

Route 1A South Infrastructure Improvements and Gibson Park Access – Phase 1 NOI Revere MA

Conservation Commission
February 19, 2025
DEP File #: 061-0836



Weston & SampsonSM



HOWARD STEIN HUDSON
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PROJECT TEAM

City of Revere

- *Julie DeMauro, Transportation Coordinator*
- *Tom Skwierawski, Chief of Planning & Community Development*

Howard Stein Hudson

- *Peter Wroblewski, P.E., Senior Civil Engineer*
- *Teren Wong, PE, PTOE, Senior Civil Engineer*

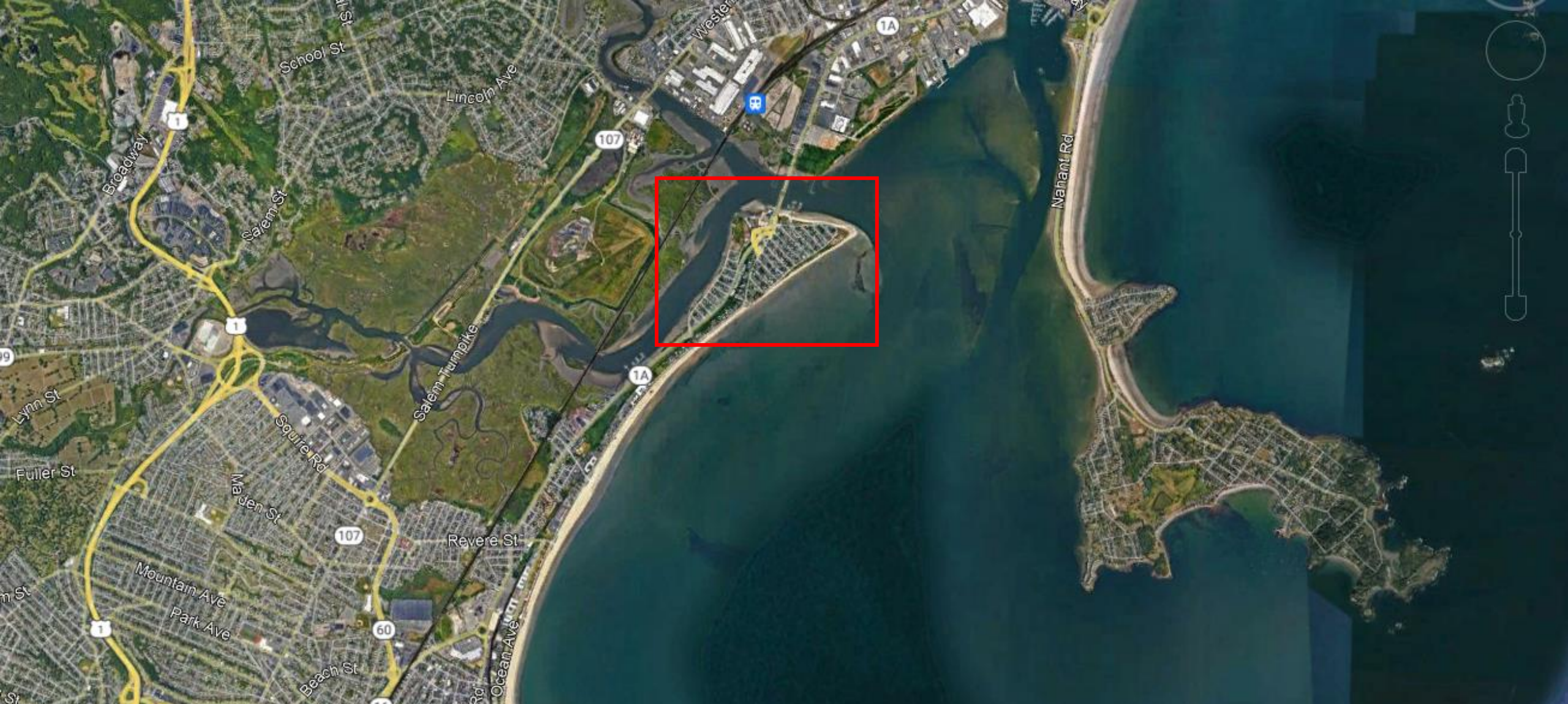
Weston & Sampson

- *Devin Herrick, CWS, Environmental Permitting*



ANTICIPATED CONSTRUCTION SCHEDULE

- Anticipated 2 year construction timeline for Phase 1
- Awarded contractor to submit construction schedule for review and approval
- Traffic management plan is developed, waiting on final permits from MassDOT
- Three 24 hour detours with overnight shifts – Otherwise traffic access to 1A is maintained throughout construction
- Residents will be notified prior to three detours
- All erosion controls will be maintained throughout construction



AERIAL LOCUS



AERIAL LOCUS

PROJECT PHASING

Path: \\base03.local\WSE\Projects\Private\HSH - Revere Rt 1A Roundabout\Permitting\GIS\Maps\Phase Map.mxd User: Herick.Devin Saved: 12/4/2024 8:37:36 AM Opened: 12/4/2024 8:37:46 AM



Data Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

Legend

-  Rt 1A Roundabout Work Area
-  Gibson Park Work Area
-  MassDOT Roads

Rte 1A Ramp Modifications
and Gibson Park Access
Revere, MA

Project Phase Map

Weston & Sampson



PROJECT PHASING - PHASE 1

- Phase 1 will include new roundabout intersection to replace existing concentric southbound ramps.
- 100% of this project footprint is within State ROW and will require an access permit from DCR & MassDOT to construct. This project is adjacent to site development at 22 Whittin and the Gibson Park Access project (Phase 2)
- There will be a Phase 2 for Gibson Park Access filed under a separate NOI as permitting proceeds
- Emergency vehicles will have access to all residential areas, including Point of Pines, at all times during construction

