HAMPTON CORRIDOR TRAFFIC STUDY

Submitted
June 10, 2019

Prepared for:
City of St. Louis
Board of Public Service

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PURPOSE

The purpose of this study was to determine the feasibility of reducing traffic lanes along Hampton Avenue between Chippewa Street and Gravois Avenue. The motivation for reducing lanes or implementing a “road diet” is a desire for Hampton Avenue to more effectively serve all users of the street, including pedestrians, cyclists, transit users, and motorists. Today, Hampton Avenue functions as an arterial street that prioritizes vehicle traffic over other modes. Hampton has two traffic lanes in each direction. Traffic signal cycles are long to accommodate through traffic. Many areas along the corridor lack adequate pedestrian and bicycle infrastructure.

At the same time, the land use context along Hampton Avenue is evolving. Small businesses and restaurants are reinvigorating existing commercial buildings. These new businesses, particularly the restaurants, have amplified the need for parking. Many restaurants rely upon on-street parking along Hampton Avenue to serve their patrons. Adjacent neighborhood residents are more and more seeking a walkable community and an urban experience.

Implementing a “road diet” along Hampton Avenue would reduce traffic speeds, improve safety, and promote a more welcoming environment for non-motorized users of the street. This study objectively evaluates the feasibility of a “road diet” along the Hampton Avenue corridor by detailing its anticipated benefits and impacts to traffic.

LOCATION

The study runs along Hampton Avenue from Chippewa Street to the north to Gravois Avenue to the south. This area touches both Ward 16 and Ward 12 of the City of St. Louis and three neighborhoods – St. Louis Hills, Princeton Heights, and South Hampton. Ward and neighborhood maps are depicted in **Figure 1** and **Figure 2**. The surrounding neighborhoods are mostly single-family. The northern portion of the corridor is commercial including large retail centers with off-street parking, such as the Hampton Village Shopping Center. The middle portion contains small-scale commercial uses with buildings abutting the sidewalks and on-street parking. The southern portion of the corridor is lined with mostly residential uses and Willmore Park.

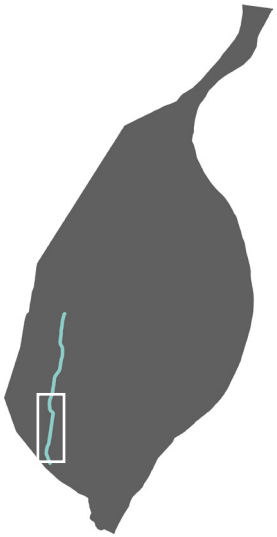


Figure 1. Hampton Corrridor City Wards

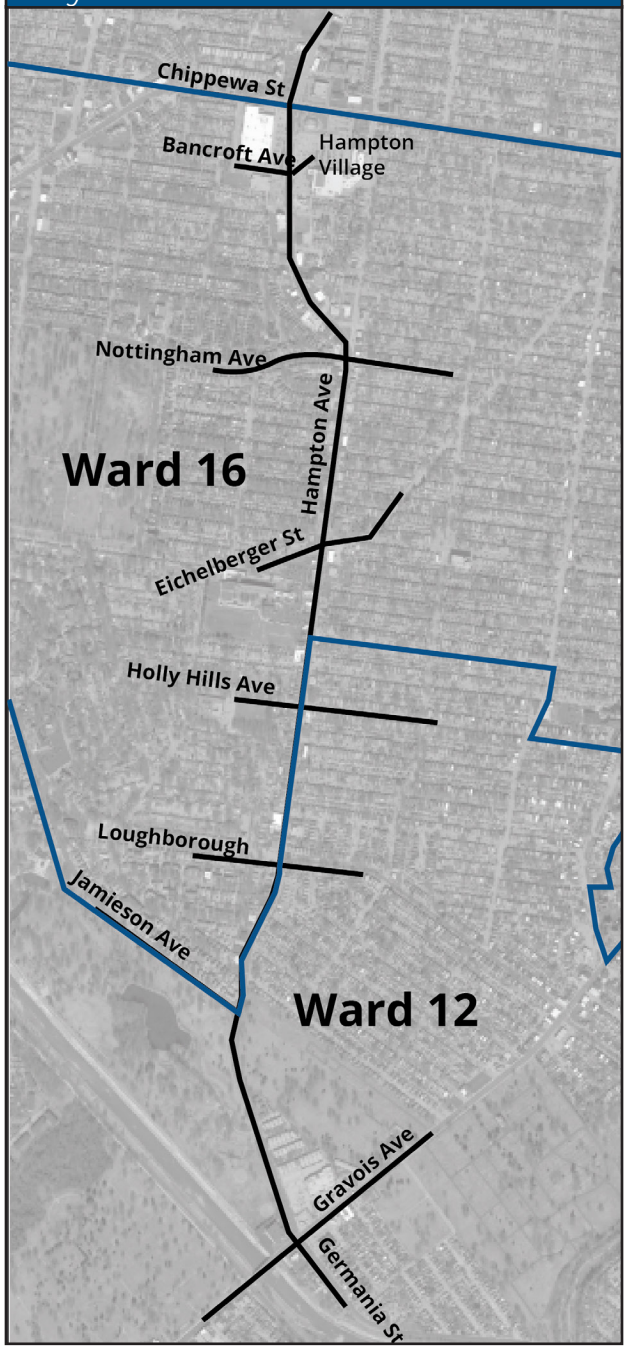
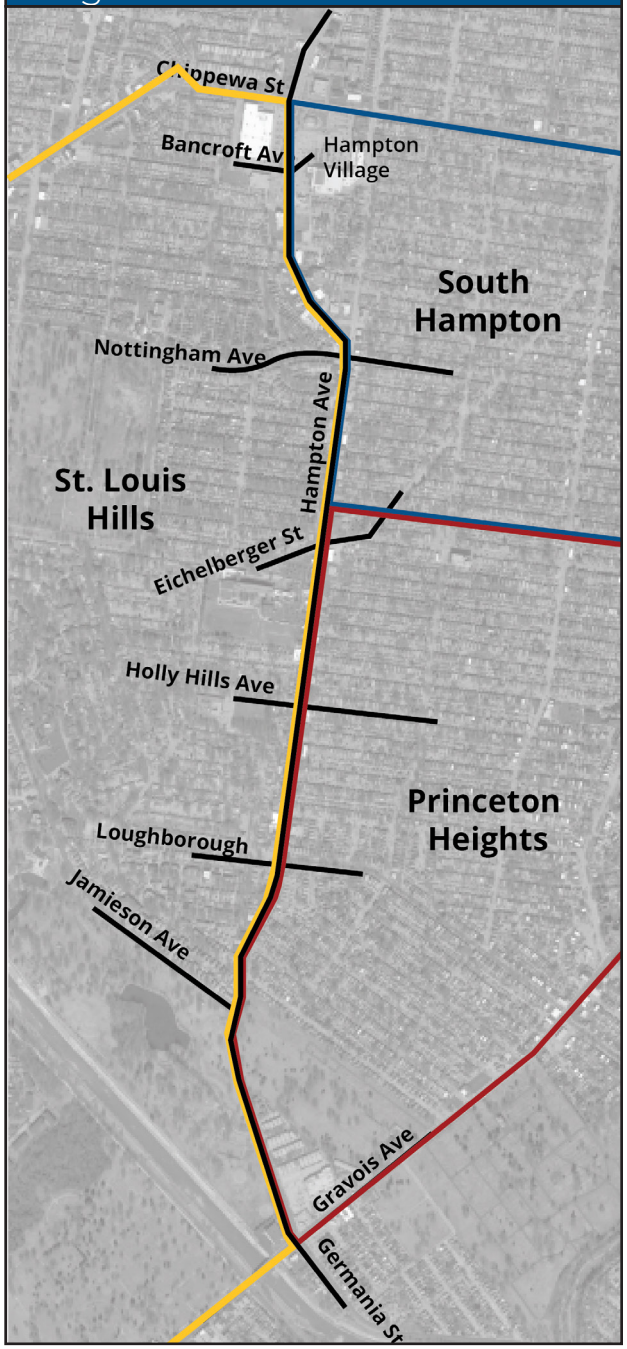


Figure 2. Hampton Corridor Neighborhoods



SCOPE

To assess the feasibility of a road diet, this study first evaluated existing conditions along Hampton Avenue based on the current configuration of the corridor. The existing conditions were then compared to a road diet configuration. Both scenarios were evaluated using existing traffic volumes.

To determine the feasibility of a “road diet”, this study evaluated traffic operations, parking, and safety along the study corridor, focusing on the major study intersections:

- Hampton Avenue and Chippewa Street
- Hampton Avenue and Bancroft Avenue
- Hampton Avenue and Nottingham Avenue
- Hampton Avenue and Eichelberger Street
- Hampton Avenue and Holly Hills Avenue
- Hampton Avenue and Loughborough Avenue
- Hampton Avenue and Jamieson Avenue
- Hampton Avenue and Gravois Avenue/Germania Street

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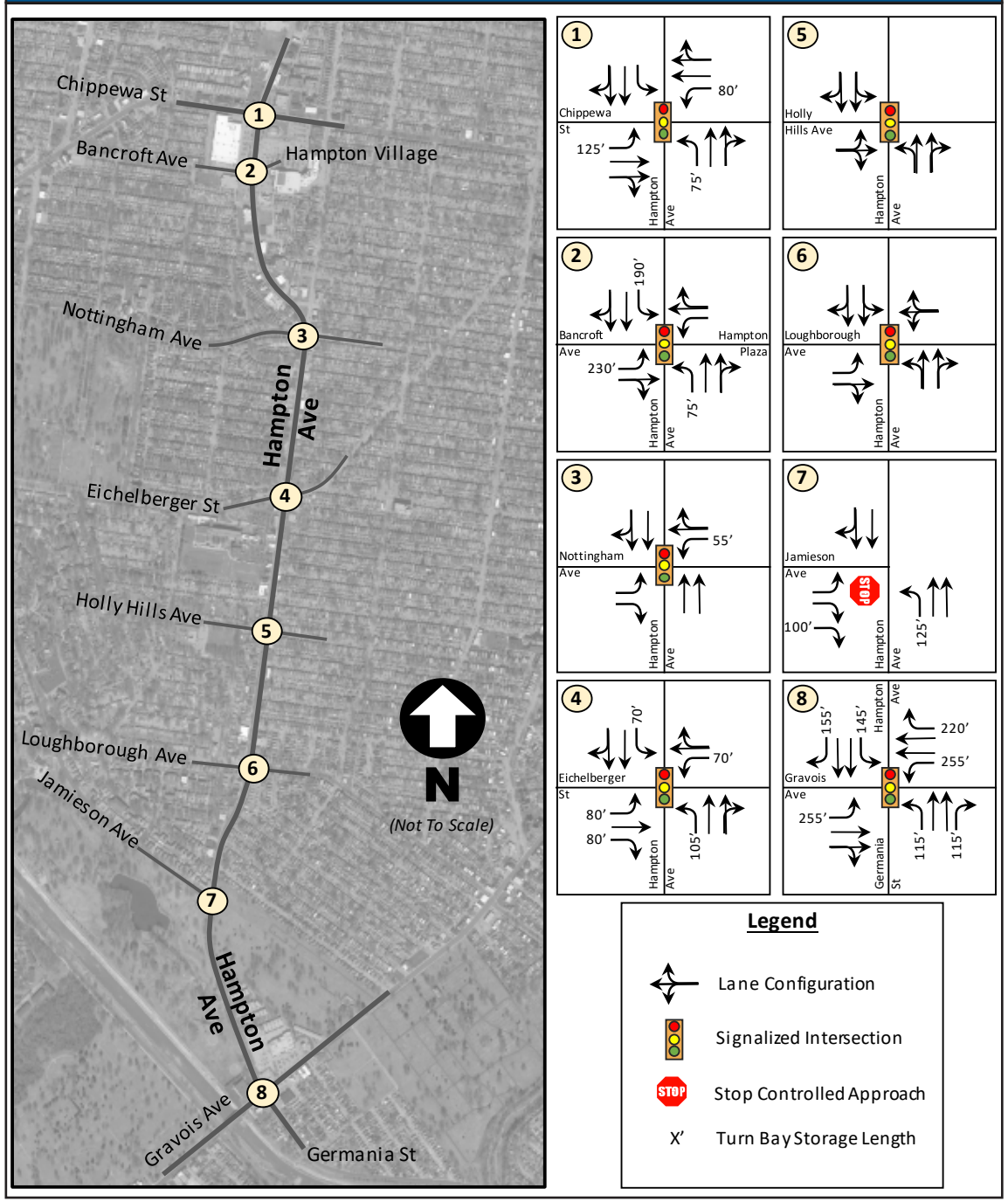
Figure 3. Existing Lane Configurations



Lane Configuration

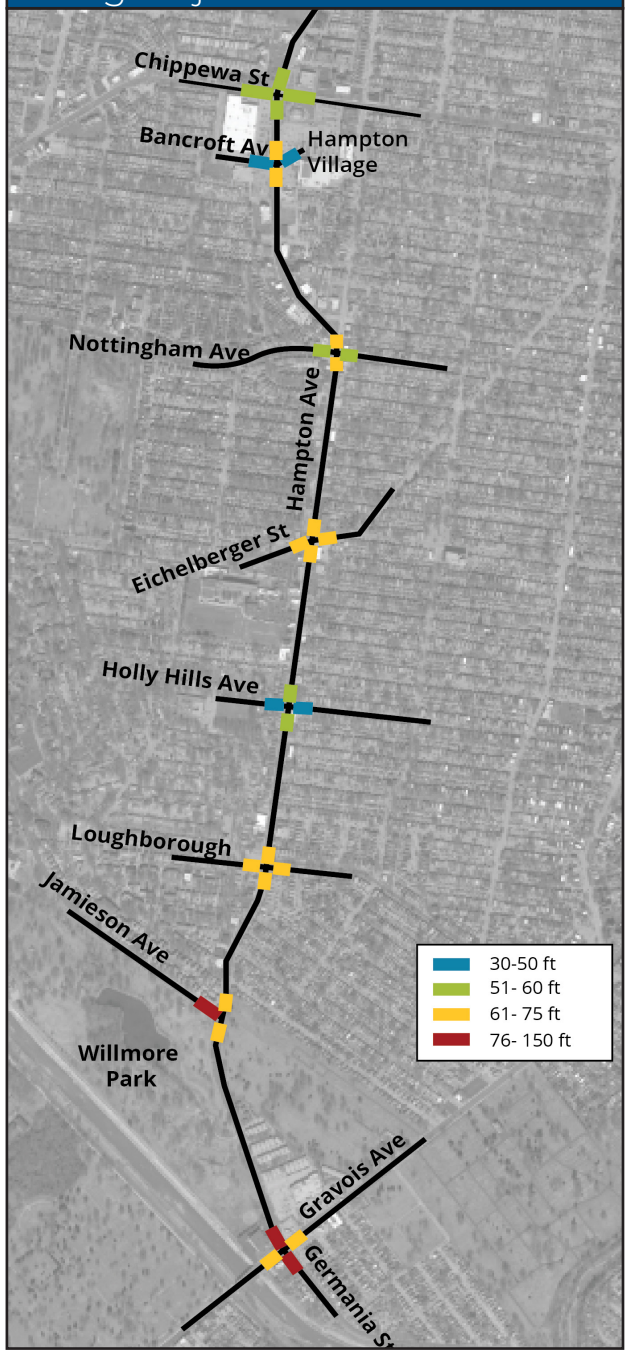
The Hampton Avenue curb-to-curb width is 54 to 55 feet along the length of the corridor. However, the lane designations vary. Between Chippewa Street and Lansdowne Avenue, the street has five lanes including two through lanes in each direction plus a center lane for left-turns. To the south of Lansdowne Avenue, Hampton Avenue is mostly four lanes with two through lanes in each direction. Hampton has dedicated left-turn lanes at its intersections with Eichelberger Street, with Jamieson Avenue, and at the Willmore Park entrance.

The study corridor contains 7 signalized intersections – 6 operate as part of a coordinated system maintained by the City of St. Louis. Missouri Department of Transportation operates the intersection of Hampton Avenue and Gravois Avenue. The lane configuration and method of traffic control at each study intersection is depicted in **Figure 3**.

Pedestrian Conditions

Sidewalks line both sides of Hampton Avenue along length of the corridor. The width of sidewalk varies by location from narrow 4-foot sidewalks to very wide 12-foot sidewalks. The signalized intersections have marked pedestrian crosswalks with push buttons and pedestrian signal indicators across most legs. Sidewalk condition and the degree of ADA compliance varies throughout the corridor. The intersection of Hampton Avenue with Jamieson Avenue lacks crosswalks entirely. In fact, Hampton Avenue lacks east-west pedestrian crossings between Loughborough Avenue and Gravois Avenue – a distance of over 3,600 feet.

Figure 4. Pedestrian Crossings Along Major Intersections



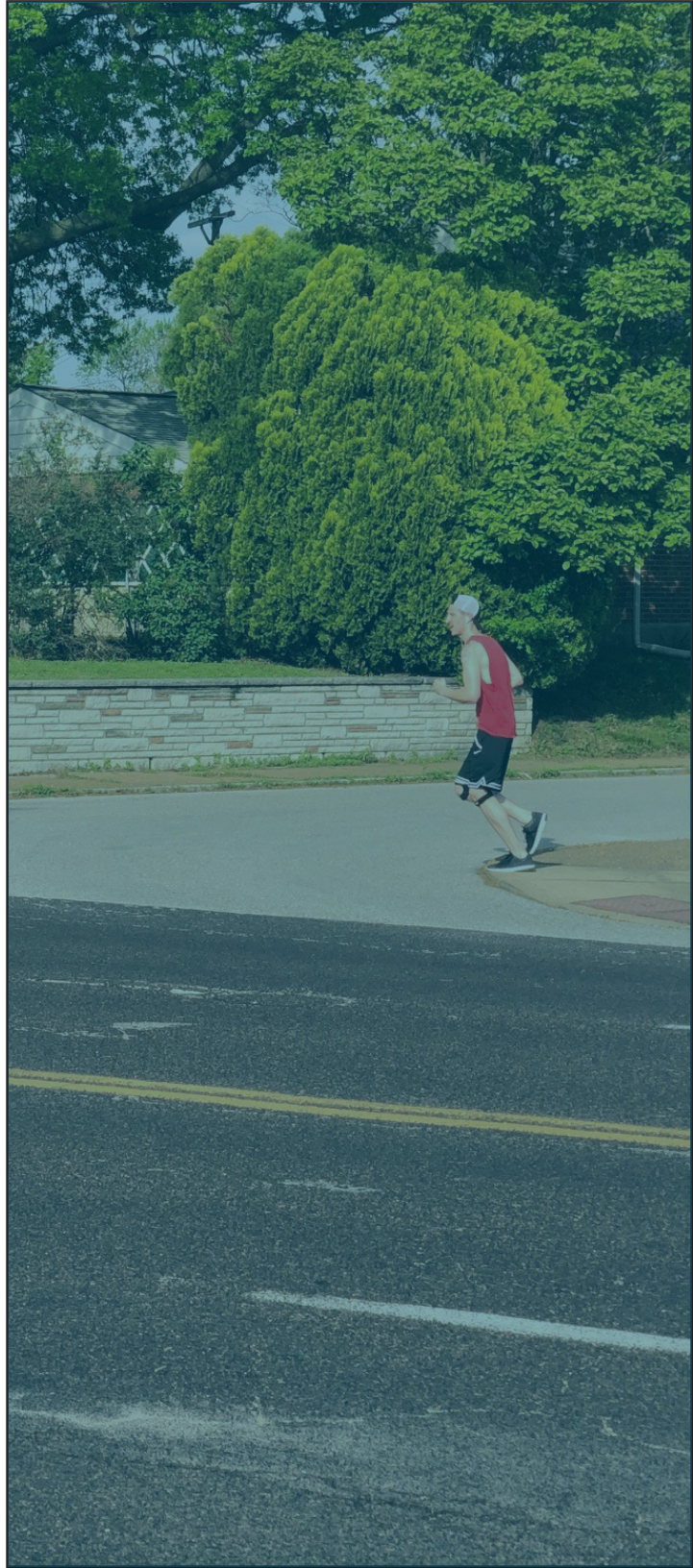
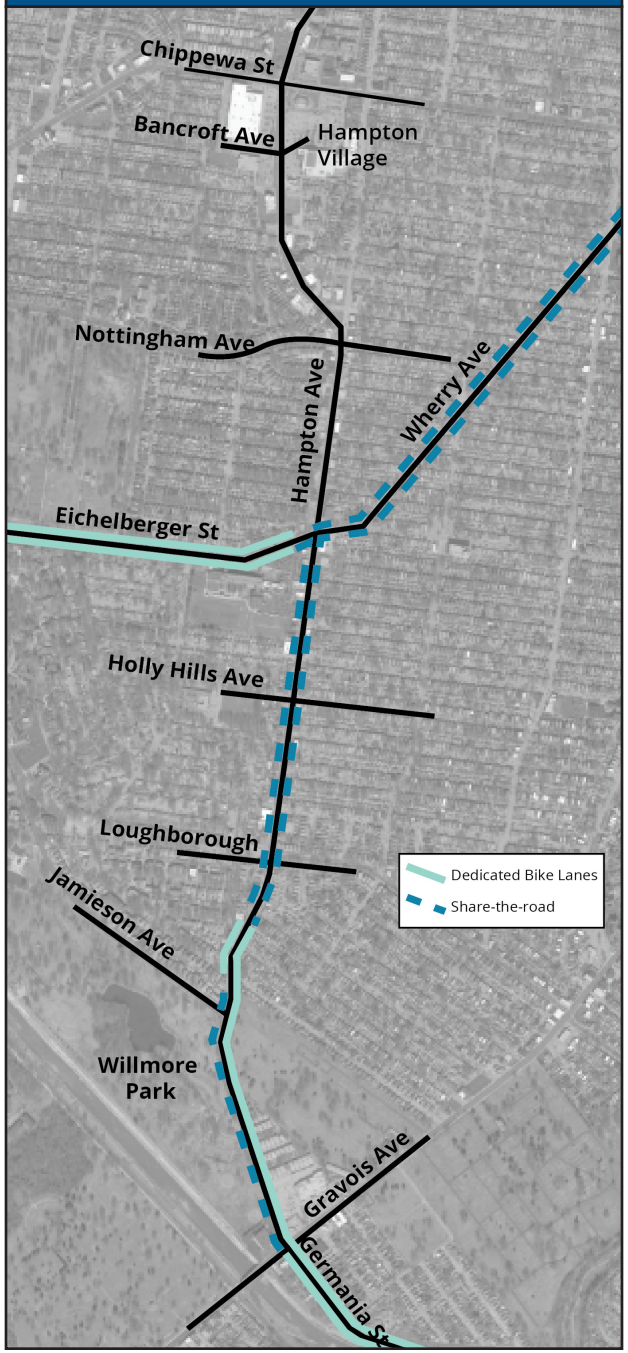


Figure 5. Bicycle Routes



Bicycle Conditions

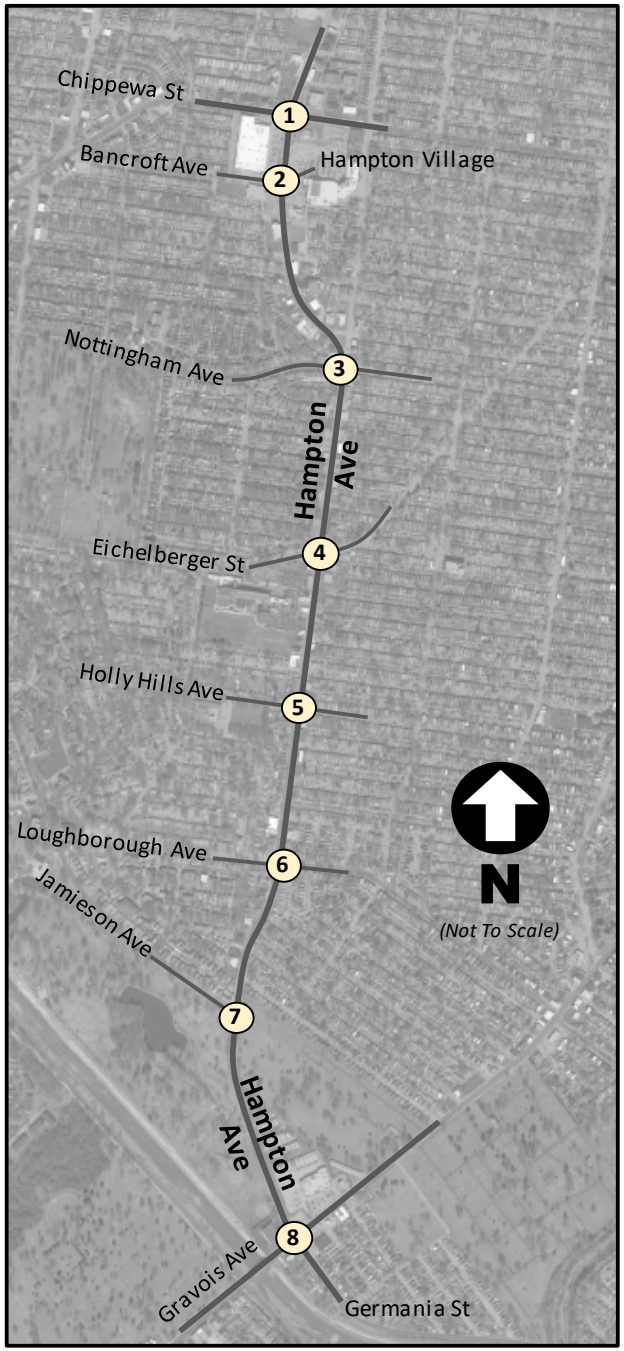
Hampton Avenue from Eichelberger Street to Gravois Avenue is an official bicycle route designated by Bike St. Louis. From Eichelberger Street to Robert Avenue, Hampton has a share-the-road configuration denoted by painted "sharrows". Dedicated on-street bicycle lanes are marked on both sides of the street south of Robert Avenue. While the northbound on-street bike lane continues south to Gravois Avenue, the southbound lane is interrupted by on-street parking adjacent to Willmore Park and returns to a share-the-road configuration.

