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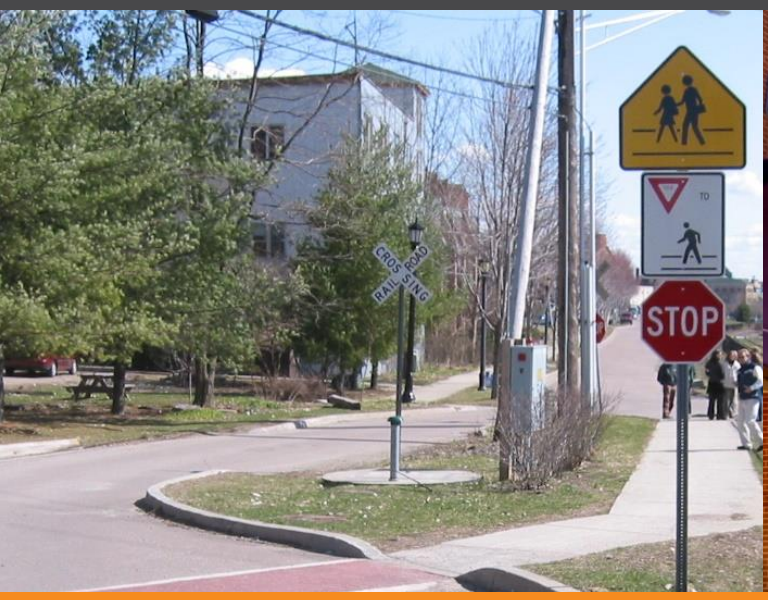
CHITTENDEN COUNTY REGIONAL PLANNING COMMISSION & CITY OF BURLINGTON

PHASE A: PARKING MANAGEMENT MODEL

Scope of Work | February 12, 2021



180 Battery Street, Suite 350
Burlington, VT 05401
802.383.0118
www.rsginc.com

PREPARED FOR:
CHITTENDEN COUNTY REGIONAL PLANNING COMMISSION & CITY OF BURLINGTON

SUBMITTED BY:
RSG

IN CONJUNCTION WITH:
DESMAN DESIGN MANAGEMENT

CONTENTS

1.0 INTRODUCTION

This proposal outlines the goals and objectives for a Parking Management Plan (PMP) for the Winooski Avenue Corridor between Pearl Street and Riverside Avenue in Burlington, Vermont. This work follows a comprehensive corridor study evaluating options to enhance multimodal capacity and safety in the corridor.

As directed by City Council, this PMP will:

1. Identify practical strategies for balancing parking supply and demand north of Pearl Street, with the goal of meeting essential parking needs while freeing up space for dedicated bike lanes; and
2. Convene a City Council – Stakeholder Committee to approve this scope of work, methodology, and public engagement plan; receive periodic updates from the project team; review recommendations of the PMP; and approve the final PMP after its presentation to the Ward 2/3 Neighborhood Planning Assembly (NPA).

This PMP will provide a transparent and technically focused analysis on the demand for vehicle parking and how that demand may be managed through on-street and off-street parking spaces. RSG's Corey Mack will be the primary point of contact and project manager. RSG's familiarity with the issues in the corridor will maximize the efficiency of this PMP. RSG has engaged Desman Design Management (DESMAN), a firm devoted to parking issues, to advise on the development of the PMP. Andy Hill from Desman will be the primary point of contact from Desman. Andy will assist in facilitation, review analysis, and inform on management approaches. Both firms will be supported by additional technical staff.

This scope of work is specifically focused on the first phase (Phase A) of the PMP which involves creating a parking model for the corridor which can be called upon to inform the level of parking demand in the study area by accounting for how changes in land use may affect the demand for parking and as well as how changes in on-street and off-street availability affect the supply of parking.

2.0 PROJECT APPROACH

TASK 0: Project Initiation Meeting

Convene the City Council-Stakeholder Committee (hereafter referred to simply as the "Committee") for a meeting with the City and the Chittenden County Regional Planning Commission (CCRPC) to approve the Phase A draft scope of work, the study area and schedule. The Committee will also review and provide feedback on the preliminary Phase B scope of work (a standalone scope of work).

The Committee meeting will cover topics such as what is a parking management plan, what does one typically consist of, the challenges during COVID regarding empirical observations, and why the suggested approach is recommended.

RSG will prepare a draft presentation and draft Phase B scope of work in advance for the City and the CCRPC at least one week prior to the meeting.

Deliverable: Meeting agenda, meeting notes, monthly progress reports.

