

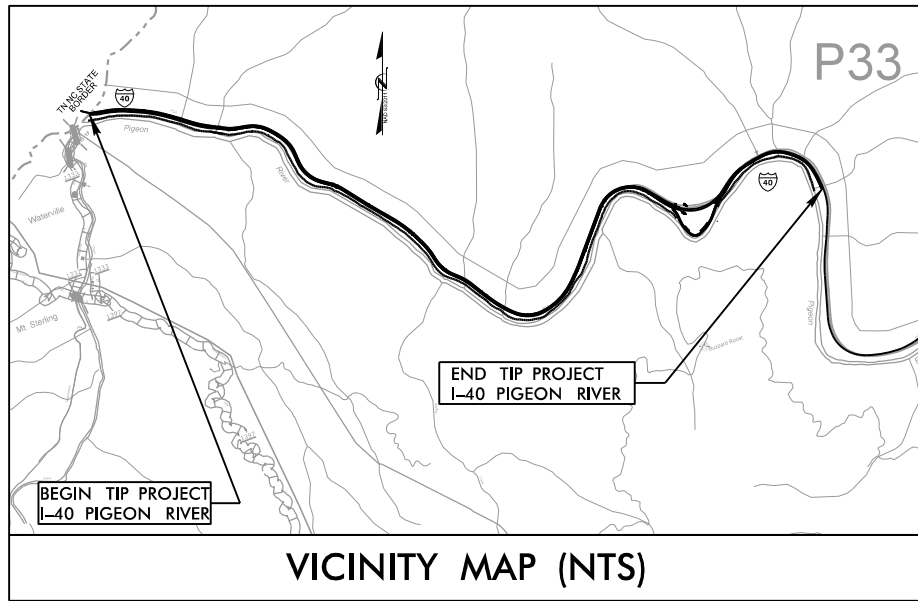
09/08/99

6/3/2025 c:\pwworking\rvrk\production\dms73276\I-40 Pigeon River_hyd_prm_tsh.dgn wgregory

TIP PROJECT: I-40 PIGEON RIVER

CONTRACT: C#

See Sheet 1B for Symbology Sheet

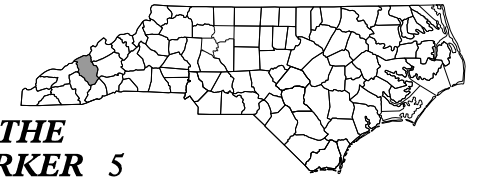


VICINITY MAP (NTS)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
HAYWOOD COUNTY

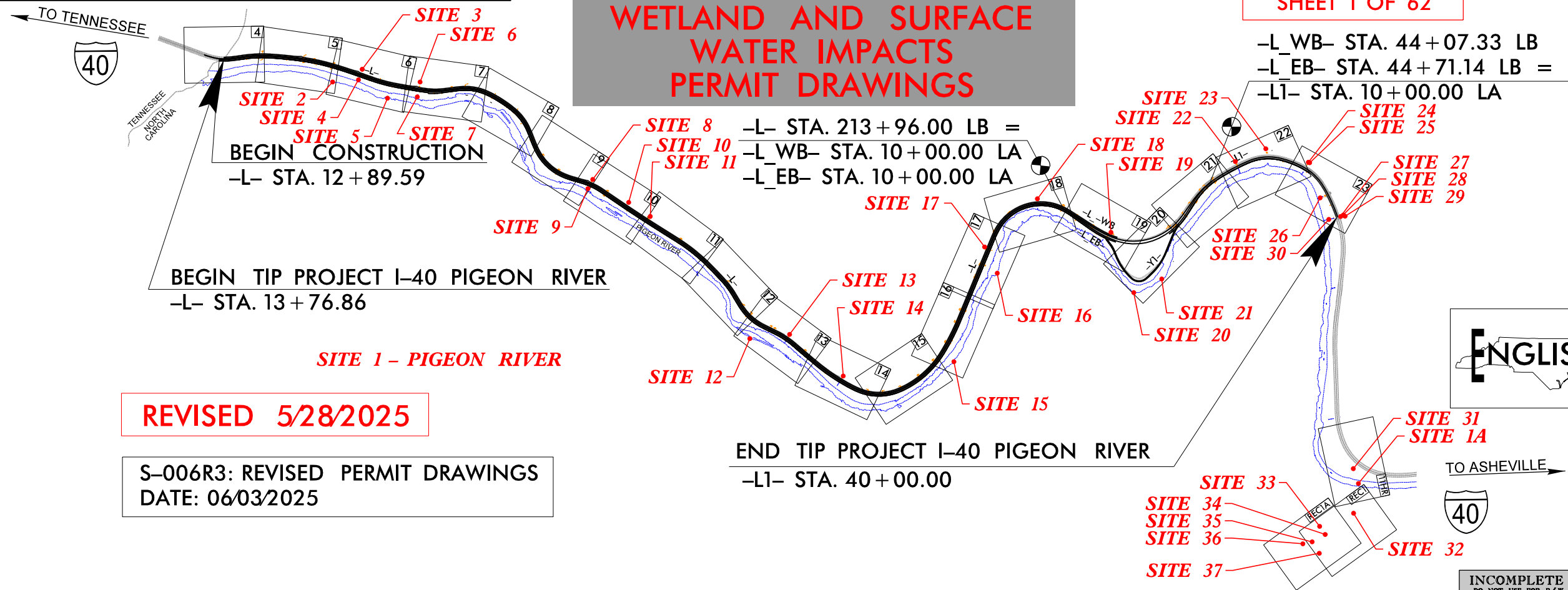
LOCATION: I-40 PIGEON RIVER GORGE EMERGENCY REPAIRS FROM THE
TENNESSEE STATE LINE TO JUST WEST OF MILE MARKER 5

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING, & RETAINING WALLS



PERMIT DRAWING
SHEET 1 OF 62

WETLAND AND SURFACE
WATER IMPACTS
PERMIT DRAWINGS

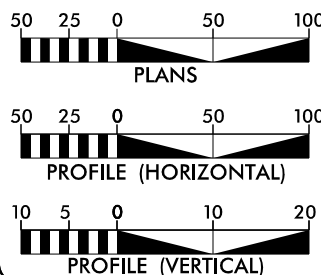


REVISED 5/28/2025

S-006R3: REVISED PERMIT DRAWINGS
DATE: 06/03/2025

- NOTES:
1. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III MODIFIED.
 2. THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
 3. THIS PROJECT IS NOT WITHIN MUNICIPAL LIMITS.
 4. DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMAL HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

GRAPHIC SCALES



DESIGN DATA

ADT 2025 = 26,500
V = 55 MPH

FUNC CLASS: INTERSTATE

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT I-40 PIGEON RIVER.....4.810 MILES
LENGTH STRUCTURE TIP PROJECT I-40 PIGEON RIVER.....0.000 MILES
TOTAL LENGTH TIP PROJECT I-40 PIGEON RIVER.....4.810 MILES

NCDOT CONTACT

JOSH B. DEYTON, P.E.
DIVISION CONSTRUCTION ENGINEER

PLANS PREPARED BY:

RK&K RUMMEL KLEPPER & KAHL, LLP
8401 SIX FORKS ROAD, FLOOR 1, SUITE 700
RALEIGH, NORTH CAROLINA 27615-3960
NC LICENSE NO. F-0112

wsp 1001 Morehead Square Dr.,
Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

2024 STANDARD SPECIFICATIONS

LETTING DATE:
MARCH XX, 2025

GREG GOINS, P.E.
PROJECT ENGINEER

CATHY HOUSER, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS
ENGINEER

SIGNATURE: _____ P.E.

ROADWAY
DESIGN
ENGINEER

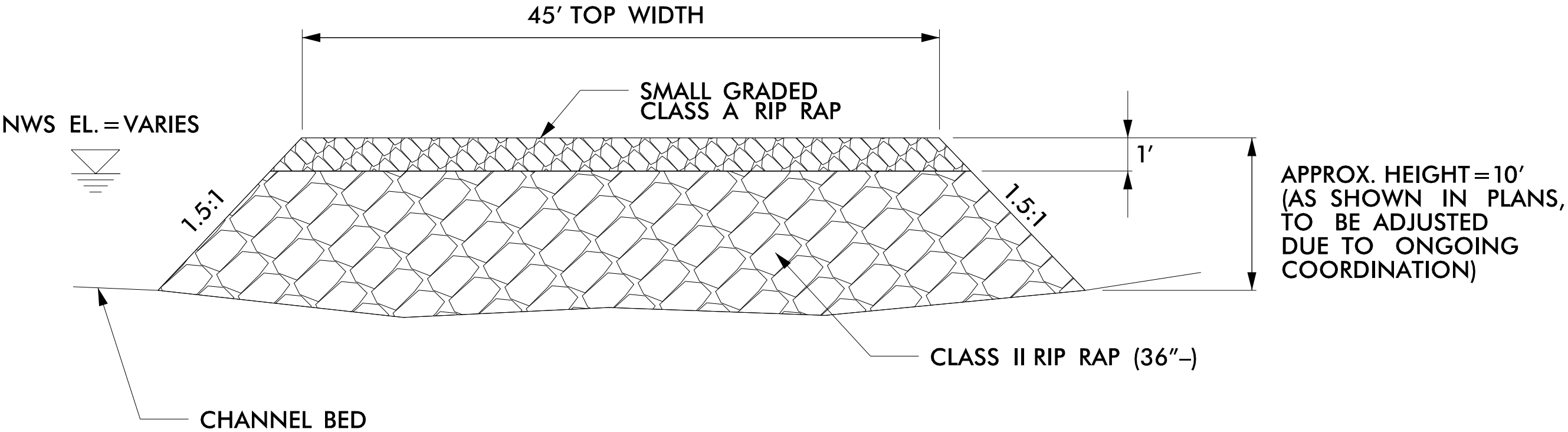
SIGNATURE: _____ P.E.



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



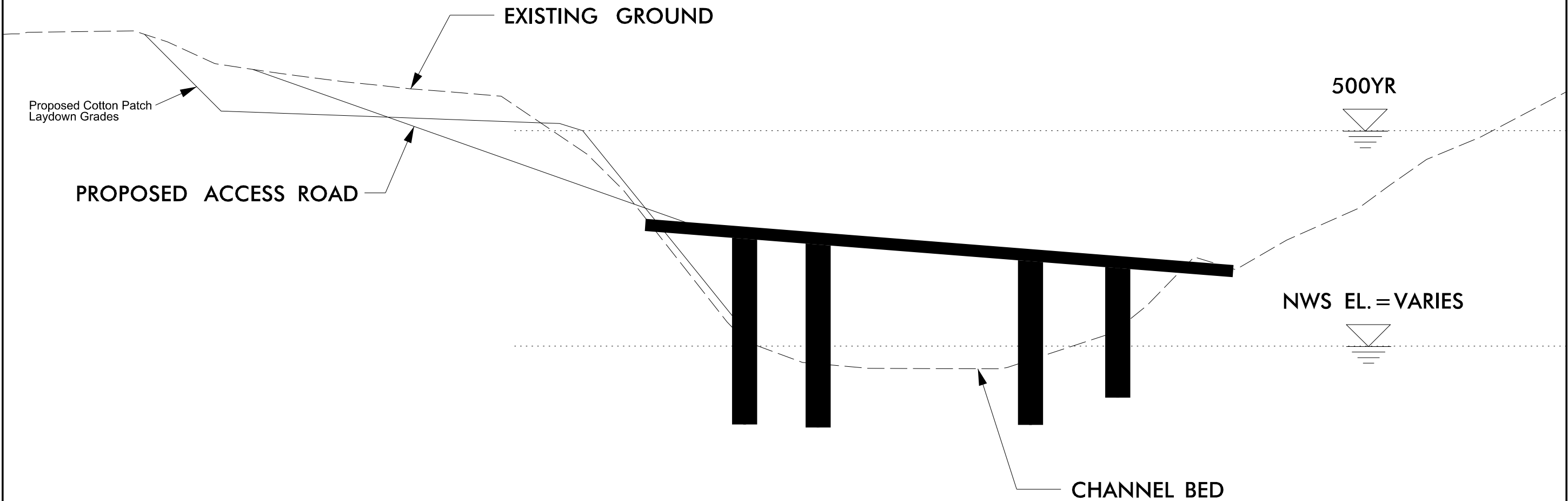
PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 2 OF 62	
REVISED 5/28/2025	



TEMPORARY RIVER CROSSING DETAIL BORING SITE #1 ACCESS ROAD

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 3 OF 62	
REVISED 5/28/2025	

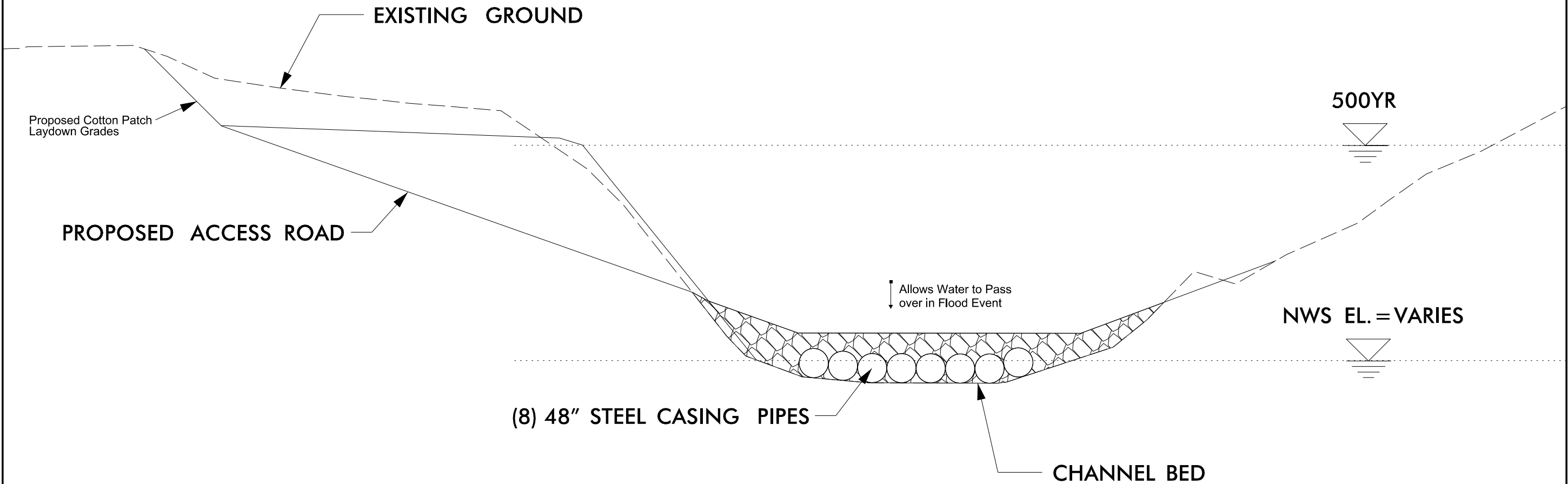


TEMPORARY RIVER CROSSING DETAIL

BORING SITE #1 ACCESS ROAD

NOT TO SCALE

PROJECT REFERENCE NO.		SHEET NO.	
I-40 PIGEON RIVER			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 4 OF 62			
REVISED 5/28/2025			



NOTES:
MINIMUM COVER = 2'
BACKFILL WITH CLASS 7

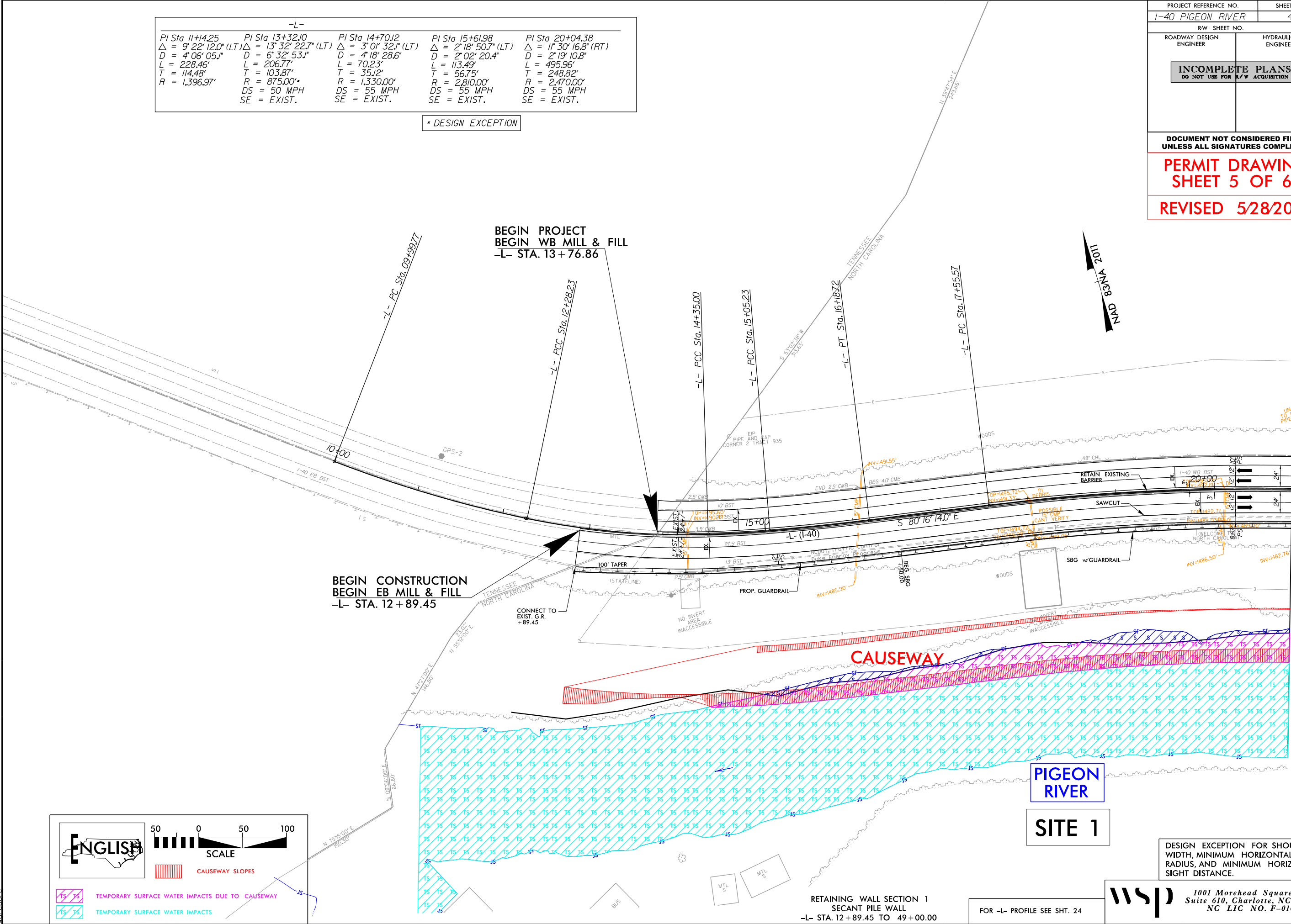
8/17/99

6/3/2025
c:\pwworking\k\k\production\dms73276\1-40 Pigeon River_Hyd.prm_psh_4.dgn
10:58:04

-L-				
PI Sta 11+14.25	PI Sta 13+32.10	PI Sta 14+70.12	PI Sta 15+61.98	PI Sta 20+04.38
$\Delta = 9^{\circ} 22' 12.0"$ (LT)	$\Delta = 13^{\circ} 32' 22.7"$ (LT)	$\Delta = 3^{\circ} 01' 32.1"$ (LT)	$\Delta = 2^{\circ} 18' 50.7"$ (LT)	$\Delta = 11^{\circ} 30' 16.8"$ (RT)
D = 4' 06' 05.1"	D = 6' 32' 53.1"	D = 4' 18' 28.6"	D = 2' 02' 20.4"	D = 2' 19' 10.8"
L = 228.46'	L = 206.77'	L = 70.23'	L = 113.49'	L = 495.96'
T = 114.48'	T = 103.87'	T = 35.12'	T = 56.75'	T = 248.82'
R = 1,396.97'	R = 875.00'	R = 1,330.00'	R = 2,810.00'	R = 2,470.00'
DS = 50 MPH	DS = 50 MPH	DS = 55 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.

• DESIGN EXCEPTION

PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 4
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 5 OF 62		
REVISED 5/28/2025		



ENGLISH

50 0 50 100

SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.

wsp 1001 Morehead Square Dr., Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

RETAINING WALL SECTION 1
SECANT PILE WALL
-L- STA. 12+89.45 TO 49+00.00

FOR -L- PROFILE SEE SHT. 24

MATCHLINE -L- STA. 21+00 SEE SHEET 05

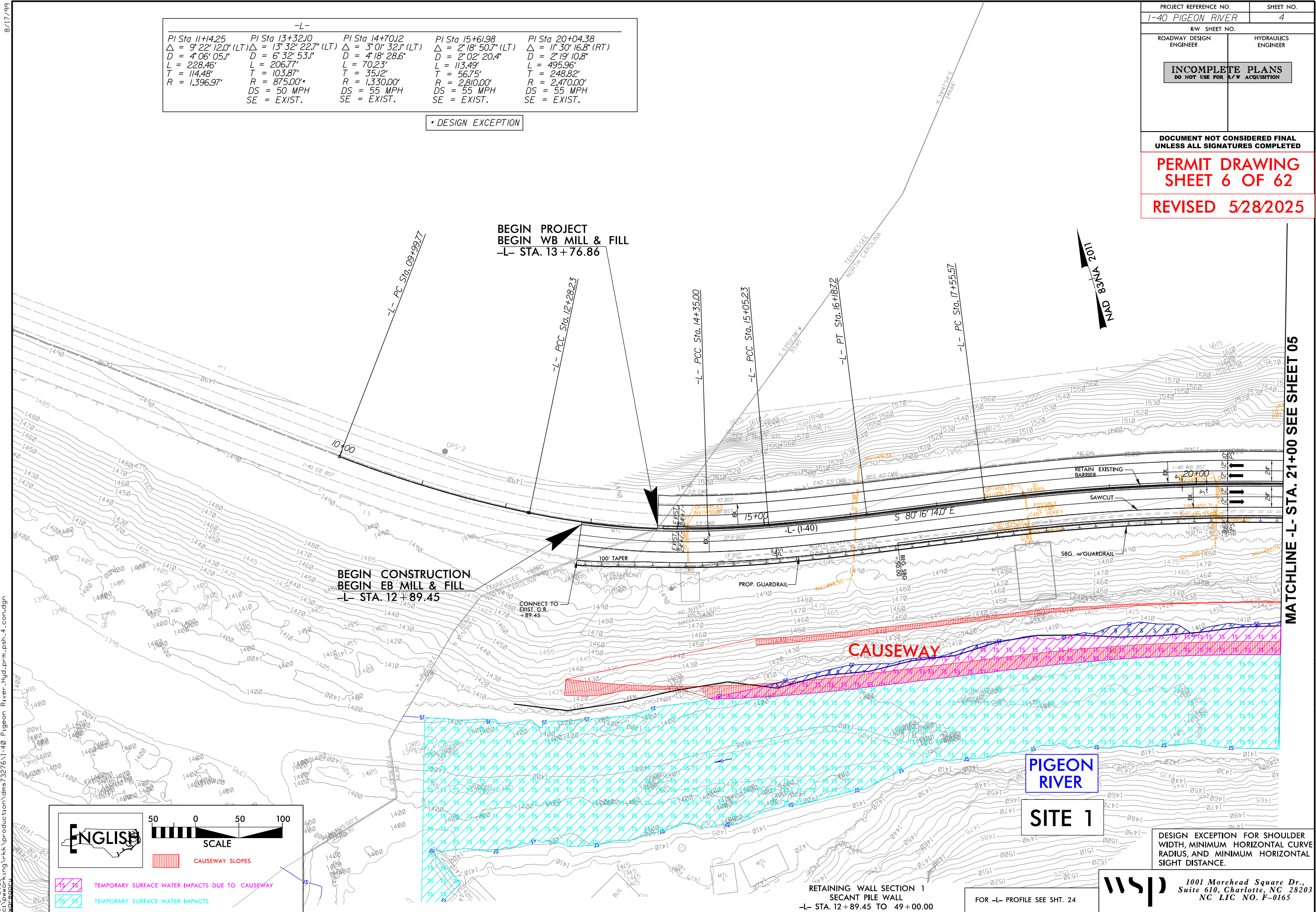
8/17/99

6/3/2025 c:\pwworking\k\production\dms73276\1-40 Pigeon River_Hyd.prm_psh_4_con.dgn

-L-				
PI Sta 11+14.25	PI Sta 13+32.10	PI Sta 14+70.12	PI Sta 15+61.98	PI Sta 20+04.38
$\Delta = 9^{\circ} 22' 12.0"$ (LT)	$\Delta = 13^{\circ} 32' 22.7"$ (LT)	$\Delta = 3^{\circ} 01' 32.1"$ (LT)	$\Delta = 2^{\circ} 18' 50.7"$ (LT)	$\Delta = 11^{\circ} 30' 16.8"$ (RT)
D = 4' 06' 05.1"	D = 6' 32' 53.1"	D = 4' 18' 28.6"	D = 2' 02' 20.4"	D = 2' 19' 10.8"
L = 228.46'	L = 206.77'	L = 70.23'	L = 113.49'	L = 495.96'
T = 114.48'	T = 103.87'	T = 35.12'	T = 56.75'	T = 248.82'
R = 1,396.97'	R = 875.00'	R = 1,330.00'	R = 2,810.00'	R = 2,470.00'
DS = 50 MPH	DS = 50 MPH	DS = 55 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.

