



MEMORANDUM

TO: Arthur Capper/Carrollsborg Team

FROM: Michael P. Hurley
Robert Schiesel, P.E.

DATE: December 2, 2008

SUBJECT: Arthur Capper/Carrollsborg Workforce Housing Parking Analysis (REVISED)

OVERVIEW

This revised memorandum provides a summary of parking demand analysis conducted for the existing workforce housing building located on Square 825-South by Gorove/Slade Associates, Inc. (G/SA) to determine the level of parking required and the adequacy of parking supplied on-site.

The site is located in near Southeast Washington, DC on M Street between 4th and 5th Streets, as shown in Figure 1. The building consists of 138 workforce housing units and a ground level parking garage with 33 spaces. In addition, 60 senior housing units are located on Square 825S in a separate building. This memorandum focuses on the parking demand generated by the workforce housing residents.

In general, this memorandum found the following:

- 33 parking spaces are provided for workforce housing residents on-site;
- On-street parking reserved for residents is readily available in the immediate vicinity. 59 on-street residential permit parking spaces are available on streets adjacent to Square 825S, of which only 25% were occupied during a parking survey conducted on a weeknight;
- The parking demand for workforce housing residents is approximately 44 to 48 parked cars, which can be easily accommodated within the parking garage and the on-street residential permit parking;
- Additional parking is not required to accommodate demand from workforce housing residents; and
- These conclusions are still valid in the future, under a fully built-out Capper Carrollsborg neighborhood, as the analysis indicates that future supply will accommodate future demand.

ANALYSIS

Square 825S has 138 workforce housing units and a ground level parking garage with 33 parking spaces. The workforce housing building is fully occupied but there are several spaces that remain available in the

building's parking garage. G/SA conducted a parking survey, reviewed parking generation manuals, and utilized G/SA parking expertise in Washington, DC to develop a parking demand profile for the workforce housing residents. This section details the analyses and findings.

Parking Generation Estimates

G/SA referenced two parking generation manuals commonly used to forecast parking demand to develop a parking demand profile for the workforce housing. These manuals provide parking demand forecasts for residential units but not for workforce housing. The ITE Parking Generation, 3rd Edition projects parking demand ratio for urban low/mid-rise apartments at 1.00 vehicles per unit. The ULI Shared Parking, 2nd Edition similarly does not have parking generation rates for workforce housing but does project parking demand ratios for residential units at 1.65 vehicles per unit.

These parking generation forecasts generally apply to developments in suburban areas with little or no transit service. In Washington, DC the maximum residential parking space per unit at buildings located near a Metrorail station is typically 0.80 to 1.00 car per unit rather than 1.65 cars per unit. These rates for parking demand for DC residential buildings should be 40% to 50% less than rates in these manuals. Public housing has less demand than typical housing, so rates for the workforce housing are expected to be even lower. For a housing complex the size of that in question, these rates suggest an expected parking demand somewhere between 44 to 69 spaces.

Census Data

Though the area has changed tremendously since 2000, G/SA referenced 2000 census data as guide for establishing parking demand because the current residential building was built to replace housing removed in the area following the 2000 census. US Census data has car ownership rates by household. Squares 825S is located in US Census Tract 72. In 2000, 85% of households in this census tract had no car available, while 10% had 1, 2% had 2, and 2% had two or more cars available per household. If car ownership characteristics were the same or similar to those observed during the 2000 census, current residents would own between 20 and 30 cars total.

Parking Survey

Since calculations of parking demand using census data and standard manuals vary significantly and do not apply directly to workforce housing, G/SA conducted a parking supply and demand survey in the study area at a time when residential parking demand was at its highest. Figure 2 identifies the location and approximate quantity of on-street parking and occupancy observed by G/SA. The study area has a mix of restricted Zone 6 residential permit parking (RPP) and un-restricted metered and non-metered parking. The vast majority of on-street parking was vacant during the observation period.

Along the streets that border the site are 71 parking spaces. G/SA observed a total of 29 cars parked in these spaces, of which 15 had Zone 6 RPP parking stickers displayed. 3 cars were parked at metered spaces and another 9 were parked adjacent to the DC Public School at the corner of 5th and M Streets where there are no RPP regulations. Table 1 lists the total number of on-street parking paces in the study area, the total number occupied spaces, and the number of spaces occupied by Zone 6 permit holders.

Table 1: On-Street Parking Spaces and Occupancy

	Total Spaces	Occupied Spaces	Occupied by Zone 6 Permit Holders
Number of Spaces	610	82	38
Percent of Total Spaces		13%	6%
Percent of Occupied Spaces			46%

Based on Gorove/Slade Associates, Inc. Parking Survey Conducted on Wednesday, May 14, 2008 at 7:30 PM

Although all 33 spaces in the parking garage are not utilized, to provide for a conservative parking profile, this study assumed that the parking garage was fully occupied.

