



A Plan to Improve Bicycling, Pedestrian Facilities, and Transit in Harwich

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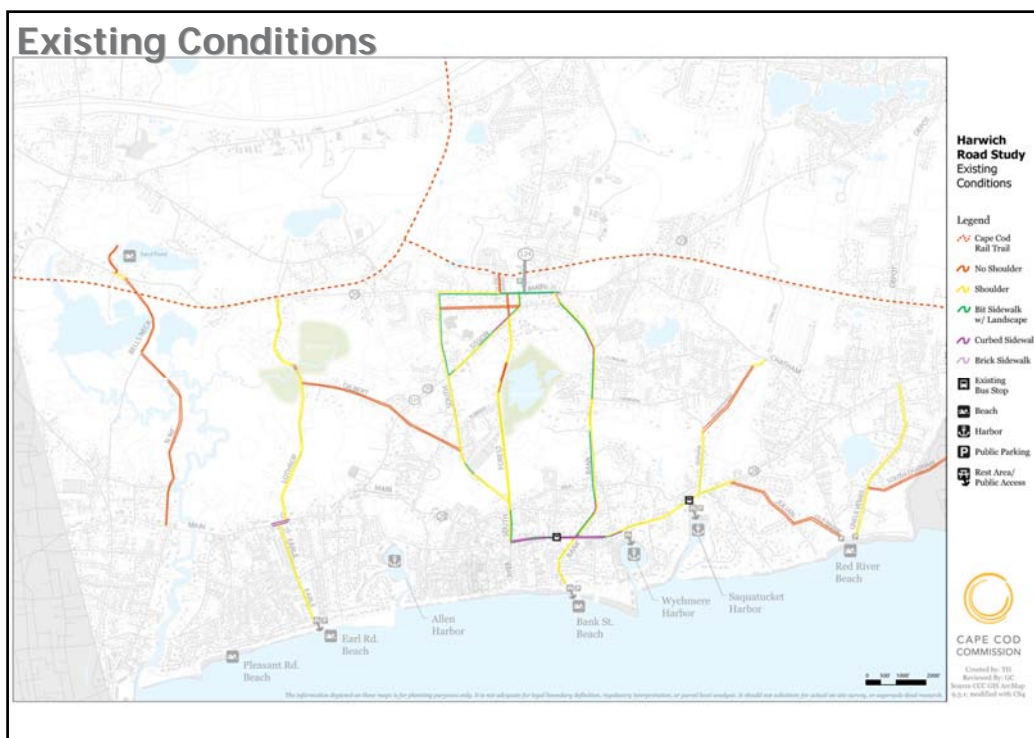
Presentation Overview