• DESIGN EXCEPTION

PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 4
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 6 OF 62		
REVISED 5/28/2025		



ENGLISH

SCALE

50 0 50 100

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

RETAINING WALL SECTION 1
SECANT PILE WALL
-L- STA. 12+89.45 TO 49+00.00

FOR -L- PROFILE SEE SHT. 24

wsj

1001 Morehead Square Dr.,
Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

MATCHLINE -L- STA. 21+00 SEE SHEET 05

WSP 1001 Morehead Square Dr.,
Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

-L-			
PI Sta. 20+04.38 Δ = 11° 30' 16.8" (RT) D = 2° 19' 10.8" L = 495.96' T = 248.82' R = 2,470.00' DS = 55 MPH SE = EXIST.	PI Sta. 25+60.91 Δ = 4° 37' 54.5" (RT) D = 0° 44' 56.3" L = 618.43' T = 309.38' R = 7,650.00' DS = 55 MPH SE = EXIST.	PI Sta. 31+52.46 Δ = 8° 12' 08.2" (RT) D = 1° 27' 15.1" L = 564.04' T = 282.50' R = 3,940.00' DS = 55 MPH SE = EXIST.	PI Sta. 36+48.31 Δ = 2° 49' 34.5" (RT) D = 0° 53' 10.5" L = 318.90' T = 159.48' R = 6,465.00' DS = 55 MPH SE = EXIST.

PROJECT REFERENCE NO.
I-40 PIGEON RIVER

SHEET NO.
5

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

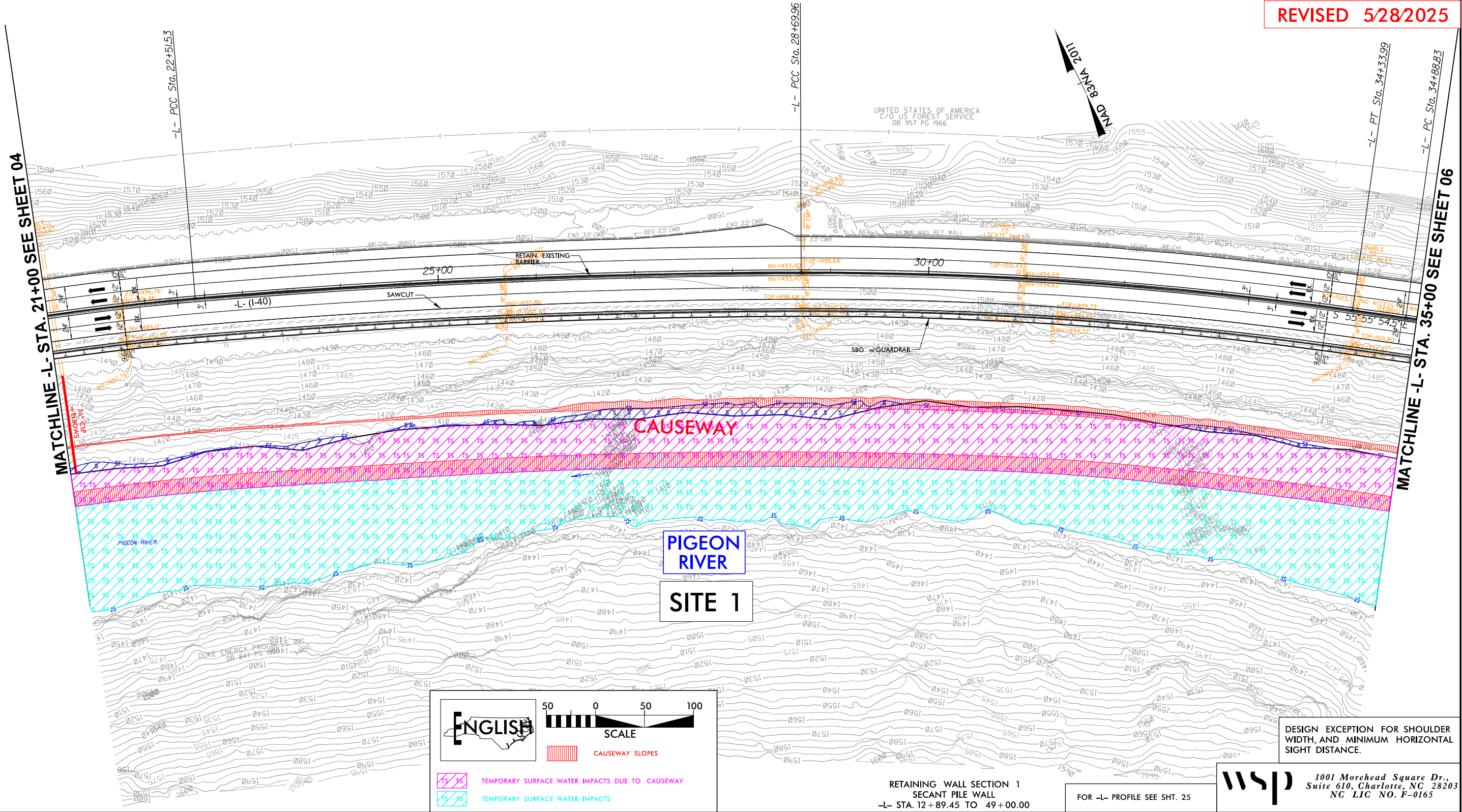
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

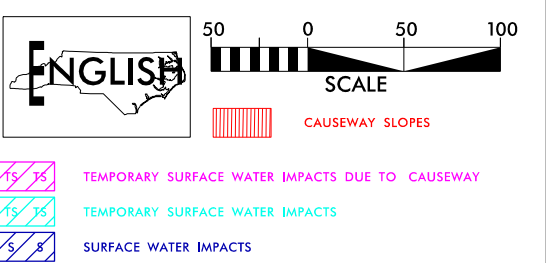
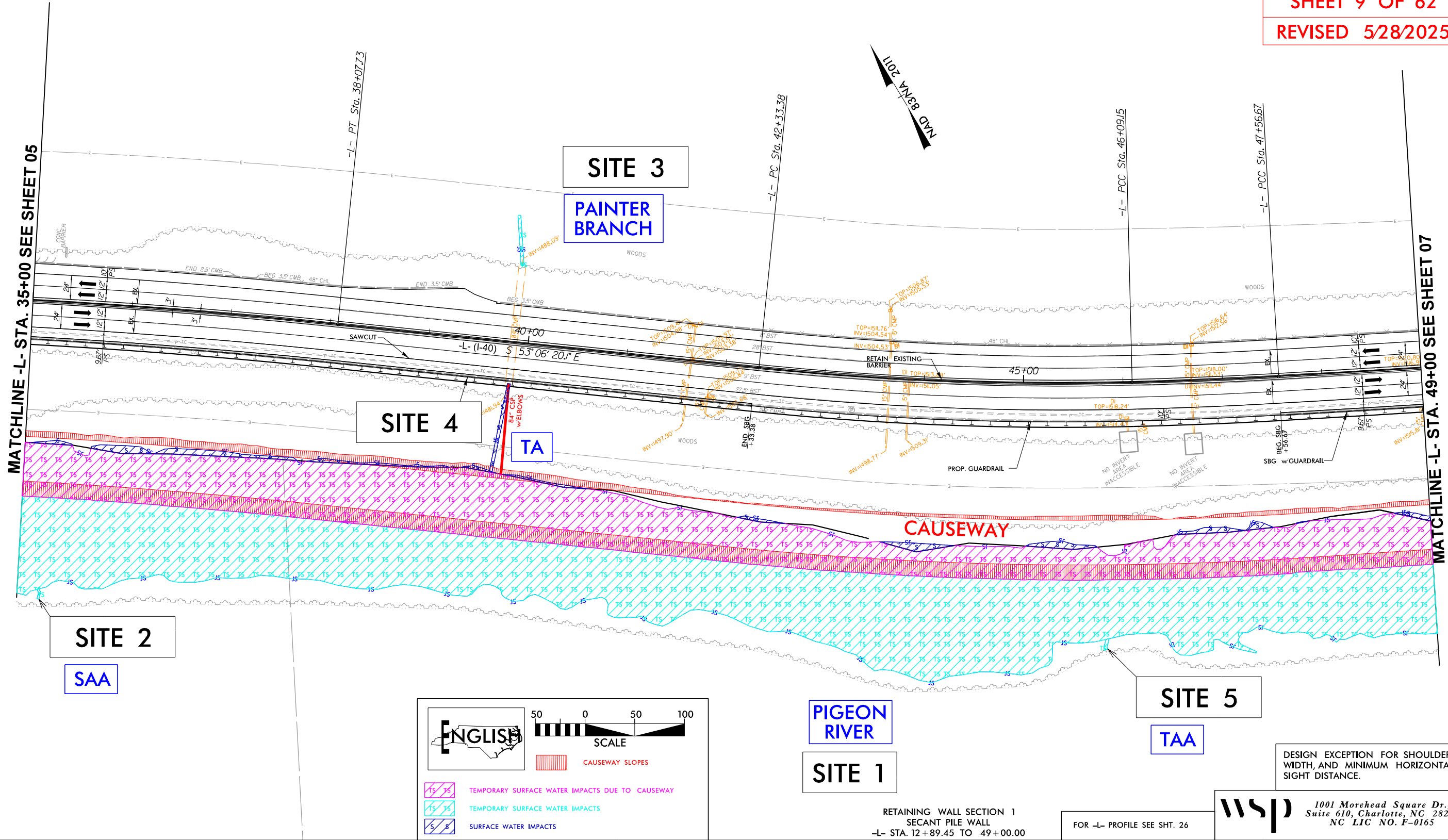
PERMIT DRAWING
SHEET 8 OF 62

REVISED 5/28/2025



PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 6
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 9 OF 62		
REVISED 5/28/2025		

-L-			
PI Sta 36+48.31 Δ = 2° 49' 34.5" (RT) D = 0° 53' 10.5" L = 318.90' T = 159.48' R = 6,465.00' DS = 55 MPH SE = EXIST.	PI Sta 44+21.52 Δ = 7° 15' 41.5" (LT) D = 1° 55' 56.7" L = 375.78' T = 188.14' R = 2,965.00' DS = 55 MPH SE = EXIST.	PI Sta 46+82.92 Δ = 1° 53' 19.4" (LT) D = 1° 16' 49.3" L = 147.52' T = 73.77' R = 4,475.00' DS = 55 MPH SE = EXIST.	PI Sta 49+43.10 Δ = 0° 46' 47.4" (LT) D = 0° 12' 32.9" L = 372.86' T = 186.43' R = 27,395.00' DS = 55 MPH SE = EXIST.



PIGEON RIVER
SITE 1

RETAINING WALL SECTION 1
SECANT PILE WALL
-L- STA. 12+89.45 TO 49+00.00

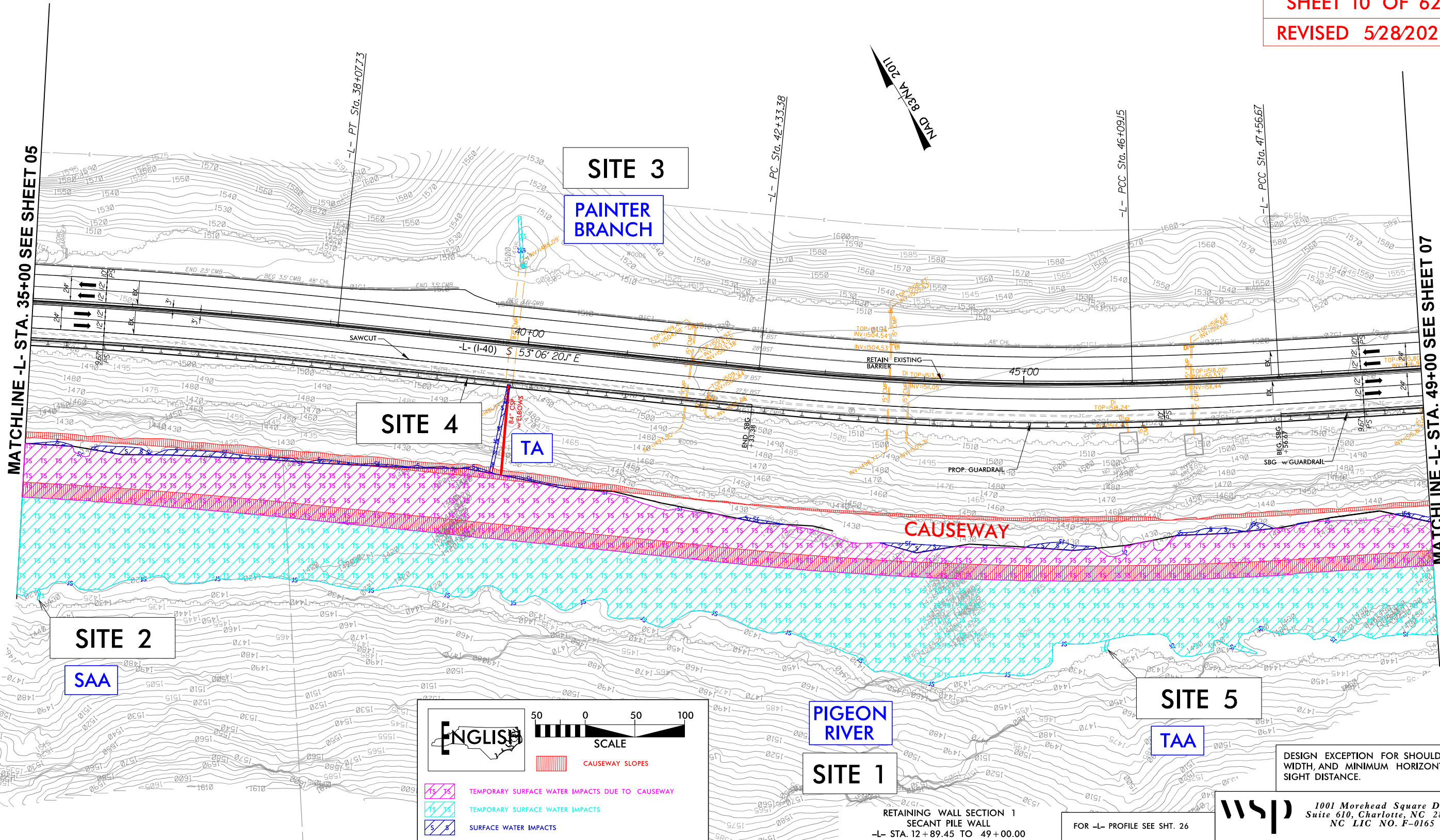
FOR -L- PROFILE SEE SHT. 26

wsp 1001 Morehead Square Dr.,
Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

DESIGN EXCEPTION FOR SHOULDER
WIDTH, AND MINIMUM HORIZONTAL
SIGHT DISTANCE.

PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 6
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 10 OF 62		
REVISED 5/28/2025		

-L-			
PI Sta 36+48.31 Δ = 2° 49' 34.5" (RT) D = 0° 53' 10.5" L = 318.90' T = 159.48' R = 6,465.00' DS = 55 MPH SE = EXIST.	PI Sta 44+21.52 Δ = 7° 15' 41.5" (LT) D = 1° 55' 56.7" L = 375.78' T = 188.14' R = 2,965.00' DS = 55 MPH SE = EXIST.	PI Sta 46+82.92 Δ = 1° 53' 19.4" (LT) D = 1° 16' 49.3" L = 147.52' T = 73.77' R = 4,475.00' DS = 55 MPH SE = EXIST.	PI Sta 49+43.10 Δ = 0° 46' 47.4" (LT) D = 0° 12' 32.9" L = 372.86' T = 186.43' R = 27,395.00' DS = 55 MPH SE = EXIST.



MATCHLINE -L- STA. 35+00 SEE SHEET 05

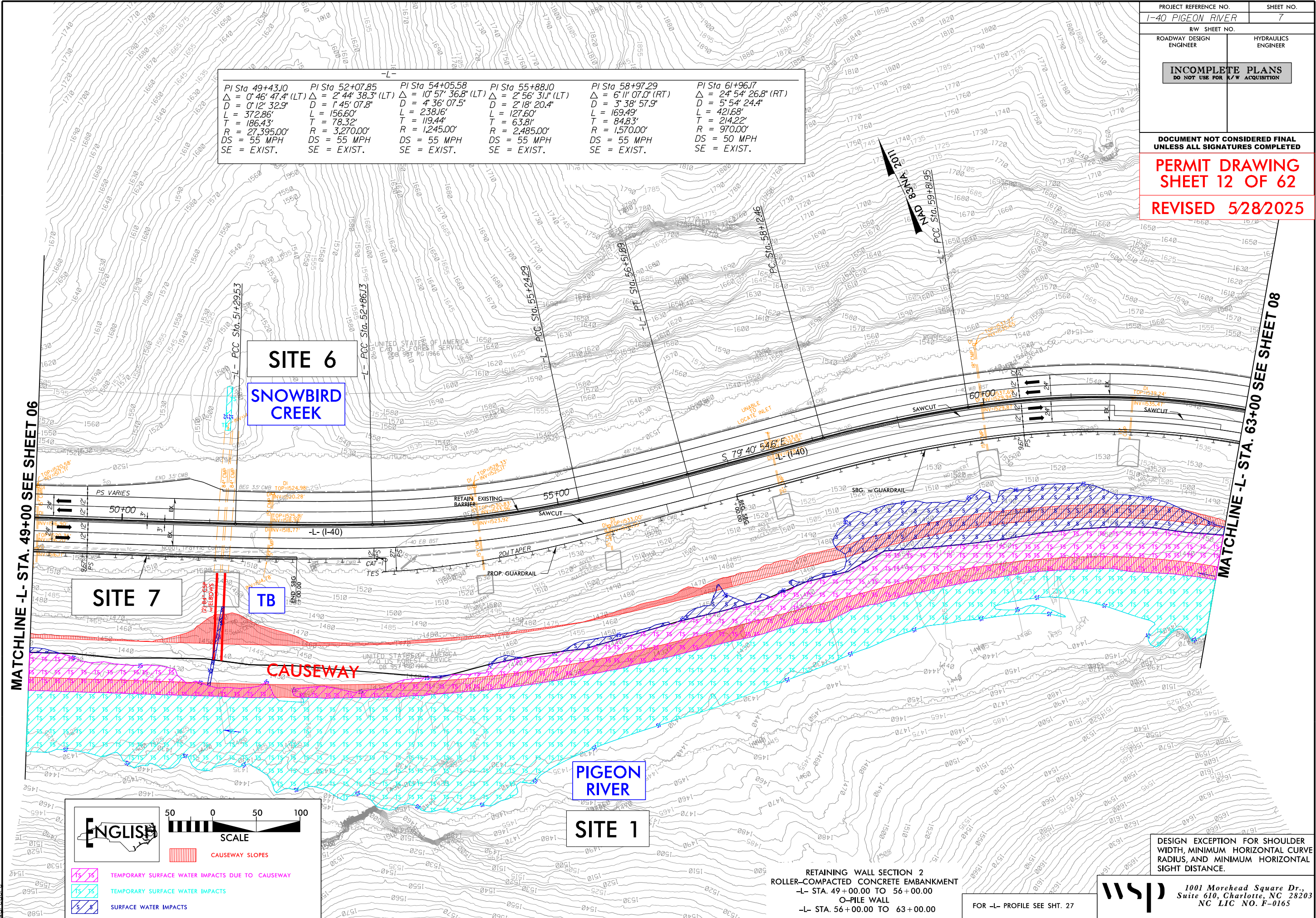
MATCHLINE -L- STA. 49+00 SEE SHEET 07

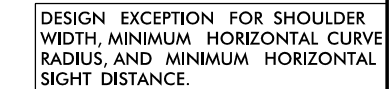
6/3/2025
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6/3/2025
c:\pwwork
warrior

8/17/99

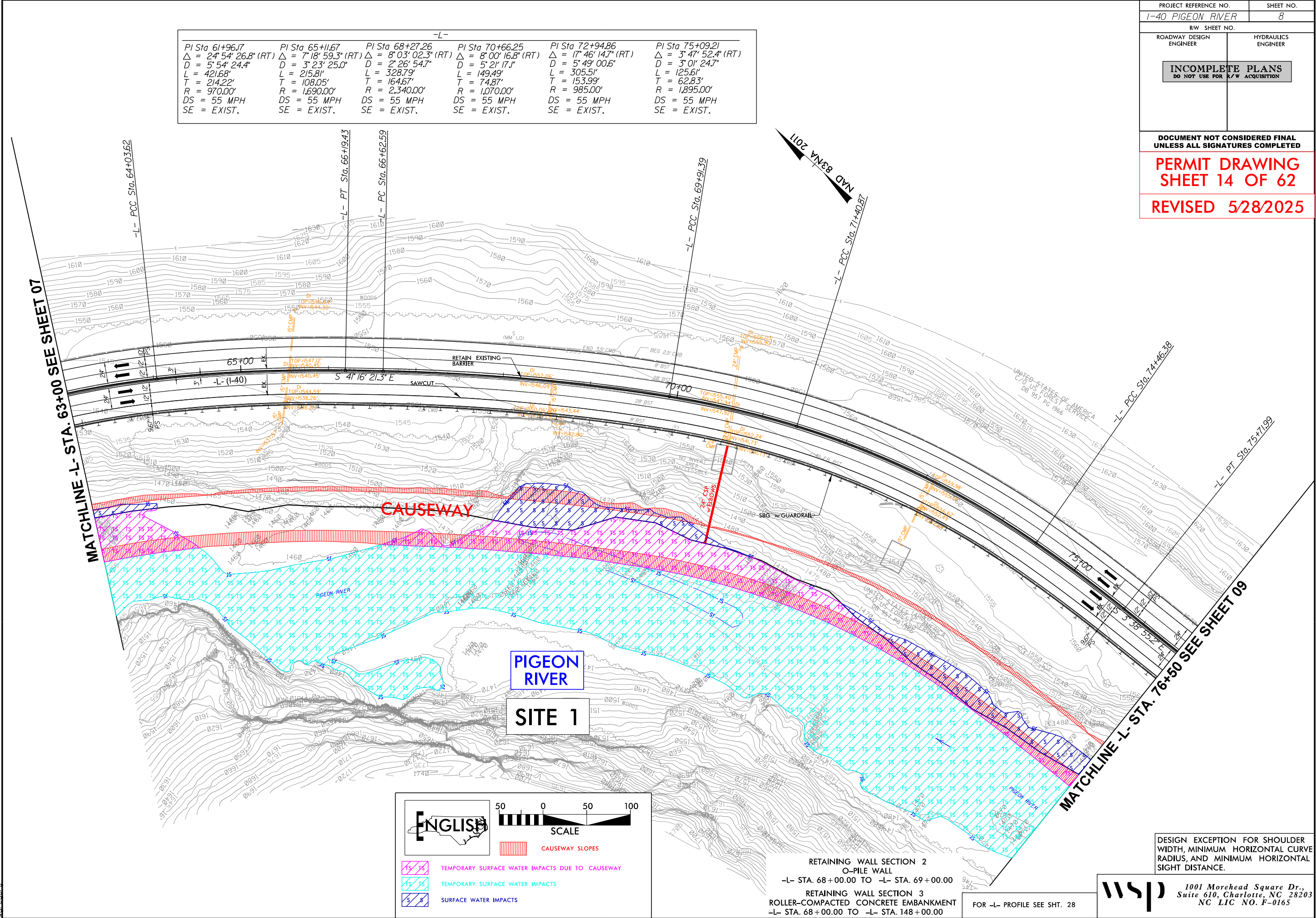
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8/17/99

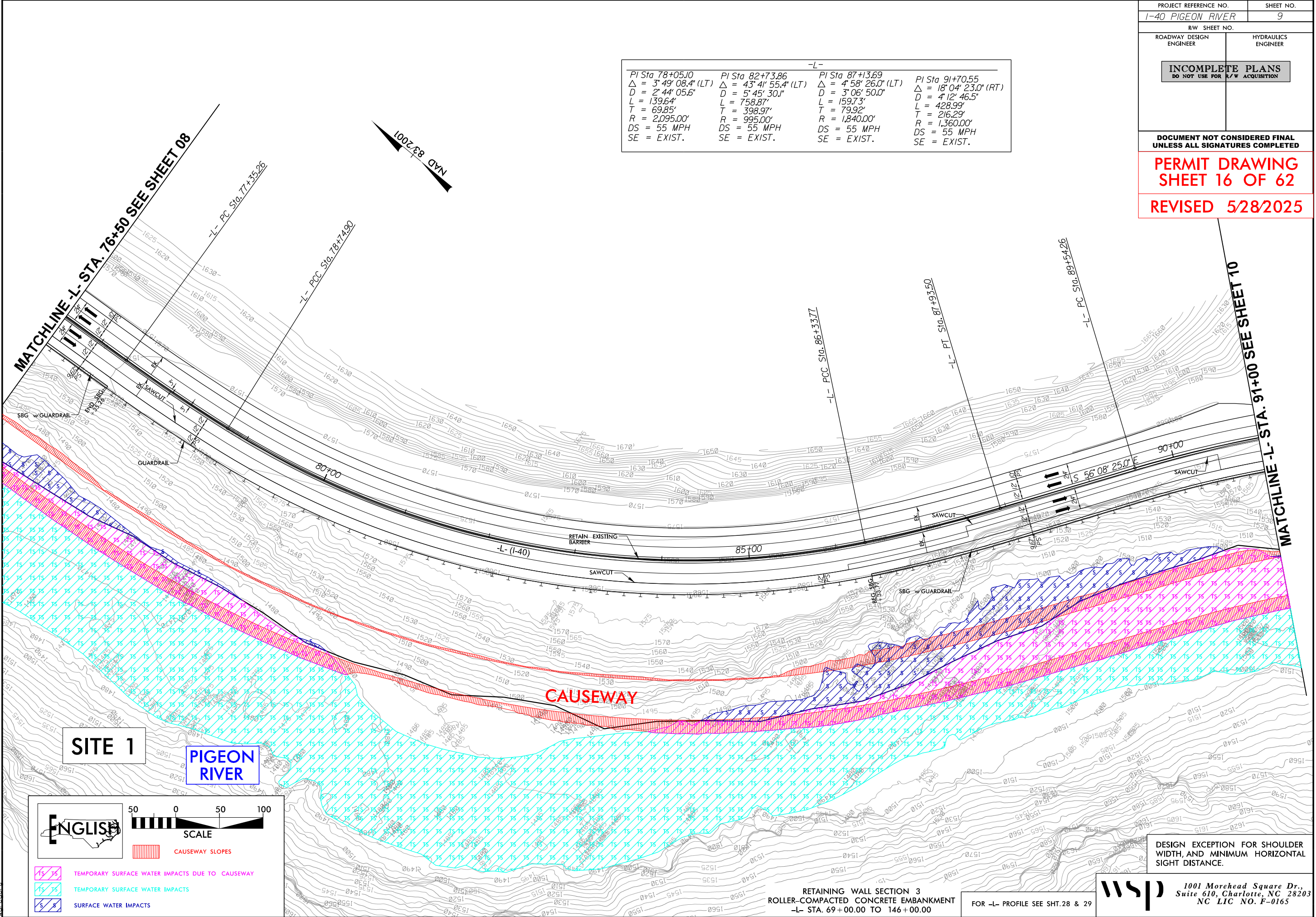
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10:58:04





8/17/99

6/3/2025
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10:50:00 AM



-L-			
PI Sta 78+05.10 Δ = 3° 49' 08.4" (LT) D = 2° 44' 05.6" L = 139.64' T = 69.85' R = 2,095.00' DS = 55 MPH SE = EXIST.	PI Sta 82+73.86 Δ = 43° 41' 55.4" (LT) D = 5° 45' 30.1" L = 758.87' T = 398.97' R = 995.00' DS = 55 MPH SE = EXIST.	PI Sta 87+13.69 Δ = 4° 58' 26.0" (LT) D = 3° 06' 50.0" L = 159.73' T = 79.92' R = 1,840.00' DS = 55 MPH SE = EXIST.	PI Sta 91+70.55 Δ = 18° 04' 23.0" (RT) D = 4° 12' 46.5" L = 428.99' T = 216.29' R = 1,360.00' DS = 55 MPH SE = EXIST.

