

Attachment 9:

Submerged Aquatic Vegetation (SAV) Impact Drawings

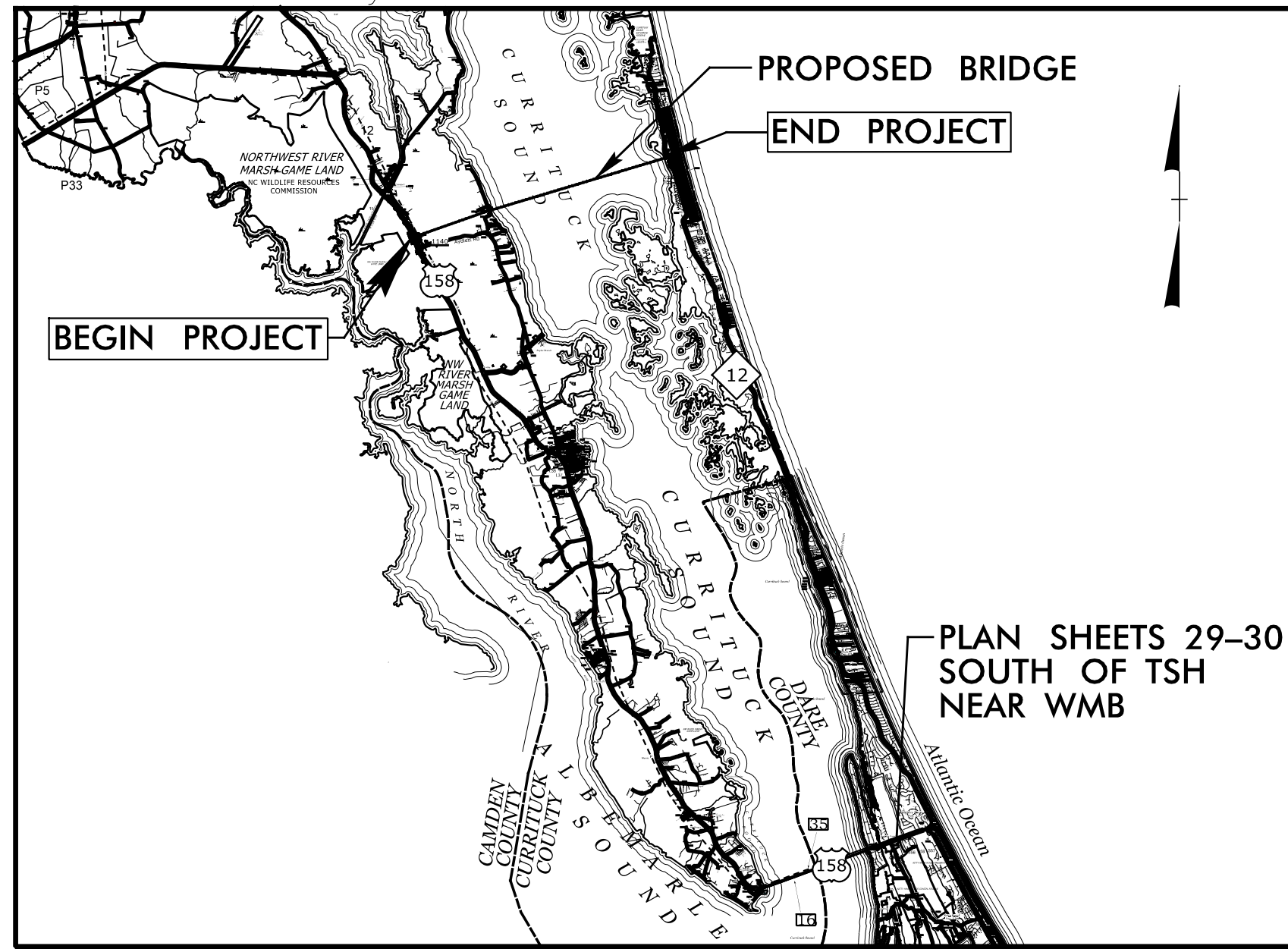
09/28/19

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

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.	

TIP PROJECT: R-2576



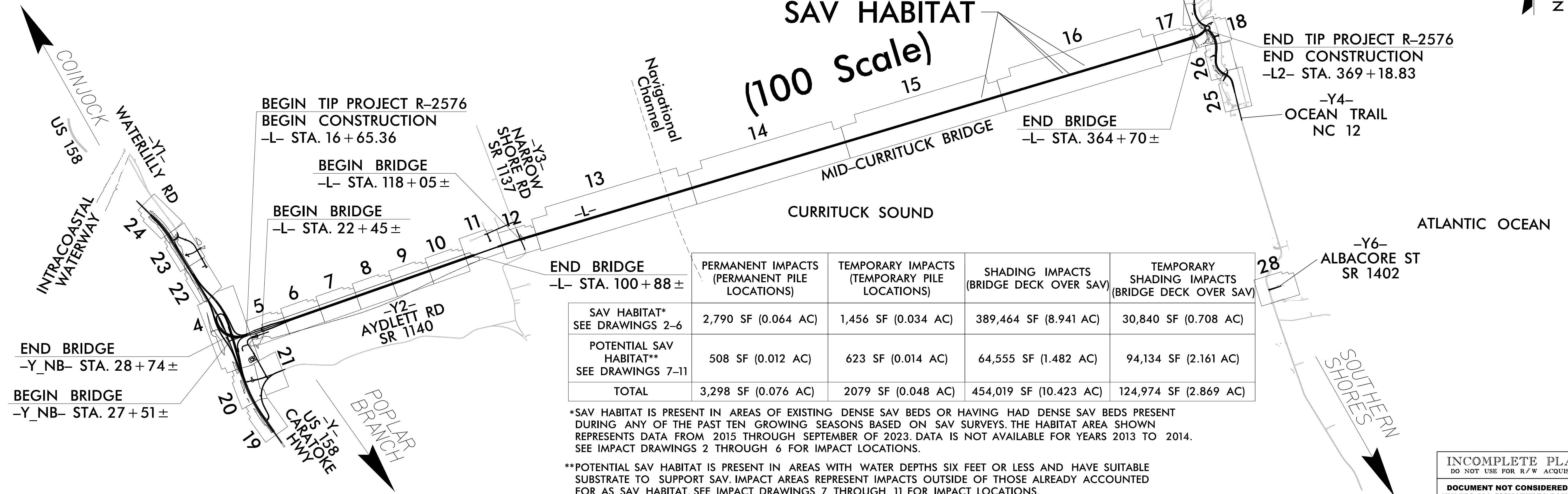
VICINITY MAP

75% PLANS

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

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

SAV IMPACT DRAWING 1 OF 11



*SAV HABITAT IS PRESENT IN AREAS OF EXISTING DENSE SAV BEDS OR HAVING HAD DENSE SAV BEDS PRESENT DURING ANY OF THE PAST TEN GROWING SEASONS BASED ON SAV SURVEYS. THE HABITAT AREA SHOWN REPRESENTS DATA FROM 2015 THROUGH SEPTEMBER OF 2023. DATA IS NOT AVAILABLE FOR YEARS 2013 TO 2014. SEE IMPACT DRAWINGS 2 THROUGH 6 FOR IMPACT LOCATIONS.

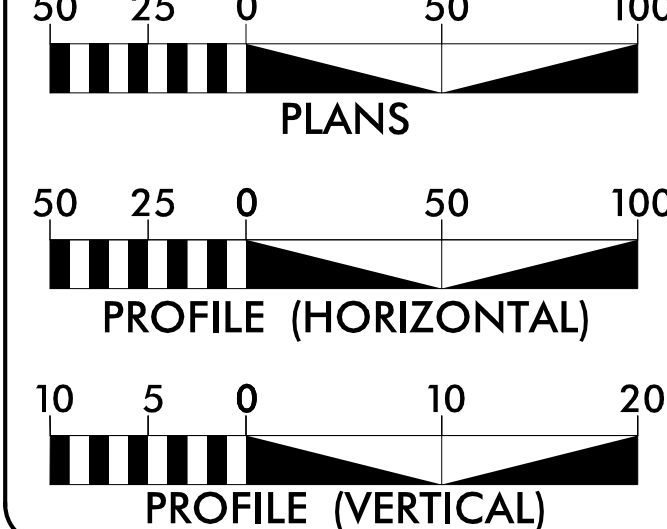
**POTENTIAL SAV HABITAT IS PRESENT IN AREAS WITH WATER DEPTHS SIX FEET OR LESS AND HAVE SUITABLE SUBSTRATE TO SUPPORT SAV. IMPACT AREAS REPRESENT IMPACTS OUTSIDE OF THOSE ALREADY ACCOUNTED FOR AS SAV HABITAT. SEE IMPACT DRAWINGS 7 THROUGH 11 FOR IMPACT LOCATIONS.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD —

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

CONTRACT:

GRAPHIC SCALES



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 = 0.524 Miles
 LENGTH STRUCTURES = 6.153 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

1223 Jones Franklin Rd.
 Raleigh, NC 27606
 License No. P-10777
 RUC: 919 851 8177
 Fax: 919 851 8107

TRANSPORTATION PLANNING DESIGN • BRIDGE/STRUCTURE DESIGN
 CONSULTING DESIGN • DESIGN • CONSTRUCTION OBSERVATION

NC License Number F-0159

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

FY 2026

LETTING DATE:

FY 2026

BRIAN K. EASON, PE
PROJECT ENGINEER

CHRISTINA L. YOKEYLEY, PE
PROJECT DESIGN ENGINEER

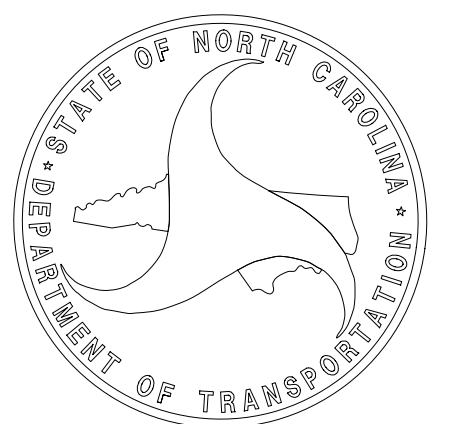
DENNIS JERNIGAN, PE
NCDOT / NCTA

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.



