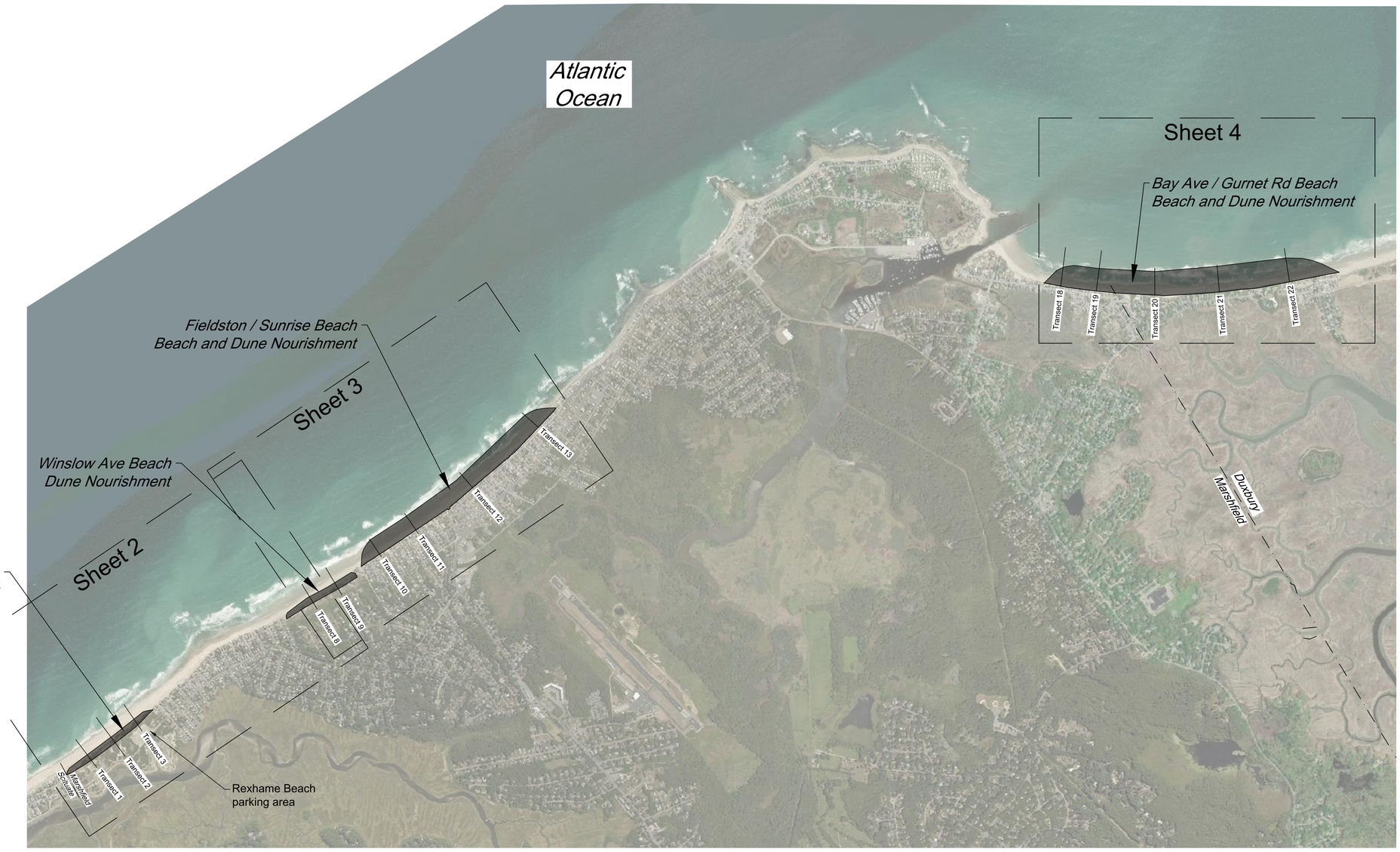

Graphic Scale

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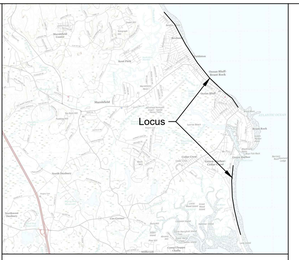
1" = 1000'



Location Map Not to Scale

WOODS HOLE GROUP
A CLS COMPANY
107 WATERHOUSE ROAD, BOURNE, MA 02532
TELEPHONE: (508) 540-8080 FAX: (508) 540-1001

Revisions	Date
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Surveyed By:

Woods Hole Group
(Transects 1-7 & 18-23)

Town of Marshfield
(Transects 8-17)

Title:

Overall Plan
of Beach and Dune Nourishment Sites
Prepared for: Towns of Marshfield and Duxbury, MA

Project Number: 2018-0231
Dwg File:
Scale: 1" = 1,000'
Date: Sept. 23, 2020
Approved:
Drawn: JRK

