SR-241 / SR-91 Express Lanes Connector Project

ORANGE COUNTY AND RIVERSIDE COUNTY, CALIFORNIA
City of Anaheim, City of Yorba Linda and City of Corona
12-ORA-241 PM 36.1/39.1
12-ORA-91 PM 14.7/18.9
08-RIV-91 PM 0.0/1.5

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Traffic Analysis Report

Prepared for:
Foothill/Eastern Transportation Corridor Agency, Project Sponsor

and for:
State of California Department of Transportation, Lead Agency

July 24, 2015

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

Signature Page

12-ORA-241 PM 36.1/39.1
12-ORA-91 PM 14.7/18.9
08-RIV-91 PM 0.0/1.5

This Traffic Analysis Report has been prepared under the direction of the following Registered Traffic Engineer. The Registered Traffic Engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

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Executive Summary

The purpose of this report is to document the traffic analysis for the State Route 241/State Route 91 (SR-241/SR-91) Express Lane Connector Project Approval/Environmental Documentation (PA/ED). The Foothill/Eastern Transportation Corridor Agency (F/ETCA) is developing the PA/ED for the proposed improvements to the SR-241/SR-91 interchange in Orange County. The proposed improvements evaluated in the PA/ED focus on a single build alternative: a new direct connection between SR-241 and the SR-91 Express Lanes ("proposed project"). That alternative would construct direct connectors from northbound SR-241 to the eastbound SR-91 Express Lanes, and from the westbound SR-91 Express Lanes to southbound SR-241 (one lane in each direction). The goal of the traffic analysis in this report is to conduct operational analysis to refine and study the PA/ED alternative. The analysis is focused on the interaction of the Express Lane weaving section with the congested general purpose (GP) lanes.

SR-241 is a toll-only facility, from the Oso Parkway interchange in south Orange County to its terminus at SR-91. There are two mainline toll stations, including one at Windy Ridge south of the SR-91 interchange. Approximately half of the ramps are tolled as well, depending on the direction of travel and proximity to the mainline stations. Toll stations have both FasTrak and license plate readers and no cash is accepted. The toll pricing structure on SR-241 is the same for all vehicle types, regardless of occupancy. The existing SR-241 is owned and maintained by Caltrans, with the F/ETCA operating the toll facilities.

The 91 Express Lanes is a two-lane toll facility on SR-91 in each direction from SR-55 to the Orange/Riverside County line (east of the SR-241 interchange). To the west and east of the 91 Express Lanes termini, there are HOV lanes on SR-91 that extend from the Interstate 110 (I-110) freeway in Gardena to the west and to the Madison Street interchange in Riverside to the east. The Orange County Transportation Authority (OCTA) operates the 91 Express Lanes. The Riverside County Transportation Commission (RCTC) is currently constructing the SR-91 Corridor Improvement Project (CIP). The SR-91 CIP will extend the tolled express lanes on SR-91 between the Orange County/Riverside County line and I-15, add one GP lane between SR-71 and I-15, add one GP lane from the I-15/SR-91 interchange to Pierce Street, and improve five local interchanges and the I-15/SR-91 interchange.

A detailed traffic operations analysis was conducted to evaluate potential design variations of the PA/ED alternative. This report focuses on that analysis. Simulation modeling was the primary tool for analysis, using VISSIM, a microscopic, behavior-based multi-purpose traffic simulation program. VISSIM was used to simulate operations on the SR-91 and SR-241 corridors, including mainline segments, ramps, interchanges, and freeway connections. One of the key benefits of VISSIM is the ability to visually simulate traffic operations to reveal the operational effects of various design solutions. The VISSIM modeling done as part of this analysis does not include dynamic behavior based on toll rate policy. Instead, the modeling is intended to optimize operations within the study area and assumes that tolling policies will be set to match the travel-demand assumptions used on the toll facilities in the VISSIM model. The volume of northbound SR-241 to eastbound SR-91 traffic using the

direct connector was developed by determining the volume of traffic that would optimize (maintain speeds in excess of 60 mph) the express lane operations in the mixing bowl. The volume using the new connector will ultimately be influenced by pricing. The amount of traffic exiting the eastbound SR-91 express lanes (from OCTA) and entering the eastbound express lanes (to RCTC) is generally fixed based on the data gathered from the Bluetooth study. The third contributing stream of traffic is the volume coming from the new direct connecter. The volume used in the analysis is the volume that will optimize express lane operations and still be acceptable to all three tolling agencies (OCTA, RCTC, and F/ETCA). A separate Tolling and Revenue Study and Concept of Operations Study will be developed to determine toll rates. The Tolling and Revenue Study and Concept of Operations Study will investigate the tolling policy that will provide the optimized direct connector demand determined in this study.

Table E-1 summarizes the overall traffic operational benefits of the proposed project.

FIGURE E-1
Overall Project Benefit Summary[1]

Measure	Year	Results
Increase in Throughput in the Mixing Bowl	2017	2,586 vehicles in the peak direction (+7%)
	2040	1,239 vehicles in the peak direction (+3%)
Increase in Corridor Vehicle Miles Traveled (VMT)	2017	34,301 VMT (+4%)
	2040	17,403 VMT (+2%)
Change in Speed	2017	+1.9 mph (+6%)
	2040	+2.7 mph (+7%)
Change in Delay	2017	-0.6 minutes/vehicle (-12%)
	2040	-0.8 minutes/vehicle (-17%)

[1] Based on seven hours of results for the combined AM peak (three hours) and PM peak (four hours).

In the build scenario, the overall findings of the traffic analysis are as follows:

- The overall throughput on SR-91 increases.
- On the eastbound SR-91 GP lanes, more vehicles must exit the OCTA Express Lanes and enter the GP lanes and fewer cars can leave the GP lanes and enter the RCTC Express Lanes. More vehicles are in the Express Lanes in the mixing bowl area because the northbound SR-241 to eastbound SR-91 Express Lane Connector adds more traffic to the mixing bowl. More vehicles will exit, increasing friction, because the downstream constraint remains the same (3,200 vehicles/hour in the RCTC Express Lanes).
- However, there is also a reduction in friction due to fewer vehicles weaving from the northbound SR-241 to eastbound SR-91 GP ramp to the RCTC Express lanes with the project (i.e., most of these vehicles will now use the SR-241 to SR-91 Express Lane Connector.).

- The result is an overall net zero effect on the eastbound SR-91 GP lanes in the PM peak period. The overall average difference in vehicle throughput (Build minus No-Build) in the 2017 PM peak period is -0.3% and 0.6% in the 2040 PM peak period.

A more detailed summary of the overall findings of the traffic analysis for the SR-241/SR-91 Express Lane Connector Project is provided below:

- Traffic is projected to shift from other regional routes (SR-91, SR-55, surface streets) to SR-241. This regional shift is a result of the additional capacity of the new connector.
- In the AM peak period, more traffic is forecasted to travel from westbound SR-91 to southbound SR-241 in the build scenario. The resulting shift leads to fewer vehicles in the westbound SR-91 GP lanes (850 vehicles/hour in 2017 and 1,320 vehicles/hour in 2040), west of the SR-91/SR-241 interchange.
- In the 2017 PM peak period, more traffic is forecasted to travel from northbound SR-241 to eastbound SR-91 in the build scenario. The resulting shift leads to fewer vehicles in the eastbound SR-91 GP lanes (190 vehicles/hour in 2017), west of the SR-91/SR-241 interchange. Once these vehicles shift to SR-241, they are projected to use the northbound SR-241 to eastbound SR-91 Express Lane Connector and continue on to the RCTC Express Lanes. By the 2040 Design Year, background growth and the additional eastbound capacity provided by the SR-91 Ultimate CIP project is anticipated to balance traffic demand within the corridor between the No Build and Build scenario. Therefore, for the 2040 PM peak, there is no eastbound SR-91 regional shift to SR-241 projected.
- The project increases the toll road system throughput and revenue in both 2017 and 2040.
- The project will reduce the length of the northbound SR-241 to eastbound SR-91 queue on the general purpose ramp in the PM peak period.
- The project provides measureable system benefits in the AM peak period in the form of increased vehicle throughput on SR-91 in the mixing bowl (7% in 2017 and 3% in 2040), increased corridor-wide VMT (4% in 2017 and 2% in 2040), increased average speed (+1.9 mph in 2017 and +2.7 mph in 2040), and reduced average delay (-0.6 minutes/vehicle in 2017 and -0.8 minutes/vehicle in 2040).
- During the PM peak period, system benefits are mixed in 2017 but show an overall improvement by 2040. SR-91 vehicle throughput and VMT both increase in 2017, but the average speed drops (1 mph) and delay increases (0.4 minutes/vehicle) due to the regional shift that increases demand in the GP lanes. However, all system measures show positive impact by 2040 (average speed increases by 2 mph and delay decreases by 0.4 minutes/vehicle).
- At the SR-91 westbound mainline bottleneck between the Green River Road interchange and the Express Lane Ingress (AM peak period), the project provides benefit in the form of shorter queues, higher vehicle throughput, higher speed and lower density, and shorter travel times in both 2017 and 2040.
- At the SR-91 eastbound mainline bottleneck between the Express Lane Ingress and the Green River Road interchange (PM peak period), the project increases vehicle throughput in both 2017 and 2040. By the 2040 Design Year, the project will improve conditions at the bottleneck by increasing average speed (5 mph) and vehicle

throughput (between 0.5 and 1.5%) while reducing density and lowering travel time (from 1 to 4.5 minutes depending on path).

- With the project, high-speed operations of the SR-91 Express Lanes can be maintained with a maximum eastbound exiting Express Lane volume of 1800 vehicles/hour in 2017 (1600 vehicles/hour in 2040). The mix of OCTA/F/ETCA/RCTC toll traffic is critical to the successful operations of the mixing bowl.
- Analysis of three design variations for the SR-91 Eastbound Express Lane weaving section shows that there is very little difference between the variations from a traffic operations perspective, and the optimal configuration should be chosen based on other design considerations.
- The VISSIM modeling done as part of this analysis does not include dynamic behavior based on toll rate policy. Instead, the modeling is intended to optimize operations within the study area and assumes that tolling policies will be set to match the travel-demand assumptions used on the toll facilities in the VISSIM model. A separate tolling and revenue study will determine toll rates.

Overall Advantages

The proposed SR-241/SR-91 Express Lane Connector Project has several advantages:

- The direct connection closes the gap between two major toll systems (SR-91 Express Lanes and SR-241 Toll Roads)
- The project improves vehicle throughput in SR 91 corridor since more vehicles can be pushed through the SR-91 Express Lanes (i.e., the project brings more cars into the express lanes in the mixing bowl and therefore the combined GP and Express Lane throughput increases in the mixing bowl). The Express Lanes throughput upstream and downstream of the mixing bowl (i.e., in the OCTA and RCTC Express Lanes) remains the same with or without the project (approximately 3,200 vehicles/hour), consistent with the OCTA and RCTC tolling policy assumptions.
- The project improves vehicle miles traveled throughout study area.
- The project will pull 1,700 vehicles during the peak hours (AM/PM) from I-5, SR-55 and surrounding local arterials to SR-241 in the 2017 Opening Year.
- Travel time will be reduced by 24% for northbound SR-241 to eastbound SR-91 toll users in the 2017 Opening Year.

Overall Challenges

The proposed project also has challenges that will need to be addressed in future design/operations efforts:

- The operations through the SR-91/SR-241 interchange ingress/egress area require that flows to/from each system are controlled to ensure that the Express Lanes do not break down. This will require coordinating the pricing schemes for three different systems and for different entry points.
- The direct connection proposed by the project will integrate three tolling facilities (SR-91 Express Lanes, SR-241 Toll Roads, RCTC Express Lanes) operated by three different agencies (OCTA, F/ETCA, and RCTC). The operation and setting of toll rates for all three systems will require careful planning and coordination.

Both of the above items will be addressed in the Concept of Operations Report.

1 Introduction

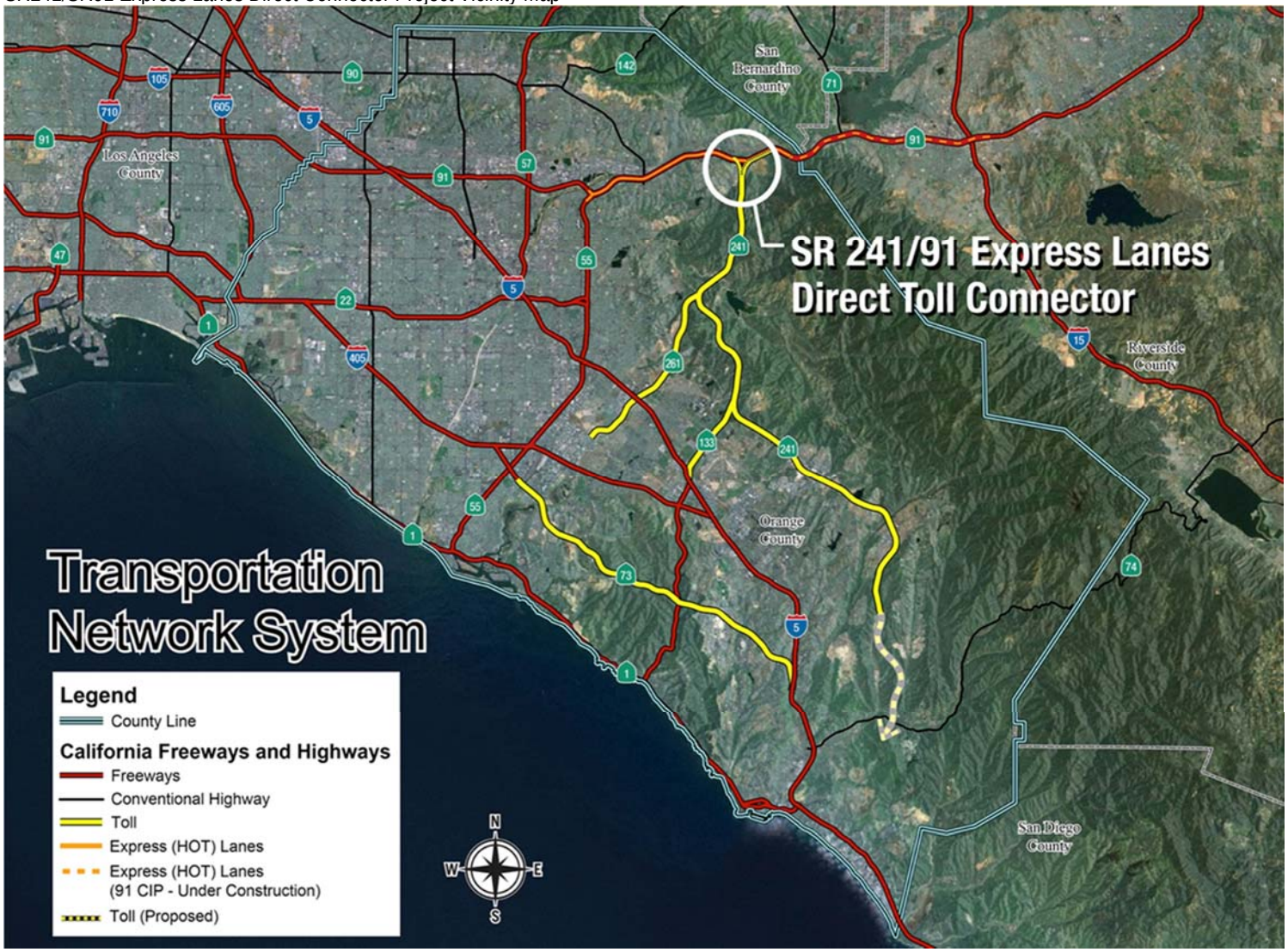
The purpose of this report is to document the traffic analysis for the State Route 241/State Route 91 (SR-241/SR-91) Express Lane Connector Project Approval/Environmental Documentation (PA/ED). The Foothill/Eastern Transportation Corridor Agency (F/ETCA) is developing the PA/ED for the proposed improvements to the SR-241/SR-91 interchange in Orange County. The proposed improvements evaluated in the PA/ED focus on a single build alternative: a new direct connection between SR-241 and the SR-91 Express Lanes ("proposed project"). That alternative would construct direct connectors from northbound SR-241 to the eastbound SR-91 Express Lanes, and the westbound SR-91 Express Lanes to southbound SR-241 (one lane in each direction). The goal of the traffic analysis in this report is to conduct operational analysis to refine and study the PA/ED alternative. The analysis is focused on the interaction of the Express Lane weaving section with the congested general purpose (GP) lanes.

The Proposed Project, located at the junction of SR-241 and SR-91 within the cities of Anaheim, Yorba Linda, and Corona and counties of Orange and Riverside, would provide improved access between SR-241 and SR-91 and is proposed to be a tolled facility. The proposed median-to-median connector project encompasses 12-ORA-241 (PM 36.1/39.1), 12-ORA-91 (PM 14.7/18.9), and 08 RIV-91 (PM 0.0/1.5) for a length of approximately 8.7 mi. A vicinity map of the project in relation to the toll road system in Orange County is provided in **Figure 1-1.**

Improvements for the connector are limited to 5.9 mi in the cities of Anaheim and Yorba Linda from south of the Windy Ridge Wildlife Undercrossing on SR-241 to Coal Canyon Undercrossing on SR-91. The remaining 2.8 mi of the Proposed Project is limited to FasTrak signage improvements (advance signage) in the cities of Anaheim (1.2 mi total), Yorba Linda (0.1 mi) and Corona (1.5 mi), with exact placement pending the Final Design process. The Proposed Project is mostly within existing Caltrans right-of-way, with one partial acquisition adjacent to eastbound SR-91. Construction access and staging areas would occur within existing Caltrans right-of-way. The project layout plan is provided in Appendix G.

SR-241 is a toll-only facility, from the Oso Parkway interchange in south Orange County to its terminus at SR-91. There are two mainline toll stations, including one at Windy Ridge south of the SR-91 interchange. Approximately half of the ramps are tolled as well, depending on the direction of travel and proximity to the mainline stations. Toll stations have both FasTrak and license plate readers and no cash is accepted. The toll pricing structure on SR-241 is the same for all vehicle types, regardless of occupancy. The existing SR-241 is owned and maintained by Caltrans, with the F/ETCA operating the toll facilities.

FIGURE 1-1
SR241/SR91 Express Lanes Direct Connector Project Vicinity Map



The 91 Express Lanes is a two-lane toll facility on SR-91 in each direction from SR-55 to the Orange/Riverside County line (east of the SR-241 interchange). To the west and east of the 91 Express Lanes termini, there are HOV lanes on SR-91 that extend from the Interstate 110 (I-110) freeway in Gardena to the west and to the Madison Street interchange in Riverside to the east. The Orange County Transportation Authority (OCTA) operates the 91 Express Lanes. The Riverside County Transportation Commission (RCTC) is currently constructing the SR-91 Corridor Improvement Project (CIP). The SR-91 CIP will extend the tolled express lanes on SR-91 between the Orange County/Riverside County line and I-15, add one GP lane between SR-71 and I-15, add one GP lane from the I-15/SR-91 interchange to Pierce Street, and improve five local interchanges and the I-15/SR-91 interchange.

The 91 Express Lanes require all drivers to have a FasTrak transponder to pay for the toll. There is no ingress/egress except at the endpoints, so there is only a single toll station in the middle of the tolled segment. Toll rates vary by day-of-week and time-of-day, and these are set in advance by OCTA, using historical traffic patterns. These rates remain the same for several months until they are updated again. OCTA maintains a toll policy that describes the criteria for changing the tolls (*http://www.91expresslanes.com/policies.asp*).

Vehicles on the SR-91 Express Lanes with three or more persons can use the 3+ lane toll-free (although they still are required to have a transponder), except when traveling eastbound (EB) on Monday through Friday between the hours of 4 and 6 PM. During that peak time, when traveling through the 3+ lane, drivers receive a 50% discount on the posted toll. The discount policy also applies to zero emission vehicles (ZEVs), motorcycles, disabled plates and disabled veterans.

A detailed traffic operations analysis was conducted to evaluate potential design variations of the PA/ED alternative. This report focuses on that analysis. Simulation modeling was the primary tool for analysis, using VISSIM, a microscopic, behavior-based multi-purpose traffic simulation program. VISSIM was used to simulate operations on the SR-91 and SR-241 corridors, including mainline segments, ramps, interchanges, and freeway connections. One of the key benefits of VISSIM is the ability to visually simulate traffic operations to reveal the operational effects of various design solutions. The VISSIM modeling done as part of this analysis does not include dynamic behavior based on toll rate policy. Instead, the modeling is intended to optimize operations within the study area and assumes that tolling policies will be set to match the travel-demand assumptions used on the toll facilities in the VISSIM model. A separate tolling and revenue study will determine toll rates.

In this report, following the introduction (Section 1), the report is organized as follows:

- Section 2 is a description of the study overview and methodology used to complete the analysis.
- Section 3 includes a detailed description of input data.
- Section 4 contains the coding of the baseline VISSIM model.
- Section 5 explains the calibration of the base model.
- Section 6 describes the development of future year travel demands.
- Section 7 discusses the traffic analysis methodology.
- Section 8 summarizes the results.
- Section 9 is the overview of findings and recommendations from the analysis.

2 Study Overview and Methodology

This section includes the details of the microsimulation analysis approach and assumptions and limitations of this study.

2.1 Study Area

The study area was chosen to be wide enough to capture the changes in traffic operations caused by the proposed project. The traffic analysis study area is illustrated in **Figure 2-1**. The freeway network includes SR-91 from west of the Weir Canyon Road interchange in Anaheim Hills to east of the Serfas Club Drive/Auto Center Drive interchange in Corona. The network also includes SR-241 from north of the Santiago Canyon Road interchange and SR-71 south of the Butterfield Ranch Road interchange.

FIGURE 2-1
Study Area

All on- and off-ramps within the freeway study area are included in the traffic analysis. The study area includes the SR-91 GP lanes, SR-91 Express Lanes, the SR-241 and SR-71 interchange connector ramps, and the service interchange ramps (i.e., local street interchange ramps). No ramp terminal intersections or other local streets are included in the study area. Off-ramps were modeled to a point just upstream of the stop bar at the intersection. On-ramps were modeled from the curb return on the local street, and include ramp meters if present.

During the development of the study area, consideration was given to the effect of the I-15 interchange (east of the project). Including SR-91 out to I-15 in the model would have substantially increased the complexity and data requirements for the analysis, without providing any more information about the SR-241/SR-91 connector benefits and impacts.

Therefore, the approach agreed upon by the technical stakeholders (Caltrans, OCTA, F/ETCA, and RCTC) was to replicate the effects of any bottlenecks caused by I-15 on eastbound traffic during the calibration process. For the calibration of existing conditions (see Section 5), the effects of downstream bottlenecks were modeled with reduced speed areas. These agreements were made at the traffic modeling methods and assumptions workshop held on April 25, 2013 at the F/ETCA offices.

2.2 Microsimulation Analysis Approach

This study followed the guidelines set forth in the Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software, Federal Highway Administration (FHWA), July 2004. A base year (2013) model for the study area was built in VISSIM (version 5.40-09) to reflect current conditions. The focus areas for the model were mainline segments, ramps, and freeway connections. The intersections at the freeway ramp termini were not included in the network since the focus of the analysis was the freeway operations (mainline and express lanes).

The VISSIM model developed for this study was based on the SR-91 CIP Final Traffic Study Paramics model (prepared by Parsons Brinckerhoff for RCTC in 2009) and the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study VISSIM model (prepared by Stantec for OCTA and F/ETCA in 2011). Validation of the simulation model will be accomplished by comparing the inputs/outputs to these previously-developed models.

The AM and PM peak periods were modeled, using the hours of 6 to 9 AM and 3 to 7 PM as the analysis windows. Three basic vehicle types were included in the model: non-toll paying vehicles (includes single-occupant and high occupancy vehicles); toll paying vehicles (includes single-occupant and high occupancy vehicles); and heavy trucks. The vehicle operational characteristics for non-toll paying vehicles and toll paying vehicles were considered identical.

After the existing conditions VISSIM microsimulation model was coded, an error checking process was conducted by reviewing the network coding for accurate lane geometry, lane channelization, lane alignment, and traffic controls. Once this error checking process was completed, low (e.g., 10%) traffic demands were coded into the model to ensure reasonable driver behavior at low volumes. Static routing in VISSIM was used for the origin/destination (O-D) assignment. Base year (2013) and future year (2017 and 2040) models, which were calibrated to match existing conditions, were used to analyze alternative scenarios. The planned opening year is 2018. The year 2017 was chosen to represent the opening year of the project. 2017 is considered by F/ETCA a reasonable estimate for opening year (plus or minus two years, 2017 to 2019). The year 2040 was chosen to represent the long-term horizon year.

The following outputs and measures of effectiveness (MOEs) were reported from the VISSIM analysis for both the GP and Express Lanes in the study area:

- Volume served (GP and Express Lanes)
- Density (GP and Express Lanes)
- Speed (GP and Express Lanes)

- Level of Service (GP and Express Lanes)
- Travel time by direction/O-D (GP and Express Lanes)
- Vehicle hours travelled (VHT)
- Vehicle miles travelled (VMT)

2.3 Technical Assumptions and Details

Table 2-1 summarizes assumptions for the VISSIM operational parameters.

TABLE 2-1
VISSIM Freeway Operational Parameters

Parameter	Approach
Vehicle Types and Classes	Non-toll, Toll, Trucks
Driving Behavior: Freeway Mainline and Ramps	Wiedemann 99[1] Freeway default parameters for car following and lane changing behavior; Adjustments may be made at bottleneck locations to match observed congestion as part of calibration process
Vehicle Acceleration	VISSIM default parameters
Vehicle Deceleration	VISSIM default parameters
Free-Flow Speed	Estimated from field surveys[2]
Reduced-Speed Areas on Ramps	From speed advisory signs and field surveys[2]
Off-Ramp Lane Change Distance	Initially based on location of exit-signs and upstream ramps, but could change as part of network calibration
Simulation Speed	5 time steps[3] per second

[1] The Wiedemann 99 model consists of ten calibration parameters, all labeled with a 'CC" prefix. Each of the parameters controls a unique aspect of the car following model. Additional discussion of these CC parameters and how they were adjusted during calibration is discussed in Section 5.2.2.
[2] Field survey data is based on PeMS data collected in the first and fourth quarter of 2013.
[3] The number of simulation seconds to a real time second. The change of the Simulation Speed does not affect the results of the simulation.

Other technical details are as follows:

- Trucks were restricted from using the left-most lane in the VISSIM model on SR-91 GP lanes. In addition, trucks were restricted from using Express/HOV lanes.
- Transit vehicles were not modeled in VISSIM.
- Pedestrians were not be modeled in VISSIM since the operations are focused on freeway operations.

3 Input Data

Detailed data were needed for both model input and calibration. Model input data included geometric data (supply), traffic data (demand), and control data. Calibration data were focused on performance data, including speed and queues. Both model input and calibration data were obtained from Bluetooth data collected in November/December 2013, field visits, aerial photographs (Google Earth), previous studies (SR-91 CIP Final Traffic Study Report prepared by Parsons Brinckerhoff for RCTC in 2009, SR-91 Corridor System Management Plans (CSMP) prepared by System Metrics Group in 2010), and historical archived data from the Caltrans Freeway Performance Measurement (PeMS) System (http://pems.eecs.berkeley.edu/State/, data taken from the first and fourth quarter of 2013).

3.1 Existing Traffic Data

Most of the detailed, historical data for mainline and ramp locations were extracted from PeMS. **Tables 3-1** and **3-2** summarize the availability of PeMS data for the ramps. Where PeMS data were not available (i.e., PeMS detectors not present at some locations), Caltrans published data and/or data from other studies (SR-91 CSMP Studies, SR-91 CIP Final Traffic Study Report) in the area were used to supplement the database.

TABLE 3-1
SR-91 Corridor – Eastbound Ramp Data Summary

#	Study Ramp	PeMS Data?	#	Study Ramp	PeMS Data?
1	Off-Ramp to Weir Canyon Road	Yes	9	Off-Ramp to Green River Road	Yes
2	On-Ramp from SB Weir Canyon Road	Yes	10	On-Ramp from Green River Road	Yes
3	On-Ramp from NB Weir Canyon Road	Yes	11	Off-Ramp to NB SR 71	No
4	Off-Ramp to SB SR 241 GP	Yes	12	On-Ramp from SB SR 71	Yes
5	Off-Ramp to Gypsum Canyon Road	Yes	13	Off-Ramp to Serfas Club Drive/Auto Center Drive	Yes
6	On-Ramp from SB Gypsum Canyon Road	Yes	14	On-Ramp from Serfas Club Drive/Auto Center Drive	Yes
7	On-Ramp from NB Gypsum Canyon Road	Yes	15	Off-Ramp to South Maple Street	Yes
8	On-Ramp from NB SR 241 GP	Yes			

Note: Where PeMS ramp data was not available, data from the SR-91 CIP Final Traffic Study Report (Parsons Brinckerhoff, 2010) was used.

TABLE 3-2
SR-91 Corridor – Westbound Ramp Data Summary

#	Study Ramp	PeMS Data?	#	Study Ramp	PeMS Data?
1	Off-Ramp to Serfas Club Drive/Auto Center Drive	No	8	Off-Ramp to Gypsum Canyon Road	No
2	On-Ramp from Serfas Club Drive/Auto Center Drive	Yes	9	On-Ramp from NB Gypsum Canyon Road	No
3	Off-Ramp to NB SR 71	No	10	On-Ramp from SB Gypsum Canyon Road	No
4	On-Ramp from SB SR 71	No	11	On-Ramp from NB SR 241	Yes
5	Off-Ramp to Green River Road	No	12	Off-Ramp to Weir Canyon Road	Yes
6	On-Ramp from Green River Road	No	13	On-Ramp from NB Weir Canyon Road	Yes
7	Off-Ramp to SB SR 241 GP	Yes	14	On-Ramp from SB Weir Canyon Road	Yes

Note: Where PeMS ramp data was not available, data from the SR-91 CIP Final Traffic Study Report (Parsons Brinckerhoff, 2010) was used.

3.2 Performance Data

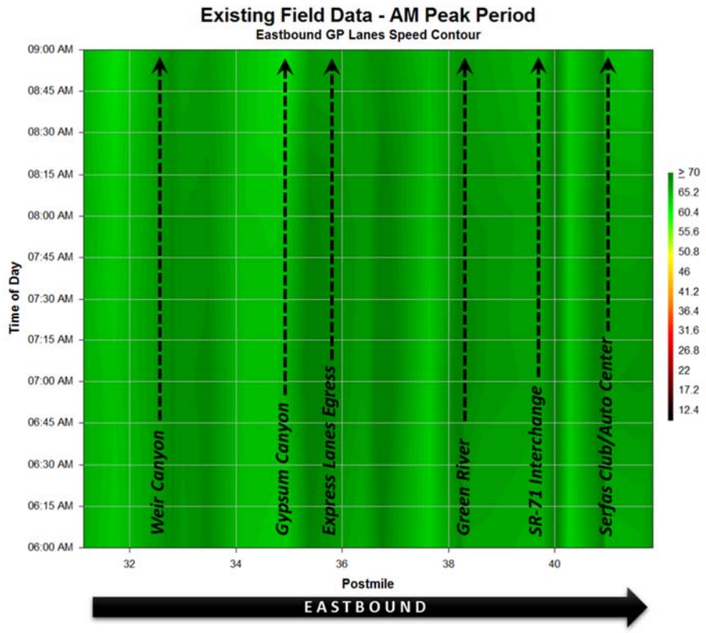
Travel speeds and bottleneck locations along the study corridor were required for the calibration of the VISSIM model. For the SR-91 corridor, 2013 PeMS data were available throughout a majority of the study area. **Figures 3-1** and **3-2** illustrate the existing conditions temporal speed diagrams for the GP lanes in the AM and PM peak hours, respectively, based on 2013 PeMS data. The diagrams are based on speed measurements taken from PeMS at stations within the study area and reported every 15 minutes.

The horizontal scale is the location (with a postmile reference); traffic moves from left to right in the eastbound direction and right to left in the westbound direction. For reference, Table 3-3 provides a geographic listing of postmile locations. The vertical scale is the time within the peak period (6 to 9 AM and 3 to 7 PM), with time progressing from bottom to top. Green colors indicate higher speeds (roughly 55 mph and higher) with red colors indicating speeds under 30 mph. In general, bottleneck locations are the vertical lines transitioning between red and green areas. The queues are the red colors upstream of the bottlenecks.

3.3 Roadway Geometry

Field visits and aerial photographs (Google Earth) were used to obtain roadway geometry.

FIGURE 3-1
SR-91 Existing Condition Temporal Speed Diagram – AM Peak Period (6-9 AM)



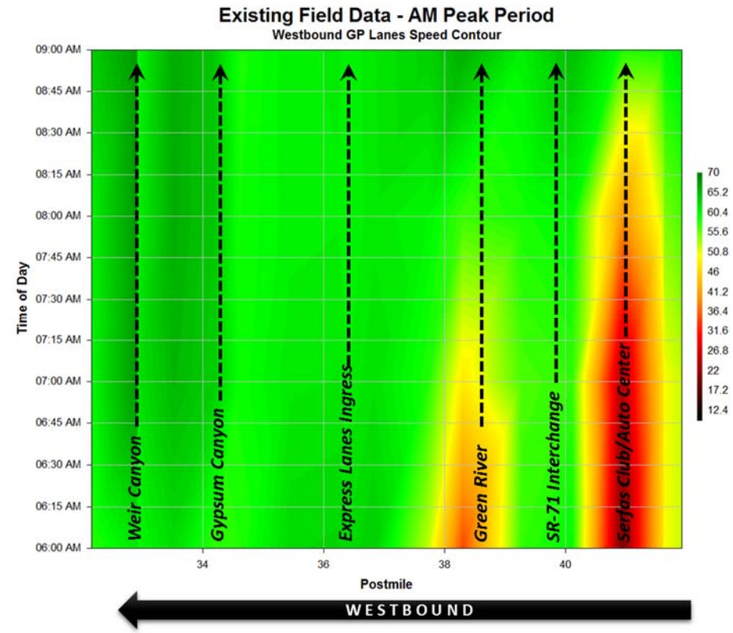
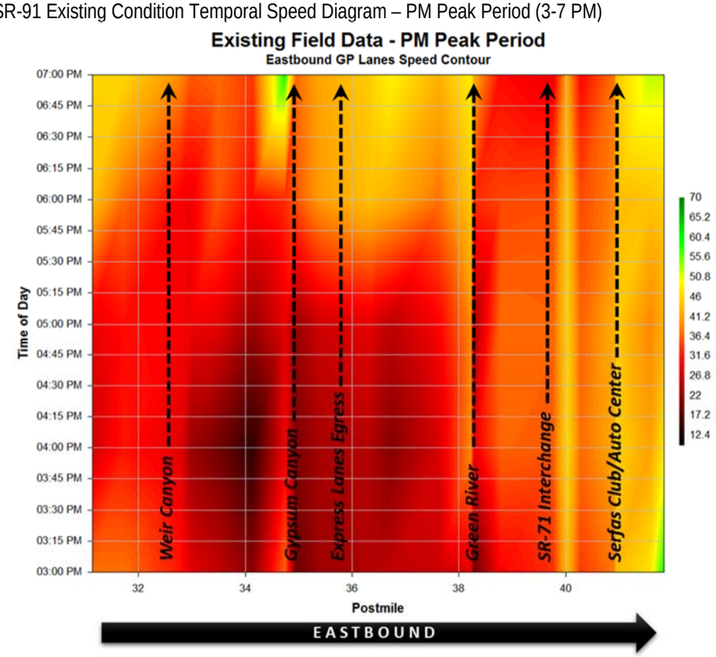


FIGURE 3-2
SR-91 Existing Condition Temporal Speed Diagram – PM Peak Period (3-7 PM)



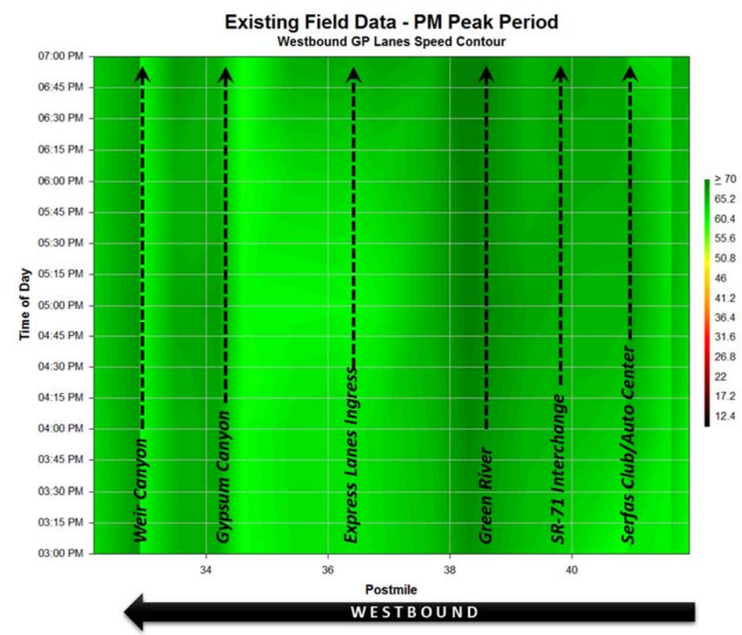


TABLE 3-3
SR-91 Geographic Post Mile Reference

SR-91 Eastbound	
Absolute Postmile	Description
32.21	EB ON TRUCK WEIGH STATION
32.57	EB OFF WEIR CANYON ROAD
34.51	EB OFF GYPSUM CANYON ROAD
36.12	EB OFF COAL CANYON ROAD
36.48	EB ON COAL CANYON ROAD
Riverside County Line (Abs PM = 37.23)	
38.12	EB OFF TO GREEN RIVER DRIVE
38.40	EB ON FROM GREEN RIVER DRIVE
40.81	EB OFF TO SERFAS CLUB DRIVE
41.06	EB ON FROM SERFAS CLUB DRIVE
41.32	EB OFF TO MAPLE STREET
SR-91 Westbound	
Absolute Postmile	Description
32.00	WB ON TRUCK WEIGH STATION
32.22	WB OFF TRUCK WEIGH STATION
33.10	WB OFF WEIR CANYON ROAD
35.08	WB OFF GYPSUM CANYON ROAD
36.21	WB ON COAL CANYON ROAD
36.61	WB OFF COAL CANYON ROAD
37.17	WB ON FROM GREEN RIVER ROAD
Riverside County Line (Abs PM = 37.32)	
38.22	WB ON FROM GREEN RIVER DRIVE
38.46	WB OFF TO GREEN RIVER DRIVE
40.87	WB ON FROM SERFAS CLUB DRIVE
41.25	WB OFF TO SERFAS CLUB DRIVE
41.62	WB ON FROM MAPLE STREET

3.4 Bluetooth Study

Data collection was needed to support the existing conditions simulation model. O-D data were needed as input to the model, and travel time data were needed for calibration. Because traffic patterns and congestion in the corridor are variable from day to day, a comprehensive data collection effort using Bluetooth detectors was recommended by the technical stakeholders during the development of the traffic study approach.

The Bluetooth data collection effort occurred over three separate weeks:

- Monday, November 4, 2013 through Sunday, November 17, 2013 (two weeks)
- Monday, December 9, 2013 through Sunday, December 15, 2013 (one week)

Bluetooth readers were installed at 10 locations along SR-91, SR-241, SR-71, and I-15 as illustrated on **Figure 3-3**. The Bluetooth readers collected data 24 hours per day over the entire three-week study period. The data were recorded and processed to provide information (from thousands of matched records) on O-D and travel time.

The Bluetooth study observed 2,287,722 unique Bluetooth users over the three-week study period. Below is a summary of the amount of daily users captured at each study location:

- Site A (SR-91, west of Weir Canyon Road): 13,665 vehicles/day
- Site B (SR-241, Windy Ridge): 3,501 vehicles/day
- Site C (SR-91, northbound SR-241 merge): 8,857 vehicles/day
- Site D (SR-91, County Line): 16,008 vehicles/day
- Site E (SR-71, north of SR-91): 1,716 vehicles/day
- Site F (SR-91, east of Serfas Club Drive/Auto Center Drive): 16,077 vehicles/day
- Site G (I-15, north of SR-91): 9,732 vehicles/day
- Site H (SR-91, east of I-15): 12,957 vehicles/day
- Site I (I-15, south of SR-91): 11,624 vehicles/day
- Site Z (SR-91, east of SR-55): 17,655 vehicles/day

The Bluetooth study yielded a large amount of valuable data within the study area. Statistics such as travel time, speed, and detection rate can be reported for all possible O-D pairs within the study area. Figure 3-4 illustrates sample statistics taken from the Bluetooth study that graphically illustrate the average travel time, speed, and detection rate along the eastbound SR-91 from the Weir Canyon Road interchange to the Serfas Club Drive/Auto Center Drive interchange over the course of the day. A sample set of summary statistics from the Bluetooth study are provided in Appendix A.

FIGURE 3-3
Bluetooth Study Area

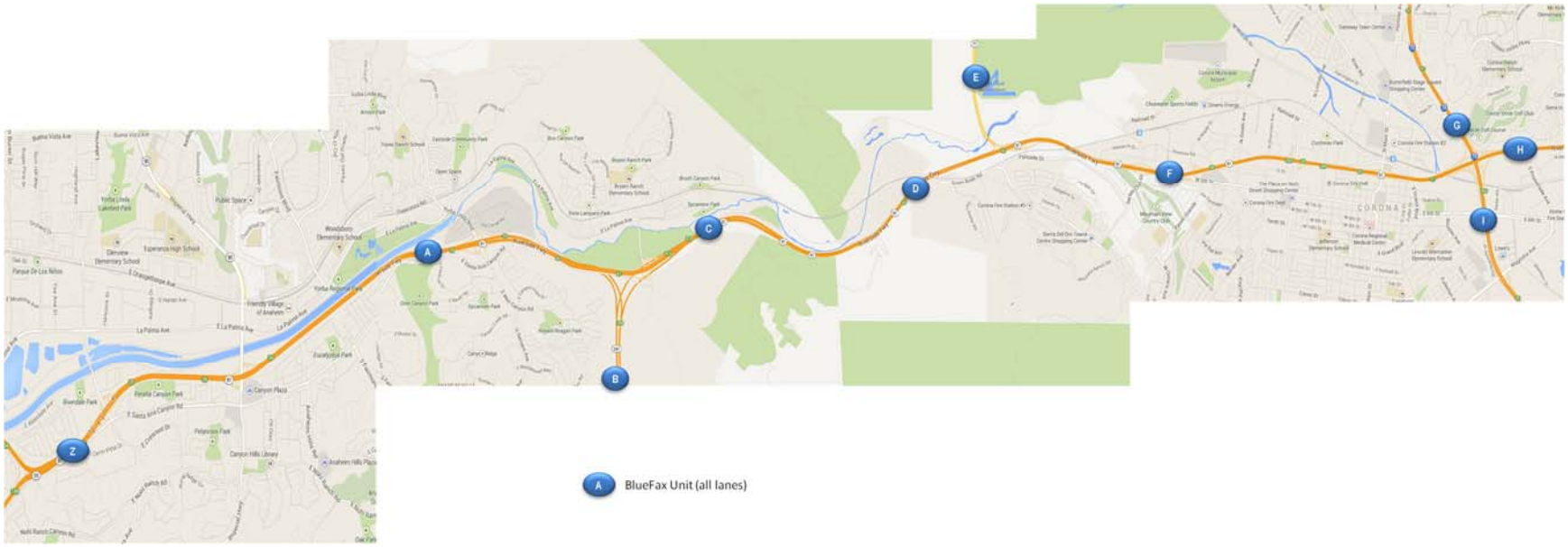
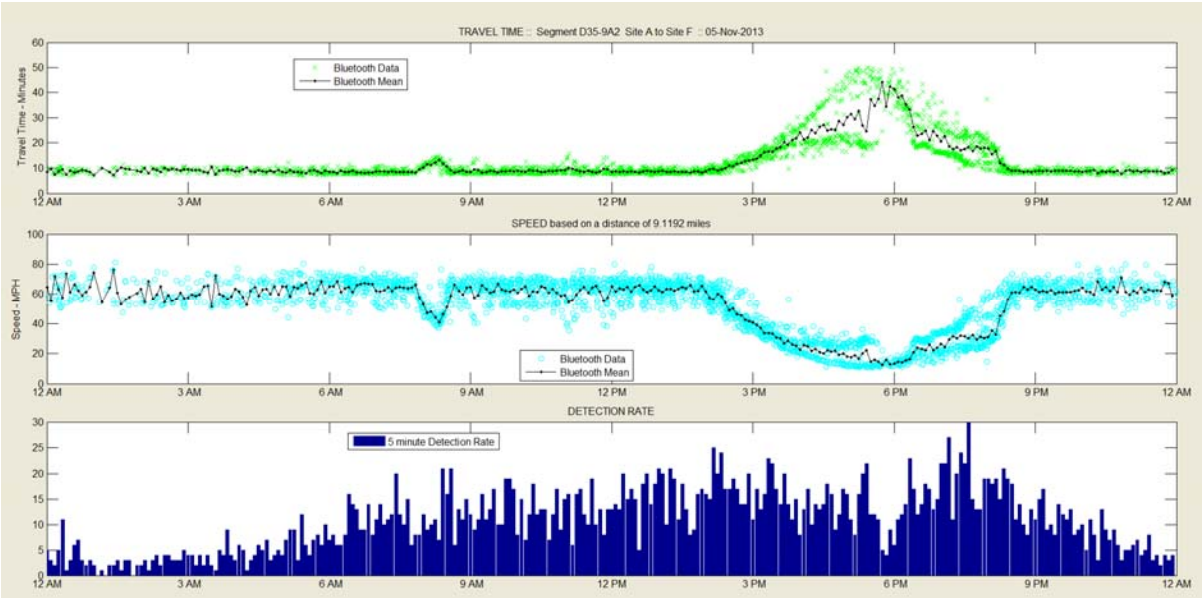


FIGURE 3-4
Bluetooth Study Sample Statistics, Eastbound SR-91



O-D data were needed to understand the traffic patterns used in the study area. While there are a wide variety of issues that could be evaluated with O-D data, the study focused on three main questions:

- How much of the eastbound SR-91 Express Lane traffic ends up in Corona versus points east of I-15?
- How much of the eastbound SR-91 general purpose lane traffic ends up in Corona versus points east of I-15?
- What are the destinations of the northbound SR-241 traffic – are they potential users of the connector?

