

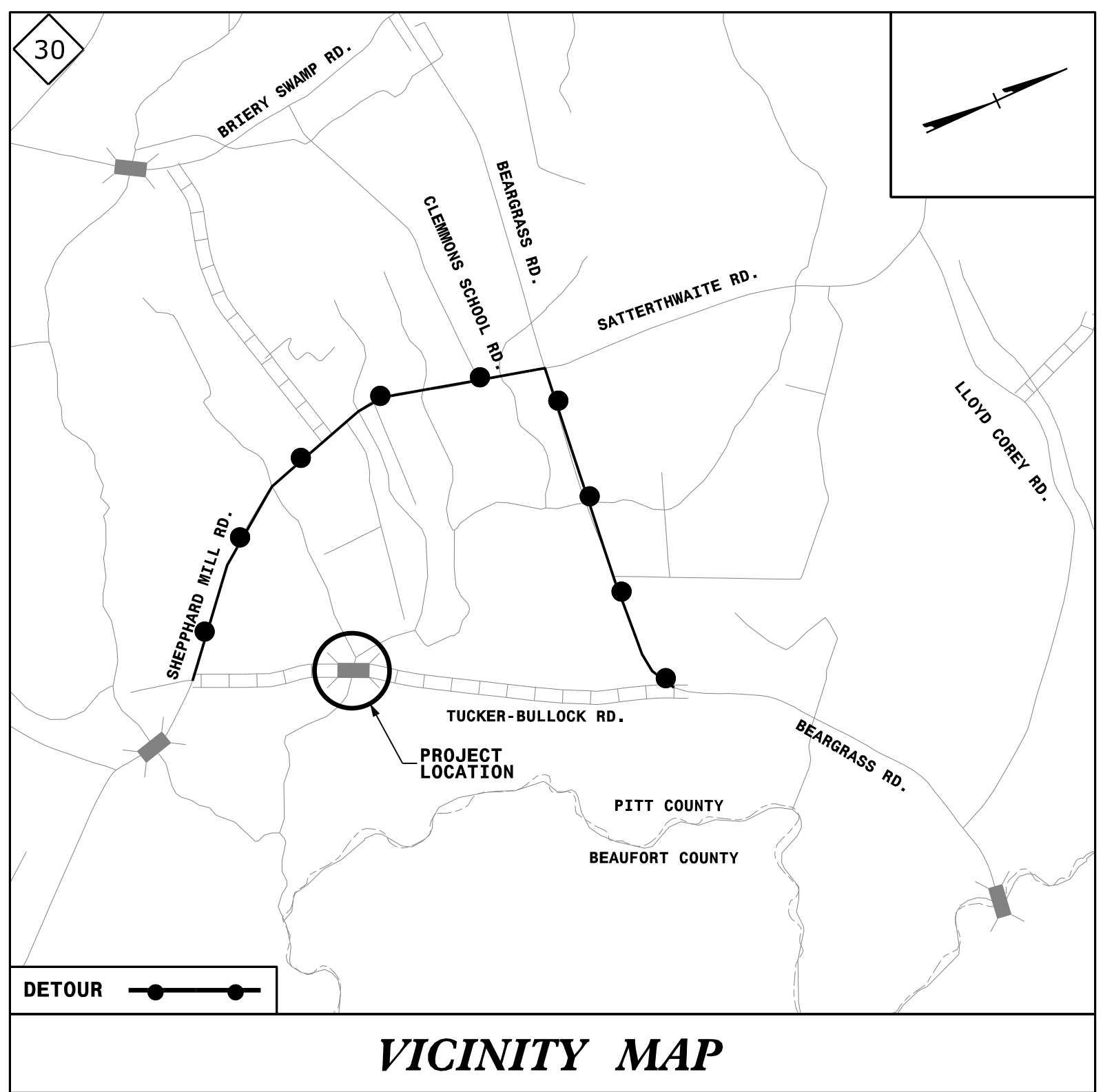
09/08/20

TIP PROJECT: BR-0120

CONTRACT: C204522

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BR-0120\_Pdy\_tsh.dgn  
jabeone

See Sheet 1A For Index of Sheets

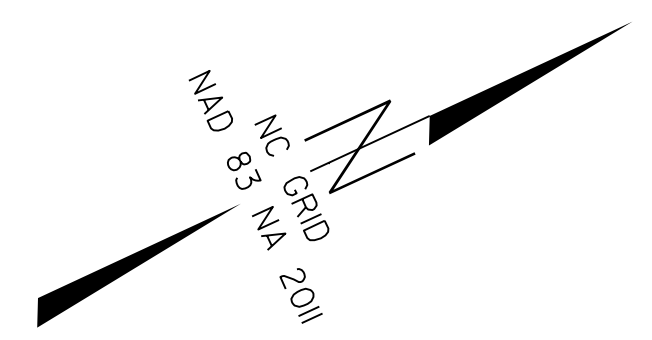
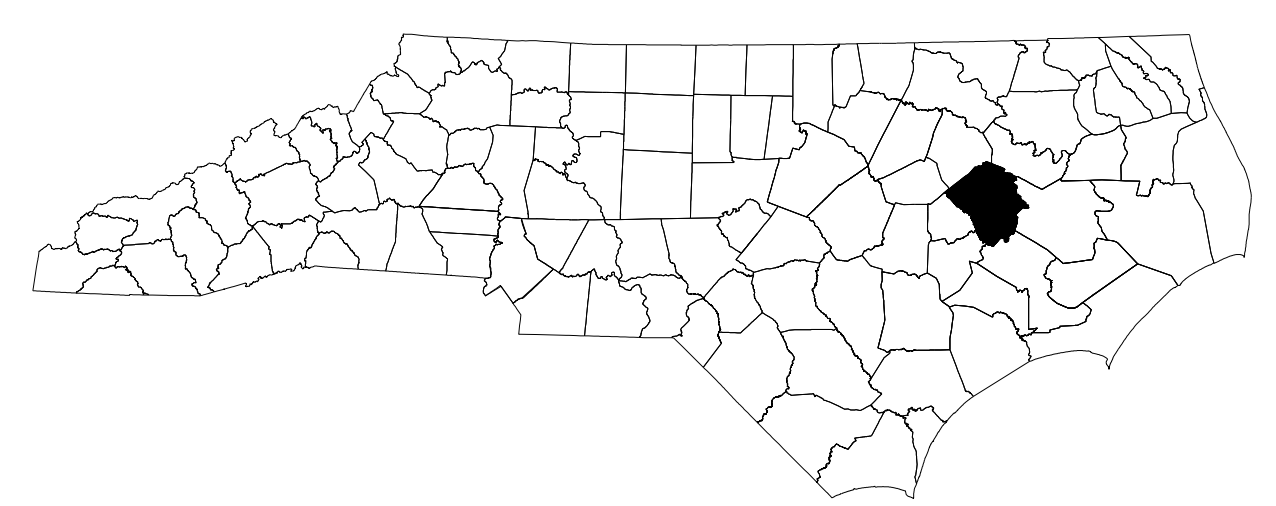


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

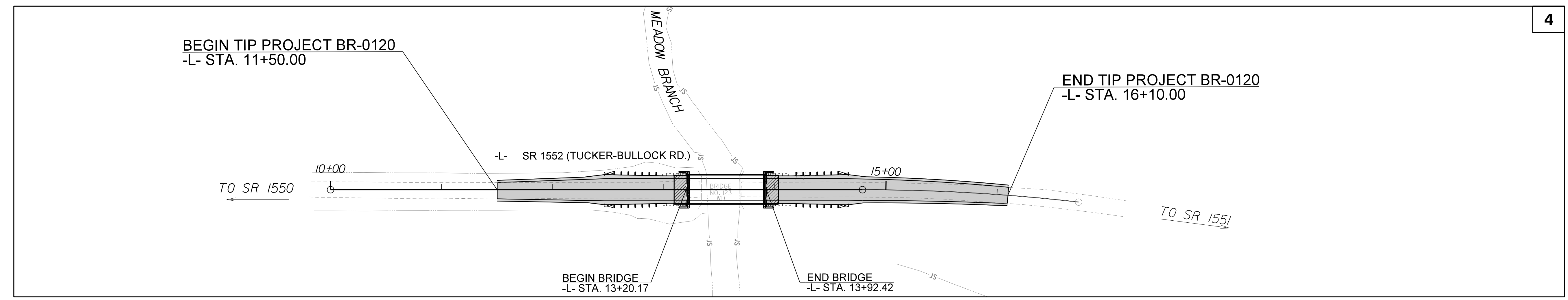
# PITT COUNTY

**LOCATION: BRIDGE 730123 ON SR 1552 (TUCKER-BULLOCK RD)  
OVER MEADOW BRANCH**

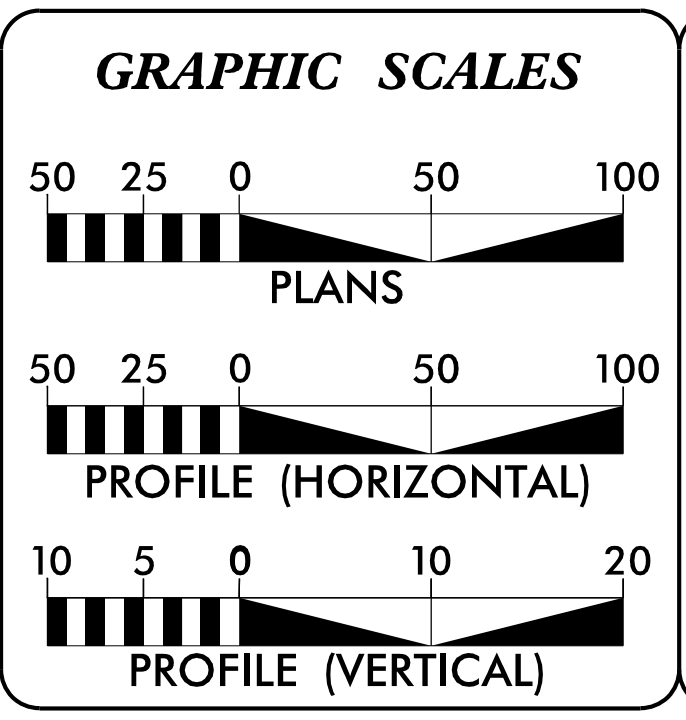
**TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0120	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
48829.1.1	N/A	PE	
48829.2.1	N/A	R/W, UTILITIES	
48829.3.1	2020001	CONSTRUCTION	



