



MEMORANDUM

TO: Arthur Capper/Carrollsbury Team

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

DATE: December 4, 2008

SUBJECT: Arthur Capper/Carrollsbury Square 882 & the Northern Portion of Square 769
Traffic Statement (REVISED)

This memorandum is a statement of the transportation features of the proposed development on Square 882 and the northern portion of Square 769 in SE Washington, D.C. These squares are part of the Arthur Capper/Carrollsbury development, and received preliminary PUD approval in 2004. This traffic statement is part of an application for second stage approval for these squares.

This traffic statement includes a description of the transportation aspects of the proposed development on Square 882 and the northern portion of Square 769, a review of the original project traffic impact study, and discussion of impacts of the proposed development on the transportation network.

The Arthur Capper/Carrollsbury PUD application from 2003/2004 that gained the initial set of approvals contained a thorough Traffic Impact Study (TIS) prepared by O.R. George and Associates and reviewed by DDOT.

Summary of Findings

This traffic statement arrived at the following conclusions:

- Quality vehicular access exists to the site from multiple routes;
- The planned parking garage access points and private drives will operate at acceptable conditions;
- The amount and location of loading docks is appropriate, and truck turning movements can be accommodated in the private drives. Loading activity will not block public streets;
- The proposed development has quality bicycle and pedestrian access;
- The proposed development has quality transit access;
- The amount of parking is appropriate for development in a transit-oriented neighborhood;
- The overall amount of vehicular trips generated by the proposed development is less than from the

preliminary approvals; and

- The capacity analysis conclusions from the original Arthur Capper/Carrollsborg PUD Traffic Impact Study are still valid; the future roadway network is expected to operate within DDOT's acceptable Level of Service standards.

Description of Proposed Development

Vehicular Circulation & Access

Figures 1 and 2 show an overview of the proposed development on Square 882 and the northern portion of Square 769. A new private drive within Square 882 will provide access for the residential parking garage, residential loading, and office building parking and loading. Office workers in the Square 882 office building will park in garage accessed from the new 6th Street SE (private road) and from the private drive.

Vehicular access to the northern portion of Square 769 will be from the new private drive for all parking and loading. This is slightly different than the access from the preliminary approval, as parking could also be accessed from a curb cut on 3rd Street SE, which has been removed in the second stage plans. This curb cut was removed to simplify the access plans, and to decrease the impact of the development to the public realm.

There are numerous ways to reach the site from area roadways. Figure 6 and 7 show the primary and secondary ingress and egress routes to the site, respectively. Additional circulatory routes to and from the site will be available once completion of the roadways changes from the 11th Street Bridges project are completed.

Private Drives/Loading

The private drive proposed for Square 882 is anticipated to handle movement to and from the residential parking, residential loading activity, and office building parking and loading activity. The private drive proposed for the northern portion of Square 769 is anticipated to handle movement to and from all parking and loading (residential and retail).

Since a significant amount of activity will take place in these drives, the turning movements for truck loading docks were evaluated using AutoTurn software. Figures 3 through 5 shows the results of this analysis, which demonstrates that trucks can be accommodated as planned. Truck movements can be performed in the private drive without blocking any public streets and trucks will not be required to drive backwards from the private drive onto any public streets adjacent to the site. For the private drive in Square 882, residential and office loading activity can occur at the same time.

The number of loading docks for the development is appropriate. The office portion on the south side of

Square 882 is required to have three 12' x 30' loading berths, one 10' x 20' service/delivery space, and three 100 square foot loading platforms. The plan provides three loading berths, one service/delivery space and three platforms that meet the requirements. Three proposed facilities provide an appropriate amount of loading facilities and meets zoning requirements for the entire building.

The residential portion on the north side of Square 882 is required to have one 12' x 55' loading berth and one 10' x 20' service/delivery space. The residential loading facilities are provided along the private drive adjacent to the residential building, with loading activity taking place in the private drive. In order to incorporate a loading dock accessed from the private drive, the private drive cross-section and the width of the curb cuts at 6th Street & 7th Street would need to be enlarged, which would negatively impact the pedestrian experience and public space. Thus, the loading dock allowance is appropriate due to the urban nature of the neighborhood, providing a more pedestrian oriented than vehicular oriented design.