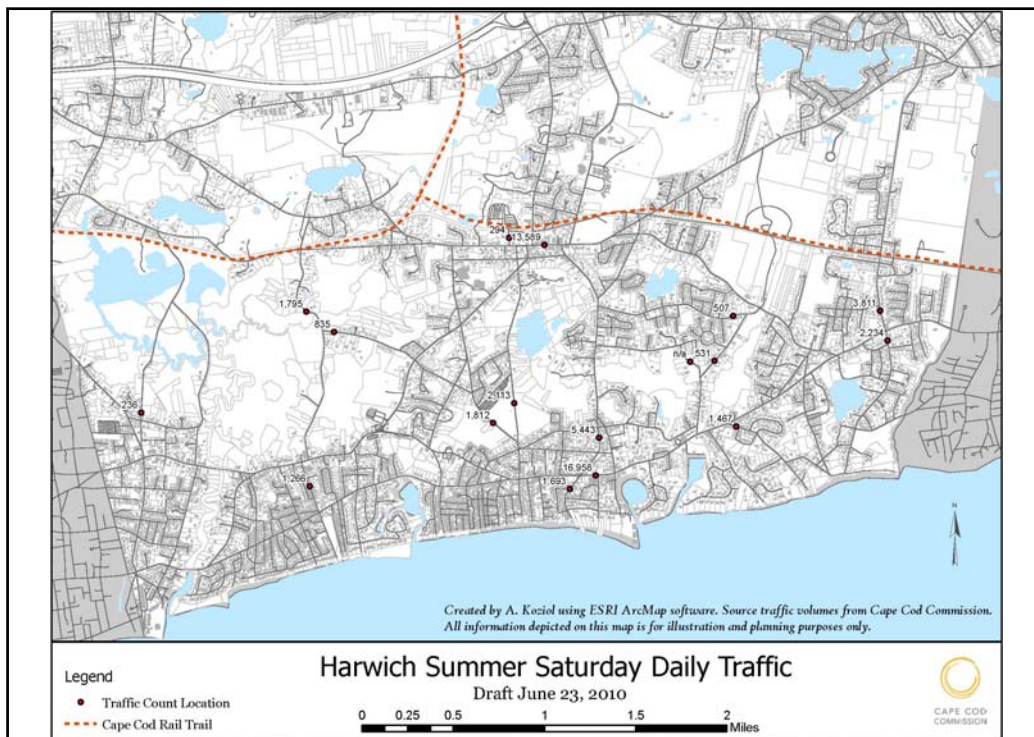
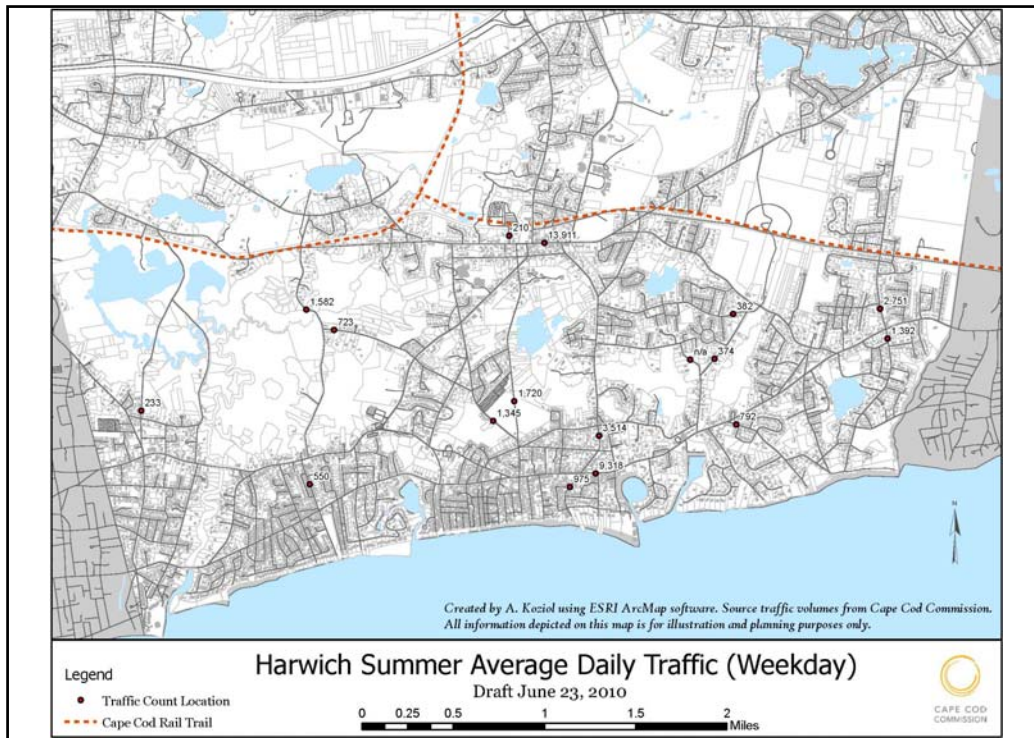


