ATTACHMENT

D

DDOT Crash Data

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-7)

Intersection: WISCONSIN AVE and CHESAPEAKE ST, NW

Time Period Covered: From 01/01/2009 To 12/31/2011 **Prepared By:** Victorine Gwel **Prepared Date:** 8/30/2012

Total Number of Accident:	11
Total Number of Fatalities:	0
Total Number of Injuries:	9
Total Number of Disabling Injuries:	0
Total Number of NonDisabling Injuries:	4
Total Number of Pedestrians Involved:	1
Total Number of Bicycles Involved:	1
Total Number of Motorcycles Involved:	0

Collision Type	#ACC	%	Collision Type	#ACC	%
Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Left Turn:	2	18.2%	Ran Off Road:	0	0.0%
Right Turn:	0	0.0%	Ped. Involved:	2	18.2%
Rear End:	3	27.3%	Backing:	1	9.1%
Side Swiped:	1	9.1%	Non Collision:	0	0.0%
Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Parked:	1	9.1%	Unspecified:	1	9.1%

Time of Day	#ACC	%
07:30 - 09:30:	2	18.2%
09:30 - 11:30:	1	9.1%
11:30 - 13:30:	0	0.0%
13:30 - 16:00:	4	36.4%
16:00 -18:30:	0	0.0%
18:30 - 07:30:	4	36.4%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	1	9.1%
Monday:	2	18.2%
Tuesday:	1	9.1%
Wednesday:	4	36.4%
Thursday:	2	18.2%
Friday:	0	0.0%
Saturday:	1	9.1%

Weather Condition	#ACC	%
Clear:	8	72.7%
Rain:	3	27.3%
Snow:	0	0.0%
Sleet/Hail:	0	0.0%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	0	0.0%

Surface Condition	#ACC	%
Dry:	8	72.7%
Wet:	3	27.3%
Snow/Ice:	0	0.0%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	0	0.0%

Type of Vehicle	#VEH	%
Passenger Car:	16	76.2%
Bus:	1	4.8%
Truck:	1	4.8%
Taxi:	1	4.8%
Minivan:	0	0.0%
Police/Emergency Vehicle:	1	4.8%
Motorcycle/Moped:	0	0.0%
Bicycle:	1	4.8%
Fixed Object:	0	0.0%
Unspecified:	0	0.0%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	7	63.6%
PDO Collision:	4	36.4%

Light Condition	#ACC	%
Daylight:	8	72.7%
Dawn/Dusk:	0	0.0%
Dark(Lighted):	3	27.3%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	0	0.0%

Contributing Factor	#VEH	%
Driver: Speed:	1	4.8%
Driver: Alcohol/Drug:	0	0.0%
Driver: Electronic Device:	0	0.0%
Driver: Others:	6	28.6%
Vehicle:	0	0.0%
Roadway:	1	4.8%
Unspecified:	13	61.9%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	1	100.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	0	0.0%
From Between Parked Cars:	0	0.0%
Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles
2009	3	0	2	2	0	1	0
2010	7	0	7	2	1	0	0
2011	1	0	0	0	0	0	0

9 Records are not approved as of 8/30/2012 11:31:21 AM

D-1

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-7)

Intersection: WISCONSIN AVE and DAVENPORT ST, NW

Time Period Covered: From 01/01/2009 To 12/31/2011 **Prepared By:** Victorine Gwel **Prepared Date:** 8/30/2012

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	18	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	1	5.6%	Ran Off Road:	0	0.0%
Total Number of Injuries:	8	Right Turn:	1	5.6%	Ped. Involved:	1	5.6%
Total Number of Disabling Injuries:	1	Rear End:	10	55.6%	Backing:	1	5.6%
Total Number of NonDisabling Injuries:	1	Side Swiped:	1	5.6%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	1	Head On:	1	5.6%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	0	0.0%	Unspecified:	2	11.1%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%
07:30 ~ 09:30:	1	5.6%
09:30 ~ 11:30:	4	22.2%
11:30 ~ 13:30:	0	0.0%
13:30 ~ 16:00:	5	27.8%
16:00 ~18:30:	3	16.7%
18:30 ~ 07:30:	5	27.8%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	5	27.8%
Monday:	2	11.1%
Tuesday:	1	5.6%
Wednesday:	4	22.2%
Thursday:	1	5.6%
Friday:	1	5.6%
Saturday:	4	22.2%

Weather Condition	#ACC	%
Clear:	15	83.3%
Rain:	2	11.1%
Snow:	0	0.0%
Sleet/Hail:	0	0.0%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	1	5.6%

Surface Condition	#ACC	%
Dry:	16	88.9%
Wet:	2	11.1%
Snow/Ice:	0	0.0%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	0	0.0%

Type of Vehicle	#VEH	%
Passenger Car:	24	68.6%
Bus:	1	2.9%
Truck:	5	14.3%
Taxi:	4	11.4%
Minivan:	0	0.0%
Police/Emergency Vehicle:	1	2.9%
Motorcycle/Moped:	0	0.0%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	0	0.0%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	8	44.4%
PDO Collision:	10	55.6%

Light Condition	#ACC	%
Daylight:	13	72.2%
Dawn/Dusk:	0	0.0%
Dark(Lighted):	5	27.8%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	0	0.0%

Contributing Factor	#VEH	%
Driver: Speed:	0	0.0%
Driver: Alcohol/Drug:	1	2.9%
Driver: Electronic Device:	0	0.0%
Driver: Others:	9	25.7%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	25	71.4%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	0	0.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	1	100.0%
From Between Parked Cars:	0	0.0%
Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles
2009	4	0	3	0	1	0	0
2010	8	0	3	1	0	0	0
2011	6	0	2	0	0	0	0

12 Records are not approved as of 8/30/2012 11:29:22 AM

D-2

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-7)

Intersection: 42ND ST and RIVER RD, NW

Time Period Covered: From 01/01/2008 To 12/31/2010 **Prepared By:** Victorine Gwei **Prepared Date:** 5/9/2012

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	5	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	1	20.0%	Ran Off Road:	0	0.0%
Total Number of Injuries:	3	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	0	Rear End:	3	60.0%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	0	Side Swiped:	1	20.0%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	0	0.0%	Unspecified:	0	0.0%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%	Day o fweek	#ACC	%
07:30 – 09:30:	1	20.0%	Sunday:	0	0.0%
09:30 – 11:30:	0	0.0%	Monday:	1	20.0%
11:30 – 13:30:	2	40.0%	Tuesday:	0	0.0%
13:30 – 16:00:	1	20.0%	Wednesday:	3	60.0%
16:00 –18:30:	0	0.0%	Thursday:	0	0.0%
18:30 – 07:30:	1	20.0%	Friday:	1	20.0%
Unspecified:	0	0.0%	Saturday:	0	0.0%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	4	80.0%	Dry:	4	80.0%
Rain:	1	20.0%	Wet:	1	20.0%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	0	0.0%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	0	0.0%	Fatal Collision:	0	0.0%
Bus:	0	0.0%	Injury Collision:	2	40.0%
Truck:	0	0.0%	PDO Collision:	3	60.0%
Taxi:	0	0.0%			
Minivan:	0	0.0%	**Light Condition**	**#ACC**	**%**
Police/Emergency Vehicle:	0	0.0%	Daylight:	5	100.0%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	0	0.0%
Bicycle:	0	0.0%	Dark(Lighted):	0	0.0%
Fixed Object:	0	0.0%	Dark(Not Lighted):	0	0.0%
Unspecified:	10	100.0%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	0	0.0%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	0	0.0%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	10	100.0%	Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles
2008	1	0	2	0	0	0	0
2009	3	0	1	0	0	0	0
2010	1	0	0	0	0	0	0

1 Records are not approved as of 5/9/2012 9:24:52 AM

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-7)

Intersection: RIVER RD and BRANDYWINE ST, NW

Time Period Covered: From 01/01/2008 To 12/31/2010 **Prepared By:** Victorine Gwei **Prepared Date:** 5/9/2012

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	6	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	1	16.7%	Ran Off Road:	0	0.0%
Total Number of Injuries:	3	Right Turn:	0	0.0%	Ped. Involved:	2	33.3%
Total Number of Disabling Injuries:	0	Rear End:	1	16.7%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	1	Side Swiped:	0	0.0%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	2	Head On:	1	16.7%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	1	16.7%	Unspecified:	0	0.0%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%
07:30 ~ 09:30:	2	33.3%
09:30 ~ 11:30:	2	33.3%
11:30 ~ 13:30:	1	16.7%
13:30 ~ 16:00:	0	0.0%
16:00 ~18:30:	1	16.7%
18:30 ~ 07:30:	0	0.0%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	0	0.0%
Monday:	0	0.0%
Tuesday:	0	0.0%
Wednesday:	1	16.7%
Thursday:	3	50.0%
Friday:	1	16.7%
Saturday:	1	16.7%

Weather Condition	#ACC	%
Clear:	6	100.0%
Rain:	0	0.0%
Snow:	0	0.0%
Sleet/Hail:	0	0.0%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	0	0.0%

Surface Condition	#ACC	%
Dry:	6	100.0%
Wet:	0	0.0%
Snow/Ice:	0	0.0%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	0	0.0%

Type of Vehicle	#VEH	%
Passenger Car:	0	0.0%
Bus:	0	0.0%
Truck:	0	0.0%
Taxi:	0	0.0%
Minivan:	0	0.0%
Police/Emergency Vehicle:	0	0.0%
Motorcycle/Moped:	0	0.0%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	9	100.0%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	3	50.0%
PDO Collision:	3	50.0%

Light Condition	#ACC	%
Daylight:	6	100.0%
Dawn/Dusk:	0	0.0%
Dark(Lighted):	0	0.0%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	0	0.0%

Contributing Factor	#VEH	%
Driver: Speed:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%
Driver: Electronic Device:	0	0.0%
Driver: Others:	0	0.0%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	9	100.0%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	2	100.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	0	0.0%
From Between Parked Cars:	0	0.0%
Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles
2009	4	0	1	0	0	0	0
2010	2	0	2	1	2	0	0

2 Records are not approved as of 5/9/2012 7:48:58 AM

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-7)

Intersection: WISCONSIN AVE and RIVER RD, NW

Time Period Covered: From 01/01/2008 To 12/31/2010 **Prepared By:** Victorine Gwei **Prepared Date:** 5/9/2012

Total Number of Accident:	19
Total Number of Fatalities:	0
Total Number of Injuries:	4
Total Number of Disabling Injuries:	0
Total Number of NonDisabling Injuries:	2
Total Number of Pedestrians Involved:	2
Total Number of Bicycles Involved:	0
Total Number of Motorcycles Involved:	0

