

R-2576 Mid-Currituck Bridge

Attachment 2:

Wetland and Surface Waters Impacts Permit Drawings

09.08/99

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols
See Sheet 1C For Survey Control Sheet

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**CURRITUCK &
DARE COUNTIES**

LOCATION: MID-CURRITUCK BRIDGE FROM US 158 SOUTH OF COINJOCK
TO NC 12 SOUTH OF COROLLA

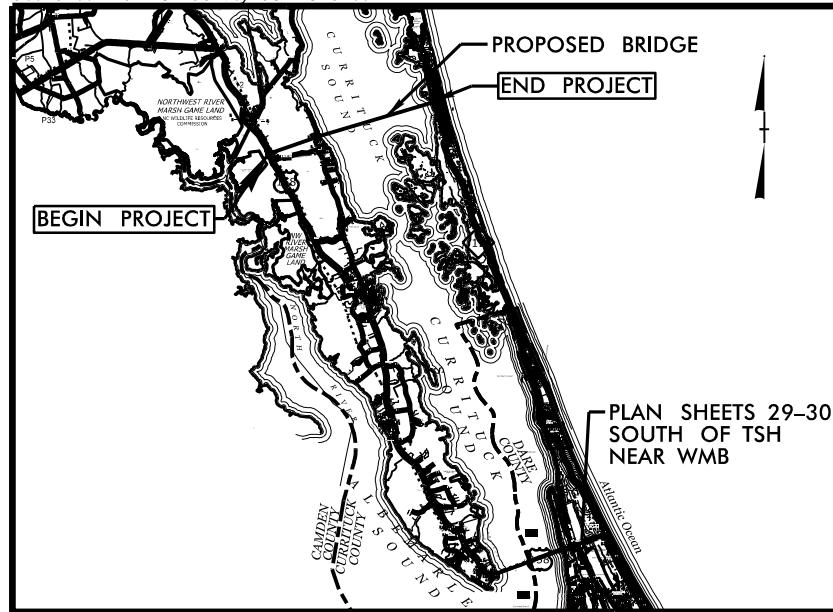
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND
STRUCTURES

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2576	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34470.1.TA1	BRSTP-000(494)	P.E.	

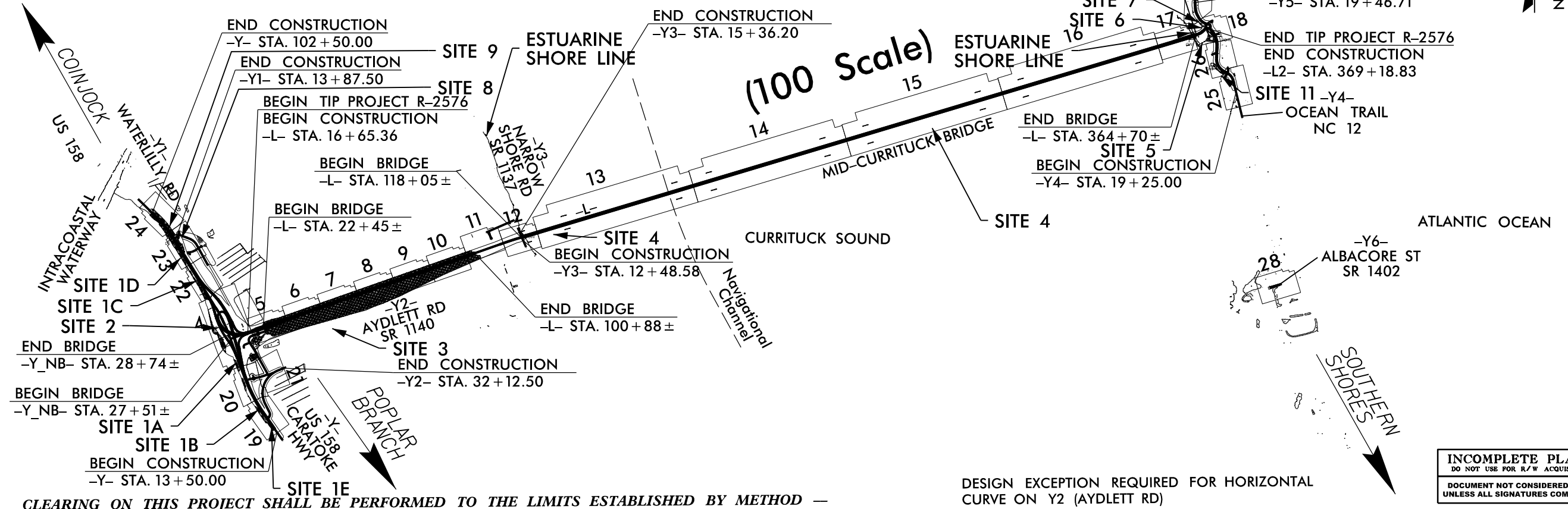
PERMIT DRAWING
SHEET 1 OF 63

TIP PROJECT: R-2576



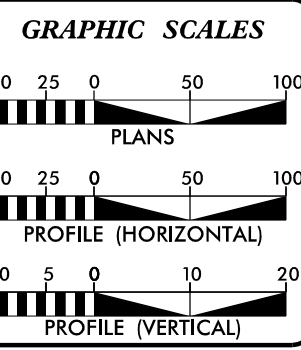
VICINITY MAP

75% PLANS



NAD 83 /2011

CONTRACT:



DESIGN DATA

ADT 2020 = 11,800
ADT 2040 = 18,000
K = 9 %
D = 60 %
T = 7 % *
V = 60 MPH
* (TTST=2) + (DUAL=1)
+ (RV=4)
FUNC CLASS =
ARTERIAL STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2576	= 0.520 Miles
LENGTH STRUCTURES	= 6.157 Miles
TOTAL LENGTH TIP PROJECT R-2576	= 6.677 Miles

PROJECT LEVEL TRAFFIC FORECAST (JUNE 2016) (SUMMER WEEKEND)

Prepared in the Office of:

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

NC License Number F-2159

2018 STANDARD SPECIFICATIONS

BRIAN K. EASON, PE
PROJECT ENGINEER

CHRISTINA L. YOKEY, PE
PROJECT DESIGN ENGINEER

DENNIS JERNIGAN, PE
NCDOT /NCTA

RIGHT OF WAY DATE: FY 2024

LETTING DATE: FY 2024

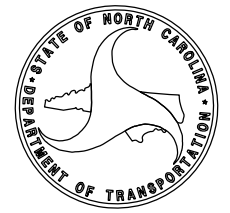
HYDRAULICS ENGINEER

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



10/22/2023
USER:KAITORF
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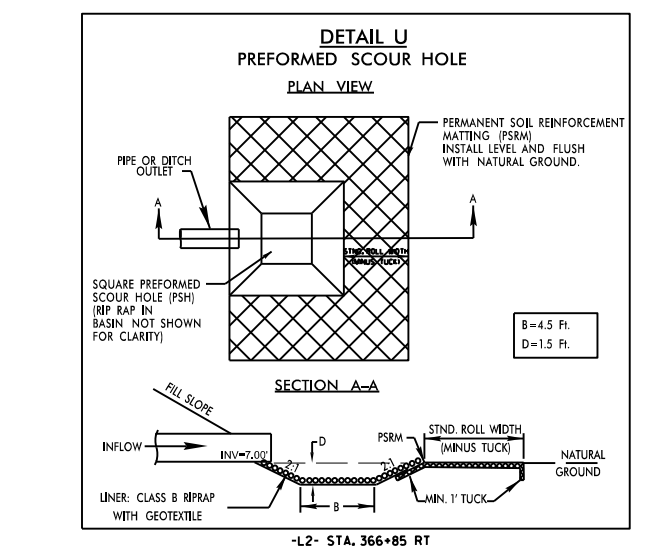
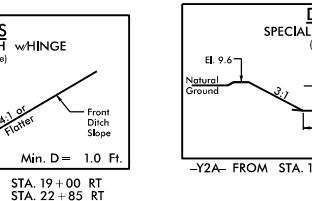
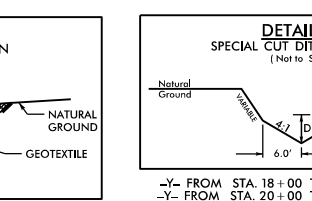
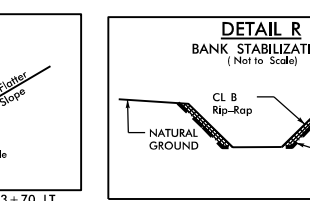
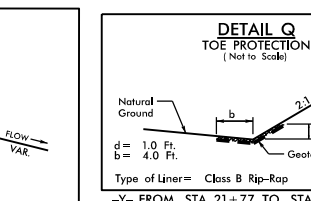
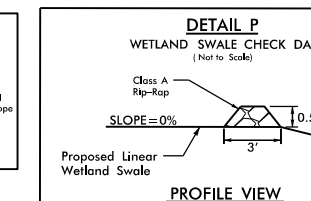
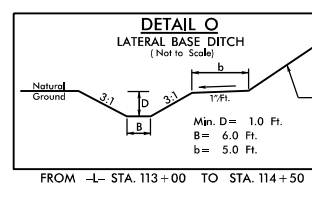
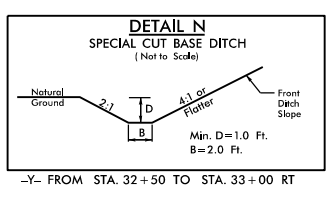
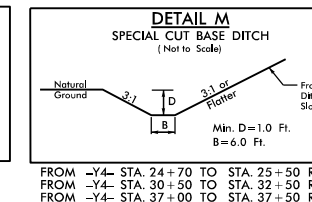
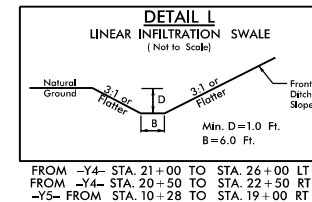
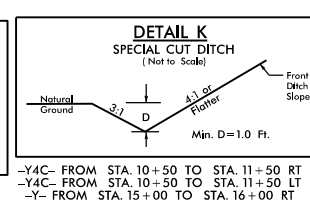
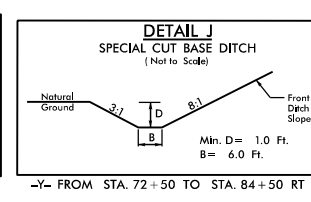
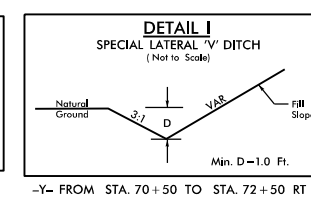
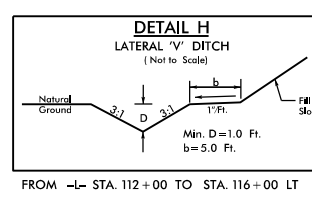
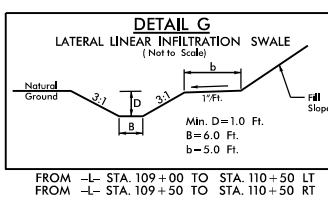
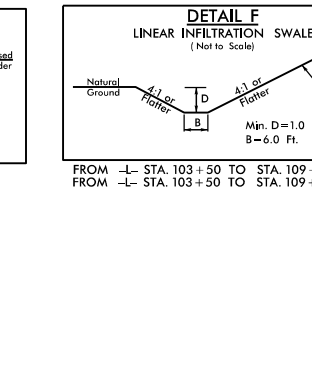
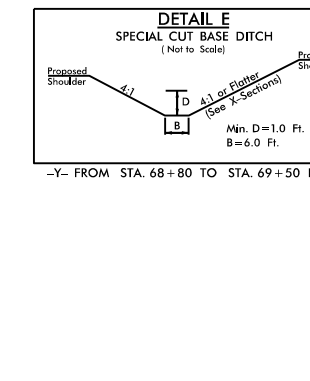
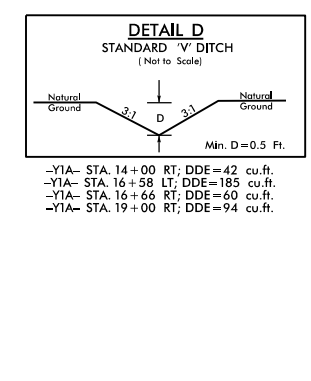
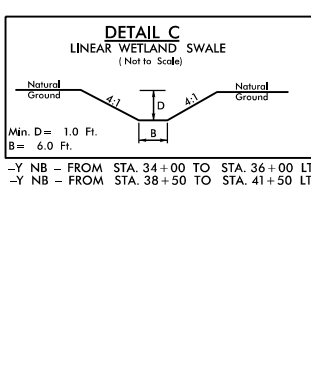
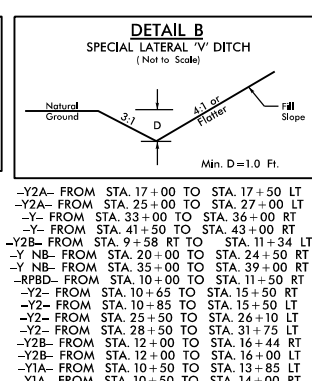
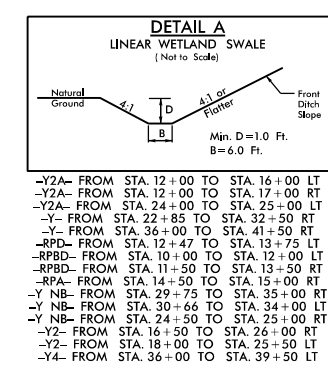
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NC License
 Number F-0159
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

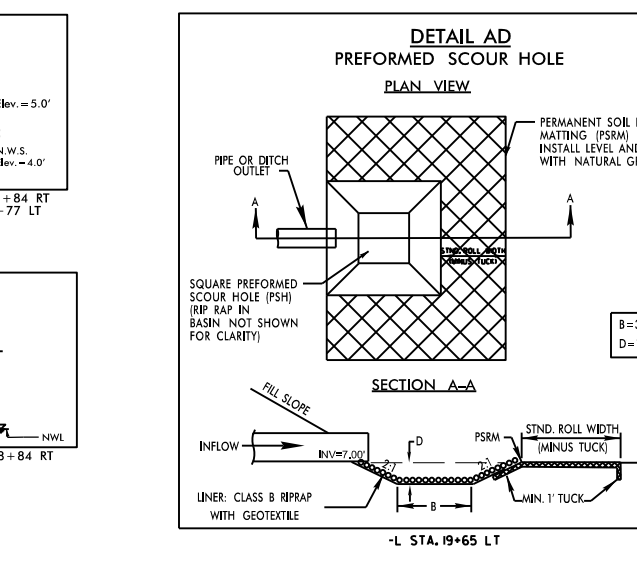
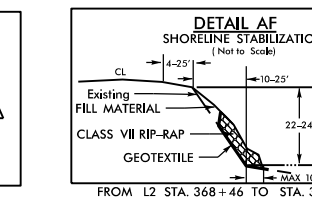
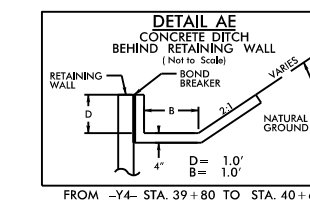
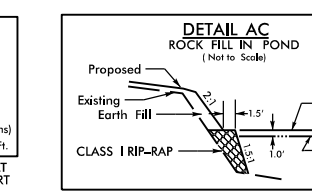
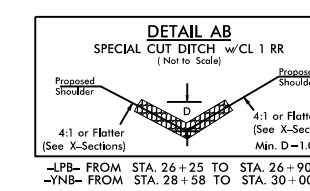
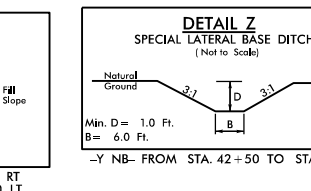
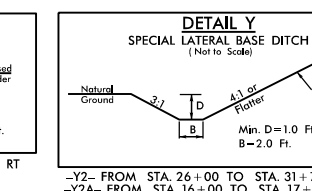
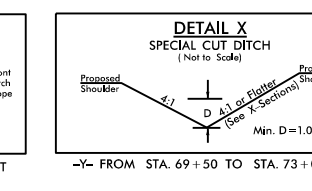
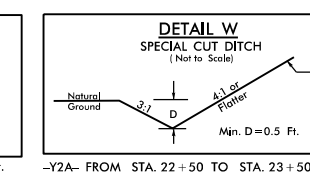
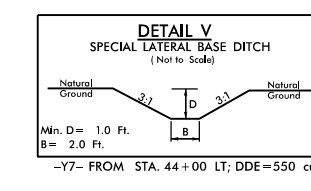
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576	SHEET NO. 2D-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PERMIT DRAWING
SHEET 2 OF 63

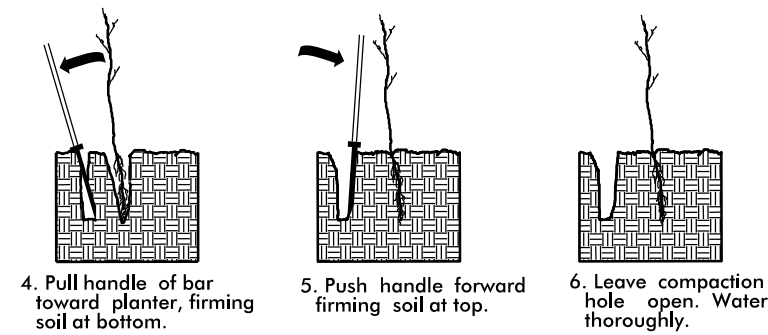
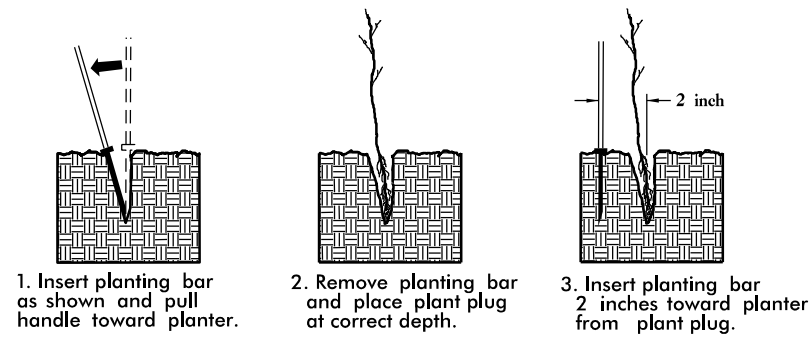


- Y2A- STA. 12+50 LT
- Y2A- STA. 13+00 RT
- Y2A- STA. 15+00 LT
- Y2A- STA. 15+00 RT
- Y2A- STA. 16+00 LT
- Y2A- STA. 16+50 RT
- Y2- STA. 18+50 RT
- Y2- STA. 22+00 LT
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- Y2- STA. 23+00 LT
- Y2- STA. 24+50 RT
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- Y2- STA. 25+50 RT
- Y- STA. 23+40 RT
- Y- STA. 28+75 RT
- Y- STA. 32+50 RT
- Y- STA. 34+00 RT
- Y- STA. 41+00 RT
- Y NB- STA. 31+50 LT
- Y NB- STA. 32+00 RT
- Y NB- STA. 32+50 LT
- Y NB- STA. 33+00 RT
- Y NB- STA. 40+00 LT
- Y NB- STA. 40+50 LT
- Y4- STA. 21+00 RT
- Y4- STA. 37+45 LT
- Y4- STA. 38+00 LT
- Y5- STA. 10+70 RT
- Y5- STA. 11+50 RT
- Y5- STA. 12+50 RT
- Y5- STA. 13+50 RT
- Y5- STA. 14+50 RT
- Y5R- STA. 12+70 RT



PLANTING DETAILS

DIBBLE PLANTING METHOD USING THE KBC PLANTING BAR



PLANTING NOTES:

PLANTING BAG
During planting, plant plugs shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.



KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



WET SWALE GRASS PLANTING

☐ WETLAND GRASS SPECIES SHALL BE PLANTED 18" ON CENTER, APPROXIMATELY 19,360 PLANTS PER ACRE.

NOTE: SEE WET SWALE GRASS PLANTING DETAIL

WET SWALE GRASS PLANTING

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

ZONE 1

50% SAGITTARIA LANCIFOLIA	BULL TONGUE	1.5" X 5" DEEP PLUG
50% SCHOENOPLECTUS TABERNAEMONTANI	SOFTSTEM BULLRUSH	1.5" X 5" DEEP PLUG

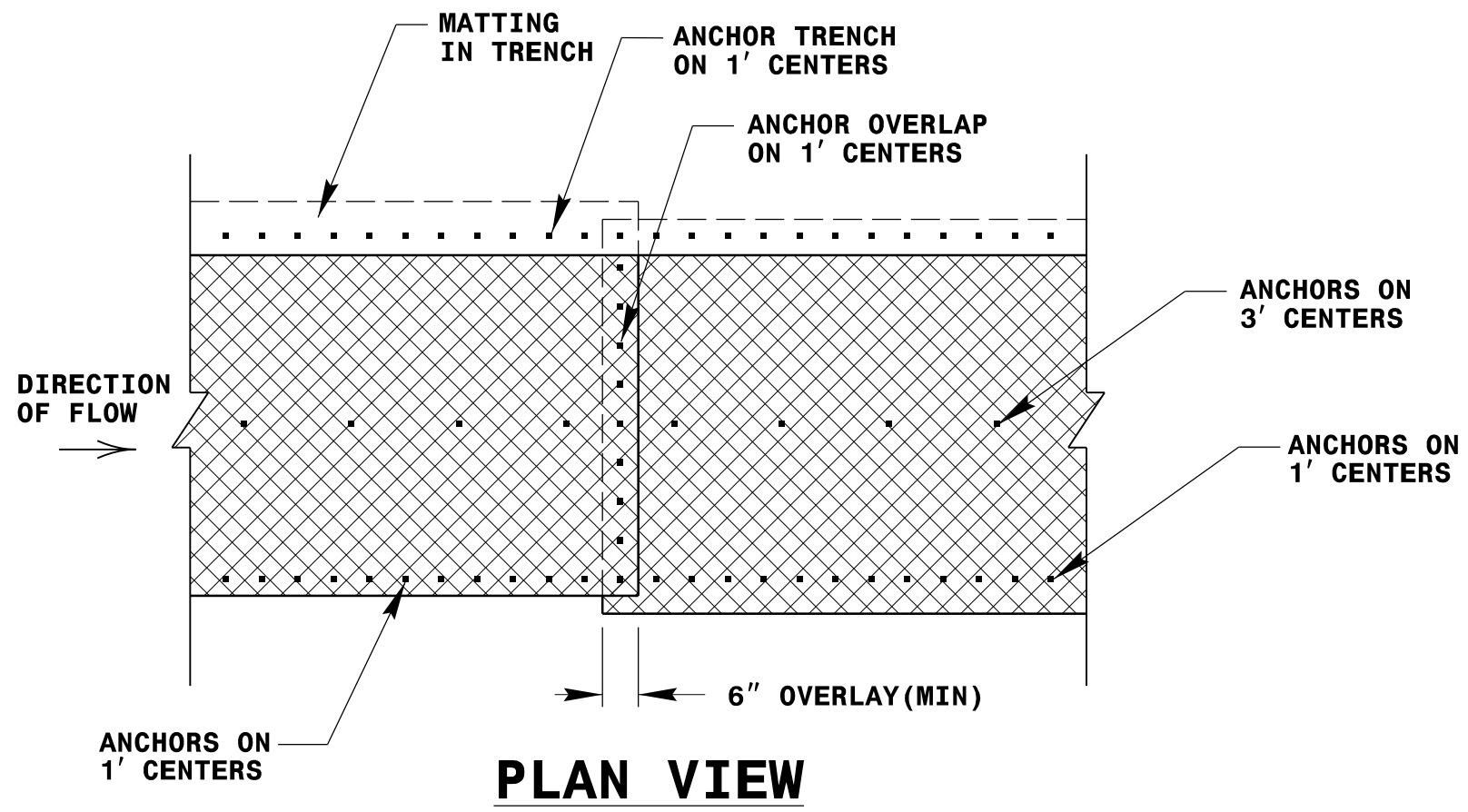
ZONE 2

50% CAREX VULPINOIDA	FOX SEDGE	1.5" X 5" DEEP PLUG
50% JUNCUS EFFUSUS	SOFT RUSH	1.5" X 5" DEEP PLUG

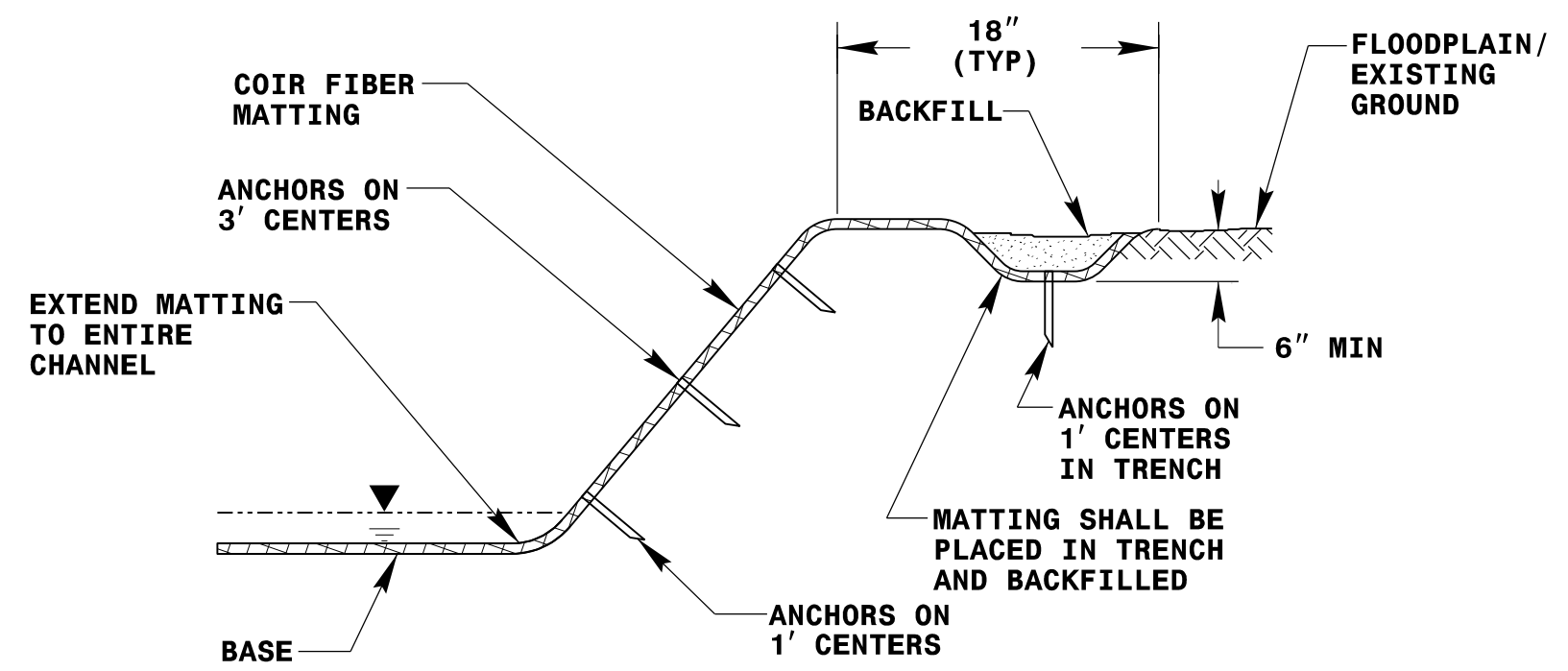
ZONE 3

SEE PROJECT SPECIAL PROVISION FOR SEED MIX

WETLAND GRASS PLANTING DETAIL SHEET 1 OF 3



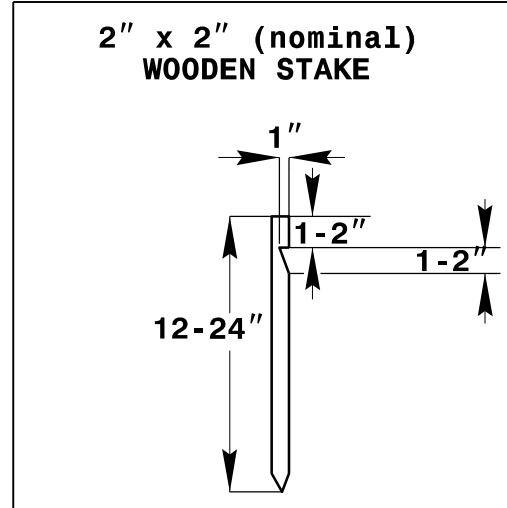
PLAN VIEW



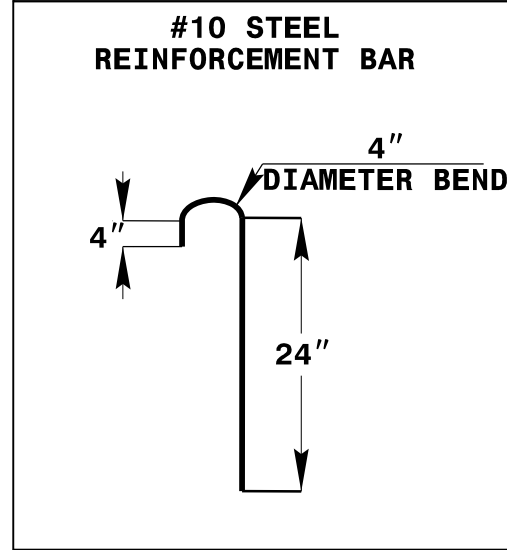
TYPICAL CROSS SECTION

COIR FIBER MATTING DETAIL

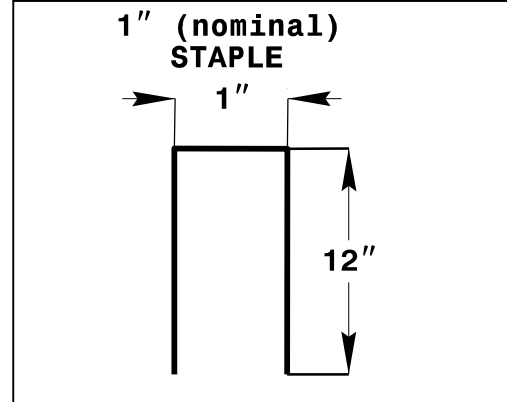
NOT TO SCALE



2" x 2" (nominal) WOODEN STAKE



#10 STEEL REINFORCEMENT BAR



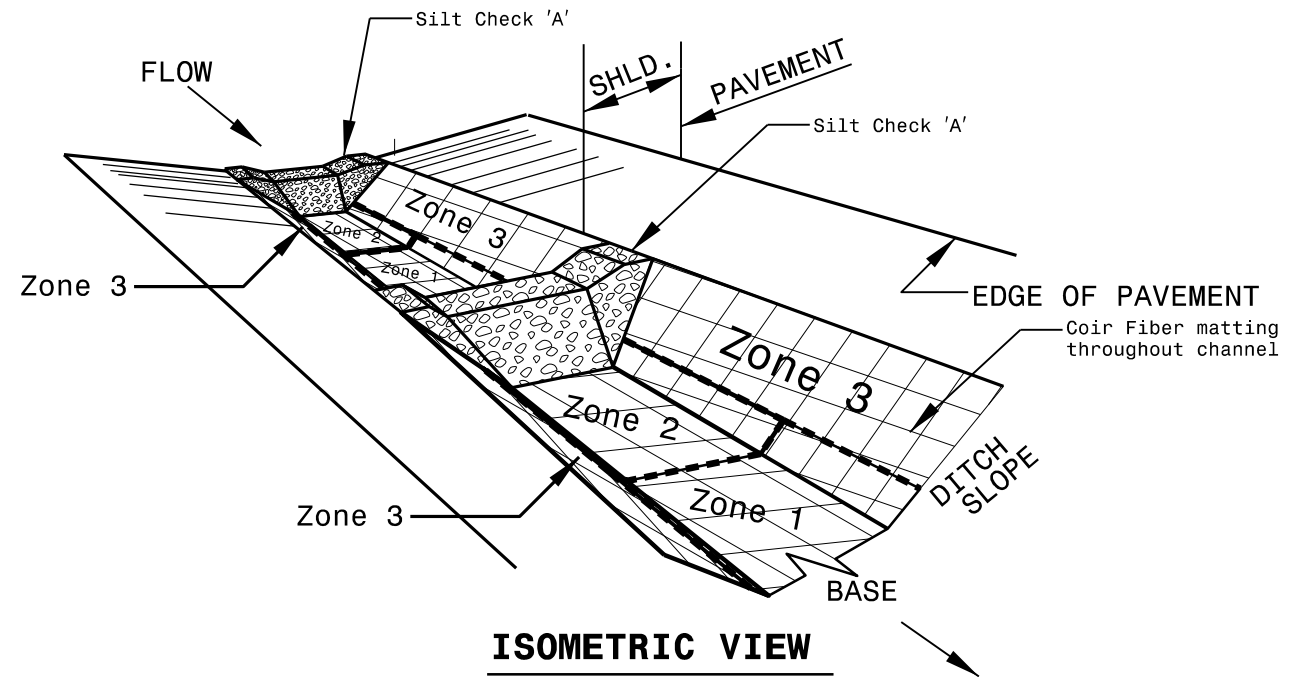
1" (nominal) STAPLE

ANCHOR OPTIONS

PROJECT REFERENCE NO. <i>R-2576</i>	SHEET NO. <i>2D-4</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

WET SWALE GRASS PLANTING DETAIL

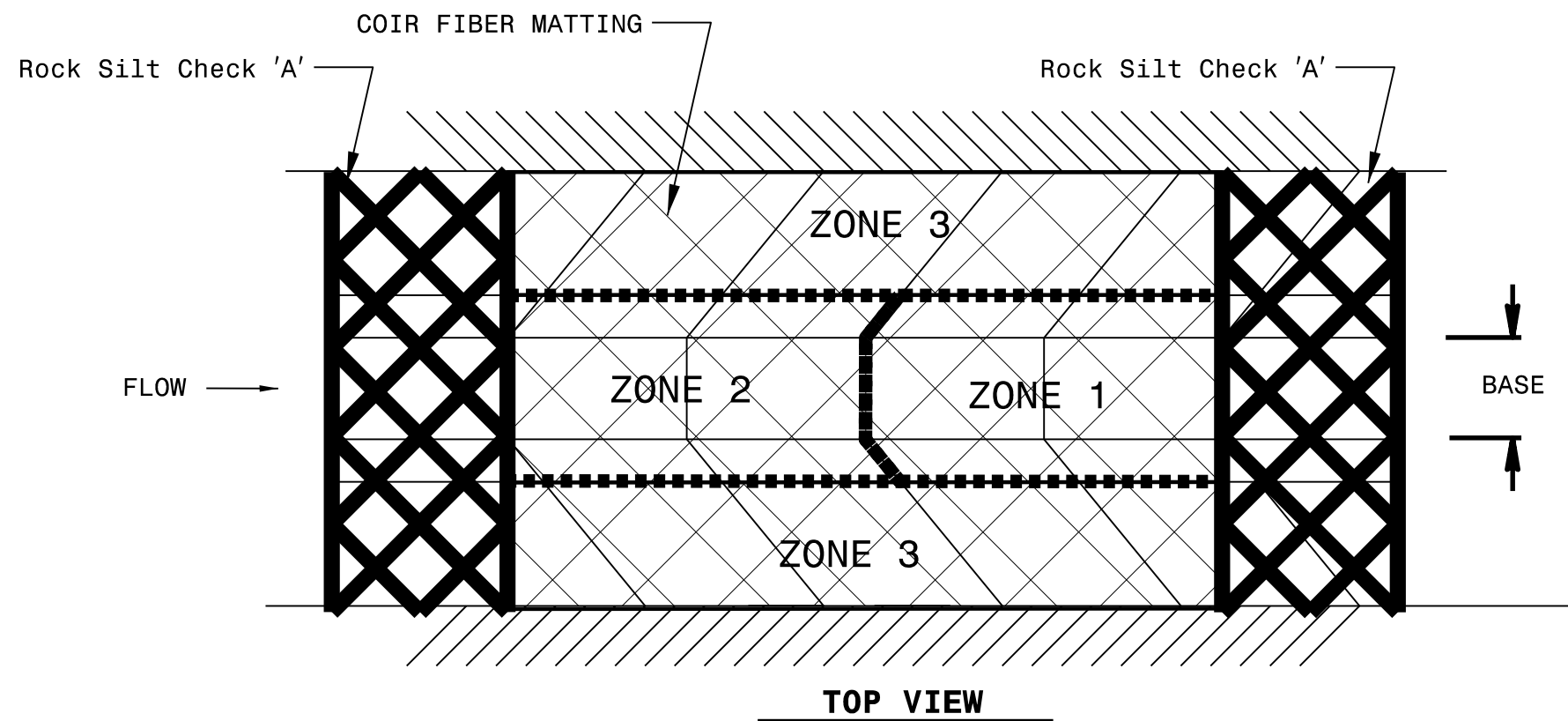
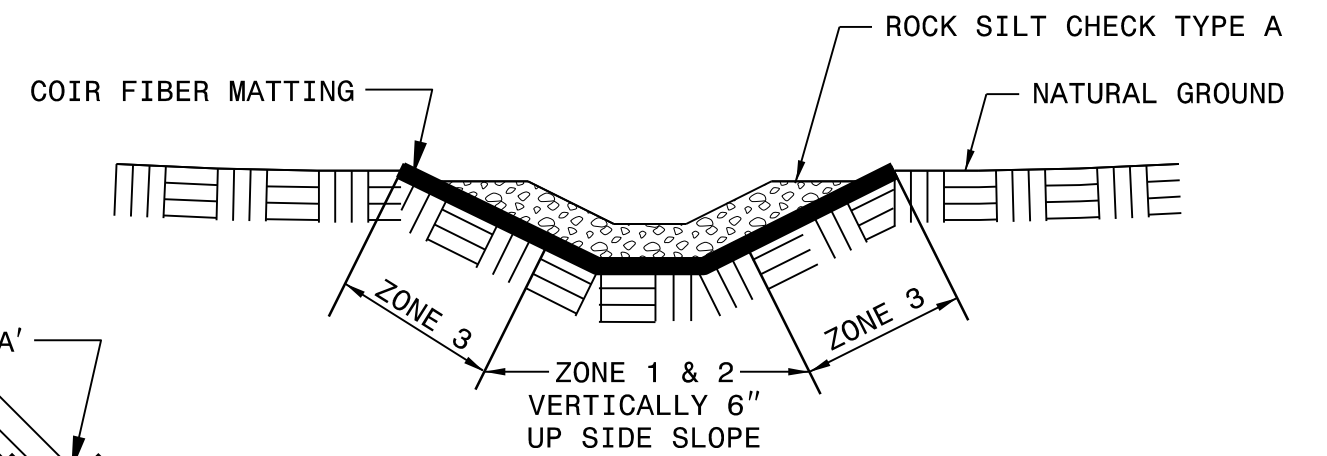
PERMIT DRAWING
SHEET 5 OF 63



NOTES:

SEE DETAIL "XX" FOR SWALE DIMENSIONS.

