

09/08/99

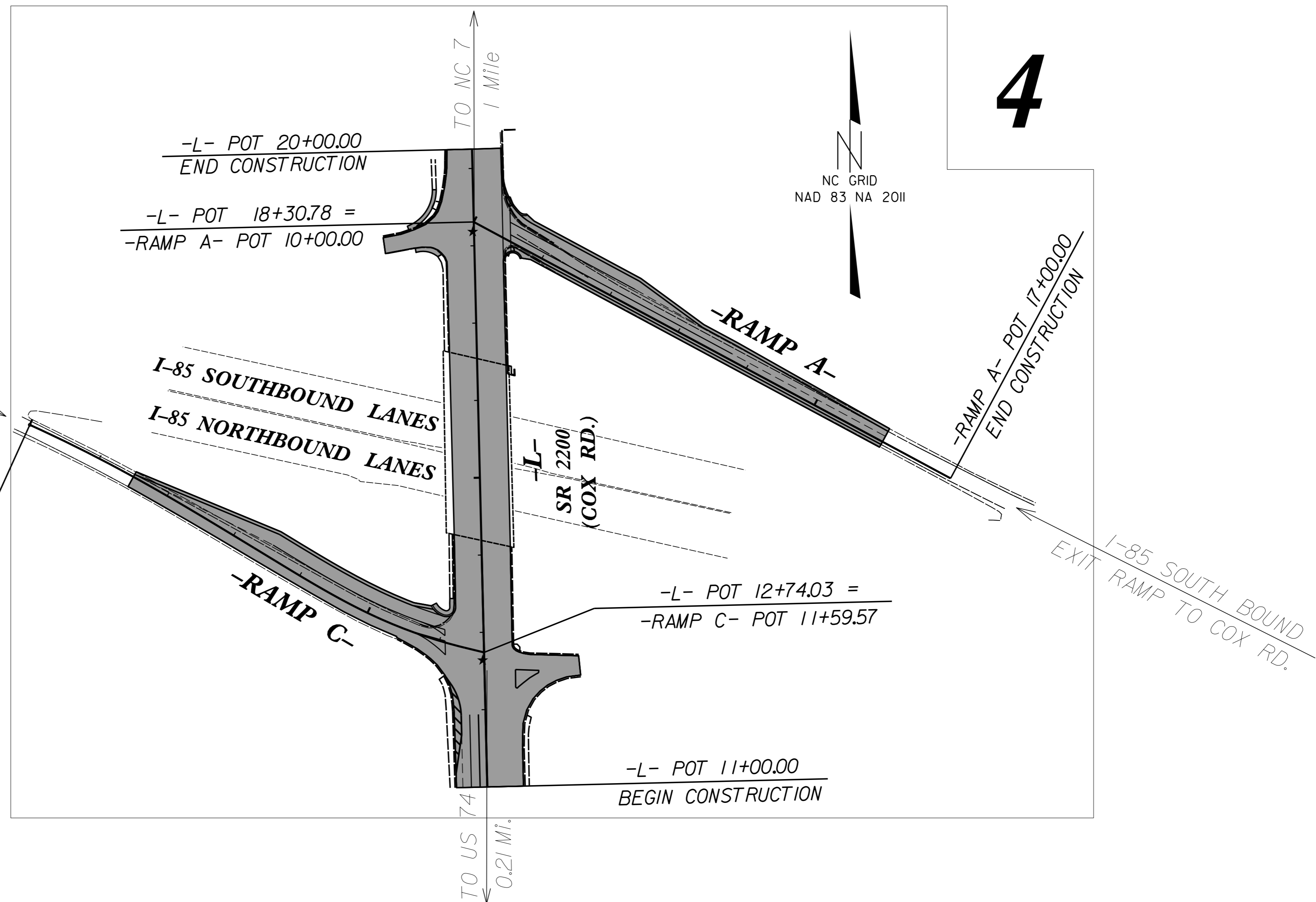
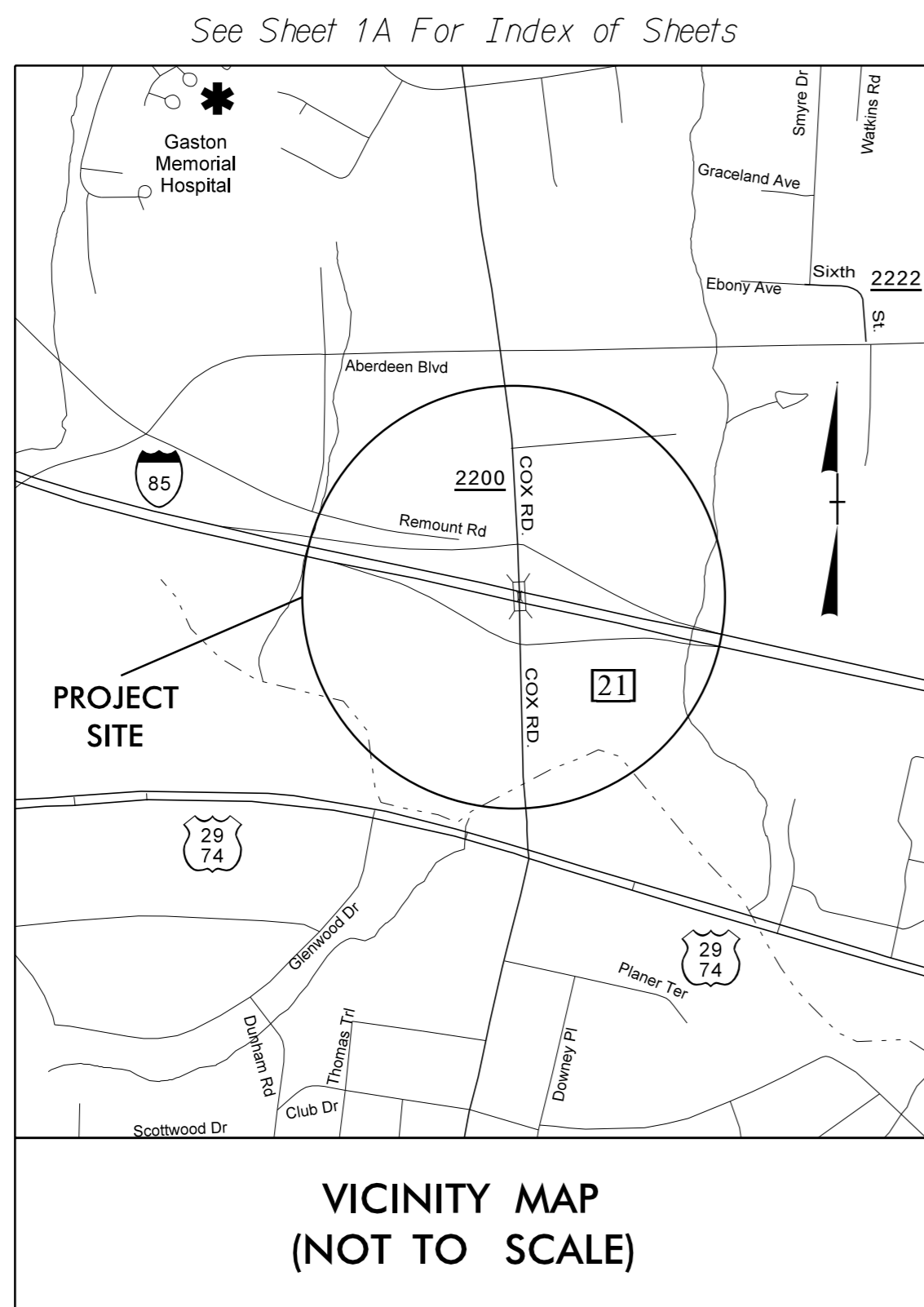
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5713	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50132.1.FS1		PE	
50132.3.1		CONSTR.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GASTON COUNTY**

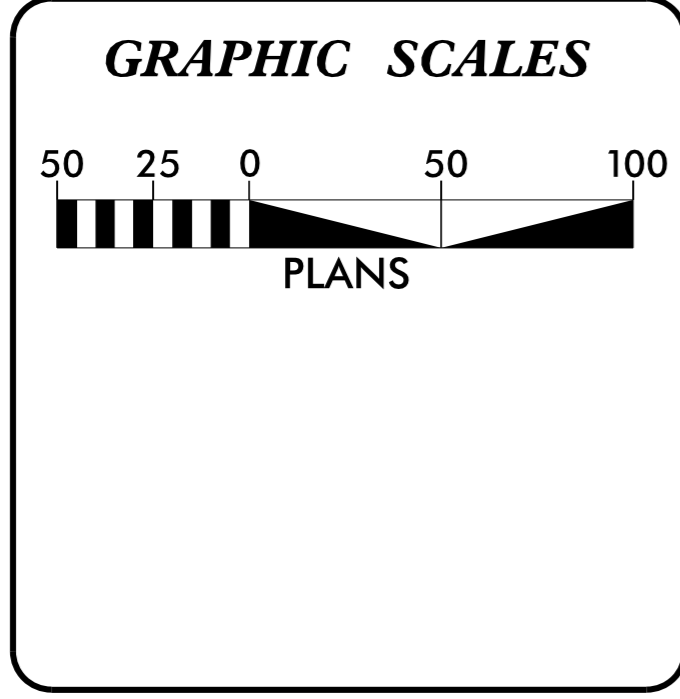
LOCATION: I-85 NORTH & SOUTH BOUND OFF RAMP AT  
SR 2200 (COX RD.)

TYPE OF WORK: GRADING, PAVING, PAVEMENT MARKINGS, PAVEMENT  
MARKERS AND SIGNALS.



TIP PROJECT: I-5713

CONTRACT: DL00184



DESIGN DATA

ADT 2015 = 33,000

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT I-5713 = 0.291 MILES

TOTAL LENGTH OF TIP PROJECT I-5713 = 0.291 MILES

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1710 East Marion St., Shelby NC, 28150

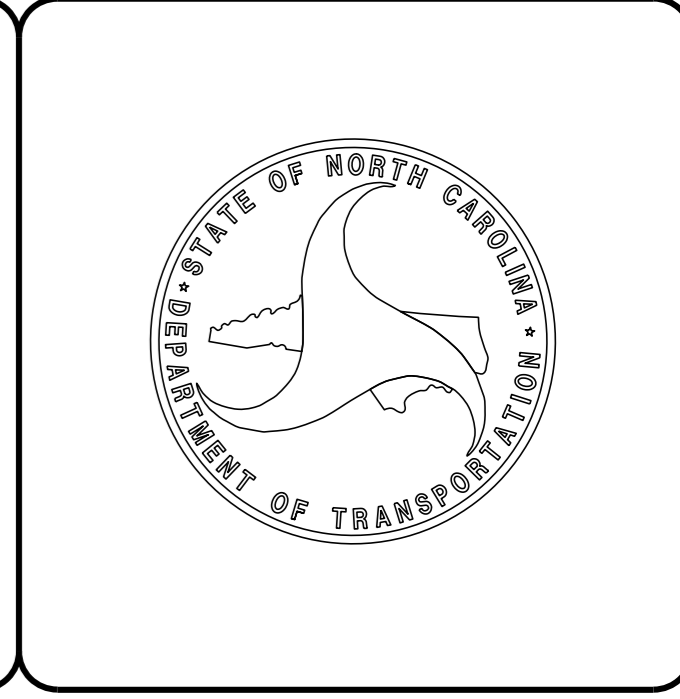
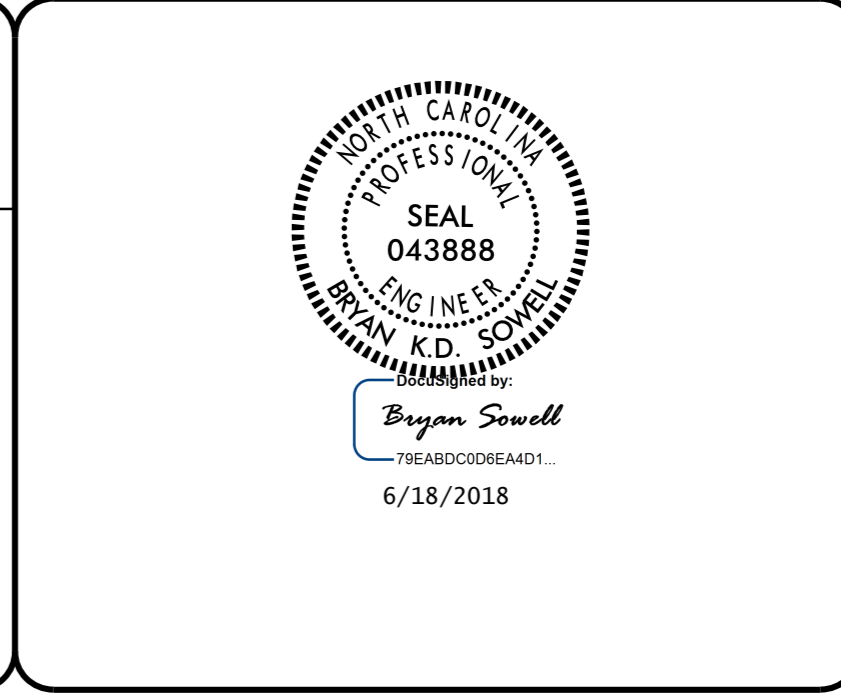
2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
NA

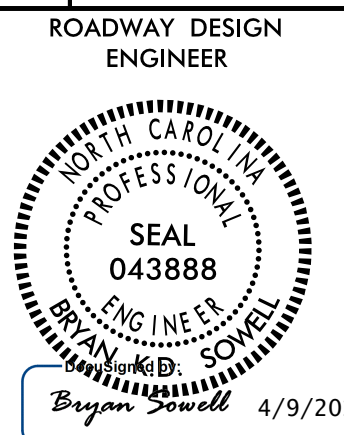
LETTING DATE:  
JULY 10, 2018

J.B. McSWAIN  
PROJECT TEAM LEAD

B.K. SOWELL, PE  
PROJECT DESIGN ENGINEER



18-JUN-2018 13:20  
R:\Roadway\Proj\Final\Drawings\I-5713-Rdy-fsh-1.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$



**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

INDEX OF SHEETS		2018 SPECIFICATIONS EFFECTIVE 1/16/2018	STANDARD DRAWINGS	
SHEET NUMBER	SHEET	GENERAL NOTES	2018 ROADWAY STD. DRAWINGS	EFF. 1/16/2018
1	TITLE SHEET	THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.	THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - HIGHWAY DESIGN BRANCH - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, NC, DATED JANUARY 16, 2018 AND THE LATEST REVISION THERETO ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:	
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS		STD. NO.	TITLE
1B	CONVENTIONAL SYMBOLS		200.03	METHOD OF CLEARING - METHOD III
1C-1	SURVEY CONTROL SHEETS	CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.	560.02	METHOD OF SHOULDER CONSTRUCTION
2A-1 THRU 2A-2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS		838.05	CONCRETE 'L' ENDWALL FOR SINGLE PIPE CULVERTS - 15" THRU 48" PIPE
3B-1	ROADWAY SUMMARIES	NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT, THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.	846.01	CONCRETE CURB, GUTTER AND CURB AND GUTTER
4	PLAN AND PROFILE SHEET		848.01	CONCRETE SIDEWALK
TMP-1 THRU TMP-7	TRAFFIC MANAGEMENT PLANS	ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.	848.05	CURB RAMP - PROPOSED CURB AND GUTTER
PMP-1	PAVEMENT MARKING PLANS		876.04	DRAINAGE DITCHES WITH CLASS 'B' RIP RAP
EC-1 THRU EC-2	EROSION CONTROL PLANS	CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL RAMPS IN ACCORDANCE WITH STD. 848.05 AND AS DIRECTED BY THE ENGINEER.	904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
SIGN-1 THRU SIGN-7	SIGNING PLANS		1205.08	PAVEMENT MARKINGS
SIG-1 THRU SIG-5.4	SIGNAL PLANS	RAMP LOGO AND GENERAL SERVICE SIGNS MUST BE MAINTAINED IN VISIBLE LOCATIONS DURING THE LIFE OF THE PROJECT BY MEANS OF WOOD POLES PER SIGNING PLANS AND AS DIRECTED AND APPROVED BY THE ENGINEER.	1253.01	SNOWFLOWABLE RAISED PAVEMENT MARKERS
X-1 THRU X-7	CROSS-SECTIONS			

# STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	----->
Property Monument	□ EDM
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-----MLB
Proposed Wetland Boundary	-----MLB
Existing Endangered Animal Boundary	-----EAB
Existing Endangered Plant Boundary	-----EPB
Existing Historic Property Boundary	-----HPB
Known Contamination Area: Soil	☠-S-☠
Potential Contamination Area: Soil	??-S-??
Known Contamination Area: Water	☠-W-☠
Potential Contamination Area: Water	??-W-??
Contaminated Site: Known or Potential	☠??

### BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

### HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	-----JS
Buffer Zone 1	-----BZ 1
Buffer Zone 2	-----BZ 2
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	▽

### RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

### RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	◆
Exist Permanent Easement Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	▲
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	-----
New Right of Way Line with Pin and Cap	-----
New Right of Way Line with Concrete or Granite RW Marker	-----
New Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
New Control of Access	-----
Existing Easement Line	-----E
New Temporary Construction Easement	-----E
New Temporary Drainage Easement	-----TDE
New Permanent Drainage Easement	-----PDE
New Permanent Drainage / Utility Easement	-----DUE
New Permanent Utility Easement	-----PUE
New Temporary Utility Easement	-----TUE
New Aerial Utility Easement	-----AUE

### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----C
Proposed Slope Stakes Fill	-----F
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----

### VEGETATION:

Single Tree	☼
Single Shrub	☼

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	-----

### EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○
Storm Sewer	-----S

### UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	-----
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	-----P
U/G Power Line LOS C (S.U.E.*)	-----P
U/G Power Line LOS D (S.U.E.*)	-----P

### TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	-----T
U/G Telephone Cable LOS C (S.U.E.*)	-----T
U/G Telephone Cable LOS D (S.U.E.*)	-----T
U/G Telephone Conduit LOS B (S.U.E.*)	-----TC
U/G Telephone Conduit LOS C (S.U.E.*)	-----TC
U/G Telephone Conduit LOS D (S.U.E.*)	-----TC
U/G Fiber Optics Cable LOS B (S.U.E.*)	-----T FO
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----T FO
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----T FO

### WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	-----W
U/G Water Line LOS C (S.U.E.*)	-----W
U/G Water Line LOS D (S.U.E.*)	-----W
Above Ground Water Line	-----A/G Water

### TV:

TV Pedestal	⊠
TV Tower	⊗
U/G TV Cable Hand Hole	-----
U/G TV Cable LOS B (S.U.E.*)	-----TV
U/G TV Cable LOS C (S.U.E.*)	-----TV
U/G TV Cable LOS D (S.U.E.*)	-----TV
U/G Fiber Optic Cable LOS B (S.U.E.*)	-----TV FO
U/G Fiber Optic Cable LOS C (S.U.E.*)	-----TV FO
U/G Fiber Optic Cable LOS D (S.U.E.*)	-----TV FO

### GAS:

Gas Valve	◇
Gas Meter	◇
U/G Gas Line LOS B (S.U.E.*)	-----G
U/G Gas Line LOS C (S.U.E.*)	-----G
U/G Gas Line LOS D (S.U.E.*)	-----G
Above Ground Gas Line	-----A/G Gas

### SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----SS
Above Ground Sanitary Sewer	-----A/G Sanitary Sewer
SS Forced Main Line LOS B (S.U.E.*)	-----FSS
SS Forced Main Line LOS C (S.U.E.*)	-----FSS
SS Forced Main Line LOS D (S.U.E.*)	-----FSS

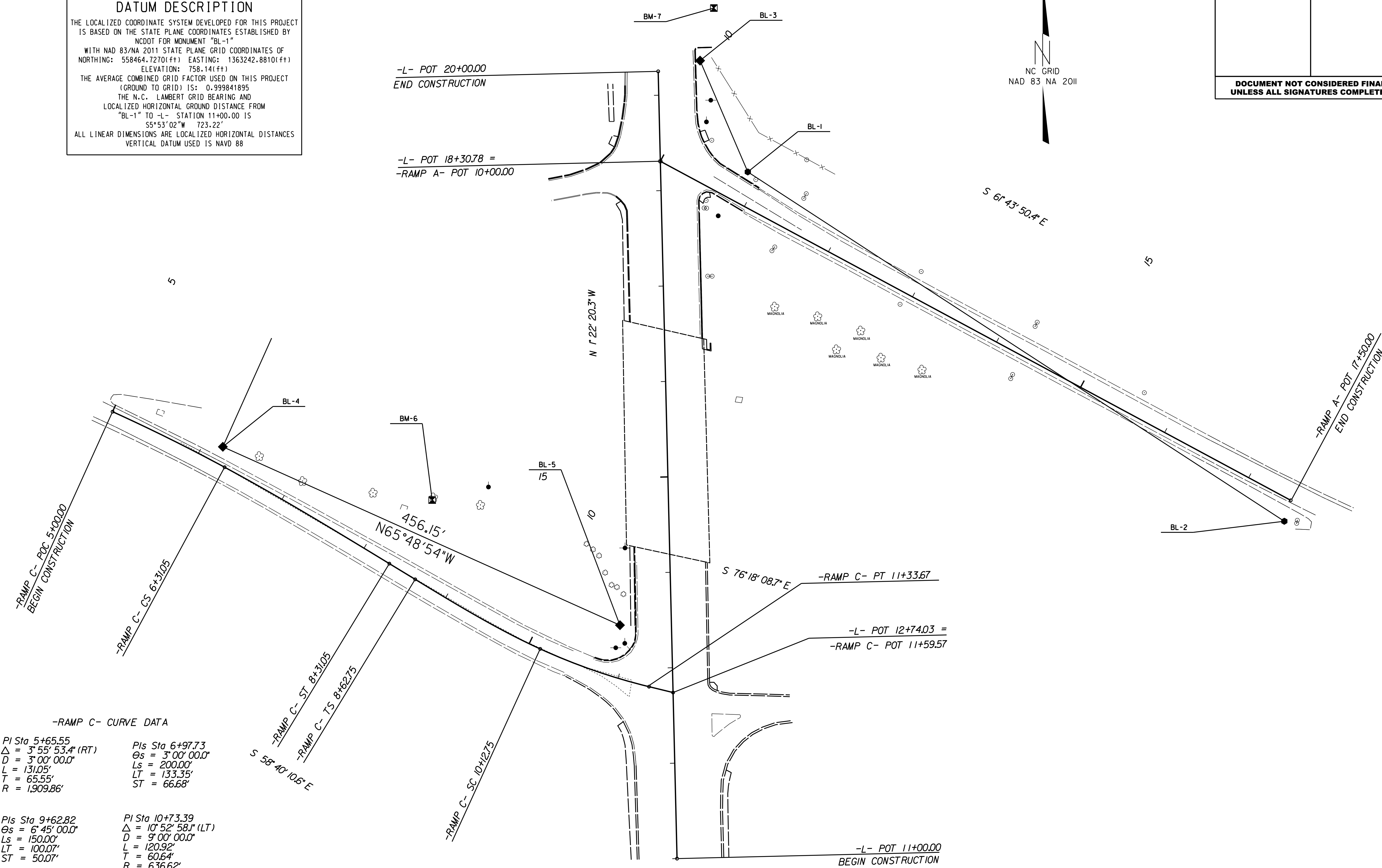
### MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	-----?U/L
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
1-5713	1C-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL-1" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 558464.7270(±ft) EASTING: 1363242.8810(±ft) ELEVATION: 758.14(±ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999841895 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-1" TO -L- STATION 11+00.00 IS S5°53'02"W 723.22' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



-RAMP C- CURVE DATA

PI Sta 5+65.55	PIs Sta 6+97.73
Δ = 3°55'53.4" (RT)	Θs = 3°00'00.0"
D = 3°00'00.0"	Ls = 200.00'
L = 131.05'	LT = 133.35'
T = 65.55'	ST = 66.68'
R = 1,909.86'	

PIs Sta 9+62.82	PI Sta 10+73.39
Θs = 6°45'00.0"	Δ = 10°52'58.1" (LT)
Ls = 150.00'	D = 9°00'00.0"
LT = 100.07'	L = 120.92'
ST = 50.07'	T = 60.64'
	R = 636.62'

NOTE: DRAWING NOT TO SCALE

REVISIONS

8/17/99

03-APR-2018 09:19 Final Plansheets\15713.LS.LC-1.dgn

PROJECT  
SURVEYOR

PROPOSED ALIGNMENT

RAMPC POINT	N	E	BEARING	DIST	DELTA	D	L	T	R	DELTA S	Ls	LT	ST
PC CURVE	558213.528	1362577.256											
CS SPIRAL	558155.342	1362694.652	S 63°38'07.3" E	131.02	03°55'53.4"(RT)	03°00'00.0"	131.05	65.55	1909.86				
ST	558054.357	1362867.256	S 59°40'10.6" E	199.98						03°00'00.0"(RT)	200.00	133.35	66.68
TS LINE	558037.876	1362894.331	S 58°40'10.6" E	31.70									
SC SPIRAL	557965.015	1363025.341	S 60°55'09.7" E	149.91						06°45'00.0"(LT)	150.00	100.07	50.07
PT CURVE	557925.430	1363139.405	S 70°51'39.7" E	120.74	10°52'58.1"(LT)	09°00'00.0"	120.92	60.64	636.62				
POT	557919.296	1363164.573	S 76°18'08.7" E	25.90									

L POINT	N	E	BEARING	DIST
POT	557745.316	1363168.740		
LINE			N 01°22'20.3" W	900.00
POT	558645.057	1363147.186		

BASELINE

BY-A POINT	DESC.	NORTH	EAST	ELEVATION	RAMPA STATION	OFFSET
3	BL-3	558581.3143	1363192.8520	764.79	OUTSIDE PROJECT LIMITS	
1	BL-1	558464.7270	1363242.8810	758.14	10+86.00	33.58 LT
2	BL-2	558098.7400	1363805.0850	728.91	OUTSIDE PROJECT LIMITS	

BASELINE ALIGNMENT

BY-A POINT	N	E	BEARING	DIST
POT	558581.314	1363192.852		
LINE			S 23°13'29.1" E	126.87
POT	558464.727	1363242.881		
LINE			S 56°56'11.2" E	670.84
POT	558098.740	1363805.085		