TRANSPORTATION IMPROVEMENT PROJECT

PLAN AND PROFILE OF
ROUTE 1A SOUTHBOUND RAMPS & ROUNDABOUT

IN THE CITY OF
REVERE
SUFFOLK COUNTY
ACCESS PERMIT PROJECT

REVERE
ROUTE 1A SOUTHBOUND RAMPS & ROUNDABOUT

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	---	1	32

PROJECT FILE NO. 2019261.02

TITLE SHEET & INDEX

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

NOI PERMIT SUBMISSION

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	GENERAL NOTES
3	LEGEND & ABBREVIATIONS
4	KEY PLAN
5-9	EXISTING CONDITIONS
10-13	CONSTRUCTION PLANS
14-17	ALTERATION PLANS
18-19	COASTAL FLOOD PATHS
20-23	GRADING PLANS
24-27	UTILITY PLANS
28-29	LANDSCAPE PLANS
30	LANDSCAPE DETAILS
31-32	CONSTRUCTION DETAILS

DESIGN DESIGNATION (ROUTE 1A SOUTHBOUND)

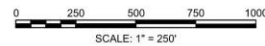
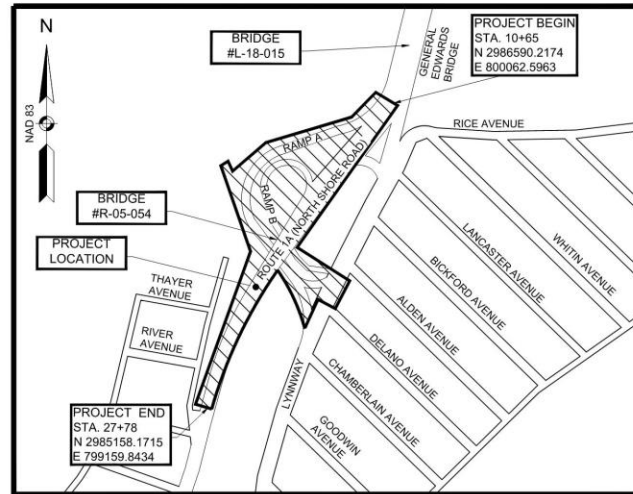
DESIGN SPEED	40 MPH
ADT (2022)	21,730
ADT (2046)	24,490
K	9.1%
T (PEAK HOUR)	2.7%
T (AVERAGE DAY)	3.5%
DHV	2,235
DDHV	N/A
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

DESIGN DESIGNATION (RAMP A)

DESIGN SPEED	25 MPH
ADT (2022)	4,375
ADT (2046)	4,930
K	12.6%
T (PEAK HOUR)	1.0%
T (AVERAGE DAY)	2.9%
DHV	620
DDHV	N/A
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL

DESIGN DESIGNATION (RAMP B)

DESIGN SPEED	20 MPH
ADT (2022)	875
ADT (2046)	985
K	7.2%
T (PEAK HOUR)	10.5%
T (AVERAGE DAY)	8.3%
DHV	70
DDHV	N/A
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL



LENGTH OF PROJECT = 1713.00 FEET = 0.324 MILES



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Boston, MA 02108
www.hshassoc.com

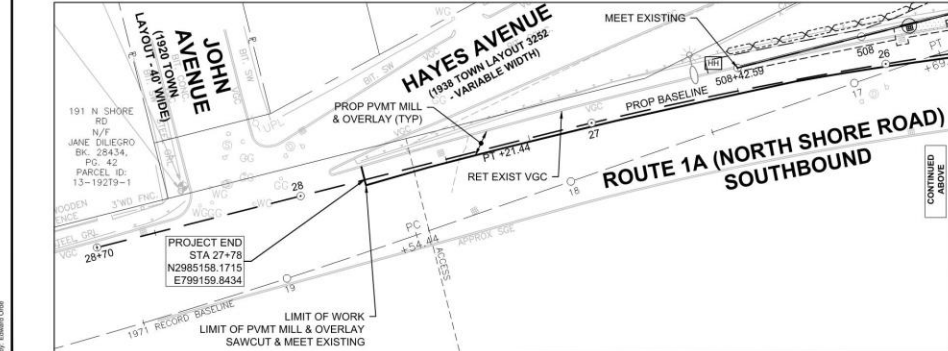
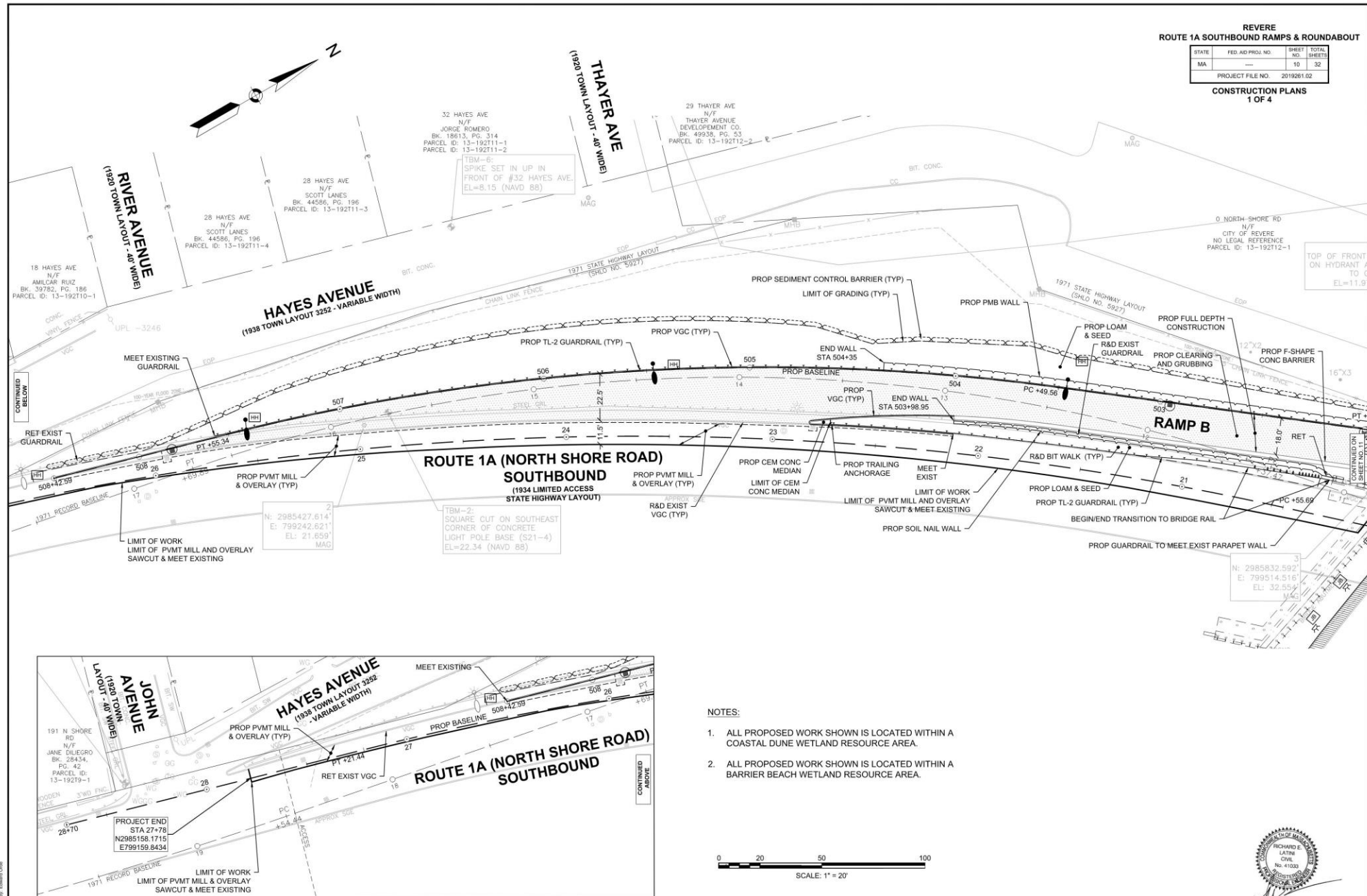
JAN 2025	NOI SUBMISSION	
JAN 2025	PS&E SUBMISSION	
DEC 2024	75/100% RESUBMISSION	
APR 2024	75/100% SUBMISSION	
APR 2023	25% SUBMISSION	
DATE	DESCRIPTION	REV #
APPROVED		
_____ CHIEF ENGINEER		_____ DATE

