


Town of Bethlehem Evaluation Process for New Pathway Investment

Procedures /Users Guide

FINAL

OCTOBER 26, 2010


Town of Bethlehem
Evaluation Process for New Pathway Investment
Procedures Manual/Users Guide

Prepared By Town of Bethlehem:

Department of Economic Development and Planning – Robert Leslie, AICP
Parks and Recreation Department – Jason Gallo
Department of Public Works – Erik Deyoe, P.E.

In association with:

PaTHs 4 Bethlehem Committee

Anne Benware	Katherine McCarthy
Stephen Downs	Henry Peyrebrune
Mark Jordan	Julie Sasso
Scott Lewendon	John Schonberg
Daniel Lewis	Caleb Wistar
Mark Lewis	

Table of Contents

I. Introduction

The PaTHs 4 Bethlehem Committee (Pathways to Homes, Hamlets and Healthy Hearts) was established by the Town Board in March 2009 to address pedestrian and bicycle mobility within the Town, as the result of a recommendation of the 2009 CACC Report on Open Space. The Town Board tasked the Committee to create a Bicycle and Pedestrian Priority Network Map. During the Priority Network Map's development, members identified the need to easily and fairly prioritize the Town's investment in pathway projects; in other words, the construction of bicycle and pedestrian accommodations along roadways identified on the Priority Network Map. Subsequently, the Committee embarked on a 17-month process to establish an evaluation process for new pathway investment. The process evaluates the benefits and costs of proposed projects, considers the use of grant opportunities to assist in construction costs, and ultimately results in an overall project evaluation score that can be compared to other bicycle and pedestrian projects.

This evaluation process addresses the Town's ***Complete Streets Resolution*** and ***Climate Smart Community Resolution***, both adopted by the Town Board in 2009. The Town's development and adoption of both resolutions signifies the importance that is placed on bicycle and pedestrian travel, subsequently resulting in capacity and efficiency increases of the Town's road network, reduced traffic congestion by improving mobility options, reduced greenhouse gas emissions, and improvements to the general quality of life; and the public's awareness that safety, health and mobility are part of being a quality community. Bicycling and walking are important forms of transportation and recreation in our community and contribute to health, fitness, neighborhood vitality, social interaction, and economic development.

The purpose of this guide is to document the process the Town should follow when conducting an evaluation for a new pathway investment project. The manual includes steps the user (evaluator) should take to complete the evaluation and also provides background information on how the process was developed.

II. Evaluation Process for New Pathway Investment

Overview

The process for evaluating the merits, including costs and benefits, of a new pathway investment project are outlined in the flow chart on page 4. The purpose of the evaluation process for new pathway investment is to provide Town decision makers and professional staff with a tool to assist in prioritizing pathway investment projects. The tool is intended to be used as a foundation and a first step for evaluating proposed pathway investment projects, and not used as the ultimate decision maker. While the Town's current practice is for professional staff (Engineering, Planning, and Highway Departments) to identify projects to address grant solicitations, up until this point there has been no formal process in evaluating the merits of a proposed project.

The evaluation process is intended to be used on new pathway investment projects located within existing public right-of-way (State, County, Town roads). Utilizing the pathways definition from the 2009 CACC Report on Open Space, the Town's pathways network is made up of sidewalks, multi-use paths, bicycle lanes, and striped/widened shoulders. These accommodations are typically found within public right-of-way. The overall goal is to address areas that need improvement in order to improve a roadway's safety and efficiency for pedestrian and bicycle users.

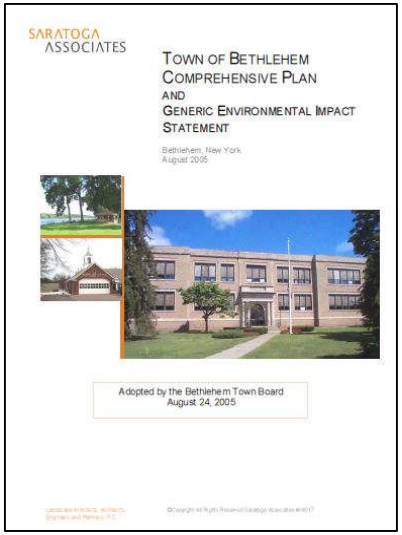
The overall evaluation process provides quantitative and qualitative values to projects in an effort to prioritize one project over another.

The evaluation process is intended to be used on new pathway investment projects located within existing public right-of-way (State, County, Town roads).

Bethlehem Comprehensive Plan

In August 2005, the Town of Bethlehem adopted its first ever Comprehensive Plan after eighteen (18) months of community deliberation about the Town's future. Of significant importance associated with this manual is the Plan's goal to improve mobility – the ability of people regardless of age and status, to engage in desired activities at moderate cost to themselves and society – throughout the Town. This goal is associated with residents ability to safely and efficiently travel around the Town as pedestrians and bicyclists. The Comprehensive Plan's Recommendations identified:

- Maintaining and enhancing pedestrian connections within and between neighborhoods, recreation facilities, and hamlet centers.
- Provide adequate bicycle facilities and establish a signed system of bicycle routes throughout the Town.
- Maintain and improve walkability with the hamlets.



The 2005 Comprehensive Plan recommended the Town maintain and enhance pedestrian connections within and between neighborhoods, recreation facilities, and hamlet centers.

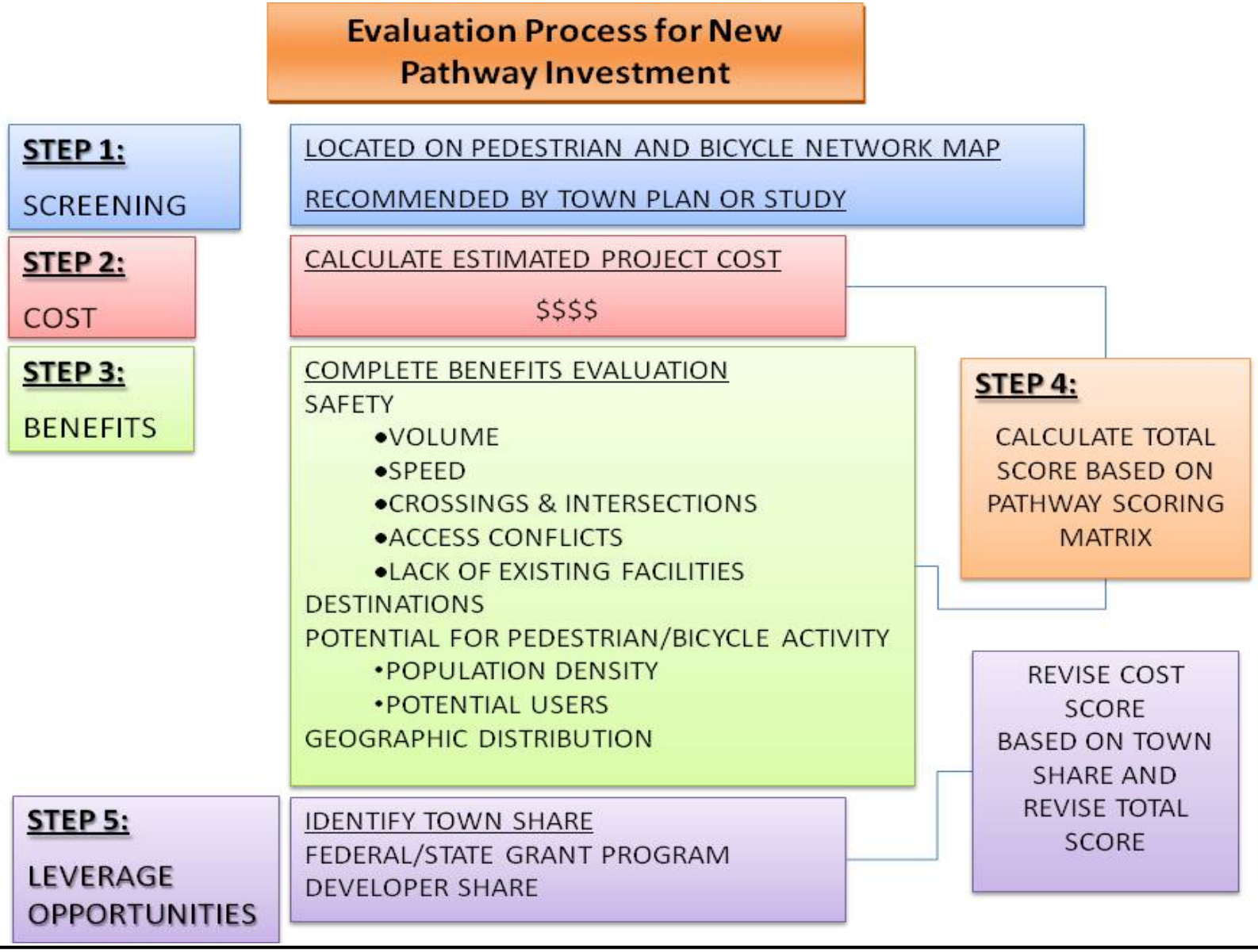
The evaluation process outlined in this manual will help the Town address the Comprehensive Plan's recommendations.

Users

Users (or evaluators) of the evaluation process for new pathway investment will include representatives from the Town's Public Works (DPW) and Highway departments, and Department of Economic Development and Planning (DEDP).

Process

The evaluation process that follows will result in an overall pathway project score of A, B, C, D, or F, with A representing a high score for project investment (project is beneficial), and F representing a poor score for project investment (project is poor).


Evaluation Process for New Pathway Investment
STEP 1:
SCREENING
LOCATED ON PEDESTRIAN AND BICYCLE NETWORK MAP
RECOMMENDED BY TOWN PLAN OR STUDY
STEP 2:
COST
CALCULATE ESTIMATED PROJECT COST
$$$$
STEP 3:
BENEFITS
COMPLETE BENEFITS EVALUATION
SAFETY
•VOLUME
•SPEED
•CROSSINGS & INTERSECTIONS
•ACCESS CONFLICTS
•LACK OF EXISTING FACILITIES
DESTINATIONS
POTENTIAL FOR PEDESTRIAN/BICYCLE ACTIVITY
•POPULATION DENSITY
•POTENTIAL USERS
GEOGRAPHIC DISTRIBUTION
STEP 4:
CALCULATE TOTAL SCORE BASED ON PATHWAY SCORING MATRIX
REVISE COST SCORE BASED ON TOWN SHARE AND REVISE TOTAL SCORE
STEP 5:
LEVERAGE OPPORTUNITIES
IDENTIFY TOWN SHARE
FEDERAL/STATE GRANT PROGRAM
DEVELOPER SHARE

The five step evaluation process is outlined below.