PROJECT REFERENCE NO. I-40 PIGEON RIVER		SHEET NO. 9
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 16 OF 62		
REVISED 5/28/2025		

ENGLISH

SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

RETAINING WALL SECTION 3
ROLLER-COMPACTED CONCRETE EMBANKMENT
-L- STA. 69+00.00 TO 146+00.00
FOR -L- PROFILE SEE SHT.28 & 29

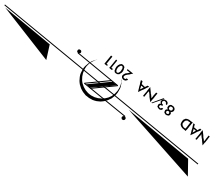
WSP
1001 Morehead Square Dr.,
Suite 610, Charlotte, NC 28203
NC LIC NO. F-0165

DESIGN EXCEPTION FOR SHOULDER
WIDTH, AND MINIMUM HORIZONTAL
SIGHT DISTANCE.

8/17/99

6/3/2025
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10:50:00 AM

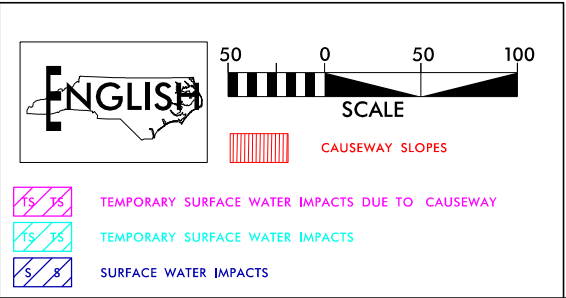
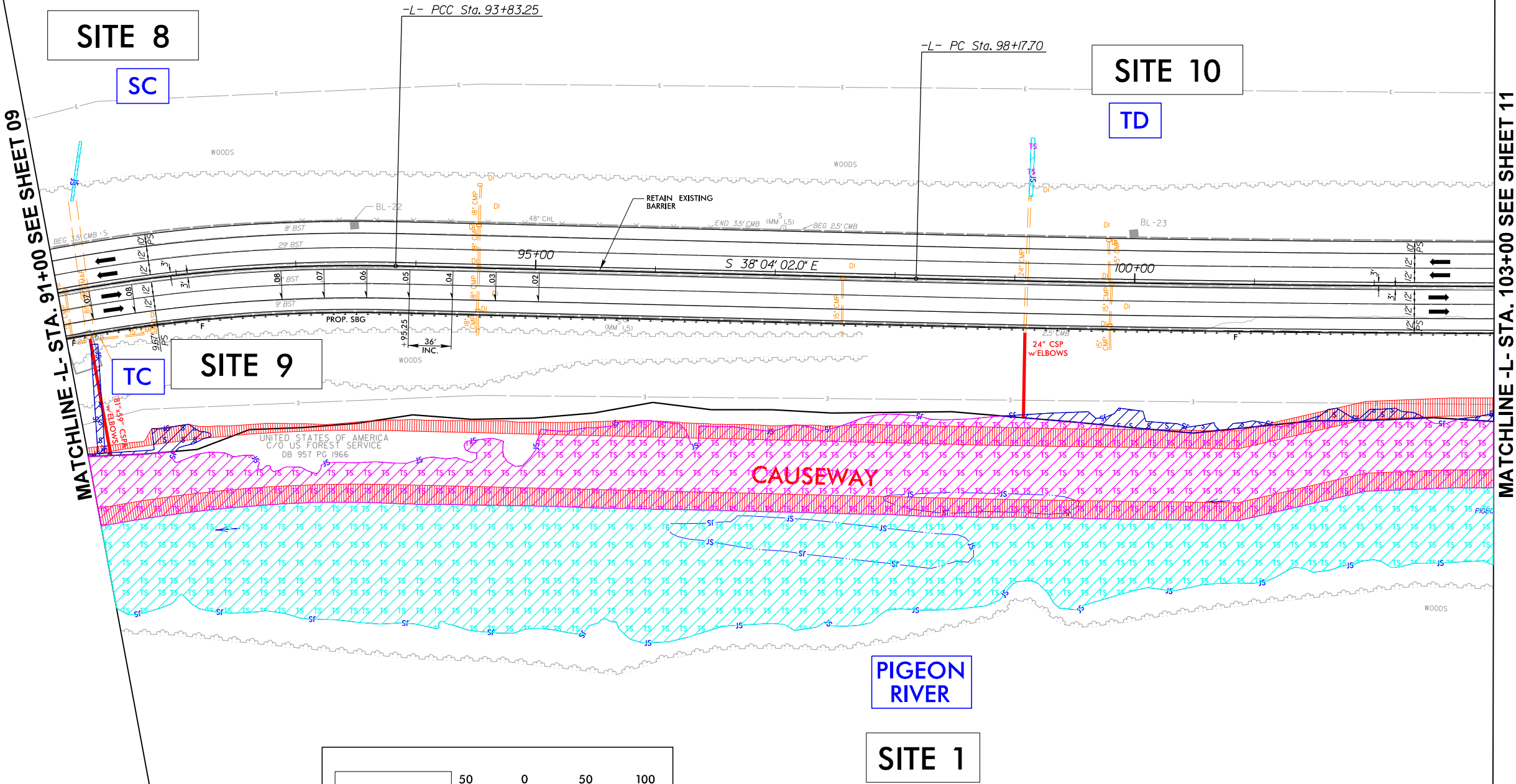
PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 10
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 17 OF 62		
REVISED 5/28/2025		



-L-

PI Sta 91+70.55 Δ = 18° 04' 23.0" (RT) D = 4' 12' 46.5" L = 428.99' T = 216.29' R = 1,360.00' DS = 55 MPH SE = EXIST.	PI Sta 102+11.63 Δ = 2° 02' 44.1" (LT) D = 0' 15' 34.8" L = 787.77' T = 393.93' R = 22,065.00' DS = 55 MPH SE = EXIST.
--	---

UNITED STATES OF AMERICA
C/O US FOREST SERVICE
DB 957 PG 1966



DESIGN EXCEPTION FOR SHOULDER
WIDTH AND MINIMUM HORIZONTAL
SIGHT DISTANCE.
FOR -L- LT- PROFILE SEE SHEET 30
FOR -L- RT- PROFILE SEE SHEET 30

RK&K
P: (919) 878-9560
8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-01112
Engineers | Construction Managers | Planners | Scientists
www.rk.com
Responsive People | Creative Solutions

8/17/99

6/3/2025 c:\pwworking\rkk\production\dms\73276\1-40 Pigeon River_Hyd_prm_psh_10_con.dgn

PROJECT REFERENCE NO.
1-40 PIGEON RIVER

SHEET NO.
10

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

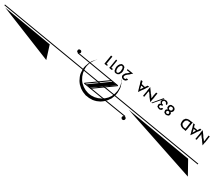
PERMIT DRAWING
SHEET 18 OF 62

REVISED 5/28/2025

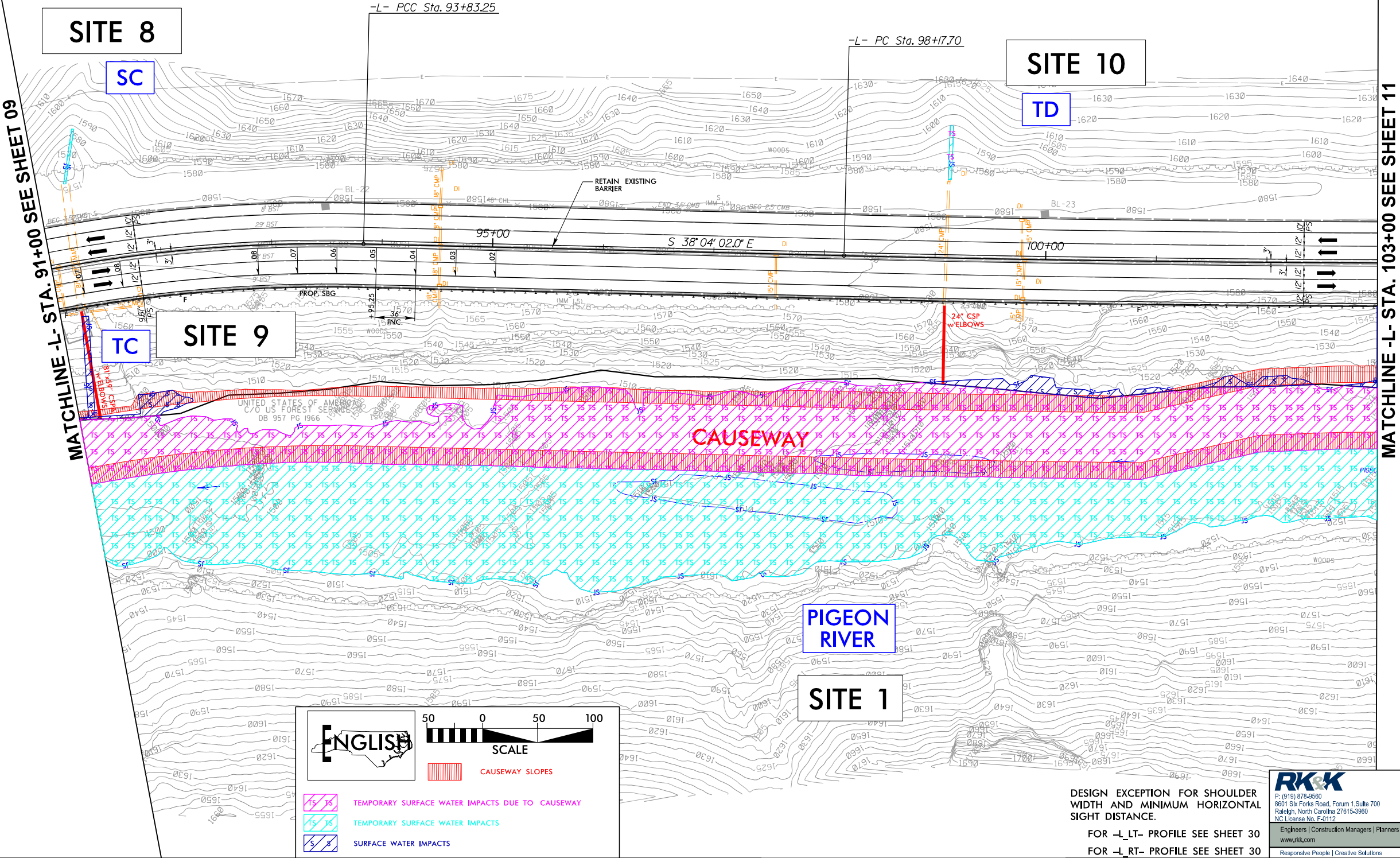
-L-

PI Sta 91+70.55
Δ = 18° 04' 23.0" (RT)
D = 4' 12' 46.5"
L = 428.99'
T = 216.29'
R = 1,360.00'
DS = 55 MPH
SE = EXIST.

PI Sta 102+11.63
Δ = 2° 02' 44.1" (LT)
D = 0' 15' 34.8"
L = 787.77'
T = 393.93'
R = 22,065.00'
DS = 55 MPH
SE = EXIST.



UNITED STATES OF AMERICA
C/O US FOREST SERVICE
DB 957 PG 1966



ENGLISH

SCALE

CAUSEWAY SLOPES

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

SURFACE WATER IMPACTS

DESIGN EXCEPTION FOR SHOULDER
WIDTH AND MINIMUM HORIZONTAL
SIGHT DISTANCE.
FOR -L- LT- PROFILE SEE SHEET 30
FOR -L- RT- PROFILE SEE SHEET 30

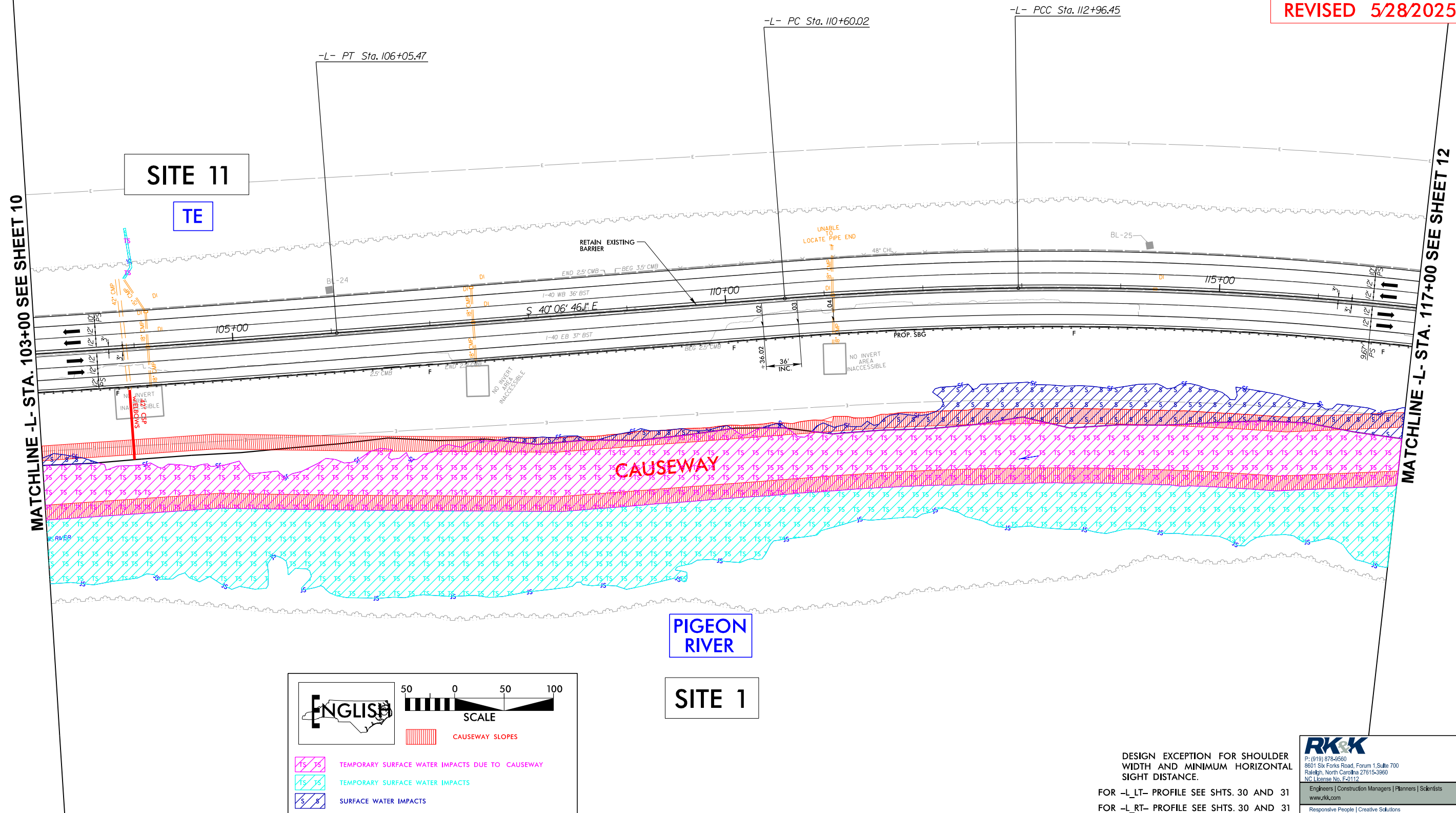
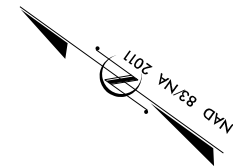
RK&K

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8601 Six Forks Road, Forum 1, Suite 700
Raleigh, North Carolina 27615-3960
NC License No. F-0112

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-L-		
<i>PI Sta 102+11.63</i>	<i>PI Sta 111+78.28</i>	<i>PI Sta 115+38.85</i>
$\Delta = 2'02'' 44.1''$ (LT)	$\Delta = 3'45'' 08.8''$ (RT)	$\Delta = 8'25'' 39.9''$ (RT)
$D = 0'15'' 34.8''$	$D = 1'35'' 13.7''$	$D = 1'44'' 29.4''$
$L = 787.77'$	$L = 236.43'$	$L = 483.93'$
$T = 393.93'$	$T = 118.26'$	$T = 242.40'$
$R = 22,065.00'$	$R = 3,610.00'$	$R = 3,290.00'$
$DS = 55$ MPH	$DS = 55$ MPH	$DS = 55$ MPH
$SE = EXIST.$	$SE = EXIST.$	$SE = EXIST.$

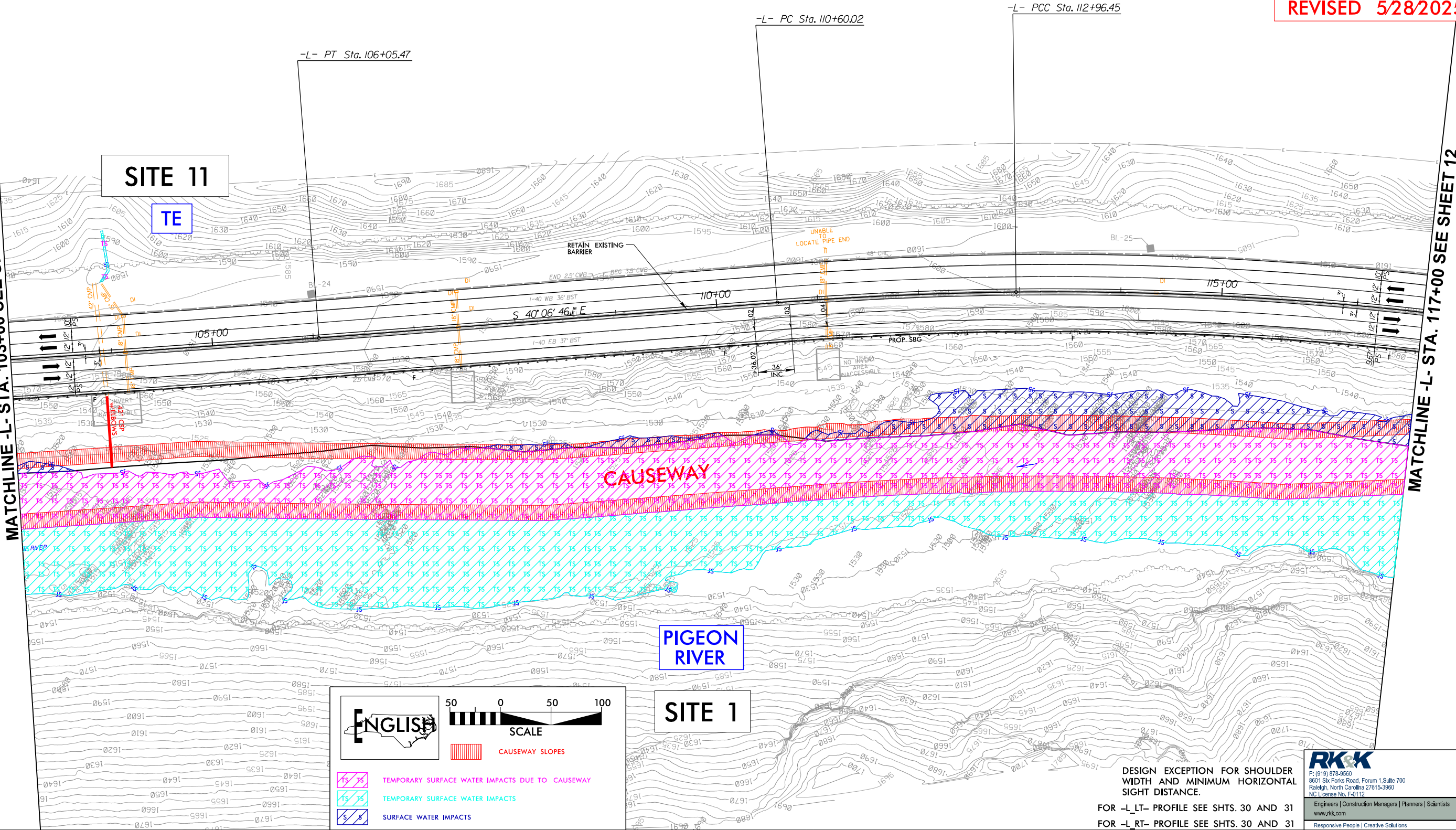
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DB 957 PG 1966



8/17/99

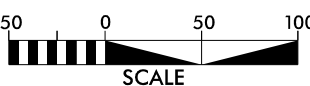
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c:\pwworking\y\kk\production\dms73276\1-40 Pigeon River_Hyd.prm_psh_111.con.dgn
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MATCHLINE -L- STA. 103+00 SEE SHEET 10



SITE 11

TE



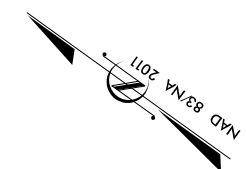
- TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY
- TEMPORARY SURFACE WATER IMPACTS
- SURFACE WATER IMPACTS

PIGEON RIVER

SITE 1

-L-		
PI Sta 102+11.63	PI Sta 111+78.28	PI Sta 115+38.85
$\Delta = 2^{\circ} 02' 44.1''$ (LT)	$\Delta = 3^{\circ} 45' 08.8''$ (RT)	$\Delta = 8^{\circ} 25' 39.9''$ (RT)
$D = 0^{\circ} 15' 34.8''$	$D = 1^{\circ} 35' 13.7''$	$D = 1^{\circ} 44' 29.4''$
$L = 787.77'$	$L = 236.43'$	$L = 483.93'$
$T = 393.93'$	$T = 118.26'$	$T = 242.40'$
$R = 22,065.00'$	$R = 3,610.00'$	$R = 3,290.00'$
$DS = 55$ MPH	$DS = 55$ MPH	$DS = 55$ MPH
$SE = EXIST.$	$SE = EXIST.$	$SE = EXIST.$

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PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 11
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 20 OF 62		
REVISED 5/28/2025		

DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

FOR -L- LT- PROFILE SEE SHTS. 30 AND 31
FOR -L- RT- PROFILE SEE SHTS. 30 AND 31

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MATCHLINE -L- STA. 117+00 SEE SHEET 12

8/17/99

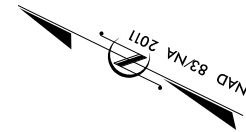
6/3/2025
c:\pwworking\k\production\dms73276\1-40 Pigeon River_Hyd_prm_psh_12.dgn
12:58:00 PM