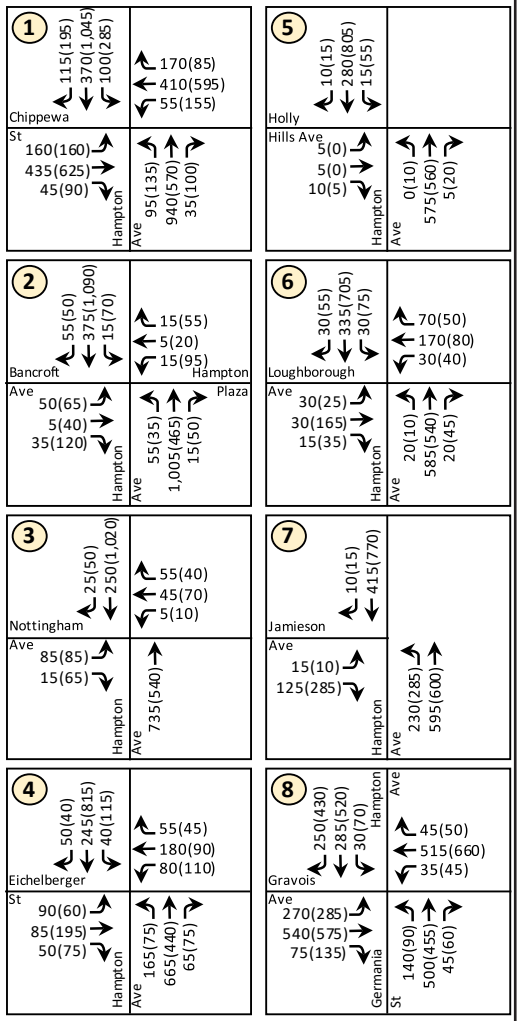
To the south of the study area, the on-street lanes continue along Germania Street. To the north, the bike route continues east on Eichelberger Street and angles north along Wherry Ave to Macklind Avenue. A map of the designated bicycle routes is shown in **Figure 5**.

Transit

The study corridor is served by Metro Transit and the #90 MetroBus route. Service is provided at 30-minute headways throughout the day with additional service during peak periods. There are 11 southbound and 9 northbound bus stops in the study area, none of which have covered shelters.

Figure 6. Existing Peak Hour Traffic Volumes





Peak Hour Traffic Volumes

Turning movement counts were collected at each of the study intersections during the weekday peak hours. Counts were performed in February and March of 2019. The weekday peak hours occurred from 7:15 AM to 8:15 AM in the morning and from 4:30 PM to 5:30 PM in the evening. These periods were the focus of the traffic analysis. The peak hour volumes are summarized by intersection and movement in **Figure 6**.

In general, traffic volumes are heavier in northern portions of the corridor. The busiest intersections are at the north (Chippewa Street) and south (Gravois Avenue) limits of the study area.

Daily Traffic Volumes

The daily traffic volume on Hampton Avenue was measured for one weekday at a location between Delor Street and Itaska Street. The daily traffic volume was 16,332 vehicles per day. As expected, volumes were balanced northbound and southbound over the course of the day. The hourly traffic fluctuation throughout the day by direction is depicted in **Figure 7**.

Traffic is heaviest in the northbound direction in the morning and in the southbound direction in the afternoon. This reflects prevailing commuter traffic patterns oriented towards Interstates 44 and 64 in the morning and away from those interstates in the afternoon.

Figure 7. Daily Traffic Volumes on Hampton Ave.

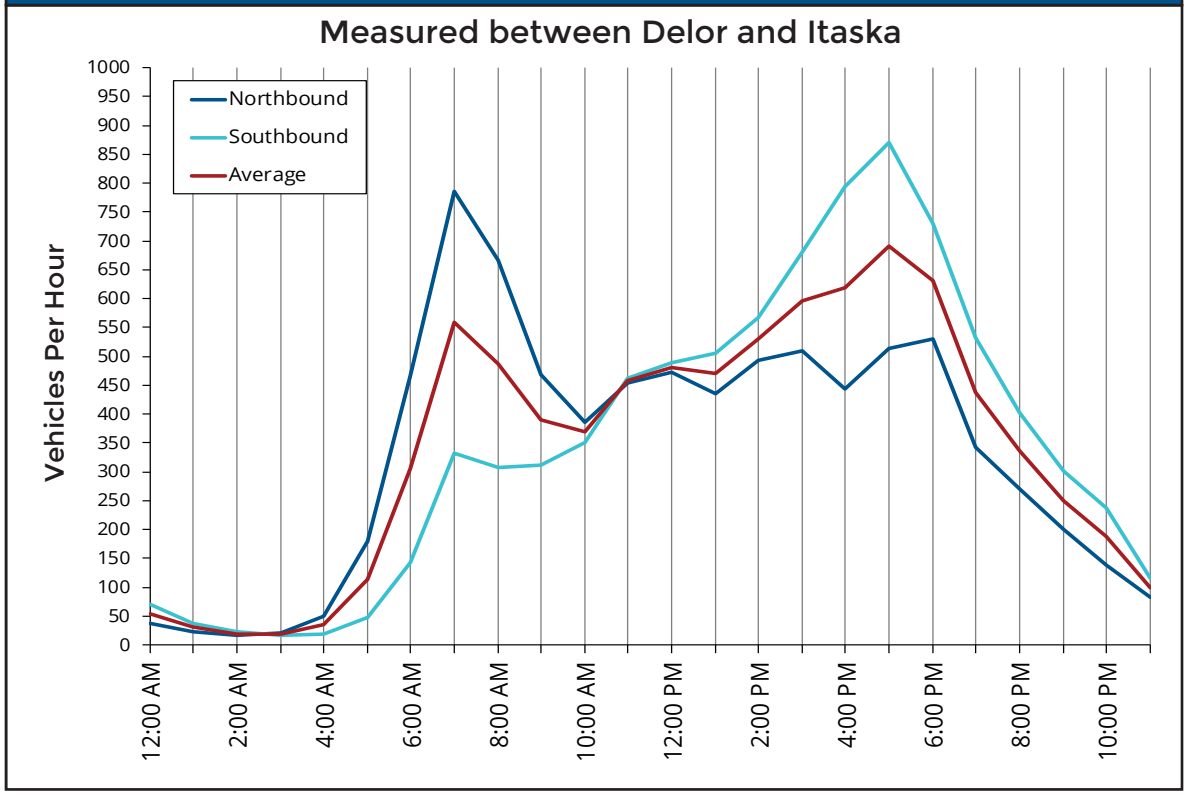
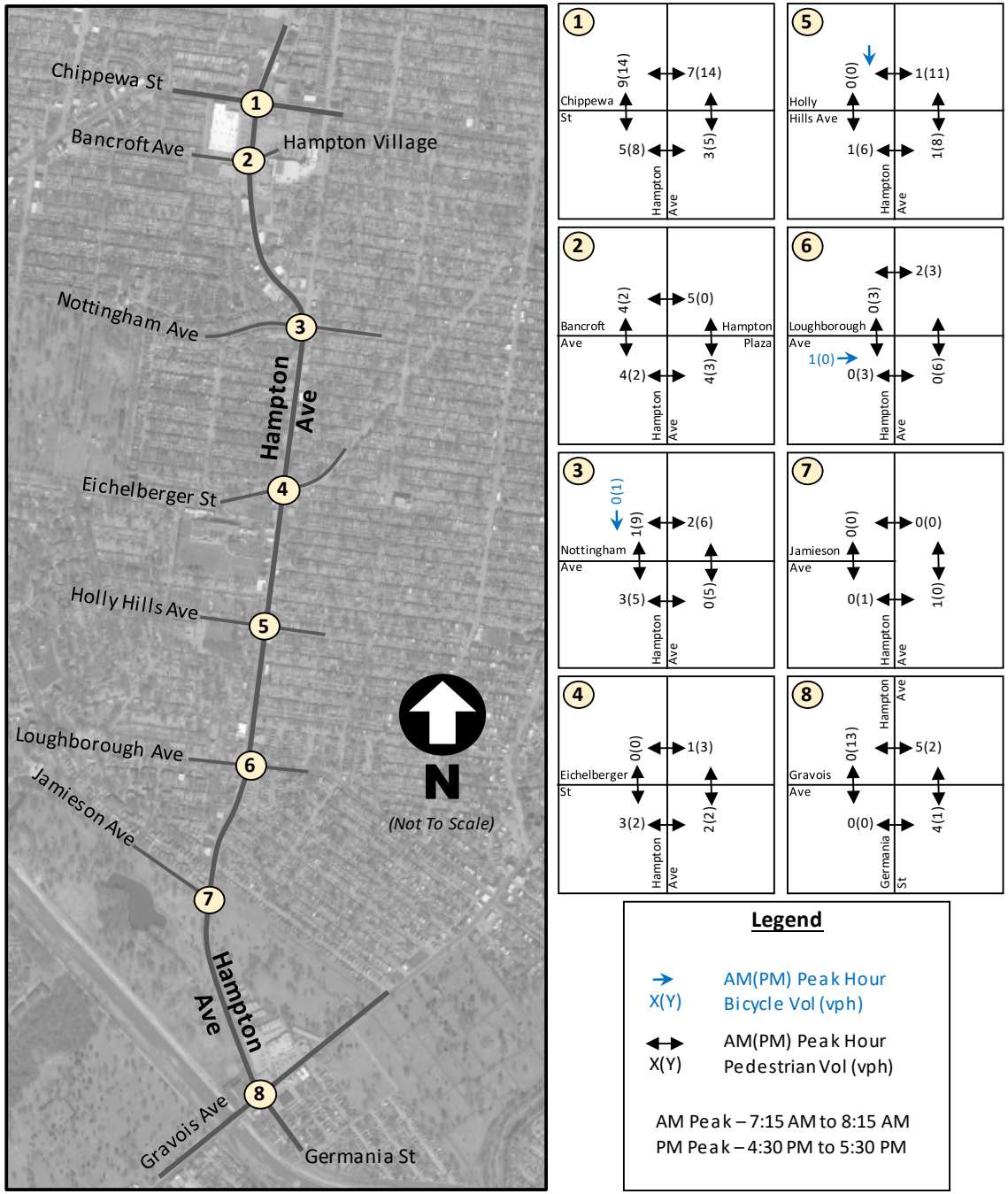


Figure 8. Existing Peak Hour Pedestrian & Bike Volumes



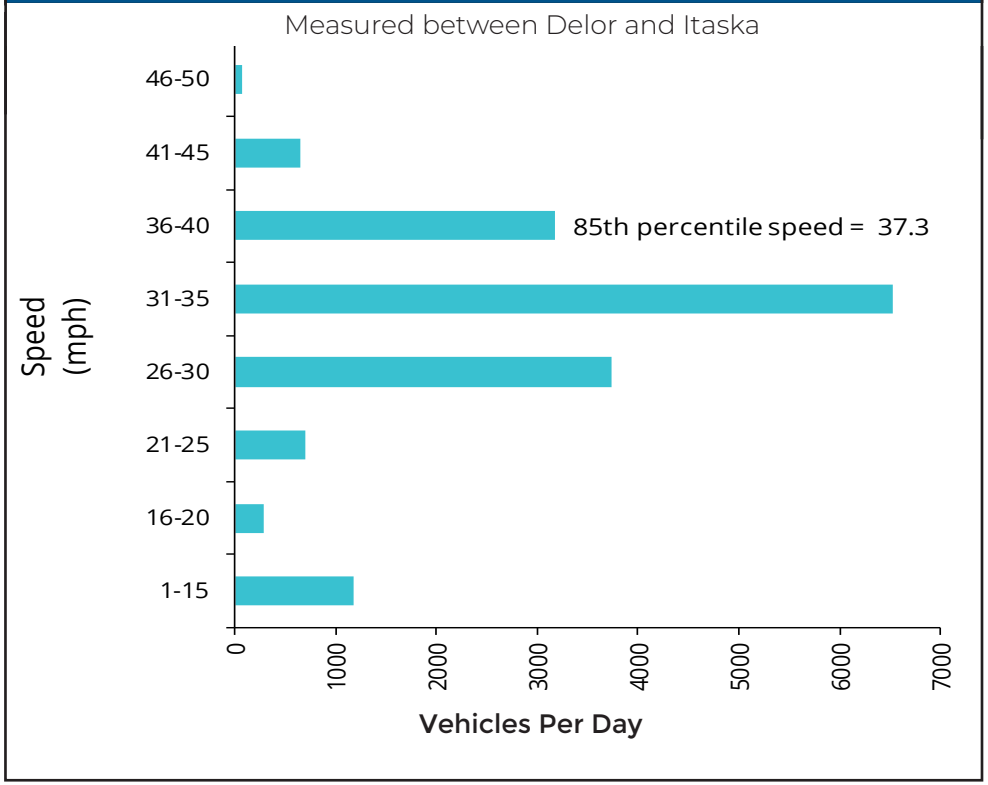
Peak Hour Pedestrian & Bicycle Volumes

Pedestrian volumes were modest while bicycle volumes were nominal. These low volumes were likely impacted by the winter season in which the counts were performed. Pedestrian and bicycle volumes collected at each study intersection are summarized for the traffic peak hours in **Figure 8**.

Speed

The posted speed limit on Hampton Avenue is 35 miles per hour (mph). Vehicle speeds on Hampton were measured for one weekday at a location between Delor Street and Itaska Street to determine motorists' compliance with the posted limit. Speed data is typically summarized by the 85th percentile speed, which is the speed at which 85 percent of the motoring public are traveling at or below. The 85th percentile speed is useful because it represents the collective judgment of most drivers and ignores high-speed outliers. Along the Hampton corridor, the 85th percentile speed was 37.3 mph, which is relatively consistent with the posted speed limit. The speed profile for Hampton Avenue is summarized in **Figure 9**.

Figure 9. Average Weekday Speed, Hampton Ave



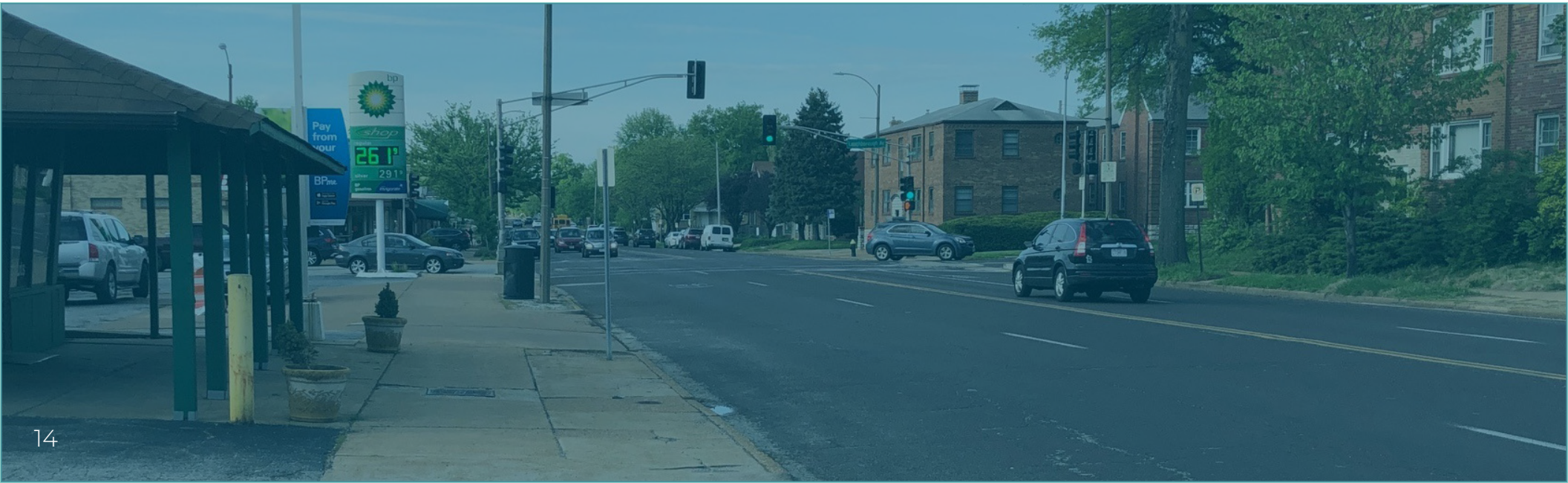


Figure 10. Weekday Mid-day On-Street Parking Utilization

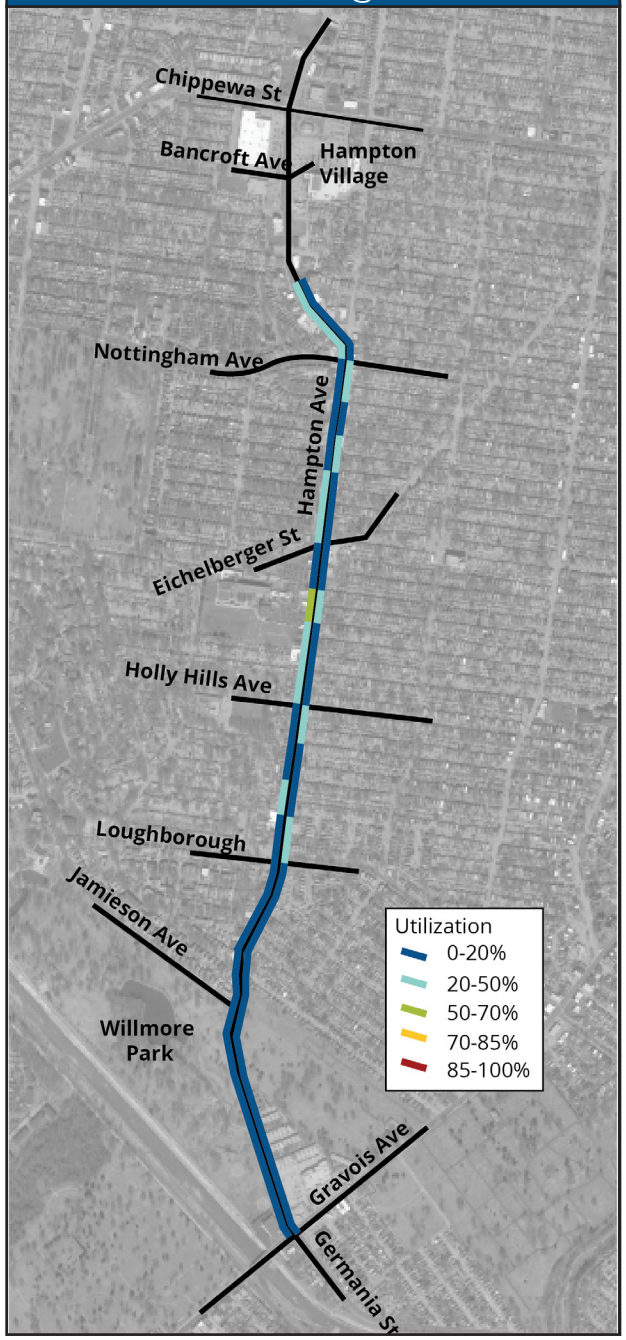
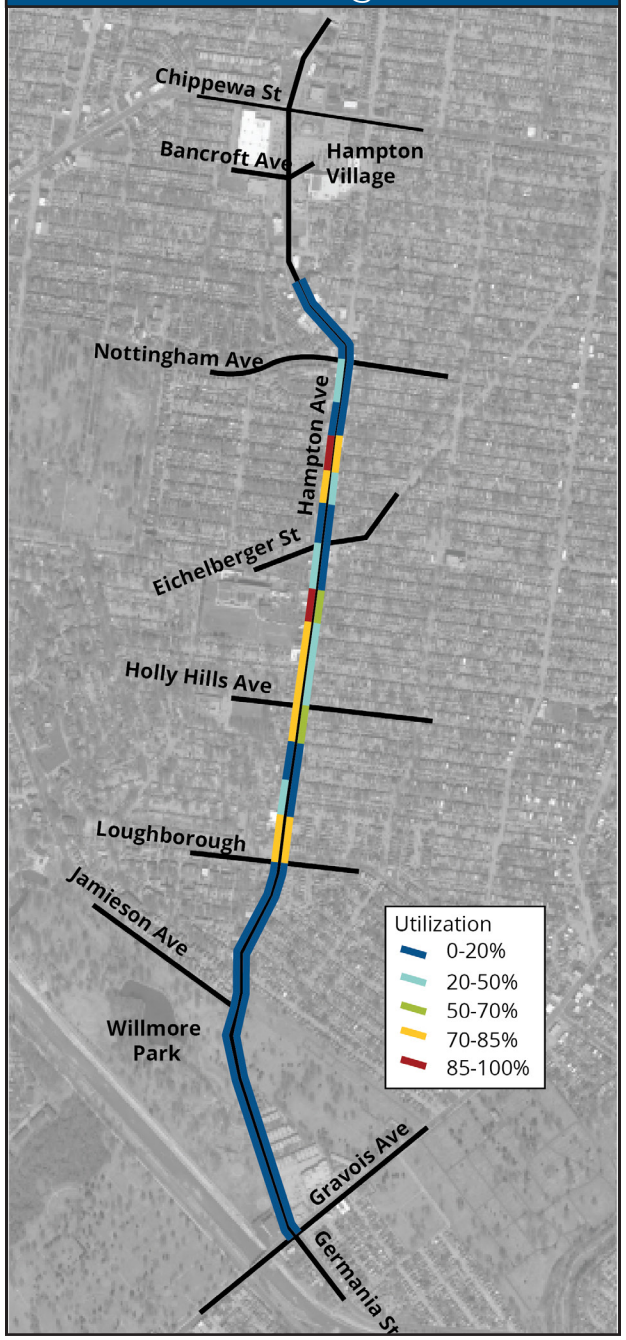


Figure 11. Friday Evening On-Street Parking Utilization



Parking

Hampton Avenue accommodates on-street parking on both sides of the street from around Lansdowne Avenue south to Gravois Avenue. Parking is interrupted in sections for dedicated left-turn lanes and on-street bike lanes but is provided throughout most of the corridor. The total amount of on-street parking was estimated to be 500 spaces.

On-street parking along Hampton Avenue was measured in the field during the midday period on a weekday (12:00 PM - 2:00 PM) and during the evening on a Friday (6:00 PM - 8:00 PM). These periods capture the highest demands for on-street parking. Parking utilization along the corridor is illustrated in **Figure 10** and **Figure 11**.

Weekday midday parking utilization was low, averaging 9 percent. Of the 500 spaces in the corridor, under 50 spaces were used. No individual block segment exceeded 55 percent utilization.

Friday evening utilization was higher, averaging 17 percent. While this is still relatively low, multiple block segments on the west side exceeded 80 percent utilization. There were also five instances of illegal parking.