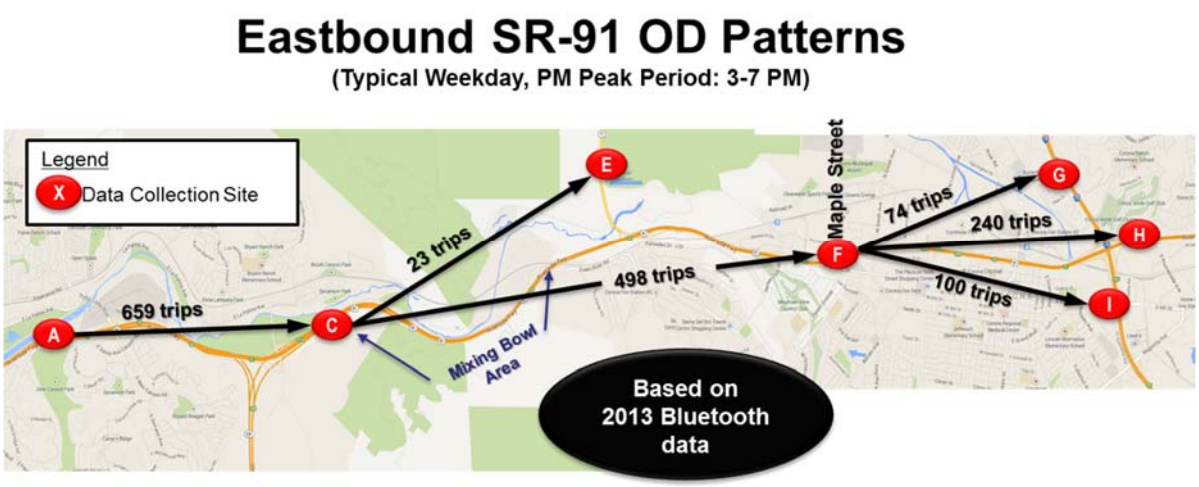
The O-D pairs referenced in the three questions above result in multiple weaving movements on SR-91 between the SR-91/SR-241 interchange and the SR-91/I-15 interchange. Understanding these O-D data helped develop future modeling assumptions that were paired with the geometric improvements associated with the SR-91 CIP Project and the proposed SR-241/SR-91 Express Lane Connector Project. The answers to the questions listed above helped to determine the following assumptions used in the project analysis:

- The number of eastbound SR-91 Express Lane users that will travel from the existing OCTA Express Lanes and continue to Riverside on the RCTC Express Lanes.
- The number of eastbound SR-91 Express Lane users that will travel from the existing OCTA Express Lanes and exit to the GP lanes in the "mixing bowl" to destinations in Corona or along SR-71. The mixing bowl is defined as the eastbound SR-91 ingress/egress area for Express Lane traffic. The limits of the mixing bowl are approximately from the northbound SR-241 to eastbound SR-91 GP lane ramp gore area to the eastbound Green River Road off-ramp.

- The number of eastbound SR-91 general purpose lane users who may enter the RCTC Express Lanes and continue east.
- The number of eastbound SR-91 users who will not use the SR-91 Express Lanes (OCTA or RCTC).
- The amount of northbound SR-241 users who are potential users of the eastbound RCTC Express Lanes.

Figure 3-5 summarizes the O-D patterns observed on the eastbound SR-91 in the PM peak period. Of the traffic travelling eastbound on the SR-91 OCTA express lanes, approximately 25% exits between the proposed mixing bowl and Maple Street in Corona (161 trips/25%). An additional 24% will have to exit the express lanes due to the proposed SR-91 CIP project because they wish to exit on ramps between Maple Street and I-15 (84 trips/13%) or they want to travel to northbound I-15 (74 trips/11%). Therefore, a total of 49% of the eastbound SR-91 OCTA express lane traffic must exit in the proposed mixing bowl because of their final destination. That observation was a critical input into the future modeling assumptions of the mixing bowl area in the eastbound direction.

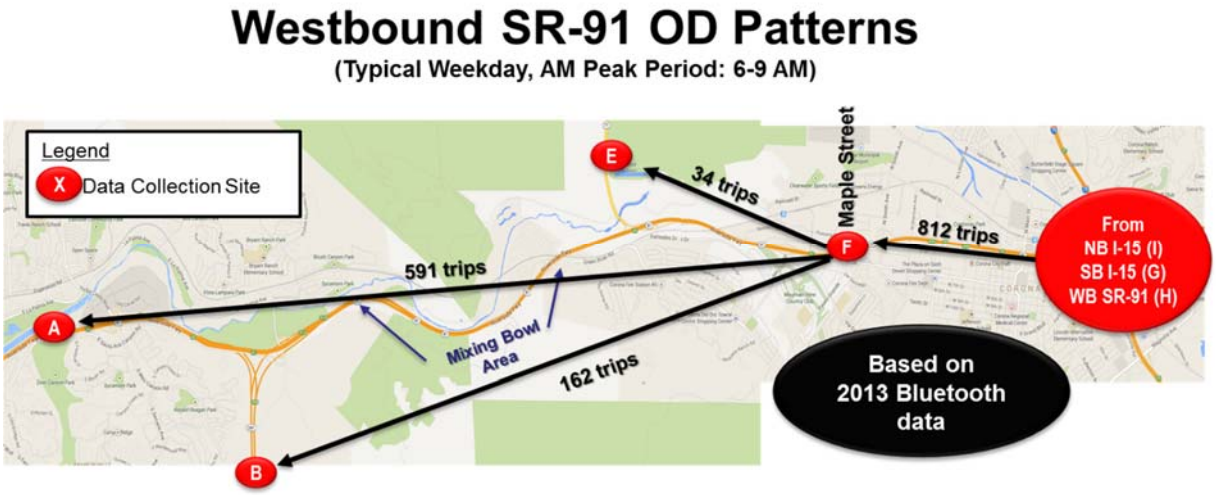
FIGURE 3-5
Bluetooth Study, Eastbound SR-91 O-D Patterns in the PM Peak Period



Note: Volumes reported represent the average four-hour Bluetooth volume captured between the hours of 3-7 PM during the study period.

Figure 3-6 summarizes the O-D patterns observed on westbound SR-91 in the AM peak period. Of the traffic travelling westbound on SR-91, approximately 73% (591 of the 812 trips) continues into Orange County west of the SR-241 interchange. Approximately 20% (162 of the 812 trips) travels to southbound SR-241. The remaining 7% of the westbound SR-91 traffic exits at SR-71 or destinations in Corona. These observations were also a critical input into the future modeling assumptions of the mixing bowl area in the westbound direction.

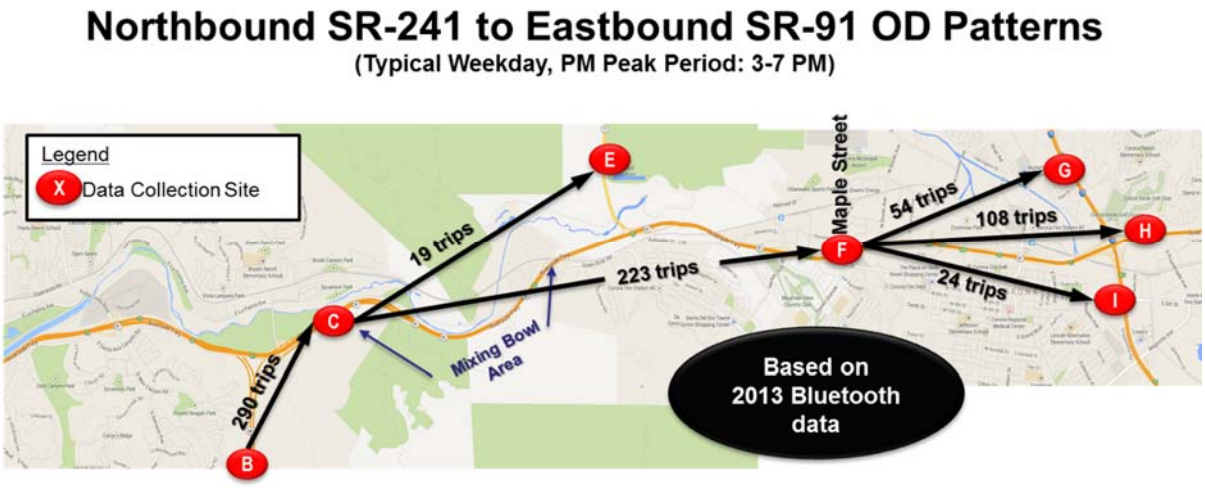
FIGURE 3-6
Bluetooth Study, Westbound SR-91 O-D Patterns in the AM Peak Period



Note: Volumes reported represent the average three-hour Bluetooth volume captured between the hours of 6-9 AM during the study period.

Figure 3-7 summarizes the O-D patterns observed for the northbound SR-241 to eastbound SR-91 movement in the PM peak period. Of the traffic travelling northbound on SR-241 to eastbound on SR-91, approximately 23% exits between proposed mixing bowl and Maple Street in Corona (67 trips/23%). An additional 31% will have to use the GP connector because they wish to exit on ramps between Maple Street and I-15 (37 trips/13%) or they want to travel to northbound I-15 (54 trips/18%). Therefore, a total of 54% of the northbound SR-241 to eastbound SR-91 movement must use the GP connector because of their final destination. That observation was a critical input into the future modeling assumptions of the mixing bowl area in the eastbound direction.

FIGURE 3-7
Bluetooth Study, Northbound SR-241 to Eastbound SR-91 O-D Patterns in the PM Peak Period



Note: Volumes reported represent the average four-hour Bluetooth volume captured between the hours of 3-7 PM during the study period.

4 Baseline VISSIM Coding

Simulation software, like VISSIM, requires three core building blocks: the network geometry, control elements, and traffic demand. Each is described in this section.

4.1 Geometry

The VISSIM network was developed from the VISSIM model applied for the "SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study" VISSIM model (prepared by Stantec in 2011). The baseline geometric configuration was coded to reflect the roadway design developed for this PA/ED. The layout plan for this project is included in Appendix G. Improvements for the connector are limited to 5.9 mi in the cities of Anaheim and Yorba Linda from south of the Windy Ridge Wildlife Undercrossing on SR-241 to Coal Canyon Undercrossing on SR-91. The remaining 2.8 mi of the Proposed Project is limited to FasTrak signage improvements (advance signage) in the cities of Anaheim (1.2 mi total), Yorba Linda (0.1 mi) and Corona (1.5 mi), with exact placement pending the Final Design process. The Proposed Project is mostly within existing Caltrans right-of-way, with one partial acquisition adjacent to eastbound SR-91. Construction access and staging areas would occur within existing Caltrans right-of-way.

All freeway mainline segments (GP and Express Lanes), ramps, and interchanges in the study area were verified and coded as needed to reflect the most recent conditions in the field and the planned improvements for this project and other projects in the area (including the SR-91 CIP project). Aerial photography (Google Earth) and design plans were used to establish gore points, horizontal curvature, and locations of interchanges. Specific geometric elements added to the VISSIM networks included:

- Freeway mainline and ramps
- Freeway auxiliary lanes
- Freeway merge and diverge lanes (tapers)
- Express/HOV lane ingress and egress locations
- Freeway interchange spacing and configuration

4.2 Control Elements

Control elements such as signals, stop signs, or roundabouts are typically needed at ramp terminal intersections to control conflicting traffic movements. However, the VISSIM network for the SR-91/SR-241 Connector project did not include ramp terminal intersections, as the primary area of focus was the freeway GP and Express Lanes and ramps. Ramp meters were included at all on-ramp locations in the VISSIM model where all existing ramp meters are known to be operated during the AM and PM peak periods. Meter rates varied at each location depending on the on-ramp demand volumes, with a range between 200 and 900 vehicles per hour per lane (vphpl). Each ramp meter was set at a rate to allow 100% of the ramp demand volumes to be accommodated without causing spillback

to the ramp terminal intersections. If on-ramp demand volumes were anticipated to exceed the 900 vphpl rate, then the meter was turned off, consistent with Caltrans policy.

4.3 Traffic Demands

Freeway traffic demands are a critical input for VISSIM modeling. It was not possible to report mainline freeway data collected in the field as freeway demand without adjusting the data. The reason is that freeway traffic volumes are different than freeway traffic demands on SR-91. With congestion, not all traffic can be served, so traffic demands are invariably higher than traffic volumes. This issue affects freeway traffic in the peak direction (westbound in the AM peak, eastbound in the PM peak) on SR-91, during both peak periods.

Discussion of the traffic forecasting is provided in Section 6.

5 Existing Conditions Calibration

The purpose of a simulation model is to investigate the effects of improvement alternatives. Simulation models are an efficient tool for evaluating improvements, but are only reliable when the base model matches real-world conditions. VISSIM, like all simulation models, was designed to be flexible enough that an analyst can correctly calibrate the network to match the local conditions at a reasonably accurate level. However, the default values will (almost) never give accurate results for a specific area. Therefore, calibration is required to adjust the VISSIM model parameters to replicate the traffic characteristics. This section summarizes the calibration approach and calibration parameters.

5.1 Testing and Verification

Verification is a form of error checking where the modeler verifies that the simulation model is built correctly. It basically ensures the model is performing reasonably. Verification occurs prior to calibration. Verification occurred in two basic steps.

The first step in the verification was a model review by the modeling team. Coding of the network and control components was completed at this point. Test volumes (10% of the actual demand) were added in order to observe the operations related to the network and controls. Any coding errors or needed enhancements were addressed at this time.

5.2 Calibration Approach

Calibrating the SR-91/SR-241 models occurred in three steps, following guidance from *Guidelines for Applying Traffic Microsimulation Modeling Software* (separate documents from both FHWA (June 2004) and Caltrans (September 2002)):

1. Calibrate the model to mainline and ramp volume data in the field
2. Calibrate the model to mainline speed and travel time data in the field
3. Review bottlenecks and queues between the model and the field

5.2.1 FHWA and Caltrans Guidelines

Volumes and speeds were calibrated to the criteria listed in **Table 5-1**. The criteria are based on tables in the Caltrans and FHWA guidelines. In both guides, a calibration target table is presented that was originally developed by the Wisconsin Department of Transportation (WisDOT) based upon guidelines developed in the United Kingdom.

TABLE 5-1
Calibration Criteria

Criteria and Measures	Calibration Acceptance Targets
Hourly Flows, Model Versus Observed	
--Individual Link Flows	
Within 400 vph, for Flow > 2700 vph	>85% of cases
Within 15%, for 700 vph < Flow < 2700 vph	>85% of cases
Within 100 vph, for Flow < 700 vph	>85% of cases
--Sum of All Link Flows	Within 5% of sum of all link counts
*GEH Statistic < 5 for Individual Link Flows	> 85% of cases
Travel Times, Model Versus Observed	
--Journey Times, Network Within 15% (or one min, if higher)	>85% of cases

*The GEH Statistic is computed as $GEH = \sqrt{\frac{(E-V)^2}{(E+V)/2}}$

Where:

E= model estimated volume

V=Field Count

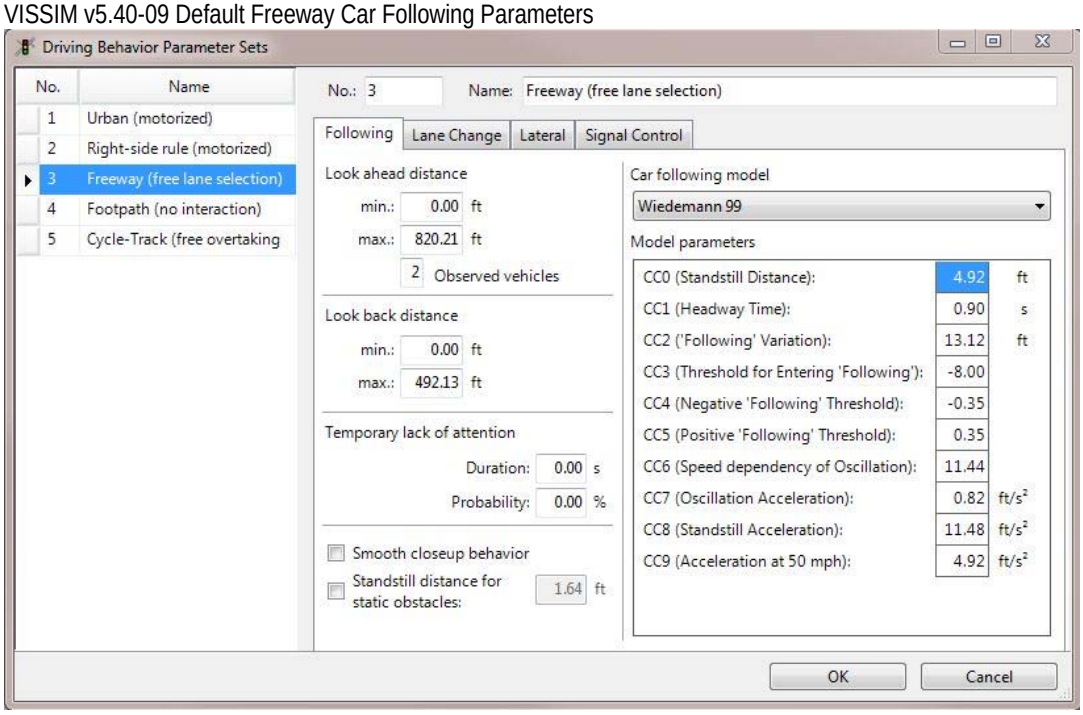
5.2.2 VISSIM Calibration Adjustments

Calibrating the peak period VISSIM models involved adjusting the default parameters to achieve the target volume and travel time thresholds. The primary parameters that were adjusted included:

- Car following parameters
- Lane change behaviors
- Lane change look back distances
- Speed distributions

VISSIM incorporates two car following models – one for freeways and one for arterials. In combination with other operational parameters, users have the ability to adjust these parameters as needed to achieve desired flow conditions. The default parameter network-wide settings for the freeway car following model (Wiedemann 99) are shown in **Figure 5-1**.

FIGURE 5-1
VISSIM v5.40-09 Default Freeway Car Following Parameters

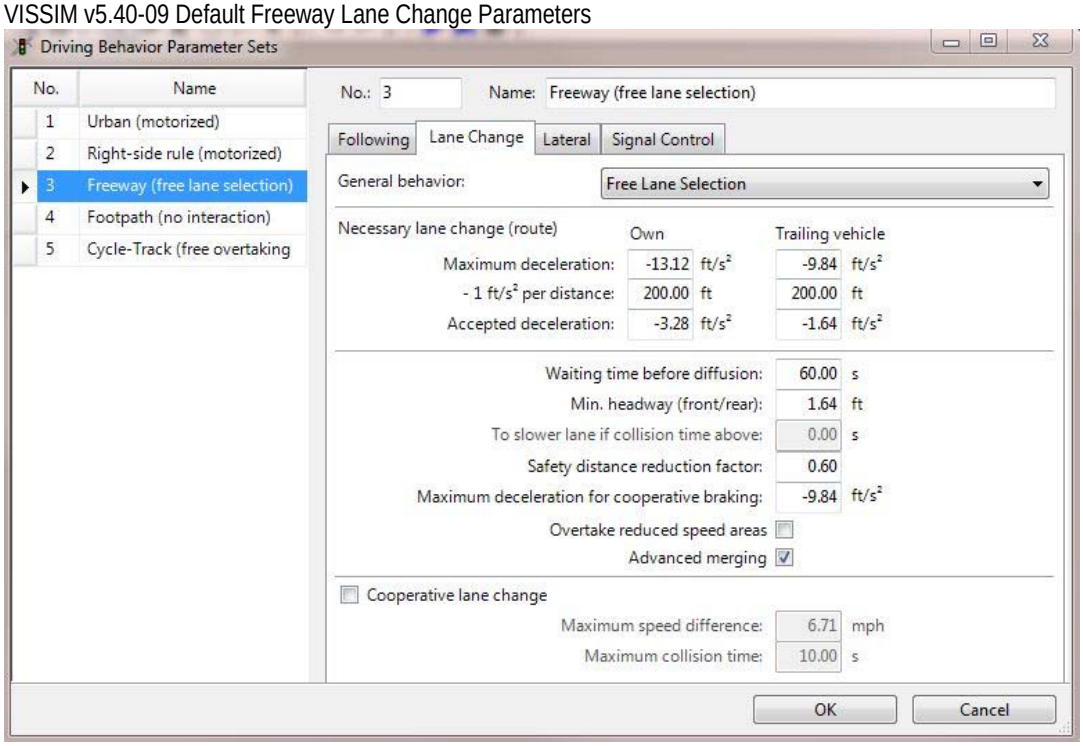


The car following parameters adjusted during the calibration process are listed below with a brief definition (from the VISSIM 5.40 User Manual). These parameters were adjusted, to achieve the calibration targets and reflect the operational conditions in the study area. Although there are nine different adjustable parameters in the Wiedemann 99 car following model, only the three listed below are typically adjusted during calibration.

- *CC0 – Standstill Distance* defines the desired distance between stopped cars. This parameter can have an effect on the length of queues observed during congested conditions.
- *CC1 – Headway Time* is not a direct measure of headway time, but rather a factor that affects the following (minimum desired safety) distance. Lower values allow the vehicles to travel closer together and increases capacity. In the case of high volumes (like those on SR-91), it is the following distance that has the strongest influence on capacity.
- *CC2 – Following Variation* restricts the longitudinal oscillation of vehicles in the car following state. It controls how much more distance than the desired safety distance a driver allows before he intentionally moves closer to the car in front. The reduction in the CC2 value means the driver allows less distance beyond the desired safety distance before he moves closer to the car in front.

Another important parametric change focused on the lane changing parameters. VISSIM includes parameters for necessary and discretionary lane changes. The default parameter network-wide settings for freeway lane changes are shown in **Figure 5-2**.

FIGURE 5-2
VISSIM v5.40-09 Default Freeway Lane Change Parameters



Tables 5-2 and **5-3** are a summary of the driver behavior parameter changes made during the calibration process for the SR-91/SR-241 networks. **Table 5-2** is for the eastbound direction (AM and PM peak) and **Table 5-3** is for the westbound direction (AM and PM peak). Note that many of these changes are link-specific to account for the variations in geometric and accompanying driver behavior in the corridor.

The seeding period is the period of time between the start of the simulation and when results start to be recorded. During the seeding period, vehicles are entering the network and the model requires adequate time for the network-wide volumes to become stable. Considering the size of the network and level of congestion that was observed at the start of the recording periods, a seeding period of one hour was used in the study. Visual observation of the simulation shows that after the one hour seeding period, vehicles are able to reach their destinations and congestion throughout the corridor matches field conditions at the start of the peak period.

TABLE 5-2
SR-91 Eastbound AM/PM Peak Calibration Parameters

	Car Following Parameters				Lane Changing					
Location	**CC0 Standstill Distance (ft)**	**CC1 Headway (sec)**	**CC2 Following Variation (ft)**	**Max Decel. Rate (ft/s^2)**	**Accepted Decel. Rate (ft/s^2)**	**Min. Headway (front/rear) (ft)**	**Safety Distance Reduction Factor**	**Max decel. for cooperative braking (ft/s^2)**	**Advanced Merging**	**Cooperative Lane Change**
Mainline West of Weir Canyon	4.9	**1.10**	13.1	**-26.0/ -184.0**	**-14.0/ -9.0**	**1.8**	**0.40**	**-14.9**	**No**	No
HOV weave between SR-241 and Green River	4.9	**1.10**	13.1	**-26.0/ -184.0**	**-14.0/ -9.0**	**1.8**	**0.10**	**-27.9**	Yes	**Yes**
All Merge Segments	4.9	**1.10**	13.1	-13.1**/ -18.0**	-3.3/ **-3.3**	1.6	**0.10**	**-29.5**	Yes	**Yes**
Mainline between Green River and Serfas Club	4.9	**1.10**	13.1	**-26.0/ -184.0**	**-14.0/ -9.0**	**1.8**	**0.40**	**-14.9**	**No**	No
VISSIM Default	4.9	0.90	13.1	-13.1/ -9.8	-3.3/ -1.6	1.6	0.60	-9.8	Yes	No

Note: Bold values indicate changes from default values

TABLE 5-3
SR-91 Westbound AM/PM Peak Calibration Parameters

	Car Following Parameters			Lane Changing						
Location	**CC0 Standstill Distance (ft)**	**CC1 Headway (sec)**	**CC2 Following Variation (ft)**	**Max Decel. Rate (ft/s^2)**	**Accepted Decel. Rate (ft/s^2)**	**Min. Headway (front/rear) (ft)**	**Safety Distance Reduction Factor**	**Max decel. for cooperative braking (ft/s^2)**	**Advanced Merging**	**Cooperative Lane Change**
Mainline between Serfas Club ramps	4.9	**1.10**	13.1	**-26.0/ -184.0**	**-14.0/ -9.0**	**1.8**	**0.10**	**-27.9**	**No**	No
HOV weave segments	4.9	**1.10**	13.1	**-26.0/ -184.0**	**-14.0/ -9.0**	**1.8**	**0.10**	**-27.9**	Yes	**Yes**
All Merge Segments	4.9	**1.10**	13.1	-13.1**/ -18.0**	-3.3/ **-3.3**	1.6	**0.10**	**-29.5**	Yes	**Yes**
Mainline between SR-71 and Green River	4.9	**1.10**	13.1	**-26.0/ -184.0**	**-14.0/ -9.0**	**1.8**	**0.40**	**-14.9**	**No**	No
Diverge to SR-241 and Diverge to Weir Canyon Rd	4.9	**1.10**	13.1	**-26.0/ -184.0**	**-14.0/ -9.0**	**1.8**	**0.10**	**-27.9**	Yes	**Yes**
VISSIM Default	4.9	0.90	13.1	-13.1/ -9.8	-3.3/ -1.6	1.6	0.60	-9.8	Yes	No

Note: Bold values indicate changes from default values

5.2.3 Visual Audit Criteria

A final step in the calibration process was a visual inspection by the modeling team. The visual audit is needed to ensure that the operations observed in the simulation model approximate expectations for the freeway and network performance. Key focus areas included the location of bottlenecks, duration and extent of queues, and traffic patterns in the network. Bottlenecks and queuing are the key elements of the visual audits. While bottlenecks and queuing affect volume and travel time, they also require a separate focus during calibration.

The first and most important characteristic of a bottleneck is its occurrence at a particular location. Bottlenecks may be formed at particular locations due to factors such as ramp merges or diverges, lane drops, and increases in traffic demand or even due to traffic accidents which cause a reduction in capacity. The bottlenecks formed due to temporary traffic conditions such as accidents are isolated incidents whereas the ones formed due to roadway geometric/design changes and increases in demand occur regularly. However, these recurring bottlenecks do not necessarily occur every day, and they may start and stop over time.

The second defining characteristic of a bottleneck is the distance of the queuing and is defined as the length/extent of the bottleneck.

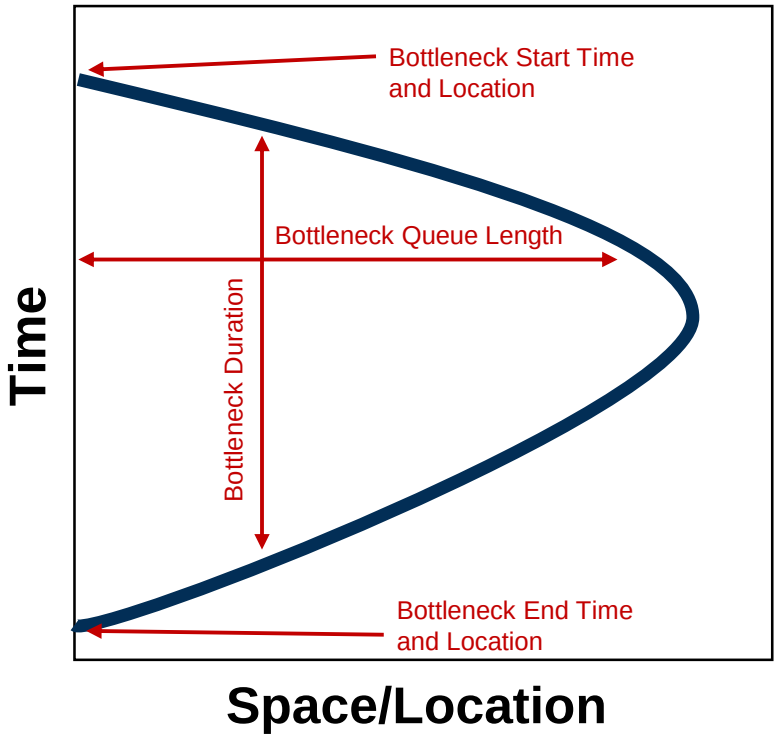
The last defining characteristics are the duration and start time of the bottleneck, which are the temporal components of the bottleneck at particular locations. In the effort to understand the cause of a bottleneck and find potential solutions, it is important to know where the bottleneck actually terminates and free-flow conditions are restored. This is typically found where speeds change from slow congested speeds to 30 to 50 miles per hour, often in a very short distance.

The length/extent and duration/time of a bottleneck often vary greatly from day to day. Both of these factors are very sensitive to the capacity and demand at the bottleneck. Because capacity and demand vary from day to day, the length/extent and duration/time also vary greatly from day to day.

To describe bottlenecks, four quantitative measures can be used (see **Figure 5-3**):

- Location
- Queue length upstream of each bottleneck (this varies over time),
- Time duration
- Starting time

FIGURE 5-3
Graphical Representation of a Typical Bottleneck



Bottlenecks can be assessed by analyzing the speed profile data obtained from PeMS or other data archival systems, combined with external sources such as travel time runs. These locations can then be confirmed using field observations. However, review of the field data suggests that there is a wide variation in bottlenecks and queues over time.

Section 5.3 compares the bottlenecks in the field with the modeling output of the existing conditions VISSIM model and explains the calibration results based on these comparisons. The comparison of the VISSIM output to the field target for queues and bottlenecks was subjective, but based on the general characteristics described in **Figure 5-3**.

5.3 Calibration Results

Calibration results for the VISSIM modeling consist of three MOEs:

- volume calibration
- travel time calibration
- visual calibration

The calibration results for all three elements are discussed in detail below.

5.3.1 Volume Calibration Results

Traffic volume from field counts was compared to VISSIM model throughput volume at all mainline and ramp links using the FHWA link flow criteria explained in Section 5.2.1. Volume calibration results are presented in **Table 5-4** and **5-5** for the AM and PM periods.

During the AM period, the VISSIM model individual link flow results for all hours and directions of travel are within the acceptable range (greater than 85% of cases for individual link flows and within 5% for sum of all link flows), with exception of the hour from 6 to 7 AM in the westbound direction (refer to Section 5.3.4 for additional explanation on calibration exceptions). In addition, the sum of all link flows is within the acceptable range for all hours and directions.

During the PM period, the VISSIM model individual link flows are close to the acceptable range (greater than 85% of cases for individual link flows and within 5% for sum of all link flows) in the peak eastbound direction (within two percentage points for the 4-5 PM peak hour), while the sum of all link flows is within the acceptable range. Refer to Section 5.3.4 for additional explanation on calibration exceptions. The off-peak westbound direction is within the acceptable range for both individual link flow and sum of all links for all hours except for the 5-6 PM hour, which is at 84% for individual link flows.

Table 5-4
Volume Calibration Results – Existing AM Peak Period (6-9 AM)

Measurement Type	Total Links	SR-91 Eastbound			Total Links	SR-91 Westbound		
		6-7 AM	7-8 AM	6-7 AM		6-7 AM	7-8 AM	6-7 AM
Individual Link Flows	42	100%	90%	93%	37	**78%**	86%	86%
Sum of All Link Flows		-2%	3%	3%	--	4%	1%	3%

Note: Calibration range based on FHWA Link Flow Criteria. Acceptable range is >85% of cases for individual link flows and within 5% for sum of all link flows. Bold numbers indicate values outside of accepted range.

Table 5-5
Volume Calibration Results – Existing PM Peak Period (3-7 PM)

Measurement Type	Total Links	SR-91 Eastbound				Total Links	SR-91 Westbound			
		3-4 PM	4-5 PM	5-6 PM	6-7 PM		3-4 PM	4-5 PM	5-6 PM	6-7 PM
Individual Link Flows	42	**76%**	**83%**	**81%**	**76%**	37	89%	89%	**84%**	95%
Sum of All Link Flows		-1%	2%	-2%	-2%	--	-2%	0%	-3%	1%

Note: Calibration range based on FHWA Link Flow Criteria. Acceptable range is >85% of cases for individual link flows and within 5% for sum of all link flows. Bold numbers indicate values outside of accepted range.

5.3.2 Travel Time Calibration Results

Travel time from the field (Bluetooth study) was compared to travel time from the VISSIM model using the FHWA criteria outlined in Section 5.2.1. Journey times from VISSIM should be within 15% of field-measured times, or within 1 minute, whichever is higher. Travel time was measured along the SR-91 GP lanes from west of the Weir Canyon Road interchange to east of the Serfas Club Drive/Auto Center Drive interchange, which is approximately 9.6 miles in length. Travel time results are presented in **Table 5-6** and **5-7** for the AM and PM periods.

Travel time results show that the VISSIM model is within the acceptable range for both the AM and PM periods for all hours and directions modeled, with the exception of the 6-7 AM hour.

Table 5-6
Travel Time Calibration Results – Existing AM Peak Period (6-9 AM)

Type	SR-91 Eastbound (minutes)			SR-91 Westbound (minutes)		
	6-7 AM	7-8 AM	6-7 AM	6-7 AM	7-8 AM	6-7 AM
Field-Measured	8.8	8.8	8.9	14.3	12.1	11.3
VISSIM	8.6	8.7	8.7	11.1	11.5	10.4
Percent Difference	-3%	-1%	-2%	**-22%**	-5%	-8%

Note: Calibration range based on FHWA Guidelines. Acceptable range is within 15% of field measured travel time, or within 1 minute, whichever is higher. Bold numbers indicate values outside of accepted range.

Table 5-7
Travel Time Calibration Results – Existing PM Peak Period (3-7 PM)

Type	SR-91 Eastbound (minutes)				SR-91 Westbound (minutes)			
	3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
Field-Measured	24.5	35.2	34.6	35.3	9.3	9.1	9.1	9.0
VISSIM	27.8	31.3	35.6	31.3	8.9	9.0	9.0	9.0
Percent Difference	13%	-11%	3%	-11%	-3%	-2%	-2%	-1%

Note: Calibration range based on FHWA Guidelines. Acceptable range is within 15% of field measured travel time, or within 1 minute, whichever is higher. Bold numbers indicate values outside of accepted range.

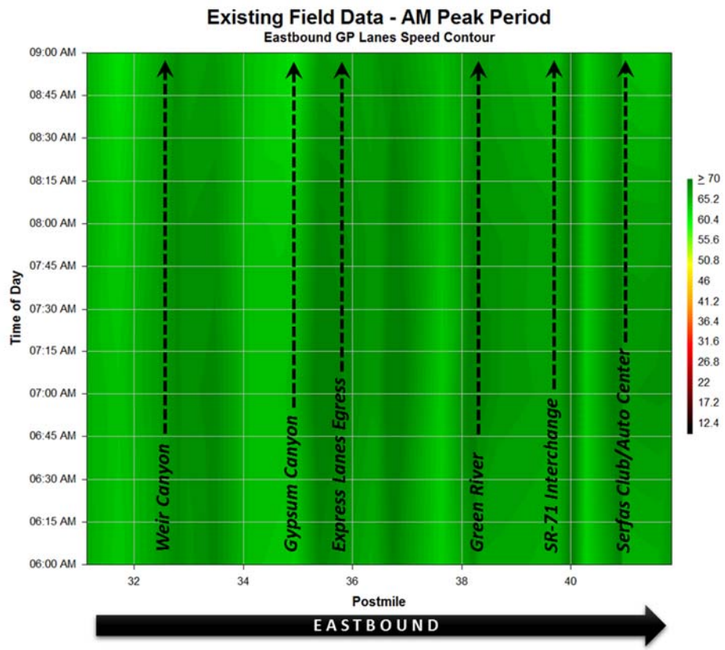
5.3.3 Visual Calibration Results

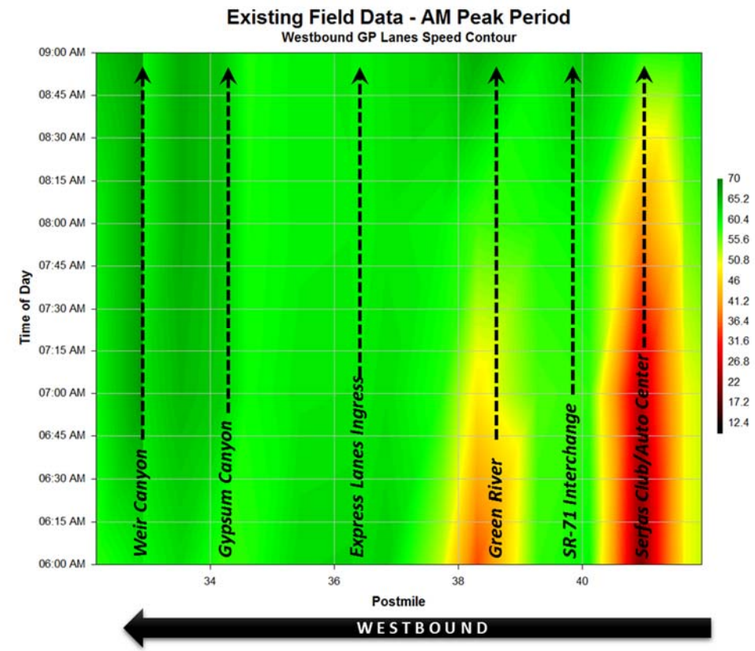
Temporal speed diagrams based on data from the field were compared with output data from VISSIM to verify the model was calibrated and replicating the traffic characteristics in the field. The data are based on speed measurements taken from the VISSIM model every 0.5 miles and every 15 minutes of simulation.

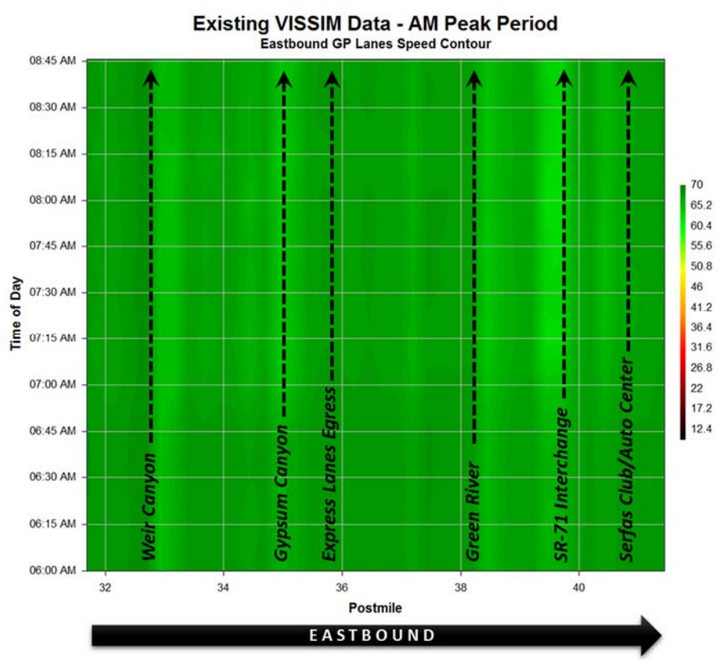
Figures 5-4 and **5-5** provide comparisons of the speed contour plots for the AM and PM peak periods in the GP lanes. The graph on the top illustrates the speed contours for the field data, and the graph at the bottom is for the VISSIM output.