MATCHLINE -L- STA. 117+00 SEE SHEET 11

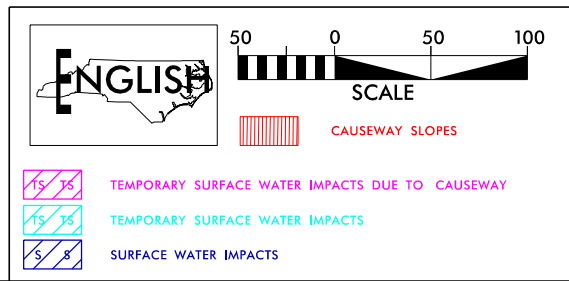
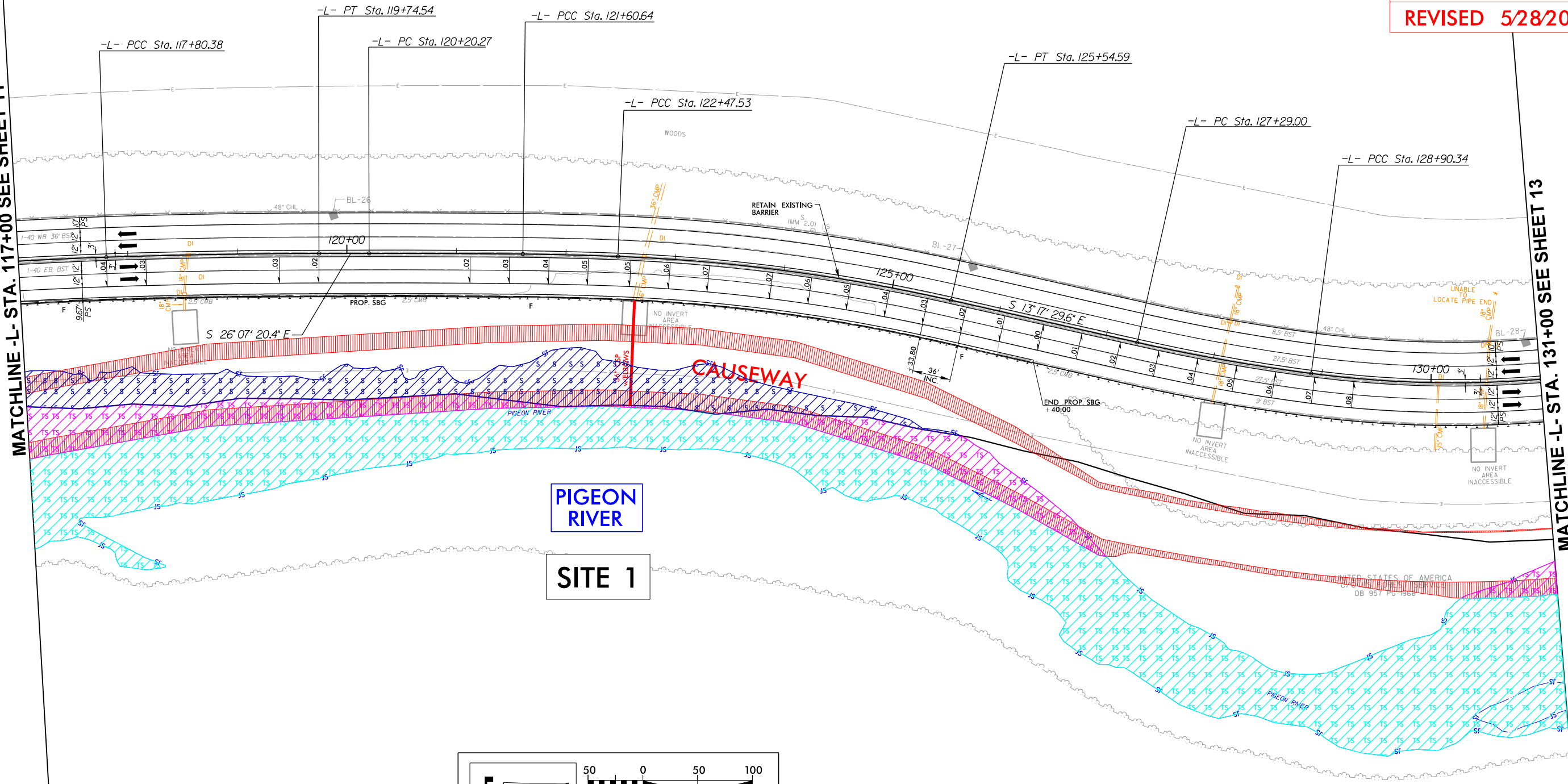
MATCHLINE -L- STA. 131+00 SEE SHEET 13

PI Sta 115+38.85 $\Delta = 8^{\circ} 25' 39.9"$ (RT) $D = 1^{\circ} 44' 29.4"$ $L = 483.93'$ $T = 242.40'$ $R = 3,290.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 118+77.47 $\Delta = 1^{\circ} 48' 37.0"$ (RT) $D = 0^{\circ} 55' 56.6"$ $L = 194.15'$ $T = 97.09'$ $R = 6,145.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 120+90.46 $\Delta = 0^{\circ} 41' 27.4"$ (RT) $D = 0^{\circ} 29' 32.0"$ $L = 140.37'$ $T = 70.19'$ $R = 11,640.00'$ $DS = 55$ MPH $SE = EXIST.$	-L- PI Sta 122+04.09 $\Delta = 1^{\circ} 40' 04.1"$ (RT) $D = 1^{\circ} 55' 10.0"$ $L = 86.89'$ $T = 43.45'$ $R = 2,985.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 124+01.49 $\Delta = 10^{\circ} 28' 19.3"$ (RT) $D = 3^{\circ} 24' 37.7"$ $L = 307.06'$ $T = 153.96'$ $R = 1,680.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 128+09.73 $\Delta = 5^{\circ} 14' 14.1"$ (LT) $D = 3^{\circ} 14' 46.4"$ $L = 161.33'$ $T = 80.72'$ $R = 1,765.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 130+37.12 $\Delta = 16^{\circ} 46' 59.2"$ (LT) $D = 5^{\circ} 45' 30.1"$ $L = 291.46'$ $T = 146.78'$ $R = 995.00'$ $DS = 55$ MPH $SE = EXIST.$
---	--	---	--	--	--	--

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PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 12
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 21 OF 62		
REVISED 5/28/2025		



DESIGN EXCEPTION FOR SHOULDER
WIDTH AND MINIMUM HORIZONTAL
SIGHT DISTANCE.
FOR -L- LT- PROFILE SEE SHTS. 31 AND 32
FOR -L- RT- PROFILE SEE SHTS. 31 AND 32

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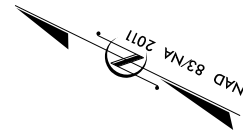
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MATCHLINE -L- STA. 117+00 SEE SHEET 11

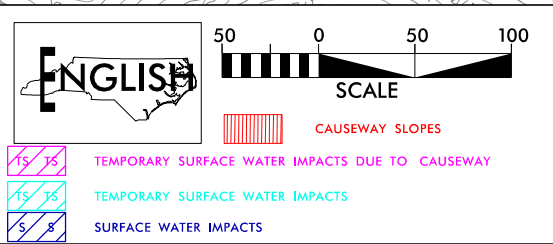
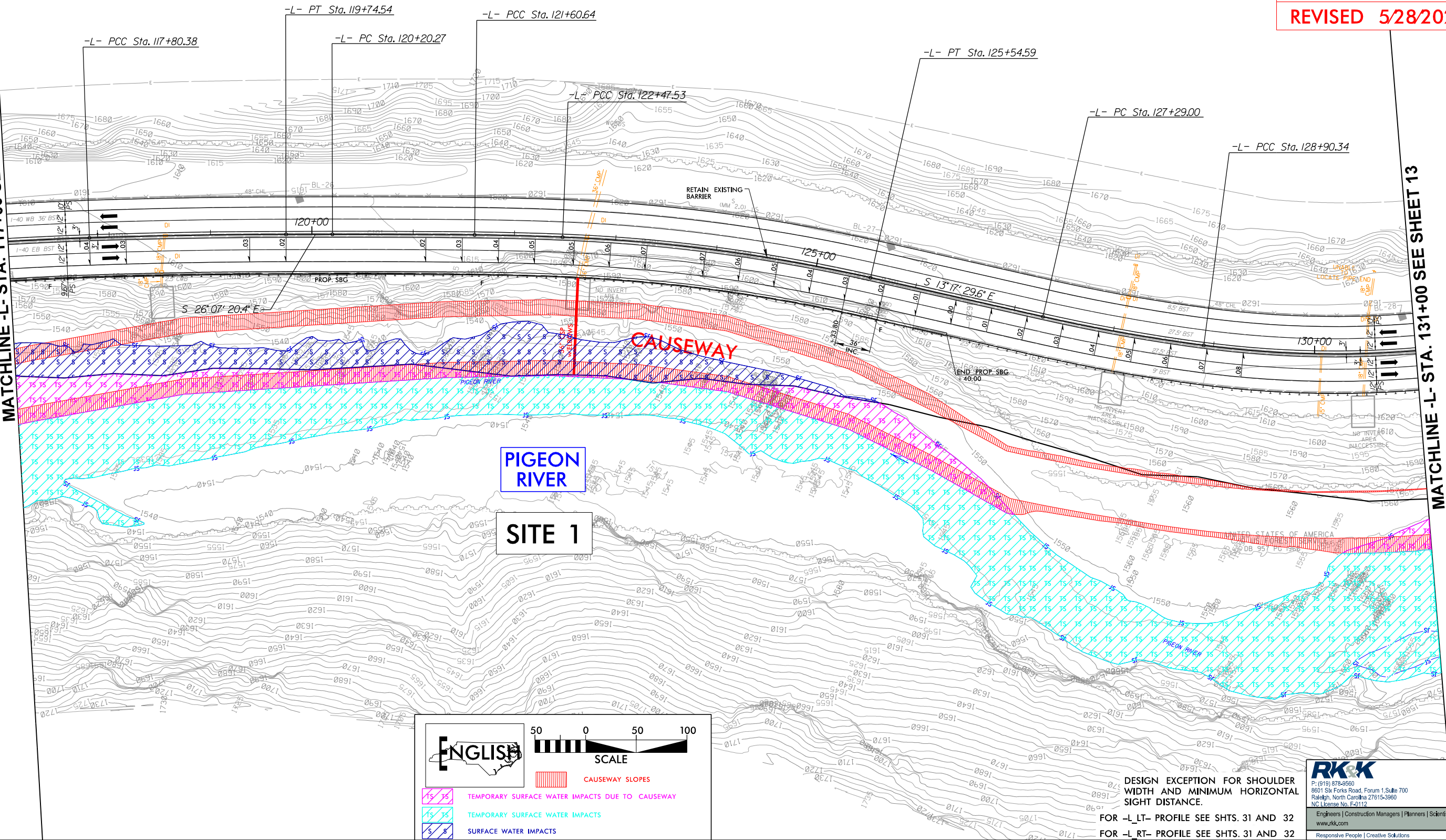
MATCHLINE -L- STA. 131+00 SEE SHEET 13

PI Sta 115+38.85 $\Delta = 8^{\circ} 25' 39.9" (RT)$ $D = 1^{\circ} 44' 29.4"$ $L = 483.93'$ $T = 242.40'$ $DS = 55 \text{ MPH}$ $SE = \text{EXIST.}$	PI Sta 118+77.47 $\Delta = 1^{\circ} 48' 37.0" (RT)$ $D = 0^{\circ} 55' 56.6"$ $L = 194.15'$ $T = 97.09'$ $DS = 55 \text{ MPH}$ $SE = \text{EXIST.}$	PI Sta 120+90.46 $\Delta = 0^{\circ} 41' 27.4" (RT)$ $D = 0^{\circ} 29' 32.0"$ $L = 140.37'$ $T = 70.19'$ $DS = 55 \text{ MPH}$ $SE = \text{EXIST.}$	-L- PI Sta 122+04.09 $\Delta = 1^{\circ} 40' 04.1" (RT)$ $D = 1^{\circ} 55' 10.0"$ $L = 86.89'$ $T = 43.45'$ $DS = 55 \text{ MPH}$ $SE = \text{EXIST.}$	PI Sta 124+01.49 $\Delta = 10^{\circ} 28' 19.3" (RT)$ $D = 3^{\circ} 24' 37.7"$ $L = 307.06'$ $T = 153.96'$ $DS = 55 \text{ MPH}$ $SE = \text{EXIST.}$	PI Sta 128+09.73 $\Delta = 5^{\circ} 14' 14.1" (LT)$ $D = 3^{\circ} 14' 46.4"$ $L = 161.33'$ $T = 80.72'$ $R = 1,765.00'$ $DS = 55 \text{ MPH}$ $SE = \text{EXIST.}$	PI Sta 130+37.12 $\Delta = 16^{\circ} 46' 59.2" (LT)$ $D = 5^{\circ} 45' 30.1"$ $L = 291.46'$ $T = 146.78'$ $R = 995.00'$ $DS = 55 \text{ MPH}$ $SE = \text{EXIST.}$
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PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 12
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR P/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 22 OF 62		
REVISED 5/28/2025		



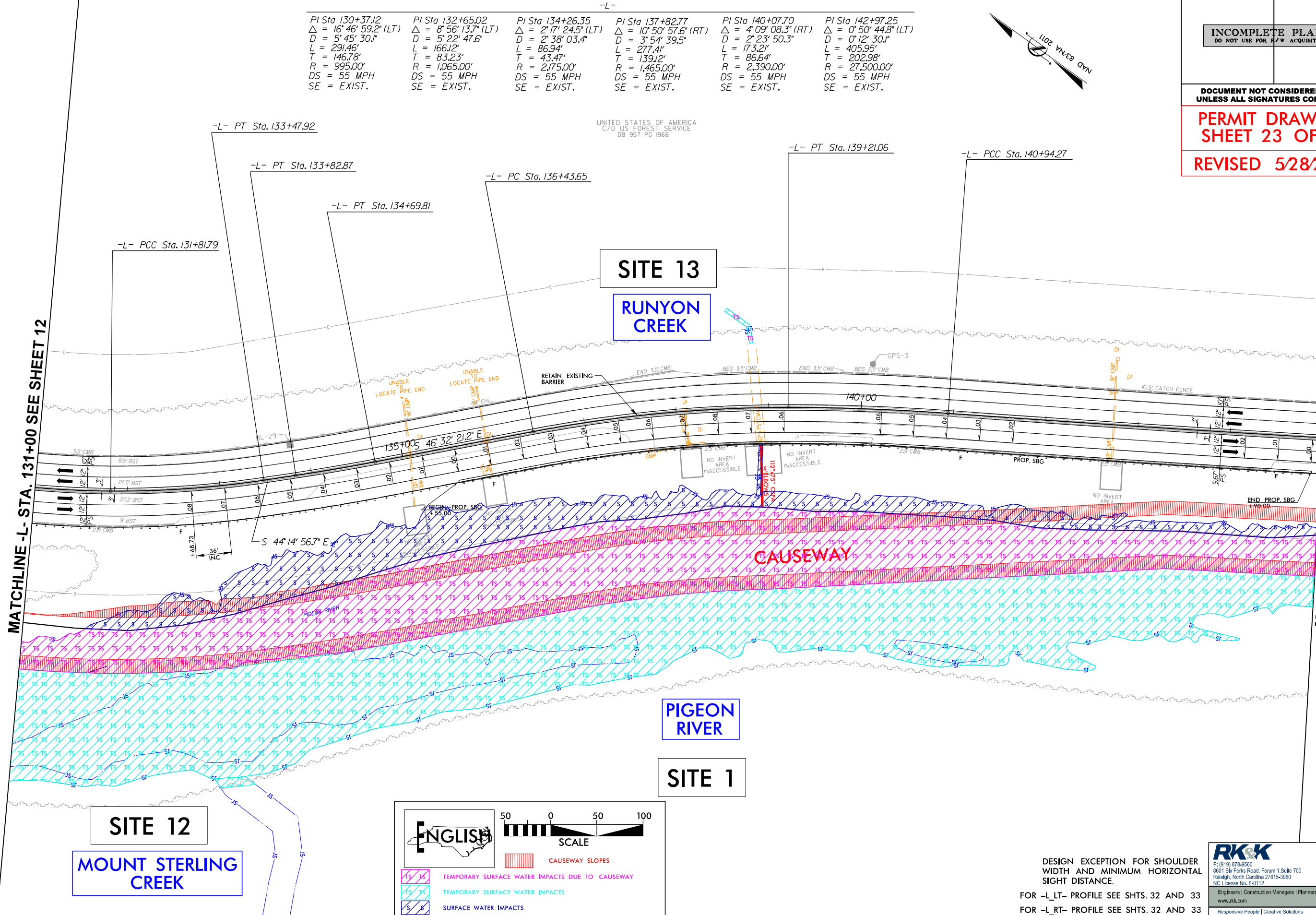
DESIGN EXCEPTION FOR SHOULDER
WIDTH AND MINIMUM HORIZONTAL
SIGHT DISTANCE.
FOR -L- LT- PROFILE SEE SHTS. 31 AND 32
FOR -L- RT- PROFILE SEE SHTS. 31 AND 32

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13-60000

PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 13
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 23 OF 62		
REVISED 5/28/2025		



DESIGN EXCEPTION FOR SHOULDER
WIDTH AND MINIMUM HORIZONTAL
SIGHT DISTANCE.
FOR -L- RT- PROFILE SEE SHTS. 32 AND 33
FOR -L- RT- PROFILE SEE SHTS. 32 AND 33

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PERMIT DRAWING
SHEET 24 OF 62

REVISÉ 5/28/2025





Technical drawing of a road cross-section. The road is 15 feet wide, with a 3-foot shoulder and a 12-foot travel lane. The drawing includes a matchline on the right side labeled "MATCHLINE L-L-STA. 158+50 SEE SHEET 15".



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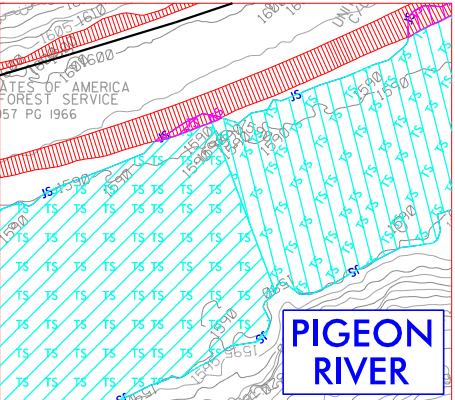
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PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

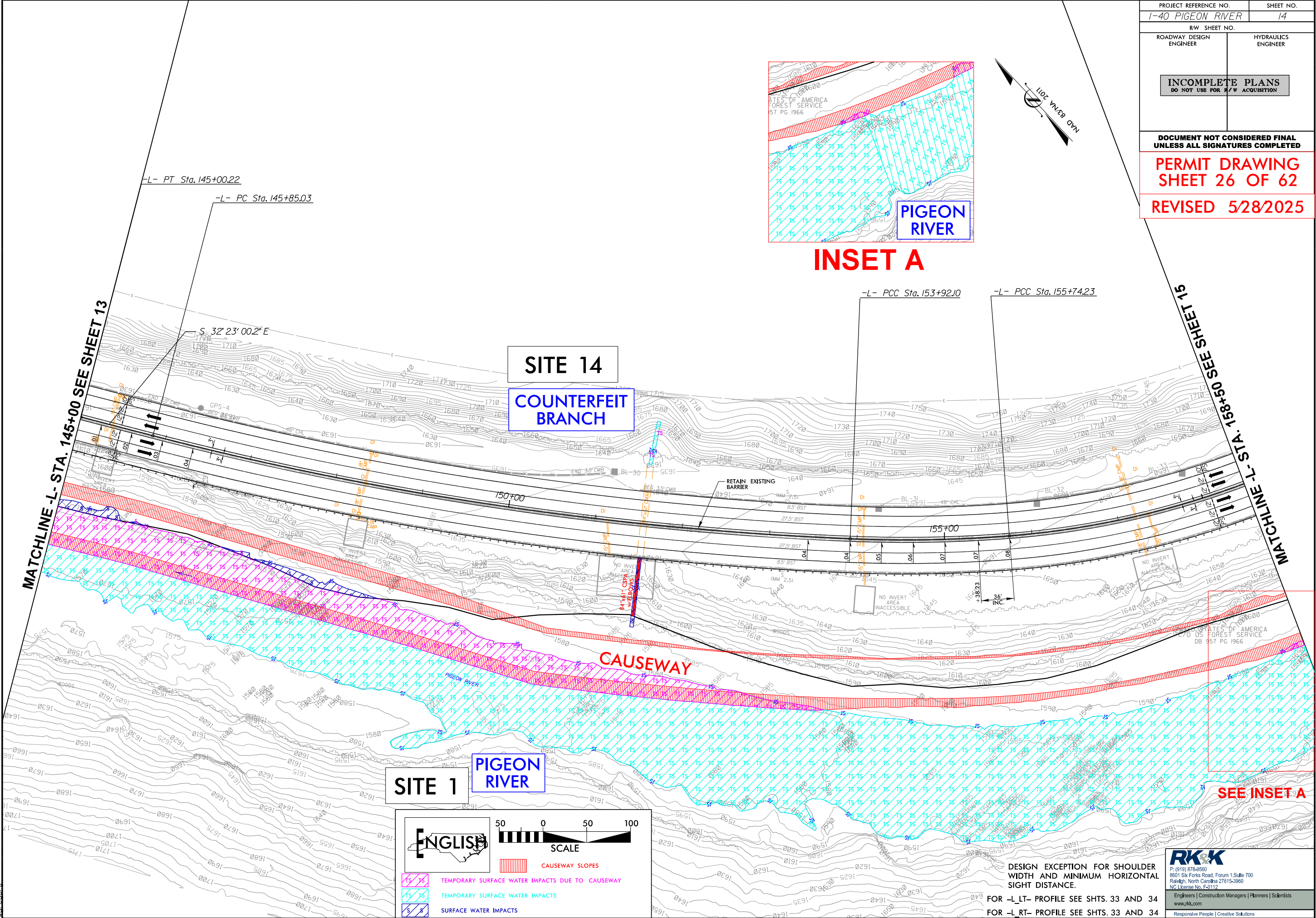
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 26 OF 62

REVISED 5/28/2025



INSET A



6/3/2025 c:\pwworking\k\production\dms73276\1-40 Pigeon River_Hyd_prm_psh_14_con.dgn

8/17/99

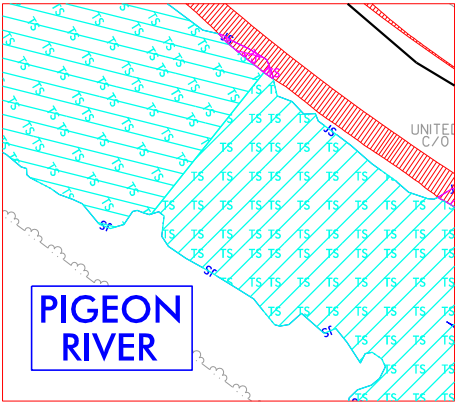
PROJECT REFERENCE NO.	SHEET NO.
1-40 PIGEON RIVER	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

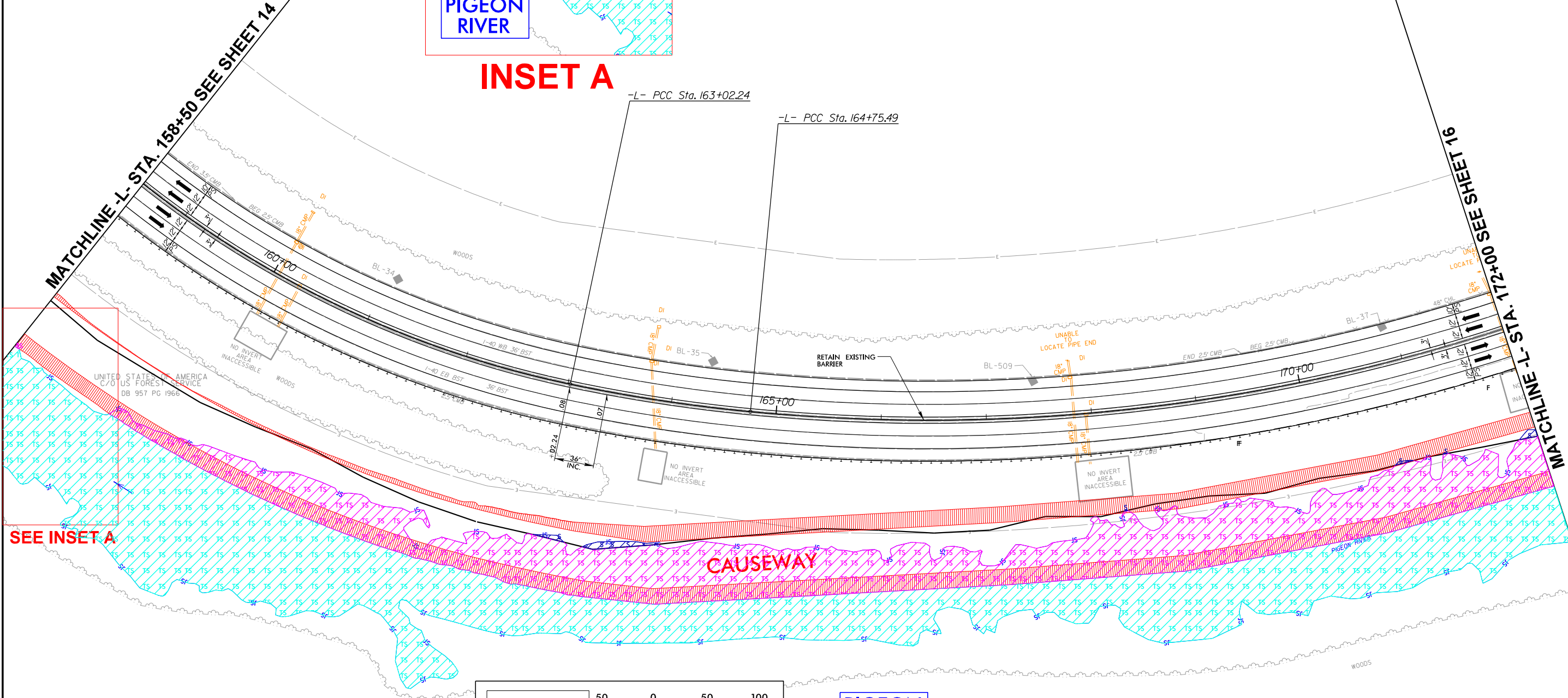
PERMIT DRAWING
SHEET 27 OF 62

REVISED 5/28/2025

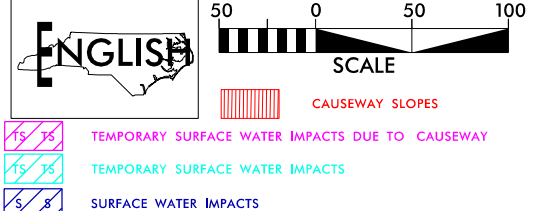
-L-		
PI Sta 159+56.15	PI Sta 163+88.95	PI Sta 169+51.35
$\Delta = 42^{\circ} 46' 52.9" (LT)$	$\Delta = 6^{\circ} 23' 00.8" (LT)$	$\Delta = 30^{\circ} 10' 39.1" (LT)$
$D = 5^{\circ} 52' 35.4"$	$D = 3^{\circ} 41' 04.6"$	$D = 3^{\circ} 14' 46.4"$
$L = 728.01'$	$L = 173.25'$	$L = 929.62'$
$T = 381.92'$	$T = 86.71'$	$T = 475.86'$
$R = 975.00'$	$R = 1,555.00'$	$R = 1,765.00'$
$DS = 55 \text{ MPH}$	$DS = 55 \text{ MPH}$	$DS = 55 \text{ MPH}$
$SE = EXIST.$	$SE = EXIST.$	$SE = EXIST.$



INSET A



SEE INSET A



PIGEON RIVER

SITE 1

DESIGN EXCEPTION FOR SHOULDER
WIDTH AND MINIMUM HORIZONTAL
SIGHT DISTANCE.

