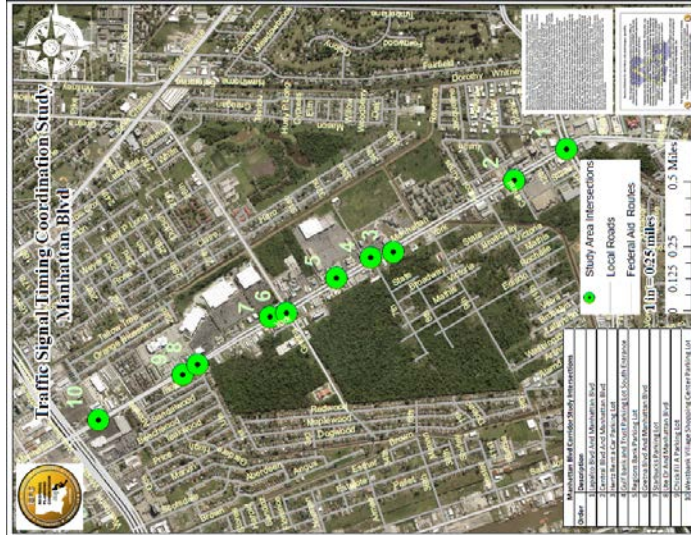


**STAGE "0" FEASIBILITY
TRAFFIC SIGNAL TIMING AND COORDINATION STUDY
RPC TASK A-3.18 FY:-18 UPWP
STATE PROJECT NO. H.972275.1
JEFFERSON PARISH, LOUISIANA**



May 2018

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Manhattan Boulevard Corridor Study

**Jefferson Parish, Louisiana
RPC Task A-3.18: FY-18 UPWP
State Project No.H.972275.1**

“The contents of this report reflect the views of the author(s) who is (are) responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views of policies of the RPC, the State or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.”

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MANUAL OF UNIFORM TRAFFIC CONTROL TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, 2009 EDITION

GUIDELINES FOR DETERMINING TRAFFIC SIGNAL CHANGE AND CLEARANCE INTERVALS, INSTITUTE OF TRANSPORTATION ENGINEERS, 2015 EDITION

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EXECUTIVE SUMMARY

This study analyzes existing traffic signal timings and develop new timings with a goal to increase safety, reduce travel time and reduce emissions along the Manhattan Boulevard Corridor from Lapalco Boulevard to Westbank Village. Manhattan Boulevard, a main arterial highway, provide an access point to the Westbank Expressway and serve many large retail stores, residential communities and governmental buildings.

Traffic patterns used to generate signal timing may change after a period of time. This cause traffic signals to become less effective. Re-timing traffic signals is a cost-effective tool, which may benefit motorists by decreasing vehicle delays, addressing safety concerns, lowering emissions and reducing fuel consumption. A regular review of signal retiming benefits the motoring public by evaluating, determining the signal's effectiveness and allows for necessary adjustments to the signal timings to reflect current traffic volumes. In addition, new signal timings generally create additional benefits such as a reduction crashes (both rear end and right angle) and provides turning motorists at not signalized intersections and driveways with acceptable gaps in traffic flow.

The new signalized timings were a coordinated effort between Regional Planning Commission, Jefferson Parish, DOTD and ITS Regional. Some of the items reviewed during the course of the study included:

- Existing intersection signal plans
- Existing intersection signal timings
- Crash data
- Existing signalization equipment at intersections
- Jefferson Parish minimum clearance interval requirements
- Traffic volumes and turning movement volumes
- Actual timed travel times (Before and after signal modifications)

An inventory of the existing corridor was conducted to identify geometric conditions and other pertinent information that affects current traffic flow and operations. ITS Regional collected traffic data. 1. Turning Movement Counts (TMC's) shown on **Figure II – (Sheets 1-5)** and 2. Bike/Pedestrian data (**Appendix J**) at the ten signalized intersections along the Manhattan Boulevard Corridor. Jefferson Traffic Engineering provided the existing timing sheets and traffic signal drawings. Jefferson Traffic Engineering also provided the minimum clearance interval timing requirements for the study corridor along with approving the roadway travel speeds for the analysis along the corridor. The existing traffic data and signal timing data was keyed into a traffic signal program (Synchro) to simulate the existing traffic conditions. New clearance intervals were developed by ITS Regional and reviewed/approved by Jefferson Traffic Engineering. These new clearance intervals included both yellow and all red clearance times.

The existing cycle length of 120 seconds along with other cycle lengths was analyzed using the existing traffic volumes. Based on the software estimated corridor time runs for multiple cycle lengths, ITS Regional recommend the existing 120-second cycle length to remain.

The results of the study based on existing conditions and the modified traffic signal timings yields the following:

- Improvements to the clearance intervals (changes in both yellow and all red signal timings)
- Overall reduction in travel time
- Increase in fuel consumption
- Decreased in air quality due to increase in fuel used.

Both termini (Lapalco and Westbank Expressway) on the corridor appear to be at or above capacity. Some of the other intersections has geometric configurations, which restricted signal phasing. Modifications to these intersections to allow additional phasing which may help reduce travel time. The changes to the clearance interval times along the corridor had a positive in terms of safety but had negative effect on fuel and air quality.

Upgrading the existing equipment to enhance future modifications is estimated to cost \$876,000. This cost includes new signal controllers, detection devices, communication and pre-emption equipment.

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I. INTRODUCTION

Regional Planning Commission (RPC) authorized the Stage “0” Feasibility Study for this project as part of the Fixing America’s Surface Transportation (FAST – a national highway program) Act responsibilities and in coordination with the region’s Ozone Advance Program. The main goal is to support national and regional mobility needs of people and freight along with encourages economic growth while minimizing transportation related fuel consumption and air pollution.

ITS Regional with Project Management Committee (PMC) comprising Regional Planning Commission (RPC), Jefferson Parish Department of Traffic Engineering, Jefferson Engineering, and LADOTD District 02 collaborated in accomplishing this project. PMC provided valuable insight into traffic issues affecting the corridor and necessary feedback on the recommended strategies. The PMC provided geo-referenced imagery, GIS information, crash data, existing timing sheets, coordination plans, traffic signal drawings, and other timing preferences for the study corridor.

Manhattan Boulevard is a minor urban arterial running north south between Parish Line/Outfall Canal to LA 18/4th Street in the Harvey neighborhood of Jefferson Parish. The corridor is dominated by commercial establishments ranging from restaurants, retail stores, service businesses, and entertainment surrounded by residential developments. The objective of this study is to analyze and develop traffic signal timing strategies for the 10 signalized intersections located along the 2.1-mile stretch of Manhattan Boulevard from Lapalco Boulevard to Westbank Village.

The Study goal is to improve safety, reduce delays, lower emissions, improve fuel consumption, and maximize the progressive movement of traffic through Manhattan Boulevard Corridor. The study with adjustments to the signal clearance intervals will improve safety. The modifying signal timings will improve traffic flows requiring fewer stops, which may also aid in the reduction in the number of crashes. ITS Regional performed data collection, field surveys and develop a simulation model for new signal timing plans. New computer software traffic signal timings were analyzed and were included in the revised traffic signal inventory plan sheets.

II. STUDY CORRIDOR

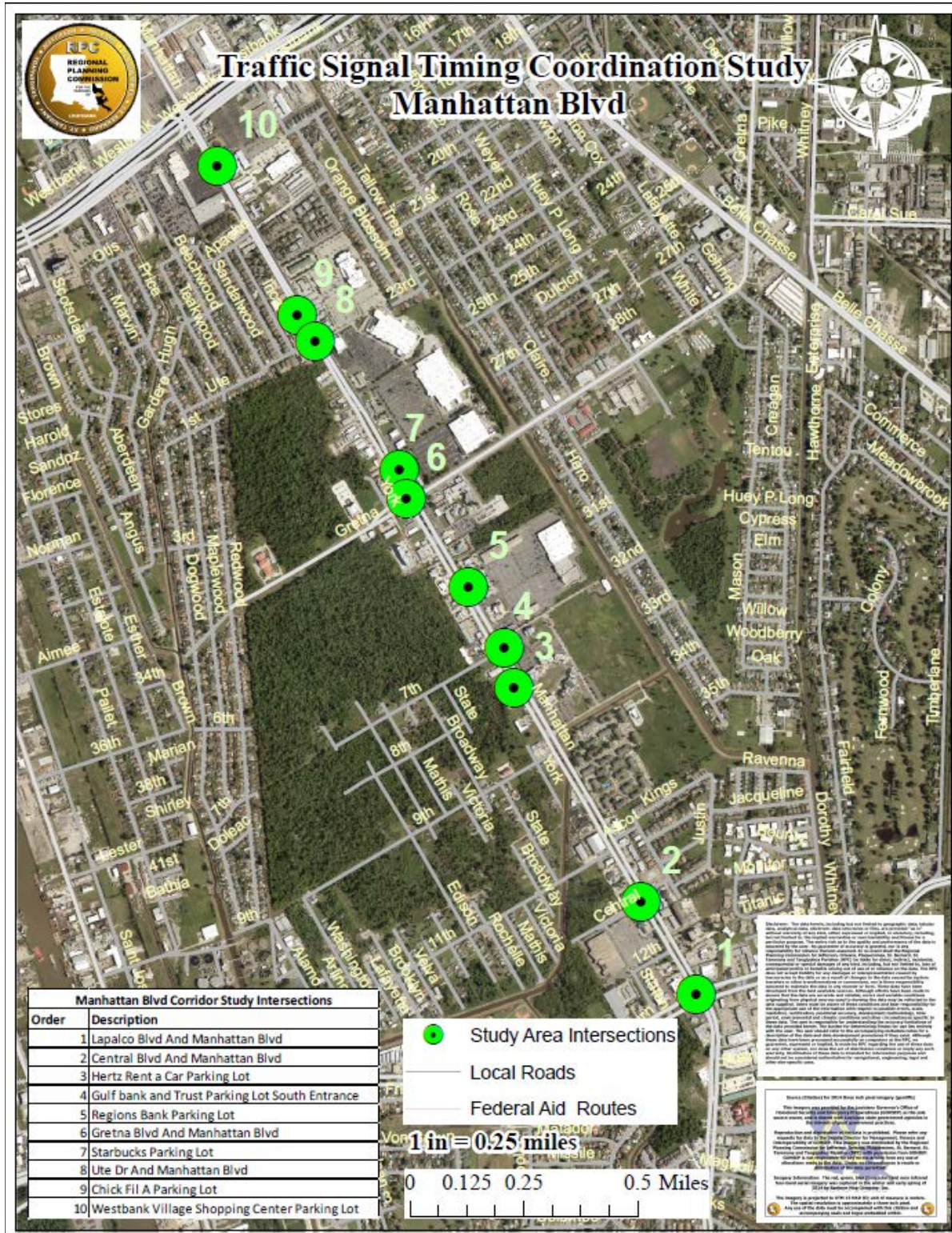
The 2.1-mile stretch of the study corridor along Manhattan Boulevard from Lapalco Boulevard to Westbank Village Shopping Center consists of ten intersections. The following are the study area's ten intersections along Manhattan Boulevard arranged in order from south to north:

Manhattan Boulevard at

1. Lapalco Boulevard
2. Central Boulevard
3. Fountain Park South – Hertz Rental Car
4. Fountain Park Center – Gulf Bank and Trust
5. Target – Regional Bank
6. Gretna Boulevard
7. Walmart - Starbucks
8. Ute Drive
9. Palace/Chick-Fil-A
10. Westbank Village Shopping Center Parking Lot/ Manhattan Plaza

Figure I below illustrate the study area intersections.

Figure I – Study Area Intersections



III. EXISTING CONDITIONS (2017)

Existing Conditions include traffic data, traffic signal inventories and field observations such as travel time study, queueing characteristics. This data was used in analyzing the existing conditions and developing a signal timing modification plan for the Manhattan Study corridor.

Intersections with Turn Restrictions

The following intersections has turns movements restricted:

Lapalco Boulevard – No left turns from Manhattan Boulevard allowed.

Central Boulevard – Tee intersection with no left southbound turns on Manhattan Boulevard.

Fountain Park South - Tee intersection with no left westbound turns from Fountain Park South

Fountain Park Center - Tee intersection with no left northbound turns on Manhattan Boulevard.

Right turn only for driveway located on the west side of the intersection.

Target - Tee intersection with no restrictions on driveways on the west side of the intersection.

Gretna Boulevard – Restricted left turns southbound from Manhattan Boulevard from 7 to 9 am and 4 to 6 pm. Restricted left turns from Gretna Boulevard for westbound only.

Walmart - Tee intersection with no turn restrictions and with no restrictions on driveways on the west side of the intersection.

Ute Drive – Four-legged intersection with no left turns from Ute Drive. Due to geometric configuration concurrent turns on Manhattan Boulevard are prohibited.

Palace/Chick-Fil -A Four-legged intersection due to geometric configuration concurrent turns on Manhattan Boulevard and side streets are prohibited.

Westbank Village Shopping Center Parking Lot/ Manhattan Plaza - A Four-legged intersection due to geometric configuration, concurrent turns on Manhattan Boulevard and side streets are prohibited.

Traffic Counts

Automated Machine/ Average Daily Traffic (ADT) data was collected for 7-Days 24-hours at fifteen locations during September 2017. The Turning Movement Counts (TMCs) were collected at the ten study area intersections during October 2017 representing the AM, Mid-Day and PM peak hours from 6:30 AM to 8:30 AM, 11 AM to 1 PM, and 3:30 PM to 5:30 PM respectively.

Figure II – Average Daily Traffic (ADT) and Turning Movement Counts (TMC)

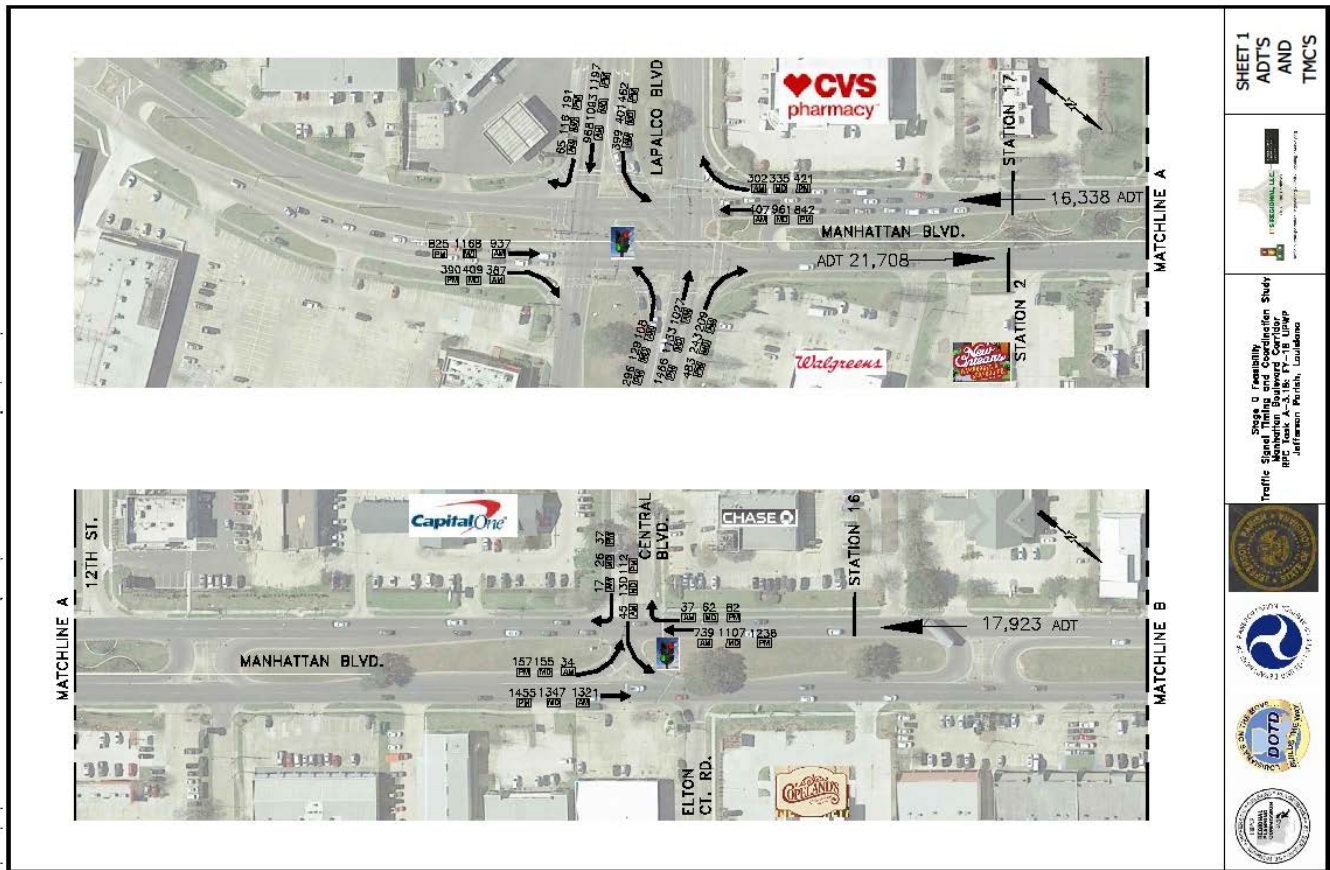
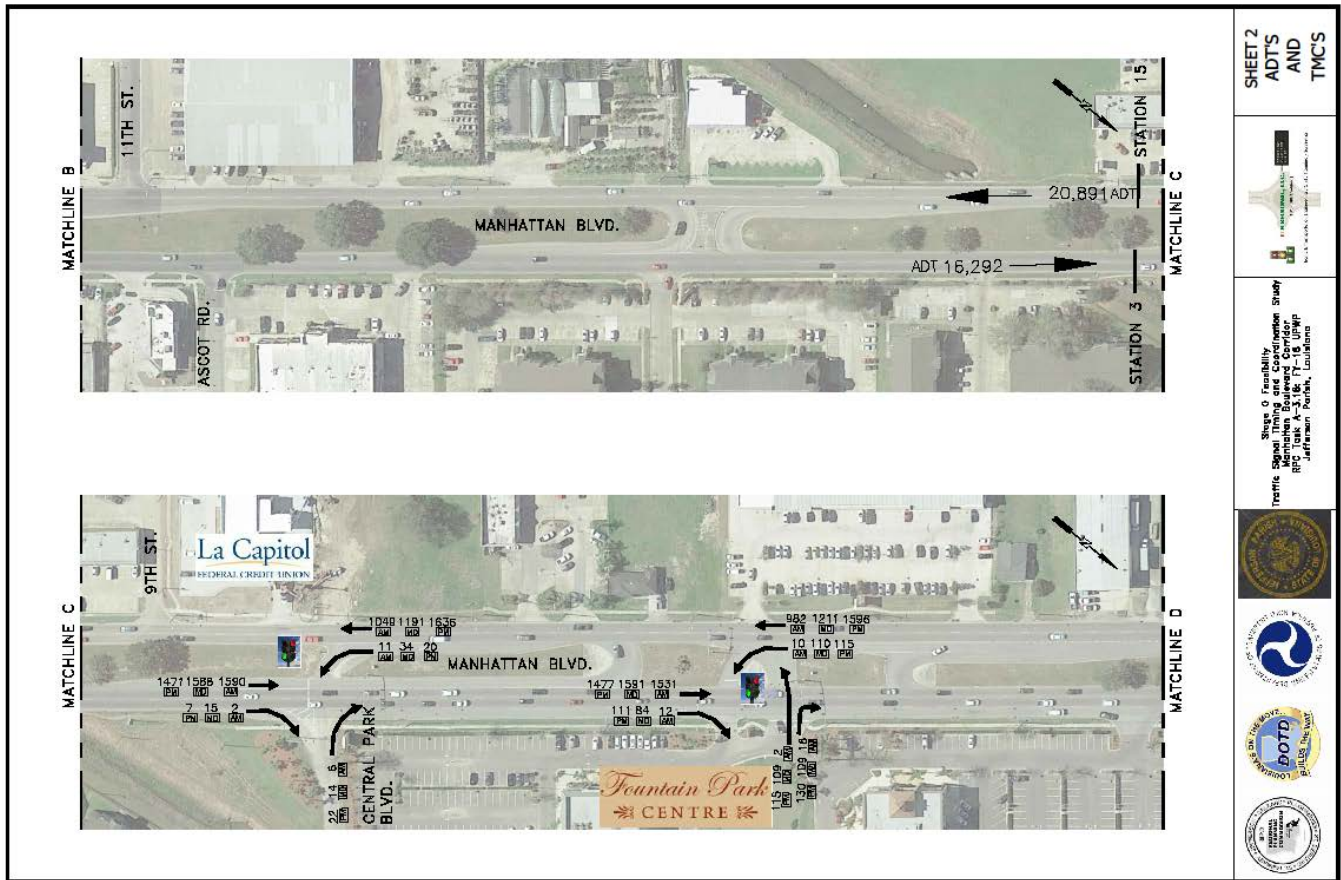


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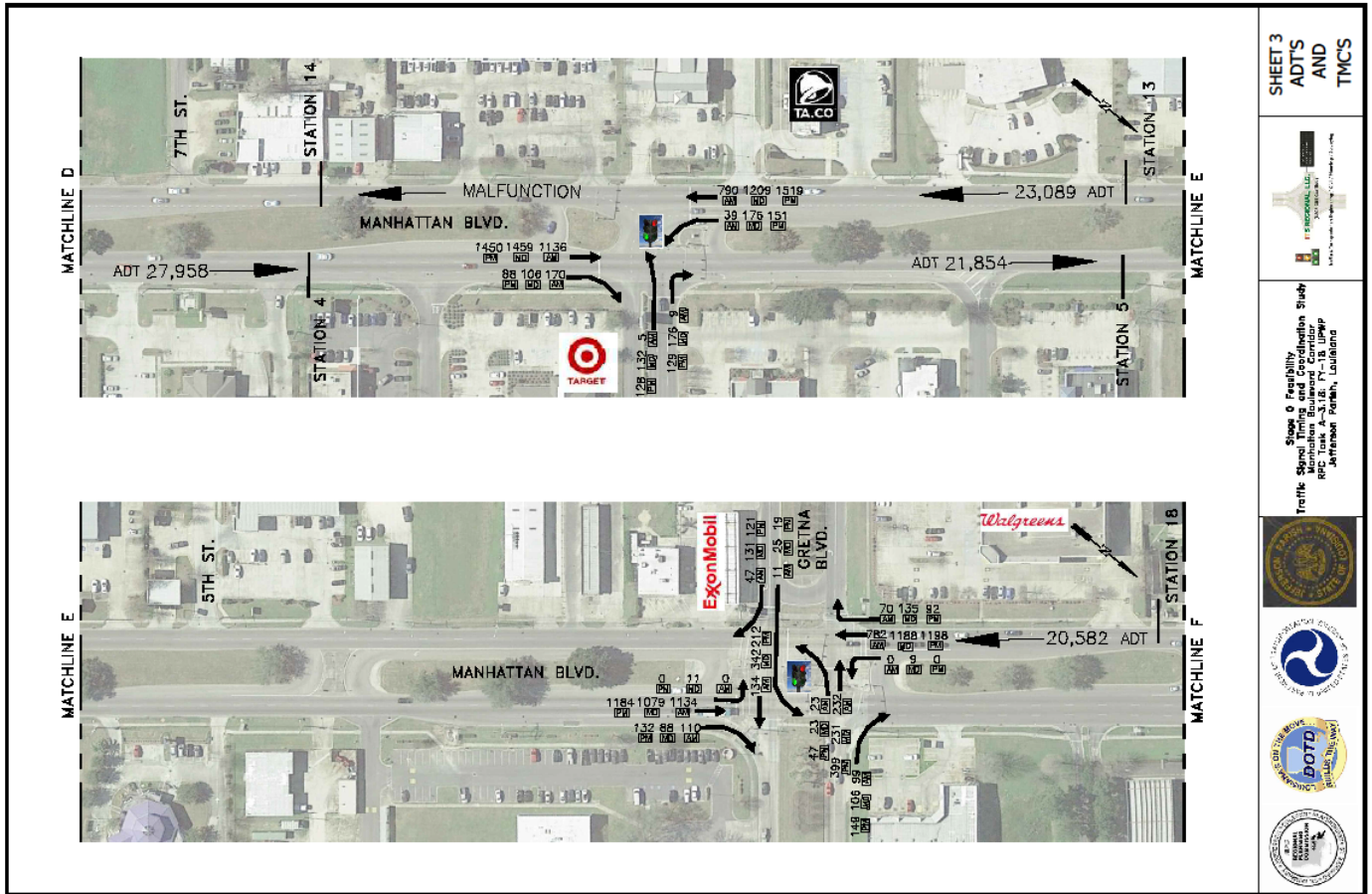
SHEET 2
ADT'S
AND
TMC'S



Shree G. Foranally
Traffic Signal Timing and Coordination Study
1000 Poydras Street, 18th Floor
Jefferson Parish, Louisiana



Figure II – Average Daily Traffic (ADT) and Turning Movement Counts (TMC)



SHEET 3
ADTS
AND
TMCs



Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
RPC Task 4-3.1.6.1-18 UPP
Jefferson Parish, Louisiana



Figure II – Average Daily Traffic (ADT) and Turning Movement Counts (TMC) (TMC)



SHEET 4
ADTS
AND
TMCs

ITS REGIONAL, LLC
TRAFFIC SIGNAL TIMING AND COORDINATION STUDY

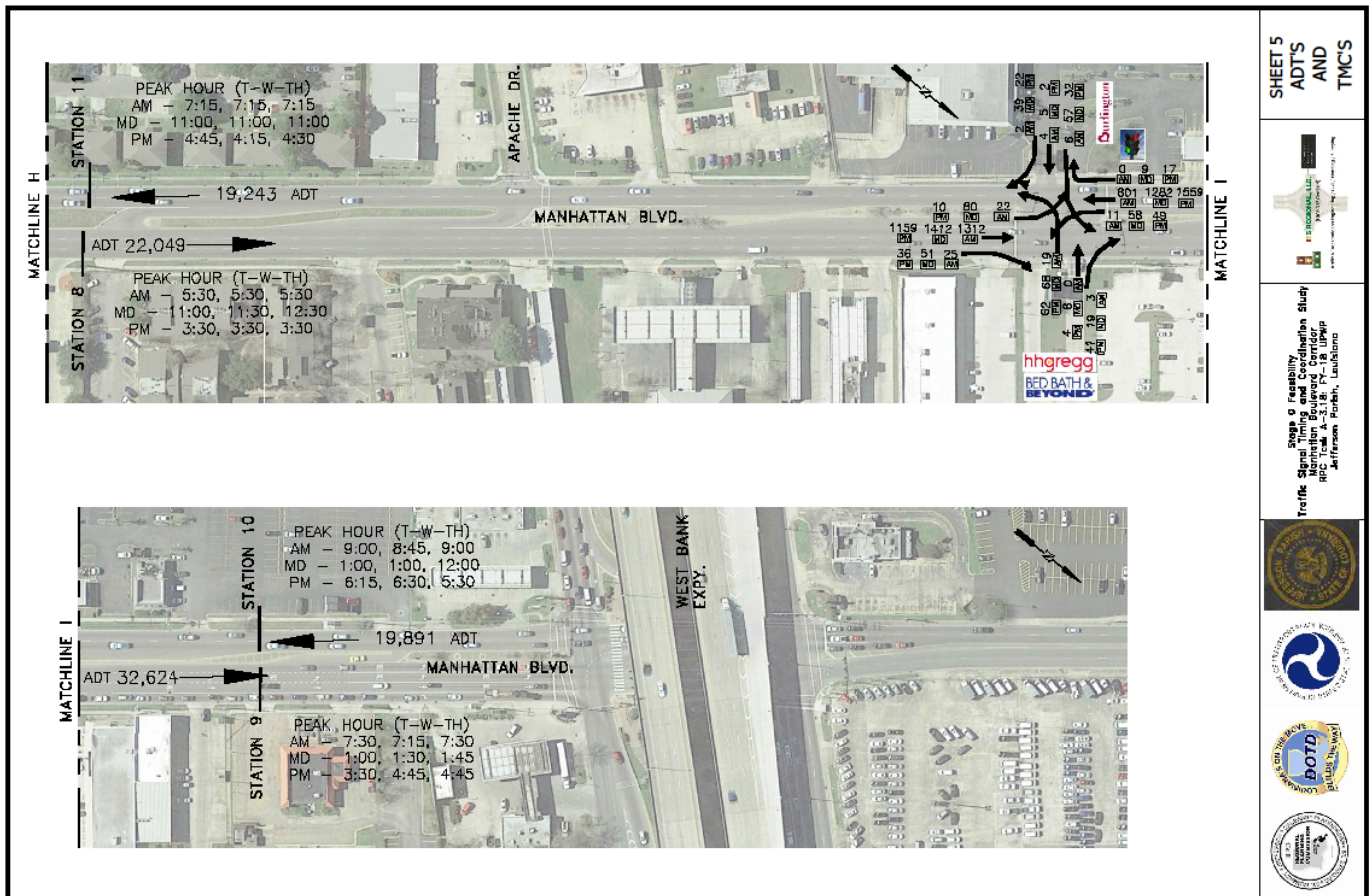
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Study
Station 6
Manhattan Blvd. Station 6
REC Task A-3.1B: TMC - 18 Uppp
Jefferson Parish, Louisiana

JEFFERSON PARISH
LA

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION
LA DOTD

JEFFERSON PARISH
LA

Figure II – Average Daily Traffic (ADT) and Turning Movement Counts (TMC)



Traffic Signal Inventory

Traffic Signal Inventory (TSI's) spread sheets were developed for each intersection.

New Traffic Signal Inventory sheets are included in the Appendix A.

Traffic Signal Operations

Based on the field observations, all left turn phases at study intersections along the study corridor are protected. Lead/ Lag left turn phasing was observed on Manhattan Boulevard at Ute Drive and Palace intersections. The Southbound left turn lane on Manhattan Boulevard at Gretna Boulevard is restricted during AM and PM peak hours.

According to Jefferson Parish, all the controllers at the study area intersections are KENTRONIC, except for the SIEMENS made controller at the intersection of Westbank Shopping Center and Manhattan. A cycle length of 120 seconds was observed during AM, Mid-Day and PM peak hours, with Master Intersection at Lapalco Boulevard. No pedestrian signals were observed at the study intersections (a flashing beacon crosswalk is located north of Apache Drive on Manhattan Boulevard) and all the detections are done by induction loops.

Travel Time Study

Travel time studies (existing conditions) were performed during October of 2017 at AM, Mid-day and PM peak hours. Four runs were conducted in each direction. After new signal timings were keyed into the controllers, additional travel time runs were performed. These runs were used to evaluate future improvements. The results are summarized in Table 11 and included in Appendix B.

Queue Observations

Approaches that experience extensive queues also are likely to experience an overrepresentation of rear-end collisions.

Lapalco Blvd and Manhattan Blvd:

The Lapalco Blvd and Manhattan Blvd intersection is near capacity. Considerable queueing was observed on Northbound and Southbound direction of Manhattan Boulevard. Eastbound left turns on Lapalco Boulevard has extensive queueing during all peaks, especially during PM peak. Queueing was also observed on through movements along Westbound Lapalco Boulevard.

Central Blvd and Manhattan Blvd:

Northbound and Southbound approaches on Manhattan Boulevard has extensive queues (but minimum rear-end crashes were noted) during all the three peak hours. The Eastbound left turn movement on Central Boulevard has considerable queueing during all the peak hours.

Fountain Park South and Manhattan Blvd:

Queueing was observed on Northbound Manhattan Boulevard during the three peak hours. *** Southbound approach experienced queues during PM peak. Through traffic not controlled by the signal – only queue would be in the turning lane.

Fountain Park Center and Manhattan Blvd:

Queues were observed on Northbound and Southbound Manhattan Boulevard during all the peak hours. Small queues were observed during Mid-Day and PM peak hours on Westbound Fountain Park Center approach. (Rear-end crashes were noted)

Target and Manhattan Blvd:

Queueing was observed on Northbound Manhattan Boulevard during all the three peak hours.

Gretna Blvd and Manhattan Blvd:

Queues were observed at all the approaches during all the peak hours. Considerable queues were observed along through movements at all the approaches. (Rear-end crashes were noted)

Walmart and Manhattan Blvd:

Queues were observed at all the approaches during the three peak hours. No considerable queues were observed at this intersection.

Ute Dr and Manhattan Blvd:

The Northbound and Southbound approaches along Manhattan Boulevard had considerable queues during all the peak hours. Eastbound approach had no queues and westbound approach had minimal queues during AM, mid-Day peak hours. (Rear-end crashes were noted)

Palace/ Chick-Fil-A Parking Lot and Manhattan Blvd:

Considerable queueing was observed on Northbound and Southbound approaches during all the peak hours. Minimal queues were observed on Eastbound and Westbound approaches. (Rear-end crashes were noted)

Manhattan Plaza/ Westbank Shopping Center and Manhattan Blvd:

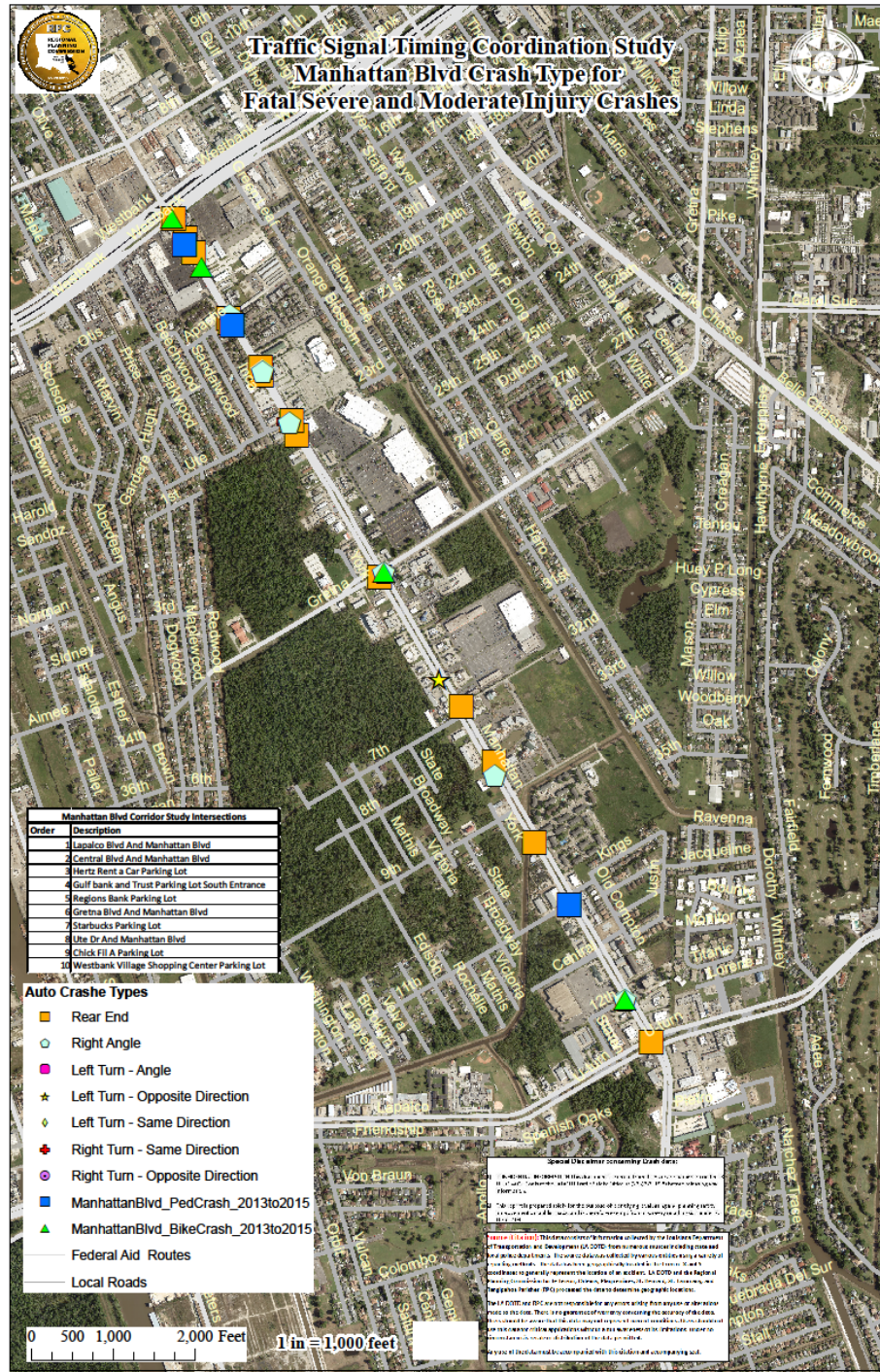
Queues were observed at all the approaches during all the three peak hours. Considerable queues were observed along Southbound Manhattan Boulevard (Rear-end crashes were noted). During AM and PM peaks, the northbound traffic is metered by the signal at Manhattan Boulevard and the Westbank Expressway.

Crash History

RPC provided the crash data history from 2013 to 2015. Rear ends crashes were the majority of the crash types. Three pedestrian crashes and three bike crashes appeared to be located within the study area. All three pedestrian crashes appear to be not signalized intersection locations (near Westbank Expressway, Apache Drive and 11th Street). Two of the bike crashes appear to be located near traffic signals (Gretna Blvd and the Plaza intersections) with the third occurring near 12 Street. The data below is from DOTD's crash database for the years 2013 to 2015.

Manhattan Blvd Crash Data 2013-2015	
Lapalco Blvd to Manhattan Village	
	2013-2015
Head on	1
Left Turn-e	4
Left Turn-f	25
Left Turn-g	23
Non Coll	29
Other	99
Rear End	534
Right Turn-i	2
Right Turn-h	24
Rt Angle	65
S Swipe(od)	1
S Swipe(sd)	95
	902

Figure III b – Manhattan Boulevard Crash Type for Fatal, Severe & Moderate Injury Crashes



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IV. TRAFFIC SIGNAL IMPROVEMENTS

This section helps in understanding in detail about the parameters considered for improving the Existing traffic signal timings along the Manhattan Boulevard study corridor.

Clearance Intervals

Jefferson Parish provided the information about the methodology and standard parameters to be used for calculating the yellow and all red clearance intervals, which is based on ITE's "Guidelines for Determining Traffic Signal Change and Clearance Intervals". Overall, these calculated clearance intervals are longer than existing intervals reducing the effective green time at the intersections, but the clearance intervals help in clearing a vehicle entering the intersection at the end of green time and before a conflicting signal phase is turned on, thereby reducing crashes and improving safety at intersections. Clearance lengths (Stop Bar to curb line) were estimated by measurements from aerial photos. The travels speeds on Manhattan Boulevard and the side streets were submitted to Jefferson Parish and approved with some modifications. Jefferson Parish has established the minimum clearance values for the Yellow Clearance (4-seconds) and all red (1-second) intervals. These clearance interval calculations for the ten studied intersections are included in Appendix C.

Corridor Modeling

Synchro 9 was used to create model of the study corridor using the existing parameters such as traffic signal timings, roadway geometry and traffic volumes during AM, Mid-Day and PM peak hours. The model was coded to replicate the existing conditions such as travel time and queuing. The improved conditions were modeled using the new calculated clearance intervals, existing roadway geometry and existing traffic volumes. The model was further analyzed to optimize offset settings (allowing motorists on the corridor to travel with less red signals stops) reducing the delays for motorists on Manhattan Blvd. The Level of Service (LOS) delays at each intersection and computer generated travel runs were analyzed in order to compare between existing and modified conditions.

Signal Timings - Coordination

Existing signal timings along the Manhattan Boulevard study corridor are coordinated, with the master at Lapalco Boulevard. The improved signal timings are also coordinated.

Signal Timings - Cycle Length Selection

Natural cycle lengths were determined at each individual intersection from analysis using Synchro 9 for AM, Mid-Day and PM peak hours. Using these cycle lengths and other cycle lengths along with computer generated travel runs, compare several iterations were performed using Synchro to find a uniform optimal cycle length for intersections along the study corridor. The parameters considered for selecting a cycle length were mainly delays and travel time. This data was submitted to Jefferson Parish and the 120-second cycle length was approved and selected.

Signal Timings – Time of the Day Plan Period Selection

In order to implement the improved signal timing plans during AM, Mid-Day and PM peak hours, existing traffic characteristics along the study corridor are analyzed using the 7-Day 24-hour Average Daily Traffic (ADT) data. The data is presented below in graphs depicting the 24-hr volumes, volumes during weekday, comparing volumes during weekdays (Tuesday, Wednesday and Thursday) and comparing volumes (Friday, Saturday, Sunday, and Monday).

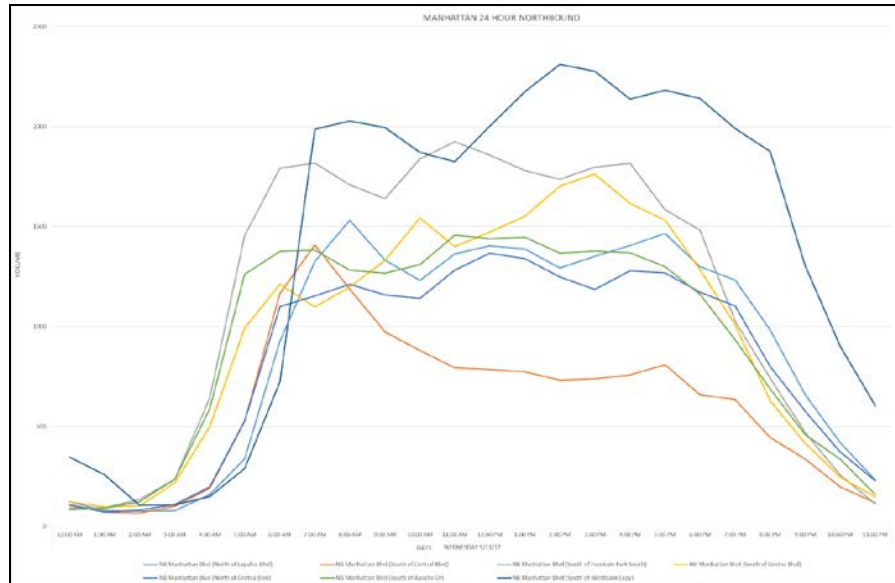


Figure IVa: Average Daily Traffic - 24-Hour (Northbound)

Figure IVa represents the 24- hour traffic counts collected at different locations during weekday along the northbound direction of Manhattan Boulevard. The above figure indicates that at the majority of study locations along the NB Manhattan Boulevard study corridor, the traffic volumes remain constant during all the peak hours between 6:00 AM and 6:00 PM.

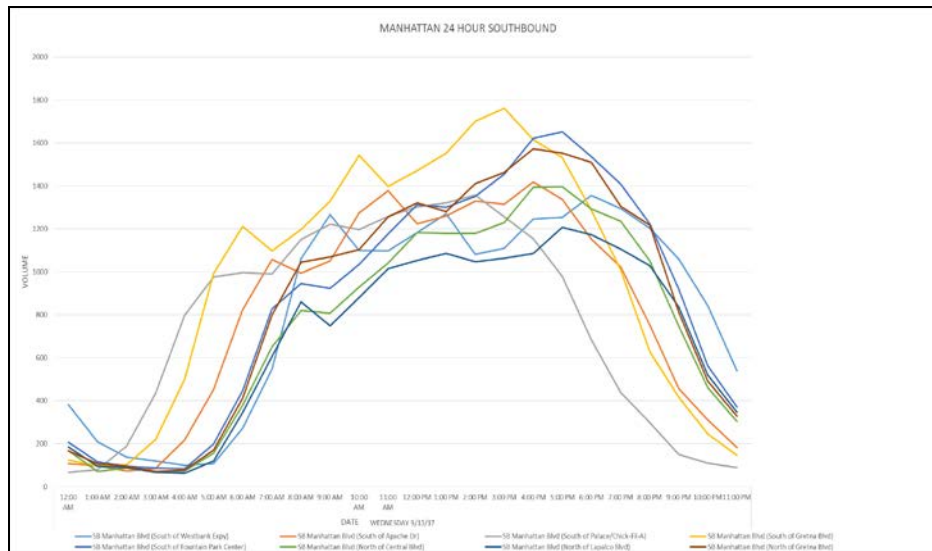


Figure IVb: Average Daily Traffic - 24-Hour (Southbound)

Figure IVb represents the 24- hour traffic counts collected at different locations during weekday along the southbound direction of Manhattan Boulevard. The pattern indicates that at the majority of study locations along the SB Manhattan Boulevard study corridor, the traffic volumes start to increase from 9:00 AM until peaking around 5:00 PM.

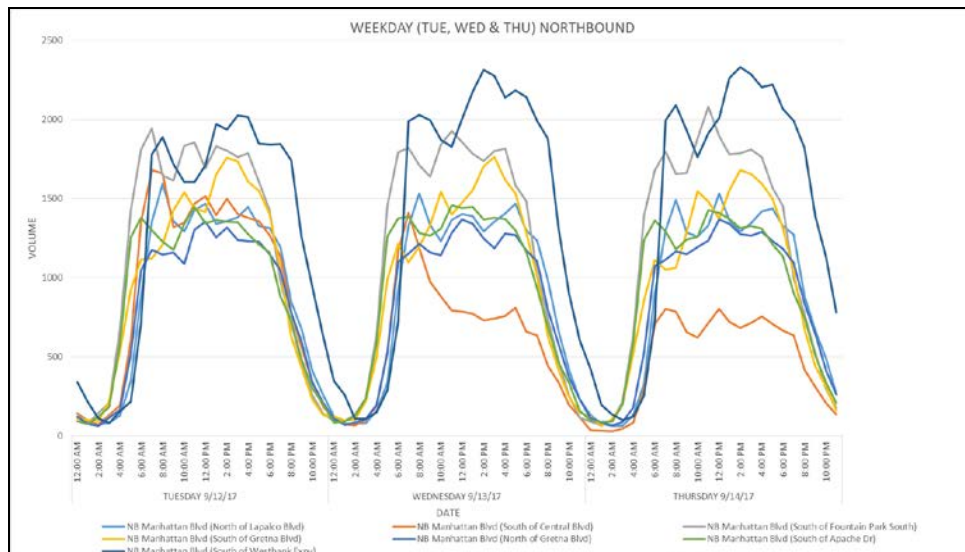


Figure V: Average Daily Traffic - Tue, Wed & Thu (Northbound)

Figure V represents comparison of 24- hour traffic patterns during Tuesday, Wednesday, and Thursday, collected at different locations along the northbound direction of Manhattan Boulevard. Above figure indicates that the traffic flow patterns are constant during 3 weekdays at the study locations along the NB Manhattan Boulevard study corridor. The volumes are more during Wednesday and Thursday compared to Tuesday.

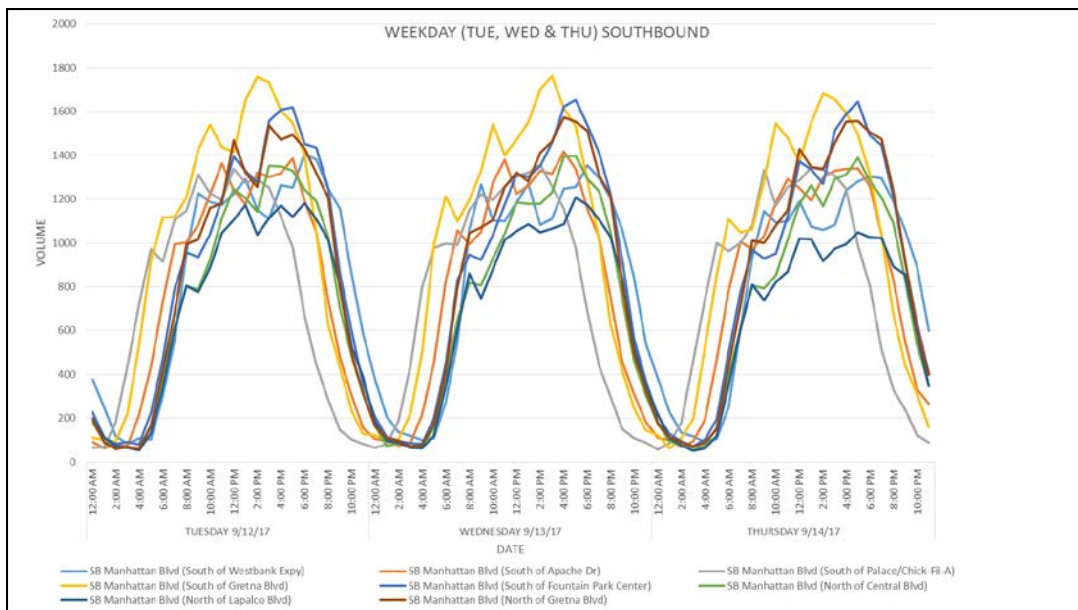


Figure VI: Average Daily Traffic - Tue, Wed & Thu (Southbound)

Figure VI represents comparison of 24- hour traffic patterns during Tuesday, Wednesday, and Thursday, collected at different locations along the southbound direction of Manhattan Boulevard. Above figure indicates that the traffic flow patterns and volumes are constant during 3 weekdays at the study locations along the SB Manhattan Boulevard study corridor.

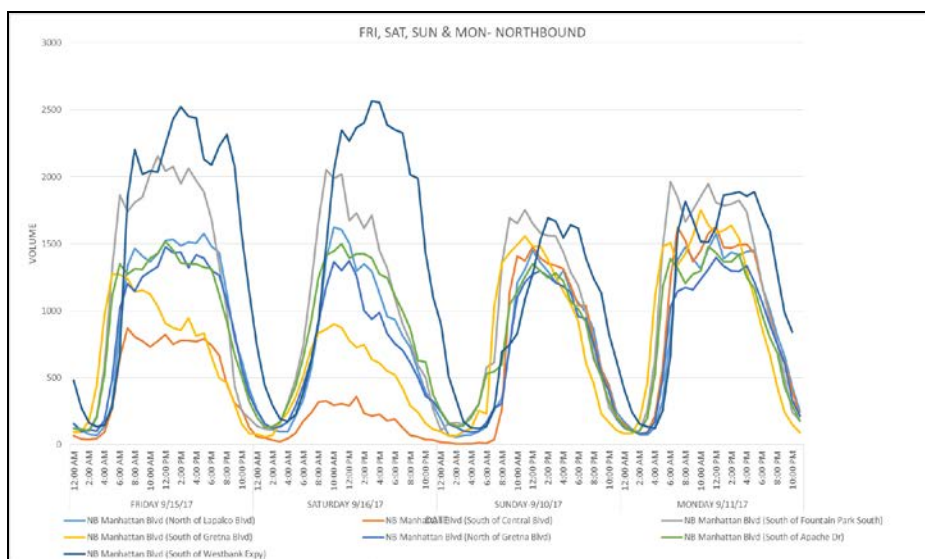


Figure VII: Average Daily Traffic – Fri, Sat, Sun & Mon (Northbound)

Figure VII represents comparison of 24- hour traffic patterns during Friday, Saturday, Sunday, and Monday, collected at different locations along the northbound direction of Manhattan Boulevard. Above figure indicates that the traffic flow patterns and volumes are constant during Friday and Monday. On Saturday, the traffic flows peak during Morning at 8:00 AM and gradually decrease. The traffic flows increase during Noon and gradually decrease on Sunday.

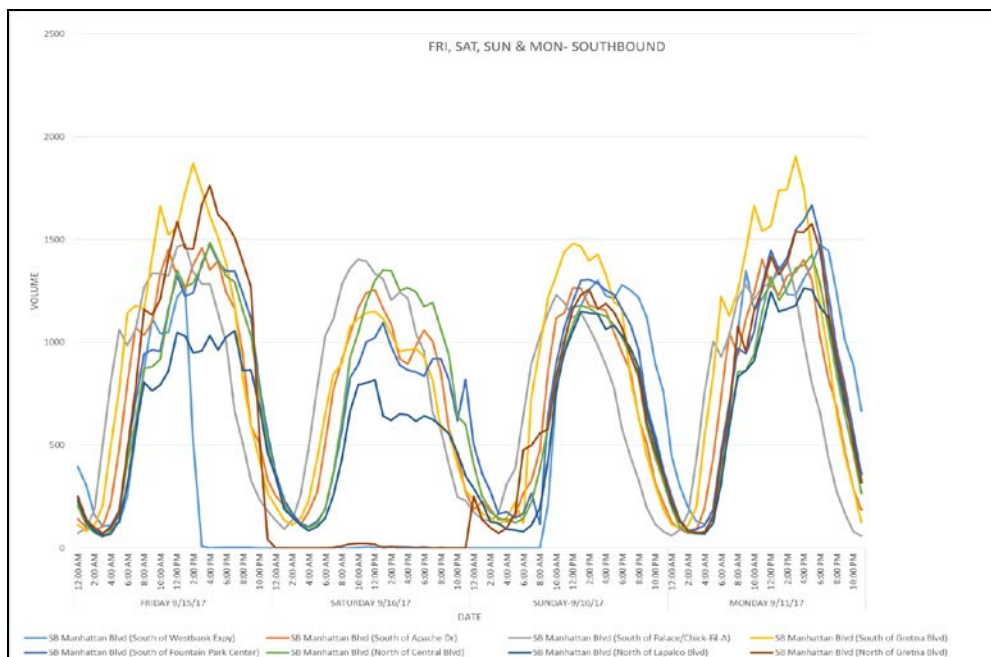


Figure VIII: Average Daily Traffic – Fri, Sat, Sun & Mon (Southbound)

Figure VIII represents comparison of 24- hour traffic patterns during Friday, Saturday, Sunday, and Monday, collected at different locations along the southbound direction of Manhattan Boulevard. Above figure indicates that the traffic flow patterns and volumes gradually increase from 8:00 AM, peaking during PM peak on Friday and Monday. On Saturday, the traffic flows peak during Morning at 8:00 AM and gradually decrease. The traffic flows increase during Noon and gradually decrease on Sunday.

The new TSI have four plans (time periods). The morning plan is from 4 AM to 10 AM, the mid-day plan is from 10 AM to 2 PM, and the evening plan is from 2 PM to 9 PM. The non-peak period is from 9 PM to 4 AM. All of these periods have a corridor cycle length of 120 seconds with the exception on the non-peak period that has a corridor cycle length of 110 seconds.

Timing Plan Implementation

Parish staff implemented the modified timing plans for the Manhattan Boulevard study corridor during the week of April 9, 2018. ITS Regional evaluated the traffic conditions in the corridor after implementing the modified 120-second cycle length along with clearance times, splits, and offsets. Travel time runs were performed during the AM, Mid-day and PM peak hours to coincide with the same time frames for travel runs performed during 2017. The details of travel runs are included in Appendix B.

V. ANALYSIS RESULTS

This section compares the results obtained from the analysis of existing conditions and modified conditions based on various parameters listed below. This strategy will help in effectively understating the improvements to Manhattan study corridor.

Travel Time Runs

ITS Regional conducted travel time surveys along the Manhattan Boulevard study corridor during third week of October in 2017 to assimilate the existing conditions. The existing conditions were compared with the travel time surveys conducted after implementing new timings on April 9, 2018.

Table 2 below compares the travel runs conducted during October 2017 and April-May 2018.

TABLE 2: TRAVEL TIME COMPARISON

Peak	Scenario	Travel Time (in Seconds)		
		Northbound	Southbound	Overall
AM	<i>Existing</i>	223	264	487
	<i>Modified</i>	243	236	479
	<i>% Diff</i>	9.0%	-10.6%	-1.6%
Mid-Day	<i>Existing</i>	304	317	621
	<i>Modified</i>	285	325	610
	<i>% Diff</i>	-6.3%	8	-1.8%
PM	<i>Existing</i>	308	359	667
	<i>Modified</i>	293	369	662
	<i>% Diff</i>	-4.9%	2.8%	-0.7%

Table 3 depicts the LOS criteria for signalized intersections.

TABLE 3 – LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS	
Level of Service	Control Delay per Vehicle (sec)
A	≤ 10
B	>10 to ≤ 20
C	> 20 to ≤ 35
D	> 35 to ≤ 55
E	> 55 to ≤ 80
F	> 80

Intersection Level of Service (LOS), Delay and Queues results were obtained from Synchro 9. Existing roadway geometry and volumes were used to develop the model. Existing and Modified Signal timings were coded into Synchro, in order to compare the scenarios during AM, Mid-Day and PM peak hours.

TABLE 4: LEVEL OF SERVICE COMPARISON – AM PEAK






NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	LEVEL OF SERVICE				
					EXISTING CONDITIONS	PROPOSED CONDITIONS			
					AM				
1	LAPALCO BLVD. AT MANHATTAN BLVD.		CYCLE LENGTH		120s	120s			
			EB	EBL	E (59.4)	E (57.2)			
				EBT	C (25.6)	C (31.5)			
				EBR	A (4.6)	A (2.2)			
				Overall Approach LOS	C (52.7)	D (57.2)			
			WB	WBL	D (49.4)	D (49.4)			
				WB TR	C (29.6)	D (40.4)			
				Overall Approach LOS	C (51.2)	D (41.1)			
			NB	NBT	E (62.2)	D (46.5)			
				NBR	B (10.1)	A (5.5)			
				Overall Approach LOS	D (46.9)	D (55.5)			
			SB	SBT	E (56.1)	C (22.0)			
				SBR	C (52.5)	A (9.7)			
				Overall Approach LOS	D (46.2)	E (16.5)			
OVERALL DELAY					D (58.2)	C (54.6)			
2	CENTRAL BLVD AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s			
			EB	EBL	D (59.9)	E (56.7)			
				EBR	B (16.0)	C (21.9)			
				Overall Approach LOS	C (55.5)	D (47.4)			
			NB	NBL	E (60.4)	D (55.5)			
				NBT	A (2.4)	A (2.5)			
				Overall Approach LOS	A (3.8)	A (5.1)			
			SB	SB TR	C (25.4)	A (6.1)			
				Overall Approach LOS	C (25.4)	A (6.1)			
				OVERALL DELAY					B (11.6)
			3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
						WB	WBR	A (5.7)	A (0.5)
							Overall Approach LOS	A (5.7)	A (0.5)
						NB	NBT	A (1.2)	A (2.6)
Overall Approach LOS	A (1.2)	A (2.6)							
SB	SBL	E (58.5)				D (40.5)			
	SBT	A (0.5)				A (0.5)			
	Overall Approach LOS	A (0.9)				A (0.7)			
OVERALL DELAY						A (1.1)	A (1.8)		
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD					CYCLE LENGTH		120s	120s
			WB	WB LR	A (0.1)	A (0.1)			
				Overall Approach LOS	A (0.1)	A (0.1)			
			NB	NB TR	B (11.6)	A (7.6)			
				Overall Approach LOS	B (11.6)	A (7.6)			
			SB	SBL	A (1.5)	A (4.2)			
				SBT	A (1.7)	A (2.5)			
				Overall Approach LOS	A (1.7)	A (2.5)			
OVERALL DELAY					A (7.7)	A (5.5)			
5	TARGET AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s			
			WB	WBL	D (50.8)	D (50.8)			
				Overall Approach LOS	C (26.4)	C (26.4)			
			NB	NB TR	C (54.6)	C (54.6)			
				Overall Approach LOS	A (5.6)	A (1.0)			
			SB	SBL	D (42.7)	D (48.6)			
				SBT	A (4.1)	A (2.6)			
				Overall Approach LOS	A (5.9)	A (4.7)			
OVERALL DELAY					A (5.9)	A (2.7)			

TABLE 4: LEVEL OF SERVICE COMPARISON – AM PEAK (CONT.)






NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	LEVEL OF SERVICE	
					EXISTING CONDITIONS	PROPOSED CONDITIONS
					AM	
6	GRETNA BLVD AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBT	D (47.1)	D (47.4)
				EBR	B (10.4)	B (10.4)
				Overall Approach LOS	D (35.1)	D (35.4)
			WB	WBT	E (50.5)	E (50.7)
				WBR	C (22.2)	B (15.9)
				Overall Approach LOS	D (42.6)	D (42.0)
			NB	NBT	A (2.5)	A (2.4)
				NBR	A (2.0)	A (0.2)
				Overall Approach LOS	A (7.7)	A (2.2)
			SB	SBT	A (5.6)	A (4.5)
SBR	A (5.6)	A (4.5)				
Overall Approach LOS	B (15.2)	B (11.8)				
OVERALL DELAY					B (15.2)	B (11.8)
7	WALMART AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			WB	WBL	D (54.0)	D (54.0)
				WBR	B (15.7)	B (15.7)
				Overall Approach LOS	C (31.5)	C (31.5)
			NB	NBTR	A (4.2)	A (4.2)
				Overall Approach LOS	A (4.2)	A (4.2)
				SBL	D (40.5)	D (40.5)
			SB	SBR	A (2.7)	A (2.7)
				Overall Approach LOS	A (5.5)	A (5.5)
				Overall Approach LOS	A (7.5)	A (8.0)
			OVERALL DELAY			
8	LUTER AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBR	A (0.0)	A (0.0)
				Overall Approach LOS	A (0.0)	A (0.0)
				WBL	O	O
			WB	WB LR	A (1.5)	A (1.0)
				Overall Approach LOS	A (1.5)	A (1.0)
				NBL	E (55.5)	D (47.5)
			NB	NBTR	A (5.5)	A (5.2)
				Overall Approach LOS	A (4.2)	A (5.5)
				SBL	C (54.2)	D (57.2)
			SB	SBR	A (2.1)	A (5.1)
Overall Approach LOS	A (4.1)	A (5.5)				
Overall Approach LOS	A (4.0)	A (5.2)				
OVERALL DELAY					A (4.0)	A (5.2)
9	PALACE/ CHICK-FILA PARKING LOT AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBL	D (45.5)	D (52.5)
				EB LT	D (45.4)	D (52.9)
				EBR	A (0.0)	A (0.0)
				Overall Approach LOS	D (44.2)	D (51.5)
			WB	WBL	O	O
				WB LT	D (42.0)	D (47.0)
				WBR	A (0.0)	A (0.0)
				Overall Approach LOS	A (5.4)	A (2.4)
			NB	NBL	E (50.5)	A (2.4)
				NBTR	B (17.5)	A (5.5)
Overall Approach LOS	C (20.5)	A (5.7)				
SB	SBL	E (52.9)	D (40.2)			
	SBR	D (57.2)	B (14.2)			
	Overall Approach LOS	D (55.9)	B (15.9)			
OVERALL DELAY					C (29.0)	B (12.7)
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EB LT	D (35.1)	D (46.5)
				EBR	A (0.0)	A (0.0)
				Overall Approach LOS	C (29.7)	D (59.2)
			WB	WB LT	D (35.5)	D (47.5)
				WBR	A (0.0)	A (0.0)
				Overall Approach LOS	C (31.4)	D (41.5)
			NB	NBL	F (54.2)	C (29.5)
				NBTR	A (5.5)	A (2.5)
				Overall Approach LOS	A (5.0)	A (2.2)
			SB	SBL	D (47.0)	D (52.5)
SBR	B (14.4)	B (12.5)				
Overall Approach LOS	B (14.2)	B (12.5)				
OVERALL DELAY					B (10.9)	A (7.1)

TABLE 5: LEVEL OF SERVICE COMPARISON – MID DAY PEAK






NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	LEVEL OF SERVICE	
					EXISTING CONDITIONS	PROPOSED CONDITIONS
					MID DAY	
1	LAPALCO BLVD. AT MANHATTAN BLVD.		CYCLE LENGTH		120s	120s
			EB	EBL	E (59.8)	F (84.0)
				EBT	C (24.7)	D (41.9)
				EBR	A (4.4)	A (8.8)
				Overall Approach LOS	C (32.0)	D (50.0)
			WB	WBL	D (50.2)	D (50.2)
				WB TR	C (31.8)	E (68.7)
				Overall Approach LOS	C (33.4)	E (67.1)
			NB	NBT	F (135.5)	D (43.4)
				NBR	B (12.5)	A (6.8)
				Overall Approach LOS	F (103.6)	C (33.9)
			SB	SBT	E (78.2)	B (16.0)
				SBR	C (29.9)	A (2.3)
				Overall Approach LOS	E (65.7)	B (12.4)
			OVERALL DELAY			
2	CENTRAL BLVD AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBL	E (61.4)	E (63.1)
				EBR	B (16.0)	B (16.5)
				Overall Approach LOS	D (53.9)	E (55.4)
			NB	NBL	E (64.6)	C (30.8)
				NBT	A (1.0)	A (1.3)
				Overall Approach LOS	A (7.5)	A (4.3)
			SB	SB TR	A (7.0)	C (26.3)
				Overall Approach LOS	A (7.0)	C (26.3)
			OVERALL DELAY			
3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			WB	WBR	B (10.2)	A (0.4)
				Overall Approach LOS	B (10.2)	A (0.4)
			NB	NBT	A (1.8)	A (3.9)
				NBR	A (0.9)	A (1.7)
				Overall Approach LOS	A (1.7)	A (3.9)
			SB	SBL	D (52.1)	D (42.7)
				SBT	A (0.3)	A (0.3)
				Overall Approach LOS	A (1.7)	A (1.4)
			OVERALL DELAY			
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			WB	WB LR	C (33.5)	C (29.0)
				Overall Approach LOS	C (33.5)	C (29.0)
			NB	NB TR	A (2.9)	A (8.2)
				Overall Approach LOS	A (2.9)	A (8.2)
			SB	SBL	B (12.8)	C (22.0)
				Overall Approach LOS	A (4.8)	A (7.5)
OVERALL DELAY					A (5.7)	A (9.3)
5	TARGET AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			WB	WBL	E (56.0)	E (56.0)
				WBR	B (15.3)	B (15.3)
				Overall Approach LOS	C (32.7)	C (32.7)
			NB	NB TR	B (15.1)	A (3.5)
				Overall Approach LOS	B (15.1)	A (3.5)
			SB	SBL	D (51.2)	D (47.4)
Overall Approach LOS	A (9.4)	A (9.2)				
OVERALL DELAY					B (14.3)	A (8.7)

TABLE 5: LEVEL OF SERVICE COMPARISON – MID DAY PEAK (CONT.)

NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	LEVEL OF SERVICE	
					EXISTING CONDITIONS	PROPOSED CONDITIONS
					MID DAY	
6	GREYNA BLVD AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBT	E (61.2)	E (60.5)
				EBR	C (23.2)	C (23.9)
				Overall Approach LOS	D (51.2)	D (50.9)
			WB	WBT	E (64.2)	E (63.2)
				WBR	B (16.2)	B (16.9)
				Overall Approach LOS	D (50.1)	D (49.6)
			NB	NBT	A (6.8)	A (3.6)
				NBR	A (0.8)	A (0.2)
				Overall Approach LOS	A (6.4)	A (3.3)
			SB	SB TR	C (21.2)	A (5.7)
				Overall Approach LOS	C (21.2)	A (5.7)
				OVERALL DELAY	C (23.5)	B (16.2)
7	WALMART AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			WB	WBL	E (55.4)	E (55.4)
				WBR	B (14.4)	B (14.4)
				Overall Approach LOS	C (34.7)	C (34.7)
			NB	NB TR	A (4.4)	A (5.4)
				Overall Approach LOS	A (4.4)	A (5.4)
			SB	SBL	E (61.6)	C (31.0)
				SBR	A (1.9)	A (4.4)
				Overall Approach LOS	B (10.2)	A (8.1)
			OVERALL DELAY	B (10.4)	A (10.0)	
8	UTE DR AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBR	A (0.2)	A (0.2)
				Overall Approach LOS	A (0.2)	A (0.2)
				0	0	
			WB	WBL	C (21.4)	C (21.4)
				WBR	C (21.4)	C (21.4)
				Overall Approach LOS	C (21.4)	C (21.4)
			NB	NBL	E (55.0)	E (55.0)
				NB TR	B (14.1)	B (14.1)
				Overall Approach LOS	B (15.2)	B (15.2)
			SB	SBL	C (25.1)	C (25.1)
				SB TR	A (2.5)	A (2.5)
				Overall Approach LOS	A (3.8)	A (3.8)
OVERALL DELAY	A (9.5)	A (9.5)				
9	PALACE/ CHICK-FIL-A PARKING LOT AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBL	D (46.3)	E (62.1)
				EB LT	D (46.3)	E (62.0)
				EBR	A (1.1)	A (0.9)
				Overall Approach LOS	D (35.2)	D (47.1)
			WB	WBL	D (42.8)	D (52.7)
				WB LT	D (42.7)	D (52.7)
				WBR	A (0.4)	A (0.5)
				Overall Approach LOS	C (23.2)	C (28.6)
			NB	NBL	E (60.8)	C (24.6)
				NB TR	C (32.2)	A (4.3)
				Overall Approach LOS	C (34.3)	A (5.7)
			SB	SBL	E (62.8)	D (41.9)
SB TR	E (73.2)	B (12.8)				
Overall Approach LOS	E (72.4)	B (14.9)				
OVERALL DELAY	D (52.1)	B (12.7)				
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EB LT	E (61.1)	E (60.4)
				EBR	A (1.2)	A (0.8)
				Overall Approach LOS	D (38.0)	D (37.5)
			WB	WB LT	E (65.3)	E (65.6)
				WBR	A (0.5)	A (0.4)
				Overall Approach LOS	D (52.2)	D (52.4)
			NB	NBL	F (83.9)	D (43.8)
				NB TR	B (12.8)	A (2.6)
				Overall Approach LOS	B (16.5)	A (4.8)
			SB	SBL	C (32.5)	E (61.2)
				SB TR	B (11.8)	B (16.6)
				Overall Approach LOS	B (12.7)	B (18.5)
OVERALL DELAY	B (16.6)	B (13.3)				

TABLE 6: LEVEL OF SERVICE COMAPRISON – PM PEAK






NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	LEVEL OF SERVICE				
					EXISTING CONDITIONS	PROPOSED CONDITIONS			
					PM				
1	LAPALCO BLVD. AT MANHATTAN BLVD.		CYCLE LENGTH		120s	120s			
			EB	EBL	E (64.1)	F (99.8)			
				EBT	C (27.0)	C (28.8)			
				EBR	B (16.5)	B (11.9)			
				Overall Approach LOS	D (35.2)	D (44.7)			
			WB	WBL	E (55.2)	E (58.3)			
				WB TR	E (65.2)	E (67.7)			
				Overall Approach LOS	E (63.9)	E (66.5)			
			NB	NBT	D (50.8)	E (57.8)			
				NBR	B (11.5)	B (13.7)			
				Overall Approach LOS	D (38.2)	D (43.7)			
			SB	SBT	E (56.3)	D (38.7)			
				SBR	C (31.7)	B (11.9)			
				Overall Approach LOS	D (48.1)	C (29.8)			
OVERALL DELAY					D (48.0)	D (49.1)			
2	CENTRAL BLVD AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s			
			EB	EBL	E (60.4)	E (65.3)			
				EBR	B (15.1)	B (16.3)			
				Overall Approach LOS	D (49.2)	D (53.2)			
			NB	NBL	E (60.4)	C (34.7)			
				NBT	A (2.8)	A (1.7)			
				Overall Approach LOS	A (8.4)	A (4.9)			
			SB	SBTR	B (14.9)	C (23.2)			
				Overall Approach LOS	B (14.9)	C (23.2)			
			OVERALL DELAY					B (13.2)	B (15.1)
			3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
WB	WBR	B (12.8)				A (0.7)			
	Overall Approach LOS	B (12.8)				A (0.7)			
NB	NBT	A (3.8)				A (4.5)			
	NBR	A (2.3)				A (2.7)			
Overall Approach LOS		A (3.8)				A (4.5)			
SB	SBL	E (65.6)				D (41.0)			
	SBT	A (0.4)				A (0.4)			
	Overall Approach LOS	A (1.2)				A (0.9)			
OVERALL DELAY					A (2.5)	A (2.6)			
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s			
			WB	WB LR	C (32.3)	C (27.9)			
				Overall Approach LOS	C (32.3)	C (27.9)			
			NB	NB TR	B (13.7)	A (8.4)			
				Overall Approach LOS	B (13.7)	A (8.4)			
			SB	SBL	B (14.0)	D (46.1)			
				SBT	A (2.6)	A (6.7)			
Overall Approach LOS	A (3.3)	A (9.4)							
OVERALL DELAY					A (10.0)	A (10.2)			
5	TARGET AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s			
			WB	WBL	E (56.2)	E (56.2)			
				WBR	B (15.4)	B (15.4)			
				Overall Approach LOS	D (35.7)	D (35.7)			
			NB	NB TR	B (11.3)	A (1.3)			
				Overall Approach LOS	B (11.3)	A (1.3)			
			SB	SBL	E (59.1)	D (38.4)			
				SBT	A (4.6)	A (2.3)			
Overall Approach LOS	A (9.6)	A (5.6)							
OVERALL DELAY					B (12.3)	A (5.9)			

TABLE 6: LEVEL OF SERVICE COMPARISON – PM PEAK (CONT.)






NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	LEVEL OF SERVICE	
					EXISTING CONDITIONS	PROPOSED CONDITIONS
PM						
6	GREYNA BLVD AT MANHATTAN BLVD		EB	EBT	D (44.2)	D (43.4)
				EBR	B (19.4)	C (22.1)
				Overall Approach LOS	D (36.9)	D (37.2)
			WB	WBT	E (74.2)	E (74.3)
				WBR	C (21.6)	C (23.9)
				Overall Approach LOS	E (61.0)	E (61.7)
			NB	NBT	C (23.9)	A (9.9)
				NBR	A (7.7)	A (0.6)
				Overall Approach LOS	C (22.3)	A (9.0)
			SB	SB TR	B (13.3)	A (4.2)
Overall Approach LOS	B (13.3)	A (4.2)				
OVERALL DELAY	C (17.1)	B (19.2)				
7	WALMART AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			WB	WBL	D (54.3)	D (54.3)
				WBR	B (14.5)	B (14.5)
				Overall Approach LOS	C (30.3)	C (30.3)
			NB	NB TR	A (8.3)	A (5.6)
				Overall Approach LOS	A (8.3)	A (5.6)
				SBL	E (60.9)	E (57.5)
			SB	SBR	A (3.6)	A (6.0)
				Overall Approach LOS	A (10.0)	A (11.6)
				OVERALL DELAY	B (11.4)	B (10.9)
8	UTE DR AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBR	A(0.1)	A(0.2)
				Overall Approach LOS	A (0.1)	A (0.3)
				WBL	0	0
			WB	WB LR	A (2.0)	A (1.3)
				Overall Approach LOS	A (2.0)	A (1.3)
				NBL	D (49.2)	E (61.0)
			NB	NB TR	B (10.3)	A (7.2)
				Overall Approach LOS	B (10.9)	A (8.1)
				SBL	D (47.6)	D (36.3)
SB	SB TR	A (2.4)	A (0.5)			
	Overall Approach LOS	A (6.1)	A (3.5)			
	OVERALL DELAY	A (8.2)	A (5.6)			
9	PALACE/ CHICK-FIL-A PARKING LOT AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EBL	E (63.5)	E (68.7)
				EB LT	E (63.6)	E (68.8)
				EBR	A (1.4)	A (1.3)
				Overall Approach LOS	D (45.9)	D (48.6)
			WB	WBL	E (60.0)	E (55.4)
				WB LT	E (59.6)	E (55.2)
				WBR	A (0.7)	A (0.8)
				Overall Approach LOS	D (36.9)	C (34.2)
			NB	NBL	F (84.5)	C (22.8)
NB TR	A (9.0)	A (7.3)				
Overall Approach LOS	B (14.7)	A (8.5)				
SB	SBL	E (57.4)	D (47.8)			
	SB TR	C (21.6)	B (15.3)			
	Overall Approach LOS	C (24.4)	B (17.8)			
OVERALL DELAY	C (21.5)	B (15.8)				
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		CYCLE LENGTH		120s	120s
			EB	EB LT	D (50.6)	D (52.1)
				EBR	A (0.6)	A (0.5)
				Overall Approach LOS	C (30.9)	C (31.8)
			WB	WB LT	E (65.1)	E (68.5)
				WBR	A (1.2)	A (0.9)
				Overall Approach LOS	D (44.3)	D (46.4)
			NB	NBL	E (76.7)	C (32.2)
				NB TR	A (2.8)	A (1.7)
				Overall Approach LOS	A (3.4)	A (1.9)
SB	SBL	D (44.3)	E (59.3)			
	SB TR	A (8.9)	B (11.6)			
	Overall Approach LOS	A (10.0)	B (13.0)			
OVERALL DELAY	A (9.2)	B (10.3)				

TABLE 7: QUEUE LENGTH COMPARISON – AM PEAK

NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	QUEUES COMPARISON					
					EXISTING 2017		PROPOSED CONDITIONS		DIFFERENCE	
					AM		AM		AM	
					Q 50	Q 95	Q 50	Q 95	Q 50	Q 95
CYCLE LENGTH					120s		120s		120s	
1	LAPALCO BLVD. AT MANHATTAN BLVD.		EB	EBL	166	222	167	225	1	3
				EBT	202	242	236	293	34	51
				EBR	0	26	0	14	0	-12
				WBL	42	72	42	72	0	0
			WB	WB TR	301	457	343	418	42	-39
				NBT	407	#546	381	453	-26	-93
			NB	NBR	38	135	38	124	0	-11
				SBT	192	248	134	175	-58	-73
SB	SBR	138	234	100	181	-38	-53			
2	CENTRAL BLVD AT MANHATTAN BLVD		EB	EBL	31	66	36	76	5	10
				EBR	0	20	0	23	0	3
			NB	NBL	28	m33	20	m29	-8	-4
				NBT	71	m77	50	140	-21	63
SB	SB TR	271	240	128	126	-143	-114			
3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		WB	WBR	0	6	0	0	0	-6
				NBT	16	47	78	141	62	94
			NB	NBR	0	m0	0	m1	0	1
				SBL	8	m30	8	m21	0	-9
SB	SBT	0	0	1	0	1	0			
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD		WB	WB LR	0	0	0	0	0	0
				NB TR	159	233	108	258	-51	25
			SB	SBL	0	4	1	m7	1	-3
				SBT	2	72	4	120	2	48
5	TARGET AT MANHATTAN BLVD		WB	WBL	2	8	2	8	0	0
				WBR	0	18	0	18	0	0
			NB	NB TR	165	219	97	0	-68	-219
				SBL	17	38	14	m32	-3	-6
SB	SBT	74	104	53	41	-33	-63			
6	GRETNA BLVD AT MANHATTAN BLVD		EB	EBT	110	164	110	165	0	1
				EBR	0	31	0	31	0	0
				WBT	205	279	205	280	0	1
				WBR	35	80	28	73	-7	-7
			NB	NBT	296	282	35	45	-259	-232
				NBR	17	25	0	0	-17	-25
			SB	SB TR	107	113	14	86	-73	-64
7	WALMART AT MANHATTAN BLVD		WB	WBL	38	64	38	64	0	0
				WBR	0	60	0	60	0	0
			NB	NB TR	16	60	117	123	101	63
				SBL	70	118	76	102	6	-16
SB	SBT	60	246	72	70	12	-176			
8	UTE DR AT MANHATTAN BLVD		EB	EBR	0	0	0	0	0	0
				WBL	0	0	0	0	0	0
			WB	WB LR	0	0	0	0	0	0
				NBL	5	m16	4	m11	-1	-5
			NB	NB TR	16	44	131	20	115	-24
				SBL	53	m105	62	117	9	12
SB	SB TR	26	63	42	87	16	24			
9	PALACE/ CHICK- FIL-A PARKING LOT AT MANHATTAN BLVD		EB	EBL	40	82	42	87	2	5
				EB LT	41	83	43	88	2	5
				EBR	0	0	0	0	0	0
				WBL	0	0	0	0	0	0
			WB	WB LT	1	6	1	6	0	0
				WBR	0	0	0	0	0	0
			NB	NBL	46	90	9	17	-37	-73
				NB TR	175	167	41	46	-134	-121
			SB	SBL	35	74	22	45	-13	-29
				SB TR	262	335	130	16	-132	-319
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		EB	EB LT	7	22	8	26	1	4
				EBR	0	0	0	0	0	0
			WB	WB LT	13	34	15	40	2	6
				WBR	0	0	0	0	0	0
			NB	NBL	20	m45	15	37	-5	-8
				NB TR	58	97	43	43	-15	-54
			SB	SBL	9	26	9	29	0	3
				SB TR	203	252	105	353	-98	101

- 95th percentile volume exceeds capacity, may be longer
m - volume for 95th percentile queue is metered by upstream signal
~ - Volume exceeds capacity, queue is theoretically infinite
Queue shown is maximim after two cycles

TABLE 8: QUEUE LENGTH COMPARISON – MID DAY PEAK

NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	QUEUES COMPARISON					
					EXISTING 2017		PROPOSED CONDITIONS		DIFFERENCE	
					MID DAY		MID DAY		MID DAY	
					Q 50	Q 95	Q 50	Q 95	Q 50	Q 95
CYCLE LENGTH					120s		120s		120s	
1	LAPALCO BLVD. AT MANHATTAN BLVD.		EB	EBL	167	223	175	#276	8	53
				EBT	236	280	305	362	69	82
				EBR	3	37	9	54	6	17
			WB	WBL	51	84	51	84	0	0
				WB TR	352	415	~433	#543	81	128
			NB	NBT	~626	#764	477	#592	-149	-172
				NBR	58	170	32	114	-26	-56
			SB	SBT	~461	#599	210	128	-251	-471
SBR	193	304		5	12	-188	-292			
2	CENTRAL BLVD AT MANHATTAN BLVD		EB	EBL	105	165	105	168	0	3
				EBR	0	27	0	27	0	0
			NB	NBL	122	m96	108	m113	-14	17
				NBT	27	m38	40	m61	13	23
SB	SB TR	270	199	503	604	233	405			
	WB	WBR	0	14	0	0	0	-14		
3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		NB	NBT	41	49	126	167	85	118
				NBR	1	m2	1	m2	0	0
			SB	SBL	22	55	22	m46	0	-9
				SBT	0	0	0	0	0	0
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD		WB	WB LR	45	84	44	84	-1	0
				NB TR	56	77	201	296	145	219
			SB	SBL	18	58	24	71	6	13
				SBT	148	167	201	230	53	63
5	TARGET AT MANHATTAN BLVD		WB	WBL	55	87	55	87	0	0
				WBR	0	69	0	69	0	0
			NB	NB TR	274	191	45	28	-229	-163
				SBL	79	105	71	117	-8	12
SB	SBT	70	116	93	168	23	52			
	6	GREYNA BLVD AT MANHATTAN BLVD		EB	EBT	296	378	295	377	-1
EBR					57	102	59	103	2	1
WB				WBT	203	282	202	281	-1	-1
				WBR	31	71	32	72	1	1
NB	NBT	185	210	24	78	-161	-132			
	NBR	8	1	0	1	-8	0			
SB	SB TR	276	344	115	209	-161	-135			
	7	WALMART AT MANHATTAN BLVD		WB	WBL	60	93	60	93	0
WBR					0	64	0	64	0	0
NB				NB TR	35	69	72	47	37	-22
				SBL	135	208	73	145	-62	-63
SB	SBT	20	92	79	160	59	68			
	8	UTE DR AT MANHATTAN BLVD		EB	EBR	0	0	0	0	0
WBL					0	0	0	0	0	0
WB				WB LR	1	63	1	61	0	-2
				NBL	32	69	25	55	-7	-14
NB				NB TR	144	188	34	48	-110	-140
				SBL	61	m67	63	m75	2	8
SB	SB TR	21	m30	40	45	19	15			
	9	PALACE/ CHICK- FIL-A PARKING LOT AT MANHATTAN BLVD		EB	EBL	50	98	55	107	5
EB LT					50	97	55	107	5	10
EBR					0	0	0	0	0	0
WB				WBL	9	30	10	33	1	3
				WB LT	9	30	10	33	1	3
				WBR	0	0	0	0	0	0
NB				NBL	88	131	10	54	-78	-77
				NB TR	269	309	28	38	-241	-271
SB	SBL	69	134	45	69	-24	-65			
	SB TR	~623	#797	123	138	-500	-659			
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		EB	EB LT	50	94	50	94	0	0
				EBR	0	0	0	0	0	0
			WB	WB LT	62	112	62	112	0	0
				WBR	0	0	0	0	0	0
			NB	NBL	72	m123	65	119	-7	-4
				NB TR	139	115	37	57	-102	-58
			SB	SBL	34	75	47	95	13	20
				SB TR	278	441	364	493	86	52

- 95th percentile volume exceeds capacity, may be longer
m - volume for 95th percentile queue is metered by upstream signal
~ - Volume exceeds capacity, queue is theoretically infinite
Queue shown is maximim after two cycles

TABLE 9: QUEUE LENGTH COMPARISON – PM PEAK

NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	QUEUES COMPARISON								
					EXISTING 2017		PROPOSED CONDITIONS		DIFFERENCE				
					PM		PM		PM				
					Q 50	Q 95	Q 50	Q 95	Q 50	Q 95			
CYCLE LENGTH					120s		120s		120s				
1	LAPALCO BLVD. AT MANHATTAN BLVD.		EB	EBL	195	#277	~214	#324	19	47			
				EBT	274	343	284	336	10	-7			
				EBR	68	132	47	103	-21	-29			
			WB	WBL	124	166	124	173	0	7			
				WB TR	~666	#763	~651	#748	-15	-15			
				NBT	342	425	355	#477	13	52			
			NB	NBR	47	151	58	171	11	20			
				SBT	400	#484	370	#480	-30	-4			
				SBR	236	384	171	209	-65	-175			
2	CENTRAL BLVD AT MANHATTAN BLVD		EB	EBL	91	148	91	155	0	7			
				EBR	0	32	0	33	0	1			
			NB	NBL	114	m121	112	m111	-2	-10			
				NBT	76	m160	73	m80	-3	-80			
			SB	SB TR	410	634	496	657	86	23			
3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		WB	WBR	0	20	0	0	0	-20			
				NBT	80	208	117	132	37	-76			
			NB	NBR	1	m2	1	m2	0	0			
				SBL	17	m0	13	m23	-4	23			
			SB	SBT	0	0	0	0	0	0			
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD		WB	WB LR	48	89	46	89	-2	0			
				NB TR	224	444	179	254	-45	-190			
			NB	SBL	10	59	73	134	63	75			
				SBT	61	132	166	256	105	124			
			SB	SBT	61	132	166	256	105	124			
5	TARGET AT MANHATTAN BLVD		WB	WBL	54	85	54	85	0	0			
				WBR	0	61	0	61	0	0			
			NB	NB TR	191	243	25	34	-166	-209			
				SBL	66	m103	62	m88	-4	-15			
			SB	SBT	130	m134	66	80	-64	-54			
6	GRETNA BLVD AT MANHATTAN BLVD		EB	EBT	207	314	213	281	6	-33			
				EBR	46	94	57	94	11	0			
				WBT	358	#567	369	467	11	-100			
			WB	WBR	62	118	74	115	12	-3			
				NBT	523	334	111	137	-412	-197			
			NB	NBR	29	62	0	6	-29	-56			
				SB TR	345	284	70	83	-275	-201			
			7	WALMART AT MANHATTAN BLVD		WB	WBL	56	86	56	86	0	0
							WBR	0	72	0	72	0	0
NB	NB TR	84				158	56	66	-28	-92			
	SBL	100				160	107	167	7	7			
SB	SBT	5				41	168	296	163	255			
8	UTE DR AT MANHATTAN BLVD		EB	EBR	0	0	0	0	0	0			
				WBL	0	0	0	0	0	0			
			WB	WB LR	0	0	0	0	0	0			
				NBL	16	m43	20	m44	4	-1			
			NB	NB TR	110	308	137	131	27	-177			
				SBL	105	m144	98	m129	-7	-15			
			SB	SB TR	18	32	6	6	-12	-26			
9	PALACE/ CHICK- FIL-A PARKING LOT AT MANHATTAN BLVD		EB	EBL	62	112	62	#120	0	8			
				EB LT	62	112	63	#121	1	9			
				EBR	0	0	0	0	0	0			
			WB	WBL	24	56	23	56	-1	0			
				WB LT	24	55	23	55	-1	0			
				WBR	0	0	0	0	0	0			
			NB	NBL	105	142	14	70	-91	-72			
				NB TR	124	48	286	235	162	187			
			SB	SBL	95	m149	49	m71	-46	-78			
SB TR	290	#740		506	110	216	-630						
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		EB	EB LT	27	58	27	60	0	2			
				EBR	0	0	0	0	0	0			
			WB	WB LT	70	121	70	124	0	3			
				WBR	0	0	0	0	0	0			
			NB	NBL	9	m24	9	m20	0	-4			
				NB TR	49	62	14	21	-35	-41			
			SB	SBL	35	74	39	82	4	8			
SB TR	216	569		276	630	60	61						

- 95th percentile volume exceeds capacity, may be longer
 m - volume for 95th percentile queue is metered by upstream signal
 ~ - Volume exceeds capacity, queue is theoretically infinite
 Queue shown is maximim after two cycles

From the above Tables 3 through 5, it is inferred that the Delays are decreased and LOS is significantly improved at majority of the intersection along the Northbound and Southbound direction of Manhattan Boulevard study corridor. The delays have significantly increased on the side streets. There is an increase in the overall Level of Service at the study intersections.

Queues, both 50th percentile and 95th percentile have decreased along the Northbound and Southbound direction of Manhattan Boulevard study corridor and a slight increase in the queue lengths is observed at the streets on study area intersections.

The Synchro Capacity Analysis results are included in Appendix D.

Cost-Benefit Analysis

The Cost-Benefit Analysis is performed to assimilate the costs for upgrading the traffic signals timings and benefits accrued to roadway users in the form of travel time savings is listed Table 10.

The monetary value for the travel time are calculated based on USDOT guidance on travel time. The value is obtained by multiplying the savings with variables such as value of time for all-purpose intercity travel \$24 per hour* savings for about 260 workdays per year and the assumed project life span of about 3 years. Average number of vehicles along NB and SB direction of study corridor are considered to calculate the number of vehicle hours saved due to the modified timing plans.

*Based on personal travel at \$20.88 (94%) and business travel at \$36.89 (6%) - 2009
 \$21.83 – 2009 increase 10% for 2018 \$24

PC-Travel

TABLE 10: TRAVEL TIME SAVINGS (In \$)

Peak	Scenario	Travel Time (in Seconds)			Average Volumes (Vehicles)	Daily Travel Time Savings (Vehicle Hours)
		Existing	Modified	Change in Travel Time		
AM	Northbound	223	243	+20	1542	+8.57
	Southbound	264	236	-28	1290	-10.03
Mid-Day	Northbound	304	285	-19	1446	-7.63
	Southbound	317	325	+8	1309	+2.90
PM	Northbound	308	293	-15	1832	-7.63
	Southbound	359	369	+10	1495	+4.15
					Total	-9.67

Monetized value of travel time = 9.67 x \$24 x 260 days x 3 years
 Savings over the project life span = \$181,022

Project Cost = \$71,500

Benefit/Cost Ratio = 2.53: 1

Fuel Consumption and Pollutant Emissions Comparison

PC-Travel was used to predict the amount of fuel consumed and pollutant emissions in real travel conditions. The amount of fuel consumed travelling along the corridor in less time and fewer stops. Lowering pollutant emissions along the corridor by reducing the amount of fuel burn and there by reducing the pollutant emissions will help in attaining or conforming to National Ambient Air Quality Standards (NAAQS).

Table 11 below compares the difference in amount of fuel consumed and amount of pollutants released into atmosphere during Existing and Improved Conditions. The Synchro results for Fuel Consumption and Pollutant Emissions are included in Appendix E.

Synchro Results

Manhattan Boulevard Corridor Study

	Existing	Revised	Existing	Revised	Existing	Revised
	AM	AM	Mid Day	Mid Day	PM	PM
Fuel Consumed (gal)	331	332	503	556	599	611
Fuel Economy (mpg)	12.1	12.1	10.1	12.6	9.2	12.4
CO Emissions (kg)	23.16	23.24	35.15	38.83	41.81	42.68
NO x Emissions (kg)	4.54	4.52	6.84	7.55	8.14	8.30
VOC Emissions (kg)	5.37	5.39	8.15	9.00	9.70	9.89

Fuel economy remained the same of AM and was improved for both Mid-Day and PM.

PC-Travel Results

Manhattan Boulevard Corridor Study

	Existing	Revised	% Diff	Existing	Revised	% Diff	Existing	Revised	% Diff
	AM	AM		Mid Day	Mid Day		PM	PM	
Fuel Consumed (gal) (NB)	0.093	0.101	8.60%	0.112	0.106	-5.36%	0.108	0.117	8.33%
Fuel Consumed (gal) (SB)	0.096	0.089	-7.19%	0.110	0.110	0.00%	0.113	0.125	10.70%
HC Emission (Grams) (NB)	7.836	8.562	9.26%	10.027	9.787	-2.39%	9.722	11.702	20.37%
HC Emission (Grams) (SB)	7.671	6.385	-16.77%	10.005	10.267	2.61%	10.263	12.399	20.81%
CO Emissions (Grams) (NB)	77.224	85.861	11.18%	94.228	88.577	-5.99%	90.067	113.624	26.16%
CO Emissions (Grams) (SB)	74.271	65.097	-12.35%	91.143	94.600	3.79%	92.648	113.962	23.00%
NOx Emissions (Grams) (NB)	4.323	4.713	9.03%	5.308	5.549	4.53%	4.975	7.289	56.03%
NOx Emissions (Grams) (SB)	3.439	2.708	-21.26%	5.111	5.233	2.38%	4.672	6.705	56.03%

PC-Travel

TABLE 11A: FUEL CONSUMPTION COMPARISON

Peak	Scenario	Fuel Consumed (Gal.)			Average Volumes (Vehicles)	Daily Consumption (Gal. Hours)
		Existing	Modified	Change in Consumption		
AM	<i>Northbound</i>	0.093	0.101	+0.008	1542	+12.33
	<i>Southbound</i>	0.096	0.089	-0.007	1290	-9.03
Mid-Day	<i>Northbound</i>	0.112	0.106	-0.006	1446	-8.676
	<i>Southbound</i>	0.110	0.110	0	1309	0
PM	<i>Northbound</i>	0.108	0.117	+0.009	1832	+16.48
	<i>Southbound</i>	0.113	0.125	+0.012	1495	+17.94
Total						29.05

PC-Travel

TABLE 11B: POLLUTANT EMISSIONS COMPARISON

Peak	Scenario	HC Emission (Grams)			Average Volumes (Vehicles)	Daily Emission (Kg. Hours)
		Existing	Modified	Change in Emissions		
AM	<i>Northbound</i>	7.836	8.562	+0.726	1542	+1,119
	<i>Southbound</i>	7.671	6.385	-1.286	1290	-1.658
Mid-Day	<i>Northbound</i>	10.027	9.787	-0.240	1446	-0.347
	<i>Southbound</i>	10.005	10.267	0.262	1309	0.342
PM	<i>Northbound</i>	9.722	11.702	+1.980	1832	+3.627
	<i>Southbound</i>	10.263	12.399	+2.136	1495	+3.193
Total						6.277

PC-Travel

TABLE 11C: POLLUTANT EMISSIONS COMPARISON

Peak	Scenario	CO Emission (Grams)			Average Volumes (Vehicles)	Daily Emission (Kg. Hours)
		Existing	Modified	Change in Emissions		
AM	<i>Northbound</i>	77.224	85.861	+8.637	1542	+13.318
	<i>Southbound</i>	74.271	65.097	-9.174	1290	-11.834
Mid-Day	<i>Northbound</i>	94.228	88.577	-5.651	1446	-8.171
	<i>Southbound</i>	91.143	94.600	3.457	1309	4.525
PM	<i>Northbound</i>	90.067	113.624	+23.557	1832	+43.156
	<i>Southbound</i>	92.648	113.962	+21.314	1495	+31.864
Total						72.858

PC-Travel

TABLE 11D: POLLUTANT EMISSIONS COMPARISON

Peak	Scenario	NOx Emission (Grams)			Average Volumes (Vehicles)	Daily Emission (Kg. Hours)
		Existing	Modified	Change in Emissions		
AM	<i>Northbound</i>	4.323	4.713	+0.390	1542	+0.601
	<i>Southbound</i>	3.439	2.708	-0.731	1290	-0.943
Mid-Day	<i>Northbound</i>	5.308	5.549	0.241	1446	0.349
	<i>Southbound</i>	5.111	5.233	0.122	1309	0.160
PM	<i>Northbound</i>	4.975	7.289	+2.314	1832	4.239
	<i>Southbound</i>	4.672	6.705	+2.033	1495	3.039
					Total	7.445

VI. CONCLUSIONS

After a detailed comparison of the capacity analysis results such as LOS, Delays and Queue lengths from Synchro, there is a significant improvement in the Level of Service and delay reduction during AM, Mid-Day and PM peak hours along the Manhattan Boulevard approach with the modified traffic signal timing improvements. This has helped in a better progression along the Manhattan Boulevard study corridor. Minor Streets/ Side streets along the corridor are experiencing a slight increase in the delays upon optimizing the study corridor. Revising clearance intervals help in improving intersection safety by providing enough time for the vehicles entering the intersection near the end of green time to clear the intersection

The modifications to the signal plans along with coordination of the signals have improved progression and safety along Manhattan Boulevard. Overall travel reduction times for each period were:

	AM	Midday	PM
	% Change	% Change	% Change
Time Period	0.77	5.47	1.14

This reduction in travel time equates to a savings \$181,022 over the project 3 year life span. Compare to the Project Cost of \$71,500. The Benefit Cost ratio is:

$$\text{Benefit/Cost Ratio} = 2.53: 1$$

Fuel consumption and emissions are also affect by the changes in signal timing and coordination.

	AM	Mid day	PM
	% Change	% Change	% Change
Fuel Consumed (Gal.)	-1.24	2.84	-9.39
CO Emission (Grams)	-0.69	1.43	-24.72
HC Emission (Grams)	2.45	0.01	-20.57
NOx Emission (Grams)	3.08	-3.54	-32.28

Negative number is an increase

Future Improvements

Upgrading the existing traffic signal Controllers and Cabinets and checking/replacing damage detection loops.

Investigate possible geometric improvements to the intersections at Lapalco and Westbank Expressway on the corridor (currently at or above capacity). Some of the other intersections has geometrics configurations, which restricted signal phasing. Modifications to these intersections to allow additional phasing which may help reduce travel time.

Suggested future improvements include improving pedestrian safety by installing the signal heads at the Lapalco and Gretna intersections on Manhattan Boulevard. These intersections were selected because they do have existing striped crosswalks. These two additional crosswalks along with the existing crosswalk near Apache Drive would allow pedestrians three marked crosswalk locations to cross the corridor.

Future studies to improve the continuity of the sidewalks and for additional crosswalks, pedestrian heads at remaining intersections along the corridor.

Additional signage near intersections with non-signalized driveways may be needed as traffic volumes increase along the corridor. These signs may in right turn only on the driveway exists and no left turn on Manhattan Boulevard.

APPENDICES

APPENDIX A

**TRAFFIC SIGNAL
INVENTORY**

Manhattan Blvd.
at
Lapalco Blvd

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 1 OF 6

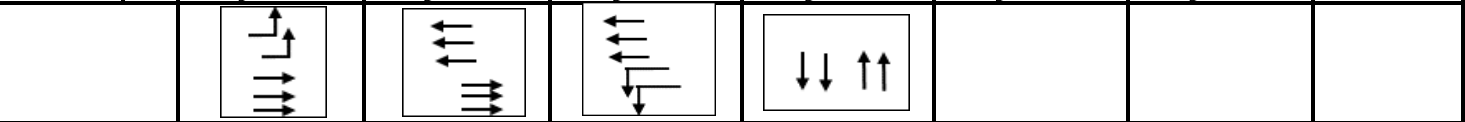
INTERSECTION: LAPALCO BLVD AND MANHATTAN BLVD		CTRL SEC:	LOGMILE:
CITY: Harvey	PARISH: Jefferson	LAT: 29.8755	LONG: -90.0483
SIGNAL TYPE:	INTERCONNECT TYPE:	REV. DATE:	INSTALL DATE:
SIGNAL WARRANTS:	MAINTAINED BY:	CONT. MANUF: Trafficware	SYS#:
Controller IP:			

TRAFFIC SIGNAL COORDINATION PLANS (PHASING MAY VARY FROM FREE OPERATION)

Phasing											Pattern: 254
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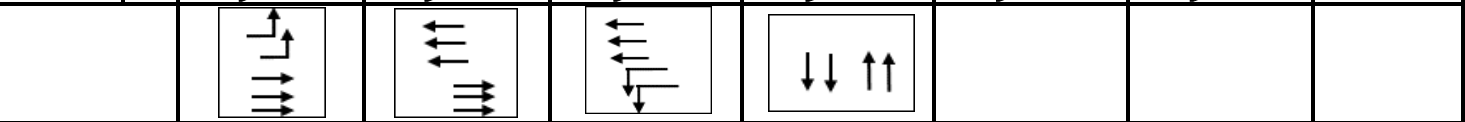
Int. Times	FREE OPERATION - SEE PAGE 4 FOR TIMING PARAMETERS										Ring Phases
Ring 1	Thru/OLP										
	Turns										
Ring 2	Thru/OLP										
	Turns										

Action =	Free	CYCLE LENGTH =		Sequence #:		Zero Point:		Max:	
Phasing		$\Phi 1 + \Phi 6$		$\Phi 2 + \Phi 6$		$\Phi 2 + \Phi 5$		$\Phi 7$	
Split	sec	23		19		28		50	
Force Offs	sec	22		43		71		69	
Yield Points	sec								



Int. Times											Ring Phases
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	
	Turns	G	Y	R	R	R	R	R	R	R	1, 2
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	
	Turns	R	R	R	R	R	R	G	Y	R	5, 6

Action =	1	CYCLE LENGTH =	120	Sequence #:		Coord Φ:		Max:	
Phasing		$\Phi 1 + \Phi 6$		$\Phi 2 + \Phi 6$		$\Phi 2 + \Phi 5$		$\Phi 7$	
Split	sec	23		42		24		55	
Force Offs	sec	22		44		66		64	
Yield Points	sec								



Int. Times											Ring Phases
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	
	Turns	G	Y	R	R	R	R	R	R	R	1, 2
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	
	Turns	R	R	R	R	R	R	G	Y	R	5, 6

Action =	2	CYCLE LENGTH =	120	Sequence #:		Coord Φ:		Max:	
Phasing		$\Phi 1 + \Phi 6$		$\Phi 2 + \Phi 6$		$\Phi 2 + \Phi 5$		$\Phi 7$	
Split	sec	25		55		25		40	
Force Offs	sec	23		56		81		79	
Yield Points	sec								



Int. Times											Ring Phases
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	
	Turns	G	Y	R	R	R	R	R	R	R	1, 2
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	
	Turns	R	R	R	R	R	R	G	Y	R	5, 6

Action =	3	CYCLE LENGTH =	120	Sequence #:		Coord Φ:		Max:	
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Action Table #		MON-TUES-WED-THURS-FRI	SATURDAY	SUNDAY
FREE				
1		4 AM to 10 AM		
2		10 AM to 2 PM		
3		2 PM to 9 PM		

MASTER/ LOCAL: _____ MASTER AT TSI #: _____ COORDINATED WITH TSI #S: _____

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

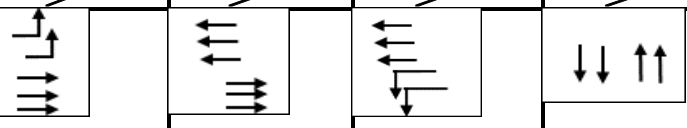
TSI NO.

PAGE: 2 OF 6

INTERSECTION: LAPALCO BLVD AND MANHATTAN BLVD CTRL SEC: 0 LOGMILE: 0

CITY: Harvey PARISH: Jefferson LAT: 29.8755 LONG: -90.0483

Phasing		Φ1 + Φ6	Φ2 + Φ6	Φ2 + Φ5	Φ7			Pattern/Split
Split	sec	20	20	20	50			4
Force Offs	sec							Offset =
Yield Points	sec							0 sec



Int. Times										Ring Phases	
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	1, 2
	Turns	G	Y	R	R	R	R	R	R	R	
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	5, 6
	Turns	R	R	R	R	R	R	G	Y	R	

Action = CYCLE LENGTH = 110 Sequence #: Coord Φ: Planned Flash Max:

Phasing								Pattern/Split
Split	sec							
Force Offs	sec							Offset =
Yield Points	sec							sec

Int. Times										Ring Phases	
Ring 1	Thru/OLP										
	Turns										
Ring 2	Thru/OLP										
	Turns										

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing								Pattern:
Split	sec							
Force Offs	sec							Offset =
Yield Points	sec							sec

Int. Times										Ring Phases	
Ring 1	Thru/OLP										
	Turns										
Ring 2	Thru/OLP										
	Turns										

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing								Pattern/Split
Split	sec							
Force Offs	sec							Offset =
Yield Points	sec							sec

Int. Times										Ring Phases	
Ring 1	Thru/OLP										
	Turns										
Ring 2	Thru/OLP										
	Turns										

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing								Pattern/Split
Split	sec							
Force Offs	sec							Offset =
Yield Points	sec							sec

Int. Times										Ring Phases	
Ring 1	Thru/OLP										
	Turns										
Ring 2	Thru/OLP										
	Turns										

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Action Table #	MON-TUES-WED-THURS-FRI					SATURDAY		SUNDAY	
4	9 PM to 4 AM								

TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO.

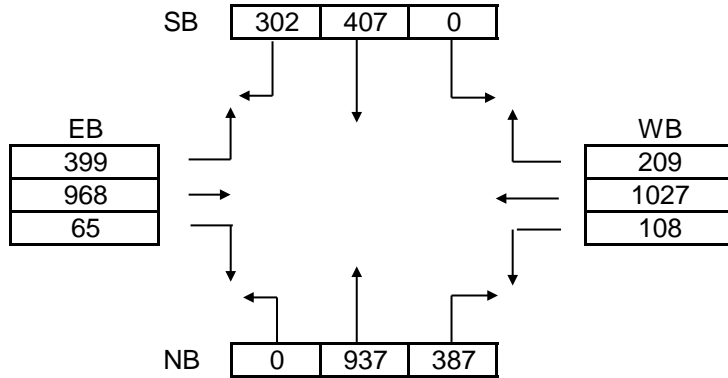
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

LAPALCO BLVD AND MANHATTAN BLVD

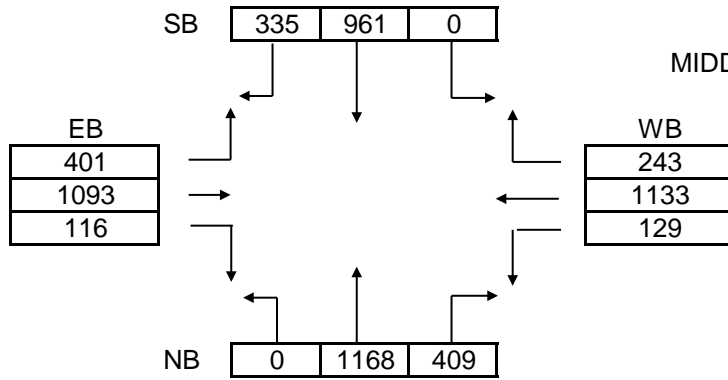
TRAFFIC VOLUMES - VPH



AM PEAK HOUR: 7:00 AM to 8:00 AM

Count Date: 10/12/2017

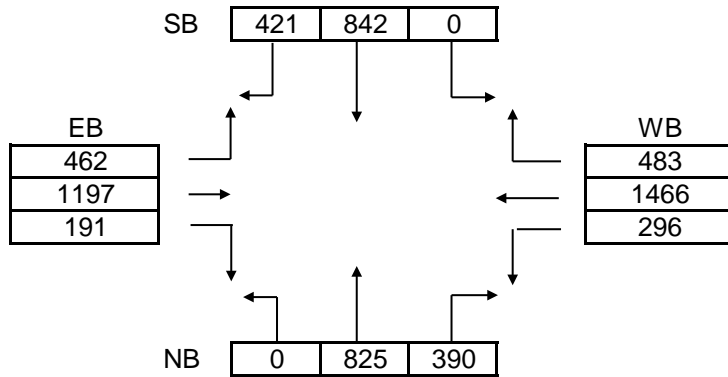
PHF: 0.868



MIDDAY PEAK HOUR: 11:30 AM to 12:30 PM

Count Date: 10/12/2017

PHF: 0.98



PM PEAK HOUR: 4:00 PM to 5:00 PM

Count Date: 10/12/2017

PHF: 0.923

Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-1		Φ1	Loop	EB1, EB2		Stopbar
L-2		Φ2	Loop	WB3, WB4, WB5		Setback
L-4		Φ4	Loop	SB1, SB2		Setback
L-5		Φ5	Loop	WB1, WB2		Setback
L-6		Φ6	Loop	EB3, EB4, EB5		Setback
L-8A		Φ8	Loop	NB1, NB2		Setback
L-8-D		Φ8	Loop	NB3		Stopbar

IP Addresses

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INTERSECTION:

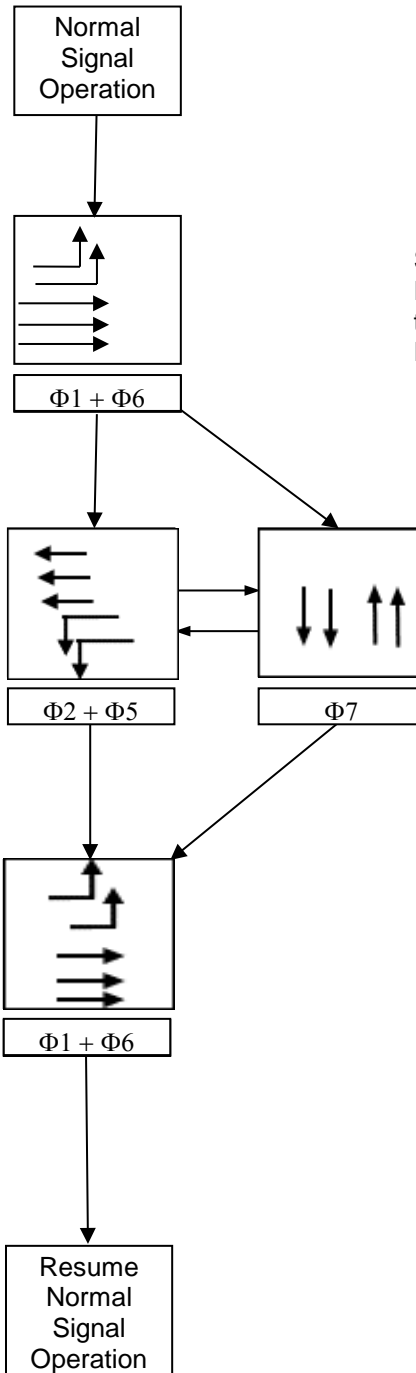
LAPALCO BLVD AND MANHATTAN BLVD

Emergency Preemption Sequence

Preemption Timing

G	Y	R

G	Y	R



Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)

Upon Termination of Preempt, Signal goes to this Phase

Signal in this Phase when preemption occurs

Manhattan Blvd.
at
Central Blvd.

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 1 OF 6

INTERSECTION: CENTRAL BLVD AND MANHATTAN BLVD		CTRL SEC:	LOGMILE:
CITY: Harvey	PARISH: Jefferson	LAT: 29.8786	LONG: -90.0503
SIGNAL TYPE:	INTERCONNECT TYPE:	REV. DATE:	INSTALL DATE:
SIGNAL WARRANTS:	MAINTAINED BY:	CONT. MANUF: Trafficware	SYS#:
Controller IP:			

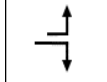
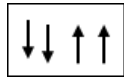
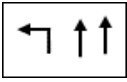
TRAFFIC SIGNAL COORDINATION PLANS (PHASING MAY VARY FROM FREE OPERATION)

Phasing										Pattern: 254
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Int. Times	FREE OPERATION - SEE PAGE 4 FOR TIMING PARAMETERS										Ring Phases
Ring 1	Thru/OLP										
	Turns										
Ring 2	Thru/OLP										
	Turns										

Action = Free	CYCLE LENGTH = FREE	Sequence #:	Zero Point:	Max:
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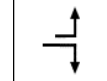
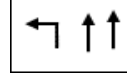
Phasing	$\Phi 1 + \Phi 6$	$\Phi 2 + \Phi 6$	$\Phi 4$				Pattern/Split:
Split sec	21	76 / 97	23				1
Force Offs sec	43	0 / 0	22				Offset =
Yield Points sec							90 sec



Int. Times	10	4	2	30	4	1	10	4	2					Ring Phases
Ring 1	Thru/OLP	R	R	R	G	Y	R	G	Y	R				
	Turns	<G	Y	R	R	R	R	--	--	--				1, 2, 4
Ring 2	Thru/OLP	G	G	G	G	Y	R	--	--	--				5, 6, 8
	Turns	--	--	--	--	--	--	--	--	--				

Action = 1	CYCLE LENGTH = 120	Sequence #:	Coord Φ:	Max:
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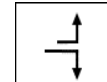
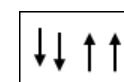
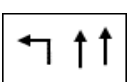
Phasing	$\Phi 1 + \Phi 6$	$\Phi 2 + \Phi 6$	$\Phi 4$				Pattern/Split
Split sec	28	67 / 95	25				2
Force Offs sec	52	0 / 0	24				Offset =
Yield Points sec							82 sec



Int. Times	10	4	2	30	4	1	10	4	2					Ring Phases
Ring 1	Thru/OLP	R	R	R	G	Y	R	G	Y	R				1, 2, 4
	Turns	<G	Y	R	R	R	R	--	--	--				
Ring 2	Thru/OLP	G	G	G	G	Y	R	--	--	--				5, 6, 8
	Turns	--	--	--	--	--	--	--	--	--				

Action = 2	CYCLE LENGTH = 120	Sequence #:	Coord Φ:	Max:
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Phasing	$\Phi 1 + \Phi 6$	$\Phi 2 + \Phi 6$	$\Phi 4$				Pattern/Split
Split sec	26	73 / 99	21				3
Force Offs sec	46	0 / 0	20				Offset =
Yield Points sec							97 sec



Int. Times	10	4	2	30	4	1	10	4	2					Ring Phases
Ring 1	Thru/OLP	R	R	R	G	Y	R	G	Y	R				1, 2, 4
	Turns	<G	Y	R	R	R	R	--	--	--				
Ring 2	Thru/OLP	G	G	G	G	Y	R	--	--	--				5, 6, 8
	Turns	--	--	--	--	--	--	--	--	--				

Action = 3	CYCLE LENGTH = 120	Sequence #:	Coord Φ:	Max:
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Action Table #	MON-TUES-WED-THURS-FRI	SATURDAY	SUNDAY
FREE			
1	4 AM to 10 AM		
2	10 AM to 2 PM		
3	2 PM to 9 PM		

MASTER/ LOCAL:	MASTER AT TSI #:	COORDINATED WITH TSI #S:
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TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

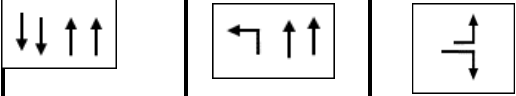
TSI NO.

PAGE: 2 OF 6

INTERSECTION: **CENTRAL BLVD AND MANHATTAN BLVD** CTRL SEC: **0** LOGMILE: **0**

CITY: **Harvey** PARISH: **Jefferson** LAT: **29.8786** LONG: **-90.0503**

Phasing	Φ2 + Φ6			Φ1 + Φ6			Φ4						Pattern/Split
Split	sec	58	84	26	84	26	26	84	26	26	84	26	4
Force Offs	sec	84		108	0	25							Offset =
Yield Points	sec												31 sec



Int. Times													Ring Phases
	10	4	2	30	4	1	10	4	2				
Ring 1	Thru/OLP	R	R	R	G	Y	R	G	Y	R			1, 2, 4
	Turns	<G	Y	R	R	R	R	--	--	--			
Ring 2	Thru/OLP	G	G	G	G	Y	R	--	--	--			5, 6, 8
	Turns	--	--	--	--	--	--	--	--	--			

Action = CYCLE LENGTH = 110 Sequence #: Coord Φ: Planned Flash Max:

Phasing													Pattern/Split
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing													Pattern:
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

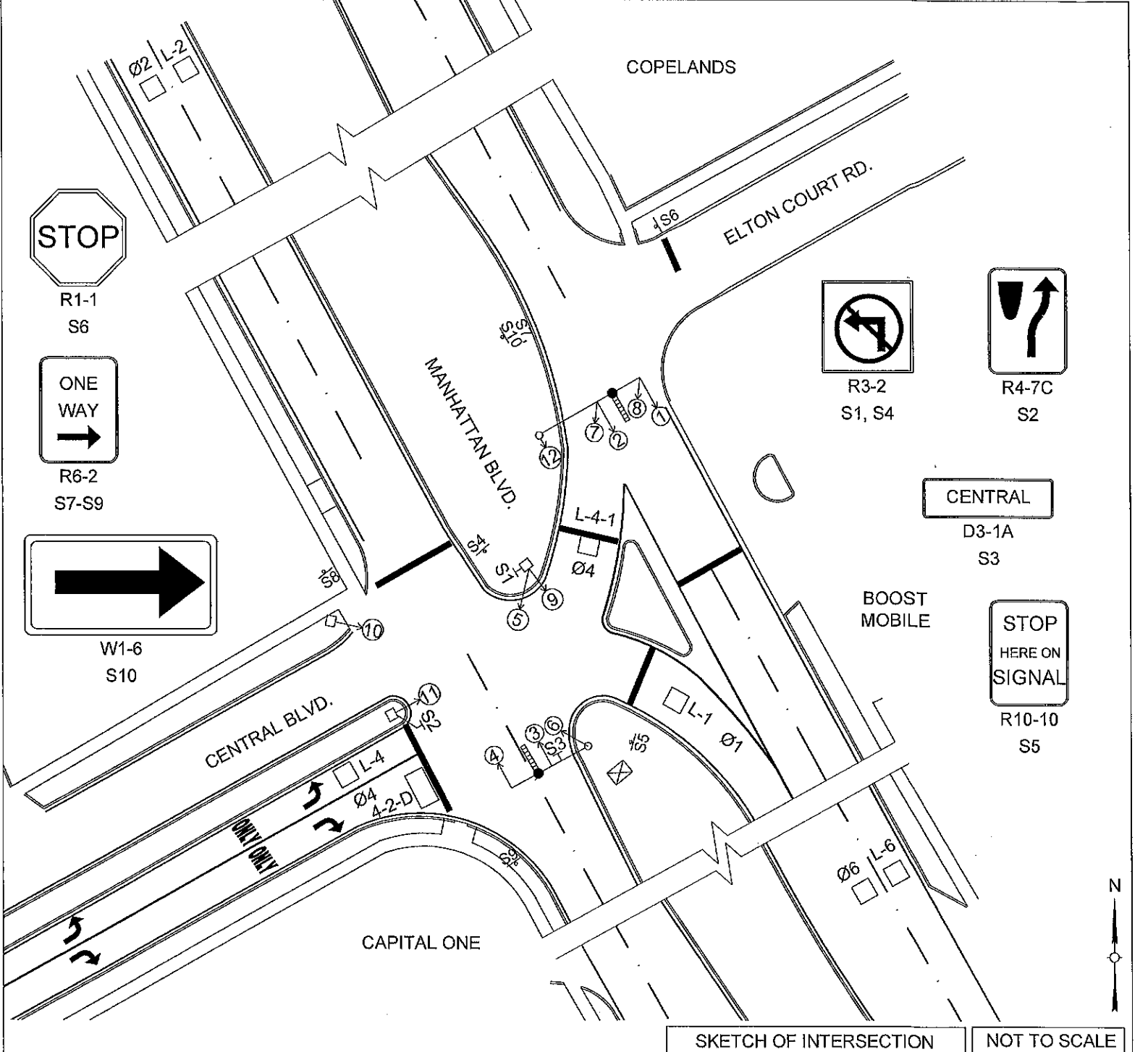
Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing													Pattern/Split
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Action Table #	MON-TUES-WED-THURS-FRI						SATURDAY			SUNDAY		
4	9 PM to 4 AM						All			All		



SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: CENTRAL BLVD. @ MANHATTAN BLVD. TSI #: PAGE 4 OF 6

● WOOD POLE	— STOP LINE	②-□ PEDESTAL MOUNT SIGNAL & NO.	▶ POWER SOURCE
○ METAL POLE	— PED CROSS WALK	②-◀ SIGNAL FACE & NO.	▨ VIDEO DETECTION ZONE & NO.
— MAST ARM	— SPAN WIRE SIGN & NO.	②-◀◀ SIGNAL FACE WITH ARROWS & NO.	— VIDEO DETECTION
— SPAN WIRE	— GROUND MOUNT SIGN & NO.	②-◀◀◀ PEDESTRIAN SIGNAL & NO.	— WIRELESS INTERCONNECT
⊠ CABINET & CONTROLLER	□ #4 LOOP DETECTOR & NO.	○ PED BUTTON & SIGN	○ UTILITY POLE
— EMERGENCY VEHICLE DETECTOR		□ PARALLEL PARKING	□ WIRELESS VDS
■ SIGNAL POWER PEDESTAL W/ DISCONNECT			— WIRELESS VDS RECEIVER

EXISTING SPEED LIMITS

20 MPH - CENTRAL BLVD.
35 MPH - MANHATTAN BLVD.

SIGNAL FACES		1-11	12								
TOTALS		11	1								
DK = DARK R = RED Y = YELLOW G = GREEN ◀ = GREEN ARROW ◀ = YELLOW ARROW ◀ = STEADY YELLOW ARROW ◀ = FLASHING YELLOW ARROW WA = WALK DW = DON'T WALK FDW = FLASHING DON'T WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMED LENS	 	 	 	 	 	 	 	 	 	 	

TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO.

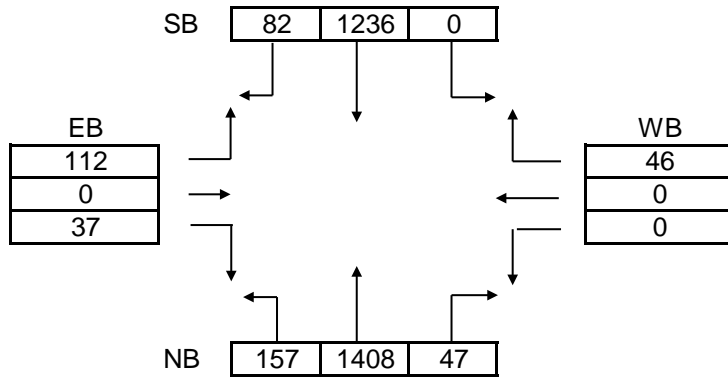
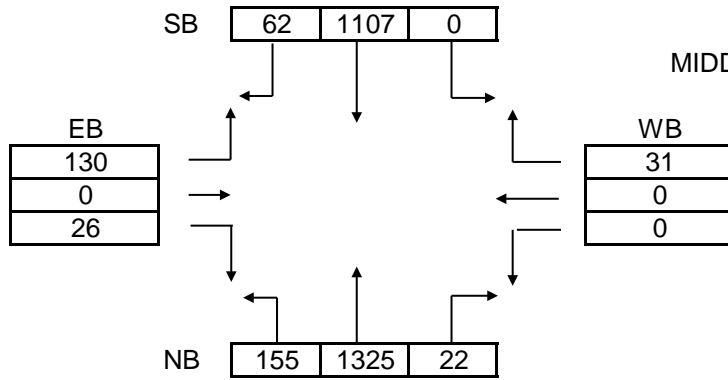
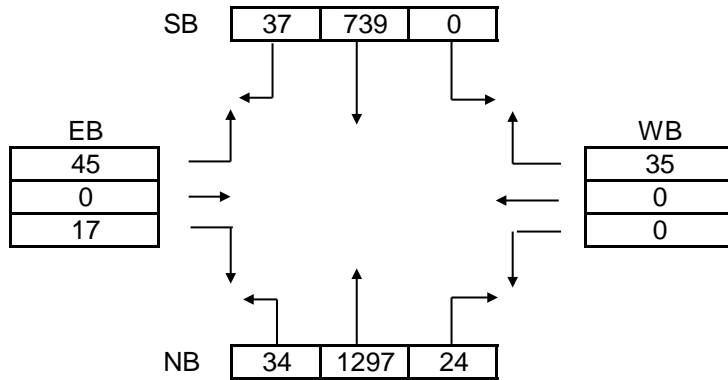
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

CENTRAL BLVD AND MANHATTAN BLVD

TRAFFIC VOLUMES - VPH



Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-4-2-D	60	Φ4	Loop	EB R		Stopbar
L-2		Φ2	Loop	SB TR		Setback
L-6		Φ6	Loop	NB T		Setback
L-1		Φ1	Loop	NB L		Stopbar
L-4		Φ4	Loop	EB L		Stopbar

IP Addresses

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INTERSECTION:

CENTRAL BLVD AND MANHATTAN BLVD

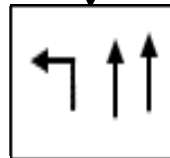
Emergency Preemption Sequence

Preemption Timing

G	Y	R

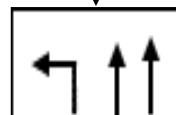
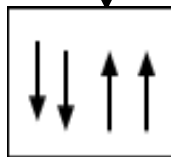
G	Y	R

Normal
Signal
Operation



$\Phi 1 + \Phi 6$

Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)



$\Phi 1 + \Phi 6$

Upon Termination of Preempt, Signal goes to this Phase

Resume
Normal
Signal
Operation

Signal in this Phase when preemption occurs

Manhattan Blvd.
at
**Fountain Park South/
Hertz Rental Car.**

TRAFFIC SIGNAL INVENTORY (v2.1)

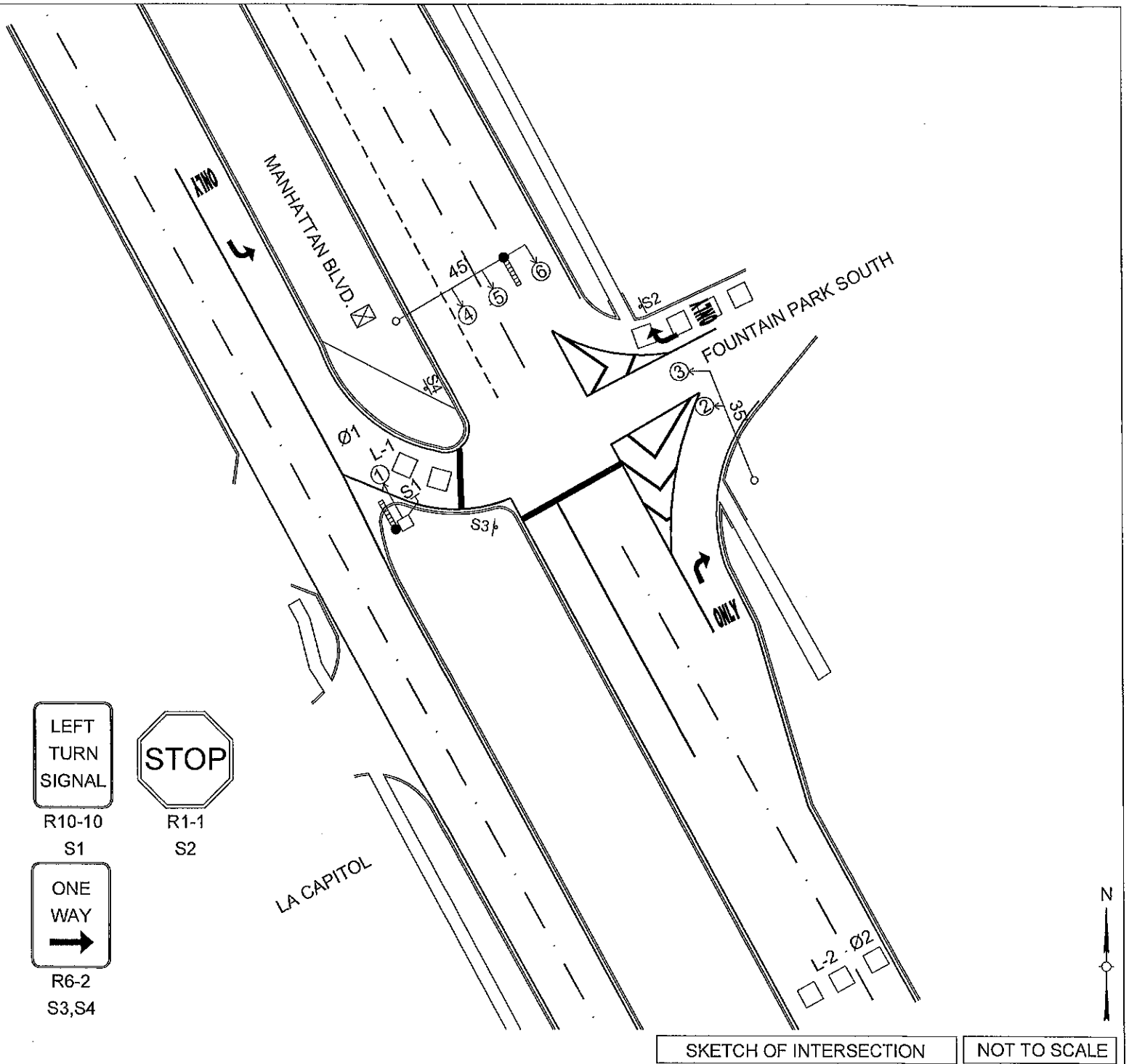
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 2 OF 6

INTERSECTION: FOUNTAIN PARK SOUTH AND MANHATTAN BLVD										CTRL SEC: 0		LOGMILE: 0	
CITY: Harvey					PARISH: Jefferson					LAT: 29.884		LONG: -90.0537	
Phasing		Φ2 + Φ6			Φ1 + Φ6								Pattern/Split
Split	sec	70	40	40									4
Force Offs	sec	0	40										Offset =
Yield Points	sec												79 sec
		↑↑↑			L								
Int. Times		20	4	1	10	4	1.5						Ring Phases
Ring 1	Thru/OLP	G	Y	R	R	R	R						1,2
	Turns	R	R	R	G	Y	R						
Ring 2	Thru/OLP	--	--	--	--	--	--						6
	Turns	--	--	--	--	--	--						
Action =		CYCLE LENGTH = 110			Sequence #:		Coord Φ:		Planned Flash		Max:		
Phasing													Pattern/Split
Split	sec												Offset =
Force Offs	sec												sec
Yield Points	sec												
Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												
Action =		CYCLE LENGTH = 0			Sequence #:		Coord Φ:		Planned Flash		Max:		
Phasing													Pattern:
Split	sec												Offset =
Force Offs	sec												sec
Yield Points	sec												
Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												
Action =		CYCLE LENGTH = 0			Sequence #:		Coord Φ:		Planned Flash		Max:		
Phasing													Pattern/Split
Split	sec												Offset =
Force Offs	sec												sec
Yield Points	sec												
Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												
Action =		CYCLE LENGTH = 0			Sequence #:		Coord Φ:		Planned Flash		Max:		

Action Table #	MON-TUES-WED-THURS-FRI	SATURDAY	SUNDAY
4	9 PM to 4 AM	All	All



SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: FOUNTAIN PARK SOUTH @ MANHATTAN BLVD. TSI #: PAGE 4 OF 6

- WOOD POLE
- METAL POLE
- MAST ARM
- SPAN WIRE
- ⊠ CABINET & CONTROLLER
- EMERGENCY VEHICLE DETECTOR
- SIGNAL POWER PEDESTAL W/ DISCONNECT
- STOP LINE
- PED CROSS WALK
- SPAN WIRE SIGN & NO.
- GROUND MOUNT SIGN & NO.
- # LOOP DETECTOR & NO.
- ②-□ PEDESTAL MOUNT SIGNAL & NO.
- ②-○ SIGNAL FACE & NO.
- ②-○ SIGNAL FACE WITH ARROWS & NO.
- ②-○ PEDESTRIAN SIGNAL & NO.
- PED BUTTON & SIGN
- PARALLEL PARKING
- ▶ POWER SOURCE
- ▨ VIDEO DETECTION ZONE & NO.
- ◁ VIDEO DETECTION
- WIRELESS INTERCONNECT
- UTILITY POLE
- WIRELESS VDS
- WIRELESS VDS RECEIVER

EXISTING SPEED LIMITS

35 MPH - MANHATTAN BLVD.

SIGNAL FACES		1-6																																																								
TOTALS		6																																																								
DK = DARK R = RED Y = YELLOW G = GREEN ↻ = GREEN ARROW ↻ = YELLOW ARROW ↻ = STEADY YELLOW ARROW ↻ = FLASHING YELLOW ARROW WA = WALK DW = DON'T WALK FDW = FLASHING DON'T WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMED LENS	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">Y</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">G</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; 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flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">Y</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">G</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">Y</div> <div style="border: 1px solid black; 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border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">G</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">Y</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">G</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">R</div> <div style="border: 1px solid black; border-radius: 50%; 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height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">Y</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">G</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin-bottom: 5px;">Y</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">G</div> </div>	<div style="display: flex; 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TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO.

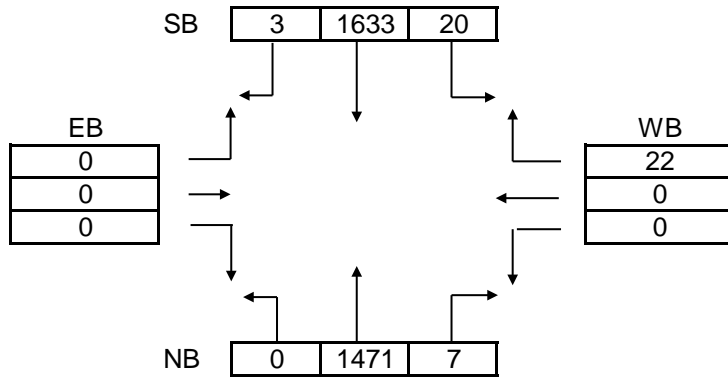
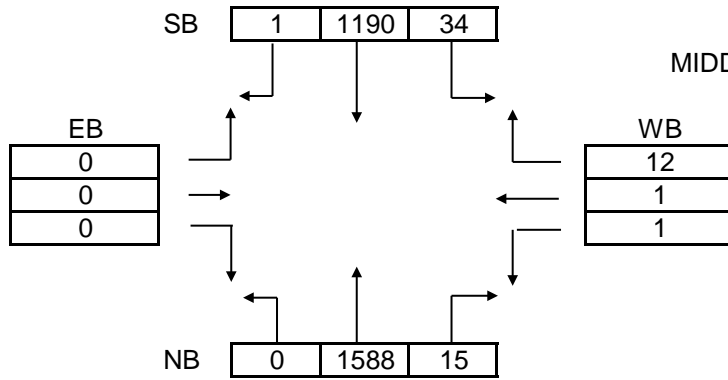
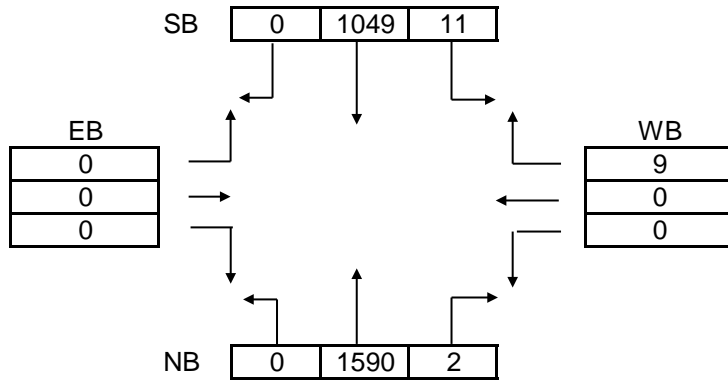
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

FOUNTAIN PARK SOUTH AND MANHATTAN BLVD

TRAFFIC VOLUMES - VPH



Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-1	10	Φ1		SB Rt Turn		Stopbar
L-2		Φ2		NB T		Setback

IP Addresses

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INTERSECTION:

FOUNTAIN PARK SOUTH AND MANHATTAN BLVD

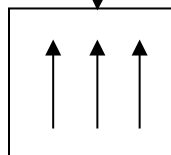
Emergency Preemption Sequence

Preemption Timing

G	Y	R

Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)

Normal Signal Operation



Φ2

Resume Normal Signal Operation

Upon Termination of Preempt, Signal goes to this Phase

G	Y	R

Signal in this Phase when preemption occurs

Manhattan Blvd.
at
**Fountain Park Center/
Gulf Bank and Trust**

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 1 OF 6

INTERSECTION: FOUNTAIN PARK CENTER AND MANHATTAN BLVD		CTRL SEC:	LOGMILE:
CITY: Harvey	PARISH: Jefferson	LAT: 29.8852	LONG: -90.0544
SIGNAL TYPE:	INTERCONNECT TYPE:	REV. DATE:	INSTALL DATE:
SIGNAL WARRANTS:	MAINTAINED BY:	CONT. MANUF: Trafficware	SYS#:
Controller IP:			

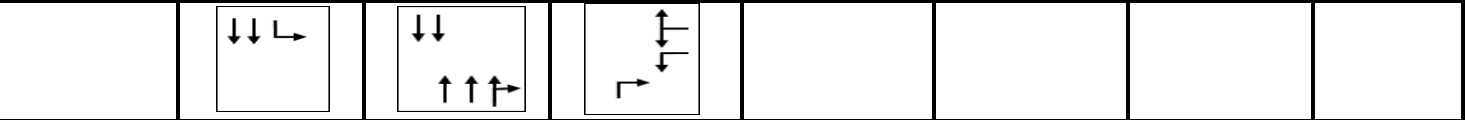
TRAFFIC SIGNAL COORDINATION PLANS (PHASING MAY VARY FROM FREE OPERATION)

Phasing										Pattern: 254
----------------	--	--	--	--	--	--	--	--	--	------------------------

Int. Times	FREE OPERATION - SEE PAGE 4 FOR TIMING PARAMETERS										Ring Phases
Ring 1	Thru/OLP										
	Turns										
Ring 2	Thru/OLP										
	Turns										

Action = Free	CYCLE LENGTH = FREE	Sequence #:	Zero Point:	Max:
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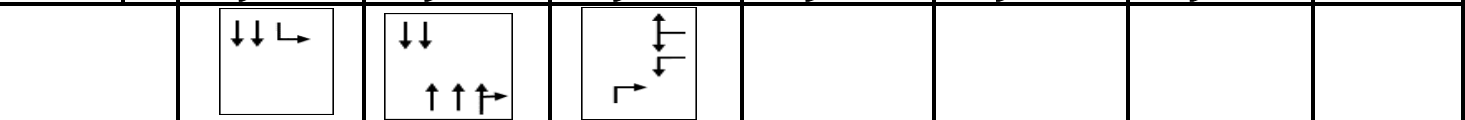
Phasing	$\Phi 1 + \Phi 6$	$\Phi 2 + \Phi 6$	$\Phi 8$				Pattern/Split:
Split sec	20	78 / 98	22				1
Force Offs sec	40	0 / 0	21				Offset =
Yield Points sec							84 sec



Int. Times	10	4	4	20	4	2	13	4	3					Ring Phases
Ring 1	Thru/OLP	R	R	R	G	Y	R	--	--	--				
	Turns	<G	<Y	R	R	R	R	--	--	--				1, 2
Ring 2	Thru/OLP	G	G	G	G	Y	R	<G	<Y	R				6, 8
	Turns	--	--	--	--	--	--	G>	Y>	R				

Action = 1	CYCLE LENGTH = 120	Sequence #:	Coord Φ:	Max:
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Phasing	$\Phi 1 + \Phi 6$	$\Phi 2 + \Phi 6$	$\Phi 8$				Pattern/Split
Split sec	24	72 / 96	24				2
Force Offs sec	46	0 / 0	23				Offset =
Yield Points sec							73 sec



Int. Times	10	4	4	20	4	2	13	4	3					Ring Phases
Ring 1	Thru/OLP	R	R	R	G	Y	R	--	--	--				
	Turns	<G	<Y	R	R	R	R	--	--	--				1, 2
Ring 2	Thru/OLP	G	G	G	G	Y	R	<G	<Y	R				6, 8
	Turns	--	--	--	--	--	--	G>	Y>	R				

Action = 2	CYCLE LENGTH = 120	Sequence #:	Coord Φ:	Max:
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Phasing	$\Phi 1 + \Phi 6$	$\Phi 2 + \Phi 6$	$\Phi 8$				Pattern/Split
Split sec	28	68 / 96	24				3
Force Offs sec	50	0 / 0	23				Offset =
Yield Points sec							101 sec



Int. Times	10	4	4	20	4	2	13	4	3					Ring Phases
Ring 1	Thru/OLP	R	R	R	G	Y	R	--	--	--				
	Turns	<G	<Y	R	R	R	R	--	--	--				1, 2
Ring 2	Thru/OLP	G	G	G	G	Y	R	<G	<Y	R				6, 8
	Turns	--	--	--	--	--	--	G>	Y>	R				

Action = 3	CYCLE LENGTH = 120	Sequence #:	Coord Φ:	Max:
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Action Table #	MON-TUES-WED-THURS-FRI	SATURDAY	SUNDAY
FREE			
1			
2			
3			

MASTER/ LOCAL: MASTER AT TSI #: COORDINATED WITH TSI #S:

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

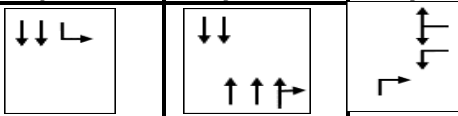
TSI NO.

PAGE: 2 OF 6

INTERSECTION: FOUNTAIN PARK CENTER AND MANHATTAN BLVD CTRL SEC: 0 LOGMILE: 0

CITY: Harvey PARISH: Jefferson LAT: 29.8852 LONG: -90.0544

Phasing	Φ1 + Φ6			Φ2 + Φ6			Φ8						Pattern/Split
Split	sec	28	4	4	59	4	87	23					4
Force Offs	sec	49			0		0	23					Offset =
Yield Points	sec												78 sec



Int. Times													Ring Phases
	10	4	4	20	4	2	13	4	3				
Ring 1	Thru/OLP	R	R	R	G	Y	R	--	--	--			1, 2
	Turns	<G	<Y	R	R	R	R	--	--	--			
Ring 2	Thru/OLP	G	G	G	G	Y	R	<G	<Y	R			6, 8
	Turns	--	--	--	--	--	--	G>	Y>	R			

Action = CYCLE LENGTH = 110 Sequence #: Coord Φ: Planned Flash Max:

Phasing												Pattern/Split	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing												Pattern:	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

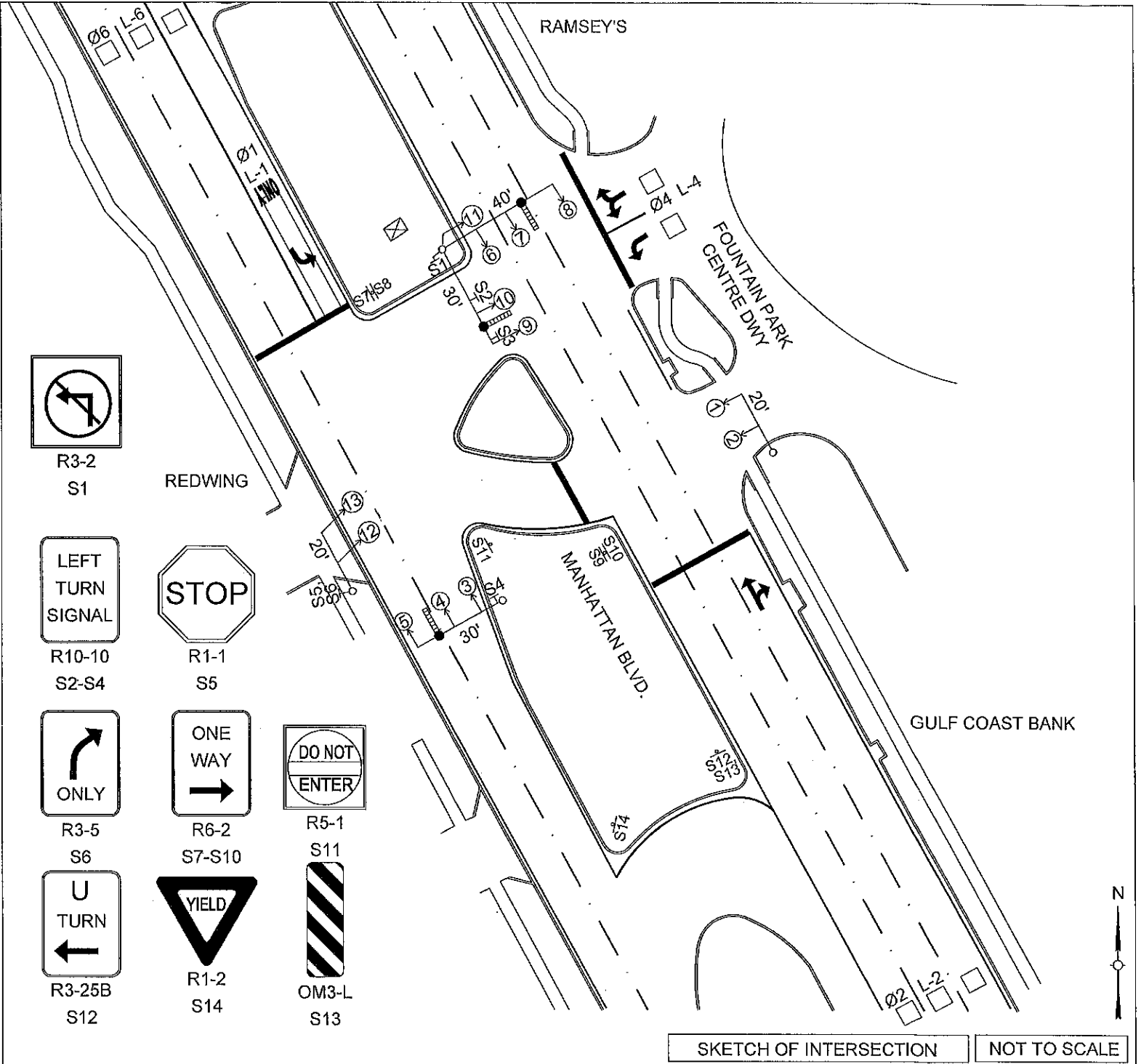
Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing												Pattern/Split	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Action Table #	MON-TUES-WED-THURS-FRI						SATURDAY		SUNDAY	
4	9 PM to 4 AM						All		All	



SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: FOUNTAIN PARK CENTER @ MANHATTAN BLVD. TSI #: PAGE 4 OF 6

● WOOD POLE	— STOP LINE	② □ PEDESTAL MOUNT SIGNAL & NO.	▶ POWER SOURCE
○ METAL POLE	— PED CROSS WALK	② ← SIGNAL FACE & NO.	▨ VIDEO DETECTION ZONE & NO.
— MAST ARM	— SPAN WIRE SIGN & NO.	② ← SIGNAL FACE WITH ARROWS & NO.	— VIDEO DETECTION
○ SPAN WIRE	— GROUND MOUNT SIGN & NO.	② ← PEDESTRIAN SIGNAL & NO.	— WIRELESS INTERCONNECT
⊠ CABINET & CONTROLLER	□ #4 LOOP DETECTOR & NO.	○ PED BUTTON & SIGN	○ UTILITY POLE
● EMERGENCY VEHICLE DETECTOR		□ PARALLEL PARKING	□ WIRELESS VDS
■ SIGNAL POWER PEDESTAL W/ DISCONNECT			○ WIRELESS VDS RECEIVER

EXISTING SPEED LIMITS
35 MPH - MANHATTAN BLVD.

SIGNAL FACES	1,2,4-7	3,9,10,12,13	11				8			
TOTALS	6	5	1				1			
DK = DARK R = RED Y = YELLOW G = GREEN ← = GREEN ARROW ↘ = YELLOW ARROW ↙ = STEADY YELLOW ARROW ↗ = FLASHING YELLOW ARROW W = WALK DW = DON'T WALK FDW = FLASHING DON'T WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMED LENS	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(A) (W) (A) (G)	PED

TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO.

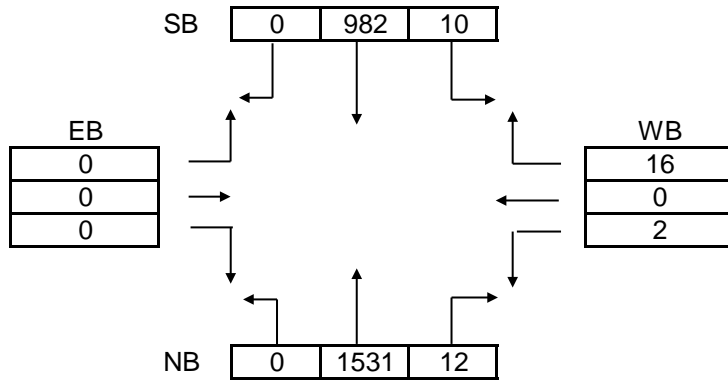
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

FOUNTAIN PARK CENTER AND MANHATTAN BLVD

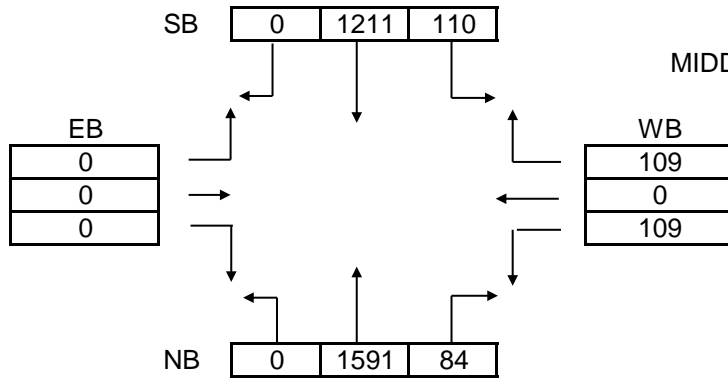
TRAFFIC VOLUMES - VPH



AM PEAK HOUR: 7:15 AM to 8:15 AM

Count Date: 10/11/2017

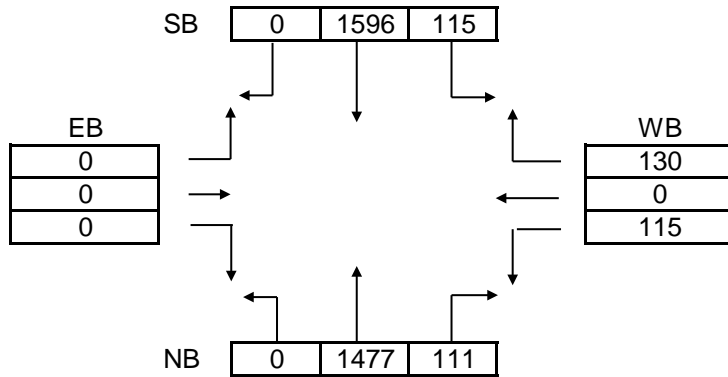
PHF: 0.951



MIDDAY PEAK HOUR: 11:45 AM to 12:45 PM

Count Date: 10/11/2017

PHF: 0.946



PM PEAK HOUR: 3:45 PM to 4:45 PM

Count Date: 10/11/2017

PHF: 0.954

Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-1		Φ1	Loop	SB L		Stopbar
L-2		Φ2	Loop	NB TR		Setback
L-4		Φ4	Loop	WB RL		Stopbar
L-6		Φ6	Loop	SB T		Setback

IP Addresses

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INTERSECTION:

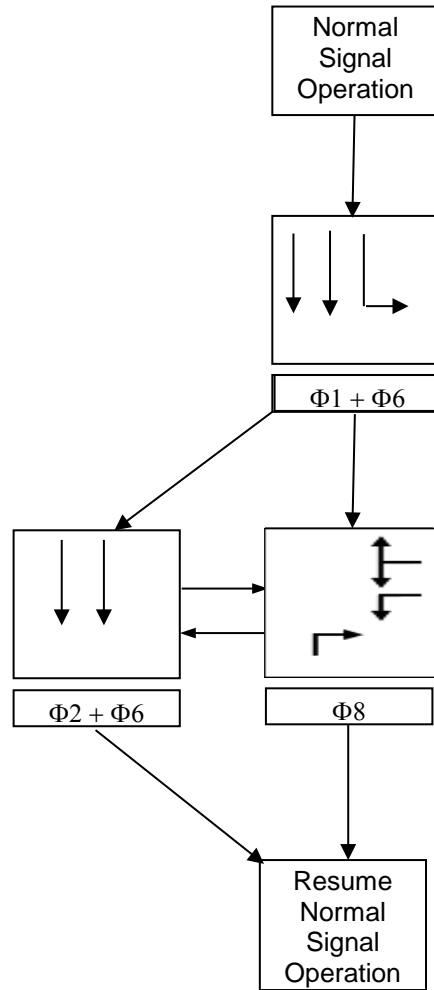
FOUNTAIN PARK CENTER AND MANHATTAN BLVD

Emergency Preemption Sequence

Preemption Timing

G	Y	R

G	Y	R



Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)

Signal in this Phase when preemption occurs

Upon Termination of Preempt, Signal goes to this Phase

Manhattan Blvd.
at
Target / Regional Bank

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

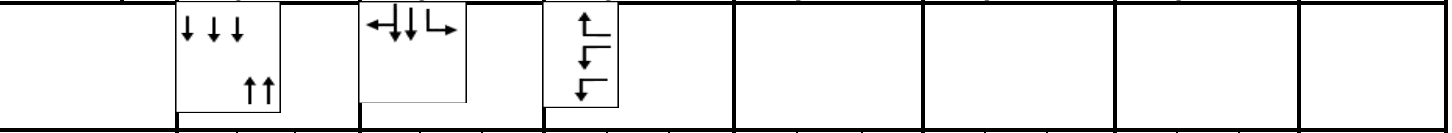
TSI NO.

PAGE: 2 OF 6

INTERSECTION: TARGET AND MANHATTAN BLVD CTRL SEC: 0 LOGMILE: 0

CITY: Harvey PARISH: Jefferson LAT: 29.888 LONG: -90.0562

Phasing	Φ2 + Φ6		Φ2 + Φ5			Φ4							Pattern/Split
Split	sec	80	50	30	30	30							4
Force Offs	sec		0	58	29								Offset =
Yield Points	sec												35 sec



Int. Times	20	4	1	10	4	3.5	10	4	2.5							Ring Phases
Ring 1	Thru/OLP	G	Y	R	G	G	G	<G	<Y	R						2, 4
Ring 1	Turns	-	-	-	-	-	-	-	-	-						
Ring 2	Thru/OLP	G	Y	R	R	R	R	-	-	-						5, 6
Ring 2	Turns	R	R	R	<G	<Y	R	-	-	-						

Action = CYCLE LENGTH = 110 Sequence #: Coord Φ: Planned Flash Max:

Phasing													Pattern/Split
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec



Int. Times																Ring Phases
Ring 1	Thru/OLP															
Ring 1	Turns															
Ring 2	Thru/OLP															
Ring 2	Turns															

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing													Pattern:
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec



Int. Times																Ring Phases
Ring 1	Thru/OLP															
Ring 1	Turns															
Ring 2	Thru/OLP															
Ring 2	Turns															

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing													Pattern/Split
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec



Int. Times																Ring Phases
Ring 1	Thru/OLP															
Ring 1	Turns															
Ring 2	Thru/OLP															
Ring 2	Turns															

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Action Table #	MON-TUES-WED-THURS-FRI			SATURDAY			SUNDAY		
4	9 PM - 4 AM			All			All		

TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO.

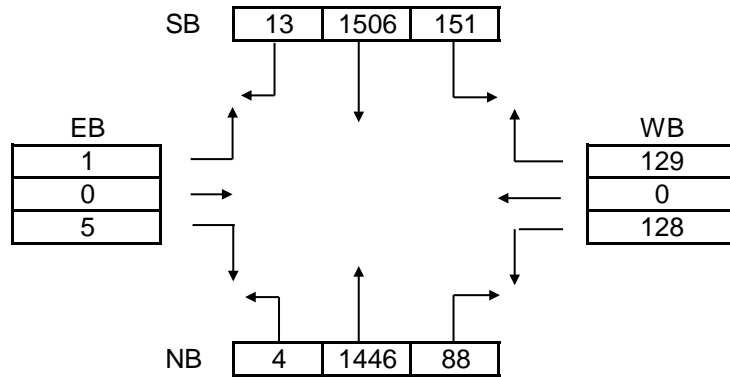
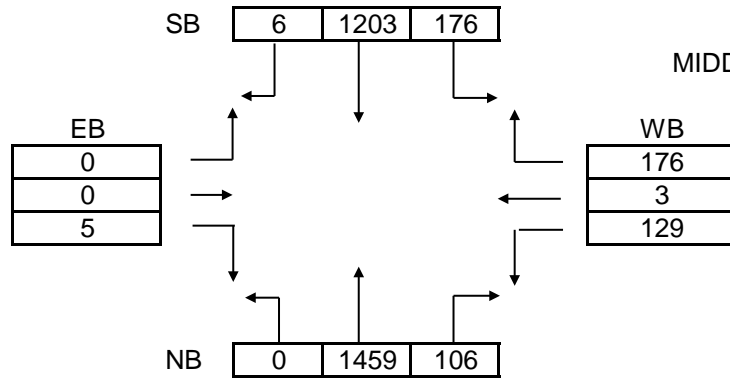
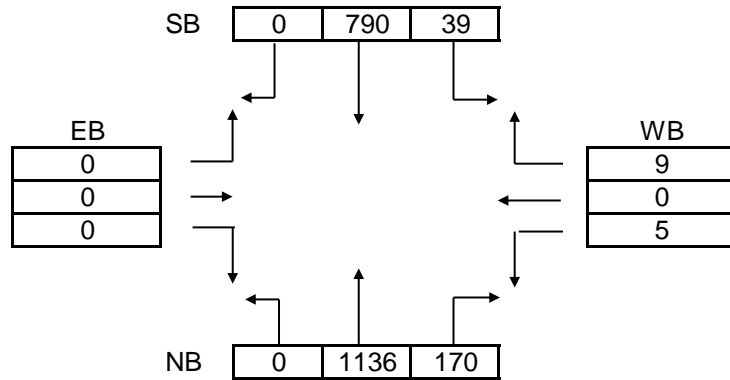
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

TARGET AND MANHATTAN BLVD

TRAFFIC VOLUMES - VPH



Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-4 R	5	Φ4		WB R		Stopbar
L-4		Φ4		WB L		Stopbar
L-2		Φ2		SB T		Setback
L-5		Φ5		SB L		Stopbar
L-6		Φ6		NB TR		Setback

IP Addresses

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INTERSECTION:

TARGET AND MANHATTAN BLVD

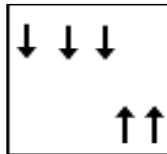
Emergency Preemption Sequence

Preemption Timing

G	Y	R

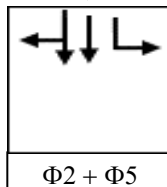
G	Y	R

Normal
Signal
Operation

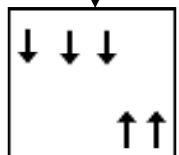


$\Phi 2 + \Phi 6$

Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)



$\Phi 2 + \Phi 5$



$\Phi 2 + \Phi 6$

Upon Termination of Preempt, Signal goes to this Phase

Resume
Normal
Signal
Operation

Signal in this Phase when preemption occurs

Manhattan Blvd.
at
Gretna Blvd.

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 2 OF 6

INTERSECTION: TARGET AND MANHATTAN BLVD CTRL SEC: 0 LOGMILE: 0

CITY: Harvey PARISH: Jefferson LAT: 29.888 LONG: -90.0562

Phasing	Φ2 + Φ6		Φ2 + Φ5			Φ4							Pattern/Split
Split	sec	80	50	30	30	30							4
Force Offs	sec		0	58	29								Offset =
Yield Points	sec												35 sec



Int. Times	20	4	1	10	4	3.5	10	4	2.5					Ring Phases
Ring 1	Thru/OLP	G	Y	R	G	G	G	<G	<Y	R				2, 4
	Turns	-	-	-	-	-	-	-	-	-				
Ring 2	Thru/OLP	G	Y	R	R	R	R	-	-	-				5, 6
	Turns	R	R	R	<G	<Y	R	-	-	-				

Action = CYCLE LENGTH = 110 Sequence #: Coord Φ: Planned Flash Max:

Phasing													Pattern/Split
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times														Ring Phases
Ring 1	Thru/OLP													
	Turns													
Ring 2	Thru/OLP													
	Turns													

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing													Pattern:
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times														Ring Phases
Ring 1	Thru/OLP													
	Turns													
Ring 2	Thru/OLP													
	Turns													

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing													Pattern/Split
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times														Ring Phases
Ring 1	Thru/OLP													
	Turns													
Ring 2	Thru/OLP													
	Turns													

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing													Pattern/Split
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times														Ring Phases
Ring 1	Thru/OLP													
	Turns													
Ring 2	Thru/OLP													
	Turns													

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing													Pattern/Split
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times														Ring Phases
Ring 1	Thru/OLP													
	Turns													
Ring 2	Thru/OLP													
	Turns													

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Action Table #	MON-TUES-WED-THURS-FRI			SATURDAY			SUNDAY		
4	9 PM - 4 AM			All			All		

TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO.

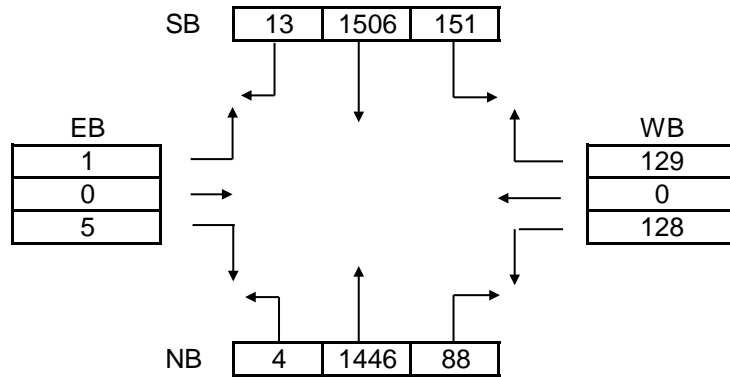
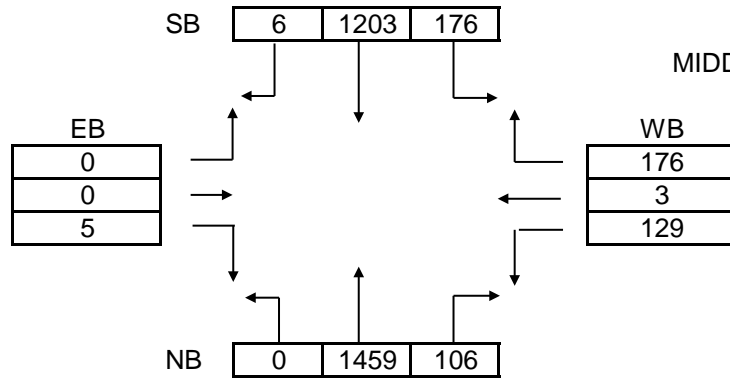
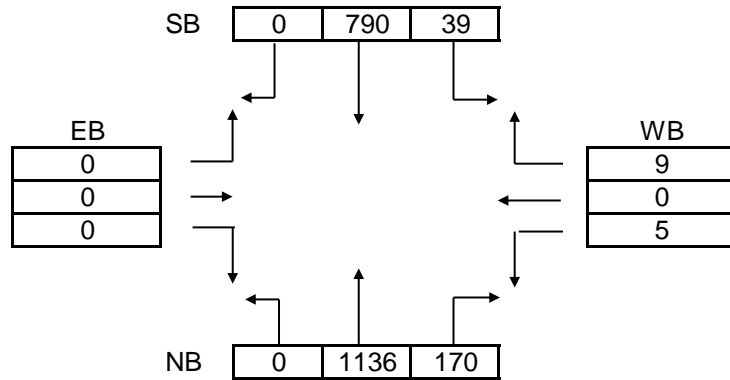
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

TARGET AND MANHATTAN BLVD

TRAFFIC VOLUMES - VPH



Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-4 R	5	Φ4		WB R		Stopbar
L-4		Φ4		WB L		Stopbar
L-2		Φ2		SB T		Setback
L-5		Φ5		SB L		Stopbar
L-6		Φ6		NB TR		Setback

IP Addresses

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INTERSECTION:

TARGET AND MANHATTAN BLVD

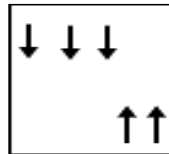
Emergency Preemption Sequence

Preemption Timing

G	Y	R

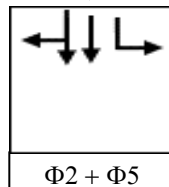
G	Y	R

Normal
Signal
Operation

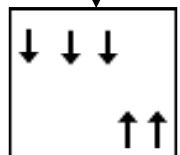


$\Phi 2 + \Phi 6$

Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)



$\Phi 2 + \Phi 5$



$\Phi 2 + \Phi 6$

Upon Termination of Preempt, Signal goes to this Phase

Resume
Normal
Signal
Operation

Signal in this Phase when preemption occurs

Manhattan Blvd.
at
Walmart / Starbucks

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 1 OF 6

INTERSECTION: WALMART AND MANHATTAN BLVD		CTRL SEC:	LOGMILE:
CITY: Harvey	PARISH: Jefferson	LAT: 29.8949	LONG: -90.0605
SIGNAL TYPE:	INTERCONNECT TYPE:	REV. DATE:	INSTALL DATE:
SIGNAL WARRANTS:	MAINTAINED BY:	CONT. MANUF: Trafficware	SYS#:
Controller IP:			

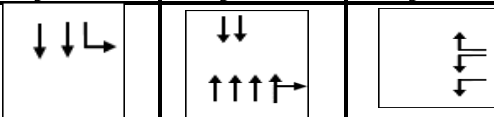
TRAFFIC SIGNAL COORDINATION PLANS (PHASING MAY VARY FROM FREE OPERATION)

Phasing										Pattern: 254
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Int. Times										FREE OPERATION - SEE PAGE 4 FOR TIMING PARAMETERS	Ring Phases
Ring 1	Thru/OLP										Ring Phases
	Turns										
Ring 2	Thru/OLP										Ring Phases
	Turns										

Action =	Free	CYCLE LENGTH =	FREE	Sequence #:	Zero Point:	Max:
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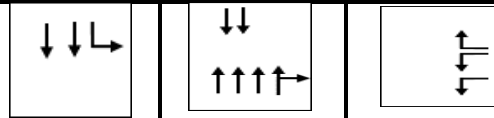
Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 4$					Pattern/Split: 1
Split	sec	31	88	57	32			Offset =
Force Offs	sec	61	0	0	30			16 sec
Yield Points	sec							



Int. Times										Ring Phases	
Ring 1	Thru/OLP	G	G	G	G	Y	R	G	Y	R	Ring Phases
	Turns	--	--	--	--	--	--	--	--	--	
Ring 2	Thru/OLP	R	R	R	G	Y	R	--	--	--	Ring Phases
	Turns	<G	<Y	R	R	R	R	--	--	--	

Action =	1	CYCLE LENGTH =	120	Sequence #:	Coord Φ :	Max:
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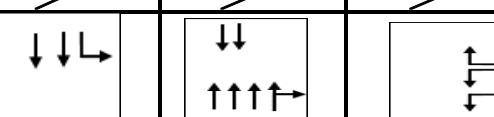
Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 4$					Pattern/Split: 2
Split	sec	34	91	57	29			Offset =
Force Offs	sec	61	0	0	27			30 sec
Yield Points	sec							



Int. Times										Ring Phases	
Ring 1	Thru/OLP	G	G	G	G	Y	R	G	Y	R	Ring Phases
	Turns	--	--	--	--	--	--	--	--	--	
Ring 2	Thru/OLP	R	R	R	G	Y	R	--	--	--	Ring Phases
	Turns	<G	<Y	R	R	R	R	--	--	--	

Action =	2	CYCLE LENGTH =	120	Sequence #:	Coord Φ :	Max:
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Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 4$					Pattern/Split: 3
Split	sec	34	89	55	31			Offset =
Force Offs	sec	63	0	0	29			36 sec
Yield Points	sec							



Int. Times										Ring Phases	
Ring 1	Thru/OLP	G	G	G	G	Y	R	G	Y	R	Ring Phases
	Turns	--	--	--	--	--	--	--	--	--	
Ring 2	Thru/OLP	R	R	R	G	Y	R	--	--	--	Ring Phases
	Turns	<G	<Y	R	R	R	R	--	--	--	

Action =	3	CYCLE LENGTH =	120	Sequence #:	Coord Φ :	Max:
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Action Table #	MON-TUES-WED-THURS-FRI	SATURDAY	SUNDAY
FREE			
1			
2			
3			

MASTER/ LOCAL:	MASTER AT TSI #:	COORDINATED WITH TSI #S:
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TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

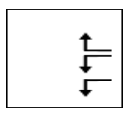
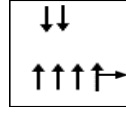
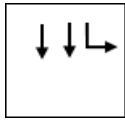
TSI NO.

PAGE: 2 OF 6

INTERSECTION: **WALMART AND MANHATTAN BLVD** CTRL SEC: **0** LOGMILE: **0**

CITY: **Harvey** PARISH: **Jefferson** LAT: **29.8949** LONG: **-90.0605**

Phasing	Φ2 + Φ5			Φ2 + Φ6			Φ4						Pattern/Split
Split	sec	31	79	48	31								4
Force Offs	sec	60	0	0	29								Offset =
Yield Points	sec												28 sec



Int. Times													Ring Phases
	10	4	3.5	20	4	1	10	4	3				
Ring 1	Thru/OLP	G	G	G	G	Y	R	G	Y	R			2, 4
	Turns	-	-	-	-	-	-	-	-	-			
Ring 2	Thru/OLP	R	R	R	G	Y	R	-	-	-			5, 6
	Turns	<G	<Y	R	R	R	R	-	-	-			

Action = CYCLE LENGTH = 110 Sequence #: Coord Φ: Planned Flash Max:

Phasing												Pattern/Split	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Phasing												Pattern/Split	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing												Pattern:	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Phasing												Pattern:	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

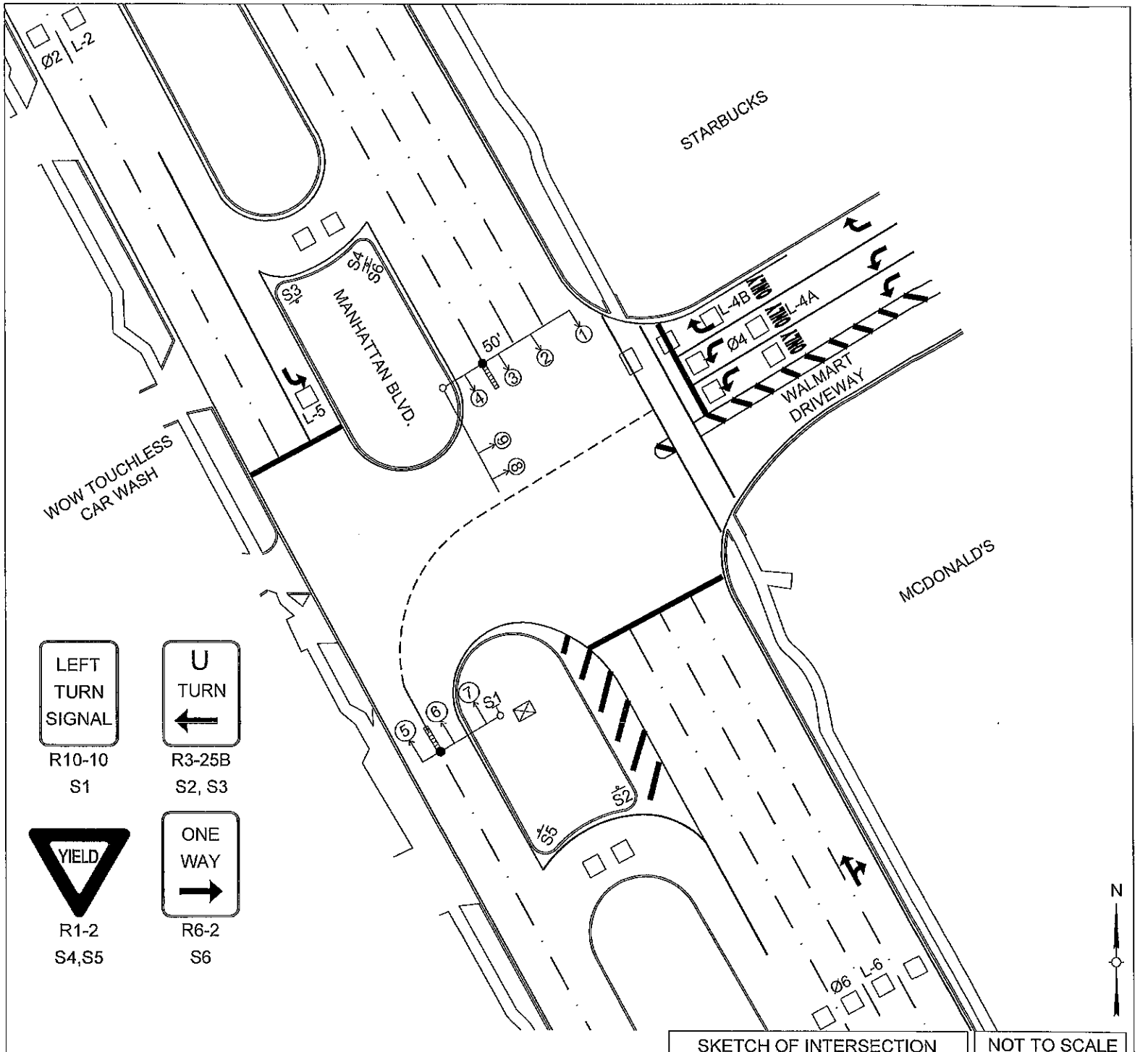
Phasing												Pattern/Split	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Phasing												Pattern/Split	
Split	sec												
Force Offs	sec												Offset =
Yield Points	sec												sec

Int. Times													Ring Phases
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Action Table #	MON-TUES-WED-THURS-FRI			SATURDAY			SUNDAY		
4	9 PM - 4 AM			All			All		



- LEFT TURN SIGNAL
R10-10
S1
- U TURN
R3-25B
S2, S3
- YIELD
R1-2
S4, S5
- ONE WAY
R6-2
S6

SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: WAL MART @ MANHATTAN BLVD. TSI #: PAGE 4 OF 6

● WOOD POLE	— STOP LINE	② ◀ ◻ PEDESTAL MOUNT SIGNAL & NO.	▶ POWER SOURCE
○ METAL POLE	— PED CROSS WALK	② ◀ ◻ SIGNAL FACE & NO.	▨ VIDEO DETECTION ZONE & NO.
○ MAST ARM	— 1/2 SPAN WIRE SIGN & NO.	② ◀ ◻ SIGNAL FACE WITH ARROWS & NO.	◁ VIDEO DETECTION
○ SPAN WIRE	— 2/3 GROUND MOUNT SIGN & NO.	② ◀ ◻ PEDESTRIAN SIGNAL & NO.	⊞ WIRELESS INTERCONNECT
◻ CABINET & CONTROLLER	◻ #4 LOOP DETECTOR & NO.	○ PED BUTTON & SIGN	○ UTILITY POLE
● EMERGENCY VEHICLE DETECTOR		◻ PARALLEL PARKING	◻ WIRELESS VDS
■ SIGNAL POWER PEDESTAL W/ DISCONNECT			◻ WIRELESS VDS RECEIVER

EXISTING SPEED LIMITS

35 MPH - MANHATTAN BLVD.

SIGNAL FACES		1-6,8,9	7							
TOTALS		8	1							
DK = DARK R = RED Y = YELLOW G = GREEN ◁ = GREEN ARROW ◁ = YELLOW ARROW ◁ = STEADY YELLOW ARROW ◁ = FLASHING YELLOW ARROW WA = WALK DW = DON'T WALK FW = FLASHING DON'T WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMED LENS		(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	PED

TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO.

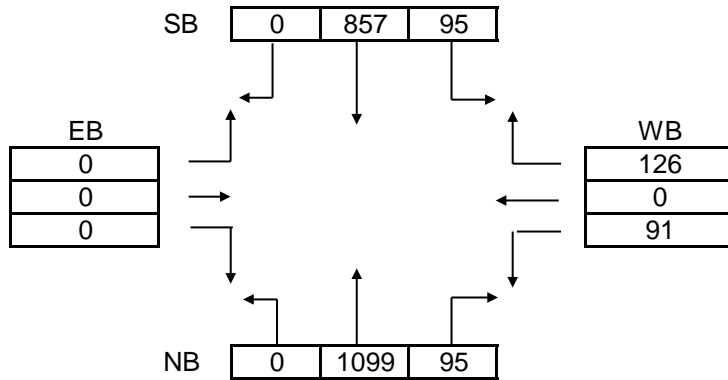
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

WALMART AND MANHATTAN BLVD

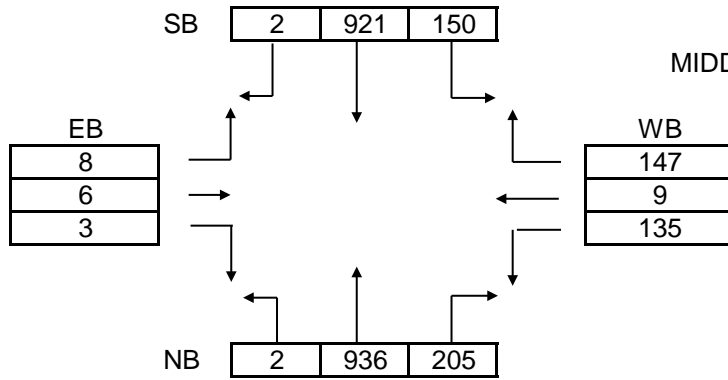
TRAFFIC VOLUMES - VPH



AM PEAK HOUR: 7:30 AM to 8:30 AM

Count Date: 10/24/2017

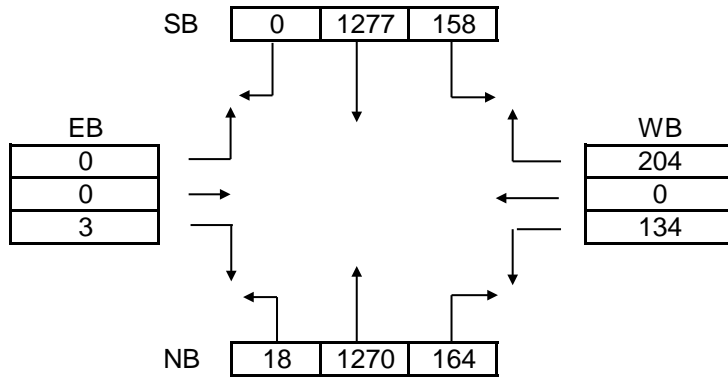
PHF: 0.917



MIDDAY PEAK HOUR: 12:00 PM to 1:00 PM

Count Date: 10/24/2017

PHF: 0.757



PM PEAK HOUR: 4:30 PM to 5:30 PM

Count Date: 10/24/2017

PHF: 0.966

Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-4B	5	Φ4	Loop	WB R		Stopbar
L-4A		Φ4	Loop	WB L		Stopbar
L-2		Φ2	Loop	SB T		Setback
L-6		Φ6	Loop	NB T		Setback

IP Addresses

INTERSECTION:

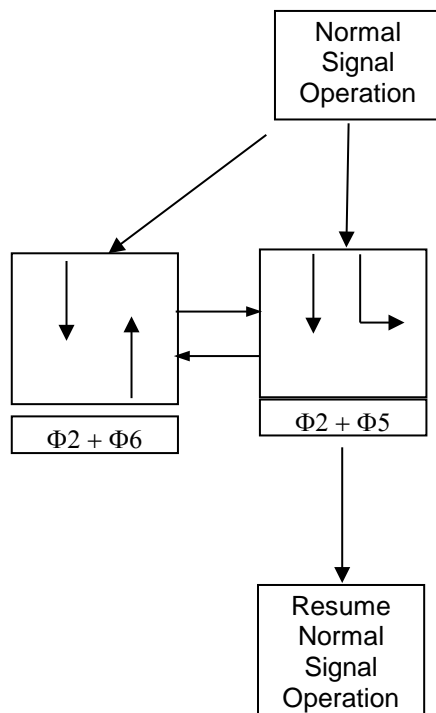
WALMART AND MANHATTAN BLVD

Emergency Preemption Sequence

Preemption Timing

G	Y	R

Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)



Upon Termination of Preempt, Signal goes to this Phase

G	Y	R

Signal in this Phase when preemption occurs

Manhattan Blvd.
at
Ute Dr.

