Avitabile, David

From: Tummonds, Paul
Sent: Wednesday, January 17, 2007 2:01 PM
To: Avitabile, David
Subject: FW: Sibley Intersection Redesign Details
Attachments: Scan001.PDF

From: Johnson, Stephanie [mailto:Sjohnson@sibley.org] **On Behalf Of** Price, Jerry
Sent: Thursday, December 14, 2006 4:16 PM
To: AHG71139@aol.com; RachelWToo@aol.com; leonard.spector@miis.edu
Subject: Sibley Intersection Redesign Details

Advisory Neighborhood Commission 3D Members
c/o Alma Gates
P.O. Box 40846 Palisades Station
Washington, D.C. 20016

Rachel Thompson
5835 Sherrier Place, N.W.
Washington, D.C. 20016

Leonard Spector
Sibley Neighbors for Responsible Growth
5224 Loughboro Road, N.W.
Washington, D.C. 20036

Dear ANC Commissioners and Sandy:

In accordance with my letter dated November 13, 2006, enclosed please find materials that were prepared by Gorove/Slade Associates, Inc. as requested by the District Department of Transportation ("DDOT"). Included in this information are design details, signage and pavement marking details, and vehicular turning diagrams that depict our final proposal for the redesigned intersection of Dalecarlia Parkway and Loughboro Road.

No changes have been made to the height, size, or appearance of the medical office building and the parking garage since the October 12, 2006, Zoning Commission meeting. The plans that we provided you on October 12, 2006, depict the medical office building and the parking garage that we intend to present to the Zoning Commission on February, 1, 2007.

I believe that the information provided in this letter and attachments, along with the data on the FAR of the PUD project that was included in my November 13 letter, addresses all of the requests that we have received from your groups regarding this project. We look forward to making our final presentation to the ANC on January 10, 2007.

If you have any questions regarding the attached information or the matters discussed in this letter, please feel free to call me at 202.537.4680.

Sincerely,

Jerry Price
Jerry Price

Executive Vice President and Chief Operating Officer

GOROVE/SLADE ASSOCIATES, INC.
1140 Connecticut Ave / Suite 700 / Washington, DC 20036

MEMORANDUM

TO: Jeff Jennings — District Department of Transportation
Sophie Boreshe — District Department of Transportation

FROM: Adrienne E. Losh
Louis J. Slade, P.E.
Leon F. Anderson

DATE: December 4, 2006

SUBJECT: Sibley MOB – Additional Analysis

This memorandum is in response to questions, comments, and recommendations raised by DDOT in a October 11, 2006 report to the Office of Zoning (Zoning Map Amendment ZC Case No. 5-42) and a subsequent follow-up meeting on Friday, November 3, 2006 to discuss the issues. In the November 3rd meeting with DDOT representatives, several additional analyses were requested. This memorandum serves as a cover to the additional requested analyses and materials. When appropriate, the analysis was presented in memorandum form and attached as follows:

1. Pedestrian Level of Service Analysis
2. Pedestrian Safety Impacts
3. Summary of Speed Survey Analysis
4. Loughboro Road/Dalecarlia Parkway Intersection Redesign
5. Summary of Additional Intersection Analyses

Also included in this transmittal are the preliminary conceptual plans for the updated Loughboro Road/Dalecarlia Parkway/Little Falls Road redesign. Pavement markings, signing, speed control measures, and other traffic control devices have been shown on the CAD plan.

GOROVE/SLADE ASSOCIATES, Inc.
Suite 700 / 1140 Connecticut Ave., NW / Washington, DC 20036
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Toll Free: (888) 212-4242

MEMORANDUM

TO: Jeff Jennings — District Department of Transportation
Sophie Boreshe — District Department of Transportation

FROM: Louis J. Slade, P.E.
Michael P. Hurley
Adrienne E. Losh

DATE: December 1, 2006

SUBJECT: Sibley MOB – Pedestrian Level of Service Analysis

BACKGROUND

Gorove/Slade Associates, Inc. (GSA) prepared a standard traffic impact analysis for the Sibley Hospital Medical Office Building (MOB) rezoning application. This memorandum supplements that analysis in response to a request by the District Department of Transportation (DDOT) to conduct a pedestrian 'quality of life' analysis. Analyzing pedestrian's perception of safety and comfort is typically not included in standard Transportation Impact Studies, but was done in this instance at the direction of DDOT to address concerns raised by residents adjacent to Sibley about additional daily traffic generated by the proposed expansion.

PEDESTRIAN LEVELS OF SERVICE METHODOLOGY

Pedestrian Levels of Service (LOS) was analyzed in the vicinity of Sibley under Existing and Total Future conditions. Pedestrian LOS was estimated using Transportation Research Board Paper No. 01-0511 *Modeling the Roadside Walking Environment: A Pedestrian Level of Service* (2001). This paper developed a statistical model for, "objectively quantifying pedestrian's perception of safety and comfort in the pedestrian environment (2)." Note, this is a 'quality of life' measurement and is different from pedestrian level of service analyses that estimates person delay and crowding. The model estimates pedestrian's perception of safety and comfort based on the lateral separation between pedestrians and vehicles. The model's primary inputs are sidewalk width, width and type of buffer between the sidewalk edge and the roadways edge, and the volume and speed of vehicular traffic. The model generates a numerical result, ranging from 0 to 5.5 or greater, that corresponds with Level of Service categories listed in Table 1.

The paper states that "Level "A" was considered the most safe/comfortable (or least hazardous). Level "F" was considered to be the least safe/comfortable (or most hazardous) (13)."

Table 1 – Level of Service Categories

Level of Service	Model Score
A	≤ 1.5
B	> 1.5 and ≤ 2.5
C	> 2.5 and ≤ 3.5
D	> 3.5 and ≤ 4.5
E	> 4.5 and ≤ 5.5
F	> 5.5

PEDESTRIAN LEVEL OF SERVICE CALCULATION

Pedestrian Level of Service (LOS) was calculated for the sidewalks on the north and south side of Loughboro Road adjacent to Sibley. Pedestrian LOS conditions were analyzed for the AM peak hour and at mid-day. The AM peak hour was used for Existing and Total Future pedestrian LOS calculations because it had the highest vehicular traffic volumes of the two peak hours in the area adjacent to the sidewalks analyzed. AM peak hour traffic volumes contained in the Gorove/Slade Associates, Inc. (G/SA) report "Sibley Memorial Hospital Medical Office Building Expansion Traffic Impact Study (June 8, 2006)" were used for AM peak hour pedestrian LOS calculations.

Mid-day Existing and Total Future traffic volumes on Loughboro Road adjacent to Sibley were developed in a previous G/SA memorandum submitted to DDOT titled "Sibley MOB – Analysis of Mid-Day Traffic (September 25, 2006)." G/SA developed mid-day traffic volumes in this memorandum based on the total Average Daily Traffic volumes (from 2002 as presented on the DDOT web site) and G/SA traffic counts on Loughboro Road.

Figure 1 contains photographs of the sidewalk on the north side of Loughboro Road adjacent to Sibley. Sidewalk widths range from between 3 feet and 9 feet while buffer widths range from 6 feet to 9 feet, which includes an 8 inch curb. A sidewalk width of 6 feet and a buffer width of 6 feet were assumed for the pedestrian level of service analyses. The posted speed limit along Loughboro Road is 25 miles per hour and the adjacent westbound travel lane is 9 feet wide. There is a second west bound lane that that is 9 feet 5 inches wide. Figure 3 in the Appendix identifies the location and dimensions of the sidewalks analyzed.

Figure 2 contains photographs of the sidewalk on the south side of Loughboro Road adjacent to Sibley. Sidewalk widths range from between 4 feet and 6 feet while buffer widths range from 6 feet to 8 feet, which includes an 8 inch curb. A sidewalk width of 6 feet and a buffer width of 6 feet were assumed for the pedestrian level of service analysis. The posted speed limit along Loughboro Road is 25 miles per hour.

The eastbound travel lane is 19 feet 8 inches wide. This includes an on-street parking lane. On-street parking increases the perceived comfort and safety of pedestrians by adding an additional buffer between pedestrians and moving traffic. The on-street parking lane is not continuous along Loughboro Road and

spaces are often vacant. Additionally, eastbound traffic travels nearer to the curb in some locations rather than the roadway centerline (for instance, when a vehicle goes around a turning vehicle). This reduces the distance between moving traffic and pedestrians. To provide for a more conservative pedestrian Level of Service estimate, a parking buffer was not included and the width of travel lane was reduced from 19 feet 8 inches to 9 feet for the south side sidewalk analyses.