12/7/2023
R2576_rdy_TSH_SAV.dgn
ACHHO

6/2/2023

12/27/2023... SAV_Habitat.dgn

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

NC License
 Number F-0159

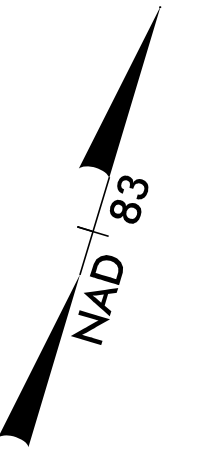
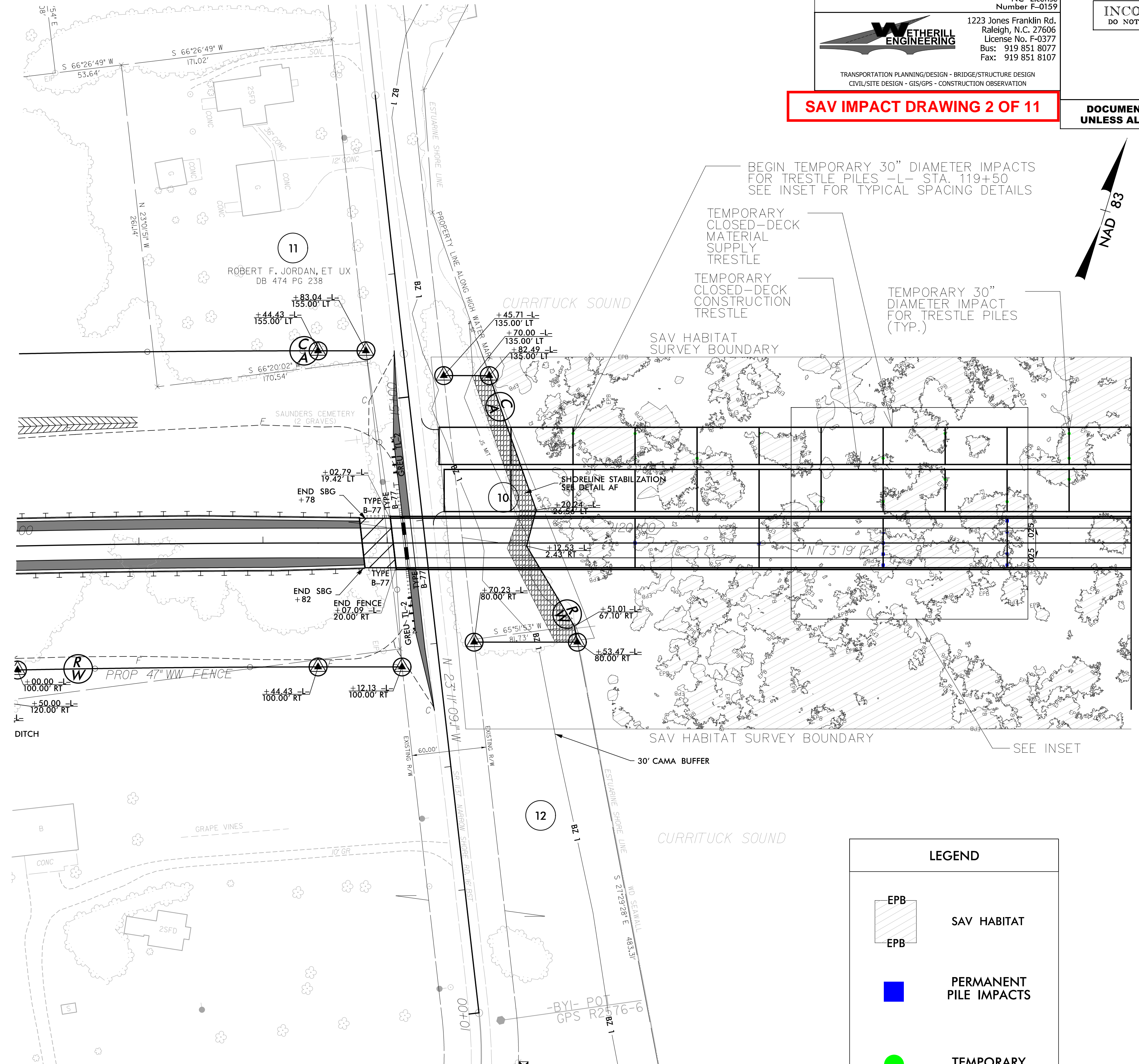
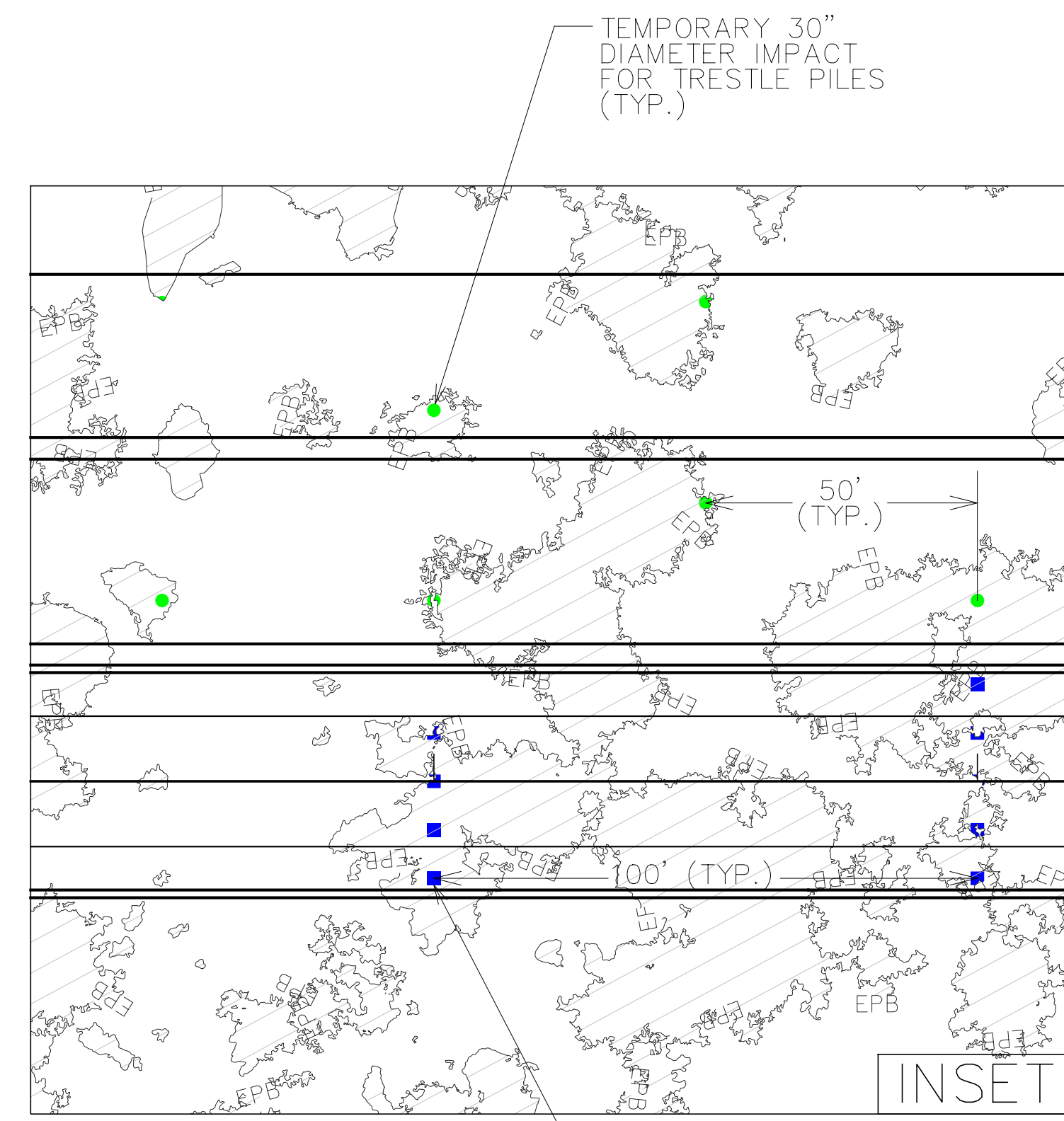
WETHERILL ENGINEERING
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

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

PROJECT REFERENCE NO. R-2576	SHEET NO. 12
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

SAV IMPACT DRAWING 2 OF 11

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



MATCHLINE SHEET 13
-L- STA. 124+00

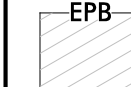


LEGEND	
	SAV HABITAT
	PERMANENT PILE IMPACTS
	TEMPORARY PILE IMPACTS

SAV HABITAT:
 AREAS OF EXISTING DENSE SAV BEDS OR HAVING HAD DENSE SAV BEDS PRESENT DURING ANY OF THE PAST TEN GROWING SEASONS BASED ON SAV SURVEYS.

THE HABITAT AREA SHOWN REPRESENTS DATA FROM 2015 THROUGH SEPTEMBER OF 2023. DATA IS NOT AVAILABLE FOR YEARS 2013 TO 2014. SEE IMPACT DRAWINGS 2 THROUGH 6 FOR IMPACT LOCATIONS.

