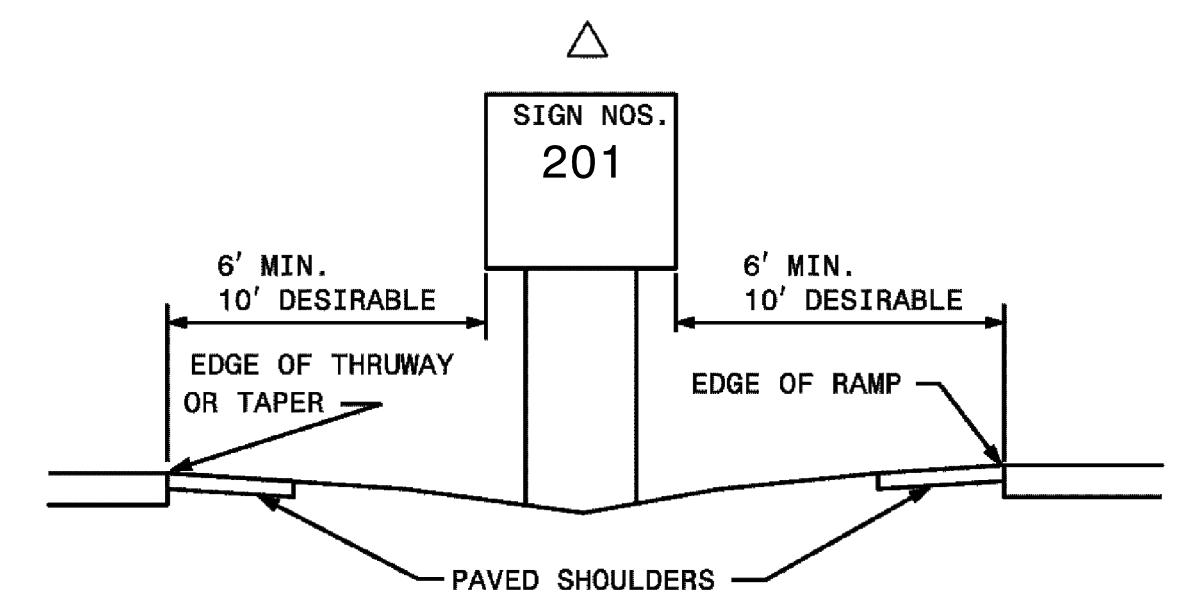
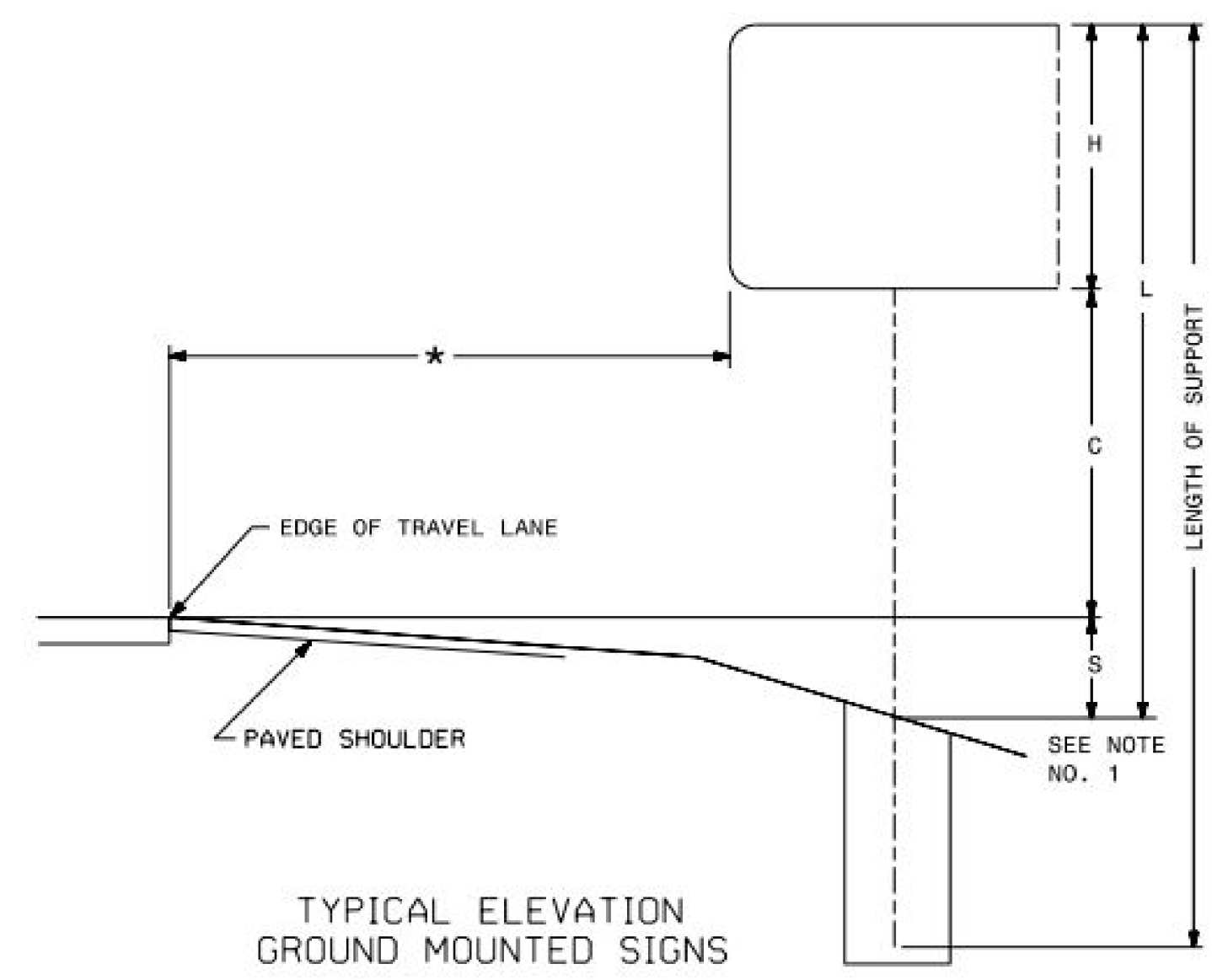
ROADWAY DESIGN UNIT  
 TRANSPORTATION ENGINEER



DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

PREPARED BY  
**AECOM**  
 NC FIRM LICENSE No. F-0342  
 5438 Wade Park Blvd., Ste 200  
 Raleigh, NC 27607  
 919-854-0200

