Martha's Vineyard
BEACH ROAD STUDY
Vineyard Haven, Tisbury

Public Informational Meeting #2

Virtual Meeting | June 10, 2025 | 6:30 p.m. EDT

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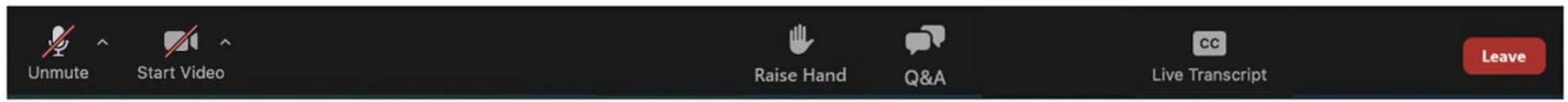

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- The meeting will be open to questions and answers at the end of the formal presentation.

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Agenda

01 Study Overview

02 Flood Vulnerability

03 Safety Analysis

04 Alternatives Development

05 Alternatives Analysis

06 Recommended Next Steps

07 Questions and Comments

https://www.youtube.com/watch?v=CHd0z44hTQc

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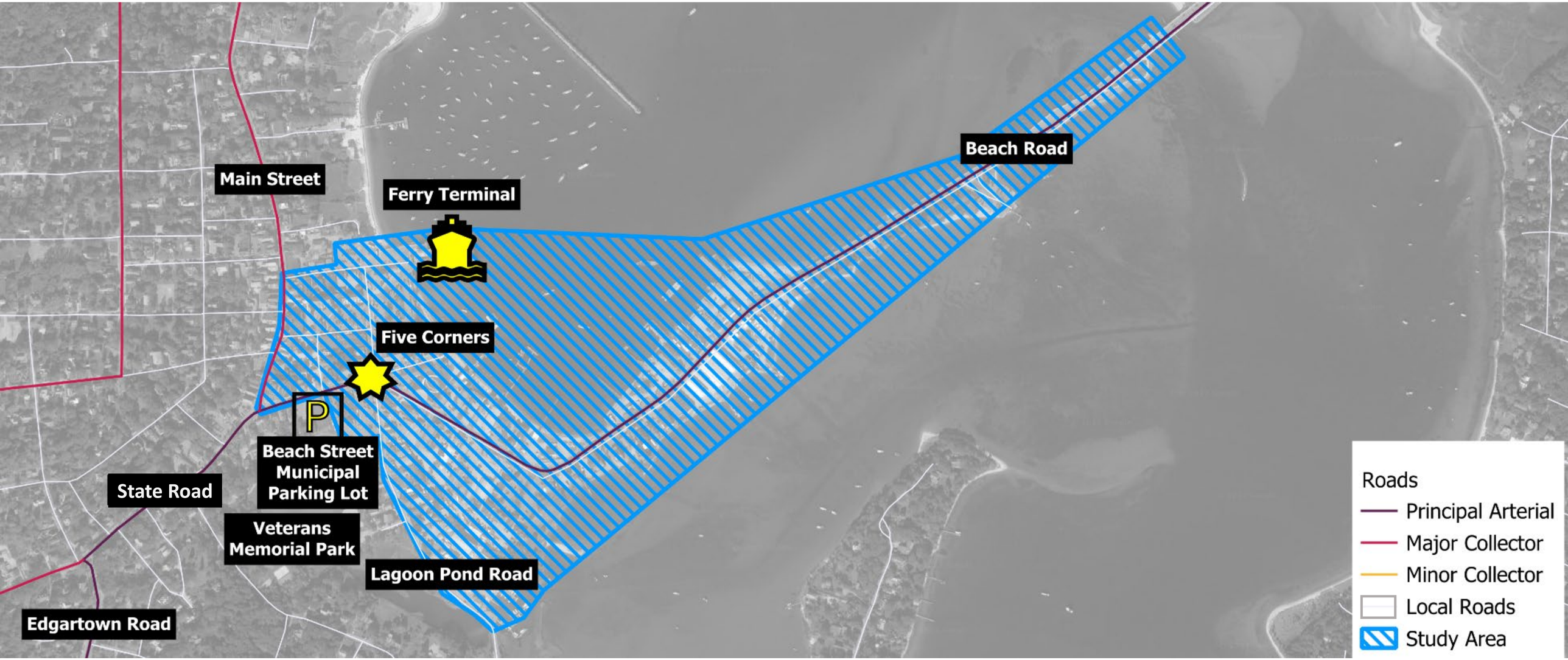
Study Overview

Goals and Objectives

- **Evaluate roadway improvements** at Five Corners and on Beach Road to **increase safety and comfort for all road users**, including pedestrians, bicyclists, trucks, and buses
  - Acknowledge and build on work done from 2015-2021
- Address **current and potential future flooding**
- **Involve local stakeholders**

Study Area



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Flood Vulnerability

Drainage System

- The current drainage system includes outfall pipes at Beach Street Extension, Lagoon Pond Road, Main Street, and Beach Road.
  - The main outfall pipe for Five Corners is at Beach Road Extension.
- Existing system has been identified as insufficient to meet current stormwater discharge needs.
- Proposed drainage improvements under MassDOT project 609459 to address challenges with the Beach Road Extension pipe.
- Tisbury has proposed additional improvements to address sedimentation at this outfall.

