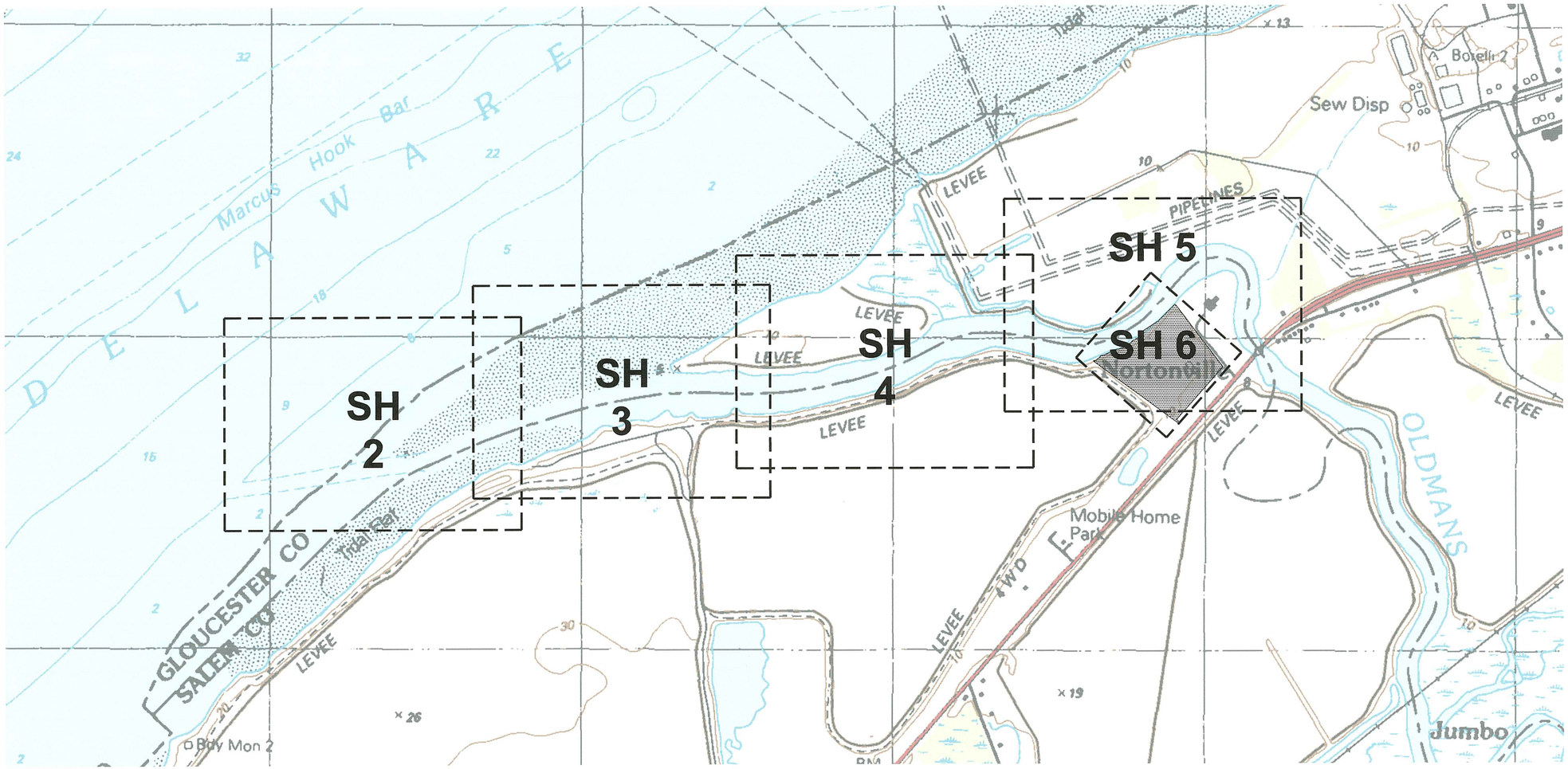

KEY MAP

PART OF THE U.S.G.S. "MARCUS HOOK QUADRANGLE" MAP
(1"=600')

FLOOD HAZARD NOTES

GLOUCESTER COUNTY, LOGAN TOWNSHIP & SALEM COUNTY, OLDMANS TOWNSHIP

ZONE AE - AN AREA OF HIGH FLOOD RISK SUBJECT TO INUNDATION BY THE 1% ANNUAL-CHANCE FLOOD EVENT. BASE FLOOD ELEVATION DETERMINED.

ZONE X - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

ZONE X (0.2% ANNUAL FLOOD CHANCE) - AREAS OF 0.2% CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQ. MILE; AND AREAS PROTECTED BY LEVEES FROM THE 1% ANNUAL CHANCE FLOOD.

FLOODWAY AREAS IN ZONE AE - THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS AND ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHT.

NOTES:
1) ALL ELEVATIONS BASED ON NAVD '88
2) GLOUCESTER COUNTY FLOOD ZONES PER FEMA FLOOD INSURANCE RATE MAP (FIRM), MAP NUMBERS 34015C0041F & 34015C0042F, DATED AUGUST 17, 2016
3) SALEM COUNTY FLOOD ZONES PER FEMA FIRM, MAP NUMBERS 34033C0001C, 34033C0015C & 34033C0001C, DATED JULY 6, 2016.
4) SHAPE FILES OF LINE WORK PROCURED FROM FEMA.

TIDAL DATUMS AND BENCHMARK ELEVATION SHEET
OLDMANS CREEK TIDAL DATA
PROVIDED BY HYDROGRAPHIC SURVEYS
AT SOUNDING STATION 20+00 PER NOAA VDATUM

HIGH TIDE LEVEL (HTL)	=	3.68 FEET
MEAN HIGHER HIGH WATER/SPRING HIGH WATER (MHHW)	=	3.18 FEET
MEAN HIGH WATER (MHW)	=	2.79 FEET
MEAN TIDE LEVEL (MTL)	=	0.05 FEET
MEAN LOW WATER (MLW)	=	−2.69 FEET
MEAN LOWER LOW WATER (MLLW)	=	−2.87 FEET

ELEVATION DATUM IS NAVD '88 (GEOID 12A).

TIDAL EPOCH 1983–2001 TAKEN FROM U.S. DEPT. OF COMMERCE, NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL OCEAN SERVICE.

HIGH TIDE LEVEL PER US ARMY CORPS OF ENGINEERS

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R.E. PIERSON CONSTRUCTION COMPANY, INC.

OLDMANS CREEK DREDGING AND BULKHEAD INSTALLATION PROJECT

LEGEND

- EXISTING MAJOR CONTOUR (HYDROGRAPHIC)
- EXISTING MINOR CONTOUR (HYDROGRAPHIC)
- EXISTING MAJOR CONTOUR (FRALINGER)
- EXISTING MINOR CONTOUR (FRALINGER)
- EXISTING SPOT ELEVATION
- TOP/BOTTOM OF CURB
- EDGE OF CONCRETE
- SOIL CORE LOCATION
- WETLANDS FLAG
- PROPERTY BOUNDARY LINE
- RIPARIAN GRANT BOUNDARY
- EASEMENT LINE
- STATE BOUNDARY LINE
- MUNICIPAL BOUNDARY LINE
- RIGHT-OF-WAY LINE
- DREDGE SLURRY PIPELINE
- NJ TIDEWATERS CLAIM LINE
- NJ COASTAL WETLANDS LINE
- NJ FRESHWATER WETLANDS LINE
- LOWER WETLANDS BOUNDARY LINE
- WETLANDS LINE
- WETLANDS BUFFER LINE
- FEMA FLOOD ZONE LINE
- FEMA FLOODWAY LIMIT
- CHAIN LINK FENCE
- WOODS
- RIPARIAN BUFFER LINE
- HIGH TIDE LINE
- MEAN HIGHER HIGH/SPRING HIGH WATER LINE
- MEAN HIGH WATER LINE
- MEAN LOWER WATER LINE
- EDGE OF STONE
- UTILITY POLE
- PHOTO ID/DIRECTION

REFERENCE NOTE:
NJ TIDEWATERS CLAIM LINE, NJ COASTAL WETLANDS LINE & NJ FRESHWATER WETLANDS LINE PER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA.

GENERAL NOTES

1. TAX MAP REFERENCE:
   OLDMANS TOWNSHIP
   SHEET 1 / BLOCK 1 / LOT 10
2. DEED REFERENCE:
   BOOK 4336 / PAGE 251 / DATED 12/08/2017
3. TOTAL AREA: 791,105 SF / 18.161 ACRES, SITUATED WITHIN OLDMANS TOWNSHIP'S INDUSTRIAL (I) ZONING DISTRICT
4. FIELD TOPOGRAPHY BLOCK 1 LOT 10 PERFORMED 11/27/18 BY FRALINGER ENGINEERING, PA. (NAVD '88).
5. BEARING, ELEVATION DATUM AND COORDINATE SYSTEM ARE BASED ON NEW JERSEY PLANE COORDINATE SYSTEM, NAD '83 ('11), NAVD '88(GEOID '12A) AS ESTABLISHED FROM G.P.S. OBSERVATIONS AND BENCH MARKS BY FRALINGER ENGINEERING, PA.
6. HYDROGRAPHIC CONTOURS WITHIN OLDMANS CREEK & DELAWARE RIVER BASED ON SOUNDINGS TAKEN FROM "OLDMANS CREEK RECON SOUNDINGS, FATHOMETRIC SURVEY," PREPARED BY HYDROGRAPHIC SURVEY, DATED 05/24/18.
7. UPPER WETLANDS BOUNDARY LINE & TIDELANDS CLAIM LINE (MAP #343-1788) SHOWN PER SHAPEFILES PROCURED FROM NJDEP.
8. WETLANDS LOCATED BY FRALINGER ENGINEERING, PA 11/27/18. WETLANDS FLAGS W9A, W28A & W31A NOT FOUND IN FIELD. WETLANDS FLAGS W10B, W16B, W17B & W4C NOT FOUND IN FIELD, SHOWN LOCATIONS PER JOHN HELBIG, PP.
9. SEDIMENT CORE SAMPLE LOCATIONS TAKEN FROM "SEDIMENT CORE LOCATIONS, OLDMANS CREEK/DELAWARE RIVER," BY ADAMS, REHMANN & HEGGAN ASSOCIATES, INC., DATED 10/31/18.
10. DREDGING, SHEETING & CUT-OFF AREAS PER NOTE #6.
11. PROPOSED DREDGING ACTIVITY TO BE CONDUCTED CONSISTENT WITH SEASONAL TIMING RESTRICTIONS REQUIRED BY REGULATORY AUTHORITIES.
12. DREDGED SEDIMENT IS PROPOSED TO BE PUMPED DIRECTLY INTO THE ADJACENT PEDRICKTOWN CONFINED DISPOSAL FACILITY (CDF) MANAGED BY THE US ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT PER 07/16/19 CONFIRMATION LETTER.