Safety

A safety analysis was performed using crash data from the Hampton Avenue corridor from 2016 and 2017. This analysis was supplemented by a review of individual reports for injury crashes furnished by the City of St. Louis from 2016, 2017, and 2018.

Crash Type

Rear-end crashes (32%) and angle crashes (25%) were most common. These types of crashes are typical for urban arterials with frequent intersections and a high concentration of driveways. 8 percent of crashes involved parked cars, which was expected given the on-street parking along Hampton Avenue. Pedestrian crashes made up 5 percent of all crashes.

Crash Severity

Over the 2-year crash analysis period, the Hampton Avenue corridor experienced 1 fatal crash and 2 crashes with incapacitating or disabling injury. In total, there were 165 crashes in 2016 and 2017 as summarized in **Figure 13**.

Figure 12. Crashes by Type, % (2016-2017)

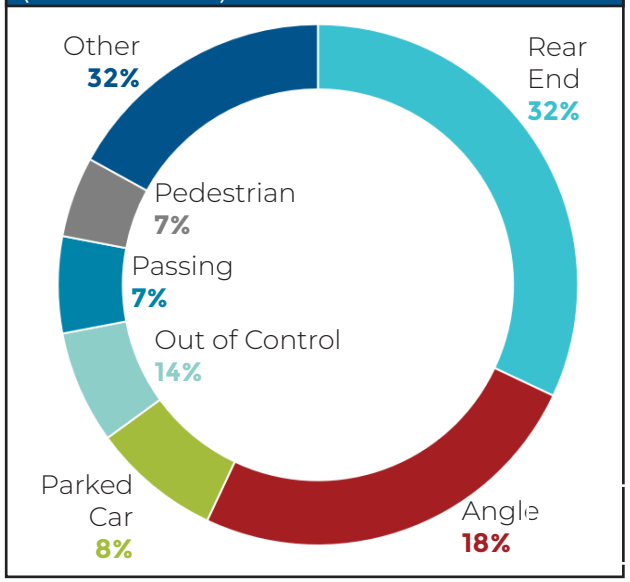


Figure 13. Crashes by Severity, total (2016-2017)

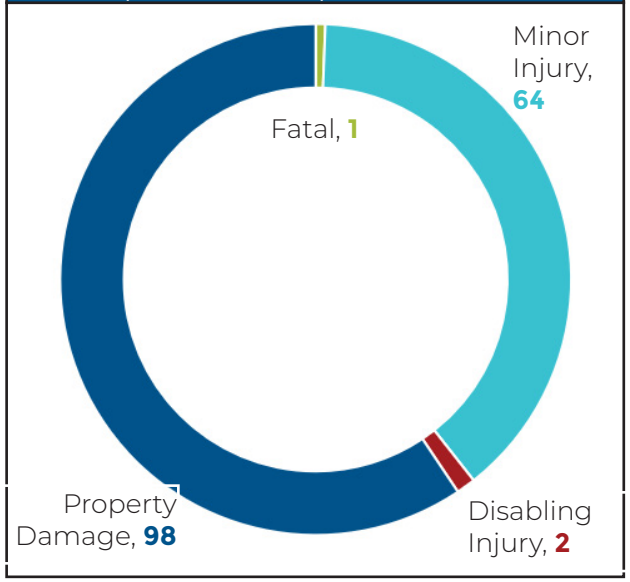
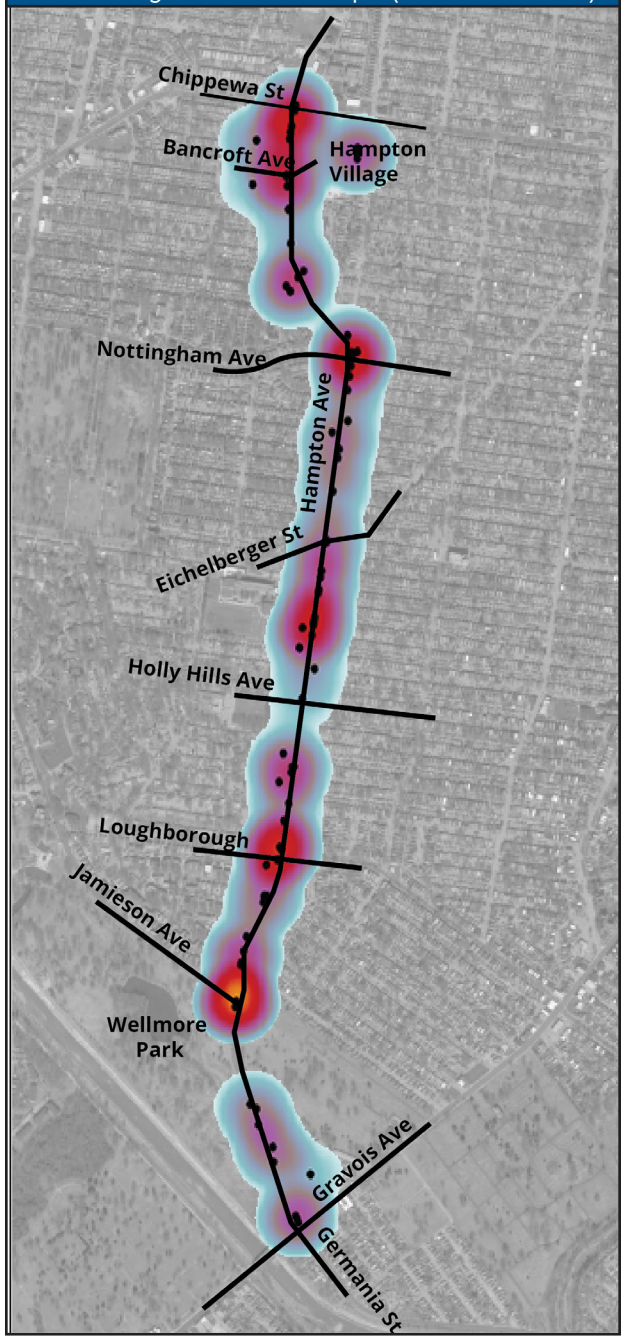


Figure 14. Crash Frequency & Severity Heat Map (2016-2017)



Safety

Crash Location

The one fatal crash occurred at Hampton Avenue and Jamieson Avenue and involved a car colliding with a bicycle in the dark. Both disabling injury crashes involved head-on collisions resulting from improper lane usage. One of the disabling injury crashes also occurred at the Hampton Avenue and Jamieson Avenue intersection. The other occurred at Hampton Avenue and Nottingham Avenue.

A heat map of crashes shown in **Figure 14** highlights the intersections of both frequent and high severity crashes, Jamieson Avenue and Hampton Avenue being the intersection with the most frequent and severe crashes. Most crashes resulted in minor injuries or property damage. These crashes were distributed throughout the Hampton Avenue corridor, although the segment between Eichelberger Street and Holly Hills Avenue experienced a larger amount of these crashes. This is likely due to a high number of active commercial driveways in that section.

Traffic Operations

Traffic operating conditions were evaluated during the weekday morning and evening commuter peak hours. If traffic is well accommodated during peak periods, it will be accomodated at all other times. Each intersection was graded with six levels of traffic service (LOS) from A through F. LOS E represents acceptable intersection performance in urban areas. Intersection LOS for the morning and evening peak hours are illustrated in **Figure 15** and **Figure 16**.

- All study intersections operate at acceptable overall levels of service – LOS C or better in the morning and LOS D or better in the evening.
- In the evening, several minor approaches to intersections operate at LOS E or F. This is in part due to long traffic signal cycle lengths (140 seconds).

Evaluation of traffic operations focused on intersection performance, since the number of vehicles that can be served at major intersections dictates Hampton Avenue's capacity. Existing traffic operations in the study corridor were evaluated using Synchro 10. The traffic operational analysis methodology is summarized in **Appendix D**. Detailed intersection operating summaries are provided in **Appendix E**, including LOS, delay, and queue lengths by intersection approach.

Figure 15. Existing Traffic Operations, AM Peak Hour

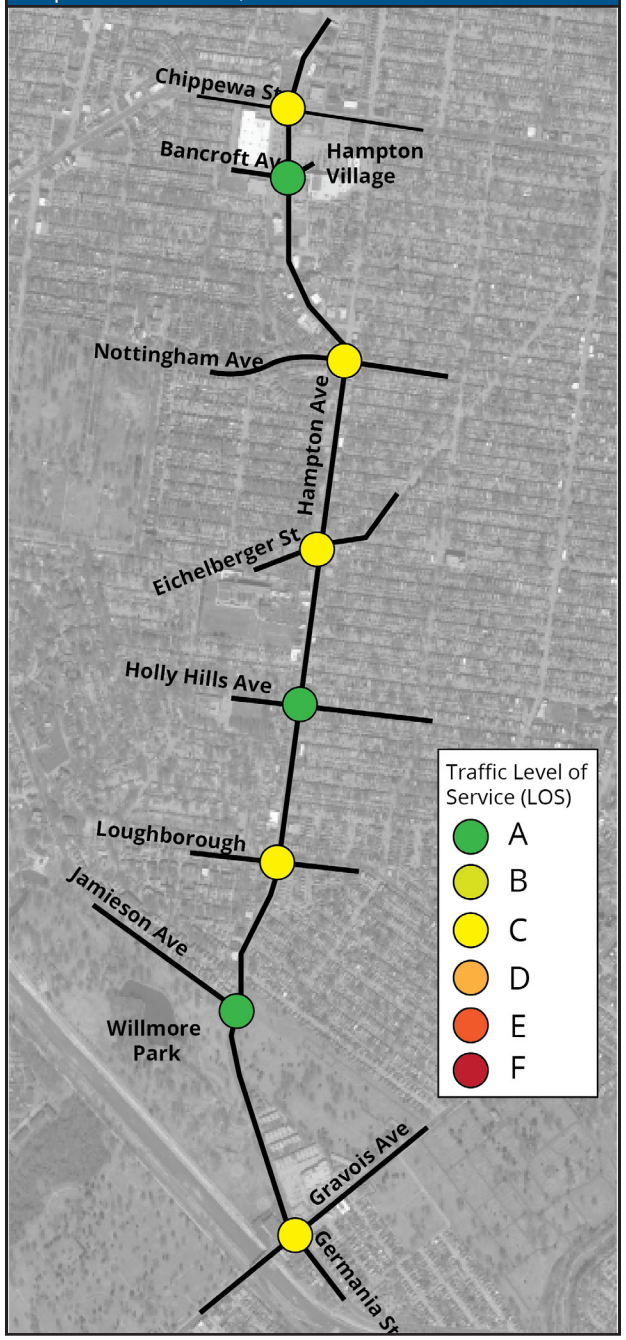
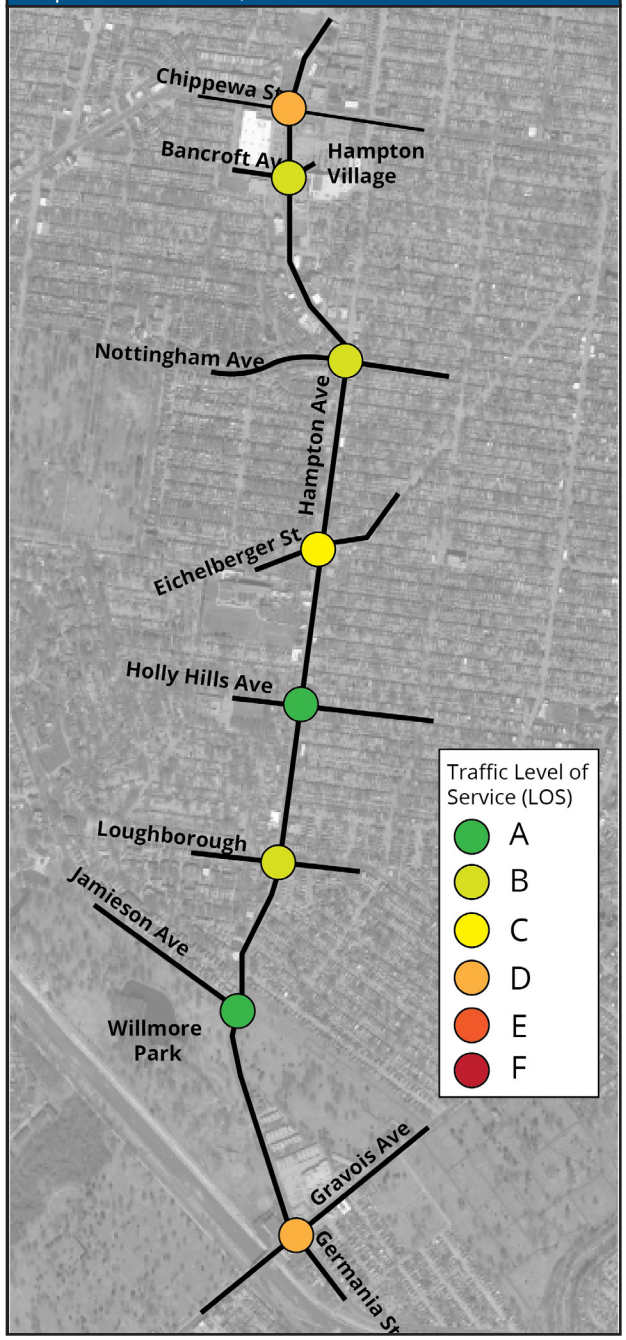


Figure 16. Existing Traffic Operations, PM Peak Hour



“ROAD DIET” CONCEPT

A “road diet” concept was developed and tailored to conditions in the Hampton Avenue corridor. The “road diet” conceptual design was evaluated for its feasibility and likelihood of success.

This objective evaluation is intended to provide decision-makers with the most accurate information to assess the feasibility of the road diet alternative. This study does not offer a recommendation for or against the “road diet” alternative.

Conceptual Design

The "road diet" concept includes 3 traffic lanes – 1 through lane in each direction plus a center two-way left-turn lane. Converting roadways from 4 lanes to 3 lanes is the most common "road diet" application. This concept maintains existing on-street parking, except for the parking along the west side of the street adjacent to Willmore Park. With negligible parking usage in that area, the pavement is instead designated for a southbound on-street bicycle lane. This mirrors the existing northbound bicycle lane on the other side of the street.

Starting at the north end of the study corridor, the road diet begins just south of Bancroft Avenue near Lansdowne Avenue. This location was chosen because beginning the "road diet" further to the north would significantly impact traffic; there are heavy traffic volumes at the Chippewa Street intersection, combined with insufficient distance for lane transitions between Chippewa and Bancroft Avenue. This concept assumes the intersections of Hampton Avenue with Chippewa Street and with Bancroft Avenue would not change. **Figure 17** shows the "road diet" locations within the study corridor.

The 3-lane "road diet" would proceed south from Lansdowne to the entrance of Willmore Park. South of that location, the three-lane road would transition back to the existing 4-lane cross-section. The intersection at Gravois Avenue would remain in place.

Figure 17. Road Diet Location

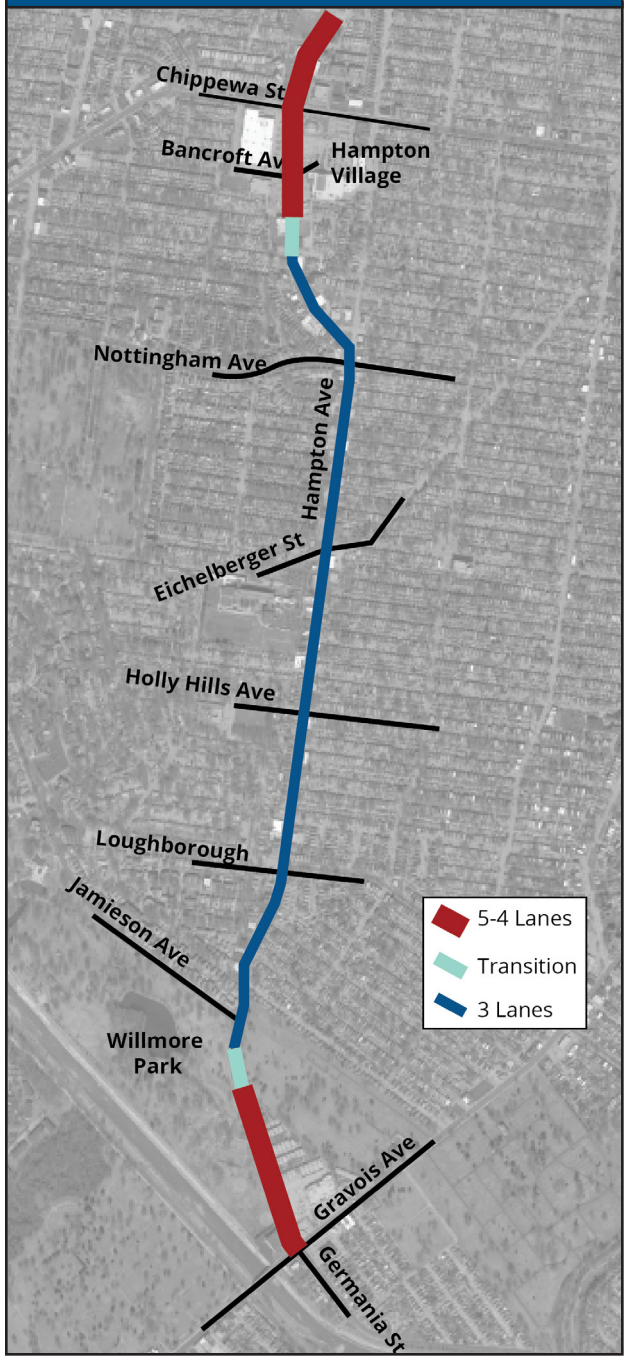


Figure 18. Road Diet On-Street Parking

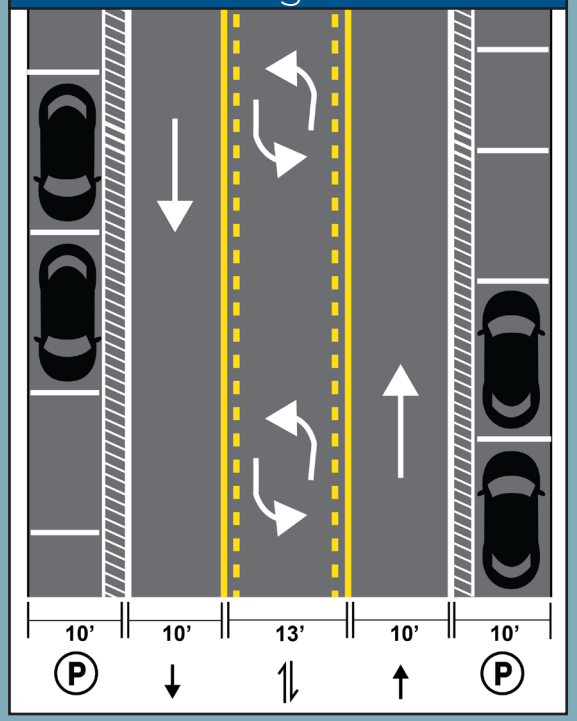
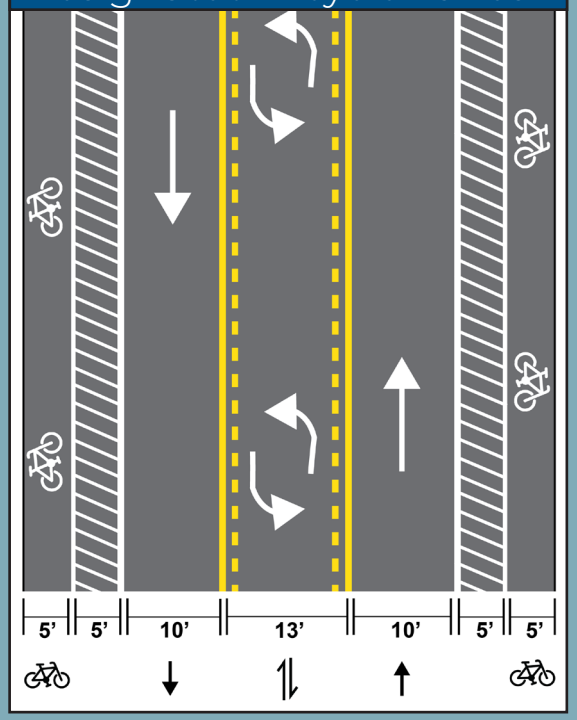


Figure 19. Road Diet Designated Bicycle Lanes



Conceptual Design

The typical cross-section with the “road diet” concept assumes 10-foot traffic lanes in each direction plus a 13-foot center two-way left-turn lane plus 10-foot outside parking lanes on each side of the street or 5-foot bike lanes plus a 5-foot buffer. On-street parking remains interrupted for transit stops. These cross sections are illustrated in **Figure 18** and **Figure 19**.

Intersection Improvements

Select intersections modified with the "road diet" concept are described below. the "road diet" lane configuration is depicted in **Figure 20**.

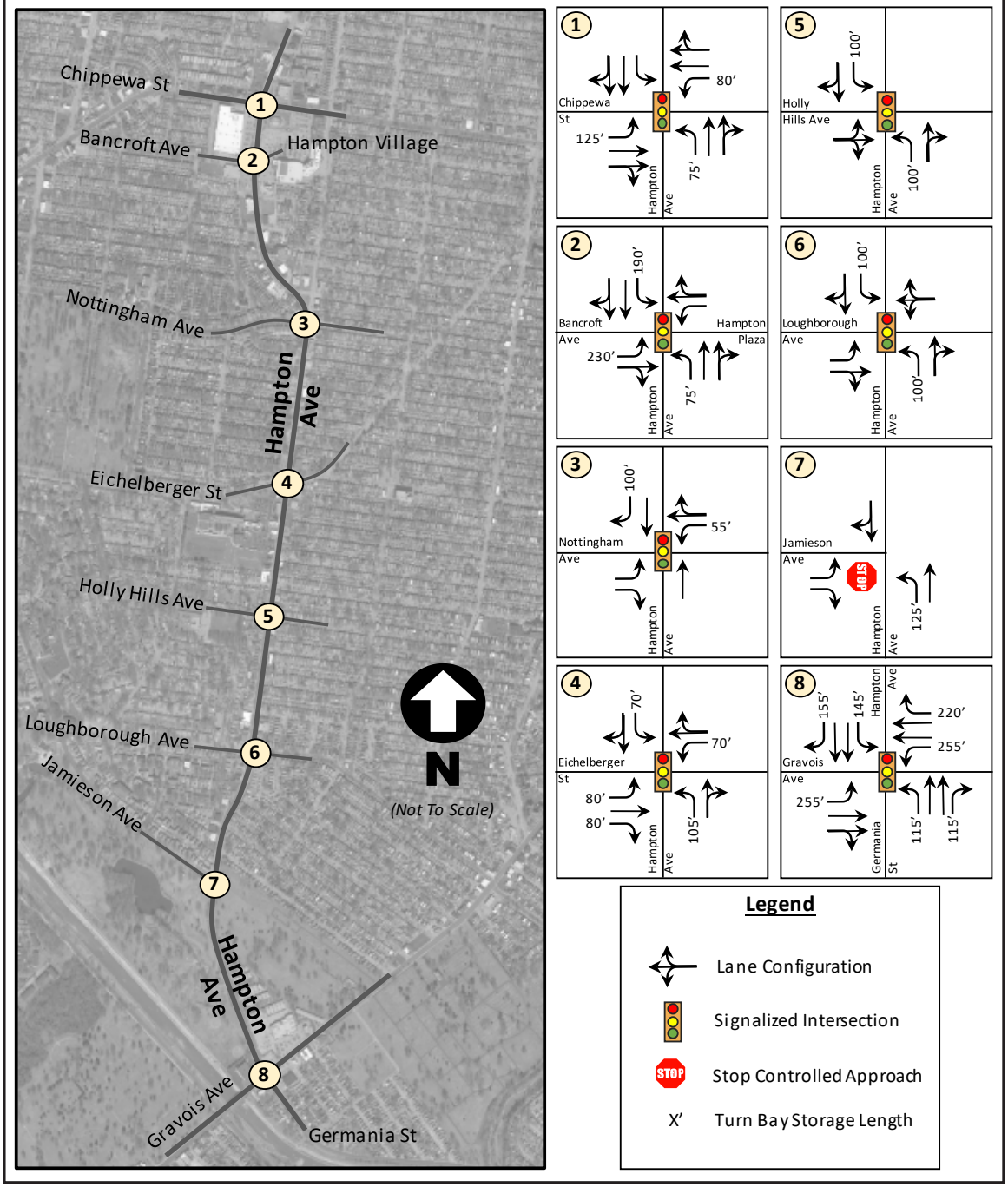
The intersection of Hampton Avenue with Nottingham Avenue includes a short dedicated southbound right-turn lane. This will help increase southbound capacity for the evening peak hours and enable right-turning vehicles to decelerate out of the through lane. Deceleration will improve safety at the intersection given limited visibility with the curvature of Hampton Avenue. The traffic signal at Hampton Avenue and Nottingham Avenue is modified to eliminate protected turn arrows (phases) for eastbound and westbound traffic. Instead, these vehicles proceed during a common green phase, yielding to oncoming traffic as necessary. The changes to this intersection simplify the traffic signal's operation, lessening the impact of fewer lanes on Hampton Avenue.