INSTALL COIR MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS AND DETAIL 2 OF 3.



NO.	DATE	REVISIONS

LOCHNER
 H. W. LOCHNER, INC.
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 271-7711

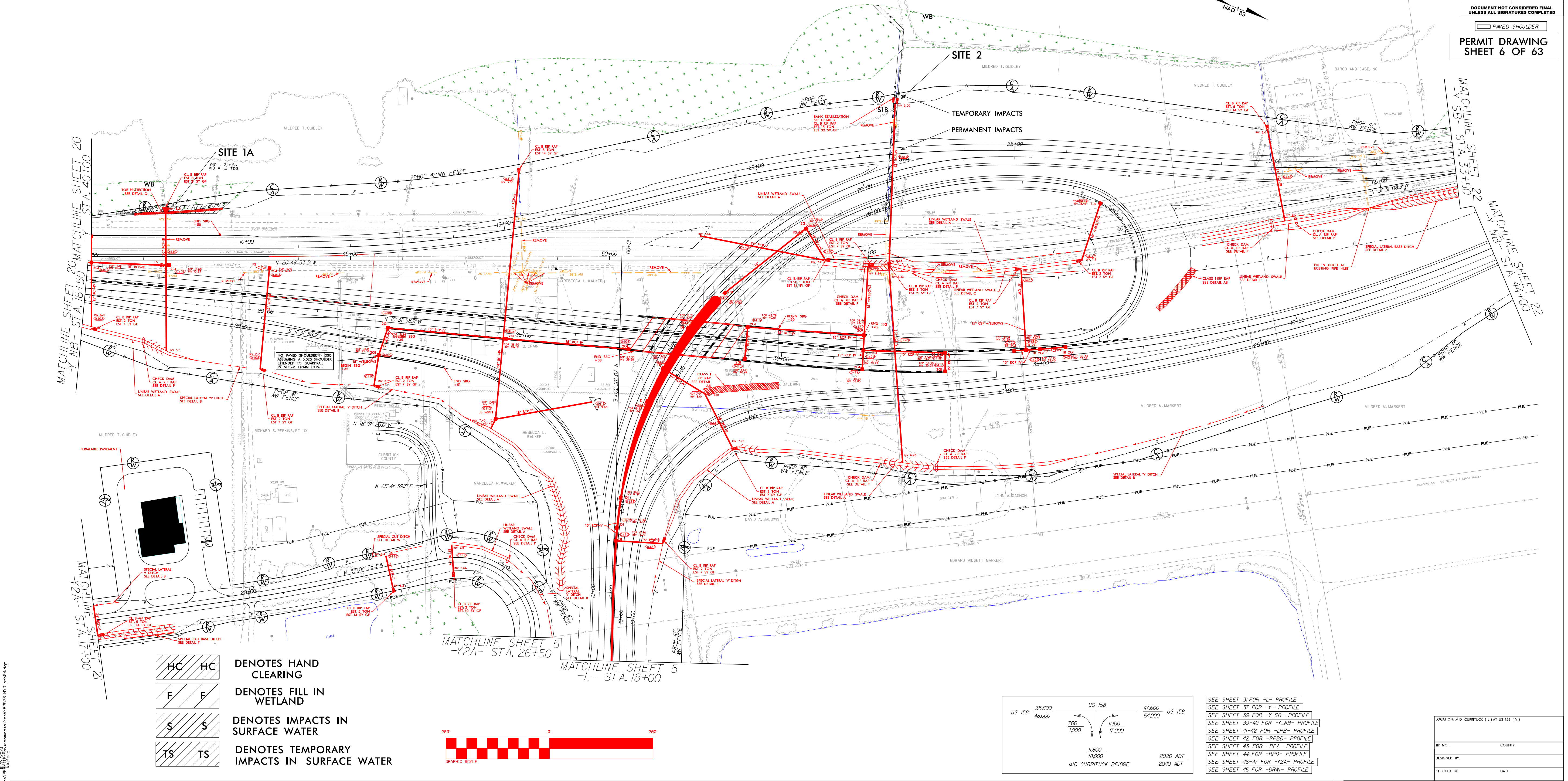
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 SHEET NO. 2
 ROADWAY DESIGN ENGINEER
 FROMAULKS ENGINEER

INCOMPLETE PLANS
 DO NOT USE FOR A CONSTRUCTION

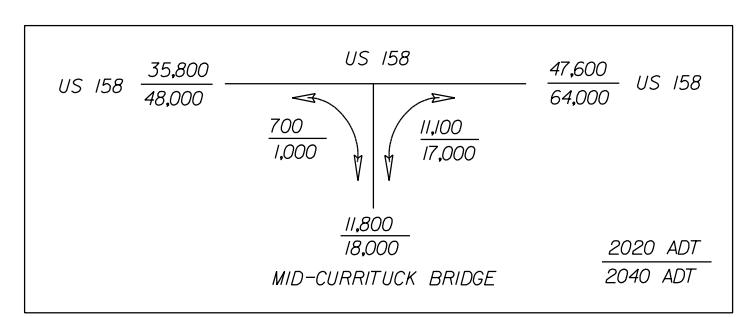
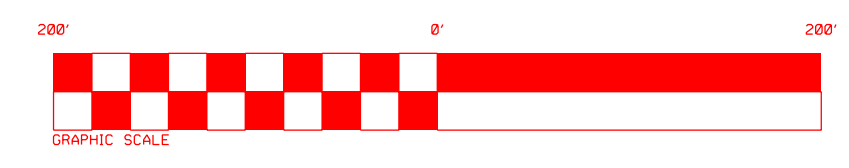
DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER

PERMIT DRAWING
 SHEET 6 OF 63



- HC HC DENOTES HAND CLEARING
- F F DENOTES FILL IN WETLAND
- S S DENOTES IMPACTS IN SURFACE WATER
- TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER



SEE SHEET 31 FOR -L- PROFILE
 SEE SHEET 37 FOR -Y- PROFILE
 SEE SHEET 39 FOR -Y-SB- PROFILE
 SEE SHEET 39-40 FOR -Y-NB- PROFILE
 SEE SHEET 41-42 FOR -LPB- PROFILE
 SEE SHEET 42 FOR -RPB- PROFILE
 SEE SHEET 43 FOR -RPA- PROFILE
 SEE SHEET 44 FOR -RPO- PROFILE
 SEE SHEET 46-47 FOR -12A- PROFILE
 SEE SHEET 46 FOR -DRW- PROFILE

LOCATION: MD, CURRITUCK I-41 AT US 158 E-1	
TP NO.:	COUNTY:
DESIGNED BY:	CHECKED BY:
CHECKED BY:	DATE:

10/15/2024 10:58:15 AM 10/15/2024 10:58:15 AM 10/15/2024 10:58:15 AM

NO.	DATE	REVISIONS

LOCHNER
 H. W. LOCHNER, INC.
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 271-7711

PROJECT REFERENCE NO. P-2576
 SHEET NO. 2
 ROADWAY DESIGN ENGINEER
 TRANSPORTATION PLANNING/DESIGN/CONSTRUCTION DESIGN CONSULTING ENGINEER/CONSTRUCTION SUPERVISOR

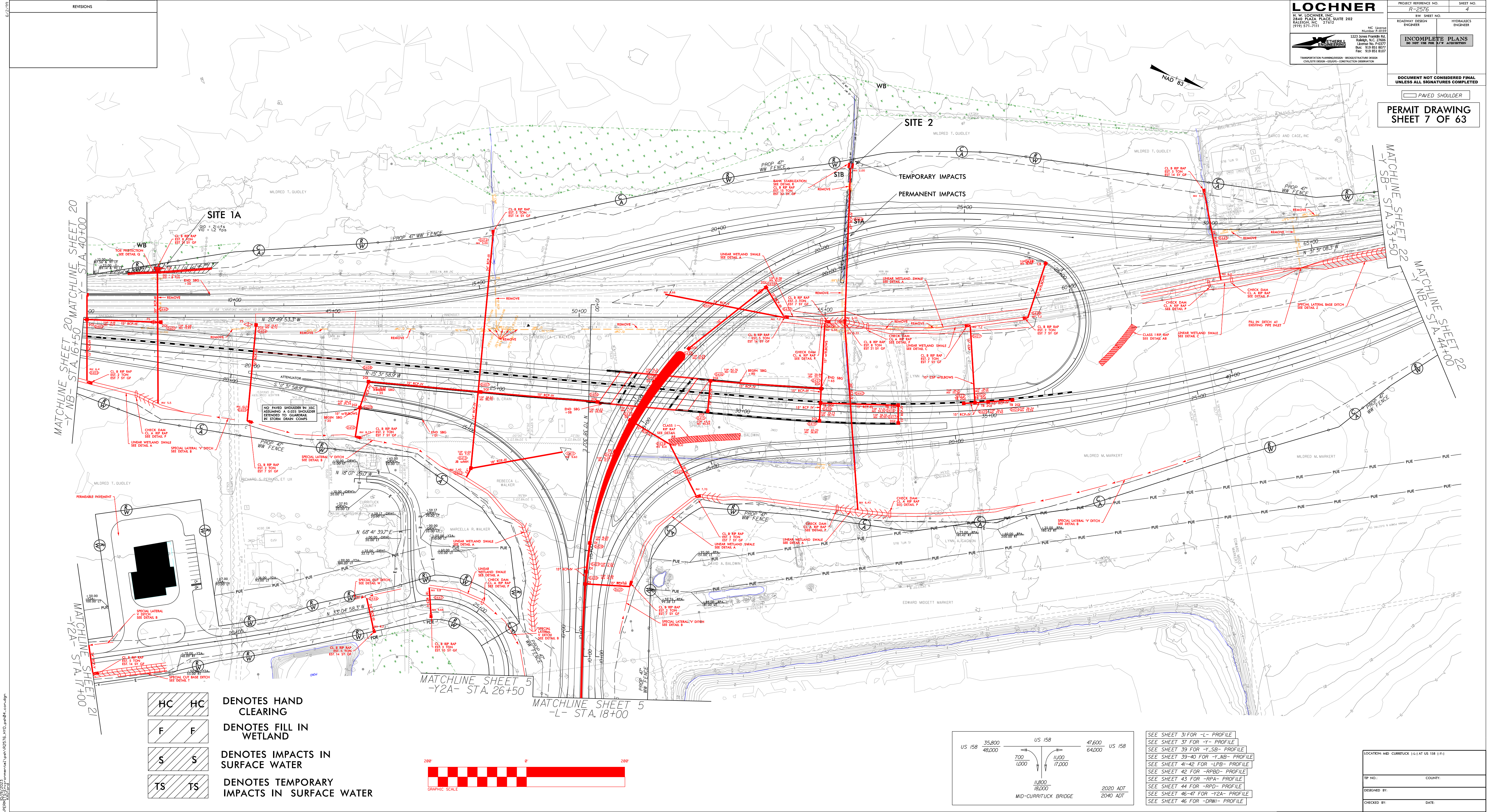
1323 JOHN FOWLER BL. RALEIGH, NC 27605
 LICENSE NO. 50277
 BUREAU: 919.851.8077
 FAX: 919.851.8577

INCOMPLETE PLANS
 DO NOT USE FOR A CONTRACT

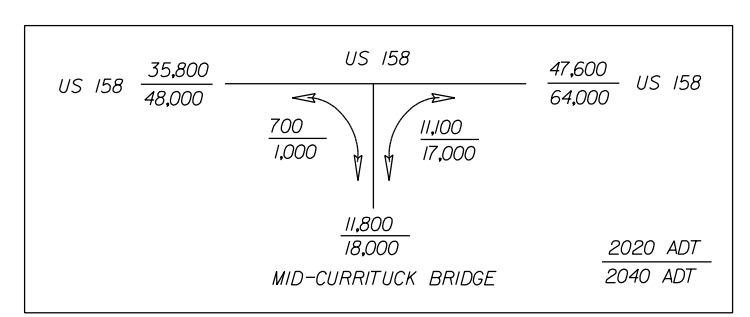
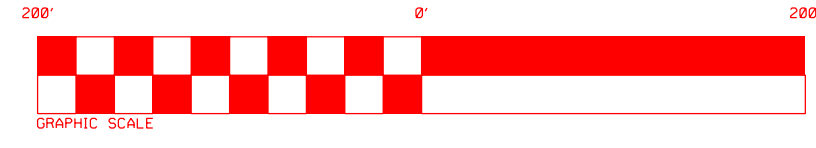
DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER

PERMIT DRAWING SHEET 7 OF 63



- HC HC DENOTES HAND CLEARING
- F F DENOTES FILL IN WETLAND
- S S DENOTES IMPACTS IN SURFACE WATER
- TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

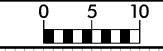


SEE SHEET 31 FOR -L- PROFILE
 SEE SHEET 37 FOR -Y- PROFILE
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 SEE SHEET 41-42 FOR -LPB- PROFILE
 SEE SHEET 42 FOR -RPB- PROFILE
 SEE SHEET 43 FOR -RPA- PROFILE
 SEE SHEET 44 FOR -RPO- PROFILE
 SEE SHEET 46-47 FOR -12A- PROFILE
 SEE SHEET 46 FOR -DRW1- PROFILE

LOCATION: MD, CURRITUCK I-41 AT US 158 E-V-1	
TP NO.:	COUNTY:
DESIGNED BY:	CHECKED BY:
CHECKED BY:	DATE:

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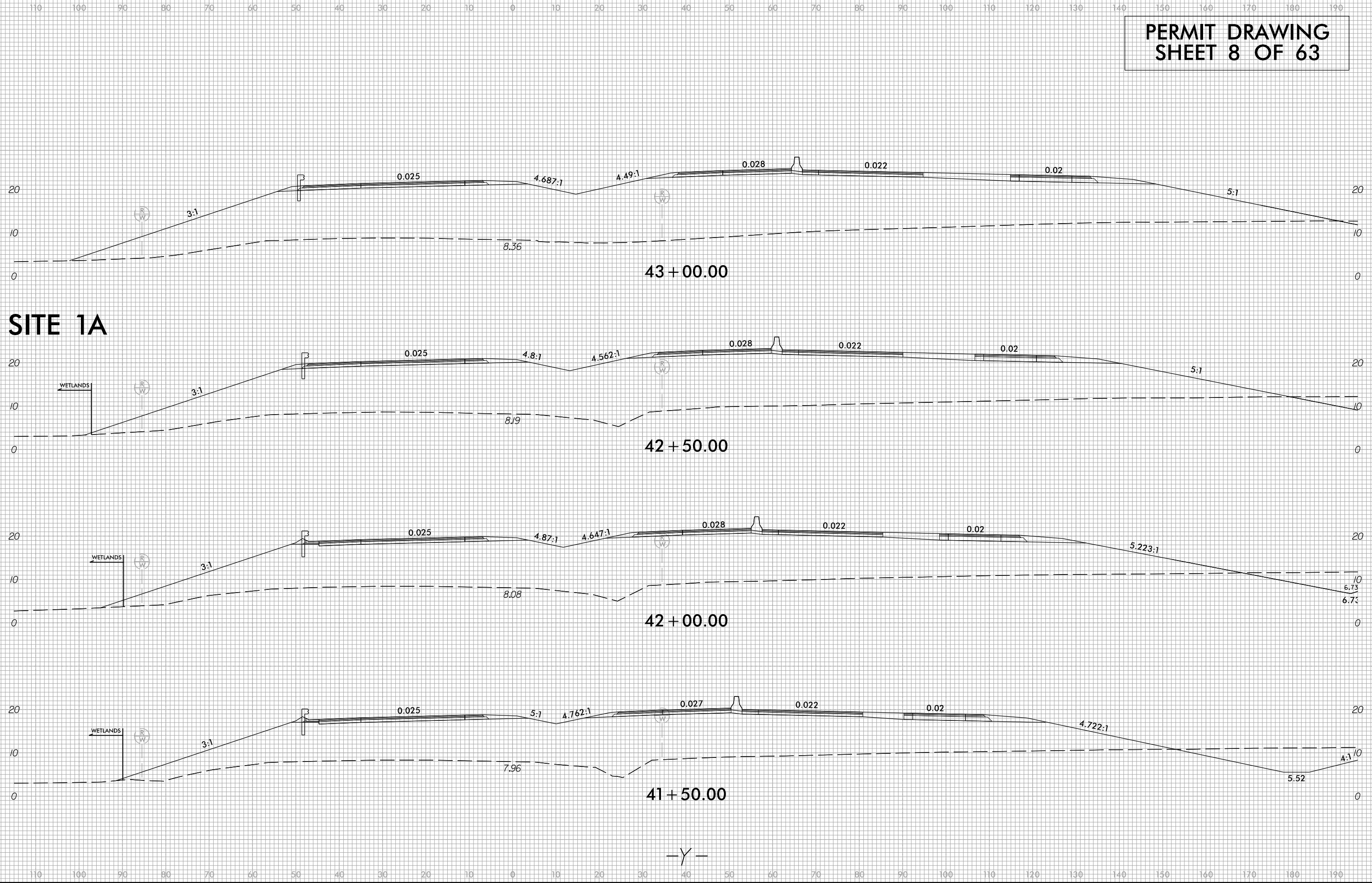
6/23/16



PROJ. REFERENCE NO.
R-2576

SHEET NO.
X-21

**PERMIT DRAWING
SHEET 8 OF 63**



SITE 1A

43 + 00.00

42 + 50.00

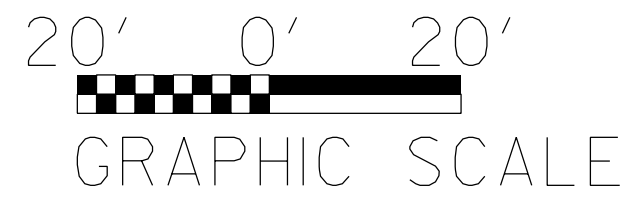
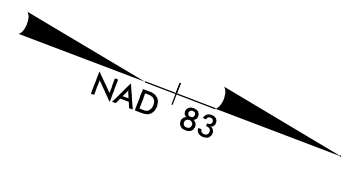
42 + 00.00

41 + 50.00

-Y-

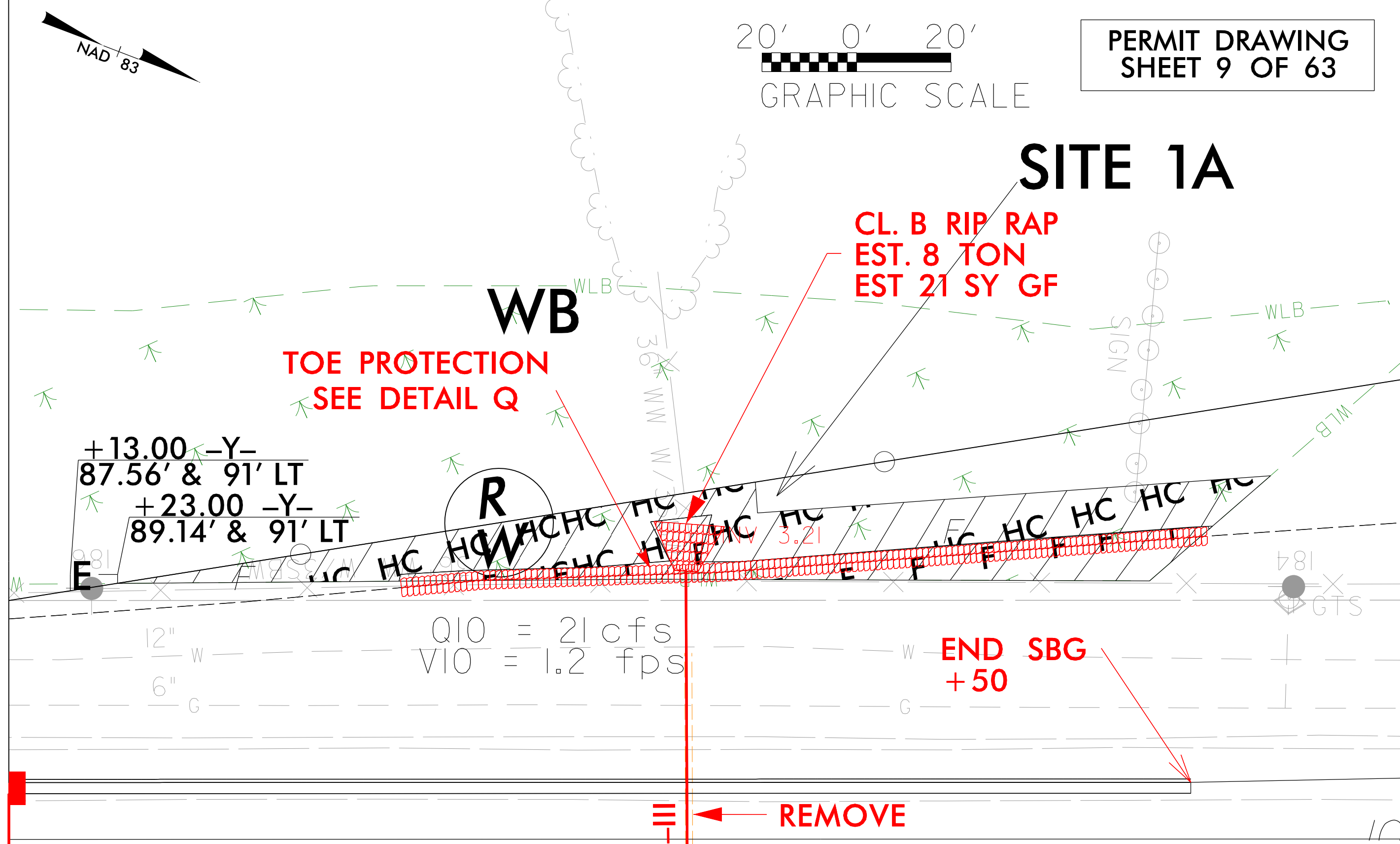
STATES
SURVIVORS
FILES

MATCHLINE SHEET
-Y- STA. 40+00



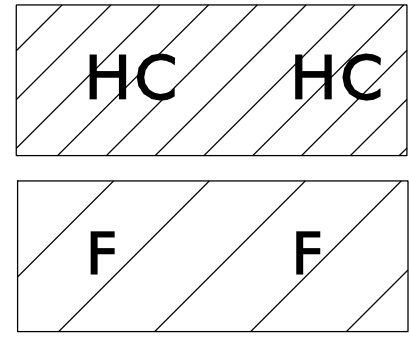
PERMIT DRAWING
SHEET 9 OF 63

SITE 1A



+13.00 -Y-
87.56' & 91' LT
+23.00 -Y-
89.14' & 91' LT

Q10 = 21 cfs
V10 = 1.2 fps

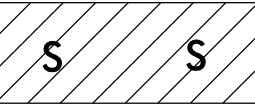


DENOTES HAND
CLEARING
DENOTES FILL IN
WETLAND

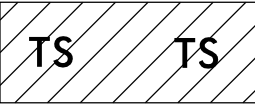
**PERMIT DRAWING
SHEET 10 OF 63**

MILDRED T. QUIDLEY

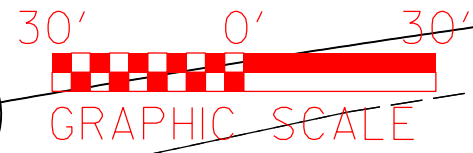
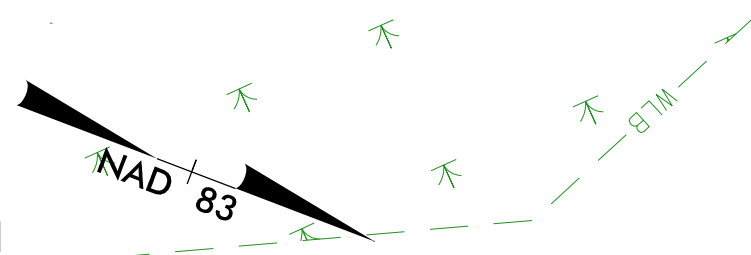
SITE 2



DENOTES IMPACTS IN
SURFACE WATER



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



GRAPHIC SCALE

**BANK STABILIZATION
SEE DETAIL R
CL. B RIP RAP
EST. 15 TON
EST 32 SY GF**

REMOVE

S1B

TEMPORARY IMPACTS

PERMANENT IMPACTS

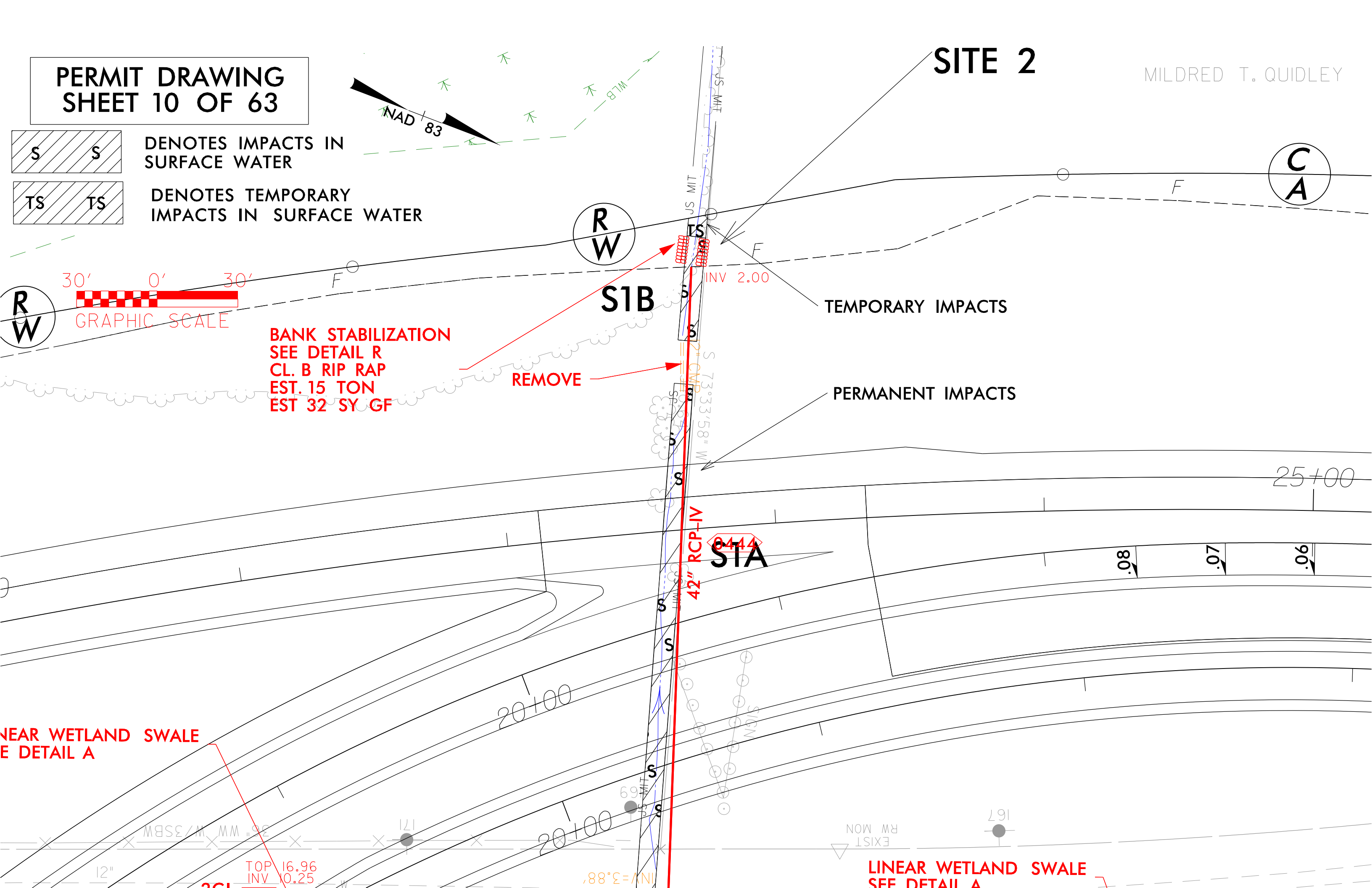
S1A

42" RCP-IV

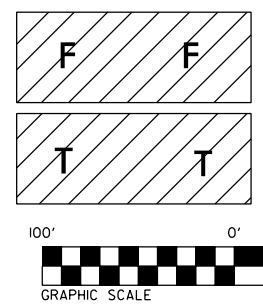
0444

**NEAR WETLAND SWALE
SEE DETAIL A**

**LINEAR WETLAND SWALE
SEE DETAIL A**



6/2/2019
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KAT



F DENOTES FILL IN WETLAND (AT BENTS)
T DENOTES TEMPORARY FILL IN WETLAND (MATTING)

**PERMIT DRAWING
SHEET 11 OF 63**

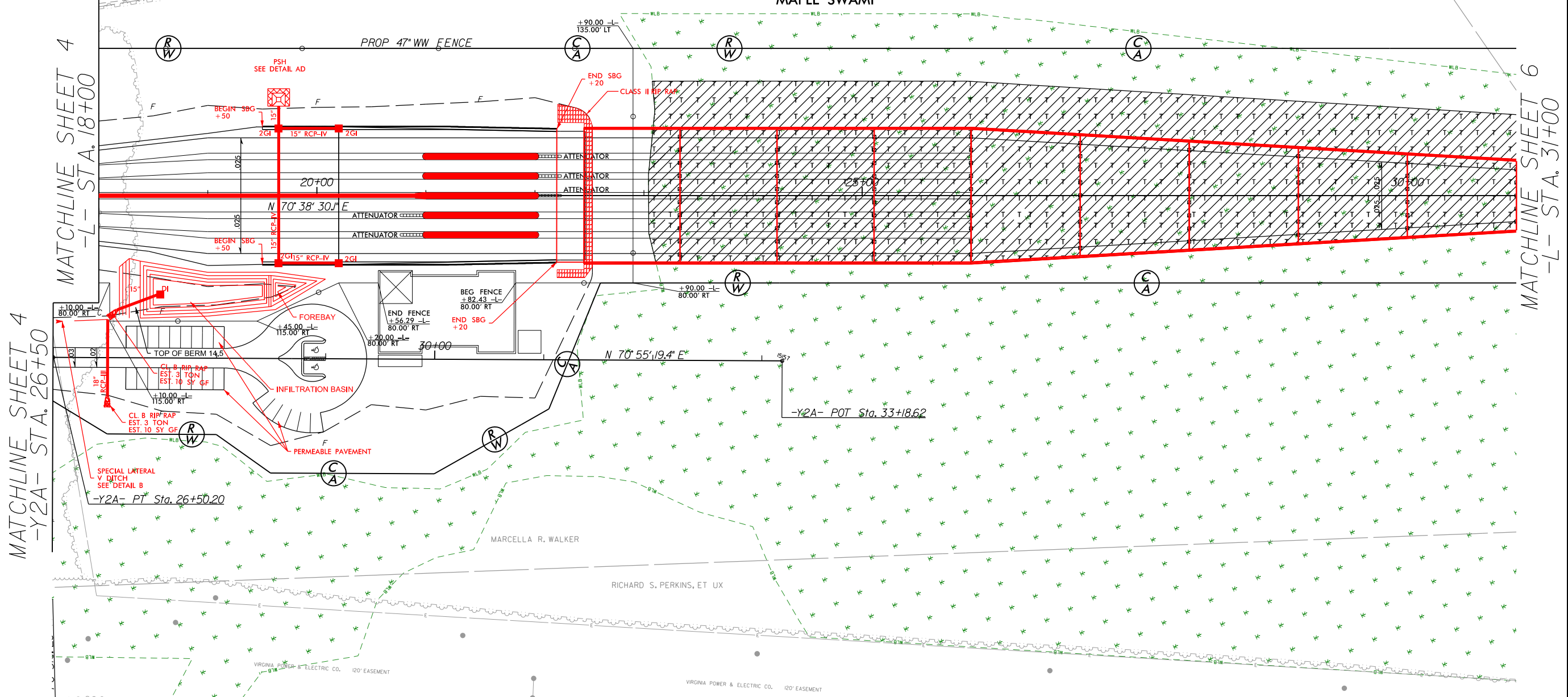
LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111
NC License Number F-0159
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
ETHERILL ENGINEERING
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>R-2576</i>	SHEET NO. 5
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



EDWARD MIDGETT MARKERT

**SITE 3
BRIDGE AND TEMPORARY BRIDGE FOOTPRINT
AND BENTS**



SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 47 FOR -Y2A- PROFILE

6/2/2019

PERMIT DRAWING SHEET 12 OF 63

LOCHNER
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 RALEIGH, NC 27612
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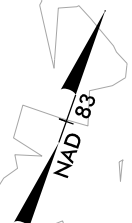
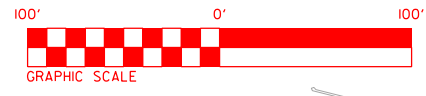
NC License Number F-0159
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

ETHERILL ENGINEERING
 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>R-2576</i>	SHEET NO. 5
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

