

SOMERVILLE CENTRAL HILL CAMPUS PARKING STUDY

EXECUTIVE SUMMARY

Nelson\Nygaard conducted a parking study to determine the parking needs for existing employees and patrons utilizing on-site parking on the Central Hill Campus (which includes City Hall, Somerville High School, and the Somerville Library), the majority of which is proposed to be eliminated as part of the Somerville High School building project. To be conservative, this study assumes that the future Central Hill Campus will provide no on-site parking for employees and that an alternative parking strategy will be necessary to accommodate employee parking needs.

This study recommends shifting Central Hill Campus employee parking to the streets surrounding the campus. These recommendations stem from analysis of data from an extensive parking survey that took place in spring of 2017 of parking utilization on the Central Hill Campus as well as streets within walking distance from the site. The proposed parking strategy balances the need to shift employee parking off the campus with the need to ensure that sufficient on-street parking is available for residents.

STUDY DESIGN

The project team determined a study area that encompassed all on-site City Hall, High School, and Library parking as well as residential streets within walking distance (about a quarter mile) where employees are likely to park.

Parking utilization (also referred to as parking demand) data was collected during multiple time periods on three days in mid-June of 2017 (before the end of the school year). Street sweeping, which changes residents' parking behavior, was in place during some of these data collections periods. To be conservative, the team chose the highest utilization for on-street and off-street parking for each time period, thereby creating a worst-case scenario for each time period.

PRELIMINARY RESULTS

The project team modeled the impact of shifting on-site campus parking to on-street parking by methodically distributing employees across the street blocks included in the study area, beginning with residential blocks nearest to the site and moving outward. To ensure a conservative analysis, the team:

- Used the utilization data from the 9am data collection time period as a baseline, which represents peak demand for on-site campus parking
- Assumed that no parking would be allowed on site and therefore that all 266 vehicles that can park on campus would park on street.
- Assumed that all cars with school employee permits that currently utilize on-street parking (27 in the worst-case scenario data) would continue to do so, resulting in a total of 293 employees parking on street.
- Limited utilization of each residential block to 85% to ensure availability for and minimize impacts to existing users.

This analysis demonstrated that campus-related parking demand can be accommodated on-street within an approximately 1- to 2-block radius of the campus on non-street sweeping days, with an overall on-street utilization of 83%.

Somerville's street sweeping program adds a layer of complication to shifting on-site parking to the streets in the study area, however, since the street sweeping restrictions drop the available supply in the study area by over 300 spaces several days a month during the street sweeping season, which runs from April 1st through December 31st.

RECOMMENDATION: ZONAL PERMIT SYSTEM BASED ON STREET SWEEPING

To address the capacity challenges created by street sweeping, the project team recommends creating an on-street permit parking program that is tied directly to the street sweeping schedule and structuring the program so that employees have a primary zone in which to park on non-street sweeping days and a secondary zone in which to park during street sweeping.

In analyzing this approach, the project team determined that the study area needed to be expanded to ensure sufficient capacity during street sweeping, so the team collected data to determine the capacity and utilization of several additional streets, which are reflected in Figure 1 below. The final recommended parking area includes three zones:

- Zone 1 begins west of School Street and is bounded at Central Street to the west, Medford Street to the north, and Avon Street to the south.
- Zone 2 includes all streets in the study area north of Medford Street, as well streets south of Highland Avenue, north of Summer Street, east of School Street, and west of Walnut Street.
- The Arterial Zone includes the three primary thoroughfares in the study area: Medford Street, Highland Avenue, and School Street between Medford and Highland.

Figure 1: Recommended Employee Parking Zones



IMPLEMENTATION

The project team's recommended assignment of permits is summarized in Figure 2. A total of 130 permits would have Zone 1 as the primary zone, and 163 would have Zone 2 as the primary zone. The assignment achieves a target 85% utilization of on-street parking during non-street sweeping days, leaving sufficient capacity in the neighborhoods to accommodate fluctuations in on-street parking and therefore minimizing impacts on residents.