Collision Type	#ACC	%	Collision Type	#ACC	%
Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Right Turn:	0	0.0%	Ped. Involved:	3	15.8%
Rear End:	5	26.3%	Backing:	1	5.3%
Side Swiped:	7	36.8%	Non Collision:	0	0.0%
Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Parked:	3	15.8%	Unspecified:	0	0.0%

Time of Day	#ACC	%
07:30 ~ 09:30:	2	10.5%
09:30 ~ 11:30:	3	15.8%
11:30 ~ 13:30:	3	15.8%
13:30 ~ 16:00:	6	31.6%
16:00 ~18:30:	1	5.3%
18:30 ~ 07:30:	4	21.1%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	2	10.5%
Monday:	3	15.8%
Tuesday:	3	15.8%
Wednesday:	2	10.5%
Thursday:	5	26.3%
Friday:	4	21.1%
Saturday:	0	0.0%

Weather Condition	#ACC	%
Clear:	15	78.9%
Rain:	1	5.3%
Snow:	1	5.3%
Sleet/Hail:	0	0.0%
Fog/Mist:	1	5.3%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	1	5.3%

Surface Condition	#ACC	%
Dry:	15	78.9%
Wet:	2	10.5%
Snow/Ice:	0	0.0%
Slush:	1	5.3%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	1	5.3%

Type of Vehicle	#VEH	%
Passenger Car:	0	0.0%
Bus:	0	0.0%
Truck:	0	0.0%
Taxi:	0	0.0%
Minivan:	0	0.0%
Police/Emergency Vehicle:	0	0.0%
Motorcycle/Moped:	0	0.0%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	35	100.0%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	3	15.8%
PDO Collision:	16	84.2%

Light Condition	#ACC	%
Daylight:	16	84.2%
Dawn/Dusk:	0	0.0%
Dark(Lighted):	3	0.0%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	0	0.0%

Contributing Factor	#VEH	%
Driver: Speed:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%
Driver: Electronic Device:	0	0.0%
Driver: Others:	0	0.0%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	35	100.0%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	0	0.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	1	50.0%
From Between Parked Cars:	0	0.0%
Unspecified:	1	50.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles
2008	8	0	4	2	2	0	0
2009	5	0	0	0	0	0	0
2010	6	0	0	0	0	0	0

4 Records are not approved as of 5/9/2012 8:32:32 AM

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-7)

Intersection: WISCONSIN AVE and ALBEMARLE ST, NW

Time Period Covered: From 01/01/2008 To 12/31/2010 **Prepared By:** Victorine Gwei **Prepared Date:** 5/9/2012

Total Number of Accident:	34
Total Number of Fatalities:	0
Total Number of Injuries:	12
Total Number of Disabling Injuries:	3
Total Number of NonDisabling Injuries:	2
Total Number of Pedestrians Involved:	2
Total Number of Bicycles Involved:	2
Total Number of Motorcycles Involved:	0

Collision Type	#ACC	%	Collision Type	#ACC	%
Right Angle:	1	2.9%	Fixed Object:	0	0.0%
Left Turn:	3	8.8%	Ran Off Road:	0	0.0%
Right Turn:	1	2.9%	Ped. Involved:	3	8.8%
Rear End:	6	17.6%	Backing:	2	5.9%
Side Swiped:	8	23.5%	Non Collision:	1	2.9%
Head On:	2	5.9%	Under/Over Ride:	0	0.0%
Parked:	3	8.8%	Unspecified:	4	11.8%

Time of Day	#ACC	%
07:30 - 09:30:	4	11.8%
09:30 - 11:30:	5	14.7%
11:30 - 13:30:	4	11.8%
13:30 - 16:00:	1	2.9%
16:00 -18:30:	6	17.6%
18:30 - 07:30:	14	41.2%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	6	17.6%
Monday:	4	11.8%
Tuesday:	6	17.6%
Wednesday:	6	17.6%
Thursday:	3	8.8%
Friday:	4	11.8%
Saturday:	5	14.7%

Weather Condition	#ACC	%
Clear:	27	79.4%
Rain:	4	11.8%
Snow:	1	2.9%
Sleet/Hail:	0	0.0%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	2	5.9%

Surface Condition	#ACC	%
Dry:	27	79.4%
Wet:	4	11.8%
Snow/Ice:	1	2.9%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	2	5.9%

Type of Vehicle	#VEH	%
Passenger Car:	0	0.0%
Bus:	0	0.0%
Truck:	0	0.0%
Taxi:	0	0.0%
Minivan:	0	0.0%
Police/Emergency Vehicle:	0	0.0%
Motorcycle/Moped:	0	0.0%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	64	100.0%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	10	29.4%
PDO Collision:	24	70.6%

Light Condition	#ACC	%
Daylight:	18	52.9%
Dawn/Dusk:	0	0.0%
Dark(Lighted):	12	0.0%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	2	5.9%
Unspecified:	2	5.9%

Contributing Factor	#VEH	%
Driver: Speed:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%
Driver: Electronic Device:	0	0.0%
Driver: Others:	0	0.0%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	64	100.0%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	1	50.0%
In Crosswalk no Signal:	0	0.0%
In Unmarked Crosswalk:	1	50.0%
Not In Crosswalk:	0	0.0%
From Between Parked Cars:	0	0.0%
Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles
2008	9	0	2	0	1	0	0
2009	11	0	2	0	0	0	0
2010	14	0	8	2	1	2	0

3 Records are not approved as of 5/9/2012 9:22:37 AM

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-7)

Intersection: WISCONSIN AVE and BRANDYWINE ST, NW

Time Period Covered: From 01/01/2008 To 12/31/2010 **Prepared By:** Victorine Gwei **Prepared Date:** 5/9/2012

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	29	Right Angle:	6	20.7%	Fixed Object:	1	3.4%
Total Number of Fatalities:	0	Left Turn:	4	13.8%	Ran Off Road:	0	0.0%
Total Number of Injuries:	6	Right Turn:	0	0.0%	Ped. Involved:	1	3.4%
Total Number of Disabling Injuries:	1	Rear End:	5	17.2%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	3	Side Swiped:	9	31.0%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	1	Head On:	2	6.9%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	0	0.0%	Unspecified:	1	3.4%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%
07:30 – 09:30:	13	44.8%
09:30 – 11:30:	1	3.4%
11:30 – 13:30:	3	10.3%
13:30 – 16:00:	2	6.9%
16:00 –18:30:	4	13.8%
18:30 – 07:30:	6	20.7%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	3	10.3%
Monday:	5	17.2%
Tuesday:	6	20.7%
Wednesday:	7	24.1%
Thursday:	5	17.2%
Friday:	2	6.9%
Saturday:	1	3.4%

Weather Condition	#ACC	%
Clear:	24	82.8%
Rain:	5	17.2%
Snow:	0	0.0%
Sleet/Hail:	0	0.0%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	0	0.0%

Surface Condition	#ACC	%
Dry:	24	82.8%
Wet:	5	17.2%
Snow/Ice:	0	0.0%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	0	0.0%

Type of Vehicle	#VEH	%
Passenger Car:	0	0.0%
Bus:	0	0.0%
Truck:	0	0.0%
Taxi:	0	0.0%
Minivan:	0	0.0%
Police/Emergency Vehicle:	0	0.0%
Motorcycle/Moped:	0	0.0%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	61	100.0%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	4	13.8%
PDO Collision:	25	86.2%

Light Condition	#ACC	%
Daylight:	22	75.9%
Dawn/Dusk:	0	0.0%
Dark(Lighted):	6	0.0%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	1	3.4%
Unspecified:	0	0.0%

Contributing Factor	#VEH	%
Driver: Speed:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%
Driver: Electronic Device:	0	0.0%
Driver: Others:	0	0.0%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	61	100.0%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	1	100.0%
In Crosswalk no Signal:	0	0.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	0	0.0%
From Between Parked Cars:	0	0.0%
Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles
2008	7	0	0	0	0	0	0
2009	13	0	4	2	0	0	0
2010	9	0	2	1	1	0	0

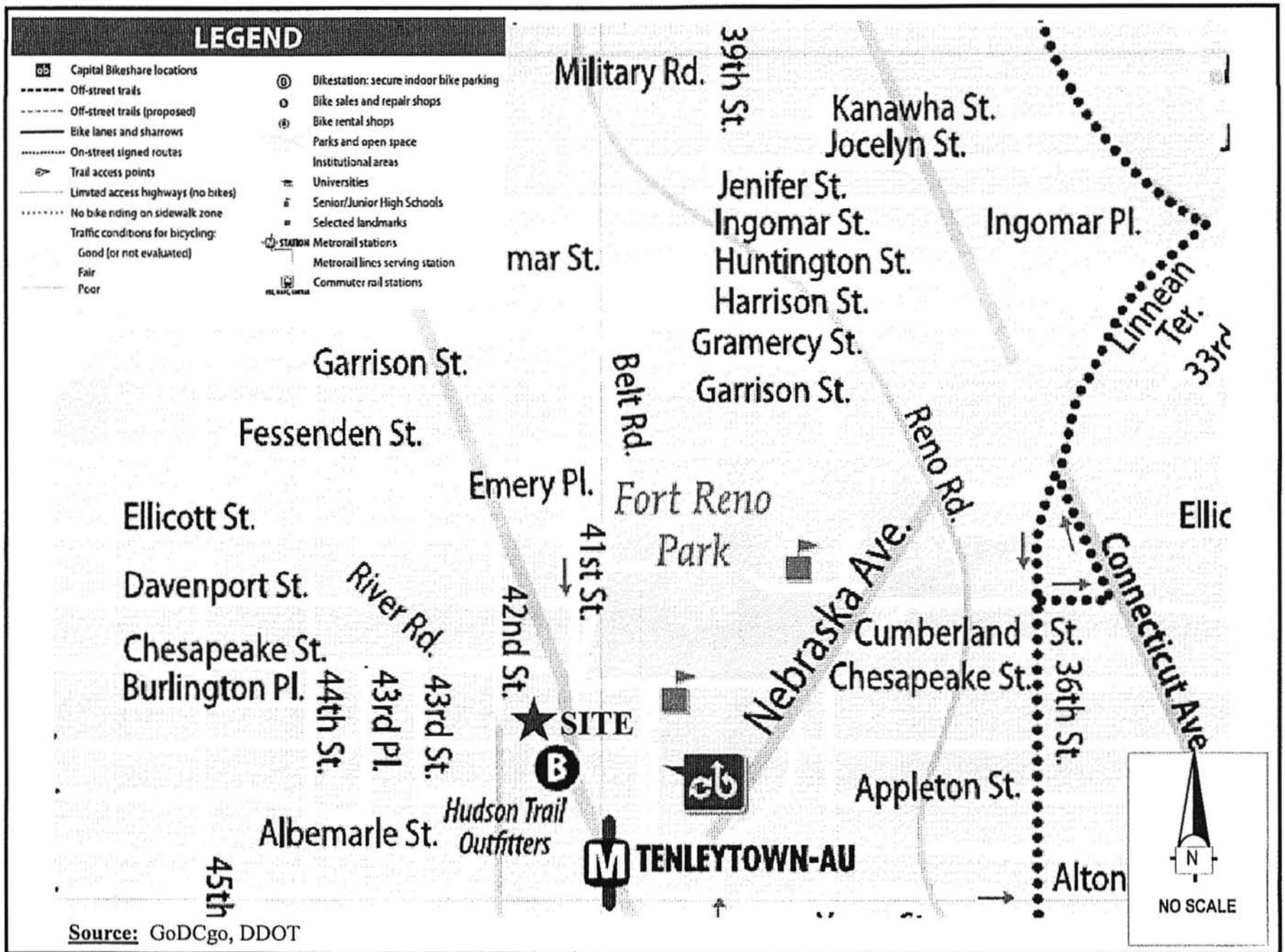
3 Records are not approved as of 5/9/2012 7:44:55 AM