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



**DESIGN DATA**

ADT 2020 = 70  
V = 55 MPH  
T = 6%\*  
(\*TTST 3% + DUALS 3%)  
FUNC CLASS = LOCAL RURAL  
SUB-REGIONAL TIER

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT BR-0120 = 0.073 MILES  
LENGTH STRUCTURES TIP PROJECT BR-0120 = 0.014 MILES  
TOTAL LENGTH TIP PROJECT BR-0120 = 0.087 MILES

**NCDOT CONTACT:** DAVID STUTTS, PE  
SMU PROJECT MANAGER

Prepared in the Office of:

**KCA**  
KISINGER CAMPO & ASSOCIATES  
NC FIRM LICENSE No: C-1506  
301 Fayetteville St., Suite 1500  
Raleigh, NC 27601  
(919)882-7839

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:** SEPTEMBER 12, 2019

**LETTING DATE:** NOVEMBER 17, 2020

**SAMUEL L. CULLUM, P.E.**  
PROJECT ENGINEER

**ALLEN MCSWAIN**  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

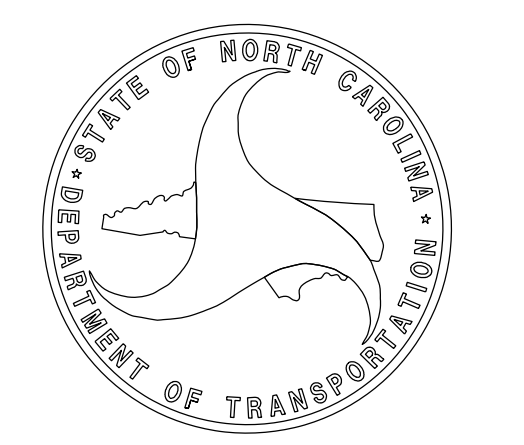
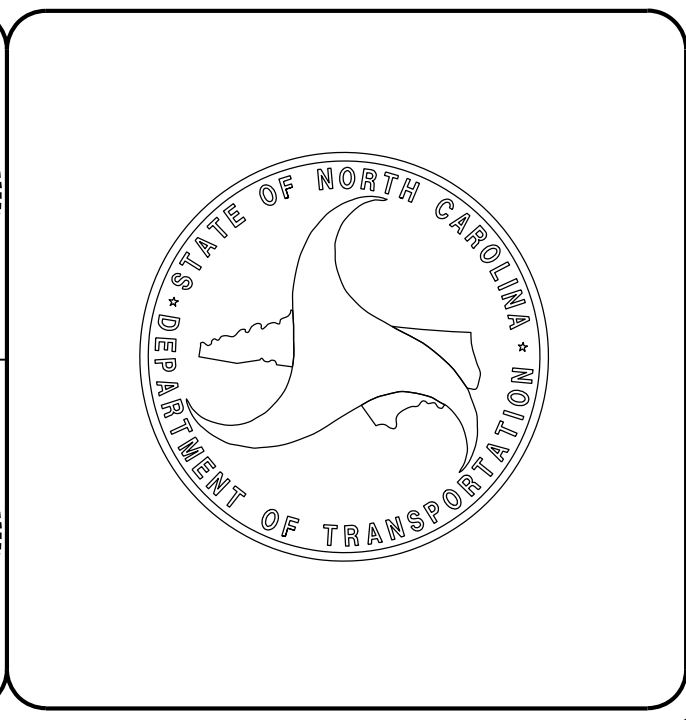
DocuSigned by:  
Samuel Cullum 9/3/2020  
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**SIGNATURE:**


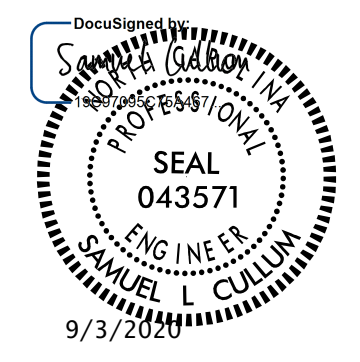
**ROADWAY DESIGN ENGINEER**

DocuSigned by:  
Samuel Cullum 9/3/2020  
19C97095C75A467...

**SIGNATURE:**



8/17/19

PREPARED IN THE OFFICE OF:  KISINGER CAMPO & ASSOCIATES	NC FIRM LICENSE No: C-1506 301 Fayetteville St., Suite 1500 Raleigh, NC 27601 (919)882-7659	PROJECT REFERENCE NO. <b>BR-0120</b>	SHEET NO. <b>1A</b>
	ROADWAY DESIGN ENGINEER 		
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			

SHEET NUMBER	SHEET		
	INDEX OF SHEETS		
1	TITLE SHEET		
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS		
1B	CONVENTIONAL SYMBOLS		
2A-1 THRU 2A-2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS	SUPERELEVATION:	01-16-2018
2C-1 THRU 2C-2	SPECIAL DETAIL SHEETS	ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.	2018 ROADWAY ENGLISH STANDARD DRAWINGS
3B-1	ROADWAY SUMMARIES		THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - 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:
3D-1	DRAINAGE SUMMARIES		
3G-1	GEOTECHNICAL SUMMARIES	SHOULDER CONSTRUCTION:	
4	PLAN AND PROFILE SHEET	ASPHALT, EARTH, AND SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO 560.01.	
4A	PLAN AND PROFILE - R/W DETAIL SHEET		
RW01 THRU RW04	RIGHT OF WAY TITLE, SURVEY CONTROL, PROPOSED ALIGNMENT CONTROL, AND RIGHT OF WAY CONTROL SHEETS	SIDE ROADS:	
		THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.	
TMP-1 THRU TMP-3	TRAFFIC CONTROL PLANS		
PMP-1	PAVEMENT MARKING PLANS		
EC-1 THRU EC-5	EROSION CONTROL PLANS		
RF-1	REFORESTATION DETAIL SHEET		
SIGN-1	SIGNING PLANS	DRIVEWAYS:	
UO-1 THRU UO-2	UTILITY BY OTHERS	DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3' RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVEWAYS WILL BE AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.	
X-1A	CROSS-SECTION SUMMARY SHEET		
X-1 THRU X-5	CROSS-SECTIONS		
S-1 THRU S-14	STRUCTURE PLANS	GUARDRAIL:	
		THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.	
	GENERAL NOTES: 2018 SPECIFICATIONS EFFECTIVE: 01-16-2018	SUBSURFACE PLANS:	
		NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.	
	GRADING AND SURFACING:	END BENTS:	
	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 ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.	
	CLEARING:	UTILITIES:	
	CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.	UTILITY OWNERS ON THIS PROJECT ARE: CENTURYLINK	
		ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.	
		RIGHT-OF-WAY MARKERS:	
		ALL RIGHT-OF-WAY MARKERS AND PERMANENT EASEMENT MARKERS ARE TO BE PLACED BY L&S. THE CONTRACT SURVEYOR WILL BE RESPONSIBLE FOR RESETTING ANY POINTS DISTURBED BY CONSTRUCTION.	

