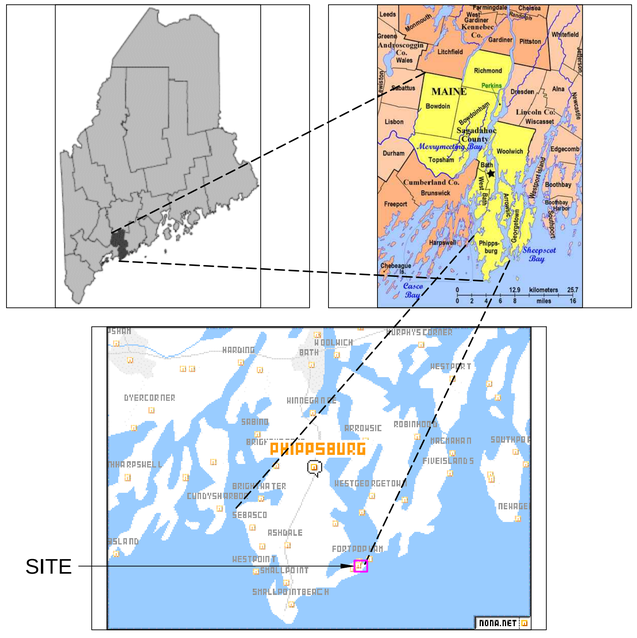
POPHAM BEACH SHORELINE RESTORATION

CONCEPTUAL DESIGN OPTIONS

POPHAM BEACH, PHIPPSBURG, MAINE



SITE

VICINITY MAP
NOT TO SCALE

POPHAM BEACH
BIRD'S-EYE VIEW

LIST OF SHEETS

NOTES

1. THESE ARE CONCEPTUAL DESIGN SHEETS AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES.

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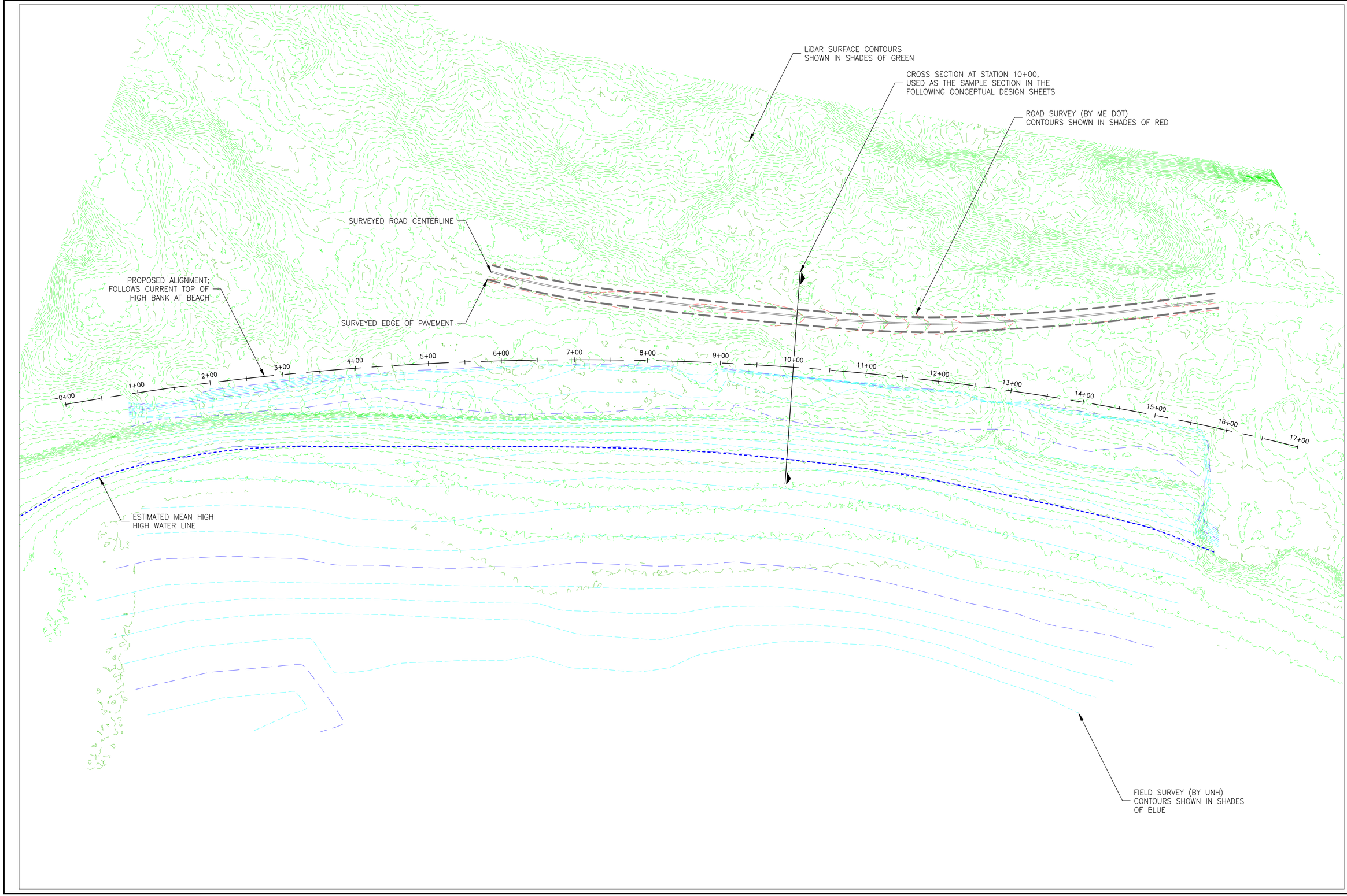