D-7

ATTACHMENT

E

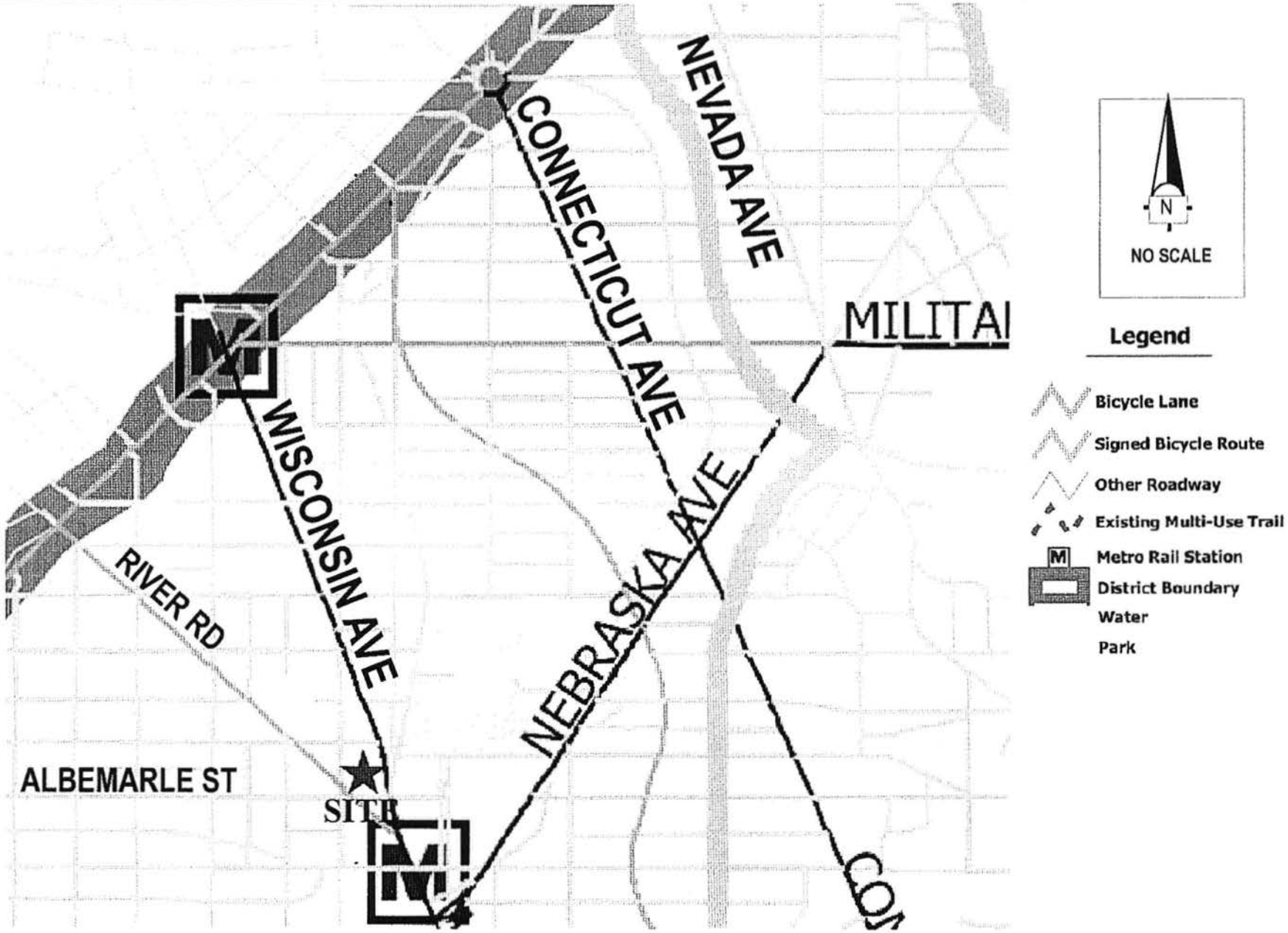
DC Bicycle Master Plan (2005) and
DC Bicycle Map (2011)



Source: GoDCgo, DDOT

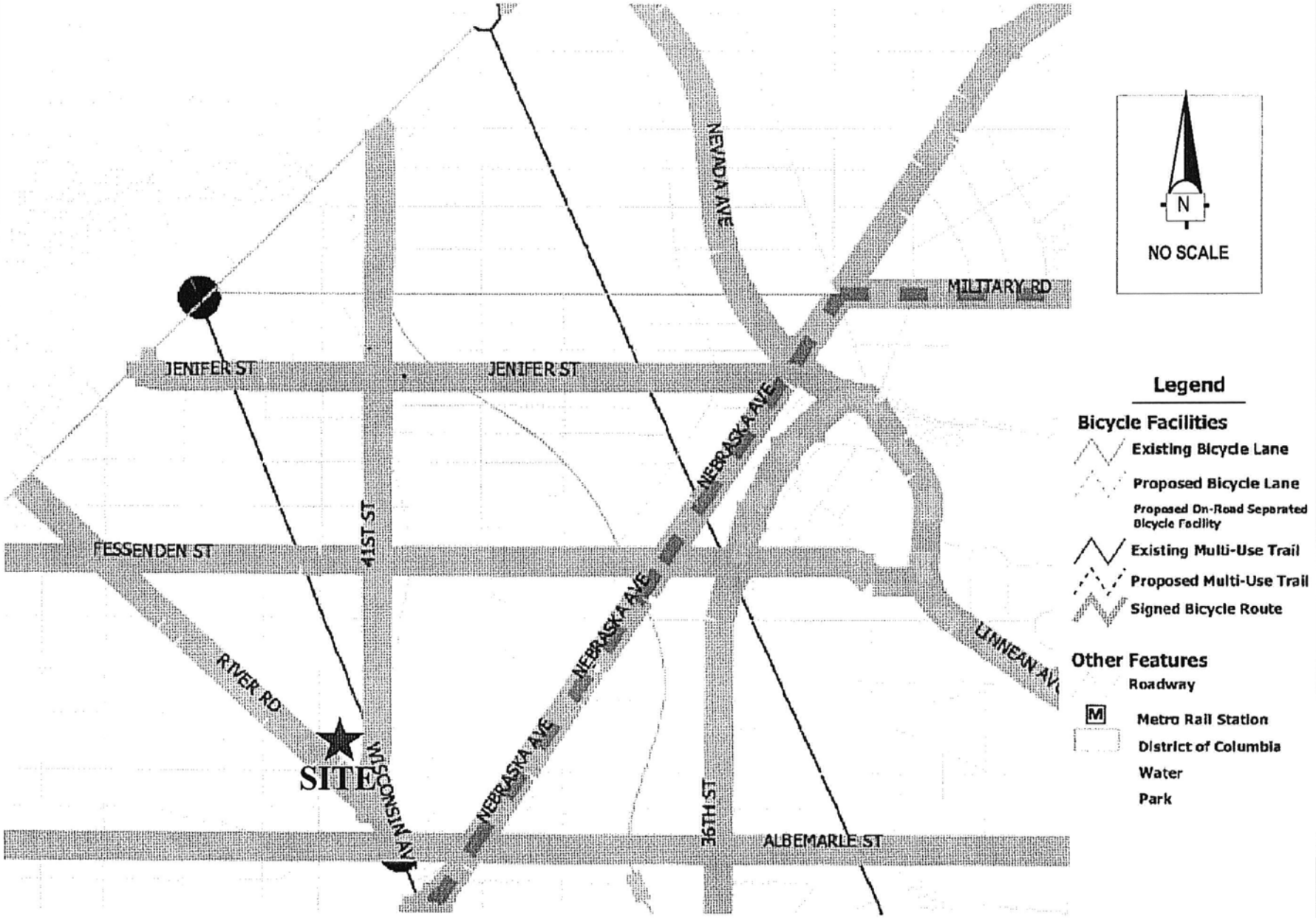
O. R. GEORGE & ASSOCIATES, INC. *Traffic Engineers - Transportation Planners*	**DC Bicycle Map, 2011** **4105 Brandywine Street, Northwest, Washington, D.C** **Board of Zoning Adjustment Application (Case No. 18435)**

E-1



Source: District of Columbia Bicycle Master Plan, 2005.

O. R. GEORGE & ASSOCIATES, INC. *Traffic Engineers - Transportation Planners*	**DC Existing Bicycle Facilities Map** **4105 Brandywine Street, Northwest, Washington, D.C** **Board of Zoning Adjustment Application (Case No. 18435)**



Source: District of Columbia Bicycle Master Plan, 2005.

