TABLE 6: CAPACITY ANALYSIS SUMMARY – 2015 NO-BUILD CONDITIONS

	Weekday				Saturday	
	AM Peak		PM peak		Peak	
Location	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*
Q Street and 32nd Street NW	A	3.6	A	5.0	A	4.9
Q Street and 31st Street NW	C	15.9	B	14.6	B	14.1
P Street and 33rd Street NW	F	120.7	D	32.9	B	13.4
P Street and 32nd Street NW	A	1.8	A	2.0	A	2.9
P Street and 29th Street NW	A	12.6	C	15.0	B	10.9
Reservoir Rd NW and Wisconsin Ave	A	5.3	F	160.0	A	7.6
33rd Street and Wisconsin Ave/Reservoir St	n/a	n/a	n/a	n/a	n/a	n/a
34th Street and R Street NW	E	37.0	F	116.0	A	10.0
34th Street and P Street NW	C	16.4	B	10.5	B	11.4
35th Street and N Street NW	B	11.8	B	10.2	B	13.4
35th Street and P Street NW	D	29.8	D	27.1	C	20.6
35th Street and Q Street NW	F	63.4	F	54.1	D	25.4
35th Street and Reservoir Road NW	F	624.6	F	638.6	F	205.6
37th Street and Reservoir Road NW	F	83.3	B	18.8	C	27.0
K Street and Wisconsin Avenue NW	F	60.9	F	73.2	C	17.6
K Street and Thomas Jefferson Street NW	D	0.7	E	0.6	D	0.8
K Street and 29th Street NW	C	1.4	C	0.4	A	0.9
K Street and 27th Street NW	F	216.5	F	391.0	E	68.8
Whitehurst Freeway and Canal Road	F	102.5	F	221.5	D	40.7
Key Bridge and M Street NW	F	147.9	F	153.3	F	104.2
M Street and 34th Street NW	F	169.3	F	269.7	F	238.4
M Street and 33rd Street NW	F	229.6	D	43.6	F	108.2
M Street and Wisconsin Avenue NW	F	161.7	F	238.8	F	123.4
M Street and Thomas Jefferson Street NW	C	33.3	A	5.9	B	16.1
Pennsylvania Avenue and 28th Street NW	B	19.6	C	24.2	C	22.2

*The intersection of 35th Street and Wisconsin Avenue NW was not analyzed because 35th Street NW is one-way south. With no movement of traffic from NB 35th Street and no stop sign(s) on Wisconsin Avenue, the intersection is not able to be analyzed.
NOTE: Red shaded cells represent intersections operating at LOS E or F;
Green shaded cells represent intersections operating at LOS A or B.
Please note that some intersections improve from existing to 2015 no-build conditions. This is primarily a factor of optimizing signals.

For signalized intersections that improve between the existing (2007) and No-build (2015) conditions, it is largely a factor of coordination of signals. The existing timing plans are laid out in favor of major corridor coordination (greater green time in one direction) resulting in better performance of individual intersections at most locations, especially where a major corridor street meets a minor street. Therefore, the current green time allocation for each peak period is not necessarily the optimum phasing or timing plan for future volumes. For this analysis, the optimum phasing was used with the assumption that some locations along M Street may suffer. The result: better operation of the intersection with additional volumes in 2015 over 2007 timings throughout the Georgetown area.

ANALYSIS AND RECOMMENDATIONS

Using the information collected on existing and future conditions, the Study Team, in association with the TAC, government agencies, and the citizens of Georgetown, developed a list of transportation issues within the study area. These issues are shown in **Figure 26** presented previously. Factors that were taken into account in the evaluation of transportation issues included:

- Safety and Mobility for pedestrians, bicyclists, and vehicles
- Intersection delay and LOS for existing and proposed configurations
- Interfacing between modes
- Visual impact (for signing)
- Circulation to and through Georgetown.
- Neighborhood historic character

Looking at the issues identified in **Figure 26,** presented previously, and the options for each issue identified in **Appendix D**, an analysis was completed on each item and a recommendation made. Traffic analysis is shown on each cut sheet in **Appendix D,** as appropriate, as well as pros/cons for each option. A summary of the preliminary analysis and recommendations is given in **Table 7**. NOTE: Not all items in **Table 7** are recommended. The "Final Recommendation" column of **Table 7** shows the resolution of each issue and recommendations to the system. Items included in the "Final Recommendation" column of **Table 7** are shown in **Appendix H**.

Specific to the bicycle and pedestrian related recommendations, **Appendix E** shows each recommendation and additional information not contained in **Appendix D**.

Below are the recommended improvements by issue for the Short-, Mid-, and Long-term options as identified previously and shown in **Appendix H**. These recommendations are also shown in **Figure 28**. A list of options that were not recommended is included in **Appendix D**.

Below is a list of recommendations for each mode by implementation timeframe. Recommendations are repeated under multiple modes as appropriate.

BICYCLE

Bicycle safety and mobility rely on driver acceptance of bicycles in the roadway as well as acknowledgement of warning signs.

Issues – bicycle/vehicle conflict at Key Bridge/Whitehurst Freeway intersection and K Street/Rock Creek Park, lack of bicycle route signage to direct bicyclists

- Short-term:
  - Install bicycle warning signs at Key Bridge/Whitehurst Freeway and K St/Rock Creek Parkway.
  - Install Smart Bike location south of M Street on Wisconsin Avenue – Pilot program of DDOT. One of two locations (1045 Wisconsin Avenue NW or at intersection of 31st Street/K Street).
  - Use of TCO officers at key locations throughout Georgetown at peak hours to allow for better movement of vehicles and pedestrians. Extend hours of TCO usage to include weekends.
- Mid-term:
  - Install pressure plates and actuation devices to trigger flashers at bicycle warning signs at Key Bridge/Whitehurst Freeway and K Street/Rock Creek Parkway.
  - Install bike route signs to highlight bike facility on K Street.
  - Install Bike box at intersection of K Street/Whitehurst Freeway/27th Street as shown on MT-3.
  - NPS to be directed to install bike racks at waterfront area, encourage installation of bike racks as development is approved.
  - Continue construction of NPS bicycle facility along K Street. Recommend expedited construction of trail. Recommend improvements to the Boardwalk area to discourage bicyclists from riding along Boardwalk.
  - Continued use of TCO officers.
- Long-term
  - Continue construction of NPS bicycle facility along K Street and connection with Rock Creek Parkway. Recommend expedited construction of trail.
  - Continued use of TCO officers.

TABLE 7: TRANSPORTATION OPTIONS ANALYSIS

NOTE: This table lists generalized improvements as shown on **Figure 26**. Specific locations and/or detailed improvements are included in the **Appendix D** cut sheets. Final Recommendations are shown in **Appendix H**

Box ID	Location	Issues	PRELIMINARY RECOMMENDATIONS						Analysis/Discussion	Final Recommendation
			Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #		
1	37th Street	Trucks operating despite restriction	Improve enforcement of restriction	MT-4	Driver feedback signs and speed camera enforcement-specific locations to be determined for report	MT-4	Speed humps - specific locations to be determined for report Bus stop bulb-outs	LT-2 LT-3	Short-term: field visits show trucks utilizing 37th St. Mid-term: field visits show speeding Long-term: speed humps and bus bulbouts were removed from further consideration	Short-term: Place on MPD watch list. Mid-term: Long-term:
2	35th Street	Buses block street			Alter routing (Removed from further consideration)	MT-9	Bus stop bulb-outs (removed from further consideration)	LT-2	WMATA is currently reviewing the routes within Georgetown. Some options include minimizing platooning through re-direction of certain buses in-route, etc.	Short-term: Mid-term: Long-term:
3	35th Street & Reservoir Road	High pedestrian flow	Improve pedestrian facilities including school flashers	ST-4 (1)					Field visits verify missing school zone signs in the area. See overall pedestrian issues item(s) below.	Short-term: Replace existing signage with updated school zone and flashers. Include "End School Zone" signage Mid-term: Long-term:
4	Reservoir Road	Uncontrolled Mid-block crossing	Install Driver Feedback signs, and Pedestrian signs with rapid flashers	ST-4 (1)	Refuge island at Reservoir Rd and French Embassy	MT-13			Short-term: field visits show speeding in this area. Pedestrian safety can be improved.	Short-term: Install driver feedback signs at Reservoir Road east of 38th St for WB traffic and east of 44th St for EB traffic. Pedestrian crossings and flashers to be located on Reservoir Road west of 39th St. Mid-term: Construct Pedestrian Refuge Median at Reservoir Road & French Embassy. Long-term:
5	Reservoir Road	Speed limit exceeded	Improve enforcement of speed limits	MT-4	Driver feedback signs and speed camera enforcement	MT-4			This section of Reservoir Road is classified as part of the emergency access route for Georgetown University Hospital. Traffic calming measures should not be used that might hamper the access to the Hospital. While speed humps could be installed, we are NOT recommending it; instead, we are recommending driver feedback signs to slow vehicles without impeding them. Short-term: field visits show speeding in this area.	Short-term: Place on MPD watch list. Short-term: Install driver feedback signs on Reservoir EB west of French Embassy and WB between 37th and 38th Sts. Mid-Term Long-term:
5	Reservoir Road: from 35th to 37th Streets	No "School Zone present" (15 mph signage) School flashers missing	Add signing/signal for school zone Add school flashers	ST-4					Short-term: field visits verify missing school zone flashing sign(s).	Short-term: Add School zone speed limit 15 mph signage with flashers for EB traffic at Reservoir west of 36th St and WB at Reservoir west of 34th St. Add "End School Zone" signage WB on Reservoir between 36th and 37th St and EB west of 34th St. Mid-term: Long-term:
5	Reservoir Road: from 35th to 39th Streets	Pedestrian accident zone	Improve pedestrian facilities including school flashers	ST-4 (1)					Short-term: field visits show speeding in this area. Pedestrian safety can be improved.	Short-term: See above for school flashers. Additionally, unsignalized crossing with flashers to be located in EB/WB direction on Reservoir Road west of 39th St. Mid-term: Long-term:

TABLE 7: TRANSPORTATION OPTIONS ANALYSIS (CONTINUED)

NOTE: This table lists generalized improvements as shown on **Figure 26**. Specific locations and/or detailed improvements are included in the **Appendix D** cut sheets. Final Recommendations are shown in **Appendix H**

Box ID	Location	Issues	PRELIMINARY RECOMMENDATIONS						Analysis/Discussion	Final Recommendation
			Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #		
6	33rd Street & 34th Street	Pass through traffic	Allow left turns for all vehicles from M Street to Wisconsin Ave northbound	ST-2	-Two-way operation of one or more of these roads to increase "friction" and reduce the desirability for pass through traffic. Removed from further consideration -Reverse direction of both 33rd and 34th Street from Wisconsin to M Street (33rd SB, 34th NB) - Removed from further consideration -No direct connection from M Street EB to NB 34th Street-must travel to Wisconsin Ave for NB traffic. - Removed from further consideration	MT-2 MT-5			Short-term: pass-through traffic utilizing 33rd St because no other option. Midterm: by reversing the one-way couplet of 33rd and 34th, additional storage capacity for M/Key Bridge is obtained. 34th St is returned to a neighborhood St. Wisconsin Ave carries more vehicles. Due to citizen objections, this option was removed.	Short-term: Remove "No Left Turn except buses and taxis" sign for EB M St at Wisconsin Ave. Re-stripe lane for left-thru movement. Mid-term: Long-term:
7	O Street & P Street	Buses block street	Removal of parking on one-side of street to allow for sufficient width of roadway for bus movement. Removed from consideration		Alter routing (Removed from further consideration)	MT-9	Bus stop bulb-outs	LT-2	G2 route is utilizing 40-foot buses. Although a shorter bus will not reduce the "blocking of the St", it will provide for fewer vibrations while also serving passengers. The volume of passengers on the G2 bus can be handled by a 30-foot bus in all but a few peak hour runs. Long-term: bus bulbouts will not aid in the blocking of Sts with the use of buses but will provide for a better pedestrian environment along these routes. Due to loading/unloading numbers along the G2 bus line on O and P Sts, this option is Not recommended.	Short-term: Recommend use of 30-foot buses on G2 route. Mid-term: Long-term:
7	O Street & P Street	No school parking/pull-off	Improve enforcement of restriction	MT-4					Short-term: field visits show parking violations.	Short-term: Place on MPD watch list. Mid-term: Long-term:
7	O Street & P Street	Poor pavement - cobblestones							No recommendation to these historic Sts. A separate study is being conducted to determine what can be done in these historic Sts without loosing designation.	Short-term: Mid-term: Long-term:
7	O Street & P Street	Existing trolley tracks							No recommendation to these historic Sts. A separate study is being conducted to determine what can be done in these historic Sts without loosing designation.	Short-term: Mid-term: Long-term:
7	O Street & P Street	Lack of parking							No recommendation to parking is made in this report. A separate study with members of DDOT, the ANC, BID, CAG, GBA and other community orgs is underway.	Short-term: Mid-term: Long-term:
8	M Street; Prospect Street: from 37th to 34th Streets	Pedestrian accident zone	Add pedestrian signing and high visibility crosswalks	ST-3 ST-4 (4)					Field visits verify high pedestrian activity area. Also, the safety of pedestrians at signalized intersections and non-signalized intersections in the area could be improved. Pedestrian crossing signage on Prospect St is warranted due to high pedestrian volumes in the area.	Short-term: High visibility crosswalks (zebra striping) along M St and Prospect St to provide a visual distinction of where pedestrians should cross. Short-term: Construction of imprint crosswalks along M St to provide a better visual distinction (than high visibility crosswalks) of where pedestrians should be and provide a uniform way of dealing with pedestrians along the M St and Wisconsin corridors where high pedestrian volumes are reported and where vehicles are present in high volumes. Mid-term: Installation of pedestrian crossing signs on Prospect St if pedestrian/vehicle incidents are not improved with high visibility crosswalks. Long-term:

TABLE 7: TRANSPORTATION OPTIONS ANALYSIS (CONTINUED)

NOTE: This table lists generalized improvements as shown on **Figure 26**. Specific locations and/or detailed improvements are included in the **Appendix D** cut sheets. Final Recommendations are shown in **Appendix H**

Box ID	Location	Issues	PRELIMINARY RECOMMENDATIONS						Analysis/Discussion	Final Recommendation
			Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #		
9	33rd Street and Q Street	RTOR restriction ignored No pedestrian signal	Improve enforcement of restriction Add pedestrian signal heads	ST-3 ST-4	Install Intersection camera with RTOR restriction Remove RTOR ban replace with "Do Not Block Intersection" signing	MT-4 MT-5			Short-term: field visits verify RTOR ignored Short-term: no pedestrian countdown heads verified	Short-term: Installation of enforcement camera at intersection Short-term: Installation of pedestrian countdown heads at signal Mid-term: Long-term:
10	M Street & 34th Street / Key Bridge	Long queues due to M St traffic, Vehicle block the box	Add "Do Not Block Intersection" signs Use TCO officers at peak hours Extend TCO hours of operation to Saturday	ST-1	Restripe lanes to better accommodate demand Removed from further consideration Alter street network to encourage/force drivers to approach the Key Bridge on M Street through modifications/closure of access points Removed from further consideration	MT-2 MT-5 MT-11	Physical changes to intersection layout Not recommended		Field visits verify queues forming, and vehicles blocking the box on M St, Key Bridge, and 34th St in peak period. Alterations to the lane configuration on M St is Not recommended.	Short-term: Install "Do Not Block Intersection" signs at M/33rd, M/34th, M/Wisconsin Short-term: Use of TCO officers for direction of traffic at M/33rd, M/34th, M/Wisconsin, M/Key Bridge Mid-term: Long-term:
10	M Street & 34th Street	Steep slope at intersection							No recommendation to this intersection for this issue. Since the route is not a truck route, signage is not necessary. Reconstructing the roadway to minimize grade would require significant changes to intersection and is not necessary.	Short-term: Mid-term: Long-term:
10	M Street & 34th Street / Key Bridge	Accident location	Add "Do Not Block Intersection" signs	ST-1					Looking at the accident data provided by DDOT, the majority of accidents at these two intersections are sideswipe accidents due to turning vehicles. Some of these vehicles are blocking the box and turning right when no-right turn on red is in effect.	Short-term: Install enforcement camera at intersections. Short-term: Use of TCO officers at intersections. Mid-term: Long-term:
11	Key Bridge and Whitehurst Freeway	Bicycle-vehicle conflict	Add bicycle warning signs	ST-1	ITS flashers tripped when bike/ped approaching	MT-4			Short-term: field visits verify the dangerous conditions at this crossing for both bicycles and pedestrians.	Short-term: Add bicycle warning signs. Mid-term: Add detection loops for bicycles/pedestrians and warning flashers. Long-term:
13	M Street & 33rd Street	Long queues AM for left turns Left turns "block the box" and hence westbound traffic High Pedestrian Flow Accident location	Allow left turns for all vehicles from M Street EB to Wisconsin Ave NB - change phasing to split phase - change phasing to leading left turn phase Improve enforcement of restriction Recalculate pedestrian timing at 3.5 fps - not shown on cut-sheet	ST-2 MT-4	Convert existing left-thru lane to left turn only lane. Stripe dedicated left turn lane on M St EB Alter street network operation (Removed from further consideration) Widen sidewalks	MT-2 MT-5 MT-12			Short-term: allowing left turns on M/Wisconsin to relieve need at this intersection. Midterm: conversion of the lane to left-turn only aids in the AM peak period but hinders in the PM peak period due to the loss of the thru-lane capability at this location. Would remove 8 parking stalls. Not recommended Midterm: narrowing the lanes on M St by 1 foot for the outside 2 lanes in each direction, an additional 2-feet of sidewalk is available in each direction. This would provide for more pedestrian sidewalk area but the cost to bump out the curb, gutter, signals, lighting, etc is prohibitive. Not Recommended	Short-term: Change in lane configuration and signal timing at M/Wisconsin to allow for left turns relieving 33rd St. Lane configuration in EB direction to allow left turns on M St to Wisconsin Ave. Lane configuration to be left-thru, thru, thru-right. Signal timing to modify for split phase in EB/WB direction and all-pedestrian phase. Mid-term: Long-term:

TABLE 7: TRANSPORTATION OPTIONS ANALYSIS (CONTINUED)

NOTE: This table lists generalized improvements as shown on **Figure 26**. Specific locations and/or detailed improvements are included in the **Appendix D** cut sheets. Final Recommendations are shown in **Appendix H**

Box ID	Location	Issues	PRELIMINARY RECOMMENDATIONS						Analysis/Discussion	Final Recommendation
			Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #		
14	Wisconsin Ave & O Street	Poor signage Stop sign at intersection difficult to see No School signing Crosswalk used for Hyde Elementary	Review signage in area for improvements Add Pedestrian crossing signage to Wisconsin Install Pedestrian countdown signal on SW corner, Add School Ahead signing. Review Pedestrian signal timing Add STOP AHEAD sign	ST-4 (3)					During field visits it was determined the STOP AHEAD sign was not necessary. Given the intersection is a T intersection, it is natural that there would be a stop sign. Not recommended	Short-term: Installation of pedestrian crossing signage on Wisconsin. Installation of School Zone 15 mph and flashers. Add "End School Zone" signage at O/Wisconsin. Install pedestrian countdown head at signal. Mid-term: Long-term:
15	Wisconsin Ave: from M St to Water Street	No marked pedestrian way	Improve signing and crosswalk striping	ST-4(4)					During field visits, pedestrian conflicts in the area were not noted. Not recommended	Short-term: Mid-term: Long-term:
16	M Street	Vehicles park during peak hours despite restriction	Improve enforcement of restrictions Traffic Control Officer (TCO) controlling study area intersections in peak hours Extend TCO hours of operation to Saturdays	MT-4	Traffic Control Officer (TCO) controlling study area intersections in peak hours Extend TCO hours of operation to Saturdays Allow parking on M Street at all times	MT-4			Mid-term: allowing parking on M St at all times will decrease the amount of capacity on M St by 1/3rd. Further, capacity of the middle lane would be decreased to account for parking maneuvers. Transit maneuvers would be more difficult. Not recommended No recommendation to parking is made in this report. A separate study with members of DDOT, the ANC, BID, CAG, GBA and other community orgs is underway	Short-term: Place on MPD watch list. Short-term: Use of TCO officers at M/33rd, M/34th, M/Wisconsin, and M/Key Bridge Mid-term: Continued use of TCO officers Long-term: Continued use of TCO officers
16	M Street	Pedestrian volume impacts turning movements and reduces intersection capacity	Include all-pedestrian phase and diagonal crosswalks, retime and rephase signal as necessary	ST-2					Pedestrian safety is improved. An all-ped phase doubles delay for an average delay per vehicle in the AM, PM, and Saturday due to the longer cycle length. With the removal of pedestrian movements in the vehicle cycle timing, vehicle movements are improved but result in large delays. A minimum All-Pedestrian phase of 16 seconds (calculated for 3.5 feet per second) must be included in overall phasing.	Short-term: Retime signal to allow for left turns and All-Ped phase at M St/Wisconsin Ave intersection. Mid-term: Long-term:
17	K Street	High bicycle volumes	Install pylons to improve driver awareness and slow vehicles	ST-4 (3)	Complete trail system (NPS). Not shown on cut-sheet				With improvement of bicycle route along NPS property bicycle use will increase. Wayfinding signs should be located throughout Georgetown to direct bicyclists to the K St facility. Recommend improvements to the Boardwalk area to discourage riding along Boardwalk.	Short-term: Installation of pedestrian crossing pylons EB/WB at K/Wisconsin, K/31st St, K/29th St. Short-term: Continue construction on NPS bicycle facility along K St with connection to Rock Creek Park. Construct on expedited schedule. Mid-term: Installation of Bicycle Route signs throughout Georgetown to highlight facility Mid-term: Continue construction of NPS bicycle facility along K St with connection to Rock Creek Park. Construct on expedited schedule. Recommend improvements to the Boardwalk area to discourage riding along Boardwalk. Long-term: Continue construction of NPS bicycle facility along K St with connection to Rock Creek Park. Construct on expedited schedule.
18	K Street & Rock Creek Parkway	Bicycle-vehicle conflict	Add bicycle warning signs	ST-1	ITS flashers tripped when bike/pedestrian approaching	MT-4			Short-term: field visits verified bicycle/vehicle conflict area.	Short-term: Add bicycle warning signs. Mid-term: Add detection loops for bicycles/pedestrians and warning flashers. Long-term:

TABLE 7: TRANSPORTATION OPTIONS ANALYSIS (CONTINUED)

NOTE: This table lists generalized improvements as shown on **Figure 26**. Specific locations and/or detailed improvements are included in the **Appendix D** cut sheets. Final Recommendations are shown in **Appendix H**

Box ID	Location	Issues	PRELIMINARY RECOMMENDATIONS						Analysis/Discussion	Final Recommendation
			Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #		
19	K Street & 27th Street	Connection with Whitehurst Freeway (Complex intersection) High traffic and pedestrian flows	Review pedestrian signal timings. Not shown on cut-sheet.		Lane restriping to accommodate left turns from K Street WB to 27th Street	MT-3			Field visits show a significant number of bicyclists traveling on K St. Potential conflict area for pedestrians/vehicles and bicycle/vehicles. Pedestrian timing is sufficient for volumes on 27th St NB leg and Whitehurst Freeway crossings.	Short-term: Mid-term: Restripe WB to left, left-thru, thru, thru-right. Install a bike box on the left-thru lane. Long-term:
20	M Street: from 31st to 29th Streets	High pedestrian flow	Recalculate pedestrian timing at 3.5 fps - not shown on cut-sheet		Widen sidewalk	MT-12			Midterm: narrowing the lanes on M St by 1 foot for the outside 2 lanes in each direction, an additional 2-feet of sidewalk is available in each direction. is would provide for more pedestrian sidewalk area but the cost to bump out the curb, gutter, signals, lighting, etc is prohibitive. Not Recommended	Short-term: Mid-term: Long-term:
21	M Street & Wisconsin Ave	High left turn volumes Ban on left turns from M Street EB causes back-up on 33rd High pedestrian flow Narrow sidewalks Accident location	Allow left turns for all vehicles from M Street EB to Wisconsin Ave NB Include ALL pedestrian phase Enforce speeds and other restrictions Improve signing as required	ST-2 MT-4	Convert thru-left to left-turn only lane Widen sidewalks	MT-5 MT-10 MT-12			Short-term: analysis shows an average pedestrian delay of 90 second existing. All ped phase improves that delay to 30-40 seconds. Midterm: converting the left-thru lane to left only removes thru capacity in the intersection resulting in overall increases in delay. Not recommended Midterm: narrowing the lanes on M St by 1 foot for the outside 2 lanes in each direction, an additional 2-feet of sidewalk is available in each direction. is would provide for more pedestrian sidewalk area but the cost to bump out the curb, gutter, signals, lighting, etc is prohibitive. Not Recommended	Short-term: Change in lane configuration and signal timing. Lane configuration in EB direction to allow left turns on M St to Wisconsin Ave. Lane configuration to be left-thru, thru, thru-right. Signal timing to modify for split phase in EB/WB direction and all-pedestrian phase. Short-term: Place enforcement issues on MPD watch list. Short-term: Use of TCO officers at intersections during peak hours Mid-term: Long-term:
22	28th Street: from M Street to R Street	Lack of parking							No recommendation to parking is made in this report. A separate study with members of DDOT, the ANC, BID, CAG, GBA and other community orgs is underway	Short-term: Mid-term: Long-term:
23	30th Street & P Street	No pedestrian signal Pedestrian Accident Zone	Add pedestrian signal heads	ST-4 (2)					Field visits show lack of countdown pedestrian signal heads at this location.	Short-term: Installation of pedestrian countdown heads at signal Mid-term: Long-term:
24	Rose Park Footpath	Incomplete and inadequate pedestrian and bicycle facilities	Complete sidewalk and trail connection	ST-6					Rose Park Footpath not to be widened. Will remain 4-feet in width	Short-term: Sidewalk connection in area to be completed Mid-term: Long-term:
25	P Street: 28th to 31st Streets	Pedestrian accident zone							Field visits show a lack of countdown pedestrian signal heads at P/28th Intersection and P/30th Intersection.	Short-term: Installation of pedestrian countdown heads at signals Mid-term: Long-term:
26	28th & P Street	No pedestrian signal Pedestrian Accident Zone	Add pedestrian signal heads	ST-4 (4)					Field visits show lack of countdown pedestrian signal heads at this location.	Short-term: Installation of pedestrian countdown heads at signal Mid-term: Long-term:
27	R Street & 29th Street	STOP sign NB on R Street-with limited sight distance EB/WB on 29th	Convert intersection to 3-way(all way) stop provided it meets warrants	ST-1					Based on speeds, sight distance of vehicles northbound on 29th St, and parking located along R St, this intersection should be converted to an all-way stop for safety reasons of both vehicles and pedestrians.	Short-term: Install stop signs EB/WB on R St at 29th St. Mid-term: Long-term:

TABLE 7: TRANSPORTATION OPTIONS ANALYSIS (CONTINUED)

NOTE: This table lists generalized improvements as shown on **Figure 26**. Specific locations and/or detailed improvements are included in the **Appendix D** cut sheets. Final Recommendations are shown in **Appendix H**

Box ID	Location	Issues	PRELIMINARY RECOMMENDATIONS						Analysis/Discussion	Final Recommendation
			Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #		
28	Scott Place & 32nd Street	No stop sign	Install stop sign	ST-1					Field visits verify missing stop sign at this location (EB). Safety at this intersection is compromised without the installation of the stop sign. Strong community support for all-way stop.	Short-term: Install "Stop" sign on Scotts Place at 32nd St (all directions). Mid-term: Long-term:
29	Reservoir Road & 32nd Street 32nd & 31st Streets	Pass through traffic (from Wisconsin Ave)			Alter network operation one way couplet with parking on 31st/30th	MT-6			Field visits verify pass-thru traffic during PM peak period. Mid-term: Altering network for a one-way couplet east of Wisconsin mirrors the 34th/33rd couplet on the west, provides for better thru connections on the east side of Wisconsin, and does not affect parking. Traffic calming measures may be necessary to slow speeds of vehicles after conversion. No change to traffic control at intersections is anticipated. Network change would necessitate residents' approval.	Short-term: Mid-term: Alter network for one-way couplet on east side of Wisconsin utilizing 31st NB and 30th SB. Long-term:
30	Wisconsin Ave & 33rd Street	High left turn volume from 33rd blocks traffic	Convert left-thru lane to left-only lane	MT-2	Sever outbound connection with Wisconsin Ave Removed from further consideration	MT-5			Mid-term: Conversion of left-thru lane EB to left-only would improve delay in the AM and Saturday peaks but would result in longer delays for vehicles in the PM peak hour due to the loss of thru movements at that intersection for one of the three lanes. Not Recommended Mid-term: Reversing 33rd St to SB is removed from consideration due to citizen feedback. Not Recommended	Short-term: Mid-term: Long-term:
31	Wisconsin & R Street	Parked vehicles contribute to AM congestion Left turn volume may require protected phase	Restrict parking in the AM peak hour northbound on Wisconsin Ave south of R Street Retime / rephase signal leading NB left turn phase lagging NB left turn phase extra green time for Wisconsin Ave leading EB left turn phase	ST-1 ST-2					Field visits verify that by the removal of 4 parking stalls in the AM peak would allow for the NB thru movement around vehicles turning left, greatly increasing the operation of this intersection. For pedestrian safety, the lagging NB left turn phase is preferred. With the removal of 2-3 parking stalls nearest the intersection, the EB direction can operate as a left, thru-right lane configuration. This configuration results in acceptable LOS for AM, PM, and Saturday in the 2015 year horizon.	Short-term: Install "No Parking 7am-9:30am Monday-Friday" signs along Wisconsin Ave from Reservoir Road to R St. Short-term: Modify signal phasing to allow for a Lagging NB left turn phase. Remove parking EB on R St to allow for two operational lanes (left and thru-right). Remove parking NB to allow for left, thru-right operational lane (see above). Mid-term: Long-term:
32	Wisconsin Ave: from Whitehaven Pkwy to Reservoir Rd	Pedestrian accident zone	Recalculate pedestrian timing at 3.5 fps - not shown on cut-sheet		35th Street Intersection redesign. Other traffic calming measures presently being considered not shown on cut sheets	MT-7			Field visits showed pedestrian issues at some locations and are identified specifically in this matrix. Please see specific locations for analysis and recommendations.	Short-term: Mid-term: Long-term:
33	35th from Reservoir to Q Street	Pedestrian accident zone	Recalculate pedestrian timing at 3.5 fps - not shown on cut-sheet		Improve speed enforcement	MT-4	Traffic calming measures - speed cushions	LT-3	Field visits verified speeding along this corridor in the AM peak. Due to this road being part of the emergency access to Georgetown University Hospital, speed humps are Not recommended.	Short-term: Place on MPD watchlist. Mid-term: Long-term:
34	R & 35th Street	Flashers out-dated	Update flashing school sign	ST-4					Field visits verified need to update school flashing sign as well as locate an "end school zone" sign in the area.	Short-term: Installation of new "School Zone 15 mph" and flashers NB on 35th St north of R St Mid-term: Long-term:

TABLE 7: TRANSPORTATION OPTIONS ANALYSIS (CONTINUED)

NOTE: This table lists generalized improvements as shown on **Figure 26**. Specific locations and/or detailed improvements are included in the **Appendix D** cut sheets. Final Recommendations are shown in **Appendix H**

Box ID	Location	Issues	PRELIMINARY RECOMMENDATIONS						Analysis/Discussion	Final Recommendation
			Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #		
35 37	Wisconsin Ave	Increased AM traffic due to British School Pedestrian-vehicle conflicts along length	Improve enforcement of parking restriction	ST-3					Field visits could not verify parking issues along Wisconsin due to the British School. Not recommended The British School is working towards a traffic plan for providing access to the school.	Short-term: Mid-term: Long-term:
36	T Street	Buses block streets Bus traffic causes vibrations in houses			Alter routing (Removed from further consideration)	MT-9	Bus Bulb outs Thickness of pavement increased Replace surface with full flexible base	LT-2	Long-term: DDOT keeps a roadway conditions database. As this street is improved, provide a deeper thickness or full flexible base to minimize vibrations. Due to minimal traffic along T St, bus bulb outs are NOT recommended.	Short-term: Mid-term: Long-term: Update pavement to improve thickness or provide a fully flexible base as roadway condition deteriorates and is in need of improvement.
38	35th Street & 36th Street	Bus and truck traffic causing vibrations in houses			Alter routing (Removed from further consideration)	MT-9	Thickness of pavement increased Replace surface with full flexible base		Long-term: DDOT keeps a roadway conditions database. As this street is improved, provide a deeper thickness or full flexible base to minimize vibrations.	Short-term: Mid-term: Long-term: Roadway to be upgraded to thicker pavement or full-flexible base in conjunction with maintenance.
39	34th, Whitehaven, 37th Street	Pass through traffic (from Wisconsin)			Alter network operation through changes to lane configurations (Removed from further consideration)	MT-5(alts)	Speed humps and/or cushions. (removed from further consideration)	LT-3	Field visits verified speeding of vehicles and pass-thru nature of these three Sts. Speed humps removed from further consideration see Appendix D.	Short-term: Mid-term: Long-term:
40	31st & Q Street	Stop signs not visible							Reviewed on-site and not verified. No recommendation	Short-term: Mid-term: Long-term:
41	Wisconsin Ave & N Street	Delivery trucks block pedestrians and traffic in both directions	Improve enforcement	MT-4	Improve enforcement Restrict load/unload in certain areas- - e.g., must load/unload on N St during non-peak hours		Provide (more) loading/unloading area for trucks		Midterm: restriction of loading/unloading to non-peak hours is possible through usage of signage and regulation for only non-peak hour loading/unloading activities. Removal of existing loading/unloading zones is not recommended. Enforcement of loading/unloading zones is recommended.	Short-term: Enforcement of loading/unloading zones on MPD watch list Mid-term: Long-term:
41	Wisconsin Ave & P Street	Need "don't block the box signs"	Add Do Not Block Intersection signs	ST-1					Field visits verified need for "Do Not Block Intersection" signs.	Short-term: Install "Do Not Block Intersection" signs. Mid-term: Long-term:
42	Wisconsin Ave and 35th Street	No northbound connection	Glover Park Transportation Study recommendation	ST-7	Reconfigure street and intersection to allow for NB movement.	MT-7			Short-term: Glover Park Transportation Study recommendation is to continue one-way operation. Installation of diagonal parking on west side. Flexible curbing bump out at Wisconsin/35th St to slow vehicles. To be used as overflow parking of Glover Park as RPP parking takes place. Midterm: revert street to two-directional use. Signal to be located at 35th and Wisconsin. Existing signal at Whitehaven/Wisconsin to be removed. Diagonal parking to be removed. Flexible curb bump out to be minimized to allow for slowing of vehicles but full use of St in both directions.	Short-term: Glover Park Recommendation. Flexible curb bump out, continued one-way operation. Diagonal parking on west side. Mid-term: Revert to two-directional traffic. Signal to be installed at 35th/Wisconsin. Existing signal at Whitehaven/Wisconsin to be removed. Slight flexible curb bump out. Diagonal parking to be removed. Long-term:
42	Wisconsin from N to P Street	High pedestrian flow	Improve signing and install pedestrian countdown on SW corner of O Street	ST-4 (3)			Reviewing sidewalk widening options - not shown on cut sheet		Field visits verified need for countdown pedestrian signal on SW corner of O St/Wisconsin Ave Long-term: due to the recommendation of providing a bus-lane on Wisconsin SB there is not sufficient room to widen the sidewalks on Wisconsin. Not recommended	Short-term: Installation of pedestrian countdown heads at signals Mid-term: Long-term:

TABLE 7: TRANSPORTATION OPTIONS ANALYSIS (CONTINUED)

NOTE: This table lists generalized improvements as shown on **Figure 26**. Specific locations and/or detailed improvements are included in the **Appendix D** cut sheets. Final Recommendations are shown in **Appendix H**

Box ID	Location	Issues	PRELIMINARY RECOMMENDATIONS						Analysis/Discussion	Final Recommendation
			Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #		
46	Wisconsin Ave	Removal of crosswalks along Wisconsin at disjointed streets							Consultant team recommendation is to NOT remove crosswalks at locations along Wisconsin to continue to provide high pedestrian mobility through the area. Not recommended	Short-term: Mid-term: Long-term:
	Overall	Pedestrian Issues	Improve enforcement of pedestrian crossings only at signed crosswalks	MT-4	Raised intersections - removed from consideration Pedestrian medians (refuge areas)	MT-8 MT-13	Bus bulb outs	LT-2	Short-term: field visits show need for improvements to pedestrian facilities within Georgetown. Mid-term: with increases in congestion and pedestrian traffic, additional measures will be needed at non-signalized intersections to maintain pedestrian safety and mobility.	Short-term: High visibility crosswalks at: 26th/P St; 32nd/P St, 33rd/P St, 34th/P St; 34th/Q St; 33rd/Q St. Short-term: Imprint crosswalks located along M St and Wisconsin Ave Mid-term: Medians for pedestrian refuge to be located at: 26th/P St; 27th/P St; Rock Creek Parkway/P St; Reservoir Road/French Embassy. Long-term:
	Overall	Enforcement of traffic regulations	Improve enforcement	MT-4	Improve enforcement including installation of red light cameras at specific locations	MT-4			Field visits verified need for enforcement cameras at certain locations Mid-term: to ensure the smooth movement of buses in the proposed bus lane on M St in the Mid-term and Wisconsin Ave in the Long-term, cameras will be installed on buses to enforce parking restrictions.	Short-term: Installation of red light cameras at 33rd/Q St and M St/Key Bridge Short-term: Use of TCO officers at certain intersection 7-days a week. For Nationals Baseball Games classified as Class B or C Games, utilize TCO officers at a minimum at M St/ Wisconsin Ave and M St/Key Bridge. Short-term: Empower DDOT with enforcement arms. Mid-term: Continued use of TCO officers Mid-term: Installation of red light camera at 33rd/Wisconsin; speed camera on O St between Wisconsin Ave and 31st St, speed camera on R St between Avon Place and 31st, red light camera at M/34th, and red light camera at M/Key Bridge Mid-term: Conversion of curb lane on M Street from Wisconsin Ave to 28th St to bus-only, both directions. Mid-term: Installation of parking enforcement cameras on buses. Long-term: Continued use of TCO officers.
	Overall	Way finding signs	Sign installed on Key Bridge to note Whitehurst Freeway downtown bypass intersection	ST-1					Parking way finding signs are not appropriate along M St given the sign pollution in the area.	Short-term: Install "Whitehurst Freeway Downtown" and arrow sign along Key Bridge. Sign should withstand winds. Mid-term: Long-term:
	Overall	Parking							No recommendation to parking is made in this report. A separate study with members of DDOT, the ANC, BID, CAG and GBA is underway.	Short-term: Mid-term: Long-term:
	Overall	Optimization of signals			Optimize all signals for more thru-put on M St and Wisconsin Ave					Short-term: Change timing of signals to allow for optimization along M St and Wisconsin Ave. Mid-term: Long-term:

PEDESTRIAN

Pedestrian safety and mobility depend upon the public understanding and driver acceptance of warning signs. Neither pedestrians on their way to/from school and work nor drivers in the area can be expected to move safely unless they understand, use, and follow the traffic control presented. Therefore, a uniform presentation of signing and crosswalk needs to be present.

Issues – Lack of ADA facilities, narrow/poor sidewalks, high pedestrian volumes, lack of pedestrian heads at some signalized intersections, safety around schools, vehicle/pedestrian conflicts at M Street/Wisconsin Avenue, high vehicle speeds, and width of some roadways make it difficult to cross.

- Short-term:
  - Install countdown pedestrian heads at:
    - Q Street/33rd Street
    - P Street/30th Street
    - P Street/28th Street
    - South leg of O Street/Wisconsin Avenue (West split street).
  - Signal modification to allow for an All-pedestrian phase at M Street/Wisconsin Avenue.
  - Imprint Crosswalks located at (see ST-3) – design would need to be approved by Old Georgetown Board prior to installation. Recommend during maintenance that material damaged or replaced within crosswalk area by in-kind material(s).
    - Wisconsin Avenue at:
      - north/south leg of S Street
      - north/south leg of R Street
      - north/south leg of Reservoir Road (west split street)
      - north/south leg of Reservoir Road (east split street)
      - north leg of Q Street (west split street)
      - south leg of Q Street (east split street)
      - south leg of Volta Street
      - north/south leg of P Street (east split street)
      - south leg of P Street (west split street)
      - south leg of O Street (east split street)
      - north/south leg of O Street (west split street)
      - south leg of Dumbarton
      - north/south leg of N Street
      - north/south leg of Prospect Street,
      - all legs of M Street
    - M Street at:
      - east leg of 34th Street
      - east/west leg of 33rd Street
      - east leg of Potomac Street
      - all legs of Wisconsin Ave
      - east/west leg of 31st Street
      - east leg of Thomas Jefferson Street
      - east/west legs of 30th Street
      - east/west leg of 29th Street
      - west leg of 28th Street
  - Curb Ramp Recommendations as shown in ST-5
  - Sidewalk improvements/replacements/repairs as shown in ST-6 for short-term

- High Visibility Crosswalks (zebra striped) as shown on ST-4
    - P Street/26th Street
    - P Street/28th Street
    - P Street/29th Street
    - P Street/32nd Street
    - P Street/33rd Street
    - P Street/34th Street
    - Q Street/34th Street
    - P Street/30th Street
    - Volta Place/34th Street
    - Volta Place/34th Street
    - Prospect Street/34th Street
    - Prospect Street/35th Street
    - Prospect Street/36th Street
    - Prospect Street/37th Street
- Signage (See ST-1/ST-4):
    - Pedestrian crossing signs located at: 37th/Whitehaven, Reservoir Road/Georgetown University Hospital
    - School advance warning assembly at Wisconsin Avenue/O Street
    - Pedestrian rapid flashers at Reservoir Road/Georgetown University Hospital and P Street/Rock Creek Parkway intersections
    - Flashing School zone sign at: 35th Street north of R Street; 35th Street south of Whitehaven Parkway; Reservoir Road west of 36th Street; Reservoir Road west of 34th Street; O Street east of 33rd Street [Recommended although there is some contention with flashing lights in the community. Sign location to be determined in consultation with the surrounding residents].
    - "End School Zone" signs at: O Street west of Wisconsin Ave; 35th Street south of Whitehaven Parkway; Reservoir Road east of 37th Street; Reservoir Road west of 34th Street, and 35th Street north of R Street
    - Unsignalized pedestrian crossing sign at P Street/Rock Creek Parkway – rapid flashing beacon with pressure activated plates
- Use of TCO officers at M Street/Wisconsin Avenue, M Street/33rd, M Street/34th, M Street/Key Bridge, extend hours of TCO usage to include weekends.