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	METHOD OF CLEARING - METHOD II.
225.02	GUIDE FOR GRADING SUBGRADE - SECONDARY AND LOCAL
225.04	METHOD OF OBTAINING SUPERELEVATION - TWO LANE PAVEMENT
DIVISION 3 - PIPE CULVERTS	
300.01	METHOD OF PIPE INSTALLATION
DIVISION 4 - MAJOR STRUCTURES	
422.02	BRIDGE APPROACH FILLS - TYPE II MODIFIED APPROACH FILL
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE -
METHOD I	
DIVISION 8 - INCIDENTALS	
840.00	CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
840.29	FRAMES AND NARROW SLOT FLAT GRATES
840.35	TRAFFIC BEARING GRATED DROP INLET
846.01	CONCRETE CURB, GUTTER AND CURB AND GUTTER
846.04	DROP INLET INSTALLATION IN SHOULDER BERM GUTTER
862.01	GUARDRAIL PLACMENT
862.02	GUARDRAIL INSTALLATION
862.03	STRUCTURE ANCHOR UNITS
876.02	GUIDE FOR RIP RAP AT PIPE OUTLETS

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

12/2/2016

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	-----
Property Monument	□ ECM
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	--- WLB ---
Proposed Wetland Boundary	--- WLB ---
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	--- WLB ---
Proposed Lateral, Tail, Head Ditch	--- FLOW ---
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	○ R W
New Right of Way Line with Pin and Cap	○ R W ◆
New Right of Way Line with Concrete or Granite R/W Marker	△ R W
New Control of Access Line with Concrete C/A Marker	△ C/A
Existing Control of Access	△ C/A
New Control of Access	△ C/A
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	--- CR ---
Existing Metal Guardrail	--- T ---
Proposed Guardrail	--- T ---
Existing Cable Guiderail	--- T ---
Proposed Cable Guiderail	--- T ---
Equality Symbol	⊕
Pavement Removal	⊗

### VEGETATION:

Single Tree	☼
Single Shrub	☼

*Note: Not to Scale*      \*S.U.E. = *Subsurface Utility Engineering*

Hedge	-----
Woods Line	-----
Orchard	☼ ☼ ☼ ☼
Vineyard	□ Vineyard

### EXISTING STRUCTURES:

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

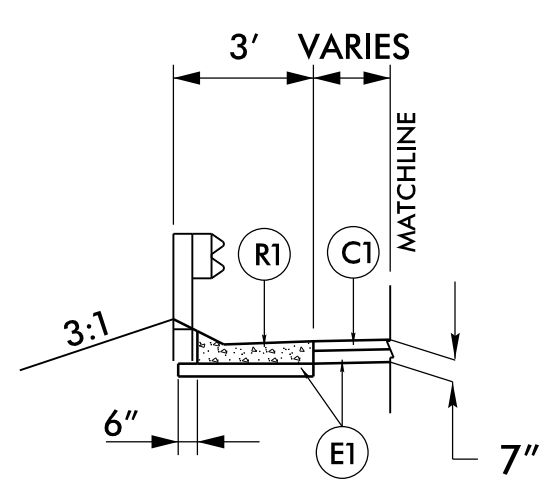
### MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	--- 7UTL ---
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.

6/2/2019

FINAL PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN MEMO - 7/22/19 - CLARK S. MORRISON, PhD, PE)	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF THE TWO LAYERS.
C2	PROP. VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110.0 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" OR TO EXCEED 1.5" IN DEPTH.
E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS PER SQ. YD.
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING

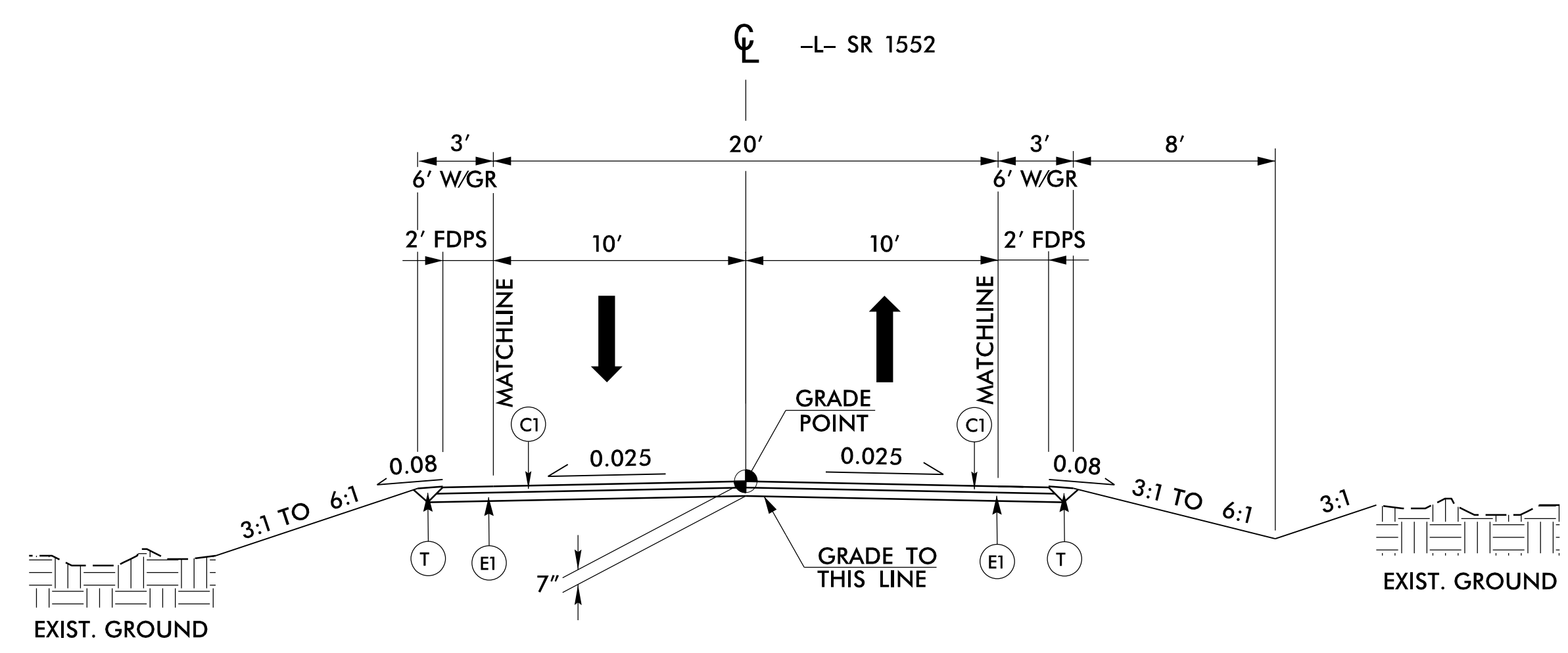
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.  
 NOTE: FINAL PAVEMENT DESIGN PER PAVEMENT DESIGN MEMO DATED 07/22/2019 FROM CLARK S. MORRISON, PhD, P.E.



**SHOULDER BERM GUTTER (SBG) DETAIL**

TO BE USED IN CONJUNCTION WITH TYPICAL SECTION NO. 1

- L- STA. 12+96.45 TO -L- STA. 13+09.30 (LT & RT)
- L- STA. 14+03.30 TO -L- STA. 14+25.00 (LT)
- L- STA. 14+03.30 TO -L- STA. 14+28.05 (RT)

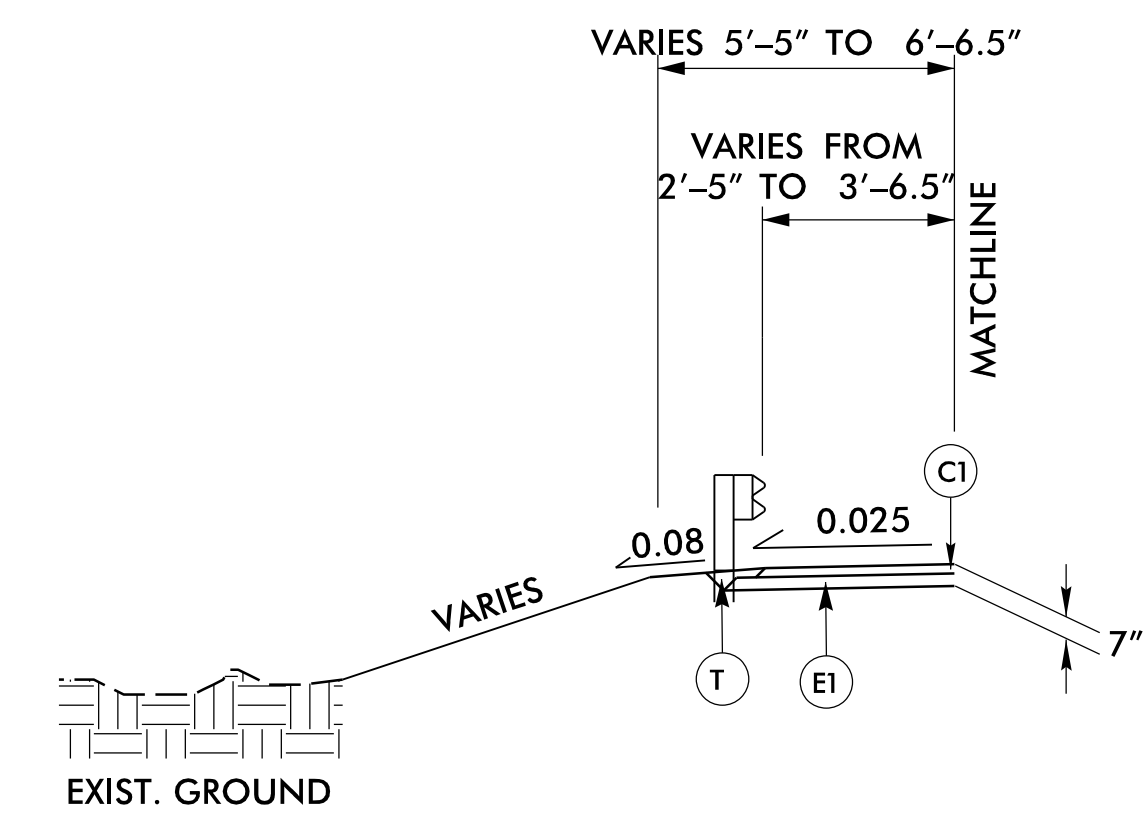


**TYPICAL SECTION NO. 1**

-L- (SR 1552)