2018-0231_WHG_TRANSECTS & CZM BEACH PROFILES.DWG / 9/3/2020

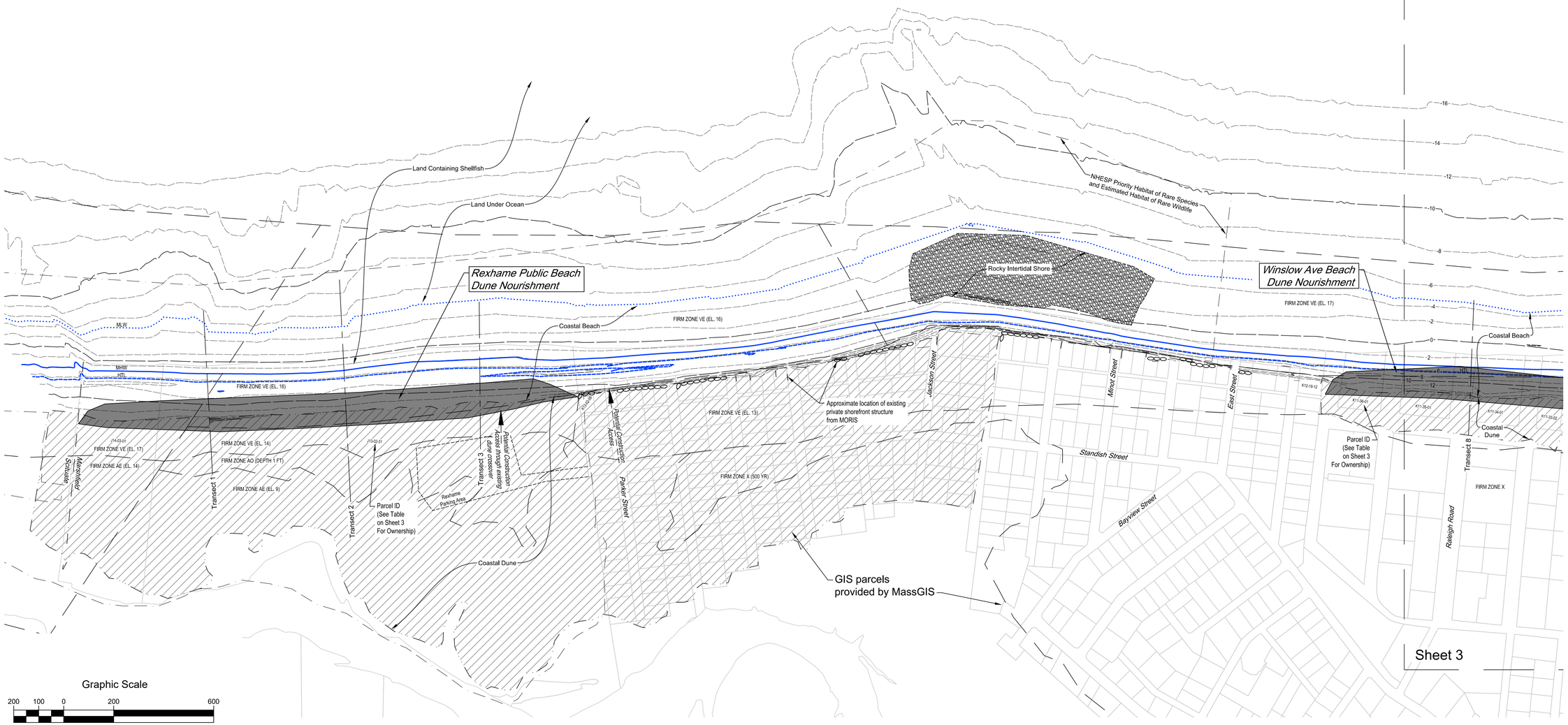
LEGEND

- Existing Topobathymetric Contours (8, 10)
- x 1.5 — Existing Survey Spot Elevation
- FEMA FIRM Boundary Line
- NHESP Habitat Boundary Line
- Public Shoreline Structure (MORIS)
- Private Shoreline Bulkhead Structure (MORIS)
- Private Shoreline Revetment Structure (MORIS)
- High Tide Line (HTL)
- Mean High Water (MHW)
- Mean Low Water (MLW)
- Existing Rocky Intertidal Shore
- Existing Coastal Dune
- Proposed Nourishment

NOTES:

1. Topographic information along Transects 1 thru 7 and 18 thru 23 compiled from an on-the-ground survey conducted by Woods Hole Group on November 4, 2019 and a bathymetric survey conducted by Woods Hole Group on December 17, 2019.
2. Topographic information along Transects 8 thru 17 compiled from an on-the-ground survey conducted by the Town of Marshfield on October 7 and 22, 2019.
3. Vertical datum: North American Vertical Datum of 1988 (NAVD88).
   MLW = -5.00
   MHW = 4.08
   HTL = 6.5

Atlantic Ocean
(TIDAL)
EBB
FLOOD



Graphic Scale
200 100 0 200 600
1" = 200'

Sheet 3

WOODS HOLE GROUP
A CLS COMPANY
107 WATERHOUSE ROAD, BOURNE, MA 02532
TELEPHONE: (508) 540-8080 FAX: (508) 540-1001

	Revisions	Date
1.		
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Surveyed By:
Woods Hole Group (Transects 1-7 & 18-23)
Town of Marshfield (Transects 8-17)

Title:
Plan
of Beach and Dune Nourishment Sites
Prepared for: Towns of Marshfield and Duxbury, MA

Project Number: 2018-0231
Dwg File:
Scale: 1" = 200'
Date: Sept. 23, 2020
Approved:
Drawn: JRK

