MINUTES
SELECTMEN'S MEETING
GRIFFIN ROOM, TOWN HALL
THURSDAY, JANUARY 23, 2014
8:30 A.M.

APPROVED

SELECTMEN PRESENT: Ballantine, Cebula (by remote participation), Hughes, LaMantia, McManus

OTHERS PRESENT: Town Administrator Christopher Clark, and others.

MEETING CALLED TO ORDER at 8:30 a.m. by Chairman LaMantia.

CONSENT AGENDA

A. Vote to approve the award of Contract for the Allen Harbor Bulkhead to Robert B. Our Co., Inc. in the amount of $349,790

Mr. Hughes moved to approve the award of Contract for the Allen Harbor Bulkhead to Robert B. Our Co., Inc. in the amount of $349,790. Mr. McManus seconded the motion and the motion carried by a unanimous vote.

OLD BUSINESS

A. Vote to approve the recommendation of the Board of Assessors to include age 60 (instead of 65) taxpayers in the Senior Work-off Program

Mr. McManus moved to approve the recommendation of the Board of Assessors to set the age at 60 for the Senior Work Off Program. Mr. Ballantine seconded the motion. Ms. Cebula requested that in a year they get a report on how many people got into the program, how many didn't get in and for what reason. The motion carried by a unanimous vote.

NEW BUSINESS

A. Draft letter to the Department of Transportation regarding the Route 124 project – *discussion/vote to sign*

Mr. McManus moved to send the letter to the Department of Transportation as proposed. Mr. Ballantine seconded the motion. Mr. Hughes pointed out that the technical memorandum needed to be updated by VHB. He also stated that the line of sight needed to be defined. The Board heard comments from Anne Stewart. The motion carried by a unanimous vote.

ADJOURNMENT

Mr. Ballantine moved to adjourn at 8:42 a.m. Mr. Hughes seconded the motion and the motion carried by a unanimous vote.

Respectfully submitted,

Ann Steidel
Recording Secretary

2.2 Step II: Planning

In this phase, the proponent identifies issues, impacts, and potential approvals required so that subsequent design and permitting processes are understood. Project planning also helps to define project responsibilities and benefits through a simultaneous public outreach process to obtain input and feedback on planning and design considerations. Providing public outreach opportunities throughout the entire project development process makes project success more likely.

The Project Need Form and its review will outline the scope of issues to be considered in the planning phase. The level of planning needed will vary widely based on the complexity of the project (from streamlined to more involved and complex). A more involved alternatives analysis is integrated as part of the planning process for all new facilities. It is also required for improvement or expansion projects where the feasibility of achieving the desired enhancements with acceptable impacts and reasonable investment is unclear at the outset. During the review of the Project Need Form, the necessary level of effort and responsibilities for planning will be determined. Typical planning requirements for different project types are illustrated in Exhibit 2-3.

2.2.1 Project Planning Report

Projects that require further planning will result in the preparation of a Project Planning Report. Many traditional planning studies such as corridor studies, functional design reports, and location studies can serve as a project planning report if done in a fashion that is consistent with the principles of this Guidebook and completed with public participation.

A generalized outline for the basic project planning process is provided in Exhibit 2-4. It is expected that this outline will be tailored for each project. The process described is not intended to be overly prescriptive or burdensome. Rather, the project proponent is encouraged to tailor planning activities appropriate to the extent, complexity, and type of project to ensure that all project benefits, impacts, and costs are objectively estimated. As part of this process, the proponent must also conduct a public participation program, provide information regarding the project's consistency with state and regional policies, and decide, based on all the information gathered in the planning process as well as public input, whether to continue the project development process and submit a Project Initiation Form (PIF) under Step III. Regular check-in meetings with the MassHighway District Office are helpful though this process.