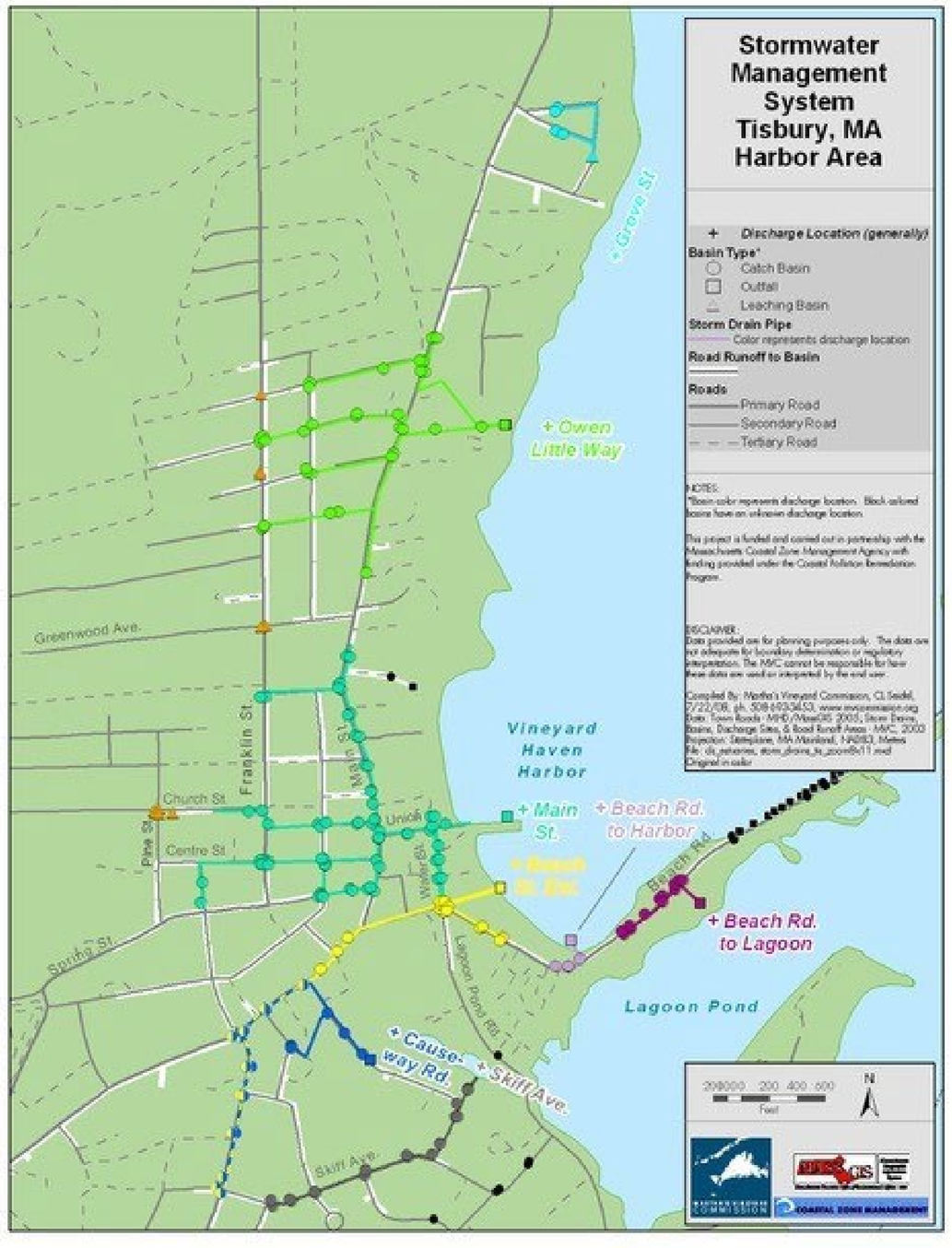

Figure shows existing drainage system in Vineyard Haven Martha's Vineyard Commission.

Flood Vulnerability – Exposure to Sea Level Rise (NOAA)

NOAA: National Oceanic and Atmospheric Administration

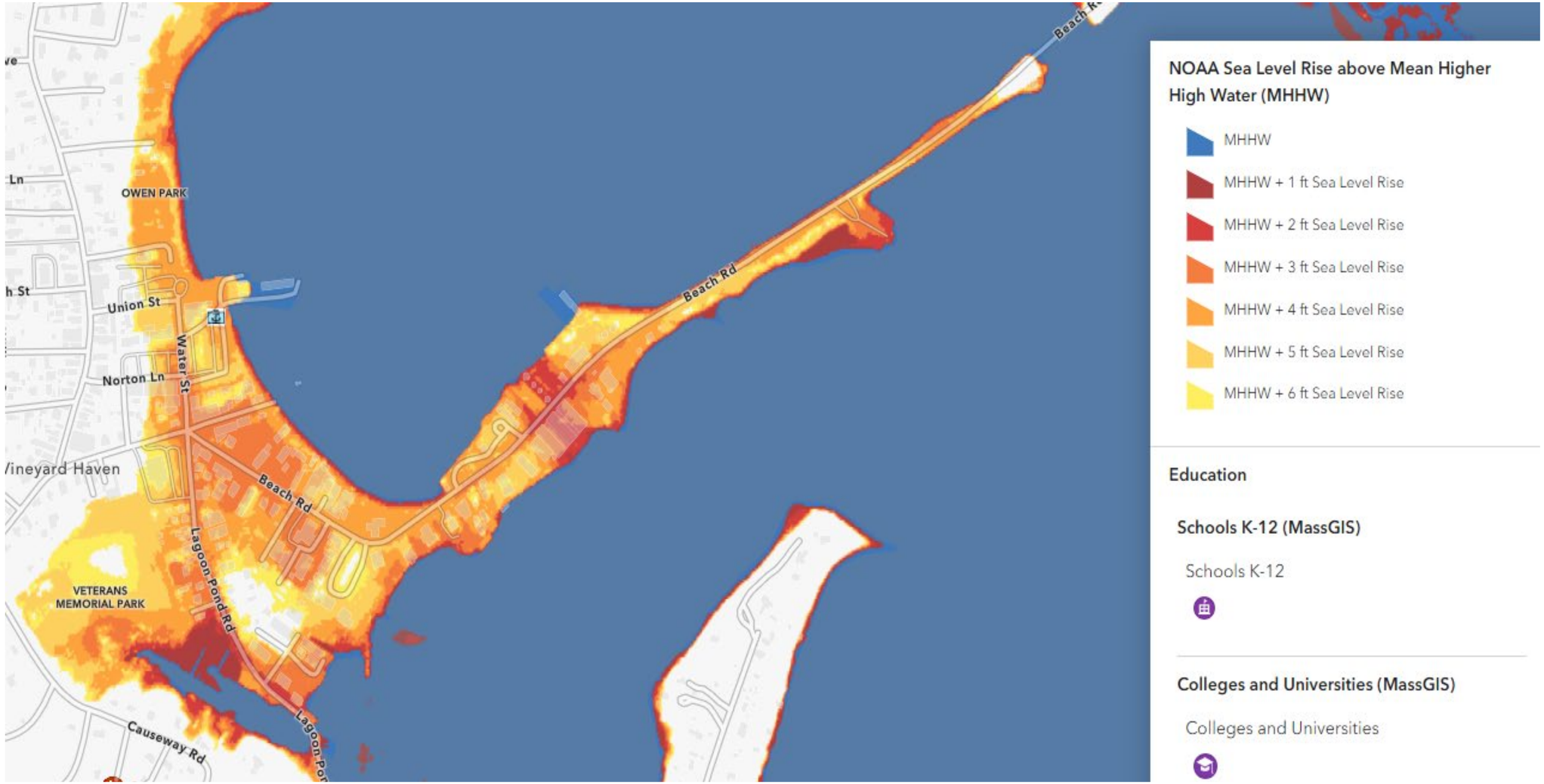

Figure displays sea level rise scenarios compared to NOAA Mean Higher High Water (MHHW)

Source: CZM Massachusetts Office of Coastal Zone Management – Sea Level Rise and Coastal Flooding Viewer

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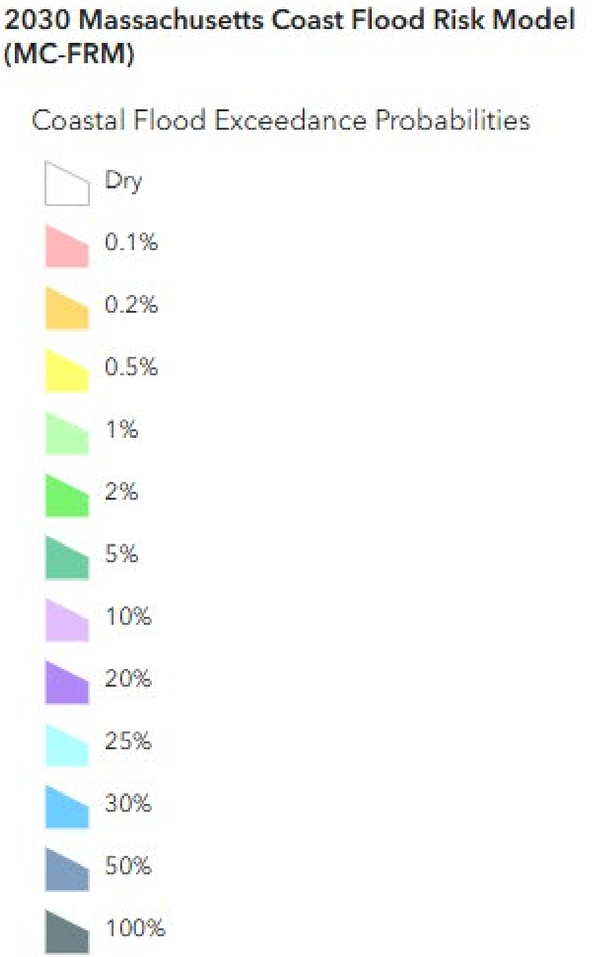
Flood Vulnerability – Future Year Flooding MC-FRM 2030

MC-FRM: Massachusetts Coast Flood Risk Model



Coastal Flood Exceedance Probability: likelihood of flooding at a specific location in any given year. In the case of the above figure 2030.