2018-0231_WHG_TRANSECTS & CZM BEACH PROFILES.DWG / 9/3/2020

Parcel ID	N/F Owner
Rexhame Public Beach Parcels	
J14-03-01	Sea Rivers Trust
J13-02-31	Town of Marshfield
Winslow Ave. Beach Parcels	
K11-36-01	Town of Marshfield
K11-35-01	Town of Marshfield
K11-34-01	Town of Marshfield
K11-33-02	Town of Marshfield
K11-33-01	Town of Marshfield
K11-28-01	Town of Marshfield
Fieldston & Sunrise Beaches	
L11-01-04	DONOVAN LEO J JR & NANCY M TRS
L11-01-03	DIBENEDETTO DAVID C TRUSTEE
L11-01-02	DONAHUE CLARKE BARBARA A
L11-02-05	PRIMO SANDRA M
L11-02-04	COLLEY SADIE A
L11-02-02	STONE ROBERT J & KAREN A
L11-03-07	MACLELLAN ALLISON
L11-03-06	MACLELLAN TIMOTHY D & JANET M
L11-03-05	MAHER STEPHEN M &
L11-04-09	LEROY LINDA J TR M HALL
L11-04-08	GIARGIARGI HUGO E TRUSTEE
L11-05-07	ODONOVAN CONOR F & CASSANDRA
L11-05-06	SULLIVAN JOAN E TRUSTEE
L11-05-05A	GRIFFIN JOHN H & JANICE M
L10-04-10	CARLUCCI KATHLEEN
L10-04-09	WAINWRIGHT ERIKA H & BRENT & MARK
L10-04-08	SHEEHAN RICHARD E
L10-05-10	MOWBRAY CAROLYN P

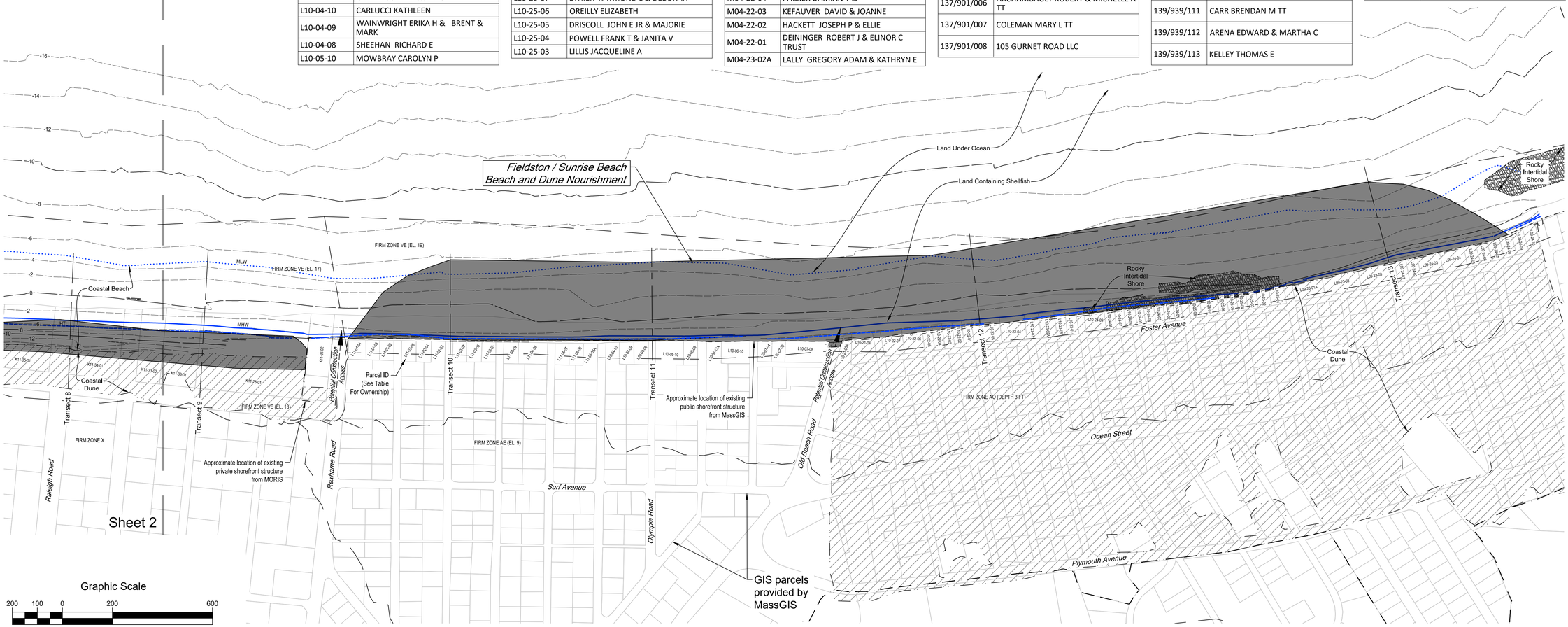
L10-05-09	AFK ENTERPRISES LLC
L10-06-13A	PIZZIFERRI JOSEPH M TR
L10-06-10	LOTTI PINO B
L10-07-04	LOTTI PINO B
L10-07-03	PATRICIA E OBRIEN LIVING TRUST
L10-07-08	GRANNIS KEITH W & KRISTEN E
L10-21-05A	DADDARIO JAMES F & SUSAN
L10-21-04	BENDER DANIEL S & DANIELLE E
L10-22-07	ADAMS GLENDA R
L10-22-06	MULLEN VIRGINIA M & HUGH E
L10-22-05	DIGIACOMO JOAN M TR
L10-22-04	BIRK TONI JO & PESCOSOLIDO P PESCOSOLIDO PAUL TRS
L10-22-03	FOSTER AVENUE LLC
L10-22-02	MAJENSKI DOROTHY
L10-22-01	GRINDLE LEE J & RAFFA JOANNE
L10-23-05	SAVINI JOHN N JR & MARY K TRS
L10-23-04	WALDRON WALTER J JR
L10-23-03	HANLON TARA M TR
L10-23-02A	KETTENDORF NOMINEE TRUST
L10-23-06	BRENNAN LUKE F III &
L10-23-01	NIELSEN KAROLE TR
L10-24-09	CODY MICHAEL T TRUSTEE
L10-24-08	MARTEL ARTHUR & MOLLISON ELIZ
L10-24-07	STANTON MATTHEW MEACOM &
L10-24-06	ROTH JOHN E ET AL
L10-24-05	RYAN MARY ANDREA ETAL
L10-24-04	ZABLOCKI JOHN M & MARIA C
L10-24-03	GRIFFIN MARY G
L10-24-02	DION PETER M & ANN S
L10-24-01	BERRY CECILE H
L10-25-08	DONOVAN SEAN M
L10-25-07	ETHIER RAYMOND L & DEBORAH
L10-25-06	OREILLY ELIZABETH
L10-25-05	DRISCOLL JOHN E JR & MAJORIE
L10-25-04	POWELL FRANK T & JANITA V
L10-25-03	LILLIS JACQUELINE A