Planning | Transportation | Land Development | Environmental

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Memorandum

To: Harwich Board of Selectmen
Lincoln Hooper, DPW Director

Date: December 20, 2013

Project No.: 12215.00

From: Stephen Rhoads, P.E. Project Engineer
Joseph Magni, P.E. Project Manager

Re: Harwich: Pleasant Lake Avenue (Route 124)
Design Memorandum

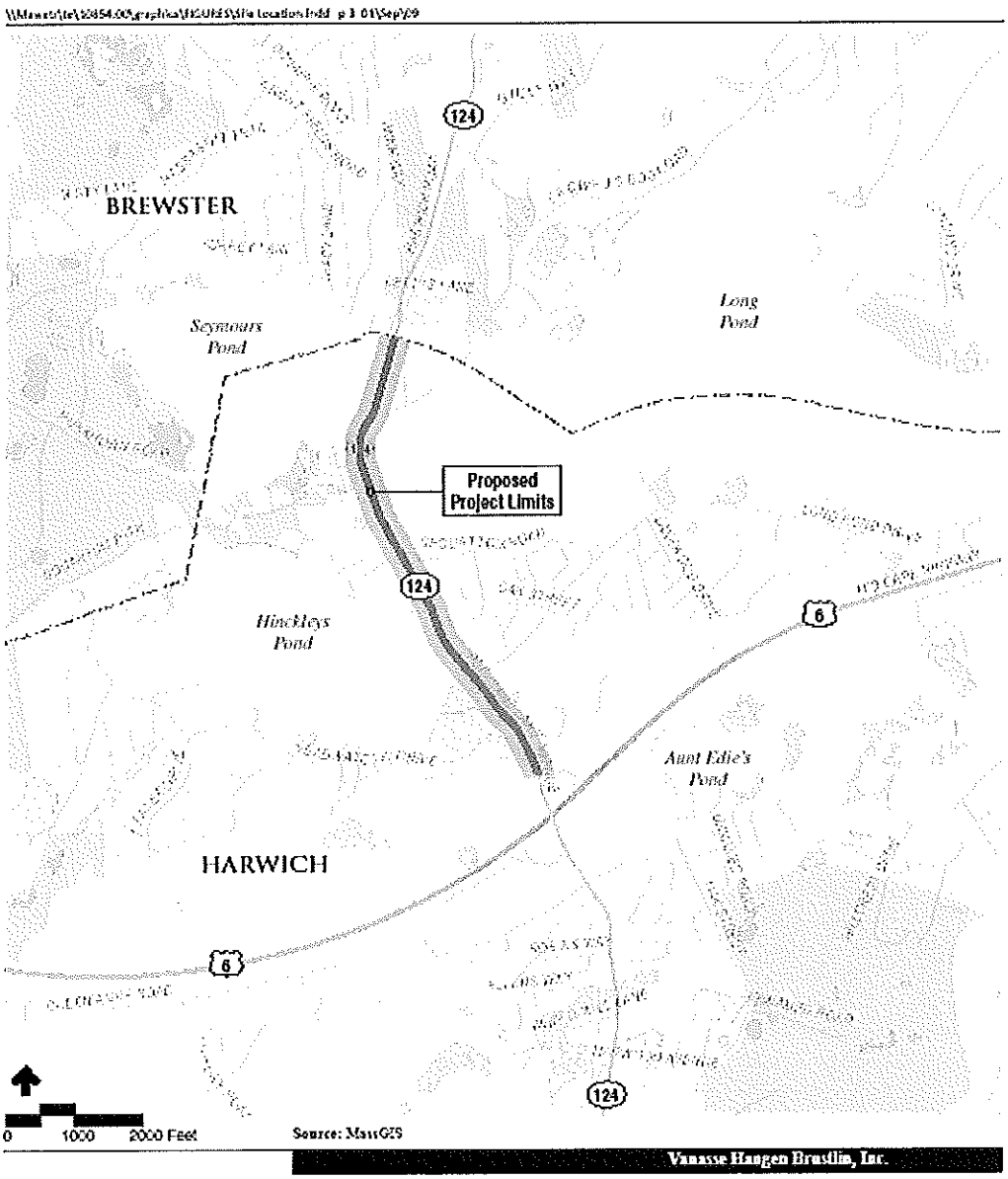
INTRODUCTION

The Town of Harwich, acting through its Division of Highways and Maintenance, is planning the construction of transportation and safety improvements to a 1.4 mile section of Pleasant Lake Avenue (Route 124) located in the northern region of their community (see Figure 1). This corridor is classified by the Cape Cod Commission as an Urban Principal Arterial. It supports between 5,000 and 6,000 vehicles each day providing local connectivity to the Cape Cod Regional Technical High School, residential communities surrounding Hinckleys Pond, Seymour Pond, Black Pond, and Long Pond, the Pleasant Lake General Store, and several commercial cranberry farms. It also provides regional connectivity to the Mid-Cape Highway (State Highway Route 6), Main Street-Brewster (State Highway Route 6A), Main Street-Harwich (State Highway Route 28), the Cape Cod Rail Trail, and recreational areas and beaches on the north and south coast of Cape Cod. Recognizing the importance of this corridor, Town officials petitioned the Commonwealth of Massachusetts Department of Transportation (MassDOT), through the Transportation Improvement Program, to fund badly needed safety and transportation improvements throughout the project area from the Mid-Cape Highway to the Brewster/Harwich Town Line. The deficiencies that must be addressed include the following:

- Poor motorist sight distance
- An ancient road pavement at the end of its serviceable life
- No roadway shoulders needed for vehicle recovery and bicycle accommodation
- Pedestrian connections between the Mid-Cape and the Cape Cod Rail Trail
- Frequent roadway flooding.

The characteristics listed above result in hazardous road conditions for motorists, cyclists and pedestrians and a constant maintenance headache for the Town's Division of Highways and Maintenance.

Recognizing the roadway deficiencies, MassDOT approved a large scale Transportation Improvement Program (TIP) project and encumbered $3,569,280.00 of the region's TIP allocation for fiscal year 2015 to construct the required safety and transportation improvements.