Designed By: JCB, TPB
Drawn By: JCB
Checked By: TPB
Date: 26 SEPT 2017

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Notes:

Date:

Revision #:

Sheet Title: SITE OVERVIEW

Sheet Set: CONCEPTUAL DESIGN OPTIONS

Project Name: POPHAM BEACH SHORELINE RESTORATION

Project Location: POPHAM BEACH, PHIPPSBURG, MAINE

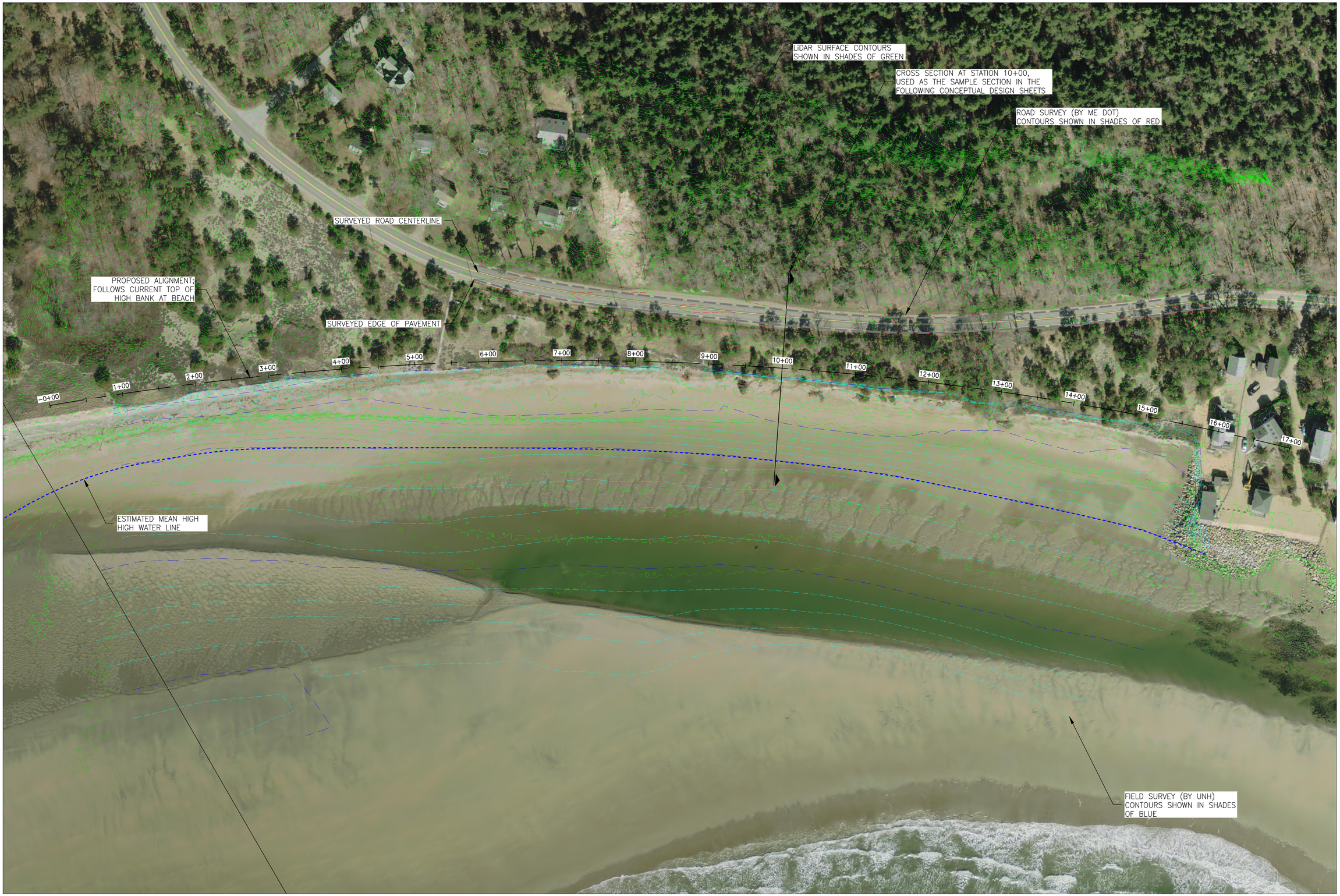
N

SCALE: 1" = 60'

0 30 60 90

Sheet ID: OVIEW

Sheet Number: 01 OF 09



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NOTES:

REVISION #	DATE:

SHEET TITLE: SITE OVERVIEW WITH AERIAL

SHEET SET: CONCEPTUAL DESIGN OPTIONS

PROJECT NAME: POPHAM BEACH SHORELINE RESTORATION

PROJECT LOCATION: POPHAM BEACH, PHIPPSBURG, MAINE

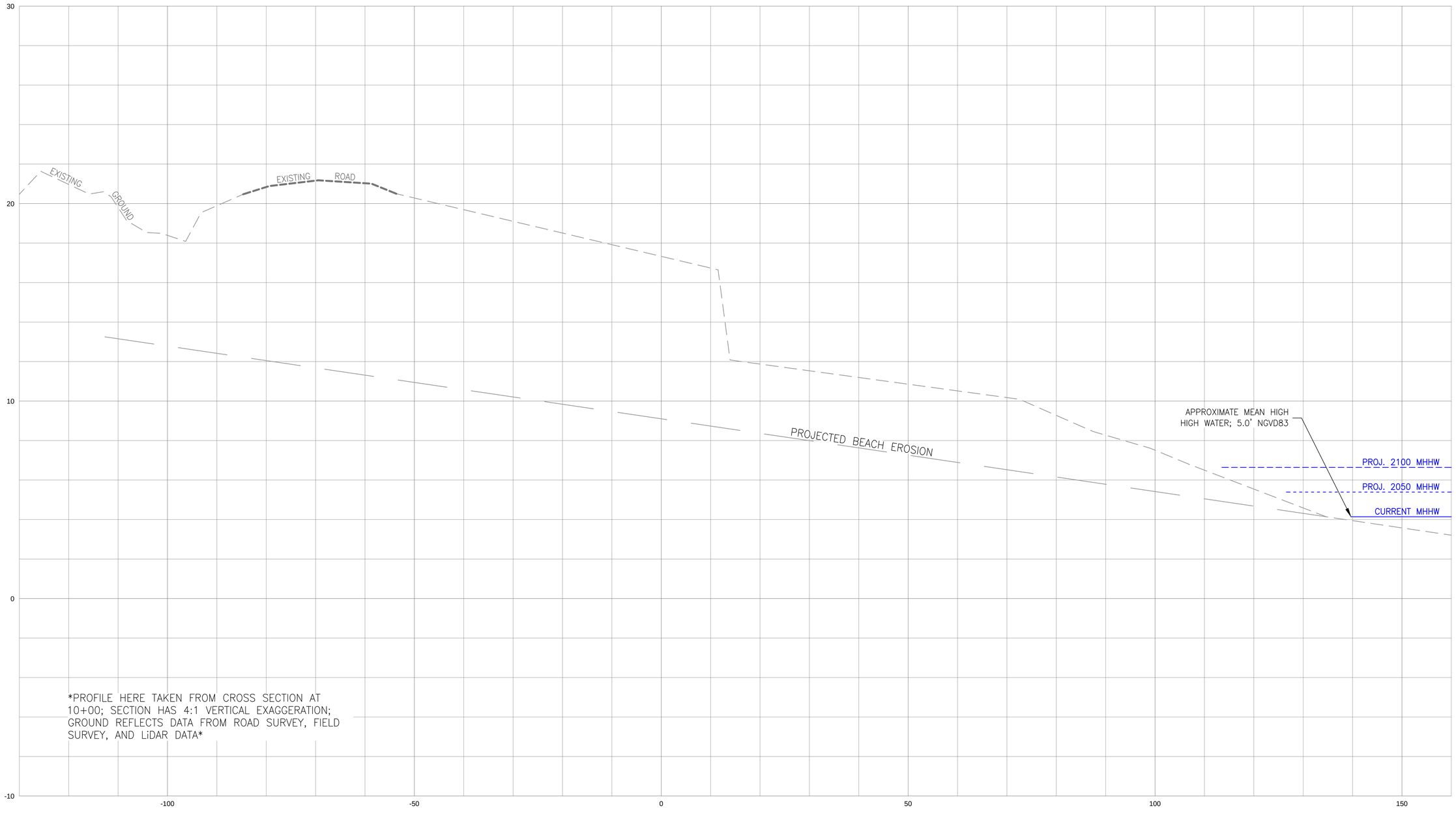
SCALE: 1" = 60'

0 30 60 90

SHEET ID: AERIAL

SHEET NUMBER: 02 OF 09

OPTION 1:
DO NOTHING; ALLOW NATURAL FORCES TO CONTINUE TO ERODE BEACH AND DUNES.



PROFILE HERE TAKEN FROM CROSS SECTION AT 10+00; SECTION HAS 4:1 VERTICAL EXAGGERATION; GROUND REFLECTS DATA FROM ROAD SURVEY, FIELD SURVEY, AND LiDAR DATA

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Notes:

Revision #: | Date:

Sheet Title: CONCEPTUAL OPTION 1
Sheet Set: CONCEPTUAL DESIGN OPTIONS
Project Name: POPHAM BEACH SHORELINE RESTORATION
Project Location: POPHAM BEACH, PHIPPSBURG, MAINE

SCALE: 1" = 10'
0 5 10 15

Sheet ID: OPT1

Sheet Number: 03 OF 09

OPTION 2:
IMPLEMENT ONLY SEAWEED MANAGEMENT AND STAKED TEMPORARY FENCING (E.G. SNOW FENCING) AT THE FRONT OF THE EXISTING DUNE. RESERVE FURTHER INVESTMENTS UNTIL LOSS OF ROAD IS IMMINENT AND THEN IMPLEMENT STABILIZATION MEASURES SELECTED FROM OTHER OPTIONS.