All signalized intersections include physically raised curb bump outs to reduce intersection sizing and shorten pedestrian crossing distances. The shorter crossing distances reduce the pedestrian crossing time, which allows shorter signal cycle lengths. With the bump-outs, ADA-compliant curb ramps and pedestrian signal push buttons are included. The existing curb line is maintained along Hampton Avenue between major intersections.

Intersection improvements to increase safety are merited at the Hampton Avenue and Jamieson Avenue independent of the "road diet" alternative. This intersection is excessively large and lacks any pedestrian crosswalks, despite adjoining residential and recreational (Willmore Park) uses. This intersection was the scene of 2 serious crashes (1 fatal and 1 with disabling injury) during the recent 2-year period. Recognizing funding limitations, the "road diet" alternative reduces the size of this intersection with painted pavement and a physical bollard or planter. The eastbound approach is reduced to 2 lanes (1 left-turn and 1 right-turn). Just a single lane departs the intersection in the westbound direction. Pedestrian crosswalks are provided across the west and north legs. Given the volume of traffic on Hampton Avenue and the absence of a traffic signal, a pedestrian refuge is added in the median of and rectangular rapid flashing beacons are provided to improve safety.

The full conceptual design of the "road diet" concept is illustrated in **Appendix F**. The cost to implement the full "road diet" concept assuming fully constructed bumpouts at intersections is $916,301. A low-cost striping only concept, which avoids upgrades to traffic signals and relies on pavement marking and planters/bollards to delineate bumpouts is $193,680. All cost estimates are summarized in **Appendix G**.

Figure 20. Proposed Lane Configuration with Road Diet



Operational Feasibility

The traffic operational feasibility of implementing the “road diet” concept was considered by applying the same methodology used for existing conditions. Existing traffic volumes were evaluated. No traffic diversions were assumed, despite multiple north-south parallel routes. However, research shows previous “road diet” implementations diverted 2 percent to 15 percent of their prior traffic volume.

Volumes

Industry guidance suggests that a street is a candidate for a 4-lane to 3-lane “road diet” conversion if the average daily traffic volume does not exceed 20,000 vehicles per day. The daily traffic volume along Hampton Avenue was 16,332 which is well below that threshold.

The heaviest direction on Hampton Avenue is southbound during the evening peak hour when 1,020 through vehicles approach Nottingham Avenue – the first “road diet” signal. This is higher than volumes traveling through the similar South Grand Boulevard “road diet” (which is 842 from a recent count). From that neighborhood’s perspective, the Grand Boulevard road diet is a success. Some traffic diversions from Hampton Avenue may be necessary for the “road diet” to function as well as Grand. If diversions reach 17 percent, peak volumes along the two corridors would be effectively equal.

Figure 21. AM LOS with Road Diet

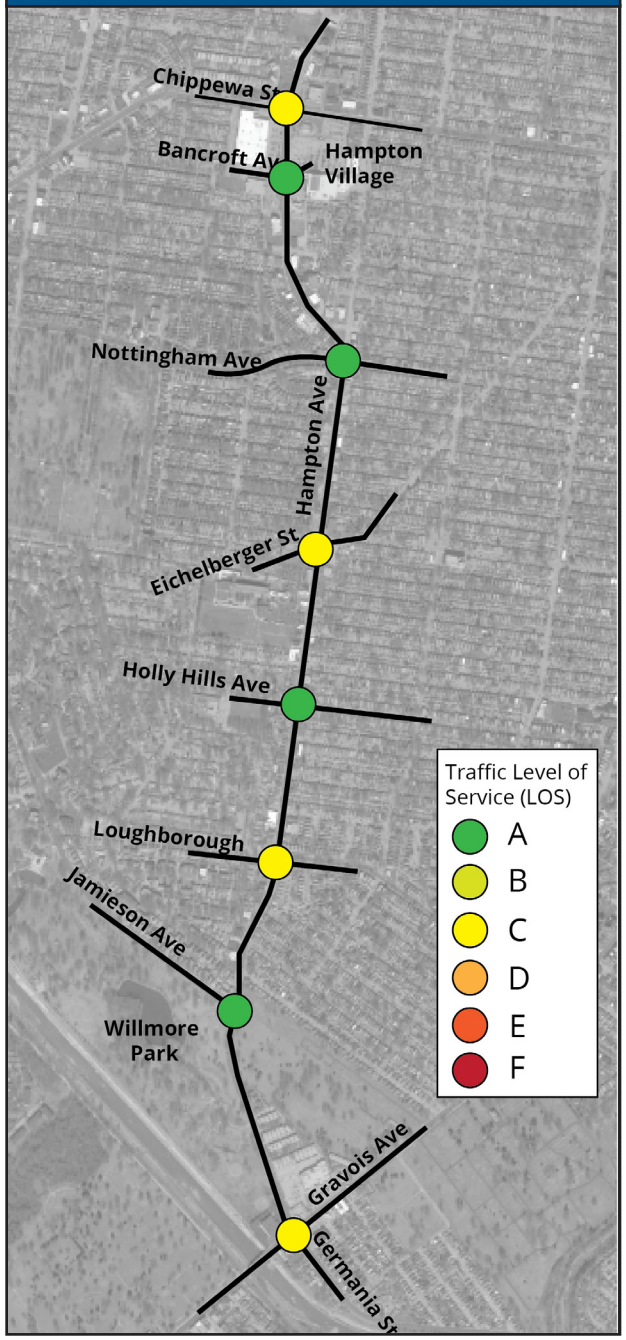
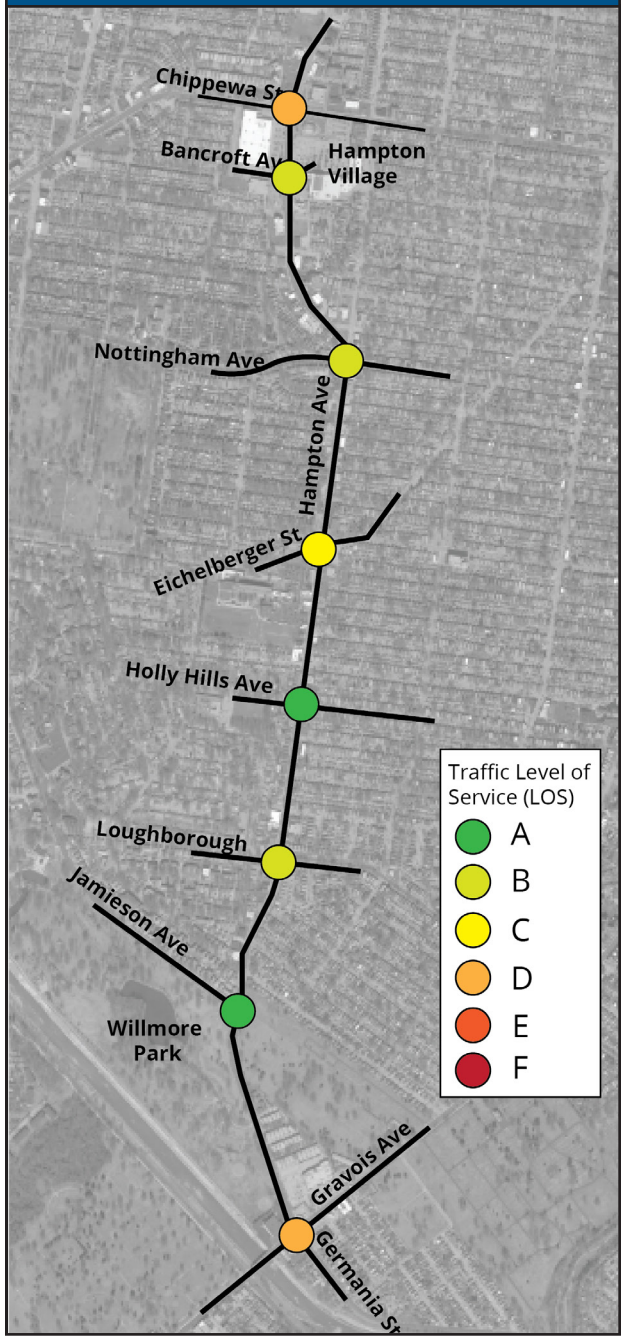


Figure 22. PM LOS with Road Diet



Operational Feasibility

Intersection Level of Service (LOS)

In general, the "road diet" concept would not impact the intersection LOS in the corridor. The most tangible traffic impact would be longer queues on Hampton Avenue at the intersections with Nottingham Avenue and with Eichelberger Street, particularly in the southbound direction during the evening peak hour. The 95th percentile queue approaching both intersections would exceed 800 feet, which is several orders of magnitude greater than existing queues. That said, for most signal cycles, all vehicles in queue would clear the intersection on a single green. Intersection LOS for the morning and evening peak hours with the "road diet" concept are illustrated in **Figure 21** and **Figure 22**.

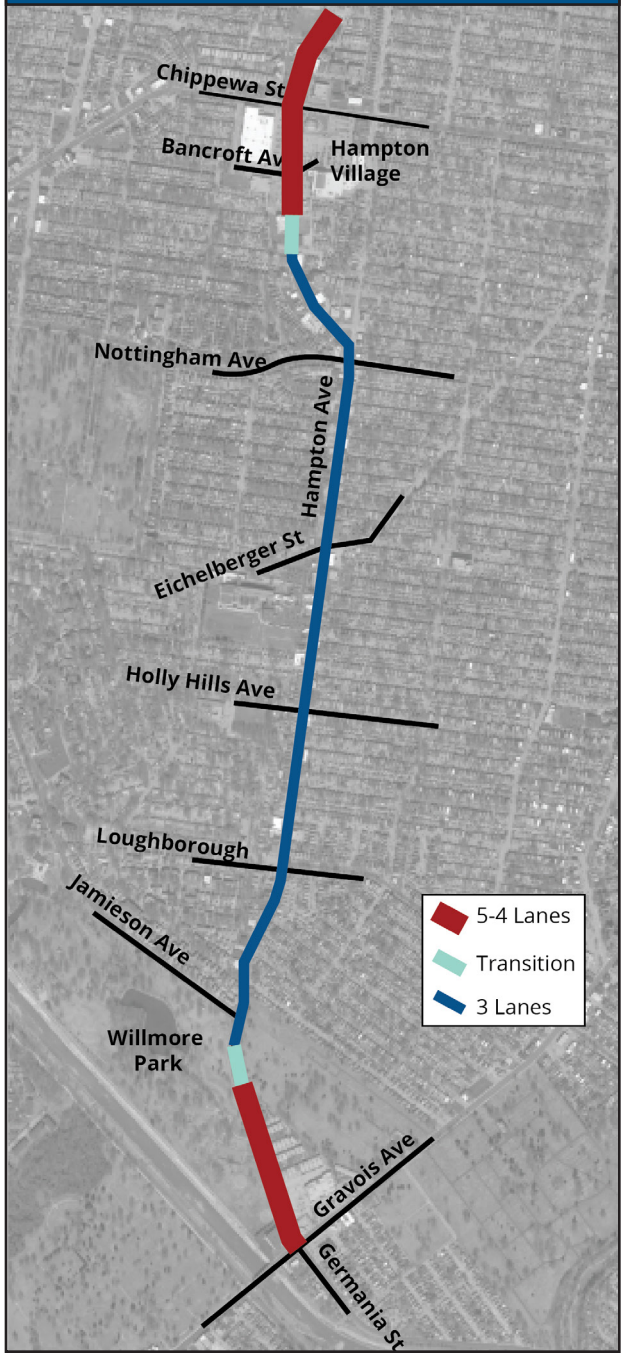
Operational Feasibility

Intersection Level of Service (LOS)

Traffic impacts to other intersections in the corridor would be mostly negligible. The intersection of Hampton Avenue and Loughborough Avenue would experience less delay and the minor street approaches would actually improve from LOS E/F to LOS D, as a result of a shorter traffic signal cycle. A summary of the impacts on each intersection is below:

Chippewa St.	No anticipated impact
Bancroft Ave.	No anticipated impact
Nottingham Ave.	LOS unchanged, lengthy southbound queuing during PM peak hour
Eichelberger St.	Similar LOS, lengthy northbound and southbound queuing during AM and PM peak hours
Holly Hills Ave.	No anticipated impact
Loughborough Ave.	LOS improved, particularly for minor approaches
Jamieson Ave.	Increase in eastbound right-turn delay by 20 seconds during PM peak hour
Gravois Ave.	No anticipated impact

Figure 17. Road Diet Location



Anticipated Benefits

Speed

A decrease in speeds along Hampton Avenue is expected due to the inability of higher speed motorists to make lane changes. Case studies reveal an average speed reduction of approximately 5 mph.

Safety

"Road diet" installations typically reduce crashes due to the elimination of passing maneuvers and the introduction of a continuous lane for left-turns. Published guidance by the Federal Highway Administration suggests that a crash reduction of 29 percent is most applicable for the "road diet" alternative in the Hampton Avenue corridor.

Pedestrian Crossings

Shorter pedestrian crossings resulting from curb bump outs reduce the likelihood of pedestrian-related crashes and promote a more welcoming environment for pedestrians. The "road diet" alternative reduces the distance to cross Hampton Avenue by approximately 15 feet. More significant pedestrian improvements are included at the Jamieson Avenue intersection.

Parking

For much of the study corridor, the "road diet" alternative does not impact the supply of on-street parking where it is in highest demand. The "road diet" increases the width of the parking lane from a narrow 7 feet to a safer and more comfortable 10 feet. The "road diet" alternative eliminates about 80 unused parking spaces along Willmore Park to expand an on-street bike lane.

Bike Lanes

The "road diet" alternative extends the southbound on-street bike lane along Willmore Park closing an existing gap between Gravois Avenue and Jamieson Avenue. The additional pavement width allows for the existing on-street lanes to be segregated from moving vehicles by a 5-feet buffer zone.

Transit

Transit operations should not be affected by the "road diet" alternative as it does not modify bus stops. Improved safety is expected due to the increased width of the parking lane. This provides additional space for buses to pull out of the traffic lane to stop and allow passengers to board or disembark.

Anticipated Draw-Backs

Traffic Diversion

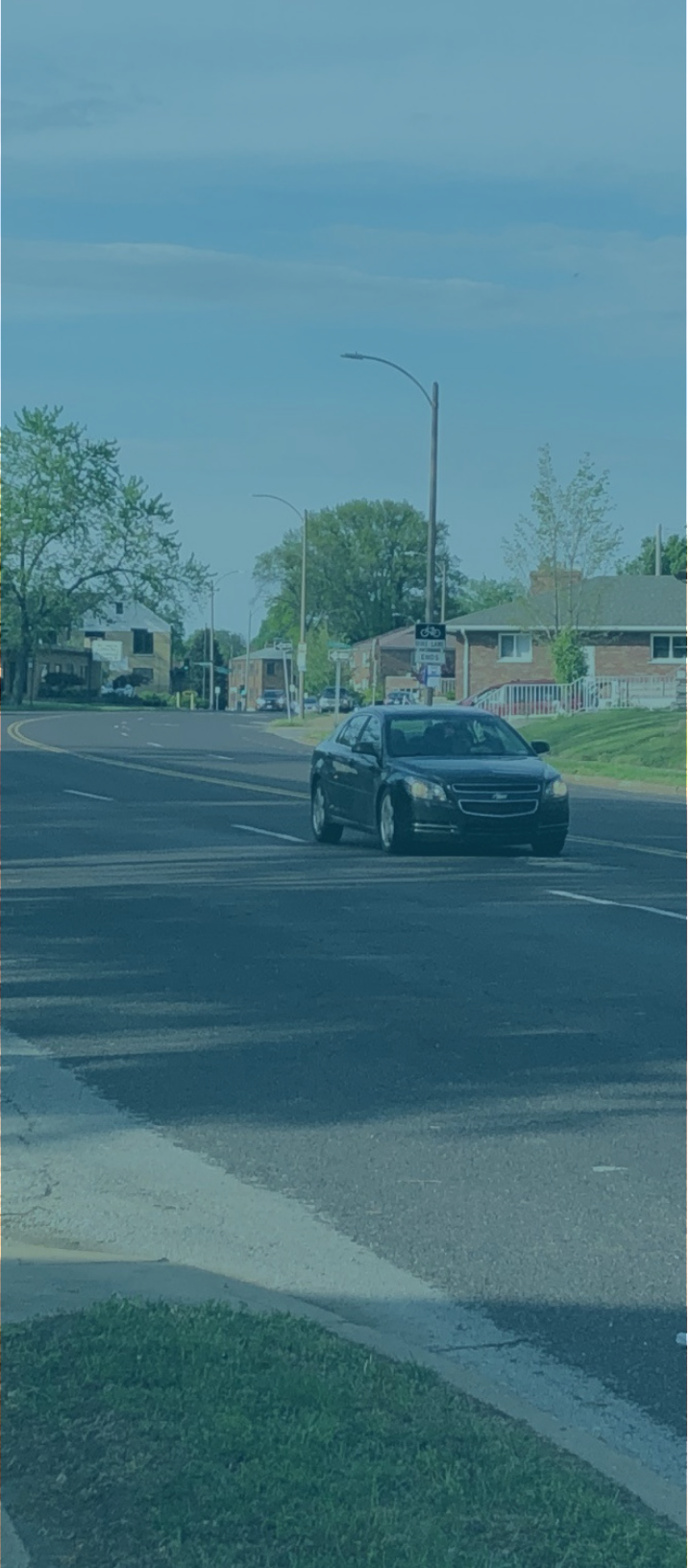
Traffic may be diverted to parallel north south streets, particularly Jamieson Ave, Macklind Ave, and Kingshighway. According to published research, traffic diversion to parallel routes from road diet implementation ranges from 2% to 15%.

Perceived Congestion

Motorists traveling on Hampton Avenue may perceive increased congestion due to the inability to pass slower moving traffic and the resulting uniformity of traffic flow. These conditions should be limited to the weekday peak commuter periods. At other non-peak times of the day, the "road diet" alternative should not adversely impact traffic operations. The "road diet" alternative is expected to provide benefits at all times of day.

Queues

Motorists may experience longer delays and greater difficulty turning onto Hampton Avenue at unsignalized locations. There will likely be longer queues on Hampton Avenue, particularly at the intersections of Nottingham Avenue and with Eichelberger Street. The queues approaching both intersections would likely exceed 800 feet – much greater than existing queues. However, for most signal cycles, all vehicles in queue would clear the intersection on a single green.



CONCLUSION

The purpose of this study was to determine the feasibility of reducing traffic lanes along Hampton Avenue between Chippewa Street and Gravois Avenue. The goal of this objective evaluation is to provide information to help decision makers. A recommendation is not offered for or against the "road diet" concept.

The "road diet" concept includes 3 traffic lanes – 1 through lane in each direction plus a center two-way left-turn lane. Lane modifications occur between Lansdowne Avenue and the entrance to Willmore Park. The traffic operational feasibility of implementing the "road diet" concept is summarized as follows:

- **The Hampton Avenue corridor is a good candidate for a road diet.** Industry guidance suggests road diets are appropriate for streets with volumes below 20,000 vehicles per day – Hampton Avenue's is 16,332 vehicles per day.

- **The "road diet" would not impact overall intersection levels of service.** The most tangible traffic impact is likely to be longer queues during the peak periods on Hampton Avenue at the intersections with Nottingham Avenue and with Eichelberger Street.

- **The "road diet" would promote a more welcoming environment for all modes** by reducing traffic speeds, improving safety, shortening pedestrian crosswalks, enlarging spaces for on-street parking and transit stops, and improving on-street bicycle lanes.

The cost estimate for the low-cost striping only concept for the "road diet" is $193,680. The cost estimate of the full "road diet" concept is $916,301. Both cost estimates are detailed in **Appendix G.**

APPENDIX

Appendix A: Existing Count Data

Appendix B: Speed Data

Appendix C: Parking Data

Appendix D: Traffic Operational Analysis Methodology

Appendix E: Traffic Operating Conditions

Appendix F: Conceptual Design

Appendix G: Conceptual Cost Estimate

Appendix A: Existing Count Data

Engineering Design Source Inc.
16141 Swingley Ridge Road

Chesterfield, Missouri, United States 12345
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Count Name: Hampton and Chippewa
Site Code: 01
Start Date: 03/07/2019

Turning Movement Data

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	15	67	18	0	0	100	41	105	13	0	0	159	5	202	22	0	0	229	6	71	29	0	0	106	594
7:15 AM	28	88	20	0	1	136	41	85	11	0	2	137	7	287	15	0	2	309	8	96	48	0	1	152	734
7:30 AM	34	105	26	0	4	165	41	109	24	0	1	174	5	257	28	0	0	290	8	137	54	0	1	199	828
7:45 AM	35	96	26	0	1	157	46	109	14	0	3	169	13	230	31	0	1	274	11	109	39	0	2	159	759
Hourly Total	112	356	90	0	6	558	169	408	62	0	6	639	30	976	96	0	3	1102	33	413	170	0	4	616	2915
8:00 AM	20	80	28	0	3	128	42	105	8	0	1	155	9	168	22	0	0	199	16	92	21	0	1	129	611
8:15 AM	32	73	38	0	0	143	32	89	13	0	2	134	3	189	28	0	1	220	7	87	43	0	0	137	634
8:30 AM	29	68	27	0	1	124	36	89	17	0	3	142	8	156	33	0	1	197	11	104	35	0	1	150	613
8:45 AM	28	102	37	0	1	167	31	82	20	0	0	133	9	150	27	0	0	186	12	97	34	0	1	143	629
Hourly Total	109	323	130	0	5	562	141	365	58	0	6	564	29	663	110	0	2	802	46	380	133	0	3	559	2487
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
4:00 PM	52	249	79	0	3	380	27	153	24	0	1	204	20	105	23	0	2	148	21	134	39	0	5	194	926
4:15 PM	60	292	67	0	3	419	22	120	38	0	5	180	21	124	29	0	0	174	26	131	39	0	3	196	969
4:30 PM	52	244	60	0	7	356	19	154	45	0	3	218	25	128	36	0	1	189	29	165	33	0	1	227	990
4:45 PM	46	277	68	0	2	391	20	133	38	0	4	191	30	140	33	0	2	203	19	150	34	0	4	203	988
Hourly Total	210	1062	274	0	15	1546	88	560	145	0	13	793	96	497	121	0	5	714	95	580	145	0	13	820	3873
5:00 PM	44	263	69	0	4	376	18	176	35	0	3	229	18	143	32	1	1	194	22	159	50	0	2	231	1030
5:15 PM	51	259	90	0	1	400	30	134	37	0	4	201	25	157	35	0	1	217	20	149	42	0	1	211	1029
5:30 PM	53	257	71	0	3	381	30	124	43	0	2	197	21	141	33	0	0	195	23	130	42	0	0	195	968
5:45 PM	40	208	83	0	1	331	50	127	38	0	0	215	20	147	36	0	0	203	28	131	43	0	0	202	951
Hourly Total	188	987	313	0	9	1488	128	561	153	0	9	842	84	588	136	1	2	809	93	569	177	0	3	839	3978
6:00 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	5
Grand Total	619	2732	807	0	35	4158	526	1894	418	0	34	2838	239	2725	463	1	12	3428	267	1943	625	0	23	2835	13259
Approach %	14.9	65.7	19.4	0.0	-	-	18.5	66.7	14.7	0.0	-	-	7.0	79.5	13.5	0.0	-	-	9.4	68.5	22.0	0.0	-	-	-
Total %	4.7	20.6	6.1	0.0	-	31.4	4.0	14.3	3.2	0.0	-	21.4	1.8	20.6	3.5	0.0	-	25.9	2.0	14.7	4.7	0.0	-	21.4	-
Motorcycles	1	1	0	0	-	2	0	0	0	0	-	0	0	2	0	0	-	2	1	0	1	0	-	2	6
% Motorcycles	0.2	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	0.0	-	0.1	0.4	0.0	0.2	-	-	0.1	0.0
Cars & Light Goods	608	2686	785	0	-	4079	512	1852	417	0	-	2781	238	2684	455	1	-	3378	262	1887	613	0	-	2762	13000
% Cars & Light Goods	98.2	98.3	97.3	-	-	98.1	97.3	97.8	99.8	-	-	98.0	99.6	98.5	98.3	100.0	-	98.5	98.1	97.1	98.1	-	-	97.4	98.0
Buses	3	22	14	0	-	39	11	28	1	0	-	40	0	24	5	0	-	29	0	29	3	0	-	32	140
% Buses	0.5	0.8	1.7	-	-	0.9	2.1	1.5	0.2	-	-	1.4	0.0	0.9	1.1	0.0	-	0.8	0.0	1.5	0.5	-	-	1.1	1.1
Single-Unit Trucks	6	17	6	0	-	29	3	8	0	0	-	11	0	11	3	0	-	14	2	22	5	0	-	29	83
% Single-Unit Trucks	1.0	0.6	0.7	-	-	0.7	0.6	0.4	0.0	-	-	0.4	0.0	0.4	0.6	0.0	-	0.4	0.7	1.1	0.8	-	-	1.0	0.6
Articulated Trucks	1	6	1	0	-	8	0	6	0	0	-	6	1	4	0	0	-	5	2	5	3	0	-	10	29
% Articulated Trucks	0.2	0.2	0.1	-	-	0.2	0.0	0.3	0.0	-	-	0.2	0.4	0.1	0.0	0.0	-	0.1	0.7	0.3	0.5	-	-	0.4	0.2
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1