SIGN					ROADWAY STATION	NUMBER OF SUPPORTS	BEAM SECTION	SUPPORT TYPE BA or S	OMNI COUPLER	ATTACHMENT METHOD	MOUNTING METHOD	HORIZONTAL CLEARANCE* (ft.)	SUPPORT SPACING	LENGTH (ft)			LEFT SUPPORT (ft)			CENTER SUPPORT (ft)			RIGHT SUPPORT (ft)			SUPPORT WEIGHTS		FOOTINGS				FIELD VERIFIED SEE NOTE 2 (mm/dd/yy)
NUMBER	TYPE	SIZE (in.)												SNS HT "H"	MTG HT "C"	EMBED-MENT	S	L	LENGTH	S	L	LENGTH	S	L	LENGTH	B/A (lbs.)	SIMPLE (lbs.)	DIAMETER (ft.)	DEPTH (ft.)	REINFORCED (c.y.)	PLAIN (c.y.)	
		w	x	h																												
101A 101B	A B	252 132	x x	156 30	-L_RT- 10+27	3	W18x40	S	YES	N/A N/A	N/A I	20.00	7.46	15.50	7.00	0.0	3.11	25.61	25.61	6.62	29.12	29.12	11.51	34.01	34.01	0.00	3549.6	3.0	5	3.93	0.00	_____
102	A	120	x	96	-L_LT- 28+59	2	W6x16	S	N/A	N/A	N/A	20.00	5.86	8.00	7.00	3.5	7.24	22.24	25.74	0.00	0.00	0.00	4.16	19.16	22.66	0.00	774.4	1.5	4	0.52	0.00	_____
201	A	108	x	60	-L_LT- 34+70	2	S3x5.7	S	N/A	N/A	N/A	Δ	5.27	5.00	7.00	2.5	0.10	12.10	14.60	0.00	0.00	0.00	0.47	12.47	14.97	0.00	168.549	1.0	3	0.00	0.17	_____
901	A	180	x	138	-L_RT- 18+44	2	W8x21	S	YES	N/A	N/A	20.00	8.79	11.50	7.00	0.0	3.22	21.72	21.72	0.00	0.00	0.00	6.34	24.84	24.84	0.00	977.76	2.0	5	1.16	0.00	_____
902	A	180	x	120	-L_LT- 17+84	2	W8x18	BA	YES	N/A	N/A	30.00	8.79	10.00	7.00	0.0	4.97	21.97	21.97	0.00	0.00	0.00	4.30	21.30	21.30	778.86	0	2.0	4.5	1.05	0.00	_____
903	A	156	x	132	-L_RT- 37+00	2	W8x21	S	N/A	N/A	N/A	20.00	7.62	11.00	7.00	4.0	3.70	21.70	25.70	0.00	0.00	0.00	7.41	25.41	29.41	0.00	1157.31	2.0	4.5	1.05	0.00	_____
																	TOTAL	TOTAL		TOTAL	TOTAL											
																	778.86	6627.62		7.71	0.17											
																	USE:	779.00	6628.00		8.00	1.00										



NOTES:

- DIMENSION "S" REPRESENTS AN INCREASE (+) OR A DECREASE (-) IN POLE LENGTH, RELATIVE TO THE ELEVATION OF THE EDGE OF TRAVEL LANE.
- FIELD VERIFICATIONS SHALL BE REQUIRED FOR ALL SUPPORTS, SEE (\*) ARTICLE 903-3. FABRICATORS SHALL BE AISC CERTIFIED IN CATEGORY 1, SEE (\*) ARTICLE 1072-1. (\*) = N.C.D.O.T. STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- PLAN LOCATIONS FOR EXISTING UTILITIES ARE BASED ON THE BEST AVAILABLE INFORMATION AND, THEREFORE MAY NOT BE PRECISELY ACCURATE. THEREFORE, IT IS INCUMBENT UPON THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF UTILITIES BEFORE BEGINNING WORK IN A LOCATION.

**TYPE 'A' AND 'B'**  
GROUND MOUNTED SIGNS



SIGN NUMBER: 101A      BACKG COLOR: Green  
 TYPE: B      COPY COLOR: White

QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 11'-0"  
 HEIGHT: 2'-6"  
 TOTAL AREA: 27.5 Sq.Ft.

BORDER TYPE: FLUSH  
 RECESS: 0"  
 WIDTH: 2"  
 RADII: 3"

NO. Z BARS: 2  
 LENGTH: 124.0

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: NICK BLOME, EI      CHECKED BY: JEFFREY KOONTZ, PE      Dec 11, 2023  
 PROJECT ID: B-3186 / B-5898      LOCATION: HAYWOOD COUNTY      DIV: 14

USE NOTES: 1, 2

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.
- Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum with Grade C reflective sheeting and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter										Series/Size
E	X	I	T							Text Length
24.3	9.2	11.1	3.8	7.5	76.1					E 2000
										31.6
	1	0	4							E 2000
70.9	7.9	14.7	14.1	24.3						36.8

FILENAME: B5898-Designs      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 201      BACKG COLOR: Green  
 TYPE: A      COPY COLOR: White

QUANTITY: 1

SYMBOL	X	Y	WID	HT
Exit Arrow (Type A) 2012	71.2	7	18.25	29.25

SIGN WIDTH: 9'-0"  
 HEIGHT: 5'-0"  
 TOTAL AREA: 45.0 Sq.Ft.

BORDER TYPE: FLUSH  
 RECESS: 0"  
 WIDTH: 1.5"  
 RADII: 6"

NO. Z BARS: 2  
 LENGTH: 100.0

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: NICK BLOME, EI      CHECKED BY: JEFFREY KOONTZ, PE      Dec 11, 2023  
 PROJECT ID: B-3186 / B-5898      LOCATION: HAYWOOD COUNTY      DIV: 14

USE NOTES: 1, 2

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.
- Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum with Grade C reflective sheeting and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter										Series/Size
E	X	I	T							Text Length
31.8	12.8	15.8	6.7	9	31.8					E 2000
										44.4
	1	0	3							E 2000
13.9	9.5	18.2	14.6	51.8						42.3

FILENAME: B5898-Designs      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 101B      BACKG COLOR: Green  
 TYPE: A      COPY COLOR: White

QUANTITY: 1

SYMBOL	X	Y	WID	HT
M1_4	129.3	104.1	36	36
M1-5-3-24-80	182.3	104.2	36	36

SIGN WIDTH: 21'-0"  
 HEIGHT: 13'-0"  
 TOTAL AREA: 273.4 Sq.Ft.

BORDER TYPE: FLUSH  
 RECESS: 0"  
 WIDTH: 2"  
 RADII: 12"

NO. Z BARS: 4  
 LENGTH: 244.1

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: NICK BLOME, EI      CHECKED BY: JEFFREY KOONTZ, PE      Dec 11, 2023  
 PROJECT ID: B-3186      LOCATION: HAYWOOD COUNTY      DIV: 14

USE NOTES: 1, 2, 3

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.
- Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum with Grade C reflective sheeting and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter															Series/Size			
B	U	S	I	N	E	S	S								Text Length			
29	12.1	12.1	12.1	5.3	12.8	10.7	11.4	9.7	136.8						E 2000			
															86.3			
	E	o	s	t	W	a	y	n	e	s	v	i	l	e	EM 2000			
16.6	14.7	15.2	13.9	8.3	16	19.4	15.2	18.2	15.5	13.8	13.8	17	9.6	9.6	8.2	10.6	16.6	218.9
	H	o	t	S	p	r	i	n	g	s							EM 2000	
50.2	17	14.2	8.3	16	17.9	15.5	11.8	9.6	15.5	15.2	10.6	50.2						151.7
	1	M	I	L	E											E 2000		
102.7	4.5	15	12	4.4	9.2	7.5	96.8										52.6	

FILENAME: B5898-Designs      NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 102      BACKG COLOR: Green  
 TYPE: A      COPY COLOR: White

QUANTITY: 1

SYMBOL	X	Y	WID	HT
Park and Ride	45.3	60	29.5	24

SIGN WIDTH: 10'-0"  
 HEIGHT: 8'-0"  
 TOTAL AREA: 80.0 Sq.Ft.