Step 1 – Screen projects based on Priority Network, and/or Recommendation of Town Plan/Study

The first step, "Screening" requires the review of the Bicycle and Pedestrian Priority Network Map (Priority Network Map), and Town Plans and Studies, to determine if the proposed project is a recommendation of these resources. If a project is not located on the Bicycle and Pedestrian Priority Network, or recommended in a Town Plan or Study, it shall not receive an evaluation. A list of proposed projects that do not receive an evaluation should be maintained and periodically reviewed by the PaTHs 4 Bethlehem Committee to determine their appropriateness as additions to the Priority Network Map.

The Town's pathways network is made up of sidewalks, multi-use paths, bicycle lanes, and striped/widened shoulders…
(Bethlehem Recommendations on Open Space Needs and Opportunities Report- CACC, July 2009)

Step 2 – Estimate Cost of the Project

Step 2 requires the calculation of the preliminary budget level project cost based on typical Town estimating practices utilizing NYSDOT weighted average unit costs, RS Means unit, and recent Town bidding experience. The Town's DPW has experience in preparing cost estimate calculations and would continue to conduct this task.

Step 3 – Evaluate Project Benefits based on Benefits Evaluation Table

Step 3 consists of evaluating the benefits of the proposed project to the Town. Benefits include safety, presence of destinations, potential for pedestrian and bicycle activity, and geographic distribution. The goal of identifying a project's benefits is to gauge whether the project will result in a safe and efficient trip for bicyclists and pedestrians, and recognize that destinations and users would benefit from the proposed bicycle and/or pedestrian accommodations. A Benefits Evaluation Criteria Table was developed to create a benefits score. Section IV discusses the process for completing the Benefits Evaluation Criteria Table.

Step 4 – Calculate Project Score based on Pathway Scoring Matrix

Step 4 utilizes the cost, calculated in Step 2, and benefits, calculated in Step 3 to determine a total project score (A, B, C, D, or F). A Pathway Scoring Matrix was developed to fairly account for project costs and benefits. Section III discusses the Pathway Scoring Matrix. An overall project score of A represents a high score for project investment (project is beneficial), while a project score of F represents a poor score for project investment (project is poor). As a result of the evaluation process, a tiered list of projects could be developed (Tier I, II, II) based on high, medium, and low evaluation scores. This process provides flexibility for the Town to choose among several projects within a Tier I list in response to a grant solicitation.

Step 5 – Leverage Opportunities

Step 5 requires the review of Federal and/or State (or other) grant opportunities to assist the Town in its pathway investment project. If a proposed pathway project meets the criteria of a Federal or State (or other) grant application, the Town project cost developed in Step 4 should be adjusted. For example, if a proposed Town pathway project has a total cost of $500,000.00, and the grant opportunity accounts for 80% of the total project cost, the Town's share for the project would be $100,000.00. As such, the project cost would be adjusted accordingly to reflect only the new Town cost (as a result of the leveraged opportunity).

III. Town of Bethlehem Bicycle and Pedestrian Priority Network

The Committee developed a ± 103-mile bicycle and pedestrian priority network that the Town should make more accommodating for safe and efficient bicycle and pedestrian travel. It is envisioned that this network could become a continuous system of usable accommodations. These roadways were identified since they are parts of major travel routes throughout the Town. They connect major destinations (schools, shopping areas, recreation facilities, community facilities) with each other and residential neighborhoods. The network does not include many local low vehicle volume and speed roadways. ***As stated in the Town's Complete Streets Resolution, adopted by the Town Board in August 2009, local Town streets with low vehicle volumes and slow travel speeds safely and efficiently accommodate bicyclists and pedestrians. As such, Town pathway investment for bicycle and pedestrian accommodations should not be directed to local roadways not identified on the Network Map.***

In the case of bicyclists, the network accommodates commuter and recreational travel. The roads highlighted in red reflect those that would be more conducive to bicycle travel only due to adjacent development (land uses) and roadway characteristics. At its January 2010 meeting, the Committee received input on bicycling routes from the President of the Mohawk Hudson Cycling Club, Oliver "Skip" Holmes. Mr. Holmes provided his experiences and expertise as an avid commuter and recreational bicyclist in the Town. The Committee also referenced a "Bicycle Back Roads" bicycle route map, prepared by the Bethlehem Citizens for Pedestrian Safety Committee.

It is important to note that the Committee utilized the Capital District Transportation Committee's (CDTC) Bicycle and Pedestrian Priority Network, developed by the CDTC Bicycle and Pedestrian Task Force, as a model for the Town's network development. Appendix A provides a large sized Bethlehem Bicycle and Pedestrian Priority Network Map and lists the roadways identified on the Town's and CDTC's networks. Also in Appendix A is a map of the CDTC Bicycle and Pedestrian Priority Network for Bethlehem and the Capital District (Albany, Rensselaer, Saratoga, and Schenectady counties).

Similar to CDTC's network, the Committee felt the Bethlehem Priority Network could:

- Identify desirable bicycle and pedestrian travel corridors
- Serve as a working plan for bicycle and pedestrian travel
- Serve as a starting point for the Town to prioritize local pathway investment

The Bicycle and Pedestrian Priority Network Map is a working map and it is anticipated that additional roadways may be added as the Town develops. It is recommended that the Committee review the Map annually to incorporate revisions, if necessary.

Applications of the Priority Network Map

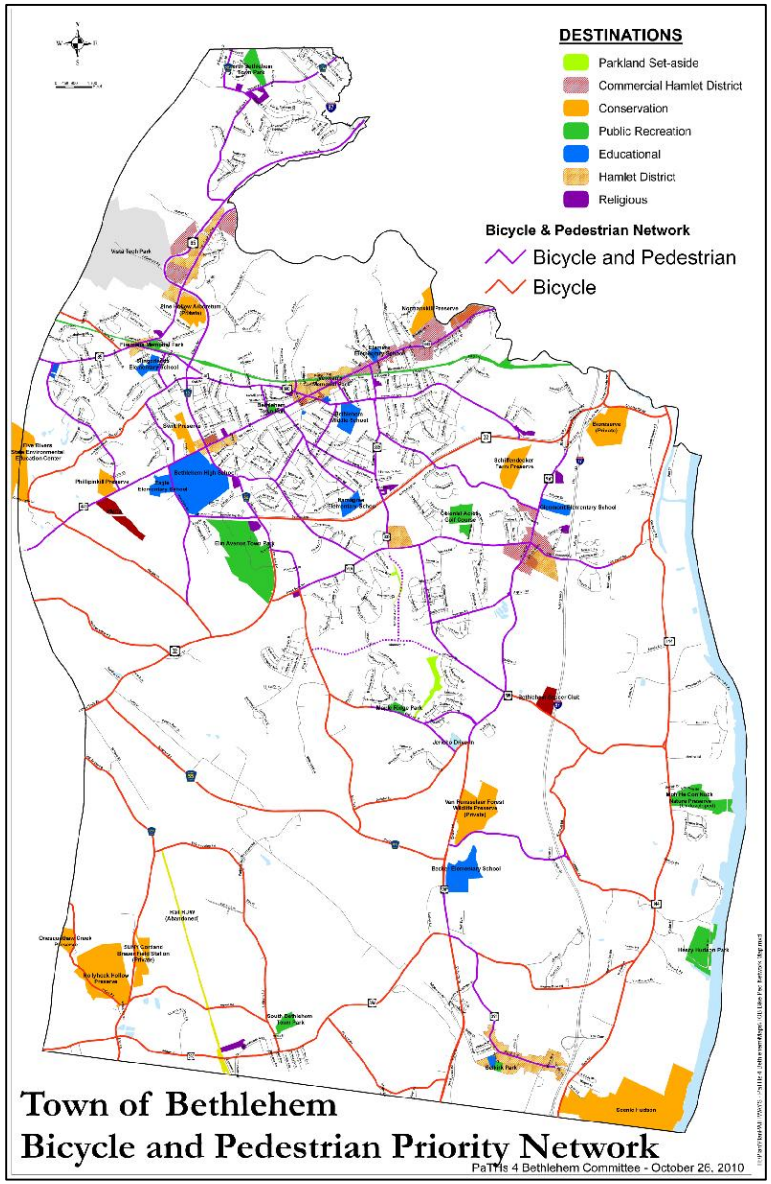
The Priority Network Map should be used in the following applications:

- Evaluation Process for New Pathway Investment

In an effort to maximize benefits of stretched Town funds, only those projects that are located on the priority network should be considered for funding. The evaluation process is described in this manual.

- Land Use Review and Approval (Site Plan/Subdivision applications)

The Planning Board is empowered to review and approve site plan and subdivision applications in the Town. Review and approval of these applications typically entails discussion of pedestrian and/or



bicycle accommodations, since the Board has the authority to require bicycle and pedestrian accommodations within the public right-of-way. The Board also reviews pedestrian accommodations with private developments (i.e. commercial uses). As such, the Planning Board should utilize the Priority Network Map to determine the need for bicycle and pedestrian accommodations if a project is located on a roadway located on the Priority Network.

- Grant Applications

A benefit to the Town for developing and maintaining the Priority Network Map is that the map will be referenced when applying for Federal and/or State (or other) grant opportunities, informing the grantor that the Town has identified its priorities for an overall bicycle and pedestrian travel network. Additionally, the Map can assist NYSDOT or Albany County at the time they design improvements for State and County roadways. In these instances, the Town would advocate to the NYSDOT or Albany County that pedestrian and accommodations be included in a project design based on the Town's adoption of the Priority Network. CDTC utilizes their network map in a similar manner for advancing projects on the Capital District's Transportation Improvement Plan.

- Bethlehem Complete Streets Resolution

As stated in the Bethlehem Complete Streets Resolution (adopted August 2009), where the need for bicyclist and pedestrian facilities has been established or is defined in Town planning documents, including but not limited to the Bicycle and Pedestrian Priority Network identified by the PaTHs 4 Bethlehem Committee, the Highway Superintendent shall consider the addition of safe bicyclist and pedestrian facilities in new street construction and street reconstruction undertaken by the Town of Bethlehem. The addition of the bicyclist and pedestrian facilities shall be consistent with the scope of the improvement project, context sensitive to the surrounding environment, and shall not be disproportionate with the cost of the larger project.

IV. Benefits Evaluation Criteria Table

Overview

Through several meetings, the Committee identified criteria that should be used to recognize the benefits of proposed pathway projects. The criteria are common, in that they are found throughout Federal and State (or other) grant applications that provide funding for pathway investment. As such, the completion of the benefits evaluation criteria table will also provide useful information to the staff person preparing a grant application.

