

1.1 Purpose and Need Statements

1.1.1 Malletts Bay Stormwater Management System

Purpose

The purpose of the Malletts Bay Stormwater Management System project is to reduce public roadway and private property damage due to inadequate management of stormwater from town-owned roadways within watersheds draining to the easterly and southern shores of Inner Malletts Bay, and to reduce the volume of stormwater, sediment and phosphorus currently being discharged from roadways to Malletts Bay. The comprehensive suite of stormwater management strategies for Town-owned roadways will support Colchester's Clean Water and Malletts Bay Initiatives and will leverage future transportation and utility-related infrastructure projects to protect and enhance water quality.

Need

Project needs, as defined by the Town of Colchester, project team members, and the public at the Local Concerns Meeting include:

- **Insufficient roadway drainage infrastructure:**
 - Roadways and sidewalks have standing water following rain events or periods of snowmelt.
 - Significant roadway deterioration has occurred as a result of poor drainage.
 - Private properties in portions of the project area are negatively impacted by uncontrolled run-on from roadways during rain events.
- **Excessive loadings of stormwater volume, sediment, and nutrients:**
 - During rainfall events, insufficient, aging, or missing stormwater management measures in the project area result in delivery of untreated or insufficiently treated runoff from roadways to tributary streams and to Inner Malletts Bay.
 - Where runoff is channeled from roadways via ditches or closed drainage systems to streams without treatment, erosion and gullyng results in transport of sediment into streams, and creates channel and streambank instability with additional transport of sediment and nutrients to Malletts Bay.

1.1.2 West Lakeshore Drive Bicycle and Pedestrian Enhancements

Purpose

The Purpose of the West Lakeshore Drive Bicycle and Pedestrian Enhancements project is to improve the safety and mobility of pedestrians and cyclists along the West Lakeshore Drive corridor between Blakely Road and Prim Road.

Need

Project needs, as defined by the Town of Colchester, project team members, and the public at the Local Concerns Meeting are:

- **Lack of safe bicycle facilities:** Currently, most cyclists traveling along West Lakeshore Drive use the roadway shoulder, which varies in width from one to three feet. This narrow shoulder is marginally adequate for experienced cyclists and is generally not utilized by other cyclists.
- **Pedestrians and cyclist conflicts on West Lakeshore Drive sidewalk:** Due to the lack of a safe bicycle facility along West Lakeshore Drive, some cyclists use the existing sidewalk along the south side of Lakeshore Drive leading to potential conflicts with pedestrians along the sidewalk.
- **Missing path connection between Prim Road and Bayside Park:** There is currently no recreational path between the Town's existing path system at Bayside Park and the planned multi-use path along West Lakeshore Drive west of Prim Road.

1.1.3 West Lakeshore Drive / Blakely Road Intersection Enhancements

Purpose

The Purpose of the West Lakeshore Drive / Blakely Road Intersection Enhancements project is to identify and develop a preferred approach to improve safety and operational efficiency for all users through the West Lakeshore Drive / Blakely Road intersection and adjacent area.

Need

Project needs, as defined by the Town of Colchester, project team members, and the public at the Local Concerns Meeting are:

- **Insufficient intersection capacity:** The current signalized intersection configuration experiences moderate to significant delay and queuing during weekday peak periods and the summer seasonal peak. This is demonstrated by the Level of Service D and volume-to-capacity ratio of 0.82 occurring during the current weekday evening peak hour and the projected Level of Service E and volume-to-capacity ratio of 0.99 projected during the 2037

weekday evening peak hour. The intersection accommodates relatively heavy commuter traffic flows traveling from East Lakeshore Drive to West Lakeshore Drive and significant pedestrian crossing volumes during the summer months.

- **Existing safety issues:** The intersection is designated as a High Crash Location in the current (2010-2014) VTrans High Crash Location report. Between 2011 and 2015 there were 33 reported crashes at the intersection, with two reported crashes involving injuries.
- **Inadequate pedestrian accommodations:** The intersection lacks several pedestrian safety and accessibility related items to accommodate both routine and peak seasonal pedestrian crossing demands. These items include the lack of detectable warning surfaces at the sidewalk ramps, lack of crosswalk striping across the recreational fields parking lot access, and lack of pedestrian countdown timers. Additionally, the July 2015 AARP Vermont Street and Sidewalk Audit noted that the current signal provides inadequate pedestrian crossing time.