WILLIAM J. OLBRICH, Jr. P.L.S.
PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 24GS03616600
wjolbrich@fralinger.com
3/24/20
DATE

NO.	DATE	REVISION	BY
5	03/24/20	REVISED LEGEND & NOTES	CG
4	02/03/20	REV. PER 01/06/20 USACOE COMMENTS	CG
3	11/25/19	REVISED PER NJDEP REQUIREMENTS & ADDED SHEET 8	CG
2	09/06/19	REVISED PER BARGE SPECIFICATIONS	CG
1	08/09/19	REVISED PER USACOE REVIEW	CG

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WATERFRONT DEVELOPMENT AND LOWER WETLANDS BOUNDARY PERMITTING PLANS
PREPARED FOR R.E. PIERSON CONSTRUCTION COMPANY, INC.
OLDMANS CREEK DREDGING & BULKHEAD INSTALLATION PROJECT

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COUNTY: GLOUCESTER CO.	CADD FILE #: 29542.00.USArmy.dwg		
STATE: NEW JERSEY	DATE: 04/15/19	CHECKED BY:	
SCALE: AS SHOWN	DRAWN BY: CG		

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E-2

N.J.P.C.S. NAD '83('11') DATUM

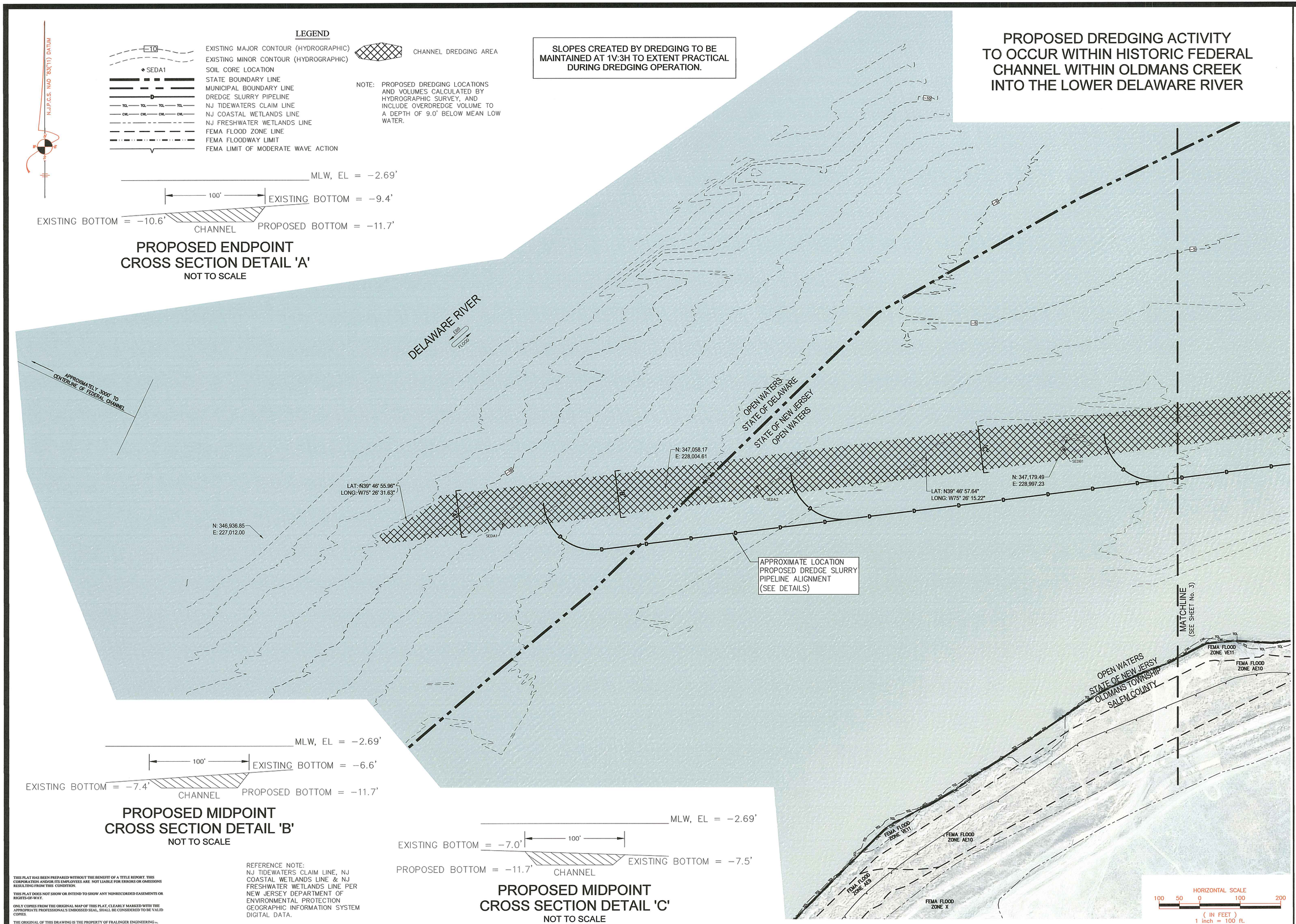
LEGEND

- EXISTING MAJOR CONTOUR (HYDROGRAPHIC)
- EXISTING MINOR CONTOUR (HYDROGRAPHIC)
- SEDA1 — SOIL CORE LOCATION
- STATE BOUNDARY LINE
- MUNICIPAL BOUNDARY LINE
- DREDGE SLURRY PIPELINE
- NJ TIDEWATERS CLAIM LINE
- NJ COASTAL WETLANDS LINE
- NJ FRESHWATER WETLANDS LINE
- FEMA FLOOD ZONE LINE
- FEMA FLOODWAY LIMIT
- FEMA LIMIT OF MODERATE WAVE ACTION
- CHANNEL DREDGING AREA

NOTE: PROPOSED DREDGING LOCATIONS AND VOLUMES CALCULATED BY HYDROGRAPHIC SURVEY, AND INCLUDE OVERDREDGE VOLUME TO A DEPTH OF 9.0' BELOW MEAN LOW WATER.

SLOPES CREATED BY DREDGING TO BE MAINTAINED AT 1V:3H TO EXTENT PRACTICAL DURING DREDGING OPERATION.

PROPOSED DREDGING ACTIVITY TO OCCUR WITHIN HISTORIC FEDERAL CHANNEL WITHIN OLDMANS CREEK INTO THE LOWER DELAWARE RIVER



MLW, EL = −2.69'
100'
EXISTING BOTTOM = −9.4'
EXISTING BOTTOM = −10.6'
CHANNEL
PROPOSED BOTTOM = −11.7'

PROPOSED ENDPOINT CROSS SECTION DETAIL 'A'

NOT TO SCALE

MLW, EL = −2.69'
100'
EXISTING BOTTOM = −6.6'
EXISTING BOTTOM = −7.4'
CHANNEL
PROPOSED BOTTOM = −11.7'

PROPOSED MIDPOINT CROSS SECTION DETAIL 'B'

NOT TO SCALE

MLW, EL = −2.69'
EXISTING BOTTOM = −7.0'
100'
PROPOSED BOTTOM = −11.7'
CHANNEL
EXISTING BOTTOM = −7.5'

PROPOSED MIDPOINT CROSS SECTION DETAIL 'C'

NOT TO SCALE

REFERENCE NOTE:
NJ TIDEWATERS CLAIM LINE, NJ COASTAL WETLANDS LINE & NJ FRESHWATER WETLANDS LINE PER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA.

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PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 24GS03554600
olbrich@fralinger.com

3/24/20
DATE

NO.	DATE	REVISION	BY
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3	02/03/20	REV. PER 01/06/20 USACOE COMMENTS	CG
2	11/25/19	ADDED SHEET 8	CG
1	08/09/19	REVISED PER USACOE REVIEW	CG

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STATE: NEW JERSEY	DATE: 04/15/19		
SCALE: 1" = 100'	DRAWN BY: CG	CHECKED BY:	