TRAFFIC SIGNAL INVENTORY (v2.1)

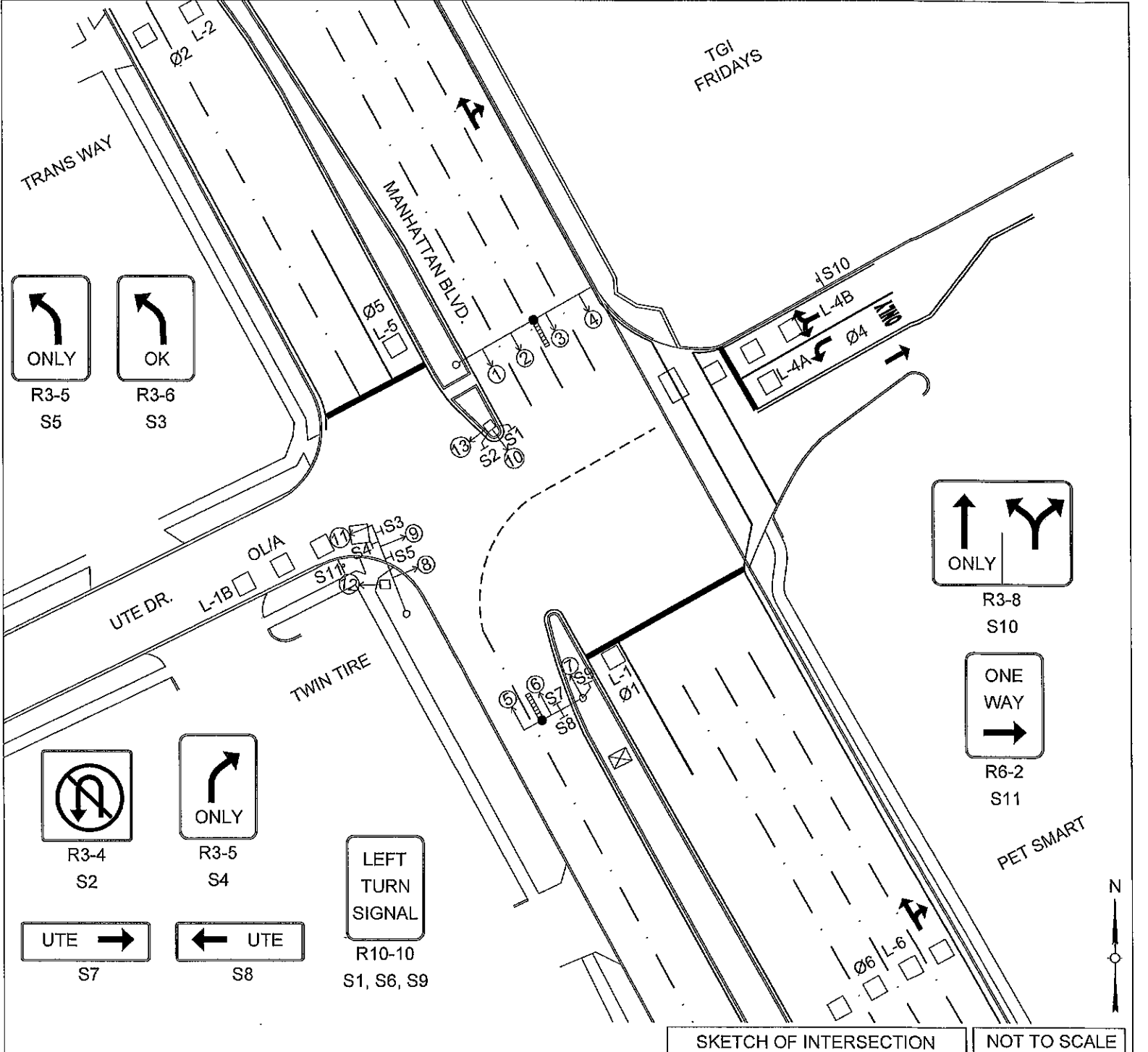
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 2 OF 6

INTERSECTION:		UTE DR AND MANHATTAN BLVD										CTRL SEC: 0		LOGMILE: 0	
CITY: Harvey				PARISH: Jefferson						LAT: 29.8967		LONG: -90.0617			
Phasing		Φ1 + Φ6			Φ2 + Φ6			Φ2 + Φ5			Φ4			Pattern/Split	
Split	sec	20			60			65 25 25			49			4	
Force Offs	sec	69			0			25 24			49			Offset =	
Yield Points	sec													52 sec	
Int. Times												Ring Phases			
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	<G	<Y	R	1, 2, 4	
	Turns	<G	<Y	R	R	R	R	R	R	R	R	R	R	R	
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	--	--	--	5, 6	
	Turns	R	R	R	R	R	R	<G	<Y	R	--	--	--		
Action =		CYCLE LENGTH = 110					Sequence #:		Coord Φ:		Planned Flash		Max:		
Phasing														Pattern/Split	
Split	sec	/			/			/			/				
Force Offs	sec	/			/			/			/			Offset =	
Yield Points	sec	/			/			/			/			sec	
Int. Times												Ring Phases			
Ring 1	Thru/OLP														
	Turns														
Ring 2	Thru/OLP														
	Turns														
Action =		CYCLE LENGTH = 0					Sequence #:		Coord Φ:		Planned Flash		Max:		
Phasing														Pattern:	
Split	sec	/			/			/			/			Offset =	
Force Offs	sec	/			/			/			/			sec	
Yield Points	sec	/			/			/			/				
Int. Times												Ring Phases			
Ring 1	Thru/OLP														
	Turns														
Ring 2	Thru/OLP														
	Turns														
Action =		CYCLE LENGTH = 0					Sequence #:		Coord Φ:		Planned Flash		Max:		
Phasing														Pattern/Split	
Split	sec	/			/			/			/			Offset =	
Force Offs	sec	/			/			/			/			sec	
Yield Points	sec	/			/			/			/				
Int. Times												Ring Phases			
Ring 1	Thru/OLP														
	Turns														
Ring 2	Thru/OLP														
	Turns														
Action =		CYCLE LENGTH = 0					Sequence #:		Coord Φ:		Planned Flash		Max:		

Action Table #	MON-TUES-WED-THURS-FRI			SATURDAY		SUNDAY	
4	9 PM - 4 AM			All		All	



SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: UTE DRIVE @ MANHATTAN BLVD. TSI #: PAGE 4 OF 6

- WOOD POLE
- METAL POLE
- MAST ARM
- SPAN WIRE
- ⊠ CABINET & CONTROLLER
- EMERGENCY VEHICLE DETECTOR
- SIGNAL POWER PEDESTAL W/ DISCONNECT
- STOP LINE
- PED CROSS WALK
- SPAN WIRE SIGN & NO.
- GROUND MOUNT SIGN & NO.
- #4 LOOP DETECTOR & NO.
- ②-□ PEDESTAL MOUNT SIGNAL & NO.
- ②-○ SIGNAL FACE & NO.
- ②-○ SIGNAL FACE WITH ARROWS & NO.
- ②-○ PEDESTRIAN SIGNAL & NO.
- ②-○ PED BUTTON & SIGN
- ②-○ PARALLEL PARKING
- ▶ POWER SOURCE
- ▨ VIDEO DETECTION ZONE & NO.
- ◀ VIDEO DETECTION
- WIRELESS INTERCONNECT
- UTILITY POLE
- WIRELESS VDS
- WIRELESS VDS RECEIVER

EXISTING SPEED LIMITS

25 MPH - UTE DRIVE
 35 MPH - MANHATTAN BLVD.

SIGNAL FACES	TOTALS	1-6, 12	7, 8, 10	11, 13	9					
OK = DARK R = RED Y = YELLOW G = GREEN ↻ = GREEN ARROW ↻ = YELLOW ARROW ↻ = STEADY YELLOW ARROW ↻ = FLASHING YELLOW ARROW WA = WALK DONW = DON'T WALK FDW = FLASHING DON'T WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMED LENS	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	PED 88

TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO. 00-000

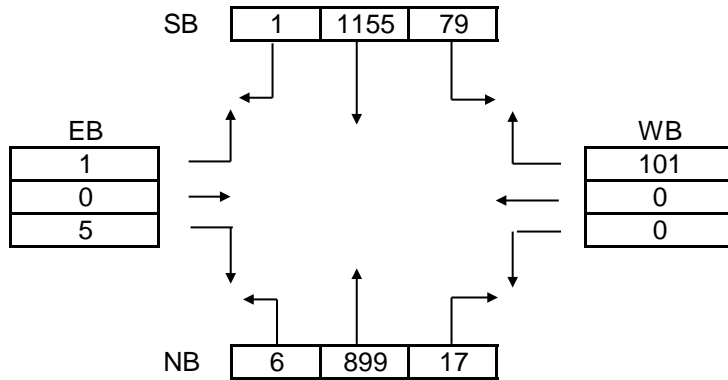
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

UTE DR AND MANHATTAN BLVD

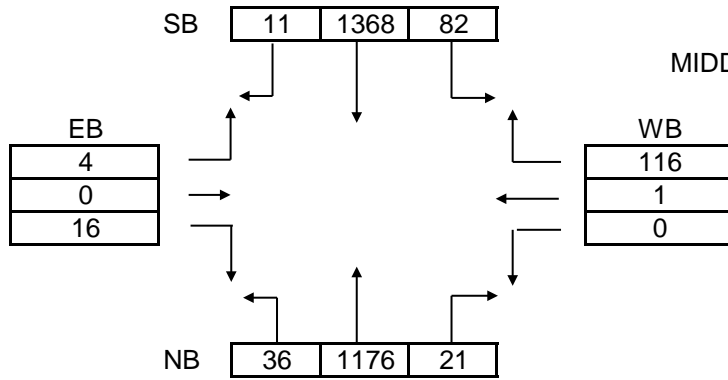
TRAFFIC VOLUMES - VPH



AM PEAK HOUR: 7:30 AM to 8:30 AM

Count Date: 10/25/2017

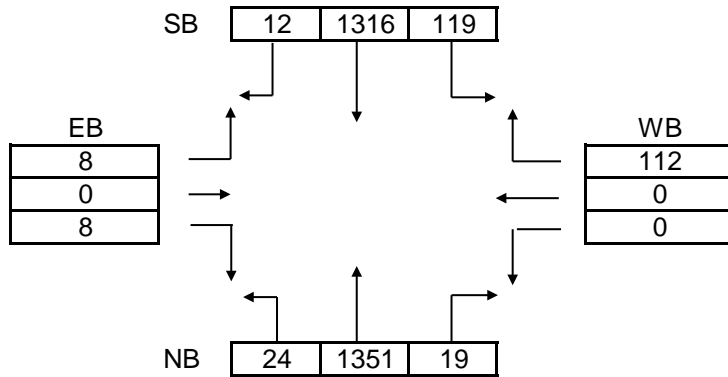
PHF: 0.921



MIDDAY PEAK HOUR: 11:15 AM to 12:15 PM

Count Date: 10/25/2017

PHF: 0.946



PM PEAK HOUR: 4:30 PM to 5:30 PM

Count Date: 10/25/2017

PHF: 0.935

Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-4B	10	Φ4	Loop	WB R		Stopbar
L-1		Φ1	Loop	NB L		Stopbar
L-6		Φ6	Loop	NB T		Setback
L-2		Φ2	Loop	SB T		Setback
L-1B		ΟΛΑ	Loop	EB R		Stopbar
L-5		Φ5	Loop	SB L		Stopbar
L-4A		Φ4	Loop	WB L		Stopbar

IP Addresses

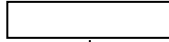
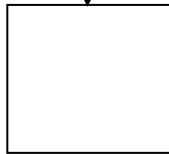
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INTERSECTION:

UTE DR AND MANHATTAN BLVD

Emergency Preemption Sequence

Normal
Signal
Operation



Resume
Normal
Signal
Operation

Signal in this Phase when preemption occurs

Preemption Timing

G	Y	R

Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)

G	Y	R

Upon Termination of Preempt, Signal goes to this Phase

Manhattan Blvd.
at
Palace / Chick-Fil-A

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 1 OF 6

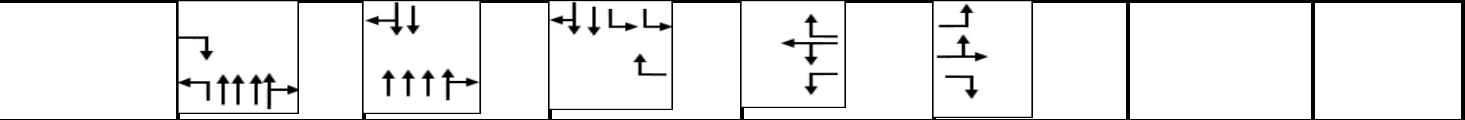
INTERSECTION: PALACE AND MANHATTAN BLVD		CTRL SEC:	LOGMILE:
CITY: Harvey	PARISH: Jefferson	LAT: 29.8977	LONG: -90.0624
SIGNAL TYPE:	INTERCONNECT TYPE:	REV. DATE:	INSTALL DATE:
SIGNAL WARRANTS:	MAINTAINED BY:	CONT. MANUF: Trafficware	SYS#:
Controller IP:			

TRAFFIC SIGNAL COORDINATION PLANS (PHASING MAY VARY FROM FREE OPERATION)

Phasing	Φ1 + Φ6	Φ2 + Φ6	Φ2 + Φ5	Φ4	Φ3	Pattern:
						254

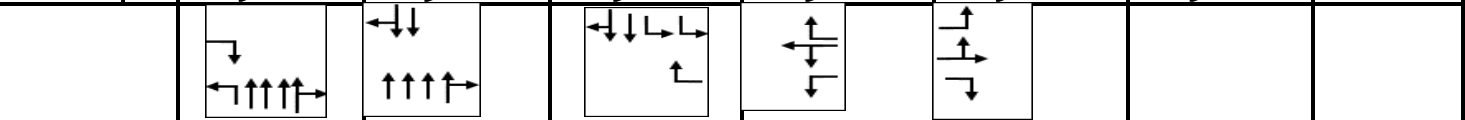
Int. Times		FREE OPERATION - SEE PAGE 4 FOR TIMING PARAMETERS										Ring Phases	
Ring 1	Thru/OLP												
	Turns												
Ring 2	Thru/OLP												
	Turns												

Action =	Free	CYCLE LENGTH =	FREE	Sequence #:	Zero Point:	Max:
Phasing	Φ1 + Φ6	Φ2 + Φ6	Φ2 + Φ5	Φ4	Φ3	Pattern/Split:
Split	sec 21	53	52 / 20	24	23	1
Force Offs	sec 87	0	20 / 18	42	66	Offset = 53 sec
Yield Points	sec					



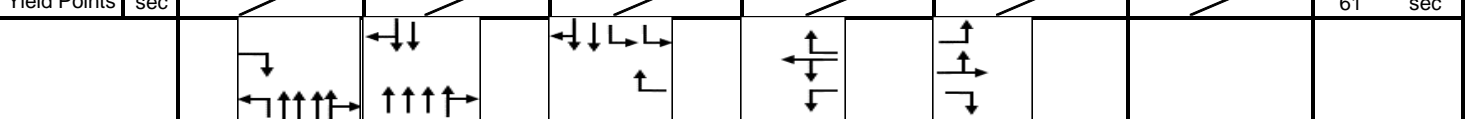
Int. Times		13	4	2.5	20	4	1	13	4	3	17	4	3	17	4	2	Ring Phases
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	G	Y	R	R	R	R	1, 2, 3, 4
	Turns	<G	<Y	R	R	R	R	R	R	R	R	R	R	<G	<Y	R	
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	--	--	--	--	--	--	5, 6
	Turns	R	R	R	R	R	R	<G	<Y	R	--	--	--	--	--	--	

Action =	1	CYCLE LENGTH =	120	Sequence #:	Coord Φ:	Max:
Phasing	Φ1 + Φ6	Φ2 + Φ6	Φ2 + Φ5	Φ4	Φ3	Pattern/Split:
Split	sec 20	53	53 / 20	24	23	2
Force Offs	sec 86	20	20 / 18	42	66	Offset = 52 sec
Yield Points	sec					



Int. Times		13	4	2.5	20	4	1	13	4	3	17	4	3	17	4	2	Ring Phases
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	G	Y	R	R	R	R	1, 2, 3, 4
	Turns	<G	<Y	R	R	R	R	R	R	R	R	R	R	<G	<Y	R	
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	--	--	--	--	--	--	5, 6
	Turns	R	R	R	R	R	R	<G	<Y	R	--	--	--	--	--	--	

Action =	2	CYCLE LENGTH =	120	Sequence #:	Coord Φ:	Max:
Phasing	Φ1 + Φ6	Φ2 + Φ6	Φ2 + Φ5	Φ3	Φ4	Pattern/Split:
Split	sec 20	53	53 / 20	23	24	3
Force Offs	sec 86	0	20 / 18	42	65	Offset = 61 sec
Yield Points	sec					



Int. Times		13	4	2.5	20	4	1	13	4	3	17	4	2	17	4	3	Ring Phases
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	G	Y	R	R	R	R	1, 2, 3, 4
	Turns	<G	<Y	R	R	R	R	R	R	R	R	R	R	<G	<Y	R	
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	--	--	--	--	--	--	5, 6
	Turns	R	R	R	R	R	R	<G	<Y	R	--	--	--	--	--	--	

Action =	3	CYCLE LENGTH =	120	Sequence #:	Coord Φ:	Max:	
Action Table #	MON-TUES-WED-THURS-FRI					SATURDAY	SUNDAY
1	4 AM to 10 AM						
2	10 AM to 2 PM						
3	2 PM to 9 PM						

MASTER/ LOCAL: MASTER AT TSI #: COORDINATED WITH TSI #S:

TRAFFIC SIGNAL INVENTORY (v2.1)

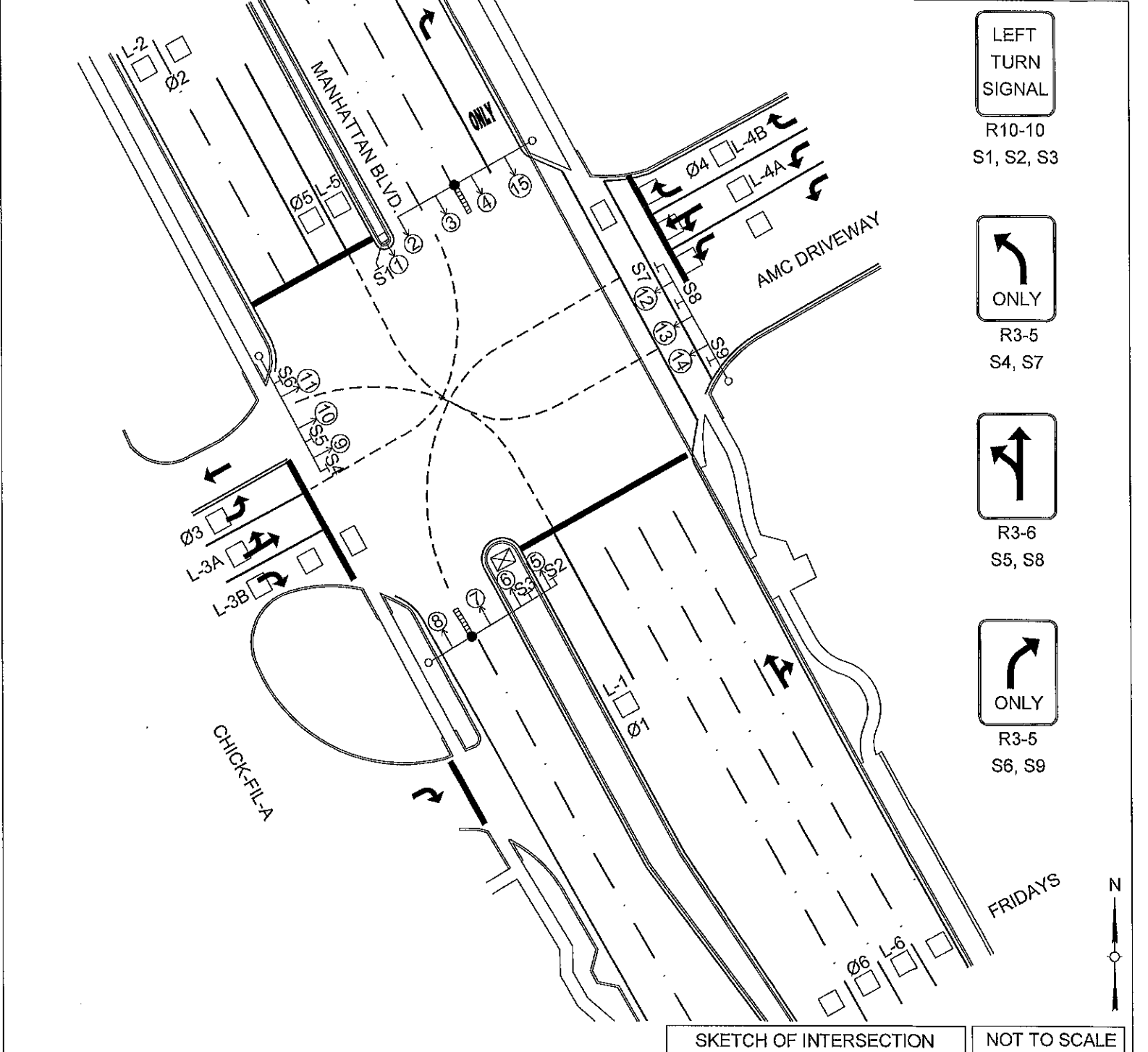
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 2 OF 6

INTERSECTION: PALACE AND MANHATTAN BLVD												CTRL SEC: 0			LOGMILE: 0			
CITY: Harvey				PARISH: Jefferson				LAT: 29.8977			LONG: -90.0624							
Phasing		Φ1 + Φ6			Φ2 + Φ6			Φ2 + Φ5			Φ4		Φ3		Pattern/Split			
Split		sec		20		43		43		20		24		23		4		
Force Offs		sec		86		0		20		18		42		66		Offset =		
Yield Points		sec														46 sec		
Int. Times		13	4	2.5	20	4	1	13	4	3	17	4	2	17	4	2	Ring Phases	
Ring 1	Thru/OLP	R	R	R	G	G	G	G	Y	R	G	Y	R	R	R	R		
	Turns	<G	<Y	R	R	R	R	R	R	R	R	R	R	<G	<Y	R		
Ring 2	Thru/OLP	G	G	G	G	Y	R	R	R	R	--	--	--	--	--	--		
	Turns	R	R	R	R	R	R	<G	<Y	R	--	--	--	--	--	--		
Action =		CYCLE LENGTH = 110					Sequence #:			Coord Φ:			Planned Flash		Max:			
Phasing															Pattern/Split			
Split		sec		/		/		/		/		/		/		Offset =		
Force Offs		sec		/		/		/		/		/		/		sec		
Yield Points		sec		/		/		/		/		/		/		sec		
Int. Times																Ring Phases		
Ring 1	Thru/OLP																	
	Turns																	
Ring 2	Thru/OLP																	
	Turns																	
Action =		CYCLE LENGTH = 0					Sequence #:			Coord Φ:			Max:					
Phasing															Pattern:			
Split		sec		/		/		/		/		/		/		Offset =		
Force Offs		sec		/		/		/		/		/		/		sec		
Yield Points		sec		/		/		/		/		/		/		sec		
Int. Times																Ring Phases		
Ring 1	Thru/OLP																	
	Turns																	
Ring 2	Thru/OLP																	
	Turns																	
Action =		CYCLE LENGTH = 0					Sequence #:			Coord Φ:			Max:					
Phasing															Pattern/Split			
Split		sec		/		/		/		/		/		/		Offset =		
Force Offs		sec		/		/		/		/		/		/		sec		
Yield Points		sec		/		/		/		/		/		/		sec		
Int. Times																Ring Phases		
Ring 1	Thru/OLP																	
	Turns																	
Ring 2	Thru/OLP																	
	Turns																	
Action =		CYCLE LENGTH = 0					Sequence #:			Coord Φ:			Max:					

Action Table #	MON-TUES-WED-THURS-FRI			SATURDAY		SUNDAY	
4	9 PM - 4 AM			All		All	



LEFT
TURN
SIGNAL
R10-10
S1, S2, S3

ONLY
R3-5
S4, S7

ONLY
R3-6
S5, S8

ONLY
R3-5
S6, S9

SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: PALACE @ MANHATTAN BLVD. TSI #: PAGE 4 OF 6

- WOOD POLE
- METAL POLE
- MAST ARM
- SPAN WIRE
- ⊠ CABINET & CONTROLLER
- ⊠ EMERGENCY VEHICLE DETECTOR
- SIGNAL POWER PEDESTAL W/ DISCONNECT
- STOP LINE
- PED CROSS WALK
- SPAN WIRE SIGN & NO.
- GROUND MOUNT SIGN & NO.
- #4 LOOP DETECTOR & NO.
- ② □ PEDESTAL MOUNT SIGNAL & NO.
- ② ← SIGNAL FACE & NO.
- ② ← SIGNAL FACE WITH ARROWS & NO.
- ② ← PEDESTRIAN SIGNAL & NO.
- ② ← PED BUTTON & SIGN
- PARALLEL PARKING
- ▶ POWER SOURCE
- ▨ VIDEO DETECTION ZONE & NO.
- ◁ VIDEO DETECTION
- ⊠ WIRELESS INTERCONNECT
- UTILITY POLE
- WIRELESS VDS
- ⊠ WIRELESS VDS RECIEVER

EXISTING SPEED LIMITS
35 MPH - MANHATTAN BLVD.

SIGNAL FACES		2-4, 7, 8, 10,13,15	1, 5, 6, 9, 12	11, 14																																																										
TOTALS		8	5	2																																																										
DK = DARK R = RED Y = YELLOW G = GREEN ← = GREEN ARROW ↔ = YELLOW ARROW ↔ = STEADY YELLOW ARROW ↔ = FLASHING YELLOW ARROW WA = WALK DW = DONT WALK FDW = FLASHING DONT WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMED LENS	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">Y</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">G</div> </div>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">R</div> <div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">Y</div> <div style="border: 1px solid black; border-radius: 50%; 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TRAFFIC SIGNAL INVENTORY (v2.1)

TSI NO.

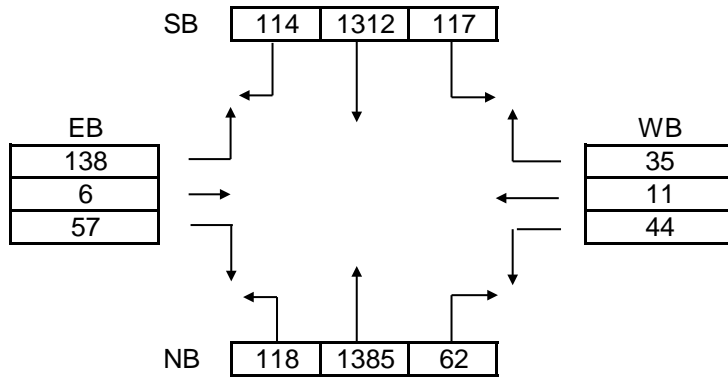
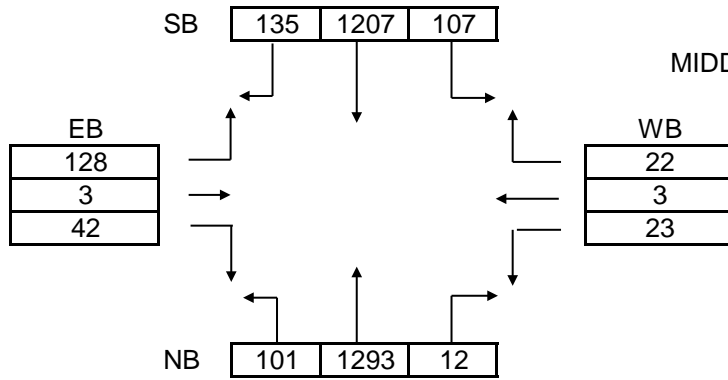
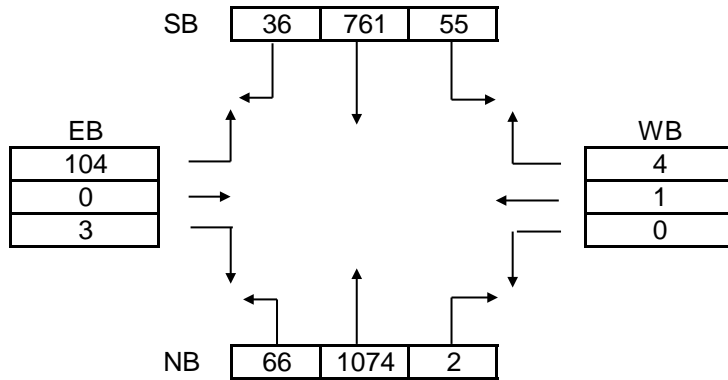
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection:

PALACE AND MANHATTAN BLVD

TRAFFIC VOLUMES - VPH



Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-4B	10	OΛA	Loop	WB R		Stopbar
L-3B	10	OΛB	Loop	EB R		Stopbar
L-3A		Φ3	Loop	EB TL		Stopbar
L-4A		Φ4	Loop	WB TL		Stopbar
L-1		Φ1	Loop	NB L		Stopbar
L-2		Φ2	Loop	SB T		Setback
L-5		Φ5	Loop	SB L		Stopbar
L-6		Φ6	Loop	NB T		Setback

IP Addresses

INTERSECTION:

PALACE AND MANHATTAN BLVD

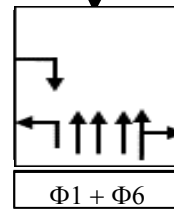
Emergency Preemption Sequence

Preemption Timing

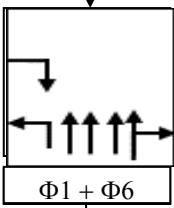
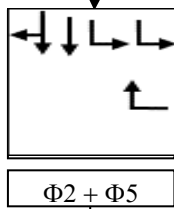
G	Y	R

G	Y	R

Normal
Signal
Operation



Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)



Upon Termination of Preempt, Signal goes to this Phase

Resume
Normal
Signal
Operation

Signal in this Phase when preemption occurs

Manhattan Blvd.
at
Westbank Village Shopping
Center Parking Lot /
Manhattan Plaza

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 1 OF 6

INTERSECTION: WESTBANK VILLAGE SHOPPING CENTER AND MANHATTAN BLVD		CTRL SEC:	LOGMILE:
CITY: Harvey	PARISH: Jefferson	LAT: 29.9017	LONG: -90.0649
SIGNAL TYPE: Fully Actuated Controller		INTERCONNECT TYPE:	REV. DATE:
SIGNAL WARRANTS:		MAINTAINED BY: Parish	CONT. MANUF: Kentronics
		SYS#:	Controller IP:

TRAFFIC SIGNAL COORDINATION PLANS (PHASING MAY VARY FROM FREE OPERATION)

Phasing	$\Phi 2 + \Phi 6$	$\Phi 4 + \Phi 8$	$\Phi 1 + \Phi 5$				Pattern: 254

Int. Times		FREE OPERATION - SEE PAGE 4 FOR TIMING PARAMETERS										Ring Phases
Ring 1	Thru/OLP											
	Turns											
Ring 2	Thru/OLP											
	Turns											

Action =	Free	CYCLE LENGTH =	FREE	Sequence #:	Zero Point:	Max:
----------	------	----------------	------	-------------	-------------	------

Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 1 + \Phi 6$	$\Phi 4 + \Phi 8$			Pattern/Split: 1
Split	sec	21 / 75	21 / 75	24 / 24			
Force Offs	sec	45	99	0	0	23	Offset = 94 sec
Yield Points	sec						

--	--	--	--	--	--	--	--

Int. Times		10	4	3	20	4	3	10	4	3	10	4	4	Ring Phases
Ring 1	Thru/OLP	G	G	G	G	Y	R	R	R	R	G	Y	R	
	Turns	R	R	R	R	R	R	<G	<Y	R	--	--	--	1, 2, 4
Ring 2	Thru/OLP	R	R	R	G	G	G	G	Y	R	G	Y	R	
	Turns	<G	<Y	R	R	R	R	R	R	R	--	--	--	5, 6, 8

Action =	1	CYCLE LENGTH =	120	Sequence #:	Coord Φ :	$\Phi 6$	Max:
----------	---	----------------	-----	-------------	----------------	----------	------

Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 1 + \Phi 6$	$\Phi 4 + \Phi 8$			Pattern/Split: 2
Split	sec	21 / 73	21 / 73	26 / 26			
Force Offs	sec	47	99	0	25		Offset = 101 sec
Yield Points	sec						

--	--	--	--	--	--	--	--

Int. Times		10	4	3	20	4	3	10	4	3	10	4	4	Ring Phases
Ring 1	Thru/OLP	G	G	G	G	Y	R	R	R	R	G	Y	R	
	Turns	R	R	R	R	R	R	<G	<Y	R	--	--	--	1, 2, 4
Ring 2	Thru/OLP	R	R	R	G	G	G	G	Y	R	G	Y	R	
	Turns	<G	<Y	R	R	R	R	R	R	R	--	--	--	5, 6, 8

Action =	2	CYCLE LENGTH =	79	Sequence #:	Coord Φ :		Max:
----------	---	----------------	----	-------------	----------------	--	------

Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 1 + \Phi 6$	$\Phi 4 + \Phi 8$			Pattern/Split: 3
Split	sec	19 / 76	19 / 76	25 / 25			
Force Offs	sec	42	103	0	24		Offset = 32 sec
Yield Points	sec						

--	--	--	--	--	--	--	--

Int. Times		10	4	3	20	4	3	10	4	3	10	4	4	Ring Phases
Ring 1	Thru/OLP	G	G	G	G	Y	R	R	R	R	G	Y	R	
	Turns	R	R	R	R	R	R	<G	<Y	R	--	--	--	1, 2, 4
Ring 2	Thru/OLP	R	R	R	G	G	G	G	Y	R	G	Y	R	
	Turns	<G	<Y	R	R	R	R	R	R	R	--	--	--	5, 6, 8

Action =	3	CYCLE LENGTH =	79	Sequence #:	Coord Φ :		Max:
----------	---	----------------	----	-------------	----------------	--	------

Action Table #	MON-TUES-WED-THURS-FRI		SATURDAY	SUNDAY
FREE				
1				
2				
3				

MASTER/ LOCAL:	MASTER AT TSI #:	COORDINATED WITH TSI #S:
-----------------------	-------------------------	---------------------------------

TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

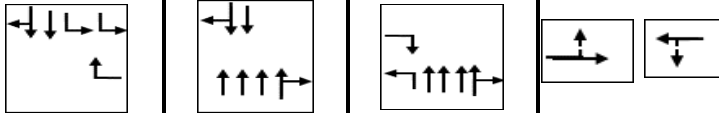
TSI NO.

PAGE: 2 OF 6

INTERSECTION: WESTBANK VILLAGE SHOPPING CENTER AND MANHATTAN BLVD CTRL SEC: 0 LOGMILE: 0

CITY: Harvey PARISH: Jefferson LAT: 29.9017 LONG: -90.0649

Phasing	Φ2 + Φ5	Φ2 + Φ6	Φ1 + Φ6	Φ4 + Φ8			Pattern/Split
Split	sec	20 56	20 56	34			4
Force Offs	sec	54 90	0	33			Offset =
Yield Points	sec						70 sec



Int. Times	10 4 3	20 4 3	10 4 3	10 4 4			Ring Phases
Ring 1	Thru/OLP	G G G	G Y R	R R R	G Y R		1, 2, 4
	Turns	R R R	R R R	<G <Y R	- - -		
Ring 2	Thru/OLP	R R R	G G G	G Y R	G Y R		5, 6, 8
	Turns	<G <Y R	R R R	R R R	- - -		

Action = CYCLE LENGTH = 110 Sequence #: Coord Φ: Planned Flash Max:

Phasing							Pattern/Split
Split	sec						
Force Offs	sec						Offset =
Yield Points	sec						sec

Int. Times							Ring Phases
Ring 1	Thru/OLP						
	Turns						
Ring 2	Thru/OLP						
	Turns						

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing							Pattern:
Split	sec						
Force Offs	sec						Offset =
Yield Points	sec						sec

Int. Times							Ring Phases
Ring 1	Thru/OLP						
	Turns						
Ring 2	Thru/OLP						
	Turns						

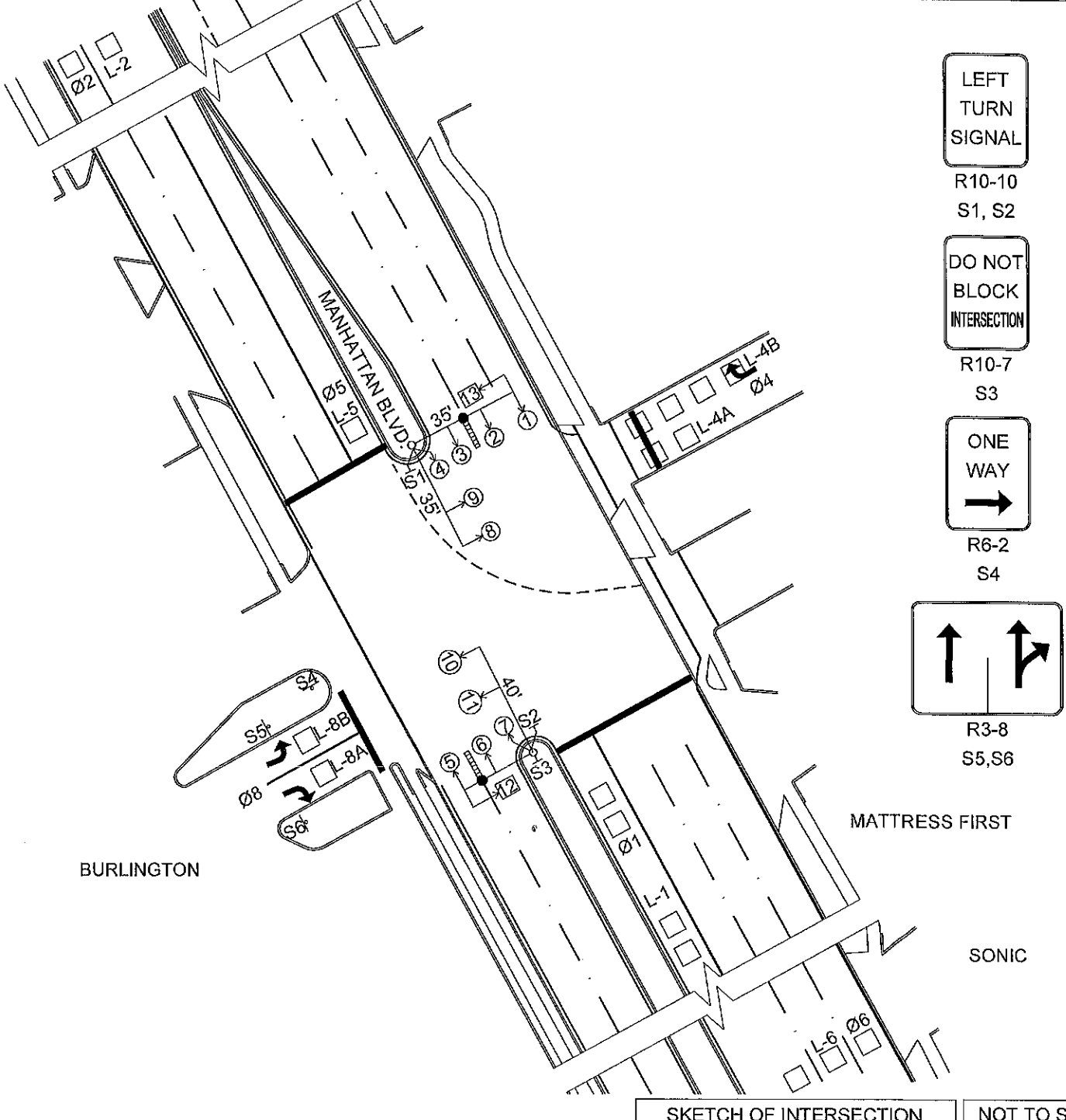
Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Phasing							Pattern/Split
Split	sec						
Force Offs	sec						Offset =
Yield Points	sec						sec

Int. Times							Ring Phases
Ring 1	Thru/OLP						
	Turns						
Ring 2	Thru/OLP						
	Turns						

Action = CYCLE LENGTH = 0 Sequence #: Coord Φ: Max:

Action Table #	MON-TUES-WED-THURS-FRI	SATURDAY	SUNDAY



SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: WEST BANK VILLAGE PARKING LOT @ MANHATTAN BLVD. TSI #: PAGE 4 OF 6

● WOOD POLE	— STOP LINE	② ◀ □ PEDESTAL MOUNT SIGNAL & NO.	▶ POWER SOURCE
○ METAL POLE	— PED CROSS WALK	② ◀ SIGNAL FACE & NO.	▨ VIDEO DETECTION ZONE & NO.
— MAST ARM	— SPAN WIRE SIGN & NO.	② ◀ SIGNAL FACE WITH ARROWS & NO.	◀ VIDEO DETECTION
— SPAN WIRE	— GROUND MOUNT SIGN & NO.	② ◀ PEDESTRIAN SIGNAL & NO.	— WIRELESS INTERCONNECT
□ CABINET & CONTROLLER	□ #4 LOOP DETECTOR & NO.	○ PED BUTTON & SIGN	○ UTILITY POLE
● EMERGENCY VEHICLE DETECTOR		▭ PARALLEL PARKING	□ WIRELESS VDS
■ SIGNAL POWER PEDESTAL W/ DISCONNECT			~VDS(○) WIRELESS VDS RECEIVER

EXISTING SPEED LIMITS
35 MPH - MANHATTAN BLVD.

SIGNAL FACES		1-3, 5, 6, 8-13	4, 7								
TOTALS		11	2								
DK = DARK R = RED Y = YELLOW G = GREEN ◀ = GREEN ARROW ◀ = YELLOW ARROW ◀ = STEADY YELLOW ARROW ◀ = FLASHING YELLOW ARROW WA = WALK DW = DON'T WALK FDW = FLASHING DON'T WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMMED LENS	 	 	 	 	 	 	 	 	 	 	

TRAFFIC SIGNAL INVENTORY (v2.1)

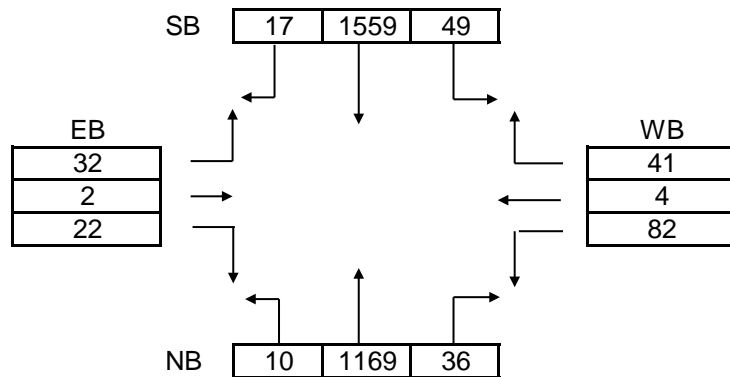
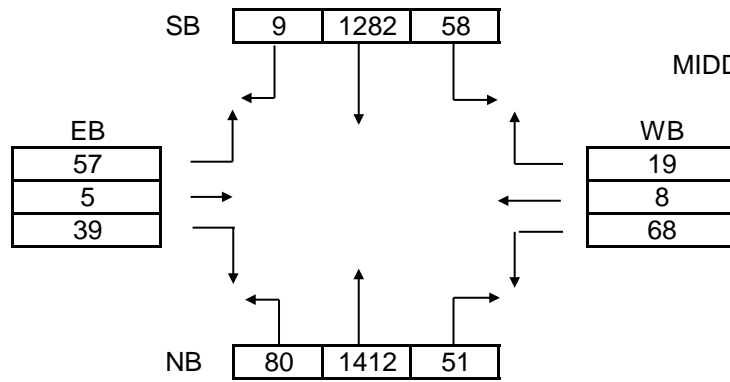
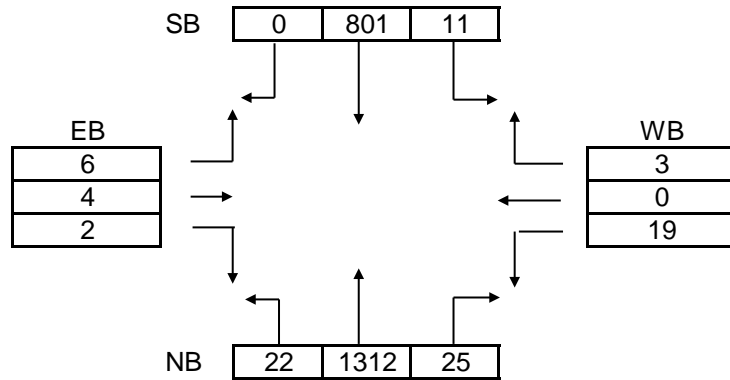
TSI NO.

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PAGE: 5 OF 6

Intesection: WESTBANK VILLAGE SHOPPING CENTER AND MANHATTAN BLVD

TRAFFIC VOLUMES - VPH



Detector #	Delay(s)	Phase	Equipment	Lane #	Size	Type
L-1		Φ1	Loop	NB1		Setback
L-2		Φ2	Loop	SB2, SB3		Setback
L-4A		Φ4	Loop	WB1		Stopbar
L-4B		Φ4	Loop	WB2		Stopbar
L-6		Φ6	Loop	NB2, NB3, NB4		Setback
L-8A		Φ8	Loop	EB1		Stopbar
L-8B		Φ8	Loop	EB2		Stopbar

IP Addresses

--	--	--	--

INTERSECTION:

WESTBANK VILLAGE SHOPPING CENTER AND MANHATTAN BLVD

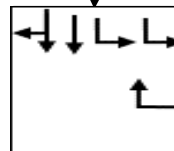
Emergency Preemption Sequence

Preemption Timing

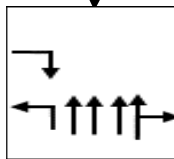
G	Y	R

G	Y	R

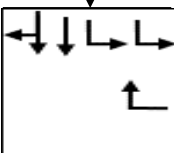
Normal
Signal
Operation



$\Phi 2 + \Phi 5$



$\Phi 1 + \Phi 6$



$\Phi 2 + \Phi 5$

Resume
Normal
Signal
Operation

Signal preempted to this Phase (Determined by the direction of the Emergency Vehicle)

Upon Termination of Preempt, Signal goes to this Phase

Signal in this Phase when preemption occurs

APPENDIX B

TRAVEL TIME RESULTS

**TRAVEL TIME RUNS
WITH
EXISTING TIMINGS**

ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd NB AM

<u>Report Name</u>	<u>Page</u>
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Fuel Consumption & Emissions	4
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Detailed Statistics By Run - Total Delay	8
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Detailed Statistics By Run - Time <= 35 MPH	10
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Detailed Statistics By Run - Hydrocarbons	13
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Speed/Distance Profiles of All Runs	16
Time/Space Trajectories of All Runs	17
Speed Profile (Distance vs Spd) for Manhattan Blvd-NB-001tn	18
Speed Profile (Distance vs Spd) for Manhattan Blvd-NB-002t	20
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Speed Profile (Time vs Spd) for Manhattan Blvd-NB-001tn	26
Speed Profile (Time vs Spd) for Manhattan Blvd-NB-002t	27
Speed Profile (Time vs Spd) for Manhattan Blvd-NB-003t	28
Speed Profile (Time vs Spd) for Manhattan Blvd-NB-004t	29

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd-NB-001tn	10/19/17	06:44	11619	Before	Primary
Manhattan Blvd-NB-002t	10/19/17	06:56	11837	Before	Secondary
Manhattan Blvd-NB-003t	10/19/17	07:08	11873	Before	Secondary
Manhattan Blvd-NB-004t	10/19/17	07:20	11870	Before	Secondary

Node Info

#	Len	Name
1	0	Lapalco Blvd
2	1305	Central Blvd
3	2083	LA Capitol
4	438	Parrot Petes
5	1313	Taco Bell
6	1504	Gretna Blvd
7	1470	Walmart
8	621	PetSmart
9	193	Chick Fil A
10	1924	Bed Bath and Beyond
11	768	Westbank Expy

Notes:

Length of Study Route = 11,619 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Lapalco Blvd							
2	1305	Central Blvd	29.8	0.0	29.9	7.3	0.0	21.5	29.8
3	2083	LA Capitol	38.8	0.0	36.7	2.8	0.0	0.0	38.8
4	438	Parrot Petes	8.0	0.0	37.3	0.5	0.0	1.8	8.0
5	1313	Taco Bell	25.3	0.0	35.5	2.8	0.0	4.5	25.3
6	1504	Gretna Blvd	33.0	0.3	31.1	7.0	0.0	18.8	33.0
7	1470	Walmart	29.5	0.0	34.0	4.5	0.0	11.8	29.5
8	621	PetSmart	12.8	0.0	33.2	1.8	0.0	6.0	12.8
9	193	Chick Fil A	6.5	0.3	20.2	3.3	0.0	5.5	6.5
10	1924	Bed Bath and Beyond	39.5	0.0	33.2	6.5	0.0	18.8	39.5
11	768	Westbank Expy	26.5	0.5	19.8	13.5	2.3	26.5	26.5
Total	11,619		249.5	1.0	31.8	49.8	2.3	115.0	249.5

Stats based on 4 BEFORE runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Lapalco Blvd				
2	1305	Central Blvd	0.0136	1.4733	12.8729	1.0605
3	2083	LA Capitol	0.0152	0.9202	10.0969	0.2355
4	438	Parrot Petes	0.0032	0.2046	2.3102	0.0666
5	1313	Taco Bell	0.0109	0.8612	8.9739	0.4444
6	1504	Gretna Blvd	0.0117	0.7866	7.5919	0.2695
7	1470	Walmart	0.0145	1.5794	16.3608	1.1321
8	621	PetSmart	0.0046	0.2777	2.9995	0.0711
9	193	Chick Fil A	0.0031	0.3765	2.3142	0.3157
10	1924	Bed Bath and Beyond	0.0161	1.3561	13.7037	0.7276
11	768	Westbank Expy	0.0089	0.8478	6.6415	0.4736
Total	11,619		0.1019	8.6833	83.8654	4.7967

Stats based on 4 BEFORE runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd-NB-001tn
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	28	31	30	30
3	2083	LA Capitol	39	39	39	38
4	438	Parrot Petes	8	9	7	8
5	1313	Taco Bell	24	31	24	22
6	1504	Gretna Blvd	31	33	38	30
7	1470	Walmart	29	29	29	31
8	621	PetSmart	12	15	11	13
9	193	Chick Fil A	4	7	3	12
10	1924	Bed Bath and Beyond	49	36	36	37
11	768	Westbank Expy	40	16	31	19
Totals	11619		264	246	248	240

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd-NB-001tn
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	0	0	0	0
3	2083	LA Capitol	0	0	0	0
4	438	Parrot Petes	0	0	0	0
5	1313	Taco Bell	0	0	0	0
6	1504	Gretna Blvd	0	0	1	0
7	1470	Walmart	0	0	0	0
8	621	PetSmart	0	0	0	0
9	193	Chick Fil A	0	0	0	1
10	1924	Bed Bath and Beyond	0	0	0	0
11	768	Westbank Expy	1	0	1	0
Totals	11619		1	0	2	1

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd-NB-001tn
Manhattan Blvd-NB-002t
Manhattan Blvd-NB-003t
Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	31.8	29.4	30.2	29.9
3	2083	LA Capitol	36.4	36.4	36.7	37.5
4	438	Parrot Petes	37.3	32.8	38.9	38.8
5	1313	Taco Bell	37.5	29.1	38.2	40.0
6	1504	Gretna Blvd	33.2	30.6	26.2	34.3
7	1470	Walmart	34.5	34.4	34.9	32.4
8	621	PetSmart	35.2	28.4	40.3	32.6
9	193	Chick Fil A	33.0	18.7	41.3	11.3
10	1924	Bed Bath and Beyond	26.8	36.5	36.2	35.5
11	768	Westbank Expy	13.1	32.3	17.1	27.5
Totals	11619		30.0	32.2	32.0	33.1

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd-NB-001t
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	6	8	7	8
3	2083	LA Capitol	3	3	3	2
4	438	Parrot Petes	1	1	0	0
5	1313	Taco Bell	2	8	1	0
6	1504	Gretna Blvd	5	7	12	4
7	1470	Walmart	4	4	4	6
8	621	PetSmart	1	4	0	2
9	193	Chick Fil A	1	4	0	8
10	1924	Bed Bath and Beyond	16	3	3	4
11	768	Westbank Expy	27	3	18	6
Totals	11619		66	45	48	40

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd-NB-001t
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	0	0	0	0
3	2083	LA Capitol	0	0	0	0
4	438	Parrot Petes	0	0	0	0
5	1313	Taco Bell	0	0	0	0
6	1504	Gretna Blvd	0	0	0	0
7	1470	Walmart	0	0	0	0
8	621	PetSmart	0	0	0	0
9	193	Chick Fil A	0	0	0	0
10	1924	Bed Bath and Beyond	0	0	0	0
11	768	Westbank Expy	6	0	3	0
Totals	11619		6	0	3	0

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd-NB-001t
Manhattan Blvd-NB-002t
Manhattan Blvd-NB-003t
Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	20	22	15	29
3	2083	LA Capitol	0	0	0	0
4	438	Parrot Petes	0	7	0	0
5	1313	Taco Bell	0	18	0	0
6	1504	Gretna Blvd	14	29	22	10
7	1470	Walmart	10	13	10	14
8	621	PetSmart	5	12	0	7
9	193	Chick Fil A	3	7	0	12
10	1924	Bed Bath and Beyond	49	5	11	10
11	768	Westbank Expy	40	16	31	19
Totals	11619		141	129	89	101

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd-NB-001tn
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	28	31	30	30
3	2083	LA Capitol	39	39	39	38
4	438	Parrot Petes	8	9	7	8
5	1313	Taco Bell	24	31	24	22
6	1504	Gretna Blvd	31	33	38	30
7	1470	Walmart	29	29	29	31
8	621	PetSmart	12	15	11	13
9	193	Chick Fil A	4	7	3	12
10	1924	Bed Bath and Beyond	49	36	36	37
11	768	Westbank Expy	40	16	31	19
Totals	11619		264	246	248	240

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd-NB-001t
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	0.0111	0.0151	0.0147	0.0135
3	2083	LA Capitol	0.0149	0.0152	0.0154	0.0154
4	438	Parrot Petes	0.0035	0.0030	0.0029	0.0033
5	1313	Taco Bell	0.0097	0.0150	0.0096	0.0094
6	1504	Gretna Blvd	0.0117	0.0110	0.0130	0.0112
7	1470	Walmart	0.0131	0.0123	0.0156	0.0171
8	621	PetSmart	0.0046	0.0046	0.0049	0.0044
9	193	Chick Fil A	0.0013	0.0040	0.0015	0.0056
10	1924	Bed Bath and Beyond	0.0184	0.0163	0.0133	0.0166
11	768	Westbank Expy	0.0111	0.0052	0.0130	0.0061
Totals	11619		0.0994	0.1017	0.1040	0.1026

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd-NB-001tn
Manhattan Blvd-NB-002t
Manhattan Blvd-NB-003t
Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	1.0936	1.6826	1.6281	1.4889
3	2083	LA Capitol	0.8409	0.9360	0.9348	0.9691
4	438	Parrot Petes	0.2865	0.1620	0.1759	0.1939
5	1313	Taco Bell	0.6245	1.8388	0.4819	0.4996
6	1504	Gretna Blvd	0.8265	0.7344	0.9393	0.6461
7	1470	Walmart	1.3104	1.1467	1.7906	2.0698
8	621	PetSmart	0.3028	0.2700	0.3041	0.2340
9	193	Chick Fil A	0.0720	0.5883	0.1089	0.7366
10	1924	Bed Bath and Beyond	1.8395	1.4310	0.6480	1.5059
11	768	Westbank Expy	1.0487	0.2880	1.5979	0.4568
Totals	11619		8.2453	9.0777	8.6095	8.8006

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd-NB-001t

Manhattan Blvd-NB-002t

Manhattan Blvd-NB-003t

Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	11.4370	13.4943	13.5435	13.0165
3	2083	LA Capitol	8.9755	10.2904	10.2596	10.8622
4	438	Parrot Petes	3.4280	1.6380	1.9963	2.1783
5	1313	Taco Bell	7.0623	18.1928	5.0903	5.5504
6	1504	Gretna Blvd	8.3322	7.0320	7.9276	7.0759
7	1470	Walmart	14.4546	12.4419	17.8086	20.7381
8	621	PetSmart	3.2841	2.7300	3.6179	2.3660
9	193	Chick Fil A	0.7280	3.5307	1.4074	3.5907
10	1924	Bed Bath and Beyond	15.5363	16.0768	6.5520	16.6495
11	768	Westbank Expy	7.4668	2.9120	12.1641	4.0230
Totals	11619		80.7048	88.3389	80.3673	86.0506

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd-NB-001t
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	0.6516	1.2865	1.2314	1.0725
3	2083	LA Capitol	0.1505	0.2525	0.2423	0.2967
4	438	Parrot Petes	0.1460	0.0198	0.0503	0.0503
5	1313	Taco Bell	0.2057	1.4139	0.0527	0.1054
6	1504	Gretna Blvd	0.3355	0.2051	0.3802	0.1572
7	1470	Walmart	0.8450	0.6801	1.3687	1.6348
8	621	PetSmart	0.0985	0.0391	0.1046	0.0421
9	193	Chick Fil A	0.0119	0.5470	0.0560	0.6479
10	1924	Bed Bath and Beyond	1.1538	0.8261	0.0441	0.8863
11	768	Westbank Expy	0.4802	0.0201	1.2244	0.1699
Totals	11619		4.0787	5.2900	4.7548	5.0631

ITS Regional

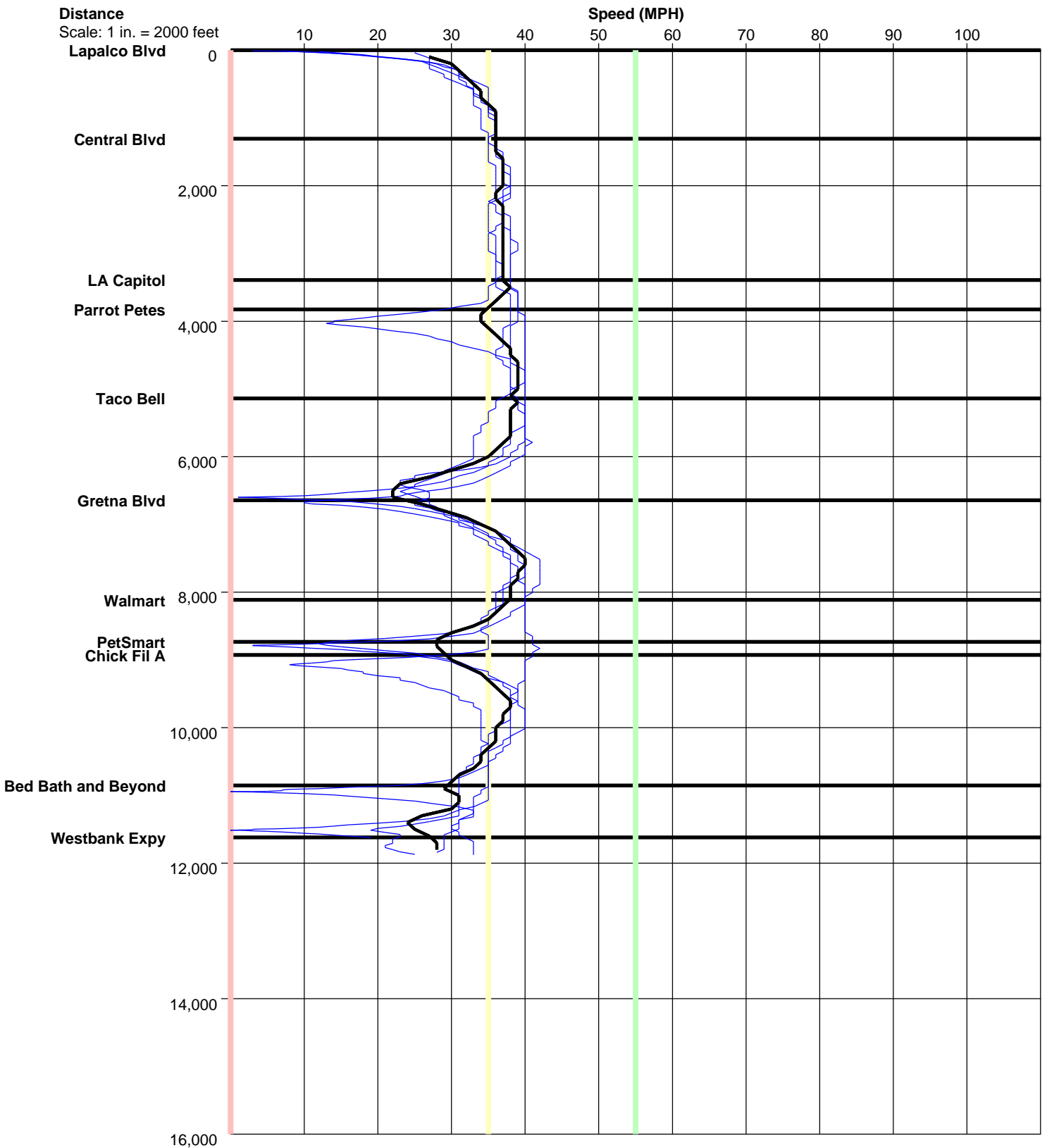
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

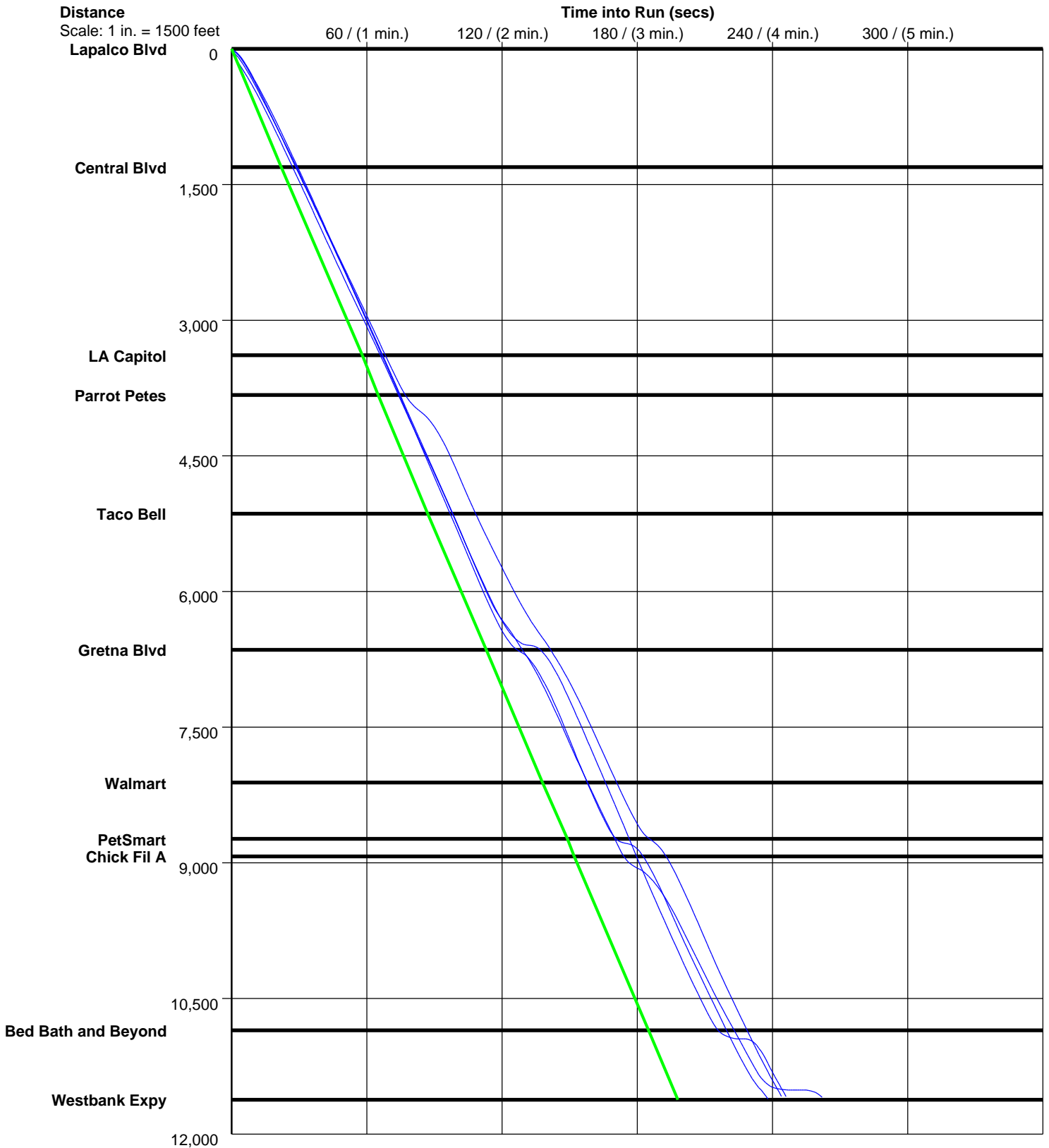
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

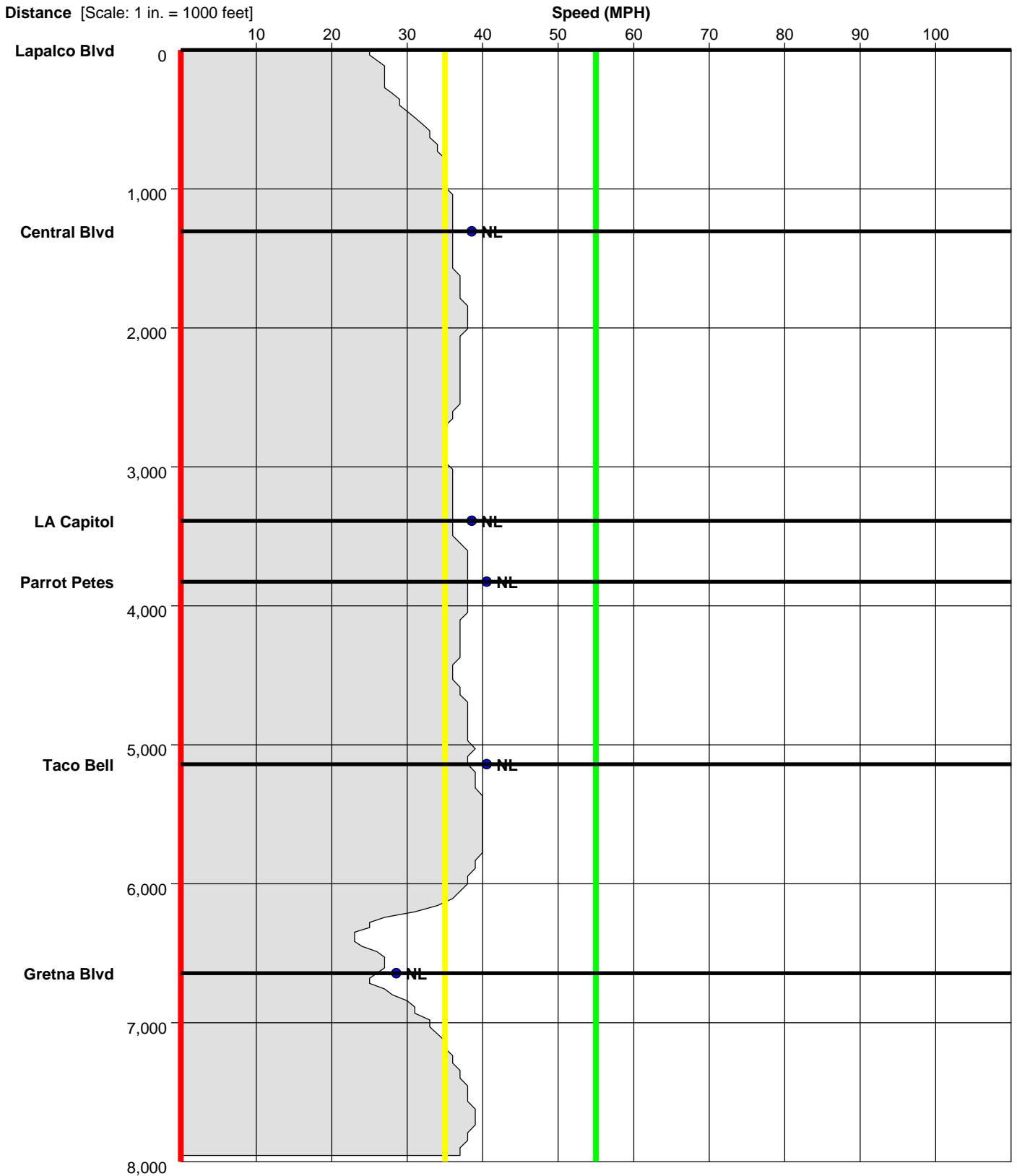
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd-NB-001tn** Start Time: **06:44** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

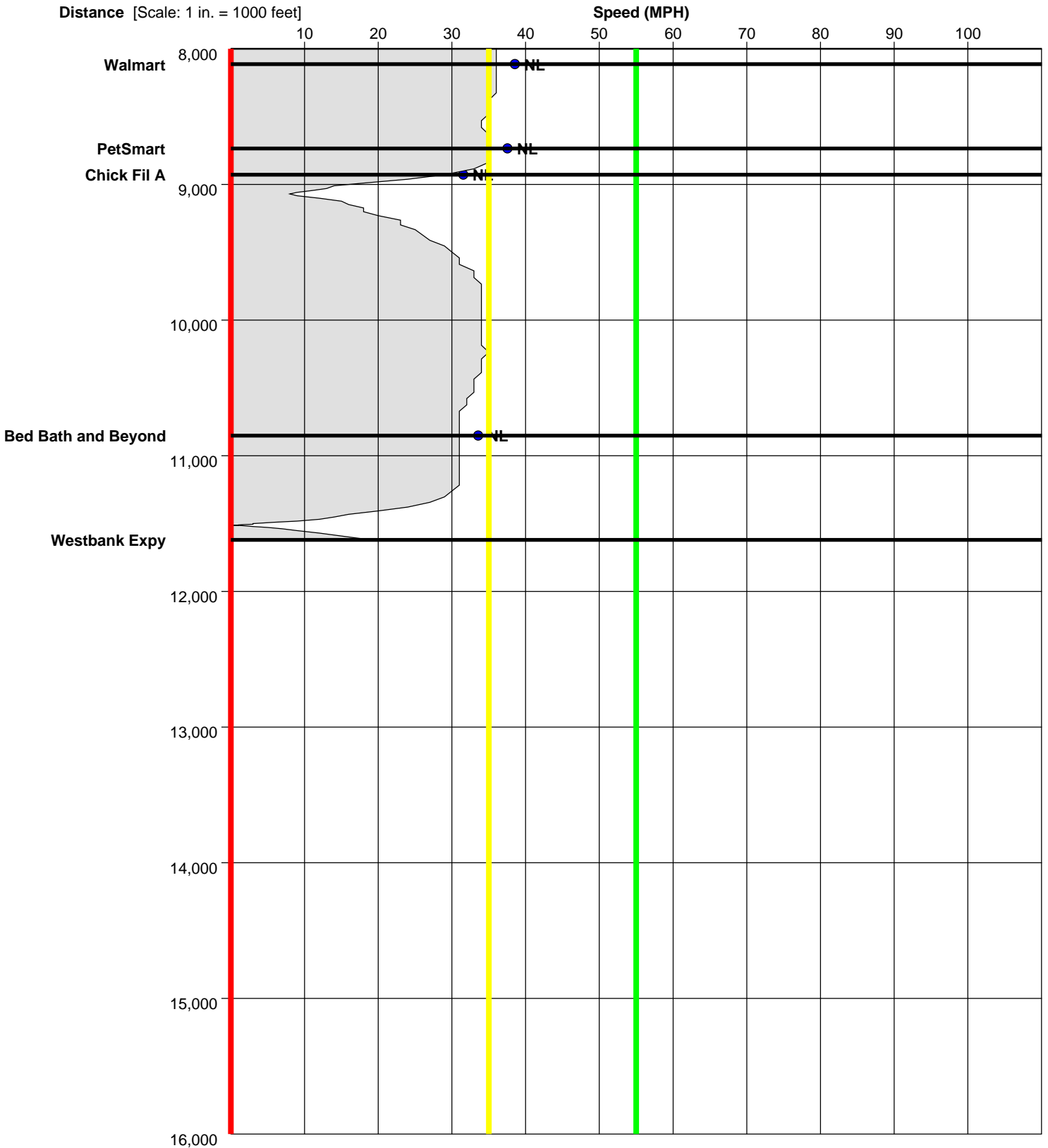
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd-NB-001tn** Start Time: **06:44** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

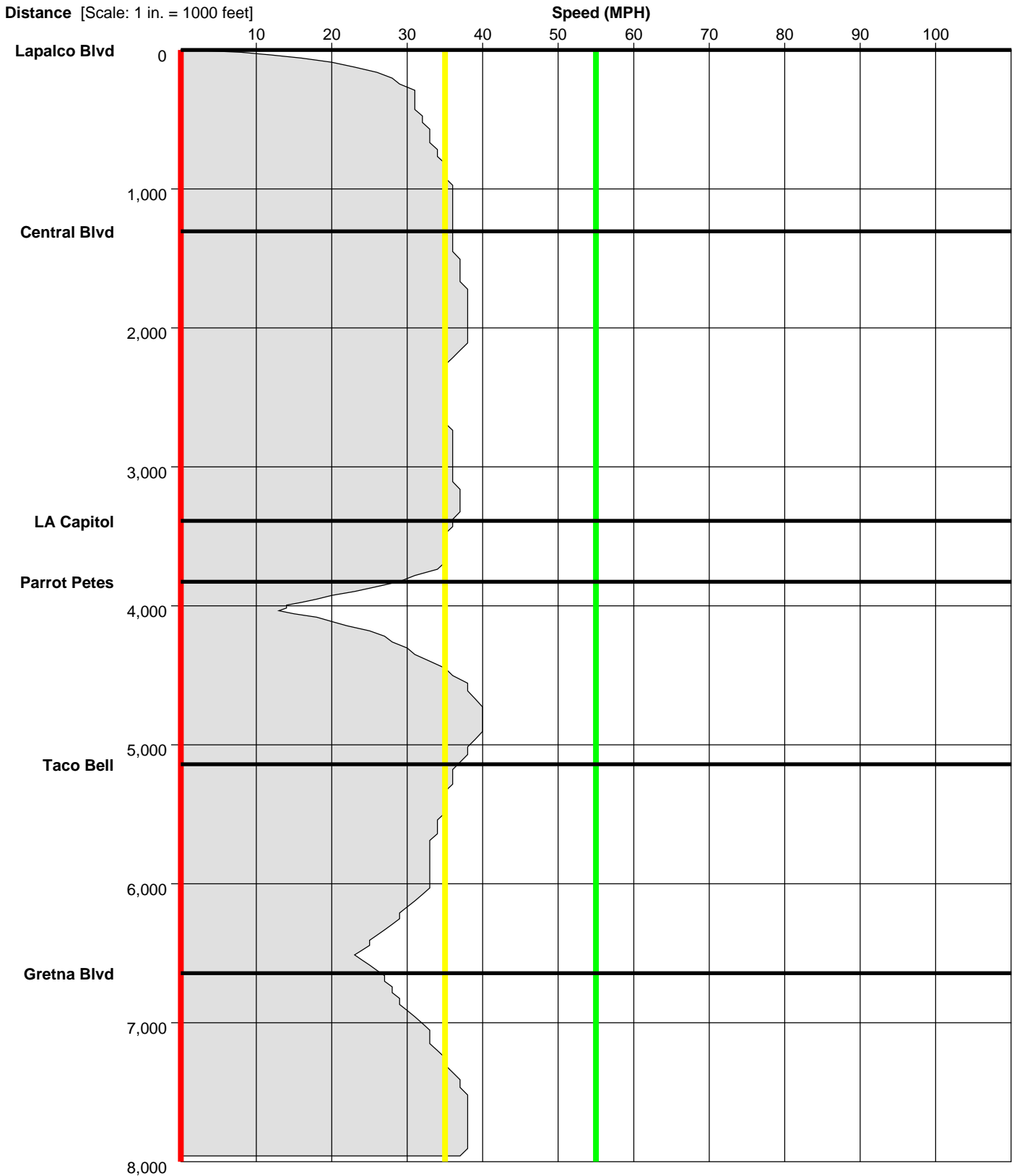
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd-NB-002t** Start Time: **06:56** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

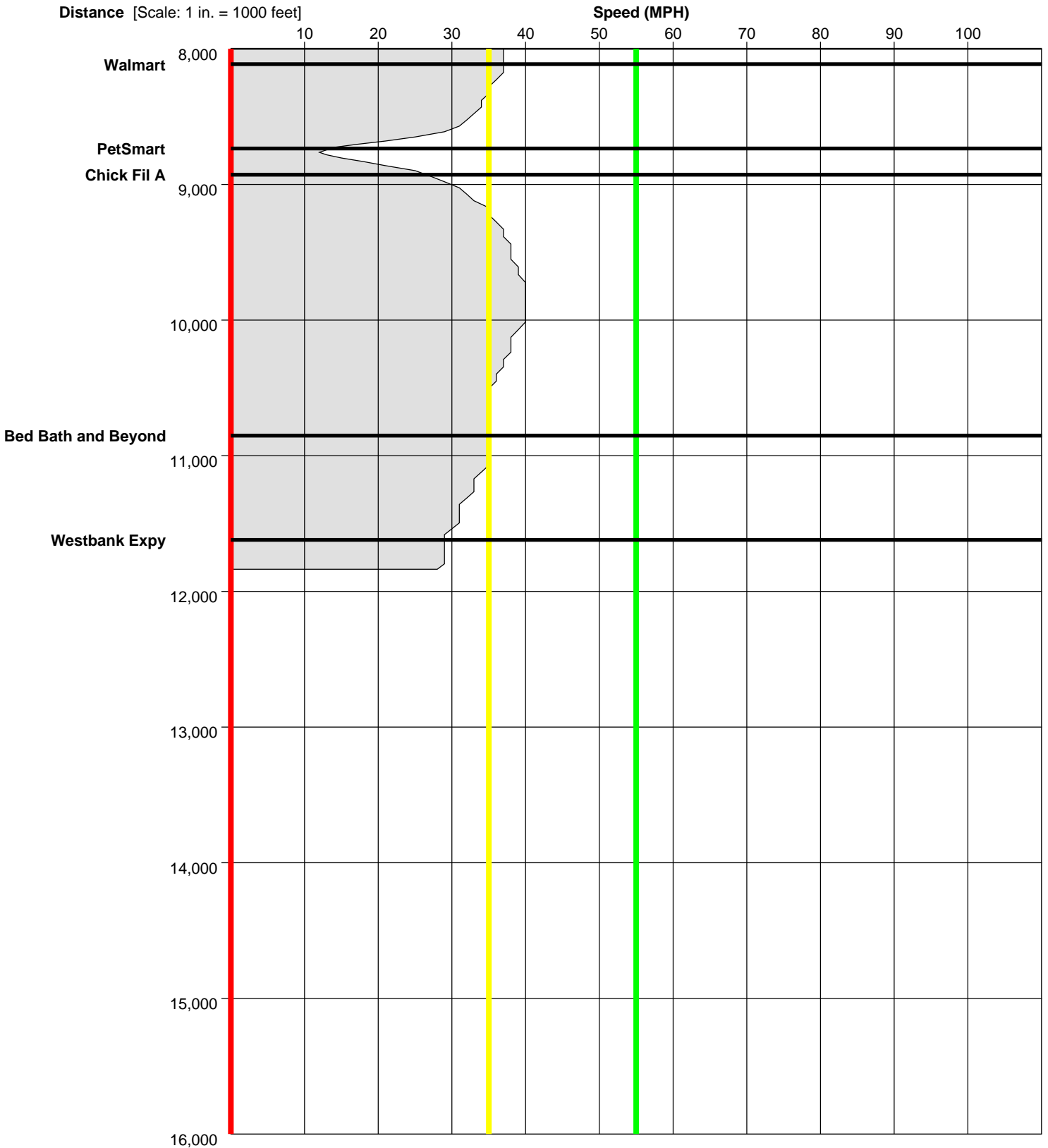
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd-NB-002t** Start Time: **06:56** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

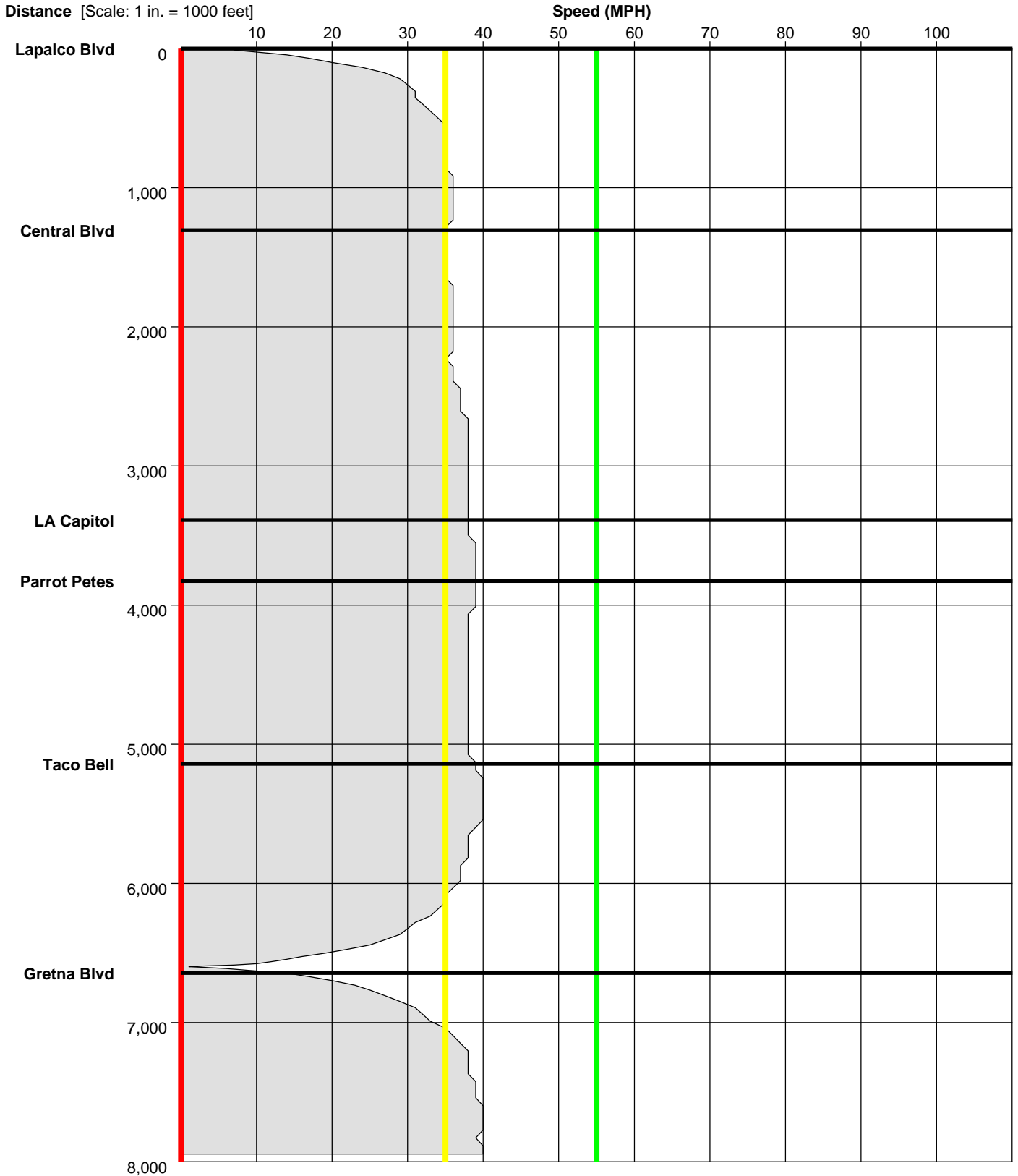
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd-NB-003t** Start Time: **07:08** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

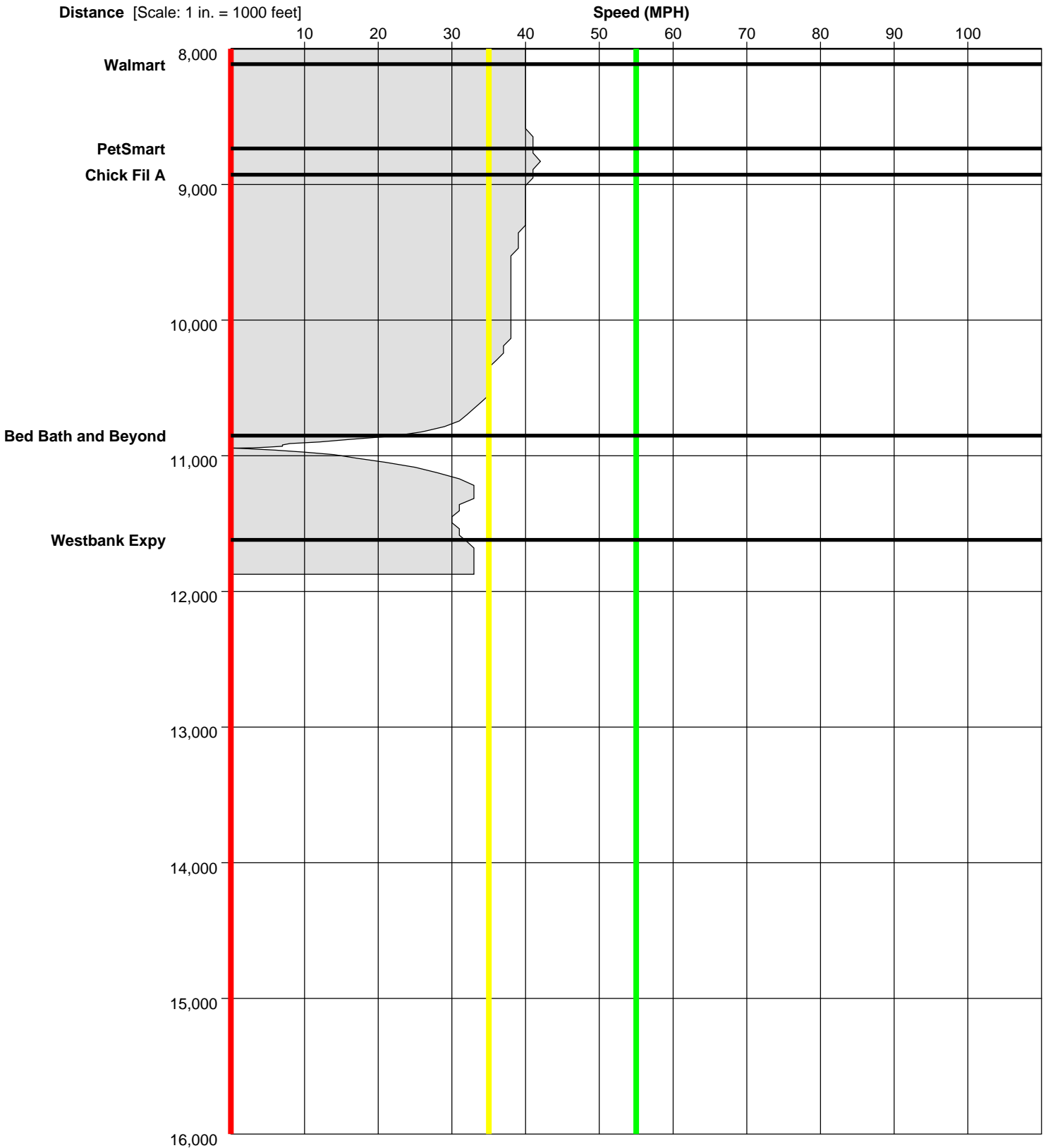
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd-NB-003t** Start Time: **07:08** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

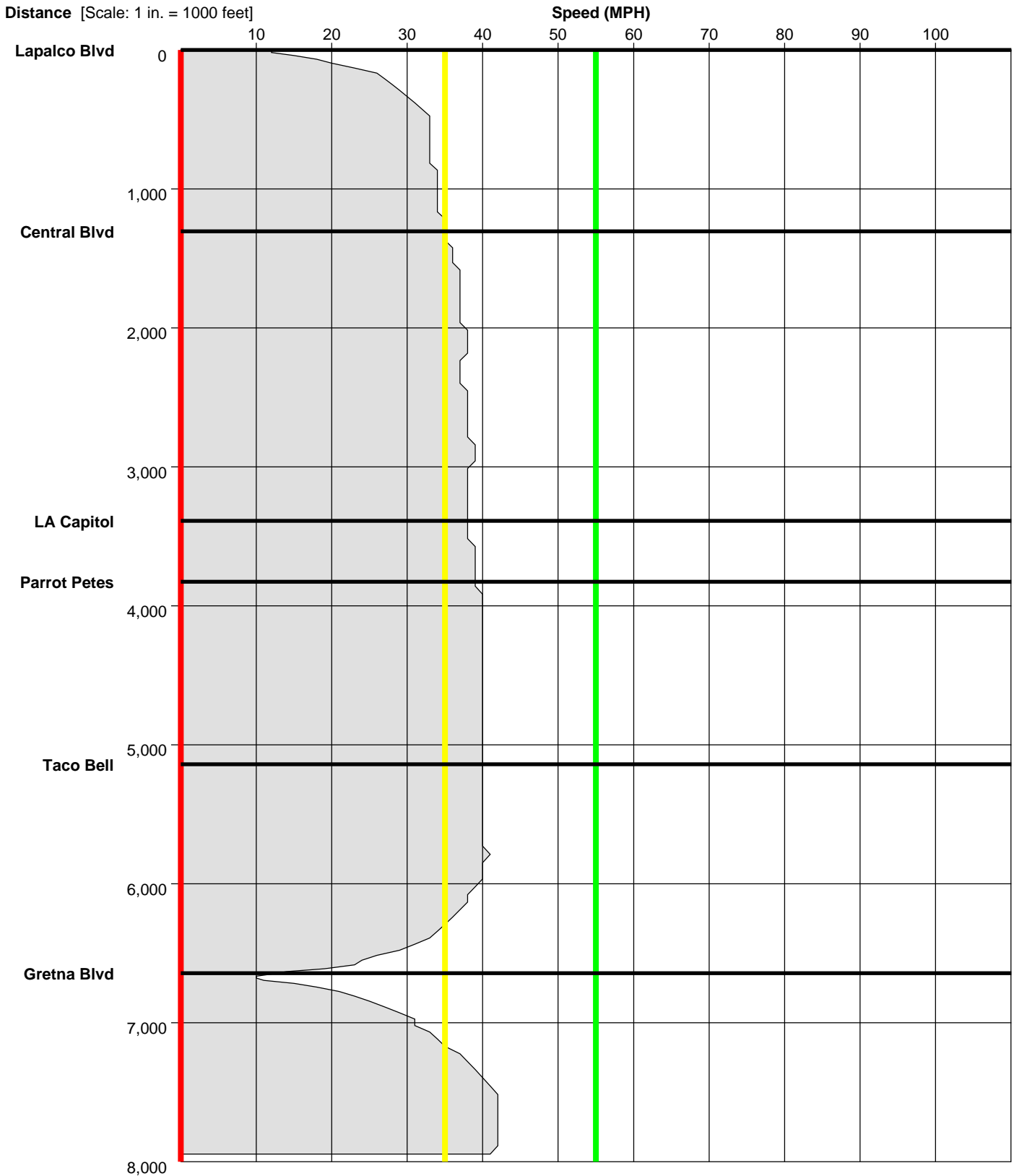
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **24**

Speed Profile

Run : **Manhattan Blvd-NB-004t** Start Time: **07:20** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

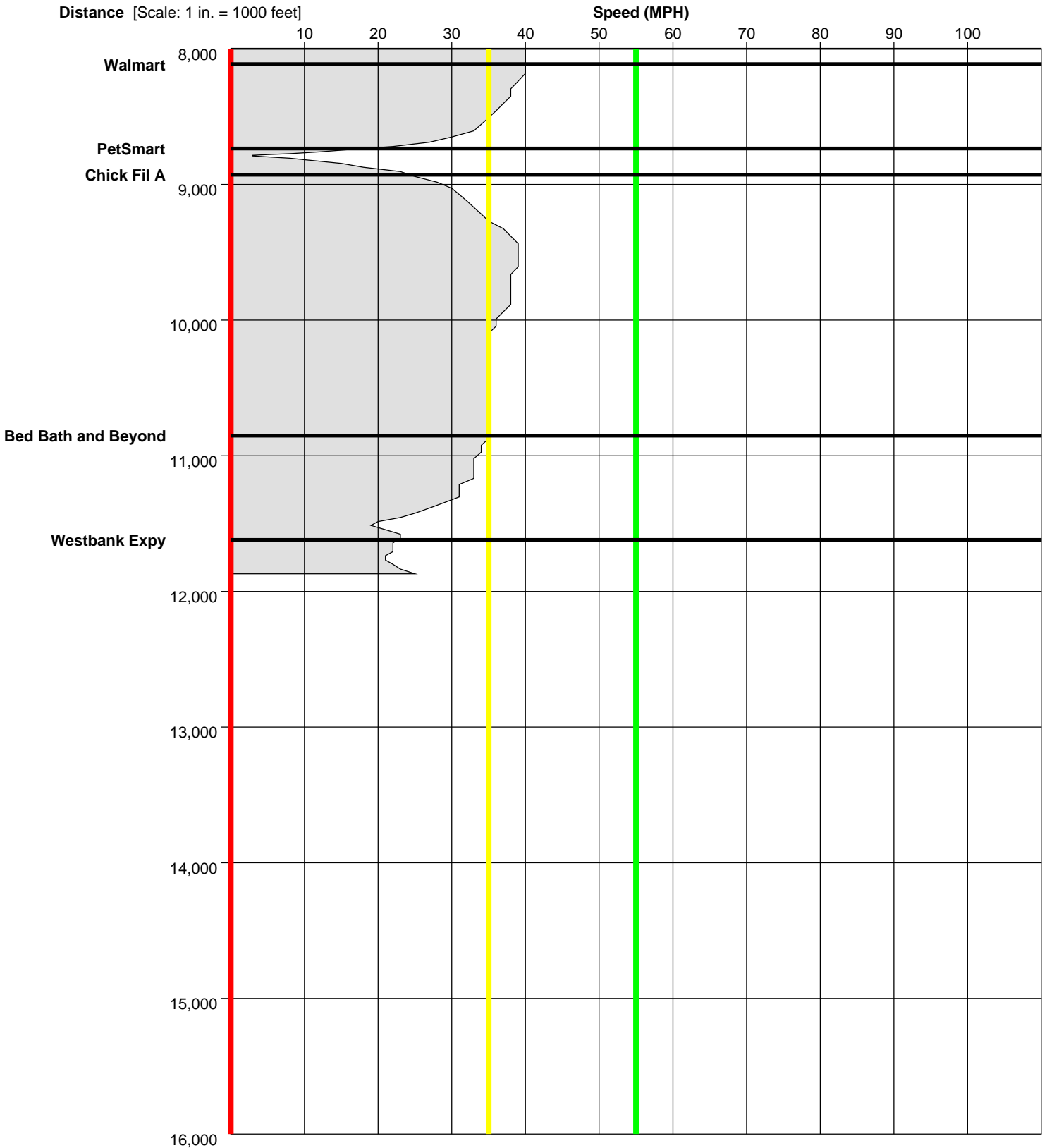
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **25**

Speed Profile

Run : **Manhattan Blvd-NB-004t** Start Time: **07:20** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

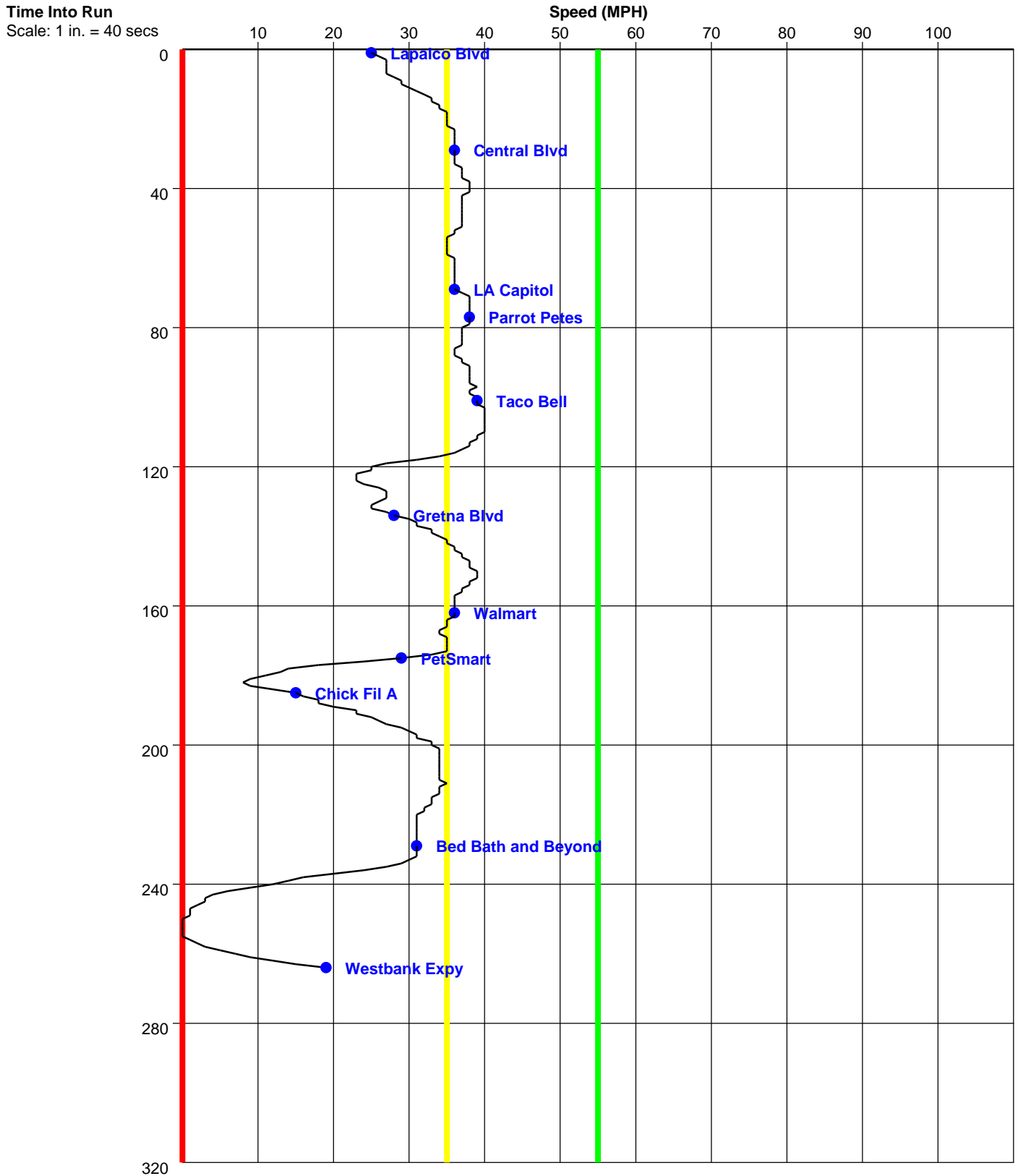
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd-NB-001tn** Start Time:**06:44** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

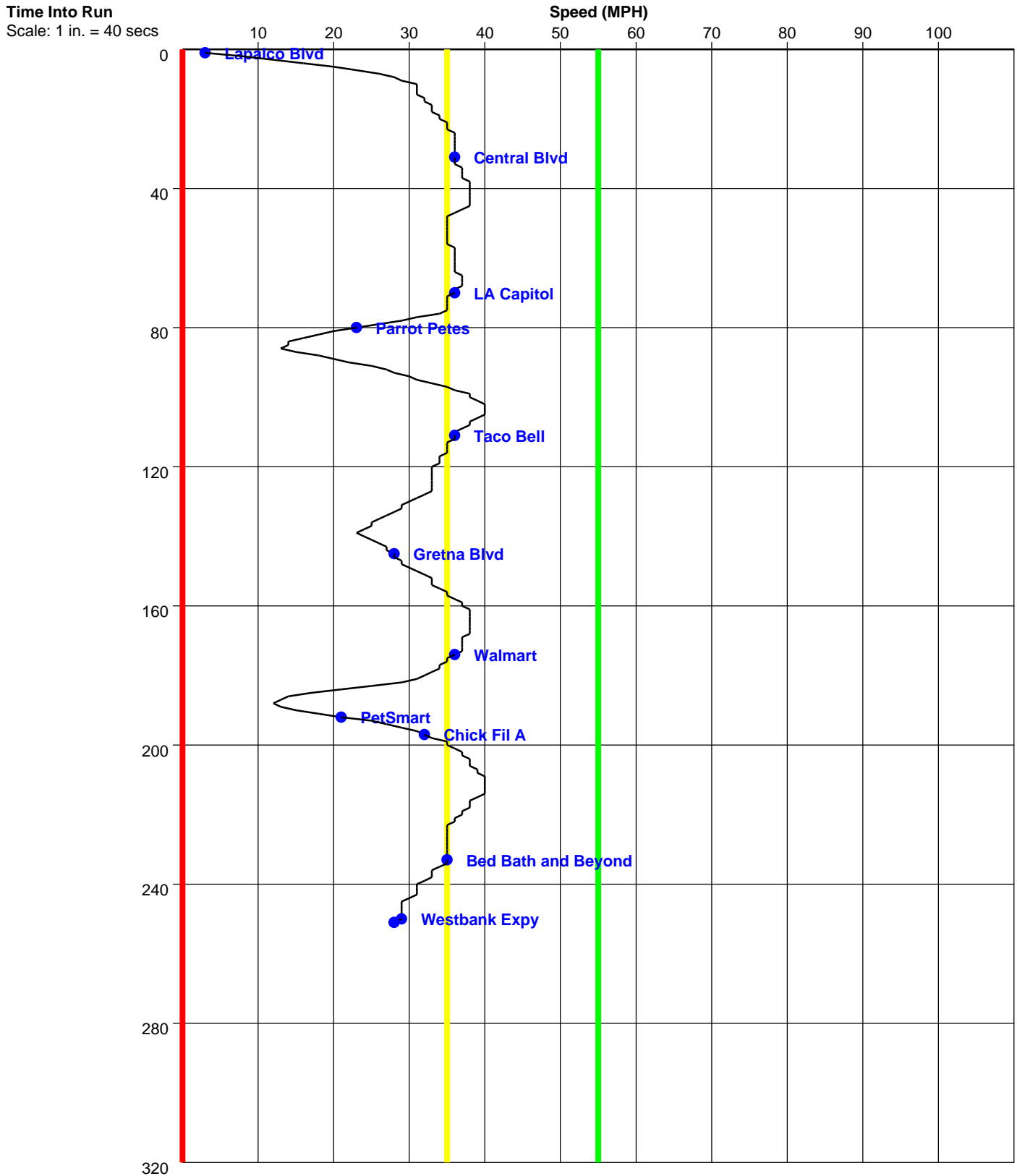
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **27**

Time-Based Speed Profile

Run : **Manhattan Blvd-NB-002t** Start Time:**06:56** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

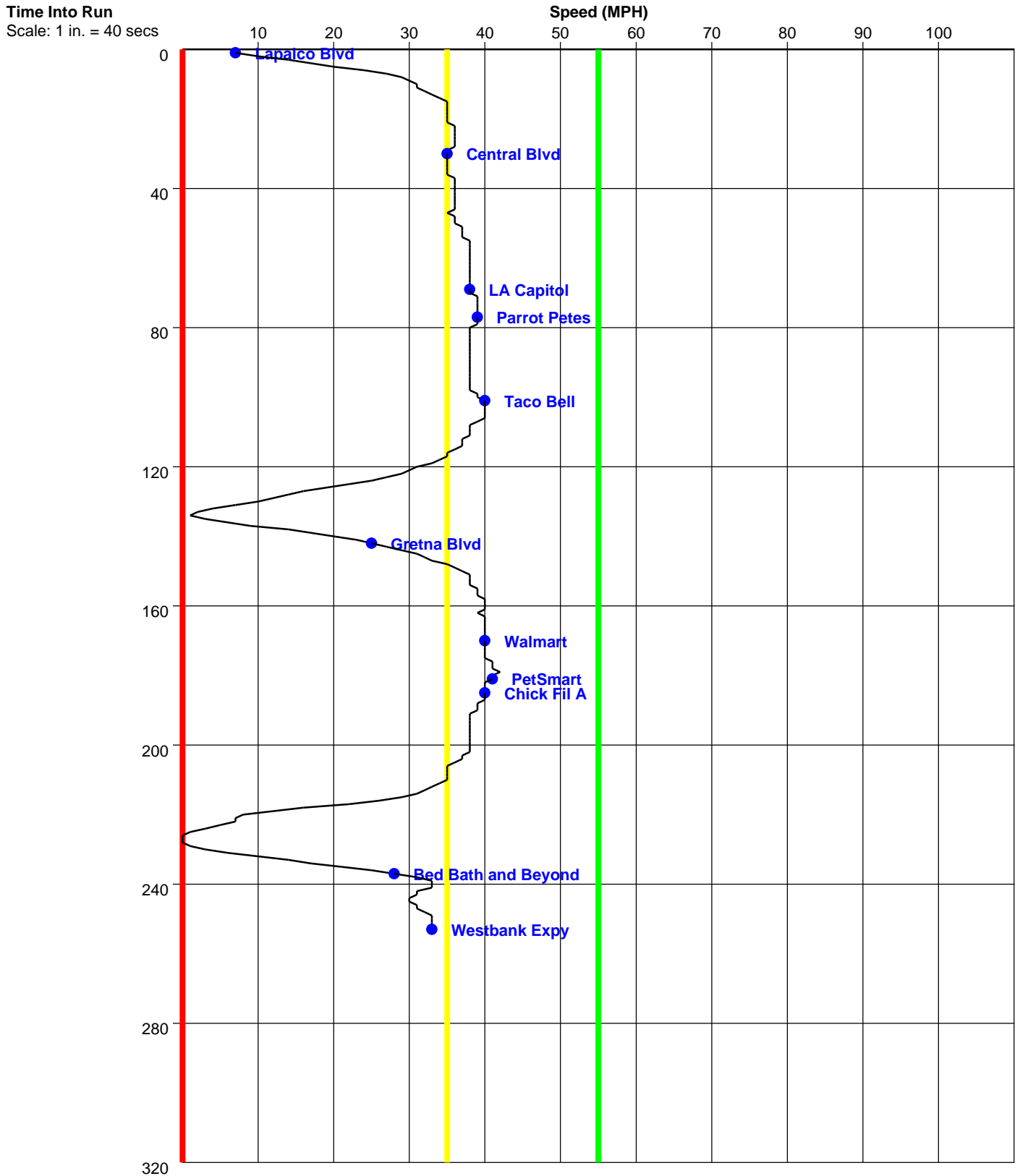
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **28**

Time-Based Speed Profile

Run : **Manhattan Blvd-NB-003t** Start Time:**07:08** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

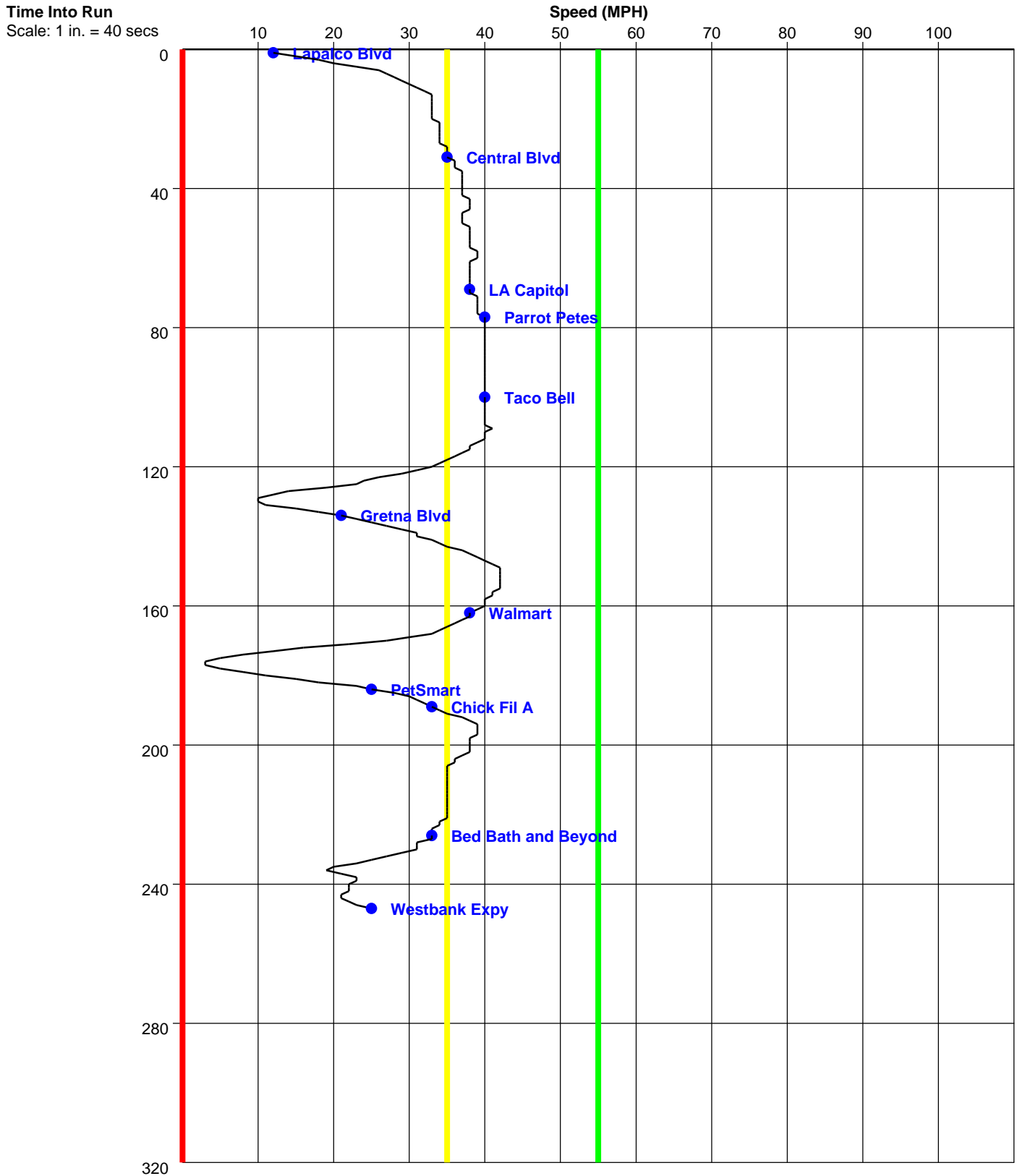
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **29**

Time-Based Speed Profile

Run : **Manhattan Blvd-NB-004t** Start Time:**07:20** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd SB AM

<u>Report Name</u>	<u>Page</u>
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Detailed Statistics By Run - Total Delay	8
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Detailed Statistics By Run - Time <= 35 MPH	10
Detailed Statistics By Run - Time <= 55 MPH	11
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Detailed Statistics By Run - Hydrocarbons	13
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Speed Profile (Time vs Spd) for Manhattan Blvd-SB-001tn	26
Speed Profile (Time vs Spd) for Manhattan Blvd-SB-002t	27
Speed Profile (Time vs Spd) for Manhattan Blvd-SB-003t	28
Speed Profile (Time vs Spd) for Manhattan Blvd-SB-004t	29

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd-SB-001tn	10/19/17	06:38	11924	Before	Primary
Manhattan Blvd-SB-002t	10/19/17	06:50	11869	Before	Secondary
Manhattan Blvd-SB-003t	10/19/17	07:01	11967	Before	Secondary
Manhattan Blvd-SB-004t	10/19/17	07:14	11969	Before	Secondary

Notes:

Node Info

#	Len	Name
1	0	Westbank Expwy
2	1076	Bed Bath and Beyond
3	1939	Chick Fil A
4	190	PetSmart
5	645	Walmart
6	1485	Gretna Blvd
7	1489	Taco Bell
8	1291	Parrot Petes
9	480	La Capitol
10	2049	Central Blvd
11	1280	Lapalco Blvd

Length of Study Route = 11,924 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Westbank Expwy							
2	1076	Bed Bath and Beyond	28.8	0.0	25.5	10.0	0.0	27.8	28.8
3	1939	Chick Fil A	48.3	0.5	27.4	15.0	0.3	44.8	48.3
4	190	PetSmart	12.0	0.3	10.8	8.3	3.8	12.0	12.0
5	645	Walmart	12.8	0.0	34.5	1.5	0.0	8.8	12.8
6	1485	Gretna Blvd	29.5	0.0	34.3	4.0	0.0	21.0	29.5
7	1489	Taco Bell	33.0	0.3	30.8	7.3	0.0	15.0	33.0
8	1291	Parrot Petes	24.0	0.0	36.7	1.5	0.0	3.0	24.0
9	480	La Capitol	8.8	0.0	37.4	0.5	0.0	2.5	8.8
10	2049	Central Blvd	38.0	0.0	36.8	3.0	0.0	12.0	38.0
11	1280	Lapalco Blvd	57.8	0.8	15.1	36.0	22.5	49.5	57.5
Total	11,924		292.8	1.8	27.8	87.0	26.5	196.3	292.5

Stats based on 4 BEFORE runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	0.0133	1.5820	12.4359	1.2375
3	1939	Chick Fil A	0.0174	1.4970	13.3655	0.7691
4	190	PetSmart	0.0035	0.3694	2.9395	0.1935
5	645	Walmart	0.0056	0.5193	5.4090	0.3117
6	1485	Gretna Blvd	0.0109	0.7240	7.6775	0.2208
7	1489	Taco Bell	0.0132	1.1627	11.0659	0.6610
8	1291	Parrot Petes	0.0105	0.8578	9.7098	0.4433
9	480	La Capitol	0.0035	0.2077	2.3234	0.0539
10	2049	Central Blvd	0.0152	0.9736	10.7072	0.3170
11	1280	Lapalco Blvd	0.0161	1.3590	11.0726	0.4689
Total	11,924		0.1093	9.2525	86.7064	4.6766

Stats based on 4 BEFORE runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd-SB-001tn
Manhattan Blvd-SB-002t
Manhattan Blvd-SB-003t
Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	29	29	29	28
3	1939	Chick Fil A	42	56	39	56
4	190	PetSmart	4	4	36	4
5	645	Walmart	13	12	14	12
6	1485	Gretna Blvd	30	29	31	28
7	1489	Taco Bell	28	35	29	40
8	1291	Parrot Petes	24	24	24	24
9	480	La Capitol	10	9	8	8
10	2049	Central Blvd	42	38	34	38
11	1280	Lapalco Blvd	89	32	62	48
Totals	11924		311	268	306	286

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd-SB-001tn
 Manhattan Blvd-SB-002t
 Manhattan Blvd-SB-003t
 Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	0	0	0	0
3	1939	Chick Fil A	0	1	0	1
4	190	PetSmart	0	0	1	0
5	645	Walmart	0	0	0	0
6	1485	Gretna Blvd	0	0	0	0
7	1489	Taco Bell	0	0	0	1
8	1291	Parrot Petes	0	0	0	0
9	480	La Capitol	0	0	0	0
10	2049	Central Blvd	0	0	0	0
11	1280	Lapalco Blvd	1	0	1	1
Totals	11924		1	1	2	3

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd-SB-001tn
 Manhattan Blvd-SB-002t
 Manhattan Blvd-SB-003t
 Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	25.3	25.9	26.4	26.5
3	1939	Chick Fil A	31.3	23.7	33.1	23.7
4	190	PetSmart	32.5	33.0	3.8	32.5
5	645	Walmart	33.8	35.4	31.7	35.3
6	1485	Gretna Blvd	33.7	34.6	31.8	37.1
7	1489	Taco Bell	36.3	29.1	35.5	25.4
8	1291	Parrot Petes	36.8	36.9	37.0	36.8
9	480	La Capitol	32.7	38.0	39.1	39.5
10	2049	Central Blvd	33.2	36.6	40.9	37.2
11	1280	Lapalco Blvd	9.8	26.5	14.1	17.8
Totals	11924		26.1	30.3	26.5	28.5

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd-SB-001tn
 Manhattan Blvd-SB-002t
 Manhattan Blvd-SB-003t
 Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	11	10	10	9
3	1939	Chick Fil A	9	22	6	23
4	190	PetSmart	1	0	32	0
5	645	Walmart	2	1	2	1
6	1485	Gretna Blvd	5	3	6	2
7	1489	Taco Bell	3	9	3	14
8	1291	Parrot Petes	2	2	1	1
9	480	La Capitol	2	0	0	0
10	2049	Central Blvd	7	3	0	2
11	1280	Lapalco Blvd	67	11	40	26
Totals	11924		109	61	100	78

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd-SB-001tn
 Manhattan Blvd-SB-002t
 Manhattan Blvd-SB-003t
 Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	0	0	0	0
3	1939	Chick Fil A	0	0	0	1
4	190	PetSmart	0	0	15	0
5	645	Walmart	0	0	0	0
6	1485	Gretna Blvd	0	0	0	0
7	1489	Taco Bell	0	0	0	0
8	1291	Parrot Petes	0	0	0	0
9	480	La Capitol	0	0	0	0
10	2049	Central Blvd	0	0	0	0
11	1280	Lapalco Blvd	56	0	25	9
Totals	11924		56	0	40	10

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd-SB-001tn
Manhattan Blvd-SB-002t
Manhattan Blvd-SB-003t
Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	29	29	27	26
3	1939	Chick Fil A	42	56	31	50
4	190	PetSmart	4	4	36	4
5	645	Walmart	13	3	14	5
6	1485	Gretna Blvd	30	23	31	0
7	1489	Taco Bell	4	26	6	24
8	1291	Parrot Petes	1	4	2	5
9	480	La Capitol	10	0	0	0
10	2049	Central Blvd	42	6	0	0
11	1280	Lapalco Blvd	82	23	48	45
Totals	11924		257	174	195	159

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd-SB-001tn
 Manhattan Blvd-SB-002t
 Manhattan Blvd-SB-003t
 Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	29	29	29	28
3	1939	Chick Fil A	42	56	39	56
4	190	PetSmart	4	4	36	4
5	645	Walmart	13	12	14	12
6	1485	Gretna Blvd	30	29	31	28
7	1489	Taco Bell	28	35	29	40
8	1291	Parrot Petes	24	24	24	24
9	480	La Capitol	10	9	8	8
10	2049	Central Blvd	42	38	34	38
11	1280	Lapalco Blvd	89	31	62	48
Totals	11924		311	267	306	286

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd-SB-001tn
Manhattan Blvd-SB-002t
Manhattan Blvd-SB-003t
Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	0.0128	0.0121	0.0147	0.0135
3	1939	Chick Fil A	0.0145	0.0208	0.0142	0.0200
4	190	PetSmart	0.0016	0.0015	0.0092	0.0019
5	645	Walmart	0.0049	0.0049	0.0078	0.0049
6	1485	Gretna Blvd	0.0111	0.0106	0.0108	0.0111
7	1489	Taco Bell	0.0115	0.0138	0.0124	0.0152
8	1291	Parrot Petes	0.0093	0.0106	0.0098	0.0124
9	480	La Capitol	0.0033	0.0036	0.0035	0.0034
10	2049	Central Blvd	0.0159	0.0148	0.0151	0.0150
11	1280	Lapalco Blvd	0.0218	0.0106	0.0180	0.0141
Totals	11924		0.1064	0.1035	0.1156	0.1116

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd-SB-001tn
 Manhattan Blvd-SB-002t
 Manhattan Blvd-SB-003t
 Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	1.5258	1.4220	1.7584	1.6216
3	1939	Chick Fil A	1.0582	2.0097	0.9960	1.9240
4	190	PetSmart	0.1497	0.1125	0.9868	0.2285
5	645	Walmart	0.3590	0.3895	0.9390	0.3895
6	1485	Gretna Blvd	0.7855	0.6504	0.7698	0.6904
7	1489	Taco Bell	0.8640	1.3572	1.0655	1.3643
8	1291	Parrot Petes	0.5258	0.8954	0.6636	1.3464
9	480	La Capitol	0.1800	0.2107	0.2451	0.1952
10	2049	Central Blvd	1.2863	0.9097	0.8242	0.8741
11	1280	Lapalco Blvd	1.9050	0.8460	1.5086	1.1766
Totals	11924		8.6392	8.8032	9.7570	9.8107

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd-SB-001tn
 Manhattan Blvd-SB-002t
 Manhattan Blvd-SB-003t
 Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	11.1153	11.4716	14.5008	12.6560
3	1939	Chick Fil A	10.9581	16.3377	10.7129	15.4535
4	190	PetSmart	1.6051	1.2069	6.4361	2.5100
5	645	Walmart	3.8871	4.3857	8.9774	4.3857
6	1485	Gretna Blvd	8.3936	6.8849	7.8009	7.6306
7	1489	Taco Bell	9.8316	12.3985	11.9442	10.0894
8	1291	Parrot Petes	5.6507	10.0927	7.4996	15.5961
9	480	La Capitol	1.8200	2.3273	2.9343	2.2120
10	2049	Central Blvd	13.9636	9.8951	9.4212	9.5487
11	1280	Lapalco Blvd	17.7993	6.4347	11.6117	8.4447
Totals	11924		85.0243	81.4352	91.8392	88.5267

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd-SB-001tn
Manhattan Blvd-SB-002t
Manhattan Blvd-SB-003t
Manhattan Blvd-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expwy				
2	1076	Bed Bath and Beyond	1.1943	1.0523	1.4094	1.2939
3	1939	Chick Fil A	0.3559	1.2238	0.3398	1.1567
4	190	PetSmart	0.0851	0.0438	0.4780	0.1671
5	645	Walmart	0.1360	0.1855	0.7395	0.1855
6	1485	Gretna Blvd	0.2800	0.1476	0.2586	0.1969
7	1489	Taco Bell	0.3801	0.8586	0.5766	0.8287
8	1291	Parrot Petes	0.1105	0.4782	0.2392	0.9452
9	480	La Capitol	0.0090	0.0495	0.1038	0.0535
10	2049	Central Blvd	0.5939	0.2537	0.2093	0.2111
11	1280	Lapalco Blvd	0.4173	0.4013	0.5739	0.4831
Totals	11924		3.5622	4.6944	4.9280	5.5219

ITS Regional

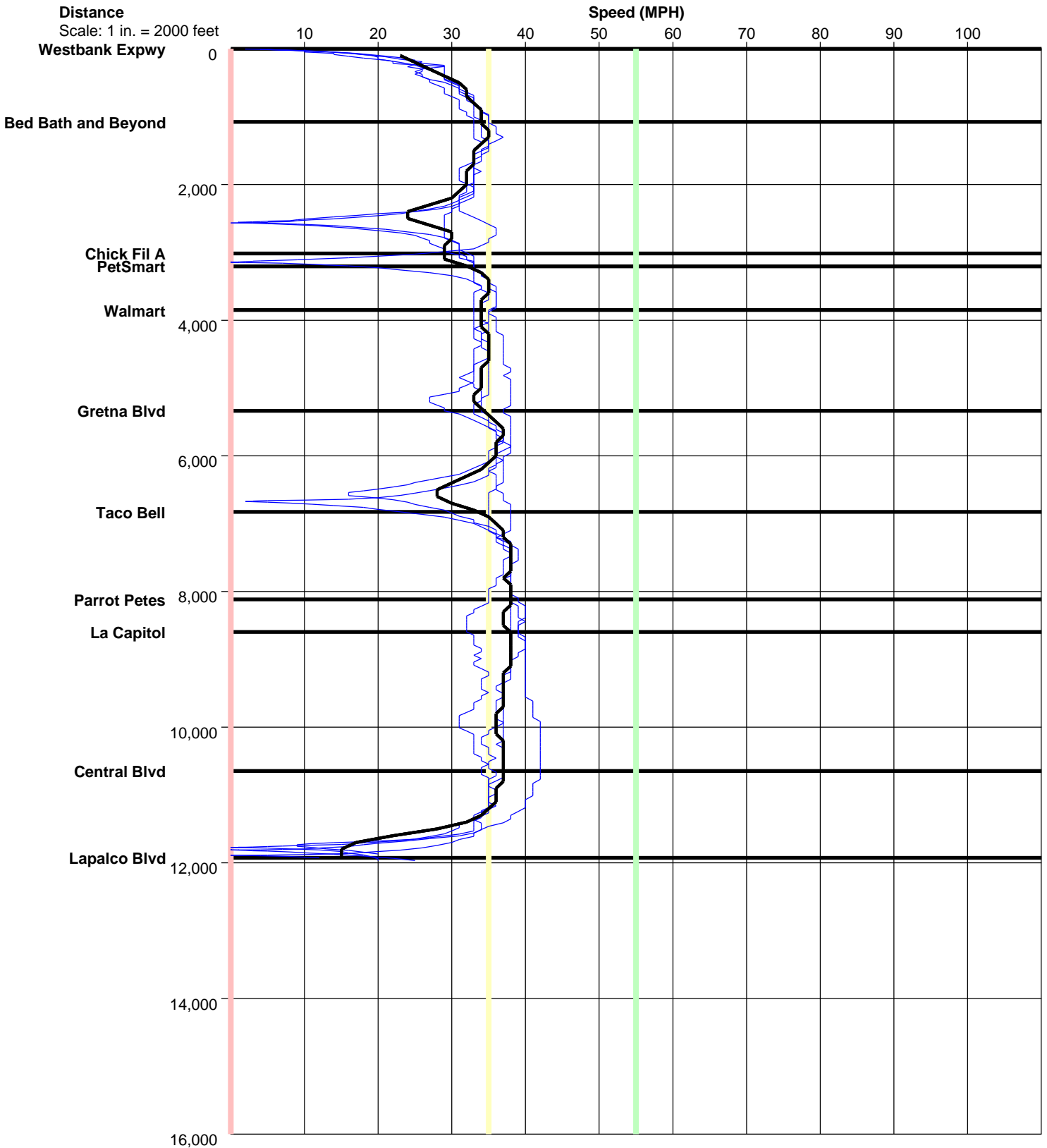
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

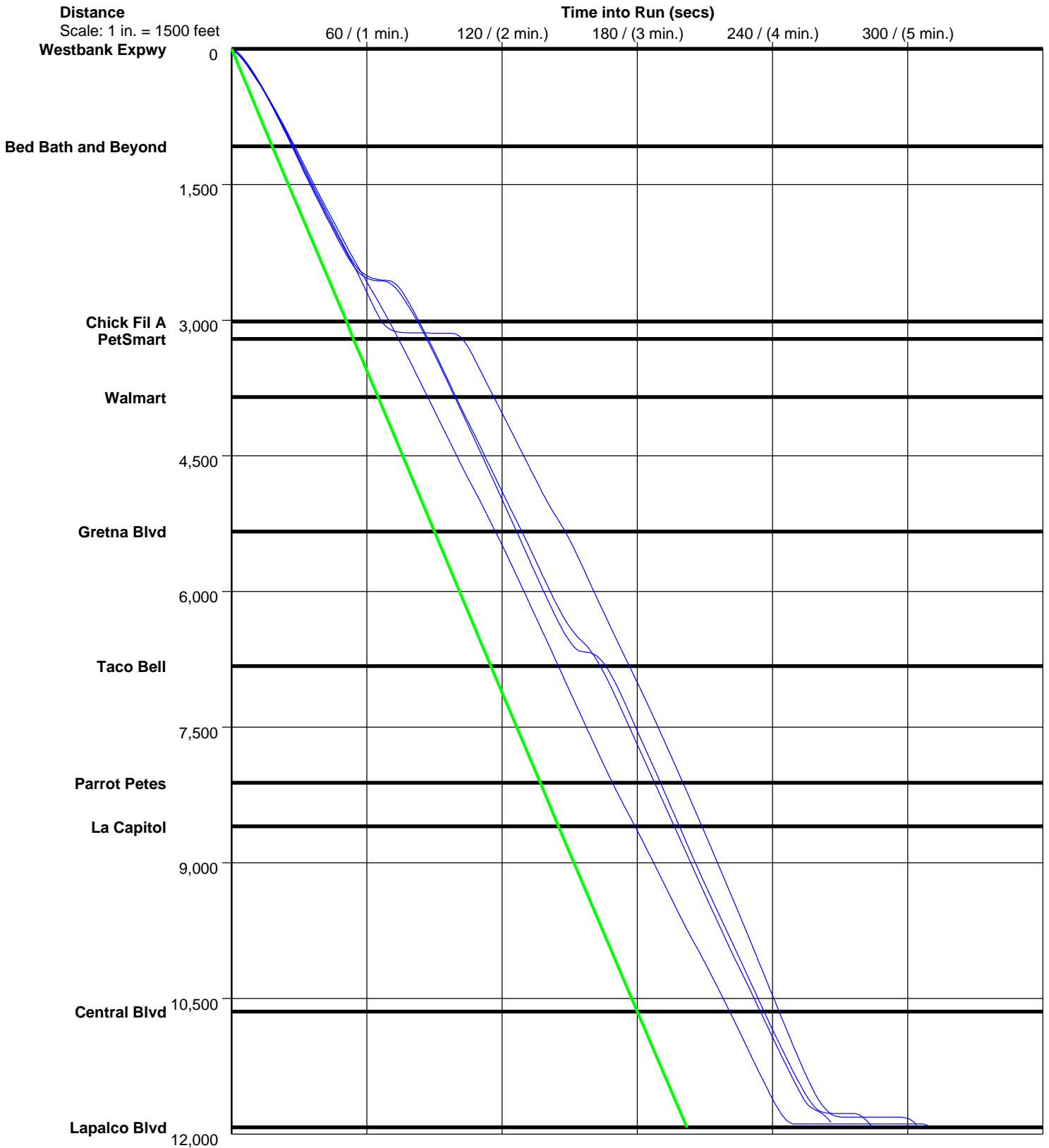
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

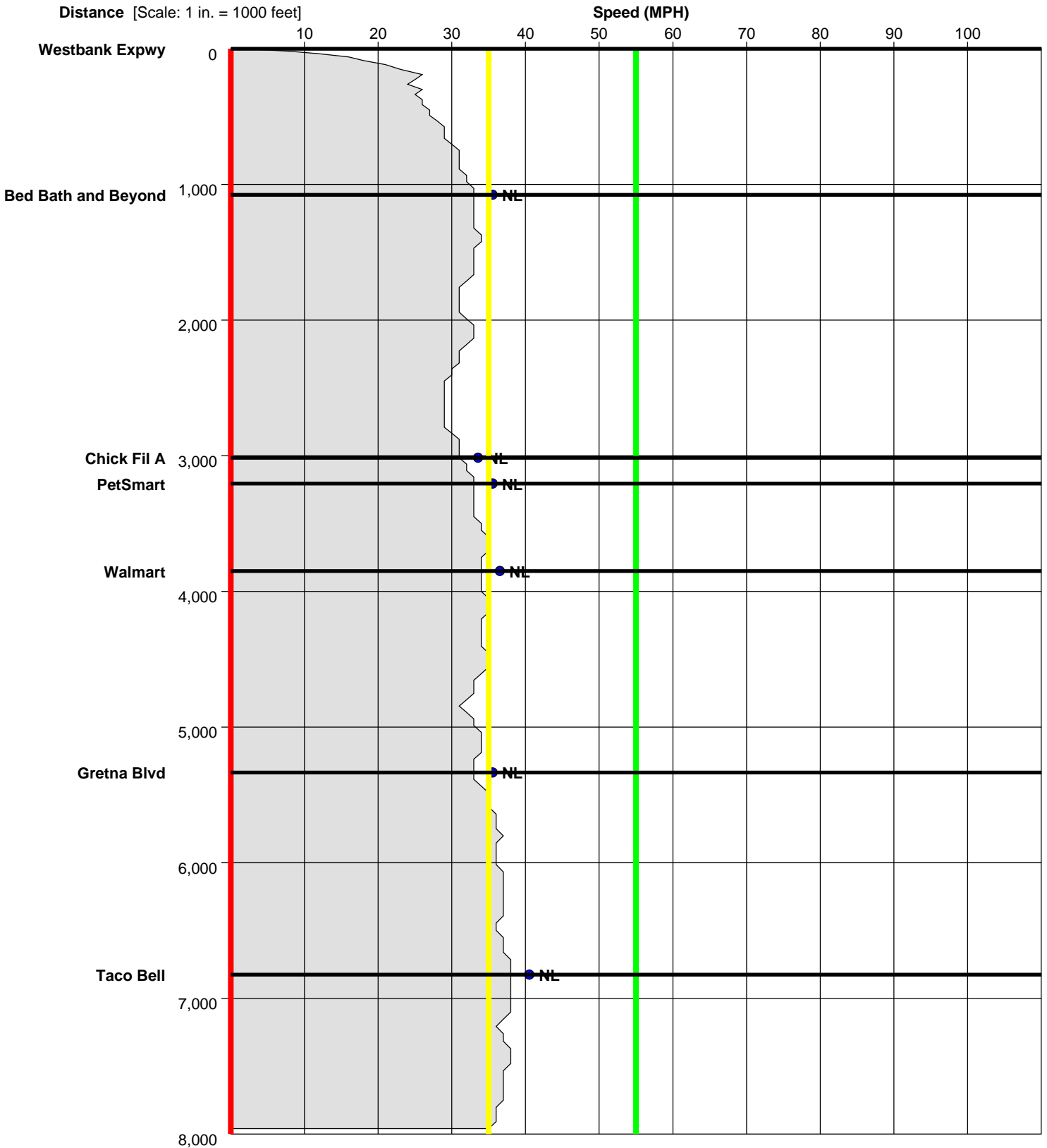
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd-SB-001tn** Start Time: **06:38** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

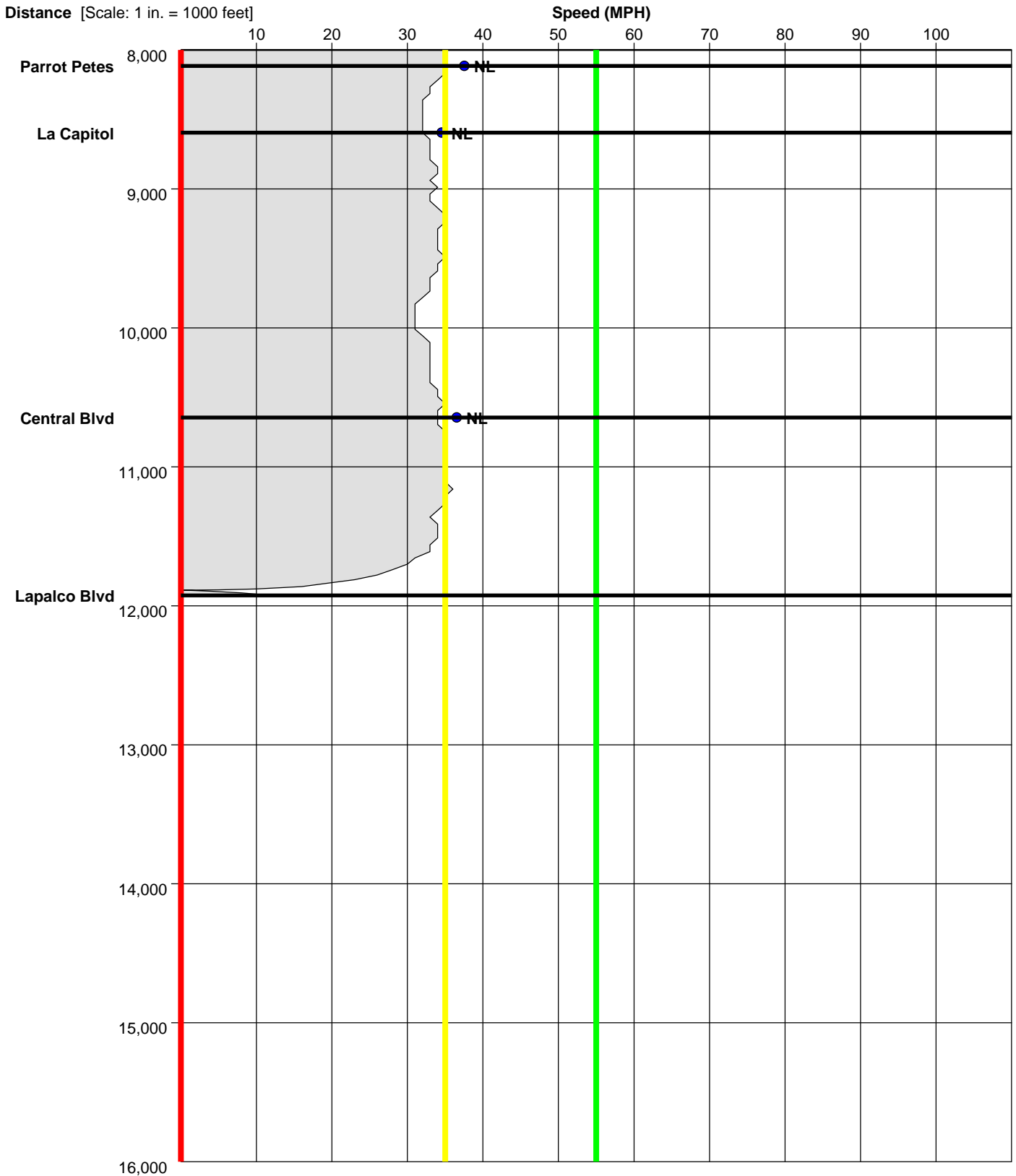
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd-SB-001tn** Start Time: **06:38** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

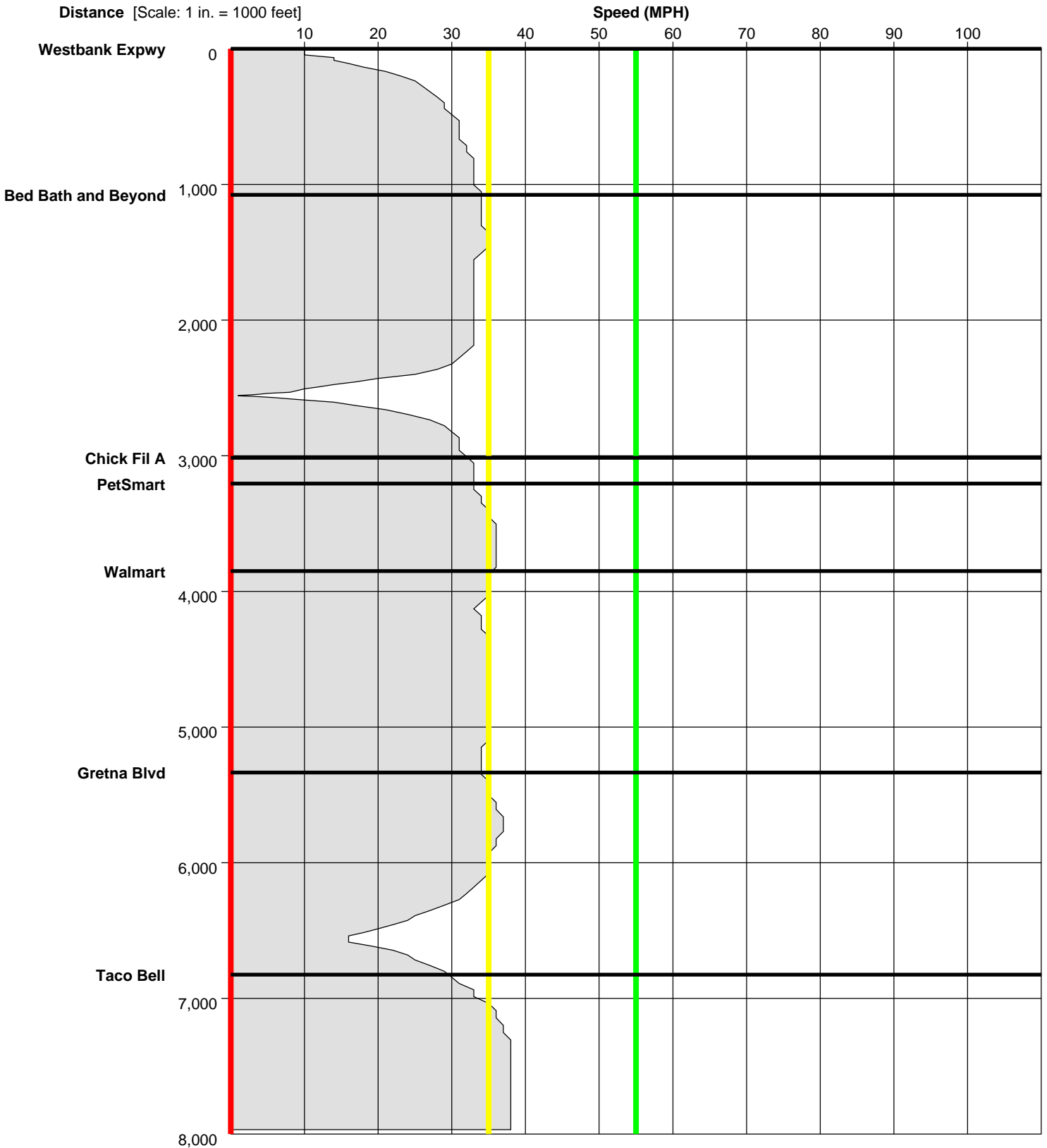
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd-SB-002t** Start Time: **06:50** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

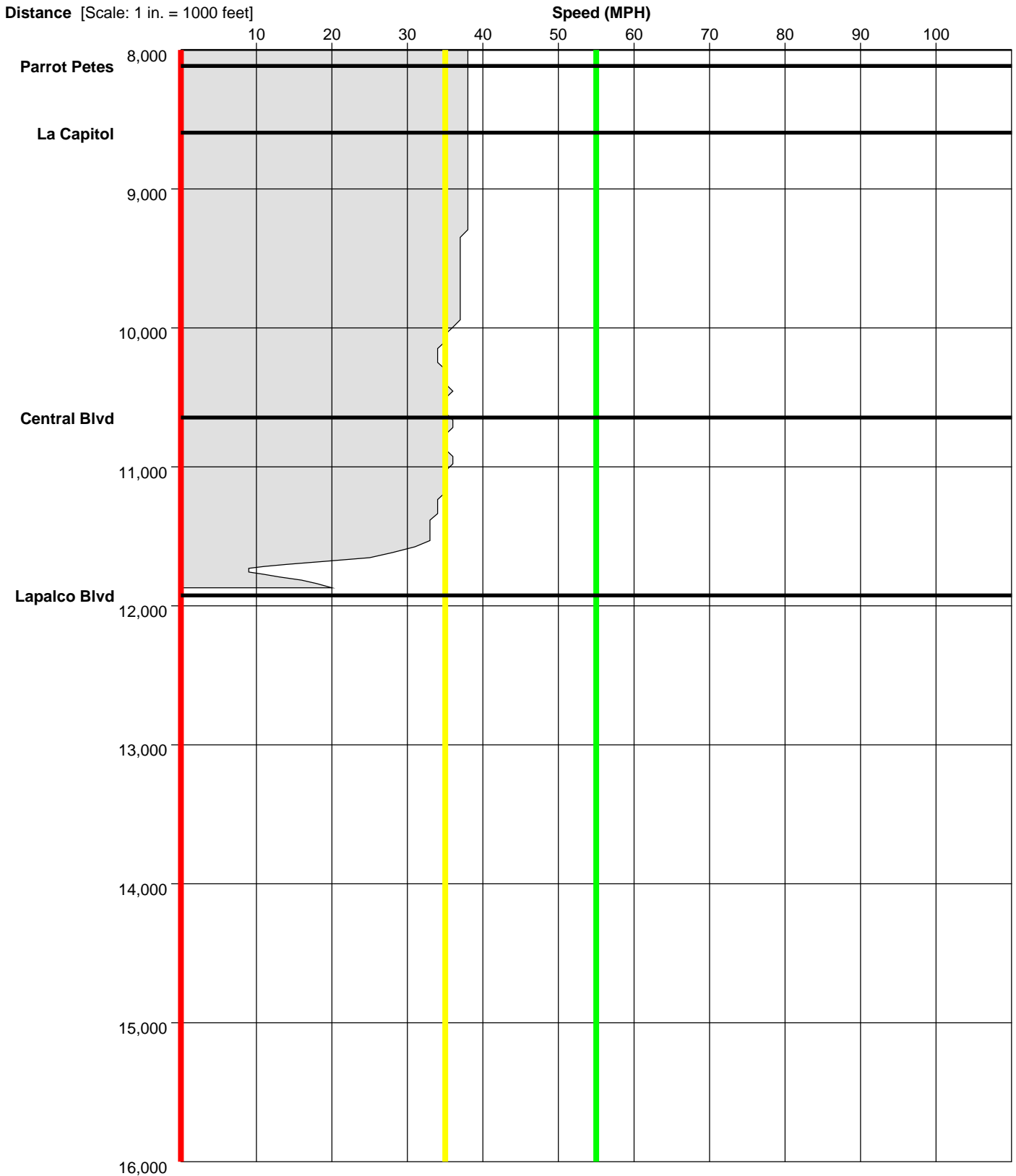
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd-SB-002t** Start Time: **06:50** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

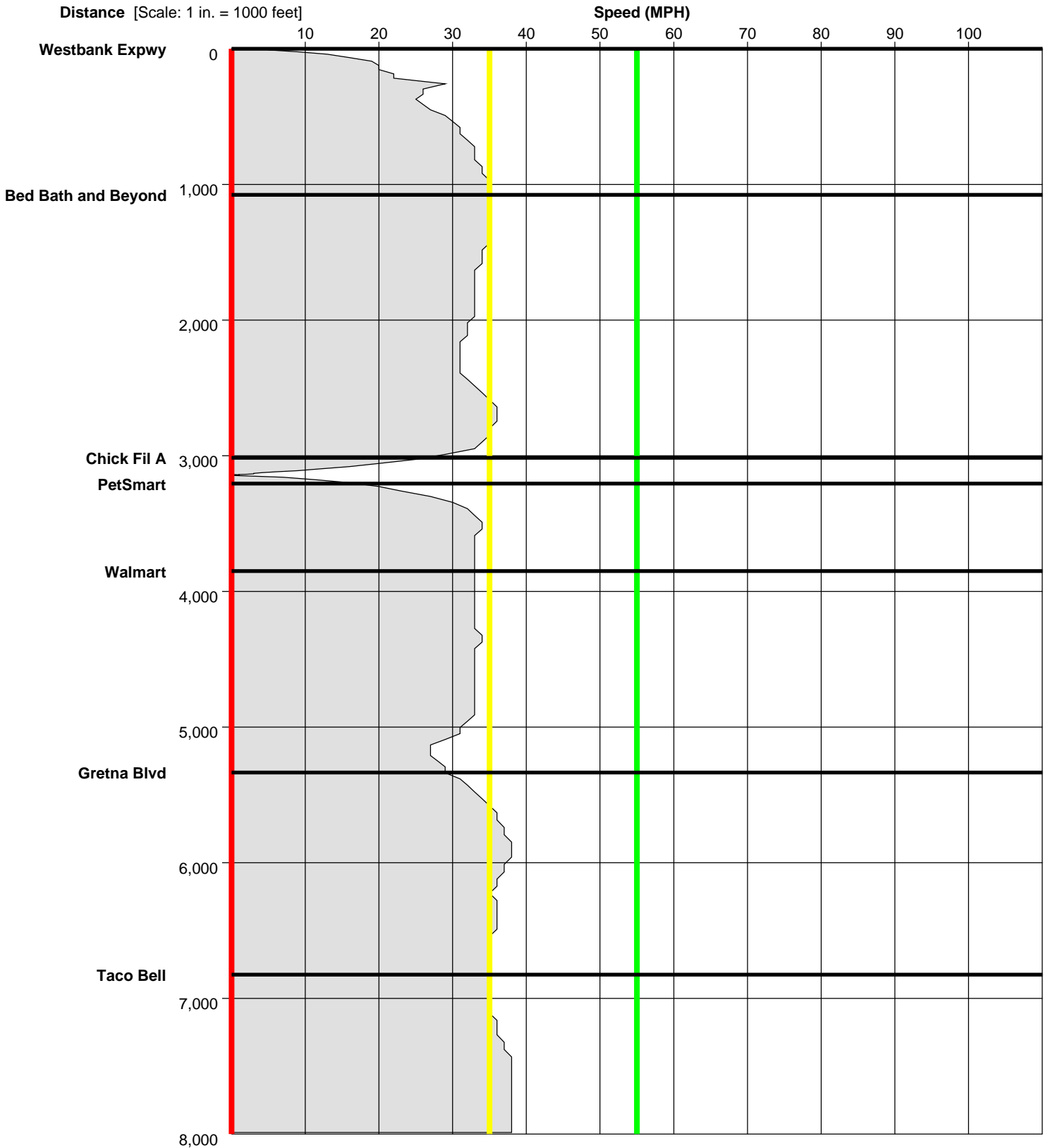
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd-SB-003t** Start Time: **07:01** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

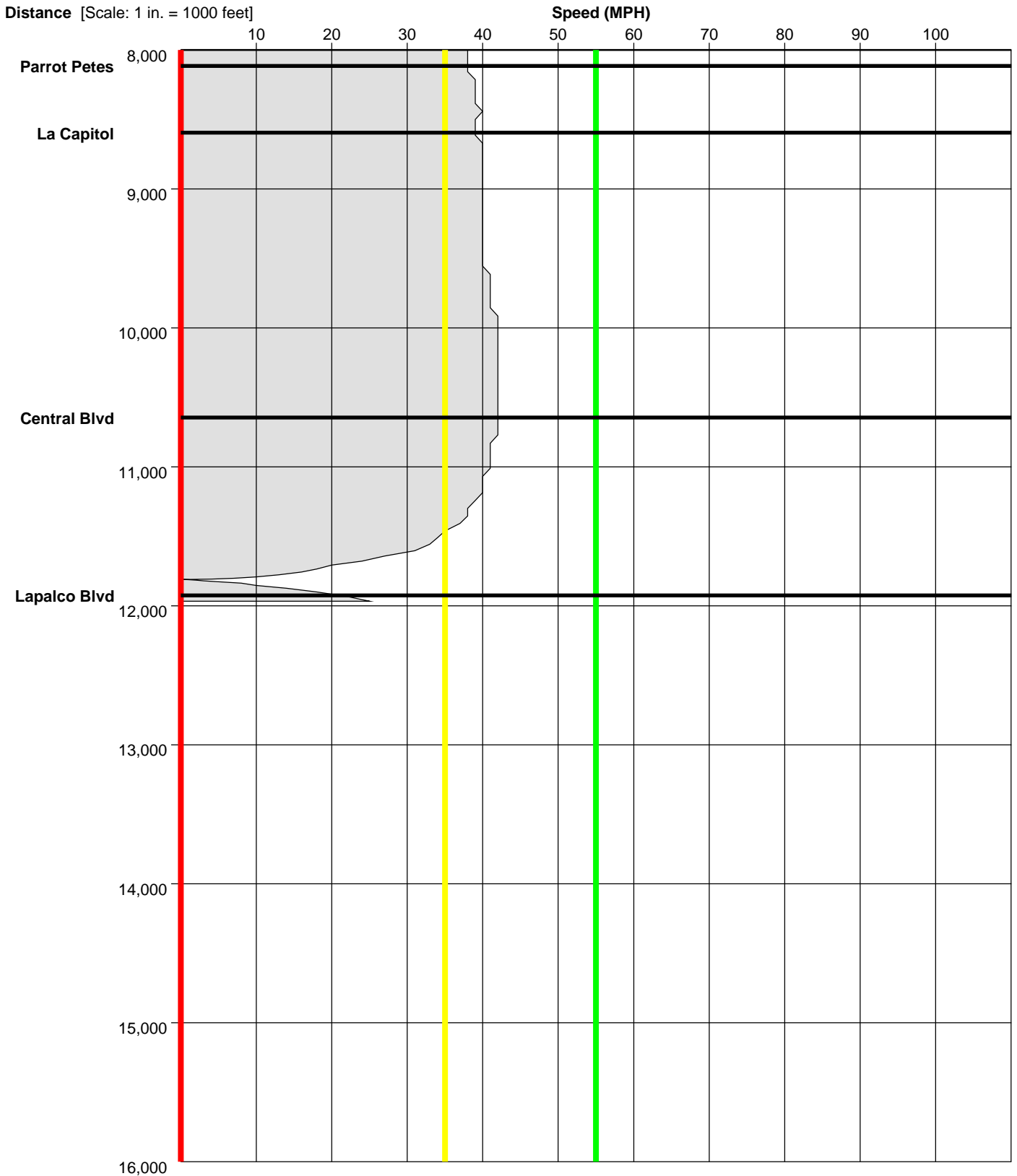
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd-SB-003t** Start Time: **07:01** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

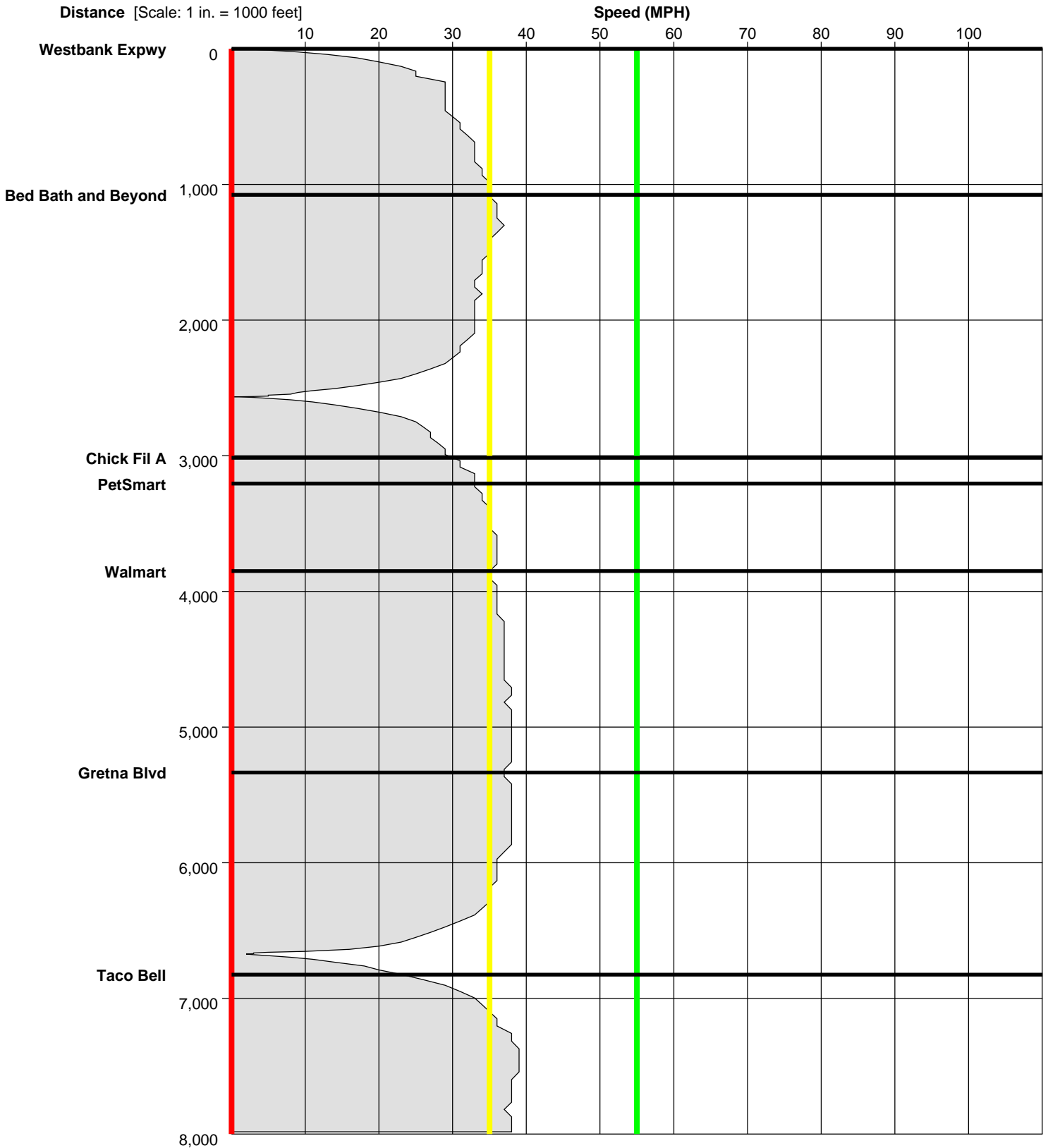
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **24**

Speed Profile

Run : **Manhattan Blvd-SB-004t** Start Time: **07:14** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

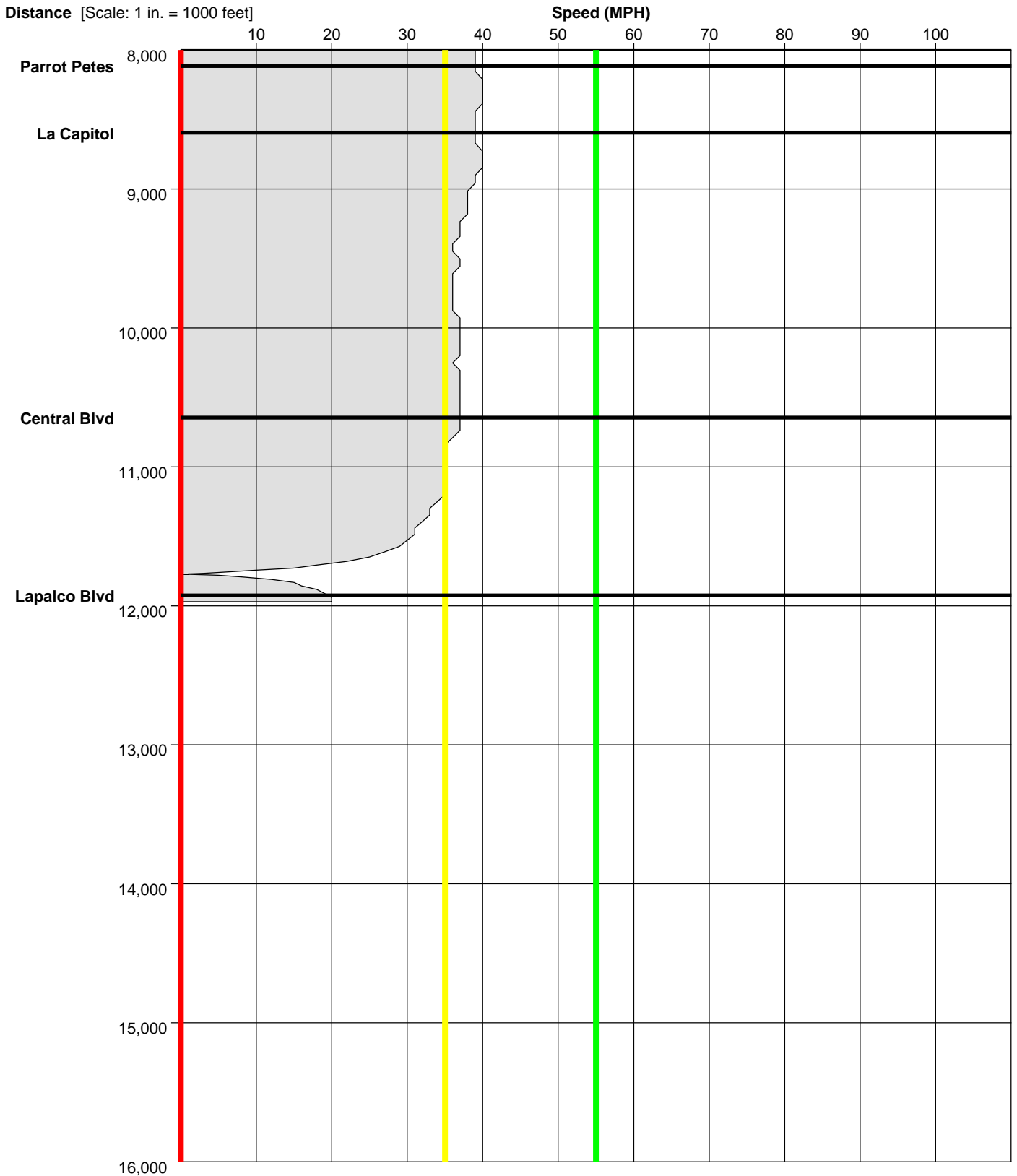
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **25**

Speed Profile

Run : **Manhattan Blvd-SB-004t** Start Time: **07:14** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

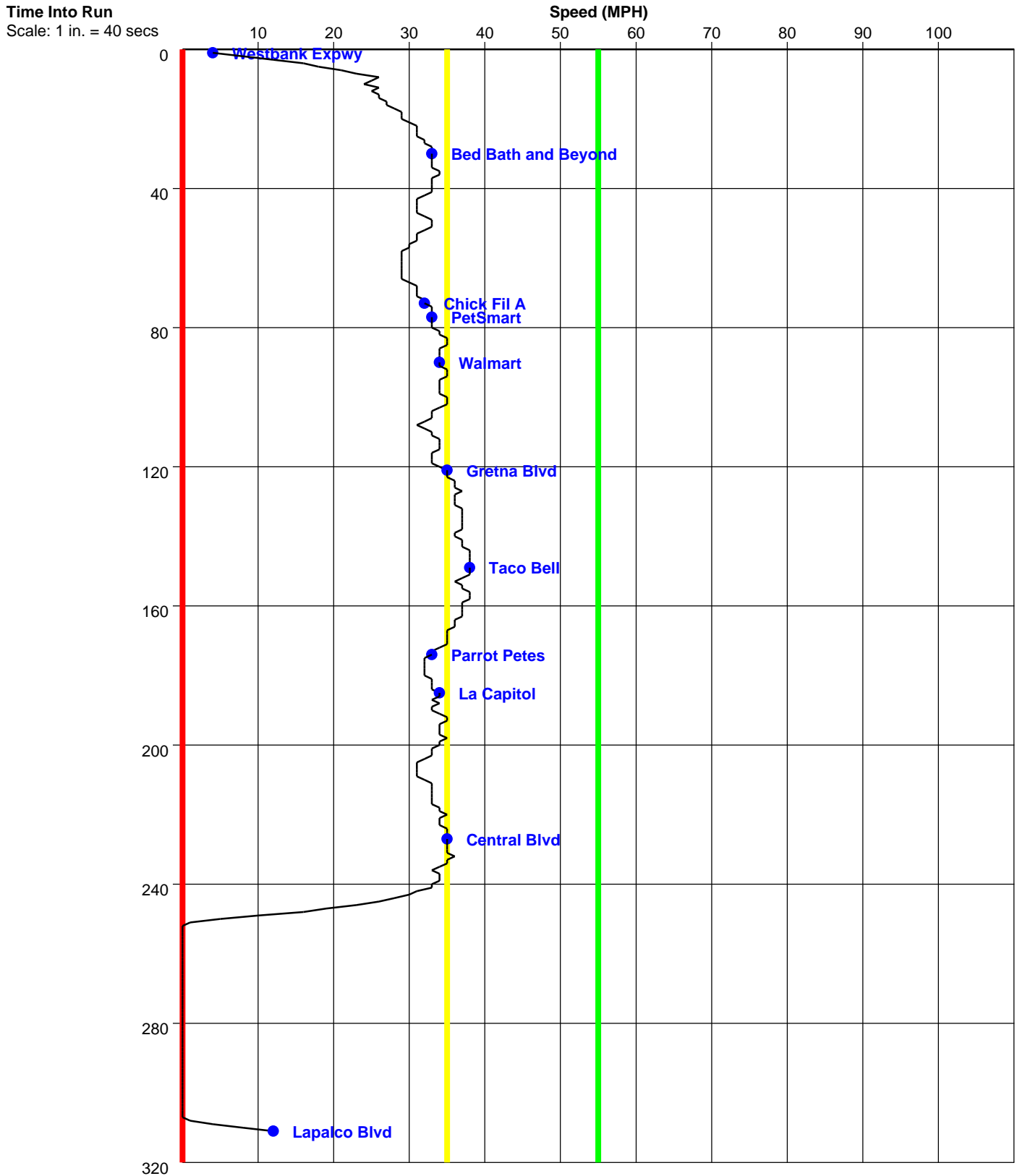
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd-SB-001tn** Start Time:**06:38** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

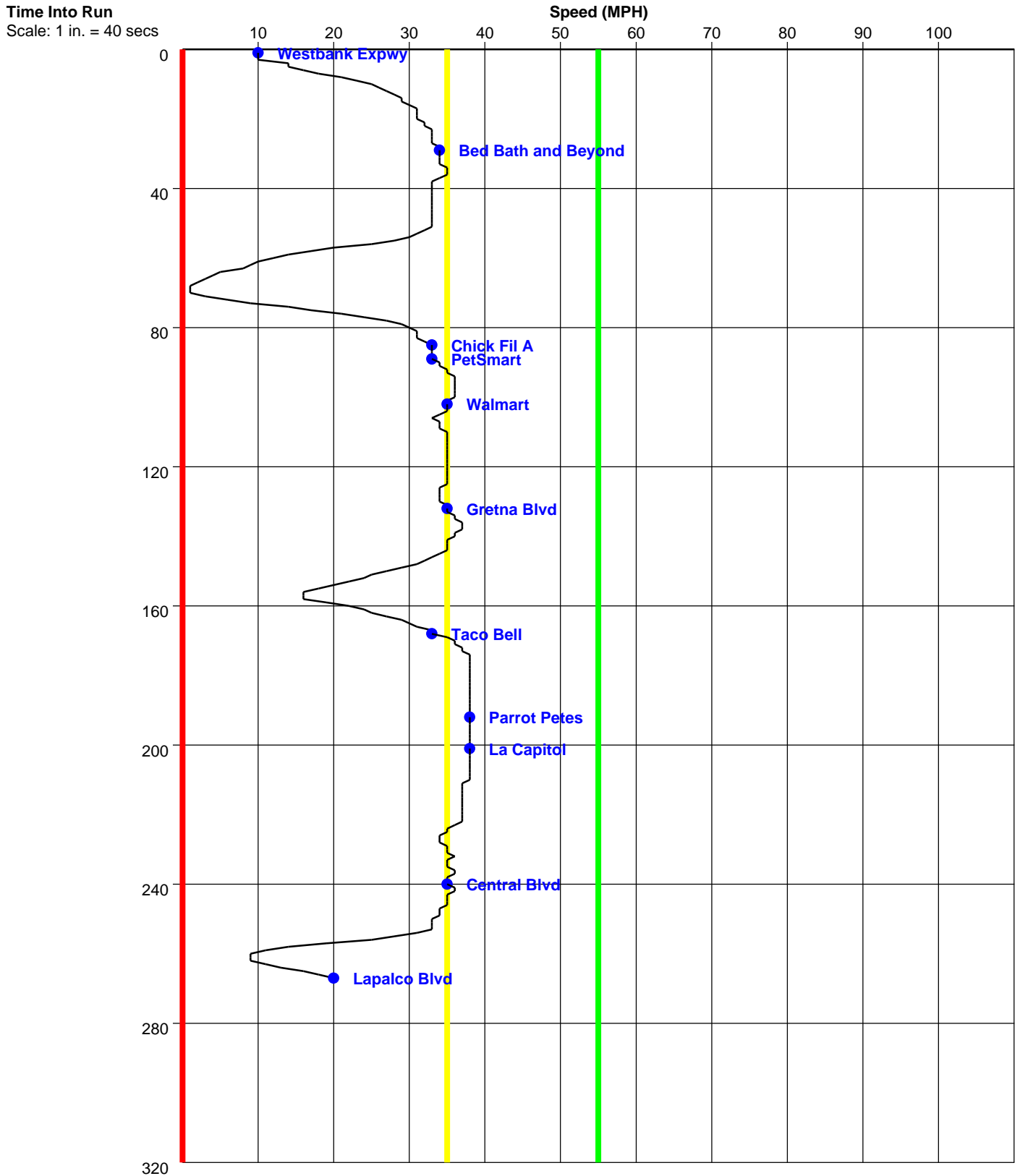
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **27**

Time-Based Speed Profile

Run : **Manhattan Blvd-SB-002t** Start Time:**06:50** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

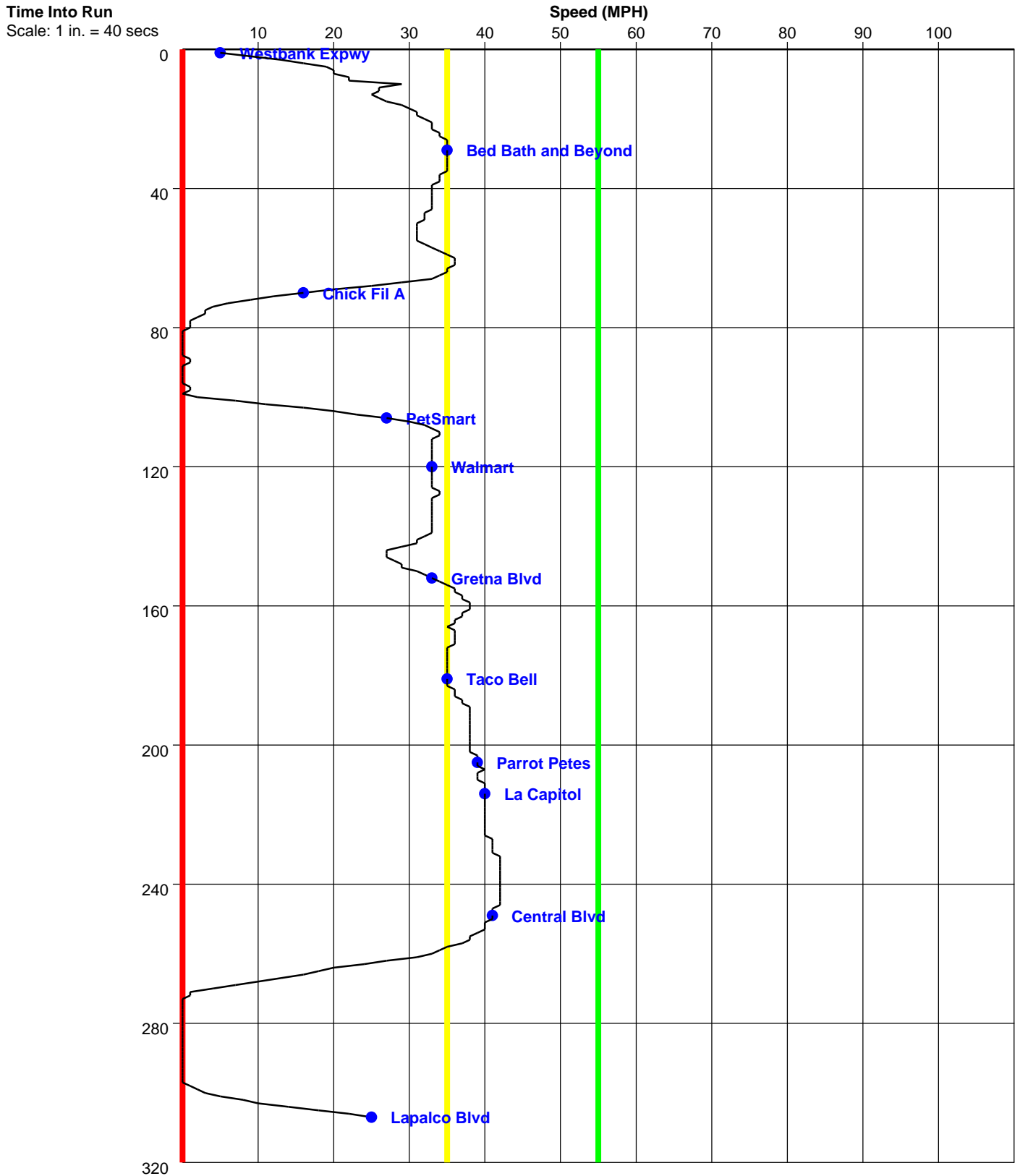
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **28**

Time-Based Speed Profile

Run : **Manhattan Blvd-SB-003t** Start Time:07:01 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

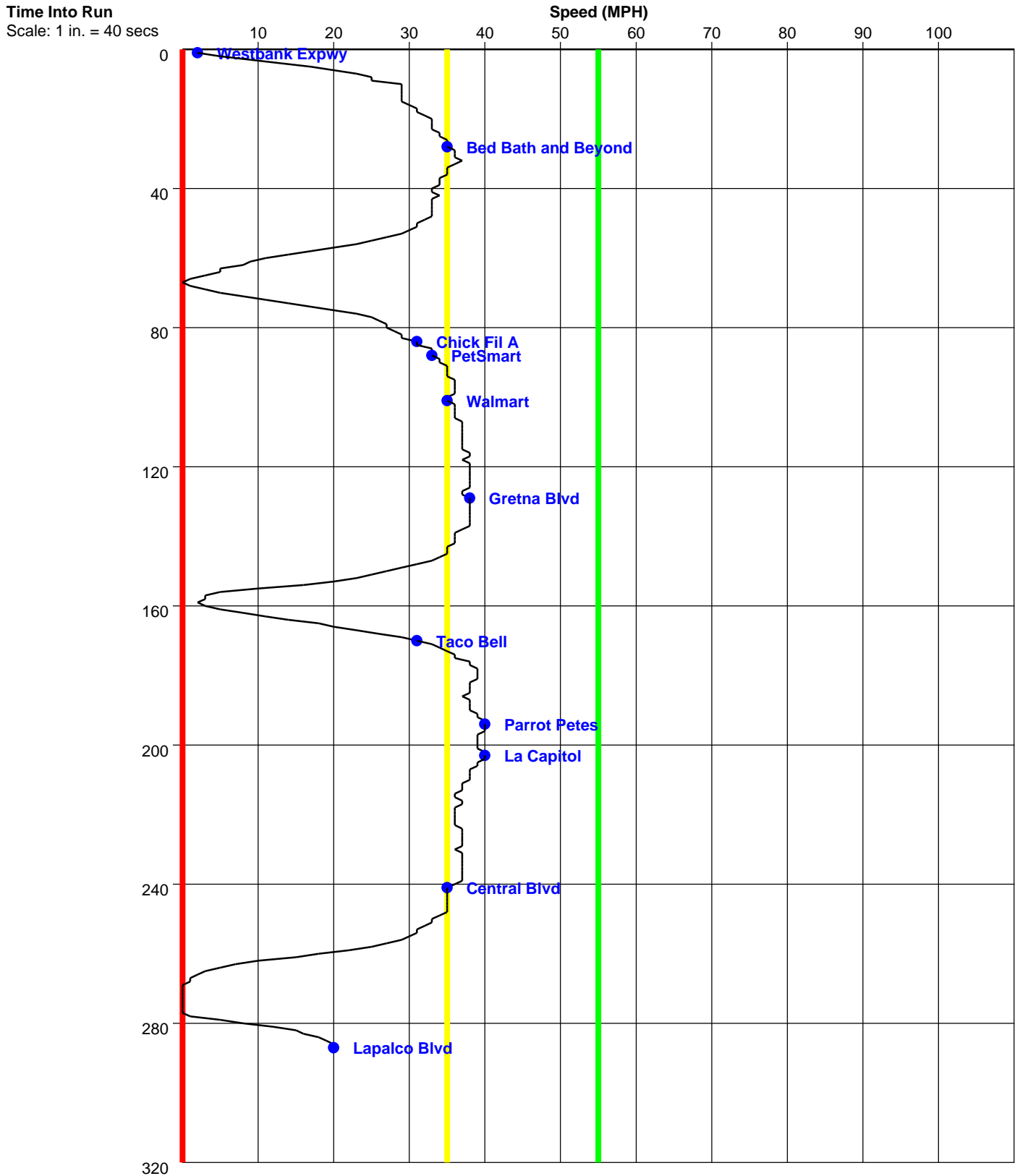
Study Name : **Manhattan Blvd SB AM**

Study Date : **10/19/2017**

Page No. : **29**

Time-Based Speed Profile

Run : **Manhattan Blvd-SB-004t** Start Time:07:14 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd NB Mldday

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Fuel Consumption & Emissions	4
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Detailed Statistics By Run - Time <= 0 MPH	9
Detailed Statistics By Run - Time <= 35 MPH	10
Detailed Statistics By Run - Time <= 55 MPH	11
Detailed Statistics By Run - Fuel Consumption	12
Detailed Statistics By Run - Hydrocarbons	13
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Speed Profile (Time vs Spd) for Manhattan Blvd Midd-NB-001tn	24
Speed Profile (Time vs Spd) for Manhattan Blvd Midd-NB-002t	25
Speed Profile (Time vs Spd) for Manhattan Blvd Midd-NB-003t	26

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd Midd-NB-001tn	10/19/17	11:02	12009	Before	Primary
Manhattan Blvd Midd-NB-002t	10/19/17	11:18	11989	Before	Secondary
Manhattan Blvd Midd-NB-003t	10/19/17	11:35	11831	Before	Secondary

Notes:

Node Info

#	Len	Name
1	0	Lapalco Blvd
2	1550	Central Blvd
3	2062	LA Capitol
4	456	Parrot Petes
5	1307	Taco Bell
6	1482	Gretna Blvd
7	1517	Walmart
8	595	PetSmart
9	176	Chick Fil A
10	1950	Bed Bath and Beyond
11	914	West Bank Expwy

Length of Study Route = 12,009 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Lapalco Blvd							
2	1550	Central Blvd	59.3	0.3	17.8	32.7	20.0	54.0	59.3
3	2062	LA Capitol	45.0	0.3	31.2	9.7	3.0	16.0	45.0
4	456	Parrot Petes	9.3	0.0	33.3	1.3	0.0	4.0	9.3
5	1307	Taco Bell	54.7	1.0	16.3	32.3	19.7	43.3	54.7
6	1482	Gretna Blvd	31.3	0.0	32.2	5.7	0.0	22.7	31.3
7	1517	Walmart	33.7	0.3	30.7	7.3	3.3	13.0	33.7
8	595	PetSmart	10.7	0.0	38.0	0.3	0.0	0.7	10.7
9	176	Chick Fil A	2.7	0.0	45.0	0.0	0.0	0.0	2.7
10	1950	Bed Bath and Beyond	57.3	0.7	23.2	24.0	6.0	37.0	57.3
11	914	West Bank Expwy	113.7	1.3	5.5	98.7	68.0	113.0	113.0
Total	12,009		417.7	4.0	19.6	212.0	120.0	303.7	417.0

Stats based on 3 BEFORE runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Lapalco Blvd				
2	1550	Central Blvd	0.0202	2.1329	18.8266	1.2368
3	2062	LA Capitol	0.0169	1.2525	13.5278	0.4933
4	456	Parrot Petes	0.0049	0.5283	4.5003	0.4020
5	1307	Taco Bell	0.0169	1.5087	12.2622	0.6847
6	1482	Gretna Blvd	0.0138	1.4022	14.1085	0.9240
7	1517	Walmart	0.0150	1.4505	14.8924	0.9266
8	595	PetSmart	0.0047	0.3246	3.8592	0.1351
9	176	Chick Fil A	0.0012	0.0805	0.9471	0.0338
10	1950	Bed Bath and Beyond	0.0183	1.3464	11.3037	0.4721
11	914	West Bank Expwy	0.0263	2.7472	22.6004	0.9569
Total	12,009		0.1383	12.7739	116.8281	6.2653

Stats based on 3 BEFORE runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	35	37	106
3	2062	LA Capitol	37	56	42
4	456	Parrot Petes	8	12	8
5	1307	Taco Bell	54	41	69
6	1482	Gretna Blvd	33	30	31
7	1517	Walmart	28	47	26
8	595	PetSmart	10	11	11
9	176	Chick Fil A	3	3	2
10	1950	Bed Bath and Beyond	56	44	72
11	914	West Bank Expwy	109	110	122
Totals	12009		373	391	489

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	0	0	1
3	2062	LA Capitol	0	1	0
4	456	Parrot Petes	0	0	0
5	1307	Taco Bell	1	1	1
6	1482	Gretna Blvd	0	0	0
7	1517	Walmart	0	1	0
8	595	PetSmart	0	0	0
9	176	Chick Fil A	0	0	0
10	1950	Bed Bath and Beyond	1	0	1
11	914	West Bank Expwy	1	1	2
Totals	12009		3	4	5

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	30.2	29.4	10.0
3	2062	LA Capitol	37.9	24.8	33.9
4	456	Parrot Petes	39.0	26.3	37.0
5	1307	Taco Bell	16.5	21.5	13.1
6	1482	Gretna Blvd	30.6	34.5	32.9
7	1517	Walmart	36.9	22.0	39.1
8	595	PetSmart	40.5	35.5	40.5
9	176	Chick Fil A	40.0	36.0	42.0
10	1950	Bed Bath and Beyond	23.8	30.7	18.4
11	914	West Bank Expwy	5.7	5.4	4.1
Totals	12009		22.0	21.0	16.5

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	9	10	79
3	2062	LA Capitol	2	21	6
4	456	Parrot Petes	0	4	0
5	1307	Taco Bell	32	19	46
6	1482	Gretna Blvd	8	4	5
7	1517	Walmart	2	20	0
8	595	PetSmart	0	1	0
9	176	Chick Fil A	0	0	0
10	1950	Bed Bath and Beyond	23	10	39
11	914	West Bank Expwy	93	94	109
Totals	12009		169	183	284

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	0	0	60
3	2062	LA Capitol	0	9	0
4	456	Parrot Petes	0	0	0
5	1307	Taco Bell	19	5	35
6	1482	Gretna Blvd	0	0	0
7	1517	Walmart	0	10	0
8	595	PetSmart	0	0	0
9	176	Chick Fil A	0	0	0
10	1950	Bed Bath and Beyond	10	0	8
11	914	West Bank Expwy	73	56	75
Totals	12009		102	80	178

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	32	24	106
3	2062	LA Capitol	0	22	26
4	456	Parrot Petes	0	12	0
5	1307	Taco Bell	38	41	51
6	1482	Gretna Blvd	33	10	25
7	1517	Walmart	8	31	0
8	595	PetSmart	0	2	0
9	176	Chick Fil A	0	0	0
10	1950	Bed Bath and Beyond	31	26	54
11	914	West Bank Expwy	109	109	121
Totals	12009		251	277	383

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	35	37	106
3	2062	LA Capitol	37	56	42
4	456	Parrot Petes	8	12	8
5	1307	Taco Bell	54	41	69
6	1482	Gretna Blvd	33	30	31
7	1517	Walmart	28	47	26
8	595	PetSmart	10	11	11
9	176	Chick Fil A	3	3	2
10	1950	Bed Bath and Beyond	56	44	72
11	914	West Bank Expwy	109	109	121
Totals	12009		373	390	488

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB MIDDAY**

Study Date : **10/19/2017**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	0.0139	0.0173	0.0293
3	2062	LA Capitol	0.0155	0.0183	0.0170
4	456	Parrot Petes	0.0032	0.0082	0.0033
5	1307	Taco Bell	0.0169	0.0143	0.0196
6	1482	Gretna Blvd	0.0139	0.0132	0.0143
7	1517	Walmart	0.0137	0.0201	0.0114
8	595	PetSmart	0.0044	0.0044	0.0053
9	176	Chick Fil A	0.0014	0.0012	0.0009
10	1950	Bed Bath and Beyond	0.0183	0.0153	0.0213
11	914	West Bank Expwy	0.0266	0.0270	0.0255
Totals	12009		0.1278	0.1393	0.1478

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	1.4437	1.8843	3.0707
3	2062	LA Capitol	1.0072	1.2541	1.4962
4	456	Parrot Petes	0.1440	1.2032	0.2378
5	1307	Taco Bell	1.5356	1.2586	1.7321
6	1482	Gretna Blvd	1.4162	1.2397	1.5508
7	1517	Walmart	1.3888	2.1987	0.7640
8	595	PetSmart	0.2337	0.3299	0.4102
9	176	Chick Fil A	0.1064	0.0991	0.0360
10	1950	Bed Bath and Beyond	1.2256	1.1176	1.6960
11	914	West Bank Expwy	2.8398	2.8776	2.5242
Totals	12009		11.3408	13.4628	13.5181

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	14.0313	15.7074	26.7409
3	2062	LA Capitol	11.5695	12.4230	16.5910
4	456	Parrot Petes	1.4560	9.3063	2.7387
5	1307	Taco Bell	13.3793	8.8249	14.5825
6	1482	Gretna Blvd	13.3846	12.9904	15.9503
7	1517	Walmart	16.1361	19.5684	8.9727
8	595	PetSmart	2.6455	3.6970	5.2352
9	176	Chick Fil A	1.3364	1.1408	0.3640
10	1950	Bed Bath and Beyond	10.3830	10.3587	13.1693
11	914	West Bank Expwy	22.5689	24.0566	21.1755
Totals	12009		106.8906	118.0735	125.5203

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd Midd-NB-001tn

Manhattan Blvd Midd-NB-002t

Manhattan Blvd Midd-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1550	Central Blvd	0.9155	1.3978	1.3971
3	2062	LA Capitol	0.3534	0.3336	0.7927
4	456	Parrot Petes	0.0000	1.1094	0.0965
5	1307	Taco Bell	0.7187	0.6911	0.6442
6	1482	Gretna Blvd	0.9361	0.7593	1.0767
7	1517	Walmart	0.9273	1.5486	0.3041
8	595	PetSmart	0.0552	0.1410	0.2093
9	176	Chick Fil A	0.0543	0.0470	0.0000
10	1950	Bed Bath and Beyond	0.3475	0.4301	0.6386
11	914	West Bank Expwy	1.1264	1.1810	0.5632
Totals	12009		5.4345	7.6389	5.7224

ITS Regional

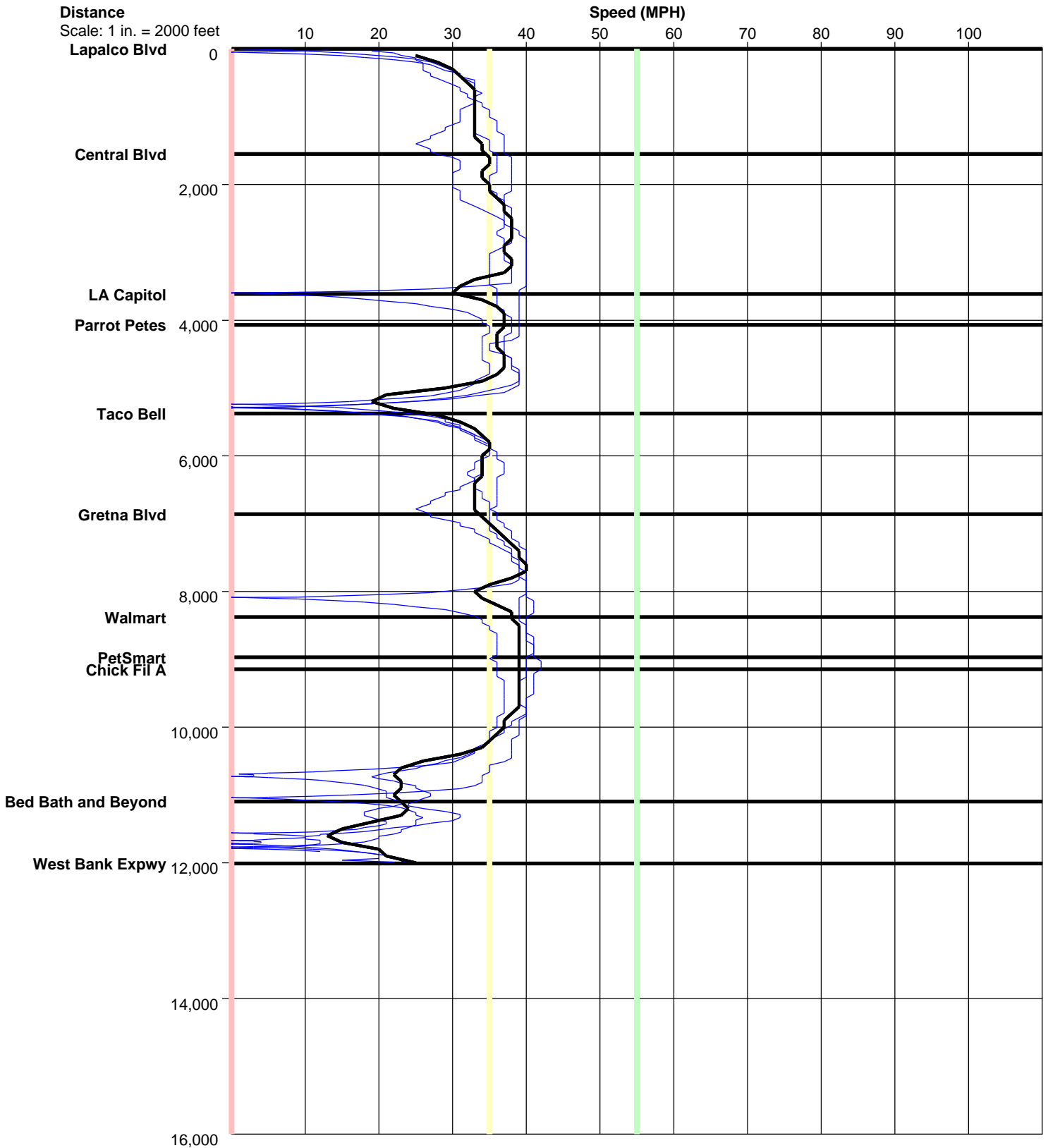
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

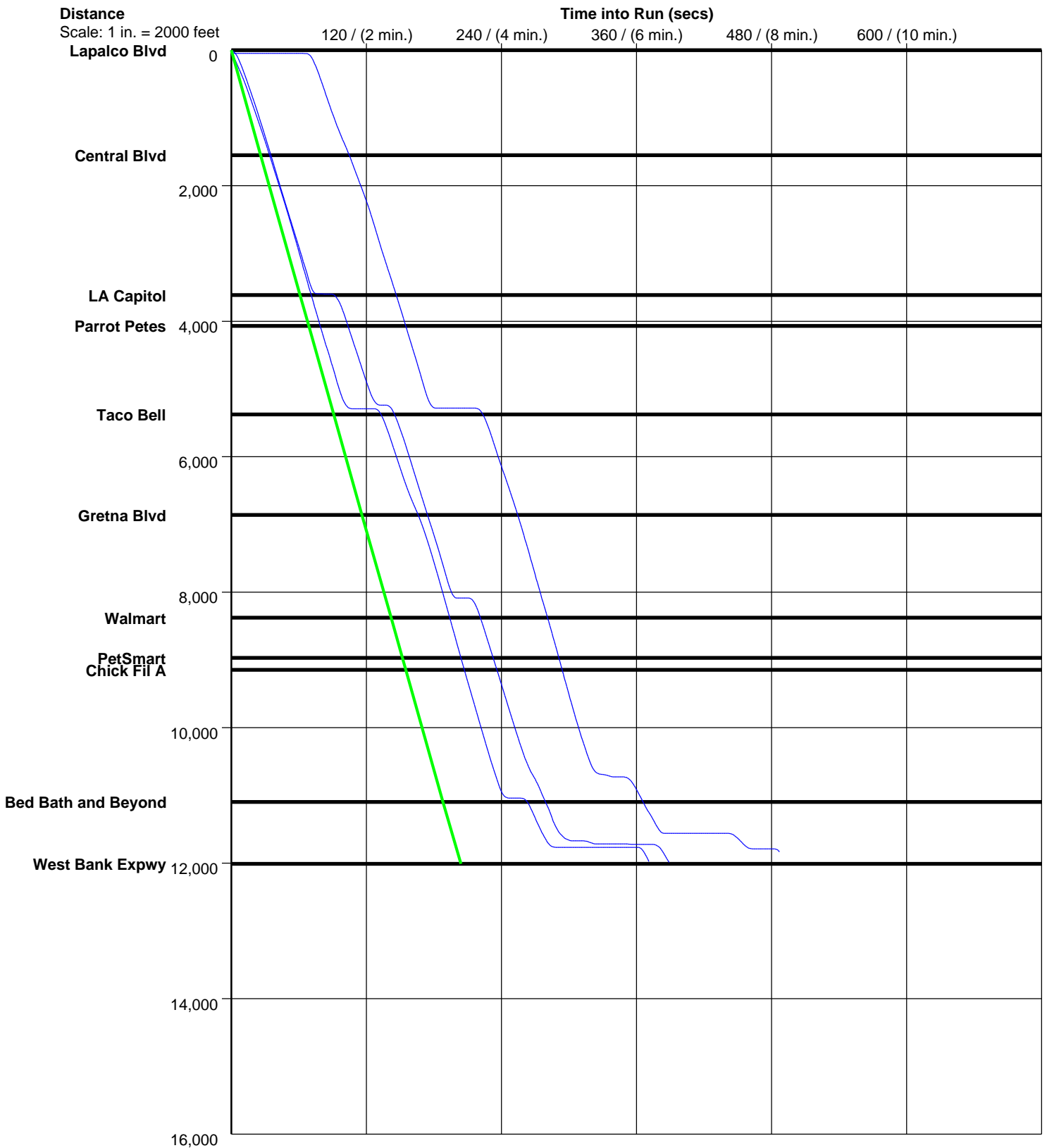
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

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Manhattan Blvd Study

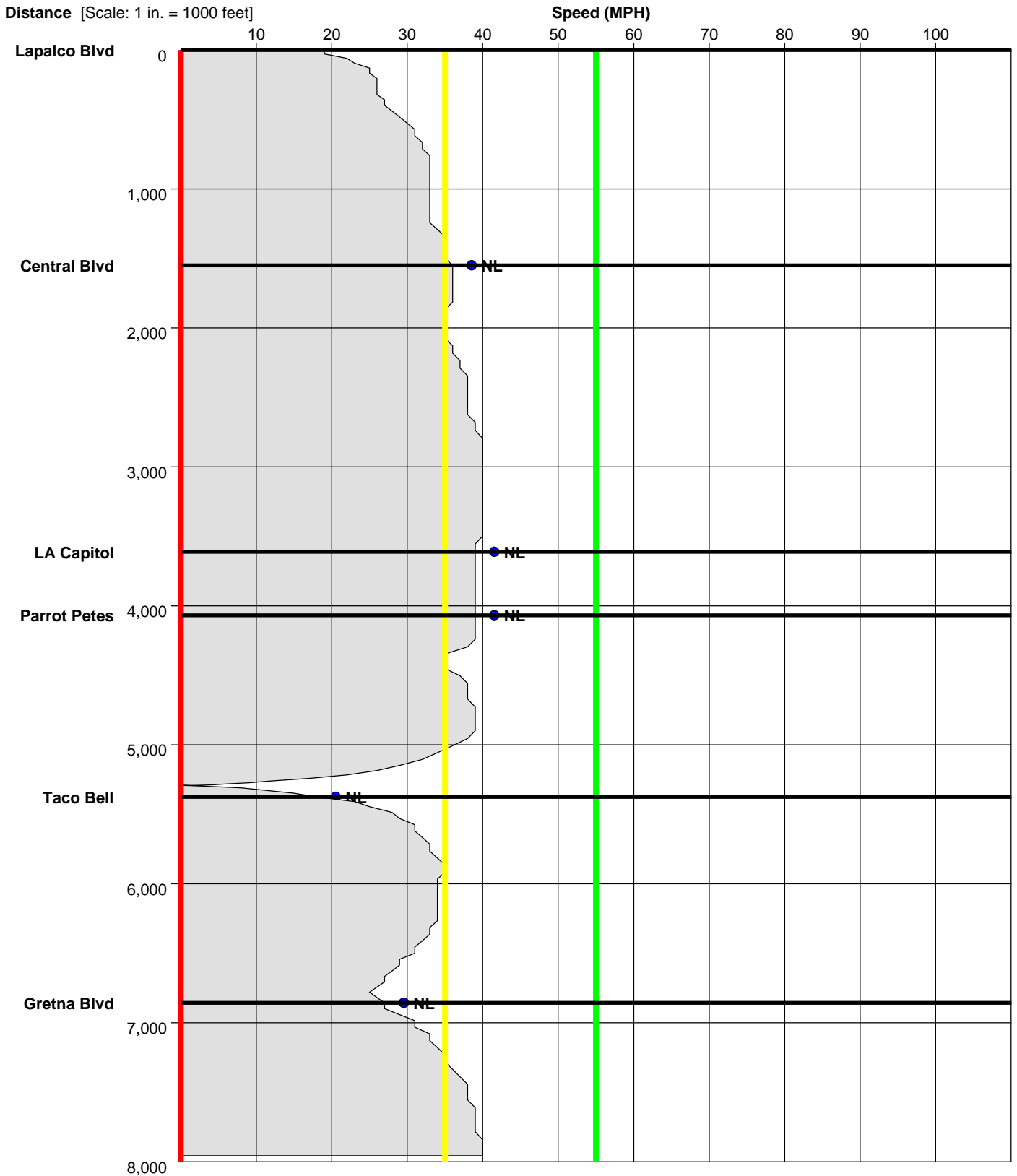
Study Name : Manhattan Blvd NB Midday

Study Date : 10/19/2017

Page No. : 18

Speed Profile

Run : Manhattan Blvd Midd-NB-001tn Start Time: 11:02 (This is a Before Run)