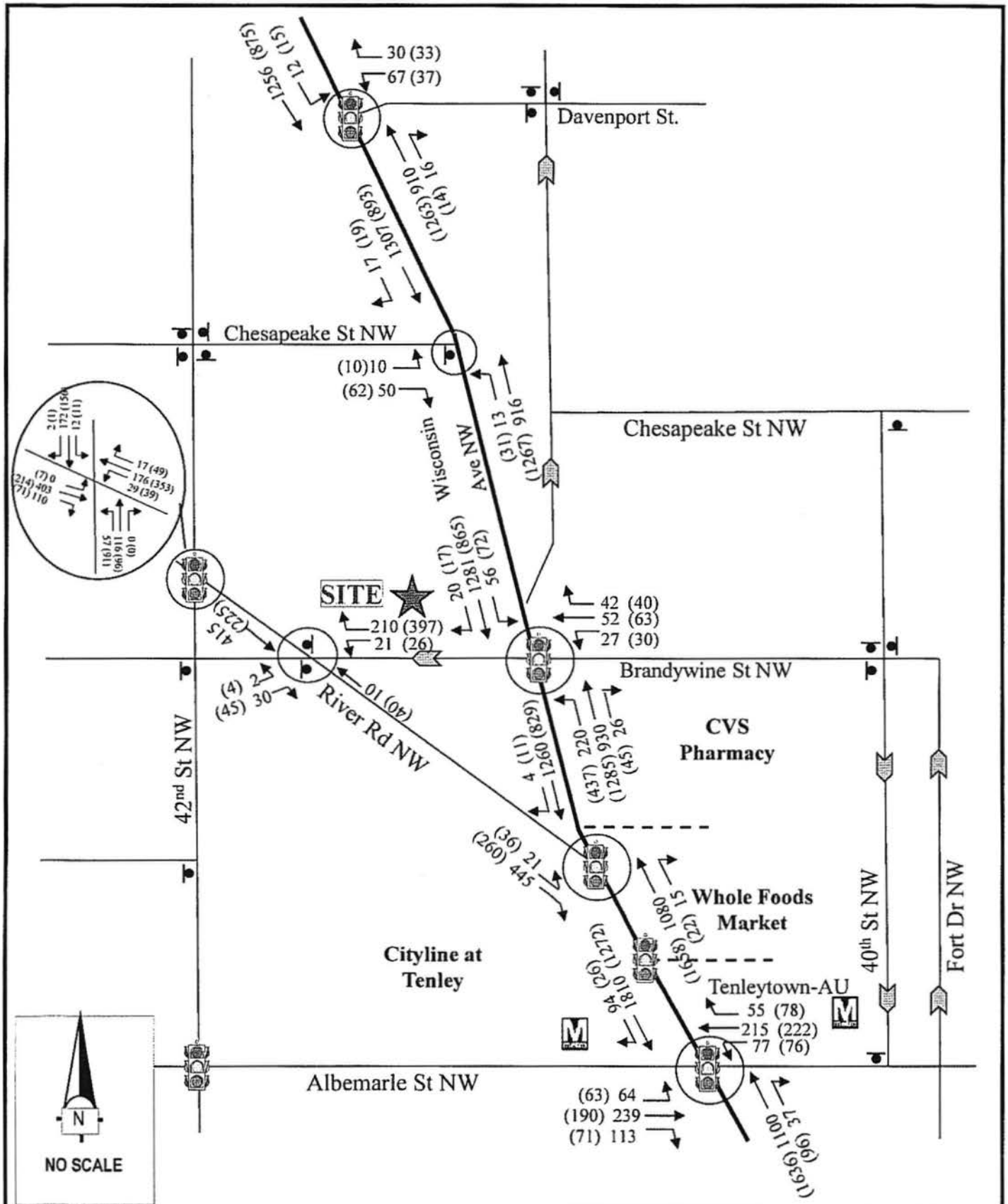
O. R. GEORGE & ASSOCIATES, INC.
Traffic Engineers - Transportation Planners

DC Proposed Bicycle Facilities Map
4105 Brandywine Street, Northwest, Washington, D.C
Board of Zoning Adjustment Application (Case No. 18435)

ATTACHMENT

F

Supporting Material for Background Traffic Analysis



O. R. GEORGE & ASSOCIATES, INC.
Traffic Engineers - Transportation Planners

2015 Base Traffic Situation
4105 Brandywine Street, Norhtwest, Washington, D.C.
Board of Zoning Adjustment Application (Case No. 18435)

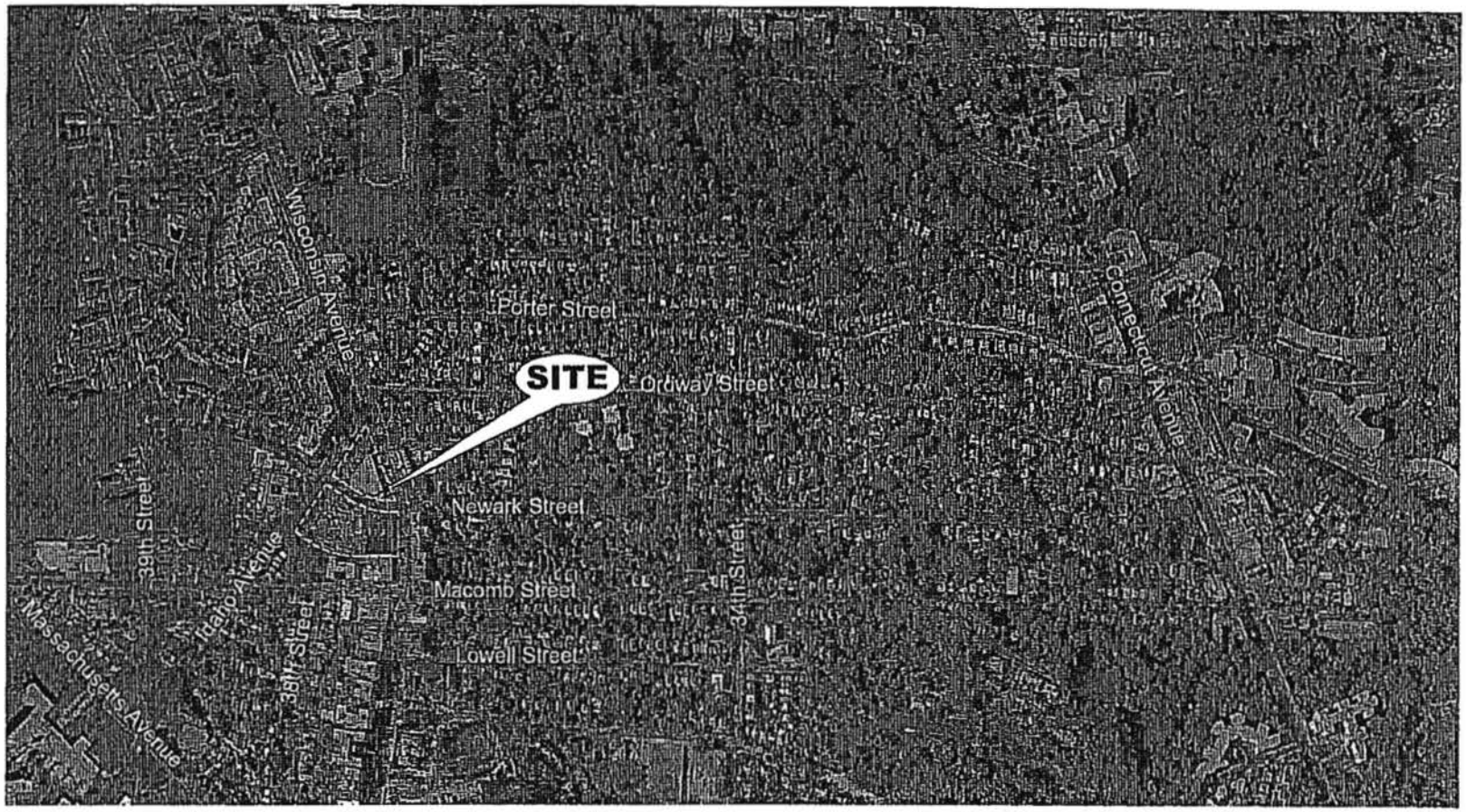
F-1

WISCONSIN AVENUE GIANT
TRANSPORTATION IMPACT STUDY
WASHINGTON, D.C.

Prepared for:
Giant of Maryland, LLC

Prepared by:
Wells + Associates, Inc.

May 14, 2008 PUD Submission



G:\PROJECTS\3501-4000\3992 CLEVELAND PARK GIANT (2000)\GRAPHICS\3992 RPT GRAPHICS.DWG

Figure 1-1
Site Location

North

Directional Distribution

The following directional distribution of site-generated trips was derived from counts of existing traffic, previous traffic study, local knowledge, and engineering judgment:

Residential Site Traffic

Direction	Route	Percent
From the North	Wisconsin Avenue	38%
From the South	Idaho Avenue	7%
From the South	38th Street	2%
From the South	Wisconsin Avenue	30%
From the West	Massachusetts Avenue	7%
From the West	Newark Street	1%
From the East	Porter Street	2%
From the East	Newark Street	10%
From the East	Macomb Street	3%
Total		100%

Commercial Site Traffic

Direction	Route	Percent
From the North	Wisconsin Avenue	36%
From the South	Idaho Avenue	5%
From the South	38th Street	4%
From the South	Wisconsin Avenue	30%
From the West	Massachusetts Avenue	7%
From the West	Newark Street	3%
From the East	Porter Street	2%
From the East	Newark Street	6%
From the East	Macomb Street	7%
Total		100%

Site Traffic Assignments

These site-generated trips were assigned to the public road network according to this directional distribution. The resulting weekday and Saturday site traffic assignments are shown on Figures 3-3 and 3-4, respectively.