BORDER TYPE: FLUSH  
 RECESS: 0"  
 WIDTH: 2"  
 RADII: 12"

NO. Z BARS: 3  
 LENGTH: 112.0

MAT'L: 0.125" (3.2 mm) ALUMINUM

DESIGN BY: NICK BLOME, EI      CHECKED BY: JEFFREY KOONTZ, PE      Dec 05, 2023  
 PROJECT ID: B-3186 / B-5898      LOCATION: HAYWOOD COUNTY      DIV: 14

USE NOTES: 1, 2

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.
- Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum with Grade C reflective sheeting and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter															Series/Size	
P	A	R	K	-	R	I	D	E							Text Length	
9	9.5	12.7	10.9	8.7	10.7	3.7	10.7	10.9	5.1	11.2	7.9	9			EM 2000	
															102	
	E	X	I	T	1	0	2									E 2000
30.6	7.1	8.6	2.8	6	6	6.4	12.1	9.7	30.8							58.7

FILENAME: B5898-Designs      NORTH CAROLINA D.O.T. SIGN DETAIL

B-3186/B-5898

SIGN 3

NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 HAYWOOD COUNTY

ROADWAY DESIGN UNIT  
 TRANSPORTATION ENGINEER

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 UNLESS ALL SIGNATURES COMPLETED

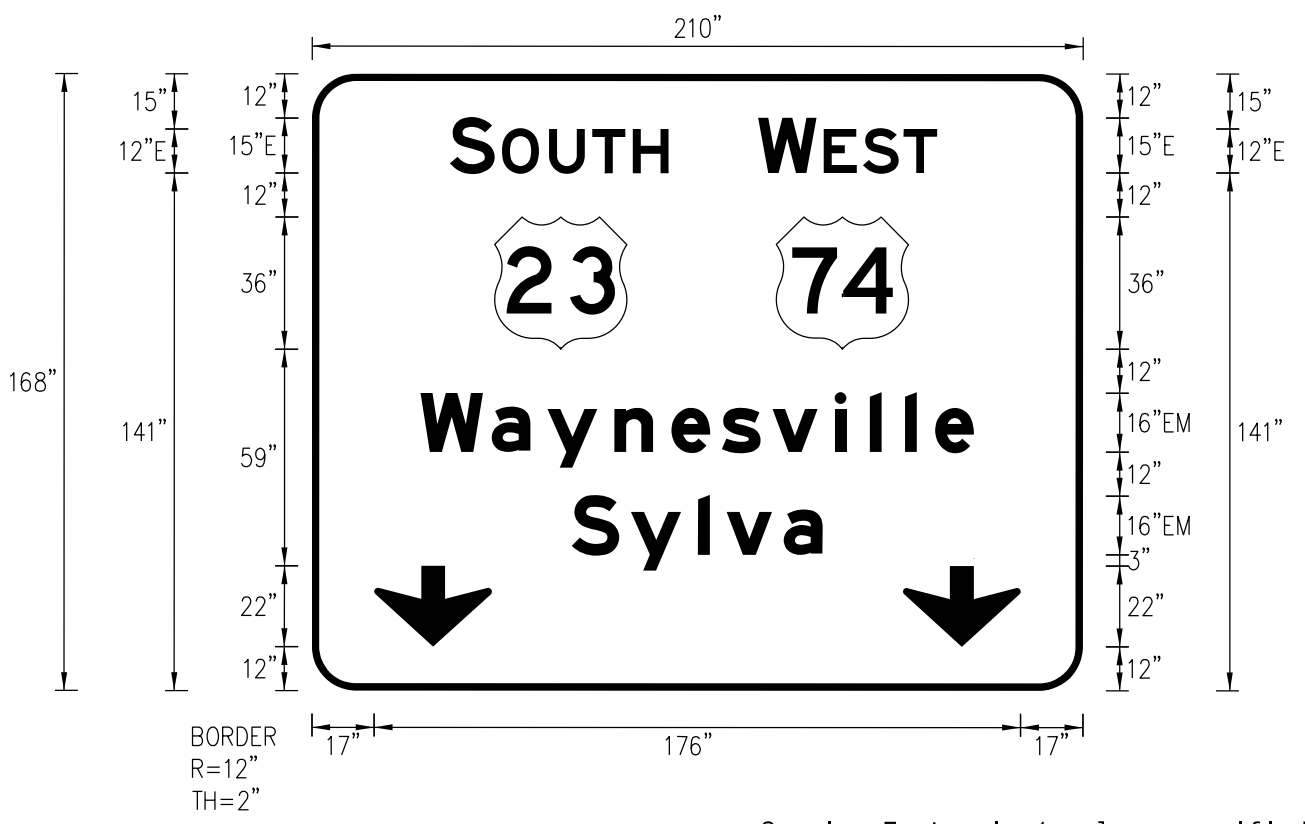
PREPARED BY  
**AECOM**  
 NC FIRM LICENSE No. F-0542  
 5458 Wade Park Blvd., Ste 200  
 Raleigh, NC 27607  
 919-854-6200

SIGN DESIGNS

SIGN NUMBER: 1  
 TYPE: A  
 QUANTITY: 1  
 SIGN WIDTH: 17'-6"  
 HEIGHT: 14'-0"  
 TOTAL AREA: 245.0 Sq.Ft.  
 BORDER TYPE: FLUSH  
 RECESS: 0"  
 WIDTH: 2"  
 RADII: 12"  
 NO. Z BARS: 4  
 LENGTH: 202.0

SYMBOL	X	Y	WID	HT
M1_4	49.7	93	36	36
M1_4	126.5	93	36	36
ARDOWN	17	12	32	22
ARDOWN	161	12	32	22

DESIGN BY: NICK BLOME, EI  
 CHECKED BY: JEFFREY KOONTZ, PE  
 PROJECT ID: B-5898  
 LOCATION: HAYWOOD COUNTY  
 Dec 11, 2023  
 DIV: 14



USE NOTES: 1, 2, 3  
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.  
 2. Background shall be Grade C reflective sheeting.  
 3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum with Grade C reflective sheeting and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter

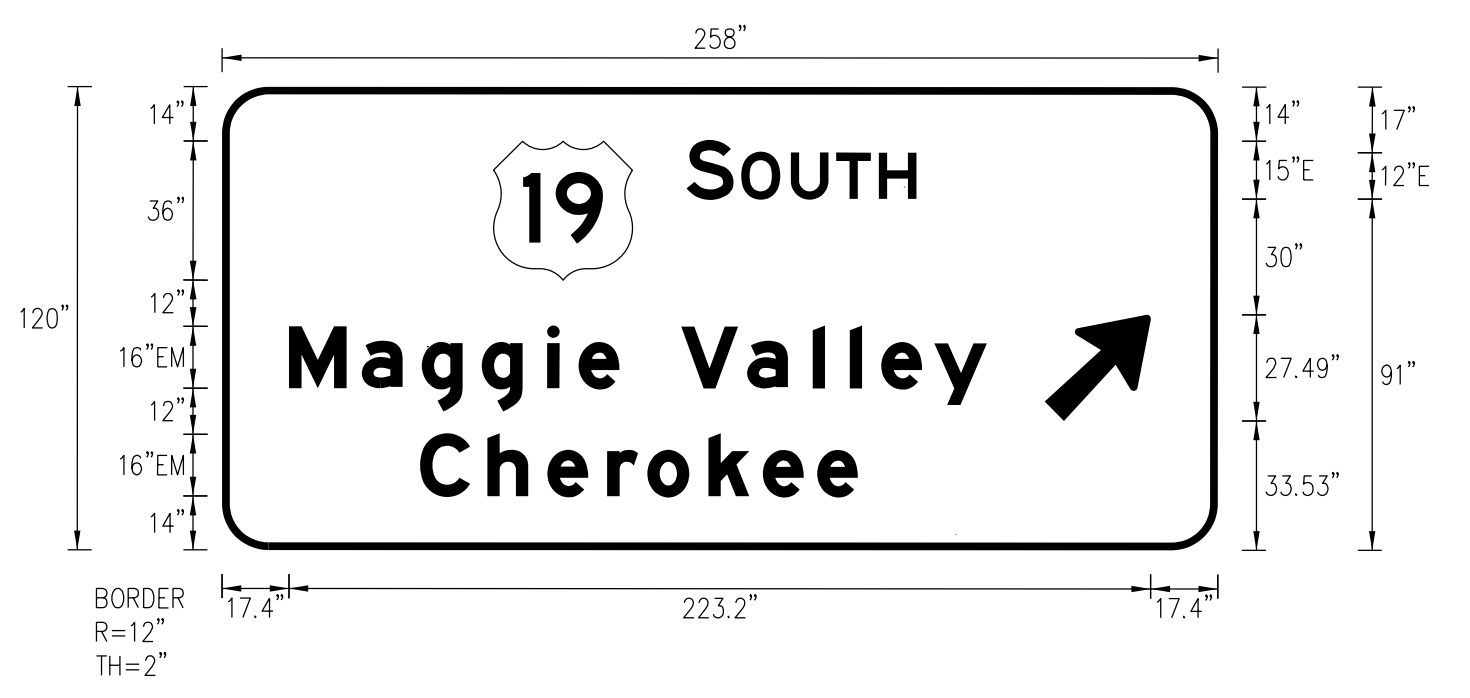
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37.6	12.2	2	12.8	11.8	11	9.7	112.9					E 2000 59.5	
121.5	15.9	2	10.7	11	9	39.9						E 2000 48.6	
29.6	19.4	15.2	18.2	15.5	13.8	13.8	17	9.6	9.6	8.2	10.6	29.7	EM 2000 150.7
70.8	16.2	18.2	7.8	15.5	10.6	70.9							EM 2000 68.3