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Manhattan Blvd Study

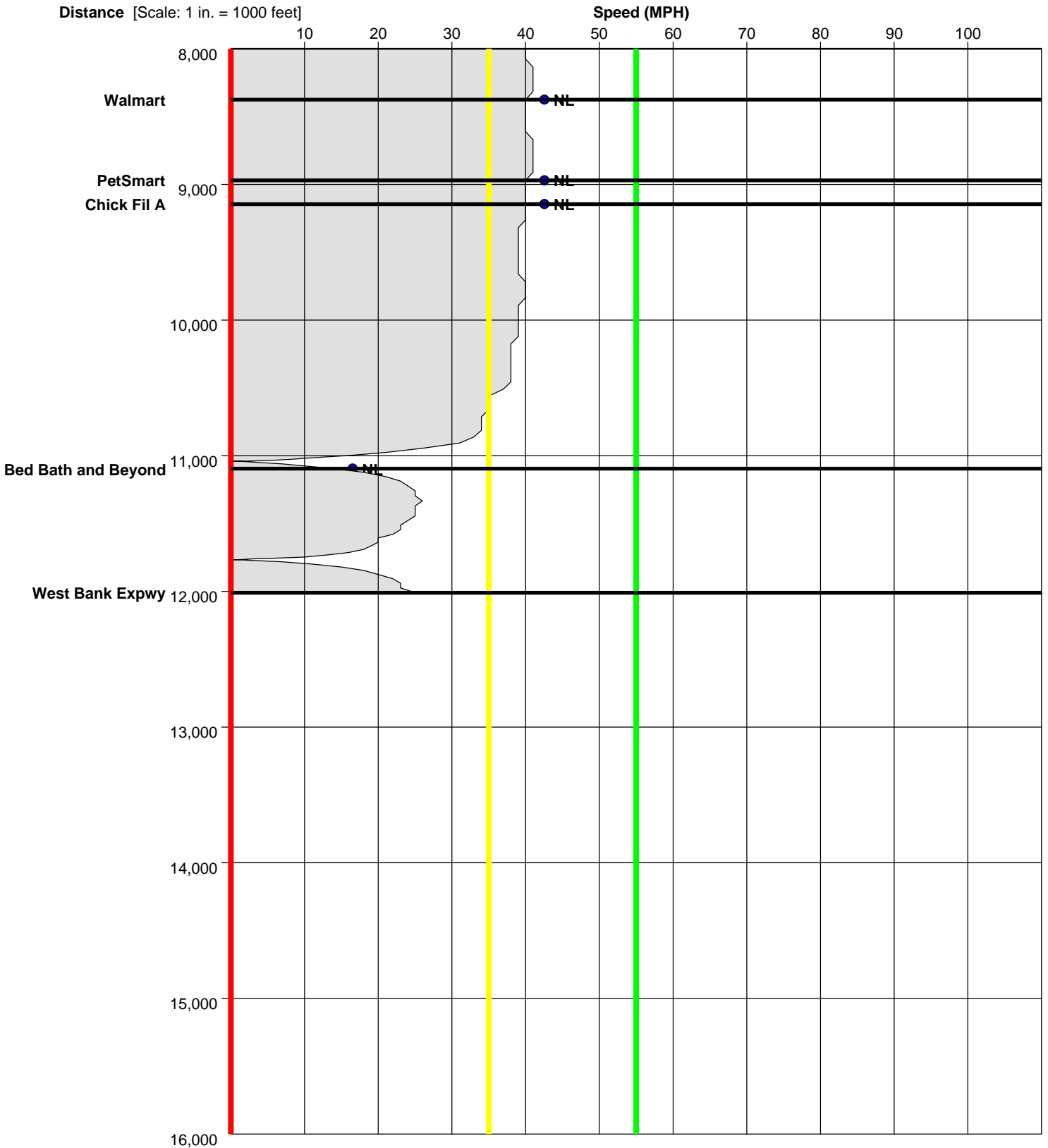
Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd Midd-NB-001tn** Start Time: **11:02** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

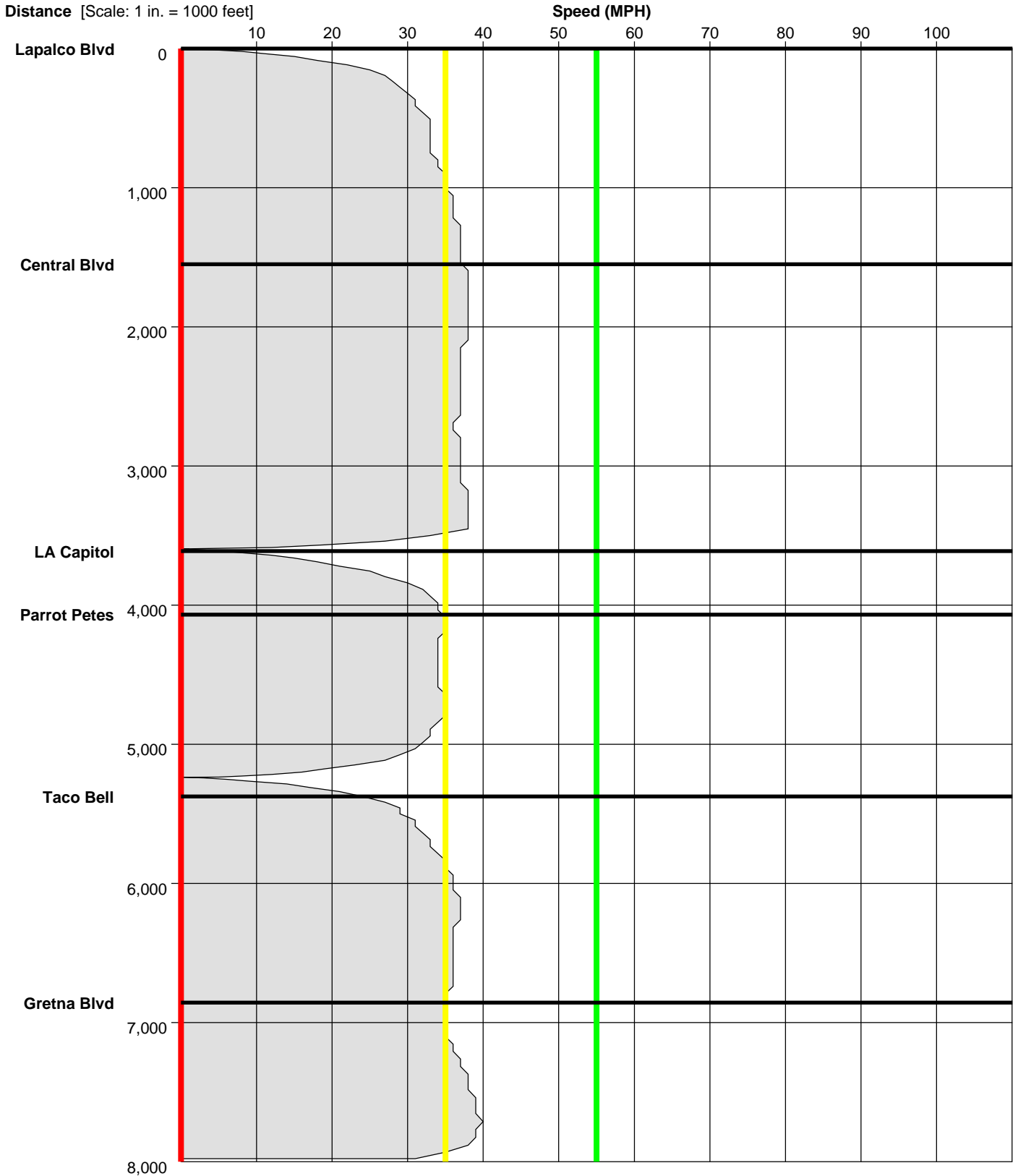
Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd Midd-NB-002t** Start Time: **11:18** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

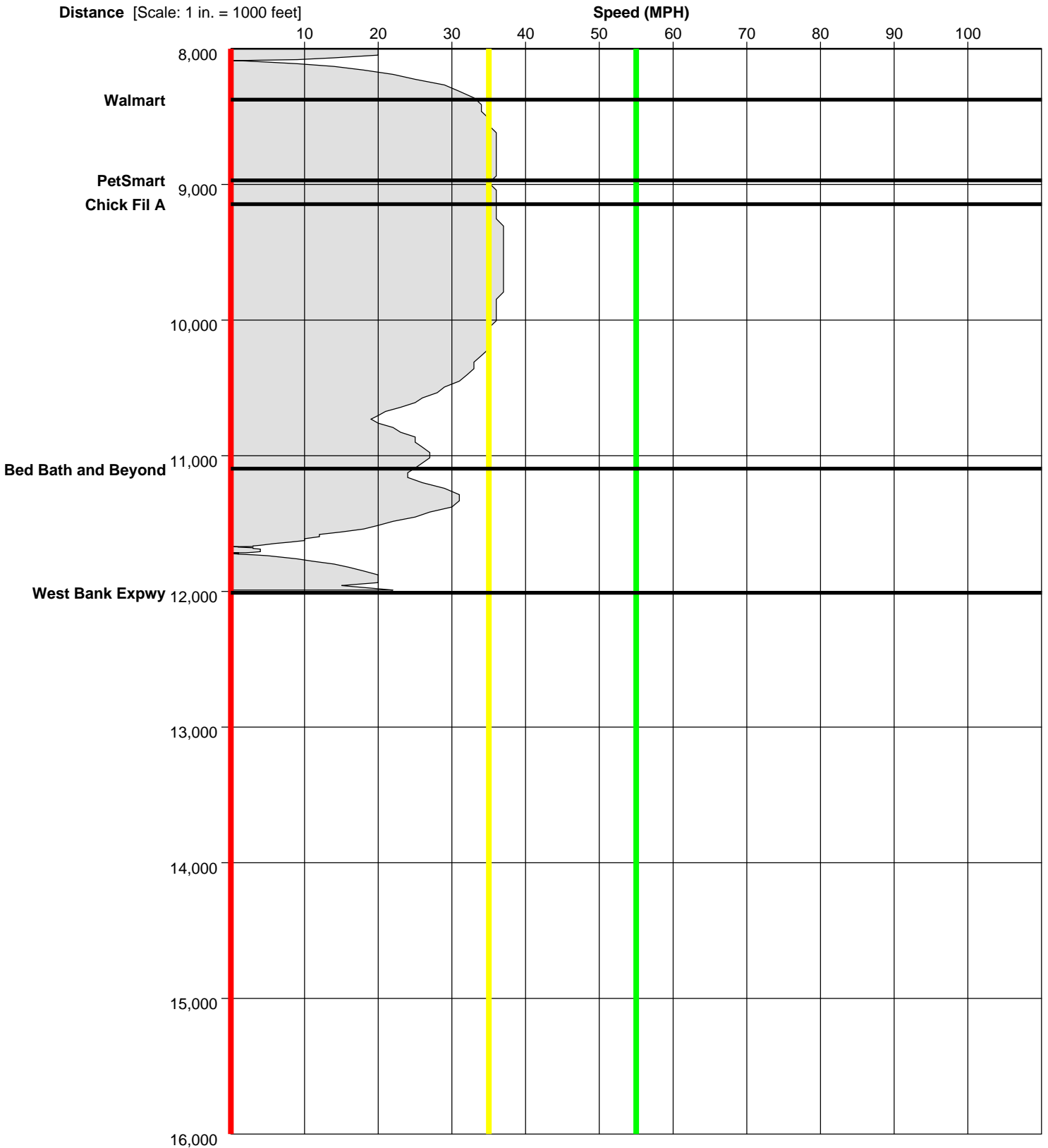
Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd Midd-NB-002t** Start Time: **11:18** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

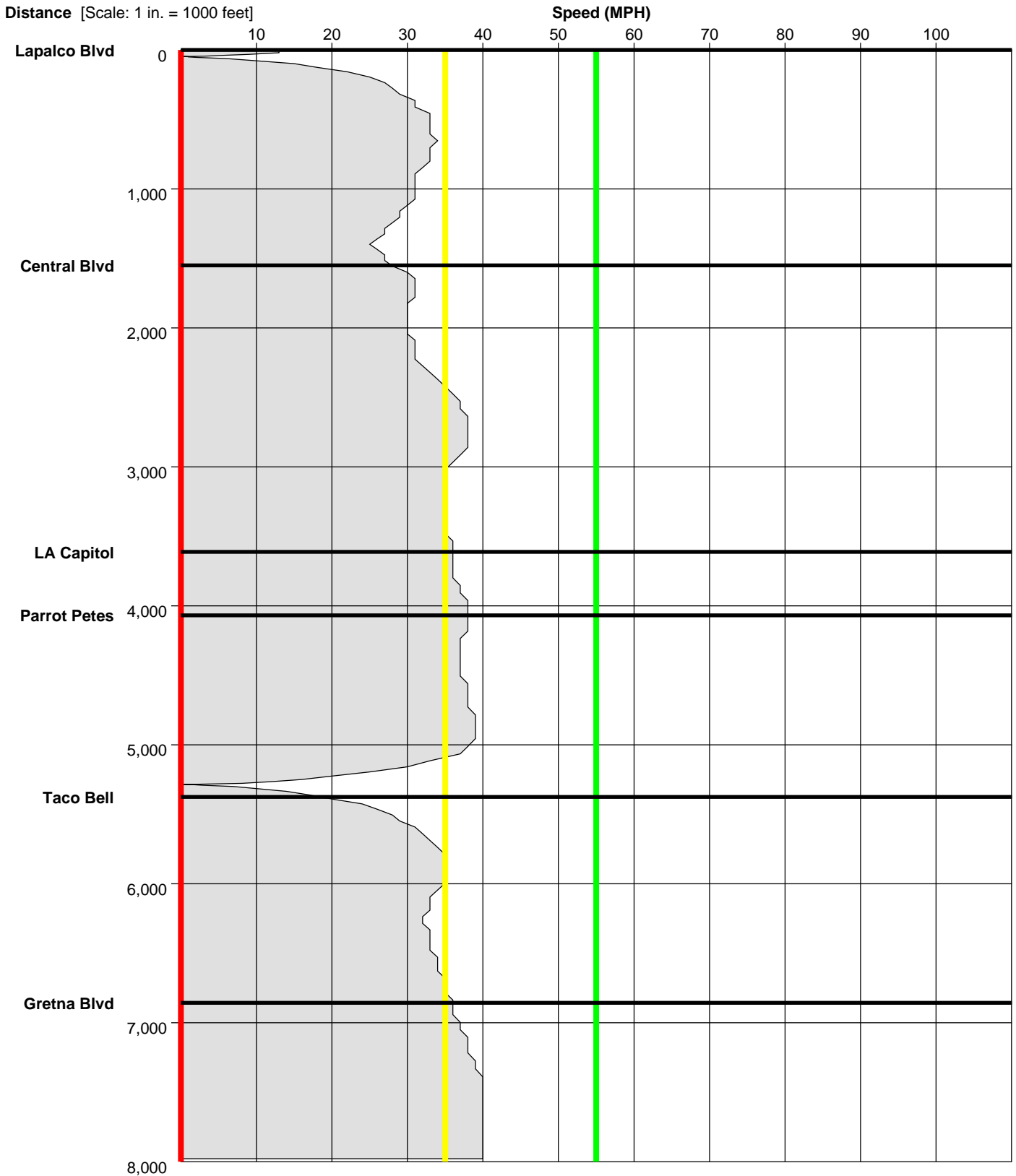
Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd Midd-NB-003t** Start Time: **11:35** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

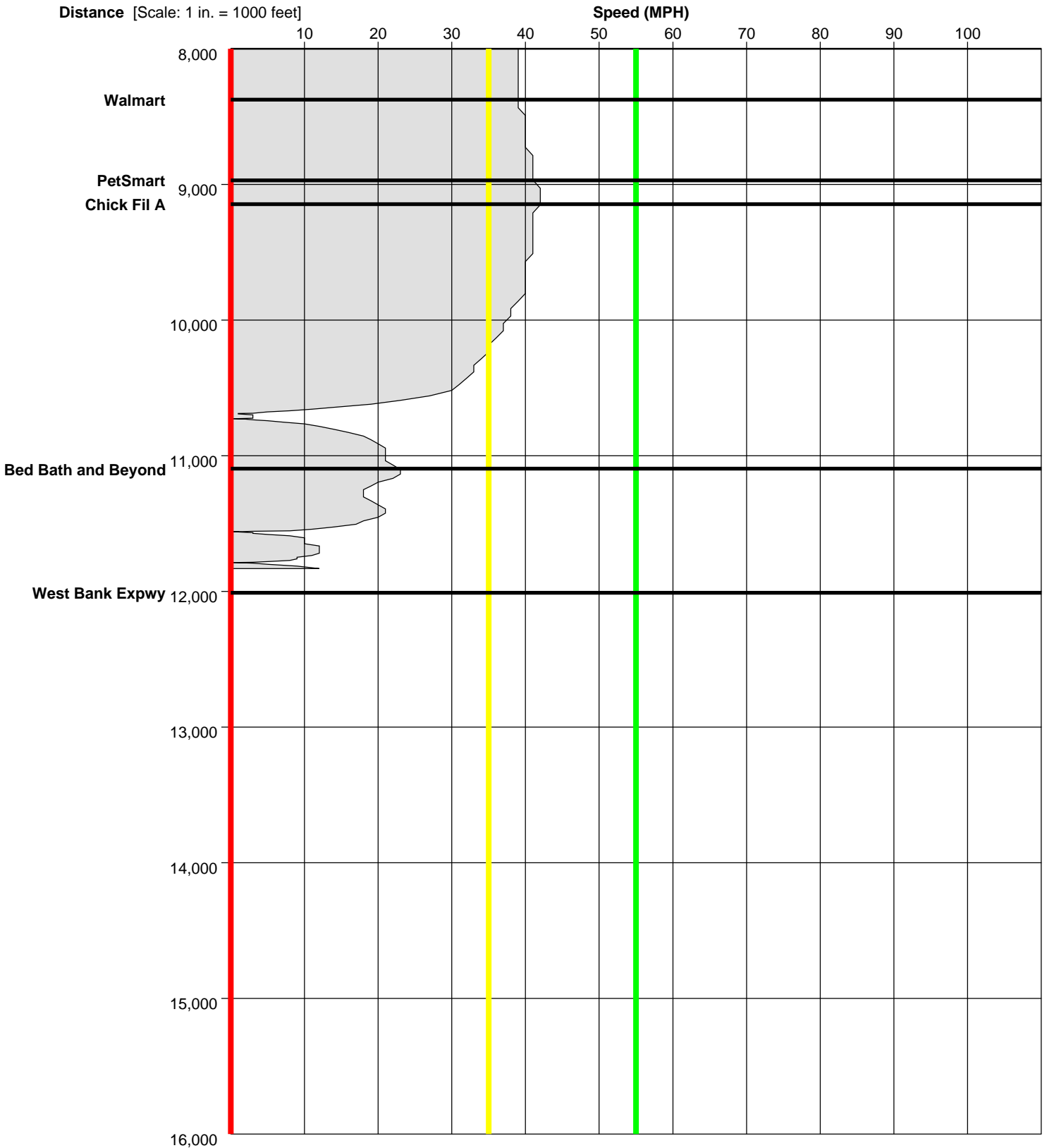
Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd Midd-NB-003t** Start Time: **11:35** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

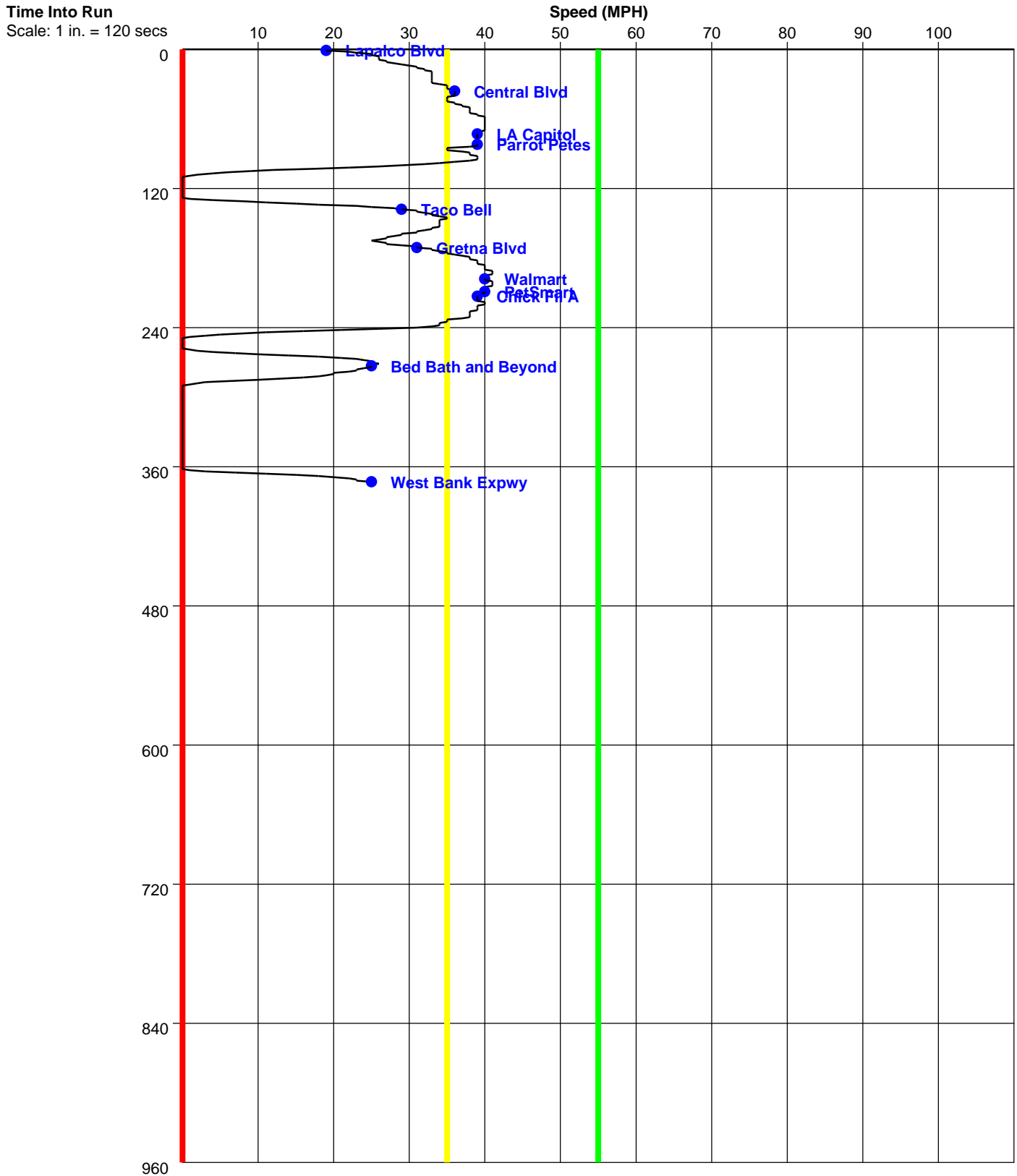
Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **24**

Time-Based Speed Profile

Run : **Manhattan Blvd Midd-NB-001tn** Start Time: **11:02** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

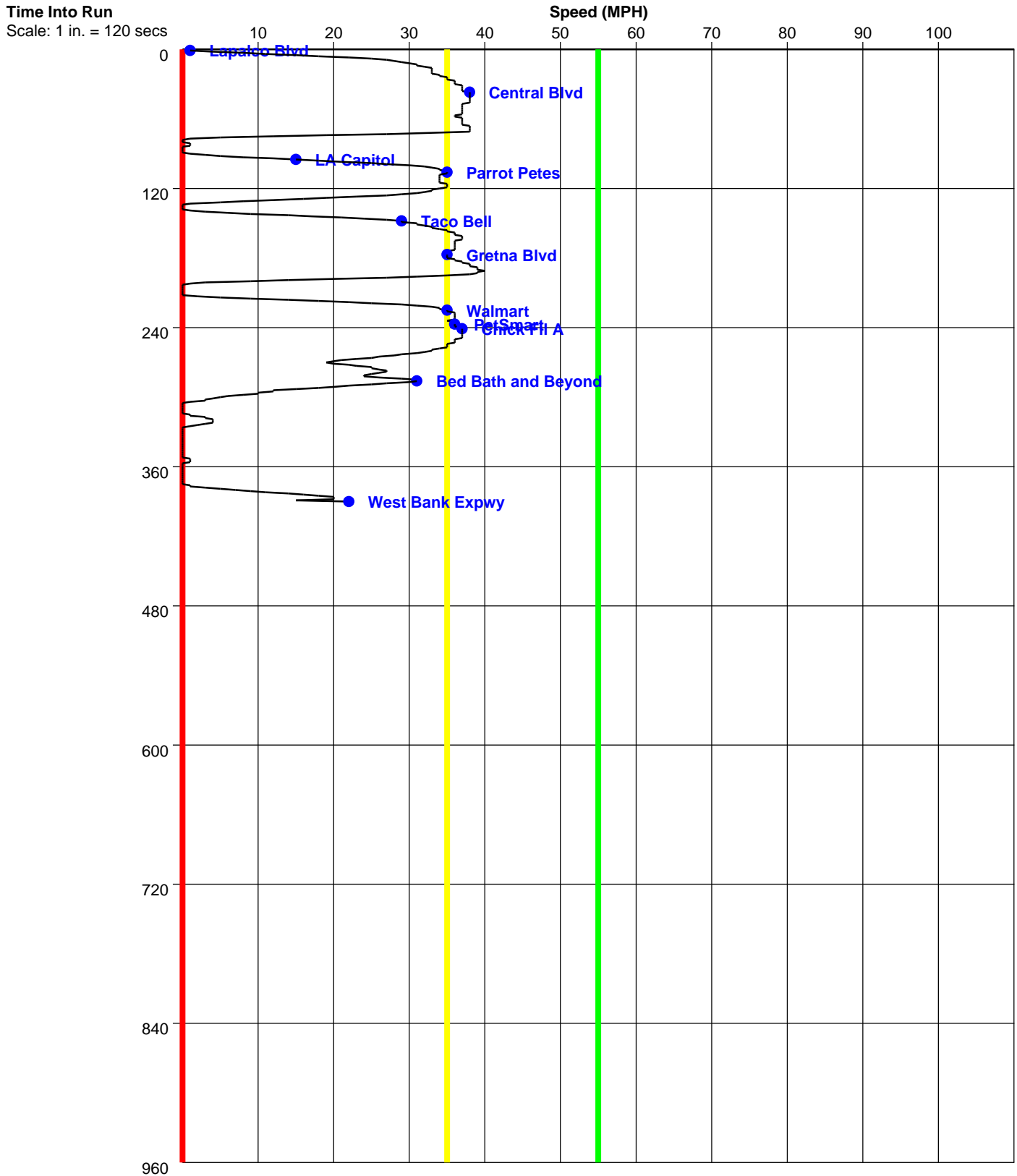
Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **25**

Time-Based Speed Profile

Run : **Manhattan Blvd Midd-NB-002t** Start Time: **11:18** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

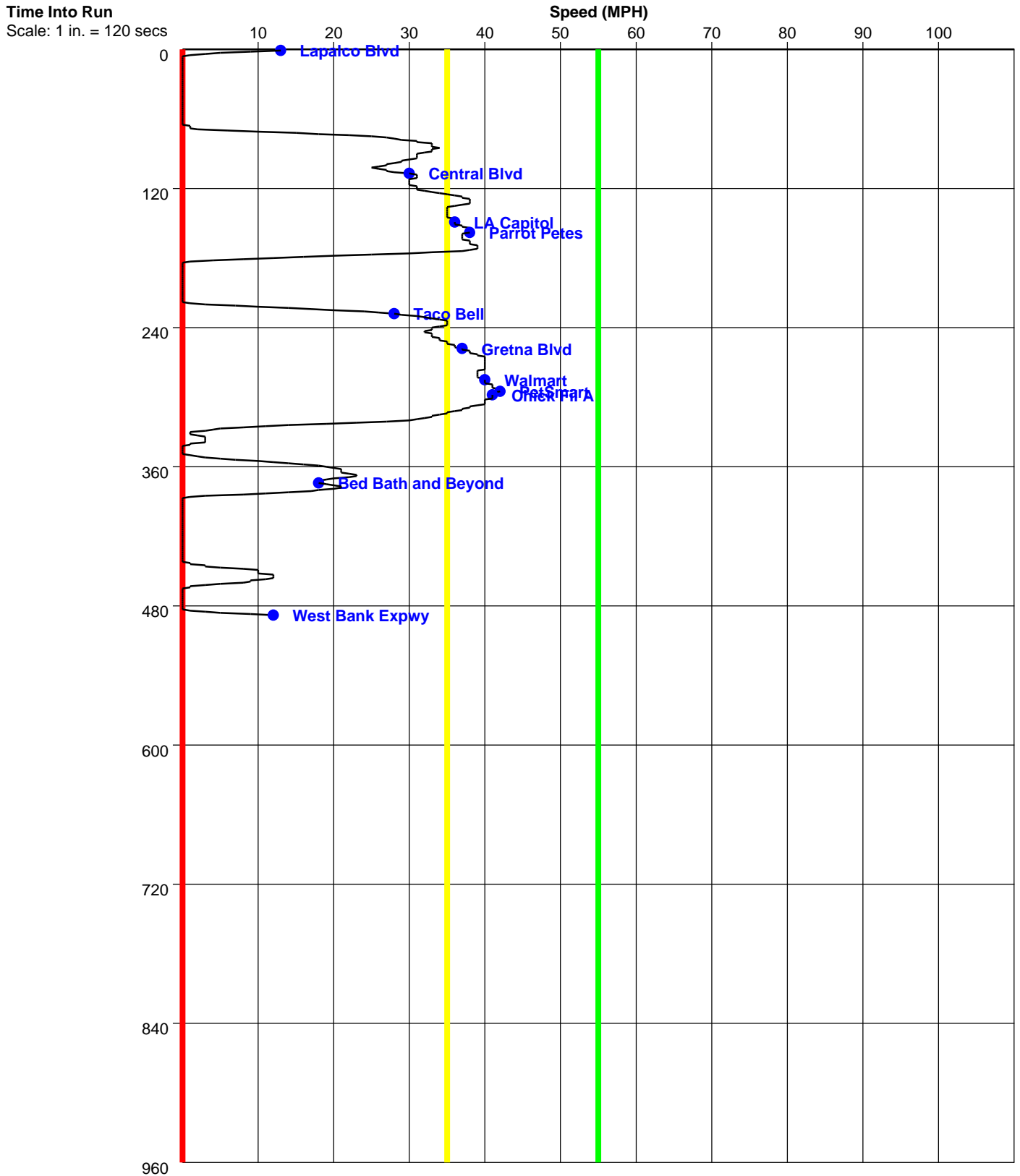
Study Name : **Manhattan Blvd NB Midday**

Study Date : **10/19/2017**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd Midd-NB-003t** Start Time: **11:35** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd SB Midday

<u>Report Name</u>	<u>Page</u>
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Detailed Statistics By Run - Time <= 55 MPH	11
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Speed Profile (Time vs Spd) for Manhattan Blvd Midd-SB-001tn	24
Speed Profile (Time vs Spd) for Manhattan Blvd Midd-SB-002t	25
Speed Profile (Time vs Spd) for Manhattan Blvd Midd-SB-003t	26

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/ After	Run Type
Manhattan Blvd Midd-SB-001tn	10/19/17	10:54	11653	Before	Primary
Manhattan Blvd Midd-SB-002t	10/19/17	11:11	11876	Before	Secondary
Manhattan Blvd Midd-SB-003t	10/19/17	11:27	11964	Before	Secondary

Notes:

Node Info

#	Len	Name
1	0	West Bank Expwy
2	866	Bed Bath and Beyond
3	1978	Chick Fil A
4	175	PetSmart
5	613	Walmart
6	1518	Gretna Blvd
7	1486	Taco Bell
8	1268	Parrot Petes
9	497	La Capitol
10	2013	Central Blvd
11	1239	Lapalco Blvd

Length of Study Route = 11,653 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	West Bank Expwy							
2	866	Bed Bath and Beyond	49.3	1.0	12.0	34.3	11.3	49.3	49.3
3	1978	Chick Fil A	62.3	0.7	21.6	28.3	11.3	60.3	62.3
4	175	PetSmart	3.3	0.0	35.8	0.3	0.0	2.3	3.3
5	613	Walmart	12.7	0.0	33.0	2.0	0.0	8.7	12.7
6	1518	Gretna Blvd	58.3	1.0	17.7	32.3	16.3	52.7	58.3
7	1486	Taco Bell	40.7	0.0	24.9	15.0	3.3	35.0	40.7
8	1268	Parrot Petes	38.3	0.7	22.6	16.3	5.0	26.3	38.3
9	497	La Capitol	10.0	0.0	33.9	1.3	0.0	6.3	10.0
10	2013	Central Blvd	38.0	0.0	36.1	3.7	0.0	9.3	38.0
11	1239	Lapalco Blvd	53.3	0.7	15.8	32.3	19.3	51.0	53.3
Total	11,653		366.3	4.0	21.7	166.0	66.7	301.3	366.3

Stats based on 3 BEFORE runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	West Bank Expwy				
2	866	Bed Bath and Beyond	0.0149	1.6604	11.4105	1.0057
3	1978	Chick Fil A	0.0221	2.1872	19.4048	1.2461
4	175	PetSmart	0.0013	0.1257	1.3625	0.0697
5	613	Walmart	0.0049	0.4023	4.3562	0.1916
6	1518	Gretna Blvd	0.0174	1.5237	12.8826	0.6297
7	1486	Taco Bell	0.0152	1.6124	15.1452	1.0106
8	1268	Parrot Petes	0.0134	1.2193	9.8975	0.6661
9	497	La Capitol	0.0046	0.5034	5.3574	0.3489
10	2013	Central Blvd	0.0146	0.8836	9.6019	0.2220
11	1239	Lapalco Blvd	0.0165	1.5470	13.1347	0.7263
Total	11,653		0.1250	11.6650	102.5533	6.1168

Stats based on 3 BEFORE runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd Midd-SB-001tn

Manhattan Blvd Midd-SB-002t

Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	58	39	51
3	1978	Chick Fil A	42	40	105
4	175	PetSmart	4	3	3
5	613	Walmart	13	12	13
6	1518	Gretna Blvd	79	61	35
7	1486	Taco Bell	31	33	58
8	1268	Parrot Petes	47	44	24
9	497	La Capitol	10	11	9
10	2013	Central Blvd	39	38	37
11	1239	Lapalco Blvd	57	27	76
Totals	11653		380	308	411

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd Midd-SB-001tn
Manhattan Blvd Midd-SB-002t
Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	1	1	1
3	1978	Chick Fil A	0	0	2
4	175	PetSmart	0	0	0
5	613	Walmart	0	0	0
6	1518	Gretna Blvd	1	1	1
7	1486	Taco Bell	0	0	0
8	1268	Parrot Petes	1	1	0
9	497	La Capitol	0	0	0
10	2013	Central Blvd	0	0	0
11	1239	Lapalco Blvd	1	0	1
Totals	11653		4	3	5

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd Midd-SB-001tn
Manhattan Blvd Midd-SB-002t
Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	10.2	15.6	11.8
3	1978	Chick Fil A	32.1	33.9	13.0
4	175	PetSmart	29.8	35.0	32.3
5	613	Walmart	32.2	35.9	32.9
6	1518	Gretna Blvd	13.1	16.7	29.2
7	1486	Taco Bell	32.6	30.8	17.8
8	1268	Parrot Petes	18.4	19.4	36.5
9	497	La Capitol	33.8	30.9	37.3
10	2013	Central Blvd	35.1	36.3	37.3
11	1239	Lapalco Blvd	14.8	31.1	10.9
Totals	11653		20.9	25.8	19.4

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd Midd-SB-001tn
Manhattan Blvd Midd-SB-002t
Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	43	24	36
3	1978	Chick Fil A	8	6	71
4	175	PetSmart	1	0	0
5	613	Walmart	3	1	2
6	1518	Gretna Blvd	53	35	9
7	1486	Taco Bell	6	7	32
8	1268	Parrot Petes	25	22	2
9	497	La Capitol	2	2	0
10	2013	Central Blvd	5	4	2
11	1239	Lapalco Blvd	36	6	55
Totals	11653		182	107	209

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd Midd-SB-001tn

Manhattan Blvd Midd-SB-002t

Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	25	3	6
3	1978	Chick Fil A	0	0	34
4	175	PetSmart	0	0	0
5	613	Walmart	0	0	0
6	1518	Gretna Blvd	33	16	0
7	1486	Taco Bell	0	0	10
8	1268	Parrot Petes	7	8	0
9	497	La Capitol	0	0	0
10	2013	Central Blvd	0	0	0
11	1239	Lapalco Blvd	17	0	41
Totals	11653		82	27	91

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd Midd-SB-001tn

Manhattan Blvd Midd-SB-002t

Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	58	39	51
3	1978	Chick Fil A	36	40	105
4	175	PetSmart	4	0	3
5	613	Walmart	13	0	13
6	1518	Gretna Blvd	75	48	35
7	1486	Taco Bell	24	23	58
8	1268	Parrot Petes	39	39	1
9	497	La Capitol	8	11	0
10	2013	Central Blvd	17	10	1
11	1239	Lapalco Blvd	57	25	71
Totals	11653		331	235	338

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd Midd-SB-001tn

Manhattan Blvd Midd-SB-002t

Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	58	39	51
3	1978	Chick Fil A	42	40	105
4	175	PetSmart	4	3	3
5	613	Walmart	13	12	13
6	1518	Gretna Blvd	79	61	35
7	1486	Taco Bell	31	33	58
8	1268	Parrot Petes	47	44	24
9	497	La Capitol	10	11	9
10	2013	Central Blvd	39	38	37
11	1239	Lapalco Blvd	57	27	76
Totals	11653		380	308	411

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd Midd-SB-001tn

Manhattan Blvd Midd-SB-002t

Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	0.0163	0.0129	0.0157
3	1978	Chick Fil A	0.0159	0.0171	0.0334
4	175	PetSmart	0.0012	0.0012	0.0016
5	613	Walmart	0.0053	0.0047	0.0047
6	1518	Gretna Blvd	0.0220	0.0188	0.0112
7	1486	Taco Bell	0.0126	0.0132	0.0198
8	1268	Parrot Petes	0.0159	0.0146	0.0098
9	497	La Capitol	0.0045	0.0056	0.0037
10	2013	Central Blvd	0.0144	0.0150	0.0145
11	1239	Lapalco Blvd	0.0172	0.0090	0.0233
Totals	11653		0.1252	0.1122	0.1377

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd Midd-SB-001tn

Manhattan Blvd Midd-SB-002t

Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	1.7555	1.4087	1.8169
3	1978	Chick Fil A	1.3812	1.5270	3.6535
4	175	PetSmart	0.0720	0.0980	0.2072
5	613	Walmart	0.5450	0.3074	0.3544
6	1518	Gretna Blvd	2.1297	1.7269	0.7145
7	1486	Taco Bell	1.2409	1.3223	2.2740
8	1268	Parrot Petes	1.6287	1.3252	0.7040
9	497	La Capitol	0.5100	0.7443	0.2558
10	2013	Central Blvd	0.8363	1.0059	0.8085
11	1239	Lapalco Blvd	1.5486	0.5728	2.5198
Totals	11653		11.6479	10.0385	13.3087

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd Midd-SB-001tn

Manhattan Blvd Midd-SB-002t

Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	13.3918	10.0411	10.7985
3	1978	Chick Fil A	14.7995	15.1316	28.2833
4	175	PetSmart	0.7280	1.1107	2.2487
5	613	Walmart	5.8887	3.4044	3.7756
6	1518	Gretna Blvd	17.5320	13.7036	7.4122
7	1486	Taco Bell	13.1951	13.3506	18.8901
8	1268	Parrot Petes	12.0343	9.6871	7.9712
9	497	La Capitol	5.8030	7.3485	2.9207
10	2013	Central Blvd	8.8596	11.2401	8.7060
11	1239	Lapalco Blvd	11.5039	6.0141	21.8862
Totals	11653		103.7358	91.0318	112.8924

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd Midd-SB-001tn

Manhattan Blvd Midd-SB-002t

Manhattan Blvd Midd-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	West Bank Expwy			
2	866	Bed Bath and Beyond	0.9090	0.8979	1.2100
3	1978	Chick Fil A	0.7002	0.8770	2.1611
4	175	PetSmart	0.0022	0.0462	0.1608
5	613	Walmart	0.3404	0.0995	0.1350
6	1518	Gretna Blvd	0.9316	0.8243	0.1332
7	1486	Taco Bell	0.7525	0.8104	1.4690
8	1268	Parrot Petes	0.9985	0.7097	0.2900
9	497	La Capitol	0.3504	0.5998	0.0965
10	2013	Central Blvd	0.1563	0.3473	0.1625
11	1239	Lapalco Blvd	0.6875	0.1297	1.3618
Totals	11653		5.8286	5.3418	7.1800

ITS Regional

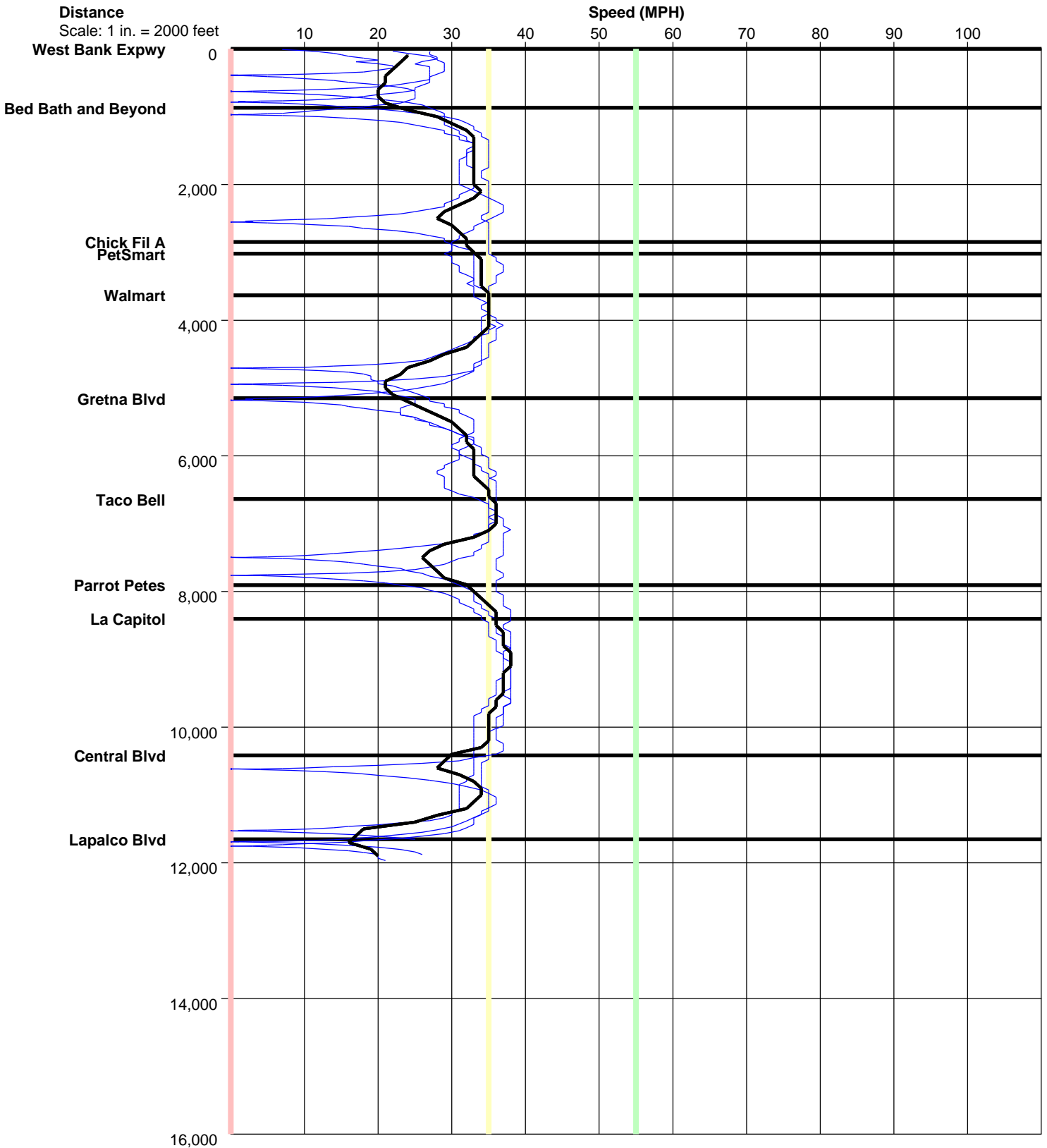
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

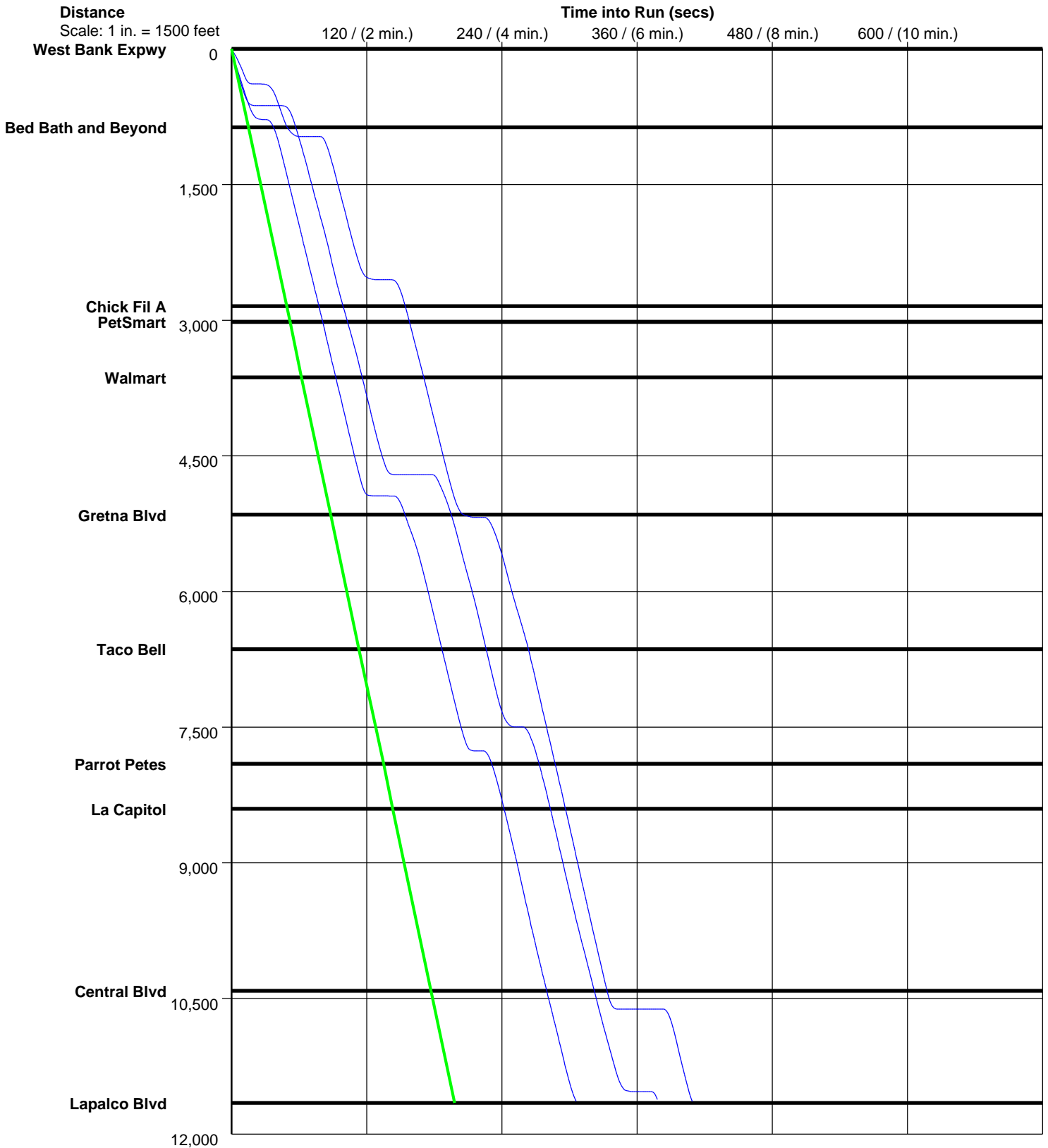
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

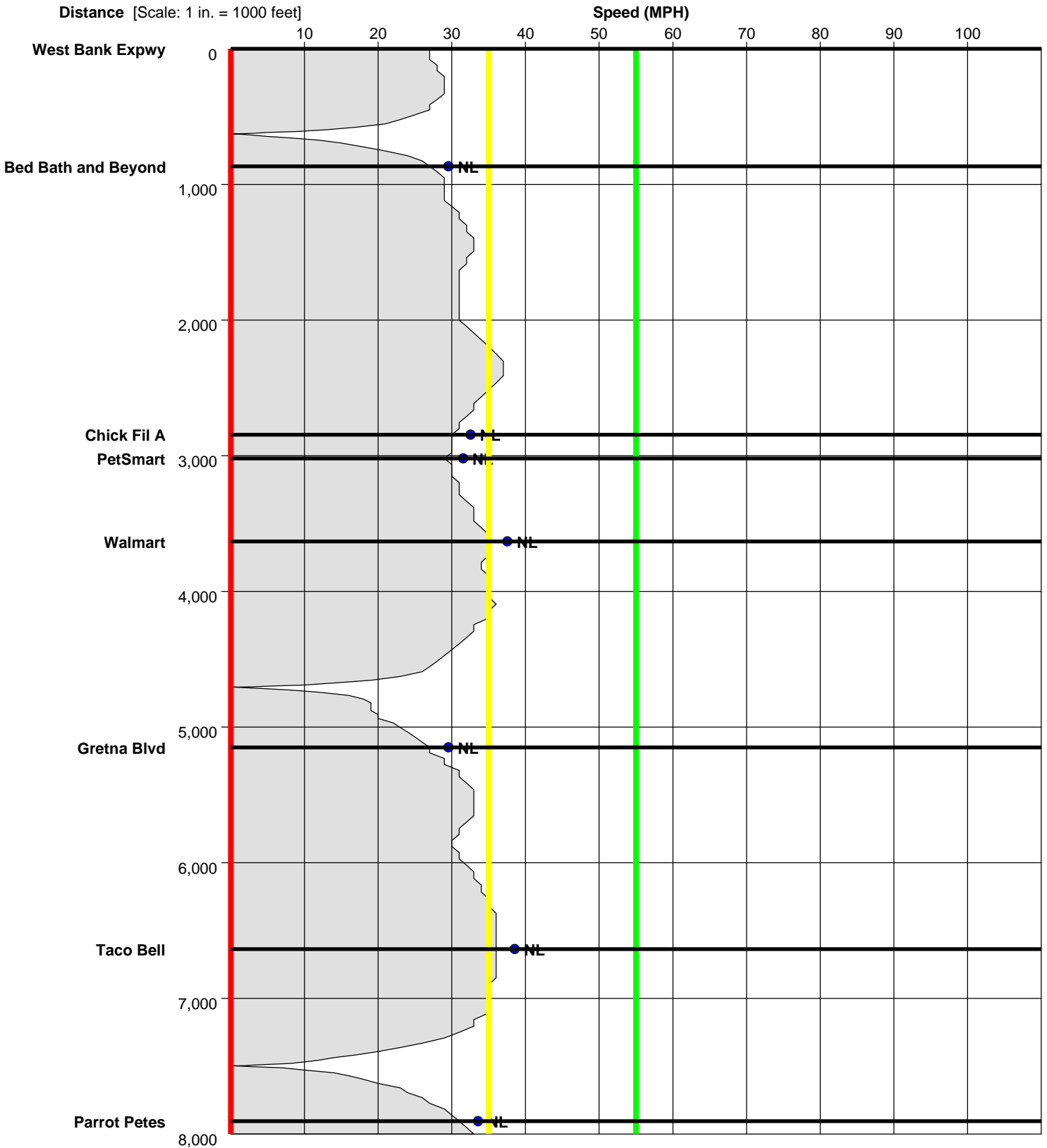
Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd Midd-SB-001tn** Start Time: **10:54** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

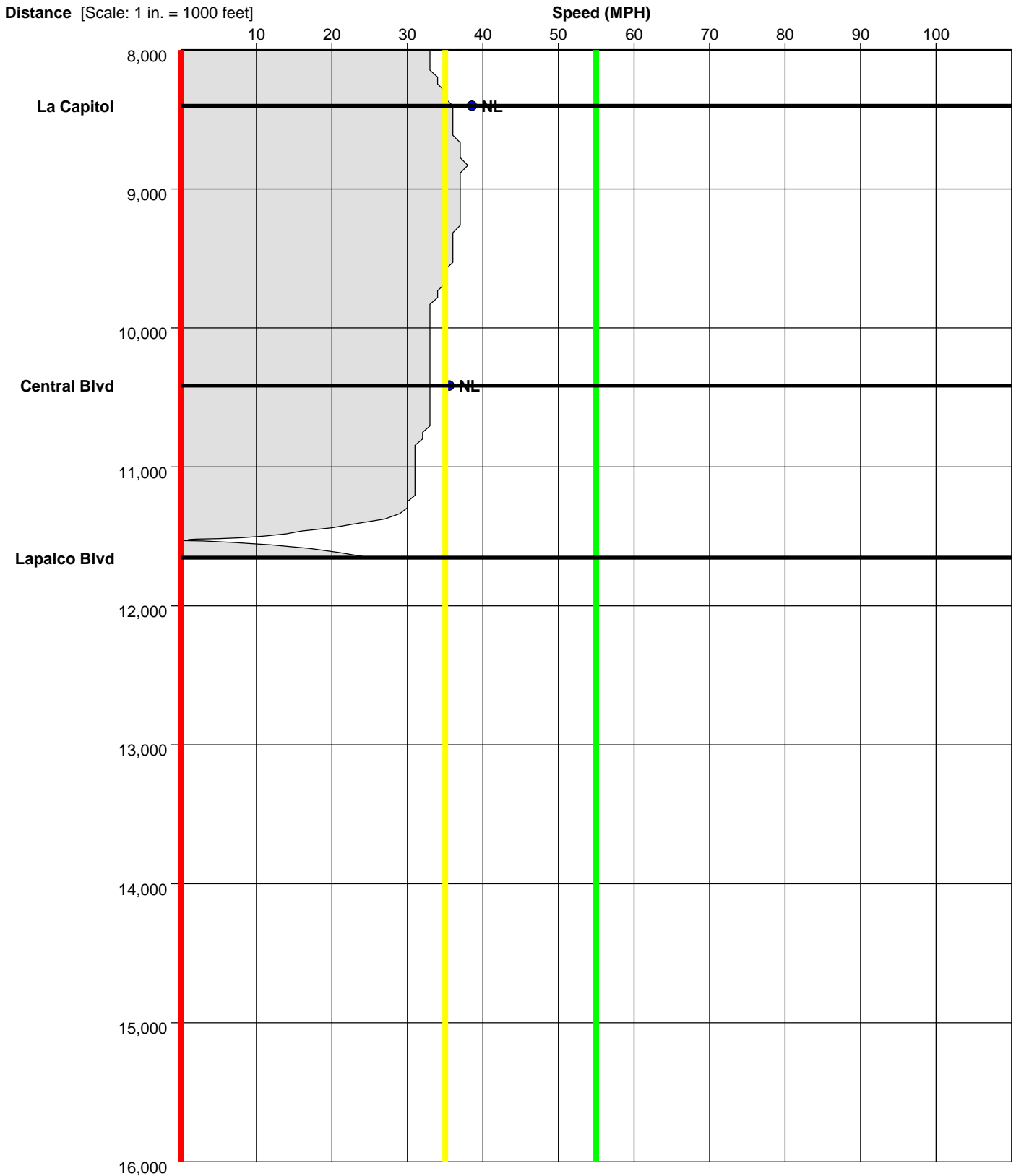
Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd Midd-SB-001tn** Start Time: **10:54** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

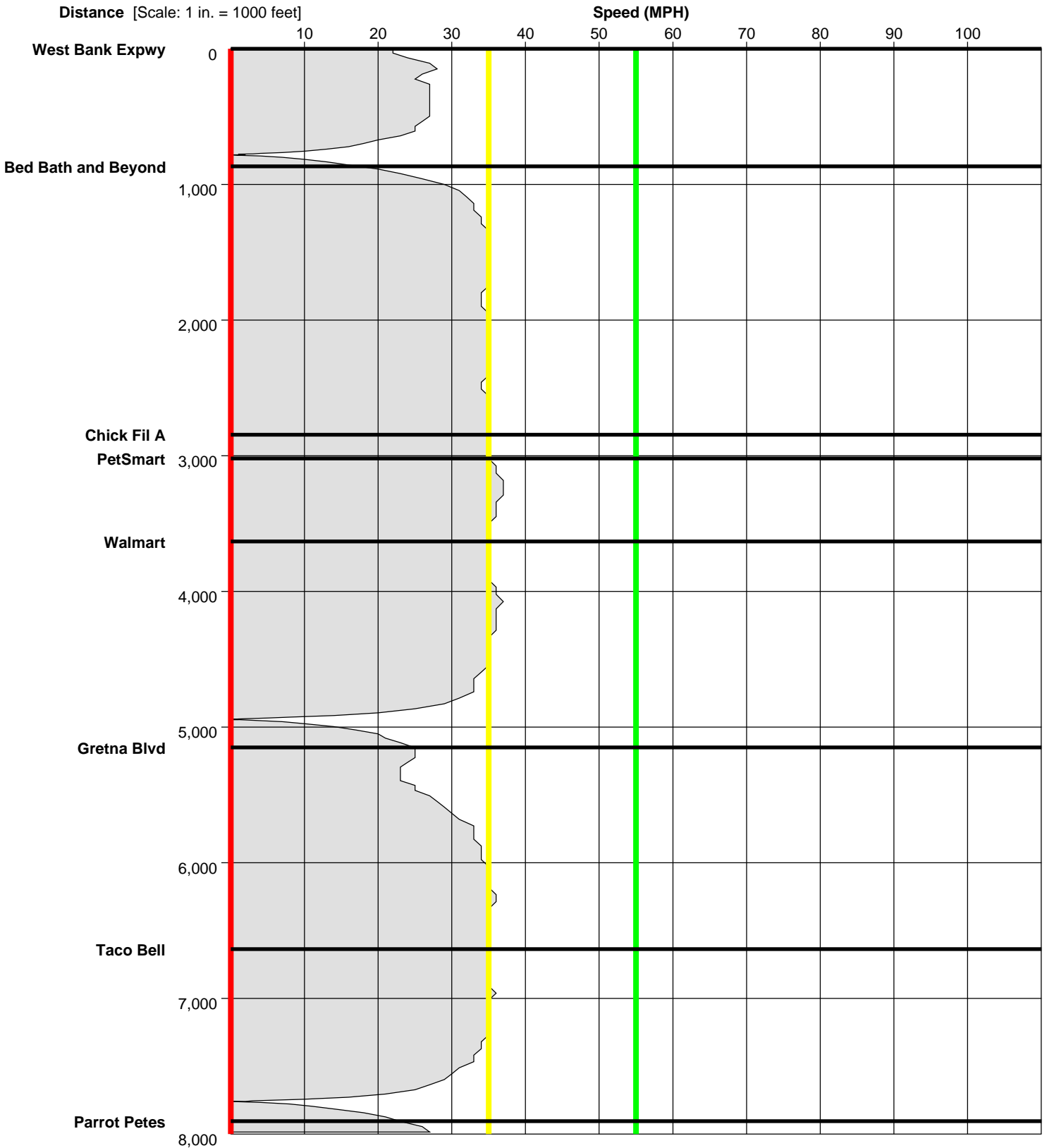
Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd Midd-SB-002t** Start Time: **11:11** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

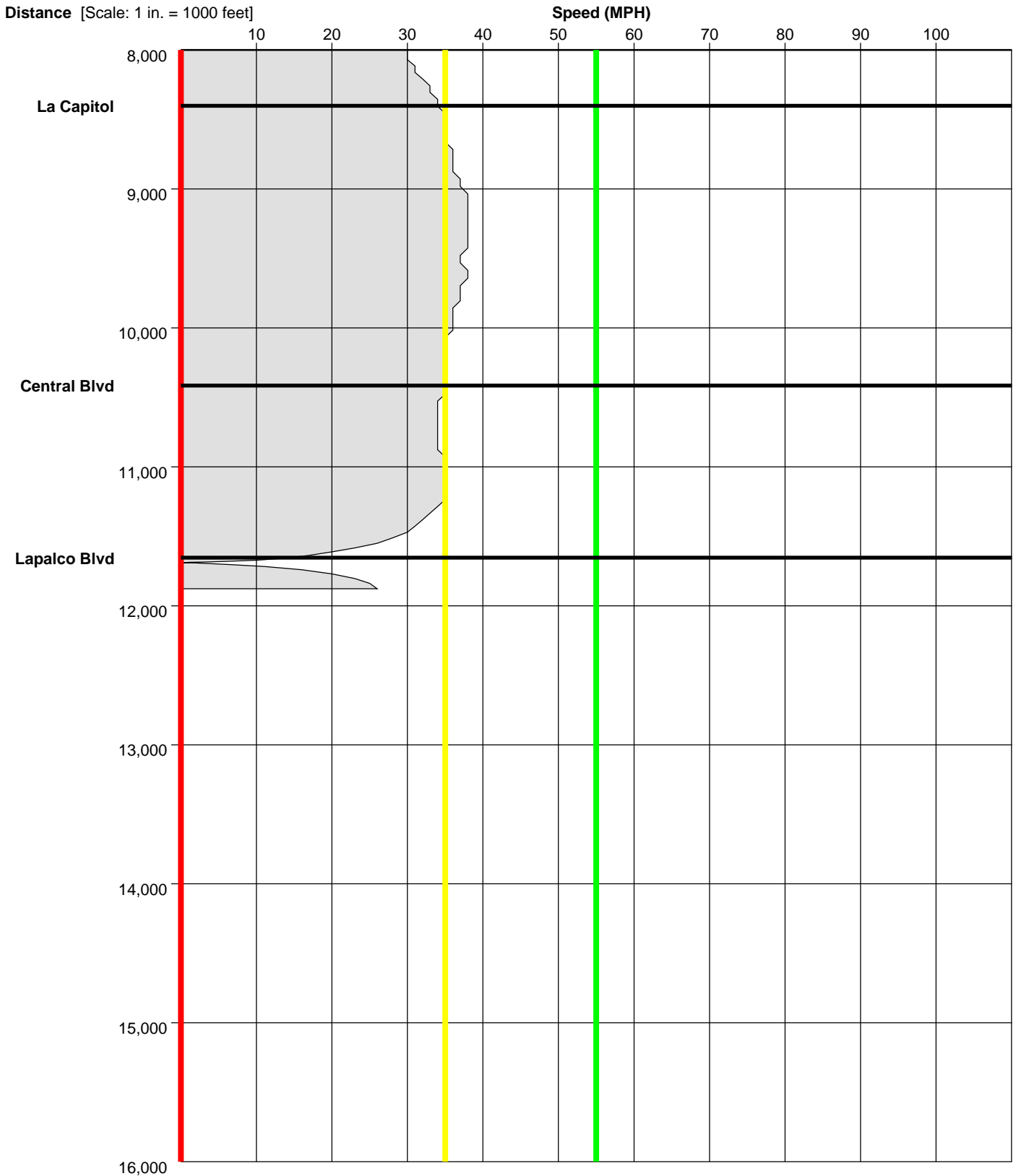
Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd Midd-SB-002t** Start Time: **11:11** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

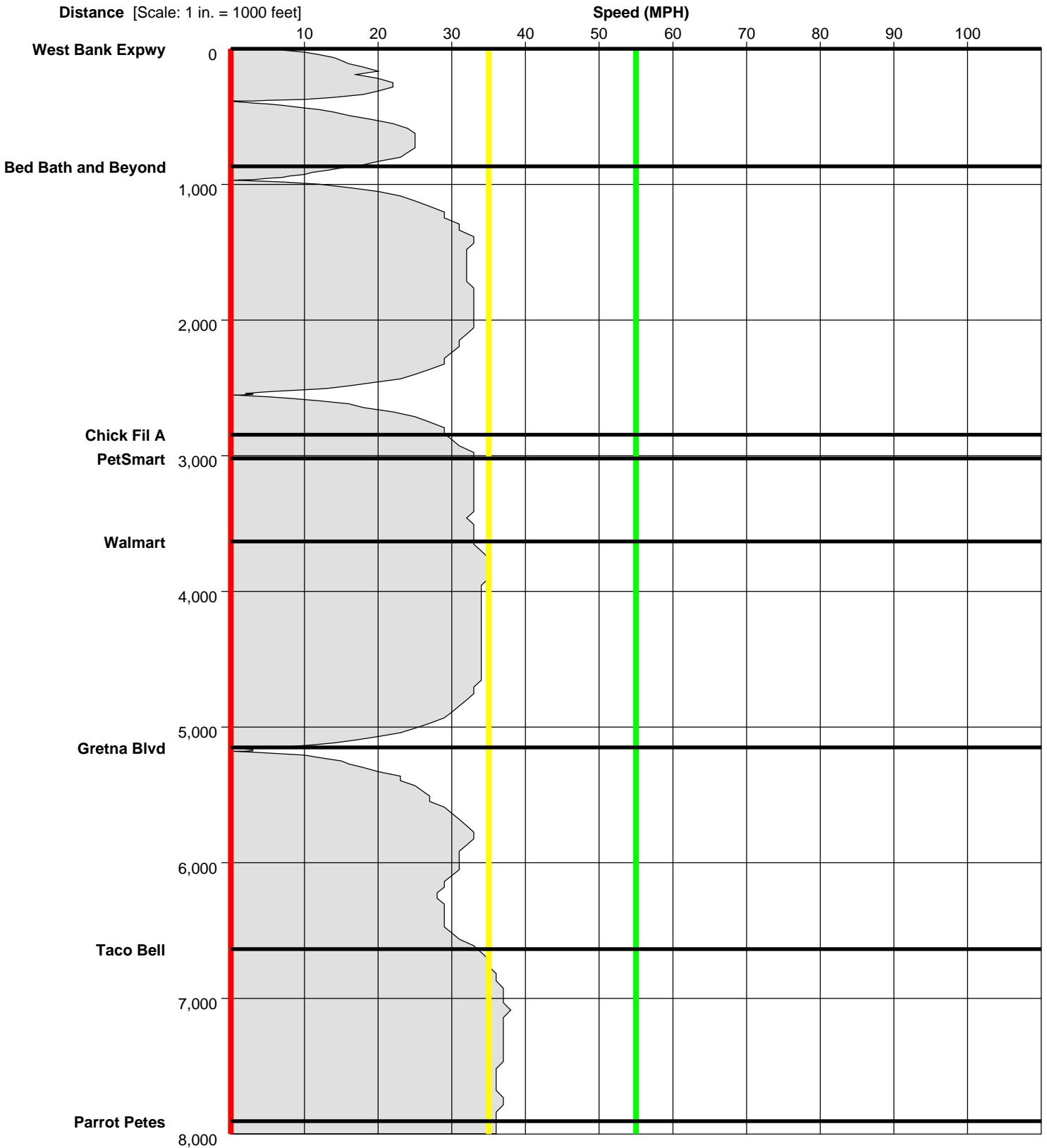
Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd Midd-SB-003t** Start Time: **11:27** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

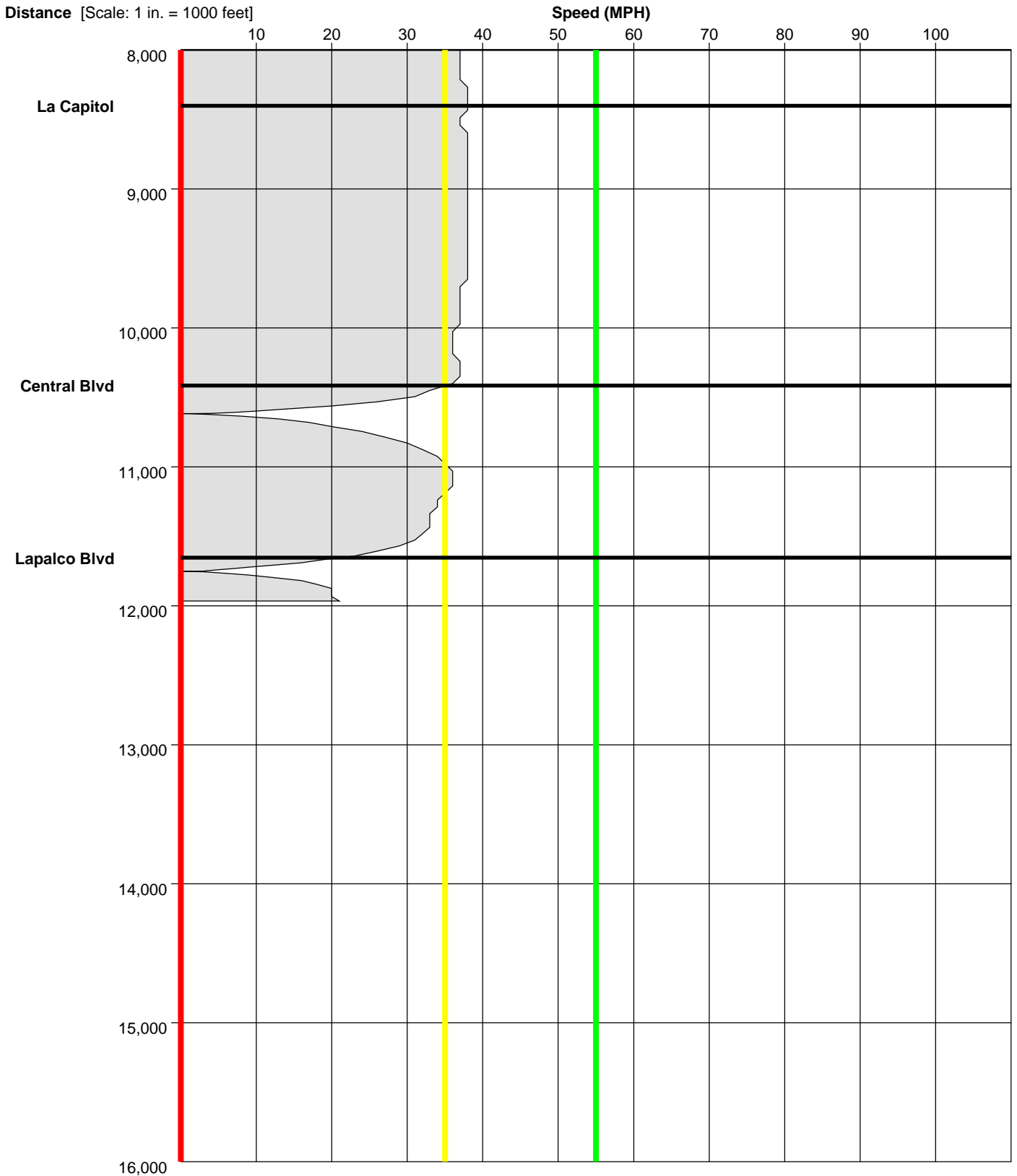
Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd Midd-SB-003t** Start Time: **11:27** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

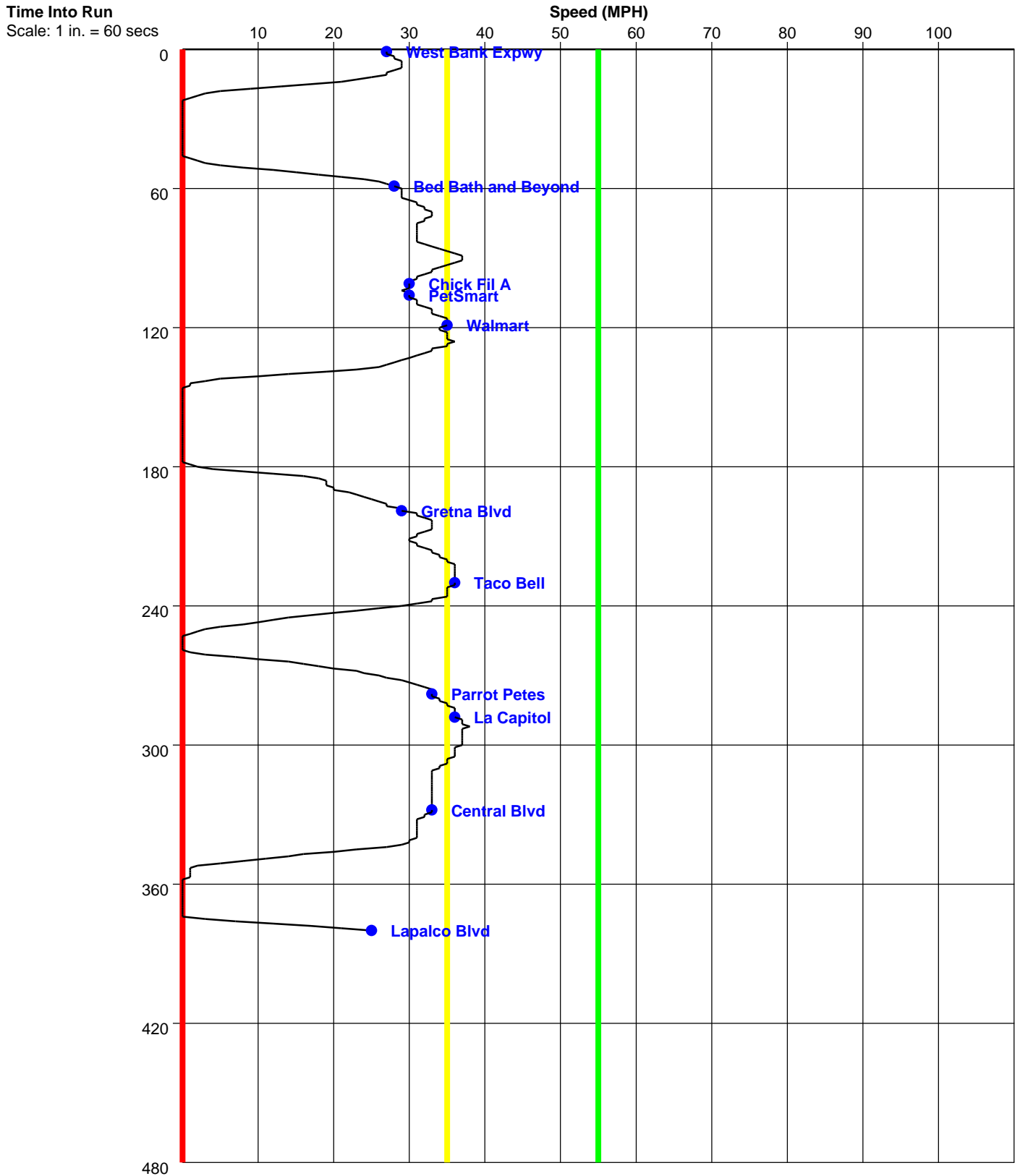
Study Name : **Manhattan Blvd SB Middy**

Study Date : **10/19/2017**

Page No. : **24**

Time-Based Speed Profile

Run : **Manhattan Blvd Midd-SB-001tn** Start Time:10:54 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

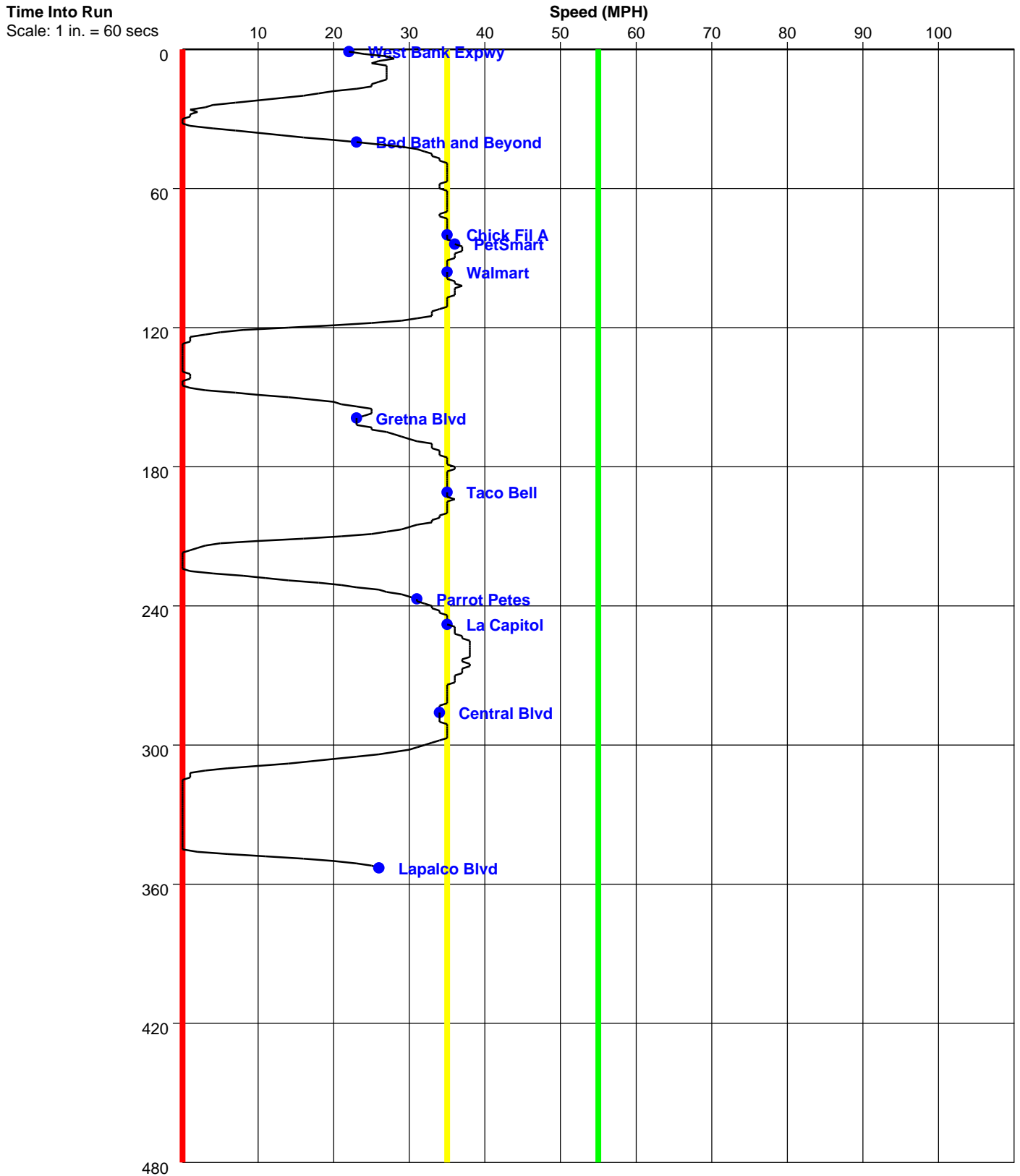
Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **25**

Time-Based Speed Profile

Run : **Manhattan Blvd Midd-SB-002t** Start Time:11:11 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

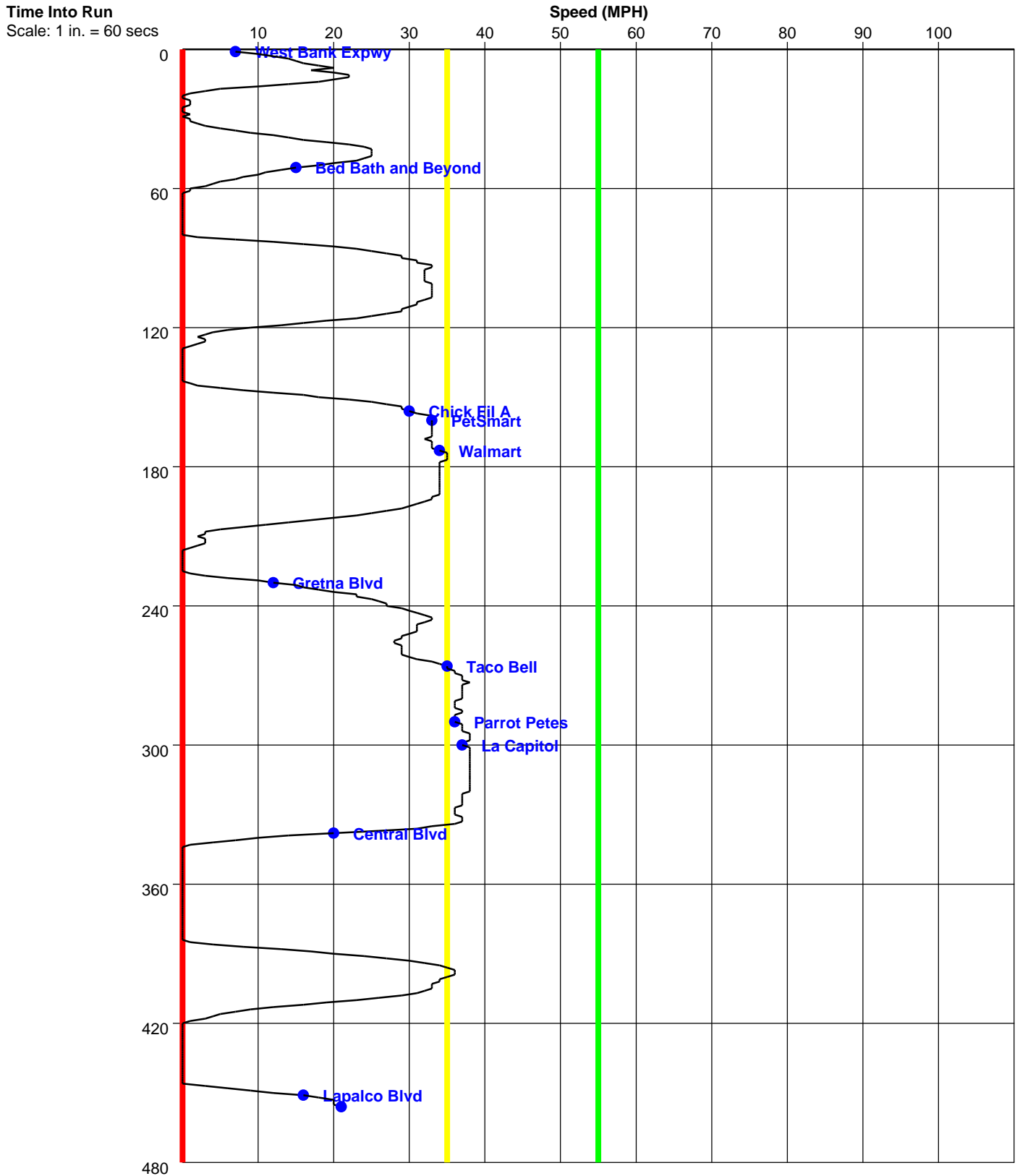
Study Name : **Manhattan Blvd SB Midday**

Study Date : **10/19/2017**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd Mid-SB-003t** Start Time: **11:27** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd NB PM

<u>Report Name</u>	<u>Page</u>
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Speed Profile (Distance vs Spd) for manhattan blvd pm-NB-001tn	18
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Speed Profile (Time vs Spd) for manhattan blvd pm-NB-003t	30
Speed Profile (Time vs Spd) for manhattan blvd pm-NB-004t	31
Speed Profile (Time vs Spd) for manhattan blvd pm-NB-005t	32

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
manhattan blvd pm-NB-001tn	10/19/17	15:09	11964	Before	Primary
manhattan blvd pm-NB-002t	10/19/17	15:29	11884	Before	Secondary
manhattan blvd pm-NB-003t	10/19/17	15:45	11927	Before	Secondary
manhattan blvd pm-NB-004t	10/19/17	16:01	11890	Before	Secondary
manhattan blvd pm-NB-005t	10/19/17	16:18	11811	Before	Secondary

Node Info

#	Len	Name
1	0	Lapalco Blvd
2	1536	Central Blvd
3	2061	LA Capitol
4	451	Parrot Petes
5	1320	Taco Bell
6	1456	Gretna Blvd
7	1538	Walmart
8	621	PetSmart
9	161	Chick Fil A
10	1943	Bed Bath and Beyond
11	877	Westbank Expwy

Notes:

Length of Study Route = 11,964 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Lapalco Blvd							
2	1536	Central Blvd	36.6	0.0	28.6	10.2	0.0	34.2	36.6
3	2061	LA Capitol	40.2	0.0	35.0	4.8	0.0	21.6	40.2
4	451	Parrot Petes	8.8	0.0	34.9	0.8	0.0	2.4	8.8
5	1320	Taco Bell	33.2	0.2	27.1	10.4	5.8	17.2	33.2
6	1456	Gretna Blvd	59.0	1.0	16.8	34.0	10.2	54.0	59.0
7	1538	Walmart	54.6	0.8	19.2	28.2	10.2	53.0	54.6
8	621	PetSmart	12.8	0.0	33.1	1.8	0.0	7.6	12.8
9	161	Chick Fil A	4.0	0.0	27.4	0.8	0.0	1.8	4.0
10	1943	Bed Bath and Beyond	58.6	0.4	22.6	25.2	4.6	49.8	58.6
11	877	Westbank Expwy	76.0	1.4	7.9	61.8	31.6	75.2	75.2
Total	11,964		383.8	3.8	21.3	178.0	62.4	316.8	383.0

Stats based on 5 BEFORE runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Lapalco Blvd				
2	1536	Central Blvd	0.0145	1.5209	14.0057	0.9876
3	2061	LA Capitol	0.0157	1.1196	12.5472	0.4259
4	451	Parrot Petes	0.0038	0.3249	3.2559	0.1844
5	1320	Taco Bell	0.0119	0.8586	8.1114	0.3136
6	1456	Gretna Blvd	0.0179	1.7269	13.9499	0.8670
7	1538	Walmart	0.0194	2.1117	18.4347	1.3329
8	621	PetSmart	0.0053	0.5098	5.9072	0.2943
9	161	Chick Fil A	0.0016	0.1353	0.9894	0.0788
10	1943	Bed Bath and Beyond	0.0178	1.4138	12.8660	0.4907
11	877	Westbank Expwy	0.0182	1.9034	14.1271	0.7814
Total	11,964		0.1261	11.6249	104.1945	5.7566

Stats based on 5 BEFORE runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

manhattan blvd pm-NB-001tn
manhattan blvd pm-NB-002t
manhattan blvd pm-NB-003t
manhattan blvd pm-NB-004t
manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	34	36	37	36	40
3	2061	LA Capitol	37	42	45	38	39
4	451	Parrot Petes	8	8	12	8	8
5	1320	Taco Bell	24	27	67	23	25
6	1456	Gretna Blvd	69	69	29	65	63
7	1538	Walmart	66	34	43	79	51
8	621	PetSmart	12	16	12	12	12
9	161	Chick Fil A	3	7	4	3	3
10	1943	Bed Bath and Beyond	77	93	41	36	46
11	877	Westbank Expwy	169	42	49	36	84
Totals	11964		499	374	339	336	371

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

manhattan blvd pm-NB-001tn
manhattan blvd pm-NB-002t
manhattan blvd pm-NB-003t
manhattan blvd pm-NB-004t
manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	0	0	0	0	0
3	2061	LA Capitol	0	0	0	0	0
4	451	Parrot Petes	0	0	0	0	0
5	1320	Taco Bell	0	0	1	0	0
6	1456	Gretna Blvd	1	2	0	1	1
7	1538	Walmart	1	0	1	1	1
8	621	PetSmart	0	0	0	0	0
9	161	Chick Fil A	0	0	0	0	0
10	1943	Bed Bath and Beyond	1	1	0	0	0
11	877	Westbank Expwy	2	1	1	1	2
Totals	11964		5	4	3	3	4

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

manhattan blvd pm-NB-001tn
manhattan blvd pm-NB-002t
manhattan blvd pm-NB-003t
manhattan blvd pm-NB-004t
manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	30.8	29.3	28.5	29.5	26.9
3	2061	LA Capitol	38.0	33.8	31.3	36.8	35.6
4	451	Parrot Petes	38.4	36.0	26.6	40.0	37.5
5	1320	Taco Bell	37.8	33.9	13.4	38.8	36.4
6	1456	Gretna Blvd	14.3	14.2	34.4	15.1	15.4
7	1538	Walmart	15.9	30.4	24.3	13.5	20.6
8	621	PetSmart	35.2	26.6	33.8	33.9	37.2
9	161	Chick Fil A	36.7	15.4	35.0	39.0	35.3
10	1943	Bed Bath and Beyond	17.2	14.2	32.0	37.1	28.4
11	877	Westbank Expwy	3.6	13.2	11.4	15.1	5.9
Totals	11964		16.3	21.7	24.1	24.2	21.7

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

manhattan blvd pm-NB-001tn

manhattan blvd pm-NB-002t

manhattan blvd pm-NB-003t

manhattan blvd pm-NB-004t

manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	8	10	11	9	13
3	2061	LA Capitol	2	6	10	3	3
4	451	Parrot Petes	0	0	4	0	0
5	1320	Taco Bell	2	4	44	0	2
6	1456	Gretna Blvd	44	44	4	40	38
7	1538	Walmart	40	8	16	52	25
8	621	PetSmart	1	5	1	1	1
9	161	Chick Fil A	0	4	0	0	0
10	1943	Bed Bath and Beyond	44	60	7	2	13
11	877	Westbank Expwy	154	28	34	22	71
Totals	11964		295	169	131	129	166

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

manhattan blvd pm-NB-001tn

manhattan blvd pm-NB-002t

manhattan blvd pm-NB-003t

manhattan blvd pm-NB-004t

manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	0	0	0	0	0
3	2061	LA Capitol	0	0	0	0	0
4	451	Parrot Petes	0	0	0	0	0
5	1320	Taco Bell	0	0	29	0	0
6	1456	Gretna Blvd	4	12	0	19	16
7	1538	Walmart	16	0	0	32	3
8	621	PetSmart	0	0	0	0	0
9	161	Chick Fil A	0	0	0	0	0
10	1943	Bed Bath and Beyond	9	14	0	0	0
11	877	Westbank Expwy	101	5	9	0	43
Totals	11964		130	31	38	51	62

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

manhattan blvd pm-NB-001tn

manhattan blvd pm-NB-002t

manhattan blvd pm-NB-003t

manhattan blvd pm-NB-004t

manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	22	36	37	36	40
3	2061	LA Capitol	6	37	45	13	7
4	451	Parrot Petes	0	0	12	0	0
5	1320	Taco Bell	0	17	67	0	2
6	1456	Gretna Blvd	63	69	18	57	63
7	1538	Walmart	66	34	43	76	46
8	621	PetSmart	4	16	10	7	1
9	161	Chick Fil A	0	7	2	0	0
10	1943	Bed Bath and Beyond	66	93	41	9	40
11	877	Westbank Expwy	169	41	48	35	83
Totals	11964		396	350	323	233	282

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

manhattan blvd pm-NB-001tn

manhattan blvd pm-NB-002t

manhattan blvd pm-NB-003t

manhattan blvd pm-NB-004t

manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	34	36	37	36	40
3	2061	LA Capitol	37	42	45	38	39
4	451	Parrot Petes	8	8	12	8	8
5	1320	Taco Bell	24	27	67	23	25
6	1456	Gretna Blvd	69	69	29	65	63
7	1538	Walmart	66	34	43	79	51
8	621	PetSmart	12	16	12	12	12
9	161	Chick Fil A	3	7	4	3	3
10	1943	Bed Bath and Beyond	77	93	41	36	46
11	877	Westbank Expwy	169	41	48	35	83
Totals	11964		499	373	338	335	370

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

manhattan blvd pm-NB-001tn
manhattan blvd pm-NB-002t
manhattan blvd pm-NB-003t
manhattan blvd pm-NB-004t
manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	0.0143	0.0138	0.0134	0.0134	0.0174
3	2061	LA Capitol	0.0162	0.0151	0.0157	0.0162	0.0152
4	451	Parrot Petes	0.0033	0.0031	0.0056	0.0035	0.0035
5	1320	Taco Bell	0.0095	0.0100	0.0213	0.0094	0.0095
6	1456	Gretna Blvd	0.0194	0.0194	0.0121	0.0198	0.0189
7	1538	Walmart	0.0228	0.0128	0.0162	0.0254	0.0197
8	621	PetSmart	0.0053	0.0045	0.0048	0.0063	0.0057
9	161	Chick Fil A	0.0013	0.0031	0.0014	0.0012	0.0011
10	1943	Bed Bath and Beyond	0.0207	0.0252	0.0140	0.0140	0.0151
11	877	Westbank Expwy	0.0365	0.0114	0.0127	0.0096	0.0207
Totals	11964		0.1493	0.1185	0.1172	0.1186	0.1267

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

manhattan blvd pm-NB-001tn
manhattan blvd pm-NB-002t
manhattan blvd pm-NB-003t
manhattan blvd pm-NB-004t
manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	1.5487	1.3769	1.3313	1.3038	2.0436
3	2061	LA Capitol	1.1560	0.9677	1.1659	1.2940	1.0144
4	451	Parrot Petes	0.1939	0.1891	0.7586	0.1964	0.2865
5	1320	Taco Bell	0.5307	0.6910	2.0623	0.4677	0.5414
6	1456	Gretna Blvd	1.8614	1.9056	1.0514	1.9611	1.8548
7	1538	Walmart	2.4931	1.2162	1.6877	2.8556	2.3057
8	621	PetSmart	0.5100	0.2880	0.4243	0.7838	0.5427
9	161	Chick Fil A	0.1003	0.3962	0.0720	0.0540	0.0540
10	1943	Bed Bath and Beyond	1.6319	2.5333	0.9310	0.7516	1.2215
11	877	Westbank Expwy	3.7515	1.2406	1.3146	0.9581	2.2522
Totals	11964		13.7776	10.8047	10.7991	10.6262	12.1168

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

manhattan blvd pm-NB-001tn
manhattan blvd pm-NB-002t
manhattan blvd pm-NB-003t
manhattan blvd pm-NB-004t
manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	15.3716	13.1516	12.3498	12.3502	16.8055
3	2061	LA Capitol	13.7208	10.2653	12.2930	15.2841	11.1729
4	451	Parrot Petes	2.1783	2.0508	6.3762	2.2464	3.4280
5	1320	Taco Bell	5.7811	7.3716	16.6224	5.0115	5.7704
6	1456	Gretna Blvd	14.6426	13.5366	11.5799	15.5747	14.4158
7	1538	Walmart	21.3467	12.3788	13.0273	25.4432	19.9775
8	621	PetSmart	5.7960	2.9120	4.7216	9.4692	6.6370
9	161	Chick Fil A	1.1716	1.9553	0.7280	0.5460	0.5460
10	1943	Bed Bath and Beyond	14.0398	20.9072	9.6389	8.0984	11.6455
11	877	Westbank Expwy	30.1878	8.0758	9.2891	6.3698	16.7129
Totals	11964		124.2362	92.6050	96.6262	100.3935	107.1115

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

manhattan blvd pm-NB-001tn
manhattan blvd pm-NB-002t
manhattan blvd pm-NB-003t
manhattan blvd pm-NB-004t
manhattan blvd pm-NB-005t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	Lapalco Blvd					
2	1536	Central Blvd	1.0411	0.8220	0.7886	0.7561	1.5302
3	2061	LA Capitol	0.4982	0.2321	0.4244	0.6385	0.3360
4	451	Parrot Petes	0.0503	0.0470	0.6270	0.0519	0.1460
5	1320	Taco Bell	0.1139	0.2417	1.0366	0.0647	0.1112
6	1456	Gretna Blvd	0.8674	0.9370	0.5704	1.0270	0.9334
7	1538	Walmart	1.5422	0.6813	1.1250	1.6817	1.6345
8	621	PetSmart	0.3060	0.0276	0.2229	0.5765	0.3382
9	161	Chick Fil A	0.0502	0.3390	0.0023	0.0000	0.0023
10	1943	Bed Bath and Beyond	0.4344	1.1341	0.2438	0.1353	0.5059
11	877	Westbank Expwy	1.0391	0.7055	0.6343	0.4998	1.0282
Totals	11964		5.9429	5.1674	5.6754	5.4315	6.5658

ITS Regional

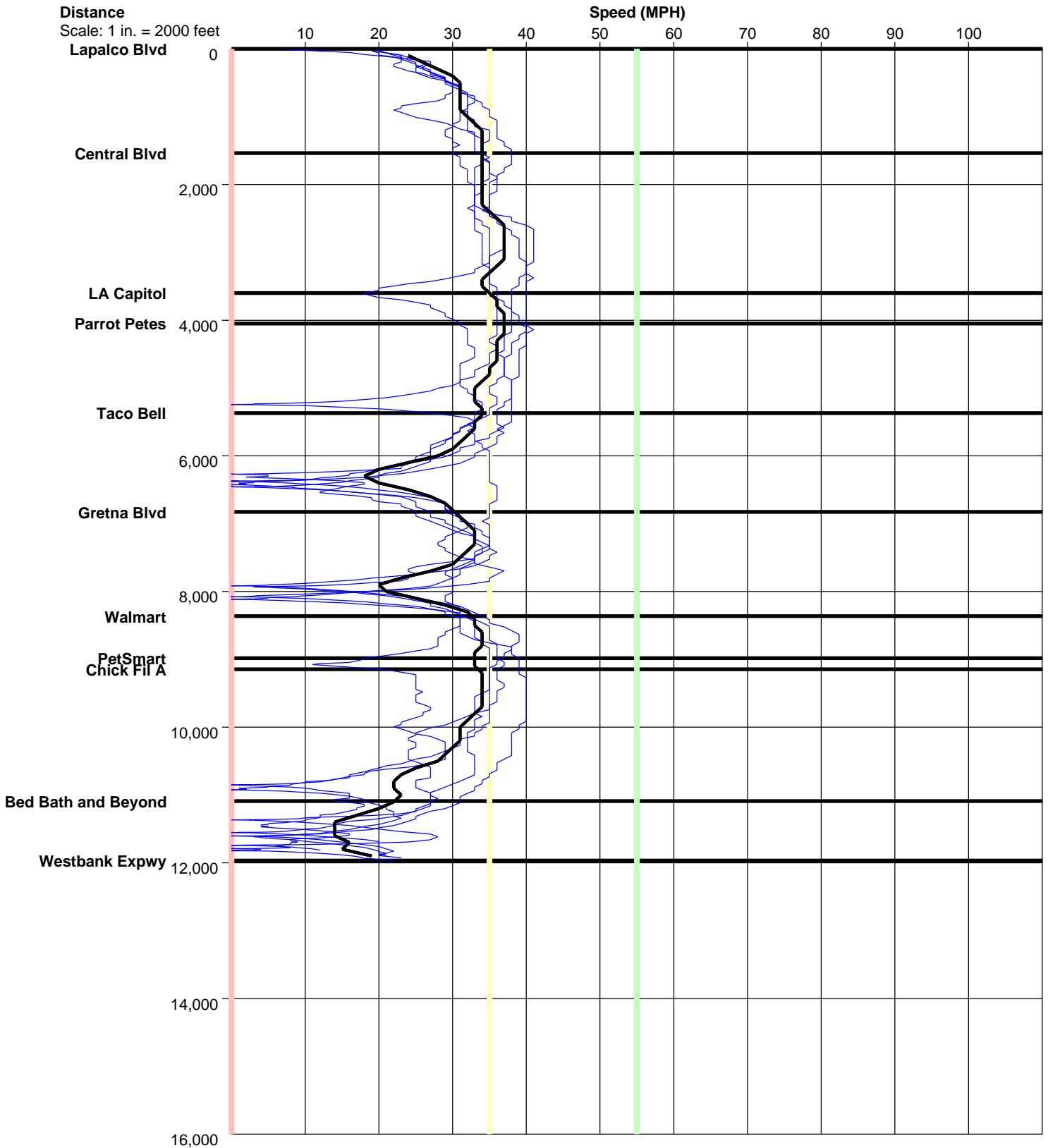
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

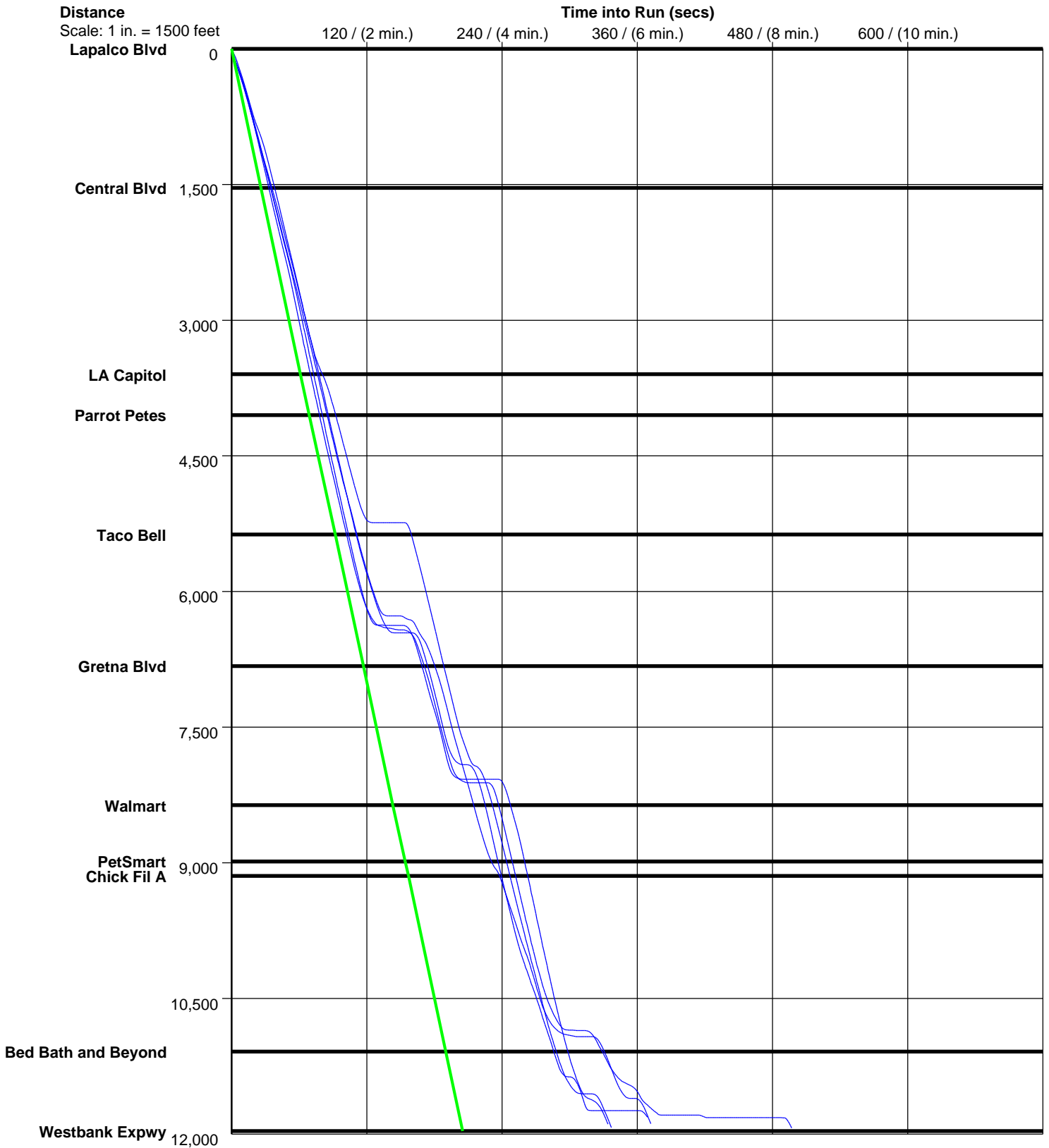
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **17**

Time/Space Trajectories of All Runs



ITS Regional

Manhattan Blvd Study

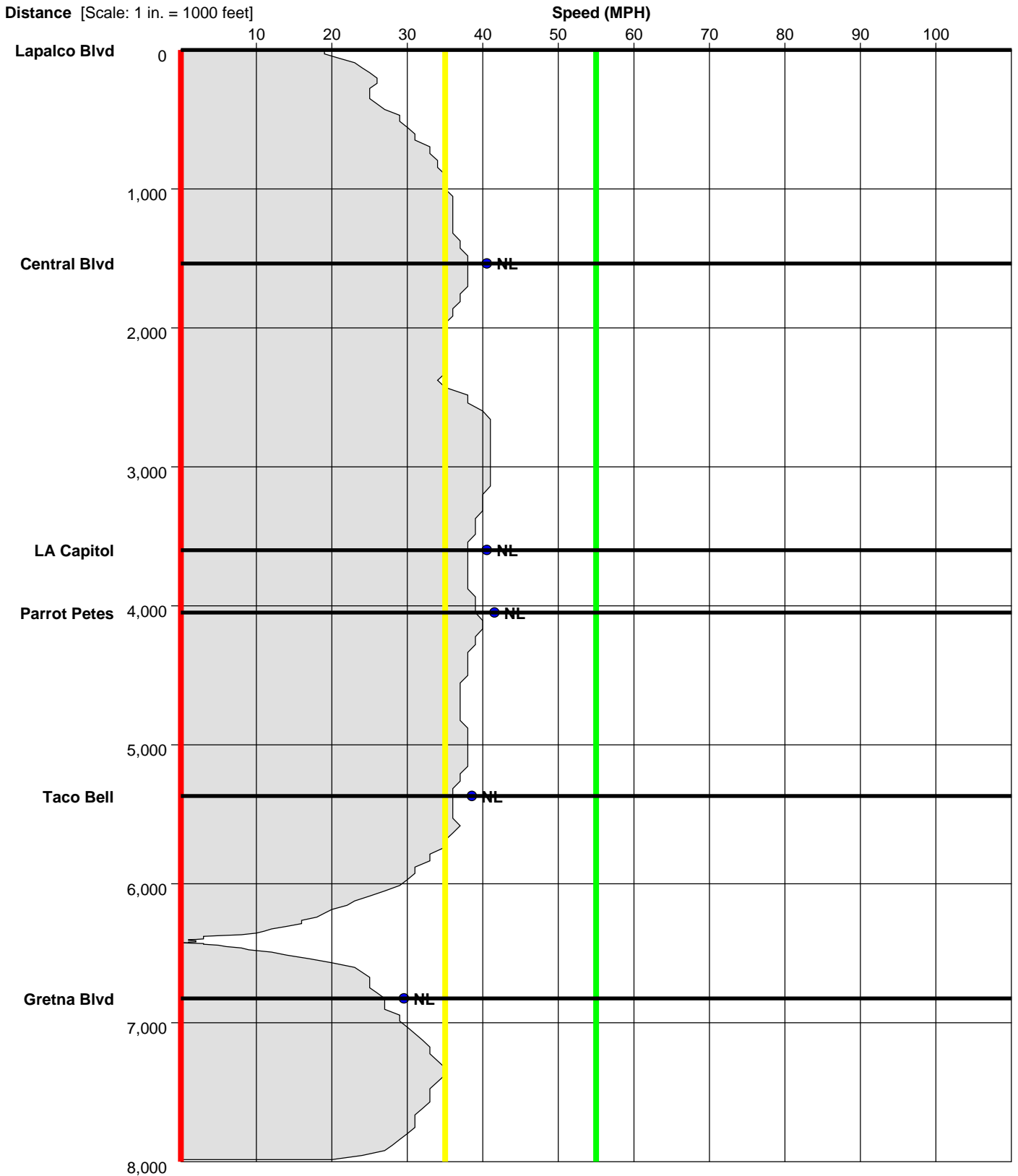
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **18**

Speed Profile

Run : manhattan blvd pm-NB-001tn Start Time: 15:09 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

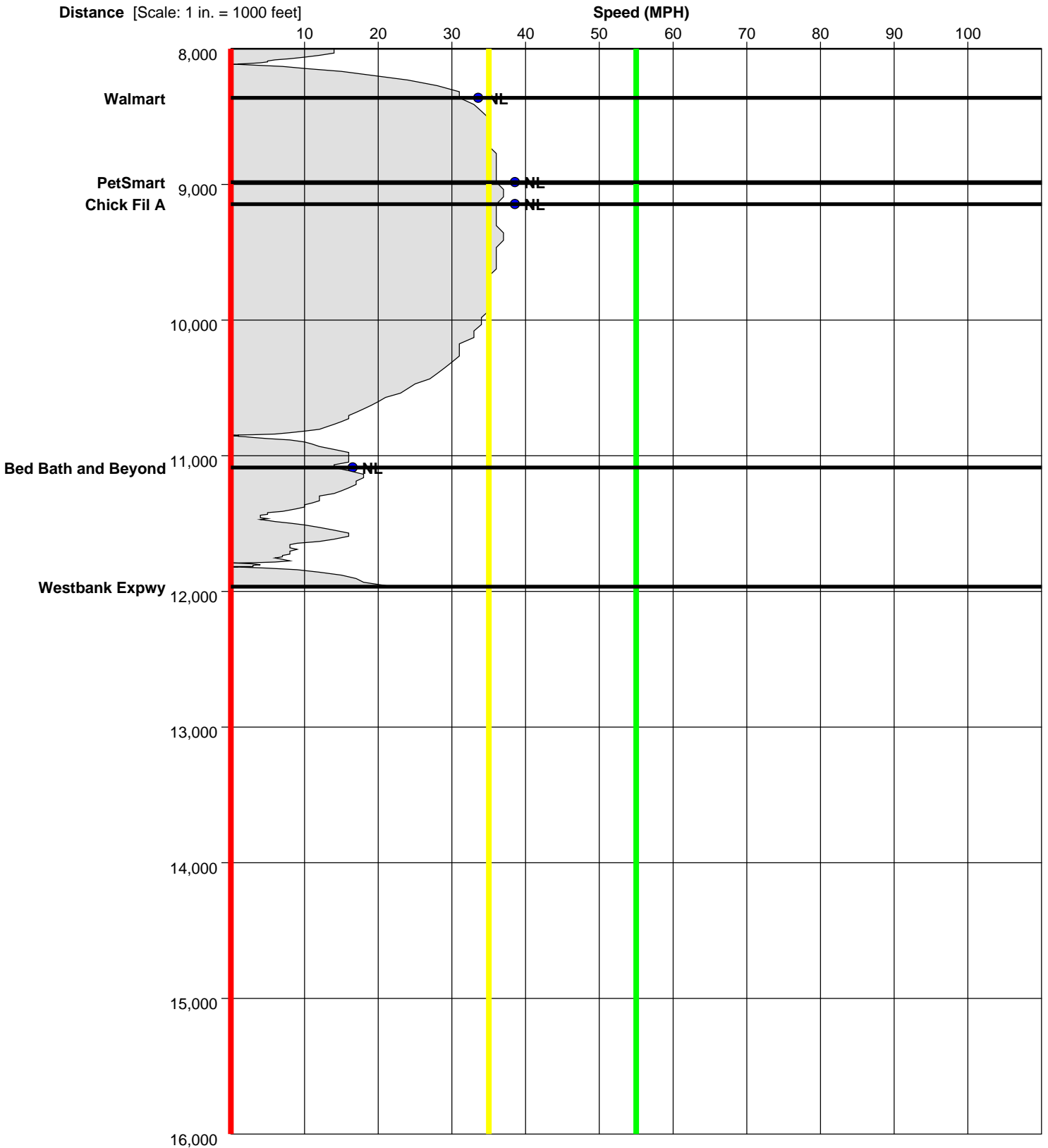
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **19**

Speed Profile

Run : manhattan blvd pm-NB-001tn Start Time: 15:09 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

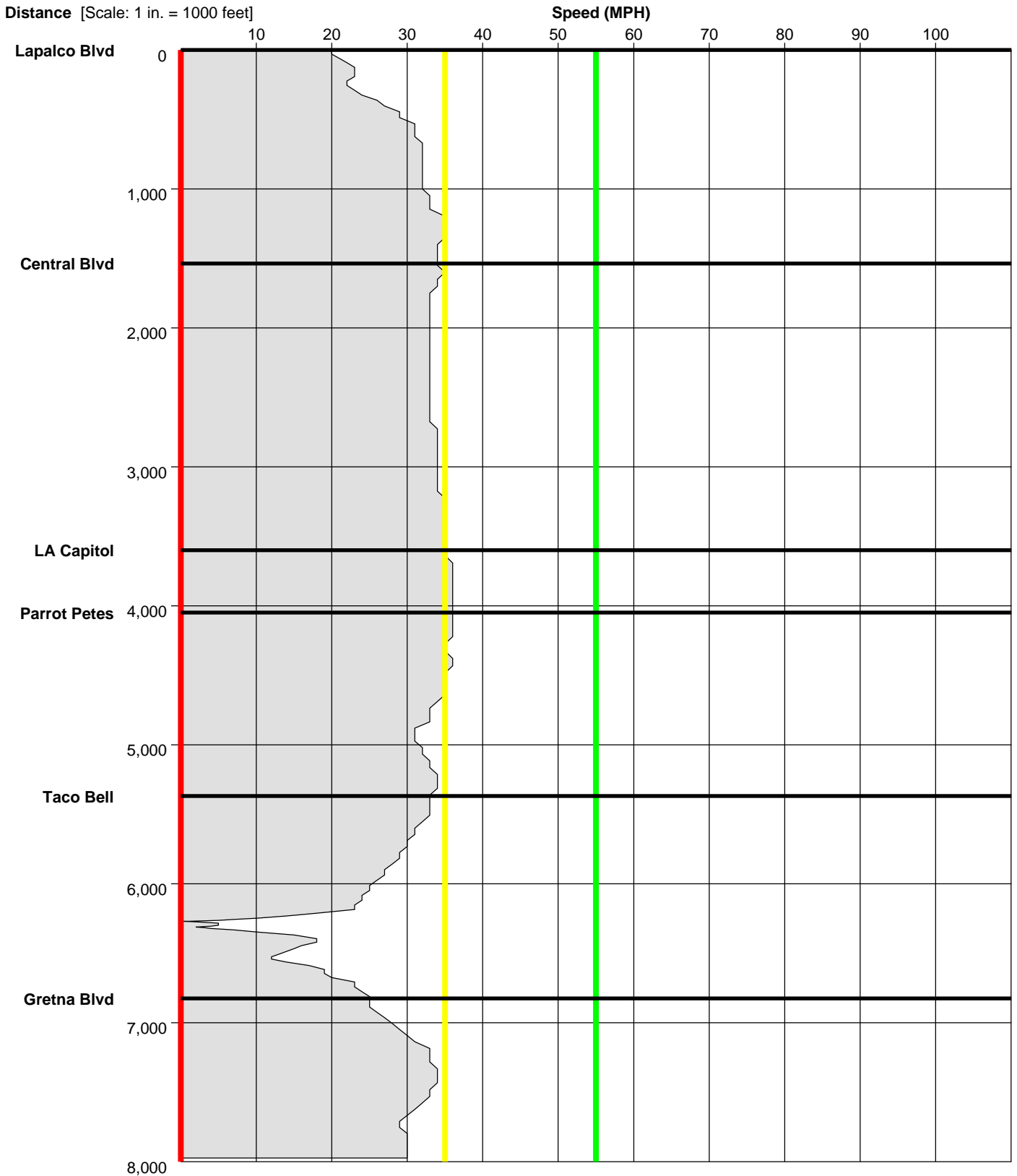
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **20**

Speed Profile

Run : manhattan blvd pm-NB-002t Start Time: 15:29 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

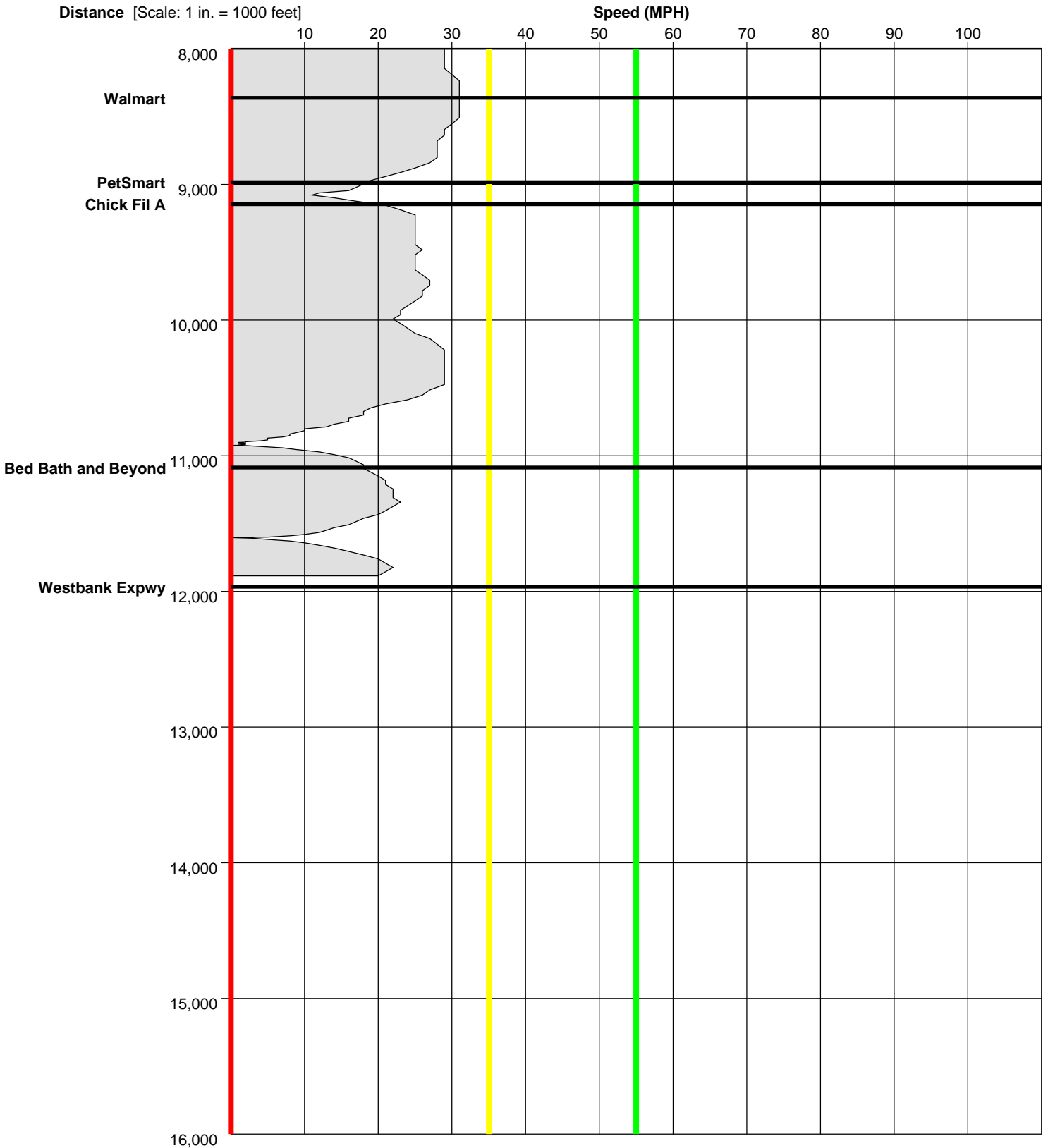
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **21**

Speed Profile

Run : manhattan blvd pm-NB-002t Start Time: 15:29 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

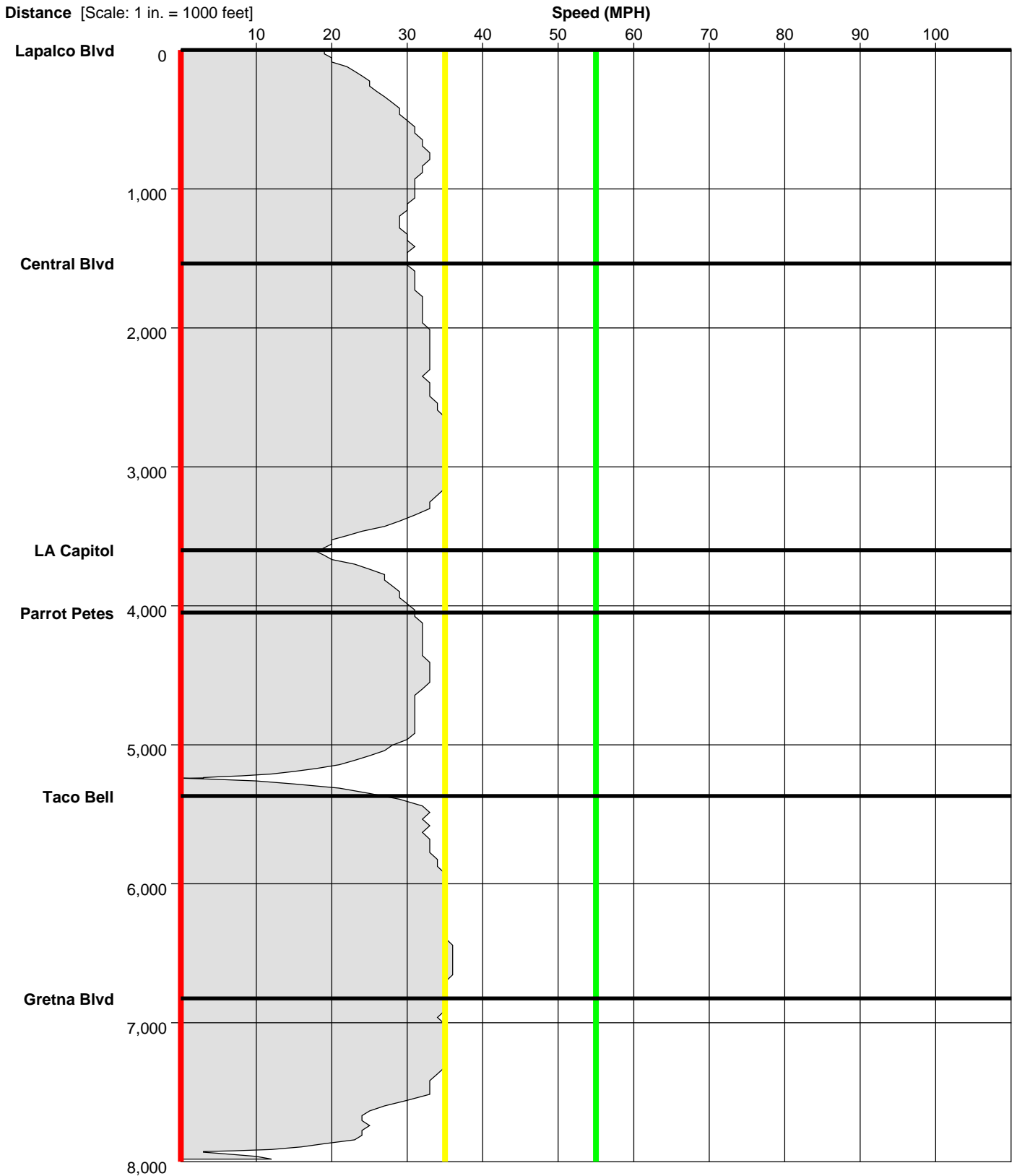
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **22**

Speed Profile

Run : manhattan blvd pm-NB-003t Start Time: 15:45 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

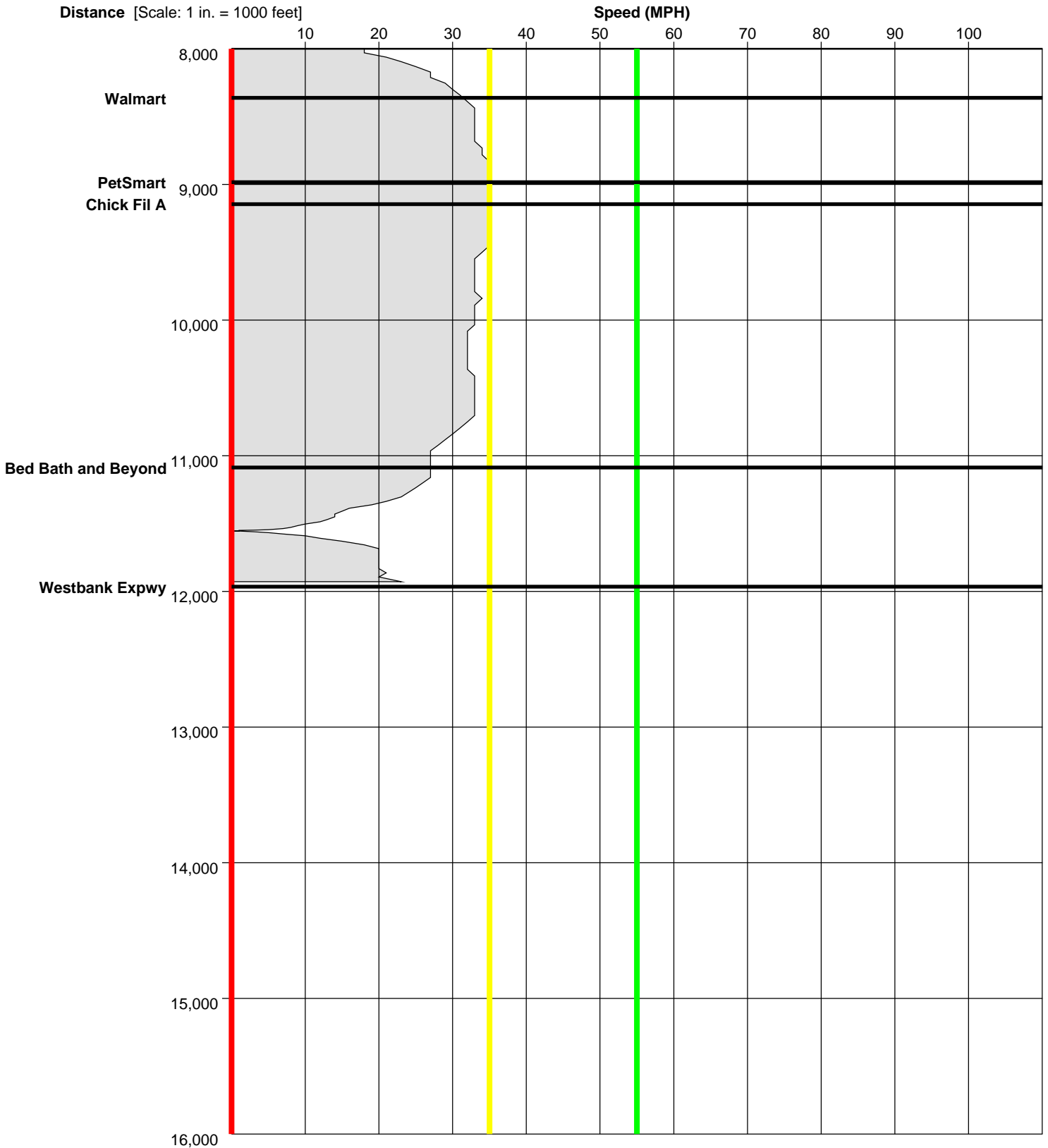
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **23**

Speed Profile

Run : manhattan blvd pm-NB-003t Start Time: 15:45 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

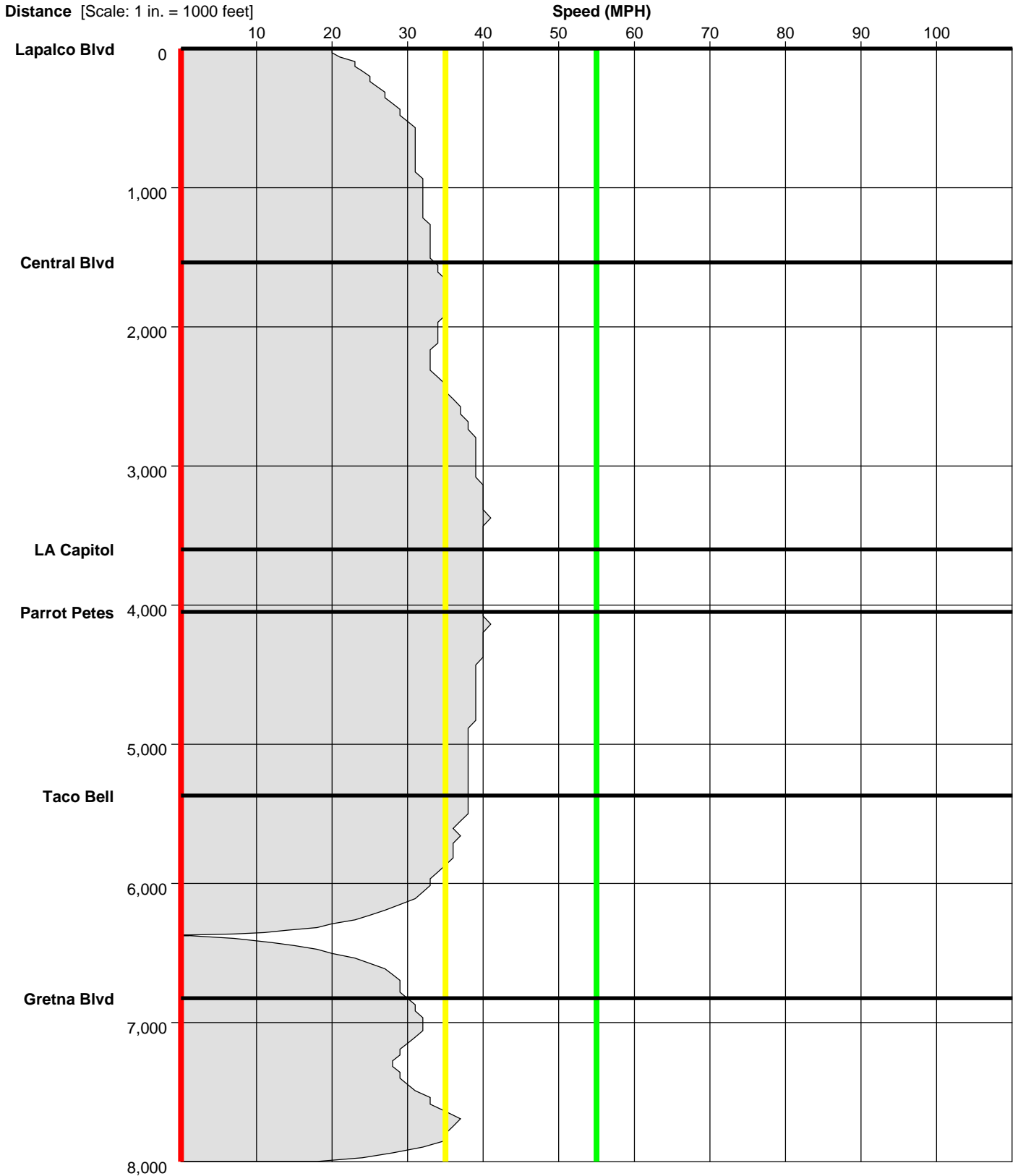
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **24**

Speed Profile

Run : **manhattan blvd pm-NB-004t** Start Time: **16:01** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

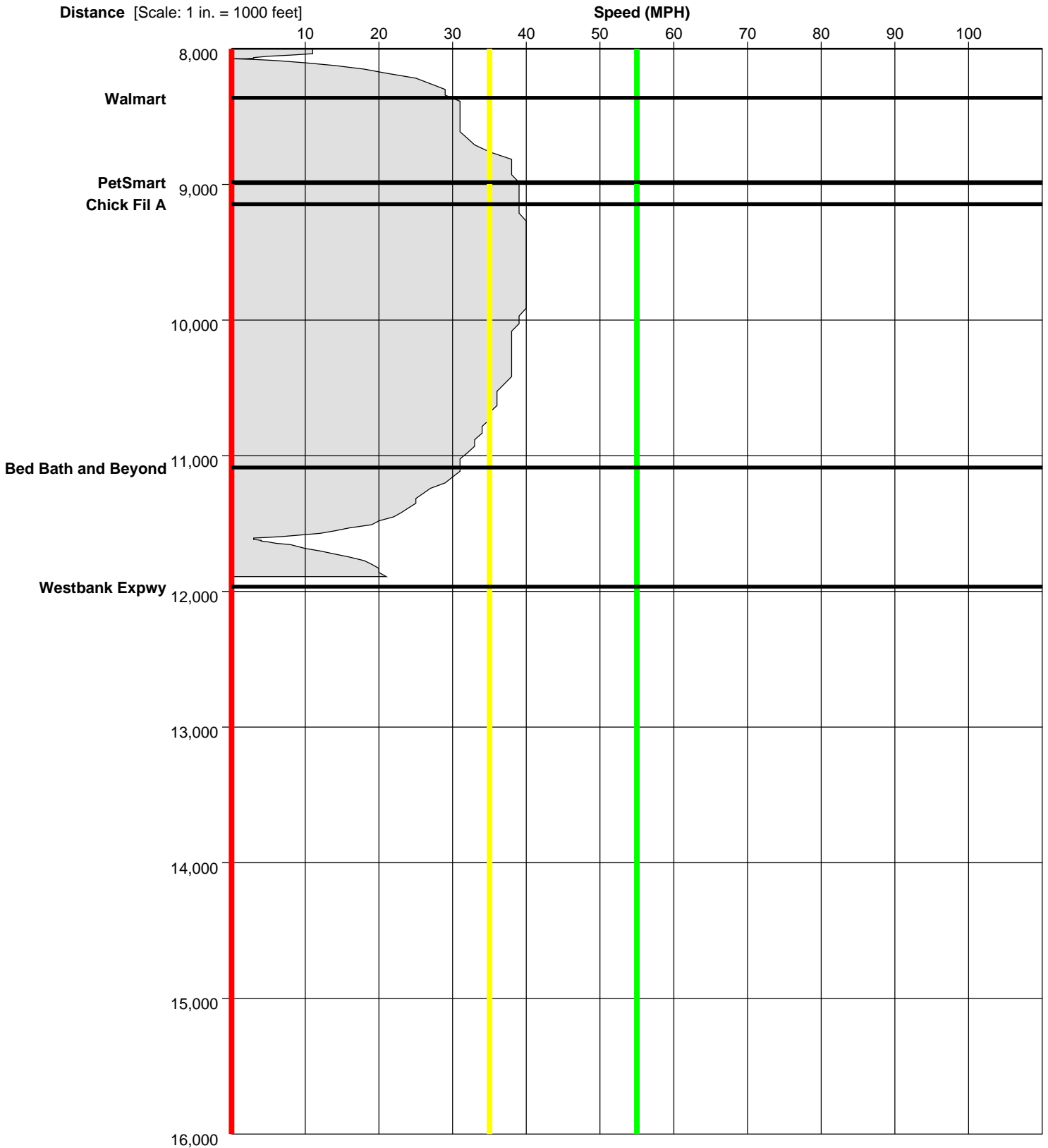
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **25**

Speed Profile

Run : **manhattan blvd pm-NB-004t** Start Time: **16:01** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

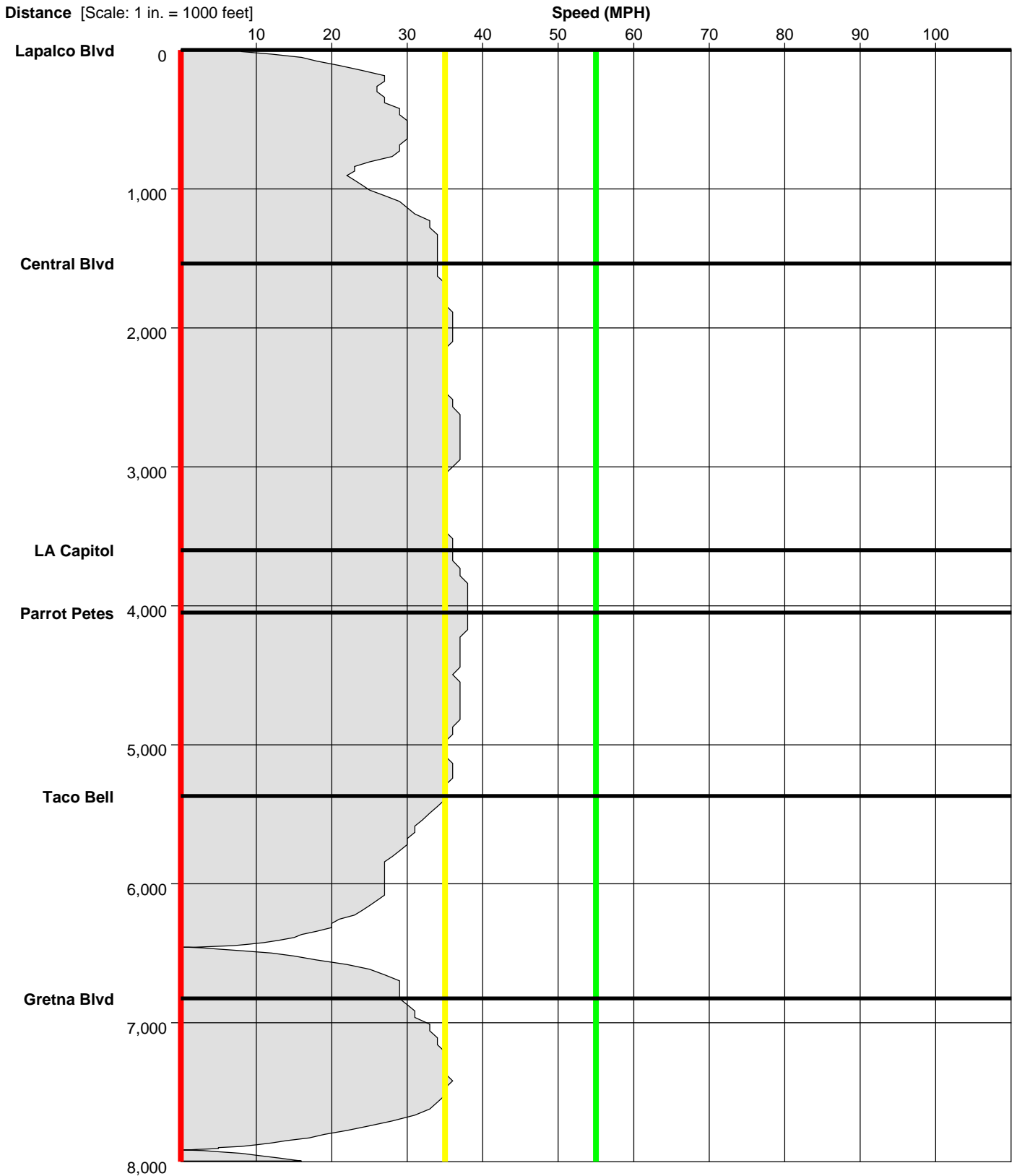
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **26**

Speed Profile

Run : manhattan blvd pm-NB-005t Start Time: 16:18 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

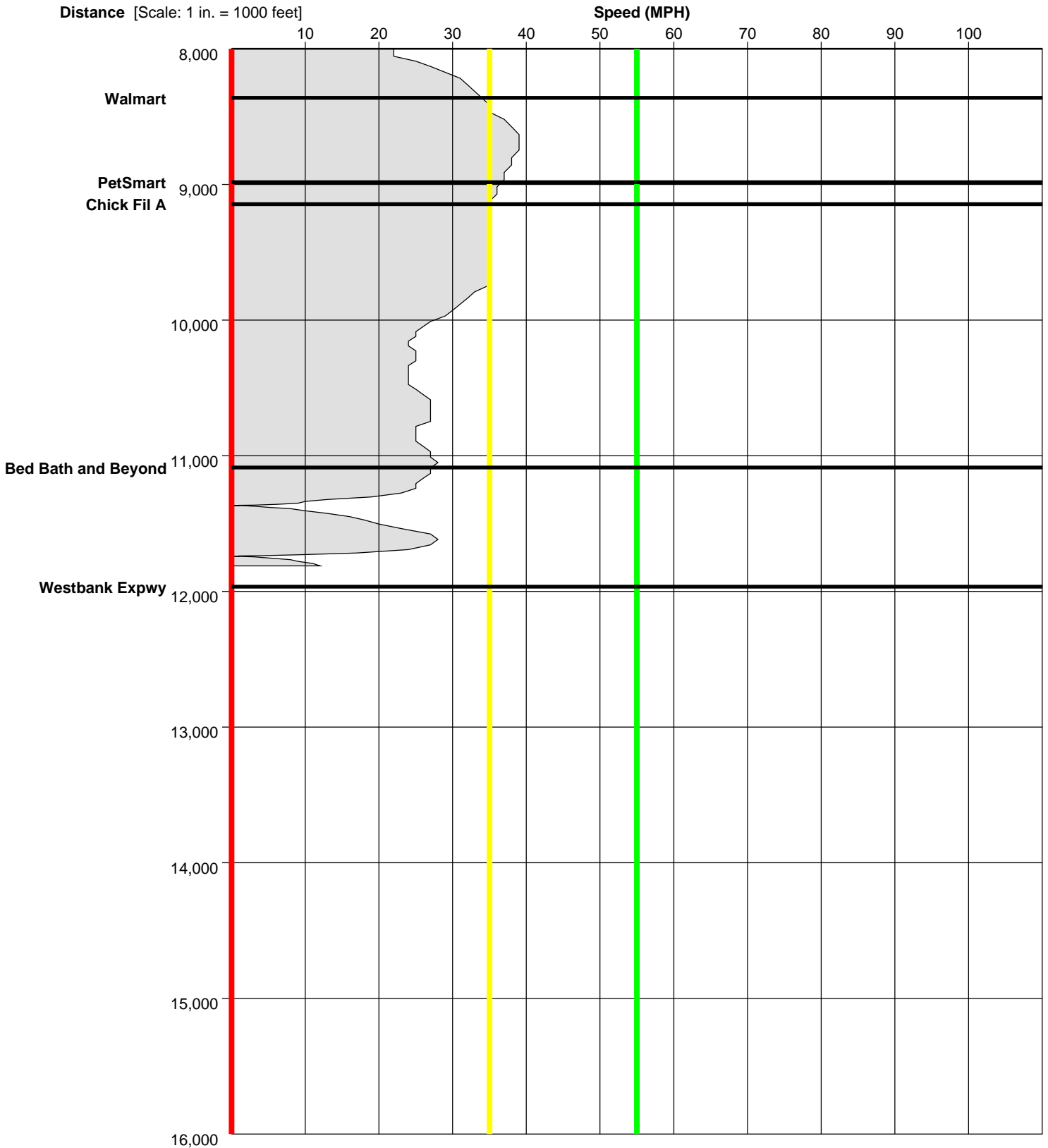
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **27**

Speed Profile

Run : manhattan blvd pm-NB-005t Start Time: 16:18 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

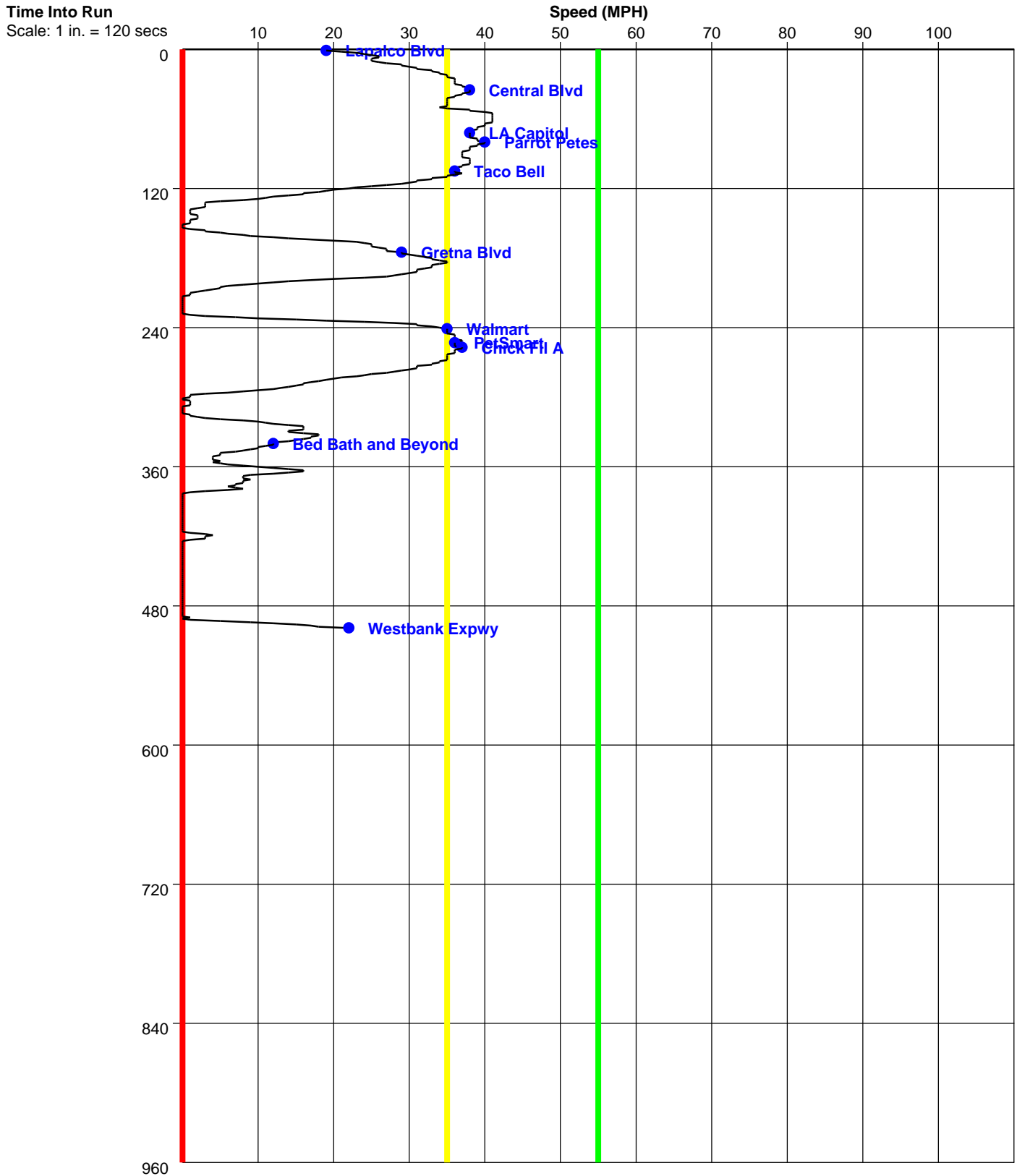
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **28**

Time-Based Speed Profile

Run : manhattan blvd pm-NB-001tn Start Time:15:09 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

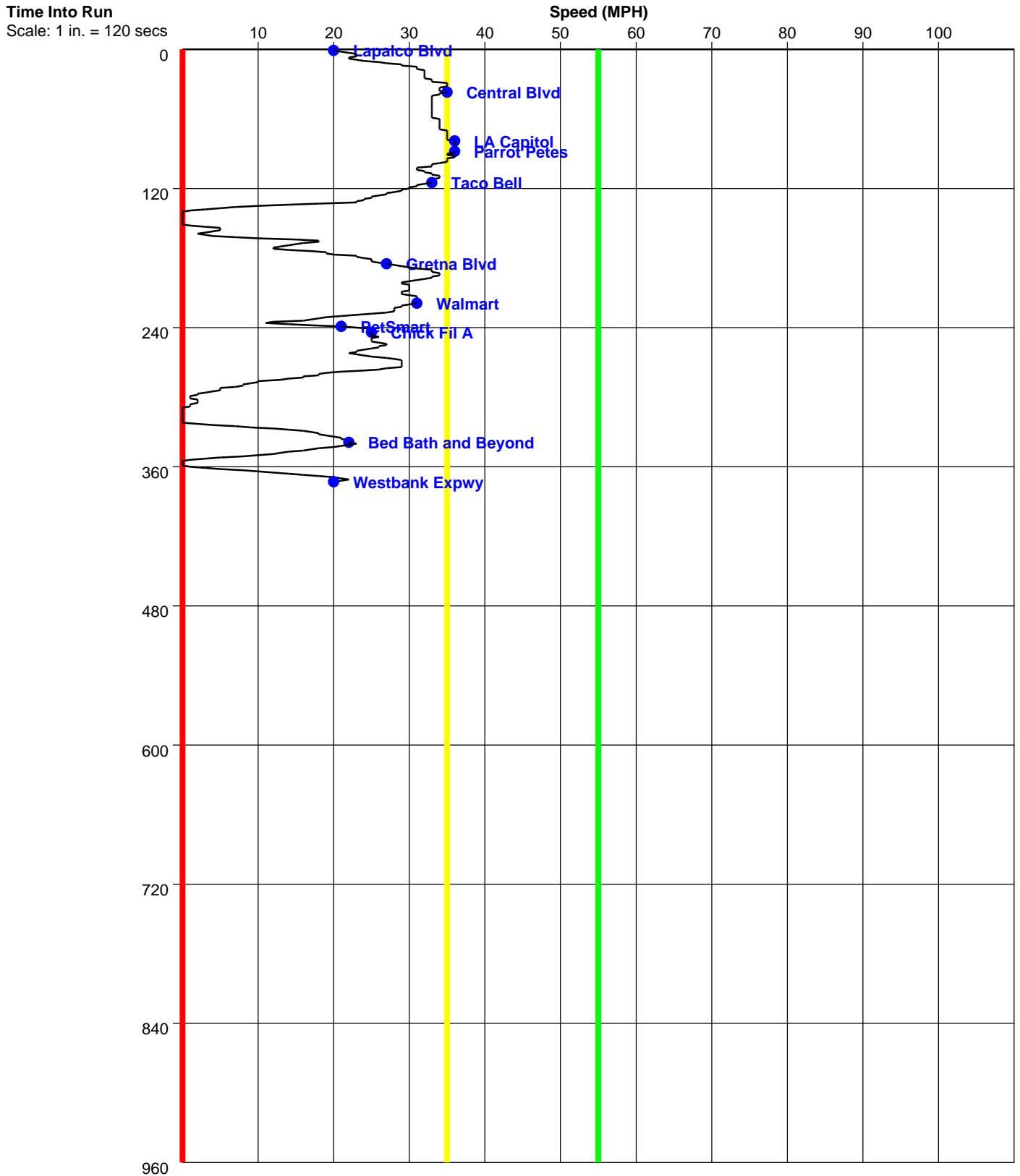
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **29**

Time-Based Speed Profile

Run : manhattan blvd pm-NB-002t Start Time:15:29 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

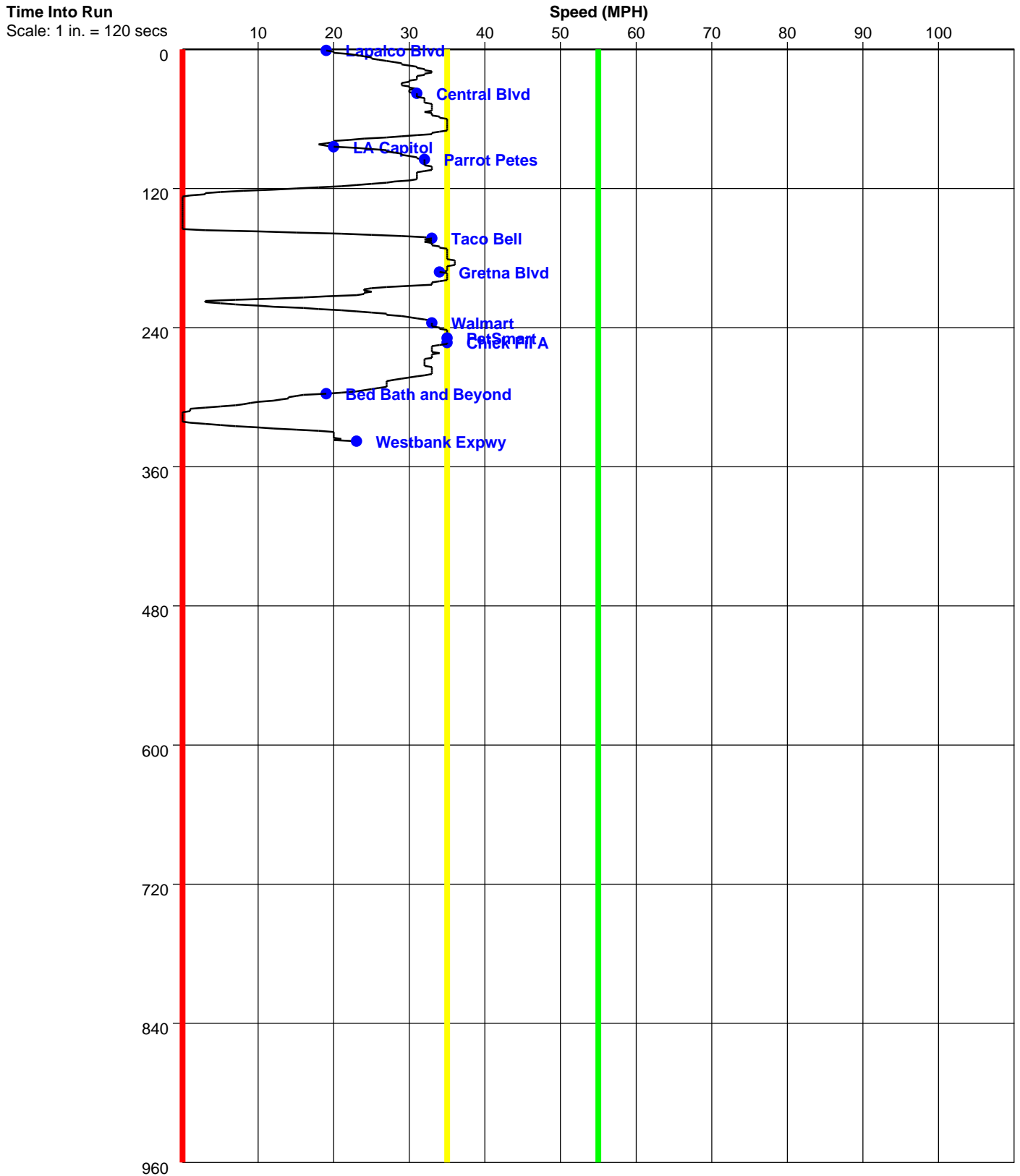
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **30**

Time-Based Speed Profile

Run : manhattan blvd pm-NB-003t Start Time:15:45 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

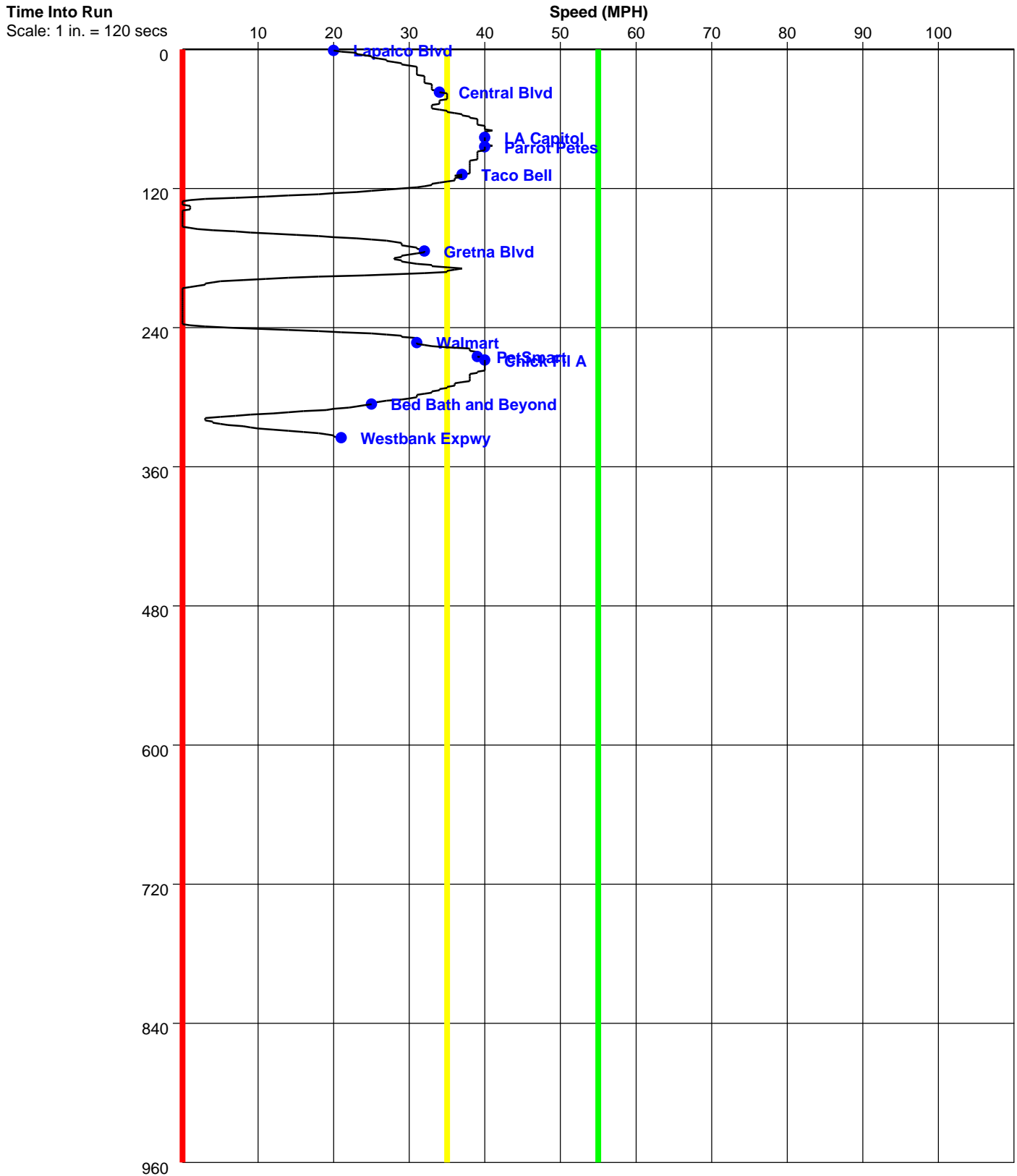
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **31**

Time-Based Speed Profile

Run : manhattan blvd pm-NB-004t Start Time:16:01 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

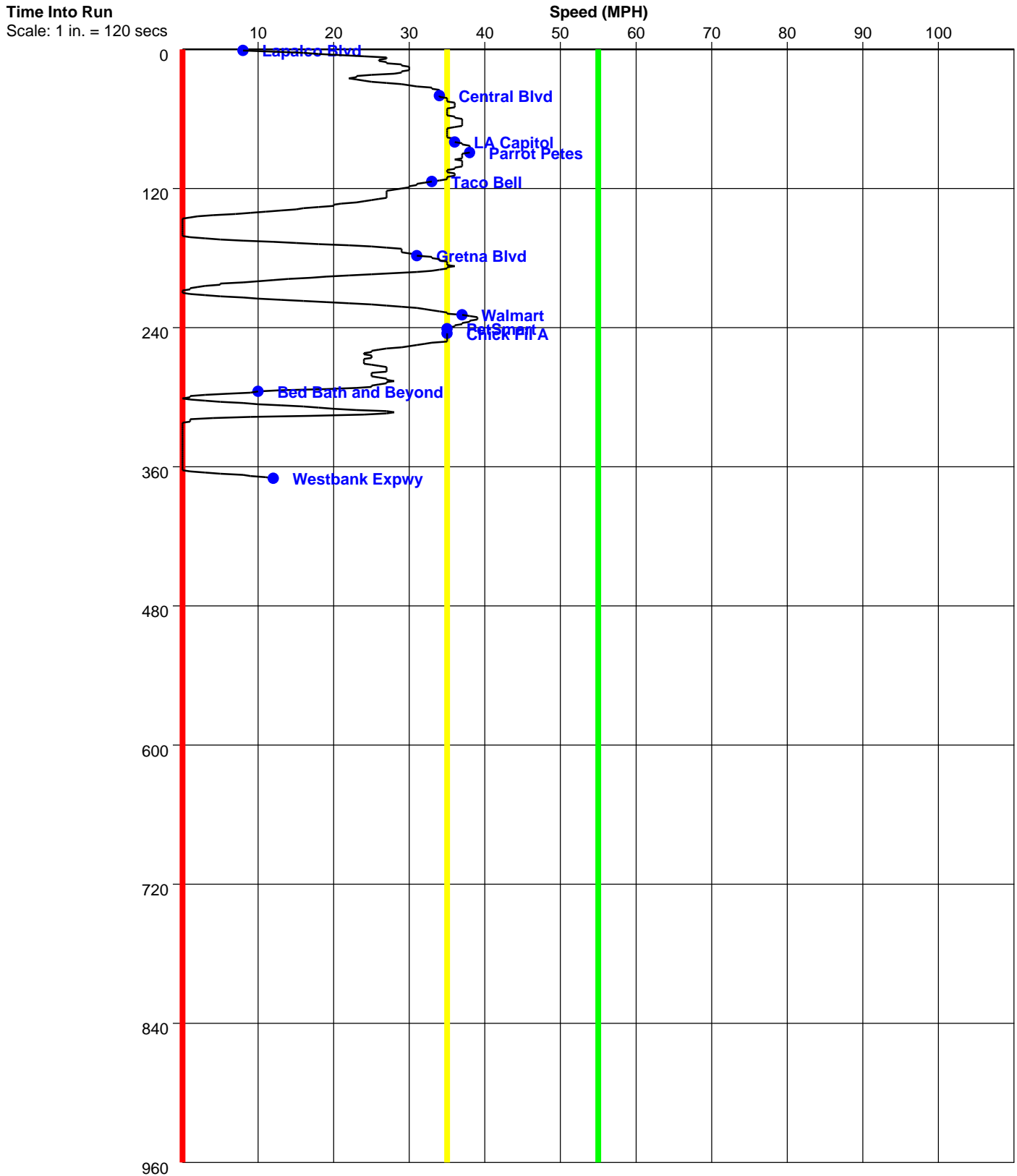
Study Name : **Manhattan Blvd NB PM**

Study Date : **10/19/2017**

Page No. : **32**

Time-Based Speed Profile

Run : manhattan blvd pm-NB-005t Start Time:16:18 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd SB PM

<u>Report Name</u>	<u>Page</u>
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Fuel Consumption & Emissions	4
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Speed Profile (Distance vs Spd) for manhattan blvd pm-SB-002tn	18
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Speed Profile (Distance vs Spd) for manhattan blvd pm-SB-006t	26
Speed Profile (Time vs Spd) for manhattan blvd pm-SB-002tn	28
Speed Profile (Time vs Spd) for manhattan blvd pm-SB-003t	29
Speed Profile (Time vs Spd) for manhattan blvd pm-SB-004t	30
Speed Profile (Time vs Spd) for manhattan blvd pm-SB-005t	31
Speed Profile (Time vs Spd) for manhattan blvd pm-SB-006t	32

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
manhattan blvd pm-SB-002tn	10/19/17	15:01	11988	Before	Primary
manhattan blvd pm-SB-003t	10/19/17	15:21	11925	Before	Secondary
manhattan blvd pm-SB-004t	10/19/17	15:37	11942	Before	Secondary
manhattan blvd pm-SB-005t	10/19/17	15:52	12073	Before	Secondary
manhattan blvd pm-SB-006t	10/19/17	16:08	11901	Before	Secondary

Node Info

#	Len	Name
1	0	West Bank Expwy
2	1148	Bed Bath and Beyond
3	1948	Chick Fil A
4	209	PetSmart
5	653	Walmart
6	1503	Gretna Blvd
7	1480	Taco Bell
8	1295	Parrot Petes
9	439	La Capitol
10	2034	Central Blvd
11	1279	Lapalco Blvd

Notes:

Length of Study Route = 11,988 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	West Bank Expwy							
2	1148	Bed Bath and Beyond	38.2	0.2	20.5	18.2	0.0	38.2	38.2
3	1948	Chick Fil A	76.8	1.0	17.3	43.4	15.0	76.8	76.8
4	209	PetSmart	4.8	0.0	29.7	0.8	0.0	4.6	4.8
5	653	Walmart	15.0	0.0	29.7	3.6	0.0	14.0	15.0
6	1503	Gretna Blvd	43.6	0.6	23.5	17.6	0.0	39.8	43.6
7	1480	Taco Bell	31.4	0.0	32.1	6.0	0.0	27.6	31.4
8	1295	Parrot Petes	25.0	0.0	35.3	2.6	0.0	13.4	25.0
9	439	La Capitol	8.6	0.0	34.8	0.8	0.0	5.2	8.6
10	2034	Central Blvd	44.0	0.2	31.5	9.0	0.0	33.6	44.0
11	1279	Lapalco Blvd	110.4	1.4	7.9	88.8	56.2	109.8	109.8
Total	11,988		397.8	3.4	20.5	190.8	71.2	363.0	397.2

Stats based on 5 BEFORE runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	West Bank Expwy				
2	1148	Bed Bath and Beyond	0.0132	1.4968	11.5948	0.9966
3	1948	Chick Fil A	0.0234	2.3125	19.4130	1.1682
4	209	PetSmart	0.0019	0.1924	1.8182	0.1225
5	653	Walmart	0.0059	0.5694	5.6943	0.3332
6	1503	Gretna Blvd	0.0152	1.4446	11.5200	0.8324
7	1480	Taco Bell	0.0118	1.0287	11.0493	0.5126
8	1295	Parrot Petes	0.0099	0.7364	8.1913	0.3085
9	439	La Capitol	0.0032	0.2000	2.1623	0.0506
10	2034	Central Blvd	0.0154	1.0779	11.2021	0.3506
11	1279	Lapalco Blvd	0.0267	2.7015	21.5976	0.9933
Total	11,988		0.1265	11.7602	104.2428	5.6683

Stats based on 5 BEFORE runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

manhattan blvd pm-SB-002in

manhattan blvd pm-SB-003t

manhattan blvd pm-SB-004t

manhattan blvd pm-SB-005t

manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	32	40	52	33	34
3	1948	Chick Fil A	68	45	83	103	85
4	209	PetSmart	5	5	4	4	6
5	653	Walmart	15	19	13	13	15
6	1503	Gretna Blvd	47	40	30	48	53
7	1480	Taco Bell	30	30	31	31	35
8	1295	Parrot Petes	26	23	24	26	26
9	439	La Capitol	8	8	9	9	9
10	2034	Central Blvd	39	42	41	47	51
11	1279	Lapalco Blvd	107	82	84	91	188
Totals	11988		377	334	371	405	502

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

manhattan blvd pm-SB-002tn
manhattan blvd pm-SB-003t
manhattan blvd pm-SB-004t
manhattan blvd pm-SB-005t
manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	0	0	1	0	0
3	1948	Chick Fil A	1	0	1	1	2
4	209	PetSmart	0	0	0	0	0
5	653	Walmart	0	0	0	0	0
6	1503	Gretna Blvd	1	0	0	1	1
7	1480	Taco Bell	0	0	0	0	0
8	1295	Parrot Petes	0	0	0	0	0
9	439	La Capitol	0	0	0	0	0
10	2034	Central Blvd	0	0	0	0	1
11	1279	Lapalco Blvd	1	1	1	1	3
Totals	11988		3	1	3	3	7

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

manhattan blvd pm-SB-002in
manhattan blvd pm-SB-003t
manhattan blvd pm-SB-004t
manhattan blvd pm-SB-005t
manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	24.4	20.0	15.6	24.2	23.1
3	1948	Chick Fil A	19.5	29.2	16.1	12.8	15.6
4	209	PetSmart	28.8	29.4	34.0	34.3	24.2
5	653	Walmart	29.7	23.6	33.5	35.1	29.5
6	1503	Gretna Blvd	21.8	25.5	34.5	21.3	19.4
7	1480	Taco Bell	33.6	33.5	32.5	32.0	29.1
8	1295	Parrot Petes	33.8	38.6	35.7	34.8	33.6
9	439	La Capitol	37.5	37.9	33.6	33.0	33.9
10	2034	Central Blvd	35.5	33.0	34.0	29.5	26.6
11	1279	Lapalco Blvd	8.2	10.0	9.9	9.4	4.3
Totals	11988		21.7	24.4	22.0	20.2	16.2

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

manhattan blvd pm-SB-002tn
manhattan blvd pm-SB-003t
manhattan blvd pm-SB-004t
manhattan blvd pm-SB-005t
manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	12	20	32	13	14
3	1948	Chick Fil A	35	12	49	69	52
4	209	PetSmart	1	1	0	0	2
5	653	Walmart	4	8	1	1	4
6	1503	Gretna Blvd	21	14	4	22	27
7	1480	Taco Bell	5	5	5	6	9
8	1295	Parrot Petes	4	1	2	3	3
9	439	La Capitol	1	0	1	1	1
10	2034	Central Blvd	4	7	6	12	16
11	1279	Lapalco Blvd	85	61	62	69	167
Totals	11988		172	129	162	196	295

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

manhattan blvd pm-SB-002tn

manhattan blvd pm-SB-003t

manhattan blvd pm-SB-004t

manhattan blvd pm-SB-005t

manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	0	0	0	0	0
3	1948	Chick Fil A	2	0	17	52	4
4	209	PetSmart	0	0	0	0	0
5	653	Walmart	0	0	0	0	0
6	1503	Gretna Blvd	0	0	0	0	0
7	1480	Taco Bell	0	0	0	0	0
8	1295	Parrot Petes	0	0	0	0	0
9	439	La Capitol	0	0	0	0	0
10	2034	Central Blvd	0	0	0	0	0
11	1279	Lapalco Blvd	58	37	38	43	105
Totals	11988		60	37	55	95	109

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

manhattan blvd pm-SB-002tn

manhattan blvd pm-SB-003t

manhattan blvd pm-SB-004t

manhattan blvd pm-SB-005t

manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	32	40	52	33	34
3	1948	Chick Fil A	68	45	83	103	85
4	209	PetSmart	5	5	4	3	6
5	653	Walmart	15	19	13	8	15
6	1503	Gretna Blvd	47	40	18	41	53
7	1480	Taco Bell	24	22	31	26	35
8	1295	Parrot Petes	21	0	9	14	23
9	439	La Capitol	0	0	8	9	9
10	2034	Central Blvd	21	30	24	42	51
11	1279	Lapalco Blvd	107	81	83	91	187
Totals	11988		340	282	325	370	498

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

manhattan blvd pm-SB-002tn

manhattan blvd pm-SB-003t

manhattan blvd pm-SB-004t

manhattan blvd pm-SB-005t

manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	32	40	52	33	34
3	1948	Chick Fil A	68	45	83	103	85
4	209	PetSmart	5	5	4	4	6
5	653	Walmart	15	19	13	13	15
6	1503	Gretna Blvd	47	40	30	48	53
7	1480	Taco Bell	30	30	31	31	35
8	1295	Parrot Petes	26	23	24	26	26
9	439	La Capitol	8	8	9	9	9
10	2034	Central Blvd	39	42	41	47	51
11	1279	Lapalco Blvd	107	81	83	91	187
Totals	11988		377	333	370	405	501

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

*manhattan blvd pm-SB-002tn
manhattan blvd pm-SB-003t
manhattan blvd pm-SB-004t
manhattan blvd pm-SB-005t
manhattan blvd pm-SB-006t*

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	0.0118	0.0143	0.0164	0.0123	0.0109
3	1948	Chick Fil A	0.0227	0.0147	0.0245	0.0304	0.0247
4	209	PetSmart	0.0016	0.0017	0.0014	0.0019	0.0026
5	653	Walmart	0.0052	0.0090	0.0047	0.0049	0.0058
6	1503	Gretna Blvd	0.0168	0.0148	0.0109	0.0164	0.0169
7	1480	Taco Bell	0.0110	0.0121	0.0119	0.0117	0.0125
8	1295	Parrot Petes	0.0104	0.0097	0.0094	0.0094	0.0109
9	439	La Capitol	0.0035	0.0031	0.0031	0.0030	0.0034
10	2034	Central Blvd	0.0149	0.0146	0.0154	0.0162	0.0156
11	1279	Lapalco Blvd	0.0254	0.0220	0.0207	0.0226	0.0427
Totals	11988		0.1232	0.1162	0.1184	0.1289	0.1460

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

manhattan blvd pm-SB-002tn
manhattan blvd pm-SB-003t
manhattan blvd pm-SB-004t
manhattan blvd pm-SB-005t
manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	1.3458	1.7148	1.9002	1.3911	1.1321
3	1948	Chick Fil A	2.2454	1.1459	2.4964	3.1539	2.5206
4	209	PetSmart	0.1229	0.1590	0.0720	0.2409	0.3669
5	653	Walmart	0.4463	1.1430	0.3185	0.3231	0.6164
6	1503	Gretna Blvd	1.7135	1.5689	0.6754	1.6037	1.6614
7	1480	Taco Bell	0.7935	1.0915	1.0345	1.0416	1.1826
8	1295	Parrot Petes	0.8904	0.6125	0.6542	0.5120	1.0130
9	439	La Capitol	0.2865	0.1440	0.1620	0.1620	0.2453
10	2034	Central Blvd	0.9363	0.9103	1.1224	1.3562	1.0641
11	1279	Lapalco Blvd	2.5252	2.2325	2.0071	2.2293	4.5138
Totals	11988		11.3059	10.7224	10.4426	12.0137	14.3161

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

manhattan blvd pm-SB-002tn
manhattan blvd pm-SB-003t
manhattan blvd pm-SB-004t
manhattan blvd pm-SB-005t
manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	11.4006	12.0369	14.3698	10.9257	9.2409
3	1948	Chick Fil A	18.7461	11.3863	21.0567	27.9674	17.9083
4	209	PetSmart	1.2140	1.5871	0.7280	2.8139	2.7482
5	653	Walmart	4.5081	10.8771	3.4082	3.5255	6.1523
6	1503	Gretna Blvd	13.1779	12.8756	7.2451	12.1410	12.1601
7	1480	Taco Bell	8.5924	12.3243	11.1647	11.3494	11.8154
8	1295	Parrot Petes	9.9532	7.0422	7.2533	5.2967	11.4112
9	439	La Capitol	3.4280	1.4560	1.6380	1.6380	2.6516
10	2034	Central Blvd	10.3121	9.3746	12.2709	13.2150	10.8380
11	1279	Lapalco Blvd	21.1034	18.4032	15.5947	18.7796	34.1073
Totals	11988		102.4358	97.3633	94.7294	107.6523	119.0332

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

manhattan blvd pm-SB-002tn
manhattan blvd pm-SB-003t
manhattan blvd pm-SB-004t
manhattan blvd pm-SB-005t
manhattan blvd pm-SB-006t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4	Run #5
1	0	West Bank Expwy					
2	1148	Bed Bath and Beyond	0.9115	1.2410	1.2227	0.9599	0.6478
3	1948	Chick Fil A	1.2595	0.4112	1.2795	1.5345	1.3564
4	209	PetSmart	0.0423	0.0829	0.0000	0.1800	0.3074
5	653	Walmart	0.2014	0.8795	0.0922	0.0978	0.3949
6	1503	Gretna Blvd	1.0737	1.0429	0.1556	0.9622	0.9275
7	1480	Taco Bell	0.2836	0.5856	0.5326	0.5273	0.6337
8	1295	Parrot Petes	0.4551	0.2075	0.2396	0.0577	0.5824
9	439	La Capitol	0.1460	0.0071	0.0091	0.0022	0.0884
10	2034	Central Blvd	0.2790	0.1986	0.4327	0.6273	0.2152
11	1279	Lapalco Blvd	0.8147	0.9831	0.7303	0.8054	1.6333
Totals	11988		5.4668	5.6393	4.6944	5.7544	6.7869

ITS Regional

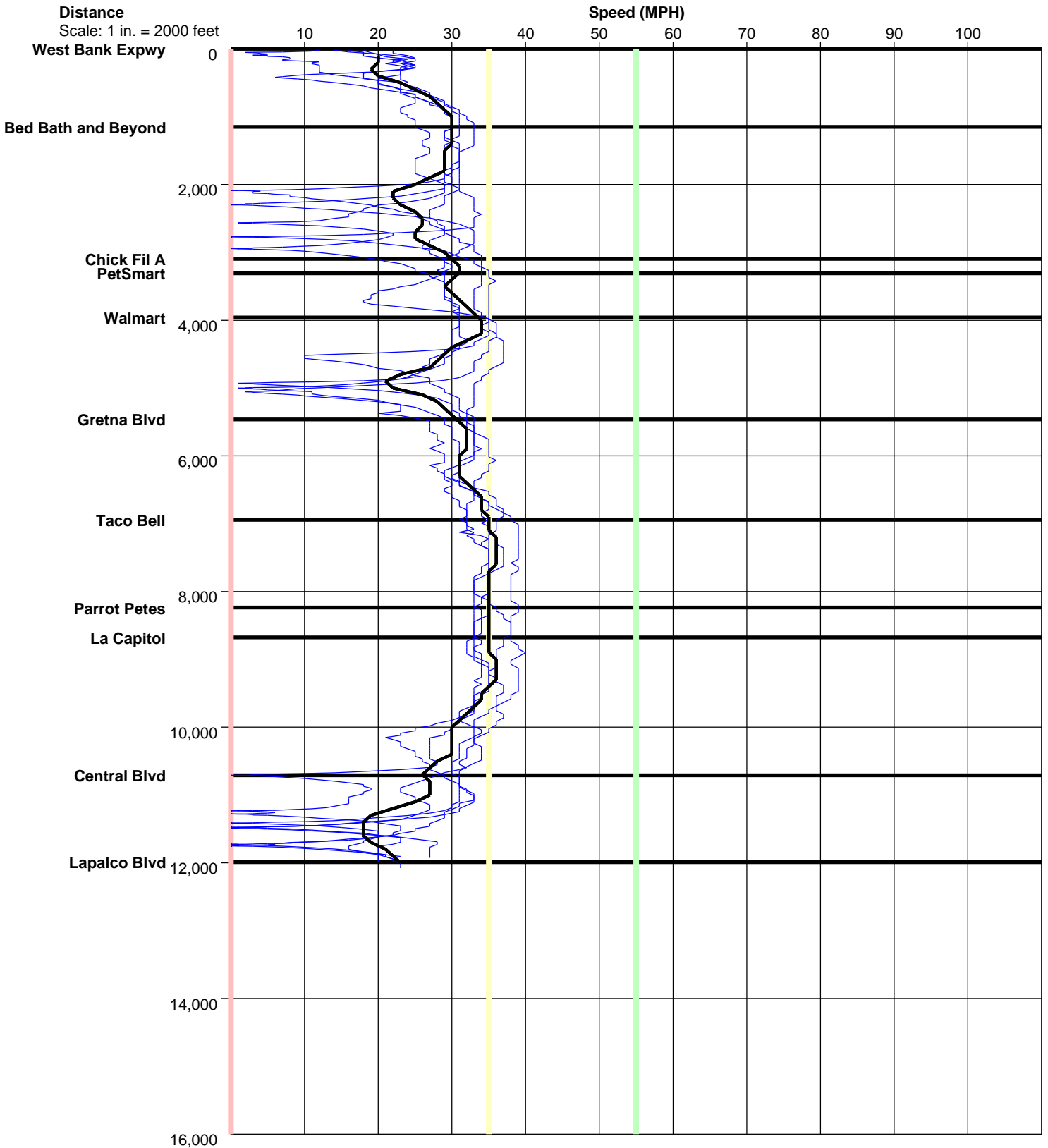
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

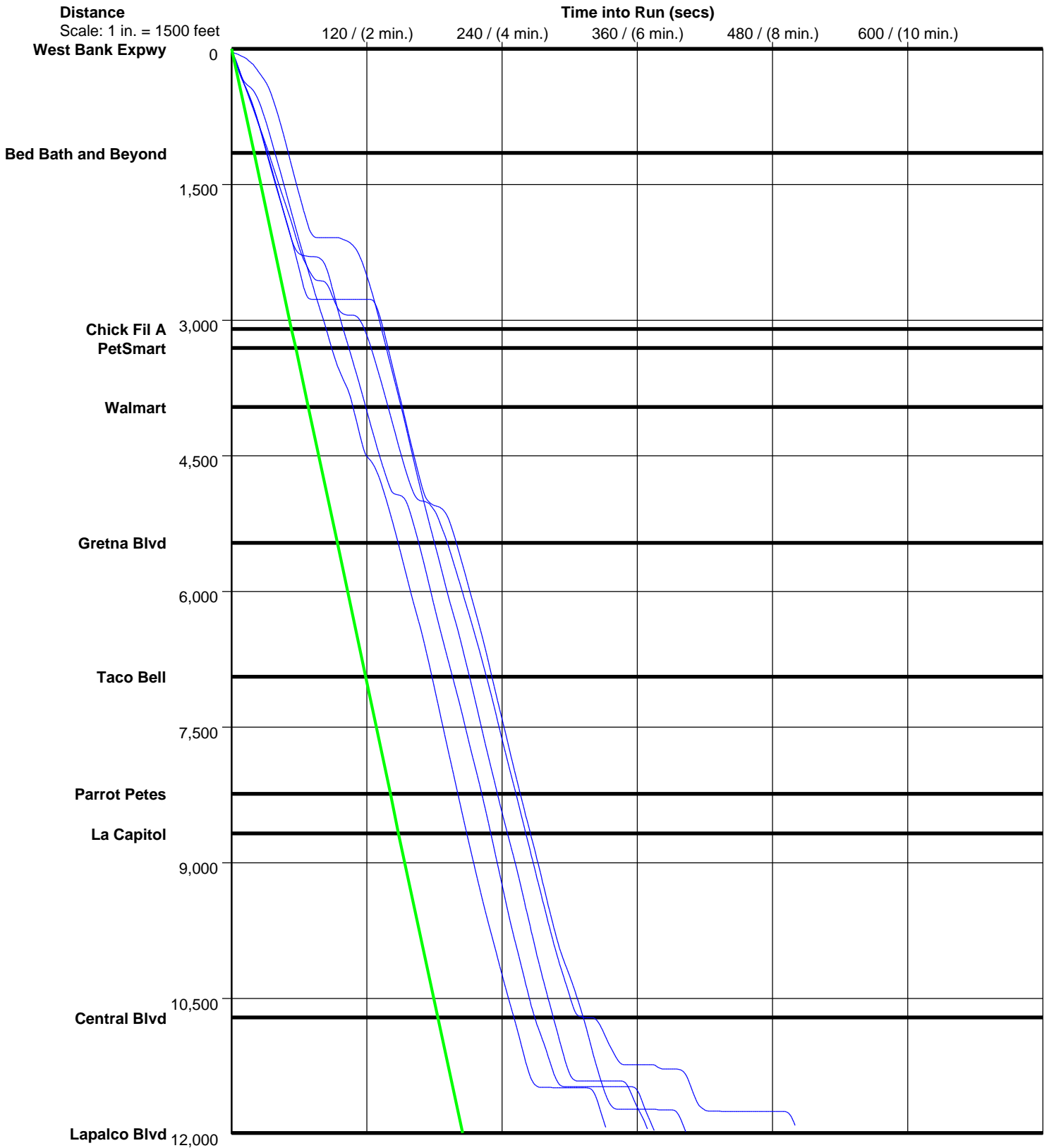
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

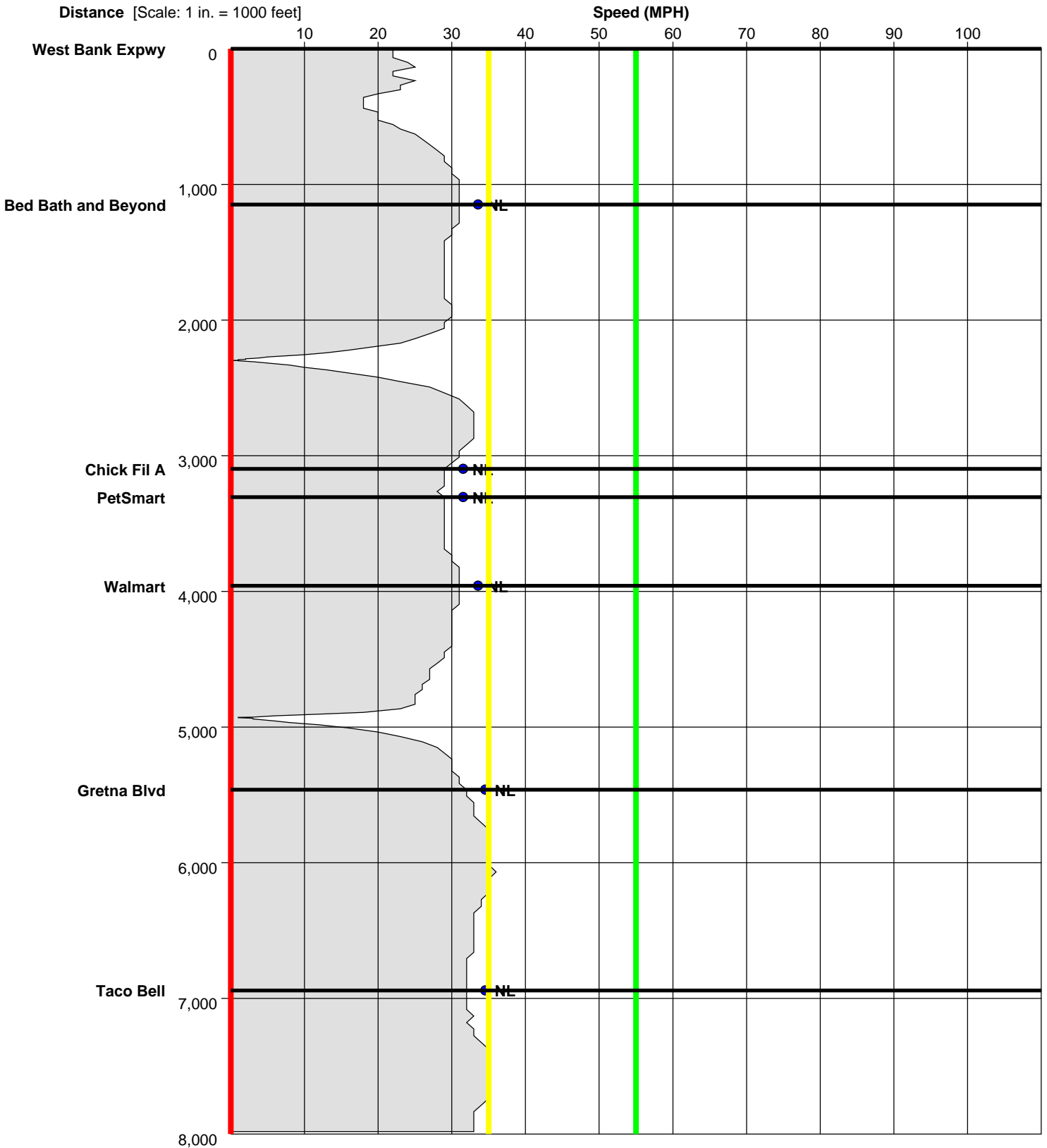
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **18**