2.1 PHASE A – DESKTOP PARKING MODEL

Overview

The first phase of the PMP will build a representation of the vehicle parking demand along the North Winooski Avenue corridor in a parking model using national parking data that will be adjusted to better reflect local Burlington conditions. Best practice guides from the Institute of Transportation Engineers (ITE) and the Urban Land institute (ULI) will inform the national data.

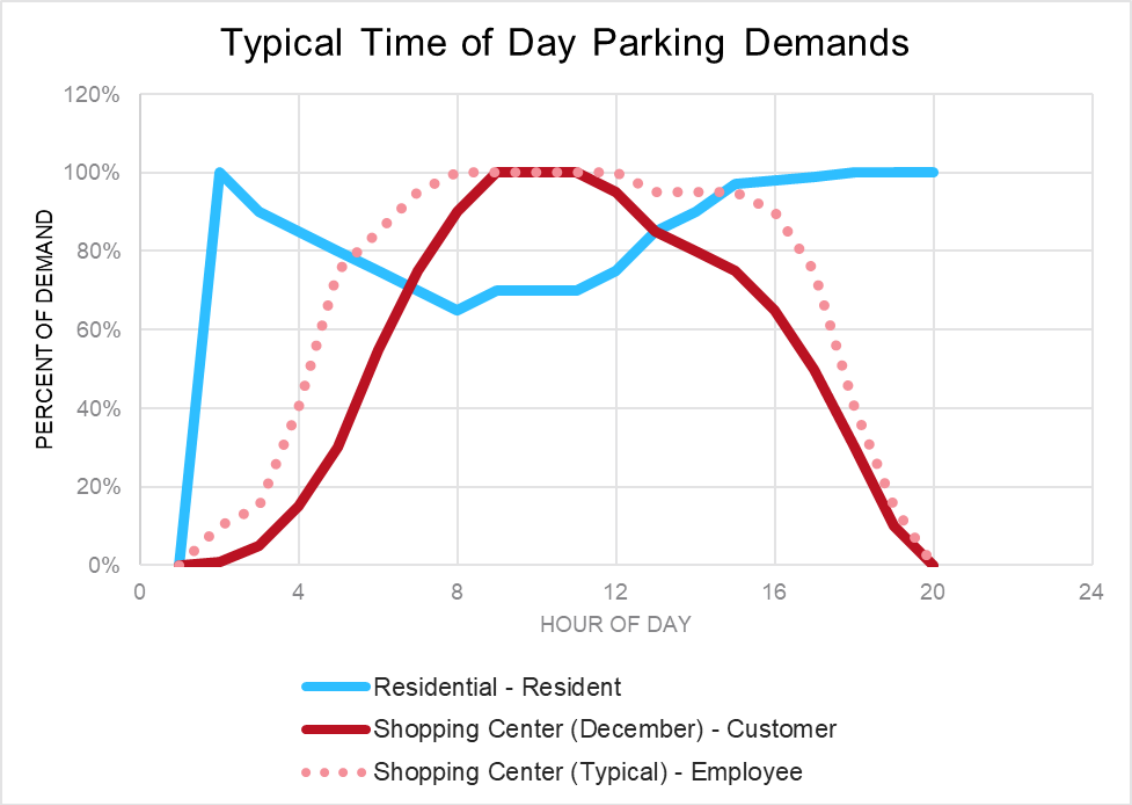
FIGURE 1: NATIONAL PARKING DATA

Available historical parking counts pre-COVID will be used to inform the calibration to local conditions. The project team will solicit available data from any sources, including publicly collected parking data from previous studies, and private parking lot data to help calibrate how local Burlington demand compares to national averages. Previous studies could include those conducted in Winooski, South Burlington, and Williston.

The Phase A parking model can proceed regardless of the effects of COVID and prior to any decisions about specific scenarios, evaluation, and prioritization processes. A parking model is used to evaluate parking demands of land uses across the time of day, day of week, and month of a year. The parking model accounts for how many vehicles may be typically associated with a specific land use across those points in time and how multiple land uses overlap in their parking demand.

Example data is shown in Figure 2 that demonstrates the parking demand for three specific user groups – residential, shopping customer and an employee of a retail store. The residential sees 100% of its demand at certain points of the day but the shopping centers see their peak during the middle of the day. The parking model layers all the individual land uses in the study area to understand the cumulative patterns and quantity of parking demanded.

FIGURE 2: EXAMPLE SHARED PARKING CONCEPT



Source: RSG with ULI Data

TASK 1: Define the Geographic Scope of the Study Area

The geographic scope of the PMP will encompass the entire North Winooski Avenue section between Pearl Street and Riverside Avenue. Any segment within the corridor can be individually considered within the parking model. Each property will be analyzed individually as well as each segment of curb between street intersections.