The horizontal scale is the location (with a postmile reference); traffic moves from left to right in the eastbound direction and right to left in the westbound direction. The vertical scale is the time within the peak period (6 to 9 AM and 3 to 7 PM), with time progressing from bottom to top. Green colors indicate higher speeds (roughly 55 mph and higher) with red colors indicating speeds under 30 mph. In general, bottleneck locations are

FIGURE 5-4
SR-91 Temporal Speed Diagram – GP Lane Calibration Comparisons, AM Peak Period (6-9 AM)







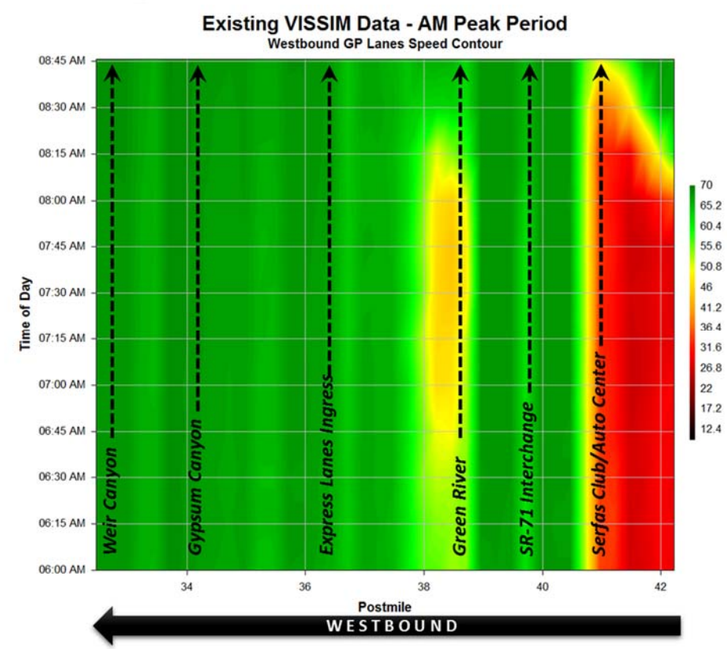
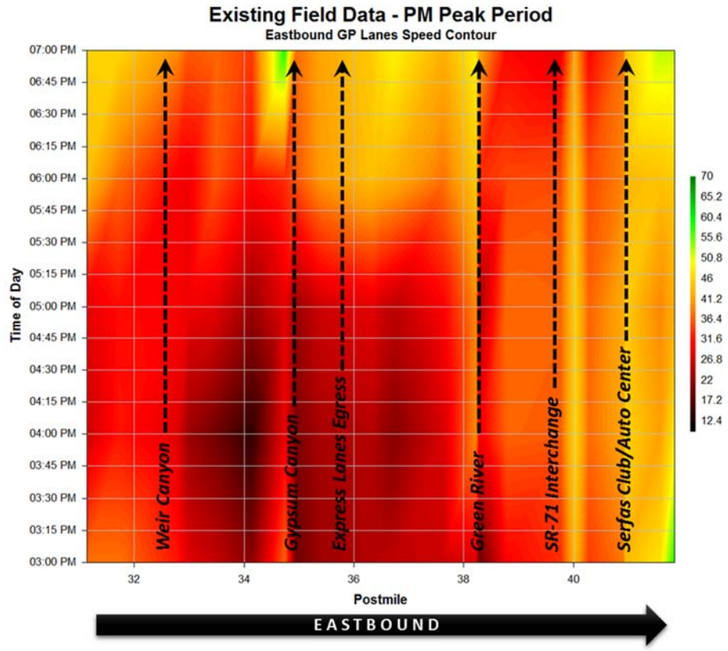
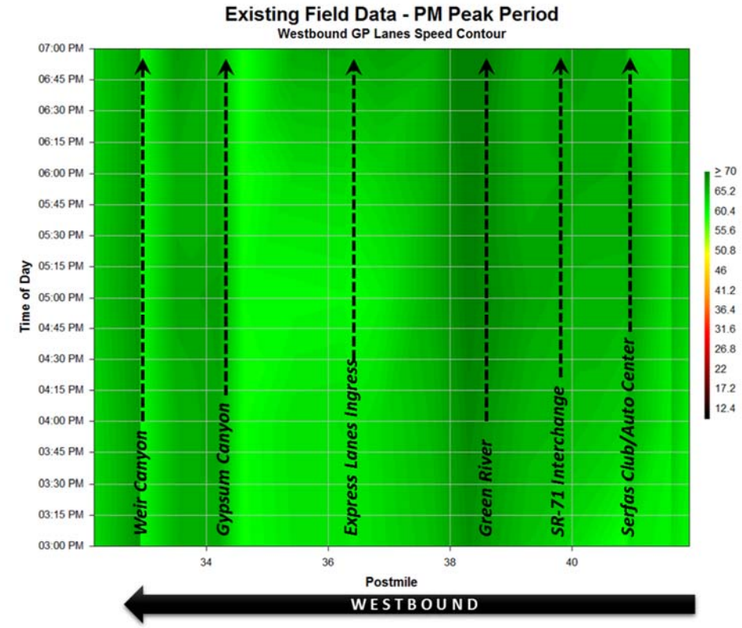
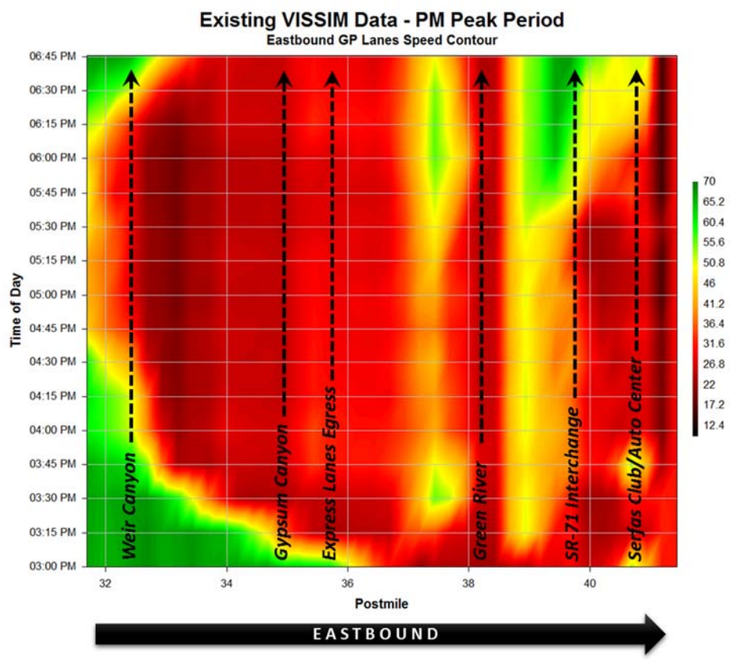
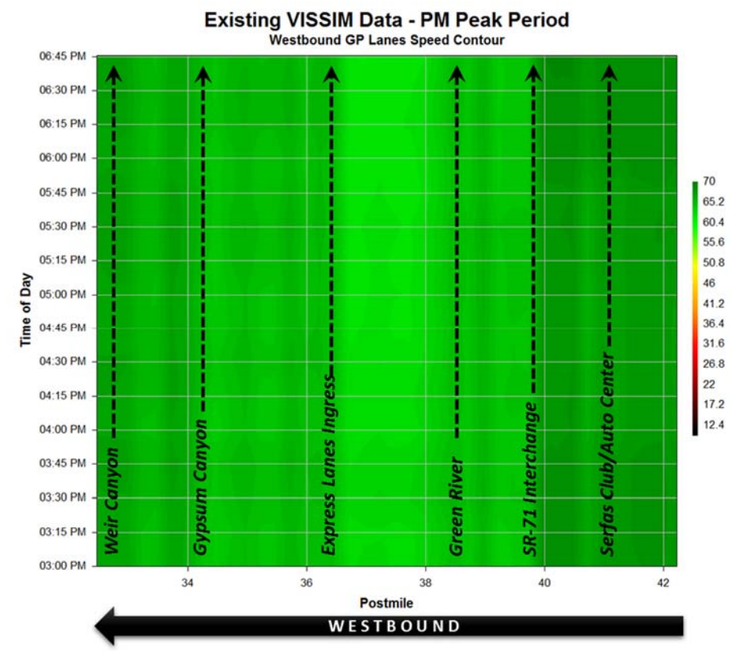


FIGURE 5-5
SR-91 Temporal Speed Diagram – GP Lane Calibration Comparisons, PM Peak Period (3-7 PM)









the vertical lines transitioning between red and green areas. The queues are the red colors upstream of the bottlenecks.

The speed contour plots were a critical tool to ensure that the operations observed in the simulation model approximate expectations for the freeway and network performance. Key focus areas were the location of bottlenecks, duration and extent of queues, and traffic patterns in the network. In general, a comparison of the field and VISSIM plots shows that the "recurring" bottlenecks observed in the existing field data are replicated in the VISSIM model. In the AM peak, the field data shows westbound SR-91 bottlenecks at the westbound Green River on-ramp and at the westbound Serfas Club Drive/Auto Center Drive on-ramp. Figure 5-4 shows that the calibrated VISSIM model replicates the field reported bottleneck locations, durations, and extent of queues. In the PM peak, the field data shows congestion on eastbound SR-91 throughout the entire study area. Overlapping bottlenecks at Serfas Club Drive/Auto Center Drive, SR-71, SR-241, and Gypsum Canyon Road cause low speeds and an extended queue through the entire eastbound SR-91 in the study area. Figure 5-5 shows that the calibrated VISSIM model replicates the field reported bottleneck locations, duration, and extent of queues.

AM Peak – GP Lanes

For the AM peak (**Figure 5-4**), in the eastbound direction on the GP lanes, the field and VISSIM speed contour plots match well. Generally, traffic conditions are near free flow speeds in both the field and the model.

In the westbound direction, the field data shows two areas with reduced speeds:

- Near the SR-71 interchange (postmile 40)
- Near the Express Lanes Ingress at the Riverside/Orange County line (postmile 37)

The model shows slowing in both of these locations (SR-71 interchange and the County boundary), although the model has less severe congestion starting at the Express Lane ingress (postmile 37) compared to field data. Although the speed contour plot shows overall higher speed from the model than field data in the AM period westbound direction, travel time and volume throughput are well calibrated during the AM peak hour of 7-8 AM.

PM Peak – GP Lanes

For the PM peak (**Figure 5-5**), in the westbound direction on the GP lanes, the field and VISSIM speed contour plots match well. Generally, traffic conditions are near free flow speeds in both the field and the model, with the exception of the SR-71 interchange (postmile 40) showing speeds dropping to around 50 mph in the field.

In the eastbound direction, the field data shows most locations within the study area with reduced speeds that last the entire duration of the PM period. The model shows slowing in the same locations and generally to the same degree and duration.

5.3.4 Calibration Summary

When reviewing the results, it is important to note that the calibration targets are guidelines (not absolute criteria). It is quite common for calibrated models to not meet all calibration targets over the entire study area. It is ultimately up to the reviewer to determine that the calibrated model is producing results that reflect field conditions at an acceptable level. The goal was not to meet every criterion but to demonstrate that the calibrated model was producing results that reflect field conditions at an acceptable level. After extensive calibration efforts, it was determined by the F/ETCA and the modeling team that the models were calibrated to an acceptable level. In the AM and peak periods, only one of the hours falls outside the target calibration range (>85%).

Based on the comparisons of volumes, travel times, and the temporal speed diagrams between the field and VISSIM data, the AM and PM VISSIM models were considered calibrated and acceptable for use in the development of the future models. The exceptions noted in Sections 5.3.1 and 5.3.2 are considered acceptable given the adherence to the remaining calibration targets (volume, speed, and travel time).

6 Traffic Forecasting Methodology

Future traffic demands were developed for each freeway segment and ramp within the project study limits. There are several traffic studies that have recently been completed or are currently in process that study the SR-91 corridor. The future traffic demands developed for this study were based on two recent traffic studies:

- SR-91 CIP Final Traffic Study Report (Parsons Brinckerhoff, 2010)
- SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study (Stantec, 2011)

To develop the future traffic demands for this study, the forecasts from these studies were compiled into a hybrid forecast that is generally consistent with the forecasts in the previous studies. No new travel/demand modeling was performed as part of this study.

The SR-91 Corridor A project is a long-range project that proposes to build an elevated four-lane facility along the SR-91 corridor from SR-241 to I-15. The design year demands for the 2040 model assumes the Corridor A improvements will not be in place. This assumption is consistent with the 2012 Southern California Association of Governments (SCAG) regional transportation planning (RTP) model (i.e., Corridor A is not included in the 2012 SCAG RTP model).

6.1 Overview of Future Year Demand Development

To develop an estimate of future freeway traffic demands, four data sources were used:

- Existing freeway and ramp volumes (2013)
- Existing travel/demand model data from the Orange County Transportation Analysis Model (OCTAM Version 3.2, provided by OCTA in January 2008)
- Short-term future (2015) travel/demand model data from the SR-91 CIP Final Traffic Study Report (prepared by Parsons Brinckerhoff in 2010)
- Long-term future (2035) travel/demand model data from the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study (prepared by Stantec in 2011)

Demand for the different years (existing, 2017 and 2040) were all derived from the different models and different studies listed above. When feasible, it is usually preferable to try to use the same model for different years to ensure consistency. However, the decision to use these models was made by the Project Development Team (PDT) prior to the start of the analysis during the development of the methods and assumptions. At that time, the group agreed to build upon the traffic forecasting that had already been done in the study area through the SR-91 CSMP Studies, SR-91 CIP Final Traffic Study Report, and the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study. All of these models/studies have limitations. However, the approach in this study was to use the best sources of data which is not necessarily the same model for all years. A discussion of each of these data sources and how they were used to develop the future freeway traffic demands is provided in the following sections.

6.1.1 Existing Traffic Data

The first step in developing future freeway traffic demands was to extract existing traffic volume data from available sources, including PeMS and freeway traffic counts from Caltrans.

Existing traffic volumes were used to help validate the future travel/demand numbers. In cases where existing volumes were found to be higher than the future forecast, adjustments were made to show reasonable growth (i.e., demands that are higher than existing volumes).

6.1.2 Existing OCTAM Data

The OCTAM model incorporates modeling components that are consistent with the SCAG model and provides a regional travel forecasting base for transportation planning work in Orange County. The OCTAM model is regional in nature and suited for macro-level analysis.

The next step in developing future freeway traffic demands was to look at existing OCTAM model data. Peak hour and daily demands for existing conditions were provided to CH2M HILL as part of the SR-91 Express Lanes Extension and State Route 241 Connector Feasibility Study (prepared by CH2M HILL, 2009).

6.1.3 Short-Term Future Data

The SR-91 CIP Final Traffic Study developed 2015 traffic forecasts for the SR-91 corridor (between SR-241 and Magnolia Avenue). The 2015 traffic forecasts represent the opening year of the Initial SR-91 CIP Project. These forecasts were used to develop the 2017 forecasts in this study.

6.1.4 Long-Term Future Data

The SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study developed 2035 traffic forecasts for the SR-91 corridor (between SR-241 and Magnolia Avenue). The 2035 traffic forecasts represent the opening year of the Ultimate SR-91 CIP Project. These forecasts were used to develop the 2040 forecasts in this study.

6.2 Estimate Future Mainline/Ramp Demands

Future freeway traffic demands were a critical input to the traffic modeling. It is important to note that freeway traffic volumes are different than freeway traffic demands. With congestion, not all traffic can be served, so traffic demands are invariably higher than traffic volumes. Along a congested corridor such as SR-91, this issue affects all freeway traffic in the corridor, during both peak periods.

Data analysis of existing volumes and future traffic forecasts was conducted to validate the future mainline and ramp demands from the other studies. In all of the data, westbound SR-91 is the peak directional flow in the morning peak period and eastbound SR-91 is the peak directional flow in the afternoon peak period.

Section 7 discusses the analysis scenarios in detail. However, 2017 and 2040 are the future analysis years of this study. To develop 2017 and 2040 traffic demands from the 2015 and

2035 forecasts available from the SR-91 CIP Final Traffic Study and the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue studies, an adjustment process was required.

The steps below outline the process used to develop the 2017 traffic demands for the mainline and ramps in the study area:

- Compared existing volumes with future demands (2015) to ensure that future demands are higher than existing volumes. There were no instances where the existing volumes were higher than the future demands.
- Compared existing OCTAM demands (2000) with future demands from the SR-91 CIP Final Traffic Study (2015) and calculated two average annual growth rates for two sub-areas:
    - Mainline segments and ramps from the west study limit (Weir Canyon) to the Orange/Riverside County line
    - Mainline segments and ramps from the Orange/Riverside County line to the east study limit (Serfas Club)
- Applied these growth rates in each sub-area to grow the 2015 demands from the SR-91 CIP Final Traffic Study by two years to develop 2017 traffic demands.
- Balanced the demands along the ramps so that the mainline demand entering the study area minus demands leaving the mainline (via off-ramps) plus demands entering the mainline (via on-ramps) equals the mainline demands leaving the study area.
- Express Lane demands were estimated based on input from OCTA staff to reflect peak operating conditions. These demands were also compared with the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study to ensure consistency.

The steps below outline the process used to develop the 2040 traffic demands for the mainline and ramps in the study area:

- Compared existing volumes with future demands (2035) to ensure that future demands are higher than existing volumes. There were no instances where the existing volumes were higher than the future demands.
- Compared the future demands from the SR-91 CIP Final Traffic Study (2015) with future demands from the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study (2035) and calculate two average annual growth rates for two sub-areas:
    - Mainline segments and ramps from the west study limit (Weir Canyon) to the Orange/Riverside County line
    - Mainline segments and ramps from the Orange/Riverside County line to the east study limit (Serfas Club)
- Applied these growth rates in each sub-area to grow the 2035 demands from the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study by five years to develop 2040 traffic demands.
- Balanced the demands along the ramps so that the mainline demand entering the study area minus demands leaving the mainline (via off-ramps) plus demands entering the mainline (via on-ramps) equals the mainline demands leaving the study area.

- Express Lane demands were estimated based on input from OCTA staff to reflect peak operating conditions. These demands were also compared with the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study to ensure consistency.

With a variety of studies recently completed in this area, it was not feasible to pick one set of forecasts that provided the future demand estimates for the study years in this analysis and also covered the entire study area. It was therefore necessary to use the synthesis approach outlined above, using forecasts from the most applicable studies (SR-91 CIP Final Traffic Study Report and the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study).

While the PDT team and technical team determined this was the best approach, there are risks associated with using demand forecasts from multiple studies. The biggest risk associated with the traffic forecasting approach is the perception of error in the forecasts because they are different. In fact, this approach minimizes the likelihood of projection errors, because the forecasts most applicable to each scenario were used. Also, in the next phase of project development, additional traffic forecasting and traffic analysis will be performed as part of the tolling and revenue study. The more detailed forecasting will serve as a method to validate and adjust the traffic forecasts used in the analysis in this study.

6.3 Forecast Results in the Mixing Bowl

The future traffic forecasts served as a direct input into the future VISSIM traffic analysis models. The model results are discussed in Section 8. The subsections below provide more details on the forecasts.

6.3.1 2017 Forecasts

Figures 6-1 (no-build) and 6-2 (build) illustrate the 2017 AM traffic demands applied for the analysis in the mixing bowl area on westbound SR-91. These traffic demands were developed using the process outlined in Section 6.2. The forecasts show that the project will result in approximately 850 vehicles per hour shifting from westbound SR-91 to southbound SR-241. The demand change will lead to fewer vehicles on the westbound SR-91 GP lanes, west of the SR-91/SR-241 interchange. This traffic shift will have a positive effect, reducing the demand in the bottleneck area to the west. It is also important to note that the westbound Express Lane demand is highest (4,250 vehicles per hour) immediately upstream of the direct connector. Additional discussion of how this demand can be handled is provided in section 8.3.2 (westbound design variation).

FIGURE 6-1
2017 No-Build Demand Assumptions in the Mixing Bowl: Westbound SR-91, AM Peak Hour

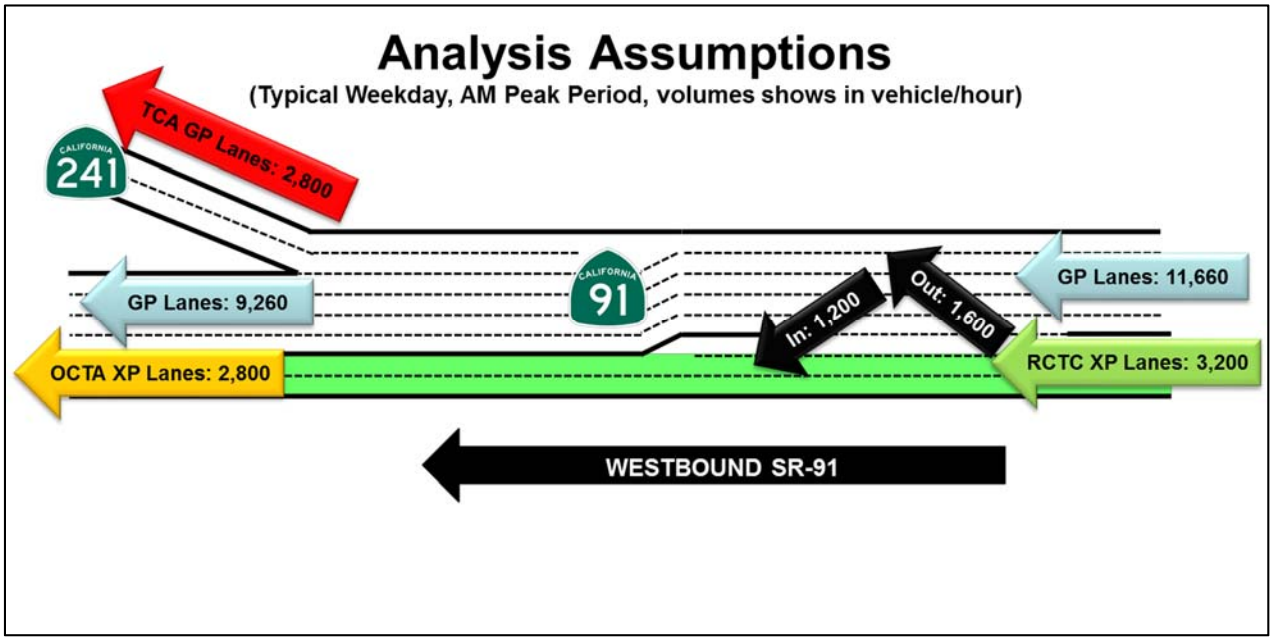
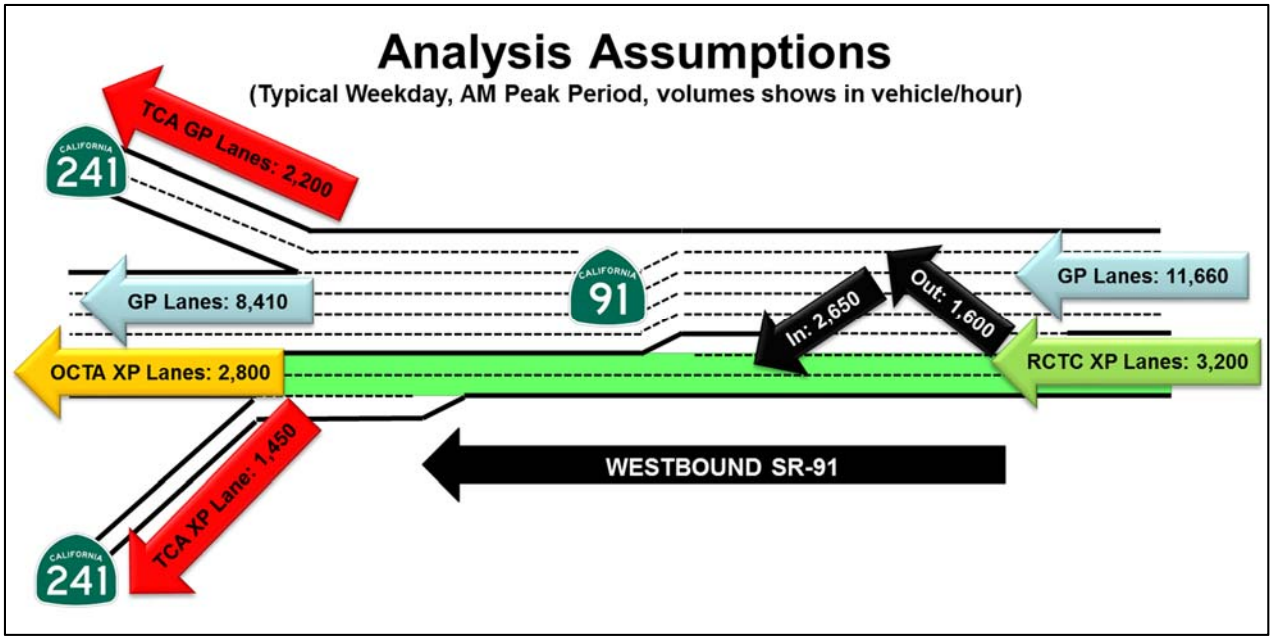


FIGURE 6-2
2017 Build Demand Assumptions in the Mixing Bowl: Westbound SR-91, AM Peak Hour



Figures 6-3 (no-build) and 6-4 (build) illustrate the 2017 PM traffic demands applied for the analysis in the mixing bowl area on eastbound SR-91. A total of 660 vehicles/hour will shift to northbound SR-241 from other routes (i.e., surface streets, SR-55, and SR-91) with the project. This total includes approximately 190 vehicles per hour that will shift from

eastbound SR-91 to northbound SR-241. The net result of the shifts will be changes in the number of vehicles on the eastbound SR-91 GP lanes. There will be fewer vehicles west of the SR-91/SR-241 interchange and more vehicles east of the SR-91/SR-241 interchange. This traffic shift will have a positive effect, reducing the demand in the bottleneck area to the west.

FIGURE 6-3
2017 No-Build Demand Assumptions in the Mixing Bowl: Eastbound SR-91, PM Peak Hour

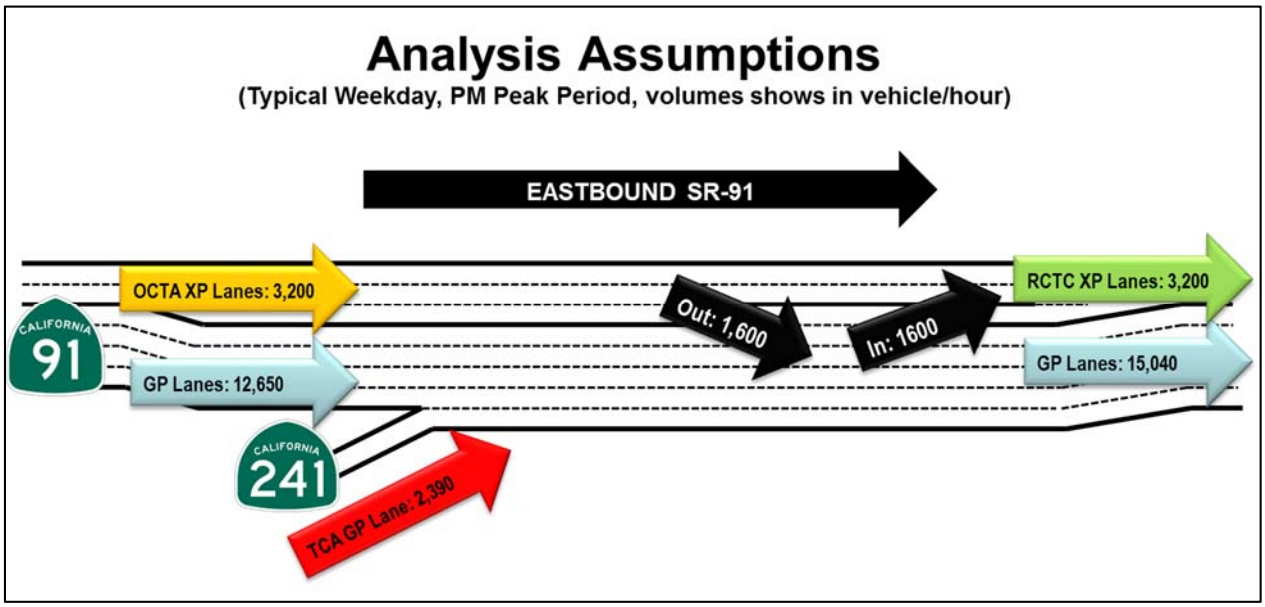
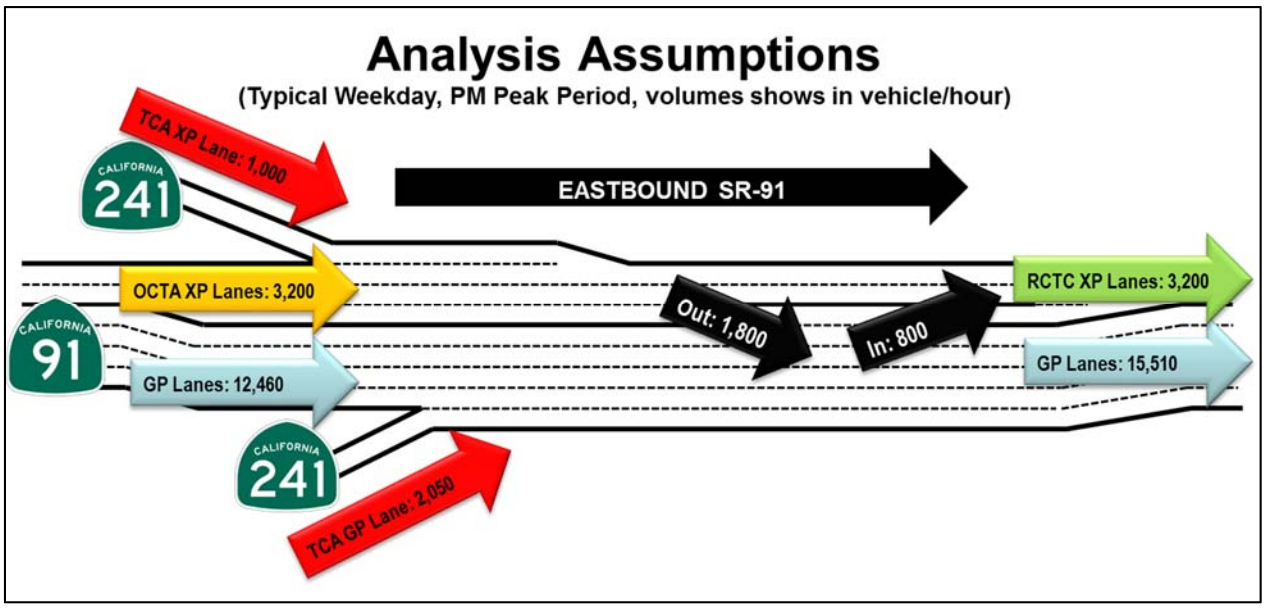


FIGURE 6-4
2017 Build Demand Assumptions in the Mixing Bowl: Eastbound SR-91, PM Peak Hour



6.3.2 2040 Forecasts

Figures 6-5 (no-build) and 6-6 (build) illustrate the 2040 AM traffic demands applied for the analysis in the mixing bowl area on westbound SR-91. The forecasts show that the project will result in approximately 1,320 vehicles per hour shifting from westbound SR-91 to southbound SR-241. The demand change will lead to fewer vehicles on the westbound SR-91 GP lanes, west of the SR-91/SR-241 interchange. This traffic shift will have a positive effect, reducing the demand in the bottleneck area to the west. The westbound Express Lane demand is highest (4,250 vehicles per hour) immediately upstream of the direct connector. Additional discussion of how this demand can be handled is provided in section 8.3.2 (westbound design variation).

FIGURE 6-5
2040 No-Build Demand Assumptions in the Mixing Bowl: Westbound SR-91, AM Peak Hour

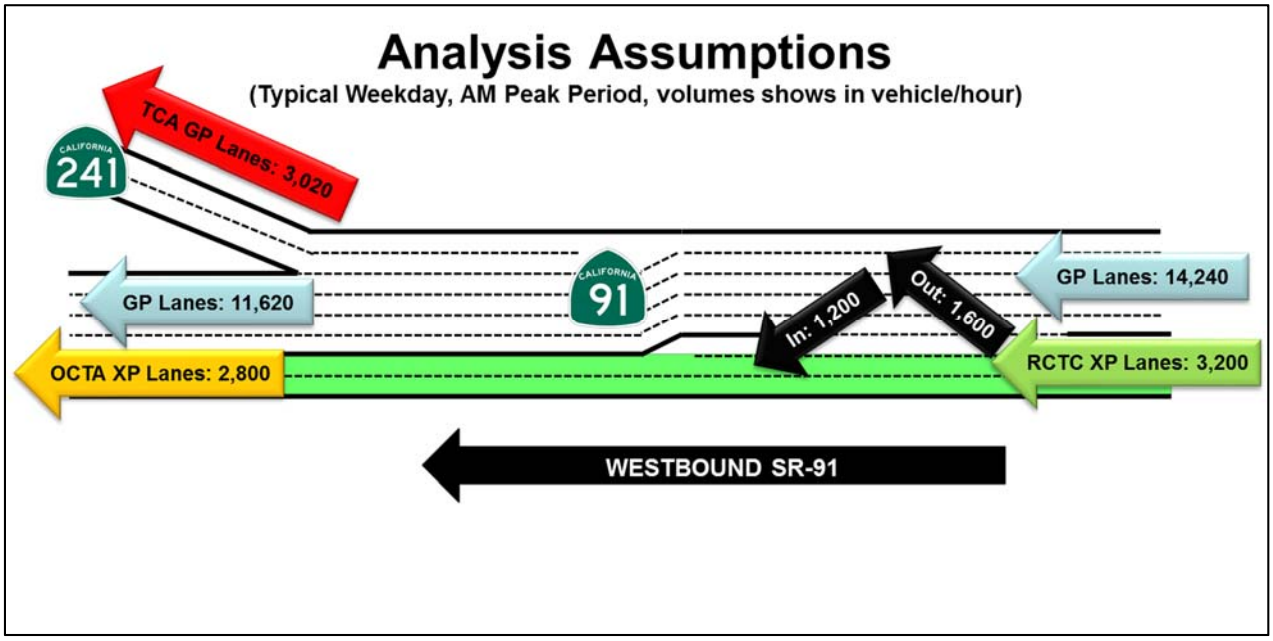
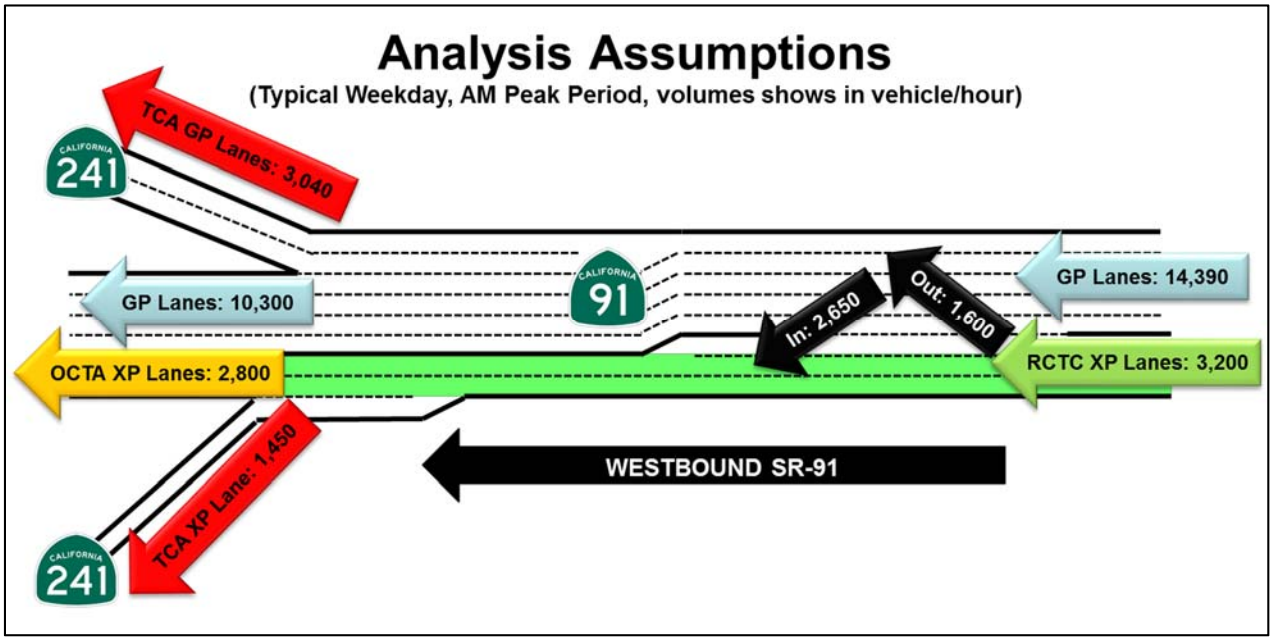


FIGURE 6-6
2040 Build Demand Assumptions in the Mixing Bowl: Westbound SR-91, AM Peak Hour



Figures 6-7 (no-build) and 6-8 (build) illustrate the 2040 PM traffic demands applied for the analysis in the mixing bowl area on eastbound SR-91. The forecasts show that the project will not cause traffic to shift from eastbound SR-91 or other routes (i.e., surface streets, SR-55) to northbound SR-241 in 2040.

FIGURE 6-7
2040 No-Build Demand Assumptions in the Mixing Bowl: Eastbound SR-91, PM Peak Hour

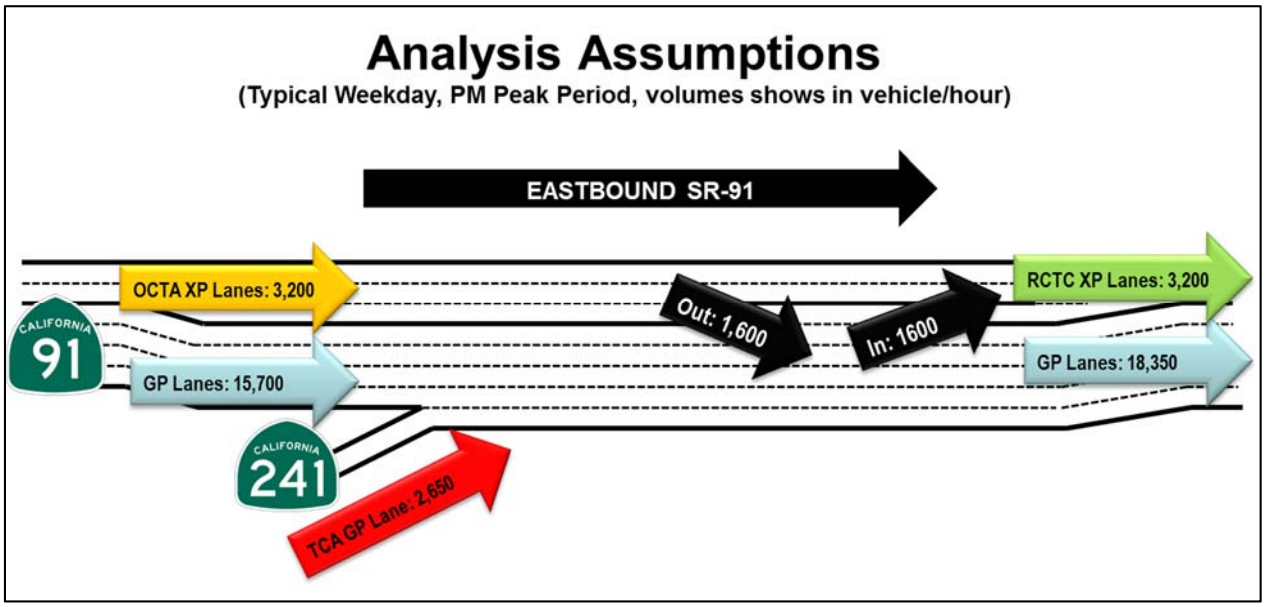
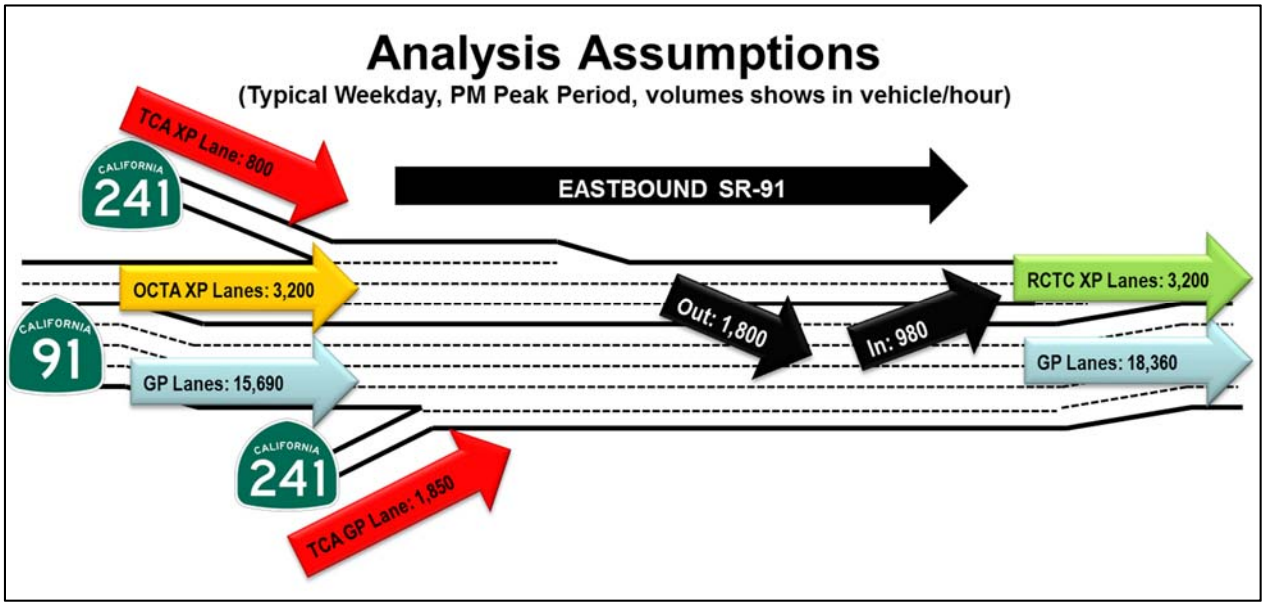


FIGURE 6-8
2040 Build Demand Assumptions in the Mixing Bowl: Eastbound SR-91, PM Peak Hour



6.3.3 Regional Shift to SR-241 with Project

Sections 6.3.1 and 6.3.2 indicate where traffic is projected to shift from other regional routes (SR-91, SR-55, surface streets) to SR-241. This regional shift is a result of the additional capacity of the new connector. The regional shift patterns discussed below are consistent with the data provided in the SR-91 CIP Final Traffic Study Report (Parsons Brinckerhoff, 2010) and the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study (Stantec, 2011). As stated earlier in this chapter, the forecasts from the SR-91 CIP Final Traffic Study Report and the SR-91/SR-241 Express Lane Direct Connector Traffic and Revenue Study were compiled into a hybrid forecast and used in this study.

In the AM peak period, more traffic is forecasted to travel from westbound SR-91 to southbound SR-241 in the build scenario. The resulting shift leads to fewer vehicles in the westbound SR-91 GP lanes (850 vehicles/hour in 2017 and 1,320 vehicles/hour in 2040), west of the SR-91/SR-241 interchange.

In the 2017 PM peak period, more traffic is forecasted to travel from northbound SR-241 to eastbound SR-91 in the build scenario. The resulting shift leads to fewer vehicles in the eastbound SR-91 GP lanes (190 vehicles/hour in 2017), west of the SR-91/SR-241 interchange. Once these vehicles shift to SR-241, they are projected to use the northbound SR-241 to eastbound SR-91 Express Lane Connector and continue on to the RCTC Express Lanes.

There is one scenario where no regional shift is predicted. By the 2040 Design Year, background growth and the additional eastbound capacity provided by the SR-91 Ultimate CIP project is anticipated to balance traffic demand within the corridor between the No Build and Build scenario. In 2040, the Ultimate CIP improvements on eastbound SR-91 improve operations to the point that fewer vehicles (200 vehicles/hr less than 2040 no-build)

choose to use the direct connector to access the express lanes because the eastbound GP lanes in the mixing bowl operate with high speeds. Therefore, for the 2040 PM peak, there is no eastbound SR-91 regional shift to SR-241 projected.

7 Traffic Analysis Methodology

7.1 Traffic Analysis Purpose

The goal of the traffic analysis was to identify any critical issues ("fatal flaws") with the traffic operations of the proposed project (and several variations of the proposed project). Since both existing and future operations on SR-91 will be heavily congested in the peak periods, the goal was not to achieve a specific level of service (LOS). Given the projected demands, the proposed project will not eliminate the congestion on SR-91. In fact, many of the benefits of the operational improvements associated with the proposed project could be hidden by the excess demand in the corridor. For example, if a given improvement reduces congestion at a bottleneck, the excess demand (that previously could not enter the corridor) will "fill in" the newly available capacity. Therefore, the traffic analysis was focused on identifying any new operational issues that could result from the project.

7.2 Overall Approach

The focus of the future year analysis was to assess the benefits of proposed improvements to the SR-91/SR-241 interchange and SR-91 mainline and Express Lanes. The tool for doing so was the VISSIM model, and the existing conditions calibrated model was the starting point for the future year analysis. The demand and supply features of the model were updated for the future year analysis.

- Traffic demands for 2017 and 2040 were coded as model input. The process for estimating the future traffic volumes is described in Chapter 6 (Traffic Forecasting).
- The network supply included the roadway configuration (number of lanes, connections, Express lanes, etc.). F/ETCA has developed plans for the SR-91/SR-241 Direct Connector improvements. RCTC has developed plans for the SR-91 CIP improvements.

Once the demand and supply features were updated, the VISSIM model was run for the 2017 and 2040 peak periods. The output results were compared for various future alternatives of the proposed project as described in Section 7.4.