**USE TYPICAL SECTION NO. 1**

- L- STA. 11+50.00 TO STA. 13+20.17 (BEGIN BRIDGE)
- L- STA. 13+92.42 (END BRIDGE) TO STA. 16+10.00



**GUARDRAIL DETAIL**

TO BE USED IN CONJUNCTION WITH TYPICAL SECTION NO. 1

- L- STA. 12+48.14 TO STA. 13+20.17 (BEGIN BRIDGE)
- L- STA. 13+92.42 (END BRIDGE) TO STA. 14+62.90

PROJECT REFERENCE NO. <i>BR-0120</i>	SHEET NO. <i>2A-1</i>
ROADWAY DESIGN ENGINEER SEAL 043571 MORRISON, CLARK S. 9/3/2020	PAVEMENT DESIGN ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
PREPARED IN THE OFFICE OF: <b>KCA</b> KISINGER CAMPO & ASSOCIATES	NC FIRM LICENSE No: C-1506 301 Fayetteville St., Suite 1500 Raleigh, NC 27601 (919)882-7839

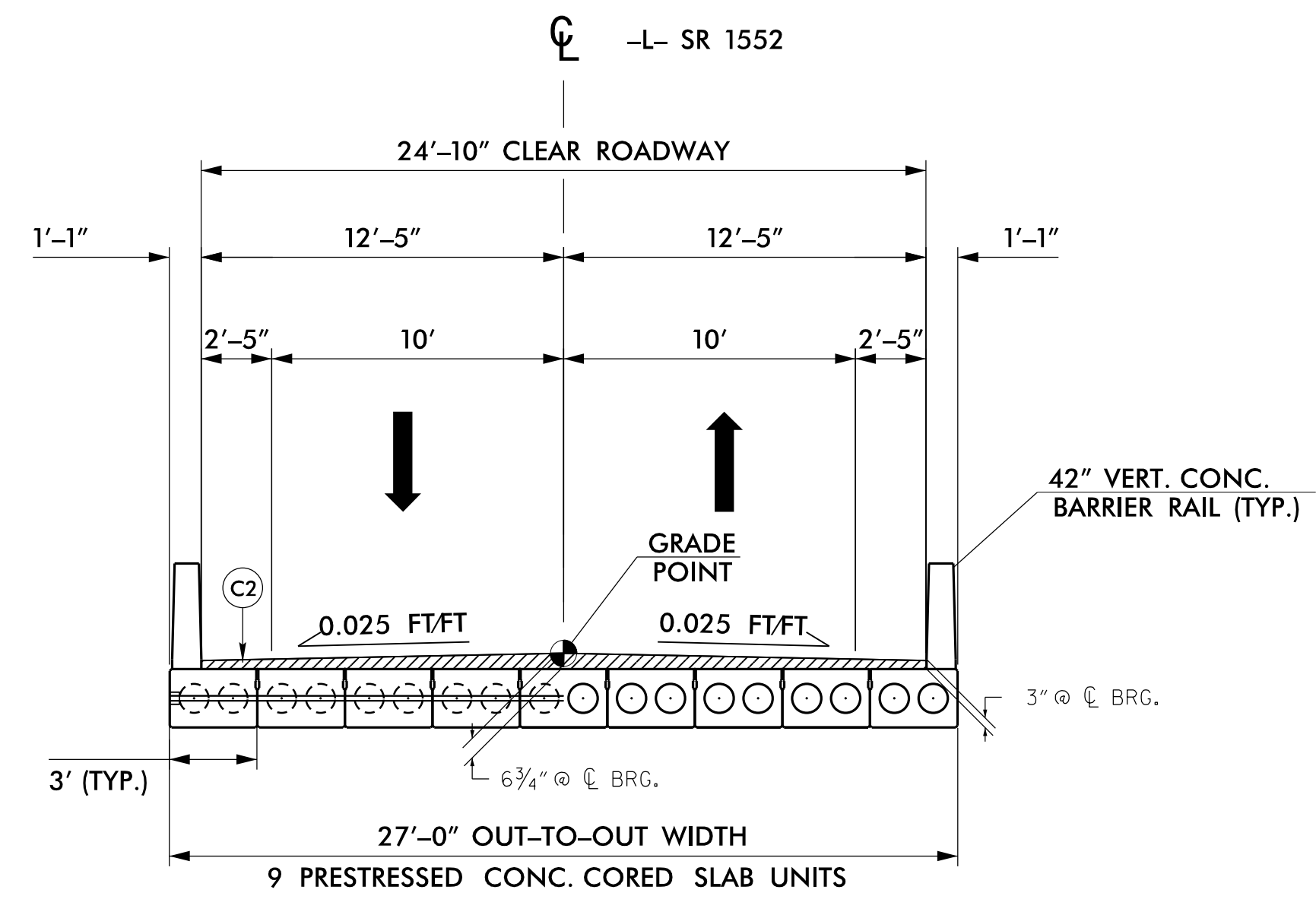
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6/2/2019

FINAL PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN MEMO - 7/22/19 - CLARK S. MORRISON, PhD, PE)	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF THE TWO LAYERS.
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E1	PROP. APPROX. 4.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS PER SQ. YD.
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.  
 NOTE: FINAL PAVEMENT DESIGN PER PAVEMENT DESIGN MEMO DATED 07/22/2019 FROM CLARK S. MORRISON, PhD, P.E.

PROJECT REFERENCE NO. <i>BR-0120</i>	SHEET NO. <i>2A-2</i>
ROADWAY DESIGN ENGINEER <i>Samuel L. Cullum</i>	PAVEMENT DESIGN ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
PREPARED IN THE OFFICE OF:	 NC FIRM LICENSE No: C-1506 501 Fayetteville St., Suite 1500 Raleigh, NC 27601 (919)882-7839



**TYPICAL SECTION NO. 2**  
 -L- STA 13+20.17 (BEGIN BRIDGE) TO 13+92.42 (END BRIDGE)

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STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

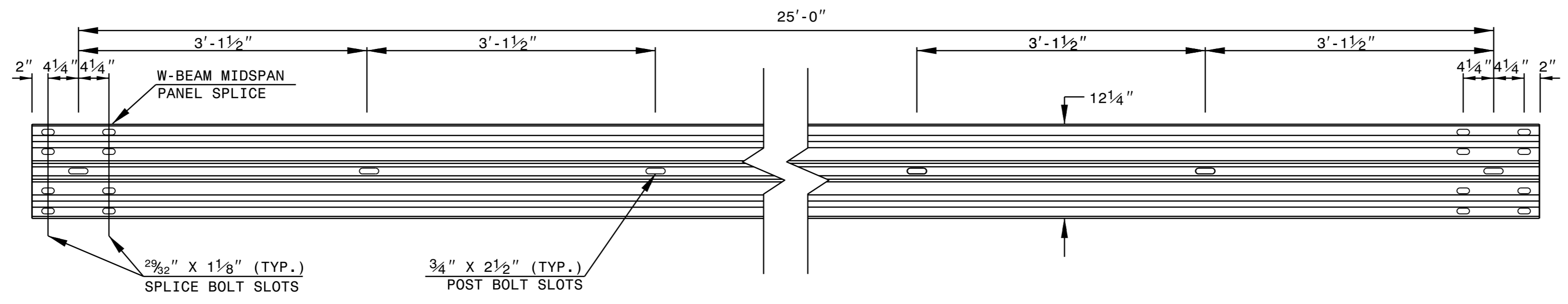
ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL INSTALLATION**

SHEET 6 OF 8  
**862D02**

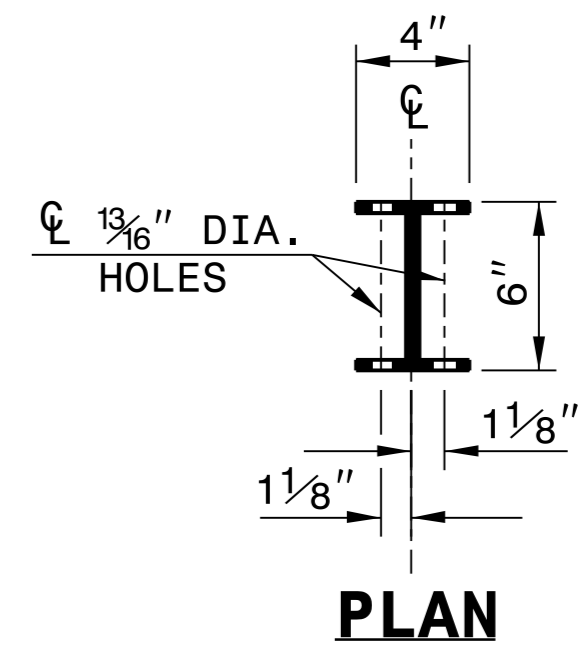
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL INSTALLATION**