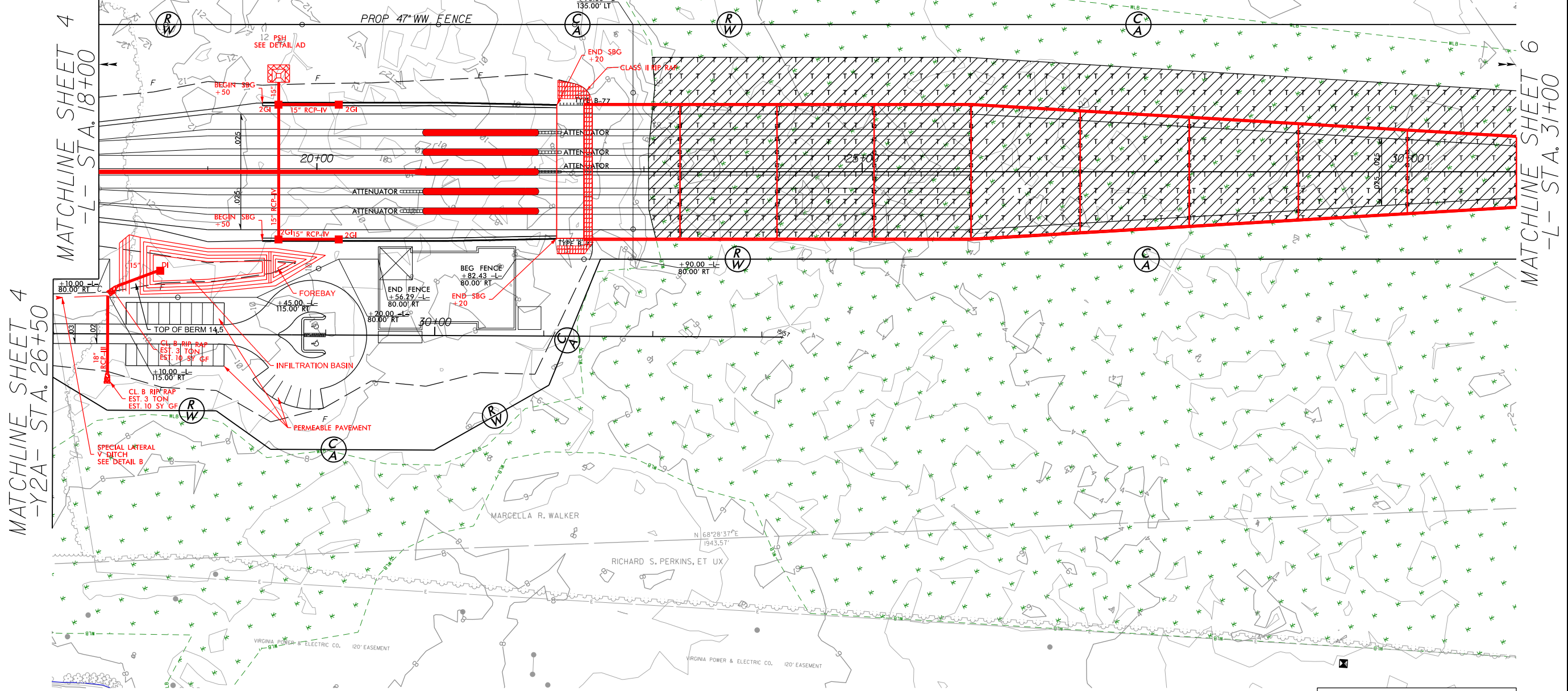
F F
DENOTES FILL IN WETLAND

T T
DENOTES TEMPORARY FILL IN WETLAND (MATTING)



PAVED SHOULDER

SITE 3 BRIDGE AND TEMPORARY BRIDGE FOOTPRINT AND BENTS



MATCHLINE SHEET 4
-L- STA. 18+00

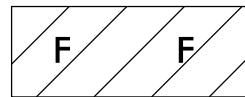
MATCHLINE SHEET 4
-Y2A- STA. 26+50

MATCHLINE SHEET 6
-L- STA. 31+00

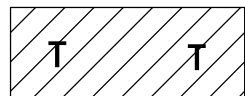
SEE SHEET 31 FOR -L- PROFILE
SEE SHEET 47 FOR -Y2A- PROFILE

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6/22/99
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KAT



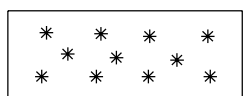
DENOTES FILL IN WETLAND (AT BENTS)



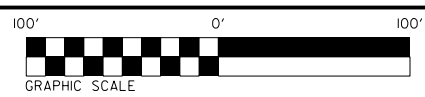
DENOTES TEMPORARY FILL IN WETLAND (MATTING, CONT AT TEMP BENTS WHEN MATTING ENDS NEXT TO BRIDGE)



DENOTES HAND CLEARING



DENOTES MECHANIZED CLEARING



GRAPHIC SCALE



PERMIT DRAWING SHEET 13 OF 63

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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

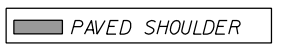
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576 SHEET NO. 6

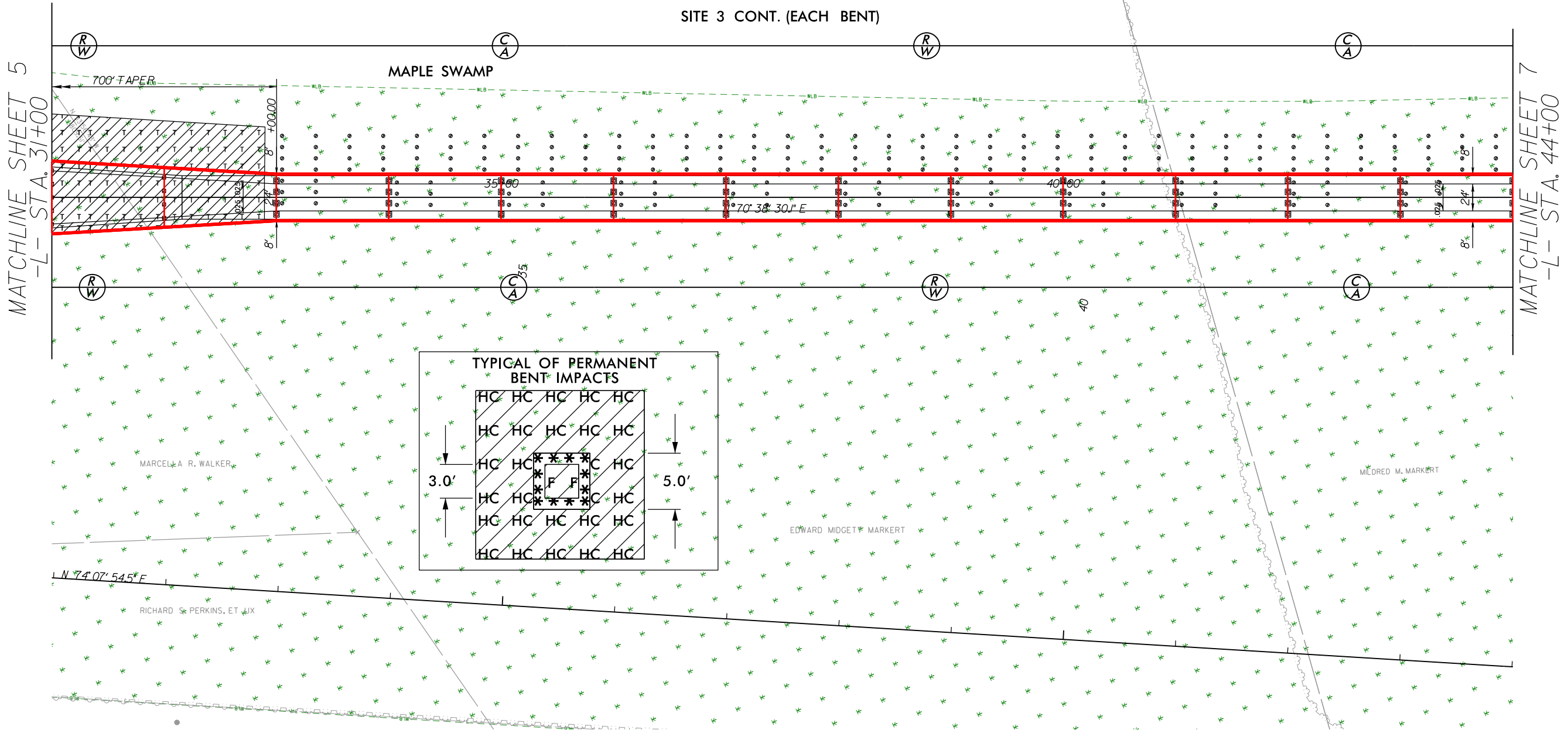
ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PAVED SHOULDER

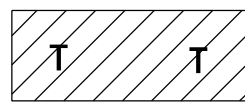


SEE SHEET 32 FOR -L- PROFILE

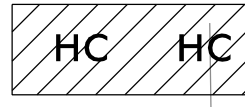
6/2/2019



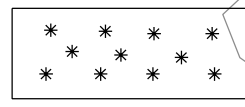
DENOTES FILL IN WETLAND (AT BENTS)



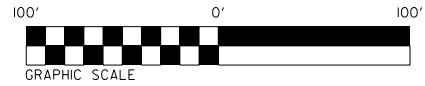
DENOTES TEMPORARY FILL IN WETLAND (MATTING, CONT AT TEMP BENTS WHEN MATTING ENDS NEXT TO BRIDGE)



DENOTES HAND CLEARING



DENOTES MECHANIZED CLEARING



GRAPHIC SCALE

PERMIT DRAWING SHEET 14 OF 63

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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576 SHEET NO. 6

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

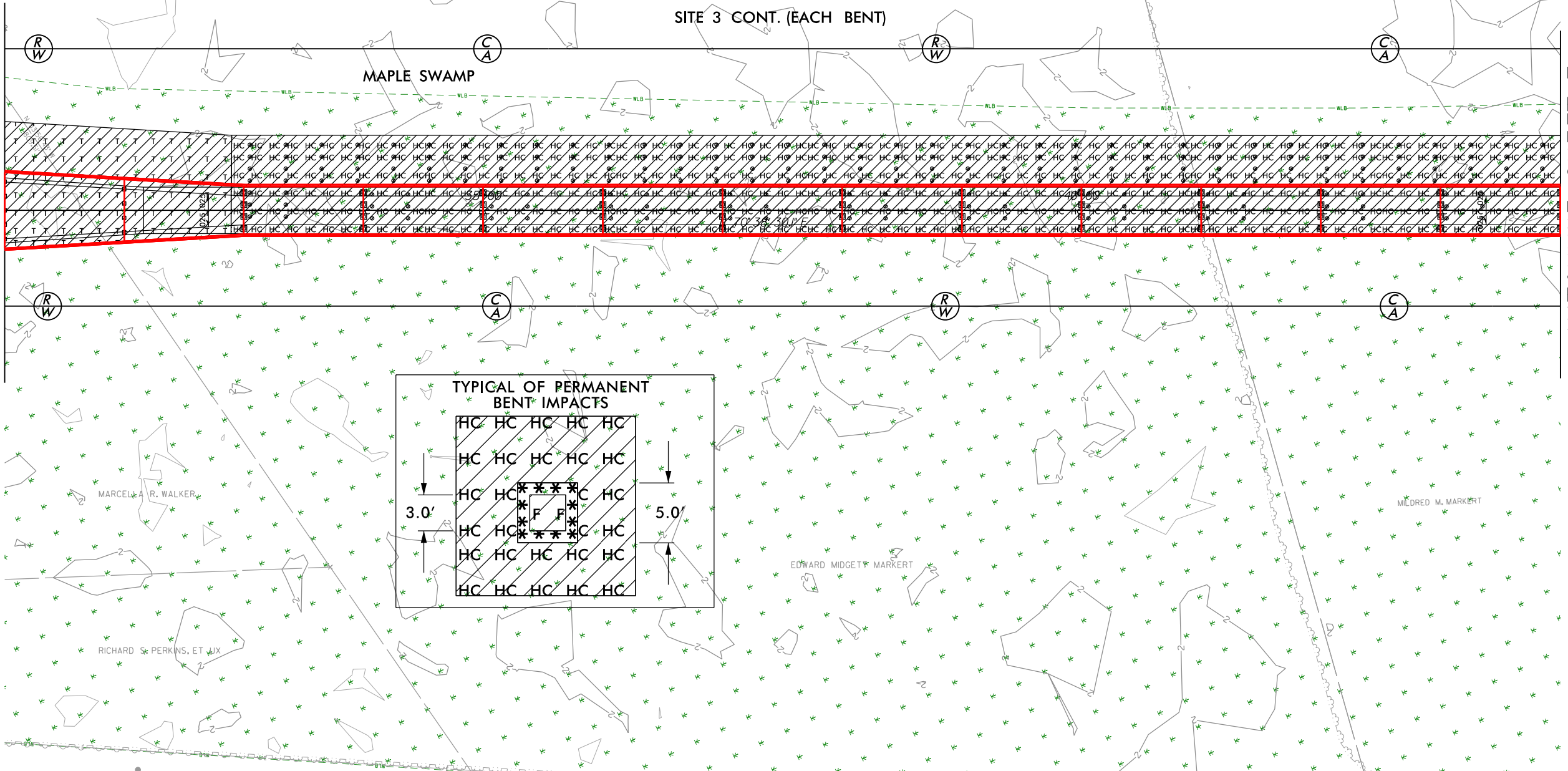
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



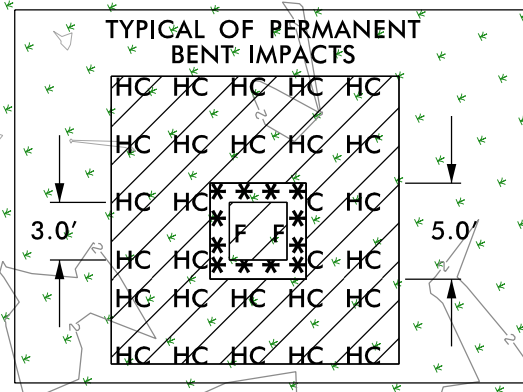
PAVED SHOULDER

MATCHLINE SHEET 5
-L- STA. 31+00

MATCHLINE SHEET 7
-L- STA. 44+00



SITE 3 CONT. (EACH BENT)



SEE SHEET 32 FOR -L- PROFILE

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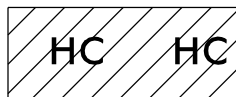
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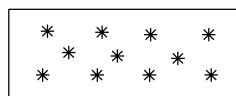
DENOTES FILL IN WETLAND (AT BENTS)



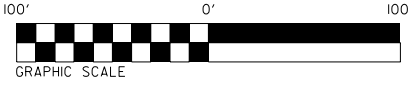
DENOTES TEMPORARY FILL IN WETLAND (MATTING, CONT AT TEMP BENTS WHEN MATTING ENDS NEXT TO BRIDGE)



DENOTES HAND CLEARING



DENOTES MECHANIZED CLEARING



PERMIT DRAWING SHEET 15 OF 63

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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

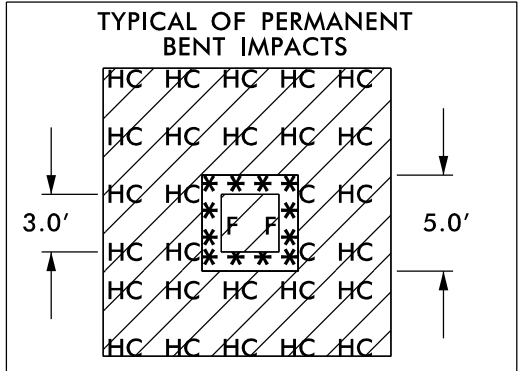
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576 SHEET NO. 10

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

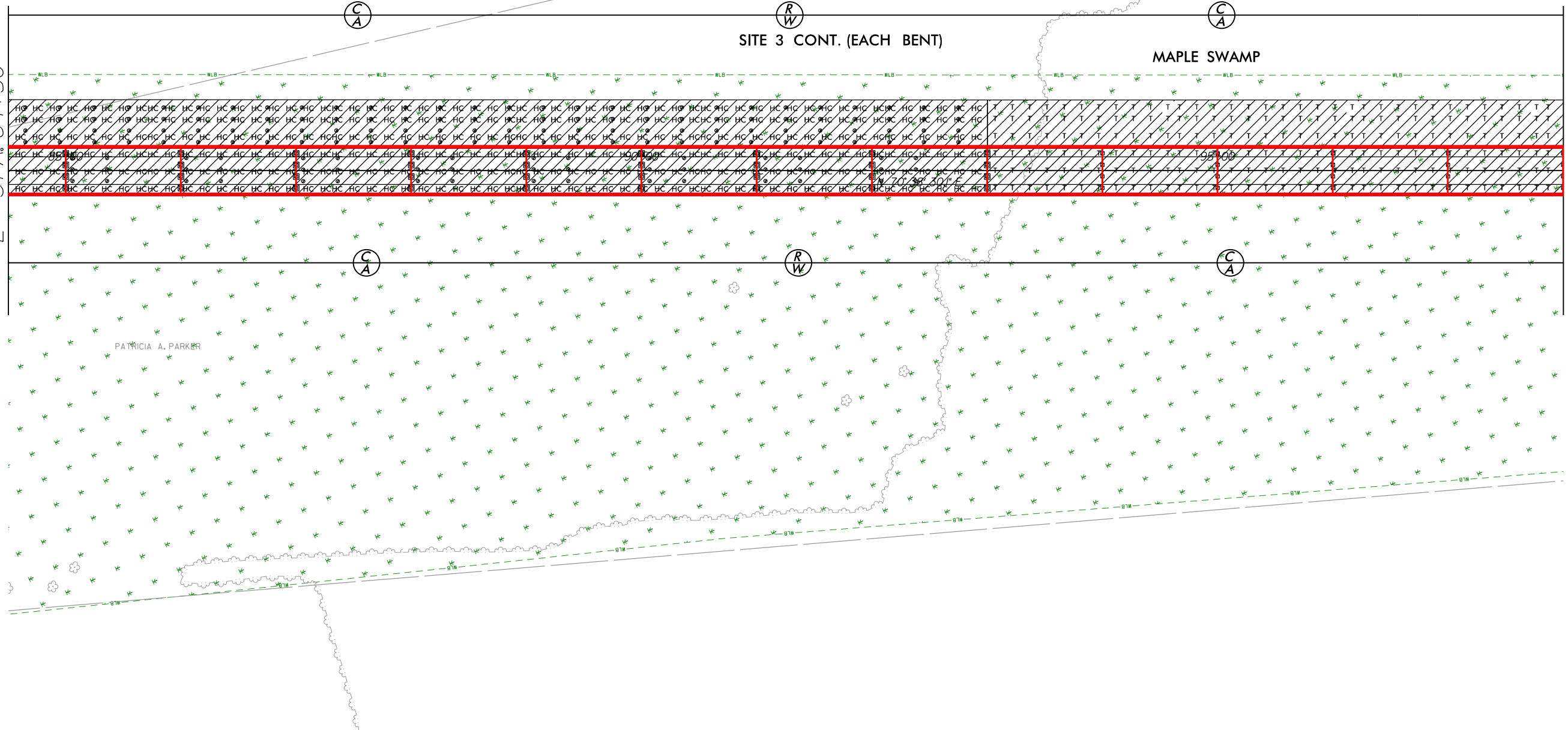
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



J. W. JONES LUMBER CO., INC

MATCHLINE SHEET 9
-L- STA. 84+50

MATCHLINE SHEET 11
-L- STA. 98+00



5 66' 108

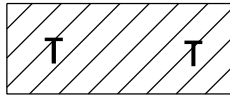
SEE SHEET 34 FOR -L- PROFILE

10/17/2023
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KAT

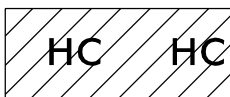
6/2/09



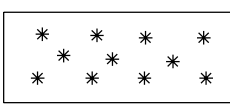
DENOTES FILL IN WETLAND (AT BENTS)



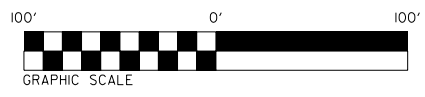
DENOTES TEMPORARY FILL IN WETLAND (MATTING, CONT AT TEMP BENTS WHEN MATTING ENDS NEXT TO BRIDGE)



DENOTES HAND CLEARING



DENOTES MECHANIZED CLEARING



PERMIT DRAWING SHEET 16 OF 63

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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

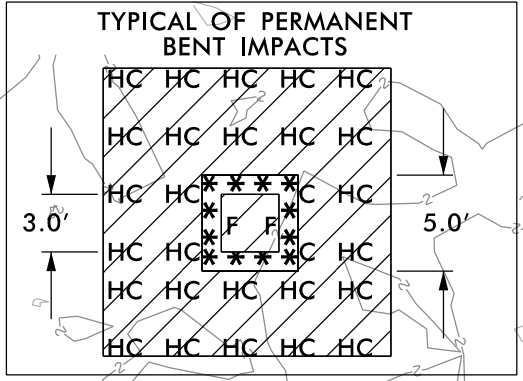
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. **R-2576** SHEET NO. **10**

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

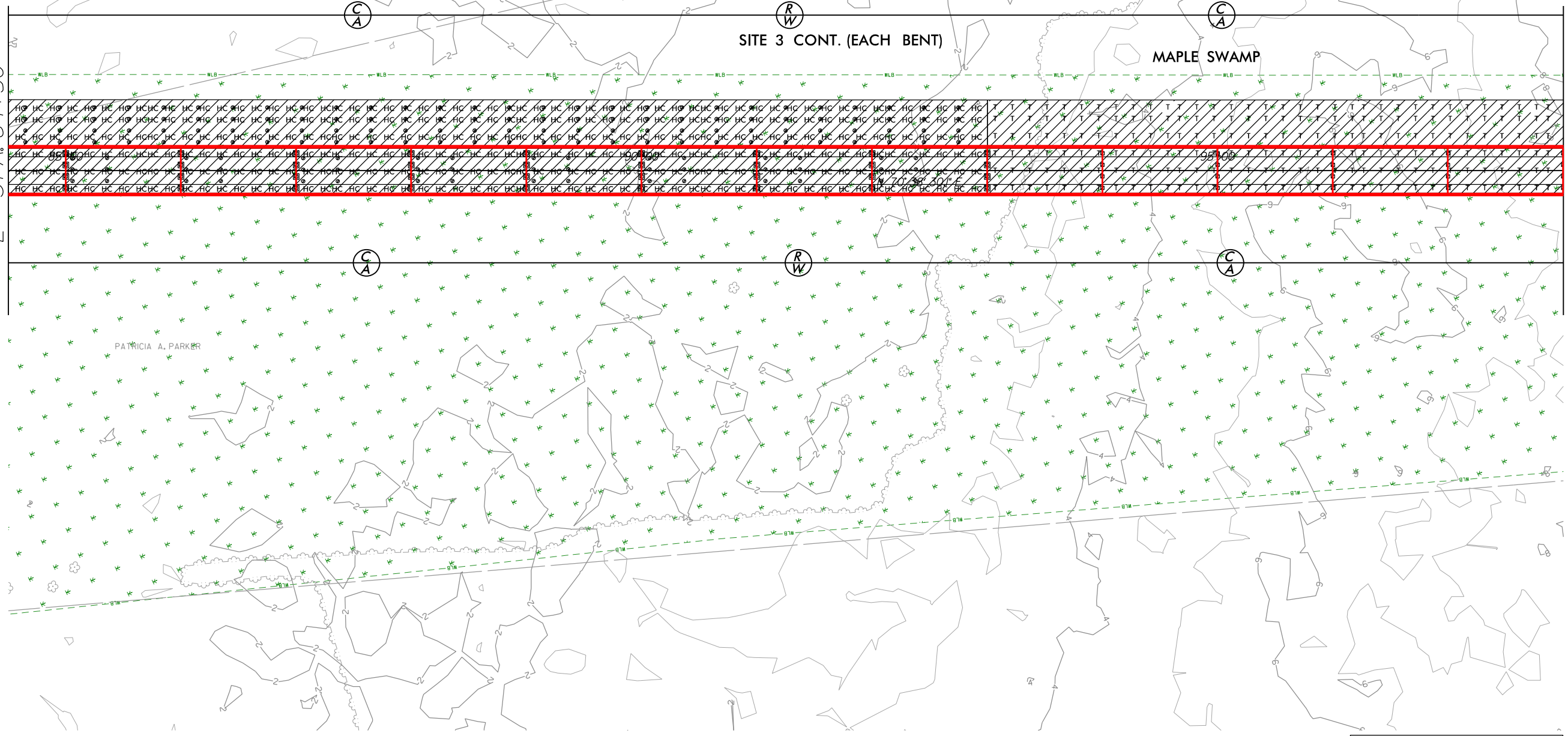
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



MATCHLINE SHEET 9
-L- STA. 84+50

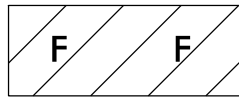
MATCHLINE SHEET 11
-L- STA. 98+00



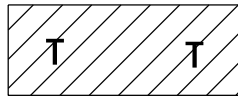
SEE SHEET 34 FOR -L- PROFILE

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6/2/2023



DENOTES FILL IN WETLAND (AT BENTS)



DENOTES TEMPORARY FILL IN WETLAND (MATTING)

PERMIT DRAWING SHEET 17 OF 63

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NC License
Number F-0159

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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107



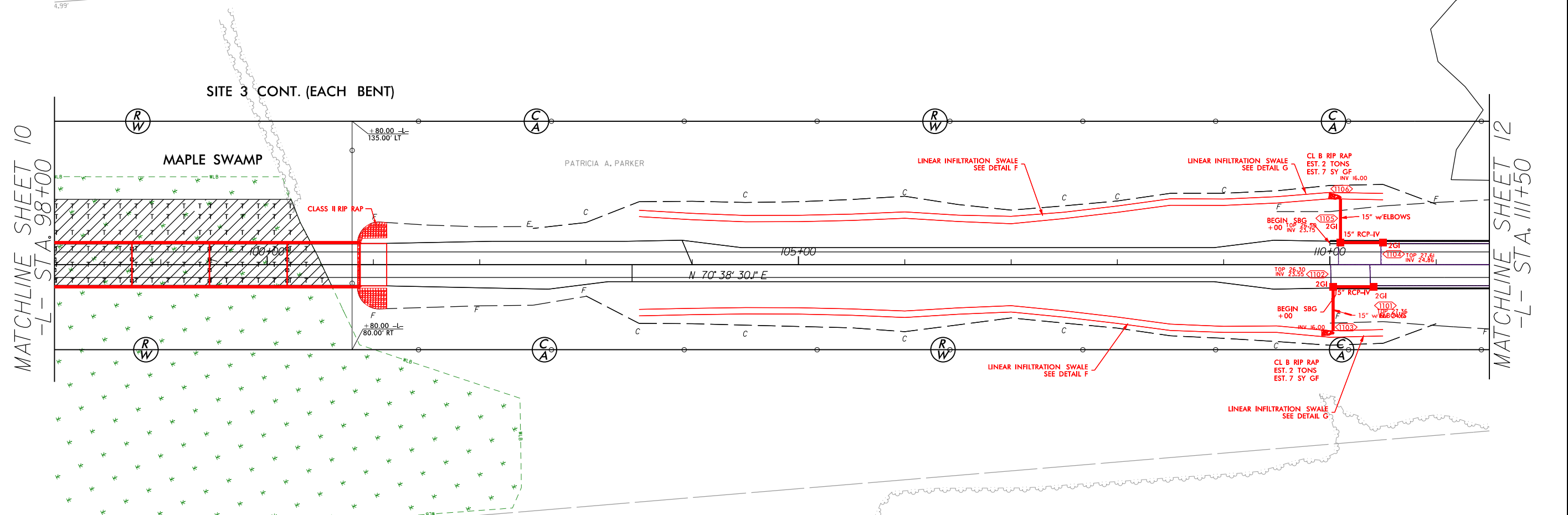
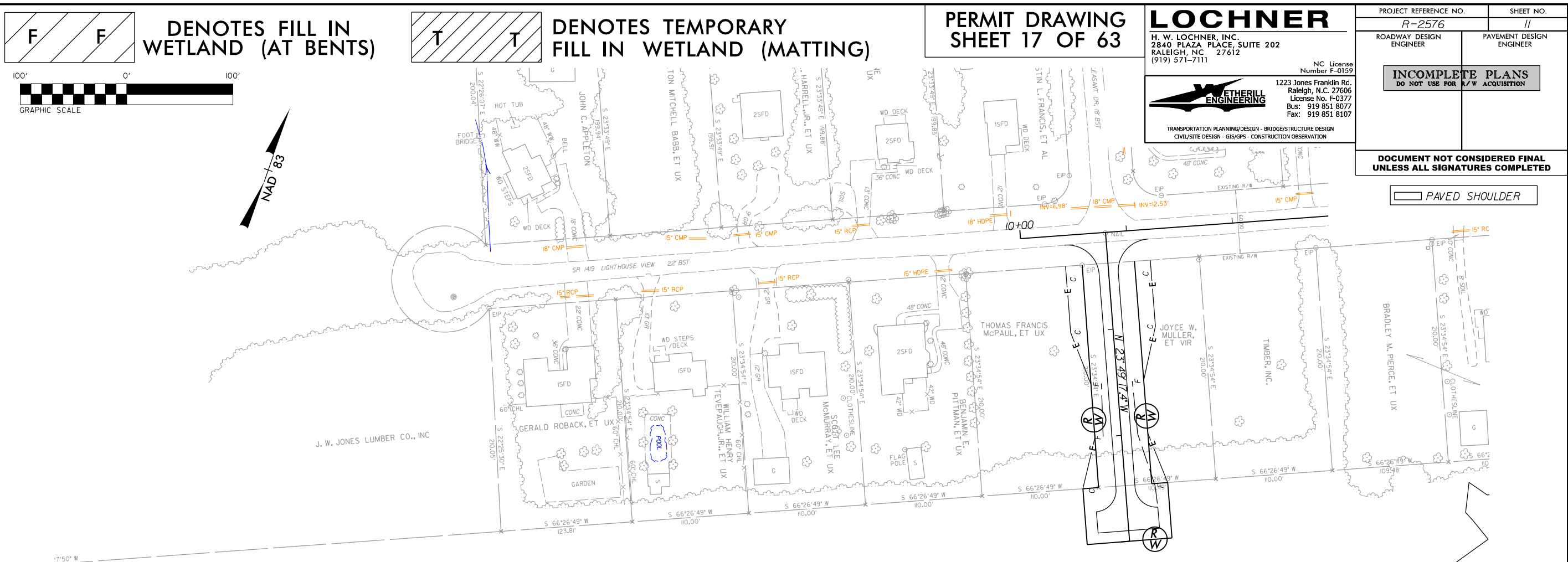
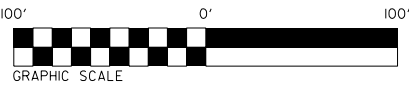
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. **R-2576** SHEET NO. **11**

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

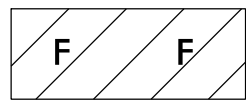


SEE SHEET 47 FOR -Y3B- PROFILE
SEE SHEET 34 FOR -L- PROFILE

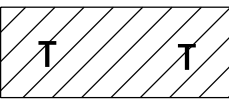
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6/2/2023

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DENOTES FILL IN WETLAND (AT BENTS)



DENOTES TEMPORARY FILL IN WETLAND (MATTING)

PERMIT DRAWING SHEET 18 OF 63

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RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159



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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

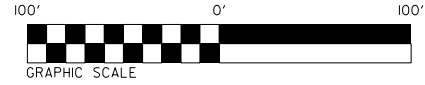
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. **R-2576** SHEET NO. **11**

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

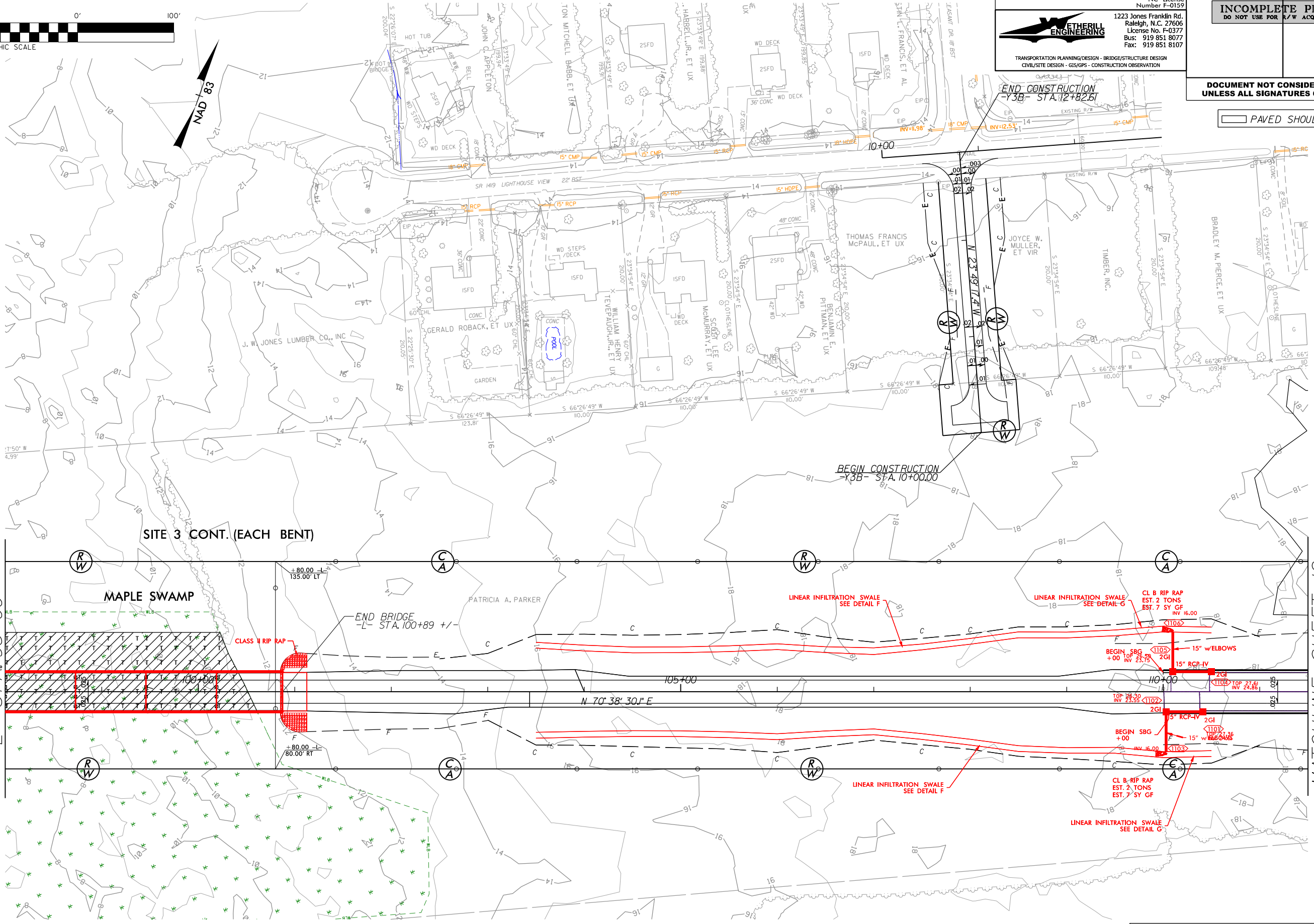
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



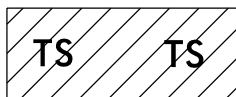
MATCHLINE SHEET 10
-L- STA. 98+00

MATCHLINE SHEET 12
-L- STA. 111+50



SEE SHEET 47 FOR -Y3B- PROFILE
SEE SHEET 34 FOR -L- PROFILE

6/2/2019



DENOTES TEMPORARY IMPACTS IN SURFACE WATER (AT BENTS)



DENOTES IMPACTS IN SURFACE WATER (AT BENTS AND SHORELINE STABILIZATION)

PERMIT DRAWING SHEET 19 OF 63

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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

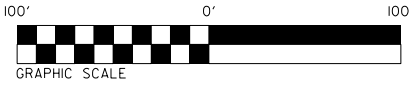
PROJECT REFERENCE NO. R-2576 SHEET NO. 12