Site Location Map

Figure 1

Harwich, Massachusetts

The Harwich Highways and Maintenance Department, in collaboration with the Board of Selectmen, have conducted an outreach program at the Board of Selectmen's meetings that included public presentations on April 10, 2010, August 6, 2012, and September 24, 2012 to present the corridor deficiencies, recommended improvements, program costs, and the project schedule. During each of these events, community leaders, town residents, and the neighborhood demonstrated full support and consensus for implementation of transportation and safety improvements throughout the limits of the project. The ultimate goals include adding efficiency, accessibility and safety to this corridor while preserving the aesthetic qualities maintained by the surrounding property abutters.

At the onset of conceptual design, the Town sponsored three (3) Public Informational Meetings to initiate the Design Phase Public Outreach Program. The date and location of these meetings were as follows:

1. Outreach Meeting #1: July 18, 2013. Meeting held at the Harwich Community Center.
2. Outreach Meeting #2: October 16, 2013. Meeting held at the Harwich High School.
3. Outreach Meeting #3: November 18, 2013 at the Board of Selectmen's meeting held at the Harwich Community Center.

The audience at each of these meetings included a coalition of project abutters that desire no transportation or safety improvements. They do, however, support construction of a maintenance project structured to repair the pavement and improve drainage at specific locations to alleviate localized flooding. In general, this coalition opposed the widening because they have concerns about the impacts to their property and degradation to the 'country' style look of the corridor.

The original design recommended in the Project Initiation Form included an 11' lane in each direction, 5' bike lanes and a sidewalk from Route 6 to the Cape Cod Rail Trail. This typical section provides for bicycle and pedestrian connectivity throughout the southerly section of the project. Where Pleasant Lake Avenue (Route 124) parallels the existing path of the Cape Cod Rail Trail, from the southerly crossing of the Rail Trail to the Brewster Town Line, this original design included 11' lanes and 4' shoulders. The reduction of the width of the shoulder and the elimination of the sidewalk in this section are possible because the existing rail trail accommodates pedestrian and bicyclists. (See Figure 2 and Figure 3 for Typical Sections)