- Mid-term:
    - Continue use of TCO officers at study area intersections throughout Georgetown at peak hours to allow for better movement of vehicles and pedestrians.
    - Median (pedestrian refuge – See MT-13 – Old Georgetown Board approval will be required prior to construction) at:
        - P Street at 26th Street
        - P Street at 27th Street
        - P Street at Rock Creek Parkway: one on each P Street and Rock Creek Parkway
        - Reservoir Road at the French Embassy
    - Sidewalk repairs/replacement as shown on ST-6
    - Complete sidewalk connection to Rose Park Footpath
    - If pedestrian safety continues to be an issue along Prospect Street with the high-visibility crosswalks installed (from Short-term solutions above), pedestrian crossing signs will be installed along Prospect Street at 34th Street, 35th Street, 36th Street, and 37th Street (See ST-4).
- Long-term
    - Continue use of TCO officers at study area intersections throughout Georgetown at peak hours to allow for better movement of vehicles and pedestrians.

TRANSIT

Transit moves more people per lane than other vehicles. As populations grow it will be important to provide for good transit options. This section provides recommendations based on transportation considerations alone. WMATA and Mass Transit Administration (MTA) will need to weigh these recommendations with other issues (e.g., funding, etc.)

Issues – Continue use of Circulator route, routes are not running on time, more frequent headways, vibrations, Georgetown University Transit Service (GUTS) use of residential streets, buses are not pulling to curb.

- Short-term:
  - Keep Circulator on present route for at least the first 6 years after publishing of study. This will be evaluated based on specific operational needs of WMATA and MTA.
  - Use 30-foot buses on G2 line. This will be evaluated based on specific operational needs of WMATA and MTA.
  - Request Georgetown University Transit Service (GUTS) and Georgetown University Hospital buses to utilize Canal Road exit rather than residential streets.
  - Use of TCO officers at M Street/Key Bridge, M Street/34th Street, M Stree/33rd Street, M Street/Wisconsin Avenue, use authority of TCOs for code enforcement, extend hours of TCO usage to include weekends.
- Mid-term:
  - Continue use of TCO officers at study area intersections throughout Georgetown at peak hours to allow for better movement of vehicles and pedestrians.
  - Bus Lanes in Peak Period
    - M Street from Wisconsin Avenue to 28th Street on both sides –
      - Conversion of curb lane in peak hours to bus-only lane
      - Signage would be necessary at each block noting bus only as well as location for vehicles to utilize lane for right-turn movement
      - The preferred location of bus stops is the far-side of intersection based on all considerations
      - Enforcement cameras mounted to buses to ticket violators. Will reduce travel time for east/west buses
      - Increases person throughput, and helps reduce transit operating costs due to transit being able to stay on-time.
- Long-term
  - Continue use of TCO officers at study area intersections throughout Georgetown at peak hours to allow for better movement of vehicles and pedestrians.
  - Thicker pavement or full flexible base utilized as street is replaced to minimize noise and vibrations at:
    - 35th Street
    - 36th Street
    - T Street
  - Bus lanes in peak periods at:
    - M Street from Wisconsin Avenue to 28th Street on both sides as identified in Mid-term recommendation
    - Wisconsin Avenue Southbound from Whitehaven Parkway to M Street
      - Conversion of thru-lane in peak hours to bus-only lane
      - Signage would be necessary at each block noting bus only as well as location for vehicles to utilize lane for right-turn movement
      - All bus stops to be located on far-side of intersection; enforcement cameras mounted to buses, traffic signals, or streetlights to ticket violators
      - Installation of “No Right-turn on Red” signs on all side streets to Wisconsin Avenue SB.
      - Will reduce travel time for east/west buses, increases person throughput, and helps reduce transit operating costs due to transit being able to stay on-time

- Support WMATA's Vision 2030 Plan to construct a Metro stop within Georgetown. However, this recommendation is not included in the District of Columbia Alternatives Analysis (DCAA), and funding has not been allocated to this endeavor. Note: This recommendation is not financially constrained.

TRAFFIC/AUTOMOBILE

The automobile will remain a major factor within the Georgetown area for at least the next 20 years, and traffic will remain an issue through the AM, PM and Saturday peak hours.

Issues – synchronization of signals along M Street and Wisconsin Avenue, critical signage is missing/old and in need of replacement, congestion along M Street and Wisconsin, "blocking" of intersections, vehicle turning movement conflicts with pedestrians and bicycles, pass through of trucks and vehicles on residential streets, cobblestone streets, pavement conditions, lack of left/right-turn lanes at intersections, speeding, lack of enforcement, narrow lanes, vehicles hit while parked.

- Short-term:
  - Increase enforcement for speeding, parking, right-turn on red restrictions, etc. as identified in Table D1.
  - Empower DDOT with enforcement ability.
  - Signage (See ST-1/ST-4):
    - "Do Not Block Intersection" signs at M/34th, M/33rd, M/Key Bridge, Wisconsin/P Street
    - Bicycle warning signs at Key Bridge/Whitehurst Freeway and K Street/Rock Creek Parkway
    - "Stop" signs on R Street at R/29th (both directions – results in all-way stop) and on Scotts Place at Scotts Place/32nd (all three directions – results in all-way stop)
    - "No Parking 7:00-9:30am Monday-Friday" on Wisconsin from Reservoir to R Street
    - Whitehurst Freeway/Downtown sign on Key Bridge – sign(s) should be able to withstand winds (utilize AASHTO ***Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*** 2001)
    - Pedestrian crossing signs located at: 37th/Whitehaven, Reservoir Road/Georgetown University Hospital
    - School advance warning assembly at Wisconsin Avenue/O Street
    - Pedestrian rapid flashers at: Reservoir Road/Georgetown University Hospital, P Street/Rock Creek Parkway
    - Flashing school zone sign at: 35th Street north of R Street; 35th Street south of Whitehaven Parkway; Reservoir Road west of 36th Street; Reservoir Road west of 34th Street; O Street east of 33rd Street [Recommended although there is some contention with flashing lights in the community. Sign location to be determined in consultation with the surrounding residents].
    - "End School Zone" signs at: O Street west of Wisconsin Ave; 35th Street south of Whitehaven Parkway; Reservoir Road east of 37th Street; Reservoir Road west of 34th Street, and 35th Street north of R Street
    - Driver feedback signs at: Reservoir Road east of 38th Street for westbound traffic and Reservoir Road east of 44th Street for eastbound traffic
    - Unsignalized pedestrian crossing sign at P Street/Rock Creek Parkway – rapid flashing beacon with pressure activated plates
    - In-street pylon pedestrian crossing signs as shown on ST-4 [Recommended although there is some contention with durability of these signs in the community – removed from areas in question but those located in cut sheets are in high-pedestrian areas with wide streets] Prior to installation of these signs the TAC committee requests commitment from DDOT to maintain signs.
  - Signal Modifications (See ST-2)
    - Synchronize signals for continuous flow of vehicles along Wisconsin Avenue and M Street.
    - Left turns available on Wisconsin Avenue at M Street. Restripe EB M Street to left-thru, thru, thru-right. Re-phase signal to allow for all-pedestrian phase. Provide education materials and publicity due to 1st intersection in DC with all-pedestrian phase.

    - Wisconsin Avenue and R Street. Remove 3 parking stalls closest to intersection on R Street and restripe for left and thru-right. Retime signal for lagging NB left-turn phase
    - Countdown pedestrian heads to be located at: Q Street/33rd Street, P Street/30th Street, P Street/28th Street, south leg of O Street/Wisconsin Avenue (west split street).
  - High visibility crosswalks as denoted in Pedestrian Short-term recommendations above and shown on ST-4.
  - Enforcement Cameras at:
    - M Street/Key Bridge – no right turn on red (NB)
    - M Street/Key Bridge – no left turn on red (WB)
    - 33rd Street/Q Street – no right turn on red
    - R Street between 31st Street and Avon Place NW – speed camera
  - Street changes
    - 35th Street/Wisconsin Avenue – use of Glover Park Transportation Study Recommendation (See ST-9). 35th remains one-way southbound; diagonal parking is installed on west side of street, parallel parking to remain on east side; flexible curb is extended at intersection to slow vehicles turning; to be used as parking for downtown Glover Park since parking restrictions will be going into affect.
  - Use of TCO officers for traffic operations and enforcement at:
    - M Street/Key Bridge
    - M Street/34th Street
    - M Street/33rd Street
    - M Street/Wisconsin Avenue
    - Use authority of TCOs for code enforcement throughout Georgetown
    - Extend hours of TCO usage to include weekends
  - Driver Feedback Signs:
    - Reservoir Road EB east of 44th Street
    - Reservoir Road WB west of 37th Street
  - Replace/upgrade/maintain streets DDOT has identified as deficient
- Mid-term:
  - Continue utilizing revised synchronization of signals along M Street and Wisconsin Avenue for continuous flow of traffic.
  - Continued use of TCO officers at study area intersections throughout Georgetown for movement of traffic and pedestrians, code enforcement, and extension of hours to Saturday and Sunday.
  - Pedestrian crossing signs located at: Prospect Street/34th Street; Prospect Street/35th Street; Prospect Street/36th Street; Reservoir Road/Georgetown University Hospital. These will be installed if high visibility crosswalks (as denoted in the Pedestrian short-term options listed above) are not effective in decreasing pedestrian/vehicle conflicts.
  - Median (pedestrian refuge – See MT-13) at:
    - P Street at 26th Street
    - P Street at 27th Street
    - P Street at Rock Creek Parkway (one on each P Street and Rock Creek Parkway)
    - Reservoir Road at French Embassy
  - Enforcement Cameras at:
    - 33rd Street/Wisconsin Avenue – no right turn on red
    - Q Street between Wisconsin Avenue and 31st Street – speed camera
    - Installation of cameras on buses for parking enforcement of bus lane(s) on M Street
  - Lane configuration changes
    - 27th Street/K Street/Whitehurst Freeway – for east leg, restripe lanes from left, thru, thru, thru-right to left, left-thru, thru (Whitehurst freeway), thru-right (Whitehurst Freeway); the left-thru lane to include a bike-box; signal would be fully actuated
    - 35th Street/Wisconsin Avenue – street will revert to 2-directional use. Signal installed at Wisconsin Avneue/35th Street with the removal of the signal at Whitehaven

Parkway/Wisconsin Avenue; diagonal parking on west side of street to be removed; flexible curb at Wisconsin to be minimized

- Bus Lanes in Peak Period
  - M Street from Wisconsin Avenue to 28th Street on both sides
    - Conversion of thru-lane in peak hours to bus-only lane.
    - Signage would be necessary at each block noting bus only as well as location for vehicles to utilize lane for right-turn movement;
    - all bus stops to be located on far-side of intersection;
    - Enforcement cameras mounted to buses or streetlights to ticket violators.
    - Installation of "No Right-turn on Red" signs on all side streets to M Street between Wisconsin Avenue and 28th Street.
- Replace/upgrade/maintain streets DDOT has identified as deficient

Long-term

- Continued use of TCO officers at study area intersections throughout Georgetown for movement of traffic and pedestrians, code enforcement, and extension of hours to include weekends.
- Replace/upgrade/maintain streets DDOT has identified as deficient
- Bus lanes in peak periods at:
  - Continued use of M Street from Wisconsin Avenue to 28th Street on both sides
  - Wisconsin Avenue Southbound from Whitehaven Parkway to M Street
    - Conversion of thru-lane in peak hours to bus-only lane
    - Signage would be necessary at each block noting bus only as well as location for vehicles to utilize lane for right-turn movement
    - all bus stops to be located on far-side of intersection; enforcement cameras mounted to buses, traffic signals, or streetlights to ticket violators
    - Installation of "No Right-turn on Red" signs on all side streets to Wisconsin Avenue SB.
    - Will reduce travel time for east/west buses, increases person throughput, and helps reduce transit operating costs due to transit being able to stay on-time
- One-way pair east of Wisconsin Avenue – Convert 30th Street to SB only; convert 31st Street to NB only to be completed in conjunction with approval of majority of affected property owners.

RECOMMENDATIONS SUMMARY

The implementation of these improvements would enhance transportation operations in the study area. An improvement that would significantly enhance operation is the optimization of signal timings throughout the study area. Current signal timings are based on throughput of major streets (M Street and Wisconsin Avenue). At some locations the LOS improves in the 2015 optimized scenario versus the existing (2007) operations; while delays on M Street and Wisconsin Avenue increase, the overall delay at the intersection improves. Further, by optimizing the signals for the entire system, improved traffic flows at upstream intersections reaching a bottleneck point in the corridor are minimized. Analysis of the recommendations is shown on the cut sheets in **Appendix H**. NOTE: Some recommendations are not able to be modeled (e.g., median usage for pedestrians, mode changes due to improvements of other modes, speed humps, etc.). The LOS for all recommended improvements are presented in **Table 8** and include all synergistic improvements.

The recommended transportation improvements are shown in **Figure 28** with the 2015 projected volumes taking into account the above recommendations are shown in **Figure 29**. Planning level cost estimates for the implementation of each of the recommended improvements are provided in **Appendix I** and total approximately $10 million for the plan including all short-, mid-, and long-term recommendations.

TABLE 8: CAPACITY ANALYSIS SUMMARY – RECOMMENDED TRANSPORTATION IMPROVEMENTS (2015 INCLUDING SHORT-, MID-, AND LONG-TERM RECOMMENDATIONS)

	Weekday				Saturday	
	AM Peak		PM peak		Peak	
Location	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*
Q Street and 32nd Street NW	A	3.6	A	5.0	A	4.9
Q Street and 31st Street NW	B	13.0	B	10.6	B	10.8
P Street and 33rd Street NW	F	120.7	D	32.9	B	13.4
P Street and 32nd Street NW	A	1.8	A	2.0	A	2.9
P Street and 29th Street NW	B	12.6	C	15.0	B	10.9
Reservoir Rd NW and Wisconsin Ave	B	12.8	F	104.8	A	6.8
33rd Street and Wisconsin Ave/Reservoir St	n/a	n/a	n/a	n/a	n/a	n/a
34th Street and R Street NW	E	37.0	F	116.0	A	10.0
34th Street and P Street NW	C	16.4	B	10.5	B	11.4
35th Street and N Street NW	B	11.8	B	10.2	B	13.4
35th Street and P Street NW	D	29.8	D	27.1	C	20.6
35th Street and Q Street NW	F	63.4	F	54.1	D	25.4
35th Street and Reservoir Road NW	F	328.8	F	340.1	E	66.3
37th Street and Reservoir Road NW	F	123.1	C	33.5	D	36.1
K Street and Wisconsin Avenue NW	F	60.9	F	73.2	C	17.6
K Street and Thomas Jefferson Street NW	A	0.7	A	0.6	A	0.8
K Street and 29th Street NW	A	1.4	A	0.4	A	0.9
K Street and 27th Street NW	F	274.9	F	225.1	D	39.2
Whitehurst Freeway and Canal Road	F	144.6	F	288.5	E	64.0
Key Bridge and M Street NW	F	173.5	F	291.7	F	311.3
M Street and 34th Street NW	F	111.0	F	160.7	F	147.8
M Street and 33rd Street NW	F	186.2	C	21.1	D	48.9
M Street and Wisconsin Avenue NW	F	286.4	F	286.9	F	220.3
M Street and Thomas Jefferson Street NW	B	17.2	A	5.6	A	6.3
Pennsylvania Avenue and 28th Street NW	C	23.0	C	24.8	B	16.6

NOTE: Red shaded cells represent intersections operating at LOS E or F;
Green shaded cells represent intersections operating at LOS A or B.
NOTE: Some recommendations are not able to be modified (e.g., median usage for pedestrians, mode changes due to improvements of other modes, speed humps, signage, etc.).

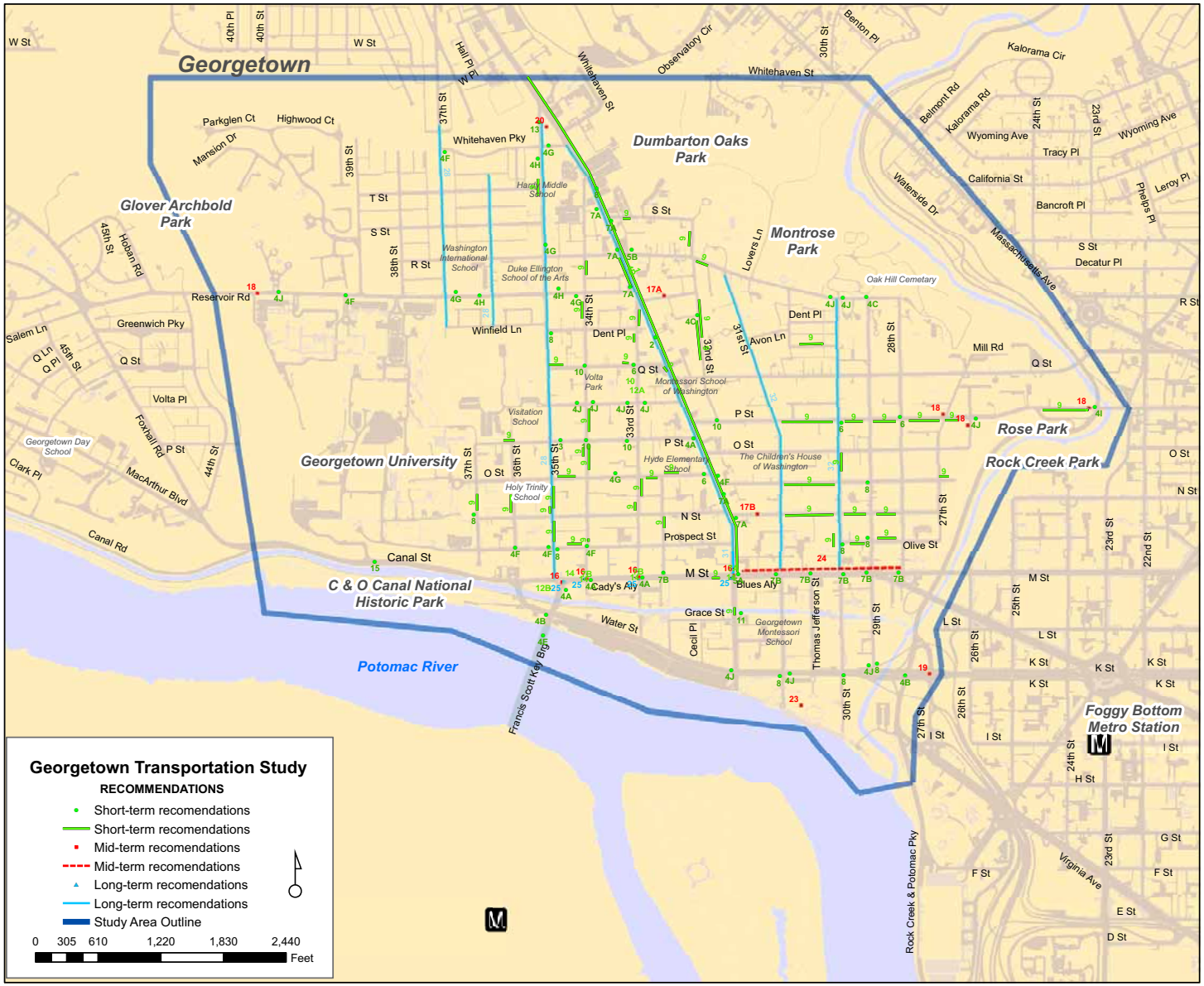
Table 9 shows a comparison of the existing (2007), 2015 No-build and 2015 with recommendations Capacity Analysis, LOS and delay for each of the 25 selected intersections. While the LOS may remain constant between the no-build and 2015 with recommendations, the delay decreases at most intersections. The exception is the intersection of M Street/Wisconsin Avenue where the delay increases over the no-build. This increase is based on adding an all-pedestrian phase to the signal cycle length. The addition of the all-pedestrian phase results in a safer intersection for all users but does increase average delay for each vehicle.

TABLE 9: EXISTING, 2015 NO-BUILD AND 2015 RECOMMENDED TRANSPORTATION IMPROVEMENTS COMPARISON

	EXISTING CONDITIONS (2007)						2015 NO-BUILD CONDITIONS						2015 with RECOMMENDATIONS					
	Weekday				Saturday		Weekday				Saturday		Weekday				Saturday	
	AM Peak		PM peak		Peak		AM Peak		PM peak		Peak		AM Peak		PM peak		Peak	
Location	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*	*LOS*	*Delay (sec)*
Q Street and 32nd Street NW	C	21.4	C	23.9	C	21.1	A	3.6	A	5.0	A	4.9	A	3.6	A	5.0	A	4.9
Q Street and 31st Street NW	B	14.4	C	16.0	B	11.7	C	15.9	B	14.6	B	14.1	B	13.0	B	10.6	B	10.8
P Street and 33rd Street NW	C	21.4	C	15.4	B	11.1	F	120.7	D	32.9	B	13.4	F	120.7	D	32.9	B	13.4
P Street and 32nd Street NW	B	11.4	B	11.6	B	12.3	A	1.8	A	2.0	A	2.9	A	1.8	A	2.0	A	2.9
P Street and 29th Street NW	B	12.4	C	15.1	B	10.8	A	12.6	C	15.0	B	10.9	B	12.6	C	15.0	B	10.9
Reservoir Rd NW and Wisconsin Ave	C	22.4	D	31.7	A	8.6	A	5.3	F	160.0	A	7.6	B	12.8	F	104.8	A	6.8
33rd Street and Wisconsin Ave/Reservoir St	A	9.4	A	9.4	A	8.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
34th Street and R Street NW	D	31.9	F	97.6	A	9.8	E	37.0	F	116.0	A	10.0	E	37.0	F	116.0	A	10.0
34th Street and P Street NW	B	10.7	A	9.0	B	10.0	C	16.4	B	10.5	B	11.4	C	16.4	B	10.5	B	11.4
35th Street and N Street NW	B	11.6	B	10.2	B	13.1	B	11.8	B	10.2	B	13.4	B	11.8	B	10.2	B	13.4
35th Street and P Street NW	B	14.7	B	14.6	C	17.0	D	29.8	D	27.1	C	20.6	D	29.8	D	27.1	C	20.6
35th Street and Q Street NW	E	41.9	C	23.2	C	20.1	F	63.4	F	54.1	D	25.4	F	63.4	F	54.1	D	25.4
35th Street and Reservoir Road NW	E	55.8	D	52.1	D	35.6	F	624.6	F	638.6	F	205.6	F	328.8	F	340.1	E	66.3
37th Street and Reservoir Road NW	D	36.1	B	11.6	C	21.7	F	83.3	B	18.8	C	27.0	F	123.1	C	33.5	D	36.1
K Street and Wisconsin Avenue NW	B	13.4	C	17.6	B	13.6	F	60.9	F	73.2	C	17.6	F	60.9	F	73.2	C	17.6
K Street and Thomas Jefferson Street NW	A	9.1	A	8.4	A	9.3	D	0.7	E	0.6	D	0.8	A	0.7	A	0.6	A	0.8
K Street and 29th Street NW	C	17.6	A	9.9	B	10.6	C	1.4	C	0.4	A	0.9	A	1.4	A	0.4	A	0.9
K Street and 27th Street NW	F	>200	F	>200	F	378.5	F	216.5	F	391.0	E	68.8	F	274.9	F	225.1	D	39.2
Whitehurst Freeway and Canal Road	C	47.6	F	120.4	C	31.9	F	102.5	F	221.5	D	40.7	F	144.6	F	288.5	E	64.0
Key Bridge and M Street NW	F	180.2	F	>200	F	161.6	F	147.9	F	153.3	F	104.2	F	173.5	F	291.7	F	311.3
M Street and 34th Street NW	F	103.7	F	133.7	E	96.4	F	169.3	F	269.7	F	238.4	F	111.0	F	160.7	F	147.8
M Street and 33rd Street NW	F	136.9	F	115.8	F	92.7	F	229.6	D	43.6	F	108.2	F	186.2	C	21.1	D	48.9
M Street and Wisconsin Avenue NW	F	119.0	F	106.0	E	67.4	F	161.7	F	238.8	F	123.4	F	286.4	F	286.9	F	220.3
M Street and Thomas Jefferson Street NW	B	13.1	B	13.2	A	8.8	C	33.3	A	5.9	B	16.1	B	17.2	A	5.6	A	6.3
Pennsylvania Avenue and 28th Street NW	B	20.0	B	15.3	B	15.9	B	19.6	C	24.2	C	22.2	C	23.0	C	24.8	B	16.6

NOTE: Red shaded cells represent intersections operating at LOS E or F;
Green shaded cells represent intersections operating at LOS A or B.
NOTE: Some recommendations are not able to be modified (e.g., median usage for pedestrians, mode changes due to improvements of other modes, speed humps, signage, etc.).
NOTE: The intersection of M and Wisconsin delay is caused by adding an all-pedestrian phase to the signal. The traffic operations are safer but additional delay to vehicles is anticipated.

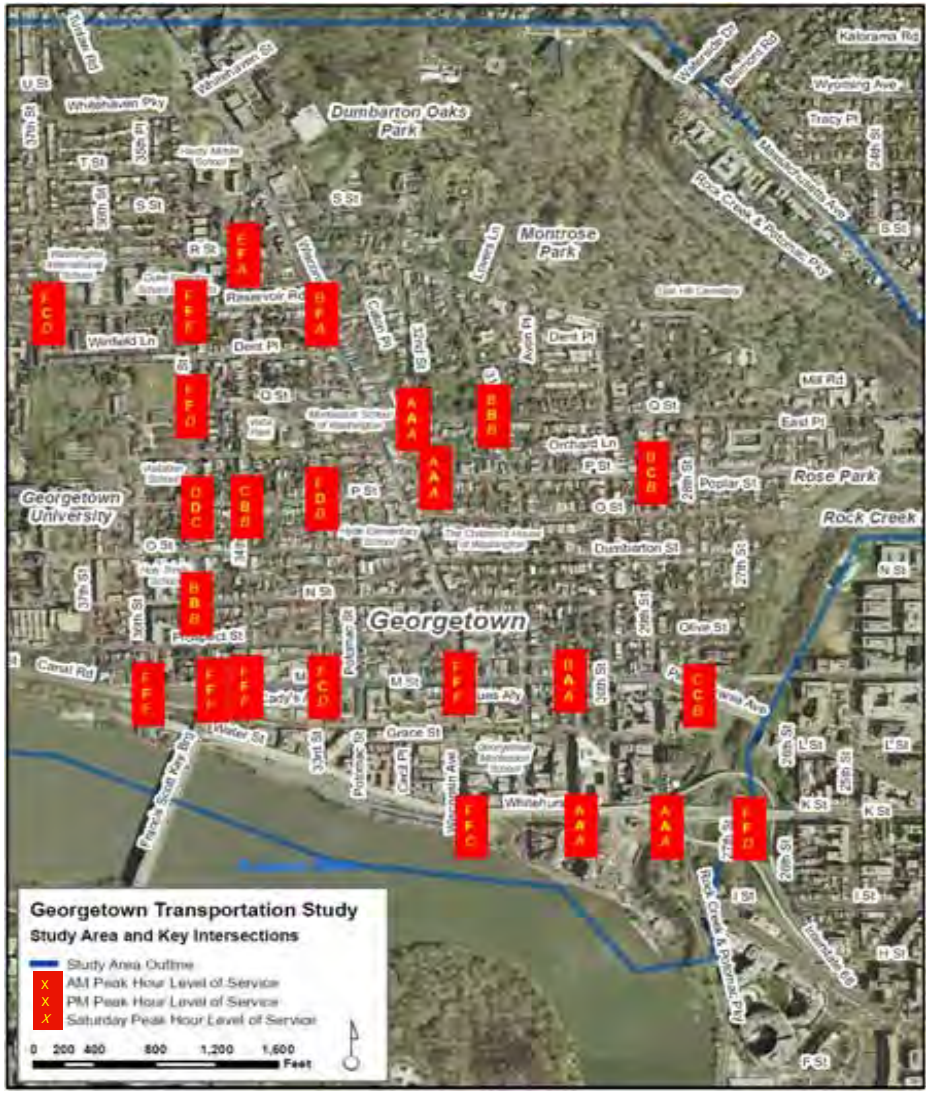
FIGURE 28: RECOMMENDED TRANSPORTATION IMPROVEMENTS

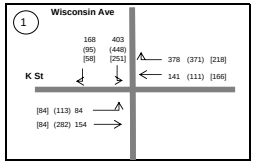


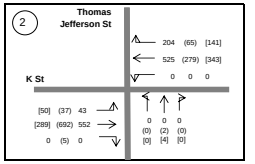
RECOMMENDATIONS LIST: SHORT, MEDIUM AND LONG TERM		
ID	**TYPE**	**DESCRIPTION**
4	**ST**	**Signage (ST-1)**
4A	**ST**	Do Not Block Intersection
4B	**ST**	Bicycle warning signs at Key Bridge/Whitehurst Freeway and K St/RockCreek Parkway
4C	**ST**	Stop signs on R Street at R/29th and on Scotts Place at Scotts Place/32nd
4D	**ST**	No Parking 7-9:30am Monday-Friday on Wisonsin from Reservoir to R St
4E	**ST**	Whitehurst Freeway/Downtown sign on Key Bridge – signs should be able to withstand winds
4F	**ST**	Pedestrian crossing signage at indicated locations
4G	**ST**	Flashing School Zone sign at indicated locations
4H	**ST**	End School Zone sign at indicated locations
4I	**ST**	Unsignalized pedestrian crossing sign at P Street/Rock Creek Parkway
4J	**ST**	In-street pylon pedestrian crossing sign at indicated locations
5	**ST**	**Signal modifications (ST-2)**
5A	**ST**	Left turns available on Wisconsin Ave at M Street
5B	**ST**	Wisconsin Avenue and R Street. Remove 3 parking stalls closest to intersection EB and restripe for left and thru-right at intersection
6	**ST**	**Countdown Pedestrian heads at signals at indicated locations**
7	**ST**	**Imprint Crosswalks (ST-3)**
7A	**ST**	Wisconsin Avenue
7B	**ST**	M Street
8	**ST**	**Curb ramp recommendations (ST-5)**
9	**ST**	**Sidewalk improvements as shown in ST-6: Replaced or Repaired**
10	**ST**	**High Visibility Crosswalks (ST-4)**
11	**ST**	**Install Smart Bike location south of M Street on Wisconsin – pilot program of DDOT**
12	**ST**	**Enforcement Cameras (MT-4)**
12A	**ST**	33rd/Q Street – right-turn on red
12B	**ST**	M/Key Bridge – no right turn on red
13	**ST**	**Recommendation (ST-9)**
14	**ST**	**Use of TCO officers during peak hours (MT-4)**
16	**MT**	**Continued use of TCO officers at M/Key Bridge, M/34th, M/33rd, M/Wisconsin, and code enforcement throughout G-town (MT-4)**
17	**MT**	**Enforcement Cameras (MT-4)**
17A	**MT**	33rd/Wisconsin – no right turn on red
17B	**MT**	O Street between Wisconsin Ave and 31st Street – speeding camera
18	**MT**	**Medians (pedestrian refuge) at indicated locations (MT-13)**
19	**MT**	**Lane Configuration changes at 27th/K Street/Whitehurst Freeway. The left-thru lane to include a bike-box. Fully actuated signal (MT-3)**
20	**MT**	**35th and Wisconsin: revert to 2-directional use of street (MT-7)**
24	**MT**	**Bus lanes in peak hour: M Street from Wisconsin Ave. to 28th Street on both sides of the street (LT-7)**
25	**LT**	**Continued use of TCO officers at locations along M Street and for code enforcement throughout Georgetown (MT-4)**
28	**LT**	**Thicker pavement or full flexible base utilized as street is replaced**
31	**LT**	**Bus lanes: Wisconsin Avenue in SB direction from Whitehaven Parkway to M Street (LT-7)**
32	**LT**	**One way pair east of Wisconsin Avenue (MT-6)**

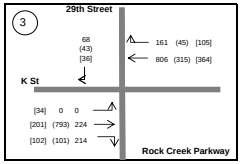
OVERALL RECOMMENDATIONS:		
1	**ST**	**Keep Circulator on present route**
2	**ST**	**Build time into transit schedules for 30's lines to accommodate traffic – more frequent service**
3	**ST**	**Recommend use of 30-foot buses on G2 line**
15	**ST**	**Recommend GUTS buses utilize the Canal Road exit/entrance rather than through G-town neighborhood**
17C	**MT**	**Installation of cameras for parking enforcement on Buses**
22	**MT**	**Install bike route signs to highlight Bike facility on K Street**
23	**MT**	**Install bike racks at waterfront area, encourage installation of bike racks as development is approved**
30	**LT**	**Construction of a metro stop in Georgetown**

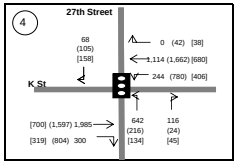
FIGURE 29: 2015 PROJECTED VOLUMES AND LEVEL OF SERVICE AT SELECT INTERSECTIONS INCLUDING THE RECOMMENDED TRANSPORTATION IMPROVEMENTS

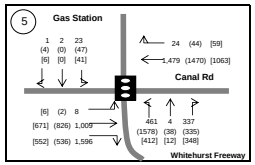


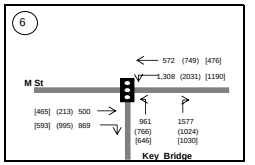


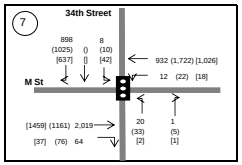


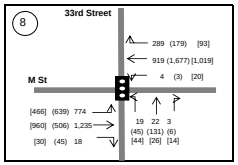


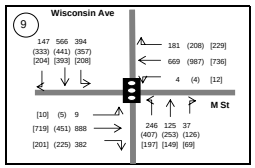


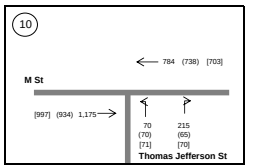


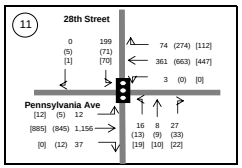


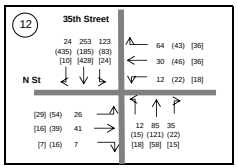


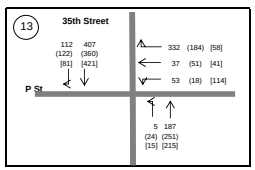


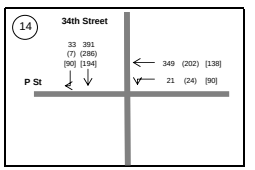


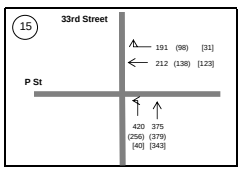


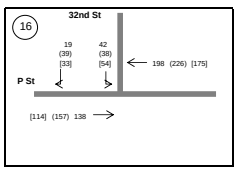


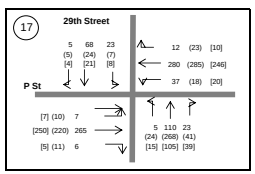


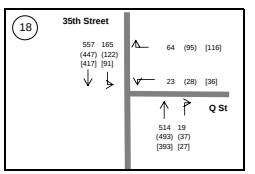


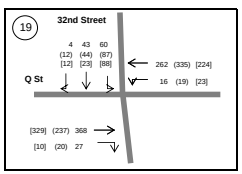


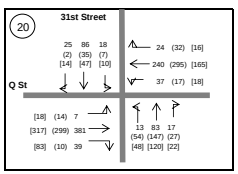


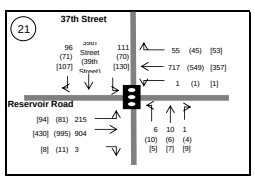


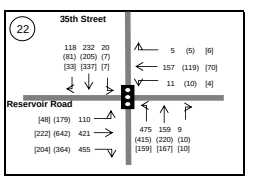


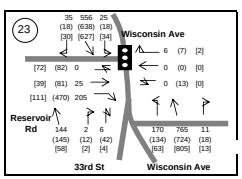


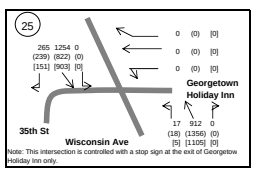












2015 Build Peak Hour Turning Movement Counts

000 AM Peak Hour
(000) PM Peak Hour
[000] Saturday Peak Hour

Signalized intersection

Note: Unless otherwise noted, all intersections are all-way stop controlled.