FILENAME: B5898-Designs  
 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 2B  
 TYPE: A  
 QUANTITY: 1  
 SIGN WIDTH: 21'-6"  
 HEIGHT: 10'-0"  
 TOTAL AREA: 215.1 Sq.Ft.  
 BORDER TYPE: FLUSH  
 RECESS: 0"  
 WIDTH: 2"  
 RADII: 12"  
 NO. Z BARS: 3  
 LENGTH: 250.0

SYMBOL	X	Y	WID	HT
M1_4	70.3	69.9	36	36
AR_Type A	213.2	33.5	22.25	35

DESIGN BY: NICK BLOME, EI  
 CHECKED BY: JEFFREY KOONTZ, PE  
 PROJECT ID: B-5898  
 LOCATION: HAYWOOD COUNTY  
 Dec 11, 2023  
 DIV: 14



USE NOTES: 1, 2, 3  
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.  
 2. Background shall be Grade C reflective sheeting.  
 3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum with Grade C reflective sheeting and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter

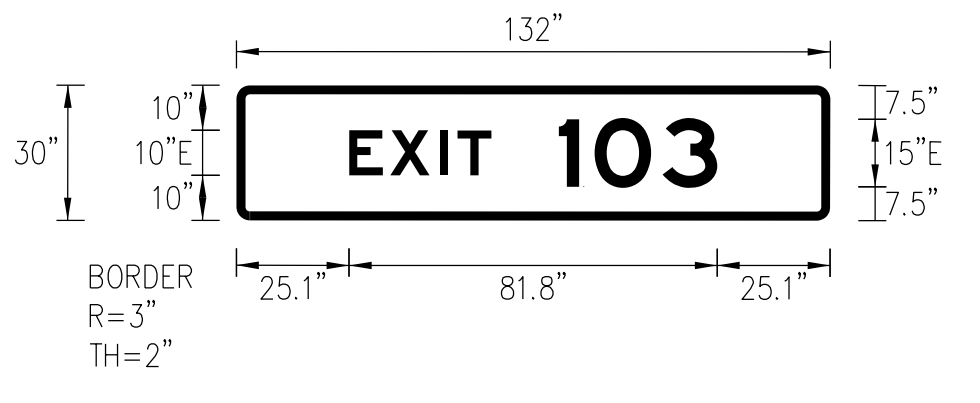
Letter spacings are to start of next letter												Series/Size Text Length			
120.4	12.2	2	12.8	11.8	11	9.7	78.1					E 2000 59.5			
17.4	18.9	15.5	15.5	17	8.2	10.6	16	17.1	17	9.6	8.2	13.8	13.6	59.9	EM 2000 180.8
51.3	17.4	15.5	15.5	10.4	15.8	14.1	14.1	10.6	93.2						EM 2000 113.4

FILENAME: B5898-Designs  
 NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: 2A  
 TYPE: B  
 QUANTITY: 1  
 SIGN WIDTH: 11'-0"  
 HEIGHT: 2'-6"  
 TOTAL AREA: 27.5 Sq.Ft.  
 BORDER TYPE: FLUSH  
 RECESS: 0"  
 WIDTH: 2"  
 RADII: 3"  
 NO. Z BARS: 2  
 LENGTH: 124.0

SYMBOL	X	Y	WID	HT

DESIGN BY: NICK BLOME, EI  
 CHECKED BY: JEFFREY KOONTZ, PE  
 PROJECT ID: B-3186 / B-5898  
 LOCATION: HAYWOOD COUNTY  
 Dec 11, 2023  
 DIV: 14



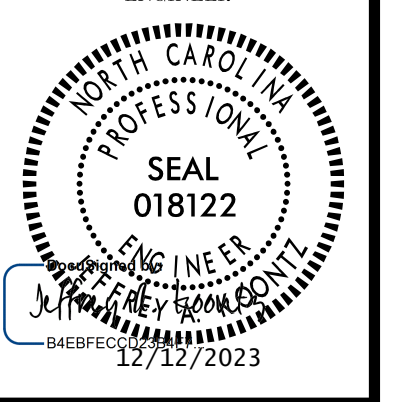
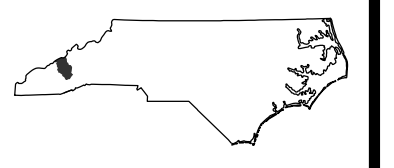
USE NOTES: 1, 2  
 1. Legend and border(except those that are colored black) shall be direct applied Grade A sheeting.  
 2. Background shall be Grade C reflective sheeting.  
 3. Shields; A, B, and C type arrows shall be on 0.032" (0.8mm) aluminum with Grade C reflective sheeting and demountable.

LETTER POSITIONS

Letter spacings are to start of next letter

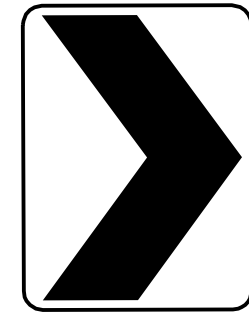
Letter spacings are to start of next letter						Series/Size Text Length
25.1	9.2	11.1	3.8	7.5	75.3	E 2000 31.6
71.7	7.9	15.1	12.2	25.1		E 2000 35.3

FILENAME: B5898-Designs  
 NORTH CAROLINA D.O.T. SIGN DETAIL



SIGN DESIGNS

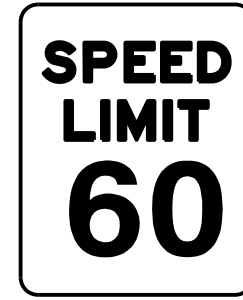
401 QUANTITY REQ'D: 8



W1-8  
36" X 48"

ONE "U" POST PER SIGN

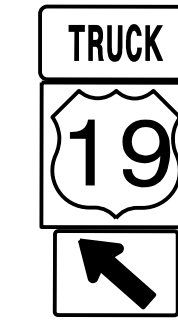
405 QUANTITY REQ'D: 1



R2-1  
48" X 60"

TWO "U" POST PER SIGN

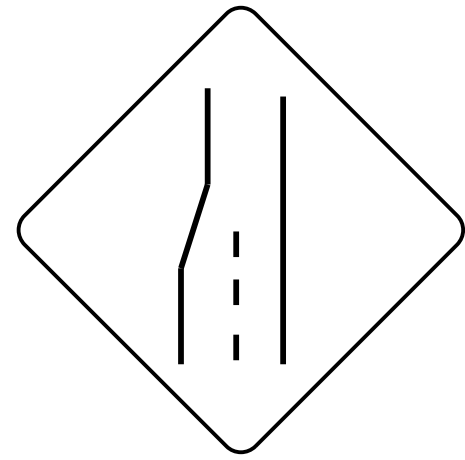
501 QUANTITY REQ'D: 1



1 - 36" x 18"  
1 - 36" x 36"  
1 - 31" x 21"