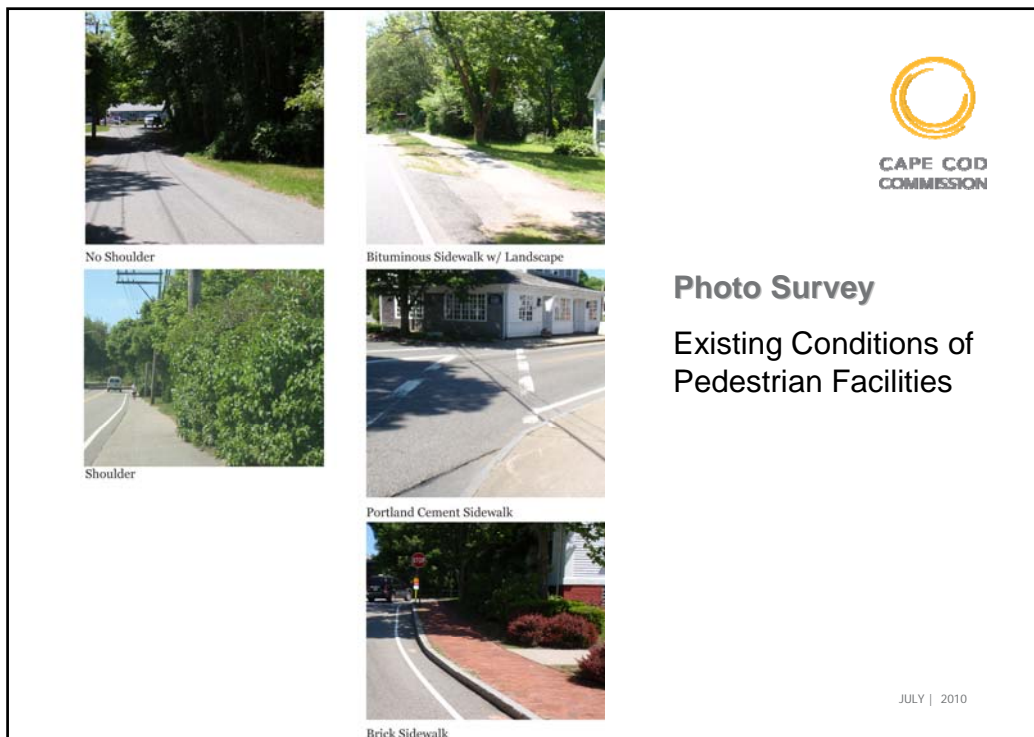
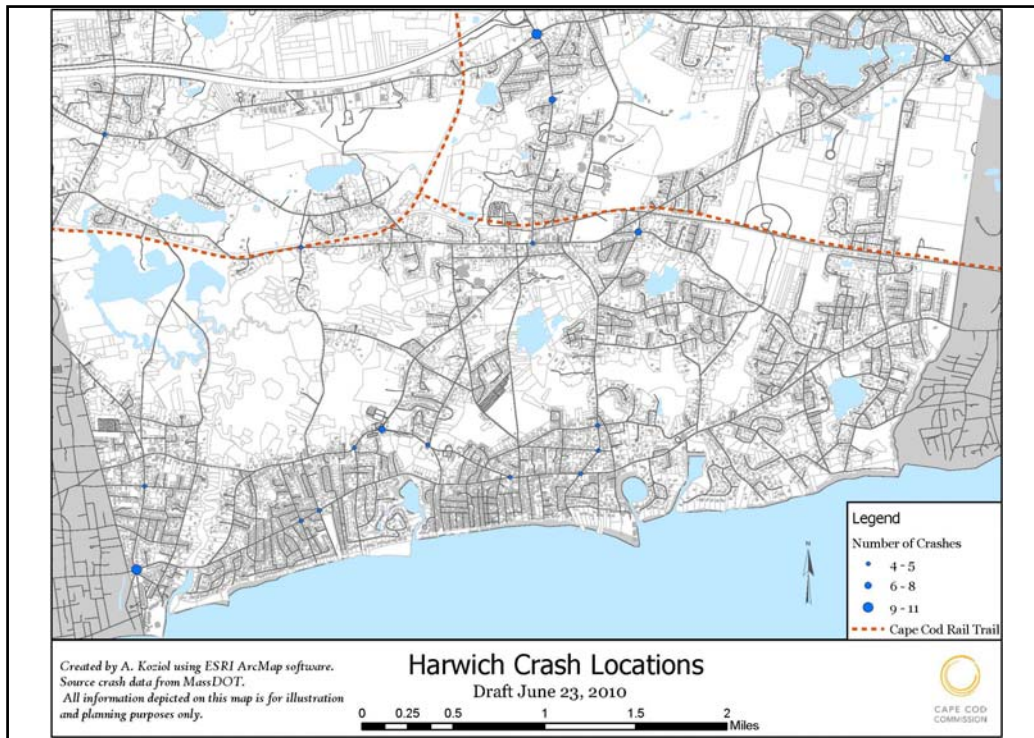
- Existing Conditions/Problem I.D.
- Goals/Vision
- Strategies for Bicycling & Pedestrian
- Strategies for Transit
- "Suggestions"

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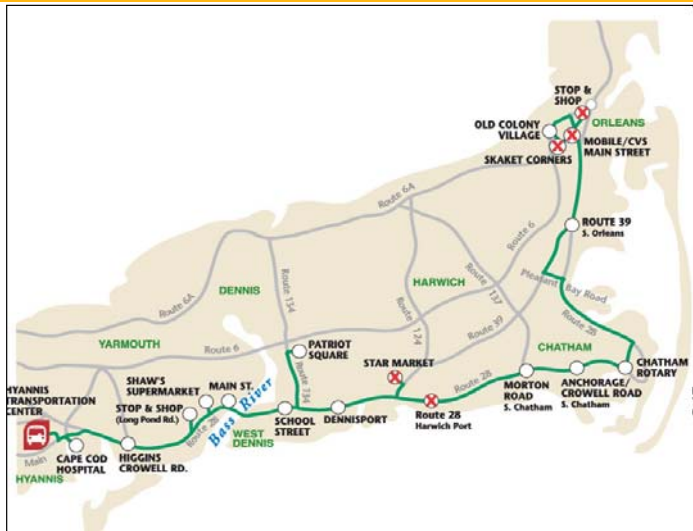
Existing Conditions & Problem Identification