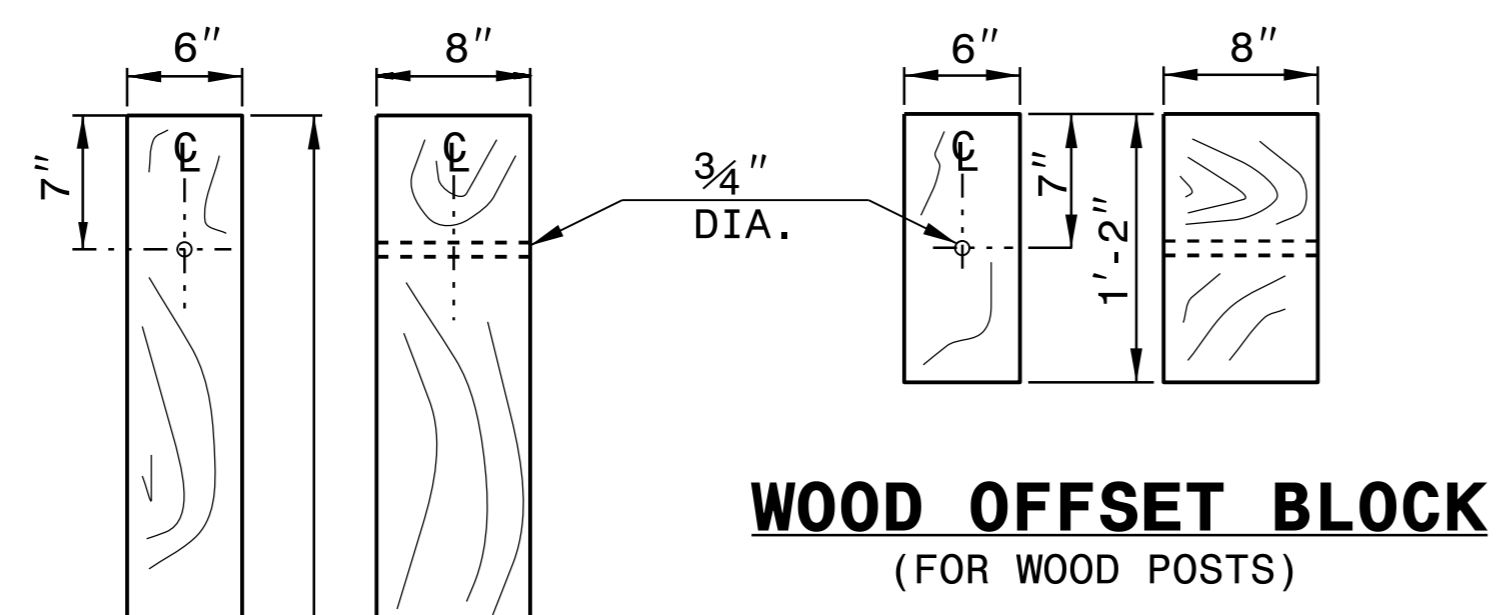
SHEET 6 OF 8  
**862D02**



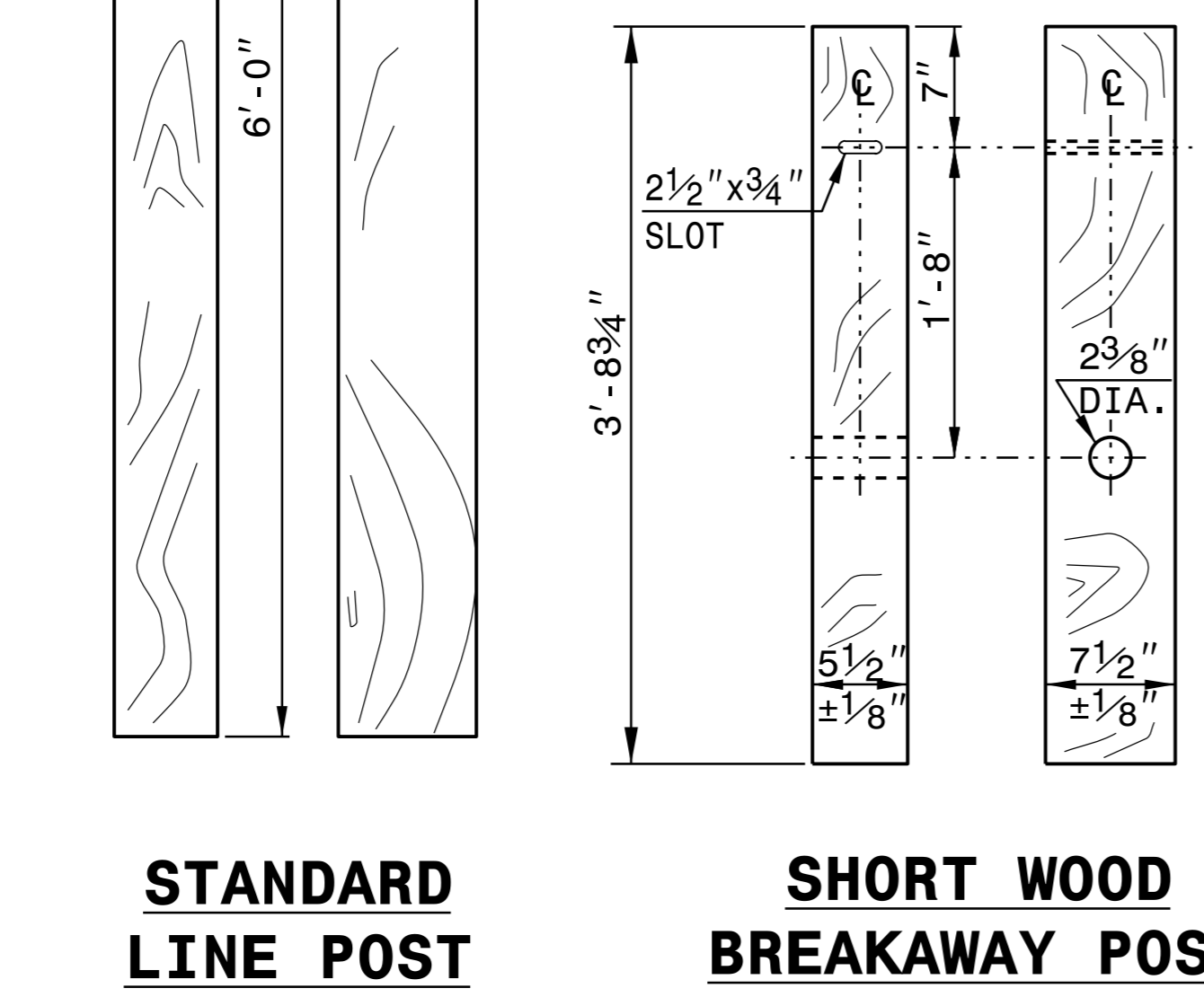
**STANDARD W-BEAM GUARDRAIL**



**PLAN**

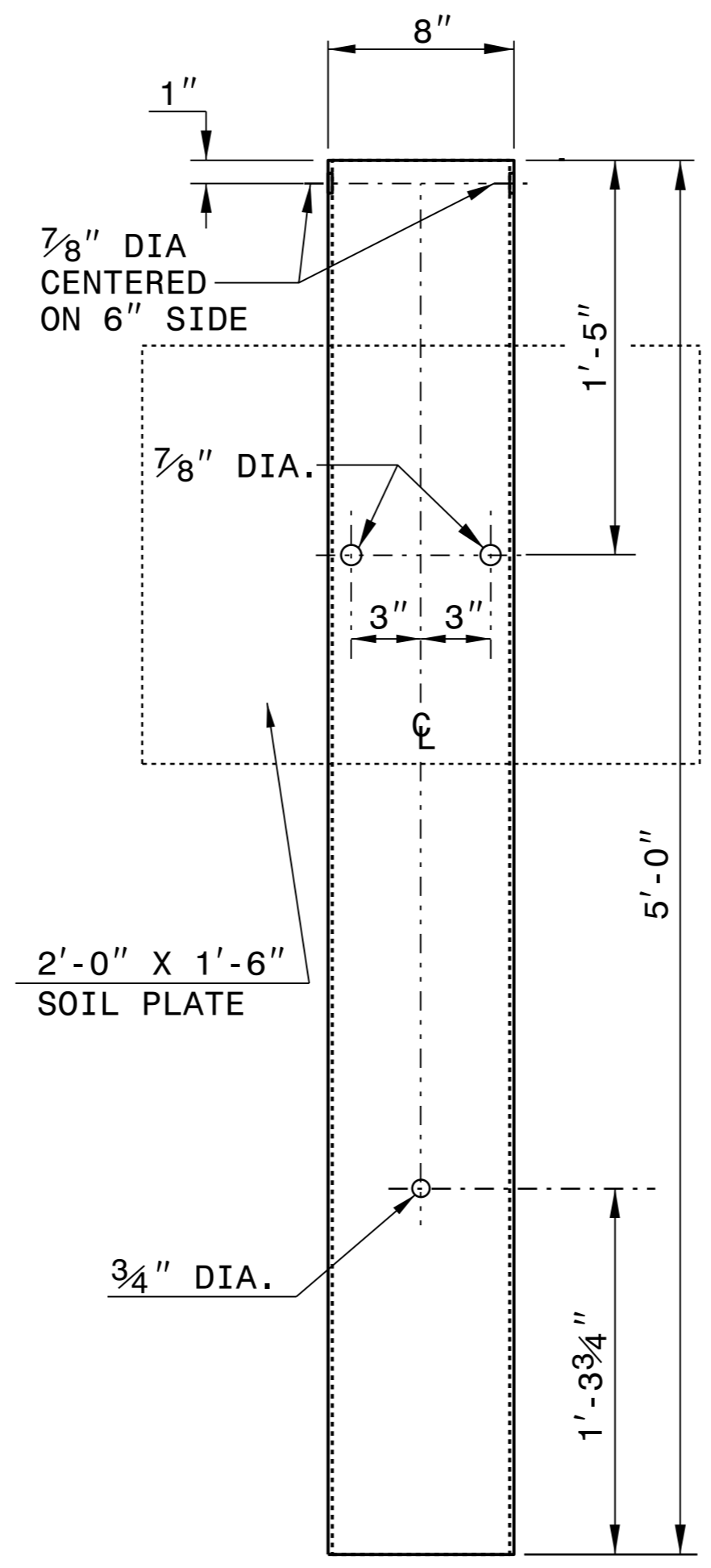


**WOOD OFFSET BLOCK  
(FOR WOOD POSTS)**

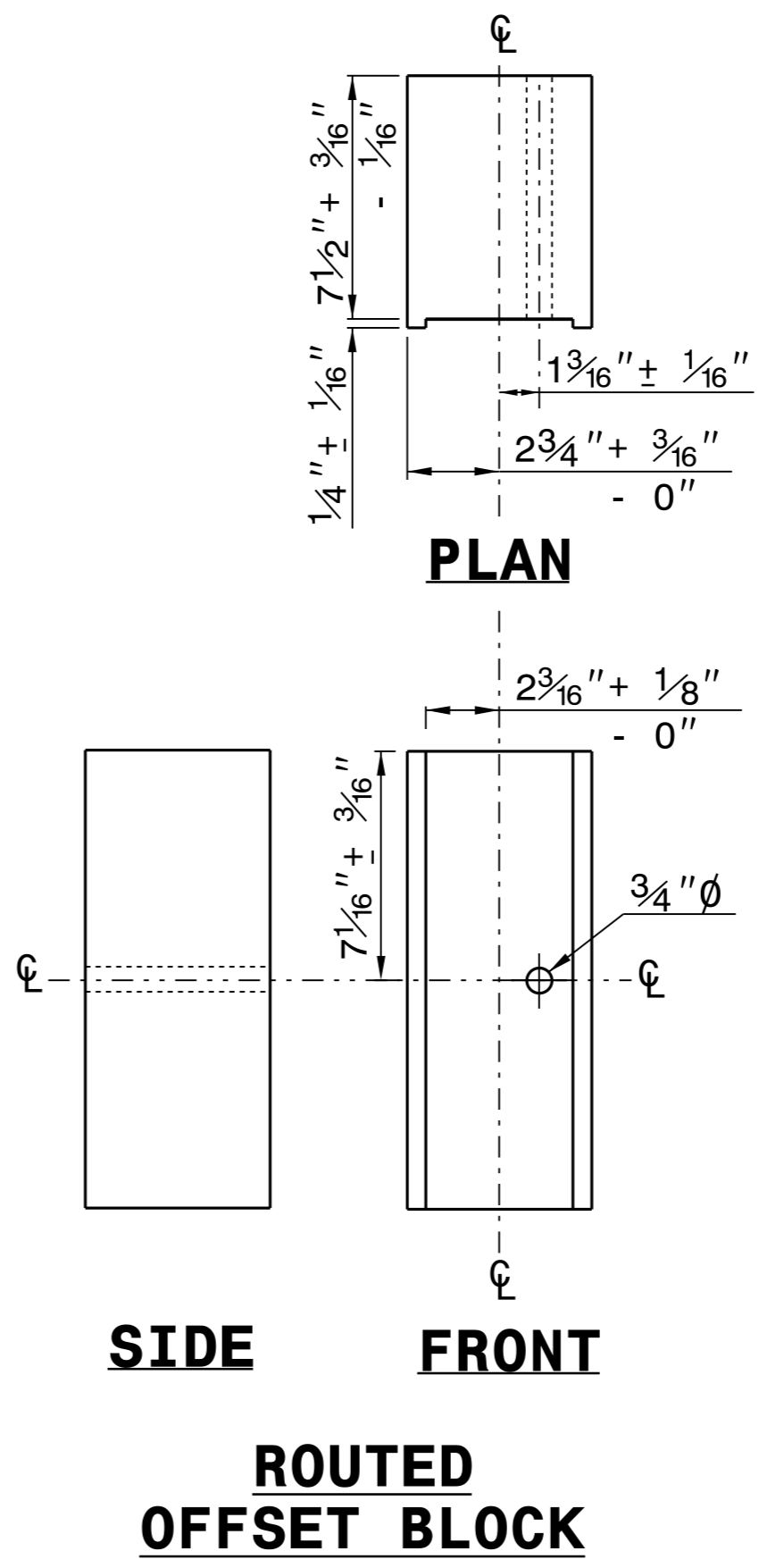


**STANDARD LINE POST**

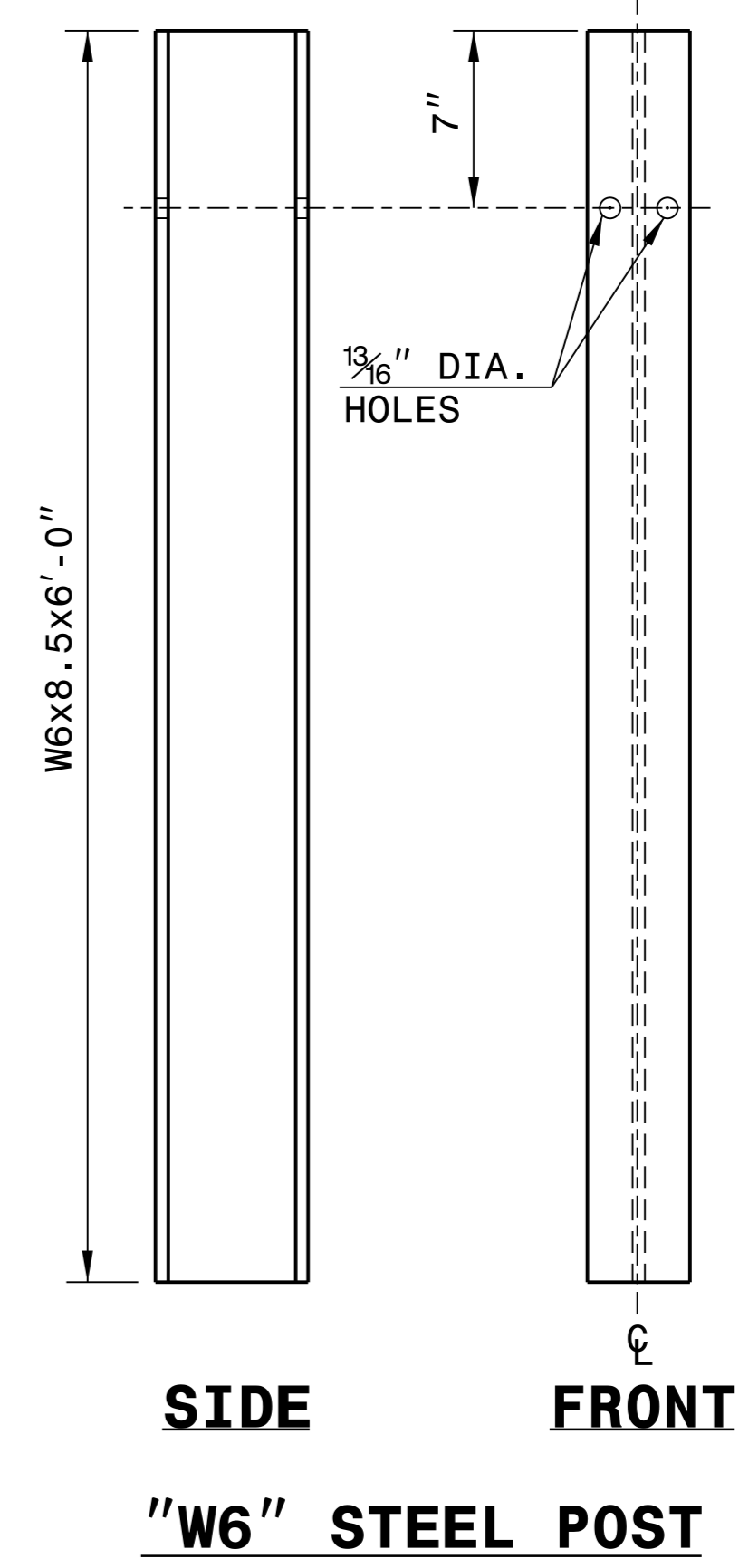
**SHORT WOOD BREAKAWAY POST**



**STEEL TUBE  
TS 6"x8"x0.1875"**



**ROUTED OFFSET BLOCK  
SIDE FRONT**



**"W6" STEEL POST  
SIDE FRONT**

**SYSTEM PARTS**

12/17/2019



Designed by:  
Joel S. Howerton  
873F3D17DCDC46F

**CONTRACTS STANDARDS  
AND DEVELOPMENT UNIT**  
Office 919-707-6950 FAX 919-250-4119

**SEE TITLE BLOCK**

ORIGINAL BY: J. HOWERTON	DATE: 3-7-2018
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	



I4-DEC-2017 10:36 S:\Contracts\Special Details\Standard Drawings\Division 8\08662d0301.dgn  
 Jhowerton AT: CSU-292595

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ROADWAY DETAIL DRAWING FOR <b>STRUCTURE ANCHOR UNITS</b> GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE	SHEET 1 OF 7 <b>862D03</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 45%;"> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>**POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.</li> <li>*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.</li> <li>-SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.</li> <li>-MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).</li> <li>-LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.</li> <li>-SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.</li> </ul> </div> </div>		
<b>GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE</b>		

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	ROADWAY DETAIL DRAWING FOR <b>STRUCTURE ANCHOR UNITS</b> GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER	SHEET 2 OF 7 <b>862D03</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> </div> <div style="width: 45%;"> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>**POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.</li> <li>*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.</li> <li>-SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.</li> <li>-MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).</li> <li>-LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.</li> <li>-SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.</li> </ul> </div> </div>		
<b>GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER</b>		