The study area will include properties fronting Winooski Avenue and approximately one-block back. The study area will include the on-street and off-street parking lots (public and private). The proposed study area is shown in Figure 3.

Deliverable: Confirm the geographic boundaries of the study area.

FIGURE 3: PROPOSED STUDY AREA

Source: RSG using Google Earth background image

TASK 2: Determine Existing Conditions

Parking Supply

Count all parking spaces within the study area and identify the following attributes:

- On-street or off-street spaces (public and private, shared or reserved).
- Restrictions by time or use (loading, accessible, 15-minute).
- Georeferenced location, number of spaces, lot size or curb length.

This can be done within the office (desktop analysis) using orthophotos (e.g., Google Earth or other available platforms) as there is no underground parking or parking structures in the area aside from the Health Center. Each property in the study area will be evaluated and the supply and availability of vehicle parking will be analyzed and incorporated into the parking model.

In-field verification of the parking space counts can occur when doing actual ground counts in Phase B.

Parking Demand

Parking demand varies by time of day and season of the year. Different land uses have different peak demand times (as evidenced in Figure 2). This task includes several mechanisms to assess demand:

a) Parking Analysis Model using national parking averages and local parking generators

b) Calibrate the model with local pre-COVID data

Parking Analysis Model

RSG will perform a shared parking analysis using the ULI Shared Parking methodology to understand the parking demands in the area. This will require the following input data:

FIGURE 4: EMPLOYMENT AND HOUSING DATA

- RSG proposes using the employment and housing data from the CCRPC Regional Model (Figure 4). RSG will review the data and provide it to the City. The CCRPC may have more recent data which will be obtained for use in this study.
- The City will be responsible for reviewing the accuracy of the land use data inputs and approving them for use in this study.

- RSG will convert the land use and employment data into units consistent with the parking data inputs from ITE and ULI.
- The City shall review and approve for use the parking supply data that will be collected and developed in GIS. This review will consist of confirming quantity of parking, restrictions of the space (time of day, accessible, private vs. shared, etc.).

Calibrate Shared Parking Analysis

Source: RSG with CCRPC Data

The parking model applies national average parking demands obtained from years of empirical observations included in the ITE Parking Generation Manual and ULI Shared Parking Manual. The national data will be the starting point for arriving at a locally specific parking rate.

Parking data collected during the Winooski Avenue corridor study and other parking studies in the city and region will be collected to update the national data with local parking rates. For example, if a previously collected study suggests that parking and trip generation demand is 80% of national data, then that will inform how the parking model should be adjusted for North Winooski Ave. The City and CCRPC will assist in the collection of this data. RSG will query Act 250 databases, previous publicly available studies, etc. Off-street parking demand in the corridor will be the most difficult data to identify. The project team will use professional judgement, past observations, and any other information about how much off-street parking demand occurs in the corridor.

Given the reality that COVID will have lasting effects and alter travel behavior for the foreseeable future, starting with the national averages and then making adjustments is the only viable option to advance this work within the next two years. Observations can inform how behaviors, including parking demand, change and stabilize over the coming year and the parking model can be re-calibrated as necessary.

Evaluate the Data

The parking model will be used to compare the existing parking demand to the existing parking supply. The output from the parking analysis will provide information on the estimated level of ‘demand’ for the many parking areas (on street parking location as well as the off-street parking lots) and identify where and when (during the day) there might be areas of excess supply or where demand may exceed supply.

The goal is to develop a better sense of the parking demands from the local land uses and how actual parking demand is generated and how / where it is being met. The final draft parking model will be reviewed with the Committee.

Deliverables: Technical memo including the model results of the existing parking supply and demand. The memo will include what assumptions were made with the national data and what efforts were made to calibrate the data to local conditions. A meeting with the Committee to present the draft technical memo with a presentation of the analysis.