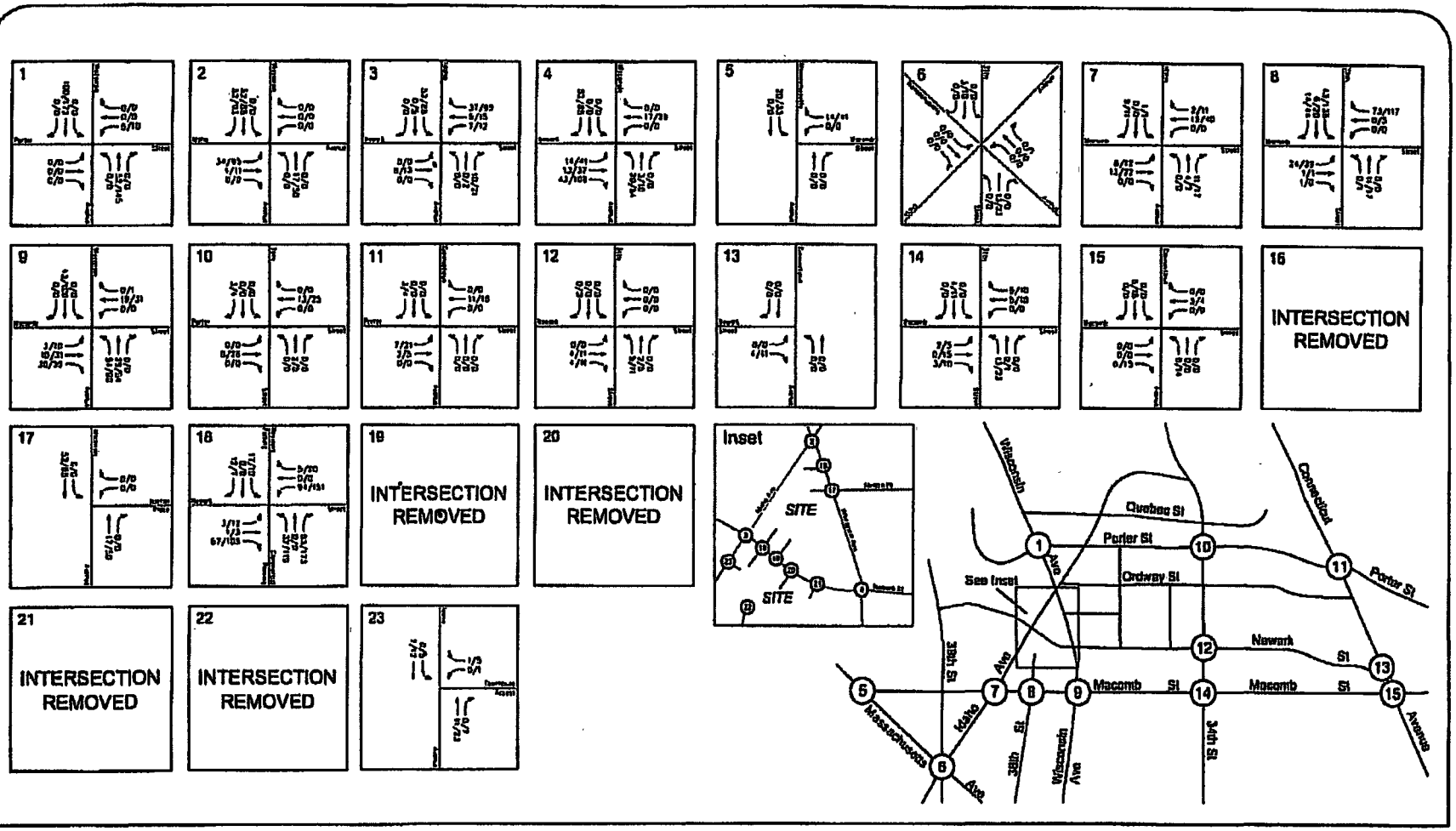
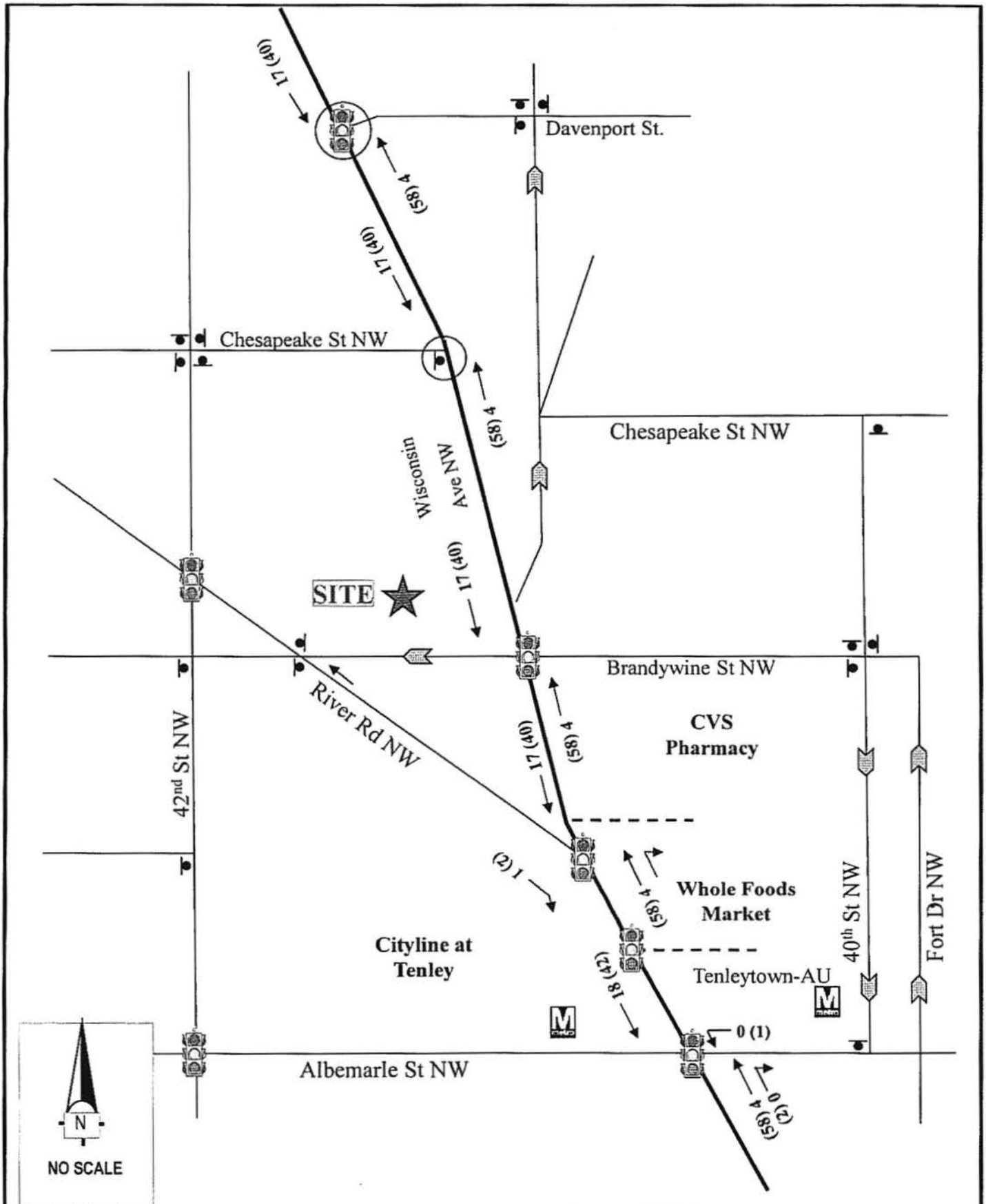


Figure 3-3
Site-Generated Traffic Assignments: Weekday



O. R. GEORGE & ASSOCIATES, INC.
Traffic Engineers - Transportation Planners

Site Trip Generation and Assignment
The Commons

TRAFFIC IMPACT ANALYSIS - 5220 WISCONSIN AVENUE, PLANNED UNIT DEVELOPMENT AND MAP AMENDMENT APPLICATIONS, NORTHWEST, WASHINGTON, DC

Prepared for:
AKRIDGE
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Land Use Counsel:
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- Christopher H. Collins, Esquire
- Christy Moseley Shiker, Esquire-

Prepared by:
O. R. GEORGE & ASSOCIATES, INC.
Transportation Planning & Engineering Consultants
10210 Greenbelt Road, Suite 310
Lanham, MD 20706-2218
Tel: (301) 794-7700

June 15, 2006

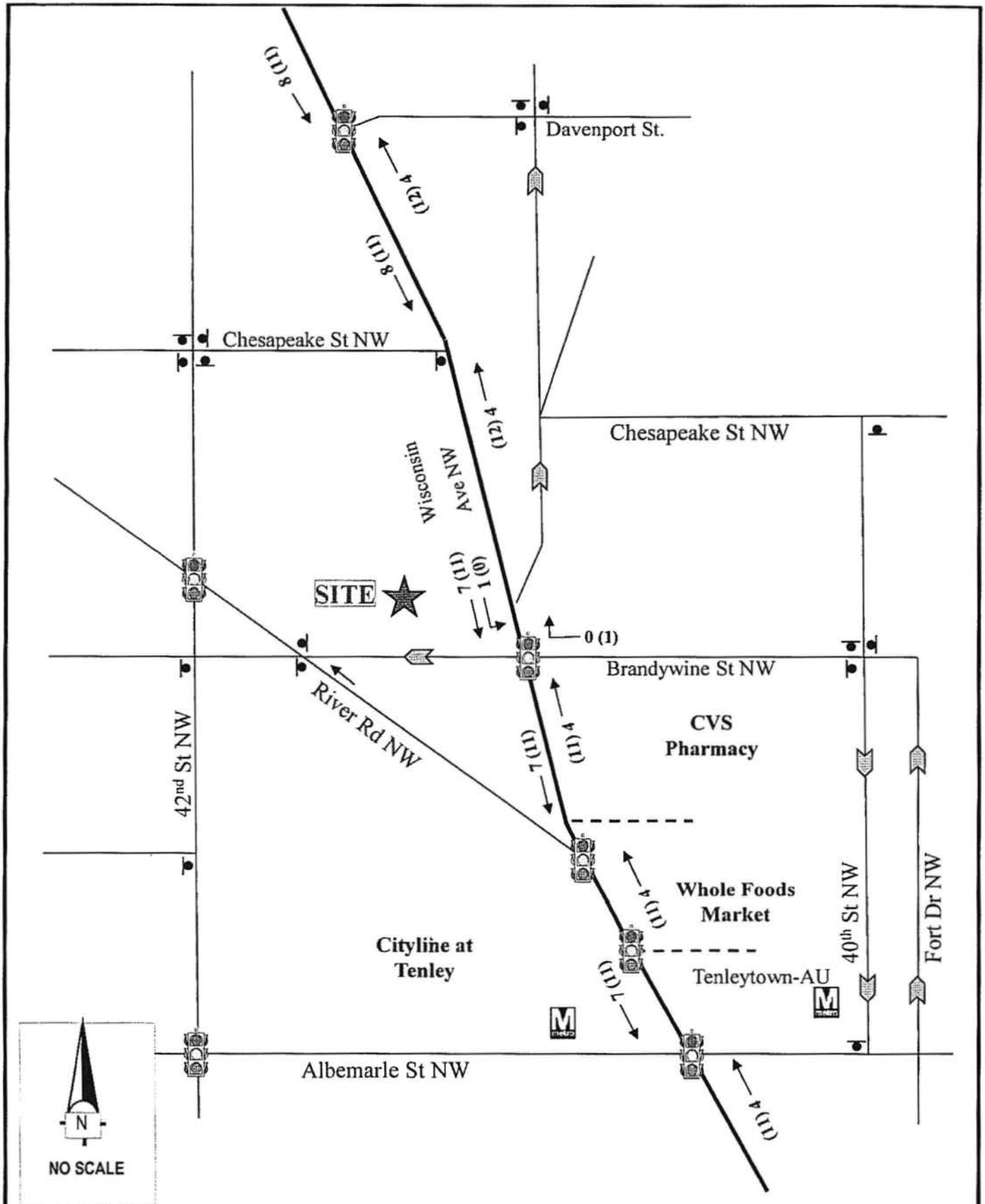
TABLE 6

PROJECTED PEAK HOUR TRIP GENERATION –
PROPOSED 5220 WISCONSIN AVENUE DEVELOPMENT

Trip Rates	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
• Trips Per Condominium Unit	0.09	0.21	0.30	0.23	0.16	0.39
(With 50% Transit Usage*)	0.05	0.10	0.15	0.12	0.08	0.20
• Trips Per 1,000 GSF Retail Space	0.63	0.40	1.03	1.80	1.95	3.75
(With 65% Walk/Non Auto Trips*)	0.22	0.14	0.36	0.63	0.68	1.31
Trip Generation						
• Trips/70 Condominium Units	3	7	10	8	6	14
• Trips/13,200 GSF Retail Space	3	2	5	9	9	18
Total (Proposed Development)	**6**	**9**	**15**	**17**	**15**	**32**
Existing Site Trips	**4**	**2**	**6**	**5**	**7**	**12**

* Based on WMATA 1989 Development Ridership Survey Report (Figure 36, p. 103, Figure 38, p.106 for residential and retail uses, respectively) and agency confirmation in 2005/2006.