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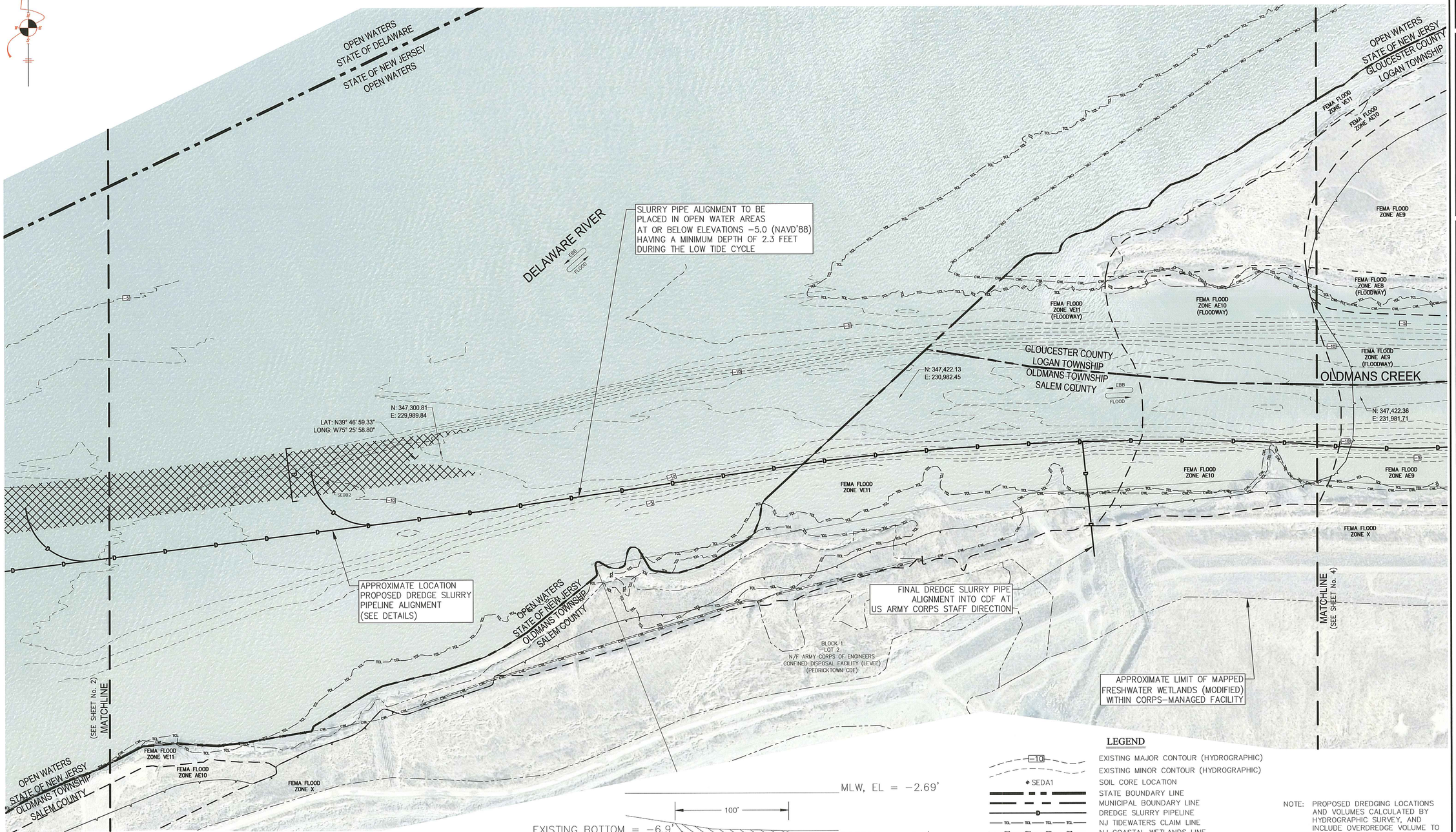
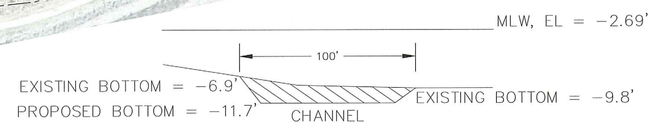
E-3

N.J.P.C.S. NAD '83/'11 DATUM

SLOPES CREATED BY DREDGING TO BE MAINTAINED AT 1V:3H TO EXTENT PRACTICAL DURING DREDGING OPERATION.

PROPOSED DREDGING ACTIVITY TO OCCUR WITHIN HISTORIC FEDERAL CHANNEL WITHIN OLDMANS CREEK INTO THE LOWER DELAWARE RIVER





PROPOSED ENDPOINT CROSS SECTION DETAIL 'D'

NOT TO SCALE

LEGEND

- EXISTING MAJOR CONTOUR (HYDROGRAPHIC)
- EXISTING MINOR CONTOUR (HYDROGRAPHIC)
- SOIL CORE LOCATION
- STATE BOUNDARY LINE
- MUNICIPAL BOUNDARY LINE
- DREDGE SLURRY PIPELINE
- NJ TIDEWATERS CLAIM LINE
- NJ COASTAL WETLANDS LINE
- NJ FRESHWATER WETLANDS LINE
- FEMA FLOOD ZONE LINE
- FEMA FLOODWAY LIMIT
- FEMA LIMIT OF MODERATE WAVE ACTION
- CHANNEL DREDGING AREA

NOTE: PROPOSED DREDGING LOCATIONS AND VOLUMES CALCULATED BY HYDROGRAPHIC SURVEY, AND INCLUDE OVERDREDGE VOLUME TO A DEPTH OF 9.0' BELOW MEAN LOW WATER.

HORIZONTAL SCALE
100 50 0 100 200
(IN FEET)
1 inch = 100 ft.

REFERENCE NOTE:
NJ TIDEWATERS CLAIM LINE, NJ COASTAL WETLANDS LINE & NJ FRESHWATER WETLANDS LINE PER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA.

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PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 24GS03615600
DATE

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2	11/25/19	ADDED SHEET 8	CG
1	08/06/19	REVISED PER USACOE REVIEW	CG

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SCALE:	1" = 100'	DRAWN BY:	CGJ
		CHECKED BY:	

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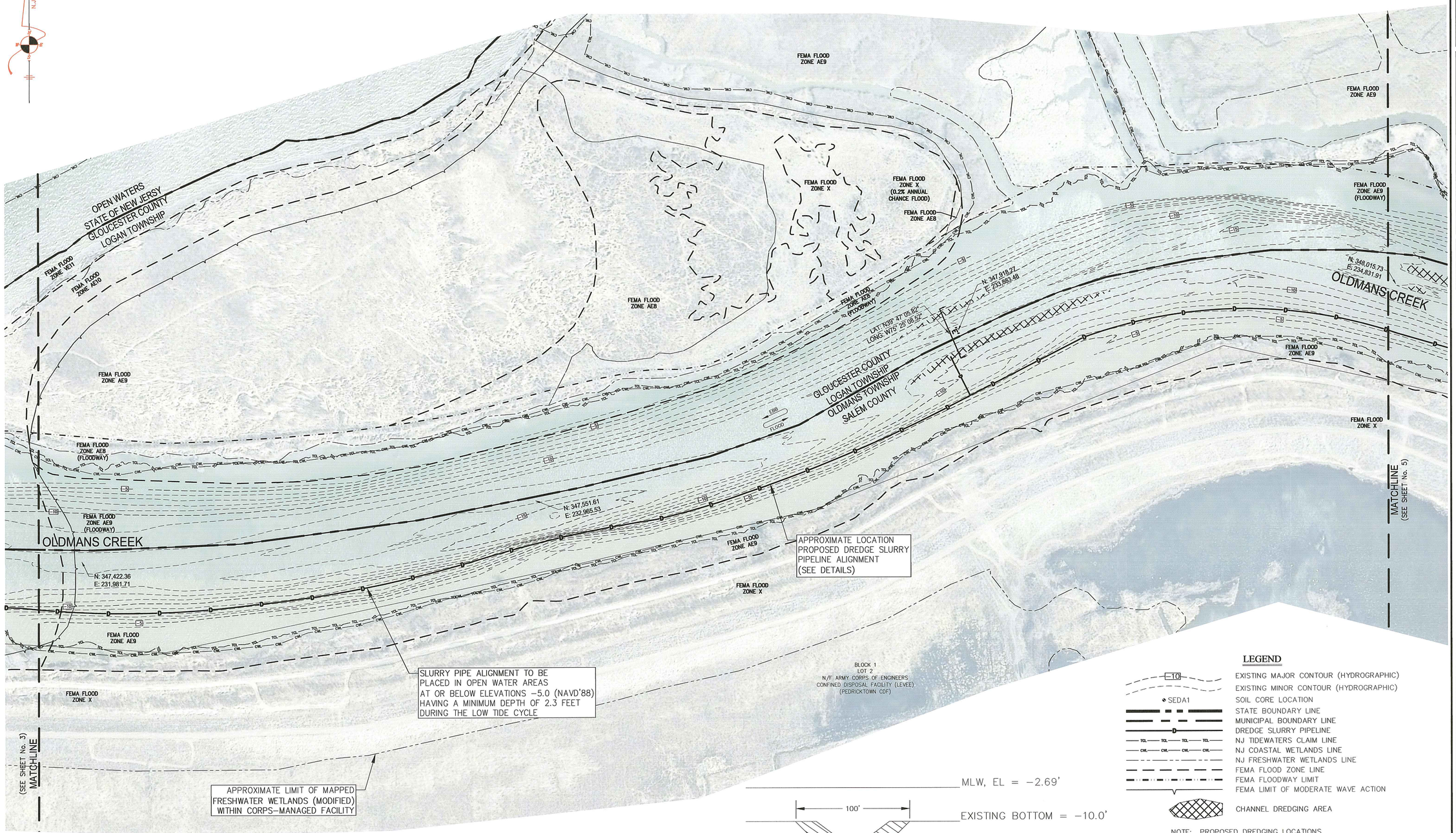
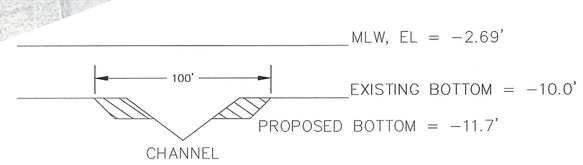
E-4

SLOPES CREATED BY DREDGING TO BE MAINTAINED AT 1V:3H TO EXTENT PRACTICAL DURING DREDGING OPERATION.

PROPOSED DREDGING ACTIVITY TO OCCUR WITHIN HISTORIC FEDERAL CHANNEL WITHIN OLDMANS CREEK INTO THE LOWER DELAWARE RIVER





LEGEND

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- CHANNEL DREDGING AREA

NOTE: PROPOSED DREDGING LOCATIONS AND VOLUMES CALCULATED BY HYDROGRAPHIC SURVEY, AND INCLUDE OVERDREDGE VOLUME TO A DEPTH OF 9.0' BELOW MEAN LOW WATER.

HORIZONTAL SCALE
100 50 0 100 200
(IN FEET)
1 inch = 100 ft.

PROPOSED MIDPOINT CROSS SECTION DETAIL 'E'

NOT TO SCALE

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DATE
Dec@fralingerengr.com

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PROPOSED DREDGING ACTIVITY TO OCCUR WITHIN HISTORIC FEDERAL CHANNEL WITHIN OLDMANS CREEK INTO THE LOWER DELAWARE RIVER

N.J.P.C.S. NAD '83(''11) DATUM

LEGEND

- EXISTING MAJOR CONTOUR (HYDROGRAPHIC)
- EXISTING MINOR CONTOUR (HYDROGRAPHIC)
- SEDA1 — SOIL CORE LOCATION
- PROPERTY BOUNDARY LINE
- RIPARIAN GRANT BOUNDARY
- EASEMENT LINE
- STATE BOUNDARY LINE
- MUNICIPAL BOUNDARY LINE
- DREDGE SLURRY PIPELINE
- RIGHT-OF-WAY LINE
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- FEMA FLOODWAY LIMIT
- CHAIN LINK FENCE
- WOODS
- HIGH TIDE LINE
- MEAN HIGHER HIGH/SPRING HIGH WATER LINE
- MEAN HIGH WATER LINE
- MEAN LOWER WATER LINE
- EDGE OF STONE
- CHANNEL DREDGING AREA
- SHEETING AREA AT PROPOSED BARGE MOORING AREA

NOTE: PROPOSED DREDGING LOCATIONS AND VOLUMES CALCULATED BY HYDROGRAPHIC SURVEY, AND INCLUDE OVERDREDGE VOLUME TO A DEPTH OF 9.0' BELOW MEAN LOW WATER.