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

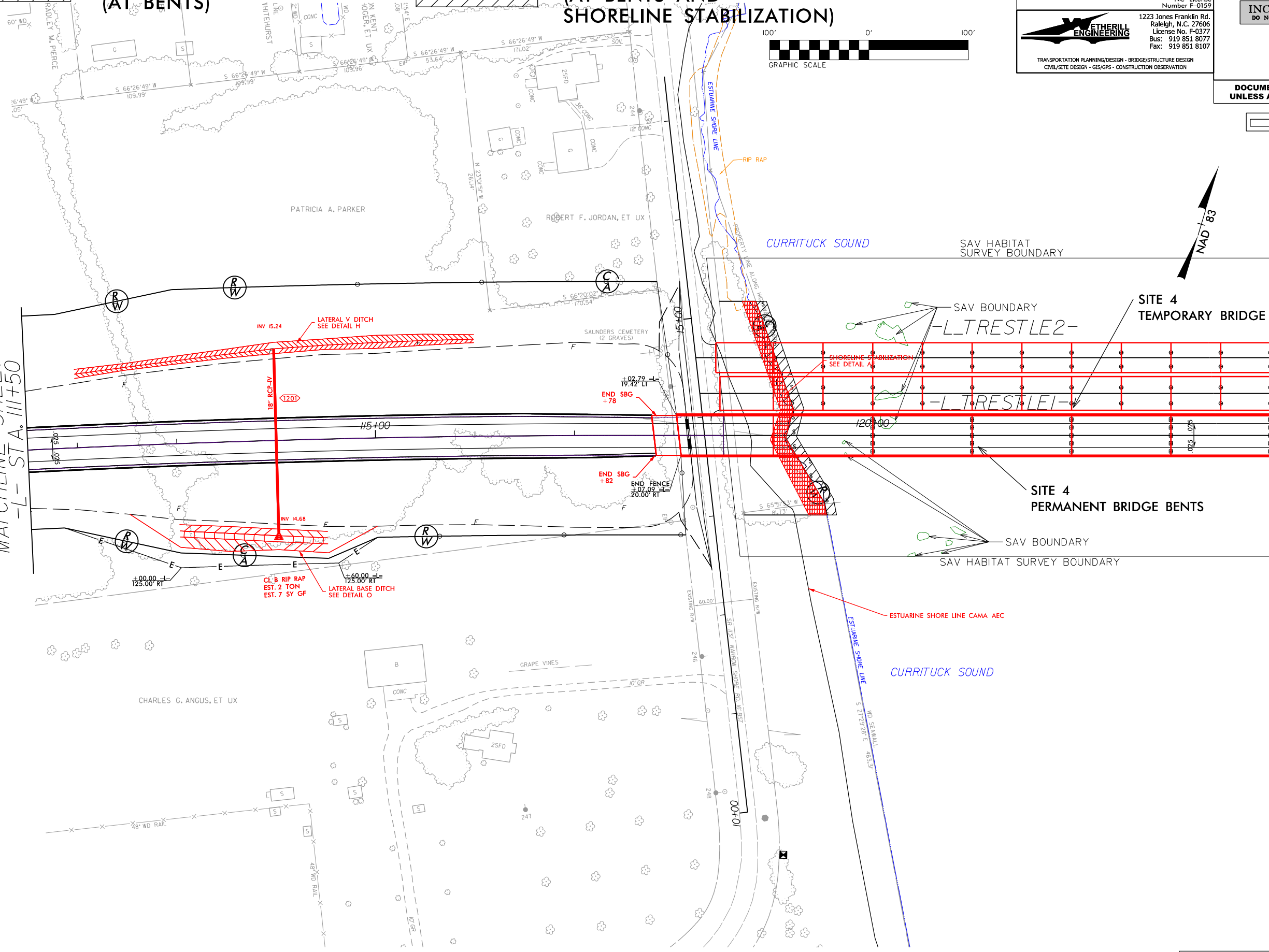
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER



MATCHLINE SHEET II
-L- STA. III+50

MATCHLINE SHEET 13
-L- STA. 124+00



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SEE SHEET 35 FOR -L- PROFILE
SEE SHEET 47 FOR -Y3- PROFILE

6/22/2019

TS TS

DENOTES TEMPORARY IMPACTS IN SURFACE WATER (AT BENTS)

S S

DENOTES IMPACTS IN SURFACE WATER (AT BENTS AND SHORELINE STABILIZATION)

PERMIT DRAWING SHEET 20 OF 63

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Raleigh, N.C. 27606
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Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

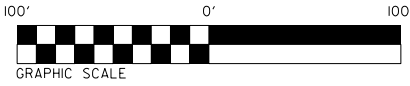
PROJECT REFERENCE NO. R-2576 SHEET NO. 12

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

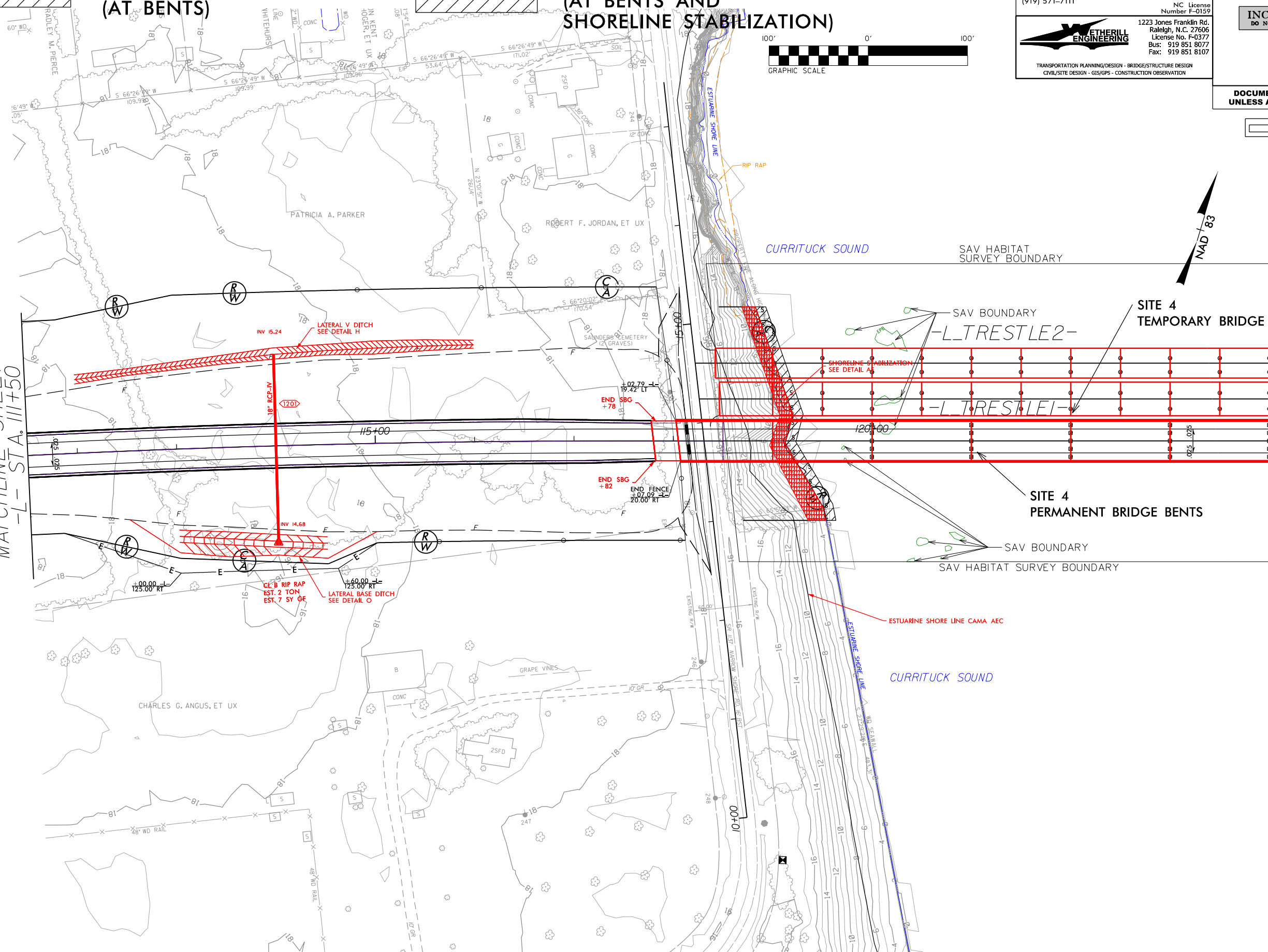
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER



MATCHLINE SHEET II
-L- STA. III+50

MATCHLINE SHEET 13
-L- STA. 124+00



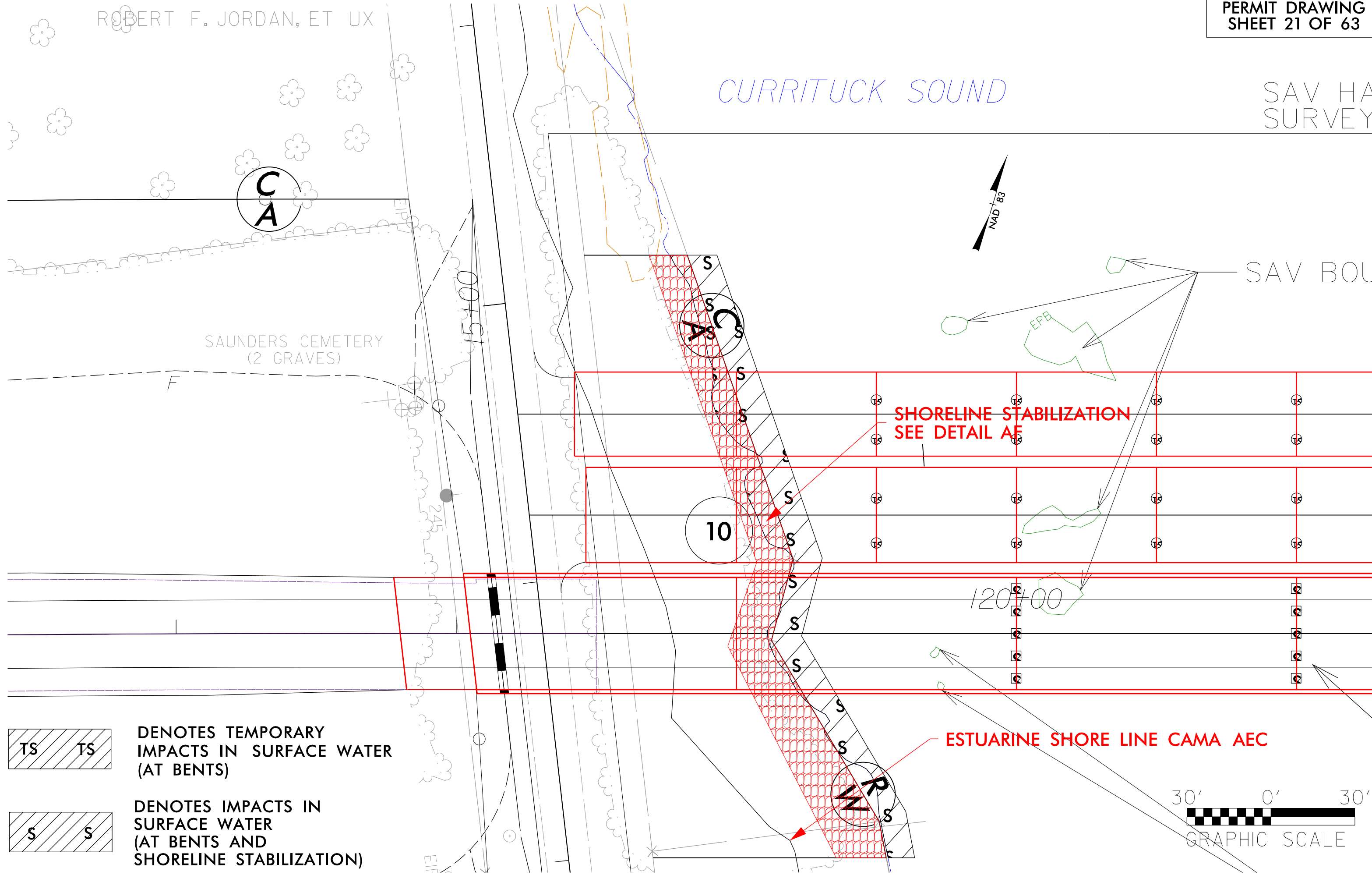
SEE SHEET 35 FOR -L- PROFILE
SEE SHEET 47 FOR -Y3- PROFILE

I:\Projects\2023\RA\Hydro\Publics\PERMITS-Environmental\psh\R2576\HYD_psh12_con.dgn

ROBERT F. JORDAN, ET UX

CURRITUCK SOUND

SAV HA
SURVEY



SAUNDERS CEMETERY
(2 GRAVES)

SHORELINE STABILIZATION
SEE DETAIL AE

SAV BOU

ESTUARINE SHORE LINE CAMA AEC

TS TS

DENOTES TEMPORARY
IMPACTS IN SURFACE WATER
(AT BENTS)

S S

DENOTES IMPACTS IN
SURFACE WATER
(AT BENTS AND
SHORELINE STABILIZATION)

30' 0' 30'
GRAPHIC SCALE

5/28/99

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 871-7111

NC License
Number F-0159



1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. SHEET NO.

R-2576

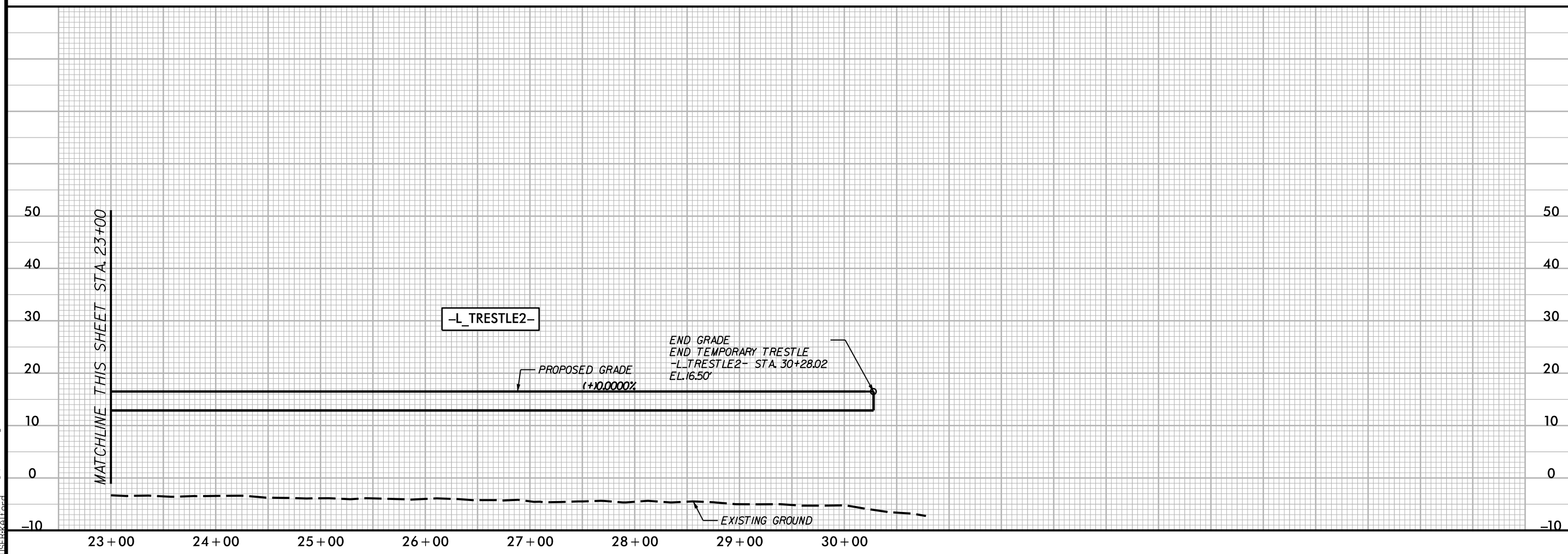
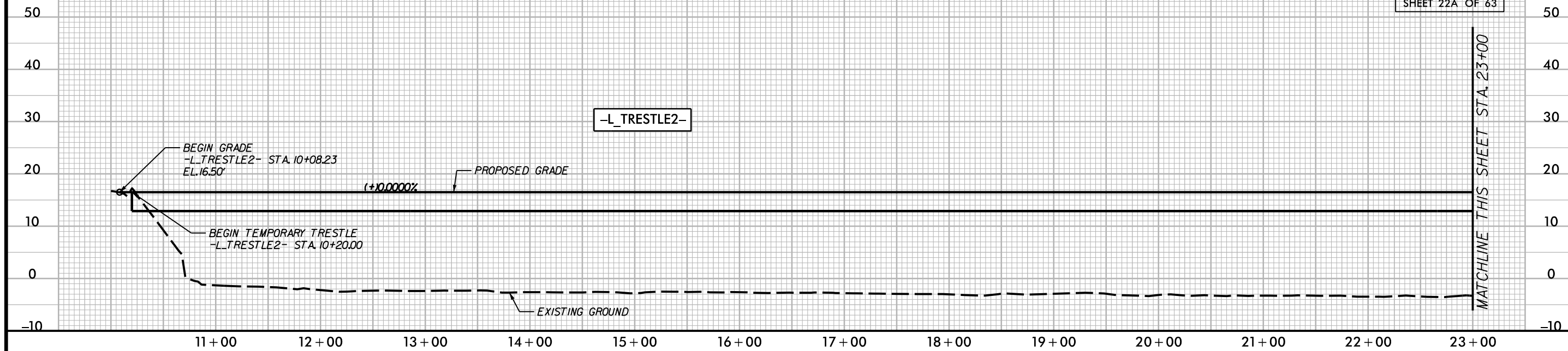
53

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

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

PERMIT DRAWING
SHEET 22A OF 63

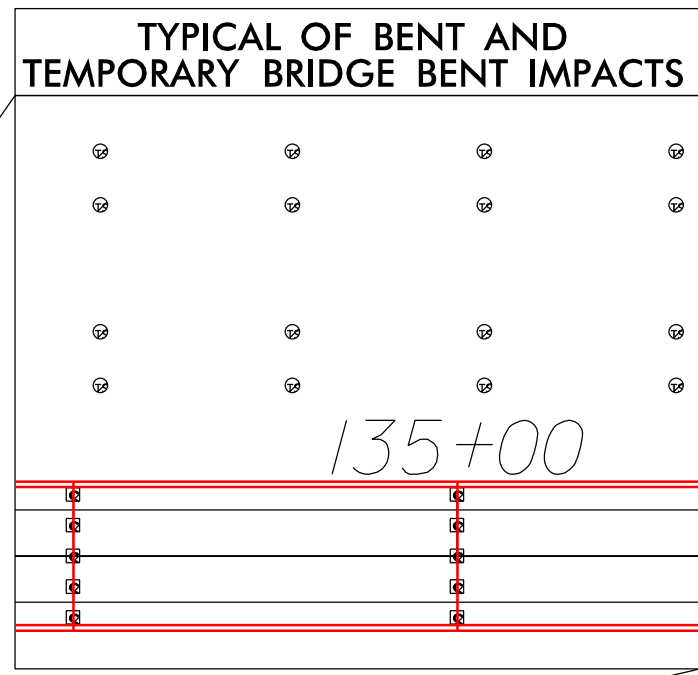
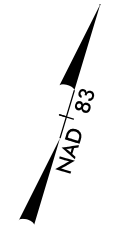


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6/2/24

REVISIONS	

DENOTES IMPACTS IN SURFACE WATER (PERMANENT BENTS)
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER (CONSTRUCTION BRIDGES)



SEE PERMIT APPLICATION FOR INFORMATION ON BARGE MOORING

SEE PERMIT APPLICATION FOR INFORMATION ON BARGE MOORING

LOCHNER
 2140 FLORA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 871-7711

NC License Number: R-2576
 ROADWAY DESIGN ENGINEER

1223 ZION PARKWAY, SUITE 200
 RAMPART, NC 27856
 LICENSE NO. P2077
 BOC: 919 851 8877
 FOC: 919 851 8877

TRANSPORTATION ADMINISTRATION: STRUCTURAL DESIGN
 CONSULTING ENGINEER - CONTRACTOR REPRESENTATIVE

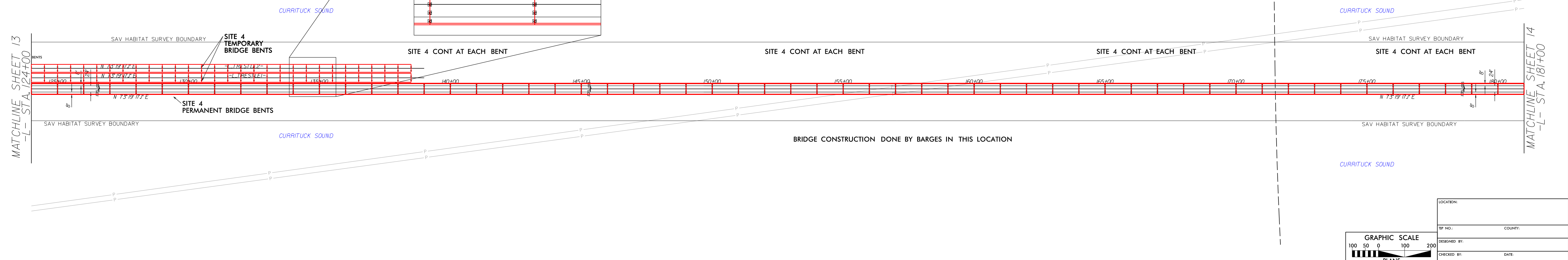
INCOMPLETE PLANS
 DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO: R-2576
 SHEET NO: 12

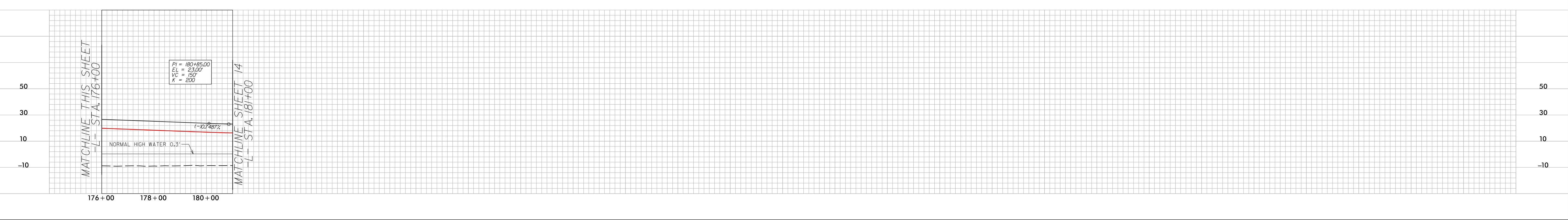
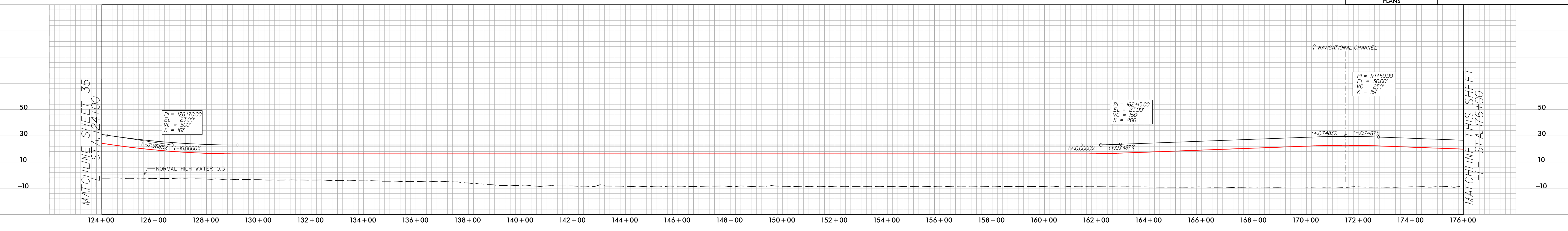
MATCHLINE SHEET 13
 -L- STA. 124+00

MATCHLINE SHEET 14
 -L- STA. 181+00





GRAPHIC SCALE
 100 50 0 100 200
 PLANS

DESIGNED BY: _____
 CHECKED BY: _____
 DATE: _____

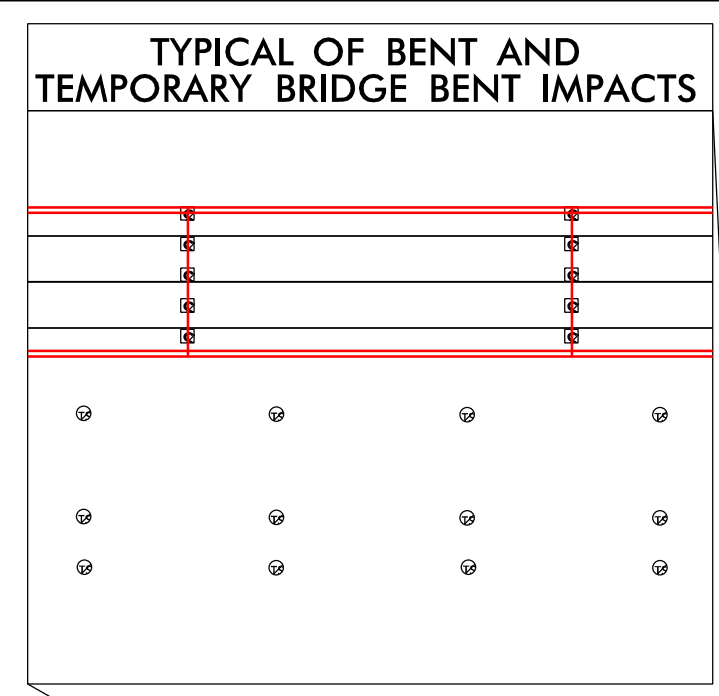


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NO.	REVISIONS

 DENOTES IMPACTS IN SURFACE WATER (PERMANENT BENTS)
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER (CONSTRUCTION BRIDGES)

SEE PERMIT APPLICATION FOR INFORMATION ON BARGE MOORING



LOCHNER
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 571-7111

NC License Number: R-2576
 ROADWAY DESIGN ENGINEER

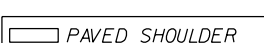
1223 JAMES FARMER BLVD.
 RALEIGH, NC 27606
 LICENSE NO. P-2277
 BUC: 919 851 8077
 FIC: 919 851 8047

TRANSPORTATION ADMINISTRATION: INFRASTRUCTURE DESIGN
 CONSULTING ENGINEER - CIVIL/CONSTRUCTION ADMINISTRATION

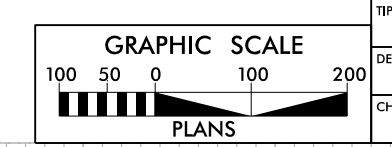
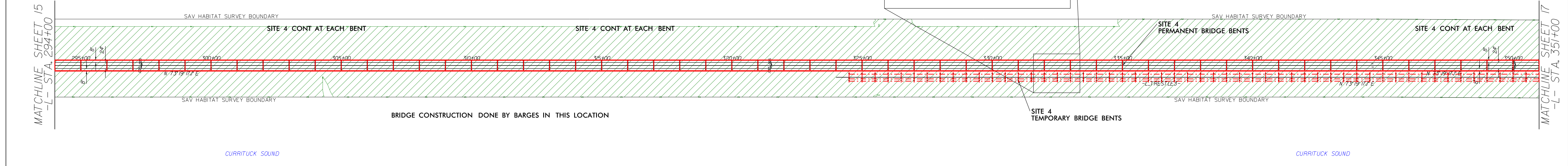
PROJECT REFERENCE NO: R-2576
 SHEET NO: 62

INCOMPLETE PLANS
 DO NOT USE FOR PERMIT APPLICATION

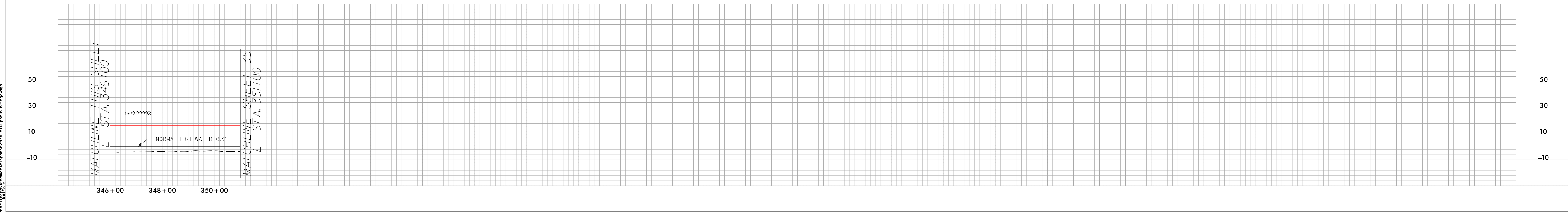
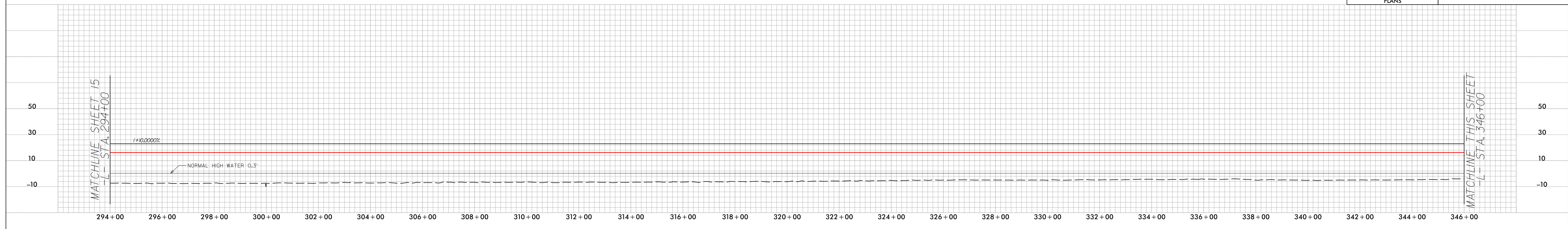
DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

 PAVED SHOULDER

PERMIT DRAWING
 SHEET 26 OF 63



LOCATION:	
TP NO.:	COUNTY:
DESIGNED BY:	
CHECKED BY:	DATE:



2023 08 10 10:00 AM C:\Users\jw\OneDrive\Documents\2023\08\10\20230810_1000_0000.dwg

5/28/99

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RALEIGH, NC 27612
(919) 871-7111

NC License
Number F-0159



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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

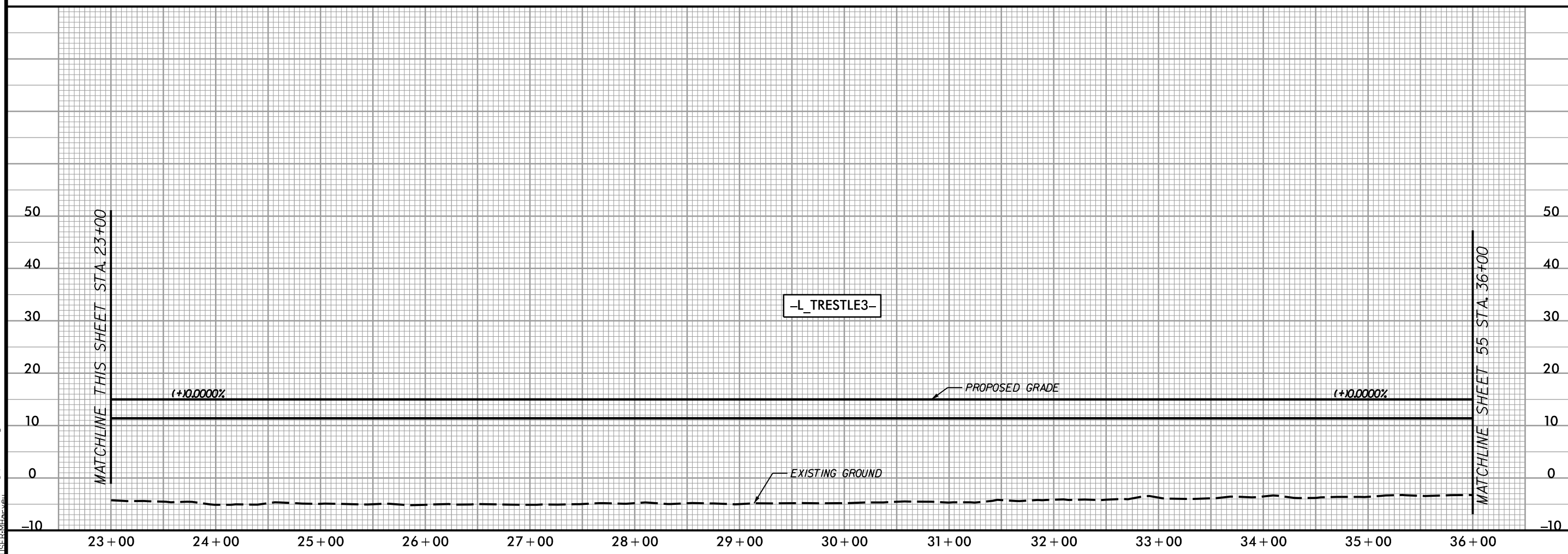
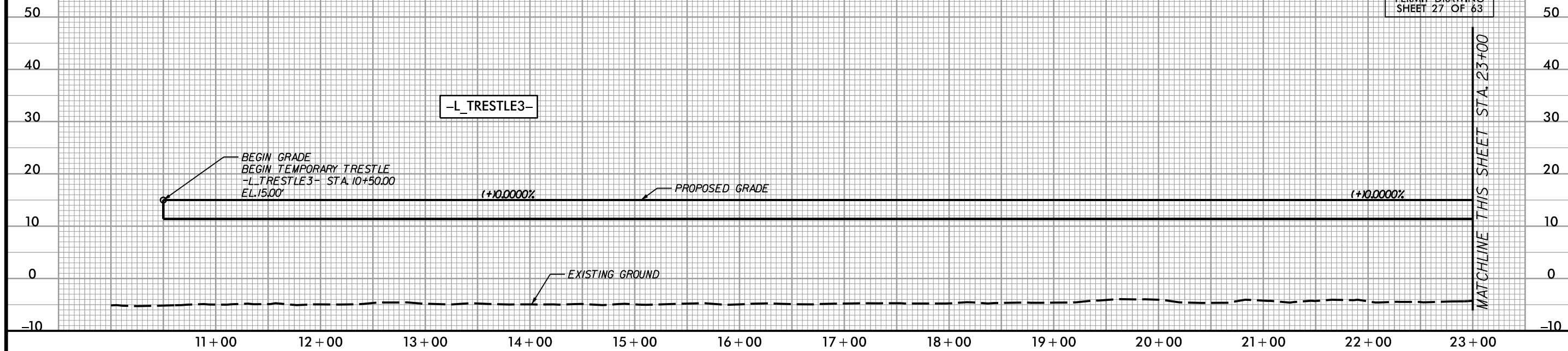
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ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

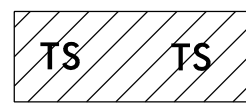
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UNLESS ALL SIGNATURES COMPLETED**

PERMIT DRAWING
SHEET 27 OF 63

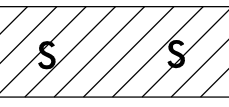


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6/2/2019



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

PERMIT DRAWING SHEET 28 OF 63

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2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

NC License Number F-0159



1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

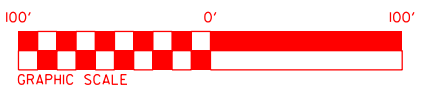
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576 SHEET NO. 17

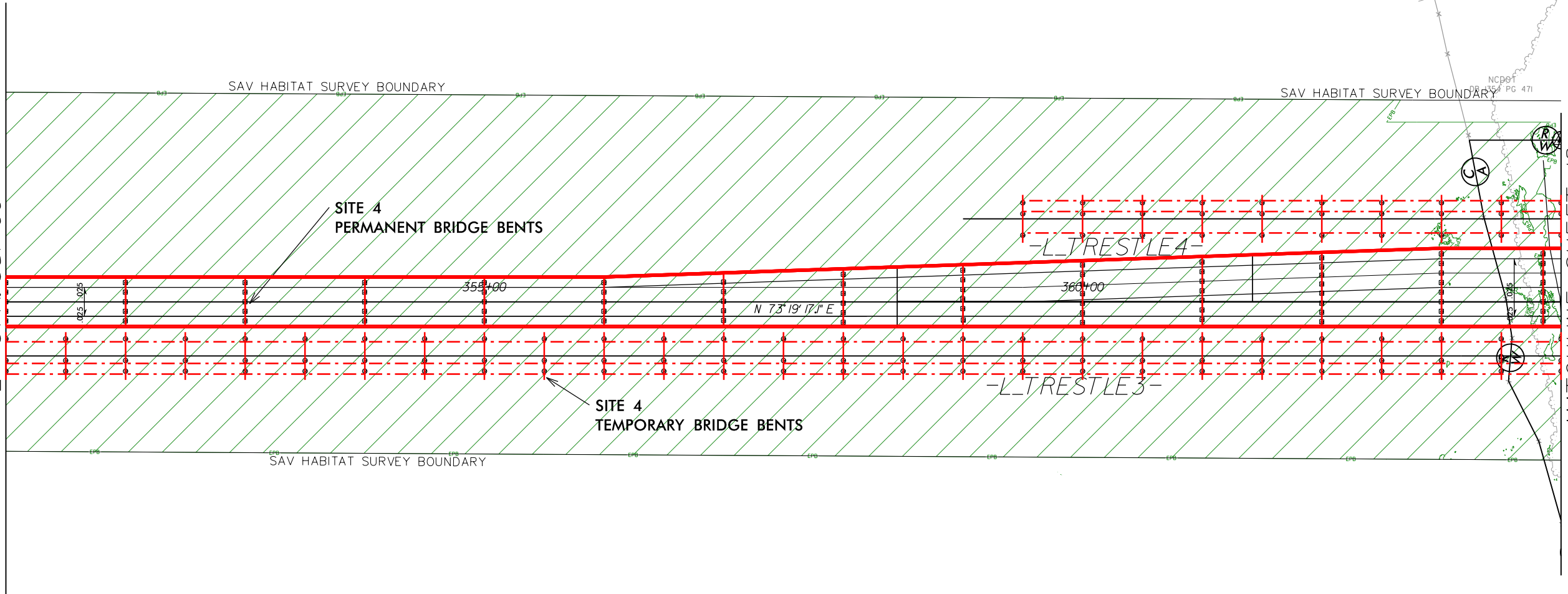
ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