BY-C POINT	N	E	BEARING	DIST
POT	558176.732	1362692.790		
LINE			S 65°48'53.7" E	456.15
POT	557989.854	1363108.903		

BY-C POINT	DESC.	NORTH	EAST	ELEVATION	RAMPC STATION	OFFSET
4	BL-4	558176.7320	1362692.7900	718.72	6+19.37	17.98 LT
5	BL-5	557989.8539	1363108.9025	739.63	10+84.60	53.64 LT

```

*****
BM-6      ELEVATION = 723.77
N 558121  E 1362912
RAMPC STATION 8+35.00 80 LEFT
BM-6    R. R. SPIKE IN TREE
*****
BM-7      ELEVATION = 768.35
N 558636  E 1363207
L STATION 19+90.00 60 RIGHT
BM-7    BENCH TIE IN POWER POLE
*****

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NOTES:

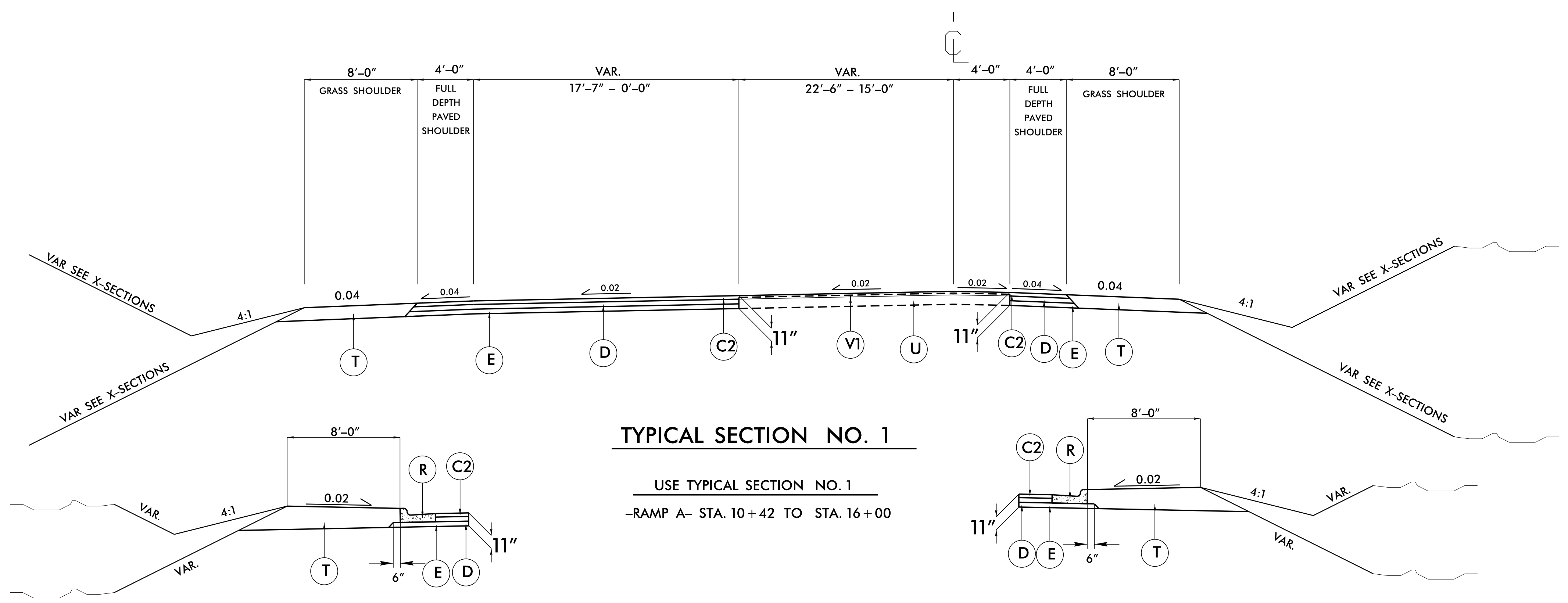
- IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

NOT TO SCALE

REVISIONS

6/2/99

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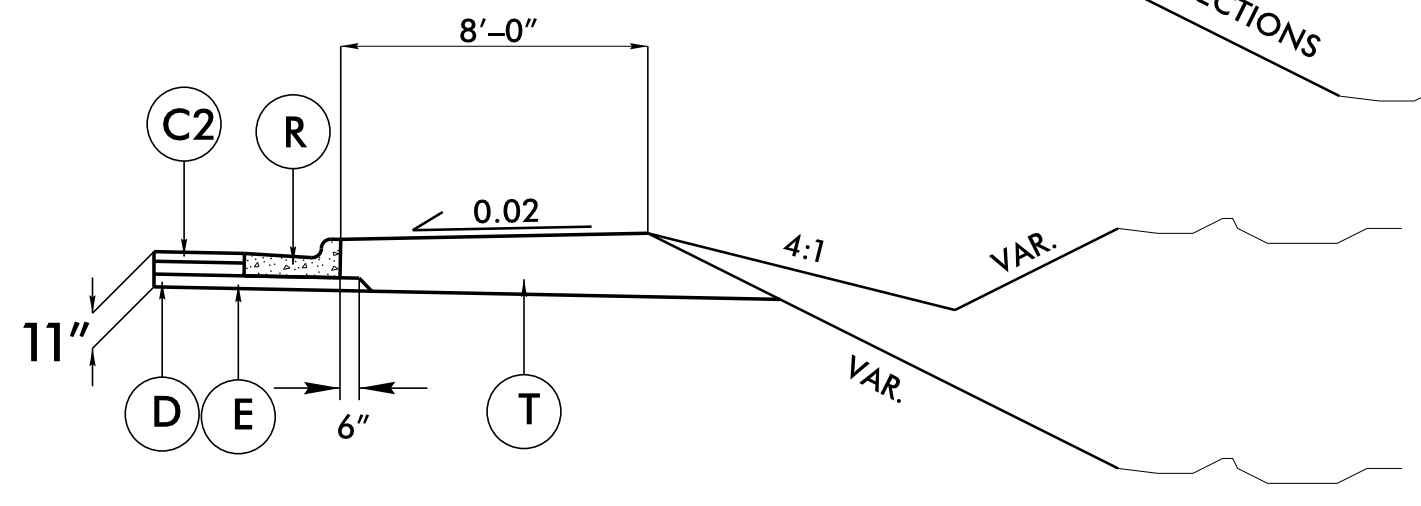


**TYPICAL SECTION NO. 1**

USE TYPICAL SECTION NO. 1  
-RAMP A- STA. 10+42 TO STA. 16+00

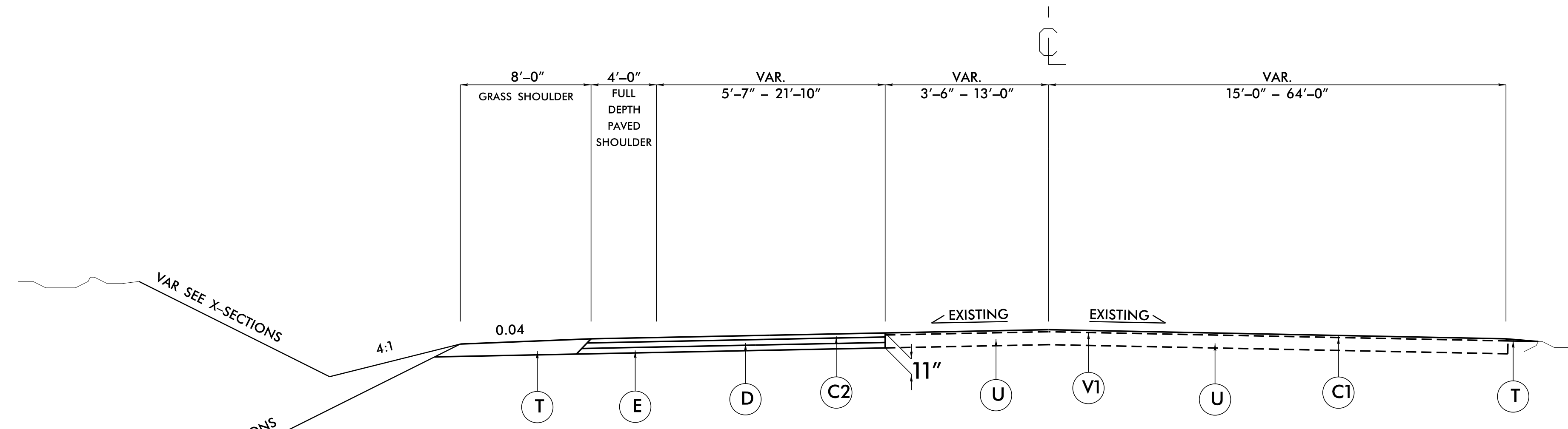
**INSET A** (DETAIL FOR 2'6" C&G)

USE INSET A  
-RAMP A- STA. 10+00 TO STA. 10+56 LT



**INSET B** (DETAIL FOR 2'6" C&G)

USE INSET B  
-RAMP A- STA. 10+57 TO STA. 10+77 RT



**TYPICAL SECTION NO. 2**

USE TYPICAL SECTION NO. 2  
-RAMP C- STA. 6+50 TO STA. 11+20

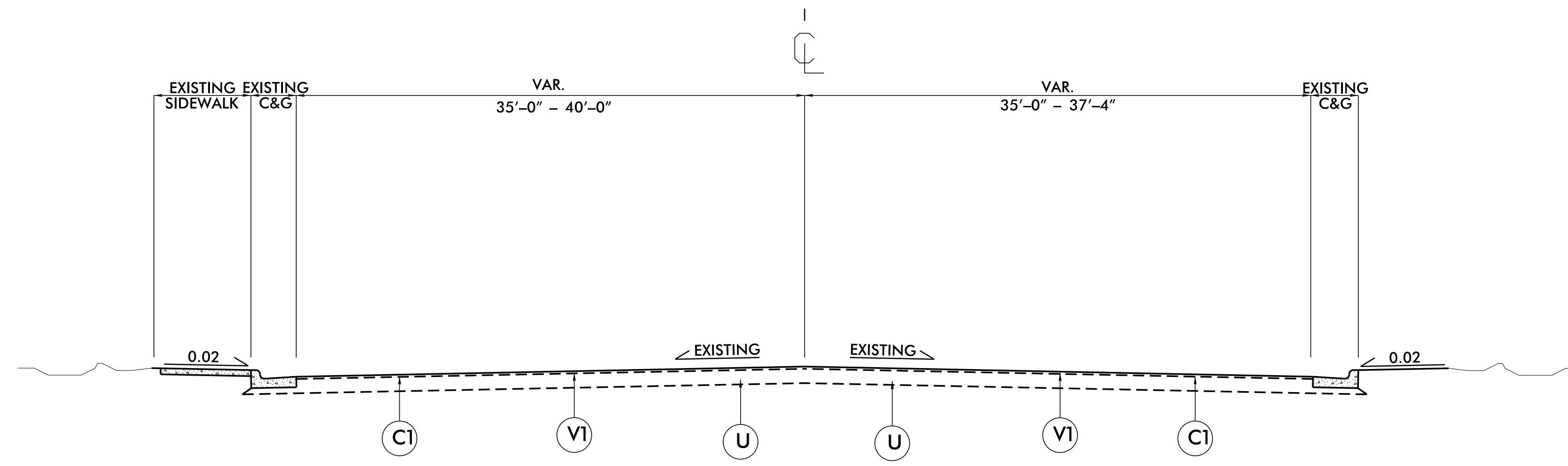
**INSET C** (DETAIL FOR 2'6" C&G AND 5' SIDEWALK)

USE INSET C  
-RAMP C- STA. 10+75 TO STA. 11+04 LT

PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN	
C1	PROP. APPROX. 1.5" OF ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LB. PER SQ. YARD.
C2	PROP. APPROX. 3.0" OF ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LB. PER SQ. YARD IN EACH OF TWO LAYERS.
D	PROP. APPROX. 4" OF ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LB. PER SQ. YARD.
E	PROP. APPROX. 4.0" OF ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LB. PER SQ. YARD.
R	2'-6" CONCRETE CURB AND GUTTER.
S	CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING BITUMINOUS PAVEMENT. 1.5" DEPTH.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

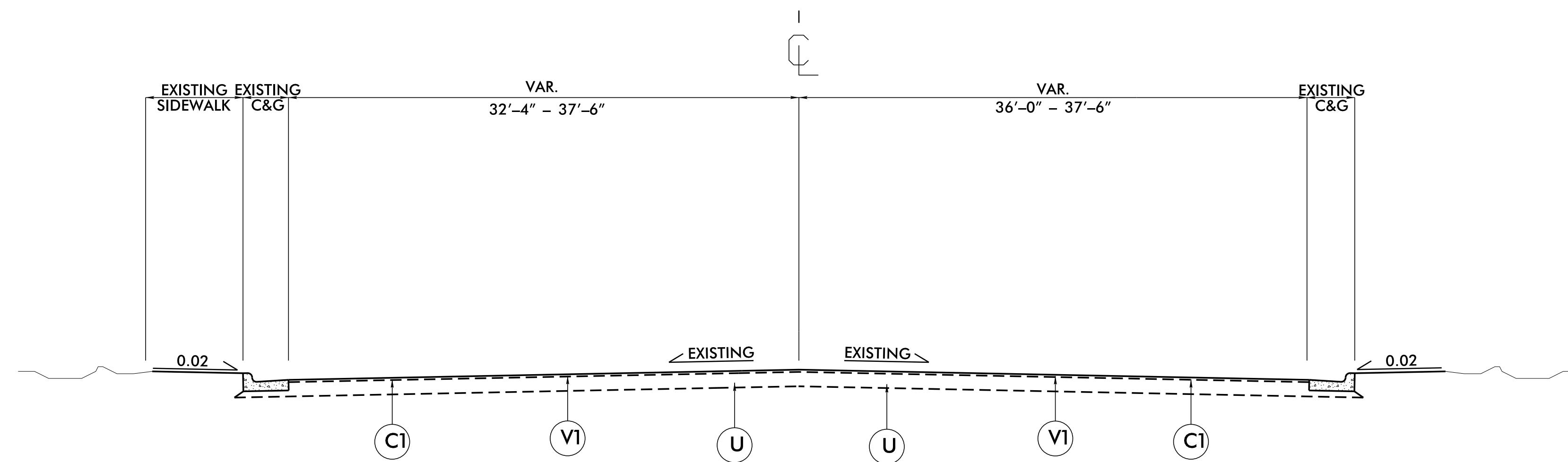
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**TYPICAL SECTION NO. 3**

USE TYPICAL SECTION NO. 3

-L- STA. 11+00 TO STA. 14+19 (BRIDGE)



**TYPICAL SECTION NO. 4**

USE TYPICAL SECTION NO. 4

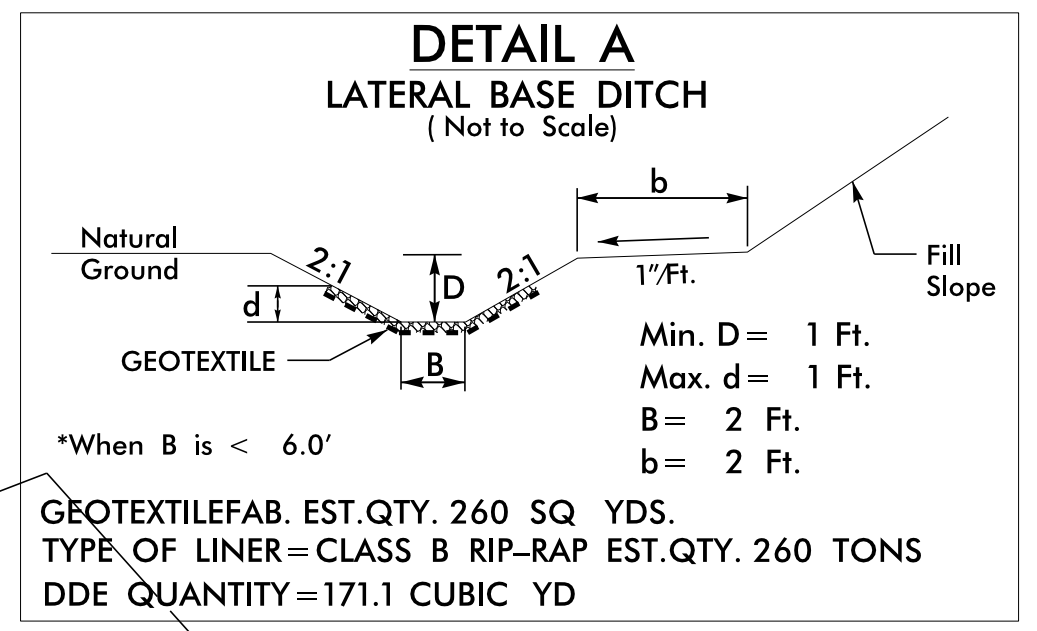
-L- STA. 16+54 (BRIDGE) TO STA. 20+00

PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN	
C1	PROP. APPROX. 1.5" OF ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LB. PER SQ. YARD.
C2	PROP. APPROX. 3.0" OF ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LB. PER SQ. YARD IN EACH OF TWO LAYERS.
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E	PROP. APPROX. 4.0" OF ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LB. PER SQ. YARD.
R	2'-6" CONCRETE CURB AND GUTTER.
S	CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING BITUMINOUS PAVEMENT. 1.5" DEPTH.

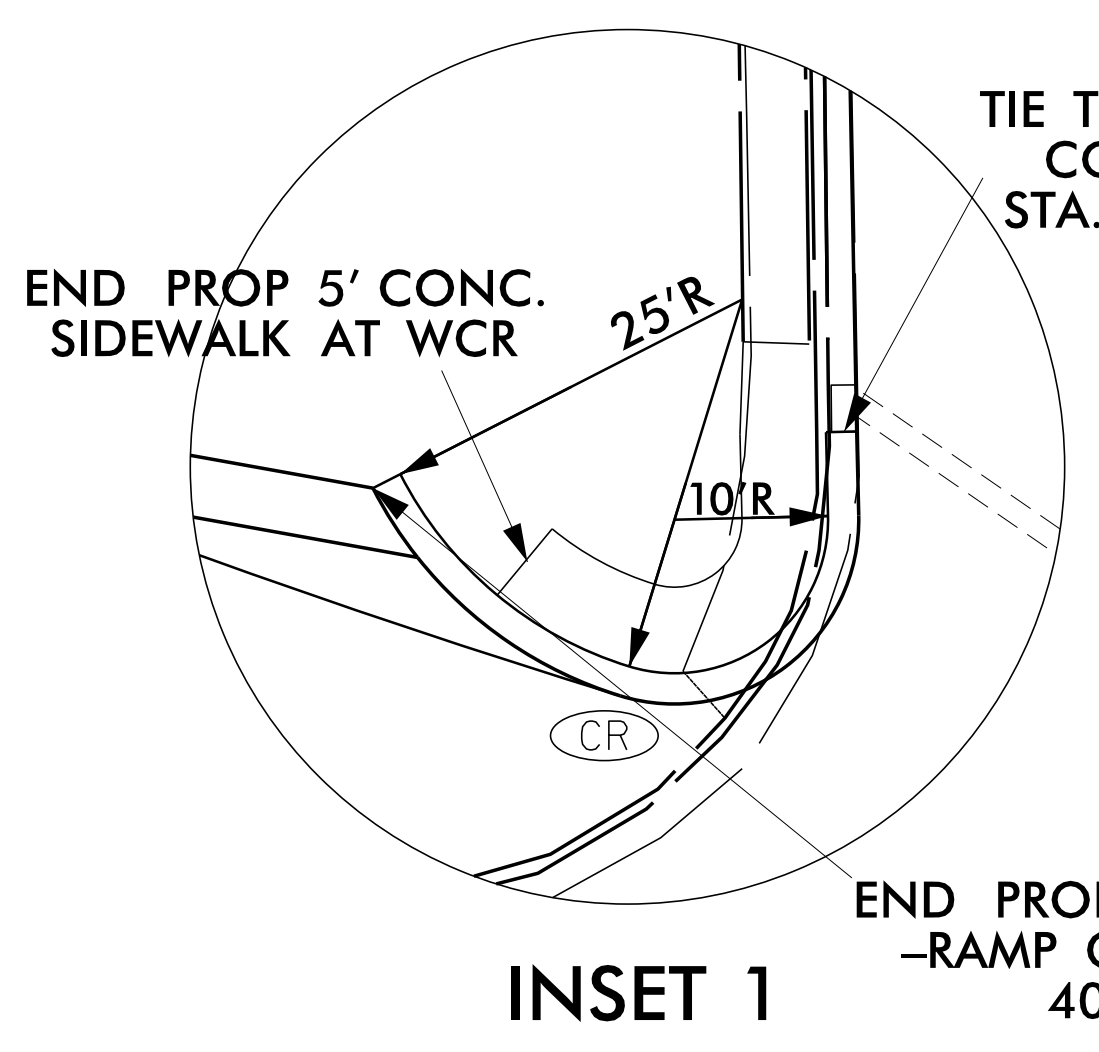
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



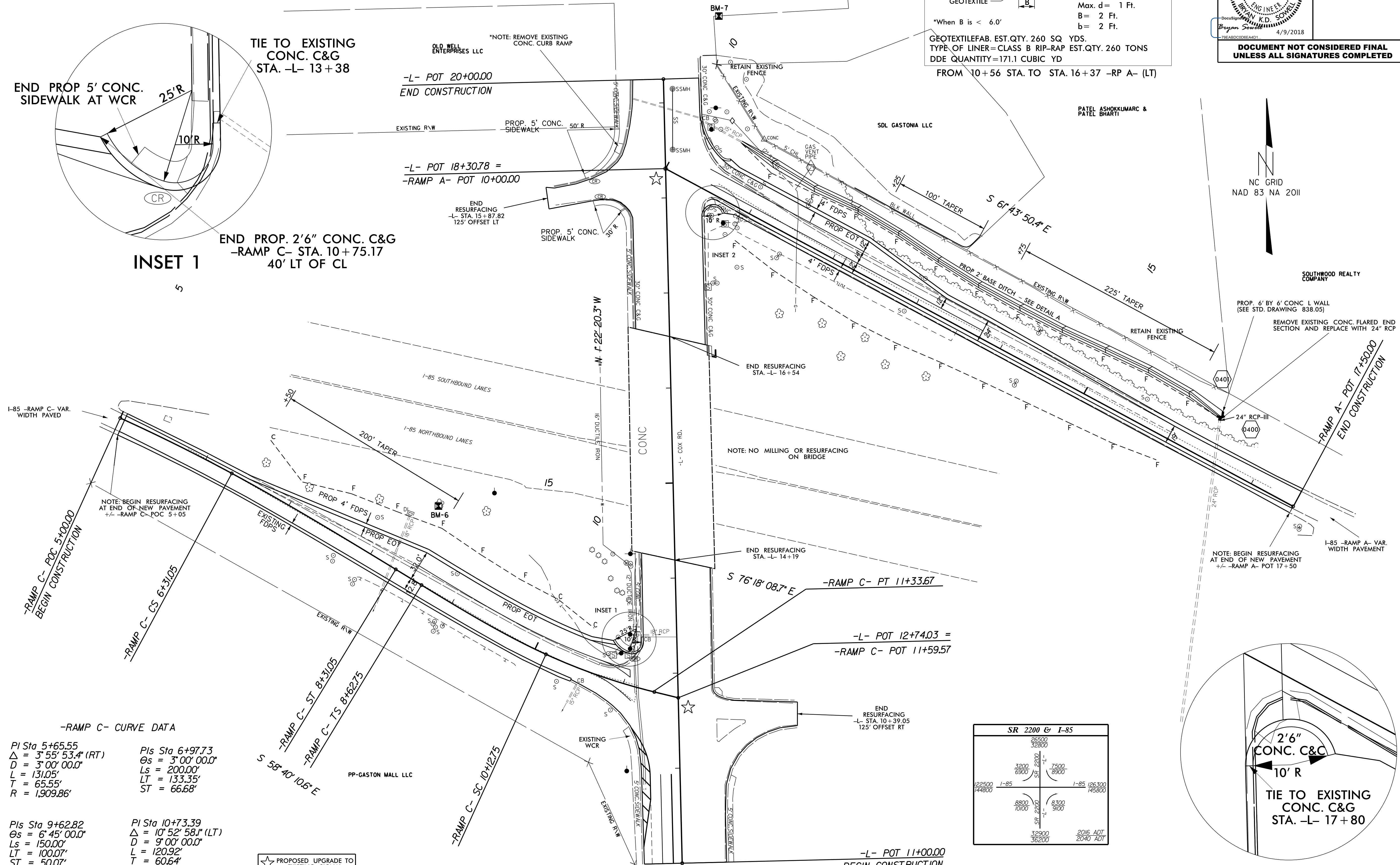




\*NOTE: ALL PROPERTY LINES ARE FROM GASTON COUNTY GIS FOR INFORMATION PURPOSES ONLY AND ARE NOT TO BE USED FOR LEGAL DESCRIPTION.



**END PROP 2'6" CONC. C&G  
-RAMP C- STA. 10+75.17  
40' LT OF CL**



**-RAMP C- CURVE DATA**

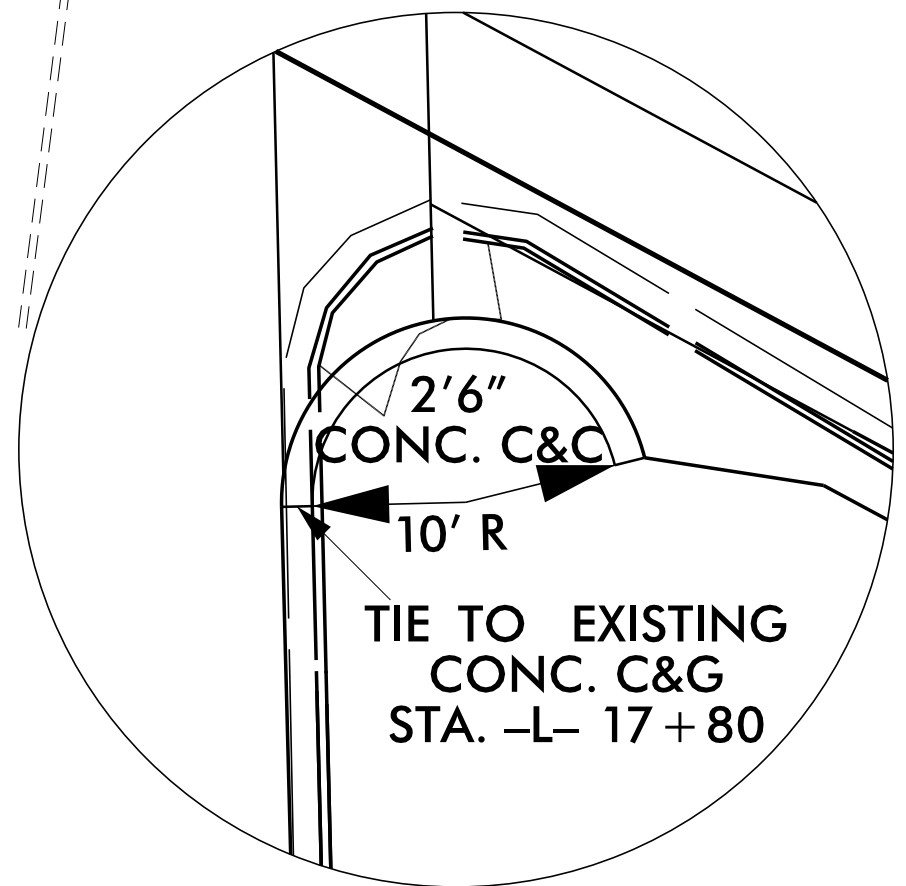
PI Sta 5+65.55	PI Sta 6+97.73
$\Delta = 3^{\circ} 55' 53.4''$ (RT)	$\Delta = 3^{\circ} 00' 00.0''$
$D = 3^{\circ} 00' 00.0''$	$\Theta_s = 3^{\circ} 00' 00.0''$
$L = 131.05'$	$L_s = 200.00'$
$T = 65.55'$	$LT = 133.35'$
$R = 1,909.86'$	$ST = 66.68'$

PI Sta 9+62.82	PI Sta 10+73.39
$\Delta = 6^{\circ} 45' 00.0''$	$\Delta = 10^{\circ} 52' 58.1''$ (LT)
$L_s = 150.00'$	$D = 9^{\circ} 00' 00.0''$
$LT = 100.07'$	$L = 120.92'$
$ST = 50.07'$	$T = 60.64'$
	$R = 636.62'$

**SR 2200 & I-85**

26500	32800
3200	7500
6900	8900
122500	144800
8800	8300
7000	9100
32900	2016 ADT
36200	2040 ADT

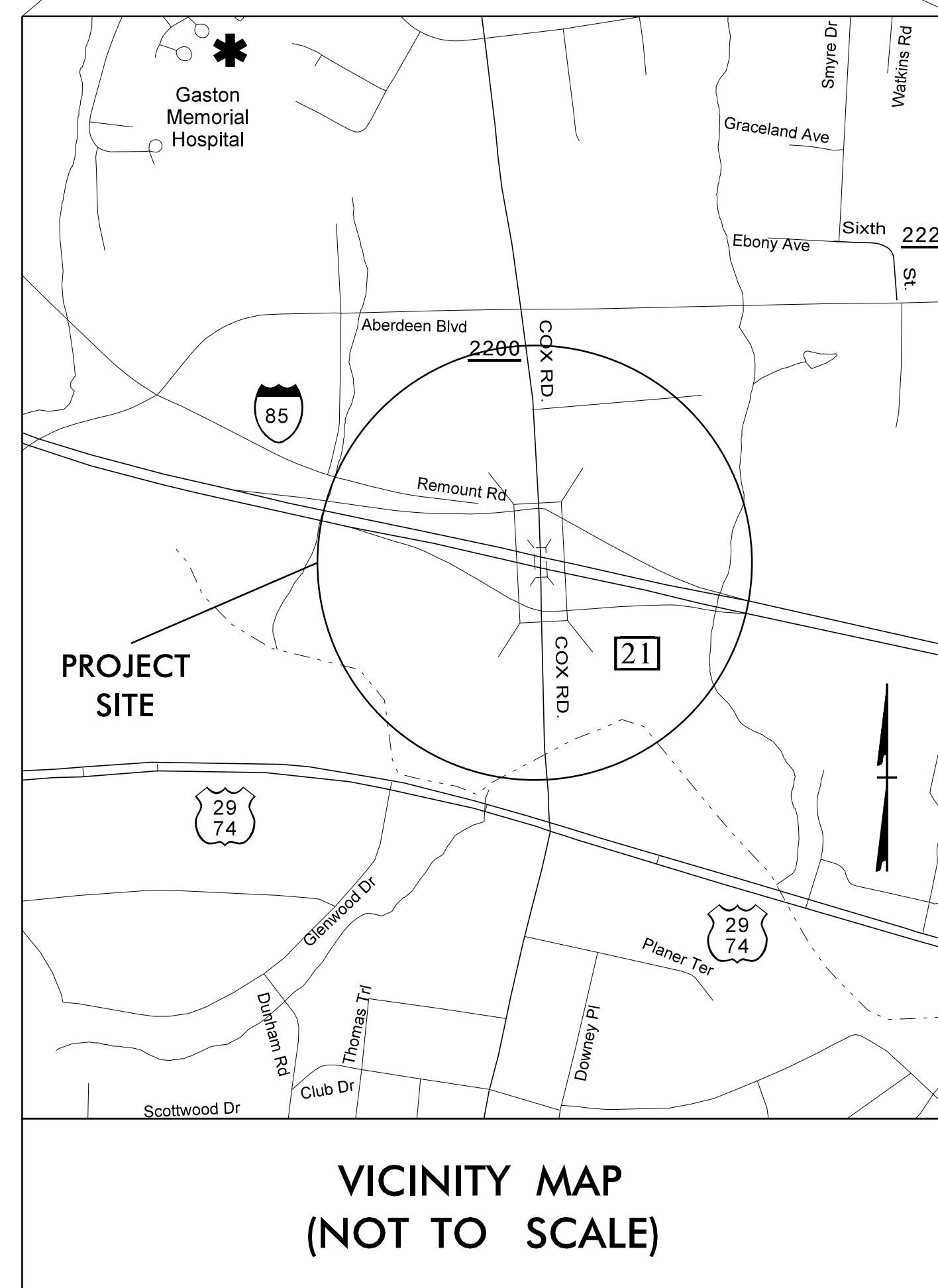