Cape Cod RTA's "Hyannis-Orleans" Service

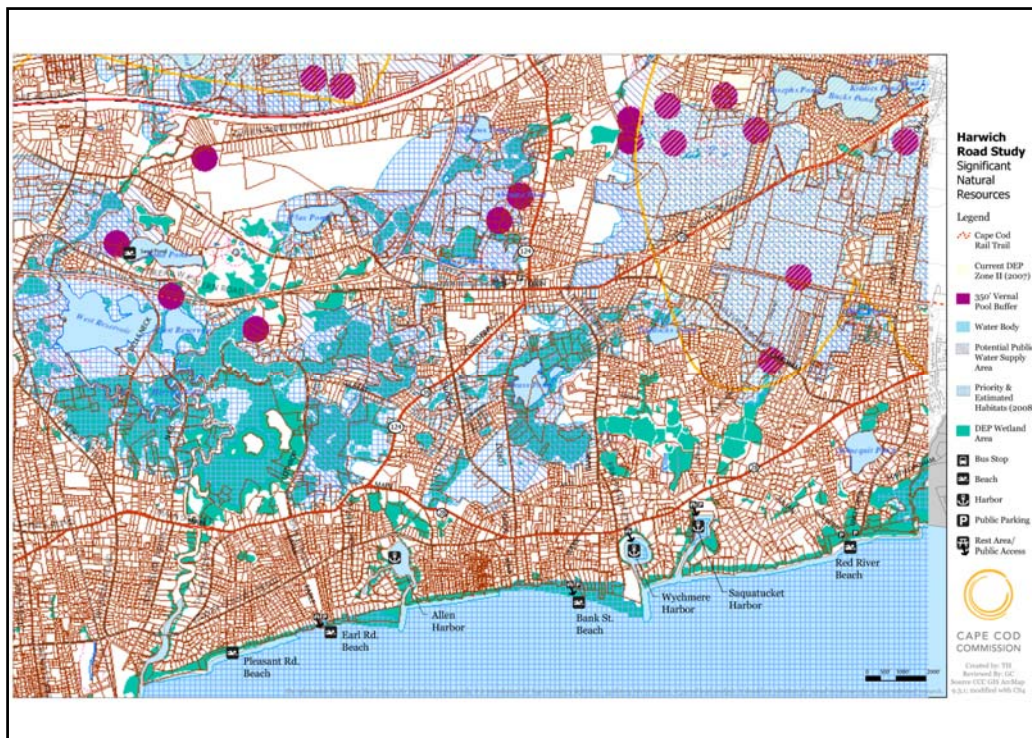


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Cape Cod RTA's "Flex" Bus Service



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Goals/Vision



- Identify safe and effective pedestrian and bicycle access between the Rail Trail, Route 28, Harwich Center and Harwich Port and between Wychmere and Saquatucket Harbors and Harwichport along Route 28.
- Identify the potential for shuttle bus service between Wychmere and Saquatucket Harbors.
- Coordinate with the Regional Transportation Plan/Cape Cod Bike Plan.
- Commission staff will work with the Town of Harwich to integrate these bicycle/pedestrian efforts into the current update of the RTP.

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Suggested Alternatives

Strategies for Bike Ped

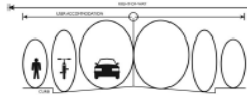


Multi-Use Path | Sidewalk | Shoulder | Share the Road

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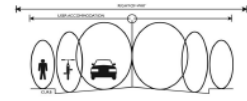
MassHighway Design Manual

Case 1: Separate Accommodation for All Users



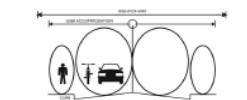
- Often the preferred option to provide safe, convenient, and comfortable travel for all users.
- Appropriate for areas with moderate to high levels of pedestrian and bicycle activity.
- Appropriate for roadways with moderate to high motor vehicle speeds.
- Appropriate in areas without substantial environmental or right-of-way constraints.