12/17/2019

DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

**CONTRACT STANDARDS  
AND DEVELOPMENT UNIT**  
 Office 919-707-6950 FAX 919-250-4119

## SEE TITLE BLOCK

ORIGINAL BY: J. HOWERTON	DATE: 06-22-12
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

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 Jhowerton AT: CSU-292595






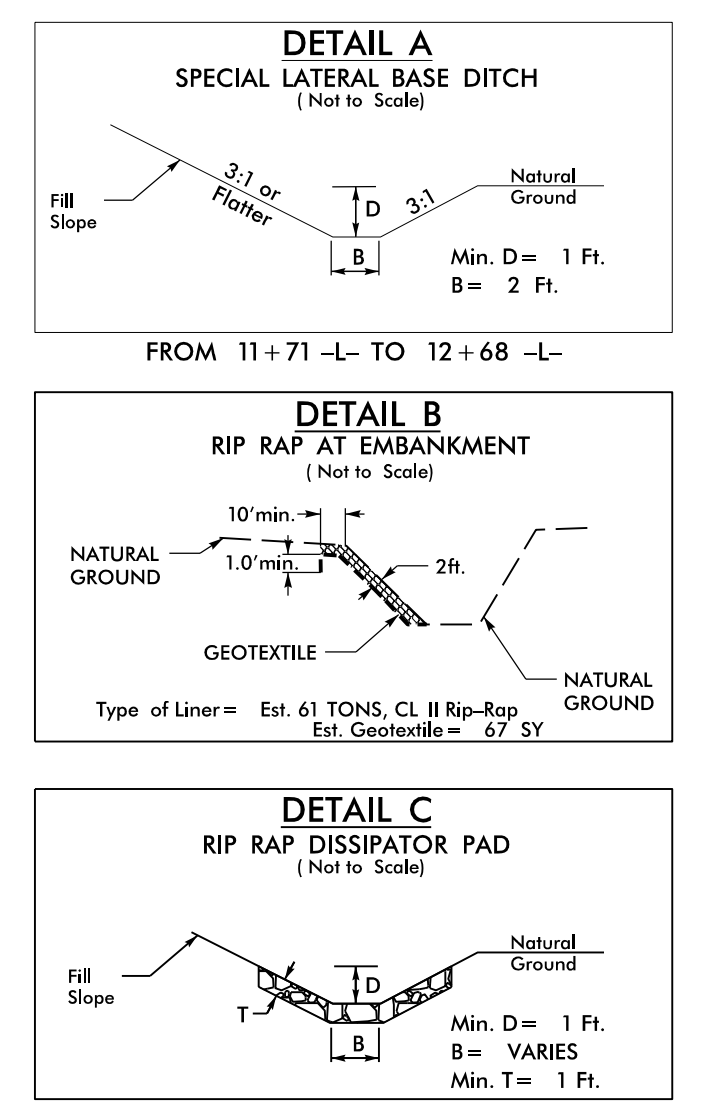
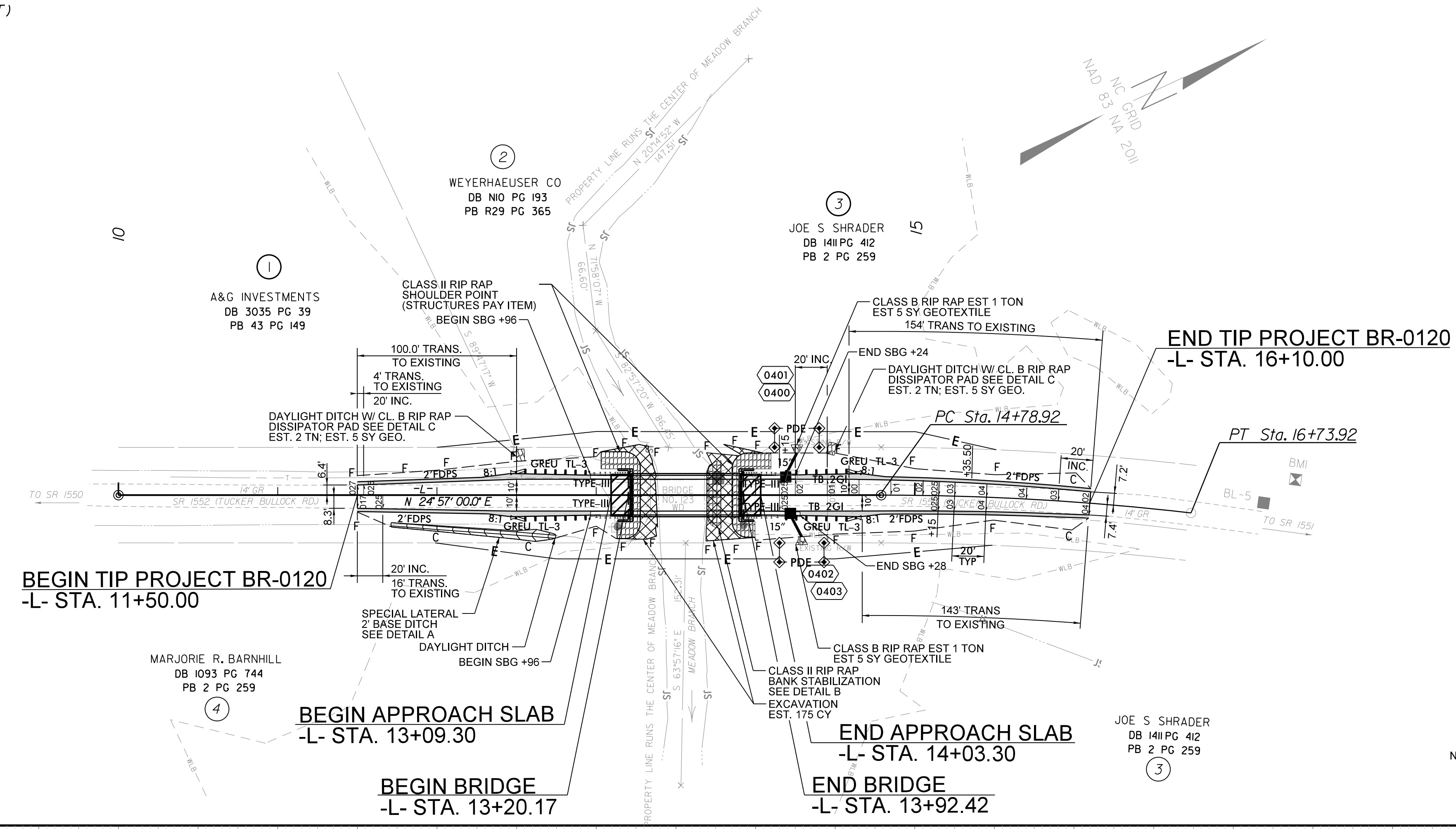




8/17/19

-L-  
 PI Sta 15+76.52  
 $\Delta = 6' 34" 19.8" (RT)$   
 $D = 3' 22" 13.2"$   
 $L = 195.00'$   
 $T = 97.61'$   
 $R = 1,700.00'$   
 $SE = 4\%$   
 $Lr = 120'$

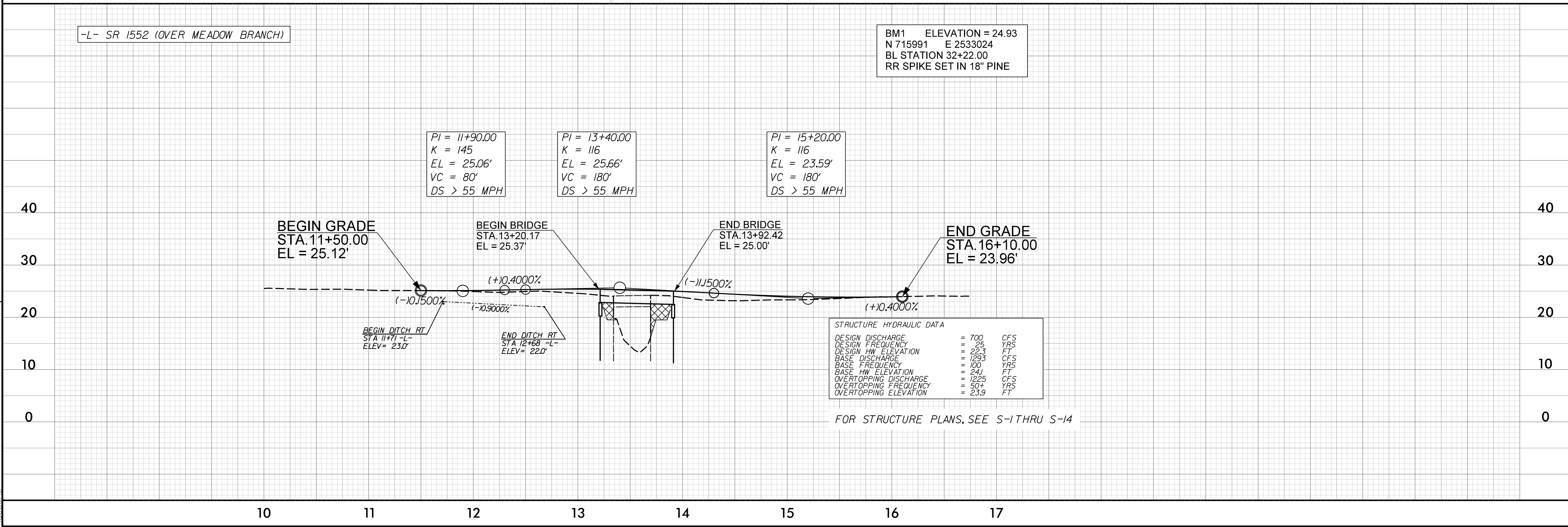
PROJECT REFERENCE NO. <b>BR-0120</b>	SHEET NO. <b>4</b>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SEAL 043571	SEAL 043571
ENGINEER SAMUEL L. CULLUM	ENGINEER SAMUEL L. CULLUM
9/3/2020	9/3/2020
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
PREPARED IN THE OFFICE OF:	 NC FIRM LICENSE NO. C-1508 301 Fayetteville St., Suite 1500 Raleigh, NC 27601 (919) 862-7839