ONE "U" POST PER ASSEMBLY

402 QUANTITY REQ'D: 2



W4-2L  
48" X 48"

TWO "U" POSTS PER SIGN

502 QUANTITY REQ'D: 1



1 - 36" x 18"  
2 - 36" x 18"  
2 - 36" x 36"  
2 - 36" x 18"  
2 - 36" x 36"

TWO "U" POSTS PER ASSEMBLY

403 QUANTITY REQ'D: 1



W4-1  
48" X 48"

TWO "U" POSTS PER SIGN

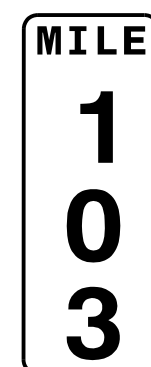
404 QUANTITY REQ'D: 1



W9-1  
48" X 48"

TWO "U" POSTS PER SIGN

QUANTITY REQ'D: 2



D10-3  
12" X 48"

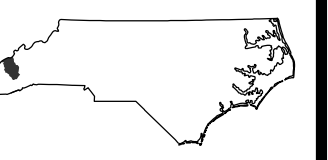
ONE "U" POST PER SIGN

TYPE 'E' & 'F' SIGNS  
MILE MARKERS

B-3186/B-5898

SIGN 5

NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HAYWOOD COUNTY



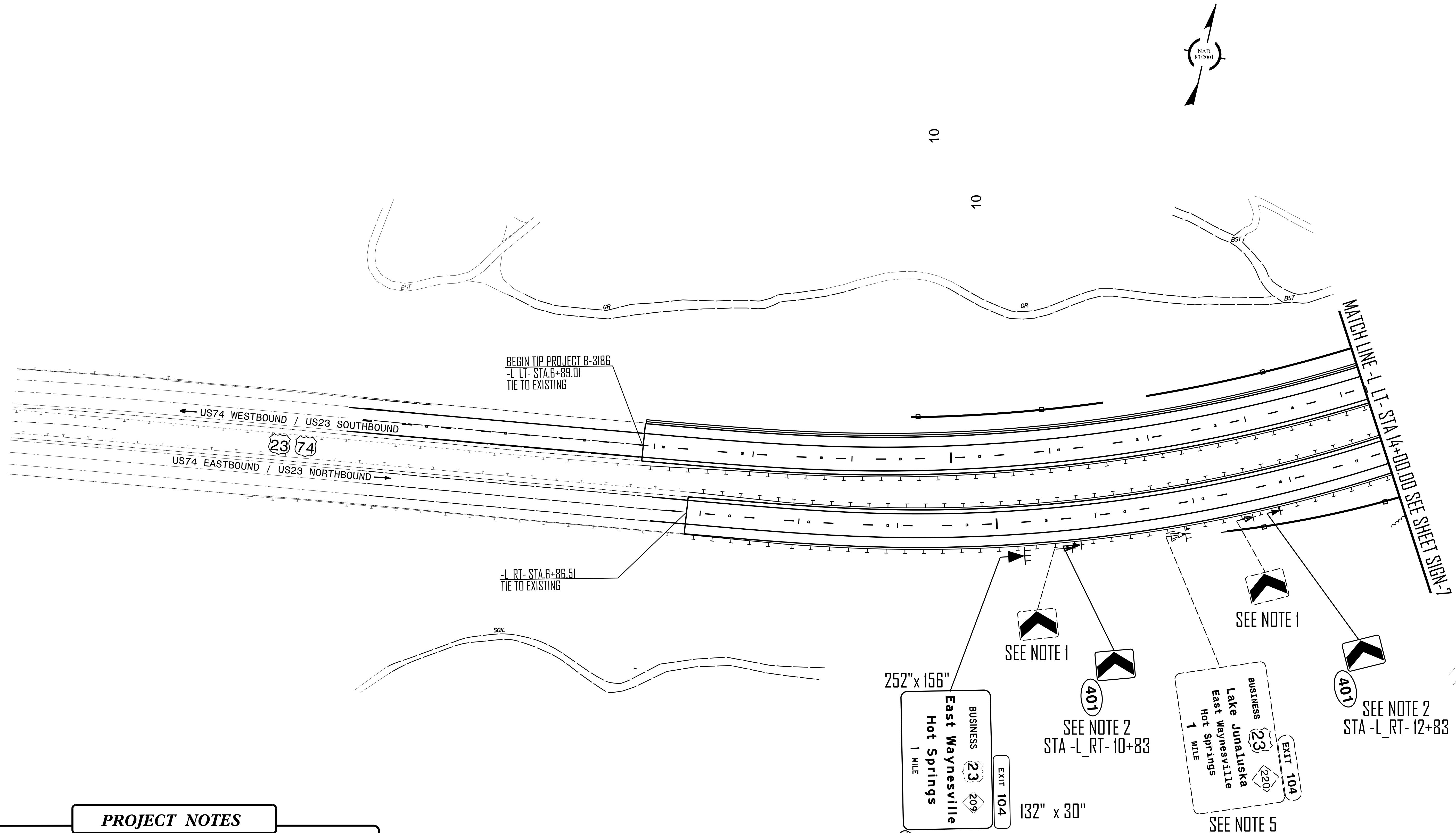
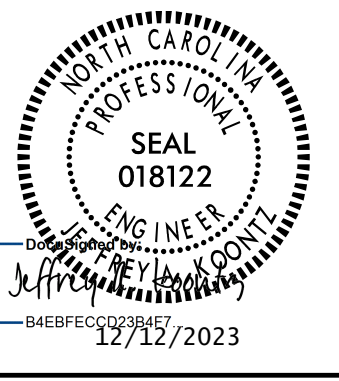
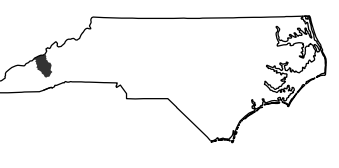
ROADWAY DESIGN UNIT