The residential building proposed for Square 769 is required to have one 12' x 55' loading berth, one 10' x 20' service/delivery space, and one 200 square foot loading platform. The plan provides one loading berth that is 12' x 30', one 10' x 20' service/delivery space, and one 100 square foot loading platform. The loading facilities provided are adequate for residential truck loading activity. The number of 55' trucks that visit a residential building are very few, and designing the private drive to accommodate large trucks would involve wider driveways and larger curb radii which negatively impacts the pedestrian experience. Thus, the loading dock allowance is appropriate due to the urban nature of the neighborhood, providing a more pedestrian oriented than vehicular oriented design.

Pedestrian/Bicycle Circulation and Access

Bicycle access to the site can be made through several roadways and paths included in the DC Bike Plan. 4th Street SE has bike lanes, and the 5th/6th Street SE corridor is planned to have bike lanes; these facilities will provide quality bicycle access to the north and south. Many of the east-west streets will have low volumes and will be good bicycling streets, such as L Street SE. In addition, Eye Street SE/SW (which has bicycle lanes) and the future Anacostia Riverwalk Trail will provide quality east-west connections. Bicycle parking will be provided in each of the parking garages, as well as on the streetscape in front of the proposed retail uses.

Pedestrian access will be greatly improved after construction of the proposed development. Ample sidewalks are proposed around the office building on Square 882, and appropriately sized, quality connections will be provided adjacent to the residential buildings on Square 882 and the northern portion of Square 769. The sidewalk widths meet or exceed the standards contained in the DDOT *Engineering and Design Manual*. The sidewalk in front of the proposed office building on Square 882 will have a clear, effective width of ten to fifteen feet. The sidewalk in front of the residential building on Square 882 is proposed to be 6 feet wide. The sidewalk in front of the residential building on Square 769 is proposed to be 10 feet wide on 3rd and L Streets, and 13 feet 8 inches wide on 2nd Street

The quality pedestrian circulation enhances the transit connections available to the site, including both the walk to and from the Navy Yard Metrorail station and to and from the numerous bus routes that serve the area.

Parking

Table 1 shows the amount of parking proposed, and a comparison with the amount of parking included in the preliminary PUD approval.

Table 1: Proposed Parking & Comparison with Preliminary Approval

Square/Component	Preliminary Approval	Proposed Second Stage	Difference
769 (Residential)			
Dwelling Units	107	171	+64
Parking Spaces	107	152	+45
Spaces/Unit	1.00	0.89	-0.11
882 (Commercial)			
Building Square Footage	496,000	499,780	+3,780
Parking Spaces	400	284	-116
Spaces/1,000 SF	0.81	0.57	-0.24
882 (Residential)			
Dwelling Units	75	189	+114
Parking Spaces	68	172	+104
Spaces/Unit	0.91	0.91	0.00
Total No. of Spaces	575	608	+33

The overall amount of parking proposed on Square 882 and the northern portion of Square 769 is 608 spaces; the preliminary plans showed a total of 575 parking spaces. Thus, the current plans incorporate a net increase of 33 spaces. The ratio of spaces to residential units has decreased from 0.96 to 0.90; the ratio of parking spaces to thousands of square feet of commercial space decreased from 0.81 to 0.57. This reflects the desire to not build too much parking for the development in a transit-oriented neighborhood, with quality access to Metrorail, Metrobus and other modes. Although the parking ratios proposed are lower than in the preliminary approval, there will be no detrimental impact as the supply will meet the expected demand. Access to and from the proposed development can still occur through various other modes, and nearby on-street parking can be controlled through the new performance parking meters or other means.

As part of this second stage application, it is proposed to reduce the overall Capper Carrollsburg parking supply by 65 parking spaces from the preliminary approval. The net reduction of 65 spaces results from an increase in the number of residential parking spaces by 105, while decreasing the number of commercial parking spaces by 170. Much of this change results from reducing the number of office parking spaces on the south side of Square 822.

The reduction will have no adverse impact on traffic or parking. The reduction of commercial based parking is not expected to lead to parking on neighborhood streets because of the high accessibility of transit and other alternate modes. No adverse traffic impact is expected because there will be fewer parking spaces within the overall PUD, notably a significant reduction in commercial-based parking spaces, which generate more traffic than residential parking spaces.