% Bicycles on Road	0.0	0.0	0.1	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	8.3	-	-	-	-	-	4.3	-	-
Pedestrians	-	-	-	-	35	-	-	-	-	-	34	-	-	-	-	-	11	-	-	-	-	-	22	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	91.7	-	-	-	-	-	95.7	-	-

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Count Name: Hampton and Nottingham
Site Code: 02
Start Date: 03/19/2019

Turning Movement Data

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	2	37	0	0	0	39	13	4	3	0	2	20	0	146	0	0	1	146	4	0	14	0	1	18	223
7:15 AM	5	58	0	0	0	63	14	9	1	0	0	24	0	209	0	0	0	209	2	0	26	0	0	28	324
7:30 AM	8	48	0	0	0	56	10	14	1	0	1	25	0	196	0	0	0	196	7	0	22	0	0	29	306
7:45 AM	8	64	0	0	1	72	14	11	3	0	1	28	0	177	0	0	0	177	1	0	22	0	2	23	300
Hourly Total	23	207	0	0	1	230	51	38	8	0	4	97	0	728	0	0	1	728	14	0	84	0	3	98	1153
8:00 AM	2	78	0	0	0	80	18	10	1	0	0	29	0	152	0	0	0	152	5	0	15	0	1	20	281
8:15 AM	2	68	0	0	1	70	10	5	2	0	0	17	0	185	0	0	0	185	7	0	20	0	1	27	299
8:30 AM	4	75	0	0	0	79	11	7	2	0	1	20	0	160	0	0	1	160	12	0	22	0	0	34	293
8:45 AM	6	70	0	0	0	76	9	8	0	0	1	17	0	152	0	0	0	152	5	0	11	0	1	16	261
Hourly Total	14	291	0	0	1	305	48	30	5	0	2	83	0	649	0	0	1	649	29	0	68	0	3	97	1134
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	7	231	0	0	2	238	6	7	1	0	1	14	0	122	0	0	2	122	10	0	18	0	0	28	402
4:15 PM	8	236	0	0	0	244	5	9	6	0	1	20	0	140	0	0	1	140	13	0	12	0	2	25	429
4:30 PM	4	264	0	0	2	268	9	18	3	0	1	30	0	152	0	0	1	152	15	0	18	0	0	33	483
4:45 PM	16	252	0	0	4	268	15	16	3	0	3	34	0	138	0	0	3	138	19	0	21	0	5	40	480
Hourly Total	35	983	0	0	8	1018	35	50	13	0	6	98	0	552	0	0	7	552	57	0	69	0	7	126	1794
5:00 PM	12	278	0	0	2	290	10	13	2	0	2	25	0	130	0	0	0	130	17	0	20	0	0	37	482
5:15 PM	16	226	0	0	1	242	4	21	4	0	0	29	0	120	0	0	1	120	15	0	26	0	0	41	432
5:30 PM	9	258	0	0	3	267	10	5	1	0	1	16	0	127	0	0	4	127	13	0	17	0	0	30	440
5:45 PM	7	203	0	1	6	211	5	10	5	0	1	20	0	146	0	0	1	146	9	0	30	0	0	39	416
Hourly Total	44	965	0	1	12	1010	29	49	12	0	4	90	0	523	0	0	6	523	54	0	93	0	0	147	1770
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	116	2446	0	1	22	2563	163	167	38	0	16	368	0	2452	0	0	15	2452	154	0	314	0	13	468	5851
Approach %	4.5	95.4	0.0	0.0	-	-	44.3	45.4	10.3	0.0	-	-	0.0	100.0	0.0	0.0	-	-	32.9	0.0	67.1	0.0	-	-	-
Total %	2.0	41.8	0.0	0.0	-	43.8	2.8	2.9	0.6	0.0	-	6.3	0.0	41.9	0.0	0.0	-	41.9	2.6	0.0	5.4	0.0	-	8.0	-
Motorcycles	0	3	0	0	-	3	0	0	0	0	-	0	0	1	0	0	-	1	1	0	0	0	-	1	5
% Motorcycles	0.0	0.1	-	0.0	-	0.1	0.0	0.0	0.0	-	-	0.0	-	0.0	-	-	-	0.0	0.6	-	0.0	-	-	0.2	0.1
Cars & Light Goods	114	2394	0	1	-	2509	163	166	37	0	-	366	0	2407	0	0	-	2407	150	0	312	0	-	462	5744
% Cars & Light Goods	98.3	97.9	-	100.0	-	97.9	100.0	99.4	97.4	-	-	99.5	-	98.2	-	-	-	98.2	97.4	-	99.4	-	-	98.7	98.2
Buses	1	16	0	0	-	17	0	0	0	0	-	0	0	23	0	0	-	23	3	0	1	0	-	4	44
% Buses	0.9	0.7	-	0.0	-	0.7	0.0	0.0	0.0	-	-	0.0	-	0.9	-	-	-	0.9	1.9	-	0.3	-	-	0.9	0.8
Single-Unit Trucks	1	28	0	0	-	29	0	1	1	0	-	2	0	17	0	0	-	17	0	0	1	0	-	1	49
% Single-Unit Trucks	0.9	1.1	-	0.0	-	1.1	0.0	0.6	2.6	-	-	0.5	-	0.7	-	-	-	0.7	0.0	-	0.3	-	-	0.2	0.8
Articulated Trucks	0	4	0	0	-	4	0	0	0	0	-	0	0	4	0	0	-	4	0	0	0	0	-	0	8
% Articulated Trucks	0.0	0.2	-	0.0	-	0.2	0.0	0.0	0.0	-	-	0.0	-	0.2	-	-	-	0.2	0.0	-	0.0	-	-	0.0	0.1
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1

% Bicycles on Road	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	-	0.0	-	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	13.6	-	-	-	-	-	12.5	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	19	-	-	-	-	-	14	-	-	-	-	-	15	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	86.4	-	-	-	-	-	87.5	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: Hampton and Eichelberger
Site Code: 03
Start Date: 03/05/2019
Page No: 1

Turning Movement Data

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	9	45	9	0	1	63	15	41	29	0	2	85	22	126	43	0	0	191	6	19	11	0	0	36	375
7:15 AM	18	64	11	0	0	93	17	48	27	0	0	92	22	185	57	0	2	264	14	17	24	0	2	55	504
7:30 AM	23	65	11	0	0	99	13	55	24	0	0	92	16	179	51	0	0	246	21	39	40	0	0	100	537
7:45 AM	6	60	13	0	0	79	16	40	21	0	1	77	16	170	32	0	0	218	9	21	15	0	0	45	419
Hourly Total	56	234	44	0	1	334	61	184	101	0	3	346	76	660	183	0	2	919	50	96	90	0	2	236	1835
8:00 AM	4	58	7	0	0	69	7	39	10	0	0	56	10	132	24	0	0	166	7	8	9	0	1	24	315
8:15 AM	3	65	5	0	0	73	8	21	16	0	1	45	9	133	22	0	0	164	2	7	15	0	0	24	306
8:30 AM	4	60	6	0	0	70	15	32	13	0	0	60	9	133	20	0	0	162	5	6	5	0	1	16	308
8:45 AM	6	58	10	0	0	74	10	31	11	0	1	52	8	122	20	0	0	150	7	12	4	0	1	23	299
Hourly Total	17	241	28	0	0	286	40	123	50	0	2	213	36	520	86	0	0	642	21	33	33	0	3	87	1228
9:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	4
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	3	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	4
4:00 PM	8	215	36	0	0	259	10	18	27	0	0	55	14	111	6	0	0	131	13	39	12	0	0	64	509
4:15 PM	9	167	32	0	0	208	10	29	30	0	1	69	13	108	20	0	1	141	26	50	4	0	1	80	498
4:30 PM	10	213	24	0	0	247	16	13	27	0	1	56	21	99	17	0	1	137	21	51	9	0	0	81	521
4:45 PM	10	190	35	0	0	235	13	27	24	0	0	64	21	111	19	0	1	151	15	53	12	0	1	80	530
Hourly Total	37	785	127	0	0	949	49	87	108	0	2	244	69	429	62	0	3	560	75	193	37	0	2	305	2058
5:00 PM	10	205	25	0	0	240	6	21	21	0	0	48	20	119	16	0	0	155	18	41	17	0	0	76	519
5:15 PM	12	207	29	0	0	248	11	28	38	0	2	77	14	111	25	0	0	150	22	52	21	0	1	95	570
5:30 PM	8	150	28	0	1	186	12	24	27	0	0	63	17	94	18	0	0	129	34	51	4	0	0	89	467
5:45 PM	13	176	30	0	0	219	10	33	16	0	0	59	29	120	21	0	0	170	14	44	5	0	0	63	511
Hourly Total	43	738	112	0	1	893	39	106	102	0	2	247	80	444	80	0	0	604	88	188	47	0	1	323	2067
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	153	2001	311	0	2	2465	189	500	361	0	9	1050	262	2053	411	0	5	2726	234	510	207	0	8	951	7192
Approach %	6.2	81.2	12.6	0.0	-	-	18.0	47.6	34.4	0.0	-	-	9.6	75.3	15.1	0.0	-	-	24.6	53.6	21.8	0.0	-	-	-
Total %	2.1	27.8	4.3	0.0	-	34.3	2.6	7.0	5.0	0.0	-	14.6	3.6	28.5	5.7	0.0	-	37.9	3.3	7.1	2.9	0.0	-	13.2	-
Motorcycles	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	2
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Cars & Light Goods	152	1961	306	0	-	2419	185	500	359	0	-	1044	261	2010	405	0	-	2676	232	505	206	0	-	943	7082
% Cars & Light Goods	99.3	98.0	98.4	-	-	98.1	97.9	100.0	99.4	-	-	99.4	99.6	97.9	98.5	-	-	98.2	99.1	99.0	99.5	-	-	99.2	98.5
Buses	0	18	4	0	-	22	1	0	0	0	-	1	1	23	1	0	-	25	1	4	0	0	-	5	53
% Buses	0.0	0.9	1.3	-	-	0.9	0.5	0.0	0.0	-	-	0.1	0.4	1.1	0.2	-	-	0.9	0.4	0.8	0.0	-	-	0.5	0.7
Single-Unit Trucks	1	17	1	0	-	19	2	0	2	0	-	4	0	11	4	0	-	15	1	0	1	0	-	2	40
% Single-Unit Trucks	0.7	0.8	0.3	-	-	0.8	1.1	0.0	0.6	-	-	0.4	0.0	0.5	1.0	-	-	0.6	0.4	0.0	0.5	-	-	0.2	0.6
Articulated Trucks	0	4	0	0	-	4	1	0	0	0	-	1	0	8	1	0	-	9	0	1	0	0	-	1	15
% Articulated Trucks	0.0	0.2	0.0	-	-	0.2	0.5	0.0	0.0	-	-	0.1	0.0	0.4	0.2	-	-	0.3	0.0	0.2	0.0	-	-	0.1	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0

% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	12.5	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	9	-	-	-	-	-	5	-	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	87.5	-	-

Engineering Design Source Inc.
16141 Swingley Ridge Road

Chesterfield, Missouri, United States 12345
636.537.5585 go@engdesignsource.com

Count Name: Hampton and Holly Hills
Site Code: 04
Start Date: 03/19/2019

Turning Movement Data

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	11	51	4	0	1	66	0	0	0	0	1	0	1	127	1	0	0	129	5	1	3	0	0	9	204
7:15 AM	6	62	4	0	0	72	0	0	0	0	0	0	2	147	0	0	0	149	3	2	2	0	0	7	228
7:30 AM	2	69	1	0	0	72	0	0	0	0	0	0	1	161	1	0	0	163	3	1	0	0	0	4	239
7:45 AM	1	54	2	0	0	57	0	0	0	0	0	0	0	138	0	0	1	138	0	0	0	0	0	0	195
Hourly Total	20	236	11	0	1	267	0	0	0	0	1	0	4	573	2	0	1	579	11	4	5	0	0	20	866
8:00 AM	1	95	8	0	0	104	0	0	0	0	1	0	3	131	1	0	0	135	3	0	1	0	1	4	243
8:15 AM	0	63	3	0	0	66	0	0	0	0	0	0	1	149	0	0	0	150	1	0	0	0	0	1	217
8:30 AM	2	76	7	0	0	85	0	0	0	0	0	0	4	150	3	0	0	157	0	1	1	0	0	2	244
8:45 AM	3	69	3	0	0	75	1	0	0	0	0	1	4	144	1	0	0	149	2	0	0	0	0	2	227
Hourly Total	6	303	21	0	0	330	1	0	0	0	1	1	12	574	5	0	0	591	6	1	2	0	1	9	931
9:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	4	194	18	0	0	216	0	0	0	0	0	0	3	137	4	1	3	145	0	2	1	0	3	3	364
4:15 PM	1	193	13	0	0	207	0	0	0	0	1	0	4	126	2	0	1	132	1	0	1	0	2	2	341
4:30 PM	4	219	10	0	0	233	0	0	0	0	7	0	7	156	1	0	0	164	2	0	0	0	1	2	399
4:45 PM	4	187	12	1	0	204	1	0	0	0	1	1	4	127	1	0	0	132	1	0	0	0	1	1	338
Hourly Total	13	793	53	1	0	860	1	0	0	0	9	1	18	546	8	1	4	573	4	2	2	0	7	8	1442
5:00 PM	5	221	19	0	0	245	0	0	1	0	1	1	5	139	4	0	6	148	0	0	1	0	4	1	395
5:15 PM	1	178	13	0	0	192	0	0	0	0	2	0	4	137	2	0	2	143	0	0	0	0	0	0	335
5:30 PM	3	191	24	0	0	218	1	0	0	0	5	1	10	131	2	0	0	143	3	0	1	0	1	4	366
5:45 PM	2	161	21	0	4	184	0	0	0	0	6	0	9	150	2	0	0	161	2	2	0	0	3	4	349
Hourly Total	11	751	77	0	4	839	1	0	1	0	14	2	28	557	10	0	8	595	5	2	2	0	8	9	1445
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Grand Total	50	2084	162	1	5	2297	3	0	1	0	25	4	62	2251	25	1	13	2339	26	9	11	0	16	46	4686
Approach %	2.2	90.7	7.1	0.0	-	-	75.0	0.0	25.0	0.0	-	-	2.7	96.2	1.1	0.0	-	-	56.5	19.6	23.9	0.0	-	-	-
Total %	1.1	44.5	3.5	0.0	-	49.0	0.1	0.0	0.0	0.0	-	0.1	1.3	48.0	0.5	0.0	-	49.9	0.6	0.2	0.2	0.0	-	1.0	-
Motorcycles	0	6	0	0	-	6	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	8
% Motorcycles	0.0	0.3	0.0	0.0	-	0.3	0.0	-	0.0	-	-	0.0	0.0	0.1	0.0	0.0	-	0.1	0.0	0.0	0.0	-	-	0.0	0.2
Cars & Light Goods	48	2038	157	1	-	2244	3	0	1	0	-	4	61	2199	23	1	-	2284	26	8	11	0	-	45	4577
% Cars & Light Goods	96.0	97.8	96.9	100.0	-	97.7	100.0	-	100.0	-	-	100.0	98.4	97.7	92.0	100.0	-	97.6	100.0	88.9	100.0	-	-	97.8	97.7
Buses	0	14	3	0	-	17	0	0	0	0	-	0	0	21	0	0	-	21	0	1	0	0	-	1	39
% Buses	0.0	0.7	1.9	0.0	-	0.7	0.0	-	0.0	-	-	0.0	0.0	0.9	0.0	0.0	-	0.9	0.0	11.1	0.0	-	-	2.2	0.8
Single-Unit Trucks	2	23	2	0	-	27	0	0	0	0	-	0	0	22	2	0	-	24	0	0	0	0	-	0	51
% Single-Unit Trucks	4.0	1.1	1.2	0.0	-	1.2	0.0	-	0.0	-	-	0.0	0.0	1.0	8.0	0.0	-	1.0	0.0	0.0	0.0	-	-	0.0	1.1
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	-	0	1	7	0	0	-	8	0	0	0	0	-	0	10
% Articulated Trucks	0.0	0.1	0.0	0.0	-	0.1	0.0	-	0.0	-	-	0.0	1.6	0.3	0.0	0.0	-	0.3	0.0	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1

% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	5	-	-	-	-	-	25	-	-	-	-	-	13	-	-	-	-	-	16	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Engineering Design Source Inc.
16141 Swingley Ridge Road

Chesterfield, Missouri, United States 12345
636.537.5585 go@engdesignsource.com

Count Name: Hampton and Loughborough
Site Code: 05
Start Date: 02/26/2019

Turning Movement Data

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	8	74	10	0	1	92	11	38	9	0	0	58	2	103	2	0	0	107	2	11	4	0	1	17	274
7:15 AM	4	75	6	0	0	85	16	48	7	0	0	71	5	166	9	0	0	180	4	5	6	0	0	15	351
7:30 AM	10	98	12	0	0	120	23	56	7	0	2	86	4	166	6	0	0	176	7	11	12	0	0	30	412
7:45 AM	9	95	7	0	0	111	20	40	9	0	0	69	5	122	2	0	0	129	3	7	4	0	0	14	323
Hourly Total	31	342	35	0	1	408	70	182	32	0	2	284	16	557	19	0	0	592	16	34	26	0	1	76	1360
8:00 AM	7	65	6	0	0	78	9	28	6	0	0	43	8	130	2	0	0	140	3	9	7	0	0	19	280
8:15 AM	2	57	6	0	0	65	12	29	4	0	0	45	4	115	4	0	0	123	3	12	6	0	0	21	254
8:30 AM	5	68	9	0	1	82	11	18	6	0	1	35	4	110	6	0	0	120	10	7	5	0	0	22	259
8:45 AM	9	59	10	0	1	78	15	22	2	0	0	39	4	117	0	0	0	121	6	9	5	0	0	20	258
Hourly Total	23	249	31	0	2	303	47	97	18	0	1	162	20	472	12	0	0	504	22	37	23	0	0	82	1051
9:00 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	11	162	16	0	1	189	17	21	6	0	2	44	4	114	3	0	2	121	9	27	8	0	1	44	398
4:15 PM	9	144	22	0	0	175	17	24	6	0	1	47	9	126	1	0	1	136	8	31	11	0	0	50	408
4:30 PM	14	184	17	0	2	215	9	21	9	0	2	39	14	113	1	0	2	128	9	39	5	0	0	53	435
4:45 PM	12	156	18	0	0	186	13	22	10	0	1	45	14	135	0	0	3	149	10	34	4	0	0	48	428
Hourly Total	46	646	73	0	3	765	56	88	31	0	6	175	41	488	5	0	8	534	36	131	28	0	1	195	1669
5:00 PM	18	194	22	0	1	234	15	15	10	0	0	40	10	134	4	0	1	148	6	48	7	0	1	61	483
5:15 PM	11	171	16	0	1	198	13	20	9	0	0	42	7	159	5	0	0	171	10	43	9	0	2	62	473
5:30 PM	6	143	17	0	0	166	23	25	8	0	0	56	4	108	3	0	0	115	15	46	5	0	0	66	403
5:45 PM	13	133	14	0	2	160	24	19	3	0	1	46	11	135	0	0	1	146	11	44	12	0	4	67	419
Hourly Total	48	641	69	0	4	758	75	79	30	0	1	184	32	536	12	0	2	580	42	181	33	0	7	256	1778
Grand Total	148	1878	208	0	10	2234	249	446	111	0	10	806	109	2053	48	0	10	2210	116	383	110	0	9	609	5859
Approach %	6.6	84.1	9.3	0.0	-	-	30.9	55.3	13.8	0.0	-	-	4.9	92.9	2.2	0.0	-	-	19.0	62.9	18.1	0.0	-	-	-
Total %	2.5	32.1	3.6	0.0	-	38.1	4.2	7.6	1.9	0.0	-	13.8	1.9	35.0	0.8	0.0	-	37.7	2.0	6.5	1.9	0.0	-	10.4	-
Motorcycles	0	0	0	0	-	0	1	0	0	0	-	1	0	2	0	0	-	2	0	0	0	0	-	0	3
% Motorcycles	0.0	0.0	0.0	-	-	0.0	0.4	0.0	0.0	-	-	0.1	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.1
Cars & Light Goods	146	1853	203	0	-	2202	246	445	106	0	-	797	104	2016	45	0	-	2165	116	377	109	0	-	602	5766
% Cars & Light Goods	98.6	98.7	97.6	-	-	98.6	98.8	99.8	95.5	-	-	98.9	95.4	98.2	93.8	-	-	98.0	100.0	98.4	99.1	-	-	98.9	98.4
Buses	0	14	1	0	-	15	2	0	2	0	-	4	1	19	3	0	-	23	0	4	1	0	-	5	47
% Buses	0.0	0.7	0.5	-	-	0.7	0.8	0.0	1.8	-	-	0.5	0.9	0.9	6.3	-	-	1.0	0.0	1.0	0.9	-	-	0.8	0.8
Single-Unit Trucks	2	10	2	0	-	14	0	1	3	0	-	4	4	12	0	0	-	16	0	0	0	0	-	0	34
% Single-Unit Trucks	1.4	0.5	1.0	-	-	0.6	0.0	0.2	2.7	-	-	0.5	3.7	0.6	0.0	-	-	0.7	0.0	0.0	0.0	-	-	0.0	0.6
Articulated Trucks	0	1	2	0	-	3	0	0	0	0	-	0	0	4	0	0	-	4	0	1	0	0	-	1	8
% Articulated Trucks	0.0	0.1	1.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.3	0.0	-	-	0.2	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	-	0.2	0.0

Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	10	-	-	-	-	-	10	-	-	-	-	-	10	-	-	-	-	-	9	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Engineering Design Source Inc.
16141 Swingley Ridge Road