TRANSPORTATION  
ENGINEER



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

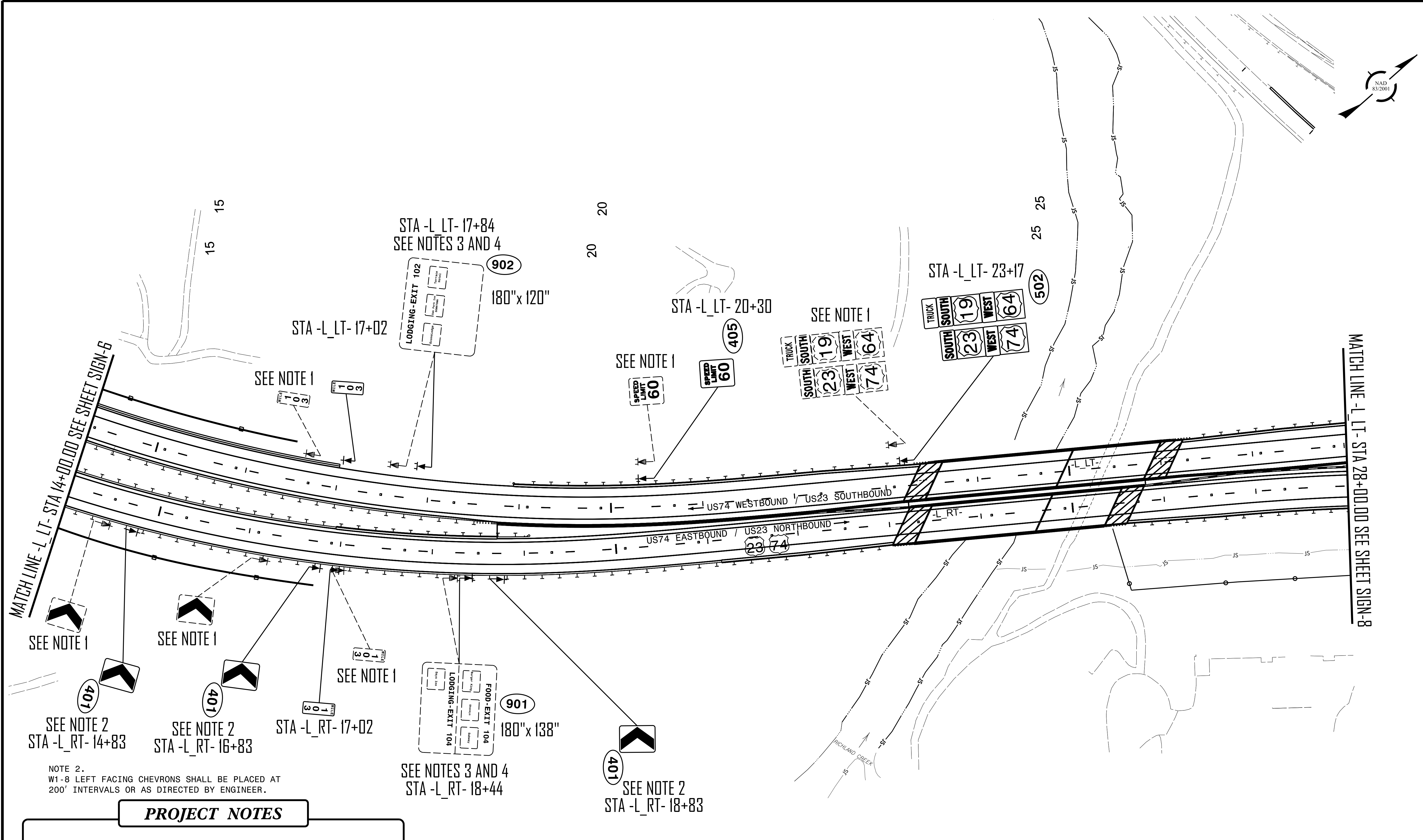
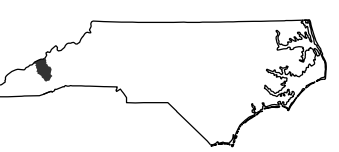
PREPARED BY  
**AECOM**  
NC FIRM LICENSE No. F-0342  
5438 Wade Park Blvd., Ste 200  
Raleigh, NC 27607  
919-854-6200



**PROJECT NOTES**

1. DISPOSAL OF SIGN SYSTEM, U-CHANNEL
3. RELOCATE EXISTING SIGN, TYPE A
4. DISPOSAL OF SIGN SUPPORTS, STEEL BEAM
5. DISPOSAL OF SIGN SYSTEM, STEEL BEAM
6. DISPOSAL OF SIGN SYSTEM, OVERHEAD

**EXISTING AND PROPOSED SIGNS**  
STA -L LT- TO 14+00



MATCH LINE -L- LT- STA 28+00.00 SEE SHEET SIGN-8

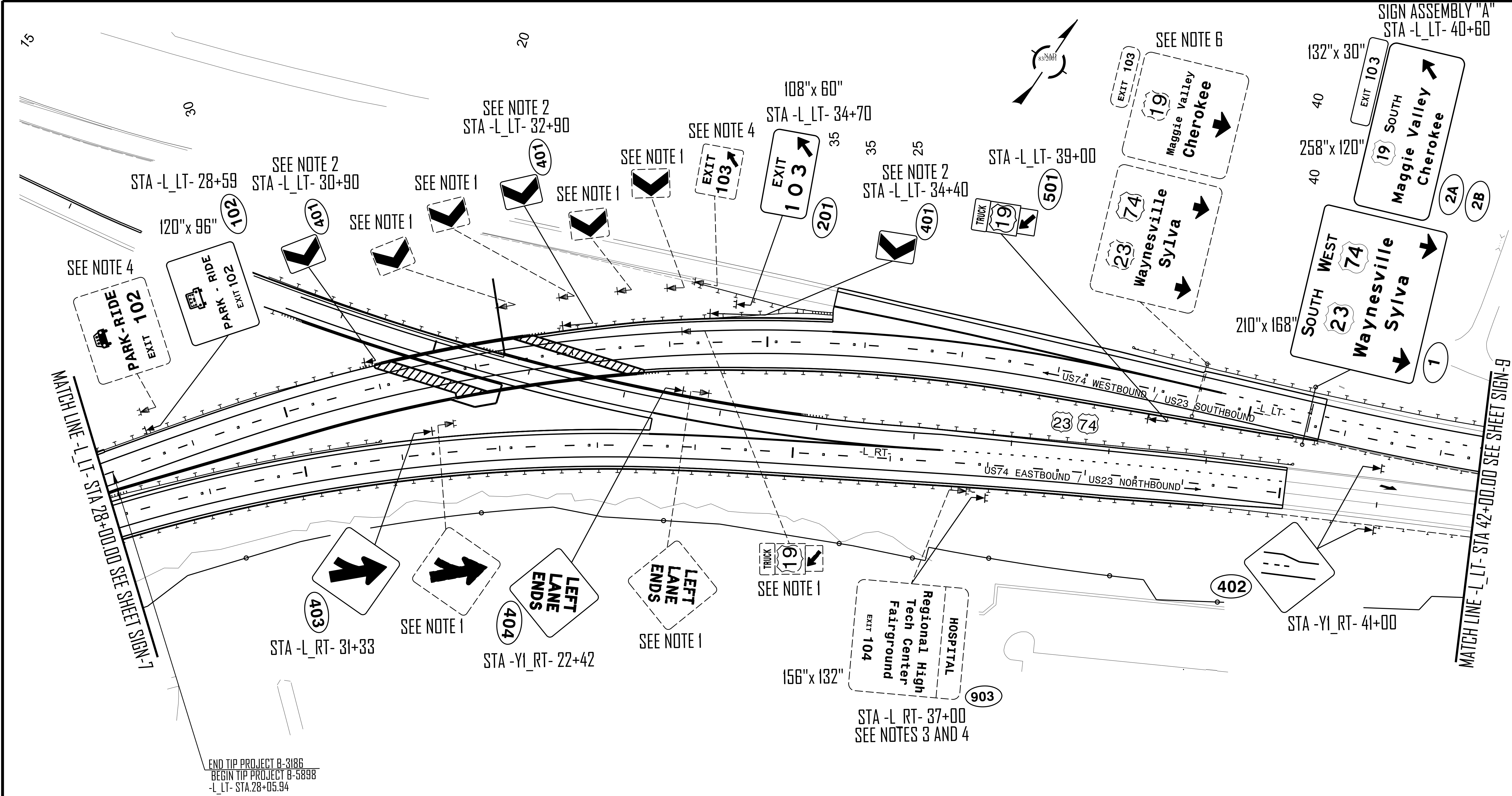
MATCH LINE -L- LT- STA 14+00.00 SEE SHEET SIGN-6

NOTE 2.  
W1-8 LEFT FACING CHEVRONS SHALL BE PLACED AT  
200' INTERVALS OR AS DIRECTED BY ENGINEER.

**PROJECT NOTES**

1. DISPOSAL OF SIGN SYSTEM, U-CHANNEL
3. RELOCATE EXISTING SIGN, TYPE A
4. DISPOSAL OF SIGN SUPPORTS, STEEL BEAM
5. DISPOSAL OF SIGN SYSTEM, STEEL BEAM
6. DISPOSAL OF SIGN SYSTEM, OVERHEAD

**EXISTING AND PROPOSED SIGNS**  
STA -L- LT- 14+00 TO 28+00



NOTE 2.  
 W1-8 LEFT FACING CHEVRONS SHALL BE PLACED AT  
 200' INTERVALS OR AS DIRECTED BY ENGINEER.