MATCHLINE SHEET 16
-L- STA. 351+00

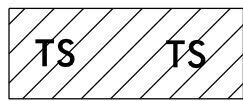


MATCHLINE SHEET 18
-L- STA. 364+00

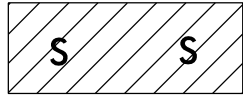
SEE SHEET 35 FOR -L- PROFILE

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KAT

6/2/2019



DENOTES TEMPORARY IMPACTS IN SURFACE WATER



DENOTES IMPACTS IN SURFACE WATER

PERMIT DRAWING SHEET 29 OF 63

LOCHNER

H. W. LOCHNER, INC. 2840 PLAZA PLACE, SUITE 202 RALEIGH, NC 27612 (919) 571-7111

NC License Number F-0159



1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-03777 Bus: 919 851 8077 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

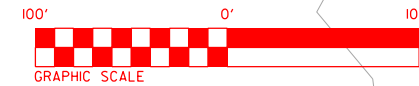
PROJECT REFERENCE NO. R-2576 SHEET NO. 17

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

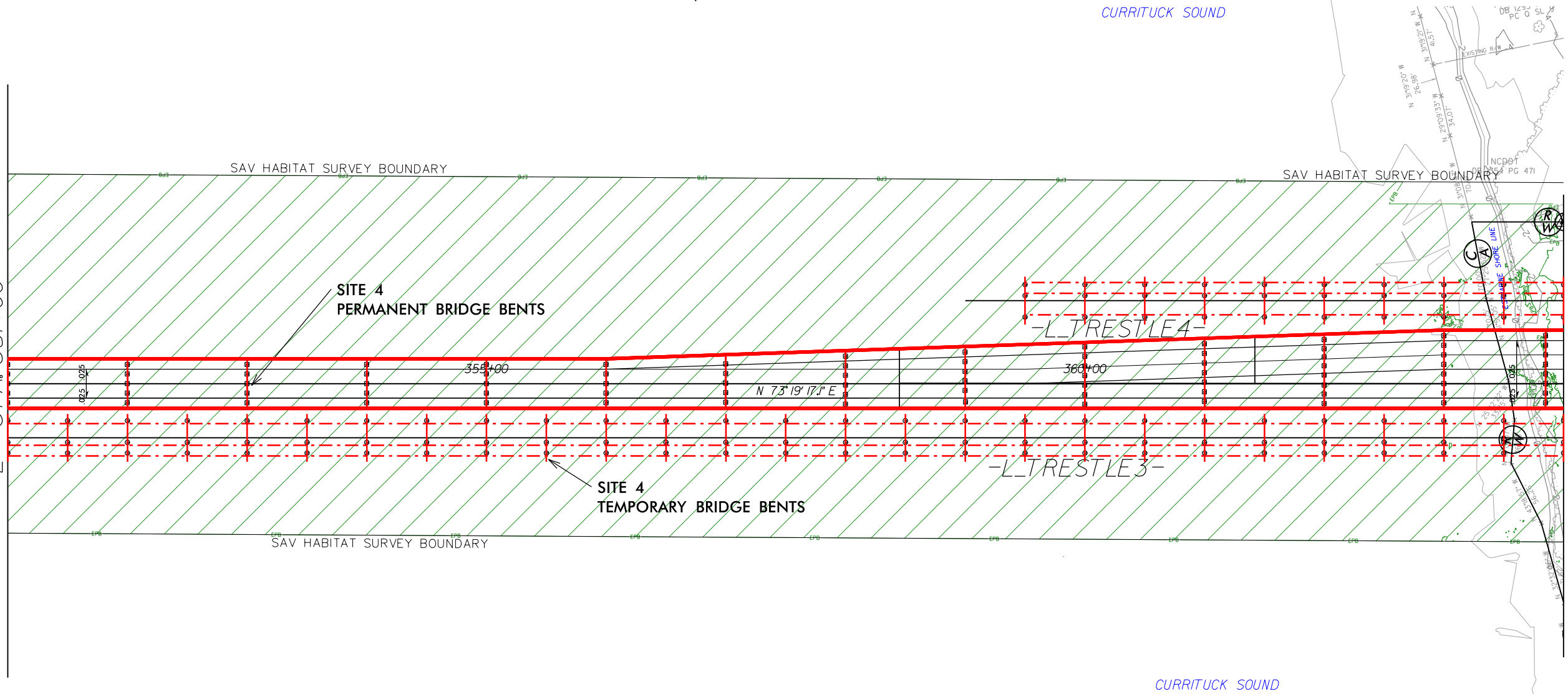
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER



MATCHLINE SHEET 16 -L- STA. 351+00

MATCHLINE SHEET 18 -L- STA. 364+00



CURRITUCK SOUND

SEE SHEET 35 FOR -L- PROFILE

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5/28/99

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159



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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

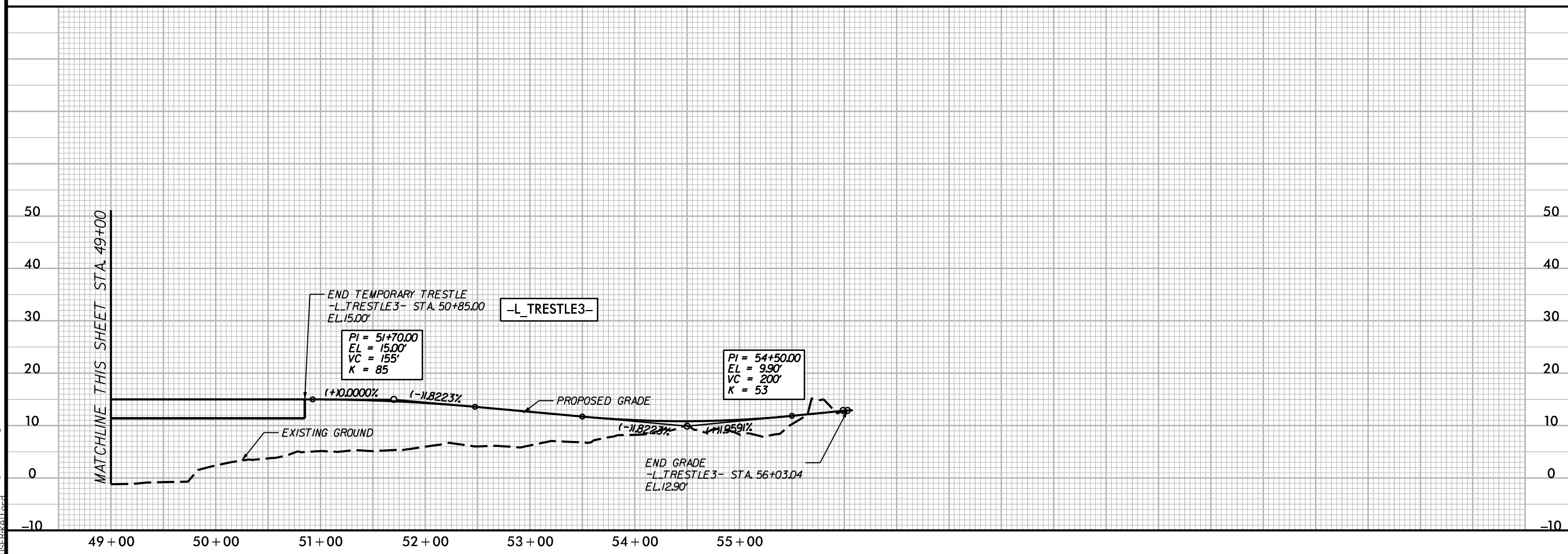
PROJECT REFERENCE NO. R-2576 SHEET NO. 55

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PERMIT DRAWING
SHEET 30 OF 63



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5/28/99

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2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159



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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.

R-2576

SHEET NO.

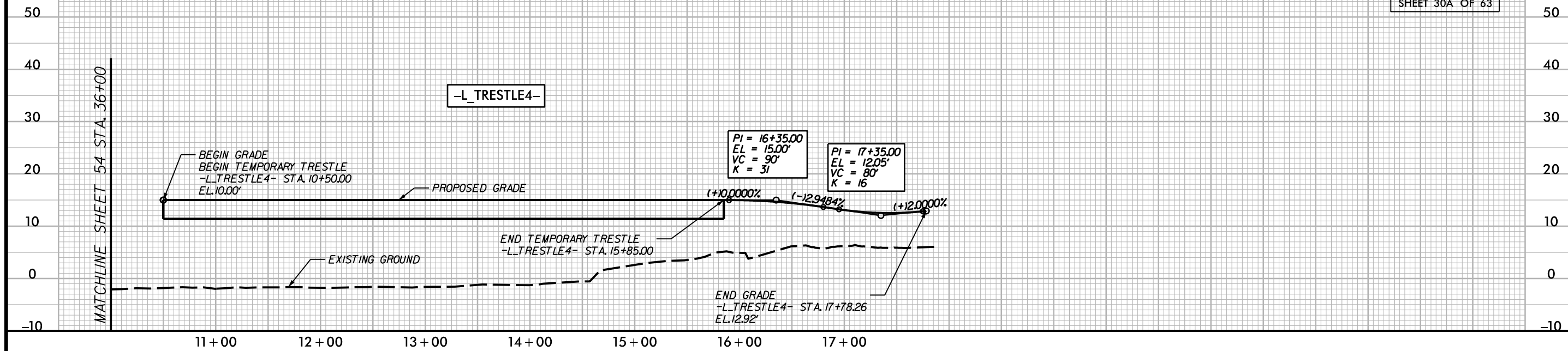
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ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

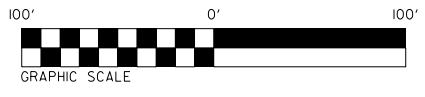
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UNLESS ALL SIGNATURES COMPLETED**

PERMIT DRAWING
SHEET 30A OF 63



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6/2/2019



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 RALEIGH, NC 27612
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 Raleigh, N.C. 27606
 License No. F-0377
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 Fax: 919 851 8107

ETHERILL ENGINEERING
 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576	SHEET NO. 18
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

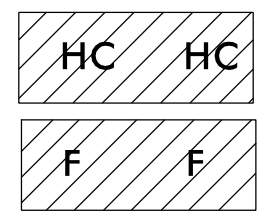
PAVED SHOULDER

PERMIT DRAWING SHEET 31 OF 63

MATCHLINE SHEET 17
-L- STA. 364+00

MATCHLINE SHEET 27
-Y5- STA. 13+00

MATCHLINE SHEET 26
-Y4- STA. 39+50



HC HC
DENOTES HAND CLEARING

F F
DENOTES FILL IN WETLAND

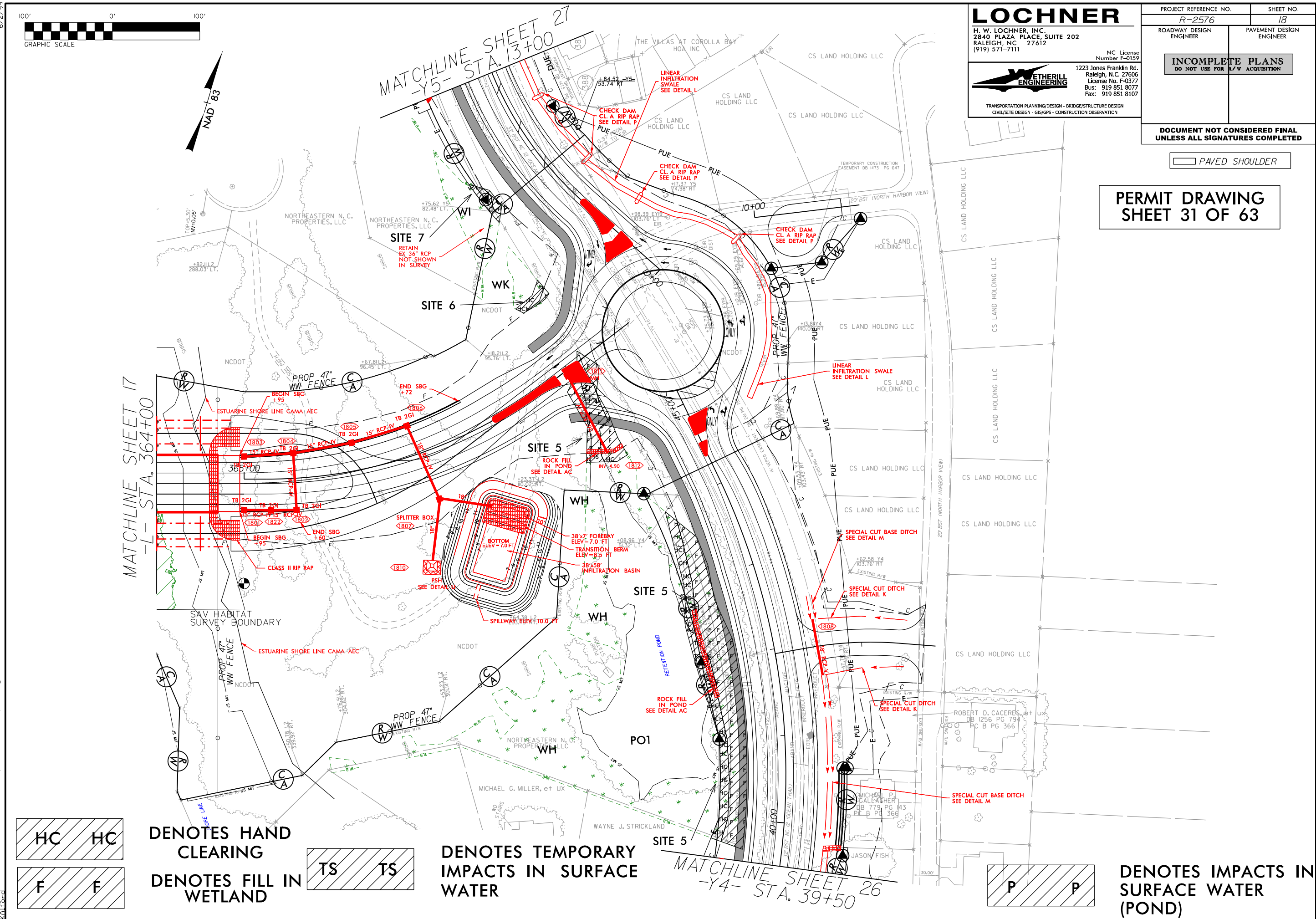


TS TS
DENOTES TEMPORARY IMPACTS IN SURFACE WATER

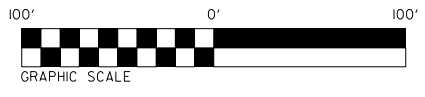


P P
DENOTES IMPACTS IN SURFACE WATER (POND)

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6/22/2019



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 H. W. LOCHNER, INC.
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 371-7111

NC License Number F-0159

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576	SHEET NO. 18
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

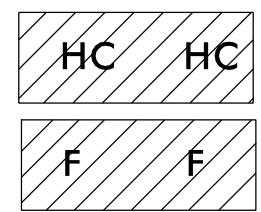
PAVED SHOULDER

PERMIT DRAWING SHEET 32 OF 63

MATCHLINE SHEET 17
-L- STA. 364+00

MATCHLINE SHEET 27
-Y5- STA. 13+00

MATCHLINE SHEET 26
-Y4- STA. 39+50



HC HC
DENOTES HAND CLEARING

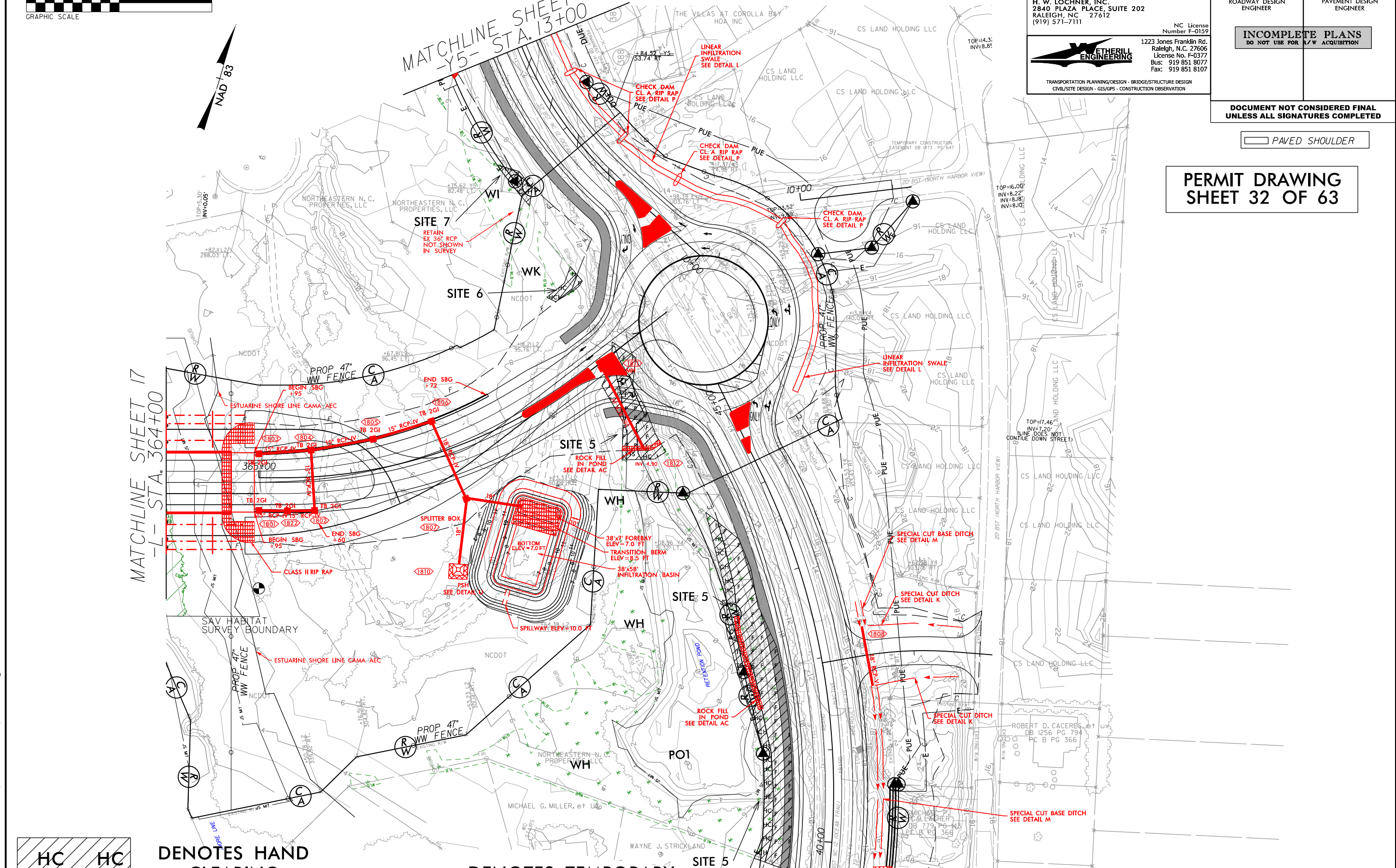
F F
DENOTES FILL IN WETLAND

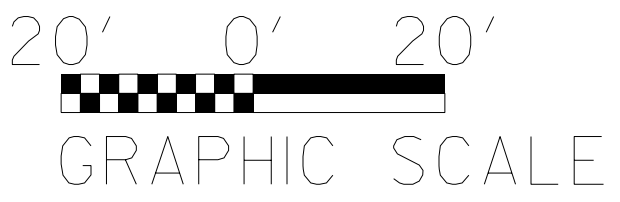
TS TS
DENOTES TEMPORARY IMPACTS IN SURFACE WATER



P P
DENOTES IMPACTS IN SURFACE WATER (POND)

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SITE 5

**ROCK FILL
IN POND
SEE DETAIL AC**

1812

WH

**R
W**

**38'x7' FOREBAY
ELEV = 7.0 FT**




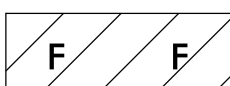
**TRANSITION BERM
ELEV = 8.5 FT**

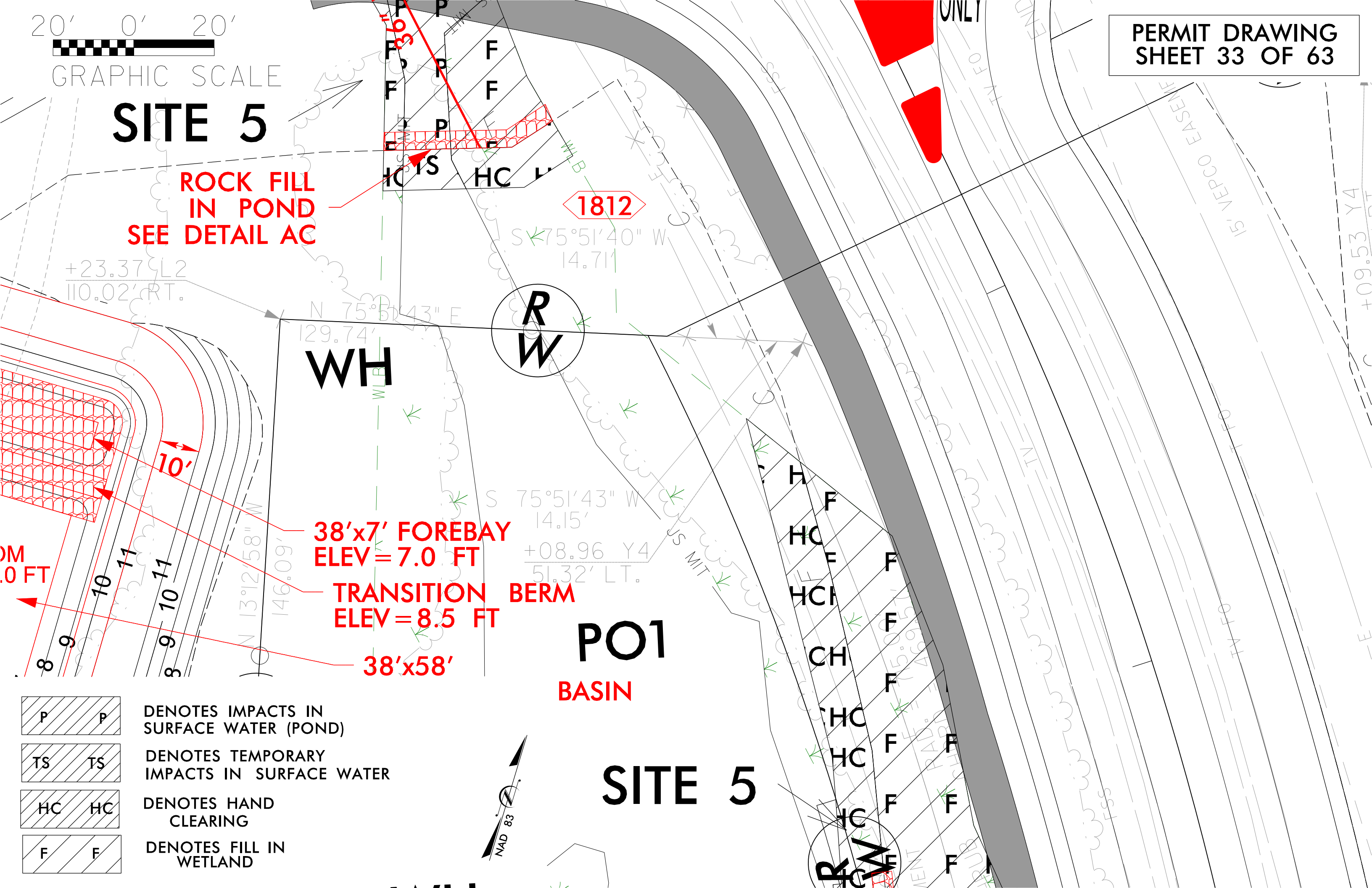
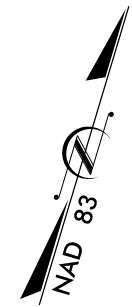
38'x58'

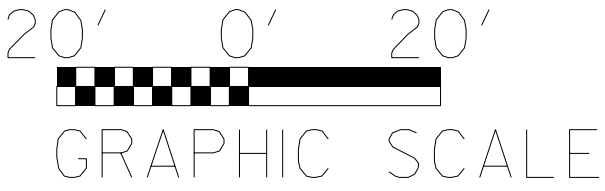
PO1

BASIN

SITE 5

-  DENOTES IMPACTS IN SURFACE WATER (POND)
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER
-  DENOTES HAND CLEARING
-  DENOTES FILL IN WETLAND





F F
HC HC
DENOTES FILL IN WETLAND
DENOTES HAND CLEARING

NORTHERN N. C. PROPERTIES, LLC

NORTHEASTERN N. C. PROPERTIES, LLC

SITE 7

RETAIN EX 36" RCP NOT SHOWN IN SURVEY

+75.62 Y5
82.48' LT.

R
W

WI

CHC
IC
HA

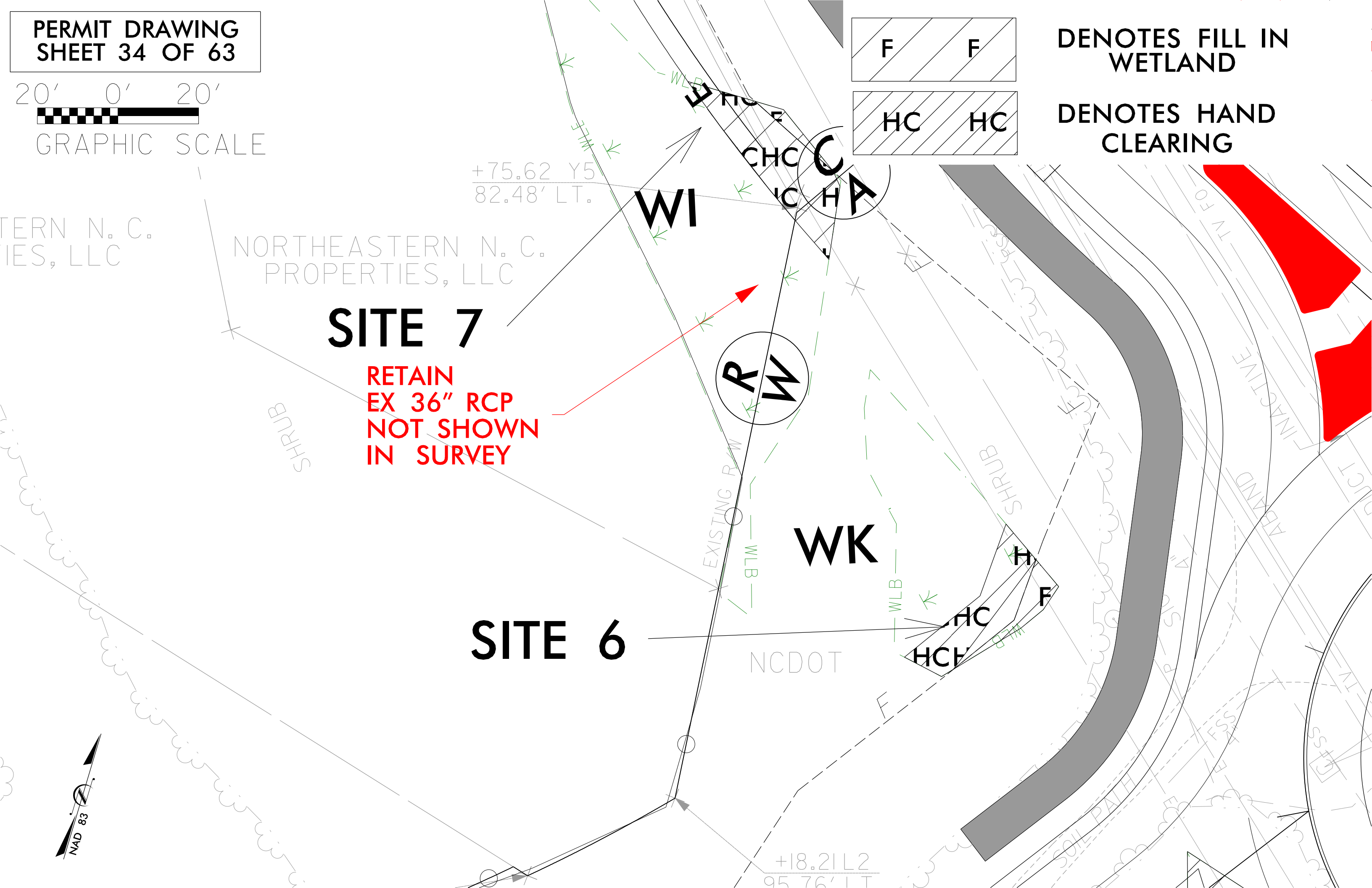
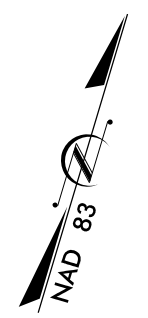
WK

SITE 6

NCDOT

H
HC
HCF
F

+18.21 L2
95.76' LT



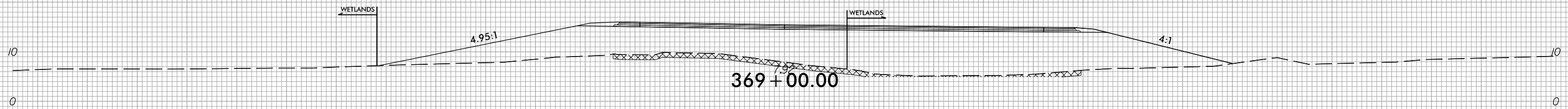
6/23/16

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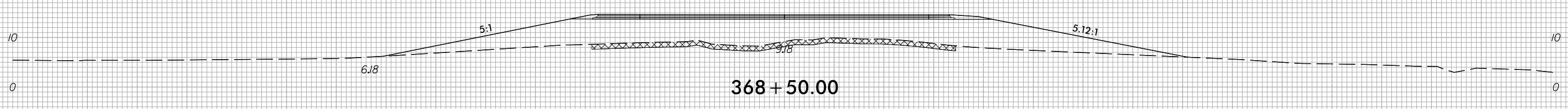
PERMIT DRAWING SHEET 35 OF 63

SITE 6

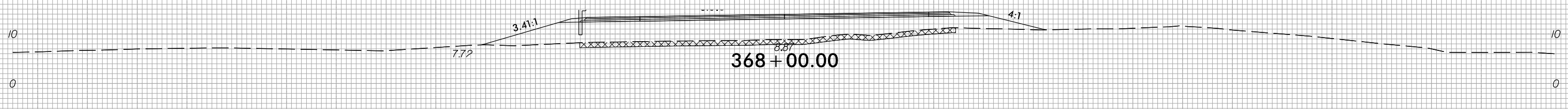
SITE 5



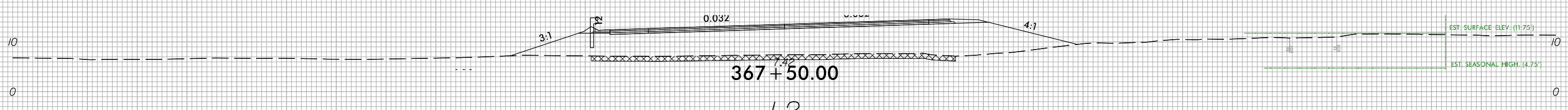
369 + 00.00



368 + 50.00



368 + 00.00



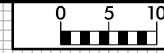
367 + 50.00

-L2-

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S:FILES

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6/23/16



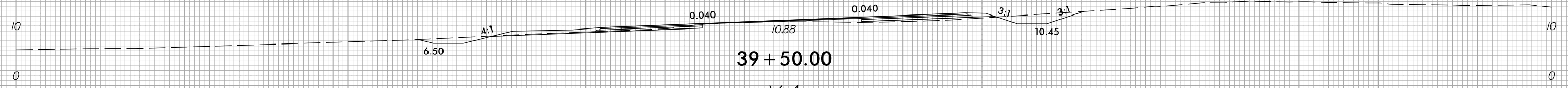
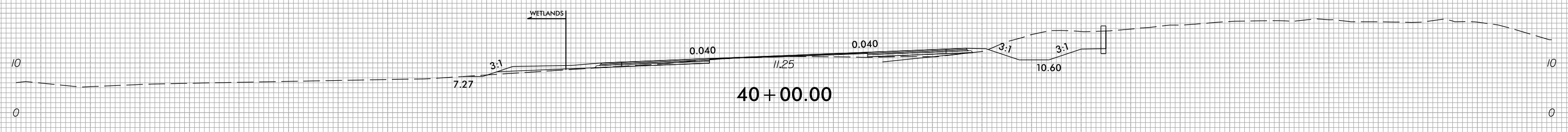
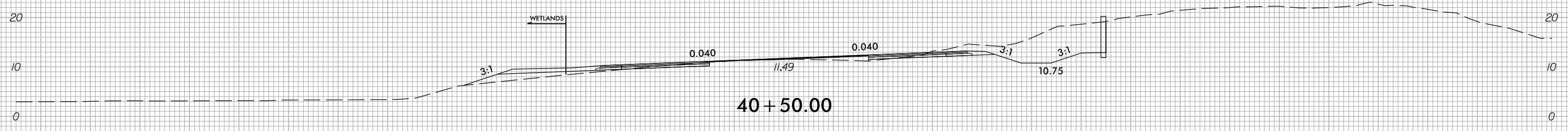
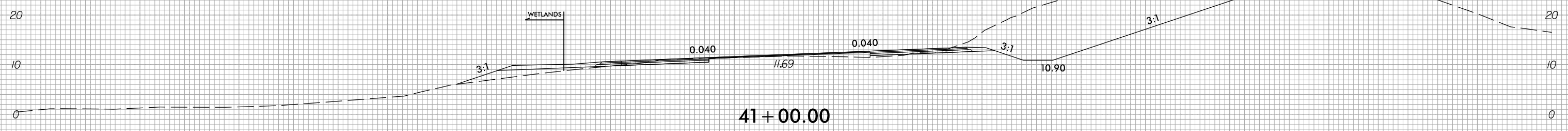
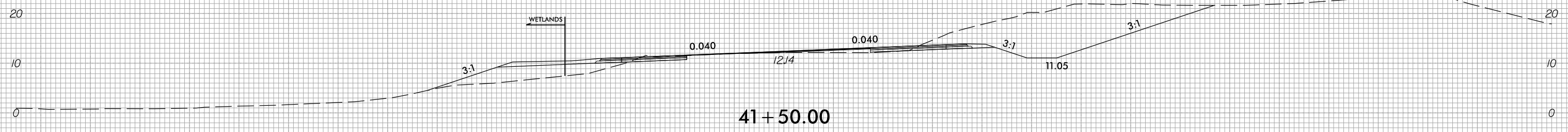
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R-2576

SHEET NO.
X-83

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PERMIT DRAWING
SHEET 36 OF 63