SLOPES CREATED BY DREDGING TO BE MAINTAINED AT 1V:3H TO EXTENT PRACTICAL DURING DREDGING OPERATION.

FEMA FLOOD ZONE AE9

LAT: N39° 47' 15.02"
LONG: W75° 24' 31.58"

FEMA FLOOD ZONE AE9 (FLOODWAY)

N: 348,678.76
E: 236,490.79

FEMA FLOOD ZONE AE9

N: 348,540.09
E: 237,192.57

DREDGE SLURRY PIPELINE EXTENSION TO ALTERNATE LANDING AREA (SEE SHEET 9)

LAT: N39° 47' 08.86"
LONG: W75° 24' 25.57"

SEDO1

SEDO2

FEMA FLOOD ZONE AE9

LAT: N39° 47' 08.71"
LONG: W75° 24' 37.99"

WEIGHTED TURBIDITY BARRIERS TO BE EMPLOYED DURING DREDGING OPERATION (SEE SHEET 7 – BMP'S)

N: 347,989.80
E: 235,787.21

SEDB1

FEMA FLOOD ZONE X

SEE SHEET 7 FOR DETAIL OF WATERFRONT

FEMA FLOOD ZONE AE9

FEMA FLOOD ZONE AE9 (FLOODWAY)

LAT: N39° 47' 06.71"
LONG: W75° 24' 53.68"

N: 348,015.73
E: 234,831.91

OLDMANS CREEK

GLOUCESTER COUNTY
LOGAN TOWNSHIP

OLDMANS TOWNSHIP
SALEM COUNTY

N: 347,947.24
E: 237,250.86

FEMA FLOOD ZONE X (0.2% ANNUAL CHANCE FLOOD)

OLDMANS CREEK

FEMA FLOOD ZONE X (0.2% ANNUAL CHANCE FLOOD)

FEMA FLOOD ZONE X

SEE SH 6

FEMA FLOOD ZONE X (0.2% ANNUAL CHANCE FLOOD)

PROJECT SITE CENTROID
N: 347,712.32
E: 236,333.57

FEMA FLOOD ZONE AE9

FEMA FLOOD ZONE AE9 (FLOODWAY)

FEMA FLOOD ZONE AE9

FEMA FLOOD ZONE X

FEMA FLOOD ZONE X

FEMA FLOOD ZONE X (0.2% ANNUAL CHANCE FLOOD)

FEMA FLOOD ZONE X

FEMA FLOOD ZONE X (0.2% ANNUAL CHANCE FLOOD)

FEMA FLOOD ZONE AE9

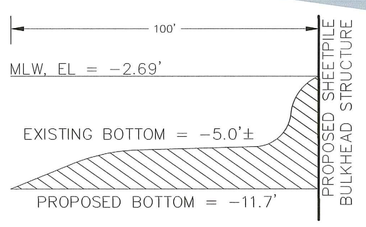
FEMA FLOOD ZONE X

APPROXIMATE LOCATION PROPOSED DREDGE SLURRY PIPELINE ALIGNMENT (SEE DETAILS)

SLURRY PIPE ALIGNMENT TO BE PLACED IN OPEN WATER AREAS AT OR BELOW ELEVATIONS –5.0 (NAVD'88) HAVING A MINIMUM DEPTH OF 2.3 FEET DURING THE LOW TIDE CYCLE

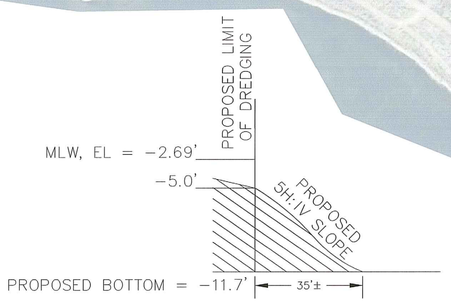
BLOCK 1
LOT 2
N/F ARMY CORPS OF ENGINEERS
CONFINED DISPOSAL FACILITY (LEVEE)
(PEDRICKTOWN CDF)

(SEE SHEET No. 4) MATCHLINE



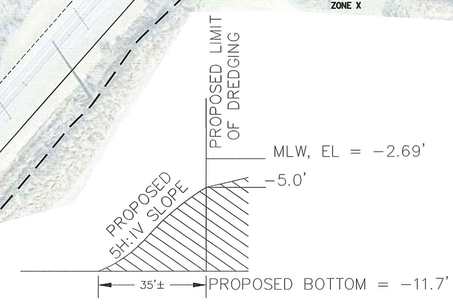
PROPOSED SHEETING AREA CROSS SECTION DETAIL 'F'

NOT TO SCALE



PROPOSED SHEETING AREA CROSS SECTION DETAIL 'G'

NOT TO SCALE



PROPOSED SHEETING AREA CROSS SECTION DETAIL 'H'

NOT TO SCALE

REFERENCE NOTE:
NJ TIDEWATERS CLAIM LINE & NJ COASTAL WETLANDS LINE PER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA.

HORIZONTAL SCALE
100 50 0 100 200
(IN FEET)
1 inch = 100 ft.

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WILLIAM J. OLBRICH, Jr., P.L.S.
PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 24GS03523600
wjo@fralinger.com
3/25/20
DATE

NO.	DATE	REVISION	BY
6	03/24/20	REV. PER 03/09/20 USACOE COMMENTS	CG
5	02/03/20	REV. PER 01/06/20 USACOE COMMENTS	CG
4	11/25/19	BULKHEAD REALIGNED PER NJDEP REQUIREMENTS & ADDED SHEET 8	CG
3	09/06/19	REVISED PER BARGE SPECIFICATIONS	CG
2	08/09/19	REVISED PER USACOE REVIEW	CG
1	05/23/19	REV. BULKHEAD LOCATION	CG

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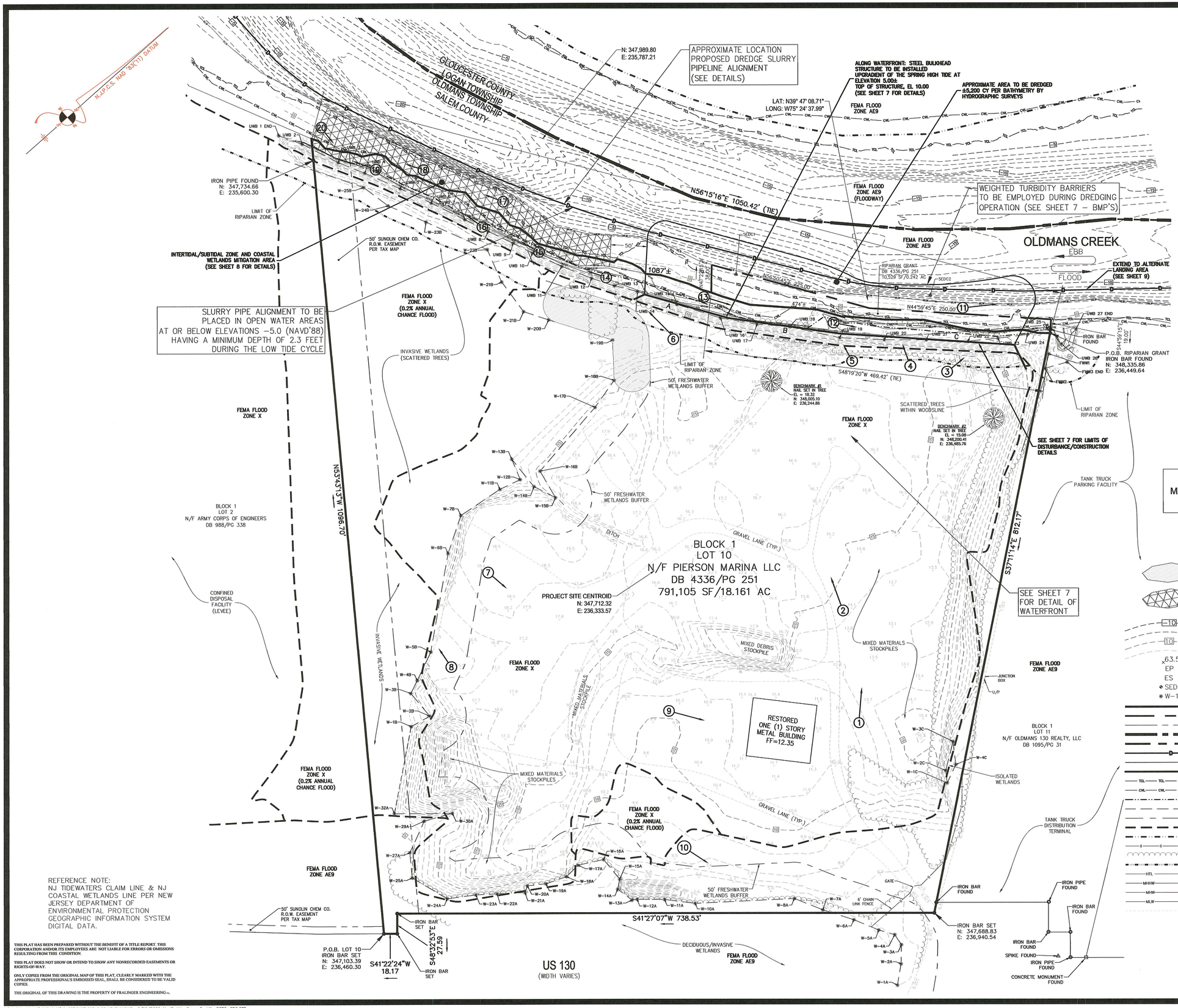
WATERFRONT DEVELOPMENT AND LOWER WETLANDS BOUNDARY PERMITTING PLANS
PREPARED FOR R.E. PIERSON CONSTRUCTION COMPANY, INC.
OLDMANS CREEK DREDGING & BULKHEAD INSTALLATION PROJECT

MUNICIPALITY: OLDMANS TWP./LOGAN TWP.	PROJECT #: 29542.00		
COUNTY: SALEM CO. GLOUCESTER CO.	CADD FILE #: 29542.00.USArmy.dwg		
STATE: NEW JERSEY	DATE: 04/15/19		
SCALE: 1" = 100'	DRAWN BY: CG	CHECKED BY:	

P:\29500-29999\29542.00\CADD\DWG\29542.00.USARMY.DWG 3/25/2020 11:49 AM Corey Gaskill PSEG-CRG.CTB

E-6



REFERENCE NOTE:
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BENCH MARKS

LOCATIONS SHOWN ON PLAN

ALL ELEVATIONS ARE NAVD '88 DATUM

#1 NAIL SET IN TREE
N 348,005.10
E 236,244.86
ELEV.=18.32

#2 NAIL SET IN TREE
N 348,200.41
E 236,485.76
ELEV.=15.08

BULKHEAD SEGMENTS

A: 120 LF
B: 155 LF
C: 240 LF
TOTAL: ±515 LF

SLOPES CREATED BY DREDGING TO BE MAINTAINED AT 1V:3H TO EXTENT PRACTICAL DURING DREDGING OPERATION.