APPENDICES

APPENDIX A – WMATA TRANSIT ROUTE RIDERSHIP

WMATA Transit Route Boardings/Alightings

Georgetown Metrobus Routes and Stops

	3:00 AM - 5:29 AM		5:30 AM - 9:29 AM		9:30 AM - 2:59 PM		3:00 PM - 6:59 PM		7:00 PM - 2:59 AM		Grand Totals	
	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings
Bus 38B East Bound												
Pennsylvania Ave and 28th St	0	0	3	5	0	0	1	2	1	0	5	7
M St and 30th St	0	0	7	7	15	3	25	12	7	0	54	22
M St and Wisconson Ave	1	0	32	15	33	13	55	14	33	1	154	43
M St and 33rd St	0	0	9	17	15	4	25	9	9	0	58	30
Bus 38 B West Bound												
M St and 34th St	0	1	2	13	7	19	1	14	0	0	10	47
M St and Potomic St	0	0	0	31	4	16	3	24	0	2	7	73
M St and Wisconson Ave	0	3	6	79	7	38	40	65	11	6	64	191
M St and Thomas Jefferson St	0	0	7	36	10	3	20	13	7	2	44	54
Pennsylvania Ave and 28th St X	0	1	7	18	2	8	11	4	3	1	23	32
Bus 30, 32, 34, 35, 36 East Bound												
Wisconson Ave and 35th St	0	0	17	17	7	9	26	9	5	2	55	37
Wisconson Ave and 34th St	0	0	39	73	44	37	45	18	15	9	143	137
Wisconson Ave and R St	1	1	30	33	20	17	72	15	9	6	132	72
Wisconson Ave and Q St	6	0	64	52	26	47	65	41	9	13	170	153
Wisconson Ave and P St X	0	0	56	59	25	42	27	31	10	8	118	140
Wisconson Ave and Dumbarton St X	0	0	25	28	24	47	49	60	16	18	114	153
M St and Wisconson Ave (TP)	1	7	81	140	81	115	87	106	93	45	343	413
M St and Thomas Jefferson St	0	2	27	44	67	22	66	17	67	9	227	94
Pennsylvania Ave and 28th St X	2	0	25	24	17	4	29	5	11	2	84	35
Bus 30, 32, 34, 35, 36 West Bound												
Pennsylvania Ave and 28th	0	1	1	22	0	11	9	13	4	4	14	51
M St and 30th St	0	8	7	95	26	45	24	48	18	12	75	208
M St and 31st St (TP)	8	13	45	110	59	139	130	107	36	31	278	400
Wisconson Ave and N St	0	3	9	36	17	36	62	33	24	8	112	116
Wisconson Ave and Dumbarton St	1	0	19	15	92	29	84	23	25	0	221	67
Wisconson Ave and P St	2	1	19	22	59	34	55	25	11	7	146	89
Wisconson Ave and Q St X	0	4	45	27	78	29	39	35	13	9	175	104
Wisconson Ave and R St	1	1	9	34	48	26	14	22	2	11	74	94
Wisconson Ave and 34th St X	0	6	11	81	56	54	56	37	7	13	130	191
Wisconson Ave and 35th St X	0	5	4	35	10	18	21	15	4	5	39	78
Bus G2 East Bound												
37th St and O St (TP)	0	0	36	0	28	0	90	0	15	0	169	0
Prospect St and 36th St	0	0	0	0	1	0	24	1	0	0	25	1
35th St and N St	0	0	1	0	4	0	3	0	0	0	8	0
O St and 34th St	0	0	3	0	3	0	5	0	2	0	13	0
O St and 33rd St	0	0	2	0	3	0	3	0	2	0	10	0
Dumbarton St and Wisconson Ave (TP)	0	0	10	1	22	0	82	10	45	0	159	11
Dumbarton St and 30th St	0	0	1	0	3	0	3	0	3	0	10	0
Dumbarton St and 29th St	0	0	2	1	3	0	1	0	0	0	6	1
28th St and Dumbarton St	0	0	3	0	3	0	1	0	4	0	11	0
28th St and P St	0	0	2	0	0	0	0	1	0	0	2	1
P St and 26th St	0	0	3	0	6	0	7	2	0	1	16	3
Bus G2 West Bound												
P St and 27th St	0	0	7	28	0	3	1	10	1	5	9	46
P St and 28th St	0	0	2	15	0	2	0	4	0	0	2	21
P St and 29th St	0	0	0	4	0	2	0	1	0	0	0	7
P St and 30th St	0	0	0	9	0	8	0	13	0	0	0	30
P St and 31st St	0	0	0	20	0	4	0	3	0	3	0	30
P St and Wisconson Ave (TP)	1	1	9	124	1	51	0	50	1	22	12	248
P St and 33rd St	0	0	2	13	0	4	0	7	0	4	2	28
P St and 34th St	0	0	2	3	2	2	0	1	0	0	4	6
P St and 35th St	0	0	0	13	0	3	0	2	0	3	0	21
37th St and O St (TP)	0	10	0	122	0	35	0	22	0	15	0	204
Bus D2 Loop												
Q St and 27th St X	0	0	2	3	0	2	0	4	0	1	2	10
Q St and 28th St	0	0	3	4	0	1	2	1	0	0	5	6
Q St and 30th St	0	0	1	1	2	2	1	11	0	1	4	15
Q St and 31st St	0	0	0	12	0	4	1	3	1	3	2	22
Q St and Wisconson Ave	0	0	3	28	5	19	15	43	4	12	27	102
Q St and 33rd St	0	0	4	8	5	3	4	7	3	0	16	18
Q St and 35ht St	0	0	0	13	1	2	2	6	2	4	5	25
35th St and Reservoir Rd (TP)	0	0	7	116	2	18	2	33	1	12	12	179
35th St and S St X	0	0	1	22	1	6	0	5	0	0	2	33
T St and 35th St	0	0	0	20	5	1	5	4	0	1	10	26
T St and 37th St	0	0	0	3	0	3	10	14	0	7	10	27
37th St and U St	0	0	0	0	0	0	0	5	0	0	0	5
37th St and Tunlaw Rd	0	0	0	2	0	1	1	17	0	10	1	30

WMATA Transit Route Boardings/Alightings (continued)

Georgetown Metrobus Routes and Stops

	3:00 AM - 5:29 AM		5:30 AM - 9:29 AM		9:30 AM - 2:59 PM		3:00 PM - 6:59 PM		7:00 PM - 2:59 AM		Grand Totals	
	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings	Boardings	Alightings
Bus D1, 3, 6 East Bound												
37th St and U St	0	0	18	4	0	0	0	0	0	0	18	4
35th St and T St	0	0	9	0	0	0	0	0	0	0	9	0
35th St and Reservoir Rd	0	0	3	2	0	0	0	0	2	0	5	2
35th St and Winfield La (TP)	0	1	22	10	12	3	60	6	0	0	94	20
Q St and 34th St	0	0	15	4	5	0	2	0	0	0	22	4
Q St and Wisconson Ave	1	0	30	26	31	42	59	63	12	13	133	144
Q St and 31st St	0	0	16	4	11	4	21	4	3	1	51	13
Q St and 30th St	0	0	35	2	4	0	5	2	0	0	44	4
Q St and 28th St	0	0	18	10	1	1	1	0	0	0	20	11
Q St and 27th St	0	0	23	3	0	0	1	0	0	1	24	4
Bus D1, 3, 6 West Bound												
Q St and 27th St X	0	0	2	2	0	0	0	2	0	3	2	7
Q St and 28th St	0	0	4	5	3	2	2	3	0	2	9	12
Q St and 30th St	0	0	0	6	3	6	0	15	0	0	3	27
Q St and 31st St	0	0	0	3	0	8	1	4	0	0	1	15
Q St and Wisconson Ave	3	5	18	29	7	31	13	25	1	11	42	101
Q St and 33rd St	2	0	28	3	22	2	19	1	4	4	75	10
Q St and 35th St	0	0	1	5	8	7	0	11	0	1	9	24
35th St and Reservoir Rd (TP)	0	0	0	21	0	0	2	5	0	2	2	28
35th St and S St X	0	0	0	0	0	0	0	0	0	0	0	0
T St and 35th St	0	0	0	0	0	0	0	0	0	0	0	0
T St and 37th St	0	0	0	0	0	0	1	0	0	0	1	0
37th St and U St	0	0	0	0	0	0	0	0	0	0	0	0
37th St and Tunlaw Rd	0	0	0	0	0	0	1	5	0	0	1	5
Bus D5 East Bound												
M St and 34th St	0	0	1	5	0	0	0	0	0	0	1	5
M St and Potomac St	0	0	0	1	0	0	0	0	0	0	0	1
M St and Wisconson Ave (TP)	0	0	4	8	0	0	0	0	0	0	4	8
M St and Thomas Jefferson St	0	0	1	3	0	0	0	0	0	0	1	3
Pennsylvania Ave and 28th St X	0	0	5	2	0	0	0	0	0	0	5	2
Bus D5 West Bound												
Pennsylvania Ave and 28th St	0	0	0	0	0	0	0	0	0	0	0	0
M St and 30th St	0	0	0	0	0	0	4	5	0	0	4	5
M St and Wisconson Ave (TP)	0	0	0	0	0	0	3	3	0	0	3	3
M St and 33rd St	0	0	0	0	0	0	3	4	0	0	3	4
Totals	***6***	***6***	***253***	***158***	***107***	***106***	***198***	***158***	***22***	***38***	***586***	***466***

Source: WMATA, 2007

Georgetown University Transportation Shuttle (GUTS) Ridership

	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Year
DuPont AM from Leavey	7,197	4,398	3,324	3,630	3,411	2,677	3,149	3,501	4,235	3,623	3,910	7,093	**50,148**
DuPont AM to Leavey	13,013	16,003	15,212	15,807	14,743	11,822	13,687	13,993	15,400	14,444	14,458	14,283	**172,865**
DuPont PM from Leavey	20,746	23,513	22,601	27,428	26,703	19,021	24,551	24,860	27,083	24,762	23,800	23,450	**288,518**
DuPont PM to Leavey	12,263	10,610	10,500	13,657	12,716	8,549	11,372	11,867	13,407	11,881	11,523	14,058	**142,403**
Rosslyn AM from Leavey	6,278	4,355	3,604	3,607	3,871	2,813	2,961	4,067	4,563	4,630	3,899	5,607	**50,255**
Rosslyn AM to Leavey	11,548	15,473	14,701	16,096	15,043	11,627	13,977	15,292	16,924	15,552	14,638	13,011	**173,882**
Rosslyn PM from Leavey	16,284	19,639	22,944	24,279	22,735	14,956	20,950	21,710	24,539	22,623	18,359	17,125	**246,143**
Rosslyn PM to Leavey	10,862	9,443	10,337	11,156	10,416	6,873	9,536	9,876	11,203	10,821	8,550	9,365	**118,438**
Arlington Loop	4,507	5,134	5,785	5,642	5,485	4,046	5,287	5,761	6,044	5,512	5,080	4,600	**62,883**
Law Center Shuttle	1,687	1,361	2,806	2,975	2,785	1,592	2,188	2,263	2,388	2,201	1,535	1,699	**25,480**
Wisconsin Ave. Shuttle	11,977	12,873	13,271	13,099	13,119	12,220	14,115	15,175	14,296	14,035	12,767	12,306	**159,253**
Charters	368	570	246	764	214	167	389	375	273	505	2,804	161	**6,836**
TOTAL YEAR TO-DATE	116,730	123,372	125,331	138,140	131,241	96,363	122,162	128,740	140,355	130,589	121,323	122,758	**1,497,104**
EACH ROUTE													

TOTAL YEAR-TO-DATE ALL ROUTES:	**1,497,104**

Source: Georgetown University Transportation Management Department, 2007

NUMBER OF PASSENGERS ON TRANSIT AT M/31ST

NUMBER of WMATA BUSES TRAVELING M STREET & WISCONSIN AVENUE - Existing (5-15-08)

	AM PEAK		PM PEAK		
	7-8am	**8-9am**	**4-5pm**	**5-6pm**	**6-7pm**
WEEKDAY EASTBOUND/SOUTHBOUND					
ROUTE					
30's line (30, 32, 34, 35, 36)	9	15	14	10	6
38B (M Street eastbound) -	3	4	3	4	3
D5 (peak service in peak direction)	3	3	--	--	--
Circulator (every 5-10 minutes)	8	8	8	8	8
Metro Connection (every 10 minutes)	6	6	6	6	6
WEEKDAY WESTBOUND/NORTHBOUND					
ROUTE					
30's line (30, 32, 34, 35, 36)	13	19	7	11	7
38B (M Street eastbound) -	3	3	3	3	4
D5 (peak service in peak direction)	--	--	1	3	2
Circulator (every 5-10 minutes)	8	8	8	8	8
Metro Connection (every 10 minutes)	6	6	6	6	6
SATURDAY PEAK	**EASTBOUND**		**WESTBOUND**		
ROUTE	**11am-noon**	**noon-1pm**	**11am-noon**	**noon-1pm**	
30's line (30, 32, 34, 35, 36)	6	6	6	6	
38B (M Street eastbound) -	2	2	2	2	
D5 (peak service in peak direction)	--	--	--	--	
Circulator (every 5-10 minutes)	8	8	8	8	
Metro Connection (every 10 minutes)	6	6	6	6	
Totals					
	Weekday AM		**Weekday PM**		**Saturday**
M Street EB east of Wisconsin	29	36	31	28	22
M Street WB east of Wisconsin	30	36	25	31	22
Wisconsin Ave SB north of M Street	17	23	22	18	14

From *K Street Transitway Study* page 2-11 table 2-1 Existing (Year 2003) Weekday bus trips and ridership

M Street Passengers east of Wisconsin

- 30's line: AM EB-570/WB-331 PM EB-292/WB-390
- 38B line AM EB-65/WB-42 PM EB-29/WB-46
- D5: AM EB-90/WB-0
- GUTS: AM-450 PM-750

Use an average of 35 passengers per bus in peak direction during peak hour:

M Street EB east of Wisconsin (Weekday AM) – 36*35 = 1,260

M Street WB east of Wisconsin (Weekday PM) – 31*35 = 1,085

M Street EB/WB east of Wisconsin (Saturday) – 22*35 = 770

Wisconsin Avenue SB north of M Street – AM – 23*35 = 805

APPENDIX B – SIDEWALKS, ROADS, AND ALLEYWAYS SCHEDULED IMPROVEMENTS

DDOT yearly posts schedules for the fiscal year construction season. For the FY08 season, the schedules below represent approximately $41 million of investment in local street, alley and sidewalk infrastructure. The tables below represent those improvements located within the Study Area.

NOTE: Some of these improvements have been completed.

DDOT FY08 and FY09 Sidewalk Schedule (revised April 28, 2008)

LOCAL SIDEWALKS

Ward	Quad	ST_NAME	From	To	Timing
2	2 NW	34TH ST	WATER ST		FY08
2	2 NW	32ND ST	P ST	Q ST	FY08
2	2 NW	O ST	35TH ST	36TH ST	FY09
2	2 NW	29TH ST	Q ST	R ST	FY09
2	2 NW	P ST	35TH ST	36TH ST	FY09
2	2 NW	N ST	27TH ST	28TH ST	FY08

DDOT FY08 and FY09 Local Road Schedule (revised April 28, 2008)

LOCAL ROAD BY TEAM 1

Ward	Street Name	Quad	From	To	Timing
2	35TH ST	NW	T ST	WHITEHAVEN PKY	FY08
2	O ST	NW	27TH ST	28TH ST	FY08
2	P ST	NW	35TH ST	36TH ST	FY08
2	36TH ST	NW	PROSPECT ST	N ST	FY08
2	38TH ST	NW	T ST	CUL DE SAC (S)	FY08
2	SCOTT PL	NW	32ND ST	CATON ST	FY08
2	36TH ST	NW	N ST	O ST	FY08
2	T ST	NW	35TH ST	36TH ST	FY09

DDOT FY08 and FY09 Alley Schedule (revised April 28, 2008)

LOCAL ALLEYS

Ward	Quad	Street 1	Street 2	Street 3	Street 4	Street 5	Street 6	Street 7	Timing
2	NW	VOLTA PL	WISCONSIN AVE	33RD ST	WISCONSIN AVE	P ST			FY08
2	NW	M ST	31ST ST	31ST ST	THOMAS JEFFERSON ST	K ST			FY09
2	NW	M ST	31ST ST	31ST ST	THOMAS JEFFERSON ST	K ST			FY09
2	NW	M ST	31ST ST	31ST ST	THOMAS JEFFERSON ST	K ST			FY09
2	NW	VOLTA PL	WISCONSIN AVE	33RD ST	WISCONSIN AVE	Q ST			FY08
2	NW	VOLTA PL	WISCONSIN AVE	33RD ST	WISCONSIN AVE	Q ST			FY08
2	NW	T ST	36TH ST	WHITEHAVEN PKY	35TH PL	T ST	37TH ST		FY08
2	NW	T ST	36TH ST	WHITEHAVEN PKY	35TH PL	T ST	37TH ST		FY08

Source: http://newsroom.dc.gov/show.aspx/agency/ddot/section/1/release/13407/year/2008

APPENDIX C – SUMMARY OF ANNUAL NUMBER OF CRASHES BY TYPE

Intersection	Right Angle			Left Turn			Right Turn			Rear-end			Sideswipe			Head On			Parked			Fixed Object			Pedestrian			Other			Total			
	04	05	06	04	05	06	04	05	06	04	05	06	04	05	06	04	05	06	04	05	06	04	05	06	04	05	06	04	05	06	04	05	06	Total
Q St & 32nd St						1													1	1											1	1	2	4
Q St & 31st St										1			1		2					1								1			3	1	2	6
P St & 33rd St											1			1																	0	2	0	2
P St & 32nd St																															0	0	0	0
P St & 29th St													1			1			1												3	0	0	3
33rd St & Wisconsin Ave		2	1		1						2	1		3	1								1				1		1		0	10	4	14
Wisconsin Ave & Reservoir Rd	3			2							3	2	2		1				1							1					8	4	3	15
34th St & R St														1													1				0	1	1	2
34th St & P St																			1												1	0	0	1
35th St & N St																			1												1	0	0	1
35th St & P St																								1						1	0	0	2	2
35th St & Q St																												1			1	0	0	1
35th St & Reservoir Rd		1		1					1			2	1	1			1														2	3	3	8
35th St & Wisconsin Ave				1		2						1		1				1	3												4	1	4	9
37th St & Reservoir Rd															1						2										0	0	3	3
K St & Wisconsin			1					1			1	5		1	2					1	1			3			2	1	1	2	1	5	16	22
K St & Thomas Jefferson St												1																			0	0	1	1
K St & 29th St				1			1			1			1	1	1	1										1					5	2	1	8
K St & 27th St										4	4	2	1	2								1									6	6	2	14
Whitehurst Fwy & Canal Rd			1								1	2	1		1																1	1	4	6
Key Bridge & M			1	1		1	1		2	2	2	5	3		2							1		1							8	2	12	22
M St & 34th St					1			1			5	1	4	8	1		1			1	1	1							1		7	18	3	28
M St & 33rd St		3		2	2			1	2	4	2	1	4	4	1				2	1	1		1			1		1	1	1	13	16	6	35
M St & Wisconsin Ave	2		1	1		5	3		9	9		9	7		11	1		1	4		3						2	1		4	28	0	45	73
M St & Thomas Jefferson St												1			4																0	0	5	5
28th St & Pennsylvania								1				2	2	2	1									1							2	4	4	10
Total	5	6	5	9	4	9	5	4	14	21	21	35	28	25	29	3	2	2	14	5	8	3	2	6	0	4	6	7	4	9	95	77	123	295
Combined Total	16			22			23			77			82			7			27			11			10			20			295			

Source: District Department of Transportation - 2007

APPENDIX D – SHORT-TERM, MID-TERM, AND LONG-TERM IMPROVEMENT OPTIONS CONSIDERED

This section of the report presents each identified transportation issue, broken into the length of implementation (Short-, Mid-, and Long-term). They are presented as follows:

- Short-term options: These solutions are broken down by "category" where possible with all solutions of that type shown on one map (e.g., signal/lane configuration modifications, signage, sidewalk improvements, etc.). Short-term options can be implemented within 12-months time.
- Mid-term/Long-term Options – these are broken down by location and presented as follows:
  - Issue-states the concern, problem or need for improvement
  - Features/Options – various solutions that could potentially address the issue. This section includes a description of all the short-term, mid-term, and long-term improvements considered in the evaluation. Based on the evaluation of alternatives, some of the preliminary suggestions were not recommended for implementation.
  - Analysis – analysis and evaluation parameters

  Mid-term options can be implemented between 1 to 5 years time. Long-term options can be implemented in 6+ years.

Table D1 provides a connection between **Figure 26** and the options considered. All options considered are shown in this table. The appropriate cut sheet or **Table 7** shows the analysis and recommendations for each option. Final recommendations are shown in **Appendix H**.

TABLE D1: TRANSPORTATION ISSUES AND POTENTIAL IMPROVEMENTS

NOTE: this table lists generalized improvements. Specific locations and/or detailed improvements are included in **Appendix D** cut sheets. Final recommendations are shown in **Appendix H**.

			PRELIMINARY RECOMMENDATIONS					
Box ID	Location	Issues	Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #
1	37th Street	Trucks operating despite restriction	Improve enforcement of restriction	MT-4	Driver feedback signs and speed camera enforcement-specific locations to be determined for report	MT-4	Speed humps - specific locations to be determined for report Bus stop bulb-outs	LT-2 LT-3
2	35th Street	Buses block street			Alter routing (Removed from further consideration)	MT-9	Bus stop bulb-outs	LT-2
3	35th & Reservoir Road	High pedestrian flow	Improve pedestrian facilities including school flashers.	ST-4 (1)				
4	Reservoir Road	Uncontrolled Mid-block crossing	Install Driver Feedback signs, and Pedestrian signs with rapid flashers.	ST-4 (1)	Refuge island at Reservoir Rd and French Embassy	MT-12		
5	Reservoir Road	Speed limit exceeded	Improve enforcement of speed limits	MT-4	Driver feedback signs and speed camera enforcement	MT-4		
5	Reservoir Road: from 35th to 37th	No "School Zone present" (15 mph signage) School flashers missing	Add signing/signal for school zone Add school flashers	ST-4				
5	Reservoir Road: from 35th to 39th	Pedestrian accident zone	Improve pedestrian facilities including school flashers	ST-4 (1)				
6	33rd Street & 34th Street	Pass through traffic	Allow left turns for all vehicles from M Street to Wisconsin Avenue northbound	ST-2	Two-way operation of one or more of these roads to increase "friction" and reduce the desirability for pass through traffic. Removed from further consideration. Reverse direction of both 33rd and 34th Street from Wisconsin to M Street (33rd SB, 34th NB) - Removed from further consideration No direct connection from M Street EB to NB 34th Street-must travel to Wisconsin Avenue for NB traffic - Removed from further consideration	MT-2 MT-5		
7	O Street & P Street	Buses block street	Removal of parking on oneside of street to allow for sufficient width of roadway for bus movement. – Removed from consideration		Alter routing (Removed from further consideration)	MT-9	Bus stop bulb-outs	LT-2

TABLE D1: TRANSPORTATION ISSUES AND POTENTIAL IMPROVEMENTS (CONTINUED)

NOTE: this table lists generalized improvements. Specific locations and/or detailed improvements are included in **Appendix D** cut sheets. Final recommendations are shown in **Appendix H**.

			PRELIMINARY RECOMMENDATIONS					
Box ID	Location	Issues	Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #
7	O Street & P Street	No school parking/pull-off	Improve enforcement of restriction	MT-4				
7	O & P Street	Poor pavement - cobblestones						
7	O & P Street	Existing trolley tracks						
7	O Street & P Street	Lack of parking						
8	M Street; Prospect Street: from 37th to 34th	Pedestrian accident zone	Add pedestrian signing and high visibility crosswalks	ST-4 (4)				
9	33rd Street and Q Street	RTOR restriction ignored No pedestrian signal	Improve enforcement of restriction Add pedestrian signal heads	ST-3 ST-4	Install Intersection camera with RTOR restriction Remove RTOR ban and replace with "Do Not Block Intersection" signing	MT-4 MT-5		
10	M Street & 34th Street / Key Bridge	Long queues due to M St traffic, Vehicle block the box	Add "Do Not Block Intersection" signs Use TCO officers at peak hours Extend TCO hours of operation to Saturday	ST-1	Restripe lanes to better accommodate demand Removed from further consideration Alter street network to encourage/force drivers to approach the Key Bridge on M Street through modifications/closure of access points Removed from further consideration	MT-2 MT-5 MT-11	Physical changes to intersection layout Not recommended	
10	M Street & 34th Street	Steep slope at intersection						
10	M Street & 34th Street / Key Bridge	Accident location	Add "Do Not Block Intersection" signs	ST-1				
11	Key Bridge and Whitehurst Freeway	Bicycle-vehicle conflict	Add bicycle warning signs	ST-1	ITS flashers tripped when bike/Ped approaching	MT-4		
13	M Street & 33rd Street	Long queues AM for left turns Left turns "block the box" and hence westbound traffic High Pedestrian Flow Accident location	Allow left turns for all vehicles from M Street EB to Wisconsin Avenue NB - change phasing to split phase - change phasing to lagging left turn phase Improve enforcement of restriction Recalculate pedestrian timing at 3.5 fps - not shown on cut-sheet	ST-2 MT-4	Convert existing left-thru lane to left turn only lane. Stripe dedicated left turn lane on M St EB Alter street network operation (Removed from further consideration) Widen sidewalks	MT-2 MT-5 MT-12		

TABLE D1: TRANSPORTATION ISSUES AND POTENTIAL IMPROVEMENTS (CONTINUED)

NOTE: this table lists generalized improvements. Specific locations and/or detailed improvements are included in **Appendix D** cut sheets. Final recommendations are shown in **Appendix H**.

			PRELIMINARY RECOMMENDATIONS					
Box ID	Location	Issues	Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #
14	Wisconsin Avenue & O Street	Poor signage Stop sign at intersection difficult to see No School signing Crosswalk used for Hyde Elementary	Review signage in area for improvements Add Pedestrian crossing signage to Wisk Install Pedestrian countdown signal on SW corner, Add "School Ahead" signage. Review Pedestrian signal timing at intersection. Add "Stop Ahead" sign	ST-4 (4)				
15	Wisconsin Avenue: from M St to Water Street	No marked pedestrian way	Improve signing and crosswalk striping	ST-4(4)				
16	M Street	Vehicles park during peak hours despite restriction	Improve enforcement of restrictions DPW Parking Enforcement controlling study area intersections in peak hours Extend TCO hours of operation to Saturdays	MT-4	Traffic Control Officer (TCO) controlling study area intersections in peak hours Extend TCO hours of operation to Saturdays Allow parking on M Street at all times	MT-4		
16	M Street	Pedestrian volume impacts turning movements and reduces intersection capacity	Include all-pedestrian phase and diagonal crosswalks, retime and rephase signal as necessary	ST-2				
17	K Street	High bicycle volumes	Install pylons to improve driver awareness and slow vehicles	ST-4 (3)	Complete trail system (NPS). Not shown on cut-sheet			
18	K Street & Rock Creek Parkway	Bicycle-vehicle conflict	Add bicycle warning signs	ST-1	ITS flashers tripped when bike/pedestrian approaching	MT-4		
19	K Street & 27th Street	Connection with Whitehurst Freeway (Complex intersection) High traffic and pedestrian flows	Review pedestrian signal timings. Not shown on cut-sheet.		Lane restriping to accommodate left turns from K Street WB to 27th Street	MT-3		
20	M Street: from 31st to 29th	High pedestrian flow	Recalculate pedestrian timing at 3.5 fps - not shown on cut-sheet		Widen sidewalk	MT-12		

TABLE D1: TRANSPORTATION ISSUES AND POTENTIAL IMPROVEMENTS (CONTINUED)

NOTE: this table lists generalized improvements. Specific locations and/or detailed improvements are included in **Appendix D** cut sheets. Final recommendations are shown in **Appendix H**.

			PRELIMINARY RECOMMENDATIONS					
Box ID	Location	Issues	Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #
21	M Street & Wisconsin Ave	High left turn volumes Ban on left turns from M Street EB causes back-up on 33rd High pedestrian flow Narrow sidewalks Accident location	Allow left turns for all vehicles from M Street EB to Wisconsin Avenue NB Include ALL pedestrian phase Enforce speeds and other restrictions Improve signing as required	ST-2 MT-4	Convert thru-left to left-turn only lane Widen sidewalks	MT-5 MT-10 MT-12		
22	28th Street: from M Street to R Street	Lack of parking						
23	30th Street & P Street	No pedestrian signal Pedestrian Accident Zone	Add pedestrian signal heads	ST-4 (4)				
24	Rose Park Footpath	Incomplete and inadequate pedestrian and bicycle facilities	Complete sidewalk and trail connection	ST-6				
25	P St: 28th to 31st	Pedestrian accident zone						
26	28th & P Street	No pedestrian signal Pedestrian Accident Zone	Add pedestrian signal heads	ST-4 (4)				
27	R Street & 29th Street	STOP sign NB on R Street-with limited sight distance EB/WB on 29th	Convert intersection to 3-way(all way) stop provided it meets warrants	ST-1				
28	Scott Place & 32nd Street	No stop sign	Install stop sign	ST-1				
29	Reservoir Road & 32nd Street 31st and 32nd Streets	Pass through traffic (from Wisconsin Avenue)			Alter network operation one way couplet with parking on 31st/30th	MT-6		
30	Wisconsin Avenue & 33rd Street	High left turn volume from 33rd blocks traffic			Sever outbound connection with Wisconsin Avenue Removed from further consideration	MT-5		
31	Wisconsin & R Street	Parked vehicles contribute to AM congestion Left turn volume may require protected phase	Restrict parking in the AM peak hour northbound on Wisconsin Avenue south of R Street Retime / rephase signal leading NB left turn phase lagging NB left turn phase extra green time for Wisconsin Ave leading EB left turn phase	ST-1 ST-2				

TABLE D1: TRANSPORTATION ISSUES AND POTENTIAL IMPROVEMENTS (CONTINUED)

NOTE: this table lists generalized improvements. Specific locations and/or detailed improvements are included in **Appendix D** cut sheets. Final recommendations are shown in **Appendix H**.

			PRELIMINARY RECOMMENDATIONS					
Box ID	Location	Issues	Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #
32	Wisconsin Avenue: from Whitehaven Pkwy to Reservoir Rd	Pedestrian accident zone	Recalculate pedestrian timing at 3.5 fps - not shown on cut-sheet		35th Street Intersection redesign. Other traffic calming measures presently being considered not shown on cut-sheets	MT-7		
33	35th from Reservoir to Q	Pedestrian accident zone	Recalculate pedestrian timing at 3.5 fps - not shown on cut-sheet		Improve speed enforcement.	MT-4	Traffic calming measures - speed cushions	LT-3
34	R & 35th Street	Flashers out-dated	Update flashing school sign	ST-4				
35 37	Wisconsin Avenue	Increased AM traffic due to British School Pedestrian-vehicle conflicts along length	Improve enforcement of parking restriction	ST-3				
36	T Street	Buses block streets Bus traffic causes vibrations in houses			Alter routing (Removed from further consideration)	MT-9	Bus Bulb outs Thickness of pavement increased Replace surface with full flexible base	LT-2
38	35th Street & 36th Street	Bus and truck traffic causing vibrations in houses			Alter routing (Removed from further consideration)	MT-9	Thickness of pavement increased Replace surface with full flexible base	
39	34th, Whitehaven, 37th Street	Pass through traffic (from Wisconsin)			Alter network operation through changes to lane configurations (Removed from further consideration)	MT-5(alts)	Speed humps and/or cushions. Specific locations for speed humps/cushions to be determined for report but are not located on cut sheets	LT-3
40	31st & Q Street	Stop signs not visible						
41	Wisconsin Avenue & P Street	Need "don't block the box signs"	Add Do Not Block Intersection signs	ST-1				

TABLE D1: TRANSPORTATION ISSUES AND POTENTIAL IMPROVEMENTS (CONTINUED)

NOTE: this table lists generalized improvements. Specific locations and/or detailed improvements are included in **Appendix D** cut sheets. Final recommendations are shown in **Appendix H**.

			PRELIMINARY RECOMMENDATIONS					
Box ID	Location	Issues	Short Term	Sheet #	Mid Term	Sheet #	Long Term	Sheet #
42	Wisconsin from N to P	High pedestrian flow	Improve signing and install pedestrian countdown on SW corner of O Street	ST-4 (4)			Reviewing sidewalk widening options - not shown on cut-sheet	
43	Wisconsin Avenue & N Street	Delivery trucks block pedestrians and traffic in both directions	Improve enforcement	MT-4	Improve enforcement Provide (more) loading/unloading area for trucks Restrict load/unload in certain areas- - e.g., must load/unload on N St during non-peak hours			
44	Wisconsin Avenue and 35th Street	No northbound connection	Glover Park Transportation Study recommendation	ST-7	Reconfigure street and intersection to allow for NB movement.	MT-7		
46	Wisconsin Avenue	Removal of crosswalks along Wisconsin at disjointed streets						
	Overall	Pedestrian Issues	Improve enforcement of pedestrian crossings only at signed crosswalks	MT-4	Raised intersections - removed from consideration Pedestrian medians (refuge areas)	MT-8 MT-13	Bus bulb outs	LT-2
	Overall	Enforcement of traffic regulations	Improve enforcement	MT-4	Improve enforcement including installation of red light cameras at specific locations	MT-4		
	Overall	Way finding signs	Sign installed on Key Bridge to note Whitehurst Freeway downtown bypass intersection	ST-1				
	Overall	Parking						

SHORT-TERM OPTIONS CONSIDERED

Short term options are solutions that can be implemented in 12-months or less to improve safety and mobility and reduce speed and congestion, such as traffic control measures, traffic calming measures, improved signage, signalization, channelization, transit route modifications, lighting, curbside management, etc.

For ease in identification, short term solutions are shown by type of improvements.

With any signage, the sign should be placed in positions where they will convey their message(s) most effectively without restricting height clearance or sight distance. Signage is based on the Manual for Uniform Traffic Control Devices.

Below is a list of the generalized Short-Term Options considered for this project. Figures are shown after the options are listed. To view the issues, features/options, and analysis for the locations of these potential improvements see each figure.

SHORT-TERM OPTION 1 – VEHICLE

SHORT-TERM OPTION 2 – SIGNAL MODIFICATIONS

SHORT-TERM OPTION 3 – IMPRINT PAVING (ON CROSSWALKS)

ST-4: SIGNS, SIGNALS AND PAVEMENT MARKINGS (PEDESTRIAN RELATED)

- **SHORT-TERM OPTION 4 –SIGNS, SIGNALS AND PAVEMENT MARKINGS (PEDESTRIAN RELATED) PAGE 1 OF 4**
- **SHORT-TERM OPTION 4 –SIGNS, SIGNALS AND PAVEMENT MARKINGS (PEDESTRIAN RELATED) PAGE 2 OF 4**
- **SHORT-TERM OPTION 4 –SIGNS, SIGNALS AND PAVEMENT MARKINGS (PEDESTRIAN RELATED) PAGE 3 OF 4**
- **SHORT-TERM OPTION 4 –SIGNS, SIGNALS AND PAVEMENT MARKINGS (PEDESTRIAN RELATED) PAGE 4 OF 4**

SHORT-TERM OPTION 5 –CURB RAMP RECOMMENDATIONS

SHORT-TERM OPTION 6 –SIDEWALK RECOMMENDATIONS

SHORT TERM OPTION 9 – INTERSECTION IMPROVEMENTS – WISCONSIN AVENUE & 35TH STREET (GLOVER PARK TRANSPORTATION STUDY RECOMMENDATION)

MID-TERM OPTIONS CONSIDERED

Mid-term options are solutions that can be implemented in a period between one and six years and include items such as signal modifications, intersection improvements, enforcement, removal of parking in certain locations, reversal of one-way traffic operations, etc.

The Mid-Term Options are listed below. The issues, features/options, and analysis for these potential improvements are shown in each figure.

MID-TERM OPTION 2 –INTERSECTION IMPROVEMENTS – M STREET/33RD STREET INTERSECTION

MID-TERM OPTION 3 –INTERSECTION IMPROVEMENTS – 27TH STREET/K STREET/ WHITEHURST FREEWAY INTERSECTION

MID-TERM OPTION 4 –ENFORCEMENT, SIGNING, AND TRAFFIC CALMING

MT-5: M STREET CORRIDOR (M STREET, 34TH STREET, 33RD STREET AND WISCONSIN AVENUE IMPROVEMENTS)

- **MID-TERM OPTION 5 –M STREET CORRIDOR (M STREET, 34TH STREET, 33RD STREET AND WISCONSIN AVENUE IMPROVEMENTS) – EXISTING CONDITIONS**
- **MID-TERM OPTION 5A –M STREET CORRIDOR (M STREET, 34TH STREET, 33RD STREET AND WISCONSIN AVENUE IMPROVEMENTS) OPTION A – 33RD STREET ONE-WAY SOUTHBOUND**
- **MID-TERM OPTION 5D –MT-5D M STREET CORRIDOR (M STREET, 34TH STREET, 33RD STREET AND WISCONSIN AVENUE IMPROVEMENTS) OPTION D – 33RD STREET ONE-WAY SOUTHBOUND, 34TH STREET ONE WAY NB TO PROSPECT STREET, BANK ALLEY NORTHBOUND**

MID-TERM OPTION 5D1 –M STREET CORRIDOR (M STREET, 34TH STREET, 33RD STREET AND WISCONSIN AVENUE IMPROVEMENTS) OPTION D1 – 33RD STREET ONE-WAY SOUTHBOUND, 34TH STREET ONE WAY NB TO PROSPECT STREET, BANK ALLEY SOUTHBOUND

MID-TERM OPTION 6 –ONE WAY PAIR EAST OF WISCONSIN AVENUE

MID-TERM OPTION 7 –INTERSECTION IMPROVEMENTS – WISCONSIN AVENUE/35TH STREET

MID-TERM OPTION 10 –INTERSECTION IMPROVEMENTS – M STREET/WISCONSIN AVENUE

MT-11: INTERSECTION IMPROVEMENTS – M STREET/KEY BRIDGE

MID-TERM OPTION 11 –INTERSECTION IMPROVEMENTS – M STREET/KEY BRIDGE (ALTERNATIVE 1)

MID-TERM OPTION 11 –INTERSECTION IMPROVEMENTS – M STREET/KEY BRIDGE (ALTERNATIVE 2)

MID-TERM OPTION 12 –SIDEWALK WIDENING AND MEDIAN ALONG M STREET AND WISCONSIN AVENUE

MID-TERM OPTION 13 – MEDIAN AND PEDESTRIAN REFUGE

LONG-TERM OPTIONS CONSIDERED

Long-term options are solutions that take a longer period of time to be implemented (more than 6 years to implement). Long-term options include such items as traffic calming devices, major street changes, resurfacing, etc.

The Long-Term Options are listed below. The issues, features/options, and analysis for these potential improvements are shown in each figure.

LONG-TERM OPTION 1 –PROPOSED BUS SHELTERS

LONG-TERM OPTION 2 –PROPOSED BUS BULB-OUT LOCATIONS

LONG-TERM OPTION 5 –M STREET PARKING MODIFICATIONS

LONG-TERM OPTION 7 –TRANSIT ONLY LANES ON M STREET EAST OF WISCONSIN AVENUE AND ALONG WISCONSIN AVENUE

ADDITIONAL OPTIONS CONSIDERED

Following the 3rd Public Meeting held April 23rd, 2008, and the feedback received, additional options beyond those described above, were considered. The items reviewed for recommendation included:

Pedestrian improvements

- Raised intersections for increased safety for pedestrians – Removed from further consideration due to concerns over sound and vibrations.
- Additional bulb out locations – removed from further consideration by TAC.
- Removing left turn only phases from signals – removed from further consideration due to lack of left turn lanes and need for continued access.
- Shorten signal timing to the minimum length for a pedestrian to cross the intersection. This would minimize delay to pedestrians.
- Widen sidewalks by narrowing travel lanes.

Transit improvements

- Additional bulb out locations not shown on LT-2 – removed from further consideration by TAC.
- Maintain the current Circulator route.
- Provide more frequent service throughout Georgetown.
- Mount enforcement cameras to transit vehicles for parking violations.
- Consolidate/remove transit stops to allow for more of an express service.
- Construction of a metro stop within Georgetown.

Bicycle improvements

- Bicycle lanes
- Smart bike location south of M Street on Wisconsin (short rental of bicycles throughout DC – pilot program of DDOT).
- Other bicycle rack locations.
- Bike boxes at intersections allowing bikes to go to the front of the intersection and queue rather than within the lane of traffic.
- Install Bike Route signs.

Roadway changes

- Conversion of one-way streets to two-way with the removal of some parking.
- Conversion of two-way streets to one-way to allow for more parking and provide directional flow through Georgetown.

IMPROVEMENT OPTIONS NOT RECOMMENDED

This section provides pros/cons as well as reasons behind the removal from further consideration of potential improvement options as presented previously.

Reversal of 33rd and 34th Street Couplet (MT-5 Options):

- Citizens have voiced concern over pass-through traffic. This option addresses that concern.
- There is a large backup at M/Key Bridge that impacts the intersections of M/34th, M/33rd, M/Potomac, and to some extent M/Wisconsin, because there is inadequate queuing space for the traffic from 34th Street heading to Key Bridge. Consequently 34th Street backs up. If 33rd Street and 34th Street are reversed there is additional queue length at the intersection of Key Bridge/M Street, and the anticipated queue length at M/33rd is cleared within 2 cycle lengths. The longest backup on 33rd Street is anticipated to reach approximately 100-feet north of Prospect Street.
    - Reversing 33rd Street to SB and preventing left turns into 34th Street would force residents to use Wisconsin Avenue (necessitating permitting left turns from M Street) to access the areas west of Wisconsin Avenue and north of M Street. This does result in reduced accessibility to that area.
- The traffic utilizing 33rd Street NB in the morning would now have to utilize Wisconsin Avenue to travel northbound. Traffic on 33rd Street now during the AM peak would now travel 33rd Street during the PM peak. With the additional storage capacity by removing the movements at M/34th, we anticipate the intersection will operate effectively.
- 34th Street reverts to a neighborhood street. With NB traffic only and no connection from M Street EB to 34th Street NB, this street reverts to a neighborhood street providing connection to Wisconsin Ave and circulation.
- Operations at 33rd/Wisconsin in the NB direction are mitigated at this 5-point intersection that does not have a signal for NB vehicles. Much safer for both vehicles and pedestrians as vehicles are watching for the gaps in traffic and not for pedestrians.
- Parking remains as is.
- Even though this recommendation provides better flow to the Key Bridge, due to public opposition this option was removed.

Speed humps as denoted in MT-4: TAC committee is strongly opposed to the installation of speed humps anywhere in Georgetown. Removed by request.

Widen sidewalks (MT-12) – for Wisconsin roadway can not be widened and provide a bus lane.
For M Street, a maximum of 1-foot per side can be accommodated with an 11-foot Bus-lane and 9.5 feet inside lanes. Cost-benefit analysis shows this is not beneficial in the long run.

- Other widening of sidewalks option – Remove a travel lane along M Street. This is in direct opposition to providing a bus lane along M Street since that would leave one travel lane in each direction in peak hours along M Street which can not carry the amount of traffic in the area. This

option, if implemented would remove a travel lane in each direction from 33rd Street to 28th Street and utilize that additional width for sidewalk. Lane widths on M Street would increase from 10-feet (current) to 11-feet with an additional 8 feet of sidewalk resulting in sidewalk widths of 18-20-feet. All street trees, furniture, lighting, traffic control and curbs/gutters would need to be moved to accommodate the additional width. If a lane of traffic were converted to pedestrian usage, transit vehicles would be significantly delayed.

Left turn phases removed from all signals – this condition actually decreases safety for pedestrians. With a specific phase for left-turning vehicles, the drivers can concentrate on the crossing instead of on-coming traffic.

Shorten signal timing to the minimum length for pedestrians to cross the intersection – For all scenarios, the timing of M/Wisconsin must operate as a stand alone since it is to contain an all-pedestrian phase.
Specific relation to M Street –only four blocks from 31st Street to 28th Street would be affected.
Specific relation to Wisconsin – we are trying to increase the number of vehicles utilizing Wisconsin. This is in direct opposition from making Wisconsin more attractive to vehicles instead of the residential streets.

Signal priority for transit – recommending bus lanes. Therefore, this is counterproductive. It would actually have a negative effect on all traffic with minimal improvement to buses.

Signal Modifications (ST-2)

- M Street/33rd Street – (1) extra green time for left turns, (2) Split Phase – both of these options result in worse average vehicle delays at the intersection.
- 35th Street and Reservoir Road (1) extra green time for SB thru, (2) optimize for SB traffic – this signal is already optimized for the SB traffic for an overall signal timing of 120 seconds. Both of these options result in an increase to average vehicle delay at the intersection.

Bus Rerouting (MT-9)

- Bus stops are located as they were prior to WMATA service taking over from privatized company.
- Because serving residents is high priority for WMATA, it is not appropriate to make elderly walk to Wisconsin. WMATA should be in the neighborhoods to service customers.
- Wisconsin is well served by transit now.

Bus Shelters as denoted in LT-1: TAC committee is strongly opposed to the installation of bus shelters within Georgetown. In some areas, the sidewalks are narrow and therefore, the standard bus shelter would encroach on sidewalk width. Additionally, it was stated that advertisement at bus shelters can not be regulated. Removed by request.

Bus bulbouts as denoted in LT-2: TAC committee is strongly opposed to the installation of bus bulbouts within Georgetown. It was stated that Bus bulbouts decrease traffic flow. Removed by request.

Intersection Improvements

- M Street/Key Bridge (MT-11) – Restriping existing lanes to 3 EB, 3 WB (remove one thru lane WB to convert to one more thru lane EB). Maintain two left turn lanes by shifting one lane north. – removes ability of thru movement in WB direction for loading/unloading activities.
- M Street/Key Bridge (MT-11) – above option with an additional thru lane in EB direction on west leg of intersection by pushing out two right turns into NPS property. Regulations associated with annexing NPS property.