FOR -L- LT- PROFILE SEE SHTS. 34 AND 35
FOR -L- RT- PROFILE SEE SHTS. 34 AND 35

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RRK-60001

8/17/99

6/3/2025 c:\pwworking\k\production\dms73276\1-40 Pigeon River_Hyd.prm_psh_15.conddgn

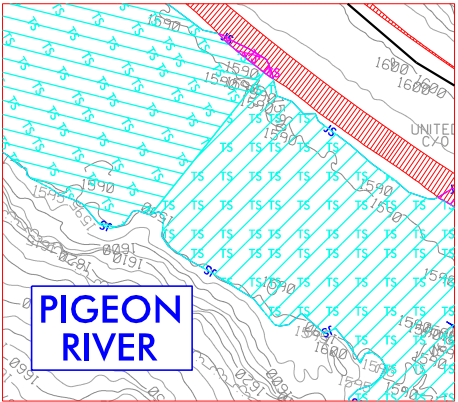
PROJECT REFERENCE NO.		SHEET NO.	
1-40 PIGEON RIVER		15	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 28 OF 62

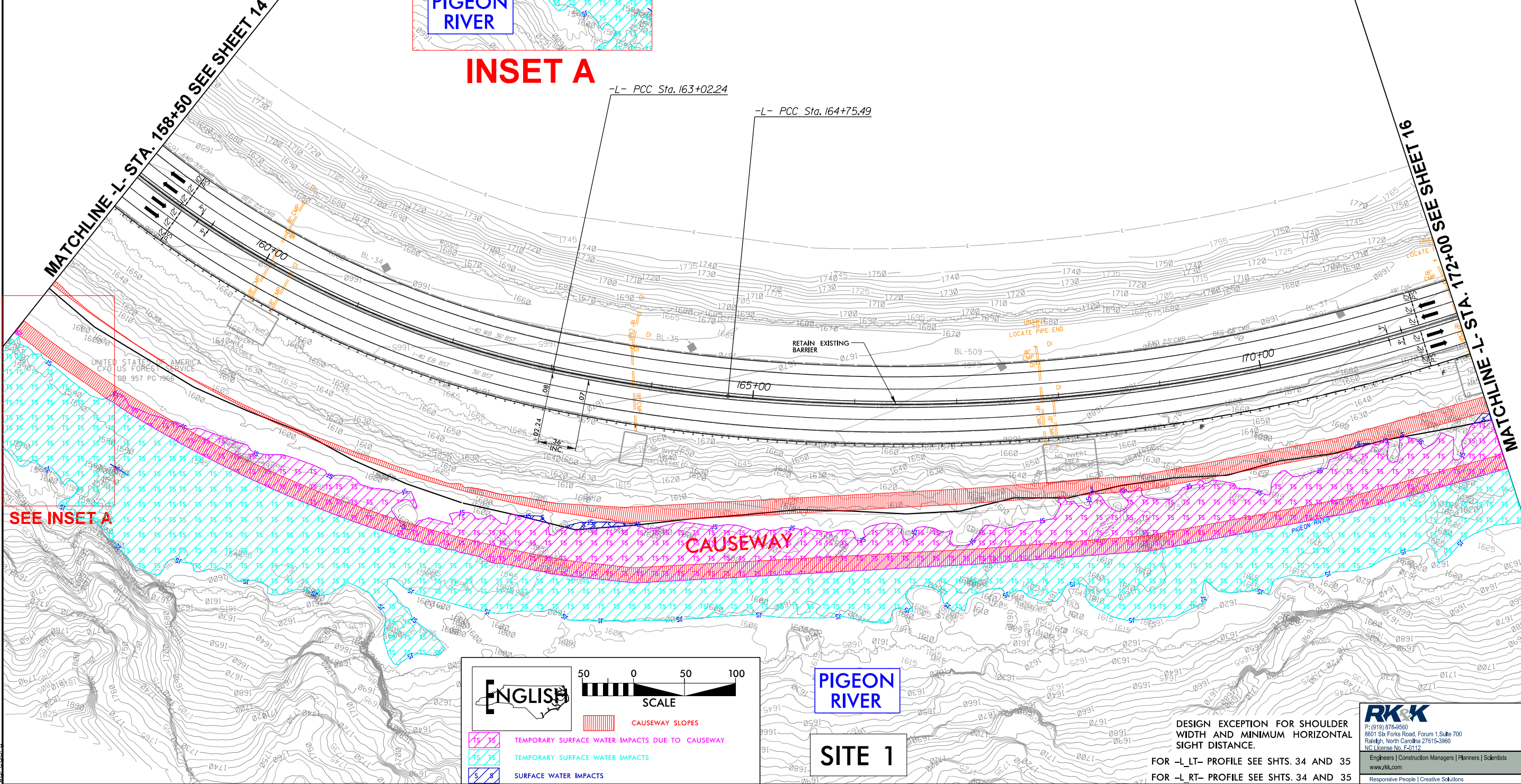
REVISED 5/28/2025

-L-		
PI Sta 159+56.15	PI Sta 163+88.95	PI Sta 169+51.35
$\Delta = 42^{\circ} 46' 52.9" (LT)$	$\Delta = 6^{\circ} 23' 00.8" (LT)$	$\Delta = 30^{\circ} 10' 39.1" (LT)$
$D = 5^{\circ} 52' 35.4"$	$D = 3^{\circ} 41' 04.6"$	$D = 3^{\circ} 14' 46.4"$
$L = 728.01'$	$L = 173.25'$	$L = 929.62'$
$T = 381.92'$	$T = 86.71'$	$T = 475.86'$
$R = 975.00'$	$R = 1,555.00'$	$R = 1,765.00'$
$DS = 55 \text{ MPH}$	$DS = 55 \text{ MPH}$	$DS = 55 \text{ MPH}$
$SE = EXIST.$	$SE = EXIST.$	$SE = EXIST.$



INSET A

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- TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY
- TEMPORARY SURFACE WATER IMPACTS
- SURFACE WATER IMPACTS

PIGEON RIVER

SITE 1

DESIGN EXCEPTION FOR SHOULDER
WIDTH AND MINIMUM HORIZONTAL
SIGHT DISTANCE.

FOR -L- LT- PROFILE SEE SHTS. 34 AND 35
FOR -L- RT- PROFILE SEE SHTS. 34 AND 35

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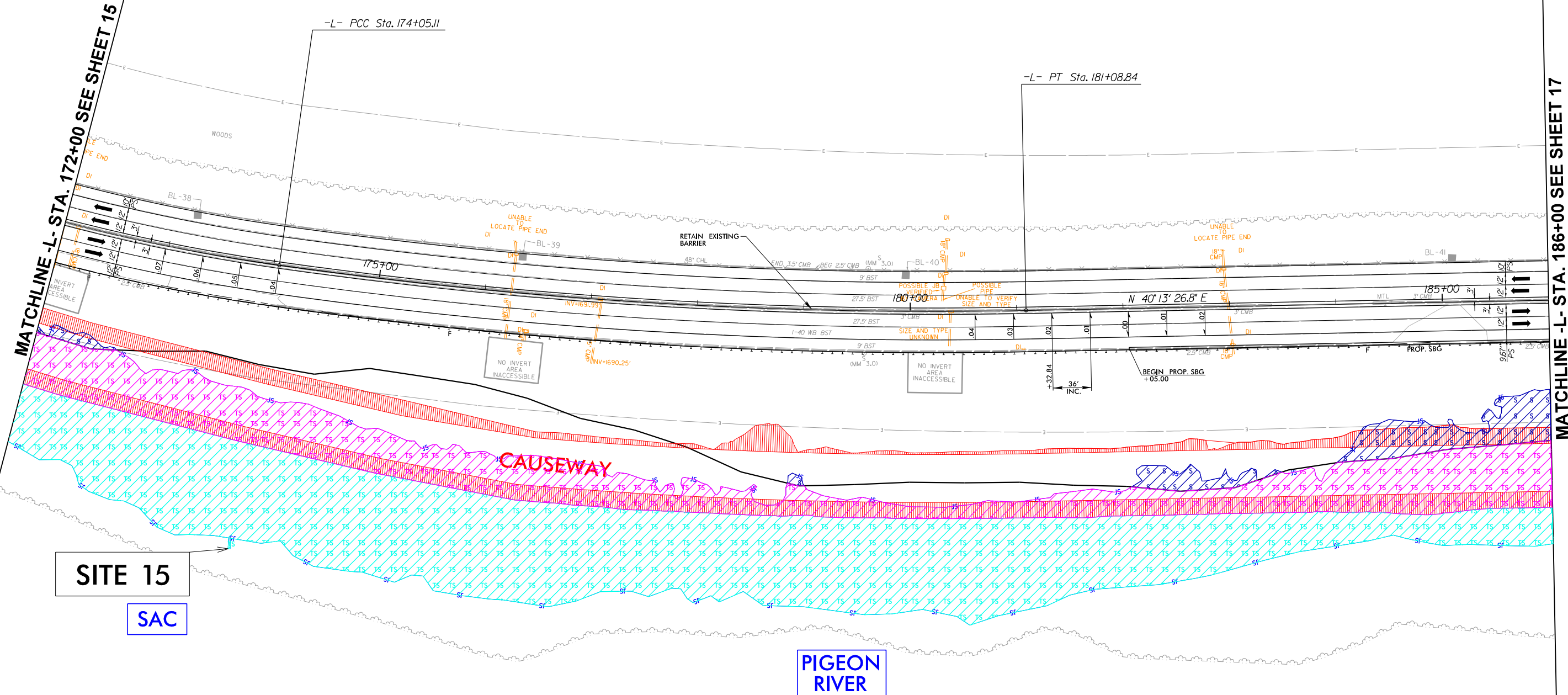
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<i>PI Sta 169+51.35</i>	<i>PI Sta 177+57.72</i>
$\Delta = 30^{\circ}10'39.1''(LT)$	$\Delta = 9^{\circ}08'34.8''(LT)$
$D = 3^{\circ}14'46.4''$	$D = 1^{\circ}17'57.2''$
$L = 929.62'$	$L = 703.73'$
$T = 475.86'$	$T = 352.61'$
$R = 1,765.00'$	$R = 4,410.00'$
$DS = 55 MPH$	$DS = 55 MPH$
$SE = EXIST.$	$SE = EXIST.$

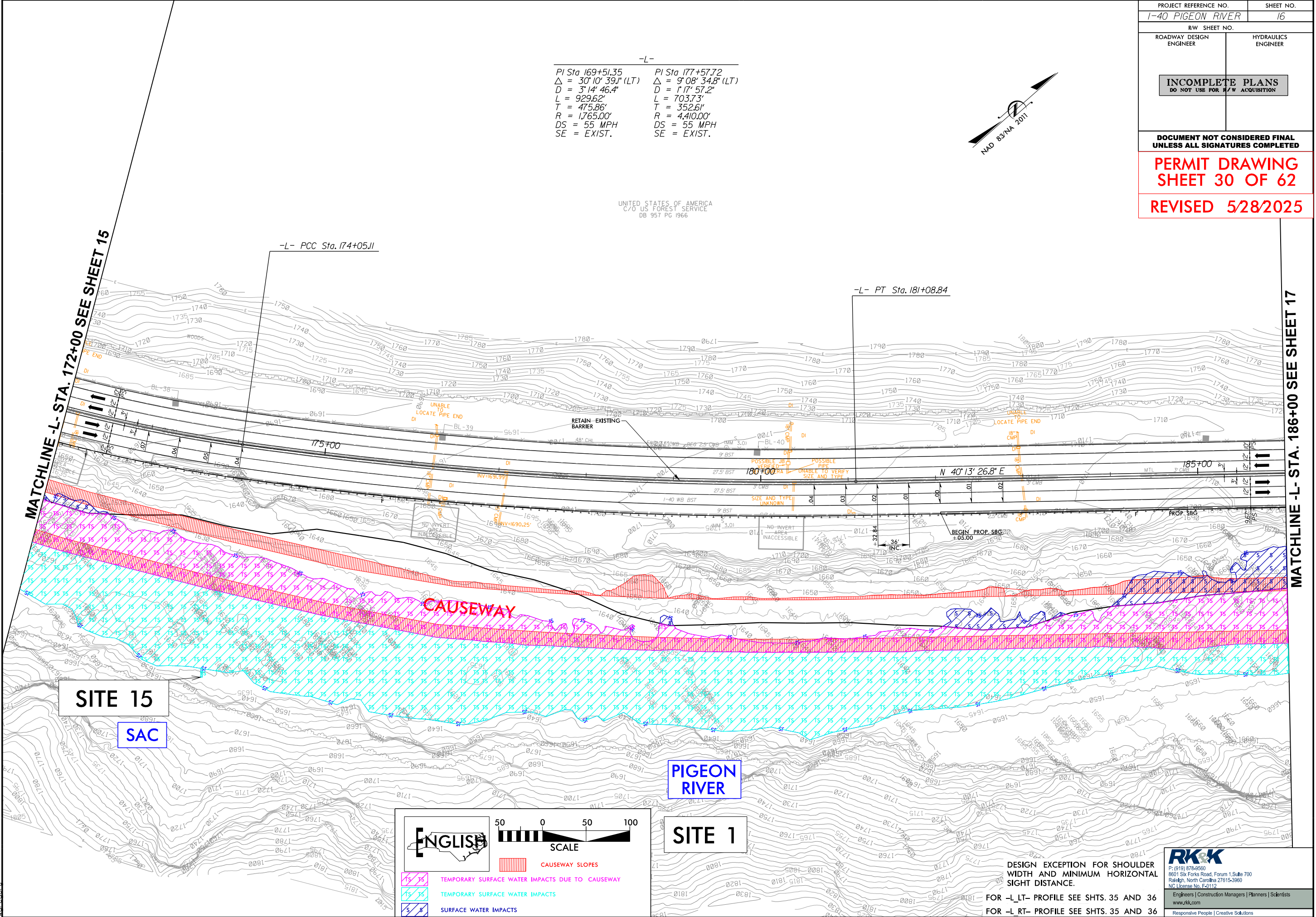


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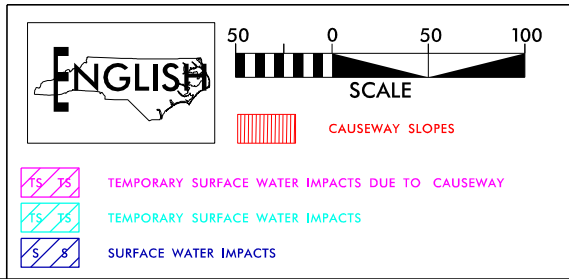
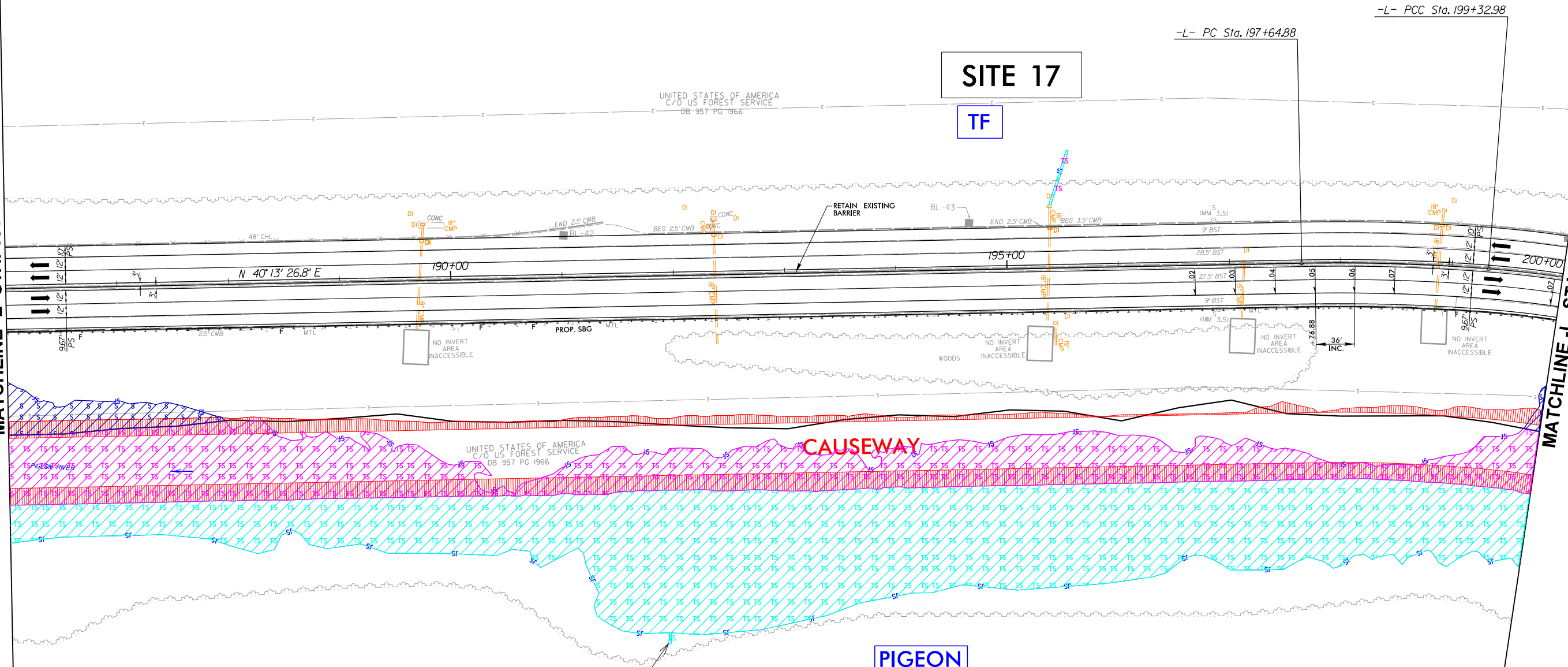
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8/17/99

6/3/2025
c:\pwworking\k\production\dms73276\1-40 Pigeon River_Hyd.prm_psh_17.dgn
10:48:00

MATCHLINE -L- STA. 186+00 SEE SHEET 16



SITE 16
PUNCHEON
CAMP BRANCH

PIGEON
RIVER
SITE 1

-L-
PI Sta 198+49.00
 $\Delta = 5^\circ 31' 10.3''$ (RT)
D = 3' 17' 00.3"
L = 168.10'
T = 84.12'
R = 1,745.00'
DS = 55 MPH
SE = EXIST.
PI Sta 201+76.75
 $\Delta = 28^\circ 55' 44.0''$ (RT)
D = 6' 03' 47.0"
L = 477.13'
T = 243.77'
R = 945.00' *
DS = 50 MPH
SE = EXIST.
* DESIGN EXCEPTION



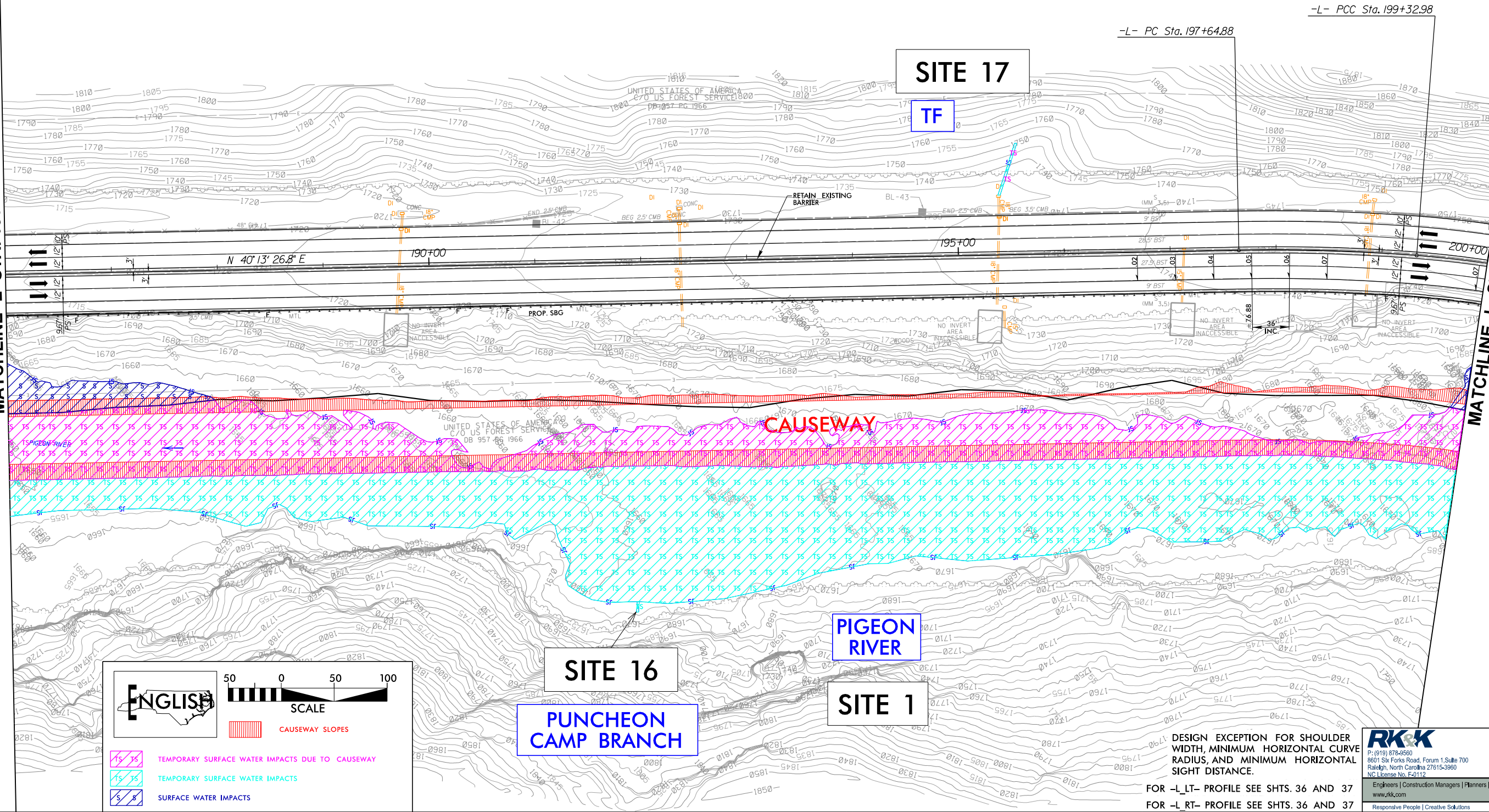
PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 17	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 31 OF 62			
REVISED 5/28/2025			

MATCHLINE -L- STA. 200+00 SEE SHEET 18

DESIGN EXCEPTION FOR SHOULDER WIDTH, MINIMUM HORIZONTAL CURVE RADIUS, AND MINIMUM HORIZONTAL SIGHT DISTANCE.
FOR -L- LT- PROFILE SEE SHTS. 36 AND 37
FOR -L- RT- PROFILE SEE SHTS. 36 AND 37

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MATCHLINE -L- STA. 186+00 SEE SHEET 16



-L-
PI Sta 198+49.00
 $\Delta = 5^\circ 31' 10.3''$ (RT)
 $D = 3^\circ 17' 00.3''$
 $L = 168.10'$
 $T = 84.12'$
 $R = 1,745.00'$
 $DS = 55$ MPH
 $SE = EXIST.$

PI Sta 201+76.75
 $\Delta = 28^\circ 55' 44.0''$ (RT)
 $D = 6^\circ 03' 47.0''$
 $L = 477.13'$
 $T = 243.77'$
 $R = 945.00' *$
 $DS = 50$ MPH
 $SE = EXIST.$
* DESIGN EXCEPTION

PROJECT REFERENCE NO.		SHEET NO.
1-40 PIGEON RIVER		17
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 32 OF 62		
REVISED 5/28/2025		

8/17/99

6/3/2025
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18.dgn

-L-			-L_WB-	-L_EB-
PI Sta 201+76.75	PI Sta 208+12.58	PI Sta 212+83.67	PI Sta 10+87.39	PI Sta 10+99.04
$\Delta = 28^{\circ}55'44.0"$ (RT)	$\Delta = 46^{\circ}34'41.4"$ (RT)	$\Delta = 13^{\circ}59'05.8"$ (RT)	$\Delta = 5^{\circ}15'59.8"$ (RT)	$\Delta = 7^{\circ}50'31.8"$ (RT)
D = 6'03'47.0"	D = 6'07'40.4"	D = 6'11'38.9"	D = 3'00'56.0"	D = 3'57'54.4"
L = 477.13'	L = 760.10'	L = 225.78'	L = 174.65'	L = 197.78'
T = 243.77'	T = 402.46'	T = 113.45'	T = 87.39'	T = 99.04'
R = 945.00' *	R = 935.00' *	R = 925.00' *	R = 1,900.00'	R = 1,445.00'
DS = 50 MPH	DS = 50 MPH	DS = 50 MPH	DS = 55 MPH	DS = 55 MPH
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.