Recognizing public objections to the cross sectional elements, Lou Rabito, Mass DOT Complete Streets Engineer, conducted a cursory review of the project locus in conjunction with the typical roadway cross-sections proposed for this project. Based on this review, he suggested that the addition of the 4-foot wide shoulders on both sides of the road, from the Rail Trail to the Brewster Town Line, may not be required because existence of the adjacent bike path satisfies bicycle and pedestrian accommodation. He argues that the character of the roadway may be significantly impacted with the introduction of the widened shoulder. He would be in favor of a proposed cross section that included 11' lanes and 2' shoulder from the Rail Trail to the Brewster Town Line including profile improvements to allow for improved roadway drainage.

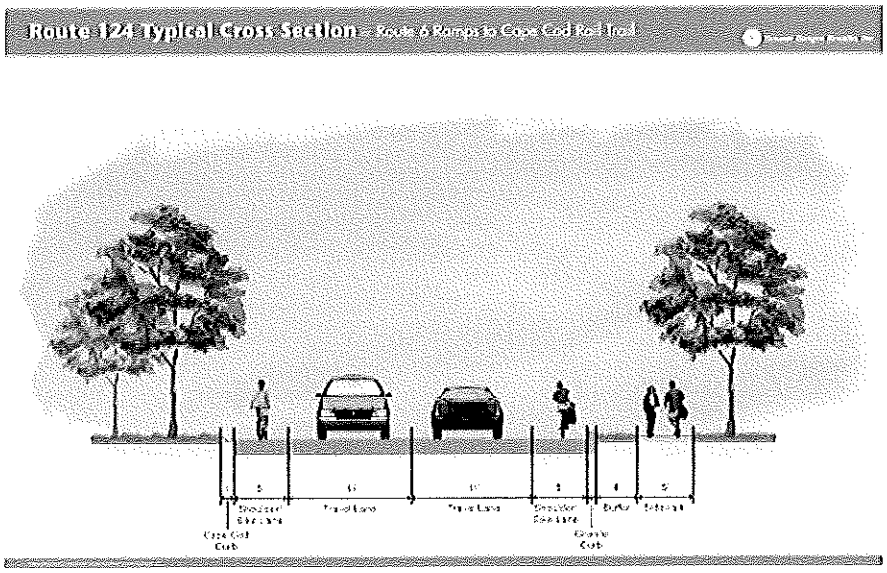


Figure 2: Typical Section-Route 6 to the Cape Cod Rail Trail

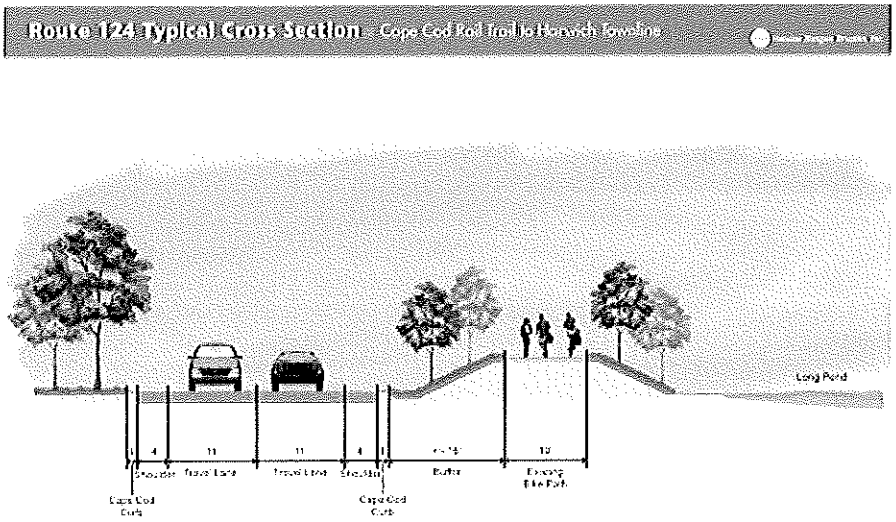


Figure 3: Typical Section- Cape Cod Rail Trail to the Brewster Town Line

Additionally, the abutters residing along the southerly section have requested that the Town consider the elimination of the sidewalk and a reduction of the shoulder to a 4' width from Route 6 to the Cape Cod Rail Trail. These abutters cite Case 4: Shared Bicycle/Pedestrian Accommodation in Sub-Section 5.2.4 of the MassDOT Project Development Guide as justification for the utilization of this typical section south of the Cape Cod Rail Trail.