Source: CZM Massachusetts Office of Coastal Zone Management – Sea Level Rise and Coastal Flooding Viewer

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Flood Modeling - Results

- ResilientMass Action Team (RMAT) model
  - Preliminary risk screening tool providing results based on asset inputs
- 2030 model was used to develop current and near-term flood mitigation alternatives
  - Projected flood levels still cover most of Five Corners and Beach Road in 2030.
- Flood levels are anticipated to be significantly higher in 2050 and 2070, which is challenging to plan for in the scope of this study.
- While current (2025) flooding can be mitigated, flooding beyond 2030 will be more severe and require more significant treatments.

Asset Preliminary Climate Risk Rating Summary — Number of Assets: 5

Asset Risk	Sea Level Rise/Storm Surge	Extreme Precipitation - Urban Flooding	Extreme Precipitation - Riverine Flooding	Extreme Heat
Five Corners intersection	High Risk	High Risk	Low Risk	High Risk
Shoreline	—— Natural Resource project assets do not receive a preliminary climate risk rating. ——			
Ferry Terminal	High Risk	High Risk	Low Risk	High Risk
Park	—— Natural Resource project assets do not receive a preliminary climate risk rating. ——			
Green infrastructure?	High Risk	High Risk	Low Risk	High Risk

Figure: RMAT climate risk rating output

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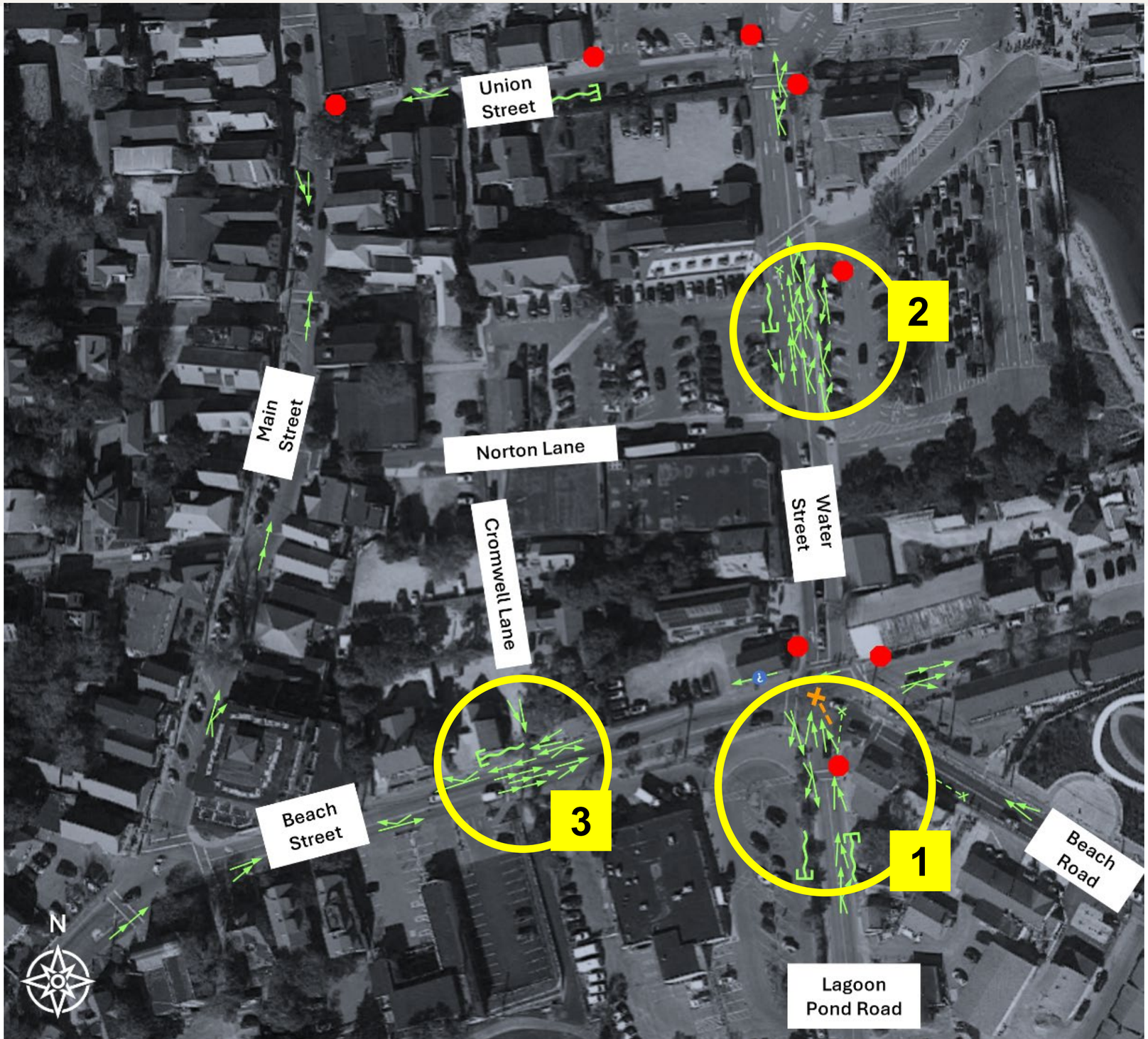
Safety Analysis

Five Corners

- Informal vehicle operations (unsignalized, partial stop control)
- Three clear crash clusters appear in Downtown Vineyard Haven (data from 2018-2022):

1. The Lagoon Pond Road entry to- and exit from- Beach Street
2. Stretch of Water Street northbound entering the ferry terminal
3. Stretch of the intersection between Beach Street and the Cromwell Lane alley



Pedestrian Conditions

- The study area sees a **large volume of pedestrian traffic**, due to the nearby ferry, bus stops, and other destinations
- **Sidewalks and curb ramps are not all up to current MassDOT standards or ADA* compliant**
- Large vehicles (buses) were noted to **encroach on the narrow sidewalks** to complete turning movements

*Americans with Disabilities Act (1990)

Bicycle Conditions

- The study area sees a **large volume of bicycle traffic**, due to the nearby ferry, bus stops, and other destinations
- The study area includes a **gap in the island-wide bicycle network**, between bike lanes on Beach Road and Beach Street