3.0 BUDGET, SCHEDULE, AND MANAGEMENT

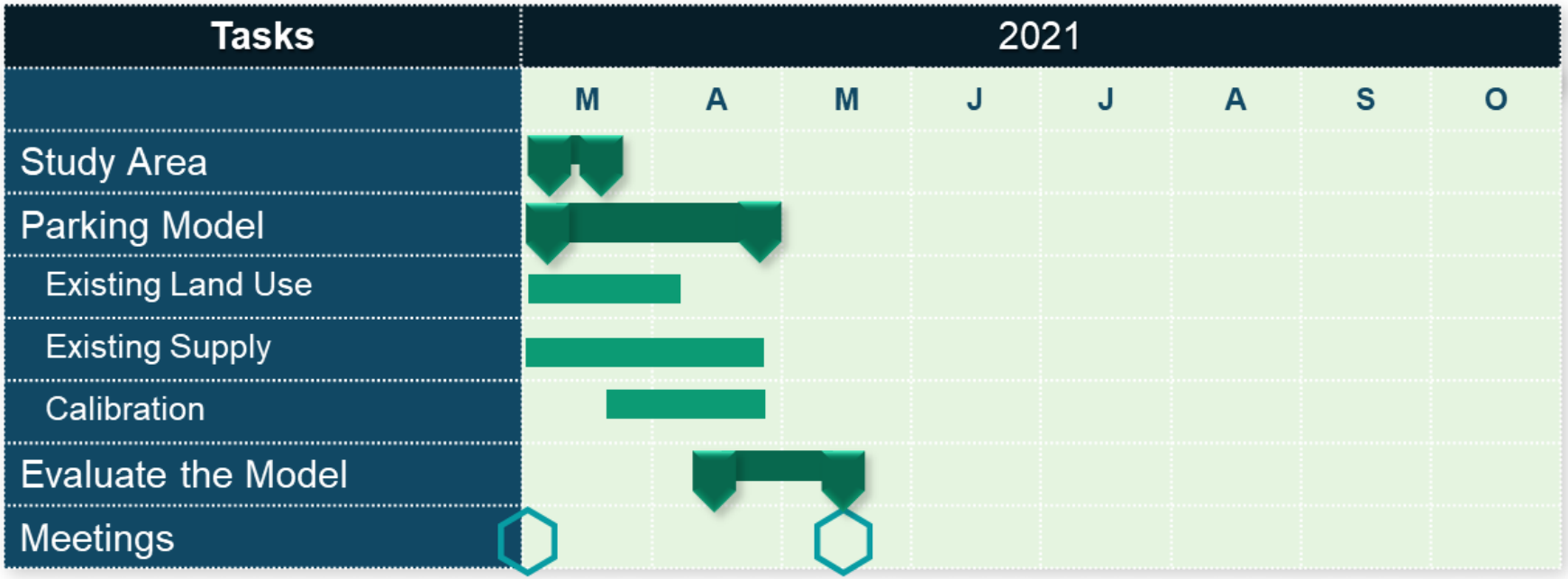
The tasks associated with the Phase A Parking Management Plan are is anticipated to require 313 hours at a cost of $40,075. The cost per task is shown below.

FIGURE 5: PHASE A BUDGET

		RSG					Desman	
		Slason	Mack	Lee	Culp	Freeman	Hill	
		Director	Sr. Engineer/ Planner	Project Engineer	GIS Lead	Analyst	Principal	Fee Per Task
Task 0	**Project Initiation Meeting and Phase A Project Management**	3	4			2	5	
Task 1	**Determine Geographic Scope**							
	Confirm Project Extents	2	2			1	2	
Task 2	**Determine Existing Conditions**							
	Desktop Inventory of Parking Spaces (code in GIS)	1	2		4	16		
	Land use inputs	2	2	12	4	8		
	Desktop Shared Parking Analysis	1	16	40	40	8		
	Previous data and calibration	4	16	12	24	24		
	Evaluate the data	4	16	8			4	
	Committee meeting (presentation, summary, memo)	4	16			4		
	Direct							
	OH (180.71%)							
	Fee(10%)							
	Hourly Rate							Totals
	Fee per staff							$40,075.52 Task Fee
	Hours per staff	21	74	72	72	63	11	313 Task Hours

The overall Parking Management Plan is required to be completed by early October to inform the paving design for Winooski Avenue which will be completed by end of 2021. With that schedule in mind, this Phase A work is anticipated to be complete by June 2021. This schedule gives two months (March and April) to collect data and calibrate the parking model and then the month of May to use the model to explore and evaluate the data under a variety of conditions. Two Committee meetings are anticipated, one at the beginning to review and inform the final scope of work and one near the completion of Phase A. The second meeting will focus on how the tool is operating and how will be combined with other quantitative as well as qualitative evaluation processes to inform the outcomes of this plan.

FIGURE 6: PHASE A SCHEDULE



Management

Corey Mack will be the overall project manager and be the point of contact for day to day matters on the project. Jonathan Slason will oversee the project and provide technical support to the team. The project will be managed out of Burlington office.

Andy Hill from DESMAN will participate and assist in the review of the validation of the parking model relative to national and local conditions given his many years of parking studies in the Burlington area.

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180 Battery Street, Suite 350
Burlington, VT 05401
802.383.0118
www.rsginc.com

White River Junction & Burlington, VT

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