Case 2: Partial Sharing for Bicycles and Motor Vehicles



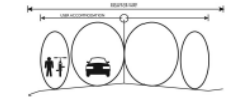
- Used in areas where the width necessary to provide Case 1 accommodation is not available.
- Under Case 2, pedestrians are provided with a sidewalk or separate path while space for bicyclists and drivers overlap somewhat.
- Appropriate in areas with low motor vehicle speeds and low to moderate motor vehicle volumes.

Case 3: Shared Bicycle/Motor Vehicle Accommodation



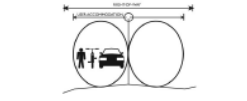
- Under Case 3, pedestrians remain separate but bicycle and motor vehicle space is shared.
- Used in densely developed areas where right-of-way is constrained.
- Also applicable to most residential/local streets where speeds and traffic volumes are low.

Case 4: Shared Bicycle/Pedestrian Accommodation



- Under Case 4, pedestrians and bicyclists share the shoulder.
- Common in rural or sparsely developed areas.
- Appropriate for areas with infrequent pedestrian and bicycle use.

Case 5: Shared Accommodation for All Users



- Under Case 5, all users share the roadway.
- Appropriate where user demands and motor vehicle speeds are very low or when severe constraints limit the feasibility of providing separate accommodation.

Source: MassHighway

2008 EDITION



Exhibit 5-12
Widths of Usable Shoulders (In Feet)

Area Type	Roadway Type			Local Roads
	Freeways ¹	Arterials ²	Collectors ²	
Rural Natural	10 to 12	4 to 12	4 to 10	2 to 8
Rural Developed	10 to 12	4 to 12	4 to 10	2 to 8
Rural Village	N/A	4 to 12	4 to 10	2 to 8
Suburban Low Density	10 to 12	4 to 12	4 to 10	2 to 8
Suburban High Density	10 to 12	4 to 12	4 to 10	2 to 8
Suburban Village/Town Center	N/A	4 to 12	4 to 10	2 to 8
Urban	10 to 12	4 to 12	4 to 10	2 to 8

Source: *Flexibility in Highway Design*, AASHTO 2004, Chapter 6 Cross Section Elements

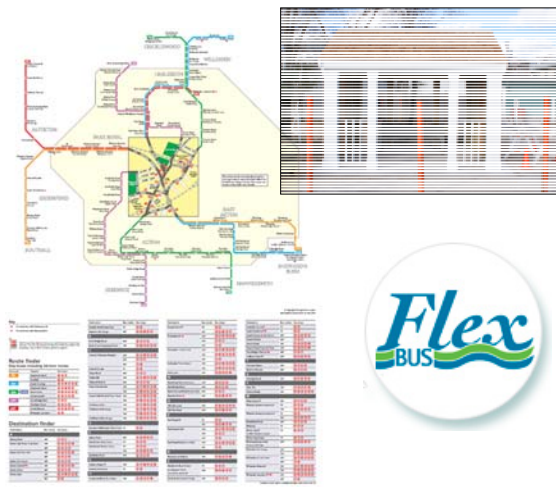
¹ Left shoulders are required on Freeways and other divided roadways. See the AASHTO Green Book for left-shoulder guidance.

² Shoulder widths less than the values shown above may be used if a design exception is obtained. See Chapter 2 for a description of the design exception procedure. Situations where narrower shoulders may be considered are described below.

Note: An additional 2-foot offset from the edge of the shoulder is required to vertical elements over 6-inches in height (such as guardrail).

Minimum 4-foot shoulders are recommended for all arterials and collectors because of the value they provide for bicycle and pedestrian (particularly in rural areas) accommodation, and motor vehicle safety. If a design exception is obtained, shoulders narrower than 4 feet may be used in constrained areas where separate pedestrian accommodation is provided and shared bicycle/motor vehicle accommodation is suitable.