Chesterfield, Missouri, United States 12345
636.537.5585 go@engdesignsource.com

Count Name: Hampton and Gravois
Site Code: 07
Start Date: 02/21/2019

Turning Movement Data

Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	50	55	9	0	0	114	10	124	8	0	0	142	6	106	24	0	0	136	13	103	61	0	0	177	569
7:15 AM	51	75	9	0	0	135	15	127	8	0	1	150	9	118	40	0	1	167	18	152	84	0	0	254	706
7:30 AM	67	88	6	0	0	161	9	125	10	0	1	144	10	163	39	0	1	212	19	125	73	0	0	217	734
7:45 AM	74	73	7	0	0	154	11	145	10	0	2	166	14	116	31	0	1	161	20	136	64	0	0	220	701
Hourly Total	242	291	31	0	0	564	45	521	36	0	4	602	39	503	134	0	3	676	70	516	282	0	0	868	2710
8:00 AM	56	50	9	0	0	115	8	117	6	0	1	131	13	104	30	0	1	147	20	126	50	0	0	196	589
8:15 AM	48	40	9	0	2	97	13	109	7	0	0	129	14	77	15	0	1	106	18	129	66	0	0	213	545
8:30 AM	53	53	6	0	3	112	9	96	5	0	1	110	13	79	24	0	0	116	10	106	56	0	0	172	510
8:45 AM	46	39	9	0	2	94	7	109	4	0	0	120	13	86	20	0	0	119	11	126	58	0	0	195	528
Hourly Total	203	182	33	0	7	418	37	431	22	0	2	490	53	346	89	0	2	488	59	487	230	0	0	776	2172
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	88	95	21	0	0	204	12	187	16	0	2	215	11	81	39	0	2	131	34	157	47	0	0	238	788
4:15 PM	89	112	7	0	3	208	12	175	11	0	3	198	13	114	25	0	4	152	24	172	58	0	0	254	812
4:30 PM	105	144	9	0	2	258	10	179	9	0	2	198	17	105	30	0	0	152	38	140	63	0	0	241	849
4:45 PM	112	115	17	0	4	244	13	163	7	0	0	183	19	111	14	0	0	144	37	136	70	0	0	243	814
Hourly Total	394	466	54	0	9	914	47	704	43	0	7	794	60	411	108	0	6	579	133	605	238	0	0	976	3263
5:00 PM	95	145	21	0	3	261	8	179	14	0	0	201	13	100	26	0	0	139	34	145	74	0	0	253	854
5:15 PM	116	117	21	0	4	254	21	141	17	0	0	179	13	141	21	0	1	175	25	154	80	0	0	259	867
5:30 PM	114	108	20	0	0	242	13	177	13	0	0	203	15	101	21	0	1	137	27	123	51	0	0	201	783
5:45 PM	95	85	13	0	0	193	6	156	17	0	1	179	12	103	22	0	0	137	35	139	70	0	0	244	753
Hourly Total	420	455	75	0	7	950	48	653	61	0	1	762	53	445	90	0	2	588	121	561	275	0	0	957	3257
6:00 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	1259	1394	193	0	23	2846	177	2311	162	0	14	2650	205	1705	421	0	13	2331	383	2169	1025	0	0	3577	11404
Approach %	44.2	49.0	6.8	0.0	-	-	6.7	87.2	6.1	0.0	-	-	8.8	73.1	18.1	0.0	-	-	10.7	60.6	28.7	0.0	-	-	-
Total %	11.0	12.2	1.7	0.0	-	25.0	1.6	20.3	1.4	0.0	-	23.2	1.8	15.0	3.7	0.0	-	20.4	3.4	19.0	9.0	0.0	-	31.4	-
Motorcycles	0	2	0	0	-	2	0	1	0	0	-	1	0	1	0	0	-	1	0	2	1	0	-	3	7
% Motorcycles	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	0.0	0.0	0.1	0.1	-	-	0.1	0.1
Cars & Light Goods	1251	1363	187	0	-	2801	145	2273	159	0	-	2577	197	1665	408	0	-	2270	377	2136	1005	0	-	3518	11166
% Cars & Light Goods	99.4	97.8	96.9	-	-	98.4	81.9	98.4	98.1	-	-	97.2	96.1	97.7	96.9	-	-	97.4	98.4	98.5	98.0	-	-	98.4	97.9
Buses	2	16	2	0	-	20	29	18	2	0	-	49	5	20	10	0	-	35	3	8	13	0	-	24	128
% Buses	0.2	1.1	1.0	-	-	0.7	16.4	0.8	1.2	-	-	1.8	2.4	1.2	2.4	-	-	1.5	0.8	0.4	1.3	-	-	0.7	1.1
Single-Unit Trucks	4	12	4	0	-	20	3	16	1	0	-	20	3	15	3	0	-	21	2	16	4	0	-	22	83
% Single-Unit Trucks	0.3	0.9	2.1	-	-	0.7	1.7	0.7	0.6	-	-	0.8	1.5	0.9	0.7	-	-	0.9	0.5	0.7	0.4	-	-	0.6	0.7
Articulated Trucks	2	1	0	0	-	3	0	2	0	0	-	2	0	4	0	0	-	4	1	6	2	0	-	9	18
% Articulated Trucks	0.2	0.1	0.0	-	-	0.1	0.0	0.1	0.0	-	-	0.1	0.0	0.2	0.0	-	-	0.2	0.3	0.3	0.2	-	-	0.3	0.2
Bicycles on Road	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	2

% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	7.7	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	23	-	-	-	-	-	14	-	-	-	-	-	12	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	92.3	-	-	-	-	-	-	-	-

Engineering Design Source Inc.
16141 Swingley Ridge Road

Chesterfield, Missouri, United States 12345
636.537.5585 go@engdesignsource.com

Count Name: Hampton and Jameison
Site Code: 06
Start Date: 02/21/2019

Turning Movement Data

Start Time	Southbound Approach					Northbound Approach					Eastbound Approach					
	Southbound					Northbound					Eastbound					
	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	6	92	0	0	98	135	48	0	0	183	22	2	0	0	24	305
7:15 AM	3	96	0	0	99	162	66	0	0	228	34	3	0	0	37	364
7:30 AM	5	121	0	0	126	169	75	0	0	244	41	0	0	0	41	411
7:45 AM	1	114	0	0	115	138	52	0	0	190	37	6	0	0	43	348
Hourly Total	15	423	0	0	438	604	241	0	0	845	134	11	0	0	145	1428
8:00 AM	3	82	0	0	85	128	38	0	1	166	14	4	0	0	18	269
8:15 AM	3	83	0	0	86	124	36	0	0	160	22	1	0	0	23	269
8:30 AM	0	76	0	0	76	127	17	0	0	144	31	2	0	2	33	253
8:45 AM	4	62	0	0	66	98	27	0	0	125	26	1	0	0	27	218
Hourly Total	10	303	0	0	313	477	118	0	1	595	93	8	0	2	101	1009
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	3	157	0	0	160	125	31	0	0	156	54	3	0	0	57	373
4:15 PM	3	152	0	0	155	134	38	0	0	172	47	5	0	1	52	379
4:30 PM	2	188	0	0	190	137	38	0	0	175	80	0	0	0	80	445
4:45 PM	4	177	0	0	181	148	49	0	0	197	68	4	0	0	72	450
Hourly Total	12	674	0	0	686	544	156	0	0	700	249	12	0	1	261	1647
5:00 PM	4	210	0	0	214	151	34	0	0	185	69	3	0	0	72	471
5:15 PM	5	193	0	0	198	162	65	0	0	227	69	5	0	0	74	499
5:30 PM	7	170	0	0	177	134	42	0	0	176	67	2	0	0	69	422
5:45 PM	0	131	0	0	131	134	53	0	0	187	54	6	0	0	60	378
Hourly Total	16	704	0	0	720	581	194	0	0	775	259	16	0	0	275	1770
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	53	2104	0	0	2157	2206	709	0	1	2915	735	47	0	3	782	5854
Approach %	2.5	97.5	0.0	-	-	75.7	24.3	0.0	-	-	94.0	6.0	0.0	-	-	-
Total %	0.9	35.9	0.0	-	36.8	37.7	12.1	0.0	-	49.8	12.6	0.8	0.0	-	13.4	-
Motorcycles	0	2	0	-	2	1	2	0	-	3	1	0	0	-	1	6
% Motorcycles	0.0	0.1	-	-	0.1	0.0	0.3	-	-	0.1	0.1	0.0	-	-	0.1	0.1
Cars & Light Goods	52	2068	0	-	2120	2148	700	0	-	2848	725	45	0	-	770	5738
% Cars & Light Goods	98.1	98.3	-	-	98.3	97.4	98.7	-	-	97.7	98.6	95.7	-	-	98.5	98.0
Buses	1	15	0	-	16	31	2	0	-	33	2	0	0	-	2	51
% Buses	1.9	0.7	-	-	0.7	1.4	0.3	-	-	1.1	0.3	0.0	-	-	0.3	0.9
Single-Unit Trucks	0	18	0	-	18	19	4	0	-	23	7	1	0	-	8	49
% Single-Unit Trucks	0.0	0.9	-	-	0.8	0.9	0.6	-	-	0.8	1.0	2.1	-	-	1.0	0.8
Articulated Trucks	0	1	0	-	1	7	1	0	-	8	0	0	0	-	0	9
% Articulated Trucks	0.0	0.0	-	-	0.0	0.3	0.1	-	-	0.3	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Bicycles on Road	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0	2.1	-	-	0.1	0.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	100.0	-	-	-	-	0.0	-	-

Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	0.0	-	-	-	-	100.0	-	-

Engineering Design Source Inc.
16141 Swingley Ridge Road

Chesterfield, Missouri, United States 12345
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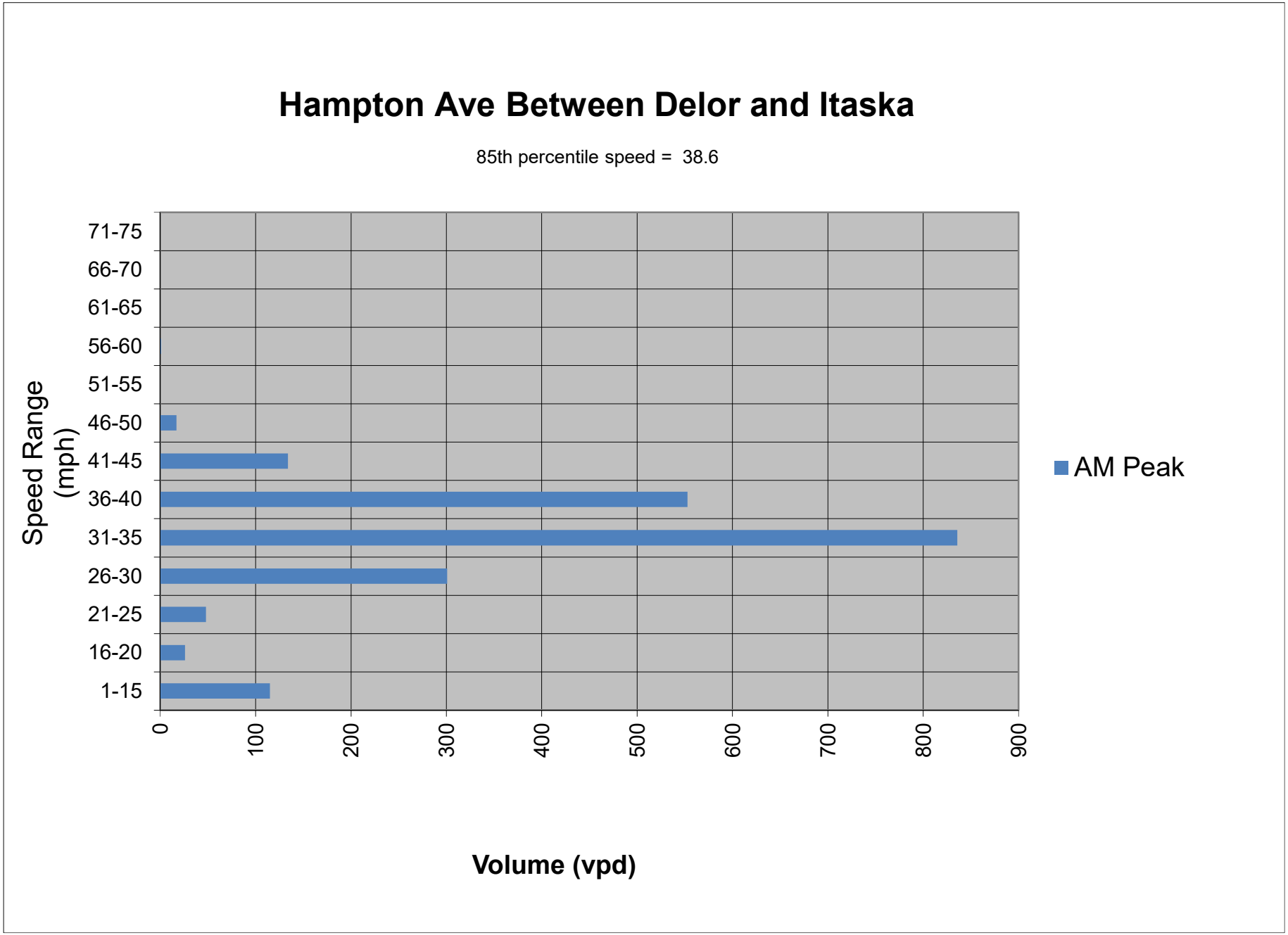
Count Name: Hampton and Gravois
Site Code: 07
Start Date: 02/21/2019

Turning Movement Data

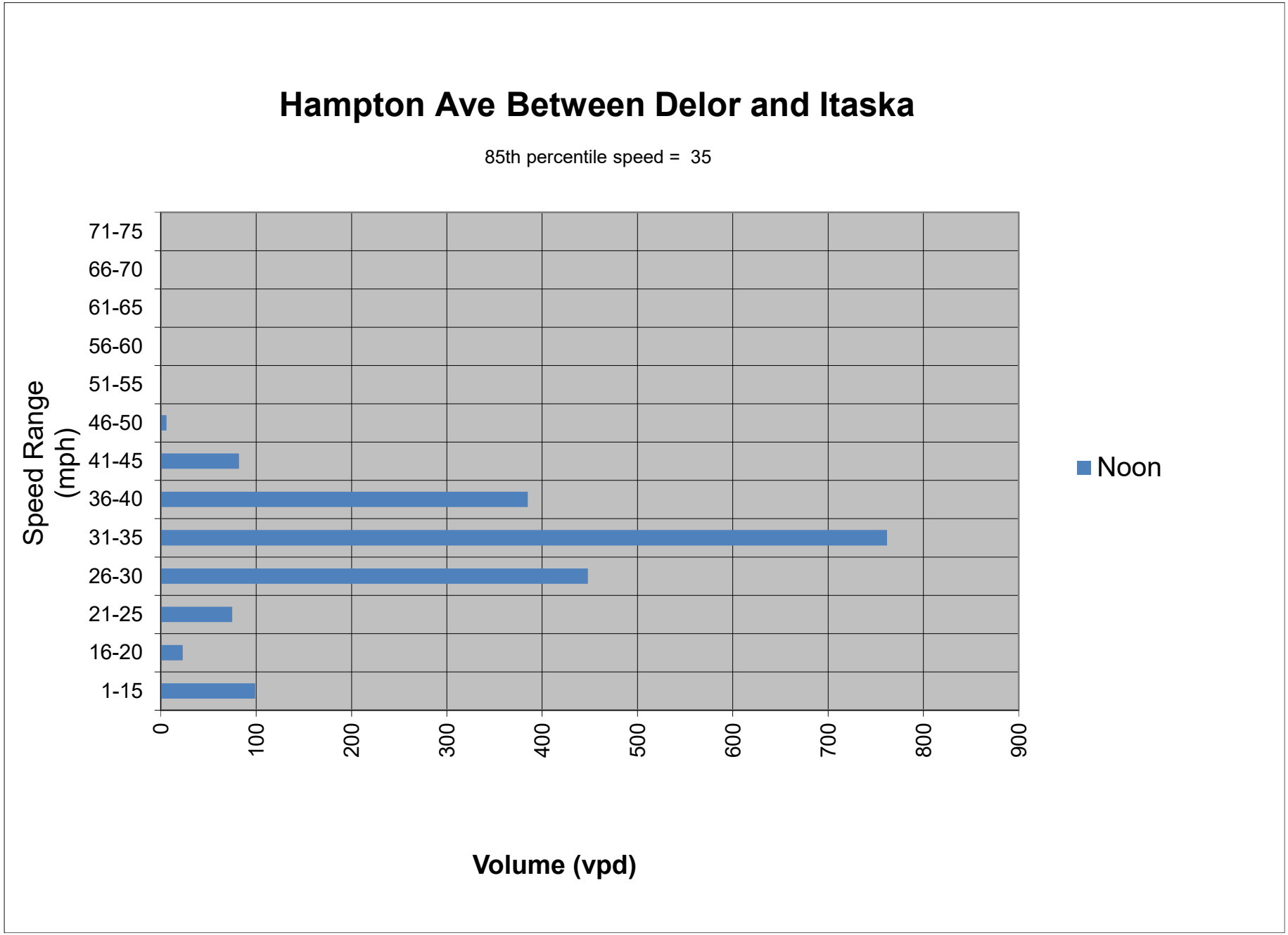
Start Time	Southbound Approach						Westbound Approach						Northbound Approach						Eastbound Approach						
	Southbound						Westbound						Northbound						Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	50	55	9	0	0	114	10	124	8	0	0	142	6	106	24	0	0	136	13	103	61	0	0	177	569
7:15 AM	51	75	9	0	0	135	15	127	8	0	1	150	9	118	40	0	1	167	18	152	84	0	0	254	706
7:30 AM	67	88	6	0	0	161	9	125	10	0	1	144	10	163	39	0	1	212	19	125	73	0	0	217	734
7:45 AM	74	73	7	0	0	154	11	145	10	0	2	166	14	116	31	0	1	161	20	136	64	0	0	220	701
Hourly Total	242	291	31	0	0	564	45	521	36	0	4	602	39	503	134	0	3	676	70	516	282	0	0	868	2710
8:00 AM	56	50	9	0	0	115	8	117	6	0	1	131	13	104	30	0	1	147	20	126	50	0	0	196	589
8:15 AM	48	40	9	0	2	97	13	109	7	0	0	129	14	77	15	0	1	106	18	129	66	0	0	213	545
8:30 AM	53	53	6	0	3	112	9	96	5	0	1	110	13	79	24	0	0	116	10	106	56	0	0	172	510
8:45 AM	46	39	9	0	2	94	7	109	4	0	0	120	13	86	20	0	0	119	11	126	58	0	0	195	528
Hourly Total	203	182	33	0	7	418	37	431	22	0	2	490	53	346	89	0	2	488	59	487	230	0	0	776	2172
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	88	95	21	0	0	204	12	187	16	0	2	215	11	81	39	0	2	131	34	157	47	0	0	238	788
4:15 PM	89	112	7	0	3	208	12	175	11	0	3	198	13	114	25	0	4	152	24	172	58	0	0	254	812
4:30 PM	105	144	9	0	2	258	10	179	9	0	2	198	17	105	30	0	0	152	38	140	63	0	0	241	849
4:45 PM	112	115	17	0	4	244	13	163	7	0	0	183	19	111	14	0	0	144	37	136	70	0	0	243	814
Hourly Total	394	466	54	0	9	914	47	704	43	0	7	794	60	411	108	0	6	579	133	605	238	0	0	976	3263
5:00 PM	95	145	21	0	3	261	8	179	14	0	0	201	13	100	26	0	0	139	34	145	74	0	0	253	854
5:15 PM	116	117	21	0	4	254	21	141	17	0	0	179	13	141	21	0	1	175	25	154	80	0	0	259	867
5:30 PM	114	108	20	0	0	242	13	177	13	0	0	203	15	101	21	0	1	137	27	123	51	0	0	201	783
5:45 PM	95	85	13	0	0	193	6	156	17	0	1	179	12	103	22	0	0	137	35	139	70	0	0	244	753
Hourly Total	420	455	75	0	7	950	48	653	61	0	1	762	53	445	90	0	2	588	121	561	275	0	0	957	3257
6:00 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	1259	1394	193	0	23	2846	177	2311	162	0	14	2650	205	1705	421	0	13	2331	383	2169	1025	0	0	3577	11404
Approach %	44.2	49.0	6.8	0.0	-	-	6.7	87.2	6.1	0.0	-	-	8.8	73.1	18.1	0.0	-	-	10.7	60.6	28.7	0.0	-	-	-
Total %	11.0	12.2	1.7	0.0	-	25.0	1.6	20.3	1.4	0.0	-	23.2	1.8	15.0	3.7	0.0	-	20.4	3.4	19.0	9.0	0.0	-	31.4	-
Motorcycles	0	2	0	0	-	2	0	1	0	0	-	1	0	1	0	0	-	1	0	2	1	0	-	3	7
% Motorcycles	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	0.0	0.0	0.1	0.1	-	-	0.1	0.1
Cars & Light Goods	1251	1363	187	0	-	2801	145	2273	159	0	-	2577	197	1665	408	0	-	2270	377	2136	1005	0	-	3518	11166
% Cars & Light Goods	99.4	97.8	96.9	-	-	98.4	81.9	98.4	98.1	-	-	97.2	96.1	97.7	96.9	-	-	97.4	98.4	98.5	98.0	-	-	98.4	97.9
Buses	2	16	2	0	-	20	29	18	2	0	-	49	5	20	10	0	-	35	3	8	13	0	-	24	128
% Buses	0.2	1.1	1.0	-	-	0.7	16.4	0.8	1.2	-	-	1.8	2.4	1.2	2.4	-	-	1.5	0.8	0.4	1.3	-	-	0.7	1.1
Single-Unit Trucks	4	12	4	0	-	20	3	16	1	0	-	20	3	15	3	0	-	21	2	16	4	0	-	22	83
% Single-Unit Trucks	0.3	0.9	2.1	-	-	0.7	1.7	0.7	0.6	-	-	0.8	1.5	0.9	0.7	-	-	0.9	0.5	0.7	0.4	-	-	0.6	0.7
Articulated Trucks	2	1	0	0	-	3	0	2	0	0	-	2	0	4	0	0	-	4	1	6	2	0	-	9	18
% Articulated Trucks	0.2	0.1	0.0	-	-	0.1	0.0	0.1	0.0	-	-	0.1	0.0	0.2	0.0	-	-	0.2	0.3	0.3	0.2	-	-	0.3	0.2
Bicycles on Road	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	1	0	0	-	1	2

% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	7.7	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	23	-	-	-	-	-	14	-	-	-	-	-	12	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	92.3	-	-	-	-	-	-	-	-