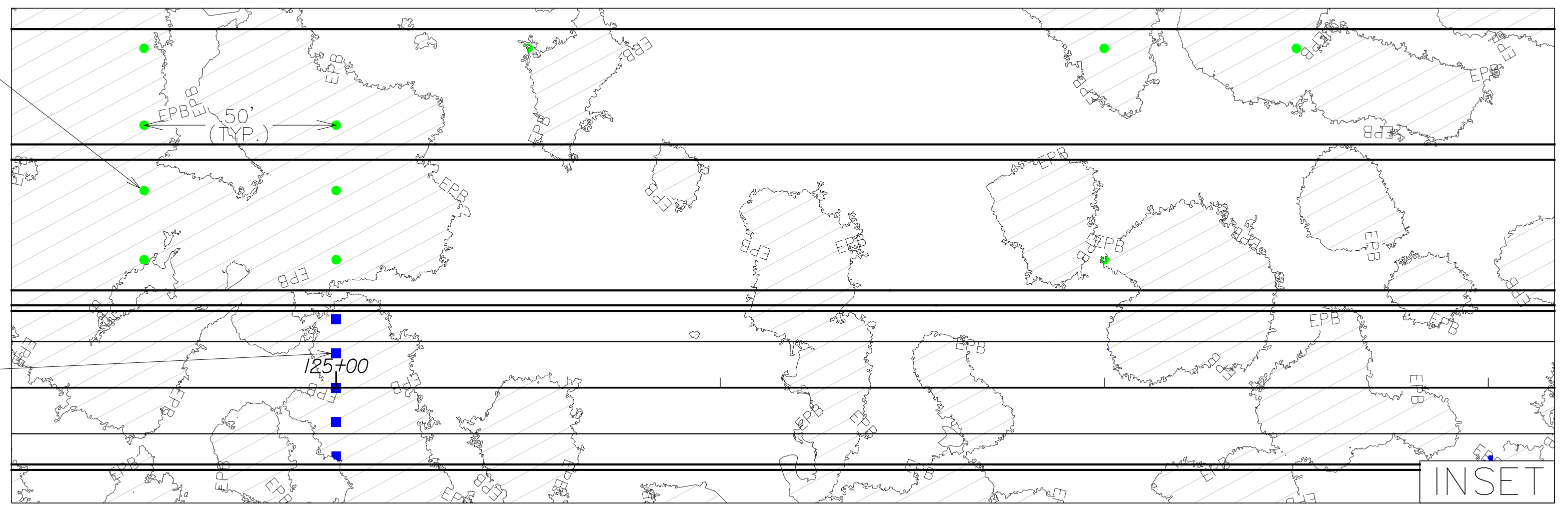
SEE SHEET 2D-I FOR DITCH DETAILS
 SEE SHEET 35 FOR -L- PROFILE
 SEE SHEET 47 FOR -Y3- PROFILE

REVISIONS	

LEGEND	
	SAV HABITAT
	PERMANENT PILE IMPACTS
	TEMPORARY PILE IMPACTS

TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)

PERMANENT 30"x30" IMPACT (TYP.)



LOCHNER
 H. W. LOCHNER, INC.
 2840 PEARL PLACE SUITE 202
 RALEIGH, NC 27612
 (919) 271-7111

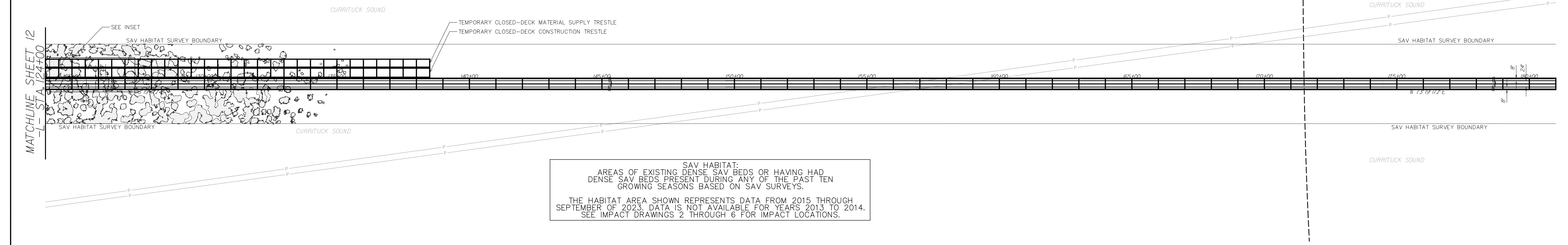
PROJECT REFERENCE NO. F-2576
 SHEET NO. 13

ROADWAY DESIGN ENGINEER
 HYDRAULIC ENGINEER

INCOMPLETE PLANS
 DO NOT USE FOR P.P. ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

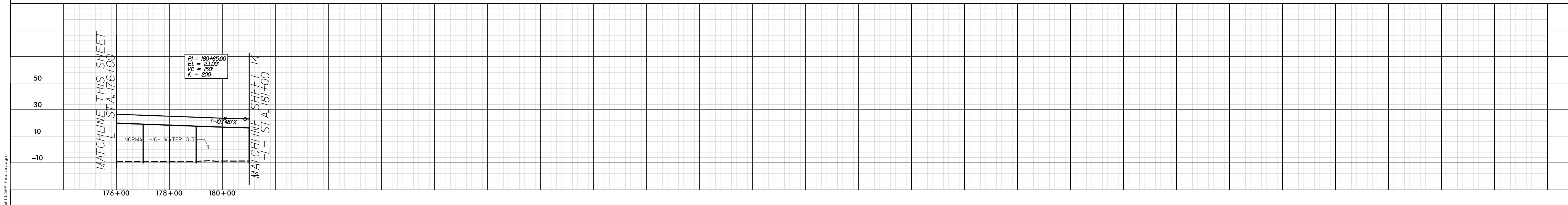
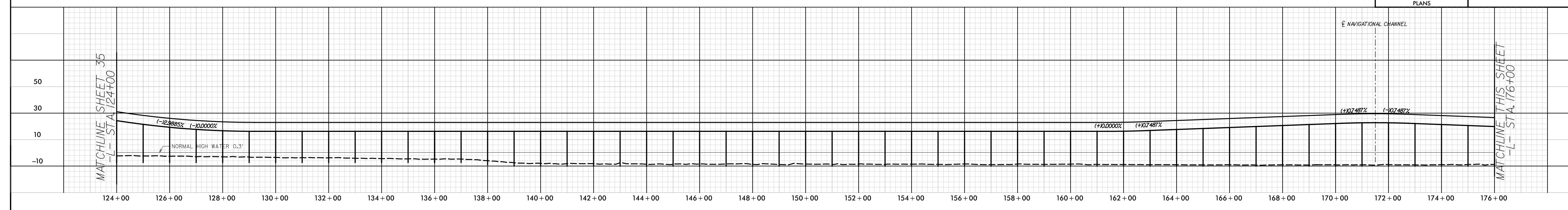
SAV IMPACT DRAWING 3 OF 11



SAV HABITAT: AREAS OF EXISTING DENSE SAV BEDS OR HAVING HAD DENSE SAV BEDS PRESENT DURING ANY OF THE PAST TEN GROWING SEASONS BASED ON SAV SURVEYS. THE HABITAT AREA SHOWN REPRESENTS DATA FROM 2015 THROUGH SEPTEMBER OF 2023. DATA IS NOT AVAILABLE FOR YEARS 2013 TO 2014. SEE IMPACT DRAWINGS 2 THROUGH 6 FOR IMPACT LOCATIONS.

GRAPHIC SCALE
 100 50 0 100 200
 PLANS

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



11/15/2023 10:31 AM SAV_HABITAT.dwg

REVISIONS

LEGEND

- EPB SAV HABITAT
- PERMANENT PILE IMPACTS
- TEMPORARY PILE IMPACTS

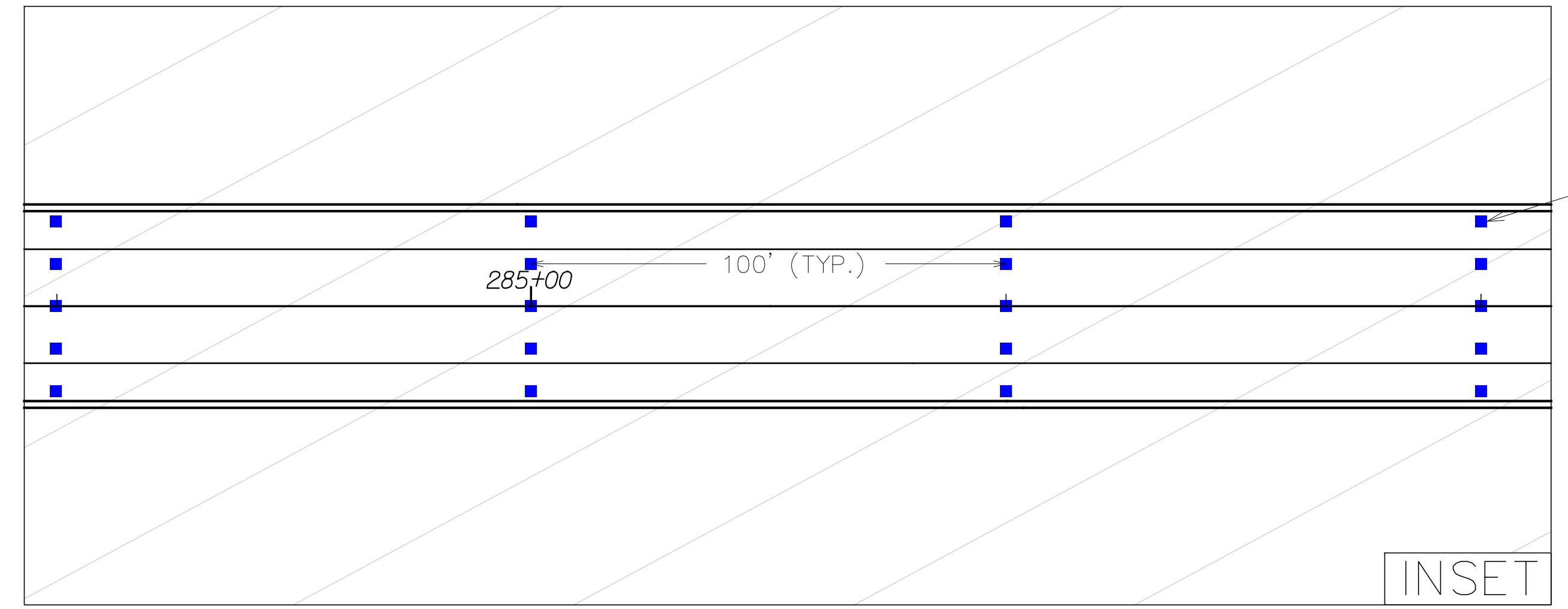
LOCHNER
 H. W. LOCHNER, INC.
 2840 PLAZA PLACE, SUITE 202
 RALEIGH, NC 27612
 (919) 571-7111

PROJECT REFERENCE NO. H-2576
 SHEET NO. 15

ROADWAY DESIGN ENGINEER
 HYDRAULICS ENGINEER

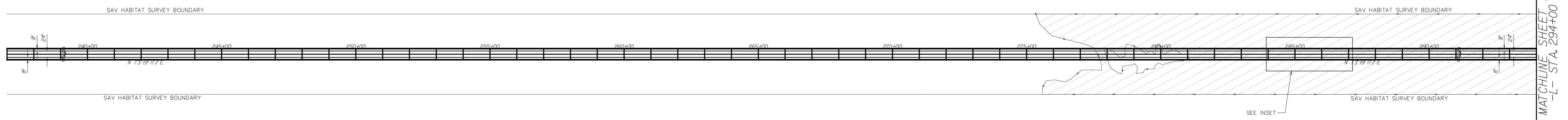
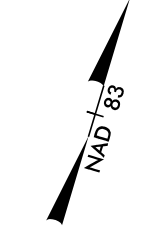
INCOMPLETE PLANS
 DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



PERMANENT 30"x30" IMPACT (TYP.)