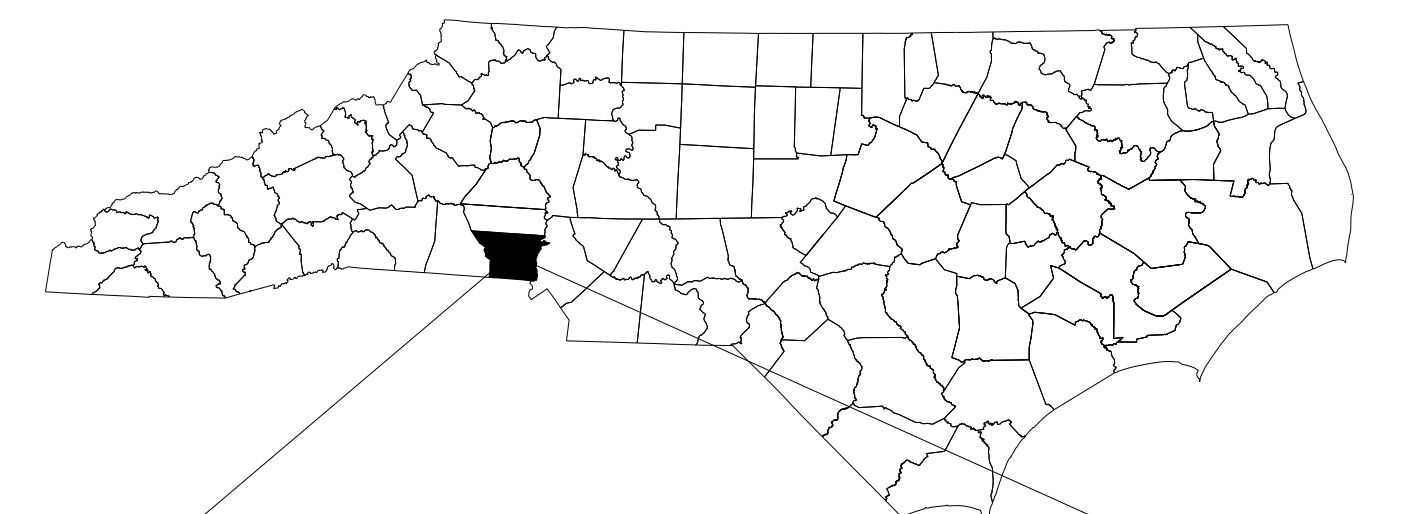


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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**GASTON COUNTY**



**INDEX OF SHEETS**

<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2	TEMPORARY TRAFFIC CONTROL PHASING NOTES
TMP-3	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL
TMP-6	TEMPORARY TRAFFIC CONTROL PHASE IV DETAIL
TMP-7	TEMPORARY DETOUR 1 & 2 PLANS
PMP-1	PAVEMENT MARKING SCHEDULE AND PLAN

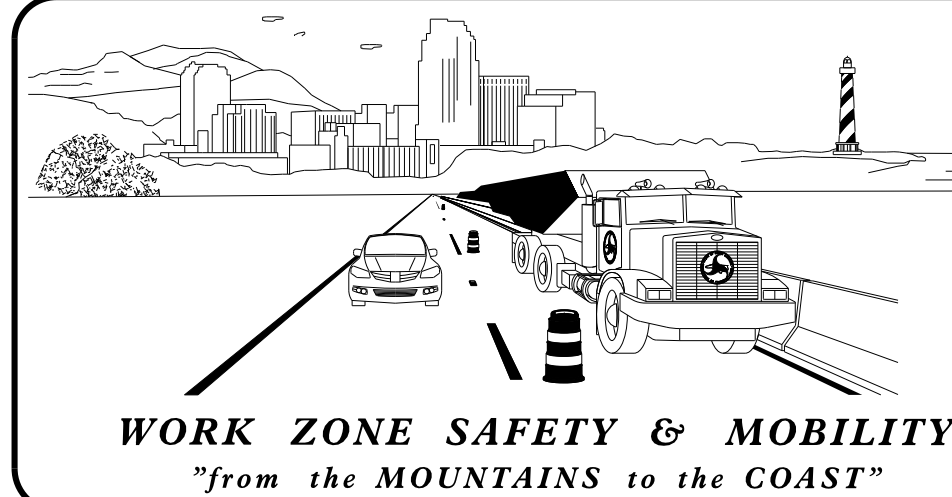
SHEET NO.

TMP-1

**I-5713**

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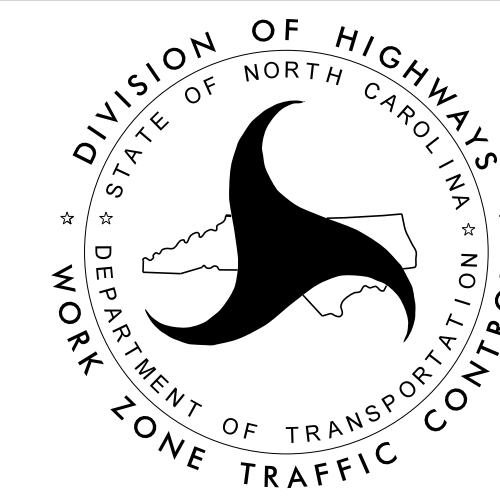
**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
 1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
 750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
 PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER

\_\_\_\_\_ TRAFFIC CONTROL PROJECT ENGINEER

\_\_\_\_\_ TRAFFIC CONTROL PROJECT DESIGN ENGINEER

\_\_\_\_\_ TRAFFIC CONTROL DESIGN ENGINEER

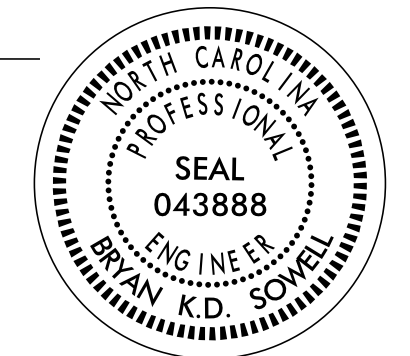


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UNLESS ALL SIGNATURES COMPLETED**

APPROVED: Bryan Sowell  
DocuSigned by:  
Bryan Sowell  
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DATE: 4/9/2018

SEAL



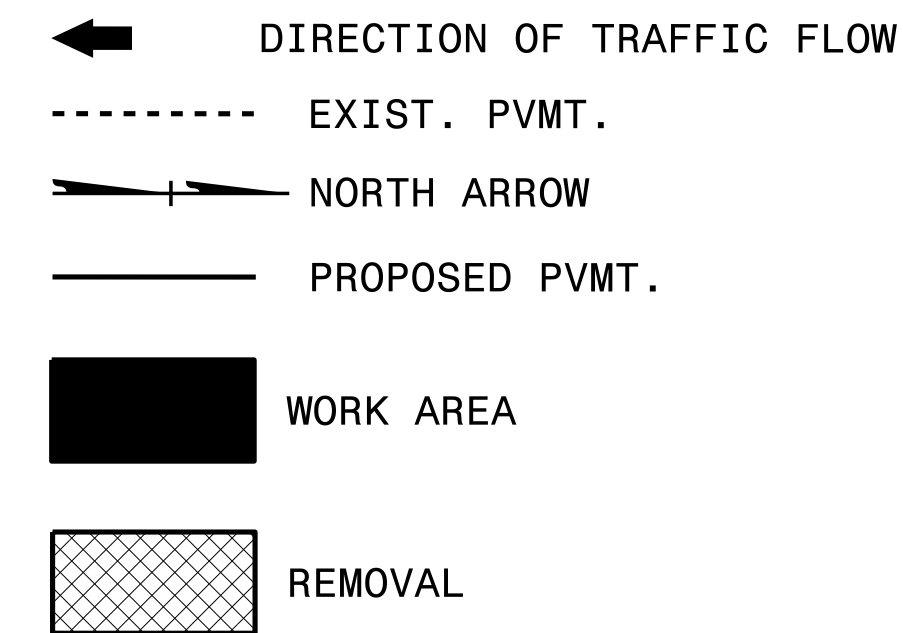
## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

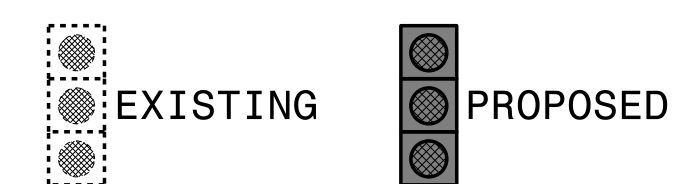
<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

## LEGEND

### GENERAL



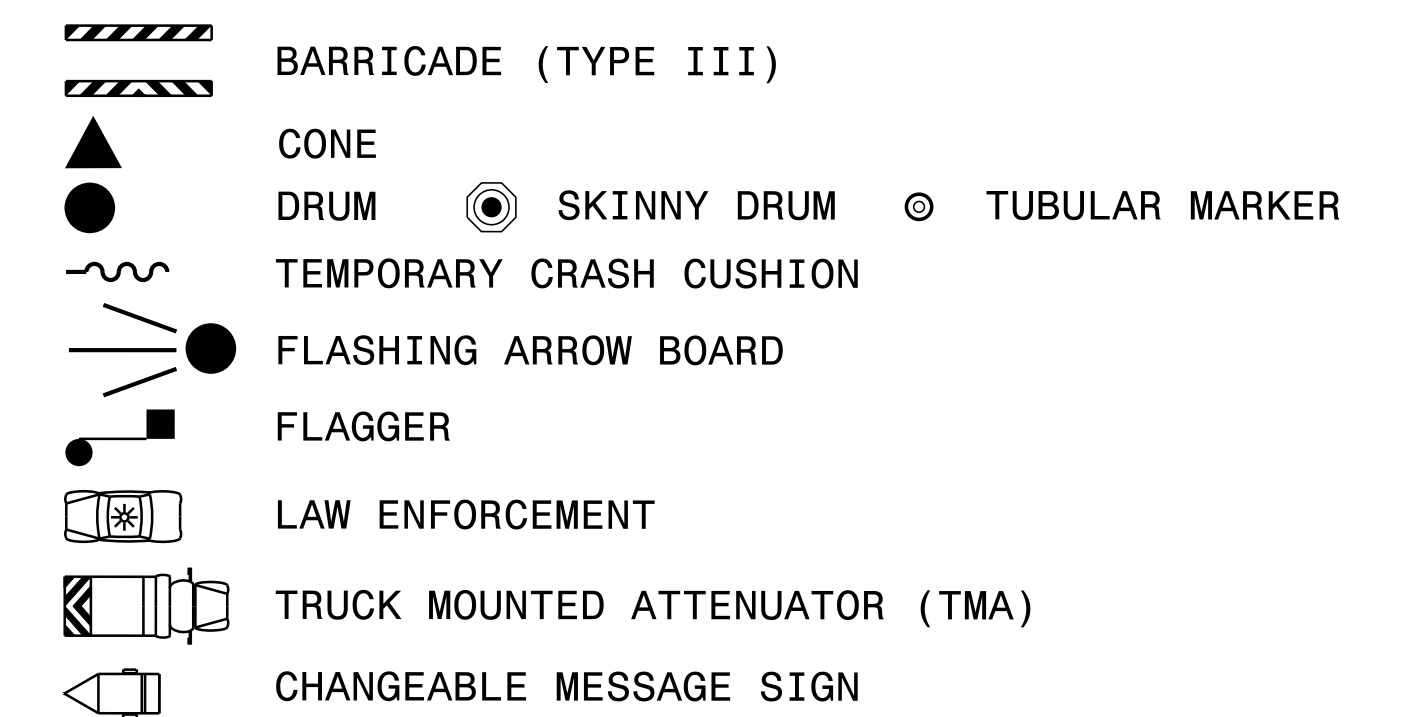
### SIGNALS



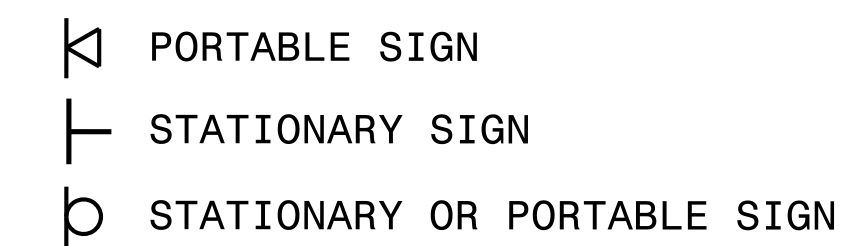
### PAVEMENT MARKINGS



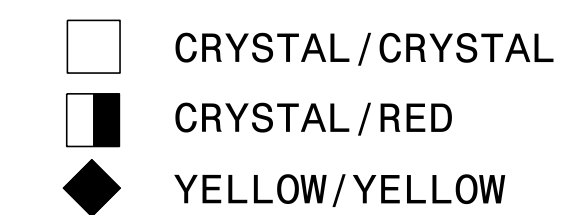
### TRAFFIC CONTROL DEVICES



### TEMPORARY SIGNING



### PAVEMENT MARKERS



### PAVEMENT MARKING SYMBOLS



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<p><b>ROADWAY STANDARD DRAWINGS &amp; LEGEND</b></p> <p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>		

## GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

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.

### TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES OR RAMPS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-85 RAMPS & COX RD.	BETWEEN 6:00 AM AND 8:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES OR RAMPS DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME
I-85 RAMPS & COX RD.

### HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31<sup>ST</sup> TO 8:00 P.M. JANUARY 2<sup>ND</sup>. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 8:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 8:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- FOR CAROLINA PANTHERS GAMES IN CHARLOTTE, BETWEEN THE HOURS OF 6:00 A.M. THE DAY OF THE EVENT AND 8:00 P.M. THE DAY AFTER THE EVENT.
- FOR ANY NASCAR RACE EVENT AT CHARLOTTE MOTOR SPEEDWAY BETWEEN THE HOURS OF 6:00 A.M. THE WEDNESDAY BEFORE THE FIRST TRACK EVENT AND 8:00 P.M. THE MONDAY AFTER THE LAST TRACK EVENT.
- FOR THE McADENVILLE CHRISTMAS TOWN USA SEASON BETWEEN THE HOURS OF 6:00 A.M. NOVEMBER 30<sup>TH</sup>, 2018 AND 8:00 P.M. DECEMBER 27<sup>TH</sup>, 2018.

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

J) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

K) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON COX RD..

L) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

M) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

N) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 100 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

O) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

P) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

Q) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

R) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

S) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC CONTROL DEVICES

T) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADIUS, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

U) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

### PAVEMENT MARKINGS AND MARKERS

V) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

W) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

X) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

### MISCELLANEOUS

Y) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

Z) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.


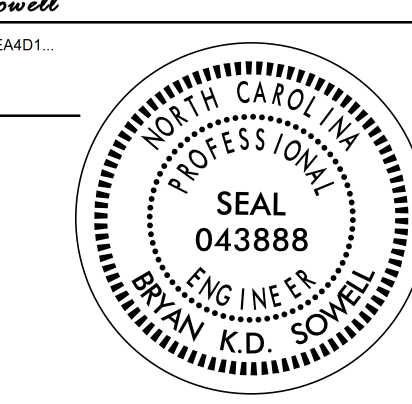
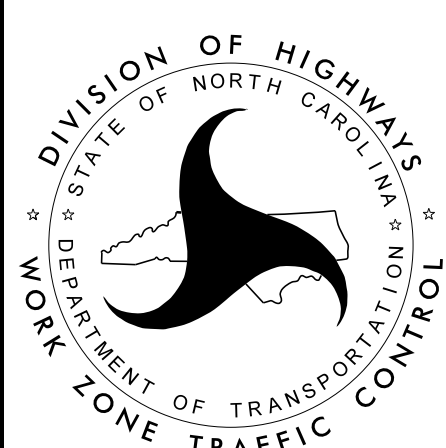
## LOCAL NOTES

MAINTAIN DRIVEWAY ACCESS TO ALL PARCELS DURING CONSTRUCTION.

## MANAGEMENT STRATEGIES

I-85 EXIT RAMPS (-RAMP A- & -RAMP C-) WILL BE CONSTRUCTED USING TEMPORARY LANE CLOSURES AND TEMPORARY DETOURS PER PHASING PLAN.

SHOULD SHOW TEMP. MESSAGES ON CMS 3 DAYS PRIOR TO CLOSING RAMPS. "RAMP CLOSED ON MMDDYY FROM 8:00 P.M. TO 6:00 A.M."

APPROVED:  <small>78EADCC0BEAD1</small> DATE: 4/9/2018			<h3 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h3>
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## PHASING NOTES

NOTE: THIS PROJECT IS DIVIDED INTO FOUR (4) PHASES.

IN PHASE I THE CONTRACTOR WILL COMPLETE ALL EARTH WORK, GRADING, CONCRETE WORK, INSTALLATION OF TEMPORARY LOGO SIGNS, AND PAVING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE FOR RAMPS A & C. THIS WORK WILL BE CONSTRUCTED WITH THE USE OF TEMPORARY LANE CLOSURES AND FLAGGERS.

IN PHASE II THE CONTRACTOR WILL MILL AND PAVE THE FINAL RIDING SURFACE, INSTALL PERMENANT PAVEMENT MARKINGS & MARKERS, INSTALL PERMENANT SIGNS, AND COMPLETE SIGNAL WORK FOR RAMP A. THIS WORK WILL BE CONSTRUCTED WITH THE USE OF DETOUR 1.

IN PHASE III THE CONTRACTOR WILL MILL AND PAVE THE FINAL RIDING SURFACE, INSTALL PERMENANT PAVEMENT MARKINGS & MARKERS, INSTALL PERMENANT SIGNS, AND COMPLETE SIGNAL WORK FOR RAMP C. THIS WORK WILL BE CONSTRUCTED WITH THE USE OF DETOUR 2.

IN PHASE IV THE CONTRACTOR SHALL COMPLETE THE WORK OF MILLING AND RESURFACING PAVEMENT ON THE -L- LINE AND INSTALL PERMANENT PAVEMENT MARKINGS AND MARKERS. THIS WORK WILL BE PERFORMED WITH THE USE OF TEMPORARY LANE CLOSURES AND FLAGGERS.

### PHASE I

STEP 1: PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, INSTALL WORK ZONE ADVANCED WARNING SIGNS AS SHOWN IN NCDOT STANDARD DRAWING 1101.01 SHEET 1 OF 3.

STEP 2: USING TRAFFIC CONTROL MEASURES STANDARD DRAWING 1101.02 SHEET 10 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS. INSTALL TEMPORARY LOGO SIGNS ON -RAMP A- & -RAMP C- PER SIGNING PLANS SHEET 5.

STEP 3: USING NCDOT STANDARD DRAWING 1101.02 SHEET 10 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, CONSTRUCT -RAMP A & -RAMP C UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS:

-RAMP A- LT FROM STA. 10+42.00 TO STA. 16+00.00  
 -RAMP C- LT FROM STA. 6+50.00 TO STA. 11+14.00

STEP 4: RELOCATE TEMPORARY LOGO SIGNS RT OF -RAMP A- PER SIGNING PLANS SHEET 6. USING NCDOT STANDARD DRAWING 1101.02 SHEET 10 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, CONSTRUCT -RAMP A- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATION:

-RAMP A- RT FROM STA. 10+42.00 TO STA. 16+00.00

STEP 5: USING TRAFFIC CONTROL MEASURES STANDARD DRAWING 1101.02 SHEET 10 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, SEED AND MULCH ALL DESTURBED AREAS, AND INSTALL MATTING FOR EROSION CONTROL AS SHOWN ON THE EROSION CONTROL PLANS.

### PHASE II

STEP 1: USING DETOUR PLANS AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, MILL AND FILL EXISTING ROADWAY 1.5 INCHES AND OVERLAY EXISTING AND NEW ROADWAY WITH THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATION:

-RAMP A- RT & LT FROM STA. 10+42.00 TO 16+00.00

STEP 2: USING DETOUR PLANS AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, CONSTRUCT SIGNAL WORK, PLACE FINAL PAVEMENT MARKINGS AND MARKERS, AND INSTALL PERMENANT SIGNS FOR -RAMP A- AS SHOWN ON THE SIGNAL, PAVEMENT MARKING, AND SIGNING PLANS.