**PROJECT NOTES**

1. DISPOSAL OF SIGN SYSTEM, U-CHANNEL
3. RELOCATE EXISTING SIGN, TYPE A
4. DISPOSAL OF SIGN SUPPORTS, STEEL BEAM
5. DISPOSAL OF SIGN SYSTEM, STEEL BEAM
6. DISPOSAL OF SIGN SYSTEM, OVERHEAD

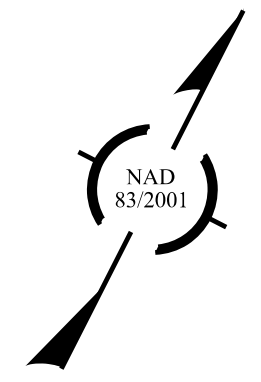
**EXISTING AND PROPOSED SIGNS**  
 STA -L\_LT- 28+00 TO 42+00

B-3186/B-5898  
 SIGN 8  
 NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 HAYWOOD COUNTY  
 ROADWAY DESIGN UNIT  
 TRANSPORTATION  
 ENGINEER  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 018122  
 JEFFREY W. HAYWOOD  
 12/12/2023

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

PREPARED BY  
**AECOM**  
 NC FIRM LICENSE No. P-0342  
 5438 Wade Park Blvd., Ste 200  
 Raleigh, NC 27607  
 919-854-6200

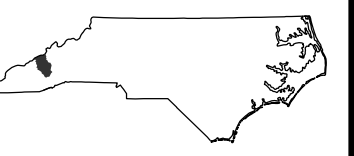
NO PROPOSED SIGNING ON THIS SHEET  
FOR REFERENCE ONLY



B-3186/B-5898

SIGN 9

NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HAYWOOD COUNTY



ROADWAY DESIGN UNIT

TRANSPORTATION  
ENGINEER



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PREPARED BY  
**AECOM**  
NC FIRM LICENSE No. F-0342  
5438 Wade Park Blvd., Ste 200  
Raleigh, NC 27607  
919-854-6200

MATCH LINE -L\_LT- STA 42+00.00 SEE SHEET SIGN-8

END TIP PROJECT B 5898  
-L\_LT- STA 43+86.30

-L\_LT-  
← US74 WESTBOUND / US23 SOUTHBOUND

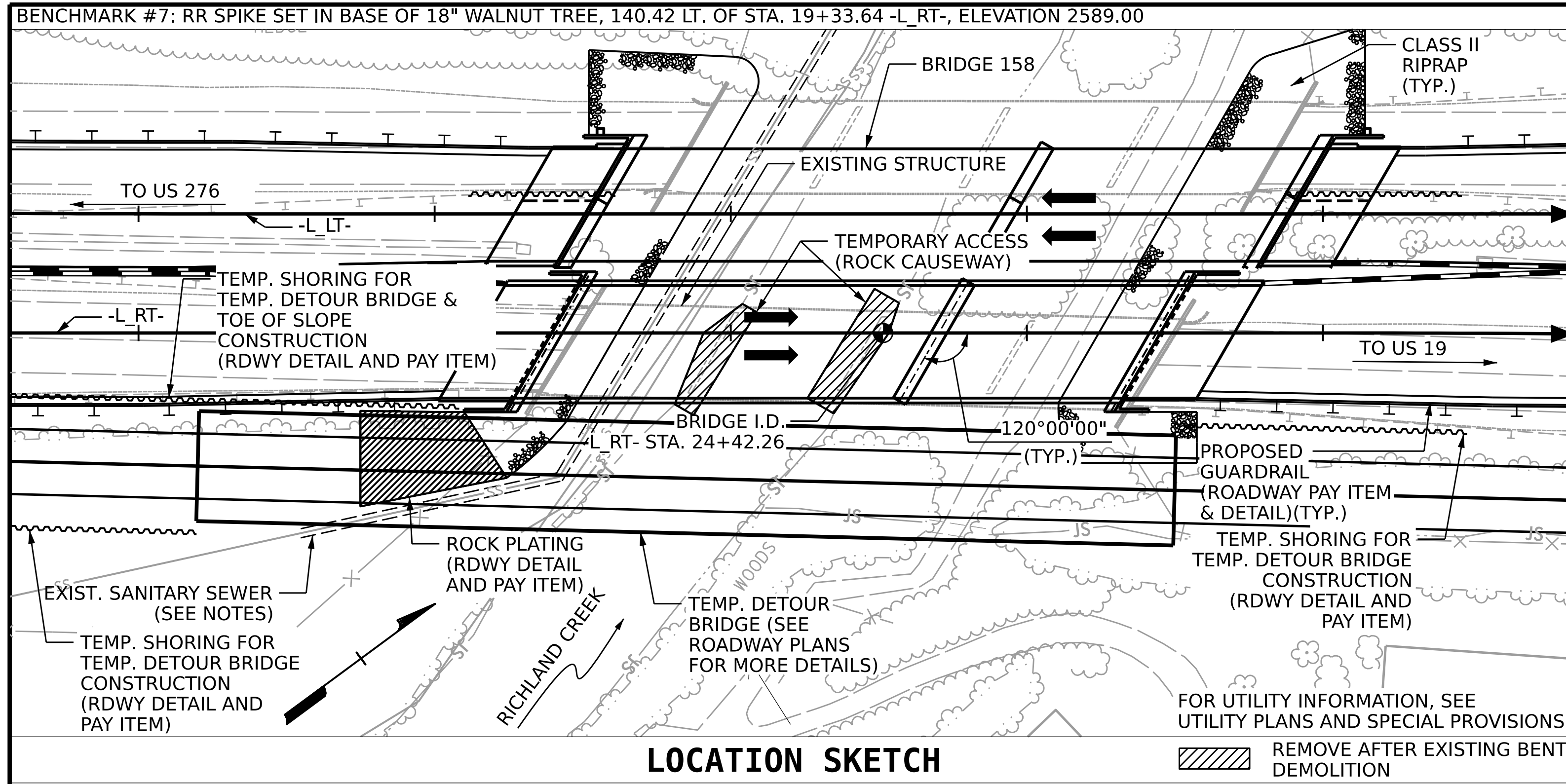


-L\_RT- US74 EASTBOUND / US23 NORTHBOUND →

45  
45

50  
50

EXISTING SIGNS  
STA -L\_LT- 42+00 TO END PROJECT



LOCATION SKETCH

GENERAL NOTES:

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC-18 EVALUATING SCOUR AT BRIDGES."

THE SCOUR CRITICAL ELEVATION FOR BENT NO. 1 LEFT SIDE AND RIGHT SIDE ARE 2541 FT AND 2551 FT, RESPECTIVELY. SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION & RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THE ELEVATIONS AND CLEARANCES SHOWN ON THE PLANS AT THE POINTS OF MINIMUM VERTICAL CLEARANCE ARE FROM THE BEST INFORMATION AVAILABLE. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, VERIFY THE ELEVATIONS ON THE EXISTING PAVEMENT AND CHECK THE CLEARANCE. REPORT ANY VARIATIONS TO THE ENGINEER. ANY PLAN REVISIONS NECESSARY TO ACHIEVE THE REQUIRED MINIMUM VERTICAL CLEARANCE WILL BE PROVIDED BY THE DEPARTMENT.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD FOR THE EXISTING STRUCTURE, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 24+42.26 -L\_RT-".

AT CONTRACTOR'S OPTION, THE EXISTING STRUCTURE CONCRETE MAY BE RUBBLIZED DURING REMOVAL AND USED AS STABILIZATION/ABCM.