SAV IMPACT DRAWING 4 OF 11

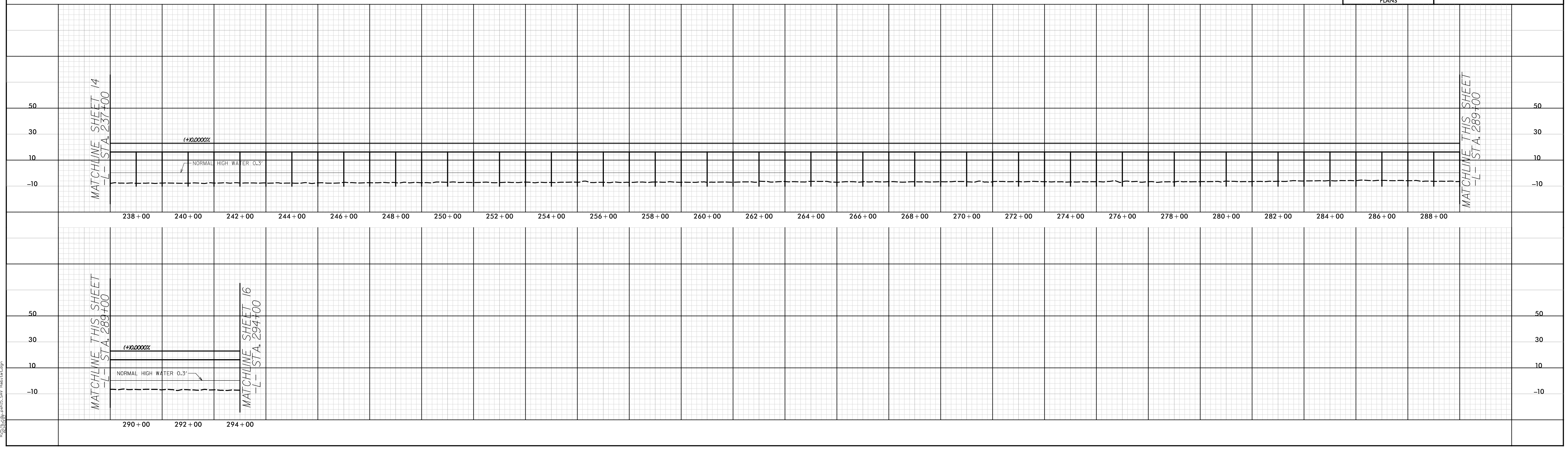


SAV HABITAT:
 AREAS OF EXISTING DENSE SAV BEDS OR HAVING HAD DENSE SAV BEDS PRESENT DURING ANY OF THE PAST TEN GROWING SEASONS BASED ON SAV SURVEYS.

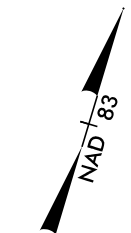
THE HABITAT AREA SHOWN REPRESENTS DATA FROM 2015 THROUGH SEPTEMBER OF 2023. DATA IS NOT AVAILABLE FOR YEARS 2013 TO 2014. SEE IMPACT DRAWINGS 2 THROUGH 6 FOR IMPACT LOCATIONS.

GRAPHIC SCALE
 100 50 0 100 200
 PLANS

LOCATION: _____
 TIP NO.: _____ COUNTY: _____
 DESIGNED BY: _____
 CHECKED BY: _____ DATE: _____



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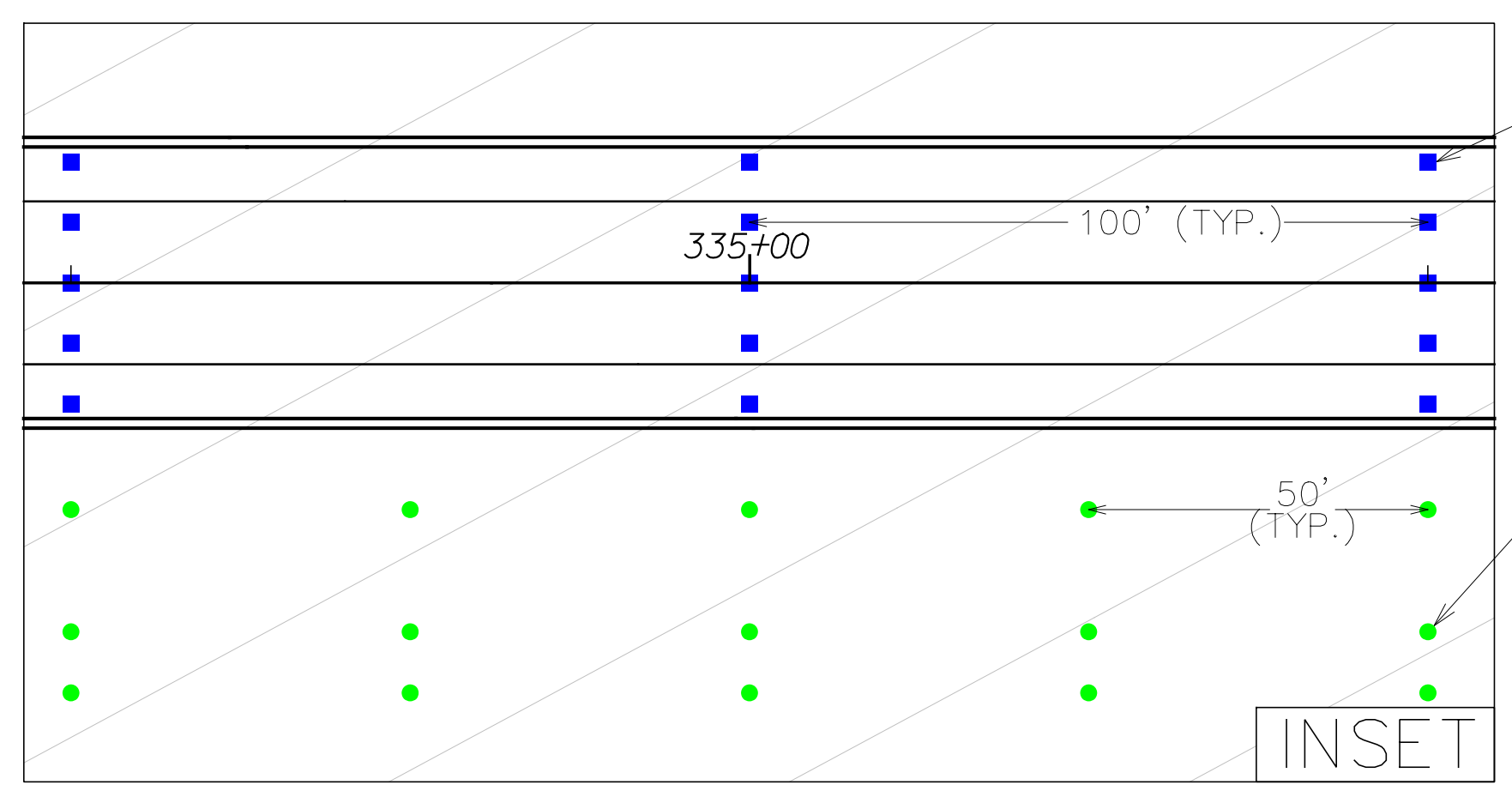


SAV IMPACT DRAWING 5 OF 11

REVISIONS

LEGEND

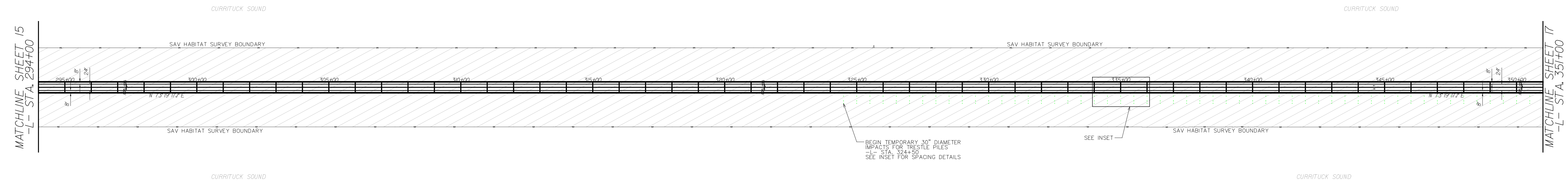
- EPB SAV HABITAT
- PERMANENT PILE IMPACTS
- TEMPORARY PILE IMPACTS



PERMANENT 30"x30" IMPACT (TYP.)

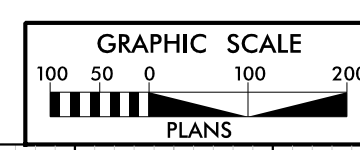
TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)

INSET

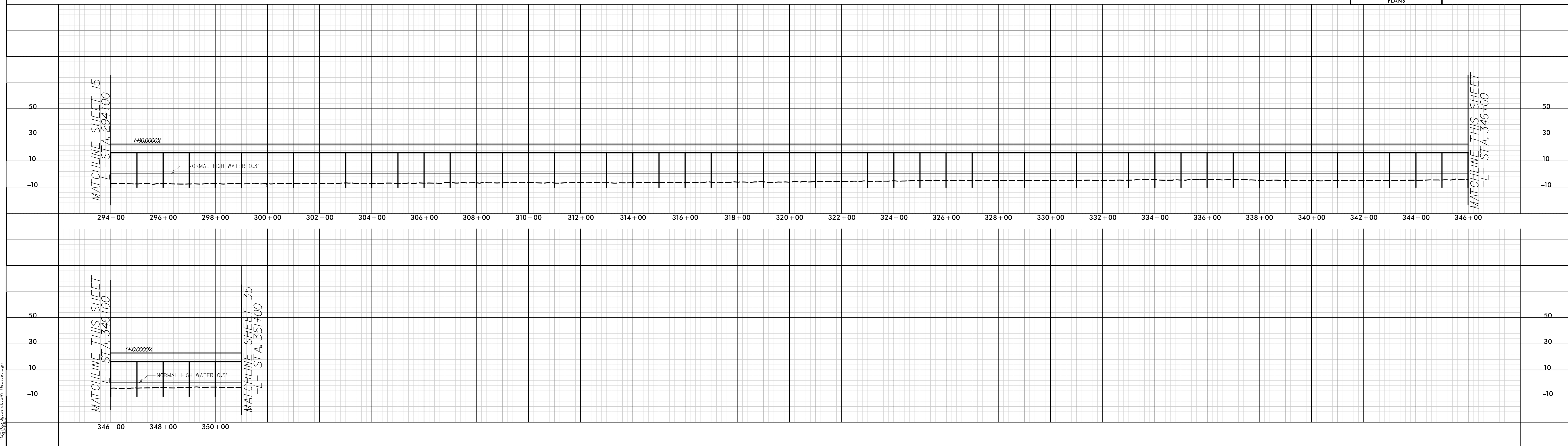


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LOCATION:	
TIP NO.:	COUNTY:
DESIGNED BY:	
CHECKED BY:	DATE:



DATE PLOTTED: 10/16/2024 10:58 AM

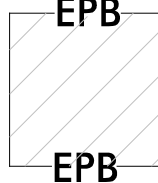


LOCHNER

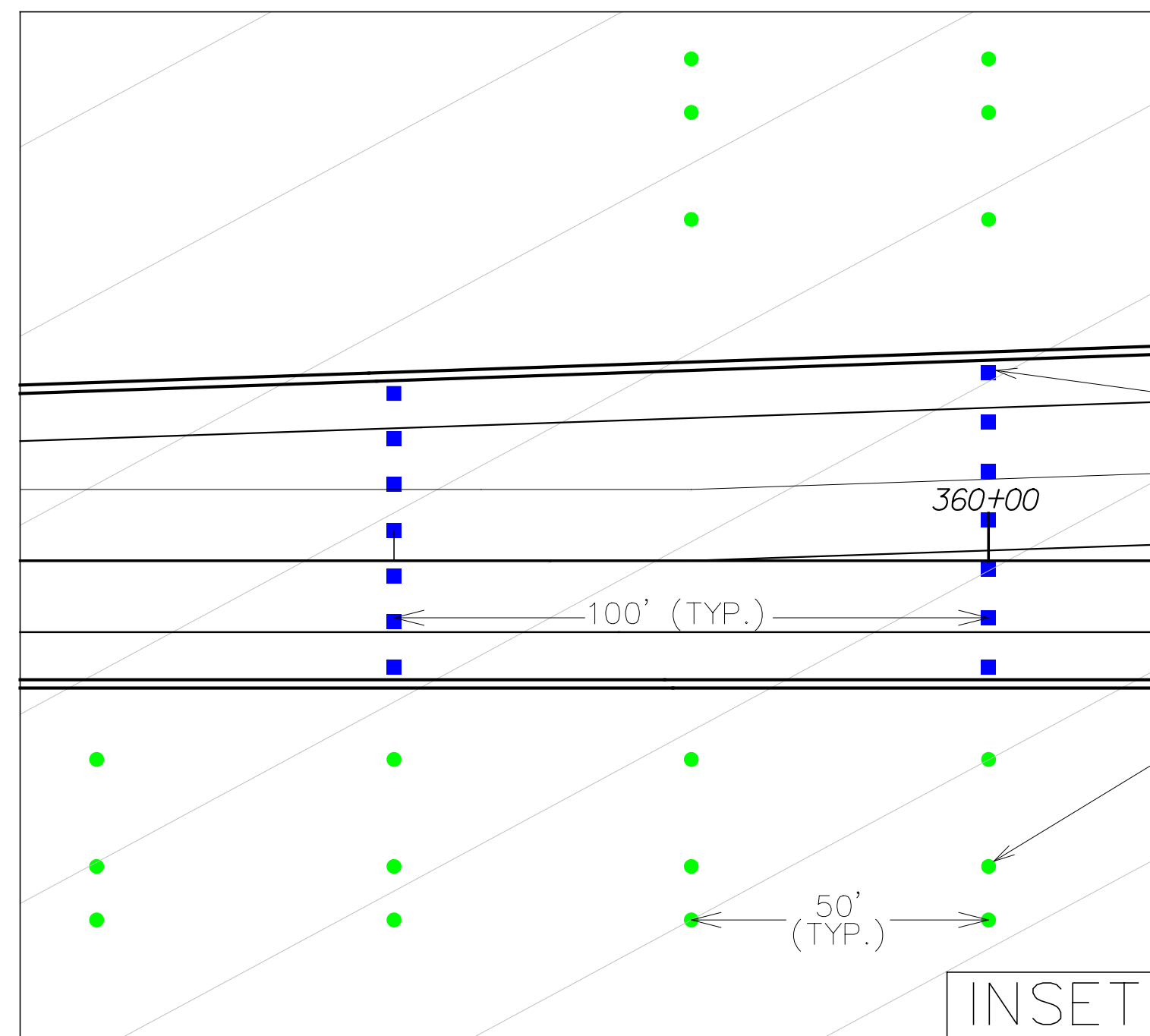
H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919) 571-7111

NC License
Number F-0159

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	

SAV IMPACT DRAWING 6 OF 11

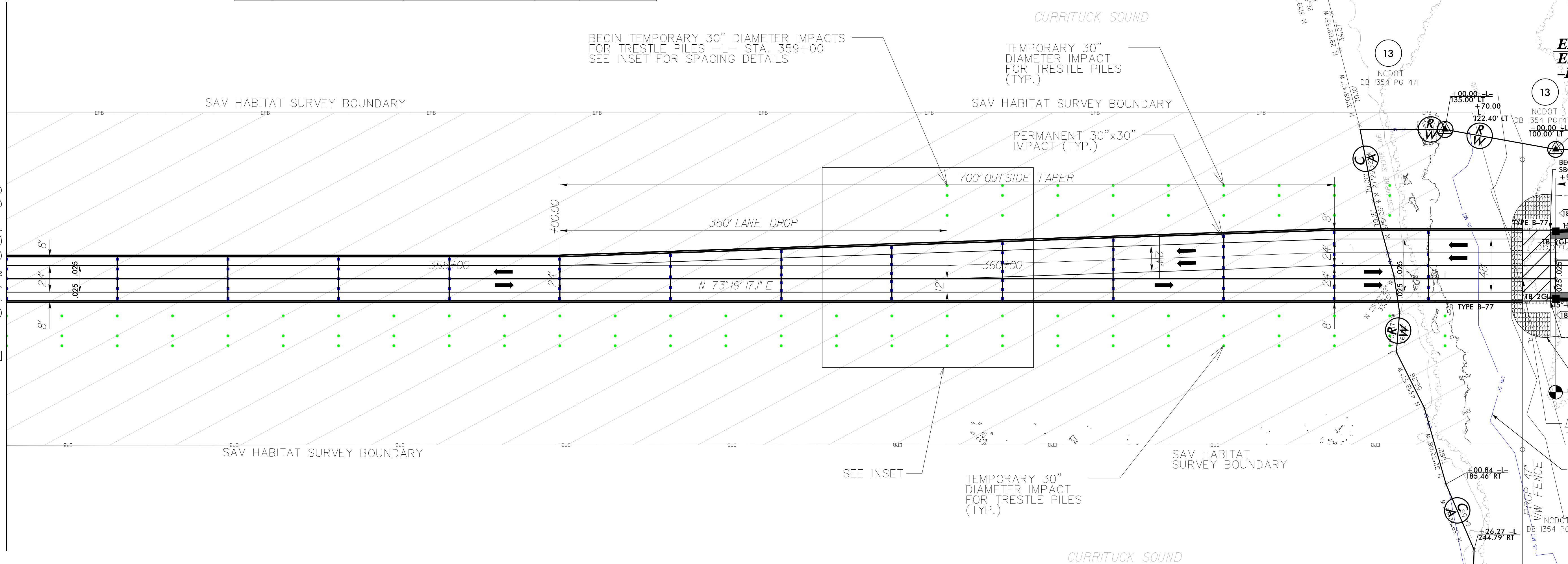
LEGEND	
	SAV HABITAT
	PERMANENT PILE IMPACTS
	TEMPORARY PILE IMPACTS



PERMANENT 30"x30" IMPACT (TYP.)

TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)

MATCHLINE SHEET 16
-L- STA. 351+00



BEGIN TEMPORARY 30" DIAMETER IMPACTS FOR TRESTLE PILES -L- STA. 359+00 SEE INSET FOR SPACING DETAILS

TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)

PERMANENT 30"x30" IMPACT (TYP.)