Figure 1 – Photographs of Location of Analysis (North Side)

Figure 2 – Photographs of Location of Analysis (South Side)

FINDINGS

The resulting LOS for the study area during the AM and mid-day peak was LOS B or better under Existing and Total Future conditions, along both the north and south sides of Loughboro Road. The numerical values and the corresponding level of service are listed in Table 2.

Table 2 – Level of Service Categories

Location	Time	Model Score	Level of Service
Existing			
North side	AM Peak	1.74	B
North side	Mid-day	1.62	B
South side	AM Peak	1.74	B
South side	Mid-day	1.62	B
Total Future			
North side	AM Peak	1.75	B
North side	Mid-day	1.64	B
South side	AM Peak	1.75	B
South side	Mid-day	1.64	B

Tables 3 through 10 in the Appendix provide information on the findings listed in Table 2.

Pedestrian LOS analysis shows that the pedestrian conditions adjacent to Sibley Hospital operate at overall safe and comfortable conditions and are forecasted to operate at overall safe and comfortable conditions with the Sibley MOB.

Buffer width and vehicle speed are the primary factors impacting pedestrian's sense of safety and comfort, which are not expect to changed under Total Future conditions. The volume of traffic along the adjacent roadway is less significant. For example, if G/SA estimates that Total Future traffic volumes during the AM peak hour were increased by 50% along Loughboro Road, the model score for the north side sidewalk would only change by 5%. Pedestrian level of service would remain at LOS B with a model score of 1.85. Conditions on the south side sidewalk would change 6% if AM peak hour traffic was increased 50%. Pedestrian Level of service would remain at LOS B with a model score of 1.67.

Therefore, it is our professional opinion that the transportation impact of the expansion of Sibley will not affect pedestrian's perceived "quality of life" in the adjacent area.

APPENDIX

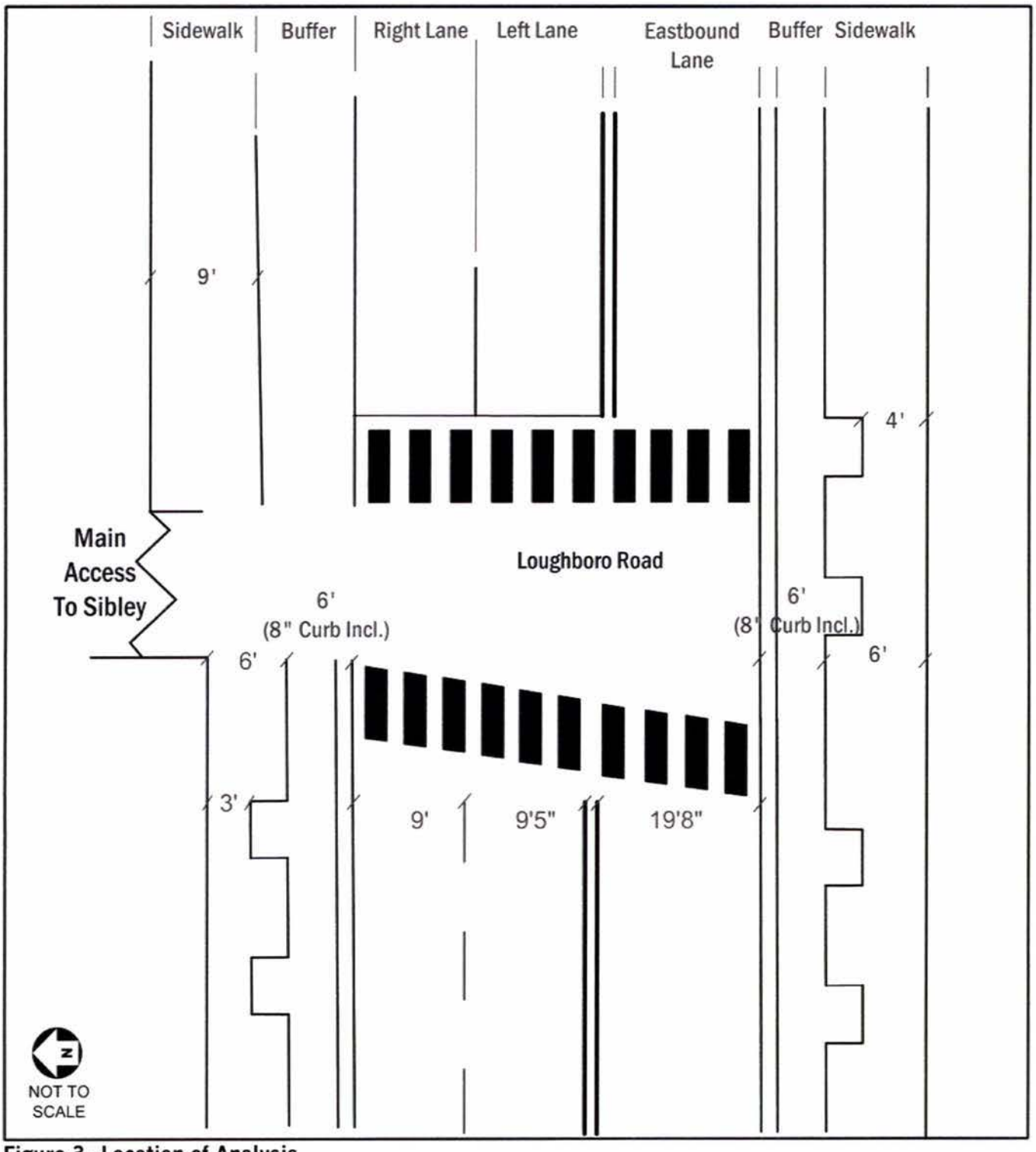


Figure 3 –Location of Analysis

Table 3 – Existing Level of Service Calculation (North Side AM Peak Hour)

	Study Area Element
9	wol = width of outside lane (feet)
0	wl = width of shoulder or bike lane (feet)
0	Fp=on-street parking coefficient (=0.20)
0	%OSP = percent of segment with on-street parking
5.37	fb = buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
6	Wb = buffer width (distance between edge of pavement and sidewalk, feet)
4.2	fsw = sidewalk presence coefficient (=6-0.3Ws)
6	Ws = Width of Sidewalk
321	Vol15 = average traffic during a 15 minute period
3	L = total number of (through) lanes (for road or street)
25	SPD = Average running speed of motor vehicle traffic (mi/hr)
1.74	Model Score

Table 4 – Total Future Level of Service Calculation (North Side AM Peak Hour)

	Study Area Element
9	wol = width of outside lane (feet)
0	wl = width of shoulder or bike lane (feet)
0	Fp=on-street parking coefficient (=0.20)
0	%OSP = percent of segment with on-street parking
5.37	fb = buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
6	Wb = buffer width (distance between edge of pavement and sidewalk, feet)
4.2	fsw = sidewalk presence coefficient (=6-0.3Ws)
6	Ws = Width of Sidewalk
335	Vol15 = average traffic during a 15 minute period
3	L = total number of (through) lanes (for road or street)
25	SPD = Average running speed of motor vehicle traffic (mi/hr)
1.75	Model Score

Table 5 – Existing Level of Service Calculation (North Side Mid-day)

	Study Area Element
9	wol = width of outside lane (feet)
0	wl = width of shoulder or bike lane (feet)
0	Fp=on-street parking coeffiicient (=0.20)
0	%OSP = percent of segmnet with on-street parking
5.37	fb = buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
6	Wb = buffer width (distance between edge of pavement and sidewalk, feet)
4.2	fsw = sidewalk presence coefficient (=6-0.3Ws)
6	Ws = Width of Sidewalk
134	Vol15 = average traffic during a 15 mininute period
3	L = total number of (through) lanes (for road or street)
25	SPD = Average running speed of motor vehicle traffic (mi/hr)
1.62	Model Score

Table 6 – Total Future Level of Service Calculation (North Side Mid-day)

	Study Area Element
9	wol = width of outside lane (feet)
0	wl = width of shoulder or bike lane (feet)
0	Fp=on-street parking coefficient (=0.20)
0	%OSP = percent of segment with on-street parking
5.37	fb = buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
6	Wb = buffer width (distance between edge of pavement and sidewalk, feet)
4.2	fsw = sidewalk presence coefficient (=6-0.3Ws)
6	Ws = Width of Sidewalk
145	Vol15 = average traffic during a 15 minute period
3	L = total number of (through) lanes (for road or street)
25	SPD = Average running speed of motor vehicle traffic (mi/hr)
1.64	Model Score

Table 7 – Existing Level of Service Calculation (South Side AM Peak Hour)