Alternatives Development

Alternatives Development - Overview

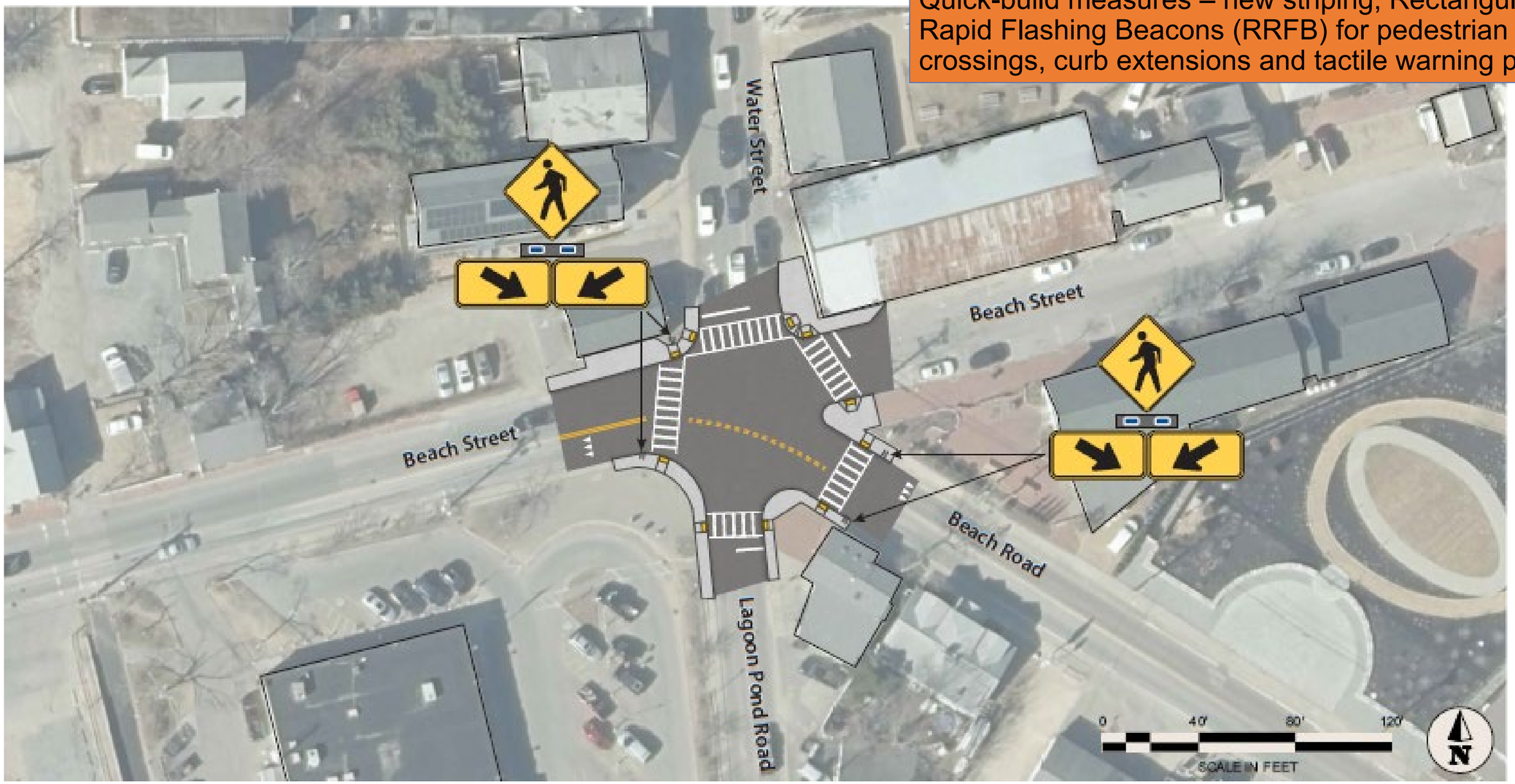
- Two components
  - Safety and road treatments
  - Flood mitigation and adaptation measures

- Safety and road treatments focused on facilitating intersection operations and improving safety for vehicles, pedestrians, bicyclists

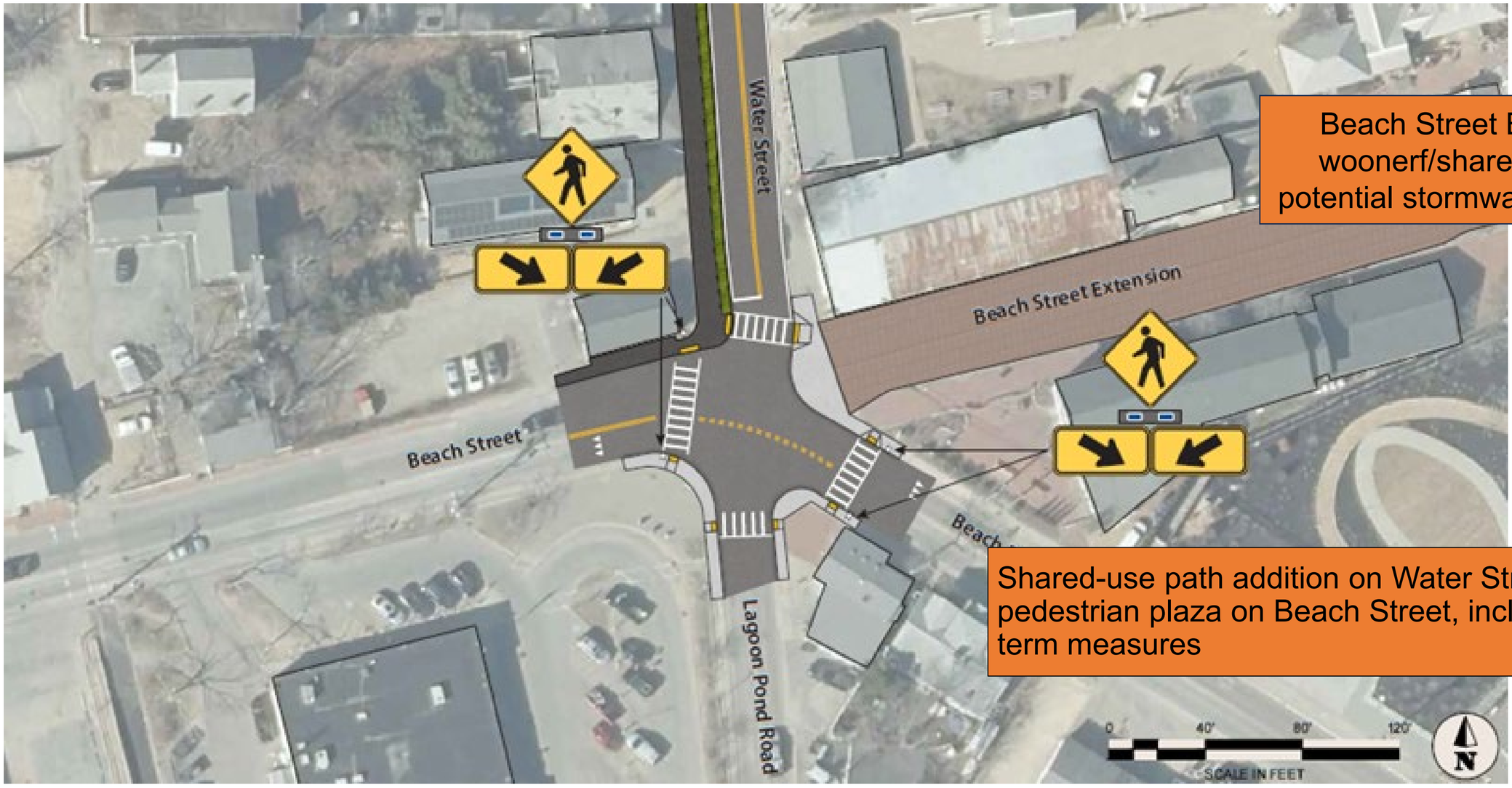
- Flood mitigation and adaptation measures are focused on minimizing the impacts of near-term flooding
  - More significant analysis required for long-term adaptation options

Five Corners Intersection - Short-Term Alternative

Quick-build measures – new striping, Rectangular Rapid Flashing Beacons (RRFB) for pedestrian crossings, curb extensions and tactile warning panels.



Five Corners Intersection - Mid-Term Alternative



Beach Street Extension woonerf/shared street – potential stormwater retention

Shared-use path addition on Water Street, pedestrian plaza on Beach Street, include short-term measures