Bicycle and Pedestrian Priority Network Map or Town Plan/Study

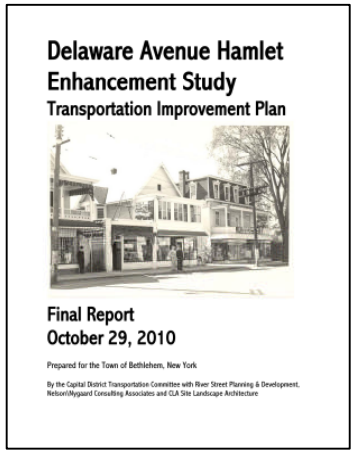
Criteria	Measure	Rating	Response	Points
Bicycle and Pedestrian Priority Network Map or Town Plan/Study	Review map to determine if proposed project is located on the bicycle and pedestrian network and/or if project is recommended in Town Plan/Study. If either is yes, proceed to additional evaluation criteria listed below.	Yes No Project is recommended in Town Plan/Study (**BONUS 10 points**)		

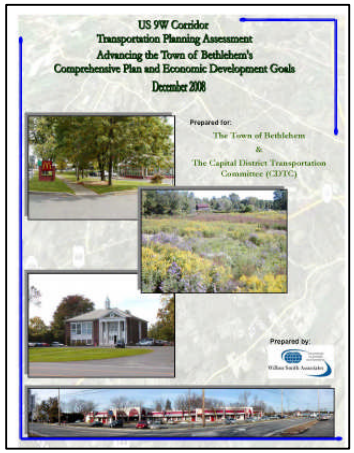
The initial screening of a project requires the evaluator to review the Bethlehem Bicycle and Pedestrian Priority Network (see page 8) to determine if the proposed project is located on a roadway identified as the bicycle and pedestrian network in Bethlehem. The evaluator shall also review all Town Plans or Studies (i.e. Route 9W Corridor Study, Delaware Avenue Hamlet Enhancement Study, etc.) to determine if the proposed project is a recommendation of a Town plan or study. If either of these reviews results in the project's identification, the evaluator shall enter "Yes" in the "Response" column, and the evaluator shall proceed to evaluate the benefits of the proposed project using the criteria listed below. Recognizing the extensive public input (Study Advisory Committee meetings, public meetings, Town Board adoption etc.) that occurs during the development of Town Plans and Studies, if a proposed project is identified in a Town Plan or Study, the project shall receive a bonus 10 points (enter points in "Weighted Score" column), in an effort to advance

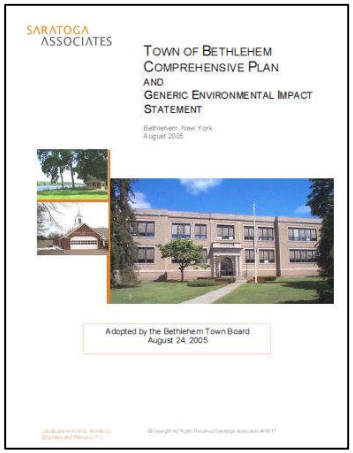
If a project is not located on the Bicycle and Pedestrian Priority Network, or recommended in a Town Plan or Study, it shall not receive an evaluation.

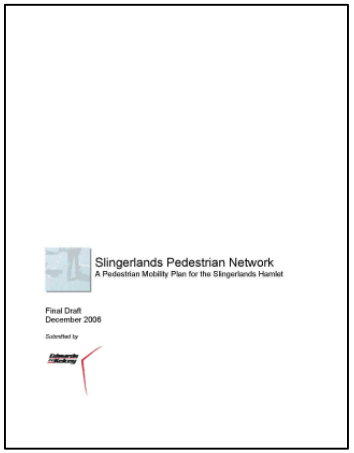
recommendations from Town Plans and Studies. Examples of Town Plans or Studies include (but are not limited to):

- US Route 9W Corridor Transportation Planning Assessment
- LUMAC
- Delaware Avenue Hamlet Enhancement Study
- Town of Bethlehem Comprehensive Plan
- Slingerlands Pedestrian Network Plan









Safety

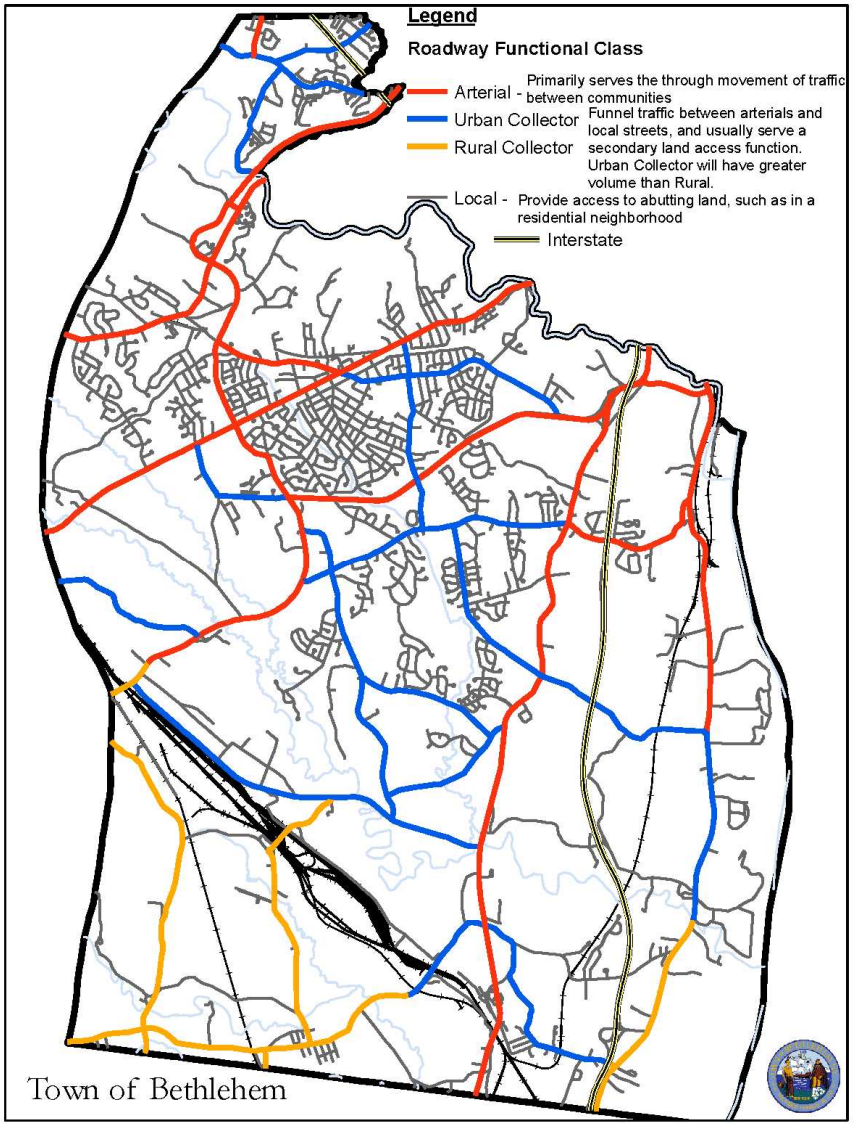
This criteria looks at several factors that contribute to roadway safety (potential for accidents between vehicles and bicyclists/pedestrians). Four roadway characteristics contribute to the potential number and severity of bicycle and pedestrian accidents. They include vehicular volume, speed, crossings and intersections, and access conflicts. The lack of existing pedestrian and bicycle accommodations contributes to safety, as well. Safety criteria accounts for 39% of the total benefits evaluation score. See Section VI for a discussion of the process utilized to determine appropriate points (max. – min.) for Safety criteria.

Volume

Roadway volume directly relates to the pedestrian and bicycle user's exposure, and affects the quality of the roadway environment for pedestrian and bicyclists, especially when proper accommodations for these users are absent.

Roadway Functional Classification and Average Annual Daily Traffic

Volume Roadway volume directly relates to the users exposure, and affects the quality of the roadway environment for pedestrian and bicyclists, especially when proper accommodations for these users are absent. Review Town of Bethlehem Roadway Functional Classification Map to determine the functional classification of the roadway proposed for a bicycle and pedestrian improvement project. *(If evaluator perceives that roadway function does not reflect typical AADT, review AADT to apply points*). WEIGHT:18%	Arterial (principal and minor) - *AADT >= 8000* **(7 points)** Urban Collector – *AADT 2000 – 7999* **(5 points)** Rural Collector – *AADT 500 – 1999* **(3 points)** Local Residential – *AADT <= 1999* **(0 point)** *(max 7 points)*



HOW TO: The evaluator shall review the Town of Bethlehem Roadway Functional Classification Map to determine the functional classification of the roadway proposed for a bicycle and pedestrian improvement project. The roadway functional classification that is identified shall be entered into the "Response" column, and associated points entered into "Weighted Score" column.

Note that if the evaluator perceives that roadway function does not reflect typical Average Annual Daily Traffic (AADT) volume, the roadway's AADT shall be reviewed to accurately determine roadway function. Volume data, collected through traffic counters (Automatic Traffic Recorders) may be available through the NYSDOT for State-owned roadways, Albany County for County-owned roadways. Also, Traffic Impact Studies (TIS) prepared for site plan or subdivision applications (for review by the Town Planning Board) may also contain AADT for State, County and Town roadways. If the TIS only includes peak hour traffic volumes, the evaluator can extrapolate the AADT based on standard industry practice where the peak hour volume represents ten percent (10%) of a roadway's AADT.

If the Town were to consider collecting volume data, it may want to take advantage of NYSDOTs County Counter Initiative, which is also available to larger suburban

municipalities. Through the NYSDOT Initiative, traffic counters and software are permanently loaned to municipalities interested in collecting traffic data, and in return the municipality is required to submit traffic data collected on State-owned roadways, and other Town or County-owned roadways. The NYSDOT also provides appropriate training and technical support of the traffic counters.

The Roadway Functional Classification Map was developed based on functional classification data provided by NYSDOT and Albany County Department of Public Works. Functional classification data provided by these entities included AADT volume for arterial and collector roadways. Based on this data, the arterial, urban collector, rural collector, and local residential roadway AADT volume ranges were developed unique to the Town of Bethlehem.

Roadway volume accounts for 18% of the safety score (max. 7 points) See Section VI for a discussion of the process utilized to determine appropriate points (max. – min.) for roadway volume.