The Board of Selectmen and the Director of the Department of Public Works have discussed these options with representatives of MassDOT District 5 Project Development Engineering Section to determine if the reduction of the cross sectional elements could be considered by MassDOT. District 5 representatives requested that the Town produce a technical memorandum outlining the details of the request. The memorandum is to include an engineering analysis of the impacts of the revised typical section on safety, operations and drainage.

This technical memorandum has been prepared to accompany the Town's request to the MassDOT District 5 Project Development Engineers to consider the cross sectional modifications.

PROJECT LOCATION AND LIMITS

The project extends along Pleasant Lake Avenue (Route 124) from the Mid-Cape State Highway (Route6) to the Brewster/Harwich Town line, a distance of approximately 7000 linear feet (1.3 miles) as shown on the Locus Map.

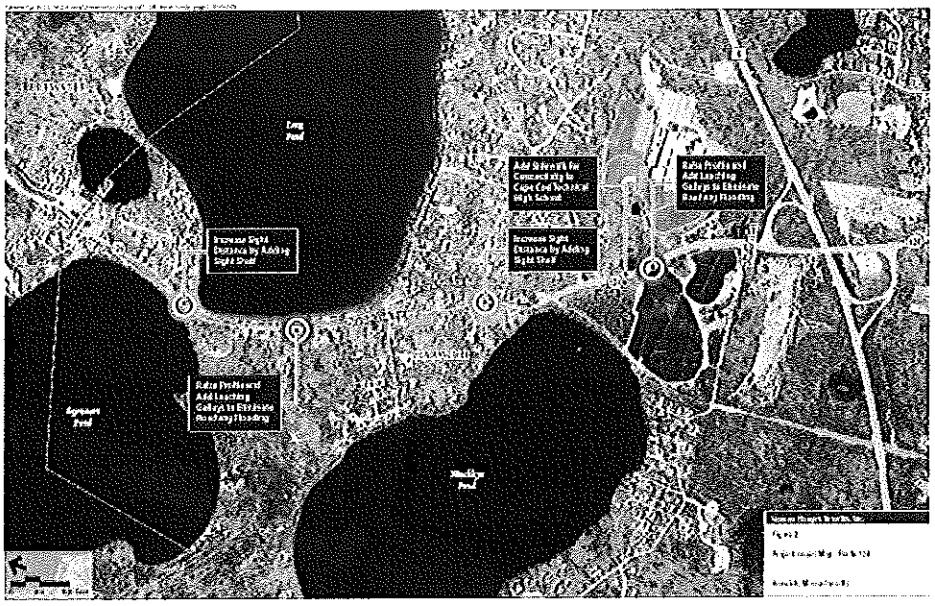


Figure 4: Locus Map

EXISTING CONDITIONS

The existing conditions within the project limits are summarized as follows:

Project Length	Pleasant Lake Avenue (Route 124)
Posted Speed	45 mph (Route 6 to Long Pond Drive) 35 mph (Long Pond Drive to the Brewster TL)
Design Speed	40 mph & 50 mph (see Exhibit 3-7 PDDG)
Motor Vehicle ADT (2012)	5,954 vpd (Cape Cod Commission)
Motor Vehicle ADT (2022)*	6,577 vpd
Truck Percentage	0.8%
Jurisdiction	Local (Town of Harwich)
Bicyclist ADT (2009) **	613 bicycles per day (Cape Cod Commission)
Skaters ADT (2009) **	7 Skaters per day (Cape Cod Commission)
Walkers ADT (2009) **	30 Walkers per day (Cape Cod Commission)
Joggers ADT (2009) **	1 Jogger per day (Cape Cod Commission)
Existing Travel Lane Width	10' – 11' and varies
Number of Lanes	2 (1 in each direction)
Existing Usable Shoulder Width	None