PROFILE HERE TAKEN FROM CROSS SECTION AT 10+00; SECTION HAS 4:1 VERTICAL EXAGGERATION; GROUND REFLECTS DATA FROM ROAD SURVEY, FIELD SURVEY, AND LiDAR DATA

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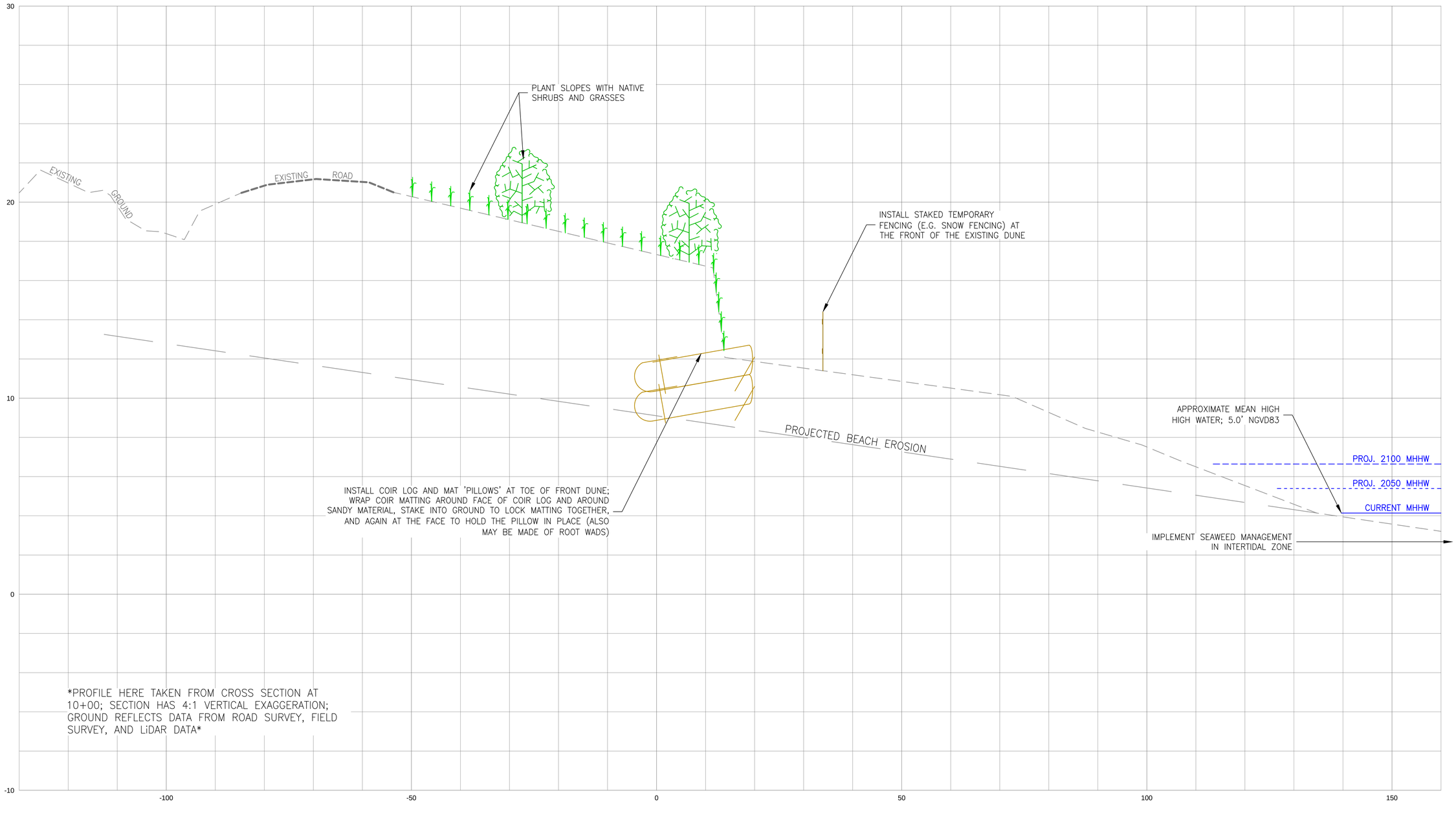
Sheet Title: CONCEPTUAL OPTION 2
Sheet Set: CONCEPTUAL DESIGN OPTIONS
Project Name: POPHAM BEACH SHORELINE RESTORATION
Project Location: POPHAM BEACH, PHIPPSBURG, MAINE

SCALE: 1" = 10'
0 5 10 15

Sheet ID: OPT2

Sheet Number: 04 OF 09

OPTION 3:
IN ADDITION TO SEAWEED MANAGEMENT AND FENCING, INSTALL COIR 'PILLOWS' AT FRONT DUNE. PLANT W2ITH NATIVE SHRUBS AND BEACH GRASSES.