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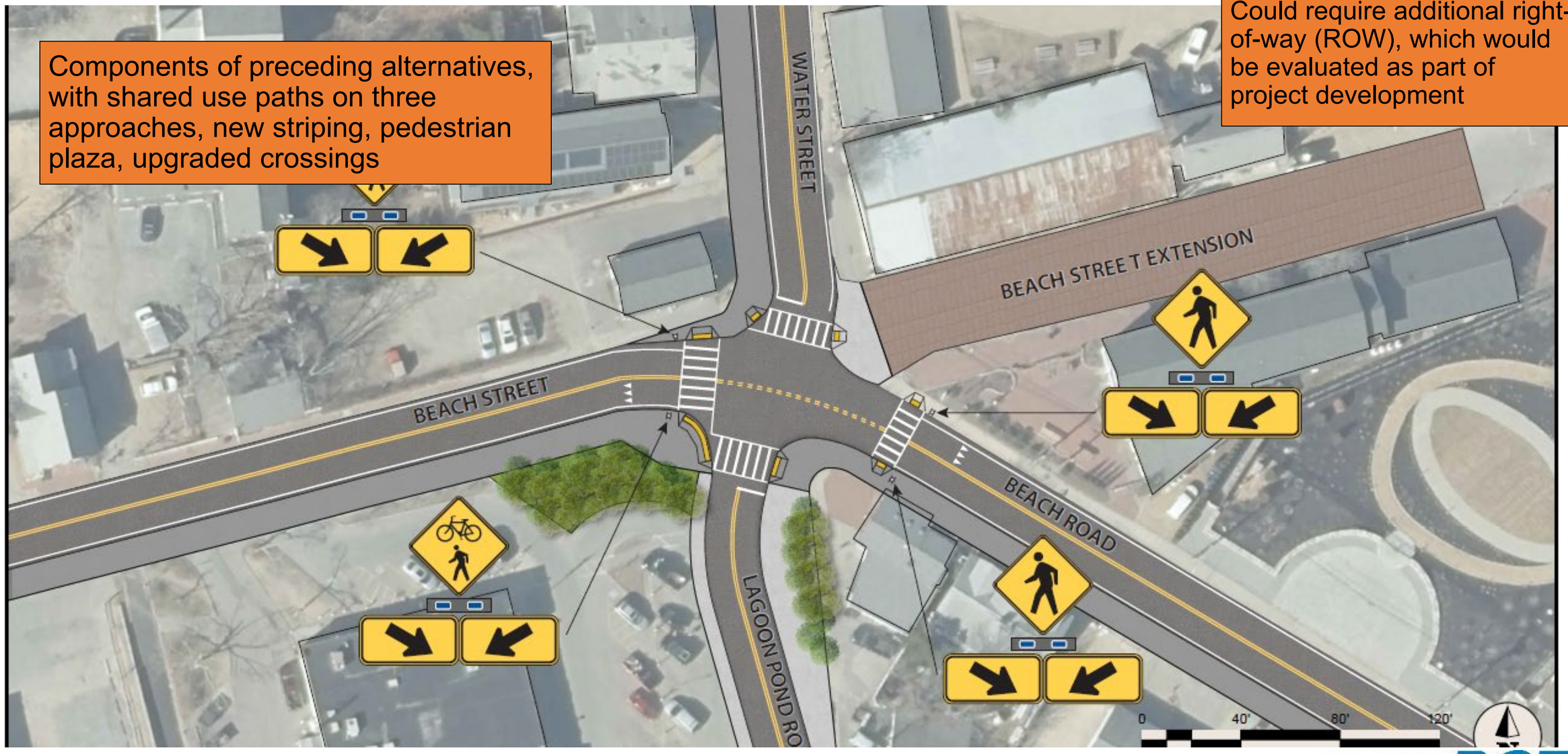
Five Corners Intersection - Long-Term Alternative
Formal Intersection

Components of preceding alternatives, with shared use paths on three approaches, new striping, pedestrian plaza, upgraded crossings

Could require additional right-of-way (ROW), which would be evaluated as part of project development



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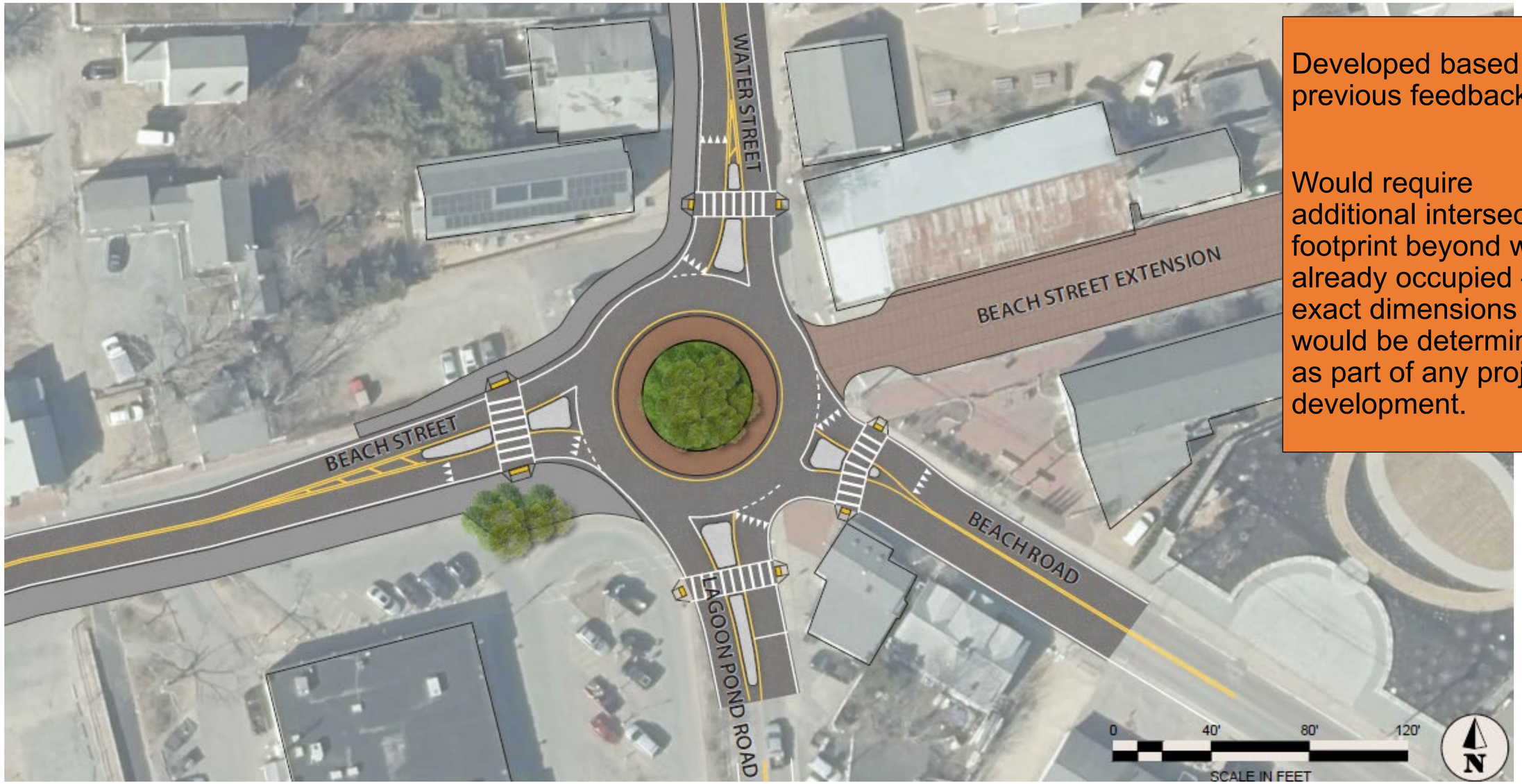
Five Corners Intersection: Long-Term Alternative Roundabout Option



Developed based on previous feedback

Would require additional intersection footprint beyond what is already occupied – exact dimensions would be determined as part of any project development.