* DESIGN EXCEPTION

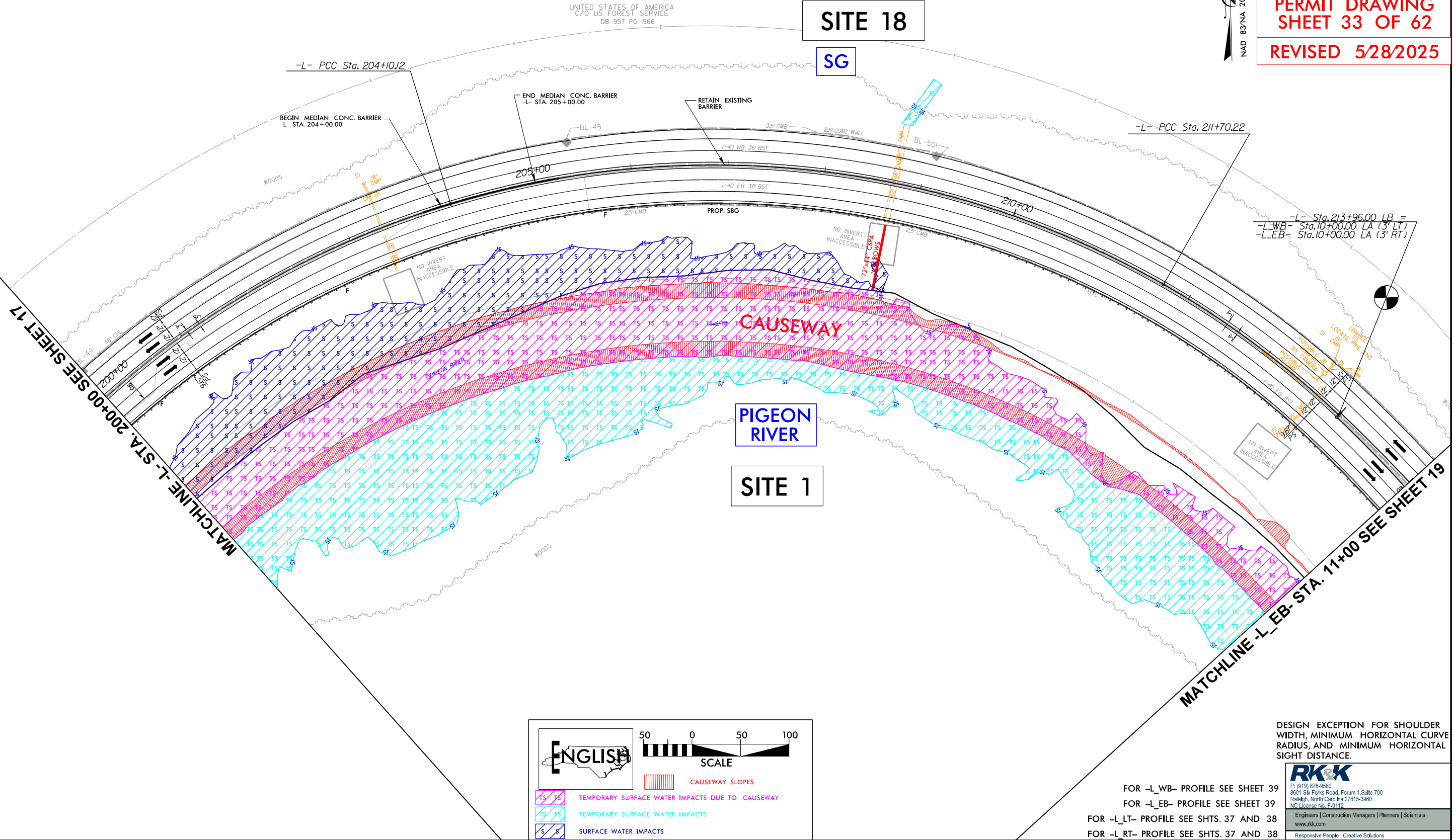
UNITED STATES OF AMERICA
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DB 957 PG 1966

SITE 18

SG

NAD 83/NA 2011

PROJECT REFERENCE NO.		SHEET NO.
1-40 PIGEON RIVER		18
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR P/W ACQUISITION		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
PERMIT DRAWING SHEET 33 OF 62		
REVISED 5/28/2025		

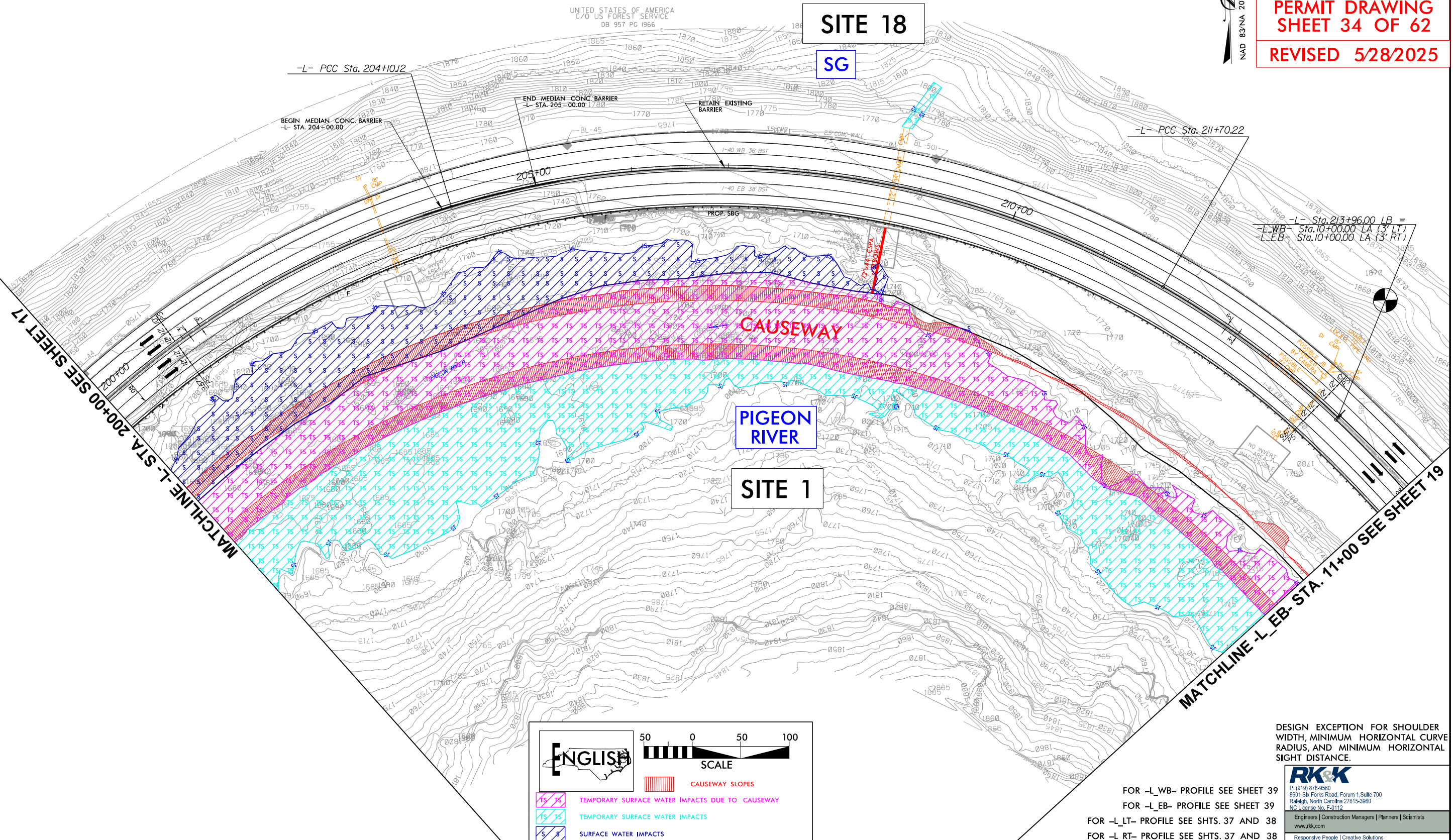


FOR -L_WB- PROFILE SEE SHEET 39
FOR -L_EB- PROFILE SEE SHEET 39
FOR -L_LT- PROFILE SEE SHTS. 37 AND 38
FOR -L_RT- PROFILE SEE SHTS. 37 AND 38

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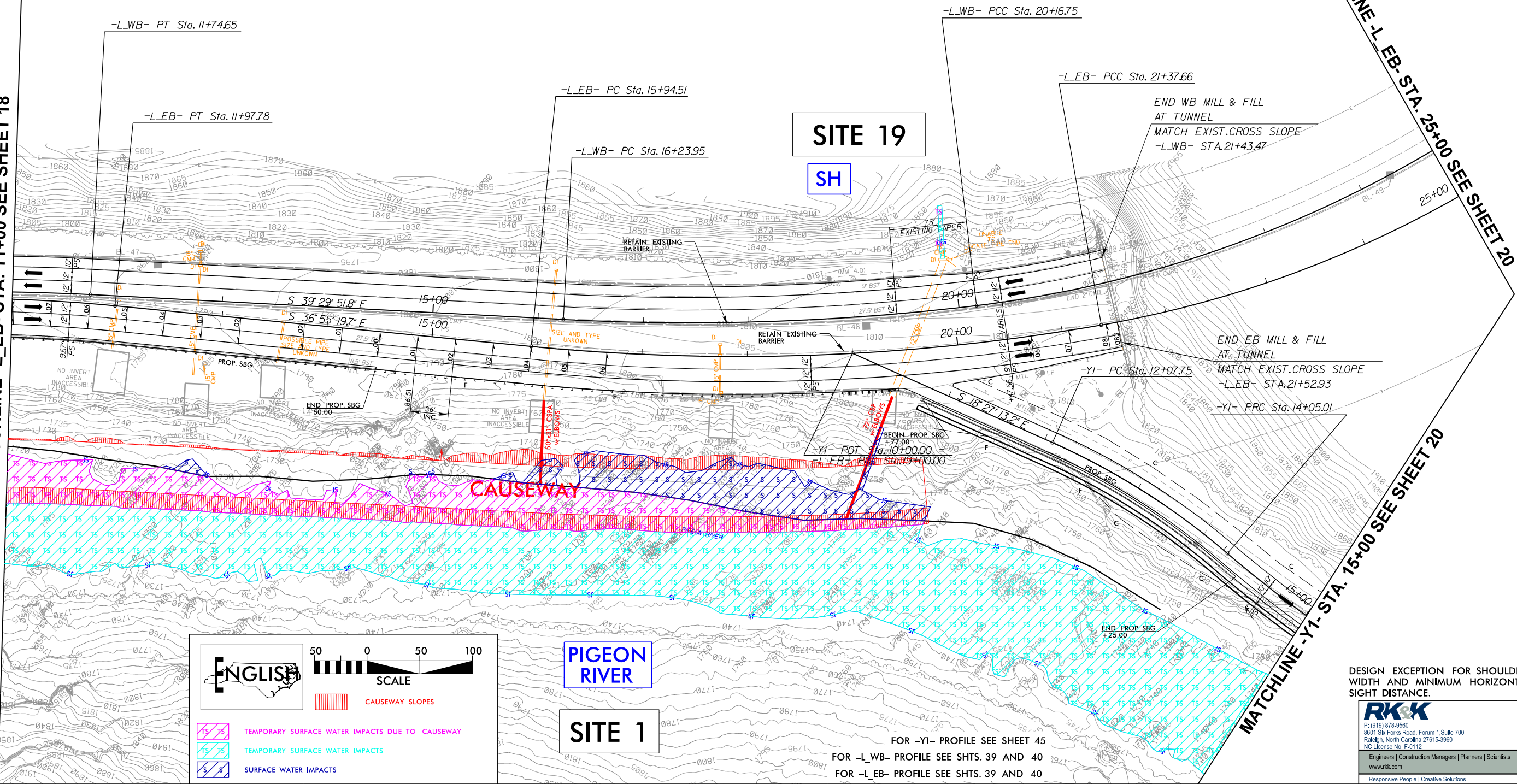
-L-			-L_WB-		-L_EB-	
PI Sta 201+76.75	PI Sta 208+12.58	PI Sta 212+83.67	PI Sta 10+87.39	PI Sta 10+99.04		
Δ = 28° 55' 44.0" (RT)	Δ = 46° 34' 41.4" (RT)	Δ = 13° 59' 05.8" (RT)	Δ = 5° 15' 59.8" (RT)	Δ = 7° 50' 31.8" (RT)		
D = 6° 03' 47.0"	D = 6° 07' 40.4"	D = 6° 11' 38.9"	D = 3° 00' 56.0"	D = 3° 57' 54.4"		
L = 477.13'	L = 760.00'	L = 225.78'	L = 174.65'	L = 197.78'		
T = 243.77'	T = 402.46'	T = 113.45'	T = 87.39'	T = 99.04'		
R = 945.00' *	R = 935.00' *	R = 925.00' *	R = 1,900.00'	R = 1,445.00'		
DS = 50 MPH	DS = 50 MPH	DS = 50 MPH	DS = 55 MPH	DS = 55 MPH		
SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.	SE = EXIST.		

* DESIGN EXCEPTION





MATCHLINE -L_EB- STA. 11+00 SEE SHEET 18



-L_WB-		
PI Sta 10+87.39 $\Delta = 5' 15'' 59.8''$ (RT) $D = 3' 00'' 56.0''$ $L = 174.65'$ $T = 87.39'$ $R = 1,900.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 18+20.84 $\Delta = 9' 52'' 15.8''$ (LT) $D = 2' 30'' 46.7''$ $L = 392.80'$ $T = 196.89'$ $R = 2,280.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 27+54.98 $\Delta = 67' 29'' 30.5''$ (LT) $D = 5' 11'' 06.5''$ $L = 1,301.64'$ $T = 738.22'$ $R = 1,050.00'$ $DS = 55$ MPH $SE = EXIST.$

-YI-	
PI Sta 12+68.89 $\Delta = 10' 16'' 31.4''$ (RT) $D = 8' 25'' 33.1''$ $L = 121.95'$ $T = 61.14'$ $R = 680.00'$ $DS = 20$ MPH $SE = EXIST.$	PI Sta 15+54.79 $\Delta = 7' 58'' 12.3''$ (LT) $D = 4' 35'' 01.2''$ $L = 173.88'$ $T = 87.08'$ $R = 1,250.00'$ $DS = 20$ MPH $SE = EXIST.$

-L_EB-		
PI Sta 10+99.04 $\Delta = 7' 50'' 31.8''$ (RT) $D = 3' 57'' 54.4''$ $L = 197.78'$ $T = 99.04'$ $R = 1,445.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 18+67.75 $\Delta = 15' 28'' 57.7''$ (LT) $D = 2' 51'' 01.9''$ $L = 543.15'$ $T = 273.24'$ $R = 2,010.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 27+03.05 $\Delta = 56' 36'' 04.5''$ (LT) $D = 5' 27'' 24.3''$ $L = 1,037.27'$ $T = 565.38'$ $R = 1,050.00'$ $DS = 55$ MPH $SE = EXIST.$

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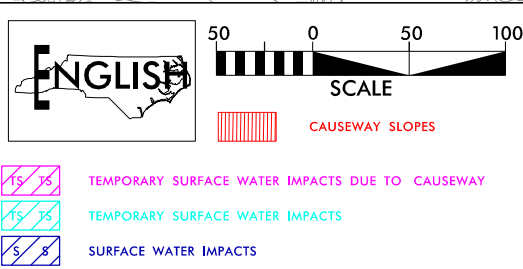
PROJECT REFERENCE NO. 1-40 PIGEON RIVER	SHEET NO. 19
R/W SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 36 OF 62

REVISED 5/28/2025



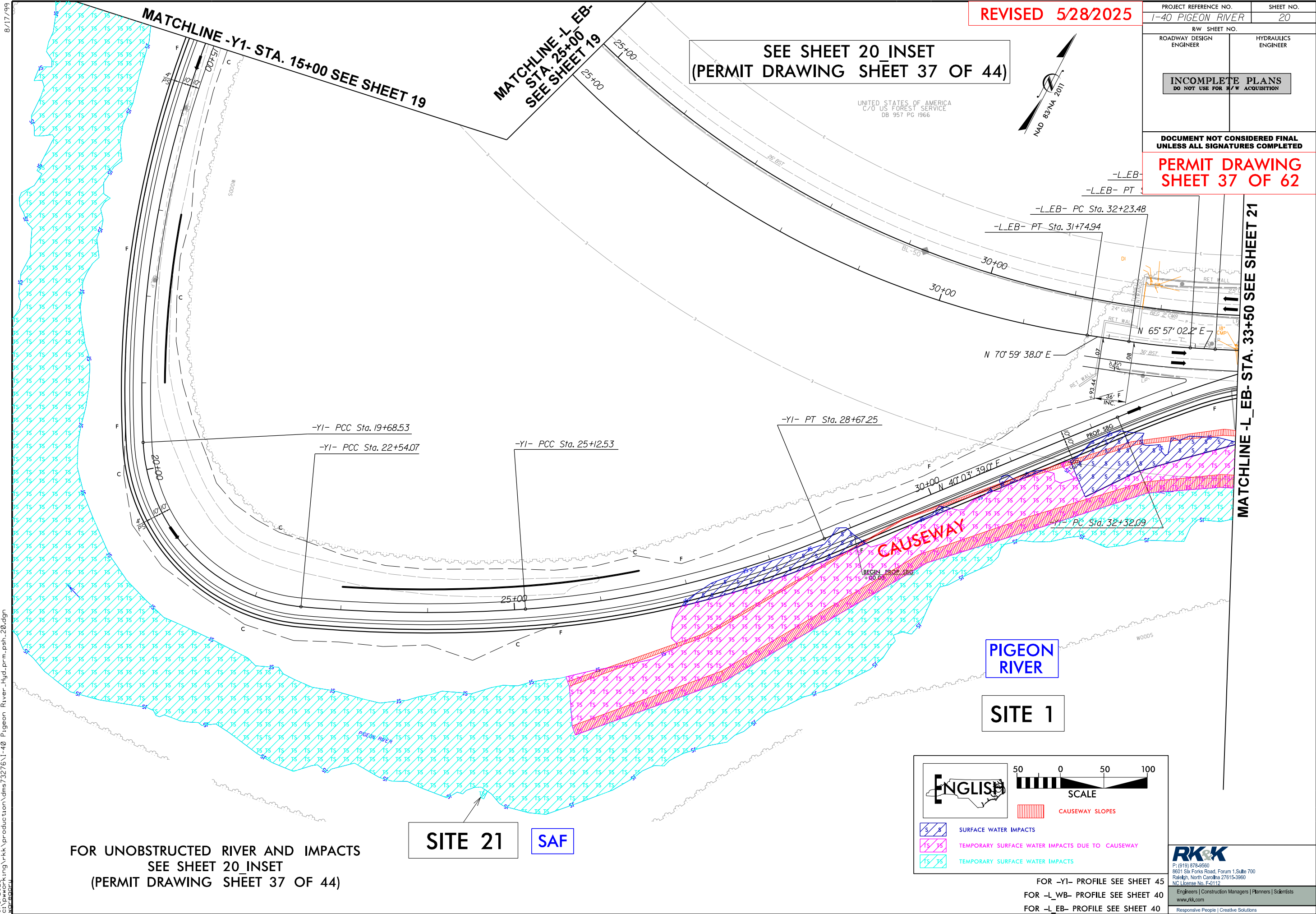
PIGEON RIVER

SITE 1

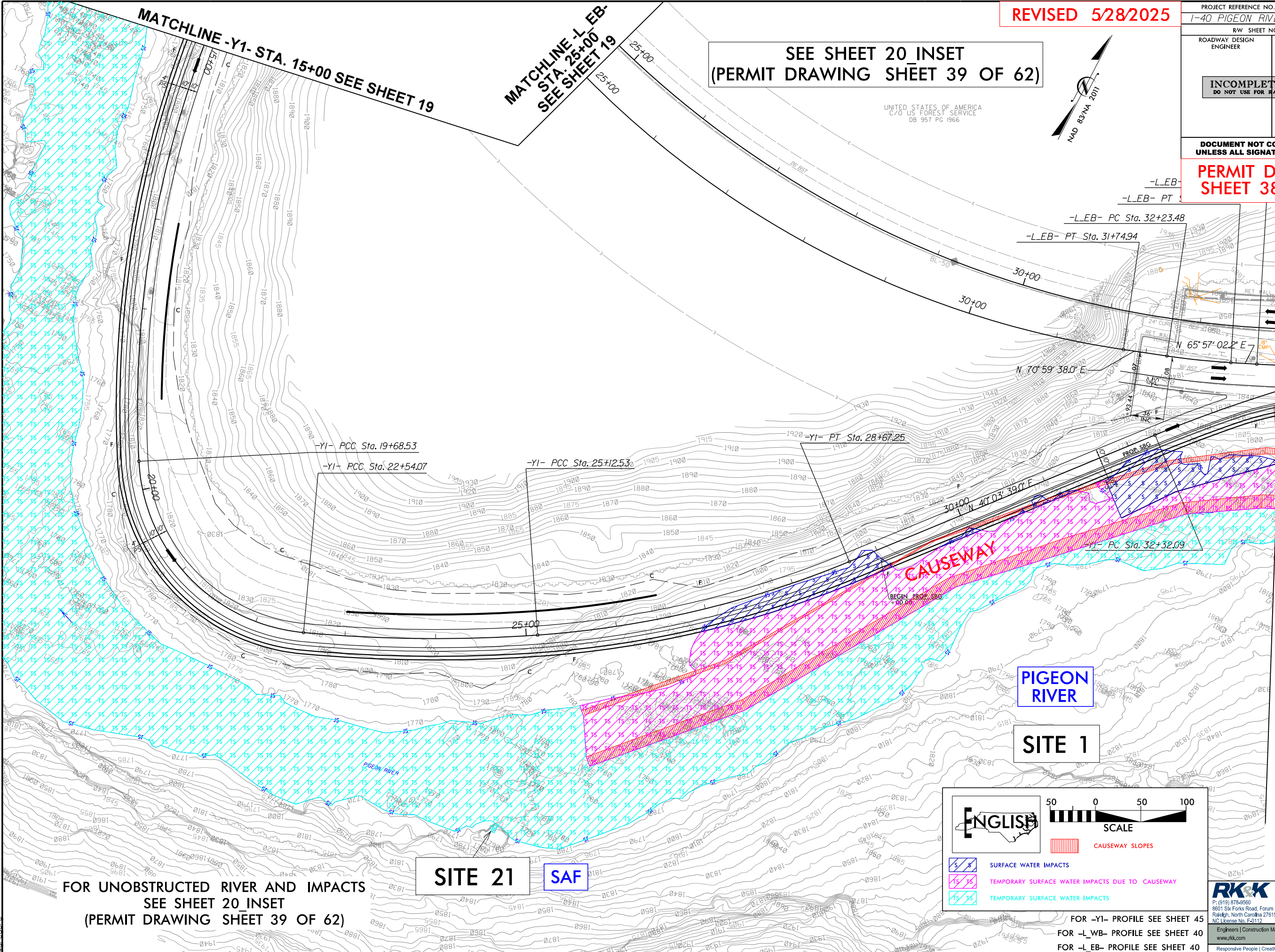
FOR -YI- PROFILE SEE SHEET 45
FOR -L_WB- PROFILE SEE SHTS. 39 AND 40
FOR -L_EB- PROFILE SEE SHTS. 39 AND 40

DESIGN EXCEPTION FOR SHOULDER WIDTH AND MINIMUM HORIZONTAL SIGHT DISTANCE.