REVERE
ROUTE 1A SOUTHBOUND RAMPS & ROUNDABOUT

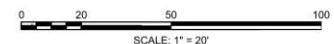
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	---	10	32

PROJECT FILE NO. 2019261.02

CONSTRUCTION PLANS
1 OF 4



- NOTES:
- ALL PROPOSED WORK SHOWN IS LOCATED WITHIN A COASTAL DUNE WETLAND RESOURCE AREA.
 - ALL PROPOSED WORK SHOWN IS LOCATED WITHIN A BARRIER BEACH WETLAND RESOURCE AREA.



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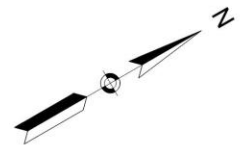
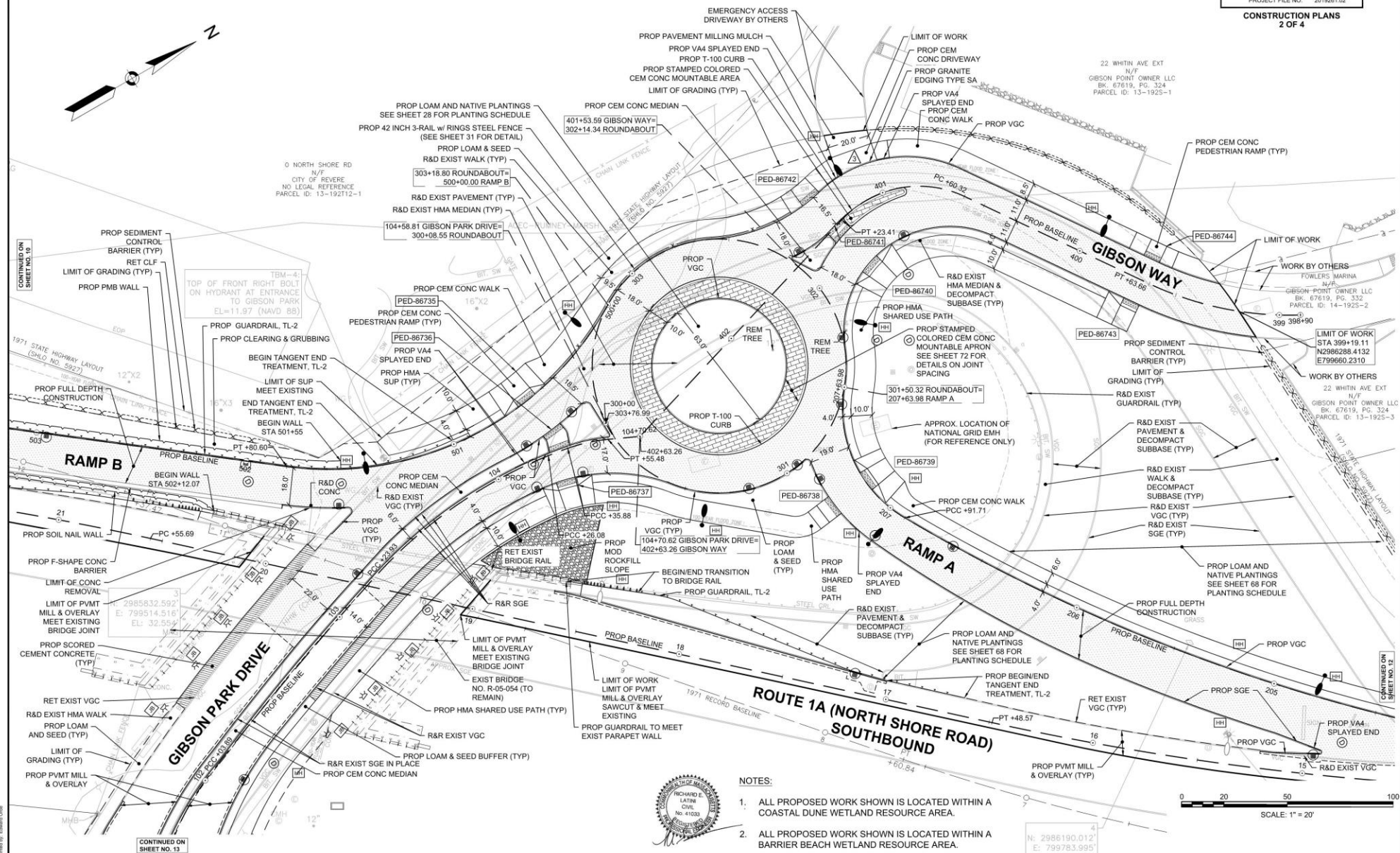
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REVERSE
ROUTE 1A SOUTHBOUND RAMPS & ROUNDABOUT