Speed

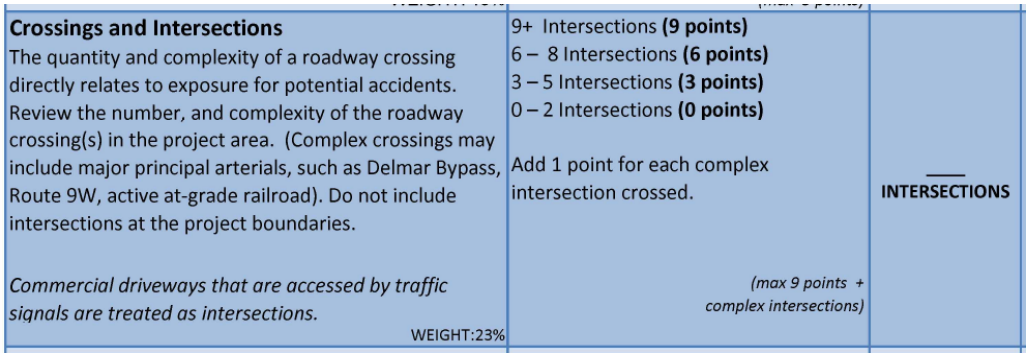
Speed is directly related to severity of the accident.

Speed Speed is directly related to severity of the accident. Review the posted speed of the roadway proposed for a bicycle and pedestrian improvement project. *(If evaluator perceives that operating speed does not reflect posted speed, review operating speed to apply points).* WEIGHT: 13%	Speed 50+mph **(5 points)** Speed 41 - 49 mph **(3 points)** Speed 31 – 40 mph **(1 points)** Speed 25 – 30 mph **(0 point)** *(max 5 points)*	___**MPH**

HOW TO: The evaluator should review the posted speed of the roadway proposed for a bicycle and pedestrian improvement project. If the evaluator perceives that operating speed does not reflect posted speed, review operating speed data to apply points. Speed data may be available through the NYSDOT for State-owned roadways, Albany County for County-owned roadways, and Traffic Impact Studies for local, and State and County roadways, prepared for site plan or subdivision applications before the Town Planning Board. Data collected through automatic traffic recorders (ATRs) typically provides vehicle speed data (max, min, average, 85%ile, etc.). The evaluator should use the 85%ile speed to reflect operating speed if real data is being used in lieu of posted speed.

Posted speed (or operating speed) accounts for 13% (max. 5 points) of the safety score. See Section VI for a discussion of the process utilized to determine appropriate points (max. – min.) for the speed criteria.

Crossings and Intersections



Crossings and Intersections The quantity and complexity of a roadway crossing directly relates to exposure for potential accidents. Review the number, and complexity of the roadway crossing(s) in the project area. (Complex crossings may include major principal arterials, such as Delmar Bypass, Route 9W, active at-grade railroad). Do not include intersections at the project boundaries. *Commercial driveways that are accessed by traffic signals are treated as intersections.* WEIGHT:23%	9+ Intersections **(9 points)** 6 – 8 Intersections **(6 points)** 3 – 5 Intersections **(3 points)** 0 – 2 Intersections **(0 points)** Add 1 point for each complex intersection crossed. *(max 9 points + complex intersections)*	____ **INTERSECTIONS**

The quantity and complexity of a roadway crossing directly relates to exposure for potential accidents. Review the number, and complexity of the roadway crossing(s) in the project area. (Complex crossings may include major principal arterials, such as Delmar Bypass, Route 9W, active at-grade railroad). ***Do not count intersections at the project boundaries since it is anticipated that all projects will have intersections at their boundaries.*** Designers of pedestrian and bicycle accommodations should note that the accommodations should carry through the intersection. Note that commercial driveways that are accessed by traffic signals are treated as intersections. For example, Route 9W and Bethlehem Town Center access drive. The evaluator should add one (1) point for each complex intersection crossed.

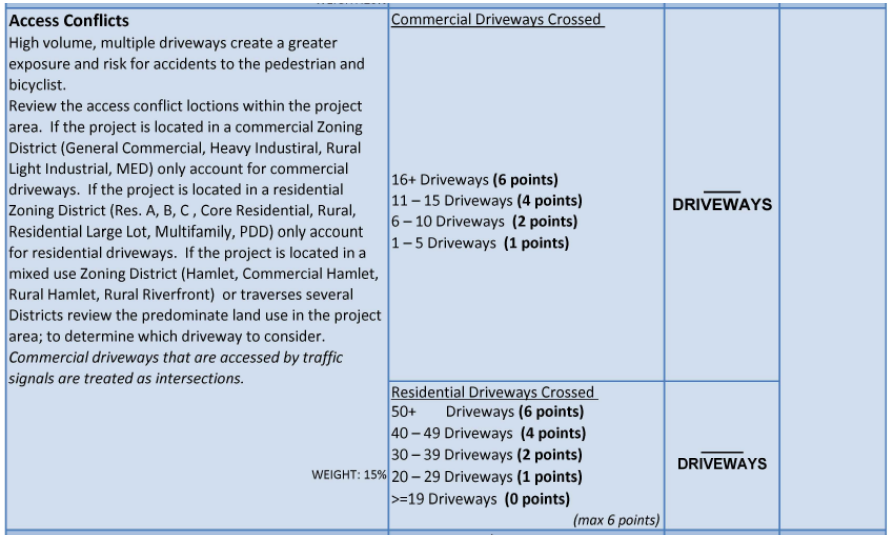
<u>HOW TO:</u> To determine the number of crossings and intersections the evaluator should utilize the Town's Geographic Information System (GIS) program, or ESRI ArcMap for those who have the capability of utilizing the desktop software. The evaluator should also use the latest aerial photo imagery to identify and tally the number of intersections crossed in the project area. This includes intersections on both sides of the project roadway.

Crossings and intersection ranges (max. – min.) were developed by taking a sample of potential pathway projects in the Town and reviewing the number of crossings and intersections within a ½ mile along the project corridor.

Crossing and Intersections accounts for 23% (max. points + complex intersections) of the safety score. See Section VI for a discussion of the process utilized to determine appropriate points (max. – min.) for the criteria

Access Conflicts

High volume, multiple driveways create a greater exposure and risk for accidents to the pedestrian and bicyclist.



HOW TO: To determine the number of access conflicts the evaluator should first determine the land use characteristics (residential or commercial) surrounding the project by reviewing aerial photo imagery and the Town's Zoning District Map. This can be conducted with assistance from the Town's Geographic Information System.

If the project is located in a commercial Zoning District such as General Commercial, Heavy Industrial, Rural Light Industrial, MED (see Zoning Law §128-12 C) the evaluator shall only account for commercial driveways. If the project is located in a residential Zoning District such as Res. A, B, C, Core Residential, Rural, Residential Large Lot, Multifamily, PDD (see Zoning Law §128-12 A), the evaluator shall only account for residential driveways. If the project is located in a mixed use Zoning District such as Hamlet, Commercial Hamlet, Rural Hamlet, Rural Riverfront (see Zoning Law §128-12 B) or traverses several Districts the evaluator shall review the predominate land use in the project area to determine which driveway type (residential or commercial) to consider. Finally, utilize the latest aerial photo imagery to identify and tally the number of commercial or residential driveways crossed.

Note that commercial driveways that are accessed by traffic signals are treated as intersections and not counted in this section. For example, the Glenmont Plaza driveway along Feura Bush Road and the Bethlehem Center Shopping Plaza driveway along Route 9W are controlled by traffic signals.

Access conflicts accounts for 15% (max. 6 points) of the safety score. See Section VI for a discussion of the process utilized to determine appropriate points (max. – min.) for the criteria.

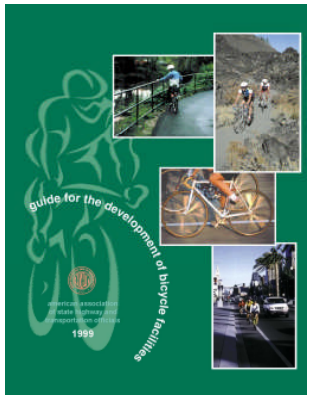
Lack of Existing Pedestrian and Bicycle Accommodations

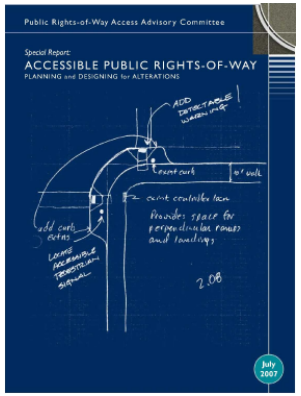
Lack of Existing Pedestrian and Bicycle Accommodations Properly designed pedestrian and bicycle accommodations improve safety and reduce the risk of accidents. Review the project corridor to determine if pedestrian and/or bicycle accommodations exist. *Evaluator should utilize AASHTO and NYSDOT Guidelines/Standards to determine if accommodations are built to design standards.* WEIGHT: 31%	No Pedestrian/Bicycle Accommodations **(12 points)** Some Pedestrian/Bicycle Accommodations not built to design standards **(6 points)** Some - Pedestrian/Bicycle Accommodations built to design standards **(3 points)** Full Ped/Bike Accommodations built to design standards **(0 points)** *(max 12 points)*

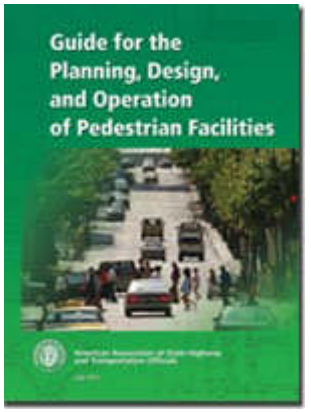
Properly designed pedestrian and bicycle accommodations improve safety and reduce the risk of accidents. The evaluator shall review the project corridor to determine if pedestrian and/or bicycle accommodations exist.