Speed Profile

Run : manhattan blvd pm-SB-002tn Start Time: 15:01 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

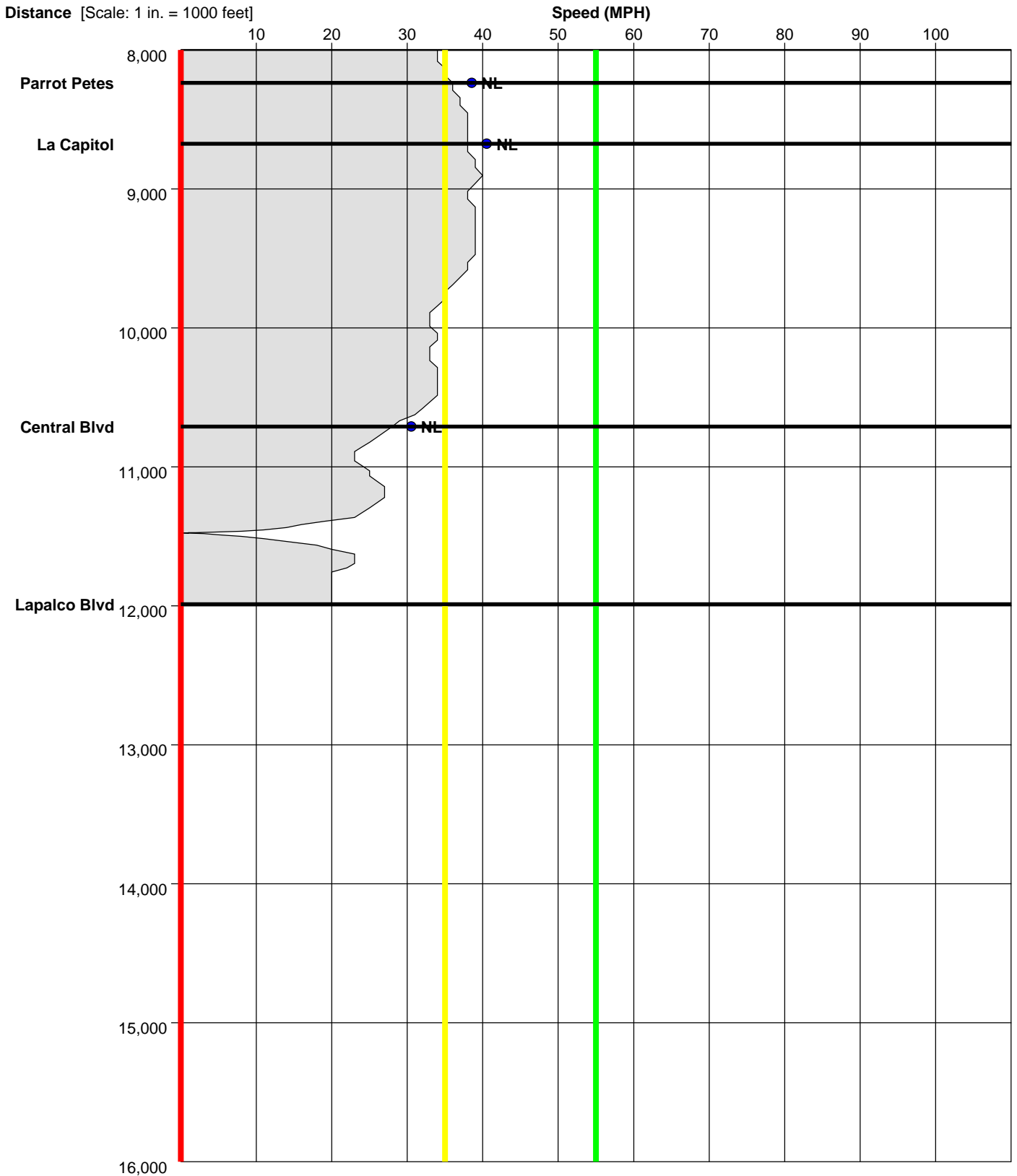
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **19**

Speed Profile

Run : manhattan blvd pm-SB-002tn Start Time: 15:01 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

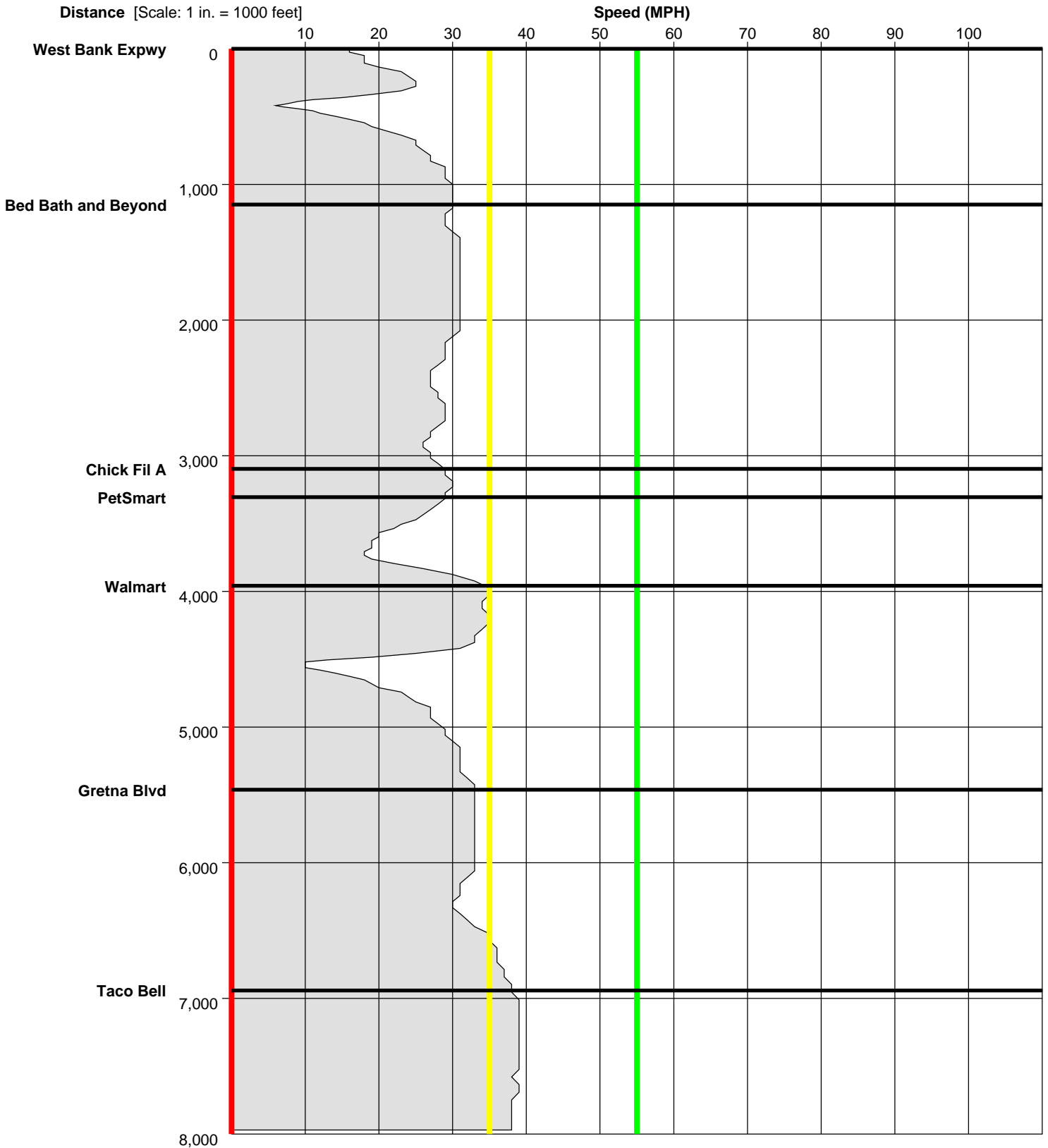
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **20**

Speed Profile

Run : **manhattan blvd pm-SB-003t** Start Time: **15:21** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

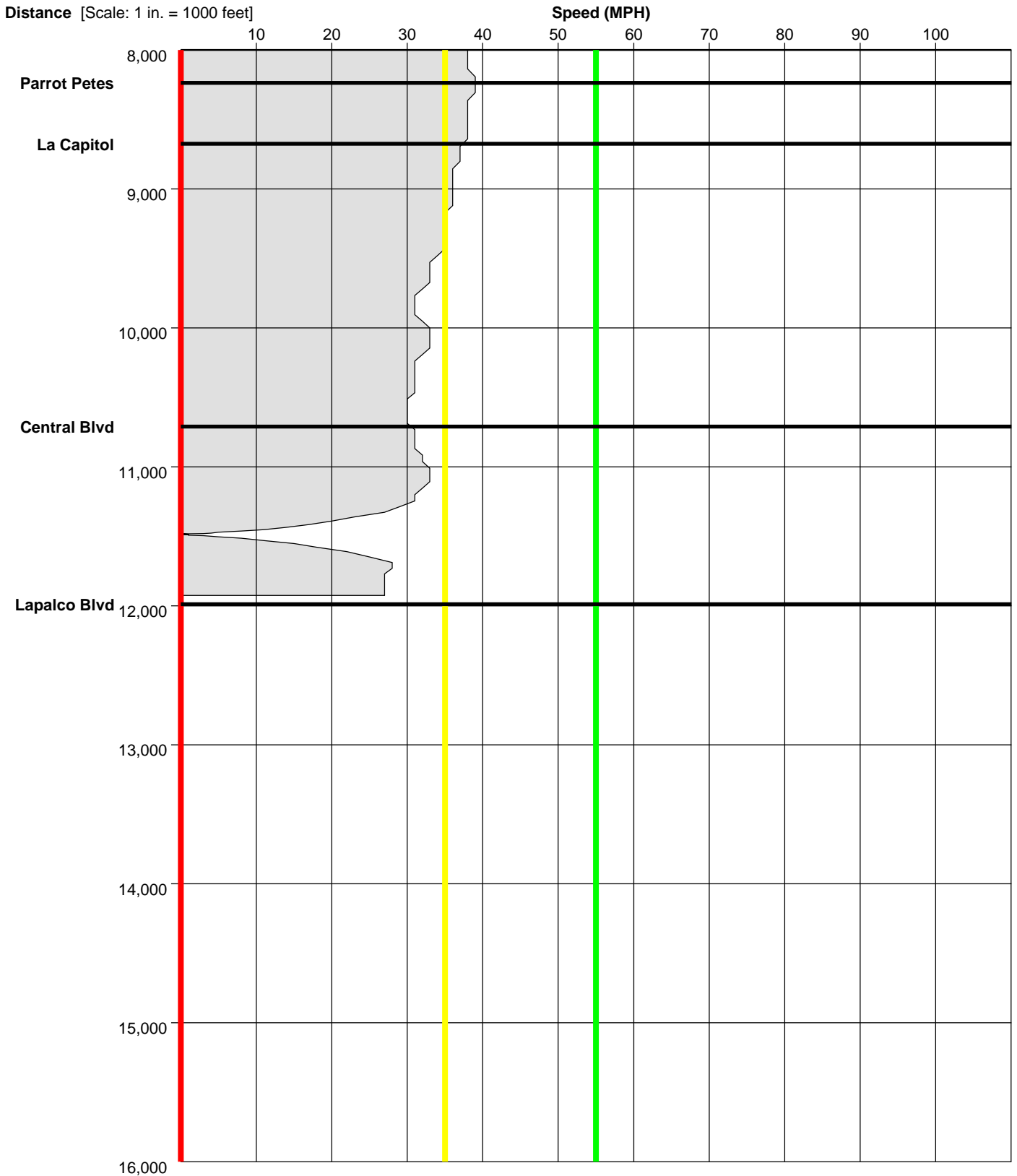
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **21**

Speed Profile

Run : manhattan blvd pm-SB-003t Start Time: 15:21 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

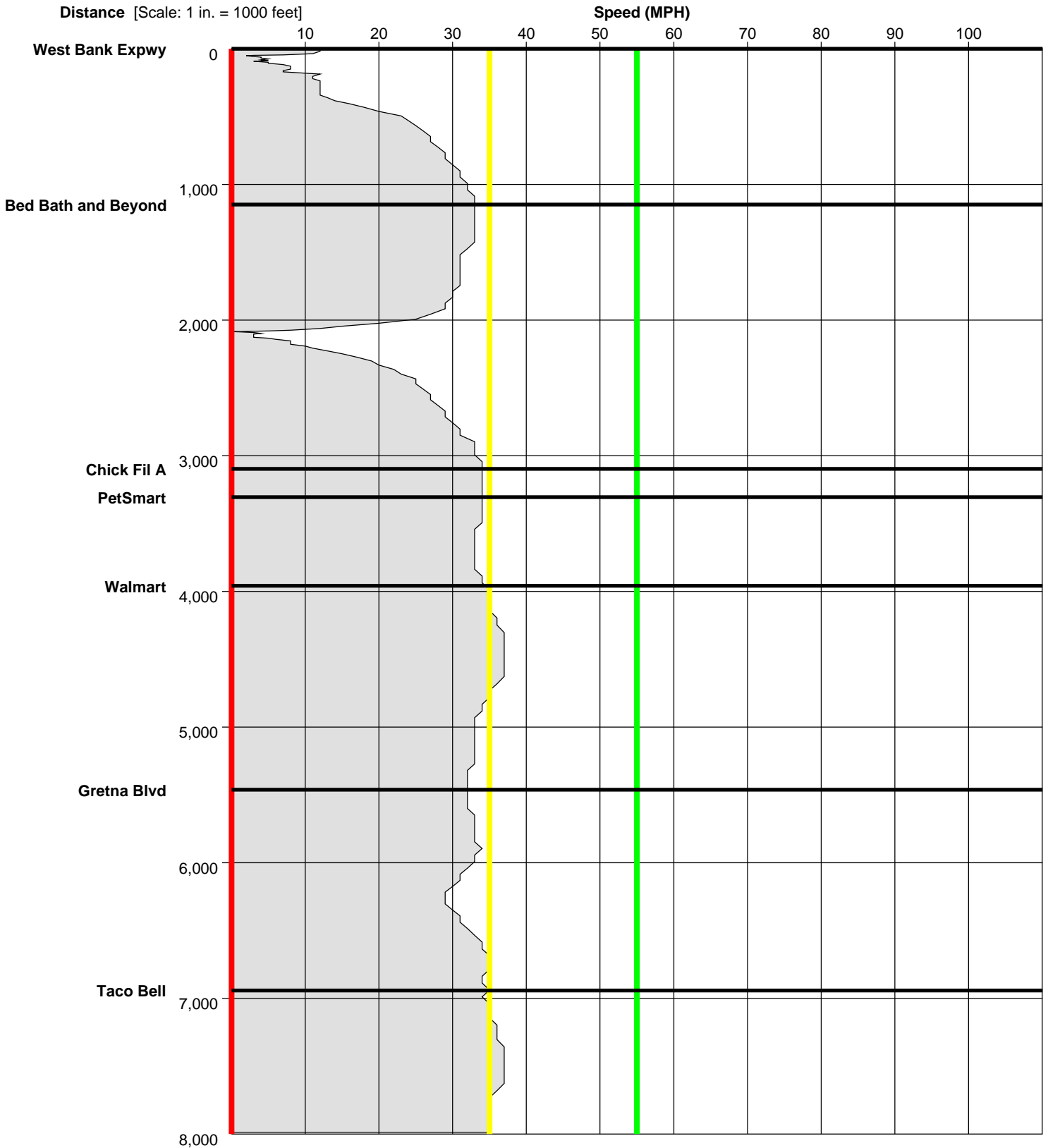
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **22**

Speed Profile

Run : **manhattan blvd pm-SB-004t** Start Time: **15:37** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

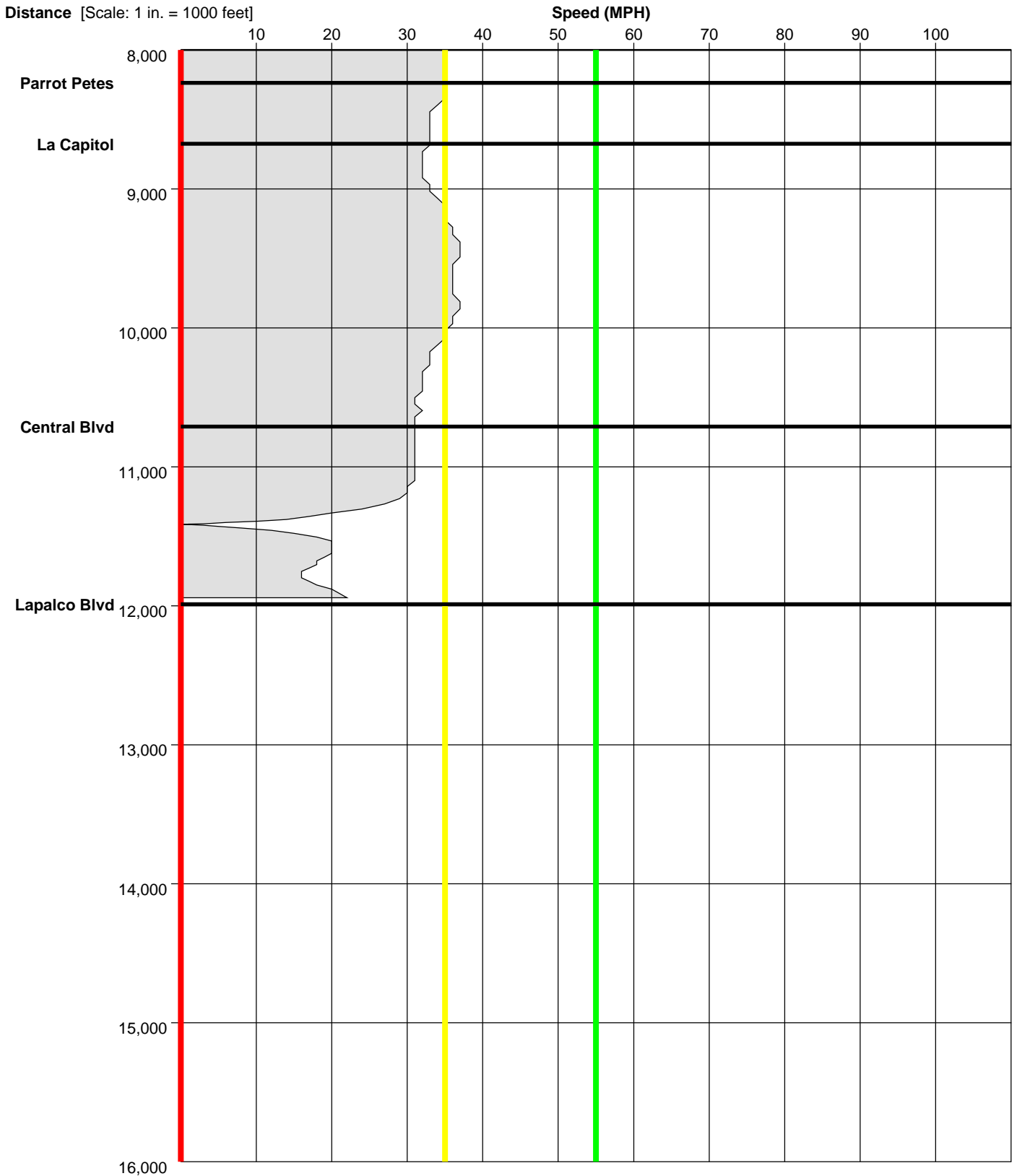
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **23**

Speed Profile

Run : manhattan blvd pm-SB-004t Start Time: 15:37 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

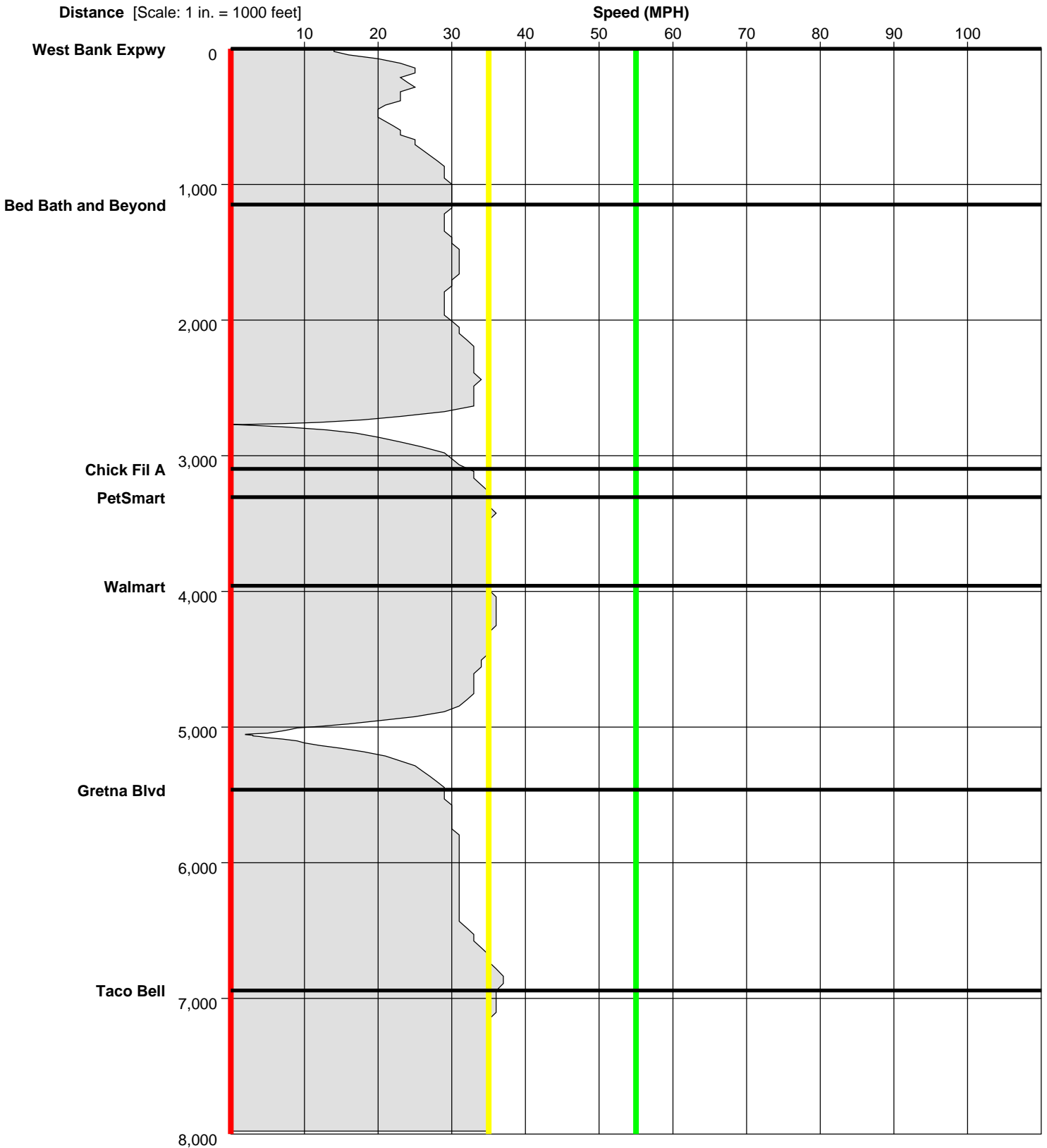
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **24**

Speed Profile

Run : **manhattan blvd pm-SB-005t** Start Time: **15:52** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

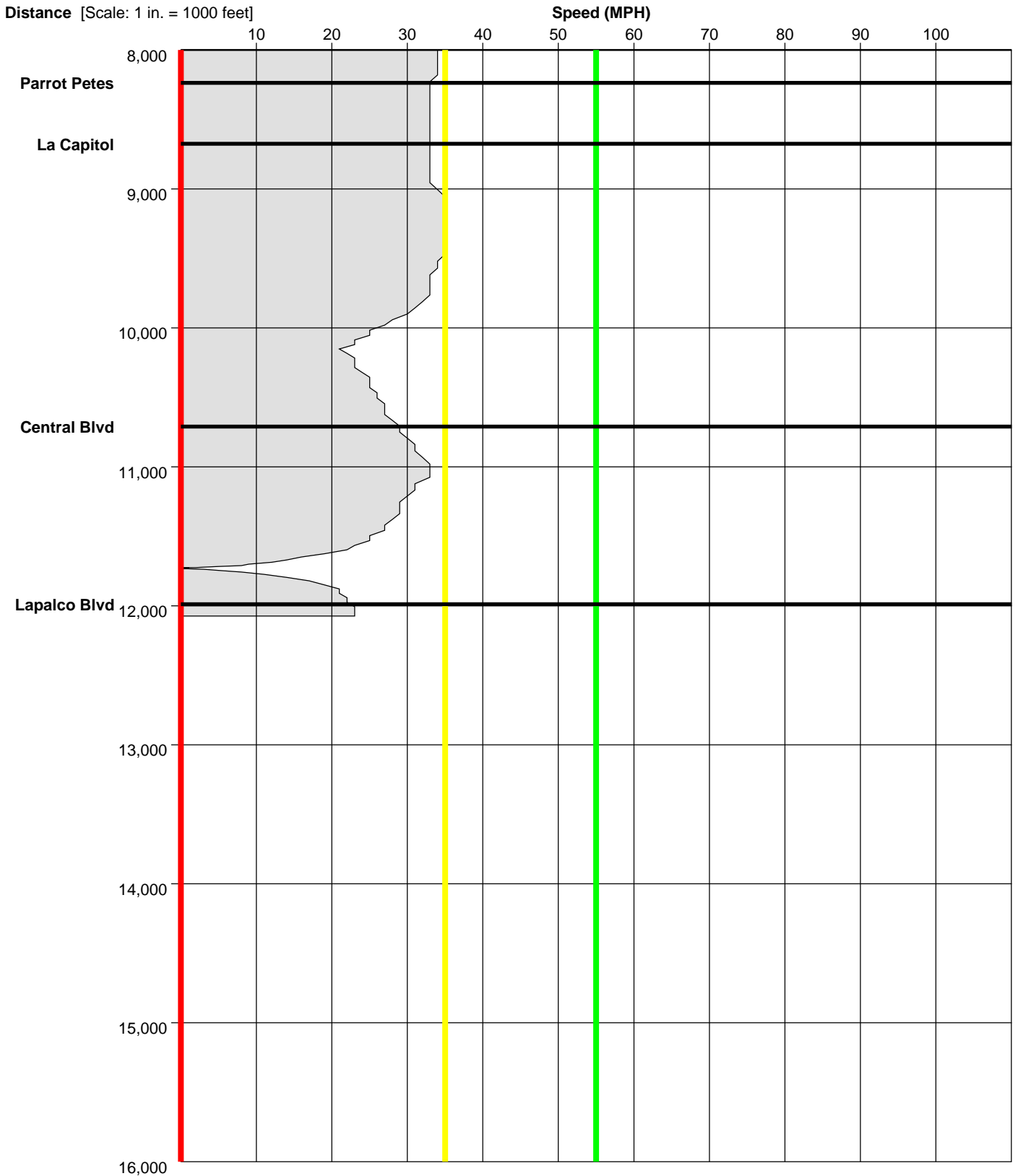
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **25**

Speed Profile

Run : manhattan blvd pm-SB-005t Start Time: 15:52 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

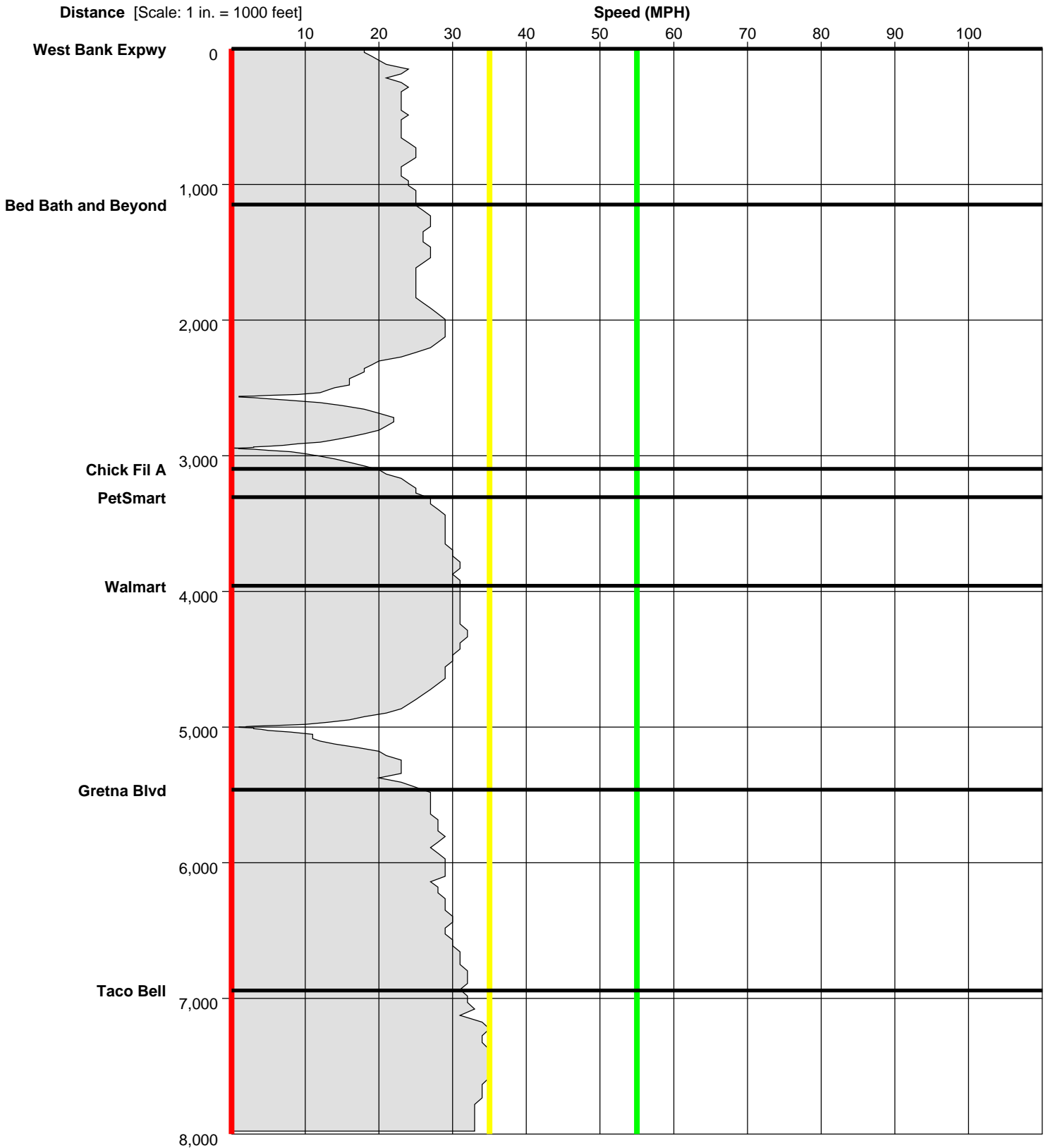
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **26**

Speed Profile

Run : **manhattan blvd pm-SB-006t** Start Time: **16:08** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

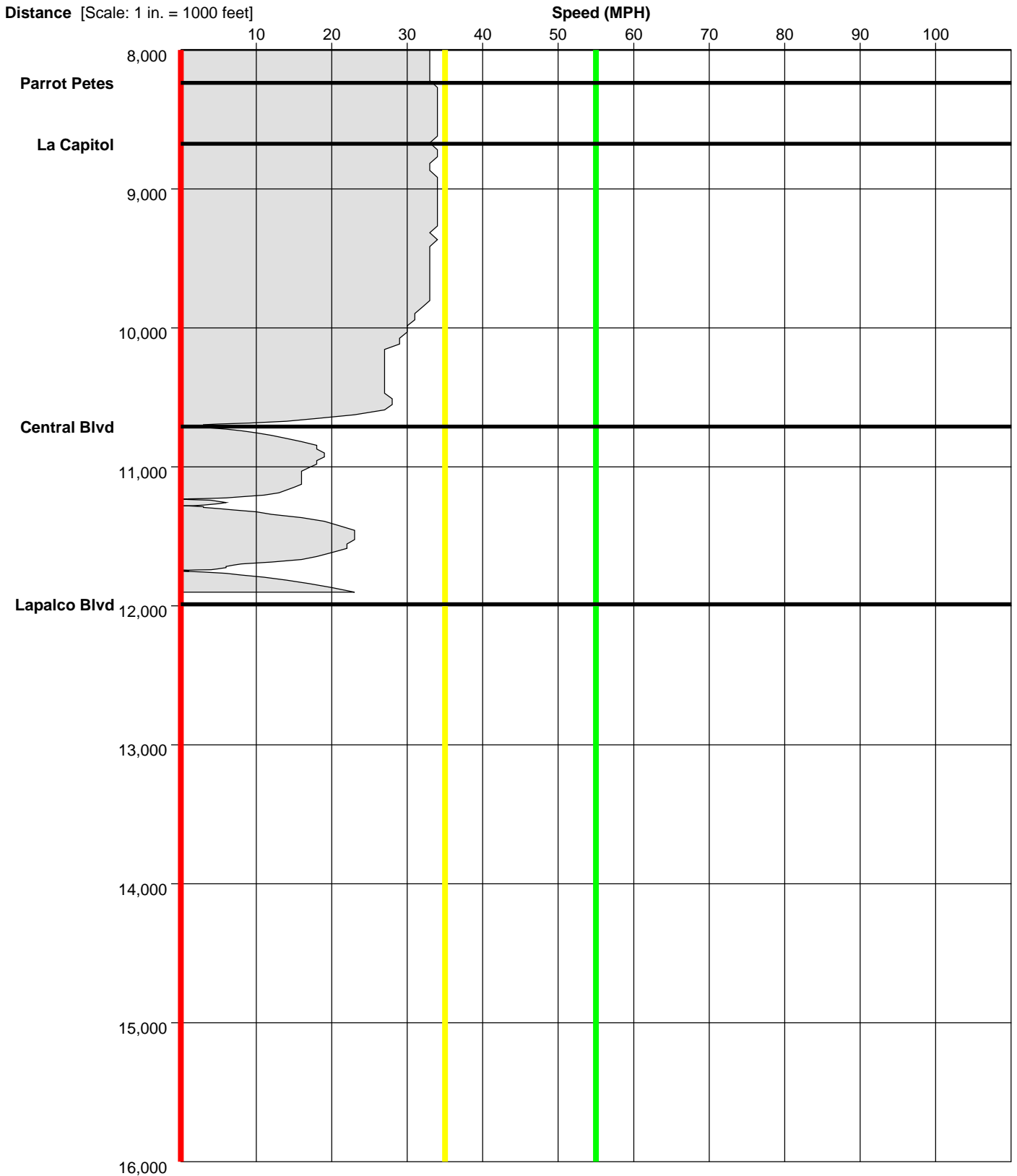
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **27**

Speed Profile

Run : manhattan blvd pm-SB-006t Start Time: 16:08 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

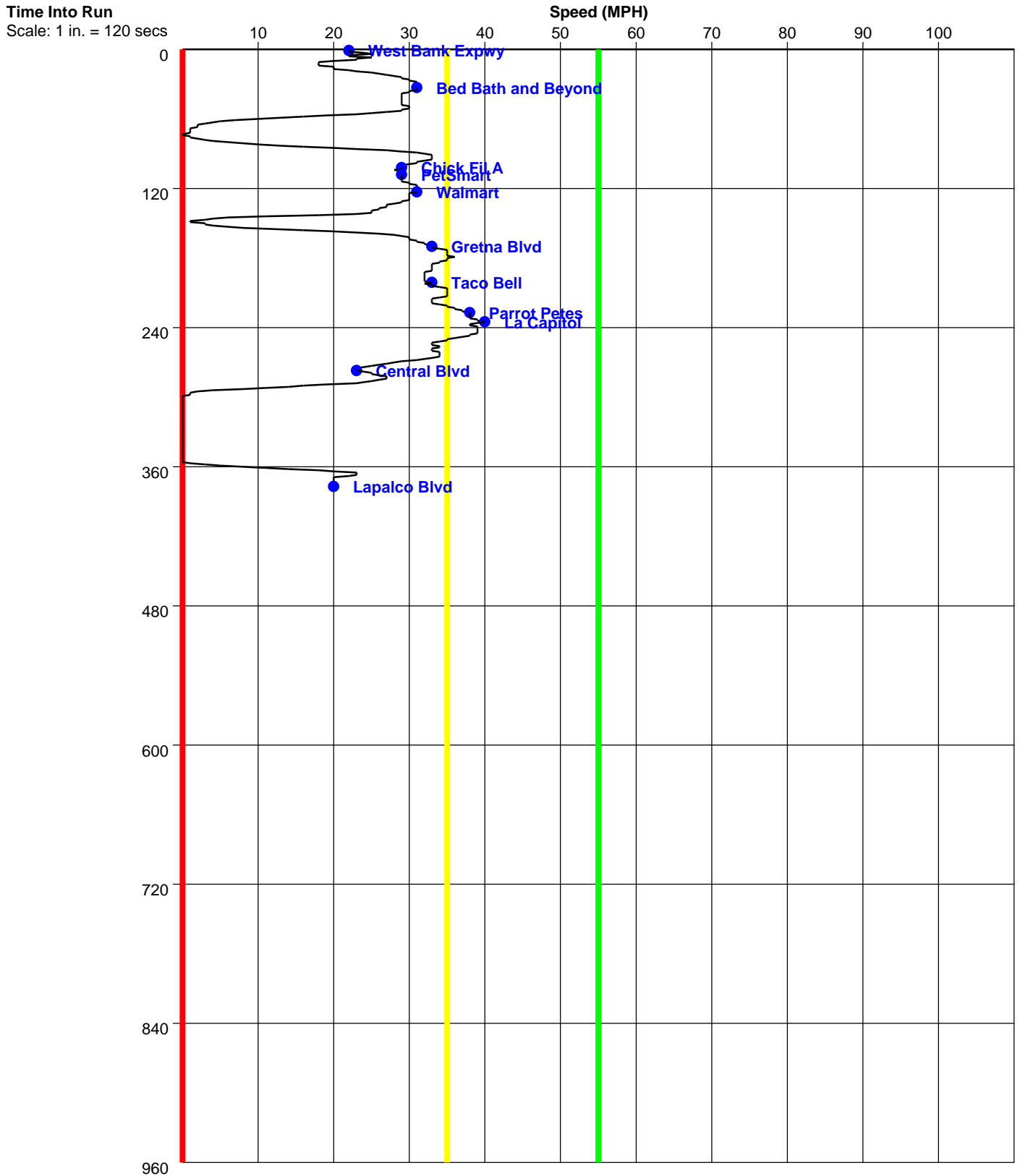
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **28**

Time-Based Speed Profile

Run : manhattan blvd pm-SB-002tn Start Time:15:01 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

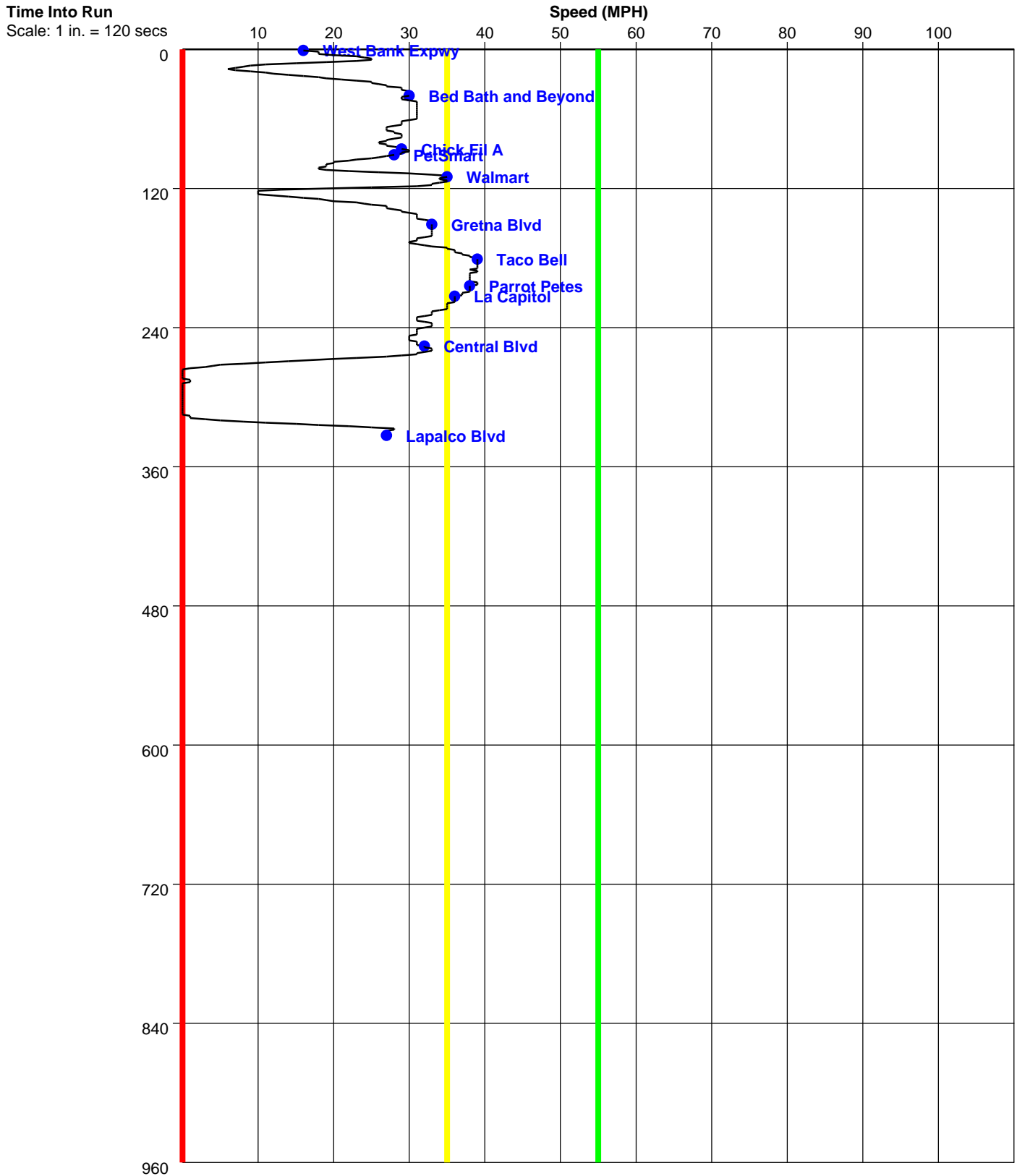
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **29**

Time-Based Speed Profile

Run : manhattan blvd pm-SB-003t Start Time:15:21 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

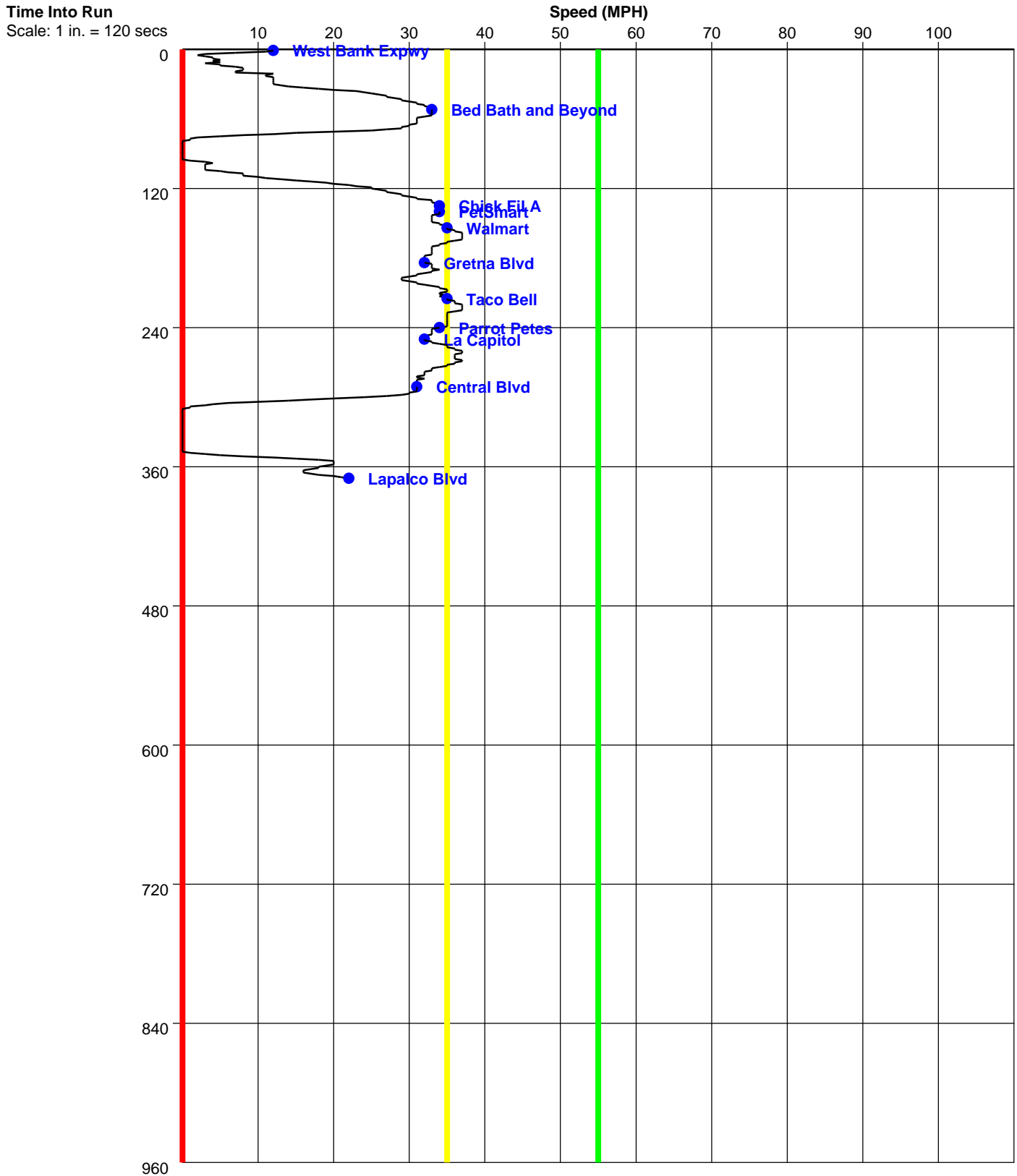
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **30**

Time-Based Speed Profile

Run : manhattan blvd pm-SB-004t Start Time:15:37 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

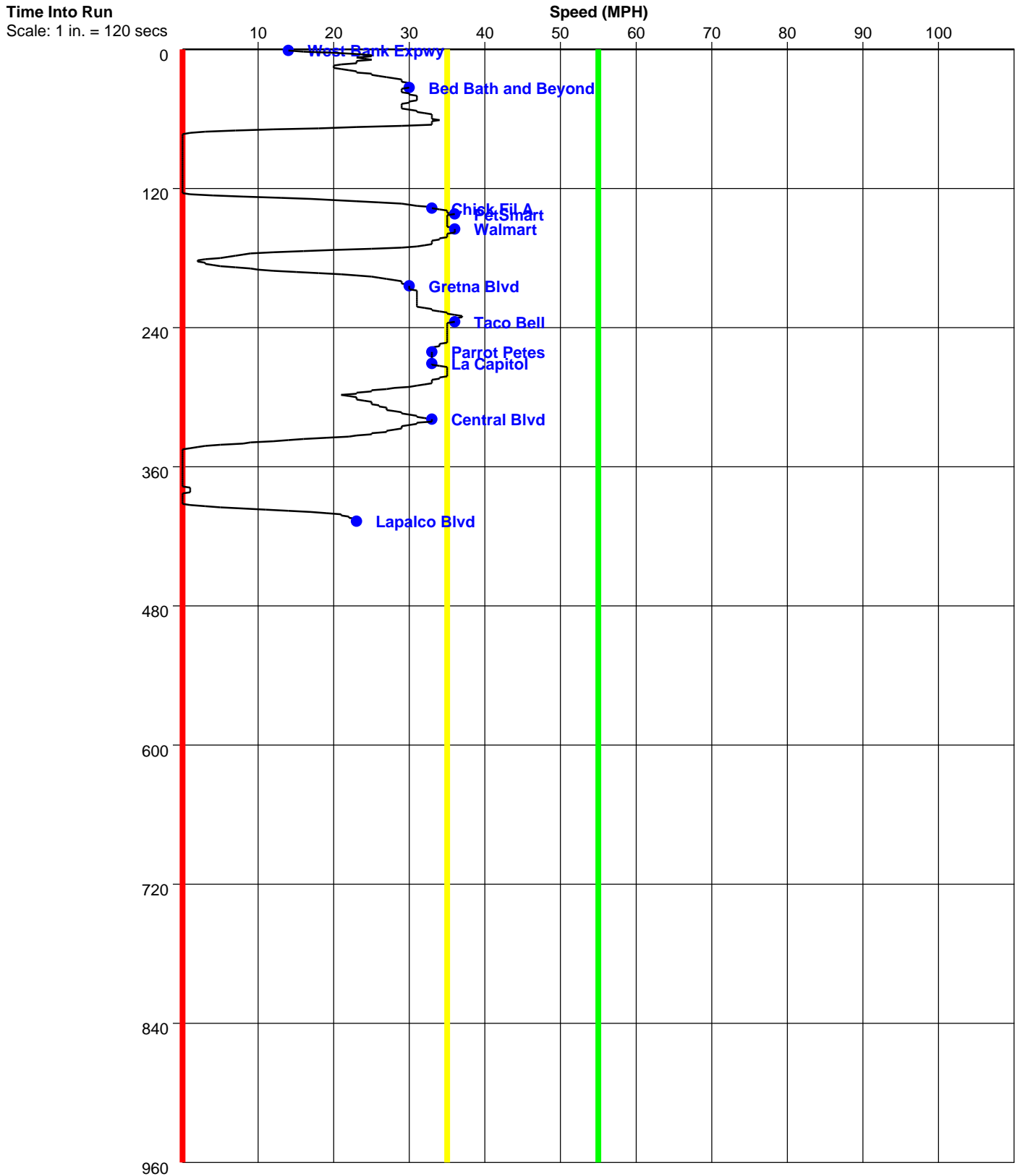
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **31**

Time-Based Speed Profile

Run : manhattan blvd pm-SB-005t Start Time:15:52 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

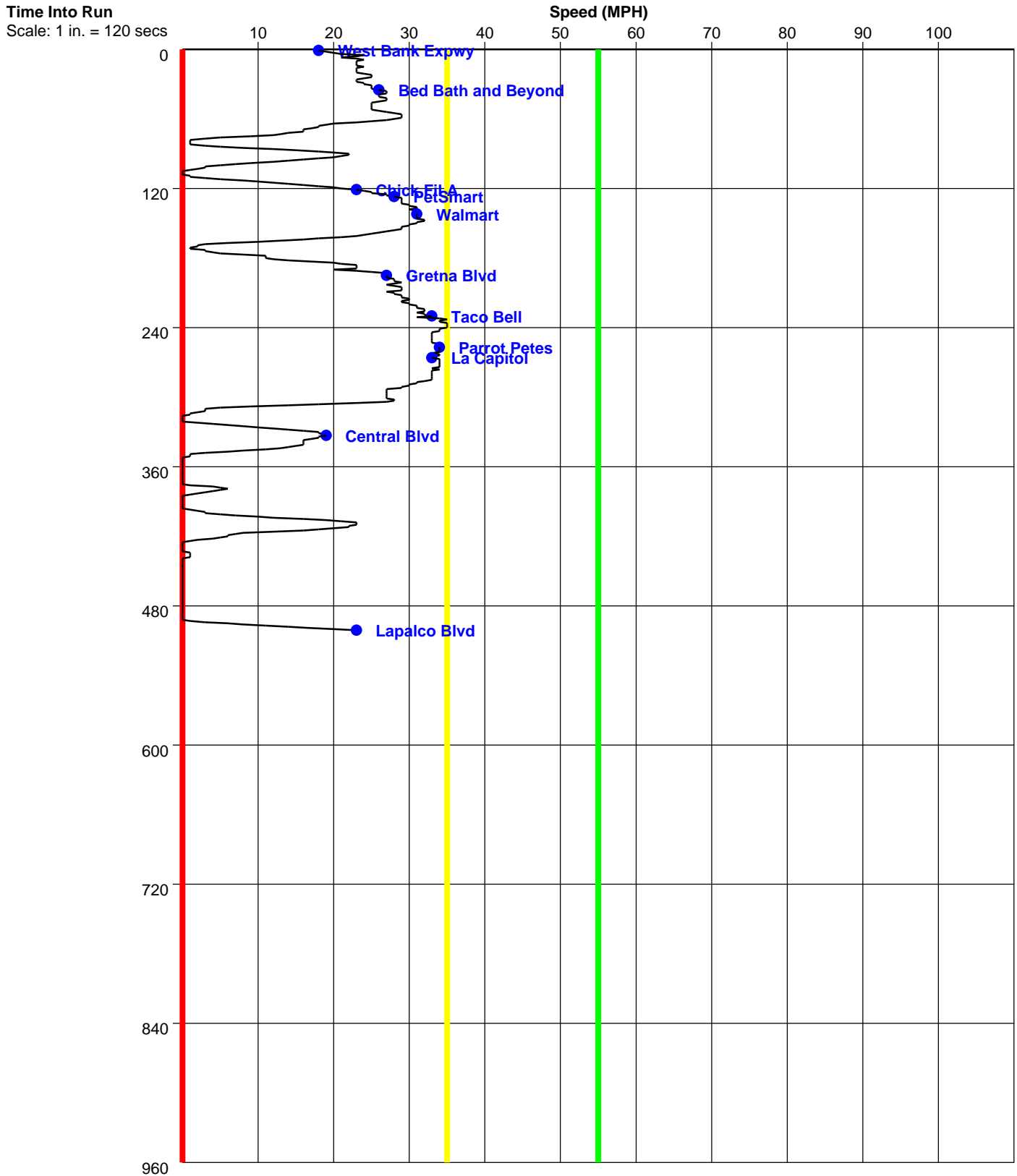
Study Name : **Manhattan Blvd SB PM**

Study Date : **10/19/2017**

Page No. : **32**

Time-Based Speed Profile

Run : manhattan blvd pm-SB-006t Start Time:16:08 (This is a Before Run)



**TRAVEL TIME RUNS
WITH
MODIFIED TIMINGS**

ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd NB AM 2

<u>Report Name</u>	<u>Page</u>
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Fuel Consumption & Emissions	4
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Detailed Statistics By Run - Time <= 35 MPH	10
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Speed Profile (Distance vs Spd) for Manhattan Blvd AM 2-NB-003t	20
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Speed Profile (Time vs Spd) for Manhattan Blvd AM 2-NB-003t	25
Speed Profile (Time vs Spd) for Manhattan Blvd AM 2-NB-004t	26

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd AM 2-NB-001tn	04/25/18	06:16	11550	After	Primary
Manhattan Blvd AM 2-NB-003t	04/25/18	06:29	11695	After	Secondary
Manhattan Blvd AM 2-NB-004t	04/25/18	06:43	11680	After	Secondary

Notes:

Node Info

#	Len	Name
1	0	Lapalco Blvd
2	1416	Central Blvd
3	2039	LA Capitol
4	451	Parrot Petes
5	1336	Taco Bell
6	1470	Gretna Blvd
7	1485	Walmart
8	655	PetSmart
9	116	Chick Fil A
10	1971	Bed Bath and Beyond
11	611	Westbank Expy

Length of Study Route = 11,550 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Lapalco Blvd							
2	1416	Central Blvd	28.3	0.0	34.1	4.0	0.0	11.7	28.3
3	2039	LA Capitol	35.7	0.0	39.0	0.7	0.0	1.3	35.7
4	451	Parrot Petes	15.3	0.3	20.1	7.0	2.3	11.3	15.3
5	1336	Taco Bell	22.7	0.0	40.2	0.0	0.0	0.0	22.7
6	1470	Gretna Blvd	44.7	0.7	22.4	19.3	8.7	26.3	44.7
7	1485	Walmart	36.0	0.3	28.1	10.3	4.7	16.3	36.0
8	655	PetSmart	11.7	0.0	38.3	0.3	0.0	2.0	11.7
9	116	Chick Fil A	2.7	0.0	29.7	0.7	0.0	1.3	2.7
10	1971	Bed Bath and Beyond	45.7	0.7	29.4	11.7	1.0	24.0	45.7
11	611	Westbank Expy	15.3	0.0	27.2	4.7	0.0	11.7	15.3
Total	11,550		258.0	2.0	30.5	58.7	16.7	106.0	258.0

Stats based on 3 AFTER runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Lapalco Blvd				
2	1416	Central Blvd	0.0136	1.4843	16.0165	1.0379
3	2039	LA Capitol	0.0149	0.8296	9.2654	0.2054
4	451	Parrot Petes	0.0065	0.7413	6.4674	0.5308
5	1336	Taco Bell	0.0104	0.7761	9.4861	0.3745
6	1470	Gretna Blvd	0.0156	1.2627	10.2265	0.5948
7	1485	Walmart	0.0156	1.5711	16.3528	1.0055
8	655	PetSmart	0.0056	0.4642	5.4801	0.2662
9	116	Chick Fil A	0.0009	0.0480	0.4853	0.0040
10	1971	Bed Bath and Beyond	0.0175	1.3842	12.0807	0.6943
11	611	Westbank Expy	0.0062	0.5863	4.8626	0.3697
Total	11,550		0.1068	9.1478	90.7233	5.0831

Stats based on 3 AFTER runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	28	29	28
3	2039	LA Capitol	36	35	36
4	451	Parrot Petes	8	10	28
5	1336	Taco Bell	23	23	22
6	1470	Gretna Blvd	25	55	54
7	1485	Walmart	55	27	26
8	655	PetSmart	12	12	11
9	116	Chick Fil A	2	4	2
10	1971	Bed Bath and Beyond	34	49	54
11	611	Westbank Expy	11	14	21
Totals	11550		234	258	282

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	0	0	0
3	2039	LA Capitol	0	0	0
4	451	Parrot Petes	0	0	1
5	1336	Taco Bell	0	0	0
6	1470	Gretna Blvd	0	1	1
7	1485	Walmart	1	0	0
8	655	PetSmart	0	0	0
9	116	Chick Fil A	0	0	0
10	1971	Bed Bath and Beyond	0	1	1
11	611	Westbank Expy	0	0	0
Totals	11550		1	2	3

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	34.4	33.7	35.1
3	2039	LA Capitol	38.7	39.7	38.4
4	451	Parrot Petes	38.4	33.9	11.5
5	1336	Taco Bell	39.7	38.3	40.8
6	1470	Gretna Blvd	40.0	18.6	19.0
7	1485	Walmart	18.4	38.1	38.5
8	655	PetSmart	37.4	36.0	42.0
9	116	Chick Fil A	40.0	16.8	42.0
10	1971	Bed Bath and Beyond	39.5	27.5	24.6
11	611	Westbank Expy	38.0	29.6	19.8
Totals	11550		33.7	30.6	28.0

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	4	5	3
3	2039	LA Capitol	1	0	1
4	451	Parrot Petes	0	1	20
5	1336	Taco Bell	0	0	0
6	1470	Gretna Blvd	0	30	28
7	1485	Walmart	30	1	0
8	655	PetSmart	1	0	0
9	116	Chick Fil A	0	2	0
10	1971	Bed Bath and Beyond	0	15	20
11	611	Westbank Expy	1	3	10
Totals	11550		37	57	82

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	0	0	0
3	2039	LA Capitol	0	0	0
4	451	Parrot Petes	0	0	7
5	1336	Taco Bell	0	0	0
6	1470	Gretna Blvd	0	12	14
7	1485	Walmart	14	0	0
8	655	PetSmart	0	0	0
9	116	Chick Fil A	0	0	0
10	1971	Bed Bath and Beyond	0	0	3
11	611	Westbank Expy	0	0	0
Totals	11550		14	12	24

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	10	14	11
3	2039	LA Capitol	0	0	4
4	451	Parrot Petes	0	7	27
5	1336	Taco Bell	0	0	0
6	1470	Gretna Blvd	0	41	38
7	1485	Walmart	41	4	4
8	655	PetSmart	3	3	0
9	116	Chick Fil A	0	4	0
10	1971	Bed Bath and Beyond	0	39	33
11	611	Westbank Expy	0	14	21
Totals	11550		54	126	138

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	28	29	28
3	2039	LA Capitol	36	35	36
4	451	Parrot Petes	8	10	28
5	1336	Taco Bell	23	23	22
6	1470	Gretna Blvd	25	55	54
7	1485	Walmart	55	27	26
8	655	PetSmart	12	12	11
9	116	Chick Fil A	2	4	2
10	1971	Bed Bath and Beyond	34	49	54
11	611	Westbank Expy	11	14	21
Totals	11550		234	258	282

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	0.0137	0.0133	0.0139
3	2039	LA Capitol	0.0148	0.0149	0.0149
4	451	Parrot Petes	0.0033	0.0044	0.0119
5	1336	Taco Bell	0.0099	0.0101	0.0113
6	1470	Gretna Blvd	0.0106	0.0179	0.0184
7	1485	Walmart	0.0188	0.0142	0.0138
8	655	PetSmart	0.0070	0.0047	0.0050
9	116	Chick Fil A	0.0008	0.0009	0.0009
10	1971	Bed Bath and Beyond	0.0144	0.0198	0.0185
11	611	Westbank Expy	0.0043	0.0043	0.0099
Totals	11550		0.0975	0.1044	0.1186

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	1.4770	1.4177	1.5582
3	2039	LA Capitol	0.7978	0.8347	0.8564
4	451	Parrot Petes	0.1939	0.4244	1.6057
5	1336	Taco Bell	0.5687	0.7467	1.0129
6	1470	Gretna Blvd	0.5037	1.6404	1.6440
7	1485	Walmart	1.8105	1.4628	1.4401
8	655	PetSmart	0.8699	0.2684	0.2542
9	116	Chick Fil A	0.0360	0.0720	0.0360
10	1971	Bed Bath and Beyond	0.7680	2.0107	1.3738
11	611	Westbank Expy	0.1980	0.2520	1.3088
Totals	11550		7.2235	9.1297	11.0902

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	15.4879	15.1671	17.3943
3	2039	LA Capitol	8.7196	9.3946	9.6820
4	451	Parrot Petes	2.1783	4.7271	12.4967
5	1336	Taco Bell	6.4883	8.7958	13.1742
6	1470	Gretna Blvd	5.3755	12.7487	12.5552
7	1485	Walmart	14.3971	17.2085	17.4527
8	655	PetSmart	10.5661	2.9744	2.9000
9	116	Chick Fil A	0.3640	0.7280	0.3640
10	1971	Bed Bath and Beyond	8.5262	17.0949	10.6209
11	611	Westbank Expy	2.0020	2.5480	10.0377
Totals	11550		74.1051	91.3872	106.6777

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd AM 2-NB-001tn

Manhattan Blvd AM 2-NB-003t

Manhattan Blvd AM 2-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1416	Central Blvd	1.0378	0.9608	1.1150
3	2039	LA Capitol	0.1580	0.2092	0.2491
4	451	Parrot Petes	0.0503	0.2700	1.2722
5	1336	Taco Bell	0.1565	0.3501	0.6169
6	1470	Gretna Blvd	0.0600	0.8480	0.8765
7	1485	Walmart	1.0307	1.0038	0.9819
8	655	PetSmart	0.6613	0.0806	0.0568
9	116	Chick Fil A	0.0000	0.0120	0.0000
10	1971	Bed Bath and Beyond	0.1646	1.3190	0.5992
11	611	Westbank Expy	0.0071	0.0284	1.0734
Totals	11550		3.3262	5.0820	6.8411

ITS Regional

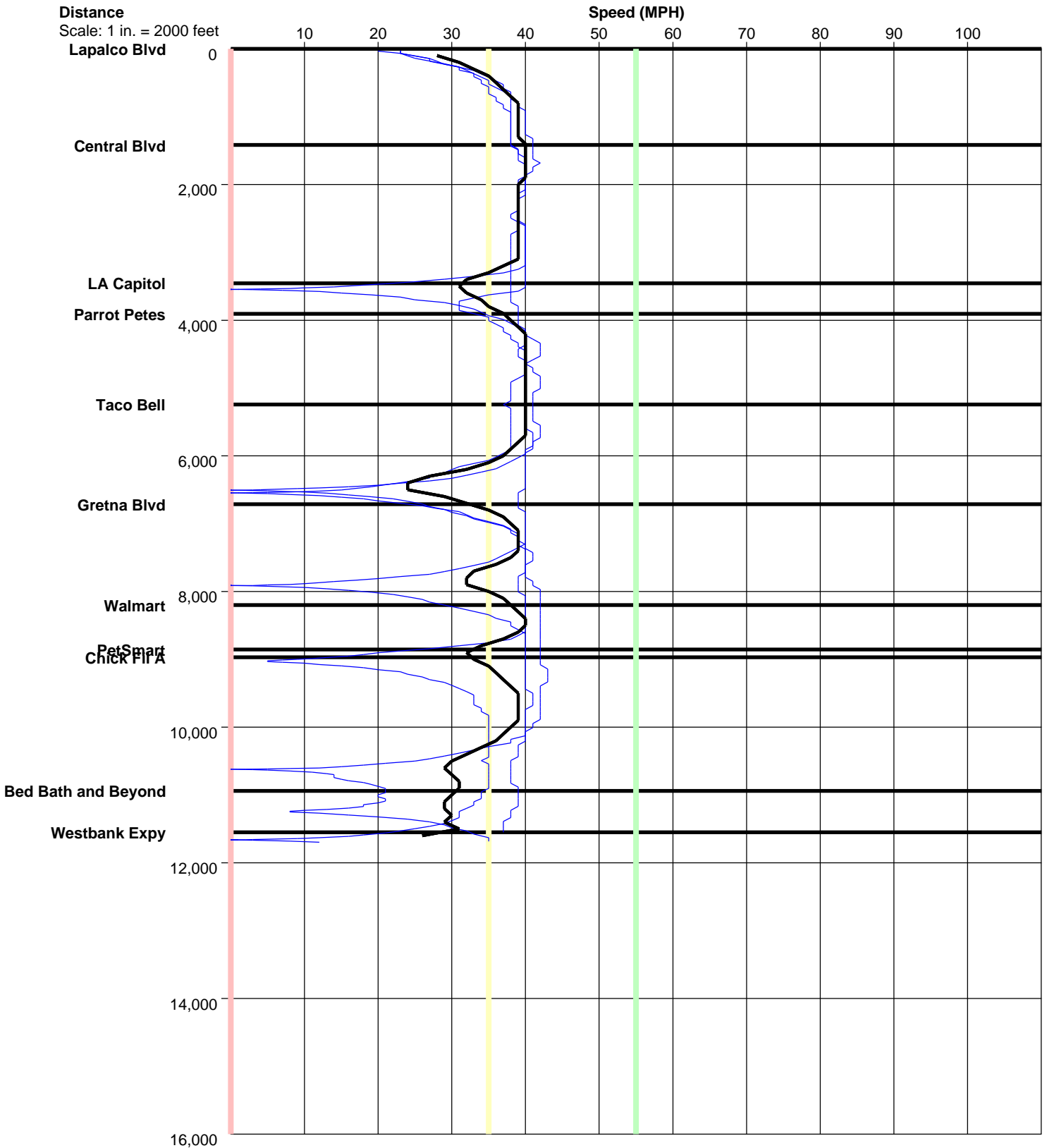
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

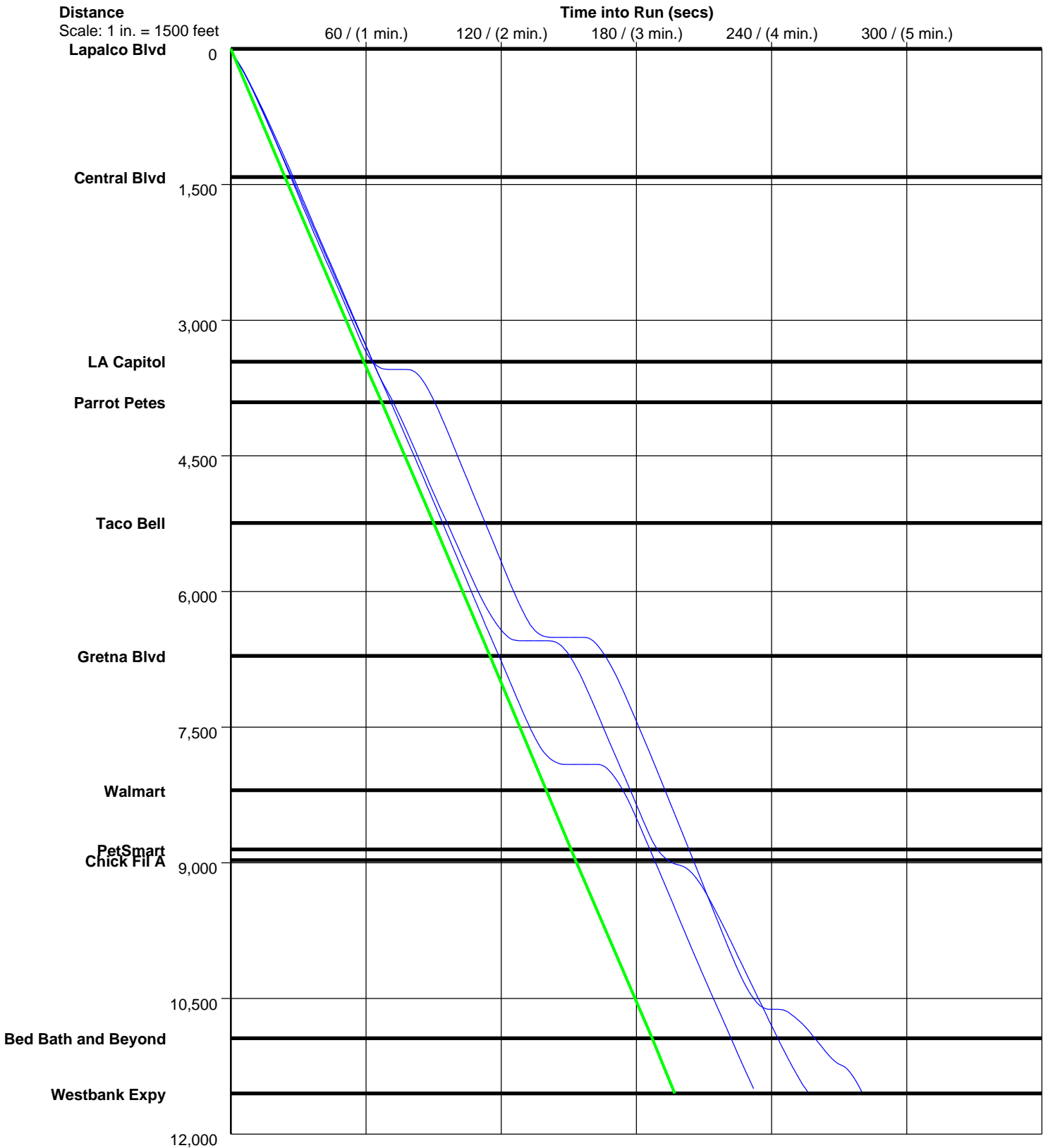
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

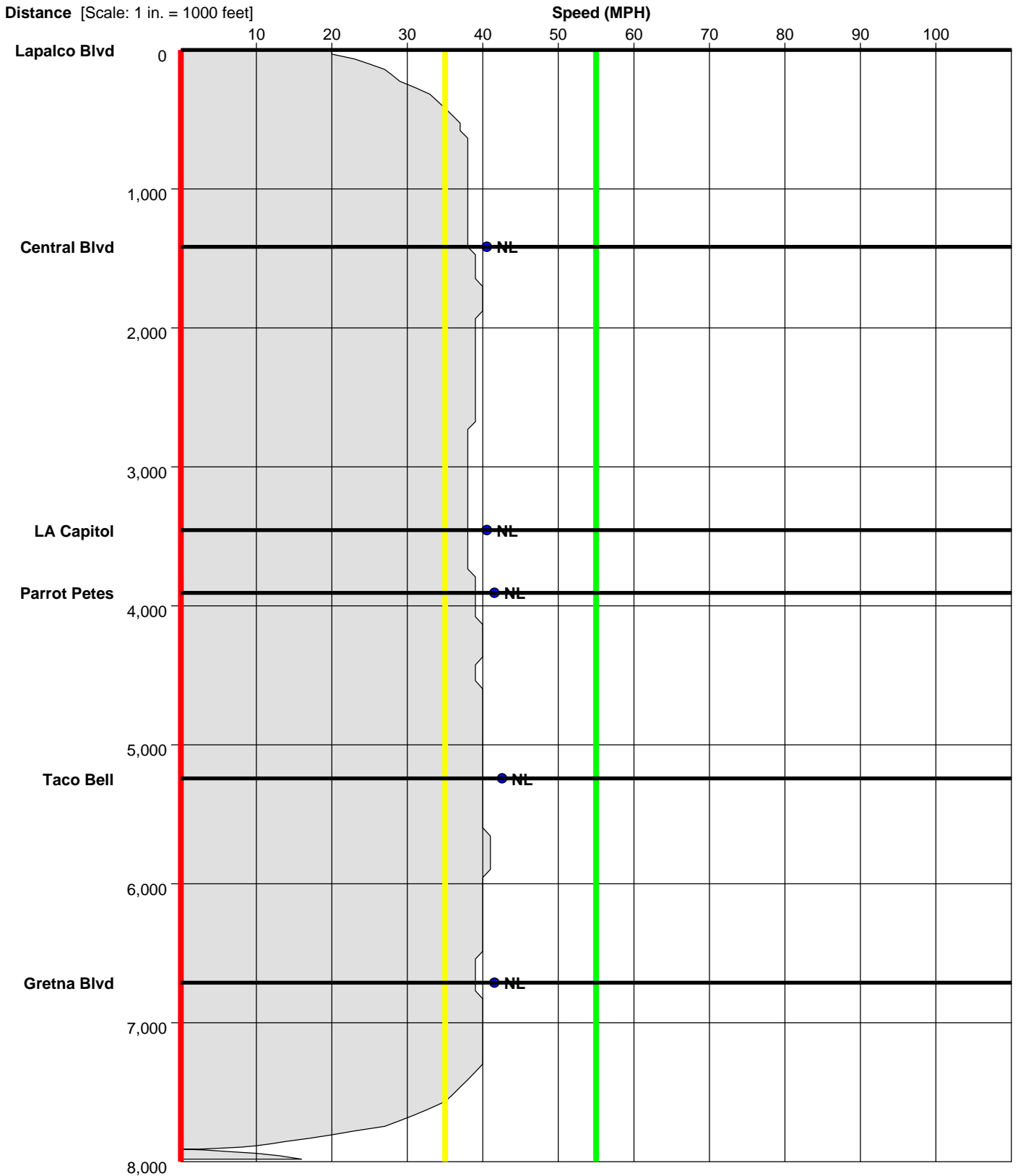
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd AM 2-NB-001tn** Start Time: **06:16** (This is an After Run)



ITS Regional

Manhattan Blvd Study

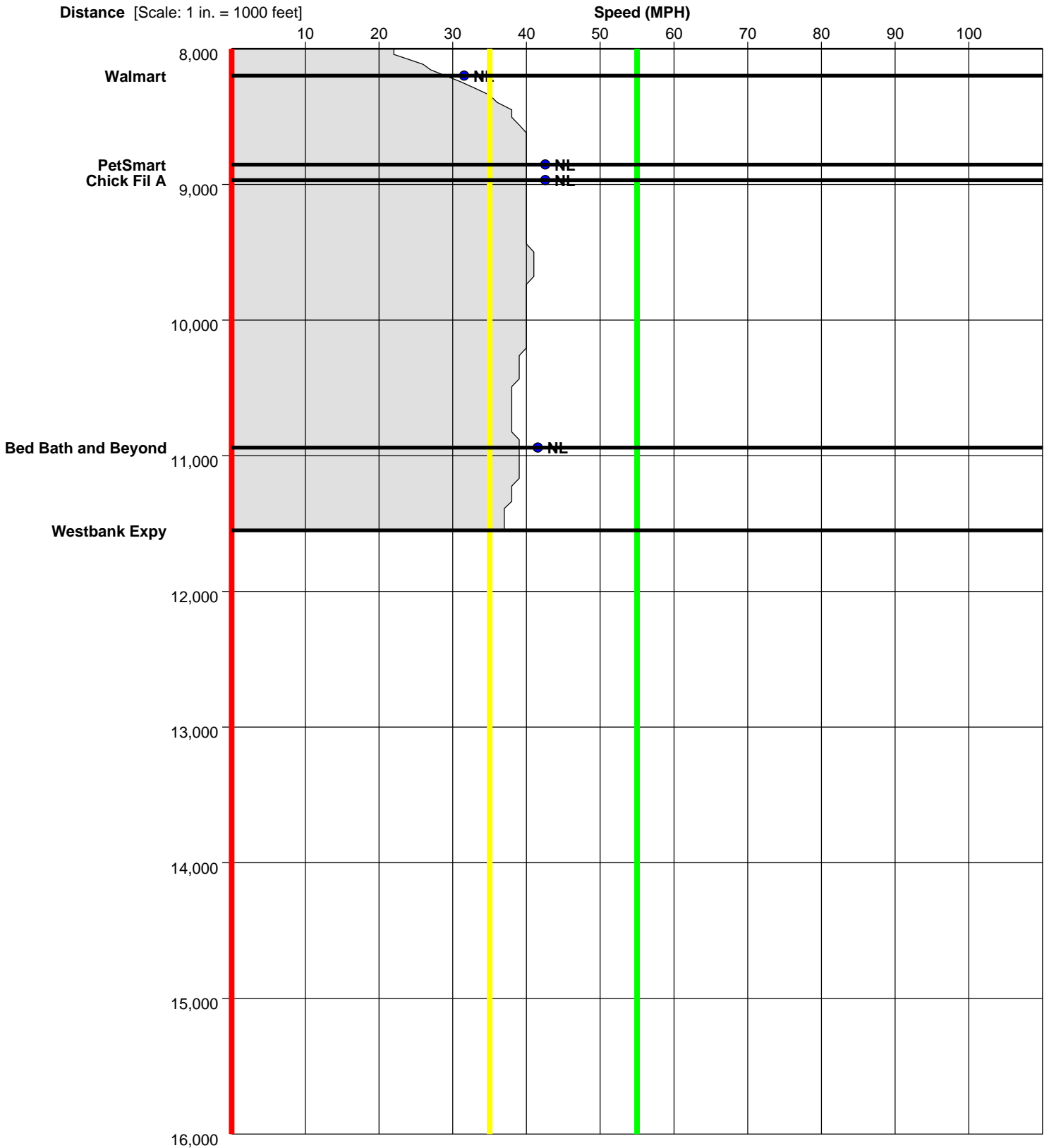
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd AM 2-NB-001tn** Start Time: **06:16** (This is an After Run)



ITS Regional

Manhattan Blvd Study

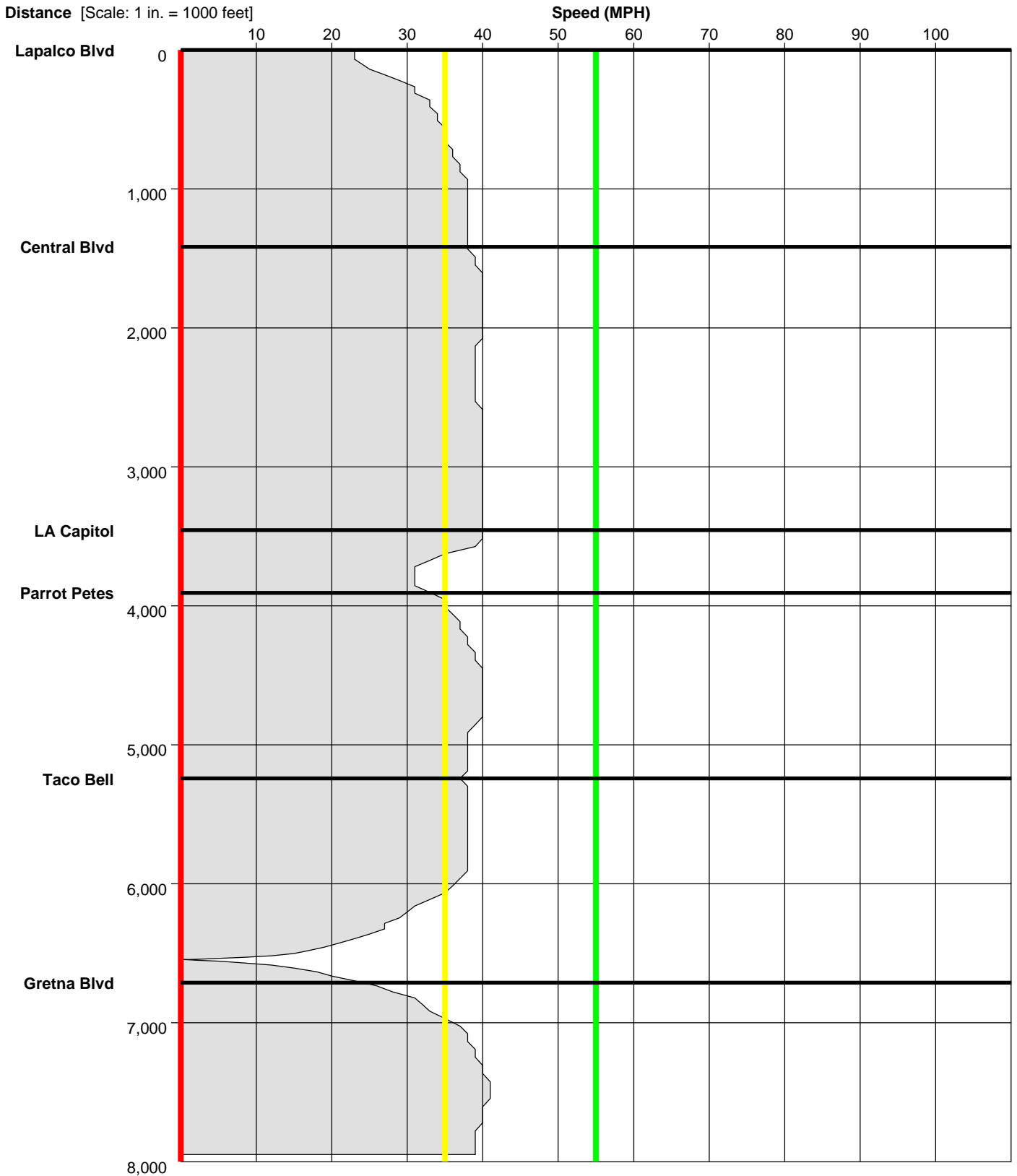
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd AM 2-NB-003t** Start Time: **06:29** (This is an After Run)



ITS Regional

Manhattan Blvd Study

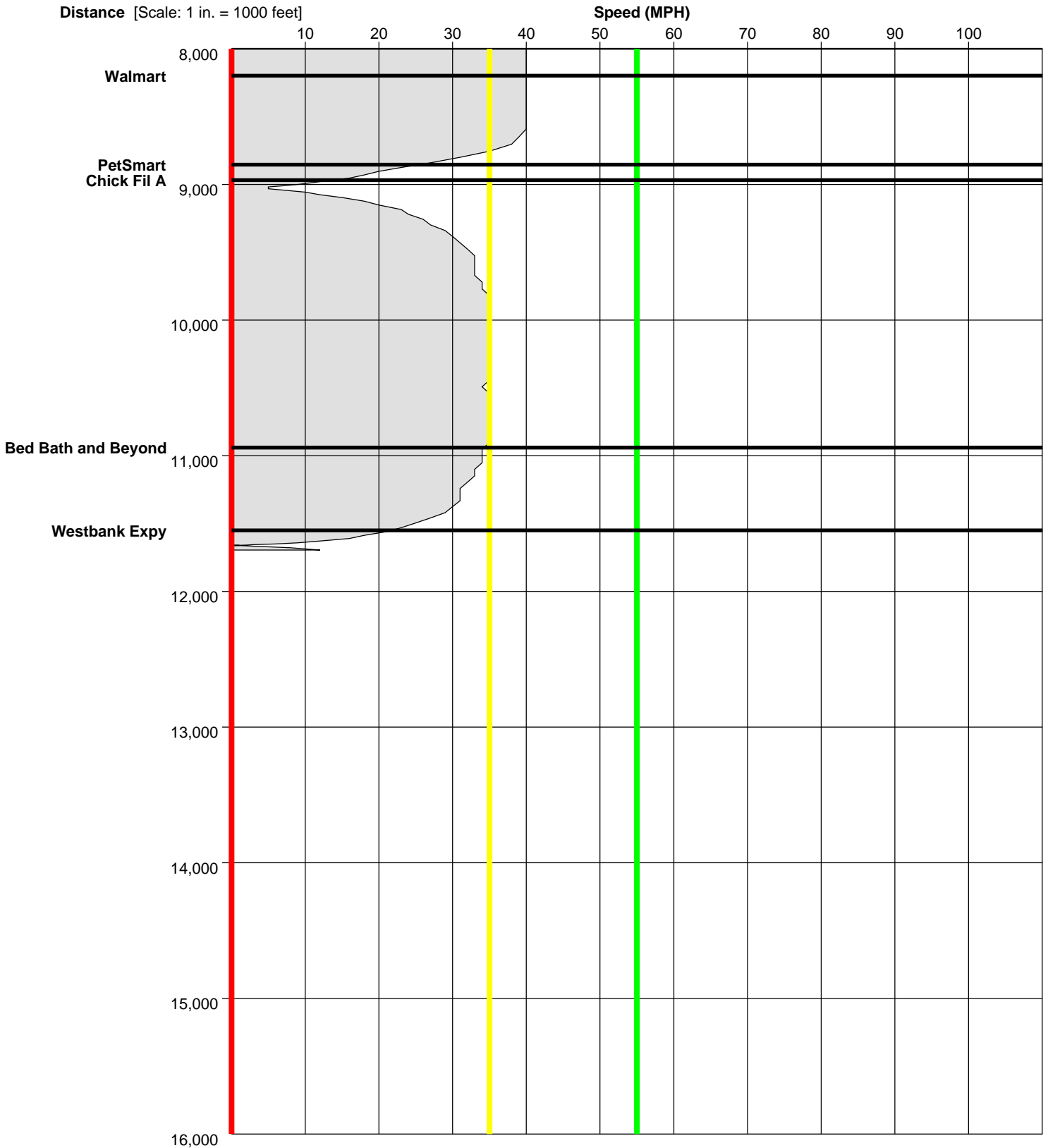
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd AM 2-NB-003t** Start Time: **06:29** (This is an After Run)



ITS Regional

Manhattan Blvd Study

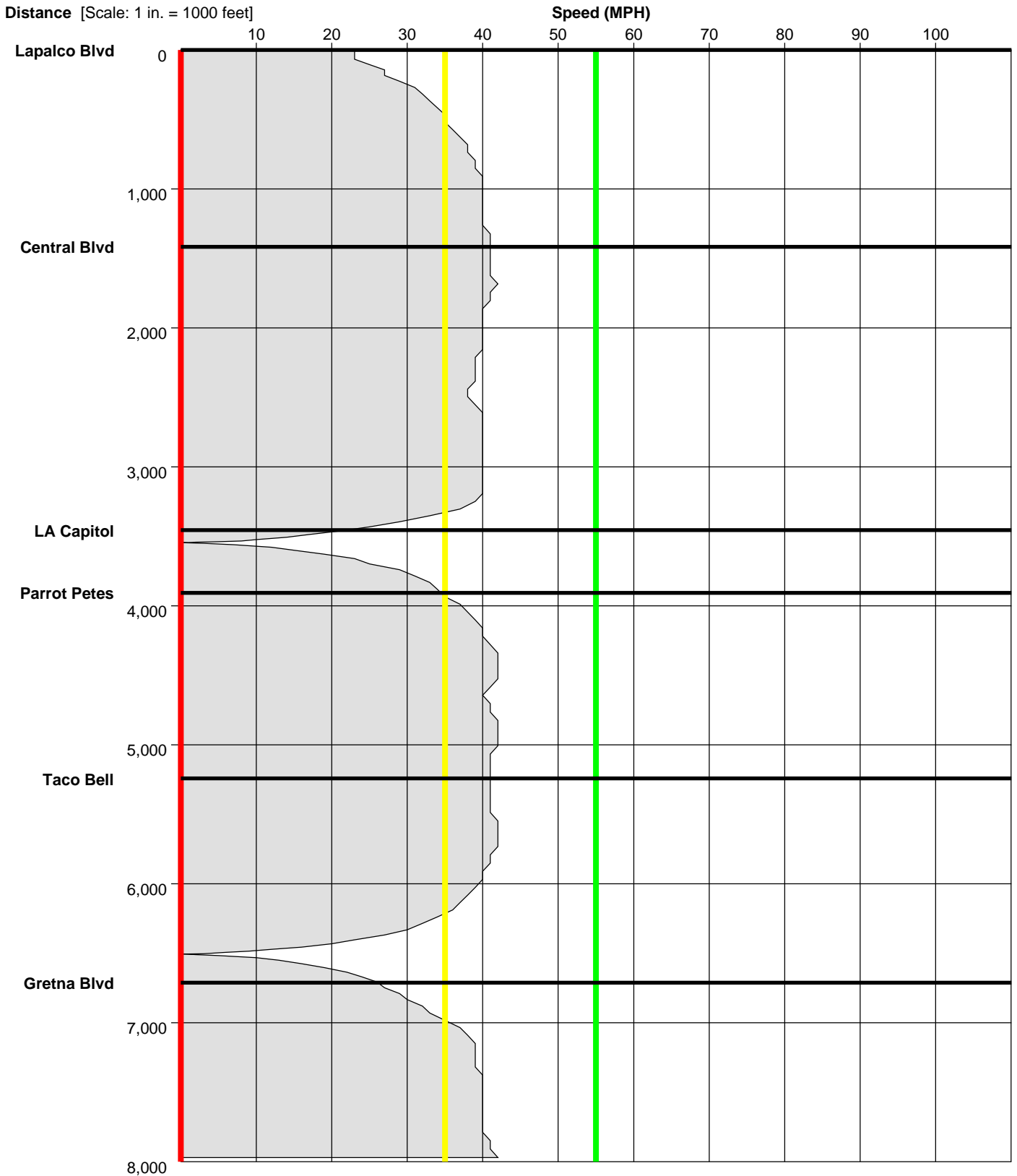
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd AM 2-NB-004t** Start Time: **06:43** (This is an After Run)



ITS Regional

Manhattan Blvd Study

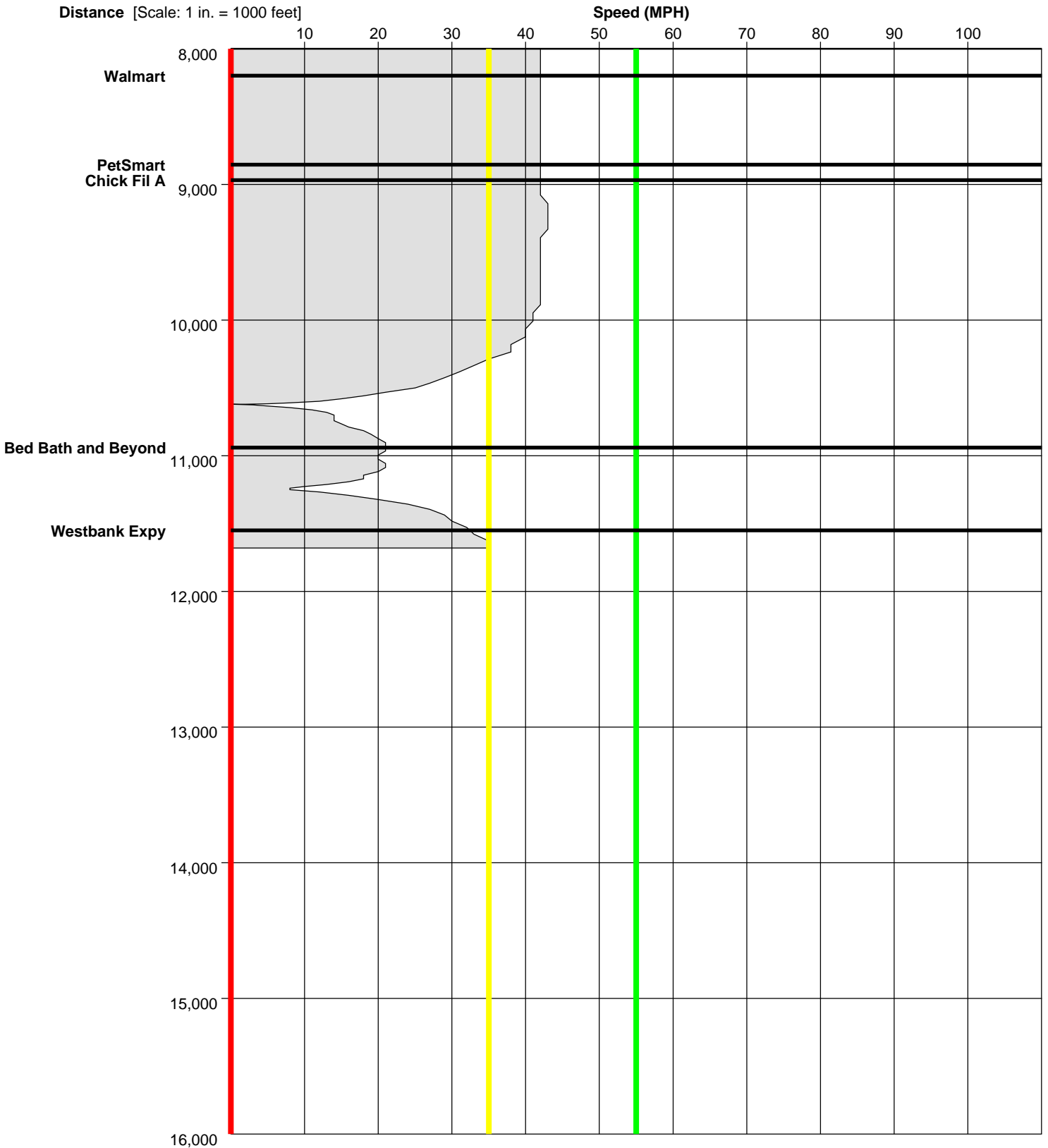
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd AM 2-NB-004t** Start Time: **06:43** (This is an After Run)



ITS Regional

Manhattan Blvd Study

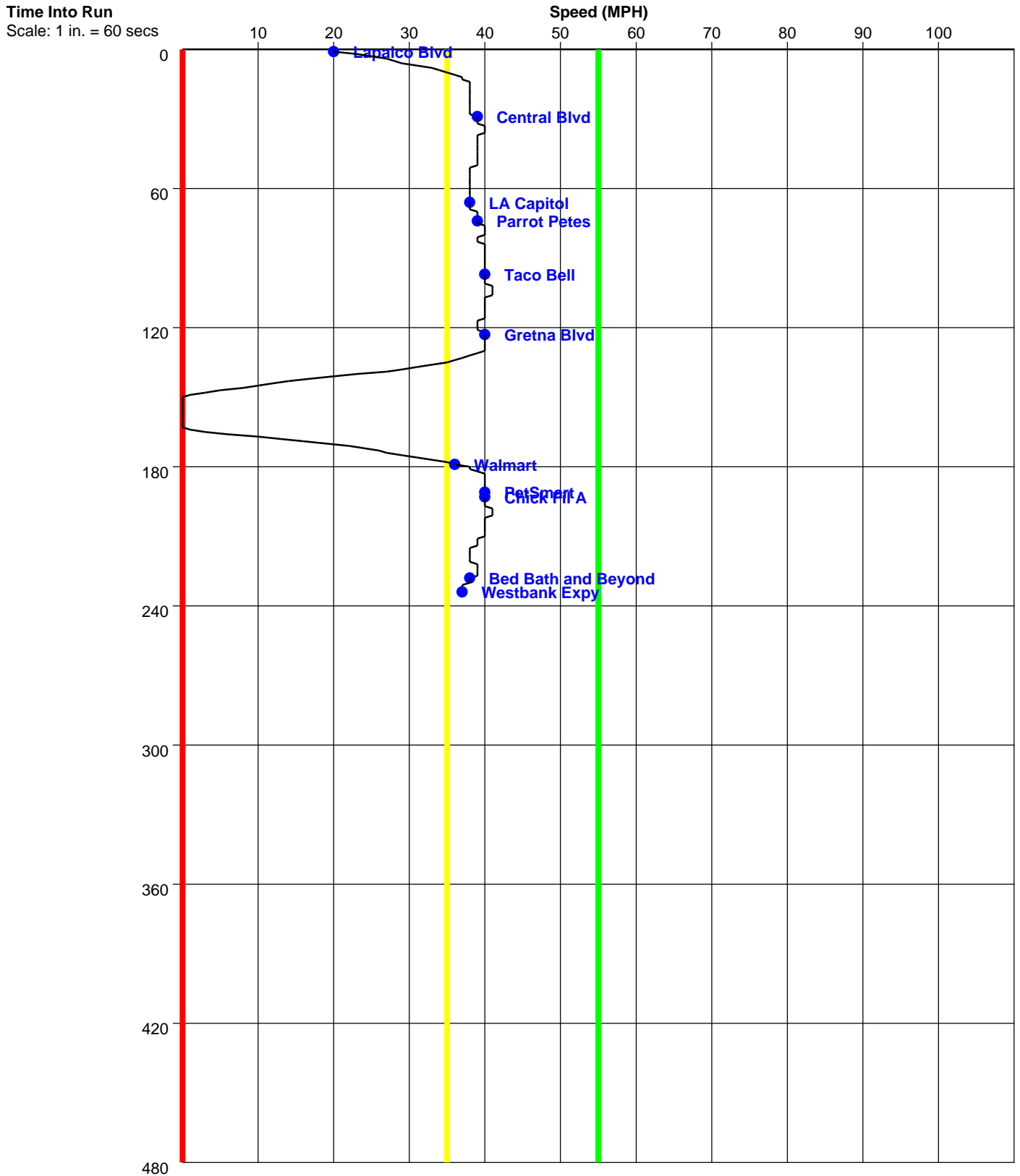
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **24**

Time-Based Speed Profile

Run : **Manhattan Blvd AM 2-NB-001tn** Start Time: **06:16** (This is an After Run)



ITS Regional

Manhattan Blvd Study

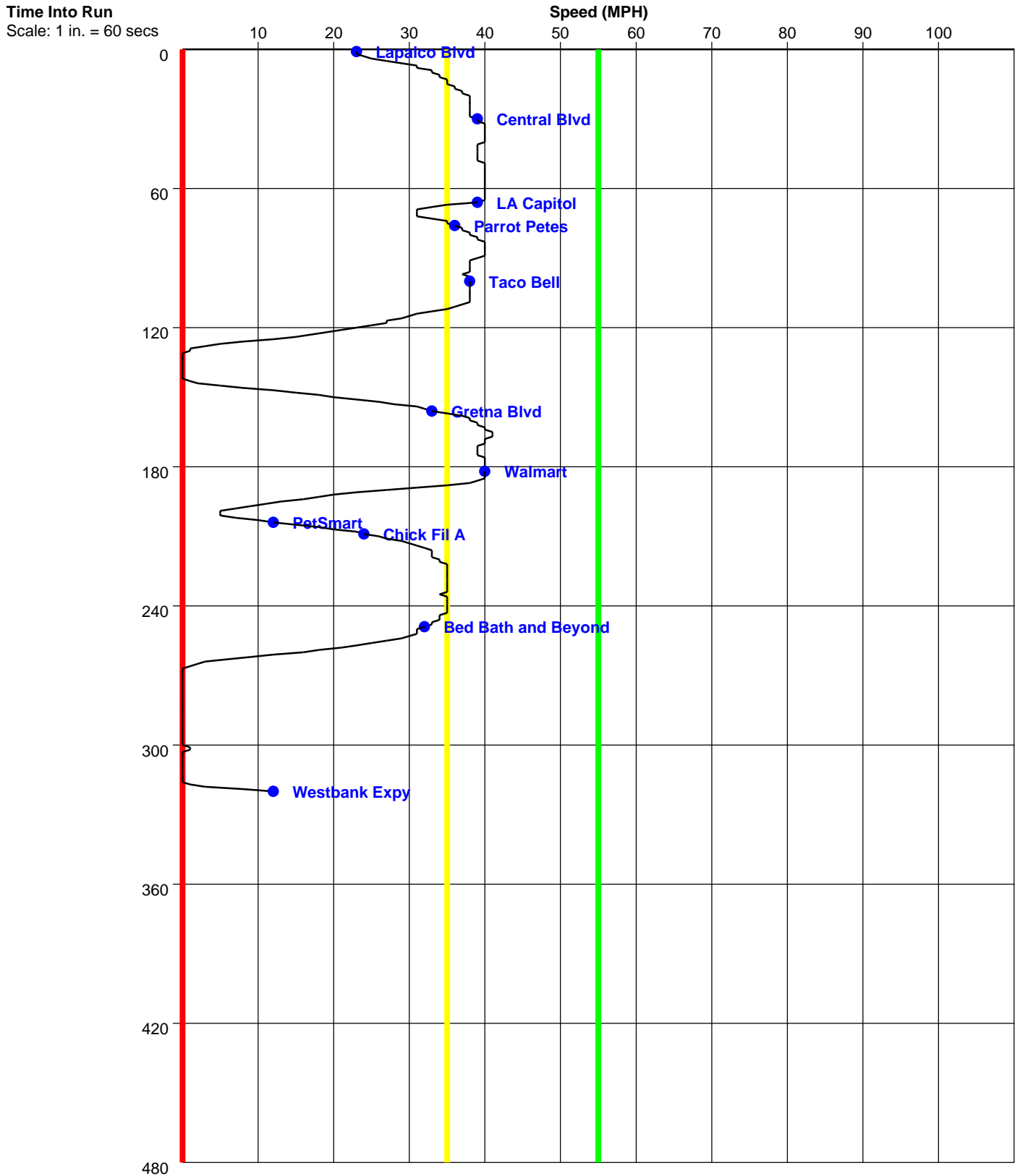
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **25**

Time-Based Speed Profile

Run : **Manhattan Blvd AM 2-NB-003t** Start Time:06:29 (This is an After Run)



ITS Regional

Manhattan Blvd Study

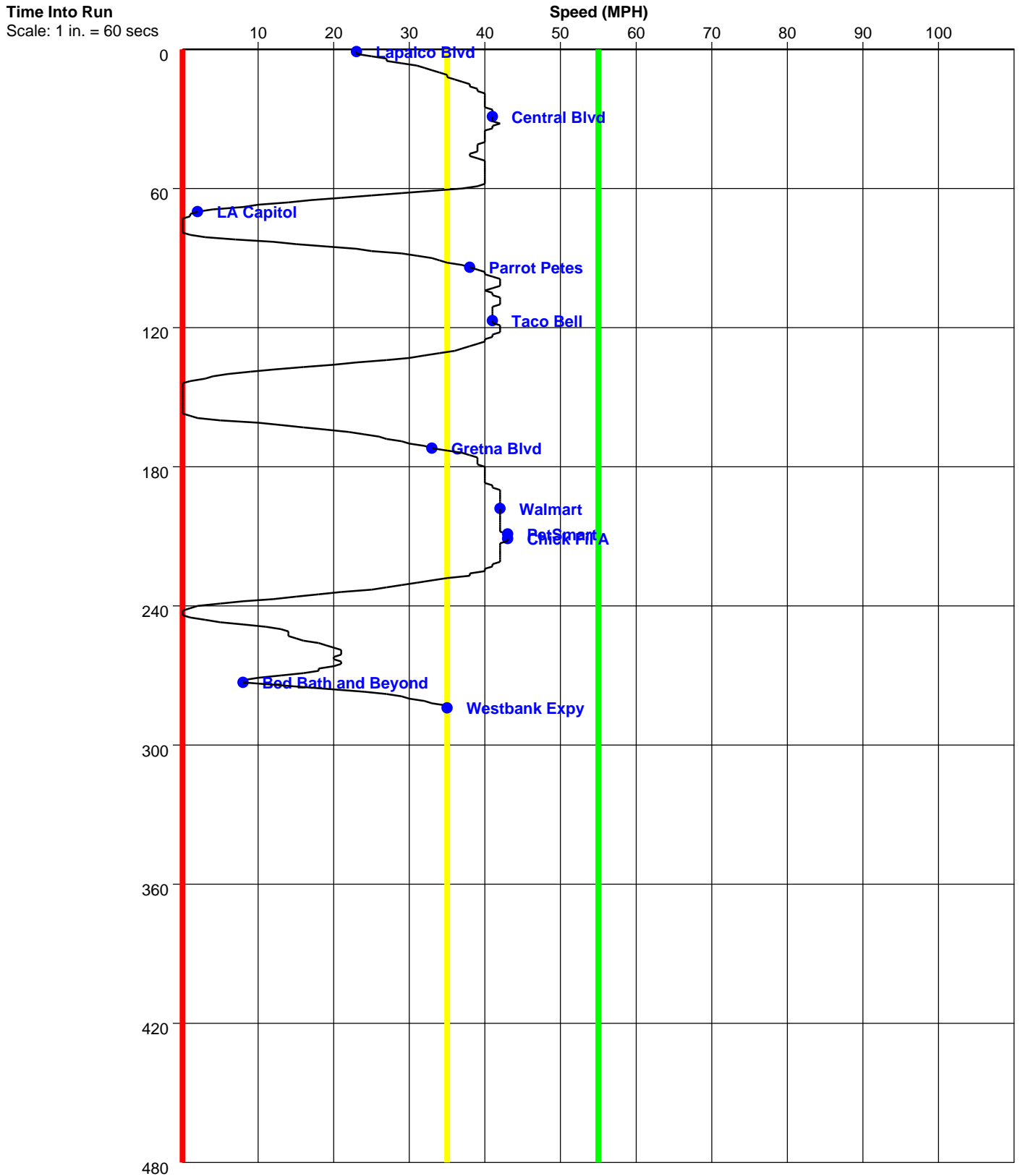
Study Name : **Manhattan Blvd NB AM 2**

Study Date : **4/25/2018**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd AM 2-NB-004t** Start Time:06:43 (This is an After Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd SB AM 2

<u>Report Name</u>	<u>Page</u>
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Fuel Consumption & Emissions	4
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Detailed Statistics By Run - Stops	6
Detailed Statistics By Run - Average Speed	7
Detailed Statistics By Run - Total Delay	8
Detailed Statistics By Run - Time <= 0 MPH	9
Detailed Statistics By Run - Time <= 35 MPH	10
Detailed Statistics By Run - Time <= 55 MPH	11
Detailed Statistics By Run - Fuel Consumption	12
Detailed Statistics By Run - Hydrocarbons	13
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Speed Profile (Distance vs Spd) for Manhattan Blvd AM 2-SB-001tn	18
Speed Profile (Distance vs Spd) for Manhattan Blvd AM 2-SB-002t	20
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Speed Profile (Time vs Spd) for Manhattan Blvd AM 2-SB-001tn	26
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Speed Profile (Time vs Spd) for Manhattan Blvd AM 2-SB-003t	28
Speed Profile (Time vs Spd) for Manhattan Blvd AM 2-SB-004t	29

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd AM 2-SB-001tn	04/25/18	06:11	11741	After	Primary
Manhattan Blvd AM 2-SB-002t	04/25/18	06:22	11642	After	Secondary
Manhattan Blvd AM 2-SB-003t	04/25/18	06:37	11654	After	Secondary
Manhattan Blvd AM 2-SB-004t	04/25/18	06:50	11624	After	Secondary

Notes:

Node Info

#	Len	Name
1	0	Westbank Expy
2	987	Bed Bath and Beyond
3	1973	Chick Fil A
4	165	PetSmart
5	651	Walmart
6	1465	Gretna Blvd
7	1539	Taco Bell
8	1250	Parrot Petes
9	450	La Capitol
10	2016	Central Blvd
11	1245	Lapalco Blvd

Length of Study Route = 11,741 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Westbank Expy							
2	987	Bed Bath and Beyond	26.8	0.3	25.2	9.5	1.3	21.0	26.8
3	1973	Chick Fil A	50.3	0.5	26.8	16.3	6.5	27.8	50.3
4	165	PetSmart	3.5	0.0	32.1	0.5	0.0	1.8	3.5
5	651	Walmart	12.3	0.0	36.2	0.8	0.0	1.5	12.3
6	1465	Gretna Blvd	33.3	0.3	30.0	8.3	5.3	9.8	33.3
7	1539	Taco Bell	33.5	0.3	31.3	6.8	4.0	9.5	33.5
8	1250	Parrot Petes	21.3	0.0	40.1	0.3	0.0	0.3	21.3
9	450	La Capitol	7.8	0.0	39.6	0.0	0.0	0.0	7.8
10	2016	Central Blvd	34.8	0.0	39.6	0.8	0.0	0.0	34.8
11	1245	Lapalco Blvd	25.5	0.3	33.3	5.0	0.5	7.8	24.8
Total	11,741		248.8	1.5	32.2	48.0	17.5	79.3	248.0

Stats based on 4 AFTER runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	0.0111	1.2591	11.4803	0.8827
3	1973	Chick Fil A	0.0183	1.5503	14.4017	0.7672
4	165	PetSmart	0.0016	0.1687	1.7204	0.1152
5	651	Walmart	0.0052	0.4346	4.9247	0.2264
6	1465	Gretna Blvd	0.0132	1.0229	10.2622	0.4763
7	1539	Taco Bell	0.0142	1.1362	11.6647	0.5861
8	1250	Parrot Petes	0.0096	0.6429	7.6234	0.2633
9	450	La Capitol	0.0034	0.1801	2.0386	0.0416
10	2016	Central Blvd	0.0144	0.7294	7.8820	0.1140
11	1245	Lapalco Blvd	0.0091	0.5197	4.5791	0.1176
Total	11,741		0.1002	7.6438	76.5771	3.5905

Stats based on 4 AFTER runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	22	43	21	21
3	1973	Chick Fil A	37	70	58	36
4	165	PetSmart	3	4	4	3
5	651	Walmart	12	12	13	12
6	1465	Gretna Blvd	26	24	57	26
7	1539	Taco Bell	27	53	27	27
8	1250	Parrot Petes	22	22	20	21
9	450	La Capitol	8	7	8	8
10	2016	Central Blvd	37	35	33	34
11	1245	Lapalco Blvd	40	20	21	21
Totals	11741		234	290	262	209

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd AM 2-SB-001tn
 Manhattan Blvd AM 2-SB-002t
 Manhattan Blvd AM 2-SB-003t
 Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	0	1	0	0
3	1973	Chick Fil A	0	1	1	0
4	165	PetSmart	0	0	0	0
5	651	Walmart	0	0	0	0
6	1465	Gretna Blvd	0	0	1	0
7	1539	Taco Bell	0	1	0	0
8	1250	Parrot Petes	0	0	0	0
9	450	La Capitol	0	0	0	0
10	2016	Central Blvd	0	0	0	0
11	1245	Lapalco Blvd	1	0	0	0
Totals	11741		1	3	2	0

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	30.6	16.2	33.0	33.6
3	1973	Chick Fil A	36.5	18.9	23.1	37.4
4	165	PetSmart	38.0	34.3	27.3	38.0
5	651	Walmart	37.2	37.5	34.6	35.8
6	1465	Gretna Blvd	38.6	40.6	17.8	38.0
7	1539	Taco Bell	38.9	20.1	39.4	39.5
8	1250	Parrot Petes	38.8	39.9	41.2	40.3
9	450	La Capitol	38.3	41.0	41.4	40.3
10	2016	Central Blvd	37.2	39.9	41.0	39.6
11	1245	Lapalco Blvd	21.2	39.4	39.5	38.5
Totals	11741		34.3	27.5	30.5	38.1

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd AM 2-SB-001tn
Manhattan Blvd AM 2-SB-002t
Manhattan Blvd AM 2-SB-003t
Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	5	26	4	3
3	1973	Chick Fil A	3	36	24	2
4	165	PetSmart	0	1	1	0
5	651	Walmart	1	0	2	0
6	1465	Gretna Blvd	1	0	31	1
7	1539	Taco Bell	1	26	0	0
8	1250	Parrot Petes	1	0	0	0
9	450	La Capitol	0	0	0	0
10	2016	Central Blvd	3	0	0	0
11	1245	Lapalco Blvd	19	0	0	1
Totals	11741		34	89	62	7

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	0	5	0	0
3	1973	Chick Fil A	0	17	9	0
4	165	PetSmart	0	0	0	0
5	651	Walmart	0	0	0	0
6	1465	Gretna Blvd	0	0	21	0
7	1539	Taco Bell	0	16	0	0
8	1250	Parrot Petes	0	0	0	0
9	450	La Capitol	0	0	0	0
10	2016	Central Blvd	0	0	0	0
11	1245	Lapalco Blvd	2	0	0	0
Totals	11741		2	38	30	0

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	21	43	12	8
3	1973	Chick Fil A	6	68	37	0
4	165	PetSmart	0	3	4	0
5	651	Walmart	0	0	5	1
6	1465	Gretna Blvd	0	0	39	0
7	1539	Taco Bell	0	35	3	0
8	1250	Parrot Petes	0	1	0	0
9	450	La Capitol	0	0	0	0
10	2016	Central Blvd	0	0	0	0
11	1245	Lapalco Blvd	31	0	0	0
Totals	11741		58	150	100	9

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	22	43	21	21
3	1973	Chick Fil A	37	70	58	36
4	165	PetSmart	3	4	4	3
5	651	Walmart	12	12	13	12
6	1465	Gretna Blvd	26	24	57	26
7	1539	Taco Bell	27	53	27	27
8	1250	Parrot Petes	22	22	20	21
9	450	La Capitol	8	7	8	8
10	2016	Central Blvd	37	35	33	34
11	1245	Lapalco Blvd	40	19	20	20
Totals	11741		234	289	261	208

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	0.0102	0.0143	0.0095	0.0104
3	1973	Chick Fil A	0.0149	0.0237	0.0200	0.0148
4	165	PetSmart	0.0011	0.0021	0.0020	0.0012
5	651	Walmart	0.0047	0.0052	0.0065	0.0047
6	1465	Gretna Blvd	0.0109	0.0108	0.0204	0.0109
7	1539	Taco Bell	0.0114	0.0205	0.0137	0.0112
8	1250	Parrot Petes	0.0091	0.0111	0.0089	0.0094
9	450	La Capitol	0.0031	0.0032	0.0036	0.0035
10	2016	Central Blvd	0.0142	0.0149	0.0144	0.0142
11	1245	Lapalco Blvd	0.0124	0.0077	0.0081	0.0081
Totals	11741		0.0920	0.1135	0.1070	0.0884

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	1.1930	1.6794	1.0039	1.1601
3	1973	Chick Fil A	1.0306	2.5062	1.6839	0.9806
4	165	PetSmart	0.0540	0.2815	0.2852	0.0540
5	651	Walmart	0.2635	0.4037	0.7663	0.3051
6	1465	Gretna Blvd	0.6665	0.6392	2.0754	0.7104
7	1539	Taco Bell	0.6894	1.9880	1.2801	0.5871
8	1250	Parrot Petes	0.4971	1.0182	0.4686	0.5876
9	450	La Capitol	0.1440	0.1797	0.1989	0.1977
10	2016	Central Blvd	0.7135	0.7847	0.7039	0.7156
11	1245	Lapalco Blvd	0.9669	0.3420	0.3600	0.4099
Totals	11741		6.2185	9.8224	8.8262	5.7081

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	11.3017	11.7168	10.5499	12.3526
3	1973	Chick Fil A	11.5891	21.4453	13.4191	11.1531
4	165	PetSmart	0.5460	3.2935	2.4963	0.5460
5	651	Walmart	2.8411	4.7508	8.7635	3.3435
6	1465	Gretna Blvd	7.5889	7.4622	17.8489	8.1486
7	1539	Taco Bell	7.9049	16.5642	15.7975	6.3923
8	1250	Parrot Petes	5.4823	12.7002	5.3269	6.9843
9	450	La Capitol	1.4560	2.0995	2.3174	2.2815
10	2016	Central Blvd	7.3911	8.6723	7.7287	7.7358
11	1245	Lapalco Blvd	6.8561	3.4580	3.6400	4.3623
Totals	11741		62.9573	92.1629	87.8882	63.3000

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd AM 2-SB-001tn

Manhattan Blvd AM 2-SB-002t

Manhattan Blvd AM 2-SB-003t

Manhattan Blvd AM 2-SB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Westbank Expy				
2	987	Bed Bath and Beyond	0.8832	1.1486	0.6690	0.8299
3	1973	Chick Fil A	0.3902	1.4978	0.8286	0.3523
4	165	PetSmart	0.0000	0.2199	0.2410	0.0000
5	651	Walmart	0.0510	0.1930	0.5568	0.1049
6	1465	Gretna Blvd	0.2075	0.2060	1.2430	0.2489
7	1539	Taco Bell	0.2108	1.2253	0.8021	0.1062
8	1250	Parrot Petes	0.1062	0.6234	0.1112	0.2125
9	450	La Capitol	0.0024	0.0576	0.0535	0.0527
10	2016	Central Blvd	0.0580	0.1638	0.1169	0.1175
11	1245	Lapalco Blvd	0.3939	0.0096	0.0096	0.0574
Totals	11741		2.3031	5.3450	4.6317	2.0823

ITS Regional

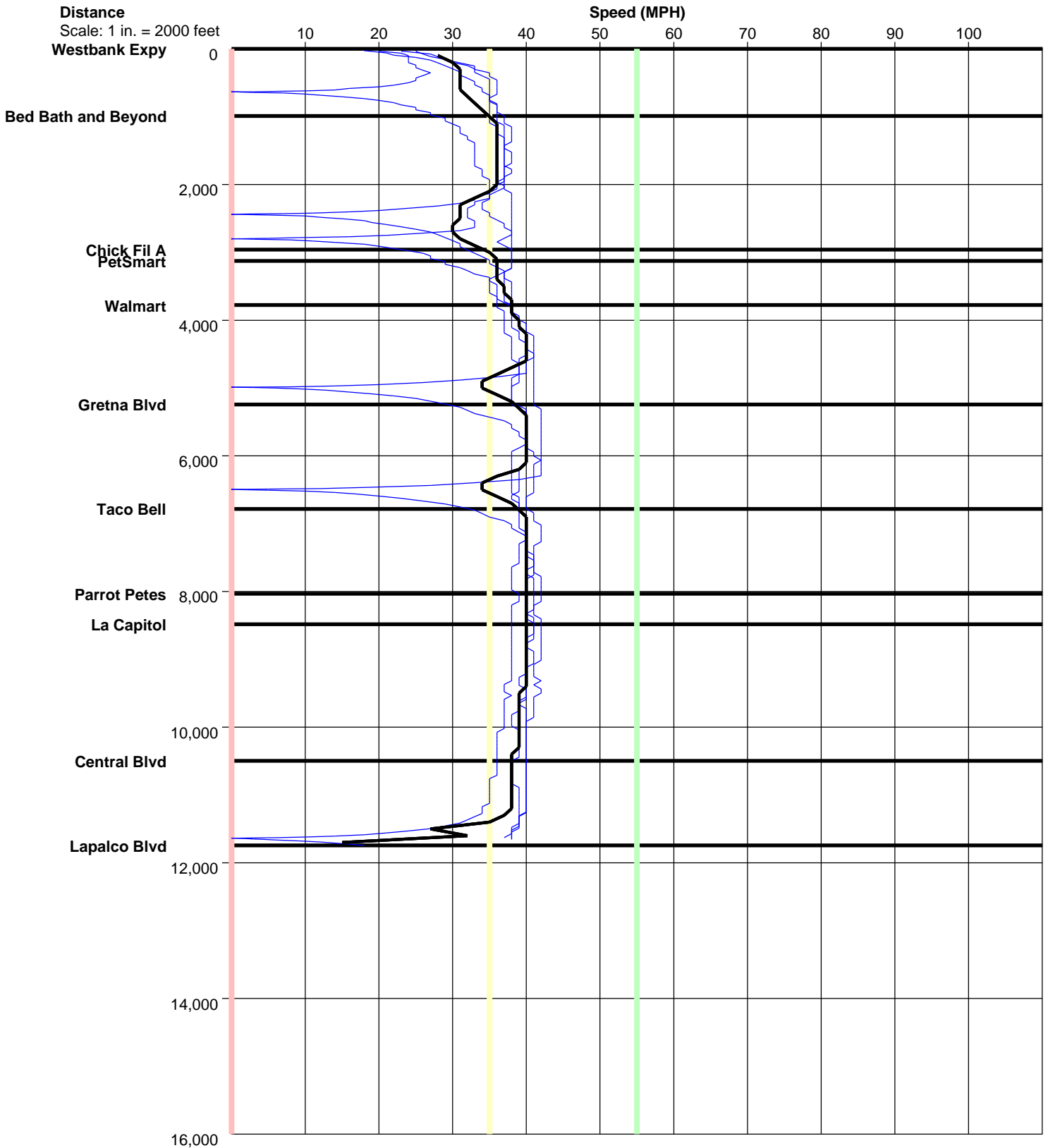
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

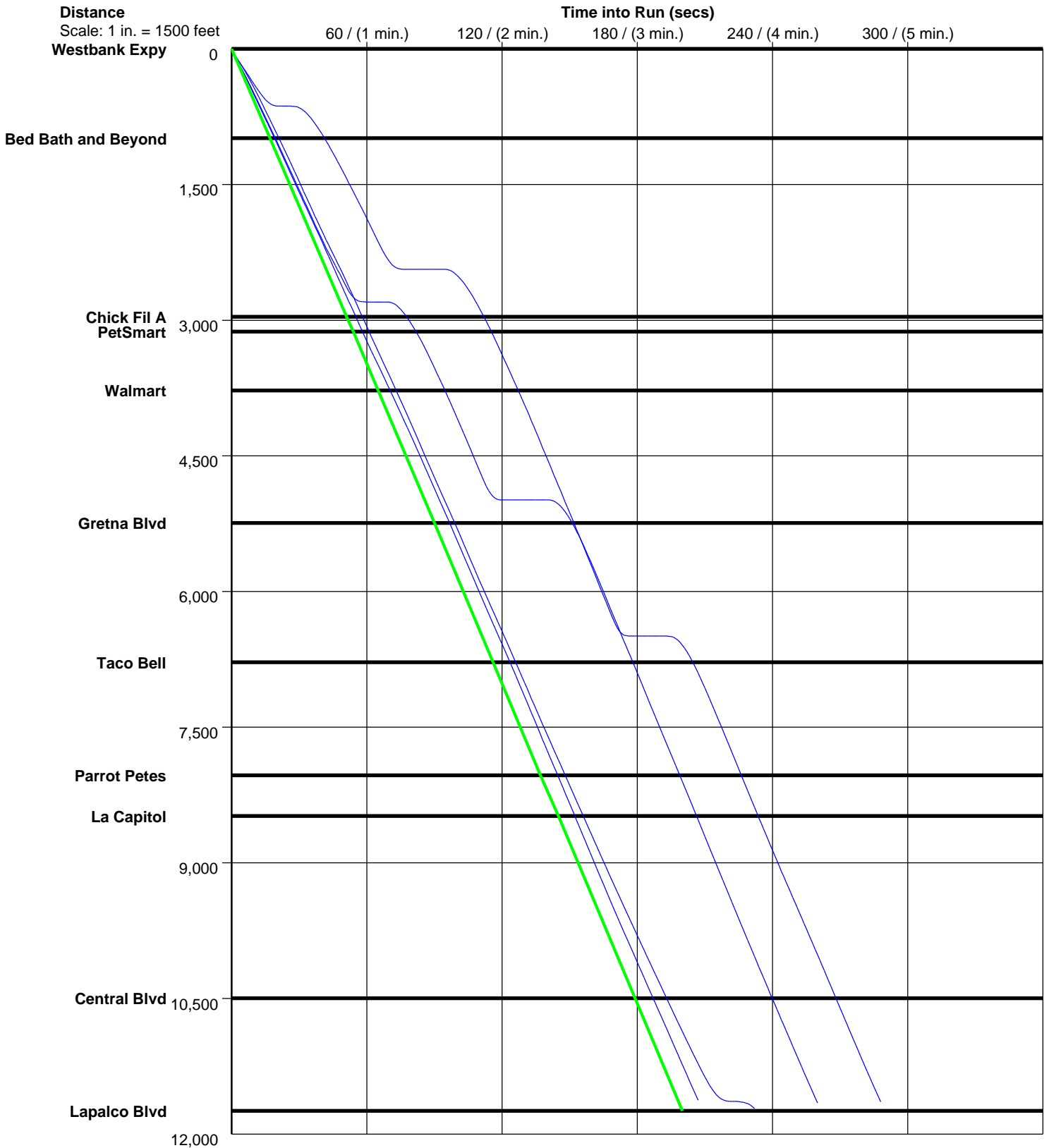
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

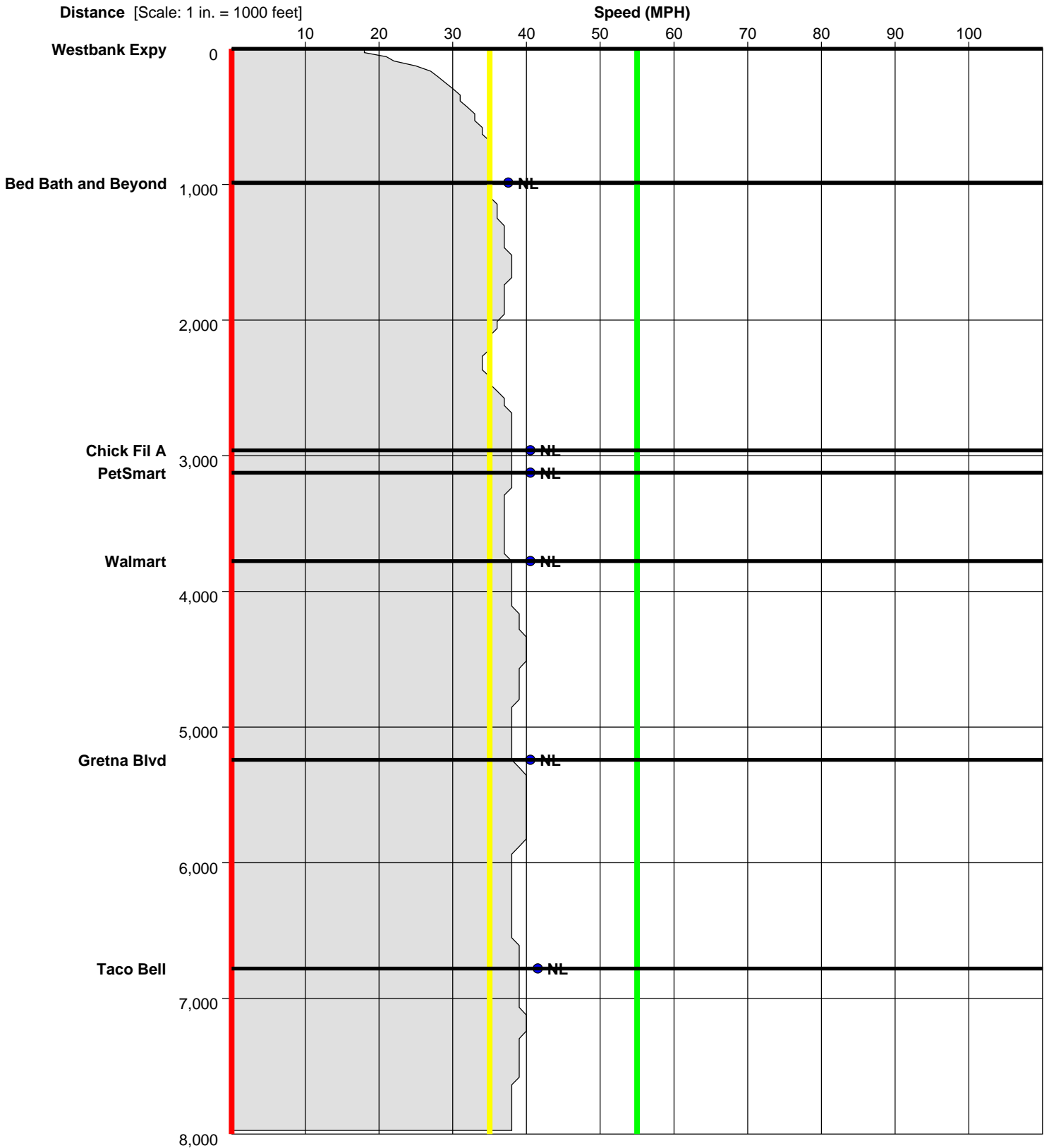
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd AM 2-SB-001tn** Start Time: **06:11** (This is an After Run)



ITS Regional

Manhattan Blvd Study

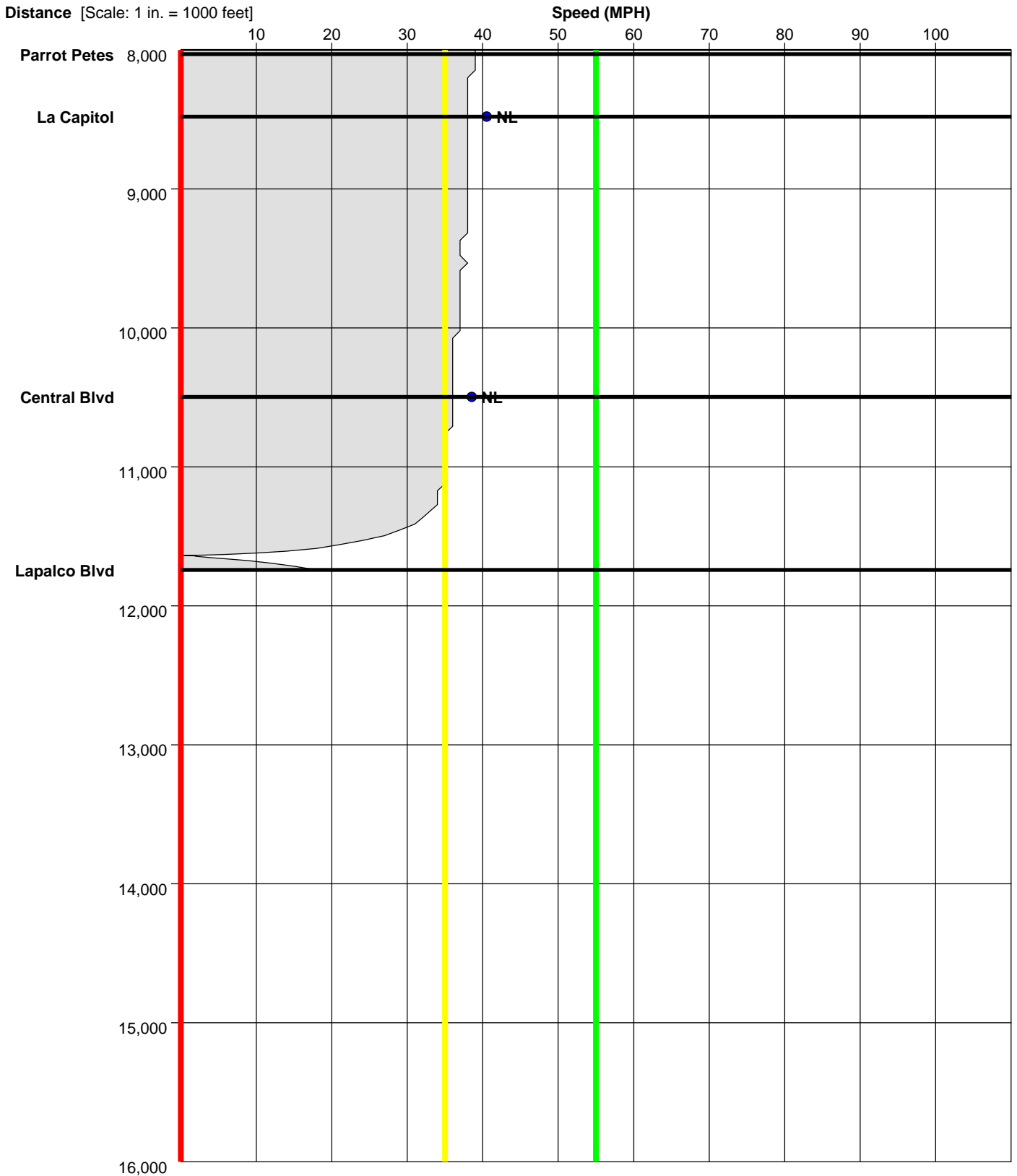
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd AM 2-SB-001tn** Start Time: **06:11** (This is an After Run)



ITS Regional

Manhattan Blvd Study

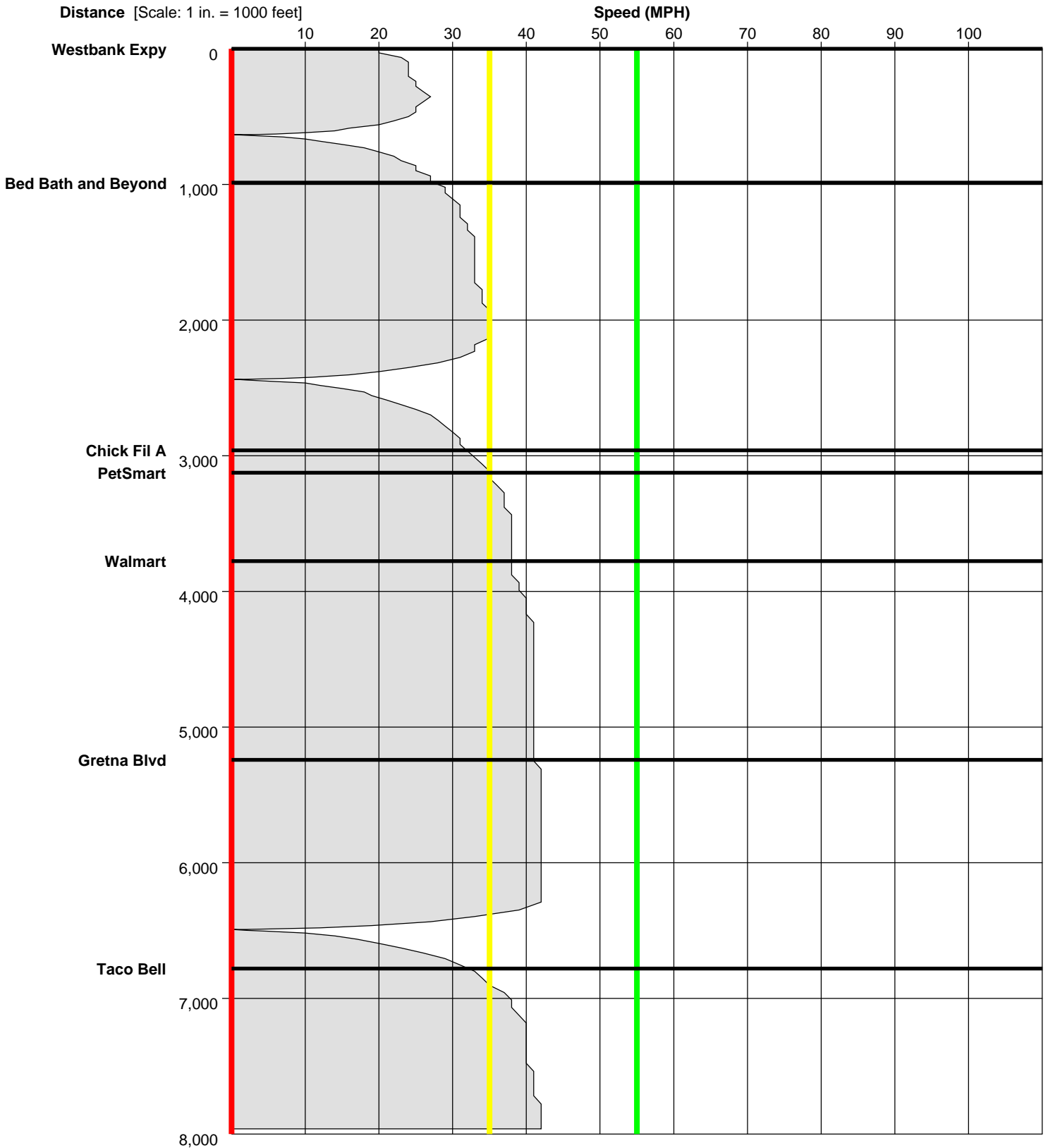
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd AM 2-SB-002t** Start Time: **06:22** (This is an After Run)



ITS Regional

Manhattan Blvd Study

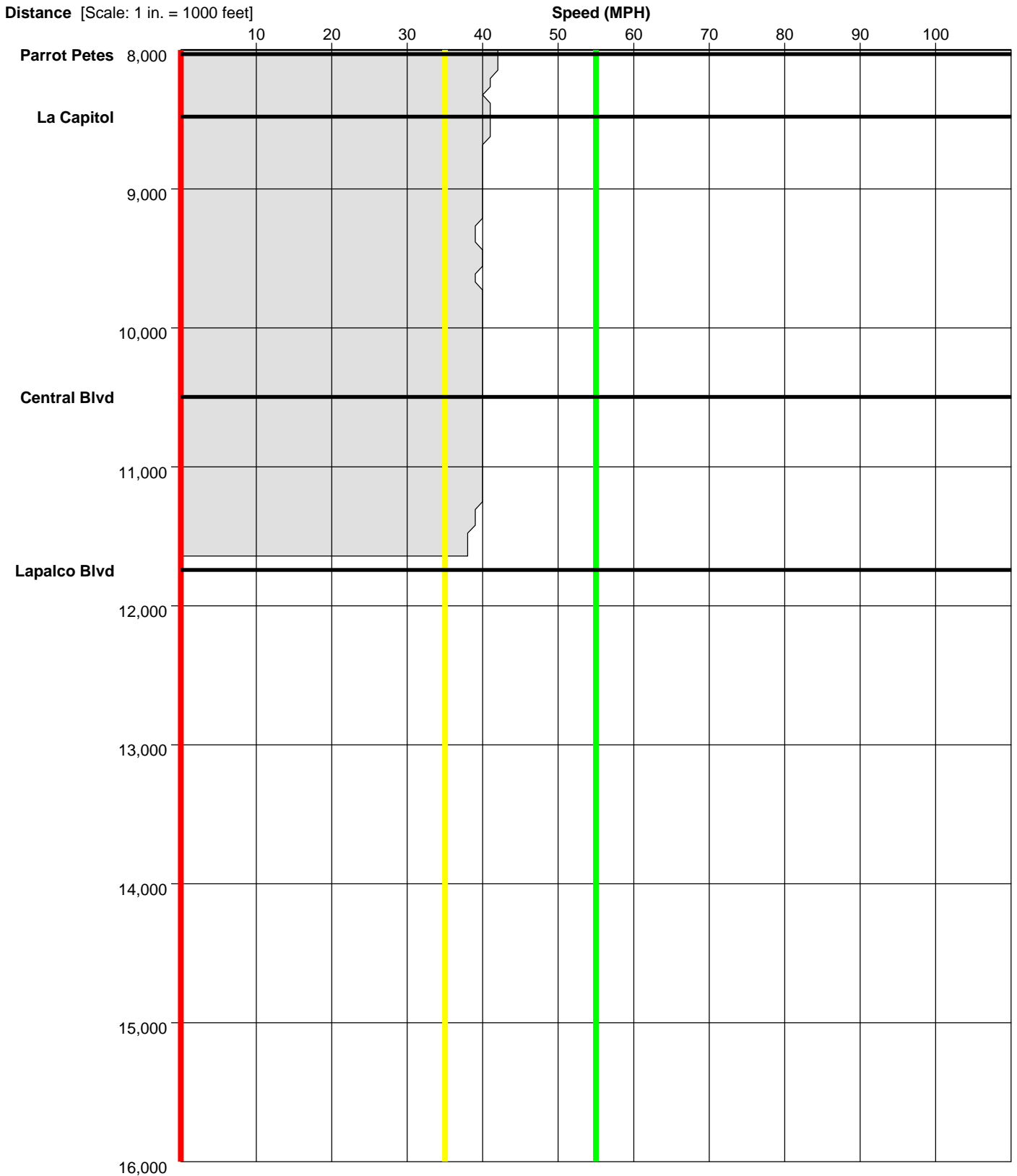
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd AM 2-SB-002t** Start Time: **06:22** (This is an After Run)



ITS Regional

Manhattan Blvd Study

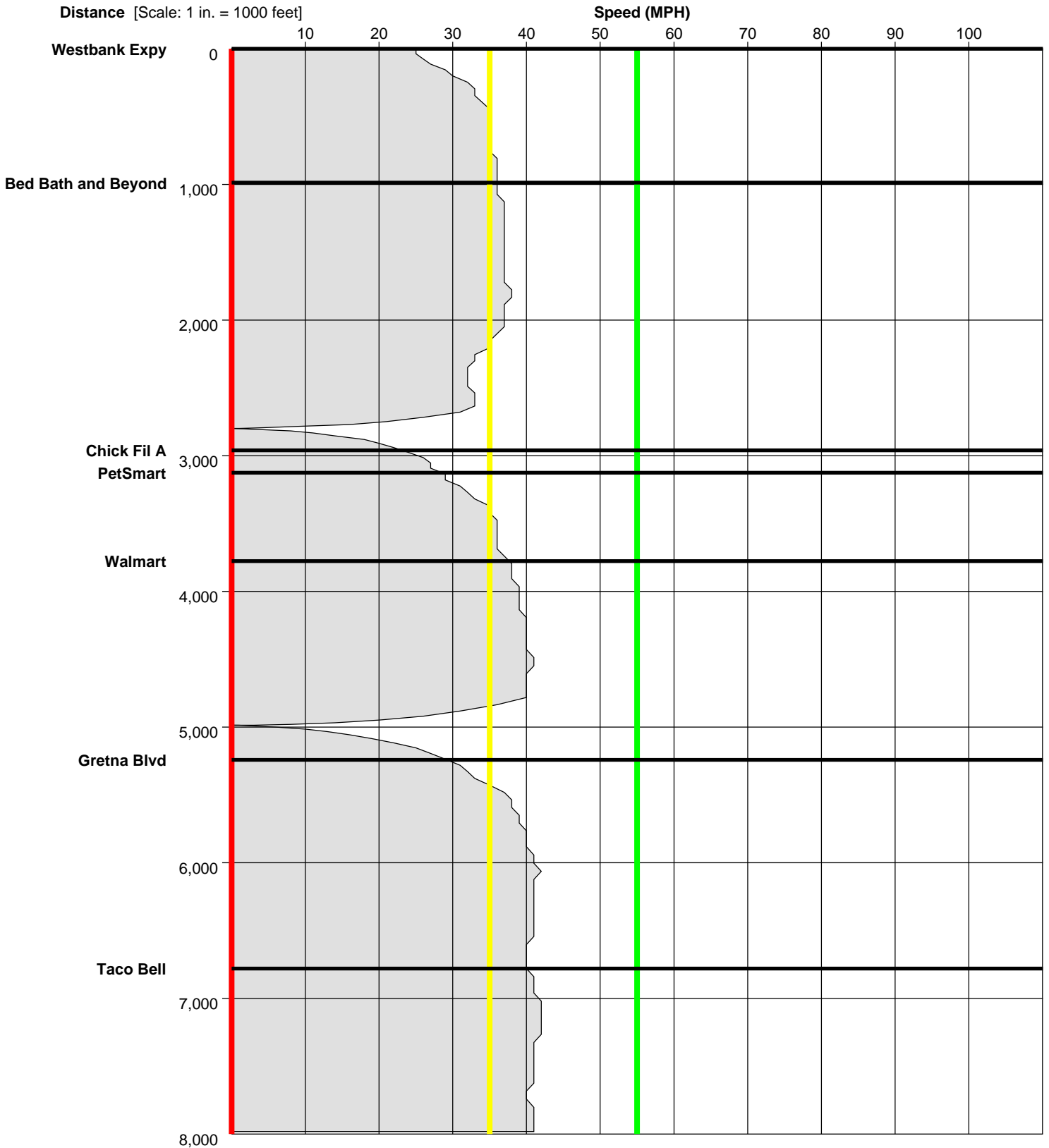
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd AM 2-SB-003t** Start Time: **06:37** (This is an After Run)



ITS Regional

Manhattan Blvd Study

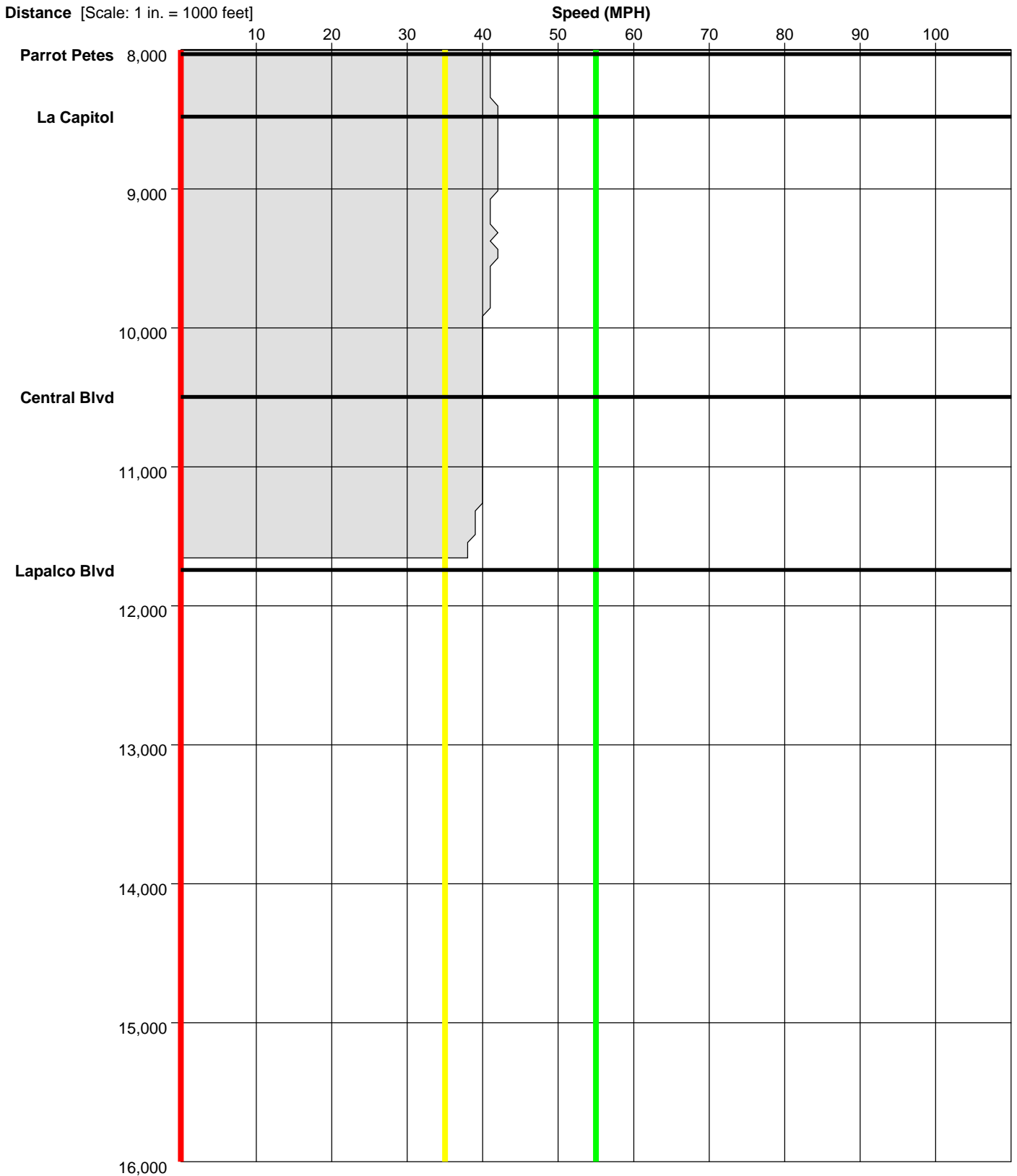
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd AM 2-SB-003t** Start Time: **06:37** (This is an After Run)



ITS Regional

Manhattan Blvd Study

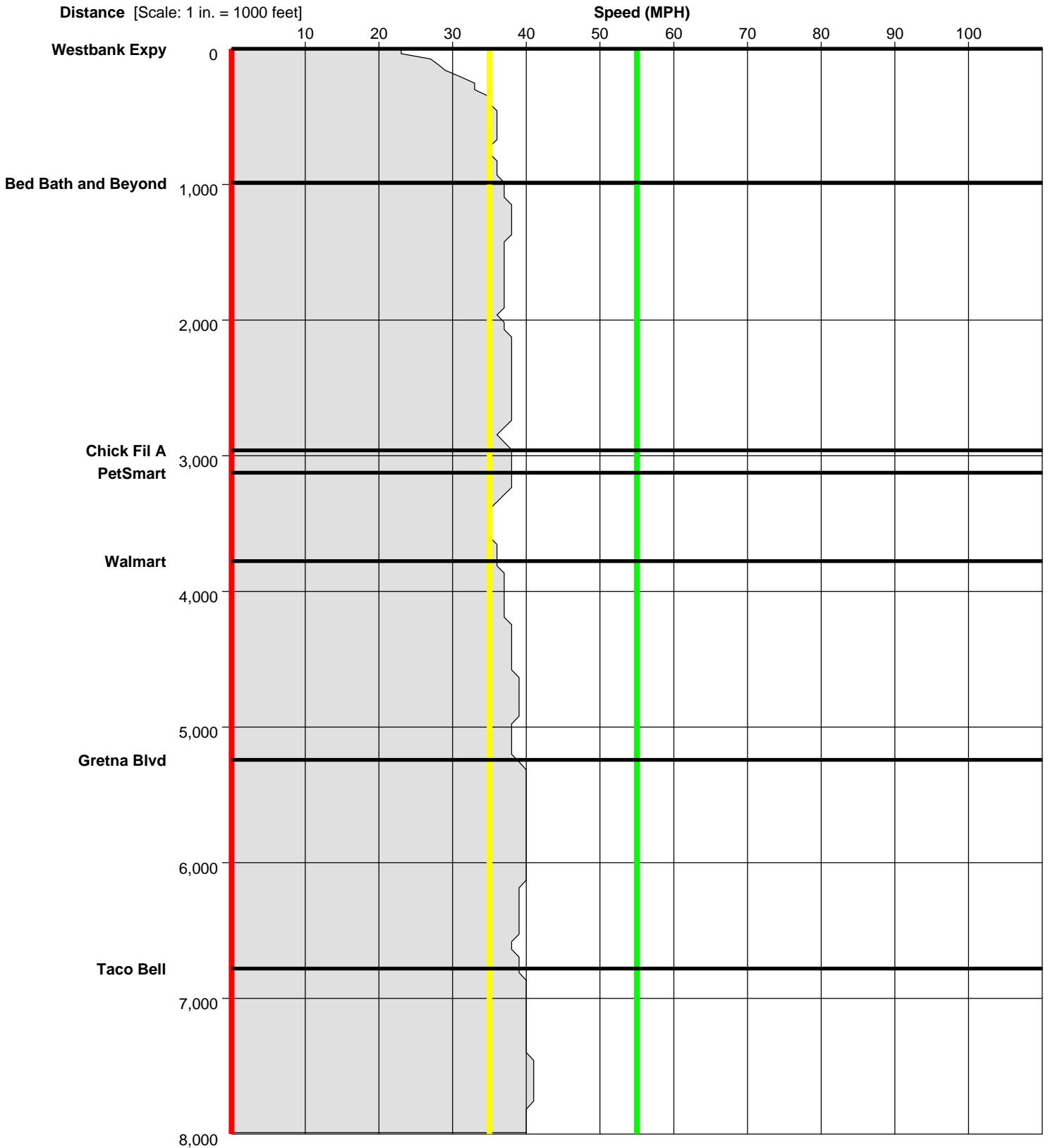
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **24**

Speed Profile

Run : **Manhattan Blvd AM 2-SB-004t** Start Time: **06:50** (This is an After Run)



ITS Regional

Manhattan Blvd Study

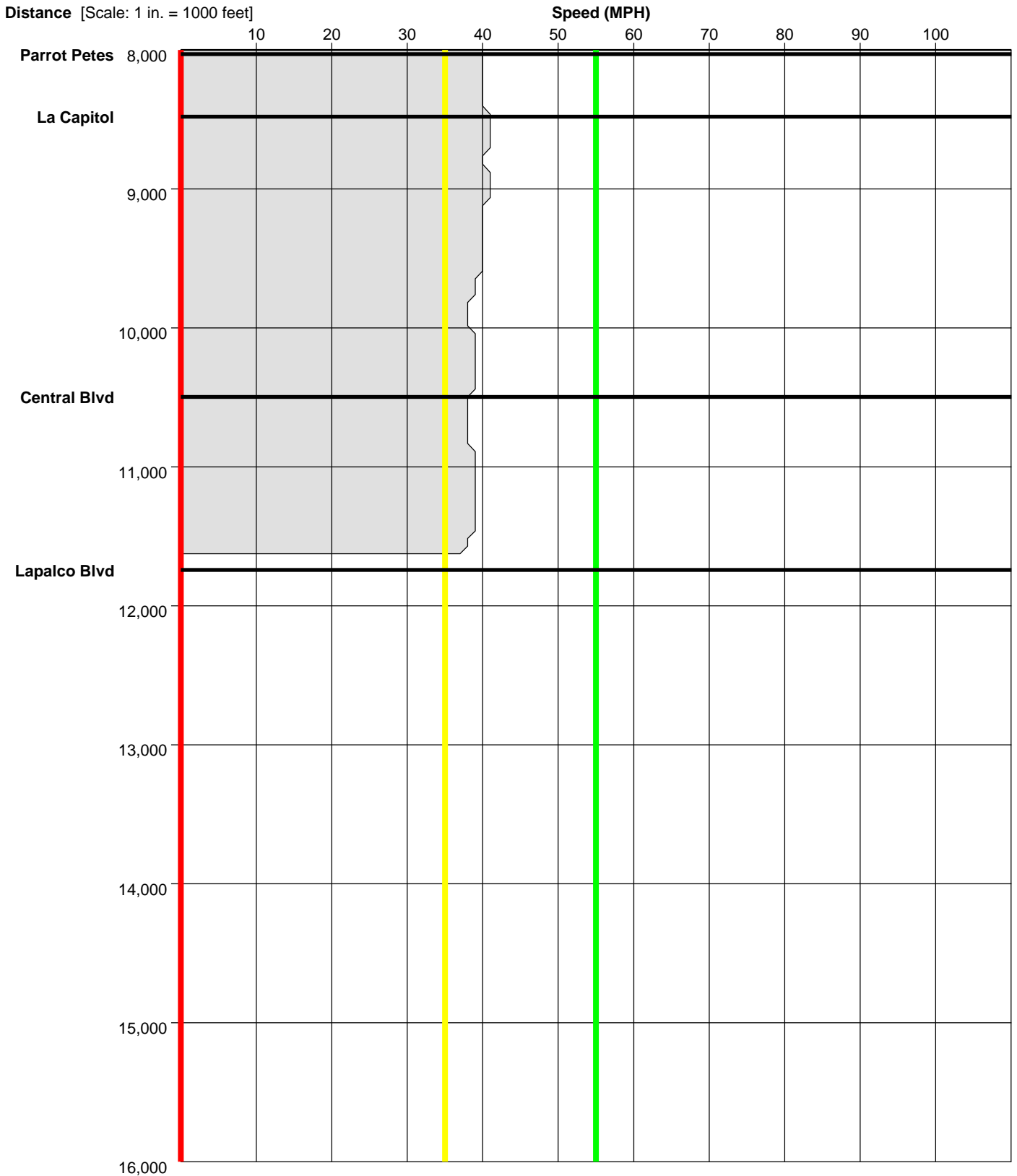
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **25**

Speed Profile

Run : **Manhattan Blvd AM 2-SB-004t** Start Time: **06:50** (This is an After Run)



ITS Regional

Manhattan Blvd Study

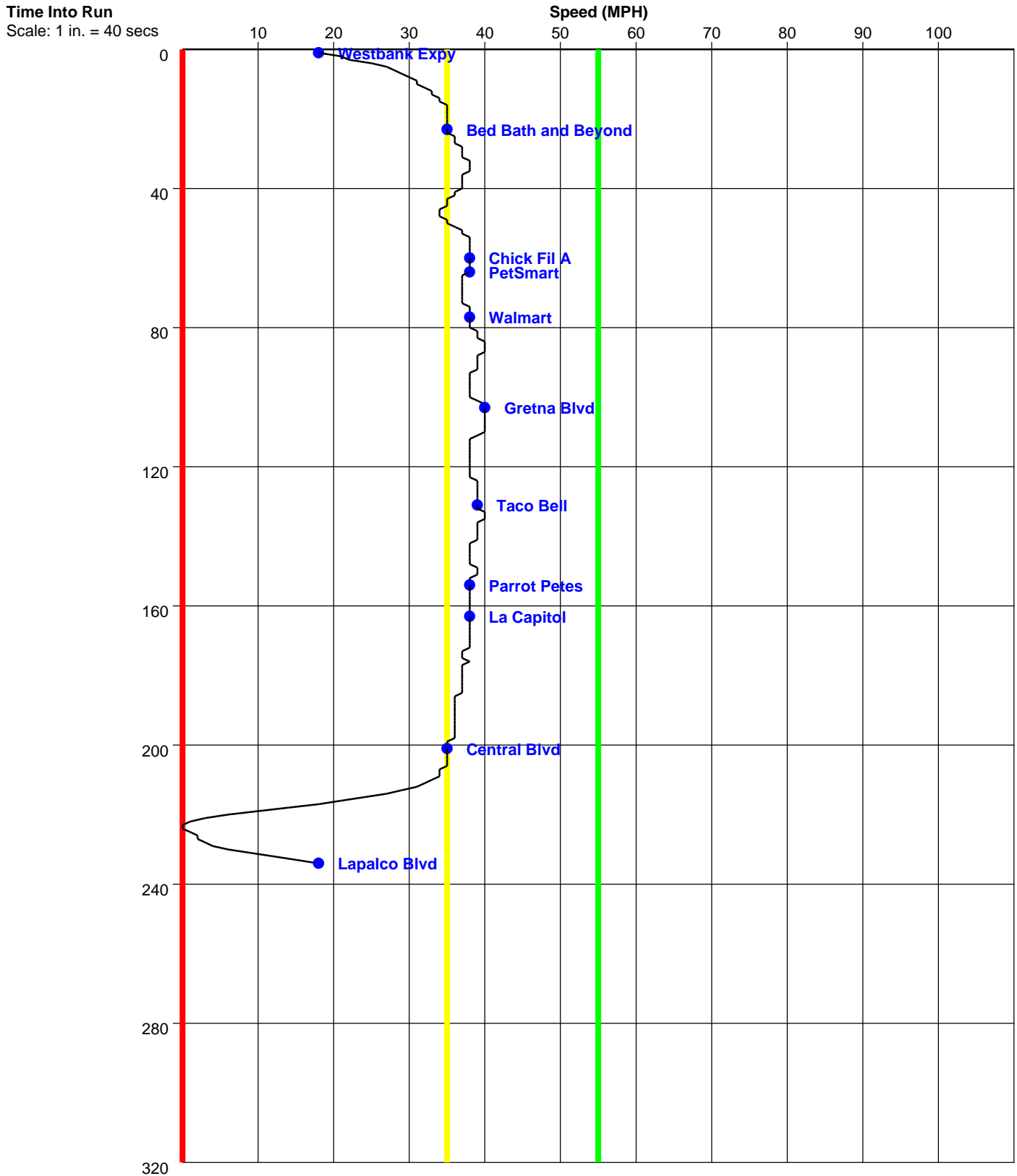
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd AM 2-SB-001tn** Start Time:06:11 (This is an After Run)



ITS Regional

Manhattan Blvd Study

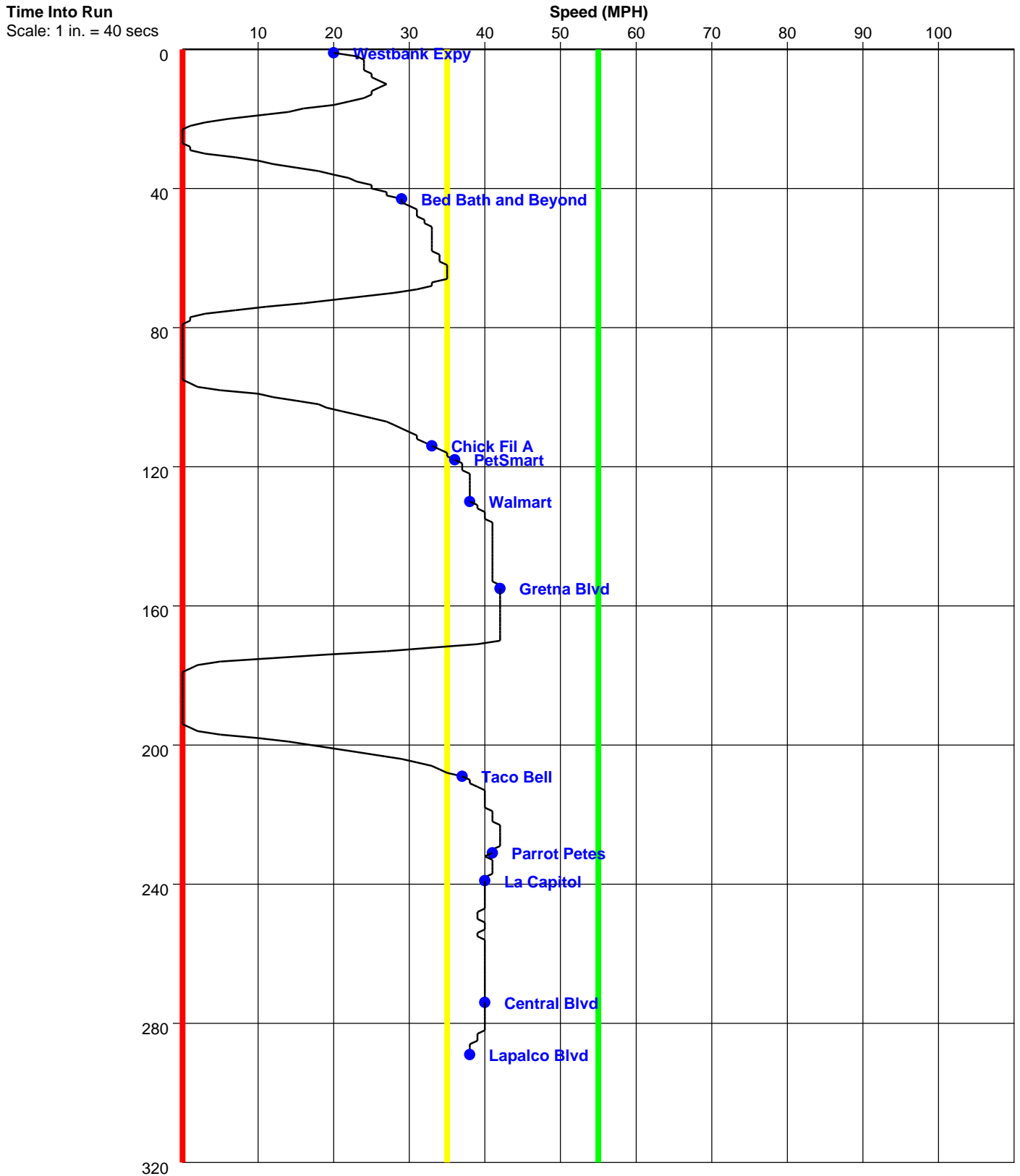
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **27**

Time-Based Speed Profile

Run : **Manhattan Blvd AM 2-SB-002t** Start Time:06:22 (This is an After Run)



ITS Regional

Manhattan Blvd Study

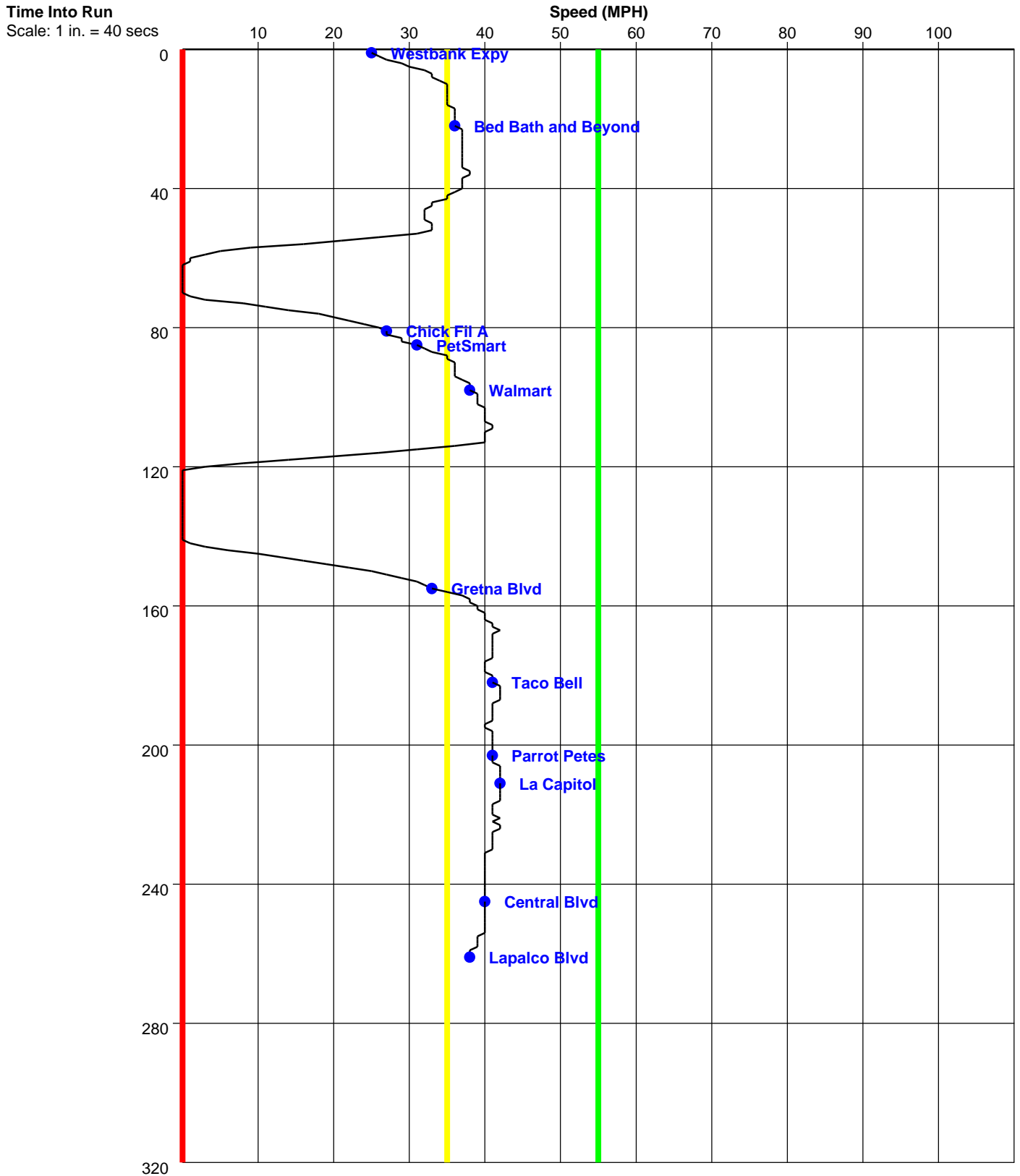
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **28**

Time-Based Speed Profile

Run : **Manhattan Blvd AM 2-SB-003t** Start Time:06:37 (This is an After Run)



ITS Regional

Manhattan Blvd Study

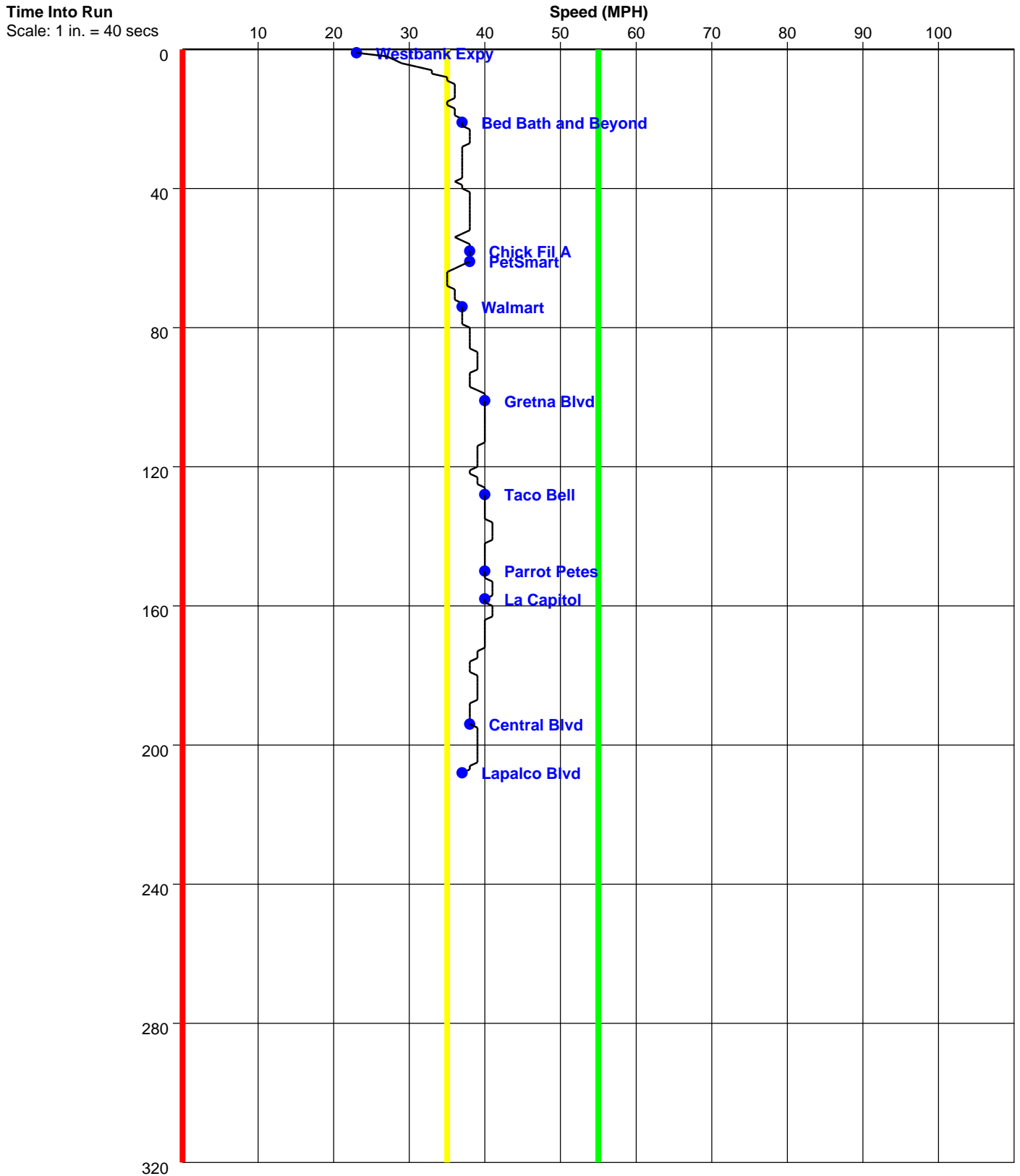
Study Name : **Manhattan Blvd SB AM 2**

Study Date : **4/25/2018**

Page No. : **29**

Time-Based Speed Profile

Run : **Manhattan Blvd AM 2-SB-004t** Start Time:06:50 (This is an After Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd NB Midday 2

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Fuel Consumption & Emissions	4
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Detailed Statistics By Run - Total Delay	8
Detailed Statistics By Run - Time <= 0 MPH	9
Detailed Statistics By Run - Time <= 35 MPH	10
Detailed Statistics By Run - Time <= 55 MPH	11
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Speed Profile (Distance vs Spd) for Manhattan Blvd Md 2-NB-002t	20
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Speed Profile (Time vs Spd) for Manhattan Blvd Md 2-NB-001tn	24
Speed Profile (Time vs Spd) for Manhattan Blvd Md 2-NB-002t	25
Speed Profile (Time vs Spd) for Manhattan Blvd Md 2-NB-003t	26

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd Md 2-NB-001tn	04/25/18	11:24	11670	After	Primary
Manhattan Blvd Md 2-NB-002t	04/25/18	11:40	11649	After	Secondary
Manhattan Blvd Md 2-NB-003t	04/25/18	11:56	11660	After	Secondary

Notes:

Node Info

#	Len	Name
1	0	Lapalco Blvd
2	1544	Central Blvd
3	2073	LA Capitol
4	436	Parrot Petes
5	1333	Taco Bell
6	1448	Gretna Blvd
7	1499	Walmart
8	688	PetSmart
9	56	Chick Fil A
10	1954	Bed Bath and Beyond
11	639	Westbank Expy

Length of Study Route = 11,670 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Lapalco Blvd							
2	1544	Central Blvd	34.3	0.0	30.7	7.7	0.0	28.0	34.3
3	2073	LA Capitol	44.7	0.3	31.6	9.0	1.0	15.7	44.7
4	436	Parrot Petes	14.3	0.3	20.7	6.7	0.7	13.0	14.3
5	1333	Taco Bell	26.3	0.0	34.5	3.0	0.0	10.3	26.3
6	1448	Gretna Blvd	60.0	1.0	16.5	35.0	10.7	53.0	60.0
7	1499	Walmart	28.3	0.0	36.1	2.3	0.0	9.0	28.3
8	688	PetSmart	16.0	0.0	29.3	4.0	0.0	9.7	16.0
9	56	Chick Fil A	10.3	0.3	3.7	9.3	5.0	10.0	10.3
10	1954	Bed Bath and Beyond	48.3	0.3	27.6	15.0	0.0	43.3	48.3
11	639	Westbank Expy	59.0	0.7	7.4	48.0	34.3	58.3	58.3
Total	11,670		341.7	3.0	23.3	140.0	51.7	250.3	341.0

Stats based on 3 AFTER runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Lapalco Blvd				
2	1544	Central Blvd	0.0143	1.4948	14.6129	0.9762
3	2073	LA Capitol	0.0166	1.1104	10.2992	0.3835
4	436	Parrot Petes	0.0059	0.7314	5.9675	0.5610
5	1333	Taco Bell	0.0115	1.0326	10.4861	0.6129
6	1448	Gretna Blvd	0.0193	2.0121	15.3315	1.1883
7	1499	Walmart	0.0124	1.0791	12.2932	0.5949
8	688	PetSmart	0.0060	0.5186	4.6283	0.2887
9	56	Chick Fil A	0.0022	0.2147	1.8669	0.0508
10	1954	Bed Bath and Beyond	0.0178	1.5937	13.0912	0.8925
11	639	Westbank Expy	0.0133	1.2622	10.9467	0.3097
Total	11,670		0.1192	11.0494	99.5235	5.8584

Stats based on 3 AFTER runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	33	33	37
3	2073	LA Capitol	39	40	55
4	436	Parrot Petes	15	19	9
5	1333	Taco Bell	27	29	23
6	1448	Gretna Blvd	71	60	49
7	1499	Walmart	27	29	29
8	688	PetSmart	12	15	21
9	56	Chick Fil A	1	29	1
10	1954	Bed Bath and Beyond	44	46	55
11	639	Westbank Expy	61	14	102
Totals	11670		330	314	381

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	0	0	0
3	2073	LA Capitol	0	0	1
4	436	Parrot Petes	0	1	0
5	1333	Taco Bell	0	0	0
6	1448	Gretna Blvd	1	1	1
7	1499	Walmart	0	0	0
8	688	PetSmart	0	0	0
9	56	Chick Fil A	0	1	0
10	1954	Bed Bath and Beyond	0	0	1
11	639	Westbank Expy	1	0	1
Totals	11670		2	3	4

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	31.9	32.8	28.8
3	2073	LA Capitol	36.3	35.0	25.9
4	436	Parrot Petes	19.9	14.7	33.3
5	1333	Taco Bell	33.4	32.4	39.0
6	1448	Gretna Blvd	13.9	16.1	20.1
7	1499	Walmart	37.9	35.0	34.9
8	688	PetSmart	39.3	30.7	22.7
9	56	Chick Fil A	38.0	1.3	31.0
10	1954	Bed Bath and Beyond	30.3	29.1	24.3
11	639	Westbank Expy	7.1	32.2	4.2
Totals	11670		24.1	25.4	20.9

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd Md 2-NB-001tn
Manhattan Blvd Md 2-NB-002t
Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	7	6	10
3	2073	LA Capitol	4	4	19
4	436	Parrot Petes	8	11	1
5	1333	Taco Bell	4	5	0
6	1448	Gretna Blvd	46	35	24
7	1499	Walmart	1	3	3
8	688	PetSmart	0	3	9
9	56	Chick Fil A	0	28	0
10	1954	Bed Bath and Beyond	11	13	21
11	639	Westbank Expy	50	3	91
Totals	11670		131	111	178

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	0	0	0
3	2073	LA Capitol	0	0	3
4	436	Parrot Petes	0	2	0
5	1333	Taco Bell	0	0	0
6	1448	Gretna Blvd	24	3	5
7	1499	Walmart	0	0	0
8	688	PetSmart	0	0	0
9	56	Chick Fil A	0	15	0
10	1954	Bed Bath and Beyond	0	0	0
11	639	Westbank Expy	33	0	70
Totals	11670		57	20	78

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	23	27	34
3	2073	LA Capitol	5	16	26
4	436	Parrot Petes	15	19	5
5	1333	Taco Bell	16	15	0
6	1448	Gretna Blvd	62	53	44
7	1499	Walmart	2	12	13
8	688	PetSmart	0	8	21
9	56	Chick Fil A	0	29	1
10	1954	Bed Bath and Beyond	29	46	55
11	639	Westbank Expy	61	13	101
Totals	11670		213	238	300

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	33	33	37
3	2073	LA Capitol	39	40	55
4	436	Parrot Petes	15	19	9
5	1333	Taco Bell	27	29	23
6	1448	Gretna Blvd	71	60	49
7	1499	Walmart	27	29	29
8	688	PetSmart	12	15	21
9	56	Chick Fil A	1	29	1
10	1954	Bed Bath and Beyond	44	46	55
11	639	Westbank Expy	61	13	101
Totals	11670		330	313	380

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	0.0139	0.0146	0.0145
3	2073	LA Capitol	0.0151	0.0145	0.0201
4	436	Parrot Petes	0.0059	0.0056	0.0061
5	1333	Taco Bell	0.0112	0.0135	0.0097
6	1448	Gretna Blvd	0.0225	0.0187	0.0167
7	1499	Walmart	0.0130	0.0125	0.0116
8	688	PetSmart	0.0050	0.0050	0.0081
9	56	Chick Fil A	0.0004	0.0058	0.0004
10	1954	Bed Bath and Beyond	0.0158	0.0185	0.0190
11	639	Westbank Expy	0.0139	0.0047	0.0212
Totals	11670		0.1167	0.1134	0.1274

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	1.4342	1.4411	1.6090
3	2073	LA Capitol	0.9324	0.8079	1.5909
4	436	Parrot Petes	0.7180	0.5384	0.9379
5	1333	Taco Bell	1.0488	1.4827	0.5663
6	1448	Gretna Blvd	2.3855	1.9164	1.7343
7	1499	Walmart	1.1582	1.1717	0.9073
8	688	PetSmart	0.2684	0.3187	0.9687
9	56	Chick Fil A	0.0180	0.5719	0.0541
10	1954	Bed Bath and Beyond	1.1688	1.8612	1.7510
11	639	Westbank Expy	1.3381	0.3850	2.0636
Totals	11670		10.4702	10.4949	12.1831

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	14.2558	13.9989	15.5841
3	2073	LA Capitol	10.1973	8.4095	12.2909
4	436	Parrot Petes	4.5325	2.8658	10.5042
5	1333	Taco Bell	11.0771	13.9609	6.4202
6	1448	Gretna Blvd	19.5288	13.3123	13.1533
7	1499	Walmart	13.7502	13.0238	10.1054
8	688	PetSmart	2.9744	3.4193	7.4911
9	56	Chick Fil A	0.1820	4.8622	0.5566
10	1954	Bed Bath and Beyond	10.0606	15.4771	13.7358
11	639	Westbank Expy	10.9402	4.0173	17.8827
Totals	11670		97.4990	93.3471	107.7244

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd Md 2-NB-001tn

Manhattan Blvd Md 2-NB-002t

Manhattan Blvd Md 2-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1544	Central Blvd	0.9243	0.9227	1.0816
3	2073	LA Capitol	0.2624	0.1062	0.7819
4	436	Parrot Petes	0.5654	0.3125	0.8052
5	1333	Taco Bell	0.6131	1.0635	0.1620
6	1448	Gretna Blvd	1.3527	1.1225	1.0895
7	1499	Walmart	0.6728	0.6933	0.4185
8	688	PetSmart	0.0591	0.0878	0.7191
9	56	Chick Fil A	0.0000	0.1118	0.0405
10	1954	Bed Bath and Beyond	0.4923	1.2117	0.9737
11	639	Westbank Expy	0.3703	0.1692	0.3897
Totals	11670		5.3123	5.8012	6.4617

ITS Regional

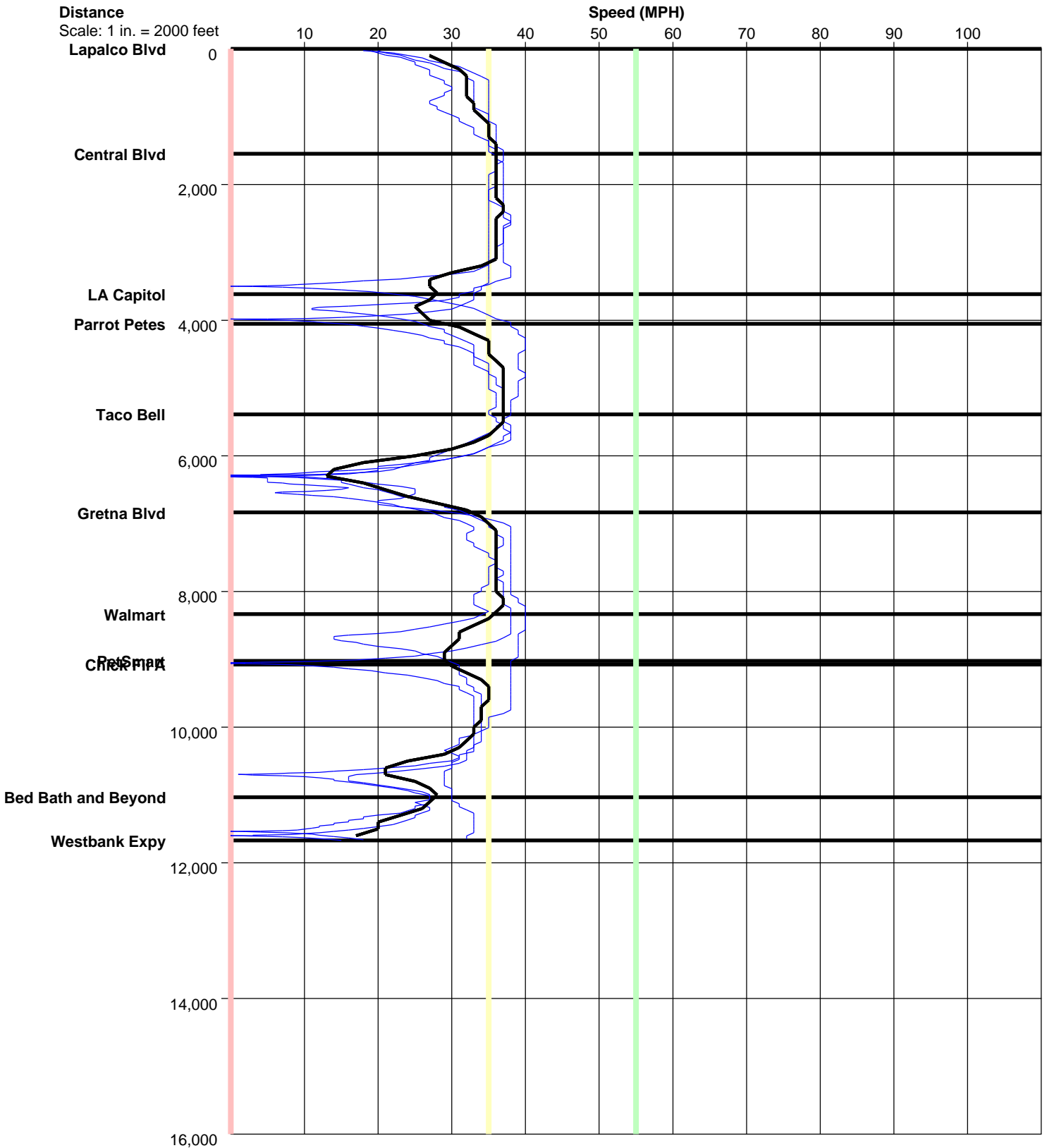
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

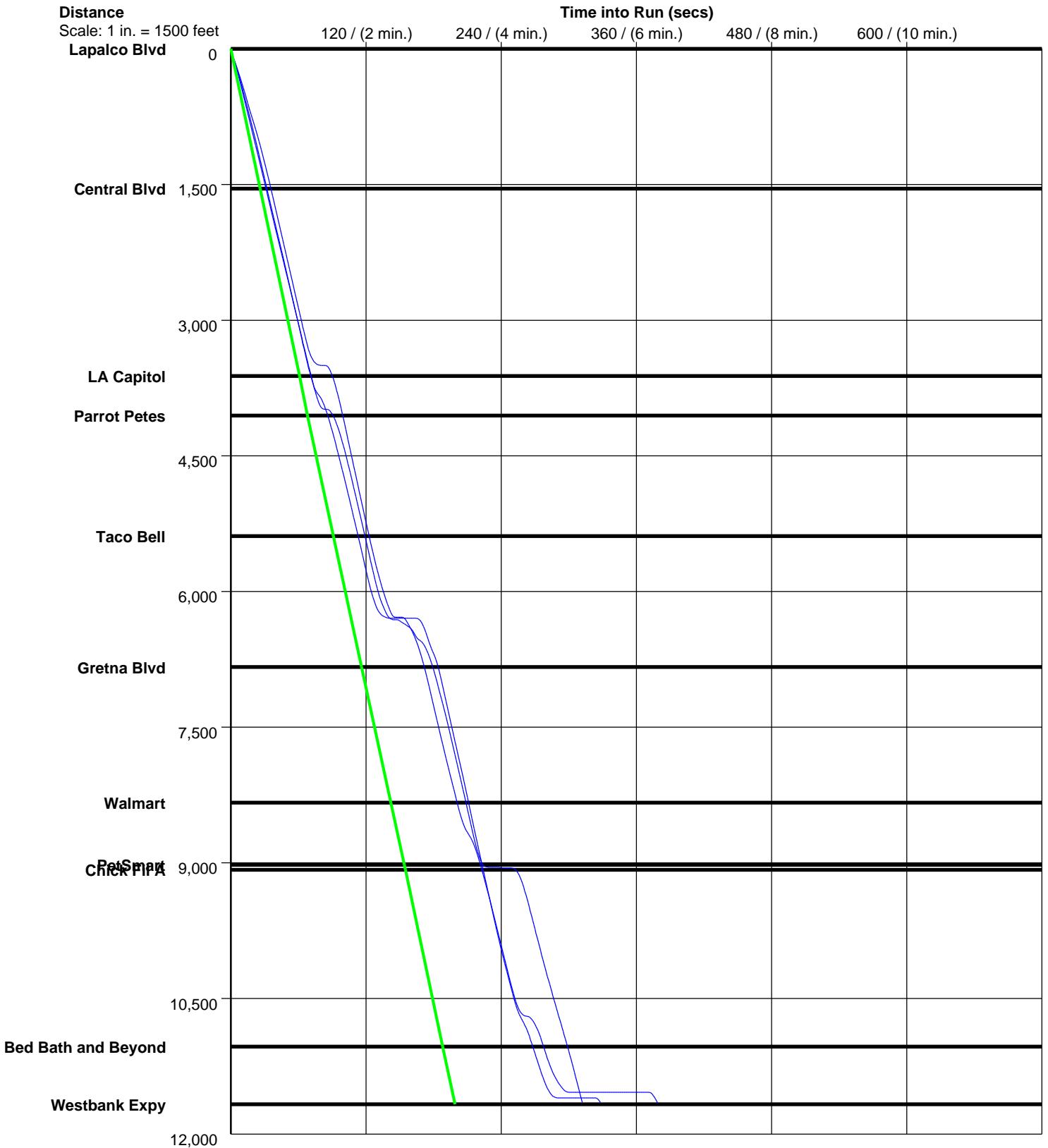
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