Traffic Impact Study Review

Trip Generation Comparison

Table 2 provides the results of a trip generation comparison of the proposed development with the preliminary approvals. The trip generation rates used are from the TIS from the original PUD application, and are based on standard rates from the Institute of Transportation Engineer's *Trip Generation* manual, with adjustments based on ridership survey data from WMATA, with one exception. The trip generation rates for the office component were reduced by an additional 30% compared to the rates from the original PUD TIS to take into account the decrease in traffic generated due to the lower parking ratios provided for the office building (an additional 30% reduction in trips was taken due to the 30% reduction in parking compared to the original PUD application). The additional alternative mode reductions due to the lower amount of parking lead to more realistic trip generation calculations.

Table 2: Trip Generation Comparison with Preliminary Approval

Land Use	Amount	AM			PM		
		In	Out	Total	In	Out	Total
Preliminary Approval							
Square 882							
Townhomes	75 Units	8	23	31	26	15	41
Retail	15,000 SF	1	1	2	3	3	6
Office	481,000 SF	332	43	375	72	356	428
Square 769							
Apartments	107 Units	4	26	30	25	13	37
Retail	3,000 SF	0	0	0	1	1	1
Total		345	93	438	127	388	513
Proposed Second Stage							
Square 882							
Apartments	189 Units	8	45	53	43	23	66
Retail	15,000 SF	1	1	2	3	3	6
Office	484,780 SF	234	31	265	51	251	302
Square 769							
Apartments	171 Units	7	41	48	40	21	60
Retail	4,090 SF	0	0	0	1	1	2
Total		250	118	368	138	299	436
Difference		(95)	25	(70)	11	(89)	(77)

The trip generation comparison shows that the amount of traffic is expected to decrease from what was shown in the original PUD TIS. This is because of the reduction in the overall amount of office based parking, and the change from townhomes to apartments in northern portion of Square 882. Office based parking generates more traffic than residential based parking. As destination trips, all vehicles that park in office parking lots are driven in or near the peak hour, but only a portion of vehicles parked in residential based lots are driven in or near the peak hour (for example, they may be vehicles owned by transit users).

Capacity Analysis Results

The Traffic Impact Study conducted by O.R. George & Associates, Inc. in support of the PUD application evaluated the traffic impact of the entire PUD on the surrounding roadway network. Capacity analysis was conducted at 13 intersections in the vicinity of the PUD. The study concluded that the roadway network operated within DDOT's acceptable Level of Service standards and would continue to due so under background conditions with and without the PUD development in the buildout year.

Background conditions reflected future conditions without PUD traffic. It accounted for annual background growth in addition to traffic generated by specific projects. Several of the major projects included as background development have not been completed today, including Southeast Federal Center (The Yards), Florida Rock, Maritime Plaza, and Waterside Mall.

Table 3 shows the results of the capacity analyses.

Table 3: PUD Stage 1 Level of Service Analysis

Intersection	Existing Conditions				Background Conditions				Total Future Conditions			
	AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
New Jersey @ I St.	B	11.5	B	11.0	B	14.8	C	16.0	B	15.0	D	26.7
New Jersey @ K St.	B	11.1	B	11.0	C	15.5	C	15.1	C	24.5	C	22.8
New Jersey @ M St.	...	...	...	...	C	28.9	C	23.8	D	36.5	C	12.4
3 rd St. @ M St.	B	17.3	B	15.5	A	9.0	B	10.3	B	18.6	B	12.4
4 th St. @ M St.	...	...	...	...	C	27.3	C	31.5	C	33.2	D	44.6
5 th St. @ M St.	...	...	...	...	...	...	...	...	...	...	...	...
7 th St. @ M St.	...	...	...	...	...	...	...	...	...	...	...	...
8 th St. @ M St.	B	15.9	B	15.0	B	19.4	B	19.0	C	20.3	B	19.9
Virginia @ 8 th St	B	15.6	C	23.2	B	17.3	C	23.4	B	17.7	D	42.0
Virginia @ 7 th St	B	15.4	B	15.5	B	16.4	B	18.4	B	17.0	B	19.1
Virginia @ 5/6 th St	B	19.2	C	24.8	C	24.1	C	28.3	C	27.5	C	32.3
Virginia @ 4 th St	A	8.2	A	8.3	A	9.7	A	8.8	B	10.2	A	9.0
Virginia @ 3 rd St	C	15.4	B	12.3	C	20.2	C	19.7	C	20.8	D	26.0

Source: O.R. George & Associates March 2003

... = Intersection is two-way stop sign controlled, and has no overall LOS or delay

Based on the trip generation comparison shown earlier, the capacity analysis results in Table 3 are still valid for the proposed development. Not only is the overall trip generation similar or less than that assumed in the study, the original TIS assumed a significant amount of background developments, and site access is similar.