### PHASE III

STEP 1: USING DETOUR PLANS AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, MILL AND FILL EXISTING ROADWAY 1.5 INCHES AND OVERLAY EXISTING AND NEW ROADWAY WITH THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATION:

-RAMP C- RT & LT FROM STA. 5+00.00 TO 11+14.00

STEP 2: USING DETOUR PLANS AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, CONSTRUCT SIGNAL WORK, PLACE FINAL PAVEMENT MARKINGS AND MARKERS, AND INSTALL PERMENANT SIGNS FOR -RAMP A- AS SHOWN ON THE SIGNAL, PAVEMENT MARKING, AND SIGNING PLANS.

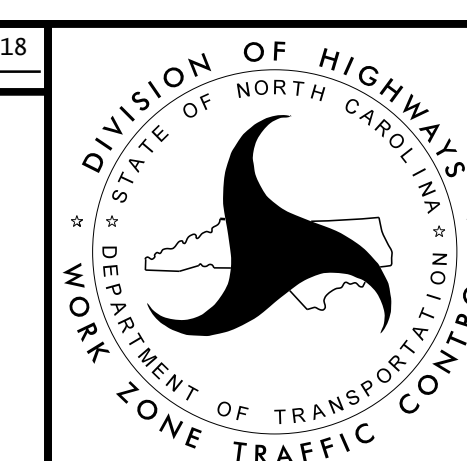
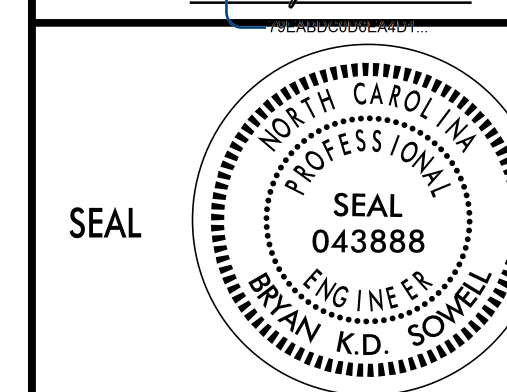
### PHASE IV

STEP 1: USING TRAFFIC CONTROL MEASURES STANDARD DRAWING STD.1101.02 SHEET 8 OF 15, STD. 1101.02 SHEET 11 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, MILL AND FILL EXISTING PAVEMENT ON THE -L- LINE AND INSTALL PERMENANT PAVEMENT MARKINGS AND MARKERS AT THE FOLLOWING LOCATION:

-L- RT & LT FROM STA. 11+00.00 TO 14+19.00 (BRIDGE)  
 -L- RT & LT FROM STA. 16+54.00 (BRIDGE) TO 20+00.00

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APPROVED: Bryan Sowell DATE: 4/9/2018



**PHASING NOTES**

PHASE I

STEP 1: PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, INSTALL WORK ZONE ADVANCED WARNING SIGNS AS SHOWN IN NCDOT STANDARD DRAWING 1101.01 SHEET 1 OF 3.

STEP 2: USING TRAFFIC CONTROL MEASURES STANDARD DRAWING 1101.02 SHEET 10 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS. INSTALL TEMPORARY LOGO SIGNS ON -RAMP A- & -RAMP C- PER SIGNING PLANS SHEET 5.

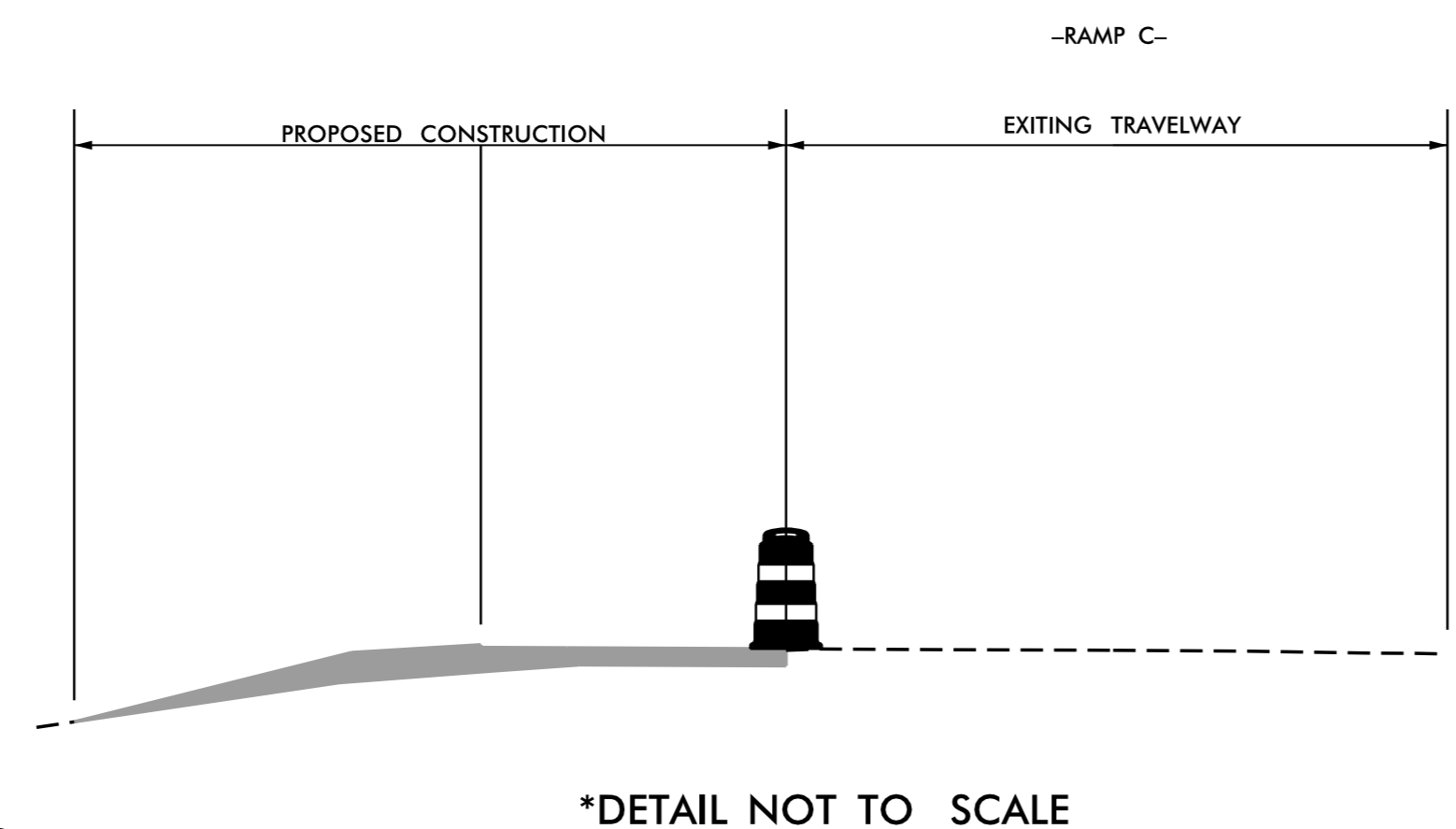
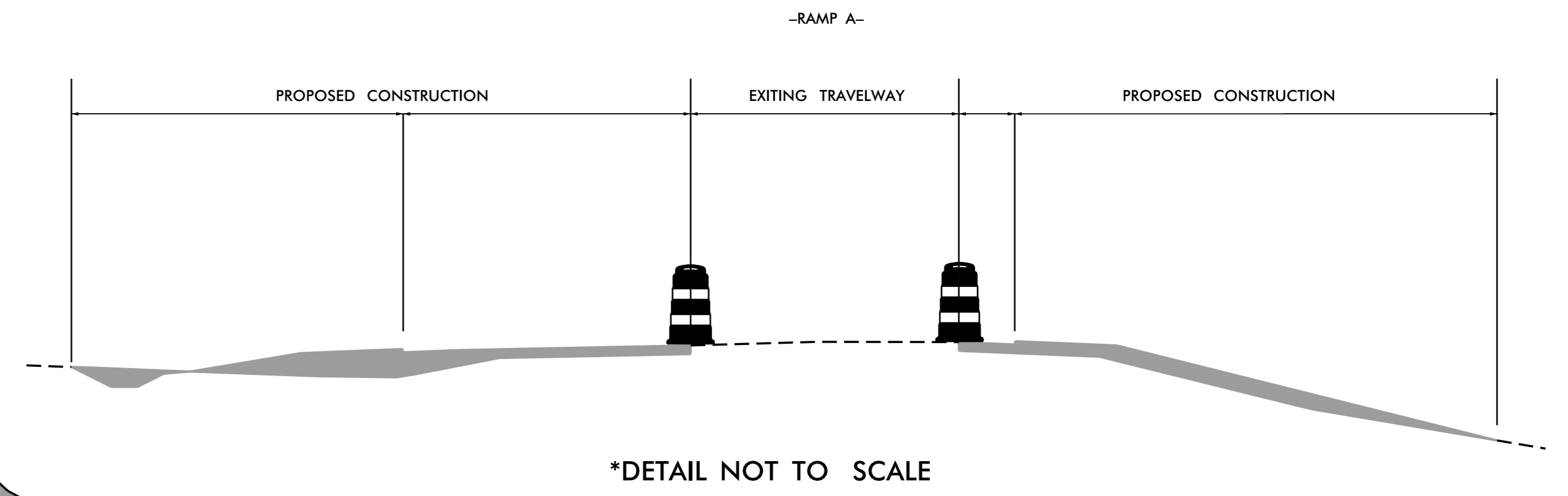
STEP 3: USING NCDOT STANDARD DRAWING 1101.02 SHEET 10 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, CONSTRUCT -RAMP A & -RAMP C UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS:

- RAMP A- LT FROM STA.10+42.00 TO STA.16+00.00
- RAMP C- LT FROM STA.6+50.00 TO STA.11+14.00

STEP 4: RELOCATE TEMPORARY LOGO SIGNS RT OF -RAMP A- PER SIGNING PLANS SHEET 6. USING NCDOT STANDARD DRAWING 1101.02 SHEET 10 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, CONSTRUCT -RAMP A- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATION:

- RAMP A- RT FROM STA.10+42.00 TO STA.16+00.00

STEP 5: USING TRAFFIC CONTROL MEASURES STANDARD DRAWING 1101.02 SHEET 10 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, SEED AND MULCH ALL DISTURBED AREAS, AND INSTALL MATTING FOR EROSION CONTROL AS SHOWN ON THE EROSION CONTROL PLANS.



DELINEATE WORK AREA WITH DRUMS BEFORE LANE CLOSURE IS REMOVED AT THE END OF EACH DAYS WORK


DELINEATE WORK AREA WITH DRUMS BEFORE LANE CLOSURE IS REMOVED AT THE END OF EACH DAYS WORK



-L- (COX ROAD)

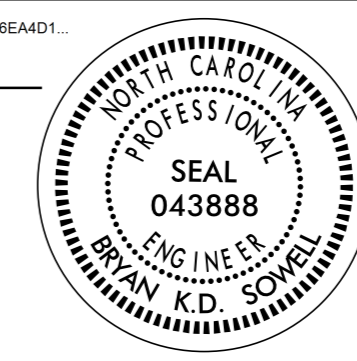
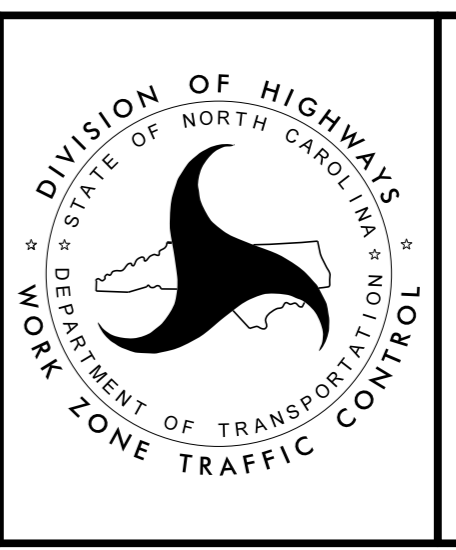
-RAMP C-

-RAMP A-

APPROVED:   
DocuSigned by:  
Bryan Sewell  
79EABDC0DE4AD1...

DATE: 4/9/2018

SEAL

PHASE I DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

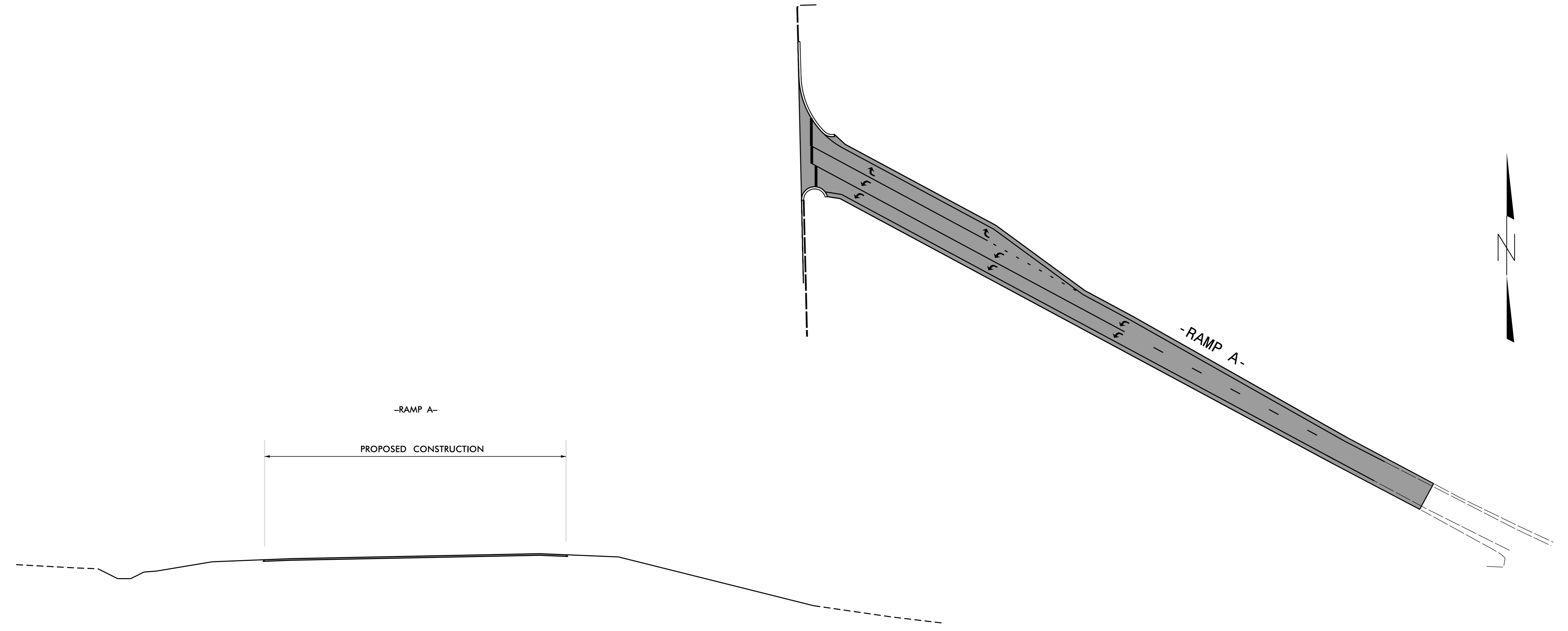
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PHASE II

STEP 1: USING DETOUR PLANS AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, MILL AND FILL EXISTING ROADWAY 1.5 INCHES AND OVERLAY EXISTING AND NEW ROADWAY WITH THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATION:

-RAMP A- RT & LT FROM STA. 10+42.00 TO 16+00.00

STEP 2: USING DETOUR PLANS AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, CONSTRUCT SIGNAL WORK, PLACE FINAL PAVEMENT MARKINGS AND MARKERS, AND INSTALL PERMENANT SIGNS FOR -RAMP A- AS SHOWN ON THE SIGNAL, PAVEMENT MARKING, AND SIGNING PLANS.



\* DETAIL NOT TO SCALE

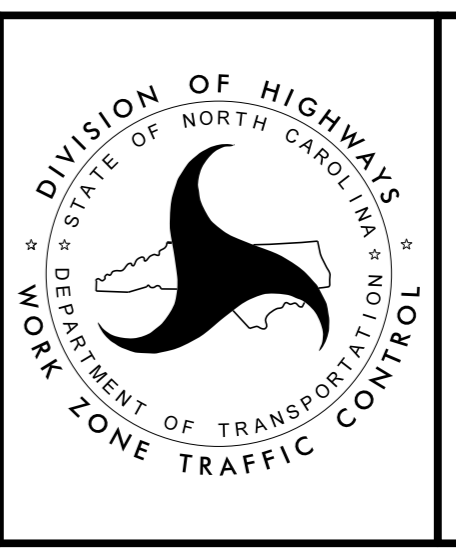
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APPROVED: *Bryan Sowell*  
79EABDC0DEA0D1...

DATE: 4/9/2018

SEAL

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



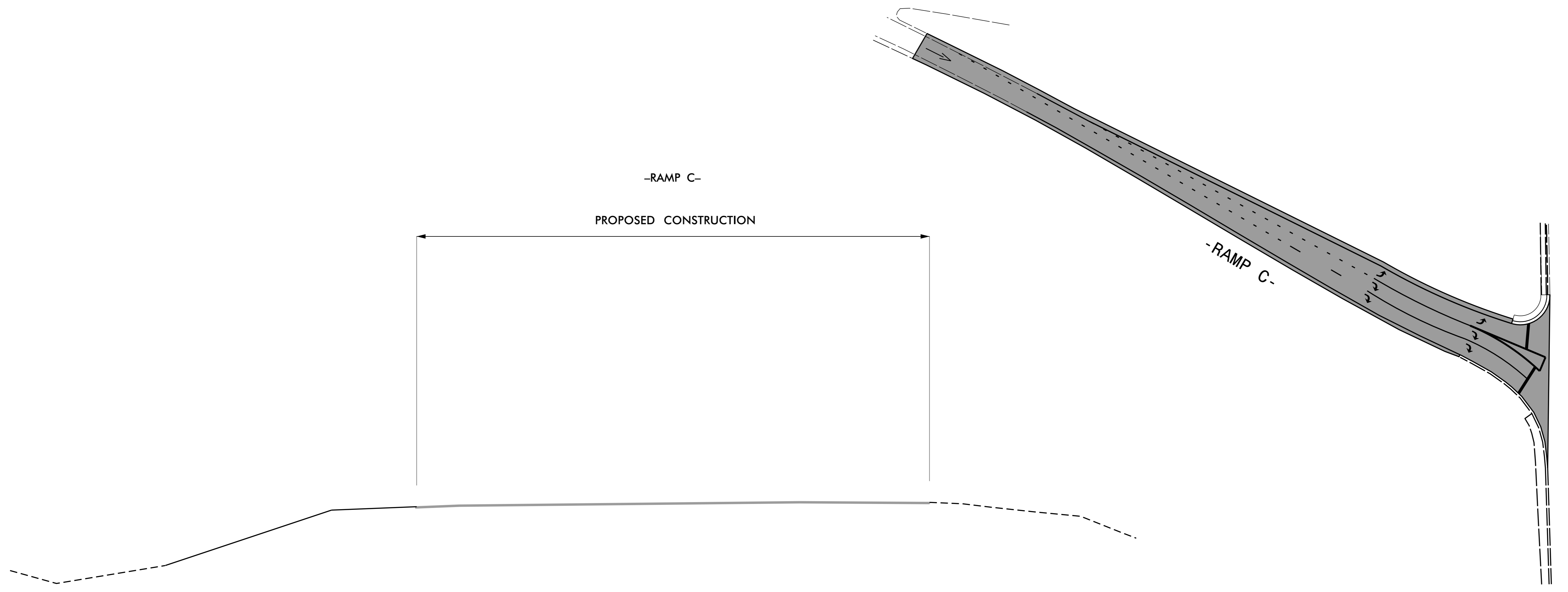
PHASE II DETAIL

PHASE III