G/SA used parking observations and the parking generation manuals to develop a parking demand profile for the workforce housing residents. The parking survey observed that up to 33 cars were parked on-site and an additional 29 cars parked on-street in the immediate vicinity. It could not be determined which on-street vehicles were owned by workforce housing residents. Of the 29 cars parked on-street 15 cars had Zone 6 RPP parking stickers. To ensure a conservative estimate of workforce housing parking demand, G/SA assumed that 11 Zone 6 RPP cars parked on-street were residents of the public housing as well as ¼ of all other cars, or 4 (assuming residential based cars were split proportionately between the workforce and senior housing on Square 825S). Combined, this indicates that the parking demand profile for the public housing is between 44 and 48 cars.

This demand profile is consistent with parking demand rates contained in parking generation manuals when accounting for proximity to a Metrorail station, car ownership characteristics in this area prior to this development, car ownership characteristics of public housing residents, and conditions observed during the parking survey.

Future Supply & Demand

In the future, the on-street parking supply may not be as abundant. If that becomes the case the findings from the analysis are still valid in because future demand can fit within the existing supply. At the present time, on-street parking is abundant, and more than adequate to satisfy the anticipated demand for workforce housing residents. The fact that there is excessive supply may influence current residents' decisions regarding auto ownership; abundant free parking is an economic factor in auto ownership.

As development increases in this neighborhood, there will be more competition for the finite amount of

free on-street parking. This will influence residents' decisions to own cars, and the ratio of car ownership will diminish. Eventually, neighborhood parking demand and supply will reach equilibrium with demand reaching a plateau at the same level as total supply.

It is reasonable to expect that when on-street parking becomes more competitive, that the workforce housing residents may be limited to parking only on street frontage adjacent to their building. This amounts to approximately 14 spaces. Combined with the structured parking, this totals a supply of 47 spaces, which is in the demand range of 44 to 48 spaces. This indicates that the future supply can accommodate the future demand.

CONCLUSION

The workforce housing on Square 825S has a parking demand that can be easily accommodated in the existing parking garage and the residential permit parking on-street adjacent to the building. Additional parking is not required to accommodate the demand from workforce housing.