*ADT increased by 1.0% growth per year

**Data from Cape Cod Commission at the Cape Cod Rail Trail (northerly crossing of Route 124 in Harwich)

Pleasant Lake Avenue (Route 124)

Pleasant Lake Avenue (Route 124), within the project limits, runs north-south beginning at the Mid-Cape (State Highway Route 6) and extending 7,400 feet to the Harwich/Brewster Town line. Pleasant Lake Avenue (Route 124), consists the following pavement width(s)

- 42' width: Sta. 11+92 to Sta. 17+00 (20' lanes and 1' shoulder)
- 42'to 22' width: Sta. 17+00 to Sta. 20+00 (lanes and shoulder widths varies)
- 22'+/- width: Sta. 20+00 to Sta. 85+25 (11' lanes; no discernible shoulders)

There are no sidewalks contiguous with Pleasant Lake Avenue (Route 124); however, a section of the Cape Cod Rail Trail meanders in an alignment that is adjacent to Pleasant Lake Avenue (Route 124) from Station 32+00 to Station 85+25. The Cape Cod Rail Trail is 10' wide and crosses Pleasant Lake Avenue (Route 124) at Station 32+00 and Station 71+30.

wetlands. A Notice of Intent (NOI) will be filed with the Harwich Conservation Commission to solicit an Order of Conditions for the construction of this project.

CULTURAL RESOURCES

There are 18 properties within the study area that are included in the Massachusetts Historical Commission's (MHC) *Inventory of Historic and Archaeological Assets of the Commonwealth*, which contain a total of 25 inventoried buildings or structures. None of the buildings have been listed in the National or State Register of Historic Places, either individually or in a district.

All of the inventoried buildings are included in the Pleasant Lake Area (HRW.G), which was surveyed in 1993. This village developed later than others in Harwich, but began to see growth with the increasing popularity of the cranberry industry during the mid-19th century. Thus the houses are primarily one- and two-story dwellings constructed c. 1850 to c. 1930, with examples of architectural styles that became popular over the course of time, including the Greek Revival, Queen Anne, and Colonial Revival styles. Several of the properties include outbuildings and barns that were inventoried as well as the main house, and among the inventoried buildings is the Pleasant Lake General Store (403 Pleasant Avenue), which has been serving the area since the late 19th century.

At the time that the survey was completed in 1993, a portion of the Pleasant Lake Area (HRW.G) was recommended by the Harwich Historical Commission as an eligible National Register district under Criteria A and C, for its significance in the development of the local cranberry industry and the variety of construction periods and stylistic details reflected in the area's architecture (377-532 Pleasant Lake Avenue). In addition, the local Commission recommended that some of the more well-preserved properties were individually eligible as well (377 Pleasant Lake Avenue; 456 Pleasant Lake Avenue; 504 Pleasant Lake Avenue; 532 Pleasant Lake Avenue). However, these recommendations were not accompanied by an MHC eligibility opinion, and it does not appear that the MHC has evaluated the eligibility of the Pleasant Lake Area or the properties within it. At the present time, there are no known properties in the study area that the MHC has evaluated as eligible for the National or State Register.

PROPOSED IMPROVEMENTS

Pleasant Lake Avenue (Route 124)

As previously described in the Introduction Section of this Memorandum, the Town of Harwich is planning transportation and safety improvements to a 1.4 miles section of Pleasant Lake Avenue (Route 124) beginning at State Highway Route 6 and extending to the Brewster/Harwich Town Line. The original project request form (Project Initiation Form) included the following typical sections:

Original Transportation Improvement Program

- Route 6 to the Cape Cod Rail Trail: 11' lane in each direction, 5' bike lanes and a 5'6" sidewalk providing bicycle and pedestrian connectivity throughout the southerly section of the project.
- Cape Cod Rail Trail to the Brewster Town Line: 11' lanes in each direction and 4'shoulders. The reduction of the width of the shoulder and the elimination of the sidewalk in this section are possible because the existing rail trail accommodates pedestrian and bicyclists.