Impact of Ballpark Traffic

The proposed development is located several blocks to the north and east of to the new Ballpark. Based on the 2008 Nationals Park Traffic Operations and Parking Plan (TOPP), the planned travel demand characteristics of Ballpark patrons and the operations of the Ballpark on game days (81) will not have a significant negative impact on Square 882/northern portion of Square 769 residents or office-workers. This is due to several reasons:

- *Travel demand characteristics*
The TOPP shows an average automobile mode split of 36 to 48% depending on the time of game and the relative attendance. Thus, the impacts of the Ballpark on roadways will be reduced significantly by the use of the Navy Yard Metrorail Station and people walking and biking to the Ballpark.
- *Parking facility locations*
The TOPP provides an overview of the parking strategy and locations, including the concept of spreading-out parking to disperse the impact at any one location.
- *Operations planning*
In order to accommodate the additional traffic on area roadways special traffic operations will be in place, including special signal timings, traffic control officers and turning restrictions. These game day measures should alleviate some of the congestion that would otherwise normally occur through the introduction of additional traffic to the roadway system.

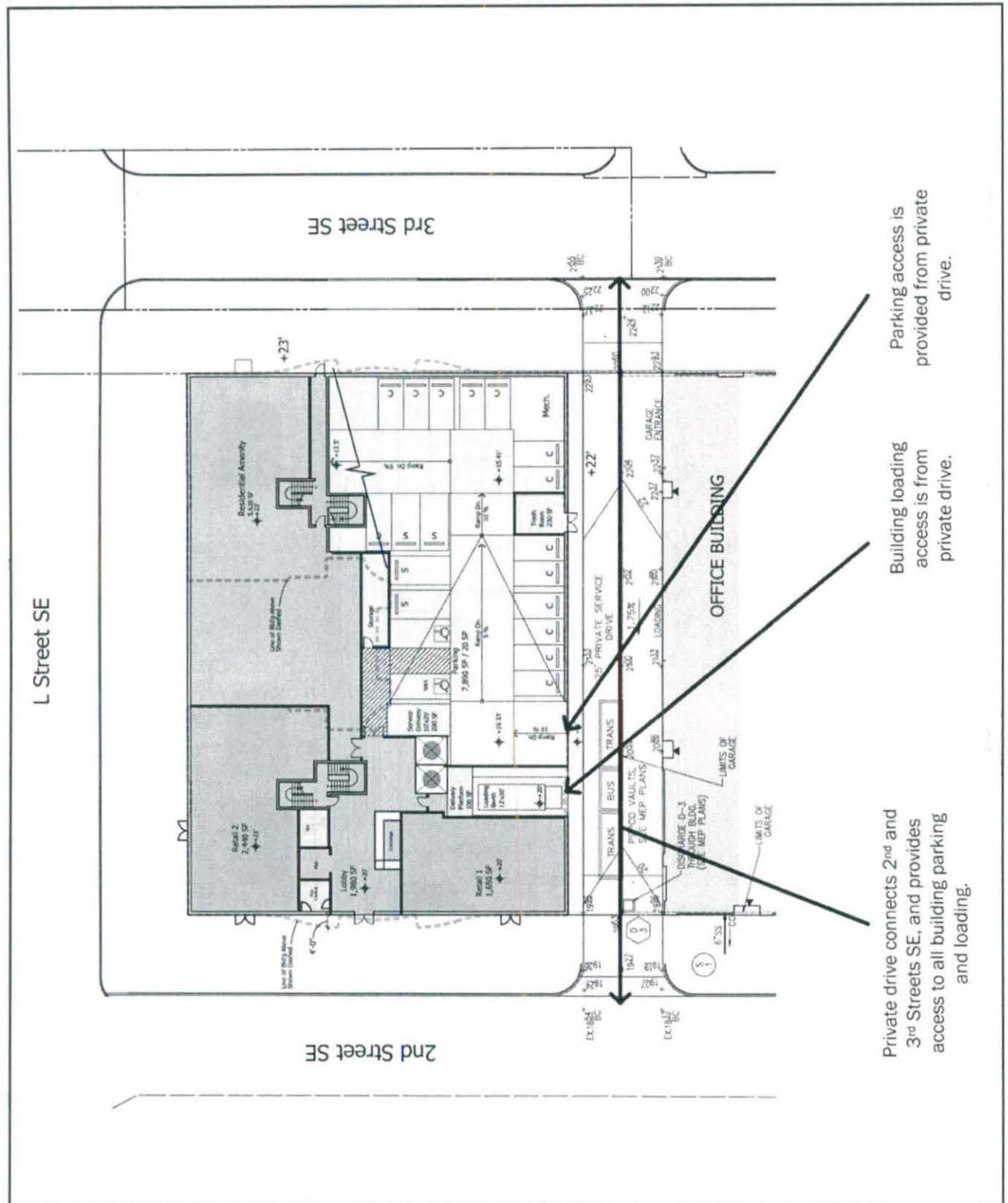
It should also be noted that the majority of Washington Nationals regular season games occur during times when commuter traffic is lower than 'typical' conditions, when traffic on regional roadways is lighter than normal, such as the summer months and weekends. Approximately 30% of their games are on weekdays (not counting Fridays) during times when DC public schools are in session.