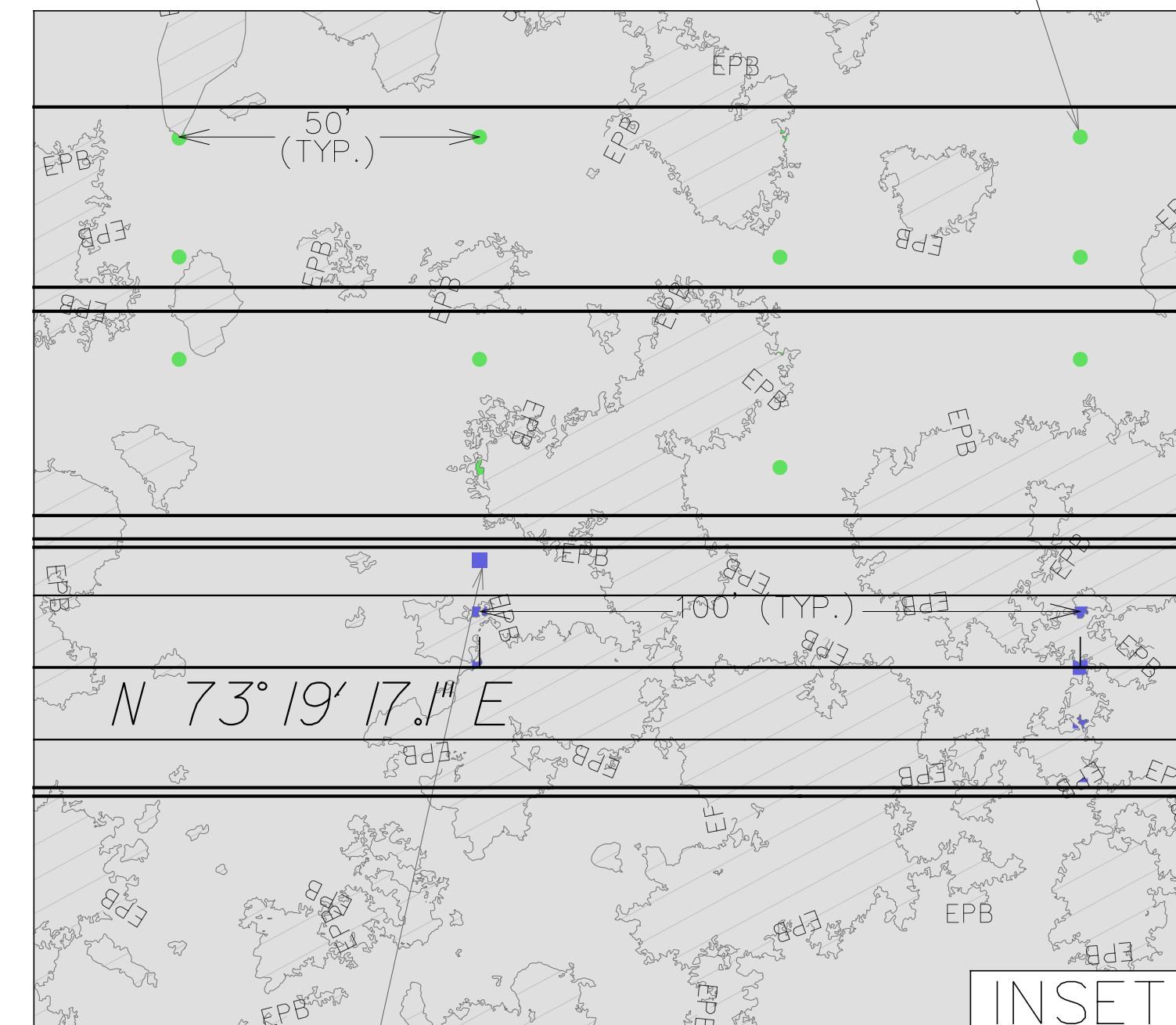
SEE INSET

TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)

SAV HABITAT:
AREAS OF EXISTING DENSE SAV BEDS OR HAVING HAD DENSE SAV BEDS PRESENT DURING ANY OF THE PAST TEN GROWING SEASONS BASED ON SAV SURVEYS.
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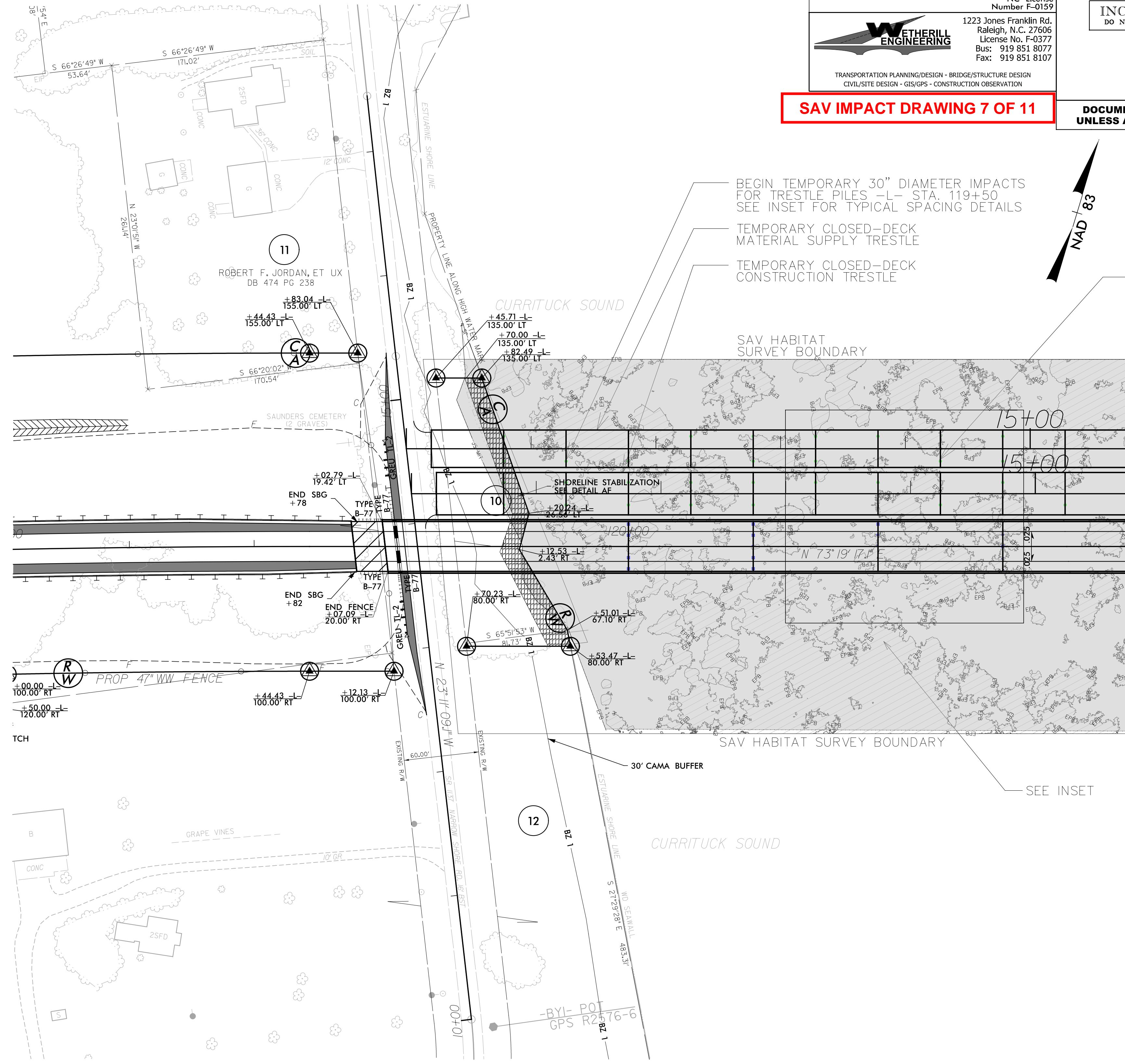
SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 35 FOR -L- PROFILE

TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)



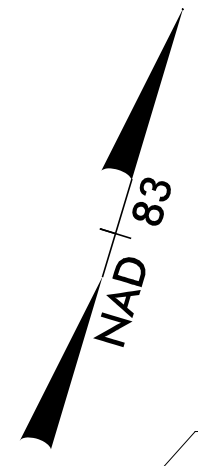
PERMANENT 30"x30" IMPACT (TYP.)

LEGEND	
	WATER DEPTH 6 FT OR LESS
	SAV HABITAT
	POTENTIAL PERMANENT PILE IMPACTS
	POTENTIAL TEMPORARY PILE IMPACTS



BEGIN TEMPORARY 30" DIAMETER IMPACTS FOR TRESTLE PILES -L- STA. 119+50
SEE INSET FOR TYPICAL SPACING DETAILS
TEMPORARY CLOSED-DECK MATERIAL SUPPLY TRESTLE
TEMPORARY CLOSED-DECK CONSTRUCTION TRESTLE

TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)



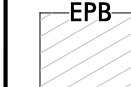


MATCHLINE SHEET 13
-L- STA. 124+00

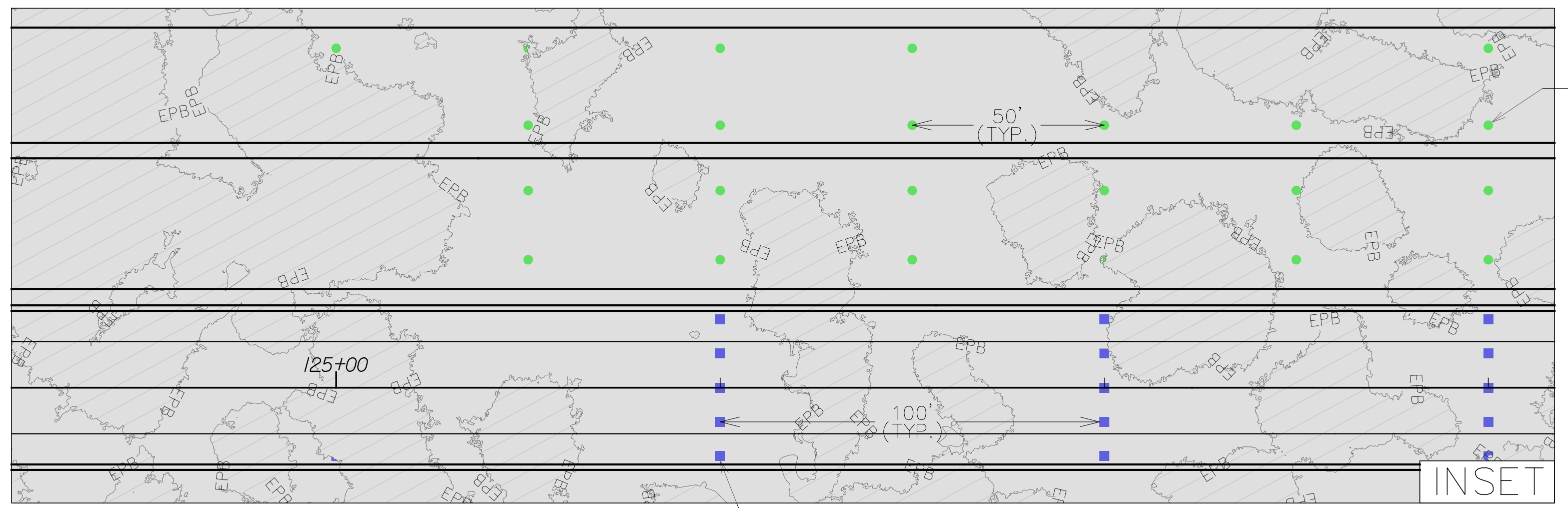
POTENTIAL SAV HABITAT:

POTENTIAL SAV HABITAT IS PRESENT IN AREAS WITH WATER DEPTHS SIX FEET OR LESS AND HAVE SUITABLE SUBSTRATE TO SUPPORT SAV. IMPACT AREAS REPRESENT IMPACTS OUTSIDE OF THOSE ALREADY ACCOUNTED FOR AS SAV HABITAT. SEE IMPACT DRAWINGS 7 THROUGH 11 FOR IMPACT LOCATIONS.

SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 35 FOR -L- PROFILE
SEE SHEET 47 FOR -Y3- PROFILE

REVISIONS	

LEGEND	
	SAV HABITAT
	PERMANENT PILE IMPACTS
	TEMPORARY PILE IMPACTS



TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)

SAV IMPACT DRAWING 8 OF 11

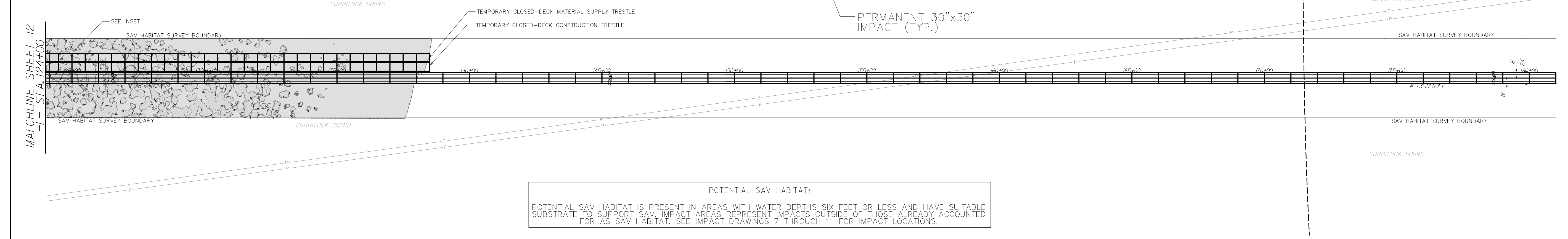
LOCHNER
 H. W. LOCHNER, INC.
 2840 PARK PLACE SUITE 202
 RALEIGH, NC 27612
 (919) 571-7111

PROJECT REFERENCE NO. P-2576
 SHEET NO. 13

ROADWAY DESIGN ENGINEER
 HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR V.P. ACCORDING

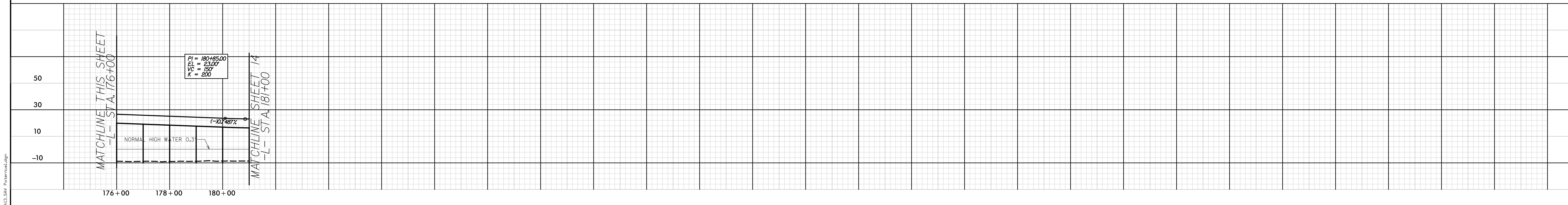
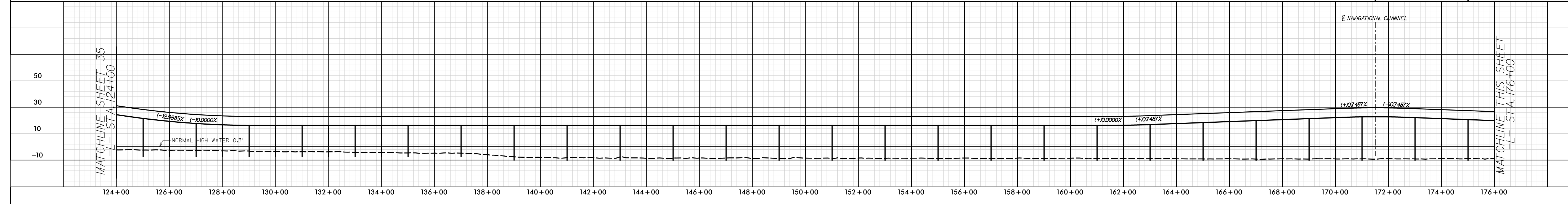
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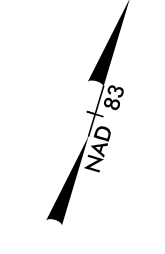
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GRAPHIC SCALE
 100 50 0 100 200
 PLANS

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



08/16/2023 10:43:53 AM SAV_Permit14.dwg



SAV IMPACT DRAWING 9 OF 11

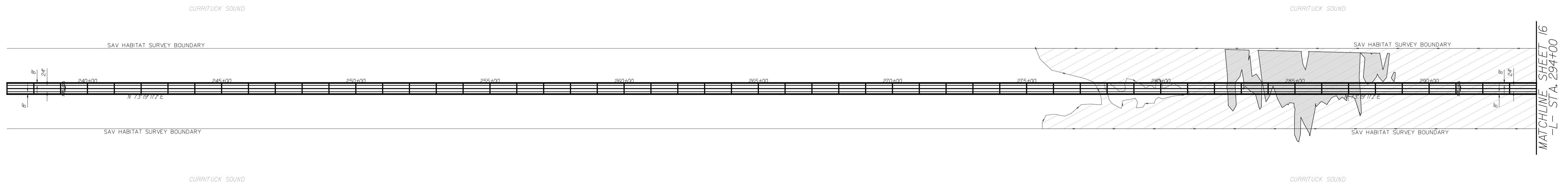
REVISIONS

LEGEND

■ WATER DEPTH 6 FT OR LESS

▨ EPB SAV HABITAT

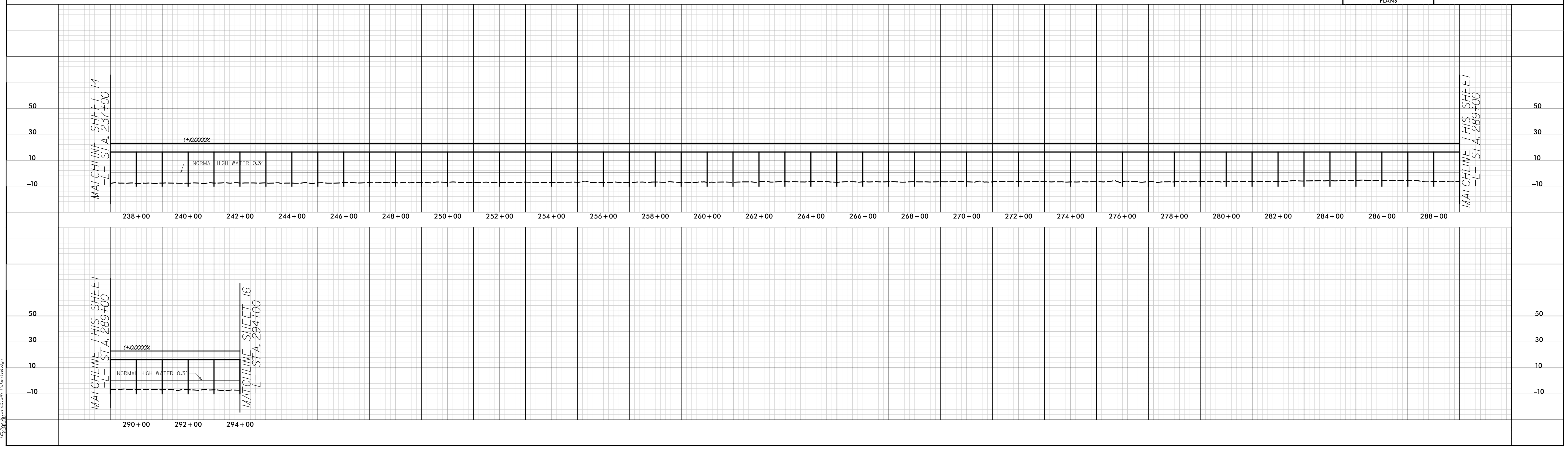
NOTE:
 NO PERMANENT NOR TEMPORARY
 POTENTIAL PILE IMPACTS ARE
 SHOWN ON THIS SHEET



POTENTIAL SAV HABITAT:
 POTENTIAL SAV HABITAT IS PRESENT IN AREAS WITH WATER DEPTHS SIX FEET OR LESS AND HAVE SUITABLE SUBSTRATE TO SUPPORT SAV. IMPACT AREAS REPRESENT IMPACTS OUTSIDE OF THOSE ALREADY ACCOUNTED FOR AS SAV HABITAT. SEE IMPACT DRAWINGS 7 THROUGH 11 FOR IMPACT LOCATIONS.