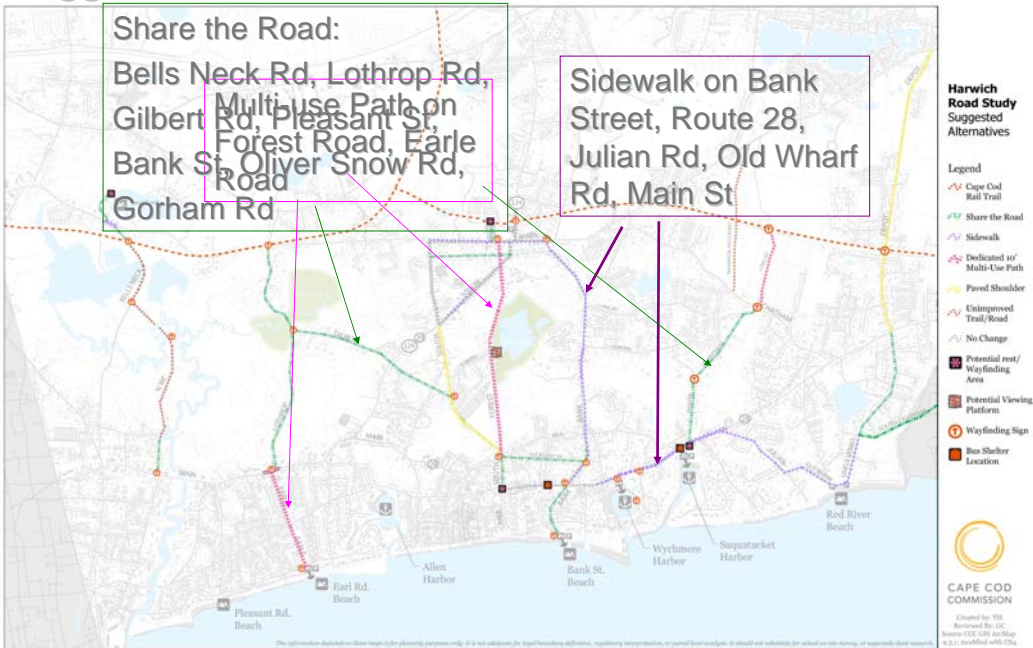
Strategies for Transit



- Amenities (benches, shelter)
- Service (frequency and routing)
- Information/ Education/Marketing

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Suggested Alternatives: Local Routes



Potential Improvements: Potential Rest/Wayfinding Area



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Potential Rest/
Wayfinding Area

Island Pond at the Cape Cod Rail Trail



- Rest Area adjacent to Rail Trail
- Wayfinding Kiosk with Maps and Directional Signage
- Pedestrian Amenities (Bench, Trash, Bike Racks)
- Identify Walking paths on Kiosk maps
 - North Street from Bells Neck to Route 28
 - Thompson's Field from Route 39 to Chatham Road

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Potential Improvements: Potential Viewing Platform



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Potential Viewing
Platform

Forest Street at Grassy Pond Bird
Sanctuary



- Low Impact Development
- Areas for Demonstration Native Plant Gardens
- Interpretive Signage

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Potential Improvements: Wayfinding Sign



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Wayfinding Sign
throughout the Area



- Small scale or focal point

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Potential Improvements: Bus Shelters



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- At selected locations along Route 28:
 - Information Center
 - Harbors

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Potential Improvements



Designated routes:

- To be shown on maps installed in kiosks with on-road signage.
- Each route should be signed appropriately in each direction (e.g., using smaller bike route signs).
- Routes are defined by end points and paths along roadways and a listed here from west to east.