HOW TO: The evaluator shall utilize AASHTO and NYSDOT (Federal and State) bicycle and or pedestrian guidelines/standards to determine if existing accommodations are built to design standards. Widely accepted, Federal and State resources may include:

- AASHTO Guide for the Development of Bicycle Facilities
- AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities
- AASHTO Designing Sidewalks and Trails for Access
- Accessible Public Rights-of-Way: Planning and Design for Alterations
- NYSDOT Bicycle Facility Design – Chapter 17
- NYSDOT Pedestrian Facility Design – Chapter 18



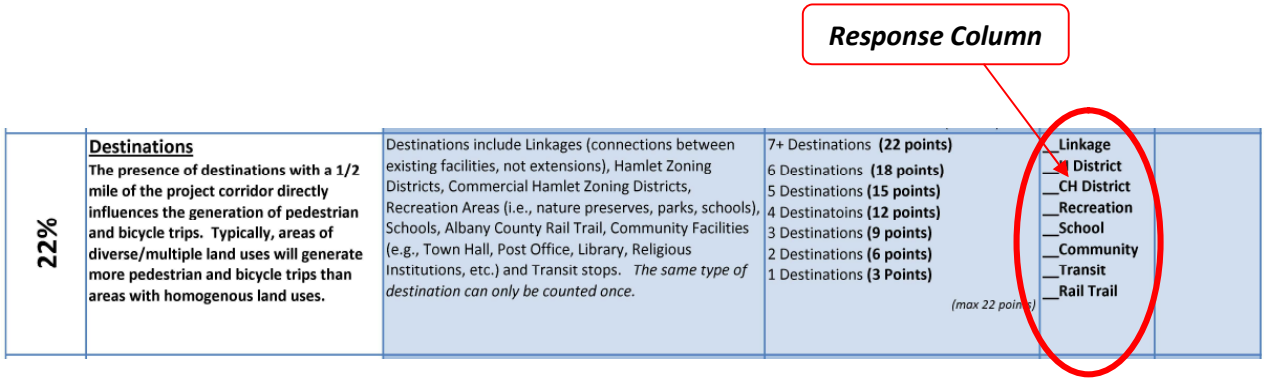




In addition, when determining appropriate accommodations for bicyclists, the Town should consider using FHWA's Selecting Roadway Design Treatments to Accommodate Bicycles.

Lack of Existing Pedestrian and Bicycle Accommodations accounts for 31% (max. 12 points) of the safety score. See Section IV for a discussion of the process utilized to determine appropriate points (max. – min.) for the criteria.

Destinations



The presence of destinations within a ½ mile of the project corridor directly influences the generation of pedestrian and bicycle trips. Typically, areas of diverse/multiple land uses will generate more pedestrian and bicycle trips than areas with homogenous land uses. The Committee identified destinations in the Town that are characterized as places that generate activity, such as shopping areas, community facilities, schools, parks, etc. The evaluator should review the destinations located within ½ mile of the project area by drawing a ½ mile buffer around the project boundary. Destinations include Linkages (connections between existing facilities, not extensions), Hamlet Zoning Districts, Commercial Hamlet Zoning Districts, Recreation Areas (i.e., nature preserves, parks, schools), Schools, Albany County Rail Trail, Community Facilities (e.g., Town Hall, Post Office, Library, Religious Institutions, etc.) and Transit stops. (Note: The same type of destination can only be counted once).

HOW TO: The Bethlehem Bicycle and Pedestrian Priority Network Map includes the locations of destinations in the Town. The evaluator should place a "check" mark next to each destination found in the project area in the response column, and tally the total number of checks to determine the number of destinations.

Destinations account for 22% (max. points 22 points) of the total benefits score. See Section VI for a discussion of the process utilized to determine appropriate points (max. – min.) for the benefits criteria.

Potential for Pedestrian and Bicycle Activity

Potential pedestrian and bicycle activity can be estimated based upon two factors: population density and potential users. The higher the density (housing units per ½ mile radius) the greater the likelihood a large number of pedestrians/bicyclists would be attracted to the pedestrian/bicycle facility.

31%	**Potential for Pedestrian and Bicycle Activity** Potential pedestrian and bicycle activity can be estimated based upon two factors: population density and potential users.	**Population Density** The higher the density (housing units per ½ mile radius) the greater the likelihood a large number of pedestrians/bicyclists would be attracted to the pedestrian/bicycle facility. Review the housing density residing within ½ mile of the proposed project for pedestrian facility improvements.	>= 1750 housing units **(15.5 points)** 1400 - 1749 housing units **(12 points)** 1050 - 1399 housing units **(9 points)** 700 - 1049 housing units **(6 points)** 350 - 699 housing units **(3 points)** <= 349 housing units **(0 points)** *(max 15.5 points)*	____Housing Units
		Potential Users Identify the potential user groups of the pedestrian and bicycle facility based on destinations that are located within or accessed by the project area. (User Groups include: Students, Recreation - with park or facility, Shoppers, Transit, Community Facility) A school can also be used for recreation.	5 users **(15.5 points)** 4 users **(12 points)** 3 users **(9 points)** 2 users **(6 points)** 1 user **(3 point)** *(max 15.5 points)*	__Students __Shoppers __Transit __Recreation __Community

Population Density: The evaluator should review the housing density (number of housing units) residing within ½ mile of the proposed project for pedestrian facility improvements.

HOW TO: To determine the number of housing units, utilize the Town's Geographic Information System desktop program ESRI ArcMap. The first step is to identify the project roadway and create a ½ mile buffer around the roadway. The second step is to "select by location" all the parcels that intersect the ½ mile buffer. Finally, review the selection set (created in step 2) attribute table to identify only residential properties (housing units) based on the NYS Office of Real Property Services land classification code – 200's and 411. These codes include single family, multiple family homes, and apartments. The

evaluator should count accordingly for multiple units when apartment (attribute 4 units to a building) and two-family, three-family, and multi-family residences/properties are identified.

Potential Users:
HOW TO: To determine potential users that will use the pedestrian or bicycle accommodation review destinations within ½ mile that are located within or accessed by the project area. User Groups include: Students, Recreation - with park or facility, Shoppers, Transit, Community Facility) A school can also be identified for recreation users. The evaluator should place a "check" mark next to each user group found in the project area in the response column, and tally the total number of checks to determine the number of user groups.

Potential for Pedestrian and Bicycle Activity account for 31% (max. 31 points) of the total benefits score. See Section IV for a discussion of the process utilized to determine appropriate points (max. – min.) for the benefits criteria.

Geographic Distribution

8%	**Geographic Distribution** **The diversity of land uses and density of hamlets throughout the Town may place some areas of the Town at a competitive disadvantage when evaluating the merits of proposed projects.**	Review/identify the recent history of public investment (Federal, State, County,Town) of pedestrian and/or bicycle accommodations within 1-mile radius of the proposed project area within the past 5 years. The purpose is to achieve some balance in the geographic distribution of public pedestrian and bicycle investment in the Town.	Project completed: 5+ years ago (8 points) 4 years ago (6 points) 3 years ago (4 points) 2 years ago (2 points) 1 year ago (0 points) *(from actual completion date)* *(max 8 points)*	____Years Ago	

The diversity of land uses and density of hamlets throughout the Town may place some areas of the Town at a competitive disadvantage when evaluating the merits of proposed projects. The evaluator should review/identify the recent history of public investment (Federal, State, County,Town) of pedestrian and/or bicycle accommodations within 1-mile radius of the proposed project area within the past 5 years. The purpose is to achieve some balance in the geographic distribution of public pedestrian and bicycle investment in the Town.

HOW TO:

To determine if a completed bicycle and pedestrian project is located within a 1-mile distance of the proposed project, utilize the Town's Geographic Information Systems program, ESRI ArcMap. The first step is to identify the project roadway and create a 1 mile buffer around the project area. The second step is to identify bicycle and pedestrian projects that were completed in the general project area by consulting with the Town Highway and/or Public Works Departments. Project completion dates can also be identified by these Departments.

Geographic Distribution accounts for 8% (max. 8 points) of the total benefits score. See Section IV for a discussion of the process utilized to determine appropriate points (max. – min.) for the benefits criteria.

Total Benefits Score

The maximum benefit score, based on the points provided, a project can receive is 110 points. Realistically, evaluators should be aware that the maximum 110 points is not achievable based on land use characteristics in the Town. For example, the Town does not have a roadway that reflects a principal arterial (high volume), with a high speed limit, access to seven or more destinations, surrounded by a high density area, etc. These are some of the characteristics needed to achieve the maximum 110 points. This is because the destinations and neighborhoods in Town have grown in an environment that encourages human scale development, which are attractive to pedestrians and bicyclists.

(PAGE INTENTIONALLY LEFT BLANK)