7.3 Description of Scenarios

The following analysis scenarios were analyzed:

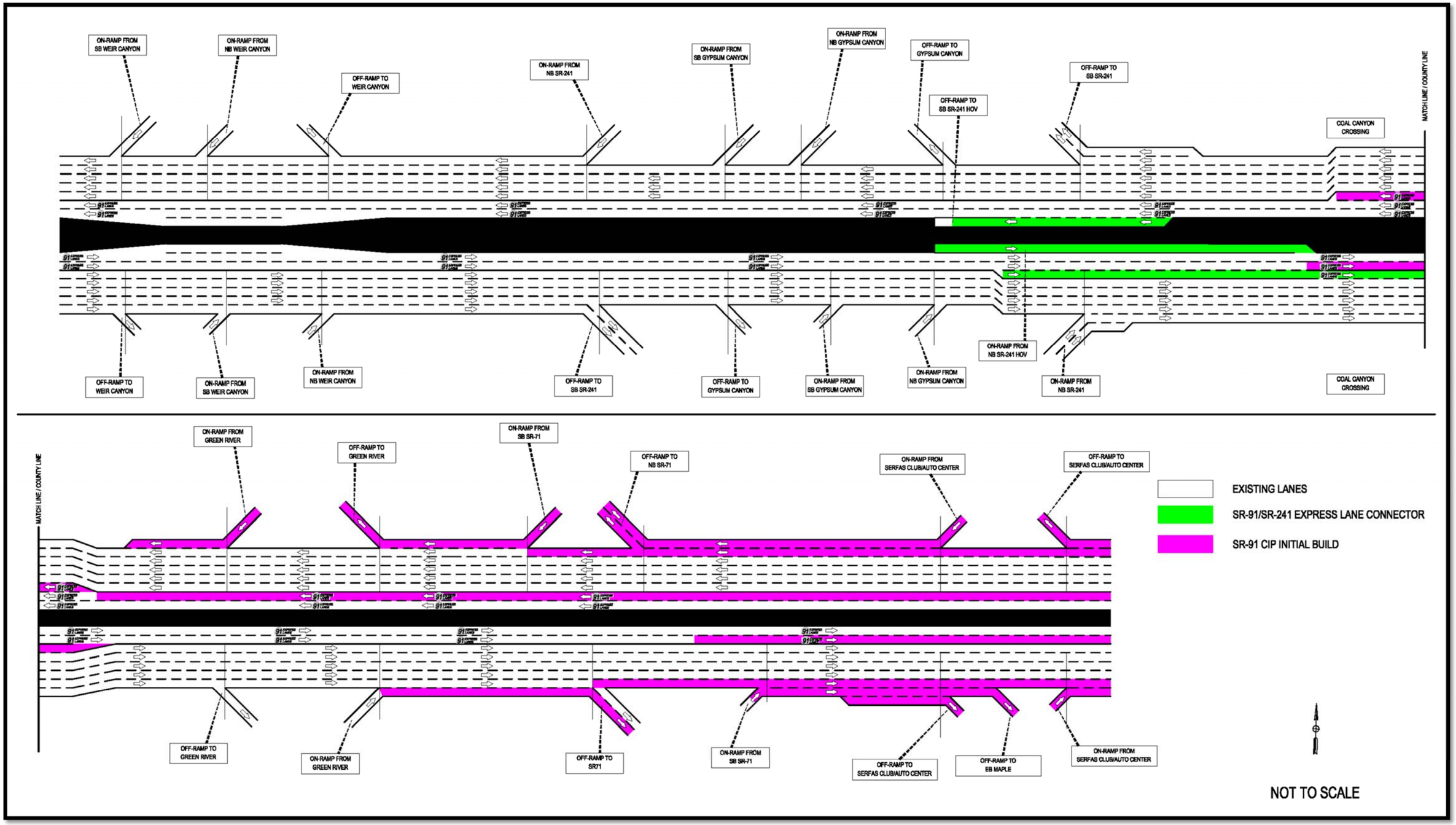
- Opening Year (2017) No Build
- Opening Year (2017) Build
- Design Year (2040) No Build
- Design Year (2040) Build

For each analysis scenario, the morning (6 to 9 AM) and evening (3 to 7 PM) peak periods were analyzed. Volumes were split by vehicle type (toll, non-toll, truck, etc.).

In the study area, there are several other projects that may be constructed before and after the opening of the SR-241/SR-91 Express Lane Connector project. These projects were considered in capturing the future lane geometry. Figures 7-1 and 7-2 illustrate the study area and lane geometry inputs that were used for the Opening Year and Design Year traffic analysis, respectively. The shaded lanes on the figures illustrate which project will provide lanes that do not exist today.

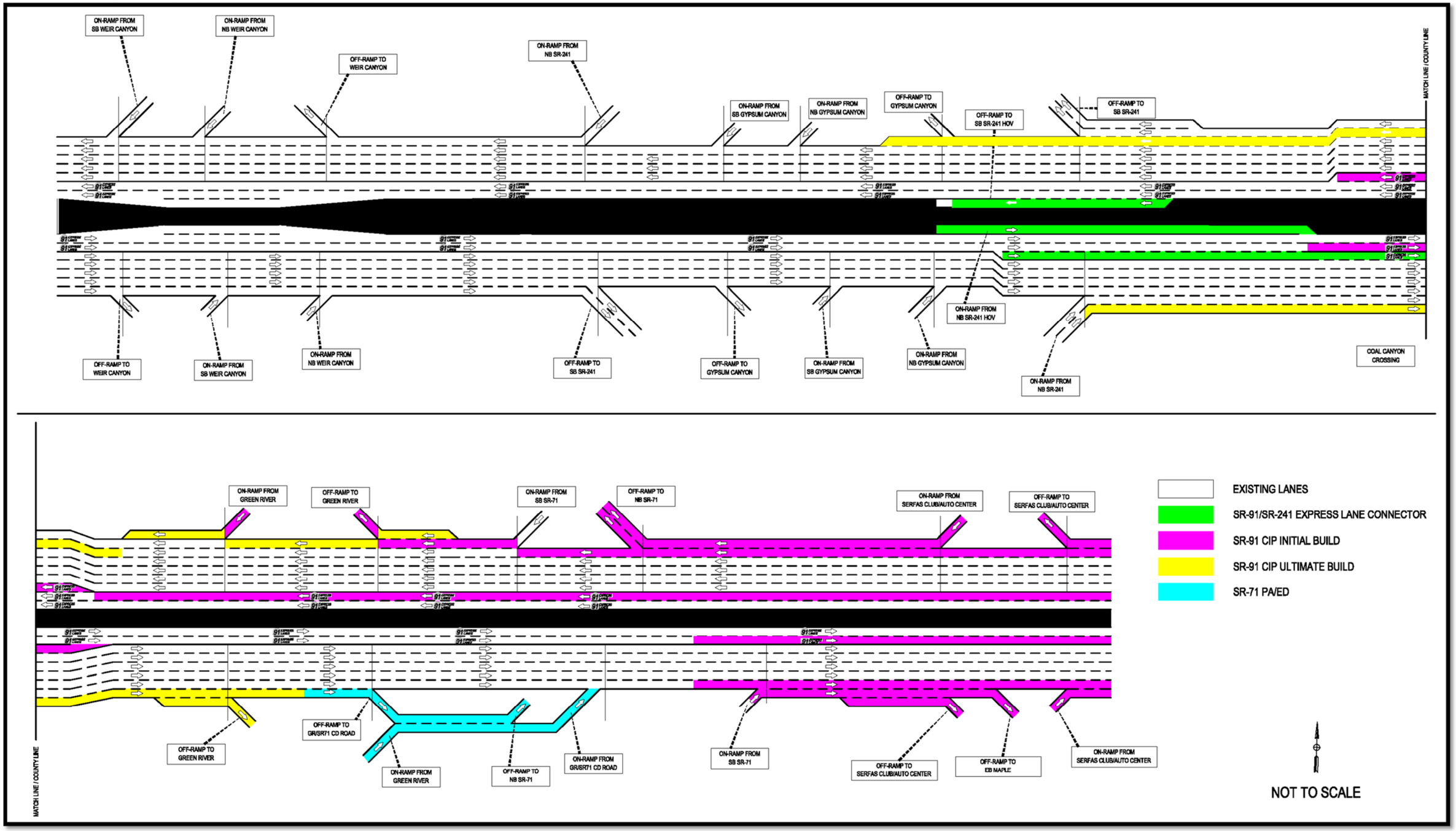
These results are summarized in Chapter 8.

FIGURE 7-1
Lane Geometry – Opening Year Analysis (2017)



Source: CH2M HILL

FIGURE 7-2
Lane Geometry – Design Year Analysis (2040 without Corridor A)



Source: CH2M HILL

8 Traffic Analysis Results

The results of the VISSIM model runs are discussed in this section. The detailed results are for an average of multiple runs (10) with different random number seeds. Detailed model output is provided in Appendix B through F.

Several MOEs are summarized for each scenario to best understand the relative differences between each scenario.

8.1 2017 Conditions (No-Build vs. Build)

8.1.1 Volume Served

Throughput volumes and percent of demand unserved were compared between the 2017 No-Build and Build scenarios. Throughput volume and percent of demand unserved are both measured by combining the GP and Express lanes along SR-91 between Weir Canyon Road and Serfas Club/Auto Center Drive in the AM and PM peak periods.

AM Peak Period

Table 8-1 compares volume throughput and percent demand unserved between the 2017 No-Build and Build scenarios in the AM peak period (6 to 9 AM). **Figure 8-1** illustrates the volume throughput comparisons in the westbound GP and Express lanes between the 2017 No-Build and Build scenarios in the AM peak hour (worst hour of the peak period). The No-Build and Build scenarios have similar combined demand (GP and Express lane trips) in the peak westbound direction of travel east of the SR-91/SR-241 interchange, but the Build scenario has approximately 7% lower combined demand (or 2,400 vehicles) west of the SR-91/SR-241 interchange, due to a shift of travel patterns that increases demand southbound on SR-241.

> In the 2017 AM peak, building the connector will allow the corridor to serve more vehicles (about 2%) and more vehicles are able to enter the study area. This represents a significant improvement in the overall efficiency of the system.

Under the Build scenarios, the volume served on SR-91 westbound east of the SR-91/SR-241 interchange is on average 5% greater than the No-Build scenarios. Also, the Build scenario has similar throughput volume to the No-Build scenario west of the SR-91/SR-241 interchange, while the percent unserved is approximately 6% lower in the Build scenario compared to the No-Build scenario. The SR-91 westbound-to-SR-241 southbound ramps serve approximately 2,800 more vehicles in the AM peak period in the Build scenario compared to the No-Build scenario, due to the addition of the direct-connector ramp. The conclusion is that in the 2017 AM peak, building the connector will allow the corridor to serve more vehicles (about 2%) and more vehicles are able to enter the study area. This represents a significant improvement in the overall efficiency of the study area.

PM Peak Period

Table 8-2 compares volume throughput and percent demand unserved between the 2017 No-Build and Build scenarios in the PM peak period (3 to 7 PM). **Figure 8-2** illustrates the volume throughput comparisons in the eastbound GP and Express lanes between the 2017 No-Build and Build scenarios in the PM peak hour (worst hour of the peak period). The Build scenario has slightly less combined demand (GP and Express lane trips) in the peak eastbound direction of travel on SR-91 west of the SR-91/SR-241 interchange when compared to the No-Build scenario (approximately 700 vehicles less during the PM peak period). However, the Build scenario has slightly higher combined demand east of the SR-91/SR-241 interchange (approximately 1,800 vehicles more during the PM peak period). This is due to an increase in demand at the SR-241 northbound-to-SR-91 eastbound movement in the Build scenario caused by the addition of the direct-connector ramp. This implies that the project will pull trips to SR-241 from the regional freeway system (e.g. SR-55), and local arterials. Under the Build scenario, the changes in volume served are summarized below:

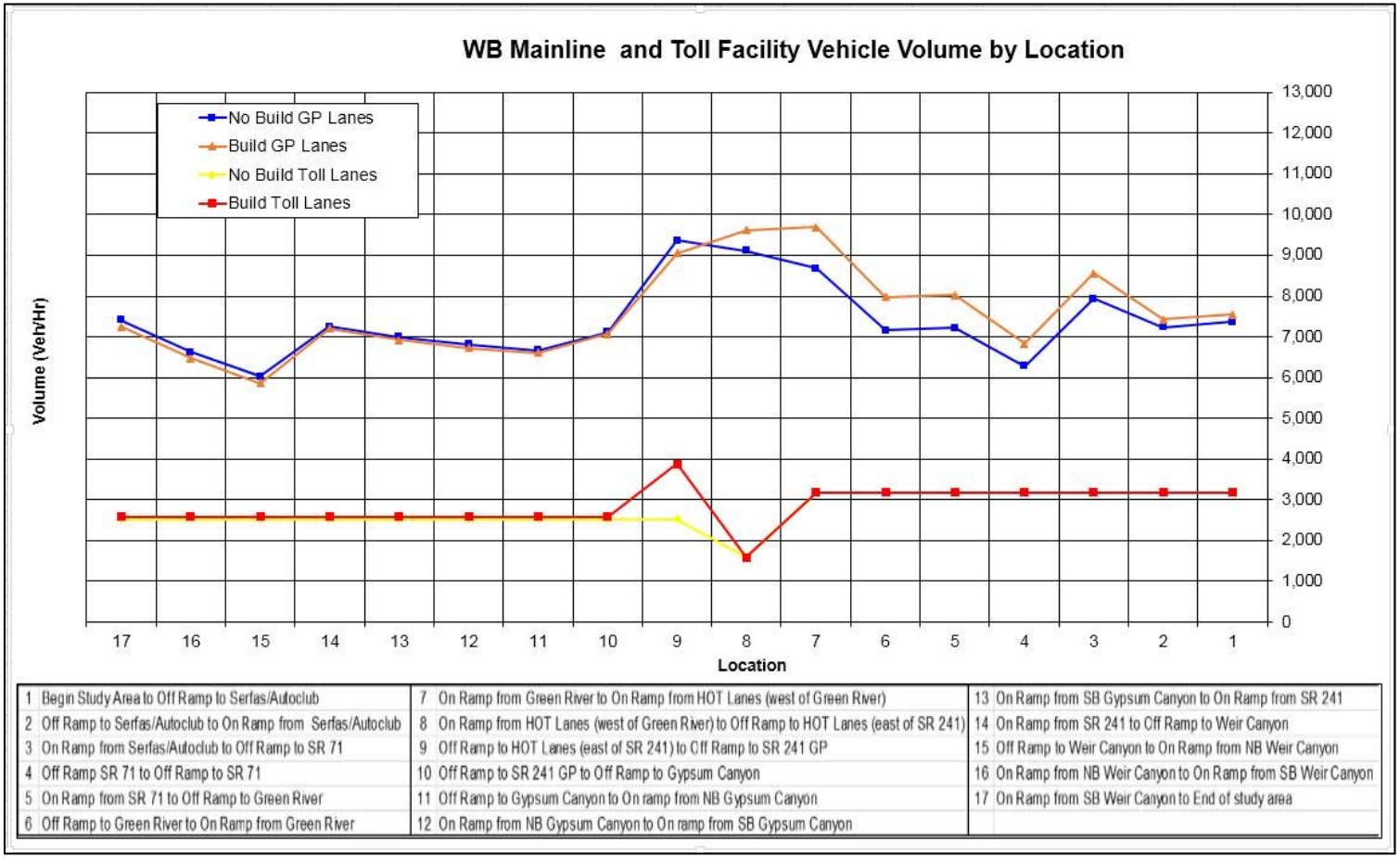
- West of the SR-91/SR-241 interchange, the volume served is slightly lower (approximately 940 total fewer vehicles during the PM peak period) than the No-Build scenario along the peak direction of travel (eastbound). This change is due to the heavy GP lane demand on SR-91 eastbound just downstream of the Express Lane egress/ingress.
- East of the SR-91/SR-241 interchange, the volume served is slightly higher (approximately 900 total more vehicles during the PM peak period) than the No-Build scenario along the peak direction of travel (eastbound). This change is due to the increase in demand through the Express Lanes in the mixing bowl with the project.

Table 8-2 shows that the 2017 PM overall average difference between the No-Build and Build scenarios in volume served in the eastbound direction is -0.3%. This is because of the negative and positive segment differences summarized in the bullets above. This overall eastbound corridor difference is considered nominal and the Build scenario is not projected to have a noticeable effect on the GP lanes in comparison to the No-Build scenario.

TABLE 8-1
Vehicle Throughput Comparison – SR-91 Westbound GP and Express Lanes, 2017 No-Build and Build, AM Peak Period (6-9 AM)

	2017 No-Build AM									2017 Build AM									Throughput Volume Difference	
	Demand Volume (3 hr volume)			Throughput Volume (3 hr volume)			Percent Unserved			Demand Volume (3 hr volume)			Throughput Volume (3 hr volume)			Percent Unserved				
Screenline Location	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	Abs Diff	% Diff
East of Serfas Club/Auto Center Drive	22367	9185	31552	21575	9143	30718	3.5%	0.5%	2.6%	22349	9184	31533	21866	9143	31009	2.2%	0.4%	1.7%	291	0.9%
Between Serfas Club/Auto Center Drive and SR-71	25820	9185	35005	24038	9143	33180	6.9%	0.5%	5.2%	25794	9184	34978	25261	9143	34405	2.1%	0.4%	1.6%	1225	3.7%
Between SR-71 and Green River Road	26530	9185	35715	21917	9143	31059	17.4%	0.5%	13.0%	26511	9184	35695	24077	9143	33220	9.2%	0.4%	6.9%	2161	7.0%
Between Green River Road and SR-241 Ramp (WB to SB)	33680	9185	42865	26256	9143	35398	22.0%	0.5%	17.4%	33659	9184	42843	29011	9143	38154	13.8%	0.4%	10.9%	2756	7.8%
Between SR-241 GP Ramp (WB to SB) and Gypsum Canyon Road	26790	8040	34830	21368	7421	28789	20.2%	7.7%	17.3%	24334	8033	32367	21119	7605	28724	13.2%	5.3%	11.3%	-66	-0.2%
Between Gypsum Canyon Road and SR-241 Ramp (NB to WB)	25631	8040	33671	20951	7421	28372	18.3%	7.7%	15.7%	23187	8033	31220	20641	7605	28245	11.0%	5.3%	9.5%	-127	-0.4%
Between SR-241 Ramp (NB to WB) and Weir Canyon Road	26493	8040	34533	21738	7421	29159	17.9%	7.7%	15.6%	24049	8033	32082	21456	7605	29061	10.8%	5.3%	9.4%	-99	-0.3%
West of Weir Canyon Road	26041	8040	34081	22091	7421	29512	15.2%	7.7%	13.4%	23598	8033	31631	21513	7605	29117	8.8%	5.3%	7.9%	-395	-1.3%
																			Average =	**2.1%**

FIGURE 8-1
SR-91 Westbound Mainline and Toll Facility Vehicle Volume by Location - 2017 No-Build and Build, AM Peak Hour (7-8 AM)



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

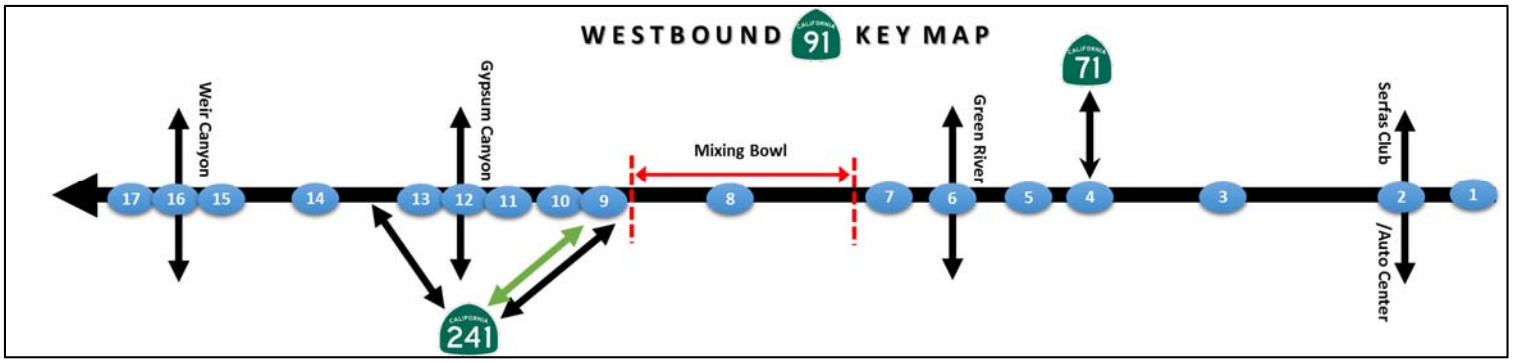
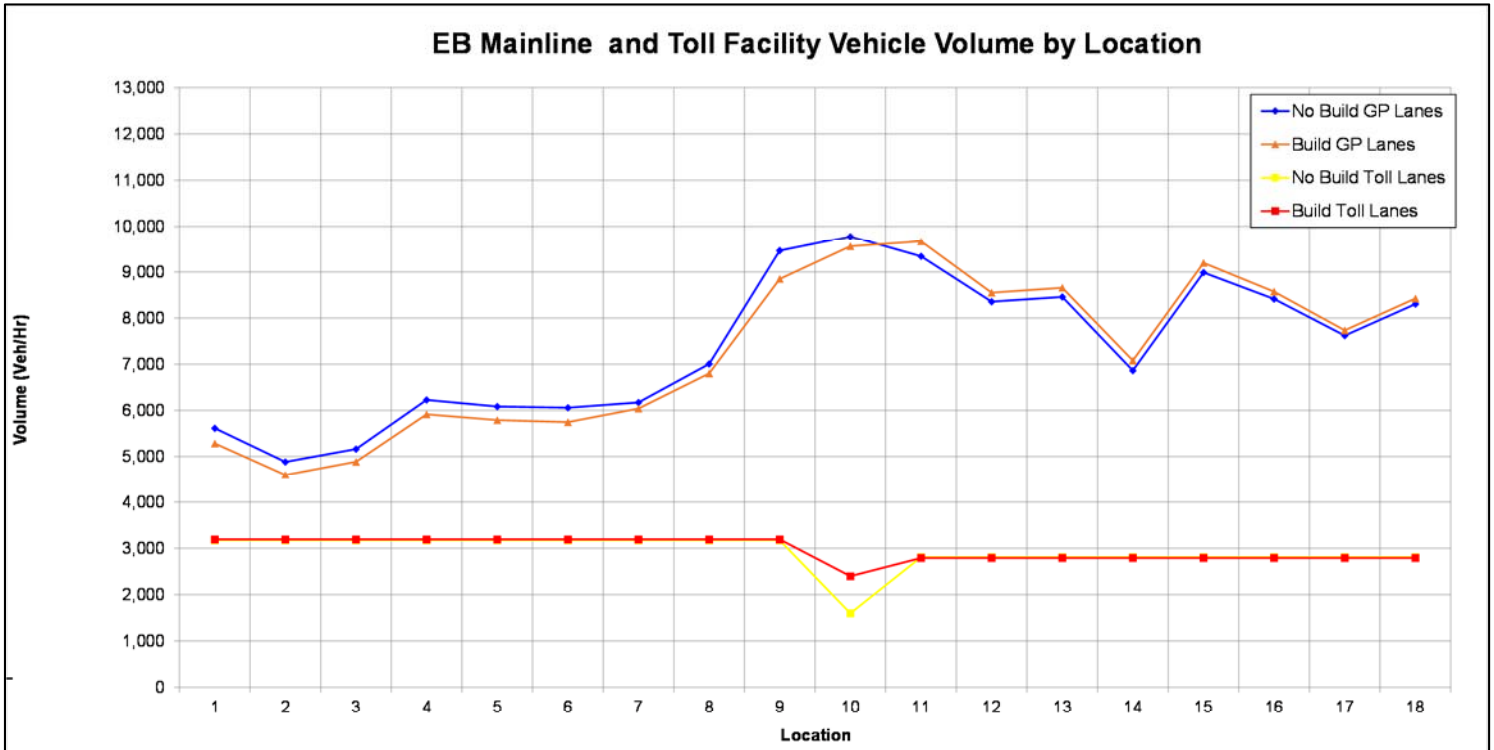


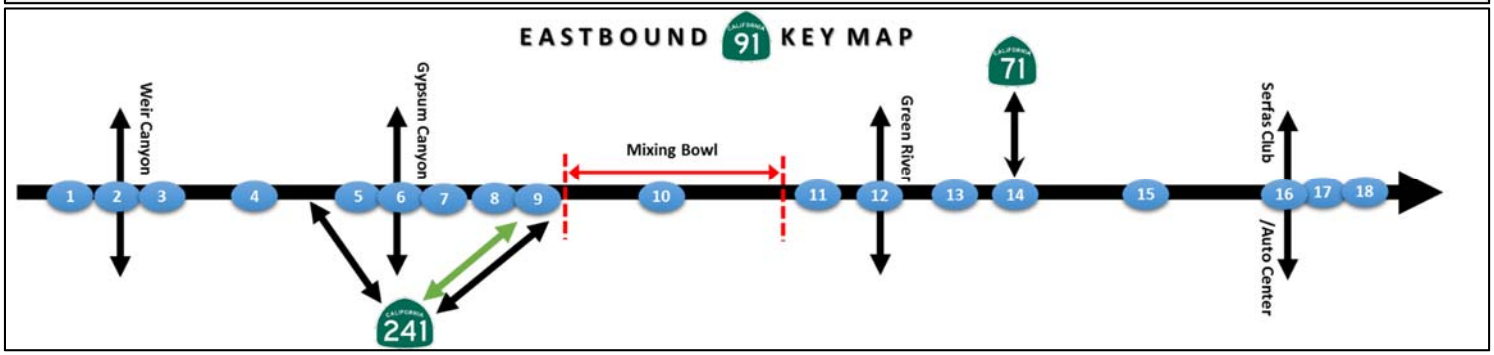
TABLE 8-2
Vehicle Throughput Comparison – SR-91 Eastbound GP and Express Lanes, 2017 No-Build and Build, PM Peak Period (3-7 PM)

	2017 No-Build PM									2017 Build PM									Throughput Volume Difference	
	Demand Volume (4 hr volume)			Throughput Volume (4 hr volume)			Percent Unserved			Demand Volume (4 hr volume)			Throughput Volume (4 hr volume)			Percent Unserved				
Screenline Location	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	Abs Diff	% Diff
West of Weir Canyon Road	44952	12164	57116	23492	12079	35570	47.7%	0.7%	37.7%	44278	12160	56438	22231	12147	34379	49.8%	0.1%	39.1%	-1192	-3.4%
Between Weir Canyon Road and SR-241 Ramp (EB to SB)	43963	12164	56127	25622	12079	37701	41.7%	0.7%	32.8%	43288	12160	55448	24469	12147	36616	43.5%	0.1%	34.0%	-1085	-2.9%
Between SR-241 Ramp (EB to SB) and Gypsum Canyon Road	42981	12164	55145	25006	12079	37084	41.8%	0.7%	32.8%	42303	12160	54463	23997	12147	36144	43.3%	0.1%	33.6%	-940	-2.5%
Between Gypsum Canyon Road and SR-241 Ramp (NB to EB)	46765	12164	58929	28490	12079	40569	39.1%	0.7%	31.2%	46080	12160	58240	27876	12147	40023	39.5%	0.1%	31.3%	-546	-1.3%
Between SR-241 Ramp (NB to EB) and Green River Road	56264	12160	68424	37201	10845	48046	33.9%	10.8%	29.8%	58075	12160	70235	38555	10804	49359	33.6%	11.2%	29.7%	1313	2.7%
Between Green River Road and SR-71	47246	12160	59406	33517	10845	44363	29.1%	10.8%	25.3%	49097	12160	61257	34409	10804	45213	29.9%	11.2%	26.2%	850	1.9%
Between SR-71 and Serfas Club/Auto Center Drive	46179	12160	58339	35152	10845	45997	23.9%	10.8%	21.2%	48034	12160	60194	36088	10804	46892	24.9%	11.2%	22.1%	895	1.9%
East of Serfas Club/Auto Center Drive	41019	12160	53179	32247	10845	43092	21.4%	10.8%	19.0%	42816	12160	54976	32876	10804	43680	23.2%	11.2%	20.5%	588	1.4%
																			Average =	**-0.3%**

FIGURE 8-2
Eastbound Mainline and Toll Facility Vehicle Volume by Location - 2017 No-Build and Build, PM Peak Hour (4-5 PM)



1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



8.1.2 Speed

Average speeds along the SR-91 GP lanes were compared between the 2017 No-Build and 2017 Build scenarios using temporal speed diagrams for the peak period. The data are based on speed measurements taken from the VISSIM model every 0.5 miles and every 15 minutes of simulation. Average speeds were also compared along the SR-91 GP and Express lanes for the peak hour using line charts.

AM Peak Period

Figure 8-3 illustrates the average speed contours for the westbound GP Lanes on the SR-91 corridor in both the 2017 No-Build and Build AM peak period scenarios. The contour plots are assigned a different color and depict a profile of speeds along the corridor throughout the entire AM peak period. The speed profiles make it easy to identify the beginning and end locations and intensity of the congestion within the corridor. They also help identify the length of queues in a particular direction.

In the AM peak period, both the 2017 No-Build and Build scenarios show a similar congestion pattern upstream (or east) of the weaving segment between the SR-241 and the Green River Road interchange (the Express Lane ingress/egress area). The No Build scenario queue extends almost one mile further upstream (or east) than the Build scenario, which shows that the Build scenario provides some congestion relief.

In the 2017 AM Build scenario, an increase in speed of 13 mph is expected on the mainline westbound segments west of SR-241 interchange.

Figure 8-4 also illustrates the speed comparisons in the westbound GP and Express Lanes between the 2017 No-Build and Build scenarios in the AM peak hour (7 to 8 AM worst hour of the peak period). In the 2017 Build scenario, an increase in speed of approximately 13 miles per hour (mph) is expected on the mainline westbound segments east of SR-241 interchange (from 15 mph in the No-Build scenario up to 28 mph in the Build scenario.

The conclusion is the project will provide some congestion relief in the 2017 AM peak period by reducing the extent of the westbound bottleneck by approximately one mile.

PM Peak Period

Figure 8-5 illustrates the average speed contours for the eastbound GP Lanes on the SR-91 corridor in both the 2017 No-Build and Build PM peak period scenarios.

In the PM peak period, the mainline segments in the eastbound direction show the same congestion pattern in both 2017 No-Build and Build scenarios. In the 2017 Build scenario, a slight decrease in speed is expected on the GP segments east of the SR-91/SR-241 interchange between SR-241 and Green River Road interchange. The additional friction in the ingress/egress area between the Express Lanes and the slow-moving GP lanes is the reason for the slight decrease in speed in these areas with the addition of the project.

Figure 8-6 also illustrates the speed comparisons in the eastbound GP and Express Lanes between the 2017 No-Build and Build scenarios in the PM peak hour (worst hour of the peak period). In the 2017 Build scenario, a slight decrease in speed is expected on the mainline eastbound segments upstream (or west) of the Express Lane ingress/egress locations. This decrease is due to the increased demand on the GP lanes downstream of the Express Lane ingress/egress caused by the Build scenario. This slight decrease in speeds (one to six mph) on the eastbound GP lanes (west of the Express Lane ingress/egress locations) with the project is considered nominal given the increase in combined throughput (GP and Express Lanes) experienced in the same area (see Section 8.1.1).

FIGURE 8-3
SR-91 Westbound Temporal Speed Diagram – 2017 GP Lane Comparisons, AM Peak Period (6-9 AM)

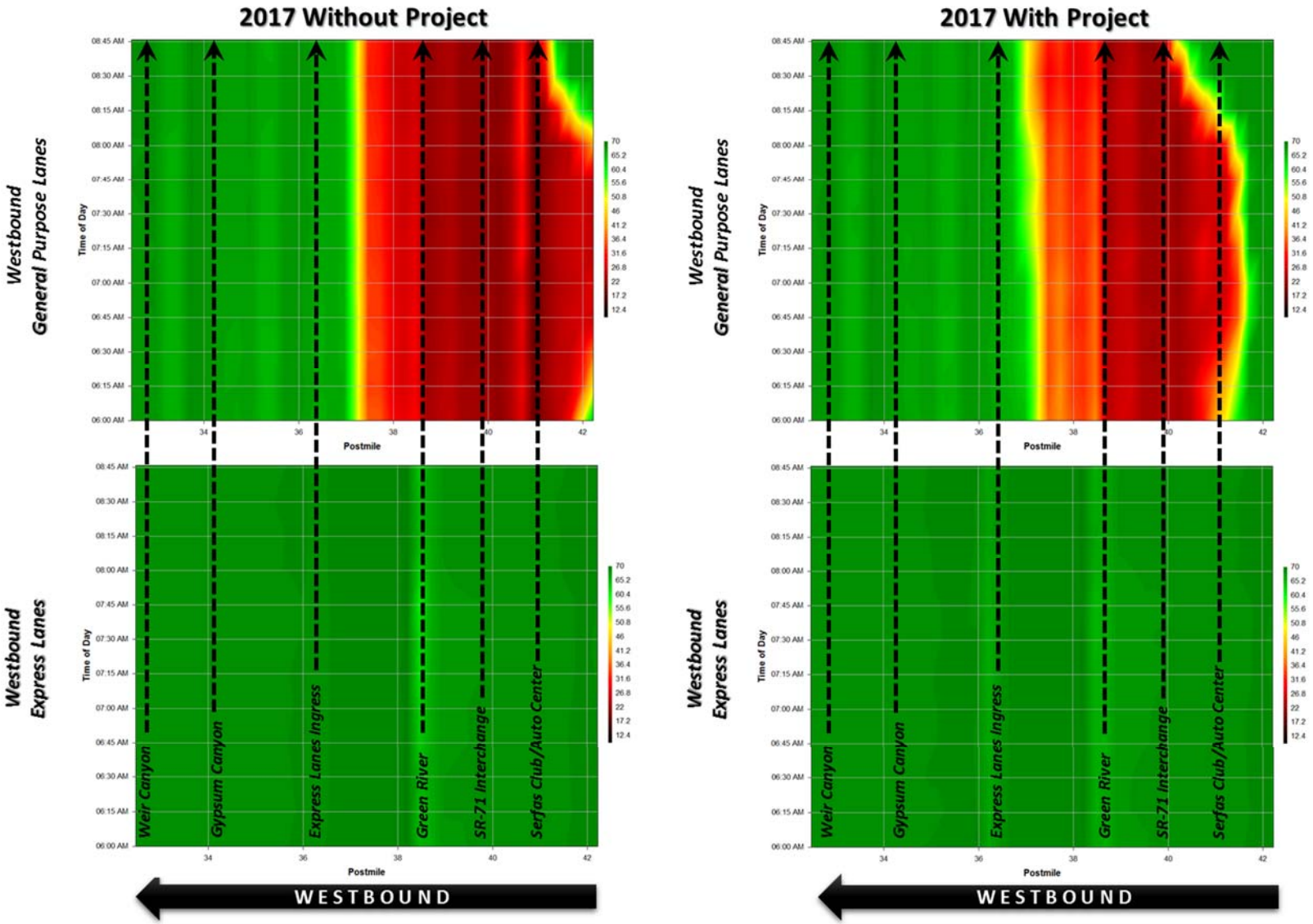
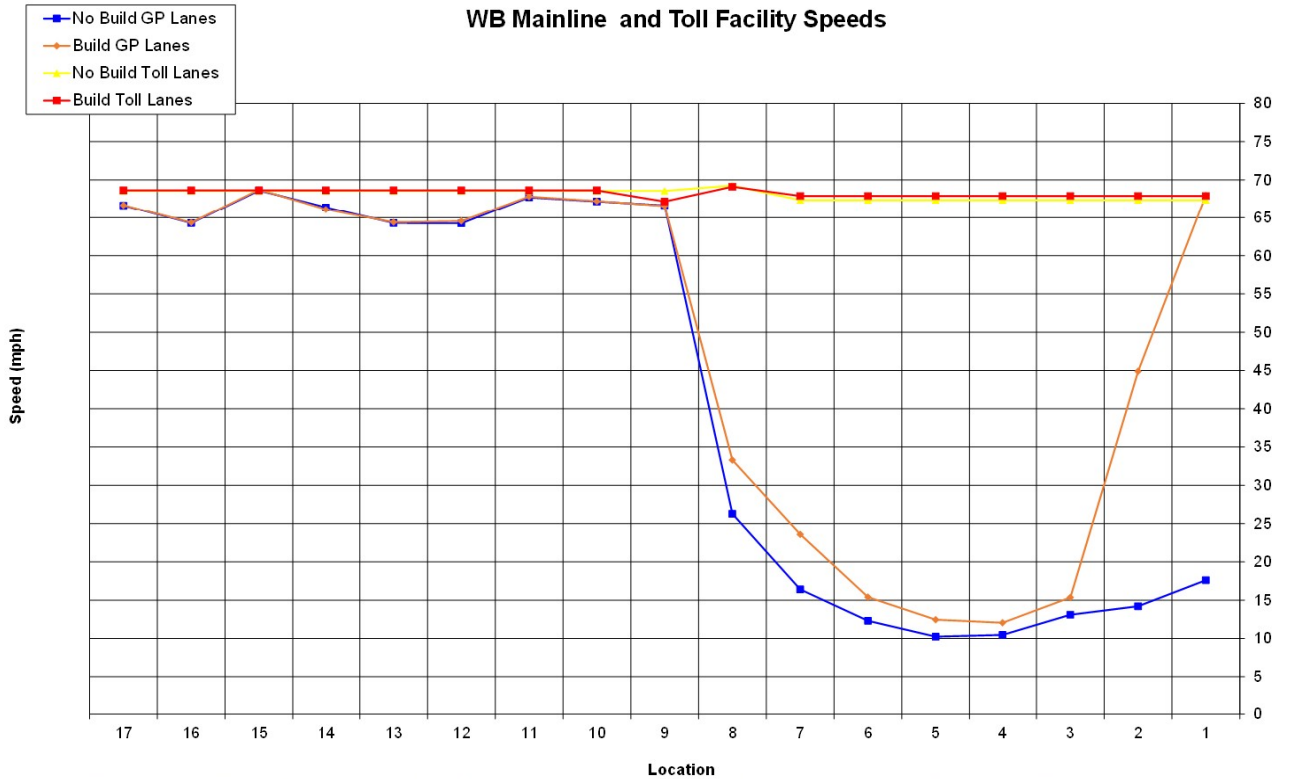


FIGURE 8-4
SR-91 Westbound Mainline and Toll Facility Speed Comparisons - 2017 No-Build and Build, AM Peak Hour (7-8 AM)



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

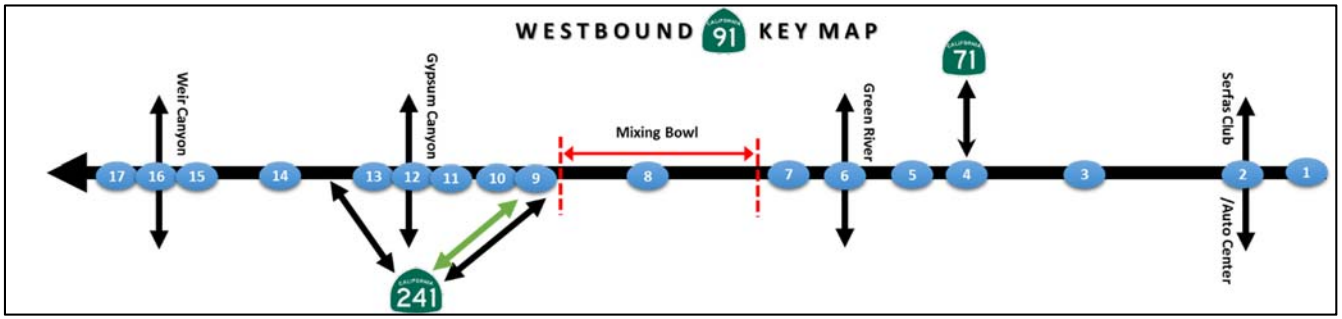


FIGURE 8-5
SR-91 Eastbound Temporal Speed Diagram – 2017 GP Lane Comparisons, PM Peak Period (3-7 PM)

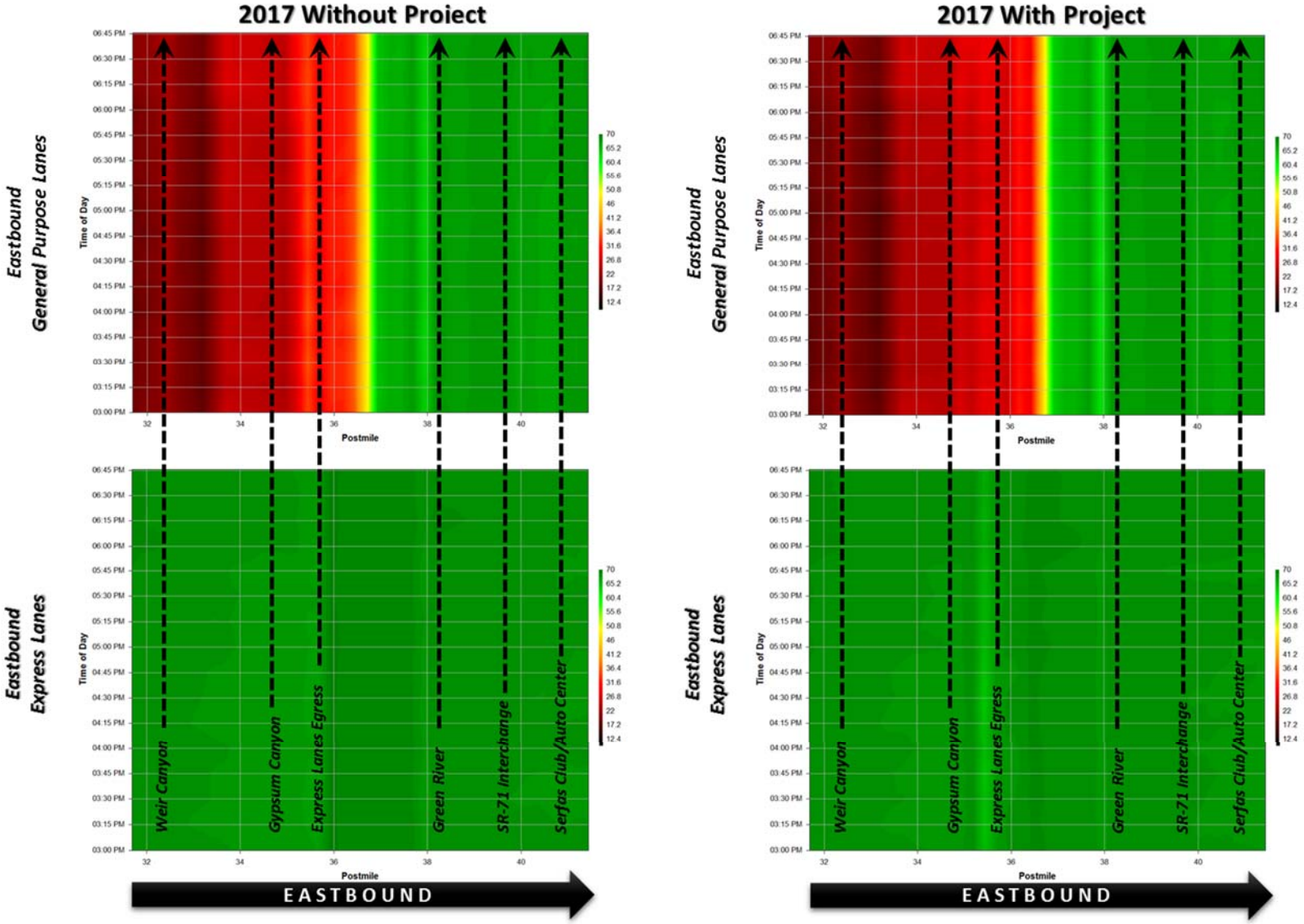
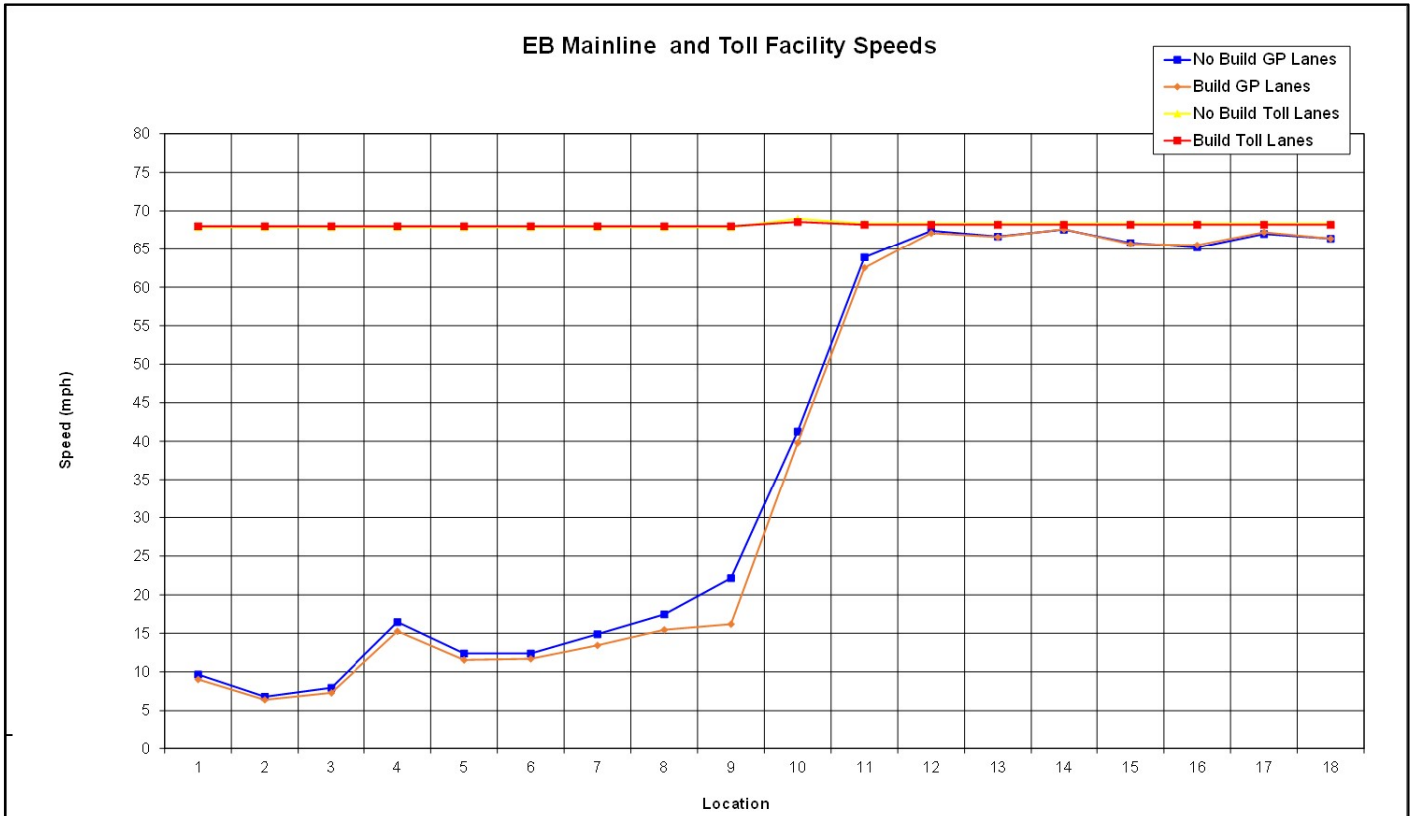
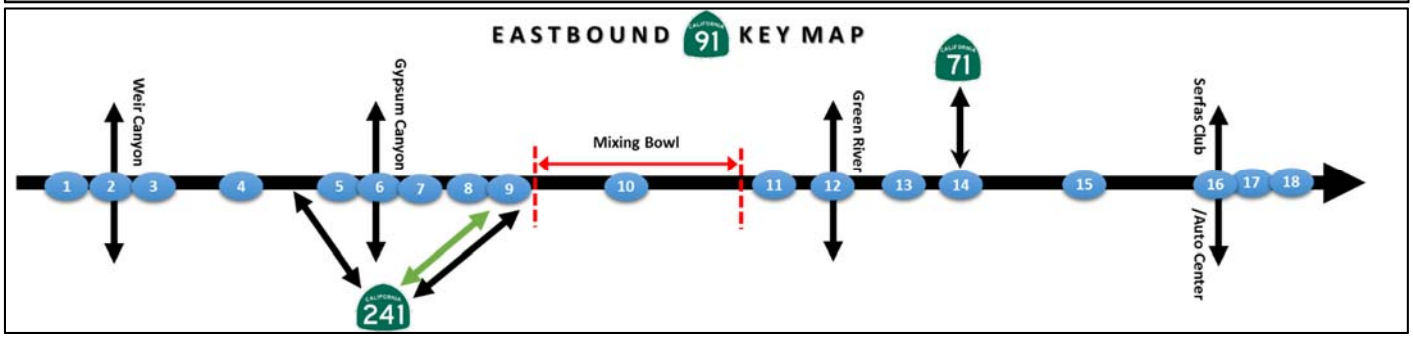


FIGURE 8-6
SR-91 Eastbound Mainline and Toll Facility Speed Comparisons - 2017 No-Build and Build PM Peak Hour (4-5 PM)



1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



8.1.3 Density and LOS

AM Peak Period

Figure 8-7 is a summary of the traffic operational conditions based on freeway segment density measured in vehicles per mile per lane along the SR-91 GP lanes in the westbound AM peak direction. The Express Lane results are not reported because the Express Lanes are tolled in a manner that maintains LOS D or better operations throughout the study area during all times of the day.