Revised Transportation Improvement Program

- Route 6 to the Cape Cod Rail Trail: 11' lane in each direction, 4' shoulders for shared bicycle and pedestrian accommodation
- Cape Cod Rail Trail to the Brewster Town Line: 11' lanes in each direction and 2'shoulders; in conjunction with the desires of the residents and based on recommendations made from the MassDOT Complete Streets Engineer.

DISCUSSION OF DESIGN STANDARDS

Recognizing that the cross sectional elements described have not yet been formally considered by the MassDOT District 5 Project Development Engineers, MassDOT representatives have agreed to conduct a cursory review of the acceptability of the details based on a presentation of a preliminary study of impacts rather than as the result of in depth study usually performed as part of the development of a formal 25% design. The objective is to avoid the need for the town to fund the cost of a revised 25% design should the Revised Transportation Improvement Program not be supported by MassDOT.

This memorandum has been prepared to request that MassDOT consider the Town's desire to reduce the width of typical section elements to dimensions to those described above in the Revised Transportation Improvement Program.

MassDOT design criteria will serve as the basis of design for the proposed roadway cross sectional elements. When applying the standards to Pleasant Lake Avenue (Route 124) for an urban principal arterial, a minimum lane width of 12'-0" and a minimum width of shoulder of 8'-0" are

required. Given the physical constraints located along the corridor MassDOT, as part of their review of the Project Initiation Form, has acknowledged a willingness to accept the project with a 4'-0" shoulder. Since the approval letter was issued by MassDOT; however, new guidelines have been issued on July 12, 2012 by the Federal Highway Administration (related to MAP 21- Moving Ahead for Progress in the 21st Century) that directly affects the Pleasant Lake Avenue (Route 124) project. As such, a Design Exception will be required to request the use of a reduced lane and shoulder width.

CONTROLLING CRITERIA

A preliminary consideration for reduced lane and shoulder widths is being requested for Pleasant Lake Avenue (Route 124). The new guidelines related to the July 12, 2012 Federal Highway Administration requirements related to MAP 21 (Moving Ahead for Progress in the 21st Century) and accepted by MassDOT are as follows:

MassDOT's Recommended Roadway Section

Travel Lane Width:	12.0 feet
Outside Shoulder Width:	8.0 feet

The Town requests consideration of the use of the following cross sectional element widths:

Town Requested Roadway Section - Route 6 to the Cape Cod Rail Trail

Travel lane Width:	11.0 feet
Shoulder Width:	4.0 feet (Shared pedestrian and bicycle accommodation)

Town Requested Roadway Section - Cape Cod Rail Trail to the Brewster/Harwich Town Line

Travel lane Width:	11.0 feet
Shoulder Width:	2.0 feet (pedestrian and bikes to use the Cape Cod Rail Trail)

**ANALYSIS OF TOWN REQUESTED ROADWAY SECTION –
PRELIMINARY EVALUATION OF CONTROLLING CRITERIA**

The analysis of the Town requested roadway section, detailed in the above section, will include a comparison of the effects on the safety and operations of the roadway between the narrower roadway section and the original TIP program roadway section. This shall include a review of sight distance, multi-modal accommodations, and drainage design.

Sight distance is determined from both the horizontal and vertical geometry of the roadway. Stopping sight distance is a critical component of sight distance and is determined by design speed, radius and proposed roadway grade. The sight distance at every point along the roadway should be at a minimum equal to the stopping sight distance. This will allow a motorist traveling at the design speed to stop before reaching a stationary object in the roadway.

