

**SCOPE OF SERVICES FOR
SOUTH BURLINGTON MULTI-SITE PEDESTRIAN CROSSING / BICYCLE ACCESS SCOPING
September 13, 2018**

Toole Design Group (“the Consultant”) will provide professional transportation engineering services to the **Chittenden County Regional Planning Commission** (“the Client”) in accordance with the Scope of Services as specified below. Specifically, the Consultant will provide engineering services to conduct a pedestrian and bicycle access study and provide conceptual design and order of magnitude cost estimates for crossing and accessibility treatments for four (4) locations in South Burlington, Vermont:

- (1) North-south crosswalk and pedestrian refuge on Kennedy Drive at Twin Oaks Terrace;
- (2) North-south crosswalk and pedestrian refuge on Williston Road between Hinesburg Road and Kennedy Drive, in the vicinity of Pillsbury Manor North and Victory Drive;
- (3) Continuation of bicycle lanes through the intersection of Williston Road and Kennedy Drive; and
- (4) Continuation of bicycle lanes through the intersection of Williston Road and Hinesburg Road.

The study and associated concept designs will seek to devise geometric and operational solutions to enhance safety and ease of use for pedestrians and bicyclists at these locations. This **scope does not include public outreach**. For scoping purposes, TDG assumes a maximum project duration of six (6) months.

TASK 1 KICK-OFF MEETING AND PROJECT MANAGEMENT

1. At the outset of the project, TDG will hold a kick-off meeting with CCRPC and South Burlington staff to review the scope, project schedule, and available data. This meeting will be conducted via telephone and/or web conference. During the kick-off meeting, attendees will review available data, identify any outstanding data needs, and refine the scope of work and schedule of deliverables to meet the needs of CCRPC and South Burlington.

Task 1 Deliverables:

- Kick-off meeting summary
- Updated scope and schedule
- Invoices and progress reports (assume 6)

TASK 2 REVIEW EXISTING INFORMATION AND DATA

1. TDG will begin the study by reviewing existing traffic and crash data, and other relevant documents and data. These information sources include, but are not limited to:
 - Existing VTrans and CCRPC traffic counts and speed data for the study sites and adjacent areas
 - Signal timing for study sites and adjacent intersections
 - As-builts for the study sites
 - Crash data for the project corridors (VTrans, CCRPC, and City of South Burlington data, if available)
 - VTrans *Guidelines for Pedestrian Crossing Treatments* (January 2015 update)
 - CCRPC Transportation Improvement Program (TIP)

Where relevant, we will also consider the facilities proposed in the 2018 South Burlington Bicycle and Pedestrian Feasibility Study. Data and findings from this task will be incorporated into documentation in Task 3.

Assumptions:

- Any documents or data not readily available online will be provided by CCRPC staff.

TASK 3 DEVELOP DESIGN RECOMMENDATIONS

TDG will perform a study of the project locations, identify solutions, and prepare alternative concept designs for each location. To achieve these ends, TDG will:

1. Conduct a site visit of the four locations to observe existing conditions and behaviors. TDG staff will collect field measurements to verify basemapping, identify and document roadway characteristics, noting safety conditions/hazards, vehicular operating conditions, and pedestrian and bicycle activity. Digital photographs documenting conditions at the sites will be obtained.
2. Develop conceptual design alternatives for each location (up to 2 per location), accompanied by feasibility assessments. Treatments included in these alternatives may include but are not limited to:
 - Modifications to signage and pavement markings;
 - Raised median refuges;
 - Rectangular Rapid Flashing Beacons (RRFBs);
 - Pedestrian Hybrid Beacons (PHBs);
 - Adjustments to curbs and curb ramps;
 - Operational adjustments to signal timing or signal design
3. Perform traffic analyses to identify the impacts of potential changes to lane configurations and signal timing.
4. Calculate order-of-magnitude cost estimates associated with the conceptual design alternatives.
5. Prepare a comparison matrix describing the design alternatives and their impact on issues identified during the kick-off meeting, impacts on existing resources, connectivity to adjacent facilities, feasibility, availability of right-of-way, and benefits for users.
6. Prepare a summary memorandum incorporating:
 - Data and analysis associated with Task 2,
 - Site visit photographs and observations,
 - Conceptual design alternatives, and
 - Order-of-magnitude cost estimates.
7. Conduct a conference call with CCRPC staff to discuss the design alternatives and summary memorandum.

Task 3 Deliverables:

- Conceptual design alternatives (up to two [2] per each of four [4] sites)
- Order-of-magnitude cost estimates
- Comparison matrix for design alternatives
- Summary memorandum