Town of Bethlehem Evaluation Process for New Pathway Investment

BENEFITS EVALUATION TABLE

PROJECT NAME: **FINAL**

As of 10/26/2010

Weight	Criteria	Measure	Rating	Response	Points
	Bicycle and Pedestrian Priority Network Map or Town Plan/Study	Review map to determine if proposed project is located on the bicycle and pedestrian network and/or if project is recommended in Town Plan/Study. If either is yes, proceed to additional evaluation criteria listed below.	Yes No Project is recommended in Town Plan/Study (**BONUS 10 points**)		
39%	**Safety** **This element looks at several factors that contribute to roadway safety (potential for accidents between vehicles and bicyclists/pedestrians). Four roadway characteristics contribute to the potential number and severity of bicycle and pedestrian accidents. They include vehicular volume, speed, crossings and intersections, and access conflicts. The lack of existing pedestrian and bicycle accommodations contributes to safety, as well.** *If project boundaries incorporate multiple roadway speeds and functional classifications, utilize higher speed and functional classification to apply points.*	**Volume** Roadway volume directly relates to the users exposure, and affects the quality of the roadway environment for pedestrian and bicyclists, especially when proper accommodations for these users are absent. Review Town of Bethlehem Roadway Functional Classification Map to determine the functional classification of the roadway proposed for a bicycle and pedestrian improvement project. *(If evaluator perceives that roadway function does not reflect typical AADT, review AADT to apply points*). WEIGHT:18%	Arterial (principal and minor) - *AADT >= 8000* **(7 points)** Urban Collector – *AADT 2000 – 7999* **(5 points)** Rural Collector – *AADT 500 – 1999* **(3 points)** Local Residential – *AADT <= 1999* **(0 point)** *(max 7 points)*		
		Speed Speed is directly related to severity of the accident**.** Review the posted speed of the roadway proposed for a bicycle and pedestrian improvement project. *(If evaluator perceives that operating speed does not reflect posted speed, review operating speed to apply points).* WEIGHT: 13%	Speed 50+mph **(5 points)** Speed 41 - 49 mph **(3 points)** Speed 31 – 40 mph **(1 points)** Speed 25 – 30 mph **(0 point)** *(max 5 points)*	**___MPH**	
		Crossings and Intersections The quantity and complexity of a roadway crossing directly relates to exposure for potential accidents. Review the number, and complexity of the roadway crossing(s) in the project area. (Complex crossings may include major principal arterials, such as Delmar Bypass, Route 9W, active at-grade railroad). Do not include intersections at the project boundaries. *Commercial driveways that are accessed by traffic signals are treated as intersections.* WEIGHT:23%	9+ Intersections **(9 points)** 6 – 8 Intersections **(6 points)** 3 – 5 Intersections **(3 points)** 0 – 2 Intersections **(0 points)** Add 1 point for each complex intersection crossed. *(max 9 points + complex intersections)*	**___ INTERSECTIONS**	
		Access Conflicts High volume, multiple driveways create a greater exposure and risk for accidents to the pedestrian and bicyclist. Review the access conflict loctions within the project area. If the project is located in a commercial Zoning District (General Commercial, Heavy Industiral, Rural Light Industrial, MED) only account for commercial driveways. If the project is located in a residential Zoning District (Res. A, B, C , Core Residential, Rural, Residential Large Lot, Multifamily, PDD) only account for residential driveways. If the project is located in a mixed use Zoning District (Hamlet, Commercial Hamlet, Rural Hamlet, Rural Riverfront) or traverses several Districts review the predominate land use in the project area; to determine which driveway to consider. *Commercial driveways that are accessed by traffic signals are treated as intersections.* WEIGHT: 15%	Commercial Driveways Crossed 16+ Driveways **(6 points)** 11 – 15 Driveways **(4 points)** 6 – 10 Driveways **(2 points)** 1 – 5 Driveways **(1 points)**	**____ DRIVEWAYS**	
			Residential Driveways Crossed 50+ Driveways **(6 points)** 40 – 49 Driveways **(4 points)** 30 – 39 Driveways **(2 points)** 20 – 29 Driveways **(1 points)** >=19 Driveways **(0 points)** *(max 6 points)*	**____ DRIVEWAYS**	
		Lack of Existing Pedestrian and Bicycle Accommodations Properly designed pedestrian and bicycle accommodations improve safety and reduce the risk of accidents. Review the project corridor to determine if pedestrian and/or bicycle accommodations exist. *Evaluator should utilize AASHTO and NYSDOT Guidelines/Standards to determine if accommodations are built to design standards.* WEIGHT: 31%	No Pedestrian/Bicycle Accommodations **(12 points)** Some Pedestrian/Bicycle Accommodations not built to design standards **(6 points)** Some - Pedestrian/Bicycle Accommodations built to design standards **(3 points)** Full Ped/Bike Accommodations built to design standards **(0 points)** *(max 12 points)*		
22%	**Destinations** **The presence of destinations with a 1/2 mile of the project corridor directly influences the generation of pedestrian and bicycle trips. Typically, areas of diverse/multiple land uses will generate more pedestrian and bicycle trips than areas with homogenous land uses.**	Destinations include Linkages (connections between existing facilities, not extensions), Hamlet Zoning Districts, Commercial Hamlet Zoning Districts, Recreation Areas (i.e., nature preserves, parks, schools), Schools, Albany County Rail Trail, Community Facilities (e.g., Town Hall, Post Office, Library, Religious Institutions, etc.) and Transit stops. *The same type of destination can only be counted once.*	7+ Destinations **(22 points)** 6 Destinations **(18 points)** 5 Destinations **(15 points)** 4 Destinatoins **(12 points)** 3 Destinations **(9 points)** 2 Destinations **(6 points)** 1 Destinations **(3 Points)** *(max 22 points)*	**__Linkage** **__H District** **__CH District** **__Recreation** **__School** **__Community** **__Transit** **__Rail Trail**	
31%	**Potential for Pedestrian and Bicycle Activity** **Potential pedestrian and bicycle activity can be estimated based upon two factors: population density and potential users.**	**Population Density** The higher the density (housing units per ½ mile radius) the greater the likelihood a large number of pedestrians/bicyclists would be attracted to the pedestrian/bicycle facility. Review the housing density residing within ½ mile of the proposed project for pedestrian facility improvements.	>= 1750 housing units **(15.5 points)** 1400 - 1749 housing units **(12 points)** 1050 - 1399 housing units **(9 points)** 700 - 1049 housing units **(6 points)** 350 - 699 housing units **(3 points)** <= 349 housing units **(0 points)** *(max 15.5 points)*	**_____Housing Units**	
		Potential Users Identify the potential user groups of the pedestrian and bicycle facility based on destinations that are located within or accessed by the project area. (User Groups include: Students, Recreation - with park or facility, Shoppers, Transit, Community Facility) A school can also be used for recreation.	5 users **(15.5 points)** 4 users **(12 points)** 3 users **(9 points)** 2 users **(6 points)** 1 user **(3 point)** *(max 15.5 points)*	**__Students** **__Shoppers** **__Transit** **__Recreation** **__Community**	
8%	**Geographic Distribution** **The diversity of land uses and density of hamlets throughout the Town may place some areas of the Town at a competitive disadvantage when evaluating the merits of proposed projects.**	Review/identify the recent history of public investment (Federal, State, County,Town) of pedestrian and/or bicycle accommodations within 1-mile radius of the proposed project area within the past 5 years. The purpose is to achieve some balance in the geographic distribution of public pedestrian and bicycle investment in the Town.	Project completed: 5+ years ago (8 points) 4 years ago (6 points) 3 years ago (4 points) 2 years ago (2 points) 1 year ago (0 points) *(from actual completion date)* *(max 8 points)*	**_____Years Ago**	
SCORE LEGEND: =>80: A, 65-79: B, 50-64: C, 35-49: D, <35: F				**TOTAL BENEFITS SCORE**	

V. Pathway Investment Scoring Matrix

Step 4 of the evaluation process for new pathway investment utilizes the pathway scoring matrix as illustrated below. The matrix was developed recognizing that the benefits of a project are more important than the cost. On a standard cost to benefit evaluation, costs are typically treated on an equal level to benefits. In the case of pathway investment, the goal is to fund projects that will have a high benefit to the community; and as such, benefits have been weighted higher than costs. For example, if a project receives a benefit score of =>80, (A) and costs >=$1million the project would receive a total score of B, reflecting benefits as carrying a greater weight in the total score.

Pathway Scoring Matrix

		Benefit Score				
		=> 80	65 - 79	50 - 64	35 - 49	< 35
Town Share Cost		A	B	C	D	F
Cost < $100k	A	A	B+	C+	D	D
$100k <= Cost < $400k	B	A-	B	C+	D	F
$400k <= Cost < $700k	C	B+	B-	C	D	F
$700k <= Cost < $1M	D	B+	C+	D	D	F
Cost >= $1M	F	B	C+	D	F	F

HOW TO: The evaluator shall apply the project cost estimated in Step 2, to the Town Share Cost column and then apply the benefits score calculated in Step 3 to identify the Total Project Score.

Leverage Opportunities

Step 5 of the evaluation process for new pathway investment is applied based on leveraging funding opportunities. Section VII-Funding Sources, provides a comprehensive list of Federal, State, and other grant opportunities available to the Town. If a Federal or State (or other) grant opportunity is identified, the evaluator shall only utilize the Town's share cost. For example, if a proposed Town pathway project has a total cost of $500,000.00, without a grant opportunity the project would receive a C grade for town share cost. Accounting for a grant opportunity that includes 80% of the total project cost, the Town's share would be $100,000.00 and would receive a B grade. If the project had a high benefits score (A, B, or C grade) the leveraging opportunity would result in a higher total score.

VI. Establishment of Benefits Criteria Point System

A point system for the benefits criteria was established with assistance from Town Public Works, Planning, and Parks and Recreation Department representatives staffed to the PaTHs Comittee, as well as a Town Engineering Division representative, and three members of the PaTHs Committee. This subgroup of the PaTHs Committee conducted a weighting (ranking) exercise to determine the value of each benefits criteria. The subgroup recognized that the four benefit criteria (Safety, Potential for Pedestrian & Bicycle Activity, Destinations, and Geographic Distribution) and associated sub-criteria for safety (Volume, Speed, Crossings and Intersections, Access Conflicts, and Lack of Existing Pedestrian and Bicycle Accommodations) should not be equally reflected in the point system; and therefore, a weighting (ranking) exercise was conducted to determine the value of each criteria. Subsequently, the values that were identified are reflected as maximum points in the benefits evaluation table. Following the establishment of a maximum point value, successive points were applied at appropriate intervals based on the criteria's measurements (i.e. speed intervals, number of destinations, roadway functional classification, etc.)

The subgroup conducted two benefit weighting (ranking) criteria exercises, the first was for the major criteria (Safety, Potential for Pedestrian & Bicycle Activity, Destinations, and Geographic Distribution) and the second was for the subcriteria associated with Safety (Volume, Speed, Crossings and Intersections, Access Conflicts, and Lack of Existing Pedestrian and Bicycle Accommodations).

Benefit Criteria Weighting Exercise

Major Criteria Weighting

The Town's Public Works Department has had success in utilizing a weighting (ranking) exercise known as a "Pairwise Exercise" for evaluation of its assets. As such, the Deputy Commissioner of Public Works (also a member of the Committee) facilitated the pairwise exercise. The pairwise exercise allowed the subgroup to make several small decisions when comparing the value of the criteria against each other. As a result, the pair-wise ranking exercise revealed the priority (weight/points) which the subgroup attached to the criteria

The exercise included the use of the following statement:

"When the Town is investing in a pathway project, (criteria), is _____, compared to (criteria)".

5. Much more beneficial
4. Slightly beneficial
5. Equally beneficial
2. Slightly less beneficial
1. Not important

As applied to the statement, each criteria was compared to each other, and for example read as follows:

"When the Town is investing in a pathway project, SAFETY is _____, compared to DESTINATIONS".

5. Much more beneficial
4. Slightly beneficial
3. Equally beneficial
2. Slightly less beneficial
1. Not important

The results of the pairwise ranking exercise for major criteria are provided in the following table. Note that the values for the cells shown in grey are inverses from cells show in white.

	Safety	Destinations	Potential for Pedestrian & Bicycle Activity	Geographic Distribution	Sum
Safety		5	4	5	14
Destinations	1		2	5	8
Potential for Pedestrian & Bicycle Activity	2	4		5	11
Geographic Distribution	1	1	1		3

The exercise revealed that Safety benefits of a pathway investment project is the most important (highest ranking) criteria. As a result, safety received 39% of the total benefits score. This is followed by Potential for Pedestrian & Bicycle Activity (31%), Destinations (22%), and Geographic Distribution (8%) in ranking order.

Safety Subcriteria Weighting

Similarly, a pairwise ranking exercise was conducted using the same process and sample statement, as described above, for the safety subcriteria *(Volume, Speed, Crossings and Intersections, Access Conflicts, and Lack of Existing Pedestrian and Bicycle Accommodations).* The ranking results are listed in the following table:

	Vehicular Volume	Speed	Crossings & Intersections	Access Conflicts	Lack of Existing Accommodations	Sum
Vehicular Volume		4	2	3	2	11
Speed	2		2	2	2	8
Crossings & Intersections	4	4		4	2	14
Access Conflicts	3	4	2		1	10
Lack of Existing Accommodations	4	4	4	5		17

The exercise revealed that Lack of Existing Accommodations is the most important (highest ranking) criteria, and received 29% of the available safety criteria points (max. 12 points). This is followed by *Crossings and Intersections, Volume, Access Conflicts, and Speed* in ranking order.