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Manhattan Blvd Study

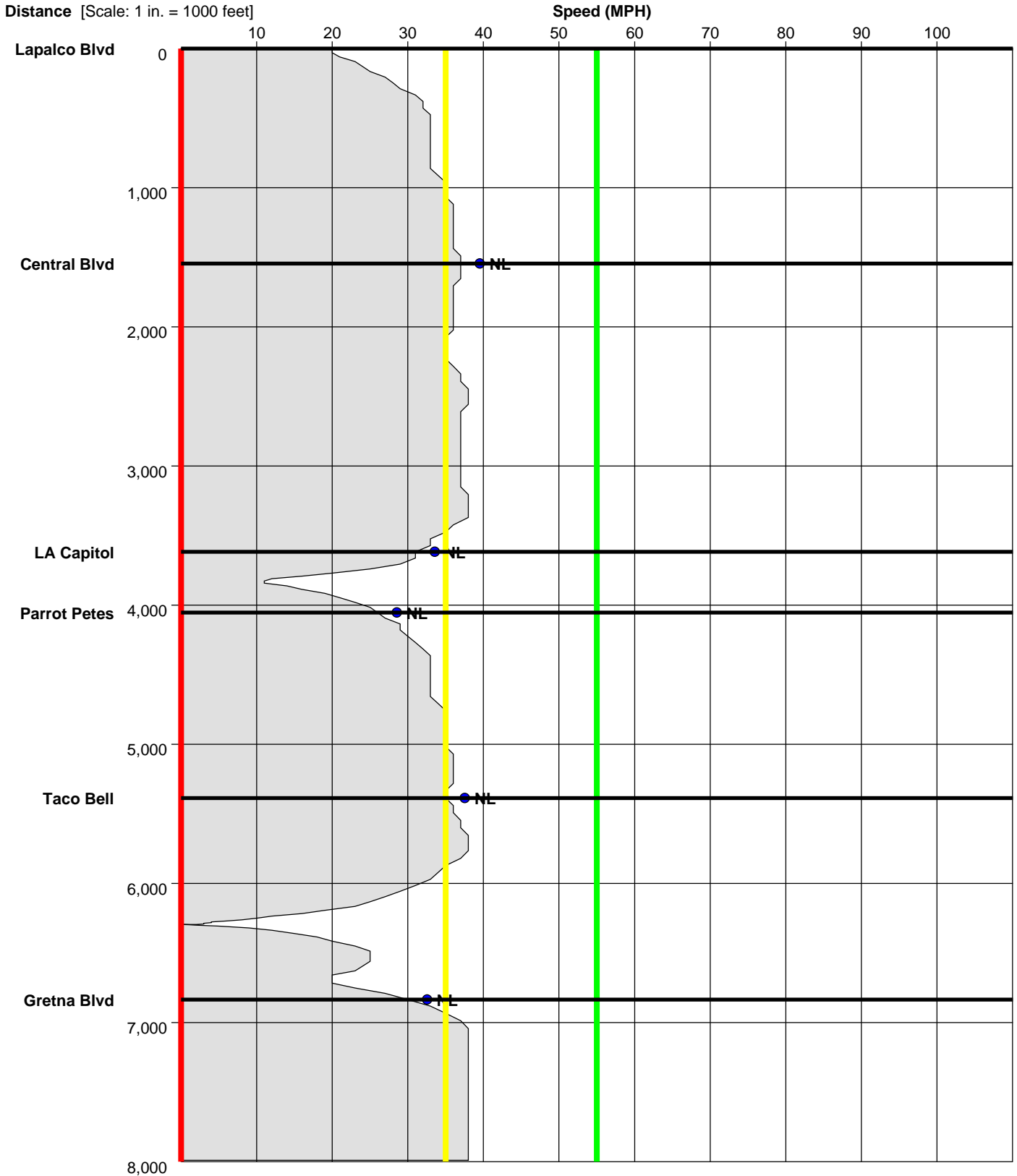
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd Md 2-NB-001tn** Start Time: **11:24** (This is an After Run)



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Manhattan Blvd Study

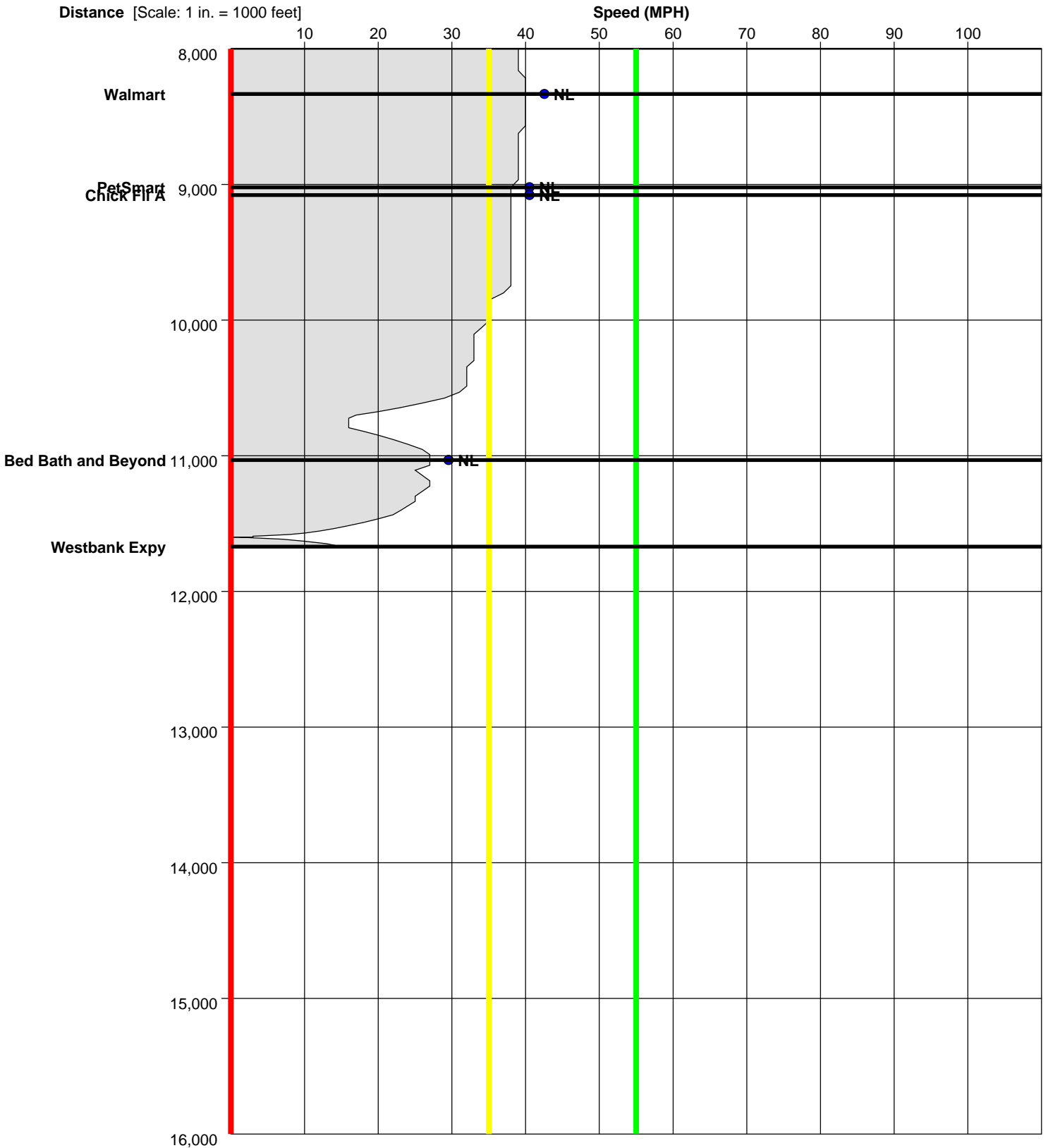
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd Md 2-NB-001tn** Start Time: **11:24** (This is an After Run)



ITS Regional

Manhattan Blvd Study

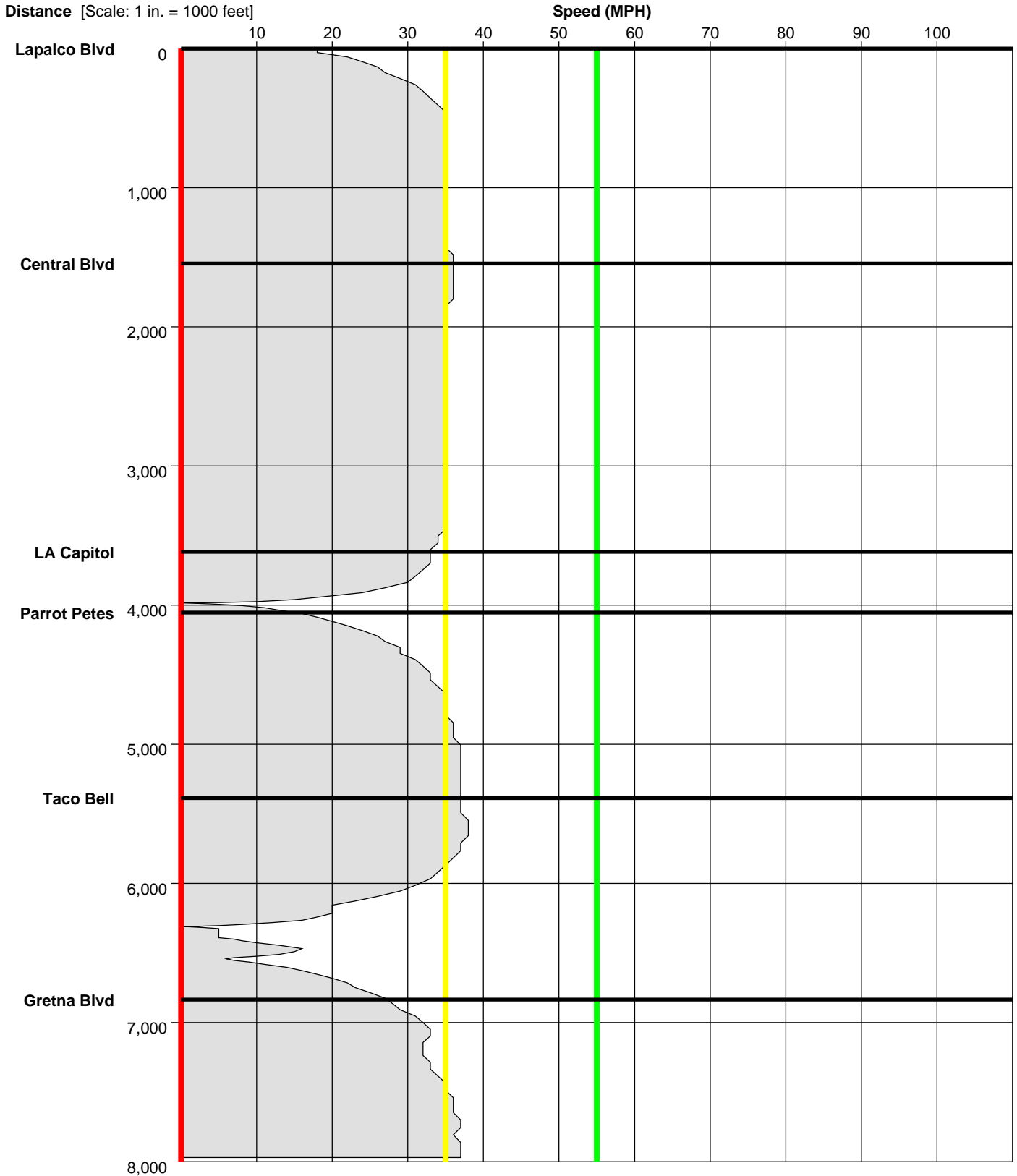
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd Md 2-NB-002t** Start Time: **11:40** (This is an After Run)



ITS Regional

Manhattan Blvd Study

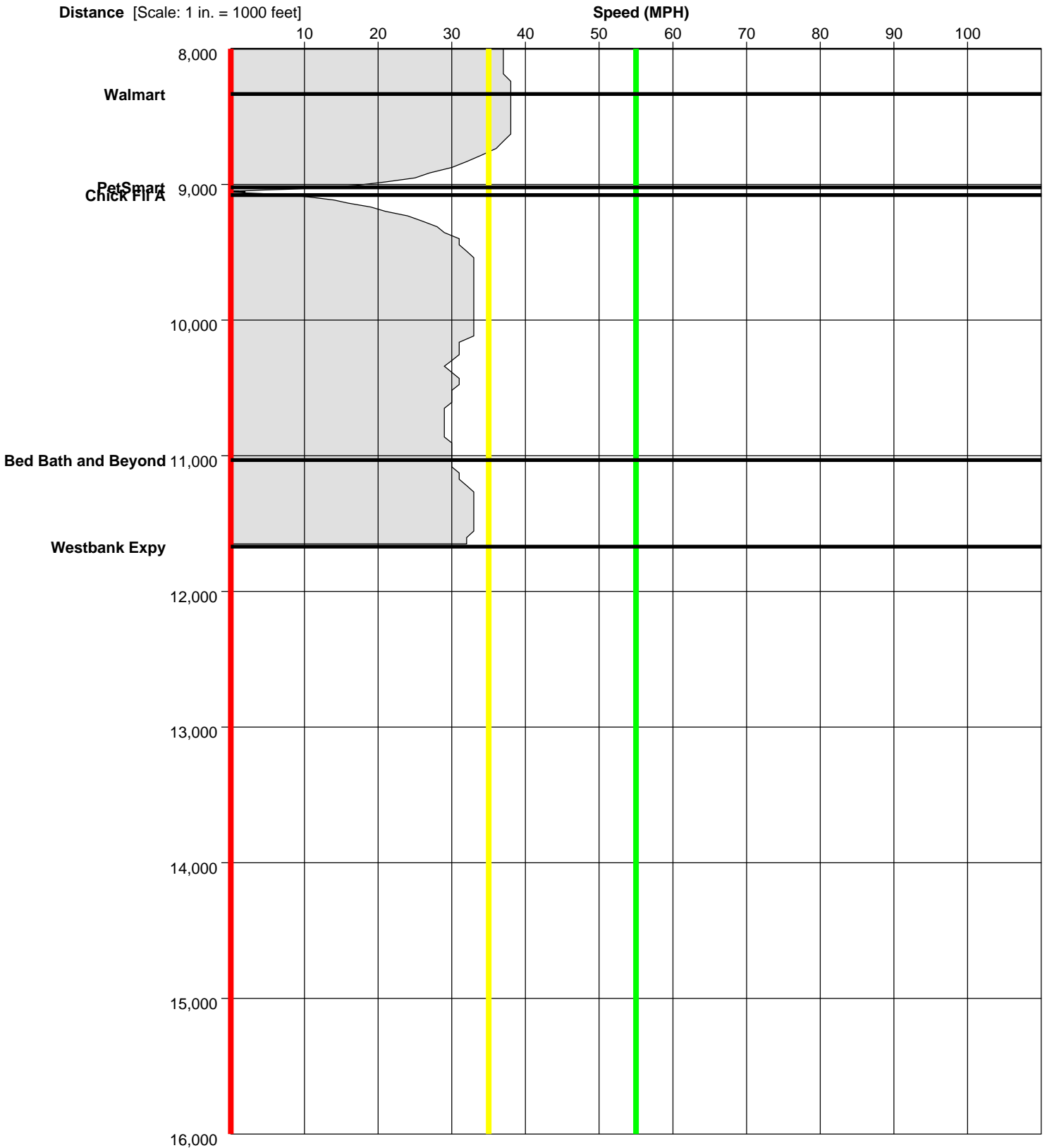
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd Md 2-NB-002t** Start Time: **11:40** (This is an After Run)



ITS Regional

Manhattan Blvd Study

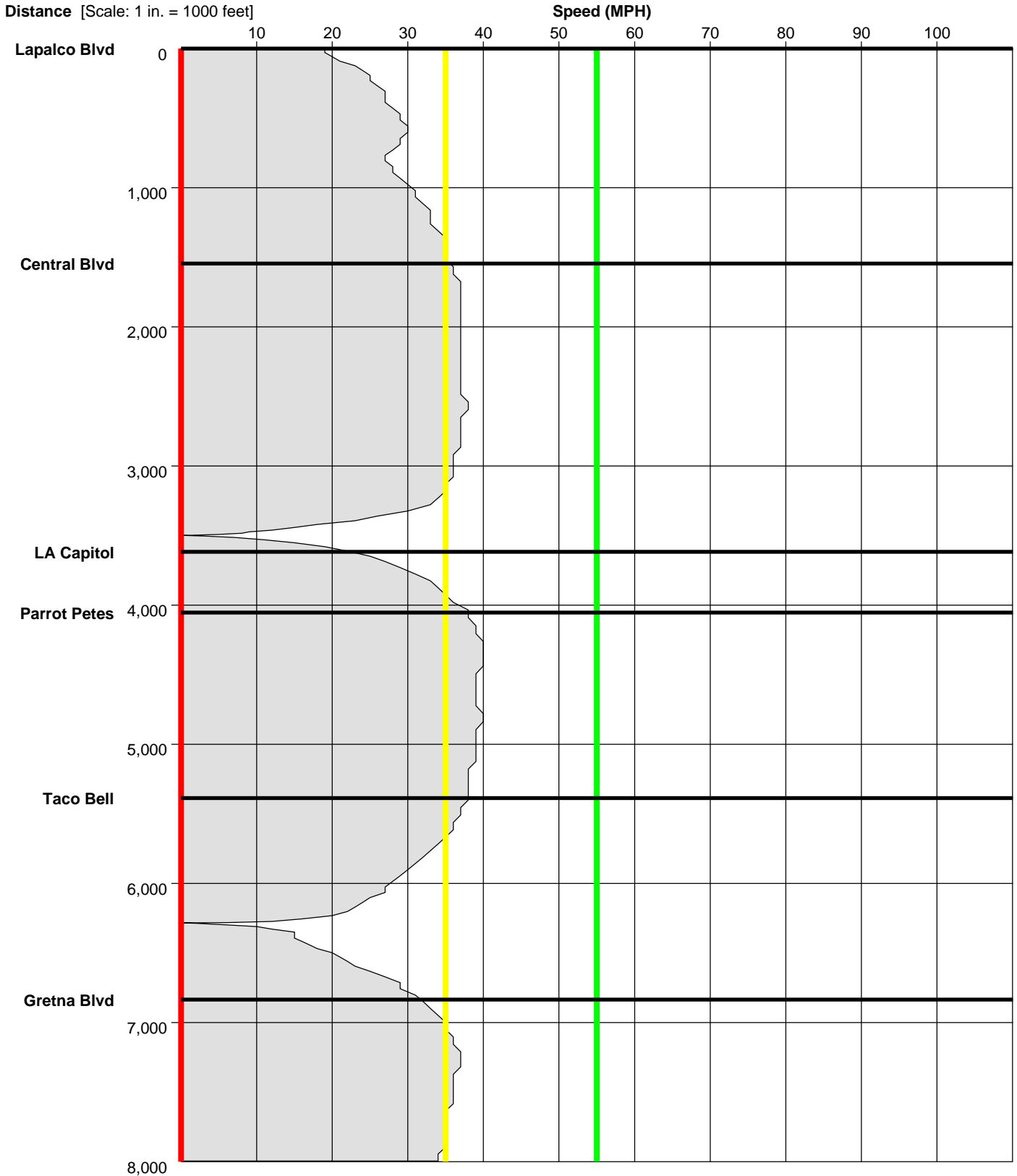
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd Md 2-NB-003t** Start Time: **11:56** (This is an After Run)



ITS Regional

Manhattan Blvd Study

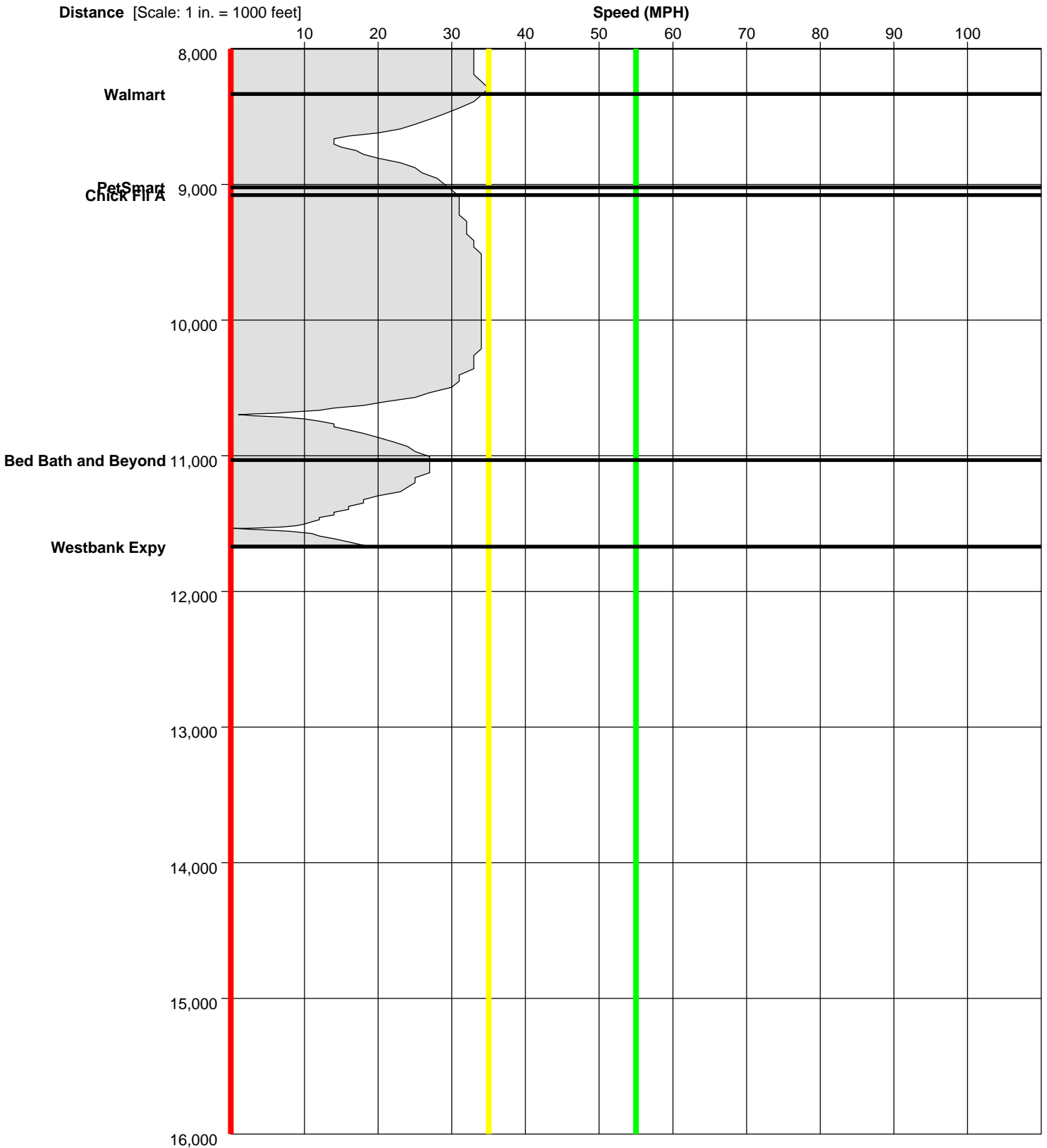
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd Md 2-NB-003t** Start Time: **11:56** (This is an After Run)



ITS Regional

Manhattan Blvd Study

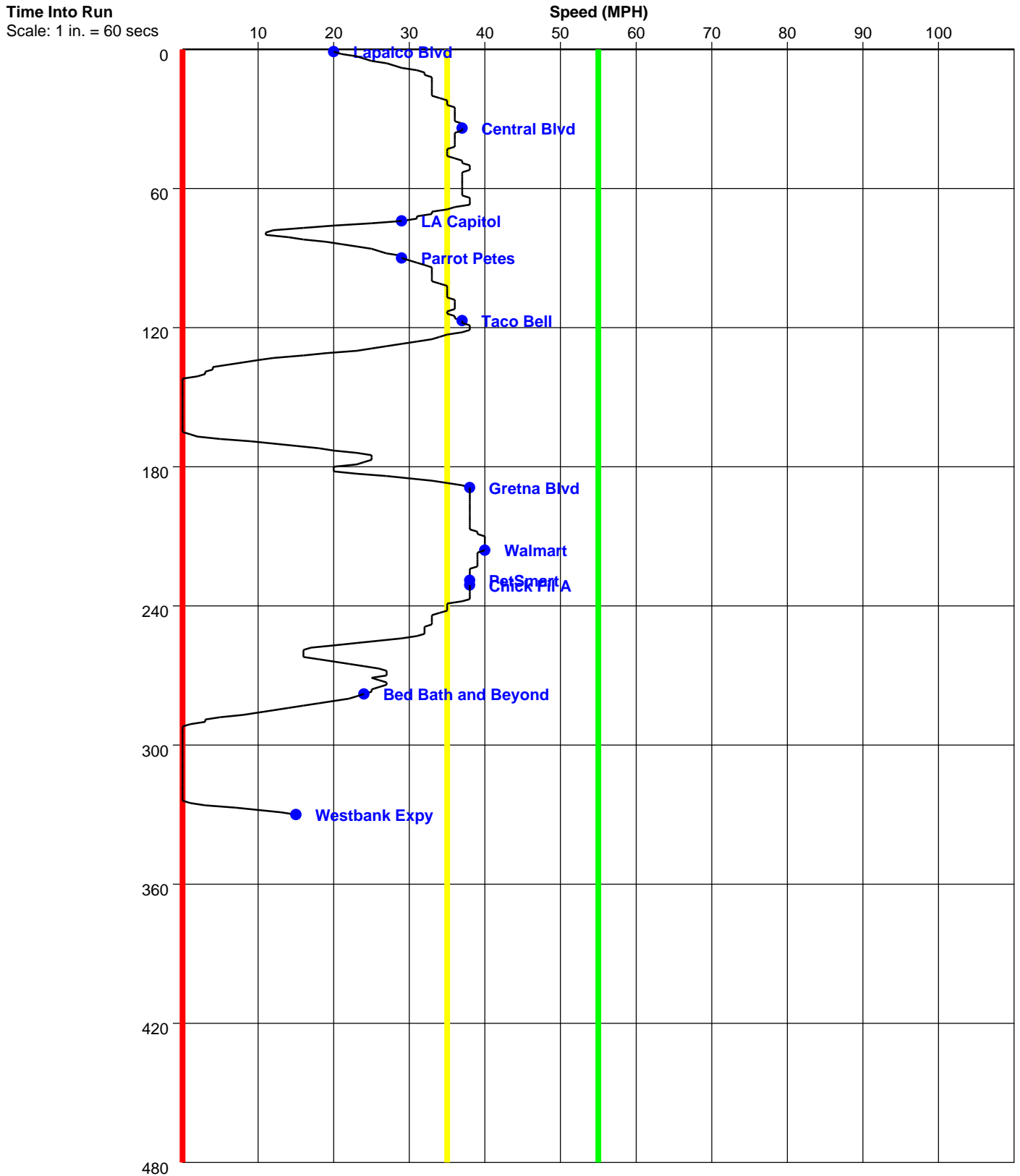
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **24**

Time-Based Speed Profile

Run : **Manhattan Blvd Md 2-NB-001tn** Start Time: **11:24** (This is an After Run)



ITS Regional

Manhattan Blvd Study

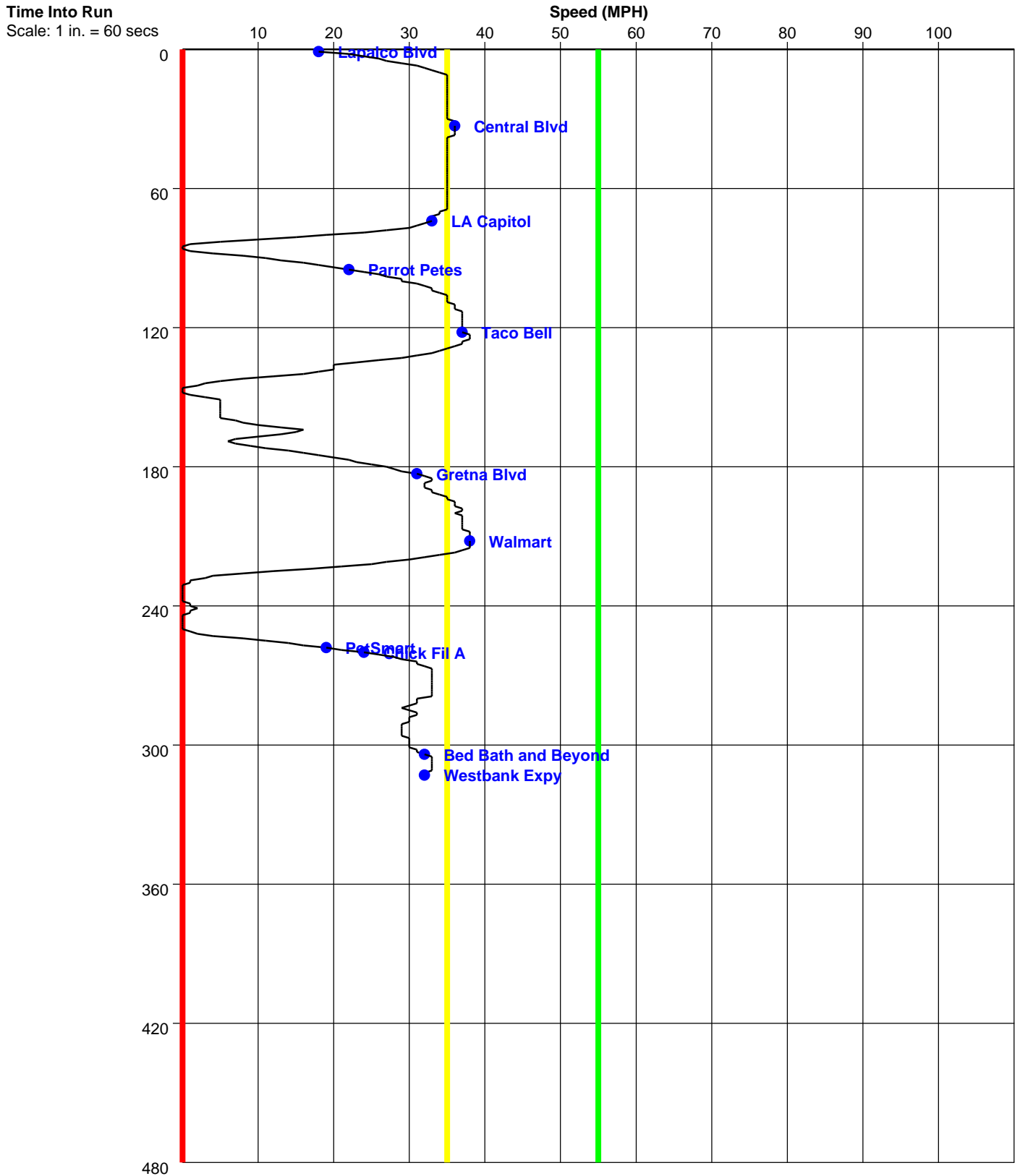
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **25**

Time-Based Speed Profile

Run : **Manhattan Blvd Md 2-NB-002t** Start Time:11:40 (This is an After Run)



ITS Regional

Manhattan Blvd Study

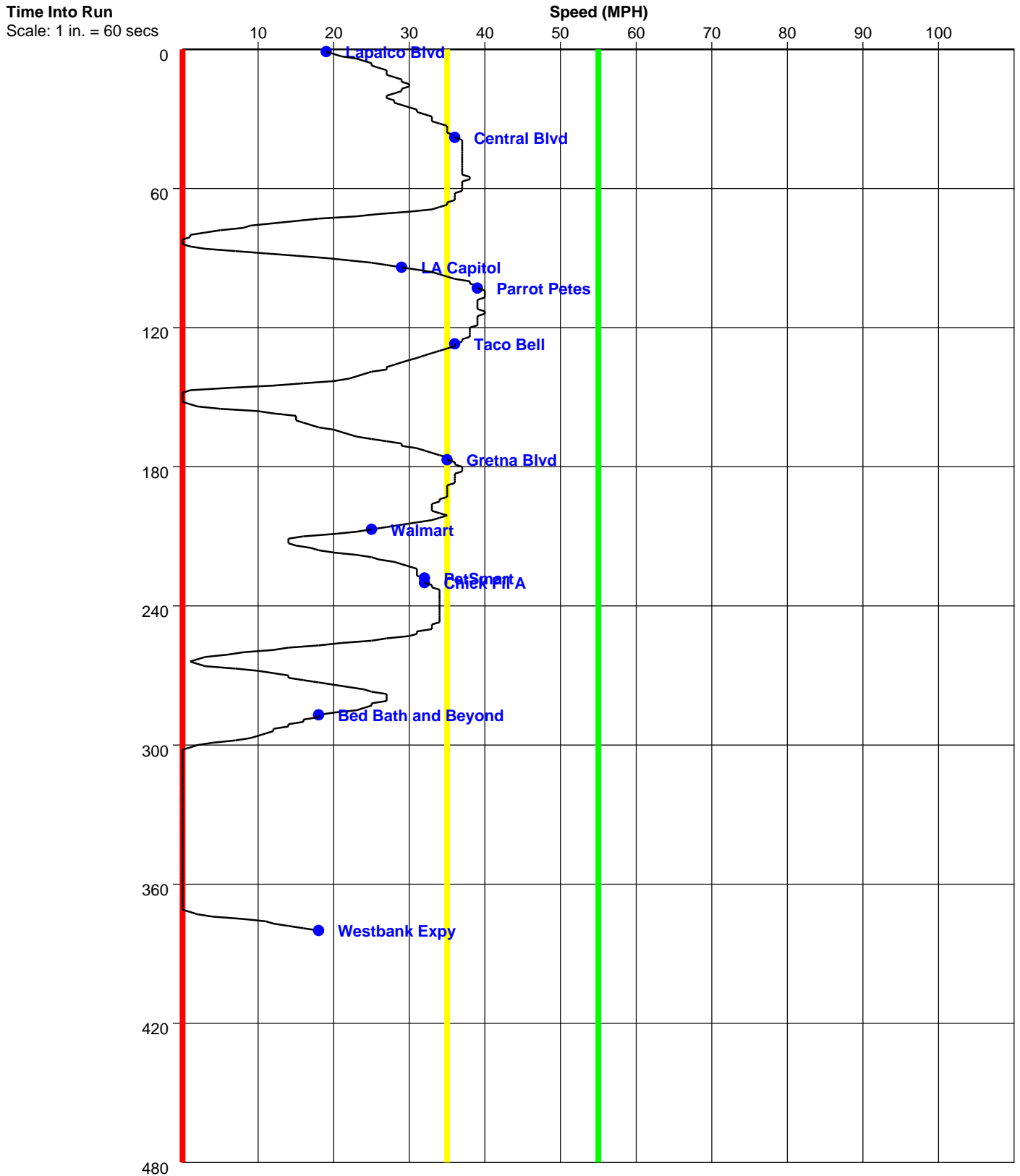
Study Name : **Manhattan Blvd NB Midday 2**

Study Date : **4/25/2018**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd Md 2-NB-003t** Start Time: **11:56** (This is an After Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd SB MIDDAY 2

<u>Report Name</u>	<u>Page</u>
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Overall Output Statistics	3
Fuel Consumption & Emissions	4
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Detailed Statistics By Run - Time <= 35 MPH	10
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Detailed Statistics By Run - Hydrocarbons	13
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Speed/Distance Profiles of All Runs	16
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Speed Profile (Distance vs Spd) for Manhattan Blvd Md 2-SB-001tn	18
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Speed Profile (Time vs Spd) for Manhattan Blvd Md 2-SB-001tn	24
Speed Profile (Time vs Spd) for Manhattan Blvd Md 2-SB-002t	25
Speed Profile (Time vs Spd) for Manhattan Blvd Md 2-SB-003t	26

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd Md 2-SB-001tn	04/25/18	11:17	11573	After	Primary
Manhattan Blvd Md 2-SB-002t	04/25/18	11:32	11710	After	Secondary
Manhattan Blvd Md 2-SB-003t	04/25/18	11:47	11763	After	Secondary

Notes:

Node Info

#	Len	Name
1	0	Westbank Expy
2	1114	Bed Bath and Beyond
3	1811	Chick Fil A
4	203	PetSmart
5	686	Walmart
6	1442	Gretna Blvd
7	1522	Taco Bell
8	1279	Parrot Petes
9	426	La Capitol
10	2024	Central Blvd
11	1066	Lapalco Blvd

Length of Study Route = 11,573 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Westbank Expy							
2	1114	Bed Bath and Beyond	58.0	0.7	13.1	38.7	20.0	58.0	58.0
3	1811	Chick Fil A	80.3	1.0	15.4	49.3	28.3	80.3	80.3
4	203	PetSmart	5.0	0.0	27.7	1.3	0.0	5.0	5.0
5	686	Walmart	38.7	1.0	12.1	26.7	13.3	38.7	38.7
6	1442	Gretna Blvd	30.0	0.0	32.8	5.0	0.0	21.7	30.0
7	1522	Taco Bell	30.0	0.0	34.6	4.0	0.0	19.7	30.0
8	1279	Parrot Petes	25.0	0.0	34.9	3.0	0.0	10.3	25.0
9	426	La Capitol	8.3	0.0	34.9	0.7	0.0	3.0	8.3
10	2024	Central Blvd	85.3	1.0	16.2	50.7	35.7	61.3	85.3
11	1066	Lapalco Blvd	22.0	0.0	33.0	4.0	0.0	13.3	22.0
Total	11,573		382.7	3.7	20.6	183.3	97.3	311.3	382.7

Stats based on 3 AFTER runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Westbank Expy				
2	1114	Bed Bath and Beyond	0.0176	1.9778	15.9969	1.1381
3	1811	Chick Fil A	0.0242	2.4697	20.4628	1.2664
4	203	PetSmart	0.0017	0.1465	1.4603	0.0673
5	686	Walmart	0.0120	1.3749	9.7935	0.8617
6	1442	Gretna Blvd	0.0124	1.2004	13.0124	0.7242
7	1522	Taco Bell	0.0112	0.7919	8.3812	0.2902
8	1279	Parrot Petes	0.0099	0.7290	8.1632	0.3001
9	426	La Capitol	0.0033	0.2353	2.5811	0.0921
10	2024	Central Blvd	0.0251	2.1586	19.1174	0.7950
11	1066	Lapalco Blvd	0.0105	1.1603	11.6286	0.8359
Total	11,573		0.1279	12.2444	110.5973	6.3711

Stats based on 3 AFTER runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd Md 2-SB-001tn

Manhattan Blvd Md 2-SB-002t

Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	31	65	78
3	1811	Chick Fil A	58	95	88
4	203	PetSmart	5	6	4
5	686	Walmart	46	23	47
6	1442	Gretna Blvd	27	30	33
7	1522	Taco Bell	28	31	31
8	1279	Parrot Petes	24	24	27
9	426	La Capitol	8	8	9
10	2024	Central Blvd	89	80	87
11	1066	Lapalco Blvd	21	22	23
Totals	11573		337	384	427

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd Md 2-SB-001tn
Manhattan Blvd Md 2-SB-002t
Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	0	1	1
3	1811	Chick Fil A	1	1	1
4	203	PetSmart	0	0	0
5	686	Walmart	1	1	1
6	1442	Gretna Blvd	0	0	0
7	1522	Taco Bell	0	0	0
8	1279	Parrot Petes	0	0	0
9	426	La Capitol	0	0	0
10	2024	Central Blvd	1	1	1
11	1066	Lapalco Blvd	0	0	0
Totals	11573		3	4	4

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd Md 2-SB-001tn
Manhattan Blvd Md 2-SB-002t
Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	24.5	11.8	10.1
3	1811	Chick Fil A	21.3	13.0	13.8
4	203	PetSmart	27.6	25.8	33.0
5	686	Walmart	10.2	20.1	9.8
6	1442	Gretna Blvd	36.4	33.1	30.6
7	1522	Taco Bell	37.3	32.6	32.7
8	1279	Parrot Petes	36.3	37.0	32.5
9	426	La Capitol	36.3	35.8	33.3
10	2024	Central Blvd	15.5	17.2	15.7
11	1066	Lapalco Blvd	34.7	32.5	31.1
Totals	11573		23.4	20.5	18.5

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd Md 2-SB-001tn
Manhattan Blvd Md 2-SB-002t
Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	12	46	58
3	1811	Chick Fil A	27	64	57
4	203	PetSmart	2	2	0
5	686	Walmart	34	11	35
6	1442	Gretna Blvd	2	5	8
7	1522	Taco Bell	2	5	5
8	1279	Parrot Petes	2	2	5
9	426	La Capitol	1	0	1
10	2024	Central Blvd	55	45	52
11	1066	Lapalco Blvd	3	4	5
Totals	11573		140	184	226

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd Md 2-SB-001tn

Manhattan Blvd Md 2-SB-002t

Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	0	19	41
3	1811	Chick Fil A	1	44	40
4	203	PetSmart	0	0	0
5	686	Walmart	18	0	22
6	1442	Gretna Blvd	0	0	0
7	1522	Taco Bell	0	0	0
8	1279	Parrot Petes	0	0	0
9	426	La Capitol	0	0	0
10	2024	Central Blvd	38	33	36
11	1066	Lapalco Blvd	0	0	0
Totals	11573		57	96	139

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd Md 2-SB-001tn

Manhattan Blvd Md 2-SB-002t

Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	31	65	78
3	1811	Chick Fil A	58	95	88
4	203	PetSmart	5	6	4
5	686	Walmart	46	23	47
6	1442	Gretna Blvd	7	25	33
7	1522	Taco Bell	0	28	31
8	1279	Parrot Petes	0	4	27
9	426	La Capitol	0	0	9
10	2024	Central Blvd	63	53	68
11	1066	Lapalco Blvd	8	14	18
Totals	11573		218	313	403

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd Md 2-SB-001tn

Manhattan Blvd Md 2-SB-002t

Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	31	65	78
3	1811	Chick Fil A	58	95	88
4	203	PetSmart	5	6	4
5	686	Walmart	46	23	47
6	1442	Gretna Blvd	27	30	33
7	1522	Taco Bell	28	31	31
8	1279	Parrot Petes	24	24	27
9	426	La Capitol	8	8	9
10	2024	Central Blvd	89	80	87
11	1066	Lapalco Blvd	21	22	23
Totals	11573		337	384	427

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd Md 2-SB-001tn

Manhattan Blvd Md 2-SB-002t

Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	0.0106	0.0188	0.0235
3	1811	Chick Fil A	0.0197	0.0265	0.0264
4	203	PetSmart	0.0014	0.0020	0.0016
5	686	Walmart	0.0131	0.0100	0.0128
6	1442	Gretna Blvd	0.0125	0.0120	0.0128
7	1522	Taco Bell	0.0106	0.0115	0.0116
8	1279	Parrot Petes	0.0090	0.0110	0.0097
9	426	La Capitol	0.0031	0.0031	0.0036
10	2024	Central Blvd	0.0260	0.0246	0.0247
11	1066	Lapalco Blvd	0.0102	0.0106	0.0106
Totals	11573		0.1162	0.1301	0.1373

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd Md 2-SB-001tn

Manhattan Blvd Md 2-SB-002t

Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	1.1135	2.0585	2.7615
3	1811	Chick Fil A	2.0562	2.6199	2.7332
4	203	PetSmart	0.0900	0.1976	0.1519
5	686	Walmart	1.4921	1.3440	1.2886
6	1442	Gretna Blvd	1.2159	1.1043	1.2809
7	1522	Taco Bell	0.5040	0.9162	0.9554
8	1279	Parrot Petes	0.4783	0.9851	0.7237
9	426	La Capitol	0.1903	0.1891	0.3264
10	2024	Central Blvd	2.2532	2.1612	2.0614
11	1066	Lapalco Blvd	1.1254	1.1778	1.1778
Totals	11573		10.5189	12.7536	13.4606

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd Md 2-SB-001tn

Manhattan Blvd Md 2-SB-002t

Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	9.4217	15.8547	22.7141
3	1811	Chick Fil A	15.2862	22.3055	23.7966
4	203	PetSmart	0.9100	1.8124	1.6587
5	686	Walmart	10.7101	9.6078	9.0627
6	1442	Gretna Blvd	14.1507	12.1064	12.7800
7	1522	Taco Bell	5.0960	9.8044	10.2431
8	1279	Parrot Petes	4.9936	11.8363	7.6596
9	426	La Capitol	2.0816	2.0508	3.6109
10	2024	Central Blvd	19.2983	20.1560	17.8980
11	1066	Lapalco Blvd	12.0233	11.3447	11.5178
Totals	11573		93.9714	116.8790	120.9414

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd Md 2-SB-001tn

Manhattan Blvd Md 2-SB-002t

Manhattan Blvd Md 2-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1114	Bed Bath and Beyond	0.6811	1.1183	1.6149
3	1811	Chick Fil A	1.2755	1.1449	1.3789
4	203	PetSmart	0.0064	0.1089	0.0867
5	686	Walmart	0.8603	1.1182	0.6068
6	1442	Gretna Blvd	0.7688	0.6228	0.7811
7	1522	Taco Bell	0.0071	0.4159	0.4476
8	1279	Parrot Petes	0.0502	0.5752	0.2750
9	426	La Capitol	0.0502	0.0493	0.1767
10	2024	Central Blvd	0.8439	0.8781	0.6630
11	1066	Lapalco Blvd	0.8026	0.8611	0.8439
Totals	11573		5.3460	6.8927	6.8746

ITS Regional

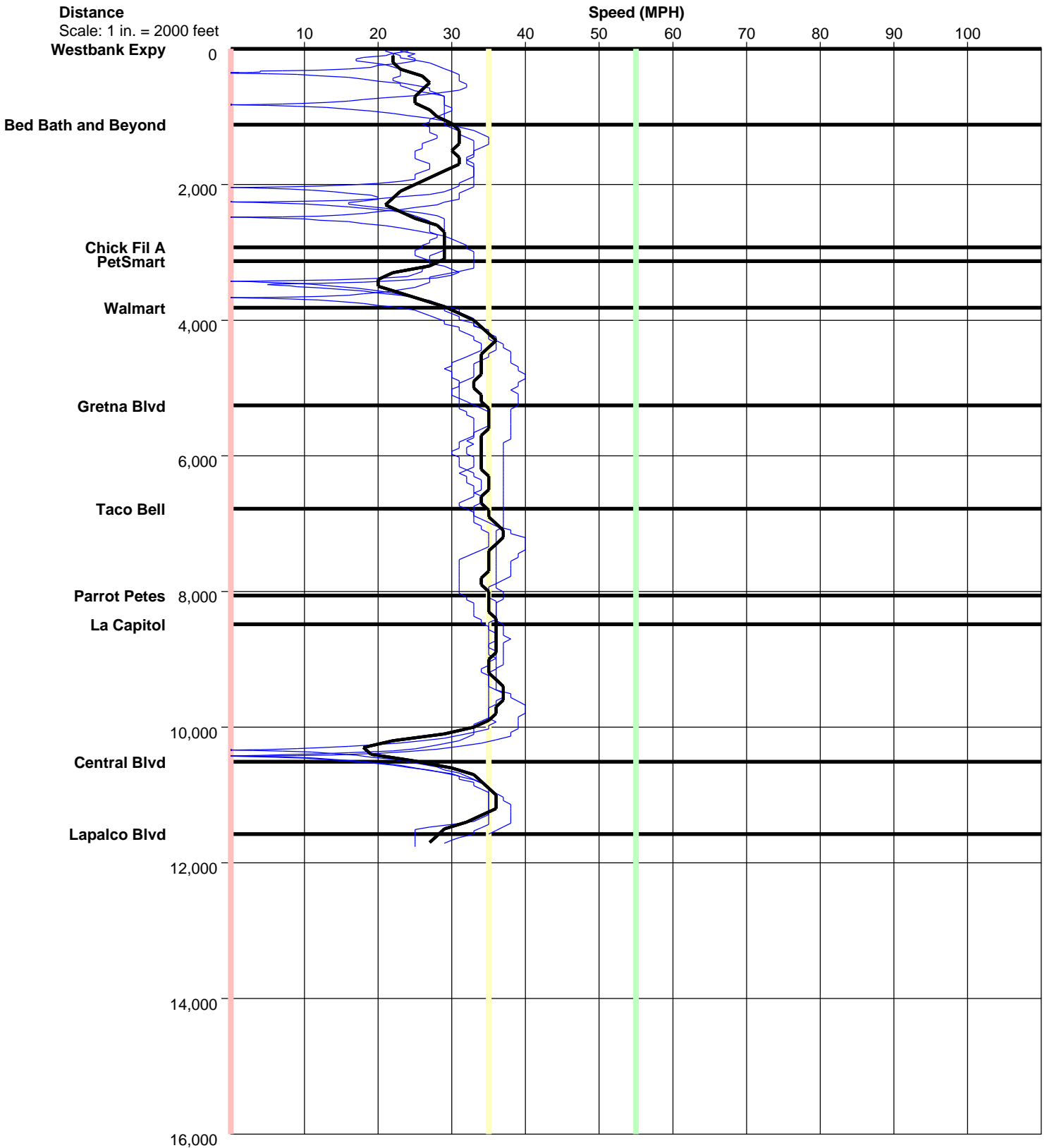
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

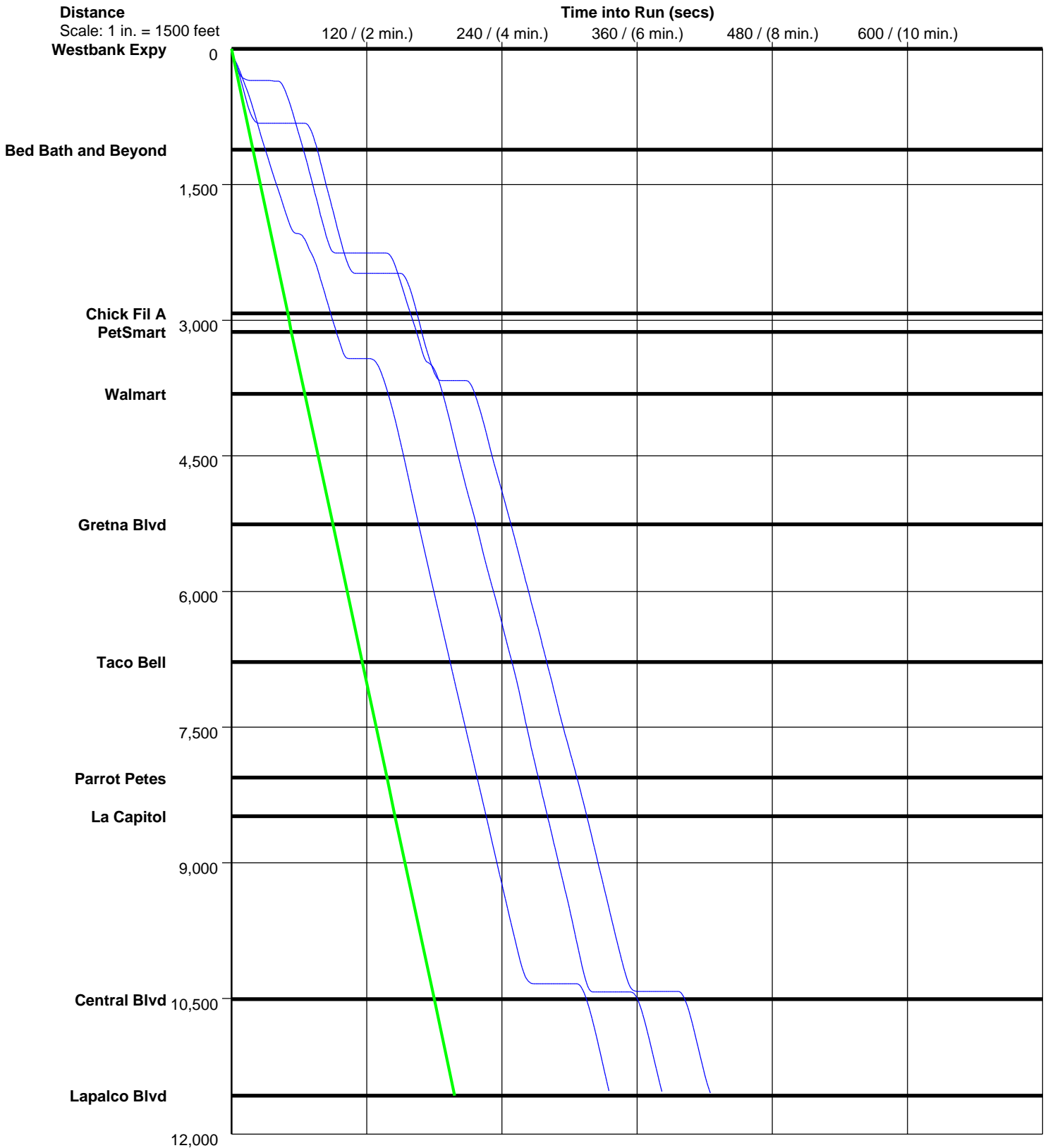
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

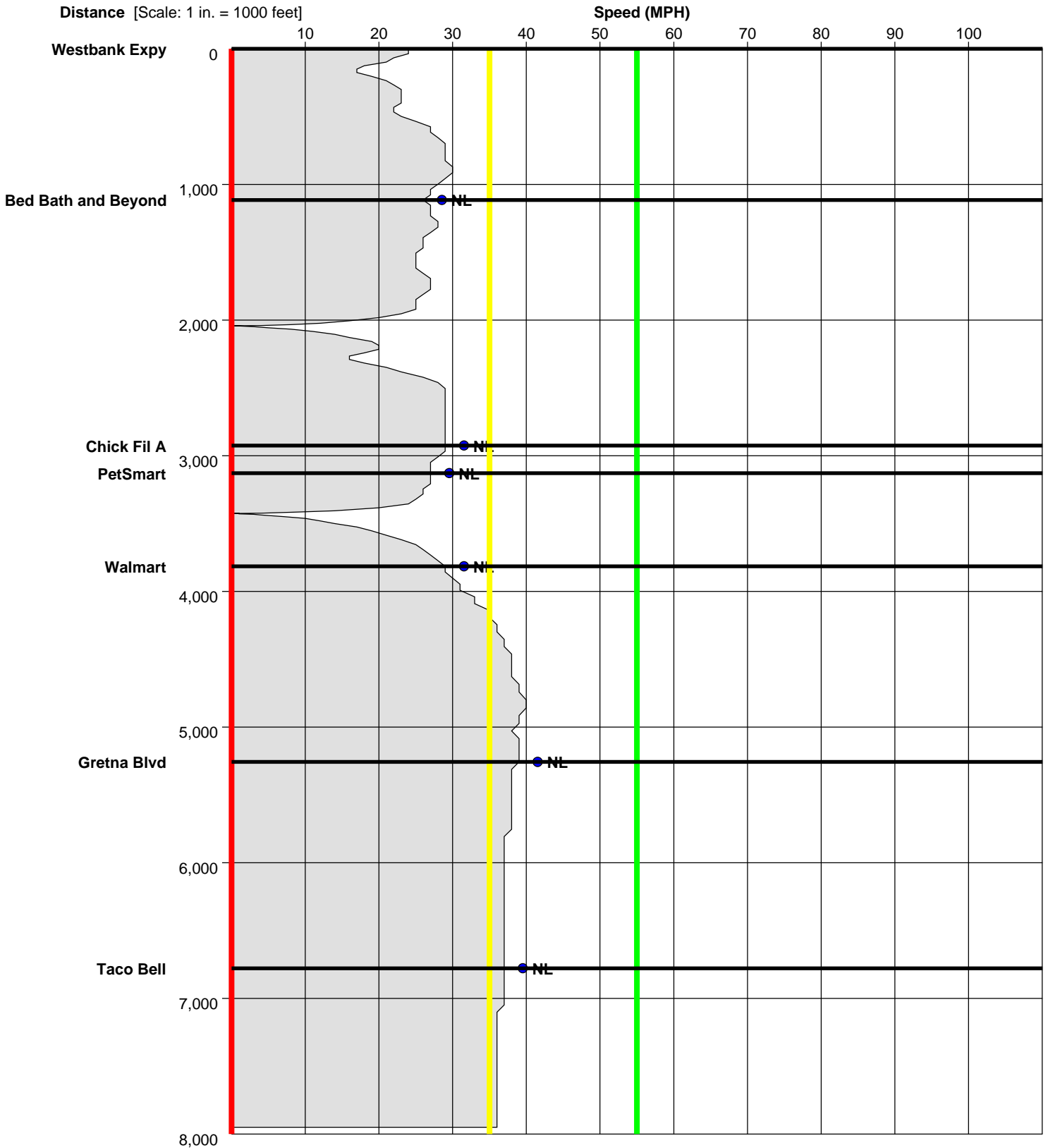
Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd Md 2-SB-001tn** Start Time: **11:17** (This is an After Run)



ITS Regional

Manhattan Blvd Study

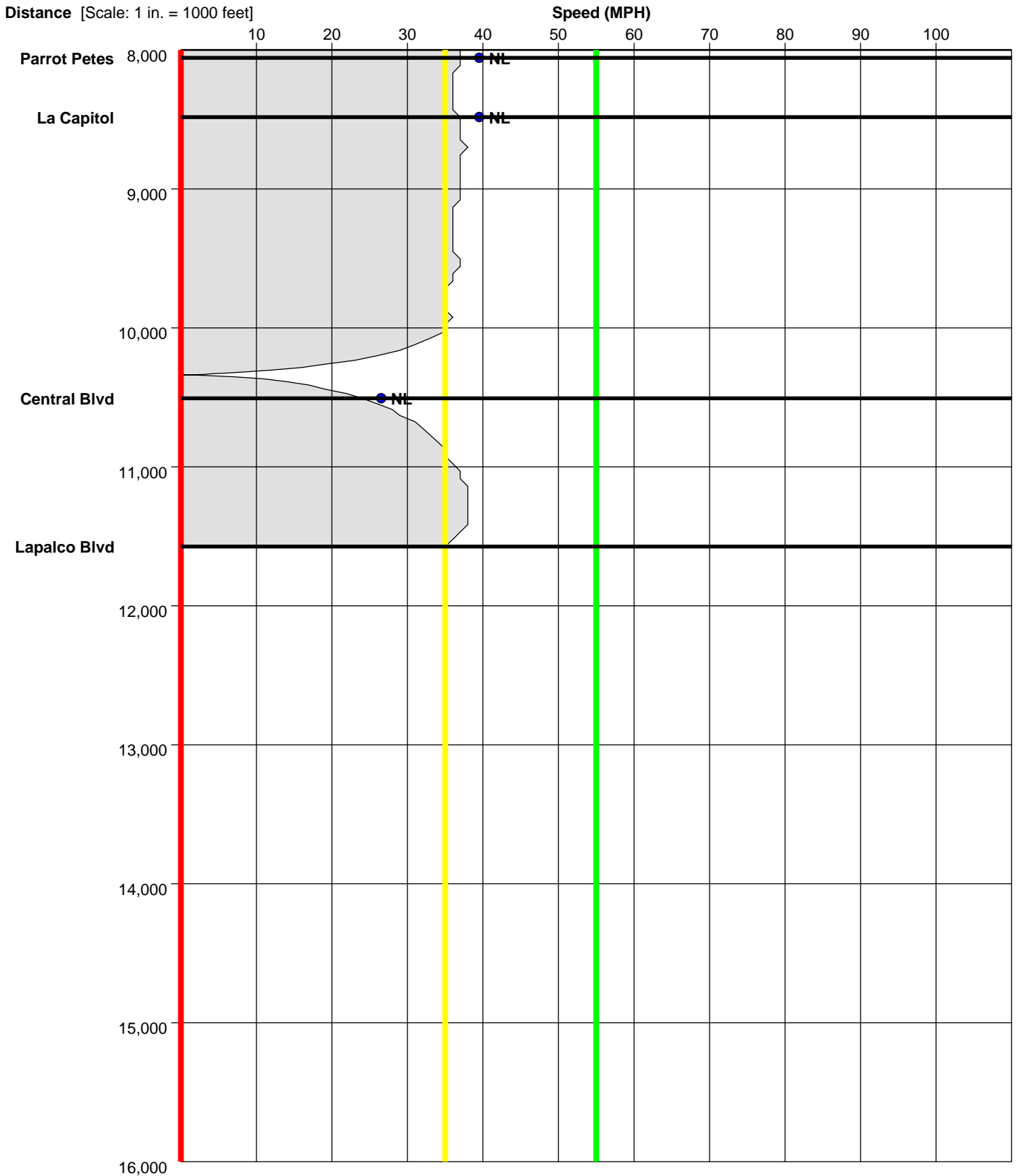
Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd Md 2-SB-001tn** Start Time: **11:17** (This is an After Run)



ITS Regional

Manhattan Blvd Study

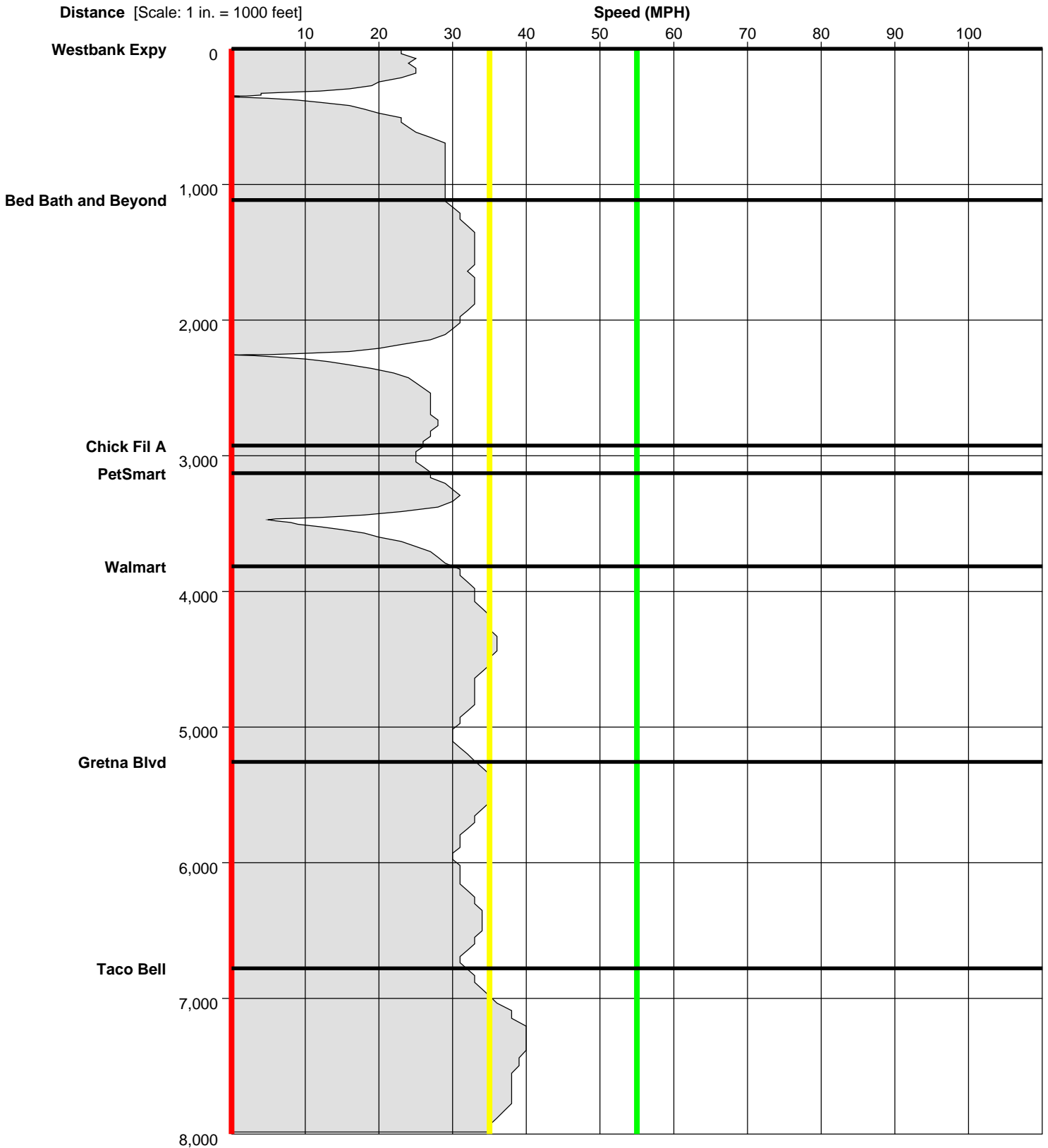
Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd Md 2-SB-002t** Start Time: **11:32** (This is an After Run)



ITS Regional

Manhattan Blvd Study

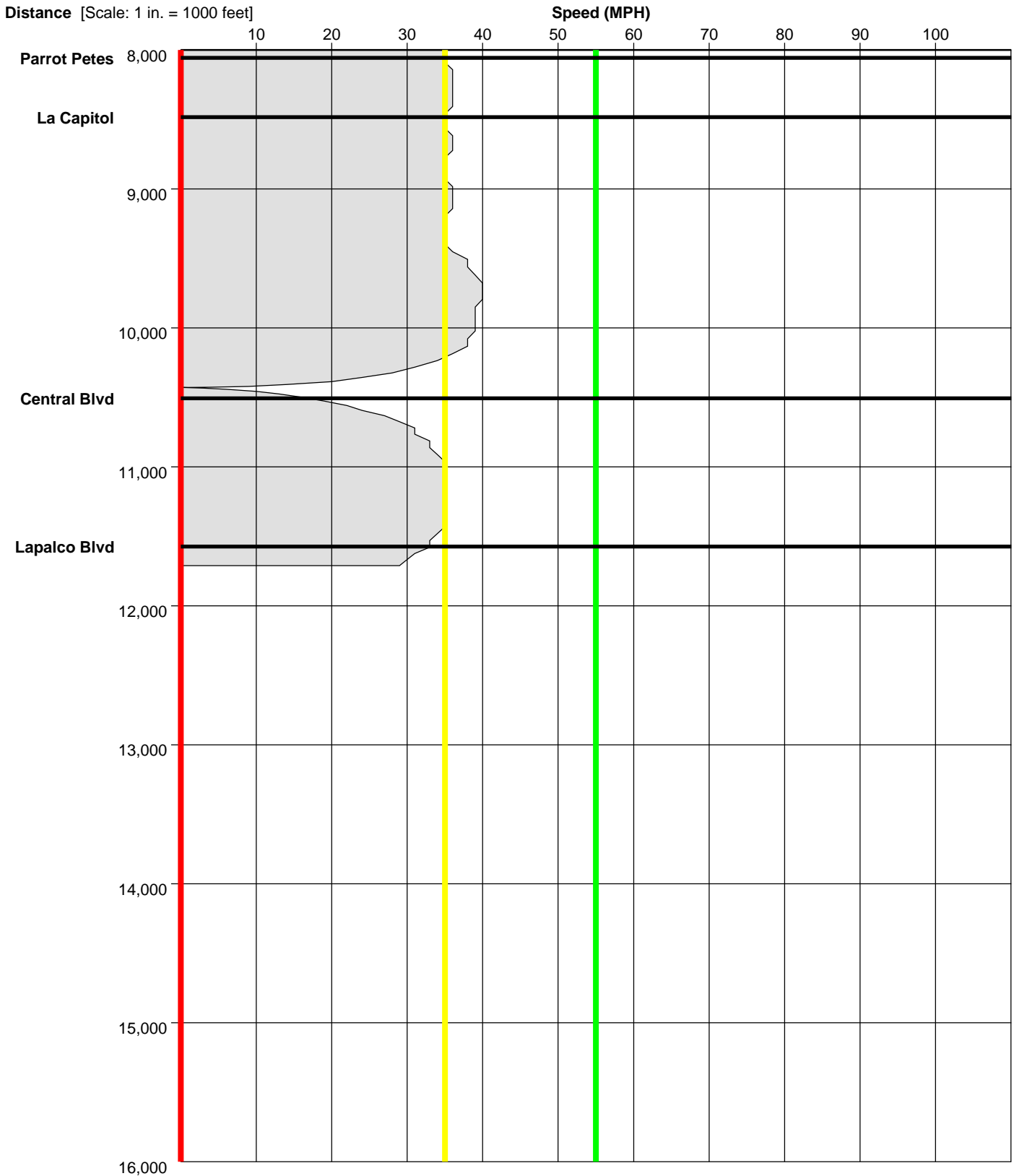
Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd Md 2-SB-002t** Start Time: **11:32** (This is an After Run)



ITS Regional

Manhattan Blvd Study

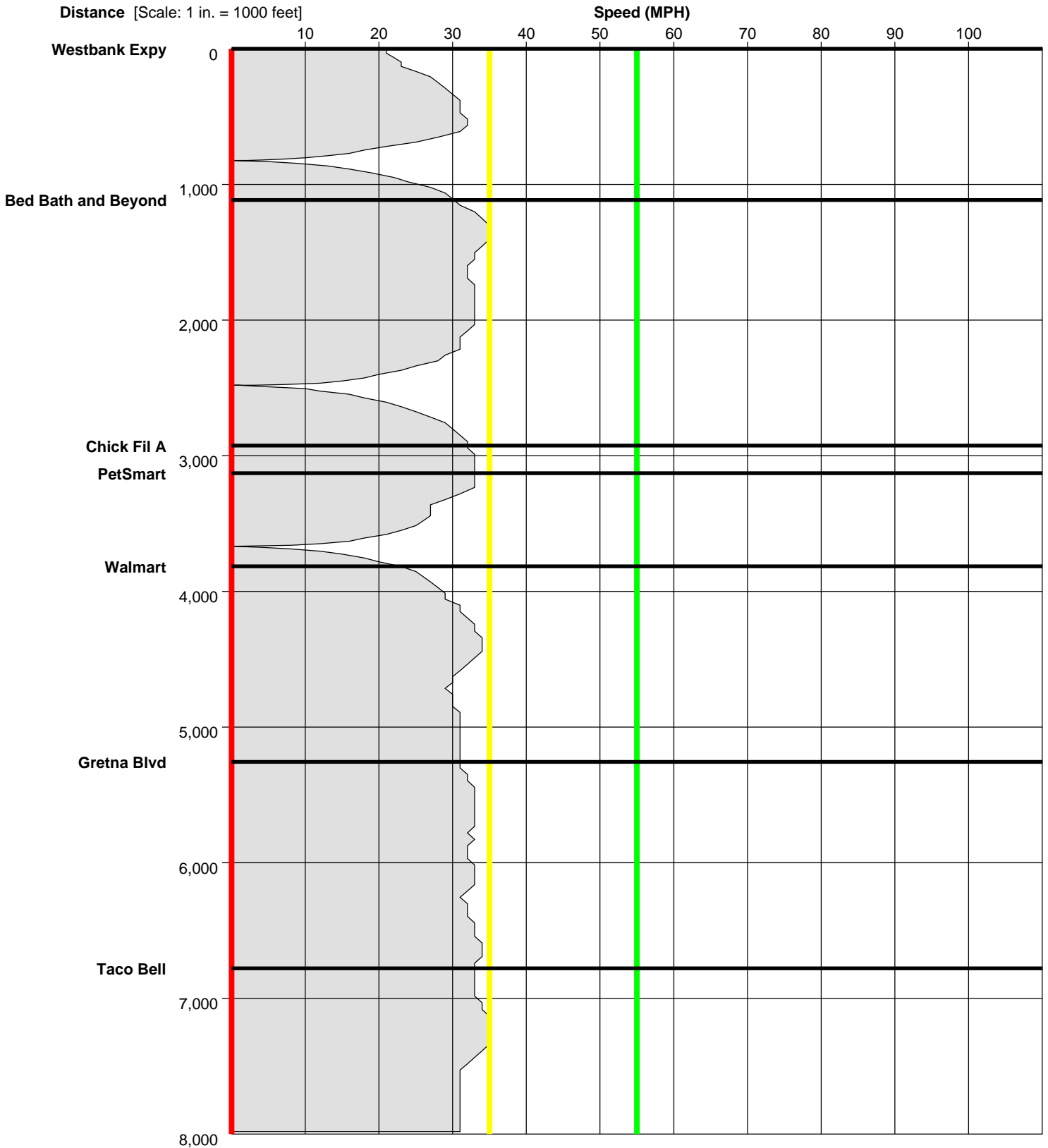
Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd Md 2-SB-003t** Start Time: **11:47** (This is an After Run)



ITS Regional

Manhattan Blvd Study

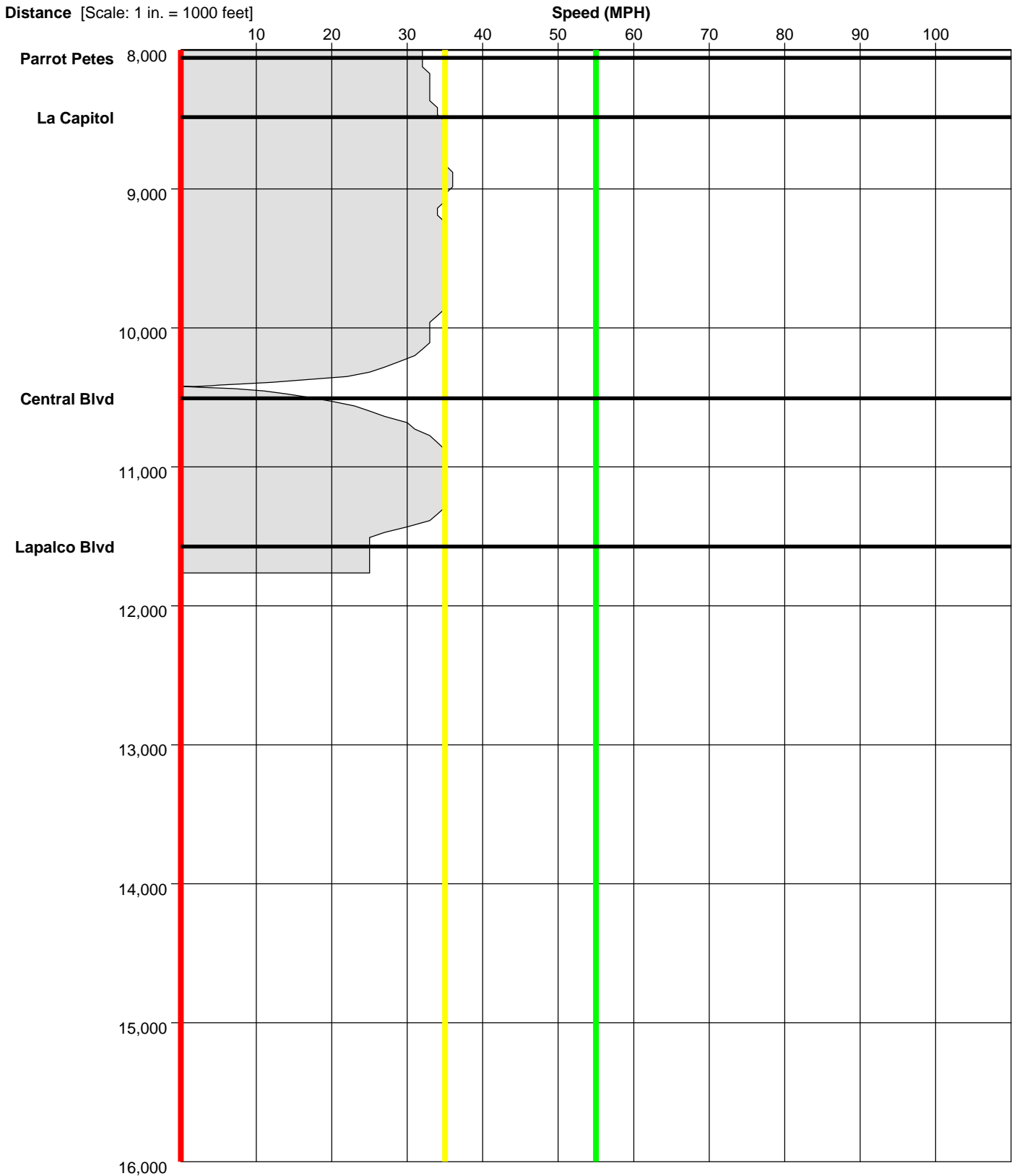
Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd Md 2-SB-003t** Start Time: **11:47** (This is an After Run)



ITS Regional

Manhattan Blvd Study

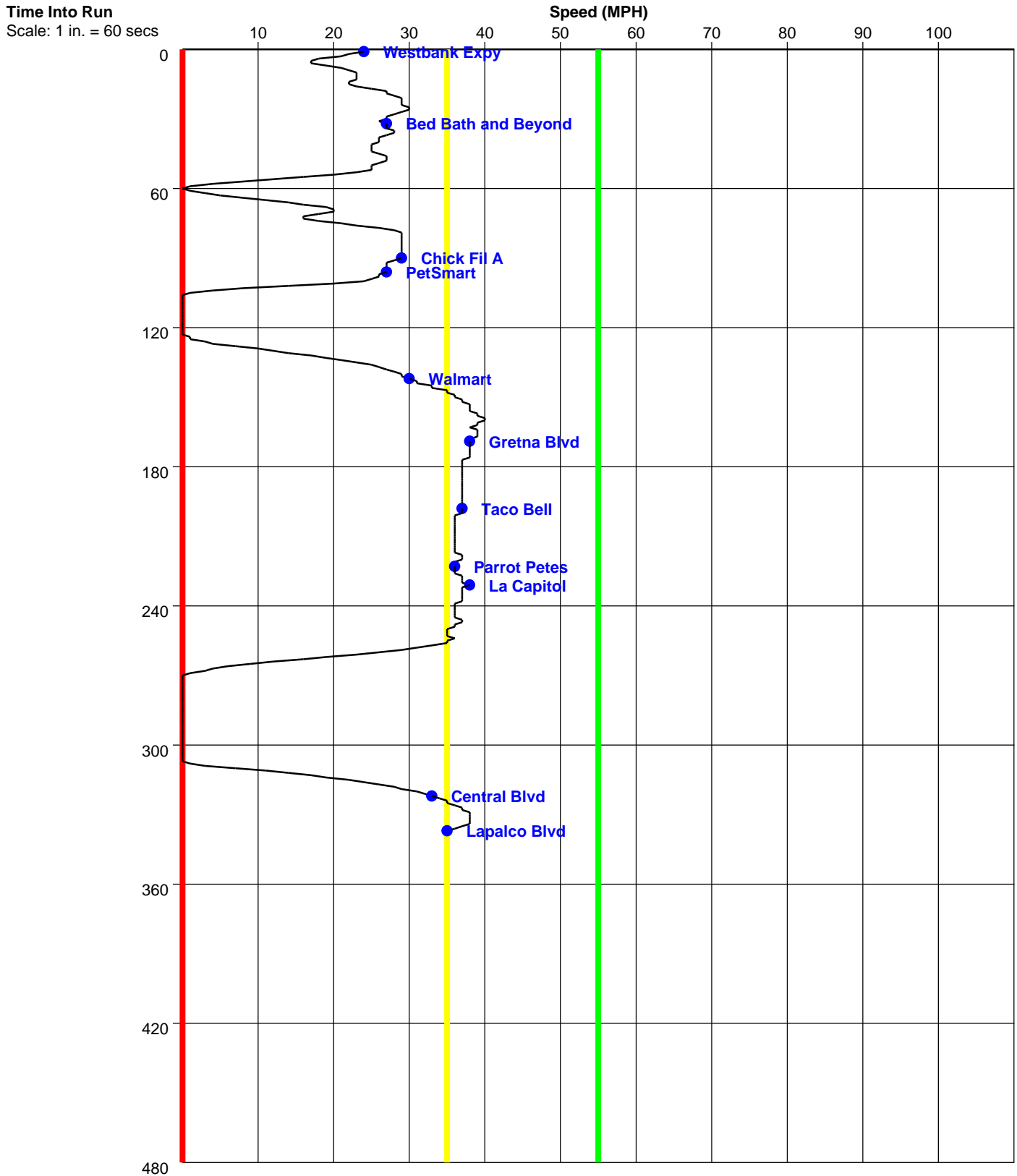
Study Name : **Manhattan Blvd SB Middyay 2**

Study Date : **4/25/2018**

Page No. : **24**

Time-Based Speed Profile

Run : **Manhattan Blvd Md 2-SB-001tn** Start Time:11:17 (This is an After Run)



ITS Regional

Manhattan Blvd Study

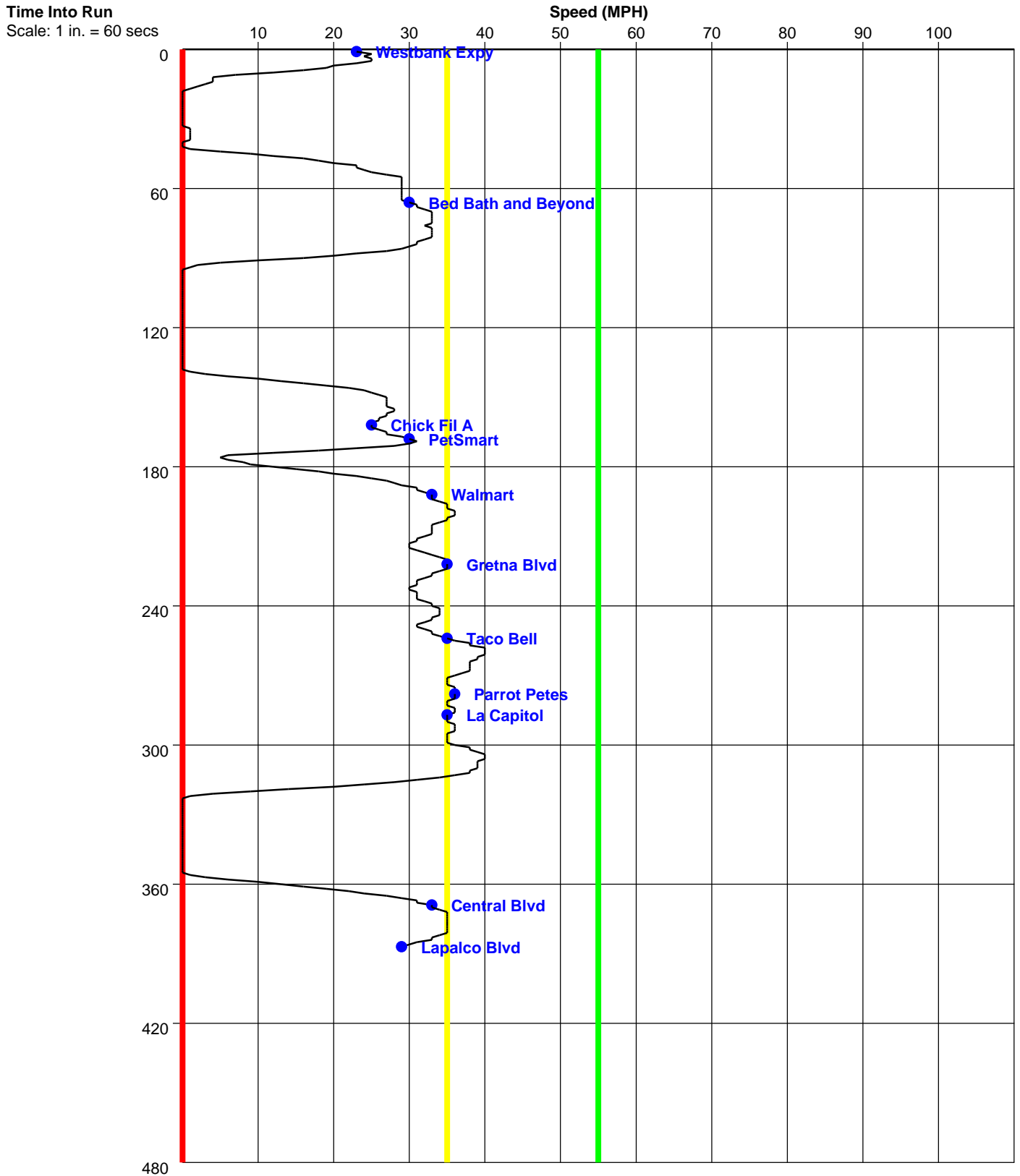
Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **25**

Time-Based Speed Profile

Run : **Manhattan Blvd Md 2-SB-002t** Start Time:11:32 (This is an After Run)



ITS Regional

Manhattan Blvd Study

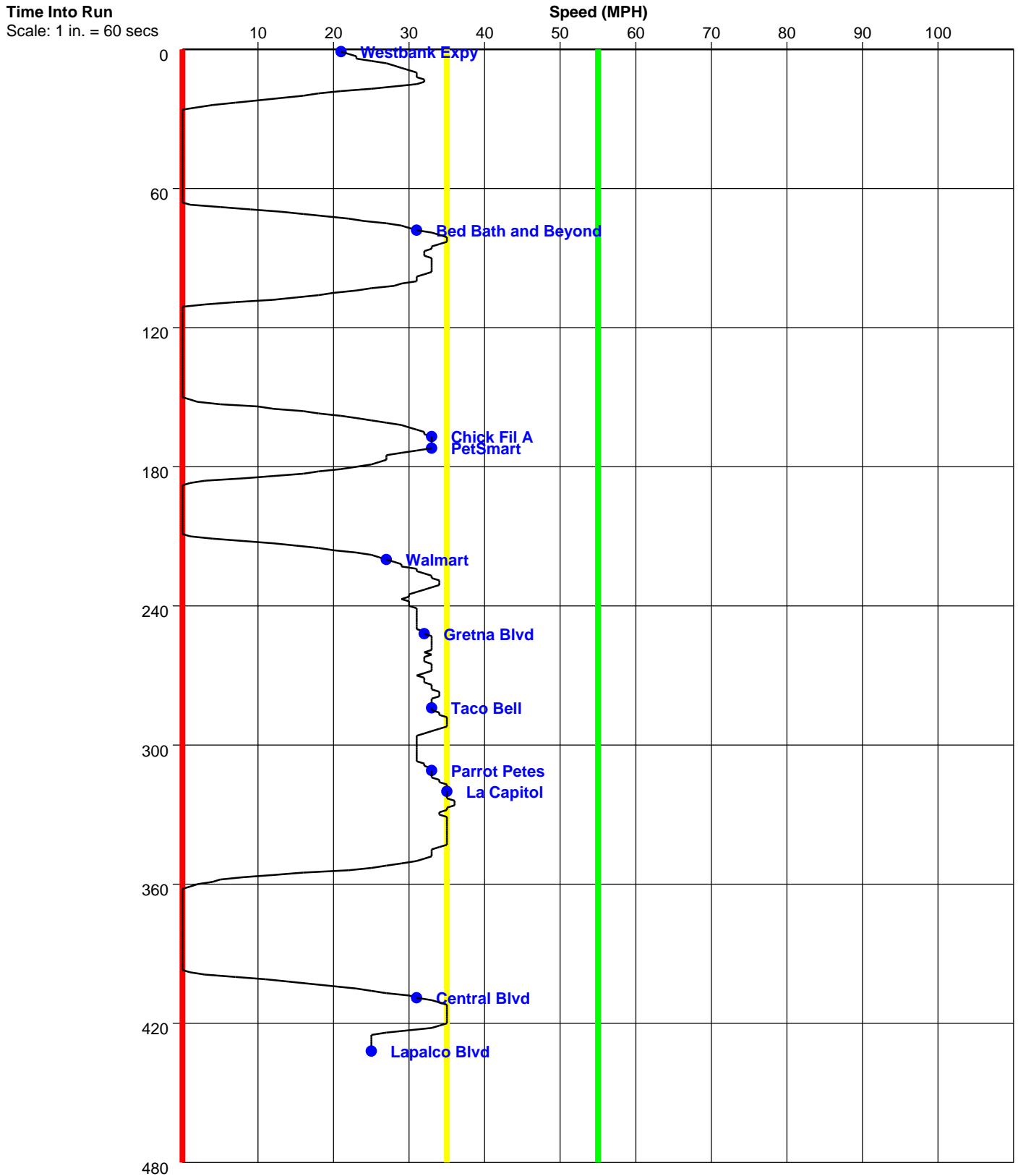
Study Name : **Manhattan Blvd SB Midday 2**

Study Date : **4/25/2018**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd Md 2-SB-003t** Start Time:11:47 (This is an After Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd NB PM 3

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ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd PM 3-NB-001tn	05/15/18	15:36	11780	After	Primary
Manhattan Blvd PM 3-NB-002t	05/15/18	15:58	11773	After	Secondary
Manhattan Blvd PM 3-NB-003t	05/15/18	16:20	11735	After	Secondary

Notes:

Node Info

#	Len	Name
1	0	Lapalco Blvd
2	1555	Central Blvd
3	2087	LA Capitol
4	454	Parrot Petes
5	1292	Taco Bell
6	1449	Gretna Blvd
7	1560	Walmart
8	616	PetSmart
9	171	Chick Fil A
10	1879	Bed Bath and Beyond
11	717	Westbank Expy

Length of Study Route = 11,780 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Lapalco Blvd							
2	1555	Central Blvd	35.0	0.0	30.3	8.0	0.0	21.3	35.0
3	2087	LA Capitol	41.3	0.3	34.4	6.0	0.0	14.0	41.3
4	454	Parrot Petes	23.0	0.7	13.5	15.0	6.0	21.0	23.0
5	1292	Taco Bell	50.3	1.0	17.5	28.3	11.3	47.0	50.3
6	1449	Gretna Blvd	34.7	0.0	28.5	9.7	0.0	27.3	34.7
7	1560	Walmart	27.3	0.0	38.9	0.3	0.0	1.0	27.3
8	616	PetSmart	11.7	0.0	36.0	1.3	0.0	6.3	11.7
9	171	Chick Fil A	3.7	0.0	31.8	0.7	0.0	2.7	3.7
10	1879	Bed Bath and Beyond	66.3	1.0	19.3	34.0	16.3	51.3	66.3
11	717	Westbank Expy	108.3	1.3	4.5	96.0	70.7	107.7	107.7
Total	11,780		401.7	4.3	20.0	199.3	104.3	299.7	401.0

Stats based on 3 AFTER runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Lapalco Blvd				
2	1555	Central Blvd	0.0159	1.8304	18.9240	1.3024
3	2087	LA Capitol	0.0174	1.3110	13.8472	0.6453
4	454	Parrot Petes	0.0087	1.1077	9.1348	0.8108
5	1292	Taco Bell	0.0178	1.9512	15.2557	1.2732
6	1449	Gretna Blvd	0.0153	1.8031	18.0629	1.3106
7	1560	Walmart	0.0130	1.0557	12.9256	0.5694
8	616	PetSmart	0.0043	0.2461	2.4982	0.0548
9	171	Chick Fil A	0.0012	0.0660	0.6673	0.0051
10	1879	Bed Bath and Beyond	0.0234	2.3307	22.3078	1.3175
11	717	Westbank Expy	0.0231	2.2548	19.9678	0.4732
Total	11,780		0.1401	13.9567	133.5914	7.7623

Stats based on 3 AFTER runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	35	32	38
3	2087	LA Capitol	39	51	34
4	454	Parrot Petes	24	9	36
5	1292	Taco Bell	56	56	39
6	1449	Gretna Blvd	36	30	38
7	1560	Walmart	27	28	27
8	616	PetSmart	13	12	10
9	171	Chick Fil A	4	4	3
10	1879	Bed Bath and Beyond	86	33	80
11	717	Westbank Expy	122	100	103
Totals	11780		442	355	408

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	0	0	0
3	2087	LA Capitol	0	1	0
4	454	Parrot Petes	1	0	1
5	1292	Taco Bell	1	1	1
6	1449	Gretna Blvd	0	0	0
7	1560	Walmart	0	0	0
8	616	PetSmart	0	0	0
9	171	Chick Fil A	0	0	0
10	1879	Bed Bath and Beyond	2	0	1
11	717	Westbank Expy	1	2	1
Totals	11780		5	4	4

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	30.3	33.6	28.7
3	2087	LA Capitol	36.4	27.8	41.6
4	454	Parrot Petes	12.9	35.0	8.2
5	1292	Taco Bell	15.7	15.4	22.9
6	1449	Gretna Blvd	27.5	33.7	26.1
7	1560	Walmart	39.4	38.2	40.5
8	616	PetSmart	32.4	33.7	41.0
9	171	Chick Fil A	29.3	27.5	40.0
10	1879	Bed Bath and Beyond	14.9	39.2	15.8
11	717	Westbank Expy	4.0	4.6	4.4
Totals	11780		18.2	22.7	19.7

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	8	5	11
3	2087	LA Capitol	3	15	0
4	454	Parrot Petes	16	1	28
5	1292	Taco Bell	34	34	17
6	1449	Gretna Blvd	11	5	13
7	1560	Walmart	0	1	0
8	616	PetSmart	3	1	0
9	171	Chick Fil A	1	1	0
10	1879	Bed Bath and Beyond	54	0	48
11	717	Westbank Expy	110	87	91
Totals	11780		240	150	208

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	0	0	0
3	2087	LA Capitol	0	0	0
4	454	Parrot Petes	0	0	18
5	1292	Taco Bell	13	21	0
6	1449	Gretna Blvd	0	0	0
7	1560	Walmart	0	0	0
8	616	PetSmart	0	0	0
9	171	Chick Fil A	0	0	0
10	1879	Bed Bath and Beyond	15	0	34
11	717	Westbank Expy	93	46	73
Totals	11780		121	67	125

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	20	15	29
3	2087	LA Capitol	6	36	0
4	454	Parrot Petes	24	4	35
5	1292	Taco Bell	56	46	39
6	1449	Gretna Blvd	29	16	37
7	1560	Walmart	1	0	2
8	616	PetSmart	10	9	0
9	171	Chick Fil A	4	4	0
10	1879	Bed Bath and Beyond	86	10	58
11	717	Westbank Expy	122	99	102
Totals	11780		358	239	302

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	35	32	38
3	2087	LA Capitol	39	51	34
4	454	Parrot Petes	24	9	36
5	1292	Taco Bell	56	56	39
6	1449	Gretna Blvd	36	30	38
7	1560	Walmart	27	28	27
8	616	PetSmart	13	12	10
9	171	Chick Fil A	4	4	3
10	1879	Bed Bath and Beyond	86	33	80
11	717	Westbank Expy	122	99	102
Totals	11780		442	354	407

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	0.0152	0.0148	0.0178
3	2087	LA Capitol	0.0158	0.0208	0.0155
4	454	Parrot Petes	0.0077	0.0083	0.0101
5	1292	Taco Bell	0.0197	0.0177	0.0160
6	1449	Gretna Blvd	0.0158	0.0152	0.0151
7	1560	Walmart	0.0128	0.0120	0.0143
8	616	PetSmart	0.0046	0.0041	0.0043
9	171	Chick Fil A	0.0012	0.0012	0.0013
10	1879	Bed Bath and Beyond	0.0268	0.0191	0.0242
11	717	Westbank Expy	0.0259	0.0213	0.0221
Totals	11780		0.1455	0.1345	0.1404

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	1.6824	1.5665	2.2422
3	2087	LA Capitol	1.0750	2.0225	0.8356
4	454	Parrot Petes	0.9340	1.3017	1.0874
5	1292	Taco Bell	2.3429	1.6358	1.8750
6	1449	Gretna Blvd	1.8845	1.7849	1.7399
7	1560	Walmart	1.0224	0.8549	1.2898
8	616	PetSmart	0.3423	0.2160	0.1800
9	171	Chick Fil A	0.0720	0.0720	0.0540
10	1879	Bed Bath and Beyond	2.8340	2.1377	2.0203
11	717	Westbank Expy	2.5092	2.0592	2.1960
Totals	11780		14.6987	13.6511	13.5203

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	17.0331	16.2309	23.5080
3	2087	LA Capitol	12.1744	19.6231	9.7440
4	454	Parrot Petes	5.3735	15.0394	6.9915
5	1292	Taco Bell	19.3680	12.1425	14.2566
6	1449	Gretna Blvd	18.2830	20.1508	15.7550
7	1560	Walmart	12.5278	10.1937	16.0554
8	616	PetSmart	3.4905	2.1840	1.8200
9	171	Chick Fil A	0.7280	0.7280	0.5460
10	1879	Bed Bath and Beyond	21.2780	28.7739	16.8715
11	717	Westbank Expy	22.6899	17.0767	20.1367
Totals	11780		132.9463	142.1430	125.6848

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd PM 3-NB-001tn

Manhattan Blvd PM 3-NB-002t

Manhattan Blvd PM 3-NB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Lapalco Blvd			
2	1555	Central Blvd	1.1524	1.0776	1.6773
3	2087	LA Capitol	0.4099	1.2888	0.2371
4	454	Parrot Petes	0.6730	1.1548	0.6045
5	1292	Taco Bell	1.5870	0.8287	1.4040
6	1449	Gretna Blvd	1.3911	1.3099	1.2307
7	1560	Walmart	0.5470	0.3680	0.7932
8	616	PetSmart	0.1430	0.0213	0.0000
9	171	Chick Fil A	0.0065	0.0064	0.0024
10	1879	Bed Bath and Beyond	1.6443	1.5379	0.7703
11	717	Westbank Expy	0.4415	0.4856	0.4924
Totals	11780		7.9958	8.0790	7.2120

ITS Regional

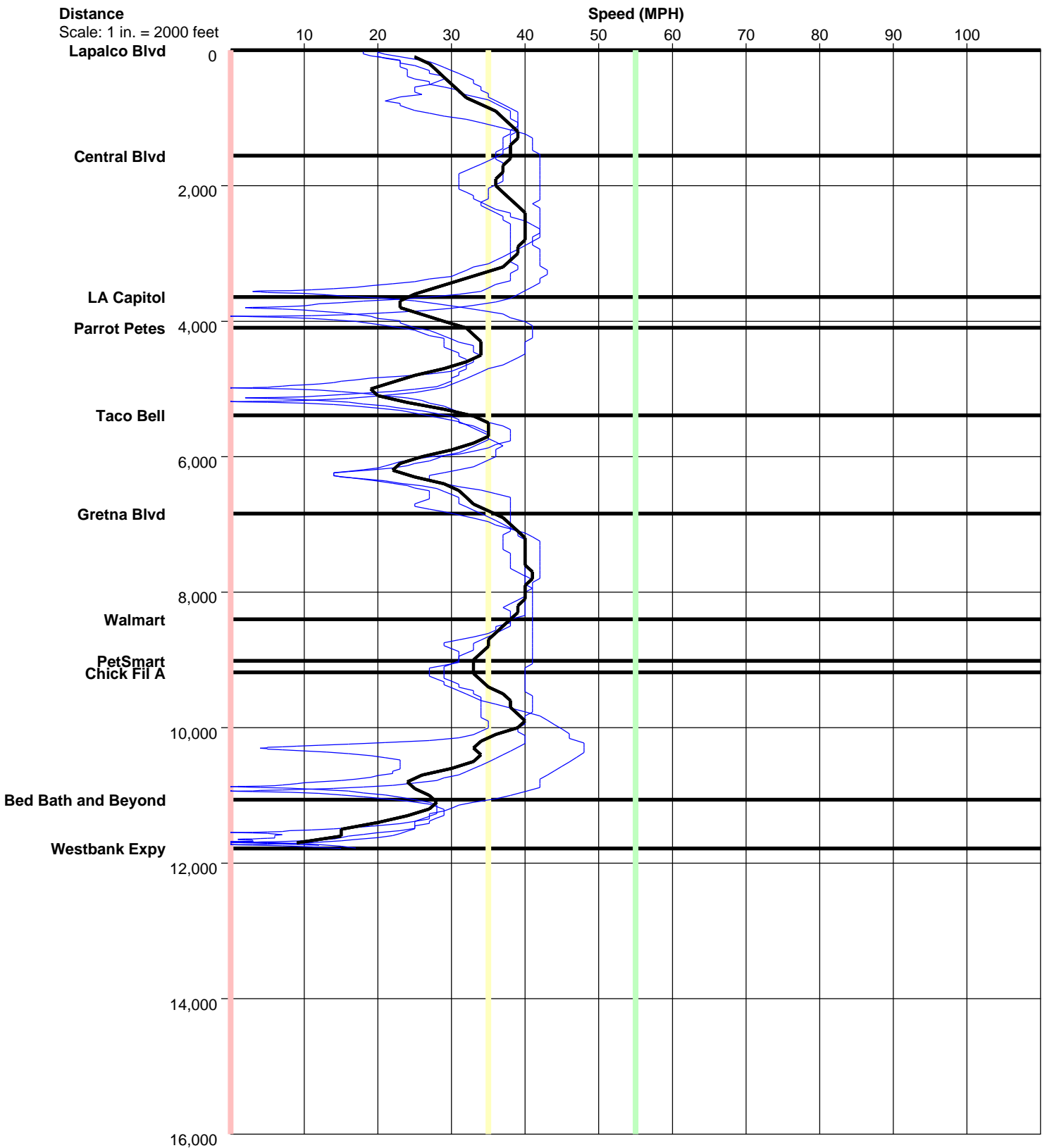
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

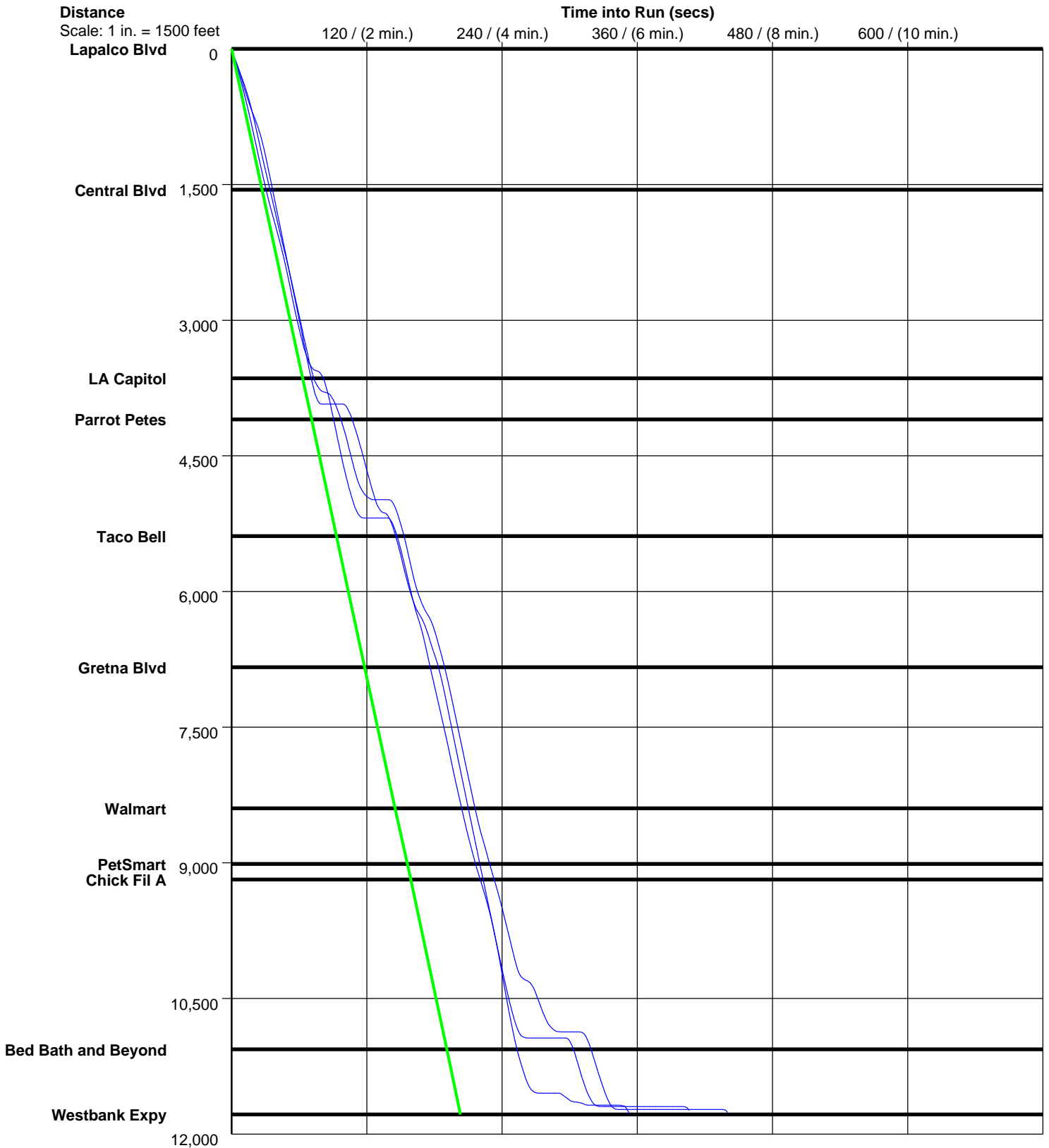
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

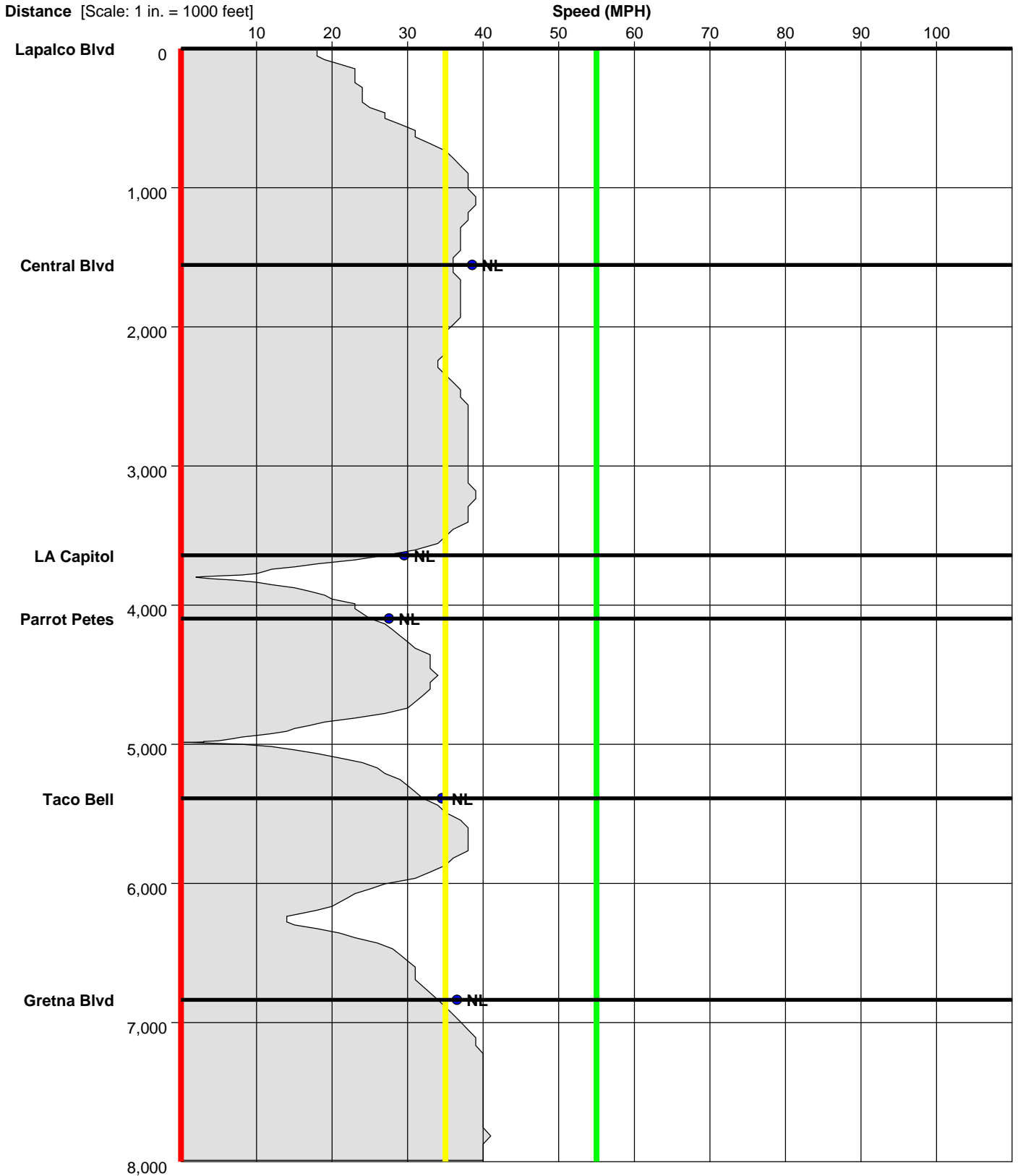
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd PM 3-NB-001tn** Start Time: **15:36** (This is an After Run)



ITS Regional

Manhattan Blvd Study

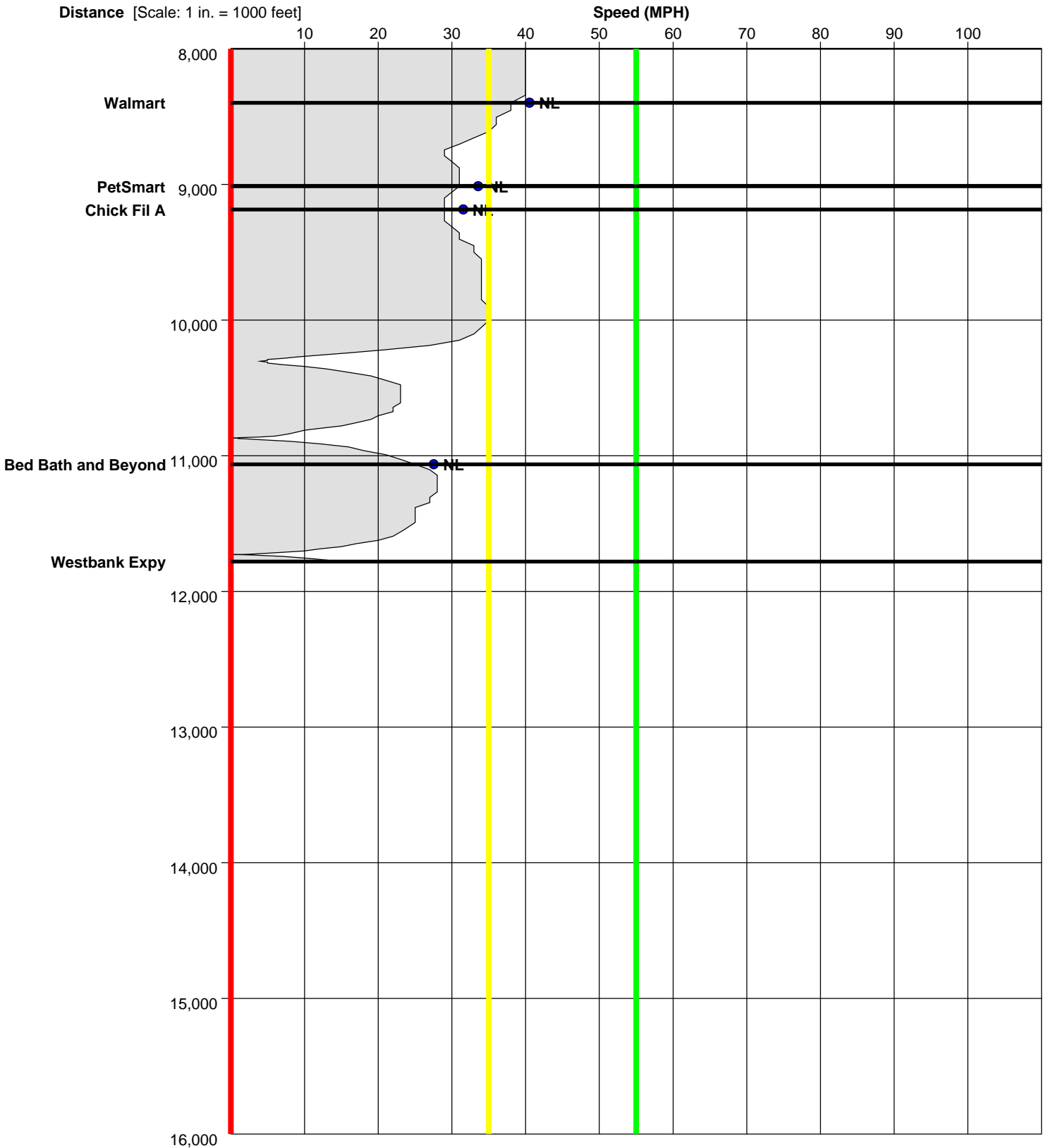
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd PM 3-NB-001tn** Start Time: **15:36** (This is an After Run)



ITS Regional

Manhattan Blvd Study

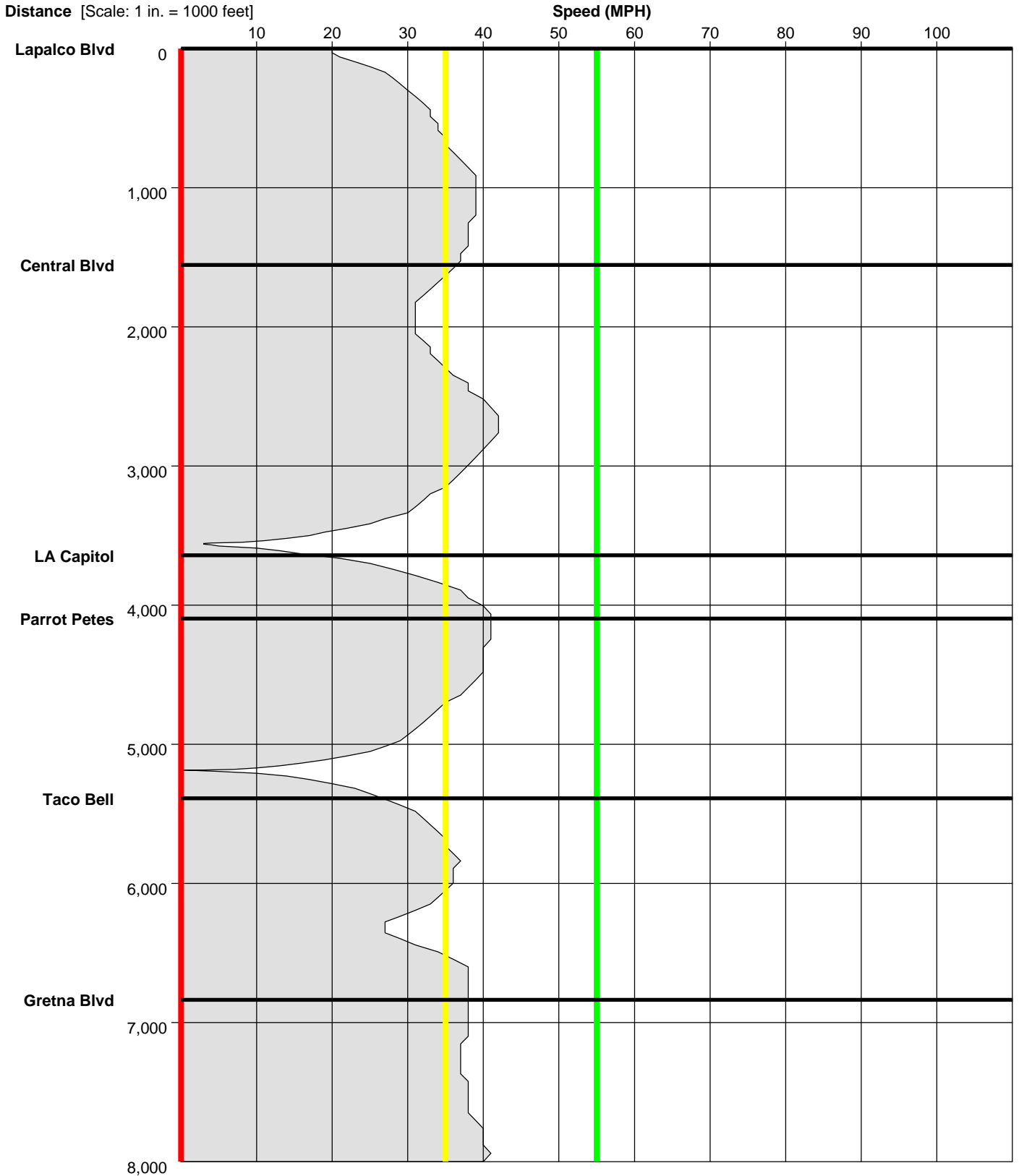
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd PM 3-NB-002t** Start Time: **15:58** (This is an After Run)



ITS Regional

Manhattan Blvd Study

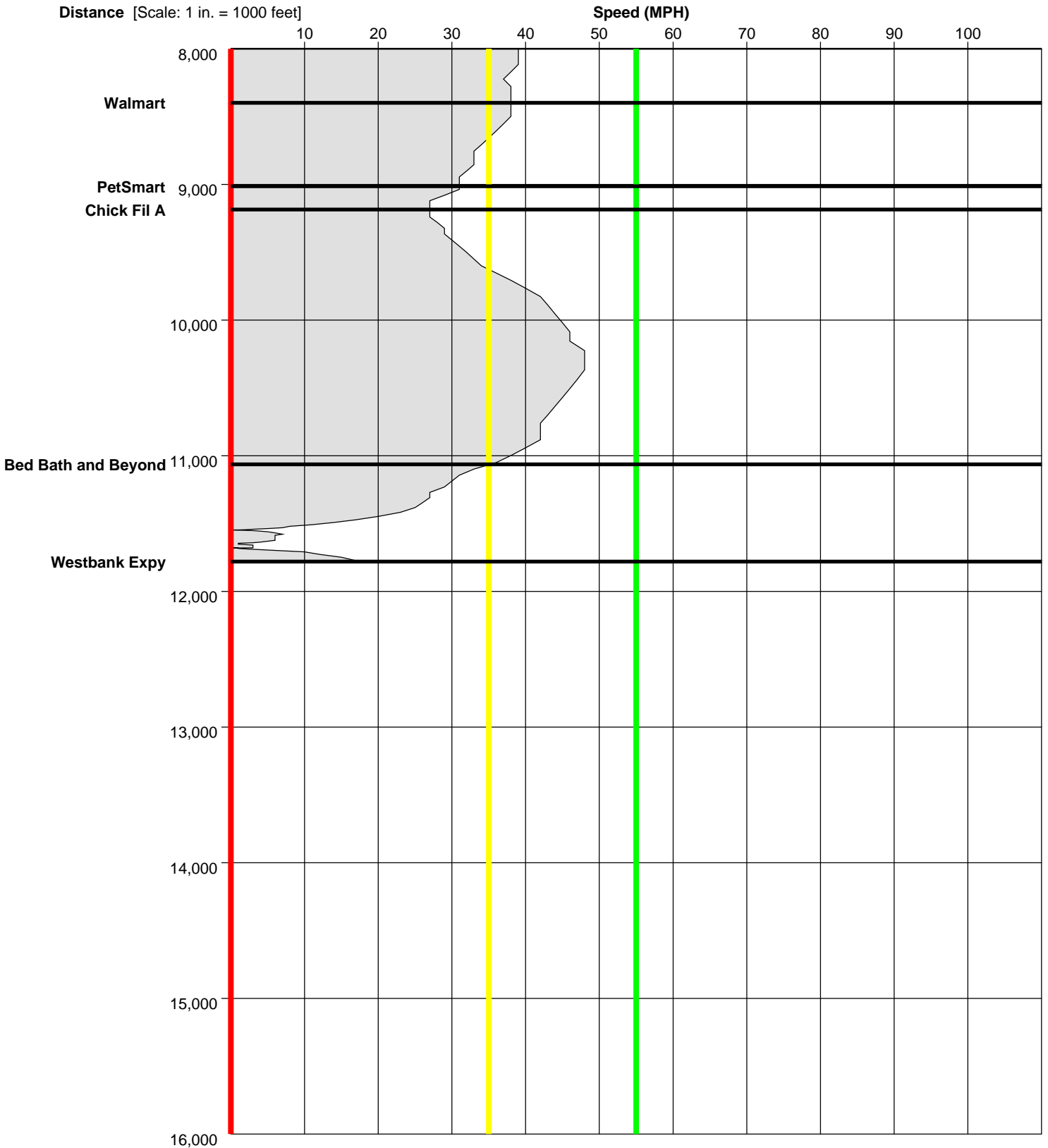
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd PM 3-NB-002t** Start Time: **15:58** (This is an After Run)



ITS Regional

Manhattan Blvd Study

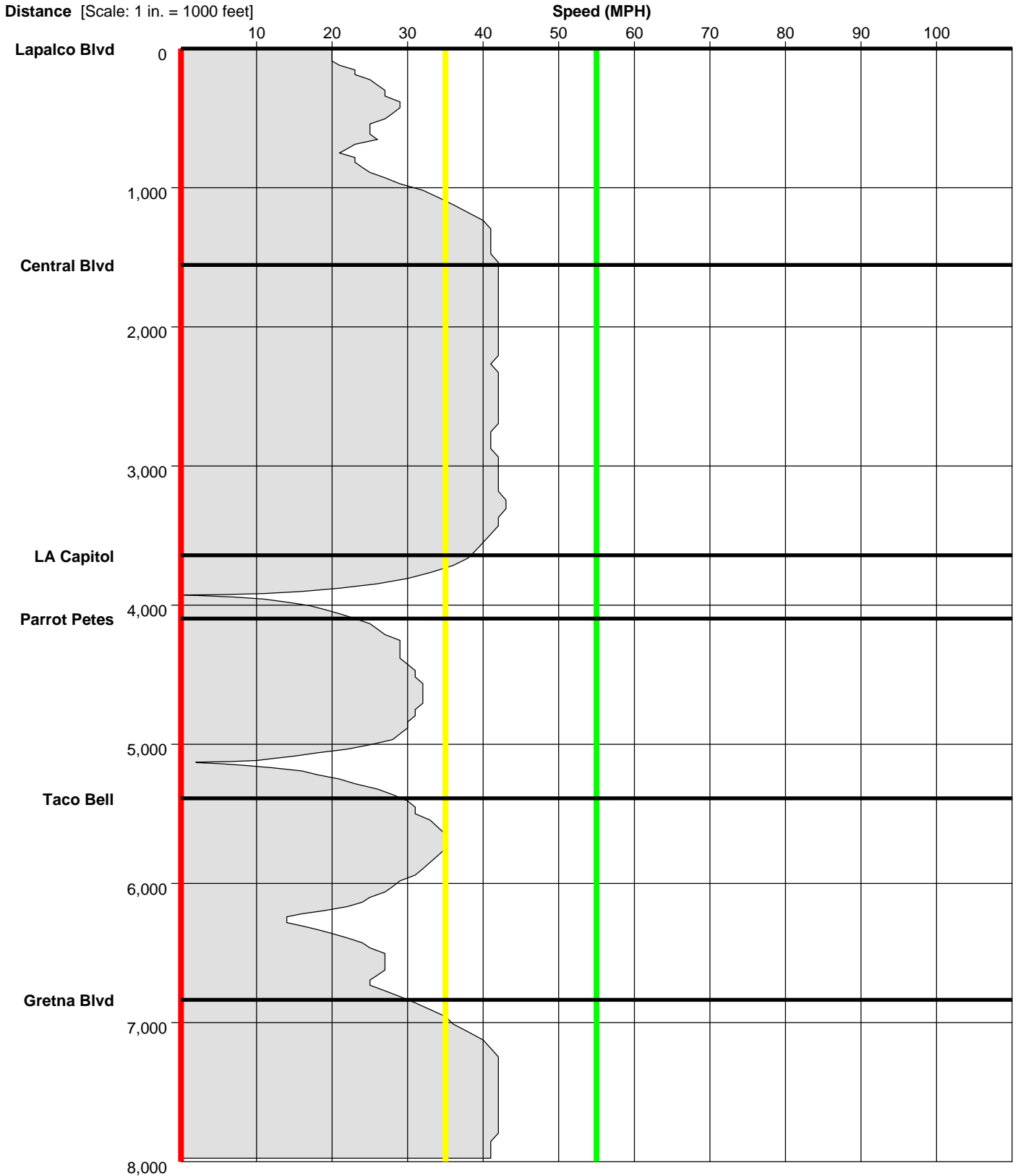
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd PM 3-NB-003t** Start Time: **16:20** (This is an After Run)



ITS Regional

Manhattan Blvd Study

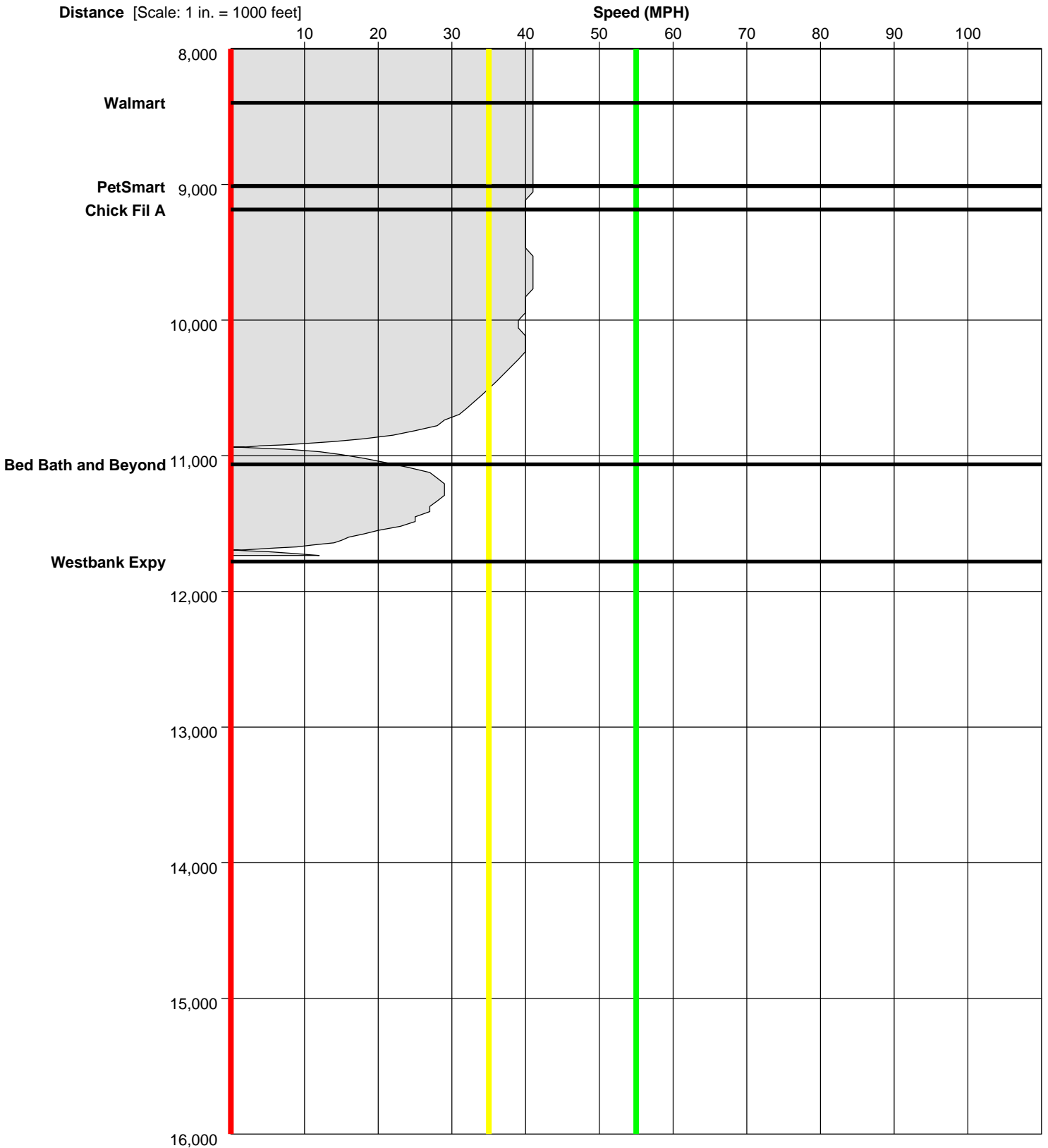
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd PM 3-NB-003t** Start Time: **16:20** (This is an After Run)



ITS Regional

Manhattan Blvd Study

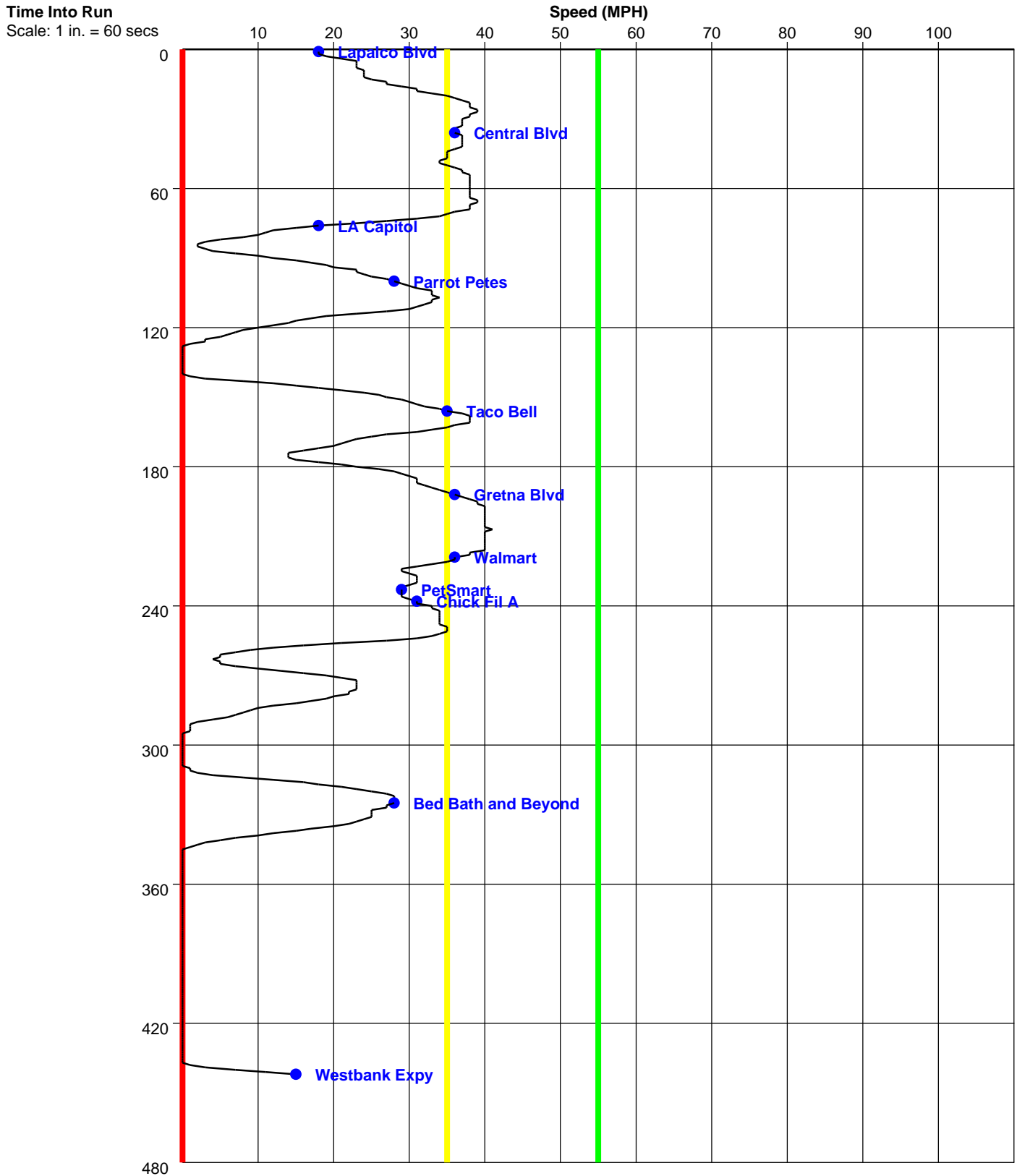
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **24**

Time-Based Speed Profile

Run : **Manhattan Blvd PM 3-NB-001tn** Start Time:15:36 (This is an After Run)



ITS Regional

Manhattan Blvd Study

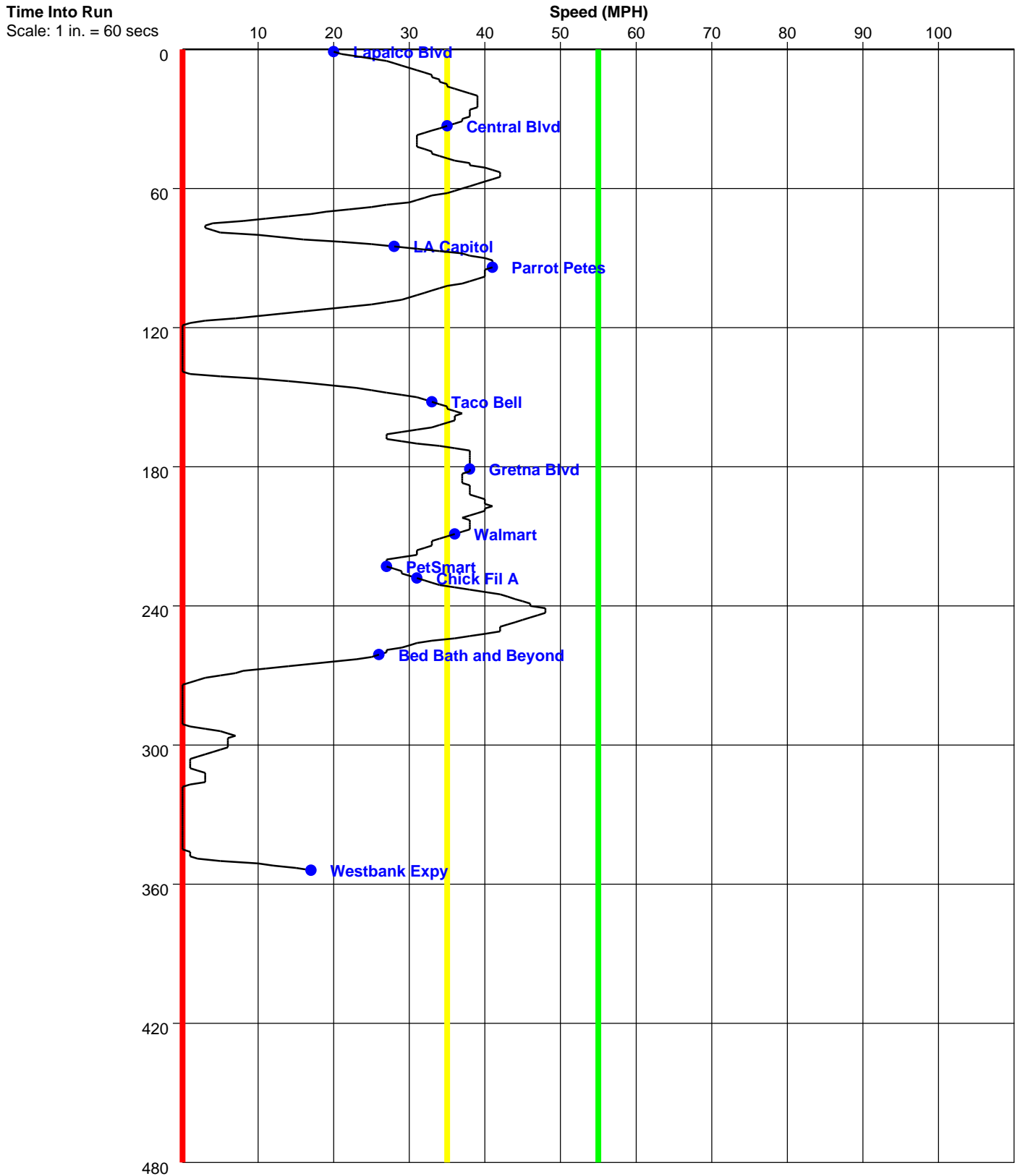
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **25**

Time-Based Speed Profile

Run : **Manhattan Blvd PM 3-NB-002t** Start Time:15:58 (This is an After Run)



ITS Regional

Manhattan Blvd Study

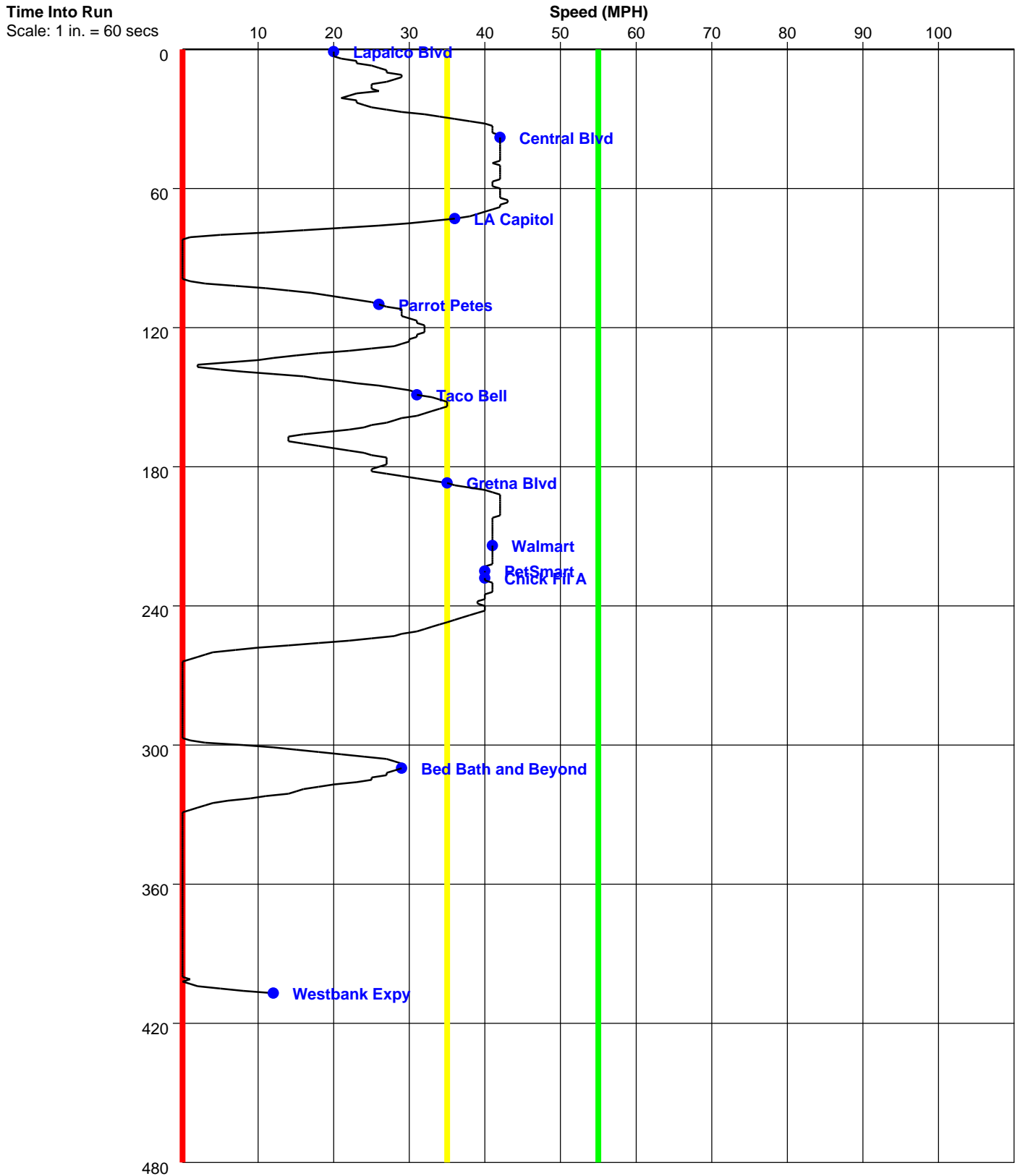
Study Name : **Manhattan Blvd NB PM 3**

Study Date : **5/15/2018**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd PM 3-NB-003t** Start Time:16:20 (This is an After Run)



ITS Regional

Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd SB PM 3

<u>Report Name</u>	<u>Page</u>
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Speed Profile (Time vs Spd) for Manhattan Blvd PM 3-SB-002t	25
Speed Profile (Time vs Spd) for Manhattan Blvd PM 3-SB-003t	26

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **2**

Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd PM 3-SB-001tn	05/15/18	15:28	11800	After	Primary
Manhattan Blvd PM 3-SB-002t	05/15/18	15:48	11752	After	Secondary
Manhattan Blvd PM 3-SB-003t	05/15/18	16:11	11703	After	Secondary

Notes:

Node Info

#	Len	Name
1	0	Westbank Expy
2	1111	Bed Bath and Beyond
3	1908	Chick Fil A
4	202	PetSmart
5	655	Walmart
6	1557	Gretna Blvd
7	1480	Taco Bell
8	1320	Parrot Petes
9	435	La Capitol
10	2024	Central Blvd
11	1108	Lapalco Blvd

Length of Study Route = 11,800 feet

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Westbank Expy							
2	1111	Bed Bath and Beyond	70.3	1.3	10.8	51.3	20.7	70.3	70.3
3	1908	Chick Fil A	84.0	1.3	15.5	51.0	24.7	82.3	84.0
4	202	PetSmart	5.3	0.0	25.8	1.7	0.0	4.3	5.3
5	655	Walmart	24.0	0.7	18.6	12.3	3.3	20.0	24.0
6	1557	Gretna Blvd	67.0	1.0	15.8	40.0	21.7	58.0	67.0
7	1480	Taco Bell	42.0	0.3	24.0	16.7	7.7	32.7	42.0
8	1320	Parrot Petes	25.0	0.0	36.0	2.3	0.0	8.7	25.0
9	435	La Capitol	7.3	0.0	40.4	0.0	0.0	0.0	7.3
10	2024	Central Blvd	41.7	0.0	33.1	7.0	0.0	21.0	41.7
11	1108	Lapalco Blvd	73.3	0.7	10.3	54.7	39.0	71.7	72.7
Total	11,800		440.0	5.3	18.3	237.0	117.0	369.0	439.3

Stats based on 3 AFTER runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **4**

Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Westbank Expy				
2	1111	Bed Bath and Beyond	0.0196	2.1444	16.7006	1.1179
3	1908	Chick Fil A	0.0253	2.6195	22.0894	1.3788
4	202	PetSmart	0.0025	0.3141	2.5889	0.2510
5	655	Walmart	0.0086	0.9816	9.3903	0.6321
6	1557	Gretna Blvd	0.0225	2.4403	20.7848	1.4658
7	1480	Taco Bell	0.0154	1.4741	13.8917	0.8360
8	1320	Parrot Petes	0.0127	1.3164	15.3232	0.9016
9	435	La Capitol	0.0034	0.2027	2.4124	0.0722
10	2024	Central Blvd	0.0161	1.1533	11.1134	0.5021
11	1108	Lapalco Blvd	0.0187	1.8971	16.3677	0.7451
Total	11,800		0.1447	14.5435	130.6626	7.9026

Stats based on 3 AFTER runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **5**

Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	29	112	70
3	1908	Chick Fil A	54	98	100
4	202	PetSmart	6	4	6
5	655	Walmart	22	12	38
6	1557	Gretna Blvd	110	60	31
7	1480	Taco Bell	69	29	28
8	1320	Parrot Petes	22	30	23
9	435	La Capitol	7	7	8
10	2024	Central Blvd	48	37	40
11	1108	Lapalco Blvd	28	105	87
Totals	11800		395	494	431

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **6**

Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	0	2	2
3	1908	Chick Fil A	1	1	2
4	202	PetSmart	0	0	0
5	655	Walmart	1	0	1
6	1557	Gretna Blvd	2	1	0
7	1480	Taco Bell	1	0	0
8	1320	Parrot Petes	0	0	0
9	435	La Capitol	0	0	0
10	2024	Central Blvd	0	0	0
11	1108	Lapalco Blvd	0	1	1
Totals	11800		5	5	6

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **7**

Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd PM 3-SB-001tn
Manhattan Blvd PM 3-SB-002t
Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	26.1	7.0	11.0
3	1908	Chick Fil A	24.0	13.1	13.0
4	202	PetSmart	22.8	35.5	25.7
5	655	Walmart	20.3	39.3	11.7
6	1557	Gretna Blvd	9.6	17.6	34.5
7	1480	Taco Bell	14.6	34.6	35.3
8	1320	Parrot Petes	41.0	30.1	39.1
9	435	La Capitol	42.4	39.7	41.3
10	2024	Central Blvd	28.8	37.9	33.9
11	1108	Lapalco Blvd	26.9	6.7	7.8
Totals	11800		20.4	16.3	18.6

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **8**

Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd PM 3-SB-001tn
Manhattan Blvd PM 3-SB-002t
Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	10	93	51
3	1908	Chick Fil A	21	65	67
4	202	PetSmart	3	0	2
5	655	Walmart	11	0	26
6	1557	Gretna Blvd	83	33	4
7	1480	Taco Bell	44	3	3
8	1320	Parrot Petes	0	7	0
9	435	La Capitol	0	0	0
10	2024	Central Blvd	14	2	5
11	1108	Lapalco Blvd	9	86	69
Totals	11800		195	289	227

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **9**

Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	0	48	14
3	1908	Chick Fil A	7	40	27
4	202	PetSmart	0	0	0
5	655	Walmart	0	0	10
6	1557	Gretna Blvd	44	21	0
7	1480	Taco Bell	23	0	0
8	1320	Parrot Petes	0	0	0
9	435	La Capitol	0	0	0
10	2024	Central Blvd	0	0	0
11	1108	Lapalco Blvd	0	68	49
Totals	11800		74	177	100

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **10**

Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	29	112	70
3	1908	Chick Fil A	49	98	100
4	202	PetSmart	6	1	6
5	655	Walmart	22	0	38
6	1557	Gretna Blvd	108	46	20
7	1480	Taco Bell	65	18	15
8	1320	Parrot Petes	1	20	5
9	435	La Capitol	0	0	0
10	2024	Central Blvd	26	9	28
11	1108	Lapalco Blvd	25	104	86
Totals	11800		331	408	368

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	29	112	70
3	1908	Chick Fil A	54	98	100
4	202	PetSmart	6	4	6
5	655	Walmart	22	12	38
6	1557	Gretna Blvd	110	60	31
7	1480	Taco Bell	69	29	28
8	1320	Parrot Petes	22	30	23
9	435	La Capitol	7	7	8
10	2024	Central Blvd	48	37	40
11	1108	Lapalco Blvd	28	104	86
Totals	11800		395	493	430

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	0.0124	0.0272	0.0192
3	1908	Chick Fil A	0.0191	0.0297	0.0271
4	202	PetSmart	0.0033	0.0019	0.0023
5	655	Walmart	0.0071	0.0067	0.0121
6	1557	Gretna Blvd	0.0329	0.0203	0.0142
7	1480	Taco Bell	0.0236	0.0116	0.0110
8	1320	Parrot Petes	0.0118	0.0145	0.0118
9	435	La Capitol	0.0031	0.0032	0.0038
10	2024	Central Blvd	0.0185	0.0145	0.0152
11	1108	Lapalco Blvd	0.0102	0.0237	0.0223
Totals	11800		0.1421	0.1533	0.1389

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	1.4368	2.9002	2.0963
3	1908	Chick Fil A	1.8542	3.3403	2.6639
4	202	PetSmart	0.4872	0.2039	0.2513
5	655	Walmart	0.7543	0.7868	1.4038
6	1557	Gretna Blvd	3.8942	1.9409	1.4859
7	1480	Taco Bell	2.6993	0.9586	0.7644
8	1320	Parrot Petes	1.1087	1.7061	1.1343
9	435	La Capitol	0.1260	0.2296	0.2526
10	2024	Central Blvd	1.6192	0.7184	1.1223
11	1108	Lapalco Blvd	1.0942	2.2842	2.3128
Totals	11800		15.0740	15.0688	13.4876

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	12.4222	21.9257	15.7541
3	1908	Chick Fil A	17.3512	29.1213	19.7955
4	202	PetSmart	3.1696	2.4230	2.1741
5	655	Walmart	7.7026	10.7359	9.7325
6	1557	Gretna Blvd	29.3422	15.2683	17.7440
7	1480	Taco Bell	22.4044	10.8664	8.4044
8	1320	Parrot Petes	14.5297	17.1363	14.3036
9	435	La Capitol	1.2740	2.8204	3.1429
10	2024	Central Blvd	13.7986	7.5244	12.0173
11	1108	Lapalco Blvd	11.0812	19.0874	18.9346
Totals	11800		133.0758	136.9090	122.0030

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd PM 3-SB-001tn

Manhattan Blvd PM 3-SB-002t

Manhattan Blvd PM 3-SB-003t

Node #	Length	Node Name	Run #1	Run #2	Run #3
1	0	Westbank Expy			
2	1111	Bed Bath and Beyond	1.0514	1.2095	1.0928
3	1908	Chick Fil A	1.0651	1.8720	1.1994
4	202	PetSmart	0.4467	0.1386	0.1678
5	655	Walmart	0.4303	0.5616	0.9045
6	1557	Gretna Blvd	2.3597	1.0843	0.9533
7	1480	Taco Bell	1.7273	0.4697	0.3109
8	1320	Parrot Petes	0.7030	1.2776	0.7242
9	435	La Capitol	0.0074	0.1030	0.1063
10	2024	Central Blvd	0.9456	0.0808	0.4798
11	1108	Lapalco Blvd	0.6830	0.5877	0.9645
Totals	11800		9.4195	7.3849	6.9035

ITS Regional

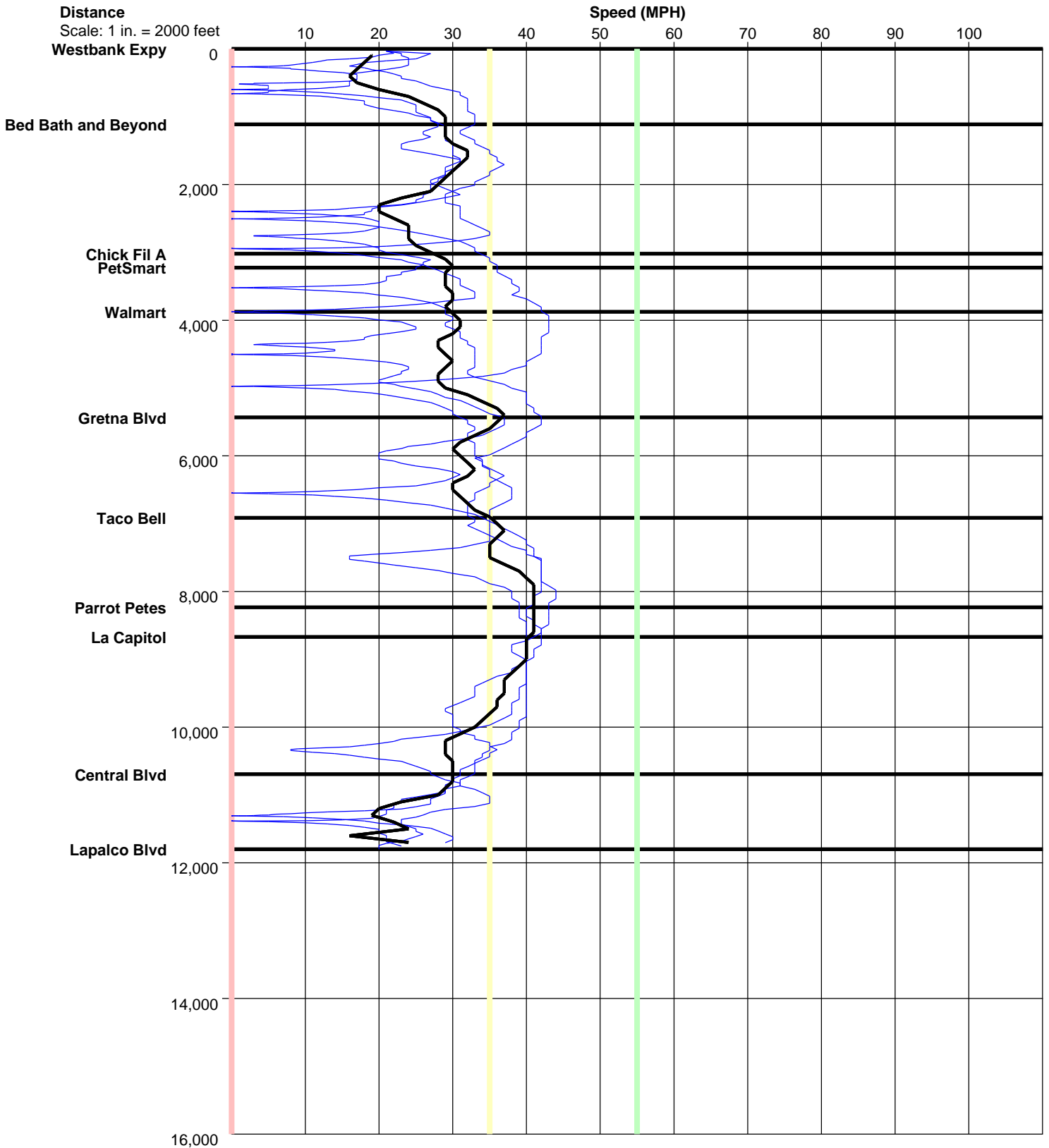
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **16**

Speed/Distance Profiles of All Runs



ITS Regional

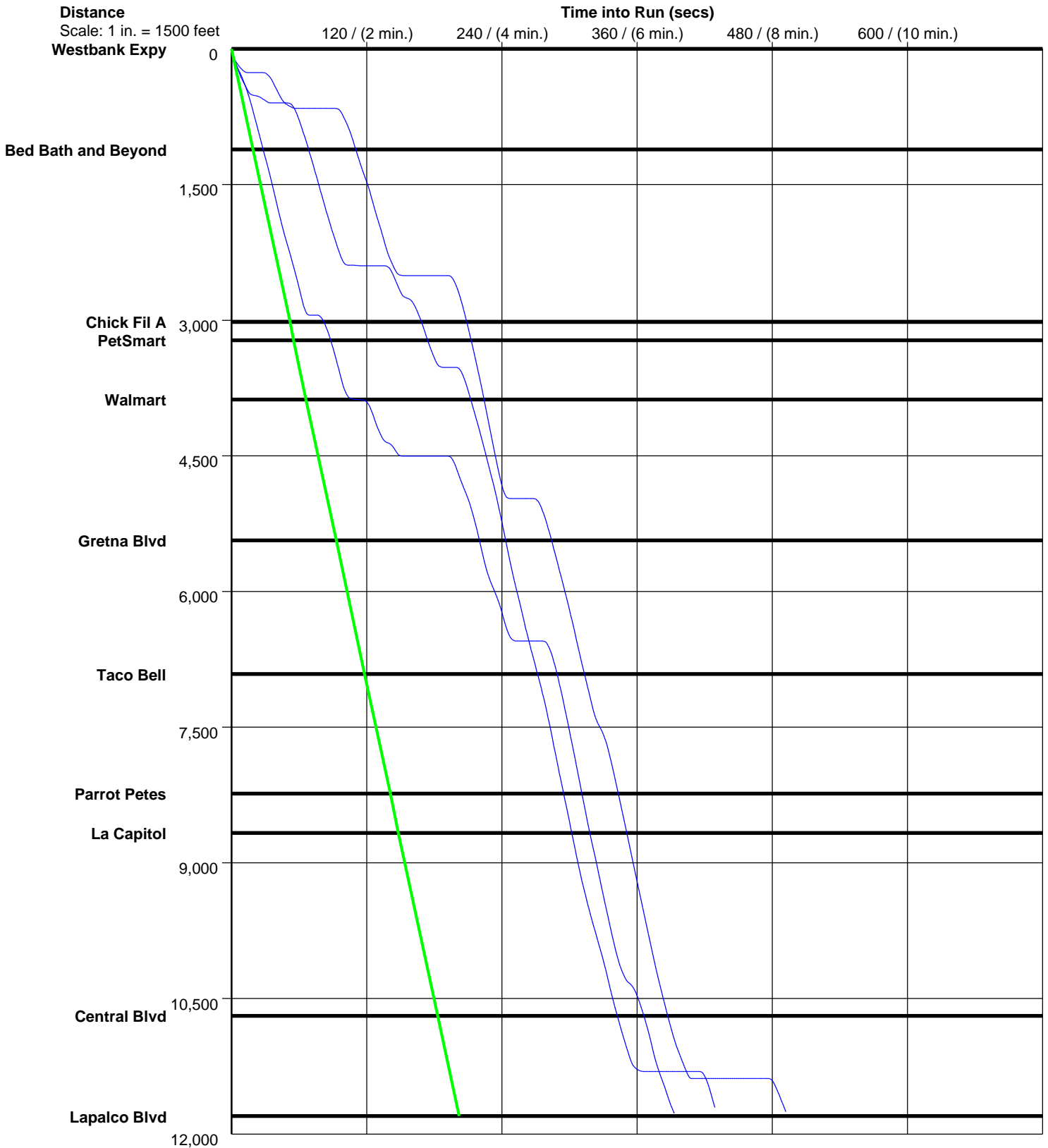
Manhattan Blvd Study

Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

ITS Regional

Manhattan Blvd Study

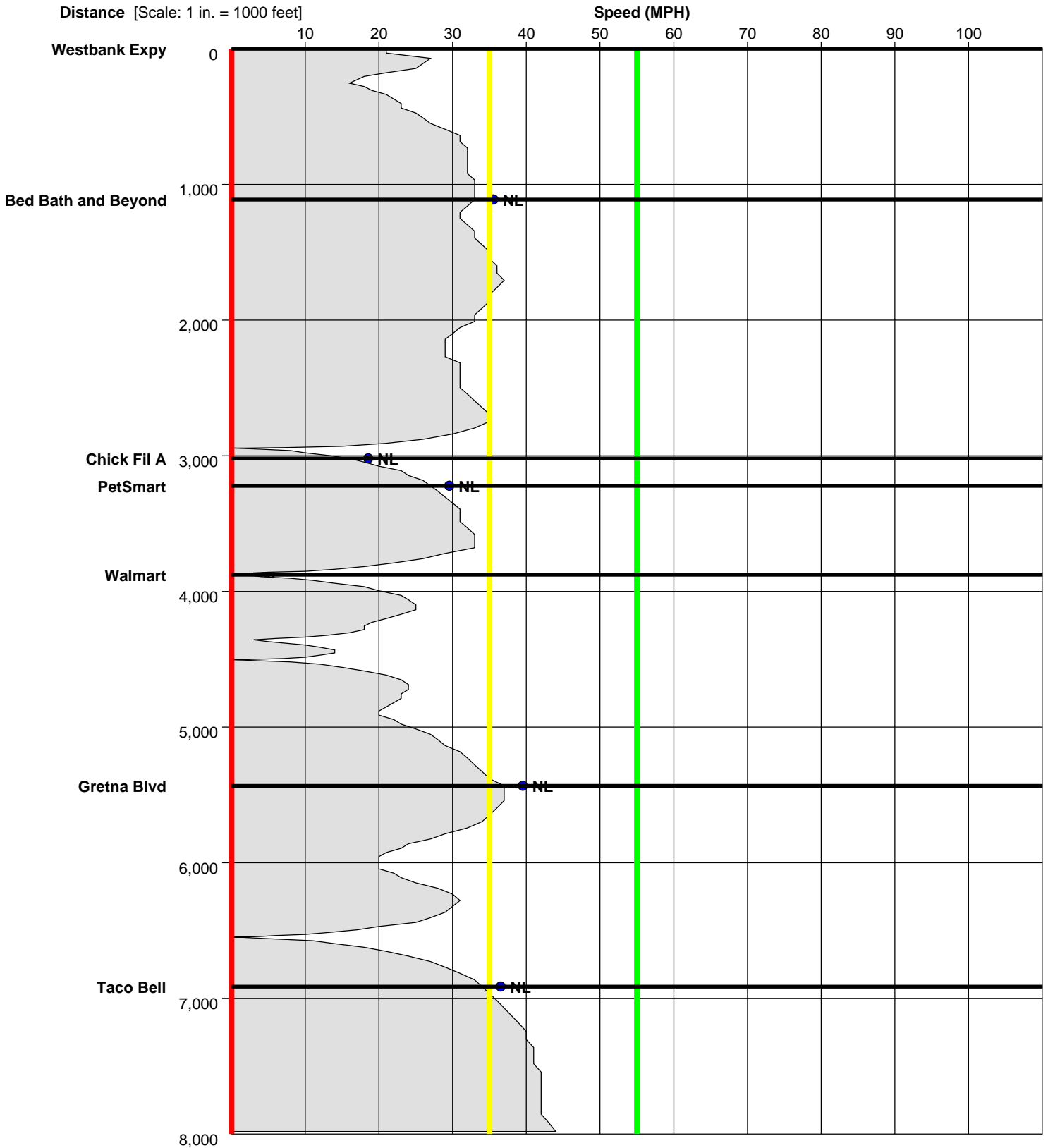
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd PM 3-SB-001tn** Start Time: **15:28** (This is an After Run)



ITS Regional

Manhattan Blvd Study

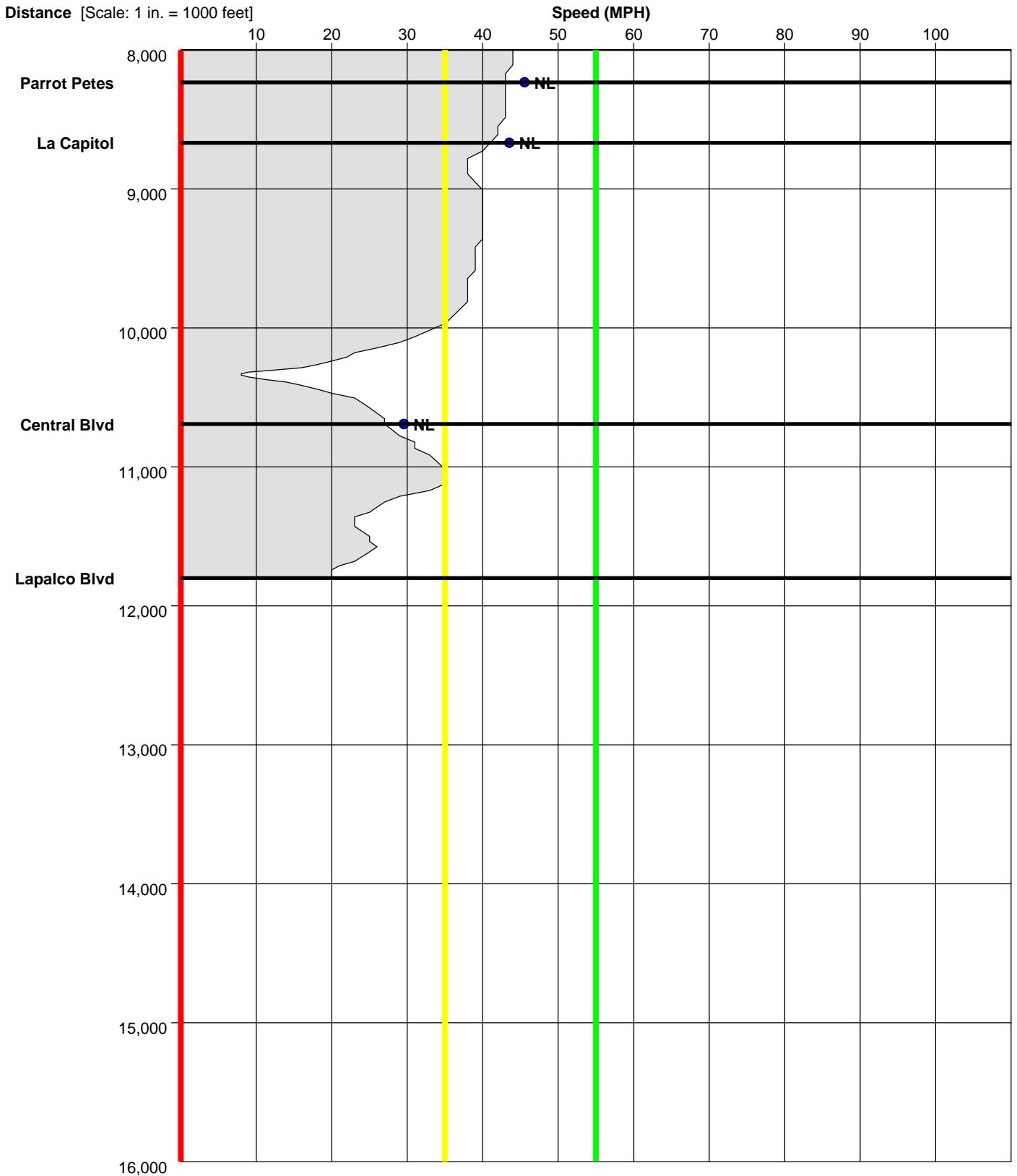
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd PM 3-SB-001tn** Start Time: **15:28** (This is an After Run)



ITS Regional

Manhattan Blvd Study

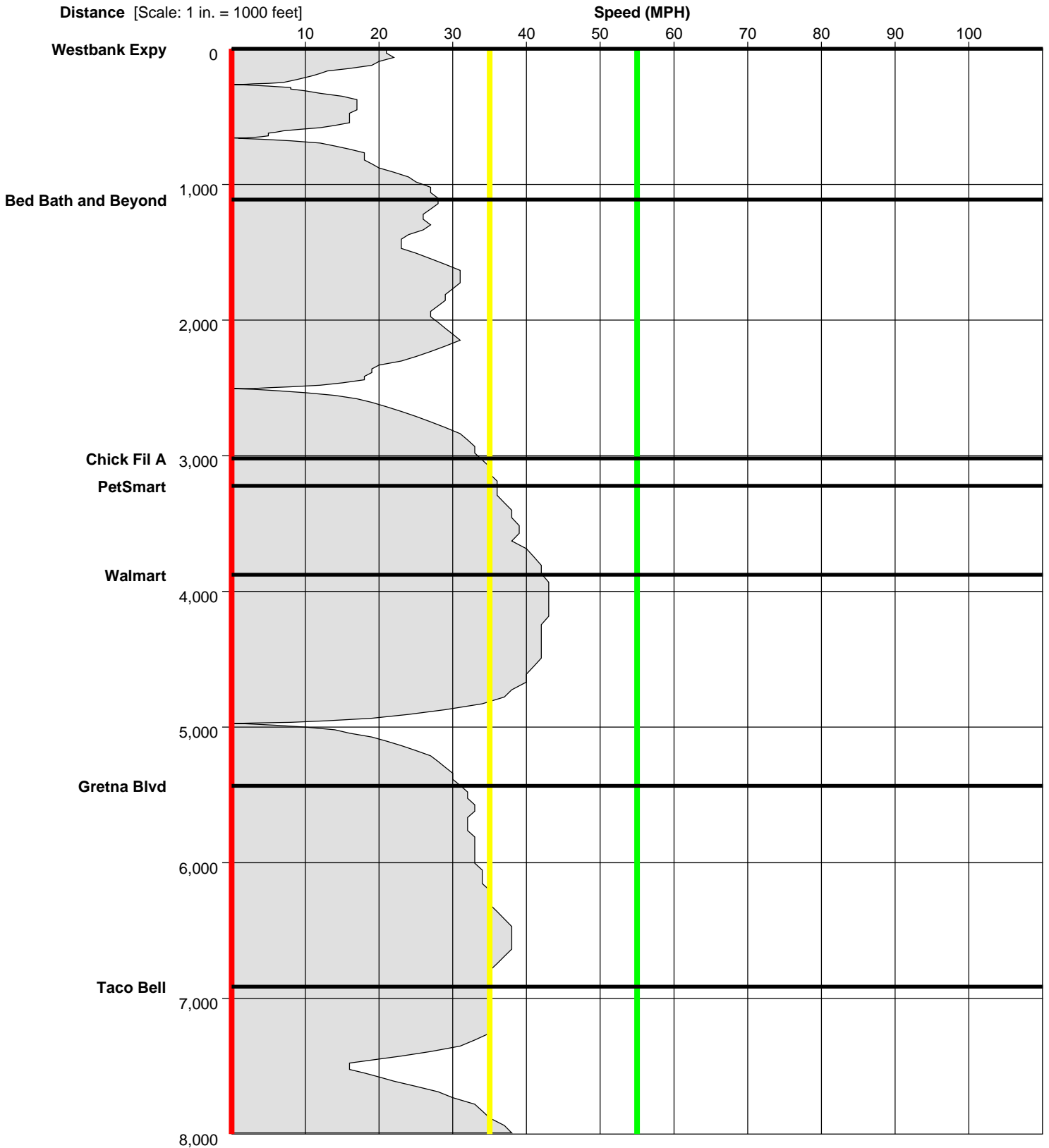
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd PM 3-SB-002t** Start Time: **15:48** (This is an After Run)



ITS Regional

Manhattan Blvd Study

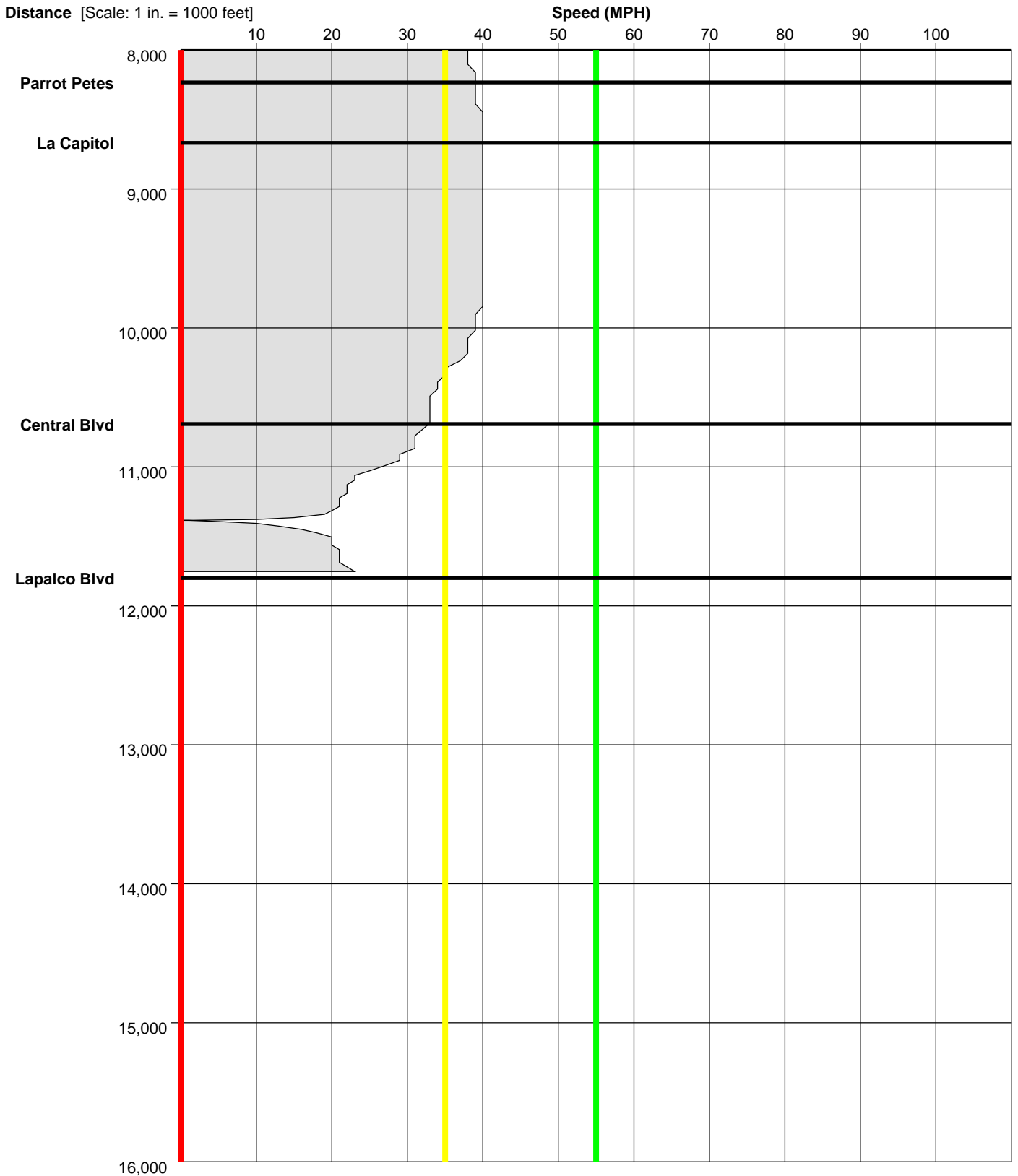
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd PM 3-SB-002t** Start Time: **15:48** (This is an After Run)



ITS Regional

Manhattan Blvd Study

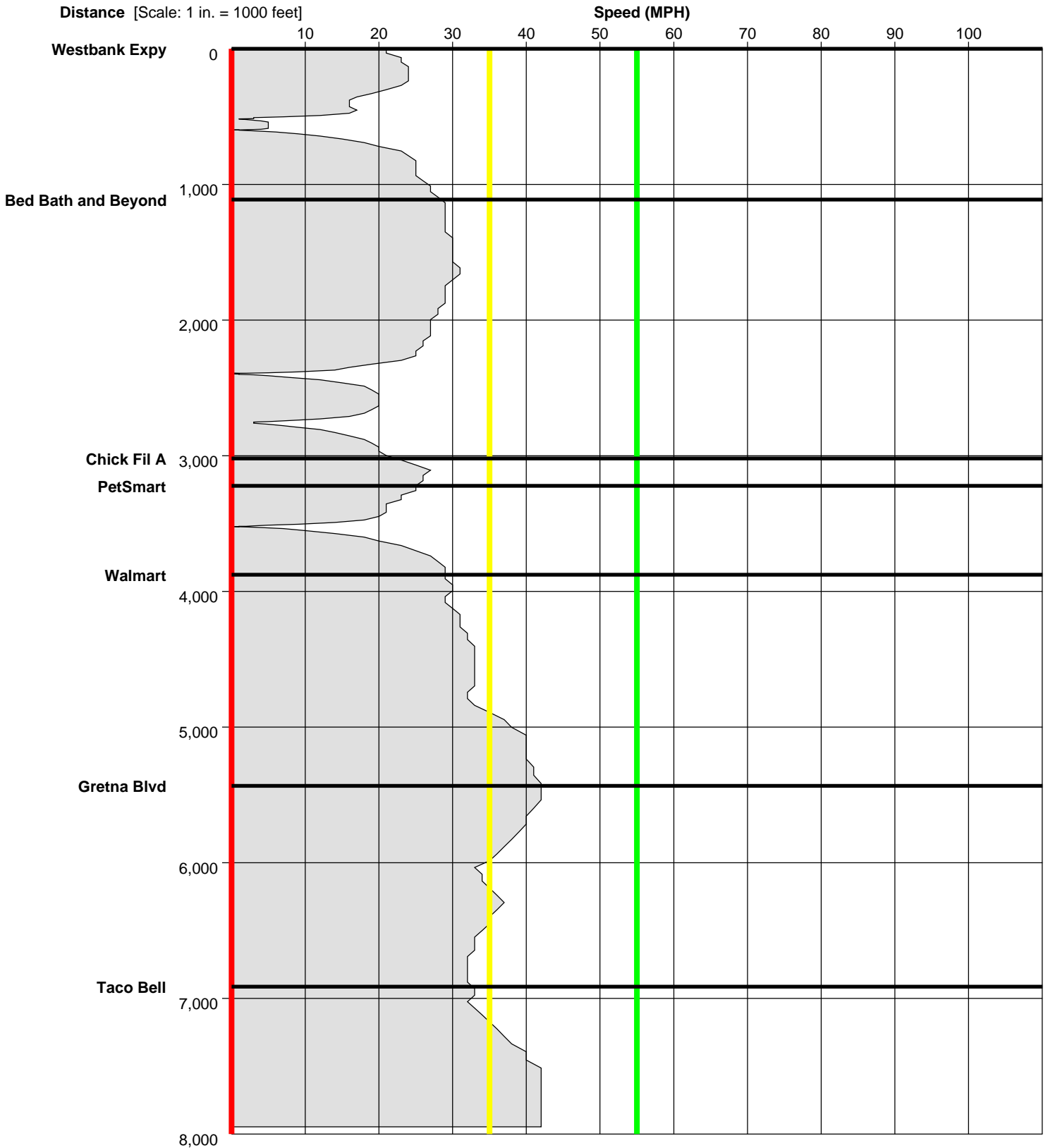
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd PM 3-SB-003t** Start Time: **16:11** (This is an After Run)



ITS Regional

Manhattan Blvd Study

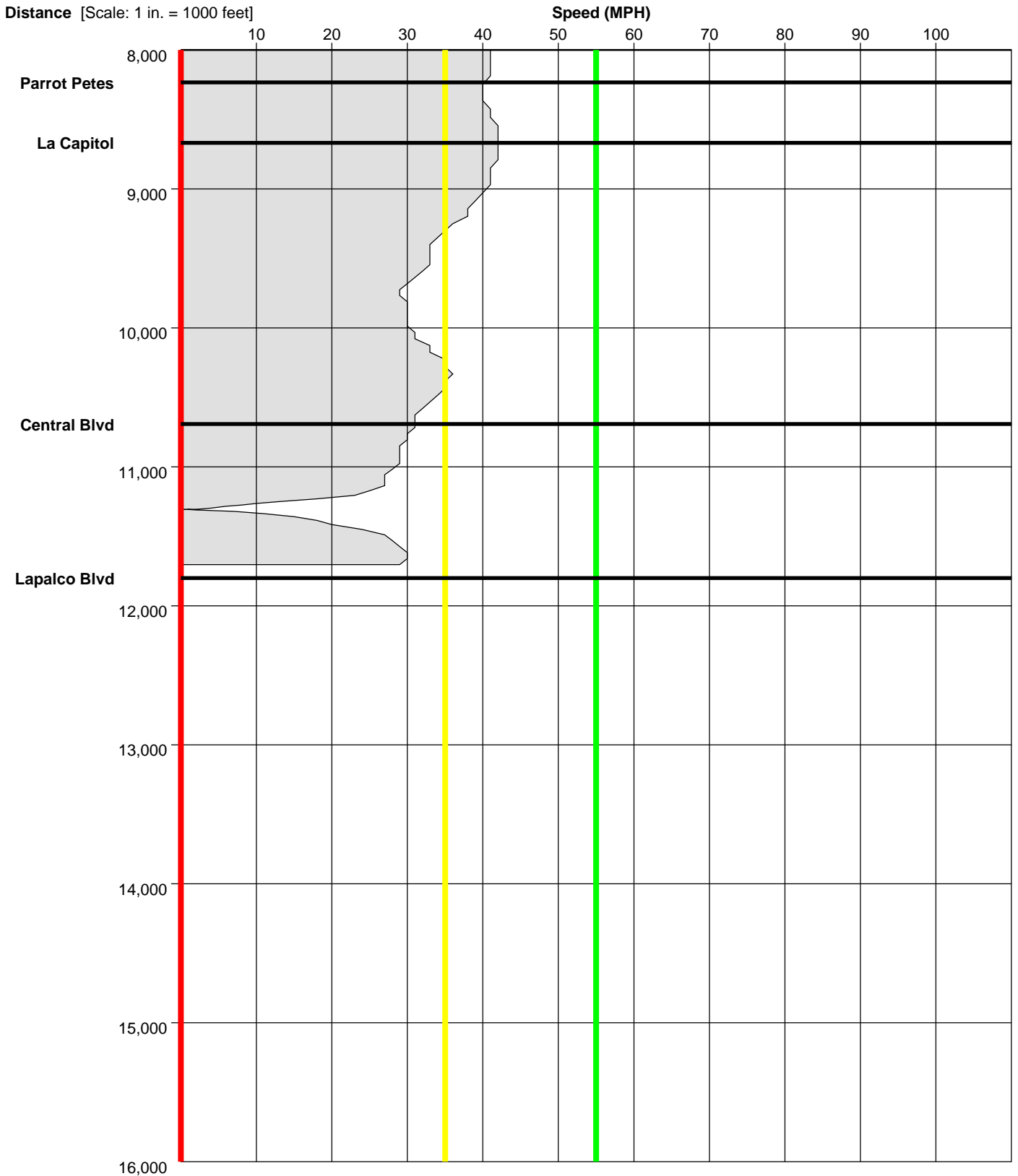
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd PM 3-SB-003t** Start Time: **16:11** (This is an After Run)



ITS Regional

Manhattan Blvd Study

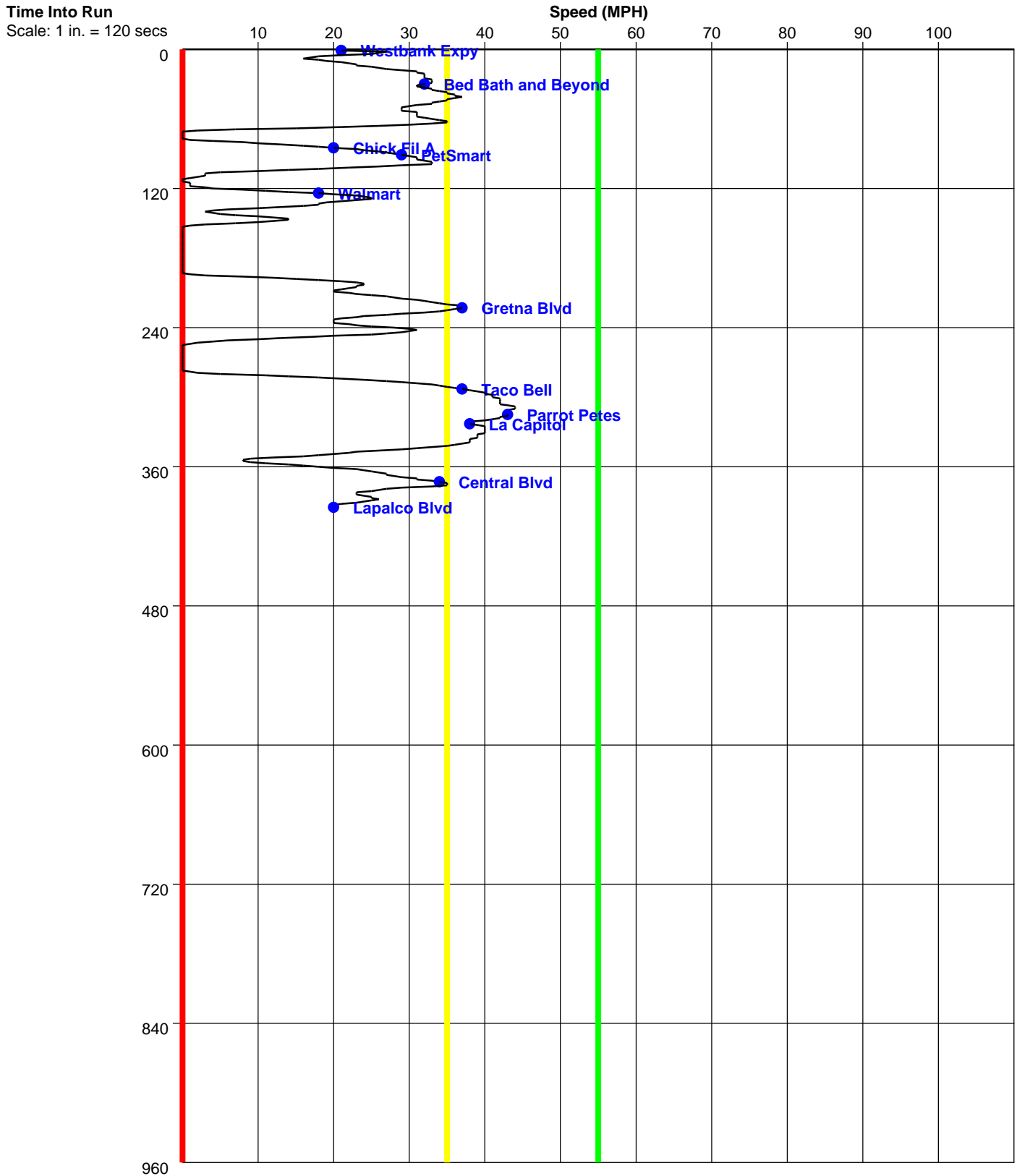
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **24**

Time-Based Speed Profile

Run : **Manhattan Blvd PM 3-SB-001tn** Start Time:15:28 (This is an After Run)



ITS Regional

Manhattan Blvd Study

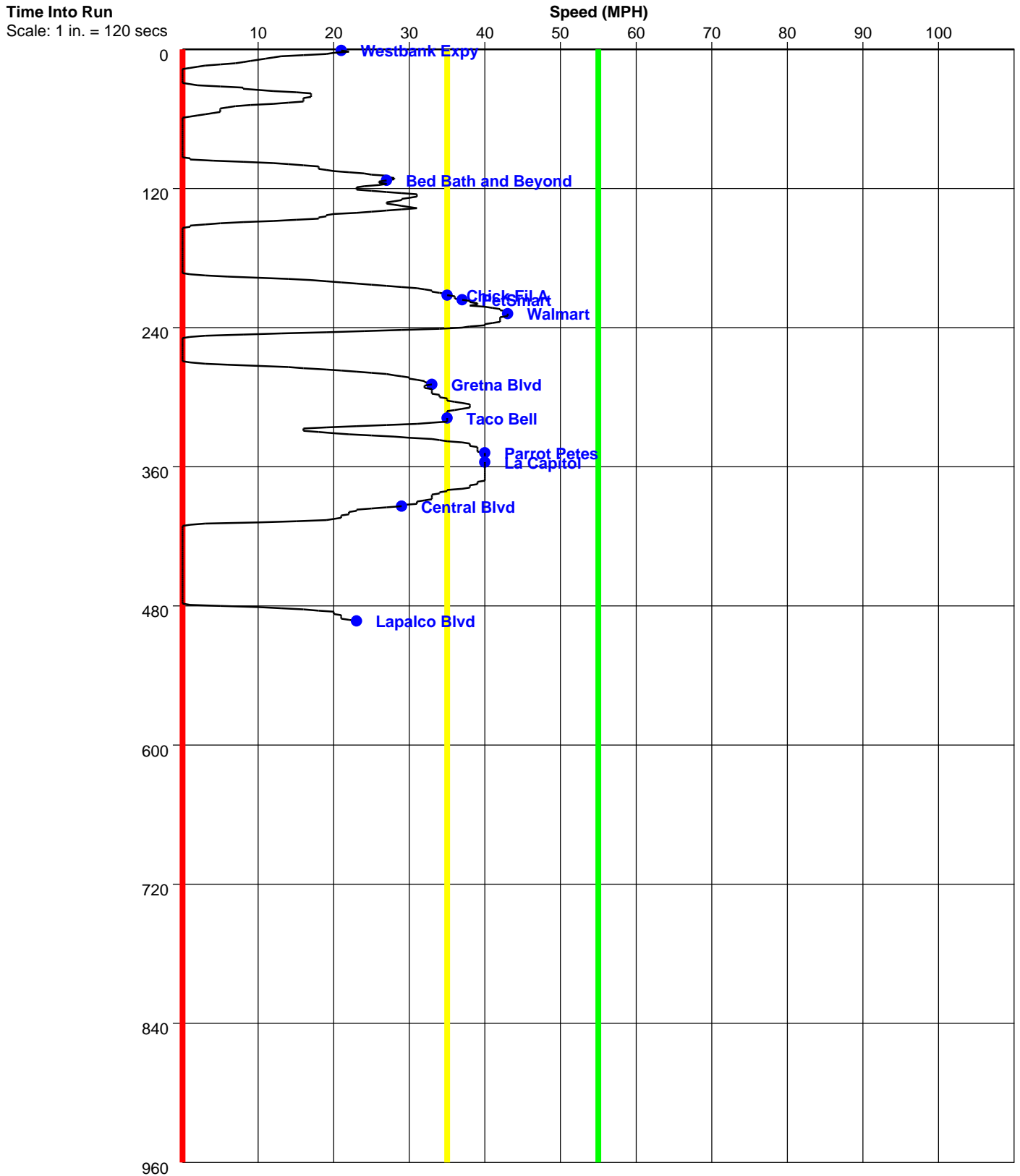
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **25**

Time-Based Speed Profile

Run : **Manhattan Blvd PM 3-SB-002t** Start Time:15:48 (This is an After Run)



ITS Regional

Manhattan Blvd Study

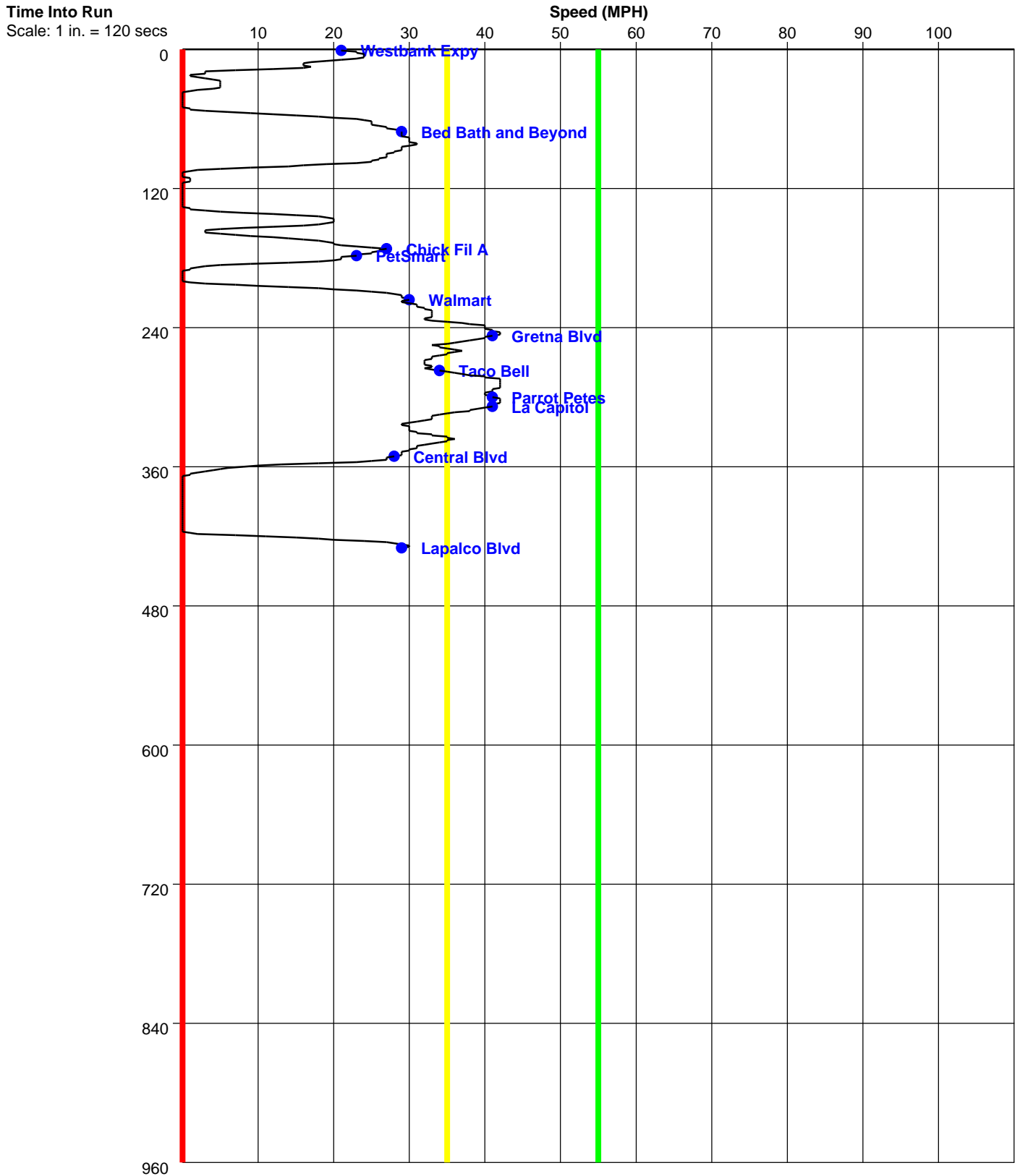
Study Name : **Manhattan Blvd SB PM 3**

Study Date : **5/15/2018**

Page No. : **26**

Time-Based Speed Profile

Run : **Manhattan Blvd PM 3-SB-003t** Start Time:16:11 (This is an After Run)



APPENDIX C

**CLEARANCE INTERVAL
CALCULATIONS**



Vehicular and Pedestrian Clearance Intervals Calculations

Project Manhattan Blvd Signal Timing Study

Parish Jefferson Parish

Intersection Manhattan Blvd. @ Lapalco Blvd.