	Study Area Element
9	wol = width of outside lane (feet)
0	wl = width of shoulder or bike lane (feet)
0	Fp=on-street parking coefficient (=0.20)
0%	%OSP = percent of segment with on-street parking
5.37	fb = buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
6	Wb = buffer width (distance between edge of pavement and sidewalk, feet)
4.2	fsw = sidewalk presence coefficient (=6-0.3Ws)
6	Ws = Width of Sidewalk
321	Vol15 = average traffic during a 15 minute period
3	L = total number of (through) lanes (for road or street)
25	SPD = Average running speed of motor vehicle traffic (mi/hr)
1.74	Model Score

Table 8 – Total Future Level of Service Calculation (South Side AM Peak Hour)

	Study Area Element
9	wol = width of outside lane (feet)
0	wl = width of shoulder or bike lane (feet)
0	Fp=on-street parking coefficient (=0.20)
0%	%OSP = percent of segment with on-street parking
5.37	fb = buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
6	Wb = buffer width (distance between edge of pavement and sidewalk, feet)
4.2	fsw = sidewalk presence coefficient (=6-0.3Ws)
6	Ws = Width of Sidewalk
335	Vol15 = average traffic during a 15 minute period
3	L = total number of (through) lanes (for road or street)
25	SPD = Average running speed of motor vehicle traffic (mi/hr)
1.75	Model Score

Table 9 – Existing Level of Service Calculation (South Side Mid-day)

	Study Area Element
9	wol = width of outside lane (feet)
0	wl = width of shoulder or bike lane (feet)
0	Fp=on-street parking coefficient (=0.20)
0%	%OSP = percent of segment with on-street parking
5.37	fb = buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
6	Wb = buffer width (distance between edge of pavement and sidewalk, feet)
4.2	fsw = sidewalk presence coefficient (=6-0.3Ws)
6	Ws = Width of Sidewalk
134	Vol15 = average traffic during a 15 minute period
3	L = total number of (through) lanes (for road or street)
25	SPD = Average running speed of motor vehicle traffic (mi/hr)
1.62	Model Score

Table 10 – Total Future Level of Service Calculation (South Side Mid-day)

	Study Area Element
9	wol = width of outside lane (feet)
0	wl = width of shoulder or bike lane (feet)
0	Fp=on-street parking coefficient (=0.20)
0%	%OSP = percent of segment with on-street parking
5.37	fb = buffer area barrier coefficient (=5.37 for trees spaced 20 feet on center)
6	Wb = buffer width (distance between edge of pavement and sidewalk, feet)
4.2	fsw = sidewalk presence coefficient (=6-0.3Ws)
6	Ws = Width of Sidewalk
145	Vol15 = average traffic during a 15 minute period
3	L = total number of (through) lanes (for road or street)
25	SPD = Average running speed of motor vehicle traffic (mi/hr)
1.64	Model Score

GOROVE/SLADE ASSOCIATES, INC.
1140 Connecticut Ave / Suite 700 / Washington, DC 20036

MEMORANDUM

TO: Jeff Jennings — District Department of Transportation
Sophie Boreshe — District Department of Transportation

FROM: Adrienne E. Losh
Louis J. Slade, P.E.
Leon F. Anderson

DATE: December 1, 2006

SUBJECT: Sibley MOB – Pedestrian Safety Impacts

This memorandum is in response to an issue discussed at our September 18, 2006 meeting regarding pedestrian safety along Loughboro Road and possible impacts due to the proposed MOB.

Gorove/Slade Associates conducted field observations and noted the following:

- Pedestrians are primarily bus patrons and visitors/employees of the Hospital;
- We have only observed very low pedestrian traffic in the entire area of the Hospital:
- Sidewalks are located on the both sides of Loughboro Road;
- Pedestrian crosswalks are provided at the signalized intersections of Loughboro Road and the Hospital's Main Entrance and Loughboro Road and MacArthur Boulevard although the crosswalks at the latter intersection are not marked on the pavement at the present time. We assume this is a temporary condition;
- Pedestrian crosswalks are not provided at the unsignalized intersection of Loughboro Road and Dalecarlia Parkway; and
- WMATA has one bus stop on the south side of Loughboro Road across from the Hospital and two stop locations on the north side adjacent to the Hospital.

The current pedestrian and vehicular conflicts occur when pedestrians cross Loughboro Road. As noted above, pedestrians are primarily bus patrons or visitors/employees of the Hospital. The safest pedestrian crossing closest to the Hospital is at the signalized intersection of Loughboro Road and the Hospital's Main Entrance. This crossing is adequate to serve the current needs of Hospital and bus patrons

With the new medical office building, there will be greater numbers of people accessing Sibley Hospital campus by public transportation. Also, the MOB entrance will be the furthest eastern building entrance on

the campus. A direct line from the current bus stop on the south side of Loughboro Road to that building entrance will be several hundred feet from the existing crosswalk at the signalized entrance to the Hospital. Therefore, many pedestrians may find walking to the existing crosswalk inconvenient.

The second factor of change is the proposed District DOT off-street bikeway to be located in the Dalecarlia Parkway right-of-way along the south side of the roadway. This will bring bicyclists and some walkers to the Dalecarlia Parkway and Loughboro Road intersection.

These two factors make it logical to add a pedestrian crossing on Loughboro Road at the Dalcarlia intersection. Only the Dalcarlia Parkway approach to the intersection is controlled by a stop sign, and therefore, traffic on Loughboro Road does not stop at the present time. Thus, this pedestrian crossing should be treated in the same way that the pedestrian crossings of MacArthur Boulevard are designed in this area of the city. The crosswalks should be high visibility "zebra" pavement markings and pedestrians crossing signs should be placed in advance of the intersection along Loughboro Road and also directly at the intersection.

We have indicated these crosswalks on the preliminary plan for the intersection. The Sibley Hospital team of designers will coordinate with DDOT roadway construction and DDOT bicycle facilities staff on the final design of the intersection and these crosswalks.

GOROVE/SLADE ASSOCIATES, INC.
1140 Connecticut Ave / Suite 700 / Washington, DC 20036

MEMORANDUM

TO: Jeff Jennings — District Department of Transportation
Sophie Boreshe — District Department of Transportation

FROM: Adrienne E. Losh
Louis J. Slade, P.E.

DATE: December 1, 2006

SUBJECT: Summary of Speed Survey Analysis

This memorandum presents the findings of a speed survey conducted for Sibley Hospital at two locations on Dalecarlia Parkway: 90 feet north of Little Falls Road and 400 feet north of Little Falls Road (approximately 500 feet south of Rockwood Parkway). The speed survey was conducted in response to community concerns presented at the September 6, 2006 ANC meeting.

Speeds on Dalecarlia Parkway were surveyed on Tuesday, September 12 from 11:00 a.m. to 11:30 a.m. (400 feet north of Little Falls Road) and from 11:30 a.m. to 12:00 Noon (90 feet north of Little Falls Road). Radar speeds are collected for 100 vehicles or for one hour, whichever comes first. In both cases, 100 vehicles were surveyed in approximately one half hour.

FINDINGS

The results of the speed survey are indicated in the table below. The speed survey data for both locations are attached to this memorandum.

	Speed Survey Location	
	90 feet north of Little Falls Road (mph)	*400 feet north of Little Falls Road* (mph)
Posted Speed Limit	35	40
Lowest Recorded Speed	25	30
Highest Recorded Speed	44	54
Average Speed	33	41
85th Percentile Speed	36	45

Gorove/Slade's speed survey data coincides with data collected by DDOT as presented in a meeting held between DDOT and Gorove/Slade on Friday, November 3.

Gorove/Slade Associates, Inc.