L10-25-02	MILLER LOUISE DANIELS
L10-25-01	GILLIS THOMAS M & KERRI K
L09-23-01A	KNIGHT ROBERT L JR
L09-23-02	MONIZ JOHN III
L09-23-03	TOWN OF MARSHFIELD CON COMM
L09-24-01	MORAN M ARY B & ROBERT J TRS
L09-24-02	BISCEGLIA PAUL M
L09-24-03	COSTELLO EDWARD J & MARY N
L09-24-04	FLANNERY MARY F
L09-24-05	GIORDANI RICHARD TR
L09-24-06	MCLAUGHLIN SEAN
L09-24-07	MAHONEY NANCY M
L09-24-08	SOUSA MICHAEL A
Bay Ave & Gurnet Rd Beaches - Marshfield	
M05-06-03	DONNELLY JEFFREY J & DANA M
M05-06-02	COLLINS SCOTT T TRUSTEE
M05-06-01	DORSEY MICHAEL J & AMY M
M04-20-07	DOHERTY GEORGE F JR & MARY F
M04-20-06	GILL ROBERT E & RITA S
M04-20-05	GROSSMAN MICHAEL S & MEAGAN S
M04-20-04	ST OURS FREDERICK H & SINATRA MARY ELLEN TRS
M04-20-03	MCCORMACK MARTIN
M04-20-02A	MAURO JAMES & DANA
M04-20-08	HANLAN DEBORAH P
M04-20-01	FLAVIN JANE E
M04-21-05	GRADY JOHN K
M04-21-04	DONNELLY JAMES C & MARY C
M04-21-03	OCONNOR FRANK C III & CAROL A
M04-21-02	SUNSHINE REALTY TRUST
M04-21-01	MCCARTHY RONALD C & SUSAN P TR
M04-22-05	EDER KONRAD
M04-22-04	PACKER DAMIAN T &
M04-22-03	KEFAUVER DAVID & JOANNE
M04-22-02	HACKETT JOSEPH P & ELLIE
M04-22-01	DEININGER ROBERT J & ELINOR C TRUST
M04-23-02A	LALLY GREGORY ADAM & KATHRYN E

Bay Ave & Gurnet Rd Beaches - Duxbury	
136/901/075	CALLAHAN LAUREN B TT
136/901/073	TEDESCHI TIMOTHY N
136/901/071	RYAN JAMES P TT
136/901/069	FITZGIBBONS CHARLES & JAMES TT
136/901/068	DOHERTY EDWARD J
136/901/064	BRENNICK DOROTHY E TT
137/901/063	BENINATI ELIZABETH A
137/901/062	MCGUINNESS KATHERINE M TT
137/901/060	BURMAN SAMANTHA TROTMAN
137/901/019	MARTIN CANDACE B TT
137/901/138	REARDON JOHN J TT
137/901/014	JULIA DENNY SWEENEY QUAL P R TRUST
137/901/036	KUZINEVICH JOHN J
137/901/013	SHEEHAN MICHAEL
137/901/001	KELLEY MARY JO ET AL TT
137/901/002	MULHERN DANIEL M TT
137/901/003	DUNN ROBERT W & CATHERINE E
137/901/004	COLOMBO DAVID
137/901/005	MASTROMARINO JOHN L
137/901/006	ARCHAMBAULT ROBERT & MICHELLE A TT
137/901/007	COLEMAN MARY L TT
137/901/008	105 GURNET ROAD LLC

137/901/009	LEONARD JOHN P
138/901/011	MCSHANE KEVIN
138/901/012	PETRO LEAH M
138/600/901	PLANTE RANDALL & DOGGETT-PLANTE H
138/901/016	SHEEHAN DIANE M TT
138/901/017	DONOVAN NANCY L
138/901/018	NIKOPOULOS LAURIE A TT
138/916/003	BENJES MARY E
138/916/004	NICHOLS JOHN A & SUSAN M TT
138/916/005	CHIMINIELLO FRANCIS
139/939/091	MACKEY ALISON
139/939/101	LEONARD TARYN
139/939/103	GAYNOR PAUL
139/939/104	RIOLO MARIE C
139/939/105	SPELLMAN TIMOTHY J
139/939/106	DUFFY JAMES J III
139/939/107	SMITH KERRY ANN, REED SANDRA A &
139/939/108	BUCKLEY CHARLES F III TT
139/939/109	NORRIS DONALD R TT
139/939/110	POTTER DEBRA
139/939/111	CARR BRENDAN M TT
139/939/112	ARENA EDWARD & MARTHA C
139/939/113	KELLEY THOMAS E