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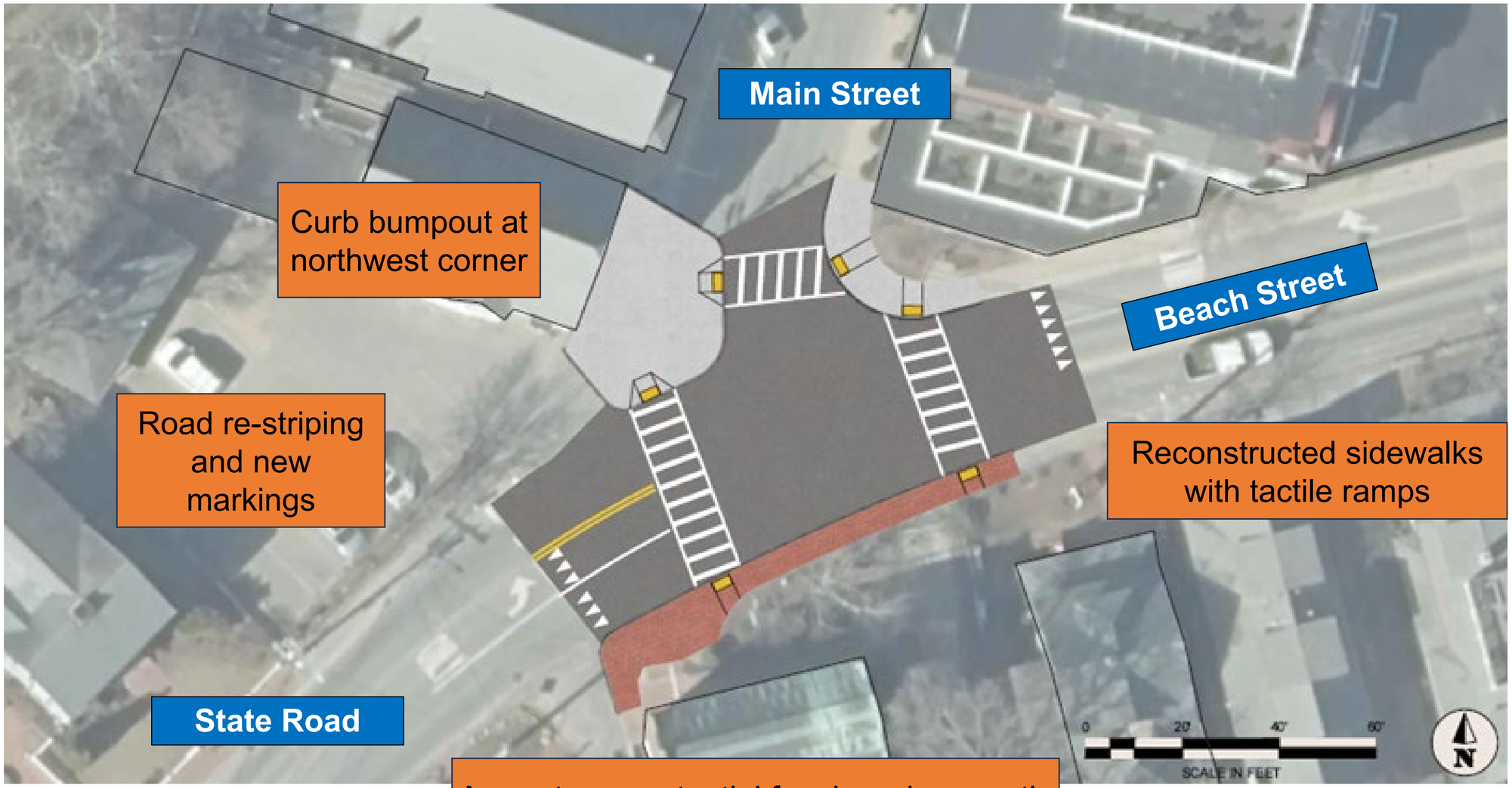
Main Street and Beach Street Alternative



Long-term: potential for shared-use path on the south side of Beach Street

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Intersection Elevation

- This study considered elevating the Five Corners intersection long-term, either as a standard intersection or a roundabout.
    - 5 feet above NAVD88, per the Town of Tisbury Alternatives Analysis
    - 5 feet above existing ground level (~ 7.5 feet above NAVD88)
- Impacts for both scenarios are discussed in the following analysis section.

Alternatives Analysis

Anticipated Impacts - Roadway

Short-term alternatives

- Safety and operations improvements
- Upgrade the intersection to current MassDOT standards and ADA-compliant infrastructure
- Would likely be insufficient to address existing turning radius challenges for large vehicles
- No right-of-way (ROW) impacts anticipated*

Mid-term alternative

- Same impacts as short-term
- Temporary construction impacts (access, noise) to properties along Beach Street Extension if woonerf were to be constructed

All alternatives would likely have brief impacts during construction e.g., travel disruption, noise

*Note: full ROW impacts are evaluated later in project development after planning

Anticipated Impacts – Roadway (continued)

Long-term (LT) alternatives

- Increase safety and standardize intersection operations
- Could increase bicycle connectivity and safety with shared-use paths
- Full intersection (LT Alternative 1) would accommodate large vehicles turning radii (potential ROW impacts)*
- Roundabout (LT Alternative 2) would also likely have right-of-way impacts*
- If the full intersection or roundabout were to be raised to protect from flooding, ROW impacts would likely be more significant*

All alternatives would likely have brief impacts during construction e.g., travel disruption, noise

*Note: full right-of-way impacts would be evaluated in any future project development

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Estimated Costs

- Short-term improvements (2025) to Five Corners: $322,000
- Short-term improvements at Main Street: $201,000
- Mid-term improvements (2027) to Five Corners: $2.3 million
- Long-Term roundabout (Year TBD) at Five Corners: $3.8 million
- *Long-Term formal intersection (Year TBD) at Five Corners: $1.8 million to $3.1 million

All costs are in 2024/2025 dollars.

Estimates are limited to roadway improvements and not inclusive of any potential flood mitigation measures (e.g., elevation) that could be incorporated.

Assumptions include provisions for drainage and utility modifications, construction contingency costs, and design and engineering costs.

*The range in long-term formal intersection encompasses base level changes to the Five Corners intersection, with additional potential improvements to Beach Street Extension as a shared-street.

Potential Flood Mitigation Measures

- A stormwater retention tank at Beach Street Extension could mitigate current flooding but would likely be insufficient to protect from future flooding.
- Construction impacts/disruption - noise sources and access impacts, raised intersection implications (potential ROW).
- Elevation would likely have significant right-of-way (ROW) impacts, due to the raised profile and nearby properties.
- Elevation levels discussed (5 and 7.5 feet NAVD88) would likely be insufficient to mitigate current projected flood impacts in 2050 and 2070, and exceedance probability is still high in 2030.

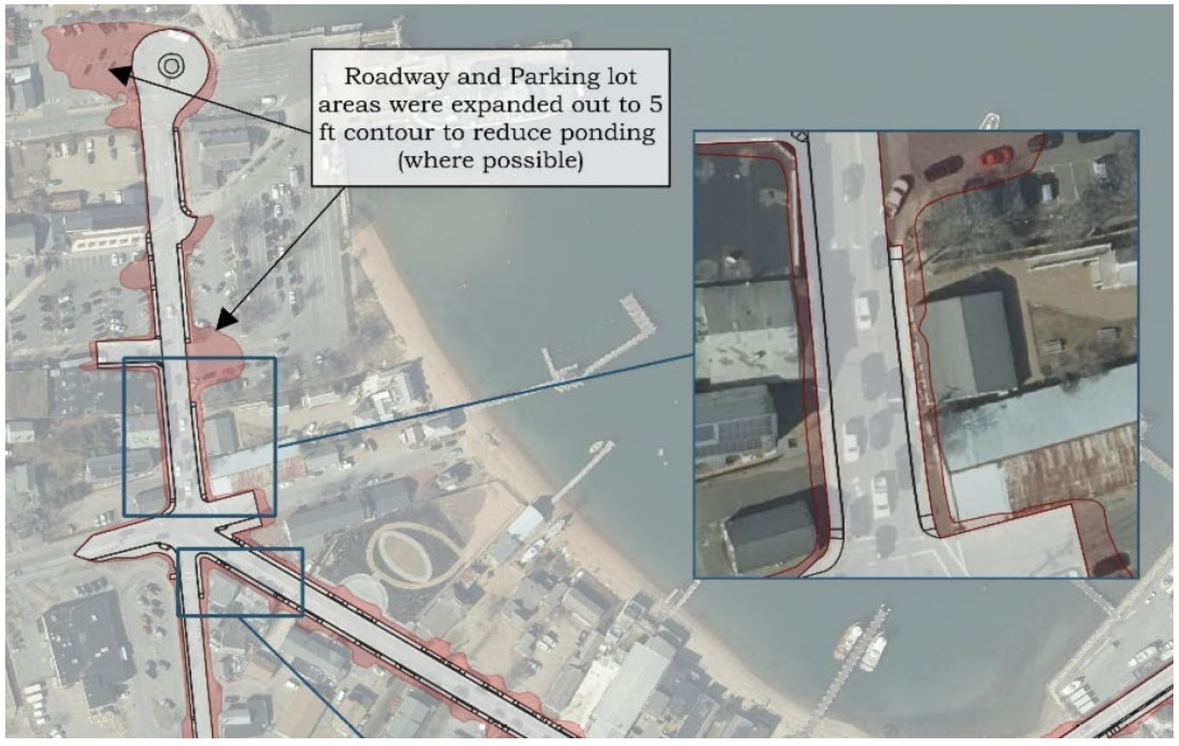

Figure: minimum footprint to achieve 5 feet NAVD88, *source: Town of Tisbury Alternatives Analysis report*