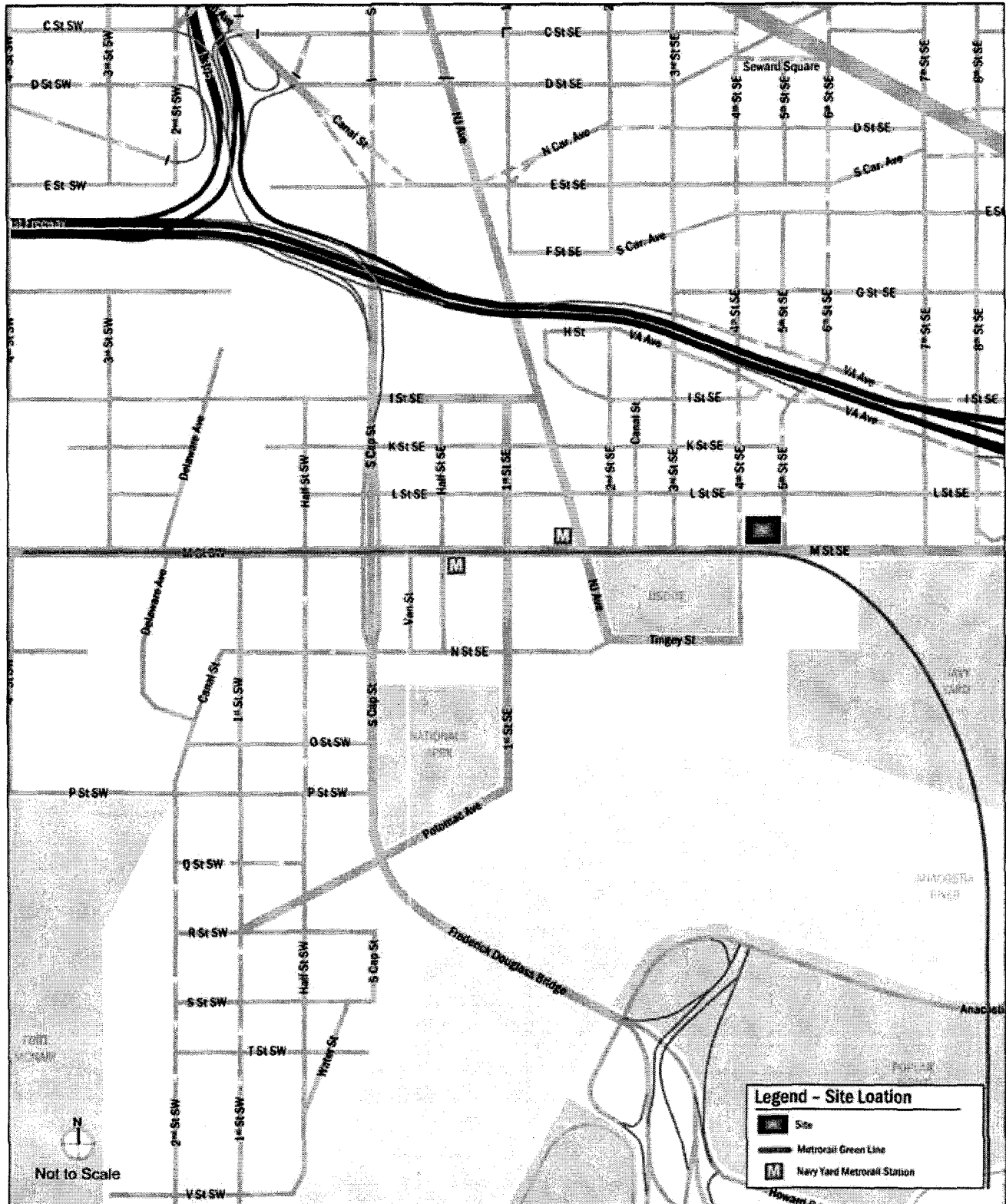


Figure 1: Site Location

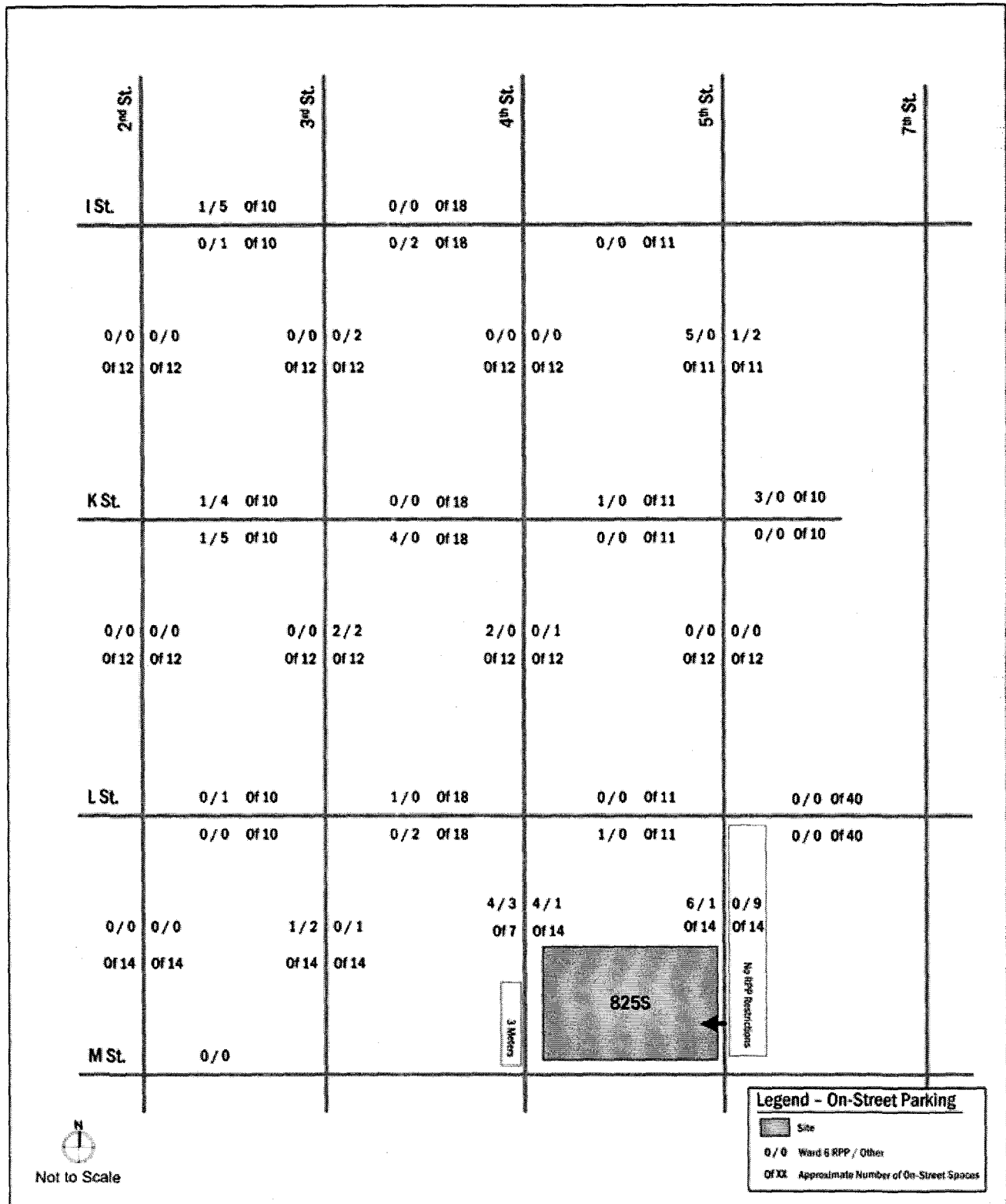


Figure 2: On-Street Parking Supply and Occupancy (Observations at 7:30 PM on May 14th, 2008)