The following tables show whether there is any impact on stopping site distance resulting from a narrower roadway shoulder:

Original TIP Program (5' shoulder) to Town Requested Roadway Section (4' shoulder) – Route 6 to Cape Cod Rail Trail

		Stopping Sight Distance Affected by Narrowing Shoulder?	
Curve Station Range	Curve Radius	**YES**	**NO**
11+93.46 – 19+33.18	1,200		X
21+41.97 – 25+11.15	930 FT		X
28+34.86 – 30+72.80	930 FT		X

2' Row Add to Column

Original TIP Program (4' shoulder) to Town Requested Roadway Section (2' shoulder) – Cape Cod Rail Trail to Brewster/Harwich Town Line

		Stopping Sight Distance Affected by Narrowing Shoulder?	
Curve Station Range	Curve Radius	**YES**	**NO**
33+24.42 – 36+89.80	485 FT		X
37+17.38 – 39+70.43	485 FT		X
41+40.30 – 44+27.11	2,500 FT		X
48+29.26 – 49+60.47	1,500 FT		X
54+68.81 – 58+18.64	2,000 FT		X
60+55.82 – 64+27.64	2,200 FT		X
67+06.04 – 71+23.62	595 FT		X
73+37.03 – 78+99.03	1,250 FT		X
81+28.95 – 83+79.47	1,100 FT		X

The Town requested roadway section between Route 6 and the Cape Cod Rail Trail eliminates a 5'6" sidewalk from the original TIP program roadway section. The elimination of a sidewalk results in pedestrian and bicyclist accommodations both taking place in the roadway shoulder. This is referred to as Case 4 under sub-section 5.2.4 of the MassDOT Project Development Guide. In this section Case 4 is generally applicable to sparsely developed areas such as rural and suburban low density areas. Case 4 does not appear to be a strong match for Route 124 which is classified as an urban principal arterial. The high speeds along this section of roadway (speed limit 45 mph) introduce a safety issue in locating pedestrians in the roadway shoulder. Additionally, while the 1' reduction in shoulder does not affect site distance, it does introduce more crowding and therefore potential conflicts between bicyclists and pedestrians.

The preliminary layout of catch basins in the proposed stormwater drainage system has followed general guidelines found in sub-section 8.4.4 of the MassDOT Project Development Guide in order to meet a tolerable amount of spread, or ponding within the gutter, over the limits of the project.

Under the proposed roadway section a lesser amount of shoulder is available to store the runoff. As a result, the drainage system would require refinements (via additional inlets) in order to reduce the amount of gutter flow that would encroach on the travel lanes.

RECOMMENDATIONS AND SUMMARY

Considering all the factors of the analysis the Town requested roadway section is feasible for both major sections (reduction from a 5' shoulder to 4' shoulder and reduction from a 4' shoulder to 2' shoulder).

However, in the section from Route 6 to the Cape Cod Rail trail there are many context sensitive issues to consider related to multi-modal accommodations. While the reduction in pavement width is acceptable, this eliminates the ability to stripe the section as a bike lane. Furthermore, placing the pedestrians in the paved shoulder reduces the ability to provide the most efficient and safe section for all road users.

It is recommended that a modified roadway section be considered for this area. In summary:

Proposed Roadway Section - Route 6 to the Cape Cod Rail Trail
Travel lane Width: 11.0 feet
Shoulder Width: 5.0 feet
Sidewalk Width: 5.5 feet — No Side walk

Proposed Roadway Section - Cape Cod Rail Trail to the Brewster/Harwich Town Line
Travel lane Width: 11.0 feet
Shoulder Width: 2.0 feet (pedestrian and bikes to use the Cape Cod Rail Trail)

No Sidewalk

On 11.0 Feet Travel Lane
2' Shoulders for Portion
Length of the Road/Image

3 Roadway Configuration

Rte 6 to CCRT — CCRT to Brewster/Harwich Line

Travel lanes: 2 @ 11.0 feet

	Original Layout	Option 1	Option 2	
Shoulders w/ Rte 6 to Rte 6 to CCRT →	5'	5'	5'	2'
CCRT to Brewster/Harwich →	5'	2'	2'	2'
Sidewalk Rte 6 to CCRT on East Side only →	5.5'	5.5'	—	—
Sidewalk CCRT to Brewster/Harwich				

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