Source: ITE Trip Generation Manual (2003), WMATA and O. R. George & Associates.



O. R. GEORGE & ASSOCIATES, INC.
Traffic Engineers - Transportation Planners

Site Trip Generation and Assignment
5220 Wisconsin Ave

TRANSPORTATION AND PARKING ASSESSMENT REPORT- PLANNED UNIT DEVELOPMENT APPLICATION FOR 4600 WISCONSIN AVE., TENLEYTOWN, NORTHWEST, WASHINGTON, DC

(Case No. 10-23)

Prepared for:
DOUGLAS DEVELOPMENT
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Washington, DC 20006
- Paul Millstein, Vice President

Land Use Council:
HOLLAND & KINGHT, LLP
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- Norman N. Glasgow, Jr., Esquire
- M. Carolyn Brown, Esquire

Prepared by:
O. R. GEORGE & ASSOCIATES, INC.
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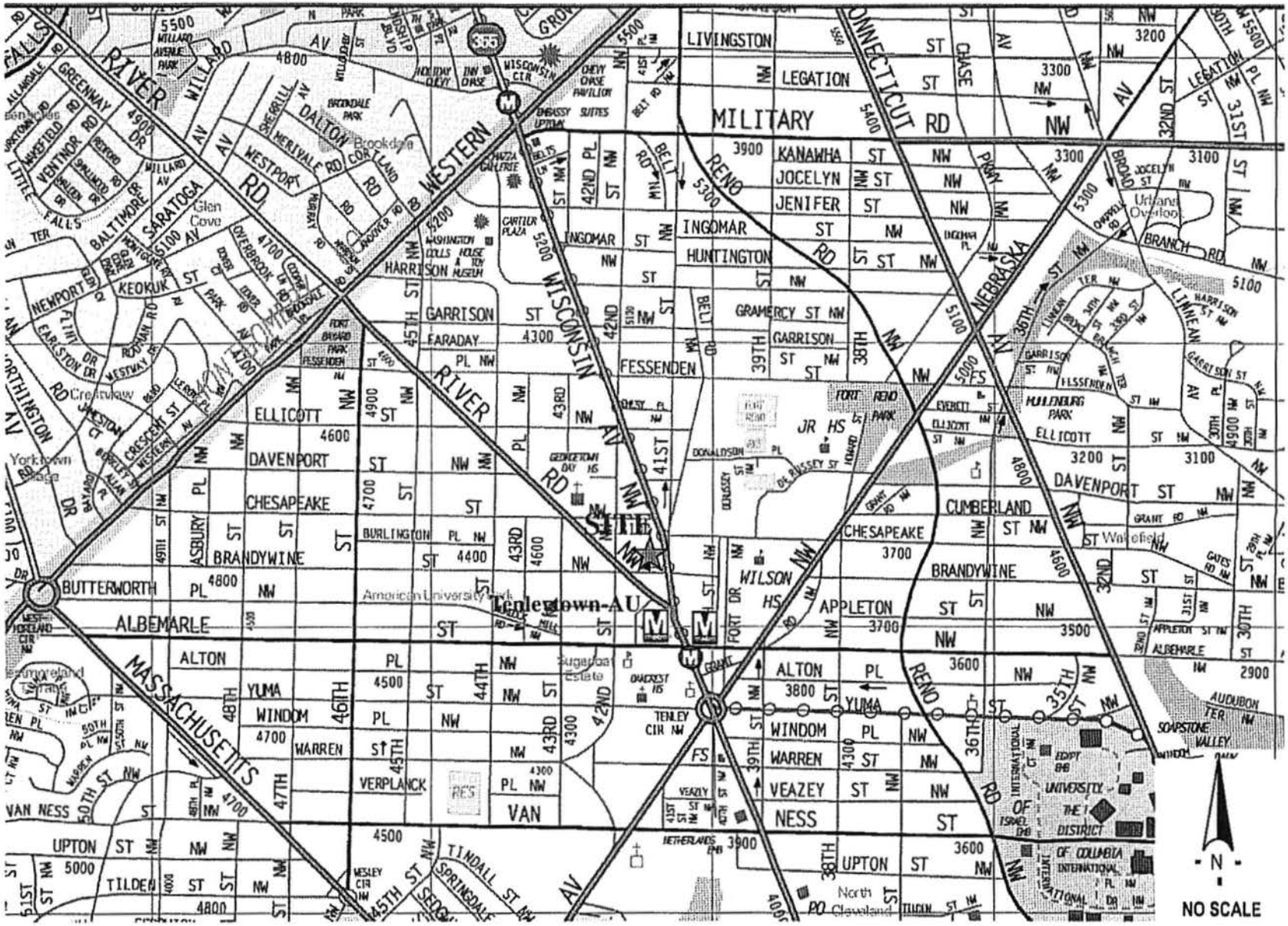
10210 Greenbelt Road, Suite 310
Lanham, Maryland 20706

September 17, 2012

F10



O. R. GEORGE & ASSOCIATES, INC.

Traffic Engineers - Transportation Planners

Exhibit 1: Site Location Map

4600 Wisconsin Avenue Northwest, Washington, D.C.

Planned Unit Development Application (No. ZC 10-23)

recommended rate during the PM peak hour. For convenience, the comparisons are shown in the table following:

Land Use	% Recommended ITE Rate	
	AM Peak Hour	PM Peak Hour
Residential	7%	30%
Retail	30%	66%

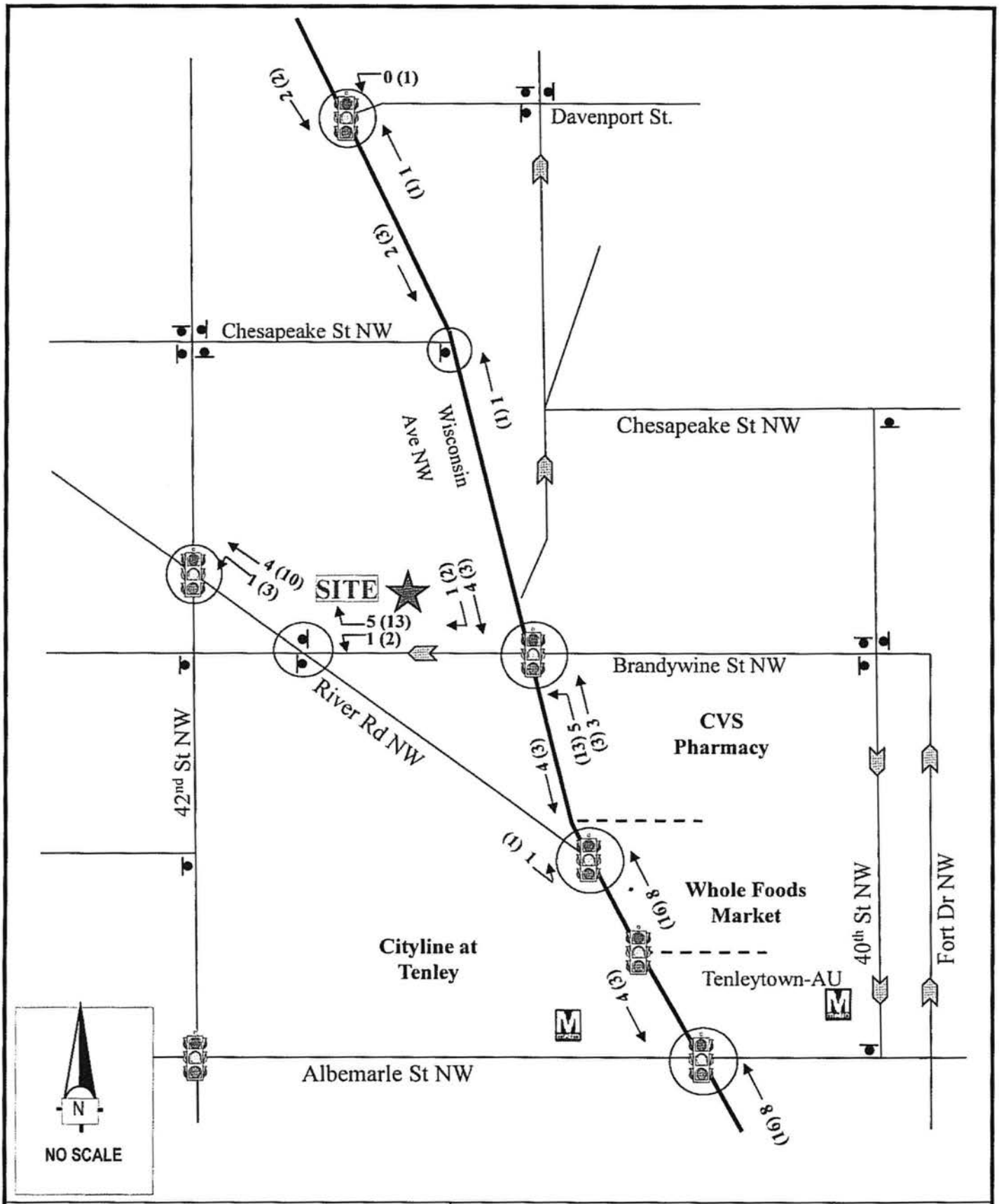
As noted earlier, the PUD site will have 14,000 sq. ft. of retail space, consisting of three (3) to five (5) retail service establishments. The Applicant has advised that these establishments will be local-serving, catering mainly to passer-by traffic, pedestrians, and local residents, including those from the subject development. This study therefore assumes that the retail would have no appreciable vehicle trip generation. *[Note: This assumption is supported by a site survey conducted for the Triangle Development located near the Columbia Heights Metrorail Station, as part of BZA Case No. 18269.]*

Based on the above, and considering adjustments applied in other residential development uses approved by DDOT, this study finds that a 60% non-auto modal split would be a reasonable and conservative assumption for a site having typical parking supply that complies with the City's current Regulations. When coupled with the fact that the Applicant proposes no on-site parking, a reduction factor of 80% was applied. The 20% vehicle trip factor (which this assumption implies) would allow for miscellaneous other trips (i.e., deliveries, drop-offs/pick-up trips, etc.). Some adjustment in the directional split was made to account for the assumptions noted. Table 7 below presents the trip generation estimates of the PUD site. Table 3 also includes trips for the retail component of the site, and reflects similar assumptions made for the retail trips. (See paragraph following below.)