Speed Survey

Street : Dalecarlia Parkway
Capture Zone : Residential

Counted By: AES
Posted Speed Limit : 35 MPH
Types of Vehicles : All Vehicles
Weather Conditions : Warm/Cloudy/Dry

****

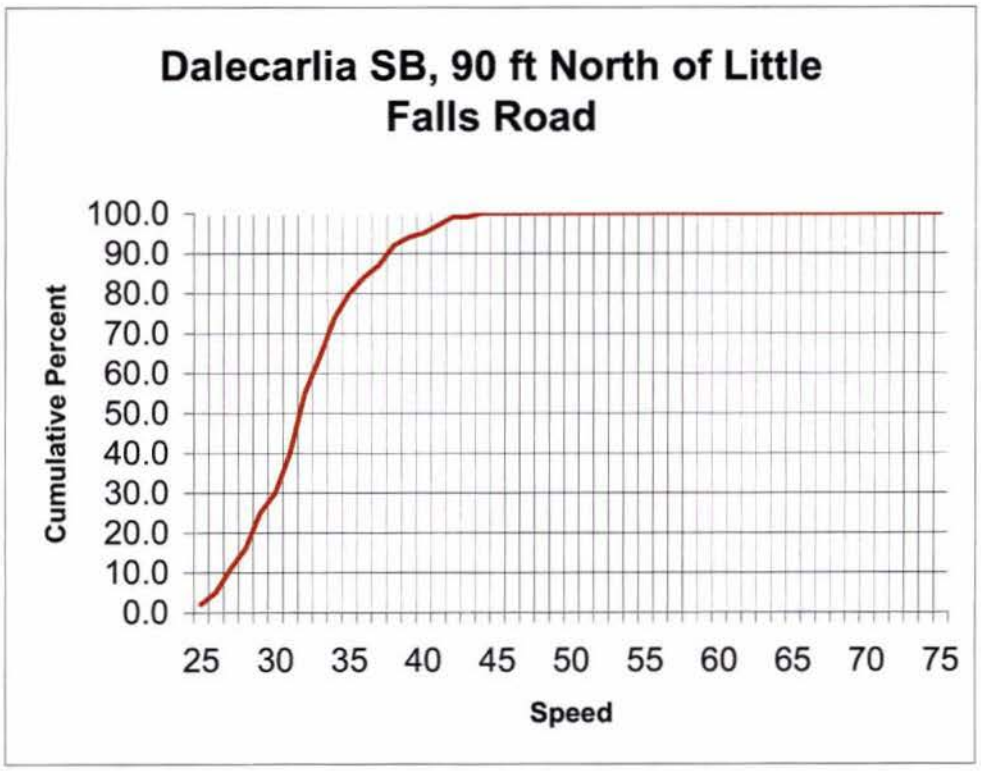
Date : 9/12/2006
Day : Tuesday
Time Range : 11:30 a.m. to Noon
Direction : Southbound, 90' North of Little Falls Road

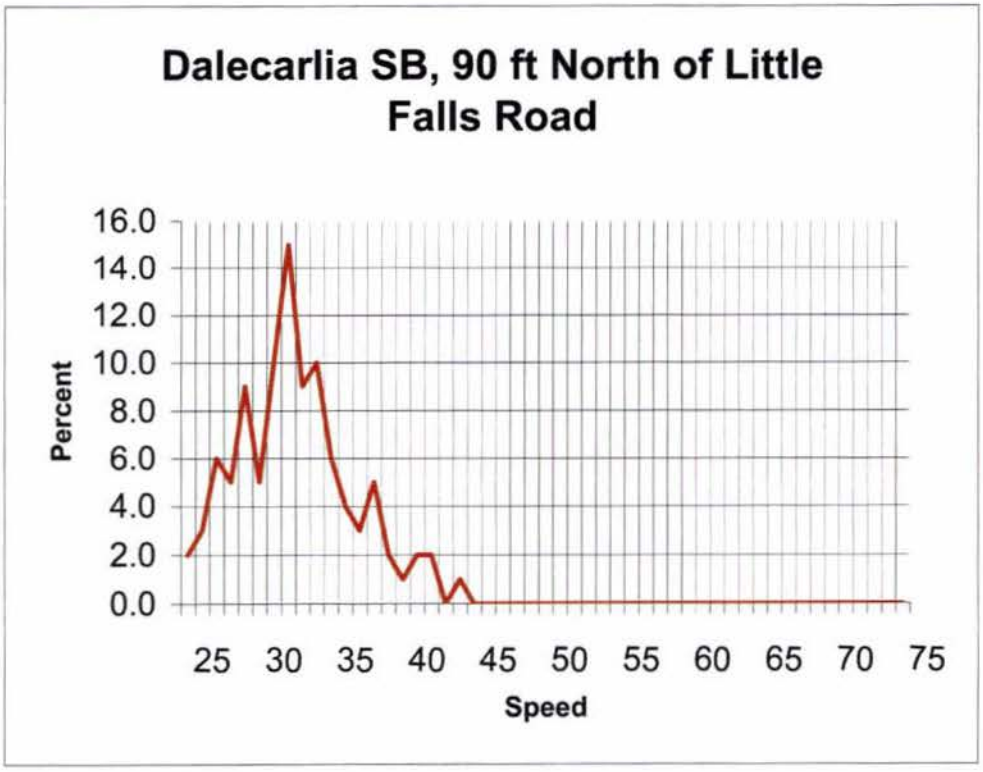
****

Lowest Recorded Speed :	25	15th Percentile :	28
Highest Recorded Speed :	44	50th Percentile :	32
Average Speed :	33	85th Percentile :	36
Vehicles Observed :	100	95th Percentile :	40

****

SPEED	COUNT	PERCENT	CUM.%	SPEED	COUNT	PERCENT	CUM.%
25	2	2.0	2.0	51	0	0.0	100.0
26	3	3.0	5.0	52	0	0.0	100.0
27	6	6.0	11.0	53	0	0.0	100.0
28	5	5.0	16.0	54	0	0.0	100.0
29	9	9.0	25.0	55	0	0.0	100.0
30	5	5.0	30.0	56	0	0.0	100.0
31	10	10.0	40.0	57	0	0.0	100.0
32	15	15.0	55.0	58	0	0.0	100.0
33	9	9.0	64.0	59	0	0.0	100.0
34	10	10.0	74.0	60	0	0.0	100.0
35	6	6.0	80.0	61	0	0.0	100.0
36	4	4.0	84.0	62	0	0.0	100.0
37	3	3.0	87.0	63	0	0.0	100.0
38	5	5.0	92.0	64	0	0.0	100.0
39	2	2.0	94.0	65	0	0.0	100.0
40	1	1.0	95.0	66	0	0.0	100.0
41	2	2.0	97.0	67	0	0.0	100.0
42	2	2.0	99.0	68	0	0.0	100.0
43	0	0.0	99.0	69	0	0.0	100.0
44	1	1.0	100.0	70	0	0.0	100.0
45	0	0.0	100.0	71	0	0.0	100.0
46	0	0.0	100.0	72	0	0.0	100.0
47	0	0.0	100.0	73	0	0.0	100.0
48	0	0.0	100.0	74	0	0.0	100.0
49	0	0.0	100.0	75	0	0.0	100.0
50	0	0.0	100.0				


Dalecarlia SB, 90 ft North of Little Falls Road
Cumulative Percent
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
25 30 35 40 45 50 55 60 65 70 75
Speed


Dalecarlia SB, 90 ft North of Little Falls Road
Percent
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
25 30 35 40 45 50 55 60 65 70 75
Speed

Gorove/Slade Associates, Inc.

Speed Survey

Street : Dalecarlia Parkway
Capture Zone : Residential

Counted By: AES
Posted Speed Limit : 40 MPH
Types of Vehicles : All Vehicles
Weather Conditions : Warm/Cloudy/Dry

****

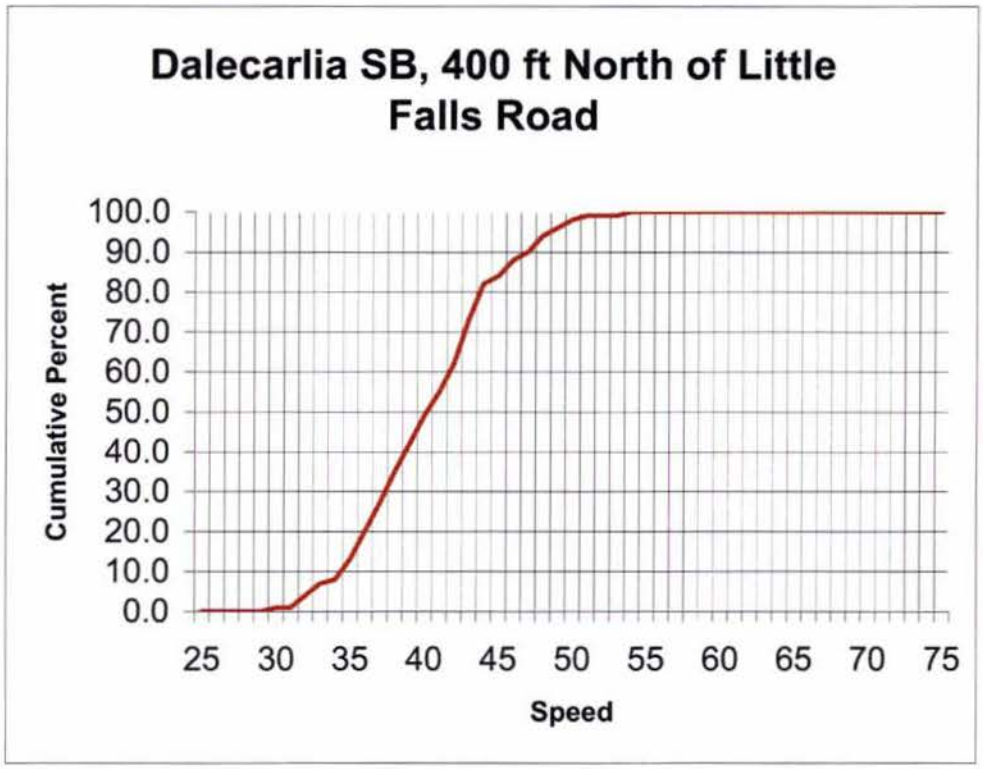
Date : 9/12/2006
Day : Tuesday
Time Range : 11:00 a.m. to 11:30 a.m.
Direction : Southbound, 400' North of Little Falls Road