139/939/114	SHIEBLER MARY B & THOMAS P TT
139/939/115	DEADY JEFFREY
139/939/117	MCLAUGHLIN BRENDAN T
139/939/118	SHIEBLER ROBERT C
139/939/119	DODDS ROBERT F
139/939/120	FREER JAMES TT
139/042/001	CLIFFORD MICHAEL L
139/042/002	MURPHY CHRISTINE
139/939/121	DALRYMPLE WILLIAM K
139/939/122	JERNEGAN JACQUELINE G TT
139/939/123	JORDAN MICHAEL R & DEBORAH M
139/939/124	CRISAFULLI FRANCES TT
139/939/125	PALMIERI JOHN R
140/939/126	EN PROPERTIES LLC
140/939/127	VERITY JOHN P
140/939/128	9 OCEANSOUTH LLC
140/939/129	OHS BARRY W
141/939/130	HALEY ARTHUR A JR
141/939/131	ANDERSON KATHLEEN G
141/939/132	1 OCEAN ROAD SOUTH LLC



WOODS HOLE GROUP
A CLS COMPANY
107 WATERHOUSE ROAD, BOURNE, MA 02532
TELEPHONE: (508) 540-8080 FAX: (508) 540-1001

	Revisions	Date
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Surveyed By:
Woods Hole Group (Transects 1-7 & 18-23)
Town of Marshfield (Transects 8-17)

Title:
Plan
of Beach and Dune Nourishment Sites
Prepared for: Towns of Marshfield and Duxbury, MA

Project Number: 2018-0231
Dwg File:
Scale: 1" = 200'
Date: Sept. 23, 2020
Approved:
Drawn: JRK

2018-0231_WHG_TRANSECTS & CZM BEACH PROFILES.DWG / 9/3/2020

Atlantic Ocean
(TIDAL)

EBB
FLOOD

Bay Ave / Gurnet Rd Beach
Beach and Dune Nourishment

Land Under Ocean
Land Containing Shellfish
Rocky Intertidal Shore
Coastal Beach
Coastal Dune
Potential Construction Access
NHESP Priority Habitat of Rare Species and Estimated Habitat of Rare Wildlife
Parcel ID (See Table on Sheet 3 For Ownership)
Approximate location of existing public shorefront structure from MORIS
GIS parcels provided by MassGIS

FIRM ZONE VE (EL. 16)
FIRM ZONE VE (EL. 17)
FIRM ZONE AE (EL 11)
FIRM ZONE AE (EL 9)
FIRM ZONE AE (EL 10)
FIRM ZONE AO (DEPTH 3 FT)
FIRM ZONE X (500 YR)

Transect 18
Transect 19
Transect 20
Transect 21
Transect 22

Bay Avenue
Bay Street
Gurnet Road
Plymouth Avenue
Ocean Road South
Duxbury
Marshfield

-18
-14
-12
-10
-8
-6
-4
-2
2
MLW
MHW
MTL

Graphic Scale
200 100 0 200 600
1" = 200'

2018-0231_WHG_TRANSECTS & CZM BEACH PROFILES.DWG / 9/3/2020

WOODS HOLE GROUP
A CLS COMPANY
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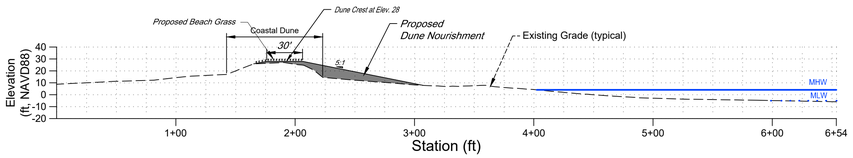
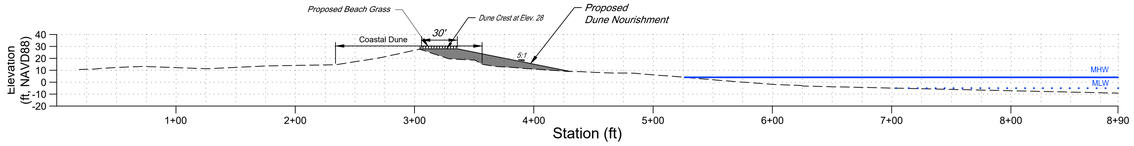
Surveyed By:
Woods Hole Group
(Transects 1-7 & 18-23)
Town of Marshfield
(Transects 8-17)

Title:
Plan
of Beach and Dune Nourishment Sites
Prepared for: Towns of Marshfield and Duxbury, MA

Project Number: 2018-0231
Dwg File:
Scale: 1" = 200'
Date: Sept. 23, 2020
Approved:
Drawn: JRK



TRANSECT 1



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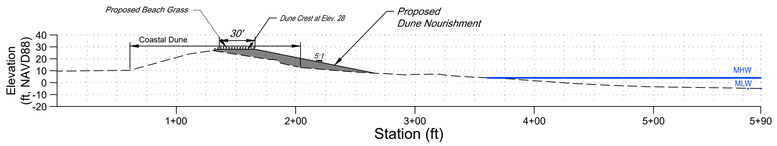