PROFILE HERE TAKEN FROM CROSS SECTION AT 10+00; SECTION HAS 4:1 VERTICAL EXAGGERATION; GROUND REFLECTS DATA FROM ROAD SURVEY, FIELD SURVEY, AND LiDAR DATA

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Date:

Revision #:

Sheet Title: CONCEPTUAL OPTION 3

Sheet Set: CONCEPTUAL DESIGN OPTIONS

Project Name: POPHAM BEACH SHORELINE RESTORATION

Project Location: POPHAM BEACH, PHIPPSBURG, MAINE

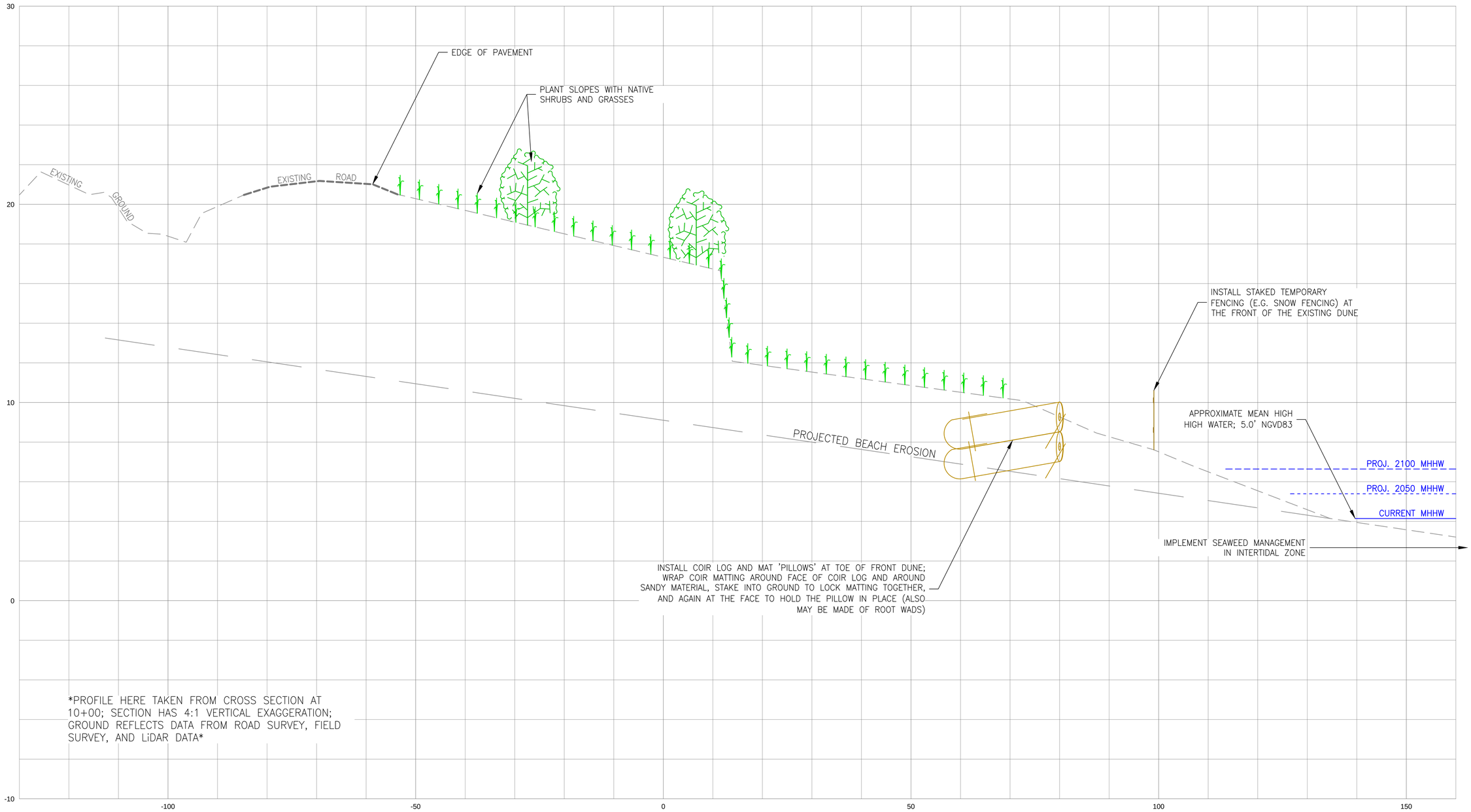
SCALE: 1" = 10'

0 5 10 15

Sheet ID: OPT3

Sheet Number: 05 of 09

OPTION 4:
IN ADDITION TO SEAWEED MANAGEMENT AND FENCING, INSTALL COIR 'PILLOWS' AT FRONT OF TOE OF DUNE. PLANT WITH NATIVE SHRUBS AND BEACH GRASSES.