STEP 1: USING DETOUR PLANS AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, MILL AND FILL EXISTING ROADWAY 1.5 INCHES AND OVERLAY EXISTING AND NEW ROADWAY WITH THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATION:

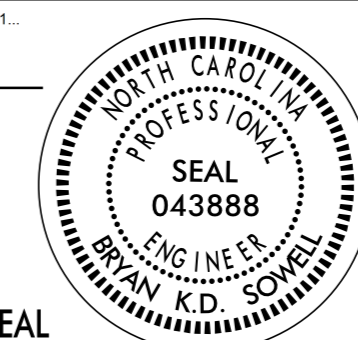

-RAMP C- RT & LT FROM STA. 5+00.00 TO 11+14.00

STEP 2: USING DETOUR PLANS AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, CONSTRUCT SIGNAL WORK, PLACE FINAL PAVEMENT MARKINGS AND MARKERS, AND INSTALL PERMENANT SIGNS FOR -RAMP A- AS SHOWN ON THE SIGNAL, PAVEMENT MARKING, AND SIGNING PLANS.



\*DETAIL NOT TO SCALE

04-APR-2018 09:56  
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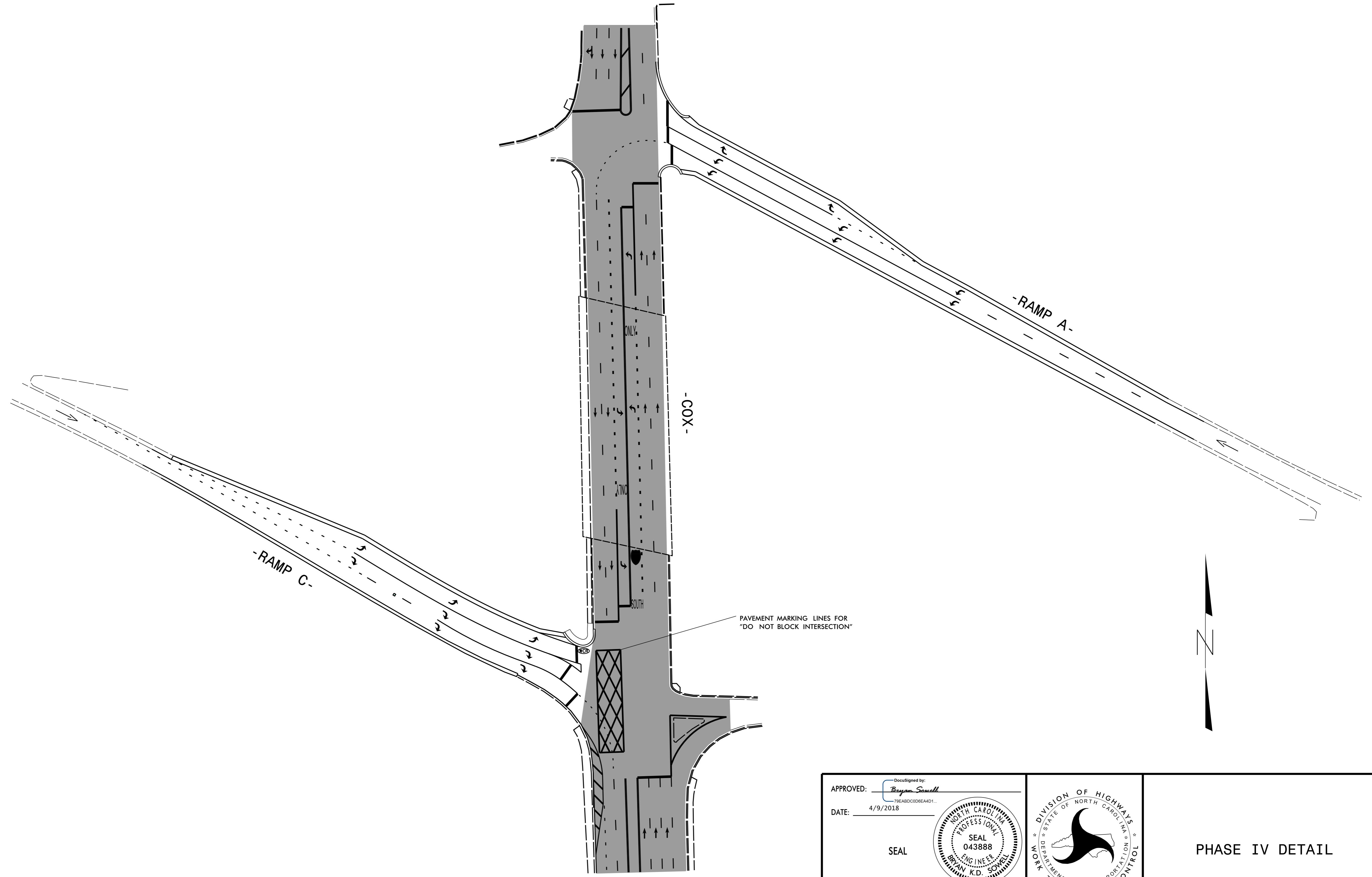
APPROVED: <i>Bryan Sowell</i> <small>79EABDC0D9E4MD1...</small> DATE: 4/9/2018  SEAL		<p>PHASE III DETAIL</p>
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>		



PHASE IV

STEP 1: USING TRAFFIC CONTROL MEASURES STANDARD DRAWING STD.1101.02 SHEET 8 OF 15, STD. 1101.02 SHEET 11 OF 15 AND ADHERING TO DAY AND TIME RESTRICTIONS IN THE CONTRACT AND THE TRAFFIC CONTROL PLAN GENERAL NOTES, MILL AND FILL EXISTING PAVEMENT ON THE -L- LINE AND INSTALL PERMENANT PAVEMENT MARKINGS AND MARKERS AT THE FOLLOWING LOCATION:

- L- RT & LT FROM STA. 11+00.00 TO 14+19.00 (BRIDGE)
- L- RT & LT FROM STA. 16+54.00 (BRIDGE) TO 20+00.00



04-APR-2018 09:58  
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APPROVED: *Bryan Sewell*  
DocuSigned by: Bryan Sewell  
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 DATE: 4/9/2018

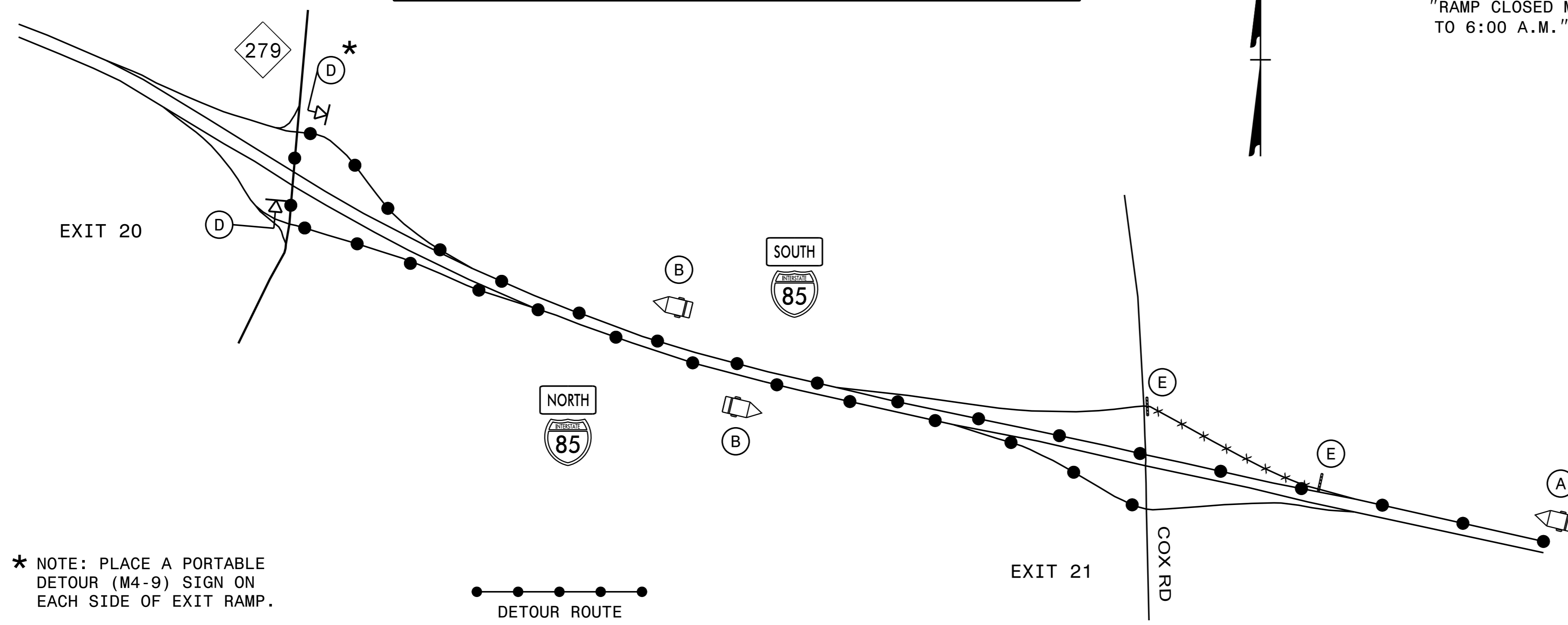
SEAL



PHASE IV DETAIL

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

**DETOUR 1: CLOSURE AT I-85 S EXIT 21  
EXIT RAMP TO COX RD.**



(A)

MESSAGE NO. 1 EXIT 21 COX RD CLOSED	MESSAGE NO. 2 DETOUR TO EXIT 20
--	--

CHANGEABLE MESSAGE SIGN

MIN. 1/2 MILE IN ADVANCE OF EXIT 21 DECELERATION LANE OR AS DIRECTED BY ENGINEER

(B)

MESSAGE NO. 1 COX RD DETOUR EXIT 20	MESSAGE NO. 2 NEXT RIGHT
--	--------------------------------

CHANGEABLE MESSAGE SIGN

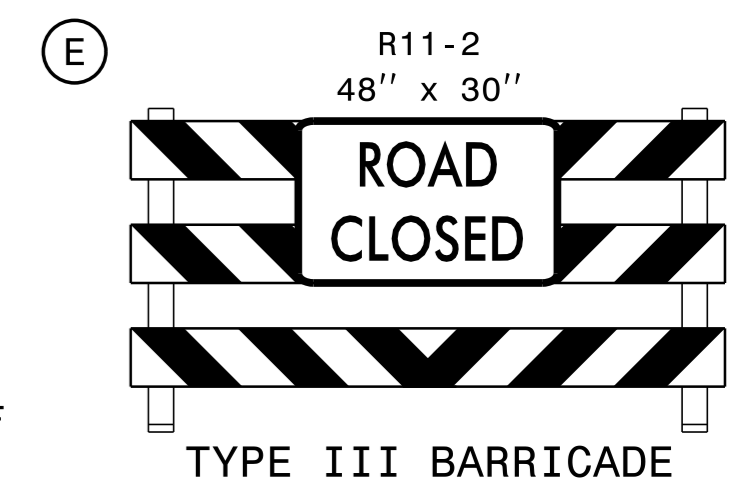
MIN. 1500 FT IN ADVANCE OF EXIT 22 DECELERATION LANE OR AS DIRECTED BY ENGINEER

(F)

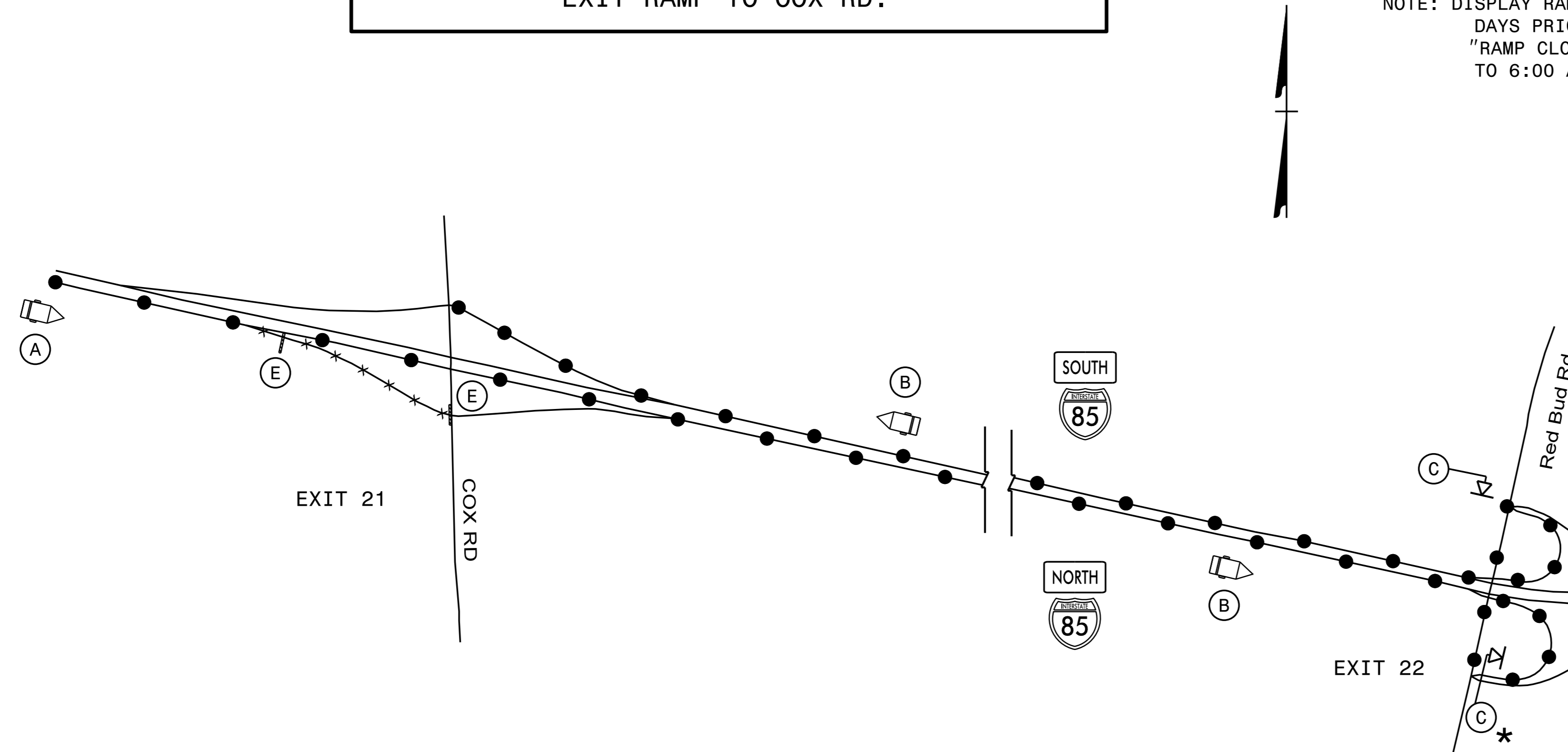
MESSAGE NO. 1 COX RD DETOUR	MESSAGE NO. 2 NEXT RIGHT
-----------------------------------	--------------------------------

CHANGEABLE MESSAGE SIGN

MIN. 1500 FT IN ADVANCE OF EXIT 22 DECELERATION LANE OR AS DIRECTED BY ENGINEER



**DETOUR 2: CLOSURE AT I-85 N EXIT 21  
EXIT RAMP TO COX RD.**



(A)

MESSAGE NO. 1 EXIT 21 COX RD CLOSED	MESSAGE NO. 2 DETOUR TO EXIT 22
--	--

CHANGEABLE MESSAGE SIGN

MIN. 1/2 MILE IN ADVANCE OF EXIT 21 DECELERATION LANE OR AS DIRECTED BY ENGINEER

(B)

MESSAGE NO. 1 COX RD DETOUR EXIT 22	MESSAGE NO. 2 NEXT RIGHT
--	--------------------------------

CHANGEABLE MESSAGE SIGN

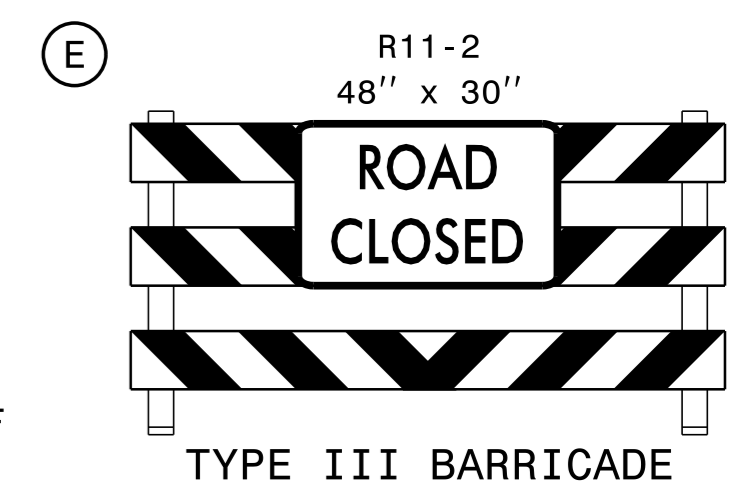
MIN. 1500 FT IN ADVANCE OF EXIT 22 DECELERATION LANE OR AS DIRECTED BY ENGINEER

(F)

MESSAGE NO. 1 COX RD DETOUR	MESSAGE NO. 2 NEXT RIGHT
-----------------------------------	--------------------------------

CHANGEABLE MESSAGE SIGN

MIN. 1500 FT IN ADVANCE OF EXIT 22 DECELERATION LANE OR AS DIRECTED BY ENGINEER



04-APR-2018 09:59 R:\0000\10\FinalPlansheets\I-5713\_TC\_TMP\_7.dgn \$\$\$USERNAME\$\$\$

\* NOTE: PLACE A PORTABLE DETOUR (M4-9) SIGN ON EACH SIDE OF EXIT RAMP.

APPROVED: Bryan Sawell

DATE: 4/9/2018

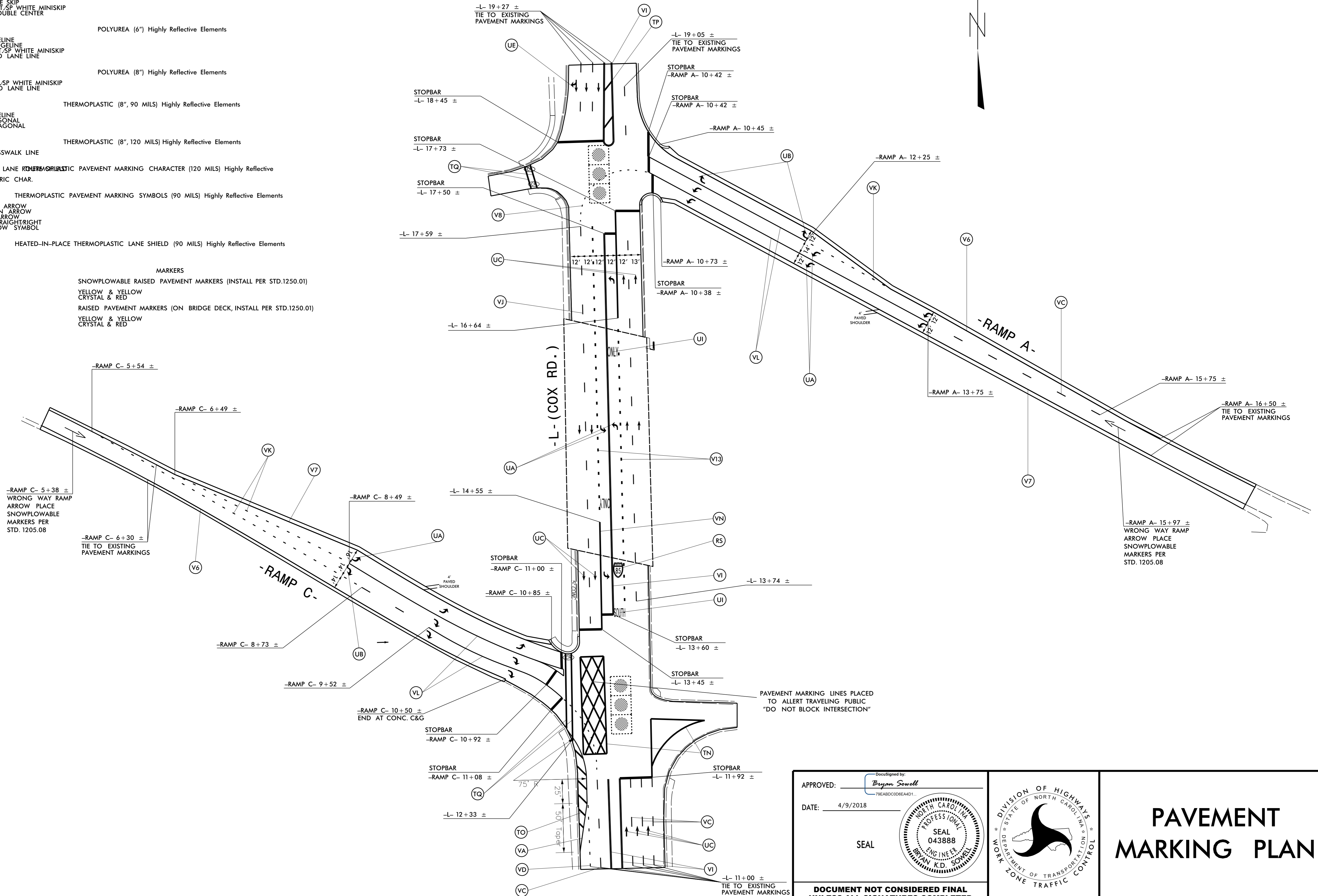
SEAL

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

I-85 EXIT 21  
RAMP DETOURS  
1 & 2

Pavement Marking Schedule

SYMB	DESCRIPTI	FINAL PAVEMENT MARKINGS
T2	WHITE STOPBAR	THERMOPLASTIC (24", 120 MILS) Highly Reflective Elements
V8	2 FT. - 6 FT. SP WHITE MINISKIP	POLYUREA (4") Highly Reflective Elements
VA	WHITE EDGELINE	
VC	10 FT. WHITE SKIP	
VD	3 FT. - 9 FT. SP WHITE MINISKIP	
VI	YELLOW DOUBLE CENTER	
V6	WHITE EDGELINE	POLYUREA (6") Highly Reflective Elements
V7	YELLOW EDGELINE	
VK	3 FT. - 9 FT. SP WHITE MINISKIP	
VL	WHITE SOLID LANE LINE	