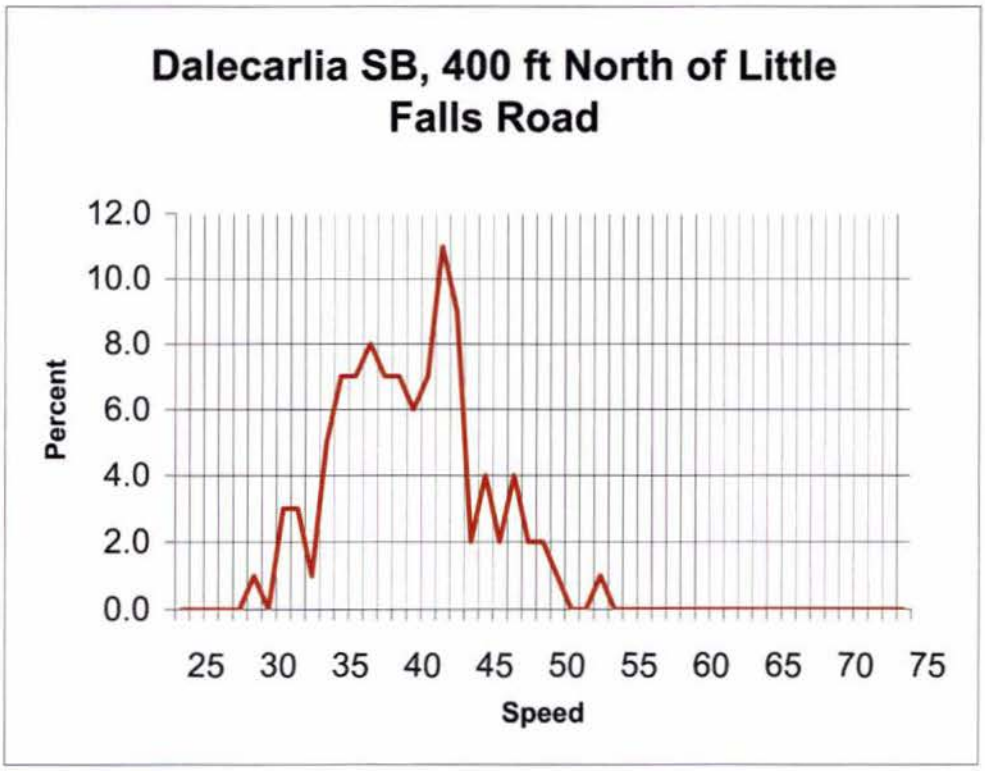
****

Lowest Recorded Speed :	30	15th Percentile :	36
Highest Recorded Speed :	54	50th Percentile :	40
Average Speed :	41	85th Percentile :	45
Vehicles Observed :	100	95th Percentile :	48

****

SPEED	COUNT	PERCENT	CUM.%	SPEED	COUNT	PERCENT	CUM.%
25	0	0.0	0.0	51	1	1.0	99.0
26	0	0.0	0.0	52	0	0.0	99.0
27	0	0.0	0.0	53	0	0.0	99.0
28	0	0.0	0.0	54	1	1.0	100.0
29	0	0.0	0.0	55	0	0.0	100.0
30	1	1.0	1.0	56	0	0.0	100.0
31	0	0.0	1.0	57	0	0.0	100.0
32	3	3.0	4.0	58	0	0.0	100.0
33	3	3.0	7.0	59	0	0.0	100.0
34	1	1.0	8.0	60	0	0.0	100.0
35	5	5.0	13.0	61	0	0.0	100.0
36	7	7.0	20.0	62	0	0.0	100.0
37	7	7.0	27.0	63	0	0.0	100.0
38	8	8.0	35.0	64	0	0.0	100.0
39	7	7.0	42.0	65	0	0.0	100.0
40	7	7.0	49.0	66	0	0.0	100.0
41	6	6.0	55.0	67	0	0.0	100.0
42	7	7.0	62.0	68	0	0.0	100.0
43	11	11.0	73.0	69	0	0.0	100.0
44	9	9.0	82.0	70	0	0.0	100.0
45	2	2.0	84.0	71	0	0.0	100.0
46	4	4.0	88.0	72	0	0.0	100.0
47	2	2.0	90.0	73	0	0.0	100.0
48	4	4.0	94.0	74	0	0.0	100.0
49	2	2.0	96.0	75	0	0.0	100.0
50	2	2.0	98.0				


Dalecarlia SB, 400 ft North of Little Falls Road
Cumulative Percent
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
25 30 35 40 45 50 55 60 65 70 75
Speed


Dalecarlia SB, 400 ft North of Little Falls Road
Percent
12.0
10.0
8.0
6.0
4.0
2.0
0.0
25 30 35 40 45 50 55 60 65 70 75
Speed

GOROVE/SLADE ASSOCIATES, INC.
1140 Connecticut Avenue / Suite 700 /Washington, DC 20036

MEMORANDUM

TO: Jeff Jennings — District Department of Transportation
Sophie Boreshe — District Department of Transportation

FROM: Adrienne E. Losh
Louis J. Slade, P.E.
Leon F. Anderson

DATE: December 4, 2006

SUBJECT: Sibley MOB – Loughboro Road/Dalecarlia Parkway Intersection Redesign

As part of the Sibley MOB project, the Loughboro Road/Dalecarlia Parkway intersection is proposed to be redesigned and reconfigured in the future to improve the safety for vehicular and pedestrian traffic. At present, vehicles traveling southbound on Dalecarlia Parkway and making a right-turn onto Loughboro Road approach the intersection at an acute angle. The proposed modification to Dalecarlia Parkway and Loughboro Road would create a safer intersection since both the southbound left and right turn movements will meet Loughboro Road at a single point – resulting in a T-intersection (see attached preliminary plans). The design also includes improvements to the pedestrian facilities: high visibility crosswalks, pavement markings, and several traffic signs to indicate the presence of pedestrians.

Traffic calming measures along Dalecarlia Parkway should include temporary radar speed monitors in both directions for a period of two weeks. This is consistent with the recommendations of the 2001 Palisades Traffic Study, which addressed speeding and other concerns on roadways in the general area[1]. The speed monitors would alert drivers of the posted speed limit and their actual speed in an effort to curb speeding along Dalecarlia Parkway. This could be repeated once every three to four months as needed.

Capacity analyses and Levels of Service (LOS) determinations were made for the Future AM and PM peak hours with the new configuration. The results are shown in Table 1. The Future conditions were also simulated using the SIMTraffic model to evaluate operations, such as queuing and blocking. The queuing results are shown in Table 2. The analyses show that southbound STOP-controlled approach at the Dalecarlia Parkway and Loughboro Road intersection would experience delays as motorists make the left-turn movement from Dalecarlia Parkway onto Loughboro Road. The southbound right-turn movement would operate similar to existing conditions since the westbound through movement on Loughboro Road is not very heavy and allows enough gaps in traffic.

[1] Dalecarlia Parkway was not included in the 2001 Palisades Traffic Study.

The northbound left-turn movement at the Little Falls Road/Dalecarlia Parkway, which was of concern to DDOT, showed a 95th percentile queue length of 73 feet. The proposed design, with a left turn lane length of 150 feet will provide sufficient space for the approximately 3 to 4 car queues.