M Street changes

- Converting one travel lane in each direction on M Street to parking only (LT-5) – parking 24 hours is counter productive with a bus lane in the same location. Bus lanes service provides more person trips than additional parking. PROS: increase business attractiveness along the M Street corridor, decrease width of crossings for pedestrians (would install bulbouts), could increase sidewalk width by two feet in each direction; CONS: increase delay for transit, increase diversion of traffic elsewhere, increase traffic operations but would increase business attractiveness along the M Street corridor. To provide for NB movement at M/Wisconsin left lane in EB direction would need to be left-thru.

- Alternative: Converting one travel lane in each direction on M Street to allow for more sidewalk width. All parking on M Street would need to be removed to allow for two thru lanes in each direction on M Street. See above for more information on specifics, pros, and cons.

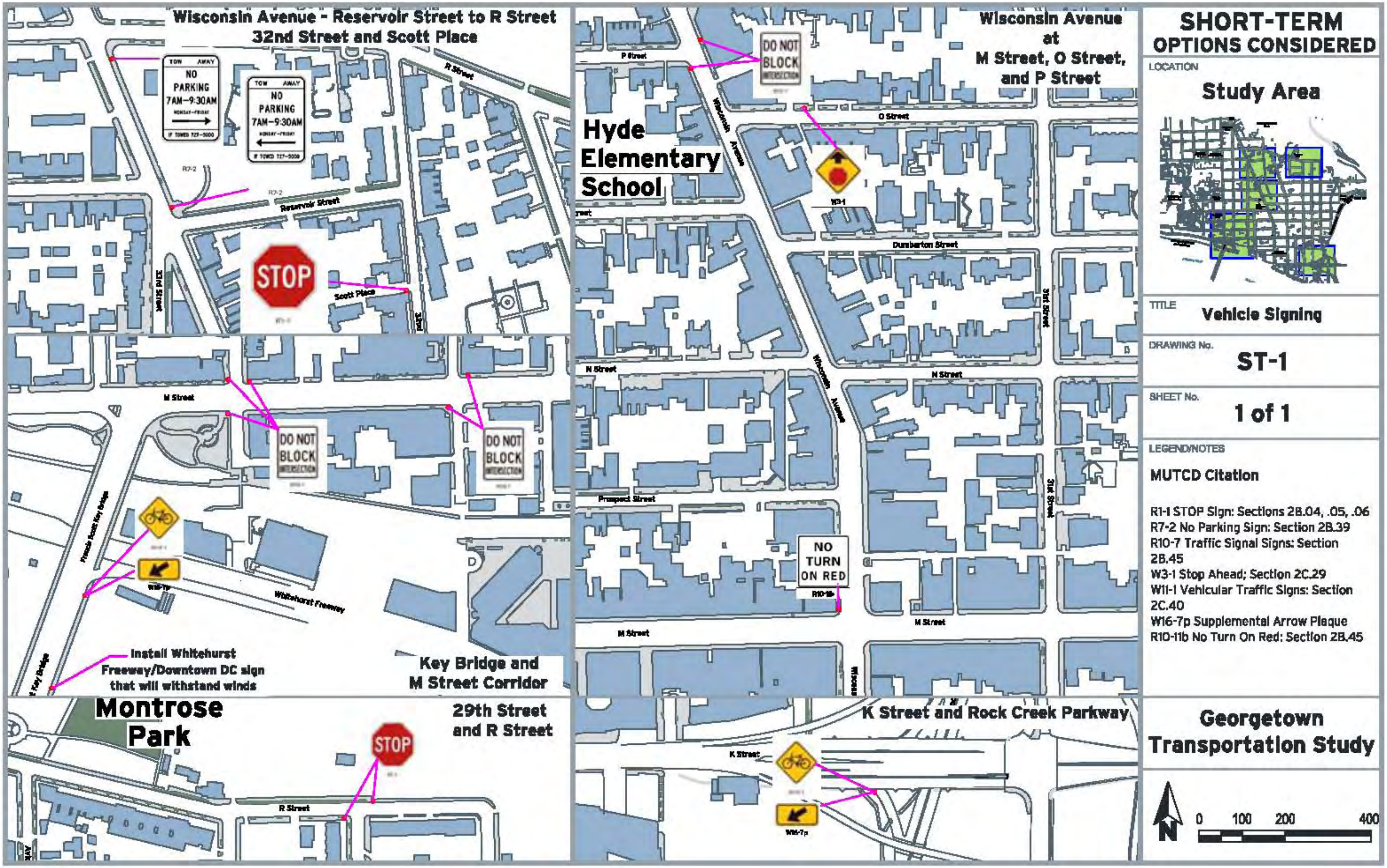
33rd/Q Street signal – flashing red in non-peak hours. This signal is used as a traffic calming measure in non-peak hours to minimize the speed of vehicles traveling down Q Street. We would recommend this location be placed on the MPD watchlist for speed and signal violations.

35th Street/Reservoir Road signal phasing changes. Northbound this intersection is a lagging left turn phase. In the DDOT model, it shows as a leading left turn phase. Analysis of utilizing a leading and lagging left turn phase were completed and analyzed for both pedestrian and vehicle movement. The leading left turn phase shows a slightly improved vehicle movement over the lagging. Safety of pedestrians is improved with lagging left turn phases. With the minimal improvement of a leading left turn phase for vehicles, the cost associated with changing the phase for such a minimal improvement, and noting that this intersection is adjacent to the Duke Ellington School of the Arts, it was determined to perform no changes to the phasing of this intersection. DDOT will be notified that their model shows this intersection as a leading left turn phase.

Consolidation of bus stop at 33rd/Q with Wisconsin/Q service different bus routes. The stop on 33rd/Q services D1, D2, D3, D6 while the stop on Wisconsin/O services the 30's line. If one stop were to be consolidated the stop would be on Wisconsin/Q with the removal of the 33rd/Q stop. Utilizing the stop at Wisconsin/Q for the D1, D2, D3, and D6 lines is not recommended due to the proximity to the right turn of the route. Having a stop so immediately after a right turn onto Wisconsin is not recommended.

Wayfinding for Parking Garages. TAC committee suggested that due to sign pollution along M Street and Wisconsin, wayfinding signs should not be considered.

Regulation stating no riding bicycles on sidewalks. The DDOT bicycle coordinator stated that there is no way to enforce this regulation. In the CBD where the regulation exists it is not enforced. Due to the residential nature of Georgetown, it is a goal of the study to improve bicycling and pedestrian facilities for safety and mobility in the area. Limiting bicycling to the street or a designated facility limits the feeling of comfort specifically of young riders. There is a regulation that one is not allowed to ride a bicycle in the presence of pedestrians on the sidewalk. This regulation covers the issue.


Wisconsin Avenue - Reservoir Street to R Street
32nd Street and Scott Place
TOW AWAY
NO PARKING
7AM–9:30AM
MONDAY–FRIDAY
R7-2
Reservoir Street
R Street
Scott Place
32nd Street
STOP
Wisconsin Avenue at M Street, O Street, and P Street
DO NOT BLOCK INTERSECTION
P Street
O Street
Hyde Elementary School
Wisconsin Avenue
W3-1
Dumbarton Street
31st Street
N Street
Prospect Street
NO TURN ON RED
R10-11b
M Street
M Street
W16-7p
Whitehurst Freeway
Francis Scott Key Bridge
Key Bridge
Install Whitehurst Freeway/Downtown DC sign that will withstand winds
Key Bridge and M Street Corridor
Montrose Park
29th Street and R Street
R Street
K Street and Rock Creek Parkway
K Street
SHORT-TERM OPTIONS CONSIDERED
LOCATION
Study Area
TITLE
Vehicle Signing
DRAWING No.
ST-1
SHEET No.
1 of 1
LEGEND/NOTES
MUTCD Citation
R1-1 STOP Sign: Sections 2B.04, .05, .06
R7-2 No Parking Sign: Section 2B.39
R10-7 Traffic Signal Signs: Section 2B.45
W3-1 Stop Ahead; Section 2C.29
W11-1 Vehicular Traffic Signs: Section 2C.40
W16-7p Supplemental Arrow Plaque
R10-11b No Turn On Red: Section 2B.45
Georgetown Transportation Study
N
0 100 200 400

M Street & 33rd Street

ISSUE:

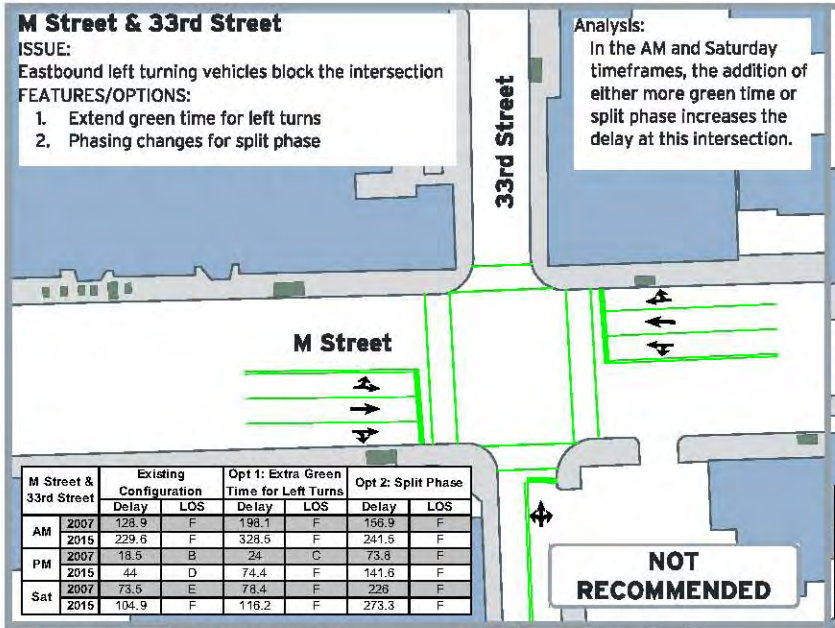
Eastbound left turning vehicles block the intersection

FEATURES/OPTIONS:

1. Extend green time for left turns
2. Phasing changes for split phase

Analysis:

In the AM and Saturday timeframes, the addition of either more green time or split phase increases the delay at this intersection.



M Street & 33rd Street		Existing Configuration		Opt 1: Extra Green Time for Left Turns		Opt 2: Split Phase	
		Delay	LOS	Delay	LOS	Delay	LOS
AM	2007	128.9	F	198.1	F	156.9	F
	2015	229.6	F	328.6	F	241.5	F
PM	2007	18.5	B	24	C	73.8	F
	2015	44	D	74.4	F	141.6	F
Sat	2007	73.5	E	78.4	F	226	F
	2015	104.9	F	116.2	F	273.3	F

Wisconsin Avenue & R Street

ISSUE:

Left turns from Wisconsin Ave NB to R Street WB delay through movement

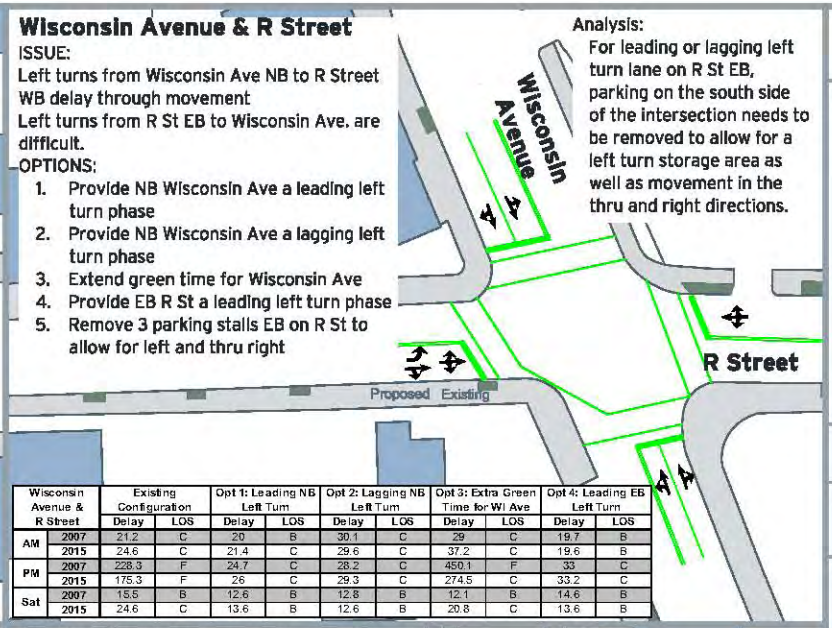
Left turns from R St EB to Wisconsin Ave. are difficult.

OPTIONS:

1. Provide NB Wisconsin Ave a leading left turn phase
2. Provide NB Wisconsin Ave a lagging left turn phase
3. Extend green time for Wisconsin Ave
4. Provide EB R St a leading left turn phase
5. Remove 3 parking stalls EB on R St to allow for left and thru right

Analysis:

For leading or lagging left turn lane on R St EB, parking on the south side of the intersection needs to be removed to allow for a left turn storage area as well as movement in the thru and right directions.



Wisconsin Avenue & R Street		Existing Configuration		Opt 1: Leading NB Left Turn		Opt 2: Lagging NB Left Turn		Opt 3: Extra Green Time for WI Ave		Opt 4: Leading EB Left Turn	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
AM	2007	21.2	C	20	B	30.1	C	29	C	19.7	B
	2015	24.6	C	21.4	C	29.6	C	37.2	C	19.6	B
PM	2007	228.3	F	24.7	C	28.2	C	450.1	F	33	C
	2015	175.3	F	26	C	29.3	C	274.5	C	33.2	C
Sat	2007	15.5	B	12.6	B	12.8	B	12.1	B	14.6	B
	2015	24.6	C	13.6	B	12.6	B	20.8	C	13.6	B

Wisconsin Avenue & M Street

ISSUE:

1. Pedestrian volumes impact turning vehicles and hence reduce capacity
2. Queues at 33rd St due to left turns

OPTIONS:

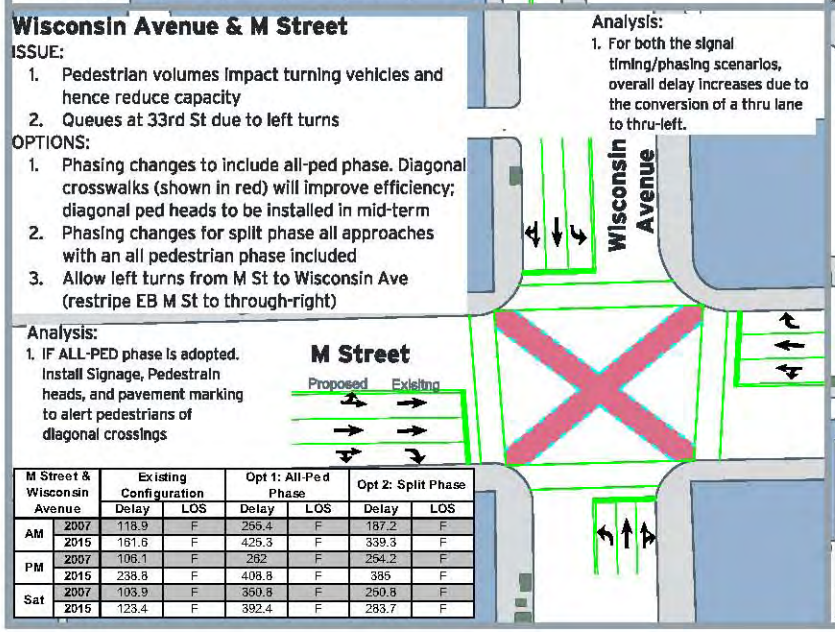
1. Phasing changes to include all-ped phase. Diagonal crosswalks (shown in red) will improve efficiency; diagonal ped heads to be installed in mid-term
2. Phasing changes for split phase all approaches with an all pedestrian phase included
3. Allow left turns from M St to Wisconsin Ave (restripe EB M St to through-right)

Analysis:

1. For both the signal timing/phasing scenarios, overall delay increases due to the conversion of a thru lane to thru-left.

Analysis:

1. IF ALL-PED phase is adopted. Install Signage, Pedestrain heads, and pavement marking to alert pedestrians of diagonal crossings



M Street & Wisconsin Avenue		Existing Configuration		Opt 1: All-Ped Phase		Opt 2: Split Phase	
		Delay	LOS	Delay	LOS	Delay	LOS
AM	2007	118.9	F	255.4	F	187.2	F
	2015	161.6	F	425.3	F	339.3	F
PM	2007	106.1	F	262	F	264.2	F
	2015	238.8	F	408.8	F	385	F
Sat	2007	103.9	F	350.8	F	250.8	F
	2015	123.4	F	392.4	F	283.7	F

35th Street & Reservoir Road

ISSUE:

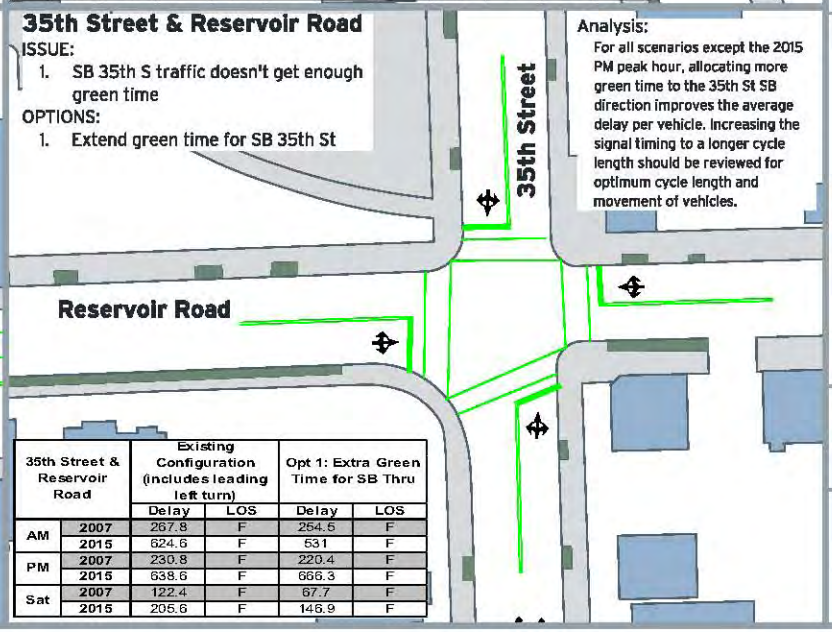
1. SB 35th S traffic doesn't get enough green time

OPTIONS:

1. Extend green time for SB 35th St

Analysis:

For all scenarios except the 2015 PM peak hour, allocating more green time to the 35th St SB direction improves the average delay per vehicle. Increasing the signal timing to a longer cycle length should be reviewed for optimum cycle length and movement of vehicles.



35th Street & Reservoir Road		Existing Configuration (includes leading left turn)		Opt 1: Extra Green Time for SB Thru	
		Delay	LOS	Delay	LOS
AM	2007	267.8	F	264.6	F
	2015	624.6	F	531	F
PM	2007	230.8	F	220.4	F
	2015	638.6	F	666.3	F
Sat	2007	122.4	F	67.7	F
	2015	205.6	F	146.9	F

SHORT-TERM OPTIONS CONSIDERED

LOCATION

Study Area

TITLE

Signal Modifications

DRAWING No.

ST-2

SHEET No.

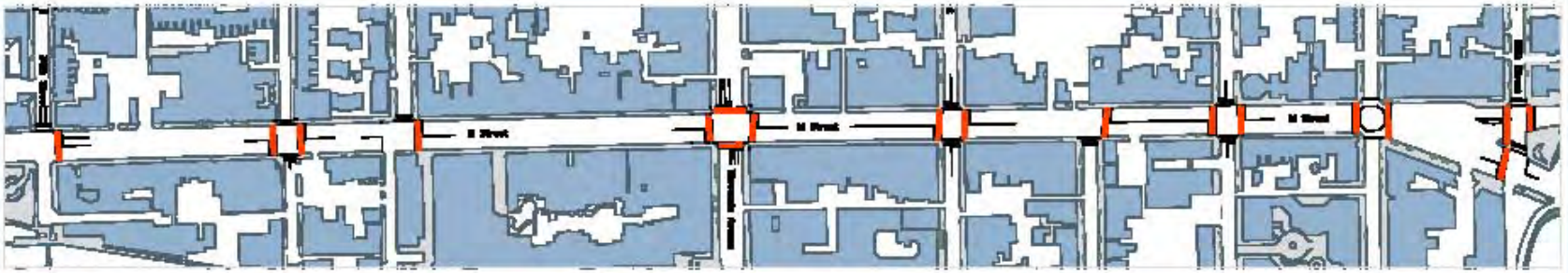
1 of 1

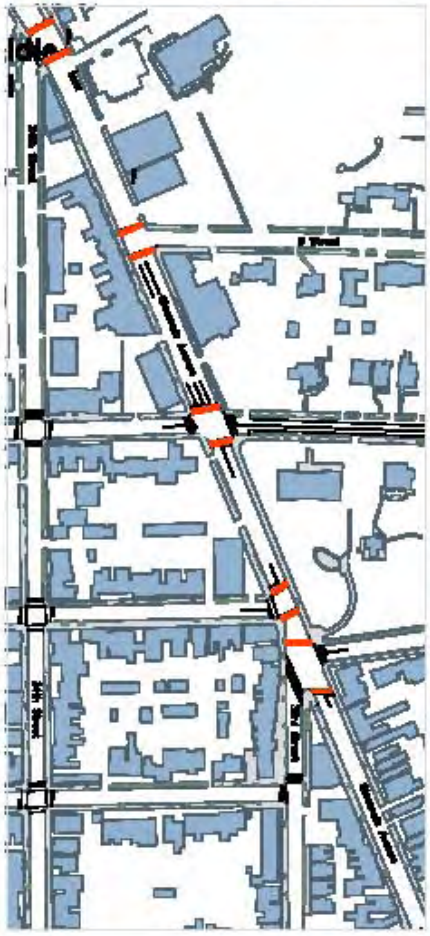
LEGEND/NOTES

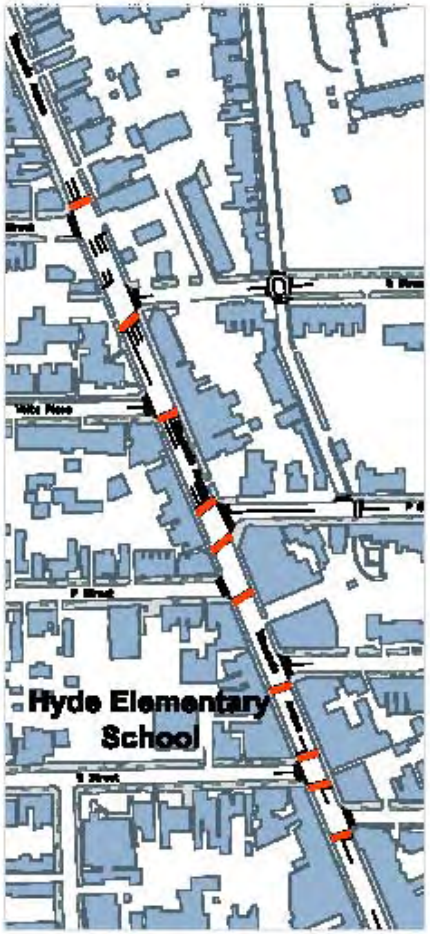
Georgetown Transportation Study

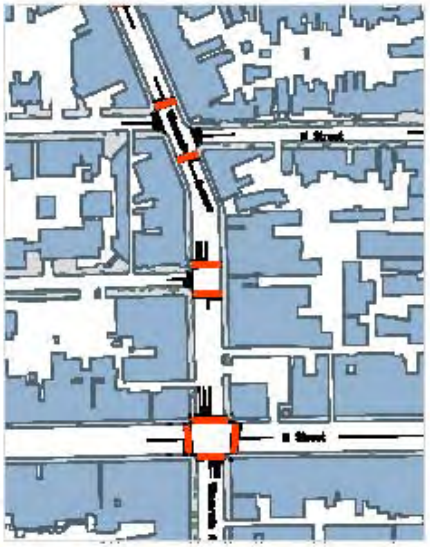
N

0 25 50 100









Imprint Paving for Crosswalk

MID-TERM
OPTIONS CONSIDERED

LOCATION

M Street, Wisconsin Avenue

TITLE

Imprint Paving (on crosswalks)

DRAWING No.

ST - 3

SHEET No.

1 of 1

LEGEND/NOTES

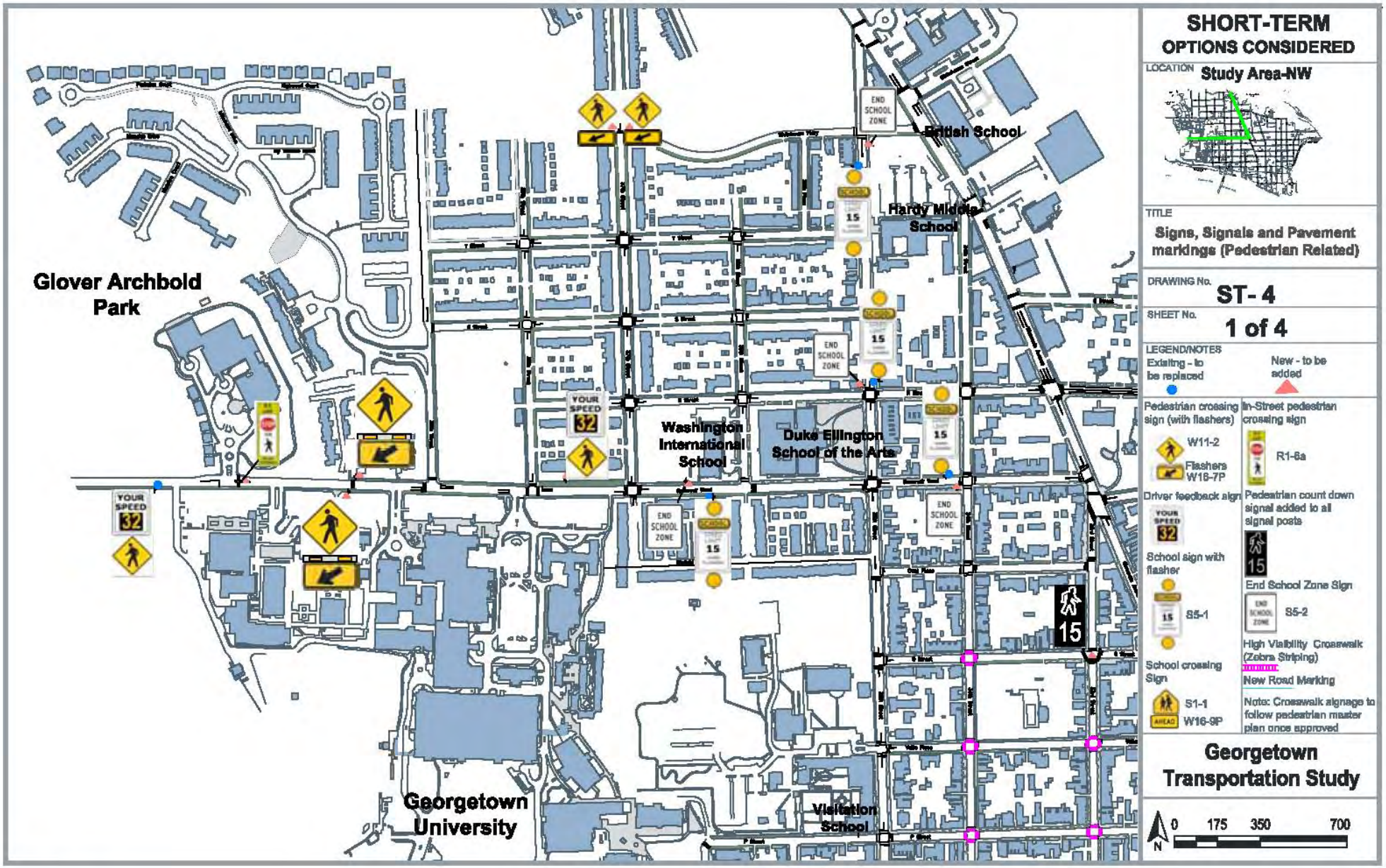
Imprint paving

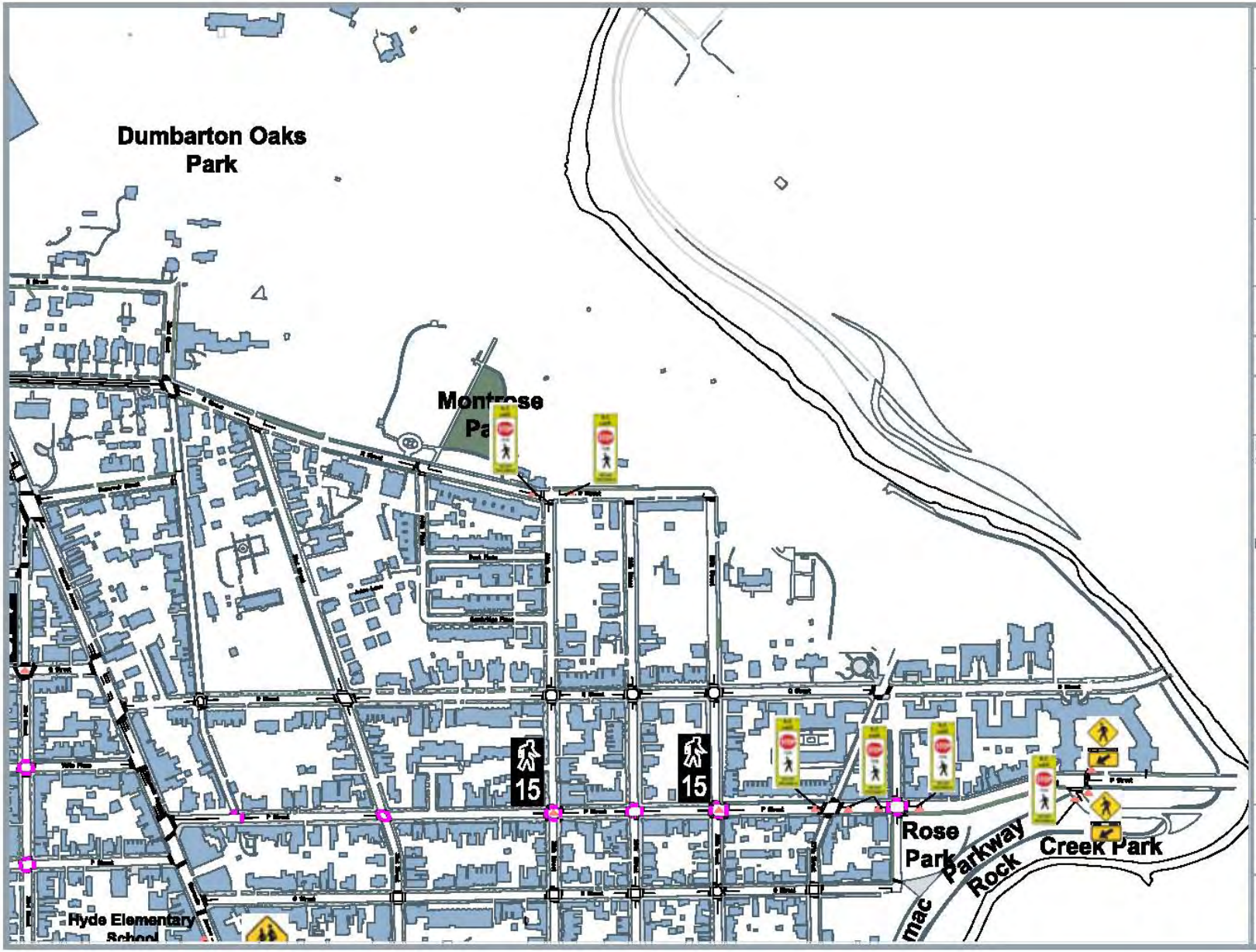
Note: Obtain Old Georgetown Board approval of design

Georgetown Transportation Study

N

0 125 250 500


Glover Archbold Park
Georgetown University
Washington International School
Duke Ellington School of the Arts
Hardy Middle School
British School
Visitation School
YOUR SPEED 32
END SCHOOL ZONE
15
SHORT-TERM
OPTIONS CONSIDERED
LOCATION
Study Area-NW
TITLE
Signs, Signals and Pavement markings (Pedestrian Related)
DRAWING No.
ST- 4
SHEET No.
1 of 4
LEGEND/NOTES
Existing - to be replaced
New - to be added
Pedestrian crossing sign (with flashers)
W11-2
Flashers W16-7P
In-Street pedestrian crossing sign
R1-6a
Driver feedback sign
Pedestrian count down signal added to all signal posts
School sign with flasher
S5-1
End School Zone Sign
S5-2
School crossing Sign
S1-1
W16-9P
High Visibility Crosswalk (Zebra Striping)
New Road Marking
Note: Crosswalk signage to follow pedestrian master plan once approved
Georgetown Transportation Study
N
0
175
350
700



SHORT-TERM
OPTIONS CONSIDERED

LOCATION **Study Area-NE**

TITLE

Signs, Signals and Pavement markings (Pedestrian Related)

DRAWING No. **ST- 4**

SHEET No. **2 of 4**

LEGEND/NOTES

Existing - to be replaced

New - to be added

Pedestrian crossing sign (with flashers)

W11-2

Flashers W16-7P

In-Street pedestrian crossing sign

R1-6a

Driver feedback sign

Pedestrian count down signal added to all signal posts

School sign with flasher

S5-1

End School Zone Sign

S5-2

School crossing Sign

S1-1

W16-9P

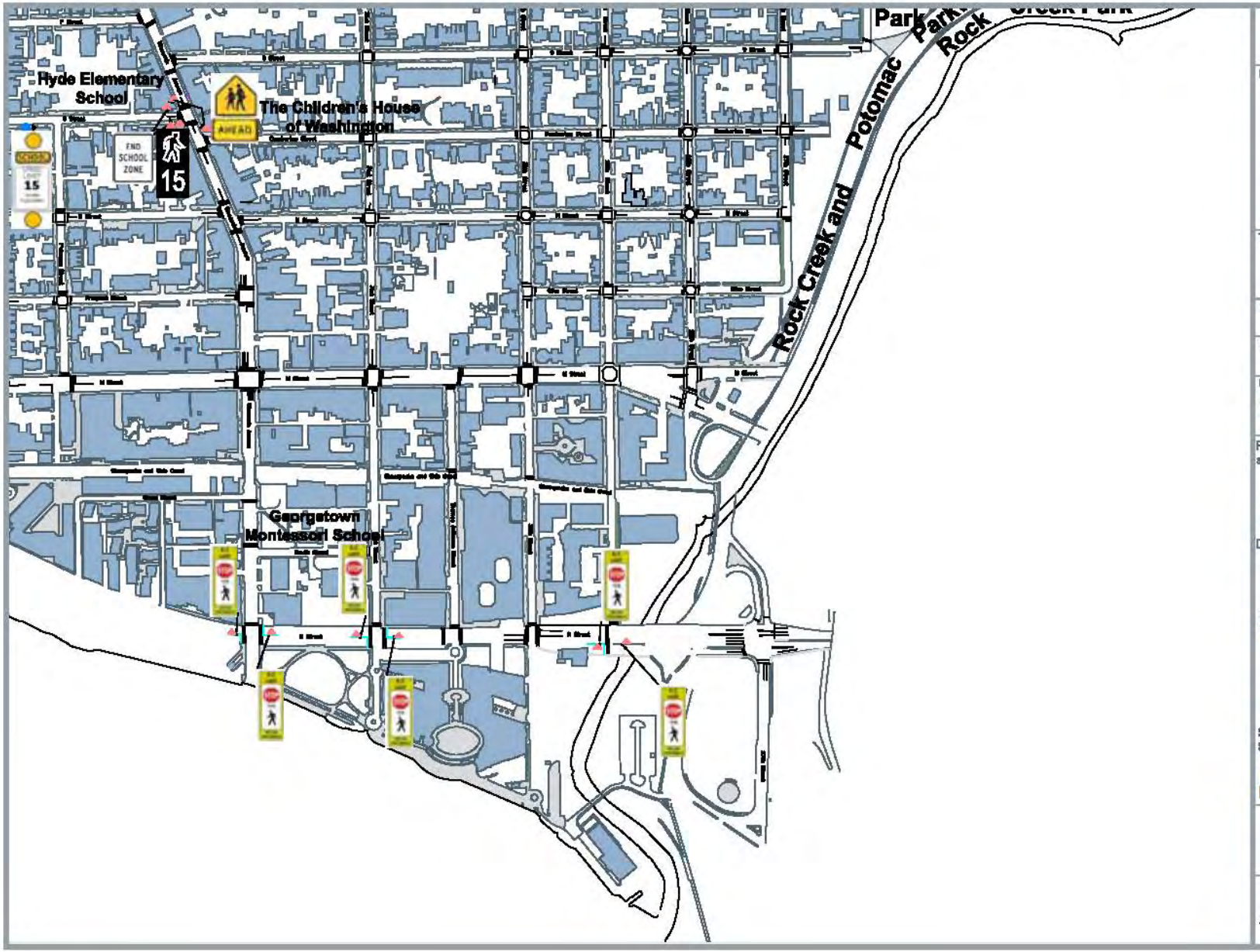
High Viability Crosswalk (Zebra Striping)

New Road Marking

Note: Crosswalk signage to follow pedestrian master plan once approved

Georgetown Transportation Study

N 0 175 350 700



SHORT-TERM OPTIONS CONSIDERED

LOCATION

Study Area-SW

TITLE

Signs, Signals and Pavement markings (Pedestrian Related)

DRAWING No.

ST- 4

SHEET No.

3 of 4

LEGEND/NOTES

Existing - to be replaced

New - to be added

Pedestrian crossing sign (with flashers)

W11-2

Flashers W16-7P

In-Street pedestrian crossing sign

R1-6a

Driver feedback sign

Pedestrian count down signal added to all signal posts

School sign with flasher

S5-1

End School Zone Sign

S5-2

School crossing Sign

S1-1

W16-9P

High Viability Crosswalk (Zebra Striping)

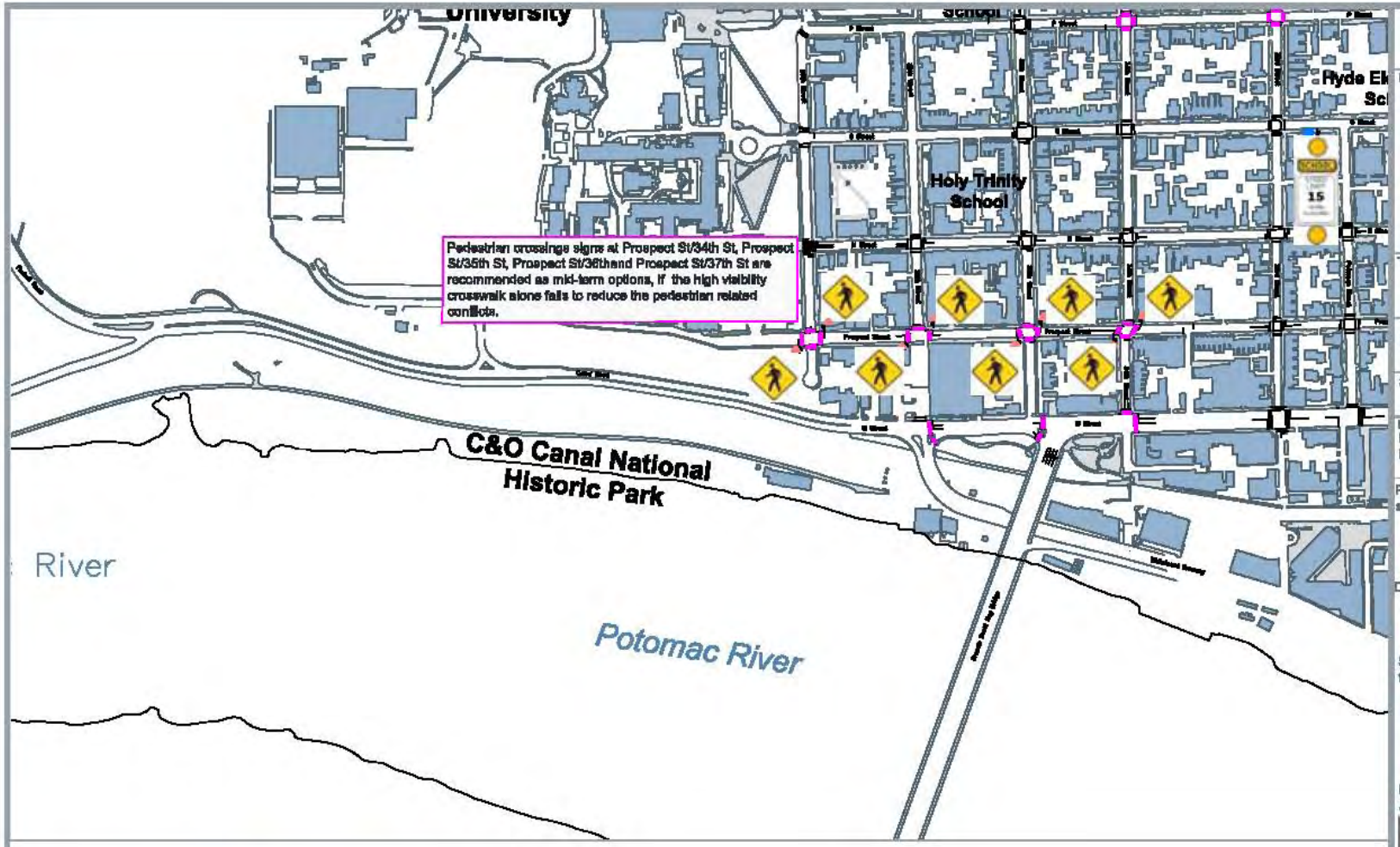
New Road Marking

Note: Crosswalk signage to follow pedestrian master plan once approved

Georgetown Transportation Study

N

0 175 350 700

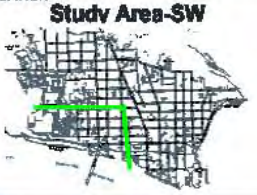


High Visibility Crosswalk

SHORT-TERM OPTIONS CONSIDERED

LOCATION

Study Area-SW



TITLE

Signs, Signals and Pavement markings (Pedestrian Related)

DRAWING No. **ST- 4**

SHEET No. **4 of 4**

LEGEND/NOTES

Existing - to be replaced

New - to be added

Pedestrian crossing sign (with flashers)

W11-2

Flashers W16-7P

Driver feedback sign

School sign with flasher

S5-1

End School Zone Sign

S5-2

In-Street pedestrian crossing sign

R1-6a

Pedestrian count down signal added to all signal post

School crossing Sign

S1-1

W16-9P

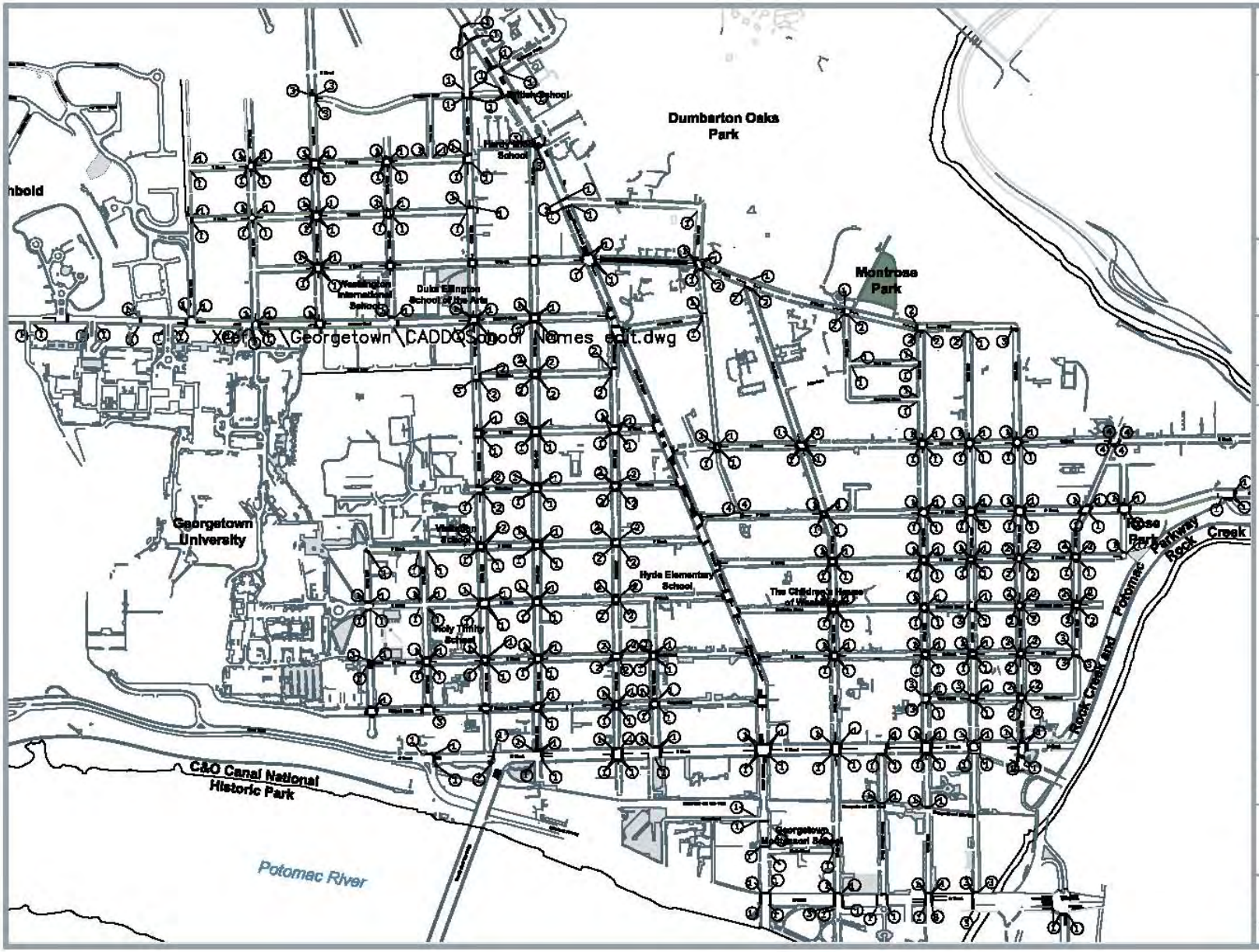
High Visibility Crosswalk (Zebra Striping)

New Road Marking

Note: Crosswalk signage to follow pedestrian master plan once approved.