THE CLASS AA CONCRETE IN THE BRIDGE DECK SHALL CONTAIN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG AT THE SUBSTITUTION RATE SPECIFIED IN ARTICLE 1024-1 AND IN ACCORDANCE WITH ARTICLES 1024-5 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 REINFORCED CONCRETE DECK SLAB.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA ON SHEET 1 OF 4 SHALL BE EXCAVATED FOR A DISTANCE OF 25 FT. LEFT OF CENTERLINE -L\_RT- AND 59 FT. RIGHT OF CENTERLINE -L\_RT- AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE SAMPLE BARS SHOULD COME FROM STEEL ACTUALLY USED IN THE PROJECT AND THE SAMPLE BARS SHOULD BE REPLACED BY SPLICED BARS AS SPECIFIED IN THE SAMPLE BAR REPLACEMENT CHART. PAYMENT FOR THE SAMPLE BARS AND REPLACEMENT REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

REMOVAL 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 REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE LOCATION OF THE CONSTRUCTION JOINT IN THE DRILLED PIERS IS BASED ON AN APPROXIMATE GROUND LINE ELEVATION. IF THE CONSTRUCTION JOINT IS ABOVE THE ACTUAL GROUND ELEVATION, THE CONTRACTOR SHALL PLACE THE CONSTRUCTION JOINT 1 FT. BELOW THE GROUND LINE.

THE LOCATION OF THE ABOVE GROUND SANITARY SEWER SHOWN IS BASED ON AN APPROXIMATE SURVEY. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, CONTRACTOR SHALL VERIFY THE LOCATION OF THE SANITARY SEWER AND ENSURE THAT THE UTILITY IS PROTECTED DURING THE REMOVAL OF THE EXISTING STRUCTURE AND DURING THE CONSTRUCTION OF THE PROPOSED STRUCTURES.

THE CONTRACTOR WILL BE REQUIRED TO CONSTRUCT, MAINTAIN, AND AFTERWARDS REMOVE A TEMPORARY STRUCTURE AT STATION 24+42.26 -L\_RT- FOR USE DURING CONSTRUCTION OF THE PROPOSED STRUCTURE. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE, SEE SPECIAL PROVISIONS.

THE BRIDGE RAILS ON THE TEMPORARY STRUCTURE SHALL BE DESIGNED FOR THE AASHTO LRFD TEST LEVEL 3 (TL-3) CRASH TEST CRITERIA. FOR CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURE, SEE SPECIAL PROVISIONS.

THE CONTRACTOR'S ATTENTION SHALL BE DRAWN TO THE FACT THAT ONLY 50% OF THE CHANNEL WILL BE ALLOWED TO BE BLOCKED AT ANY TIME.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

SAMPLE BAR REPLACEMENT

SIZE	SIZE
#3	6'-2"
#4	7'-4"
#5	8'-6"
#6	9'-8"
#7	10'-10"
#8	12'-0"
#9	13'-2"
#10	14'-6"
#11	15'-10"

NOTE:

SAMPLE BAR REPLACEMENT LENGTHS BASED ON 30" (SAMPLE LENGTH) PLUS TWO SPlice LENGTHS AND fy = 60ksi. BAR LENGTHS IN THIS TABLE ARE A GUIDE. THE ENGINEER SHALL APPROVE FINAL LENGTHS BASED ON TYPE AND LOCATION OF SAMPLE BAR.

NOTES CONT'D:

AT THE CONTRACTOR'S OPTION, AND UPON REMOVAL OF THE CAUSEWAY, THE CLASS II RIP RAP USED IN THE CAUSEWAY MAY BE PLACED AS RIP RAP SLOPE PROTECTION. SEE SPECIAL PROVISIONS FOR CONSTRUCTION, MAINTENANCE, AND REMOVAL OF TEMPORARY ACCESS AT STATION 24+42.26 -L\_RT-

THE EXISTING STRUCTURE CONSISTING OF 4 SPANS AT 50FT OF CONCRETE DECK ON ROLLED STEEL W-SHAPE GIRDER, WITH 28.0 FT CLEAR ROADWAY WIDTH, SUPPORTED BY PILE BENT CONCRETE END BENTS AND CONCRETE POST AND BEAM BENTS ON ISOLATED SPREAD FOOTINGS, AND LOCATED AT THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

TOTAL BILL OF MATERIAL

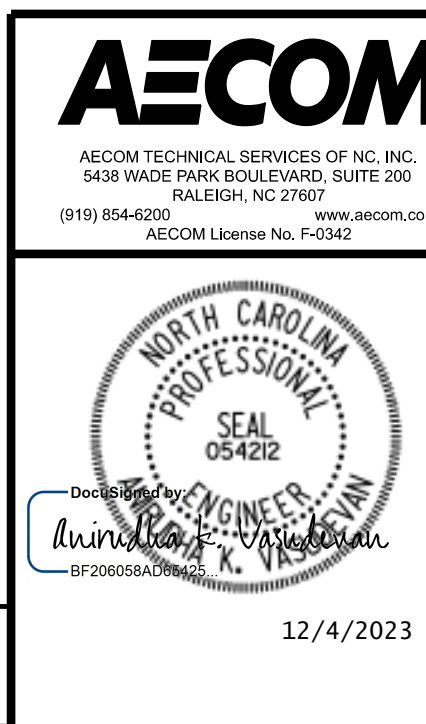
	CONSTRUCTION, MAINT., AND REMOVAL OF TEMPORARY STRUCTURE AT STA. 24+42.26 -L_RT-	CONSTRUCTION, MAINT., AND REMOVAL OF TEMPORARY ACCESS AT STA. 24+42.26 -L_RT-	REMOVAL OF EXISTING STRUCTURE AT STA. 24+42.26 -L_RT-	ASEBESTOS ASSESSMENT	4'-6" Ø DRILLED PIERS IN SOIL	4'-6" Ø DRILLED PIERS NOT IN SOIL	PERMANENT STEEL CASING FOR 4'-6" Ø DRILLED PIER	PDA TESTING	SID TESTING	CSL TESTING	UNCLASSIFIED STRUCTURE EXCAVATION AT STA. 24+42.26
	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	EACH	LUMP SUM
SUPERSTRUCTURE											
END BENT 1											
BENT 1					65.9	25.6	54.9		3	3	
END BENT 2											
TOTAL	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	65.9	25.6	54.9	1	3	3	LUMP SUM

TOTAL BILL OF MATERIAL

	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	SPIRAL COLUMN REINFORCING STEEL	54" F.I.B. PRESTRESSED CONCRETE GIRDER	PILE DRIVING EQUIPMENT SETUP FOR HP 14X73 STEEL PILES	HP 14X73 STEEL PILES	STEEL PILE POINTS	PILE REDRIVES	CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS
	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	LBS.	NO. LIN. FT.	EACH	NO. LIN. FT.	EACH	EACH	LIN. FT.	TON	SQ. YDS.	LUMP SUM
SUPERSTRUCTURE	8,480	8,911					12 1,223.8					461.1			
END BENT 1			47.7		7,529			12	12	360	12		174	193	
BENT 1			50.9		16,847	3,167									
END BENT 2			47.7		7,618			10	10	390	10		287	318	
TOTAL	8,480	8,911	146.3	LUMP SUM	31,994	3,167	12 1,223.8	22	22	750	22	11	461.1	461	511 LUMP SUM

DRAWN BY: A.R. VAN VUREN DATE: 03/2023  
 CHECKED BY: A.K. VASUDEVAN DATE: 04/2023  
 DESIGN ENGINEER OF RECORD: A.K. VASUDEVAN DATE: 06/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

GENERAL DRAWING

FOR BRIDGE ON US74 EB/US23 NB OVER RICHLAND CREEK BETWEEN US276 AND US19

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S2-04
2			4			TOTAL SHEETS 31