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Notes:

Date:

Revision #:

Sheet Title: CONCEPTUAL OPTION 4

Sheet Set: CONCEPTUAL DESIGN OPTIONS

Project Name: POPHAM BEACH SHORELINE RESTORATION

Project Location: POPHAM BEACH, PHIPPSBURG, MAINE

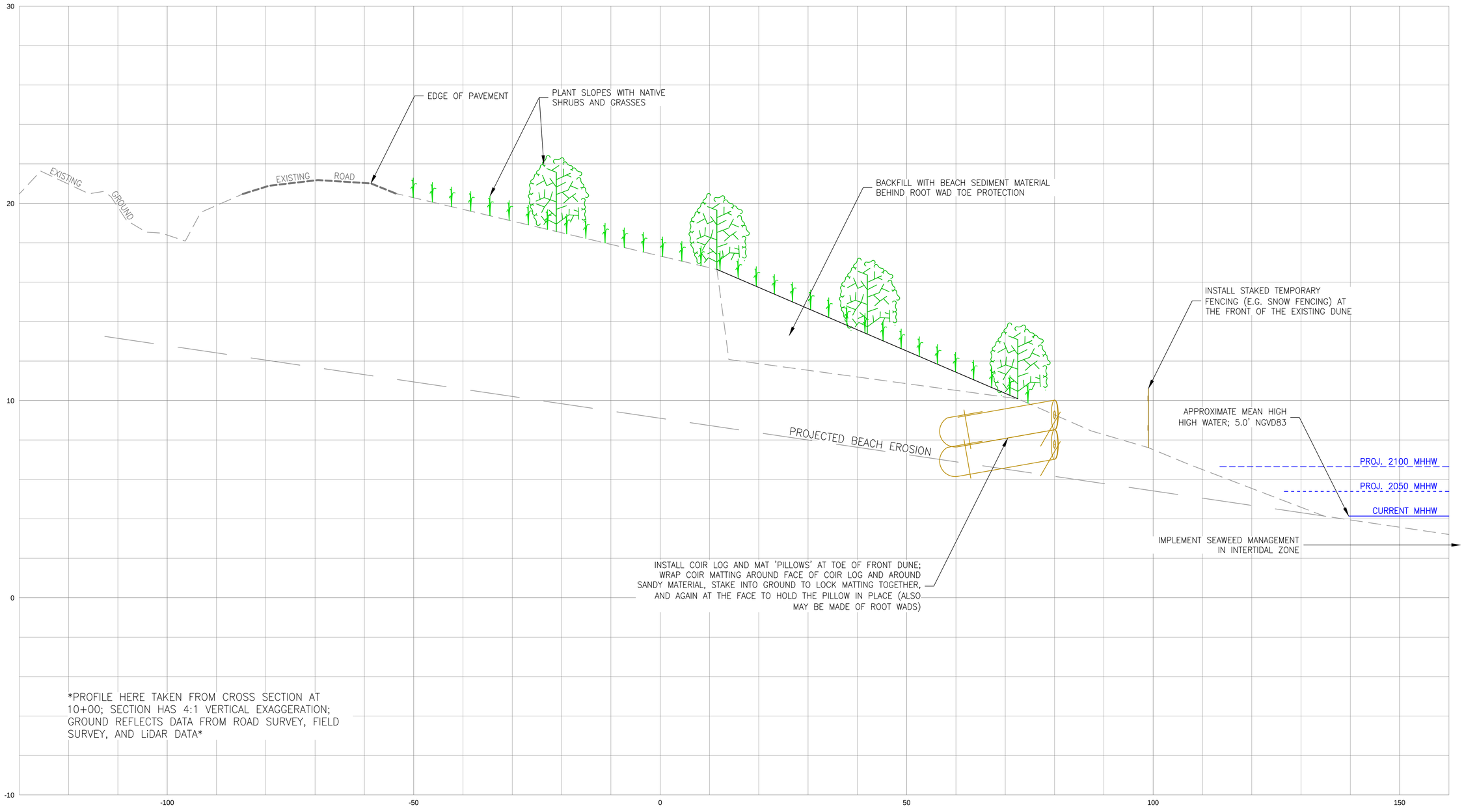
SCALE: 1" = 10'

0 5 10 15

Sheet ID: OPT4

Sheet Number: 06 of 09

OPTION 4A:
IN ADDITION TO SEAWEED MANAGEMENT AND FENCING, INSTALL COIR 'PILLOWS' AT FRONT DUNE OR CRIB WALL STRUCTURE. ADD BEACH SEDIMENT MATERIAL BEHIND PILLOWS TO TOE OF ROAD BANK; PLANT WITH NATIVE SHRUBS AND BEACH GRASSES.