Georgetown Transportation Study

N 0 175 350 700



SHORT-, MID-TERM
OPTIONS CONSIDERED

LOCATION **Study Area**

TITLE

Curb Ramp Recommendations

DRAWING No. **ST- 5**

SHEET No. **1 of 1**

LEGEND/NOTES

① Detectable Warnings Required- Mid Term

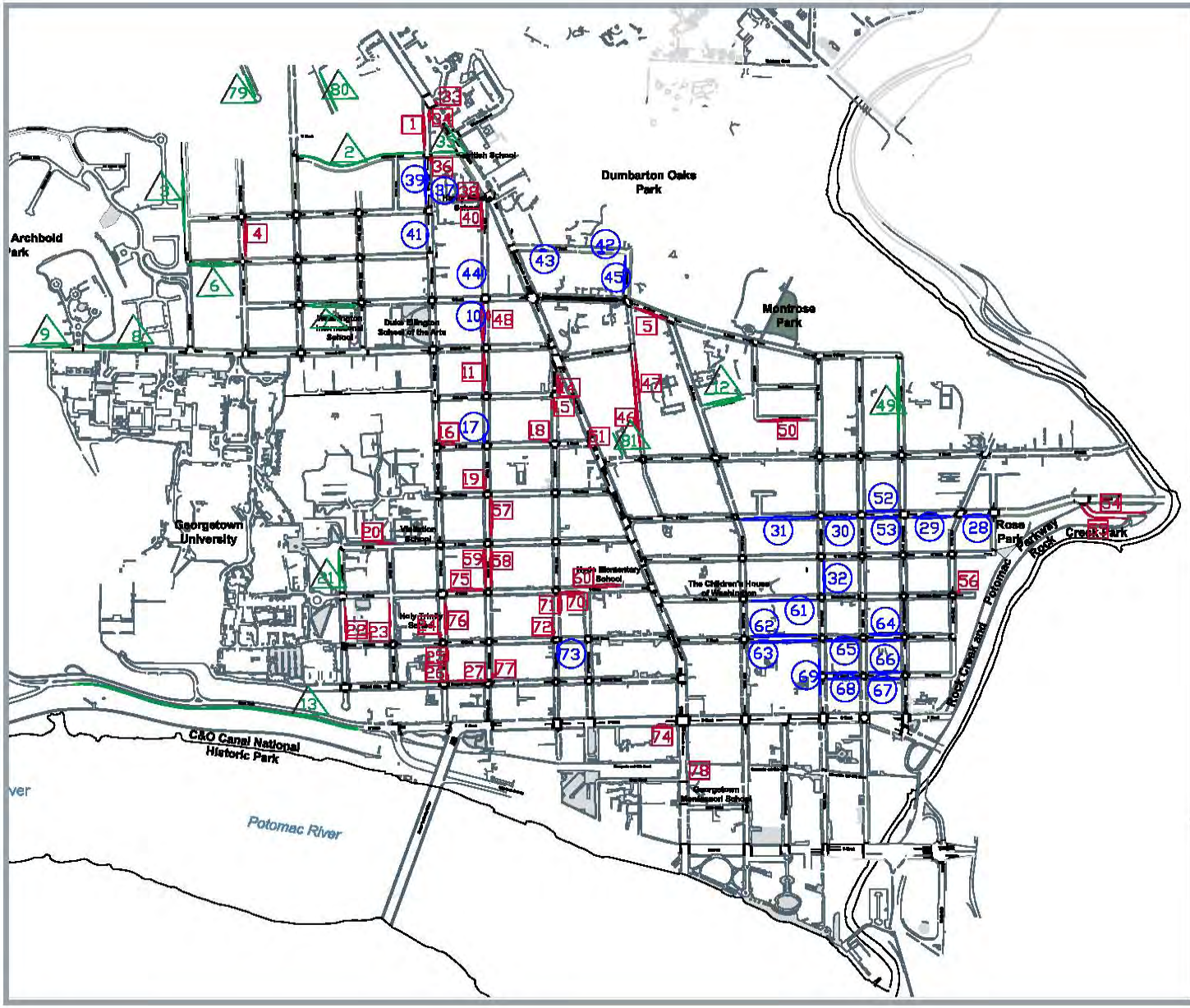
② Curb Ramp to be Replaced- Mid Term

③ Curb Ramp Required- Short Term

Note: Old Georgetown Board of Fine Arts Commission to be advised of the proposed design of curb ramps.

Georgetown Transportation Study

N 0 300 600 1200



SIDEWALKS TO BE REPLACED

1	5' X 300'
4	6' X 150'
5	4' X 320'
11	4' X 320'
14	8' X 120'
15	4' X 70'
16	4' X 70'
18	4' X 10'
19	4' X 26'
20	4' X 150'
24	6' X 6'
25	4' X 67'
26	4' X 36'
27	4' X 320'
33	6' X 15'
34	5' X 50'
36	6' X 4'
38	3' X 15'
40	5' X 200'
46	5' X 50'
47	4' X 300'
48	5' X 300'
50	5' X 300'
51	4' X 10'
54	4' X 400'
55	4' X 400'
56	3' X 6'
57	4' X 320'
58	4' X 320'
59	4' X 320'
60	4' X 140'
70	6' X 125'
71	6' X 80'
72	3' X 6'
74	6' X 6'
75	4' X 320'
76	4' X 320'
77	3' X 10'
78	5' X 1000'

SIDEWALKS TO BE REPAIRED

10	5' X 320'
22	8' X 320'
23	8' X 320'
28	6' X 160'
29	8' X 320'
30	8' X 200'
31	6' X660'
32	6' X 240'
37	3' X 3'
39	7' X 360'
41	6' X 6'
42	5' X 10'
43	6' X 10'
44	5' X10'
45	6' X 220'
52	6' X 220'
53	6' X 220'
61	6' X 525'
62	6' X 625'
63	6' X 625'
64	6' X 225'
66	6' X 225'
66	6' X 260'
67	6' X 260'
68	6' X 225'
69	6' X 640'
73	3' X 6'

NEW SIDEWALKS

2	1000'
3	850'
6	360'
7	400'
8	325'
9	600'
12	300'
13	2000'
21	320'
35	175'
49	350'
79	170'
80	300'
81	180'

SHORT-, MID-TERM OPTIONS CONSIDERED

LOCATION

Study Area

TITLE

Sidewalk Recommendations

DRAWING No. **ST- 6**

SHEET No. **1 of 1**

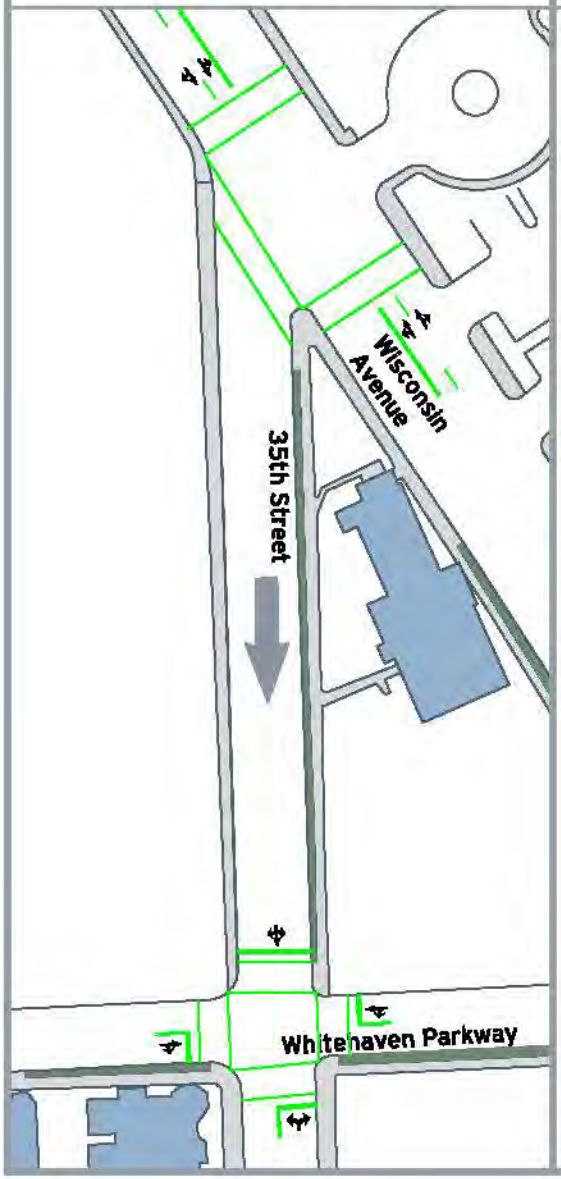
LEGEND/NOTES

- Sidewalk to be Replaced- Short Term
- Sidewalk to be Repaired- Short Term
- New Sidewalk- Mid Term

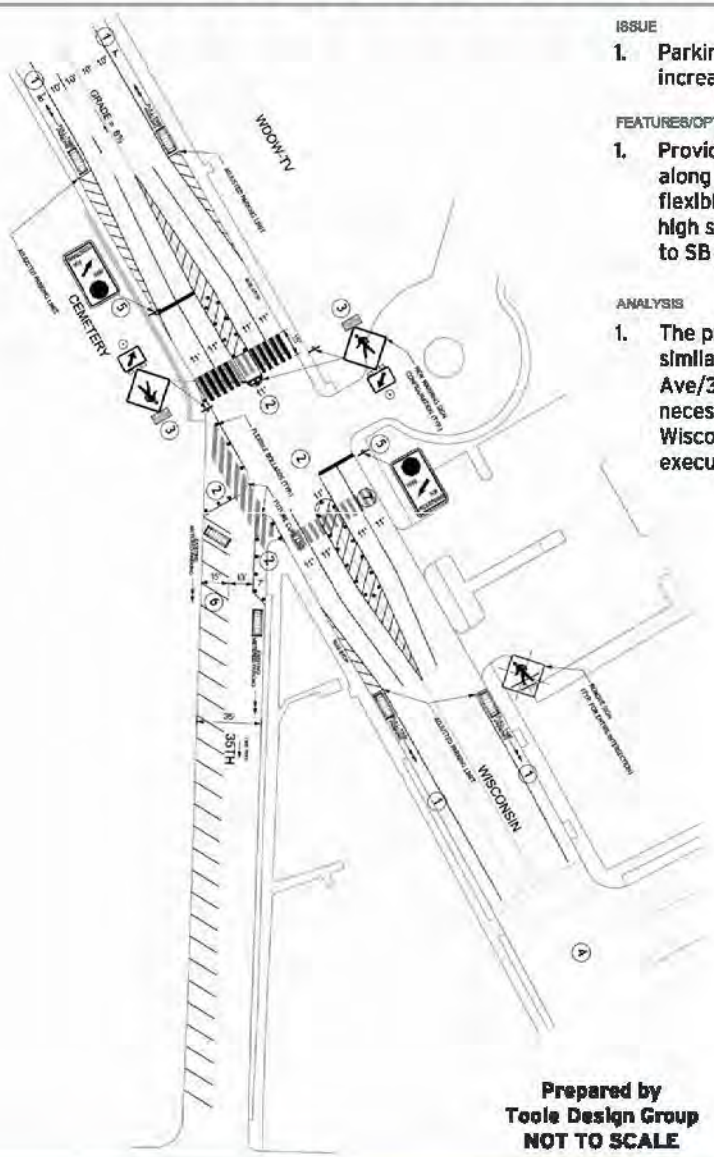
Georgetown Transportation Study

N 0 350 700 1400

Existing Configuration



Glover Park Transportation Study Alternative



ISSUE

1. Parking in Glover Park is becoming increasingly difficult

FEATURES/OPTIONS

1. Provide back-in diagonal parking along west side of street and install a flexible curb to slow traffic turning at high speeds from Wisconsin Ave SB to SB 35th St

ANALYSIS

1. The proposed change results in similar operations at Wisconsin Ave/35th St intersection but would necessitate vehicles headed SB on Wisconsin Ave to slow down to execute the turn

Prepared by
Toole Design Group
NOT TO SCALE

SHORT-TERM OPTIONS CONSIDERED

LOCATION

35th Street between Whitehaven Parkway and Wisconsin Avenue

TITLE **Intersection Improvements Wisconsin Avenue & 35th Street**

DRAWING No. **ST-9**

SHEET No. **1 of 1**

LEGEND/NOTES

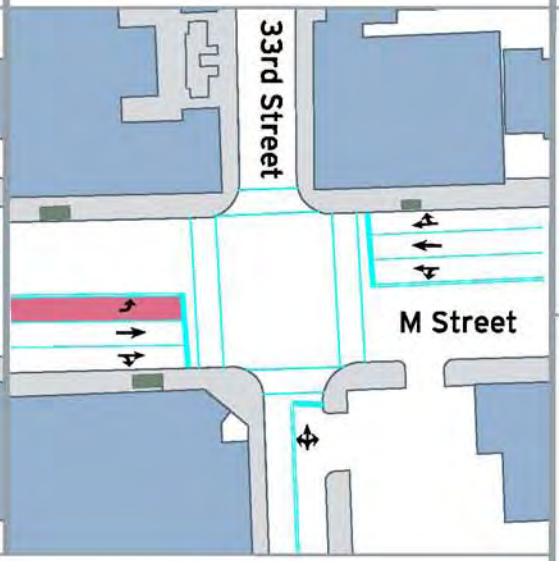
- Allowed movements
- Existing One-way Street

Georgetown Transportation Study

N 0 25 50 100

Existing Configuration

Alternative 1



M Street & 33rd Street

FEATURES

1. Thru left converted to left turn only
2. Parking on M St removed to the west of M St / 33rd St intersection for length of left turn lane plus additional 100 feet
3. No parking EB between 33rd St and Potomac St any time
4. Right lane EB becomes right turn only at M St and Potomac St

ANALYSIS

M Street & 33rd Street		Existing Configuration		Lane Conversion & Optimized Timing	
		Delay	LOS	Delay	LOS
AM	2007	128.9	F	-	-
	2015	229.6	F	151.7	F
PM	2007	18.5	B	-	-
	2015	44	D	167.9	F
Sat	2007	73.5	E	-	-
	2015	104.9	F	78.7	E

1. Analysis shows that by converting the inner left turn lane from a left-thru to a left turn only lane and providing for two thru movement lanes by eliminating parking on M St, the delay in the AM peak and Saturday peak decreases in 2015 over current 2007 known delay
2. Delay in the PM peak hour increases in 2015 in comparison with existing 2007 delay due to the decrease of through capacity. Increased delay from 2007 to 2015 is expected. Analysis shows a 400% increase in delay at the intersection in the PM peak in 2015
3. Removes zero parking spaces on M St. from 33rd St to Potomac St
4. Removes 8 parking spaces on M St from 34th St to 33rd St

MID-TERM OPTIONS CONSIDERED

LOCATION

M Street & 33rd Street

TITLE

Intersection Improvements

DRAWING No.

MT-2

SHEET No.

1 of 1

LEGEND/NOTES

- Allowed movements
- Altered from existing

Georgetown Transportation Study

N

0 25 50 100

MID-TERM OPTIONS CONSIDERED

LOCATION
K Street, WhiteHurst Freeway & 27th Street

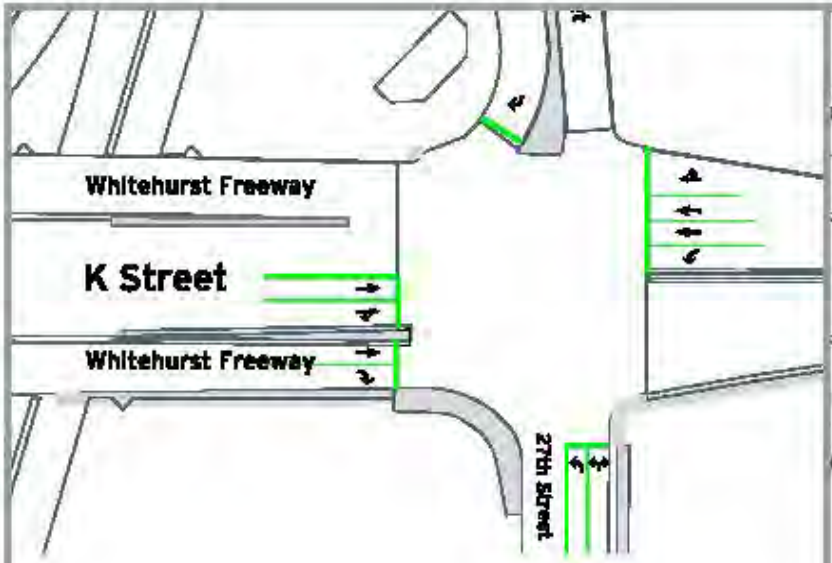
TITLE **Intersection Improvements 27th St, K St & Whitehurst Frwy**

DRAWING No. **MT-3**

SHEET No. **1 of 1**

LEGEND/NOTES

- Allowed movements
- Altered from existing



Existing Configuration

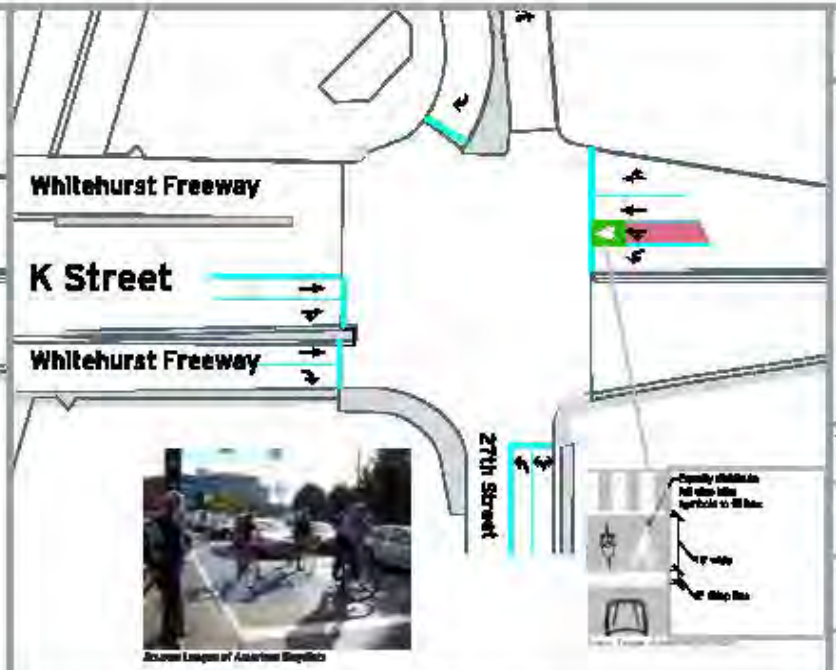
ANALYSIS

Pros
- Additional capacity for left turning vehicles from K St to 27th St

Cons
- Increased bicycle/pedestrian/vehicle conflict area on 27th St SB
- Moves merge area from existing location at 27th St to the south approx 200-feet.
- Additional traffic to contend with for bicycles traveling through on K St. Currently they straddle the shaded and 2nd thru lane. Possible increase in bicycle/vehicle conflicts

K St. & 27St. & Whitehurst		Existing Configuration		Creation of Through Left Lane	
		Delay	LOS	Delay	LOS
AM	2007	242	F	-	-
	2015	255	F	212.4	F
PM	2007	243.8	F	-	-
	2015	391	F	167.9	F
Sat	2007	67	E	-	-
	2015	68.8	E	65.5	E

1. Alternative 1 results in decreased delays in all analysis periods for the 2015 traffic volumes.
2. Analysis of a fully actuated signal was not conducted. It is projected that delay would remain constant compared with existing conditions or Alternative 1 during the AM, PM and Saturday peak hours due to the fact that the number of vehicles in each direction is already optimized for these scenarios.
   Improvement in delay would be seen in the off-peak hours when minimum green time would be associated with all movements and only activated when vehicles are present



Alternative 1

FEATURES

1. Thru-left created in existing thru only lane WB on K St
2. Create bike box to accommodate bikes in shaded lane.
   - 2.1 Dimensions: Box length: 10 feet
   - 2.2 Distance to the Stop bar: 2 feet
3. SB 27th St to be restriped for two lanes
4. Signal phasing change to include a split-phase fully actuated signal

Alternative 2

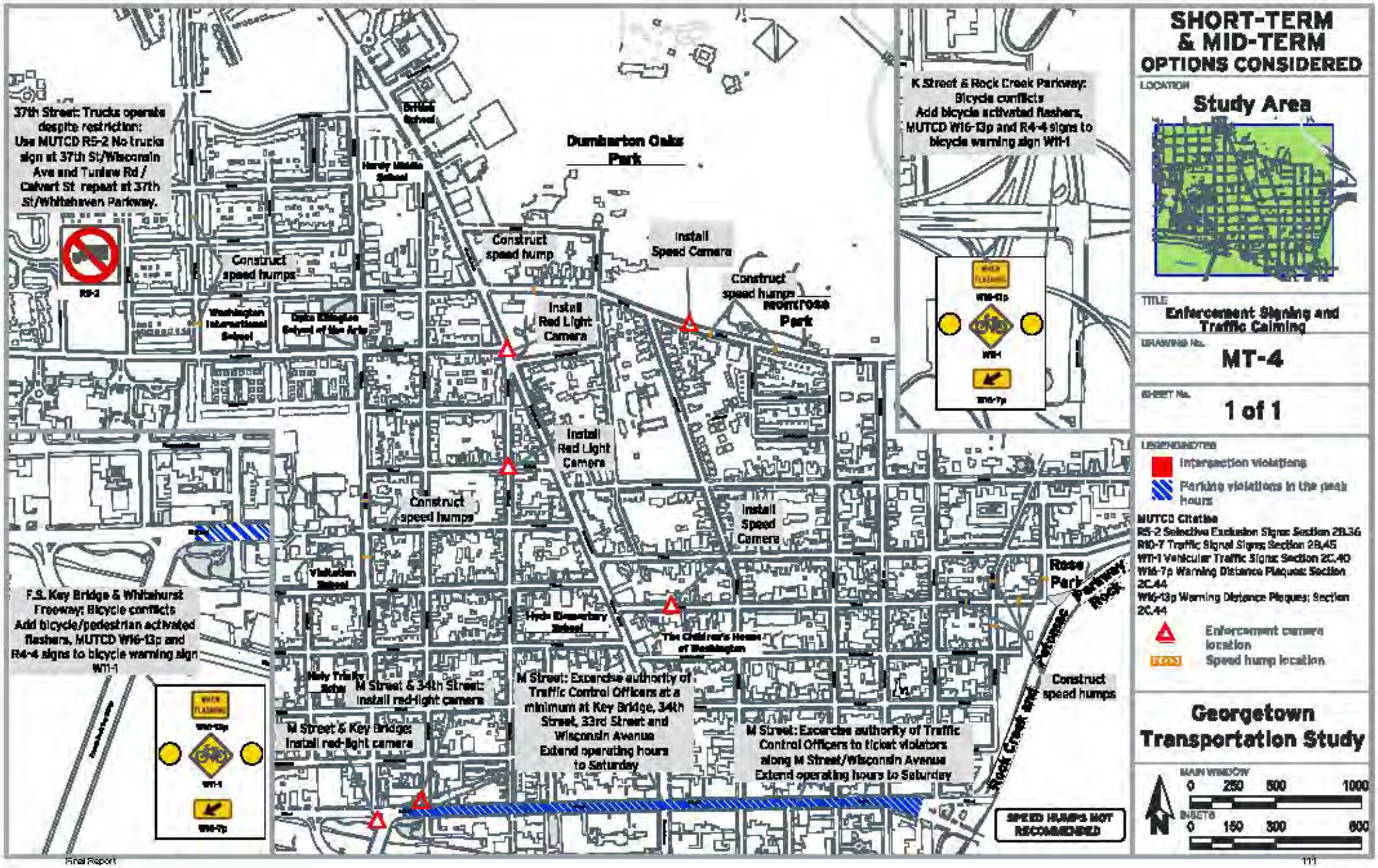
FEATURES

1. Numbers 1-3 under Alternative 1
2. Install fully actuated traffic signals

Georgetown Transportation Study

N

0 30 60 120



SHORT-TERM & MID-TERM OPTIONS CONSIDERED

LOCATION

Study Area

TITLE

Enforcement Signing and Traffic Calming

DRAWING No.

MT-4

SHEET No.

1 of 1

LEGEND/KEY

- Intersection violations
- Parking violations in the peak hours

MUTCD Citation
R5-2 Selective Exclusion Signs: Section 2B.36
R10-7 Traffic Signal Signs: Section 2B.45
W11-1 Vehicular Traffic Signs: Section 2C.40
W16-7p Warning Distance Plaques: Section 2C.44
W16-13p Warning Distance Plaques: Section 2C.44

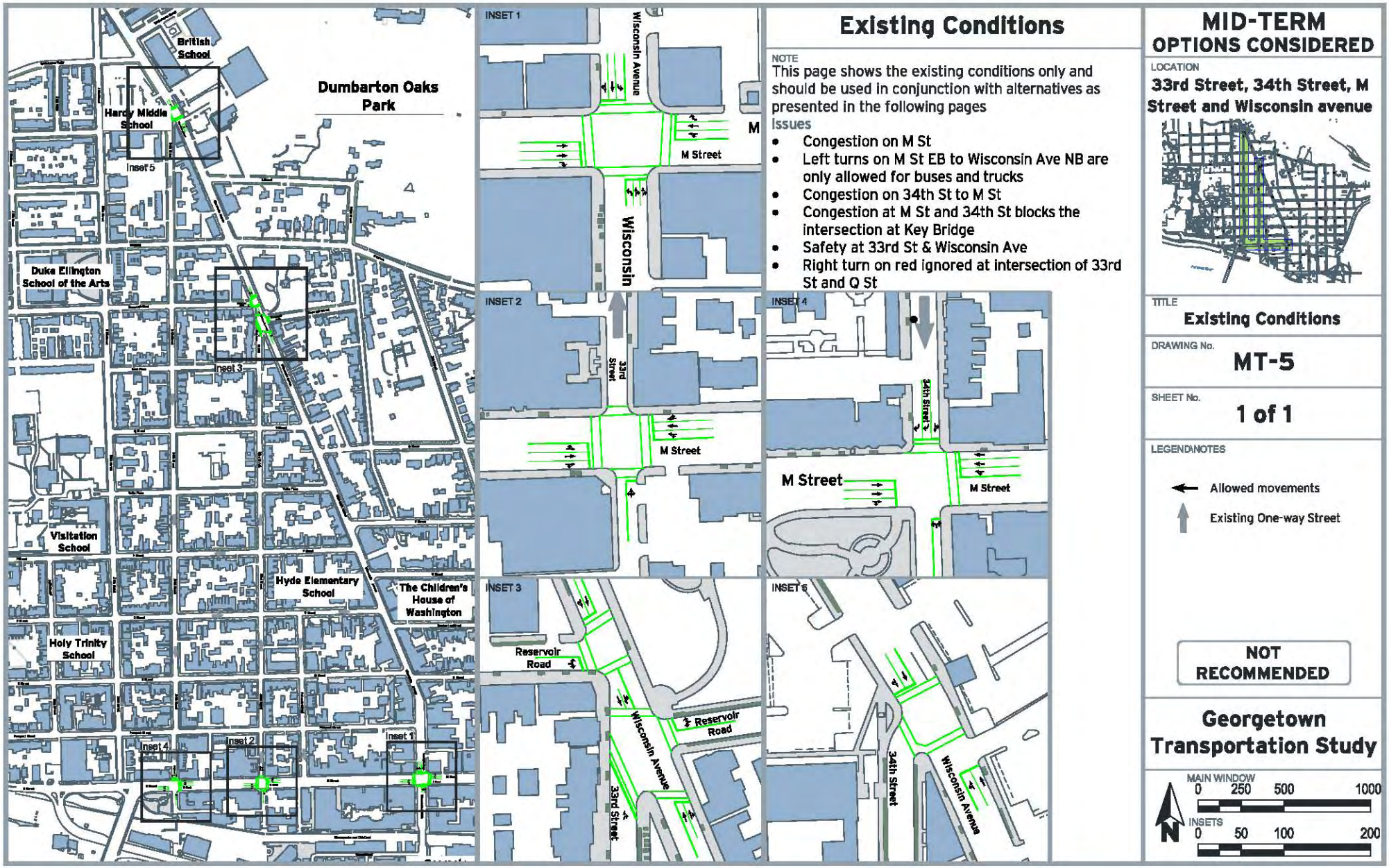
- Enforcement camera location
- Speed hump location

Georgetown Transportation Study

MAIN WINDOW 0 250 500 1000

INSETS 0 150 300 600

N



Existing Conditions

NOTE
This page shows the existing conditions only and should be used in conjunction with alternatives as presented in the following pages

Issues

- Congestion on M St
- Left turns on M St EB to Wisconsin Ave NB are only allowed for buses and trucks
- Congestion on 34th St to M St
- Congestion at M St and 34th St blocks the intersection at Key Bridge
- Safety at 33rd St & Wisconsin Ave
- Right turn on red ignored at intersection of 33rd St and Q St

MID-TERM OPTIONS CONSIDERED

LOCATION
33rd Street, 34th Street, M Street and Wisconsin avenue

TITLE
Existing Conditions

DRAWING No.
MT-5

SHEET No.
1 of 1

LEGEND\NOTES

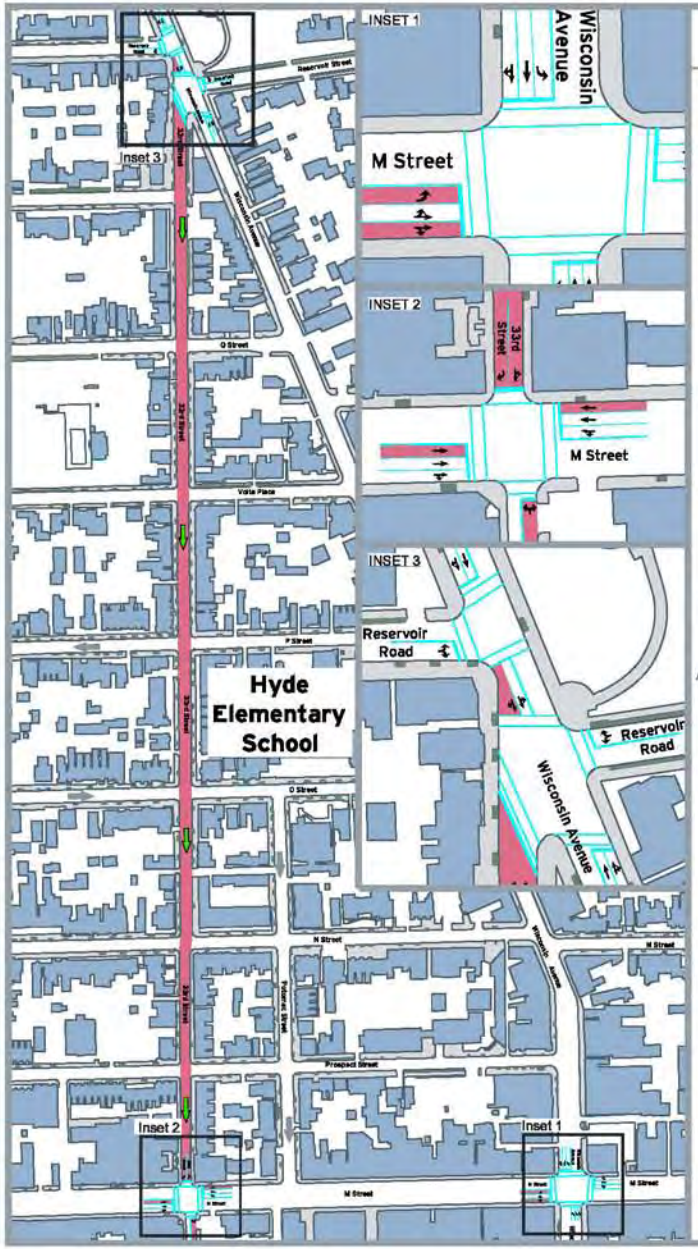
- Allowed movements
- Existing One-way Street

NOT RECOMMENDED

Georgetown Transportation Study

MAIN WINDOW 0 250 500 1000

INSETS 0 50 100 200



Proposed Conditions

FEATURES/OPTIONS:

1. 33rd St currently one-way NB reversed to one-way SB
2. Left turns from M St to Wisconsin Ave allowed. Left lane EB on M St converted to left only lane, center lane converted to a shared left-thru lane to accommodate the large number of turning vehicles
3. Lane configuration changes at 33rd St & Wisconsin Ave, and 33rd St & M St to accommodate reversal of 33rd St
4. Remove parking on EB M St all day to accommodate left turn onto NB Wisconsin Ave from Potomac St to Wisconsin Ave
5. Lane configuration changes on all intersections on 33rd St between Wisconsin Ave and M St to accommodate reversal of 33rd St
6. Install a bulb-out to slow vehicles turning from SB Wisconsin Ave to SB 33rd St

ANALYSIS

All analysis was completed using the 2015 analysis year

1. Delay at the intersection of M St/Key Bridge for the AM, PM, and Saturday peak hour shows slight improvements in delay. But all remain a LOS F
2. For the intersection of M St/33rd St, delay decreases by half in the AM peak, increases in the PM peak 2- fold, and remains constant in the Saturday peak hour
3. For the intersection of M St/34th St, delay is reduced in all scenarios
4. For the intersection of M St/ Wisconsin Ave, delay increases in all scenarios with the removal of the restriction of left turns EB from M St to Wisconsin Ave NB
5. Removes 24 parking stalls currently used in non-peak hours on M St EB from Potomac St to Wisconsin Ave

ANALYSIS

Key Intersection	2015-AM			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	61	F	61	F
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	1	A	1	A
K street, Whitehurst Freeway & 27th Street	217	F	217	F
Canal Street/Whitehurst Freeway	102	F	92	F
M Street & Key Bridge	155	F	151	F
M Street & 34th Street	177	F	95	F
M Street & 33rd Street	220	F	74	E
M Street & Wisconsin Avenue	162	F	387	F
M Street & Thomas Jefferson Street	33	C	26	C
Pennsylvania Avenue & 28th Street	20	C	19	B
N Street & 35th Street	12	B	12	B
P Street & 35th Street	30	D	67	F
P Street & 34th Street	16	C	20	C
P Street & 33rd Street	121	F	101	F
P Street & 32nd Street	2	A	2	A
P Street & 29th Street	13	B	13	B
Q Street & 35th Street	83	F	77	F
Q Street & 32nd Street	4	A	4	A
Q Street & 31st Street	16	C	16	C
Reservoir Road & 37th Street	83	F	83	F
Reservoir Road & 35th Street	629	F	531	F
R Street & 34th Street	37	E	13	B
Wisconsin Avenue & R Street	25	C	27	C

Key Intersection	2015-PM			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	73	F	73	F
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	0	A	0	A
K street, Whitehurst Freeway & 27th Street	391	F	391	F
Canal Street/Whitehurst Freeway	224	F	224	F
M Street & Key Bridge	153	F	152	F
M Street & 34th Street	269	F	89	F
M Street & 33rd Street	44	D	100	F
M Street & Wisconsin Avenue	239	F	381	F
M Street & Thomas Jefferson Street	8	A	9	A
Pennsylvania Avenue & 28th Street	24	C	18	B
N Street & 35th Street	10	B	10	B
P Street & 35th Street	27	D	31	D
P Street & 34th Street	11	B	14	B
P Street & 33rd Street	33	D	32	D
P Street & 32nd Street	2	A	2	A
P Street & 29th Street	15	C	15	C
Q Street & 35th Street	54	F	43	E
Q Street & 32nd Street	5	A	5	A
Q Street & 31st Street	15	B	16	B
Reservoir Road & 37th Street	19	B	19	B
Reservoir Road & 35th Street	639	F	638	F
R Street & 34th Street	116	F	22	C
Wisconsin Avenue & R Street	175	F	175	F

Key Intersection	2015-SAT			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	18	C	18	C
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	1	A	1	A
K street, Whitehurst Freeway & 27th Street	69	E	69	E
Canal Street/Whitehurst Freeway	47	D	47	D
M Street & Key Bridge	148	F	105	F
M Street & 34th Street	240	F	43	D
M Street & 33rd Street	105	F	97	F
M Street & Wisconsin Avenue	123	F	285	F
M Street & Thomas Jefferson Street	16	B	15	B
Pennsylvania Avenue & 28th Street	22	C	22	C
N Street & 35th Street	13	B	13	B
P Street & 35th Street	21	C	20	C
P Street & 34th Street	11	B	10	B
P Street & 33rd Street	13	B	11	B
P Street & 32nd Street	3	A	3	A
P Street & 29th Street	11	B	11	B
Q Street & 35th Street	25	D	22	C
Q Street & 32nd Street	5	A	5	A
Q Street & 31st Street	14	B	14	B
Reservoir Road & 37th Street	27	C	27	C
Reservoir Road & 35th Street	206	F	206	F
R Street & 34th Street	10	A	8	A
Wisconsin Avenue & R Street	25	C	21	C

MID-TERM OPTIONS CONSIDERED

LOCATION

33rd Street

TITLE

Scenario A - 33rd One-Way SB

DRAWING No.

MT-5a

SHEET No.