SITE 5



-Y4-

SDATES
SUSBRNAMES
SFILES

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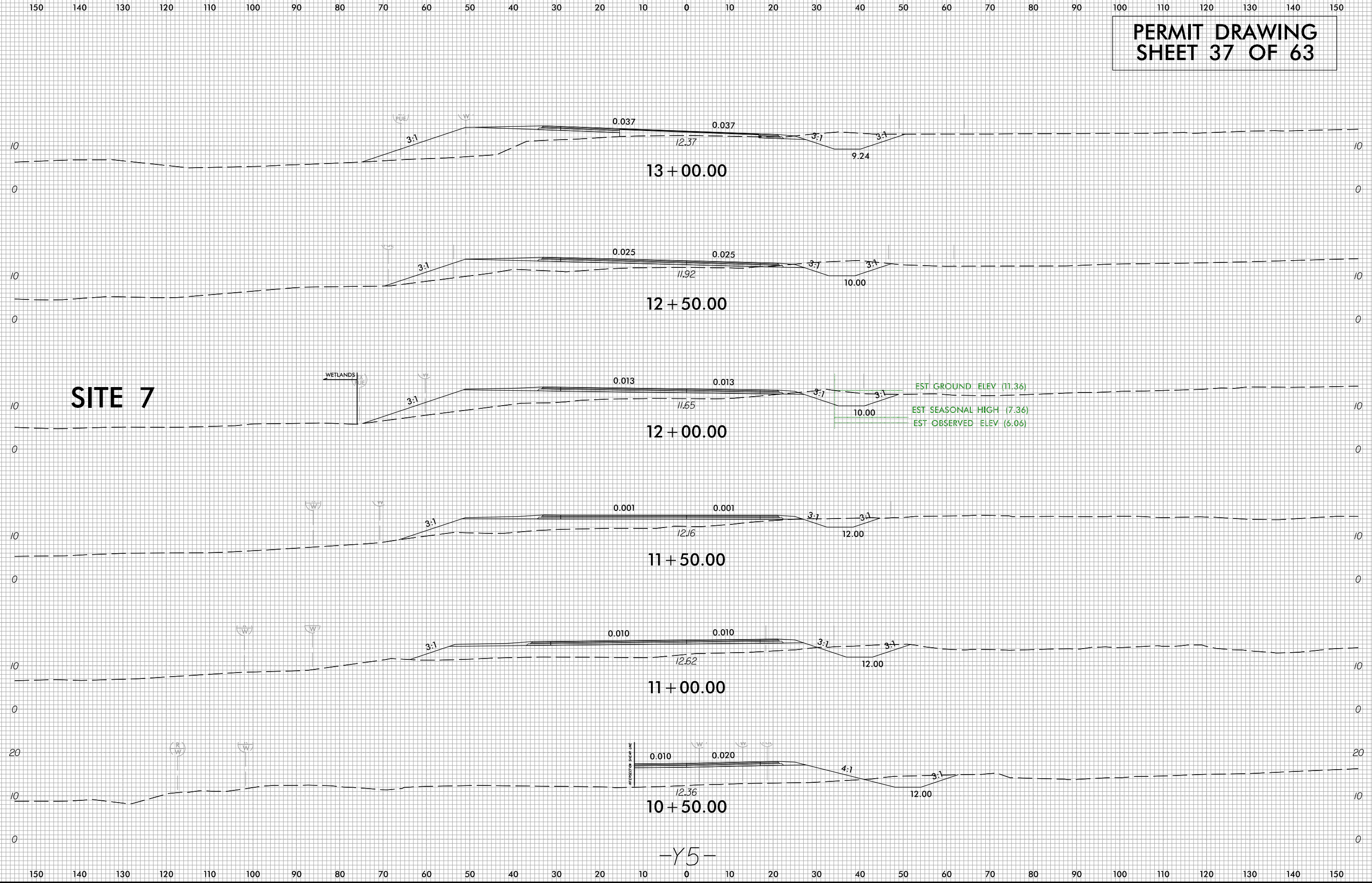
6/23/16



PROJ. REFERENCE NO.
R-2576

SHEET NO.
X-90

PERMIT DRAWING SHEET 37 OF 63

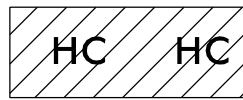


SITE 7

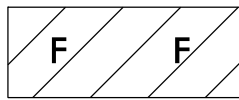
-Y5-

SDATES
CUSERNAMEIS
SFILES

6/2/2019



HC HC DENOTES HAND CLEARING



F F DENOTES FILL IN WETLAND

PERMIT DRAWING SHEET 38 OF 63

LOCHNER

H. W. LOCHNER, INC. 2840 PLAZA PLACE, SUITE 202 RALEIGH, NC 27612 (919) 571-7111

NC License Number F-0159



1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-03777 Bus: 919 851 8077 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

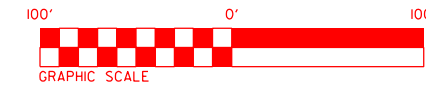
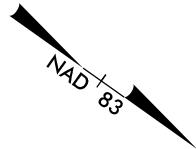
PROJECT REFERENCE NO. R-2576 SHEET NO. 19

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

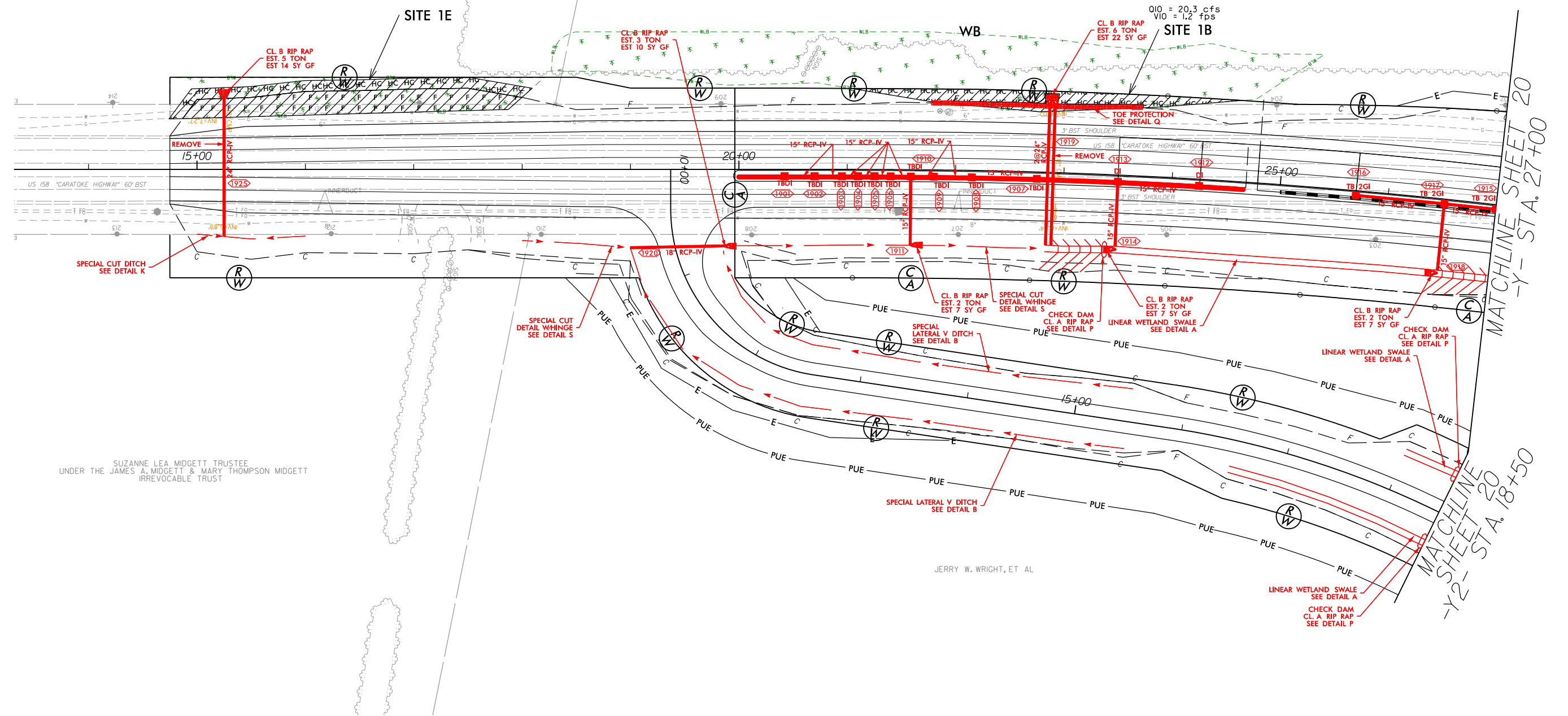
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER



SUZANNE LEA MIDGETT TRUSTEE UNDER THE JAMES A. MIDGETT & MARY THOMPSON MIDGETT IRREVOCABLE TRUST

JERRY W. WRIGHT, ET AL



MATCHLINE SHEET 20 -Y- STA. 27+00

MATCHLINE SHEET 20 -Y2- STA. 18+50

SEE SHEET 36 FOR -Y- PROFILE SEE SHEET 45 FOR -Y2- PROFILE

I:\2019\2023\0611res\PERMITS-Environmental\psh\R2576.HYD_psh19.dgn

6/2/2019

HC HC DENOTES HAND CLEARING

F F DENOTES FILL IN WETLAND

PERMIT DRAWING SHEET 39 OF 63

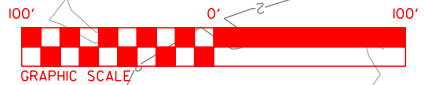
LOCHNER
 H. W. LOCHNER, INC.
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 571-7111

NC License Number F-0159

ETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

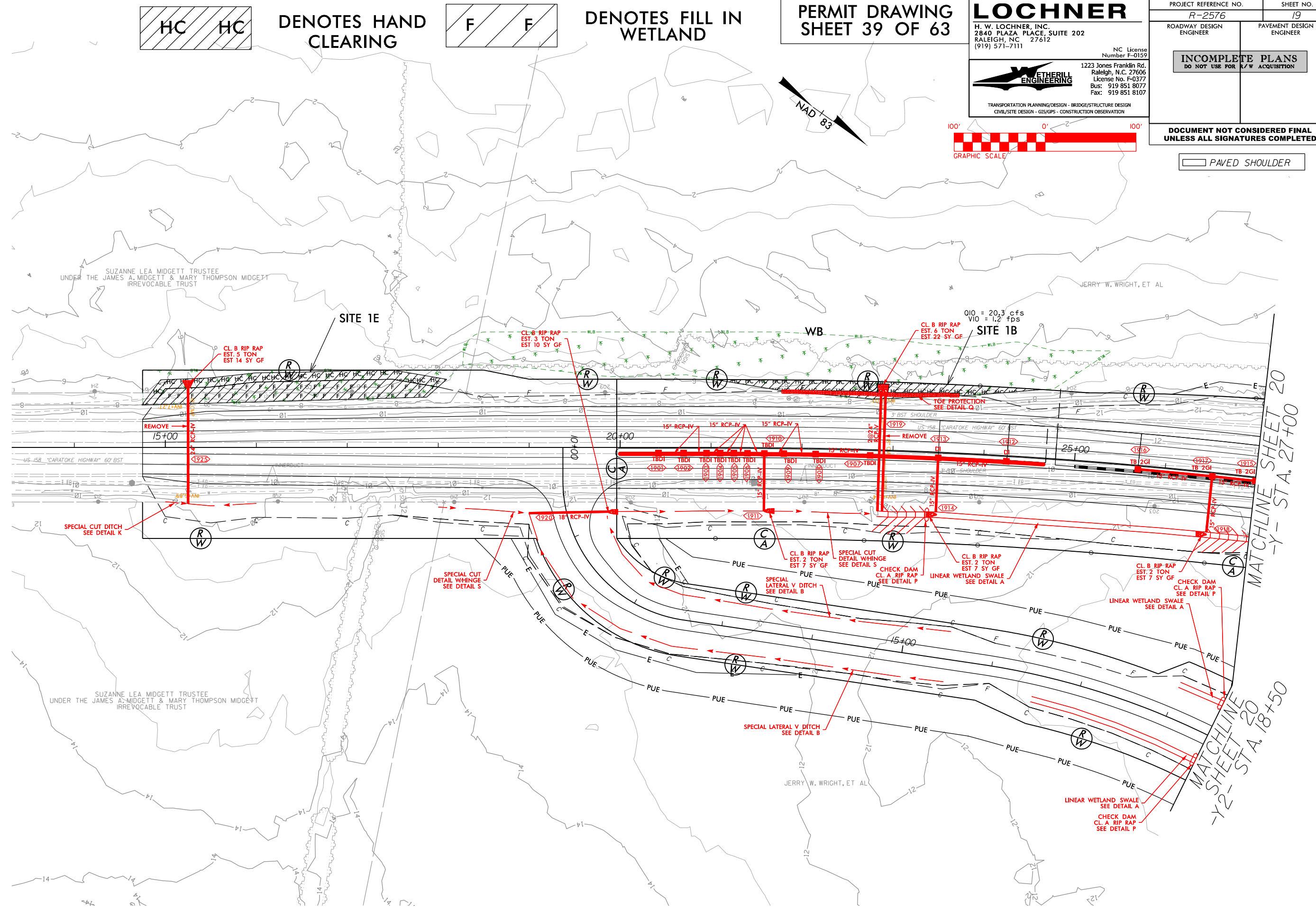
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576	SHEET NO. 19
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	



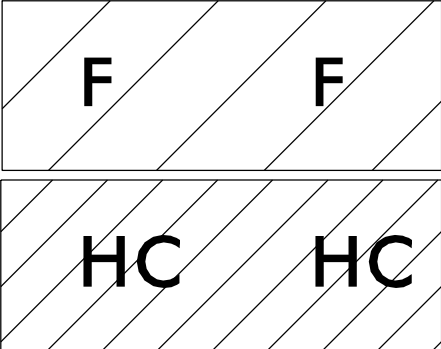
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER



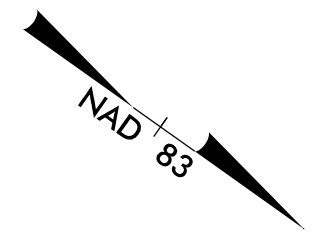
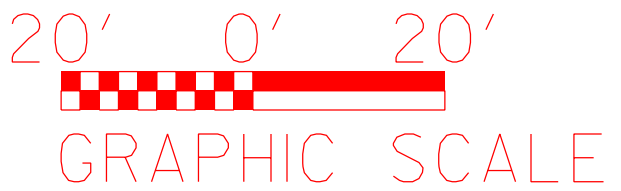
D:\2019\PERMITS-Environmental\psh\R2576.HYD_psh19_com.dgn

SEE SHEET 36 FOR -Y- PROFILE
SEE SHEET 45 FOR -Y2- PROFILE



DENOTES FILL IN WETLAND

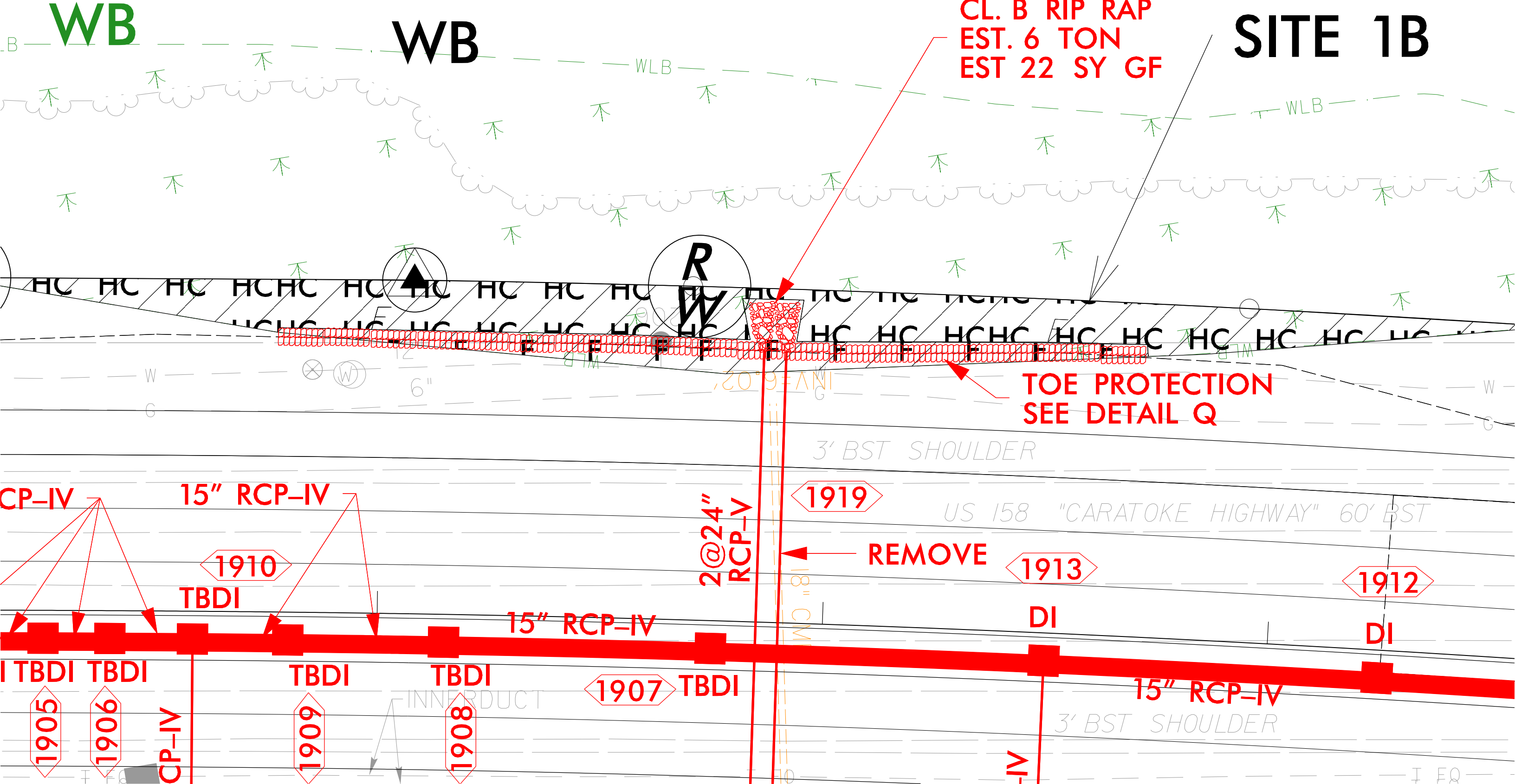
DENOTES HAND CLEARING



**PERMIT DRAWING
SHEET 40 OF 63**

Q10 = 20.3 cfs
V10 = 1.2 fps

SITE 1B



**CL. B RIP RAP
EST. 6 TON
EST 22 SY GF**

**TOE PROTECTION
SEE DETAIL Q**

REMOVE

CP-IV 15" RCP-IV

15" RCP-IV

2@24" RCP-V

15" RCP-IV

TBDI

TBDI

TBDI

TBDI

TBDI

DI

DI

1905

1906

1909

1908

1907

1919

1913

1912

US 158 "CARATOKE HIGHWAY" 60' BST

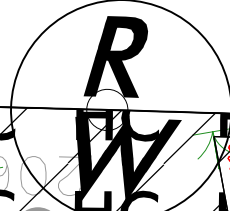
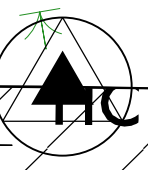
3' BST SHOULDER

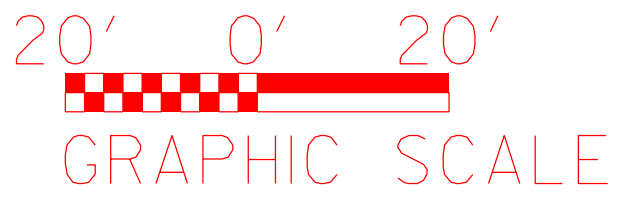
3' BST SHOULDER

6"

20' 9" INV

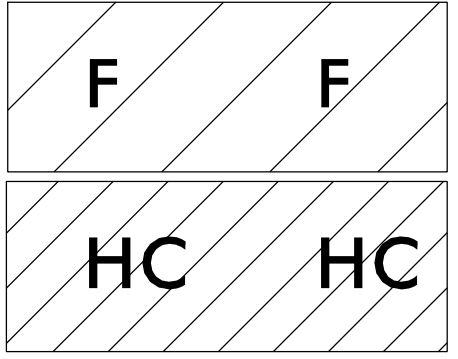
18" CW





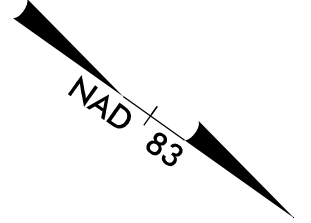
PERMIT DRAWING
SHEET 40A OF 63

14



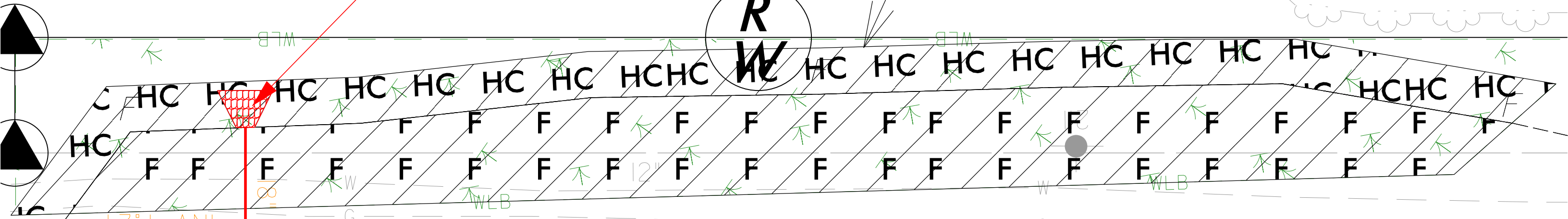
DENOTES FILL IN WETLAND
DENOTES HAND CLEARING

SITE 1E



CL. B RIP RAP
EST. 5 TON
EST 14 SY GF

R
W



REMOVE

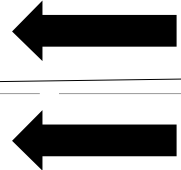
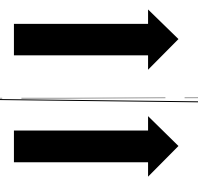
15+00

24" RCP-IV

1925



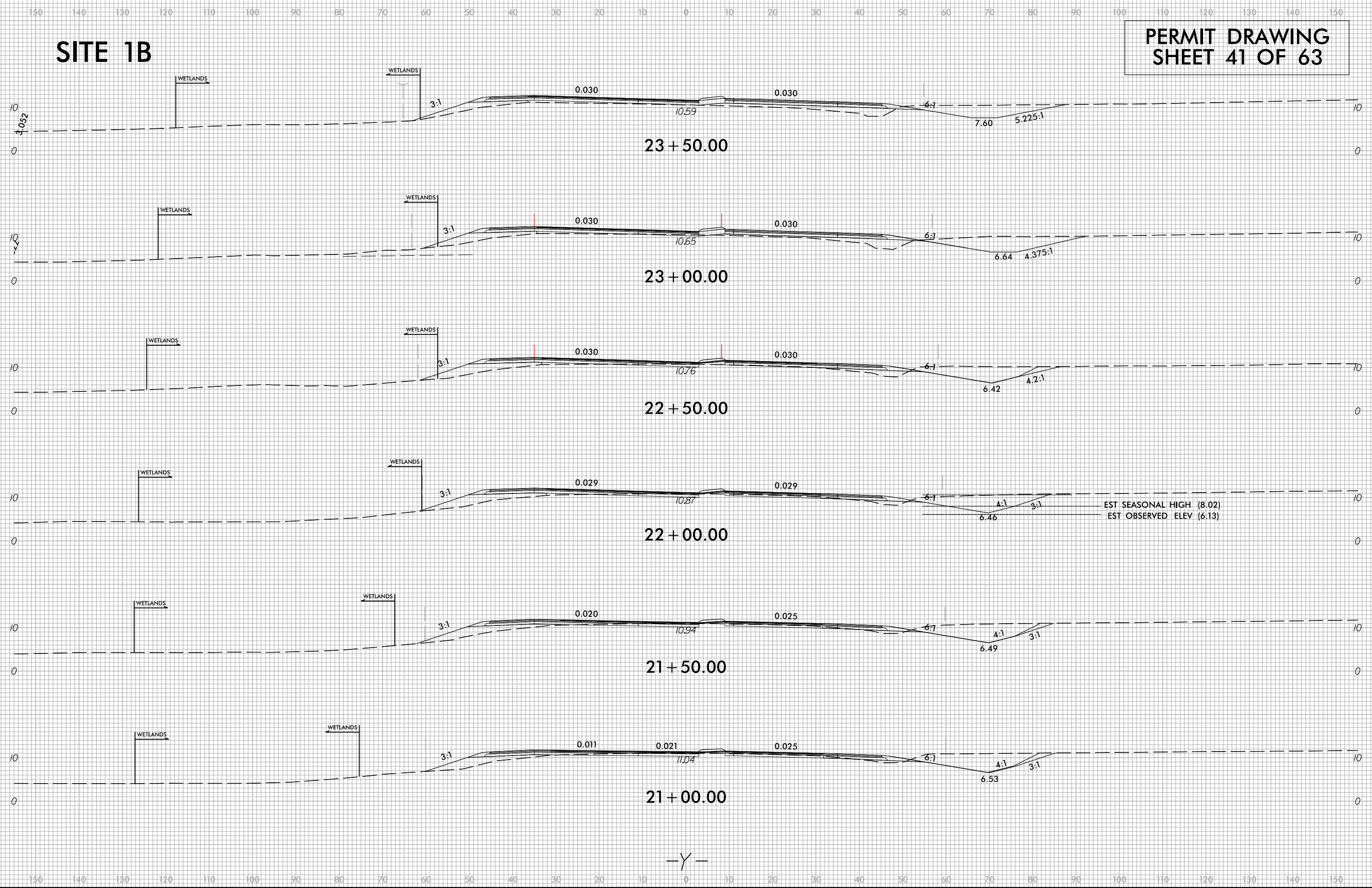
INNERDUCT



6/23/16

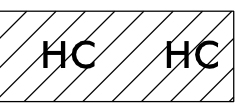
SITE 1B

PERMIT DRAWING SHEET 41 OF 63



-Y-

6/2/2019



HC HC DENOTES HAND CLEARING



F F DENOTES FILL IN WETLAND

PERMIT DRAWING SHEET 42 OF 63

LOCHNER

H. W. LOCHNER, INC. 2840 PLAZA PLACE, SUITE 202 RALEIGH, NC 27612 (919) 571-7111



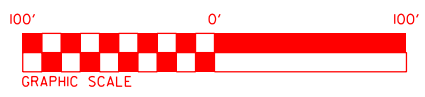
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576 SHEET NO. 22

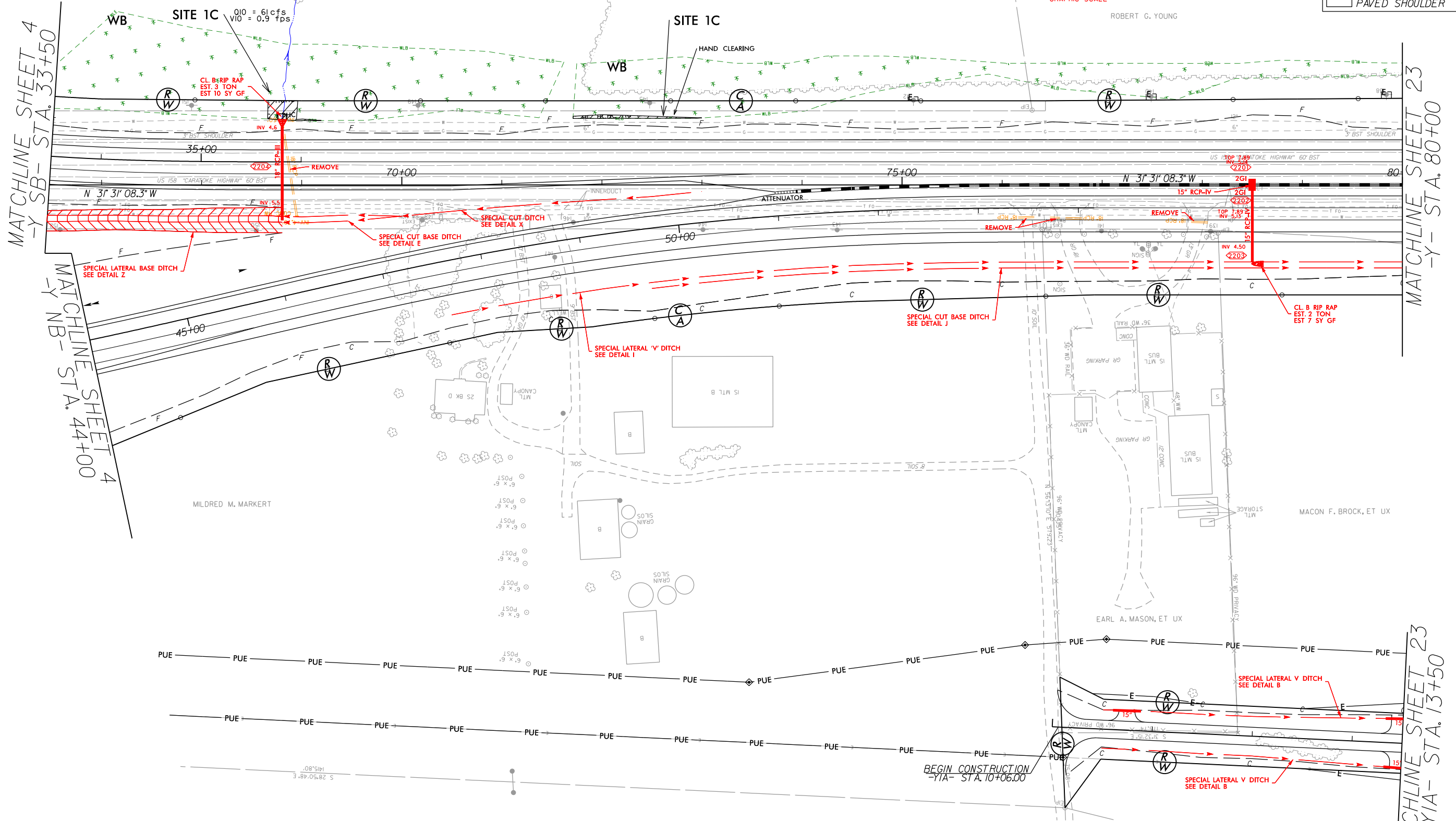
ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



ROBERT G. YOUNG



MATCHLINE SHEET 4 -Y- SB- STA. 33+50

MATCHLINE SHEET 4 -Y- NB- STA. 44+00

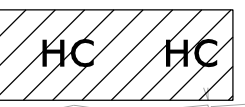
MATCHLINE SHEET 23 -Y- STA. 80+00

MATCHLINE SHEET 23 -YIA- STA. 13+50

SEE SHEET 37-38 FOR -Y- PROFILE SEE SHEET 40-41 FOR -Y-NB- PROFILE SEE SHEET 39 FOR -Y-SB- PROFILE SEE SHEET 44 FOR -YIA- PROFILE

10/17/2023 R:\Hydro\publics\PERMITS-Environmental\psh\R2576.HYD_psh22.dgn

6/2/09



HC HC DENOTES HAND CLEARING



F F DENOTES FILL IN WETLAND

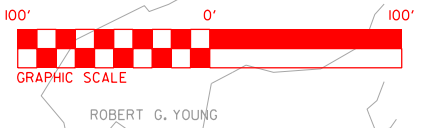
PERMIT DRAWING SHEET 43 OF 63

LOCHNER
 H. W. LOCHNER, INC.
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 571-7111

NC License Number F-0159
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

ETHERILL ENGINEERING
 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576	SHEET NO. 22
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	



DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

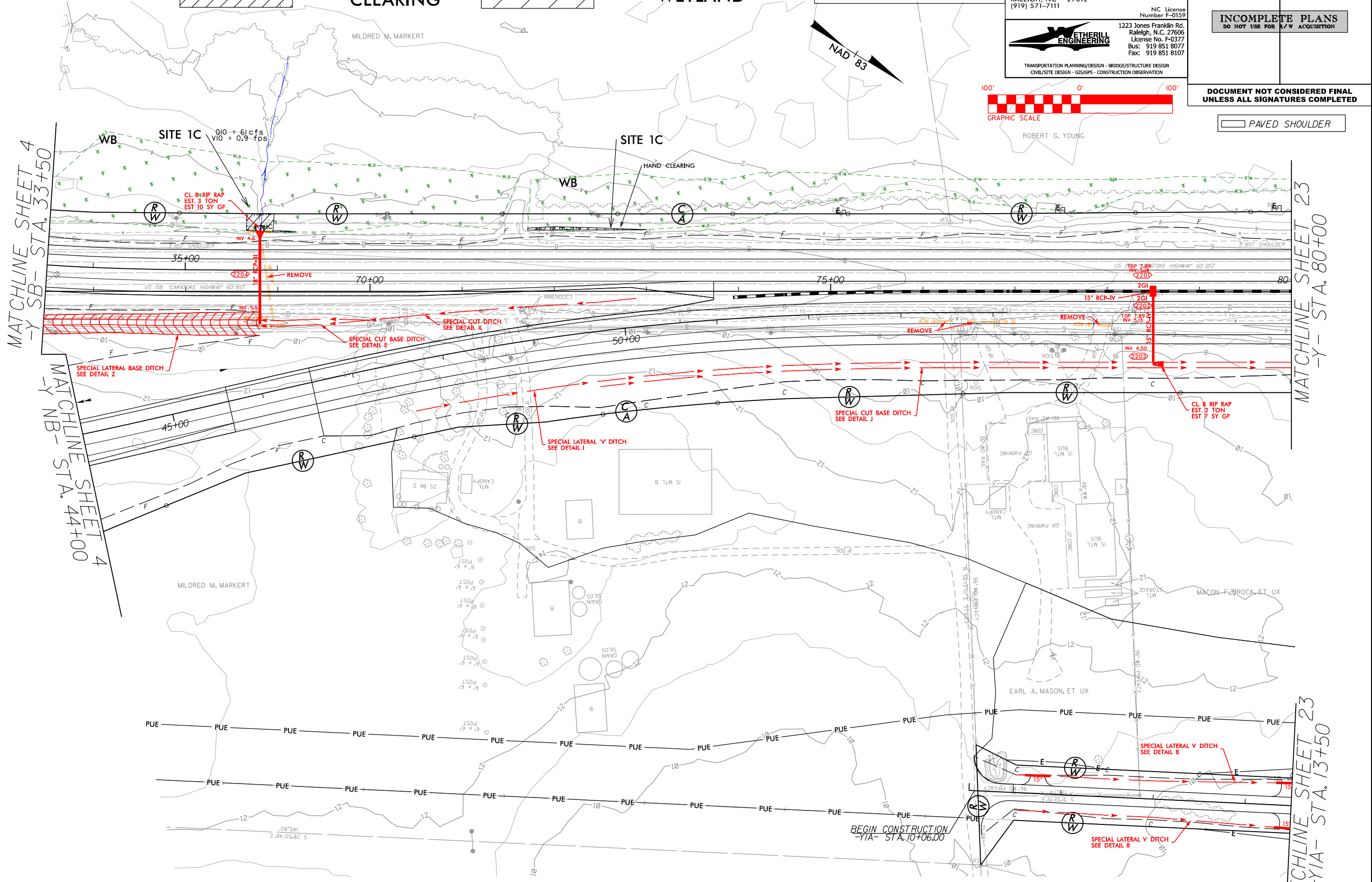
PAVED SHOULDER

MATCHLINE SHEET 4 -Y-SB- STA. 33+50

MATCHLINE SHEET 4 -Y-NB- STA. 44+00

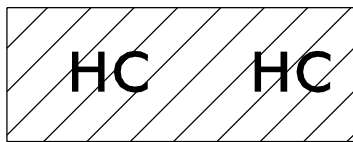
MATCHLINE SHEET 23 -Y- STA. 80+00

MATCHLINE SHEET 23 -YIA- STA. 13+50

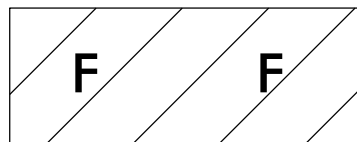


SEE SHEET 37-38 FOR -Y- PROFILE SEE SHEET 40-41 FOR -Y-NB- PROFILE
 SEE SHEET 39 FOR -Y-SB- PROFILE SEE SHEET 44 FOR -YIA- PROFILE

10/17/2023
 R:\Hwy\public\PERMITS-Environmental\psh\R2576-HYD_psh22.com.dgn
 K21100