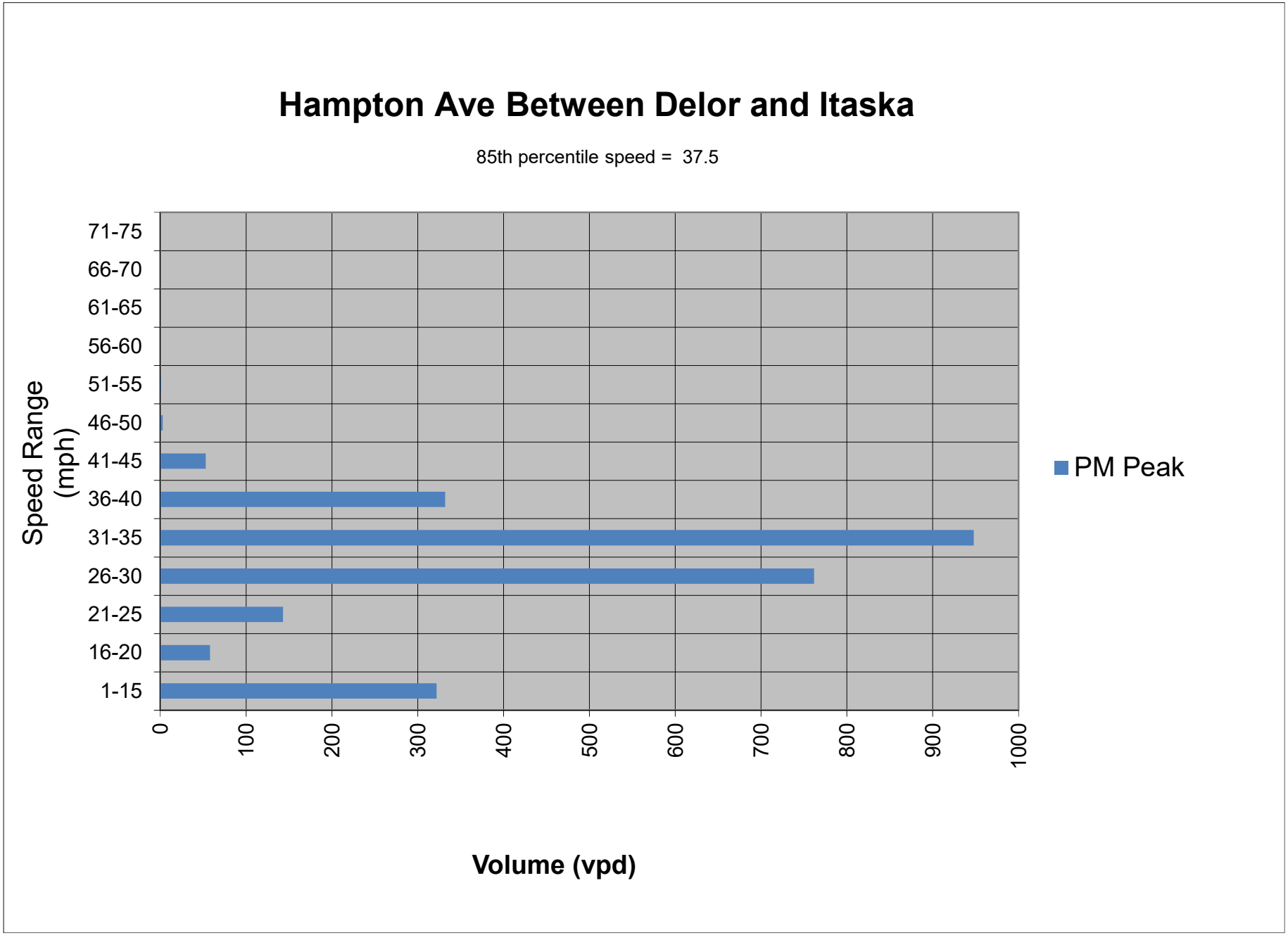
Appendix B: Speed Data



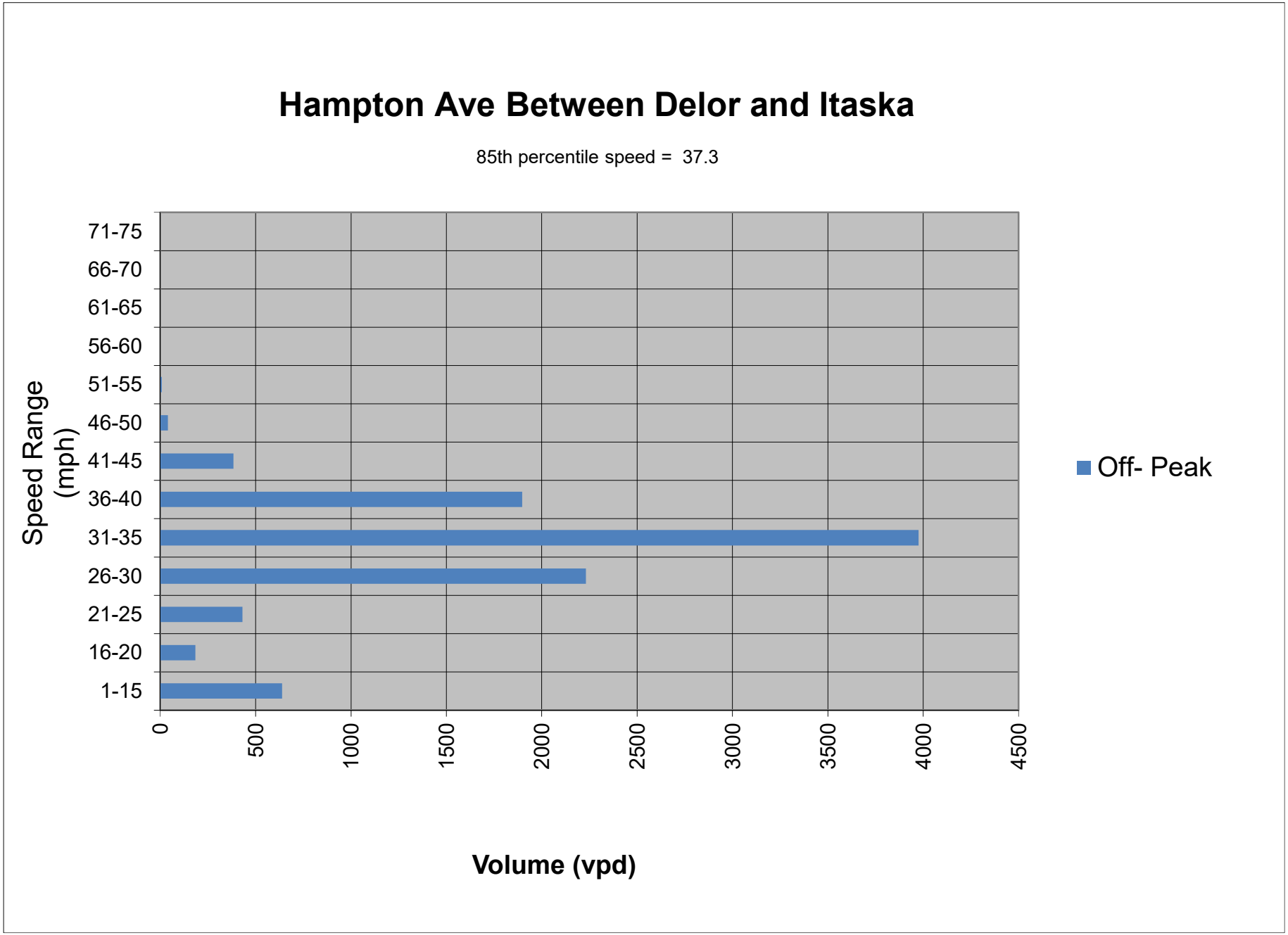
AM Peak Period Speed Profile



Midday Peak Period Speed Profile



PM Peak Period Speed Profile



Off-Peak Period Speed Profile

Appendix C: Parking Data

			Weekday 2/26/2019 12:00 PM to 2:00 PM															
			Southbound Lanes							Northbound Lanes								Total Block Average Utilization
			Available Spots	Parked Vehicles Run#		Average Utilization	Illegal Parked Vehicles Run#			Available Spots	Parked Vehicles Run#		Average Utilization	Illegal Parked Vehicles Run#				
HAMPTON AVE				1	2		Total	1	2		1	2		Total	1	2		
Chippewa	to	Bancroft	0	-	-	-	0	-	-	0	-	-	-		-	-	-	
Bancroft	to	Sutherland	0	-	-	-	0	-	-	0	-	-	-		-	-	-	
Sutherland	to	Lansdowne	0	-	-	-	0	-	-	0	-	-	-		-	-	-	
Lansdowne	to	Devonshire	0	-	-	-	0	-	-	12	0	0	0%	0	0	0	0%	
Devonshire	to	Nottingham	18	5	5	28%	0	0	0	21	0	0	0%	0	0	0	13%	
Nottingham	to	Neosho	7	0	0	0%	0	0	0	8	2	2	25%	0	0	0	13%	
Neosho	to	Itaska	10	1	1	10%	0	0	0	5	0	1	10%	0	0	0	10%	
Itaska	to	Delor	8	1	1	13%	0	0	0	8	2	2	25%	0	0	0	19%	
Delor	to	Walsh	5	1	2	30%	0	0	0	7	1	0	7%	0	0	0	17%	
Walsh	to	Eichelberger	4	2	1	38%	0	0	0	6	0	0	0%	0	0	0	15%	
Eichelberger	to	Goethe	7	1	1	14%	0	0	0	7	0	0	0%	0	0	0	7%	
Goethe	to	Milentz	10	5	6	55%	0	0	0	11	2	3	23%	1	1	0	38%	
Milentz	to	Rhodes	5	3	0	30%	0	0	0	10	1	3	20%	0	0	0	23%	
Rhodes	to	Holly Hills	6	2	1	25%	0	0	0	10	1	1	10%	0	0	0	16%	
Holly Hills	to	Finkman	8	0	0	0%	0	0	0	10	3	3	30%	0	0	0	17%	
Finkman	to	Lisette	9	0	0	0%	0	0	0	12	0	0	0%	0	0	0	0%	
Lisette	to	Gresham	11	3	3	27%	0	0	0	11	1	1	9%	0	0	0	18%	
Gresham	to	Loughborough	15	2	1	10%	0	0	0	8	3	1	25%	0	0	0	15%	
Loughborough	to	Robert	16	1	0	3%	0	0	0	28	3	3	11%	0	0	0	8%	
Robert	to	Sunshine	7	0	0	0%	0	0	0	7	0	1	7%	0	0	0	4%	
Sunshine	to	Jamieson	10	0	0	0%	0	0	0	16	0	0	0%	0	0	0	0%	
Jamieson	to	Parkview	50	0	0	0%	0	0	0	53	0	0	0%	0	0	0	0%	
Parkview	to	Hampshire	14	0	0	0%	0	0	0	6	0	0	0%	0	0	0	0%	
Hampshire	to	Gravois	17	0	0	0%	0	0	0	15	0	0	0%	0	0	0	0%	
	SB Corridor Total		237	27	22	**10%**				271	19	21	**7%**	NB Corridor Total				

Corridor Grand Total	508	46	43	**9%**

			Friday 3/1/2019 6:00 PM to 8:00 PM																													
			Southbound Lanes															Northbound Lanes														
			Available Spots	Parked Vehicles Run #						Average Utilization	Illegal Parked Vehicles Run #							Available Spots	Parked Vehicles Run #						Average Utilization	Illegal Parked Vehicles Run #							Total Block Average Utilization
HAMPTON AVE				1	2	3	4	5	6		Total	1	2	3	4	5	6		1	2	3	4	5	6		Total	1	2	3	4	5	6	
Chippewa	to	Bancroft	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-		0	-	-	-	-	-	-	-
Bancroft	to	Sutherland	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-		0	-	-	-	-	-	-	-
Sutherland	to	Lansdowne	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-		0	-	-	-	-	-	-	-
Lansdowne	to	Devonshire	0	-	-	-	-	-	-	-	0	-	-	-	-	-	-	12	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**0%**
Devonshire	to	Nottingham	18	3	3	4	4	3	3	19%	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**9%**
Nottingham	to	Neosho	7	0	0	2	1	2	4	21%	0	0	0	0	0	0	0	8	1	1	1	0	0	0	6%	0	0	0	0	0	0	0	**13%**
Neosho	to	Itaska	10	1	1	1	1	1	3	13%	0	0	0	0	0	0	0	5	0	0	0	1	0	0	3%	0	0	0	0	0	0	0	**10%**
Itaska	to	Delor	8	7	8	7	8	9	8	98%	1	0	0	0	0	1	0	8	6	6	4	7	6	6	73%	0	0	0	0	0	0	0	**85%**
Delor	to	Walsh	5	5	5	2	3	4	3	73%	2	1		0	0	1	0	7	1	1	2	2	2	2	24%	0	0	0	0	0	0	0	**44%**
Walsh	to	Eichelberger	4	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**0%**
Eichelberger	to	Goethe	7	1	2	1	2	3	2	26%	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**13%**
Goethe	to	Milentz	10	9	7	9	10	10	9	90%	0	0	0	0	0	0	0	11	4	4	7	6	6	6	50%	0	0	0	0	0	0	0	**69%**
Milentz	to	Rhodes	5	4	5	4	4	4	4	83%	1	0	1					10	4	4	4	4	4	5	42%	0	0	0	0	0	0	0	**56%**
Rhodes	to	Holly Hills	6	2	3	4	3	3	3	50%	0	0	0	0	0	0	0	10	3	3	2	2	2	2	23%	0	0	0	0	0	0	0	**33%**
Holly Hills	to	Finkman	8	3	4	4	4	6	4	52%	0	0	0	0	0	0	0	10	2	3	4	4	4	3	33%	0	0	0	0	0	0	0	**42%**
Finkman	to	Lisette	9	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**0%**
Lisette	to	Gresham	11	3	3	3	3	3	3	27%	0	0	0	0	0	0	0	11	2	2	1	1	2	2	15%	0	0	0	0	0	0	0	**21%**
Gresham	to	Loughborough	15	7	10	11	11	11	10	67%	0	0	0	0	0	0	0	8	3	3	3	6	6	5	54%	1	0	1					**62%**
Loughborough	to	Robert	16	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	28	2	2	0	0	1	1	4%	0	0	0	0	0	0	0	**2%**
Robert	to	Sunshine	7	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	7	0	0	1	1	0	0	5%	0	0	0	0	0	0	0	**2%**
Sunshine	to	Jamieson	10	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**0%**
Jamieson	to	Parkview	50	0	0	0	1	0	0	0%	0	0	0	0	0	0	0	53	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**0%**
Parkview	to	Hampshire	14	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**0%**
Hampshire	to	Gravois	17	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	**0%**
	SB Corridor Total		237	45	51	52	55	59	56	**22%**		NB Corridor Total						271	28	29	29	34	33	32	**11%**								

Corridor Grand Total	508		73	80	81	89	92	88	**17%**

Appendix D: Traffic Operational Analysis Methodology

Traffic operating conditions were evaluated using Synchro 10 traffic modeling software, which is based upon methodologies outlined in the Highway Capacity Manual, 6th Edition (HCM) published by the Transportation Research Board.

The performance of a transportation system is quantified by Levels of Service (LOS), which are measures of traffic flow that consider factors such as speed, delay, interruptions, safety, and driver comfort and convenience. There are six levels of service ranging from LOS A ("free flow") to LOS F ("oversaturated"). LOS C is commonly used for design purposes and represents a roadway with volumes utilizing 70 to 80 percent of its capacity. LOS E is typically considered acceptable for peak period conditions in urban areas.

Level of service criteria vary depending upon the roadway component being evaluated. Intersections are most commonly evaluated since roadway capacity is typically dictated by the number of vehicles that can be served at critical intersections. For intersections, the criteria are based on delay and the type of control (i.e., whether it is signalized or unsignalized/roundabout).

Signalized intersections reflect higher delay tolerances as compared to unsignalized locations because motorists are accustomed to and accepting of longer delays at signals. For signalized and all-way stop intersections, the average control delay per vehicle is estimated for each movement and then aggregated for each approach and the intersection as a whole. For intersections with partial (side-street) stop control, the delay is calculated for the minor movements only (side-street approaches and major road left-turns) since through traffic on the major road is not required to stop. The thresholds for intersection levels of service are summarized in **Table D1**.

Table D1: Intersection Level of Service Thresholds

Level of Service	Delay per Vehicle (sec/veh)	
	Signalized	Unsignalized
A	< 10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

Appendix E: Traffic Operating Conditions

Table E1: Existing Operating Conditions

Int #	Intersection/ Approach	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec/veh)	95th % Queue (ft)	LOS	Delay (sec/veh)	95th % Queue (ft)
1	***Hampton Ave @ Chippewa St (Signalized)***						
	Overall Intersection	**C**	**35.5**	**-**	**D**	**52.4**	**-**
	Eastbound Approach	D	50.4	254	F	81.9	#503
	Westbound Approach	C	30.1	250	E	67.4	#472
	Northbound Approach	C	30.3	511	C	32.9	301
	Southbound Approach	C	32.5	205	D	37.4	642
2	***Hampton Ave @ Bancroft Ave (Signalized)***						
	Overall Intersection	**A**	**9.8**	**-**	**B**	**13.9**	**-**
	Eastbound Approach	D	40.5	77	D	37.6	129
	Westbound Approach	D	35.2	32	F	83.4	#168
	Northbound Approach	B	10.4	335	A	7.9	136
	Southbound Approach	A	0.4	12	A	2.5	m104
3	***Hampton Ave @ Nottingham Ave (Signalized)***						
	Overall Intersection	**C**	**23.0**	**-**	**B**	**17.1**	**-**
	Eastbound Approach	D	41.3	109	D	48.4	124
	Westbound Approach	C	30.4	100	D	48.5	149
	Northbound Approach	C	25.1	305	B	12.7	181
	Southbound Approach	A	8.2	50	B	11.3	224
4	***Hampton Ave @ Eichelberger St (Signalized)***						
	Overall Intersection	**C**	**35.2**	**-**	**C**	**25.6**	**-**
	Eastbound Approach	D	47.7	101	E	63.8	266
	Westbound Approach	E	63.4	#308	D	51.8	183
	Northbound Approach	C	30.2	328	C	21.5	305
	Southbound Approach	A	9.9	46	A	5.3	54
5	***Hampton Ave @ Holly Hills Ave (Signalized)***						
	Overall Intersection	**A**	**3.4**	**-**	**A**	**2.0**	**-**
	Eastbound Approach	C	31.8	27	A	0.0	0
	Northbound Approach	A	3.8	m262	A	1.7	91
	Southbound Approach	A	0.9	54	A	2.3	293

6	***Hampton Ave @ Loughborough Ave (Signalized)***						
	Overall Intersection	**C**	**23.5**	**-**	**B**	**20.0**	**-**
	Eastbound Approach	D	45.4	82	E	60.2	254
	Westbound Approach	E	75.5	#331	F	109.5	#256
	Northbound Approach	A	7.9	m82	A	5.9	133
	Southbound Approach	A	4.0	37	A	2.4	42
7	***Hampton Ave @ Jamieson Ave (Unsignalized, Side Street STOP Control)***						
	Eastbound Approach	C	15.1	20	C	20.0	80
	Northbound Left-Turn	A	9.6	25	B	11.3	28
8	***Hampton Ave/Germania St @ Gravois Ave (Signalized)***						
	Overall Intersection	**C**	**46.4**	**-**	**D**	**45.4**	**-**
	Eastbound Approach	D	47.7	#313	D	47.6	#323
	Westbound Approach	C	27.1	217	C	27.6	276
	Northbound Approach	E	66.5	#301	E	61.5	280
	Southbound Approach	D	37.8	m174	D	46.1	#312

- 95th percentile volume exceeds capacity, queue may be longer; queue shown is maximum after two cycles
m - volume for the 95th percentile queue is metered by the upstream signal

Table E2: Forecasted Operating Conditions with "Road Diet" Alternative

Int #	Intersection/ Approach	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec/veh)	95th % Queue (ft)	LOS	Delay (sec/veh)	95th % Queue (ft)
1	***Hampton Ave @ Chippewa St (Signalized)***						
	Overall Intersection	**C**	**36.8**	**-**	**D**	**52.9**	**-**
	Eastbound Approach	D	50.4	254	F	81.9	#503
	Westbound Approach	C	30.1	250	E	67.4	#472
	Northbound Approach	C	30.3	469	D	35.6	335
	Southbound Approach	C	32.6	205	D	37.4	642
2	***Hampton Ave @ Bancroft Ave (Signalized)***						
	Overall Intersection	**A**	**5.2**	**-**	**B**	**13.1**	**-**
	Eastbound Approach	D	40.5	77	D	37.6	129
	Westbound Approach	D	35.2	32	F	83.4	#168
	Northbound Approach	A	3.3	171	A	4.6	100
	Southbound Approach	A	0.4	12	A	2.5	m104
3	***Hampton Ave @ Nottingham Ave (Signalized)***						
	Overall Intersection	**A**	**7.4**	**-**	**B**	**15.7**	**-**
	Eastbound Approach	D	39.3	88	D	45.9	100
	Westbound Approach	C	26.9	11	D	35.0	103
	Northbound Approach	A	3.6	m94	A	4.6	281
	Southbound Approach	A	5.3	98	B	15.0	#886
4	***Hampton Ave @ Eichelberger St (Signalized)***						
	Overall Intersection	**C**	**33.9**	**-**	**C**	**29.2**	**-**
	Eastbound Approach	D	37.4	78	D	46.7	202
	Westbound Approach	D	46.5	#225	D	44.0	142
	Northbound Approach	C	32.4	#701	B	19.0	386
	Southbound Approach	C	22.7	233	C	24.3	#819
5	***Hampton Ave @ Holly Hills Ave (Signalized)***						
	Overall Intersection	**A**	**3.2**	**-**	**A**	**2.8**	**-**
	Eastbound Approach	C	22.5	21	A	0.2	0
	Northbound Approach	A	3.5	198	A	3.2	217
	Southbound Approach	A	1.4	59	A	2.6	m312
6	***Hampton Ave @ Loughborough Ave (Signalized)***						
	Overall Intersection	**B**	**18.8**	**-**	**B**	**15.0**	**-**

	Eastbound Approach	C	24.6	55	D	41.7	190
	Westbound Approach	D	38.7	206	D	53.5	#256
	Northbound Approach	B	13.6	343	A	8.5	268
	Southbound Approach	B	10.9	140	A	5.2	95
7	***Hampton Ave @ Jamieson Ave (Unsignalized, Side Street STOP Control)***						
	Eastbound Approach	C	13.6	28	E	39.5	200
	Northbound Left-Turn	A	9.6	25	B	11.3	28
8	***Hampton Ave/Germania St @ Gravois Ave (Signalized)***						
	Overall Intersection	**C**	**44.8**	**-**	**D**	**45.4**	**-**
	Eastbound Approach	D	47.7	#313	D	47.6	#323
	Westbound Approach	C	27.1	217	C	27.6	276
	Northbound Approach	E	66.5	#301	E	61.5	280
	Southbound Approach	C	29.8	163	D	46.1	#312

- 95th percentile volume exceeds capacity, queue may be longer; queue shown is maximum after two cycles
m - volume for the 95th percentile queue is metered by the upstream signal

Appendix F: Conceptual Design

XX-XXX-XXXX(XXX)
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Bridge Division

HAMPTON AVE CORRIDOR TRAFFIC STUDY

CHIPPEWA ST TO GRAVOIS AVE

PAVEMENT MARKINGS

Sheet 1

Revision No.	Date

5/28/2019
Date

File Number
Striping Plan 01.dgn

5/28/2019
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XX-XXX-XXXX(XXX)

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HAMPTON AVE CORRIDOR TRAFFIC STUDY

CHIPPEWA ST TO GRAVOIS AVE

PAVEMENT MARKINGS

Sheet 2

Revision No.	Date

5/28/2019

Date

File Number

Striping Plan 02.dgn

5/28/2019
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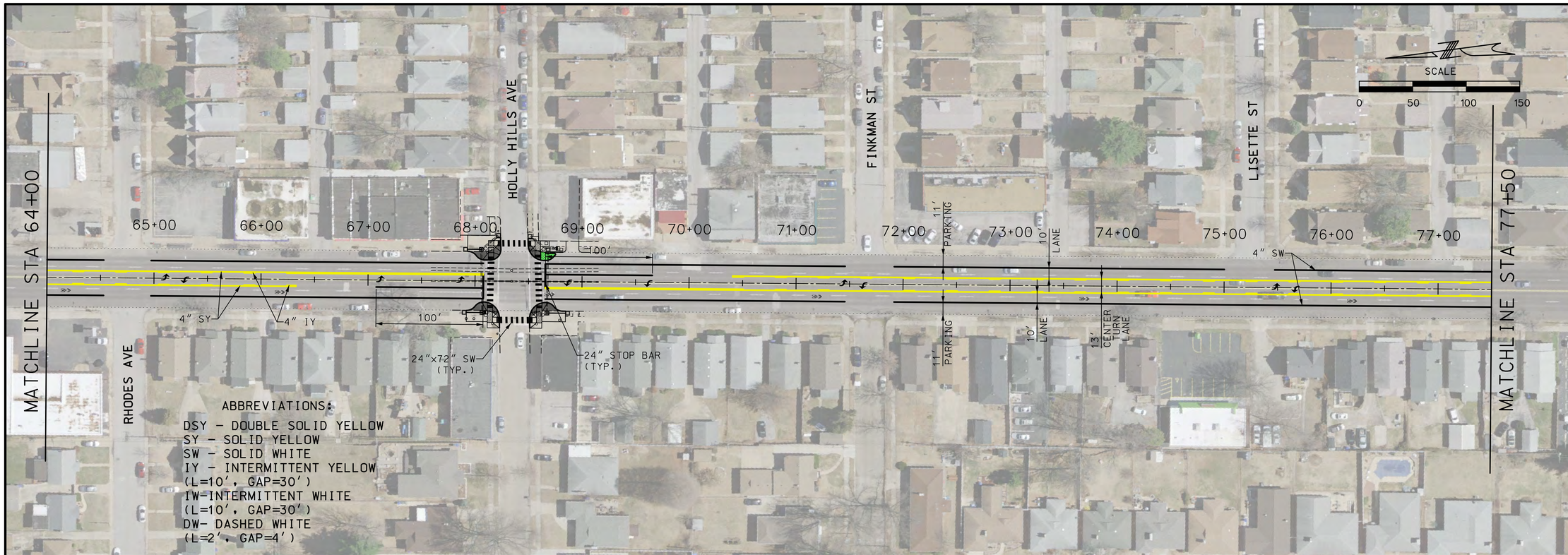