Table 1 – Future Levels of Service

Intersection (Approach)	Future LOS Conditions			
	AM Peak Hour		*PM Peak Hour*	
	Delay (sec/veh)	Level of Service	Delay (sec/veh)	Level of Service
Little Falls Road and Dalecarlia Parkway				
Eastbound	23.0	C	38.4	E
Dalecarlia Parkway and Loughboro Road				
Southbound	143.9	F	41.8	C

Table 2 – Future Queuing Conditions

Intersection Approach (Directions Served)	Total Future Queuing Conditions	
	AM Peak Hour	*PM Peak Hour*
	95th Percentile Queue (feet)	95th Percentile Queue (feet)
Dalecarlia Parkway and Loughboro Road		
Eastbound	239	154
Westbound	17	32
Southbound (Left)	279	166
Southbound (Right)	300	212
Little Falls Road and Dalecarlia Parkway		
Eastbound	173	79
Northbound (Left)	73	43
Northbound (Through)	39	-
Southbound (Through)	347	-

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MEMORANDUM

TO: Jeff Jennings — District Department of Transportation
Sophie Boreshe — District Department of Transportation

FROM: Adrienne E. Losh
Louis J. Slade, P.E.
Leon F. Anderson

DATE: December 4, 2006

SUBJECT: Sibley MOB - Summary of Additional Traffic Analyses

This memorandum is in response to questions, comments, and recommendations raised by DDOT in an October 11, 2006 report to the Office of Zoning (Zoning Map Amendment ZC Case No. 5-42) and a subsequent follow-up meeting (Friday November 3, 2006). Specifically, in the November 3rd meeting DDOT requested analysis of potential transportation impacts of a larger study area. The supplemental traffic analysis would include the following additional intersections:

1. MacArthur Boulevard at Arizona Avenue (signalized);
2. Loughboro Road at Arizona Avenue (unsignalized);
3. Dalecarlia Parkway at Rockwood Parkway (unsignalized); and
4. Dalecarlia Parkway at Warren Place (unsignalized).

Turning movement traffic counts were conducted at the four (4) study intersections on Thursday, November 9, 2006 and Tuesday, November 14, 2006, between the hours of 6:00 a.m. to 9:00 a.m. and 4:00 p.m. to 7:00 p.m. In addition to collecting turning movement counts, the geometry of the study area and traffic control information was also collected.

Capacity analyses and Levels of Service (LOS) determinations were made for the AM and PM peak hours under "existing" and "total future" conditions. The total future condition represents future conditions with the build-out of the Sibley MOB. A 0.5% growth factor was applied to through movements of major approaches and heavy turning movements at all intersections. Background analysis (future conditions without the proposed Sibley MOB) was not included in the analysis. All analyses were conducted using Synchro software (version 6.0), existing lane use and traffic controls, and existing and future traffic volumes. The results of the analyses are summarized in Table 1.

The capacity analysis indicates that the MacArthur Boulevard/Arizona Avenue intersection operates

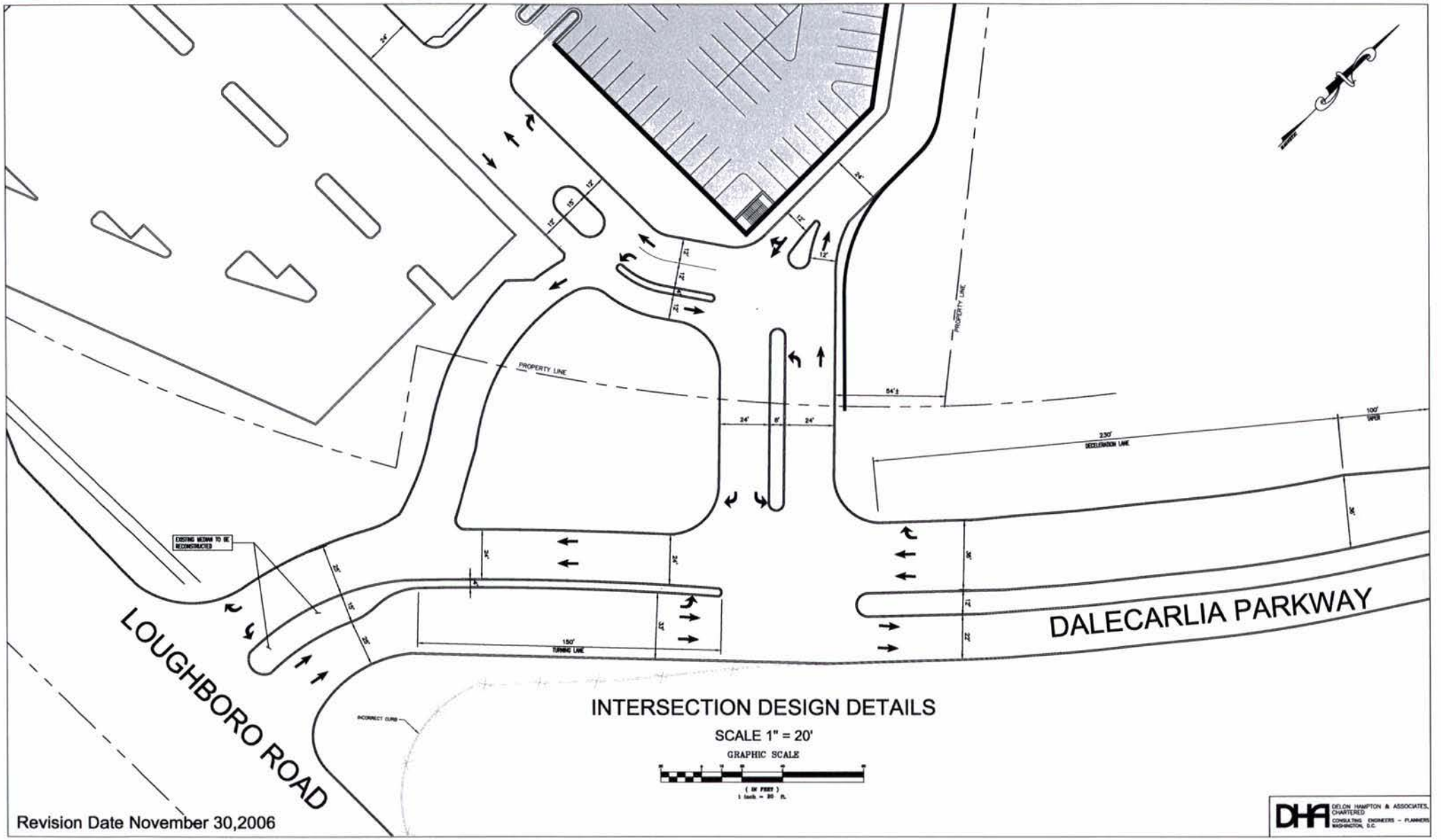
acceptably during the morning peak hour, with minor delays experienced along the westbound approach. This is due primarily to heavy through movements to the Chain Bridge leading into Northern Virginia. This situation will continue under total future conditions, with minor delays experienced by northbound traffic along MacArthur Boulevard. It should be noted that these results are quite typical for urban intersections that primarily serve some regional traffic movements.

The unsignalized intersection of Loughboro Boulevard and Arizona Avenue operates at an overall LOS E for both AM and PM peak hour, under existing and total future conditions. The critical movements at this intersection are the westbound left turn movement (from Loughbouro Road onto Arizona Avenue) and the northbound right-turn movement (from Arizona Avenue onto Loughboro Road). These movements also represent commuter traffic leaving the District and heading into Nothern Virginia via the Chain Bridge and vise versa. The proposed MOB traffic will only contribute 2% to the total traffic at this intersection at an average rate of one car every two minutes. The MOB will not contribute to the critical movements at this intersection.

Table 1 – Existing and Future Levels of Service (Expanded Study Area)

Intersection/Approach	Existing		Total Future	
	AM	*PM*	*AM*	*PM*
MacArthur Boulevard & Arizona Avenue				
Overall	**D (41.1)**	**C (30.4)**	**D (44.4)**	**D (37.2)**
Eastbound	D (49.6)	C (20.0)	D (51.9)	C (20.2)
Westbound	E (64.3)	C (21.8)	E (64.2)	C (21.8)
Northbound	C (31.2)	D (50.6)	D (37.4)	E (71.2)
Southbound	C (29.4)	C (21.1)	C (33.5)	C (22.2)
Loughboro Road & Arizona Avenue				
Overall	**E (47.5)**	**E (94.3)**	**E (51.3)**	**E (96.2)**
Eastbound	B (13.4)	B (12.4)	B (13.9)	B (13.6)
Westbound	B (14.6)	F (170.6)	B (14.8)	F (175.2)
Northbound	E (74.9)	D (29.5)	F (82.9)	D (31.7)
Dalecarlia Parkway & Rockwood Parkway				
Westbound	B (12.5)	B (11.9)	B (12.7)	B (12.5)
Dalecarlia Parkway & Warren Place				
Westbound	B (10.8)	B (10.4)	B (10.9)	B (10.8)

The Dalecarlia Parkway/Rockwood Parkway and Dalecarlia Parkway/Warren Place intersections have only the minor approach under STOP control. There is no delay for the northbound and southbound approaches (along Dalecarlia Parkway). The westbound approaches for both intersections operate at LOS B during both the AM and PM peak, and will continue to operate at LOS B for both scenarios when growth and Sibley MOB traffic is added to the roadway network.