LEGEND

- RIPARIAN BUFFER MITIGATION – TREE PLANTING AREA (±10,000 SF)
- WATERFRONT MITIGATION AREA (±21,000 SF)
- EXISTING MAJOR CONTOUR (HYDROGRAPHIC)
- EXISTING MINOR CONTOUR (HYDROGRAPHIC)
- EXISTING MAJOR CONTOUR (FRALINGER)
- EXISTING MINOR CONTOUR (FRALINGER)
- EXISTING SPOT ELEVATION
- TOP/BOTTOM OF CURB
- EDGE OF CONCRETE
- SOIL CORE LOCATION
- WETLANDS FLAG
- PROPERTY BOUNDARY LINE
- RIPARIAN GRANT BOUNDARY
- EASEMENT LINE
- STATE BOUNDARY LINE
- MUNICIPAL BOUNDARY LINE
- DREDGE SLURRY PIPELINE
- RIGHT–OF–WAY LINE
- BULKHEAD LOCATION
- NJ TIDEWATERS CLAIM LINE
- NJ COASTAL WETLANDS LINE
- LOWER WETLANDS BOUNDARY LINE
- WETLANDS LINE
- WETLANDS BUFFER LINE
- FEMA FLOOD ZONE LINE
- FEMA FLOODWAY LIMIT
- CHAIN LINK FENCE
- WOODS
- RIPARIAN BUFFER LINE
- HIGH TIDE LINE
- MEAN HIGHER HIGH/SPRING HIGH WATER LINE
- MEAN HIGH WATER LINE
- MEAN LOWER WATER LINE
- EDGE OF STONE
- UTILITY POLE
- PHOTO ID/DIRECTION

HORIZONTAL SCALE
60 30 0 60 120
(IN FEET)
1 inch = 60 ft.

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NO.	DATE	REVISION	BY
6	03/24/20	REV. PER 03/09/20 USACOE COMMENTS	CG
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4	11/25/19	BULKHEAD REALIGNED PER NJDEP REQUIREMENTS & ADDED SHEET 8	CG
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2	08/09/19	REVISED PER USACOE REVIEW	CG
1	05/23/19	REV. BULKHEAD LOCATION	CG

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WATERFRONT DEVELOPMENT AND LOWER WETLANDS BOUNDARY PERMITTING PLANS

PREPARED FOR R.E. PIERSON CONSTRUCTION COMPANY, INC.

OLDMANS CREEK DREDGING & BULKHEAD INSTALLATION PROJECT

MUNICIPALITY: OLDMANS TWP./LOGAN TWP.	PROJECT #: 29542.00		
COUNTY: SALEM CO. GLOUCESTER CO.	CADD FILE #: 29542.00.USArmy.dwg		
STATE: NEW JERSEY	DATE: 04/15/19		
SCALE: 1" = 60'	DRAWN BY: CG	CHECKED BY:	

P:\29500-29999\29542.00\CADD\DWG\29542.00.USARMY.DWG 3/25/2020 11:45 AM Corey Coskill PSEG-CRC.CTB

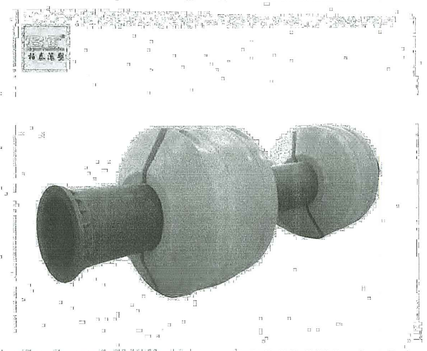
E-7

DANGER

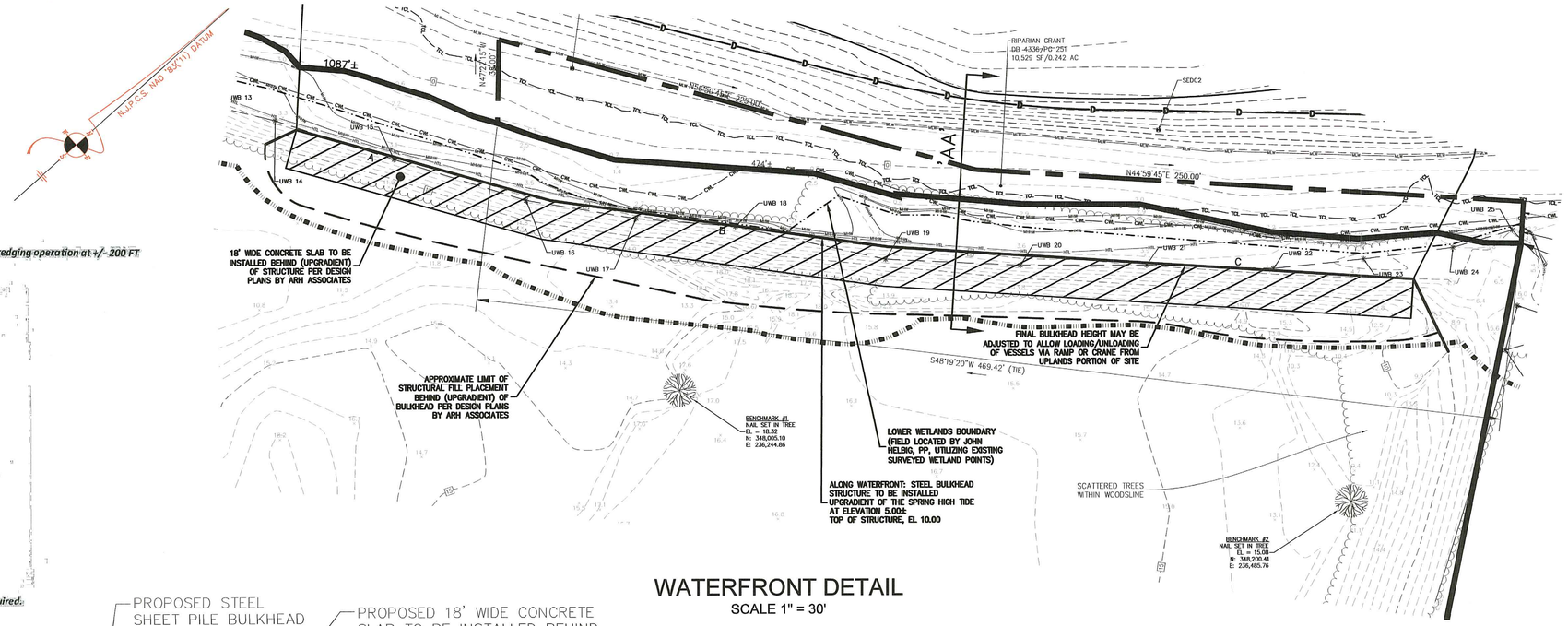
DREDGE SLURRY LINE PRESENT

STAY MINIMUM 75 FEET AWAY

Proposed warning signage to be firmly installed and maintained along pipeline segments during entire dredging operation at +/- 200 FT intervals. Use bold/black lettering on high visibility orange background.