In the AM peak hour (7 to 8 AM), the mainline segments in the westbound direction will operate at the same or better LOS in the 2017 Build scenario compared to the No-Build scenario. In the 2017 Build scenario, a slight decrease in density is expected on the westbound mainline segments already operating at LOS F in the No-Build scenario (east of SR-241).

In the AM peak hour (7 to 8 AM), the mainline segments in the westbound direction will operate at the same or better LOS in the 2017 Build scenario compared to the No-Build scenario.

The project will therefore slightly improve density/LOS in the 2017 AM peak period on the SR-91 GP lanes in the westbound direction between the Express Lane ingress/egress area and the eastern limits of the study area (Serfas Club Drive/Auto Center Drive).

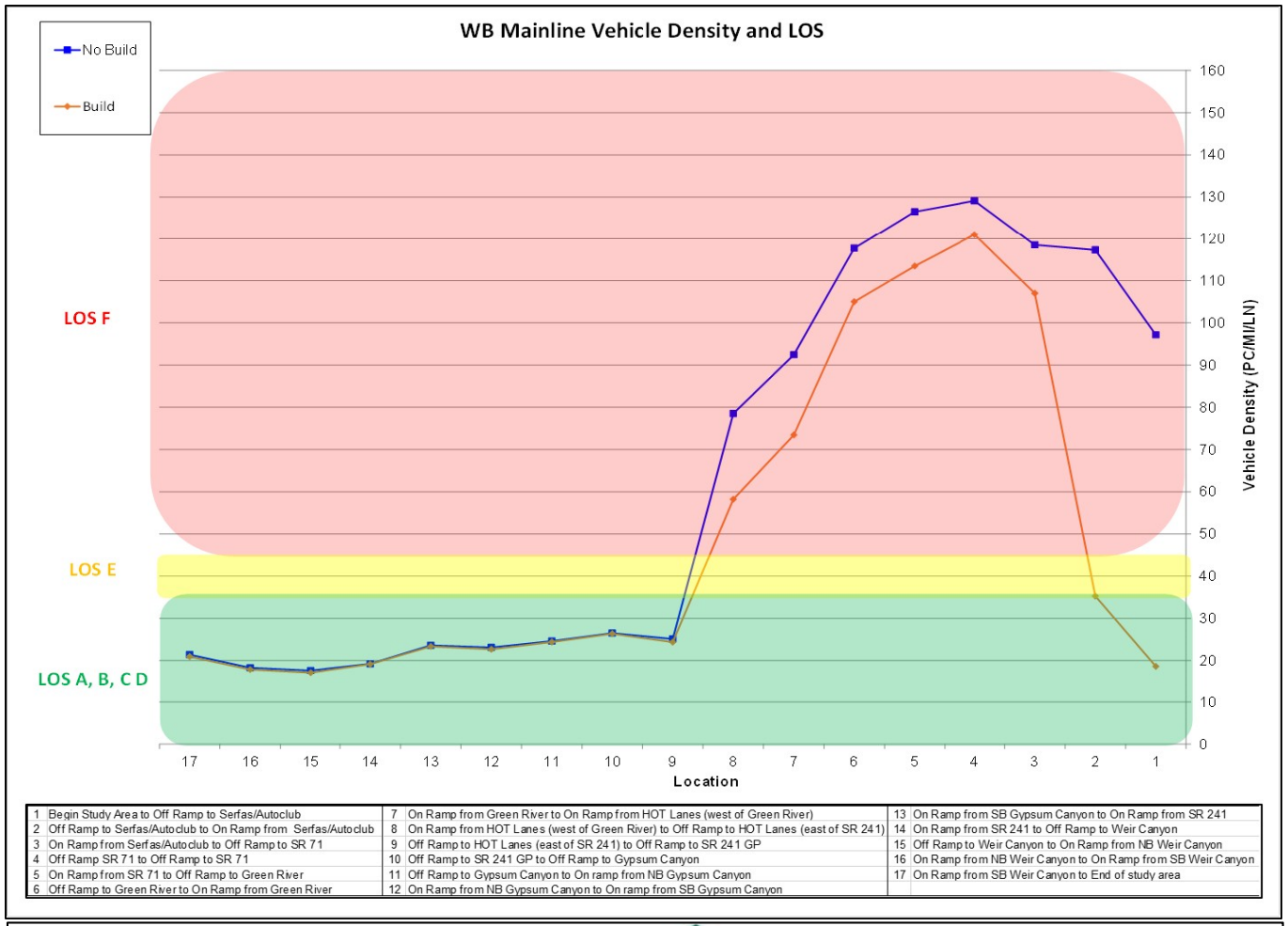
PM Peak Period

Figure 8-8 is a summary of the traffic operational conditions based on freeway segment density measured in vehicles per mile per lane along the SR-91 GP lanes in the eastbound PM peak direction.

In the PM peak hour (4-5 PM), the mainline segments in the eastbound direction west of the Express Lane ingress/egress will operate at the same LOS in both 2017 No-Build and Build scenarios. In the 2017 Build scenario, an increase in density is expected on the GP segments operating in LOS F (west of Green River Road interchange) due to an increase in demand in the GP lanes downstream of the Express Lane ingress/egress area between SR-241 and Green River Road interchange.

The project will therefore slightly worsen density/LOS in the 2017 PM peak period on the SR-91 GP lanes in the eastbound direction between the Express Lane ingress/egress area and the western limits of the study area (Weir Canyon Road), but is considered nominal given the increase in combined throughput (GP and Express Lanes) experienced in the same area (see Section 8.1.1). Density will increase in the eastbound SR-91 GP lanes by approximately 4.8% on average with the project in the 2017 PM peak period. However, combined throughput (GP and Express Lanes) will increase by 5.2% (approximately 600 veh/hr) in the eastbound SR-91 mixing bowl. The increase in combined throughput is considered to offset the relatively small increase in density. Potential mitigation measures for the GP lanes was also considered. However, physical improvements are not feasible given the right-of-way and topographical constraints.

FIGURE 8-7
SR-91 Westbound Mainline Vehicle Density and LOS Comparisons - 2017 No-Build and Build, AM Peak Hour (7-8 AM)



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

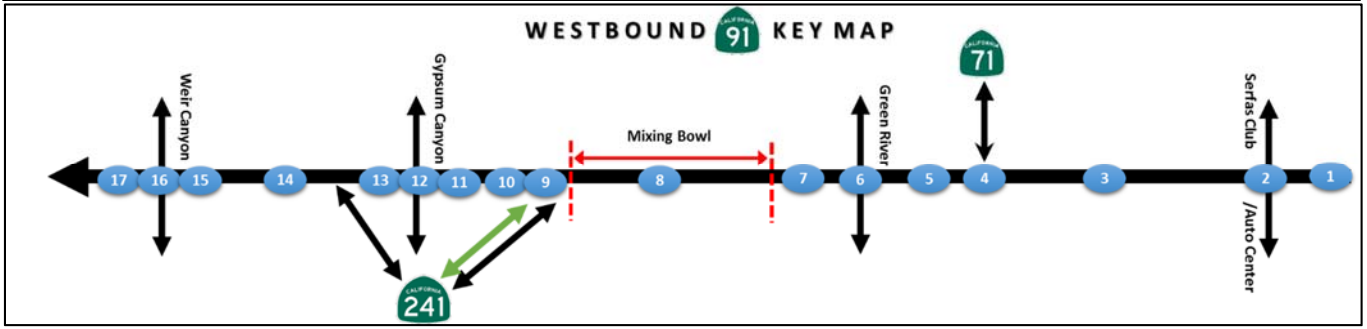
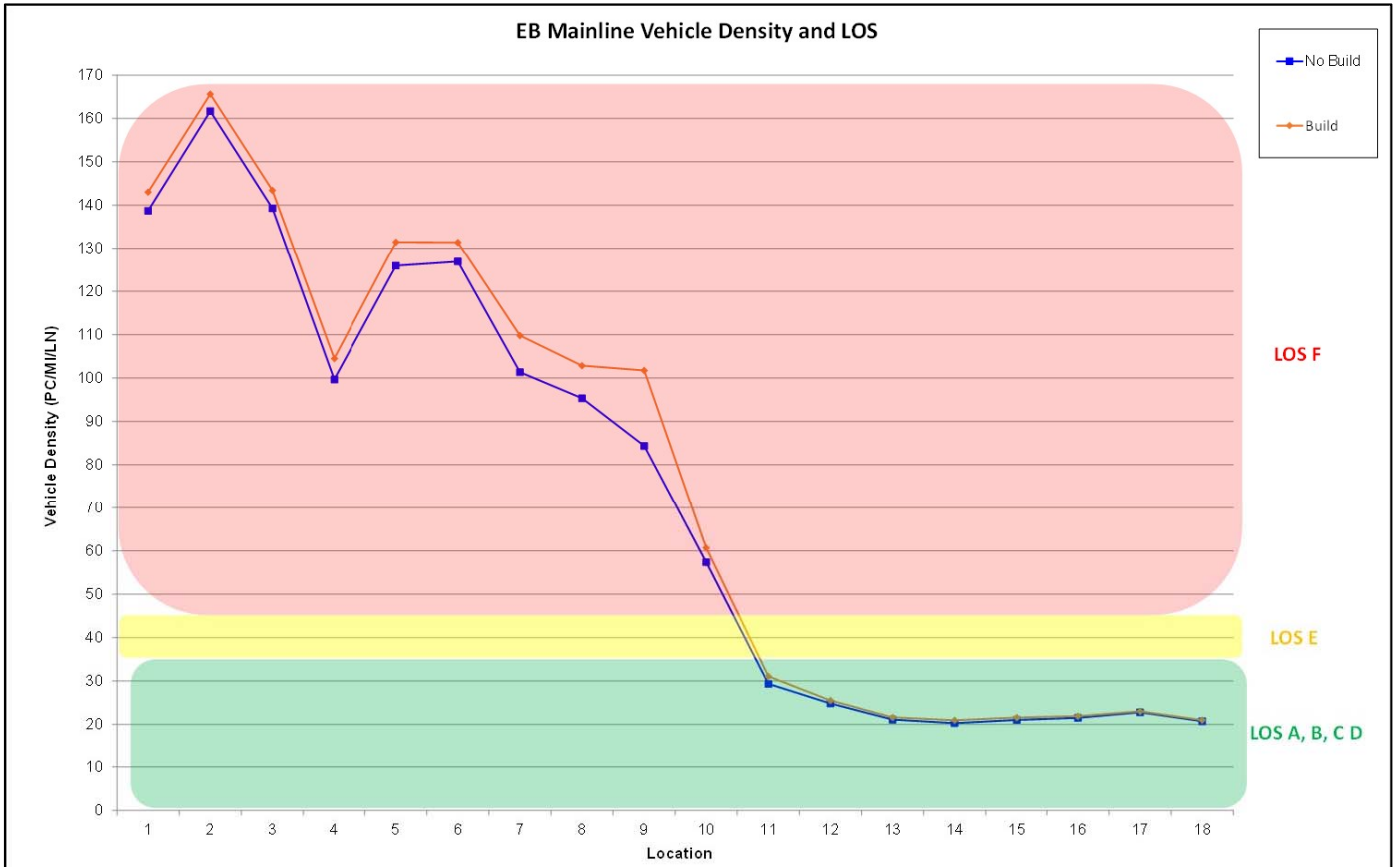
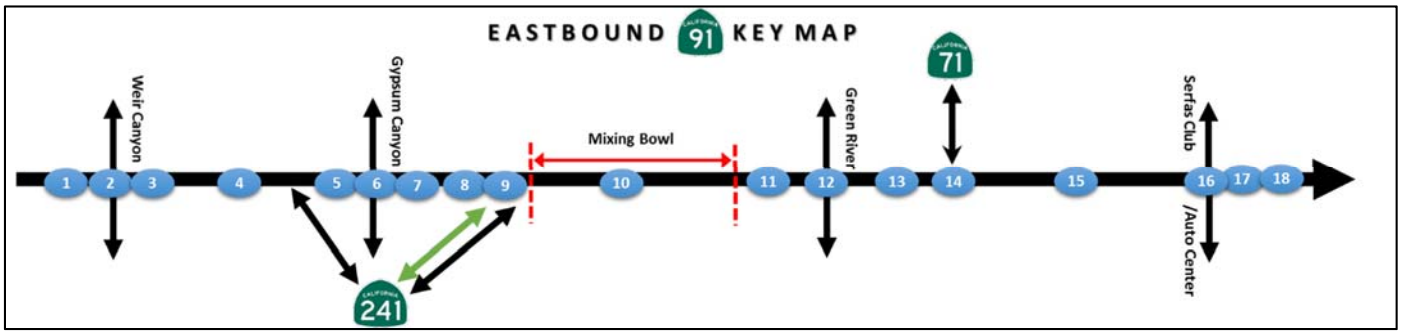


FIGURE 8-8
SR-91 Eastbound Mainline Vehicle Density and LOS Comparisons - 2017 No-Build and Build, PM Peak Hour (4-5 PM)



1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



8.1.4 Travel Time

Travel time between major O-D points within the study area was compared between the 2017 No Build and Build scenarios using the VISSIM model. **Figure 8-9** shows how the O-D zones were numbered so that comparisons between No Build and Build can be made. The zones are as follows:

1. SR 91 GP Lanes west of Weir Canyon Road
2. SR 91 Express Lanes west of Weir Canyon Road
3. SR 91 GP Lanes east of Serfas Club Drive
4. SR 91 Express Lanes east of Serfas Club Drive
5. SR 241 (via GP ramp) south of SR 91
6. SR 241 (via Express Lanes ramp) south of SR 91
7. SR 71 north of SR 91

In the AM peak period, all of the travel times for the select O-D pairs will either decrease or stay the same in the westbound direction on SR-91 in the 2017 Build scenario due to the project improvements.

FIGURE 8-9
Travel Time – Origin/Destination Zones

AM Peak Period

Table 8-3 compares travel times between 2017 No-Build and Build scenarios in the AM peak period (6-9 AM) for selected O-D pairs. The O-D pairs were selected to represent all possible movements that capture end to end trips through the study area (e.g., the entry point on northbound SR-241 to the exit point on eastbound SR-91).

In the AM peak period, all of the travel times for the select O-D pairs will either decrease (between 3.3 and 4.5 minutes) or stay the same in the westbound direction on SR-91 in the 2017 Build scenario due to the project improvements. In addition, the travel time for the O-D pair between SR-71 southbound to SR-91 eastbound (off-peak direction) will also decrease (between 8.2 to 11.2 minutes), due to improvements on SR-91 westbound (peak direction) that reduce the queue spillback onto the SR-71 southbound direction that occurs in the No-Build scenario.

PM Peak Period

Table 8-4 compares travel times between 2017 No-Build and 2017 Build scenarios in the PM peak period (3-7 PM) for select O-D pairs.

In the 2017 PM peak period, the travel time for select O-D pairs for SR-91 eastbound GP lanes will slightly increase in the Build scenarios (between 1 to 2.5 minutes) due to an increase in demand in the Express Lane ingress/egress area between SR-241 and the Green River Road interchange. The travel time for the O-D pair for SR-241 northbound to SR-91 eastbound via the GP ramp will also increase in the Build scenario by approximately 1.5 minutes. However, the travel time for the O-D pair for SR-241 northbound to SR-91 eastbound via the new Express Lane ramp will decrease by 2.5 minutes. The travel time from northbound SR-241 to eastbound SR-91 via the GP connector is slightly longer in the build condition because the density on the eastbound SR-91 GP lanes is slightly worse with the project. The increase in the eastbound mixing bowl therefore leads to slower travel times in spite of the drop in demand on the northbound SR-241 to eastbound SR-91 GP connector. The increases in travel times for the SR-91 eastbound GP select O-D pairs discussed above is considered nominal given the increase in combined throughput (GP and Express Lanes) experienced in the same area (see Section 8.1.1).

TABLE 8-3
Travel Time Comparisons - 2017 No-Build and Build, AM Peak Period (6-9 AM)

#	Origin	#	Destination	2017 No Build VISSIM Travel Time (Minutes)			2017 Build VISSIM Travel Time (Minutes)			Change VISSIM Travel Time (Minutes)		
				6-7 AM	7-8 AM	8-9 AM	6-7 AM	7-8 AM	8-9 AM	6-7 AM	7-8 AM	8-9 AM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	8.6	8.7	8.6	8.7	8.7	8.6	0.1	0.0	0.0
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	8.6	8.6	8.6	8.6	8.6	8.6	0.0	0.0	0.0
		5	SR 241 SB south of SR 91	7.1	7.2	7.2	7.2	7.2	7.2	0.1	0.0	0.0
		7	SR 71 NB north of SR 91	11.0	11.1	11.0	11.1	11.1	11.0	0.1	0.0	0.0
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	8.5	8.5	8.5	8.5	8.5	8.5	0.0	0.0	0.0
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	8.4	8.4	8.4	8.4	8.4	8.4	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	10.9	10.9	10.9	10.9	11.0	10.9	0.0	0.1	0.0
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	23.1	24.8	24.1	18.7	20.4	19.5	-4.4	-4.4	-4.6
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	23.0	24.7	24.0	18.6	20.3	19.5	-4.4	-4.4	-4.5
		5	SR 241 SB south of SR 91 (Via GP Ramp)	25.4	27.1	26.5	21.1	22.8	22.0	-4.3	-4.3	-4.5
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	21.0	22.7	21.9	-4.4	-4.4	-4.6
		7	SR 71 NB north of SR 91	12.4	13.3	12.0	9.0	10.1	7.7	-3.4	-3.2	-4.3
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	12.0	12.4	12.6	11.1	11.4	11.9	-0.9	-1.0	-0.7
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	8.4	8.4	8.4	8.5	8.5	8.4	0.1	0.1	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	14.4	14.8	15.0	13.6	13.9	14.4	-0.8	-0.9	-0.6
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	10.8	10.9	10.8	-3.6	-3.9	-4.2
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	7.2	7.2	7.2	7.2	7.2	7.2	0.0	0.0	0.0
		3	SR 91 EB GP Lanes east of Serfas Club Rd	11.0	11.0	11.0	11.0	11.0	10.9	0.0	0.0	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	10.9	10.9	10.9	10.9	10.9	10.9	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	13.4	13.4	13.4	13.4	13.4	13.3	0.0	0.0	-0.1
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	n/a	n/a	n/a	10.9	10.9	10.9	-0.1	-0.1	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	n/a	n/a	n/a	10.8	10.8	10.8	-0.1	-0.1	-0.1
		7	SR 71 NB north of SR 91	n/a	n/a	n/a	13.3	13.4	13.3	-0.1	0.0	0.0
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	43.0	54.1	55.9	32.0	39.5	40.5	-11.0	-14.6	-15.4
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	42.9	54.0	55.8	31.9	39.4	40.5	-11.0	-14.6	-15.3
		3	SR 91 EB GP Lanes east of Serfas Club Rd	28.7	37.2	38.3	20.5	26.7	27.0	-8.2	-10.5	-11.3
		5	SR 241 SB south of SR 91 (Via GP Ramp)	45.3	56.4	58.3	34.4	42.0	43.1	-10.9	-14.4	-15.2
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	34.3	41.8	42.9	-11.0	-14.6	-15.4

Decrease in travel time with project is greater than 0.5 minutes

Increase in travel time with project is greater than 0.5 minutes

TABLE 8-4
Travel Time Comparisons - 2017 No-Build and Build, PM Peak Period (3-7 PM)

#	Origin	#	Destination	2017 No Build VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM	2017 Build VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM	Change VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	28.3	29.6	29.4	27.6	30.3	31.9	32.0	29.4	2.0	2.3	2.6	1.8
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	28.3	29.5	29.4	27.6	30.3	31.9	31.9	29.4	2.0	2.4	2.5	1.8
		5	SR 241 SB south of SR 91	18.4	19.1	19.0	17.7	19.3	20.8	20.6	18.7	0.9	1.7	1.6	1.0
		7	SR 71 NB north of SR 91	30.6	31.9	31.8	30.0	32.7	34.3	34.3	31.7	2.1	2.4	2.5	1.7
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	10.4	10.5	10.5	10.5	11.2	11.3	11.3	11.2	0.8	0.8	0.8	0.7
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.4	0.1	0.1	0.1	0.0
		7	SR 71 NB north of SR 91	12.7	12.8	12.9	12.9	13.6	13.6	13.7	13.5	0.9	0.8	0.8	0.6
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	0.0	0.0	0.0	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	8.5	8.5	8.5	8.4	8.5	8.5	8.5	8.4	0.0	0.0	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10.9	11.0	10.9	10.9	10.9	10.9	10.9	10.9	0.0	-0.1	0.0	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	n/a	10.9	10.8	10.8	10.8	0.0	-0.2	-0.1	-0.1
		7	SR 71 NB north of SR 91	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.4	0.0	0.0	0.0	-0.1
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	0.0	0.0	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	0.0	0.0	0.0	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	n/a	10.8	10.8	10.8	10.7	-0.1	-0.1	-0.1	-0.2
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	0.0	0.0	0.0	0.0
		3	SR 91 EB GP Lanes east of Serfas Club Rd	13.4	13.5	13.6	13.6	15.0	15.2	15.1	14.9	1.6	1.7	1.5	1.3
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	13.4	13.4	13.5	13.5	15.0	15.2	15.1	14.8	1.6	1.8	1.6	1.3
		7	SR 71 NB north of SR 91	15.7	15.8	15.9	15.9	17.3	17.5	17.5	17.2	1.6	1.7	1.6	1.3
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	n/a	n/a	n/a	n/a	13.6	13.7	13.7	13.6	0.2	0.2	0.1	0.0
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	n/a	n/a	n/a	n/a	10.8	10.8	10.8	10.8	-2.6	-2.6	-2.7	-2.7
		7	SR 71 NB north of SR 91	n/a	n/a	n/a	n/a	15.9	16.0	16.0	15.9	0.2	0.2	0.1	0.0
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	10.2	10.2	10.1	9.9	10.2	10.2	10.1	9.9	0.0	0.0	0.0	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	10.2	10.2	10.0	9.9	10.2	10.2	10.0	9.8	0.0	0.0	0.0	-0.1
		3	SR 91 EB GP Lanes east of Serfas Club Rd	6.4	6.7	6.2	5.8	6.5	6.6	6.2	5.8	0.1	-0.1	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	12.6	12.7	12.5	12.3	12.7	12.6	12.5	12.3	0.1	-0.1	0.0	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	n/a	12.6	12.6	12.4	12.2	0.0	-0.1	-0.1	-0.1

Decrease in travel time with project is greater than 0.5 minutes

Increase in travel time with project is greater than 0.5 minutes

8.1.5 Network Performance

In addition to freeway performance results, network performance measures were recorded. The network performance MOEs include:

- Total vehicle demand and volume served (vehicles)
- Total vehicle-miles traveled (VMT measured in miles)
- Total network travel time (hours)
- Average speed per vehicle (mph)
- Average delay time per vehicle (minutes/vehicle)

In the AM peak period, the average delay per vehicle decreases by approximately 28% (from 6.8 to 4.9 minutes per vehicle) in the Build scenario.

AM Peak Period

Table 8-5 compares the network performance results from the 2017 No-Build and Build scenarios in the AM peak period (6 to 9 AM). The following points highlight the 2017 No-Build versus Build comparisons in the AM peak period:

- The Build scenario will slightly increase demand in the study area (by an additional 940 vehicles or less than 1%) by attracting vehicles from surrounding roadways to SR-241.
- The Build scenario will increase vehicle throughput (by 4,500 vehicles or 5%) and decrease the percent of unserved traffic (from 9% in the No-Build scenario to 5% in the Build scenario).
- VMT increases by 6% in the Build scenario because vehicle throughput increases.
- The average speed per vehicle increases by approximately 6 mph (from 34 mph to 40 mph) in the Build scenario.
- The average delay per vehicle decreases by approximately 28% (from 6.8 to 4.9 minutes per vehicle) in the Build scenario.

PM Peak Period

Table 8-6 compares the network performance results from the 2017 No-Build and Build scenarios in the PM peak period (3 to 7 PM). The following points highlight the 2017 No-Build versus Build comparisons in the PM peak period:

- The Build scenario will increase demand in the study area (by an additional 2,800 vehicles or 2%) by pulling additional demand to SR-241 from surrounding roadways.
- The Build scenario will increase vehicle throughput (by 1,200 vehicles or 1%). Although the amount of unserved vehicles will increase in the Build scenario (by 1,600 vehicles), the percent of unserved vehicles will remain at 15% for both scenarios.
- VMT increases by 2% in the Build scenario because vehicle throughput increases.
- The average speed per vehicle decreases by 1 mph (from 39 to 38 mph) in the Build scenario due to the additional demand in the GP lanes downstream of the Express Lane ingress/egress.
- The average delay per vehicle increases by approximately 0.4 minutes (from 5.3 to 5.7 minutes) in the Build scenario.

The decrease in speed (-1.0 mph) and increase in travel time (+0.4 min/veh) are balanced by the benefits of the increase in vehicle throughput (+1,200 vehicles or 1%).

TABLE 8-5
Summary of Network Performance - No-Build vs. Build Scenarios, 2017 AM Peak Period (6-9 AM)

Performance Measure (all vehicle types, 6:00 - 9:00 AM)	No-Build Condition Value	Build Condition Value	Net Change with Project
Total Vehicle Demand (vehicles)	100,741	101,682	941
Total number of vehicles that did not reach their destination (vehicles)	9,016	5,420	-3,596
Total number of vehicles that have reached their destination (vehicles)	91,725	96,262	4,537
Total vehicle-miles traveled - VMT (miles)	796,551	845,966	49,415
Total travel time - VHT (hours)	23,068	21,012	-2,056
Average speed (mph)	34.5	40.3	5.8
Average delay time per vehicle (min/veh)	6.8	4.9	-1.9

Note: Results are based on the total three hours and are an average of all runs.

TABLE 8-6
Summary of Network Performance - No-Build vs. Build Scenarios, 2017 PM Peak Period (3-7 PM)

Performance Measure (all vehicle types, 3:00 - 7:00 PM)	No-Build Condition Value	Build Condition Value	Net Change with Project
Total Vehicle Demand (vehicles)	141,937	144,727	2,790
Total number of vehicles that did not reach their destination (vehicles)	20,812	22,405	1,593
Total number of vehicles that have reached their destination (vehicles)	121,125	122,322	1,197
Total vehicle-miles traveled - VMT (miles)	1,014,001	1,036,967	22,966
Total travel time - VHT (hours)	26,278	27,608	1,330
Average speed (mph)	38.6	37.6	-1.0
Average delay time per vehicle (min/veh)	5.3	5.7	0.4

Note: Results are based on the total four hours and are an average of all runs.

8.1.6 Express Lane Operations

AM Peak Period

Express lane operations were studied as part of the 2017 AM peak period analysis in both the No-Build and Build scenarios. Operational metrics such as volume served, speed, queues, and LOS were presented for the AM peak period earlier in Section 8. For quick reference, these metrics are summarized in **Table 8-7**. In the AM peak period, the westbound Express Lanes throughout the study area are projected to operate the same with and without the project. **Table 8-7** shows that there is no appreciable difference in volume served, speed, or LOS in the westbound Express Lanes with or without the project.

TABLE 8-7
Summary of Westbound Express Lane Operations - No-Build vs. Build Scenarios, 2017 AM Peak Period (6-9 AM)

Operational Metric	Scenario	Study Segment Between SR-71 and Green River	Between Green River and SR-241 Express Lane Connector	Between SR-241 Express Lane Connector and Weir Canyon
Volume Served (percent of demand served)	No-Build	99.5%	99.5%	92.3%
	Build	99.6%	99.6%	94.7%
Speed	No-Build	68	69	69
	Build	68	68	69
Queues in the Express Lanes?	No-Build	No	No	No
	Build	No	No	No
Level of Service	No-Build	C	B	B
	Build	C	B	B

PM Peak Period

In the PM peak period, the eastbound Express Lanes throughout the study area are also projected to operate the same with and without the project in 2017. **Table 8-8** shows that there is no appreciable difference in volume served, speed, or LOS in the eastbound Express Lanes with or without the project.

TABLE 8-8
Summary of Eastbound Express Lane Operations - No-Build vs. Build Scenarios, 2017 PM Peak Period (3-7 PM)

Operational Metric	Scenario	Study Segment Between Weir Canyon and SR-241 Express Lane Connector	Between SR-241 Express Lane Connector and Green River	Between Green River and SR-71
Volume Served (percent of demand served)	No-Build	99.3%	99.3%	89.2%
	Build	99.9%	99.9%	88.8%
Speed (mph)	No-Build	68	69	68
	Build	68	69	68
Queues in the Express Lanes?	No-Build	No	No	No
	Build	No	No	No
Level of Service	No-Build	C	B	C
	Build	C	B	C

Additional weaving analysis of the Express Lane operations in the mixing bowl was performed to supplement the microsimulation analysis. Per the Highway Design Manual (Section 504.7), the Leisch Method was applied to study the weaving condition in the mixing bowl. However, the Leisch method will not work for this study segment because the weaving volume (V_w) exceeds the "Turning Line for K" and the weaving section is greater than the chart boundary (7,400 feet). As noted on Figure 504.7A in the Highway Design Manual, extrapolation beyond the chart boundaries is not advised for the Leisch method. The Highway Capacity Manual (HCM) weaving analysis methodology was also attempted for the mixing bowl. However, based on the weaving volumes, the maximum weaving segment that can be analyzed is 4,093 feet. The mixing bowl segment is 7,400 feet and therefore cannot be analyzed using the HCM weaving methodology. Therefore, microsimulation is the only analysis tool that can be used for a segment as long as the mixing bowl. As summarized in this chapter, microsimulation analysis shows that weaving between the eastbound Express Lanes and eastbound GP lanes is not an issue due to the 7,400 foot mixing bowl segment.

8.2 2040 Conditions (No-Build vs. Build)

8.2.1 Volume Served

Throughput volumes and percent of demand unserved were compared between the 2040 No-Build and Build scenarios. Throughput volume and percent of demand unserved are both measured by combining the GP and Express lanes along SR-91 between Weir Canyon Road and Serfas Club Drive/Auto Center Drive in the AM and PM peak periods.

AM Peak Period

Table 8-9 compares volume throughput and percent demand unserved between the 2040 No-Build and Build scenarios in the AM peak period (6 to 9 AM). **Figure 8-10** illustrates the volume throughput comparisons in the westbound GP and Express lanes between the 2040 No-Build and Build scenarios in the AM peak hour (7 to 8 AM). The Build scenario has slightly higher combined demand on SR-91 westbound east of the SR-91/SR-241 interchange when compared to the No-Build scenario (approximately 440 vehicles during the AM peak period), but the Build scenario has approximately 9% lower demand west of the SR-91/SR-241 interchange (approximately 3,700 vehicles during the AM peak period). This is due to a shift of travel patterns that increases demand southbound on SR-241.

In the 2040 AM peak, building the connector will increase the volume served on SR-91 westbound by 1% upstream of the Express Lane weaving area and by 47% downstream of the weaving area along SR-241 southbound.

The Build scenario serves slightly more vehicles east of the SR-91/SR-241 interchange than the No Build scenario (approximately 430 more vehicles or 1%), but approximately 3,500 fewer vehicles in west of the SR-91/SR-241 interchange. However, the SR-91 westbound to SR-241 southbound movement serves approximately 3,300 more vehicles in the Build scenario compared to the No Build scenario due to the addition of the direct connector ramp, offsetting this difference. Furthermore, the average percent unserved traffic along the entire length of SR-91 is the same between the Build and No-Build scenarios. The

conclusion is that the Build scenario is able to serve the same or slightly more vehicles in the peak direction of SR-91 upstream of the Express Lane ingress/egress area, and more vehicles along SR-241 southbound. Due to a shift in travel patterns, the Build scenario serves more vehicles along southbound SR-241 and less vehicles along westbound SR-91 downstream of the Express Lane ingress/egress area. This represents a slight improvement in the overall efficiency of the system.

PM Peak Period

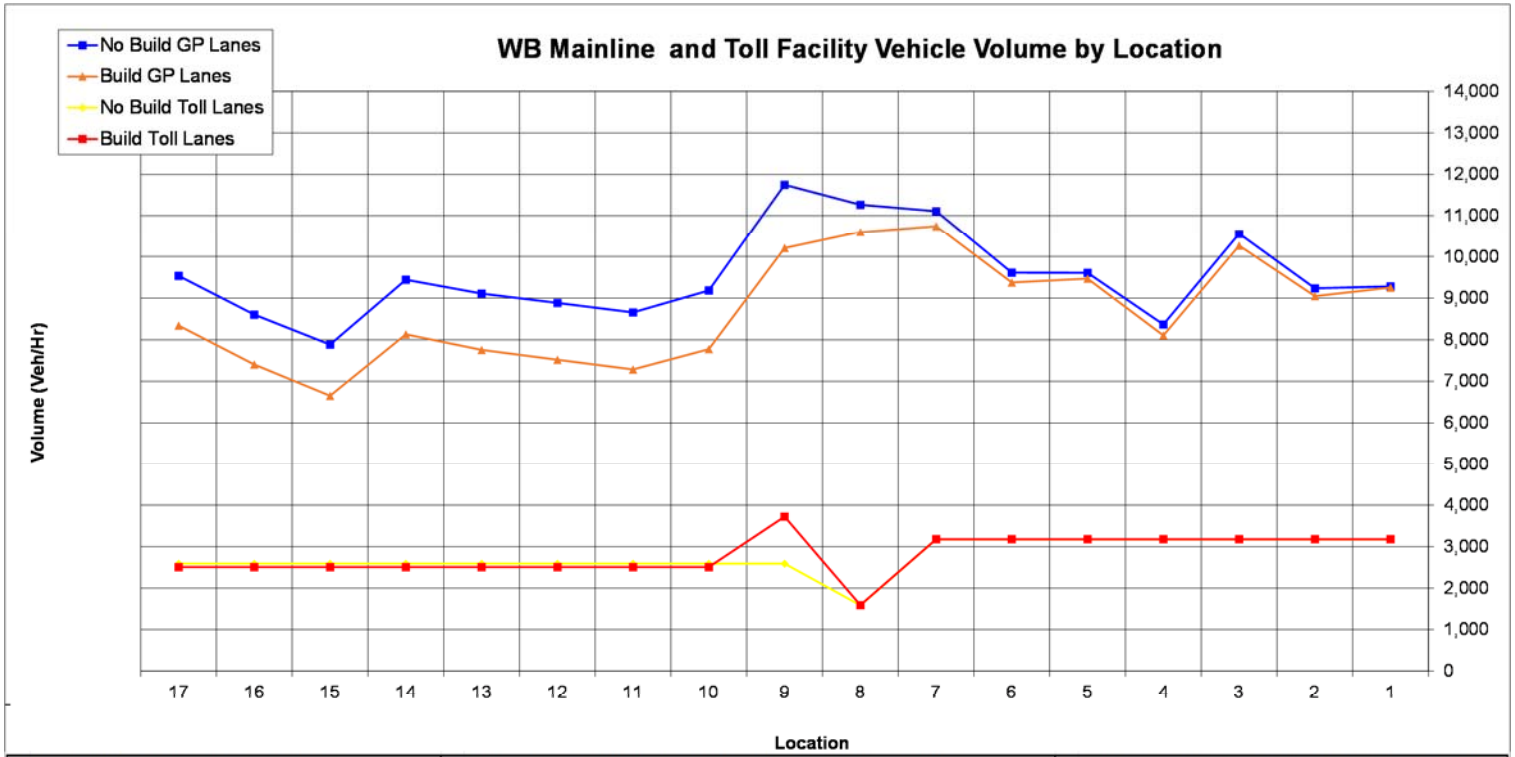
Table 8-10 compares volume throughput and percent demand unserved between the 2040 No-Build and Build scenarios in the PM peak period (3 to 7 PM). **Figure 8-11** illustrates the volume throughput comparisons in the eastbound GP and Express lanes between the 2040 No-Build and Build scenarios in the PM peak hour (4 to 5 PM). The Build scenario has the same combined demand (GP and Express lane trips) in the peak eastbound direction of travel when compared to the No-Build scenario. Under the Build scenario, the volume served is slightly greater (about 300 vehicles during the PM peak period) than the No-Build scenario in the peak direction of travel (eastbound). This change is due to the shift of approximately 800 peak hour trips from the SR-241 northbound to SR-91 eastbound GP ramp over to the Express Lane ramp, which slightly lowers demand in the GP lanes in that area. The conclusion is that the Build scenario is able to serve slightly more vehicles and more vehicles are able to enter the study area. With the project, there will be an improvement in the overall efficiency of the system.