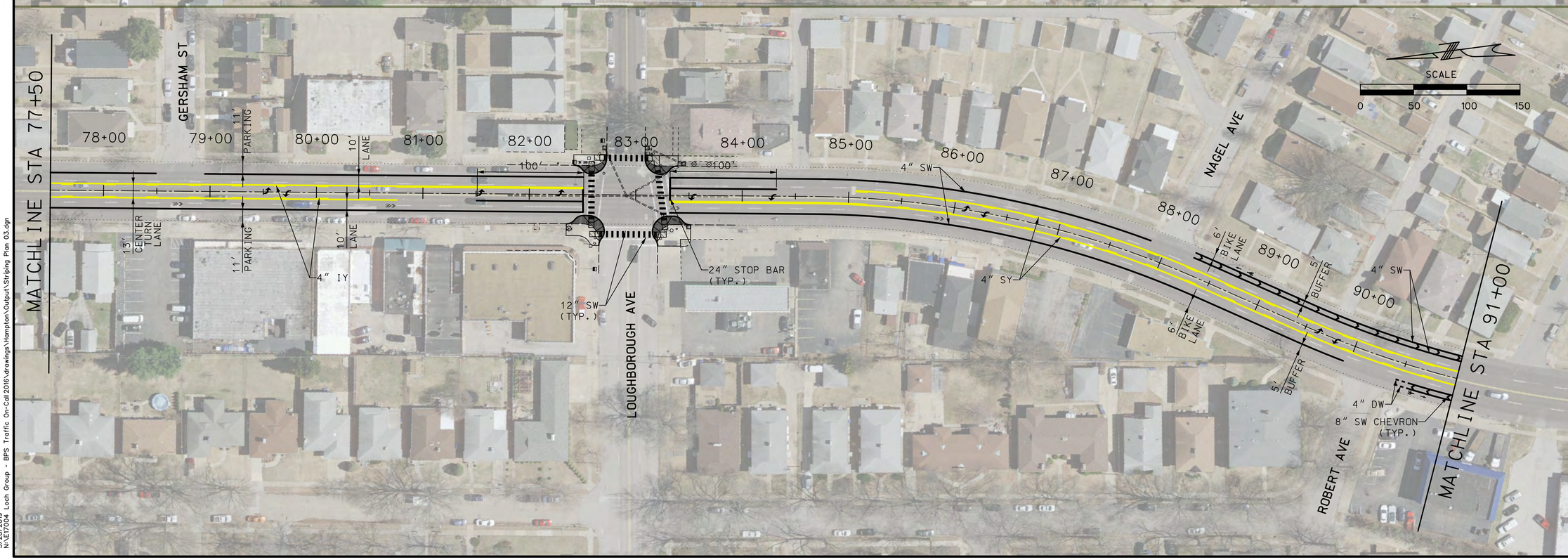

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HAMPTON AVE CORRIDOR TRAFFIC STUDY

CHIPPEWA ST TO GRAVOIS AVE

PAVEMENT MARKINGS

Sheet 3

Revision No.	Date

5/28/2019
Date

File Number

Striping Plan 03.dgn

5/28/2019
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HAMPTON AVE CORRIDOR TRAFFIC STUDY

CHIPPEWA ST TO GRAVOIS AVE

PAVEMENT MARKINGS

Sheet 4

Revision No.	Date

5/28/2019
Date

File Number

Striping Plan 04.dgn

5/28/2019
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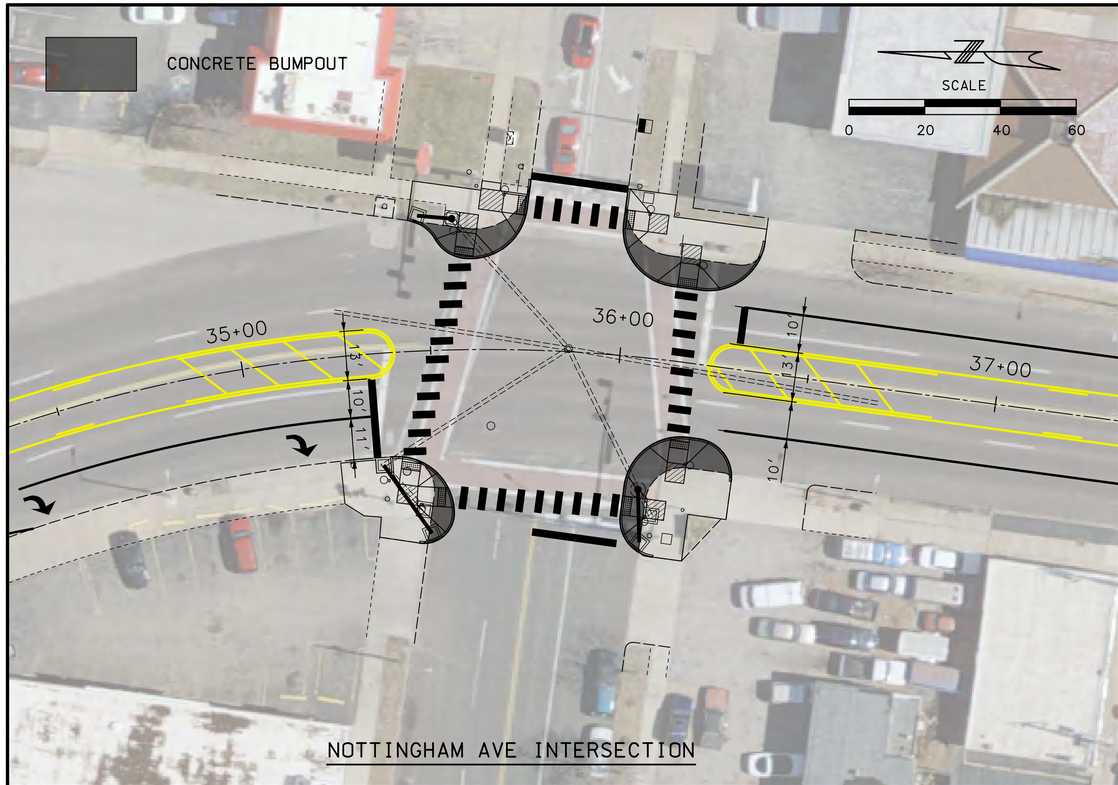

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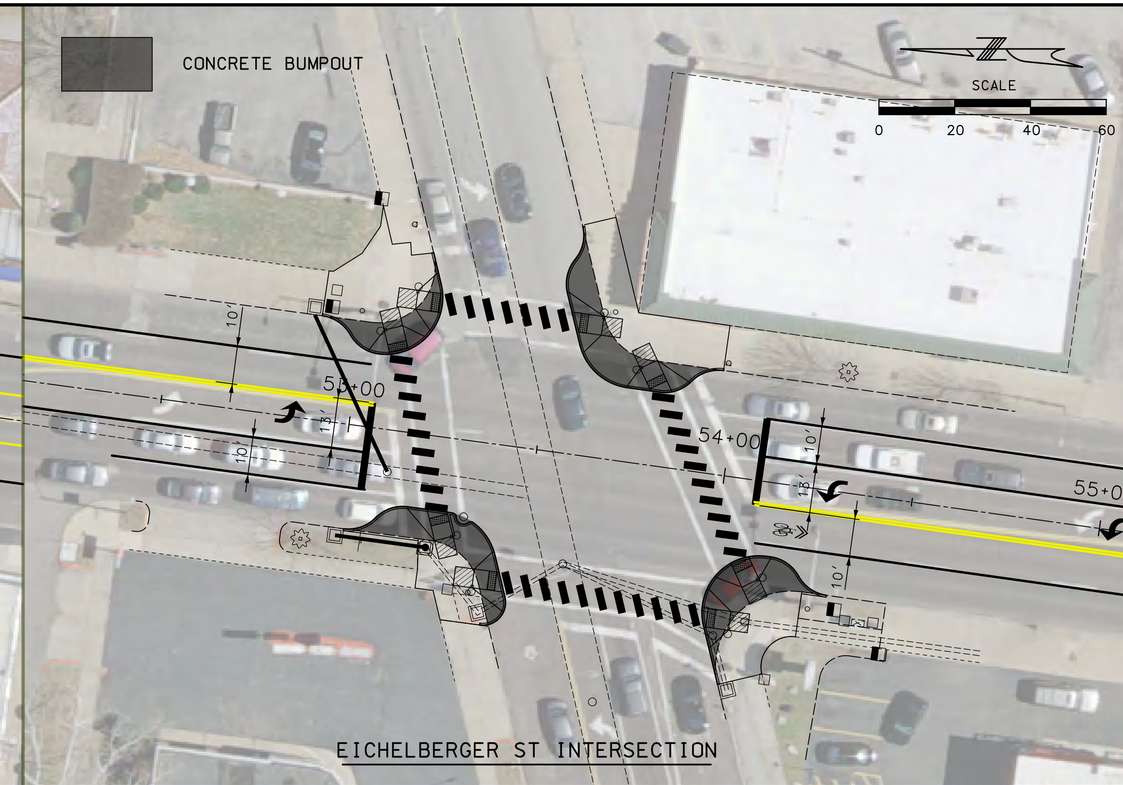
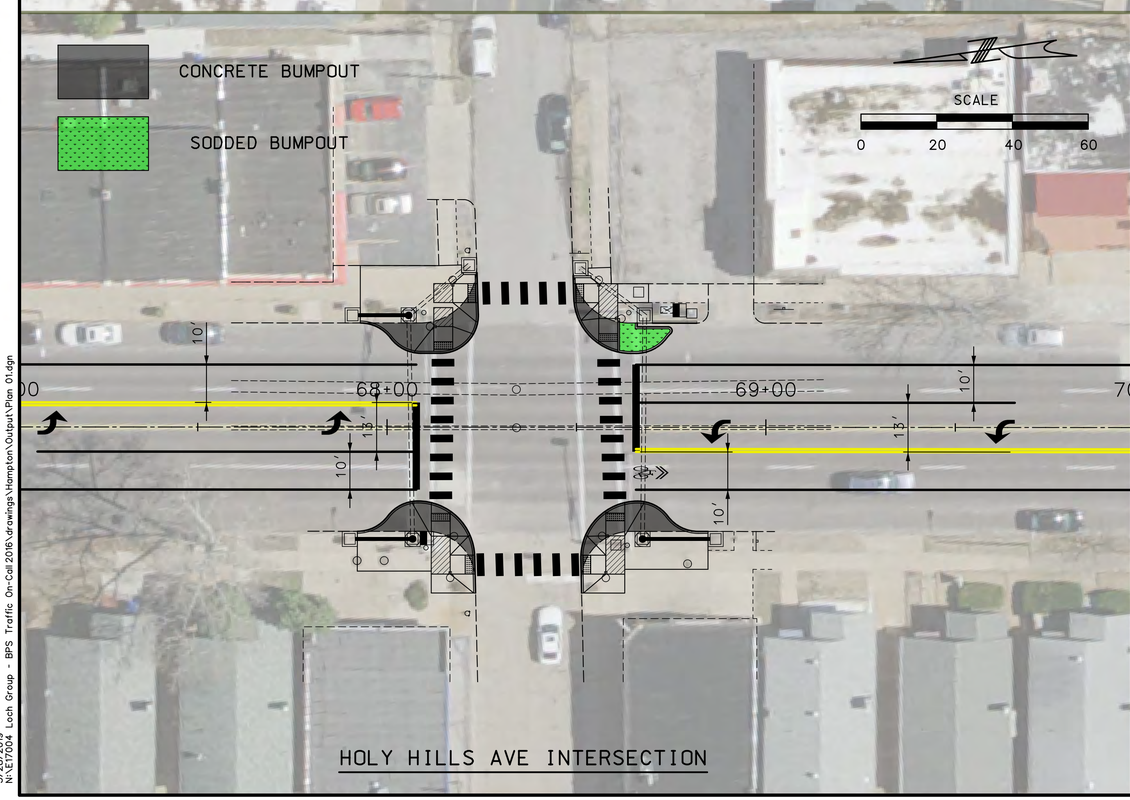
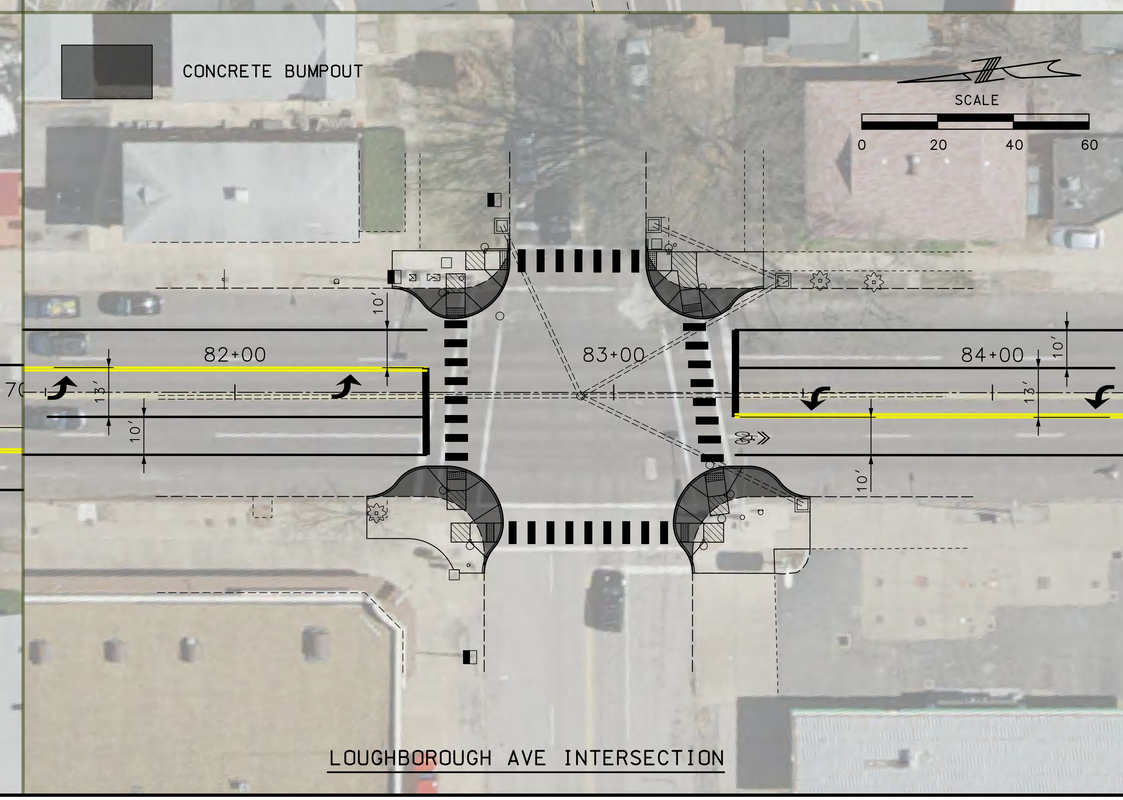


EICHELBERGER ST INTERSECTION



HOLY HILLS AVE INTERSECTION



LOUGHBOROUGH AVE INTERSECTION

XX-XXX-XXXX(XXX)
BPS Project Number

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BOARD OF PUBLIC SERVICE
ROOM 301 CITY HALL
ST. LOUIS, MISSOURI 63103
PHONE (314) 622-4576
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XX
Chief Engineer
Bridge Division

HAMPTON AVE CORRIDOR TRAFFIC STUDY

CHIPPEWA ST TO GRAVOIS AVE

INTERSECTION PLAN

Sheet 5

Revision No.	Date

5/28/2019
Date

File Number

Plan 01.dgn

5/28/2019
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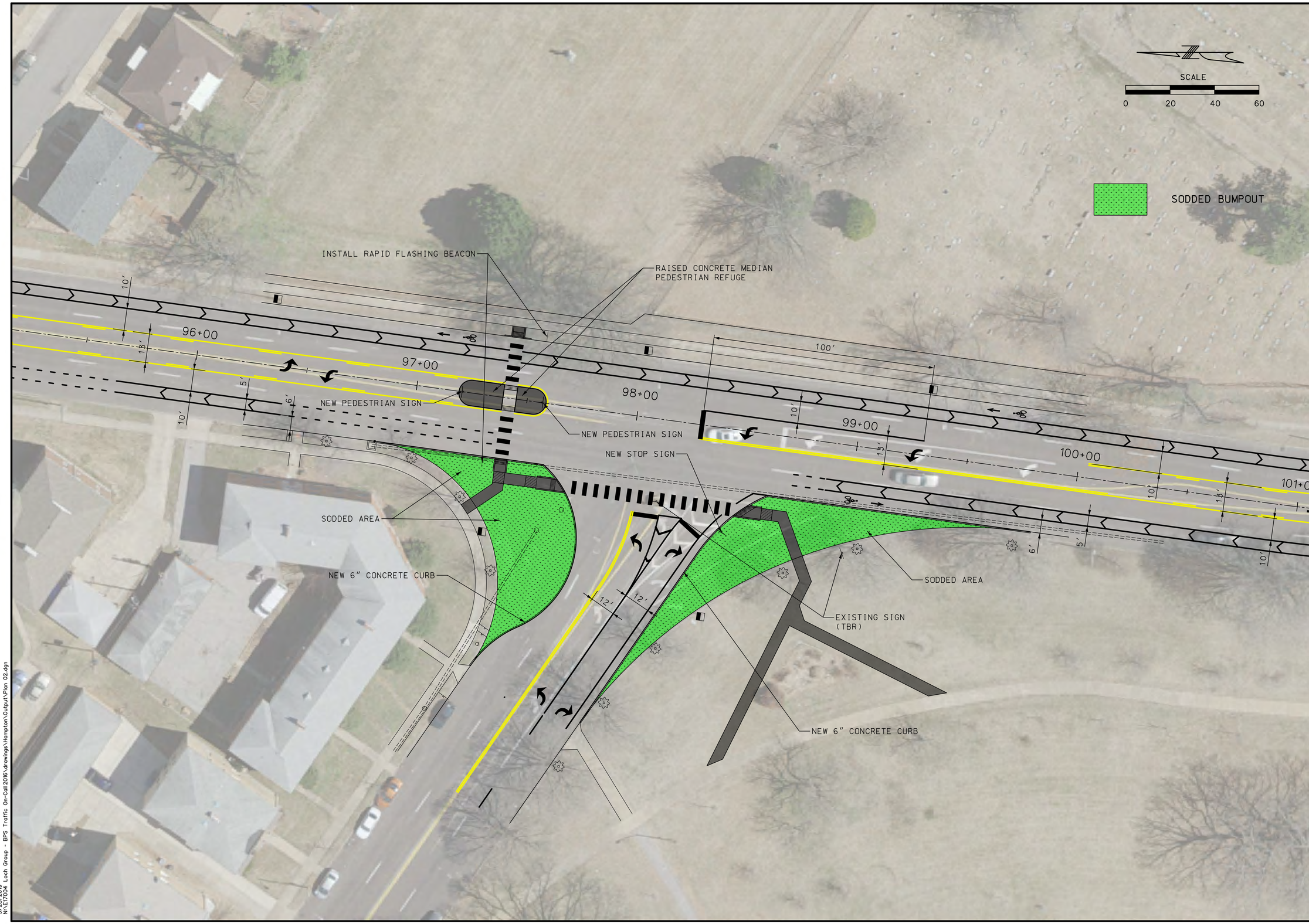

XX-XXX-XXXX(XXX)
BPS Project Number

CITY OF SAINT LOUIS
MISSOURI

DEPARTMENT OF THE PRESIDENT
BOARD OF PUBLIC SERVICE
ROOM 301 CITY HALL
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HAMPTON AVE CORRIDOR TRAFFIC STUDY

CHIPPEWA ST TO GRAVOIS AVE

INTERSECTION PLAN

Sheet 6

Revision No.	Date

5/28/2019
Date

File Number
Plan 02.dgn

5/28/2019
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Appendix G: Conceptual Cost Estimate

HAMPTON AVE ROAD DIET - STRIPING IMPROVEMENTS CONCEPT				
	CITY OF ST. LOUIS			
	6/6/2019			
DESCRIPTION	**Units**	**Quantity**	**UnitPrice**	**COST**
JAMIESON AVENUE INTERSECTION				
REMOVAL OF IMPROVEMENTS	L.S.	1	$ 8,000.00	$ 8,000.00
PAINTED PAVEMENT	S.F.	6,255	$ 1.15	$ 7,193.25
BOLLARDS	EA.	23	$ 350	$ 8,050.00
			SUB TOTAL	**$ 23,243.25**
CORRIDOR PAVEMENT MARKINGS				
PAVEMENT MARKING REMOVAL	L.S.	1	$ 13,750	$ 13,750.00
PAVEMENT MARKINGS	L.S.	1	$ 39,496	$ 39,496.02
INTERSECTION PLANTERS (12 PER SIGNALIZED INTERSECTION)	EA.	4	$ 4,800	$ 19,200.00
SIGNS	L.S.	1	$ 8,000	$ 8,000.00
			SUB TOTAL	**$ 80,446.02**
NOTTINGHAM AVE SIGNAL PHASING MODIFICATION				
SIGNAL PHASING MODIFICATIONS	L.S.	1	$ 25,000	$ 25,000.00
			SUB TOTAL	**$ 25,000.00**
MOBILIZATION				**$ 23,164.07**
TRAFFIC CONTROL (7%)				**$ 9,008.25**
CONTINGENCY (15%)				**$ 12,066.90**
ENGINEERING DESIGN COST (12%)				**$ 20,751.42**
		TOTAL		**$ 193,679.91**

HAMPTON AVE ROAD DIET - FULL IMPROVEMENTS CONCEPT				
	CITY OF ST. LOUIS			
	5/28/2019			
DESCRIPTION	**Units**	**Quantity**	**UnitPrice**	**COST**
NOTTINGHAM AVE BUMP-OUT				
REMOVAL OF IMPROVEMENTS	L.S.	1	$ 12,000	$ 12,000.00
CONCRETE IMPROVEMENTS	L.S.	1	$ 32,032	$ 32,032.00
DRAINAGE IMPROVEMENTS	L.S.	1	$ 21,870	$ 21,870.00
SIGNAL IMPROVEMENTS & PHASING MODIFICATIONS	L.S.	1	$ 61,000	$ 61,000.00
			SUB TOTAL	**$ 126,902.00**
EICHELBERGER ST BUMP-OUT				
REMOVAL OF IMPROVEMENTS	L.S.	1	$ 18,000	$ 18,000.00
CONCRETE IMPROVEMENTS	L.S.	1	$ 37,725	$ 37,725.00
DRAINAGE IMPROVEMENTS	L.S.	1	$ 22,121	$ 22,120.72
SIGNAL IMPROVEMENTS	L.S.	1	$ 36,000	$ 36,000.00
			SUB TOTAL	**$ 113,845.72**
HOLLY HILLS AVE BUMP-OUT				
REMOVAL OF IMPROVEMENTS	L.S.	1	$ 9,000	$ 9,000.00
CONCRETE IMPROVEMENTS	L.S.	1	$ 30,539	$ 30,539.00
DRAINAGE IMPROVEMENTS	L.S.	1	$ 25,386	$ 25,386.00
SIGNAL IMPROVEMENTS	L.S.	1	$ 36,000	$ 36,000.00
			SUB TOTAL	**$ 100,925.00**
LOUGHBOROUGH AVE BUMP-OUT				
REMOVAL OF IMPROVEMENTS	L.S.	1	$ 13,000	$ 13,000.00
CONCRETE IMPROVEMENTS	L.S.	1	$ 35,463	$ 35,463.00
DRAINAGE IMPROVEMENTS	L.S.	1	$ -	$ -
SIGNAL IMPROVEMENTS	L.S.	1	$ 36,000	$ 36,000.00
			SUB TOTAL	**$ 84,463.00**
JAMIESON AVE INTERSECTION				
REMOVAL OF IMPROVEMENTS	L.S.	1	$ 14,000.00	$ 14,000.00
CONCRETE IMPROVEMENTS	L.S.	1	$ 25,563	$ 25,563.00
RAPID FLASHING BEACON	L.S.	1	$ 24,000	$ 24,000.00
CONCRETE MEDIANS	S.Y.	40	$ 85	$ 3,400.00
STREET LIGHT RELOCATIONS	EA.	2	$ 2,500	$ 5,000.00
SOD	S.Y.	587	$ 15	$ 8,798.30
			SUB TOTAL	**$ 80,761.30**
CORRIDOR PAVEMENT MARKINGS				
PAVEMENT MARKING REMOVAL	L.S.	1	$ 13,750	$ 13,750.00
PAVEMENT MARKINGS	L.S.	1	$ 39,496	$ 39,496.02
SIGNS	L.S.	1	$ 8,000	$ 8,000.00
			SUB TOTAL	**$ 61,246.02**
MOBI*L*ZATION (18%)				**$ 102,265.75**
TRAFFIC CONTROL (6%)				**$ 34,088.58**
CONTINGENCY (15%)				**$ 113,628.61**
ENGINEERING DESIGN COST (12%)				**$ 98,175.12**
			TOTAL	**$ 916,301.08**

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