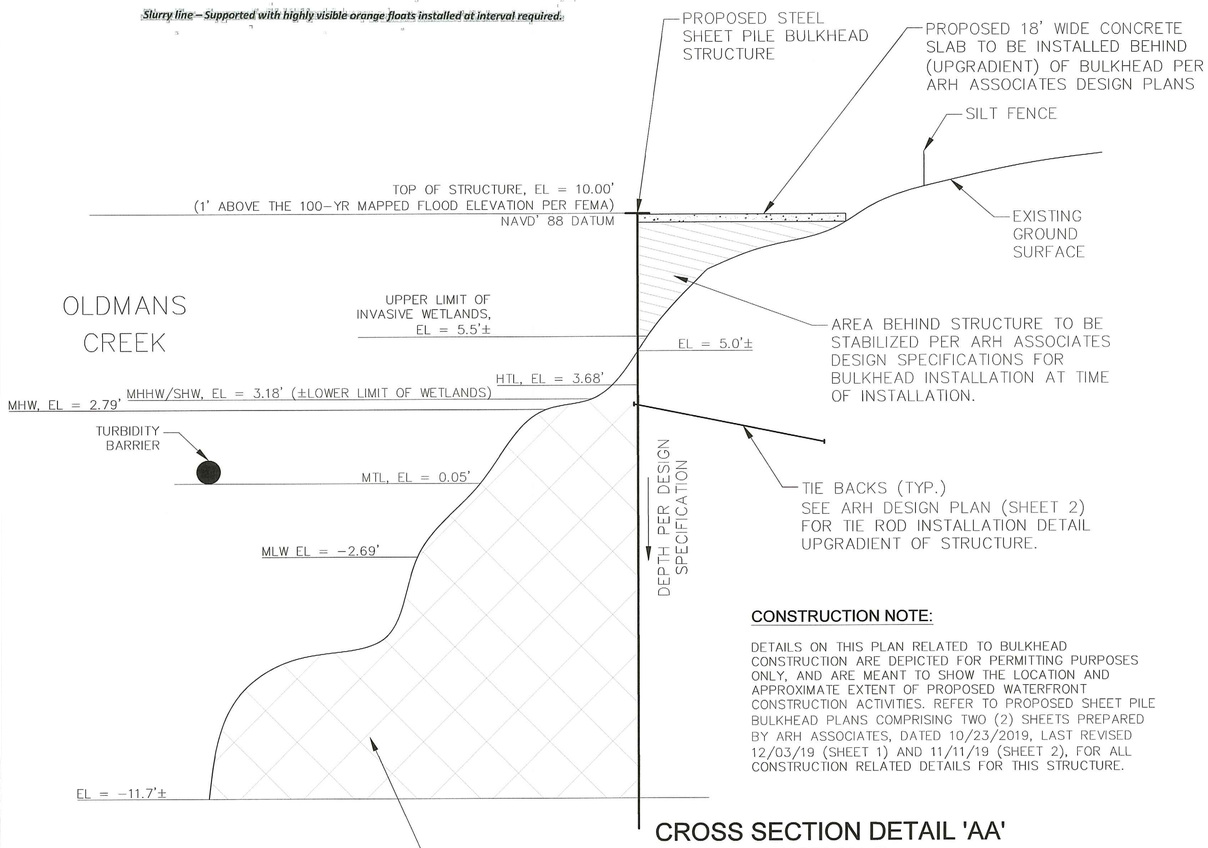


Slurry line – Supported with highly visible orange floats installed at interval required.



WATERFRONT DETAIL

SCALE 1" = 30'



CROSS SECTION DETAIL 'AA'

NOT TO SCALE

CONSTRUCTION NOTE:

DETAILS ON THIS PLAN RELATED TO BULKHEAD CONSTRUCTION ARE DEPICTED FOR PERMITTING PURPOSES ONLY, AND ARE MEANT TO SHOW THE LOCATION AND APPROXIMATE EXTENT OF PROPOSED WATERFRONT CONSTRUCTION ACTIVITIES. REFER TO PROPOSED SHEET PILE BULKHEAD PLANS COMPRISING TWO (2) SHEETS PREPARED BY ARH ASSOCIATES, DATED 10/23/2019, LAST REVISED 12/03/19 (SHEET 1) AND 11/11/19 (SHEET 2), FOR ALL CONSTRUCTION RELATED DETAILS FOR THIS STRUCTURE.

DREDGING ACTIVITIES - BEST MANAGEMENT PRACTICES

THE FOLLOWING BEST MANAGEMENT PRACTICES (BMP'S) ARE PROPOSED IN ORDER TO MINIMIZE IMPACTS TO WATER QUALITY AND INDIRECT IMPACTS TO ADJACENT AQUATIC HABITATS:

TIMING RESTRICTIONS – CONSISTENT WITH THE AQUATIC ECOLOGICAL ASSESSMENT COMPLETED BY PRINCETON HYDRO LLC, TIMING RESTRICTIONS ON DREDGING ACTIVITIES WILL BE IMPLEMENTED BETWEEN 3/1 AND 6/30.

TURBIDITY CONTROLS – TO THE EXTENT THAT THEY CAN BE INSTALLED IN A PRACTICAL MANNER GIVEN EXISTING TIDAL FLUCTUATIONS, FULL-LENGTH TURBIDITY CURTAINS WITH WEIGHTED BOTTOMS WILL BE UTILIZED AROUND THE PERIMETER OF ALL DREDGING LOCATIONS. INSTALLATION WILL OCCUR PRIOR TO THE INITIATION OF DREDGING ACTIVITIES.

DAILY INSPECTION OF THE HYDRAULIC PUMPING EQUIPMENT AND SLURRY LINE(S) CONNECTING DREDGING LOCATIONS TO THE PEDRICKTOWN CONFINED DISPOSAL FACILITY WILL BE CARRIED OUT AND REQUIRED REPAIRS COMPLETED AS SOON AS POSSIBLE.

WEATHER AND TIDAL CONDITIONS WILL BE MONITORED DAILY AND DREDGING ACTIVITIES SUSPENDED IF WINDS OR EXTREME TIDAL CONDITIONS THREATEN THE SAFE COMPLETION OF OPERATIONS IN A MANNER PROTECTIVE OF HUMAN HEALTH AND THE LOCAL ENVIRONMENT.

BULKHEAD SEGMENTS

A:	120 LF
B:	155 LF
C:	240 LF
TOTAL:	±515 LF

LEGEND

10	EXISTING MAJOR CONTOUR (HYDROGRAPHIC)
10	EXISTING MINOR CONTOUR (HYDROGRAPHIC)
10	EXISTING MAJOR CONTOUR (FRALINGER)
10	EXISTING MINOR CONTOUR (FRALINGER)
x63.5	EXISTING SPOT ELEVATION
EP	TOP/BOTTOM OF CURB
ES	EDGE OF CONCRETE
SEDA1	SOIL CORE LOCATION
W-1A	WETLANDS FLAG
	PROPERTY BOUNDARY LINE
	RIPARIAN GRANT BOUNDARY
	EASEMENT LINE
	STATE BOUNDARY LINE
	MUNICIPAL BOUNDARY LINE
D	DREDGE SLURRY PIPELINE
	BULKHEAD LOCATION
TCL	NJ TIDEWATERS CLAIM LINE
CWL	NJ COASTAL WETLANDS LINE
	LOWER WETLANDS BOUNDARY LINE
	WETLANDS LINE
	CHAIN LINK FENCE
	WOODS
	RIPARIAN BUFFER LINE
HTL	HIGH TIDE LINE
MHHW	MEAN HIGHER HIGH/SPRING HIGH WATER LINE
MHW	MEAN HIGH WATER LINE
MLW	MEAN LOWER WATER LINE
	APPROX. LIMIT OF STRUCTURAL FILL

REFERENCE NOTE:
NJ TIDEWATERS CLAIM LINE & NJ COASTAL WETLANDS LINE PER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA.

HORIZONTAL SCALE
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(IN FEET)
1 inch = 30 ft.

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wolbrich@frlinger.com
DATE

NO.	DATE	REVISION	BY
6	03/24/20	REV. PER 03/09/20 USACOE COMMENTS	CG
5	02/03/20	REV. PER 01/06/20 USACOE COMMENTS	CG
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WATERFRONT DEVELOPMENT AND LOWER WETLANDS BOUNDARY PERMITTING PLANS
PREPARED FOR R.E. PIERSON CONSTRUCTION COMPANY, INC.
OLDMANS CREEK DREDGING & BULKHEAD INSTALLATION PROJECT

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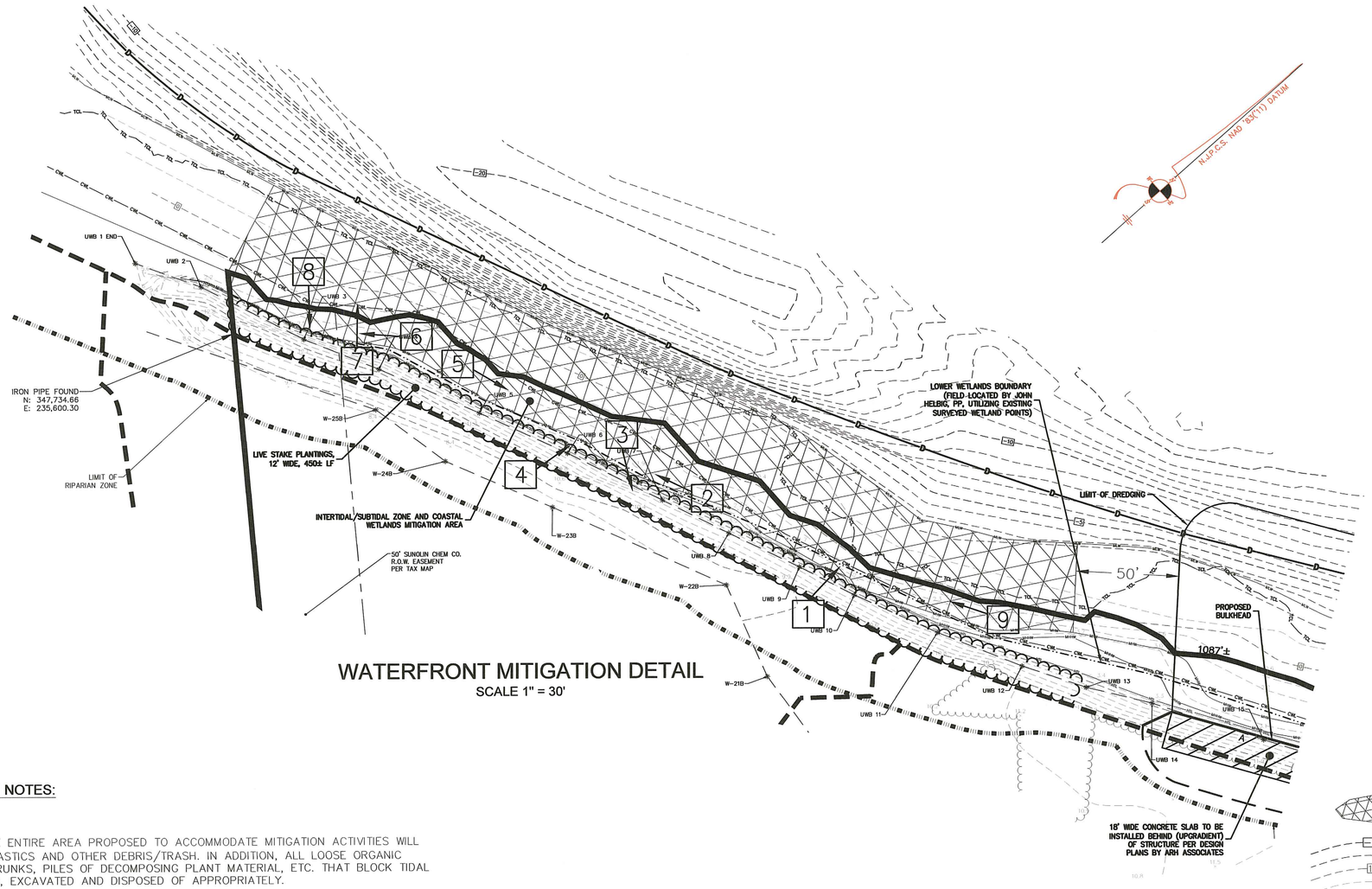
COUNTY: SALEM CO./GLOUCESTER CO.	CADD FILE #: 29542.00.USAarmy.dwg		
STATE: NEW JERSEY	DATE: 03/11/19		
SCALE: AS SHOWN	DRAWN BY: CG	CHECKED BY:	