Deceleration (ft/s²) 10 Vehicle Length (ft) 20 Walking Speed (ft/s) 3.5

Phase	Approach	Speed (mph)	Clear Dist (ft)	Walk Dist (ft)	Existing				Calculated				Recommended				Approved		
					YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R
5	EB Left	30	142.00	32	4.0	2.0	6.0		3.2	4.5	7.7	9	4.0	4.0	8.0		4.0	4.0	8.0
1	WB Left	30	138.00	40	4.0	2.0	6.0		3.2	4.4	7.6	11	4.0	4.0	8.0		4.0	4.0	8.0
8	NB	42	180.00	38	4.0		4.0		4.1	2.2	6.3	11	4.5	2.0	6.5		4.0	2.5	6.5
4	SB	42	181.00	32	4.0		4.0		4.1	2.3	6.4	9	4.5	2.0	6.5		4.0	2.5	6.5
6	EB	42	122.00	40	4.0	2.0	6.0		4.1	1.3	5.4	11	4.0	2.0	6.0		4.0	1.5	5.5
2	WB	42	116.00	34	4.0	2.0	6.0		4.1	1.2	5.3	10	4.0	2.0	6.0		4.0	1.5	5.5

- YEL Yellow Clearance Time = $t + (V / (2a + 64.4g))$
- RED Red Clearance Time = $((w + L) / V) - t_s$ (Speed for left turning vehicles is 20 mph)
- t - Perception Reaction Time = 1.0 sec
- V - Approach Speed (ft/s) = Speed (mph) * 1.47
- a - Deceleration rate (ft/s²)
- g - percent grade of the approach, assumed to be 0%
- w - Intersection Width (ft)
- L - Length of Vehicle (ft)
- t_s - conflicting movement startup delay = 1.0 sec
- FDW Flashing Don't Walk Time = (Walk Distance / Walking Speed) - Yellow Clearance Time



Vehicular and Pedestrian Clearance Intervals Calculations

Project Manhattan Blvd Signal Timing Study

Parish Jefferson

Intersection Manhattan Blvd. @ Fountain Park South

Deceleration (ft/s²) 10 Vehicle Length (ft) 20 Walking Speed (ft/s) 3.5

Phase	Approach	Speed (mph)	Clear Dist (ft)	Walk Dist (ft)	Existing				Calculated				Recommended				Approved		
					YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R
1	SB Left	30	50		4.0	1.0	5.0		3.2	1.4	4.6	0	4.0	1.5	5.5		4.0	1.5	5.5
2	NB	42	24		4.0	1.0	5.0		4.1	-0.3	3.8	0	4.0	1.0	5.0		4.0	1.0	5.0

- YEL Yellow Clearance Time = $t + (V / (2a + 64.4g))$
- RED Red Clearance Time = $((w + L) / V) - t_s$ (Speed for left turning vehicles is 20 mph)
- t - Perception Reaction Time = 1.0 sec
- V - Approach Speed (ft/s) = Speed (mph) * 1.47
- a - Deceleration rate (ft/s²)
- g - percent grade of the approach, assumed to be 0%
- w - Intersection Width (ft)
- L - Length of Vehicle (ft)
- t_s - conflicting movement startup delay = 1.0 sec
- FDW Flashing Don't Walk Time = (Walk Distance / Walking Speed) - Yellow Clearance Time



Vehicular and Pedestrian Clearance Intervals Calculations

Project Manhattan Blvd Signal Timing Study

Parish Jefferson

Intersection Manhattan Blvd. @ Fountain Park Center

Deceleration (ft/s²) 10 Vehicle Length (ft) 20 Walking Speed (ft/s) 3.5

*Dummy ped phase.

Phase	Approach	Speed (mph)	Clear Dist (ft)	Walk Dist (ft)	Existing				Calculated				Recommended				Approved		
					YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R
2	NB	42	133		4.0	2.0	6.0		4.1	1.5	5.6		4.0	2.0	6.0		4.0	2.0	6.0
6	SB	42	40		4.0	2.0	6.0		4.1	0.0	4.1		4.0	2.0	6.0		4.0	2.0	6.0
1	SB Left	30	145		4.0	0.0	4.0		3.2	4.6	7.8		4.0	1.0	5.0		4.0	4.0	8.0
8	WB Left	20	130		4.0	0.0	4.0		2.5	4.1	6.6		4.0	3.5	7.5		4.0	3.0	7.0

- YEL Yellow Clearance Time = $t + (V / (2a + 64.4g))$
- RED Red Clearance Time = $((w + L) / V) - t_s$ (Speed for left turning vehicles is 20 mph)
- t - Perception Reaction Time = 1.0 sec
- V - Approach Speed (ft/s) = Speed (mph) * 1.47
- a - Deceleration rate (ft/s²)
- g - percent grade of the approach, assumed to be 0%
- w - Intersection Width (ft)
- L - Length of Vehicle (ft)
- t_s - conflicting movement startup delay = 1.0 sec
- FDW Flashing Don't Walk Time = (Walk Distance / Walking Speed) - Yellow Clearance Time



Vehicular and Pedestrian Clearance Intervals Calculations

Project Manhattan Blvd Signal Timing Study

Parish Jefferson

Intersection Manhattan Blvd. @ Target

Deceleration (ft/s²) 10 Vehicle Length (ft) 20 Walking Speed (ft/s) 3.5

Phase	Approach	Speed (mph)	Clear Dist (ft)	Walk Dist (ft)	Existing				Calculated				Recommended				Approved		
					YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R
6	NB	42	100		4.0		4.0		4.1	0.9	5.0	0	4.0	1.0	5.0		4.0	1.0	5.0
2	SB	42	80		4.0		4.0		4.1	0.6	4.7	0	4.0	1.0	5.0		4.0	1.0	5.0
5	SB Left	30	132		4.0		4.0		3.2	4.2	7.4	0	4.0	4.0	8.0		4.0	3.5	7.5
4	WB Left	20	120		4.0		4.0		2.5	3.8	6.3	0	4.0	3.5	7.5		4.0	2.5	6.5

- YEL Yellow Clearance Time = $t + (V / (2a + 64.4g))$
- RED Red Clearance Time = $((w + L) / V) - t_s$ (Speed for left turning vehicles is 20 mph)
- t - Perception Reaction Time = 1.0 sec
- V - Approach Speed (ft/s) = Speed (mph) * 1.47
- a - Deceleration rate (ft/s²)
- g - percent grade of the approach, assumed to be 0%
- w - Intersection Width (ft)
- L - Length of Vehicle (ft)
- ts - conflicting movement startup delay = 1.0 sec
- FDW Flashing Don't Walk Time = (Walk Distance / Walking Speed) - Yellow Clearance Time



Vehicular and Pedestrian Clearance Intervals Calculations

Project Manhattan Blvd Signal Timing Study

Parish Jefferson

Intersection Manhattan Blvd. @ WalMart

Deceleration (ft/s²) 10 Vehicle Length (ft) 20 Walking Speed (ft/s) 3.5

Phase	Approach	Speed (mph)	Clear Dist (ft)	Walk Dist (ft)	Existing				Calculated				Recommended				Approved		
					YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R
6	NB	42	90		4.0	0.0	4.0		4.1	0.8	4.9	0	4	1	5.0		4	1	5.0
2	SB	42	80		4.0	0.0	4.0		4.1	0.6	4.7	0	4	1	5.0		4	1	5.0
4	WB Left	20	135		4.0	0.0	4.0		2.5	4.3	6.8	0	4.0	4.0	8.0		4.0	3.0	7.0
5	SB Left	30	132		4.0	0.0	4.0		3.2	4.2	7.4	0	4.0	4.0	8.0		4.0	3.5	7.5

- YEL Yellow Clearance Time = $t + (V / (2a + 64.4g))$
- RED Red Clearance Time = $((w + L) / V) - t_s$ (Speed for left turning vehicles is 20 mph)
- t - Perception Reaction Time = 1.0 sec
- V - Approach Speed (ft/s) = Speed (mph) * 1.47
- a - Deceleration rate (ft/s²)
- g - percent grade of the approach, assumed to be 0%
- w - Intersection Width (ft)
- L - Length of Vehicle (ft)
- ts - conflicting movement startup delay = 1.0 sec
- FDW Flashing Don't Walk Time = (Walk Distance / Walking Speed) - Yellow Clearance Time



Vehicular and Pedestrian Clearance Intervals Calculations

Project Manhattan Blvd Signal Timing Study

Parish Jefferson

Intersection Manhattan Blvd. @ Chick Fil A / Palace

Deceleration (ft/s²) 10 Vehicle Length (ft) 20 Walking Speed (ft/s) 3.5

Phase	Approach	Speed (mph)	Clear Dist (ft)	Walk Dist (ft)	Existing				Calculated				Recommended				Approved		
					YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R
6	NB	42	88		4.0	1.0	5.0		4.1	0.7	4.8		4.5	1.0	5.5		4.0	1.0	5.0
2	SB	42	88		4.0	1.0	5.0		4.1	0.7	4.8		4.5	1.0	5.5		4.0	1.0	5.0
1	NB Left	30	94		4.0	1.0	5.0		3.2	2.9	6.1		4.0	2.5	6.5		4.0	2.5	6.5
5	SB Left	30	120		4.0	1.0	5.0		3.2	3.8	7.0		4.0	3.0	7.0		4.0	3.0	7.0
4	WB Left	20	128		4.0	1.0	5.0		2.5	4.0	6.5		4.0	3.0	7.0		4.0	3.0	7.0
3	EB Left	20	96		4.0	1.0	5.0		2.5	2.9	5.4		4.0	2.0	6.0		4.0	2.0	6.0

- YEL Yellow Clearance Time = $t + (V / (2a + 64.4g))$
- RED Red Clearance Time = $((w + L) / V) - t_s$ (Speed for left turning vehicles is 20 mph)
- t - Perception Reaction Time = 1.0 sec
- V - Approach Speed (ft/s) = Speed (mph) * 1.47
- a - Deceleration rate (ft/s²)
- g - percent grade of the approach, assumed to be 0%
- w - Intersection Width (ft)
- L - Length of Vehicle (ft)
- t_s - conflicting movement startup delay = 1.0 sec
- FDW Flashing Don't Walk Time = (Walk Distance / Walking Speed) - Yellow Clearance Time



Vehicular and Pedestrian Clearance Intervals Calculations

Project Manhattan Blvd Signal Timing Study

Parish Jefferson

Intersection Manhattan Blvd. @ Westgate Village/Manhattan Plaza

Deceleration (ft/s²) 10 Vehicle Length (ft) 20 Walking Speed (ft/s) 3.5

Phase	Approach	Speed (mph)	Clear Dist (ft)	Walk Dist (ft)	Existing				Calculated				Recommended				Approved			
					YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW
6	NB	42	84		4.0	1.0	5.0		4.1	2.5	6.6		4.0	3.0	7.0		4.0	3.0	7.0	
2	SB	42	94		4.0	1.0	5.0		4.1	2.9	7.0		4.0	3.0	7.0		4.0	3.0	7.0	
1	NB Left	30	96		4.0	1.0	5.0		3.2	2.9	6.1		4.0	3.0	7.0		4.0	3.0	7.0	
5	SB Left	30	108		4.0	1.0	5.0		3.2	3.4	6.6		4.0	3.0	7.0		4.0	3.0	7.0	
4	WB Left	20	130		4.0	1.0	5.0		2.5	4.1	6.6		4.0	4.0	8.0		4.0	4.0	8.0	
8	EB Left	20	100		4.0	1.0	5.0		2.5	3.1	5.6		4.0	4.0	8.0		4.0	4.0	8.0	

- YEL Yellow Clearance Time = $t + (V / (2a + 64.4g))$
- RED Red Clearance Time = $((w + L) / V) - t_s$ (Speed for left turning vehicles is 20 mph)
- t - Perception Reaction Time = 1.0 sec
- V - Approach Speed (ft/s) = Speed (mph) * 1.47
- a - Deceleration rate (ft/s²)
- g - percent grade of the approach, assumed to be 0%
- w - Intersection Width (ft)
- L - Length of Vehicle (ft)
- t_s - conflicting movement startup delay = 1.0 sec
- FDW Flashing Don't Walk Time = (Walk Distance / Walking Speed) - Yellow Clearance Time

APPENDIX D

**SYNCHRO CAPACITY
ANALYSIS RESULTS
(EXISTING)**

Phasings
1: Manhattan Blvd & Lapalco Blvd

2017 Existing AM
02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↗	↔↔	↑↑↑			↑↑	↗		↑↑	↗
Traffic Volume (vph)	399	968	65	108	1027	209	0	937	387	0	407	302
Future Volume (vph)	399	968	65	108	1027	209	0	937	387	0	407	302
Satd. Flow (prot)	3433	5085	1583	3433	4958	0	0	3539	1583	0	3539	1583
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	3433	5085	1583	3433	4958	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)			71		21				354			328
Lane Group Flow (vph)	434	1052	71	117	1343	0	0	1018	421	0	442	328
Turn Type	Prot	NA	Perm	Prot	NA			NA	Perm		NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2						8			4
Total Split (s)	27.0	54.0	54.0	27.0	54.0			39.0	39.0		39.0	39.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			3.0	3.0		4.0	4.0
Act Effct Green (s)	19.2	54.2	54.2	15.0	50.0			35.8	35.8		34.8	34.8
Actuated g/C Ratio	0.16	0.45	0.45	0.12	0.42			0.30	0.30		0.29	0.29
v/c Ratio	0.79	0.46	0.09	0.27	0.65			0.96	0.58		0.43	0.47
Control Delay	59.4	23.6	4.6	49.4	29.6			62.2	10.1		56.1	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	59.4	23.6	4.6	49.4	29.6			62.2	10.1		56.1	32.4
LOS	E	C	A	D	C			E	B		E	C
Approach Delay		32.7			31.2			46.9			46.0	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	166	202	0	42	301			407	38		193	138
Queue Length 95th (ft)	222	242	26	72	357			#546	135		248	234
Internal Link Dist (ft)		579			645			475			475	
Turn Bay Length (ft)	170		180	200					290			160
Base Capacity (vph)	600	2296	754	600	2077			1061	722		1032	694
Starvation Cap Reductn	0	0	0	0	0			0	0		0	0
Spillback Cap Reductn	0	0	0	0	0			0	0		0	0
Storage Cap Reductn	0	0	0	0	0			0	0		0	0
Reduced v/c Ratio	0.72	0.46	0.09	0.20	0.65			0.96	0.58		0.43	0.47

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Red, Master Intersection
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 38.2
 Intersection LOS: D
 Intersection Capacity Utilization 76.2%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Manhattan Blvd & Lapalco Blvd



Phasings
2: Manhattan Blvd & Central

2017 Existing AM
02/14/2018



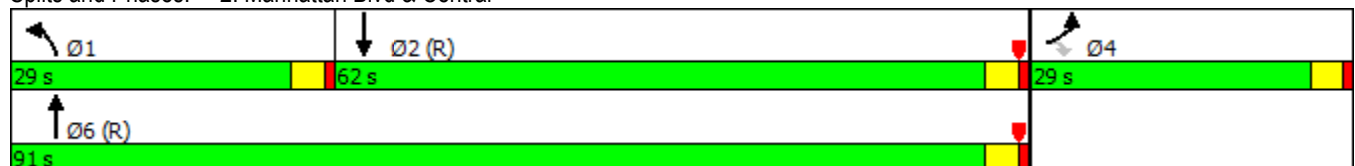
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	17	34	1321	739	37
Future Volume (vph)	45	17	34	1321	739	37
Satd. Flow (prot)	1770	1583	1770	3539	3514	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3514	0
Satd. Flow (RTOR)		18			6	
Lane Group Flow (vph)	49	18	37	1436	843	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		1	6	2	
Permitted Phases		4				
Total Split (s)	29.0	29.0	29.0	91.0	62.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Act Effct Green (s)	25.0	25.0	30.8	93.6	58.0	
Actuated g/C Ratio	0.21	0.21	0.26	0.78	0.48	
v/c Ratio	0.13	0.05	0.08	0.52	0.50	
Control Delay	39.9	16.0	60.4	2.4	23.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	39.9	16.0	60.4	2.4	23.5	
LOS	D	B	E	A	C	
Approach Delay	33.5			3.8	23.5	
Approach LOS	C			A	C	
Queue Length 50th (ft)	31	0	28	71	271	
Queue Length 95th (ft)	66	20	m33	m77	237	
Internal Link Dist (ft)	152			694	1887	
Turn Bay Length (ft)			200			
Base Capacity (vph)	368	344	454	2760	1701	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.05	0.08	0.52	0.50	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 92 (77%), Referenced to phase 2:SBT and 6:NBT, Start of Red
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 11.6
 Intersection LOS: B
 Intersection Capacity Utilization 75.8%
 ICU Level of Service D
 Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Manhattan Blvd & Central



Phasings
3: Manhattan Blvd & Fountain Park South

2017 Existing AM
02/14/2018

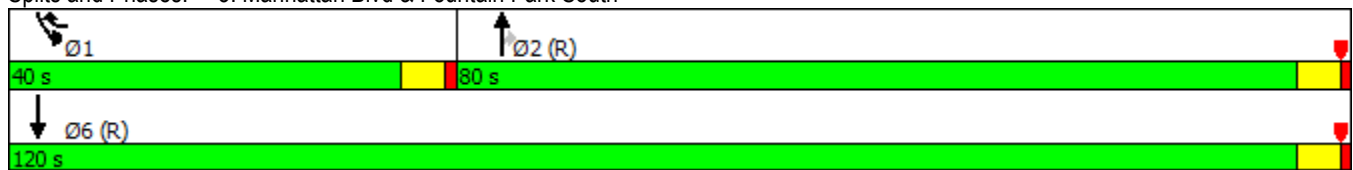


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗↗	↗	↘	↗↗
Traffic Volume (vph)	0	9	1590	2	11	1049
Future Volume (vph)	0	9	1590	2	11	1049
Satd. Flow (prot)	0	1611	5085	1583	1770	3539
Flt Permitted					0.950	
Satd. Flow (perm)	0	1611	5085	1583	1770	3539
Satd. Flow (RTOR)		26		1		
Lane Group Flow (vph)	0	10	1728	2	12	1140
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Total Split (s)		40.0	80.0	80.0	40.0	120.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0
Act Effct Green (s)		10.0	100.0	100.0	10.0	120.0
Actuated g/C Ratio		0.08	0.83	0.83	0.08	1.00
v/c Ratio		0.06	0.41	0.00	0.08	0.32
Control Delay		5.7	1.2	1.0	58.1	0.3
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		5.7	1.2	1.0	58.1	0.3
LOS		A	A	A	E	A
Approach Delay	5.7		1.2			0.9
Approach LOS	A		A			A
Queue Length 50th (ft)		0	16	0	8	1
Queue Length 95th (ft)		6	47	m0	m30	0
Internal Link Dist (ft)	504		188			461
Turn Bay Length (ft)				50	225	
Base Capacity (vph)		488	4237	1319	516	3539
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.02	0.41	0.00	0.02	0.32

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 117 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Red
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay: 1.1
 Intersection Capacity Utilization 47.4%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



Phasings
4: Manhattan Blvd & Fountain Park Center

2017 Existing AM
02/14/2018

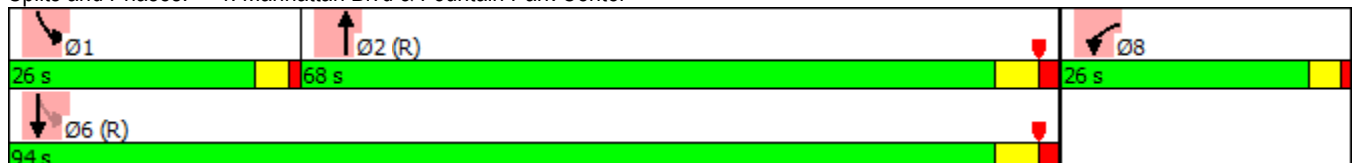


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←←		↑↑↑		←	↑↑
Traffic Volume (vph)	2	16	1531	12	10	982
Future Volume (vph)	2	16	1531	12	10	982
Satd. Flow (prot)	3114	0	5080	0	1770	3539
Flt Permitted	0.995				0.102	
Satd. Flow (perm)	3114	0	5080	0	190	3539
Satd. Flow (RTOR)	295		1			
Lane Group Flow (vph)	19	0	1677	0	11	1067
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Total Split (s)	26.0		68.0		26.0	94.0
Total Lost Time (s)	4.0		6.0		4.0	6.0
Act Effct Green (s)	20.0		80.4		106.4	108.0
Actuated g/C Ratio	0.17		0.67		0.89	0.90
v/c Ratio	0.02		0.49		0.03	0.34
Control Delay	0.1		11.6		1.8	1.7
Queue Delay	0.0		0.1		0.0	0.0
Total Delay	0.1		11.6		1.8	1.7
LOS	A		B		A	A
Approach Delay	0.1		11.6			1.7
Approach LOS	A		B			A
Queue Length 50th (ft)	0		159		0	2
Queue Length 95th (ft)	0		233		4	78
Internal Link Dist (ft)	410		461			1111
Turn Bay Length (ft)					440	
Base Capacity (vph)	811		3404		458	3185
Starvation Cap Reductn	0		388		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.02		0.56		0.02	0.34

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 102 (85%), Referenced to phase 2:NBT and 6:SBTL, Start of Red
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.49
 Intersection Signal Delay: 7.7
 Intersection Capacity Utilization 76.7%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service D

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



Phasings
5: Manhattan Blvd & Target

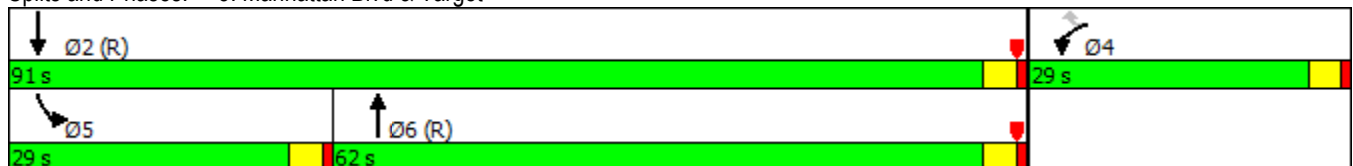


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔	↑↑↑		↔↔	↓
Traffic Volume (vph)	5	9	1136	170	39	790
Future Volume (vph)	5	9	1136	170	39	790
Satd. Flow (prot)	3433	1583	4984	0	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	4984	0	3433	3539
Satd. Flow (RTOR)		10	32			
Lane Group Flow (vph)	5	10	1420	0	42	859
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Total Split (s)	29.0	29.0	62.0		29.0	91.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Act Effct Green (s)	10.0	10.0	93.4		6.4	102.0
Actuated g/C Ratio	0.08	0.08	0.78		0.05	0.85
v/c Ratio	0.02	0.07	0.37		0.23	0.29
Control Delay	50.8	26.4	4.7		40.6	3.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	50.8	26.4	4.7		40.6	3.9
LOS	D	C	A		D	A
Approach Delay	34.6		4.7			5.6
Approach LOS	C		A			A
Queue Length 50th (ft)	2	0	138		17	80
Queue Length 95th (ft)	8	18	220		38	113
Internal Link Dist (ft)	511		1111			441
Turn Bay Length (ft)					300	
Base Capacity (vph)	715	337	3885		715	3008
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.01	0.03	0.37		0.06	0.29

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 110 (92%), Referenced to phase 2:SBT and 6:NBT, Start of Red
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.37
 Intersection Signal Delay: 5.3
 Intersection Capacity Utilization 40.7%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 5: Manhattan Blvd & Target



Phasings
6: Manhattan Blvd & Gretna Blvd

2017 Existing AM
02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↑↑	↗		↑↑↑	
Traffic Volume (vph)	11	134	47	23	232	99	0	1134	110	0	782	70
Future Volume (vph)	11	134	47	23	232	99	0	1134	110	0	782	70
Satd. Flow (prot)	0	1855	1583	0	1855	1583	0	3539	1583	0	5024	0
Flt Permitted		0.854			0.958							
Satd. Flow (perm)	0	1591	1583	0	1785	1583	0	3539	1583	0	5024	0
Satd. Flow (RTOR)			51			54			120		19	
Lane Group Flow (vph)	0	158	51	0	277	108	0	1233	120	0	926	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm		NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4			6			
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0		72.0	72.0		72.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Act Effct Green (s)		23.9	23.9		23.9	23.9		84.1	84.1		84.1	
Actuated g/C Ratio		0.20	0.20		0.20	0.20		0.70	0.70		0.70	
v/c Ratio		0.50	0.14		0.78	0.30		0.50	0.10		0.26	
Control Delay		47.1	10.4		60.3	22.2		9.6	2.8		6.2	
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Delay		47.1	10.4		60.3	22.2		9.6	2.8		6.2	
LOS		D	B		E	C		A	A		A	
Approach Delay		38.1			49.6			9.0			6.2	
Approach LOS		D			D			A			A	
Queue Length 50th (ft)		110	0		205	35		304	23		107	
Queue Length 95th (ft)		164	31		279	80		290	37		107	
Internal Link Dist (ft)		449			281			447			304	
Turn Bay Length (ft)									340			
Base Capacity (vph)		556	587		624	589		2480	1145		3526	
Starvation Cap Reductn		0	0		0	0		0	0		0	
Spillback Cap Reductn		0	0		0	0		0	0		0	
Storage Cap Reductn		0	0		0	0		0	0		0	
Reduced v/c Ratio		0.28	0.09		0.44	0.18		0.50	0.10		0.26	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 107 (89%), Referenced to phase 2:SBT and 6:NBT, Start of Red

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 15.6

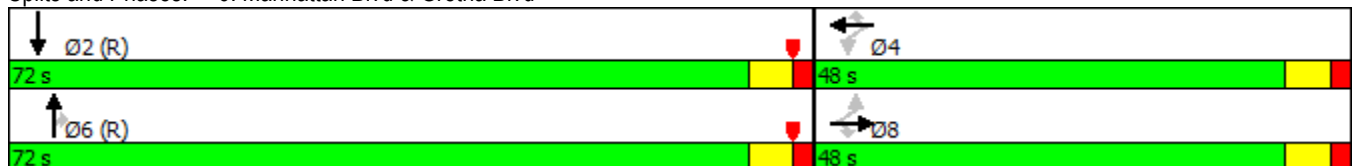
Intersection LOS: B

Intersection Capacity Utilization 72.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



Phasings
7: Manhattan Blvd & WalMart

2017 Existing AM
02/14/2018



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↗	↑↑↑		↙	↑↑
Traffic Volume (vph)	91	126	1099	95	95	857
Future Volume (vph)	91	126	1099	95	95	857
Satd. Flow (prot)	3433	1583	6331	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	6331	0	1770	3539
Satd. Flow (RTOR)		137	22			
Lane Group Flow (vph)	99	137	1298	0	103	932
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Total Split (s)	29.0	29.0	62.0		29.0	91.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Act Effct Green (s)	10.7	10.7	83.8		13.5	101.3
Actuated g/C Ratio	0.09	0.09	0.70		0.11	0.84
v/c Ratio	0.32	0.52	0.29		0.52	0.31
Control Delay	54.0	15.7	2.3		39.3	4.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	54.0	15.7	2.3		39.3	4.6
LOS	D	B	A		D	A
Approach Delay	31.8		2.3			8.0
Approach LOS	C		A			A
Queue Length 50th (ft)	38	0	16		70	60
Queue Length 95th (ft)	64	60	55		119	246
Internal Link Dist (ft)	367		956			706
Turn Bay Length (ft)					230	
Base Capacity (vph)	715	438	4428		368	2988
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.14	0.31	0.29		0.28	0.31

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 2 (2%), Referenced to phase 6:NBT, Start of Red
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 7.3
 Intersection Capacity Utilization 44.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 7: Manhattan Blvd & WalMart



Phasings
8: Manhattan Blvd & Ute Dr/Lowes

2017 Existing AM
02/14/2018

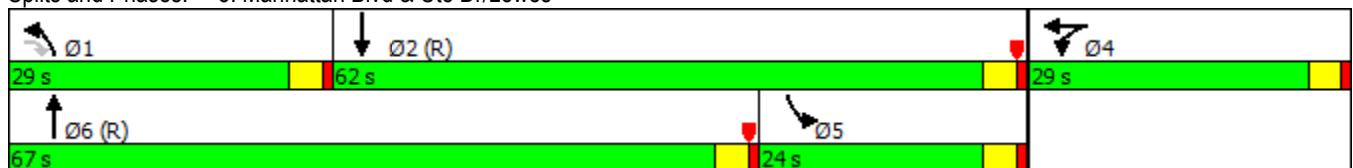


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔		↖	↑↑↑		↖	↗	
Traffic Volume (vph)	0	0	6	0	0	101	6	899	17	79	1155	1
Future Volume (vph)	0	0	6	0	0	101	6	899	17	79	1155	1
Satd. Flow (prot)	0	0	1611	1770	1504	0	1770	6389	0	1770	3539	0
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1611	1770	1504	0	1770	6389	0	1770	3539	0
Satd. Flow (RTOR)			368		345			4				
Lane Group Flow (vph)	0	0	7	0	110	0	7	995	0	86	1256	0
Turn Type			Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases				4	4		1	6		5	2	
Permitted Phases			1									
Total Split (s)			29.0	29.0	29.0		29.0	67.0		24.0	62.0	
Total Lost Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)			10.0		10.0		10.0	82.8		18.0	96.4	
Actuated g/C Ratio			0.08		0.08		0.08	0.69		0.15	0.80	
v/c Ratio			0.01		0.25		0.05	0.23		0.32	0.44	
Control Delay			0.0		1.3		66.2	3.6		34.2	1.8	
Queue Delay			0.0		0.0		0.0	0.0		0.0	0.2	
Total Delay			0.0		1.3		66.2	3.6		34.2	2.0	
LOS			A		A		E	A		C	A	
Approach Delay					1.3			4.1			4.0	
Approach LOS					A			A			A	
Queue Length 50th (ft)			0		0		5	15		53	24	
Queue Length 95th (ft)			0		0		m17	44		m105	61	
Internal Link Dist (ft)		549			478			706			318	
Turn Bay Length (ft)							200			120		
Base Capacity (vph)			626		586		368	4409		295	2843	
Starvation Cap Reductn			0		0		0	0		0	617	
Spillback Cap Reductn			0		0		0	0		0	0	
Storage Cap Reductn			0		0		0	0		0	0	
Reduced v/c Ratio			0.01		0.19		0.02	0.23		0.29	0.56	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 9 (8%), Referenced to phase 2:SBT and 6:NBT, Start of Red
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.44
 Intersection Signal Delay: 3.9
 Intersection LOS: A
 Intersection Capacity Utilization 58.6%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Manhattan Blvd & Ute Dr/Lowes



Phasings
9: Manhattan Blvd & Chick-Fil-A/Palace

2017 Existing AM
02/14/2018

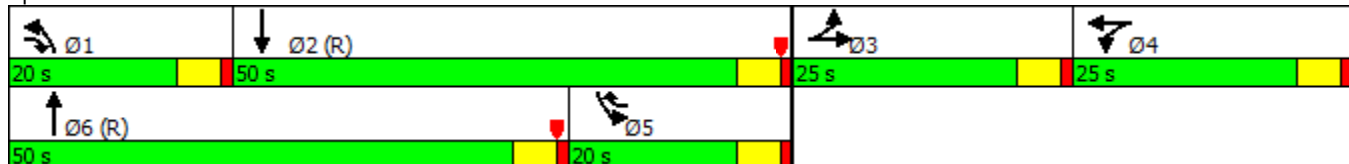


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↑↑↑		↖↖	↖↖	
Traffic Volume (vph)	104	0	3	0	1	4	66	1074	2	55	761	36
Future Volume (vph)	104	0	3	0	1	4	66	1074	2	55	761	36
Satd. Flow (prot)	1681	1681	1583	1770	1770	1583	1770	6408	0	3204	3514	0
Flt Permitted	0.950	0.950					0.950			0.950		
Satd. Flow (perm)	1681	1681	1583	1770	1770	1583	1770	6408	0	3204	3514	0
Satd. Flow (RTOR)			155			155						4
Lane Group Flow (vph)	56	57	3	0	1	4	72	1169	0	60	866	0
Turn Type	Split	NA	Over	Split	NA	Over	Prot	NA		Prot	NA	
Protected Phases	3	3	1	4	4	5	1	6		5	2	
Permitted Phases												
Total Split (s)	25.0	25.0	20.0	25.0	25.0	20.0	20.0	50.0		20.0	50.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Act Effct Green (s)	20.0	20.0	10.2		20.0	13.1	10.2	49.0		13.1	52.0	
Actuated g/C Ratio	0.17	0.17	0.08		0.17	0.11	0.08	0.41		0.11	0.43	
v/c Ratio	0.20	0.20	0.01		0.00	0.01	0.48	0.45		0.17	0.57	
Control Delay	45.3	45.4	0.0		42.0	0.0	60.7	17.7		59.3	37.2	
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.1		0.0	0.0	
Total Delay	45.3	45.4	0.0		42.0	0.0	60.7	17.8		59.3	37.2	
LOS	D	D	A		D	A	E	B		E	D	
Approach Delay		44.2			8.4			20.3			38.6	
Approach LOS		D			A			C			D	
Queue Length 50th (ft)	40	41	0		1	0	46	173		18	262	
Queue Length 95th (ft)	82	83	0		6	0	90	164		37	335	
Internal Link Dist (ft)		217			295			318			269	
Turn Bay Length (ft)						60	110			145		
Base Capacity (vph)	280	280	333		295	333	221	2617		400	1526	
Starvation Cap Reductn	0	0	0		0	0	0	493		0	0	
Spillback Cap Reductn	0	0	0		0	0	0	0		0	0	
Storage Cap Reductn	0	0	0		0	0	0	0		0	0	
Reduced v/c Ratio	0.20	0.20	0.01		0.00	0.01	0.33	0.55		0.15	0.57	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 117 (98%), Referenced to phase 2:SBT and 6:NBT, Start of Red
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 28.9
 Intersection Capacity Utilization 48.4%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 9: Manhattan Blvd & Chick-Fil-A/Palace





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↑↑↑		↖	↗	
Traffic Volume (vph)	6	4	2	19	0	3	22	1359	25	11	801	0
Future Volume (vph)	6	4	2	19	0	3	22	1359	25	11	801	0
Satd. Flow (prot)	0	1805	1583	0	1770	1583	1770	5070	0	1770	3539	0
Flt Permitted		0.905			0.750		0.950			0.950		
Satd. Flow (perm)	0	1686	1583	0	1397	1583	1770	5070	0	1770	3539	0
Satd. Flow (RTOR)			109			109		3				
Lane Group Flow (vph)	0	11	2	0	21	3	24	1504	0	12	871	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4						
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	26.0	60.0		26.0	60.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Act Effct Green (s)		29.0	29.0		29.0	29.0	10.0	75.8		12.2	72.0	
Actuated g/C Ratio		0.24	0.24		0.24	0.24	0.08	0.63		0.10	0.60	
v/c Ratio		0.03	0.00		0.06	0.01	0.16	0.47		0.07	0.41	
Control Delay		35.1	0.0		35.8	0.0	84.8	6.8		47.0	14.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		35.1	0.0		35.8	0.0	84.8	6.8		47.0	14.4	
LOS		D	A		D	A	F	A		D	B	
Approach Delay		29.7			31.4			8.0			14.9	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		7	0		13	0	20	57		9	203	
Queue Length 95th (ft)		22	0		34	0	m45	97		26	252	
Internal Link Dist (ft)		58			530			1275			783	
Turn Bay Length (ft)							260			250		
Base Capacity (vph)		407	465		337	465	309	3203		309	2123	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.03	0.00		0.06	0.01	0.08	0.47		0.04	0.41	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 20 (17%), Referenced to phase 2:SBT and 6:NBT, Start of Red

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 10.9

Intersection LOS: B

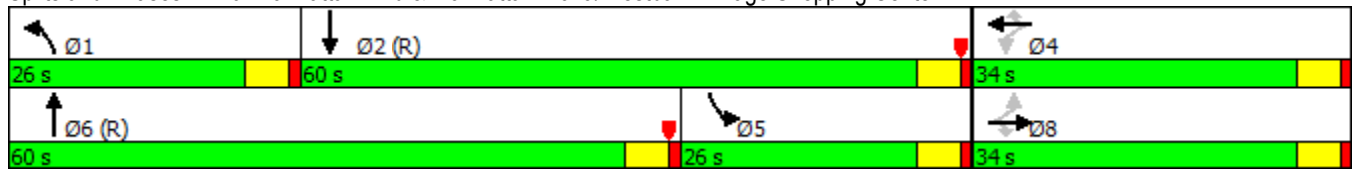
Intersection Capacity Utilization 56.0%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center



Phasings
1: Manhattan Blvd & Lapalco Blvd

2017 Existing Mid Day
02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖	↖↗	↑↑↑			↑↑	↖		↑↑	↖
Traffic Volume (vph)	401	1093	116	129	1133	243	0	1168	409	0	961	335
Future Volume (vph)	401	1093	116	129	1133	243	0	1168	409	0	961	335
Satd. Flow (prot)	3433	5085	1583	3433	4953	0	0	3539	1583	0	3539	1583
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	3433	5085	1583	3433	4953	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)			119		16				345			207
Lane Group Flow (vph)	436	1188	126	140	1496	0	0	1270	445	0	1045	364
Turn Type	Prot	NA	Perm	Prot	NA			NA	Perm		NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2						8			4
Total Split (s)	27.0	54.0	54.0	27.0	54.0			39.0	39.0		39.0	39.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			4.0	4.0		4.0	4.0
Act Effct Green (s)	19.2	54.0	54.0	15.0	49.8			35.0	35.0		35.0	35.0
Actuated g/C Ratio	0.16	0.45	0.45	0.12	0.42			0.29	0.29		0.29	0.29
v/c Ratio	0.80	0.52	0.16	0.33	0.72			1.23	0.63		1.01	0.60
Control Delay	59.8	24.7	4.4	50.2	31.8			149.6	13.0		78.3	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	59.8	24.7	4.4	50.2	31.8			149.6	13.0		78.3	30.1
LOS	E	C	A	D	C			F	B		E	C
Approach Delay		32.0			33.4			114.1			65.9	
Approach LOS		C			C			F			E	
Queue Length 50th (ft)	167	236	3	51	352			~639	59		~462	193
Queue Length 95th (ft)	223	280	37	84	415			#776	173		#599	304
Internal Link Dist (ft)		579			645			482			475	
Turn Bay Length (ft)	170		180	200					290			160
Base Capacity (vph)	600	2288	777	600	2065			1032	706		1032	608
Starvation Cap Reductn	0	0	0	0	0			0	0		0	0
Spillback Cap Reductn	0	0	0	0	0			0	0		0	0
Storage Cap Reductn	0	0	0	0	0			0	0		0	0
Reduced v/c Ratio	0.73	0.52	0.16	0.23	0.72			1.23	0.63		1.01	0.60

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 61.3
 Intersection LOS: E
 Intersection Capacity Utilization 85.4%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Manhattan Blvd & Lapalco Blvd



Phasings
2: Manhattan Blvd & Central



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	26	155	1347	1107	62
Future Volume (vph)	130	26	155	1347	1107	62
Satd. Flow (prot)	1770	1583	1770	3539	3511	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3511	0
Satd. Flow (RTOR)		28			6	
Lane Group Flow (vph)	141	28	168	1464	1270	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		1	6	2	
Permitted Phases		4				
Total Split (s)	29.0	29.0	29.0	91.0	62.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Act Effct Green (s)	15.3	15.3	16.5	96.7	76.3	
Actuated g/C Ratio	0.13	0.13	0.14	0.81	0.64	
v/c Ratio	0.63	0.12	0.69	0.51	0.57	
Control Delay	61.4	16.0	64.4	1.1	6.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	61.4	16.0	64.4	1.1	6.9	
LOS	E	B	E	A	A	
Approach Delay	53.9			7.6	6.9	
Approach LOS	D			A	A	
Queue Length 50th (ft)	105	0	122	27	237	
Queue Length 95th (ft)	165	27	m93	m38	199	
Internal Link Dist (ft)	152			694	1954	
Turn Bay Length (ft)			200			
Base Capacity (vph)	368	351	368	2852	2233	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.38	0.08	0.46	0.51	0.57	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 105 (88%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 9.9
 Intersection LOS: A
 Intersection Capacity Utilization 59.5%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Manhattan Blvd & Central



Phasings
3: Manhattan Blvd & Fountain Park South

2017 Existing Mid Day
02/14/2018

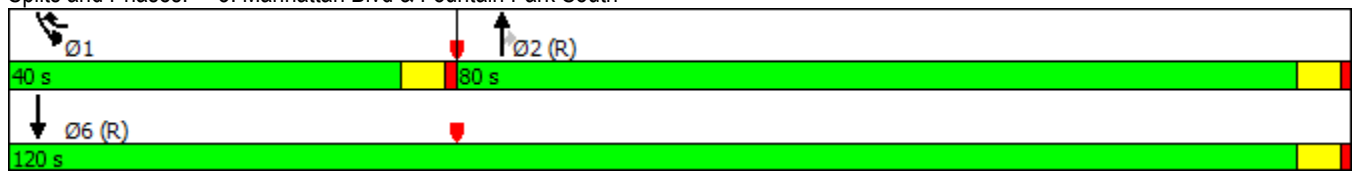


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑	↘	↘	↑↑
Traffic Volume (vph)	0	14	1588	15	34	1191
Future Volume (vph)	0	14	1588	15	34	1191
Satd. Flow (prot)	0	1611	5085	1583	1770	3539
Flt Permitted					0.950	
Satd. Flow (perm)	0	1611	5085	1583	1770	3539
Satd. Flow (RTOR)		26		6		
Lane Group Flow (vph)	0	15	1726	16	37	1295
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Total Split (s)		40.0	80.0	80.0	40.0	120.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0
Act Effct Green (s)		10.3	99.7	99.7	10.3	120.0
Actuated g/C Ratio		0.09	0.83	0.83	0.09	1.00
v/c Ratio		0.09	0.41	0.01	0.24	0.37
Control Delay		10.2	1.8	0.9	53.0	0.3
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		10.2	1.8	0.9	53.0	0.3
LOS		B	A	A	D	A
Approach Delay	10.2		1.7			1.7
Approach LOS	B		A			A
Queue Length 50th (ft)		0	41	1	22	0
Queue Length 95th (ft)		14	49	m2	55	0
Internal Link Dist (ft)	504		121			461
Turn Bay Length (ft)				50	225	
Base Capacity (vph)		488	4223	1315	516	3539
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.03	0.41	0.01	0.07	0.37

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay: 1.8
 Intersection LOS: A
 Intersection Capacity Utilization 47.3%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



Phasings
4: Manhattan Blvd & Fountain Park Center

2017 Existing Mid Day
02/14/2018

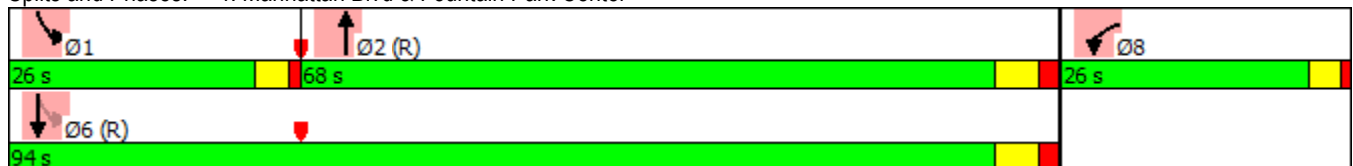


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←←		↑↑↑		←	↑↑
Traffic Volume (vph)	109	109	1591	84	110	1211
Future Volume (vph)	109	109	1591	84	110	1211
Satd. Flow (prot)	3262	0	5045	0	1770	3539
Flt Permitted	0.976				0.091	
Satd. Flow (perm)	3262	0	5045	0	170	3539
Satd. Flow (RTOR)	118		10			
Lane Group Flow (vph)	236	0	1820	0	120	1316
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Total Split (s)	26.0		68.0		26.0	94.0
Total Lost Time (s)	4.0		6.0		4.0	6.0
Act Effct Green (s)	9.9		85.3		102.1	100.1
Actuated g/C Ratio	0.08		0.71		0.85	0.83
v/c Ratio	0.63		0.51		0.42	0.45
Control Delay	33.5		2.8		12.0	4.8
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	33.5		2.9		12.0	4.8
LOS	C		A		B	A
Approach Delay	33.5		2.9			5.4
Approach LOS	C		A			A
Queue Length 50th (ft)	45		56		22	218
Queue Length 95th (ft)	84		77		59	155
Internal Link Dist (ft)	410		461			1111
Turn Bay Length (ft)					440	
Base Capacity (vph)	694		3587		437	2953
Starvation Cap Reductn	0		295		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.34		0.55		0.27	0.45

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 115 (96%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 6.0
 Intersection Capacity Utilization 59.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



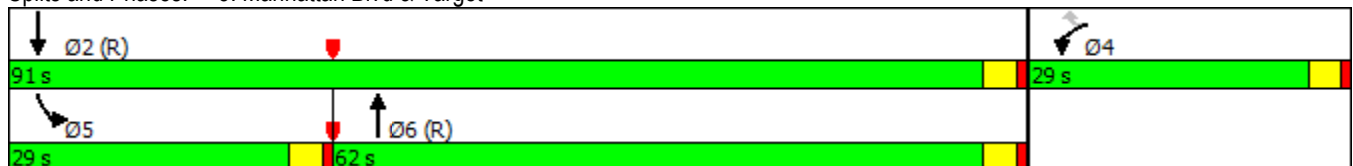
Phasings
5: Manhattan Blvd & Target

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↖	↑↑↑		↙↘	↑↑
Traffic Volume (vph)	132	176	1459	106	176	1209
Future Volume (vph)	132	176	1459	106	176	1209
Satd. Flow (prot)	3433	1583	5034	0	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	5034	0	3433	3539
Satd. Flow (RTOR)		191	13			
Lane Group Flow (vph)	143	191	1701	0	191	1314
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Total Split (s)	29.0	29.0	62.0		29.0	91.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Act Effct Green (s)	11.1	11.1	84.3		12.6	100.9
Actuated g/C Ratio	0.09	0.09	0.70		0.10	0.84
v/c Ratio	0.45	0.60	0.48		0.53	0.44
Control Delay	56.0	15.3	13.7		50.0	4.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	56.0	15.3	13.7		50.0	4.7
LOS	E	B	B		D	A
Approach Delay	32.7		13.7			10.4
Approach LOS	C		B			B
Queue Length 50th (ft)	55	0	273		79	122
Queue Length 95th (ft)	87	69	212		110	176
Internal Link Dist (ft)	511		1111			441
Turn Bay Length (ft)					300	
Base Capacity (vph)	715	481	3538		715	2975
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.20	0.40	0.48		0.27	0.44

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 3 (3%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 14.1
 Intersection Capacity Utilization 57.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 5: Manhattan Blvd & Target



Phasings
6: Manhattan Blvd & Gretna Blvd

2017 Existing Mid Day
02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕↕	↗		↕↕↕	
Traffic Volume (vph)	25	342	131	23	231	106	11	1079	88	9	1188	135
Future Volume (vph)	25	342	131	23	231	106	11	1079	88	9	1188	135
Satd. Flow (prot)	0	1857	1583	0	1853	1583	0	3536	1583	0	5009	0
Flt Permitted		0.916			0.651			0.928			0.928	
Satd. Flow (perm)	0	1706	1583	0	1213	1583	0	3284	1583	0	4648	0
Satd. Flow (RTOR)			47			63			96		26	
Lane Group Flow (vph)	0	399	142	0	276	115	0	1185	96	0	1448	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6				2
Permitted Phases	8		8	4		4	6		6	2		
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0	72.0	72.0	72.0	72.0	72.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Act Effct Green (s)		32.2	32.2		32.2	32.2		75.8	75.8		75.8	
Actuated g/C Ratio		0.27	0.27		0.27	0.27		0.63	0.63		0.63	
v/c Ratio		0.87	0.31		0.85	0.24		0.57	0.09		0.49	
Control Delay		61.2	23.2		64.2	16.2		8.5	1.6		21.2	
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Delay		61.2	23.2		64.2	16.2		8.5	1.6		21.2	
LOS		E	C		E	B		A	A		C	
Approach Delay		51.2			50.1			8.0			21.2	
Approach LOS		D			D			A			C	
Queue Length 50th (ft)		296	57		203	31		193	9		276	
Queue Length 95th (ft)		378	102		282	71		210	4		344	
Internal Link Dist (ft)		449			281			447			304	
Turn Bay Length (ft)									340			
Base Capacity (vph)		597	584		424	595		2074	1035		2946	
Starvation Cap Reductn		0	0		0	0		0	0		0	
Spillback Cap Reductn		0	0		0	0		0	0		0	
Storage Cap Reductn		0	0		0	0		0	0		0	
Reduced v/c Ratio		0.67	0.24		0.65	0.19		0.57	0.09		0.49	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 24.1

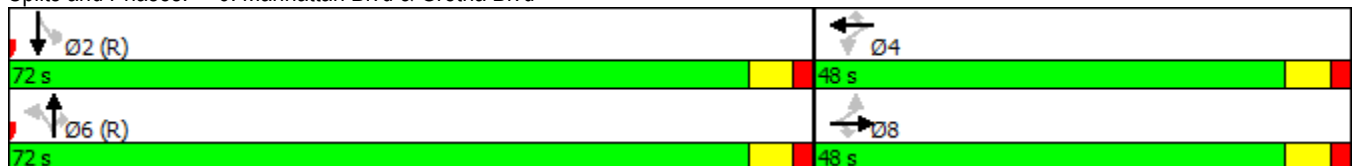
Intersection LOS: C

Intersection Capacity Utilization 85.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



Phasings
7: Manhattan Blvd & WalMart

2017 Existing Mid Day
02/14/2018

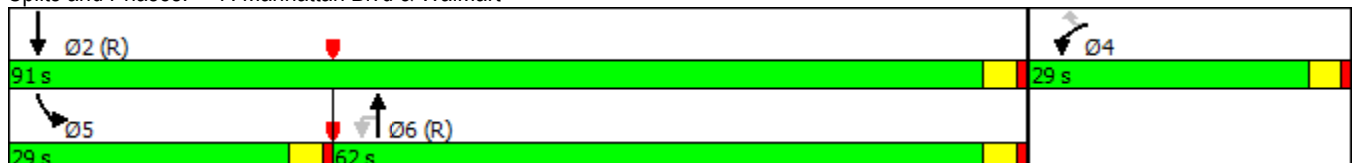


Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↗		↔↔↔		↗	↕↕
Traffic Volume (vph)	144	147	2	936	205	150	923
Future Volume (vph)	144	147	2	936	205	150	923
Satd. Flow (prot)	3433	1583	0	6235	0	1770	3539
Flt Permitted	0.950			0.932		0.950	
Satd. Flow (perm)	3433	1583	0	5811	0	1770	3539
Satd. Flow (RTOR)		160		64			
Lane Group Flow (vph)	157	160	0	1242	0	163	1003
Turn Type	Prot	Perm	Perm	NA		Prot	NA
Protected Phases	4			6		5	2
Permitted Phases		4	6				
Total Split (s)	29.0	29.0	62.0	62.0		29.0	91.0
Total Lost Time (s)	4.0	4.0		4.0		4.0	4.0
Act Effct Green (s)	11.8	11.8		79.0		17.2	100.2
Actuated g/C Ratio	0.10	0.10		0.66		0.14	0.84
v/c Ratio	0.47	0.54		0.32		0.64	0.34
Control Delay	55.4	14.4		4.1		61.6	1.9
Queue Delay	0.0	0.0		0.0		0.0	0.0
Total Delay	55.4	14.4		4.1		61.6	1.9
LOS	E	B		A		E	A
Approach Delay	34.7			4.1			10.2
Approach LOS	C			A			B
Queue Length 50th (ft)	60	0		31		135	20
Queue Length 95th (ft)	93	64		69		208	92
Internal Link Dist (ft)	367			956			706
Turn Bay Length (ft)						230	
Base Capacity (vph)	715	456		3847		368	2955
Starvation Cap Reductn	0	0		0		0	0
Spillback Cap Reductn	0	0		0		0	0
Storage Cap Reductn	0	0		0		0	0
Reduced v/c Ratio	0.22	0.35		0.32		0.44	0.34

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 15 (13%), Referenced to phase 2:SBT and 6:NBTU, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 10.3
 Intersection Capacity Utilization 60.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 7: Manhattan Blvd & WalMart



Phasings
9: Manhattan Blvd & Chick-Fil-A/Palace

2017 Existing Mid Day
02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	3	42	23	3	22	101	1293	12	107	1207	135
Future Volume (vph)	128	3	42	23	3	22	101	1293	12	107	1207	135
Satd. Flow (prot)	1681	1688	1583	1681	1702	1583	1770	6401	0	3204	3486	0
Flt Permitted	0.950	0.954		0.950	0.962		0.950			0.950		
Satd. Flow (perm)	1681	1688	1583	1681	1702	1583	1770	6401	0	3204	3486	0
Satd. Flow (RTOR)			155			155		2			11	
Lane Group Flow (vph)	71	71	46	14	14	24	110	1418	0	116	1459	0
Turn Type	Split	NA	Over	Split	NA	Over	Prot	NA		Prot	NA	
Protected Phases	3	3	1	4	4	5	1	6		5	2	
Permitted Phases												
Total Split (s)	25.0	25.0	20.0	25.0	25.0	20.0	20.0	50.0		20.0	50.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Act Effct Green (s)	20.0	20.0	12.2	20.0	20.0	15.0	12.2	45.0		15.0	47.8	
Actuated g/C Ratio	0.17	0.17	0.10	0.17	0.17	0.12	0.10	0.38		0.12	0.40	
v/c Ratio	0.25	0.25	0.15	0.05	0.05	0.07	0.61	0.59		0.29	1.05	
Control Delay	46.3	46.3	1.1	42.8	42.7	0.4	60.4	32.2		55.2	73.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3		0.0	0.0	
Total Delay	46.3	46.3	1.1	42.8	42.7	0.4	60.4	32.5		55.2	73.2	
LOS	D	D	A	D	D	A	E	C		E	E	
Approach Delay		35.2			23.2			34.5			71.8	
Approach LOS		D			C			C			E	
Queue Length 50th (ft)	50	50	0	9	9	0	88	273		32	~623	
Queue Length 95th (ft)	98	97	0	30	30	0	131	309		68	#797	
Internal Link Dist (ft)		155			398			318			269	
Turn Bay Length (ft)						60	110			145		
Base Capacity (vph)	280	281	333	280	283	333	221	2401		400	1395	
Starvation Cap Reductn	0	0	0	0	0	0	0	381		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.25	0.25	0.14	0.05	0.05	0.07	0.50	0.70		0.29	1.05	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 10 (8%), Referenced to phase 2:SBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 52.0

Intersection LOS: D

Intersection Capacity Utilization 66.1%

ICU Level of Service C

Analysis Period (min) 15

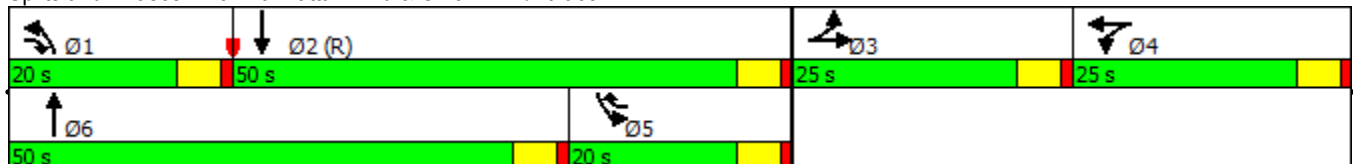
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 9: Manhattan Blvd & Chick-Fil-A/Palace



Phasings

2017 Existing Mid Day

10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center

02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↕↕		↗	↕↕	
Traffic Volume (vph)	57	5	39	68	8	19	80	1412	51	58	1282	9
Future Volume (vph)	57	5	39	68	8	19	80	1412	51	58	1282	9
Satd. Flow (prot)	0	1781	1583	0	1783	1583	1770	5060	0	1770	3536	0
Flt Permitted		0.668			0.701		0.950			0.950		
Satd. Flow (perm)	0	1244	1583	0	1306	1583	1770	5060	0	1770	3536	0
Satd. Flow (RTOR)			109			109		6			1	
Lane Group Flow (vph)	0	67	42	0	83	21	87	1590	0	63	1403	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4						
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	26.0	60.0		26.0	60.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Act Effct Green (s)		13.4	13.4		13.4	13.4	11.8	67.1		31.5	86.8	
Actuated g/C Ratio		0.11	0.11		0.11	0.11	0.10	0.56		0.26	0.72	
v/c Ratio		0.49	0.15		0.57	0.08	0.50	0.56		0.14	0.55	
Control Delay		61.1	1.2		65.3	0.5	83.9	12.8		32.5	11.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		61.1	1.2		65.3	0.5	83.9	12.8		32.5	11.8	
LOS		E	A		E	A	F	B		C	B	
Approach Delay		38.0			52.2			16.5			12.7	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)		50	0		62	0	72	139		34	278	
Queue Length 95th (ft)		94	0		112	0	m123	115		75	441	
Internal Link Dist (ft)		58			668			1275			783	
Turn Bay Length (ft)							260			250		
Base Capacity (vph)		300	465		315	465	309	2871		497	2557	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.22	0.09		0.26	0.05	0.28	0.55		0.13	0.55	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 33 (28%), Referenced to phase 2:SBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 16.6

Intersection LOS: B

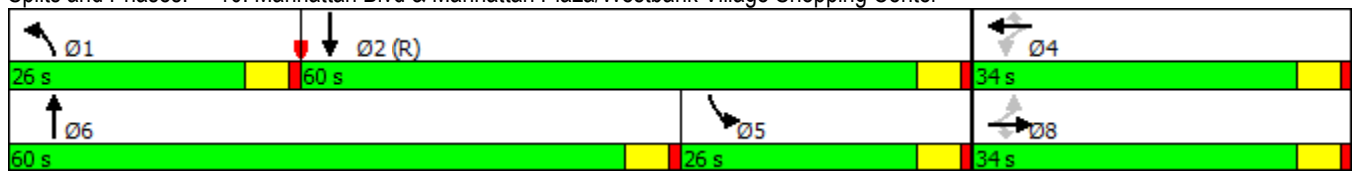
Intersection Capacity Utilization 67.4%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center



Phasings
2: Manhattan Blvd & Central

2017 Existing PM
02/14/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	112	37	157	1455	1236	82
Future Volume (vph)	112	37	157	1455	1236	82
Satd. Flow (prot)	1770	1583	1770	3539	3507	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3507	0
Satd. Flow (RTOR)		40			8	
Lane Group Flow (vph)	122	40	171	1582	1432	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		1	6	2	
Permitted Phases		4				
Total Split (s)	29.0	29.0	29.0	91.0	62.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Act Effct Green (s)	14.3	14.3	16.6	97.7	77.0	
Actuated g/C Ratio	0.12	0.12	0.14	0.81	0.64	
v/c Ratio	0.58	0.18	0.70	0.55	0.64	
Control Delay	60.4	15.1	59.8	2.9	22.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	60.4	15.1	59.8	2.9	22.2	
LOS	E	B	E	A	C	
Approach Delay	49.2			8.4	22.2	
Approach LOS	D			A	C	
Queue Length 50th (ft)	91	0	113	76	470	
Queue Length 95th (ft)	148	32	m118	m169	622	
Internal Link Dist (ft)	152			694	1954	
Turn Bay Length (ft)			200			
Base Capacity (vph)	368	361	368	2880	2253	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.33	0.11	0.46	0.55	0.64	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 112 (93%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 16.3
 Intersection LOS: B
 Intersection Capacity Utilization 63.8%
 ICU Level of Service B
 Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Manhattan Blvd & Central



Phasings
3: Manhattan Blvd & Fountain Park South

2017 Existing PM
02/14/2018

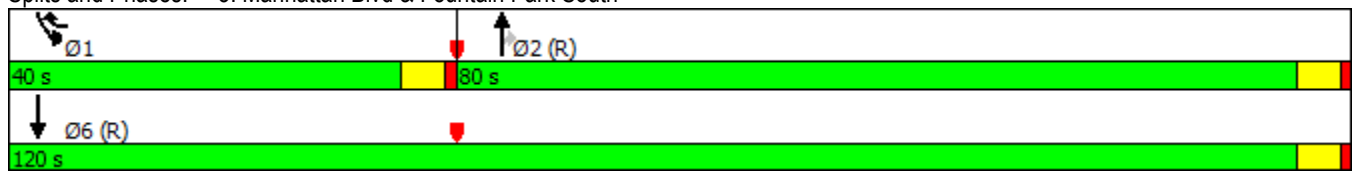


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↕↕	↗	↖	↕↕
Traffic Volume (vph)	0	22	1471	7	20	1636
Future Volume (vph)	0	22	1471	7	20	1636
Satd. Flow (prot)	0	1611	5085	1583	1770	3539
Flt Permitted					0.950	
Satd. Flow (perm)	0	1611	5085	1583	1770	3539
Satd. Flow (RTOR)		34		3		
Lane Group Flow (vph)	0	24	1599	8	22	1778
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Total Split (s)		40.0	80.0	80.0	40.0	120.0
Total Lost Time (s)		5.0	5.0	5.0	5.0	5.0
Act Effct Green (s)		10.0	100.0	100.0	10.0	120.0
Actuated g/C Ratio		0.08	0.83	0.83	0.08	1.00
v/c Ratio		0.15	0.38	0.01	0.15	0.50
Control Delay		12.8	3.8	2.3	72.1	0.4
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		12.8	3.8	2.3	72.1	0.4
LOS		B	A	A	E	A
Approach Delay	12.8		3.8			1.3
Approach LOS	B		A			A
Queue Length 50th (ft)		0	80	1	17	0
Queue Length 95th (ft)		20	208	m2	m0	0
Internal Link Dist (ft)	504		121			461
Turn Bay Length (ft)				50	225	
Base Capacity (vph)		493	4236	1319	516	3539
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	53	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.05	0.38	0.01	0.04	0.50

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 60 (50%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay: 2.5
 Intersection LOS: A
 Intersection Capacity Utilization 49.4%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



Phasings
4: Manhattan Blvd & Fountain Park Center

2017 Existing PM
02/14/2018

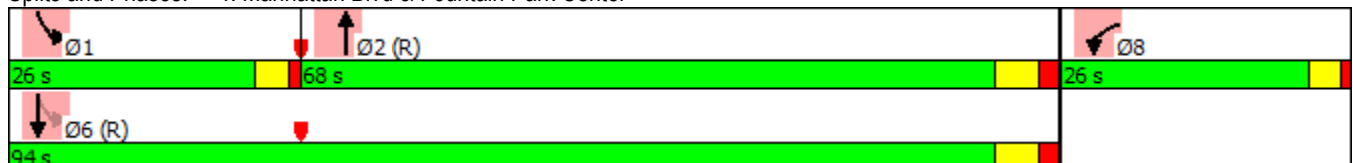


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←←		↑↑↑		←	↑↑
Traffic Volume (vph)	115	130	1477	111	115	1596
Future Volume (vph)	115	130	1477	111	115	1596
Satd. Flow (prot)	3248	0	5029	0	1770	3539
Flt Permitted	0.977				0.103	
Satd. Flow (perm)	3248	0	5029	0	192	3539
Satd. Flow (RTOR)	141		15			
Lane Group Flow (vph)	266	0	1726	0	125	1735
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Total Split (s)	26.0		68.0		26.0	94.0
Total Lost Time (s)	4.0		6.0		4.0	6.0
Act Effct Green (s)	10.2		85.1		101.8	99.8
Actuated g/C Ratio	0.08		0.71		0.85	0.83
v/c Ratio	0.66		0.48		0.41	0.59
Control Delay	32.3		13.6		8.3	12.2
Queue Delay	0.0		0.1		0.0	0.0
Total Delay	32.3		13.7		8.3	12.2
LOS	C		B		A	B
Approach Delay	32.3		13.7			11.9
Approach LOS	C		B			B
Queue Length 50th (ft)	48		224		28	494
Queue Length 95th (ft)	89		443		33	627
Internal Link Dist (ft)	410		461			1111
Turn Bay Length (ft)					440	
Base Capacity (vph)	710		3572		452	2944
Starvation Cap Reductn	0		400		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.37		0.54		0.28	0.59

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 55 (46%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 14.1
 Intersection Capacity Utilization 59.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



Phasings
5: Manhattan Blvd & Target

2017 Existing PM
02/14/2018

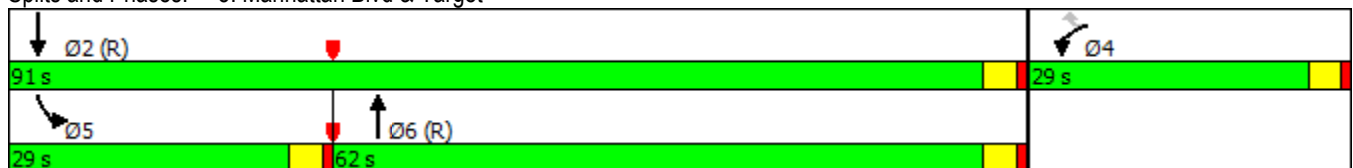


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↙	↑↑↑		↙↘	↑↑
Traffic Volume (vph)	128	129	1450	88	151	1519
Future Volume (vph)	128	129	1450	88	151	1519
Satd. Flow (prot)	3433	1583	5040	0	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	5040	0	3433	3539
Satd. Flow (RTOR)		140	11			
Lane Group Flow (vph)	139	140	1672	0	164	1651
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Total Split (s)	29.0	29.0	62.0		29.0	91.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Act Effct Green (s)	10.9	10.9	85.3		11.9	101.1
Actuated g/C Ratio	0.09	0.09	0.71		0.10	0.84
v/c Ratio	0.45	0.52	0.47		0.48	0.55
Control Delay	56.2	15.4	11.3		56.0	9.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	56.2	15.4	11.3		56.0	9.9
LOS	E	B	B		E	A
Approach Delay	35.7		11.3			14.0
Approach LOS	D		B			B
Queue Length 50th (ft)	54	0	191		66	238
Queue Length 95th (ft)	85	61	243		m89	m565
Internal Link Dist (ft)	511		1111			441
Turn Bay Length (ft)					300	
Base Capacity (vph)	715	440	3584		715	2982
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.19	0.32	0.47		0.23	0.55

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 43 (36%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 14.4
 Intersection LOS: B
 Intersection Capacity Utilization 57.0%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Manhattan Blvd & Target



Phasings
6: Manhattan Blvd & Gretna Blvd

2017 Existing PM
02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕↕	↗		↕↕↕	
Traffic Volume (vph)	19	272	121	47	399	149	0	1184	132	0	1198	92
Future Volume (vph)	19	272	121	47	399	149	0	1184	132	0	1198	92
Satd. Flow (prot)	0	1857	1583	0	1853	1583	0	3539	1583	0	5029	0
Flt Permitted		0.728			0.807							
Satd. Flow (perm)	0	1356	1583	0	1503	1583	0	3539	1583	0	5029	0
Satd. Flow (RTOR)			45			47			143		16	
Lane Group Flow (vph)	0	317	132	0	485	162	0	1287	143	0	1402	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm		NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4			6			
Total Split (s)	48.0	48.0	48.0	48.0	48.0	48.0		72.0	72.0		72.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Act Effct Green (s)		39.8	39.8		39.8	39.8		68.2	68.2		68.2	
Actuated g/C Ratio		0.33	0.33		0.33	0.33		0.57	0.57		0.57	
v/c Ratio		0.71	0.24		0.97	0.29		0.64	0.15		0.49	
Control Delay		44.2	19.4		74.2	21.6		21.4	6.4		10.4	
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Delay		44.2	19.4		74.2	21.6		21.4	6.4		10.4	
LOS		D	B		E	C		C	A		B	
Approach Delay		36.9			61.0			19.9			10.4	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)		207	46		358	62		291	30		113	
Queue Length 95th (ft)		314	94		#567	118		310	59		126	
Internal Link Dist (ft)		449			281			447			304	
Turn Bay Length (ft)									340			
Base Capacity (vph)		474	583		526	584		2012	962		2866	
Starvation Cap Reductn		0	0		0	0		0	0		0	
Spillback Cap Reductn		0	0		0	0		0	0		0	
Storage Cap Reductn		0	0		0	0		0	0		0	
Reduced v/c Ratio		0.67	0.23		0.92	0.28		0.64	0.15		0.49	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 54 (45%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 25.2

Intersection LOS: C

Intersection Capacity Utilization 86.7%

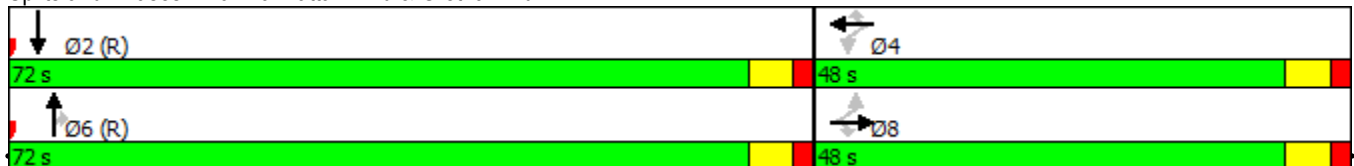
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



Phasings
7: Manhattan Blvd & Walmart

2017 Existing PM
02/14/2018

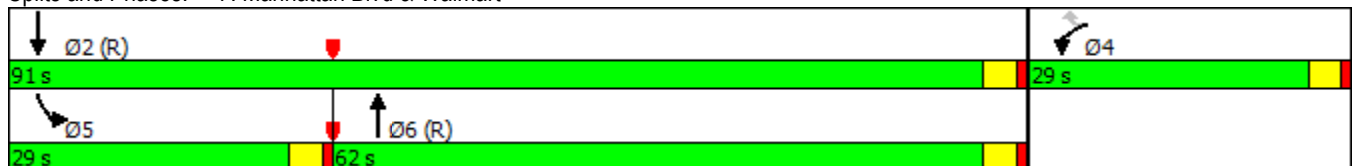


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↗	↑↑↑		↘	↑↑
Traffic Volume (vph)	134	204	1270	164	158	1277
Future Volume (vph)	134	204	1270	164	158	1277
Satd. Flow (prot)	3433	1583	6299	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	6299	0	1770	3539
Satd. Flow (RTOR)		222	37			
Lane Group Flow (vph)	146	222	1558	0	172	1388
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Total Split (s)	29.0	29.0	62.0		29.0	91.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Act Effct Green (s)	11.9	11.9	78.3		17.8	100.1
Actuated g/C Ratio	0.10	0.10	0.65		0.15	0.83
v/c Ratio	0.43	0.62	0.38		0.66	0.47
Control Delay	54.3	14.5	3.1		74.5	2.2
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	54.3	14.5	3.1		74.5	2.2
LOS	D	B	A		E	A
Approach Delay	30.3		3.1			10.1
Approach LOS	C		A			B
Queue Length 50th (ft)	56	0	37		142	74
Queue Length 95th (ft)	86	72	54		184	30
Internal Link Dist (ft)	367		956			706
Turn Bay Length (ft)					230	
Base Capacity (vph)	715	505	4123		368	2952
Starvation Cap Reductn	0	0	0		0	103
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.20	0.44	0.38		0.47	0.49

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 81 (68%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 9.1
 Intersection Capacity Utilization 50.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 7: Manhattan Blvd & Walmart



Phasings
8: Manhattan Blvd & Ute Dr/Lowes

2017 Existing PM
02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗	↖	↔		↖	↑↑↑		↖	↗	
Traffic Volume (vph)	0	0	16	0	0	112	24	1351	19	119	1316	12
Future Volume (vph)	0	0	16	0	0	112	24	1351	19	119	1316	12
Satd. Flow (prot)	0	0	1611	1770	1504	0	1770	6395	0	1770	3536	0
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1611	1770	1504	0	1770	6395	0	1770	3536	0
Satd. Flow (RTOR)			358		294			3			1	
Lane Group Flow (vph)	0	0	17	0	122	0	26	1489	0	129	1443	0
Turn Type			Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases				4	4		1	6		5	2	
Permitted Phases			1									
Total Split (s)			29.0	29.0	29.0		29.0	67.0		24.0	62.0	
Total Lost Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Act Effct Green (s)			10.0		10.0		10.0	78.0		20.0	93.6	
Actuated g/C Ratio			0.08		0.08		0.08	0.65		0.17	0.78	
v/c Ratio			0.04		0.31		0.18	0.36		0.44	0.52	
Control Delay			0.1		2.0		46.4	15.3		65.4	17.7	
Queue Delay			0.0		0.0		0.0	0.0		0.0	49.0	
Total Delay			0.1		2.1		46.4	15.3		65.4	66.7	
LOS			A		A		D	B		E	E	
Approach Delay		0.1			2.1			15.8			66.6	
Approach LOS		A			A			B			E	
Queue Length 50th (ft)			0		0		22	173		81	441	
Queue Length 95th (ft)			0		0		m51	213		m140	645	
Internal Link Dist (ft)		549			478			706			318	
Turn Bay Length (ft)							200			120		
Base Capacity (vph)			619		546		368	4157		295	2758	
Starvation Cap Reductn			0		0		0	0		0	1455	
Spillback Cap Reductn			0		14		0	96		0	0	
Storage Cap Reductn			0		0		0	0		0	0	
Reduced v/c Ratio			0.03		0.23		0.07	0.37		0.44	1.11	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 75 (63%), Referenced to phase 2:SBT and 6:NBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 39.9
 Intersection LOS: D
 Intersection Capacity Utilization 63.4%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Manhattan Blvd & Ute Dr/Lowes



Phasings

2017 Existing PM

10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center

02/14/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↕↕		↗	↕↕	
Traffic Volume (vph)	32	2	22	82	4	41	10	1169	36	49	1559	17
Future Volume (vph)	32	2	22	82	4	41	10	1169	36	49	1559	17
Satd. Flow (prot)	0	1779	1583	0	1777	1583	1770	5065	0	1770	3532	0
Flt Permitted		0.670			0.708		0.950			0.950		
Satd. Flow (perm)	0	1248	1583	0	1319	1583	1770	5065	0	1770	3532	0
Satd. Flow (RTOR)			109			109		5			1	
Lane Group Flow (vph)	0	37	24	0	93	45	11	1310	0	53	1713	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4						
Total Split (s)	34.0	34.0	34.0	34.0	34.0	34.0	26.0	60.0		26.0	60.0	
Total Lost Time (s)		5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	
Act Effct Green (s)		14.2	14.2		14.2	14.2	10.0	75.0		18.8	92.8	
Actuated g/C Ratio		0.12	0.12		0.12	0.12	0.08	0.62		0.16	0.77	
v/c Ratio		0.25	0.08		0.60	0.16	0.07	0.41		0.19	0.63	
Control Delay		50.6	0.6		65.1	1.2	41.7	28.3		44.3	8.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		50.6	0.6		65.1	1.2	41.7	28.3		44.3	8.9	
LOS		D	A		E	A	D	C		D	A	
Approach Delay		30.9			44.3			28.4			10.0	
Approach LOS		C			D			C			A	
Queue Length 50th (ft)		27	0		70	0	9	318		35	216	
Queue Length 95th (ft)		58	0		121	0	m23	405		74	569	
Internal Link Dist (ft)		233			532			1275			783	
Turn Bay Length (ft)							260			250		
Base Capacity (vph)		301	465		318	465	309	3165		309	2730	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.12	0.05		0.29	0.10	0.04	0.41		0.17	0.63	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 85 (71%), Referenced to phase 2:SBT and 6:NBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 19.2

Intersection LOS: B

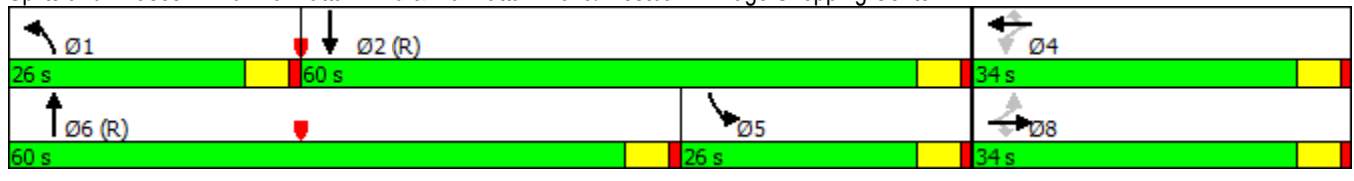
Intersection Capacity Utilization 72.8%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center



APPENDIX E

SYNCHRO CAPACITY ANALYSIS RESULTS (PROPOSED)

Timings

2: Manhattan Blvd & Central

05/23/2018

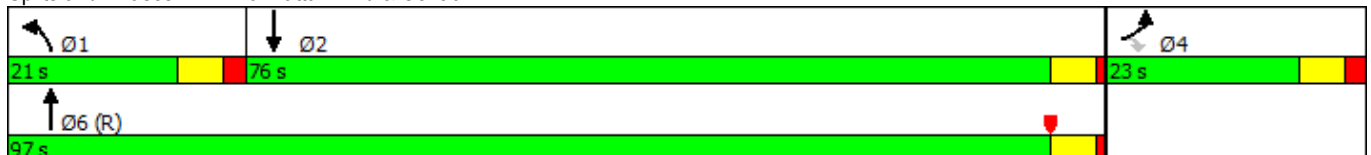


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	17	34	1321	739	37
Future Volume (vph)	45	17	34	1321	739	37
Satd. Flow (prot)	1770	1583	1770	3539	3514	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3514	0
Satd. Flow (RTOR)		18			7	
Lane Group Flow (vph)	49	18	37	1436	843	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		1	6	2	
Permitted Phases		4				
Detector Phase	4	4	1	6	2	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	
Minimum Split (s)	17.0	17.0	17.0	35.5	35.5	
Total Split (s)	23.0	23.0	21.0	97.0	76.0	
Total Split (%)	19.2%	19.2%	17.5%	80.8%	63.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	5.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	Max	C-Max	Max	
Act Effct Green (s)	10.6	10.6	24.6	102.6	71.0	
Actuated g/C Ratio	0.09	0.09	0.20	0.86	0.59	
v/c Ratio	0.32	0.12	0.10	0.47	0.41	
Control Delay	56.7	21.9	34.7	5.9	10.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.7	21.9	34.7	5.9	10.7	
LOS	E	C	C	A	B	
Approach Delay	47.4			6.7	10.7	
Approach LOS	D			A	B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 90 (75%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.47
 Intersection Signal Delay: 9.2
 Intersection LOS: A
 Intersection Capacity Utilization 54.0%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 2: Manhattan Blvd & Central



Timings

3: Manhattan Blvd & Fountain Park South

05/23/2018

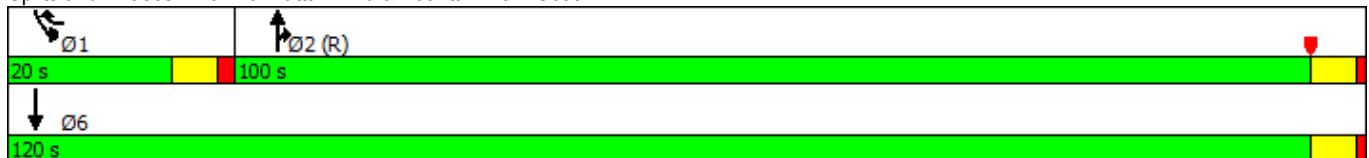


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↕↕	↖	↘	↕↕
Traffic Volume (vph)	0	9	1590	2	11	1049
Future Volume (vph)	0	9	1590	2	11	1049
Satd. Flow (prot)	0	1611	5085	1583	1770	3539
Flt Permitted					0.950	
Satd. Flow (perm)	0	1611	5085	1583	1770	3539
Satd. Flow (RTOR)		59		1		
Lane Group Flow (vph)	0	10	1728	2	12	1140
Turn Type		Over	NA	Prot	Prot	NA
Protected Phases		1	2	2	1	6
Permitted Phases						
Detector Phase		1	2	2	1	6
Switch Phase						
Minimum Initial (s)		10.0	20.0	20.0	10.0	20.0
Minimum Split (s)		15.5	25.0	25.0	15.5	25.0
Total Split (s)		20.0	100.0	100.0	20.0	120.0
Total Split (%)		16.7%	83.3%	83.3%	16.7%	100.0%
Yellow Time (s)		4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.5	1.0	1.0	1.5	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.0	5.0	5.5	5.0
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Recall Mode		Min	C-Max	C-Max	Min	Max
Act Effct Green (s)		10.0	99.5	99.5	10.0	120.0
Actuated g/C Ratio		0.08	0.83	0.83	0.08	1.00
v/c Ratio		0.05	0.41	0.00	0.08	0.32
Control Delay		0.6	1.2	0.5	69.0	0.3
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		0.6	1.2	0.5	69.0	0.3
LOS		A	A	A	E	A
Approach Delay	0.6		1.2			1.0
Approach LOS	A		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 115 (96%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay: 1.1
 Intersection Capacity Utilization 47.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



Timings

4: Manhattan Blvd & Fountain Park Center

05/23/2018

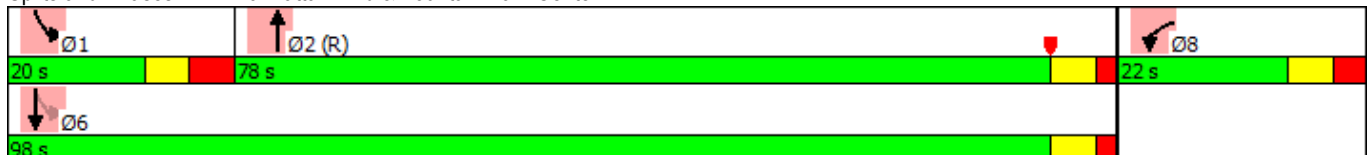


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	16	1531	12	10	982
Future Volume (vph)	2	16	1531	12	10	982
Satd. Flow (prot)	3114	0	5080	0	1770	3539
Flt Permitted	0.995				0.104	
Satd. Flow (perm)	3114	0	5080	0	194	3539
Satd. Flow (RTOR)	178		2			
Lane Group Flow (vph)	19	0	1677	0	11	1067
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	
Detector Phase	8		2		1	6
Switch Phase						
Minimum Initial (s)	13.0		20.0		10.0	20.0
Minimum Split (s)	20.5		26.0		18.0	26.0
Total Split (s)	22.0		78.0		20.0	98.0
Total Split (%)	18.3%		65.0%		16.7%	81.7%
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	3.0		2.0		4.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	7.0		6.0		8.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None		C-Max		Min	Max
Act Effct Green (s)	13.0		88.0		104.0	109.6
Actuated g/C Ratio	0.11		0.73		0.87	0.91
v/c Ratio	0.04		0.45		0.04	0.33
Control Delay	0.1		4.3		1.4	1.2
Queue Delay	0.0		0.1		0.0	0.0
Total Delay	0.1		4.3		1.4	1.2
LOS	A		A		A	A
Approach Delay	0.1		4.3			1.2
Approach LOS	A		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84 (70%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.45
 Intersection Signal Delay: 3.1
 Intersection Capacity Utilization 51.5%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



Timings

5: Manhattan Blvd & Target

05/23/2018



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↖	↖	↕↕↕		↖↖	↕↕
Traffic Volume (vph)	5	9	1136	170	39	790
Future Volume (vph)	5	9	1136	170	39	790
Satd. Flow (prot)	3433	1583	4984	0	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	4984	0	3433	3539
Satd. Flow (RTOR)		10	41			
Lane Group Flow (vph)	5	10	1420	0	42	859
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		10.0	20.0
Minimum Split (s)	17.5	17.5	25.0		18.0	25.0
Total Split (s)	22.0	22.0	76.0		22.0	98.0
Total Split (%)	18.3%	18.3%	63.3%		18.3%	81.7%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.5	2.5	1.0		3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5	5.0		7.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?					Yes	
Recall Mode	Min	Min	C-Min		None	Min
Act Effct Green (s)	10.0	10.0	84.5		10.0	98.5
Actuated g/C Ratio	0.08	0.08	0.70		0.08	0.82
v/c Ratio	0.02	0.07	0.40		0.15	0.30
Control Delay	50.8	26.4	7.4		30.8	2.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	50.8	26.4	7.4		30.8	2.0
LOS	D	C	A		C	A
Approach Delay	34.6		7.4			3.3
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 58 (48%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.40
 Intersection Signal Delay: 6.0
 Intersection Capacity Utilization 43.7%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 5: Manhattan Blvd & Target



Timings

6: Manhattan Blvd & Gretna Blvd

05/23/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕	↗		↕	↗
Traffic Volume (vph)	11	134	47	23	232	99	0	1134	110	0	782	70
Future Volume (vph)	11	134	47	23	232	99	0	1134	110	0	782	70
Satd. Flow (prot)	0	1855	1583	0	1855	1583	0	3539	1583	0	5024	0
Flt Permitted		0.851			0.958							
Satd. Flow (perm)	0	1585	1583	0	1785	1583	0	3539	1583	0	5024	0
Satd. Flow (RTOR)			51			65			120			21
Lane Group Flow (vph)	0	158	51	0	277	108	0	1233	120	0	926	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm		NA	
Protected Phases		8			4			6				2
Permitted Phases	8		8	4		4			6			
Detector Phase	8	8	8	4	4	4		6	6			2
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0		20.0	20.0		20.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0		26.0	26.0		26.0	
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0		76.0	76.0		76.0	
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%		63.3%	63.3%		63.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None		C-Max	C-Max		C-Max	
Act Effct Green (s)		23.8	23.8		23.8	23.8		84.2	84.2		84.2	
Actuated g/C Ratio		0.20	0.20		0.20	0.20		0.70	0.70		0.70	
v/c Ratio		0.50	0.14		0.78	0.30		0.50	0.10		0.26	
Control Delay		47.4	10.4		60.7	18.9		5.4	0.2		8.0	
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Delay		47.4	10.4		60.7	18.9		5.4	0.2		8.0	
LOS		D	B		E	B		A	A		A	
Approach Delay		38.4			49.0			4.9			8.0	
Approach LOS		D			D			A			A	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 39 (33%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 14.3

Intersection LOS: B

Intersection Capacity Utilization 72.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



Timings

7: Manhattan Blvd & WalMart

05/23/2018

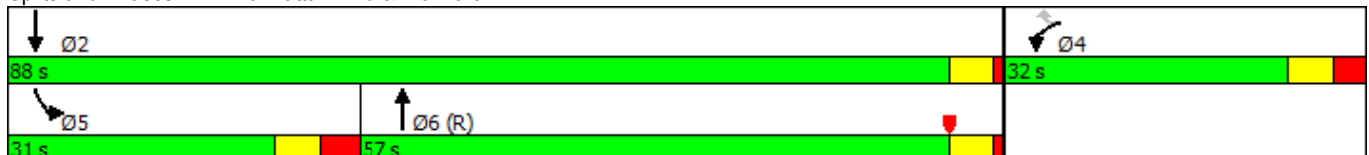


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	91	126	1099	95	95	857
Future Volume (vph)	91	126	1099	95	95	857
Satd. Flow (prot)	3433	1583	6331	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	6331	0	1770	3539
Satd. Flow (RTOR)		137	20			
Lane Group Flow (vph)	99	137	1298	0	103	932
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		10.0	20.0
Minimum Split (s)	18.0	18.0	25.0		18.0	25.0
Total Split (s)	32.0	32.0	57.0		31.0	88.0
Total Split (%)	26.7%	26.7%	47.5%		25.8%	73.3%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	3.0	3.0	1.0		3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0		7.5	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Min	Min	C-Max		Min	Min
Act Effct Green (s)	10.7	10.7	76.3		13.5	97.3
Actuated g/C Ratio	0.09	0.09	0.64		0.11	0.81
v/c Ratio	0.32	0.52	0.32		0.52	0.32
Control Delay	54.0	15.7	8.7		70.7	2.1
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	54.0	15.7	8.7		70.7	2.1
LOS	D	B	A		E	A
Approach Delay	31.8		8.7			8.9
Approach LOS	C		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 16 (13%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 10.9
 Intersection Capacity Utilization 50.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 7: Manhattan Blvd & WalMart



Timings

8: Manhattan Blvd & Ute Dr/Lowes

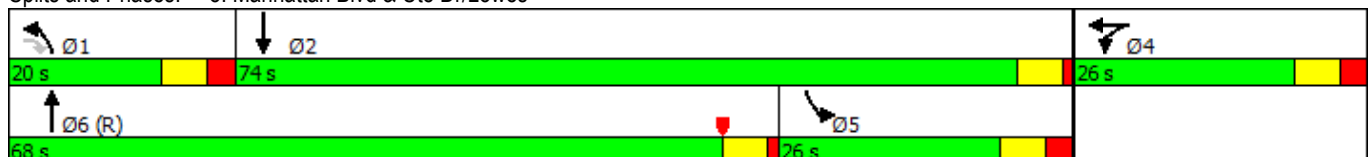
05/23/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	6	0	0	101	6	899	17	79	1155	1
Future Volume (vph)	0	0	6	0	0	101	6	899	17	79	1155	1
Satd. Flow (prot)	0	0	1611	1770	1504	0	1770	6389	0	1770	3539	0
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1611	1770	1504	0	1770	6389	0	1770	3539	0
Satd. Flow (RTOR)			304		348			4				
Lane Group Flow (vph)	0	0	7	0	110	0	7	995	0	86	1256	0
Turn Type			Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases				4	4		1	6		5	2	
Permitted Phases			1									
Detector Phase			1	4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)			13.0	17.0	17.0		13.0	20.0		13.0	20.0	
Minimum Split (s)			19.5	23.5	23.5		19.5	25.5		22.5	26.5	
Total Split (s)			20.0	26.0	26.0		20.0	68.0		26.0	74.0	
Total Split (%)			16.7%	21.7%	21.7%		16.7%	56.7%		21.7%	61.7%	
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)			2.5	2.5	2.5		2.5	1.0		2.5	1.0	
Lost Time Adjust (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)			6.5	6.5	6.5		6.5	5.0		6.5	5.0	
Lead/Lag			Lead				Lead	Lead		Lag	Lag	
Lead-Lag Optimize?												
Recall Mode			None	None	None		None	C-Max		None	Max	
Act Effct Green (s)			13.0		17.0		13.0	70.7		18.2	83.7	
Actuated g/C Ratio			0.11		0.14		0.11	0.59		0.15	0.70	
v/c Ratio			0.02		0.22		0.04	0.26		0.32	0.51	
Control Delay			0.0		1.0		50.3	12.4		32.2	3.5	
Queue Delay			0.0		0.0		0.0	0.0		0.0	0.2	
Total Delay			0.0		1.0		50.3	12.4		32.2	3.7	
LOS			A		A		D	B		C	A	
Approach Delay					1.0			12.7			5.5	
Approach LOS					A			B			A	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 62 (52%), Referenced to phase 6:NBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Manhattan Blvd & Ute Dr/Lowes



Timings

9: Manhattan Blvd & Chick-Fil-A/Palace

05/23/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	0	3	0	1	4	66	1074	2	55	761	36
Future Volume (vph)	104	0	3	0	1	4	66	1074	2	55	761	36
Satd. Flow (prot)	1681	1681	1583	1770	1770	1583	1770	6408	0	3204	3514	0
Flt Permitted	0.950	0.950					0.110			0.950		
Satd. Flow (perm)	1681	1681	1583	1770	1770	1583	205	6408	0	3204	3514	0
Satd. Flow (RTOR)			200			195						5
Lane Group Flow (vph)	56	57	3	0	1	4	72	1169	0	60	866	0
Turn Type	Split	NA	Over	Split	NA	Over	pm+pt	NA		Prot	NA	
Protected Phases	3	3	1	4	4	5	1	6		5	2	
Permitted Phases							6					
Detector Phase	3	3	1	4	4	5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	17.0	17.0	13.0	17.0	17.0	13.0	13.0	20.0		13.0	20.0	
Minimum Split (s)	23.0	23.0	19.5	24.0	24.0	20.0	19.5	25.5		20.0	25.5	
Total Split (s)	23.0	23.0	21.0	24.0	24.0	20.0	21.0	53.0		20.0	52.0	
Total Split (%)	19.2%	19.2%	17.5%	20.0%	20.0%	16.7%	17.5%	44.2%		16.7%	43.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.5	3.0	3.0	3.0	2.5	1.0		3.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.5	7.0	7.0	7.0	6.5	5.0		7.0	5.0	
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	Max	Max	None	Max	Max	None	None	C-Max		None	None	
Act Effct Green (s)	17.0	17.0	13.0		21.0	13.0	46.5	48.0		13.0	48.4	
Actuated g/C Ratio	0.14	0.14	0.11		0.18	0.11	0.39	0.40		0.11	0.40	
v/c Ratio	0.24	0.24	0.01		0.00	0.01	0.29	0.46		0.17	0.61	
Control Delay	48.7	48.8	0.0		44.0	0.0	9.3	11.4		23.3	10.1	
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.2		0.0	0.0	
Total Delay	48.7	48.8	0.0		44.0	0.0	9.3	11.5		23.3	10.1	
LOS	D	D	A		D	A	A	B		C	B	
Approach Delay		47.5			8.8			11.4			11.0	
Approach LOS		D			A			B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 53 (44%), Referenced to phase 6:NBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 13.1

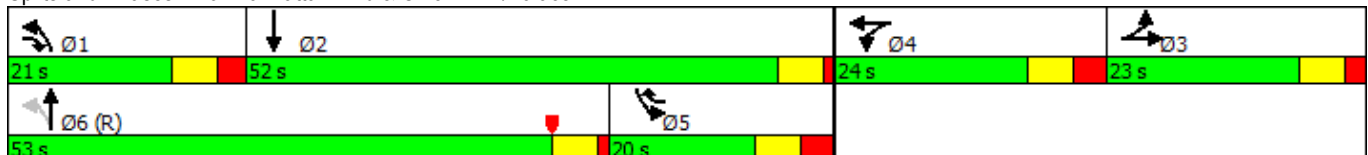
Intersection LOS: B

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 9: Manhattan Blvd & Chick-Fil-A/Palace



Timings

10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center

05/23/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗↘		↗	↕↗	
Traffic Volume (vph)	6	4	2	19	0	3	22	1359	25	11	801	0
Future Volume (vph)	6	4	2	19	0	3	22	1359	25	11	801	0
Satd. Flow (prot)	0	1805	1583	0	1770	1583	1770	5070	0	1770	3539	0
Flt Permitted		0.903			0.750		0.950			0.950		
Satd. Flow (perm)	0	1682	1583	0	1397	1583	1770	5070	0	1770	3539	0
Satd. Flow (RTOR)			164			164		4				
Lane Group Flow (vph)	0	11	2	0	21	3	24	1504	0	12	871	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4						
Detector Phase	8	8	8	4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0		10.0	20.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	27.0		17.0	27.0	
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	21.0	75.0		21.0	75.0	
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	17.5%	62.5%		17.5%	62.5%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0	8.0		8.0	8.0	7.0	7.0		7.0	7.0	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	Max	Max	Max	None	None	None	None	C-Min		None	Min	
Act Effct Green (s)		43.7	43.7		43.7	43.7	12.9	57.9		10.0	51.6	
Actuated g/C Ratio		0.36	0.36		0.36	0.36	0.11	0.48		0.08	0.43	
v/c Ratio		0.02	0.00		0.04	0.00	0.13	0.61		0.08	0.57	
Control Delay		29.4	0.0		29.3	0.0	24.3	7.9		52.3	28.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		29.4	0.0		29.3	0.0	24.3	7.9		52.3	28.6	
LOS		C	A		C	A	C	A		D	C	
Approach Delay		24.9			25.7			8.2			28.9	
Approach LOS		C			C			A			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 94 (78%), Referenced to phase 6:NBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 15.9

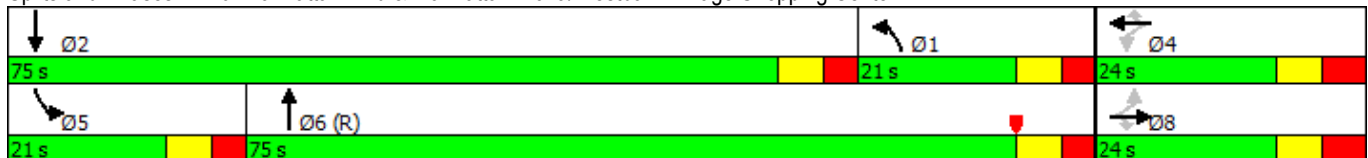
Intersection LOS: B

Intersection Capacity Utilization 62.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center



Timings

1: Manhattan Blvd & Lapalco Blvd

05/23/2018

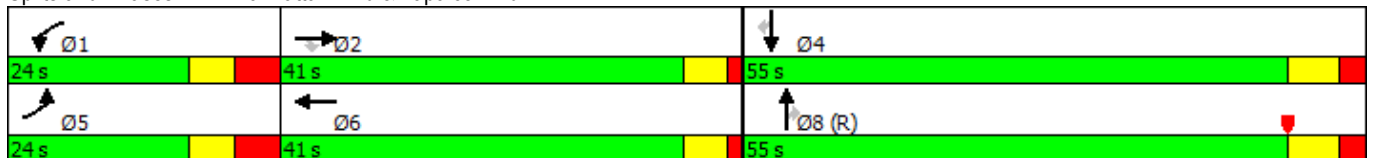


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕	↗	↖↗	↕			↕	↗		↕	↗
Traffic Volume (vph)	401	1093	116	129	1133	243	0	1168	409	0	961	335
Future Volume (vph)	401	1093	116	129	1133	243	0	1168	409	0	961	335
Satd. Flow (prot)	3433	5085	1583	3433	4953	0	0	3539	1583	0	3539	1583
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	3433	5085	1583	3433	4953	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)			109		14				342			245
Lane Group Flow (vph)	436	1188	126	140	1496	0	0	1270	445	0	1045	364
Turn Type	Prot	NA	Perm	Prot	NA			NA	Perm		NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2						8			4
Detector Phase	5	2	2	1	6			8	8		4	4
Switch Phase												
Minimum Initial (s)	15.0	25.0	25.0	15.0	25.0			18.0	18.0		18.0	18.0
Minimum Split (s)	23.0	31.0	31.0	23.0	31.0			25.0	25.0		25.0	25.0
Total Split (s)	24.0	41.0	41.0	24.0	41.0			55.0	55.0		55.0	55.0
Total Split (%)	20.0%	34.2%	34.2%	20.0%	34.2%			45.8%	45.8%		45.8%	45.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
All-Red Time (s)	4.0	1.5	1.5	4.0	1.5			2.5	2.5		2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	8.0	5.5	5.5	8.0	5.5			7.0	7.0		7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	Max	Max	None	Max			C-Max	C-Max		None	None
Act Effct Green (s)	16.0	36.5	36.5	15.0	35.5			48.0	48.0		48.0	48.0
Actuated g/C Ratio	0.13	0.30	0.30	0.12	0.30			0.40	0.40		0.40	0.40
v/c Ratio	0.95	0.77	0.23	0.33	1.01			0.90	0.53		0.74	0.47
Control Delay	84.0	41.9	8.8	50.2	68.7			43.4	8.8		32.6	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	84.0	41.9	8.8	50.2	68.7			43.4	8.8		32.6	15.2
LOS	F	D	A	D	E			D	A		C	B
Approach Delay		50.0			67.1			34.4			28.1	
Approach LOS		D			E			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 8:NBT, Start of Yellow, Master Intersection
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 45.4
 Intersection LOS: D
 Intersection Capacity Utilization 89.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 1: Manhattan Blvd & Lapalco Blvd



Timings

2: Manhattan Blvd & Central

05/23/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	130	26	155	1347	1107	62
Future Volume (vph)	130	26	155	1347	1107	62
Satd. Flow (prot)	1770	1583	1770	3539	3511	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3511	0
Satd. Flow (RTOR)		28			7	
Lane Group Flow (vph)	141	28	168	1464	1270	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		1	6	2	
Permitted Phases		4				
Detector Phase	4	4	1	6	2	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	
Minimum Split (s)	17.0	17.0	17.0	35.5	35.5	
Total Split (s)	25.0	25.0	28.0	95.0	67.0	
Total Split (%)	20.8%	20.8%	23.3%	79.2%	55.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	5.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	Min	Min	None	C-Max	Max	
Act Effct Green (s)	14.9	14.9	16.3	94.1	71.8	
Actuated g/C Ratio	0.12	0.12	0.14	0.78	0.60	
v/c Ratio	0.64	0.13	0.70	0.53	0.60	
Control Delay	63.1	16.5	49.6	7.5	10.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.1	16.5	49.6	7.5	10.1	
LOS	E	B	D	A	B	
Approach Delay	55.4			11.8	10.1	
Approach LOS	E			B	B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 82 (68%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 13.5
 Intersection Capacity Utilization 63.7%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 2: Manhattan Blvd & Central



Timings

3: Manhattan Blvd & Fountain Park South

05/23/2018



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕	↖	↗	↕
Traffic Volume (vph)	0	14	1588	15	34	1191
Future Volume (vph)	0	14	1588	15	34	1191
Satd. Flow (prot)	0	1611	5085	1583	1770	3539
Flt Permitted					0.950	
Satd. Flow (perm)	0	1611	5085	1583	1770	3539
Satd. Flow (RTOR)		53		10		
Lane Group Flow (vph)	0	15	1726	16	37	1295
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Detector Phase		1	2	2	1	6
Switch Phase						
Minimum Initial (s)		10.0	20.0	20.0	10.0	20.0
Minimum Split (s)		15.5	25.0	25.0	15.5	25.0
Total Split (s)		23.0	97.0	97.0	23.0	120.0
Total Split (%)		19.2%	80.8%	80.8%	19.2%	100.0%
Yellow Time (s)		4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.5	1.0	1.0	1.5	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.0	5.0	5.5	5.0
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Recall Mode		Min	C-Max	C-Max	Min	Max
Act Effct Green (s)		10.3	99.2	99.2	10.3	120.0
Actuated g/C Ratio		0.09	0.83	0.83	0.09	1.00
v/c Ratio		0.08	0.41	0.01	0.24	0.37
Control Delay		0.9	1.3	0.3	60.4	0.3
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		0.9	1.3	0.3	60.4	0.3
LOS		A	A	A	E	A
Approach Delay	0.9		1.3			1.9
Approach LOS	A		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 107 (89%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.41
 Intersection Signal Delay: 1.6
 Intersection Capacity Utilization 47.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



Timings

4: Manhattan Blvd & Fountain Park Center

05/23/2018

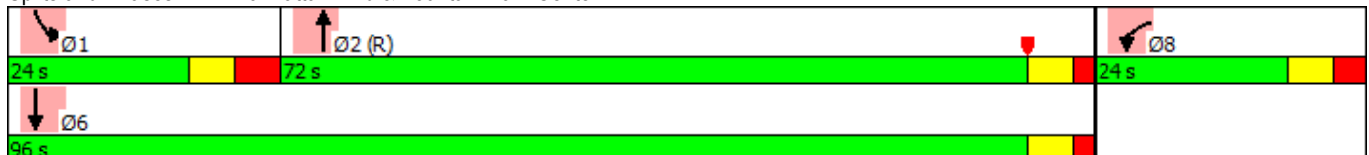


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗		↑↑↑		↖	↑↑
Traffic Volume (vph)	109	109	1591	84	110	1211
Future Volume (vph)	109	109	1591	84	110	1211
Satd. Flow (prot)	3262	0	5045	0	1770	3539
Flt Permitted	0.976				0.950	
Satd. Flow (perm)	3262	0	5045	0	1770	3539
Satd. Flow (RTOR)	118		11			
Lane Group Flow (vph)	236	0	1820	0	120	1316
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Detector Phase	8		2		1	6
Switch Phase						
Minimum Initial (s)	13.0		20.0		10.0	20.0
Minimum Split (s)	20.5		26.0		18.0	26.0
Total Split (s)	24.0		72.0		24.0	96.0
Total Split (%)	20.0%		60.0%		20.0%	80.0%
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	3.0		2.0		4.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	7.0		6.0		8.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None		C-Max		Min	Max
Act Effct Green (s)	13.2		71.4		14.4	93.8
Actuated g/C Ratio	0.11		0.60		0.12	0.78
v/c Ratio	0.51		0.61		0.57	0.48
Control Delay	29.0		12.8		61.9	4.1
Queue Delay	0.0		0.1		0.0	0.0
Total Delay	29.0		12.8		61.9	4.1
LOS	C		B		E	A
Approach Delay	29.0		12.8			8.9
Approach LOS	C		B			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 73 (61%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 12.3
 Intersection LOS: B
 Intersection Capacity Utilization 69.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



Timings

5: Manhattan Blvd & Target

05/23/2018



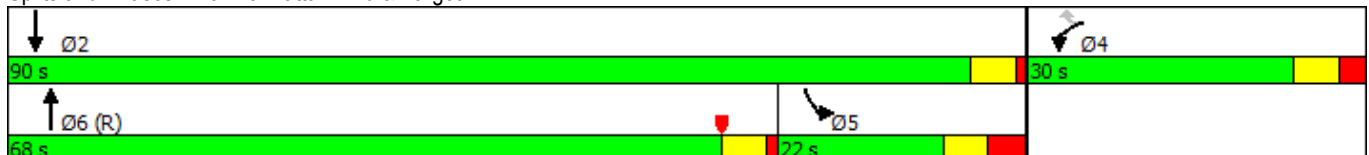
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕↖↗		↖↗	↕
Traffic Volume (vph)	132	176	1459	106	176	1209
Future Volume (vph)	132	176	1459	106	176	1209
Satd. Flow (prot)	3433	1583	5034	0	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	5034	0	3433	3539
Satd. Flow (RTOR)		191	14			
Lane Group Flow (vph)	143	191	1701	0	191	1314
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		10.0	20.0
Minimum Split (s)	17.5	17.5	25.0		18.0	25.0
Total Split (s)	30.0	30.0	68.0		22.0	90.0
Total Split (%)	25.0%	25.0%	56.7%		18.3%	75.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.5	2.5	1.0		3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5	5.0		7.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	Min	Min	C-Min		Min	Min
Act Effct Green (s)	11.1	11.1	77.3		12.6	97.4
Actuated g/C Ratio	0.09	0.09	0.64		0.10	0.81
v/c Ratio	0.45	0.60	0.52		0.53	0.46
Control Delay	56.0	15.3	24.4		46.2	1.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	56.0	15.3	24.4		46.2	1.4
LOS	E	B	C		D	A
Approach Delay	32.7		24.4			7.1
Approach LOS	C		C			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 43 (36%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 17.8
 Intersection Capacity Utilization 63.0%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 5: Manhattan Blvd & Target



Timings

6: Manhattan Blvd & Gretna Blvd

05/23/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕		↕↕	↕		↕↕↕	
Traffic Volume (vph)	25	342	131	23	231	106	11	1079	88	9	1188	135
Future Volume (vph)	25	342	131	23	231	106	11	1079	88	9	1188	135
Satd. Flow (prot)	0	1857	1583	0	1853	1583	0	3536	1583	0	5009	0
Flt Permitted		0.918			0.654			0.928			0.928	
Satd. Flow (perm)	0	1710	1583	0	1218	1583	0	3284	1583	0	4648	0
Satd. Flow (RTOR)			44			60			96		25	
Lane Group Flow (vph)	0	399	142	0	276	115	0	1185	96	0	1448	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4	6		6	2		
Detector Phase	8	8	8	4	4	4	6	6	6	2	2	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	26.0	26.0	26.0	26.0	26.0	
Total Split (s)	49.0	49.0	49.0	49.0	49.0	49.0	71.0	71.0	71.0	71.0	71.0	
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%	59.2%	59.2%	59.2%	59.2%	59.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	
Act Effct Green (s)		32.3	32.3		32.3	32.3		75.7	75.7		75.7	
Actuated g/C Ratio		0.27	0.27		0.27	0.27		0.63	0.63		0.63	
v/c Ratio		0.87	0.31		0.84	0.25		0.57	0.09		0.49	
Control Delay		60.5	23.9		63.2	16.9		8.2	3.8		3.4	
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Delay		60.5	23.9		63.2	16.9		8.2	3.8		3.4	
LOS		E	C		E	B		A	A		A	
Approach Delay		50.9			49.6			7.8			3.4	
Approach LOS		D			D			A			A	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 7 (6%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 85.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



Timings

7: Manhattan Blvd & WalMart

05/23/2018

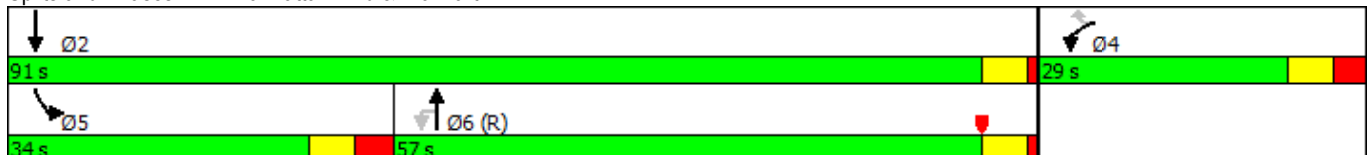


Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	144	147	2	936	205	150	923
Future Volume (vph)	144	147	2	936	205	150	923
Satd. Flow (prot)	3433	1583	0	6235	0	1770	3539
Flt Permitted	0.950			0.932		0.950	
Satd. Flow (perm)	3433	1583	0	5811	0	1770	3539
Satd. Flow (RTOR)		160		58			
Lane Group Flow (vph)	157	160	0	1242	0	163	1003
Turn Type	Prot	Perm	Perm	NA		Prot	NA
Protected Phases	4			6		5	2
Permitted Phases		4	6				
Detector Phase	4	4	6	6		5	2
Switch Phase							
Minimum Initial (s)	10.0	10.0	20.0	20.0		10.0	20.0
Minimum Split (s)	18.0	18.0	25.0	25.0		18.0	25.0
Total Split (s)	29.0	29.0	57.0	57.0		34.0	91.0
Total Split (%)	24.2%	24.2%	47.5%	47.5%		28.3%	75.8%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	3.0	3.0	1.0	1.0		3.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0		5.0		7.5	5.0
Lead/Lag			Lag	Lag		Lead	
Lead-Lag Optimize?			Yes	Yes		Yes	
Recall Mode	Min	Min	C-Max	C-Max		Min	Max
Act Effct Green (s)	11.8	11.8		71.5		17.2	96.2
Actuated g/C Ratio	0.10	0.10		0.60		0.14	0.80
v/c Ratio	0.47	0.54		0.36		0.64	0.35
Control Delay	55.4	14.4		2.8		49.5	4.2
Queue Delay	0.0	0.0		0.0		0.0	0.0
Total Delay	55.4	14.4		2.8		49.5	4.2
LOS	E	B		A		D	A
Approach Delay	34.7			2.8			10.6
Approach LOS	C			A			B

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 30 (25%), Referenced to phase 6:NBTU, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 9.8
 Intersection LOS: A
 Intersection Capacity Utilization 65.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 7: Manhattan Blvd & WalMart



Timings

8: Manhattan Blvd & Ute Dr/Lowes

05/23/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	20	0	1	116	36	1176	21	82	1368	11
Future Volume (vph)	0	0	20	0	1	116	36	1176	21	82	1368	11
Satd. Flow (prot)	0	0	1611	1770	1506	0	1770	6389	0	1770	3536	0
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	0	1611	1770	1506	0	1770	6389	0	1770	3536	0
Satd. Flow (RTOR)			452		126			5			1	
Lane Group Flow (vph)	0	0	22	0	127	0	39	1301	0	89	1499	0
Turn Type			Prot	Split	NA		Prot	NA		Prot	NA	
Protected Phases			5!	4	4		1	6		5	2!	
Permitted Phases												
Detector Phase			5	4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)			13.0	17.0	17.0		13.0	14.5		13.0	15.0	
Minimum Split (s)			19.5	23.5	23.5		19.5	20.0		19.5	20.0	
Total Split (s)			21.0	25.0	25.0		20.0	74.0		21.0	75.0	
Total Split (%)			17.5%	20.8%	20.8%		16.7%	61.7%		17.5%	62.5%	
Yellow Time (s)			4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)			2.5	2.5	2.5		2.5	1.0		2.5	1.0	
Lost Time Adjust (s)			0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)			6.5	6.5	6.5		6.5	5.0		6.5	5.0	
Lead/Lag			Lag				Lead	Lead		Lag	Lag	
Lead-Lag Optimize?												
Recall Mode			None	None	None		None	C-Max		None	Max	
Act Effct Green (s)			14.2		17.0		13.0	74.7		14.2	79.8	
Actuated g/C Ratio			0.12		0.14		0.11	0.62		0.12	0.66	
v/c Ratio			0.04		0.40		0.20	0.33		0.43	0.64	
Control Delay			0.1		12.0		57.3	5.8		26.7	3.4	
Queue Delay			0.0		0.0		0.0	0.0		0.0	0.2	
Total Delay			0.1		12.0		57.3	5.8		26.7	3.6	
LOS			A		B		E	A		C	A	
Approach Delay		0.1			12.0			7.3			4.9	
Approach LOS		A			B			A			A	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 62 (52%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 6.2
 Intersection Capacity Utilization 78.2%
 Analysis Period (min) 15
 ! Phase conflict between lane groups.

Splits and Phases: 8: Manhattan Blvd & Ute Dr/Lowes



Timings

9: Manhattan Blvd & Chick-Fil-A/Palace

05/23/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	3	42	23	3	22	101	1293	12	107	1207	135
Future Volume (vph)	128	3	42	23	3	22	101	1293	12	107	1207	135
Satd. Flow (prot)	1681	1688	1583	1681	1549	0	1770	6401	0	3204	3486	0
Flt Permitted	0.950	0.954		0.950	0.995		0.950			0.950		
Satd. Flow (perm)	1681	1688	1583	1681	1549	0	1770	6401	0	3204	3486	0
Satd. Flow (RTOR)			200		24			2			12	
Lane Group Flow (vph)	71	71	46	22	30	0	110	1418	0	116	1459	0
Turn Type	Split	NA	Over	Split	NA		Prot	NA		Prot	NA	
Protected Phases	3	3	1	4	4		1	6		5	2	
Permitted Phases												
Detector Phase	3	3	1	4	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	17.0	17.0	13.0	17.0	17.0		13.0	15.0		13.0	15.0	
Minimum Split (s)	23.0	23.0	19.5	24.0	24.0		19.5	20.0		20.0	20.0	
Total Split (s)	23.0	23.0	20.0	24.0	24.0		20.0	53.0		20.0	53.0	
Total Split (%)	19.2%	19.2%	16.7%	20.0%	20.0%		16.7%	44.2%		16.7%	44.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.5	3.0	3.0		2.5	1.0		3.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.5	7.0	7.0		6.5	5.0		7.0	5.0	
Lead/Lag	Lag	Lag	Lead	Lead	Lead		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?												
Recall Mode	Max	Max	None	Max	Max		None	C-Max		None	Max	
Act Effct Green (s)	17.0	17.0	13.2	17.0	17.0		13.2	48.0		13.0	48.3	
Actuated g/C Ratio	0.14	0.14	0.11	0.14	0.14		0.11	0.40		0.11	0.40	
v/c Ratio	0.30	0.30	0.13	0.09	0.12		0.57	0.55		0.33	1.03	
Control Delay	50.0	50.0	0.8	46.0	21.7		53.0	12.7		42.2	57.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.2		0.0	0.0	
Total Delay	50.0	50.0	0.8	46.0	21.7		53.0	12.9		42.2	57.7	
LOS	D	D	A	D	C		D	B		D	E	
Approach Delay		37.9			32.0			15.8			56.6	
Approach LOS		D			C			B			E	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 52 (43%), Referenced to phase 6:NBT, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 36.5

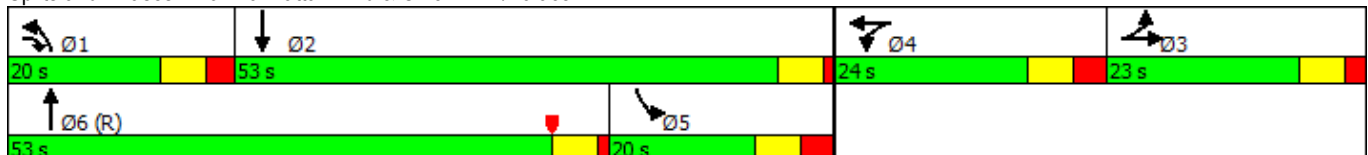
Intersection LOS: D

Intersection Capacity Utilization 78.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: Manhattan Blvd & Chick-Fil-A/Palace



Timings

10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center

05/23/2018

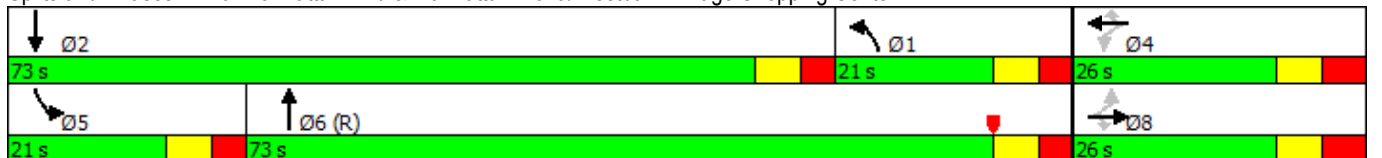


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗↘		↗	↕↗	
Traffic Volume (vph)	57	5	39	68	8	19	80	1412	51	58	1282	9
Future Volume (vph)	57	5	39	68	8	19	80	1412	51	58	1282	9
Satd. Flow (prot)	0	1781	1583	0	1783	1583	1770	5060	0	1770	3536	0
Flt Permitted		0.683			0.701		0.950		0.950			
Satd. Flow (perm)	0	1272	1583	0	1306	1583	1770	5060	0	1770	3536	0
Satd. Flow (RTOR)			164			164		7				1
Lane Group Flow (vph)	0	67	42	0	83	21	87	1590	0	63	1403	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4						
Detector Phase	8	8	8	4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	17.0	17.0	17.0	17.0	17.0	17.0	13.0	20.0		13.0	20.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	20.0	27.0		20.0	27.0	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	26.0	21.0	73.0		21.0	73.0	
Total Split (%)	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%	17.5%	60.8%		17.5%	60.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0	8.0		8.0	8.0	7.0	7.0		7.0	7.0	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min		None	Min	
Act Effct Green (s)		17.3	17.3		17.3	17.3	13.5	78.1		13.0	77.6	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.11	0.65		0.11	0.65	
v/c Ratio		0.37	0.11		0.44	0.06	0.44	0.48		0.33	0.61	
Control Delay		52.6	0.6		54.9	0.3	40.9	5.5		54.7	18.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		52.6	0.6		54.9	0.3	40.9	5.5		54.7	18.3	
LOS		D	A		D	A	D	A		D	B	
Approach Delay		32.5			43.9			7.3			19.9	
Approach LOS		C			D			A			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 101 (84%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 14.7
 Intersection LOS: B
 Intersection Capacity Utilization 83.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center



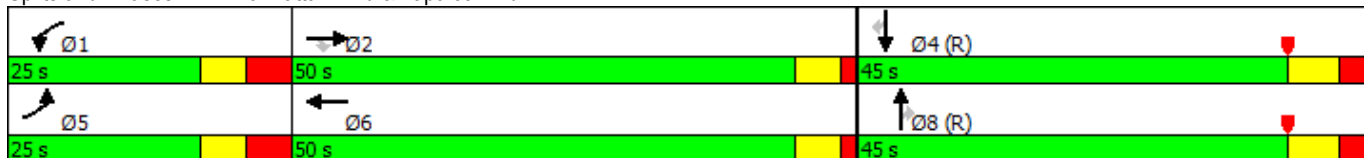


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↗	↗↗↗	↗	↗↗	↗↗↗			↗↗	↗		↗↗	↗
Traffic Volume (vph)	462	1197	191	296	1466	483	0	825	390	0	842	421
Future Volume (vph)	462	1197	191	296	1466	483	0	825	390	0	842	421
Satd. Flow (prot)	3433	5085	1583	3433	4897	0	0	3539	1583	0	3539	1583
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	3433	5085	1583	3433	4897	0	0	3539	1583	0	3539	1583
Satd. Flow (RTOR)			109		19				308			303
Lane Group Flow (vph)	502	1301	208	322	2118	0	0	897	424	0	915	458
Turn Type	Prot	NA	Perm	Prot	NA			NA	Perm		NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2						8			4
Detector Phase	5	2	2	1	6			8	8		4	4
Switch Phase												
Minimum Initial (s)	15.0	25.0	25.0	15.0	25.0			18.0	18.0		18.0	18.0
Minimum Split (s)	23.0	31.0	31.0	23.0	31.0			25.0	25.0		25.0	25.0
Total Split (s)	25.0	50.0	50.0	25.0	50.0			45.0	45.0		45.0	45.0
Total Split (%)	20.8%	41.7%	41.7%	20.8%	41.7%			37.5%	37.5%		37.5%	37.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0			4.5	4.5		4.5	4.5
All-Red Time (s)	4.0	1.5	1.5	4.0	1.5			2.5	2.5		2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	8.0	5.5	5.5	8.0	5.5			7.0	7.0		7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	Max	Max	None	Max			C-Max	C-Max		C-Max	C-Max
Act Effct Green (s)	17.0	45.4	45.4	16.1	44.5			38.0	38.0		38.0	38.0
Actuated g/C Ratio	0.14	0.38	0.38	0.13	0.37			0.32	0.32		0.32	0.32
v/c Ratio	1.03	0.68	0.31	0.70	1.16			0.80	0.60		0.82	0.65
Control Delay	99.8	33.5	13.7	58.3	113.1			44.0	13.2		27.4	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	99.8	33.5	13.7	58.3	113.1			44.0	13.2		27.4	16.5
LOS	F	C	B	E	F			D	B		C	B
Approach Delay		48.0			105.9			34.1			23.7	
Approach LOS		D			F			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 4:SBT and 8:NBT, Start of Yellow, Master Intersection
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 60.5
 Intersection LOS: E
 Intersection Capacity Utilization 92.6%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 1: Manhattan Blvd & Lapalco Blvd



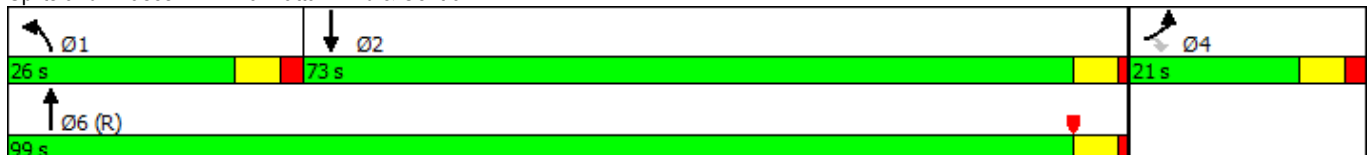


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	112	37	157	1455	1236	82
Future Volume (vph)	112	37	157	1455	1236	82
Satd. Flow (prot)	1770	1583	1770	3539	3507	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	3539	3507	0
Satd. Flow (RTOR)		40			9	
Lane Group Flow (vph)	122	40	171	1582	1432	0
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		1	6	2	
Permitted Phases		4				
Detector Phase	4	4	1	6	2	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0	
Minimum Split (s)	17.0	17.0	17.0	35.5	35.5	
Total Split (s)	21.0	21.0	26.0	99.0	73.0	
Total Split (%)	17.5%	17.5%	21.7%	82.5%	60.8%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	5.0	5.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	Min	Min	None	C-Max	Max	
Act Effct Green (s)	13.2	13.2	16.1	95.8	73.7	
Actuated g/C Ratio	0.11	0.11	0.13	0.80	0.61	
v/c Ratio	0.63	0.19	0.72	0.56	0.66	
Control Delay	65.3	16.3	49.6	7.7	11.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.3	16.3	49.6	7.7	11.3	
LOS	E	B	D	A	B	
Approach Delay	53.2			11.8	11.3	
Approach LOS	D			B	B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 97 (81%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 13.6
 Intersection LOS: B
 Intersection Capacity Utilization 68.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Manhattan Blvd & Central





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕	↖	↗	↕
Traffic Volume (vph)	0	22	1471	7	20	1636
Future Volume (vph)	0	22	1471	7	20	1636
Satd. Flow (prot)	0	1611	5085	1583	1770	3539
Flt Permitted					0.950	
Satd. Flow (perm)	0	1611	5085	1583	1770	3539
Satd. Flow (RTOR)		74		6		
Lane Group Flow (vph)	0	24	1599	8	22	1778
Turn Type		Over	NA	Perm	Prot	NA
Protected Phases		1	2		1	6
Permitted Phases				2		
Detector Phase		1	2	2	1	6
Switch Phase						
Minimum Initial (s)		10.0	20.0	20.0	10.0	20.0
Minimum Split (s)		15.5	25.0	25.0	15.5	25.0
Total Split (s)		20.0	100.0	100.0	20.0	120.0
Total Split (%)		16.7%	83.3%	83.3%	16.7%	100.0%
Yellow Time (s)		4.0	4.0	4.0	4.0	4.0
All-Red Time (s)		1.5	1.0	1.0	1.5	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5	5.0	5.0	5.5	5.0
Lead/Lag		Lead	Lag	Lag	Lead	
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	
Recall Mode		Min	C-Max	C-Max	Min	Max
Act Effct Green (s)		10.0	99.5	99.5	10.0	120.0
Actuated g/C Ratio		0.08	0.83	0.83	0.08	1.00
v/c Ratio		0.12	0.38	0.01	0.15	0.50
Control Delay		1.2	1.7	0.7	59.6	0.4
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		1.2	1.7	0.7	59.6	0.4
LOS		A	A	A	E	A
Approach Delay	1.2		1.7			1.1
Approach LOS	A		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 102 (85%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay: 1.4
 Intersection Capacity Utilization 49.4%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



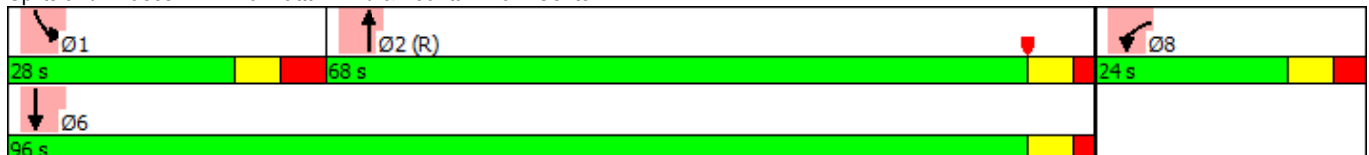


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WT		TTT		T	TT
Traffic Volume (vph)	115	130	1477	111	115	1596
Future Volume (vph)	115	130	1477	111	115	1596
Satd. Flow (prot)	3248	0	5029	0	1770	3539
Flt Permitted	0.977				0.950	
Satd. Flow (perm)	3248	0	5029	0	1770	3539
Satd. Flow (RTOR)	141		15			
Lane Group Flow (vph)	266	0	1726	0	125	1735
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Detector Phase	8		2		1	6
Switch Phase						
Minimum Initial (s)	13.0		20.0		10.0	20.0
Minimum Split (s)	20.5		26.0		18.0	26.0
Total Split (s)	24.0		68.0		28.0	96.0
Total Split (%)	20.0%		56.7%		23.3%	80.0%
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	3.0		2.0		4.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	7.0		6.0		8.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	None		C-Max		Min	Max
Act Effct Green (s)	13.3		70.9		14.8	93.7
Actuated g/C Ratio	0.11		0.59		0.12	0.78
v/c Ratio	0.55		0.58		0.58	0.63
Control Delay	27.9		8.3		57.8	7.7
Queue Delay	0.0		0.1		0.0	0.0
Total Delay	27.9		8.4		57.8	7.7
LOS	C		A		E	A
Approach Delay	27.9		8.4			11.1
Approach LOS	C		A			B

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 101 (84%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 11.1
 Intersection Capacity Utilization 67.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



Timings
5: Manhattan Blvd & Target

Revised PM
05/23/2018



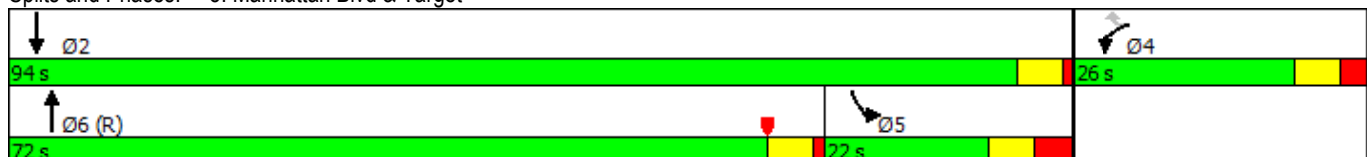
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖	↕↕↕		↖↗	↕↕
Traffic Volume (vph)	128	129	1450	88	151	1519
Future Volume (vph)	128	129	1450	88	151	1519
Satd. Flow (prot)	3433	1583	5040	0	3433	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	5040	0	3433	3539
Satd. Flow (RTOR)		140	13			
Lane Group Flow (vph)	139	140	1672	0	164	1651
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		10.0	20.0
Minimum Split (s)	17.5	17.5	25.0		18.0	25.0
Total Split (s)	26.0	26.0	72.0		22.0	94.0
Total Split (%)	21.7%	21.7%	60.0%		18.3%	78.3%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.5	2.5	1.0		3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.5	6.5	5.0		7.5	5.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	Min	Min	C-Max		Min	Max
Act Effct Green (s)	10.9	10.9	75.6		14.5	97.6
Actuated g/C Ratio	0.09	0.09	0.63		0.12	0.81
v/c Ratio	0.45	0.52	0.53		0.40	0.57
Control Delay	56.2	15.4	6.9		37.1	2.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	56.2	15.4	6.9		37.1	2.4
LOS	E	B	A		D	A
Approach Delay	35.7		6.9			5.5
Approach LOS	D		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 19 (16%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 8.4
 Intersection Capacity Utilization 62.5%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 5: Manhattan Blvd & Target



Timings
6: Manhattan Blvd & Gretna Blvd

Revised PM
05/23/2018

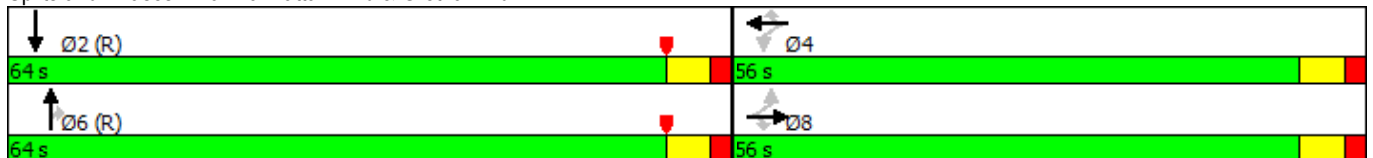


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕	↗		↕	↗
Traffic Volume (vph)	19	272	121	47	399	149	0	1184	132	0	1198	92
Future Volume (vph)	19	272	121	47	399	149	0	1184	132	0	1198	92
Satd. Flow (prot)	0	1857	1583	0	1853	1583	0	3539	1583	0	5029	0
Flt Permitted		0.726			0.806							
Satd. Flow (perm)	0	1352	1583	0	1501	1583	0	3539	1583	0	5029	0
Satd. Flow (RTOR)			28			30			143			14
Lane Group Flow (vph)	0	317	132	0	485	162	0	1287	143	0	1402	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm		NA	Perm		NA	
Protected Phases		8			4			6			2	
Permitted Phases	8		8	4		4			6			
Detector Phase	8	8	8	4	4	4		6	6			2
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0		20.0	20.0		20.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0		26.0	26.0		26.0	
Total Split (s)	56.0	56.0	56.0	56.0	56.0	56.0		64.0	64.0		64.0	
Total Split (%)	46.7%	46.7%	46.7%	46.7%	46.7%	46.7%		53.3%	53.3%		53.3%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None		C-Max	C-Max		C-Max	
Act Effct Green (s)		39.7	39.7		39.7	39.7		68.3	68.3		68.3	
Actuated g/C Ratio		0.33	0.33		0.33	0.33		0.57	0.57		0.57	
v/c Ratio		0.71	0.24		0.98	0.30		0.64	0.15		0.49	
Control Delay		43.4	22.1		74.3	23.9		6.2	0.3		3.0	
Queue Delay		0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Delay		43.4	22.1		74.3	23.9		6.2	0.3		3.0	
LOS		D	C		E	C		A	A		A	
Approach Delay		37.2			61.7			5.6			3.0	
Approach LOS		D			E			A			A	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 20 (17%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



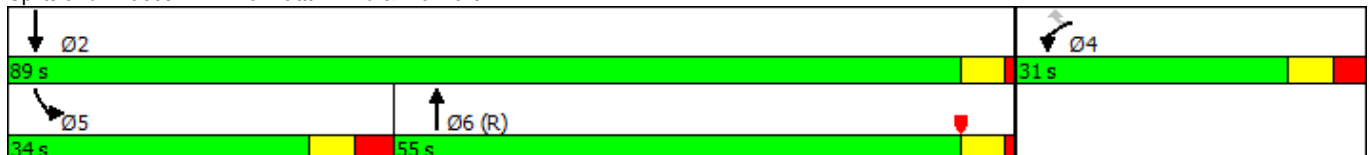


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	134	204	1270	164	158	1277
Future Volume (vph)	134	204	1270	164	158	1277
Satd. Flow (prot)	3433	1583	6299	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	1583	6299	0	1770	3539
Satd. Flow (RTOR)		222	33			
Lane Group Flow (vph)	146	222	1558	0	172	1388
Turn Type	Prot	Perm	NA		Prot	NA
Protected Phases	4		6		5	2
Permitted Phases		4				
Detector Phase	4	4	6		5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0		10.0	20.0
Minimum Split (s)	18.0	18.0	25.0		18.0	25.0
Total Split (s)	31.0	31.0	55.0		34.0	89.0
Total Split (%)	25.8%	25.8%	45.8%		28.3%	74.2%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	3.0	3.0	1.0		3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0		7.5	5.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode	Min	Min	C-Max		Min	Max
Act Effct Green (s)	11.9	11.9	70.8		17.8	96.1
Actuated g/C Ratio	0.10	0.10	0.59		0.15	0.80
v/c Ratio	0.43	0.62	0.42		0.66	0.49
Control Delay	54.3	14.5	6.0		52.2	9.4
Queue Delay	0.0	0.0	0.0		0.0	1.0
Total Delay	54.3	14.5	6.0		52.2	10.4
LOS	D	B	A		D	B
Approach Delay	30.3		6.0			15.0
Approach LOS	C		A			B

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 36 (30%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 12.6
 Intersection LOS: B
 Intersection Capacity Utilization 54.5%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 7: Manhattan Blvd & Walmart



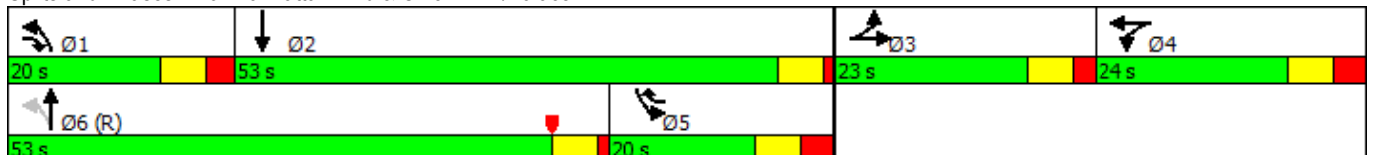


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	6	57	44	11	35	118	1385	62	117	1312	114
Future Volume (vph)	138	6	57	44	11	35	118	1385	62	117	1312	114
Satd. Flow (prot)	1681	1692	1583	1681	1718	1583	1770	6369	0	3204	3497	0
Flt Permitted	0.950	0.956		0.950	0.971		0.104			0.950		
Satd. Flow (perm)	1681	1692	1583	1681	1718	1583	194	6369	0	3204	3497	0
Satd. Flow (RTOR)			200			195		9			9	
Lane Group Flow (vph)	78	79	62	30	30	38	128	1572	0	127	1550	0
Turn Type	Split	NA	Over	Split	NA	Over	pm+pt	NA		Prot	NA	
Protected Phases	3	3	1	4	4	5	1	6		5	2	
Permitted Phases							6					
Detector Phase	3	3	1	4	4	5	1	6		5	2	
Switch Phase												
Minimum Initial (s)	17.0	17.0	13.0	17.0	17.0	13.0	13.0	20.0		13.0	20.0	
Minimum Split (s)	23.0	23.0	19.5	24.0	24.0	20.0	19.5	25.5		20.0	25.5	
Total Split (s)	23.0	23.0	20.0	24.0	24.0	20.0	20.0	53.0		20.0	53.0	
Total Split (%)	19.2%	19.2%	16.7%	20.0%	20.0%	16.7%	16.7%	44.2%		16.7%	44.2%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.5	3.0	3.0	3.0	2.5	1.0		3.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.5	7.0	7.0	7.0	6.5	5.0		7.0	5.0	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	None	None	None	None	None	None	C-Max		None	Max	
Act Effct Green (s)	17.0	17.0	13.1	17.0	17.0	13.0	51.3	52.8		13.0	53.2	
Actuated g/C Ratio	0.14	0.14	0.11	0.14	0.14	0.11	0.43	0.44		0.11	0.44	
v/c Ratio	0.33	0.33	0.18	0.13	0.12	0.11	0.50	0.56		0.37	1.00	
Control Delay	50.7	50.7	1.1	46.6	46.5	0.7	26.4	7.2		53.0	52.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.0	0.0	
Total Delay	50.7	50.7	1.1	46.6	46.5	0.7	26.4	7.2		53.0	52.9	
LOS	D	D	A	D	D	A	C	A		D	D	
Approach Delay		36.7			28.8			8.7			52.9	
Approach LOS		D			C			A			D	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 61 (51%), Referenced to phase 6:NBTL, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 30.9
 Intersection LOS: C
 Intersection Capacity Utilization 80.3%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 9: Manhattan Blvd & Chick-Fil-A/Palace



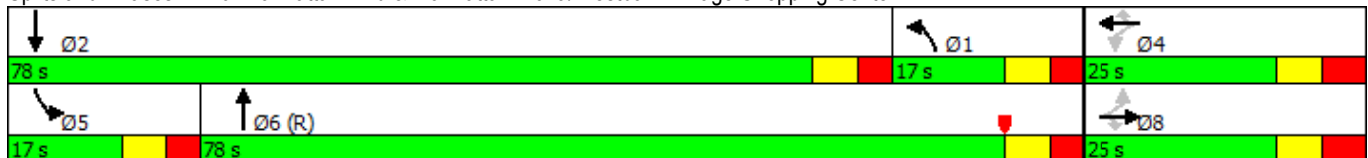


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗↘		↗	↕↗	
Traffic Volume (vph)	32	2	22	82	4	41	10	1169	36	49	1559	17
Future Volume (vph)	32	2	22	82	4	41	10	1169	36	49	1559	17
Satd. Flow (prot)	0	1779	1583	0	1777	1583	1770	5065	0	1770	3532	0
Flt Permitted		0.671			0.708		0.950		0.950			
Satd. Flow (perm)	0	1250	1583	0	1319	1583	1770	5065	0	1770	3532	0
Satd. Flow (RTOR)			164			164		6			1	
Lane Group Flow (vph)	0	37	24	0	93	45	11	1310	0	53	1713	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4						
Detector Phase	8	8	8	4	4	4	1	6		5	2	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0		10.0	20.0	
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	27.0		17.0	27.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	17.0	78.0		17.0	78.0	
Total Split (%)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	14.2%	65.0%		14.2%	65.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0	8.0		8.0	8.0	7.0	7.0		7.0	7.0	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	C-Min		None	Min	
Act Effct Green (s)		13.6	13.6		13.6	13.6	10.0	77.8		10.0	88.0	
Actuated g/C Ratio		0.11	0.11		0.11	0.11	0.08	0.65		0.08	0.73	
v/c Ratio		0.26	0.07		0.62	0.14	0.07	0.40		0.36	0.66	
Control Delay		52.1	0.5		68.5	0.9	70.8	11.6		59.3	11.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		52.1	0.5		68.5	0.9	70.8	11.6		59.3	11.6	
LOS		D	A		E	A	E	B		E	B	
Approach Delay		31.8			46.4			12.1			13.0	
Approach LOS		C			D			B			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 32 (27%), Referenced to phase 6:NBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 14.4
 Intersection LOS: B
 Intersection Capacity Utilization 79.5%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center



APPENDIX F

SYNCHRO RESULTS – FUEL CONSUMPTION AND POLLUTANT EMISSIONS

Manhattan Boulevard Corridor Study

	Existing	Revised	Existing	Revised	Existing	Revised
	AM	AM	Mid Day	Mid Day	PM	PM
Fuel Consumed (gal)	331	332	503	556	599	611
Fuel Economy (mpg)	12.1	12.1	10.1	12.6	9.2	12.4
CO Emissions (kg)	23.16	23.24	35.15	38.83	41.81	42.68
NO x Emissions (kg)	4.54	4.52	6.84	7.55	8.14	8.30
VOC Emissions (kg)	5.37	5.39	8.15	9.00	9.70	9.89

Manhattan Boulevard Corridor Study

	Existing	Revised	% Diff	Existing	Revised	% Diff	Existing	Revised	% Diff
	AM	AM		Mid Day	Mid Day		PM	PM	
Fuel Consumed (gal) (NB)	0.093	0.101	8.60%	0.112	0.106	-5.36%	0.108	0.117	8.33%
Fuel Consumed (gal) (SB)	0.096	0.089	-7.19%	0.110	0.110	0.00%	0.113	0.125	10.70%
HC Emmission (Grams) (NB)	7.836	8.562	9.26%	10.027	9.787	-2.39%	9.722	11.702	20.37%
HC Emmission (Grams) (SB)	7.671	6.385	-16.77%	10.005	10.267	2.61%	10.263	12.399	20.81%
CO Emissions (Grams) (NB)	77.224	85.861	11.18%	94.228	88.577	-5.99%	90.067	113.624	26.16%
CO Emissions (Grams) (SB)	74.271	65.097	-12.35%	91.143	94.600	3.79%	92.648	113.962	23.00%
NOx Emissions (Grams) (NB)	4.323	4.713	9.03%	5.308	5.549	4.53%	4.975	7.289	56.03%
NOx Emissions (Grams) (SB)	3.439	2.708	-21.26%	5.111	5.233	2.38%	4.672	6.705	56.03%

APPENDIX G

MEETING DOCUMENTS



ITS REGIONAL, LLC.



Traffic & Transportation Engineering / Civil / Planning / Surveying

Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana

Place/Date of Meeting: Regional Planning Commission
10 Veterans Blvd
New Orleans, LA 70124
1:30 p.m. to 2:30 p.m.
1 September, 2017

A project Kick Off Meeting was held for the above-named project on September 1 27, 2017. The Following persons were in attendance

Table with 4 columns: Representative, Office, Phone, E-mail Address. Rows include Walter Brooks (WB), Jeff Roesel (JR), Alison Maulhardt (AM), Mark Drewes (MD), Jody Savoie (JS), Dawn Daleo (DD), Mark Annino (MA), Jed Hellmich (JM), Vi Ngyuen, and P. Carmelo Gutierrez (PG).

Project Kick-Off Meeting (9/1/17)

- Alison Maulhardt (AM) started the meeting by asking everyone to introduce themselves.
AM and PG distributed drawings showing the limits of the project and noting that the main scope of work is to install Develop TSI's forms, Collect Traffic Data, Analysis of Existing Conditions, Develop Recommendations, implementation of Recommendations, Benefit-Cost Estimation, Environmental Checklist and Final Report.
AM will be the project coordinator. All communications should be addressed to her or as minimum copy her.

- Scope of work call for Consultant to collect 24-Hour ADT counts on all approaches of the study intersections and 7-day counts at selected locations. It was requested and agreed that 7-day 24-Hour ADT will be collected thru the main corridor only. Consultant will submit a mark-up drawing showing the locations of the 7-day, 24-hour counts and to be approved by the Parish before proceeding. It is the intention to start collecting these data on Sunday, September 10, 2017
- Once that the 7-day, 24-Hour data is collected, the AM, MD and PM peak period will be determined. As per scope of work Consultant will collect MANUAL Turning Movement Counts at each intersection. It was requested and agreed that VIDEO will be used to collect the AM, MD and PM peak Turning Movement Counts.
- As per scope of work the Consultant to conduct a travel time studies along the Manhattan Boulevard Corridor using the "FLOATING CAR METHOD", it was requested by the Consultant and agreed that the Consultant will be using the PC_TRAVEL SOFTWARE SUITE (Travel Time and Delay Analysis Software) to conduct the travel time studies.
- Project is schedule to be completed in nine (9) months. Three additional meeting will take place during the course of the project. Next PMC meeting will probably be schedule for last week of October to discuss Data Collected and review preliminary SYNCHRO Analysis. It was agreed that additional meeting may be necessary as project progresses.
- It was discussed that as per scope of work Jefferson Parish Engineering will provide, existing timing sheets, coordination plans, and traffic signal drawings and suggested timing preference for the study corridor.
- The consultant will use the latest standards TSI's forms from the LADOTD Traffic Engineer's Manual.
- Anyone that would like to add any personnel to the Project Management Committee (PMC) should contact AM.
- AM provided a copy of the study that RPC conducted for the Veterans Boulevard Corridor.

Meeting was adjourned

Attachments:

1. Meeting Agenda
2. Meeting Signing Sheet
3. Project Contact List

Action Items

1. Jefferson Parish Engineering to provide, existing timing sheets, coordination plans, and traffic signal drawings.
2. Consultant to submit a map showing the locations of the ADT'S for approval.
3. The consultant team will schedule next PMC meeting tentatively for the last week of October 2017
4. RPC project manager (AM) to provide the consultant with Crash Data and Imagery for the project
5. Consultant to inspect the site for existing conditions
6. Consultant to collect traffic data (tentatively to start on September 10, 2017)

**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

Kick-Off Meeting Agenda

Place/Date of Meeting: Regional Planning Commission
10 Veterans Blvd
New Orleans, LA 70124
1:30 p.m. to 2:30 p.m.
1 September, 2017

Invited:

Walter Brooks, RPC
Jeff Roesel, RPC
Alison Maulhardt, RPC
Jody Savoie, Jefferson Parish
Mark Drewes, Jefferson Parish

Chris Morvant, LADOTD
Ennis Johnson, LADOTD
Scott Boyle, LADOTD
Jesse Guerra, LADOTD

AGENDA

1. Introductions
2. Team Organization
3. Communications/ Coordination Protocol
4. Project Overview
5. Purpose and Need
6. Traffic, Engineering, Environmental, Cultural Resources
7. Early Coordination / Public Involvement
8. Progress Reporting / Schedule
9. Action Items



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Traffic & Transportation Engineering / Civil / Planning / Surveying

Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana

Kick-Off Meeting Agenda

Place/Date of Meeting: Regional Planning Commission
10 Veterans Blvd
New Orleans, LA 70124
December 4, 2017 10:30am

A Project Management Committee meeting was held for the above-named project on December 4, 2017. The following persons were in attendance

Project Progress Meeting (12/4/17)

Table with 4 columns: Representative, Office, Phone, E-mail Address. Lists attendees including Walter Brooks, Alison Maulhardt, Jody Savoie, Dawn Daleo, Jed Hellmich, Vi Ngyuen, P. Carmelo Gutierrez, Predeep Thummala, Alan Dale, Tom Haysley, and Bao Long Le.

Project Management Committee Meeting (12/4/2017)

1. Alison Maulhardt (AM) began the meeting with a brief statement about the study.
2. Alan Dale (AD) described the limits of the project starting at Lapalco and ending at Manhattan Plaza near the Westbank Expressway. AD reviewed the project layout and ADT/Turning movements.
 - Walter Brooks (WB) questioned the timing for the PM Peak Time. Pradeep Thummala (PT) clarified that was between 4:00-5:30 pm.
 - Jody Savoie (JS) requested that the peak hour times be shown at all intersections on the Traffic Volume map. Carmelo Gutierrez (PG) clarified that the peak hours shown at the Average Daily Traffic (ADT) locations were to ascertain timings for conducting the Turning Movement Counts (TMC) and the peak hour times will be removed from this sheet.
 - JS questioned the number between the intersections. AD stated that these numbers were either additional or a reduction in traffic volume between the signalized intersections. These changes may be caused by driveways, un-signalized intersections and/or U-turn vehicles.
 - JS stated that a future project to extend the right turn lane on Manhattan Blvd. southbound before Lapalco Blvd. is proposed.
3. AD acknowledged the notes from the Field Operations.
 - Dawn Daleo (DD) explained the existing phases and restrictions due to geometric limitations that does not allow modification of the phasing for the Chick-fil-A and Ute Drive Intersections.
 - AD stated that the phasing for the intersections varies / not consistent. DD stated that the phasing should remain the same as existing. Technician may be confused by the changes. Only if new cabinets are installed in the future would the phases would be wired consistently with phase 6 being north direction on Manhattan Blvd.
 - AD noted that the scope of services and the Parish's TSI had different names. DD stated that the Parish's TSI names should govern. Later JS questioned the side street names. The consultant shall use the side street names as listed on the TSI forms.
4. AD presented the Synchro's intersection model data.
 - WB requested that the consultant recheck the southbound right turn movement at the Lapalco and Manhattan intersection.
 - JS requested the consultant to review the LOS sheets and the traffic volume sheets.
5. AD presented the preliminary travel run data. These runs were from three difference sources: PC Travel software, Synchro and Sim Traffic. AD explained that the difference in time may be due to the length of the link in Synchro (travel time and signal delay before the first and last signals on the corridor). AD stated that the offsets may need to be adjusted due to the master at the Lapalco and Manhattan intersection having an offset time.
 - DD stated that offsets were at the end of yellow.
6. Jed Hellmich (JM) discuss the TSI form
 - Jefferson Parish wishes the legend to remain on the form.
 - No TSI numbers are included on Jefferson Parish TSI forms.
 - Names of Form shall use the existing names (Existing street names as defined by the existing TSI forms).

7. AD reviewed the Synchro's natural cycle length data and the preliminary clearance intervals for the corridor.
 - JS questioned the Synchro's natural cycle length data due to the existing traffic volumes shown.
 - The clearance intervals are subject to changes and not approved by the Parish at this time.
8. DD clarified that the existing traffic signal controls are Kentronics 1700 or 1800 with the exception of the Manhattan Plaza (Siemens).
 - All controllers are wireless communication with the exception of Manhattan Plaza.
 - Upgrades may not be purchased at this time but recommendation and cost to be provided by the consultant.
 - Additional pedestrian heads may be recommended. Pedestrian head recommendation may indicate the need for additional study.
9. PG represented the schedule sheet. The initial schedule was impacted by construction work for approximately 2 weeks on Manhattan Blvd.
 - 2nd PMC meeting will be scheduled during 2nd week in January.
 - New timings are projected to be completed in February.
 - Future Travel Runs are proposed for March or April.
10. Action Items
 - The consultant team will schedule the next PMC meeting tentatively for the second week of January 2018.
 - Consultant to provide handouts to team members one week before the next schedule meeting.

Attachments:

1. Meeting Agenda
2. Handouts from meeting
3. Meeting Sign-In Sheet

Meeting was adjourned



ITS REGIONAL, LLC.

TECHNOLOGY
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**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

PMC Meeting Agenda

Place/Date of Meeting: Regional Planning Commission
10 Veterans Blvd
New Orleans, LA 70124
10:30 a.m. to 11:30 a.m.
04 December, 2017

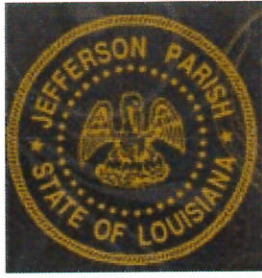
Invited:

Walter Brooks, RPC
Jeff Roesel, RPC
Alison Maulhardt, RPC
Jody Savoie, Jefferson Parish
Mark Drewes, Jefferson Parish
Dawn Daleo, Jefferson Parish

Chris Morvant, LADOTD
Ennis Johnson, LADOTD
Scott Boyle, LADOTD
Jesse Guerra, LADOTD
Vi Nguyen, LADOTD
Mark Annino, LHJ

AGENDA

1. Introductions
2. Traffic Data
3. Field Observations
4. SYNCHRO Analysis (Existing Conditions)
5. Travel Runs
6. Future Analysis (Cycle Length, Clearance Intervals, etc)
7. Existing Equipment Survey
8. Schedule Updates
9. Next Steps
 - New Action Items??
 - Next PMC Meeting
 - Additional Items



Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana

PMC MEETING DECEMBER 04, 2017

SIGN-IN SHEET

Initial	Representative	Organization	Phone	E-mail Address
WB	Walter Brooks (WB)	Regional Planning Commission	504.483.8525	wbrooks@norpc.org
	Jeff Roesel (JR)	Regional Planning Commission	504.483.8528	jroesel@norpc.org
AM	Alison Maulhardt (AM)	Regional Planning Commission	504.483.8533	amaulhardt@norpc.org
	Mark Drewes (MD)	Jefferson Parish Engineering	504.736.6500	jpengineering@jeffparish.net
JMS	Jody Savoie (JS)	Jefferson Parish Traffic	504.736.6530	jsavoie@jeffparish.net
DD	Dawn Daleo (DD)	Jefferson Parish Traffic	504.736.6530	ddaleo@jeffparish.net
	Mark Annino (MA)	Linfield, Hunter & Junius	504.833.5300	mark@lhjunius.com
JH	Jed Hellmich (JM)	Linfield, Hunter & Junius	504.833.5300	jhellmich@lhjunius.com
VN	Vi Ngyuen (VN)	LADOTD	504-484-0214	Vingyuen2@la.gov
PG	P. Carmelo Gutierrez (PG)	ITS Regional	504.888.9399	cgutierrez@itsregional.com
AD	Alan Dale (AD)	ITS Regional	504.888.9399	adale@itsregional.com
PT	Pradeep Thummala (PT)	ITS Regional	504.888.9399	pthummala@itsregional.com
Tom Kinsley	Tom Kinsley	RPC	483-8510	tkinsley@norpc.org
BQL	BAD LONG LE	LADOTD	504-484-0201	baolong@la.gov



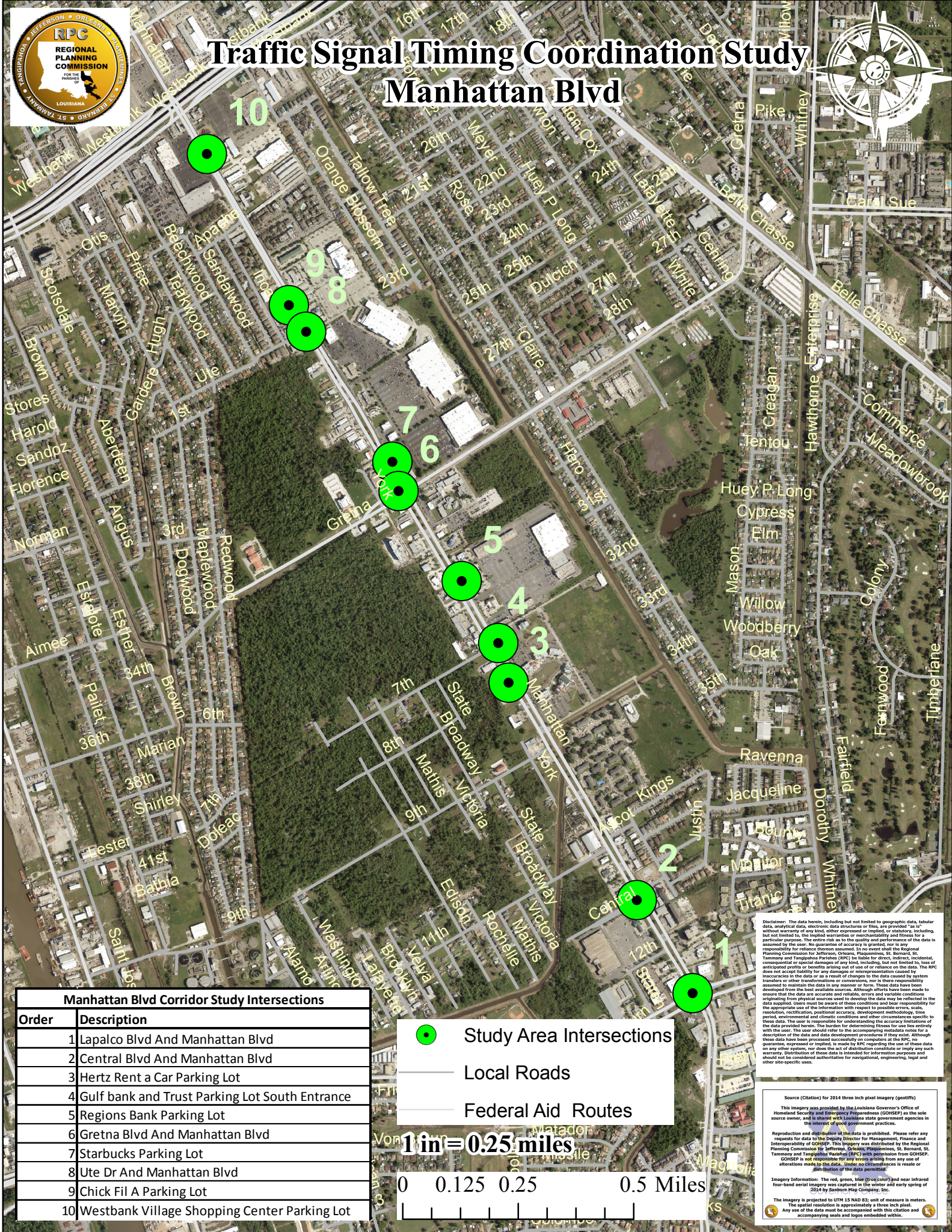
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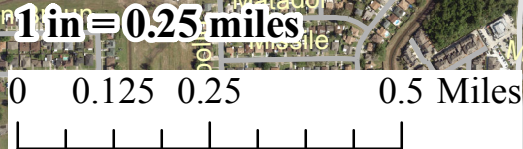


Traffic Signal Timing Coordination Study Manhattan Blvd



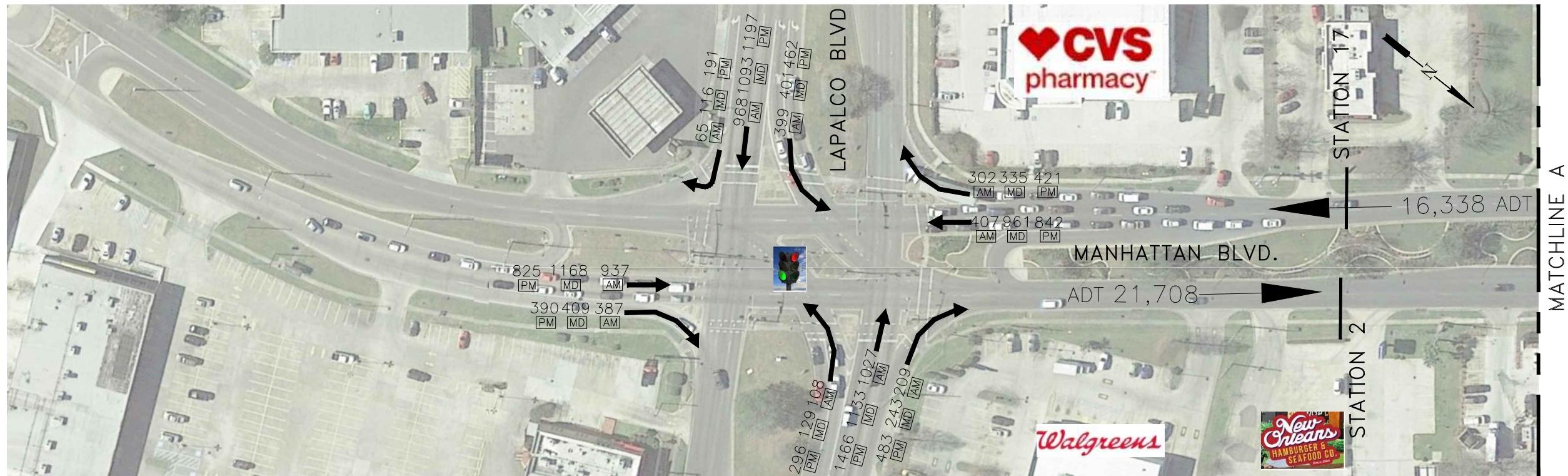
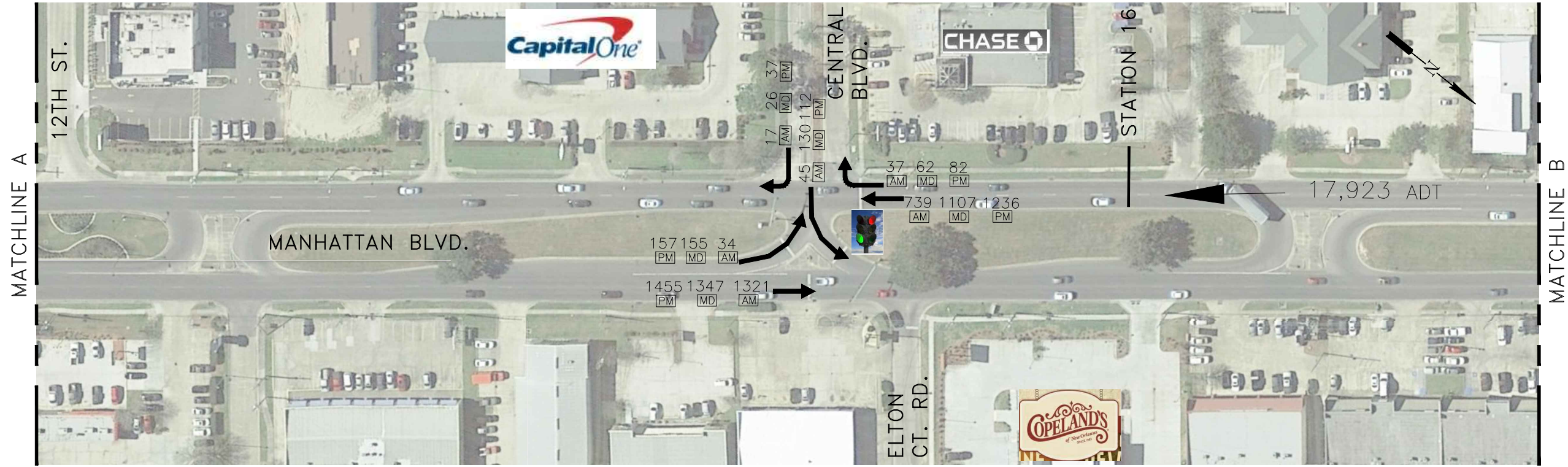
Manhattan Blvd Corridor Study Intersections	
Order	Description
1	Lapalco Blvd And Manhattan Blvd
2	Central Blvd And Manhattan Blvd
3	Hertz Rent a Car Parking Lot
4	Gulf bank and Trust Parking Lot South Entrance
5	Regions Bank Parking Lot
6	Gretna Blvd And Manhattan Blvd
7	Starbucks Parking Lot
8	Ute Dr And Manhattan Blvd
9	Chick Fil A Parking Lot
10	Westbank Village Shopping Center Parking Lot

 Study Area Intersections
 Local Roads
 Federal Aid Routes



Disclaimer: The data herein, including but not limited to geographic data, tabular data, analytical data, electronic data structure or files, are provided "as is" without warranty of any kind, either expressed or implied, or statutory, including, but not limited to, the implied warranties or merchantability and fitness for a particular purpose. The user risks as to the quality and performance of the data is assumed by the user. No guarantee of accuracy is granted, nor is any responsibility for reliance thereon assumed. In no event shall the Regional Planning Commission be liable for direct, indirect, incidental, consequential or punitive damages or any other damages or losses, including, but not limited to, loss of anticipated profits or benefits arising out of use of or reliance on the data. The RPC does not accept any liability for any damages or consequences, nor does it have any responsibility to maintain the data in any manner or form. These data have been developed from physical available sources. Although efforts have been made to ensure that the data are accurate and reliable, errors and variable conditions originating from physical sources used to develop the data may be reflected in the data supplied. Users must be aware of these conditions and bear responsibility for the appropriate use of the data with respect to possible errors, scale, resolution, rectification, positional accuracy, development methodology, time period, environmental or climatic conditions and other circumstances specific to the data provided herein. The burden for determining fitness for use lies entirely with the user. The user shall be held responsible for understanding the accuracy limitations of the data and data development procedures if they exist. Although this data has been processed accordingly, the RPC does not guarantee, express or implied, is made by RPC regarding the use of these data on any other matter, nor does the act of distribution constitute any warranty. Distribution of these data is intended for information purposes and should not be considered authoritative for navigational, engineering, legal and other site-specific uses.

Source (Citation) for 2014 three inch pixel imagery (geotiff)
 This imagery was provided by the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) as the sole source owner, and is shared with Louisiana state government agencies in the interest of good government practices.
 Reproduction and distribution of the data is prohibited. Please refer any requests for data to the Deputy Director for Management, Finance and Interoperability of GOHSEP. This imagery was distributed by the Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard, St. Tammany and Tangipahoa Parishes (RPC) with permission from GOHSEP. GOHSEP is not responsible for any errors arising from any use of alterations made to the data. Under no circumstances is resale or distribution of the data permitted.
 Imagery Information: The red, green, blue (true color) and near infrared four-band aerial imagery was captured in the winter and early spring of 2014 by Sanborn Map Company, Inc.
 The imagery is projected to UTM 15 NAD 83; unit of measure is meters. The spatial resolution is approximately a three inch pixel. Any use of the data must be accompanied with this citation and accompanying seals and logos embedded within.



SHEET 1
ADT'S
AND
TMC'S



Stage 0 Feasibility
Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18; FY-18 UPWP
Jefferson Parish, Louisiana



MATCHLINE B



MATCHLINE C

MATCHLINE C



MATCHLINE D

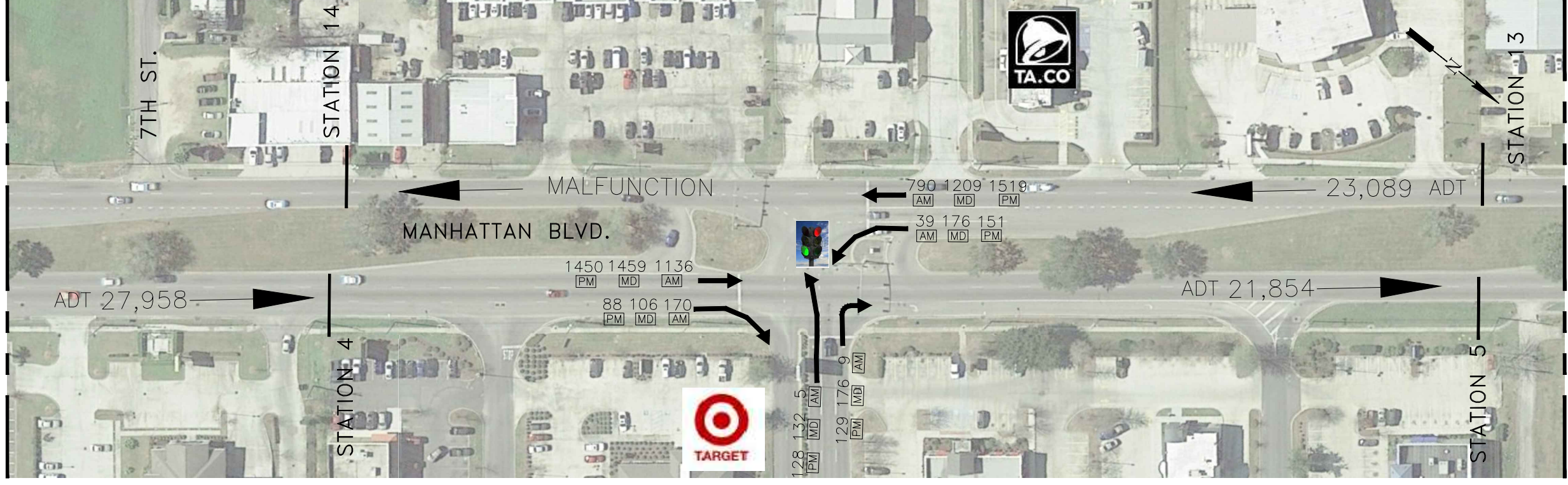
SHEET 2
ADT'S
AND
TMC'S



Stage 0 Feasibility
 Traffic Signal Timing and Coordination Study
 Manhattan Boulevard Corridor
 RPC Task A-3.18; FY-18 UPWP
 Jefferson Parish, Louisiana



MATCHLINE D

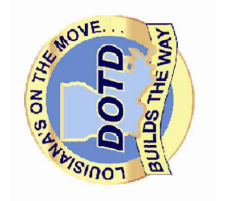


MATCHLINE E



MATCHLINE E

MATCHLINE F



Stage 0 Feasibility
Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18; FY-18 UPWP
Jefferson Parish, Louisiana



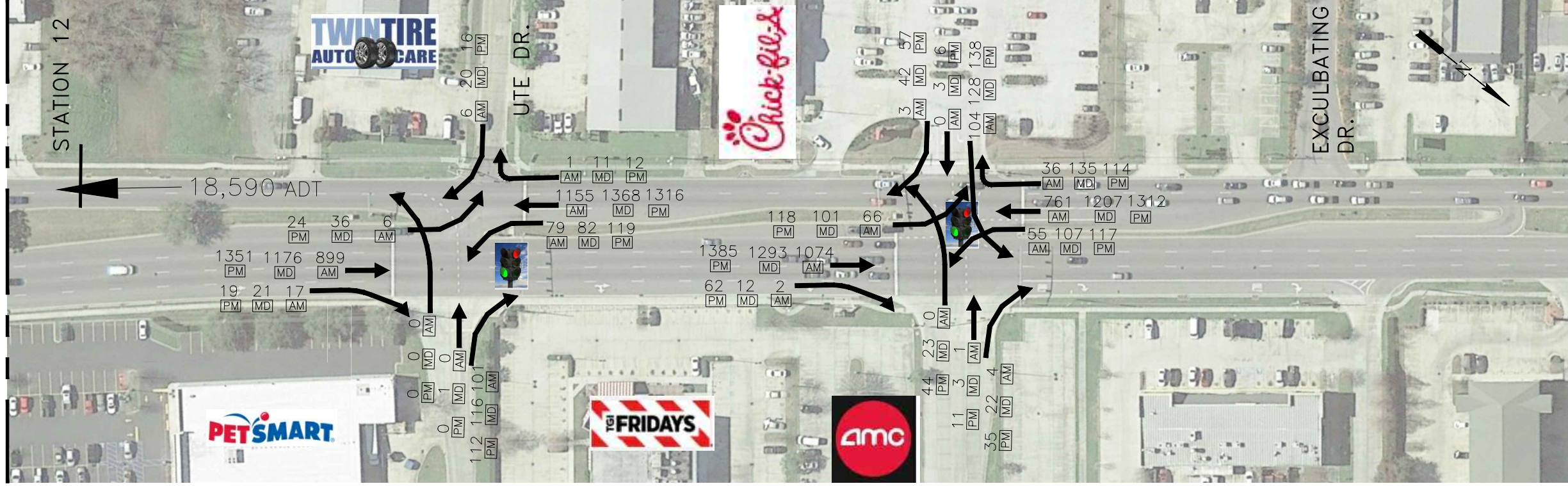
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ADT'S
AND
TMCS

MATCHLINE F

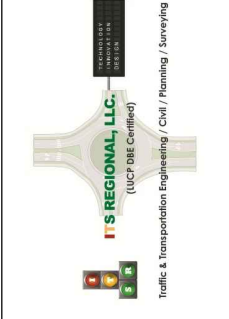


MATCHLINE G

MATCHLINE G

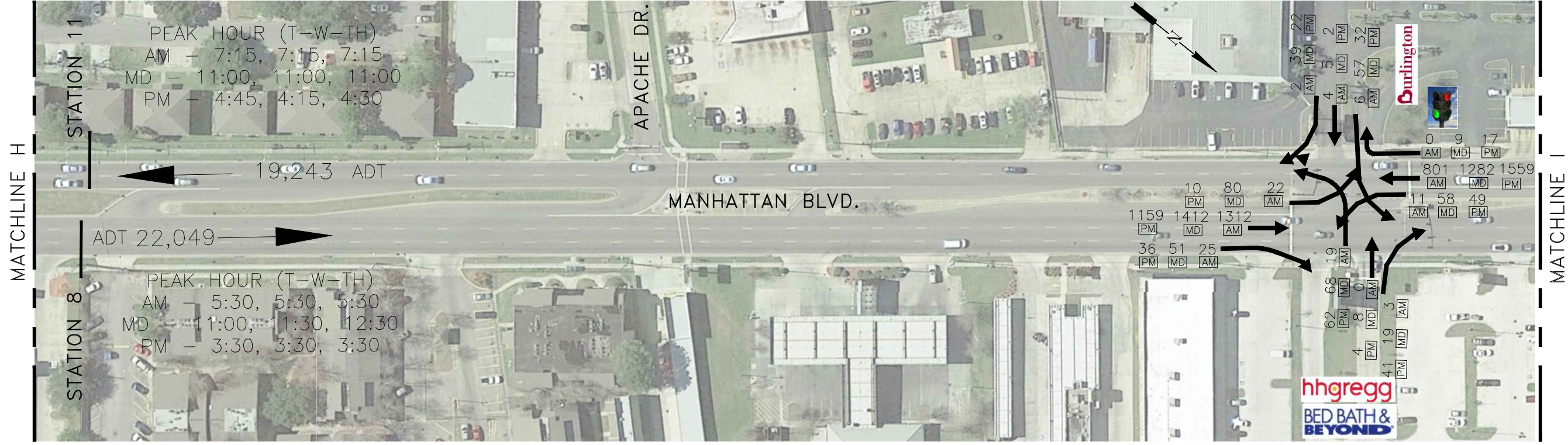


MATCHLINE H



Stage 0 Feasibility
Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana

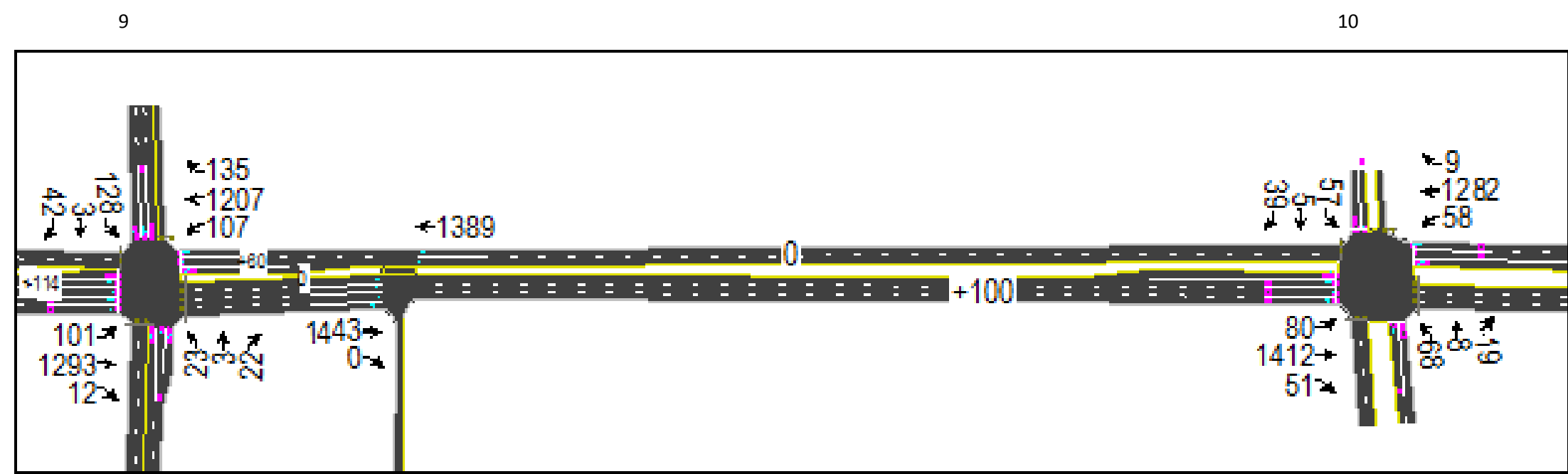
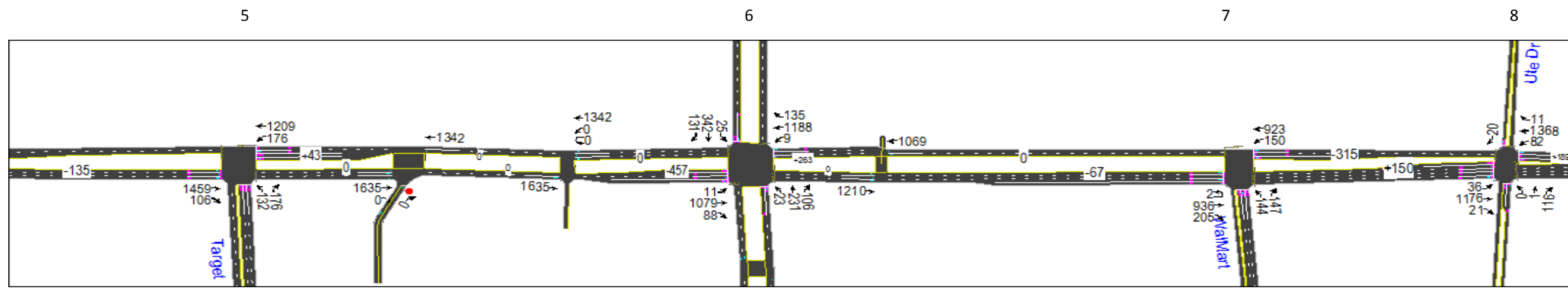
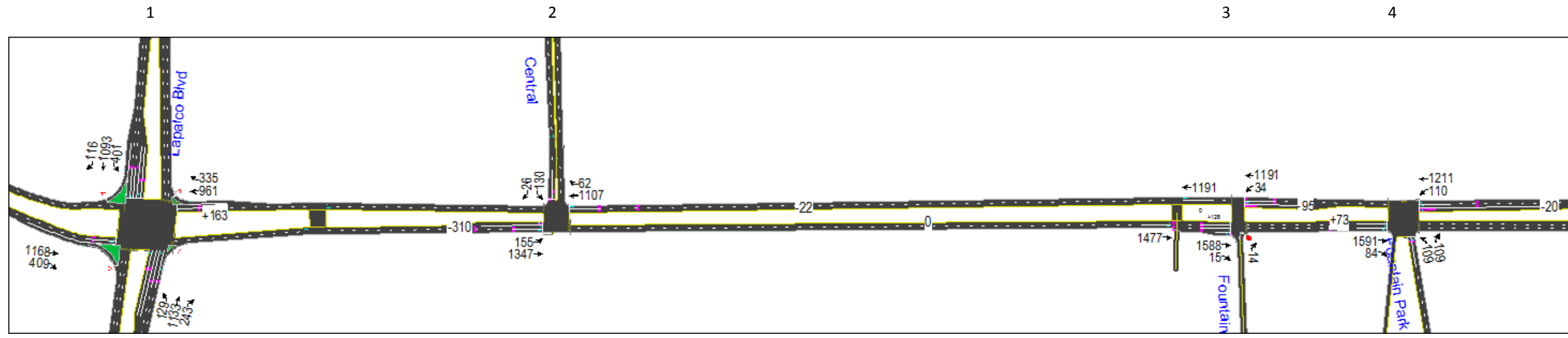


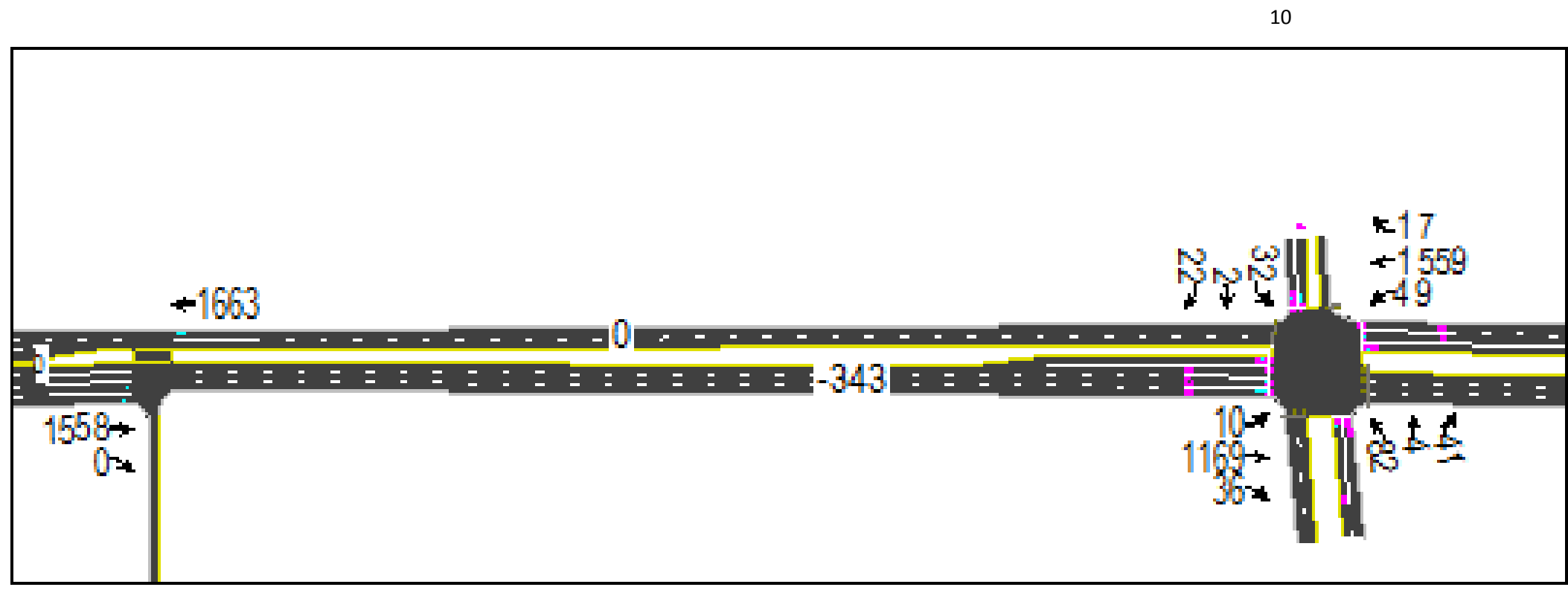
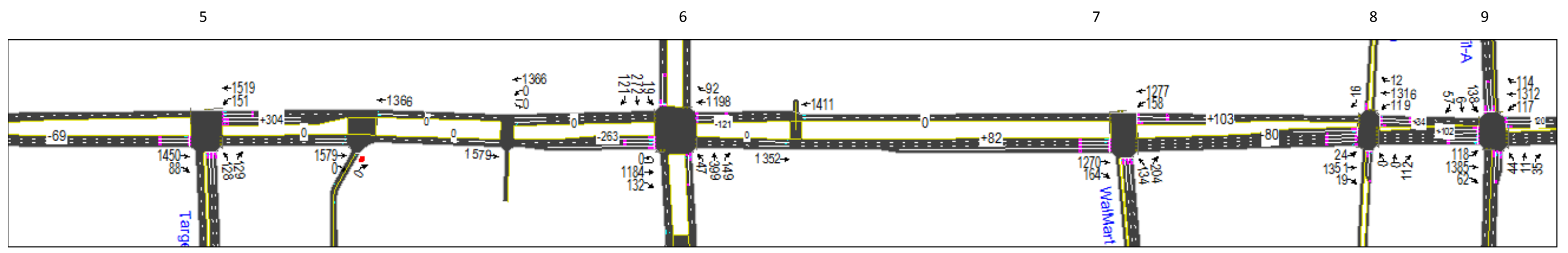
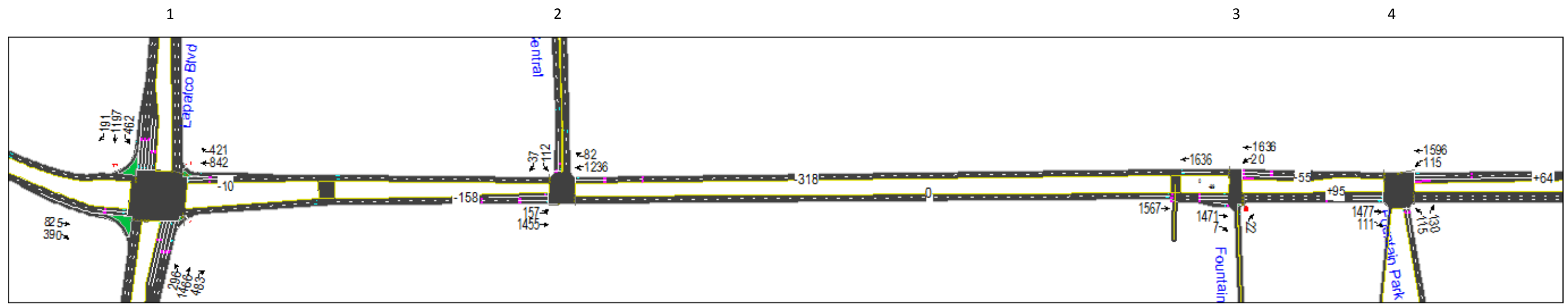


Stage 0 Feasibility
 and Coordination Study
 Manhattan Boulevard Corridor
 RPC Task A-3.18: FY-18 UPWP
 Jefferson Parish, Louisiana



Mid Day Volumes







**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

FIELD OBSERVATIONS (10/25/2017):

Northbound/ Southbound: Manhattan Boulevard Eastbound/ Westbound: Minor Streets

1. Manhattan Boulevard and Lapalco Boulevard:
 - a. 4-Legged Intersection
 - b. No Left Turn movements on Manhattan side of the intersection
 - c. Left Turn movements on Lapalco side of the intersection and they move simultaneously
 - d. Crosswalks present at the intersection
2. Manhattan Boulevard and Central Boulevard:
 - a. 3-Legged Intersection/ T- Intersection.
 - b. NB Left Turn Lane
 - c. No SB LT Lane/ Bay
 - d. No Crosswalks
3. Manhattan Boulevard and Fountain Park South:
 - a. 3- Legged/ 2-Phase Intersection
 - b. NB exclusive signalized U-Turn lane and an RT bay
 - c. SB Signalized J Turn lane and free through movement
 - d. No Crosswalks
4. Manhattan Boulevard and Fountain Park Center:
 - a. 3- Legged Intersection/ T- Intersection
 - b. SB LT bay
5. Manhattan Boulevard and Target:
 - a. 3- Legged Intersection/ T- Intersection
 - b. No NB LT Lane
 - c. 2 SB LT Lane
 - d. 2 LT and 1 RT lane from Minor Street
6. Manhattan Boulevard and Gretna Boulevard:
 - a. 4- Legged Intersection
 - b. SB LT Lane (restricted during AM & PM)
 - c. No NB LT



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7. Manhattan Boulevard and Walmart:
 - a. 3- Legged Intersection/ T- Intersection
 - b. SB LT Bay
 - c. No NB LT Lane
 - d. Queuing observed on SB LT Bay
8. Manhattan Boulevard and Ute Drive:
 - a. 4- Legged Intersection
 - b. Lead/ Lag LT on Manhattan Boulevard
9. Manhattan Boulevard and Palace:
 - a. 4-Legged Intersection
 - b. SB LT (Lag) and NB LT (Lead) on Manhattan Boulevard
 - c. No Ped Heads
 - d. Side Streets have split phasing
10. Manhattan Boulevard and Westbank Village Shopping Center:
 - a. 4 – Legged Intersection



Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana

LEVEL OF SERVICE (LOS):

NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	LEVEL OF SERVICE		LEVEL OF SERVICE	
					EXISTING 2017		IMPROVED CONDITIONS	
					AM	PM	AM	PM
1	LAPALCO BLVD. AT MANHATTAN BLVD.		EB	CYCLE LENGTH	120s			
				EBL	E (56.5)	E (61.2)		
				EBT	C (23.4)	C (26.2)		
				EBR	B (18.5)	C (21.8)		
				Overall Approach LOS	C (32.4)	C (34.5)		
			WB	WBL	D (48.0)	D (52.2)		
				WB TR	C (29.5)	E (66.1)		
				Overall Approach LOS	C (31.0)	E (64.3)		
			NB	NBT	E (61.1)	D (48.7)		
				NBR	C (33.6)	C (34.7)		
				Overall Approach LOS	D (53.1)	D (44.2)		
			SB	SBT	C (33.5)	D (54.8)		
				SBR	F (187.6)	E (77.9)		
				Overall Approach LOS	F (99.1)	E (62.5)		
	OVERALL DELAY	D (47.5)	D (51.8)					



**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor`
RPC Task A-3.18: FY-18 UPWP**

	Time Travel (minutes)						TRAVEL RUN PC	
	Synchro	SimTraffic						
NB		1	2	3	4	5	Avg	Avg.
AM	6.621667	5.403333	5.608333	5.145	5.891667	5.238333	5.517333	3.71667
Mid-Day	7.955	7.828333	7.935	7.225	7.963333	7.656667	7.721667	5.0667
PM	6.46	5.198333	5.561667	5.388333	5.408333	5.345	5.380333	5.13
SB								
AM	6.16	5.378333	5.378333	5.188333	4.885	5.058333	5.177667	4.4
Mid-Day	7.398333	5.933333	6.35	6.09	5.553333	6.395	6.064333	5.283
PM	6.145	5.248333	5.246667	5.265	5.341667	5.138333	5.248	5.9933

SYNCHRO

Arterial Level of Service								AM Existing 11/29/2017
Arterial Level of Service: NB Manhattan Blvd								
Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Lapalco Blvd	II	37	31.4	62.2	93.6	0.26	10.2	F
Central	II	42	27.7	2.0	29.7	0.25	30.5	B
Fountain Park South	II	42	40.6	0.8	41.4	0.42	36.8	A
Fountain Park Center	II	42	11.8	4.1	15.9	0.10	23.2	C
Target	II	42	24.8	13.5	38.3	0.23	21.2	D
Gretna Blvd	II	42	28.7	14.3	43.0	0.28	23.6	C
WalMart	II	42	29.6	2.5	32.1	0.27	30.2	B
Lowes	II	42	17.1	7.7	24.8	0.15	21.6	D
Palace	II	42	8.7	30.6	39.3	0.08	6.9	F
Westbank Village Sho	II	42	32.9	6.3	39.2	0.32	29.6	B
Total	II		253.3	144.0	397.3	2.36	21.4	D
Arterial Level of Service: SB Manhattan Blvd								
Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Manhattan Plaza	II	42	18.8	14.4	33.2	0.16	17.7	D
Chick-Fil-A	II	42	32.9	42.8	75.7	0.32	15.3	E
Ute Dr	II	42	8.7	1.9	10.6	0.08	25.6	C
WalMart	II	42	17.1	1.3	18.4	0.15	29.1	B
Gretna Blvd	II	42	29.6	10.4	40.0	0.27	24.2	C
Target	II	42	28.7	1.2	29.9	0.28	33.9	B
Fountain Park Center	II	42	24.8	2.8	27.6	0.23	29.4	B
Fountain Park South	II	42	11.8	0.3	12.1	0.10	30.5	B
Central	II	42	40.6	19.2	59.8	0.42	25.5	C
Lapalco Blvd	II	42	27.7	34.6	62.3	0.25	14.5	E
Total	II		240.7	128.9	369.6	2.26	22.1	C

SIMTRAFFIC

Arterial Level of Service								AM Existing 11/29/2017
Baseline								
Arterial Level of Service: NB Manhattan Blvd								
Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay	
Lapalco Blvd	1	53.1	60.8	0.1	6	6	53.1	
Central	2	1.5	12.8	0.1	41	41	1.5	
Fountain Park South	11	2.1	30.9	0.4	43	43	2.1	
Fountain Park Center	3	1.1	5.2	0.1	35	35	1.1	
Target	4	4.8	13.0	0.1	28	28	4.8	
Gretna Blvd	5	5.4	23.2	0.2	35	35	5.4	
WalMart	14	1.8	9.9	0.1	36	36	1.8	
Lowes	24	0.9	8.9	0.1	34	34	0.9	
Palace	6	10.5	17.8	0.1	20	20	10.5	
Westbank Village Sho	26	2.0	8.8	0.1	30	30	2.0	
WalMart	7	4.4	20.8	0.2	34	34	4.4	
Lowes	8	3.1	14.1	0.1	38	38	3.1	
Palace	9	27.3	33.1	0.1	8	8	27.3	
Westbank Village Sho	29	2.4	8.2	0.1	29	29	2.4	
WalMart	10	4.6	23.4	0.3	39	39	4.6	
Total		132.4	324.2	2.4	26	26	132.4	
Arterial Level of Service: SB Manhattan Blvd								
Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 1 Speed	Run 1 Delay	
Manhattan Plaza	10	15.0	27.9	0.2	21	21	15.0	
Chick-Fil-A	29	5.4	27.4	0.3	34	34	5.4	
Ute Dr	9	40.2	45.0	0.1	5	5	40.2	
WalMart	8	3.9	8.9	0.1	31	31	3.9	
Gretna Blvd	7	2.2	13.7	0.1	39	39	2.2	
Target	26	2.7	20.0	0.2	35	35	2.7	
Fountain Park Center	6	10.0	14.9	0.1	18	18	10.0	
Fountain Park South	24	2.2	11.2	0.1	32	32	2.2	
Central	14	0.4	7.6	0.1	40	40	0.4	
Lapalco Blvd	5	3.6	11.5	0.1	31	31	3.6	
WalMart	4	1.7	18.2	0.2	45	45	1.7	
Target	3	0.5	9.5	0.1	39	39	0.5	
Fountain Park Center	11	0.2	4.7	0.1	39	39	0.2	
Fountain Park South	2	9.6	35.1	0.4	38	38	9.6	
Central	22	2.7	14.9	0.1	36	36	2.7	
Lapalco Blvd	1	29.3	37.1	0.1	10	10	29.3	
WalMart	20	3.6	15.2	0.1	25	25	3.6	
Total		133.0	322.7	2.4	26	26	133.0	

SimTraffic Report





**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

CYCLE LENGTHS

**(RECOMMENDED SYNCHRO NATURAL CYCLE LENGTHS AND
IMPLEMENTED CYCLE LENGTH)**

	Intersection	Synchro Natural Cycle Lengths			Existing Cycle Length
		AM	Mid-Day	PM	
1	Lapalco Blvd	80	90	100	120
2	Central Blvd	120	70	80	120
3	Fountain Park South	45	45	45	120
4	Fountain Park Center	120	75	70	120
5	Target	60	70	65	120
6	Gretna Blvd.	55	60	55	120
7	Walmart	70	70	70	120
8	Ute Dr.	75	70	75	120
9	Palace	85	105	110	120
10	Westbank Village Shopping Center Parking Lot/ Manhattan Plaza	75	75	80	120



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Manhattan Blvd Study

PC-Travel Reports for study: Manhattan Blvd NB AM

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Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

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Study Summary

Runs Used in This Study

Run Title	Start Date	Start Time	Length	Before/After	Run Type
Manhattan Blvd-NB-001tn	10/19/17	06:44	11619	Before	Primary
Manhattan Blvd-NB-002t	10/19/17	06:56	11837	Before	Secondary
Manhattan Blvd-NB-003t	10/19/17	07:08	11873	Before	Secondary
Manhattan Blvd-NB-004t	10/19/17	07:20	11870	Before	Secondary

Node Info

#	Len	Name
1	0	Lapalco Blvd
2	1305	Central Blvd
3	2083	LA Capitol
4	438	Parrot Petes
5	1313	Taco Bell
6	1504	Gretna Blvd
7	1470	Walmart
8	621	PetSmart
9	193	Chick Fil A
10	1924	Bed Bath and Beyond
11	768	Westbank Expy

Notes:

Length of Study Route = 11,619 feet

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Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **3**

Overall Output Statistics

Node #	Length	Node	Travel Time	# of Stops	Avg Speed	Total Delay	Time <= 0 MPH	Time <= 35 MPH	Time <= 55 MPH
1	0	Lapalco Blvd							
2	1305	Central Blvd	29.8	0.0	29.9	7.3	0.0	21.5	29.8
3	2083	LA Capitol	38.8	0.0	36.7	2.8	0.0	0.0	38.8
4	438	Parrot Petes	8.0	0.0	37.3	0.5	0.0	1.8	8.0
5	1313	Taco Bell	25.3	0.0	35.5	2.8	0.0	4.5	25.3
6	1504	Gretna Blvd	33.0	0.3	31.1	7.0	0.0	18.8	33.0
7	1470	Walmart	29.5	0.0	34.0	4.5	0.0	11.8	29.5
8	621	PetSmart	12.8	0.0	33.2	1.8	0.0	6.0	12.8
9	193	Chick Fil A	6.5	0.3	20.2	3.3	0.0	5.5	6.5
10	1924	Bed Bath and Beyond	39.5	0.0	33.2	6.5	0.0	18.8	39.5
11	768	Westbank Expy	26.5	0.5	19.8	13.5	2.3	26.5	26.5
Total	11,619		249.5	1.0	31.8	49.8	2.3	115.0	249.5

Stats based on 4 BEFORE runs.