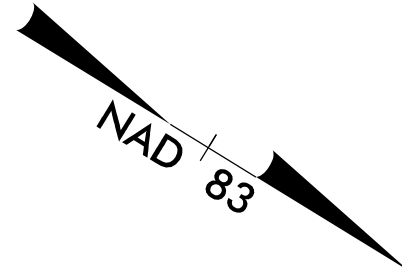


DENOTES HAND CLEARING



DENOTES FILL IN WETLAND

PERMIT DRAWING SHEET 44 OF 63



SITE 1C

Q10 = 61 cfs
V10 = 0.9 fps

SITE 1C

HAND CLEARING

WB

CA

+06.00 -Y-
84' & 88' LT

+16.00 -Y-
84' & 88' LT

CL. B RIP RAP
EST. 3 TON
EST 10 SY GF

R
W

R
W

INV 4.6

3' BST SHOULDER

35+00

REMOVE

70+00

US 158 "CARATOKE HIGHWAY" 60' BST

75+00

8.3" W

INV 5.5

INV 4

SPECIAL CUT DITCH
SEE DETAIL X

SPECIAL CUT BASE DITCH
SEE DETAIL E

SPECIAL LATERAL 'V' DITCH
SEE DETAIL I

SPECIAL CUT BASE DITCH
SEE DETAIL J

AL BASE DITCH

45+00

R
W

R
W

C
A

R
W

25 BK D

MTL CANOPY

IS MTL B

B

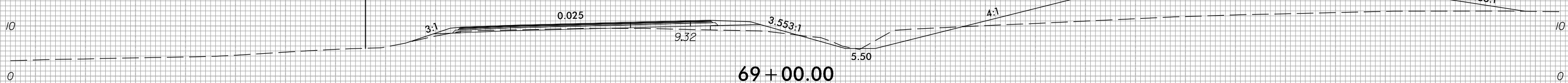
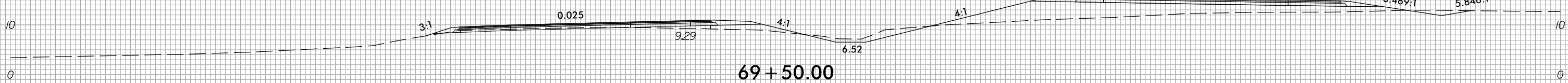
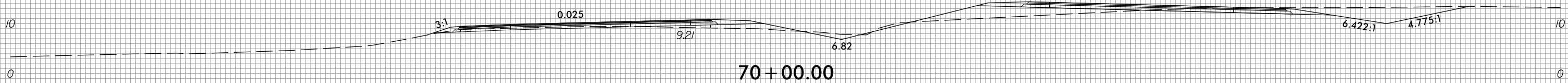
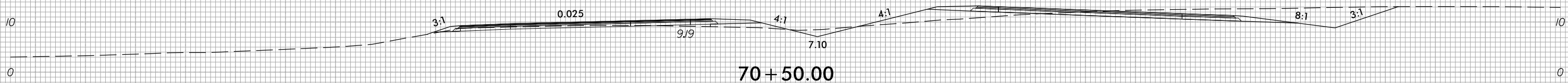
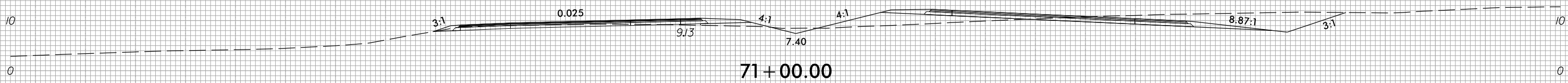
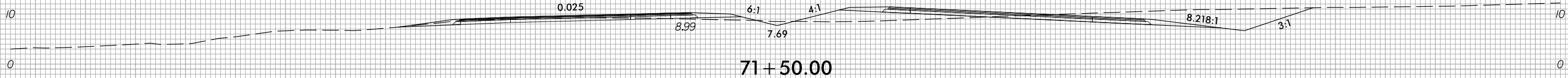
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6/23/16

0 5 10	PROJ. REFERENCE NO. R-2576	SHEET NO. X-22
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PERMIT DRAWING
SHEET 45 OF 63

130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170



SITE 1C

WETLANDS

-Y-

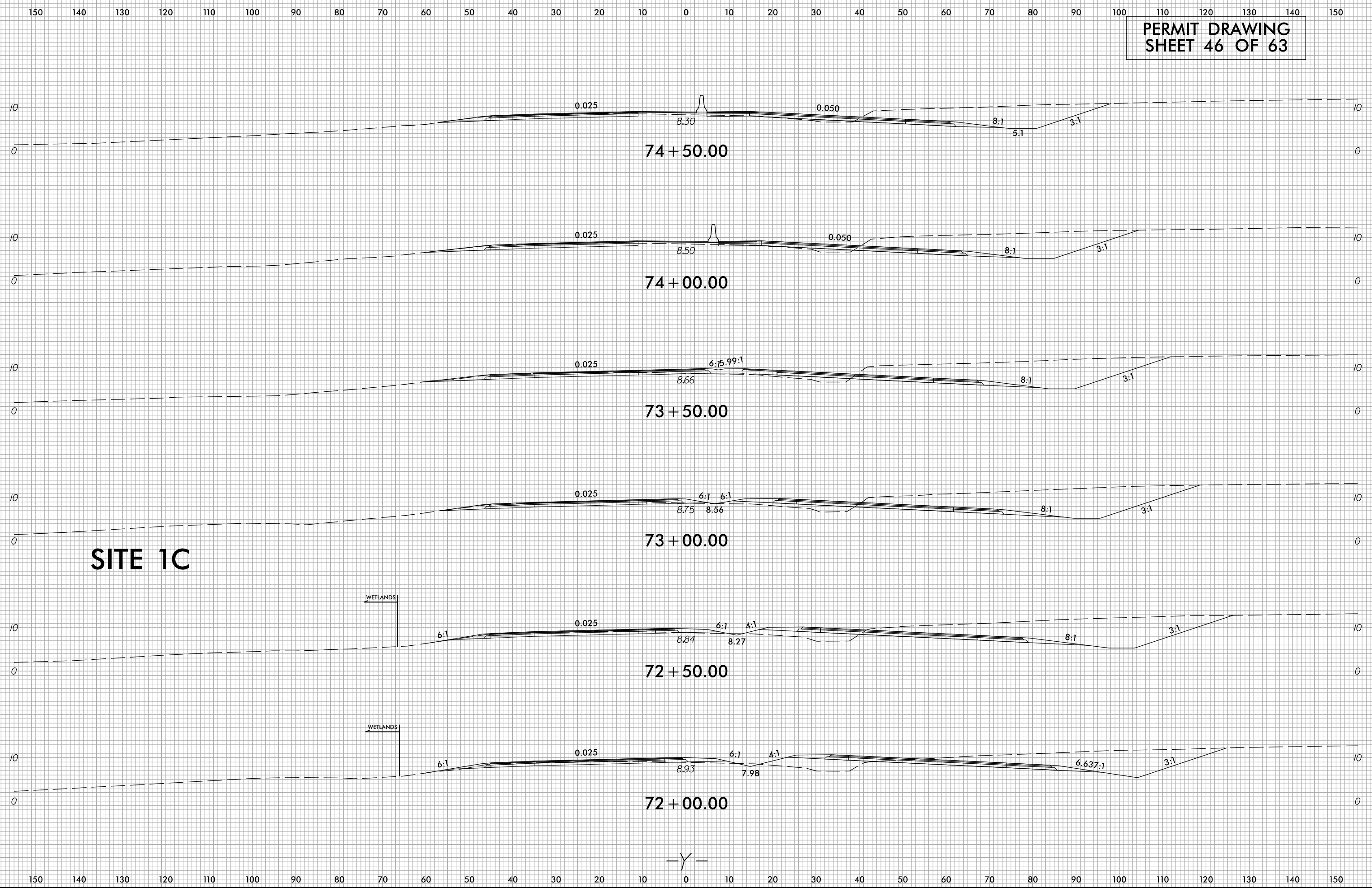
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R:\Hydro\p\ites\CADD\XPL\R2576_rdy_XPL_Y.dgn

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6/23/16

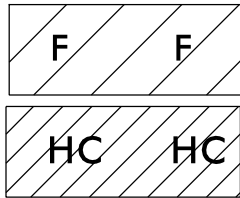
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PERMIT DRAWING
SHEET 46 OF 63



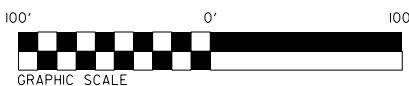
10/17/2023
P:\Hydro\p\ites\CADD\XPL\R2576_rdy_XPL.y.dgn
R2110.d

6/2/2019



F DENOTES FILL IN WETLAND

HC DENOTES HAND CLEARING



PERMIT DRAWING
SHEET 47 OF 63

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107



TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

COINJOCK DEVELOPMENT COMPANY, INC

PROJECT REFERENCE NO. **R-2576** SHEET NO. **23**

ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER

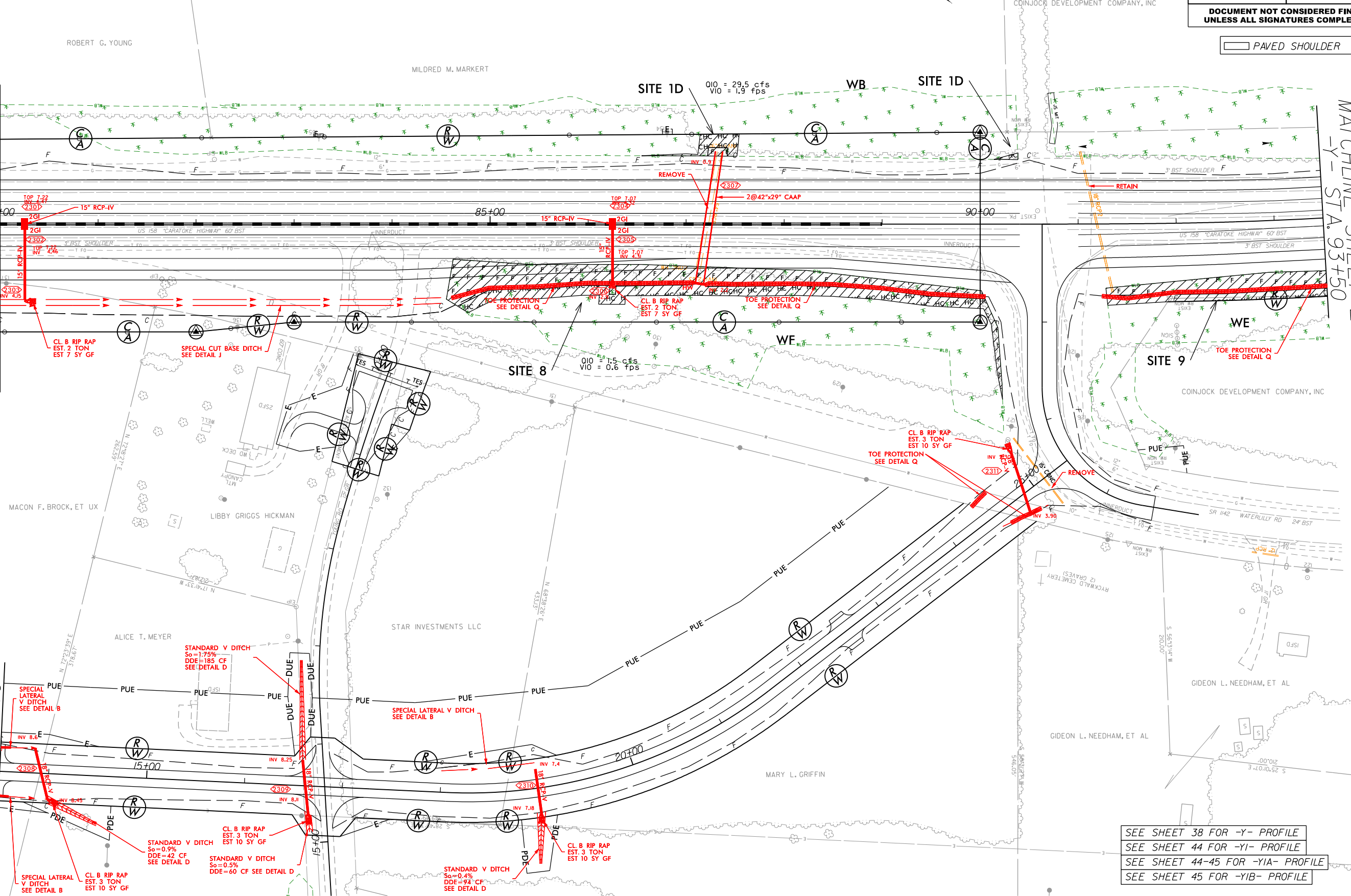
MATCHLINE SHEET 22
-Y- STA. 80+00

MATCHLINE SHEET 24
-Y- STA. 93+50

MATCHLINE SHEET 22
-YIA- STA. 13+50

SEE SHEET 38 FOR -Y- PROFILE
SEE SHEET 44 FOR -YI- PROFILE
SEE SHEET 44-45 FOR -YIA- PROFILE
SEE SHEET 45 FOR -YIB- PROFILE

I:\Projects\2023\Public\PERMITS-Environmental\psh\R2576.HYD_psh23.dgn



ROBERT G. YOUNG

MILDRED M. MARKERT

SITE 1D Q10 = 29.5 cfs
V10 = 1.9 fps

WB SITE 1D

SITE 8 Q10 = 1.5 cfs
V10 = 0.6 fps

SITE 9

COINJOCK DEVELOPMENT COMPANY, INC

MACON F. BROCK, ET UX

LIBBY GRIGGS HICKMAN

STAR INVESTMENTS LLC

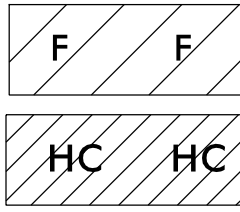
ALICE T. MEYER

MARY L. GRIFFIN

GIDEON L. NEEDHAM, ET AL

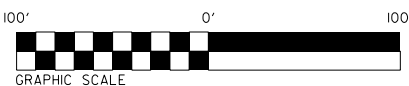
GIDEON L. NEEDHAM, ET AL

6/2/2019



F F
DENOTES FILL IN WETLAND

HC HC
DENOTES HAND CLEARING



PERMIT DRAWING
SHEET 48 OF 63

LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159



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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

COINJOCK DEVELOPMENT COMPANY, INC

PROJECT REFERENCE NO. **R-2576** SHEET NO. **23**

ROADWAY DESIGN ENGINEER PAYMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



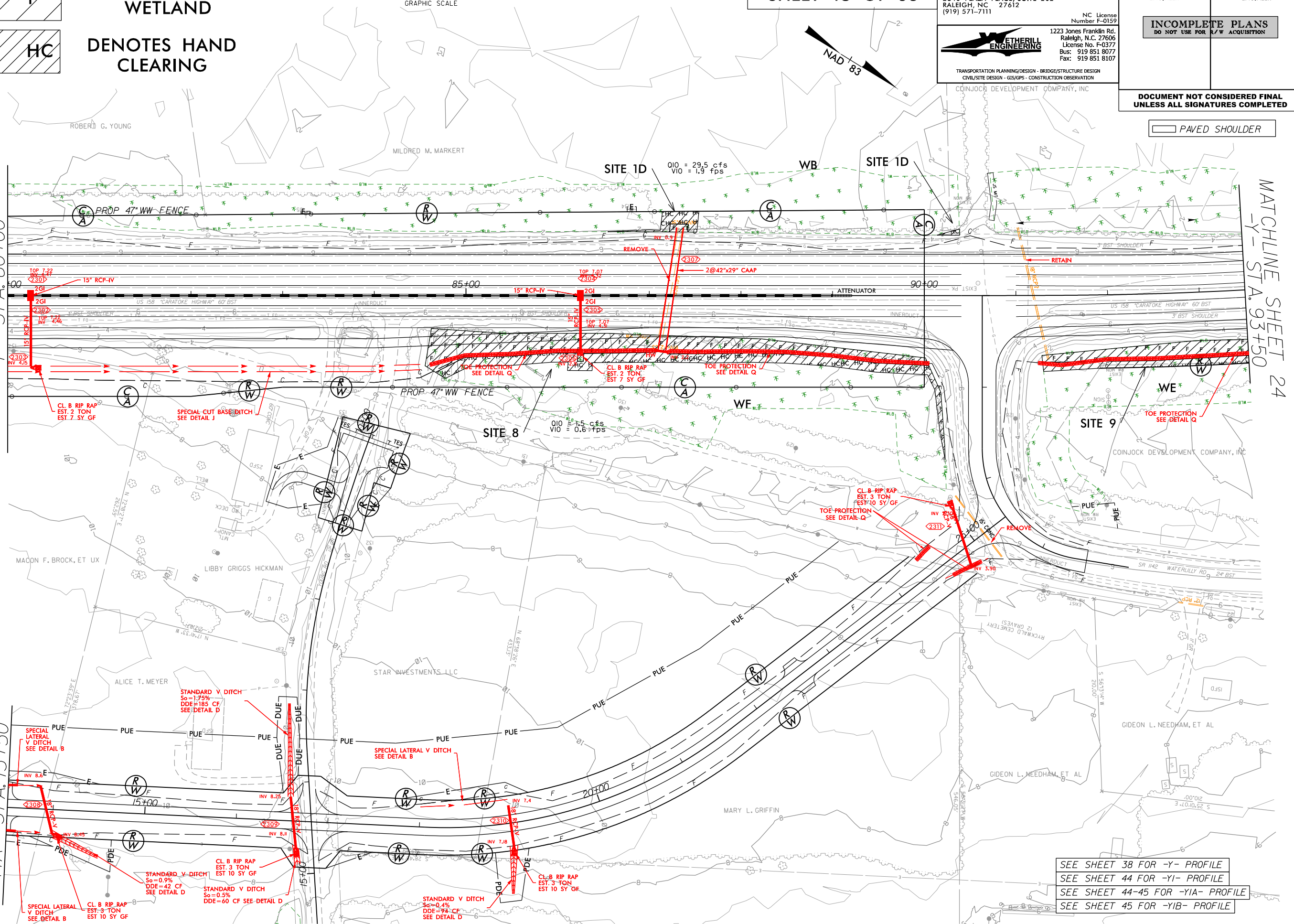
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-Y- STA. 80+00

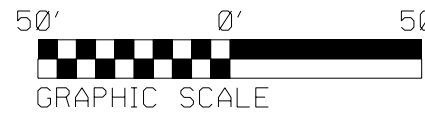
MATCHLINE SHEET 24
-Y- STA. 93+50

MATCHLINE SHEET 22
-YIA- STA. 13+50

SEE SHEET 38 FOR -Y- PROFILE
SEE SHEET 44 FOR -YI- PROFILE
SEE SHEET 44-45 FOR -YIA- PROFILE
SEE SHEET 45 FOR -YIB- PROFILE

I:\17\2023\RA\Hwy\public\PERMITS-Environmental\psh\R2576.HYD_psh23.com.dgn



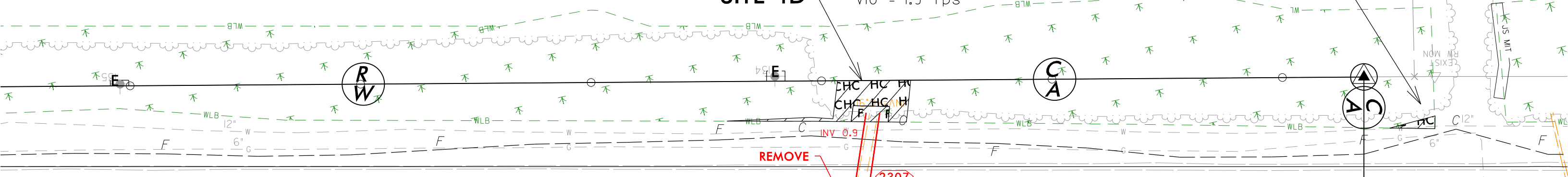


SITE 1D

Q10 = 29.5 cfs
V10 = 1.9 fps

WB

SITE 1D



85+00

90+00

15" RCP-IV

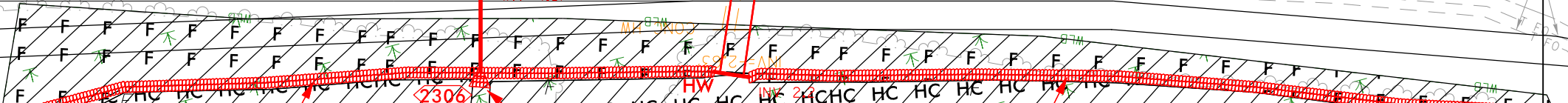
TOP 7.07
INV 4.32
2304

2307

2@42"x29" CAAP

TOP 7.07
INV 4.31
2305

15" RCP-IV



TOE PROTECTION
SEE DETAIL Q

CL. B RIP RAP
EST. 2 TON
EST 7 SY GF

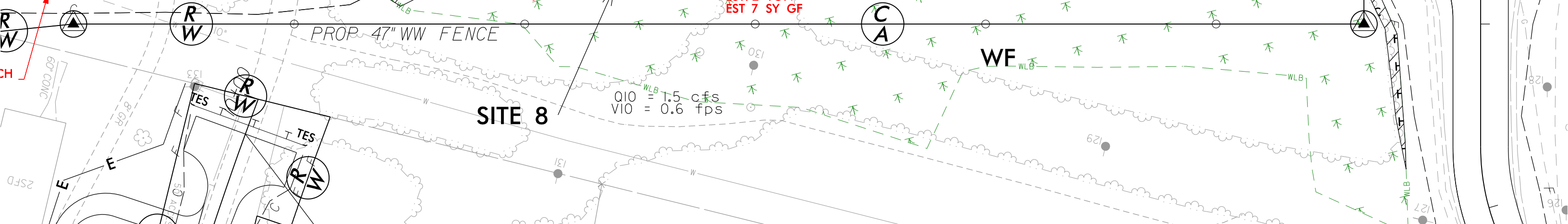
TOE PROTECTION
SEE DETAIL Q

PROP. 47" WW FENCE

SITE 8

Q10 = 1.5 cfs
V10 = 0.6 fps

WE



BEGIN CONSTRUCTION
-YIB- STA. 10+20.00

CL. B RIP RAP
EST. 3 TON
EST 10 SY GF

TOE PROTECTION
SEE DETAIL Q

2311

INV 3.90

REMOVE



DENOTES HAND
CLEARING



DENOTES FILL IN
WETLAND

END CONSTRUCTION
-YIB- STA. 11+15.00

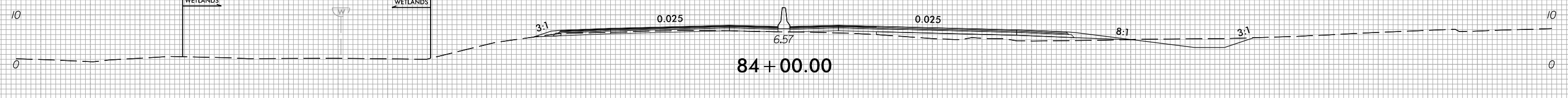
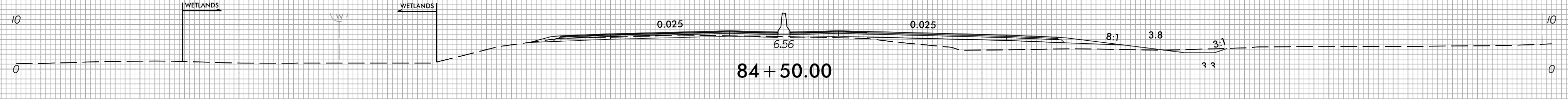
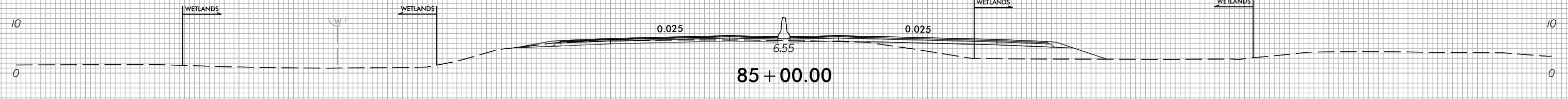
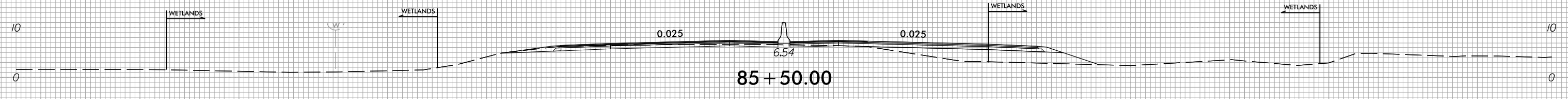
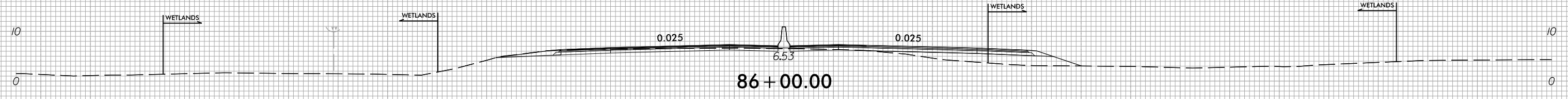
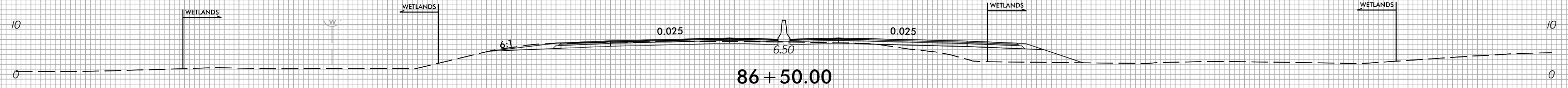
6/23/16

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SITE 1D

SITE 8

**PERMIT DRAWING
SHEET 50 OF 63**

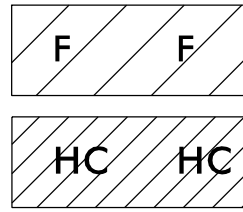


-Y-

STATES
SURVIVORS
FILES

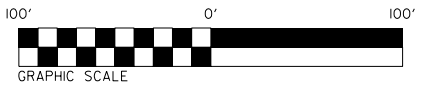
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6/2/2019



DENOTES FILL IN WETLAND

DENOTES HAND CLEARING



PERMIT DRAWING SHEET 51 OF 63

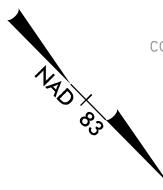
LOCHNER
 H. W. LOCHNER, INC.
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 571-7111

NC License Number F-0159

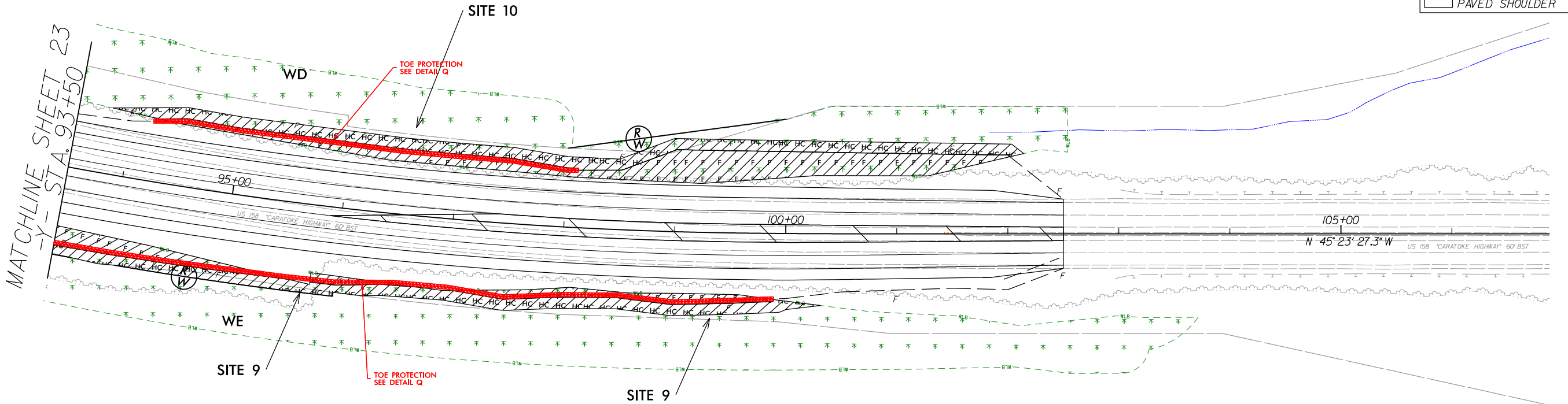
1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

ETHERILL ENGINEERING
 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

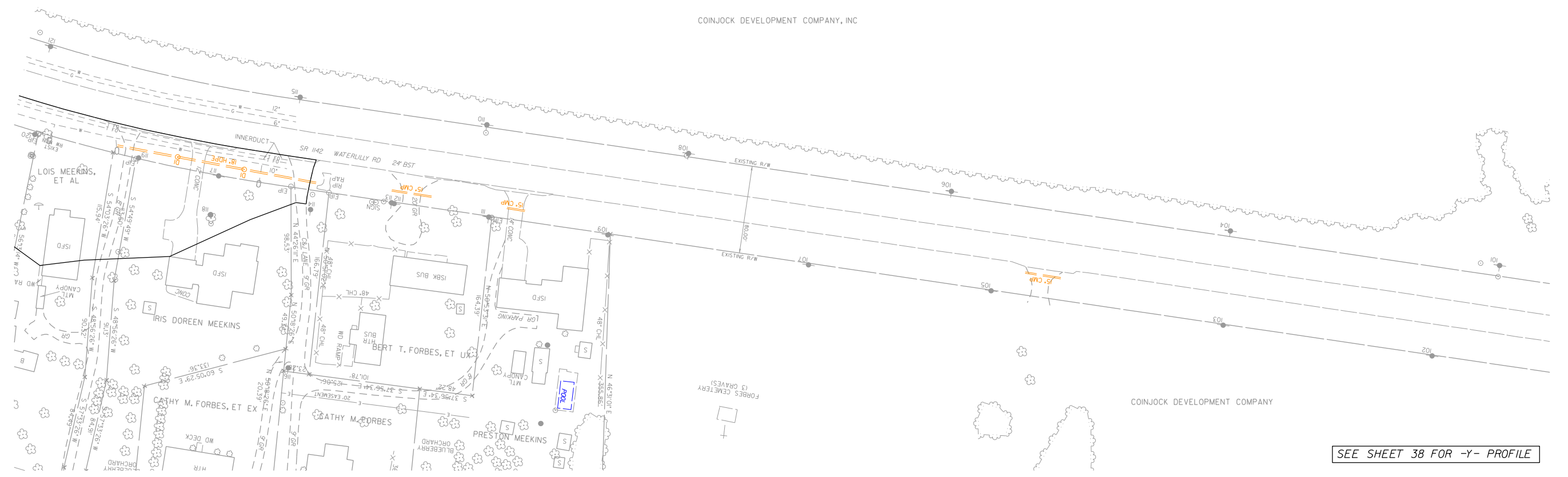
PROJECT REFERENCE NO. R-2576	SHEET NO. 24
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



COINJOCK DEVELOPMENT COMPANY, INC



COINJOCK DEVELOPMENT COMPANY, INC

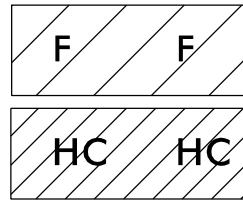


COINJOCK DEVELOPMENT COMPANY

SEE SHEET 38 FOR -Y- PROFILE

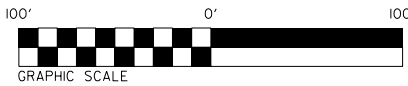
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6/2/2019



DENOTES FILL IN WETLAND

DENOTES HAND CLEARING



PERMIT DRAWING SHEET 52 OF 63

LOCHNER

H. W. LOCHNER, INC.
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 571-7111

NC License
 Number F-0159



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 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576 SHEET NO. 24

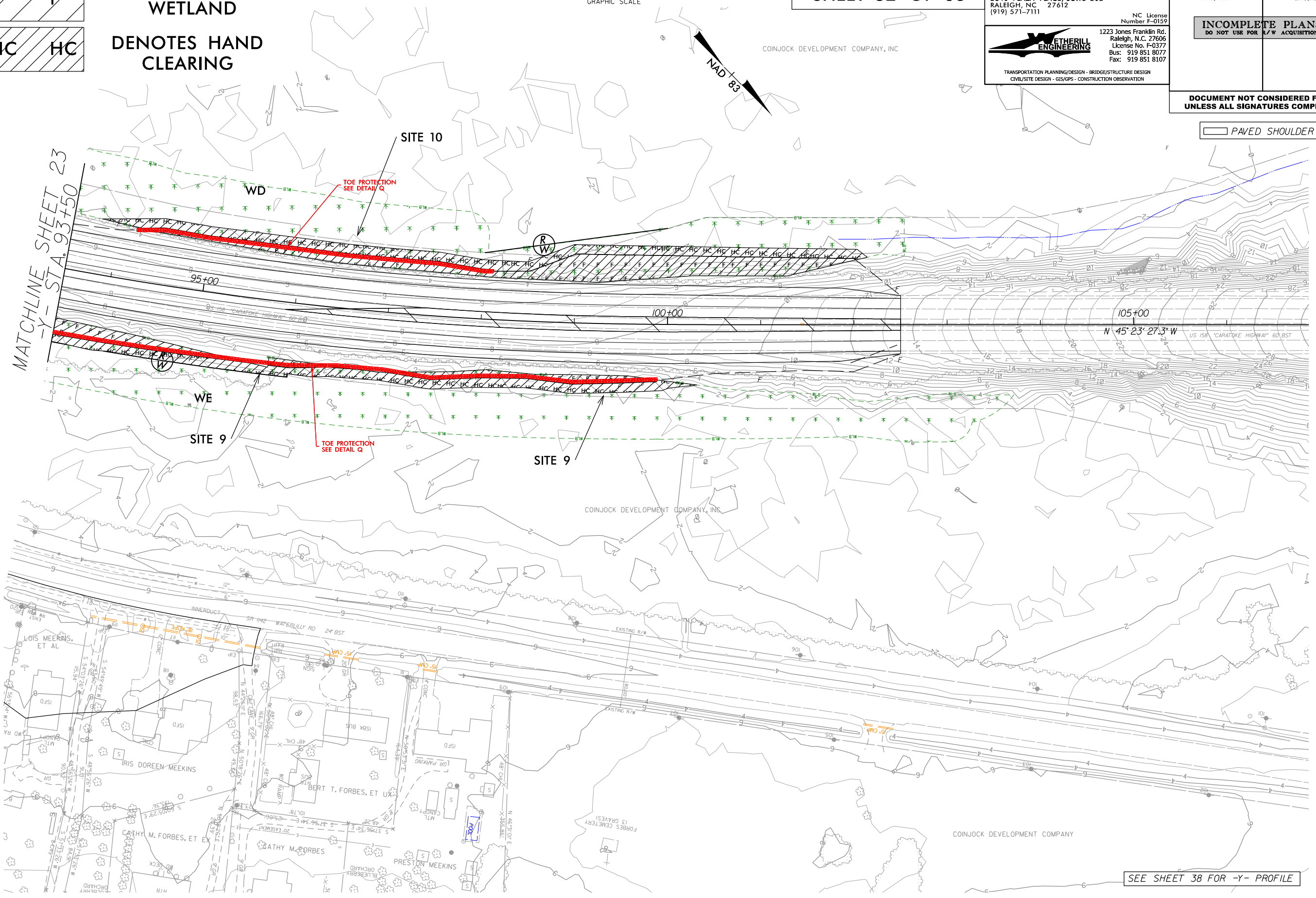
ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
 DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



MATCHLINE SHEET 23
 -Y- STA. 93+50

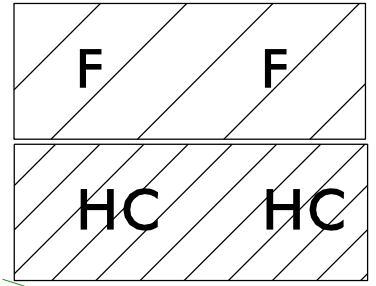


COINJOCK DEVELOPMENT COMPANY, INC.