P:\29500-29999\29542.00\CADD\DWG\29542.00.USARMY.DWG 3/25/2020 11:45 AM Corey Gaskill PSEG-CRG.CTB

E-8



WATERFRONT MITIGATION DETAIL

SCALE 1" = 30'

MITIGATION SITE PREPARATION NOTES:

1. DEBRIS/DETRITUS REMOVAL:

   DURING THE LOW TIDE CYCLE THE ENTIRE AREA PROPOSED TO ACCOMMODATE MITIGATION ACTIVITIES WILL BE THOROUGHLY CLEANED OF PLASTICS AND OTHER DEBRIS/TRASH. IN ADDITION, ALL LOOSE ORGANIC MATERIALS INCLUSIVE OF TREE TRUNKS, PILES OF DECOMPOSING PLANT MATERIAL, ETC. THAT BLOCK TIDAL FLOWS ARE TO BE CONSOLIDATED, EXCAVATED AND DISPOSED OF APPROPRIATELY.

2. MECHANICAL COMMON REED REMOVAL:

   ONCE THE AREA HAS BEEN THOROUGHLY CLEANED OF HUMAN/NATURAL DEBRIS, COMPLETE MECHANICAL REMOVAL OF COMMON REED PATCHES AND ASSOCIATED FILL, MIGRATING DOWNGRADIENT ONTO THE TIDAL FLAT BELOW THE HIGH TIDE LINE SHOULD BE COMPLETED. THIS WORK SCOPE SHOULD BE COMPLETED WITH A MECHANICAL EXCAVATOR CAPABLE OF COMPLETELY REMOVING UNDERGROUND RHIZOMES TO PREVENT RESEEDING AND NEW PROPAGATION OF THIS SPECIES. ALL ORGANIC MATERIALS MECHANICALLY EXCAVATED SHOULD BE REMOVED FROM THE SITE AND DISPOSED OF APPROPRIATELY.

   CARE SHOULD BE TAKEN TO PREVENT ANY DAMAGE TO EXISTING SHRUB AND CANOPY VEGETATION CURRENTLY STABILIZING THE SLOPE ABOVE THE HIGH TIDE LINE.

3. REGRADING/RESTORATION:

   ALL AREAS WHERE COMMON REED IS REMOVED SHOULD BE REGRADED TO RE-ESTABLISH THE PRE-EXISTING ELEVATIONS. SUPPLEMENTARY BENTHIC MATERIAL CAN BE ADDED FROM ADJACENT SURFICIAL DREDGING ACTIVITIES AS REQUIRED.

LIVING (LIVE STAKE) SHORELINE PLANTING NOTES:

LIVE STAKES TO BE PLANTED PER NRCS DIRECTIVES ALONG +/- 450 LF SLOPE AREA ABOVE MHWL. STAKES COMPRISING THE FOLLOWING SPECIES TO BE PLANTED IN A STAGGERED FASHION ON A 12 FT TRIANGULAR GRID PERPENDICULAR TO THE SLOPE TOE, BEING CAREFUL NOT TO DISTURB EXISTING CANOPY OR SHRUB SPECIMENS:

LOWER LEVEL
- WILLOW (SALIX SP)/SILKY DOGWOOD (CORNUS AMOMUM)
- RED OSIER DOGWOOD (CORNUS SERECIA)

UPPER LEVEL
- GRAY DOGWOOD (CORNUS RACEMOSA)

WATERFRONT MITIGATION SUPPLEMENTARY PLANTINGS

IN ORDER TO ACCELERATE REVEGETATION OF DISTURBED AREAS WHERE INVASIVE SPECIES HAVE BEEN REMOVED, SUPPLEMENTARY NUPHAR PLUG PLANTINGS SHALL BE FOCUSED IN AREAS SLATED FOR PHRAGMITIES REMOVAL WITHIN THE COASTAL MITIGATION AREA. PLANTINGS SHOULD BE COMPLETED ON 18" – 24" CENTERS DURING THE SUMMER SEASON. CLUSTERS OF 20–25 PLANTS SHOULD BE PLACED APPROXIMATELY FIFTY (50) FEET APART WHILE AVOIDING DISTURBANCE OF ESTABLISHED CONCENTRATIONS.

LEGEND

- WATERFRONT MITIGATION AREA (±21,000 SF)
- 10 — EXISTING MAJOR CONTOUR (HYDROGRAPHIC)
- 10 — EXISTING MINOR CONTOUR (HYDROGRAPHIC)
- 10 — EXISTING MAJOR CONTOUR (FRALINGER)
- 10 — EXISTING MINOR CONTOUR (FRALINGER)
- x63.5 — EXISTING SPOT ELEVATION
- EP — TOP/BOTTOM OF CURB
- ES — EDGE OF CONCRETE
- SEDA1 — SOIL CORE LOCATION
- W-1A — WETLANDS FLAG
- PROPERTY BOUNDARY LINE
- RIPARIAN GRANT BOUNDARY
- EASEMENT LINE
- STATE BOUNDARY LINE
- MUNICIPAL BOUNDARY LINE
- D — DREDGE SLURRY PIPELINE
- BULKHEAD LOCATION
- TCL — NJ TIDEWATERS CLAIM LINE
- CWL — NJ COASTAL WETLANDS LINE
- LOWER WETLANDS BOUNDARY LINE
- WETLANDS LINE
- CHAIN LINK FENCE
- WOODS
- HTL — RIPARIAN BUFFER LINE
- HTL — HIGH TIDE LINE
- MHHW — MEAN HIGHER HIGH/SPRING HIGH WATER LINE
- MHW — MEAN HIGH WATER LINE
- MLW — MEAN LOWER WATER LINE
- 7 — PHOTO ID/DIRECTION (10/2019)

REFERENCE NOTE:
NJ TIDEWATERS CLAIM LINE & NJ COASTAL WETLANDS LINE PER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA.

HORIZONTAL SCALE
30 15 0 30 60
(IN FEET)
1 inch = 30 ft.

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WILLIAM J. OLBRICH, Jr. P.L.S.
PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 24GS04125600
wolbrich@fralinger.com
DATE 3/25/20

NO.	DATE	REVISION	BY
2	03/24/20	ADDED REFERENCE NOTE	CG
1	02/03/20	REVISED PER USACOE COMMENTS	CG
		OF 01/06/20	

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STATE: NEW JERSEY	DATE: 11/11/19		
SCALE: AS SHOWN	DRAWN BY: CG	CHECKED BY:	

E-9

N.J.P.C.S. NAD '83('11') DATUM

LEGEND

- EXISTING MAJOR CONTOUR (HYDROGRAPHIC)
- EXISTING MINOR CONTOUR (HYDROGRAPHIC)
- SEDA1 — SOIL CORE LOCATION
- PROPERTY BOUNDARY LINE
- RIPARIAN GRANT BOUNDARY
- EASEMENT LINE
- STATE BOUNDARY LINE
- MUNICIPAL BOUNDARY LINE
- DREDGE SLURRY PIPELINE
- RIGHT-OF-WAY LINE
- NJ TIDEWATERS CLAIM LINE
- NJ COASTAL WETLANDS LINE
- WETLANDS LINE
- FEMA FLOOD ZONE LINE
- FEMA FLOODWAY LIMIT
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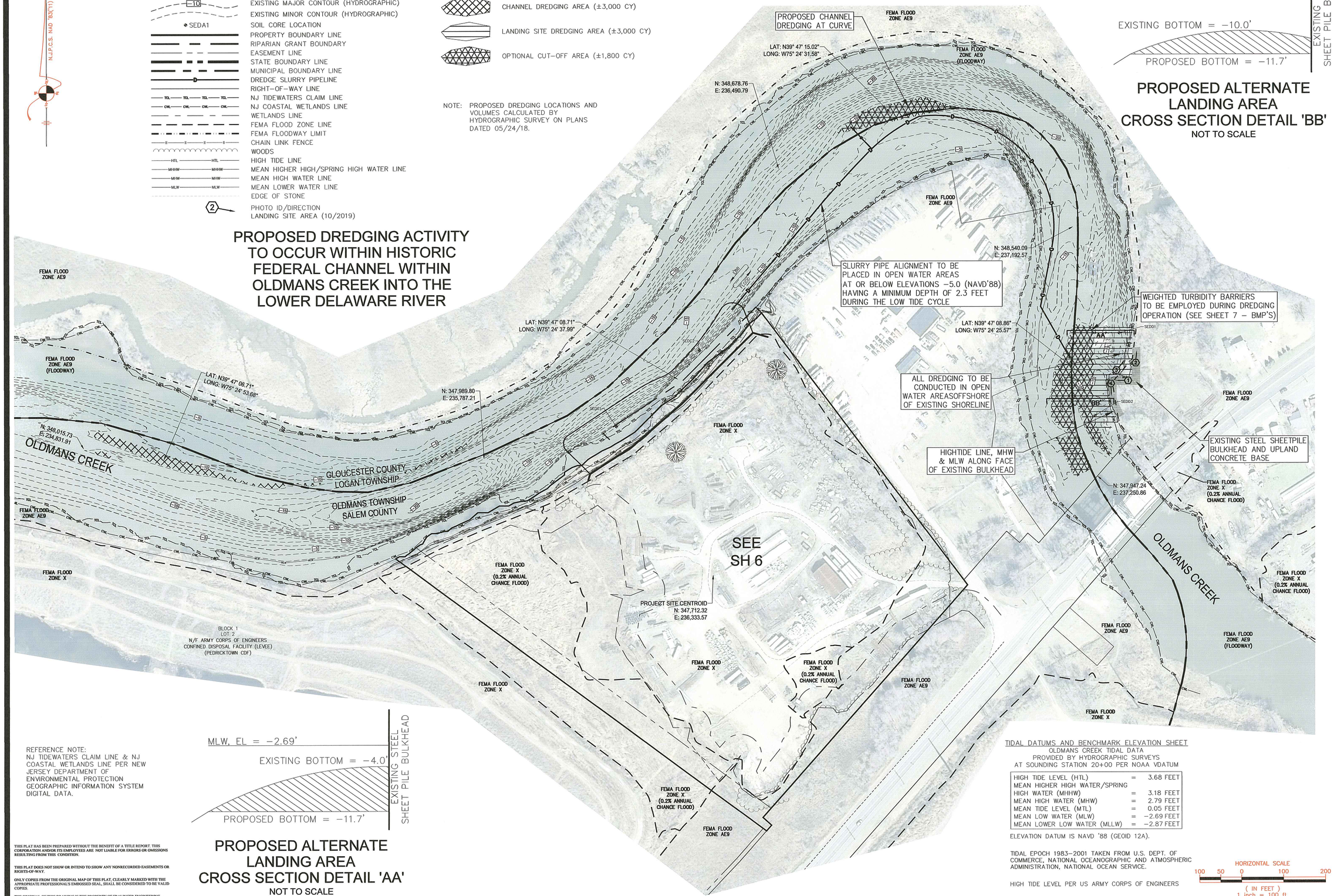
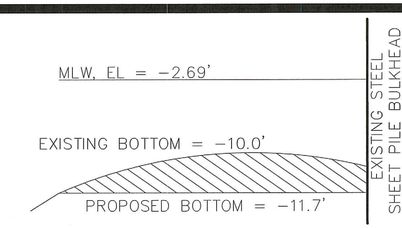
- WOODS
- HIGH TIDE LINE
- MEAN HIGHER HIGH/SPRING HIGH WATER LINE
- MEAN HIGH WATER LINE
- MEAN LOWER WATER LINE
- EDGE OF STONE
- PHOTO ID/DIRECTION
- LANDING SITE AREA (10/2019)
- CHANNEL DREDGING AREA (±3,000 CY)
- LANDING SITE DREDGING AREA (±3,000 CY)
- OPTIONAL CUT-OFF AREA (±1,800 CY)