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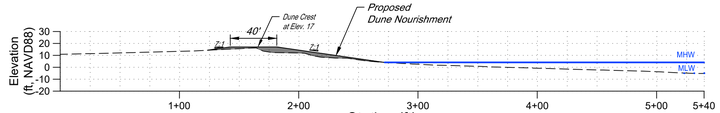

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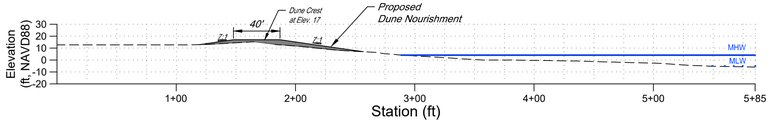

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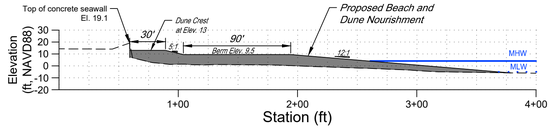

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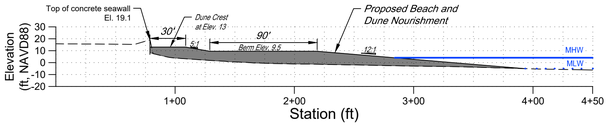

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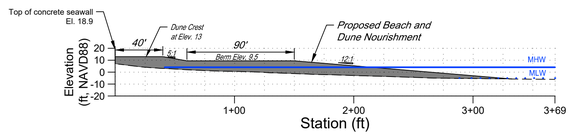

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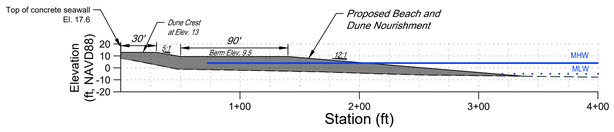

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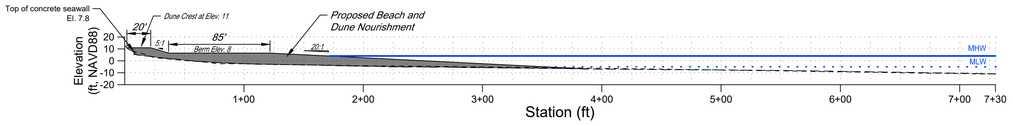
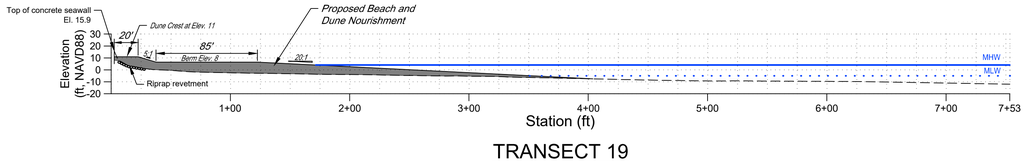


TRANSECT 18



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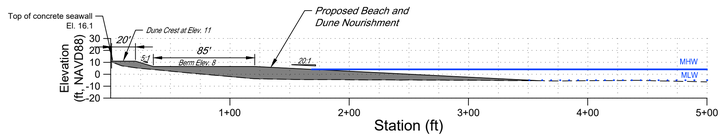

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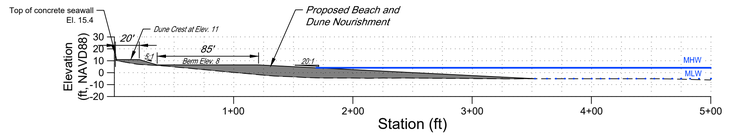

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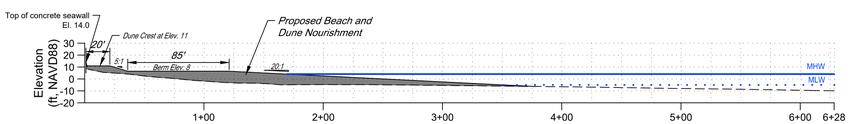

TRANSECT 22

Graphic Scale

60 30 0 60 180

1" = 60'

WOODS HOLE GROUP
A CLS COMPANY
107 WATERHOUSE ROAD, BOURNE, MA 02532
TELEPHONE: (508) 540-8080 FAX: (508) 540-1001

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Revisions

Surveyed By:

Woods Hole Group (Transects 1-7 & 18-23)

Town of Marshfield (Transects 8-17)

Title:

Transect Profiles
of Beach and Dune Nourishment Sites
Prepared for: Towns of Marshfield and Duxbury, MA

Project Number:	2018-0231
Dwg File:	
Scale:	1" = 60'
Date:	Sept. 23, 2020
Approved:	
Drawn:	JRK

2018-0231_WHG_TRANSECTS & CZM BEACH PROFILES.DWG / 9/3/2020

Plan Notes:

References:

See Sheets 2, 3 and 4 for parcel references.

Flood Notes:

Flood Zone VE, Elevations 25, 19, 17, 16, 14, and 13 from FEMA FIRM Panels 25023C0143K, 25023C0231K, 25023C0232K, 25023C0234K, 25023C0242K dated 11/4/2016, LOMR 19-01-0097P eff. 1/10/2020, and LOMR 20-01-0284P eff. 7/6/2020.