As a result of the pairwise ranking exercises, the maximum points were applied to the criteria as follows:

Scoring System Based on Pairwise Ranking Exercise		
Criterion	**Points**	
Safety		
Vehicular Volume	7	
Speed	5	
Crossings & Intersections	9	39
Access Conflicts	6	
Lack of Existing Ped/Bicyclist Accommodations	12	
Destinations		22
Potential for Pedestrian & Bicycle Activity		31
Geographic Distribution		8
Sum		100

VII. Funding Sources

The funding sources listed in the table below are referenced from the New York Bicycling Coalition and Village of Altamont Pedestrian and Bicycle Plan (Section 7.3), January 2009, prepared by Alta Planning + Design, with funding assistance from the Capital District Transportation Committee. These funding programs are applicable to either State, County, and Town roads.

FUNDING PROGRAM	REQUIREMENTS	CONTACT INFORMATION
NYSDOT/CDTC *Transportation Enhancements Program (TEP)	Offer communities the opportunity to expand transportation choices. (Each project must relate to surface transportation and meet one of the 12 eligible activities).	• http://www.fhwa.dot.gov/environment/te/index.htm Federal Highway Administration (FHWA) Enhancements Information • http://www.enhancements.org/ National Transportation Enhancements Clearinghouse • https://www.nysdot.gov/portal/page/portal/programs/tep NYSDOT o Transportation Enhancements Program (TEP)
NYSDOT/CDTC *Surface Transportation Planning (STP)	Flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects.	• http://www.fhwa.dot.gov/safetealu/factsheets/stp.htm • https://www.nysdot.gov/portal/page/portal/divisions/policy-and-strategy/transit-bureau/public-transportation/federal-transit- funding/st-program

FUNDING PROGRAM	REQUIREMENTS	CONTACT INFORMATION
NYSDOT/ C DTC *Hazard Elimination Program	Funds activities to resolve safety problems at hazardous locations and sections, and roadway elements which may constitute a danger to motorists, pedestrians, and bicyclists.	• http://www.fhwa.dot.gov/tea21/factsheets/isfty.htm • http://www.fhwa.dot.gov/tea21/index .htm
Governor's Traffic Safety Committee *Section 402 highway safety funds	Funds for Local Health Unit staff in the development, implementation, and evaluation of the traffic safety projects by the New York State Department of Health Injury Control Program.	• http://www.nhtsa.dot.gov/people/outreach/safedige/Fall1998/n5-1 11 .html • http://www.safeny.com
Safe Routes to Schools (SR2S)	Funding for projects and programs to support walking and bicycling to schools	• www.saferoutestoschools.org • NYSDOT SR2S Program

FUNDING PROGRAM	REQUIREMENTS	CONTACT INFORMATION
Consolidated Local Street and Highway Improvement Program (CHIPS)/ Municipal Streets and Highway Program	Local highway and bridge capital improvements. Assists localities in matching federal funds for projects. NYS Multi-Modal Funds are also eligible for bike/ped/trail projects	• http://www.dot.state.ny.us/chips/index.html • http://www.dot.state.ny.us/chips/guide.pdf • http://www.osc.state.ny.us/localgov/muni/releases/marchise.htm
Environmental Protection Fund (EPF) • Title 7 • Title 9	Allocates funds to DEC and OPRHP for land purchases. Funds to local government and not-for-profit organizations to purchase, develop, and preserve park lands and historic resources.	• http://www.dec.state.ny.us/website/opensp/opepfl4. html
Empire State Development Corporation (Metropolitan Economic Revitalization Funds MERF)	Encourages private investment to create new development	• http://www.nylovesbiz.com/default.as p • http://publications.budget.state.ny.us /fy0405app1 /esdc.pdf

FUNDING PROGRAM	REQUIREMENTS	CONTACT INFORMATION
Empire State Development: Economic Development Fund	Funding to large and small businesses for economic development.	• http://www.awib.org/content_frames/articles/empire.html • http://publications.budget.state.ny.us/fy0405app1_/esdc.pdf
Division of Housing and Community Renewal (Community Development)	Provide funds to develop housing, for housing preservation, and development activities within communities.	• http://www.dhcr.state.ny.us/ocd/pubs/pdf/cpm03. pdf • http://www.dhcr.state.ny.us/ocd/ocd.htm • http://www.dhcr.state.ny.us/ocd/progs/ocdprogs.htm • http://www.dhcr.state.ny.us/ocd/nofas/ocdnofas. htm
Capital District Transportation Committee (CDTC)	SPOT Improvement Program Transportation Improvement Program (TIP)	• www.ctdcmpo.org

FUNDING PROGRAM	REQUIREMENTS	• CONTACT INFORMATION
NYS Department of Health, Healthy Heart Program	Funds programs that make it easier for New Yorkers to choose healthy lifestyles	• http://www.health.state.ny.us/nysdoh/heart/ healthy/ healthy. htm • http://www.health.state.ny.us/nysdoh/heart/ heart_disease. htm
""No Child Left Indoors"	Various national programs to encourage outdoor physical activity and recreation	• http://www.nrpa.org "Get out and Play" programs
Hudson River Valley Greenway	Allocates funds for planning and project implementation for those located within the geographic area of the Greenway, including efforts that support trails and bicycling	• http://www.hudsongreenway.state.ny.us/funding/funding.htm • http://www.hudsongreenway.state.ny.us/funding/commgrant.pdf • http://www.hudsongreenway.state.ny.us/funding/compgrant.pdf

Appendix A

Town of Bethlehem Bicycle and Pedestrian Priority Network

Capital District Transportation Committee Bicycle and Pedestrian Priority Network

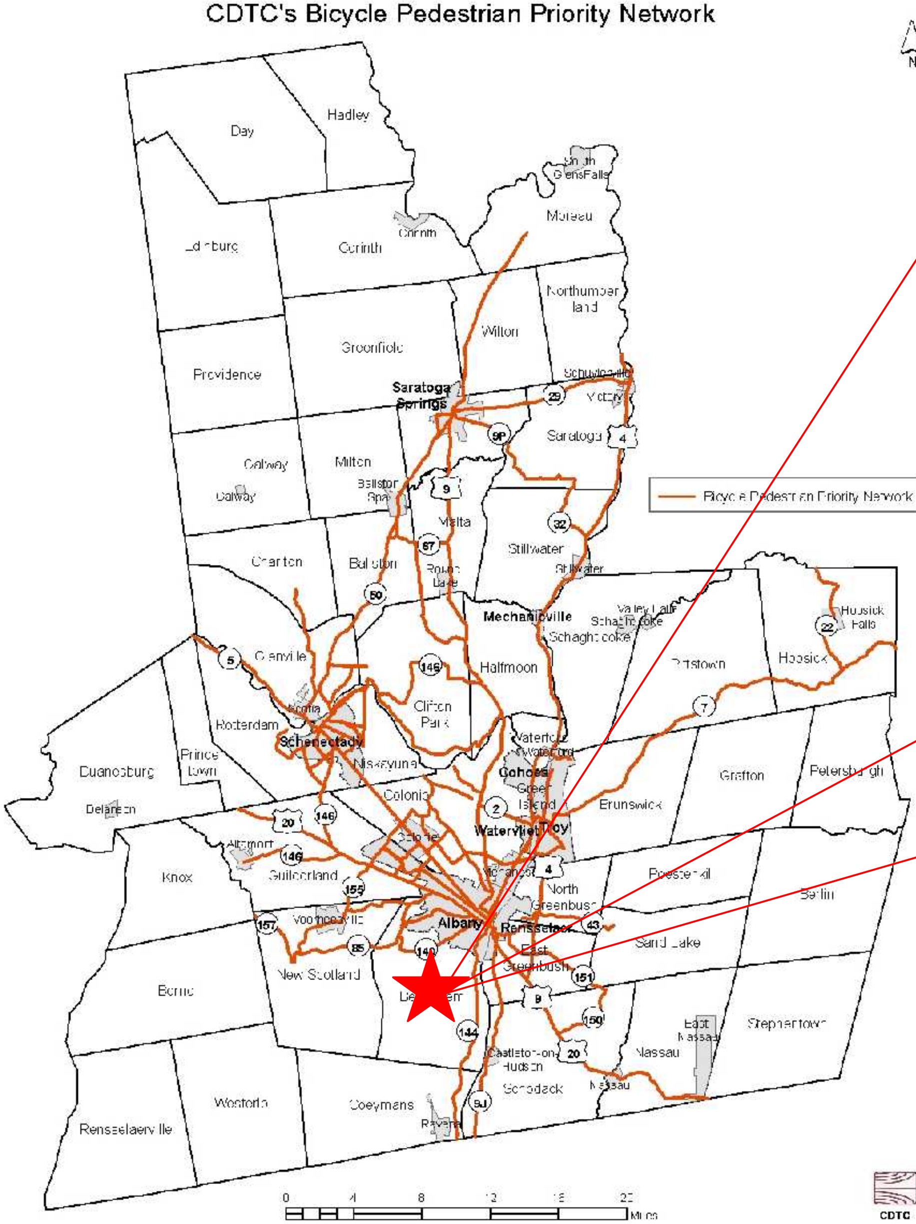
Town of Bethlehem
Bicycle and Pedestrian Priority Network
Road Name List