PROFILE HERE TAKEN FROM CROSS SECTION AT 10+00; SECTION HAS 4:1 VERTICAL EXAGGERATION; GROUND REFLECTS DATA FROM ROAD SURVEY, FIELD SURVEY, AND LiDAR DATA

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DATE:

REVISION #:

SHEET TITLE: CONCEPTUAL OPTION 4A

SHEET SET: CONCEPTUAL DESIGN OPTIONS

PROJECT NAME: POPHAM BEACH SHORELINE RESTORATION

PROJECT LOCATION: POPHAM BEACH, PHIPPSBURG, MAINE

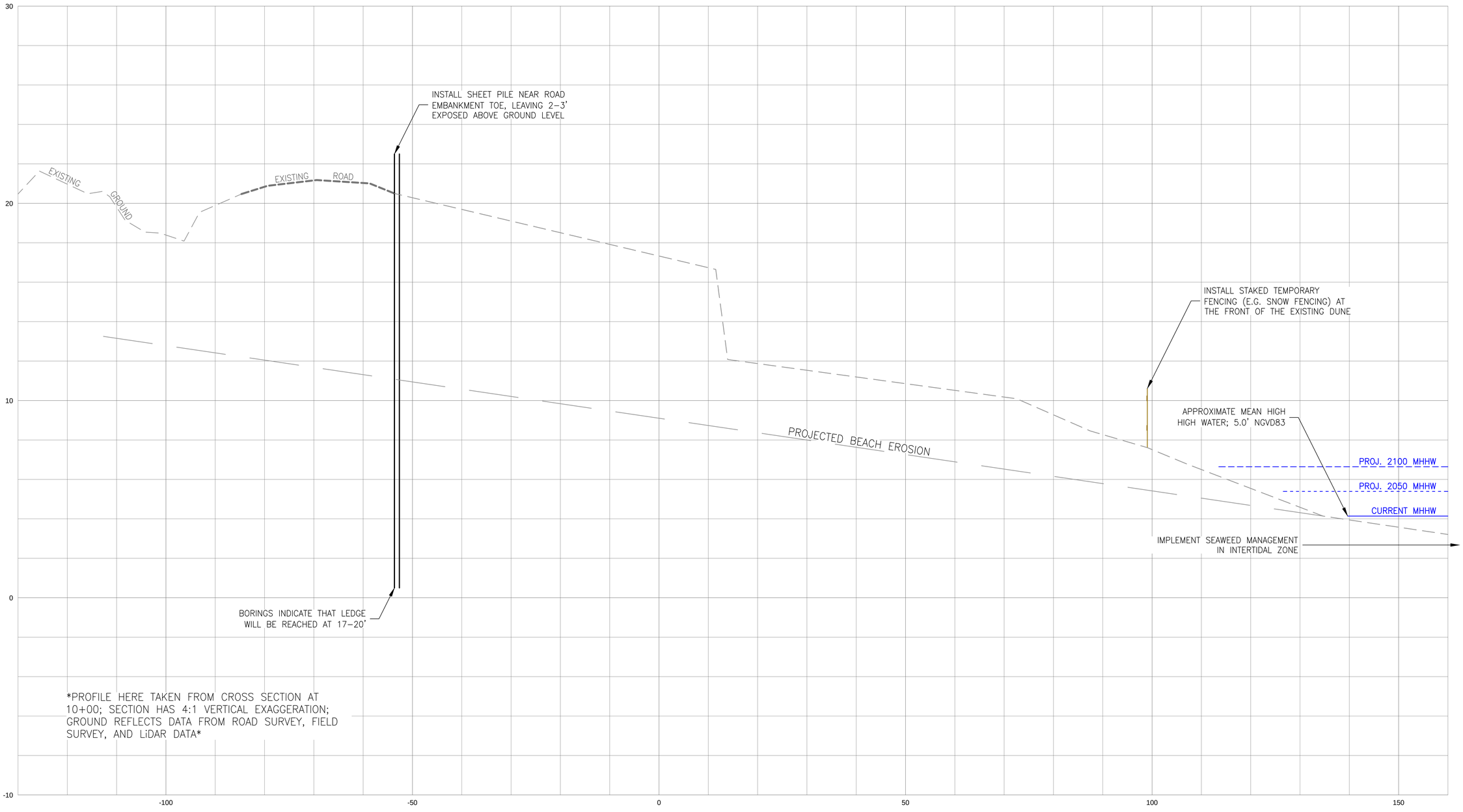
SCALE: 1" = 10'
0 5 10 15

SHEET ID: OPT4A

SHEET NUMBER: 07 OF 09

OPTION 5:

UNTIL THE EROSIONAL SCARP REACHES 15' FROM THE ROAD, CONDUCT SEAWEED MANAGEMENT AND FENCING REGIME AS IN OPTION 2, THEN INSTALL STEEL SHEET PILE WALL JUST SEAWARD OF EROSIONAL SCARP AT ROAD, LEAVING APPROXIMATELY 2–3' ABOVE GROUND LEVEL. INDICATIONS FROM MAINE GEOLOGICAL SURVEY BORINGS IN ADJACENT AREAS ARE THAT LEDGE WILL BE REACHED AT 17–20'.