TABLE 8-9

Vehicle Throughput Comparison – SR-91 Westbound GP and Express Lanes, 2040 No-Build and Build, AM Peak Period (6-9 AM)

	2040 No-Build AM									2040 Build AM									Throughput Volume Difference	
	Demand Volume (3 hr volume)			Throughput Volume (3 hr volume)			Percent Unserved			Demand Volume (3 hr volume)			Throughput Volume (3 hr volume)			Percent Unserved				
Screenline Location	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	Abs Diff	% Diff
East of Serfas Club/Auto Center Drive	27218	9185	36403	25992	9135	35127	4.5%	0.5%	3.5%	27744	9184	36928	27121	9136	36257	2.2%	0.5%	1.8%	1129	3.2%
Between Serfas Club/Auto Center Drive and SR-71	31564	9185	40749	30055	9135	39191	4.8%	0.5%	3.8%	31983	9184	41167	30821	9136	39956	3.6%	0.5%	2.9%	766	2.0%
Between SR-71 and Green River Road	32331	9185	41516	28451	9135	37586	12.0%	0.5%	9.5%	32744	9184	41928	28684	9136	37820	12.4%	0.5%	9.8%	234	0.6%
Between Green River Road and SR-241 Ramp (WB to SB)	41137	9185	50322	33034	9135	42169	19.7%	0.5%	16.2%	41540	9184	50724	32613	9136	41749	21.5%	0.5%	17.7%	-421	-1.0%
Between SR-241 GP Ramp (WB to SB) and Gypsum Canyon Road	33614	8040	41654	27200	7518	34718	19.1%	6.5%	16.7%	29804	8033	37837	23724	7364	31088	20.4%	8.3%	17.8%	-3630	-10.5%
Between Gypsum Canyon Road and SR-241 Ramp (NB to WB)	32124	8040	40164	27028	7518	34546	15.9%	6.5%	14.0%	28388	8033	36421	23641	7364	31005	16.7%	8.3%	14.9%	-3541	-10.3%
Between SR-241 Ramp (NB to WB) and Weir Canyon Road	33188	8040	41228	28005	7518	35523	15.6%	6.5%	13.8%	29444	8033	37477	24662	7364	32026	16.2%	8.3%	14.5%	-3497	-9.8%
West of Weir Canyon Road	32492	8040	40532	28228	7518	35746	13.1%	6.5%	11.8%	28894	8033	36927	25081	7364	32445	13.2%	8.3%	12.1%	-3301	-9.2%
																			Average =	**-4.4%**

FIGURE 8-10
SR-91 Westbound Mainline and Toll Facility Vehicle Volume by Location - 2040 No-Build and Build, AM Peak Hour (7-8 AM)



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

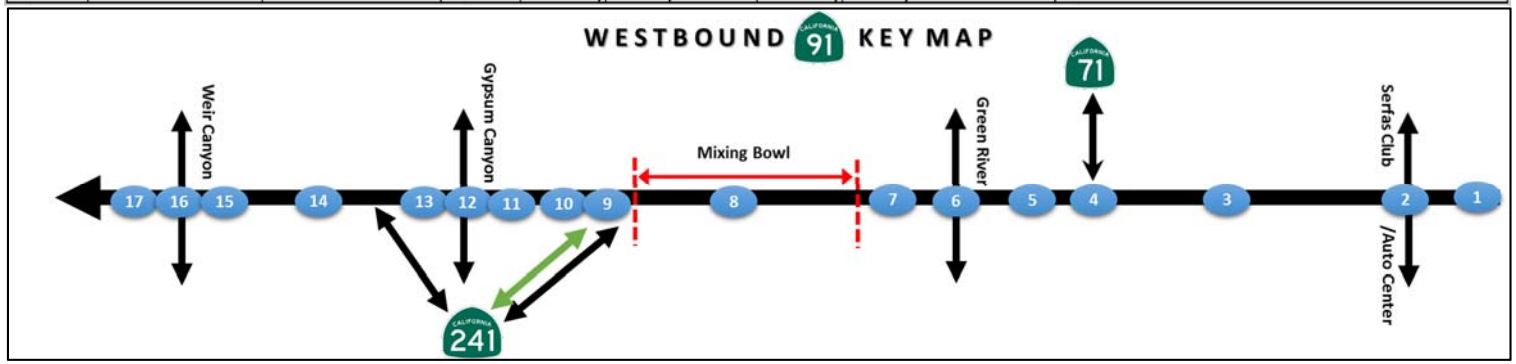
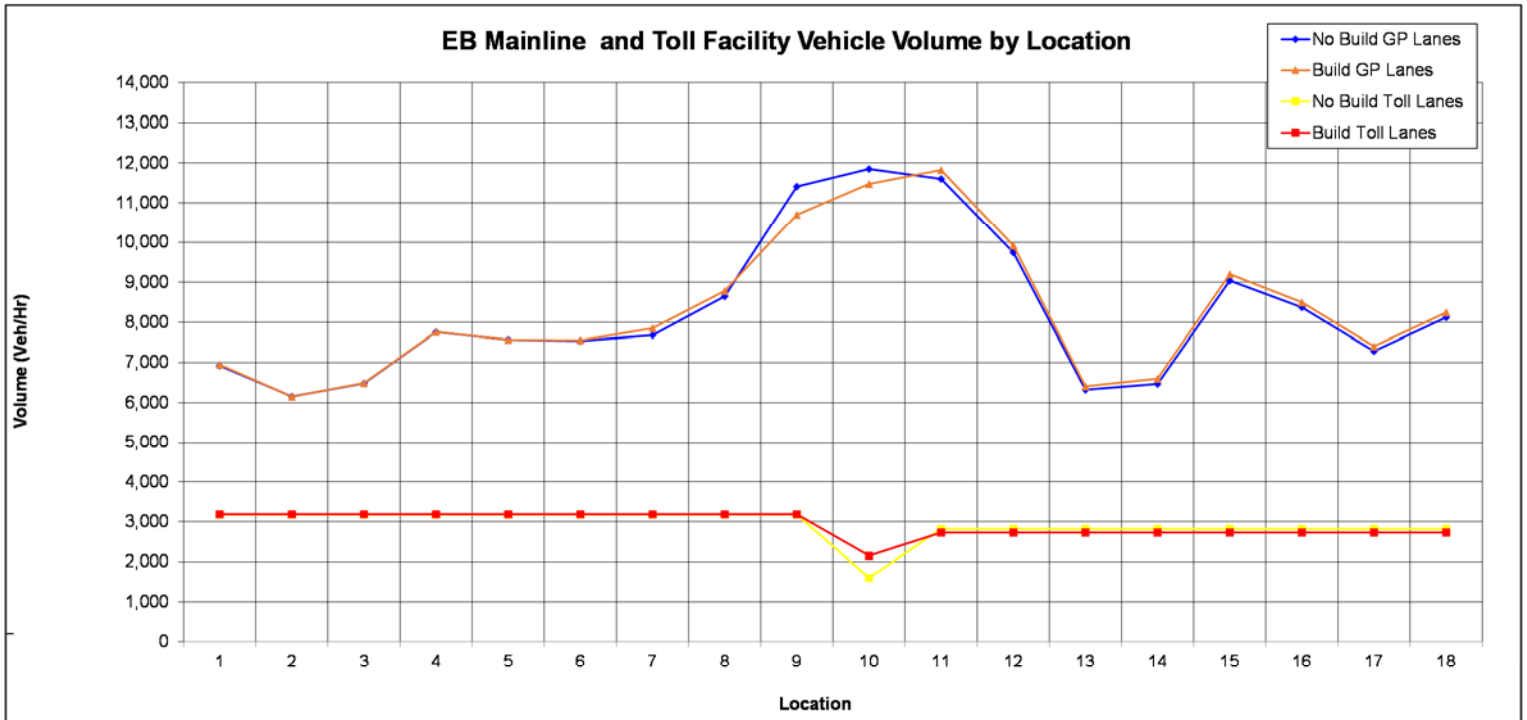


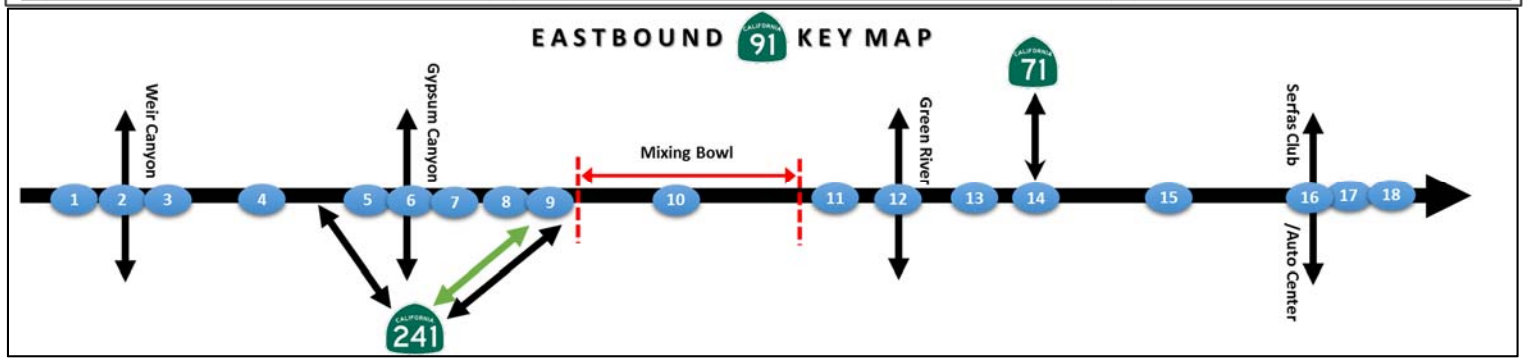
TABLE 8-10
Vehicle Throughput Comparison – SR-91 Eastbound GP and Express Lanes, 2040 No-Build and Build, PM Peak Period (3-7 PM)

	2040 No-Build PM									2040 Build PM									Throughput Volume Difference	
	Demand Volume (4 hr volume)			Throughput Volume (4 hr volume)			Percent Unserved			Demand Volume (4 hr volume)			Throughput Volume (4 hr volume)			Percent Unserved				
Screenline Location	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	GP Lanes	Express Lanes	Overall	Abs Diff	% Diff
West of Weir Canyon Road	55164	12164	67328	28247	12079	40326	48.8%	0.7%	40.1%	55162	12160	67322	28476	12121	40597	48.4%	0.3%	39.7%	270	0.7%
Between Weir Canyon Road and SR-241 Ramp (EB to SB)	54771	12164	66935	31232	12079	43311	43.0%	0.7%	35.3%	54614	12160	66774	31362	12121	43483	42.6%	0.3%	34.9%	172	0.4%
Between SR-241 Ramp (EB to SB) and Gypsum Canyon Road	53563	12164	65727	30457	12079	42536	43.1%	0.7%	35.3%	53382	12160	65542	30548	12121	42669	42.8%	0.3%	34.9%	134	0.3%
Between Gypsum Canyon Road and SR-241 Ramp (NB to EB)	58054	12164	70218	34548	12079	46627	40.5%	0.7%	33.6%	58009	12160	70169	35202	12121	47323	39.3%	0.3%	32.6%	696	1.5%
Between SR-241 Ramp (NB to EB) and Green River Road	68537	12160	80697	45851	10863	56714	33.1%	10.7%	29.7%	68157	12097	80254	46653	10539	57192	31.6%	12.9%	28.7%	478	0.8%
Between Green River Road and SR-71	35516	12160	47676	24751	10863	35614	30.3%	10.7%	25.3%	35662	12097	47759	25022	10539	35561	29.8%	12.9%	25.5%	-53	-0.1%
Between SR-71 and Serfas Club/Auto Center Drive	46089	12160	58249	35080	10863	45943	23.9%	10.7%	21.1%	46576	12097	58673	35683	10539	46223	23.4%	12.9%	21.2%	280	0.6%
East of Serfas Club/Auto Center Drive	39790	12160	51950	31361	10863	42224	21.2%	10.7%	18.7%	40044	12097	52141	31858	10539	42398	20.4%	12.9%	18.7%	174	0.4%
																			Average =	**0.6%**

FIGURE 8-11
SR-91 Eastbound Mainline and Toll Facility Vehicle Volume by Location – 2040 No-Build and Build, PM Peak Hour (4-5 PM)



1 Begin Study Area to Off Ramp to Weir Canyon	7 On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13 Off Ramp to SR 71 CD to On Ramp from Green River
2 Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8 On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14 On Ramp from Green River to On Ramp from SR 71
3 On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9 On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15 On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4 On Ramp from NB Weir Canyon to Off Ramp to SR 241	10 On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16 Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11 Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17 Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6 Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12 Off Ramp to Green River to Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub to End of Study Area



8.2.2 Speed

Average speeds along the SR-91 GP lanes were compared between the 2040 No-Build and Build scenarios during the peak period using temporal speed diagrams. The data are based on speed measurements taken from the VISSIM model every 0.5 miles and every 15 minutes of simulation. Average speeds were also compared along the SR-91 GP and Express Lanes during the peak hour using line charts.

AM Peak Period

Figure 8-12 illustrates the average speed contours for the westbound GP lanes on the SR-91 corridor in both the 2040 No-Build and Build AM peak period scenarios.

In the AM peak period, the project will increase speeds (from between 30 and 40 mph to 60 mph) between the Express Lane Ingress and Gypsum Canyon Road between 6:45 AM and 8:30 AM. This is due to an increase in the throughput volume in the ingress/egress area between the Green River Road interchange and SR-241. Speeds are also higher in the Build scenario (approximately 60 mph) east of the Serfas Club Drive/Auto Center Drive interchange during the 6-7 AM hour compared to the No Build scenario (approximately 30 mph).

Figure 8-13 also illustrates the speed comparisons in the westbound GP and Express lanes between the 2040 No-Build and Build scenarios in the AM peak hour (worst hour of the peak period). In the 2040 Build scenario, an increase in speed of approximately 30 mph (from 33 to 63 mph) is expected compared to the No Build scenario on the mainline segments west of SR-241 interchange.

The conclusion is the project will provide some congestion relief in the 2040 AM peak period by reducing the limits and duration of the westbound bottleneck.

PM Peak Period

Figure 8-14 illustrates the average speed contours for the eastbound GP lanes on the SR-91 corridor in both the 2040 No-Build and Build PM peak period scenarios.

In the 2040 PM peak, the speeds in the GP lanes in the eastbound direction are generally the same between the No Build and Build scenarios, with the exception of the area between the SR-241 GP On Ramp and the Green River Road interchange. In this area, speeds are 5 mph higher with the project.

In the PM peak period, the speeds in the GP lanes in the eastbound direction are generally the same between the No Build and Build scenarios, with the exception of the area between the SR-241 GP On Ramp and the Green River Road interchange. Speeds are approximately 5 mph higher in the Build scenario (60 to 65 mph) in this area compared to the No Build scenario (55 to 60 mph). The improvements associated with the ultimate SR-91 CIP improvements were found to provide enough capacity in 2040 to accommodate the friction between the Express Lanes and the GP lanes in the eastbound ingress/egress area.

Figure 8-15 also illustrates the speed comparisons in the eastbound GP and Express lanes between the 2040 No-Build and Build scenarios in the PM peak hour (worst hour of the peak period). Speeds along SR-91 eastbound are generally the same between the Build and No-Build scenario in most segments of the corridor, with the exception of the segment between the SR-241 on-ramp and SR-71 Collector-Distributor (C-D) off-ramp. Speeds are approximately 5 mph higher in the Build scenario in this area compared to the No-Build scenario. In the Express Lanes, the speeds are projected to remain near free-flow in the ingress/egress area. The project therefore provides benefit in terms of increased speeds in the eastbound general purpose lanes in the 2040 Build scenario.

FIGURE 8-12
SR-91 Westbound Temporal Speed Diagram – 2040 GP and Express Lane Comparisons, AM Peak Period (6-9 AM)

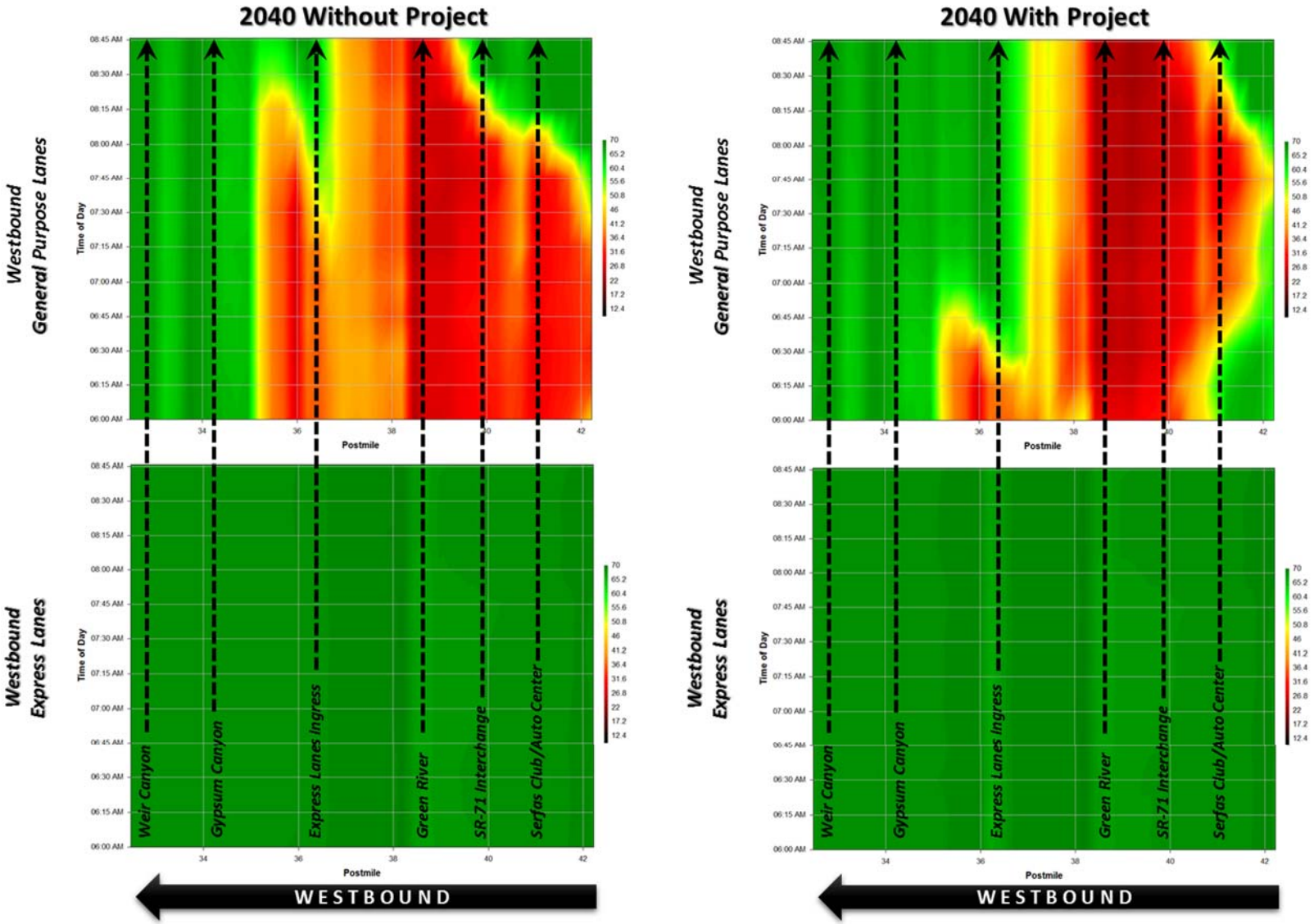
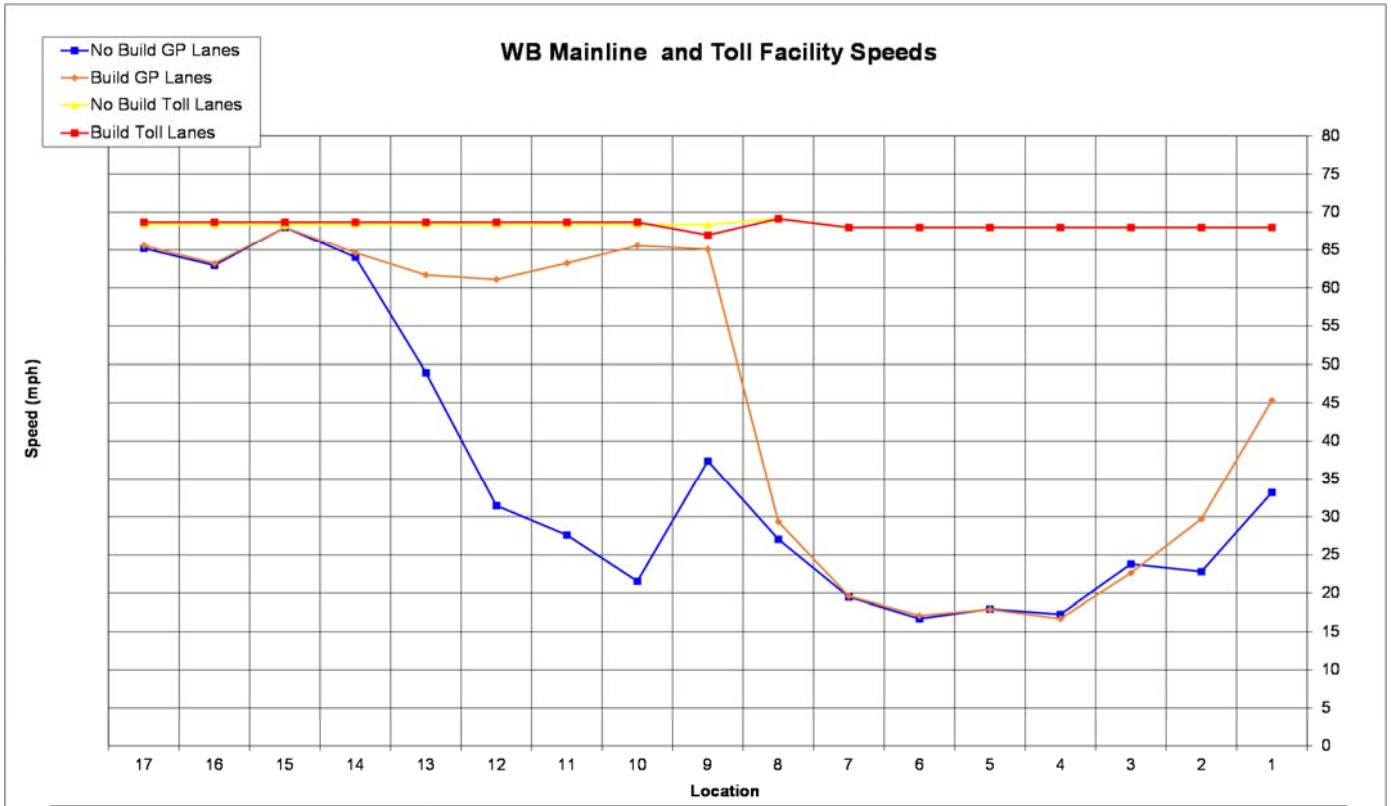


FIGURE 8-13
SR-91 Westbound Mainline and Toll Facility Speed Comparisons - 2040 No-Build and Build, AM Peak Hour (7-8 AM)



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

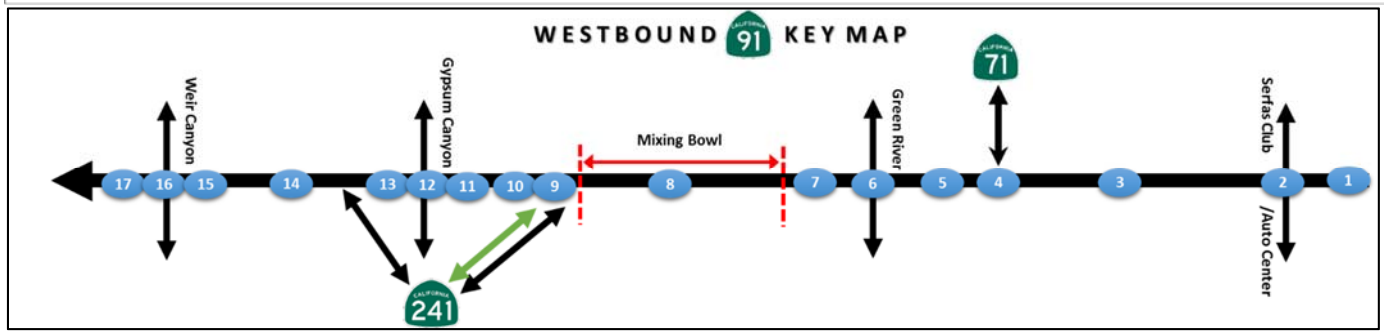


FIGURE 8-14
SR-91 Eastbound Temporal Speed Diagram – 2040 GP and Express Lane Comparisons, PM Peak Period (3-7 PM)

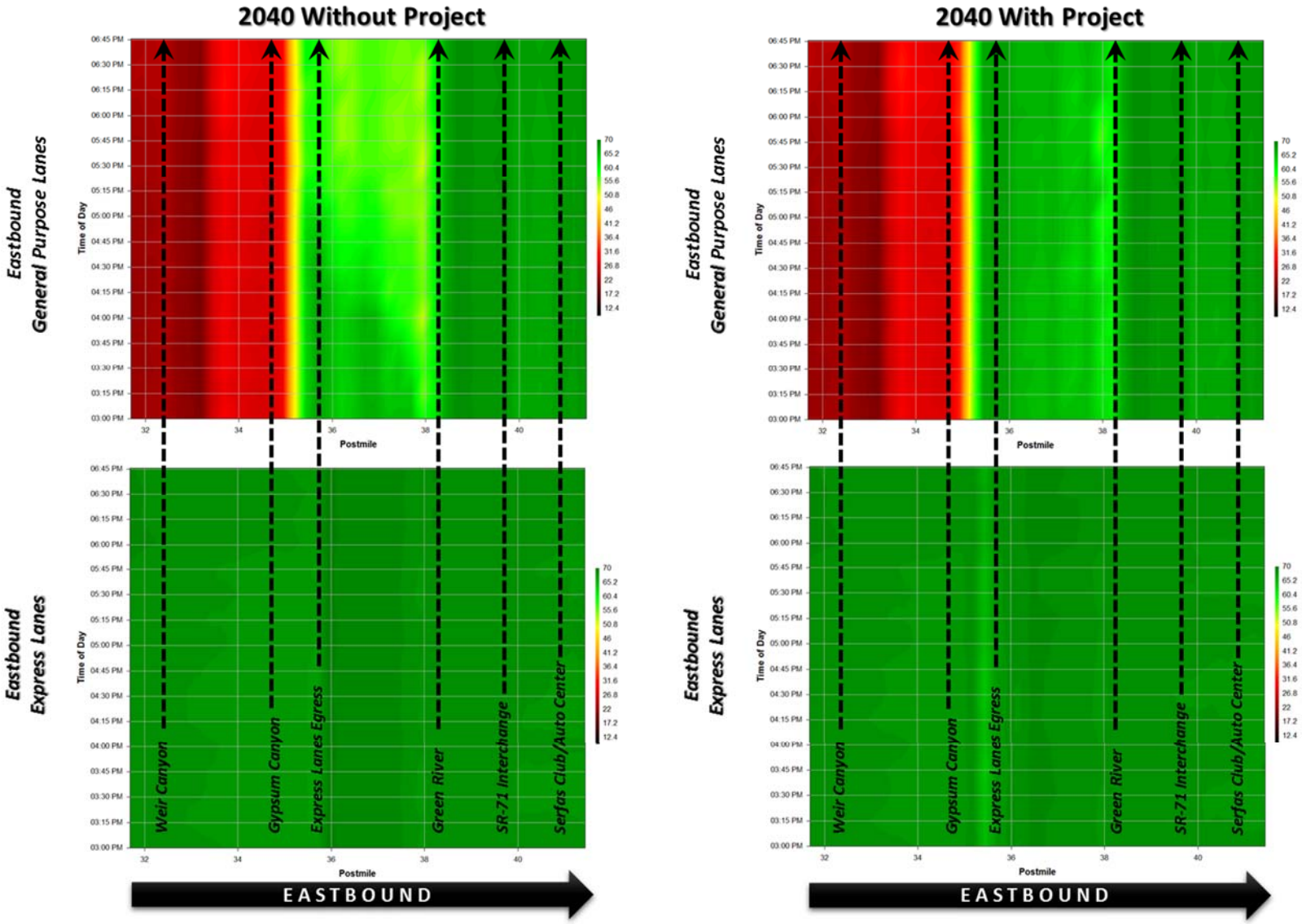
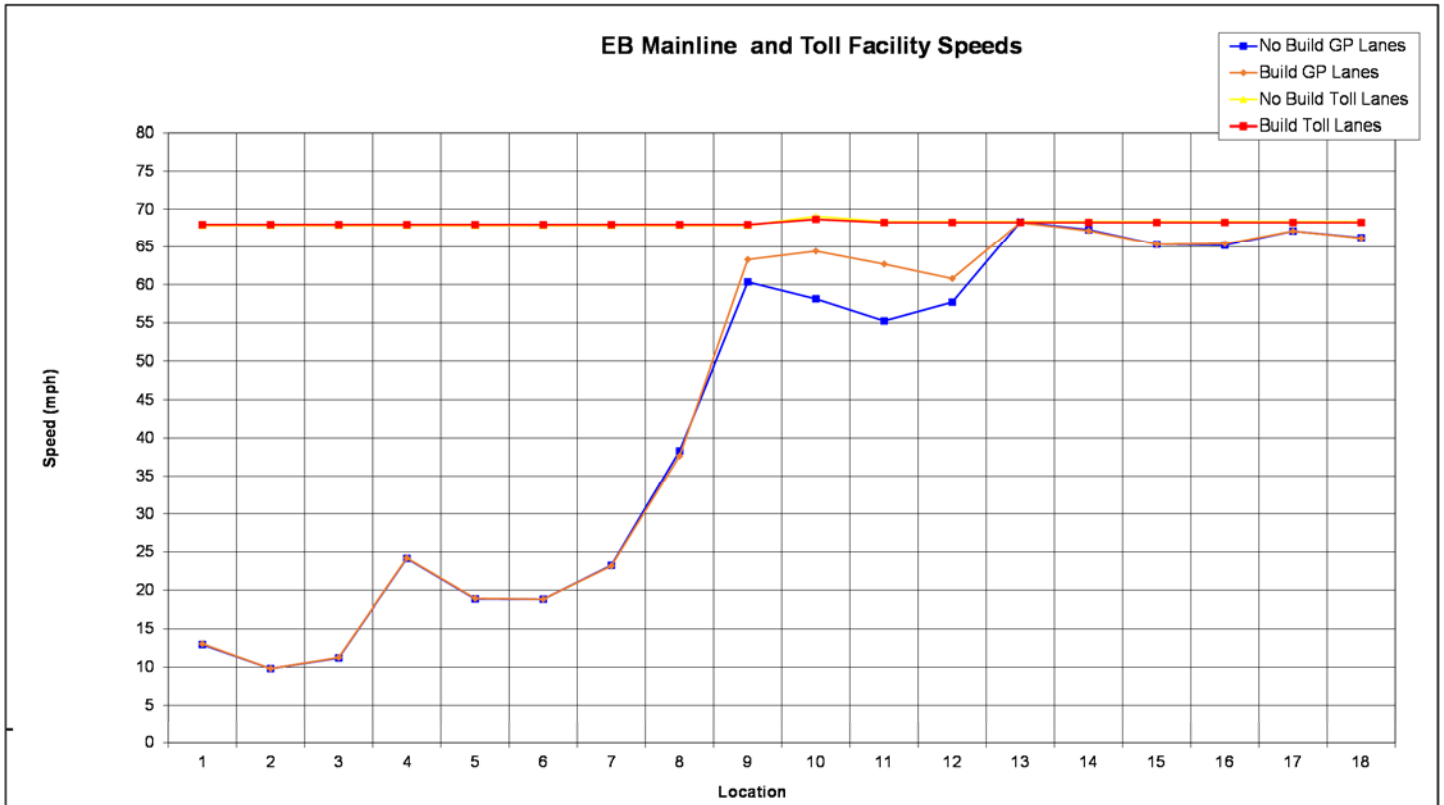
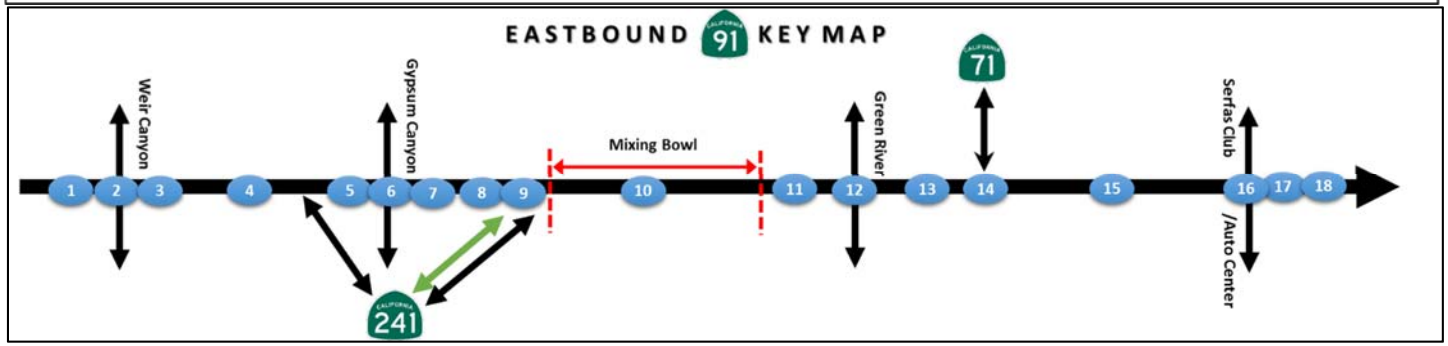


FIGURE 8-15
SR-91 Eastbound Mainline and Toll Facility Speed Comparisons - 2040 No-Build and Build, PM Peak Hour (4-5 PM)



1 Begin Study Area to Off Ramp to Weir Canyon	7 On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13 Off Ramp to SR 71 CD to On Ramp from Green River
2 Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8 On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14 On Ramp from Green River to On Ramp from SR 71
3 On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9 On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15 On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4 On Ramp from NB Weir Canyon to Off Ramp to SR 241	10 On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16 Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11 Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17 Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6 Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12 Off Ramp to Green River to Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub to End of Study Area



8.2.3 Density and LOS

AM Peak Period

Figure 8-16 is a summary of the traffic operational conditions based on freeway segment density measured in vehicles per mile per lane along the SR-91 GP lanes in the westbound AM peak direction. The Express Lane results are not reported because the Express Lanes are tolled in a manner that maintains LOS D or better operations throughout the study area during all times of the day.

In the AM peak period, the GP lanes in the westbound direction will operate at the same LOS in both 2040 No-Build and Build scenarios except in the area between the Green River Road interchange and the SR-241 interchange. The GP lane segment between the Green River Road and SR-241 interchanges is expected to operate at LOS D or better in the Build scenario, compared to LOS F in the No-Build scenario. This is caused by higher demand in the GP lanes of this segment in the No-Build scenario compared to the Build scenario.

The project will therefore provide substantial improvements in density/LOS on the SR-91 GP lanes in the 2040 AM peak period in the westbound direction between the Express Lane ingress/egress area and the SR-241 interchange.

PM Peak Period

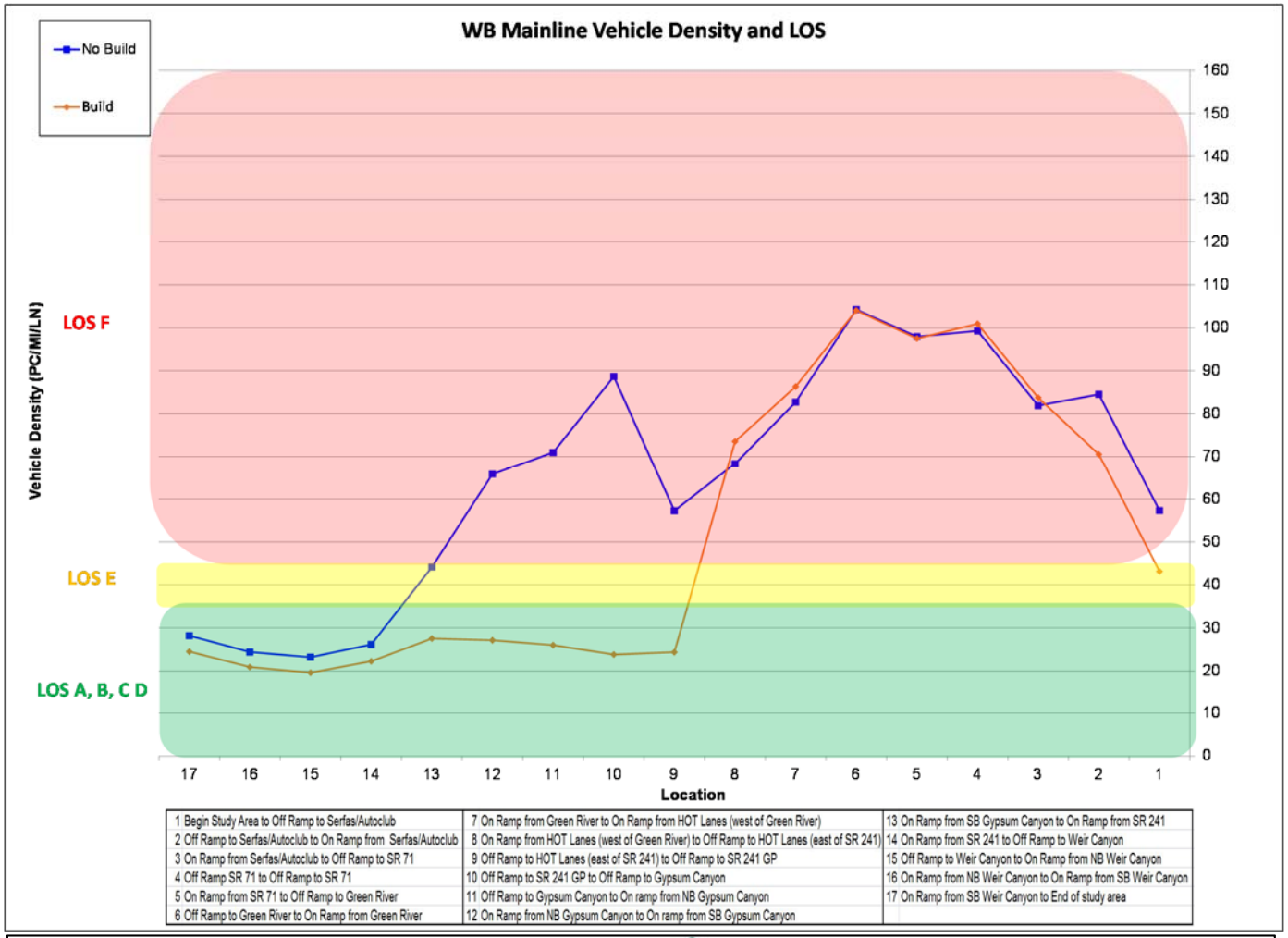
Figure 8-17 is a summary of the traffic operations based on freeway segment density measured in vehicles per mile per lane along the SR-91 GP lanes in the eastbound PM peak direction.

In the 2040 Build scenario, a decrease in density is expected in the GP lanes in the vicinity of the Express Lane ingress/egress area when compared to the No-Build scenario. These segments between the SR-241 and Green River Road interchanges are expected to operate at LOS E without the project compared to LOS D or better with the project. The decrease in density in the GP lanes is due to slightly lower demand in the Build scenario caused by the shift of approximately 800 trips from the SR-241 northbound-to-SR-91 eastbound GP ramp over to the Express Lane ramp.

In the 2040 PM peak, the project will lead to a decrease in density (and improvement in LOS) in the GP lanes in the vicinity of the Express Lane ingress/egress area.

The project will therefore slightly worsen the density/LOS in the 2040 PM peak period on the SR-91 GP lanes in the eastbound direction between the Express Lane ingress/egress area and the western limits of the study area (Weir Canyon Road), but is considered nominal given the increase in combined throughput (GP and Express Lanes) experienced in the same area (see Section 8.2.1).

FIGURE 8-16
SR-91 Westbound Mainline Vehicle Density and LOS Comparisons - 2040 No-Build and Build, AM Peak Hour (7-8 AM)



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

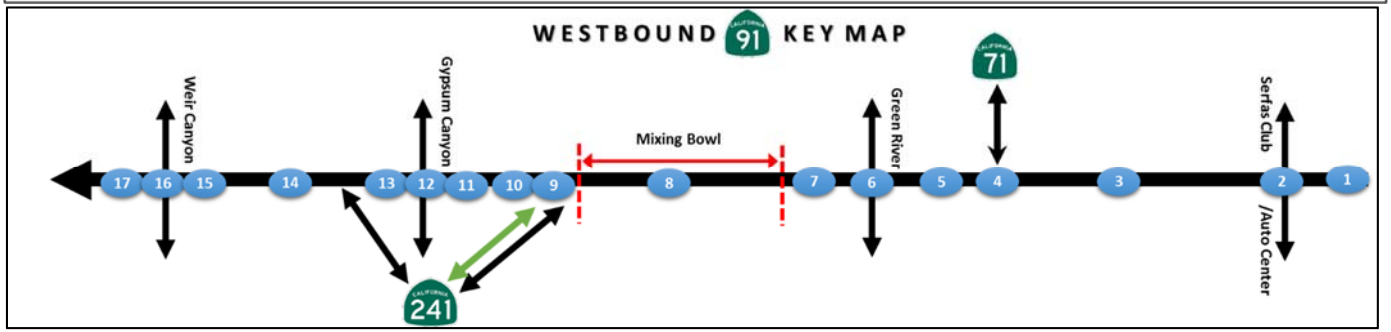
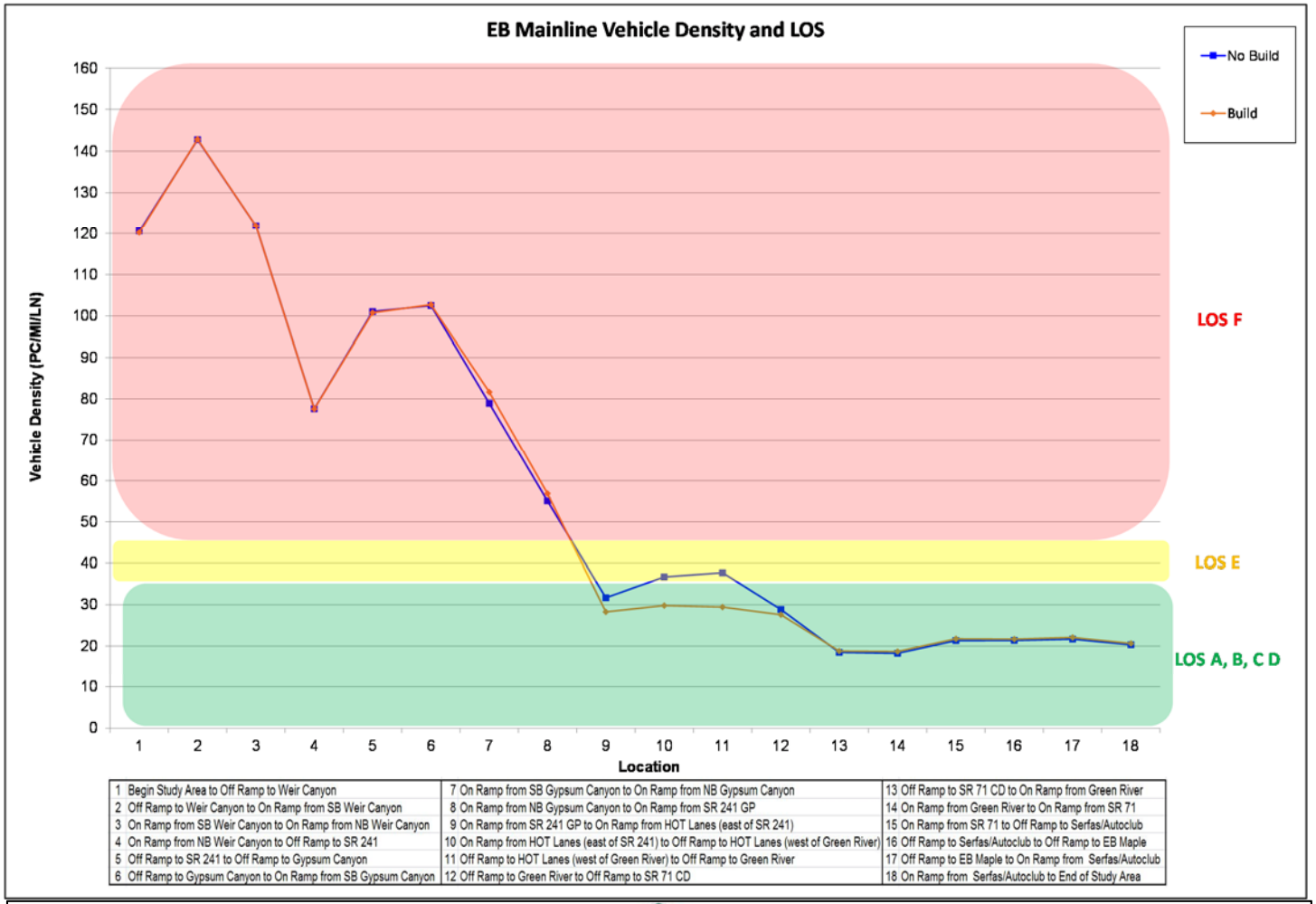
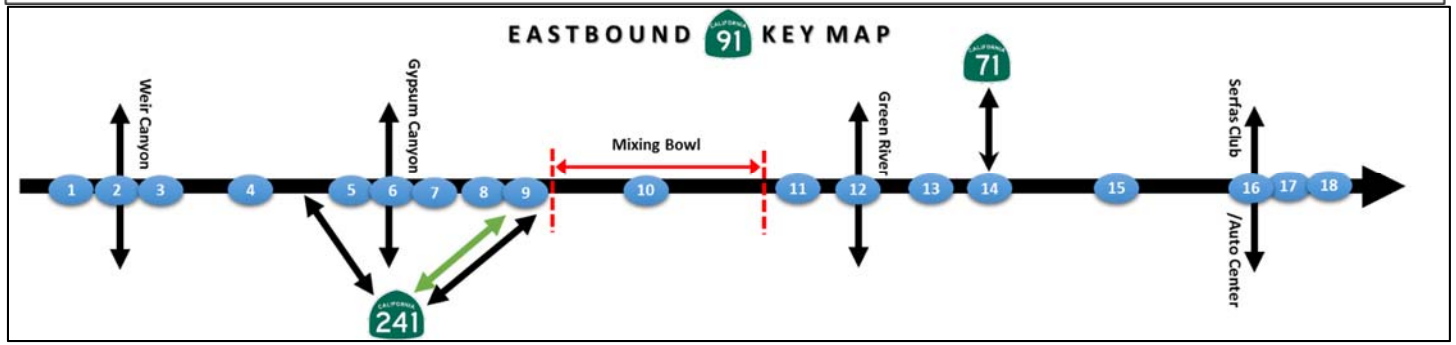


FIGURE 8-17
SR-91 Eastbound Mainline Vehicle Density and LOS Comparisons - 2040 No-Build and Build, PM Peak Hour (4-5 PM)



1 Begin Study Area to Off Ramp to Weir Canyon	7 On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13 Off Ramp to SR 71 CD to On Ramp from Green River
2 Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8 On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14 On Ramp from Green River to On Ramp from SR 71
3 On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9 On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15 On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4 On Ramp from NB Weir Canyon to Off Ramp to SR 241	10 On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16 Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11 Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17 Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6 Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12 Off Ramp to Green River to Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub to End of Study Area



8.2.4 Travel Time

Travel time between major O-D points within the study area was compared between the 2040 No Build and Build scenarios using the VISSIM model. **Figure 8-9** shows how the O-D zones were numbered so that comparisons between No Build and Build can be made.