1 of 1

LEGEND/NOTES

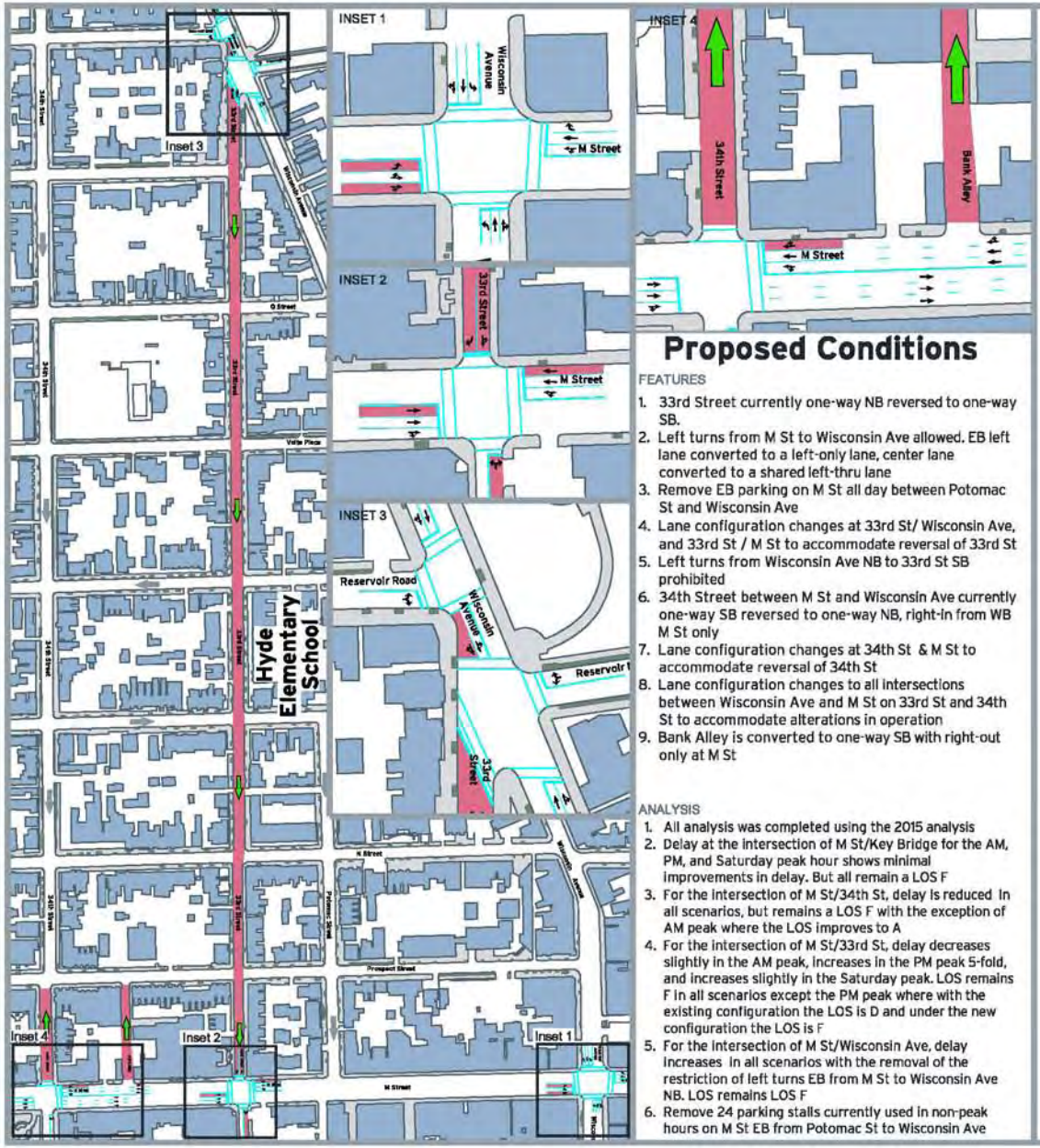
- Allowed movements
- Altered from existing
- Existing One-way Street
- Proposed One-way Street

NOT RECOMMENDED

Georgetown Transportation Study

MAIN WINDOW 0 150 300 600

INSETS 0 50 100 200



Proposed Conditions

FEATURES

1. 33rd Street currently one-way NB reversed to one-way SB.
2. Left turns from M St to Wisconsin Ave allowed. EB left lane converted to a left-only lane, center lane converted to a shared left-thru lane
3. Remove EB parking on M St all day between Potomac St and Wisconsin Ave
4. Lane configuration changes at 33rd St/ Wisconsin Ave, and 33rd St / M St to accommodate reversal of 33rd St
5. Left turns from Wisconsin Ave NB to 33rd St SB prohibited
6. 34th Street between M St and Wisconsin Ave currently one-way SB reversed to one-way NB, right-in from WB M St only
7. Lane configuration changes at 34th St & M St to accommodate reversal of 34th St
8. Lane configuration changes to all intersections between Wisconsin Ave and M St on 33rd St and 34th St to accommodate alterations in operation
9. Bank Alley is converted to one-way SB with right-out only at M St

ANALYSIS

1. All analysis was completed using the 2015 analysis
2. Delay at the intersection of M St/Key Bridge for the AM, PM, and Saturday peak hour shows minimal improvements in delay. But all remain a LOS F
3. For the intersection of M St/34th St, delay is reduced in all scenarios, but remains a LOS F with the exception of AM peak where the LOS improves to A
4. For the intersection of M St/33rd St, delay decreases slightly in the AM peak, increases in the PM peak 5-fold, and increases slightly in the Saturday peak. LOS remains F in all scenarios except the PM peak where with the existing configuration the LOS is D and under the new configuration the LOS is F
5. For the intersection of M St/Wisconsin Ave, delay increases in all scenarios with the removal of the restriction of left turns EB from M St to Wisconsin Ave NB. LOS remains LOS F
6. Remove 24 parking stalls currently used in non-peak hours on M St EB from Potomac St to Wisconsin Ave

ANALYSIS

Key Intersection	2015-AM			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	61	F	61	F
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	1	A	1	A
K Street, Whitehurst Freeway & 27th Street	217	F	217	F
Canal Street/Whitehurst Freeway	102	F	103	F
M Street & Key Bridge	155	F	147	F
M Street & 34th Street	177	F	14	B
M Street & 33rd Street	230	F	253	F
M Street & Wisconsin Avenue	162	F	387	F
M Street & Thomas Jefferson Street	33	C	32	C
Pennsylvania Avenue & 28th Street	20	C	19	B
N Street & 35th Street	12	B	12	B
P Street & 36th Street	30	D	67	F
P Street & 34th Street	16	C	21	C
P Street & 33rd Street	121	F	143	F
P Street & 32nd Street	2	A	2	A
P Street & 29th Street	13	B	13	B
Q Street & 36th Street	63	F	77	F
Q Street & 32nd Street	4	A	4	A
Q Street & 31st Street	16	C	16	C
Reservoir Road & 37th Street	83	F	83	F
Reservoir Road & 35th Street	625	F	625	F
R Street & 34th Street	37	E	19	C
Wisconsin Avenue & R Street	25	C	25	C

Key Intersection	2015-PM			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	73	F	73	F
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	0	A	0	A
K Street, Whitehurst Freeway & 27th Street	391	F	391	F
Canal Street/Whitehurst Freeway	224	F	255	F
M Street & Key Bridge	153	F	127	F
M Street & 34th Street	269	F	149	F
M Street & 33rd Street	44	D	289	F
M Street & Wisconsin Avenue	239	F	375	F
M Street & Thomas Jefferson Street	6	A	7	A
Pennsylvania Avenue & 28th Street	24	C	24	C
N Street & 35th Street	10	B	10	B
P Street & 35th Street	27	D	25	D
P Street & 34th Street	11	B	11	B
P Street & 33rd Street	33	D	37	E
P Street & 32nd Street	2	A	2	A
P Street & 29th Street	16	C	15	C
Q Street & 35th Street	54	F	35	E
Q Street & 32nd Street	5	A	5	A
Q Street & 31st Street	15	B	15	B
Reservoir Road & 37th Street	19	B	19	B
Reservoir Road & 35th Street	639	F	639	F
R Street & 34th Street	116	F	28	D
Wisconsin Avenue & R Street	175	F	31	C

Key Intersection	2015-SAT			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	18	C	18	C
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	1	A	1	A
K Street, Whitehurst Freeway & 27th Street	69	E	69	E
Canal Street/Whitehurst Freeway	47	D	50	D
M Street & Key Bridge	148	F	110	F
M Street & 34th Street	240	F	19	B
M Street & 33rd Street	105	F	385	F
M Street & Wisconsin Avenue	123	F	273	F
M Street & Thomas Jefferson Street	16	B	14	B
Pennsylvania Avenue & 28th Street	22	C	22	C
N Street & 35th Street	13	B	13	B
P Street & 36th Street	21	C	22	C
P Street & 34th Street	11	B	19	C
P Street & 33rd Street	13	B	18	C
P Street & 32nd Street	3	A	3	A
P Street & 29th Street	11	B	11	B
Q Street & 36th Street	25	D	25	D
Q Street & 32nd Street	5	A	5	A
Q Street & 31st Street	14	B	14	B
Reservoir Road & 37th Street	27	C	27	C
Reservoir Road & 35th Street	206	F	206	F
R Street & 34th Street	10	A	13	B
Wisconsin Avenue & R Street	25	C	25	C

MID-TERM OPTIONS CONSIDERED

LOCATION

33rd Street & 34th Street

TITLE

Scenario D - 33rd One-Way SB, 34th One-Way NB to Prospect Street

DRAWING No.

MT-5d

SHEET No.

1 of 1

LEGEND/NOTES

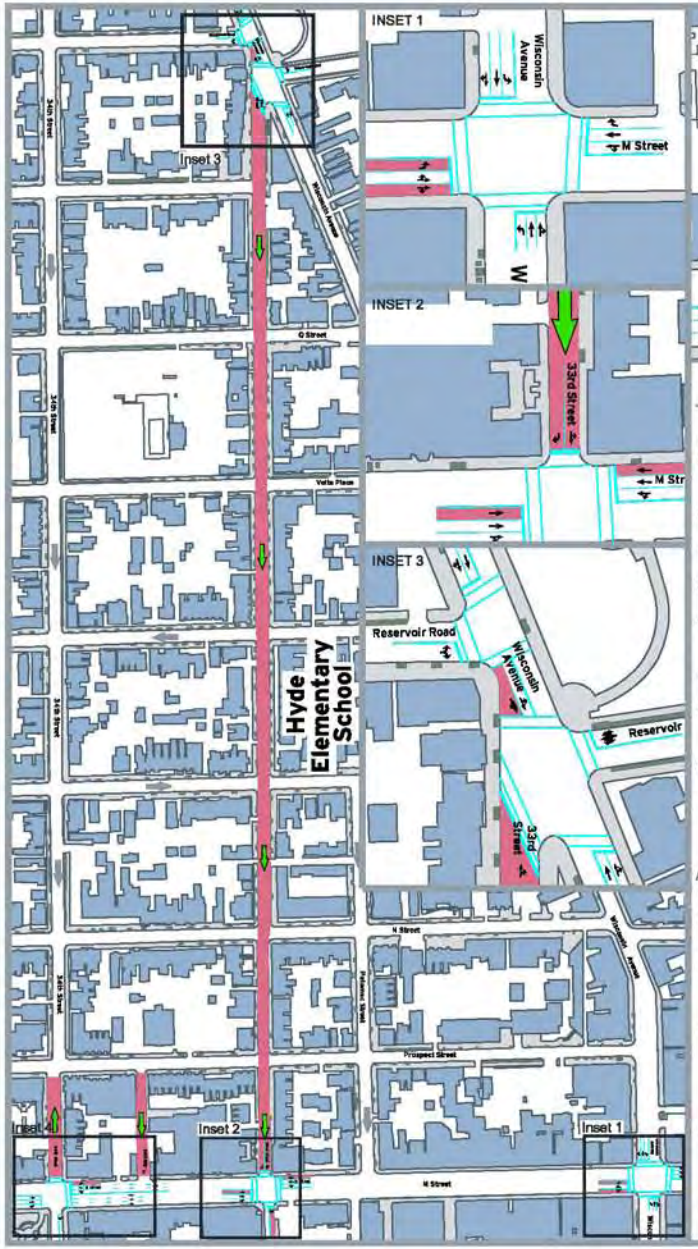
- Allowed movements
- Altered from existing
- Existing One-way Street
- Proposed One-way Street

NOT RECOMMENDED

Georgetown Transportation Study

MAIN WINDOW 0 150 300 600

INSETS 0 50 100 200



Proposed Conditions

FEATURES/OPTIONS

1. 33rd St currently one-way NB reversed to one-way SB.
2. Left turns from M St to Wisconsin Ave allowed. EB left lane converted to a left-only lane, center lane converted to a shared left-thru lane
3. Remove EB parking on M St all day between Potomac St and Wisconsin Ave
4. Lane configuration changes at 33rd St/ Wisconsin Ave, and 33rd St/ M St to accommodate reversal of 33rd St
5. Left turns from Wisconsin Ave NB to 33rd St SB prohibited
6. 34th St between M St and Wisconsin Ave currently one-way SB reversed to one-way NB, right-in from WB M St only
7. Lane configuration changes at 34th St & M St to accommodate reversal of 34th St
8. Lane configuration changes to all intersections between Wisconsin Ave and M St on 33rd St and 34th St to accommodate alterations in operation
9. Bank Alley is converted to one-way SB with right-out only at M St

ANALYSIS

1. All analysis was completed using the 2015 analysis
2. Delay at the intersection of M St/Key Bridge for the AM, PM, and Saturday peak hour shows minimal improvements in delay. But all remain a LOS F
3. For the intersection of M/34th St, delay is reduced in all scenarios, but remains a LOS F with the exception of Saturday where the LOS improves to D
4. For the intersection of M St/33rd St, delay decreases slightly in the AM peak, increases in the PM peak 5-fold, and increases slightly in the Saturday peak. LOS remains F in all scenarios except the PM peak where with the existing configuration the LOS is D and under the new configuration the LOS is F
5. For the intersection of M St/Wisconsin Ave, delay increases in all scenarios with the removal of the restriction of left turns EB from M St to Wisconsin Ave NB, but provides access to NB Traffic From Key Bridge.
6. Removes 24 parking stalls currently used in non-peak hours on M St EB from Potomac St to Wisconsin Ave

ANALYSIS

Key Intersection	2015-AM			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	61	F	61	F
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	1	A	1	A
K Street, Whitehurst Freeway & 27th Street	217	F	217	F
Canal Street/Whitehurst Freeway	102	F	103	F
M Street & Key Bridge	156	F	149	F
M Street & 34th Street	177	F	10	B
M Street & 33rd Street	230	F	207	F
M Street & Wisconsin Avenue	182	F	387	F
M Street & Thomas Jefferson Street	33	C	32	C
Pennsylvania Avenue & 28th Street	20	C	19	B
N Street & 35th Street	12	B	12	B
P Street & 36th Street	30	D	67	F
P Street & 34th Street	16	C	21	C
P Street & 33rd Street	121	F	143	F
P Street & 32nd Street	2	A	2	A
P Street & 29th Street	13	B	13	B
Q Street & 36th Street	63	F	77	F
Q Street & 32nd Street	4	A	4	A
Q Street & 31st Street	16	C	16	C
Reservoir Road & 37th Street	83	F	83	F
Reservoir Road & 35th Street	825	F	825	F
R Street & 34th Street	37	E	19	C
Wisconsin Avenue & R Street	25	C	27	C

Key Intersection	2015-PM			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	73	F	73	F
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	0	A	0	A
K Street, Whitehurst Freeway & 27th Street	391	F	391	F
Canal Street/Whitehurst Freeway	224	F	225	F
M Street & Key Bridge	163	F	127	F
M Street & 34th Street	269	F	154	F
M Street & 33rd Street	44	D	266	F
M Street & Wisconsin Avenue	232	F	373	F
M Street & Thomas Jefferson Street	6	A	7	A
Pennsylvania Avenue & 28th Street	24	C	24	C
N Street & 35th Street	10	B	10	B
P Street & 35th Street	27	D	25	D
P Street & 34th Street	11	B	11	B
P Street & 33rd Street	33	D	37	E
P Street & 32nd Street	2	A	2	A
P Street & 29th Street	15	C	15	C
Q Street & 36th Street	54	F	35	E
Q Street & 32nd Street	5	A	5	A
Q Street & 31st Street	15	B	15	B
Reservoir Road & 37th Street	19	B	19	B
Reservoir Road & 35th Street	639	F	639	F
R Street & 34th Street	115	F	28	D
Wisconsin Avenue & R Street	175	F	156	F

Key Intersection	2015-SAT			
	Existing Configuration		Proposed Configuration	
	Delay	LOS	Delay	LOS
K Street & Wisconsin Avenue	18	C	18	C
K Street & Thomas Jefferson Street	1	A	1	A
K Street & 29th Street	1	A	1	A
K Street, WhiteHurst Freeway & 27th Street	69	E	69	E
Canal Street/Whitehurst Freeway	47	D	50	D
M Street & Key Bridge	148	F	93	F
M Street & 34th Street	240	F	30	D
M Street & 33rd Street	105	F	231	F
M Street & Wisconsin Avenue	123	F	273	F
M Street & Thomas Jefferson Street	16	B	14	B
Pennsylvania Avenue & 28th Street	22	C	22	C
N Street & 35th Street	13	B	13	B
P Street & 35th Street	21	C	22	C
P Street & 34th Street	11	B	19	C
P Street & 33rd Street	13	B	16	C
P Street & 32nd Street	3	A	3	A
P Street & 29th Street	11	B	11	B
Q Street & 36th Street	25	D	25	D
Q Street & 32nd Street	5	A	5	A
Q Street & 31st Street	14	B	14	B
Reservoir Road & 37th Street	27	C	27	C
Reservoir Road & 35th Street	208	F	208	F
R Street & 34th Street	10	A	13	B
Wisconsin Avenue & R Street	25	C	25	C

MID-TERM OPTIONS CONSIDERED

LOCATION

33rd Street & 34th Street

TITLE

Scenario D1 - 33rd One-Way SB, 34th One-Way NB to Prospect Street

DRAWING No.

MT-5d1

SHEET No.

1 of 1

LEGEND/NOTES

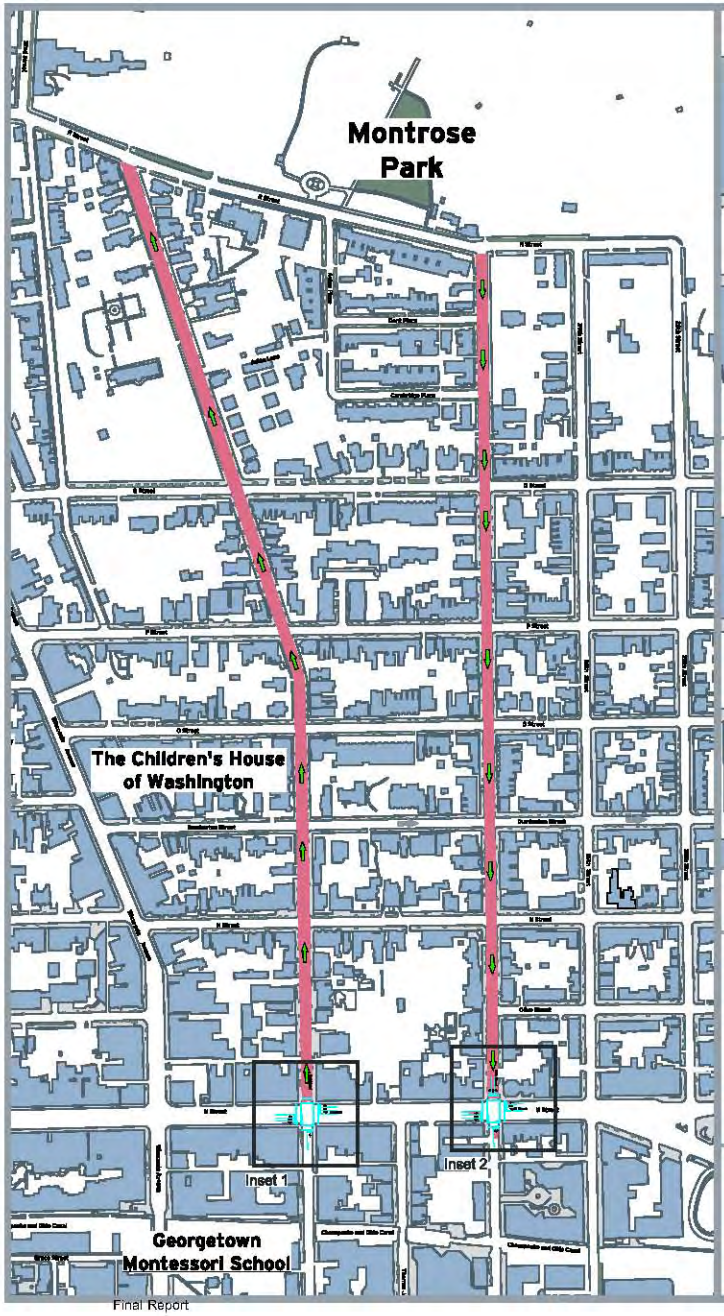
- Allowed movements
- Altered from existing
- Existing One-way Street
- Proposed One-way Street

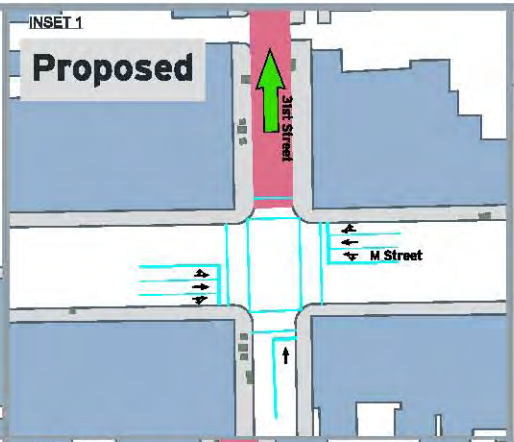
NOT RECOMMENDED

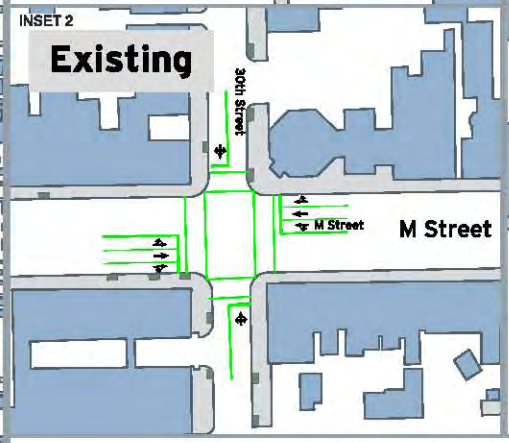
Georgetown Transportation Study

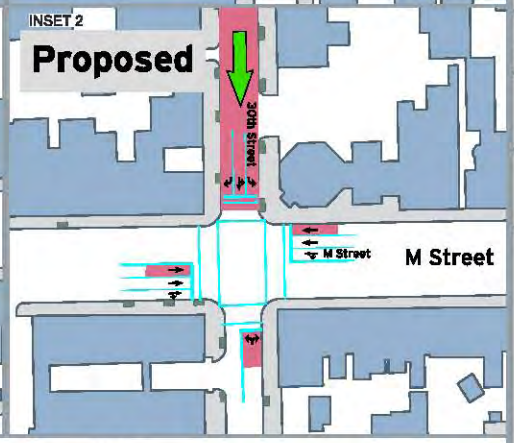
MAIN WINDOW 0 150 300 600

INSETS 0 50 100 200









Proposed Conditions

FEATURES/OPTIONS

1. 30th St currently two-way converted to one-way SB
2. 31st St currently two-way converted to one-way NB
3. Lane configuration changes at all intersections on 30th St and 31st St inclusive of R St and M St to accomodate proposed alterations in operation

ANALYSIS

MID-TERM OPTIONS CONSIDERED

LOCATION

30th Street and 31st Street

TITLE

One-Way Pair East of Wisconsin Avenue

DRAWING No.

MT-6

SHEET No.

1 of 1

LEGEND/NOTES

- Allowed movements
- Altered from existing
- Proposed One-way Street

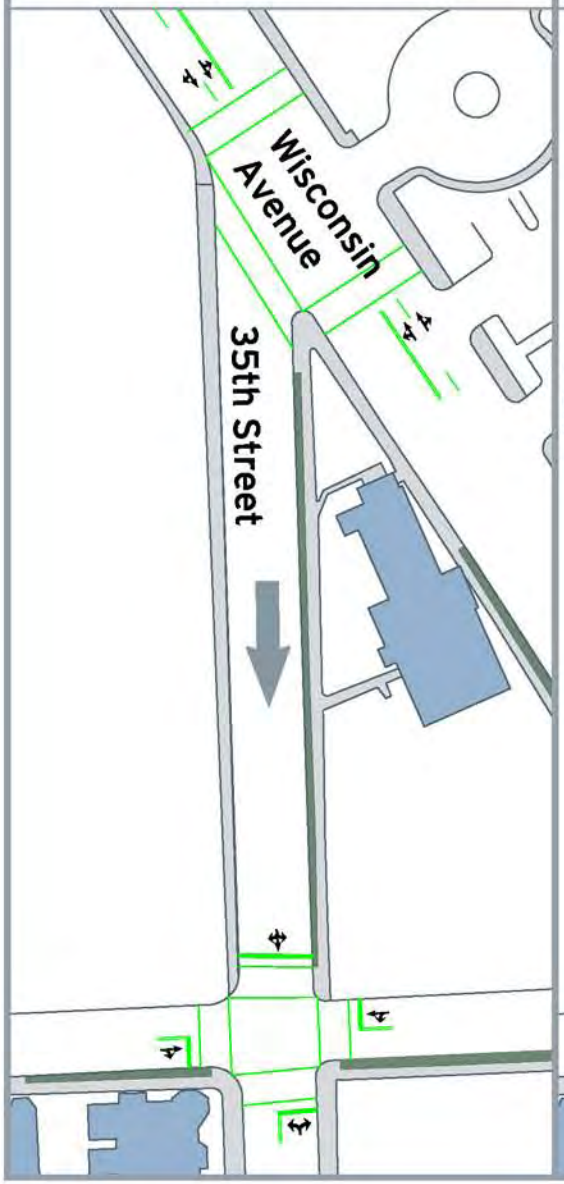
Georgetown Transportation Study

MAIN WINDOW 0 200 400 800

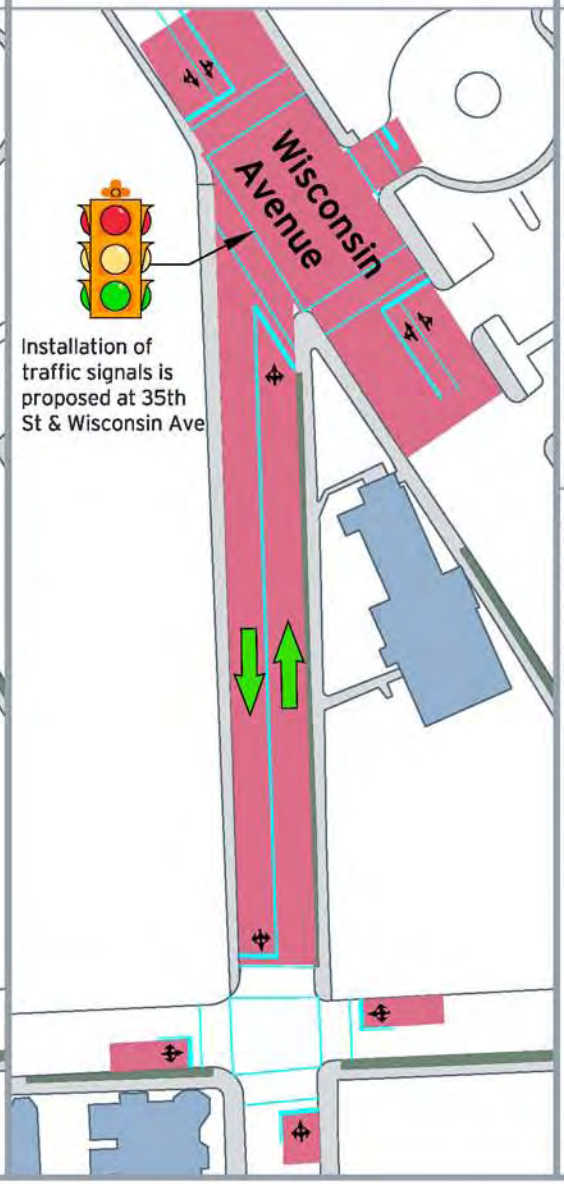
INSETS 0 50 100 200

N

Existing Configuration



Alternative 1



Proposed Conditions

ISSUE

1. 35th St south of Whitehaven Pkwy is two-way. 35th St north of Whitehaven Pkwy is SB only, but used to be two-way

FEATURES/OPTIONS

1. 35th Street between Wisconsin Ave and Whitehaven Pkwy currently one-way SB converted to two-way
2. The intersection of 35th St and Whitehaven Pkwy remains all-way stop control
3. Installation of traffic signal proposed at the intersection of 35th St and Wisconsin Ave.
4. Current Signal at Wisconsin Ave
5. Diagonal parking on west side of street identified in ST-9 would be removed parallel parking would exist on both sides of street
6. Flexible curb installed on Wisconsin Ave SB to 35th St SB to slow vehicles.

ANALYSIS

Wisconsin Avenue & 35th Street		Existing Configuration		Four Way STOP		Signalized Intersection	
		Delay	LOS	Delay	LOS	Delay	LOS
AM	2007	-	-	-	-	-	-
	2015	-	-	266.6	F	41.1	D
PM	2007	-	-	-	-	-	-
	2015	-	-	95.2	F	52.9	D
Sat	2007	-	-	-	-	-	-
	2015	-	-	173.1	F	21.8	C

1. Without the installation of a signal at this location, delays to NB travelers results in a LOS F for the intersection. With the installation of the signal, the operation in all directions remains within acceptable thresholds.

MID-TERM OPTIONS CONSIDERED

LOCATION

35th Street between Whitehaven Parkway and Wisconsin Avenue

TITLE **Intersection Improvements Wisconsin Avenue & 35th Street**

DRAWING No. **MT-7**

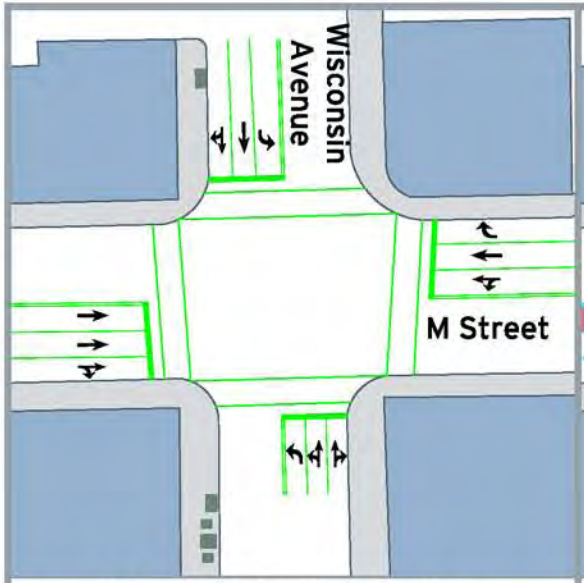
SHEET No. **1 of 1**

LEGEND/NOTES

- Allowed movements
- Altered from existing
- Existing One-way Street
- Proposed Two-way Street

Georgetown Transportation Study

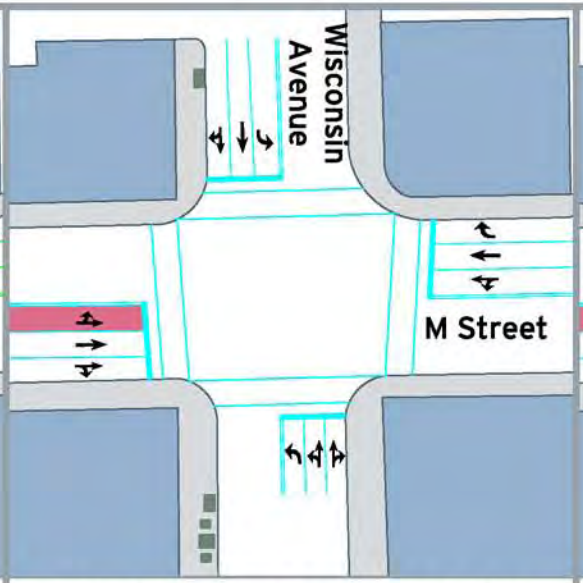
N 0 25 50 100



Existing Configuration

FEATURES

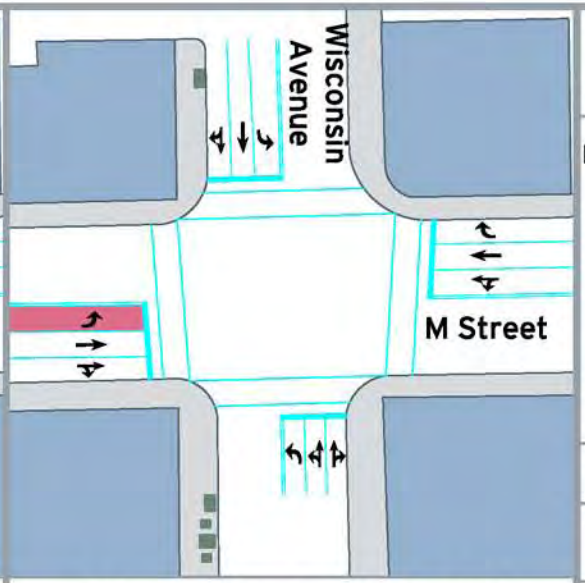
No Change



Alternative 1 SHORT-TERM

FEATURES/OPTIONS

1. Allows left turns from M St EB to Wisconsin Ave NB as an alternative to 33rd St (residential street) for travel NB from M St
2. EB left most lane converted to a thru-left lane for all traffic
3. Signal timing changed to allow leading EB movement or split phase



Alternative 2 MID-TERM

FEATURES/OPTIONS

NOT RECOMMENDED

1. Allows left turns from M St EB to Wisconsin Ave NB
2. EB left-most lane is converted to a left only lane
3. Signal timing changed to allow left turn phase or split phase
4. Remove parking EB M St from Potomac St to Wisconsin Ave

ANALYSIS

M Street & Wisconsin Avenue		Existing Configuration		Through Left		Left Lane Only	
		Delay	LOS	Delay	LOS	Delay	LOS
AM	2007	118.9	F	-	-	-	-
	2015	161.6	F	336.3	F	317.8	F
PM	2007	100	F	-	-	-	-
	2015	232	F	249.5	F	297.6	F
Sat	2007	103.9	F	-	-	-	-
	2015	123.4	F	227.7	F	221	F

Alternative 1

PROS:

1. Provides an alternative to 33rd St (residential street) to travel NB from M St
2. While the delay is high in the 2015 year timeframe, allowing left turns at this intersection does not significantly increase the delay for the PM peak

CONS:

1. With the ability to turn left on Wisconsin Ave from M St in the peak hours, the delay at the intersection per vehicle doubles in the AM and Saturday peaks
2. Providing an all-pedestrian phase increases delay to vehicles at this intersection, but improves safety for pedestrians and vehicles while allowing better movement of vehicles during cycle without pedestrian conflicts

Alternative 2

PROS:

1. Provides an alternative to 33rd St (residential street) to travel NB from M St
2. While the delay is high in the 2015 year timeframe, allowing left turns at this intersection does not significantly increase the delay for the PM peak

CONS:

1. With the ability to turn left on Wisconsin Ave from M St in the peak hours, the delay at the intersection per vehicle doubles in the AM and Saturday peaks
2. Providing an all-pedestrian phase increases delay to vehicles at this intersection, but improves safety for pedestrians and vehicles while allowing better movement of vehicles during cycle without pedestrian conflicts
3. Would remove 24 parking stalls available in non-peak hours on M St

SHORT-TERM & MID-TERM OPTIONS CONSIDERED

LOCATION

M Street & Wisconsin Avenue

TITLE

Intersection Improvements M Street and Wisconsin Avenue

DRAWING No.

MT-10

SHEET No.

1 of 1

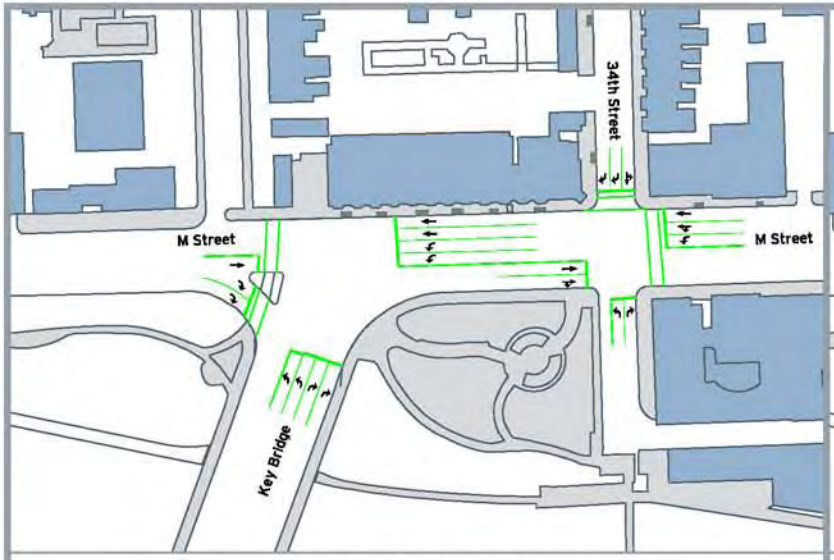
LEGEND/NOTES

← Allowed movements

Altered from existing

Georgetown Transportation Study

N 0 25 50 100



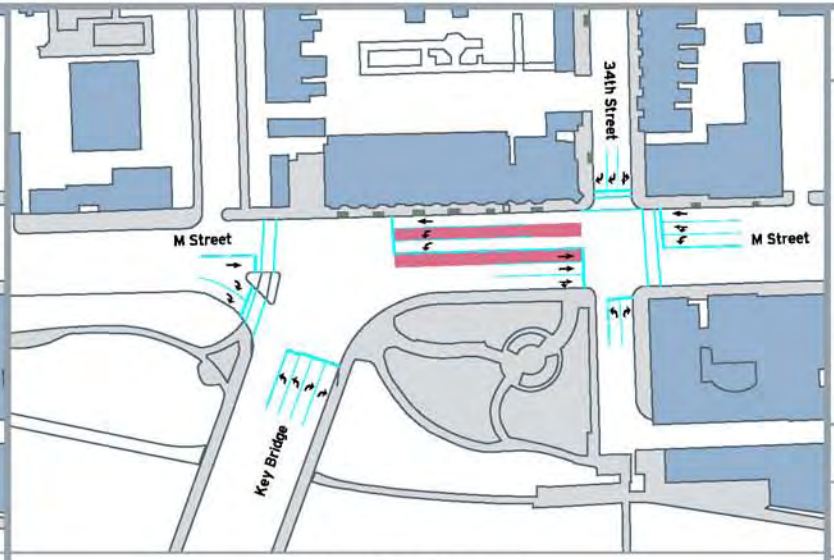
Exisiting Configuration

ISSUES

1. High Volume of traffic to and from VA
2. Throughput highly constrained

FEATURES

1. Parking on M St between Key Bridge and 34th St removed all day
2. Single thru lane retained in outer WB lane; second left-only lane replaces second WB thru lane
3. Inner WB lane flipped to EB
4. Loading for businesses on M St between Key Bridge and 34th St to occur elsewhere (restricted to non-peak hours).
   Options for loading/unloading require trucks to be traveling on neighborhood streets



Alternative 1

ANALYSIS

M Street & Key Bridge		Existing Configuration		One West Bound Lane		Additional East bound lane	
		Delay	LOS	Delay	LOS	Delay	LOS
AM	2007	92.6	F	-	-	-	-
	2015	154.6	F	149.5	F	70.3	E
PM	2007	105	F	-	-	-	-
	2015	153.3	F	153.7	F	153.6	F
Sat	2007	87.1	F	-	-	-	-
	2015	147.5	F	105.8	F	61.4	E

PROS:

1. Allows for an additional thru lane of traffic on M St EB while maintaining the number of left turn lanes on M St to Key Bridge
2. Minimize weave that currently exists from 34th St to Key Bridge to one lane of weave.