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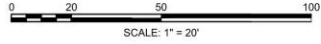
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CONSTRUCTION PLANS
2 OF 4



NOTES:

1. ALL PROPOSED WORK SHOWN IS LOCATED WITHIN A COASTAL DUNE WETLAND RESOURCE AREA.
2. ALL PROPOSED WORK SHOWN IS LOCATED WITHIN A BARRIER BEACH WETLAND RESOURCE AREA.



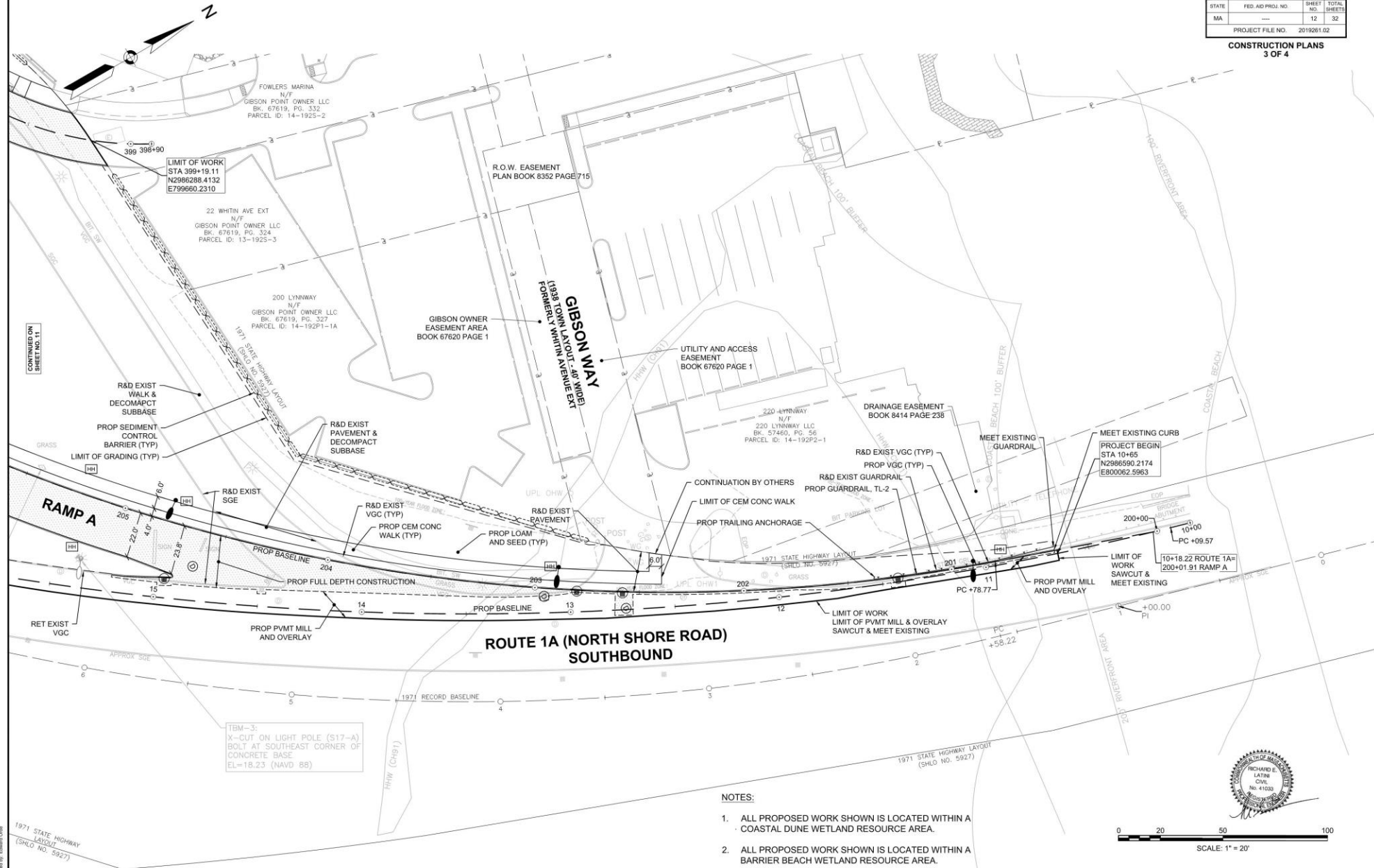
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REVERSE
ROUTE 1A SOUTHBOUND RAMPS & ROUNDABOUT

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CONSTRUCTION PLANS
3 OF 4



CONTINUED ON
SHEET NO. 11

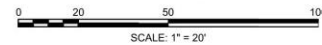
RAMP A

**ROUTE 1A (NORTH SHORE ROAD)
SOUTHBOUND**

TBM-3:
X-CUT ON LIGHT POLE (S17-A)
BOLT AT SOUTHEAST CORNER OF
CONCRETE BASE
EL=18.23 (NAVD 88)

NOTES:

1. ALL PROPOSED WORK SHOWN IS LOCATED WITHIN A COASTAL DUNE WETLAND RESOURCE AREA.
2. ALL PROPOSED WORK SHOWN IS LOCATED WITHIN A BARRIER BEACH WETLAND RESOURCE AREA.