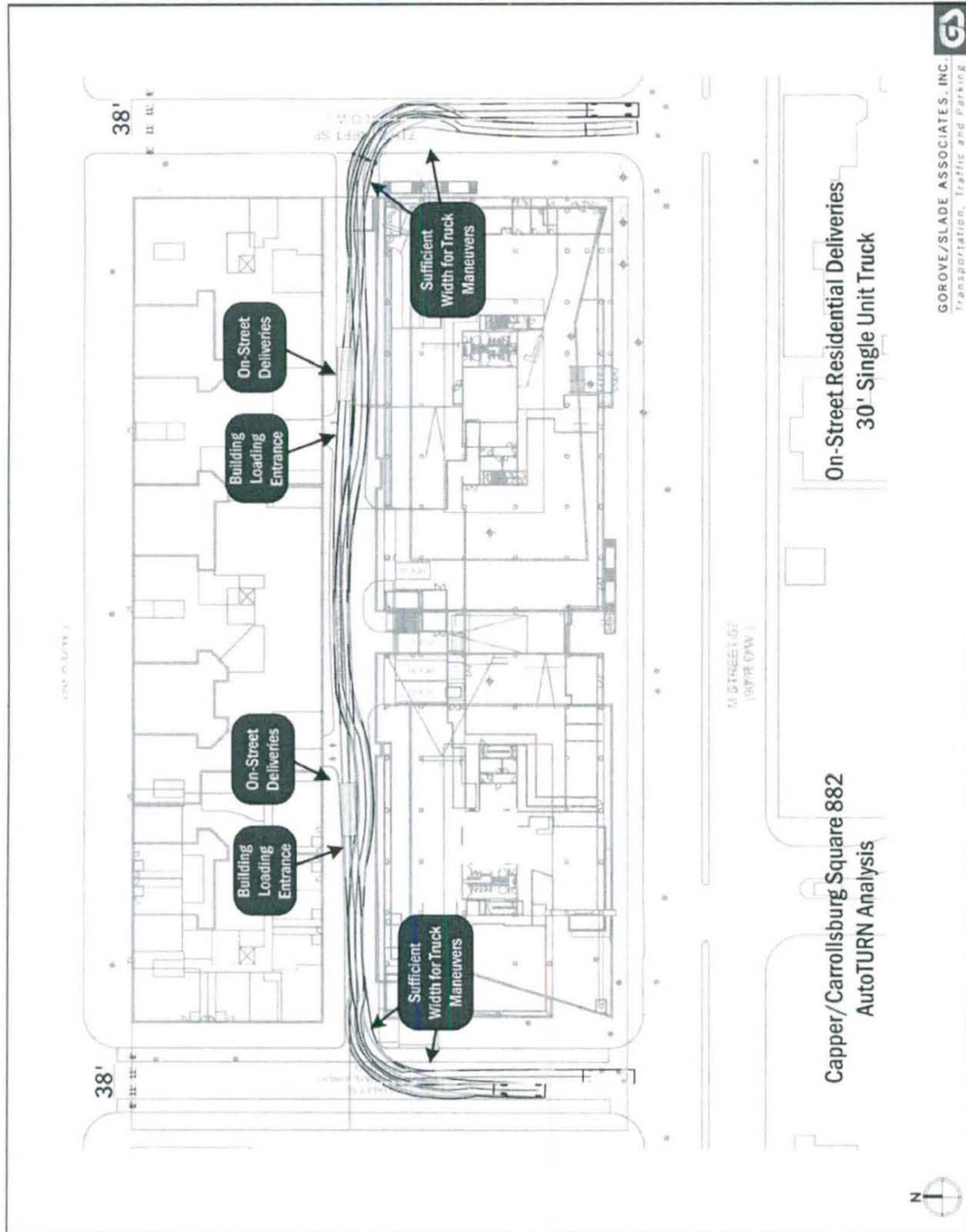
Conclusions