CONS:

1. Loading zone located on M St west of 34th St would be removed. Loading/unloading activities would be more difficult
2. It is likely loading/unloading activities would continue at this location to some degree which would block the thru lane of traffic.
3. Trucks would utilize neighborhood streets to access loading/unloading location.
4. Grade issue on both 34th St and 35th St making trucks use limited
5. Removes parking stalls EB on M Street currently available in off peak-hours

MID-TERM
OPTIONS CONSIDERED

LOCATION

M Street & Key Bridge

TITLE **Intersection Improvements M Street & Key Bridge**

DRAWING No. **MT-11**

SHEET No. **1 of 2**

LEGEND/NOTES

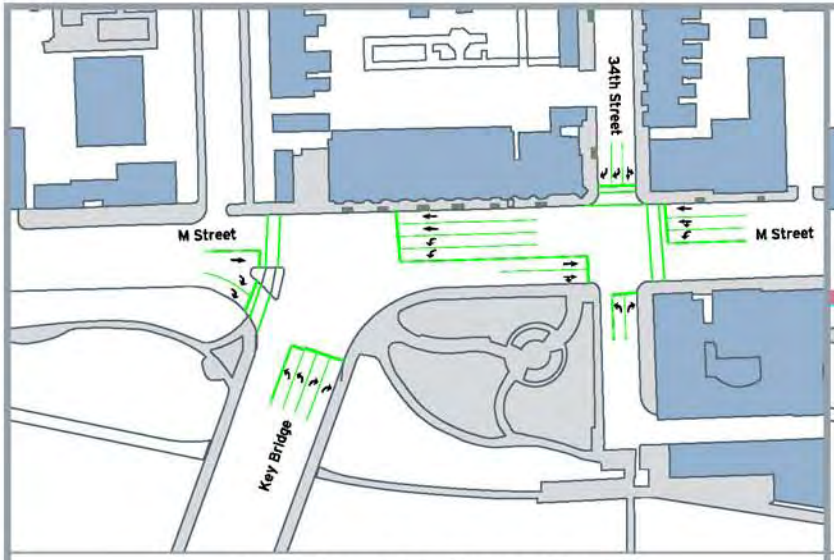
- Allowed movements
- Altered from existing

NOT RECOMMENDED

Georgetown Transportation Study

N

0 50 100 200



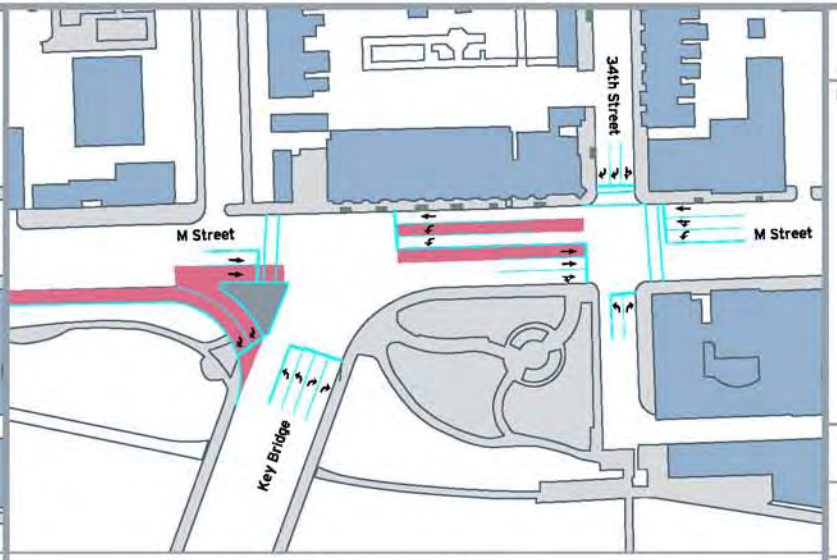
Exisiting Configuration

ISSUES

1. High Volume of traffic to and from VA
2. Throughput highly constrained

FEATURES

1. All changes proposed in Alternative 1
   1.1. Parking on M St between the Key Bridge and 34th St removed all day
   1.2. Single thru lane retained in outer WB lane; second left only lane replaces existing WB through lane
   1.3. Inner WB lane flipped to EB
2. Additional lane added to M St EB approach between Whitehurst Freeway and Key Bridge: 4 Lane total cross section



Alternative 2

ANALYSIS

M Street & Key Bridge		Existing Configuration		One West Bound Lane		Additional East bound lane	
		Delay	LOS	Delay	LOS	Delay	LOS
AM	2007	92.6	F	-	-	-	-
	2015	154.6	F	149.5	F	70.3	E
PM	2007	105	F	-	-	-	-
	2015	153.3	F	153.7	F	153.6	F
Sat	2007	87.1	F				
	2015	147.5	F	105.8	F	61.4	E

Pros

1. Allows for an additional thru lane of traffic on M St EB while maintaining the number of left turn lanes on M St to Key Bridge.
2. Minimize weave that currently exists from 34th St to Key Bridge to one lane of weave
3. Adds an additional thru lane to M St west of intersection for more thru capacity

Cons:

1. Loading zone located on M St west of 34th St would be removed. Loading/unloading activities would be more difficult
2. It is likely loading/unloading activities would continue at this location to some degree which would block the thru lane of traffic
3. Trucks would utilize neighborhood streets to access loading/unloading location.
4. Grade issue on both 34th St and 35th St making truck use limited
5. Land necessary to construct extra lane is owned by the National Parks Service
6. Removes four parking stalls currently available for off-peak parking

MID-TERM OPTIONS CONSIDERED

LOCATION

M Street & Key Bridge

TITLE **Intersection Improvements M Street & Key Bridge**

DRAWING No. **MT-11**

SHEET No. **2 of 2**

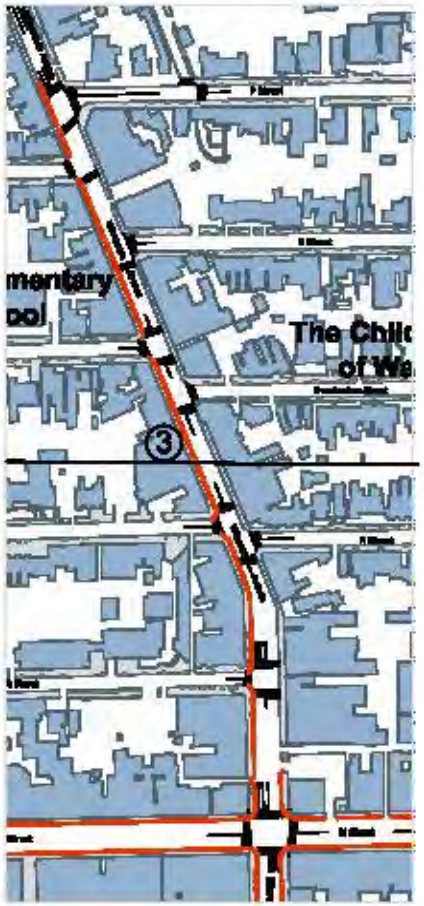
LEGEND/NOTES

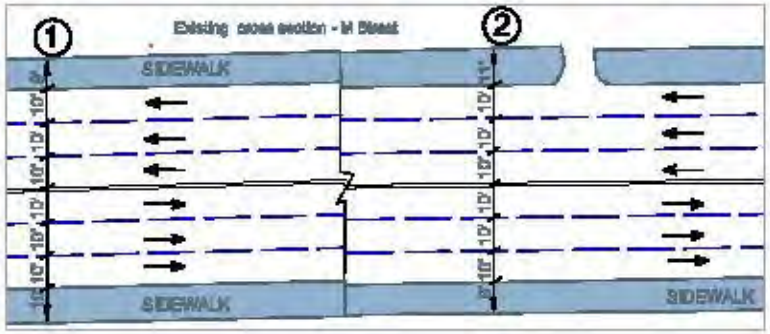
- Allowed movements
- Altered from existing

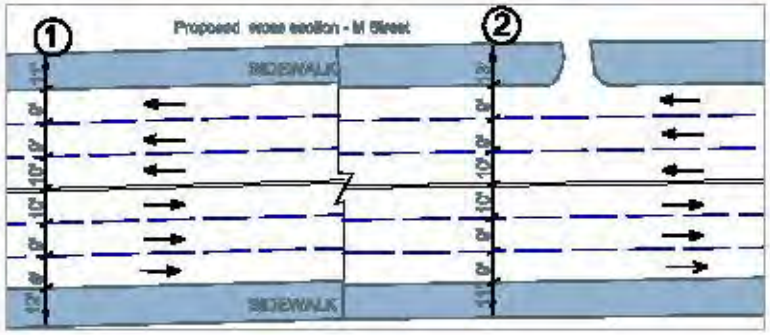
NOT RECOMMENDED

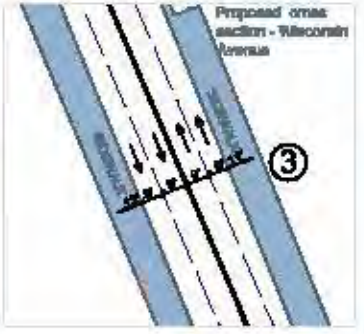
Georgetown Transportation Study

N 0 50 100 200









MID-TERM OPTIONS CONSIDERED

LOCATION
M Street, Wisconsin Avenue

TITLE
Sidewalk Widening

DRAWING No.
MT - 12

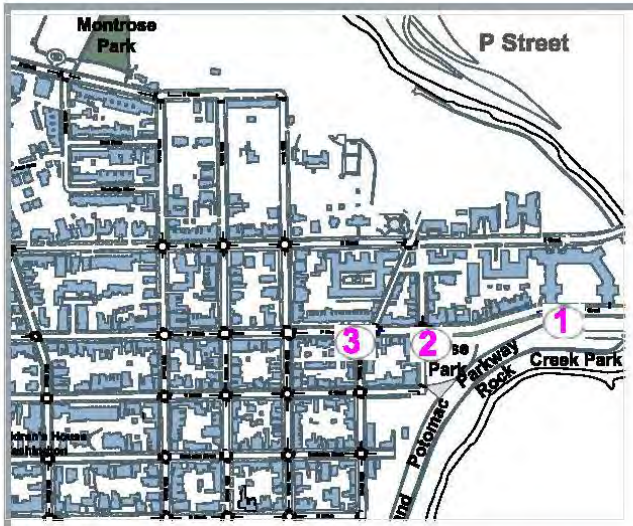
SHEET No.
1 of 1

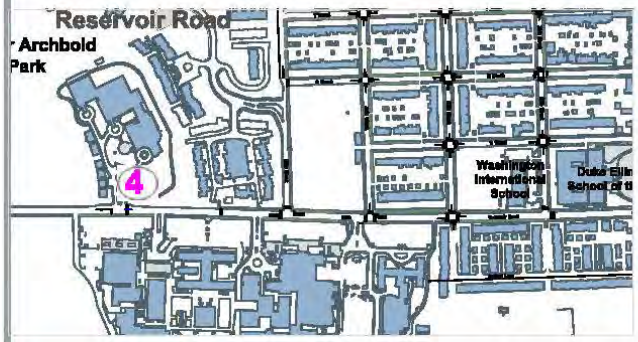
LEGEND/NOTES

Widen Sidewalk (2 ft)

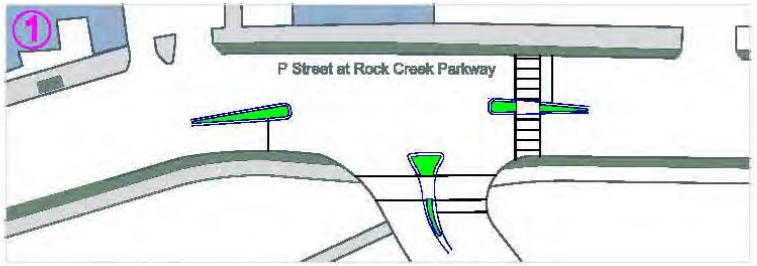
NOT RECOMMENDED

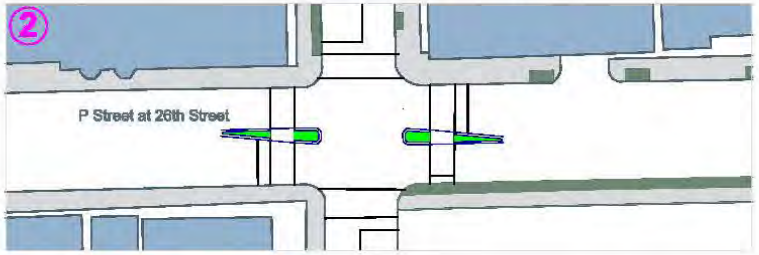
Georgetown Transportation Study

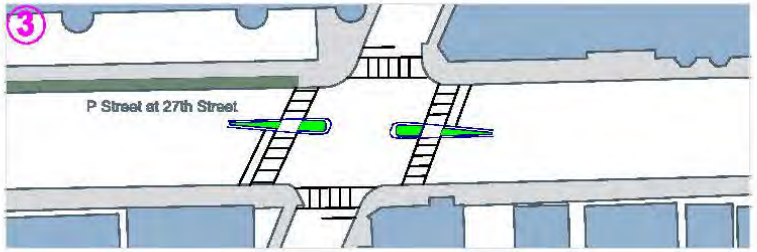


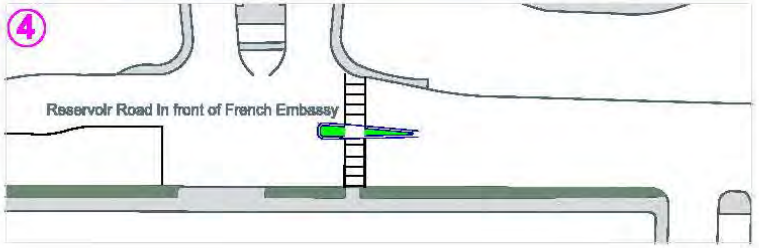


Raised median at intersection









MID-TERM
OPTIONS CONSIDERED

LOCATION

P Street, Reservoir Road

TITLE

Median and Pedestrian Refuge

DRAWING No. **MT - 13**

SHEET No. **1 of 1**

LEGEND/NOTES

Raised median

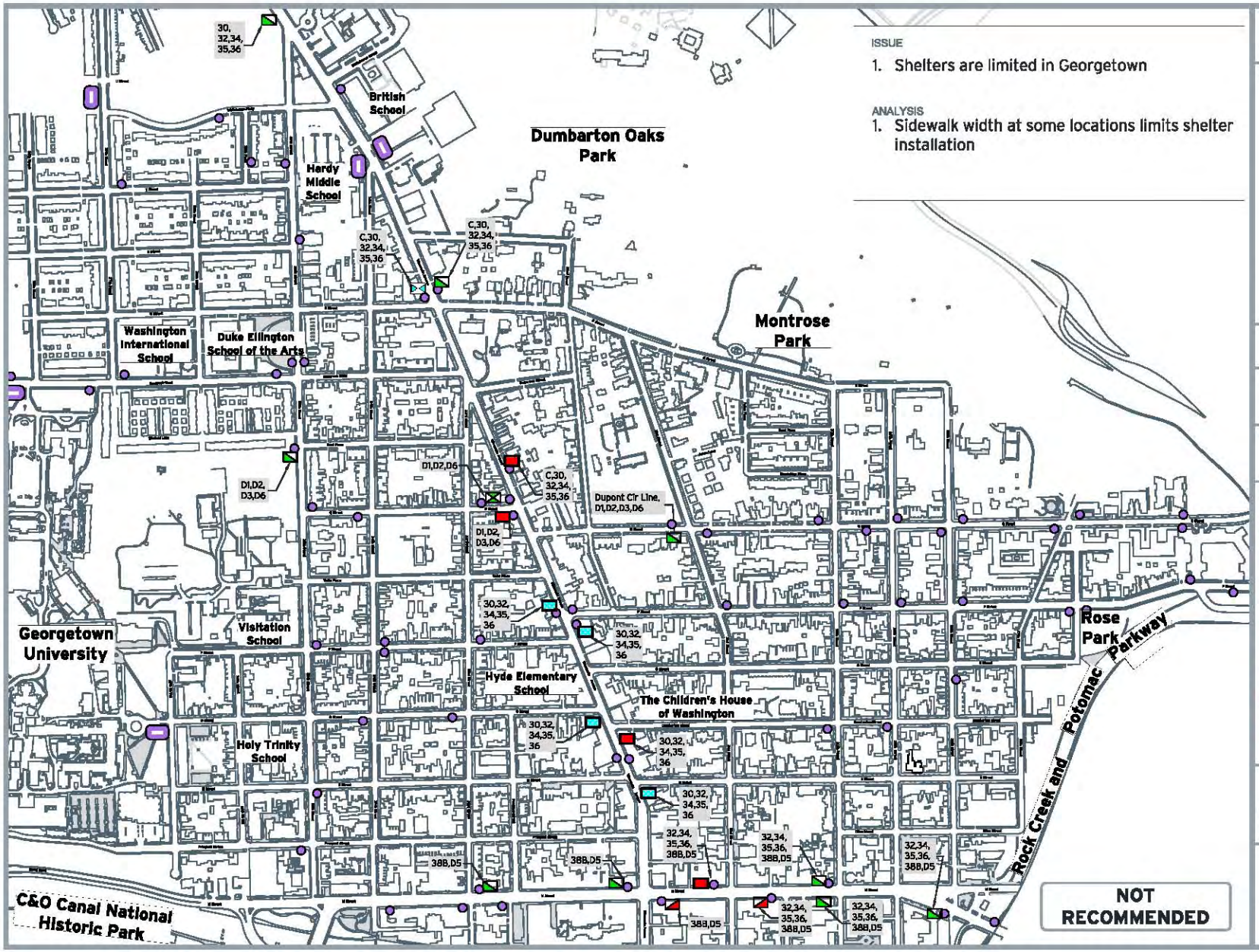
Note: Obtain Old Georgetown Board approval of design

Georgetown Transportation Study

N

0 25 50 100

0 300 600 1200



ISSUE

1. Shelters are limited in Georgetown

ANALYSIS

1. Sidewalk width at some locations limits shelter installation

LONG-TERM OPTIONS CONSIDERED

LOCATION

Study Area

TITLE

Proposed Bus Shelters

DRAWING No.

LT-1

SHEET No.

1 of 1

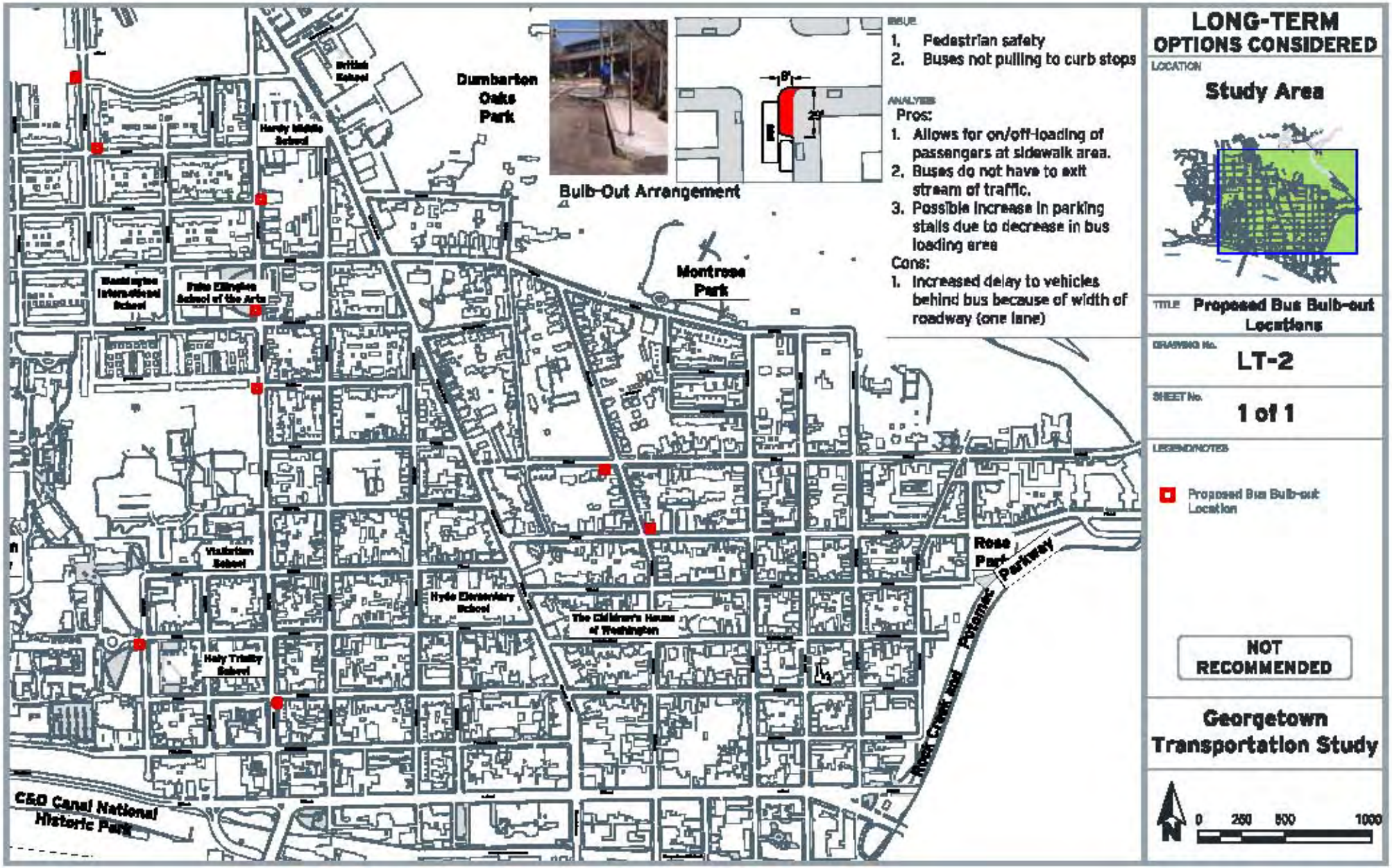
LEGEND/NOTES

- Existing Bus Stop
- Existing Bus Shelter
- Stop Qualified for Shelter without Sufficient Space (Low Priority)
- Stop Qualified for Shelter without Sufficient Space (Mid Priority)
- Stop Qualified for Shelter without Sufficient Space (High Priority)
- Stop Qualified for Shelter with Sufficient Space (Low Priority)
- Stop Qualified for Shelter with Sufficient Space (Mid Priority)
- Stop Qualified for Shelter with Sufficient Space (High Priority)

Georgetown Transportation Study

N 0 250 500 1000

LONG-TERM OPTIONS CONSIDERED



ISSUE

1. Pedestrian safety
2. Buses not pulling to curb stops

ANALYSIS

Pros:

1. Allows for on/off-loading of passengers at sidewalk area.
2. Buses do not have to exit stream of traffic.
3. Possible increase in parking stalls due to decrease in bus loading area

Cons:

1. Increased delay to vehicles behind bus because of width of roadway (one lane)

LOCATION

Study Area

TITLE **Proposed Bus Bulb-out Locations**

DRAWING No. **LT-2**

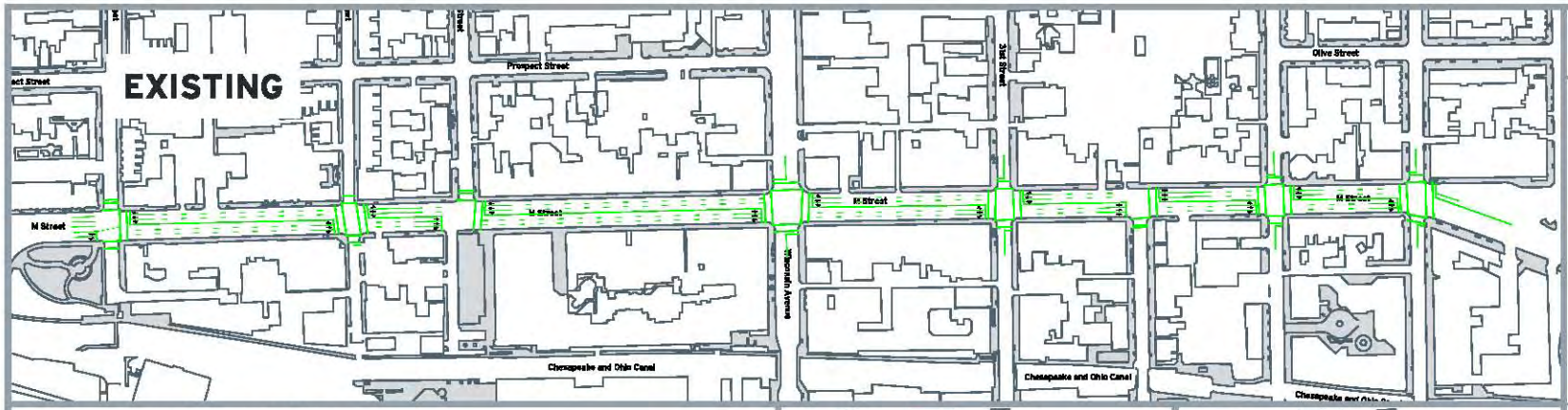
SHEET No. **1 of 1**

LEGEND/NOTES

Proposed Bus Bulb-out Location

NOT RECOMMENDED

Georgetown Transportation Study



Proposed Conditions

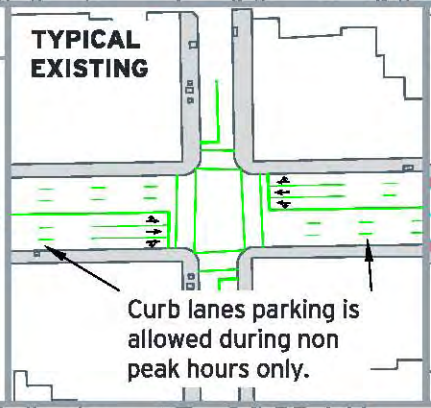
ISSUES
1. Not enough parking on commercial streets
2. Pedestrian safety and sidewalk width

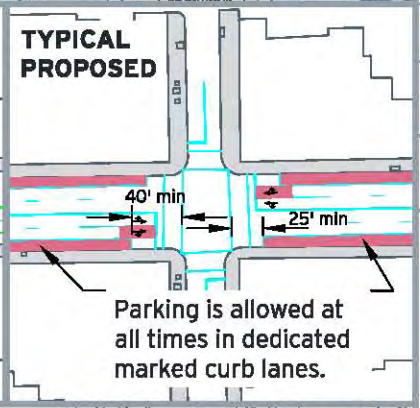
FEATURES/OPTIONS
1. Parking spaces along both sides of M Street (currently non peak hour parking only) converted to 2-hour parking 8AM-6PM all days
2. Curb lanes on both sides of M St marked with parking stall lines where applicable
3. Parking signs on both sides of M St changed to accommodate 2-hour parking 8AM-6PM all days
4. Minimize curb lane to 8 feet to allow for 2 feet of sidewalk width widening on both sides of street

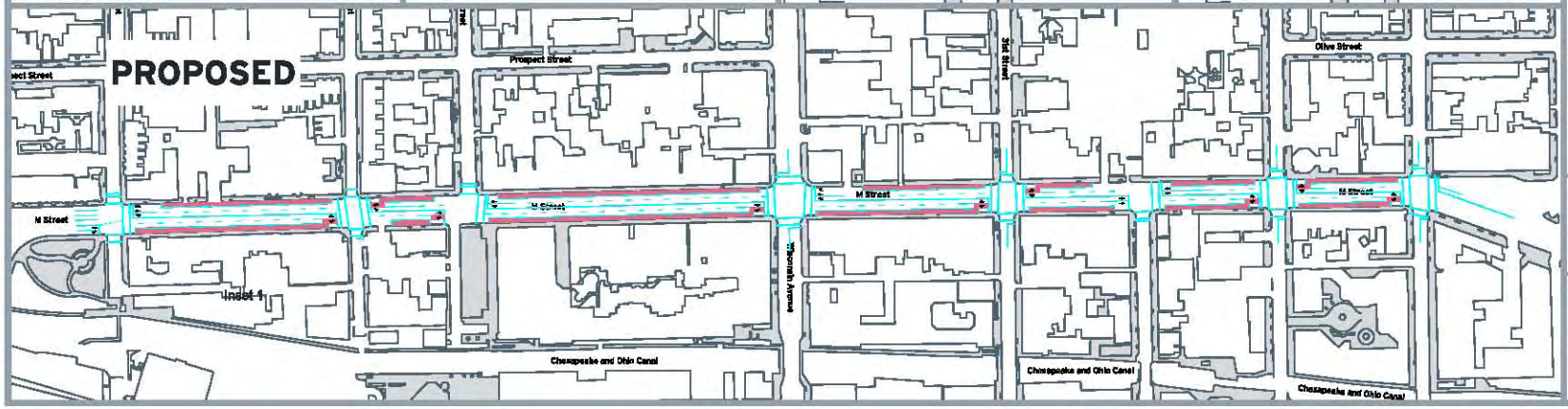
ANALYSIS

PROS
1. Additional width for sidewalk parking provides buffer to pedestrian area

CONS
1. Reduced thru capacity
2. Cost of moving curb, gutter, sidewalk, etc for an extra 2 feet of sidewalk width







LONG-TERM OPTIONS CONSIDERED

LOCATION

M Street

TITLE
M Street Parking Modification

DRAWING No.
LT-5

SHEET No.
1 of 1

LEGEND/NOTES

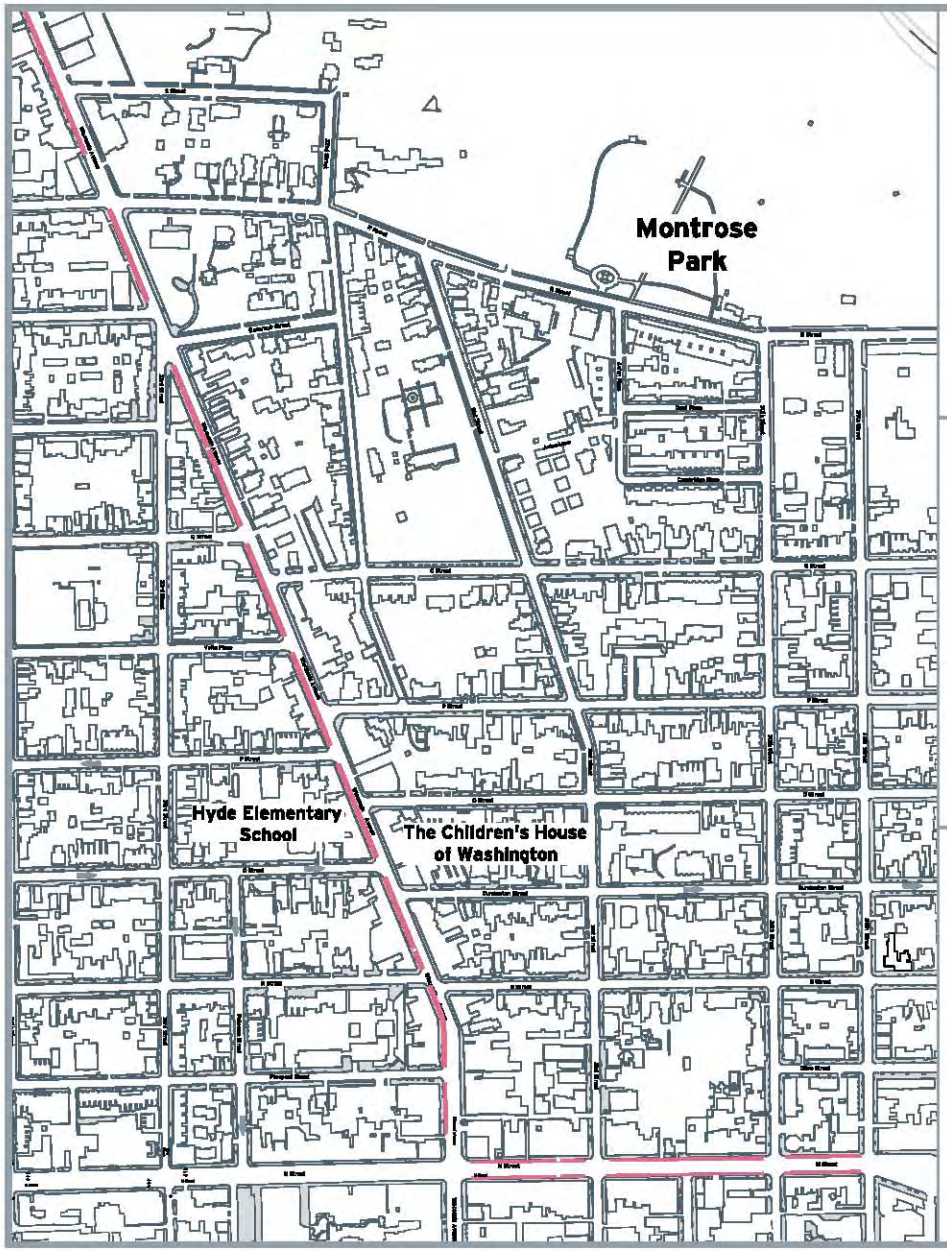
- Allowed movements
- Altered from existing

NOT RECOMMENDED

Georgetown Transportation Study

MAIN WINDOW 0 125 250 500

INSETS 0 50 100 200



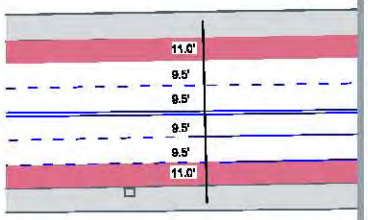
M Street General Arrangement

Existing Conditions

Six lanes ten feet each

MID-TERM

Proposed Conditions



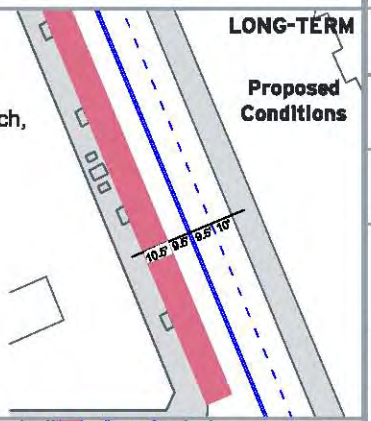
Wisconsin Avenue General Arrangement

Existing Conditions

Four lanes generally ten feet each, but cross-section varies

LONG-TERM

Proposed Conditions



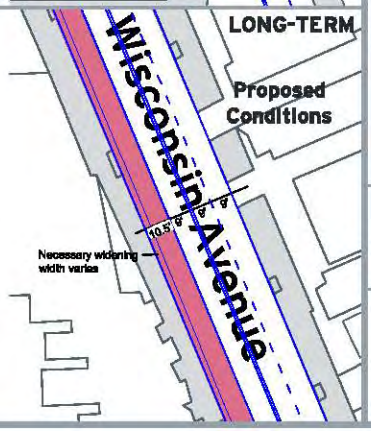
Wisconsin Avenue between Q and R Street

Existing Conditions

Four lanes in a 34 feet cross-section.

LONG-TERM

Proposed Conditions



MID-TERM & LONG-TERM OPTIONS CONSIDERED

LOCATION

Curb lane East of Wisconsin Ave on M St

TITLE

Transit only Lanes on M Street and Wisconsin Ave

DRAWING No.

LT-7

SHEET No.

1 of 1

LEGEND/NOTES

Bus Lane

Bus lane width on M Street will be 11 feet and 10.5 feet on Wisconsin Avenue SB. Other general purpose lanes shall be no less that 9 feet

Georgetown Transportation Study

MAIN WINDOW
0 125 250 500

INSETS
0 25 50

N

APPENDIX E – PEDESTRIAN AND BICYCLE RECOMMENDATIONS BACKUP

Specific to the bicycle and pedestrian recommendations, the following has been prepared as backup to the recommendations.

Pedestrian Countdown Signal

For safety reasons, any signalized intersection should include pedestrian countdown signals (shown in the figure to the right) in all directions from which pedestrians are allowed to move through an intersection. Pedestrian signals should be located in line with designated crosswalks and be present in either direction of travel. The pedestrian signal heads usually are installed on existing signal poles.

Pedestrian Count Down Signal

The following signalized intersections within the study area currently have no pedestrian countdown signals:

- 33rd Street and Q Street (Drawing ST-4[1]).
- 28th Street and P Street (Drawing ST-4[2]).
- 30th Street and P Street (Drawing ST-4([2]).
- Wisconsin Avenue and O Street/Dumbarton Street (Southside crosswalk) (Drawing ST-4[4]).

Pedestrian count down signals are designed to begin counting at the beginning of the walk phase with the flashing DON'T WALK during the pedestrian clearance interval. The pedestrian clearance interval is based on the time taken by a pedestrian to traverse a crosswalk at a particular walking speed. The typical walking speed used to calculate pedestrian clearance interval is 3.5 ft/sec.

Table E1 provides results of the analysis conducted for pedestrian clearance interval. The analysis indicates that some of the signalized intersections within the study area do not provide adequate flashing DON'T WALK time to cross the intersection. The study team recommends upgrading existing flashing DON'T WALK time to the required amount of time as shown in the following table:

TABLE E1: PEDESTRIAN SIGNAL TIMING ANALYSIS

Signalized Intersections	Street Name (North-South)	Time in Seconds		Street Name (East-West)	Time in Seconds	
		Suggested FD*	Existing FD*		Suggested FD*	Existing FD*
M St/ Wisconsin Ave	Wisconsin Ave	20	10	M St (ES*)	17	8
				M St (WS)*	17	10
Wisconsin Ave/ Whitehaven Pkwy	Wisconsin Ave	17	10	Whitehaven Parkway	13	6
Wisconsin/ Q St	Wisconsin Ave (NS)	11	5	Q St (ES)*	14	8
	Wisconsin Ave (SS)	13	8	Q St (WS)*	12	4
Wisconsin/R St	Wisconsin Ave	15	13	R St	12	7
Reservoir Rd/G-town Med Center/38th St	38th St(NS)	9	2	Reservoir Rd (WS)*	11	3
27th St & K St / Whitehurst	27th St	13	10	K St	7	3
28th St/M St/Pennsylvania Ave	28th St	11	4	M St	14	12
				Pennsylvania Ave	16	12
34thSt/Q St	34th St	9	3	Q St	9	3
29th St/M St	29th St	17	4	M St	21	14
30th St/M St	30th St	10	4	M St	17	11
31st St/M St	31st St	9	4	M St	17	11
33rd St/ M St	33rd St	8	4	M St	17	9
33rd St/Reservoir Rd/Wisconsin Ave	Wisconsin Ave	11	8	Reservoir Rd/33rd St	11	8
34th St/M St	34th St	9	5-37	M St	18	10
	34th St	8	4			
28th St/Q St	28th St	9		Q St	9	
34th St/Reservoir Rd	34th St	9	4	Reservoir Rd	9	4
35th St/Wisconsin Ave	35th St	15	12	Wisconsin Ave	12	8
35th St/Reservoir Rd	35th St	15	7	Reservoir Rd (ES)*	9	3
				Reservoir Rd (WS)*	13	6
37th St/Reservoir Rd	37th St	10	4	Reservoir Rd	11	5
O St/Wisconsin Ave	Wisconsin Ave	11	9	O St	11	6
Dumbarton St/Wisconsin Ave	Wisconsin Ave	11	-	Dumbarton St	10	15
N St/Wisconsin Ave	Wisconsin Ave	11	9	N St	11	5
Key Bridge/M St				M St	12	9
				M St (dedicated right-turn lanes)	7	2
30th St/Q St	30th St	10	5	Q St	9	4
39th St/Reservoir Rd	39th St (NS) *	9	3	Reservoir Rd (WS)*	10	5
36th St/M St	36th St	11	1	M St	13	6
S St/Wisconsin Ave	Wisconsin Ave	15	12	S St	9	6
Wisconsin Ave/ P St	Wisconsin Ave	13	8	P St	16	7
Prospect St/Wisconsin Ave	Wisconsin Ave	16	10	Prospect St	9	3
M St/Thomas Jefferson St	Thomas Jefferson St	9	7	M St	17	14

*Note: FD- Flashing Don't Walk NS- North Side SS-South Side ES- East Side WS- West Side

School Zone Sign (S5-1 with flashers)

A School Speed Limit assembly sign (S5-1) indicates the speed limit where a reduced speed zone for a school area has been established (in accordance with law based upon an engineering study) or where statute specifies a speed limit for such areas. Place the School Speed Limit assembly or School Speed Limit sign at, or as near as practical to, the point where the reduced speed zone begins. The sign assembly (S5-1) consists of 15 mph school zone with flashing lights (shown in the figure to the right) when the school zone speed limit is in effect. School flashers are nonexistent or outdated at some locations.

School Area Sign S5-1 with Flasher

The study team recommends upgrading the school zone signing as follows:

- 35th Street between R Street and Whitehaven Parkway – Replace the old school flashers with new flashers and update existing signage to conform to the MUTCD by placing an S5-1 sign (Drawing ST-4[1]).
- Reservoir Road between 34th Street and 37th Street – Replace existing school speed limit assembly sign with school area sign S5-1 and flashers (Drawing ST-4[1]).
- O Street between 33rd Street and Potomac Street – Replace existing school speed limit assembly sign with school area sign, S5-1 and flashers (Drawing ST-4[4]).

End School Zone Sign (S5-2)

End School Zone Sign (S5-2) marks the end of an authorized and posted school speed zone with a standard Speed Limit sign showing the speed limit for the section of highway that follows or with an END SCHOOL ZONE sign S5-2 (shown in figure to the right). There is currently no End School Zone signing at some schools.

End School Zone Sign S5-2

The study team recommends posting the End School Zone signing at following locations within the study area:

- Reservoir Road at 34th Street on south side of the street (Drawing ST-4[1]).
- Reservoir Road between 37th Street and 36th street on north side of the street (Drawing ST-4[1]).
- 35th Street at Whitehaven Parkway on east side of the road (Drawing ST-4[1]).
- 35th Street at R Street on west side of the road (Drawing ST-4[1]).
- O Street at Wisconsin Avenue on both sides of the road (Drawing ST-4[3])

School Advance Warning Assembly (S1-1 and W16-7P)

Install the School Advance Warning Assembly (shown in the figure to the right) in advance of locations where school buildings or grounds are adjacent to the highway, except where a physical barrier such as fencing separates school children from the roadway. The School Advance Warning Assembly consists of a School Advance Warning (S1-1) sign supplemented with a plaque with the legend AHEAD (W16-9p). There is no warning sign on Wisconsin Avenue to alert drivers that an elementary school is located one-half block west of the intersection with O Street where students and parents cross.

School Advance Warning Assembly S1-1 and W16-7P

The study team recommends posting a School Advance Warning assembly at:

- Wisconsin Avenue and O Street placed 100 ft in either direction along Wisconsin Avenue (Drawing ST-4[4]).

Enhanced Pedestrian Crossing/Warning Signs (W11-2)

Pedestrian crossing/warning signs (W11-2) inform motorists/pedestrians of unusual or unexpected conditions. This sign also is used at high-volume pedestrian crossing locations to add emphasis to the crosswalk. To help alleviate motorist confusion, install a black-and-yellow diagonally downward pointing arrow sign (W16-7P) to supplement the pedestrian crossing sign (W16-7P) used at crosswalk locations.

Two enhancements to the standard W11-2 sign (shown in the figures to the right) are proposed:

1. W11-2 with Driver Feedback Sign (DFS). The DFS provides visual cue to drivers that they are driving over the legal speed limit.
2. W11-2 with rapid flashers. Rapid flashers are a new technology that is actuated only by the pedestrian. When activated, the rapid flashers alert drivers to pedestrians crossing ahead.