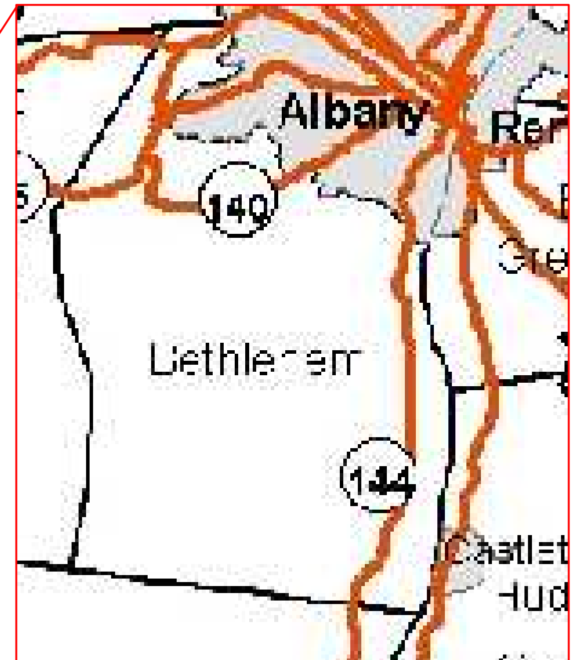
Road Name	Route No.	Jurisdiction
Adams St		Town
Beacon Rd		Town
Beaver Dam Rd		Town
Bells Crossing Rd	CR 54	County
Bender Ln		Town
Blessing Rd		Town
Borthwick Ave		Town
Bridge St	NYS 396	State
Brockley Dr		Town
Cherry Ave	CR 52	County
Clapper Rd		Town
Clapper Rd		Town
Creble Rd	CR 55	County
Darroch Rd		Town
Delaware Ave	NYS 443	State
Delmar Byp	NYS 32	State
Delmar Byp Ext		Town
Elm Ave		Town
Elm Ave E		Town
Elsmere Ave	NYS 335	State
Fernbank Ave		Town
Feura Bush Rd	NYS 910A	State
Fisher Blvd		Town
Font Grove Rd	CR 306	County
Glenmont Rd	NYS 910A	State
Hague Blvd		Town
Herber Ave		Town
Howard Pl		Town
Jericho Road	CR 53	County

Road Name	Route No.	Jurisdiction
Kenwood Ave	NYS 140	State
Krumkill Rd	CR 204	County
Krumkill Rd		Town
Maple Ave	NYS 396	State
Meads Ln		Town
Murray Ave		Town
New Scotland Rd		Town
Oakwood Pl		Town
Old Quarry Rd	CR 102	County
Old School Rd	CR 53	County
Orchard St		Town
Pictuay Road		Town
Rarick Road		Town
River Rd	NYS 144	State
Route 9W		Town
Rupert Road		Town
Russell Rd	CR 204	County
S Albany Rd	CR 54	County
Schoolhouse Rd	CR 205	County
Starr Rd		Town
State Hwy 85	NYS 85	State
Union Ave		Town
US Route 9W	US 9W	State
Van Dyke Rd		Town
Waldenmaier Rd		Town
Weisheit Rd		Town
Wemple Rd		Town
Winne Rd		Town

NOTE: All or portions of the roads listed above are located on the Priority Network. If there are inconsistencies between the tables (above) and Priority Network Map, the Priority Network Map shall supercede.

Capital District Transportation Committee
Bicycle and Pedestrian Priority Network





Bethlehem Roads
NYS 85 (portion)
NY 140 (portion)
NY 144
NY 443 (portion)
Krumkill Road (portion)
Russell Road
Blessing Road

Appendix B

Town of Bethlehem

Complete Streets Resolution

Climate Smart Community Resolution

RESOLUTION NO. 30

TOWN BOARD

TOWN OF BETHLEHEM

RESOLUTION

COMPLETE STREETS

WHEREAS, a goal of the Town of Bethlehem Comprehensive Plan is to improve mobility – the ability of people, regardless of age and status, to engage in desired activities throughout the Town; and

WHEREAS, the Town of Bethlehem Comprehensive Plan recommends maintaining and enhancing bicycle and pedestrian connections within neighborhoods, and between neighborhoods and hamlet centers;

WHEREAS, the Town of Bethlehem has established a pathways committee (PaTHs 4 Bethlehem) to explore bicycle and pedestrian facility connections and address issues; and

WHEREAS, bicycling and walking are important forms of transportation and recreation in our community; and

WHEREAS, bicycling and walking contribute to health, fitness, neighborhood vitality, social interaction, and economic development; and

WHEREAS, the full integration of all modes in the design of streets and highways will increase the capacity and efficiency of the road network, reduce traffic congestion by improving mobility options, limit greenhouse gas emissions, and improve the general quality of life; and

WHEREAS, educating the public about safety, health and mobility are part of being a quality community; and

WHEREAS, Complete Streets are defined as facilities that are designed and operated to enable safe and efficient access for all users. Persons with disabilities, pedestrians, bicyclists, motorists and transit riders are able to safely and efficiently move along and across a complete street.

NOW, THEREFORE, BE IT RESOLVED, the intent of the Town of Bethlehem Complete Streets Policy is to recognize bicyclists and pedestrians as equally important as motorists in the planning and design of all new street construction and street reconstruction undertaken by the Town.

BE IT FURTHER RESOLVED, it is also the intent of the Town of Bethlehem Complete Streets Policy to recognize that local Town streets with low vehicle volumes and slow travel speeds safely and efficiently accommodate bicyclists and pedestrians. However, principal Town roads that are characterized as having high vehicle volumes and high travel speeds, and are important for bicycle and pedestrian travel to access and connect to destinations in and adjacent to the Town, shall be considered for Complete Streets treatment.

BE IT FURTHER RESOLVED, that the Town Board hereby resolves to establish a Complete Streets Policy as follows:

Engineering: The Highway Superintendent shall consider the safe and efficient accommodation of bicyclists and pedestrians in all new street construction and street reconstruction undertaken by the Town of Bethlehem.

1. In addition, where the need for bicyclist and pedestrian facilities has been established or is defined in Town planning documents, including but not limited to the Bicycle and Pedestrian Priority Network identified by the PaTHs 4 Bethlehem Committee, the Highway Superintendent shall consider the addition of safe bicyclist and pedestrian facilities in new street construction and street reconstruction undertaken by the Town of Bethlehem. The addition of the bicyclist and pedestrian facilities shall be consistent with the scope of the improvement project, context sensitive to the surrounding environment, and shall not be disproportionate with the cost of the larger project.

2. Bicyclist and pedestrian facilities are defined as improvements that are above and beyond the normal space, surfaces, pavement markings, and signing that would routinely be incorporated into street design and maintenance for the accommodation of bicyclists and pedestrians. These facilities shall include but not be limited to sidewalks, curb cuts and ramps, marked crosswalks, pedestrian actuated signals, paved shoulders, bicycle route signing, bicycle lanes, bicycle parking facilities, and shared use paths.

3. Bicycle and pedestrian facilities may be planned, designed, developed and maintained in accordance with guidelines adopted by the United States Department of Transportation (USDOT), New York State Department of Transportation (NYSDOT), and the American Association of State Highway and Transportation Officials (AASHTO) or other guidelines approved by the Town of Bethlehem.

4. Whereas, if the Highway Superintendent determines that the inclusion of bicycle and/or pedestrian facilities are unable to be accommodated on a roadway or within Town right-of-way proposed for construction or reconstruction, he/she shall provide said determination in writing, with supporting documentation, to the Town Board for their information. Education and

Encouragement: The Town supports the promotion of bicycling and walking for health, fitness, transportation and recreation through events, programs and other educational activities, which benefit residents, students, businesses and visitors of all ages and abilities. These activities can be coordinated with the PaTHs 4 Bethlehem Committee, other Town Committees and Departments, local bicycle clubs, schools, health organizations and other partners.

Furthermore, the Town encourages the NYSDOT and Albany County to consider a Complete Streets approach when constructing or reconstructing their respective streets in the Town.

Enforcement: The Town will provide a balanced enforcement of the New York State Vehicle and Traffic Law for motorists, pedestrians and bicyclists. This will include enforcement of pedestrian's right-of-way in crosswalks, bicyclists riding with traffic and all modes sharing the road safely.

Additionally, the Town may consider the use of traffic calming applications as an alternative to bicycle and pedestrian facilities. Traffic calming applications help to physically or psychologically calm motor vehicle traffic behaviors, thereby aiding in the enforcement of a safe environment for bicycle and pedestrian travel.

On a motion by Mrs. Dawson , seconded by Mr. Kotary, and by a vote of 5 for, 0 against and 0 absent, this RESOLUTION was adopted on August 12, 2009 .

TOWN OF BETHLEHEM

445 DELAWARE AVENUE
DELMAR, NEW YORK 12054

RESOLUTION NO. 20

RESOLUTION IN SUPPORT OF CLIMATE SMART COMMUNITY

WHEREAS, the Town of Bethlehem believes that climate change poses a real and increasing threat to our local and global environments; and

WHEREAS, the effects of climate change may negatively impact our infrastructure, economy, farms, food supply, ecological communities; encourage the spread of invasive species and exotic diseases; reduce drinking water supplies; and pose health threats to our residents; and

WHEREAS, we believe that our response to climate change may result in new opportunities that could save money, encourage the growth of livable, energy-independent and secure communities, vibrant innovation economies, healthy and safe schools, and resilient infrastructures; and

WHEREAS, we believe the scale of greenhouse gas emissions reductions required for climate stabilization will require sustained and substantial efforts; and

WHEREAS, we believe that even if emissions were dramatically reduced today, communities would still be required to adapt to the effects of climate change for decades to come,

IT IS HEREBY RESOLVED that the Town of Bethlehem, in order to help reduce greenhouse gas emissions and adapt to a changing climate will, to the extent that actions can be taken that are consistent with good fiscal management of Town and taxpayer resources and are consistent with the Town's plans and goals as reflected in the Town Comprehensive Plan, pledge to take actions consistent with the goals outlined below.

1. The Town shall set a goal of combating climate change by participating to the extent practical and fiscally prudent in programs designed for Climate Smart Communities.

2. The Town shall investigate programs to reduce greenhouse gas emissions.

3. The Town shall take steps to decrease energy demand for local government operations, with a goal of reducing consumption of gasoline and reducing electricity use by 15 percent from projected levels by no later than 2015.

4. The Town shall encourage the use of renewable energy for local government operations.

TOWN OF BETHLEHEM

445 DELAWARE AVENUE
DELMAR, NEW YORK 12054

5. The Town shall investigate opportunities to realize benefits of additional recycling programs and other climate smart solid waste management practices.

6. The Town shall, to the extent consistent with the Town's Master Plan, promote climate protection through its community land use planning.

7. The Town shall, to the extent practical and fiscally prudent, investigate, consider and plan for the effects of unavoidable climate change on Town infrastructure.

8. To the extent practical and fiscally prudent, the Town shall support green economy innovations.

9. The Town shall endeavor to inform the public about steps that they can take to reduce energy use and reduce climate change.

10. The Town recognizes that research and policy on climate protection are constantly improving and evolving, and shall endeavor to remain updated on steps that the Town can take to reduce adverse climate impacts.

The foregoing resolution was presented for adoption by Mr. Kotary, seconded by Mr. Hennessey and passed by the following vote:

Ayes: Mr. Cunningham, Mr. Kotary, Mrs. Dawson, Mr. Hennessey.
Noes: Mr. Messina.
Absent: None.

DATED: April 22, 2009