Survey Notes:

1. Topographic information along Transects 1 thru 7 and 18 thru 23 compiled from an on-the-ground survey conducted by Woods Hole Group on November 4, 2019 and a bathymetric survey conducted by Woods Hole Group on December 17, 2019.
2. Topographic information along Transects 8 thru 17 compiled from an on-the-ground survey conducted by the Town of Marshfield on October 7 and 22, 2019.
3. Property boundaries shown hereon were obtained from a combination of MassGIS property line database information. Such property lines are approximate only and are not to be construed as property lines obtained from an accurate boundary survey, and are subject to such changes as an accurate boundary survey may disclose.

Datum Notes:

Vertical datum: North American Vertical Datum of 1988 (NAVD88).
MLW = -5.00
MTL = -0.50
MHW = 4.08
HTL = 6.5

Permit Plan:

This plan is for permitting purposes only. The plan describes the full scope of the project; however, the Contractor shall coordinate with the Engineer for detailing prior to providing a bid on this project.

General Notes:

1. Performance of the work shall be in compliance with the plans and details, and any permit requirements issued by the Towns of Marshfield and Duxbury, State of Massachusetts, USACE, or other regulatory agencies for the referenced project and described herein.
2. The purpose of this project is to increase coastal resilience using nature-based solutions on Rexhame Public Beach, Winslow Ave. Beach, Fieldston and Sunrise Beaches and Bay Ave, and Gurnet Rd. Beaches in Marshfield and Duxbury, MA, as shown on the plan and details. The proposed work includes dune and beach nourishment.
3. Prior to work on any beach the Contractor shall attend a pre-construction on-site meeting, which shall be attended by the Engineer and representatives from the appropriate Marshfield or Duxbury Conservation Commission. The Contractor shall present to the Engineer and the Conservation Commission representatives the proposed methods and means to construct the proposed project.
4. No construction vehicles shall be stored on the coastal beach or the vegetated coastal dunes overnight.
5. During periods of high-water levels, all equipment shall be moved to the construction access areas.
6. No excessive idling of construction vehicles shall occur.
7. Refueling shall occur only on hardscaped areas.
8. The Contractor shall not vary from the plans, specifications, Orders of Conditions, or instructions provided at the pre-construction meeting, without first obtaining approval of the Conservation Commission representatives and the Engineer.
9. The work at Rexhame Public Beach and Bay Ave/Gurnet Rd Beaches is located within the Priority Habitats of Rare Species and Estimated Habitats of Rare Wildlife in accordance with the Massachusetts Natural Heritage Atlas, 14th Edition.
10. All fill material required shall be compatible to the existing location receiving it.
11. Once completed, components of the project should be inspected on a regular basis.
12. Woods Hole Group cannot make warranties and encourages diligent inspection and potential maintenance of all project components.
13. The proposed designs are not expected to be a long-term solution and are susceptible to damage during coastal storms and potentially significant damage during coastal storm events.

Rexhame Public Beach - Dune Nourishment Notes:

1. The dune nourishment project presented herein is intended to provide enhanced storm damage protection and improve wildlife habitat and recreation areas.
2. The length of the Rexhame Public Beach dune nourishment is approximately 1,980 ft. and the proposed footprint is approximately 5.34 acres.
3. 47,240 cubic yards of dune compatible sand shall be placed above Mean High Water.
4. A limit of project activity shall be established and shall be maintained throughout until project completion. The limit of work shall serve as a visual and physical marker for construction activities.
5. It is anticipated that the source for the dune nourishment shall come from either material trucked in from upland sources or hydraulically dredged and pumped to the site.
6. If upland sources are used, the nourishment material should be clean, dune compatible sediment brought to the site by the Contractor. It is required that the Contractor have the sediment source tested by a qualified laboratory to ensure adequate dune compatibility prior to any placement of the nourishment material.
7. Construction access and staging shall be from Parker St or the Rexhame Public Beach parking lot in Marshfield. Upon completion of the project, all disturbed areas shall be re-graded and re-vegetated to match pre-construction conditions.
8. After placement, the dune nourishment material shall be graded to the proposed dune width, slope and elevation indicated on the plans.
9. The dune nourishment project specifies a dune crest elevation of 28 feet NAVD88 and a dune width of 30 feet.
10. All dune slopes shall be constructed to 5H:1V, as indicated on the plan.
11. Areas between the provided cross-sections should be tapered as shown in the plan view. All dune elevations, slopes, heights, etc. shall be smoothly tapered between the various cross sections.
12. Following final grading, planting landward of the dune crest shall be performed by hand. Planting shall take place in late winter and early spring (February through April). American beach grass shall be planted by hand; two to three beach grass culms shall be placed in each hole, approximately 7-9 inches deep and spaced 36 inches on center (OC) in shorebird nesting areas, 18 inches OC in other areas.
13. The dune system shall be inspected by the Engineer following the completion of the work.

Winslow Ave. Beach - Dune Nourishment Notes:

1. The dune nourishment project presented herein is intended to provide enhanced storm damage protection.
2. The length of the Winslow Ave. Beach dune nourishment is approximately 1,500 ft. and the proposed footprint is approximately 3.54 acres.
3. 17,850 cubic yards of dune compatible sand shall be placed above Mean High Water.
4. A limit of project activity shall be established and shall be maintained throughout until project completion. The limit of work shall serve as a visual and physical marker for construction activities.
5. It is anticipated that the source for the dune nourishment shall come from material trucked in from upland sources.
6. The nourishment material should be clean, dune compatible sediment brought to the site by the Contractor. It is required that the Contractor have the sediment source tested by a qualified laboratory to ensure adequate dune compatibility prior to any placement of the nourishment material.
7. Construction access and staging shall be from Rexhame Rd or Waterman Ave. Upon completion of the project, all disturbed areas shall be re-graded and re-vegetated to match pre-construction conditions.
8. After placement, the dune nourishment material shall be graded to the proposed dune width, slope and elevation indicated on the plans.
9. The dune nourishment project specifies a dune crest elevation of 17 feet NAVD88 and a dune width of 40 feet.
10. All dune slopes shall be constructed to 7H:1V, as indicated on the plan.
11. Areas between the provided cross-sections should be tapered as shown in the plan view. All dune elevations, slopes, heights, etc. shall be smoothly tapered between the various cross sections.
12. The dune system shall be inspected by the Engineer following the completion of the work.