Pedestrian Crossing Sign, W11-2 with Driver feedback sign (FS)

Pedestrian Crossing Sign W11-2 with Rapid Flashers

The study team recommends installing enhanced W11-2 signs at the following high-crash, high pedestrian-activity locations within the study area:

- Reservoir Road, 150 ft east to 38th Street – Install enhanced W11-2 sign with driver feedback sign on the north side (Drawing ST-4[1]).
- Reservoir Road west of Georgetown University Hospital (parking lot) driveway – Replace existing W11-2 sign with enhanced W11-2 sign with driver feedback sign on the south side (Drawing ST-4[1]).
- Reservoir Road midblock pedestrian crossing (west of 39th Street) – Replace existing pedestrian crossing signs with enhanced W11-2 sign with rapid flashers (Drawing ST-4[1]).
- P Street at Rock Creek Parkway on both sides of the street - Install existing pedestrian crossing signs with enhanced W11-2 sign with rapid flashers

The study team also recommends installing pedestrian crossing/warning signs (W11-2 and W16-7P) at following high pedestrian-activity locations within the study area:

- 37th Street at Whitehaven Parkway on north side (W11-2 and W16-7P, Drawing ST-4[1])
- Prospect Street at 34th Street, 35th Street, 36th Street, and 37th Street (W11-2, Drawing ST-4[4]). Recommended as a Mid-term option if high visibility crosswalks fail to reduce the pedestrian/vehicle conflicts.

In-Street Pedestrian Crossing Sign (R1-6a).

In-Street Pedestrian Crossing Signs (R1-6a), shown in the figure to the right) are used at high pedestrian volume unsignalized intersections to remind road users of the D.C law requiring the driver of a vehicle to stop or yield the right-of-way to a pedestrian crossing the roadway within a marked crosswalk. These signs, also known as pedestrian pylons, are usually used at those locations adjacent to and along established pedestrian routes to and from a park, school, recreation area, etc.

In-Street Pedestrian Crossing Sign R1-6a

The study team recommends installing the In-Street Pedestrian Crossing Sign (R1-6a) at the following unsignalized intersections identified as high pedestrian activity/deficiency areas:

- Reservoir Road west of 39th Street (In front of the French Embassy, Drawing ST-4[1]).
- R Street at 30th Street.
- P Street at 26th Street (Drawing ST-4[2]).
- P Street at 27th Street (Drawing ST-4[2]).
- P Street at Rock Creek Parkway Ramp (Drawing ST-4[2]).
- K Street at 31st Street (Drawing ST-4[3]).
- K Street at Wisconsin Avenue (Drawing ST-4[3]).
- K Street at 29th Street (Drawing ST-4[3]).

Bicycle Warning Sign (W11-1)

The bicycle warning sign (W11-1, shown in the figures below) is used at locations where there are unexpected entries into the roadway by bicyclists. Bicycle warning signs, when used at the crossing

locations, is supplemented with a diagonal downward pointing arrow (W16-7p plaque). In situations where there is a need to warn motorists to watch for bicyclists traveling along the highway, the SHARE THE ROAD (W16-1) plaque may be used in conjunction with the W11-1 sign.

The study team recommends installing bicycle warning signs at the following high bicycle activity/deficiency locations within the study area:

- Key Bridge at Whitehurst Freeway entrance ramp - W11-1 with W16-7P (Drawing ST-1).
- K Street at Rock Creek Parkway - W11-1 with W16-7P (Drawing ST-1).

Bicycle Warning Sign W11-1 with Plaque W16-7P

Bicycle Warning Sign W11-1 with Plaque W16-7P, W16-13P and Flashers

Adding bicycle activated flashers and the plaque, W16-13P when flashing (shown in the figure above) to the bicycle sign is also recommended as a Mid-term option (Drawing MT-4).

High-Visibility Crosswalk Striping

A crosswalk is a visible indication for both motorists and pedestrians as to where pedestrians may be expected to cross a roadway. Using special markings such as striped longitudinal lines or diagonal crosshatching (shown in the figure to the right) adds visibility and emphasizes the crossing. M Street is a high-activity/deficiency as well as high-crash corridor. Stretches of P Street and Prospect Street are also identified as crash-prone areas.

Thermoplastic Striping

Imprint paving

The study team recommends upgrading the existing crosswalk to a high-visibility crosswalk with imprint paving or thermoplastic striping (as shown in the figures to the right) at the following locations:

- Intersections of Prospect Street from 34th Street to 37th Street – Thermoplastic Striping (Drawing ST-4[4]).
- Intersections of P Street from 28th Street to Wisconsin Avenue – Thermoplastic Striping (Drawing ST-4[2]).
- Intersections of P Street at 26th Street –Thermoplastic Striping (Drawing ST-4[2])).
- Intersections of 34th Street from Q Street to P Street –Thermoplastic Striping (Drawing ST-4[1]).
- Intersections of 33rd Street from Volta Place to P Street – Thermoplastic Striping (Drawing ST-4[1]).
- Along M Street from Whitehurst freeway to 29th Street – Imprint paving (Drawing ST-5).
- Along Wisconsin Avenue from Whitehaven Parkway to M Street – Imprint Paving (Drawing ST-3).

Speed Humps

Speed humps (shown in figure to the right) are raised surfaces on the roadway that are typically 3 to 6 inches high and are placed across the travel lane to reduce vehicle speeds by creating a change in vertical deflection along the roadway. They are usually placed on local streets and midblock sections, and generally are not used on bus routes or primary emergency routes.

Speed Hump

Install a speed hump warning sign (W17-1) in accordance with the MUTCD. The pavement marking designs in the MUTCD Section 3B.27 may be used.

Because of the presence of Rosa Park and high pedestrian activity, the study team recommends installing speed humps at the following locations, as shown in Drawing MT-4:

- 26th Street between P Street and O Street.
- 27th Street between P Street and Dumbarton Street.
- O Street between 28th Street and 26th Street.

Prior to the installation of speed humps, it is recommended that the speed checks be completed, and the Rosa Park affected property owners be consulted.

NOTE: Speed humps have been removed from further consideration by the request of TAC members.

Curb Ramp Recommendations

Curb ramps provide access to wheelchair users, strollers, etc. Curb ramp recommendations comprise both short- and mid-term options, as shown in Drawing ST-5:

Short-term recommendation consists of:

- Construct new curb ramp with detectable warning.

Mid-term recommendations consist of:

- Construct new detectable warnings at curb ramp-only locations, as shown in the figure below.
- Replace curb ramps with brick pattern, as shown in the figure below.

Curb Ramp with Detector

Brick-Patterned Curb Ramp

Sidewalk Recommendations

A good sidewalk (shown in the figure to the right) environment and network is important to all pedestrians, particularly to those with activity limitations. The study team identified the following deficiencies in the existing conditions within the study area, which are required to be rectified. Sidewalk recommendations comprise both short- and mid-term options.

Properly Maintained Brick Sidewalk along M Street

Short-term sidewalk recommendations as shown in Drawing ST-6 consist of:

- Repair broken or cracked sidewalks (Drawing ST-6).
- Repair/Replace elevated sidewalks (Drawing ST-6).

Mid-term recommendations consist of:

- Install new sidewalks (Drawing ST-6).
- Widen sidewalk on M Street from 29th Street to 34th Street on both sides (Drawing MT-12).
- Widen sidewalk on Wisconsin Avenue from P Street to M Street on west side (Drawing MT-12).

Raised Median

Medians (shown in figure to the right) are raised barriers in the center portion of the street or roadway that serve as a refuge for pedestrians who cross a street midblock or at an intersection location. Raised medians also help to reduce the vehicular speeds by narrowing the roadway.

Raised Median

Median islands should have a minimum width of 6-ft to comfortably accommodate pedestrians and should be at least 8- to12-ft long.

The study team recommends installing raised medians with the unsignalized pedestrian crossing sign R1-6a at the following high pedestrian activity/deficiency locations with in the study area, as shown in Drawing MT-13:

- P Street at Rock Creek Parkway Ramp.

- P Street at 26th Street.
- P Street at 27th Street.
- Reservoir Road west of 39th Street (in front of French Embassy).

Bike Trail

The National Park Service is developing the trail system in the southern part of the study area (see **Figure 7**), which will eventually connect the Capital Crescent Trail to the Rock Creek Park Trail and the Kennedy Center. The project is being developed over four phases:

- Phase I - Currently under construction and will extend the Capital Crescent Trail along K Street from 34th Street to Wisconsin Avenue – on-going.
- Phase II - Extends the trail from Wisconsin Avenue to 31st Street along K Street – Mid-term
- Phase III - Connects the waterfront to the Kennedy Center and F Street – Mid-term.
- Phase IV –Connects the trail to Rock Creek Park Trail south of K Street – Long-term.

The study team recommends that the NPS bicycle facility schedule be accelerated. In addition, improvements to the Boardwalk to discourage bicyclists from riding on the Boardwalk should be investigated.

APPENDIX F – PUBLIC INVOLVEMENT PROCESS

Public Involvement Goals

The purpose of the public involvement plan was to provide a series of meaningful exchanges between the public, the District Department of Transportation (DDOT) and the consultant team that were closely integrated with the overall planning process. The public involvement plan provided a variety of communication channels to help the public understand the scope and evolution of the plan. The specific goals were to accomplish the following:

- Inform the community about the project;
- Encourage participation in the planning process;
- Solicit input and feedback from the public as to their specific needs, issues, concerns and recommendations; and
- Create a strategic development plan that reflects consideration and inclusion of the community's specific needs, issues, concerns and recommendations.

KEY OUTREACH STRATEGIES	TARGETED OUTCOMES
• Working with local community groups, key stakeholders and a technical advisory committee to help reach pre-public meeting consensus on specific "success outcomes" • Using the client coordination meetings to help increase agency integration and benefit from public participation • Using extensive and effective pre-and post-public meeting outreach and communication to help increase the public's level of knowledge participation • Documenting all legitimate input and demonstrate linkages to final recommendations	• Build trust between the District Department of Transportation team and the stakeholders • Develop consensus on Georgetown Transportation Study issues • Foster community support and consensus for the Georgetown Transportation Study and its implementation

Technical Advisory Committee

In collaboration with the consultant team, the District Department of Transportation (DDOT) invited a diverse group of stakeholders that represent various interests within the overall study area to serve on a Technical Advisory Committee (TAC) for the study. The TAC discussed—on an ongoing basis—study related issues and the public involvement program. In the earlier stages of the planning process, DDOT issued a letter of invitation to the TAC members for the September 2007 kickoff meeting. Subsequent meetings were convened at key project milestones and the TAC provided continual guidance to the study team. Generally, the TAC met two weeks prior to each public meeting. These meetings focused on discussion of the project to date and helped to build agendas for the upcoming meeting. Each of the four meetings lasted about two hours.

Public Meetings

All five public meetings were held at the Saint John's Episcopal Church (Georgetown Parish). The meetings were designed to familiarize participants with the purpose of the study, its context within Ward 2, the existing conditions and issues identified by the design team, and the project goals and objectives. Most importantly, the format was designed to provide a forum for interaction in small groups to solicit the public's concerns and issues and identify possible solutions. On average, 30 people signed in at each public meeting. The meeting summaries are located in **Appendix G**.

The consultant team created a mailing list, which included area residents, public agency representatives, and neighborhood and civic associations, that was updated as the project progressed based on registrants at meetings.

PUBLIC WORKSHOPS		
Date	**Location**	**Participants**
September 12, 2007	Saint John's Episcopal Church (Georgetown Parish)	48
September 20, 2007	Saint John's Episcopal Church (Georgetown Parish)	12
January 16, 2008	Saint John's Episcopal Church (Georgetown Parish)	31
April 23, 2008	Saint John's Episcopal Church (Georgetown Parish)	31
July 24, 2008	Saint John's Episcopal Church (Georgetown Parish)	25

Outreach and Noticing Materials

The outreach and noticing materials included postcards, print advertisements, community event calendars in local publications, email listservs, e-flyers. In addition, a study brand was created to provide a distinct look for the project.

Septermber 12th & 20th, 2007 Community Meeting

Date & purpose of each mailing:

- September 12th & September 20th Community Meeting Postcard
  - o A public meeting to gather input for the Georgetown Transportation Study

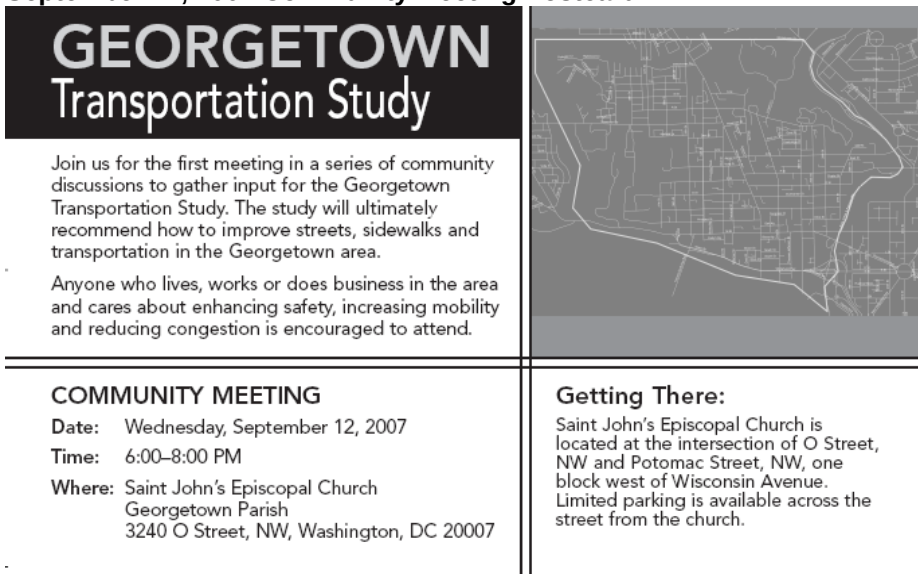
Number of postcards, ads, flyers, etc that were produced and distributed for September 12 Meeting:

- September 12th Community Meeting Postcards
  - o Produced 5,623; distributed 5,623
  - o Postcards were mailed out a week prior to meeting
  - o Mailing list provided by the District Office of Planning (captured addresses within a ¼ mile of study area)
- September 12th Meeting Ad
  - o Produced one ad; placed in The Northwest Current, Georgetown Current, Dupont Current, and Foggy Bottom Current
  - o Ad published one week prior to meeting
  - o Total circulation is 60,151
- September 12th Meeting Email Reminder
  - o Email blast to the listservs of the Citizens Association of Georgetown, ANC2E, Georgetown BID, Bike Advisory Committee, Washington Harbor, and the National Park Service
- Number of Participants at September 12th Meeting
  - o 48 participants

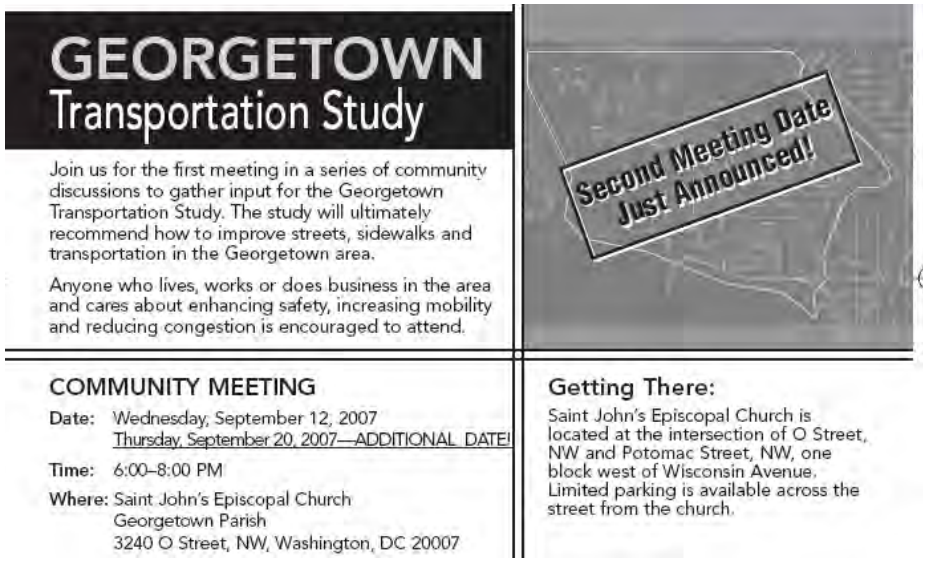
Number of postcards, ads, flyers, etc. that were produced and distributed for September 20th Meeting:

- September 20th Community Meeting Postcards
  - o Produced 5,623; distributed 5,623
  - o Postcards were mailed out a 4-5 days prior to meeting
  - o Mailing list provided by the District Office of Planning (captured addresses within a ¼ mile of study area)
- September 20th Meeting Email Reminder
  - o Email blast to the listservs of the Citizens Association of Georgetown, ANC2E, Georgetown BID, Bike Advisory Committee, Washington Harbor, and the National Park Service
- Number of Participants at September 20th Meeting
  - o 12 participants

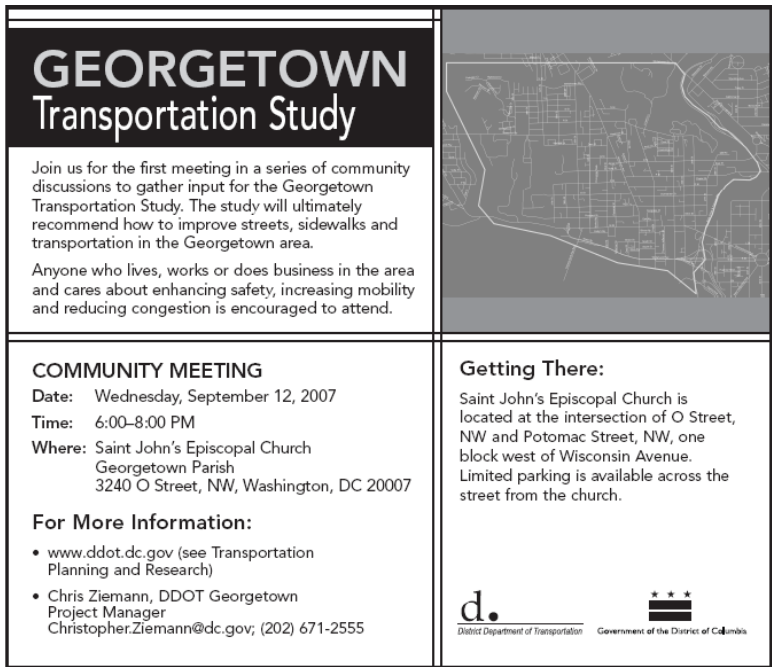
September 12, 2007 Community Meeting Postcard



September 12 & 20, 2007 Community Meeting Postcard



September 12, 2007 Community Meeting Ad



January 16th, 2008 Community Meeting

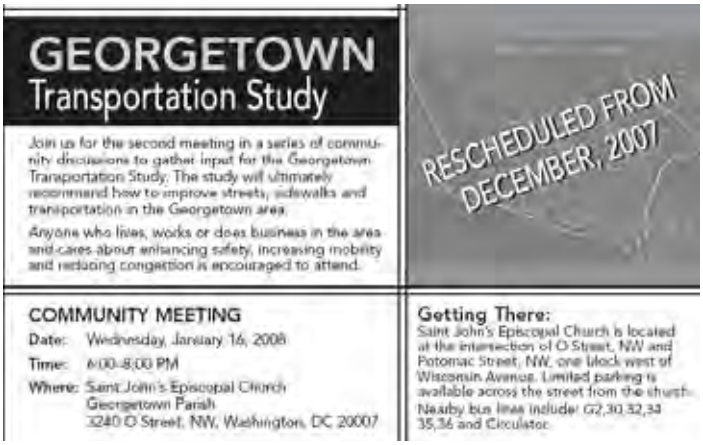
Date & purpose of each mailing:

- January 16th Community Meeting Postcard
  - o A public meeting to discuss the Existing Conditions Report and potential options to consider to address transportation issues

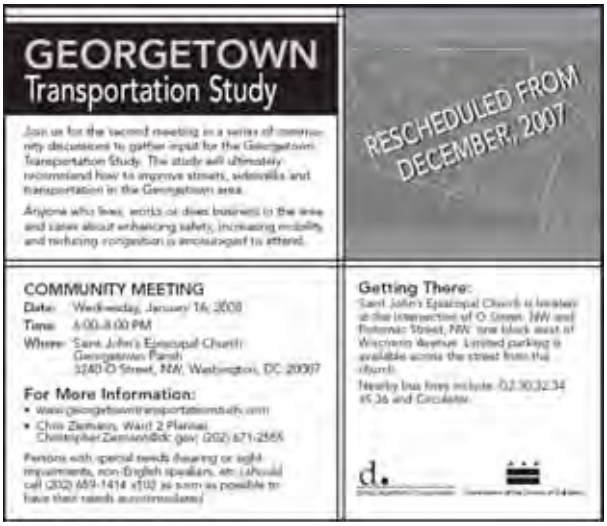
Number of postcards, ads, flyers, etc. that were produced and distributed for January 16th Meeting:

- January 16th Community Meeting Postcard
  - o Produced 5,637; distributed 5,637
  - o Postcards were mailed out a week prior to meeting
  - o Mailing list provided by the District Office of Planning (captured addresses within a ¼ mile of the study area)
- January 16th Meeting Ad
  - o Produced one ad; placed in The Northwest Current, Georgetown Current, Dupont Current, and Foggy Bottom Current
  - o Ad published one week prior to meeting
  - o Total circulation is 60,151
- January 16th Meeting Email Reminder
  - o Email blast to over 40 community members including the listservs of the Citizens Association of Georgetown (CAG), the office of Jack Evans, ANC2E, Georgetown BID, Bike Advisory Committee, Washington Harbor, and the National Park Service
- Number of Participants at January 16th Meeting
  - o 31 participants

January 16, 2008 Community Meeting Postcard



January 16, 2008 Community Meeting Ad



April 23rd, 2008 Community Meeting

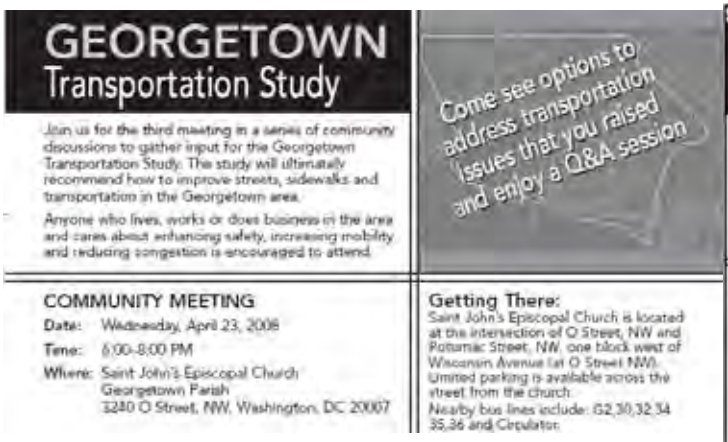
Date & purpose of each mailing:

- April 23rd Community Meeting Postcard
  - o A public meeting to present and discuss recommendation options for further analysis to address the transportation issues already identified

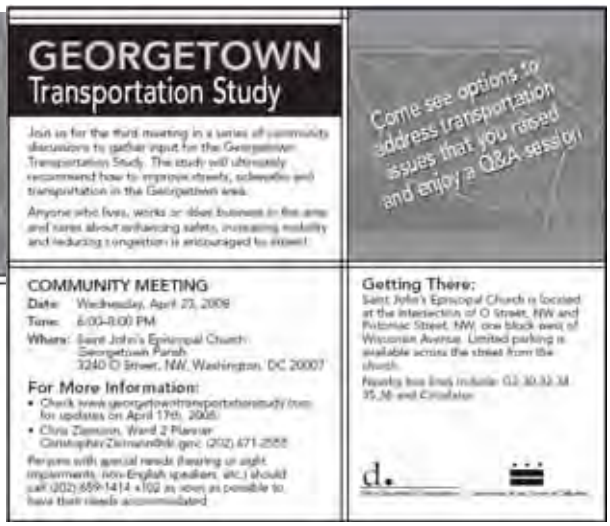
Number of postcards, ads, flyers, etc. that were produced and distributed for April 23rd Meeting:

- April 23rd Community Meeting Postcard
  - o Produced 5,637; distributed 5,637
  - o Postcards were mailed out a week prior to meeting
  - o Mailing list provided by the District Office of Planning (captured addresses within a ¼ mile of the study area)
- April 23rd Meeting Ad
  - o Produced one ad; placed in The Northwest Current, Georgetown Current, Dupont Current, and Foggy Bottom Current
  - o Ad published one week prior to meeting
  - o Total circulation is 60,151
- April 23rd Meeting Email Reminder
  - o Email blast to over 40 community members including the listservs of the Citizens Association of Georgetown (CAG), the office of Jack Evans, ANC2E, Georgetown BID, Bike Advisory Committee, Washington Harbor, and the National Park Service
- Number of Participants at January 16th Meeting
  - o 31 participants

April 23, 2008 Community Meeting Postcard



April 23, 2008 Community Meeting Ad



July 24th, 2008 Community Meeting

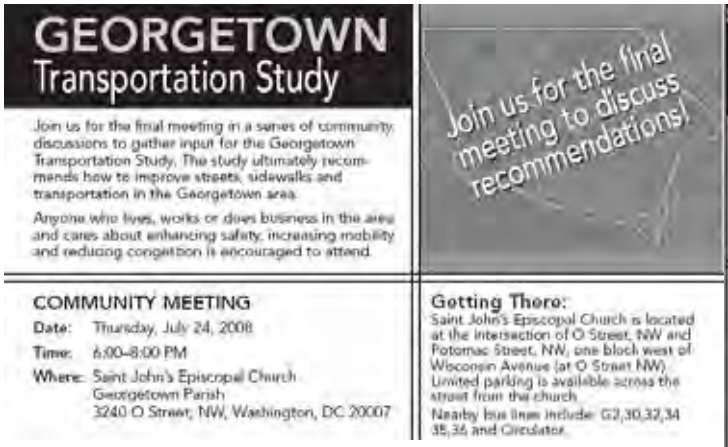
Date & purpose of each mailing:

- July 24th Community Meeting Postcard
  - o A public meeting to gather input for the Georgetown Transportation Study

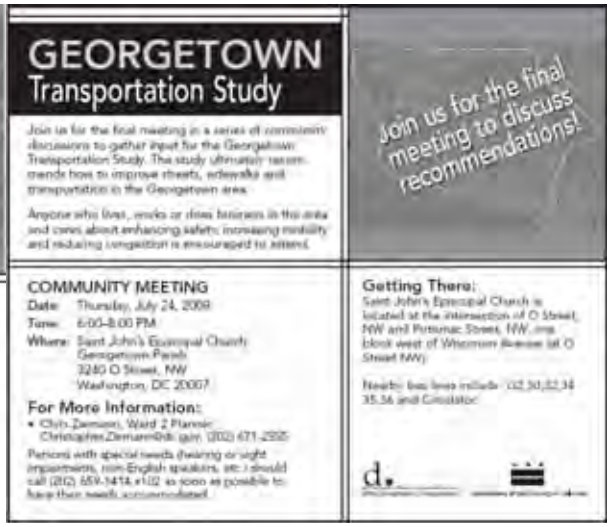
Number of postcards, ads, flyers, etc. that were produced and distributed for July 24th Meeting:

- July 24th Community Meeting Postcard
  - o Produced 5,637; distributed 5,637
  - o Postcards were mailed out a week prior to meeting
  - o Mailing list provided by the District Office of Planning (captured addresses within a ¼ mile of the study area)
- July 24th Meeting Ad
  - o Produced one ad; placed in The Northwest Current, Georgetown Current, Dupont Current, and Foggy Bottom Current
  - o Ad published one week prior to meeting
  - o Total circulation is 60,151
- July 24th Meeting Email Reminder
  - o Email blast to over 40 community members including the listservs of the Citizens Association of Georgetown (CAG), the office of Jack Evans, ANC2E, Georgetown BID, Bike Advisory Committee, Washington Harbor, and the National Park Service
- Number of Participants at January 16th Meeting
  - o 25 participants

July 24, 2008 Community Meeting Postcard



July 24, 2008 Community Meeting Ad



Comment Cards

Comment cards were distributed at each meeting to solicit input and feedback from the public as to their specific needs, issues, concerns and recommendations. One type of comment card was used in the first two rounds of public meetings to gather specific information from participants, and a second type was used in the last two meetings to allow the public to comment more generally on the study recommendations.

September 12th & 20th, 2007, and January 16th, 2008 Community Meetings:

COMMENT CARD

PLEASE PROVIDE THE FOLLOWING:

Name: _____

Address: _____

_____

Phone: _____ (optional)

E-mail: _____ (optional)

Please submit your written comments today at the sign-in table, or mail this form to the address below

Steve Lee
CirclePoint
2029 K Street, NW
Suite 300
Washington, DC 20006
(202) 659-1313 fax
comment@GeorgetownTransportationStudy.com

What are your top 3 transportation issues or concerns for Georgetown?

In what areas would you like to see transportation in Georgetown improved (i.e. more transit, congestion, bicycle access, etc.)?

Please rank the following issues areas in order of priority (1 is the most important):

Beautification and Streetscape	
Bicycle mobility	
Parking	
Pedestrian mobility	
Safety	
Traffic mobility and Congestion	
Transit:	

Please provide any additional comments or concerns related to the existing conditions that are not addressed in the previous questions:

April 23rd, 2008 and July 24th, 2008 Community Meetings:

COMMENT CARD

PLEASE PROVIDE THE FOLLOWING:

Name: _____

Address: _____

_____

Phone: _____ (optional)

E-mail: _____ (optional)

Please submit your written comments today at the sign-in table, or mail this form to the address below

Steve Lee
CirclePoint
2029 K Street, NW
Suite 300
Washington, DC 20006
(202) 659-1313 fax
comment@GeorgetownTransportationStudy.com

Please provide any comments and feedback related to the discussed alternatives and recommendations:

APPENDIX G – PUBLIC COMMENTS AND RESPONSES

Public Meeting #1 – September 12th and 20th, 2007

SUMMARY OF PUBLIC COMMENTS

Round 1: Community Workshops

Meeting Dates: September 12, 2007 & September 20, 2007

Location: Saint John's Episcopal Church, Georgetown Parish
3240 O Street, NW
Washington, DC 20007

Meeting Purpose: To gather input from the community for the Georgetown Transportation Study. The study will ultimately make recommendations for how to improve streets, sidewalks and transportation in the Georgetown area.

Meeting Format: The workshop was an open house format with stations and handouts available. A brief overview presentation was given at 6:00 pm and District Department of Transportation (DDOT) staff and consultants were available at each display area to discuss the project and answer questions.

Comments: Comments for this summary were collected by comment card and given verbally at the two public workshops. Comments were also collected through the website, with 20 comments submitted from September 5, 2007 to September 28, 2007.

Attendees: Approximately 60 community members attended the community workshops. The project staff attending included: Christopher Ziemann (DDOT), Susan Gygi & Abi Lerner (HNTB), Leverson Boodlal & Tintu Abraham (KLS) and Steve Lee, Tosin Durotoye & Kristy Ranieri (CirclePoint).

Transportation Issues or Concerns Identified	RESPONSE
• Need to eliminate some one way streets	• Acknowledged
• Fix O and P Streets NW between Wisconsin Avenue and 35th Street NW	• This is being studied due to the historic nature of the streets. Alternatives include fixing one of the two streets, both, or neither. Options relating to the removal of rails/ cobblestones will be dealt with under a separate study.
• Need to reduce congestion for the area between M Street and Wisconsin Avenue NW and the Canal; should move double decker sightseeing buses and trolley stops to the waterfront park area.	• Signal timing and lane configurations will be studied. Removal of one-way streets or reversal will be studied.
• The intersection of N street and Wisconsin Avenue NW is dangerous	• Acknowledged
• Future plans should include ideas to discourage driving to and through the neighborhood	• Acknowledged. Wisconsin will be improved where appropriate.
• Pave other streets	• Due to the build out of Georgetown, without acquiring new right-of-way, new streets can not be built/paved
• Pedestrian safety	• This is a major goal of the study to improve pedestrian safety and mobility through Georgetown
• Consider a multi-way stop at M Street and Wisconsin Avenue NW and let all pedestrians go in any direction while no cars are allowed to move	• One of the scenarios is to include an all-pedestrian phase in the current signal timing at this intersection.
• Lengthen the traffic light time for pedestrian crossings at main intersections in Georgetown	• Signal timing and phasing will be reviewed.
• Bicycle traffic on M Street NW sidewalks and streets	• Acknowledged. The NPS improvements on K Street are anticipated to draw some bicycle traffic currently using M St to K St. The bicycle path will be separate from the street as well as the sidewalk along K St
• Need a dedicated bicycle lane on the Whitehurst coming from Virginia	• By providing improvements along K Street, a dedicated bicycle lane on Whitehurst may not be necessary.
• More street traffic should be directed to commercial streets	• Acknowledged.

• Alleviate street traffic on 33rd Street NW and 35th Street NW	• Acknowledged. Scenarios have been prepared to slow traffic on these streets or remove some connection points to further dissuade vehicles from traveling down these corridors.
• The narrow sidewalks on M Street NW and Wisconsin Avenue NW are a problem on Friday and Saturday nights	• Acknowledged.
• Sidewalks in Georgetown are too narrow	• Acknowledged. In many areas, the streets would need to be narrowed to widen sidewalks without acquiring further right-of-way from property owners.
• Vehicles not stopping at four-way stops	• Acknowledged. Enforcement of all traffic signs and regulations is being proposed for the study area.
• Driving above the speed limit especially at 35th Street and Reservoir Roads NW	• Acknowledged. Traffic calming devices (speed humps/cushions) are being proposed along 35th Street to decrease speeds of vehicles.
• Need a Metro stop in Georgetown to accommodate traffic growth	• Acknowledged. Due to geotechnical issues within the study area, the construction of a metro stop in Georgetown would be difficult.
• The Blue Bus should not go to Virginia because it is being paid for by DC tax payers	• Acknowledged.
• Need easy access to the Red, Orange, and Blue Metro lines	• Acknowledged.
• Need smaller buses on residential streets in Georgetown	• Acknowledged. Smaller buses (26-foot) produce as much noise and pollution (in certain cases more) as larger 40-foot buses. There was a time when the existing buses were switched to 26-foot, but the citizens didn't like the loud engine noise, loud external stop announcements and loud squealing breaks. Currently, the 40-foot buses have been replaced on certain routes with 30-foot buses that are more equipped to handle the passenger loads, as well as decreasing noise/vibration over the 26-foot versions .
• Need dedicated bus lanes around Georgetown	• Acknowledged. Similar studies have suggested 60 buses per hour replace a congested lane of traffic in total number of people moved.
• Need better transit option such as reliable buses and maybe street cars	• Acknowledged. Metro is completing a study of the 30's lines to determine changes in route and/or timetable. Renewing the streetcar line along O and P St has been discussed but major improvements would be necessary.
• Reduce parking on major streets including M Street and Wisconsin Avenue NW	• Acknowledged.
• In Europe, there exists a few centralized parking locations; many which are one way and no way streets	• Acknowledged. Due to minimal connection points, it was determined that providing pedestrian malls (areas where cars are not allowed) would not benefit Georgetown as a whole.
• Too much traffic in the neighborhood	• Improvements to Wisconsin as well as installation of traffic calming will result in Wisconsin and M to be more attractive.
• Need better traffic enforcement as bus and car drivers run red lights and speed while using cell phones	• Acknowledged. Increased enforcement is included in the short-term solutions.
• Parking is too close to street intersections	• A review of parking proximity to streets in relation to bus stop locations specifically was completed and recommendations for removal of parking at certain locations for safety were included in the options.
• Need public transportation on K Street NW at the Washington Harbor	• Metro is reviewing the use of K Street for the Circulator route as well as others.
• Remove the Whitehurst Freeway	• DDOT has determined for this project that the Whitehurst should be assumed to be remaining.

• Whitehurst Freeway and the Expressway need to be taken down	• See comment above. Acknowledged
• Too many tie ups on Key Bridge and M Street NW	• Signal timing and phasing as well as changes to the lane structure along M Street are being considered.
• Reservoir Road intersections are problematic	• Signal timing and phasing as well as increased enforcement are being considered.
• Commuter traffic generated by institutional users is problematic	• Acknowledged.
• Too many cars are using 28th Street NW during rush hour as a throughway	• A one-way couplet including 30th and 31st Street is being considered. Other traffic calming devices on neighboring streets may be necessary to make vehicles transition to 30th/31st.
• Cars are speeding on Wisconsin Avenue NW at P and O Streets NW and Dumbarton Street when walking children to Hyde Elementary School	• Signage and enforcement are included in the analysis.
• Need 'Children Crossing' signage at study area intersections for Hyde Elementary School	• Additional pedestrian signage as well as enforcement is included in the analysis.
• Need better parking options for residents, shoppers, & visitors and intermediate parking for contractors	• Acknowledged. Parking changes are being studied separately by the BID/ANC/and DDOT staff
• Oversized Blue Buses on 35th and T Streets NW damage the structure of the small houses and block traffic when cars are parked on both sides	• Acknowledged. 35th and T service the D1, D2, and GUTS Wisconsin Ave Line.
• The oversized Blue Buses stop at the intersection of 35th and T Streets and are a risk to the safety of students at the Carlos Rosario Junior High School	• Acknowledged. This is designated Hardy Middle School on the maps.
Transportation Areas that Need Improvement	
• More public transit options, speed bumps and cameras and better marked crosswalks	• These items are included in the analysis of options
• Need a Metro stop in Georgetown	• Acknowledged. See previous response.
• More transit options and a focus on pedestrians	• One of the goals of the study is to provide increased mobility and safety to pedestrians and bicyclists. Transit is also being looked at in conjunction with WMATA.
• More transit options	• See previous response.
• Need public transportation on K Street NW at the Washington Harbor	• See previous response. WMATA is reviewing the use of K Street as part of the Circulator route.
• Need more reliable bus transit options	• See previous response.
• Return the smaller bus service at 35th and T Street NW	• Smaller buses have resulted in citizen complaints of loud engine noise, loud external stop announcements and loud, squealing brakes. There is no benefit in noise or vibration by using smaller buses.
• Need the Number 30 buses to stay on schedule	• WMATA is currently reviewing the 30 lines for revision. One of the items is to allow for insertion of buses at critical locations when the schedule is not being met due to congestion or accidents.
• Eliminate buses altogether at 35th and T Street NW	• One of the options considered removes buses from T Street to Whitehaven Parkway, NW
• Restore Blue Bus service to the Foggy Bottom Metro Station	• Blue Buses are run by Georgetown University. This request will be passed on.
• There is a lack of transportation on K Street NW	• Acknowledged. WMATA is reviewing the use of K Street for transit service.
• Need more connector buses	• WMATA is reviewing the 30 routes to determine the need to split these routes into smaller segments that would be able to stay on schedule and provide more connection points throughout the system.
• Congestion needs to be improved around Georgetown	• Signal timing and phasing as well as traffic calming devices and lane configurations are being included in the options analysis.

• Improved bicycle lanes and locking facilities	• Providing better access and safety to bicycle facilities is one of the main goals of the study. NPS is constructing a new bicycle lane in association with improvements along K Street. New bicycle racks are being considered at certain locations.
• Need more bicycle racks	• See previous comment.
• Widen the sidewalks on the corners of M Street and Wisconsin Avenue NW so that pedestrians can move safely	• Bus bulbs are being considered at intersections along Wisconsin and M Street to shorten the distance pedestrians are in the vehicle path.
• Make commuting safer for kids on bicycles and scooters	• See previous comment.
• Make it safer for pedestrians near Hyde Elementary School	• See previous comment. Additional signage and enforcement are included in options analysis.
• Need restrictions on through truck traffic	• Restrictions on truck traffic exist on 37th, 34th, 33rd, and portions of P Street, O Street and Potomac Street. Other locations are being considered as part of the options.
• Motorist and pedestrian laws need stricter enforcement in the Georgetown area	• Enforcement is included in the options analysis.
• Residential parking program needs stricter enforcement	• Enforcement is included in the options analysis.
SUMMARY OF WEBSITE AND COMMUNITY MEETING COMMENTS	
Beautification and Streetscape	
• There are relatively few trees on the commercial streets and more should be planted and maintained there	• Acknowledged. It should be noted that the planting of trees decreases the width of the sidewalk area due to the lack of available right-of-way within Georgetown.
• Bricks on part of the sidewalk were torn up years ago and replaced with asphalt and the bricks have never been replaced	• As sidewalks and roadways have maintenance or work completed, bricks will be used for sidewalks where feasible to maintain the historic character.
• Need to improve the condition of pavement on residential streets which includes the removal of old trolley tracks and better quality cobblestone or imitation cobblestone	• The future of O and P Street is being reviewed with relation to historic significance. This study will not suggest changes to the historic cobblestones and tracks along O and P Street.
• Need better way finding and directional signs around Georgetown	• Signage is included in the options analysis.
• Do not use dinky and small signs; way finding signs for pedestrians should not be used for drivers	• Acknowledged.
• Some residents currently report major problems with rats near restaurants and that problem needs to be remedied	• This comment will be forwarded to DDOT personnel.
• Should widen the sidewalks that have room to be widened	• Acknowledged.
• The sidewalk in front of Hyde Elementary Public School at O and P streets is only concrete; it needs to be redone in brick to match the other sidewalks	• Acknowledged.
• Would like to see all the Georgetown streets re-paved	• Acknowledged. Due to monetary constraints of DDOT, this is not possible in the short- or mid-term options.
• Obstacles on sidewalks such as commercial poster boards and newspaper vending boxes significantly worsen some choke points	• Acknowledged. A sidewalk inventory was completed. Sidewalks with less than 4-feet width are proposed for widening to ADA standards.
• Cobblestones are pretty and add to the character of the neighborhood	• Acknowledged.
• All District Department of Transportation (DDOT) projects should go through aesthetic design review since they affect the appearance of the Georgetown National Historic Landmarks	• Acknowledged.