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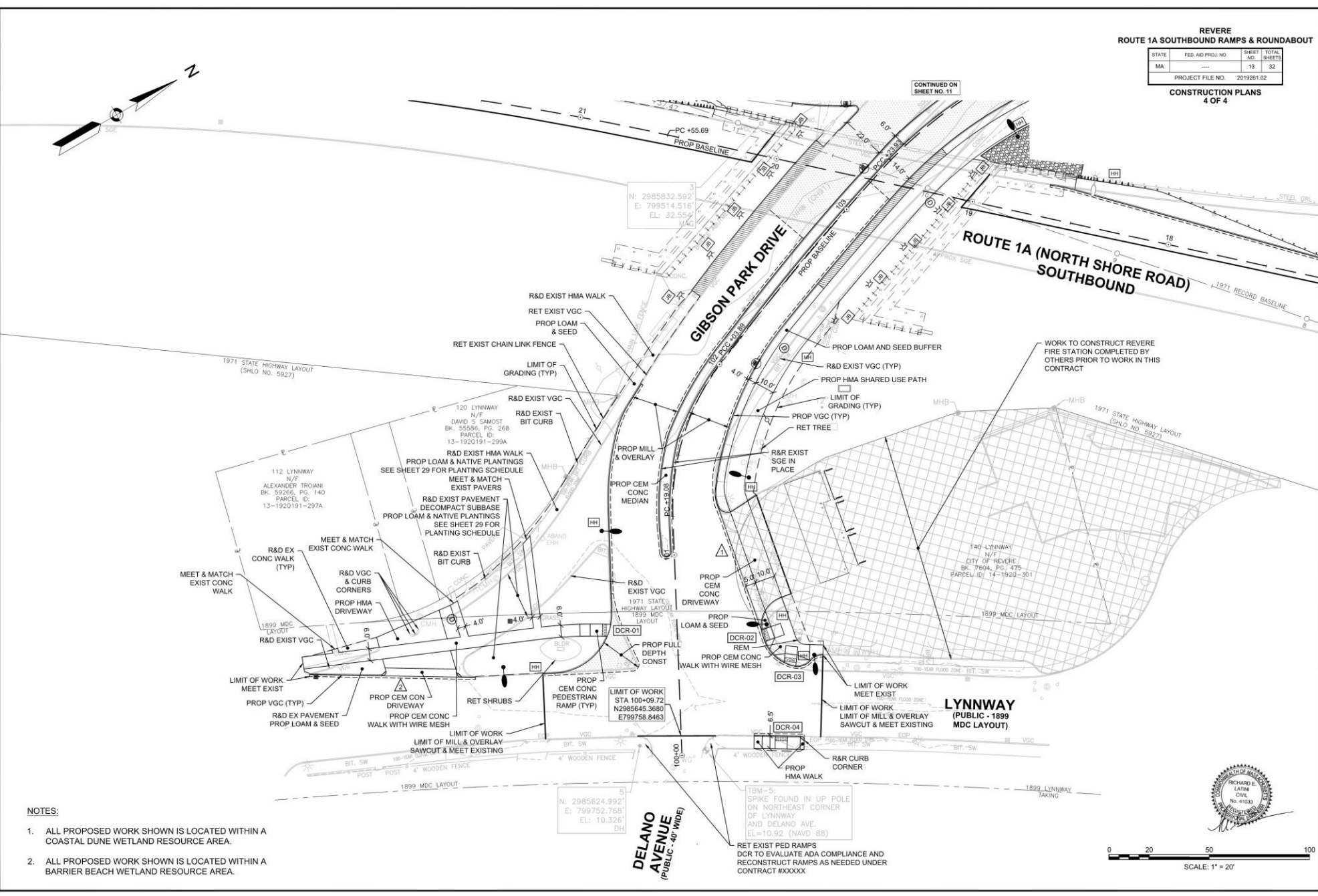
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REVERSE
ROUTE 1A SOUTHBOUND RAMPS & ROUNDABOUT

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	---	13	32

PROJECT FILE NO. 2019261.02

CONSTRUCTION PLANS
4 OF 4



NOTES:

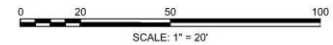
1. ALL PROPOSED WORK SHOWN IS LOCATED WITHIN A COASTAL DUNE WETLAND RESOURCE AREA.
2. ALL PROPOSED WORK SHOWN IS LOCATED WITHIN A BARRIER BEACH WETLAND RESOURCE AREA.