Fieldston/Sunrise Beach - Beach and Dune Nourishment Notes:

1. The beach and dune nourishment project presented herein is intended to increase overall beach width, improve habitat areas, and provide enhancements for storm damage protection.
2. The length of the Fieldston/Sunrise Beach beach and dune nourishment component is approximately 4,650 ft and the proposed footprint is approximately 30.5 acres.
3. 389,770 cubic yards of beach and dune compatible sand shall be placed.
4. A limit of project activity shall be established and shall be maintained throughout until project completion. The limit of work shall serve as a visual and physical marker for construction activities.
5. It is anticipated that the source for the dune nourishment shall come from either material trucked in from upland sources or hydraulically dredged and pumped to the site.
6. If upland sources are used, the nourishment material should be clean, beach and dune-compatible sediment brought to the site by the Contractor. It is required that the Contractor have the sediment source tested by a qualified laboratory to ensure adequate beach compatibility prior to any placement of the nourishment material.
7. Construction access and staging shall be from Rexhame Rd or Old Beach Rd. Upon completion of the project, all disturbed areas shall be re-graded and re-vegetated to match pre-construction conditions.
8. After placement, the beach and dune nourishment material shall be graded to the proposed dune and berm widths, slopes and elevations indicated on the plans.
9. The beach and dune nourishment project specifies a dune crest elevation of 13 feet NAVD88, a dune crest width of 30 ft., a beach berm elevation of 9.5 feet, and a beach berm width of 90 feet, along 4,650 ft. of the beach.
10. The beach slopes shall be constructed to 12H:1V, as indicated on the plan.
11. The dune slopes shall be constructed to 5H:1V, as indicated on the plan.
12. Both the northern and southern ends of the coastal dune/beach shall taper into the existing dune/beach on a 10H:1V slope.
13. Areas between the provided cross-sections should be tapered as shown in the plan view. All dune and beach elevations, slopes, heights, etc. shall be smoothly tapered between the various cross sections.
14. The beach and dune systems shall be inspected by the Engineer following the completion of the work.

Bay Ave./Gurnet Road Beach - Beach and Dune Nourishment Notes:

1. The beach and dune nourishment project presented herein is intended to increase overall beach width, improve habitat areas, and provide enhancements for storm damage protection.
2. The length of the Bay Ave/Gurnet Road Beach beach and dune nourishment component is approximately 6,010 ft. and the proposed footprint is approximately 50.3 acres.
3. 313,160 cubic yards of beach and dune compatible sand shall be placed.
4. A limit of project activity shall be established and shall be maintained throughout until project completion. The limit of work shall serve as a visual and physical marker for construction activities.
5. It is anticipated that the source for the dune nourishment shall come from either material trucked in from upland sources or hydraulically dredged and pumped to the site.
6. If upland sources are used, the nourishment material should be clean, beach and dune-compatible sediment brought to the site by the Contractor. It is required that the Contractor have the sediment source tested by a qualified laboratory to ensure adequate beach compatibility prior to any placement of the nourishment material.
7. Construction access and staging shall be from the Bay Ave ramp in Marshfield or the south end of Ocean Rd South in Duxbury. Upon completion of the project, all disturbed areas shall be re-graded and re-vegetated to match pre-construction conditions.
8. After placement, the beach and dune nourishment material shall be graded to the proposed dune and berm widths, slopes and elevations indicated on the plans.
9. The beach and dune nourishment project specifies a dune crest elevation of 11 feet NAVD88, a dune width of 20 feet, a beach berm elevation of 8.0 feet NAVD88, and a beach berm width of 85 feet, along 6,010 ft. of the beach.
10. The beach slopes shall be constructed to 20H:1V, as indicated on the plan.
11. The dune slopes shall be constructed to 5H:1V, as indicated on the plan.
12. Both the northern and southern ends of the coastal dune/beach shall taper into the existing dune/beach on a 10H:1V slope.
13. Areas between the provided cross-sections should be tapered as shown in the plan view. All dune and beach elevations, slopes, heights, etc. shall be smoothly tapered between the various cross sections.
14. The beach and dune systems shall be inspected by the Engineer following the completion of the work.

Qualifier Note:

The proposed beach and dune nourishment presented herein follows stable slopes for unconsolidated sediment and maximizes the volume of sediment within the nourishment footprint. The owners understand the proposed designs are not expected to be a long-term solution and are susceptible to damage and loss during coastal storms.

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Date

Revisions

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Surveyed By:

Title:

Plan Notes
for Beach and Dune Nourishment
Prepared for: Towns of Marshfield and Duxbury, MA

Project Number:	2018-0231
Dwg File:	
Scale:	1" = 60'
Date:	Sept. 23, 2020
Approved:	
Drawn:	JRK