GRAPHIC SCALE
 100 50 0 100 200
 PLANS

LOCATION: _____
 TIP NO.: _____ COUNTY: _____
 DESIGNED BY: _____
 CHECKED BY: _____ DATE: _____



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SAV IMPACT DRAWING 10 OF 11

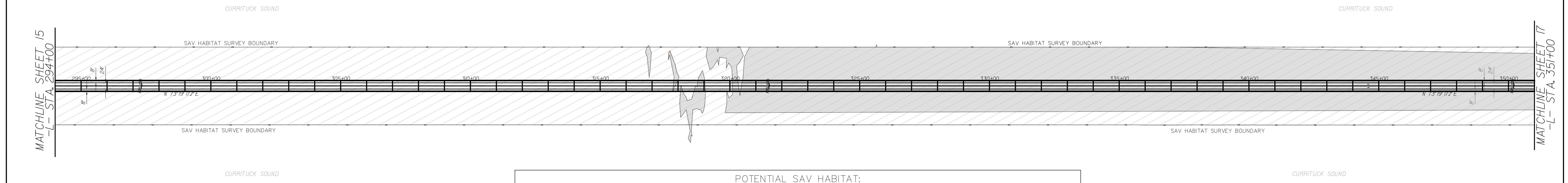
REVISIONS

LEGEND

■ WATER DEPTH 6 FT OR LESS

▨ EPB SAV HABITAT

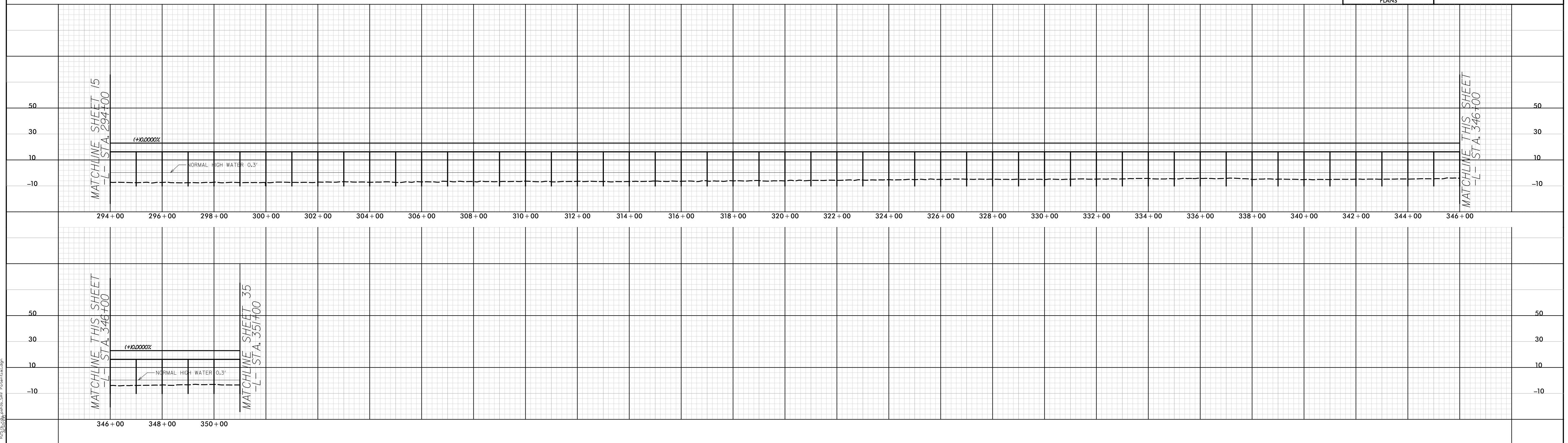
NOTE:
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GRAPHIC SCALE
 100 50 0 100 200
 PLANS

LOCATION: _____
 TIP NO.: _____ COUNTY: _____
 DESIGNED BY: _____
 CHECKED BY: _____ DATE: _____



H:\Projects\2010\A-2576\Drawings\10 of 11 SAV Impact.dwg
 10/11/10
 P:\Users\jld\My Documents\10 of 11 SAV Impact.dwg
 10/11/10

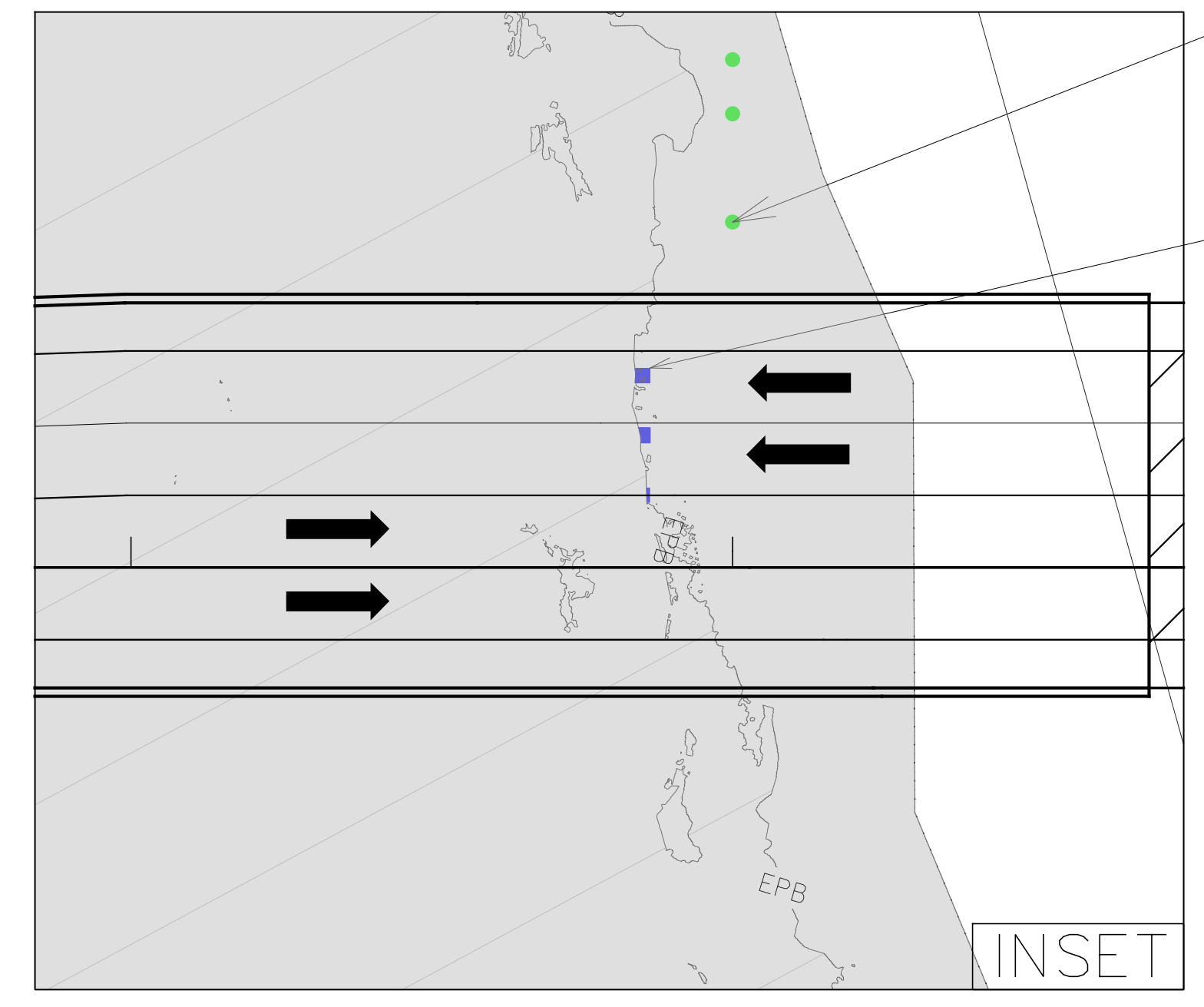
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

SAV IMPACT DRAWING 11 OF 11

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

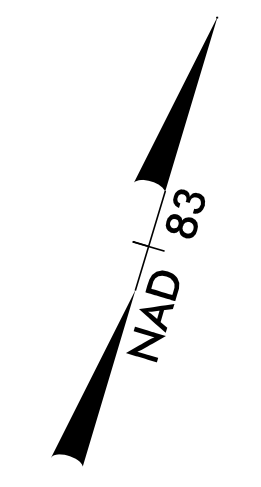
LEGEND

- WATER DEPTH 6 FT OR LESS
- SAV HABITAT
- POTENTIAL PERMANENT PILE IMPACTS
- POTENTIAL TEMPORARY PILE IMPACTS

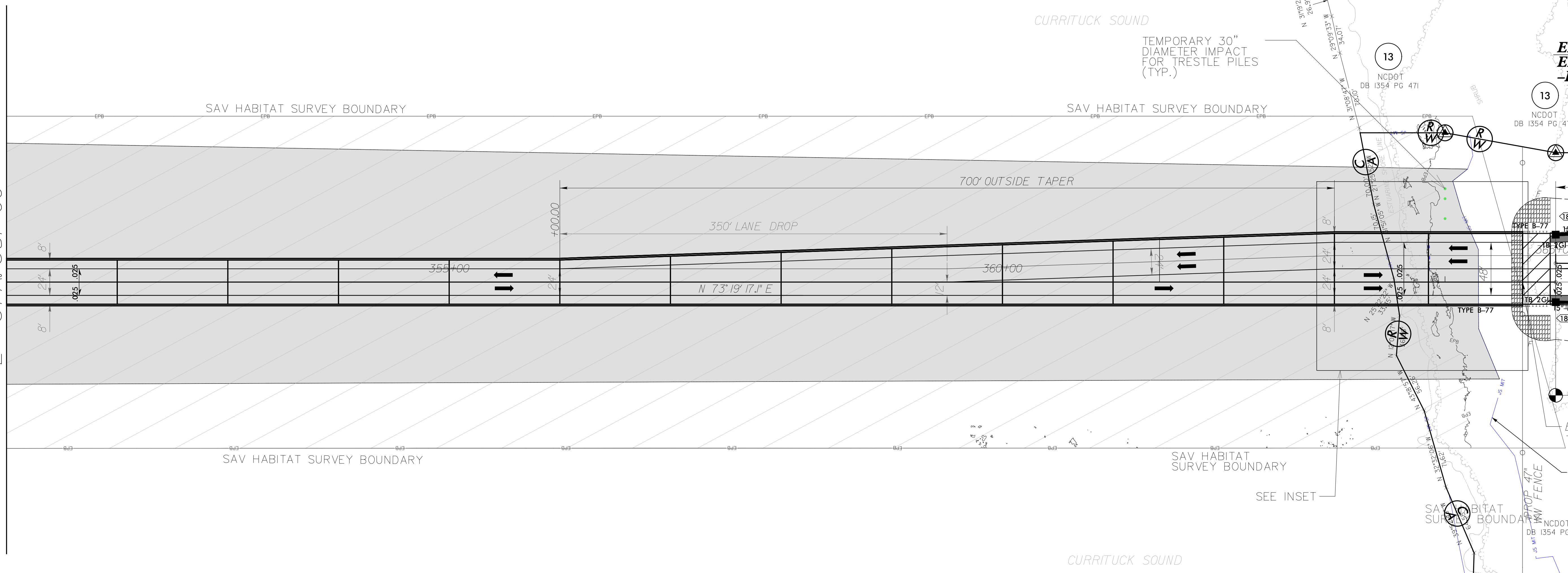


TEMPORARY 30" DIAMETER IMPACT FOR TRESTLE PILES (TYP.)

PERMANENT 30"x30" IMPACT (TYP.)



MATCHLINE SHEET 16
-L- STA. 351+00



POTENTIAL SAV HABITAT:

POTENTIAL SAV HABITAT IS PRESENT IN AREAS WITH WATER DEPTHS SIX FEET OR LESS AND HAVE SUITABLE SUBSTRATE TO SUPPORT SAV. IMPACT AREAS REPRESENT IMPACTS OUTSIDE OF THOSE ALREADY ACCOUNTED FOR AS SAV HABITAT. SEE IMPACT DRAWINGS 7 THROUGH 11 FOR IMPACT LOCATIONS.

SEE SHEET 2D-I FOR DITCH DETAILS
SEE SHEET 35 FOR -L- PROFILE