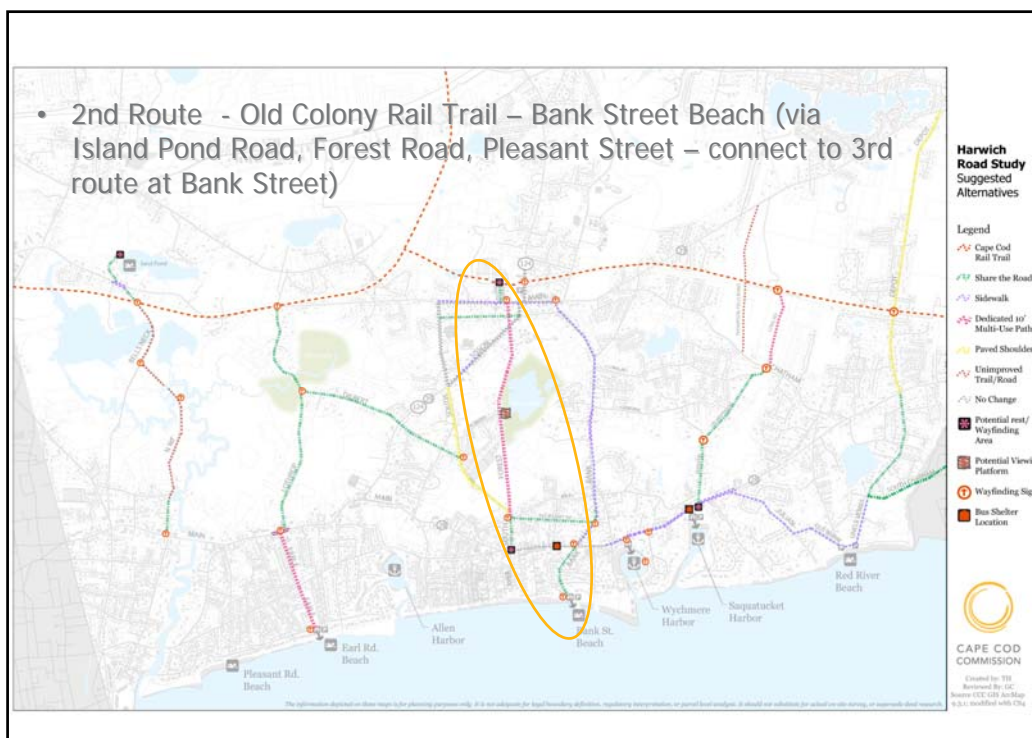
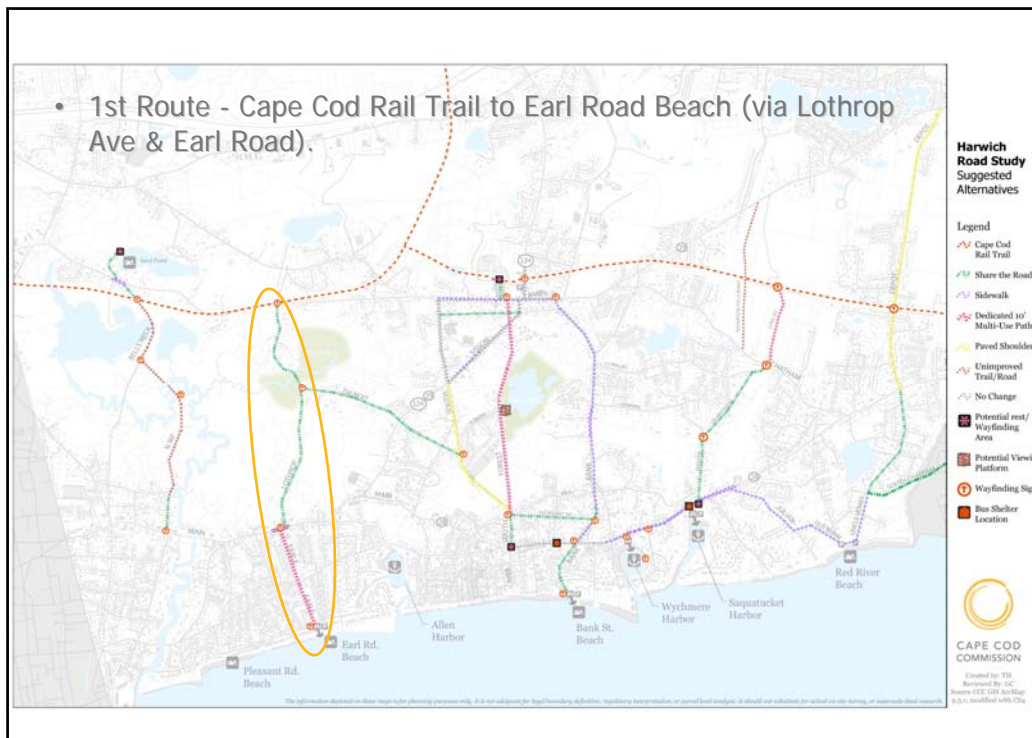
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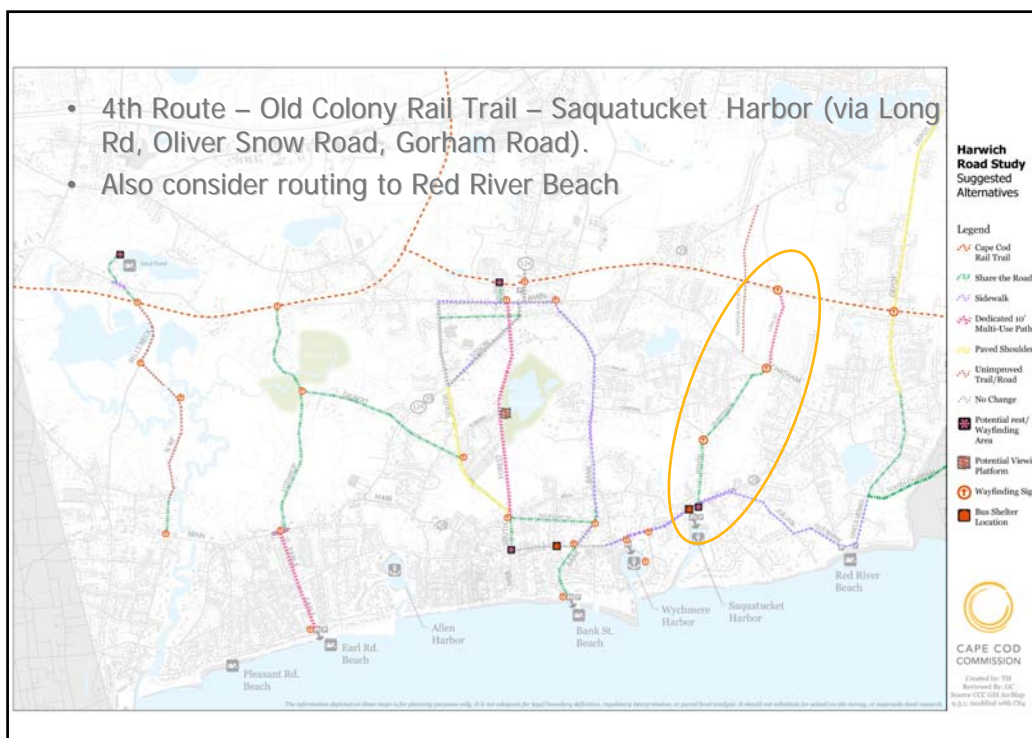
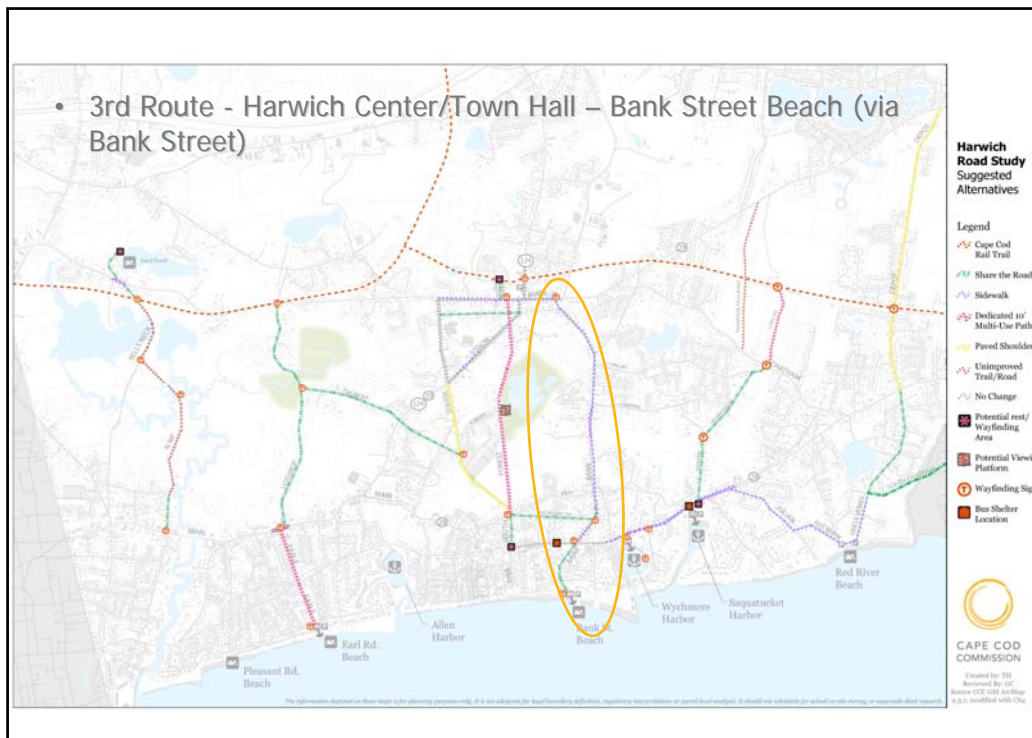
Potential Improvements



- 1st Route - Cape Cod Rail Trail to Earl Road Beach (via Lothrop Ave & Earl Road).
- 2nd Route - Old Colony Rail Trail – Bank Street Beach (via Island Pond Road, Forest Road, Pleasant Street – connect to 3rd route at Bank Street)
- 3rd Route - Harwich Center/Town Hall – Bank Street Beach (via Bank Street)
- 4th Route – Old Colony Rail Trail – Saquatucket Harbor (via Long Rd, Oliver Snow Road, Gorham Road).
- Also consider routing to Red River Beach

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For Information or Input...



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Transportation Dept. Website:**

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