Table 7:
Vehicle Trip Generation (Subject PUD Site)

	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Trip Rates						
Trips per Mid-Rise Apt. Unit *[ITE Land Use Code 223]*	0.09	0.21	0.30	0.23	0.16	0.39
Trip Generation						
Trip/60 Mid-Rise Apt. Units	5	13	18	14	10	24
Net New Residential Trips (With 75% non-auto factor)	**4**	**5**	**9**	**4**	**4**	**8**
Retail Trips	**6**	**6**	**12**	**15**	**15**	**30**
Total Site Trips	**10**	**11**	**21**	**19**	**19**	**38**

Source: ITE Trip Generation Manual (2003), and O. R. George & Associates, Inc.



O. R. GEORGE & ASSOCIATES, INC.
Traffic Engineers - Transportation Planners

Site Trip Generation and Assignment

4600 Wisconsin Avenue, Northwest, Washington D.C.

ATTACHMENT

G

Employee Travel Mode Questionnaire

Employee Questionnaire

Greetings Friendship employees,

As you are hopefully well aware, we are looking to expand and upgrade our facilities. In our efforts to do so, we have hired O.R. George & Associates to conduct a transportation and parking assessment for us. Please take a few minutes of your time to complete the following survey to the best of your abilities.

Thanks,

Karen Mara

For Friendship Personnel *(Survey Monkey)*

1. How long have you been working at FHA?
   __< 1 year
   __ 1 – 2 years
   __ > 2 years

2. Where do you live?
   Neighborhood: _____ Zip code: _____

3. What is your typical work schedule? (check all that apply)
   __ Mon
   __ Tue
   __ Wed
   __ Thu
   __ Fri
   __ Sat
   __ Sun

4. What is your typical shift?
   __ Morning (7AM – 3PM)
   __ Afternoon (3PM – 11PM)
   __ Overnight (11PM – 7AM)
   __ 9AM to 5PM

5. How long is your commute?
   __ ≤ 15 minutes
   __ ≤ 30 minutes
   __ ≤ 1 hour
   __ ≥1 hour

6. Indicate your primary and secondary means of travel during a typical week. (1 for primary; 2 for secondary)
   __ Personal Vehicle
   __ Carpool with other FHA employees
   __ Drop-off/Taxi
   __ Public Transit
   __ Bicycle
   __ Walk

7. If you drive, where do you park?
   __ Meter
   __ RPP
   __ Public/Paid Parking
   __ Not Applicable

8. If you park, please provide your (typical) parking location (address/street name):
   _____

9. Do you use subsidies offered by FHA for transit or parking?
   __ No
   __ Transit
   __ Parking

10. If you do not use Transit subsidies, please give your reason why.
    __ Transit not easily accessible from home
    __ Scheduling
    __ Health
    __ Didn't know it was offered
    __ Other
    __Not Applicable

11. Would you use bikeshare or carshare to commute to/from work if it was subsidized?
    __ Currently use
    __ Likely use
    __ Not likely use

12. Are you currently a member of Capital Bikeshare?
    __ Yes
    __ No

13. Are you currently a member of a carshare service?
    __ Yes
    __ No

Client Questionnaire *(Intercept surveys)*

1. Where do you live?
   Neighborhood: _____ Zip code: _____

2. How long have you been a client of FHA?
   __ First time visit
   __ ≤ 1 year
   __ ≤ 2 years
   __ ≥ 3 years

3. What is the nature of your visit?
   __ Regular check up
   __ Emergency
   __ Special care
   __ Other _____

4. How did you arrive (travel) here today?
   __ Personal Vehicle
   __ Drop-Off/Taxi
   __ Public Transit
   __ Bicycle
   __ Walk
   __ Other

   4a. If you drove, where did you park?
   __ On-site
   __ Meter
   __ RPP
   __ Public/Paid parking

   4b. If you parked, please provide your (typical) parking location (address/street name):
   _____

5. Are you making other stops within the Tenleytown area before you go home? Or have you already made stops on your way here? (e.g. shopping, coffee, etc.)
   __ Yes
   __ No

For Drop-off/Pick up *(Intercept Surveys)*

1. Are you on your way to work? / Where are you on your way to?
2. How did you arrive? / How are you continuing?
3. What time do you expect to pick up? And by what travel means?

ATTACHMENT

H

Synchro Analysis Worksheets–
2015 Total Traffic Situation

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.91			0.95
Frt	0.94		1.00			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1700		5077			3536
Flt Permitted	0.97		1.00			0.91
Satd. Flow (perm)	1700		5077			3227
Volume (vph)	38	33	1334	14	15	930
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	36	1450	15	16	1011
RTOR Reduction (vph)	27	0	1	0	0	0
Lane Group Flow (vph)	50	0	1464	0	0	1027
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	23.0		63.0			63.0
Effective Green, g (s)	26.0		66.0			66.0
Actuated g/C Ratio	0.26		0.66			0.66
Clearance Time (s)	7.0		7.0			7.0
Lane Grp Cap (vph)	442		3351			2130
v/s Ratio Prot	c0.03		0.29			
v/s Ratio Perm						c0.32
v/c Ratio	0.11		0.44			0.48
Uniform Delay, d1	28.2		8.1			8.5
Progression Factor	1.00		2.35			1.00
Incremental Delay, d2	0.5		0.4			0.8
Delay (s)	28.7		19.5			9.3
Level of Service	C		B			A
Approach Delay (s)	28.7		19.5			9.3
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.91		1.00	0.95	
Frt					0.96		1.00	1.00		1.00	1.00	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1765		1770	5061		1770	3527	
Flt Permitted					0.99		0.13	1.00		0.16	1.00	
Satd. Flow (perm)					1765		235	5061		294	3527	
Volume (vph)	0	0	0	30	63	41	450	1357	45	72	919	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	33	68	45	489	1475	49	78	999	23
RTOR Reduction (vph)	0	0	0	0	16	0	0	3	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	130	0	489	1521	0	78	1020	0
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				6	6		7	4		3	8	
Permitted Phases							4			8		
Actuated Green, G (s)					19.6		66.4	53.9		43.9	38.4	
Effective Green, g (s)					22.6		69.4	56.9		49.9	41.4	
Actuated g/C Ratio					0.23		0.69	0.57		0.50	0.41	
Clearance Time (s)					7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)					3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)					399		531	2880		272	1460	
v/s Ratio Prot					c0.07		c0.22	0.30		0.02	0.29	
v/s Ratio Perm							c0.42			0.12		
v/c Ratio					0.33		0.92	0.53		0.29	0.70	
Uniform Delay, d1					32.3		25.6	13.3		13.1	24.2	
Progression Factor					1.00		1.91	0.23		0.60	1.00	
Incremental Delay, d2					2.2		17.8	0.5		0.5	2.6	
Delay (s)					34.5		66.5	3.6		8.5	26.8	
Level of Service					C		E	A		A	C	
Approach Delay (s)		0.0			34.5			18.9			25.5	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.91	0.95	
Frt	0.88			1.00	1.00	
Flt Protected	0.99			1.00	1.00	
Satd. Flow (prot)	1632			5085	3527	
Flt Permitted	0.99			1.00	1.00	
Satd. Flow (perm)	1632			5085	3527	
Volume (vph)	37	264	0	1750	883	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	287	0	1902	960	22
RTOR Reduction (vph)	77	0	0	0	2	0
Lane Group Flow (vph)	250	0	0	1902	980	0
Turn Type						
Protected Phases	2			8	4	
Permitted Phases						
Actuated Green, G (s)	32.0			55.0	55.0	
Effective Green, g (s)	35.0			57.0	57.0	
Actuated g/C Ratio	0.35			0.57	0.57	
Clearance Time (s)	7.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	571			2898	2010	
v/s Ratio Prot	c0.15			c0.37	0.28	
v/s Ratio Perm						
v/c Ratio	0.44			0.66	0.49	
Uniform Delay, d1	25.0			14.8	12.8	
Progression Factor	1.00			0.13	0.19	
Incremental Delay, d2	2.4			0.7	0.6	
Delay (s)	27.4			2.6	3.0	
Level of Service	C			A	A	
Approach Delay (s)	27.4			2.6	3.0	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	5.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00			1.00			0.91			0.95	
Frt	1.00	0.96			0.97			0.99			1.00	
Flt Protected	0.95	1.00			0.99			1.00			1.00	
Satd. Flow (prot)	1770	1787			1792			5044			3529	
Flt Permitted	0.38	1.00			0.87			1.00			1.00	
Satd. Flow (perm)	701	1787			1573			5044			3529	
Volume (vph)	63	190	71	76	222	78	0	1728	98	0	1330	26
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	207	77	83	241	85	0	1878	107	0	1446	28
RTOR Reduction (vph)	0	9	0	0	10	0	0	6	0	0	2	0
Lane Group Flow (vph)	68	275	0	0	399	0	0	1979	0	0	1472	0
Turn Type	pm+pt			Perm								
Protected Phases	1	6			2			4			8	
Permitted Phases	6			2								
Actuated Green, G (s)	43.0	43.0			33.8			45.0			45.0	
Effective Green, g (s)	45.0	45.0			35.8			47.0			47.0	
Actuated g/C Ratio	0.45	0.45			0.36			0.47			0.47	
Clearance Time (s)	6.0	6.0			6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	371	804			563			2371			1659	
v/s Ratio Prot	0.01	c0.15						0.39			c0.42	
v/s Ratio Perm	0.07				c0.25							
v/c Ratio	0.18	0.34			0.71			0.83			0.89	
Uniform Delay, d1	17.8	17.9			27.6			23.1			24.1	
Progression Factor	1.00	1.00			1.00			1.00			1.13	
Incremental Delay, d2	0.2	1.2			7.4			3.6			7.0	
Delay (s)	18.0	19.0			35.0			26.8			34.1	
Level of Service	B	B			D			C			C	
Approach Delay (s)		18.8			35.0			26.8			34.1	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			0.97			0.99	
Flt Protected		0.98			1.00			1.00			1.00	
Satd. Flow (prot)		1818			1855			1800			1827	
Flt Permitted		0.78			0.98			0.99			0.93	
Satd. Flow (perm)		1458			1824			1777			1702	
Volume (vph)	91	96	0	11	156	1	7	214	71	45	367	49
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	104	0	12	170	1	8	233	77	49	399	53
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	6	0
Lane Group Flow (vph)	0	203	0	0	183	0	0	302	0	0	495	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		54.1			54.1			31.9			31.9	
Effective Green, g (s)		57.1			57.1			34.9			34.9	
Actuated g/C Ratio		0.57			0.57			0.35			0.35	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		833			1042			620			594	
v/s Ratio Prot												
v/s Ratio Perm		c0.14			0.10			0.17			c0.29	
v/c Ratio		0.24			0.18			0.49			0.83	
Uniform Delay, d1		10.7			10.2			25.5			29.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.7			0.4			0.6			9.8	
Delay (s)		11.4			10.6			26.1			39.7	
Level of Service		B			B			C			D	
Approach Delay (s)		11.4			10.6			26.1			39.7	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	10	50	13	925	1334	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	54	14	1005	1450	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				490	393	
pX, platoon unblocked	0.89	0.87	0.87			
vC, conflicting volume	1990	493	1468			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1420	130	1247			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	93	97			
cM capacity (veh/h)	110	782	484			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	65	349	670	580	580	308
Volume Left	11	14	0	0	0	0
Volume Right	54	0	0	0	0	18
cSH	387	484	1700	1700	1700	1700
Volume to Capacity	0.17	0.03	0.39	0.34	0.34	0.18
Queue Length 95th (ft)	15	2	0	0	0	0
Control Delay (s)	16.2	1.0	0.0	0.0	0.0	0.0
Lane LOS	C	A				
Approach Delay (s)	16.2	0.3		0.0		
Approach LOS	C					