COINJOCK DEVELOPMENT COMPANY

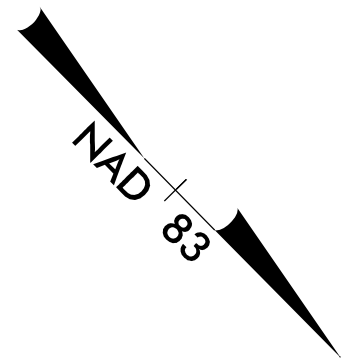
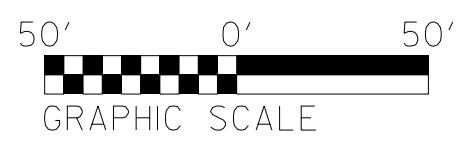
SEE SHEET 38 FOR -Y- PROFILE

I:\2019\2023\PERMITS-Environmental\psh\R2576_HYD_psh24_con.dgn
 6/2/2019 10:42:00 AM
 KATLORD



DENOTES FILL IN
WETLAND

DENOTES HAND
CLEARING



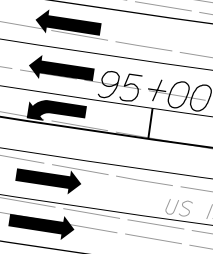
23
93+50

SITE 10

TOE PROTECTION
SEE DETAIL Q

WD

R
W



95+00

US 158 "CARATOKE HIGHWAY" 60' BST

100+00

W

WE

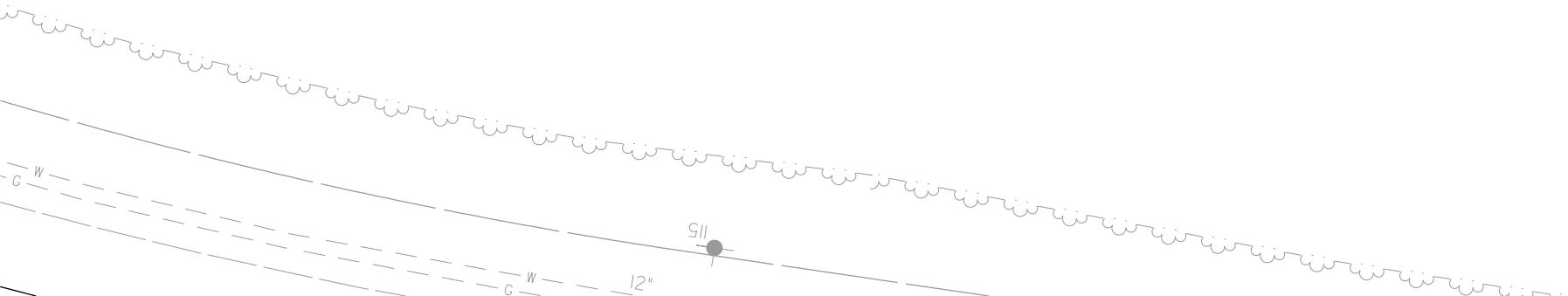
SITE 9

TOE PROTECTION
SEE DETAIL Q

SITE 9

26

COINJOCK DEVELOPMENT COMPANY, INC



6/23/16



PROJ. REFERENCE NO.
R-2576

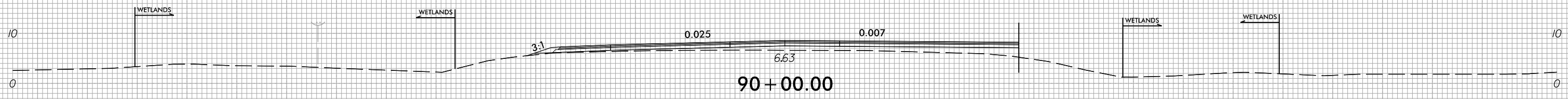
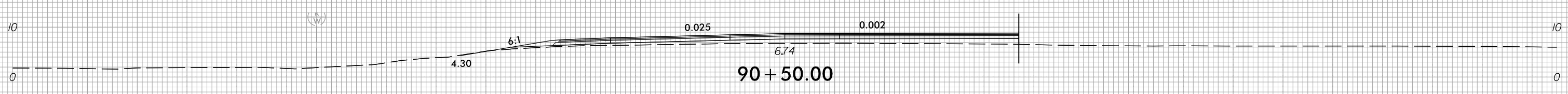
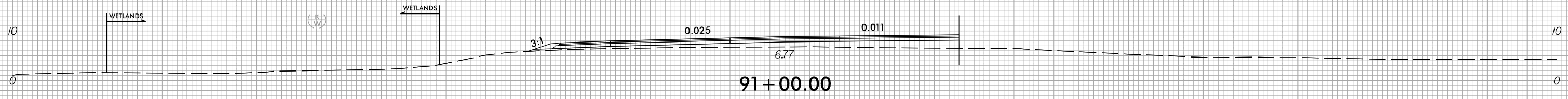
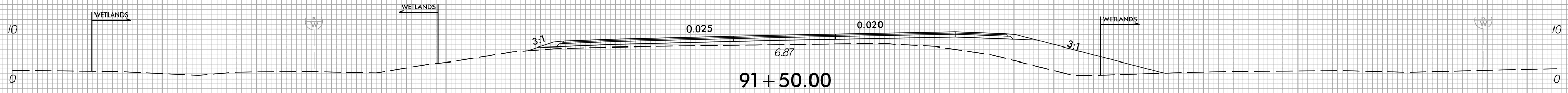
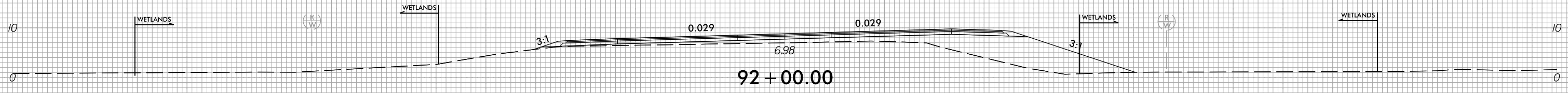
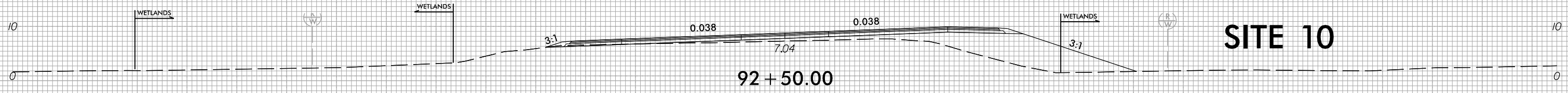
SHEET NO.
X-29

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SITE 9

PERMIT DRAWING SHEET 54 OF 63

SITE 10



-Y-

\$DATE\$
\$USER\$
\$FILE\$

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6/23/16



PROJ. REFERENCE NO.
R-2576

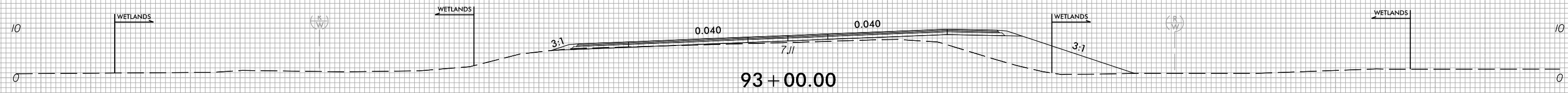
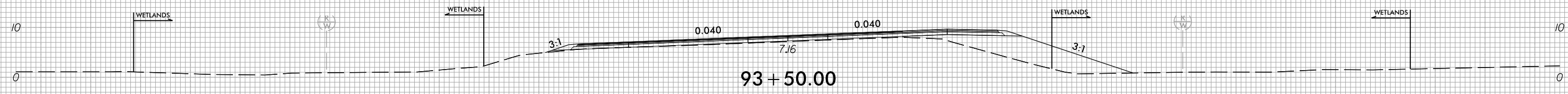
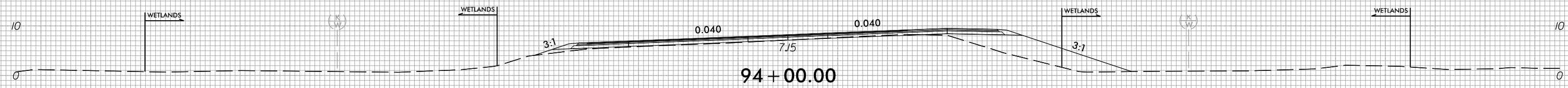
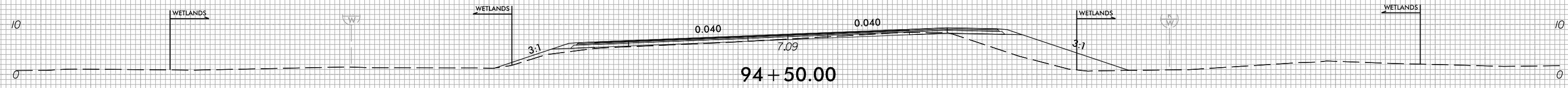
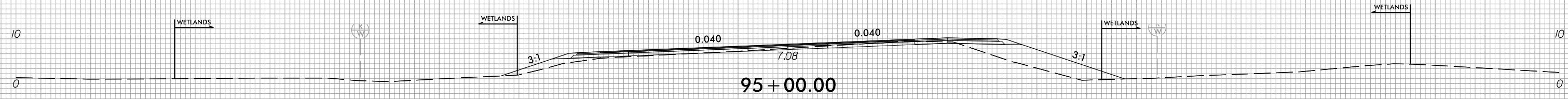
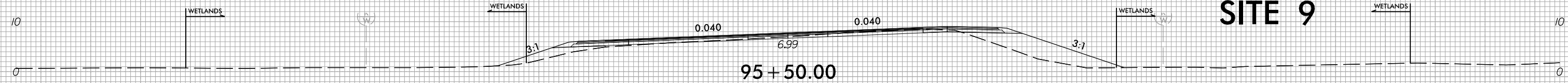
SHEET NO.
X-30

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SITE 10

PERMIT DRAWING SHEET 55 OF 63

SITE 9



-Y-

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

STATES
3 (USER NAME) \$
FILES

6/23/16



PROJ. REFERENCE NO.
R-2576

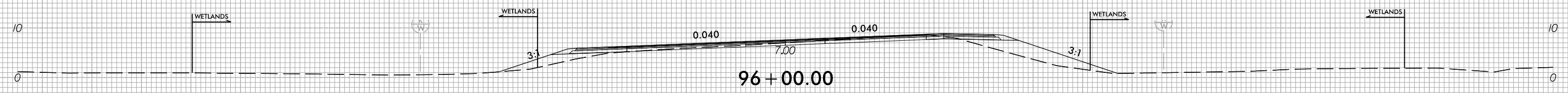
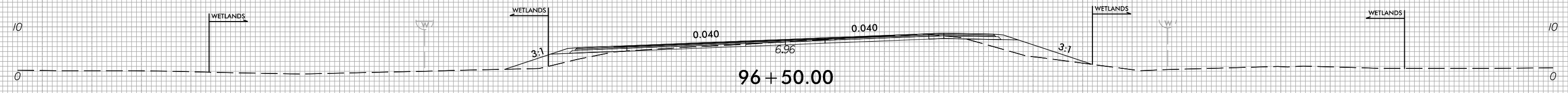
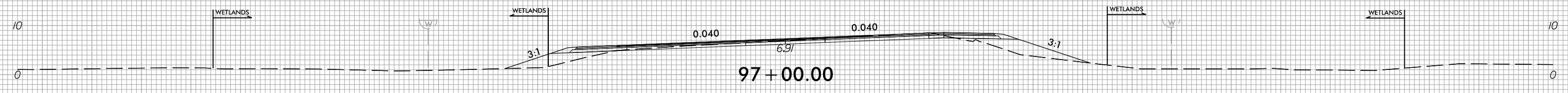
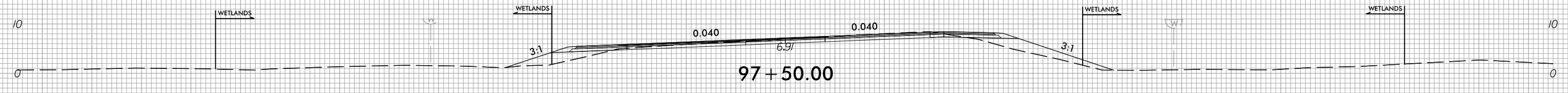
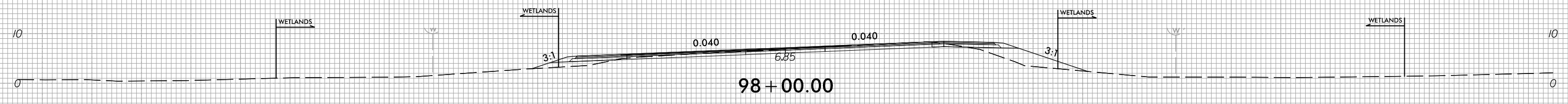
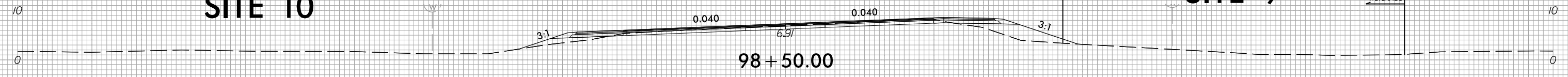
SHEET NO.
X-31

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PERMIT DRAWING SHEET 56 OF 63

SITE 10

SITE 9

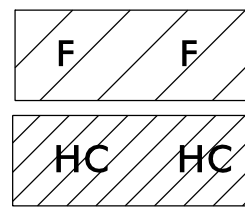


-Y-

\$DATE\$
\$USER\$NAME\$
\$FILE\$

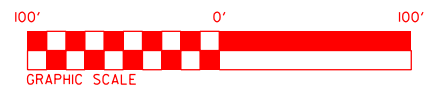
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6/2/2019



F F
DENOTES FILL IN
WETLAND

HC HC
DENOTES HAND
CLEARING



PERMIT DRAWING SHEET 57 OF 63

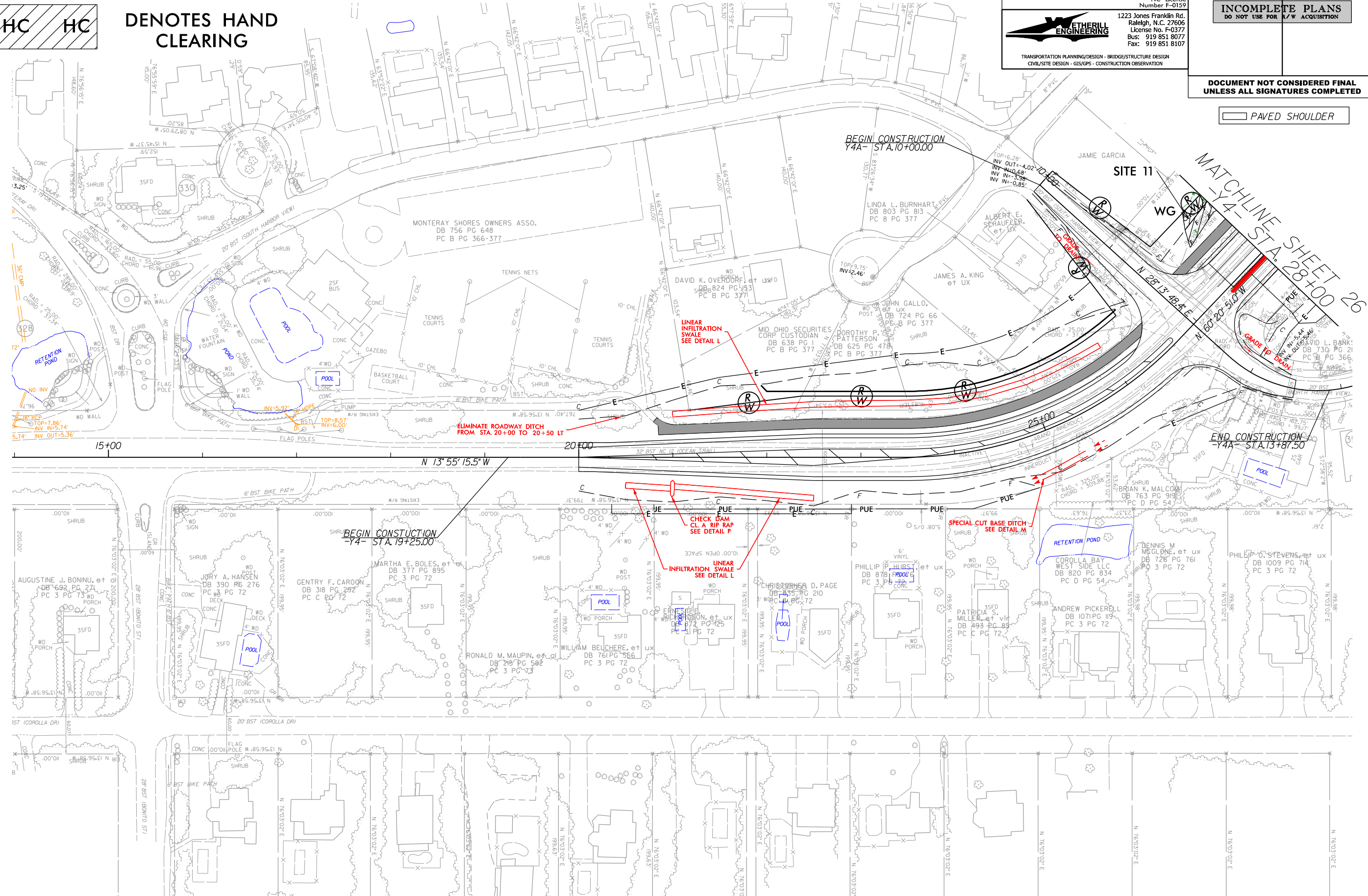
LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

NC License
Number F-0159

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

ETHERILL ENGINEERING
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

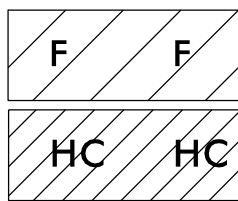
PROJECT REFERENCE NO. <i>R-2576</i>	SHEET NO. <i>25</i>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



SEE SHEET 48 FOR -Y4- PROFILE
SEE SHEET 49 FOR -Y4A- PROFILE

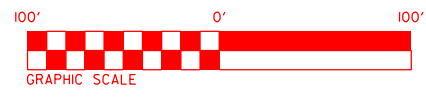
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6/2/2023
R:\Hydro\Public\PERMITS-Environmental\psh\R2576.HYD_psh25.con.dgn



F F
DENOTES FILL IN
WETLAND

HC HC
DENOTES HAND
CLEARING



PERMIT DRAWING SHEET 58 OF 63

LOCHNER
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

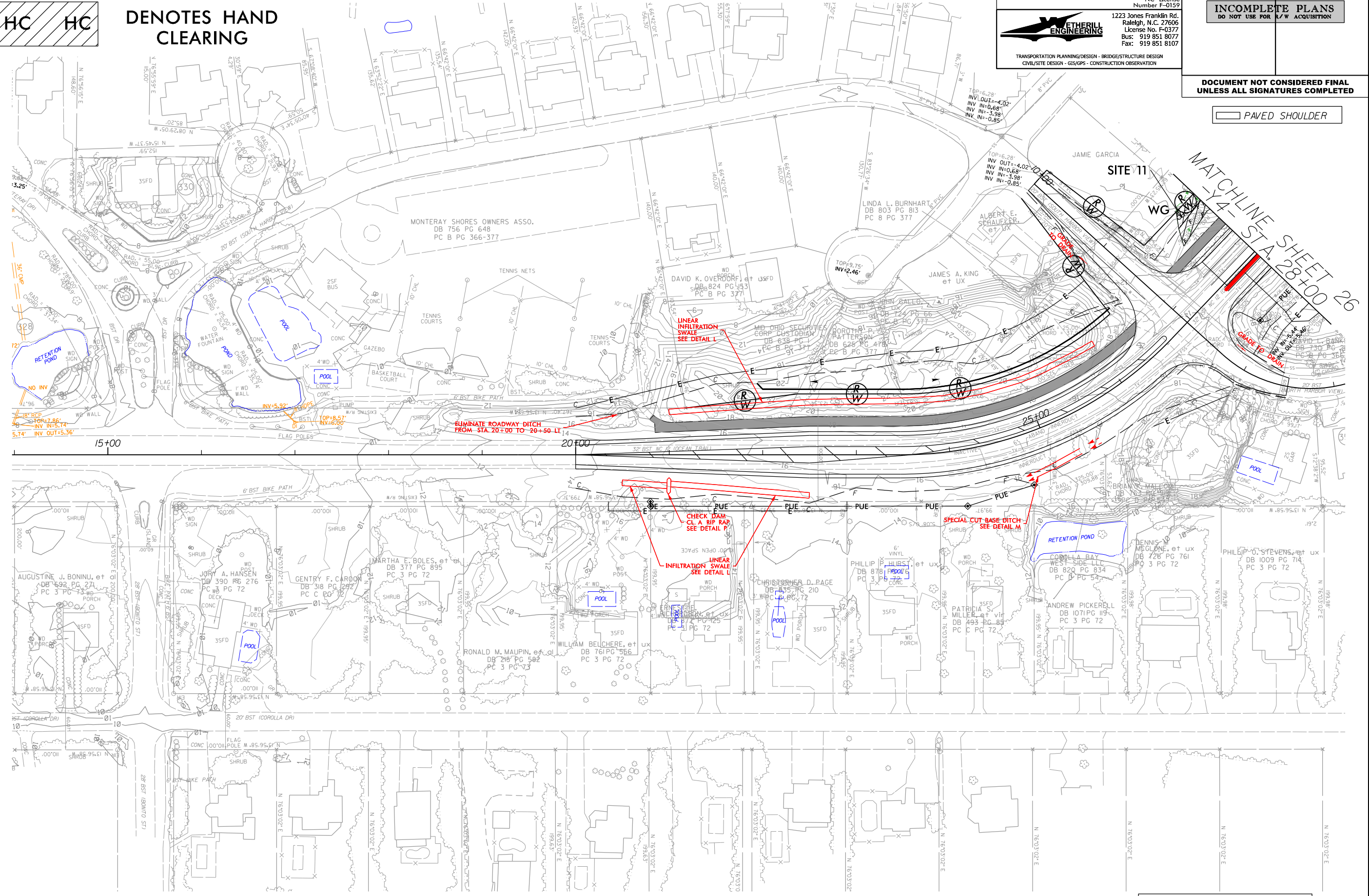
NC License
Number F-0159

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

**ETHERILL
ENGINEERING**

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. R-2576	SHEET NO. 25
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PAVED SHOULDER

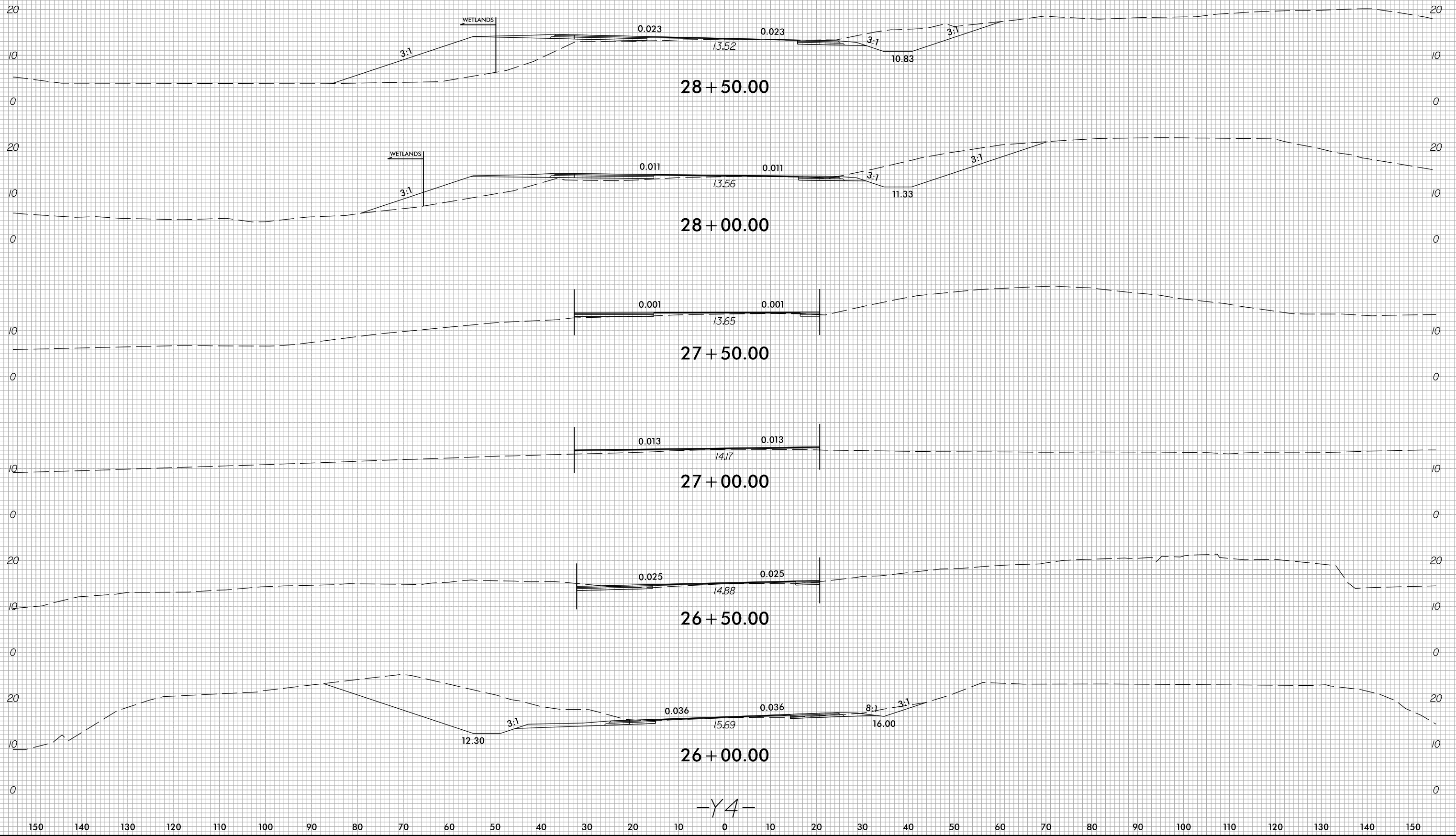
SEE SHEET 48 FOR -Y4- PROFILE
SEE SHEET 49 FOR -Y4A- PROFILE

6/23/16

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2576	X-79

SITE 11

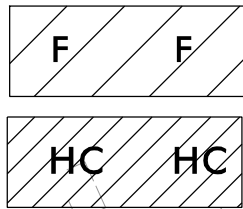
PERMIT DRAWING SHEET 59 OF 63



-Y4-

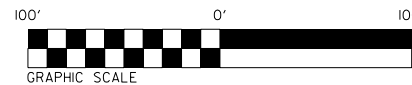
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RLL:ord

6/2/2019



F
DENOTES FILL IN WETLAND

HC
DENOTES HAND CLEARING



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2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159



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Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. **R-2576** SHEET NO. **26**

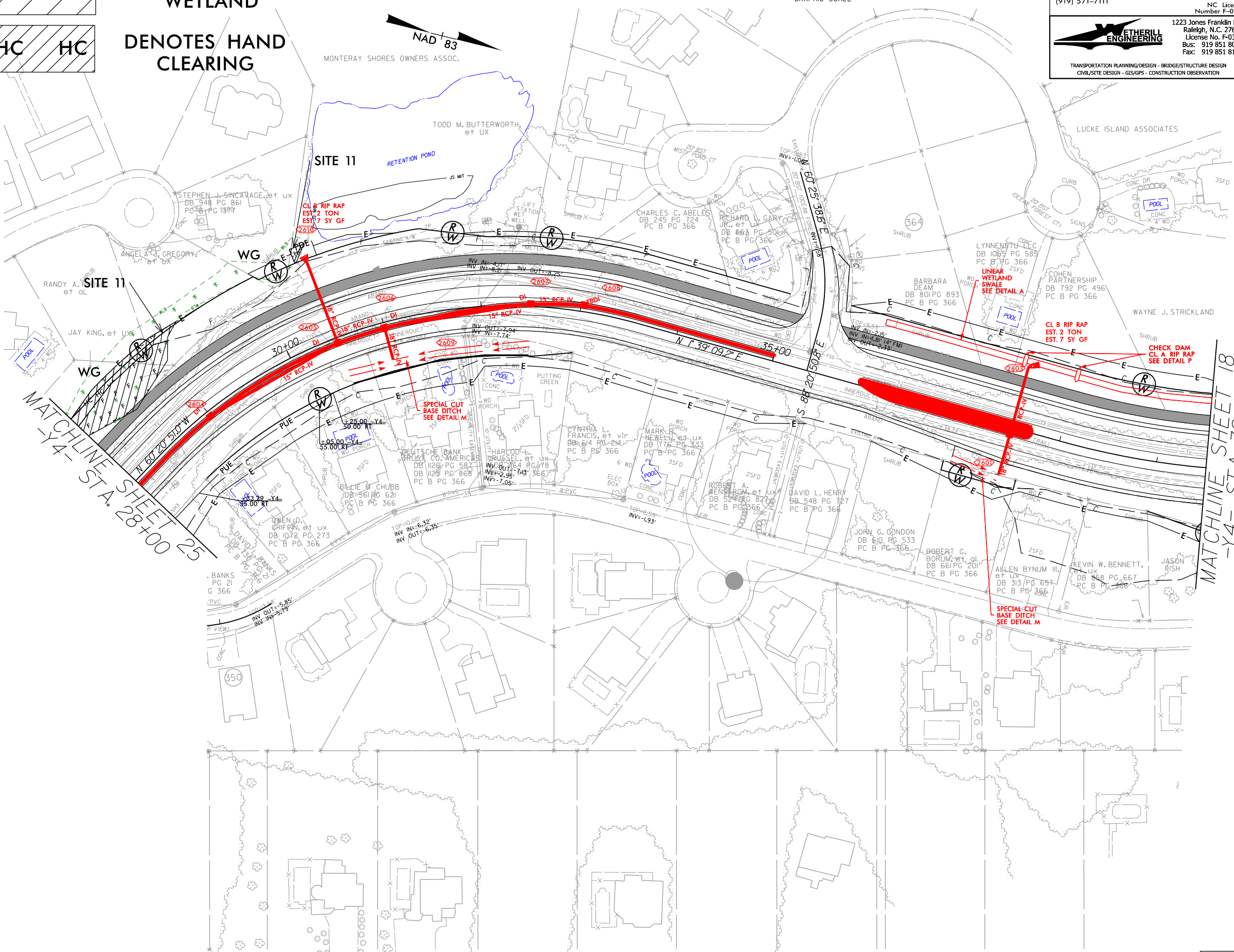
ROADWAY DESIGN ENGINEER PAYMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PAVED SHOULDER

PERMIT DRAWING
SHEET 60 OF 63

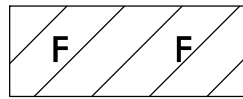


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SEE SHEET 48 FOR -Y4- PROFILE
SEE SHEET 49 FOR -Y4B- PROFILE

6/2/2023

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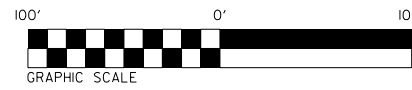
DENOTES FILL IN WETLAND



DENOTES HAND CLEARING



MONTEREY SHORES OWNERS ASSOC.



LOCHNER

H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 371-7111

NC License
Number F-0159



1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. **R-2576** SHEET NO. **26**

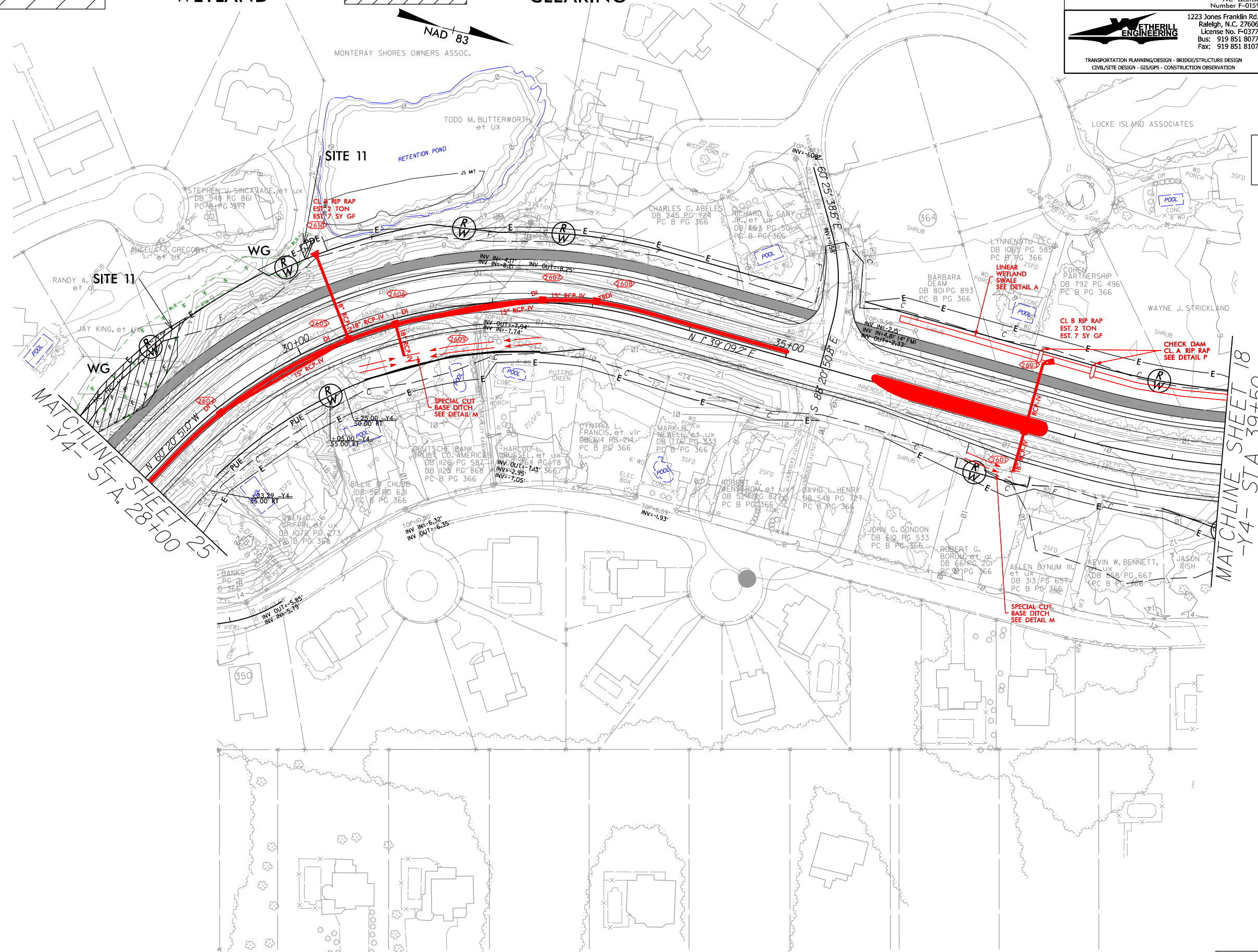
ROADWAY DESIGN ENGINEER PAVEMENT DESIGN ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



PERMIT DRAWING
SHEET 61 OF 63

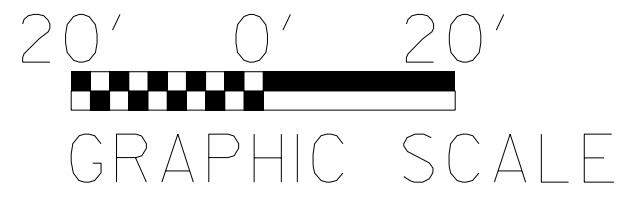


MATCHLINE SHEET 18
-Y4- STA. 28+00

MATCHLINE SHEET 18
-Y4- STA. 39+50

SEE SHEET 48 FOR -Y4- PROFILE
SEE SHEET 49 FOR -Y4B- PROFILE

PERMIT DRAWING SHEET 62 OF 63



NAD 83

JAMIE GARCIA

SITE 11

1/4 G

R/W

R/W

260
0.13

F

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HC

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DENOTES FILL IN
WETLAND

DENOTES HAND
CLEARING



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)
1A	-Y- 40+26 to 42+66 LT	Fill with Toe Protection	0.02				0.05					
1B	-Y- 21+00 to 24+60 LT	Fill with Toe Protection	0.02				0.07					
1C	-Y- 68+65 to 73+00 LT	RipRap outlet/Proximity to Fill	< 0.01				0.02					
1D	-Y- 86+54 to 90+39 LT	2@42"x29" CAAP outlet	< 0.01				0.02					
1E	-Y- 14+74 to 18+10 LT	Fill slope	0.14				0.08					
2	-Y- 55+45	42" RCP-IV						0.04	< 0.01	228	9	
		Bank Stabilization						< 0.01		10		
3	-L- 23+00 to 100+60	Bridge	0.07	4.66		0.09	11.32					
4	-L- 119+00 to 364+00	Bridge										
		Shoreline Stabilization						0.07		233		
5	-Y4- 39+64 to -Y5R- 14+38 LT	Fill in Pond	0.26				0.08	0.04	0.02			
6	-Y5- 10+76 to 10+97 LT	Fill slope	< 0.01				< 0.01					
7	-Y5- 11+74 to 12+01 LT	Fill	< 0.01				0.01					
8	-Y1A- 24+40 to 24+90 LT/RT	new road	0.03				< 0.01					
9	-Y- 91+27 to 99+90 RT	Fill with Toe Protection	0.19				0.19					
10	-Y- 93+78 to 98+03 LT	Fill with Toe Protection	0.25				0.18					
11	-Y4- 27+50 to 29+13 LT	Fill slope	0.09				0.04					
TOTALS*:			1.07	4.66		0.09	12.07	0.14	0.02	471	9	0

*Rounded totals are sum of actual impacts

NOTES:

- Site 1 includes the entire wetland along the Y line (except near end of construction, North side of project)
- Site 3 takes into account 1000' of 80' wide temp impacts due to matting at the beginning of the bridge, and 760' at the end.
- Site 4 includes 2 temporary bridges for 2007' at the start of the bridge and 2 temporary bridges for at the end (4035' and 535' for these two temporary bridges).
- Site 4 includes 0.374 acres of Surface Water Impacts from bents and 0.156 acres of Temporary Surface Impacts.
- 0.13 Ac. of Temporary Fill will be provided for Hand Clearing areas for Erosion Control Devices.
- All Wetlands are 404 (No CAMA Wetlands are Impacted)

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 10/23/2023
 Currituck Co.
 R-2576

SHEET 63 OF 63