N: 2985624.992
E: 799752.768
EL: 10.326'
DH

DELANO AVENUE
(PUBLIC - 40' WIDE)

TBM-S:
SPIKE FOUND IN UP POLE
ON NORTHEAST CORNER
OF LYNNWAY
AND DELANO AVE.
EL.=10.92 (NAVD 88)

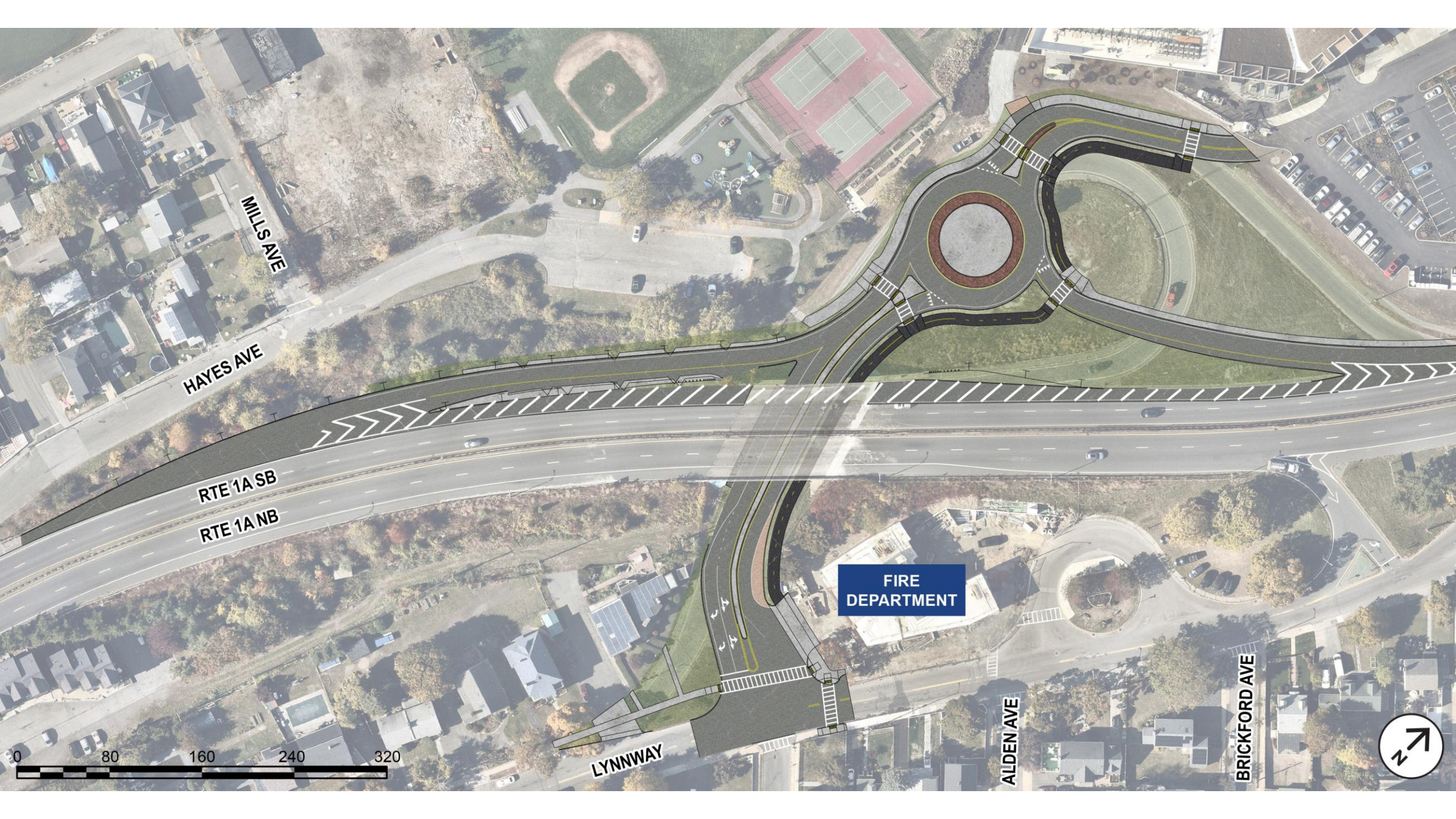
RET EXIST PED RAMPS
DCR TO EVALUATE ADA COMPLIANCE AND
RECONSTRUCT RAMPS AS NEEDED UNDER
CONTRACT #XXXXX



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SHEET NO. 11



MILLS AVE

HAYES AVE

RTE 1A SB

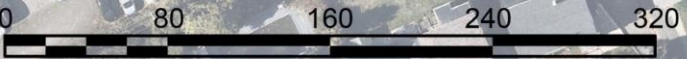
RTE 1A NB

FIRE DEPARTMENT

LYNNWAY

ALDEN AVE

BRICKFORD AVE





BENEFITS OF THIS INFRASTRUCTURE IMPROVEMENT – PHASE 1 ROUNDABOUT

- Creates access to Route 1A northbound and southbound to residents east of Route 1A
- Minimal traffic impacts to adjacent neighborhoods
- Addition of shared use path
 - Improve access to Gibson Park
 - Improve safety for access to Point of Pines neighborhood
- Reduce response times for emergency response vehicles
- Elimination of slip lane



TRAFFIC CONSIDERATIONS

- The proposed roundabout design will not increase traffic volumes and provides sufficient capacity to accommodate anticipated future traffic volumes.
- A background growth rate compounded annually to the build year was utilized to account for any developments in the area which would impact the project roadways.
- During construction, three 24 hour detours with overnight shifts are anticipated where traffic will be diverted through a detour. These shifts will be non-sequential and overnight to minimize public impact.