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	45.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	0	30	23	0	220	0	415	0	0	10	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	33	25	0	239	0	451	0	0	11	0

Direction, Lane #	EB 1	EB 2	WB 1	SE 1	NW 1
Volume Total (vph)	2	33	264	451	11
Volume Left (vph)	2	0	25	0	0
Volume Right (vph)	0	33	239	0	0
Hadj (s)	0.53	-0.67	-0.49	0.03	0.03
Departure Headway (s)	6.5	5.3	4.7	4.7	5.3
Degree Utilization, x	0.00	0.05	0.35	0.59	0.02
Capacity (veh/h)	497	602	707	740	618
Control Delay (s)	8.4	7.4	10.2	14.1	8.3
Approach Delay (s)	7.4		10.2	14.1	8.3
Approach LOS	A		B	B	A

Intersection Summary				
Delay	12.4			
HCM Level of Service	B			
Intersection Capacity Utilization	50.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	10	62	31	1338	949	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	67	34	1454	1032	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				490	393	
pX, platoon unblocked	0.89	0.86	0.86			
vC, conflicting volume	1594	526	1052			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	878	285	897			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	89	95			
cM capacity (veh/h)	244	612	647			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	78	325	582	582	688	364
Volume Left	11	34	0	0	0	0
Volume Right	67	0	0	0	0	21
cSH	505	647	1700	1700	1700	1700
Volume to Capacity	0.15	0.05	0.34	0.34	0.40	0.21
Queue Length 95th (ft)	14	4	0	0	0	0
Control Delay (s)	13.4	1.7	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	13.4	0.4			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	0	45	45	0	418	0	225	0	0	40	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	49	49	0	454	0	245	0	0	43	0

Direction, Lane #	EB 1	EB 2	WB 1	SE 1	NW 1
Volume Total (vph)	4	49	503	245	43
Volume Left (vph)	4	0	49	0	0
Volume Right (vph)	0	49	454	0	0
Hadj (s)	0.53	-0.67	-0.49	0.03	0.03
Departure Headway (s)	6.4	5.2	4.4	5.3	5.6
Degree Utilization, x	0.01	0.07	0.62	0.36	0.07
Capacity (veh/h)	515	631	788	629	554
Control Delay (s)	8.2	7.4	14.2	11.2	9.0
Approach Delay (s)	7.4		14.2	11.2	9.0
Approach LOS	A		B	B	A

Intersection Summary			
Delay	12.6		
HCM Level of Service	B		
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.91
Frt	0.96		1.00			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1725		3530			5083
Flt Permitted	0.97		1.00			0.93
Satd. Flow (perm)	1725		3530			4712
Volume (vph)	67	30	919	16	12	1285
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	33	999	17	13	1397
RTOR Reduction (vph)	16	0	1	0	0	0
Lane Group Flow (vph)	90	0	1015	0	0	1410
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)	23.0		63.0			63.0
Effective Green, g (s)	26.0		66.0			66.0
Actuated g/C Ratio	0.26		0.66			0.66
Clearance Time (s)	7.0		7.0			7.0
Lane Grp Cap (vph)	449		2330			3110
v/s Ratio Prot	c0.05		0.29			
v/s Ratio Perm						c0.30
v/c Ratio	0.20		0.44			0.45
Uniform Delay, d1	28.9		8.1			8.2
Progression Factor	1.00		2.40			1.00
Incremental Delay, d2	1.0		0.5			0.5
Delay (s)	29.9		20.0			8.7
Level of Service	C		C			A
Approach Delay (s)	29.9		20.0			8.7
Approach LOS	C		C			A

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.91	
Frt					0.95		1.00	1.00		1.00	1.00	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1756		1770	3525		1770	5072	
Flt Permitted					0.99		0.10	1.00		0.24	1.00	
Satd. Flow (perm)					1756		185	3525		444	5072	
Volume (vph)	0	0	0	27	52	42	225	941	26	56	1309	23
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	29	57	46	245	1023	28	61	1423	25
RTOR Reduction (vph)	0	0	0	0	19	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	0	0	0	113	0	245	1049	0	61	1446	0
Turn Type				Split			pm+pt			pm+pt		
Protected Phases				6	6		7	4		3	8	
Permitted Phases							4			8		
Actuated Green, G (s)					19.6		66.4	54.0		50.3	44.9	
Effective Green, g (s)					22.6		69.4	57.0		56.3	47.9	
Actuated g/C Ratio					0.23		0.69	0.57		0.56	0.48	
Clearance Time (s)					7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)					3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)					397		406	2009		361	2429	
v/s Ratio Prot					c0.06		c0.11	0.30		0.01	0.29	
v/s Ratio Perm							c0.31			0.08		
v/c Ratio					0.28		0.60	0.52		0.17	0.60	
Uniform Delay, d1					32.0		17.6	13.2		10.1	19.0	
Progression Factor					1.00		2.22	0.21		0.45	0.97	
Incremental Delay, d2					1.8		2.1	0.8		0.2	1.0	
Delay (s)					33.8		41.1	3.5		4.7	19.5	
Level of Service					C		D	A		A	B	
Approach Delay (s)		0.0			33.8			10.6			18.9	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.91	
Frt	0.87			1.00	1.00	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	1619			3539	5079	
Flt Permitted	1.00			1.00	1.00	
Satd. Flow (perm)	1619			3539	5079	
Volume (vph)	22	447	0	1103	1288	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	486	0	1199	1400	11
RTOR Reduction (vph)	26	0	0	0	1	0
Lane Group Flow (vph)	484	0	0	1199	1410	0
Turn Type						
Protected Phases	2			8	4	
Permitted Phases						
Actuated Green, G (s)	32.0			55.0	55.0	
Effective Green, g (s)	35.0			57.0	57.0	
Actuated g/C Ratio	0.35			0.57	0.57	
Clearance Time (s)	7.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	567			2017	2895	
v/s Ratio Prot	c0.30			c0.34	0.28	
v/s Ratio Perm						
v/c Ratio	0.85			0.59	0.49	
Uniform Delay, d1	30.1			14.0	12.8	
Progression Factor	1.00			0.18	0.16	
Incremental Delay, d2	15.1			0.9	0.5	
Delay (s)	45.2			3.4	2.5	
Level of Service	D			A	A	
Approach Delay (s)	45.2			3.4	2.5	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00			1.00			0.95			0.91	
Frt	1.00	0.95			0.98			1.00			0.99	
Flt Protected	0.95	1.00			0.99			1.00			1.00	
Satd. Flow (prot)	1770	1773			1803			3522			5048	
Flt Permitted	0.40	1.00			0.83			1.00			1.00	
Satd. Flow (perm)	748	1773			1516			3522			5048	
Volume (vph)	64	239	113	77	215	55	0	1123	37	0	1840	94
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	260	123	84	234	60	0	1221	40	0	2000	102
RTOR Reduction (vph)	0	2	0	0	6	0	0	2	0	0	5	0
Lane Group Flow (vph)	70	381	0	0	372	0	0	1259	0	0	2097	0
Turn Type	pm+pt			Perm								
Protected Phases	1	6			2			4			8	
Permitted Phases	6			2								
Actuated Green, G (s)	43.0	43.0			33.8			45.0			45.0	
Effective Green, g (s)	45.0	45.0			35.8			47.0			47.0	
Actuated g/C Ratio	0.45	0.45			0.36			0.47			0.47	
Clearance Time (s)	6.0	6.0			6.0			6.0			6.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	390	798			543			1655			2373	
v/s Ratio Prot	0.01	c0.22						0.36			c0.42	
v/s Ratio Perm	0.07				c0.25							
v/c Ratio	0.18	0.48			0.68			0.76			0.88	
Uniform Delay, d1	17.6	19.3			27.3			21.9			24.0	
Progression Factor	1.00	1.00			1.00			1.00			0.84	
Incremental Delay, d2	0.2	2.0			6.9			3.4			4.6	
Delay (s)	17.8	21.3			34.1			25.2			24.7	
Level of Service	B	C			C			C			C	
Approach Delay (s)		20.8			34.1			25.2			24.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			0.97			0.99	
Flt Protected		0.98			1.00			1.00			0.99	
Satd. Flow (prot)		1833			1854			1809			1832	
Flt Permitted		0.85			0.98			1.00			0.56	
Satd. Flow (perm)		1586			1824			1809			1032	
Volume (vph)	57	116	0	12	172	2	0	403	110	31	184	17
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	126	0	13	187	2	0	438	120	34	200	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	13	0	0	4	0
Lane Group Flow (vph)	0	188	0	0	202	0	0	545	0	0	248	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		52.7			52.7			33.3			33.3	
Effective Green, g (s)		55.7			55.7			36.3			36.3	
Actuated g/C Ratio		0.56			0.56			0.36			0.36	
Clearance Time (s)		7.0			7.0			7.0			7.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		883			1016			657			375	
v/s Ratio Prot								c0.30				
v/s Ratio Perm		c0.12			0.11						0.24	
v/c Ratio		0.21			0.20			0.83			0.66	
Uniform Delay, d1		11.1			11.0			29.0			26.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.6			0.4			8.5			4.3	
Delay (s)		11.7			11.5			37.5			31.1	
Level of Service		B			B			D			C	
Approach Delay (s)		11.7			11.5			37.5			31.1	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

ATTACHMENT

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BZA Site Vehicular Activity Photographs

Alley Operation