Stops based on a Stop Speed of 5 MPH.

Total Delay based on a Normal Speed of 40 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

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Fuel Consumption & Emissions

Node #	Length	Node Name	Fuel (gal)	HC (grams)	CO (grams)	NOx (grams)
1	0	Lapalco Blvd				
2	1305	Central Blvd	0.0136	1.4733	12.8729	1.0605
3	2083	LA Capitol	0.0152	0.9202	10.0969	0.2355
4	438	Parrot Petes	0.0032	0.2046	2.3102	0.0666
5	1313	Taco Bell	0.0109	0.8612	8.9739	0.4444
6	1504	Gretna Blvd	0.0117	0.7866	7.5919	0.2695
7	1470	Walmart	0.0145	1.5794	16.3608	1.1321
8	621	PetSmart	0.0046	0.2777	2.9995	0.0711
9	193	Chick Fil A	0.0031	0.3765	2.3142	0.3157
10	1924	Bed Bath and Beyond	0.0161	1.3561	13.7037	0.7276
11	768	Westbank Expy	0.0089	0.8478	6.6415	0.4736
Total	11,619		0.1019	8.6833	83.8654	4.7967

Stats based on 4 BEFORE runs.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

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Detailed Statistics By Run

Travel Time (sec) by Section

Manhattan Blvd-NB-001tn
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	28	31	30	30
3	2083	LA Capitol	39	39	39	38
4	438	Parrot Petes	8	9	7	8
5	1313	Taco Bell	24	31	24	22
6	1504	Gretna Blvd	31	33	38	30
7	1470	Walmart	29	29	29	31
8	621	PetSmart	12	15	11	13
9	193	Chick Fil A	4	7	3	12
10	1924	Bed Bath and Beyond	49	36	36	37
11	768	Westbank Expy	40	16	31	19
Totals	11619		264	246	248	240

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Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

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Detailed Statistics By Run

Number of Stops by Section

Manhattan Blvd-NB-001tn
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	0	0	0	0
3	2083	LA Capitol	0	0	0	0
4	438	Parrot Petes	0	0	0	0
5	1313	Taco Bell	0	0	0	0
6	1504	Gretna Blvd	0	0	1	0
7	1470	Walmart	0	0	0	0
8	621	PetSmart	0	0	0	0
9	193	Chick Fil A	0	0	0	1
10	1924	Bed Bath and Beyond	0	0	0	0
11	768	Westbank Expy	1	0	1	0
Totals	11619		1	0	2	1

Stops based on a Stop Speed of 5 MPH.

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

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Detailed Statistics By Run

Average Speed (MPH) by Section

Manhattan Blvd-NB-001tn
Manhattan Blvd-NB-002t
Manhattan Blvd-NB-003t
Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	31.8	29.4	30.2	29.9
3	2083	LA Capitol	36.4	36.4	36.7	37.5
4	438	Parrot Petes	37.3	32.8	38.9	38.8
5	1313	Taco Bell	37.5	29.1	38.2	40.0
6	1504	Gretna Blvd	33.2	30.6	26.2	34.3
7	1470	Walmart	34.5	34.4	34.9	32.4
8	621	PetSmart	35.2	28.4	40.3	32.6
9	193	Chick Fil A	33.0	18.7	41.3	11.3
10	1924	Bed Bath and Beyond	26.8	36.5	36.2	35.5
11	768	Westbank Expy	13.1	32.3	17.1	27.5
Totals	11619		30.0	32.2	32.0	33.1

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Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

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Detailed Statistics By Run

Total Delay (sec) by Section

Manhattan Blvd-NB-001tn
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	6	8	7	8
3	2083	LA Capitol	3	3	3	2
4	438	Parrot Petes	1	1	0	0
5	1313	Taco Bell	2	8	1	0
6	1504	Gretna Blvd	5	7	12	4
7	1470	Walmart	4	4	4	6
8	621	PetSmart	1	4	0	2
9	193	Chick Fil A	1	4	0	8
10	1924	Bed Bath and Beyond	16	3	3	4
11	768	Westbank Expy	27	3	18	6
Totals	11619		66	45	48	40

Total Delay based on a Normal Speed of 40 MPH.

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Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

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Detailed Statistics By Run

Time <= 0 MPH by Section

Manhattan Blvd-NB-001t
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	0	0	0	0
3	2083	LA Capitol	0	0	0	0
4	438	Parrot Petes	0	0	0	0
5	1313	Taco Bell	0	0	0	0
6	1504	Gretna Blvd	0	0	0	0
7	1470	Walmart	0	0	0	0
8	621	PetSmart	0	0	0	0
9	193	Chick Fil A	0	0	0	0
10	1924	Bed Bath and Beyond	0	0	0	0
11	768	Westbank Expy	6	0	3	0
Totals	11619		6	0	3	0

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

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Detailed Statistics By Run

Time <= 35 MPH by Section

Manhattan Blvd-NB-001t

Manhattan Blvd-NB-002t

Manhattan Blvd-NB-003t

Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	20	22	15	29
3	2083	LA Capitol	0	0	0	0
4	438	Parrot Petes	0	7	0	0
5	1313	Taco Bell	0	18	0	0
6	1504	Gretna Blvd	14	29	22	10
7	1470	Walmart	10	13	10	14
8	621	PetSmart	5	12	0	7
9	193	Chick Fil A	3	7	0	12
10	1924	Bed Bath and Beyond	49	5	11	10
11	768	Westbank Expy	40	16	31	19
Totals	11619		141	129	89	101

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **11**

Detailed Statistics By Run

Time <= 55 MPH by Section

Manhattan Blvd-NB-001tn
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	28	31	30	30
3	2083	LA Capitol	39	39	39	38
4	438	Parrot Petes	8	9	7	8
5	1313	Taco Bell	24	31	24	22
6	1504	Gretna Blvd	31	33	38	30
7	1470	Walmart	29	29	29	31
8	621	PetSmart	12	15	11	13
9	193	Chick Fil A	4	7	3	12
10	1924	Bed Bath and Beyond	49	36	36	37
11	768	Westbank Expy	40	16	31	19
Totals	11619		264	246	248	240

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **12**

Detailed Statistics By Run

Fuel Consumption (gallons) by Section

Manhattan Blvd-NB-001t
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	0.0111	0.0151	0.0147	0.0135
3	2083	LA Capitol	0.0149	0.0152	0.0154	0.0154
4	438	Parrot Petes	0.0035	0.0030	0.0029	0.0033
5	1313	Taco Bell	0.0097	0.0150	0.0096	0.0094
6	1504	Gretna Blvd	0.0117	0.0110	0.0130	0.0112
7	1470	Walmart	0.0131	0.0123	0.0156	0.0171
8	621	PetSmart	0.0046	0.0046	0.0049	0.0044
9	193	Chick Fil A	0.0013	0.0040	0.0015	0.0056
10	1924	Bed Bath and Beyond	0.0184	0.0163	0.0133	0.0166
11	768	Westbank Expy	0.0111	0.0052	0.0130	0.0061
Totals	11619		0.0994	0.1017	0.1040	0.1026

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **13**

Detailed Statistics By Run

Hydrocarbons (grams) by Section

Manhattan Blvd-NB-001tn
Manhattan Blvd-NB-002t
Manhattan Blvd-NB-003t
Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	1.0936	1.6826	1.6281	1.4889
3	2083	LA Capitol	0.8409	0.9360	0.9348	0.9691
4	438	Parrot Petes	0.2865	0.1620	0.1759	0.1939
5	1313	Taco Bell	0.6245	1.8388	0.4819	0.4996
6	1504	Gretna Blvd	0.8265	0.7344	0.9393	0.6461
7	1470	Walmart	1.3104	1.1467	1.7906	2.0698
8	621	PetSmart	0.3028	0.2700	0.3041	0.2340
9	193	Chick Fil A	0.0720	0.5883	0.1089	0.7366
10	1924	Bed Bath and Beyond	1.8395	1.4310	0.6480	1.5059
11	768	Westbank Expy	1.0487	0.2880	1.5979	0.4568
Totals	11619		8.2453	9.0777	8.6095	8.8006

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **14**

Detailed Statistics By Run

Carbon Monoxide (grams) by Section

Manhattan Blvd-NB-001t

Manhattan Blvd-NB-002t

Manhattan Blvd-NB-003t

Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	11.4370	13.4943	13.5435	13.0165
3	2083	LA Capitol	8.9755	10.2904	10.2596	10.8622
4	438	Parrot Petes	3.4280	1.6380	1.9963	2.1783
5	1313	Taco Bell	7.0623	18.1928	5.0903	5.5504
6	1504	Gretna Blvd	8.3322	7.0320	7.9276	7.0759
7	1470	Walmart	14.4546	12.4419	17.8086	20.7381
8	621	PetSmart	3.2841	2.7300	3.6179	2.3660
9	193	Chick Fil A	0.7280	3.5307	1.4074	3.5907
10	1924	Bed Bath and Beyond	15.5363	16.0768	6.5520	16.6495
11	768	Westbank Expy	7.4668	2.9120	12.1641	4.0230
Totals	11619		80.7048	88.3389	80.3673	86.0506

ITS Regional

Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **15**

Detailed Statistics By Run

Nitrous Oxides (grams) by Section

Manhattan Blvd-NB-001t
 Manhattan Blvd-NB-002t
 Manhattan Blvd-NB-003t
 Manhattan Blvd-NB-004t

Node #	Length	Node Name	Run #1	Run #2	Run #3	Run #4
1	0	Lapalco Blvd				
2	1305	Central Blvd	0.6516	1.2865	1.2314	1.0725
3	2083	LA Capitol	0.1505	0.2525	0.2423	0.2967
4	438	Parrot Petes	0.1460	0.0198	0.0503	0.0503
5	1313	Taco Bell	0.2057	1.4139	0.0527	0.1054
6	1504	Gretna Blvd	0.3355	0.2051	0.3802	0.1572
7	1470	Walmart	0.8450	0.6801	1.3687	1.6348
8	621	PetSmart	0.0985	0.0391	0.1046	0.0421
9	193	Chick Fil A	0.0119	0.5470	0.0560	0.6479
10	1924	Bed Bath and Beyond	1.1538	0.8261	0.0441	0.8863
11	768	Westbank Expy	0.4802	0.0201	1.2244	0.1699
Totals	11619		4.0787	5.2900	4.7548	5.0631

ITS Regional

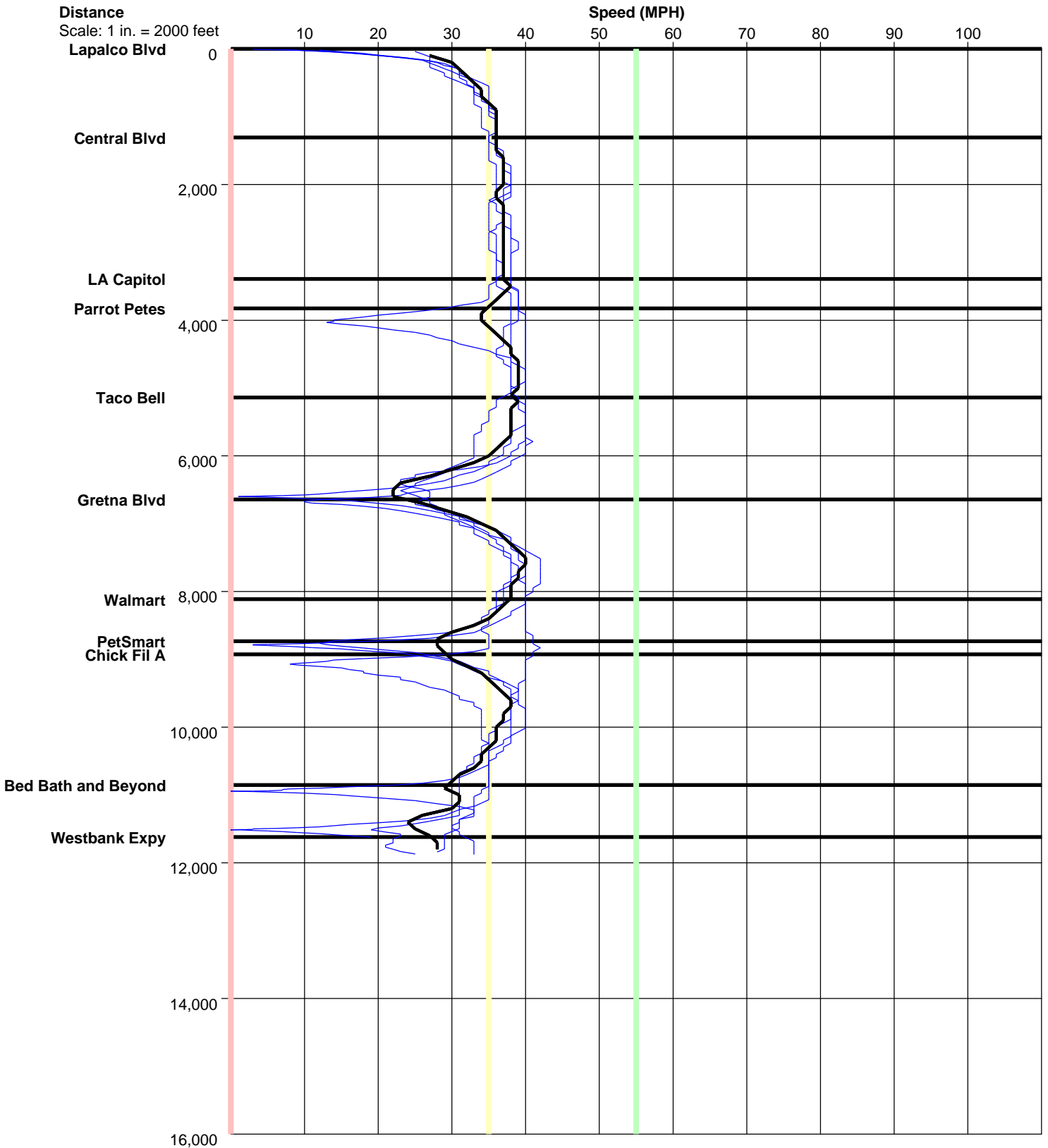
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **16**

Speed/Distance Profiles of All Runs



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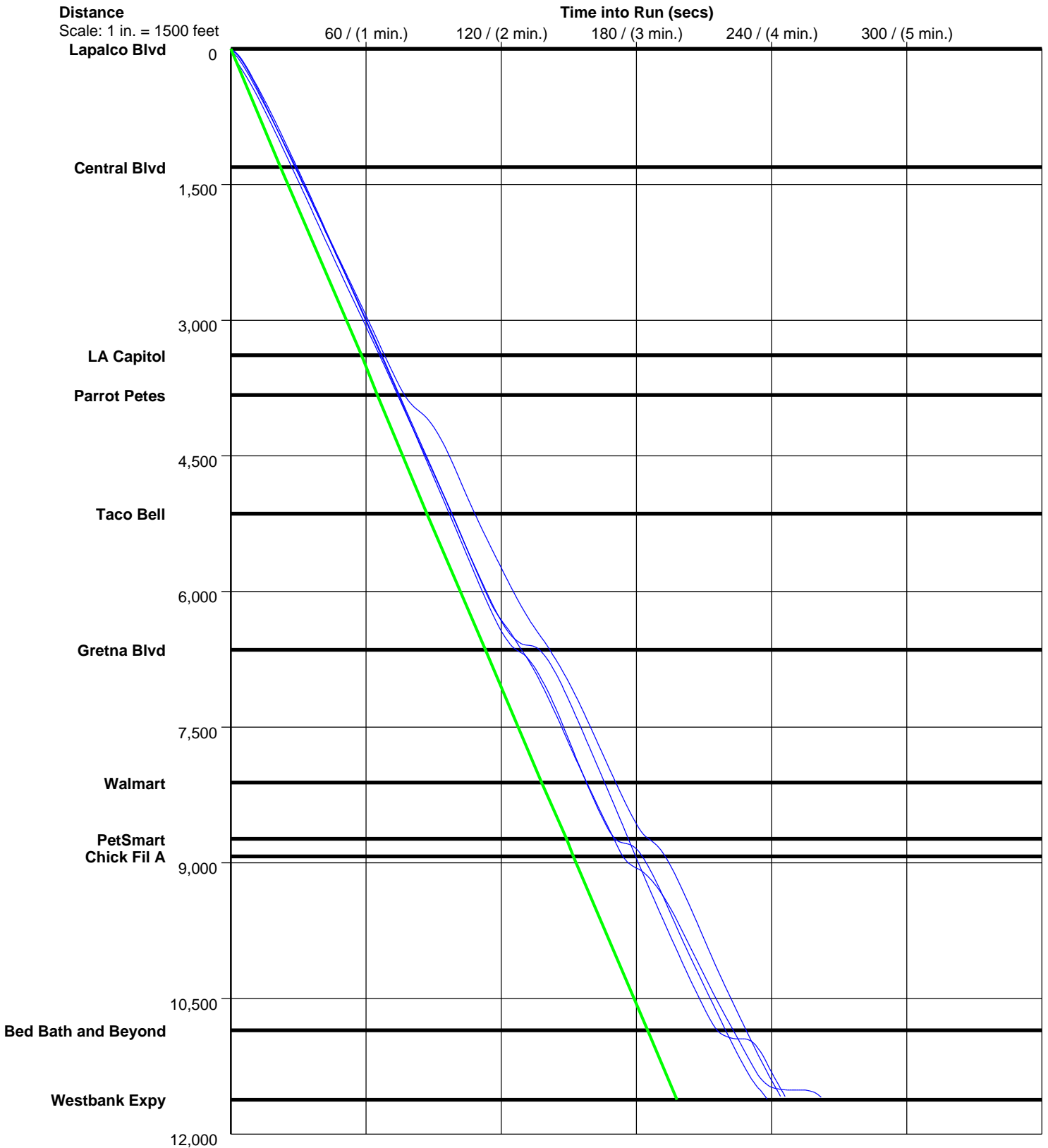
Manhattan Blvd Study

Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **17**

Time/Space Trajectories of All Runs



Solid Line is Normal Speed of 40 MPH

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Manhattan Blvd Study

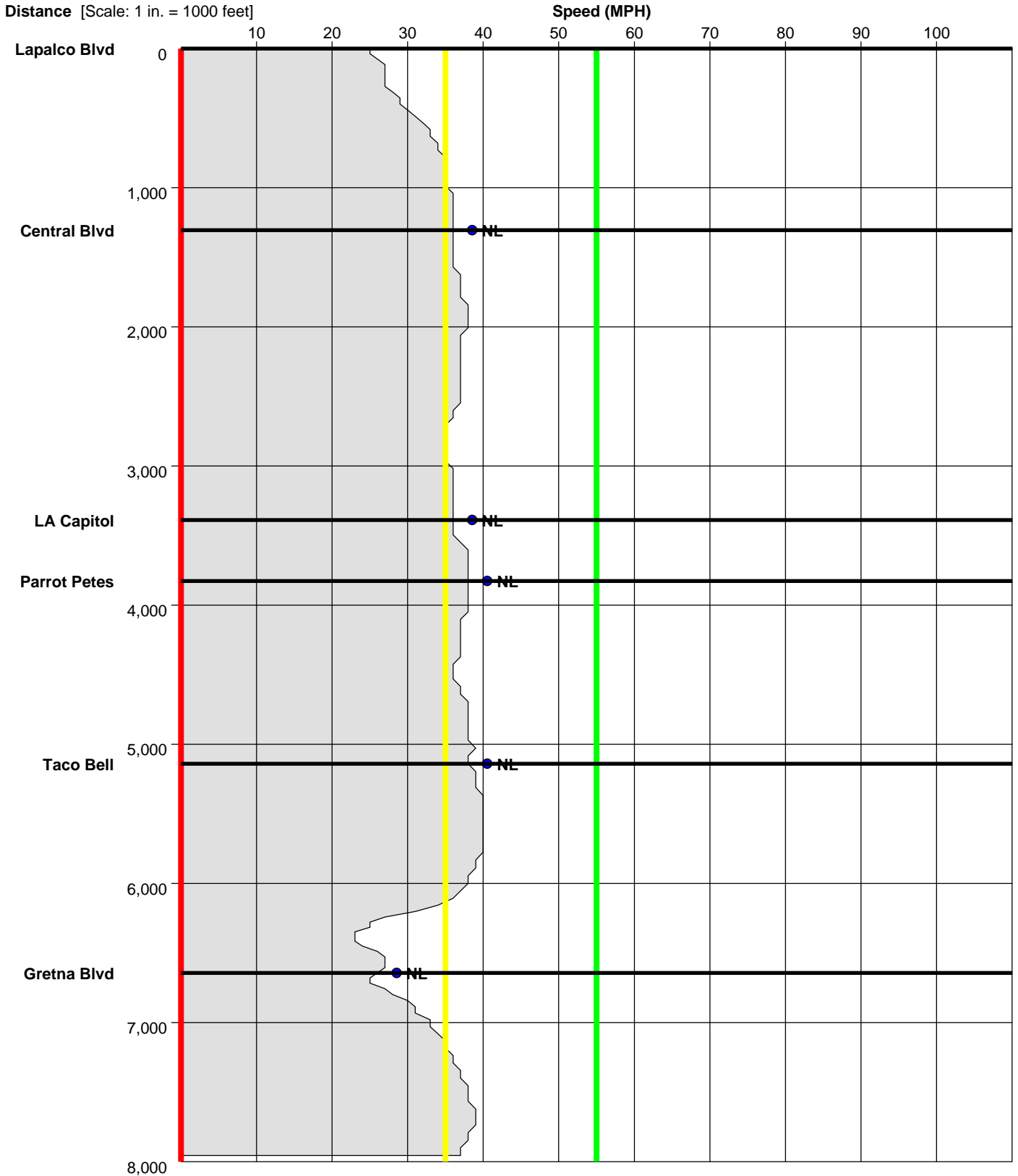
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **18**

Speed Profile

Run : **Manhattan Blvd-NB-001tn** Start Time: **06:44** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

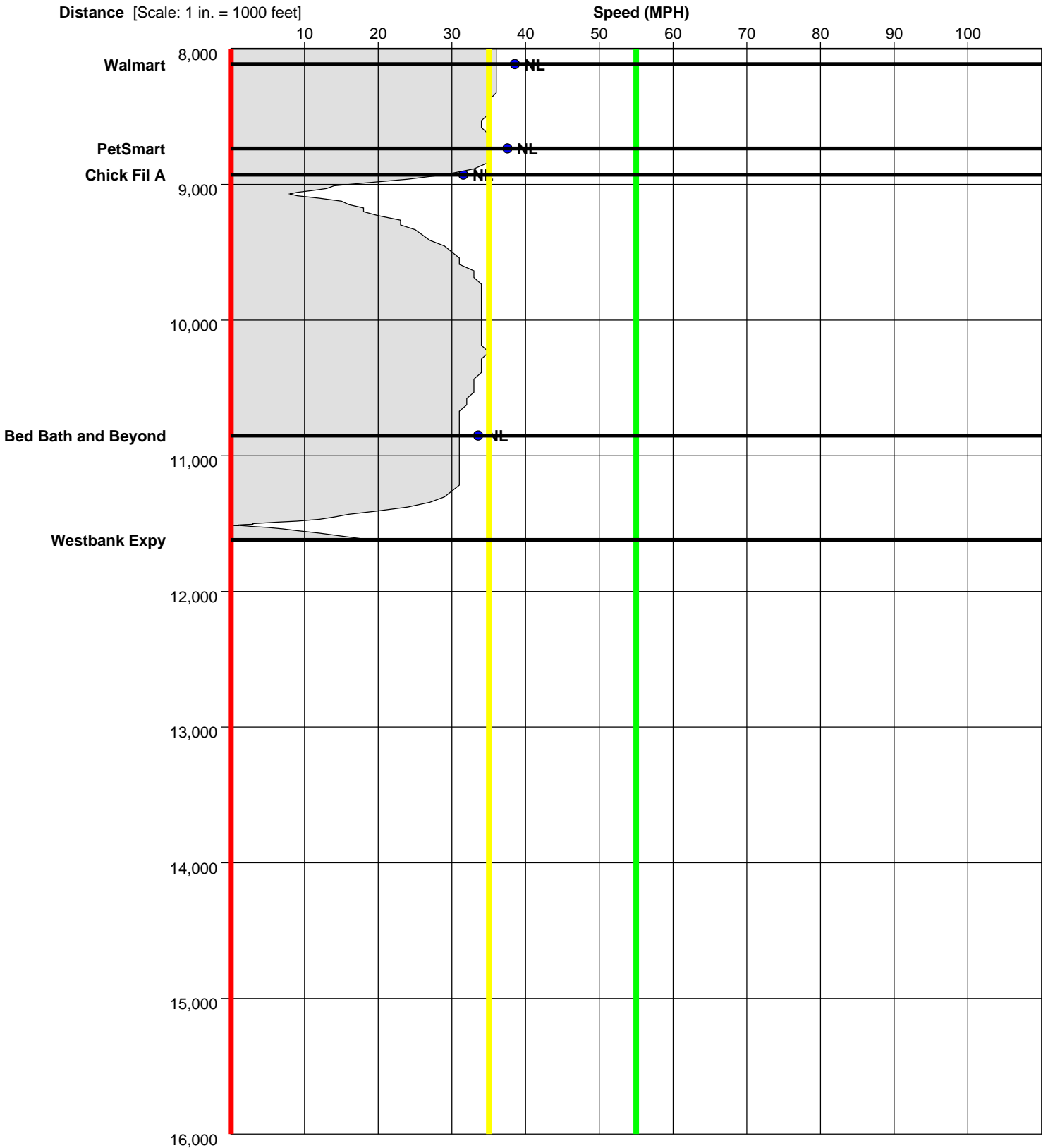
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **19**

Speed Profile

Run : **Manhattan Blvd-NB-001tn** Start Time: **06:44** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

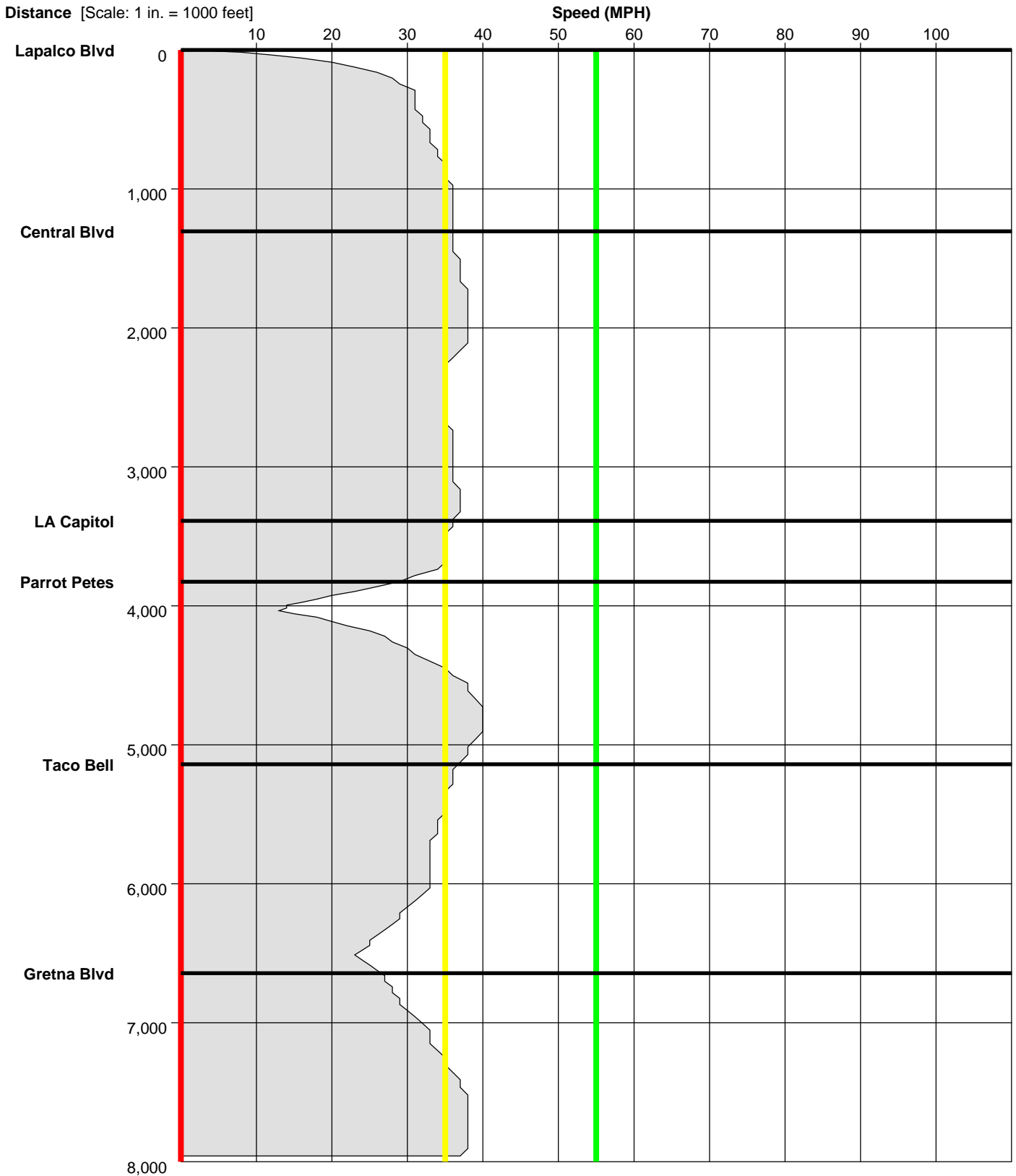
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **20**

Speed Profile

Run : **Manhattan Blvd-NB-002t** Start Time: **06:56** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

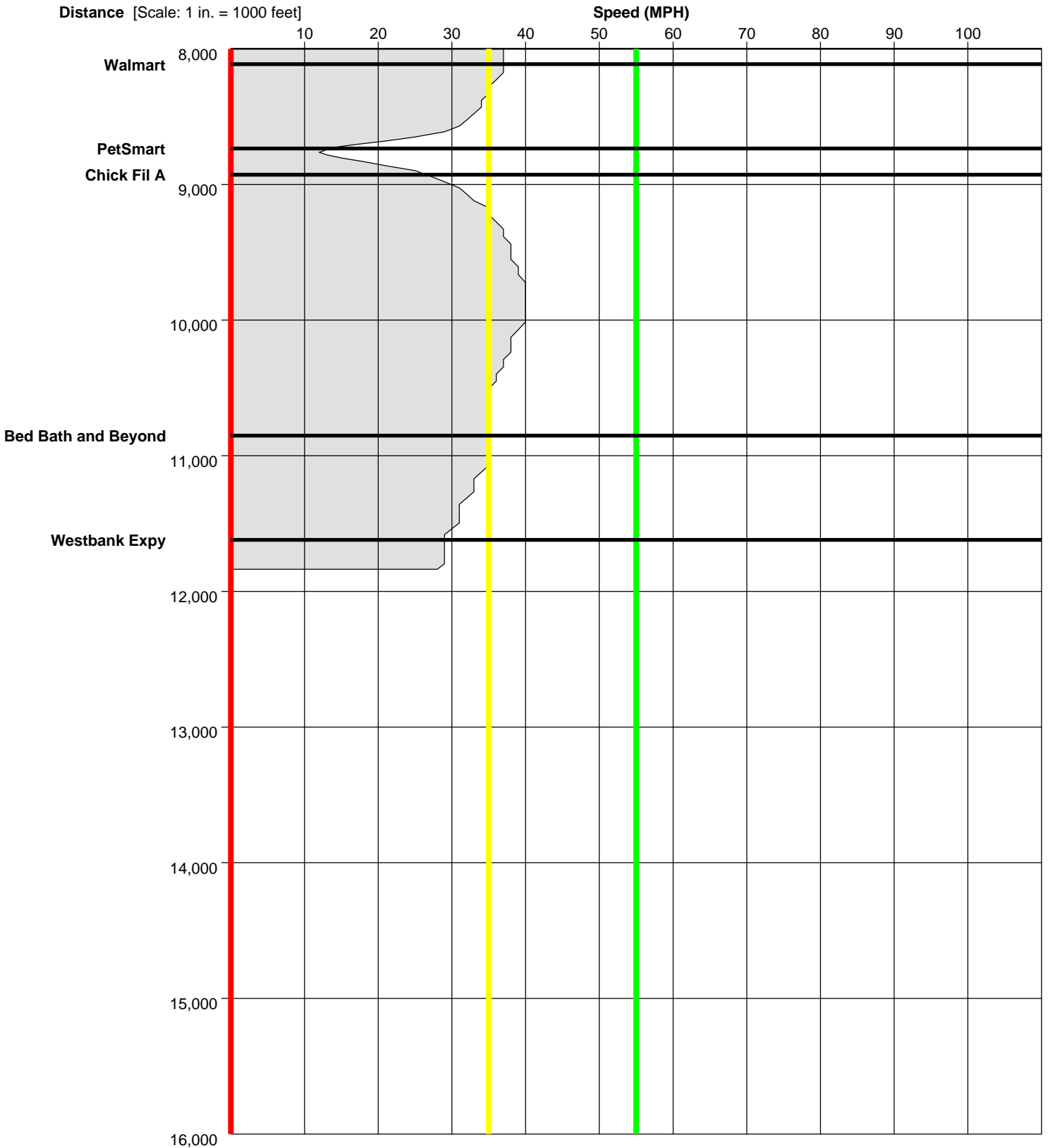
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **21**

Speed Profile

Run : **Manhattan Blvd-NB-002t** Start Time: **06:56** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

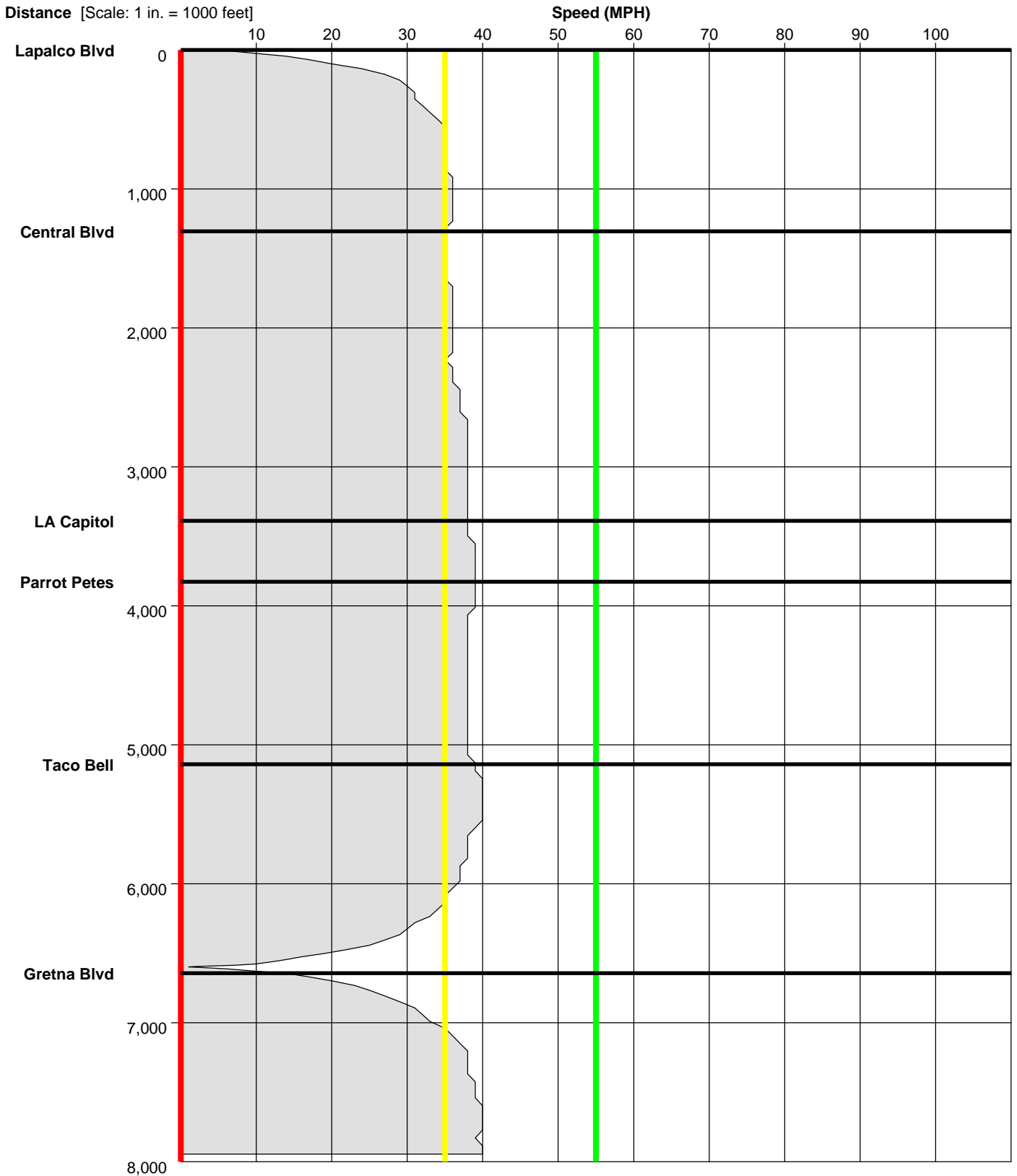
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **22**

Speed Profile

Run : **Manhattan Blvd-NB-003t** Start Time: **07:08** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

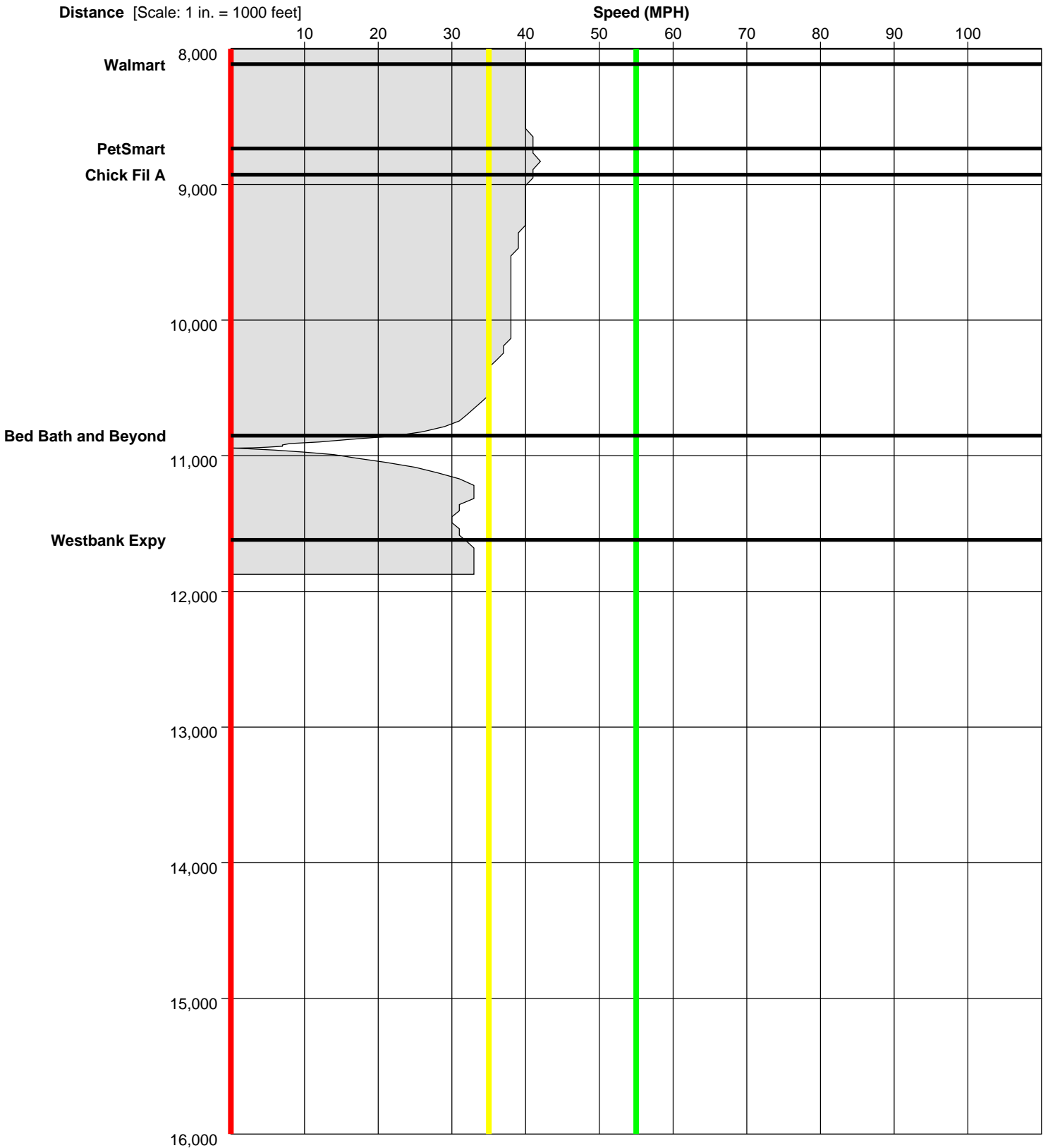
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **23**

Speed Profile

Run : **Manhattan Blvd-NB-003t** Start Time: **07:08** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

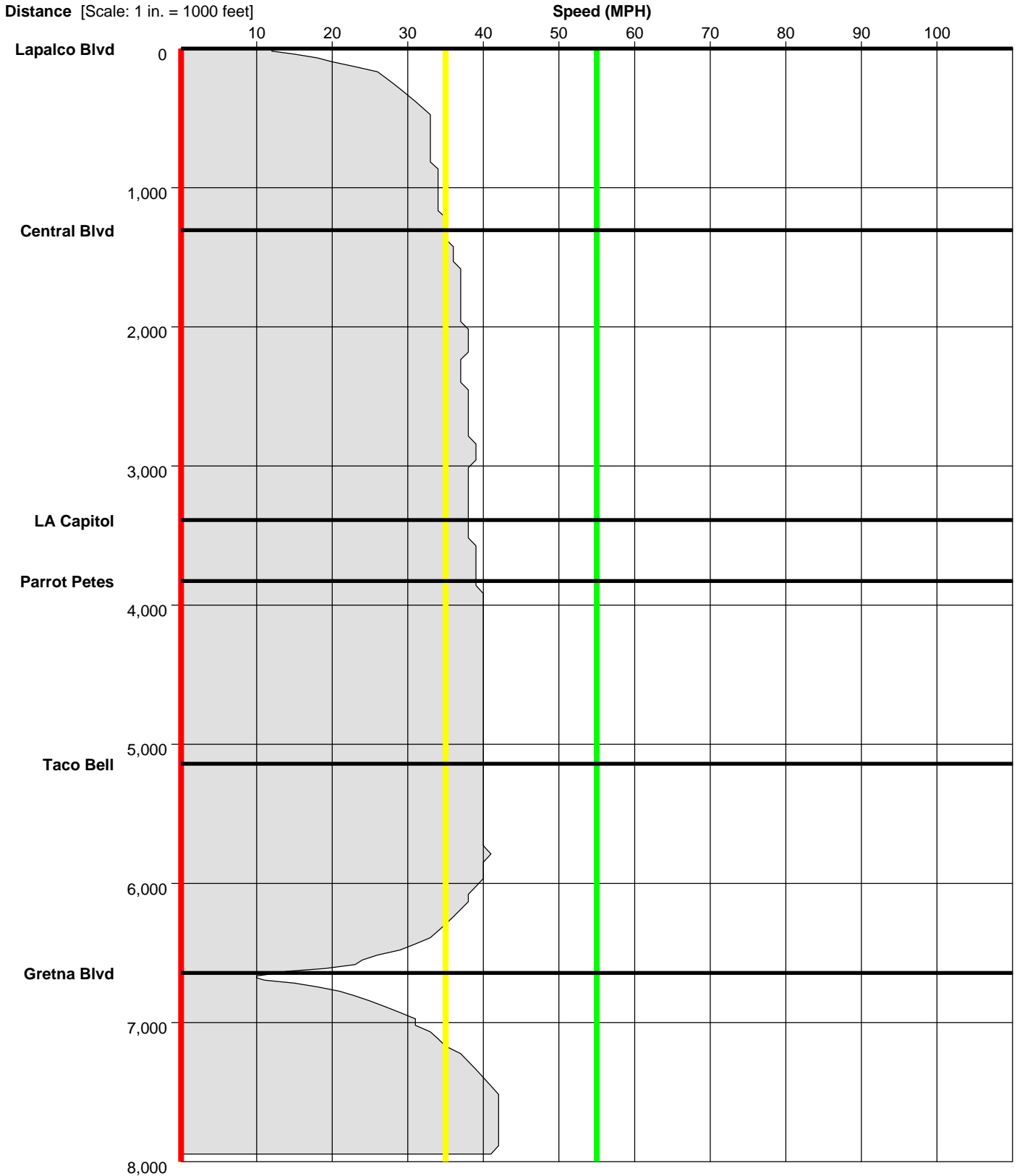
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **24**

Speed Profile

Run : **Manhattan Blvd-NB-004t** Start Time: **07:20** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

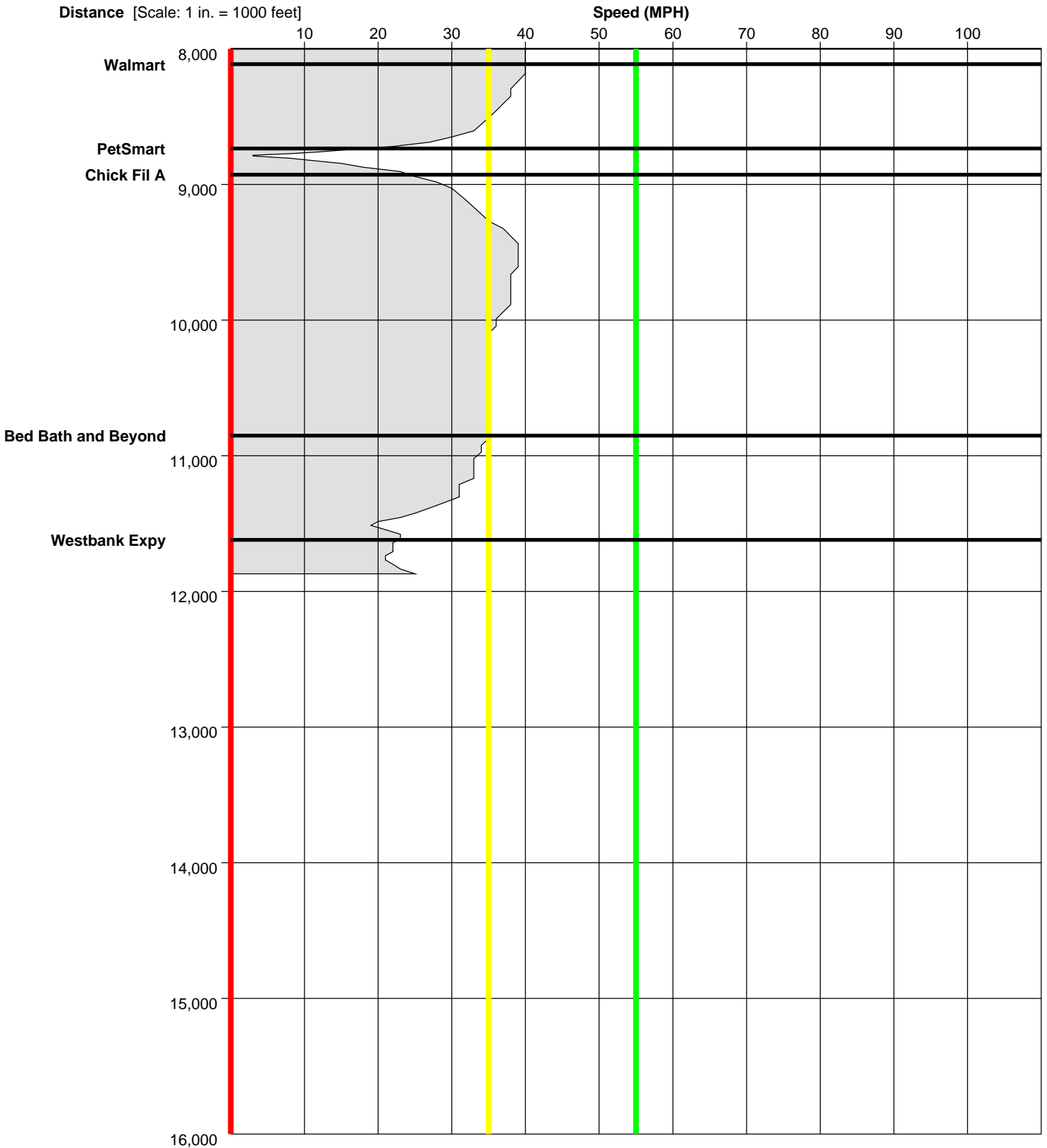
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **25**

Speed Profile

Run : **Manhattan Blvd-NB-004t** Start Time: **07:20** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

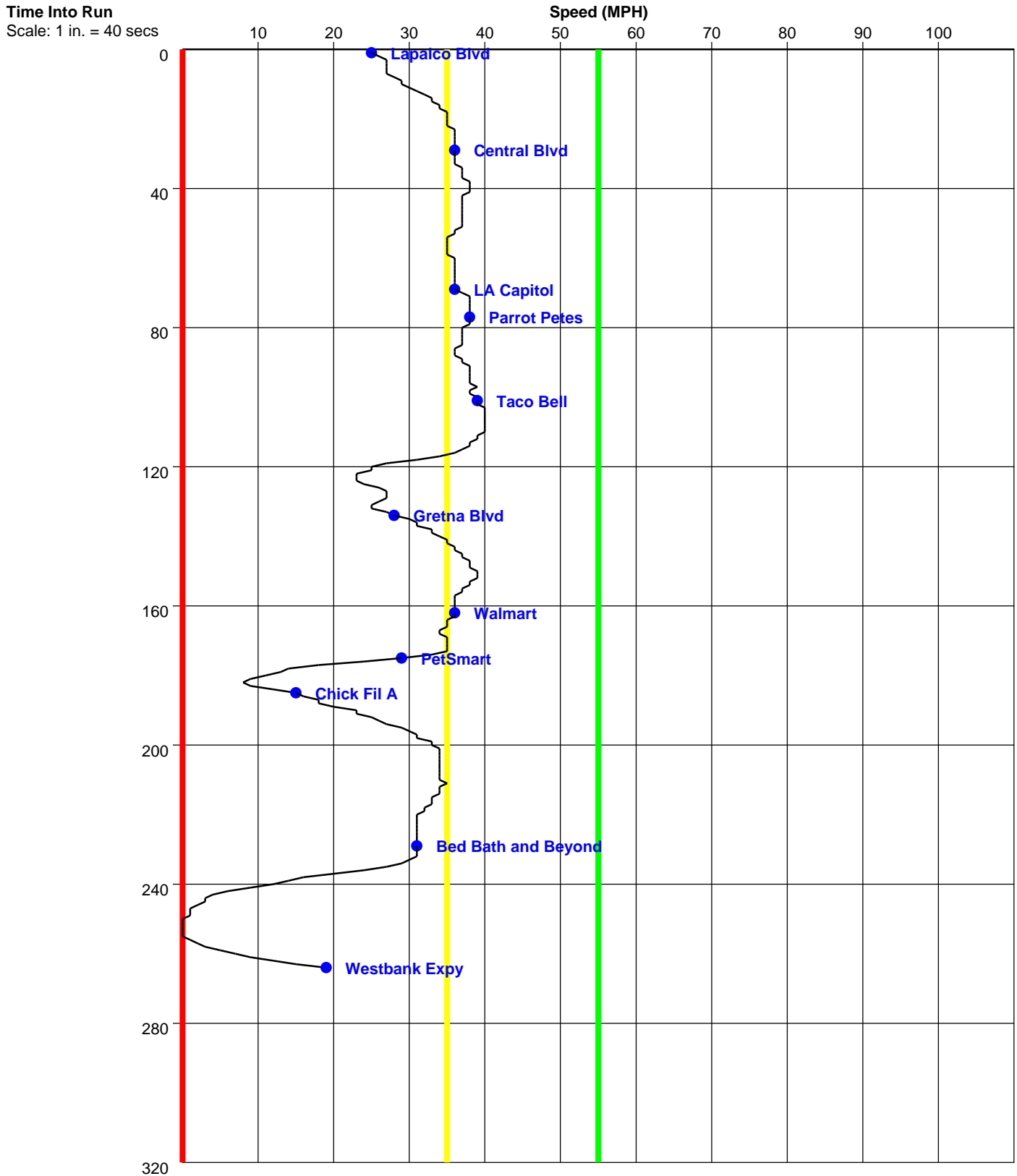
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **26**

Time-Based Speed Profile

Run : Manhattan Blvd-NB-001tn Start Time:06:44 (This is a Before Run)



ITS Regional

Manhattan Blvd Study

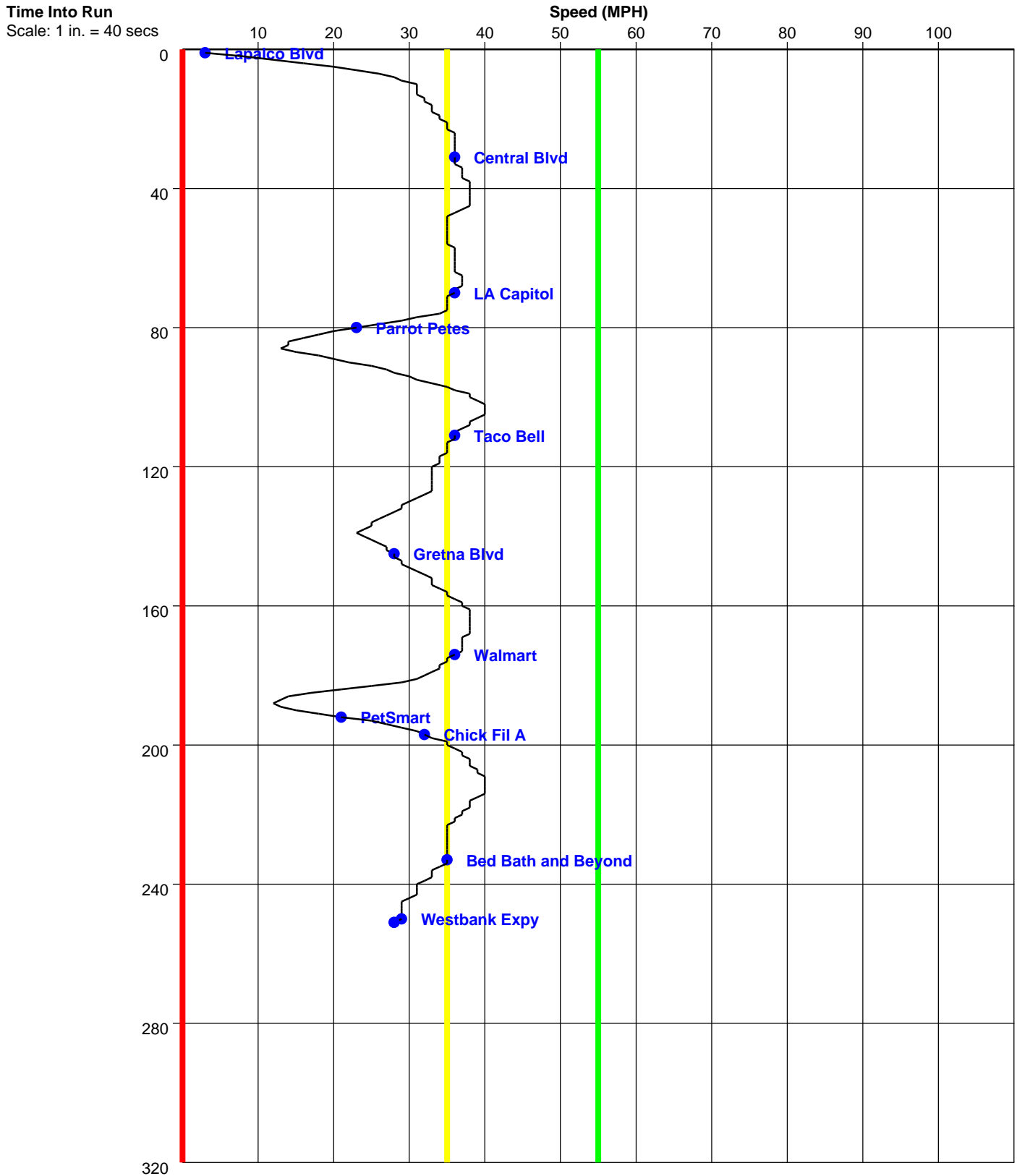
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **27**

Time-Based Speed Profile

Run : **Manhattan Blvd-NB-002t** Start Time:**06:56** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

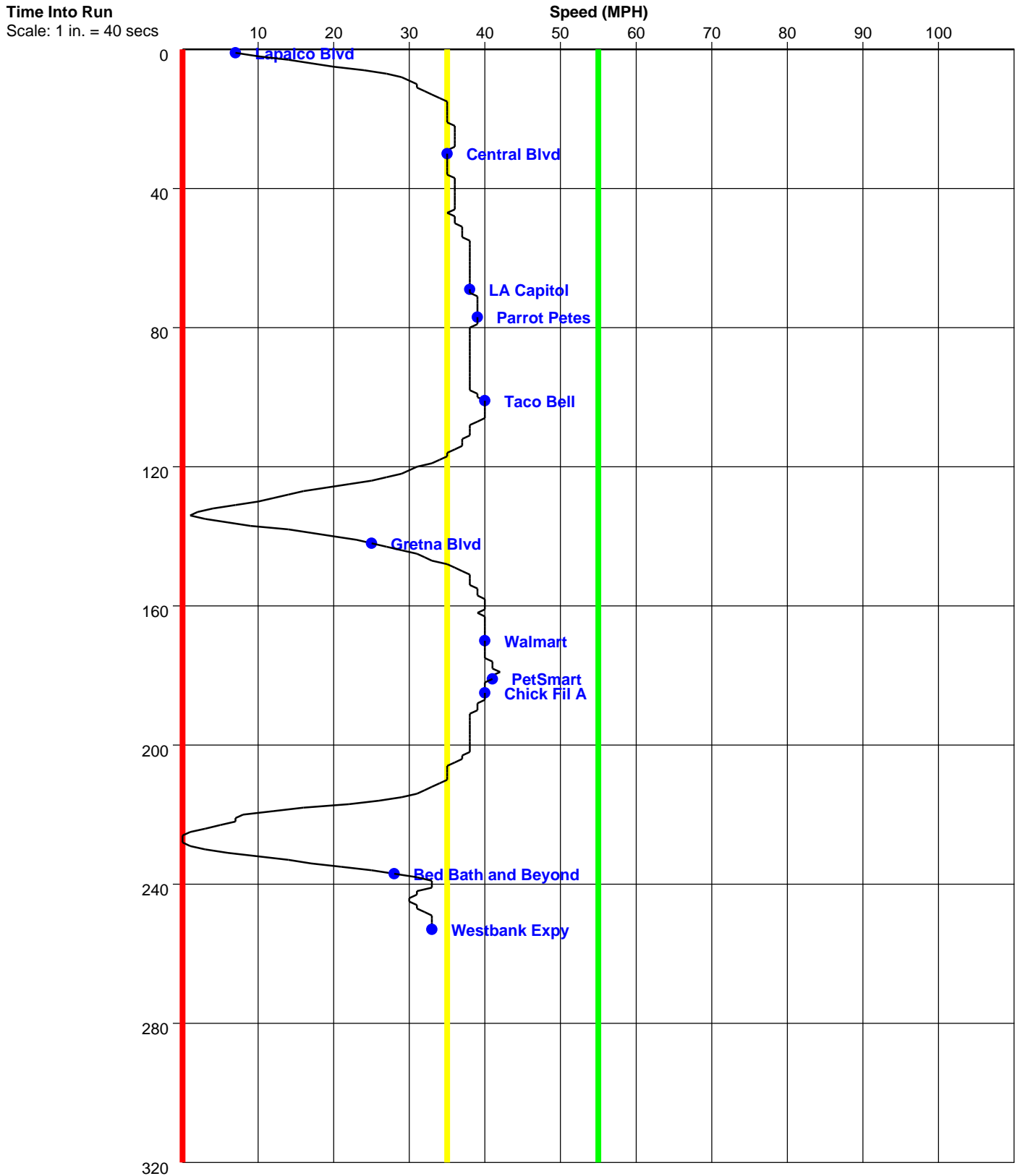
Study Name : **Manhattan Blvd NB AM**

Study Date : **10/19/2017**

Page No. : **28**

Time-Based Speed Profile

Run : **Manhattan Blvd-NB-003t** Start Time:**07:08** (This is a Before Run)



ITS Regional

Manhattan Blvd Study

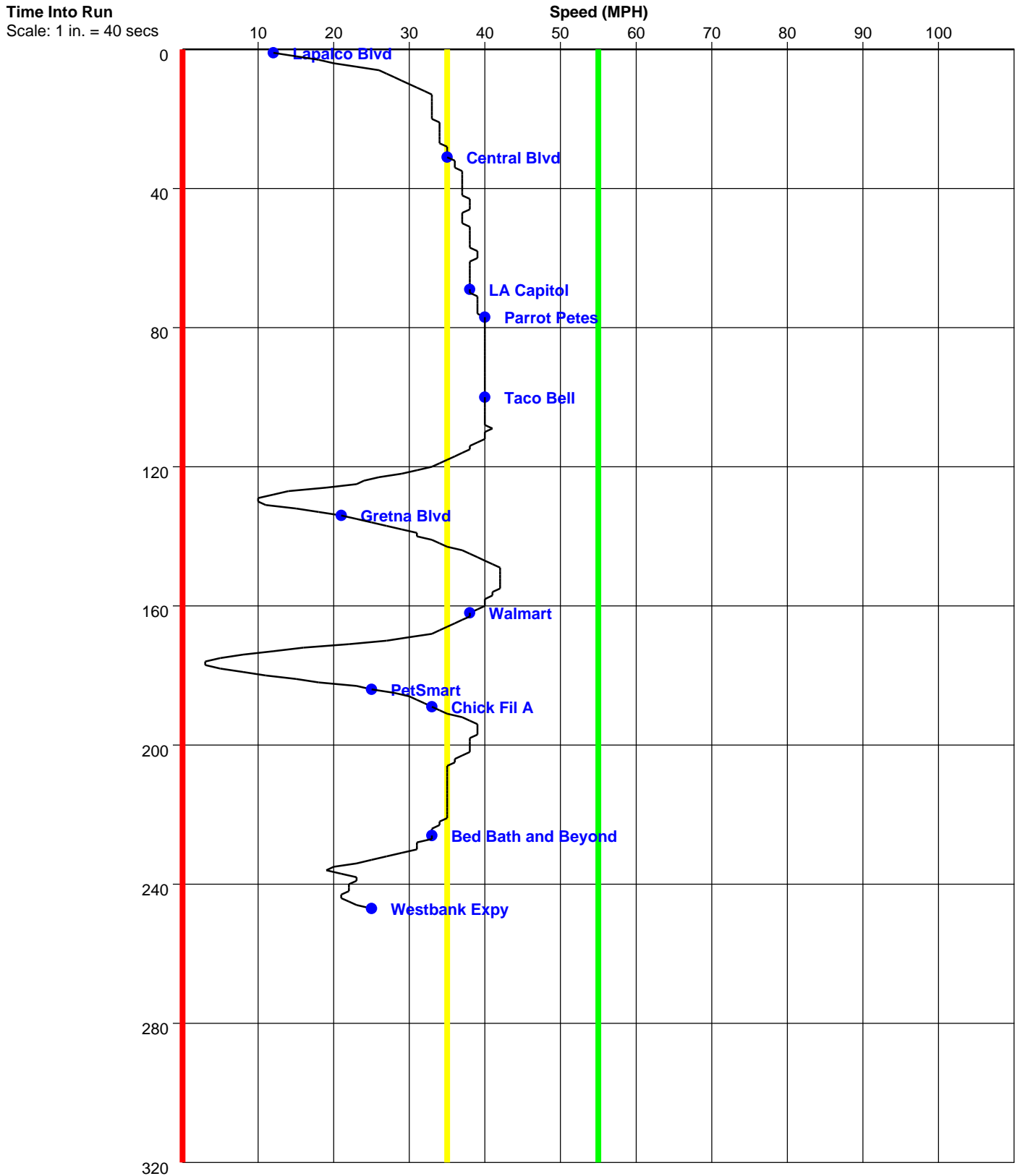
Study Name : **Manhattan Blvd NB AM**

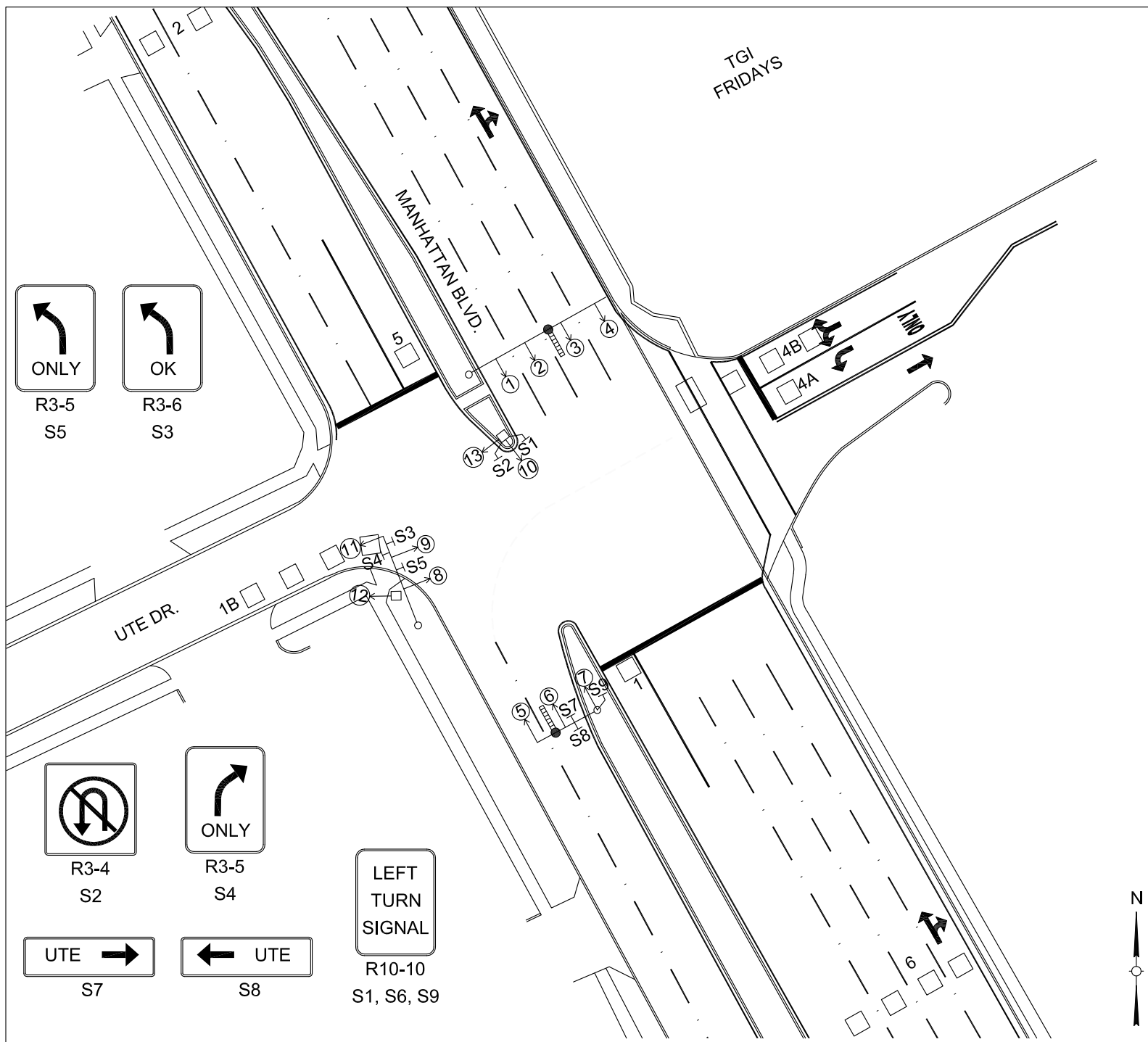
Study Date : **10/19/2017**

Page No. : **29**

Time-Based Speed Profile

Run : **Manhattan Blvd-NB-004t** Start Time:**07:20** (This is a Before Run)





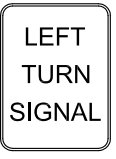
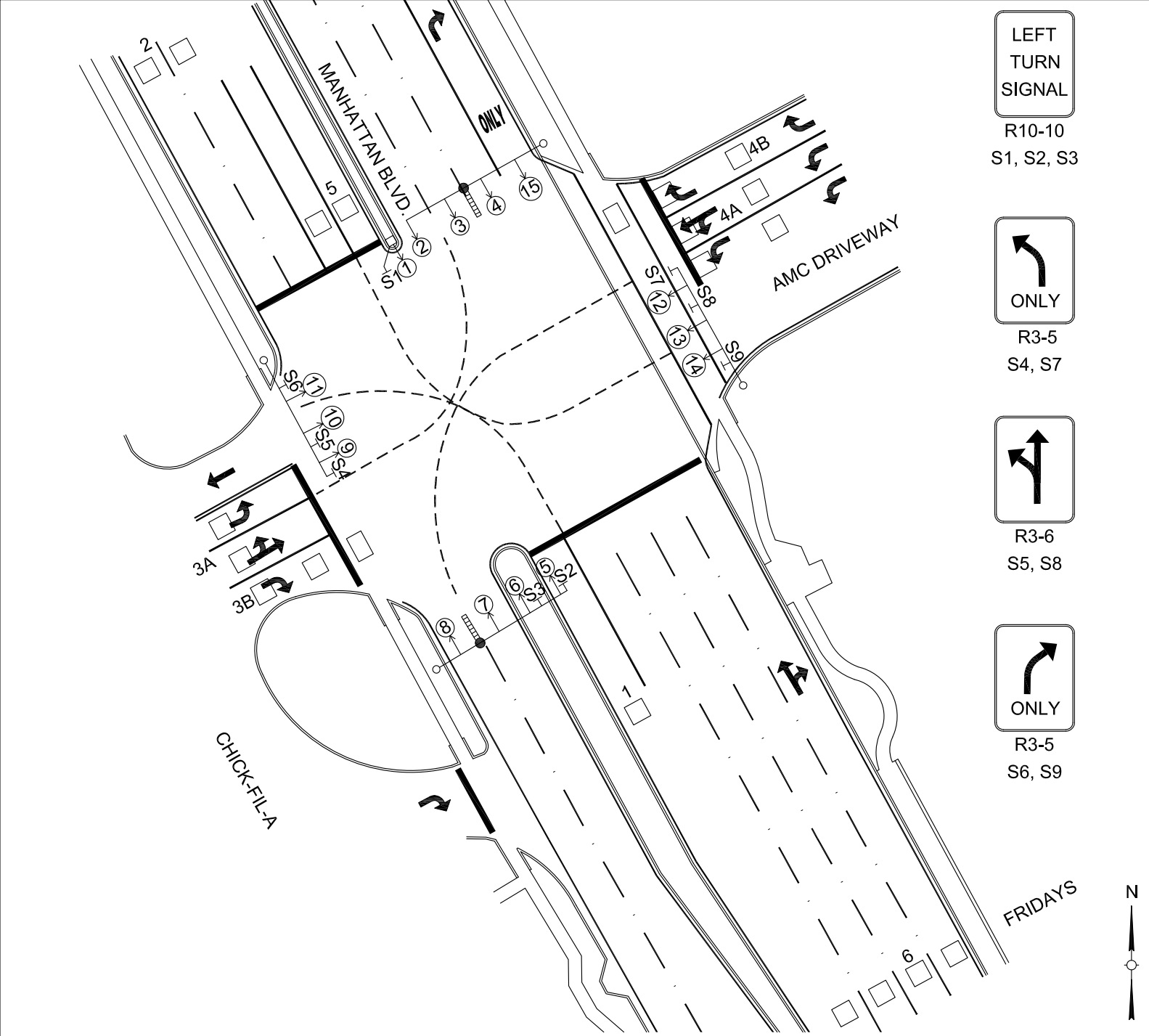
BACKPLATES: YES NO SIGNAL HEAD HEIGHT: SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: UTE DRIVE @ MANHATTAN BLVD. TSI #: XX-XX PAGE X OF X

- WOOD POLE
- METAL POLE
- MAST ARM
- SPAN WIRE
- ⊠ CABINET & CONTROLLER
- EMERGENCY VEHICLE DETECTOR
- SIGNAL POWER PEDESTAL W/ DISCONNECT
- ▬ STOP LINE
- PED CROSS WALK
- SPAN WIRE SIGN & NO.
- ③ GROUND MOUNT SIGN & NO.
- #4 LOOP DETECTOR & NO.
- ② ← □ PEDESTAL MOUNT SIGNAL & NO.
- ② ← SIGNAL FACE & NO.
- ② ← SIGNAL FACE WITH ARROWS & NO.
- ② ← PEDESTRIAN SIGNAL & NO.
- ② ← PED BUTTON & SIGN
- PARALLEL PARKING
- ▶ POWER SOURCE
- ▨ VIDEO DETECTION ZONE & NO.
- ◁ VIDEO DETECTION
- WIRELESS INTERCONNECT
- UTILITY POLE
- WIRELESS VDS
- ◁ WIRELESS VDS RECIEVER

EXISTING SPEED LIMITS
 25 MPH - UTE DRIVE
 35 MPH - MANHATTAN BLVD.

SIGNAL FACES		1-6,12	7, 8, 10	11, 13	9					
TOTALS		6	3	3	1					
DK = DARK R = RED Y = YELLOW G = GREEN ↶ = GREEN ARROW ↷ = YELLOW ARROW ↶↷ = STEADY YELLOW ARROW ↶↷ = FLASHING YELLOW ARROW WA = WALK DW = DON'T WALK FDW = FLASHING DON'T WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMED LENS	 	 	 	 	 	 	 	 	 	



R10-10
S1, S2, S3



R3-5
S4, S7



R3-6
S5, S8



R3-5
S6, S9



BACKPLATES: YES NO SIGNAL HEAD HEIGHT:

SKETCH OF INTERSECTION NOT TO SCALE

INTERSECTION: PALACE @ MANHATTAN BLVD.

TSI #: XX-XX PAGE X OF X

● WOOD POLE	▬ STOP LINE	② ◀ □ PEDESTAL MOUNT SIGNAL & NO.	▶ POWER SOURCE
○ METAL POLE	▬ PED CROSS WALK	② ◀ SIGNAL FACE & NO.	▨ VIDEO DETECTION ZONE & NO.
— MAST ARM	— SPAN WIRE SIGN & NO.	② ◀ SIGNAL FACE WITH ARROWS & NO.	◁ VIDEO DETECTION
○ SPAN WIRE	③ GROUND MOUNT SIGN & NO.	② ◀ PEDESTRIAN SIGNAL & NO.	— WIRELESS INTERCONNECT
☒ CABINET & CONTROLLER	□ #4 LOOP DETECTOR & NO.	② ◀ PED BUTTON & SIGN	○ UTILITY POLE
● EMERGENCY VEHICLE DETECTOR		○ PARALLEL PARKING	□ WIRELESS VDS
■ SIGNAL POWER PEDESTAL W/ DISCONNECT			◁ WIRELESS VDS RECIEVER

EXISTING SPEED LIMITS
35 MPH - MANHATTAN BLVD.

SIGNAL FACES		2-4, 7, 8, 10,13,15	1, 5, 6, 9, 12	11, 14							
TOTALS		8	5	2							
DK = DARK R = RED Y = YELLOW G = GREEN ↔ = GREEN ARROW ↔ = YELLOW ARROW ↔ = STEADY YELLOW ARROW ↔ = FLASHING YELLOW ARROW WA = WALK DW = DON'T WALK FDW = FLASHING DON'T WALK 8" = 8" DIA. LENS 12" = 12" DIA. LENS OP = OPTICALLY PROGRAMED LENS	 	 	 	 	 	 	 	 	 	 	PED

STAGE "0" FEASIBILITY STUDY
 TRAFFIC SIGNAL TIMING AND COORDINATION STUDY
 MANHATTAN BOULEVARD CORRIDOR, JEFFERSON PARISH, LA
 RPC TASK A-3.18: FY-18 UPWP
 ITS PROJECT NO. 017-17-1017

	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	
NOTICE TO PROCEED (NTP)	August 23, 2017										
TASK 1 - KICKOFF MEETING		SEP 1, 2017									
TASK 2 - PROJECT MANAGEMENT COMMITTEE			22-Aug-17		12/4/2017	MEETING II - January 15-19		MEETING III - March 5-9			
TASK 3 - REVIEW OF EXISTING CONDITIONS											
Sub-Task 3.A - GATHERING OF DATA/TSIS											
Sub-Task 3.B - TURNING MOVEMENT COUNTS											
Sub-Task 3.C - DATA TO BE PROVIDED TO CONSULTANT											
TASK 4 - ANALYSIS OF EXISTING CONDITIONS											
TASK 5 - DEVELOPMENT OF RECOMMENDATIONS											
TASK 6 - IMPLEMENTATION AND EVALUATION											
TASK 7 - BENEFIT - COST ESTIMATION											
TASK 8 - DRAFT REPORT											
TASK 9 - ENVIRONMENTAL CHECKLIST											
TASK 10 - FINAL DELIVERABLES											



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Traffic & Transportation Engineering / Civil / Planning / Surveying

Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana

Kick-Off Meeting Agenda

Place/Date of Meeting: Regional Planning Commission
10 Veterans Blvd
New Orleans, LA 70124
January 31, 2018 2:00pm

A Project Management Committee meeting was held for the above-named project on January 31, 2018. The following persons were in attendance

Project Progress Meeting (01/31/18)

Table with 4 columns: Representative, Office, Phone, E-mail Address. Lists attendees including Alison Maulhardt, Jody Savoie, Dawn Daleo, Jed Hellmich, Vi Nguyen, P. Carmelo Gutierrez, Predeep Thummala, Alan Dale, and Susan Treadway.

Project Management Committee Meeting (01/31/2018)

1. Carmelo Gutierrez (CG) began the meeting with a brief statement about the tasks accomplished since last PMC meeting.
2. Dawn Daleo (DD) points to the set of recommendations about upgrading the Traffic Signal controllers and Cabinets from a different study and CG clarifies that the cost specified includes equipment and labor. Further, CG explains the funding process for implementing the upgrade.
3. DD specified about correcting the yellow clearance interval from 3.5 s to 2.5 s for westbound at the intersection of Target and Manhattan Blvd.
4. DD stated that the start the intersection offsets would at the beginning of yellow clearance time.
5. DD suggests manually adjusting offset times along the Manhattan Boulevard corridor. The current offsets at the intersection of Lapalco and Manhattan are: AM – 13 s, Mid-Day – 26 s, and PM – 26 s.
6. Jody Savoie (JS) was concerned about Left Turn Lead/ Lag phasing on EB/ WB Lapalco Blvd and Vi Nguyen (VN) explains him the functioning of the phasing at the intersection. DD clarifies not to change the Lead/ Lag phasing at the intersection of Westbank Shopping Center/ Manhattan Plaza and Manhattan Blvd. but suggests reviewing the phasing at Lapalco Blvd and Manhattan Blvd intersection.
7. For the intersection of Lapalco Blvd. at Manhattan Blvd., JS favors NB Through movement than EB left turns at Lapalco Blvd.
8. JS wants the reason using NB as a reference for coordination during AM and PM peak hours, rather favor SB during PM peak hour. Alan Dale (AD) explains that the NB has considerable traffic during both the peaks and points to a Synchro analysis done referring SB for coordination during PM peak. The Analysis shows that there is a slight decrease in Travel time of 6s along SB during PM peak, an increase in Travel time of 40 s along NB during PM peak.
9. VN points to heavy Right Turn volumes on WB Lapalco Blvd. at Manhattan Blvd. DD clarifies that the delays are relatively less, as the traffic does Right Turns on Red.
10. DD suggests comparing the proposed phasing sequence with existing at the intersection of Lapalco Blvd. and Manhattan Blvd.
11. DD suggests that the time of day plans should be, AM: 6 AM till 11 AM, Mid-day: 11 AM till 3 PM and PM: 3 PM till 7 PM. AD suggests a weekend cycle length of 110 s and DD clarifies that the cycle length should be used for the whole 24 hours during Saturday and Sunday.
12. DD and JS stated that future signal improvements should consider installation of pedestrian heads at Lapalco Blvd. and Gretna Blvd. An existing crosswalk with traffic beacon currently exists near the intersection of Manhattan Blvd. and Apache Dr.
13. AD suggests checking for the broken loop detectors along the study corridor and the possibility of upgrading them with Magnetometers. DD clarifies that the loop detectors are relatively new and no need for change but will check for broken loops when installing the new timings.

14. DD requests providing yield points and force-offs at all the intersections.
15. DD requested a color copy of the Time-Space diagrams that includes the different phasing sequences, revised offsets at Lapalco Blvd. and Manhattan Blvd.
16. The Next PMC meeting was proposed after implementing the proposed timings and performing travel time runs.
17. Attachments:
 1. Meeting Agenda
 2. Handouts from meeting
 3. Meeting Sign-In Sheet

Meeting was adjourned



**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

PMC Meeting Agenda

Place/Date of Meeting: Regional Planning Commission
10 Veterans Blvd
New Orleans, LA 70124
2:00 p.m. to 3:00 p.m.
31 January, 2018

Invited:

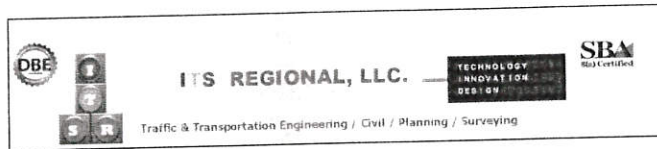
Walter Brooks, RPC
Jeff Roesel, RPC
Alison Maulhardt, RPC
Jody Savoie, Jefferson Parish
Mark Drewes, Jefferson Parish
Dawn Daleo, Jefferson Parish

Chris Morvant, LADOTD
Ennis Johnson, LADOTD
Scott Boyle, LADOTD
Jesse Guerra, LADOTD
Vi Nguyen, LADOTD
Mark Annino, LHJ

AGENDA

1. Introductions
2. Clearance Intervals
3. SYNCHRO/Sim Traffic - Future Analysis (Cycle Lengths Presentation)
4. TSI's
5. Timings Implementation Period
6. Upgrade of Equipment
7. New Travel Runs
8. Schedule Updates
9. Next Steps
 - New Action Items??
 - Next PMC Meeting
 - Additional Items





Vehicular and Pedestrian Clearance Intervals Calculations

Project Manhattan Blvd Signal Timing Study

Parish Jefferson

Intersection Manhattan Blvd. @ Central Blvd.

Deceleration (ft/s²) 10 Vehicle Length (ft) 20 Walking Speed (ft/s) 3.5

Phase	Approach	Speed (mph)	Clear Dist (ft)	Walk Dist (ft)	Existing				Calculated				Recommended				Approved		
					YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R	FDW	YEL	RED	Y+R
1	NB Left	30	92		4.0	0.0	4.0		3.2	2.8	6.0	0	4.0	3.0	7.0		4.0	2.0	6.0
4	WB Left	20	89		4.0	0.0	4.0		2.5	2.7	5.2	0	4.0	3.0	7.0		4.0	2.0	6.0
6	NB	42	81		4.0	0.0	4.0		4.1	0.6	4.7	0	4.5	1.0	5.5		4.0	1.0	5.0
2	SB	42	74		4.0	0.0	4.0		4.1	0.5	4.6	0	4.5	1.0	5.5		4.0	1.0	5.0

- YEL Yellow Clearance Time = $t + (V / (2a + 64.4g))$
- RED Red Clearance Time = $((w + L) / V) - t_s$ (Speed for left turning vehicles is 20 mph)
- t - Perception Reaction Time = 1.0 sec
- V - Approach Speed (ft/s) = Speed (mph) * 1.47
- a - Deceleration rate (ft/s²)
- g - percent grade of the approach, assumed to be 0%
- w - Intersection Width (ft)
- L - Length of Vehicle (ft)
- t_s - conflicting movement startup delay = 1.0 sec
- FDW Flashing Don't Walk Time = (Walk Distance / Walking Speed) - Yellow Clearance Time



**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

INTERSECTION DELAYS:

Synchro Intersection Delays in seconds									
Cycle Length	110	120	130	110	120	130	110	120	130
Intersection	AM			Mid Day			PM		
Lapalco Blvd	34	35	37.3	41.6	41.9	42.2	50.4	49.3	49.5
Central Blvd	6.6	4.9	4.6	12.6	16.2	15.9	13.1	14.8	14.5
Fountain Park South	1.7	1.5	1.3	2.3	2.8	2.8	1.1	2.5	1.6
Fountain Park Center	3	2.3	2.8	7.8	9.3	8	14.6	10.4	11.8
Target	2.4	2.4	2.6	10.2	8.9	9.3	11.2	7.4	9.5
Gretna Blvd.	10.2	11	12.4	15.4	16.2	18.4	17.9	18.7	23.4
Walmart	7.1	8	8	9.6	10	10.9	12.3	10.8	10.3
Ute Dr.	4.9	5.2	4.3	4.7	4.9	5.2	6	5.4	2.8
Palace	11.6	12.7	15.4	13.5	12.7	11.8	15.5	16.5	15.4
Westbank Village	6.8	7.1	7.5	12.6	13.3	14.7	11.9	10.8	11



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**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

TRAVEL TIME COMPARISON:

	Existing Travel Time (minutes)			Proposed Travel Time (minutes)			Proposed Travel Time (minutes)		
	120s	120s	120s	110s	120s	130s	110s	120s	130s
Source	ITS -PC Travel	SimTraffic	Synchro	SimTraffic			Synchro		
NORTHBOUND									
AM	3.72	4.15	4.70	3.85	3.89	3.82	4.15	4.17	4.17
Mid-Day	5.07	5.51	5.70	4.38	4.11	4.40	4.35	4.30	4.33
PM	5.13	4.74	5.13	5.25	5.04	4.84	4.81	4.53	4.41
SOUTHBOUND									
AM	4.40	4.72	5.95	4.03	4.92	4.95	4.08	4.01	4.04
Mid-Day	5.28	5.57	6.92	4.74	4.60	4.83	4.44	4.56	4.44
PM	5.99	5.04	5.68	5.18	5.34	5.00	5.01	4.56	4.56













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











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









NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	LEVEL OF SERVICE			LEVEL OF SERVICE					
					EXISTING 2017			PROPOSED CONDITIONS					
					AM	MID DAY	PM	AM	MID DAY	PM			
1	LAPALCO BLVD. AT MANHATTAN BLVD.		CYCLE LENGTH		120s			120s					
			EB	EBL	E (59.4)	E (59.8)	E (64.1)	E (57.2)	F (84.0)	F (99.8)			
				EBT	C (23.6)	C (24.7)	C (27.0)	C (31.3)	D (41.9)	C (28.8)			
				EBR	A (4.6)	A (4.4)	B (16.5)	A (2.2)	A (8.8)	B (11.9)			
			Overall Approach LOS		C (32.7)	C (32.0)	D (35.2)	D (37.2)	D (50.0)	D (44.7)			
			WB	WBL	D (49.4)	D (50.2)	E (55.2)	D (49.4)	D (50.2)	E (58.3)			
				WB TR	C (29.6)	C (31.8)	E (65.2)	D (40.4)	E (68.7)	E (67.7)			
				Overall Approach LOS	C (31.2)	C (33.4)	E (63.9)	D (41.1)	E (67.1)	E (66.5)			
			NB	NBT	E (62.2)	F (135.5)	D (50.8)	D (46.5)	D (43.4)	E (57.8)			
				NBR	B (10.1)	B (12.5)	B (11.5)	A (8.8)	A (6.8)	B (13.7)			
				Overall Approach LOS	D (46.9)	F (103.6)	D (38.2)	D (35.5)	C (33.9)	D (43.7)			
			SB	SBT	E (56.1)	E (78.2)	E (56.3)	C (22.0)	B (16.0)	D (38.7)			
				SBR	C (32.5)	C (29.9)	C (31.7)	A (9.7)	A (2.3)	B (11.9)			
				Overall Approach LOS	D (46.9)	E (65.7)	D (48.1)	B (16.8)	B (12.4)	C (29.8)			
OVERALL DELAY		D (38.2)	E (58.5)	D (48.0)	C (34.8)	D (41.9)	D (49.1)						
2	CENTRAL BLVD AT MANHATTAN BLVD		CYCLE LENGTH		120s			120s					
			EB	EBL	D (39.9)	E (61.4)	E (60.4)	E (56.7)	E (63.1)	E (65.3)			
				EBR	B (16.0)	B (16.0)	B (15.1)	C (21.9)	B (16.5)	B (16.3)			
				Overall Approach LOS	C (33.5)	D (53.9)	D (49.2)	D (47.4)	E (55.4)	D (53.2)			
			NB	NBL	E (60.4)	E (64.6)	E (60.4)	D (35.5)	C (30.8)	C (34.7)			
				NBT	A (2.4)	A (1.0)	A (2.8)	A (2.3)	A (1.3)	A (1.7)			
				Overall Approach LOS	A (3.8)	A (7.5)	A (8.4)	A (3.1)	A (4.3)	A (4.9)			
			SB	SB TR	C (23.4)	A (7.0)	B (14.9)	A (6.1)	C (26.3)	C (23.2)			
				Overall Approach LOS	C (23.4)	A (7.0)	B (14.9)	A (6.1)	C (26.3)	C (23.2)			
				OVERALL DELAY		B (11.6)	A (9.9)	B (13.2)	A (5.4)	B (16.2)	B (15.1)		
			3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		CYCLE LENGTH		120s			120s		
						WB	WBR	A (5.7)	B (10.2)	B (12.8)	A (0.3)	A (0.4)	A (0.7)
							Overall Approach LOS	A (5.7)	B (10.2)	B (12.8)	A (0.3)	A (0.4)	A (0.7)
							NBT	A (1.2)	A (1.8)	A (3.8)	A (2.6)	A (3.9)	A (4.5)
NB	NBR	A (1.0)				A (0.9)	A (2.3)	A (1.0)	A (1.7)	A (2.7)			
	Overall Approach LOS	A (1.2)				A (1.7)	A (3.8)	A (2.6)	A (3.9)	A (4.5)			
	SBL	E (58.5)				D (52.1)	E (65.6)	D (40.5)	D (42.7)	D (41.0)			
SB	SBT	A (0.3)				A (0.3)	A (0.4)	A (0.3)	A (0.3)	A (0.4)			
	Overall Approach LOS	A (0.9)				A (1.7)	A (1.2)	A (0.7)	A (1.4)	A (0.9)			
	OVERALL DELAY					A (1.1)	A (1.8)	A (2.5)	A (1.8)	A (2.8)	A (2.6)		
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD					CYCLE LENGTH		120s			120s		
						WB	WB LR	A (0.1)	C (33.5)	C (32.3)	A (0.1)	C (29.0)	C (27.9)
							Overall Approach LOS	A (0.1)	C (33.5)	C (32.3)	A (0.1)	C (29.0)	C (27.9)
							NB TR	B (11.6)	A (2.9)	B (13.7)	A (7.6)	A (8.2)	A (8.4)
			NB	Overall Approach LOS	B (11.6)	A (2.9)	B (13.7)	A (7.6)	A (8.2)	A (8.4)			
				SBL	A (1.5)	B (12.8)	B (14.0)	A (4.2)	C (22.0)	D (46.1)			
				SBT	A (1.7)	A (4.1)	A (2.6)	A (2.3)	A (6.2)	A (6.7)			
			SB	Overall Approach LOS	A (1.7)	A (4.8)	A (3.3)	A (2.3)	A (7.5)	A (9.4)			
				OVERALL DELAY		A (7.7)	A (5.7)	A (10.0)	A (5.5)	A (9.3)	A (10.2)		
				5	TARGET AT MANHATTAN BLVD		CYCLE LENGTH		120s			120s	
			WB				WBL	D (50.8)	E (56.0)	E (56.2)	D (50.8)	E (56.0)	E (56.2)
							WBR	C (26.4)	B (15.3)	B (15.4)	C (26.4)	B (15.3)	B (15.4)
							Overall Approach LOS	C (34.6)	C (32.7)	D (35.7)	C (34.6)	C (32.7)	D (35.7)
			NB				NB TR	A (5.6)	B (15.1)	B (11.3)	A (2.6)	A (3.5)	A (1.3)
Overall Approach LOS	A (5.6)	B (15.1)					B (11.3)	A (2.6)	A (3.5)	A (1.3)			
SBL	D (42.7)	D (51.2)					E (59.1)	D (41.6)	D (47.1)	D (49.2)			
SB	SBT	A (4.1)	A (3.3)				A (4.6)	A (2.3)	A (4.4)	A (5.1)			
	Overall Approach LOS	A (5.9)	A (9.4)				A (9.6)	A (4.1)	A (9.8)	A (9.1)			
	OVERALL DELAY		A (5.9)				B (14.3)	B (12.3)	A (3.4)	A (8.9)	A (7.6)		
6	GRETNA BLVD AT MANHATTAN BLVD		CYCLE LENGTH				120s			120s			
			EB				EBT	D (47.1)	E (61.2)	D (44.2)	D (47.4)	E (60.5)	D (43.4)
							EBR	B (10.4)	C (23.2)	B (19.4)	B (10.4)	C (23.9)	C (22.1)
							Overall Approach LOS	D (38.1)	D (51.2)	D (36.9)	D (38.4)	D (50.9)	D (37.2)
			WB	WBT	E (60.3)	E (64.2)	E (74.2)	E (60.7)	E (63.2)	E (74.3)			
				WBR	C (22.2)	B (16.2)	C (21.6)	B (18.9)	B (16.9)	C (23.9)			
				Overall Approach LOS	D (49.6)	D (50.1)	E (61.0)	D (49.0)	D (49.6)	E (61.7)			
			NB	NBT	A (8.3)	A (6.8)	C (23.9)	A (2.6)	A (3.6)	A (9.9)			
				NBR	A (2.0)	A (0.8)	A (7.7)	A (0.2)	A (0.2)	A (0.6)			
				Overall Approach LOS	A (7.7)	A (6.4)	C (22.3)	A (2.4)	A (3.3)	A (9.0)			
			SB	SB TR	A (6.6)	C (21.2)	B (13.3)	A (1.6)	A (5.7)	A (4.2)			
				Overall Approach LOS	A (6.6)	C (21.2)	B (13.3)	A (1.6)	A (5.7)	A (4.2)			
				OVERALL DELAY		B (15.2)	C (23.5)	C (17.1)	B (11.0)	B (16.2)	B (19.2)		
			7	WALMART AT MANHATTAN BLVD		CYCLE LENGTH		120s			120s		
WB	WBL	D (54.0)				E (55.4)	D (54.3)	D (54.0)	E (55.4)	D (54.3)			
	WBR	B (15.7)				B (14.4)	B (14.5)	B (15.7)	B (14.4)	B (14.5)			
	Overall Approach LOS	C (31.8)				C (34.7)	C (30.3)	C (31.8)	C (34.7)	C (30.3)			
NB	NB TR	A (4.9)				A (4.4)	A (8.3)	A (4.9)	A (5.4)	A (5.6)			
	Overall Approach LOS	A (4.9)				A (4.4)	A (8.3)	A (4.9)	A (5.4)	A (5.6)			
	SBL	D (40.5)				E (61.6)	E (60.9)	D (40.5)	C (31.0)	E (57.5)			
SB	SBR	A (2.7)				A (1.9)	A (3.6)	A (2.7)	A (4.4)	A (6.0)			
	Overall Approach LOS	A (6.5)				B (10.2)	A (10.0)	A (6.5)	A (8.1)	A (11.6)			
	OVERALL DELAY					A (7.5)	B (10.4)	B (11.4)	A (8.0)	A (10.0)	B (10.9)		
8	UTE DR AT MANHATTAN BLVD					CYCLE LENGTH		120s			120s		
						EB	EBR	A (0.0)	A (0.2)	A (0.1)	A (0.0)	A (0.2)	A (0.2)
							Overall Approach LOS	A (0.0)	A (0.2)	A (0.1)	A (0.0)	A (0.2)	A (0.3)
							WBL	0	0	0	0	0	0
			WB	WB LR	A (1.3)	C (21.4)	A (2.0)	A (1.0)	C (21.4)	A (1.3)			
				Overall Approach LOS	A (1.3)	C (21.4)	A (2.0)	A (1.0)	C (21.4)	A (1.3)			
				NBL	E (63.8)	E (55.0)	D (49.2)	D (47.5)	E (55.0)	E (61.0)			
			NB	NB TR	A (3.8)	B (14.1)	B (10.3)	A (5.2)	B (14.1)	A (7.2)			
				Overall Approach LOS	A (4.2)	B (15.2)	B (10.9)	A (5.5)	B (15.2)	A (8.1)			
				SBL	C (34.2)	C (25.1)	D (47.6)	D (37.2)	C (25.1)	D (36.3)			
			SB	SB TR	A (2.1)	A (2.5)	A (2.4)	A (3.1)	A (2.5)	A (0.5)			
				Overall Approach LOS	A (4.1)	A (3.8)	A (6.1)	A (5.3)	A (3.8)	A (3.5)			
				OVERALL DELAY		A (4.0)	A (9.5)	A (8.2)	A (5.2)	A (9.5)	A (5.6)		
			9	PALACE/ CHICK-FIL-A PARKING LOT AT MANHATTAN BLVD		CYCLE LENGTH		120s			120s		
EB	EBL	D (45.3)				D (46.3)	E (63.5)	D (52.8)	E (62.1)	E (68.7)			
	EB LT	D (45.4)				D (46.3)	E (63.6)	D (52.9)	E (62.0)	E (68.8)			
	EBR	A (0.0)				A (1.1)	A (1.4)	A (0.0)	A (0.9)	A (1.3)			
Overall Approach LOS		D (44.2)				D (35.2)	D (45.9)	D (51.5)	D (47.1)	D (49.6)			
WB	WBL	0				D (42.8)	E (60.0)	0	D (52.7)	E (55.4)			
	WB LT	D (42.0)				D (42.7)	E (59.6)	D (47.0)	D (52.7)	E (55.2)			
	WBR	A (0.0)				A (0.4)	A (0.7)	A (0.0)	A (0.5)	A (0.8)			
Overall Approach LOS		A (8.4)				C (23.2)	D (36.9)	A (9.4)	C (28.6)	C (34.2)			
NB	NBL	E (60.3)				E (60.8)	F (84.5)	A (9.4)	C (24.6)	C (22.8)			
	NB TR	B (17.8)				C (32.2)	A (9.0)	A (6.5)	A (4.3)	A (7.3)			
	Overall Approach LOS	C (20.3)				C (34.3)	B (14.7)	A (6.7)	A (5.7)	A (8.5)			
SB	SBL	E (62.9)				E (62.8)	E (57.4)	D (40.2)	D (41.9)	D (47.8)			
	SB TR	D (37.2)				E (73.2)	C (21.6)	B (14.2)	B (12.8)	B (15.3)			
	Overall Approach LOS	D (38.9)	E (72.4)	C (24.4)	B (15.9)	B (14.9)	B (17.8)						
OVERALL DELAY		C (29.0)	D (52.1)	C (21.5)	B (12.7)	B (12.7)	B (15.8)						
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		CYCLE LENGTH		120s			120s					
			EB	EB LT	D (35.1)	E (61.1)	D (50.6)	D (46.3)	E (60.4)	D (52.1)			
				EBR	A (0.0)	A (1.2)	A (0.6)	A (0.0)	A (0.8)	A (0.5)			
				Overall Approach LOS	C (29.7)	D (38.0)	C (30.9)	D (39.2)	D (37.5)	C (31.8)			
			WB	WB LT	D (35.8)	E (65.3)	E (65.1)	D (47.6)	E (65.6)	E (68.5)			
				WBR	A (0.0)	A (0.5)	A (1.2)	A (0.0)	A (0.4)	A (0.9)			
				Overall Approach LOS	C (31.4)	D (52.2)	D (44.3)	D (41.6)	D (52.4)	D (46.4)			
			NB	NBL	F (84.9)	F (83.9)	E (76.7)	C (29.5)	D (43.8)	C (32.2)			
				NB TR	A (6.8)	B (12.8)	A (2.8)	A (2.5)	A (2.6)	A (1.7)			
				Overall Approach LOS	A (8.0)	B (16.5)	A (3.4)	A (2.9)	A (4.8)	A (1.9)			
			SB	SBL	D (47.0)	C (32.5)	D (44.3)	D (52.3)	E (61.2)	E (59.3)			
				SB TR	B (14.4)	B (11.8)	A (8.9)	B (12.3)	B (16.6)	B (11.6)			
				Overall Approach LOS	B (14.9)	B (12.7)	A (10.0)	B (12.8)	B (18.5)	B (13.0)			
			OVERALL DELAY		B (10.9)	B (16.6)	A (9.2)	A (7.1)	B (13.3)	B (10.3)			

NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	QUEUES COMPARISON					
					EXISTING 2017		PROPOSED CONDITIONS		DIFFERENCE	
					AM		AM		AM	
					Q 50	Q 95	Q 50	Q 95	Q 50	Q 95
CYCLE LENGTH				120s		120s		120s		
1	LAPALCO BLVD. AT MANHATTAN BLVD.		EB	EBL	166	222	167	225	1	3
				EBT	202	242	236	293	34	51
				EBR	0	26	0	14	0	-12
			WB	WBL	42	72	42	72	0	0
				WB TR	301	457	343	418	42	-39
			NB	NBT	407	#546	381	453	-26	-93
				NBR	38	135	38	124	0	-11
SB	SBT	192	248	134	175	-58	-73			
	SBR	138	234	100	181	-38	-53			
2	CENTRAL BLVD AT MANHATTAN BLVD		EB	EBL	31	66	36	76	5	10
				EBR	0	20	0	23	0	3
			NB	NBL	28	m33	20	m29	-8	-4
				NBT	71	m77	50	140	-21	63
SB	SB TR	271	240	128	126	-143	-114			
	3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		WB	WBR	0	6	0	0	0
NBT					16	47	78	141	62	94
NB				NBR	0	m0	0	m1	0	1
				SBL	8	m30	8	m21	0	-9
SB	SBT	0	0	1	0	1	0			
	4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD		WB	WB LR	0	0	0	0	0
NB TR					159	233	108	258	-51	25
SB				SBL	0	4	1	m7	1	-3
				SBT	2	72	4	120	2	48
5	TARGET AT MANHATTAN BLVD		WB	WBL	2	8	2	8	0	0
				WBR	0	18	0	18	0	0
			NB	NB TR	165	219	97	0	-68	-219
				SBL	17	38	14	m32	-3	-6
SB	SBT	74	104	41	41	-33	-63			
	6	GRETNA BLVD AT MANHATTAN BLVD		EB	EBT	110	164	110	165	0
EBR					0	31	0	31	0	0
WB				WBT	205	279	205	280	0	1
				WBR	35	80	28	73	-7	-7
NB				NBT	296	282	37	50	-259	-232
				NBR	17	25	0	0	-17	-25
SB	SB TR	107	113	34	49	-73	-64			
7	WALMART AT MANHATTAN BLVD		WB	WBL	38	64	38	64	0	0
				WBR	0	60	0	60	0	0
			NB	NB TR	16	60	117	123	101	63
				SBL	70	118	76	102	6	-16
SB	SBT	60	246	72	70	12	-176			
8	UTE DR AT MANHATTAN BLVD		EB	EBR	0	0	0	0	0	0
				WB	WBL	0	0	0	0	0
			WB	WB LR	0	0	0	0	0	0
				NBL	5	m16	4	m11	-1	-5
			NB	NB TR	16	44	131	20	115	-24
SBL	53	m105		62	117	9	12			
SB	SB TR	26	63	42	87	16	24			
9	PALACE/ CHICK- FIL-A PARKING LOT AT MANHATTAN BLVD		EB	EBL	40	82	42	87	2	5
				EB LT	41	83	43	88	2	5
				EBR	0	0	0	0	0	0
			WB	WBL	0	0	0	0	0	0
				WB LT	1	6	1	6	0	0
				WBR	0	0	0	0	0	0
			NB	NBL	46	90	9	17	-37	-73
				NB TR	175	167	41	46	-134	-121
SB	SBL	35	74	22	45	-13	-29			
	SB TR	262	335	130	16	-132	-319			
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		EB	EB LT	7	22	8	26	1	4
				EBR	0	0	0	0	0	0
			WB	WB LT	13	34	15	40	2	6
				WBR	0	0	0	0	0	0
			NB	NBL	20	m45	15	37	-5	-8
				NB TR	58	97	43	43	-15	-54
SB	SBL	9	26	9	29	0	3			
SB TR	203	252	105	353	-98	101				

- 95th percentile volume exceeds capacity, may be longer
m - volume for 95th percentile queue is metered by upstream signal
~ - Volume exceeds capacity, queue is theoretically infinite
Queue shown is maximum after two cycles

NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	QUEUES COMPARISON					
					EXISTING 2017		PROPOSED CONDITIONS		DIFFERENCE	
					MID DAY		MID DAY		MID DAY	
					Q 50	Q 95	Q 50	Q 95	Q 50	Q 95
CYCLE LENGTH				120s		120s		120s		
1	LAPALCO BLVD. AT MANHATTAN BLVD.		EB	EBL	167	223	175	#276	8	53
				EBT	236	280	305	362	69	82
				EBR	3	37	9	54	6	17
			WB	WBL	51	84	51	84	0	0
				WB TR	352	415	~433	#543	81	128
			NB	NBT	~626	#764	477	#592	-149	-172
				NBR	58	170	32	114	-26	-56
SB	SBT	~461	#599	210	128	-251	-471			
	SBR	193	304	5	12	-188	-292			
2	CENTRAL BLVD AT MANHATTAN BLVD		EB	EBL	105	165	105	168	0	3
				EBR	0	27	0	27	0	0
			NB	NBL	122	m96	108	m113	-14	17
				NBT	27	m38	40	m61	13	23
SB	SB TR	270	199	503	604	233	405			
3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		WB	WBR	0	14	0	0	0	-14
			NB	NBT	41	49	126	167	85	118
				NBR	1	m2	1	m2	0	0
			SB	SBL	22	55	22	m46	0	-9
SBT	0	0		0	0	0	0			
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD		WB	WB LR	45	84	44	84	-1	0
			NB	NB TR	56	77	201	296	145	219
			SB	SBL	18	58	24	71	6	13
				SBT	148	167	201	230	53	63
5	TARGET AT MANHATTAN BLVD		WB	WBL	55	87	55	87	0	0
				WBR	0	69	0	69	0	0
			NB	NB TR	274	191	47	28	-227	-163
			SB	SBL	79	105	73	115	-6	10
SBT	70	116		116	197	46	81			
6	GRETNA BLVD AT MANHATTAN BLVD		EB	EBT	296	378	295	377	-1	-1
				EBR	57	102	59	103	2	1
			WB	WBT	203	282	202	281	-1	-1
				WBR	31	71	32	72	1	1
			NB	NBT	185	210	24	78	-161	-132
				NBR	8	1	0	1	-8	0
SB	SB TR	276	344	115	209	-161	-135			
7	WALMART AT MANHATTAN BLVD		WB	WBL	60	93	60	93	0	0
				WBR	0	64	0	64	0	0
			NB	NB TR	35	69	72	47	37	-22
			SB	SBL	135	208	73	145	-62	-63
SBT	20	92		79	160	59	68			
8	UTE DR AT MANHATTAN BLVD		EB	EBR	0	0	0	0	0	0
			WB	WBL	0	0	0	0	0	0
				WB LR	1	63	1	61	0	-2
			NB	NBL	32	69	25	55	-7	-14
				NB TR	144	188	34	48	-110	-140
SB	SBL	61	m67	63	m75	2	8			
SB TR	21	m30	40	45	19	15				
9	PALACE/ CHICK- FIL-A PARKING LOT AT MANHATTAN BLVD		EB	EBL	50	98	55	107	5	9
				EB LT	50	97	55	107	5	10
				EBR	0	0	0	0	0	0
			WB	WBL	9	30	10	33	1	3
				WB LT	9	30	10	33	1	3
				WBR	0	0	0	0	0	0
			NB	NBL	88	131	10	54	-78	-77
				NB TR	269	309	28	38	-241	-271
SB	SBL	69	134	45	69	-24	-65			
	SB TR	~623	#797	123	138	-500	-659			
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		EB	EB LT	50	94	50	94	0	0
				EBR	0	0	0	0	0	0
			WB	WB LT	62	112	62	112	0	0
				WBR	0	0	0	0	0	0
			NB	NBL	72	m123	65	119	-7	-4
				NB TR	139	115	37	57	-102	-58
SB	SBL	34	75	47	95	13	20			
SB TR	278	441	364	493	86	52				

- 95th percentile volume exceeds capacity, may be longer
m - volume for 95th percentile queue is metered by upstream signal
~ - Volume exceeds capacity, queue is theoretically infinite
Queue shown is maximim after two cycles

NO	INTERSECTION	CONTROL TYPE	MOVEMENT	APPROACH	QUEUES COMPARISON					
					EXISTING 2017		PROPOSED CONDITIONS		DIFFERENCE	
					PM		PM		PM	
					Q 50	Q 95	Q 50	Q 95	Q 50	Q 95
CYCLE LENGTH				120s		120s		120s		
1	LAPALCO BLVD. AT MANHATTAN BLVD.		EB	EBL	195	#277	~214	#324	19	47
				EBT	274	343	284	336	10	-7
				EBR	68	132	47	103	-21	-29
			WB	WBL	124	166	124	173	0	7
				WB TR	~666	#763	~651	#748	-15	-15
			NB	NBT	342	425	355	#477	13	52
				NBR	47	151	58	171	11	20
SB	SBT	400	#484	370	#480	-30	-4			
	SBR	236	384	171	209	-65	-175			
2	CENTRAL BLVD AT MANHATTAN BLVD		EB	EBL	91	148	91	155	0	7
				EBR	0	32	0	33	0	1
			NB	NBL	114	m121	112	m111	-2	-10
				NBT	76	m160	73	m80	-3	-80
SB	SB TR	410	634	496	657	86	23			
3	FOUNTAIN PARK SOUTH AT MANHATTAN BLVD		WB	WBR	0	20	0	0	0	-20
				NBT	80	208	117	132	37	-76
			NB	NBR	1	m2	1	m2	0	0
				SBL	17	m0	13	m23	-4	23
SB	SBT	0	0	0	0	0	0			
4	FOUNTAIN PARK CENTER AT MANHATTAN BLVD		WB	WB LR	48	89	46	89	-2	0
				NB TR	224	444	179	254	-45	-190
			SB	SBL	10	59	73	134	63	75
				SBT	61	132	166	256	105	124
5	TARGET AT MANHATTAN BLVD		WB	WBL	54	85	54	85	0	0
				WBR	0	61	0	61	0	0
			NB	NB TR	191	243	25	34	-166	-209
				SBL	66	m103	65	m100	-1	-3
SB	SBT	130	m134	106	283	-24	149			
6	GRETNA BLVD AT MANHATTAN BLVD		EB	EBT	207	314	213	281	6	-33
				EBR	46	94	57	94	11	0
			WB	WBT	358	#567	369	467	11	-100
				WBR	62	118	74	115	12	-3
			NB	NBT	523	334	111	137	-412	-197
				NBR	29	62	0	6	-29	-56
SB	SB TR	345	284	70	83	-275	-201			
7	WALMART AT MANHATTAN BLVD		WB	WBL	56	86	56	86	0	0
				WBR	0	72	0	72	0	0
			NB	NB TR	84	158	56	66	-28	-92
				SBL	100	160	107	167	7	7
SB	SBT	5	41	168	296	163	255			
8	UTE DR AT MANHATTAN BLVD		EB	EBR	0	0	0	0	0	0
				WBL	0	0	0	0	0	0
			WB	WB LR	0	0	0	0	0	0
				NBL	16	m43	20	m44	4	-1
			NB	NB TR	110	308	137	131	27	-177
				SBL	105	m144	98	m129	-7	-15
SB	SB TR	18	32	6	6	-12	-26			
9	PALACE/ CHICK- FIL-A PARKING LOT AT MANHATTAN BLVD		EB	EBL	62	112	62	#120	0	8
				EB LT	62	112	63	#121	1	9
				EBR	0	0	0	0	0	0
			WB	WBL	24	56	23	56	-1	0
				WB LT	24	55	23	55	-1	0
			NB	WBR	0	0	0	0	0	0
				NBL	105	142	14	70	-91	-72
			SB	NB TR	124	48	286	235	162	187
SBL	95	m149		49	m71	-46	-78			
SB TR	290	#740	506	110	216	-630				
10	MANHATTAN PLAZA/ WESTBANK VILLAGE SHOPPING CTR PARKING LOT AT MANHATTAN BLVD		EB	EB LT	27	58	27	60	0	2
				EBR	0	0	0	0	0	0
			WB	WB LT	70	121	70	124	0	3
				WBR	0	0	0	0	0	0
			NB	NBL	9	m24	9	m20	0	-4
				NB TR	49	62	14	21	-35	-41
SB	SBL	35	74	39	82	4	8			
SB TR	216	569	276	630	60	61				

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TRAFFIC SIGNAL INVENTORY (v2.1)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

TSI NO.

PAGE: 1 OF 8

INTERSECTION: TARGET AND MANHATTAN BLVD		CTRL SEC:	LOGMILE:
CITY: Harvey	PARISH: Jefferson	LAT: 29.8880	LONG: -90.0562
SIGNAL TYPE:		INTERCONNECT TYPE:	REV. DATE:
SIGNAL WARRANTS:	MAINTAINED BY:	CONT. MANUF: Trafficware	SYS#: Controller IP:

TRAFFIC SIGNAL COORDINATION PLANS (PHASING MAY VARY FROM FREE OPERATION)

Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 4$				Pattern: 254
Int. Times	FREE OPERATION - SEE PAGE 4 FOR TIMING PARAMETERS						Ring Phases
Ring 1	Thru/OLP						
	Turns						
Ring 2	Thru/OLP						
	Turns						
Action =	Free	CYCLE LENGTH =	FREE	Sequence #:	Zero Point:		Max:

Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 4$				Pattern/Split:
Split	sec 22	76	22				
Force Offs	sec						Offset =
Yield Points	sec						8 sec
Int. Times							Ring Phases
Ring 1	Thru/OLP						
	Turns						
Ring 2	Thru/OLP						
	Turns						
Action =	1	CYCLE LENGTH =	120	Sequence #:	Coord Φ :		Max:

Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 4$				Pattern/Split
Split	sec 22	68	30				
Force Offs	sec						Offset =
Yield Points	sec						112 sec
Int. Times							Ring Phases
Ring 1	Thru/OLP						
	Turns						
Ring 2	Thru/OLP						
	Turns						
Action	2	CYCLE LENGTH =	120	Sequence #:	Coord Φ :		Max:

Phasing	$\Phi 2 + \Phi 5$	$\Phi 2 + \Phi 6$	$\Phi 2 + \Phi 5$				Pattern/Split
Split	sec 22	72	26				
Force Offs	sec						Offset =
Yield Points	sec						25 sec
Int. Times							Ring Phases
Ring 1	Thru/OLP						
	Turns						
Ring 2	Thru/OLP						
	Turns						
Action	3	CYCLE LENGTH =	120	Sequence #:	Coord Φ :		Max:

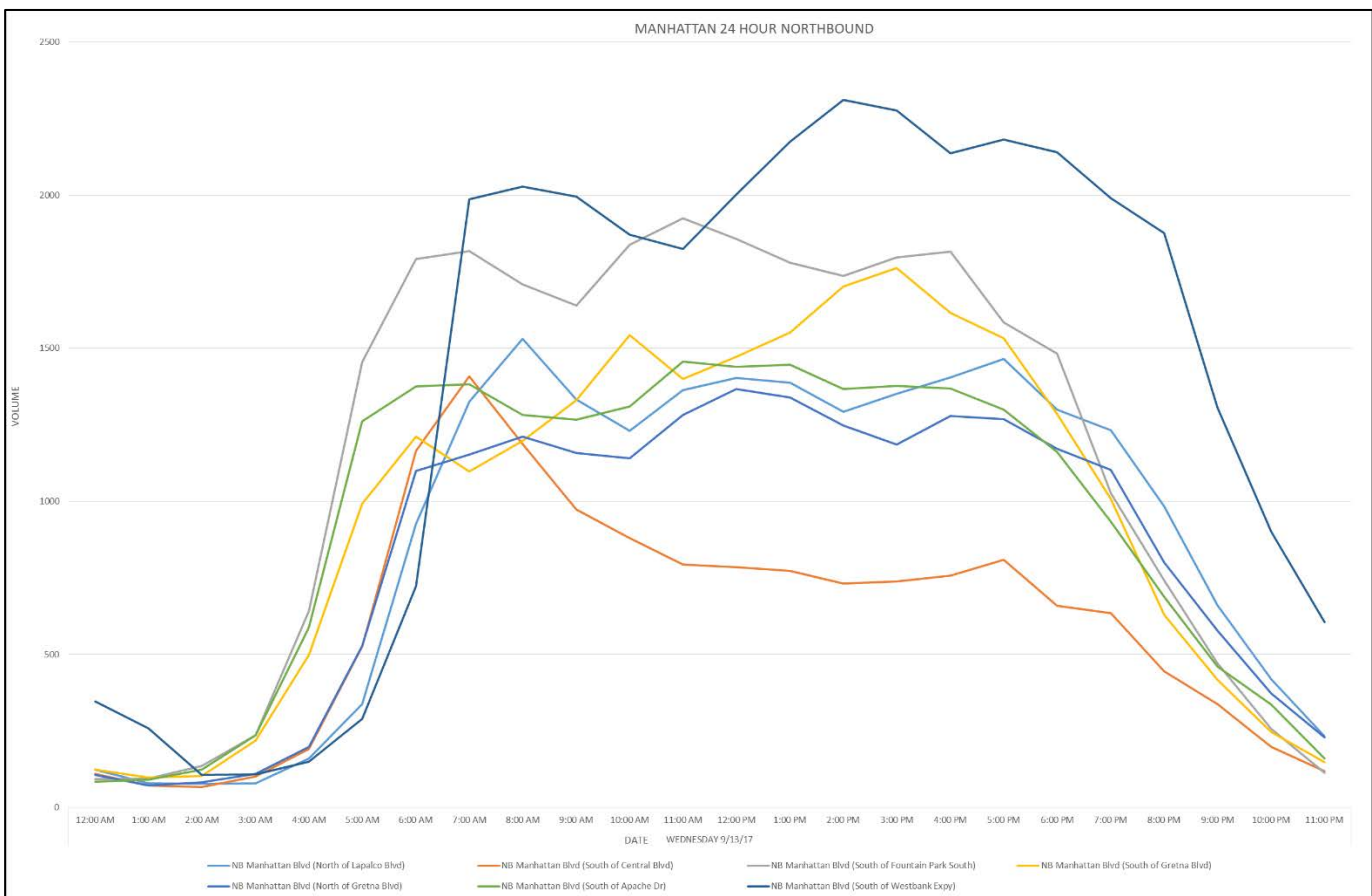
Action Table #	MON-TUES-WED-THURS-FRI	SATURDAY	SUNDAY
FREE	7 PM to 6 AM	All	All
1	6 AM to 10 AM		
2	10 AM to 2 PM		
3	2 PM to 7 PM		
MASTER/ LOCAL:	MASTER AT TSI #:	COORDINATED WITH TSI #S:	



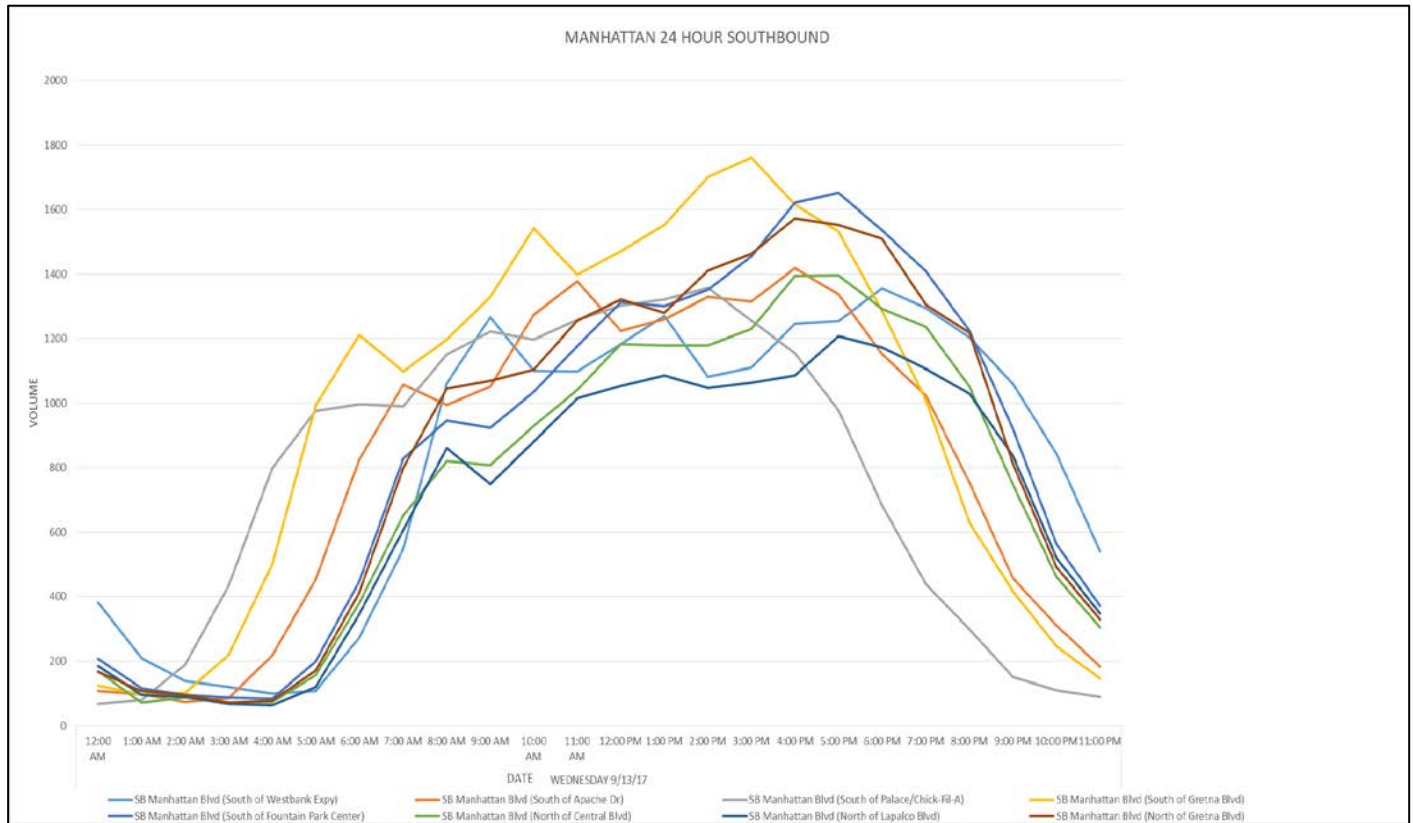
**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

AVERAGE DAILY TRAFFIC (ADT) – 24 HOUR

Northbound Manhattan Boulevard



Southbound Manhattan Boulevard



ITS REGIONAL, LLC.

TECHNOLOGY
INNOVATION
DESIGN



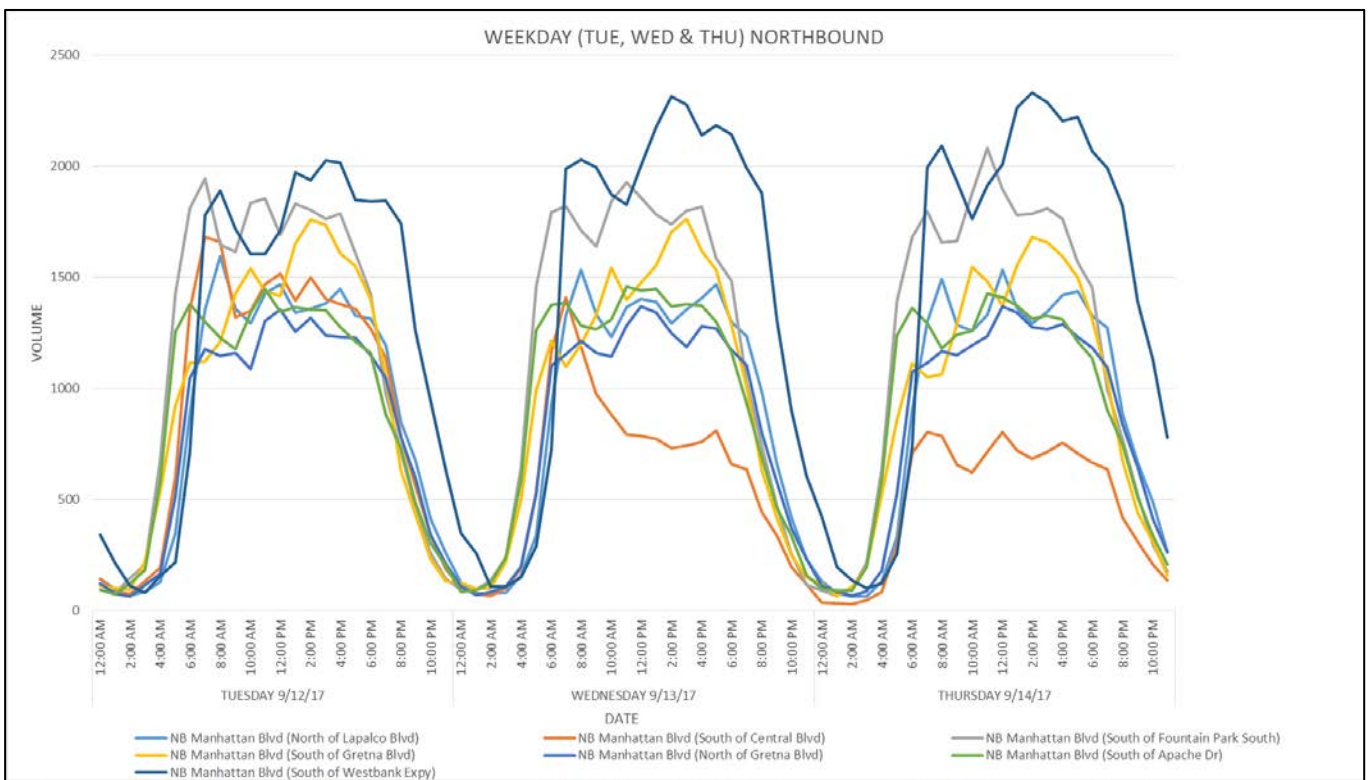
Traffic & Transportation Engineering / Civil / Planning / Surveying



**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

AVERAGE DAILY TRAFFIC (ADT) – WEEKDAY (TUE, WED & THU)

Northbound Manhattan Boulevard



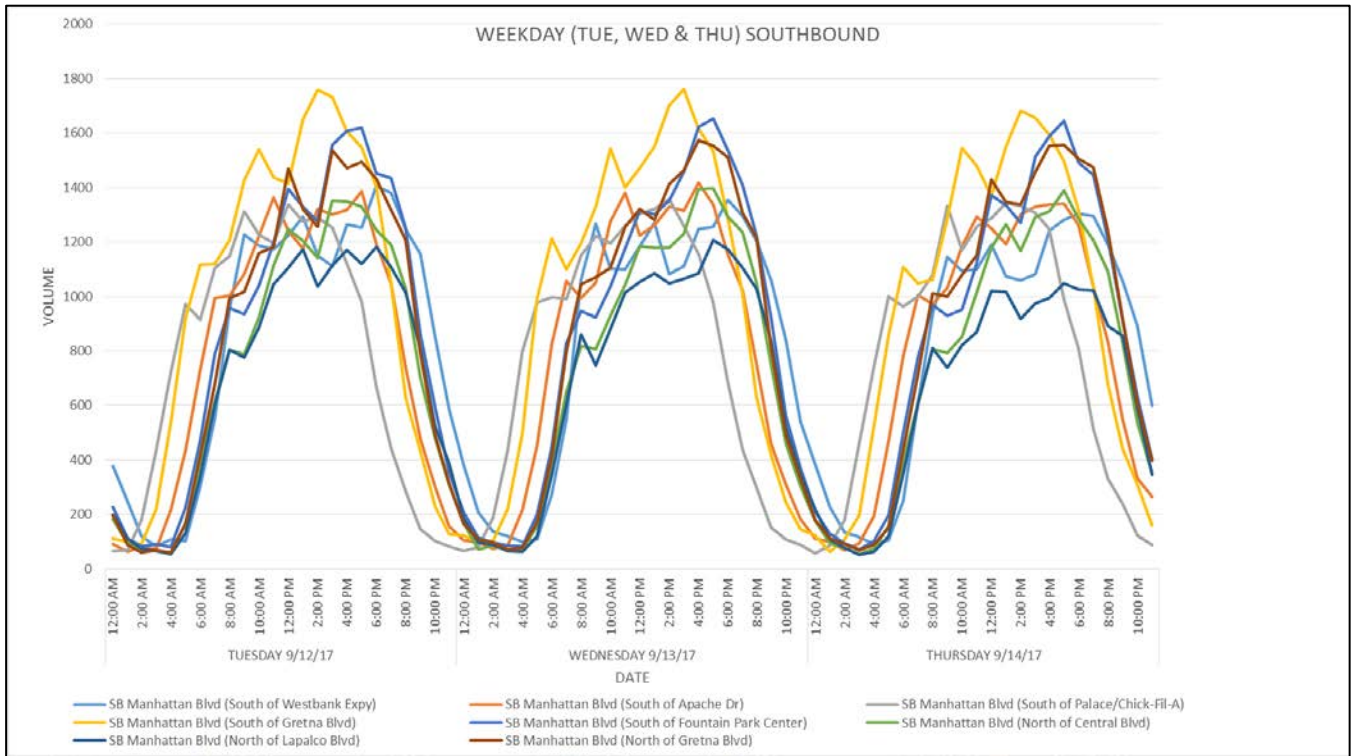
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TECHNOLOGY
INNOVATION
DESIGN



Traffic & Transportation Engineering / Civil / Planning / Surveying

Southbound Manhattan Boulevard



ITS REGIONAL, LLC.

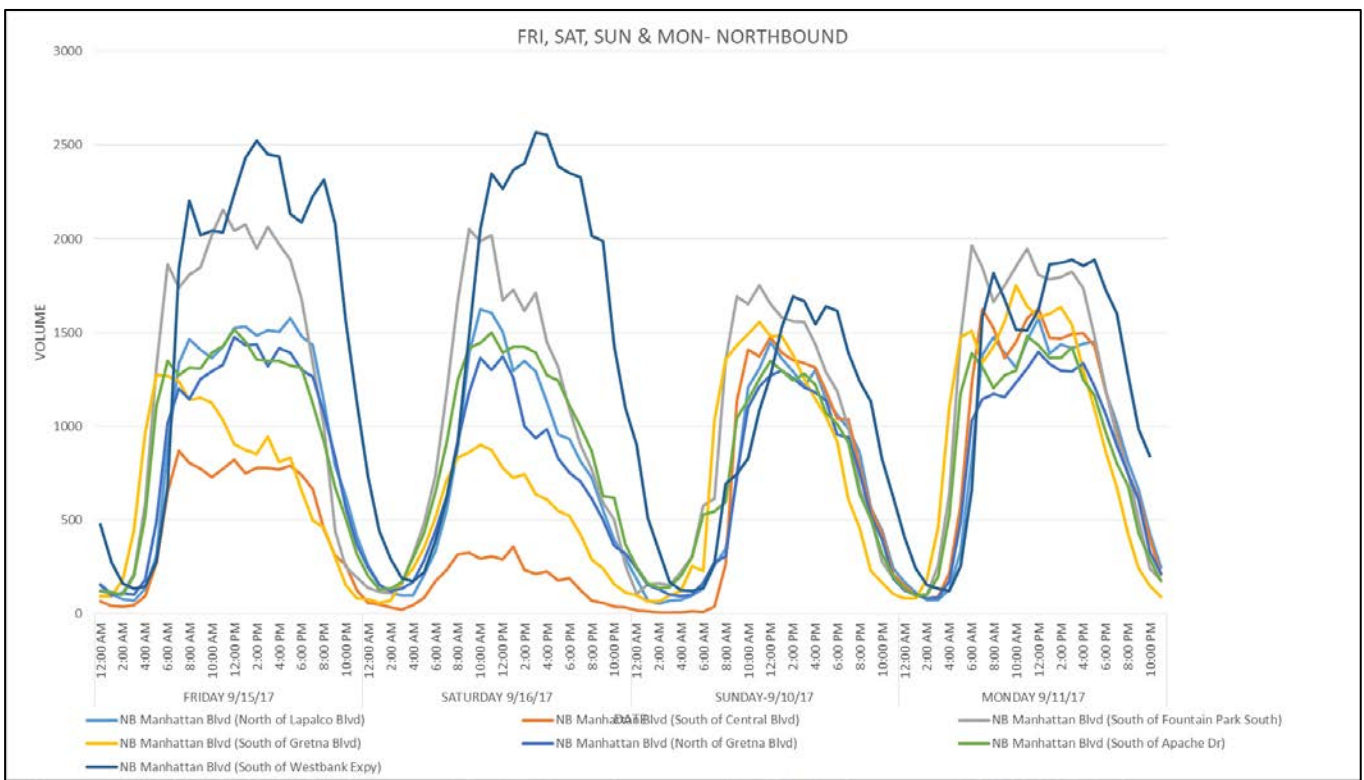


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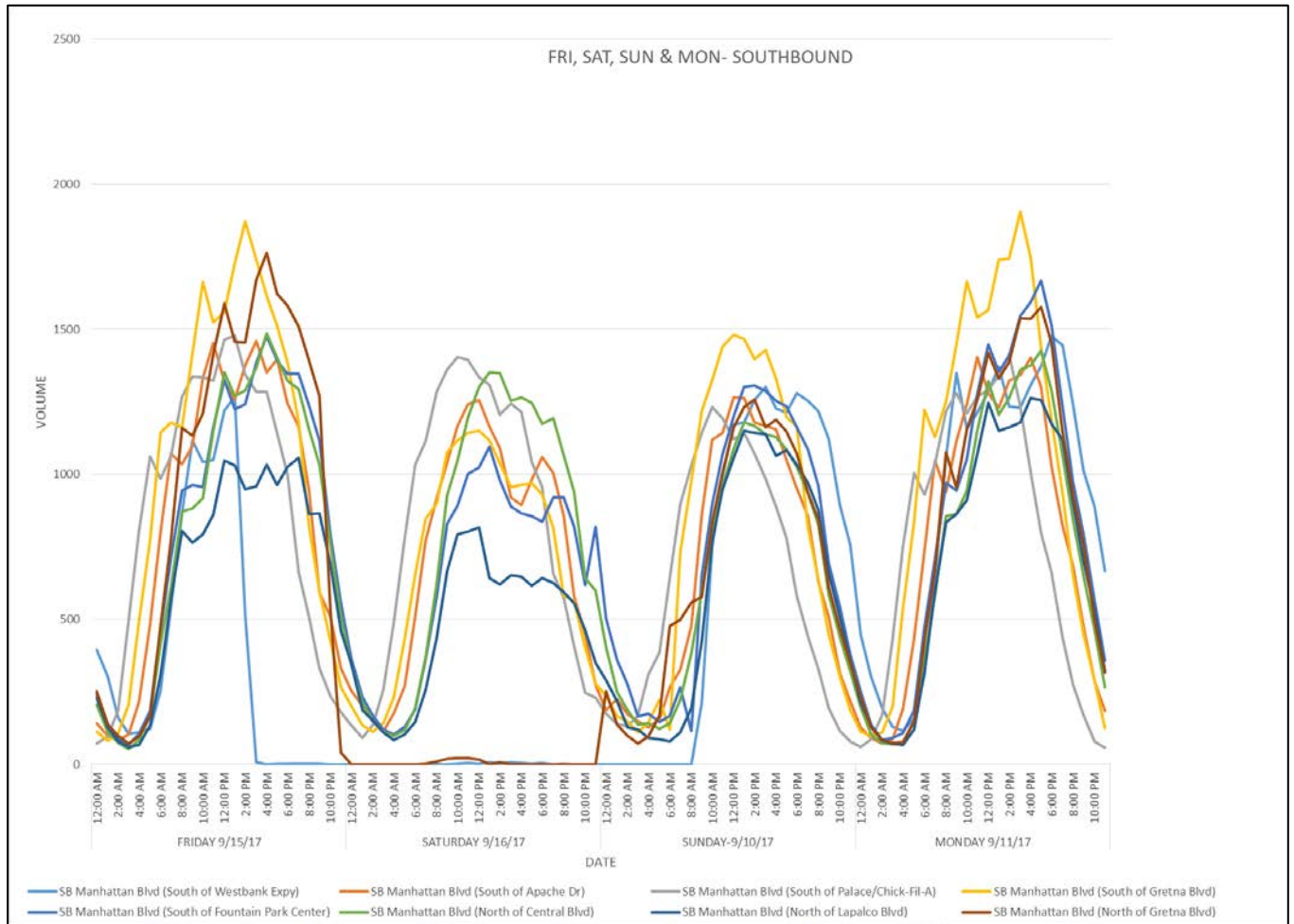


**Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana**

AVERAGE DAILY TRAFFIC (ADT) – (FRI, SAT, SUN & MON)
Northbound Manhattan Boulevard



Southbound Manhattan Boulevard



ITS REGIONAL, LLC.

TECHNOLOGY
INNOVATION
DESIGN

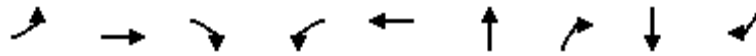


Traffic & Transportation Engineering / Civil / Planning / Surveying

SYNCHRO WORK SHEETS
PROPOSED CONDITIONS
AM PEAK

Timings
1: Manhattan Blvd & Lapalco Blvd

120 Cycle AM
01/30/2018

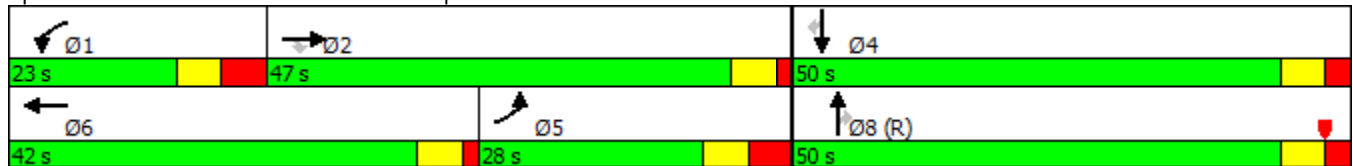


Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↑↑	↔	↑↑	↔
Traffic Volume (vph)	399	968	65	108	1027	937	387	407	302
Future Volume (vph)	399	968	65	108	1027	937	387	407	302
Turn Type	Prot	NA	Perm	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2		1	6	8		4	
Permitted Phases			2				8		4
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	15.0	25.0	25.0	15.0	25.0	18.0	18.0	18.0	18.0
Minimum Split (s)	23.0	31.0	31.0	23.0	31.0	24.5	24.5	24.5	24.5
Total Split (s)	28.0	47.0	47.0	23.0	42.0	50.0	50.0	50.0	50.0
Total Split (%)	23.3%	39.2%	39.2%	19.2%	35.0%	41.7%	41.7%	41.7%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	1.5	1.5	4.0	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	5.5	5.5	8.0	5.5	6.5	6.5	6.5	6.5
Lead/Lag	Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	Max	C-Max	C-Max	None	None

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 8:NBT, Start of Red, Master Intersection
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Manhattan Blvd & Lapalco Blvd



Timings
2: Manhattan Blvd & Central

120 Cycle AM
01/30/2018



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations	↙	↗	↙	↑↑	↑↓
Traffic Volume (vph)	45	17	34	1321	739
Future Volume (vph)	45	17	34	1321	739
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		1	6	2
Permitted Phases		4			
Detector Phase	4	4	1	6	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0
Minimum Split (s)	17.0	17.0	17.0	35.5	35.5
Total Split (s)	23.0	23.0	21.0	97.0	76.0
Total Split (%)	19.2%	19.2%	17.5%	80.8%	63.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.0	5.0
Lead/Lag			Lag		Lead
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	Max	C-Max	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 30 (25%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Manhattan Blvd & Central



Timings
3: Manhattan Blvd & Fountain Park South

120 Cycle AM
01/30/2018



Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↗	↑↑↑	↗	↘	↑↑
Traffic Volume (vph)	9	1590	2	11	1049
Future Volume (vph)	9	1590	2	11	1049
Turn Type	Over	NA	Prot	Prot	NA
Protected Phases	1	2	2	1	6
Permitted Phases					
Detector Phase	1	2	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0
Minimum Split (s)	15.5	25.0	25.0	15.5	25.0
Total Split (s)	20.0	100.0	100.0	20.0	120.0
Total Split (%)	16.7%	83.3%	83.3%	16.7%	100.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.0	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.0	5.0	5.5	5.0
Lead/Lag	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	
Recall Mode	Min	C-Max	C-Max	Min	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 74 (62%), Referenced to phase 2:NBT, Start of Red
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



Timings
4: Manhattan Blvd & Fountain Park Center

120 Cycle AM
01/30/2018



Lane Group	WBL	NBT	SBL	SBT
Lane Configurations	↙↙	↑↑↑	↘	↑↑
Traffic Volume (vph)	2	1531	10	982
Future Volume (vph)	2	1531	10	982
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	8	2	1	6
Permitted Phases			6	
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	13.0	20.0	10.0	20.0
Minimum Split (s)	20.5	26.0	18.0	26.0
Total Split (s)	22.0	78.0	20.0	98.0
Total Split (%)	18.3%	65.0%	16.7%	81.7%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	2.0	4.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	6.0	8.0	6.0
Lead/Lag		Lead	Lag	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	C-Max	Min	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 66 (55%), Referenced to phase 2:NBT, Start of Red
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



Timings
5: Manhattan Blvd & Target

120 Cycle AM
01/30/2018



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↔↔↔	↔↔	↔↔
Traffic Volume (vph)	5	9	1136	39	790
Future Volume (vph)	5	9	1136	39	790
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	4		6	5	2
Permitted Phases		4			
Detector Phase	4	4	6	5	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	17.5	17.5	25.0	18.0	25.0
Total Split (s)	22.0	22.0	76.0	22.0	98.0
Total Split (%)	18.3%	18.3%	63.3%	18.3%	81.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.5	3.5	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	5.0	7.5	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?				Yes	
Recall Mode	Min	Min	C-Min	None	Min

Intersection Summary

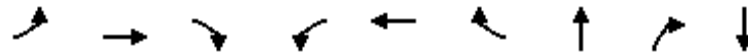
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 9 (8%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Manhattan Blvd & Target



Timings
6: Manhattan Blvd & Gretna Blvd

120 Cycle AM
01/30/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Configurations		↕	↗		↕	↗	↑↑	↗	↑↑↑
Traffic Volume (vph)	11	134	47	23	232	99	1134	110	782
Future Volume (vph)	11	134	47	23	232	99	1134	110	782
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8			4		6		2
Permitted Phases	8		8	4		4		6	
Detector Phase	8	8	8	4	4	4	6	6	2
Switch Phase									
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	20.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	26.0	26.0	26.0
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	76.0	76.0	76.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%	36.7%	63.3%	63.3%	63.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 104 (87%), Referenced to phase 2:SBT and 6:NBT, Start of Red
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



Timings
7: Manhattan Blvd & WalMart

120 Cycle AM
01/30/2018

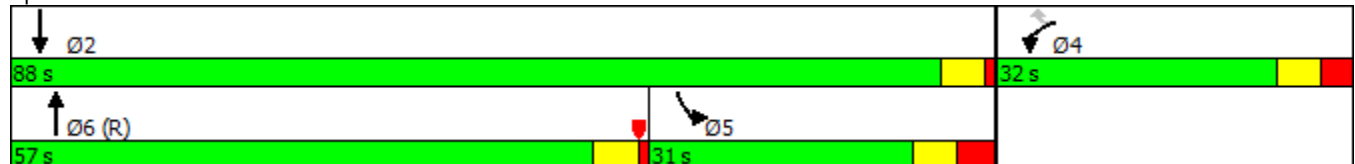


Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙↘	↗	↑↑↑	↘	↑↑
Traffic Volume (vph)	91	126	1099	95	857
Future Volume (vph)	91	126	1099	95	857
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	4		6	5	2
Permitted Phases		4			
Detector Phase	4	4	6	5	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	18.0	18.0	25.0	18.0	25.0
Total Split (s)	32.0	32.0	57.0	31.0	88.0
Total Split (%)	26.7%	26.7%	47.5%	25.8%	73.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0	7.5	5.0
Lead/Lag			Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	Min	Min	C-Max	Min	Min

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 18 (15%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 7: Manhattan Blvd & WalMart



Timings
8: Manhattan Blvd & Ute Dr/Lowes

120 Cycle AM
01/30/2018

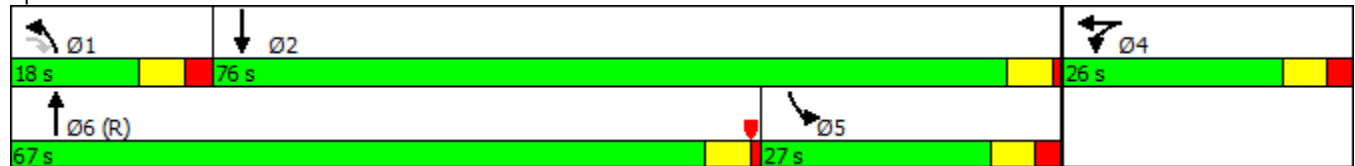


Lane Group	EBR	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↗	↔	↖	↑↑↑	↖	↗
Traffic Volume (vph)	6	0	6	899	79	1155
Future Volume (vph)	6	0	6	899	79	1155
Turn Type	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4	1	6	5	2
Permitted Phases	1					
Detector Phase	1	4	1	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	15.0	10.0	20.0	15.0	20.0
Minimum Split (s)	17.0	22.0	17.0	25.5	22.5	26.5
Total Split (s)	18.0	26.0	18.0	67.0	27.0	76.0
Total Split (%)	15.0%	21.7%	15.0%	55.8%	22.5%	63.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.0	6.5	5.0
Lead/Lag	Lead		Lead	Lead	Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	None	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 30 (25%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 8: Manhattan Blvd & Ute Dr/Lowes



Timings
9: Manhattan Blvd & Chick-Fil-A/Palace

120 Cycle AM
01/30/2018

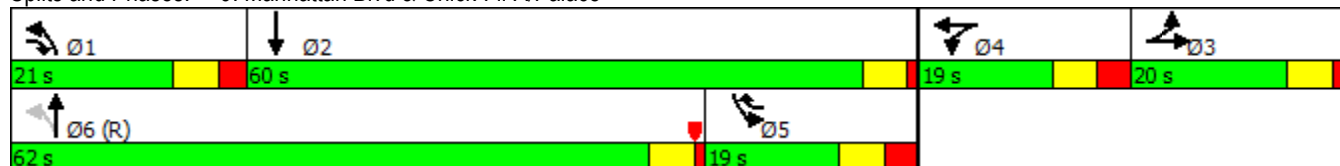


Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↶	↑↑↑	↶↷	↑↑
Traffic Volume (vph)	104	0	3	1	4	66	1074	55	761
Future Volume (vph)	104	0	3	1	4	66	1074	55	761
Turn Type	Split	NA	Over	NA	Over	pm+pt	NA	Prot	NA
Protected Phases	3	3	1	4	5	1	6	5	2
Permitted Phases						6			
Detector Phase	3	3	1	4	5	1	6	5	2
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	16.0	16.0	16.5	17.0	17.0	16.5	25.5	17.0	25.5
Total Split (s)	20.0	20.0	21.0	19.0	19.0	21.0	62.0	19.0	60.0
Total Split (%)	16.7%	16.7%	17.5%	15.8%	15.8%	17.5%	51.7%	15.8%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	3.0	3.0	2.5	1.0	3.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.5	7.0	7.0	6.5	5.0	7.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes					
Recall Mode	Max	Max	None	Max	None	None	C-Max	None	None

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 25 (21%), Referenced to phase 6:NBTL, Start of Red
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Manhattan Blvd & Chick-Fil-A/Palace

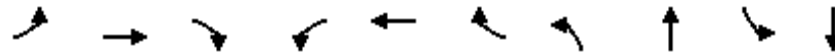


Timings

10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center

120 Cycle AM

01/30/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗		↕	↗	↗	↑↑↑	↗	↕
Traffic Volume (vph)	6	4	2	19	0	3	22	1359	11	801
Future Volume (vph)	6	4	2	19	0	3	22	1359	11	801
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Prot	NA
Protected Phases		8			4		1	6	5	2
Permitted Phases	8		8	4		4				
Detector Phase	8	8	8	4	4	4	1	6	5	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	27.0	17.0	27.0
Total Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	21.0	77.0	19.0	75.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	17.5%	64.2%	15.8%	62.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		8.0	8.0		8.0	8.0	7.0	7.0	7.0	7.0
Lead/Lag							Lag	Lag	Lead	Lead
Lead-Lag Optimize?										
Recall Mode	Max	Max	Max	Max	Max	Max	None	C-Max	None	None

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 55 (46%), Referenced to phase 6:NBT, Start of Red

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center



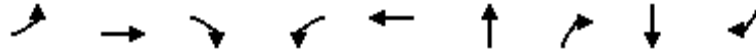
SYNCHRO WORK SHEETS

PROPOSED CONDITIONS

MID-DAY PEAK

Timings
1: Manhattan Blvd & Lapalco Blvd

120 Cycle Mid Day
01/30/2018

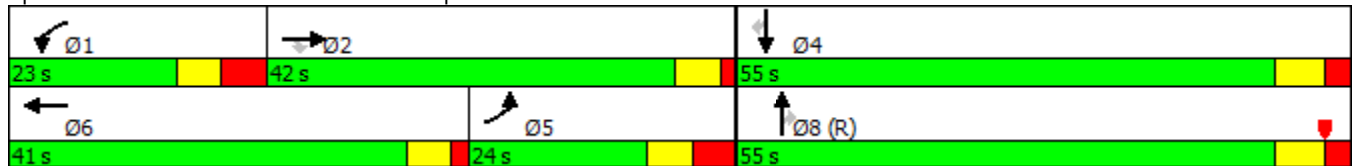


Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Configurations	↖↖	↑↑↑	↗	↖↖	↑↑↑	↑↑	↗	↑↑	↗
Traffic Volume (vph)	401	1093	116	129	1133	1168	409	961	335
Future Volume (vph)	401	1093	116	129	1133	1168	409	961	335
Turn Type	Prot	NA	Perm	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2		1	6	8		4	
Permitted Phases			2				8		4
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	15.0	25.0	25.0	15.0	25.0	18.0	18.0	18.0	18.0
Minimum Split (s)	23.0	31.0	31.0	23.0	31.0	25.0	25.0	25.0	25.0
Total Split (s)	24.0	42.0	42.0	23.0	41.0	55.0	55.0	55.0	55.0
Total Split (%)	20.0%	35.0%	35.0%	19.2%	34.2%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	4.0	1.5	1.5	4.0	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	5.5	5.5	8.0	5.5	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	Max	C-Max	C-Max	None	None

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 8:NBT, Start of Red, Master Intersection
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Manhattan Blvd & Lapalco Blvd



Timings
2: Manhattan Blvd & Central

120 Cycle Mid Day
01/30/2018

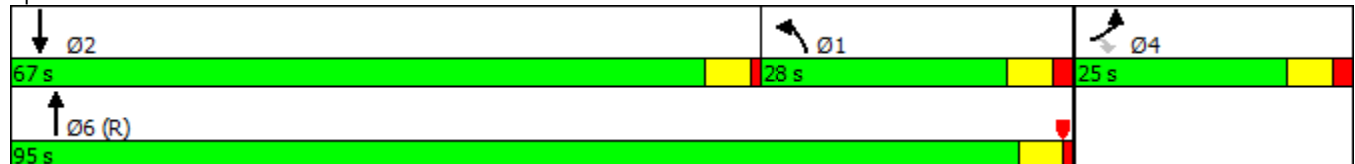


Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	130	26	155	1347	1107
Future Volume (vph)	130	26	155	1347	1107
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		1	6	2
Permitted Phases		4			
Detector Phase	4	4	1	6	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0
Minimum Split (s)	17.0	17.0	17.0	35.5	35.5
Total Split (s)	25.0	25.0	28.0	95.0	67.0
Total Split (%)	20.8%	20.8%	23.3%	79.2%	55.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.0	5.0
Lead/Lag			Lag		Lead
Lead-Lag Optimize?			Yes		Yes
Recall Mode	Min	Min	None	C-Max	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 19 (16%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Manhattan Blvd & Central



Timings
3: Manhattan Blvd & Fountain Park South

120 Cycle Mid Day
01/30/2018



Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↗	↑↑↑	↗	↘	↑↑
Traffic Volume (vph)	14	1588	15	34	1191
Future Volume (vph)	14	1588	15	34	1191
Turn Type	Over	NA	Perm	Prot	NA
Protected Phases	1	2		1	6
Permitted Phases			2		
Detector Phase	1	2	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0
Minimum Split (s)	15.5	25.0	25.0	15.5	25.0
Total Split (s)	23.0	97.0	97.0	23.0	120.0
Total Split (%)	19.2%	80.8%	80.8%	19.2%	100.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.0	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.0	5.0	5.5	5.0
Lead/Lag	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	
Recall Mode	Min	C-Max	C-Max	Min	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 88 (73%), Referenced to phase 2:NBT, Start of Red
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



Timings
4: Manhattan Blvd & Fountain Park Center

120 Cycle Mid Day
01/30/2018

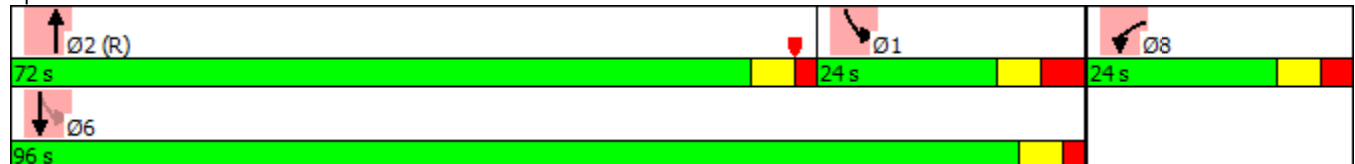


Lane Group	WBL	NBT	SBL	SBT
Lane Configurations	↖↗	↑↑↓	↖	↑↑
Traffic Volume (vph)	109	1591	110	1211
Future Volume (vph)	109	1591	110	1211
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	8	2	1	6
Permitted Phases			6	
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	13.0	20.0	10.0	20.0
Minimum Split (s)	20.5	26.0	18.0	26.0
Total Split (s)	24.0	72.0	24.0	96.0
Total Split (%)	20.0%	60.0%	20.0%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	2.0	4.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	6.0	8.0	6.0
Lead/Lag		Lead	Lag	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	C-Max	Min	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 79 (66%), Referenced to phase 2:NBT, Start of Red
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



Timings
5: Manhattan Blvd & Target

120 Cycle Mid Day
01/30/2018



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↕↕↕	↔↔	↕↕
Traffic Volume (vph)	132	176	1459	176	1209
Future Volume (vph)	132	176	1459	176	1209
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	4		6	5	2
Permitted Phases		4			
Detector Phase	4	4	6	5	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	17.5	17.5	25.0	18.0	25.0
Total Split (s)	30.0	30.0	68.0	22.0	90.0
Total Split (%)	25.0%	25.0%	56.7%	18.3%	75.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.5	3.5	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	5.0	7.5	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Min	C-Min	Min	Min

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 112 (93%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Manhattan Blvd & Target



Timings
6: Manhattan Blvd & Gretna Blvd

120 Cycle Mid Day
01/30/2018

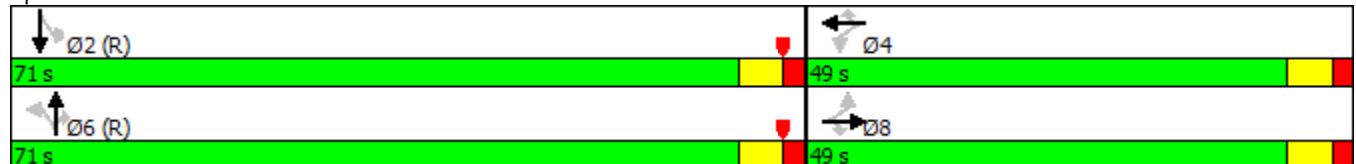


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗		↕	↗		↕↕	↗		↕↕↕
Traffic Volume (vph)	25	342	131	23	231	106	11	1079	88	9	1188
Future Volume (vph)	25	342	131	23	231	106	11	1079	88	9	1188
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA
Protected Phases		8			4			6			2
Permitted Phases	8		8	4		4	6		6	2	
Detector Phase	8	8	8	4	4	4	6	6	6	2	2
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	49.0	49.0	49.0	49.0	49.0	49.0	71.0	71.0	71.0	71.0	71.0
Total Split (%)	40.8%	40.8%	40.8%	40.8%	40.8%	40.8%	59.2%	59.2%	59.2%	59.2%	59.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0		6.0	6.0		6.0
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 107 (89%), Referenced to phase 2:SBTL and 6:NBTL, Start of Red
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



Timings
7: Manhattan Blvd & WalMart

120 Cycle Mid Day
01/30/2018

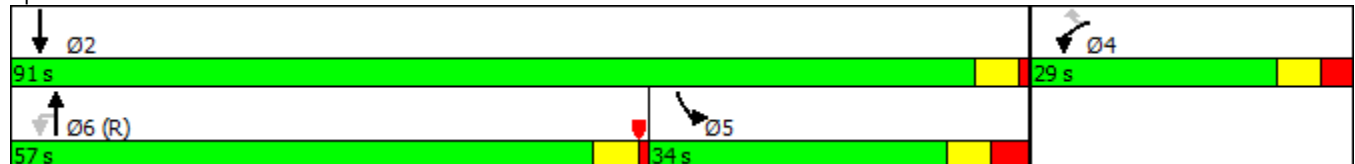


Lane Group	WBL	WBR	NBU	NBT	SBL	SBT
Lane Configurations	↔↔	↔		↔↔↔	↔	↔↔
Traffic Volume (vph)	144	147	2	936	150	923
Future Volume (vph)	144	147	2	936	150	923
Turn Type	Prot	Perm	Perm	NA	Prot	NA
Protected Phases	4			6	5	2
Permitted Phases		4	6			
Detector Phase	4	4	6	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	10.0	20.0	20.0	10.0	20.0
Minimum Split (s)	18.0	18.0	25.0	25.0	18.0	25.0
Total Split (s)	29.0	29.0	57.0	57.0	34.0	91.0
Total Split (%)	24.2%	24.2%	47.5%	47.5%	28.3%	75.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	1.0	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		5.0	7.5	5.0
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	Min	Min	C-Max	C-Max	Min	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 9 (8%), Referenced to phase 6:NBTU, Start of Red
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 7: Manhattan Blvd & WalMart



Timings
8: Manhattan Blvd & Ute Dr/Lowes

120 Cycle Mid Day
01/30/2018



Lane Group	EBR	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↗	↔	↖	↑↑↑	↖	↑↑
Traffic Volume (vph)	20	1	36	1176	82	1368
Future Volume (vph)	20	1	36	1176	82	1368
Turn Type	Perm	NA	Prot	NA	Prot	NA
Protected Phases		4	1	6	5	2
Permitted Phases	1					
Detector Phase	1	4	1	6	5	2
Switch Phase						
Minimum Initial (s)	10.0	15.0	10.0	20.0	15.0	20.0
Minimum Split (s)	17.0	22.0	17.0	25.5	22.5	25.5
Total Split (s)	17.0	24.0	17.0	71.0	25.0	79.0
Total Split (%)	14.2%	20.0%	14.2%	59.2%	20.8%	65.8%
Yellow Time (s)	4.0	4.0	4.0	4.5	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	5.5	6.5	5.0
Lead/Lag	Lead		Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	Max

Intersection Summary

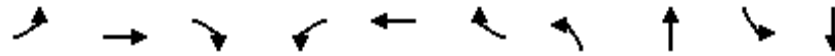
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 28 (23%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 8: Manhattan Blvd & Ute Dr/Lowes



Timings
9: Manhattan Blvd & Chick-Fil-A/Palace

120 Cycle Mid Day
01/30/2018



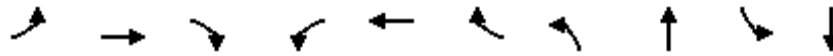
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↑↑↑	↖↗	↖↗
Traffic Volume (vph)	128	3	42	23	3	22	101	1293	107	1207
Future Volume (vph)	128	3	42	23	3	22	101	1293	107	1207
Turn Type	Split	NA	Over	Split	NA	Over	pm+pt	NA	Prot	NA
Protected Phases	3	3	1	4	4	5	1	6	5	2
Permitted Phases								6		
Detector Phase	3	3	1	4	4	5	1	6	5	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	16.0	16.0	16.5	17.0	17.0	17.0	16.5	25.5	17.0	25.5
Total Split (s)	17.0	17.0	18.9	17.0	17.0	17.0	18.9	69.0	17.0	67.1
Total Split (%)	14.2%	14.2%	15.8%	14.2%	14.2%	14.2%	15.8%	57.5%	14.2%	55.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	3.0	3.0	3.0	2.5	1.0	3.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.5	7.0	7.0	7.0	6.5	5.5	7.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	Max	Max	None	Max	Max	None	None	C-Max	None	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 29 (24%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Manhattan Blvd & Chick-Fil-A/Palace





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗		↕	↗	↗	↕↕↕	↗	↕↕
Traffic Volume (vph)	57	5	39	68	8	19	80	1412	58	1282
Future Volume (vph)	57	5	39	68	8	19	80	1412	58	1282
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Prot	NA
Protected Phases		8			4		1	6	5	2
Permitted Phases	8		8	4		4				
Detector Phase	8	8	8	4	4	4	1	6	5	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	27.0	17.0	27.0
Total Split (s)	26.0	26.0	26.0	26.0	26.0	26.0	21.0	77.0	17.0	73.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	21.7%	21.7%	17.5%	64.2%	14.2%	60.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		8.0	8.0		8.0	8.0	7.0	7.0	7.0	7.0
Lead/Lag							Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	Max

Intersection Summary

Cycle Length: 120

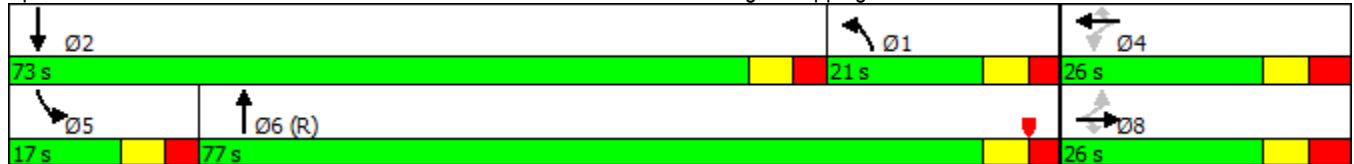
Actuated Cycle Length: 120

Offset: 57 (48%), Referenced to phase 6:NBT, Start of Red

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center



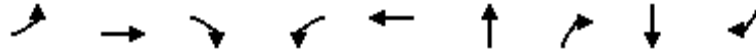
SYNCHRO WORK SHEETS

PROPOSED CONDITIONS

PM PEAK

Timings
1: Manhattan Blvd & Lapalco Blvd

120 Cycle PM
01/30/2018

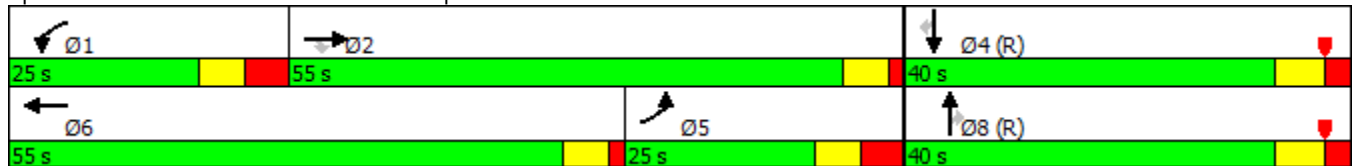


Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔↔	↑↑↑	↑↑	↔	↑↑	↔
Traffic Volume (vph)	462	1197	191	296	1466	825	390	842	421
Future Volume (vph)	462	1197	191	296	1466	825	390	842	421
Turn Type	Prot	NA	Perm	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2		1	6	8		4	
Permitted Phases			2				8		4
Detector Phase	5	2	2	1	6	8	8	4	4
Switch Phase									
Minimum Initial (s)	15.0	25.0	25.0	15.0	25.0	18.0	18.0	18.0	18.0
Minimum Split (s)	23.0	31.0	31.0	23.0	31.0	25.0	25.0	25.0	25.0
Total Split (s)	25.0	55.0	55.0	25.0	55.0	40.0	40.0	40.0	40.0
Total Split (%)	20.8%	45.8%	45.8%	20.8%	45.8%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5
All-Red Time (s)	4.0	1.5	1.5	4.0	1.5	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.0	5.5	5.5	8.0	5.5	7.0	7.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	None	Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84 (70%), Referenced to phase 4:SBT and 8:NBT, Start of Red
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Manhattan Blvd & Lapalco Blvd



Timings
2: Manhattan Blvd & Central

120 Cycle PM
01/30/2018



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations	↙	↗	↙	↑↑	↑↑
Traffic Volume (vph)	112	37	157	1455	1236
Future Volume (vph)	112	37	157	1455	1236
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	4		1	6	2
Permitted Phases		4			
Detector Phase	4	4	1	6	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	10.0	30.0	30.0
Minimum Split (s)	17.0	17.0	17.0	35.5	35.5
Total Split (s)	21.0	21.0	26.0	99.0	73.0
Total Split (%)	17.5%	17.5%	21.7%	82.5%	60.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.0	5.0
Lead/Lag			Lag		Lead
Lead-Lag Optimize?			Yes		Yes
Recall Mode	Min	Min	None	C-Max	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 106 (88%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Manhattan Blvd & Central



Timings
3: Manhattan Blvd & Fountain Park South

120 Cycle PM
01/30/2018



Lane Group	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↗	↑↑↑	↗	↘	↑↑
Traffic Volume (vph)	22	1471	7	20	1636
Future Volume (vph)	22	1471	7	20	1636
Turn Type	Over	NA	Perm	Prot	NA
Protected Phases	1	2		1	6
Permitted Phases			2		
Detector Phase	1	2	2	1	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0
Minimum Split (s)	15.5	25.0	25.0	15.5	25.0
Total Split (s)	20.0	100.0	100.0	20.0	120.0
Total Split (%)	16.7%	83.3%	83.3%	16.7%	100.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.0	1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.0	5.0	5.5	5.0
Lead/Lag	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	
Recall Mode	Min	C-Max	C-Max	Min	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 44 (37%), Referenced to phase 2:NBT, Start of Red
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 3: Manhattan Blvd & Fountain Park South



Timings
4: Manhattan Blvd & Fountain Park Center

120 Cycle PM
01/30/2018



Lane Group	WBL	NBT	SBL	SBT
Lane Configurations	↙↙	↑↑↑	↘	↑↑
Traffic Volume (vph)	115	1477	115	1596
Future Volume (vph)	115	1477	115	1596
Turn Type	Prot	NA	Prot	NA
Protected Phases	8	2	1	6
Permitted Phases				
Detector Phase	8	2	1	6
Switch Phase				
Minimum Initial (s)	13.0	20.0	10.0	20.0
Minimum Split (s)	20.5	26.0	18.0	26.0
Total Split (s)	24.0	68.0	28.0	96.0
Total Split (%)	20.0%	56.7%	23.3%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	2.0	4.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	6.0	8.0	6.0
Lead/Lag		Lead	Lag	
Lead-Lag Optimize?		Yes	Yes	
Recall Mode	None	C-Max	Min	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 28 (23%), Referenced to phase 2:NBT, Start of Red
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Manhattan Blvd & Fountain Park Center



Timings
5: Manhattan Blvd & Target

120 Cycle PM
01/30/2018

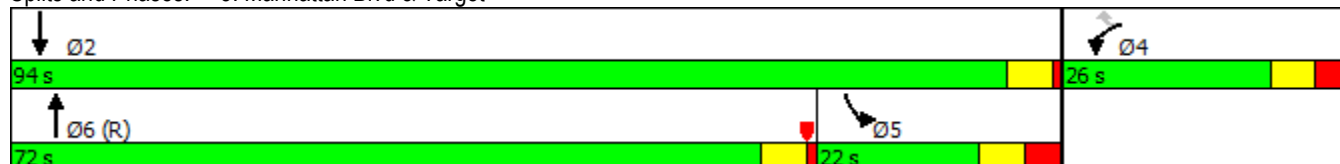


Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↕↕↕	↔↔	↕↕
Traffic Volume (vph)	128	129	1450	151	1519
Future Volume (vph)	128	129	1450	151	1519
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	4		6	5	2
Permitted Phases		4			
Detector Phase	4	4	6	5	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	17.5	17.5	25.0	18.0	25.0
Total Split (s)	26.0	26.0	72.0	22.0	94.0
Total Split (%)	21.7%	21.7%	60.0%	18.3%	78.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.5	3.5	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	5.0	7.5	5.0
Lead/Lag			Lead	Lag	
Lead-Lag Optimize?					
Recall Mode	Min	Min	C-Max	Min	Max

Intersection Summary

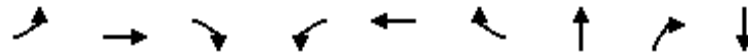
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 49 (41%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Manhattan Blvd & Target



Timings
6: Manhattan Blvd & Gretna Blvd

120 Cycle PM
01/30/2018

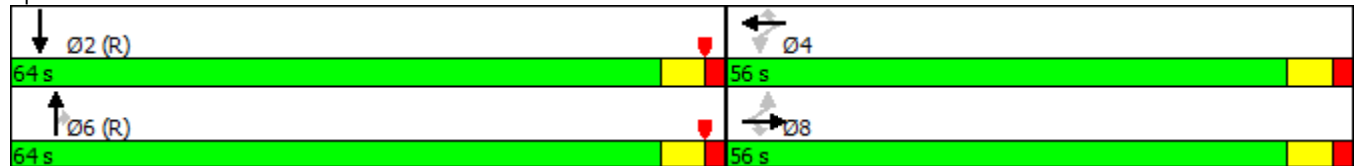


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT
Lane Configurations		↕	↗		↕	↗	↑↑	↗	↑↑↑
Traffic Volume (vph)	19	272	121	47	399	149	1184	132	1198
Future Volume (vph)	19	272	121	47	399	149	1184	132	1198
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8			4		6		2
Permitted Phases	8		8	4		4		6	
Detector Phase	8	8	8	4	4	4	6	6	2
Switch Phase									
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0	15.0	20.0	20.0	20.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	26.0	26.0	26.0
Total Split (s)	56.0	56.0	56.0	56.0	56.0	56.0	64.0	64.0	64.0
Total Split (%)	46.7%	46.7%	46.7%	46.7%	46.7%	46.7%	53.3%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 48 (40%), Referenced to phase 2:SBT and 6:NBT, Start of Red
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Manhattan Blvd & Gretna Blvd



Timings
7: Manhattan Blvd & Walmart

120 Cycle PM
01/30/2018



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations	↙↘	↗	↑↑↑	↘	↑↑
Traffic Volume (vph)	134	204	1270	158	1277
Future Volume (vph)	134	204	1270	158	1277
Turn Type	Prot	Perm	NA	Prot	NA
Protected Phases	4		6	5	2
Permitted Phases		4			
Detector Phase	4	4	6	5	2
Switch Phase					
Minimum Initial (s)	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	18.0	18.0	25.0	18.0	25.0
Total Split (s)	31.0	31.0	55.0	34.0	89.0
Total Split (%)	25.8%	25.8%	45.8%	28.3%	74.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	1.0	3.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	5.0	7.5	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	Min	Min	C-Max	Min	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 65 (54%), Referenced to phase 6:NBT, Start of Red
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 7: Manhattan Blvd & Walmart



Timings
8: Manhattan Blvd & Ute Dr/Lowes

120 Cycle PM
01/30/2018

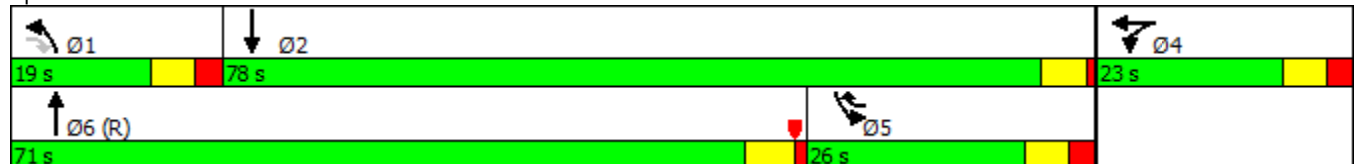


Lane Group	EBR	WBR	NBL	NBT	SBL	SBT	Ø4
Lane Configurations	↶	↶	↶	↑↑↑	↶	↑↑	
Traffic Volume (vph)	16	112	24	1351	119	1316	
Future Volume (vph)	16	112	24	1351	119	1316	
Turn Type	Perm	Over	Prot	NA	Prot	NA	
Protected Phases		5	1	6	5	2	4
Permitted Phases	1						
Detector Phase	1	5	1	6	5	2	
Switch Phase							
Minimum Initial (s)	10.0	15.0	10.0	20.0	15.0	20.0	15.0
Minimum Split (s)	17.0	22.5	17.0	25.5	22.5	25.5	22.0
Total Split (s)	19.0	26.0	19.0	71.0	26.0	78.0	23.0
Total Split (%)	15.8%	21.7%	15.8%	59.2%	21.7%	65.0%	19%
Yellow Time (s)	4.0	4.0	4.0	4.5	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	1.0	2.5	1.0	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	5.5	6.5	5.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?							
Recall Mode	None	None	None	C-Max	None	Max	None

Intersection Summary

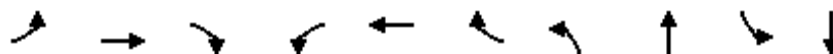
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 6:NBT, Start of Red, Master Intersection
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 8: Manhattan Blvd & Ute Dr/Lowes



Timings
9: Manhattan Blvd & Chick-Fil-A/Palace

120 Cycle PM
01/30/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↑↑↑	↖↗	↖↗
Traffic Volume (vph)	138	6	57	44	11	35	118	1385	117	1312
Future Volume (vph)	138	6	57	44	11	35	118	1385	117	1312
Turn Type	Split	NA	Over	Split	NA	Over	pm+pt	NA	Prot	NA
Protected Phases	3	3	1	4	4	5	1	6	5	2
Permitted Phases							6			
Detector Phase	3	3	1	4	4	5	1	6	5	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	16.0	16.0	16.5	17.0	17.0	17.0	16.5	25.5	17.0	25.5
Total Split (s)	16.0	16.0	18.0	17.0	17.0	17.0	18.0	70.0	17.0	69.0
Total Split (%)	13.3%	13.3%	15.0%	14.2%	14.2%	14.2%	15.0%	58.3%	14.2%	57.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.5	3.0	3.0	3.0	2.5	1.0	3.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.5	7.0	7.0	7.0	6.5	5.5	7.0	5.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes					
Recall Mode	None	None	None	None	None	None	None	C-Max	None	Max

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 109 (91%), Referenced to phase 6:NBTL, Start of Red
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Manhattan Blvd & Chick-Fil-A/Palace

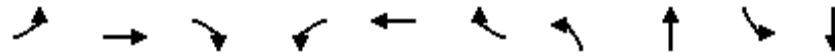


Timings

10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center

120 Cycle PM

01/30/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations		↕	↗		↕	↗	↗	↕↕↕	↗	↕↕
Traffic Volume (vph)	32	2	22	82	4	41	10	1169	49	1559
Future Volume (vph)	32	2	22	82	4	41	10	1169	49	1559
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Prot	NA
Protected Phases		8			4		1	6	5	2
Permitted Phases	8		8	4		4				
Detector Phase	8	8	8	4	4	4	1	6	5	2
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	20.0	10.0	20.0
Minimum Split (s)	18.0	18.0	18.0	18.0	18.0	18.0	17.0	27.0	17.0	27.0
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	17.0	78.0	17.0	78.0
Total Split (%)	20.8%	20.8%	20.8%	20.8%	20.8%	20.8%	14.2%	65.0%	14.2%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		8.0	8.0		8.0	8.0	7.0	7.0	7.0	7.0
Lead/Lag							Lag	Lag	Lead	Lead
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

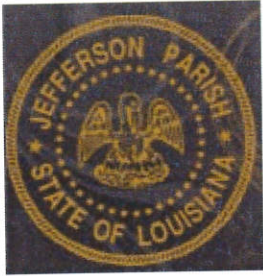
Offset: 4 (3%), Referenced to phase 6:NBT, Start of Red

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 10: Manhattan Blvd & Manhattan Plaza/Westbank Village Shopping Center





Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana

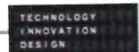
PMC MEETING JANUARY 31, 2018

SIGN-IN SHEET

Initial	Representative	Organization	Phone	E-mail Address
	Walter Brooks (WB)	Regional Planning Commission	504.483.8525	wbrooks@norpc.org
	Jeff Roesel (JR)	Regional Planning Commission	504.483.8528	jroesel@norpc.org amaulhardt@norpc.org
AM	Alison Maulhardt (AM)	Regional Planning Commission	504.483.8533	jpengineering@jeffparish.net
	Mark Drewes (MD)	Jefferson Parish Engineering	504.736.6500	jsavoie@jeffparish.net
JMS	Jody Savoie (JS)	Jefferson Parish Traffic	504.736.6530	ddaleo@jeffparish.net
DD	Dawn Daleo (DD)	Jefferson Parish Traffic	504.736.6530	mark@lhjunius.com
	Mark Annino (MA)	Linfield, Hunter & Junius	504.833.5300	jhellmich@lhjunius.com
	Jed Hellmich (JM)	Linfield, Hunter & Junius	504.833.5300	Vingyuen2@la.gov
VN	Vi Ngyuen (VN)	LADOTD	504-484-0214	egutierrez@itsregional.com
PG	P. Carmelo Gutierrez (PG)	ITS Regional	504.888.9399	adale@itsregional.com
AD	Alan Dale (AD)	ITS Regional	504.888.9399	pthummala@itsregional.com
PT	Pradeep Thummala (PT)	ITS Regional	504.888.9399	STreadway@jeffparish.net
	Susan Treadway	Jefferson Parish Traffic	504-736-6530	



ITS REGIONAL, LLC.