AM Peak Period

Table 8-11 compares westbound travel times between 2040 No-Build and Build scenarios in the AM peak hour for select O-D pairs.

In the AM peak period, travel times for most of the O-D pairs will either stay the same or decrease in the westbound direction on SR-91 in the 2040 Build scenario due to project improvements. Travel times in the SR-91 eastbound (off peak) direction are also expected to improve in the Build scenario compared to the No-Build scenario. This change is caused by a shift in regional travel patterns that causes lower GP lane demand on SR-91 eastbound west of the SR-241 interchange in the Build scenario.

PM Peak Period

Table 8-12 compares eastbound travel times between 2040 No-Build and Build scenarios in the PM peak hour for select O-D pairs in the study area.

In the PM peak period, all of the travel times for the select O-D pairs will either stay the same or decrease in the Build scenario compared to the No-Build scenario. The decrease in travel time is due to the shift of trips from the SR-241 northbound to SR-91 eastbound GP ramp over to the Express Lane ramp, which lowers the GP lane demand in the Express Lane ingress/egress area.

In the 2040 PM peak, all of the travel times for the select O-D pairs will either stay the same or decrease in the Build scenario compared to the No-Build scenario.

TABLE 8-11
Travel Time Comparisons - 2040 No-Build and Build, AM Peak Period (6-9 AM)

#	Origin	#	Destination	2040 No Build VISSIM Travel Time (Minutes)			2040 Build VISSIM Travel Time (Minutes)			Change VISSIM Travel Time (Minutes)		
				6-7 AM	7-8 AM	8-9 AM	6-7 AM	7-8 AM	8-9 AM	6-7 AM	7-8 AM	8-9 AM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	9.7	12.6	13.7	8.9	9.5	9.4	-0.8	-3.1	-4.3
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	9.5	12.4	13.5	8.8	9.4	9.3	-0.7	-3.0	-4.2
		5	SR 241 SB south of SR 91	7.9	10.7	12.0	7.3	7.7	7.9	-0.6	-3.0	-4.1
		7	SR 71 NB north of SR 91	11.0	13.9	15.0	10.2	10.8	10.7	-0.8	-3.1	-4.3
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	8.7	8.7	8.6	8.6	8.6	8.5	-0.1	-0.1	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	8.3	8.3	8.3	8.4	8.4	8.4	0.1	0.1	0.1
		7	SR 71 NB north of SR 91	10.0	10.0	9.9	9.9	9.9	9.9	-0.1	-0.1	0.0
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	22.8	21.2	16.3	18.1	19.4	20.0	-4.7	-1.8	3.7
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	20.8	19.3	15.4	16.4	19.2	19.9	-4.4	-0.1	4.5
		5	SR 241 SB south of SR 91 (Via GP Ramp)	23.2	21.8	17.8	18.9	21.7	22.4	-4.3	-0.1	4.6
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	18.8	21.6	22.3	-4.4	-0.2	4.5
		7	SR 71 NB north of SR 91	8.5	8.0	5.7	6.2	8.2	7.8	-2.3	0.2	2.1
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	15.0	14.5	13.2	14.1	12.9	13.5	-0.9	-1.6	0.3
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	8.4	8.4	8.4	8.4	8.4	8.4	0.0	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15.5	15.0	14.7	14.8	15.2	15.9	-0.7	0.2	1.2
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	10.8	10.8	10.8	-4.7	-4.2	-3.9
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	7.3	7.3	7.3	7.3	7.3	7.2	0.0	0.0	-0.1
		3	SR 91 EB GP Lanes east of Serfas Club Rd	11.1	11.1	11.1	11.0	11.0	11.0	-0.1	-0.1	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	10.9	10.9	10.9	10.9	10.9	10.9	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	12.4	12.4	12.4	12.3	12.3	12.3	-0.1	-0.1	-0.1
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	n/a	n/a	n/a	11.0	11.0	11.0	-0.1	-0.1	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	n/a	n/a	n/a	10.8	10.8	10.8	-0.1	-0.1	-0.1
		7	SR 71 NB north of SR 91	n/a	n/a	n/a	12.3	12.3	12.3	-0.1	-0.1	-0.1
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	39.6	56.0	59.3	29.5	44.1	54.6	-10.1	-11.9	-4.7
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	37.6	54.2	58.4	27.8	44.0	54.5	-9.8	-10.2	-3.9
		3	SR 91 EB GP Lanes east of Serfas Club Rd	23.5	38.6	44.5	15.2	28.8	35.5	-8.3	-9.8	-9.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	40.1	56.6	60.9	30.2	46.4	57.0	-9.9	-10.2	-3.9
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	30.2	46.3	56.9	-9.9	-10.3	-4.0

Decrease in travel time with project is greater than 0.5 minutes

Increase in travel time with project is greater than 0.5 minutes

TABLE 8-12
Travel Time Comparisons - 2040 No-Build and Build, PM Peak Period (3-7 PM)

#	Origin	#	Destination	2040 No Build VISSIM Travel Time (Minutes)				2040 Build VISSIM Travel Time (Minutes)				Change VISSIM Travel Time (Minutes)			
				3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	19.8	20.3	20.9	20.5	19.6	19.7	19.6	18.7	-0.2	-0.6	-1.3	-1.8
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19.7	20.3	20.8	20.5	19.5	19.7	19.6	18.7	-0.2	-0.6	-1.2	-1.8
		5	SR 241 SB south of SR 91	14.7	14.7	14.6	14.3	14.5	14.7	14.6	14.0	-0.2	0.0	0.0	-0.3
		7	SR 71 NB north of SR 91	21.2	21.8	22.3	22.0	21.0	21.2	21.1	20.2	-0.2	-0.6	-1.2	-1.8
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	8.8	9.2	9.7	9.9	8.7	8.7	8.7	8.6	-0.1	-0.5	-1.0	-1.3
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.4	0.1	0.1	0.1	0.0
		7	SR 71 NB north of SR 91	10.2	10.6	11.2	11.4	10.1	10.2	10.2	10.1	-0.1	-0.4	-1.0	-1.3
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8.7	8.7	8.7	8.5	8.5	8.5	8.5	8.5	-0.2	-0.2	-0.2	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	8.6	8.6	8.6	8.5	8.5	8.5	8.5	8.4	-0.1	-0.1	-0.1	-0.1
		5	SR 241 SB south of SR 91 (Via GP Ramp)	11.0	11.1	11.0	10.9	10.9	11.0	10.9	10.9	-0.1	-0.1	-0.1	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	n/a	10.9	10.9	10.8	10.8	-0.1	-0.2	-0.2	-0.1
		7	SR 71 NB north of SR 91	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8.6	8.7	8.6	8.5	8.5	8.5	8.5	8.5	-0.1	-0.2	-0.1	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	8.4	8.4	8.4	8.3	8.4	8.4	8.4	8.4	0.0	0.0	0.0	0.1
		5	SR 241 SB south of SR 91 (Via GP Ramp)	11.0	11.0	11.0	10.9	10.9	10.9	10.9	10.9	-0.1	-0.1	-0.1	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	n/a	10.8	10.8	10.7	10.7	-0.2	-0.2	-0.3	-0.2
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	7.2	7.2	7.5	7.3	7.2	7.2	7.3	7.2	0.0	0.0	-0.2	-0.1
		3	SR 91 EB GP Lanes east of Serfas Club Rd	11.2	11.6	12.7	12.6	11.0	11.1	11.1	11.0	-0.2	-0.5	-1.6	-1.6
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	11.2	11.6	12.7	12.5	11.0	11.0	11.0	11.0	-0.2	-0.6	-1.7	-1.5
		7	SR 71 NB north of SR 91	12.6	13.1	14.2	14.0	12.5	12.5	12.5	12.5	-0.1	-0.6	-1.7	-1.5
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	n/a	n/a	n/a	n/a	11.0	11.0	11.1	11.0	-0.2	-0.6	-1.6	-1.6
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	n/a	n/a	n/a	n/a	10.8	10.8	10.8	10.8	-0.4	-0.8	-1.9	-1.7
		7	SR 71 NB north of SR 91	n/a	n/a	n/a	n/a	12.5	12.5	12.5	12.5	-0.1	-0.6	-1.7	-1.5
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	10.0	10.1	10.0	9.8	9.9	9.9	9.9	9.8	-0.1	-0.2	-0.1	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9.9	10.0	9.9	9.8	9.8	9.8	9.8	9.7	-0.1	-0.2	-0.1	-0.1
		3	SR 91 EB GP Lanes east of Serfas Club Rd	5.7	5.7	5.6	5.4	5.8	5.9	5.6	5.4	0.1	0.2	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	12.4	12.5	12.4	12.2	12.3	12.3	12.3	12.2	-0.1	-0.2	-0.1	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	n/a	n/a	n/a	n/a	12.2	12.2	12.2	12.1	-0.2	-0.3	-0.2	-0.1

Decrease in travel time with project is greater than 0.5 minutes

Increase in travel time with project is greater than 0.5 minutes

8.2.5 Network Performance

AM Peak Period

Table 8-13 compares the network performance results from the 2040 No-Build and Build scenarios in the AM peak period (6 to 9 AM). The following points highlight the 2040 No-Build versus Build comparisons in the AM peak period:

In the 2040, the project will increase vehicle throughput by 1% in the AM and PM peak periods.

- The No Build and Build scenario have generally the same demand.
- The Build scenario will increase vehicle throughput (by an additional 930 vehicles or 1%) and decrease percent unserved (from 9% in No-Build to 8% in Build).
- VMT increases by 1% in the Build scenario because vehicle throughput increases.
- The average speed per vehicle increases by approximately 4 mph (from 34 mph to 38 mph) in the Build scenario.
- The average delay per vehicle decreases by approximately 20% (from 7.0 to 5.6 minutes per vehicle) in the Build scenario.

PM Peak Period

Table 8-14 compares the network performance results from the 2040 No-Build and Build scenarios in the PM peak period (3 to 7 PM). The following points highlight the 2040 No-Build versus Build comparisons in the PM peak period:

- The No Build and Build scenario have generally the same demand.
- The Build scenario will increase vehicle throughput (by 1,450 vehicles or 1%) while decreasing the amount of unserved vehicles (by 1,000 vehicles). The percent unserved will decrease from 16% in the No-Build scenario to 15% for the Build scenario.
- VMT increases by 2% in the Build scenario because vehicle throughput increases.
- The average speed per vehicle increases in the Build scenario by about 2 mph (from 45 to 47 mph).
- The average delay per vehicle slightly decreases with the Build scenario by less than half a minute (from 3.4 to 3.1 minutes) when compared to the No Build scenario.

TABLE 8-13
Summary of Network Performance - No-Build vs. Build Scenarios, 2040 AM Peak Period (6-9 AM)

Performance Measure (all vehicle types, 6:00 - 9:00 AM)	No-Build Condition Value	Build Condition Value	Net Change with Project
Total Vehicle Demand (vehicles)	119,605	120,167	562
Total number of vehicles that did not reach their destination (vehicles)	10,264	9,895	-369
Total number of vehicles that have reached their destination (vehicles)	109,342	110,273	931
Total vehicle-miles traveled - VMT (miles)	939,671	953,732	14,061
Total travel time - VHT (hours)	27,641	25,219	-2,422
Average speed (mph)	34.0	37.8	3.8
Average delay time per vehicle (min/veh)	7.0	5.6	-1.4

Note: Results are based on the total three hours and are an average of all runs.

TABLE 8-14
Summary of Network Performance - No-Build vs. Build Scenarios, 2040 PM Peak Period (3-7 PM)

Performance Measure (all vehicle types, 3:00 - 7:00 PM)	No-Build Condition Value	Build Condition Value	Net Change with Project
Total Vehicle Demand (vehicles)	168,494	168,944	450
Total number of vehicles that did not reach their destination (vehicles)	26,918	25,914	-1,004
Total number of vehicles that have reached their destination (vehicles)	141,576	143,030	1,454
Total vehicle-miles traveled - VMT (miles)	1,173,727	1,193,635	19,908
Total travel time - VHT (hours)	26,063	25,477	-586
Average speed (mph)	45.1	46.9	1.8
Average delay time per vehicle (min/veh)	3.4	3.1	-0.3

Note: Results are based on the total four hours and are an average of all runs.

8.2.6 Express Lane Operations

AM Peak Period

Express lane operations were studied as part of the 2040 AM peak period analysis in both the No-Build and Build scenarios. Operational metrics such as volume served, speed, queues, and LOS were presented for the AM peak period earlier in Section 8. For quick reference, these metrics are summarized in **Table 8-15**. In the AM peak period, the westbound Express Lanes throughout the study area are projected to operate the same with and without the project. **Table 8-15** shows that there is relatively no difference in volume served, speed, or LOS in the westbound Express Lanes with or without the project.

TABLE 8-15
Summary of Westbound Express Lane Operations - No-Build vs. Build Scenarios, 2040 AM Peak Period (6-9 AM)

Operational Metric	Scenario	Study Segment Between SR-71 and Green River	Between Green River and SR-241 Express Lane Connector	Between SR-241 Express Lane Connector and Weir Canyon
Volume Served (percent of demand served)	No-Build	99.5%	99.5%	93.5%
	Build	99.5%	99.5%	91.7%
Speed	No-Build	68	69	68
	Build	68	68	69
Queues in the Express Lanes?	No-Build	No	No	No
	Build	No	No	No
Level of Service	No-Build	C	B	B
	Build	C	B	B

PM Peak Period

In the PM peak period, the eastbound Express Lanes throughout the study area are also projected to operate the same with and without the project in 2040. **Table 8-16** shows that there is relatively no difference in volume served, speed, or LOS in the eastbound Express Lanes with or without the project.

TABLE 8-16
Summary of Eastbound Express Lane Operations - No-Build vs. Build Scenarios, 2040 PM Peak Period (3-7 PM)

Operational Metric	Scenario	Study Segment Between Weir Canyon and SR-241 Express Lane Connector	Between SR-241 Express Lane Connector and Green River	Between Green River and SR-71
Volume Served (percent of demand served)	No-Build	99.3%	99.3%	89.3%
	Build	99.7%	99.7%	87.1%
Speed (mph)	No-Build	68	69	68
	Build	68	69	68
Queues in the Express Lanes?	No-Build	No	No	No
	Build	No	No	No
Level of Service	No-Build	C	B	C
	Build	C	B	C

Additional weaving analysis of the Express Lane operations in the mixing bowl was performed to supplement the microsimulation analysis. Per the Highway Design Manual (Section 504.7), the Leisch Method was applied to study the weaving condition in the mixing bowl. However, the Leisch method will not work for this study segment because the weaving volume (V_w) exceeds the "Turning Line for K" and the weaving section is greater than the chart boundary (7,400 feet). As noted on Figure 504.7A in the Highway Design Manual, extrapolation beyond the chart boundaries is not advised for the Leisch method. The Highway Capacity Manual (HCM) weaving analysis methodology was also attempted for the mixing bowl. However, based on the weaving volumes, the maximum weaving segment that can be analyzed is 4,093 feet. The mixing bowl segment is 7,400 feet and therefore cannot be analyzed using the HCM weaving methodology. Therefore, microsimulation is the only analysis tool that can be used for a segment as long as the mixing bowl.

8.3 Additional Design Variations

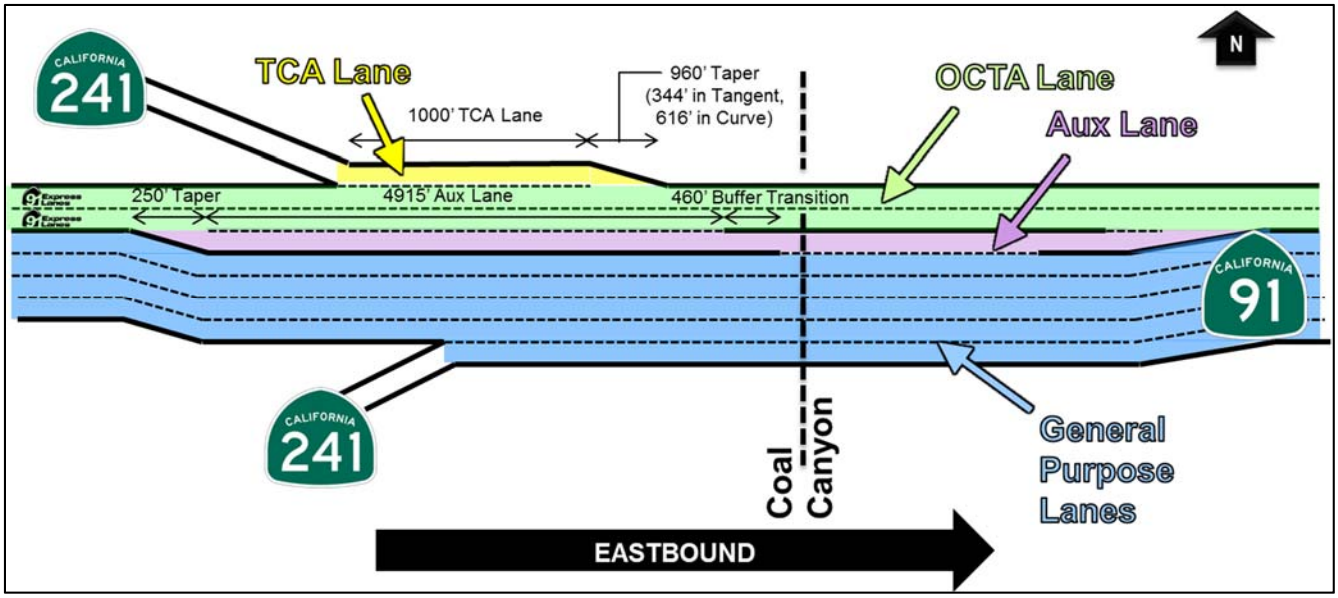
The proposed improvements evaluated in this analysis focused on a single build alternative: a new direct connection between SR-241 and the SR-91 Express Lanes. That alternative proposes to construct direct connectors from northbound SR-241 to the eastbound SR-91 Express Lanes, and the westbound SR-91 Express Lanes to southbound SR-241 (one lane in each direction). However, several design variations of the project were analyzed in VISSIM to determine the optimal configuration. Three eastbound design variations (Design Variations 1, 2, and 3) and one westbound design variation (Design Variation 4) are summarized in the following sub-sections (8.3.1 through 8.3.4). Design Variation 2 was found to optimize operations and was therefore carried forward for the 2017 and 2040 Build scenarios to be compared to the No Build scenario. The layout plan for this project (Design Variation 2) is included in Appendix G.

8.3.1 Eastbound Design Variations

Design Variation 1

Figure 8-18 illustrates the geometric configuration of Design Variation 1 (not to scale). The northbound-to-eastbound SR-241/SR-91 Express Lane Connector has a minimum length of 1,000 feet followed by a 960-foot left-side merge taper with the inside OCTA Express Lane. In addition, the Express Lane Connector joins the OCTA Express Lanes with no buffer (i.e., Express Lane Connector traffic can merge with OCTA Express Lane traffic immediately). There is approximately 3,900 feet of total weaving distance provided in Design Variation 1 between the Express Lane Connector and the entrance to the GP lanes, although this movement is not anticipated to have any demand.

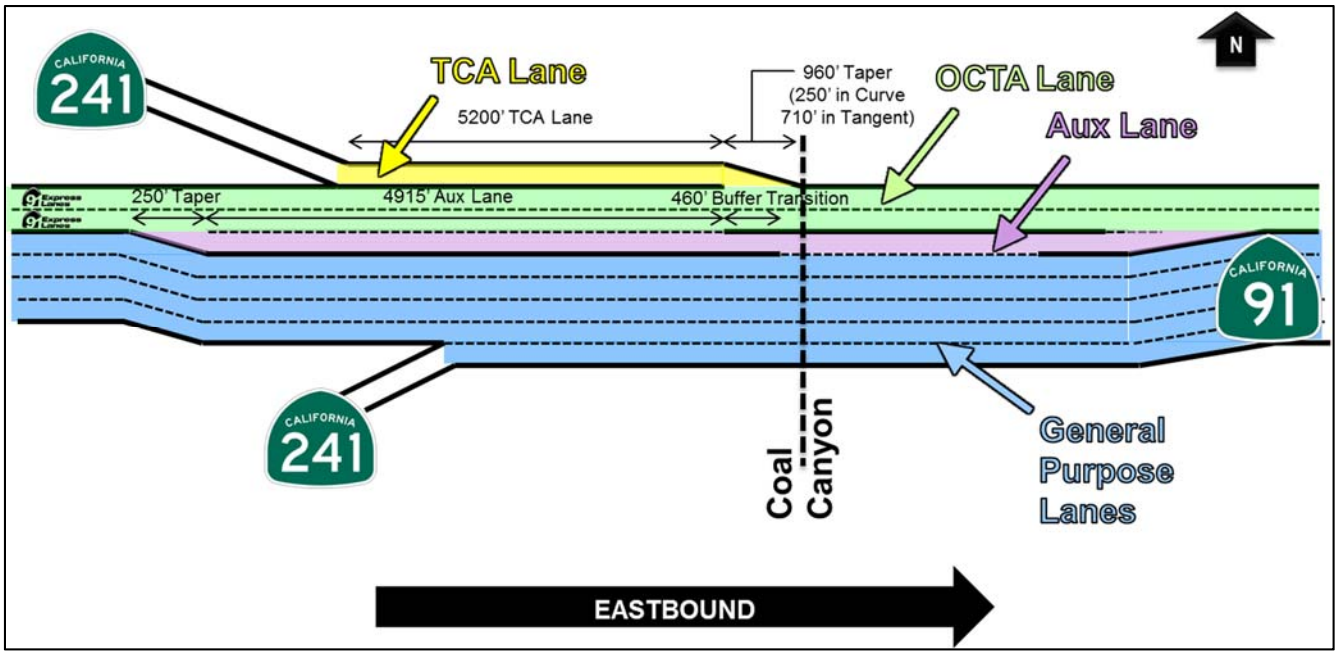
FIGURE 8-18
SR-91 Eastbound Express Lanes – Design Variation 1


CALIFORNIA
241
TCA Lane
1000' TCA Lane
960' Taper
(344' in Tangent,
616' in Curve)
OCTA Lane
Aux Lane
N
250' Taper
4915' Aux Lane
460' Buffer Transition
CALIFORNIA
91
CALIFORNIA
241
Coal
Canyon
General
Purpose
Lanes
EASTBOUND

Design Variation 2

Figure 8-19 illustrates the geometric configuration of Design Variation 2 (not to scale). The Express Lane Connector (northbound SR-241 to eastbound SR-91) tapers off at Coal Canyon and merges with the inside OCTA Express Lane (i.e., has a length longer than 1,000 feet). In this variation, part of the taper occurs in the SR-91 curve, west of Coal Canyon. In addition, the Express Lane Connector joins the OCTA Express Lanes with a 4-foot buffer (i.e., Express Lane Connector traffic cannot merge with OCTA Express Lanes due to the buffer and must merge at the end of the buffer limit).

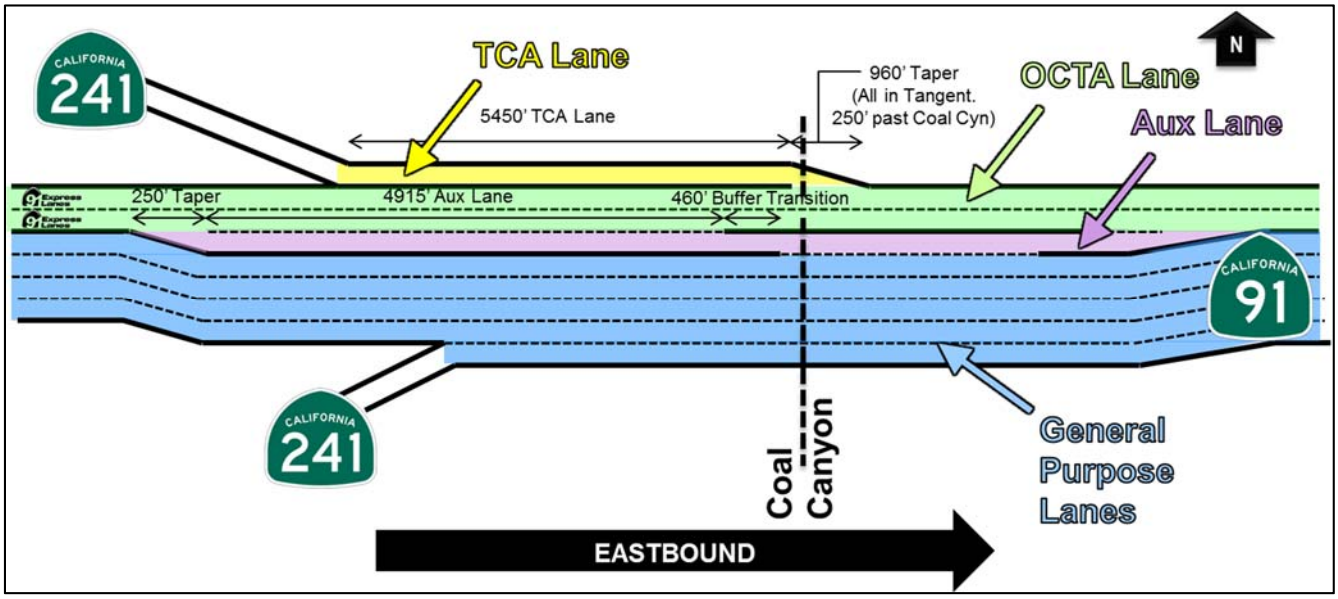
FIGURE 8-19
SR-91 Eastbound Express Lanes – Design Variation 2



Design Variation 3

Figure 8-20 illustrates the geometric configuration of Design Variation 3 (not to scale). The Express Lane Connector (northbound SR-241 to eastbound SR-91) tapers off east of the Coal Canyon project limit and merges with the inside OCTA Express Lane (i.e., has a length longer than 1,000 feet). In this variation, part of the taper occurs on the tangent section of SR-91, west of Coal Canyon. In addition, the Express Lane Connector joins the OCTA Express Lanes with a four-foot buffer (i.e., Express Lane Connector traffic cannot merge with OCTA Express Lanes due to the buffer and must merge at the end of the buffer limit).

FIGURE 8-20
SR-91 Eastbound Express Lanes – Design Variation 3



8.3.2 Eastbound Design Variation Results Comparison

The results from the VISSIM analysis of the three eastbound design variations is discussed below. The 2017 and 2040 PM peak period was used to make the comparison, as the PM peak period is the worst case for demand volume in this segment of the SR-91 Eastbound Express Lanes. MOEs used to compare the design variations include volume served, speed, density, travel time, and network performance. The results from the VISSIM analysis of the three design variations showed there was very little difference in traffic operations, and that the configuration should be based on other design elements. Design Variation 2 was carried forward for the 2017 and 2040 Build scenarios to be compared to the No Build scenario. The build scenario results shown in Sections 8.1 and 8.2 represent the results of Design Variation 2.

<u>Volume Served</u>

Throughput volumes were measured at the SR-91 Eastbound GP and Express Lanes between the SR-241 interchange and the Express Lane egress ramps and compared between the three design variations and No Build scenario. **Table 8-15** compares volume throughput for both the 2017 and 2040 PM peak hour (4-5 PM). All three design variations have similar throughput volumes (within 0.3%).

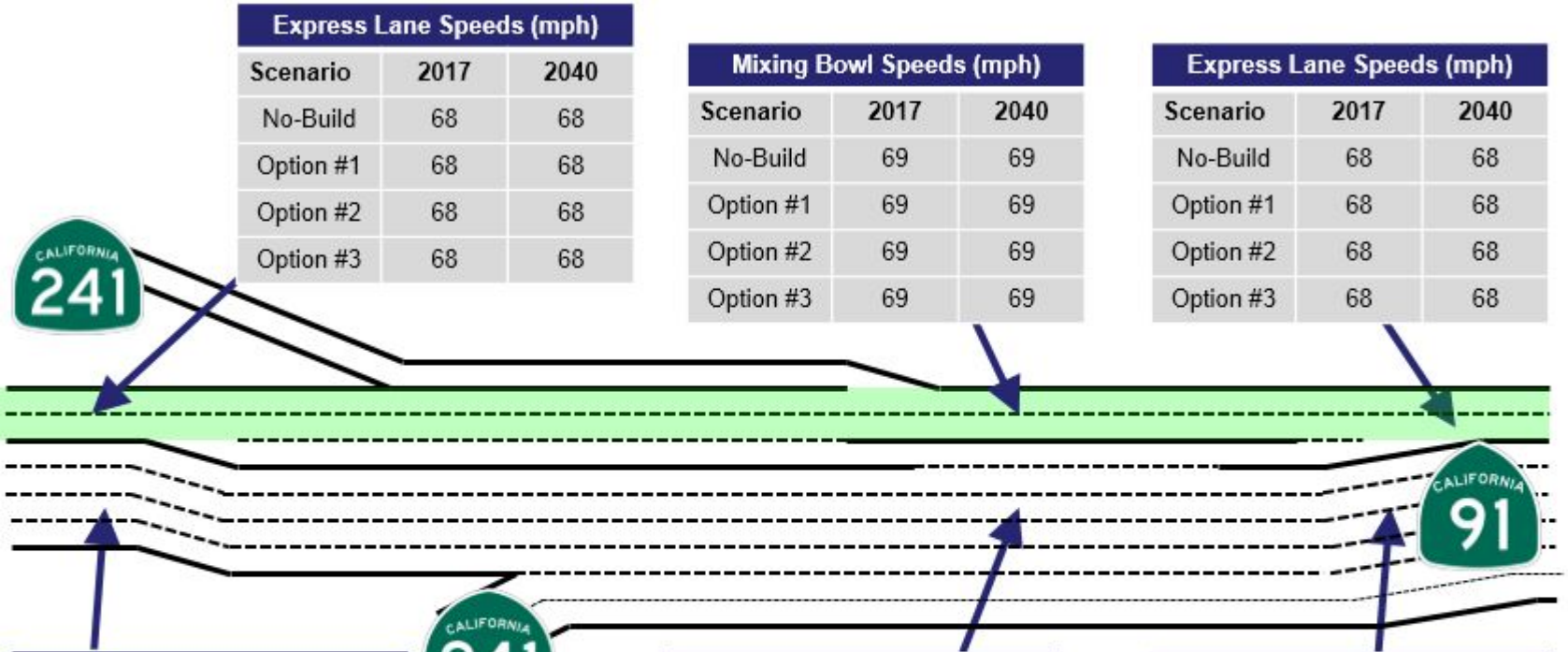
TABLE 8-15
Vehicle Throughput Comparison –SR-91 Eastbound between SR-241 and Express Lane egress, PM Peak Hour (4-5 PM)

Scenario	2017 PM				2040 PM			
	Throughput Volume (veh/hr)			Overall Change from No Build	Throughput Volume (veh/hr)			Overall Change from No Build
	GP Lanes	Express Lanes	Overall		GP Lanes	Express Lanes	Overall	
No Build	9468	3174	12641	0.0%	11409	3174	14583	0.0%
Option 1	8866	4202	13068	3.4%	10702	3926	14628	0.3%
Option 2	8850	4200	13050	3.2%	10702	3941	14642	0.4%
Option 3	8886	4200	13086	3.5%	10707	3941	14648	0.4%

Speed and Density

Speed and density were measured along SR-91 eastbound in both the GP and Express Lanes upstream, within, and downstream of the mixing bowl and compared among the three design variations and No Build scenario. **Figures 8-21 and 8-22** compares speed and density, respectively, during the 2017 and 2040 PM peak hour (4-5 PM) for all three design variations. The results show there is very little difference in either speed or density within the areas evaluated.

FIGURE 8-21
Speed Comparison – SR-91 Eastbound GP and Express Lanes at the SR-241 Mixing Bowl, PM Peak Hour (4-5 PM)



Express Lane Speeds (mph)		
Scenario	2017	2040
No-Build	68	68
Option #1	68	68
Option #2	68	68
Option #3	68	68

Mixing Bowl Speeds (mph)		
Scenario	2017	2040
No-Build	69	69
Option #1	69	69
Option #2	69	69
Option #3	69	69

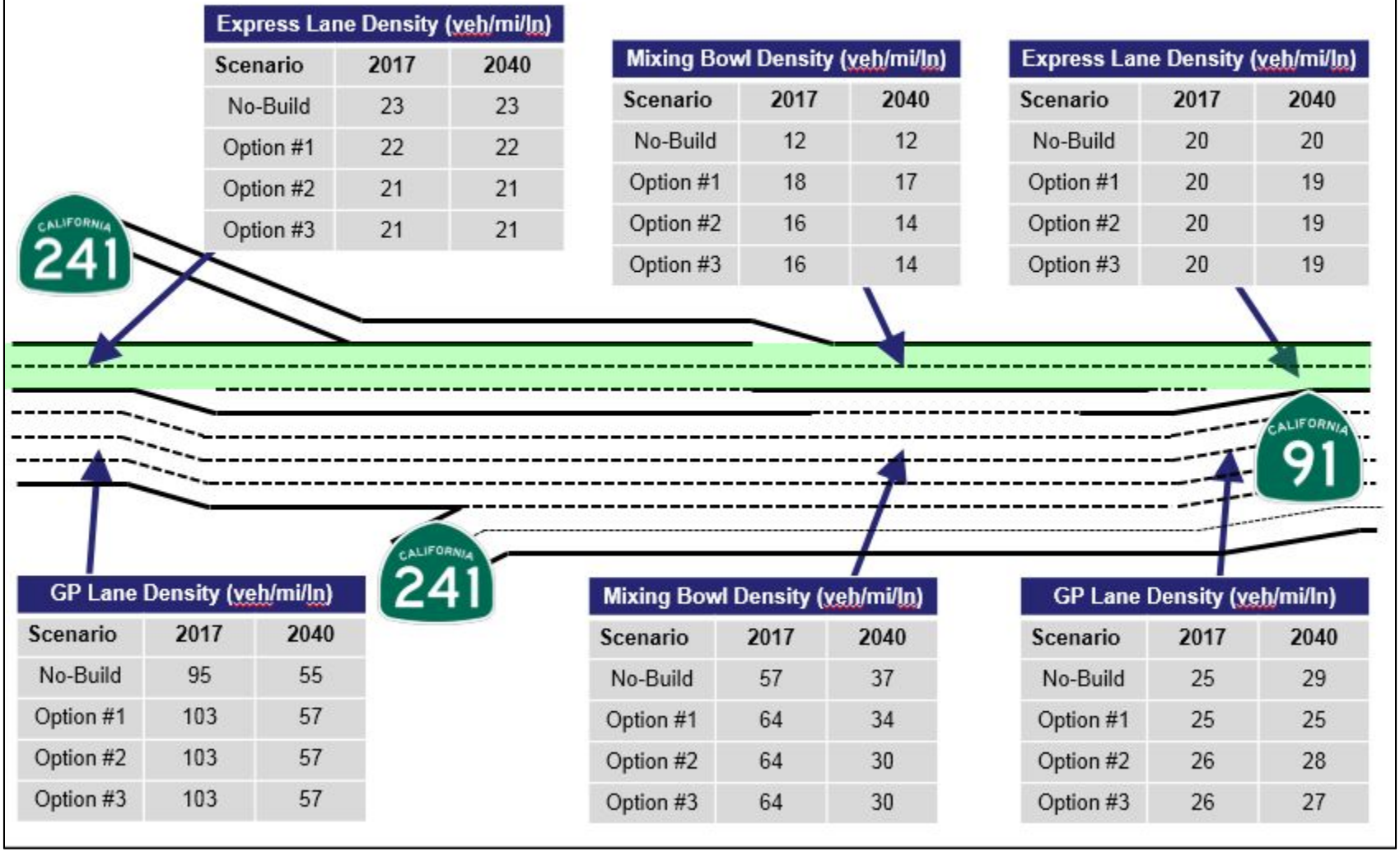
Express Lane Speeds (mph)		
Scenario	2017	2040
No-Build	68	68
Option #1	68	68
Option #2	68	68
Option #3	68	68

GP Lane Speeds (mph)		
Scenario	2017	2040
No-Build	17	38
Option #1	15	38
Option #2	15	38
Option #3	16	38

Mixing Bowl Speeds (mph)		
Scenario	2017	2040
No-Build	41	58
Option #1	38	60
Option #2	38	64
Option #3	38	64

GP Lane Speeds (mph)		
Scenario	2017	2040
No-Build	67	58
Option #1	67	66
Option #2	67	61
Option #3	67	62

FIGURE 8-22
Density Comparison – SR-91 Eastbound GP and Express Lanes at the SR-241 Mixing Bowl, PM Peak Hour (4-5 PM)



Express Lane Density (veh/mi/ln)		
Scenario	2017	2040
No-Build	23	23
Option #1	22	22
Option #2	21	21
Option #3	21	21

Mixing Bowl Density (veh/mi/ln)		
Scenario	2017	2040
No-Build	12	12
Option #1	18	17
Option #2	16	14
Option #3	16	14

Express Lane Density (veh/mi/ln)		
Scenario	2017	2040
No-Build	20	20
Option #1	20	19
Option #2	20	19
Option #3	20	19

GP Lane Density (veh/mi/ln)		
Scenario	2017	2040
No-Build	95	55
Option #1	103	57
Option #2	103	57
Option #3	103	57

Mixing Bowl Density (veh/mi/ln)		
Scenario	2017	2040
No-Build	57	37
Option #1	64	34
Option #2	64	30
Option #3	64	30

GP Lane Density (veh/mi/ln)		
Scenario	2017	2040
No-Build	25	29
Option #1	25	25
Option #2	26	28
Option #3	26	27

8.3.3 Westbound Design Variations

Design Variation 4

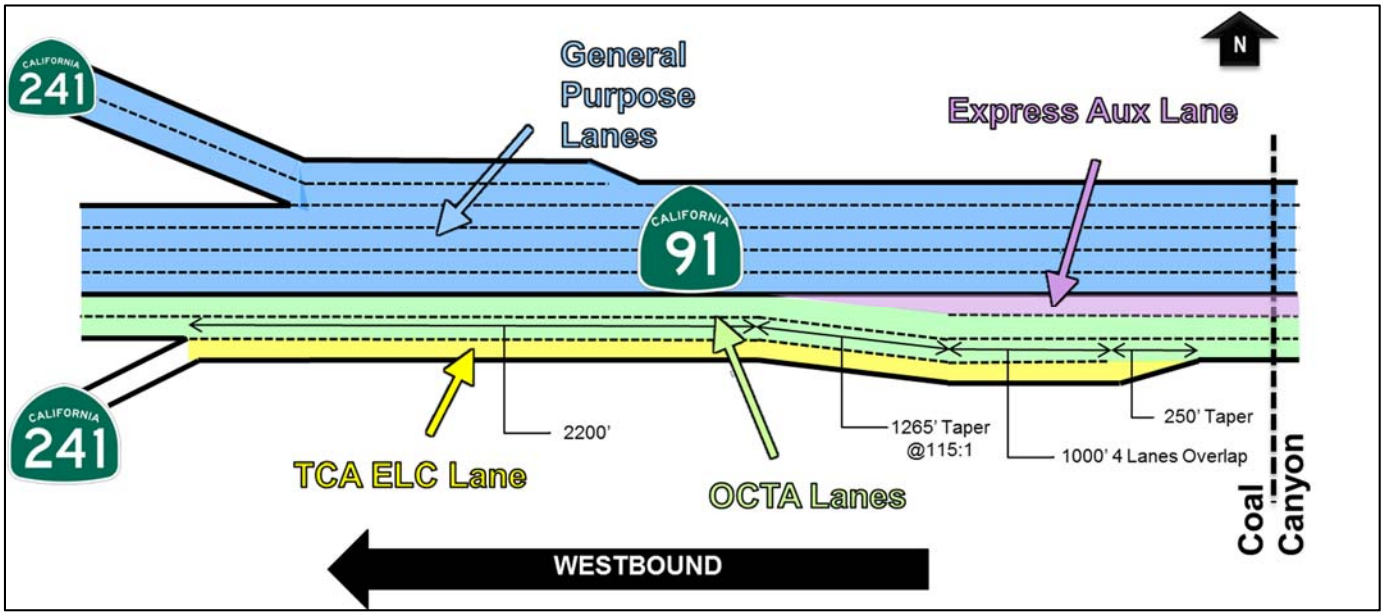
Figure 8-23 illustrates the geometric configuration of Design Variation 4 (not to scale). Design Variation 4 is similar to the base design and only involves modification of the westbound SR-91 Express Lane geometry between the westbound ingress/egress area and the SR-241 direct connector. In this design variation, the Express Lane Connector lane is extended to the east so that there is a 1000-foot section where there are four lanes in the Express Lanes (one Express Lane auxiliary lane, two OCTA Express Lanes, one Express Lane Connector lane). Similar to the baseline geometry, the Express Lane auxiliary lane merges into the outside OCTA Express Lane. At this point, the Express Lane cross section will be three lanes until the Express Lane Connector lane diverges.

OCTA's tolling policy is to maintain a maximum vehicle flow rate of approximately 1,700 vehicles per hour per lane (1,600 vehicles per hour per lane is preferred). As noted in Section 6.3.1 and Section 6.3.2, the future forecasts show that the project will generate a demand of 4,250 vehicles per hour in the AM peak period between the westbound ingress/egress area and the Express Lane connector. This equates to 2,125 vehicles per hour per lane in the baseline design concept where there are only two lanes between the westbound ingress/egress area and the Express Lane connector (see Figures 7-1 and 7-2). Design Variation 4 would provide three lanes in this critical Express Lane area and would equate to approximately 1,420 vehicles per hour per lane which is in compliance with OCTA's per lane tolling policy parameters.

The configuration of Design Variation 4 provides optimal lane balance and utilization. Westbound Express Lane drivers travelling from the RCTC Express Lanes who wish to continue through to the OCTA Express Lanes do not need to change lanes to make this movement. As shown in Figure 8-23, the two westbound RCTC Express Lanes channel directly into the two OCTA Express Lanes. This configuration provides for optimal lane balance and lane utilization in the westbound Express Lane ingress/egress area.

Additional traffic analysis was not needed for Design Variation 4 because the operations are projected to be better than the base design. The base design, which narrows down to two lanes between the westbound ingress/egress area and the Express Lane connector, was found to operate with speeds in excess of 65 mph (see Section 8.1.2 and 8.2.2). Design Variation 4 would provide three to four lanes in this critical Express Lane area so this additional capacity will only improve the operations in the Express Lanes. These findings were discussed with F/ETCA, OCTA, and Caltrans in a meeting on October 16, 2014. In this meeting, it was agreed that additional traffic analysis was not required for Design Variation 4 due to the reasons stated above.