NOTE: PROPOSED DREDGING LOCATIONS AND VOLUMES CALCULATED BY HYDROGRAPHIC SURVEY ON PLANS DATED 05/24/18.

SLOPES CREATED BY DREDGING TO BE MAINTAINED AT 1V:3H TO EXTENT PRACTICAL DURING DREDGING OPERATION.

PROPOSED DREDGING ACTIVITY TO OCCUR WITHIN HISTORIC FEDERAL CHANNEL WITHIN OLDMANS CREEK INTO THE LOWER DELAWARE RIVER





PROPOSED ALTERNATE LANDING AREA CROSS SECTION DETAIL 'BB'

NOT TO SCALE

REFERENCE NOTE:
NJ TIDEWATERS CLAIM LINE & NJ COASTAL WETLANDS LINE PER NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GEOGRAPHIC INFORMATION SYSTEM DIGITAL DATA.

PROPOSED ALTERNATE LANDING AREA CROSS SECTION DETAIL 'AA'

NOT TO SCALE

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TIDAL DATUMS AND BENCHMARK ELEVATION SHEET
OLDMANS CREEK TIDAL DATA
PROVIDED BY HYDROGRAPHIC SURVEYS
AT SOUNDING STATION 20+00 PER NOAA VDATUM

HIGH TIDE LEVEL (HTL)	=	3.68 FEET
MEAN HIGHER HIGH WATER/SPRING HIGH WATER (MHHW)	=	3.18 FEET
MEAN HIGH WATER (MHW)	=	2.79 FEET
MEAN TIDE LEVEL (MTL)	=	0.05 FEET
MEAN LOW WATER (MLW)	=	-2.69 FEET
MEAN LOWER LOW WATER (MLLW)	=	-2.87 FEET

ELEVATION DATUM IS NAVD '88 (GEOID 12A).

TIDAL EPOCH 1983-2001 TAKEN FROM U.S. DEPT. OF COMMERCE, NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL OCEAN SERVICE.

HIGH TIDE LEVEL PER US ARMY CORPS OF ENGINEERS

HORIZONTAL SCALE
100 50 0 100 200
(IN FEET)
1 inch = 100 ft.

WILLIAM J. OLBRICH, Jr., P.L.S.
PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 24GS03433600
DATE 3/24/20

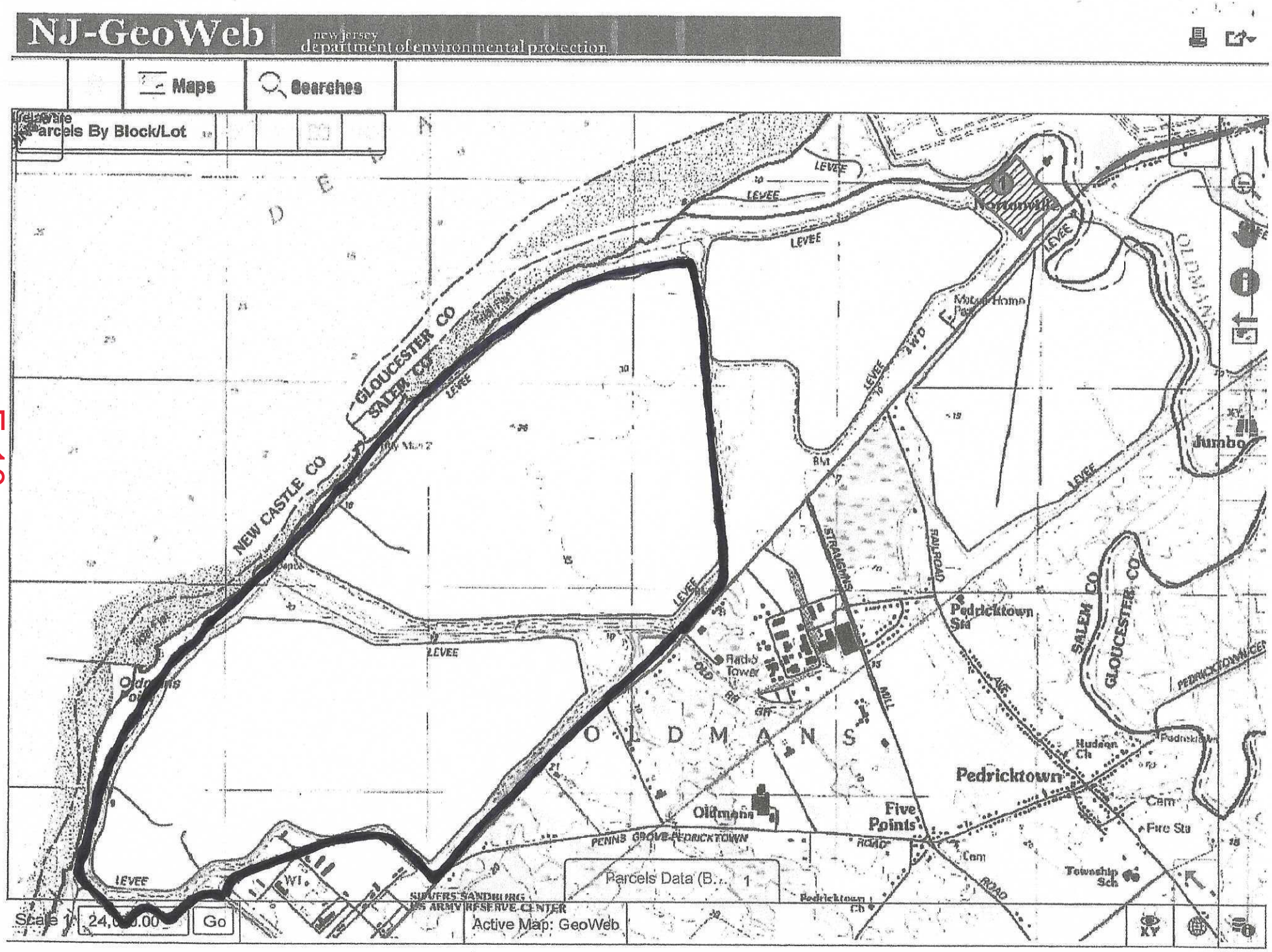
NO.	DATE	REVISION	BY
1	03/24/20	REV. PER 03/09/20 USACOE COMMENTS	CG

Fralinger Engineering PA
CONSULTING ENGINEERS • PLANNERS • LAND SURVEYORS • ENVIRONMENTAL SERVICES
629 Shiloh Pike
Bridgeton, NJ 08302
Phone: (856) 451-2990
Fax: (856) 455-9702
www.fralinger.com

WATERFRONT DEVELOPMENT AND LOWER WETLANDS BOUNDARY PERMITTING PLANS
PREPARED FOR R.E. PIERSON CONSTRUCTION COMPANY, INC.
OLDMANS CREEK DREDGING & BULKHEAD INSTALLATION PROJECT

MUNICIPALITY: OLDMANS TWP./LOGAN TWP.	PROJECT #: 29542.00		
COUNTY: SALEM CO./GLOUCESTER CO.	CADD FILE #: 29542.00.LandingAreas.dwg		
STATE: NEW JERSEY	DATE: 01/30/20		
SCALE: 1" = 100'	DRAWN BY: CG	CHECKED BY:	

P:\29500-29999\29542.00\CADD\DWG\29542.00.LANDINGAREA.DWG 4/1/2020 2:53 PM Corey Gaskill PSEG-CRG.CTB


NJ-GeoWeb
new jersey department of environmental protection
Maps
Searches
Parcels By Block/Lot
GLOUCESTER CO
SALEM CO
NEW CASTLE CO
LEVEE
Normanville
Mobile Home
Jumbo
OLDMANS
Pedricktown Sta
Radio Tower
Oldmans
Five Points
Pedricktown
Hudson Ch
Cem
Fire Sta
Township Sch
PENNS GROVE-PEDRICKTOWN ROAD
STRAUGHNS MILL ROAD
RAILROAD AVE
PEDRICKTOWN-CEDAR
Pedricktown Ch
SUPERS SANDBURG
US ARMY RESERVE CENTER
Parcels Data (B... 1
Scale 1: 24,000.00
Go
Active Map: GeoWeb
XY

E-10