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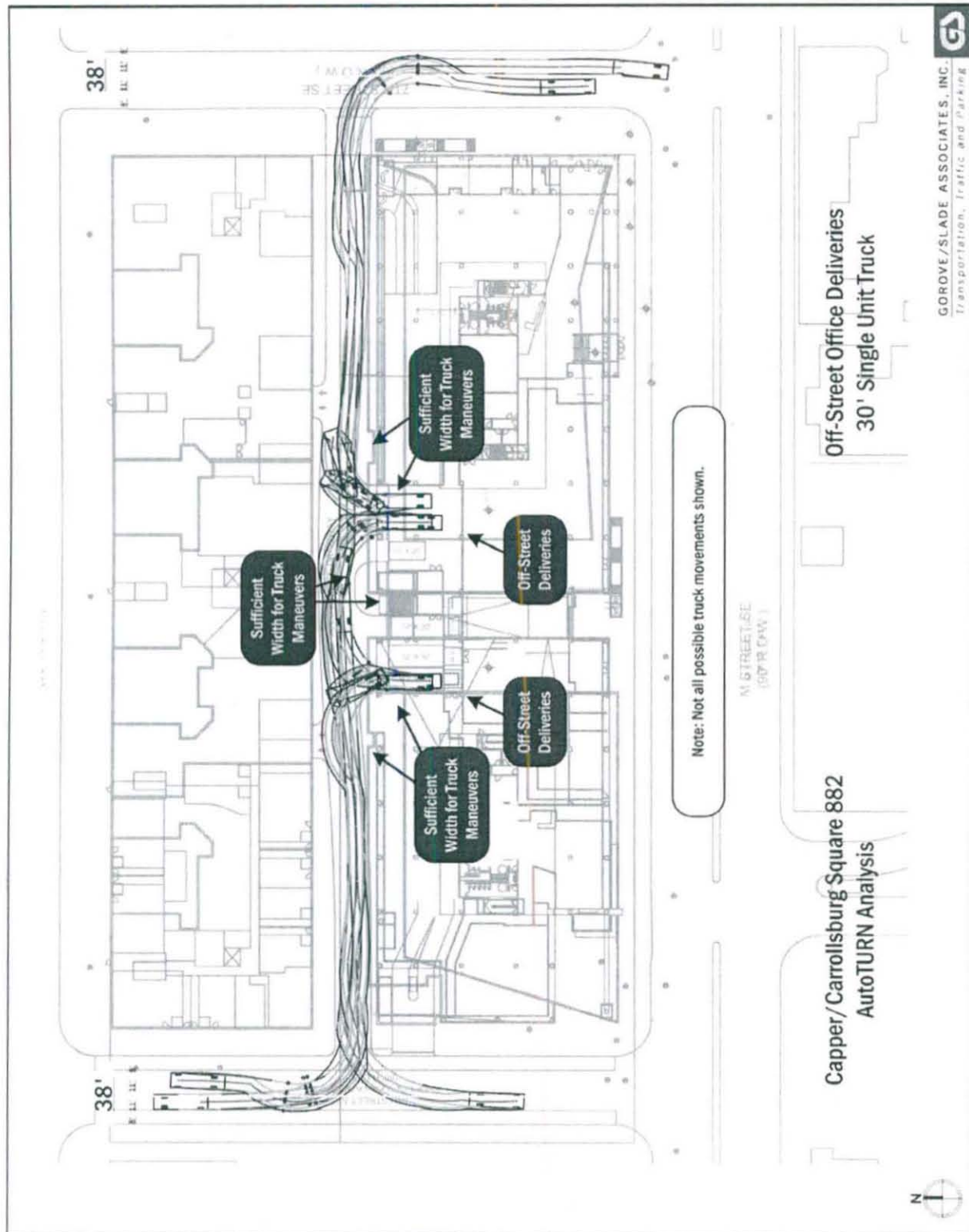