NOTE: CROSS SLOPES AT PROJECT TIE-INS ARE APPROXIMATE. CONTRACTOR TO ENSURE APPROPRIATE CROSS SLOPE TRANSITIONS TO EXISTING CONDITION

-L- SR 1552 (OVER MEADOW BRANCH)

BM1 ELEVATION = 24.93  
 N 715991 E 2533024  
 BL STATION 32+22.00  
 RR SPIKE SET IN 18" PINE



REVISIONS

03-SEP-2020 10:51  
 BR-0120-Rdy\_psh.dgn  
 ide.bone

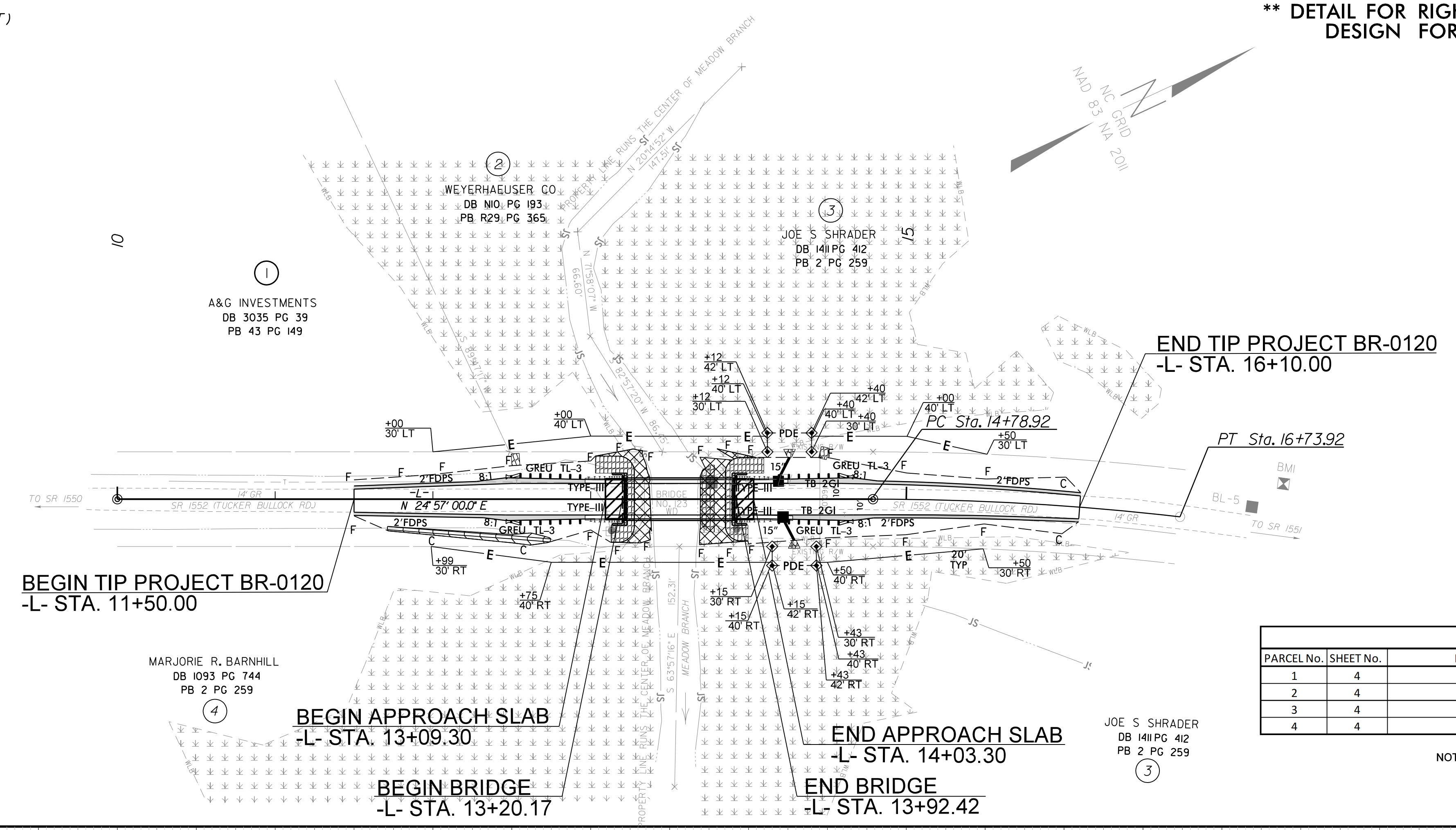


8/17/19

-L-  
 PI Sta 15+76.52  
 $\Delta = 6' 34" 19.8" (RT)$   
 $D = 3' 22" 13.2"$   
 $L = 195.00'$   
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 $R = 1,700.00'$   
 $SE = 4\%$   
 $Lr = 120'$

**RIGHT OF WAY DETAIL SHEET**  
**\*\* DETAIL FOR RIGHT OF WAY MONUMENT DESIGN FOR REFERENCE ONLY**

PROJECT REFERENCE NO. <i>BR-0120</i>	SHEET NO. <i>4A</i>
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER Samuel L. Cullum SEAL 043571 9/3/2020	HYDRAULICS ENGINEER Samuel L. Cullum SEAL 043571 9/3/2020
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
PREPARED IN THE OFFICE OF: <b>KCA</b> KISINGER CAMPO & ASSOCIATES	NC FIRM LICENSE No: C-1508 301 Fayetteville St., Suite 1500 Raleigh, NC 27601 (919)862-7839

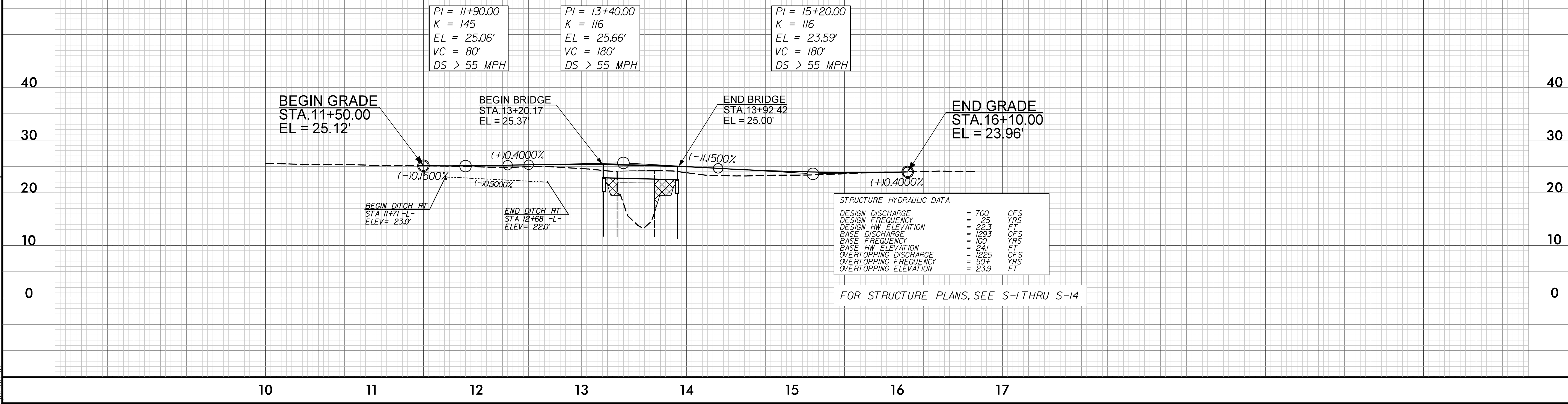


PARCEL ROW INDEX TABLE						
PARCEL No.	SHEET No.	PROPERTY OWNER NAME	TCE AREA (SF)	TCE AREA (AC)	PDE AREA (SF)	PDE AREA (AC)
1	4	A&G INVESTMENTS	112	0.003		
2	4	WEYERHAEUSER CO	808	0.019		
3	4	JOE S SHRADER	2728	0.063	673	0.015
4	4	MARJORIE R. BARNHILL	1191	0.027		

NOTE: CROSS SLOPES AT PROJECT TIE-INS ARE APPROXIMATE.  
 CONTRACTOR TO ENSURE APPROPRIATE CROSS SLOPE TRANSITIONS TO EXISTING CONDITION

-L- SR 1552 (OVER MEADOW BRANCH)

BM1 ELEVATION = 24.93  
 N 715991 E 2533024  
 BL STATION 32+22.00  
 RR SPIKE SET IN 18" PINE



FOR STRUCTURE PLANS, SEE S-1 THRU S-14

REVISIONS

03-SEP-2020 10:51  
 BR-0120-Rwy\_psh\_row.dgn  
 ide@kca.com