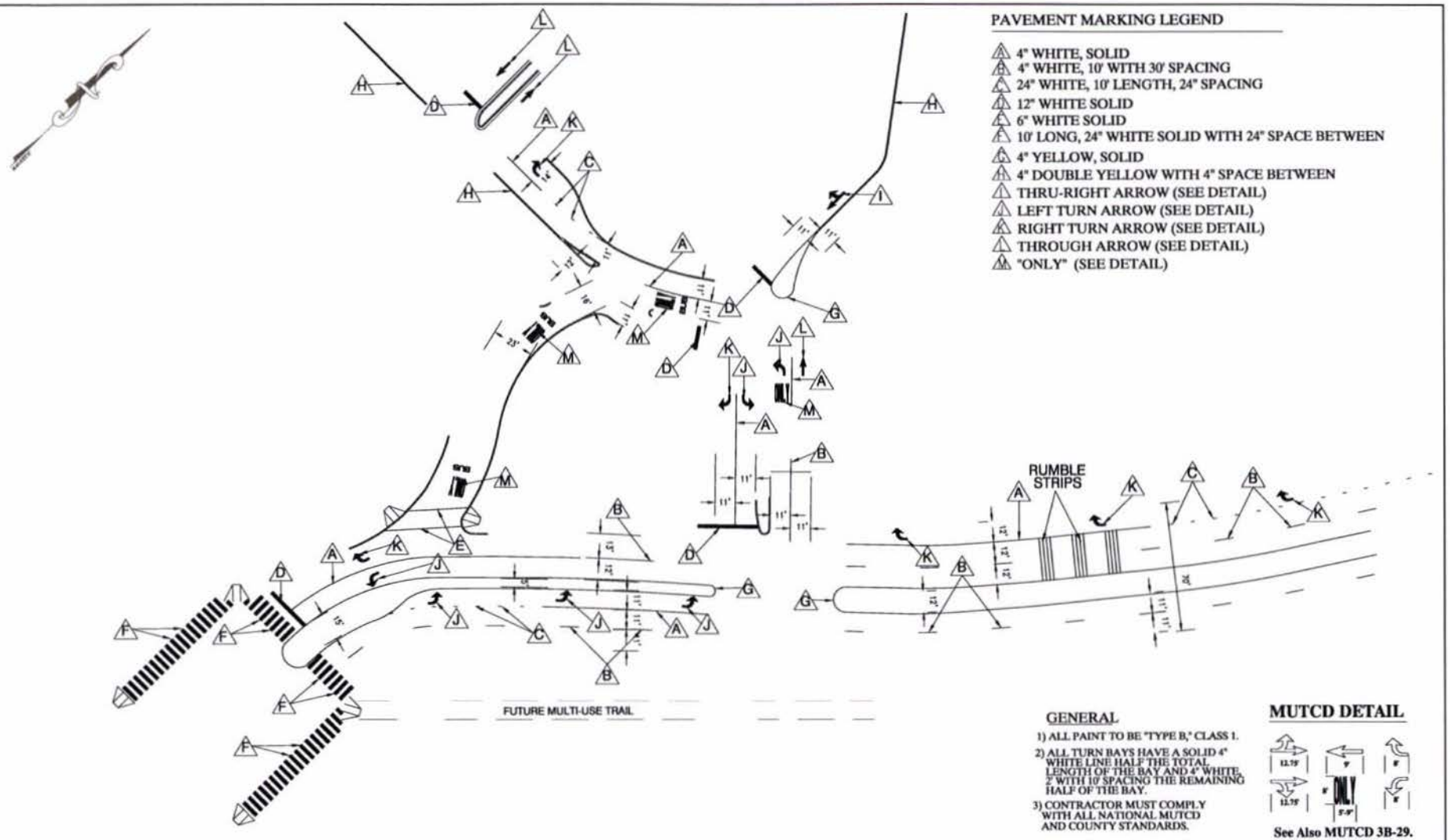


Revision Date November 30,2006

SIBLEY MEMORIAL HOSPITAL

OUTPATIENT / MEDICAL OFFICE BUILDING & GARAGE

WILMOT SANZ
ARCHITECTURE
PLANNING



PAVEMENT MARKING LEGEND

- A 4" WHITE, SOLID
- B 4" WHITE, 10' WITH 30' SPACING
- C 24" WHITE, 10' LENGTH, 24" SPACING
- D 12" WHITE SOLID
- E 6" WHITE SOLID
- F 10' LONG, 24" WHITE SOLID WITH 24" SPACE BETWEEN
- G 4" YELLOW, SOLID
- H 4" DOUBLE YELLOW WITH 4" SPACE BETWEEN
- I THRU-RIGHT ARROW (SEE DETAIL)
- J LEFT TURN ARROW (SEE DETAIL)
- K RIGHT TURN ARROW (SEE DETAIL)
- L THROUGH ARROW (SEE DETAIL)
- M "ONLY" (SEE DETAIL)

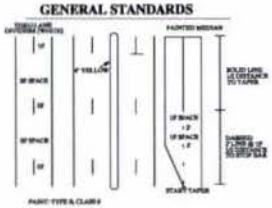
GENERAL

1) ALL PAINT TO BE "TYPE B," CLASS 1.
2) ALL TURN BAYS HAVE A SOLID 4" WHITE LINE HALF THE TOTAL LENGTH OF THE BAY AND 4" WHITE, 2' WITH 10' SPACING THE REMAINING HALF OF THE BAY.
3) CONTRACTOR MUST COMPLY WITH ALL NATIONAL MUTCD AND COUNTY STANDARDS.

MUTCD DETAIL

See Also MUTCD 3B-29.

GENERAL STANDARDS



DRAFT

SIBLEY HOSPITAL

GOROVE / SLADE ASSOCIATES, Inc.
TRANSPORTATION, TRAFFIC and PARKING CONSULTANTS

DEPARTMENT OF TRANSPORTATION
DISTRICT OF COLUMBIA
TRAFFIC SERVICES ADMINISTRATION

DALECARLIA PARKWAY & THE SIBLEY HOSPITAL
(REALIGNED DRIVEWAY – N.I.S.)
PROPOSED STRIPING PLAN

RECOMMENDED
- CHIEF, TRAFFIC SIGNAL DESIGN BRANCH — DATE
- CHIEF, TRAFFIC SIGNAL OPERATIONS BRANCH — DATE
- CHIEF, TRAFFIC SIGNAL CONSTRUCTION BRANCH — DATE
- CHIEF, TRAFFIC SIGNAL MAINTENANCE BRANCH — DATE