Traffic & Transportation Engineering / Civil / Planning / Surveying

APPENDIX H

STAGE 0

ENVIRONMENTAL

CHECKLIST

STAGE 0
Environmental Checklist

Route Manhattan Boulevard Parish: Jefferson

C.S. NA Begin Log mile NA End Log mile NA

ADJACENT LAND USE: Residential and Commercial

Any property owned by a Native American Tribe?

(Y or N or Unknown) If so, which Tribe? No

Any property enrolled into the Wetland Reserve Program?

(Y or N or Unknown) If so, give the location N

Are there any other known wetlands in the area?

(Y or N) If so, give the location Y – Wetlands near Manhattan on both sides of road between Ute Dr. and 11th St. (Wetlands Code: PFO1Ad)

Community Elements: Is the project impacting or adjacent to any (if the answer is yes, list names and locations):

(Y or N) Cemeteries Y – Adjacent to Holy Hill Baptist Church – NW Corner of intersection at Walmart Dwy and Manhattan (1409 Manhattan Blvd.)

(Y or N) Churches Y – Holy Hill Baptist Church - NW Corner of intersection at Walmart Dwy and Manhattan (1409 Manhattan Blvd.)

(Y or N) Schools N

(Y or N) Public Facilities (i.e., fire station, library, etc.) Y - Jefferson Parish Juvenile Complex – SE Corner of Gretna Blvd and Manhattan Blvd. (1546 Gretna Blvd.)

(Y or N) Community water well/supply N

Section 4(f) issue: Is the project impacting or adjacent to any (if the answer is yes, list names and locations):

(Y or N) Public recreation areas N

(Y or N) Public parks N

(Y or N) Wildlife Refuges N

(Y or N) Historic Sites N

Is the project impacting, or adjacent to, a property listed on the National Register of Historic Places?

(Y or N) **Is the project within a historic district or a national landmark district?** (Y or N) If the answer is yes to either question, list names and locations below:

N

Do you know of any threatened or endangered species in the area? (Y or N)

If so, list species and location. N

Does the project impact or adjacent to a stream protected by the Louisiana Scenic Rivers Act? (Y or N) If yes, name the stream. N

Are there any Significant Trees as defined by EDSM I.1.1.21 within proposed ROW? (Y or N) If so, where? Y – From Lapalco Blvd. to Central Park Blvd.; From Fountain Park Center to Ute Dr.

What year was the existing bridge built? NA

Are any waterways impacted by the project considered navigable? (Y or N) If unknown, state so, list the waterways: No

Hazardous Material: Have you checked the following DEQ and EPA databases for potential problems? (If the answer is yes, list names and locations.)

(Y or N) Leaking Underground Storage Tanks Y – No problems anticipated

**STAGE 0
Environmental Checklist**

(Y or N) CERCLIS Y – No problems anticipated

(Y or N) ERNS Y – No problems anticipated

(Y or N) Enforcement and Compliance History Y – No problems anticipated

Underground Storage Tanks (UST): Are there any Gasoline Stations or other facilities that may have UST on or adjacent to the project? (Y or N) Y

If so, give the name and location: Shell - SE Corner of Manhattan and W. Bank Expressway; Exxon – NE Corner of Manhattan and W. Bank Expressway; Raceway – 989 Manhattan Blvd.; Brothers – SW Corner of Gretna Blvd. and Manhattan; Circle K – SW Corner of Lapalco and Manhattan

Any chemical plants, refineries or landfills adjacent to the project? (Y or N) **Any large manufacturing facilities adjacent to the project?** (Y or N) **Dry Cleaners?** (Y or N) If yes to any, give names and locations: Y – Majestic Cleaners – 2317 Manhattan Blvd

Oil/Gas wells: Have you checked DNR database for registered oil and gas wells? (Y or N) List the type and location of wells being impacted by the project. Y – No wells are anticipated to be impacted

Are there any possible residential or commercial relocations/displacements? (Y or N)

How many? N – No relocations anticipated

Do you know of any sensitive community or cultural issues related to the project? (Y or N)

If so, explain N

Is the project area population minority or low income? (Y or N) Y

What type of detour/closures could be used on the job? None anticipated

Did you notice anything of environmental concern during your site/windshield survey of the area? If so, explain below.

No

Point of Contact

Phone Number

Date

STAGE 0

Environmental Checklist

General Explanation:

To adequately consider projects in Stage 0, some consideration must be given to the human and natural environment which will be impacted by the project. The Environmental Checklist was designed knowing that some environmental issues may surface later in the process. This checklist was designed to obtain basic information, which is readily accessible by reviewing public databases and by visiting the site. It is recognized that some information may be more accessible than other information. Some items on the checklist may be more important than others depending on the type of project. It is recommended that the individual completing the checklist do their best to answer the questions accurately. Feel free to comment or write any explanatory comments at the end of the checklist.

The Databases:

To assist in gathering public information, the previous sheet includes web addresses for some of the databases that need to be consulted to complete the checklist. As of February 2011, these addresses were accurate.

Note that you will not have access to the location of any threatened or endangered (T&E) species. The web address lists only the threatened or endangered species in Louisiana by Parish. It will generally describe their habitat and other information. If you know of any species in the project area, please state so, but you will not be able to confirm it yourself. If you feel this may be an issue, please contact the Environmental Section. We have biologist on staff who can confirm the presence of a species.

Why is this information important?

Land Use? Indicator of biological issues such as T&E species or wetlands.

Tribal Land Ownership? Tells us whether coordination with tribal nations will be required.

WRP properties? Farmland that is converted back into wetlands. The Federal government has a permanent easement which cannot be expropriated by the State. Program is operated through the Natural Resources Conservation Service (formerly the Soil Conservation Service).

Community Elements? DOTD would like to limit adverse impacts to communities. Also, public facilities may be costly to relocate.

Section 4(f) issues? USDOT agencies are required by law to avoid certain properties, unless a prudent or feasible alternative is not available.

Historic Properties? Tells us if we have a Section 106 issue on the project. (Section 106 of the National Historic Preservation Act) See <http://www.achp.gov/work106.html> for more details.

Scenic Streams? Scenic streams require a permit and may require restricted construction activities.

Significant Trees? Need coordination and can be important to community.

Age of Bridge? Section 106 may apply. Bridges over 50 years old are evaluated to determine if they are eligible for the National Register of Historic Places.

Navigability? If navigable, will require an assessment of present and future navigation needs and US Coast Guard permit.

Hazardous Material? Don't want to purchase property if contaminated. Also, a safety issue for construction workers if right-of-way is contaminated.

Oil and Gas Wells? Expensive if project hits a well.

Relocations? Important to community. Real Estate costs can be substantial depending on location of project. Can result in organized opposition to a project.

Sensitive Issues? Identification of sensitive issues early greatly assists project team in designing public involvement plan.

Minority/Low Income Populations? Executive Order requires Federal Agencies to identify and address disproportionately high and adverse human health and environmental effects on minority or low income populations. (Often referred to as Environmental Justice)

Detours? The detour route may have as many or more impacts. Should be looked at with project. May be unacceptable to the public.

STAGE 0 Environmental Checklist

Louisiana Governor's Office of Indian Affairs:

<http://www.indianaffairs.com/tribes.htm>

Louisiana Wetlands Reserve Program:

<http://www.nrcs.usda.gov/programs/wrp/states/la.html>

Community Water Well/Supply

<http://sonris.com/default.htm>

Louisiana Department of Wildlife and Fisheries – Wildlife Refuges

<http://www.wlf.louisiana.gov/refuges>

<http://www.fws.gov/refuges/profiles/ByState.cfm?state=LA>

<http://www.fws.gov/refuges/refugelocatomaps/Louisiana.html>

U.S. Fish & Wildlife Service – National Wetlands Inventory:

<http://www.fws.gov/wetlands/>

Louisiana State Historic Sites:

<http://www.crt.state.la.us/parks/ihistoricsiteslisting.aspx>

National Register of Historic Places (Louisiana):

<http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome>

<http://www.nationalregisterofhistoricplaces.com/la/state.html>

National Historic Landmarks Program:

<http://www.nps.gov/history/nhl/>

Threatened and Endangered Species Databases:

<http://www.wlf.louisiana.gov/wildlife/louisiana-natural-heritage-program>

Louisiana Scenic Rivers:

<http://www.wlf.louisiana.gov/wildlife/scenic-rivers>

<http://media.wlf.state.la.us/experience/scenicrivers/louisiananaturalandscenicriversdescriptions/>

<http://www.legis.state.la.us/lss/lss.asp?doc=104995>

Significant Tree Policy (EDSM I.1.1.21)

<http://notes1/ppmemos.nsf>

(Live Oak, Red Oak, White Oak, Magnolia or Cypress, aesthetically important, 18" or greater in diameter at breast height and has form that separates it from surrounding or that which may be considered historic.)

CERCLIS (Superfund Sites):

<http://www.epa.gov/superfund/sites/cursites/>

http://www.epa.gov/enviro/html/cerclis/cerclis_query.html

ERNS - Emergency Response Notification System - Database of oil and hazardous substances spill reports: <http://www.epa.gov/region4/r4data/erns/index.htm>

Enforcement & Compliance History (ECHO)

<http://www.epa-echo.gov/echo/>

DEQ – Underground Storage Tank Program Information:

<http://www.deq.louisiana.gov/portal/tabid/2674/Default.aspx>

Leaking Underground Storage Tanks:

<http://www.deq.state.la.us/portal/tabid/79/Default.aspx>

STAGE 0
Environmental Checklist

SONRIS – Oil and Gas Well Information & Water Well Information
<http://sonris.com/default.htm>

Environmental Justice (minority & low income)
<http://www.fhwa.dot.gov/environment/ej2000.htm>

Demographics
<http://www.census.gov/>

FHWA’s Environmental Website
<http://www.fhwa.dot.gov/environment/index.htm>

Additional Databases Checked

Other Comments:

APPENDIX I

JEFFERSON PARISH ADA TRANSITION PLAN FOR PUBLIC RIGHTS-OF- WAY

Jefferson Parish

Americans with Disabilities Act Transition Plan for Public Rights-of-Way

January 2014



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1. Introduction

1.1 Purpose of the Transition Plan

The purpose of this document is to ensure that facilities for pedestrian circulation and use located in the Jefferson Parish public right-of-way are readily accessible to and usable by pedestrians with disabilities in accordance with the Americans with Disabilities Act (ADA) and the U.S. Access Board Public Right of Way Accessibility Guidelines (PROWAG). The PROWAG provides guidelines for identifying, assessing, and addressing accessibility deficiencies in the public right-of-way. Although the PROWAG have not been finalized as of the drafting of this Transition Plan, the accessibility standard contained in the PROWAG will become mandatory when the guidelines are adopted.

1.2 Overview of the ADA and Parish Responsibilities

The federal statute known as the ADA, enacted on July 26, 1990, provides comprehensive civil rights protections to persons with disabilities in the areas of employment, state and local government services, and access to public accommodations, transportation, and telecommunications. Title II of the ADA specifically refers to state and local government programs, services and activities.

Title II of the ADA (28 CFR Section 35.150 (d) – Nondiscrimination on the Basis of Disability in State and Local Government Services – requires that state and local entities develop a Transition Plan specific to the entities’ facilities:

(d) Transition Plan.

(1) In the event that structural changes to facilities will be undertaken to achieve program accessibility, a public entity that employs 50 or more persons shall develop, within six months of January 26, 1992, a transition plan setting forth the steps necessary to complete such changes. A public entity shall provide an opportunity to interested persons, including individuals with disabilities or organizations representing individuals with disabilities, to participate in the development of the transition plan by submitting comments. A copy of the transition plan shall be made available for public inspection.

(2) If a public entity has responsibility or authority over streets, roads, or walkways, its transition plan shall include a schedule for providing curb ramps or other sloped areas where pedestrian walks cross curbs, giving priority to walkways serving entities covered by the Act, including State and local government offices and facilities, transportation, places of public accommodation, and employers, followed by walkways serving other areas.

(3) The plans shall, at a minimum:

(i) Identify physical obstacles in the public entity’s facilities that limit the accessibility of its programs or activities to individuals with disabilities;

(ii) Describe in detail the methods that will be used to make the facilities accessible;

(iii) Specify the schedule for taking the steps necessary to achieve compliance with this section and, if the time period of the transition plan is longer than one year, identify steps that will be taken during each year of the transition period; and

(iv) Indicate the official responsible for implementation of the plan.

As the entity responsible for authorizing the planning, design, construction, operation, and maintenance of public street rights-of-way and related activities, Jefferson Parish is required to ensure that new pedestrian facilities be accessible to people with disabilities in accordance with PROWAG. PROWAG applies to existing pedestrian facilities that are included within the scope of an alteration undertaken at the discretion of Jefferson Parish or other covered entities. The PROWAG defines an alteration as “a change to a facility in the public right-of-way that affects or could affect pedestrian access, circulation, or use. Alterations include but are not limited to, resurfacing, rehabilitation, reconstruction, historic restoration, or changes or rearrangement of structural parts or elements of a facility.”¹

The ADA permits agencies to defer upgrades of existing facilities to ADA standards if it can demonstrate “undue financial and administrative burden.” According to the *Title II Technical Assistance Manual Covering State and Local Government Programs and Services*, United States Access Board’s Public Rights-of-Way Accessibility Guidelines:

“A public entity does not have to take any action that it can demonstrate would result in a fundamental alteration in the nature of its program or activity or in undue financial and administrative burdens. This determination can only be made by the head of the public

¹ R105.5 Defined Terms

entity or his or her designee and must be accompanied by a written statement of the reasons for reaching that conclusion. The determination that the undue burdens would result must be based on all resources available for use in the program. If an action would result in such an alteration or such burdens, the public entity must take any other action that would not result in such an alteration of such burdens but would nevertheless ensure that individuals with disabilities receive the benefits and services of the program or activity.”

2. Development of the Transition Plan

2.1 Citizens Advisory Committee

With the support of the Jefferson Parish ADA Coordinator, a Citizens Advisory Committee assisted in the identification of barriers to accessibility of Jefferson Parish streets and sidewalks, and helped develop a schedule for making improvements. The Citizens Advisory Committee was made up of individuals with disabilities, or representatives of disability advocacy organizations, from a variety of socio-economic, racial and ethnic backgrounds. Accommodations for committee members who required interpretation of materials were provided at all meetings.

The Citizens Advisory Committee met three times during the development of the Transition Plan:

The first Advisory Committee meeting introduced the planning process and served as an opportunity for the committee members to provide input directly to the Regional Planning Commission and Jefferson Parish representatives. A survey (See Appendix A) was distributed to each of the committee members to determine priorities for locations of improvements. The results of that survey were used to develop a set of intersections to survey and include in the Transition Plan.

The second Advisory Committee meeting shared the results of the analysis of target areas and described the approach used to begin surveying for accessibility. An anticipated timeline for the completion of the survey and development of the transition plan was also shared. The Committee reviewed and approved the results of the target area analysis (see Figures 1 and 2: Target Areas). The methodology for the accessibility survey was also explained to and reviewed by the Committee.

The third Advisory Committee meeting shared a Final Draft of the ADA Transition Plan with committee members as well as representatives of Jefferson Parish. The ADA Transition Plan was to be presented to the Jefferson Parish council at its next meeting before implementation.

For Citizens Advisory Committee Roster and meeting minutes, see Appendix B.

2.2 Addressing PROWAG Requirements

The PROWAG clarifies what types of facilities in the public right-of-way are covered and the difference between scoping and technical requirements as follows:

“Scoping requirements specify what pedestrian facilities must comply with the proposed guidelines. Some of the scoping requirements are triggered where certain pedestrian facilities are provided such as pedestrian signals (see R209), street furniture (see R212), transit stops and transit shelters (see R213), on-street parking (see R214), and passenger loading zones (see R215). The scoping requirements reference the technical requirements that each pedestrian facility must comply with in order to be considered accessible.”

This Transition Plan is organized to address the PROWAG scoping requirements. Technical requirements are referenced where appropriate. The curb ramp inventory conducted for this project evaluated curb ramps with respect to the PROWAG requirements listed in Table 1.

Table 1: Selected PROWAG requirements evaluated in curb ramp inventory

Description	PROWAG Reference
Ramp type	R304.1
Cut-through width	R302.3.1
Ramp surface condition	R302.7
Running slope	R304.2.2
Ramp flares	R304.2.3
Left flare slope	R304.2.3
Right flare slope	R304.2.3
Do obstructions block ramp?	R304.2.3
Ramp width	R304.5.1
Ramp length	R304.2.2
Top landing dimensions	R304.2.1
Landing cross slope	R304.5.3
Grade breaks are perp.	R304.5.2
Detectable warning	R305, R208.2
DW contrast?	R305.1.3
Counter slope	R304.5.4
Bottom landing dimensions	R304.5.5

2.3 Identifying Target Areas

The ADA (28 CFR 35.150(d-2)) stipulates that agencies give priority to “walkways serving entities covered by the Act, including state and local government offices and facilities, transportation,

places of public accommodation, and employers, followed by walkways serving other areas.” With this guidance, and with assistance from the Citizens Advisory Committee, tiered criteria were developed to determine which locations will receive highest priority in addressing accessibility needs. The criteria are as follows:

- Tier I: Federal aid roadways: roadways serving state and local government buildings and services; major commercial centers, and roadway segments serving transit
- Tier II: Major roadways off of federal aid roadways; roadways serving employment and retail sites not in Tier 1; and multifamily housing complexes
- Tier III: Residential, industrial and other areas not covered in the first two tiers

The Citizens Advisory Committee participated in the ranking of land uses and destinations by level of importance by completing surveys at its first meeting. For example, members recommended that hospitals and Jefferson Transit fixed route bus stops have the highest weight in the analysis. Table 2 shows the resulting order of priority land uses. Based on this guidance a geospatial analysis was conducted to identify clusters of intersections to target for accessibility improvements. The clusters were restricted to Parish-owned roadways throughout unincorporated Jefferson Parish, as the Parish does not have jurisdiction over state-owned roadways or those located in municipalities, such as the Cities of Gretna and Kenner. The full committee survey and description of the target area methodology are located in Appendices A and C, respectively.

Table 2: Land Use Priorities

High priority	<ul style="list-style-type: none"> • Hospitals • Jefferson Transit bus stops • Government offices • Polls • Health Clinics • Public schools and colleges • Job clusters • Major shopping centers • Parks
Medium priority	<ul style="list-style-type: none"> • Private schools and universities • Multifamily housing complexes • Minor shopping destinations
Lower priority	<ul style="list-style-type: none"> • Residential areas • Industrial areas • Rural and undeveloped areas

The geographical application of these land use priorities resulted in a set of ranked intersections. For example, the intersection of Veterans and Causeway received a high ranking due to its adjacency to the Lakeside Shopping Mall.

Based on the aggregation of intersections and land use priority weights, the Transition Plan identifies nineteen “Target Areas” – clusters of street intersections that ranked high in the land use analysis.

This method is used to select areas for transition plan survey efforts, and will assist Jefferson Parish in prioritizing and scheduling accessibility compliance improvements. Figures 1 and 2 show the target areas. The schedule is provided in Appendix D of this Transition Plan.

Figure 1: Target Areas, East Bank

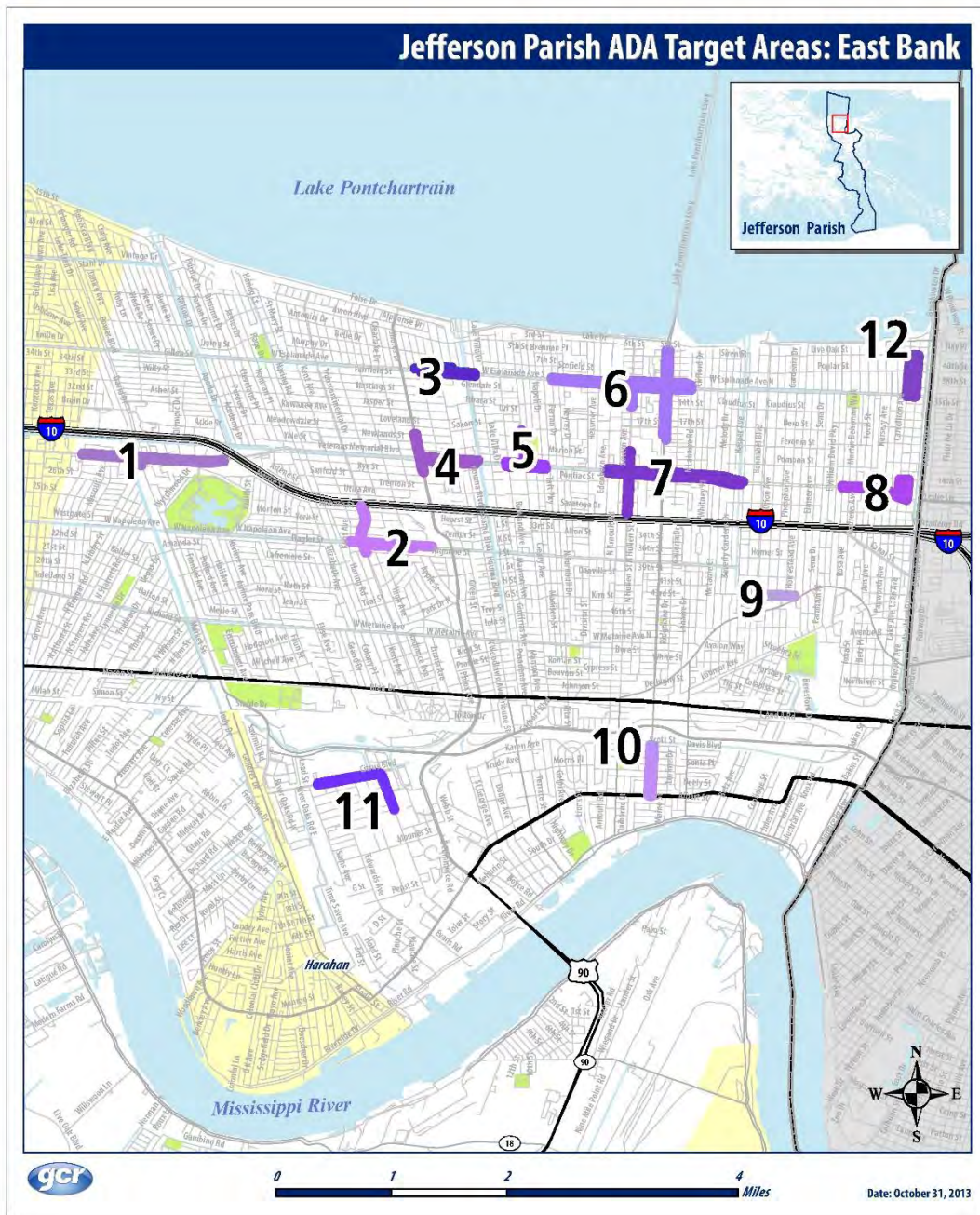
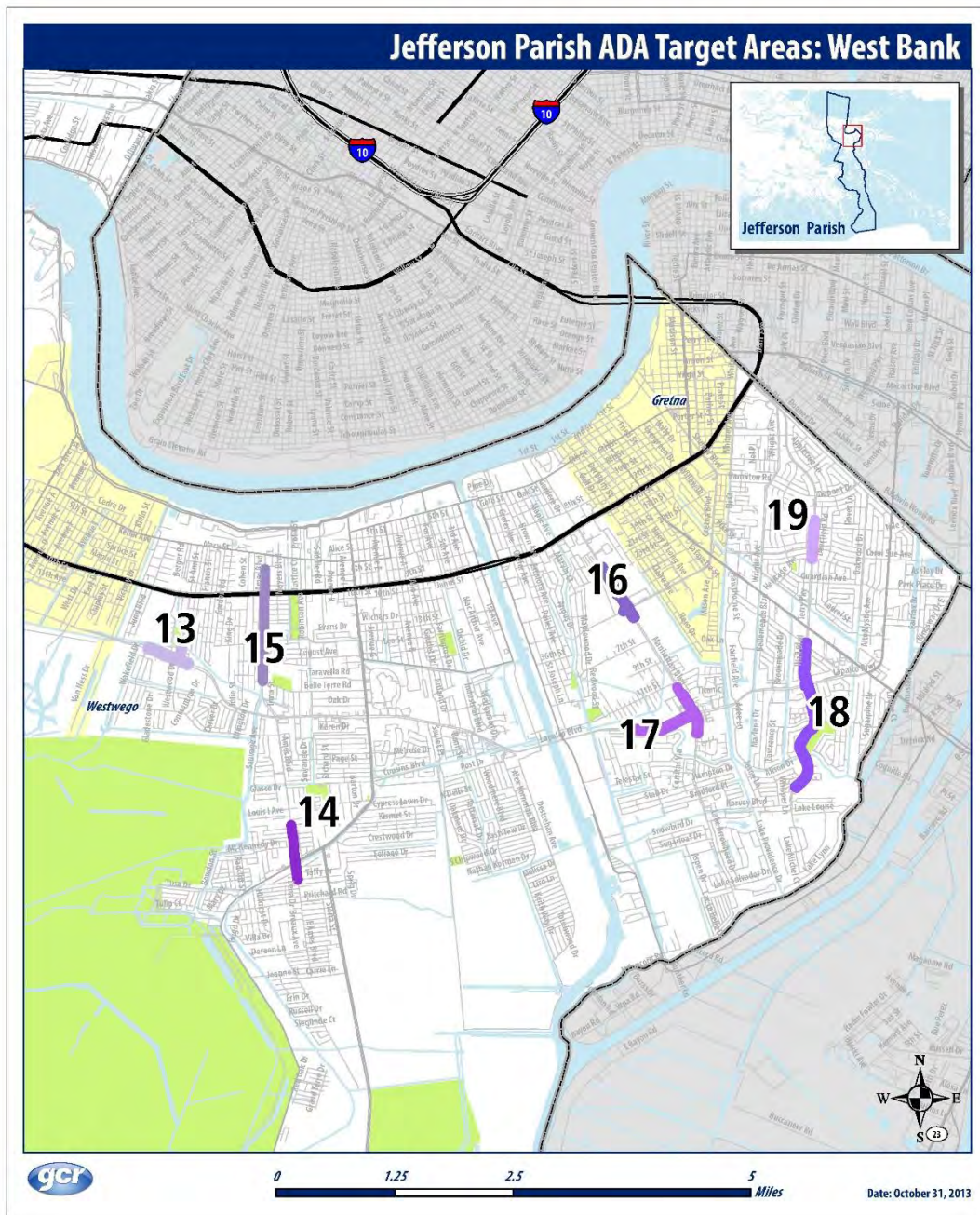


Figure 2: Target Areas, West Bank



2.4 Curb Ramp Survey Methodology

To identify curbs in need of ramp construction or improvement, trained staff conducted inspections of the priority intersections during the spring of 2013 within the target areas described in Section 2.3. The survey was designed to evaluate curb slope, width, quality, material, landing size and several other criteria that determine the functionality of the ramp, as shown in Table 1. Collected field data and photos of every curb and ramp were saved to a database using a table application (Figure 3). Surveyors also recorded instances of sidewalks missing or in poor condition adjacent to surveyed curbs. Whereas Jefferson Parish property owners are responsible for constructing and maintaining sidewalks adjacent to their property,² the Parish is responsible for constructing and maintaining the sidewalks immediately adjacent to constructed curbs at intersection corners.

Figure 3: Curb Ramp Inventory Application Screenshot

The screenshot shows a web application interface for 'Jefferson Parish ADA'. At the top, there is a 'Sync' button on the left and a 'Logout' button on the right. The user is identified as 'User: gcr'. The network status is 'Online'. Below this, there are red text notifications: '1 local curb(s) to upload', '1 local curb image(s) to upload', '1 local ramp(s) to upload', 'No ramp image(s) to upload', and 'No ramp survey(s) to upload'. The main section is titled 'DAVID DR & DAVID DR E' with 'Curb: 1' and 'Ramp: 2' below it. The form contains the following fields and options:

- 1. Date: 03/10/2013 11:09 AM
- 2. Intersection ID: 77
- 3. Street 1: DAVID DR
- 4. Street 2: DAVID DR E
- 5. Traffic Signal Present: Yes No
- 6. Pedestrian Signal Present: Yes No
- 7. Street 1 Material: Concrete Asphalt
- 8. Street 2 Material: Concrete Asphalt
- 9. Sidewalks: 0 1 2 X
- 10. Sidewalk 1 Condition: Acceptable Unacceptable X
- 11. Sidewalk 2 Condition: Acceptable Unacceptable X
- 13. Ramp Type: Perpendicular Parallel Blended transition Apex Cut-through None Other

A 'Save' button is located at the bottom right of the form, and the version number 'Version: 2.5' is displayed at the bottom of the application window.

² [Jefferson Parish Code of Ordinances: Chapter 29, Article V: Construction of Sidewalks, Sec. 29-143](#)

3. Findings and Prioritization

3.1 Survey Results by Target Area

As described in section 2.3, nineteen target areas, containing a total of 1138 curb crossings, were identified for surveying. Surveyed ramps were scored according to their degree of compliance with the set of PROWAG standards defined for this project (See Section 2.2 Table 1). The range of possible compliance scores is zero to 100. A score of 0 indicates complete compliance with the standards used. A higher score indicates a greater level of the ramp’s noncompliance with the PROWAG. For instance, a ramp with a poor surface condition and slope of 9%, but which is otherwise compliant with all other standards, would receive a score of 10 out of 100. Table 3 shows a detailed methodology of the scoring system. This table and an explanatory diagram are also available in Appendix E.

Table 3: Curb inaccessibility scoring methodology

Feature		Values			
1	Ramp type	All types : 0	No ramp : 75		
2	Ramp surface	Acceptable : 0	Unacceptable : 5	Is Null : 0	
3	Running slope	≤ 8.33 : 0	8.33 to 10 : 5	> 10 : 10	Is Null : 0
4	Left flare percentage	≤ 10 : 0	> 10 : 5	Is Null : 0	
5	Right flare percentage	≤ 10 : 0	> 10 : 5	Is Null : 0	
6	Ramp obstructions	No : 0	Yes : 10	Is Null : 0	
7	Ramp width	≥ 48 : 0	36 to 47.9 : 5	< 36 : 10	Is Null : 0
8	Ramp length	< 180 : 0	≥ 180 : 5	Is Null : 0	
9	Ramp cross slope	≤ 2 : 0	2.1 to 4 : 3	> 4 : 5	Is Null : 0
10	Landing present	Yes : 0	No : 5	Is Null : 0	
11	Landing width	≥ 48 : 0	36 to 47.9: 3	< 36 : 5	Is Null : 0
12	Landing height	≥ 48 : 0	36 to 47.9 : 3	< 36 : 5	Is Null : 0
13	Landing cross slope	≤ 2 : 0	2.1 to 4 : 3	> 4: 5	Is Null : 0
14	Grade breaks are perpendicular	Yes : 0	No : 2	Is Null : 0	
15	Detectable warning	Truncated dome : 0	Scored/stamped : 2	None : 5	Is Null : 0
16	Detectable warning contrast	Yes : 0	No : 2	Is Null : 0	
17	Counter slope	≤ 5 : 0	5.1 to 7 : 3	>7 : 5	Is Null : 0
18	Is curb present	Yes : 0	No : 5	Is Null : 0	
19	Sidewalks	2 acceptable : 0	1 acceptable : 5	0 acceptable : 10	Is Null : 0
20	Cut-through	≥ 60 or null : 0	48 to 59.9 : 5	<48 : 10	Is Null : 0

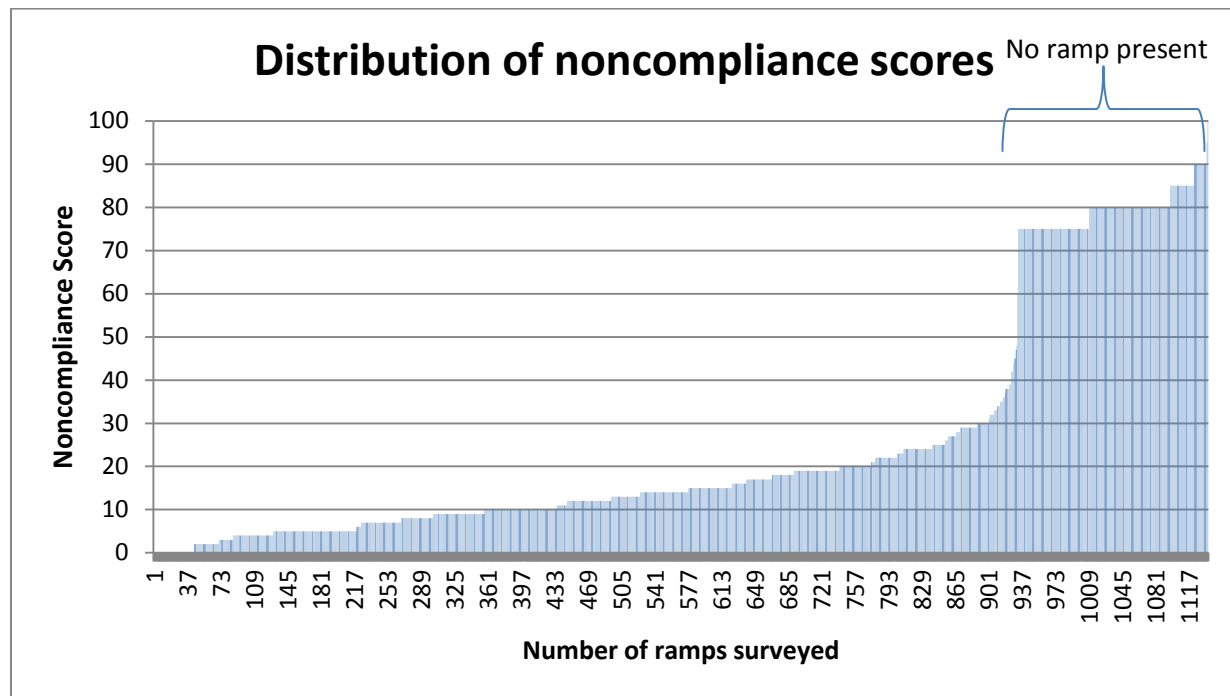
Out of the 1138 ramps surveyed, 1094 (96%) received a score greater than 0, and are therefore identified for improvements – that is, either replacement, repair or new construction of at least one curb ramp is necessary to make all designated street crossings of each intersection accessible. These range from existing ramps that lack only a detectable warning panel, to curb crossings without any ramp at all. Table 4 shows the number of ramps in need of improvement in each target area. Figure 4 shows the distribution of all surveyed ramp scores

Table 4: Summary of target area improvements

Target Area	Location	Surveyed curbs without ramps	Total # Ramps to improve	# Ramps surveyed
EAST BANK				
Target Area 1	Veterans Memorial Blvd. commercial corridor at Power Blvd.	6	44	45
Target Area 2	W. Napoleon Ave. at Transcontinental Dr.	3	65	65
Target Area 3	W. Esplanade Ave. at Clearview Pkwy.	5	33	33
Target Area 4	Veterans Memorial Blvd. at Clearview Pkwy.	5	36	39
Target Area 5	Veterans Memorial Blvd. at Cleary Ave.	2	33	33
Target Area 6	W. Esplanade Ave. at Causeway Blvd.	16	109	115
Target Area 7	Veterans Memorial Blvd. at Severn Ave.	22	95	101
Target Area 8	Veterans Memorial Blvd. at 17 th Street Canal	7	63	75
Target Area 9	Codifer Blvd. at Metairie Rd.	13	80	90
Target Area 10	Causeway Blvd. at Jefferson Hwy.	13	25	25
Target Area 11	Citrus Blvd. and Elmwood Park Blvd. (Government Center)	13	53	54
Target Area 12	Bucktown	13	84	85
East Bank Total		118	720	760
WEST BANK				
Target Area 13	Lapalco Blvd. at Westwood Dr.	8	42	42

Target Area 14	Ames Blvd. at Barataria Blvd.	9	69	69
Target Area 15	Ames Blvd. at West Bank	17	36	36
Target Area 16	Manhattan Blvd. at Gretna Blvd.	32	72	72
Target Area 17	Lapalco Blvd. at Manhattan Blvd.	2	38	41
Target Area 18	Terry Pkwy. at Lapalco Blvd.	12	52	52
Target Area 19	Terry Pkwy. at Carol Sue Ave.	7	65	66
West Bank Total		87	374	378
TOTAL		205	1094	1138

Figure 4: Distribution of ramp scores



The ramp below, at the corner of Phosphor Ave. and Codifer Blvd. South in Target Area 9, scored 3 out of 100, due only to its landing cross slope of 2.3%, which is above the maximum permitted 2%.



The curb shown below, at the intersection of Veterans Memorial Boulevard North and Richland Avenue in Target Area 5, scored 33, due to a 20% left flare slope (twice the maximum permitted 10%), steep ramp and landing cross slopes, and steep counter slope.



The curb crossing below, at the corner of Carrollton Ave. and Live Oak St. in Target Area 12, was the only ramp survey to receive a noncompliance score of 100, due to the absence of any constructed ramp or curb and presence of an obstruction.



3.2 Prioritization Methodology

Assignment of high, medium or low priority to an intersection in the schedule of improvements is based on two factors: 1) Its destination land use score, and 2) Its inaccessibility score (see Appendix D for inaccessibility scores). For example, an intersection located near a transit stop, shopping mall and government offices that has many noncompliant features, such as steep slopes and poor pavement conditions, will rank among the high priority intersections.

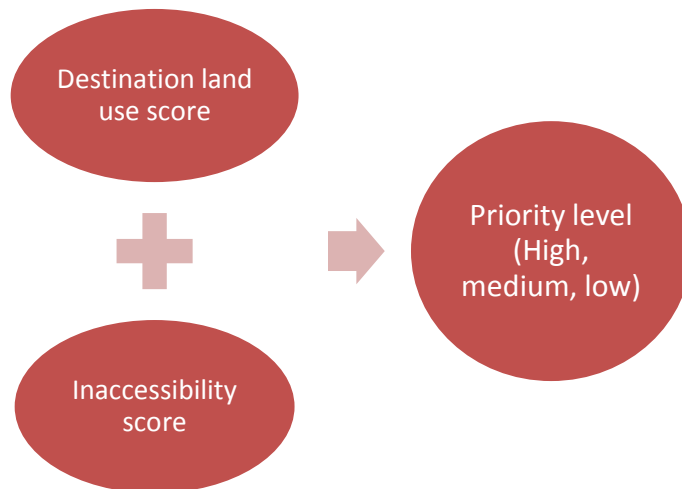


Table 5: Summary of Improvements According by Priority Area

Priority Level	# of intersections and ramps	Time Frame
1: High	100 / 320	Years 1-2 (2014-2015)
2: Medium	100 / 491	Years 3-4 (2016-2017)
3: Low	84 / 283	Year 5 (2018)

To achieve an equitable, strategic schedule of improvements, Jefferson Parish should improve accessibility at high priority intersections within two years, at medium priority intersections within four years, and at low priority intersections within five years. Figures 1 and 2 in Section 2.3 show maps of each of the nineteen target areas. Appendix B specifies each individual ramp in need of improvement, by target area, priority and intersection. **Note that curb improvements can take place at ANY noncompliant ramp regardless of whether or not it is located within these target areas.**

3.3 Estimated Costs

Based on an average cost of \$1,500 per replaced or newly constructed curb ramp, the estimated cost for making the improvements is \$1,641,000 (2013 dollars). Table 6 below shows a schedule of costs based on the priority levels described above.

Table 6: Estimated costs for curb ramp improvements, by year

Year	# of ramps	Estimated Cost (2013 dollars)
1 (2014)	160	\$240,000
2 (2015)	160	\$240,000
3 (2016)	245	\$367,500
4 (2017)	246	\$369,000
5 (2018)	283	\$424,500

For budgeting purposes, construction budgets should be adjusted to reflect any cost changes in materials, labor and any other factors that would increase or decrease construction costs.

Jefferson Parish and the RPC shall seek both local and federal funding sources to support this construction program. Because all curbs surveyed in this project are along Federal Aid roads, the RPC will work with the Parish to identify, when possible, the availability of Federal funding to finance accessibility improvements.

4. Policies

4.1 Administrative Guidelines of Notice and Grievance Procedure until Title II of the ADA

This grievance policy is intended to provide a prompt and equitable resolution of complaints alleging discrimination in violation of Parish, State, or Federal law, based on a past or current disability.

This grievance procedure is established to meet the requirements of the Americans with Disabilities Act of 1990 (ADA). It may be used by anyone who wishes to file a complaint alleging discrimination on the basis of disability and the provisions of services, activities, programs, or benefits of Jefferson Parish.

The grievance should be in writing and contain information about the alleged discrimination, such as the name, address, and phone number of the complainant, and the location, date, and description of the complaint or problem. Alternative means of filing complaints, such as personal interviews or a tape recording of the complaint will be made available to persons with disabilities upon request.

The complaint should be submitted by the grievant and/or his/her designee as soon as possible, but no later than sixty (60) calendar days after the alleged violation to the ADA Coordinator, Department of Citizens Affairs, Office of Citizens with Disabilities, 1221 Elmwood Park Blvd., Suite 402, Jefferson, LA 70123, Phone: 736-6086, ADA@jeffparish.net.

An investigation shall promptly follow the filing of a grievance. The investigation shall be conducted by the ADA Coordinator, with the authorization of the Parish administration. This policy contemplates informal but thorough investigations, affording interested persons and their representatives, if any, an opportunity to provide information relative to the grievance. Within fifteen (15) calendar days after receipt of the grievance the ADA Coordinator or his/her designee will meet with the complainant to discuss the complaint and the possible resolutions. Within fifteen (15) calendar days of the meeting, the ADA Coordinator or his/her designee will respond in writing and, where appropriate, in a format accessible to the complainant such as large print, Braille, or audio tape. The response will explain the position of Jefferson Parish and offer options for substantive resolution of the complaint. The response will also be forwarded to the Parish administration and the Parish Attorney's office.

The ADA Coordinator shall maintain all such grievance files and records of Jefferson Parish in the Office of Citizens with Disabilities.

The grievant may request reconsideration in instances where he/she is dissatisfied with the written determination provided by the ADA Coordinator. Requests for reconsideration shall be made in writing to the parish administration. Within fifteen (15) days after receipt of the appeal/reconsideration the parish administration or its designee will meet with the complainant to discuss the complaint and possible resolutions. Within fifteen (15) calendar days after the meeting the parish administration or his/her designee will respond in writing and, where appropriate,

in a format accessible to the complainant with a final resolution of the complaint.

All written complaints received by the ADA Coordinator or their designee and appeals to the parish administration or their designee and responses from these two offices will be retained by Jefferson Parish for at least three (3) years.

A public entity must provide information on Title II's requirements to applicant's participants, beneficiaries, and other interested persons. The notice shall explain Title II's applicability to the public entity's services, programs, or activities.

4.2 Public Notice About the ADA

This public notice is directed to everyone who interacts-or would potentially interact - with the Jefferson Parish Government.

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 (ADA), as amended, Jefferson Parish will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs, or activities.

Employment: Jefferson Parish does not discriminate on the basis of disability in its hiring or employment practices and complies with all regulations promulgated by the U.S. Equal Employment Opportunity Commission under Title I of the ADA.

Effective Communication: Jefferson Parish will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities so they can participate equally in Jefferson Parish programs, services, and activities, including qualified sign language interpreters, documents in Braille, and other ways of making information and communications accessible to people who have speech, hearing, or vision impairments.

Modifications to Policies and Procedures: Jefferson Parish will make all reasonable modifications to policies and programs to ensure that people with disabilities have an equal opportunity to enjoy all of its programs, services, and activities. For example, individuals with service animals are welcomed in Jefferson Parish offices, even where pets are generally prohibited.

Anyone who requires an auxiliary aid or service for effective communication, or a modification of policies or procedures to participate in a program, service, or activity of Jefferson Parish, should contact ADA Coordinator of Jefferson Parish, Department of Citizens Affairs, Office of Citizens with Disabilities, 1221 Elmwood Park Blvd., Suite 402, Jefferson, LA 70123,
Phone: (504) 736-6086, as soon as possible but no later than 48 hours before the scheduled event.

The ADA does not require Jefferson Parish to take any action that would fundamentally alter the nature of its programs or services, or impose an undue financial or administrative burden.

Complaints that a program, service, or activity of Jefferson Parish is not accessible to persons with disabilities should be directed to the ADA Coordinator of Jefferson Parish, Department of Citizens Affairs, Office of Citizens with Disabilities, 1221 Elmwood Park Blvd., Suite 402, Jefferson, LA 70123. Phone: (504) 736-6086

Jefferson Parish will not place a surcharge on a particular individual with a disability or any group of individuals with disabilities to cover the cost of providing auxiliary aids/services or reasonable modifications of policy, such as retrieving items from locations that are open to the public but are not accessible to persons who use wheelchairs.

4.3 Responsible Public Official

The official responsible for implementation of the Transition Plan is the Director of Jefferson Parish Department of Streets located at 1901 Ames Blvd, Marrero, LA 70072, (504) 349-5834.

4.4 Jefferson Parish Standards

See Appendix F for Jefferson Parish Department of Engineering curb ramp standards details.

Appendix A: Survey Form

This survey form was created to show what entities (if applicable) to the community that need to be served in a priority ranking basis. This survey will help prioritize construction for future ADA transitions.

ADVISORY COMMITTEE SURVEY
 Jefferson Parish ADA Transition Plan
 Wednesday October 24, 2:00-3:00pm

Please mark how important you think each category should be to help determine which Jefferson Parish roads should be made more accessible.

Name (optional) _____

	Not important	Somewhat important	Very important	Most important
Government offices				
Public schools and colleges				
Parks				
Hospitals				
Dense job locations (Elmwood, Veterans Blvd., Metairie CBD, etc.)				
Major shopping centers (malls, big box stores)				
Jefferson Transit stops				
Health Clinics				
Small shopping destinations				
Private schools and universities				
Multifamily housing complexes (condos and apartments)				
Community centers				
Other:				
Other:				
Other:				
Other:				
Other:				

Appendix B: Citizens Advisory Committee Roster and Meeting Minutes

Minutes – Meeting #1

October 24, 2012, 2:00-3:00 PM

Regional Planning Commission

10 Veterans Memorial Blvd., New Orleans, LA 70124

Attendees:

COMMITTEE MEMBERS	Present?
Rox'e Homstad, Lighthouse for the Blind	Yes
Calvin Lee, Lighthouse for the Blind	Yes
Ann Butcher, Lighthouse for the Blind	No
Erika Sanders, citizen	Yes
Nella Brainis, citizen	Yes
Kristin Cipriani, citizen	Yes
Crystal Smith, National MS Society	Yes
Anne Ogden, Janke & Associates	Yes
Page McCranie, City of New Orleans	Yes
Cliff Doescher, Arc of Greater New Orleans	Yes
Katherine Hoover, Jefferson Parish	Yes
TECHNICAL STAFF	
Katherine Hoover, Jefferson Parish	Yes
Richard Bettis, University of New Orleans	Yes
Randy Nicholson, Jefferson Parish	Yes
Wilton Demuth, Jefferson Parish	Yes
Walter Brooks, Regional Planning Commission	No
Jeff Roesel, Regional Planning Commission	No
Clare Brown, Regional Planning Commission	Yes
Jason Sappington, Regional Planning Commission	Yes
Josh Schexnayder, GOTECH, Inc.	Yes
Matt Rufo, GCR, Inc.	Yes

Katherine Hoover gave a bit of background information on the history of the ADA within the Parish, mentioning that the inventory was supposed to be completed back in 1992 to bring intersections up to ADA standards. She also noted that this is a large undertaking and of high importance.

Matt Rufo gave an overview of the purpose of the ADA Transition Plan project and the tasks that will be worked on, including prioritization of intersections, public engagement, surveying of priority intersections, and formulation of plan to upgrade deficiencies at them.

Randy Nicholson spoke on behalf of the Jefferson Parish Streets Department. He noted that the Parish does not have the funding to do everything required. The Parish has been working on major intersections but the residential neighborhoods are challenging. There are 15,000 intersections with at least 4 corners at each. As the Parish touches corners they bring them up to ADA standards, but have not been aggressive about these updates in the past. The Parish is now being more aggressive in their surveying of intersections and is no longer just addressing complaints. The average cost to replace a corner is \$2,000 which amounts to \$8,000 per intersection, and this does not include any needed street work the Parish will address while fixing the ramps.

Question: Is there an ordinance in place that prevents parking on sidewalks?

Answer: There is an ordinance but it is not always enforced.

Committee Comment: If the ordinance was enforced that would make a difference.

Question: What about sidewalks that are missing?

Answer: Some neighborhoods do not have sidewalks. Requirement was grandfathered in and if 50% of the neighborhood does not have sidewalks they are not required. If you see a problem, call Jefferson Parish Streets at (504) 349-5800.

Committee Comment: Area in discussion concerning missing sidewalks is between Aris and Papworth – strip of land along service road where the property is private but the road is owned by the state. Also, the Martin Behrman walk strip.

Committee Comment: There is a section of Veterans that is an issue. Is the business responsible for the sidewalk leading from the street to the business? Area in question is off of Severn by Buffalo Wild Wings. Committee Member's chair flipped in this area.

Jefferson Parish Answer: We will survey that area.

Question: Is there any new money coming in other than the original FEMA money?

Answer: We were given a budget of \$400,000 for this year and now have \$400,000 appropriated for next year from the Parish. Walter Brooks and the Regional Planning Commission are also working with us to find other funding.

Question: Why are there no blue dots (indicating surveyed intersections) on the West Bank?

Answer: West Bank intersections have been surveyed but the map is not entirely up to date.

Matt Rufo: Part of the reason we are here today is to find the critical areas and highlight the priorities.

Clare Brown: Please note that the money available is just for the plan. None of the funds are available to actually make the improvements.

Randy Nicholson: Most of the major intersections do have ramps but not all of them are compliant.

Question: How does Airline Highway factor in?

Answer: That is a state highway. This plan addresses Parish routes and not state owned, but we will be surveying all of them and are sharing information with those working on the state's ADA transition plan.

This was followed by discussion of Metairie Road.

Matt Rufo distributed surveys asking attendees to rank the importance of several land uses, to help determine which parish roadways and intersections ought to be high priority. The results will be used to inform the ranking of parish intersections.

Katherine Hoover requested that the maps be made available online or that a large map is available at the meetings, and that government polling places are included.

It was discussed that although the map shows Kenner, the unincorporated parts of the parish will be the focus of the ADA Transition Plan.

Matt Rufo described the next phases of the project, including prioritization analysis, two public forums to be held at time to be determined, and two more Advisory Committee meetings.

Question: Will you be emailing us any additional questions as they arise since our next meeting is in January?

Answer: Yes.

Katherine Hoover also requested that the meeting materials be printed in size 20 font on legal paper in order to accommodate some of the committee members.

Minutes – Meeting #2

January 31, 2013, 2:00pm – 3:00pm
 Regional Planning Commission
 10 Veterans Memorial Blvd., New Orleans, La. 70124

Attendees:

COMMITTEE MEMBERS	Present?
Rox'e Homstad, Lighthouse for the Blind	Yes
Calvin Lee, Lighthouse for the Blind	Yes
Ann Butcher, Lighthouse for the Blind	No
Erika Sanders, citizen	No
Nella Brainis, citizen	No
Kristin Cipriani, citizen	Yes
Crystal Smith, National MS Society	Yes
Anne Ogden, Janke & Associates	No
Page McCranie, City of New Orleans	Yes
Cliff Doescher, Arc of Greater New Orleans	No
Katherine Hoover, Jefferson Parish	Yes
TECHNICAL STAFF	
Katherine Hoover, Jefferson Parish	Yes
Richard Bettis, University of New Orleans	No
Don Hogan Jr., Jefferson Parish Streets Department	Yes
Matthew Zeringue, Jefferson Parish Engineering Department	Yes
Randy Nicholson, Jefferson Parish	Yes
Wilton Demuth, Jefferson Parish	Yes
Walter Brooks, Regional Planning Commission	No
Jeff Roesel, Regional Planning Commission	No
Clare Brown, Regional Planning Commission	Yes
Jason Sappington, Regional Planning Commission	Yes
Josh Schexnayder, GOTECH, Inc.	Yes
Matt Rufo, GCR Inc.	Yes
Elizabeth Griffith, GCR Inc.	Yes

Power Point Presentation Notes

- Matt Rufo began with a presentation focusing on the purpose of the plan, which is to make streets more accessible. The project team is looking at the public right of way, streets, and sidewalks to make them more accessible.
- The team is determining which ADA standards will be included in the survey of intersections

- The team has mapped out the Parish intersections and distinguished which ones are eligible for federal funding and which ones the State is handling with their own plan. The State’s plan is currently underway.
- The project team is not able to survey every intersection, so the survey completed at the last meeting helped determine which streets and intersections were most important to committee members. Hospitals were ranked the highest, with transit stops, government buildings, job centers, health clinics and schools having high rankings as well.
- Based on the prioritization analysis, groupings or nodes of intersections in 19 different areas of the Parish were identified for surveying. These tend to be places with high traffic.
 - Katherine Hoover asked whether the project team had received a list of and considered polling places. Matt explained that these have been included in the government buildings data set, but the plan can include the list for reference. Clare Brown noted that if an intersection does not make it in the plan this does not mean the Jefferson Parish Streets Department will not consider it for upgrades. Katherine also noted that the entire block around the polling place needs to be made accessible.
- The presentation then reviewed an example of the different curb aspects the team will survey at each intersection.
 - It was then asked, if when the plan is complete, will this information be available to the public in the form of a map database? Having information on which intersections have curb cuts and other ADA requirements would be beneficial to trip planning. Ultimately this will be up to Jefferson Parish as they will own the plan, and the project team will support as feasible.

Minutes – Meeting #3

November 19, 2013, 10:00am – 11:30am
 Regional Planning Commission
 10 Veterans Memorial Blvd., New Orleans, La. 70124

COMMITTEE MEMBERS	Present?
Rox'e Homstad, Lighthouse for the Blind	No
Calvin Lee, Lighthouse for the Blind	No
Ann Butcher, Lighthouse for the Blind	No
Erika Sanders, citizen	No
Nella Brainis, citizen	No
Kristin Cipriani, citizen	No
Crystal Smith, National MS Society	No
Anne Ogden, Janke & Associates	No
Page McCranie, City of New Orleans	Yes
Cliff Doescher, Arc of Greater New Orleans	No
Katherine Hoover, Jefferson Parish	Yes
TECHNICAL STAFF	
Katherine Hoover, Jefferson Parish	Yes
Richard Bettis, University of New Orleans	No
Don Hogan Jr., Jefferson Parish Streets Department	Yes
Matthew Zeringue, Jefferson Parish Engineering Department	No
Randy Nicholson, Jefferson Parish	Yes
Wilton Demuth, Jefferson Parish	Yes
Walter Brooks, Regional Planning Commission	No
Clare Brown, Regional Planning Commission	Yes
Jason Sappington, Regional Planning Commission	Yes
Josh Schexnayder, GOTECH, Inc.	Yes
Bruce Dyson, GOTECH, Inc.	Yes
Matt Rufo, GCR Inc.	Yes
Nick Puczkowskyj, GCR Inc.	Yes

Presentation

Matt Rufo presented the final draft of the Transition Plan. Key points include:

- This is a parish level plan, using parish owned roads
- Target areas are stratified into high, medium, and low priority.
- High priority areas will be dealt within 1-2 year, medium priority in 3-4 years, and low 5 years.
- 284 intersections were inspected for this study, with a total of 1138 ramps being surveyed.
- The most current ADA standards will be used for this project

Comments

-Can Submerged Streets funding be used? No, because the funding can only be directed towards residential streets which is not the focus of the plan

-The plan is scheduled to begin next year, but that might not necessarily be true. This is due to the potentially lengthy process of securing federal money for the project. The project might not start for another year or two.

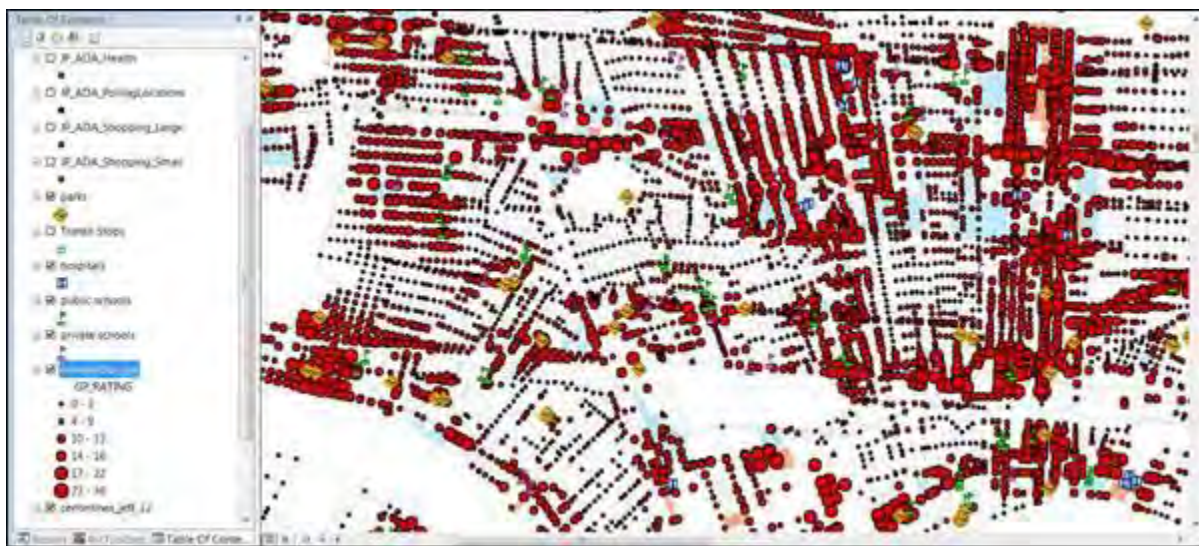
-There was an issue with older terra cotta colored ramp surfaces fading in color. This was due to the dye used in the material. Newer materials, resistant to UV light, are scheduled to be used for the new ramps and are currently being used by Jefferson Parish.

-It was suggested that the plans “draft” watermark be removed when the plan is sent to the councilmember meeting to induce a speedy approval. The rebuttal being, an unmarked draft could be seen as final and create a situation where multiple drafts are in circulation.

Appendix C: Target Area Methodology

Thematic and base layer data for the study area were assembled in a GIS for spatial analysis. An intersections point file was derived from the Jefferson Parish Streets layer. The resulting street intersections were overlaid with a custom built data set of analysis criteria features, including point destinations, and 2010 census blocks attributed with job density and population density information. Each intersection point was assessed a priority score based on its 1,000 foot proximity to the analysis criteria features (see Figure 5).

Figure 5 Street Intersection Mapping and Spatial Analysis sample



Intersections were given a score based on the number of destinations, each with varying weights, within 1,000 feet. High priority destinations, such as hospitals and bus stops, received a weight of “5,” while medium priority destinations, such as small retail centers, received a weight of “3.” For example, the score of an intersection within 1,000 feet of 50 high-priority and 20 medium-priority destinations would be calculated as such:

$$\text{DESTINATION LAND USE SCORE} = (50 \times 5) + (20 \times 3) = 310$$

The project’s Advisory Committee participated in the ranking of these priorities. Table 7 shows a full list of destinations and their weights.

Table 7: Destination Land Use Weighting

High Priority (Weight = 5)	Medium Priority (Weight = 3)
Dense job locations	Community centers
Government offices	Population density
Health clinics	Private schools
Hospitals	Small shopping destinations
Major shopping centers	
Parks	
Polling locations	
Public Schools	
Transit stops	

Following this analysis, the top 500 clustered intersections were selected to be a part of the field survey. These intersections are exclusive of roads that do not receive federal aid and those owned by the state or municipalities.

Appendix D: Detailed Curb Ramp Improvement Needs and Schedule

Jefferson Parish ADA Transition Plan / Summary of survey results, organized by target area and priority

Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
1	1	40	1	1	11	DOWNS BLVD	VETERANS MEMORIAL BLVD S	Perpendicular
1	1	40	2	1	75	DOWNS BLVD	VETERANS MEMORIAL BLVD S	None
1	1	40	3	3	20	DOWNS BLVD	VETERANS MEMORIAL BLVD S	Apex
1	1	40	4	1	0	DOWNS BLVD	VETERANS MEMORIAL BLVD S	Perpendicular
1	1	40	4	2	11	DOWNS BLVD	VETERANS MEMORIAL BLVD S	Perpendicular
1	1	40	C	1	80	DOWNS BLVD	VETERANS MEMORIAL BLVD S	None
1	1	54	2	1	80	VETERANS MEMORIAL BLVD S	I-10 RAMP	None
1	1	54	3	1	80	VETERANS MEMORIAL BLVD S	I-10 RAMP	None
1	1	63	1	1	13	VETERANS MEMORIAL BLVD N	MISSISSIPPI AVE	Perpendicular
1	1	63	1	2	14	VETERANS MEMORIAL BLVD N	MISSISSIPPI AVE	Perpendicular
1	1	63	2	1	19	VETERANS MEMORIAL BLVD N	MISSISSIPPI AVE	Perpendicular
1	1	63	2	2	22	VETERANS MEMORIAL BLVD N	MISSISSIPPI AVE	Perpendicular
1	1	63	3	1	19	VETERANS MEMORIAL BLVD N	MISSISSIPPI AVE	Perpendicular
1	1	63	4	1	75	VETERANS MEMORIAL BLVD N	MISSISSIPPI AVE	None
1	1	63	A	1	4	VETERANS MEMORIAL BLVD N	MISSISSIPPI AVE	Cut-through
1	1	63	A	2	4	VETERANS MEMORIAL BLVD N	MISSISSIPPI AVE	Cut-through
1	1	64	1	1	80	VETERANS MEMORIAL BLVD N	I-10 RAMP	None
1	2	50	1	3	5	POWER BLVD W	VETERANS MEMORIAL BLVD N	Apex
1	2	50	2	3	10	POWER BLVD W	VETERANS MEMORIAL BLVD N	Apex
1	2	50	3	2	14	POWER BLVD W	VETERANS MEMORIAL BLVD N	Perpendicular
1	2	599	1	3	10	VETERANS MEMORIAL BLVD	GREEN ACRES RD	Apex
1	2	599	2	1	7	VETERANS MEMORIAL BLVD	GREEN ACRES RD	Perpendicular
1	2	599	2	2	10	VETERANS MEMORIAL BLVD	GREEN ACRES RD	Perpendicular
1	2	599	3	1	17	VETERANS MEMORIAL BLVD	GREEN ACRES RD	Perpendicular
1	2	599	4	2	8	VETERANS MEMORIAL BLVD	GREEN ACRES RD	Perpendicular
1	2	599	A	1	5	VETERANS MEMORIAL BLVD	GREEN ACRES RD	Perpendicular
1	2	599	A	2	2	VETERANS MEMORIAL BLVD	GREEN ACRES RD	Perpendicular
1	3	71	1	3	4	MASSACHUSETTS AVE	VETERANS MEMORIAL BLVD N	Apex
1	3	71	2	2	24	MASSACHUSETTS AVE	VETERANS MEMORIAL BLVD N	Perpendicular
1	3	71	3	1	24	MASSACHUSETTS AVE	VETERANS MEMORIAL BLVD N	Perpendicular
1	3	71	4	3	2	MASSACHUSETTS AVE	VETERANS MEMORIAL BLVD N	Apex
1	3	598	1	2	14	POWER BLVD E	RIVERSIDE DR	Apex
1	3	598	2	3	32	POWER BLVD E	RIVERSIDE DR	Apex
1	3	598	B	1	7	POWER BLVD E	RIVERSIDE DR	Perpendicular
1	3	598	B	2	14	POWER BLVD E	RIVERSIDE DR	Perpendicular
1	3	598	C	1	7	POWER BLVD E	RIVERSIDE DR	Perpendicular
1	3	598	C	2	7	POWER BLVD E	RIVERSIDE DR	Perpendicular
1	3	598	D	1	12	POWER BLVD E	RIVERSIDE DR	Perpendicular
1	3	658	3	2	12	W CANAL AVE	VETERANS MEMORIAL BLVD	Perpendicular
1	3	658	4	3	10	W CANAL AVE	VETERANS MEMORIAL BLVD	Perpendicular
1	3	658	C	1	2	W CANAL AVE	VETERANS MEMORIAL BLVD	Cut-through
1	3	661	1	1	23	CRAIG AVE	KAWANEE AVE	Perpendicular
1	3	661	1	2	20	CRAIG AVE	KAWANEE AVE	Perpendicular
1	3	661	4	1	8	CRAIG AVE	KAWANEE AVE	Perpendicular
1	3	661	4	2	13	CRAIG AVE	KAWANEE AVE	Perpendicular
2	1	319	1	1	17	TRANSCONTINENTAL DR W	YORK ST	Perpendicular
2	1	319	1	2	30	TRANSCONTINENTAL DR W	YORK ST	Perpendicular
2	1	319	2	1	24	TRANSCONTINENTAL DR W	YORK ST	Perpendicular
2	1	319	2	2	19	TRANSCONTINENTAL DR W	YORK ST	Perpendicular
2	1	319	3	3	22	TRANSCONTINENTAL DR W	YORK ST	Apex
2	1	319	4	1	29	TRANSCONTINENTAL DR W	YORK ST	Perpendicular
2	1	319	4	2	22	TRANSCONTINENTAL DR W	YORK ST	Perpendicular
2	1	328	1	1	27	TRANSCONTINENTAL DR W	HEARST ST	Perpendicular
2	1	328	1	2	19	TRANSCONTINENTAL DR W	HEARST ST	Perpendicular
2	1	328	2	1	19	TRANSCONTINENTAL DR W	HEARST ST	Perpendicular
2	1	328	3	2	4	TRANSCONTINENTAL DR W	HEARST ST	Perpendicular



Jefferson Parish ADA Transition Plan / Summary of survey results, organized by target area and priority

Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
2	1	328	4	1	13	TRANSCONTINENTAL DR W	HEARST ST	Perpendicular
2	1	328	4	2	13	TRANSCONTINENTAL DR W	HEARST ST	Perpendicular
2	1	673	1	1	80	HARVARD AVE	W NAPOLEON AVE N	None
2	1	673	4	3	14	HARVARD AVE	W NAPOLEON AVE N	Apex
2	1	691	3	2	24	VINELAND	TRANSCONTINENTAL DR	Perpendicular
2	1	691	4	1	90	VINELAND	TRANSCONTINENTAL DR	None
2	2	307	1	2	15	TRANSCONTINENTAL DR W	ARGONNE ST	Perpendicular
2	2	307	2	3	10	TRANSCONTINENTAL DR W	ARGONNE ST	Apex
2	2	307	3	2	9	TRANSCONTINENTAL DR W	ARGONNE ST	Perpendicular
2	2	307	4	1	24	TRANSCONTINENTAL DR W	ARGONNE ST	Perpendicular
2	2	309	1	1	27	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	1	2	27	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	2	3	9	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Apex
2	2	309	3	2	9	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Apex
2	2	309	3	3	9	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Apex
2	2	309	4	3	4	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Apex
2	2	309	A	1	14	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	A	2	12	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	B	1	9	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	B	2	9	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	C	1	14	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	C	2	19	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	D	1	9	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	309	D	2	12	TRANSCONTINENTAL DR W	W NAPOLEON AVE S	Perpendicular
2	2	318	1	2	29	TRANSCONTINENTAL DR W	ZENITH ST	Perpendicular
2	2	318	2	3	14	TRANSCONTINENTAL DR W	ZENITH ST	Apex
2	2	318	3	1	47	TRANSCONTINENTAL DR W	ZENITH ST	Perpendicular
2	2	318	3	2	44	TRANSCONTINENTAL DR W	ZENITH ST	Perpendicular
2	2	318	4	1	22	TRANSCONTINENTAL DR W	ZENITH ST	Perpendicular
2	2	318	B	1	5	TRANSCONTINENTAL DR W	ZENITH ST	Cut-through
2	2	318	B	2	5	TRANSCONTINENTAL DR W	ZENITH ST	Cut-through
2	2	330	1	1	24	TRANSCONTINENTAL DR W	WABASH ST	Perpendicular
2	2	330	1	2	14	TRANSCONTINENTAL DR W	WABASH ST	Perpendicular
2	2	330	2	1	29	TRANSCONTINENTAL DR W	WABASH ST	Perpendicular
2	2	330	3	2	7	TRANSCONTINENTAL DR W	WABASH ST	Perpendicular
2	2	330	4	1	20	TRANSCONTINENTAL DR W	WABASH ST	Perpendicular
2	2	330	4	2	12	TRANSCONTINENTAL DR W	WABASH ST	Perpendicular
2	2	674	2	3	20	HARVARD AVE	W NAPOLEON AVE S	Apex
2	2	674	3	3	17	HARVARD AVE	W NAPOLEON AVE S	Apex
2	2	692	1	3	9	LIME ST	W NAPOLEON AVE N	Apex
2	2	692	4	3	19	LIME ST	W NAPOLEON AVE N	Apex
2	3	335	1	3	9	KENT AVE	W NAPOLEON AVE N	Apex
2	3	335	4	3	12	KENT AVE	W NAPOLEON AVE N	Apex
2	3	615	1	3	24	TRANSCONTINENTAL DR	UTICA AVE	Apex
2	3	615	2	3	17	TRANSCONTINENTAL DR	UTICA AVE	Apex
2	3	615	3	1	90	TRANSCONTINENTAL DR	UTICA AVE	None
2	3	615	4	3	14	TRANSCONTINENTAL DR	UTICA AVE	Apex
2	3	615	B	1	14	TRANSCONTINENTAL DR	UTICA AVE	Cut-through
2	3	671	2	2	4	LEMON ST	W NAPOLEON AVE S	Perpendicular
2	3	671	3	1	12	LEMON ST	W NAPOLEON AVE S	Perpendicular
2	3	672	1	3	21	LEMON ST	W NAPOLEON AVE N	Apex
2	3	672	4	3	18	LEMON ST	W NAPOLEON AVE N	Apex
2	3	675	1	3	8	N WOODLAWN AVE	W NAPOLEON AVE N	Apex
2	3	675	4	3	19	N WOODLAWN AVE	W NAPOLEON AVE N	Apex
3	1	350	1	1	80	HOUMA BLVD E	W ESPLANADE AVE S	None
3	1	350	2	3	24	HOUMA BLVD E	W ESPLANADE AVE S	Apex



Jefferson Parish ADA Transition Plan / Summary of survey results, organized by target area and priority

Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
3	1	350	3	1	14	HOUMA BLVD E	W ESPLANADE AVE S	Apex
3	1	350	3	3	19	HOUMA BLVD E	W ESPLANADE AVE S	Apex
3	1	350	4	1	90	HOUMA BLVD E	W ESPLANADE AVE S	None
3	1	350	C	1	12	HOUMA BLVD E	W ESPLANADE AVE S	Perpendicular
3	1	350	C	2	12	HOUMA BLVD E	W ESPLANADE AVE S	Perpendicular
3	1	657	3	1	75	LAKE VILLA DR	W ESPLANADE AVE S	None
3	2	654	2	3	10	KENT AVE	W ESPLANADE AVE S	Apex
3	2	654	3	1	90	KENT AVE	W ESPLANADE AVE S	None
3	2	656	2	3	31	W ESPLANADE AVE S	HUDSON ST	Apex
3	2	656	3	1	30	W ESPLANADE AVE S	HUDSON ST	Perpendicular
3	3	361	1	1	10	W ESPLANADE AVE S	LAKEPORT DR	Perpendicular
3	3	361	2	3	25	W ESPLANADE AVE S	LAKEPORT DR	Apex
3	3	361	3	3	19	W ESPLANADE AVE S	LAKEPORT DR	Apex
3	3	361	4	2	28	W ESPLANADE AVE S	LAKEPORT DR	Perpendicular
3	3	647	2	3	12	N WOODLAWN AVE	W ESPLANADE AVE S	Apex
3	3	647	3	3	25	N WOODLAWN AVE	W ESPLANADE AVE S	Apex
3	3	650	1	1	17	W ESPLANADE AVE N	CHASTANT ST	Perpendicular
3	3	650	4	2	7	W ESPLANADE AVE N	CHASTANT ST	Perpendicular
3	3	651	1	3	13	MORALES ST	W ESPLANADE AVE N	Perpendicular
3	3	651	4	3	7	MORALES ST	W ESPLANADE AVE N	Perpendicular
3	3	652	1	3	12	W ESPLANADE AVE N	LAPLACE ST	Apex
3	3	652	4	3	5	W ESPLANADE AVE N	LAPLACE ST	Apex
3	3	653	1	1	7	DREYFOUS AVE	W ESPLANADE AVE N	Perpendicular
3	3	653	4	3	17	DREYFOUS AVE	W ESPLANADE AVE N	Apex
3	3	662	1	1	13	KENT AVE	W ESPLANADE AVE N	Perpendicular
3	3	662	4	2	14	KENT AVE	W ESPLANADE AVE N	Perpendicular
3	3	663	1	1	2	BARNETT ST	W ESPLANADE AVE N	Perpendicular
3	3	663	4	2	8	BARNETT ST	W ESPLANADE AVE N	Perpendicular
3	3	664	1	1	15	HERRMANN ST	W ESPLANADE AVE N	Perpendicular
3	3	664	1	2	75	HERRMANN ST	W ESPLANADE AVE N	None
3	3	664	4	3	12	HERRMANN ST	W ESPLANADE AVE N	Apex
4	1	387	1	1	80	VETERANS MEMORIAL BLVD N	KINGMAN ST	None
4	1	387	4	1	80	VETERANS MEMORIAL BLVD N	KINGMAN ST	None
4	1	617	1	1	80	VETERANS MEMORIAL BLVD N	N WOODLAWN AVE	None
4	1	617	4	2	8	VETERANS MEMORIAL BLVD N	N WOODLAWN AVE	Perpendicular
4	1	669	1	1	5	HUDSON ST	VETERANS MEMORIAL BLVD N	Perpendicular
4	1	669	4	1	80	HUDSON ST	VETERANS MEMORIAL BLVD N	None
4	2	372	1	2	24	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Perpendicular
4	2	372	1	3	10	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	2	3	19	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	3	3	34	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	4	3	19	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	A	1	19	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	A	2	19	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	B	1	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Cut-through
4	2	372	B	2	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Cut-through
4	2	372	C	1	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Cut-through
4	2	372	C	2	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Cut-through
4	2	372	D	1	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Perpendicular
4	2	372	D	2	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Perpendicular
4	2	372	D	3	9	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	E	1	19	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	E	2	14	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Apex
4	2	372	F	1	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Cut-through
4	2	372	F	2	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Cut-through
4	2	372	G	1	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Cut-through



Jefferson Parish ADA Transition Plan / Summary of survey results, organized by target area and priority

Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
4	2	372	G	2	4	CLEARVIEW PKWY W	VETERANS MEMORIAL BLVD S	Cut-through
4	2	597	1	3	9	HOUMA BLVD	VETERANS MEMORIAL BLVD	Apex
4	2	597	2	2	0	HOUMA BLVD	VETERANS MEMORIAL BLVD	Perpendicular
4	2	597	3	1	0	HOUMA BLVD	VETERANS MEMORIAL BLVD	Perpendicular
4	2	597	3	2	5	HOUMA BLVD	VETERANS MEMORIAL BLVD	Perpendicular
4	2	597	4	2	5	HOUMA BLVD	VETERANS MEMORIAL BLVD	Apex
4	2	597	C	1	3	HOUMA BLVD	VETERANS MEMORIAL BLVD	Perpendicular
4	2	597	C	2	0	HOUMA BLVD	VETERANS MEMORIAL BLVD	Perpendicular
4	2	670	1	1	80	LIME ST	VETERANS MEMORIAL BLVD N	None
4	2	670	4	2	7	LIME ST	VETERANS MEMORIAL BLVD N	Perpendicular
4	3	667	1	1	12	LEMON ST	VETERANS MEMORIAL BLVD N	Perpendicular
4	3	667	4	2	12	LEMON ST	VETERANS MEMORIAL BLVD N	Perpendicular
4	3	668	1	1	20	HARVARD AVE	VETERANS MEMORIAL BLVD N	Perpendicular
4	3	668	4	2	15	HARVARD AVE	VETERANS MEMORIAL BLVD N	Perpendicular
5	1	399	1	3	19	VETERANS MEMORIAL BLVD S	CLEARY AVE	Apex
5	1	399	2	1	15	VETERANS MEMORIAL BLVD S	CLEARY AVE	Perpendicular
5	1	399	2	2	19	VETERANS MEMORIAL BLVD S	CLEARY AVE	Perpendicular
5	1	399	3	1	7	VETERANS MEMORIAL BLVD S	CLEARY AVE	Perpendicular
5	1	399	3	2	7	VETERANS MEMORIAL BLVD S	CLEARY AVE	Perpendicular
5	1	399	4	3	12	VETERANS MEMORIAL BLVD S	CLEARY AVE	Apex
5	1	399	A	1	14	VETERANS MEMORIAL BLVD S	CLEARY AVE	Perpendicular
5	1	399	A	2	14	VETERANS MEMORIAL BLVD S	CLEARY AVE	Perpendicular
5	1	399	C	1	19	VETERANS MEMORIAL BLVD S	CLEARY AVE	Perpendicular
5	1	399	C	2	24	VETERANS MEMORIAL BLVD S	CLEARY AVE	Perpendicular
5	2	397	2	3	10	VETERANS MEMORIAL BLVD S	RICHLAND AVE	Apex
5	2	397	3	1	75	VETERANS MEMORIAL BLVD S	RICHLAND AVE	None
5	2	397	A	2	12	VETERANS MEMORIAL BLVD S	RICHLAND AVE	Perpendicular
5	2	402	2	2	17	VETERANS MEMORIAL BLVD S	TAFT PK	Perpendicular
5	2	402	3	1	16	VETERANS MEMORIAL BLVD S	TAFT PK	Perpendicular
5	2	402	C	1	12	VETERANS MEMORIAL BLVD S	TAFT PK	Perpendicular
5	2	596	1	1	4	VETERANS MEMORIAL BLVD N	RICHLAND AVE	Perpendicular
5	2	596	1	2	4	VETERANS MEMORIAL BLVD N	RICHLAND AVE	Perpendicular
5	2	596	2	3	33	VETERANS MEMORIAL BLVD N	RICHLAND AVE	Apex
5	2	596	3	1	75	VETERANS MEMORIAL BLVD N	RICHLAND AVE	None
5	2	596	4	3	19	VETERANS MEMORIAL BLVD N	RICHLAND AVE	Apex
5	2	596	A	1	5	VETERANS MEMORIAL BLVD N	RICHLAND AVE	Perpendicular
5	2	596	A	2	23	VETERANS MEMORIAL BLVD N	RICHLAND AVE	Perpendicular
5	3	408	2	2	5	DANNY PK	VETERANS MEMORIAL BLVD S	Perpendicular
5	3	408	3	1	7	DANNY PK	VETERANS MEMORIAL BLVD S	Perpendicular
5	3	665	1	1	12	VETERANS MEMORIAL BLVD N	JURGENS ST	Perpendicular
5	3	665	4	3	7	VETERANS MEMORIAL BLVD N	JURGENS ST	Apex
5	3	666	1	1	9	DIVISION ST	VETERANS MEMORIAL BLVD	Perpendicular
5	3	666	2	2	16	DIVISION ST	VETERANS MEMORIAL BLVD	Perpendicular
5	3	666	3	1	21	DIVISION ST	VETERANS MEMORIAL BLVD	Perpendicular
5	3	666	4	2	7	DIVISION ST	VETERANS MEMORIAL BLVD	Perpendicular
5	3	666	C	1	12	DIVISION ST	VETERANS MEMORIAL BLVD	Perpendicular
5	3	666	C	2	7	DIVISION ST	VETERANS MEMORIAL BLVD	Perpendicular
6	1	414	1	1	75	SEVERN AVE E	MELVIL DEWEY DR	None
6	1	415	1	3	20	N CAUSEWAY BLVD E	14TH ST	Apex
6	1	415	2	3	25	N CAUSEWAY BLVD E	14TH ST	Perpendicular
6	1	425	1	3	30	N CAUSEWAY BLVD E	16TH ST	Apex
6	1	425	2	3	34	N CAUSEWAY BLVD E	16TH ST	Apex
6	1	425	3	3	20	N CAUSEWAY BLVD E	16TH ST	Apex
6	1	425	4	3	33	N CAUSEWAY BLVD E	16TH ST	Apex
6	1	432	1	1	75	5TH ST	N CAUSEWAY BLVD W	None
6	1	432	2	3	5	5TH ST	N CAUSEWAY BLVD W	Apex



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
6	1	432	3	1	75	5TH ST	N CAUSEWAY BLVD W	None
6	1	432	4	1	75	5TH ST	N CAUSEWAY BLVD W	None
6	1	436	1	1	80	N CAUSEWAY BLVD W	CAUSEWAY BLVD SERVICE RD W	None
6	1	437	1	1	80	N CAUSEWAY BLVD E	CAUSEWAY BLVD SERVICE RD E	None
6	1	441	1	1	80	SEVERN AVE E	12TH ST	None
6	1	443	1	3	20	N CAUSEWAY BLVD E	12TH ST	Apex
6	1	443	2	3	20	N CAUSEWAY BLVD E	12TH ST	Perpendicular
6	1	449	1	2	25	N CAUSEWAY BLVD W	W ESPLANADE AVE S	Perpendicular
6	1	449	2	2	39	N CAUSEWAY BLVD W	W ESPLANADE AVE S	Perpendicular
6	1	449	2	3	29	N CAUSEWAY BLVD W	W ESPLANADE AVE S	Apex
6	1	449	3	1	20	N CAUSEWAY BLVD W	W ESPLANADE AVE S	Perpendicular
6	1	449	3	3	18	N CAUSEWAY BLVD W	W ESPLANADE AVE S	Apex
6	1	449	4	1	20	N CAUSEWAY BLVD W	W ESPLANADE AVE S	Perpendicular
6	1	449	B	1	9	N CAUSEWAY BLVD W	W ESPLANADE AVE S	Perpendicular
6	1	449	B	2	14	N CAUSEWAY BLVD W	W ESPLANADE AVE S	Perpendicular
6	1	450	1	3	17	N CAUSEWAY BLVD W	W ESPLANADE AVE N	Apex
6	1	450	2	3	32	N CAUSEWAY BLVD W	W ESPLANADE AVE N	Apex
6	1	450	3	3	25	N CAUSEWAY BLVD W	W ESPLANADE AVE N	Apex
6	1	450	4	3	30	N CAUSEWAY BLVD W	W ESPLANADE AVE N	Apex
6	1	450	D	1	12	N CAUSEWAY BLVD W	W ESPLANADE AVE N	Perpendicular
6	1	450	D	2	19	N CAUSEWAY BLVD W	W ESPLANADE AVE N	Perpendicular
6	1	454	1	1	80	N CAUSEWAY BLVD E	9TH ST	None
6	1	454	2	1	80	N CAUSEWAY BLVD E	9TH ST	None
6	1	454	3	1	75	N CAUSEWAY BLVD E	9TH ST	None
6	1	480	1	3	22	RIDGELAKE DR	W ESPLANADE AVE S	Apex
6	1	480	2	3	17	RIDGELAKE DR	W ESPLANADE AVE S	Apex
6	1	480	3	3	24	RIDGELAKE DR	W ESPLANADE AVE S	Apex
6	1	480	4	3	27	RIDGELAKE DR	W ESPLANADE AVE S	Apex
6	1	483	1	3	19	RIDGELAKE DR	W ESPLANADE AVE N	Apex
6	1	483	2	3	32	RIDGELAKE DR	W ESPLANADE AVE N	Apex
6	1	483	3	3	37	RIDGELAKE DR	W ESPLANADE AVE N	Apex
6	1	483	4	3	19	RIDGELAKE DR	W ESPLANADE AVE N	Apex
6	1	484	1	1	75	W ESPLANADE AVE N	TOLMAS DR	None
6	1	484	4	2	19	W ESPLANADE AVE N	TOLMAS DR	Perpendicular
6	2	411	1	3	18	SEVERN AVE W	14TH ST	Perpendicular
6	2	411	2	1	80	SEVERN AVE W	14TH ST	None
6	2	411	3	1	80	SEVERN AVE W	14TH ST	None
6	2	411	4	1	8	SEVERN AVE W	14TH ST	Perpendicular
6	2	412	3	3	14	SEVERN AVE W	MELVIL DEWEY DR	Apex
6	2	412	4	1	75	SEVERN AVE W	MELVIL DEWEY DR	None
6	2	419	3	3	28	N CAUSEWAY BLVD W	15TH ST	Perpendicular
6	2	419	4	3	12	N CAUSEWAY BLVD W	15TH ST	Apex
6	2	420	1	3	45	N CAUSEWAY BLVD E	7TH ST	Apex
6	2	420	2	3	19	N CAUSEWAY BLVD E	7TH ST	Apex
6	2	420	3	2	25	N CAUSEWAY BLVD E	7TH ST	Perpendicular
6	2	420	4	1	30	N CAUSEWAY BLVD E	7TH ST	Perpendicular
6	2	429	1	3	35	N CAUSEWAY BLVD E	17TH ST	Apex
6	2	429	2	3	30	N CAUSEWAY BLVD E	17TH ST	Apex
6	2	429	3	3	29	N CAUSEWAY BLVD E	17TH ST	Apex
6	2	429	4	3	19	N CAUSEWAY BLVD E	17TH ST	Perpendicular
6	2	429	C	1	14	N CAUSEWAY BLVD E	17TH ST	Cut-through
6	2	429	C	2	9	N CAUSEWAY BLVD E	17TH ST	Cut-through
6	2	439	3	1	75	SEVERN AVE W	12TH ST	None
6	2	439	4	1	7	SEVERN AVE W	12TH ST	Perpendicular
6	2	439	4	2	4	SEVERN AVE W	12TH ST	Perpendicular
6	2	440	1	1	15	SEVERN AVE W	W ESPLANADE AVE S	Perpendicular



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
6	2	440	2	3	5	SEVERN AVE W	W ESPLANADE AVE S	Apex
6	2	440	3	3	10	SEVERN AVE W	W ESPLANADE AVE S	Apex
6	2	440	4	1	10	SEVERN AVE W	W ESPLANADE AVE S	Perpendicular
6	2	440	4	2	7	SEVERN AVE W	W ESPLANADE AVE S	Perpendicular
6	2	440	B	1	0	SEVERN AVE W	W ESPLANADE AVE S	Cut-through
6	2	440	B	2	0	SEVERN AVE W	W ESPLANADE AVE S	Cut-through
6	2	440	D	1	5	SEVERN AVE W	W ESPLANADE AVE S	Perpendicular
6	2	440	D	2	5	SEVERN AVE W	W ESPLANADE AVE S	Perpendicular
6	2	440	E	1	0	SEVERN AVE W	W ESPLANADE AVE S	Cut-through
6	2	440	E	2	0	SEVERN AVE W	W ESPLANADE AVE S	Cut-through
6	2	445	1	3	15	N CAUSEWAY BLVD W	MELVIL DEWEY DR	Apex
6	2	445	2	3	5	N CAUSEWAY BLVD W	MELVIL DEWEY DR	Apex
6	2	445	3	3	38	N CAUSEWAY BLVD W	MELVIL DEWEY DR	Apex
6	2	445	4	3	35	N CAUSEWAY BLVD W	MELVIL DEWEY DR	Apex
6	2	453	1	3	29	N CAUSEWAY BLVD E	8TH ST	Apex
6	2	453	2	1	75	N CAUSEWAY BLVD E	8TH ST	None
6	2	453	3	3	24	N CAUSEWAY BLVD E	8TH ST	Apex
6	2	453	4	3	20	N CAUSEWAY BLVD E	8TH ST	Apex
6	2	488	1	3	10	N HULLEN ST	W ESPLANADE AVE S	Apex
6	2	488	2	3	10	N HULLEN ST	W ESPLANADE AVE S	Apex
6	2	488	3	3	5	N HULLEN ST	W ESPLANADE AVE S	Apex
6	2	488	4	3	15	N HULLEN ST	W ESPLANADE AVE S	Apex
6	2	645	1	3	10	CHATEAU DR	W ESPLANADE AVE N	Apex
6	2	645	3	2	5	CHATEAU DR	W ESPLANADE AVE N	Perpendicular
6	2	645	4	1	16	CHATEAU DR	W ESPLANADE AVE N	Perpendicular
6	2	645	4	3	29	CHATEAU DR	W ESPLANADE AVE N	Perpendicular
6	2	645	C	1	5	CHATEAU DR	W ESPLANADE AVE N	Perpendicular
6	2	645	C	2	5	CHATEAU DR	W ESPLANADE AVE N	Perpendicular
6	2	649	2	3	3	W ESPLANADE AVE S	GRACE KING PL	Perpendicular
6	2	649	3	1	15	W ESPLANADE AVE S	GRACE KING PL	Perpendicular
6	3	434	1	3	5	N CAUSEWAY BLVD E	6TH ST	Apex
6	3	434	2	3	5	N CAUSEWAY BLVD E	6TH ST	Apex
6	3	434	3	3	5	N CAUSEWAY BLVD E	6TH ST	Apex
6	3	434	4	3	10	N CAUSEWAY BLVD E	6TH ST	Apex
6	3	435	1	3	38	N CAUSEWAY BLVD E	18TH ST	Apex
6	3	435	2	3	38	N CAUSEWAY BLVD E	18TH ST	Apex
6	3	438	1	3	30	CAUSEWAY BLVD SERVICE RD E	19TH ST	Apex
6	3	438	2	3	30	CAUSEWAY BLVD SERVICE RD E	19TH ST	Apex
6	3	457	2	2	5	W ESPLANADE AVE S	N ARNOULT ACCESS RD	Perpendicular
6	3	457	3	1	10	W ESPLANADE AVE S	N ARNOULT ACCESS RD	Perpendicular
6	3	481	2	2	10	W ESPLANADE AVE S	TOLMAS DR	Perpendicular
6	3	481	3	1	4	W ESPLANADE AVE S	TOLMAS DR	Perpendicular
6	3	491	2	2	25	VILLAGE DR	W ESPLANADE AVE S	Perpendicular
6	3	491	3	1	5	VILLAGE DR	W ESPLANADE AVE S	Perpendicular
6	3	646	2	2	0	W ESPLANADE AVE S	N TURNBULL DR	Perpendicular
6	3	646	3	1	3	W ESPLANADE AVE S	N TURNBULL DR	Perpendicular
6	3	648	2	2	3	W ESPLANADE AVE S	NEYREY DR	Perpendicular
6	3	648	3	1	0	W ESPLANADE AVE S	NEYREY DR	Perpendicular
6	3	660	2	3	5	W ESPLANADE AVE S	DIVISION ST	Apex
6	3	660	3	3	5	W ESPLANADE AVE S	DIVISION ST	Apex
7	1	495	3	3	29	SEVERN AVE W	22ND ST	Apex
7	1	495	4	3	42	SEVERN AVE W	22ND ST	Apex
7	1	506	1	1	10	VETERANS MEMORIAL BLVD N	CLIFFORD DR	Perpendicular
7	1	506	3	2	15	VETERANS MEMORIAL BLVD N	CLIFFORD DR	Apex
7	1	506	4	1	16	VETERANS MEMORIAL BLVD N	CLIFFORD DR	Perpendicular
7	1	506	4	2	0	VETERANS MEMORIAL BLVD N	CLIFFORD DR	Perpendicular



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
7	1	506	C	1	15	VETERANS MEMORIAL BLVD N	CLIFFORD DR	Perpendicular
7	1	506	C	2	25	VETERANS MEMORIAL BLVD N	CLIFFORD DR	Perpendicular
7	1	514	3	1	75	SEVERN AVE W	21ST ST	None
7	1	514	4	1	75	SEVERN AVE W	21ST ST	None
7	1	530	1	1	80	SEVERN AVE W	28TH ST	None
7	1	530	2	1	75	SEVERN AVE W	28TH ST	None
7	1	530	3	1	19	SEVERN AVE W	28TH ST	Perpendicular
7	1	530	3	2	29	SEVERN AVE W	28TH ST	Perpendicular
7	1	530	4	1	75	SEVERN AVE W	28TH ST	None
7	1	530	B	1	85	SEVERN AVE W	28TH ST	None
7	1	530	D	1	75	SEVERN AVE W	28TH ST	None
7	1	539	1	1	75	TOLMAS DR	VETERANS MEMORIAL BLVD N	None
7	1	539	4	1	75	TOLMAS DR	VETERANS MEMORIAL BLVD N	None
7	1	540	1	3	4	VETERANS MEMORIAL BLVD S	EDENBORN AVE	Apex
7	1	540	2	3	4	VETERANS MEMORIAL BLVD S	EDENBORN AVE	Apex
7	1	540	3	3	14	VETERANS MEMORIAL BLVD S	EDENBORN AVE	Apex
7	1	540	4	3	19	VETERANS MEMORIAL BLVD S	EDENBORN AVE	Apex
7	1	540	A	1	22	VETERANS MEMORIAL BLVD S	EDENBORN AVE	Apex
7	1	540	A	2	9	VETERANS MEMORIAL BLVD S	EDENBORN AVE	Apex
7	1	543	1	1	80	RIDGEWAY DR	VETERANS MEMORIAL BLVD N	None
7	1	543	4	1	80	RIDGEWAY DR	VETERANS MEMORIAL BLVD N	None
7	1	544	1	1	75	VETERANS MEMORIAL BLVD N	METAIRIE HEIGHTS AVE	None
7	1	544	4	1	80	VETERANS MEMORIAL BLVD N	METAIRIE HEIGHTS AVE	None
7	1	550	2	1	80	BEVERLY GARDEN DR	VETERANS MEMORIAL BLVD S	None
7	1	550	3	1	24	BEVERLY GARDEN DR	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	496	1	2	13	SEVERN AVE E	KENNETH ST	Perpendicular
7	2	496	2	1	10	SEVERN AVE E	KENNETH ST	Perpendicular
7	2	496	3	1	7	SEVERN AVE E	KENNETH ST	Perpendicular
7	2	496	3	2	7	SEVERN AVE E	KENNETH ST	Perpendicular
7	2	496	4	1	75	SEVERN AVE E	KENNETH ST	None
7	2	496	B	1	75	SEVERN AVE E	KENNETH ST	None
7	2	496	D	1	75	SEVERN AVE E	KENNETH ST	None
7	2	499	2	3	17	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Apex
7	2	499	3	3	22	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Apex
7	2	499	4	2	12	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	4	3	14	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Apex
7	2	499	A	1	13	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	A	2	18	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	B	1	18	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	B	2	10	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	C	1	8	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	C	2	5	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	D	1	0	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Cut-through
7	2	499	D	2	0	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Cut-through
7	2	499	E	1	13	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	E	2	23	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	499	F	1	9	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Cut-through
7	2	499	F	2	9	SEVERN AVE E	VETERANS MEMORIAL BLVD N	Cut-through
7	2	509	1	1	75	CAUSEWAY BLVD SERVICE RD W	VETERANS MEMORIAL BLVD S	None
7	2	509	2	2	20	CAUSEWAY BLVD SERVICE RD W	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	509	3	3	5	CAUSEWAY BLVD SERVICE RD W	VETERANS MEMORIAL BLVD S	Apex
7	2	509	4	1	5	CAUSEWAY BLVD SERVICE RD W	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	511	1	2	8	CAUSEWAY BLVD SERVICE RD E	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	511	2	3	10	CAUSEWAY BLVD SERVICE RD E	VETERANS MEMORIAL BLVD S	Apex
7	2	511	3	1	5	CAUSEWAY BLVD SERVICE RD E	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	511	4	1	75	CAUSEWAY BLVD SERVICE RD E	VETERANS MEMORIAL BLVD S	None



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
7	2	522	2	3	14	ATHANIA PKWY	VETERANS MEMORIAL BLVD S	Apex
7	2	522	3	2	12	ATHANIA PKWY	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	522	3	3	14	ATHANIA PKWY	VETERANS MEMORIAL BLVD S	Apex
7	2	522	4	1	15	ATHANIA PKWY	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	522	C	1	0	ATHANIA PKWY	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	522	C	2	3	ATHANIA PKWY	VETERANS MEMORIAL BLVD S	Perpendicular
7	2	537	1	1	20	CAUSEWAY BLVD SERVICE RD W	VETERANS MEMORIAL BLVD N	Apex
7	2	537	2	1	75	CAUSEWAY BLVD SERVICE RD W	VETERANS MEMORIAL BLVD N	None
7	2	537	3	2	10	CAUSEWAY BLVD SERVICE RD W	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	537	4	3	5	CAUSEWAY BLVD SERVICE RD W	VETERANS MEMORIAL BLVD N	Apex
7	2	538	1	1	15	RIDGELAKE DR	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	538	4	2	22	RIDGELAKE DR	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	545	1	1	14	METAIRIE CT	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	545	4	2	19	METAIRIE CT	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	546	1	1	12	MELODY DR	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	546	4	3	20	MELODY DR	VETERANS MEMORIAL BLVD N	Apex
7	2	548	2	2	15	VETERANS MEMORIAL BLVD S	WHITNEY PL	Perpendicular
7	2	548	3	3	25	VETERANS MEMORIAL BLVD S	WHITNEY PL	Perpendicular
7	2	549	2	2	4	VETERANS MEMORIAL BLVD S	METAIRIE HEIGHTS AVE	Perpendicular
7	2	549	3	1	0	VETERANS MEMORIAL BLVD S	METAIRIE HEIGHTS AVE	Perpendicular
7	2	552	1	3	9	HESPER AVE	VETERANS MEMORIAL BLVD N	Perpendicular
7	2	552	4	1	75	HESPER AVE	VETERANS MEMORIAL BLVD N	None
7	3	510	1	3	5	CAUSEWAY BLVD SERVICE RD E	VETERANS MEMORIAL BLVD N	Apex
7	3	510	2	1	13	CAUSEWAY BLVD SERVICE RD E	VETERANS MEMORIAL BLVD N	Perpendicular
7	3	510	3	1	75	CAUSEWAY BLVD SERVICE RD E	VETERANS MEMORIAL BLVD N	None
7	3	510	4	2	5	CAUSEWAY BLVD SERVICE RD E	VETERANS MEMORIAL BLVD N	Perpendicular
7	3	534	2	2	14	VETERANS MEMORIAL BLVD S	MELODY DR	Perpendicular
7	3	534	3	1	18	VETERANS MEMORIAL BLVD S	MELODY DR	Perpendicular
7	3	534	3	2	8	VETERANS MEMORIAL BLVD S	MELODY DR	Perpendicular
7	3	541	2	2	22	VETERANS MEMORIAL BLVD S	N ARNOULT RD	Perpendicular
7	3	541	3	1	5	VETERANS MEMORIAL BLVD S	N ARNOULT RD	Perpendicular
7	3	542	1	1	0	N LABARRE RD	VETERANS MEMORIAL BLVD N	Perpendicular
7	3	547	2	3	10	VETERANS MEMORIAL BLVD S	RIDGELAKE DR	Apex
7	3	547	3	1	12	VETERANS MEMORIAL BLVD S	RIDGELAKE DR	Perpendicular
7	3	547	3	2	15	VETERANS MEMORIAL BLVD S	RIDGELAKE DR	Perpendicular
7	3	551	2	2	7	METAIRIE CT	VETERANS MEMORIAL BLVD S	Perpendicular
7	3	551	3	1	5	METAIRIE CT	VETERANS MEMORIAL BLVD S	Perpendicular
7	3	554	2	3	4	N HULLEN ST	VETERANS MEMORIAL BLVD S	Apex
7	3	554	3	3	17	N HULLEN ST	VETERANS MEMORIAL BLVD S	Apex
8	1	577	1	1	75	CARROLLTON AVE	RASPBERRY ST	None
8	1	577	2	3	24	CARROLLTON AVE	RASPBERRY ST	Apex
8	1	577	3	1	75	CARROLLTON AVE	RASPBERRY ST	None
8	1	577	4	1	90	CARROLLTON AVE	RASPBERRY ST	None
8	2	557	1	3	0	VETERANS MEMORIAL BLVD N	OAKLAWN DR	Perpendicular
8	2	557	2	2	3	VETERANS MEMORIAL BLVD N	OAKLAWN DR	Perpendicular
8	2	557	3	1	5	VETERANS MEMORIAL BLVD N	OAKLAWN DR	Perpendicular
8	2	557	3	2	5	VETERANS MEMORIAL BLVD N	OAKLAWN DR	Perpendicular
8	2	557	4	1	0	VETERANS MEMORIAL BLVD N	OAKLAWN DR	Perpendicular
8	2	557	4	3	0	VETERANS MEMORIAL BLVD N	OAKLAWN DR	Perpendicular
8	2	557	C	1	5	VETERANS MEMORIAL BLVD N	OAKLAWN DR	Cut-through
8	2	557	C	2	5	VETERANS MEMORIAL BLVD N	OAKLAWN DR	Cut-through
8	2	571	1	1	0	VETERANS MEMORIAL BLVD N	PAPWORTH AVE	Perpendicular
8	2	571	2	2	5	VETERANS MEMORIAL BLVD N	PAPWORTH AVE	Perpendicular
8	2	571	3	1	5	VETERANS MEMORIAL BLVD N	PAPWORTH AVE	Perpendicular
8	2	571	3	2	5	VETERANS MEMORIAL BLVD N	PAPWORTH AVE	Perpendicular
8	2	571	4	1	5	VETERANS MEMORIAL BLVD N	PAPWORTH AVE	Perpendicular



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
8	2	571	4	2	10	VETERANS MEMORIAL BLVD N	PAPWORTH AVE	Perpendicular
8	2	571	C	1	5	VETERANS MEMORIAL BLVD N	PAPWORTH AVE	Cut-through
8	2	571	C	2	5	VETERANS MEMORIAL BLVD N	PAPWORTH AVE	Cut-through
8	2	573	1	1	13	VETERANS MEMORIAL BLVD N	CARROLLTON AVE	Perpendicular
8	2	573	1	2	0	VETERANS MEMORIAL BLVD N	CARROLLTON AVE	Perpendicular
8	2	573	2	1	6	VETERANS MEMORIAL BLVD N	CARROLLTON AVE	Perpendicular
8	2	573	2	2	23	VETERANS MEMORIAL BLVD N	CARROLLTON AVE	Perpendicular
8	2	573	3	1	5	VETERANS MEMORIAL BLVD N	CARROLLTON AVE	Perpendicular
8	2	573	4	2	13	VETERANS MEMORIAL BLVD N	CARROLLTON AVE	Perpendicular
8	2	573	A	1	5	VETERANS MEMORIAL BLVD N	CARROLLTON AVE	Cut-through
8	2	573	A	2	5	VETERANS MEMORIAL BLVD N	CARROLLTON AVE	Cut-through
8	2	575	1	1	7	VETERANS MEMORIAL BLVD N	LAKE AVE	Perpendicular
8	2	575	2	1	75	VETERANS MEMORIAL BLVD N	LAKE AVE	None
8	2	575	3	1	75	VETERANS MEMORIAL BLVD N	LAKE AVE	None
8	2	575	4	2	24	VETERANS MEMORIAL BLVD N	LAKE AVE	Apex
8	2	578	1	3	15	LAKE AVE	RASPBERRY ST	Apex
8	2	578	2	3	9	LAKE AVE	RASPBERRY ST	Apex
8	2	578	3	3	9	LAKE AVE	RASPBERRY ST	Apex
8	2	578	4	3	20	LAKE AVE	RASPBERRY ST	Apex
8	2	601	1	3	6	VETERANS MEMORIAL BLVD	ELMEER AVE	Apex
8	2	601	2	2	10	VETERANS MEMORIAL BLVD	ELMEER AVE	Perpendicular
8	2	601	3	1	0	VETERANS MEMORIAL BLVD	ELMEER AVE	Perpendicular
8	2	601	4	2	0	VETERANS MEMORIAL BLVD	ELMEER AVE	Perpendicular
8	2	601	A	1	10	VETERANS MEMORIAL BLVD	ELMEER AVE	Perpendicular
8	2	601	A	2	10	VETERANS MEMORIAL BLVD	ELMEER AVE	Perpendicular
8	3	558	1	1	7	VETERANS MEMORIAL BLVD N	ROSA AVE	Perpendicular
8	3	558	2	2	17	VETERANS MEMORIAL BLVD N	ROSA AVE	Perpendicular
8	3	558	3	1	10	VETERANS MEMORIAL BLVD N	ROSA AVE	Perpendicular
8	3	558	4	2	5	VETERANS MEMORIAL BLVD N	ROSA AVE	Perpendicular
8	3	559	1	1	0	VETERANS MEMORIAL BLVD N	MARTIN BEHRMAN AVE	Perpendicular
8	3	559	1	2	0	VETERANS MEMORIAL BLVD N	MARTIN BEHRMAN AVE	Perpendicular
8	3	559	2	1	5	VETERANS MEMORIAL BLVD N	MARTIN BEHRMAN AVE	Perpendicular
8	3	559	4	2	0	VETERANS MEMORIAL BLVD N	MARTIN BEHRMAN AVE	Perpendicular
8	3	559	A	1	5	VETERANS MEMORIAL BLVD N	MARTIN BEHRMAN AVE	Cut-through
8	3	559	A	2	5	VETERANS MEMORIAL BLVD N	MARTIN BEHRMAN AVE	Cut-through
8	3	560	1	3	10	VETERANS MEMORIAL BLVD N	FOCIS ST	Apex
8	3	560	2	1	6	VETERANS MEMORIAL BLVD N	FOCIS ST	Perpendicular
8	3	560	2	2	0	VETERANS MEMORIAL BLVD N	FOCIS ST	Perpendicular
8	3	560	3	1	80	VETERANS MEMORIAL BLVD N	FOCIS ST	None
8	3	560	4	2	7	VETERANS MEMORIAL BLVD N	FOCIS ST	Perpendicular
8	3	561	1	1	10	VETERANS MEMORIAL BLVD N	ARIS AVE	Perpendicular
8	3	561	2	3	14	VETERANS MEMORIAL BLVD N	ARIS AVE	Apex
8	3	561	3	1	80	VETERANS MEMORIAL BLVD N	ARIS AVE	None
8	3	561	4	2	27	VETERANS MEMORIAL BLVD N	ARIS AVE	Perpendicular
8	3	562	2	2	15	VETERANS MEMORIAL BLVD N	WILSHIRE PL	Perpendicular
8	3	562	3	1	7	VETERANS MEMORIAL BLVD N	WILSHIRE PL	Perpendicular
8	3	566	1	1	14	VETERANS MEMORIAL BLVD N	NURSERY AVE	Perpendicular
8	3	566	2	3	22	VETERANS MEMORIAL BLVD N	NURSERY AVE	Apex
8	3	566	3	1	13	VETERANS MEMORIAL BLVD N	NURSERY AVE	Perpendicular
8	3	566	4	2	10	VETERANS MEMORIAL BLVD N	NURSERY AVE	Perpendicular
8	3	600	1	1	0	VETERANS MEMORIAL BLVD	HOMESTEAD AVE	Perpendicular
8	3	600	2	2	5	VETERANS MEMORIAL BLVD	HOMESTEAD AVE	Perpendicular
8	3	600	3	1	10	VETERANS MEMORIAL BLVD	HOMESTEAD AVE	Perpendicular
8	3	600	4	2	5	VETERANS MEMORIAL BLVD	HOMESTEAD AVE	Perpendicular
8	3	659	1	1	5	BROCKENBROUGH CT	VETERANS MEMORIAL BLVD N	Perpendicular
8	3	659	2	3	5	BROCKENBROUGH CT	VETERANS MEMORIAL BLVD N	Apex



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
8	3	659	3	1	8	BROCKENBRAUGH CT	VETERANS MEMORIAL BLVD N	Perpendicular
8	3	659	4	2	6	BROCKENBRAUGH CT	VETERANS MEMORIAL BLVD N	Perpendicular
9	1	594	1	1	80	METAIRIE AVE	HELOIS AVE	None
9	1	594	2	1	80	METAIRIE AVE	HELOIS AVE	None
9	1	594	3	1	75	METAIRIE AVE	HELOIS AVE	None
9	1	594	4	1	20	METAIRIE AVE	HELOIS AVE	Perpendicular
9	1	594	4	2	27	METAIRIE AVE	HELOIS AVE	Perpendicular
9	1	595	3	1	80	METAIRIE AVE	BONNABEL BLVD W	None
9	1	595	4	1	75	METAIRIE AVE	BONNABEL BLVD W	None
9	1	679	1	1	80	N CAUSEWAY RD E	48TH ST	None
9	1	679	2	1	85	N CAUSEWAY RD E	48TH ST	None
9	1	683	1	1	75	N CAUSEWAY RD E	ROMAN ST	None
9	1	683	2	1	75	N CAUSEWAY RD E	ROMAN ST	None
9	1	693	2	1	75	CHARLESTON PK	CODIFER BLVD S	None
9	1	693	3	1	75	CHARLESTON PK	CODIFER BLVD S	None
9	2	579	1	1	2	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	1	2	2	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	2	1	2	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	2	2	18	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	3	1	15	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	3	2	5	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	4	1	2	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	4	2	2	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	A	1	7	CODIFER BLVD N	HELOIS AVE	Cut-through
9	2	579	A	2	7	CODIFER BLVD N	HELOIS AVE	Cut-through
9	2	579	C	1	2	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	579	C	2	2	CODIFER BLVD N	HELOIS AVE	Perpendicular
9	2	585	1	1	15	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	1	2	2	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	2	1	2	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	2	2	5	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	3	1	2	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	3	2	7	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	4	1	7	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	4	2	22	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	A	1	2	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	A	2	2	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	B	1	5	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	B	2	8	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	C	1	7	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	C	2	12	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	D	1	8	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	585	D	2	13	BONNABEL BLVD W	CODIFER BLVD S	Perpendicular
9	2	604	1	1	21	CAUSEWAY BLVD	W NAPOLEON AVE	Perpendicular
9	2	604	2	3	10	CAUSEWAY BLVD	W NAPOLEON AVE	Apex
9	2	604	3	3	15	CAUSEWAY BLVD	W NAPOLEON AVE	Apex
9	2	604	4	1	18	CAUSEWAY BLVD	W NAPOLEON AVE	Perpendicular
9	2	604	4	2	10	CAUSEWAY BLVD	W NAPOLEON AVE	Perpendicular
9	2	604	A	1	0	CAUSEWAY BLVD	W NAPOLEON AVE	Cut-through
9	2	604	B	1	8	CAUSEWAY BLVD	W NAPOLEON AVE	Perpendicular
9	2	604	B	2	5	CAUSEWAY BLVD	W NAPOLEON AVE	Perpendicular
9	2	604	C	1	0	CAUSEWAY BLVD	W NAPOLEON AVE	Cut-through
9	2	604	D	1	0	CAUSEWAY BLVD	W NAPOLEON AVE	Cut-through
9	2	604	E	1	10	CAUSEWAY BLVD	W NAPOLEON AVE	Perpendicular
9	2	604	E	2	5	CAUSEWAY BLVD	W NAPOLEON AVE	Perpendicular
9	2	604	F	1	0	CAUSEWAY BLVD	W NAPOLEON AVE	Cut-through



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
9	2	612	1	1	19	PHOSPHOR AVE	CODIFER BLVD S	Perpendicular
9	2	612	1	2	11	PHOSPHOR AVE	CODIFER BLVD S	Perpendicular
9	2	612	4	1	3	PHOSPHOR AVE	CODIFER BLVD S	Perpendicular
9	2	612	4	2	8	PHOSPHOR AVE	CODIFER BLVD S	Perpendicular
9	2	612	A	1	0	PHOSPHOR AVE	CODIFER BLVD S	Perpendicular
9	2	612	A	2	5	PHOSPHOR AVE	CODIFER BLVD S	Perpendicular
9	2	612	C	1	3	PHOSPHOR AVE	CODIFER BLVD S	Perpendicular
9	2	612	C	2	8	PHOSPHOR AVE	CODIFER BLVD S	Perpendicular
9	2	676	1	1	80	N CAUSEWAY RD E	46TH ST	None
9	2	676	2	1	9	N CAUSEWAY RD E	46TH ST	Perpendicular
9	2	682	1	2	12	N CAUSEWAY RD E	47TH ST	Perpendicular
9	2	682	2	1	85	N CAUSEWAY RD E	47TH ST	None
9	3	610	1	1	10	ORION AVE	CODIFER BLVD S	Perpendicular
9	3	610	1	2	15	ORION AVE	CODIFER BLVD S	Perpendicular
9	3	610	4	1	0	ORION AVE	CODIFER BLVD S	Perpendicular
9	3	610	4	2	3	ORION AVE	CODIFER BLVD S	Perpendicular
9	3	610	A	1	6	ORION AVE	CODIFER BLVD S	Perpendicular
9	3	610	A	2	3	ORION AVE	CODIFER BLVD S	Perpendicular
9	3	610	C	1	0	ORION AVE	CODIFER BLVD S	Perpendicular
9	3	610	C	2	10	ORION AVE	CODIFER BLVD S	Perpendicular
9	3	611	1	1	10	AURORA AVE	CODIFER BLVD S	Perpendicular
9	3	611	1	2	5	AURORA AVE	CODIFER BLVD S	Perpendicular
9	3	611	4	1	0	AURORA AVE	CODIFER BLVD S	Perpendicular
9	3	611	4	2	13	AURORA AVE	CODIFER BLVD S	Perpendicular
9	3	611	A	1	0	AURORA AVE	CODIFER BLVD S	Perpendicular
9	3	611	A	2	3	AURORA AVE	CODIFER BLVD S	Perpendicular
9	3	611	C	1	5	AURORA AVE	CODIFER BLVD S	Perpendicular
9	3	611	C	2	5	AURORA AVE	CODIFER BLVD S	Perpendicular
9	3	613	1	1	3	HOMESTEAD AVE	CODIFER BLVD S	Perpendicular
9	3	613	1	2	10	HOMESTEAD AVE	CODIFER BLVD S	Perpendicular
9	3	613	4	1	10	HOMESTEAD AVE	CODIFER BLVD S	Perpendicular
9	3	613	4	2	18	HOMESTEAD AVE	CODIFER BLVD S	Perpendicular
9	3	613	A	1	3	HOMESTEAD AVE	CODIFER BLVD S	Perpendicular
9	3	613	A	2	8	HOMESTEAD AVE	CODIFER BLVD S	Perpendicular
9	3	613	C	1	5	HOMESTEAD AVE	CODIFER BLVD S	Perpendicular
9	3	613	C	2	0	HOMESTEAD AVE	CODIFER BLVD S	Perpendicular
10	1	83	3	1	75	CAUSEWAY BLVD SERVICE RD W	BERWICK ST	None
10	1	83	4	1	75	CAUSEWAY BLVD SERVICE RD W	BERWICK ST	None
10	1	87	3	3	7	CAUSEWAY BLVD SERVICE RD W	SAM LENOX ST	Apex
10	1	87	4	1	75	CAUSEWAY BLVD SERVICE RD W	SAM LENOX ST	None
10	1	90	3	3	14	CAUSEWAY BLVD SERVICE RD W	BURNS ST	Apex
10	1	90	4	1	80	CAUSEWAY BLVD SERVICE RD W	BURNS ST	None
10	1	684	1	1	80	CLEARY AVE	JOHNSON ST	None
10	1	684	2	1	85	CLEARY AVE	JOHNSON ST	None
10	1	684	3	3	22	CLEARY AVE	JOHNSON ST	Apex
10	1	684	4	3	24	CLEARY AVE	JOHNSON ST	Blended transitic
10	1	685	1	1	75	CLEARY AVE	DERBIGNY ST	None
10	1	685	2	1	80	CLEARY AVE	DERBIGNY ST	None
10	1	685	3	1	9	CLEARY AVE	DERBIGNY ST	Perpendicular
10	1	685	4	1	80	CLEARY AVE	DERBIGNY ST	None
10	1	686	1	1	85	DECKBAR AVE	OESTERLY ST	None
10	1	686	2	1	75	DECKBAR AVE	OESTERLY ST	None
10	2	86	1	2	4	CAUSEWAY BLVD SERVICE RD E	CLERMONT ST	Perpendicular
10	2	86	2	1	75	CAUSEWAY BLVD SERVICE RD E	CLERMONT ST	None
10	3	79	3	2	12	CAUSEWAY BLVD SERVICE RD W	ANDOVER ST	Perpendicular
10	3	79	4	3	9	CAUSEWAY BLVD SERVICE RD W	ANDOVER ST	Apex



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
10	3	80	3	2	9	CAUSEWAY BLVD SERVICE RD W	WESTBURY ST	Perpendicular
10	3	80	4	1	9	CAUSEWAY BLVD SERVICE RD W	WESTBURY ST	Perpendicular
10	3	89	3	2	7	CAUSEWAY BLVD SERVICE RD W	SCOTT ST	Perpendicular
10	3	92	1	1	75	CAUSEWAY BLVD SERVICE RD E	HAWKSTON ST	None
10	3	92	2	1	4	CAUSEWAY BLVD SERVICE RD E	HAWKSTON ST	Perpendicular
11	1	96	1	2	17	ELMWOOD PARK BLVD E	ACCESS	Perpendicular
11	1	96	2	1	18	ELMWOOD PARK BLVD E	ACCESS	Perpendicular
11	1	96	3	2	15	ELMWOOD PARK BLVD E	ACCESS	Perpendicular
11	1	96	4	1	75	ELMWOOD PARK BLVD E	ACCESS	None
11	1	104	2	2	32	CITRUS BLVD S	ELMWOOD PARK BLVD W	Perpendicular
11	1	104	4	1	34	CITRUS BLVD S	ELMWOOD PARK BLVD W	Perpendicular
11	1	104	B	1	29	CITRUS BLVD S	ELMWOOD PARK BLVD W	Perpendicular
11	1	104	B	2	19	CITRUS BLVD S	ELMWOOD PARK BLVD W	Perpendicular
11	1	104	B	3	19	CITRUS BLVD S	ELMWOOD PARK BLVD W	Perpendicular
11	1	116	1	2	14	ELMWOOD PARK BLVD	ELMWOOD PARK BLVD W	Perpendicular
11	1	116	2	1	12	ELMWOOD PARK BLVD	ELMWOOD PARK BLVD W	Perpendicular
11	1	116	3	3	14	ELMWOOD PARK BLVD	ELMWOOD PARK BLVD W	Apex
11	1	116	4	3	12	ELMWOOD PARK BLVD	ELMWOOD PARK BLVD W	Apex
11	1	607	1	1	80	CITRUS BLVD N	LEAD	None
11	1	607	4	1	85	CITRUS BLVD N	LEAD	None
11	1	677	1	1	85	DAVID DR	SAINTS DR	None
11	1	677	2	1	80	DAVID DR	SAINTS DR	None
11	1	687	3	1	75	ELMWOOD PARK BLVD	POWELL ST	None
11	1	687	4	1	75	ELMWOOD PARK BLVD	POWELL ST	None
11	1	690	1	1	24	MOUNES ST	N CORPORATE DR	Perpendicular
11	1	690	2	1	75	MOUNES ST	N CORPORATE DR	None
11	1	690	3	3	24	MOUNES ST	N CORPORATE DR	Apex
11	1	690	4	1	80	MOUNES ST	N CORPORATE DR	None
11	2	105	1	1	15	CITRUS BLVD N	KUEBEL ST	Perpendicular
11	2	105	2	1	19	CITRUS BLVD N	KUEBEL ST	Apex
11	2	105	3	1	75	CITRUS BLVD N	KUEBEL ST	None
11	2	105	4	2	19	CITRUS BLVD N	KUEBEL ST	Perpendicular
11	2	107	2	2	30	CITRUS BLVD N	EDWARDS ST	Perpendicular
11	2	107	3	1	85	CITRUS BLVD N	EDWARDS ST	None
11	2	117	1	2	15	ELMWOOD PARK BLVD E	ELMWOOD PARK BLVD W	Perpendicular
11	2	117	2	1	12	ELMWOOD PARK BLVD E	ELMWOOD PARK BLVD W	Perpendicular
11	2	629	1	1	15	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	1	2	0	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	2	1	18	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	2	2	20	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	3	1	32	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	3	2	24	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	4	1	20	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	4	2	16	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	A	1	8	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	A	2	8	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	C	1	8	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	629	C	2	13	W METAIRIE AVE	ELISE AVE	Perpendicular
11	2	631	1	3	30	W METAIRIE AVE	LYNNETTE DR	Perpendicular
11	2	631	2	2	10	W METAIRIE AVE	LYNNETTE DR	Perpendicular
11	2	631	3	1	8	W METAIRIE AVE	LYNNETTE DR	Perpendicular
11	2	631	4	1	75	W METAIRIE AVE	LYNNETTE DR	None
11	2	631	C	1	75	W METAIRIE AVE	LYNNETTE DR	None
11	2	678	1	1	18	PHLOX AVE	W METAIRIE AVE N	Perpendicular
11	2	678	4	3	45	PHLOX AVE	W METAIRIE AVE N	Apex
11	3	680	1	1	24	N STARRETT RD	W METAIRIE AVE N	Perpendicular



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11	3	680	4	2	14	N STARRETT RD	W METAIRIE AVE N	Perpendicular
11	3	681	1	1	5	EISENHOWER AVE	W METAIRIE AVE N	Perpendicular
11	3	681	4	3	8	EISENHOWER AVE	W METAIRIE AVE N	Perpendicular
12	1	122	1	1	8	CARROLLTON AVE	POPLAR ST	Perpendicular
12	1	122	1	2	20	CARROLLTON AVE	POPLAR ST	Perpendicular
12	1	122	2	2	9	CARROLLTON AVE	POPLAR ST	Perpendicular
12	1	122	3	1	85	CARROLLTON AVE	POPLAR ST	None
12	1	122	3	2	85	CARROLLTON AVE	POPLAR ST	None
12	1	122	4	1	90	CARROLLTON AVE	POPLAR ST	None
12	1	122	4	2	80	CARROLLTON AVE	POPLAR ST	None
12	1	125	1	1	85	CARROLLTON AVE	GENEVA ST	None
12	1	125	1	2	48	CARROLLTON AVE	GENEVA ST	Perpendicular
12	1	125	2	1	17	CARROLLTON AVE	GENEVA ST	Perpendicular
12	1	125	2	2	18	CARROLLTON AVE	GENEVA ST	Perpendicular
12	1	125	3	1	20	CARROLLTON AVE	GENEVA ST	Perpendicular
12	1	125	3	2	13	CARROLLTON AVE	GENEVA ST	Perpendicular
12	1	125	4	1	80	CARROLLTON AVE	GENEVA ST	None
12	1	125	4	2	80	CARROLLTON AVE	GENEVA ST	None
12	1	130	3	1	80	CARROLLTON AVE	GLENN ST	None
12	1	130	4	1	80	CARROLLTON AVE	GLENN ST	None
12	2	118	1	1	80	CARROLLTON AVE	ASH ST	None
12	2	118	1	2	13	CARROLLTON AVE	ASH ST	Perpendicular
12	2	118	2	1	36	CARROLLTON AVE	ASH ST	Perpendicular
12	2	118	3	1	60	CARROLLTON AVE	ASH ST	Perpendicular
12	2	118	3	2	35	CARROLLTON AVE	ASH ST	Perpendicular
12	2	118	4	1	30	CARROLLTON AVE	ASH ST	Perpendicular
12	2	118	4	2	24	CARROLLTON AVE	ASH ST	Perpendicular
12	2	119	1	1	100	CARROLLTON AVE	LIVE OAK ST	None
12	2	119	1	2	13	CARROLLTON AVE	LIVE OAK ST	Perpendicular
12	2	119	2	1	90	CARROLLTON AVE	LIVE OAK ST	None
12	2	119	2	2	80	CARROLLTON AVE	LIVE OAK ST	None
12	2	119	3	1	20	CARROLLTON AVE	LIVE OAK ST	Perpendicular
12	2	119	3	2	30	CARROLLTON AVE	LIVE OAK ST	Perpendicular
12	2	119	4	1	25	CARROLLTON AVE	LIVE OAK ST	Perpendicular
12	2	119	4	2	33	CARROLLTON AVE	LIVE OAK ST	Perpendicular
12	2	121	1	1	0	LAKE AVE	LIVE OAK ST	Perpendicular
12	2	121	1	2	3	LAKE AVE	LIVE OAK ST	Perpendicular
12	2	121	2	1	8	LAKE AVE	LIVE OAK ST	Perpendicular
12	2	121	2	2	8	LAKE AVE	LIVE OAK ST	Perpendicular
12	2	121	3	1	26	LAKE AVE	LIVE OAK ST	Perpendicular
12	2	121	3	2	18	LAKE AVE	LIVE OAK ST	Perpendicular
12	2	121	4	1	15	LAKE AVE	LIVE OAK ST	Perpendicular
12	2	121	4	2	10	LAKE AVE	LIVE OAK ST	Perpendicular
12	2	123	1	1	5	LAKE AVE	POPLAR ST	Perpendicular
12	2	123	1	2	8	LAKE AVE	POPLAR ST	Perpendicular
12	2	123	2	1	14	LAKE AVE	POPLAR ST	Perpendicular
12	2	123	2	2	8	LAKE AVE	POPLAR ST	Perpendicular
12	2	123	3	1	8	LAKE AVE	POPLAR ST	Perpendicular
12	2	123	3	2	13	LAKE AVE	POPLAR ST	Perpendicular
12	2	123	4	1	8	LAKE AVE	POPLAR ST	Perpendicular
12	2	124	1	1	4	CARROLLTON AVE	W ESPLANADE AVE N	Perpendicular
12	2	124	1	2	4	CARROLLTON AVE	W ESPLANADE AVE N	Perpendicular
12	2	124	2	1	17	CARROLLTON AVE	W ESPLANADE AVE N	Perpendicular
12	2	124	3	2	24	CARROLLTON AVE	W ESPLANADE AVE N	Perpendicular
12	2	124	4	3	9	CARROLLTON AVE	W ESPLANADE AVE N	Apex
12	2	126	1	2	19	LAKE AVE	W ESPLANADE AVE N	Perpendicular



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
12	2	126	2	3	22	LAKE AVE	W ESPLANADE AVE N	Apex
12	2	126	3	2	20	LAKE AVE	W ESPLANADE AVE N	Perpendicular
12	2	126	4	3	5	LAKE AVE	W ESPLANADE AVE N	Apex
12	2	127	1	2	10	LAKE AVE	GENEVA ST	Perpendicular
12	2	127	2	1	18	LAKE AVE	GENEVA ST	Perpendicular
12	2	127	2	2	16	LAKE AVE	GENEVA ST	Perpendicular
12	2	127	3	1	13	LAKE AVE	GENEVA ST	Perpendicular
12	2	127	3	2	5	LAKE AVE	GENEVA ST	Perpendicular
12	2	127	4	1	16	LAKE AVE	GENEVA ST	Perpendicular
12	2	128	1	2	23	CARROLLTON AVE	W ESPLANADE AVE S	Perpendicular
12	2	128	2	3	14	CARROLLTON AVE	W ESPLANADE AVE S	Apex
12	2	128	3	3	9	CARROLLTON AVE	W ESPLANADE AVE S	Apex
12	2	128	4	1	15	CARROLLTON AVE	W ESPLANADE AVE S	Perpendicular
12	2	129	1	3	30	LAKE AVE	W ESPLANADE AVE S	Apex
12	2	129	2	3	7	LAKE AVE	W ESPLANADE AVE S	Apex
12	2	129	3	3	17	LAKE AVE	W ESPLANADE AVE S	Apex
12	2	129	4	1	12	LAKE AVE	W ESPLANADE AVE S	Perpendicular
12	2	655	1	2	14	OAKLAWN DR	W ESPLANADE AVE	Perpendicular
12	2	655	2	3	12	OAKLAWN DR	W ESPLANADE AVE	Apex
12	2	655	3	3	18	OAKLAWN DR	W ESPLANADE AVE	Apex
12	2	655	4	1	9	OAKLAWN DR	W ESPLANADE AVE	Perpendicular
12	2	655	A	1	10	OAKLAWN DR	W ESPLANADE AVE	Perpendicular
12	2	655	A	2	12	OAKLAWN DR	W ESPLANADE AVE	Perpendicular
12	2	655	C	1	15	OAKLAWN DR	W ESPLANADE AVE	Perpendicular
12	2	655	C	2	12	OAKLAWN DR	W ESPLANADE AVE	Perpendicular
12	3	120	1	2	11	LAKE AVE	ASH ST	Perpendicular
12	3	120	2	1	11	LAKE AVE	ASH ST	Perpendicular
12	3	120	3	2	17	LAKE AVE	ASH ST	Perpendicular
12	3	120	4	1	36	LAKE AVE	ASH ST	Perpendicular
12	3	131	1	2	10	LAKE AVE	GLENN ST	Perpendicular
12	3	131	2	1	13	LAKE AVE	GLENN ST	Perpendicular
12	3	131	2	2	10	LAKE AVE	GLENN ST	Perpendicular
13	1	132	2	1	85	LAPALCO BLVD S	BERGER RD	None
13	1	132	3	1	90	LAPALCO BLVD S	BERGER RD	None
13	1	133	1	1	29	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	1	2	14	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	2	3	7	LAPALCO BLVD S	WESTWOOD DR W	Apex
13	1	133	3	1	14	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	3	2	17	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	4	3	14	LAPALCO BLVD S	WESTWOOD DR W	Apex
13	1	133	A	1	15	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	A	2	20	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	B	1	14	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	B	2	9	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	C	1	14	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	C	2	19	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	D	1	9	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	133	D	2	7	LAPALCO BLVD S	WESTWOOD DR W	Perpendicular
13	1	138	1	1	80	LAPALCO BLVD N	WESTMINSTER BLVD W	None
13	1	141	2	1	75	LAPALCO BLVD S	WESTMINSTER BLVD E	None
13	1	141	3	1	85	LAPALCO BLVD S	WESTMINSTER BLVD E	None
13	1	146	1	1	80	LAPALCO BLVD N	BERGER RD	None
13	1	146	4	1	90	LAPALCO BLVD N	BERGER RD	None
13	1	150	1	1	75	OLD LEVEE RD	WESTWOOD DR E	None
13	2	148	3	2	11	OLD LEVEE RD	WESTWOOD DR W	Perpendicular
13	2	148	4	1	19	OLD LEVEE RD	WESTWOOD DR W	Perpendicular



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
13	2	148	4	3	16	OLD LEVEE RD	WESTWOOD DR W	Apex
13	2	603	1	3	7	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	2	1	9	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	2	3	12	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	3	3	9	LAPALCO BLVD	BETTY BLVD	Apex
13	2	603	4	3	14	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	A	1	9	LAPALCO BLVD	BETTY BLVD	Cut-through
13	2	603	B	1	7	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	B	2	10	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	C	1	4	LAPALCO BLVD	BETTY BLVD	Cut-through
13	2	603	D	1	9	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	D	2	14	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	D	3	4	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	E	1	17	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	E	2	14	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	2	603	E	3	15	LAPALCO BLVD	BETTY BLVD	Perpendicular
13	3	602	2	2	15	LAPALCO BLVD S	LINCOLNSHIRE DR	Perpendicular
13	3	602	3	1	19	LAPALCO BLVD S	LINCOLNSHIRE DR	Perpendicular
14	1	152	3	1	80	AMES BLVD	PHIL LN	None
14	1	152	4	1	80	AMES BLVD	PHIL LN	None
14	1	153	1	1	85	AMES BLVD	SAINT JUDE PL	None
14	1	153	2	1	80	AMES BLVD	SAINT JUDE PL	None
14	1	154	1	1	80	AMES BLVD	TAFFY DR	None
14	1	154	2	1	80	AMES BLVD	TAFFY DR	None
14	1	158	1	3	26	AMES BLVD	CAILLOU DR	Apex
14	1	158	2	3	42	AMES BLVD	CAILLOU DR	Apex
14	1	630	3	1	75	AMES BLVD	BAYOU ESTATES AVE	None
14	1	630	4	1	75	AMES BLVD	BAYOU ESTATES AVE	None
14	2	156	1	3	17	SUNRISE DR	AMES BLVD	Apex
14	2	156	2	1	23	SUNRISE DR	AMES BLVD	Perpendicular
14	2	157	1	1	14	AMES BLVD	MT KENNEDY DR	Perpendicular
14	2	157	3	3	29	AMES BLVD	MT KENNEDY DR	Apex
14	2	157	4	3	29	AMES BLVD	MT KENNEDY DR	Apex
14	2	161	3	3	27	AMES BLVD	SIEVERS DR	Apex
14	2	161	4	3	21	AMES BLVD	SIEVERS DR	Apex
14	2	609	1	1	13	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	609	1	2	18	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	609	2	2	15	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	609	2	3	9	LAPALCO BLVD S	PARLANGE DR	Apex
14	2	609	3	1	4	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	609	3	2	17	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	609	A	1	18	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	609	A	2	18	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	609	C	1	18	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	609	C	2	5	LAPALCO BLVD S	PARLANGE DR	Perpendicular
14	2	633	1	3	9	ENTERPRISE	LAPALCO BLVD	Apex
14	2	633	4	1	75	ENTERPRISE	LAPALCO BLVD	None
14	2	637	1	3	17	WABASH DR	AMES BLVD	Apex
14	2	637	2	3	12	WABASH DR	AMES BLVD	Apex
14	2	643	1	3	24	AMES BLVD	CHARLESTON DR	Apex
14	2	643	2	3	12	AMES BLVD	CHARLESTON DR	Apex
14	3	155	3	3	22	AMES BLVD	AMIGO AVE	Apex
14	3	155	4	3	9	AMES BLVD	AMIGO AVE	Apex
14	3	159	3	3	16	AMES BLVD	S OAK DR	Apex
14	3	159	4	3	11	AMES BLVD	S OAK DR	Apex
14	3	160	3	3	16	AMES BLVD	N OAK DR	Apex



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Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
14	3	160	4	3	26	AMES BLVD	N OAK DR	Apex
14	3	162	1	3	16	AMES CT	AMES BLVD	Apex
14	3	162	2	3	19	AMES CT	AMES BLVD	Apex
14	3	606	1	3	17	LAPALCO BLVD S	BONNIE ANN DR	Apex
14	3	606	2	3	24	LAPALCO BLVD S	BONNIE ANN DR	Apex
14	3	606	3	3	9	LAPALCO BLVD S	BONNIE ANN DR	Apex
14	3	606	4	3	14	LAPALCO BLVD S	BONNIE ANN DR	Apex
14	3	608	1	2	12	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	1	3	9	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	2	3	14	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	3	3	14	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	4	3	9	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	A	1	4	LAPALCO BLVD	AMES BLVD	Cut-through
14	3	608	B	1	12	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	B	2	12	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	B	3	4	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	C	1	4	LAPALCO BLVD	AMES BLVD	Cut-through
14	3	608	D	1	9	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	D	2	4	LAPALCO BLVD	AMES BLVD	Cut-through
14	3	608	E	1	4	LAPALCO BLVD	AMES BLVD	Cut-through
14	3	608	F	1	19	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	F	2	9	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	F	3	4	LAPALCO BLVD	AMES BLVD	Perpendicular
14	3	608	G	1	4	LAPALCO BLVD	AMES BLVD	Cut-through
14	3	616	1	3	9	LAPALCO BLVD	INDUSTRIAL ST	Apex
14	3	616	4	3	9	LAPALCO BLVD	INDUSTRIAL ST	Apex
14	3	641	1	3	22	JORDAN DR	AMES BLVD	Apex
14	3	641	2	3	12	JORDAN DR	AMES BLVD	Apex
14	3	642	1	3	29	EHRET RD	AMES BLVD	Apex
14	3	642	2	3	19	EHRET RD	AMES BLVD	Perpendicular
14	3	642	3	1	10	EHRET RD	AMES BLVD	Perpendicular
15	1	164	1	3	15	AMES BLVD	AUGUST AVE	Apex
15	1	164	2	3	20	AMES BLVD	AUGUST AVE	Apex
15	1	169	1	1	85	6TH AVE E	AMES BLVD	None
15	1	169	2	1	75	6TH AVE E	AMES BLVD	None
15	1	170	3	1	90	AMES BLVD	6TH AVE W	None
15	1	170	4	1	85	AMES BLVD	6TH AVE W	None
15	1	171	1	1	80	AMES BLVD	TROJAN BLVD	None
15	1	171	2	1	80	AMES BLVD	TROJAN BLVD	None
15	1	172	3	3	25	AMES BLVD	ACRE RD	Apex
15	1	172	4	1	75	AMES BLVD	ACRE RD	None
15	1	177	1	3	11	BELLE TERRE RD	AMES BLVD	Apex
15	1	177	2	3	16	BELLE TERRE RD	AMES BLVD	Apex
15	1	177	3	3	24	BELLE TERRE RD	AMES BLVD	Apex
15	1	177	4	3	19	BELLE TERRE RD	AMES BLVD	Apex
15	1	178	1	1	80	2ND AVE	AMES BLVD	None
15	1	178	2	1	80	2ND AVE	AMES BLVD	None
15	1	180	1	1	80	3RD AVE	AMES BLVD	None
15	1	180	2	1	80	3RD AVE	AMES BLVD	None
15	1	181	3	1	85	LINCOLN	AMES BLVD	None
15	1	181	4	1	75	LINCOLN	AMES BLVD	None
15	1	182	1	1	80	SALOME ST	AMES BLVD	None
15	1	182	2	1	90	SALOME ST	AMES BLVD	None
15	2	163	3	3	5	AMES BLVD	SECOND ZION BLVD	Apex
15	2	163	4	3	10	AMES BLVD	SECOND ZION BLVD	Apex
15	2	166	1	3	15	AMES BLVD	S JUDAH DR	Apex



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15	2	166	2	3	18	AMES BLVD	S JUDAH DR	Apex
15	2	167	1	3	10	4TH AVE	AMES BLVD	Apex
15	2	167	2	1	80	4TH AVE	AMES BLVD	None
15	2	168	1	3	18	5TH AVE	AMES BLVD	Apex
15	2	168	2	3	25	5TH AVE	AMES BLVD	Apex
15	2	174	1	1	95	FIELD ST	AMES BLVD	None
15	2	174	2	3	17	FIELD ST	AMES BLVD	Apex
15	3	173	1	3	10	AMES BLVD	HAPPY ST	Apex
15	3	173	2	1	8	AMES BLVD	HAPPY ST	Perpendicular
15	3	175	3	3	15	AMES BLVD	FREEDOM CT	Apex
15	3	175	4	3	10	AMES BLVD	FREEDOM CT	Apex
16	1	189	1	3	5	GRETNA BLVD N	MANHATTAN BLVD E	Apex
16	1	189	2	3	3	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	3	1	29	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	3	2	22	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	4	1	22	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	4	2	24	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	A	1	8	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	A	2	18	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	B	1	10	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	B	2	15	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	B	3	15	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	C	1	10	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	C	2	4	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	D	1	17	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	D	2	4	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	E	1	5	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	189	E	2	20	GRETNA BLVD N	MANHATTAN BLVD E	Perpendicular
16	1	200	1	3	20	GRETNA BLVD	YORK AVE	Apex
16	1	200	2	3	27	GRETNA BLVD	YORK AVE	Apex
16	1	200	3	3	22	GRETNA BLVD	YORK AVE	Apex
16	1	200	4	1	75	GRETNA BLVD	YORK AVE	None
16	1	201	1	1	75	GRETNA BLVD	CROSSOVER	None
16	1	202	1	1	80	GRETNA BLVD	GRETNA BLVD S	None
16	1	618	1	1	80	CHALMETTE ST	8TH ST	None
16	1	618	4	1	28	CHALMETTE ST	8TH ST	Perpendicular
16	1	618	4	2	16	CHALMETTE ST	8TH ST	Perpendicular
16	1	619	1	1	80	GARDERE AVE	8TH ST	None
16	1	619	4	1	80	GARDERE AVE	8TH ST	None
16	1	620	1	1	80	OLIVE AVE	8TH ST	None
16	1	620	4	1	80	OLIVE AVE	8TH ST	None
16	1	621	1	1	80	YETTA AVE	8TH ST	None
16	1	621	4	1	80	YETTA AVE	8TH ST	None
16	1	623	1	1	8	MAPLE AVE	8TH ST	Perpendicular
16	1	623	2	3	20	MAPLE AVE	8TH ST	Apex
16	1	623	3	1	80	MAPLE AVE	8TH ST	None
16	1	623	4	1	80	MAPLE AVE	8TH ST	None
16	1	624	1	1	85	MARION ST	8TH ST	None
16	1	624	4	1	80	MARION ST	8TH ST	None
16	1	626	1	1	80	BROWN AVE	8TH ST	None
16	1	626	2	1	85	BROWN AVE	8TH ST	None
16	1	626	3	1	9	BROWN AVE	8TH ST	Perpendicular
16	1	626	3	2	12	BROWN AVE	8TH ST	Perpendicular
16	1	626	4	1	80	BROWN AVE	8TH ST	None
16	1	627	1	1	85	8TH ST	PAILET AVE	None
16	1	627	2	1	80	8TH ST	PAILET AVE	None



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16	1	627	3	1	85	8TH ST	PAILET AVE	None
16	1	627	4	1	80	8TH ST	PAILET AVE	None
16	1	639	1	1	90	34TH ST	ESTHER ST	None
16	1	639	2	1	90	34TH ST	ESTHER ST	None
16	2	622	1	1	10	FAIRMONT ST	8TH ST	Perpendicular
16	2	622	1	2	13	FAIRMONT ST	8TH ST	Perpendicular
16	2	622	4	1	80	FAIRMONT ST	8TH ST	None
16	2	625	1	1	80	GREFER AVE	8TH ST	None
16	2	625	2	1	80	GREFER AVE	8TH ST	None
16	2	625	3	1	80	GREFER AVE	8TH ST	None
16	2	625	4	1	15	GREFER AVE	8TH ST	Perpendicular
16	2	625	4	2	10	GREFER AVE	8TH ST	Perpendicular
16	2	628	1	1	80	8TH ST	ST JOSEPH LN	None
16	2	628	2	1	80	8TH ST	ST JOSEPH LN	None
16	2	628	3	1	90	8TH ST	ST JOSEPH LN	None
16	2	628	4	1	80	8TH ST	ST JOSEPH LN	None
16	2	644	1	1	9	8TH ST	MANHATTAN BLVD	Perpendicular
16	2	644	1	2	9	8TH ST	MANHATTAN BLVD	Perpendicular
16	2	644	2	1	75	8TH ST	MANHATTAN BLVD	None
16	2	644	3	3	22	8TH ST	MANHATTAN BLVD	Apex
16	2	644	4	2	4	8TH ST	MANHATTAN BLVD	Perpendicular
16	3	186	1	2	13	UTE DR	MANHATTAN BLVD W	Perpendicular
16	3	186	2	1	13	UTE DR	MANHATTAN BLVD W	Perpendicular
16	3	186	3	3	22	UTE DR	MANHATTAN BLVD W	Apex
16	3	186	4	3	9	UTE DR	MANHATTAN BLVD W	Perpendicular
16	3	212	1	2	11	MANHATTAN BLVD W	STUB	Perpendicular
16	3	212	2	1	10	MANHATTAN BLVD W	STUB	Perpendicular
17	2	229	1	1	80	LAPALCO BLVD S	APOLLO AVE E	None
17	2	229	2	1	75	LAPALCO BLVD S	APOLLO AVE E	None
17	2	229	3	2	8	LAPALCO BLVD S	APOLLO AVE E	Perpendicular
17	2	229	4	1	5	LAPALCO BLVD S	APOLLO AVE E	Perpendicular
17	2	229	C	1	11	LAPALCO BLVD S	APOLLO AVE E	Perpendicular
17	2	229	C	2	0	LAPALCO BLVD S	APOLLO AVE E	Perpendicular
17	2	234	3	3	19	CENTRAL	CENTRAL BLVD S	Apex
17	2	234	4	3	38	CENTRAL	CENTRAL BLVD S	Perpendicular
17	2	688	1	3	15	MANHATTAN BLVD	MAGNOLIA TRACE DR	Apex
17	2	688	2	3	25	MANHATTAN BLVD	MAGNOLIA TRACE DR	Apex
17	3	224	1	1	0	LAPALCO BLVD N	BROOKLYN AVE	Perpendicular
17	3	224	4	2	0	LAPALCO BLVD N	BROOKLYN AVE	Perpendicular
17	3	230	1	3	7	LAPALCO BLVD S	MANHATTAN BLVD W	Apex
17	3	230	2	3	7	LAPALCO BLVD S	MANHATTAN BLVD W	Apex
17	3	230	3	3	22	LAPALCO BLVD S	MANHATTAN BLVD W	Apex
17	3	230	4	3	12	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	A	1	12	LAPALCO BLVD S	MANHATTAN BLVD W	Cut-through
17	3	230	A	2	12	LAPALCO BLVD S	MANHATTAN BLVD W	Cut-through
17	3	230	B	1	2	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	B	2	2	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	C	1	13	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	C	2	15	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	D	1	10	LAPALCO BLVD S	MANHATTAN BLVD W	Cut-through
17	3	230	E	1	5	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	E	2	2	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	F	1	2	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	F	2	5	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	G	1	2	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	G	2	2	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular



Jefferson Parish ADA Transition Plan / Summary of survey results, organized by target area and priority

Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
17	3	230	H	1	17	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	H	2	15	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	H	3	15	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	I	1	5	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	230	I	2	2	LAPALCO BLVD S	MANHATTAN BLVD W	Perpendicular
17	3	238	3	1	39	MANHATTAN BLVD W	12TH ST	Perpendicular
17	3	238	3	2	19	MANHATTAN BLVD W	12TH ST	Perpendicular
17	3	238	4	3	13	MANHATTAN BLVD W	12TH ST	Apex
17	3	689	3	2	9	MANHATTAN BLVD	HYDE	Perpendicular
17	3	689	4	1	24	MANHATTAN BLVD	HYDE	Perpendicular
17	3	689	C	1	13	MANHATTAN BLVD	HYDE	Perpendicular
17	3	689	C	2	8	MANHATTAN BLVD	HYDE	Perpendicular
18	1	269	3	1	85	HIGHLAND DR N	WALL BLVD W	None
18	1	269	4	1	75	HIGHLAND DR N	WALL BLVD W	None
18	1	271	1	1	80	HIGHLAND DR N	WALL BLVD E	None
18	1	274	1	2	80	WALL BLVD E	CARLISLE DR N	None
18	1	283	1	1	80	WALL BLVD E	LEBRUIN DR	None
18	1	283	2	1	75	WALL BLVD E	LEBRUIN DR	None
18	1	284	3	1	80	WALL BLVD W	DRAKE LN	None
18	1	284	4	1	80	WALL BLVD W	DRAKE LN	None
18	1	291	1	1	80	WALL BLVD E	IBERIA ST	None
18	1	305	1	3	28	WALL BLVD W	MOUNT LAUREL DR	Apex
18	1	305	2	3	24	WALL BLVD W	MOUNT LAUREL DR	Apex
18	1	305	3	3	5	WALL BLVD W	MOUNT LAUREL DR	Apex
18	1	305	4	3	5	WALL BLVD W	MOUNT LAUREL DR	Apex
18	1	305	B	1	9	WALL BLVD W	MOUNT LAUREL DR	Cut-through
18	2	249	1	2	10	WALL BLVD W	COMMERCE ST	Perpendicular
18	2	249	2	3	5	WALL BLVD W	COMMERCE ST	Apex
18	2	249	3	3	20	WALL BLVD W	COMMERCE ST	Apex
18	2	249	4	3	10	WALL BLVD W	COMMERCE ST	Apex
18	2	254	1	3	20	WALL BLVD W	WILLOWBROOK DR	Apex
18	2	254	2	3	15	WALL BLVD W	WILLOWBROOK DR	Apex
18	2	254	3	3	10	WALL BLVD W	WILLOWBROOK DR	Apex
18	2	254	4	3	5	WALL BLVD W	WILLOWBROOK DR	Apex
18	2	273	3	1	75	WALL BLVD W	CARLISLE DR N	None
18	2	273	4	3	10	WALL BLVD W	CARLISLE DR N	Apex
18	2	280	2	2	19	WALL BLVD W	FAIRFIELD AVE	Perpendicular
18	2	280	3	1	85	WALL BLVD W	FAIRFIELD AVE	None
18	2	280	4	1	75	WALL BLVD W	FAIRFIELD AVE	None
18	2	280	B	1	9	WALL BLVD W	FAIRFIELD AVE	Perpendicular
18	2	280	B	2	9	WALL BLVD W	FAIRFIELD AVE	Perpendicular
18	2	292	1	3	15	LAPALCO BLVD N	WALL BLVD E	Apex
18	2	292	2	3	2	LAPALCO BLVD N	WALL BLVD E	Apex
18	2	292	3	3	2	LAPALCO BLVD N	WALL BLVD E	Apex
18	2	292	4	3	20	LAPALCO BLVD N	WALL BLVD E	Apex
18	2	292	A	1	5	LAPALCO BLVD N	WALL BLVD E	Perpendicular
18	2	292	A	2	10	LAPALCO BLVD N	WALL BLVD E	Perpendicular
18	2	292	B	1	5	LAPALCO BLVD N	WALL BLVD E	Perpendicular
18	2	292	B	2	10	LAPALCO BLVD N	WALL BLVD E	Perpendicular
18	2	292	C	1	2	LAPALCO BLVD N	WALL BLVD E	Cut-through
18	2	292	C	2	12	LAPALCO BLVD N	WALL BLVD E	Cut-through
18	2	292	D	1	7	LAPALCO BLVD N	WALL BLVD E	Perpendicular
18	2	292	D	2	7	LAPALCO BLVD N	WALL BLVD E	Perpendicular
18	2	292	D	3	10	LAPALCO BLVD N	WALL BLVD E	Perpendicular
18	2	292	E	1	7	LAPALCO BLVD N	WALL BLVD E	Cut-through
18	2	292	E	2	12	LAPALCO BLVD N	WALL BLVD E	Cut-through



Jefferson Parish ADA Transition Plan / Summary of survey results, organized by target area and priority

Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
18	2	292	F	1	15	LAPALCO BLVD N	WALL BLVD E	Perpendicular
18	2	292	F	2	5	LAPALCO BLVD N	WALL BLVD E	Cut-through
18	3	265	3	3	10	WALL BLVD W	IBERIA ST	Apex
18	3	265	4	3	5	WALL BLVD W	IBERIA ST	Apex
18	3	290	1	3	5	CAMERON DR	WALL BLVD W	Apex
18	3	290	2	3	11	CAMERON DR	WALL BLVD W	Apex
18	3	290	3	3	5	CAMERON DR	WALL BLVD W	Apex
18	3	290	4	3	20	CAMERON DR	WALL BLVD W	Apex
19	2	1	1	3	22	TERRY PKWY W	HARVARD AVE	Apex
19	2	1	2	3	29	TERRY PKWY W	HARVARD AVE	Apex
19	2	1	3	3	15	TERRY PKWY W	HARVARD AVE	Apex
19	2	1	4	3	18	TERRY PKWY W	HARVARD AVE	Apex
19	2	1	B	1	16	TERRY PKWY W	HARVARD AVE	Perpendicular
19	2	1	B	2	19	TERRY PKWY W	HARVARD AVE	Perpendicular
19	2	1	D	1	16	TERRY PKWY W	HARVARD AVE	Perpendicular
19	2	1	D	2	15	TERRY PKWY W	HARVARD AVE	Perpendicular
19	2	9	1	3	22	TERRY PKWY W	CAROL SUE AVE	Apex
19	2	9	2	2	20	TERRY PKWY W	CAROL SUE AVE	Perpendicular
19	2	9	2	3	29	TERRY PKWY W	CAROL SUE AVE	Apex
19	2	9	3	1	23	TERRY PKWY W	CAROL SUE AVE	Perpendicular
19	2	9	3	2	14	TERRY PKWY W	CAROL SUE AVE	Perpendicular
19	2	9	4	3	19	TERRY PKWY W	CAROL SUE AVE	Apex
19	2	9	B	1	17	TERRY PKWY W	CAROL SUE AVE	Perpendicular
19	2	9	B	2	25	TERRY PKWY W	CAROL SUE AVE	Perpendicular
19	2	9	D	1	4	TERRY PKWY W	CAROL SUE AVE	Perpendicular
19	2	9	D	2	9	TERRY PKWY W	CAROL SUE AVE	Perpendicular
19	2	16	1	2	8	TERRY PKWY W	DANIELS RD N	Perpendicular
19	2	16	2	1	8	TERRY PKWY W	DANIELS RD N	Perpendicular
19	2	16	3	1	75	TERRY PKWY W	DANIELS RD N	None
19	2	16	4	1	85	TERRY PKWY W	DANIELS RD N	None
19	2	16	D	1	10	TERRY PKWY W	DANIELS RD N	Cut-through
19	2	16	D	2	10	TERRY PKWY W	DANIELS RD N	Cut-through
19	2	634	1	1	75	STUMPF BLVD	HOLMES BLVD	None
19	2	634	2	1	75	STUMPF BLVD	HOLMES BLVD	None
19	2	634	3	2	0	STUMPF BLVD	HOLMES BLVD	Perpendicular
19	2	634	4	1	75	STUMPF BLVD	HOLMES BLVD	None
19	2	640	1	1	14	STUMPF BLVD	BLOSSOM ST	Perpendicular
19	2	640	1	2	24	STUMPF BLVD	BLOSSOM ST	Perpendicular
19	2	640	4	1	85	STUMPF BLVD	BLOSSOM ST	None
19	3	2	3	3	10	TERRY PKWY W	GREEN OAK DR	Apex
19	3	2	4	3	5	TERRY PKWY W	GREEN OAK DR	Apex
19	3	605	1	3	14	TERRY PKWY	GUARDIAN AVE	Apex
19	3	605	2	3	24	TERRY PKWY	GUARDIAN AVE	Apex
19	3	605	3	3	19	TERRY PKWY	GUARDIAN AVE	Apex
19	3	605	4	3	29	TERRY PKWY	GUARDIAN AVE	Apex
19	3	605	B	1	20	TERRY PKWY	GUARDIAN AVE	Perpendicular
19	3	605	B	2	10	TERRY PKWY	GUARDIAN AVE	Perpendicular
19	3	605	D	1	9	TERRY PKWY	GUARDIAN AVE	Perpendicular
19	3	605	D	2	17	TERRY PKWY	GUARDIAN AVE	Perpendicular
19	3	632	1	3	24	STUMPF BLVD	TERRY PKWY	Apex
19	3	632	2	3	14	STUMPF BLVD	TERRY PKWY	Apex
19	3	632	3	3	14	STUMPF BLVD	TERRY PKWY	Apex
19	3	632	4	3	19	STUMPF BLVD	TERRY PKWY	Apex
19	3	632	D	1	19	STUMPF BLVD	TERRY PKWY	Perpendicular
19	3	632	D	2	14	STUMPF BLVD	TERRY PKWY	Perpendicular
19	3	635	1	1	13	HERITAGE AVE	STUMPF BLVD	Perpendicular



Jefferson Parish ADA Transition Plan / Summary of survey results, organized by target area and priority

Target area	Priority	Intersection ID	CurbID	RampID	RampScore	Street 1	Street 2	Ramp type
19	3	635	1	2	10	HERITAGE AVE	STUMPF BLVD	Perpendicular
19	3	635	2	1	10	HERITAGE AVE	STUMPF BLVD	Perpendicular
19	3	635	2	2	10	HERITAGE AVE	STUMPF BLVD	Perpendicular
19	3	635	3	1	10	HERITAGE AVE	STUMPF BLVD	Perpendicular
19	3	635	3	2	10	HERITAGE AVE	STUMPF BLVD	Perpendicular
19	3	635	4	1	10	HERITAGE AVE	STUMPF BLVD	Perpendicular
19	3	635	4	2	10	HERITAGE AVE	STUMPF BLVD	Perpendicular
19	3	636	1	3	10	STUMPF BLVD	WRIGHT AVE	Apex
19	3	636	2	1	4	STUMPF BLVD	WRIGHT AVE	Apex
19	3	636	2	2	7	STUMPF BLVD	WRIGHT AVE	Perpendicular
19	3	636	3	3	5	STUMPF BLVD	WRIGHT AVE	Apex
19	3	636	4	1	75	STUMPF BLVD	WRIGHT AVE	None
19	3	636	D	1	13	STUMPF BLVD	WRIGHT AVE	Perpendicular
19	3	636	D	2	15	STUMPF BLVD	WRIGHT AVE	Perpendicular
19	3	638	2	1	2	STUMPF BLVD	DOLPHIN ST	Perpendicular
19	3	638	2	2	7	STUMPF BLVD	DOLPHIN ST	Perpendicular
19	3	638	3	1	27	STUMPF BLVD	DOLPHIN ST	Perpendicular
19	3	638	3	2	22	STUMPF BLVD	DOLPHIN ST	Perpendicular

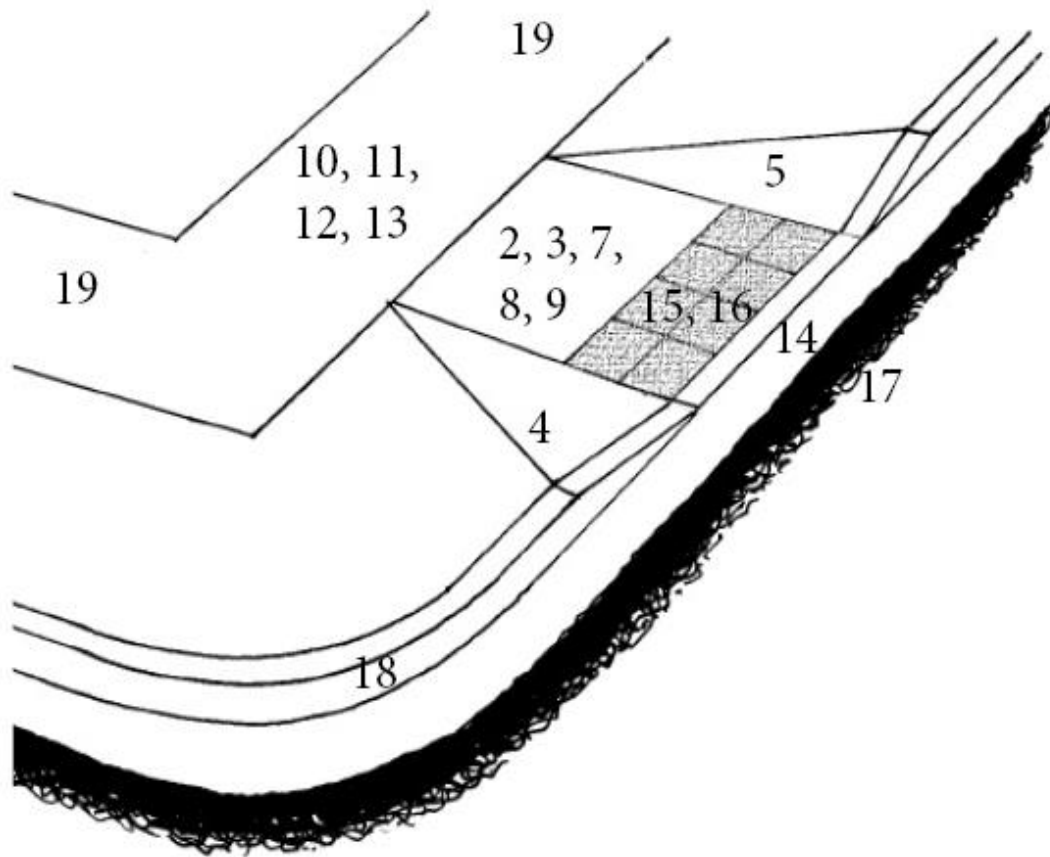


Appendix E: Curb Ramp and Intersection Scoring Methodology

Curb crossings (ramps) were scored according to the methodology shown in the table below. Crossings could receive a maximum of 100 points (in the case of the absence of a ramp and curb, and presence of an obstruction, and absence of or poor condition sidewalks).

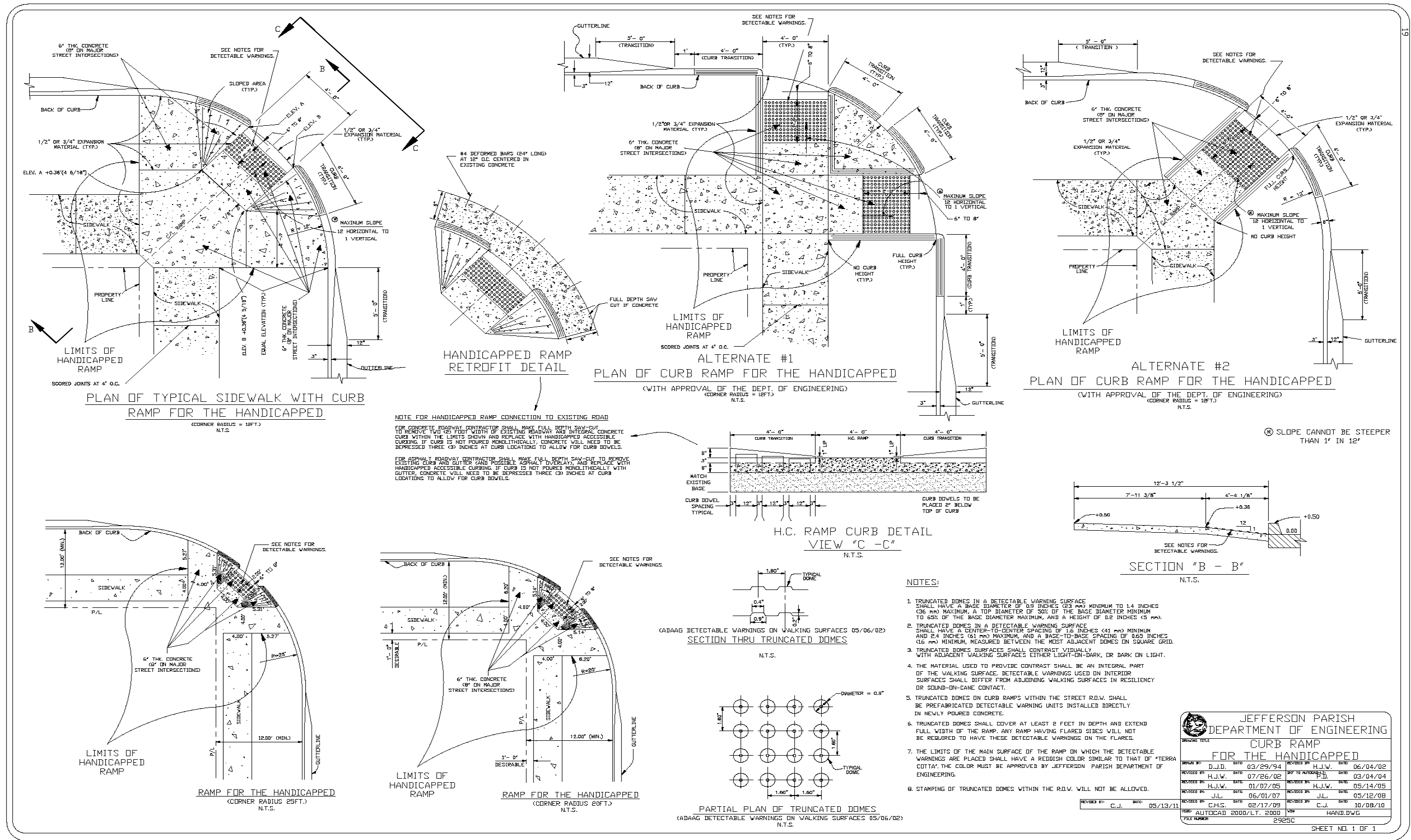
Feature		Values			
1	Ramp type	All types : 0	No ramp : 75		
2	Ramp surface	Acceptable : 0	Unacceptable : 5	Is Null : 0	
3	Running slope	≤ 8.33 : 0	8.33 to 10 : 5	> 10 : 10	Is Null : 0
4	Left flare percentage	≤ 10 : 0	> 10 : 5	Is Null : 0	
5	Right flare percentage	≤ 10 : 0	> 10 : 5	Is Null : 0	
6	Ramp obstructions	No : 0	Yes : 10	Is Null : 0	
7	Ramp width	≥ 48 : 0	36 to 47.9 : 5	< 36 : 10	Is Null : 0
8	Ramp length	< 180 : 0	≥ 180 : 5	Is Null : 0	
9	Ramp cross slope	≤ 2 : 0	2.1 to 4 : 3	> 4 : 5	Is Null : 0
10	Landing present	Yes : 0	No : 5	Is Null : 0	
11	Landing width	≥ 48 : 0	36 to 47.9 : 3	< 36 : 5	Is Null : 0
12	Landing height	≥ 48 : 0	36 to 47.9 : 3	< 36 : 5	Is Null : 0
13	Landing cross slope	≤ 2 : 0	2.1 to 4 : 3	> 4 : 5	Is Null : 0
14	Grade breaks are perpendicular	Yes : 0	No : 2	Is Null : 0	
15	Detectable warning	Truncated dome : 0	Scored/stamped : 2	None : 5	Is Null : 0
16	Detectable warning contrast	Yes : 0	No : 2	Is Null : 0	
17	Counter slope	≤ 5 : 0	5.1 to 7 : 3	>7 : 5	Is Null : 0
18	Is curb present	Yes : 0	No : 5	Is Null : 0	
19	Sidewalks	2 acceptable : 0	1 acceptable : 5	0 acceptable : 10	Is Null : 0
20	Cut-through	≥ 60 or null : 0	48 to 59.9 : 5	<48 : 10	Is Null : 0

The diagram below indicates the locations of the different features described in the table on the previous page.



Appendix F: Jefferson Parish Dept. of Engineering Curb Ramp Standards

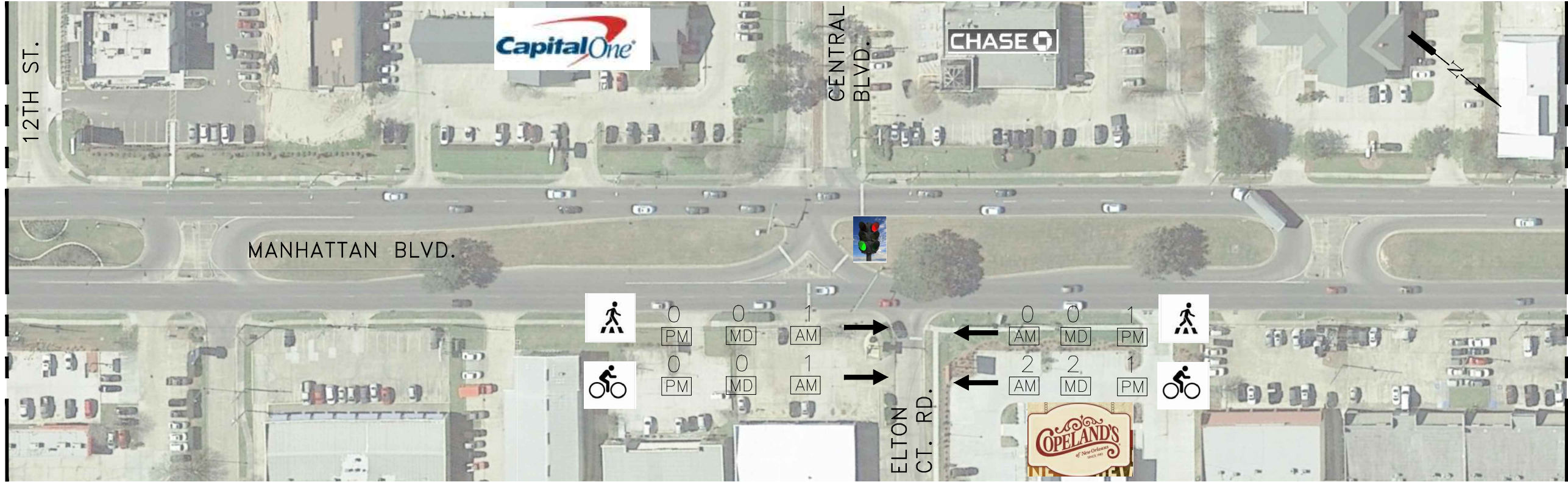
Jefferson Parish's official curb ramp design standards are provided to demonstrate their compliance with the PROWAG definitions provided in section 2.2 of this Transition Plan.



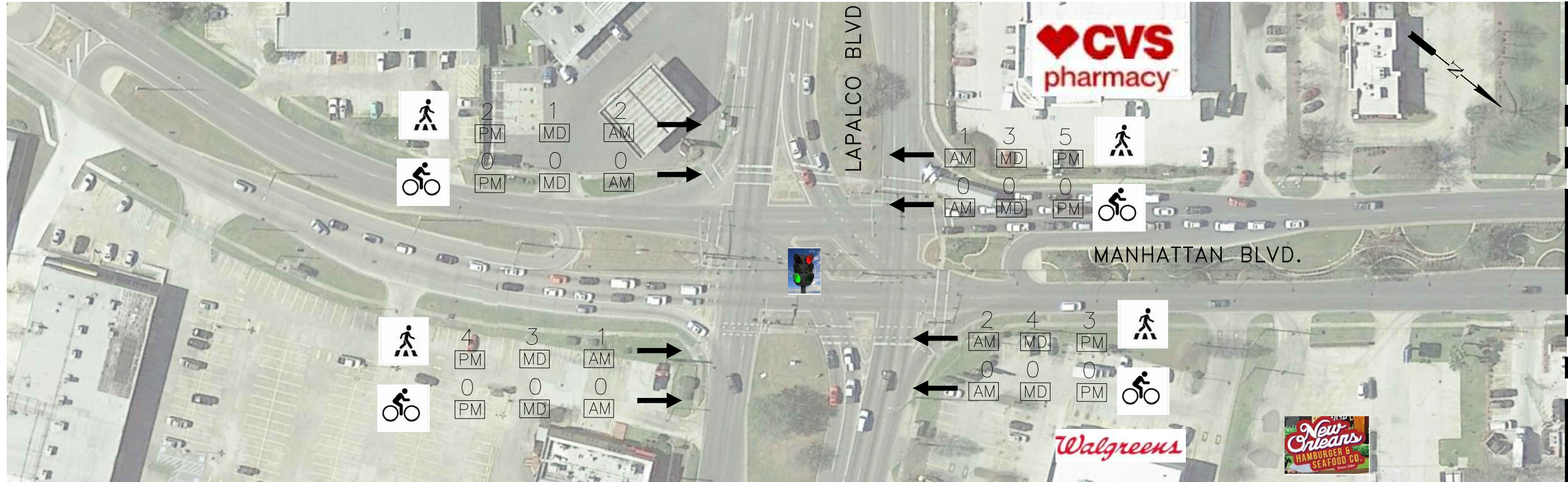
APPENDIX J

TURNING MOVEMENT COUNTS PEDESTRIANS AND BICYCLES

MATCHLINE A



MATCHLINE B



MATCHLINE A

6/28/2018 - 6/29/2018



Stage 0 Feasibility
 Timing and Coordination Study
 Manhattan Boulevard Corridor
 RPC Task A - 3.18: FY-18 UPWP
 Jefferson Parish, Louisiana



SHEET 1
 PEDESTRIANS
 AND
 BICYCLES

MATCHLINE C



MATCHLINE B



MATCHLINE D

MATCHLINE C

6/28/2018 - 6/29/2018

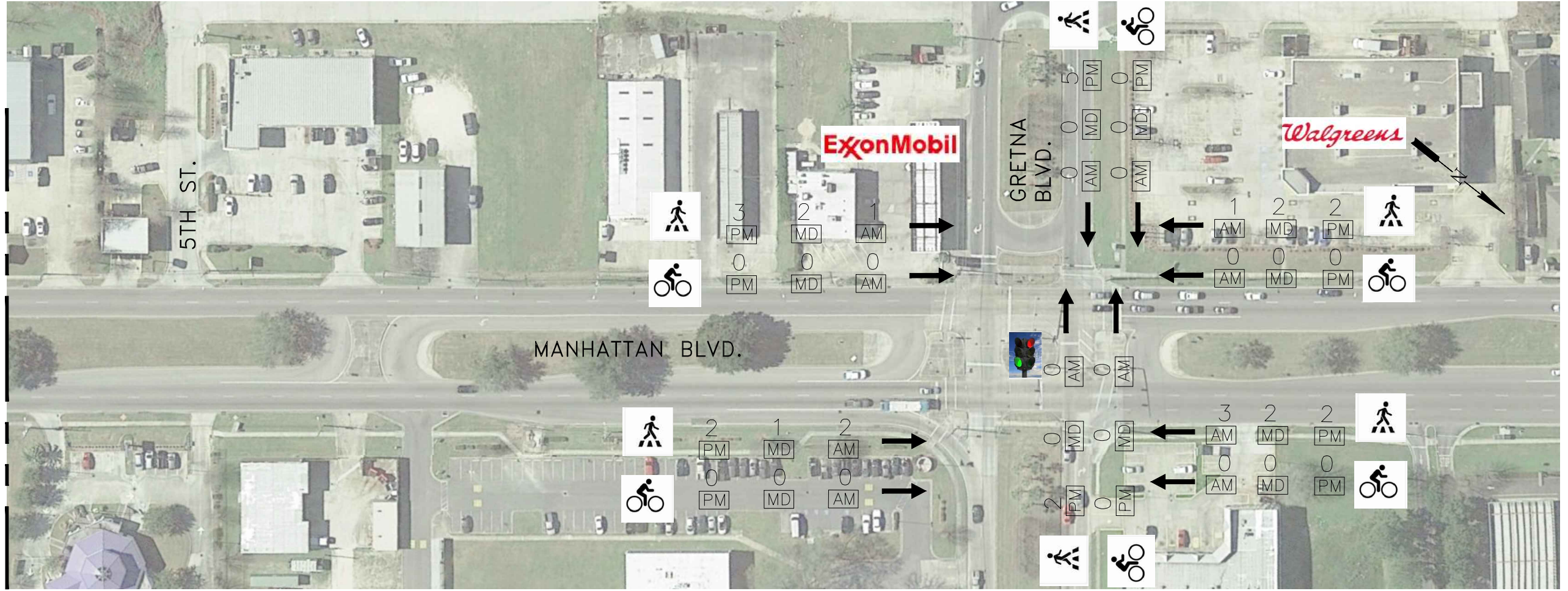


Stage 0 Feasibility
 Traffic Signal Timing and Coordination Study
 Manhattan Boulevard Corridor
 RPC Task A-3.18: FY-18 UPWP
 Jefferson Parish, Louisiana



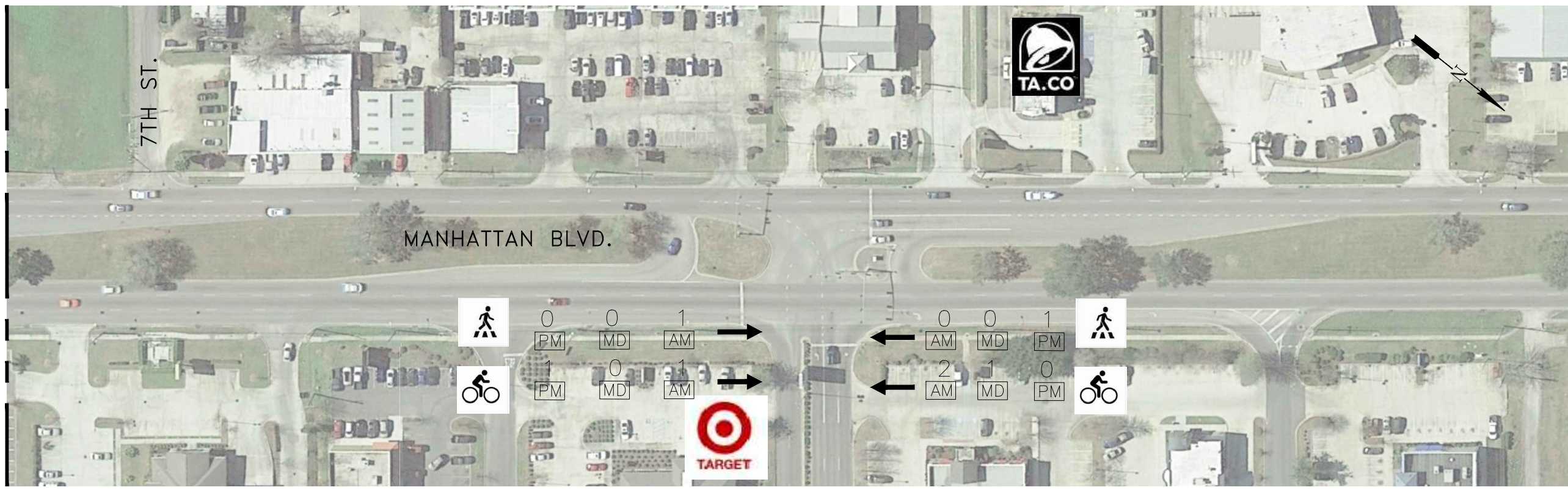
SHEET 2
 PEDESTRIANS
 AND
 BICYCLES

MATCHLINE E



MATCHLINE F

MATCHLINE D



MATCHLINE E

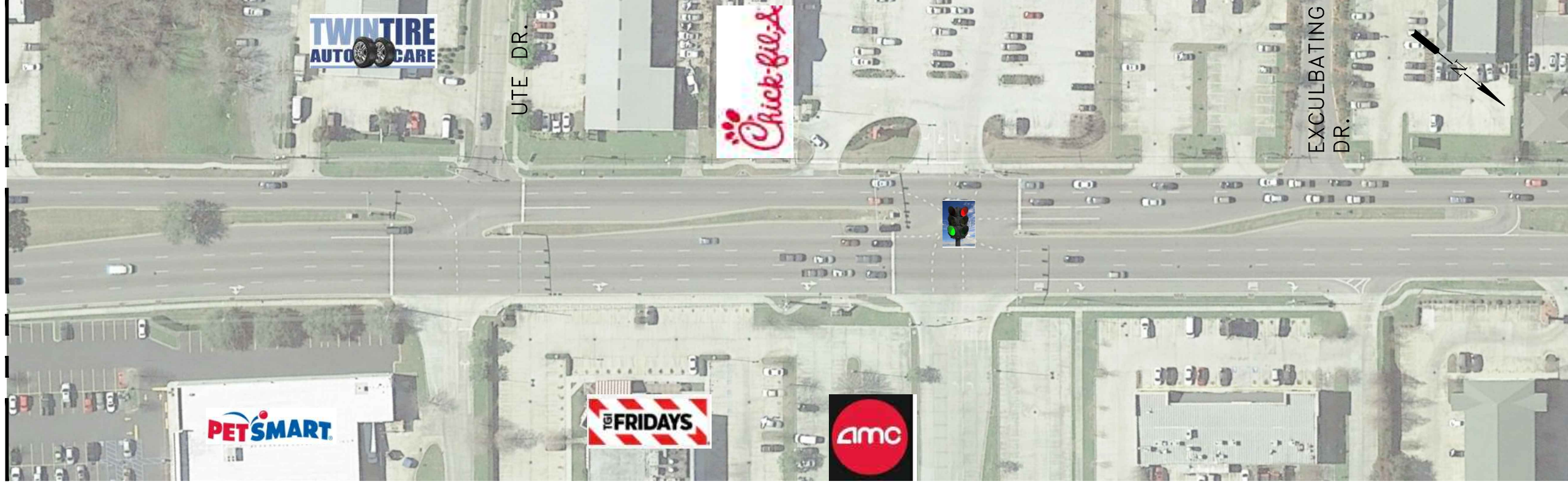
6/28/2018 - 6/29/2018



Stage 0 Feasibility
Traffic Signal Timing and Coordination Study
Manhattan Boulevard Corridor
RPC Task A-3.18: FY-18 UPWP
Jefferson Parish, Louisiana



MATCHLINE G



MATCHLINE H

MATCHLINE F

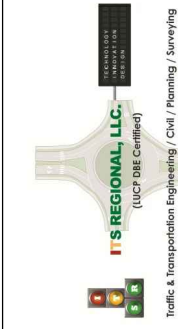


MATCHLINE G

6/28/2018 - 6/29/2018



Stage 0 Feasibility
 Traffic Signal Timing and Coordination Study
 Manhattan Boulevard Corridor
 RPC Task A-3.18: FY-18 UPWP
 Jefferson Parish, Louisiana



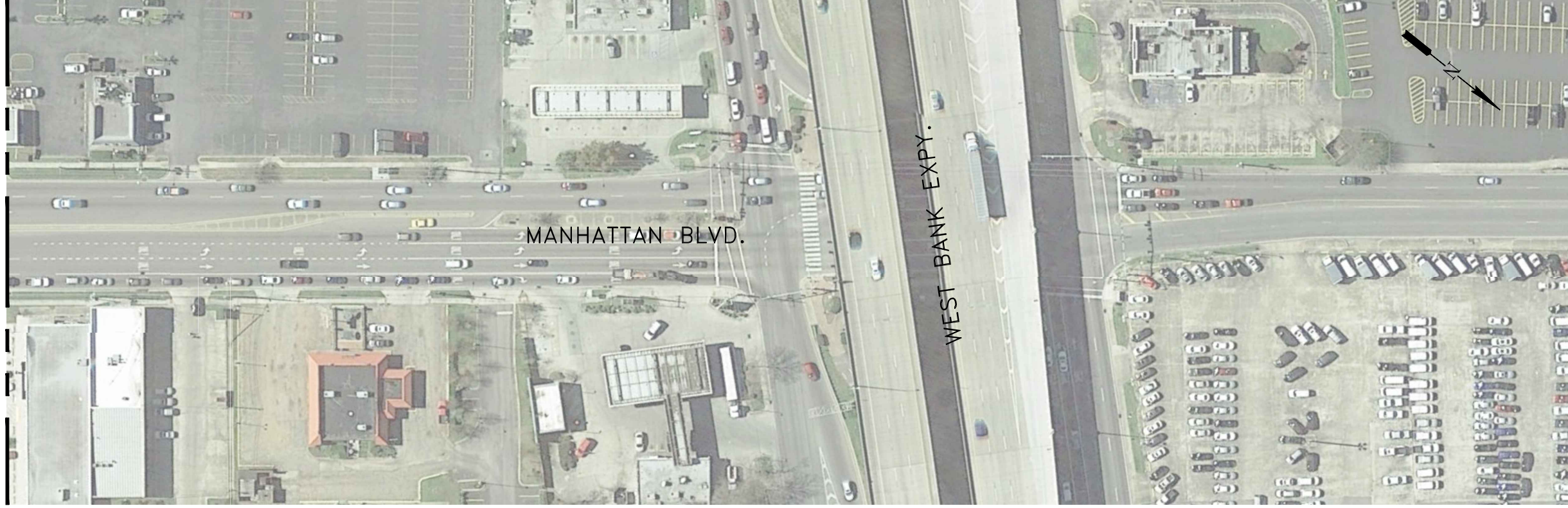
SHEET 4
 PEDESTRIANS
 AND
 BICYCLES

MATCHLINE H



MATCHLINE I

MATCHLINE I



6/28/2018 - 6/29/2018



Stage 0 Feasibility
 Traffic Signal Timing and Coordination Study
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 Jefferson Parish, Louisiana



SHEET 5
 PEDESTRIANS
 AND
 BICYCLES