ANTICIPATED ENVIRONMENTAL IMPACTS

- Wetland Resource Areas Under Mass Wetlands Protection Act – Revere Conservation Commission
 - Barrier Beach
 - Coastal Dune
 - 100 Year Floodplain

WETLAND RESOURCES MAP



- Legend**
- Wetland Flags
 - ▭ Rt 1A Roundabout Work Area
 - ▬ Approximate 200 foot Riverfront Area
 - ▬ Approximate 100 foot Riverfront Area
 - ▬ Salt Marsh
 - ▬ Salt Marsh 100 foot Buffer Zone
 - ▬ Approximate Coastal Beach 100ft Buffer Zone
 - ▬ HAT NAVD88 Landward Limit Coastal Beach
 - ▬ MHW NAVD88 Seaward Limit Coastal Beach
 - ▬ MassDOT Roads
 - ▭ Marsh/Bog
 - ▭ Wooded marsh
 - ▭ Cranberry Bog
 - ▭ Salt Marsh
 - ▭ Open Water
 - ▭ Reservoir (with PWSID)
 - ▭ Tidal Flats
 - ▭ Beach/Dune
 - ▬ USGS Perennial Stream
 - ▬ USGS Intermittent Stream
 - ▭ Massachusetts Property Tax Parcels

FIGURE 2
Rte 1A Ramp Modifications
and Gibson Park Access
Revere, MA

Wetland Field Map



Data Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

FEMA MAP

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone X, Y, APB
- With BFE or Depth Zone AE, AO, AH, VE, AF
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS

- Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/30/2024 at 4:28 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Legend
 Rt 1A Roundabout Work Area

FIGURE 3
 Route 1A Southbound Ramps & Roundabout Project
 Revere, MA

FEMA Map





ANTICIPATED ENVIRONMENTAL IMPACTS

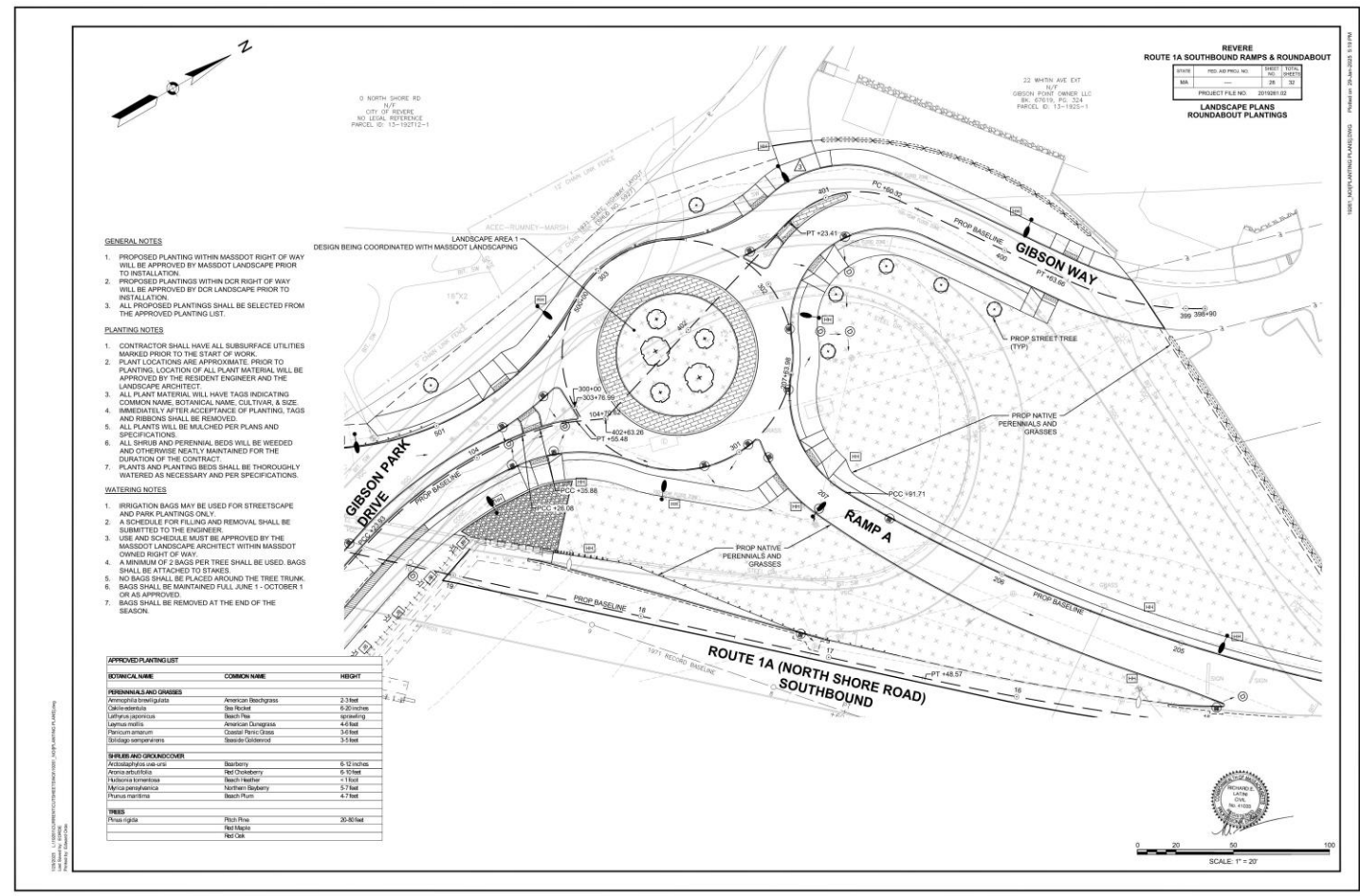
Table – Summary of Wetland Resource Area Impacts under the WPA (Phase 1)

Resource Area	Temporary	Permanent	Total
Land Subject to Coastal Storm Flowage	50,949 SF	14,662 SF	65,611 SF
Barrier Beach	121,326 SF	65,009 SF	186,335 SF
Coastal Dune	121,326 SF	65,009 SF	186,335 SF