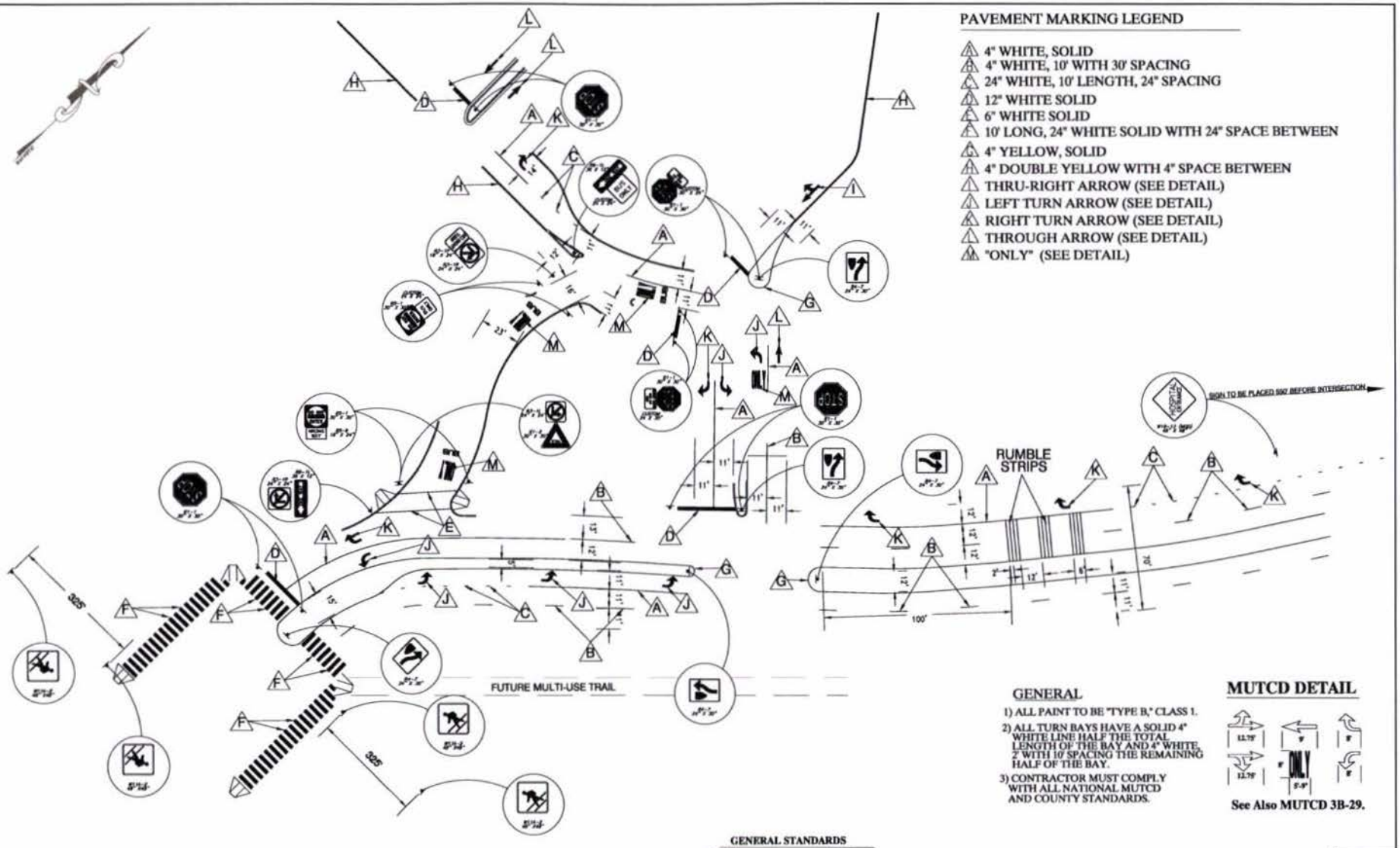
APPROVED
- CHIEF, TRAFFIC SIGNAL SYSTEMS DIVISION — DATE

S.L.F. NO. _____
APPROVED BY _____ DATE _____

DRAFT
FIELD CHECKED BY
DESIGNED BY CJS
DRAWN BY CJS
DATE 12/01/06
SCALE 1" = 25'
SHEET 1 OF 4
DRAWING NO. D-XXS-XX

DRAFT

SIBLEY HOSPITAL	DEPARTMENT OF TRANSPORTATION DISTRICT OF COLUMBIA TRAFFIC SERVICES ADMINISTRATION	DRAFT
GOROVE / SLADE ASSOCIATES, Inc. TRANSPORTATION, TRAFFIC, and PARKING CONSULTANTS 1140 Connecticut Avenue NW / Suite 750 / Washington, DC 20036 / (202) 296-8625 3914 Centreville Road / Suite 330 / Chantilly, VA 20151 / (703) 787-9595	DALECARLIA PARKWAY & THE SIBLEY HOSPITAL (REALIGNED DRIVEWAY – N.I.S.) 45' BUS TRACK WITHOUT GEOMETRY IMPROVEMENTS	FIELD CHECKED BY DESIGNED BY: CJS DRAWN BY: CJS DATE: 12/01/06 SCALE: 1" = 25' SHEET 3 OF 4 DRAWING NO. X-XXX-XX
S.L.F. NO APPROVED BY DATE	RECOMMENDED CHIEF, TRAFFIC SIGNAL DESIGN BRANCH DATE CHIEF, TRAFFIC SIGNAL OPERATIONS BRANCH DATE CHIEF, TRAFFIC SIGNAL CONSTRUCTION BRANCH DATE CHIEF, TRAFFIC SIGNAL MAINTENANCE BRANCH DATE APPROVED CHIEF, TRAFFIC SIGNAL SYSTEMS DIVISION DATE	



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G. 4" YELLOW, SOLID
H. 4" DOUBLE YELLOW WITH 4" SPACE BETWEEN
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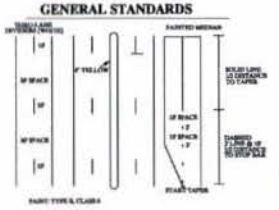
GENERAL STANDARDS



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SIBLEY HOSPITAL

GOROVE / SLADE ASSOCIATES, Inc.

DEPARTMENT OF TRANSPORTATION
DISTRICT OF COLUMBIA
TRAFFIC SERVICES ADMINISTRATION

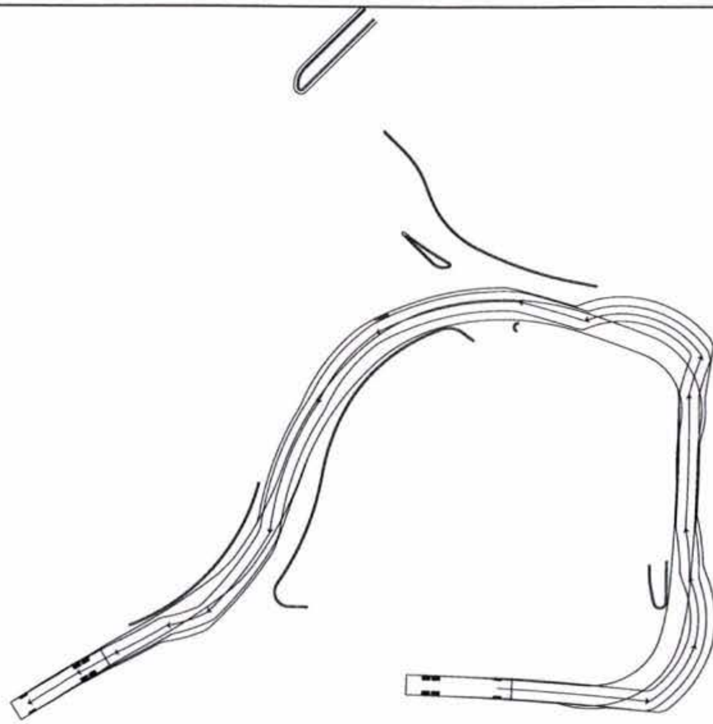
DALECARLIA PARKWAY & THE SIBLEY HOSPITAL (REALIGNED DRIVEWAY – N.I.S.)
PROPOSED SIGNING & STRIPING PLAN

RECOMMENDED
- CHIEF, TRAFFIC SIGNAL DESIGN BRANCH — DATE
- CHIEF, TRAFFIC SIGNAL OPERATIONS BRANCH — DATE
- CHIEF, TRAFFIC SIGNAL CONSTRUCTION BRANCH — DATE
- CHIEF, TRAFFIC SIGNAL MAINTENANCE BRANCH — DATE

APPROVED
- CHIEF, TRAFFIC SIGNAL ENGINEERING DIVISION — DATE

S.L.F. NO. _____
APPROVED BY _____ DATE _____

DRAFT
FIELD CHECKED BY
DESIGNED BY CJS
DRAWN BY CJS
DATE 12/01/06
SCALE 1" = 25'
SHEET 2 OF 4
DRAWING NO. S-XXX-XX



DRAFT

SIBLEY HOSPITAL	DEPARTMENT OF TRANSPORTATION DISTRICT OF COLUMBIA TRAFFIC SERVICES ADMINISTRATION	DRAFT
	DALECARLIA PARKWAY & THE SIBLEY HOSPITAL (REALIGNED DRIVEWAY – N.I.S.) 45' BUS TRACK WITH GEOMETRY IMPROVEMENTS	FIELD CHECKED BY
GOROVE / SLADE ASSOCIATES, Inc. TRANSPORTATION, TRAFFIC, and PARKING CONSULTANTS	RECOMMENDED CHIEF, TRAFFIC SIGNAL DESIGN BRANCH DATE CHIEF, TRAFFIC SIGNAL OPERATIONS BRANCH DATE CHIEF, TRAFFIC SIGNAL CONSTRUCTION BRANCH DATE CHIEF, TRAFFIC SIGNAL MAINTENANCE BRANCH DATE	DESIGNED BY CUS DRAWN BY CUS DATE 12/01/06 SCALE 1" = 25' SHEET 4 OF 4
S.I.F. NO APPROVED BY DATE	APPROVED CHIEF TRAFFIC SIGNAL SYSTEMS DIVISION DATE	DRAWING NO. X-XXX-XX