V13	3 FT. - 9 FT. SP WHITE MINISKIP	POLYUREA (8") Highly Reflective Elements
VN	WHITE SOLID LANE LINE	
TN	WHITE GORELINE	THERMOPLASTIC (8", 90 MILS) Highly Reflective Elements
TO	WHITE DIAGONAL	
TP	YELLOW DIAGONAL	
TQ	WHITE CROSSWALK LINE	THERMOPLASTIC (8", 120 MILS) Highly Reflective Elements
RS	I-85 IN LANE	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS) Highly Reflective
UI	ALPHANUMERIC CHAR.	THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS) Highly Reflective Elements
UA	LEFT TURN ARROW	
UB	RIGHT TURN ARROW	
UC	STRAIGHT ARROW	
UE	COMBO STRAIGHT/RIGHT	
UQ	RAMP ARROW SYMBOL	
		HEATED-IN-PLACE THERMOPLASTIC LANE SHIELD (90 MILS) Highly Reflective Elements
		MARKERS
		SNOWPLOWABLE RAISED PAVEMENT MARKERS (INSTALL PER STD.1250.01)
		YELLOW & YELLOW CRYSTAL & RED
		RAISED PAVEMENT MARKERS (ON BRIDGE DECK, INSTALL PER STD.1250.01)
		YELLOW & YELLOW CRYSTAL & RED



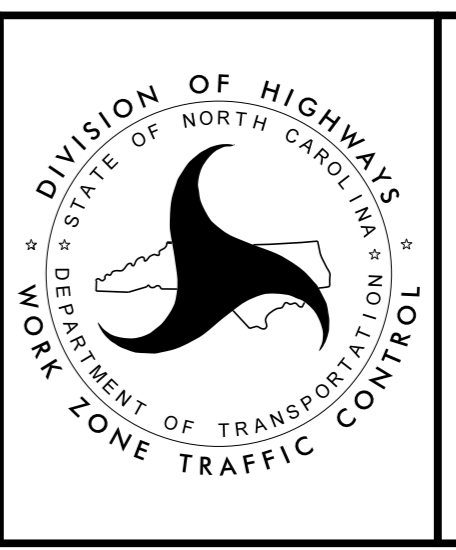
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DocuSigned by: Bryan Sowell 79EABDC0D9E44D1

DATE: 4/9/2018

SEAL

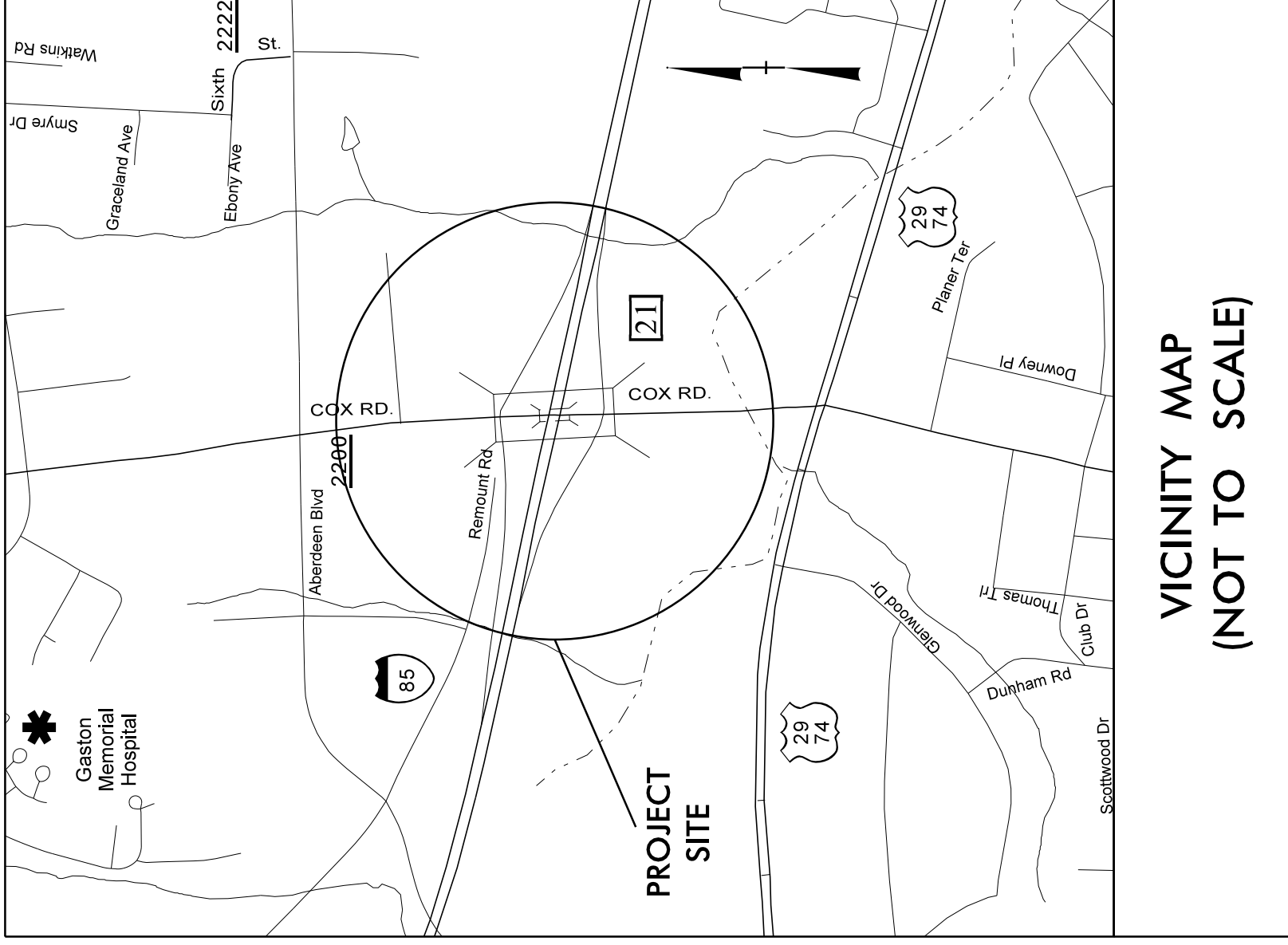
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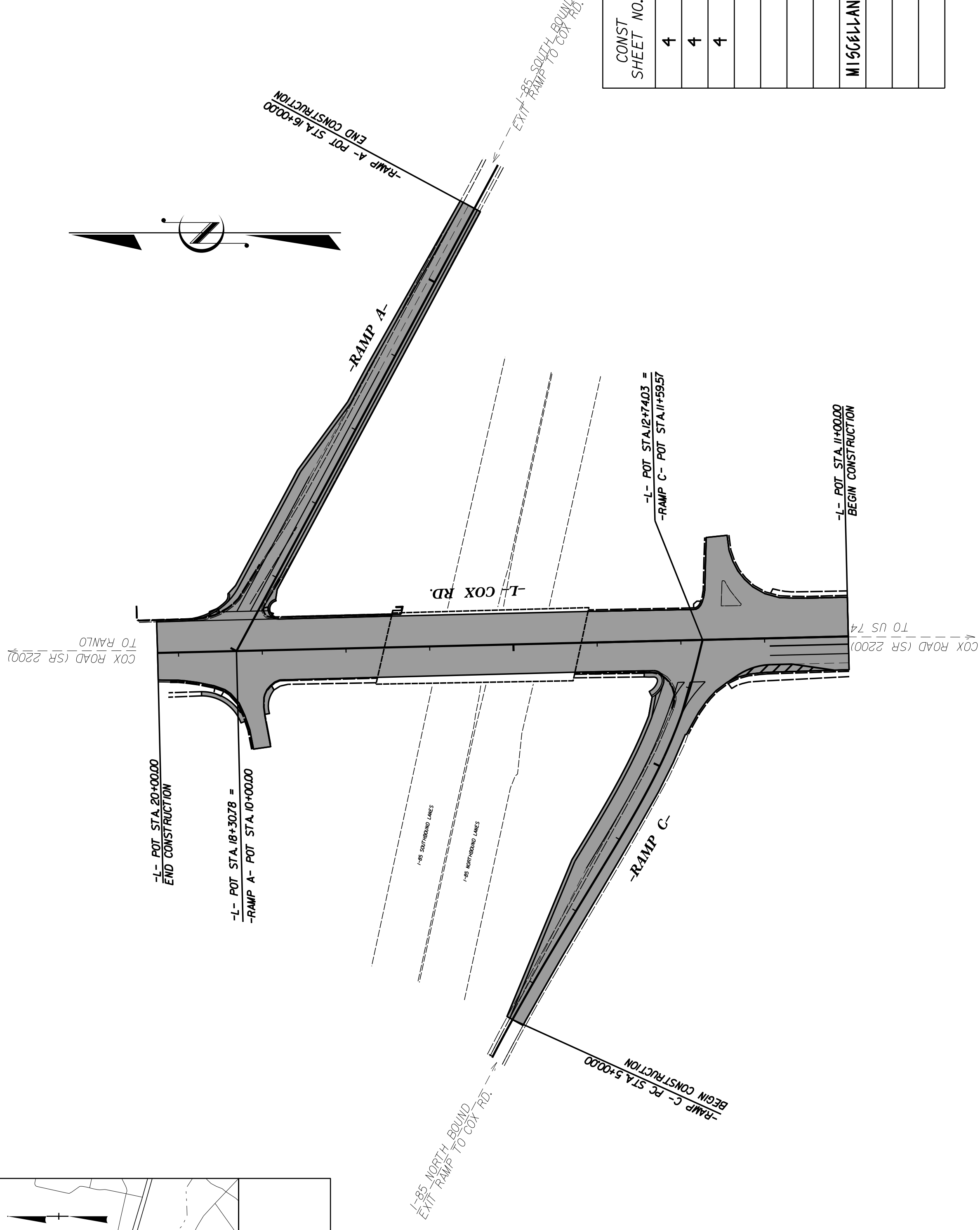

  
**PAVEMENT MARKING PLAN**

# TIP PROJECT: I-5713

See Sheet 1A For Index of Sheets



## STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS PLAN FOR PROPOSED HIGHWAY EROSION CONTROL



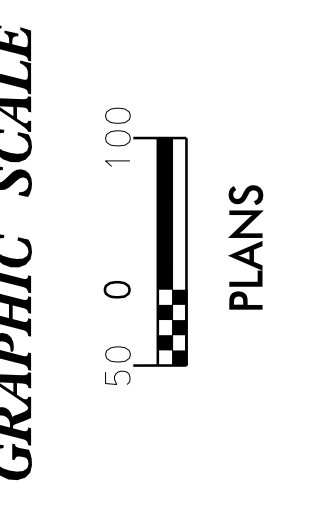
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5713	EC-1	2
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	

### EROSION AND SEDIMENT CONTROL MEASURES

Sd. #	Description	Symbol
1605.01	Temporary Silt Fence	— III — III — III
1606.01	Special Sediment Control Fence	— III — III — III
1632.03	Rock Inlet Sediment Trap	□
1633.02	Wattle/Coir Fiber Wattle	⌒
1635.01	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	⌒
1635.02	Rock Pipe Inlet Sediment Trap Type-A	⌒

### MATting FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	RAMP A	10+50	16+50	L T	906
4	RAMP A	10+50	16+50	R T	1412
4	RAMP C	6+00	10+50	L T	823
SUBTOTAL					3141
MISCELLANEOUS MATting TO BE INSTALLED AS DIRECTED BY THE ENGINEER					20
TOTAL					3161
SAY					3175



ROADSIDE ENVIRONMENTAL UNIT  
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:  
**ROADSIDE ENVIRONMENTAL UNIT**  
1 South Wilmington St.  
Raleigh, NC 27611

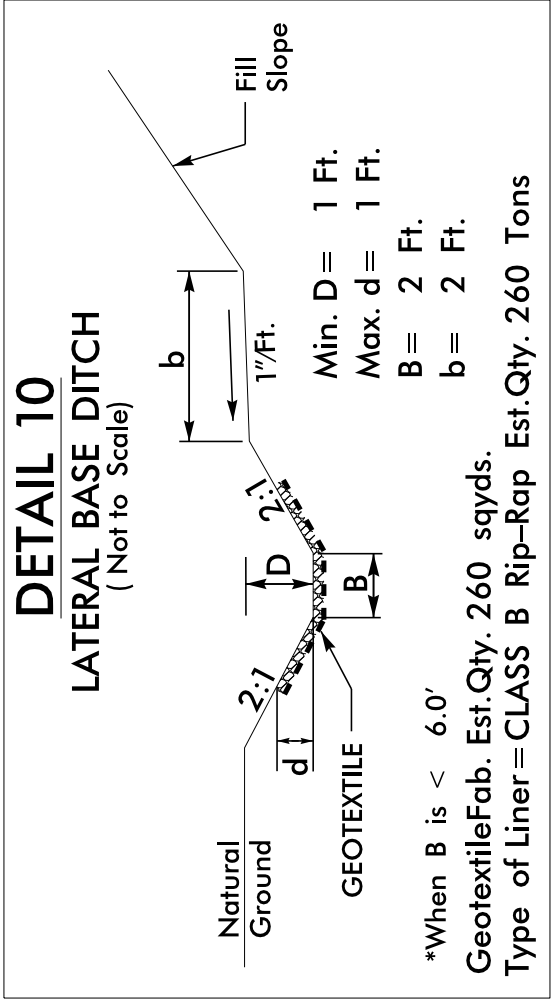
2012 STANDARD SPECIFICATIONS

Designed by:  
**J.S. CARPENTER**  
NAME LEVEL III CERTIFICATION NO. 3877

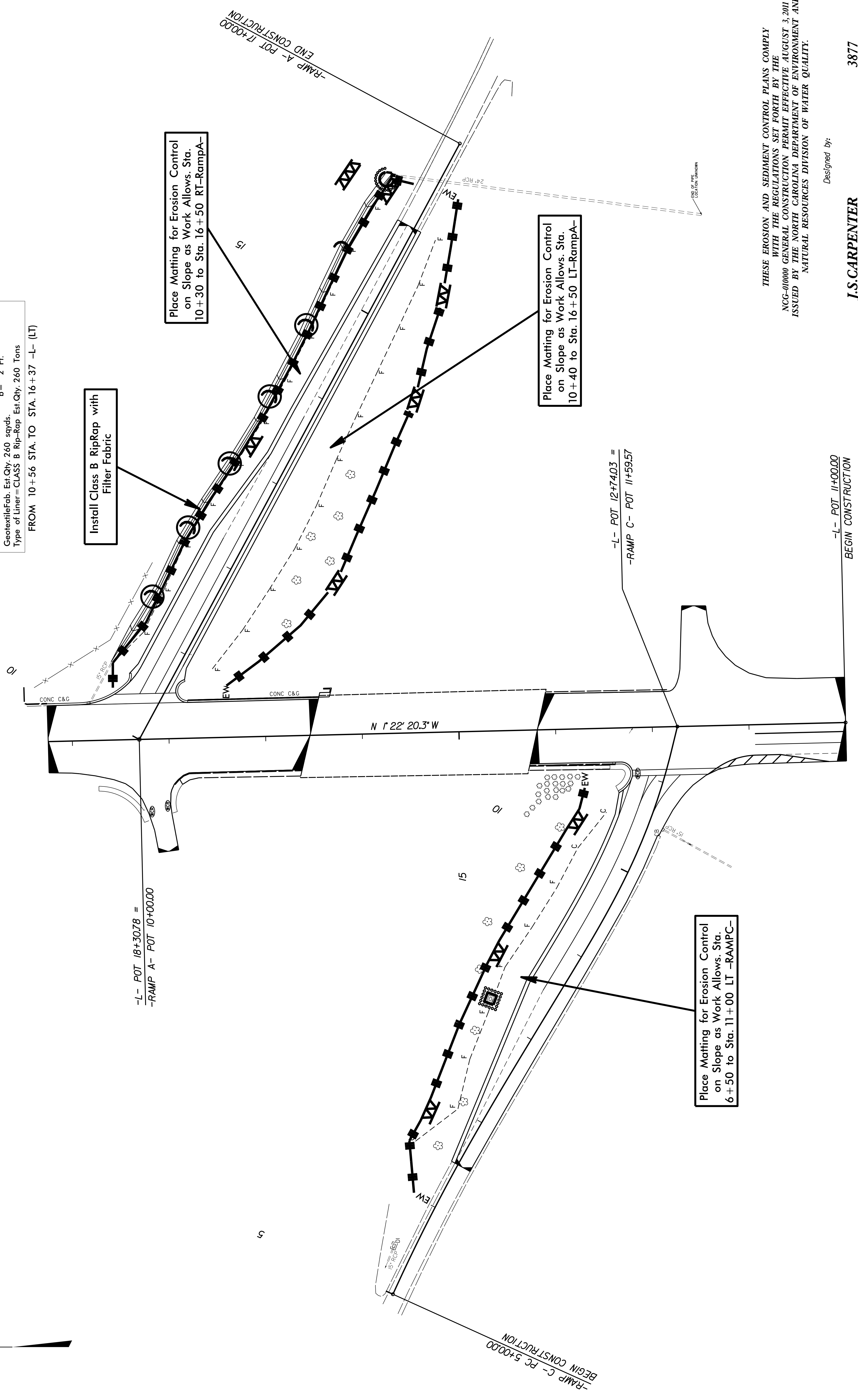
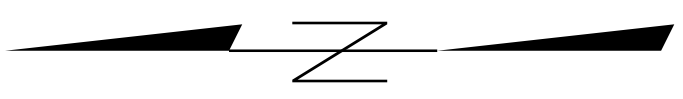
Roadway Standard Drawings  
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

**DETAIL 10**  
LATERAL BASE DITCH  
(Not to Scale)



FROM 10+56 STA. TO STA. 16+37 -L- (LT)



-L- POT 18+30.78 =  
-RAMP A- POT 10+00.00

-L- POT 12+74.03 =  
-RAMP C- POT 11+59.57

Place Matting for Erosion Control on Slope as Work Allows. Sta. 6+50 to Sta. 11+00 LT -RAMPC-

Place Matting for Erosion Control on Slope as Work Allows. Sta. 10+40 to Sta. 16+50 LT-RampA-

Place Matting for Erosion Control on Slope as Work Allows. Sta. 10+30 to Sta. 16+50 RT-RampA-

Install Class B RipRap with Filter Fabric

-L- POT 11+00.00  
BEGIN CONSTRUCTION

-RAMP C- PC 5+00.00  
BEGIN CONSTRUCTION

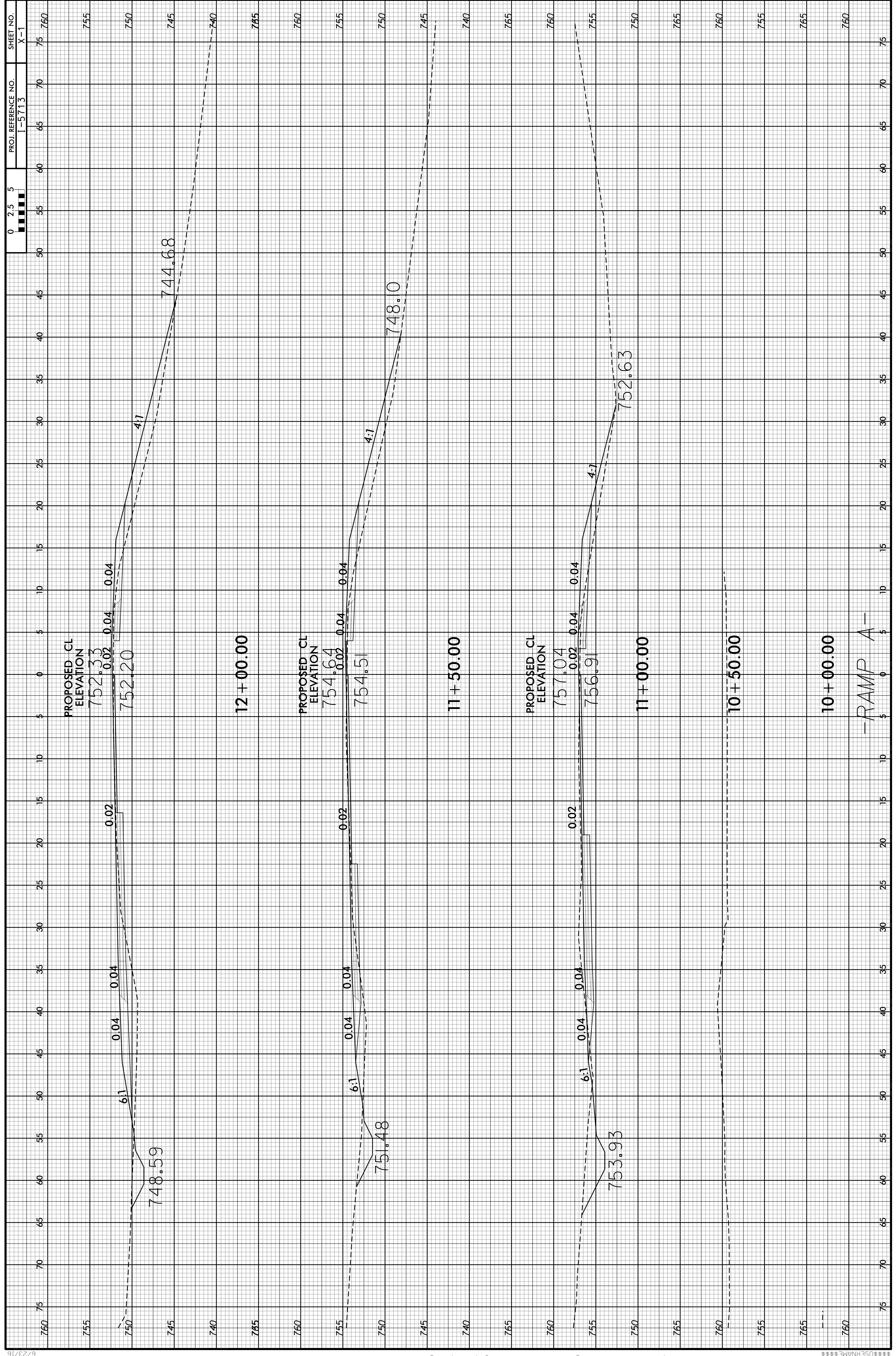
-RAMP A- POT 17+00.00  
END CONSTRUCTION

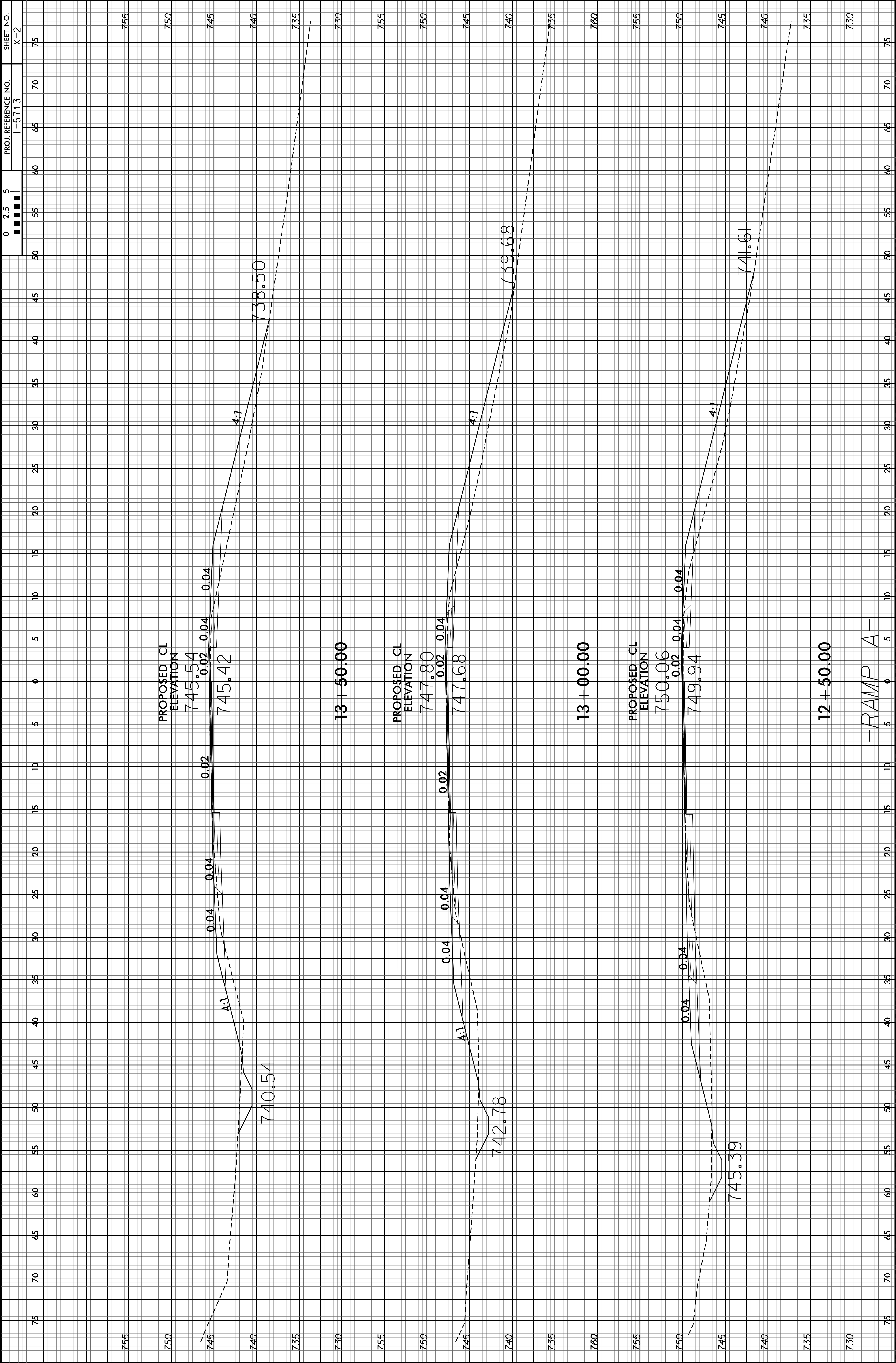
THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Designed by:

**J.S. CARPENTER**  
NAME

3877  
LEVEL III CERTIFICATION NO.





PROJ. REFERENCE NO. I-5713

SHEET NO. X-2

0 2.5 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

PROPOSED CL ELEVATION

745.54

745.42

13 + 50.00

PROPOSED CL ELEVATION

747.80

747.68

13 + 00.00

PROPOSED CL ELEVATION

750.06

749.94

12 + 50.00

-RAMP A-

738.50

739.68

741.61

740.54

742.78

745.39

755

750

745

740

735

730

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