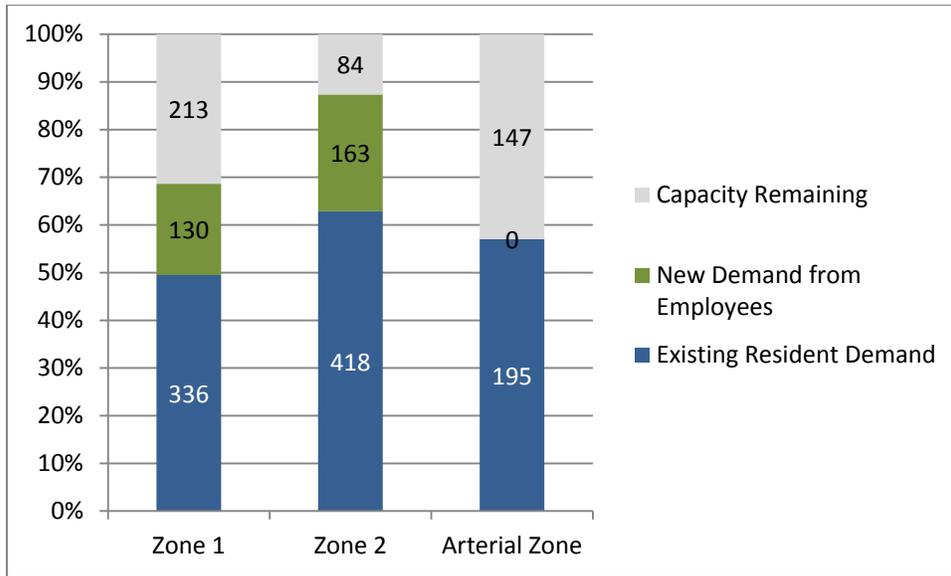
About two-thirds of Zone 1 permit holders would have Zone 2 as their secondary zone, meaning they would park in Zone 2 during street sweeping in Zone 1. The remaining Zone 1 permit holders would park in the Arterial Zone during street sweeping in Zone 1. All Zone 2 permit holders would have Zone 1 as their secondary zone, meaning they would park in Zone 1 during street sweeping in Zone 2. Utilization of on-street parking during street sweeping days may exceed the target 85% utilization due to reduction in overall supply, but these days only occur four times a month.

Figure 2: Recommended Assignment of Employee Permits with Primary and Second Zones

Number of Permit Holders		Secondary Zone			
		Zone 1	Zone 2	Arterial Zone	Total
Primary Zone	Zone 1	n/a	84	46	130
	Zone 2	163	n/a	0	163
	Arterial Zone	0	0	n/a	0
	Total	163	84	46	293

Figures 3 to 5 show the final utilization of the study area with and without street sweeping, with the implementation of the project team’s recommended permit system. It was assumed that no campus-related parking activity would be permitted in zones that are being swept that day.

Figure 3: Final Study Area Utilization (No Street Sweeping)



Somerville Central Hill Campus Parking Study - Executive Summary
City of Somerville, MA

Figure 4: Final Study Area Utilization (Street Sweeping in Zone 1)

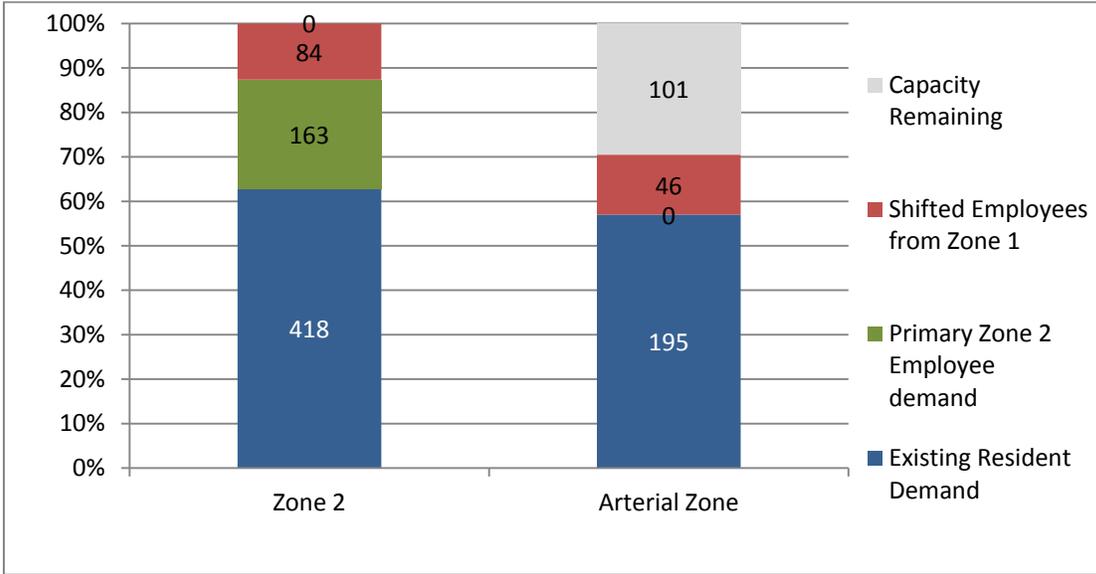


Figure 5: Final Study Area Utilization (Street Sweeping in Zone 2)