Figure 4: Square 882 Office Building Loading

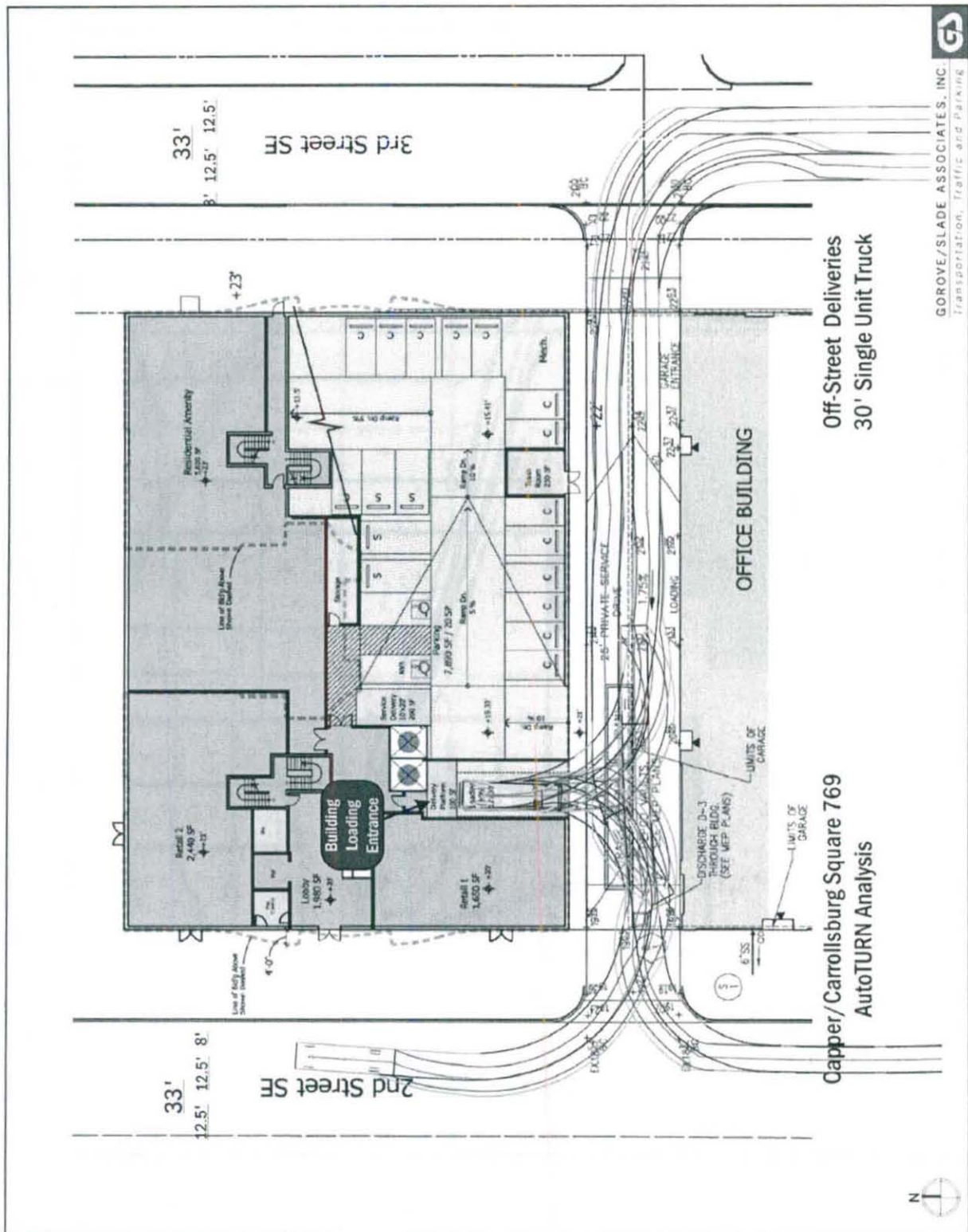


Figure 5: Northern Portion of Square 769 Loading



Figure 6: Site Ingress



Figure 7: Site Egress