DUNE PLANTINGS

- 44,714 SF of native dune plantings



DUNE PLANTINGS

APPROVED PLANTING LIST		
BOTANICAL NAME	COMMON NAME	HEIGHT
PERENNNIALS AND GRASSES		
<i>Ammophila breviligulata</i>	American Beachgrass	2-3 feet
<i>Cakile edentula</i>	Sea Rocket	6-20 inches
<i>Lathyrus japonicus</i>	Beach Pea	sprawling
<i>Leymus mollis</i>	American Dunegrass	4-6 feet
<i>Panicum amarum</i>	Coastal Panic Grass	3-6 feet
<i>Solidago sempervirens</i>	Seaside Goldenrod	3-5 feet
SHRUBS AND GROUNDCOVER		
<i>Arctostaphylos uva-ursi</i>	Bearberry	6-12 inches
<i>Aronia arbutifolia</i>	Red Chokeberry	6-10 feet
<i>Hudsonia tomentosa</i>	Beach Heather	< 1 foot
<i>Myrica pensylvanica</i>	Northern Bayberry	5-7 feet
<i>Prunus maritima</i>	Beach Plum	4-7 feet
TREES		
<i>Pinus rigida</i>	Pitch Pine	20-80 feet
	Red Maple	
	Red Oak	

DESIGN PROCESS



25% plans accepted by
Revere and MassDOT

Structural Design
(Geotechnical borings
and wall design)

Stamped plans,
Environmental
Permitting
(state and federal)

State Access Permit
Issued (DOT and DCR)

* We are here

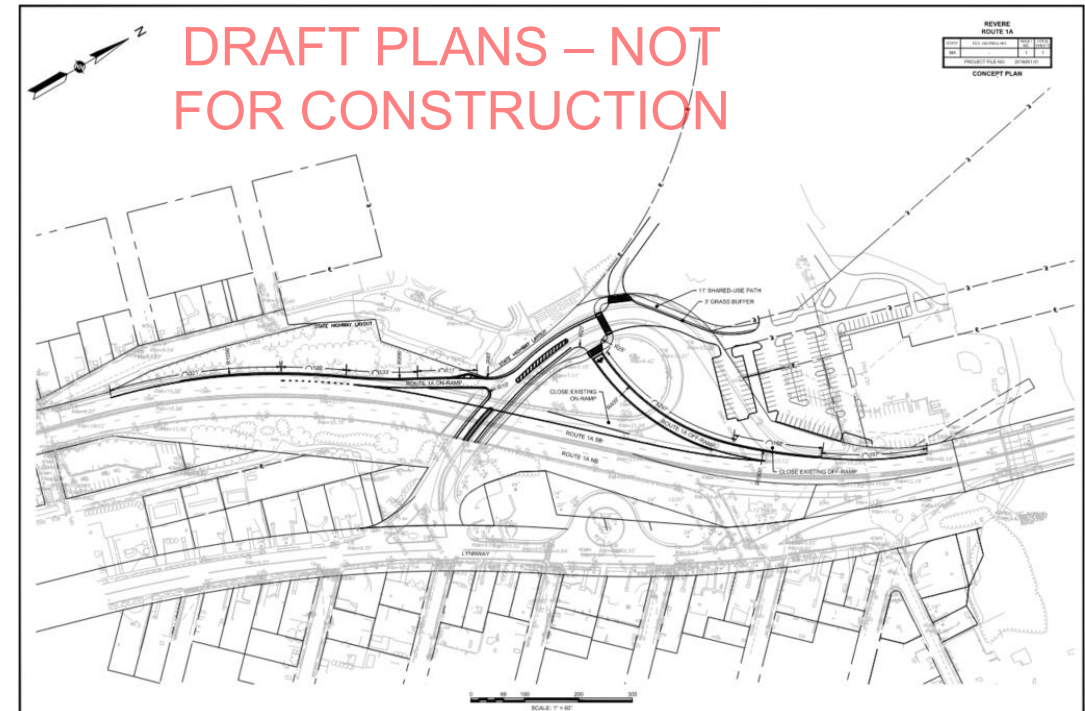


Thank you!
Questions?



ALTERNATIVES CONSIDERED

- Two Offset Three-way Intersections
 - Most seriously considered alternative
 - Similar to roundabout aside from intersection
 - Analysis proved: no negative traffic impacts to Route 1A
 - Not enough physical space for sufficient On-Ramp
 - NOT VIABLE



ALTERNATIVES CONSIDERED

- Concept A
 - Introduces a stop-controlled intersection at the end of the south bound (SB) ramp.
 - Introduces new north bound (NB) on-ramp and off-ramp at the Lynn intersection.
 - Includes direct access to private development at the existing driveway apron abutting 1A southbound.
 - NOT VIABLE

CONCEPTUAL DESIGN
June 2008

Figure 1. Concept A



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ALTERNATIVES CONSIDERED

- Concept B1/B2
 - Introduces a new stop-controlled intersection on Route 1A.
 - These alternatives include the least amount of new impervious materials compared to other alternatives.
 - Concept B2 includes an additional exit ramp to retain access to the Lynnway.
 - NOT VIABLE

CONCEPTUAL DESIGN
June 2020

Figure 2. Concept B1



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ALTERNATIVES CONSIDERED

- Concept B1/B2
 - Introduces a new stop-controlled intersection on Route 1A.
 - These alternatives include the least amount of new impervious materials compared to other alternatives.
 - Concept B2 includes an additional exit ramp to retain access to the Lynnway.
 - NOT VIABLE

CONCEPTUAL DESIGN
June 2020

Figure 3. Concept B2



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ALTERNATIVES CONSIDERED

- Concept C
 - Concept C is similar to Concept A but does not provide direct access for the private development to the Route 1A SB Off-Ramp. Instead, it provides access to the development with a new access road at a lower elevation.
 - Compared to Concept A, this concept has an extended length of Route 1A SB off-ramp, which is desirable.
 - **NOT VIABLE**

CONCEPTUAL DESIGN
JUNE 2020

Figure 4. Concept C



ALTERNATIVES CONSIDERED

- Concept D
 - Retains the general shape of the existing on-ramp and off-ramp.
 - Includes a stop condition intersection.
 - NOT VIABLE

CONCEPTUAL DESIGN
June 2020



Figure 5. Concept D



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