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6/3/2025 c:\pwworking\rkk\production\dms73276\1-40 Pigeon River_Hyd.prm_psh_20_con.dgn 8/17/99



SEE SHEET 20 INSET
(PERMIT DRAWING SHEET 39 OF 62)

UNITED STATES OF AMERICA
C/O U.S. FOREST SERVICE
DB 957 PG 1966



REVISED 5/28/2025

PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 20
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 38 OF 62

FOR UNOBSTRUCTED RIVER AND IMPACTS
SEE SHEET 20 INSET
(PERMIT DRAWING SHEET 39 OF 62)

SITE 21 SAF

PIGEON
RIVER

SITE 1

ENGLISH

500 0 50 100

SCALE

CAUSEWAY SLOPES

SURFACE WATER IMPACTS

TEMPORARY SURFACE WATER IMPACTS DUE TO CAUSEWAY

TEMPORARY SURFACE WATER IMPACTS

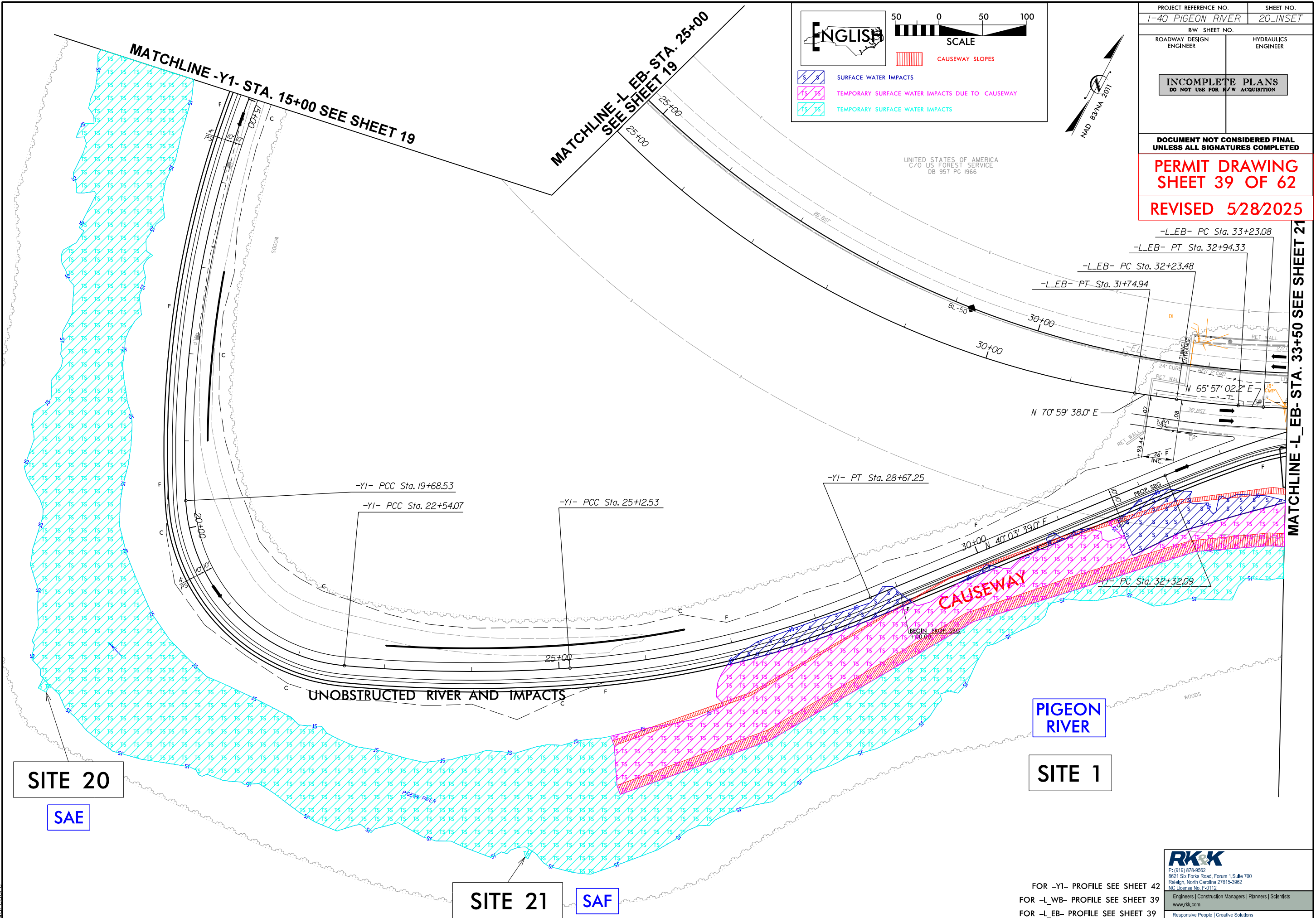
FOR -YI- PROFILE SEE SHEET 45
FOR -L_WB- PROFILE SEE SHEET 40
FOR -L_EB- PROFILE SEE SHEET 40

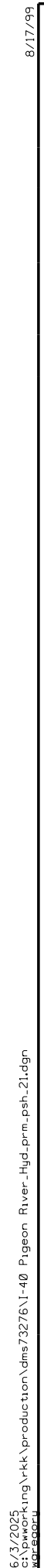
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MATCHLINE -L_EB- STA. 33+50 SEE SHEET 21







8/17/99

6/3/2025
c:\pwworking\k\production\dms73276\1-40 Pigeon River_Hyd.prm_psh_22.dgn
10:58:04

MATCHLINE -L1- STA. 13+50 SEE SHEET 21

SITE 22
SKIFFLEY CREEK

<i>PI Sta. 14+11.50</i> $\Delta = 2^{\circ}13'53.1''$ (RT) $D = 1^{\circ}17'04.8''$ $L = 173.70'$ $T = 86.86'$ $R = 4,460.00'$ $DS = 55$ MPH $SE = EXIST.$	<i>PI Sta. 16+81.88</i> $\Delta = 5^{\circ}49'01.4''$ (RT) $D = 2^{\circ}24'26.6''$ $L = 241.63'$ $T = 120.92'$ $R = 2,380.00'$ $DS = 55$ MPH $SE = EXIST.$	<i>PI Sta. 20+71.35</i> $\Delta = 3^{\circ}45'03.5''$ (RT) $D = 6^{\circ}03'47.0''$ $L = 523.68'$ $T = 268.75'$ $R = 945.00' *$ $DS = 50$ MPH $SE = EXIST.$	<i>PI Sta. 24+50.19</i> $\Delta = 10^{\circ}02'40.3''$ (RT) $D = 4^{\circ}03'48.7''$ $L = 247.19'$ $T = 123.10'$ $R = 1,410.00'$ $DS = 55$ MPH $SE = EXIST.$	<i>PI Sta. 27+68.61</i> $\Delta = 9^{\circ}45'39.0''$ (RT) $D = 4^{\circ}00'24.1''$ $L = 283.73'$ $T = 122.10'$ $R = 1,430.00'$ $DS = 55$ MPH $SE = EXIST.$
---	--	--	---	--

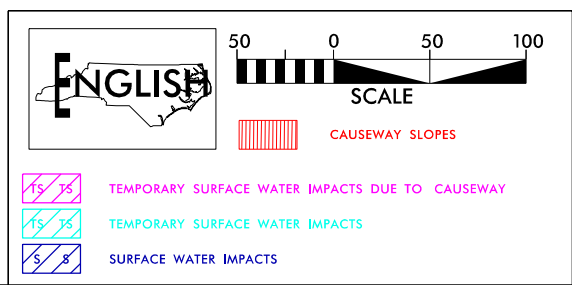
* DESIGN EXCEPTION

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DB 957 PG 1966

SITE 23
GROUNDHOG CREEK

PIGEON RIVER

SITE 1



FOR -L1- PROFILE SEE SHEET 41

PROJECT REFERENCE NO. 1-40 PIGEON RIVER	SHEET NO. 22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 42 OF 62	
REVISED 5/28/2025	



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6/3/2025
c:\pwworking\rkk\production\dms73276\1-40 Pigeon River_Hyd_prm_psh_22_con.dgn
04:58:04

MATCHLINE -L1- STA. 13+50 SEE SHEET 21

SITE 22
SKIFFLEY CREEK

-LI- PT Sta. 14+98.34

-LI- PC Sta. 15+60.96

-LI- PCC Sta. 18+02.60

PI Sta 14+11.50 $\Delta = 2^{\circ}13'53.1''$ (RT) $D = 1^{\circ}17'04.8''$ $L = 173.70'$ $T = 86.86'$ $R = 4,460.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 16+81.88 $\Delta = 5^{\circ}49'01.4''$ (RT) $D = 2^{\circ}24'26.6''$ $L = 241.63'$ $T = 120.92'$ $R = 2,380.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 20+71.35 $\Delta = 31^{\circ}45'03.5''$ (RT) $D = 6^{\circ}03'47.0''$ $L = 523.68'$ $T = 268.75'$ $R = 945.00' *$ $DS = 50$ MPH $SE = EXIST.$	-LI- PI Sta 24+50.19 $\Delta = 10^{\circ}02'40.3''$ (RT) $D = 4^{\circ}03'48.7''$ $L = 247.19'$ $T = 123.91'$ $R = 1,410.00'$ $DS = 55$ MPH $SE = EXIST.$	PI Sta 27+68.61 $\Delta = 9^{\circ}45'39.0''$ (RT) $D = 4^{\circ}00'24.1''$ $L = 283.73'$ $T = 122.10'$ $R = 1,430.00'$ $DS = 55$ MPH $SE = EXIST.$
---	--	---	---	--

* DESIGN EXCEPTION

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DB 957 PG 1966

SITE 23
GROUNDHOG CREEK

-LI- PC Sta. 23+26.28

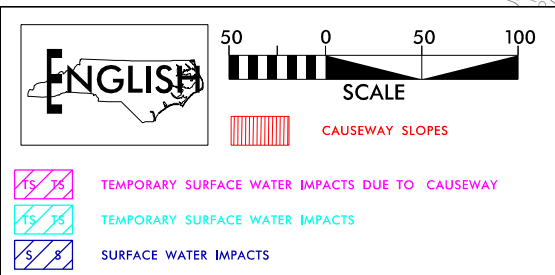
-LI- PC Sta. 26+26.27

-LI- PT Sta. 25+73.46

PIGEON RIVER

SITE 1

MATCHLINE -L1- STA. 27+00 SEE SHEET 23



PROJECT REFERENCE NO. 1-40 PIGEON RIVER	SHEET NO. 22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
PERMIT DRAWING SHEET 43 OF 62	
REVISED 5/28/2025	



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FOR -L1- PROFILE SEE SHEET 41

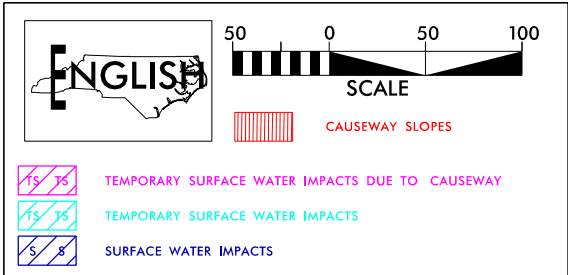
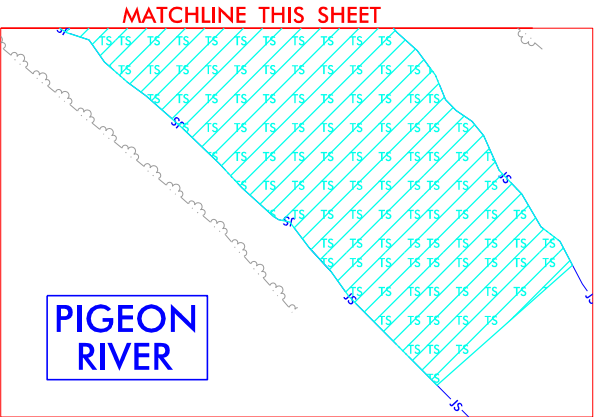
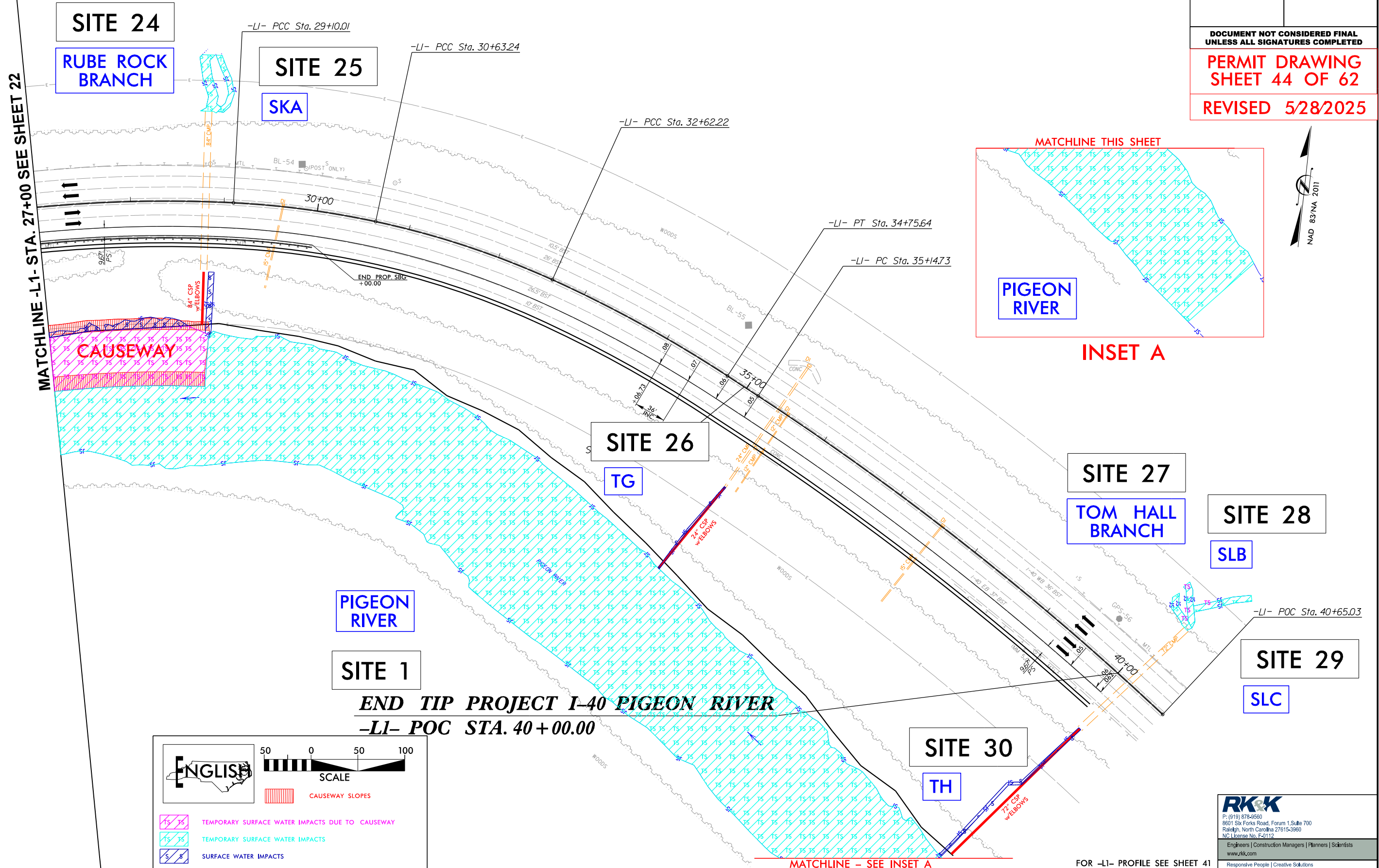
6/3/2025 c:\pwworking\rkk\production\dms73276\1-40 Pigeon River_Hyd.prm_psh_23.dgn 8/17/99

PROJECT REFERENCE NO. 1-40 PIGEON RIVER		SHEET NO. 23
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 44 OF 62

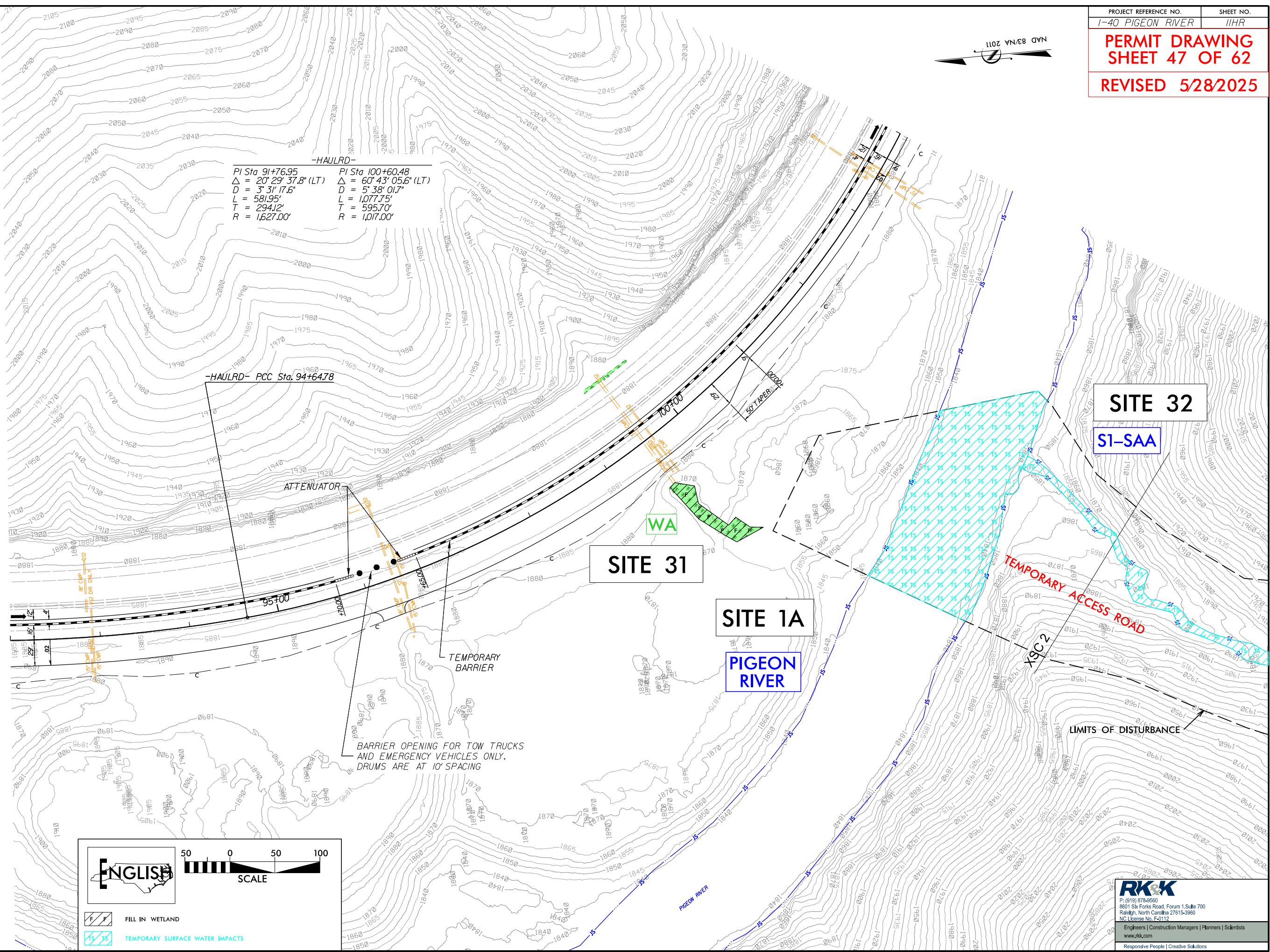
REVISED 5/28/2025



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FOR -L1- PROFILE SEE SHEET 41





-HAULRD-
PI Sta 91+76.95 PI Sta 100+60.48
 $\Delta = 20^\circ 29' 37.8''$ (LT) $\Delta = 60^\circ 43' 05.6''$ (LT)
 $D = 5' 31' 17.6''$ $D = 5' 38' 01.7''$
 $L = 581.95'$ $L = 1,077.75'$
 $T = 294.12'$ $T = 595.70'$
 $R = 1,627.00'$ $R = 1,017.00'$