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Anticipated Impacts - Flooding

- Storm flood levels already cover a large portion of Five Corners, which is anticipated to be more significant in future years (2030 and beyond)
- Flood mitigation measures considered as part of this study are not anticipated to sufficiently protect from flooding beyond 2030, and the expected project development timeline approaches 2030
- Proposed flood mitigation measures will likely be insufficient to protect from 2050 and 2070 flood models, due to the additional severity of flooding.

Figure displays 2030 horizon year flooding scenarios for high tide (including mean higher high water) and 20-year and 100-year storm surge

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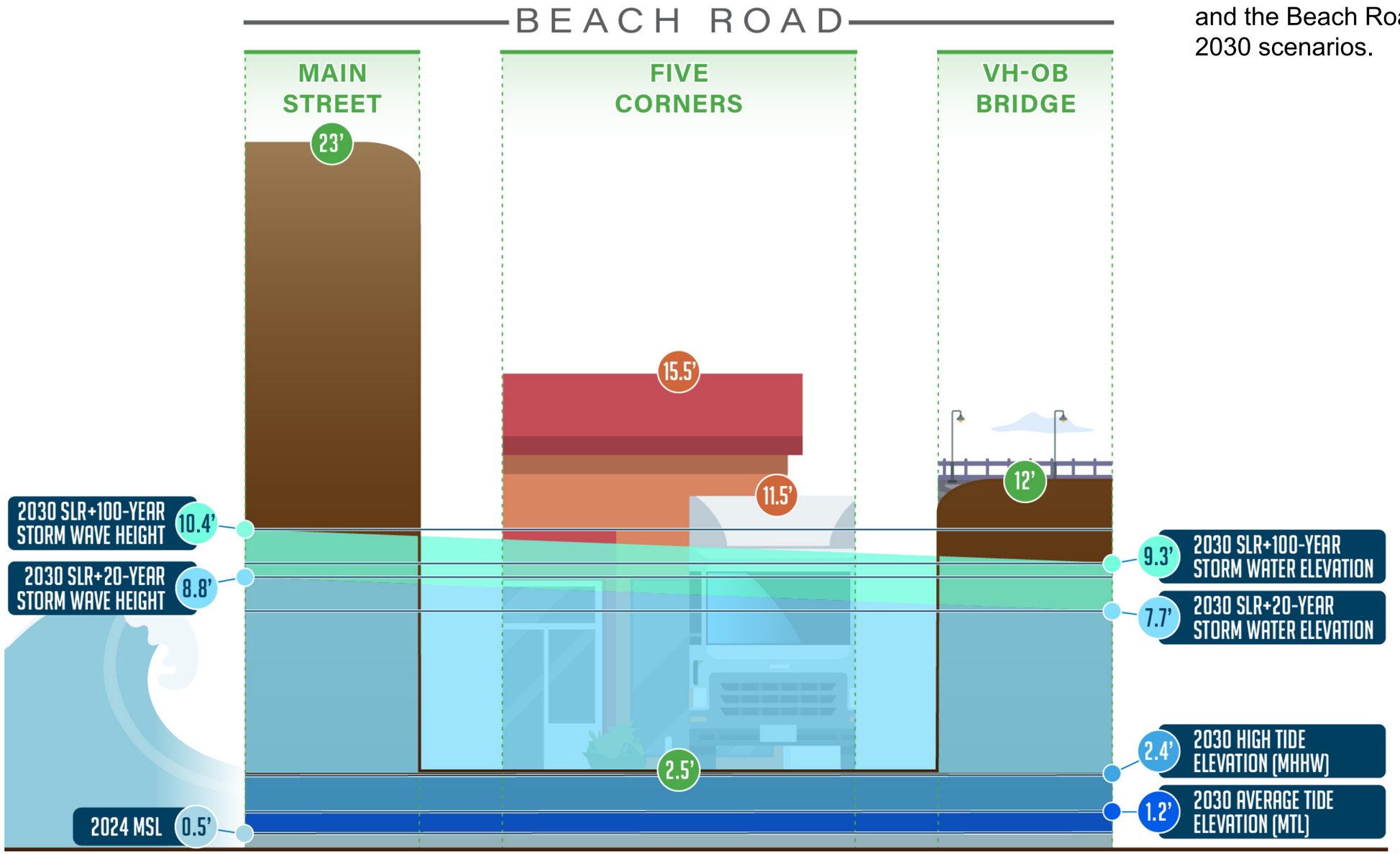
Visual - 2030 Flood Projections



HEIGHT IN FEET (ABOVE NAVD88 MSL), ROUNDED TO NEAREST QUARTER-FOOT

Figure: varied flood heights at Main Street and Beach Street, Five Corners, and the Beach Road causeway under 2030 scenarios.

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Recommendations

Recommended Next Steps

- Advance MassDOT drainage project 609459 to address near term flooding at Five Corners near Beach Road extension.
- Future-year flood mitigation could potentially be addressed as part of a future roadway construction project, such as the long-term alternatives reconfiguring Five Corners as a formal intersection or a roundabout.
    - At a minimum, any road reconstruction should include drainage enhancements.
    - If the road were to be elevated, the exact height would need to be determined in project development.
- Additional flood mitigation strategies must be determined and advanced by other stakeholders for infrastructure beyond MassDOT jurisdiction.

Next Steps

1

May 2025

Working Group meeting #3

2

June 2025

Public Meeting #2

3

Summer 2025

Incorporate feedback on alternatives and analyses

Finalize study recommendations

4

2025 onward

MassDOT to coordinate with partners on next steps after study

Alternatives Review and Alternatives Analysis, present recommended next steps

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Questions and Comments

Share Your Questions and Comments

- Submit your questions and comments; (Alt + H)

- “Raise your hand” to be unmuted for verbal questions; (Alt + Y)

- Please state your name before your question

- Please share only **1** question or comment at a time, limited to **2** minutes, to allow others to participate.

- To ask a question via phone, dial *9 and the moderator will call out the last 4-digits of your phone number and unmute your audio when it is your turn.

Please be advised that all comments are subject to disclosure for public records, therefore use these functions for project-related business only.

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How to reach us?