PROFILE HERE TAKEN FROM CROSS SECTION AT 10+00; SECTION HAS 4:1 VERTICAL EXAGGERATION; GROUND REFLECTS DATA FROM ROAD SURVEY, FIELD SURVEY, AND LiDAR DATA

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Checked By: TPB
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Date:

Revision #:

Sheet Title: CONCEPTUAL OPTION 5

Sheet Set: CONCEPTUAL DESIGN OPTIONS

Project Name: POPHAM BEACH SHORELINE RESTORATION

Project Location: POPHAM BEACH, PHIPPSBURG, MAINE

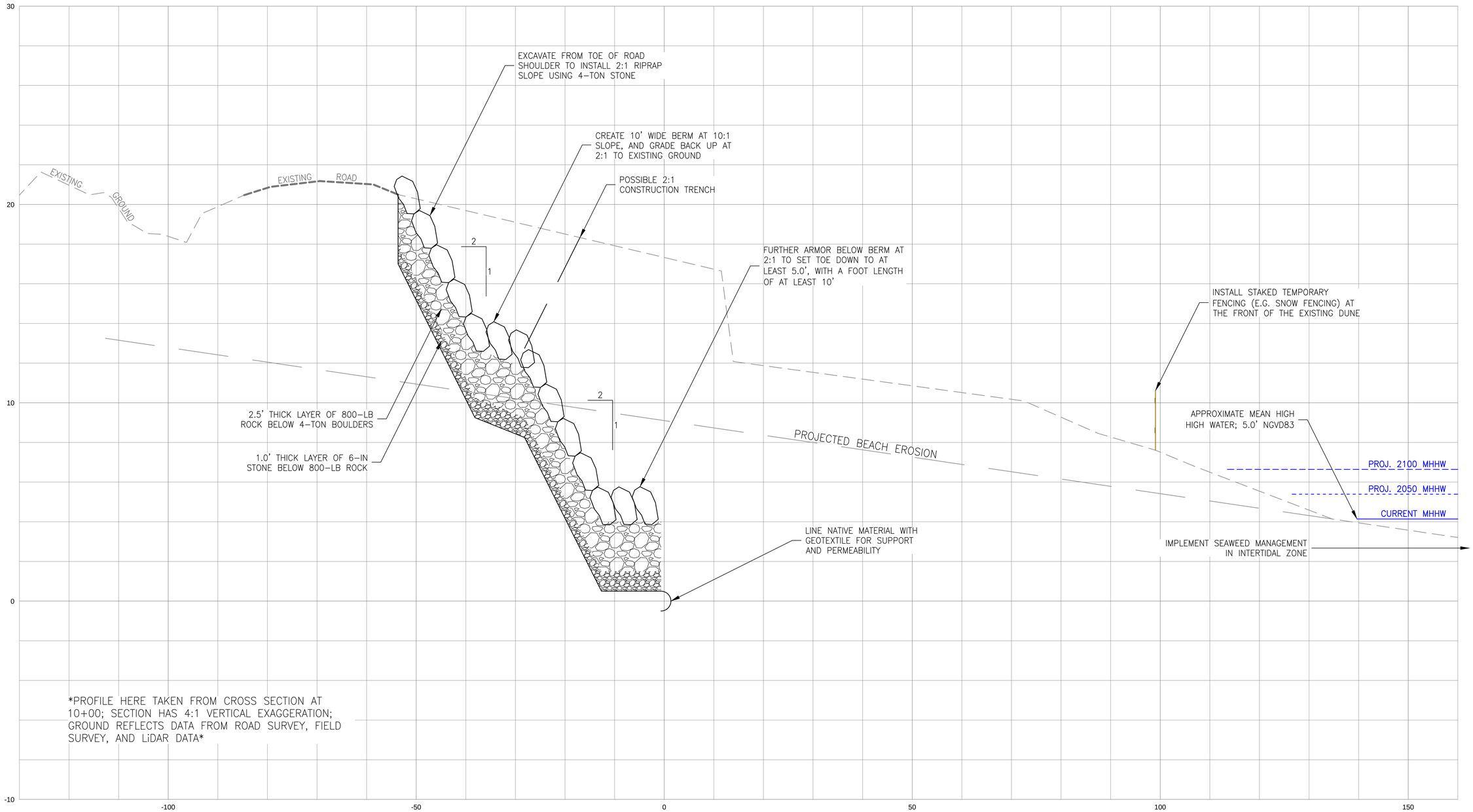
SCALE: 1" = 10'

0 5 10 15

Sheet ID: OPT5

Sheet Number: 07 OF 09

OPTION 6:
UNTIL THE EROSIONAL SCARP REACHES 15' FROM THE ROAD, CONDUCT SEAWEED MANAGEMENT AND FENCING REGIME AS IN OPTION 2, THEN INSTALL 'S' SLOPE JUST SEAWARD OF EROSIONAL SCARP AT ROAD; EXCAVATE FROM ROAD SHOULDER TO INSTALL 2:1 RIPRAP SLOPE USING LARGE DIAMETER STONE, CREATING A DITCH WITH A 10' WIDE FLOOR.



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Checked By: TPB
Date: 26 SEPT 2017

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Notes:

Date:

Revision #:

Sheet Title: CONCEPTUAL OPTION 6

Sheet Set: CONCEPTUAL DESIGN OPTIONS

Project Name: POPHAM BEACH SHORELINE RESTORATION

Project Location: POPHAM BEACH, PHIPPSBURG, MAINE

SCALE: 1" = 10'
0 5 10 15

Sheet ID: OPT6

Sheet Number: 09 OF 09