-HAULRD- PCC Sta. 94+64.78

ATTENUATOR

SITE 31

SITE 1A

PIGEON RIVER

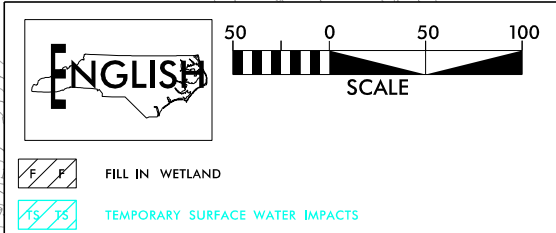
SITE 32

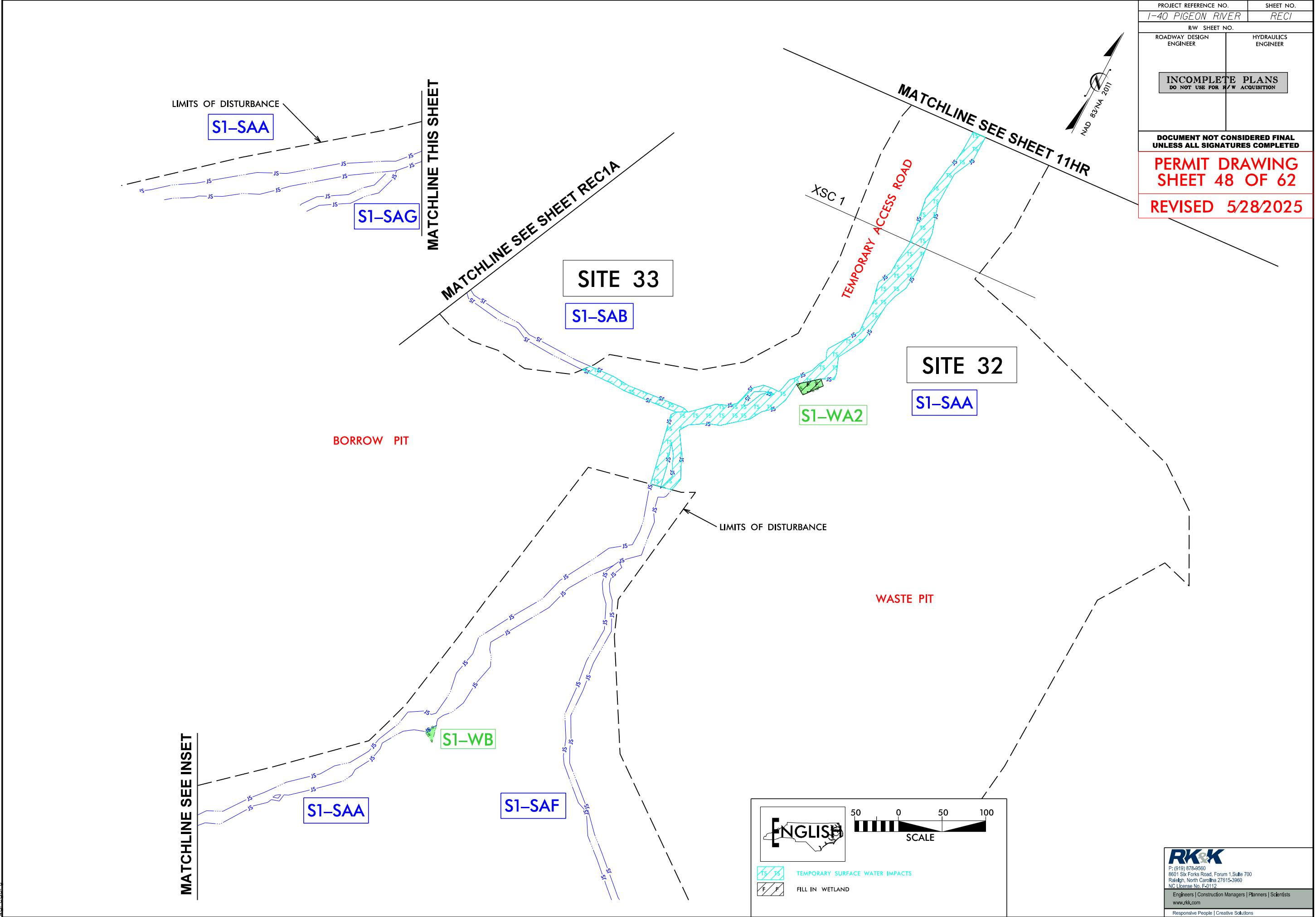
S1-SAA

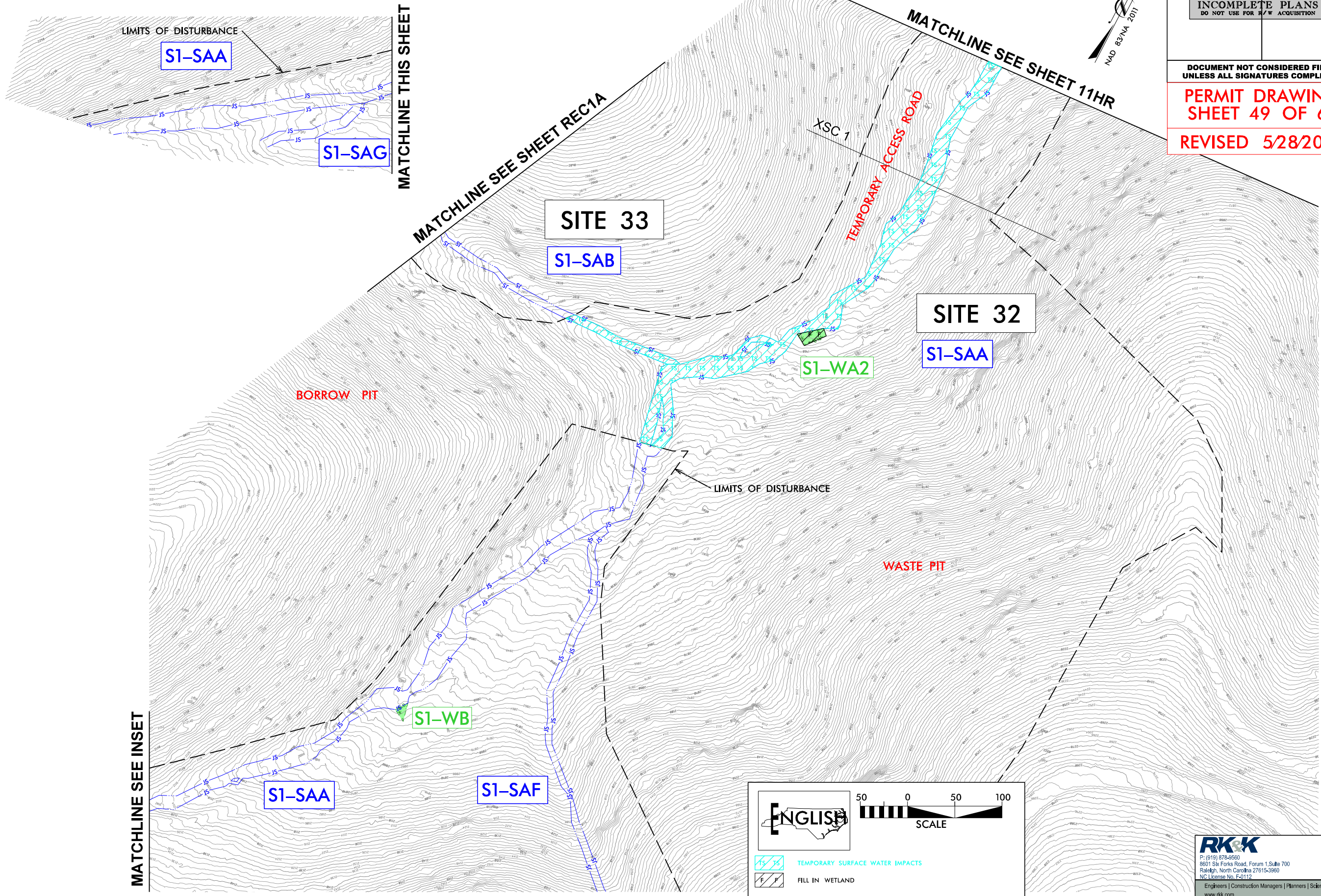
TEMPORARY ACCESS ROAD

LIMITS OF DISTURBANCE

BARRIER OPENING FOR TOW TRUCKS
AND EMERGENCY VEHICLES ONLY.
DRUMS ARE AT 10' SPACING







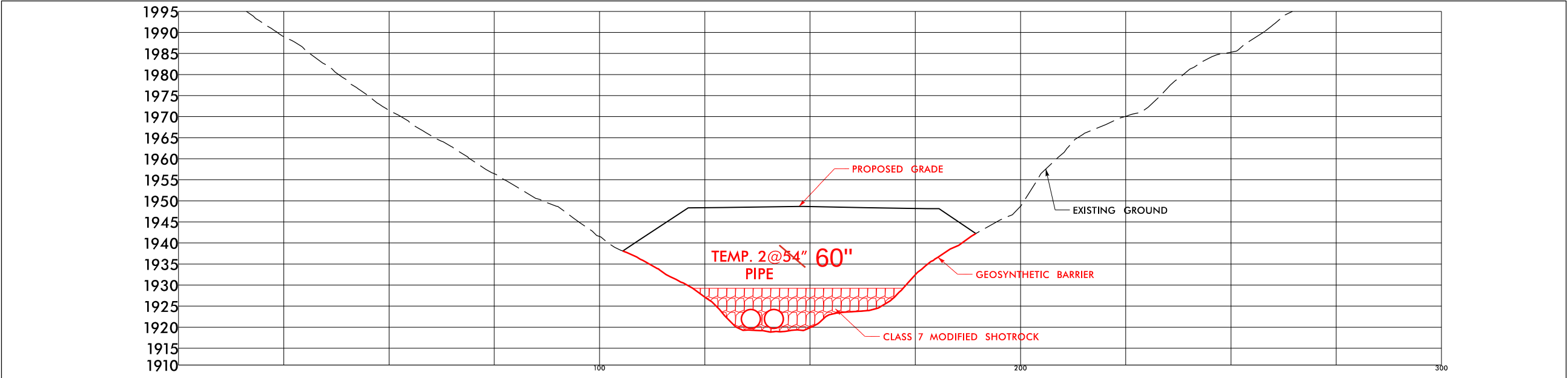
PROJECT REFERENCE NO.		SHEET NO.	
1-40 PIGEON RIVER		REC1	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PERMIT DRAWING SHEET 49 OF 62			
REVISED 5/28/2025			

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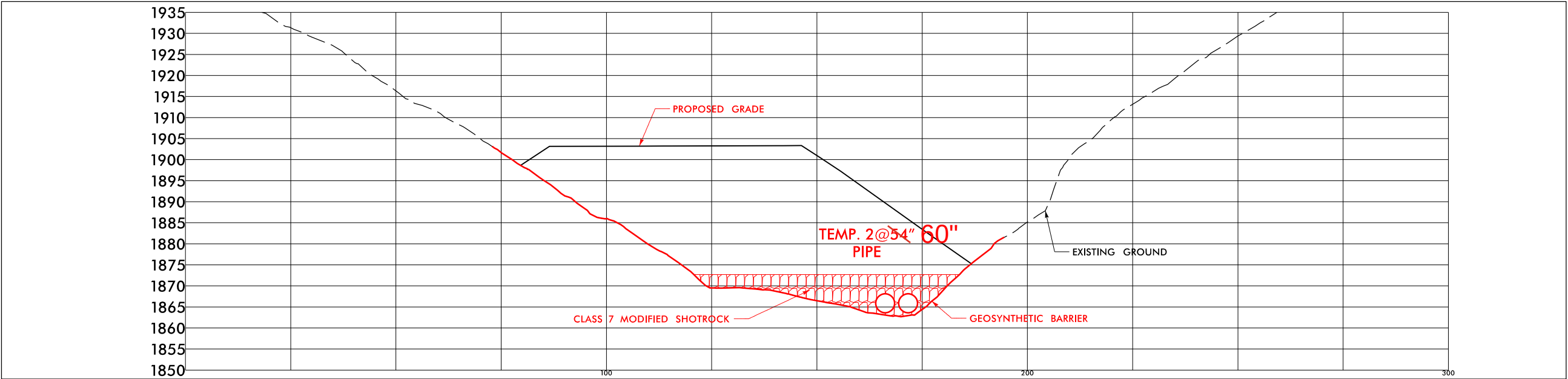
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CROSS SECTION 1



CROSS SECTION 2

SCALE: N.T.S

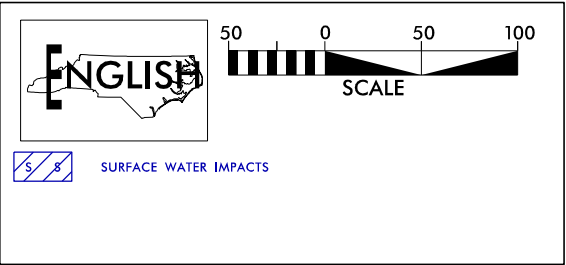
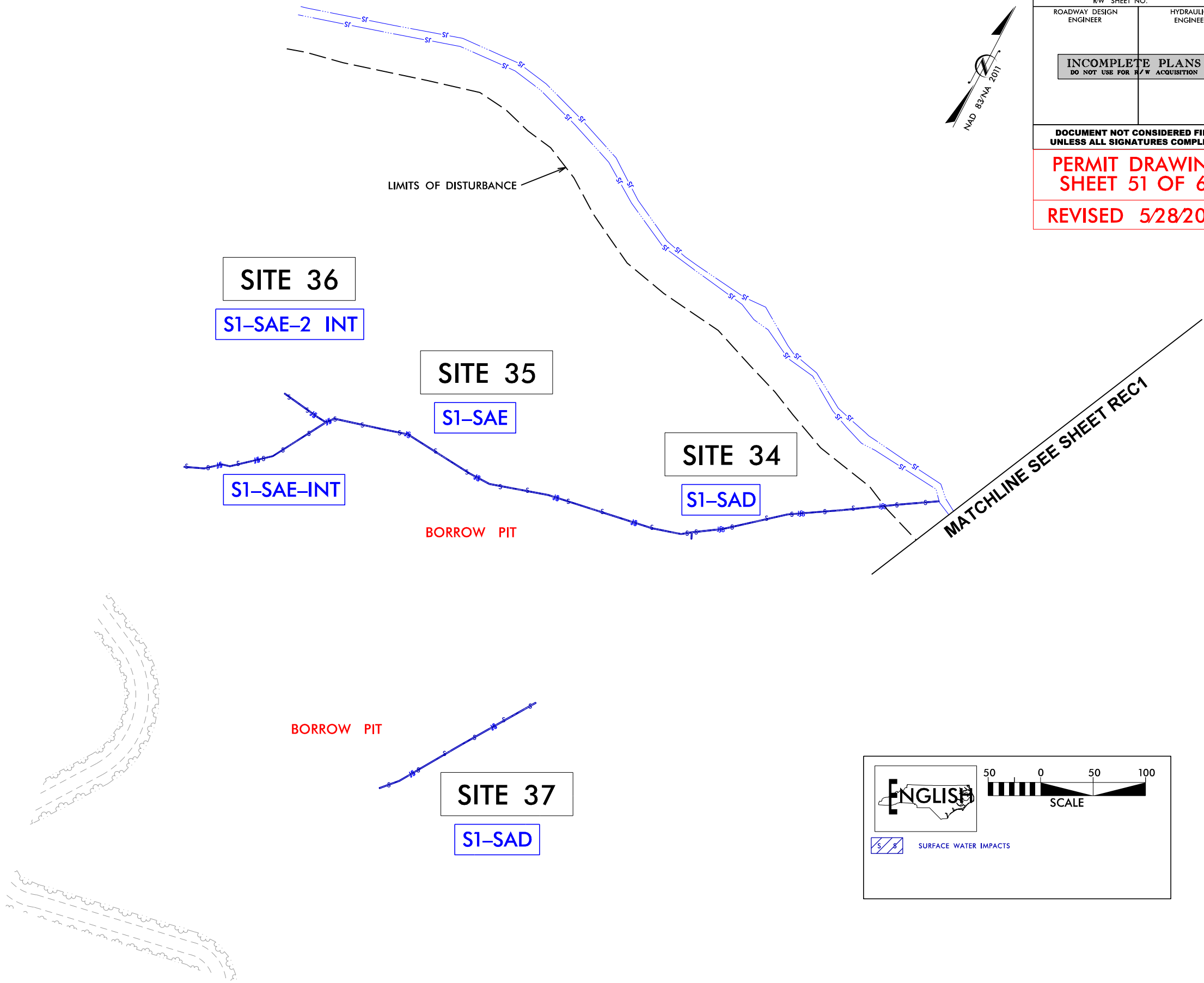


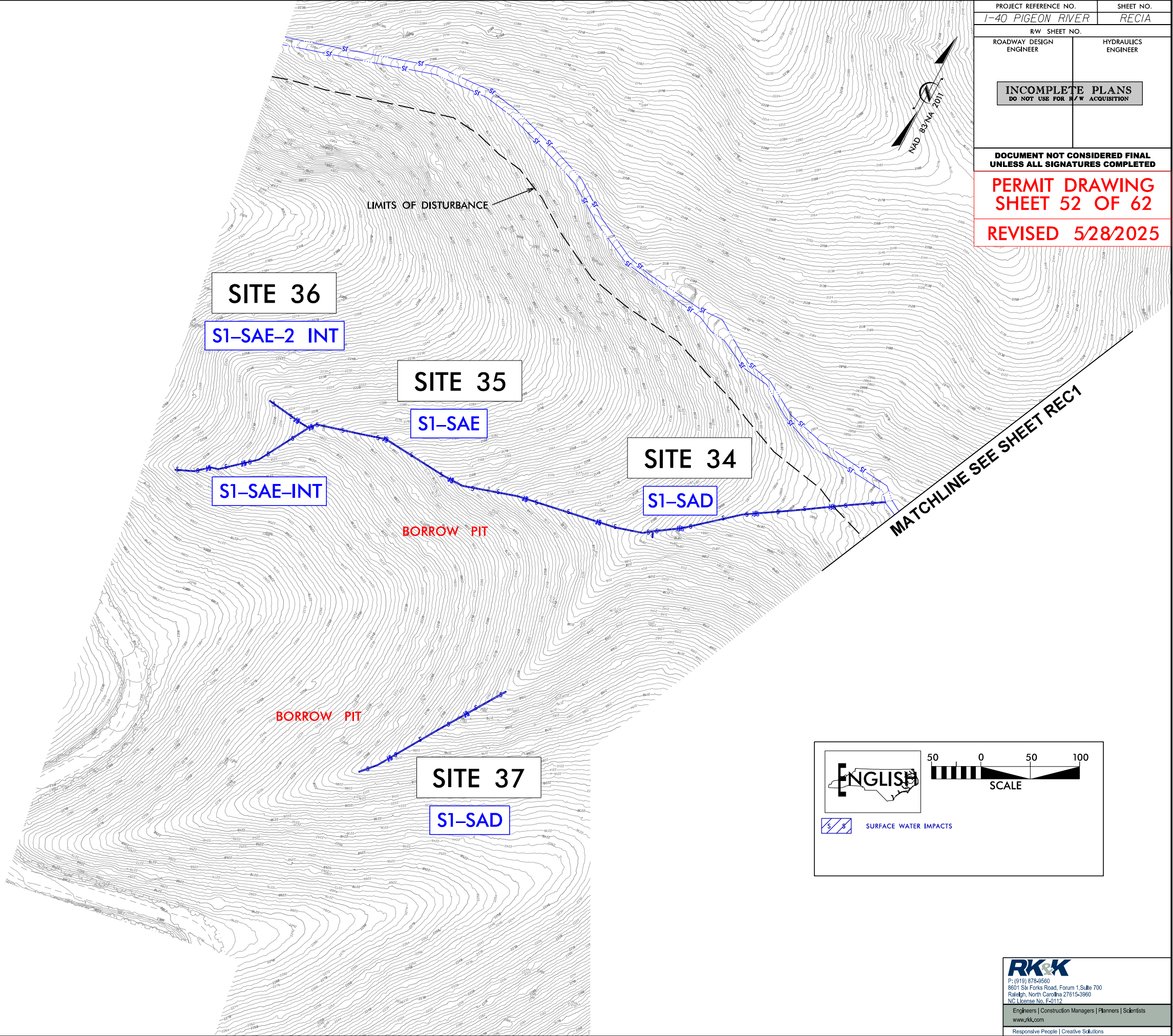
PROJECT REFERENCE NO.		SHEET NO.	
1-40 PIGEON RIVER		REC1A	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 51 OF 62

REVISED 5/28/2025







**DRAWING IS FOR REFERENCE ONLY
SEE DRAWINGS 46-52 FOR IMPACTS**



PROJECT REFERENCE NO.		SHEET NO.	
I-40 PIGEON RIVER			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
PERMIT DRAWING SHEET 54 OF 62			
REVISED 5/28/2025			

THIS SHEET INTENTIONALLY LEFT BLANK

PROJECT REFERENCE NO.		SHEET NO.	
I-40 PIGEON RIVER			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
PERMIT DRAWING SHEET 55 OF 62			
REVISED 5/28/2025			

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THIS SHEET INTENTIONALLY LEFT BLANK

PROJECT REFERENCE NO.		SHEET NO.	
I-40 PIGEON RIVER			
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
PERMIT DRAWING SHEET 56 OF 62			
REVISED 5/28/2025			

WETLAND AND SURACE WATER IMPACTS SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 4)	-L- Sta. 10+00 to 21+00	PR; Causeway						0.067	0.357	542	458	
1 (PSH 4)	-L- Sta. 10+00 to 21+00	PR; Non-Causeway							2.773			
1 (PSH 5)	-L- Sta. 21+00 to 35+00	PR; Causeway						0.125	1.587	916	430	
1 (PSH 5)	-L- Sta. 21+00 to 35+00	PR; Non-Causeway							2.183			
1 (PSH 6)	-L- Sta. 35+00 to 49+00	PR; Causeway						0.064	1.554	856	578	
1 (PSH 6)	-L- Sta. 35+00 to 49+00	PR; Non-Causeway							2.286			
2	-L- Sta. 35+24 RT	SAA; Non-Causeway							0.001		11	
3	-L- Sta. 39+82 LT	Painter Branch; 84" CMP							0.004		51	
4	-L- Sta. 39+83 RT	TA; 84" CMP; Wall						0.006				
5	-L- Sta. 45+79 RT	TAA; Non-Causeway							0.001			
1 (PSH 7)	-L- Sta. 49+00 to 63+00	PR; Causeway; Wall						0.509	1.064	854	551	
1 (PSH 7)	-L- Sta. 49+00 to 63+00	PR; Non-Causeway							2.367			
6	-L- Sta. 51+19 LT	Snowbird Creek; (2) 84" CMP							0.007		50	
7	-L- Sta. 51+11 RT	TB; (2) 84" CMP						0.006				
SHEET TOTALS:			0.000	0.000	0.000	0.000	0.000	0.777	14.184	3168	2129	0
NOTES: PR: Pigeon River REVISED MAY 28, 2025 NC DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DECEMBER 17, 2024 HAYWOOD COUNTY I-40 PIGEON RIVER												
Revised 2018 Feb								SHEET	57	OF	62	

WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 8)	-L- Sta. 63+00 to 76+50	PR; Causeway; Wall						0.301	0.556	639	544	
1 (PSH 8)	-L- Sta. 63+00 to 76+50	PR; Non-Causeway							2.633			
1 (PSH 9)	-L- Sta. 76+50 to 91+00	PR; Causeway; Wall						0.531	1.061	1050	646	
1 (PSH 9)	-L- Sta. 76+50 to 91+00	PR; Non-Causeway							3.725			
1 (PSH 10)	-L- Sta. 91+00 to 103+00	PR; Causeway; Wall						0.068	1.665	444	717	
1 (PSH 10)	-L- Sta. 91+00 to 103+00	PR; Non-Causeway							2.156			
8	-L- Sta. 91+32 LT	SC; 81"x59" CMAP							0.002		50	
9	-L- Sta. 91+19 RT	TC; 81"x59" CMAP; Wall						0.013				
10	-L- Sta. 99+12 LT	TD; 24" CMP							0.003			
1 (PSH 11)	-L- Sta. 103+00 to 117+00	PR; Causeway; Wall						0.434	1.860	891	481	
1 (PSH 11)	-L- Sta. 103+00 to 117+00	PR, Non-Causeway							1.915			
11	-L- 104+00 LT	TE; 42" CMP							0.002			
1 (PSH 12)	-L- Sta. 117+00 to 131+00	PR; Causeway; Wall						0.519	0.449	838	653	
1 (PSH 12)	-L- Sta. 117+00 to 131+00	PR; Non-Causeway							2.030			
SHEET TOTALS:			0.000	0.000	0.000	0.000	0.000	1.866	18.057	3862	3091	0

NOTES:
PR: Pigeon River

REVISED MAY 28, 2025

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DECEMBER 17, 2024
HAYWOOD COUNTY
I-40 PIGEON RIVER

WETLAND AND SURFACE WATER IMPACTS SUMMARY												
Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1 (PSH 13)	-L- Sta. 131+00 to 145+00	PR; Causeway; Wall						0.733	2.113	1322	97	
1 (PSH 13)	-L- Sta. 131+00 to 145+00	PR; Non-Causeway							2.772			
12	-L- Sta. 132+85 RT	Mount Sterling Creek; Non-Causeway							0.008		13	
13	-L- Sta. 138+88	Runyon Creek; 112"x75" CMAP; Wall						0.005	0.005	55	49	
1 (PSH 14)	-L- Sta. 145+00 to 158+50	PR; Causeway; Wall						0.038	0.714	275	1229	
1 (PSH 14)	-L- Sta. 145+00 to 158+50	PR; Non-Causeway							3.085			
14	-L- 151+56	Counterfeit Branch; 84"x61" CMAP; Wall						0.007	0.005	79	50	
1 (PSH 15)	-L- Sta. 158+50 to 172+00	PR; Causeway; Wall						0.013	1.310	126	1419	
1 (PSH 15)	-L- Sta. 158+50 to 172+00	PR; Non-Causeway							2.220			
1 (PSH 16)	-L- Sta. 172+00 to 186+00	PR; Causeway; Wall						0.195	1.180	418	1044	
1 (PSH 16)	-L- Sta. 172+00 to 186+00	PR; Non-Causeway							2.461			
15	-L- Sta. 173+96 RT	SAC; Non-Causeway							0.001		10	
1 (PSH 17)	-L- Sta. 186+00 to 200+00	PR; Causeway; Wall						0.113	1.278	193	1176	
1 (PSH 17)	-L- Sta. 186+00 to 200+00	PR; Non-Causeway							2.277			
16	-L- 191+91 RT	Puncheon Camp Branch; Non-Causeway							0.001		10	
SHEET TOTALS:			0.000	0.000	0.000	0.000	0.000	1.104	19.430	2468	5097	0
NOTES: PR: Pigeon River									REVISED MAY 28, 2025			
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WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
17	-L- Sta. 195+45 LT	TF; 18" CMP							0.002			
1 (PSH 18)	-L- Sta. 200+00 to -L_EB- 11+00	PR; Causeway; Wall						0.853	1.668	723	491	
1 (PSH 18)	-L- Sta. 200+00 to -L_EB- 11+00	PR; Non-Causeway							1.572			
18	-L- Sta. 208+73	SG; 72"x44" CMAP; Wall						0.007	0.013	30	55	
1 (PSH 19)	-L_EB- Sta. 11+00 to 21+57.61	PR; Causeway; Wall						0.271	0.581	448	756	
1 (PSH 19)	-L_EB- Sta. 11+00 to 21+57.61	PR; Non-Causeway							2.088			
19	-L_EB- Sta. 19+61	SH; 72" CMP; Wall						0.006	0.005	62	50	
1 (PSH 20)	-L_EB- Sta. 32+35.77 to 33+50	PR; Causeway; Wall						0.242	1.043	484	1648	
1 (PSH 20)	-L_EB- Sta. 32+35.77 to 33+50	PR; Non-Causeway							4.157			
20	-Y1- 20+69 RT	SAE; Non-Causeway							0.002		11	
21	-Y1- 24+57 RT	SAF; Non-Causeway							0.001		10	
1 (PSH 21)	-L_EB- Sta. 33+50 to -L1- Sta. 13+50	PR; Causeway; Wall						0.040	0.821	208	1142	
1 (PSH 21)	-L_EB- Sta. 33+50 to -L1- Sta. 13+50	PR; Non-Causeway							2.484			
1 (PSH 22)	-L1- Sta. 13+50 to 27+00	PR; Causeway; Wall						0.081	1.047	353	849	
1 (PSH 22)	-L1- Sta. 13+50 to 27+00	PR; Non-Causeway							2.523			
SHEET TOTALS:			0.000	0.000	0.000	0.000	0.000	1.500	18.007	2308	5012	0

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WETLAND AND SURACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
32	Borrow Site #1	S1-SAA, S1-WA2; Temp. Access Road	0.007						0.326		960	
33	Borrow Site #1	SAB; Temp. Access Road							0.021		121	
34	Borrow Site #1	S1-SAD; Borrow Pit						0.006		244		
35	Borrow Site #1	S1-SAE/S1-SAE-INT; Borrow Pit						0.012		517		
36	Borrow Site #1	S1-SAE12 INT; Borrow Pit						0.001		48		
37	Borrow Site #1	S1-SAD; Borrow Pit						0.004		170		
SHEET TOTALS:			0.007	0.000	0.000	0.000	0.000	0.023	0.347	979	1081	0
PROJECT TOTALS:			0.045	0.000	0.000	0.000	0.000	5.326	74.475	13095	18192	0

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