- Submit written comments to:
  Office of Transportation Planning
  MassDOT
  10 Park Plaza, Suite 4150
  Boston, MA 02116
  Attention: Multimodal Planning

- Submit email comments to:
  planning@dot.state.ma.us

- For project information visit the MassDOT website at:
  https://www.mass.gov/marthas-vineyard-beach-road-study

QR code to study website

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BEACH ROAD STUDY
Vineyard Haven, Tisbury

Thank You

Public Informational Meeting | June 10, 2025 | 6:30 p.m. EDT

Project Manager: Patrick L. Snyder
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Appendix

2050 Coastal Flood Exceedance Probabilities – MC-FRM

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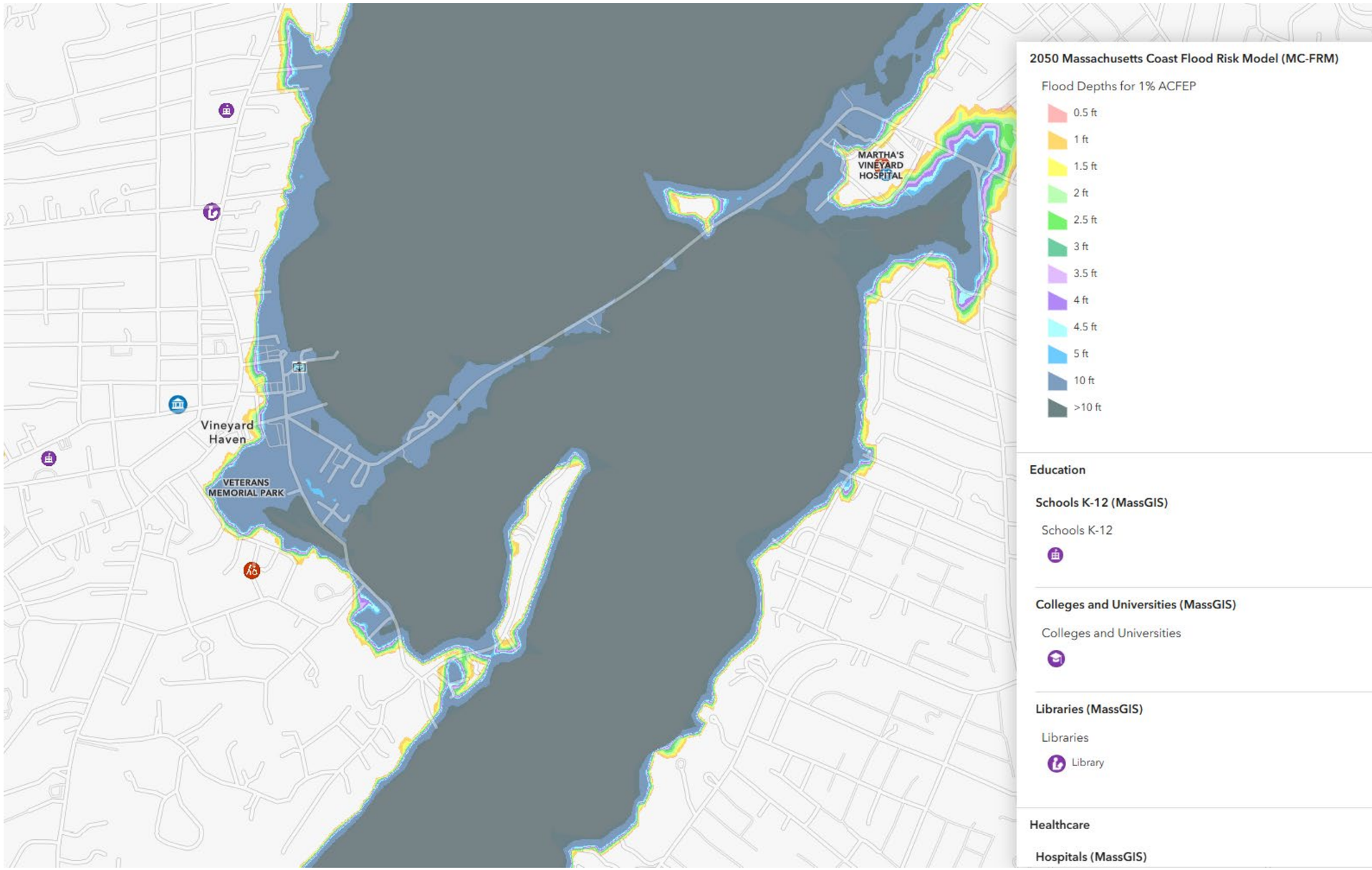
2050 Flood Depths 1% (100 Year Storm) – MC-FRM



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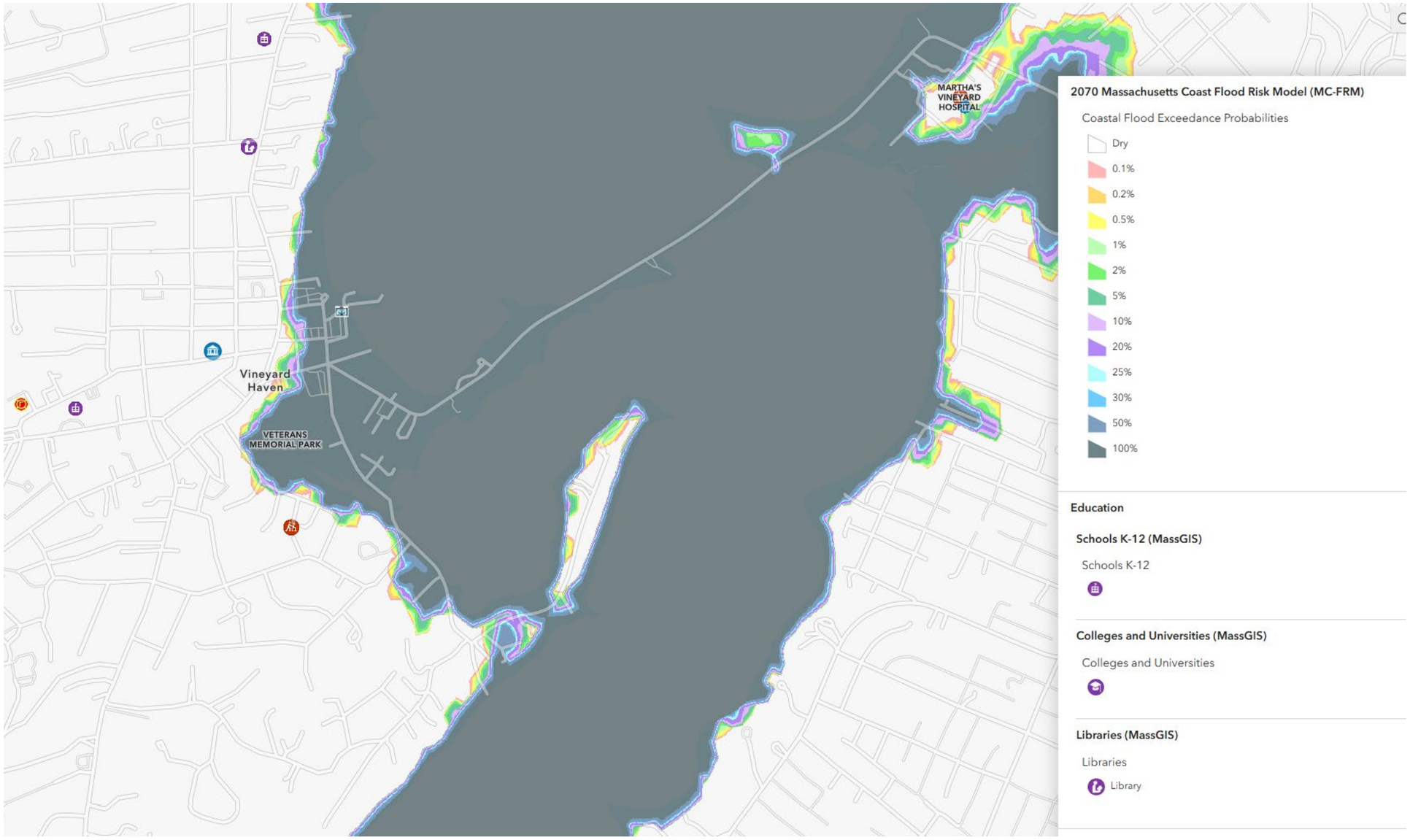
2070 Coastal Flood Exceedance Probabilities – MC-FRM



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2070 Flood Depths 1% (100 Year Storm) – MC-FRM