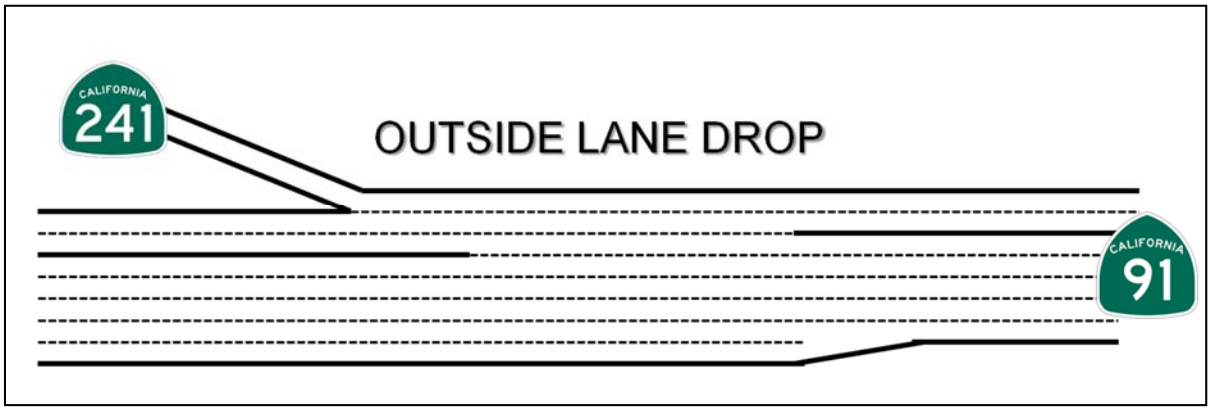
FIGURE 8-23
SR-91 Westbound Express Lanes – Design Variation 4



8.3.4 Design Variations Considered during Earlier Stages of Project Development

In earlier phases of project development for this project, a variety of other design variations were considered and analyzed. During the Project Study Report/Project Report (PSR/PR) phase of the project, the way in which the outside eastbound Express Lane was terminated at the end of the mixing bowl was analyzed using VISSIM. As part of this analysis, an alternative method for dropping the third eastbound SR-91 Express Lane was analyzed. The alternative method for dropping the third Express Lane was to drop it in the outside GP lane. Figure 8-24 illustrates the geometric configuration of the outside lane drop.

FIGURE 8-24
SR-91 Eastbound Express Lanes - Outside Lane Drop Schematic



The analysis showed that dropping the 3rd Express Lane via an outside GP lane drop increased congestion in GP lanes compared to project baseline, created a bottleneck at end of weaving section, and caused the Express lanes to operate below 50 mph. For these reasons, the outside lane drop alternative was dropped from further consideration and therefore not considered in the PA/ED analysis.

9 Summary of Findings

The purpose of this report is to document the traffic analysis for the SR-241/SR-91 Express Lane Connector Project Study Report/Project Report. The goal of the traffic analysis is to conduct operational analysis to refine the PA/ED alternative, focused on the interaction of the Express Lane weaving section with the congested GP lanes. This section summarizes the overall findings of the traffic analysis.

9.1 Overall Traffic Operations Findings

Table 9-1 summarizes the overall traffic operational benefits of the proposed project.

FIGURE 9-1
Overall Project Benefit Summary[1]

Measure	Year	Results
Increase in Throughput in the Mixing Bowl	2017	2,586 vehicles in the peak direction (+7%)
	2040	1,239 vehicles in the peak direction (+3%)
Increase in Corridor VMT	2017	34,301 (+4%)
	2040	17,403 (+2%)
Change in Speed	2017	+1.9 mph (+6%)
	2040	+2.7 mph (+7%)
Change in Delay	2017	-0.6 minutes/vehicle (-12%)
	2040	-0.8 minutes/vehicle (-17%)

[1] Based on seven hours of results for the combined AM peak (three hours) and PM peak (four hours).

In the build scenario, the overall findings of the traffic analysis can be summarized as follows:

- The overall throughput on SR-91 increases.
- On the eastbound SR-91 GP lanes, more vehicles must exit the OCTA Express Lanes and enter the GP lanes and fewer cars can leave the GP lanes and enter the RCTC Express Lanes. More vehicles are in the Express Lanes in the mixing bowl area because the northbound SR-241 to eastbound SR-91 Express Lane Connector adds more traffic to the mixing bowl. To help handle the additional vehicles in the Express lanes, the project does add an additional two lanes of capacity in the mixing bowl. More vehicles will exit, increasing friction, because the downstream constraint remains the same (3,200 vehicles/hour in the RCTC Express Lanes).

- However, there is also a reduction in friction due to fewer vehicles weaving from the northbound SR-241 to eastbound SR-91 GP ramp to the RCTC Express lanes with the project (i.e., most of these vehicles will now use the SR-241 to SR-91 Express Lane Connector).
- The result is an overall net zero effect on the eastbound SR-91 GP lanes with the project in the PM peak period. The overall average difference in vehicle throughput (Build minus No-Build) in the 2017 PM peak period is -0.3% and 0.6% in the 2040 PM peak period.

A more detailed summary of the overall findings of the traffic analysis for the SR-241/SR-91 Express Lane Connector Project is provided below:

- Traffic is projected to shift from other regional routes (SR-91, SR-55, surface streets) to SR-241. This regional shift is a result of the additional capacity of the new connector.
- In the AM peak period, more traffic is forecasted to travel from westbound SR-91 to southbound SR-241 in the build scenario. The resulting shift leads to fewer vehicles in the westbound SR-91 GP lanes (850 vehicles/hour in 2017 and 1,320 vehicles/hour in 2040), west of the SR-91/SR-241 interchange.
- A design variation for the westbound Express Lanes between the ingress/egress area and the Express Lane Connector was assessed (Design Variation 4). In this design variation, the Express Lane Connector lane is extended to the east so that there is a 1000-foot section where there are four lanes in the Express Lanes (one Express Lane auxiliary lane, two OCTA Express Lanes, one Express Lane Connector lane). Similar to the baseline geometry, the Express Lane auxiliary lane merges into the outside OCTA Express Lane. At this point, the Express Lane cross section will be three lanes until the Express Lane Connector lane diverges. Design Variation 4 would provide three lanes in this critical Express Lane area and would equate to approximately 1,420 vehicles per hour per lane which is in compliance with OCTA's per lane tolling policy parameters. Additional traffic analysis was not needed for Design Variation 4 because the operations are projected to be better than the base design. The base design, which narrows down to two lanes between the westbound ingress/egress area and the Express Lane connector, was found to operate with speeds in excess of 65 mph. Design Variation 4 would provide three to four lanes in this critical Express Lane area and there is therefore assumed that this additional capacity will only improve the operations in the Express Lanes (i.e., speeds will be 65 mph or higher).
- In the 2017 PM peak period, more traffic is forecasted to travel from northbound SR-241 to eastbound SR-91 in the build scenario. The resulting shift leads to fewer vehicles in the eastbound SR-91 GP lanes (190 vehicles/hour in 2017), west of the SR-91/SR-241 interchange. Once these vehicles shift to SR-241, they are projected to use the northbound SR-241 to eastbound SR-91 Express Lane Connector and continue on to the RCTC Express Lanes. By the 2040 Design Year, background growth and the additional eastbound capacity provided by the SR-91 Ultimate CIP project is anticipated to balance traffic demand within the corridor between the No Build and Build scenario. Therefore, for the 2040 PM peak, there is no eastbound SR-91 regional shift to SR-241 projected.
- The project increases the toll road system throughput and revenue in both 2017 and 2040.
- The project will reduce the length of the northbound SR-241 to eastbound SR-91 queue on the general purpose ramp in the PM peak period.

- The project provides measureable system benefits in the AM peak period in the form of increased vehicle throughput on SR-91 in the mixing bowl (7% in 2017 and 3% in 2040), increased corridor-wide VMT (4% in 2017 and 2% in 2040), increased average speed (+1.9 mph in 2017 and +2.7 mph in 2040), and reduced average delay (-0.6 minutes/vehicle in 2017 and -0.8 minutes/vehicle in 2040).
- During the PM peak period, system benefits are mixed in 2017 but show an overall improvement by 2040. SR-91 vehicle throughput and VMT both increase in 2017, but the average speed drops (1 mph) and delay increases (0.4 minutes/vehicle) due to the regional shift that increases demand in the GP lanes. However, all system measures show positive impact by 2040 (average speed increases by 2 mph and delay decreases by 0.4 minutes/vehicle).
- At the SR-91 westbound mainline bottleneck between the Green River Road interchange and the Express Lane Ingress (AM peak period), the project provides benefit in the form of shorter queues, higher vehicle throughput, higher speed and lower density, and shorter travel times in both 2017 and 2040.
- At the SR-91 eastbound mainline bottleneck between the Express Lane Ingress and the Green River Road interchange (PM peak period), the project increases vehicle throughput in both 2017 and 2040. By the 2040 Design Year, the project will improve conditions at the bottleneck by increasing average speed (5 mph) and vehicle throughput (between 0.5 and 1.5%) while reducing density and lowering travel time (from 1 to 4.5 minutes depending on path).
- With the project, high-speed operations of the SR-91 Express Lanes can be maintained with a maximum eastbound exiting Express Lane volume of 1800 vehicles/hour in 2017 (1600 vehicles/hour in 2040). The mix of OCTA/F/ETCA/RCTC toll traffic is critical to the successful operations of the mixing bowl.
- Analysis of three design variations for the SR-91 Eastbound Express Lane weaving section shows that there is very little difference between the variations from a traffic operations perspective, and the optimal configuration should be chosen based on other design considerations.
- The VISSIM modeling done as part of this analysis does not include dynamic behavior based on toll rate policy. Instead, the modeling is intended to optimize operations within the study area and assumes that tolling policies will be set to match the travel-demand assumptions used on the toll facilities in the VISSIM model. A separate tolling and revenue study will determine toll rates.

9.2 Overall Advantages

The proposed SR-241/SR-91 Express Lane Connector Project has several advantages:

- The direct connection closes the gap between two major toll systems (SR-91 Express Lanes and SR-241 Toll Roads)
- The project improves vehicle throughput in SR-91 corridor since more vehicles can be pushed through the SR-91 Express Lanes (i.e., the project brings more cars into the express lanes in the mixing bowl and therefore the combined GP and Express Lane throughput increases in the mixing bowl). The Express Lanes throughput upstream and downstream of the mixing bowl (i.e., in the OCTA and RCTC Express Lanes) remains the same with or

without the project (approximately 3,200 vehicles/hour), consistent with the OCTA and RCTC tolling policy assumptions.

- The project improves vehicle miles traveled throughout study area.
- The project will pull 1,700 vehicles during the peak hours (AM/PM) from I-5, SR-55 and surrounding local arterials to SR-241 in the 2017 Opening Year.
- Travel time will be reduced by 24% for northbound SR-241 to eastbound SR-91 toll users in the 2017 Opening Year.

9.3 Overall Challenges

The proposed project also has challenges that will need to be addressed in future design/operations efforts:

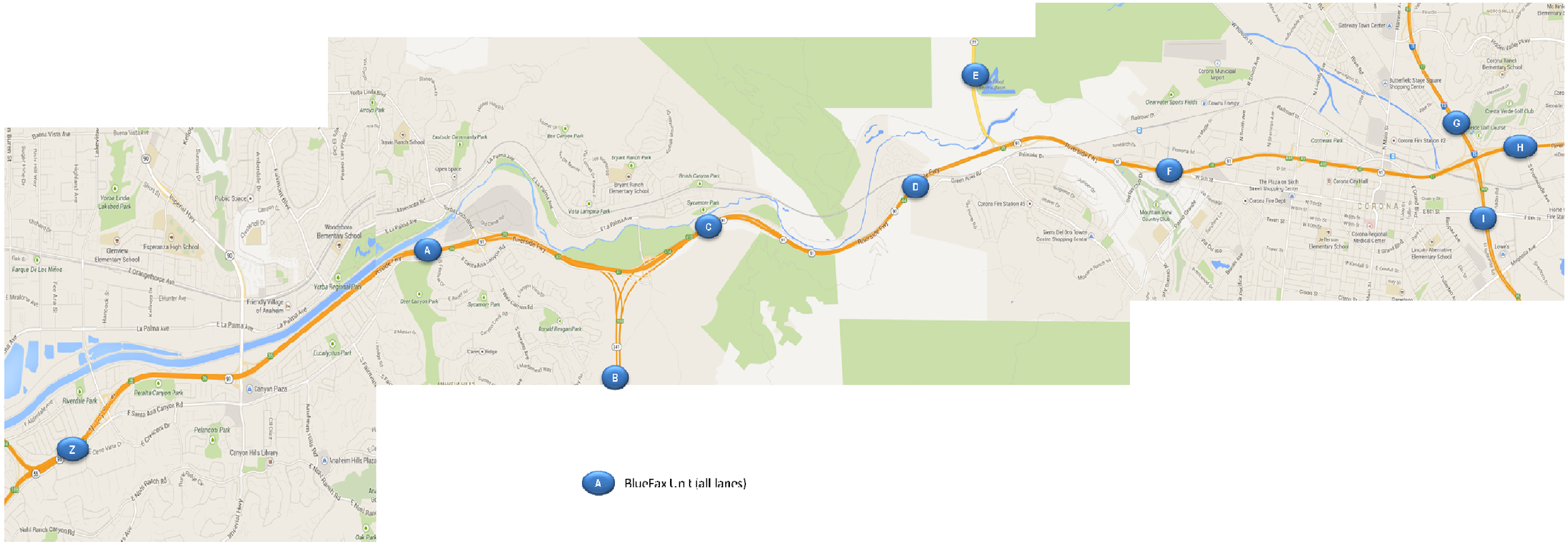
- The operations through the SR-91/SR-241 interchange ingress/egress area require that flows to/from each system are controlled to ensure that the Express Lanes do not break down. This will require coordinating the pricing schemes for three different systems and for different entry points.
- The direct connection proposed by the project will integrate three tolling facilities (SR-91 Express Lanes, SR-241 Toll Roads, RCTC Express Lanes) operated by three different agencies (OCTA, F/ETCA, and RCTC). The operation and setting of toll rates for all three systems will require careful planning and coordination.
- Both of the above items will be addressed in the Concept of Operations Report.

10 Project Reviewers

Agency	Reviewer	Review Date
Foothill/Eastern Transportation Corridor Agency	Juliet Su	7/2/14
	King Thomas	7/2/14
	Doug Feremenga	7/2/14
	Valarie McFall	7/2/14
	David Lowe	7/2/14
	Steven Abendschein	7/2/14
	Jeff Fromhertz	7/2/14
	Mike Kraman	7/2/14
	Lisa Telles	7/2/14
Caltrans District 12	Bassem Barsoum	2/4/15
Orange County Transportation Authority	Anup Kulkarni	2/17/15
Riverside County Transportation Commission	Craig Schneider	12/23/14
Federal Highway Administration	Jesse Glazer	3/25/15

Appendix A
Bluetooth Study Summary Statistics

FIGURE 1
Bluetooth Study Area



A BlueFax Unit (all lanes)

Origin-Destination Reporting Parameters

Date/Time Filtering Method:		Origin
Date Range Filter	OFF	
	DATETIME BEGIN	---
	DATETIME END	---
	LENGTH IN HOURS	---
Trip Length Filter	OFF	
	MINIMUM	---
	MAXIMUM	---
Outliers are:	INCLUDED	
Time of Day Filter	OFF	
	BEGIN	---
	END	---
Day of Week Filter	ON	
	Monday	Yes
	Tuesday	Yes
	Wednesday	Yes
	Thursday	Yes
	Friday	Yes
	Saturday	No
	Sunday	No

Segment Status

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I	No Segmer	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Site H	OK	No Segmer	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Site G	OK	OK	No Segmer	OK	OK	OK	OK	OK	OK	OK	OK	OK
Site D	OK	OK	OK	No Segmer	OK	OK	OK	OK	OK	OK	OK	OK
Site H-1	OK	OK	OK	OK	No Segmer	OK	OK	OK	OK	OK	OK	OK
Site F	OK	OK	OK	OK	OK	No Segmer	OK	OK	OK	OK	OK	OK
Site E	OK	OK	OK	OK	OK	OK	No Segmer	OK	OK	OK	OK	OK
Site C	OK	OK	OK	OK	OK	OK	OK	No Segmer	OK	OK	OK	OK
Site B	OK	OK	OK	OK	OK	OK	OK	OK	No Segmer	OK	OK	OK
Site A	OK	OK	OK	OK	OK	OK	OK	OK	OK	No Segmer	OK	OK
Site Z-1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	No Segmer	OK
Site Z	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	No Segment

OD Counts

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		5134	11797	6949	6069	8152	719	3088	739	5935	6016	4941
Site H	4815		5026	13827	36700	13694	426	6196	1796	11231	11411	9418
Site G	9456	3652		4917	4076	4740	87	2429	994	3619	3570	3180
Site D	5171	11509	4259		11990	24510	1034	18245	6633	29599	29194	24042
Site H-1	4378	20708	4462	12671		12733	355	5777	1632	10359	10456	8905
Site F	8374	15438	5897	27271	17032		1378	13074	3741	21105	20758	18139
Site E	1262	670	60	3618	681	2740		2035	1101	1925	1810	1632
Site C	4116	9269	3685	21194	9937	20246	892		3486	13036	12396	11354
Site B	562	1810	1143	4576	1932	4053	313	4048		658	326	269
Site A	4322	9150	3136	19590	9427	18623	588	15286	411		32619	26897
Site Z-1	4402	9141	3239	19692	9535	18843	576	15243	246	22049		36211
Site Z	5112	10992	3940	22255	11949	23146	611	18180	253	24604	31060	

Mean Travel Time in Minutes

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		2.055964	1.548925	11.73464	1.903792	8.176877	13.15342	17.63664	24.15607	19.32526	23.45216	24.17709
Site H	2.411566		1.461882	9.920863	0.252427	6.537709	11.78087	15.14342	21.33436	17.0841	20.93165	21.59669
Site G	2.685343	2.756526		9.933937	2.784746	6.836053	15.25038	14.9826	20.60211	18.2936	22.877	23.46729
Site D	11.87459	10.77883	10.76692		10.79129	5.252516	6.688427	3.048814	8.67583	6.488313	10.07878	10.60466
Site H-1	2.314072	0.665971	1.527697	9.914642		6.449683	11.58254	14.96633	21.21544	17.08444	20.98695	21.43719
Site F	6.857449	5.633658	6.013404	3.679573	5.655189		5.602467	6.932444	12.69573	10.18543	13.929	14.37352
Site E	14.92419	13.53241	15.66431	7.054411	13.74939	8.530408		10.42995	16.67408	13.60113	17.79452	18.23465
Site C	14.70665	13.85505	13.90061	3.184293	13.71395	8.097811	9.803578		5.822528	4.041663	7.618093	8.093808
Site B	23.9844	23.81951	22.95427	12.68314	23.7548	17.63313	19.08307	9.817383		8.071771	12.67771	13.48256
Site A	20.76496	20.31101	21.08795	8.358504	20.09296	13.88156	14.40791	6.148444	7.998378		3.554103	4.012316
Site Z-1	24.72219	23.88021	25.38691	12.09314	23.60885	17.29493	19.46207	9.462861	11.61782	3.150622		0.519349
Site Z	25.31089	24.40054	25.63126	12.6045	23.90441	17.76422	20.06232	10.04305	11.62628	3.483005	0.540791	

Minimum Travel Time in Minutes

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		0.625	0.075	2.983333	0.566667	1.25	4.558333	6.833333	11.65833	6.775	1.183333	1.016667
Site H	0.125		0.058333	4.45	0	1.183333	6.6	6.533333	11.43333	9.091667	11.075	4.883333
Site G	0.116667	0.141667		1.816667	0	0.05	7.7	4.766667	11.05	8.083333	0.466667	9.4
Site D	5.158333	4.575	4.883333		4.6	2.116667	3.316667	0.133333	6.016667	3.983333	6.125	2.341667
Site H-1	0.066667	0	0	4.366667		1.1	6.791667	6.516667	11.375	9.166667	7.958333	11
Site F	2.408333	2.266667	2.291667	1.775	2.416667		3.733333	3.533333	8.283333	1.3	2.075	2.833333
Site E	7.416667	6.408333	7.233333	3.066667	6.55	3.725		4.983333	9.55	2.466667	6.941667	7.7
Site C	7	2.866667	6.641667	1.333333	2.766667	3.508333	0.966667		4.066667	2.558333	3.683333	4.791667
Site B	11.66667	11.04167	10.73333	3.666667	9.316667	6.266667	10.70833	1.883333		5.6	8.133333	8.325
Site A	9.425	5.333333	3.133333	4.008333	1.95	2.4	8.991667	2.533333	3.283333		1.891667	2.15
Site Z-1	11.49167	10.58333	10.95	6.008333	10.60833	8.175	11.14167	3.733333	8.183333	1.833333		0
Site Z	11.71667	8.116667	10.50833	6.191667	10.79167	5.716667	11.44167	3.933333	8.5	2.183333	0	

Max Travel Time in Minutes

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		29.78333	29.94167	36.91667	29.95	29.96667	41.325	48.94167	65.20833	70.31667	86.11667	86.95
Site H	29.89167		29.75	38.16667	29.875	29.93333	39.21667	50.39167	68.55833	71.075	87.89167	89.10833
Site G	29.95	29.65		34.18333	29.96667	29.875	34.65833	46.01667	65.35	67.775	84.48333	85.30833
Site D	36.73333	38.15	34.11667		38.39167	29.96667	28.83333	29.8	37.88333	33.78333	50.20833	51.4
Site H-1	29.99167	29.89167	29.99167	38.43333		29.99167	40.51667	50.66667	68.78333	71.98333	87.88333	89.36667
Site F	29.91667	29.85	29.65833	29.85833	29.9		29.89167	29.98333	49.33333	49.83333	66.53333	67.6
Site E	41.80833	40.24167	35.25	29.71667	40.25833	29.925		29.33333	52.125	40.85833	57.29167	57.80833
Site C	48.9	50.4	45.675	28.575	50.53333	29.825	29.73333		30.23333	29.75833	37.9	38.99167
Site B	64.55	68.66667	65.56667	37.90833	68.84167	49.99167	54.625	30.68333		28.61667	33.38333	33.59167
Site A	70.26667	71.56667	67.8	33.78333	72.1	50.175	41.05	29.99167	29.91667		29.95	29.98333
Site Z-1	86.35	88.2	84.18333	50.21667	88.38333	66.56667	57.84167	38.05	33.58333	29.9		29.99167
Site Z	87.10833	89.18333	85.24167	51.46667	89.08333	67.73333	59.21667	39.19167	33.69167	29.925	29.98333	

Median Travel Time in Minutes

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		1.5	1.3	9.35	1.508333	6.325	11.15	13.49167	18.66667	15.525	18.97917	19.54167
Site H	1.375		0.891667	6.466666	0.083333	3.766667	9.2875	10	14.84167	12.575	16.29167	16.84167
Site G	1.516667	1.658333		6.916667	1.691667	4.15	10.9	10.25833	15.1875	13.48333	17.225	17.73333
Site D	8.325	7.383333	7.725		7.408333	3.408333	5.466667	2.666667	8.208333	5.966667	9.108333	9.5
Site H-1	1.325	0.05	0.808333	6.433333		3.708334	8.975	9.858333	14.76667	12.54167	16.24583	16.75
Site F	4.783333	3.9	4.366667	2.816667	3.925		5.208333	5.766667	11.21667	8.841667	12.35	12.79167
Site E	10.89583	9.491667	9.7	5.7	9.541667	5.741667		9.966667	16.475	12.26667	16.2875	16.66667
Site C	10.45	9.55	9.916667	2.341667	9.533333	5.645833	7.783333		5.3	3.65	6.925	7.366667
Site B	17.94583	16.2125	16.14167	8.495833	16.05	12.15	14.01667	6.283333		7.05	10.40833	11
Site A	14.925	13.95	14.575	6.225	13.925	9.866667	11.9375	3.833333	6.825		2.916667	3.275
Site Z-1	18.18333	17.15833	17.88333	9.15	17.06667	12.96667	15.37917	6.666667	9.691667	2.725		0.383333
Site Z	18.49167	17.42083	18.12917	9.45	17.24167	13.23333	15.66667	6.95	9.783333	3.016667	0.283333	

25th Percentile Travel Time in Minutes

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		1.25	1.191667	7.191667	1.283333	4.5375	9.725	10.04167	15.33542	12.99167	15.8	16.17292
Site H	1.25		0.825	5.966667	0.041667	3.441667	8.275	8.533333	13.43333	11.58333	14.325	14.69167
Site G	1.35	1.508333		6.316667	1.541667	3.766667	9.677083	9	13.83333	12.04167	14.90833	15.3
Site D	6.977083	6.116667	6.633333		6.166667	2.833333	4.85	2.341667	7.425	5.6	8.291667	8.583333
Site H-1	1.191667	0.025	0.708333	5.933333		3.408333	8.108333	8.48125	13.39167	11.56667	14.30833	14.64167
Site F	4.1	3.316667	3.766667	2.55	3.358333		4.741667	5.008333	10.03333	8.175	10.91667	11.225
Site E	9.375	8.258333	8.583333	4.183333	8.316667	5.008333		6.916667	12.65	10.05	13.28333	13.7
Site C	8.995833	8.133333	8.622917	2.058333	8.166667	4.875	6.883333		5.058333	3.416667	6.183333	6.491667
Site B	14.625	13.41667	13.86667	7.275	13.46667	10.13333	12.07292	5.2		6.658333	9.608333	9.939583
Site A	12.61667	11.75	12.36667	5.55	11.75833	8.4	10.45417	3.491667	6.510417		2.633333	2.916667
Site Z-1	15.3	14.38333	15.10208	8.183333	14.375	11.03333	13.13333	6.091667	9.141667	2.566667		0.275
Site Z	15.51667	14.64167	15.29167	8.458333	14.63125	11.3	13.50208	6.366667	9.358333	2.841667	0.225	

75th Percentile Travel Time in Minutes

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		1.95	1.466667	12.30208	1.916667	8.783333	13.73125	23.05417	29.84375	20.27292	25.34583	26.42083
Site H	1.608333		0.966667	9.291667	0.141667	5.633333	11.675	18.78333	27.80833	16.875	21.225	22.05
Site G	1.875	2.6375		9.15	2.65	5.9	20.625	18.67917	23.03333	19.65833	24.59167	25.24167
Site D	15.78333	14.80833	14.375		14.8	7.566667	7.541666	3.5	9.408333	6.741667	10.75	11.31667
Site H-1	1.566667	0.1	0.908333	9.033333		5.116667	11.21875	18.40208	26.8125	16.68125	21.19583	21.71667
Site F	7.958333	6.233333	7.110417	3.733333	6.233333		5.783333	8.391667	14.46667	10.61667	14.90833	15.45833
Site E	17.625	15.75833	24.575	9.566667	16.60208	10.54583		13.43333	19.52708	16.3375	20.35833	20.90833
Site C	18.5125	19.025	18.36458	3.741667	18.775	11.48333	12.0125		5.975	4.05	7.891667	8.525
Site B	30.58333	33.54167	30.20833	17.1375	33.475	24.41042	23.98542	13.51667		7.716667	13.31667	14.30417
Site A	24.625	24.15833	24.6875	7.483333	23.95	15.975	15.16667	4.583333	7.404167		3.733333	4.35
Site Z-1	28.63333	28.56875	29.29792	11.10833	28.16667	19.69167	20.27917	8.297917	10.94167	3.033333		0.55
Site Z	29.8	29.275	29.66667	11.775	28.64583	20.33333	20.975	9.083333	10.90417	3.35	0.375	

15th Percentile Travel Time in Minutes

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		1.15	1.15	6.775	1.183333	4.233333	9.069583	9.166667	14.54458	12.38333	15.01667	15.34167
Site H	1.191667		0.783333	5.808333	0.025	3.325	7.983333	8.183333	13.11667	11.31667	13.925	14.24167
Site G	1.291667	1.441667		6.141667	1.466667	3.633333	8.879167	8.591667	13.46667	11.7	14.34167	14.67917
Site D	6.641667	5.866667	6.333333		5.916667	2.7	4.65	2.233333	7.208333	5.45	8.041667	8.316667
Site H-1	1.116667	0.008333	0.633333	5.783333		3.316667	7.891667	8.15	13.0775	11.30833	13.91667	14.225
Site F	3.883333	3.175	3.566667	2.466667	3.225		4.56	4.808333	9.766667	7.975	10.575	10.86667
Site E	8.891667	7.916667	8.266667	3.941667	8.035833	4.808333		6.466667	11.625	9.616667	12.48333	12.78333
Site C	8.616667	7.833333	8.25	1.958333	7.875	4.683333	6.65		4.941667	3.316667	5.933333	6.233333
Site B	13.9	12.875	13.33292	7.025	12.94417	9.766667	11.75	5.016667		6.491667	9.245	9.575
Site A	12.11667	11.275	11.80833	5.35	11.31667	8.1	10.10583	3.383333	6.333333		2.541667	2.816667
Site Z-1	14.7	13.84167	14.43333	7.908333	13.86667	10.65	12.7	5.908333	8.941667	2.5		0.241667
Site Z	14.93333	14.1	14.64167	8.183333	14.11667	10.90833	13.04292	6.175	9.145417	2.766667	0.2	

Mean Speed in MPH - Conversion of Mean Travel Time to Speed

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		29.19995	56.9892	34.08517	30.96912	27.38384	34.57497	30.07353	29.26553	39.42422	39.90817	39.14985
Site H	24.89421		35.22797	41.67706	14.19478	35.87261	37.3776	36.07186	34.97242	45.60504	45.69652	44.81479
Site G	32.87178	18.68261		37.29844	19.77591	28.1923	25.50757	33.61981	34.91257	40.26354	40.01425	39.50853
Site D	33.68346	38.35969	34.41285		38.5839	34.07173	30.30657	43.69292	47.57931	56.41698	54.11668	52.57734
Site H-1	25.47837	5.380325	36.04831	41.99546		36.80969	38.32326	36.68897	35.24908	45.76978	45.70542	45.2734
Site F	32.65271	41.62921	32.04908	48.63671	41.98106		45.84013	44.97322	42.74623	53.47682	51.89369	51.10025
Site E	30.47261	32.5397	24.83354	28.73426	32.28366	30.10616		25.29879	35.58196	32.93048	35.25547	35.23364
Site C	36.06504	39.42615	36.2367	41.83396	40.03949	38.50106	26.91519		57.26293	57.63056	54.13953	52.48408
Site B	29.47499	31.32366	31.33504	32.54635	31.481	30.77698	31.09022	33.9617		38.99282	29.19439	27.40487
Site A	36.69081	38.35954	34.92825	43.79384	38.91667	39.23797	31.08653	37.88329	39.35062		51.42547	49.02732
Site Z-1	37.85801	40.05425	36.05819	45.10241	40.62958	41.79418	32.23471	43.58512	31.85778	58.01122		32.31621
Site Z	37.39613	39.66515	36.17294	44.23537	40.60064	41.34661	32.02387	42.29754	31.78038	56.47797	31.03487	

Mean Speed in MPH - Mean of Individual Speed Observations

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		39.2287	65.81561	42.1438	38.44167	36.03107	39.21707	38.45659	34.99662	46.44992	46.94982	46.11678
Site H	40.73514		59.42411	55.2052	65535	53.29344	43.72535	47.55301	42.762	54.78613	53.85463	52.95354
Site G	51.7164	29.34402		47.26624	65535	41.23727	31.29983	42.73419	41.58162	48.87396	48.91047	47.69586
Site D	42.54564	49.20931	42.31182		49.36981	45.39215	34.29612	47.72636	49.19597	58.86377	57.35688	56.2058
Site H-1	42.30602	65535	65535	55.88666		54.72474	45.34568	48.42654	43.15457	55.13817	54.0648	53.40665
Site F	41.95188	53.81939	39.7835	57.4041	53.94073		48.38027	50.26557	45.62391	57.51787	56.26236	55.44248
Site E	37.36631	41.00225	33.02906	35.08214	40.87185	38.55703		28.66053	38.17517	35.87086	38.58426	38.54123
Site C	44.99773	50.04584	44.73707	51.00483	50.45952	48.08902	30.97162		59.63196	61.55649	57.98033	56.29095
Site B	36.24337	40.33268	39.18175	42.14623	40.49528	39.27703	37.59252	46.19571		42.20514	32.4675	30.7826
Site A	45.76671	49.50765	44.92602	54.14157	49.89491	49.52891	35.17675	53.73917	43.26049		57.99318	55.61669
Site Z-1	46.69789	50.09771	45.77587	54.56517	50.53588	50.80931	38.11288	54.97834	35.35734	64.01158		65535
Site Z	46.25837	49.72073	45.74712	53.69703	50.39379	50.32677	38.02276	53.76873	34.78823	62.19721	65535	

35th Percentile Speed in MPH

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		34.97128	63.42899	36.69515	34.34492	28.37351	36.00191	30.39809	29.77791	43.80738	42.57465	41.43872
Site H	40.93229		55.17762	57.2941	30.71262	55.83922	41.80449	41.59274	37.90749	55.6515	52.7969	51.64168
Site G	53.49818	28.09043		49.12976	29.63456	42.7484	26.66515	37.90397	40.96864	49.68398	46.38881	45.35628
Site D	33.73792	36.21656	34.36046		36.84689	31.07884	32.43253	44.28086	46.25098	57.64583	54.58848	53.39805
Site H-1	41.13404	47.77513	63.54333	58.16576		57.78763	45.13083	43.63703	39.17193	56.18809	53.21841	52.34343
Site F	37.58002	48.35561	35.20074	57.11563	49.37487		46.48287	45.84916	41.21338	55.96071	53.27965	52.40121
Site E	33.85452	38.04239	21.52145	24.24197	37.94932	32.372		21.64307	32.53689	29.82632	33.26667	33.30457
Site C	40.49082	41.22652	39.38456	49.03494	42.98233	39.63233	29.16174		60.25572	60.23878	55.92406	53.9995
Site B	29.92761	29.6175	34.01956	36.10408	30.20193	30.23437	32.46641	37.05641		42.77342	30.37073	29.02211
Site A	39.89266	41.27794	39.14603	53.76514	42.43967	43.74974	33.91621	55.34811	44.43404		56.52725	53.33989
Site Z-1	40.91808	42.38335	39.74482	54.67969	43.40351	45.60424	36.98294	55.92406	36.60306	63.57267		35.96442
Site Z	40.26357	41.92403	39.59394	53.95787	43.57546	44.92295	37.10767	54.8714	36.13866	62.11992	50.3502	

Median Speed in MPH

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		40.02269	67.90154	42.77831	39.0887	35.40147	40.78736	39.31286	37.87179	49.07461	49.31369	48.43648
Site H	43.66111		57.75601	63.93904	42.99765	62.2632	47.41218	54.62514	50.27159	61.95794	58.71123	57.46766
Site G	58.20131	31.05474		53.5692	32.55422	46.43953	35.68809	49.10273	47.35952	54.62782	53.14403	52.28335
Site D	48.0453	56.00078	47.96379		56.20291	52.50728	37.07987	49.95434	50.28914	61.34933	59.88251	58.69101
Site H-1	44.49719	71.6627	68.12893	64.72071		64.0209	49.45744	55.699	50.64277	62.34825	59.04391	57.94236
Site F	46.81135	60.13454	44.13528	63.53691	60.48683		49.30903	54.06491	48.38286	61.60425	58.52852	57.41943
Site E	41.73881	46.39234	40.10311	35.56198	46.52023	44.7288		26.47476	36.01194	36.51292	38.51751	38.54838
Site C	50.7556	57.1991	50.7945	56.8875	57.59783	55.22202	33.9013		62.90849	63.8146	59.55812	57.66463
Site B	39.39299	46.02092	44.56001	48.58735	46.59345	44.66621	42.32794	53.0634		44.64413	35.55977	33.58979
Site A	51.04746	55.85097	50.5362	58.80337	56.15447	55.20448	37.51974	60.7626	46.11591		62.66449	60.06506
Site Z-1	51.47202	55.74573	51.18766	59.60982	56.20415	55.74503	40.79246	61.86599	38.1893	67.07208		43.78277
Site Z	51.18681	55.55711	51.14179	59.00155	56.29006	55.50304	41.00891	61.12174	37.76706	65.20875	59.23551	

15th Percentile Speed in MPH

	END STATION											
BEGIN STATION	**Site I**	**Site H**	**Site G**	**Site D**	**Site H-1**	**Site F**	**Site E**	**Site C**	**Site B**	**Site A**	**Site Z-1**	**Site Z**
Site I		52.2035	76.75826	59.03722	49.82433	52.89314	50.14333	57.86139	48.60504	61.5249	62.32627	61.69665
Site H	50.3782		65.74354	71.18607	143.3254	70.53375	55.15749	66.75169	56.88292	68.84722	68.68968	67.95912
Site G	68.33961	35.72193		60.32895	37.54833	53.04331	43.81044	58.62799	53.41134	62.95428	63.82842	63.16149
Site D	60.22241	70.47826	58.50321		70.37238	66.28234	43.59211	59.64698	57.26567	67.16532	67.82548	67.04184
Site H-1	52.79891	429.9704	86.95402	71.9948		71.58116	56.24674	67.37415	57.18408	69.14821	68.92581	68.22738
Site F	57.66034	73.86605	54.03478	72.55229	73.61576		56.3197	64.84041	55.56598	68.29896	68.35246	67.59113
Site E	51.14667	55.62198	47.05647	51.42578	55.23765	53.41099		40.80389	51.03627	46.57454	50.25533	50.25864
Site C	61.55467	69.73422	61.05601	68.02293	69.7269	66.57103	39.67897		67.47016	70.22813	69.51235	68.14911
Site B	50.859	57.95062	53.94714	58.76015	57.77312	55.56598	50.49333	66.46146		48.48387	40.03439	38.5888
Site A	62.87895	69.10165	62.37672	68.42075	69.09729	67.24497	44.32013	68.84432	49.69596		71.91007	69.83896
Site Z-1	63.6689	69.10323	63.42305	68.96901	69.17434	67.87111	49.39795	69.80648	41.3925	73.10857		69.44852
Site Z	63.38367	68.64192	63.32326	68.13417	68.75097	67.33295	49.25838	68.79289	40.40141	71.10111	83.91693	

Travel Time Report Parameters

METHOD ALL

OUTLIERS EXCLUDED

Status of Station Pairs

	END STATION											
BEGIN STA	Site I	Site H	Site G	Site D	Site H-1	Site F	Site E	Site C	Site B	Site A	Site Z-1	Site Z
Site I		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Site H	OK		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Site G	OK	OK		OK	OK	OK	OK	OK	OK	OK	OK	OK
Site D	OK	OK	OK		OK	OK	OK	OK	OK	OK	OK	OK
Site H-1	OK	OK	OK	OK		OK	OK	OK	OK	OK	OK	OK
Site F	OK	OK	OK	OK	OK		OK	OK	OK	OK	OK	OK
Site E	OK	OK	OK	OK	OK	OK		OK	OK	OK	OK	OK
Site C	OK	OK	OK	OK	OK	OK	OK		OK	OK	OK	OK
Site B	OK	OK	OK	OK	OK	OK	OK	OK		OK	OK	OK
Site A	OK	OK	OK	OK	OK	OK	OK	OK	OK		OK	OK
Site Z-1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK		OK
Site Z	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	

Mean Travel Time in Minutes

	END STATION											
BEGIN STA	Site I	Site H	Site G	Site D	Site H-1	Site F	Site E	Site C	Site B	Site A	Site Z-1	Site Z
Site I		1.64	1.38	10.44	1.65	7.26	11.76	15.49	21.75	17.12	20.59	21.17
Site H	1.71		0.95	8.75	0.11	5.61	10.28	13.41	19.16	15.07	18.53	18.96
Site G	2.25	2.08		8.76	2.12	5.82	13.91	13.26	18.54	15.44	19.06	19.65
Site D	10.85	9.88	9.92		9.93	4.85	6.17	2.87	8.36	6.24	9.71	10.1
Site H-1	1.63	0.39	0.84	8.73		5.53	9.72	13.2	19.03	15	18.46	18.83
Site F	6.1	5.02	5.3	3.3	5.07		5.18	6.41	11.85	9.48	12.92	13.32
Site E	13.81	12.17	14.57	6.4	12.29	7.84		9.82	15.85	12.59	16.15	16.61
Site C	13.24	12.45	12.53	2.96	12.42	7.51	9.21		5.54	3.75	7.11	7.56
Site B	21.87	21.86	21.36	11.7	21.8	16.34	17.8	9.08		7.28	11.3	12.12
Site A	18.31	17.84	18.09	7.64	17.9	12.66	13.19	5.55	7.49		3.5	3.91
Site Z-1	21.4	20.7	21.35	11	20.64	15.64	16.62	8.64	10.5	2.94		0.43
Site Z	21.93	21.21	21.64	11.46	21.11	16.11	16.87	9.13	10.62	3.24	0.3	

All Measured Parameters

		END STATION											
BEGIN STATION		Site I	Site H	Site G	Site D	Site H-1	Site F	Site E	Site C	Site B	Site A	Site Z-1	Site Z
Site I	count		6410	14876	9408	7758	11113	1022	3824	937	7840	7941	6447
	mean_minutes		1.64	1.38	10.44	1.65	7.26	11.76	15.49	21.75	17.12	20.59	21.17
	min_minutes		0.65	0.73	5.09	0.57	2.92	4.56	6.83	11.66	9.52	11.67	11.97
	max_minutes		10.31	7.44	36.92	11.3	29.97	40.87	48.73	63.7	67.16	81.23	71.75
	median_minutes		1.42	1.28	8.6	1.47	5.59	10.47	11.8	17.64	14.69	17.95	18.42
	PCT25_minutes		1.21	1.18	6.91	1.25	4.32	9.05	9.35	15	12.63	15.39	15.72
	PCT75_minutes		1.82	1.44	11.1	1.85	8.13	12.72	17.74	23.92	17.6	22.14	23
	PCT15_minutes		1.13	1.13	6.59	1.16	4.08	8.66	8.86	14.38	12.14	14.78	15.09
Site H	count	5824		6150	17917	47534	17747	579	7515	2264	14345	14593	11983
	mean_min	1.71		0.95	8.75	0.11	5.61	10.28	13.41	19.16	15.07	18.53	18.96
	min_minut	0.53		0.38	4.41	0	2.47	6.6	6.38	11.11	7.18	11.14	11.18
	max_minu	11.67		8.97	38.17	1.57	29.93	39.22	50.36	65.54	65.62	67.21	68.06
	median_m	1.35		0.88	6.23	0.1	3.62	8.78	9.33	14.26	12.1	15.5	16
	PCT25_mir	1.24		0.82	5.88	0.05	3.38	8.04	8.25	13.29	11.45	14.17	14.48
	PCT75_mir	1.5		0.95	7.33	0.17	4.26	10.46	14.28	20.14	14.13	18.78	19.39
	PCT15_mir	1.19		0.79	5.75	0.03	3.28	7.83	8	12.98	11.22	13.83	14.12
Site G	count	11879	4311		6403	4851	6137	110	2989	1242	4490	4397	3903
	mean_min	2.25	2.08		8.76	2.12	5.82	13.91	13.26	18.54	15.44	19.06	19.65
	min_minut	0.88	0.47		4.48	0	0.05	7.52	6.2	11.01	8.08	11.28	9.4
	max_minu	15.47	7.99		34.18	8.48	29.87	34.66	45.77	65.35	57.62	79.83	82.2
	median_m	1.47	1.63		6.67	1.68	4	10.41	9.77	14.66	12.77	16.4	16.98
	PCT25_mir	1.33	1.51		6.23	1.55	3.69	8.87	8.68	13.63	11.86	14.62	14.98
	PCT75_mir	1.73	1.92		7.65	1.96	4.59	15.67	13.9	18.18	14.77	19.55	20.38
	PCT15_mir	1.28	1.46		6.05	1.48	3.57	8.38	8.39	13.3	11.56	14.18	14.49
Site D	count	6769	14622	5334		15235	31634	1308	22302	7887	38586	37994	31205
	mean_min	10.85	9.88	9.92		9.93	4.85	6.17	2.87	8.36	6.24	9.71	10.1
	min_minut	5.16	4.57	4.33		4.6	2.03	3.81	1.65	6.02	3.98	6.33	6.4
	max_minu	36.73	37.97	32.85		38.35	23.9	21.49	10.39	17.22	15.02	31	31.45
	median_m	7.85	6.95	7.41		6.97	3.22	5.21	2.53	7.92	5.87	8.93	9.28
	PCT25_mir	6.8	6.01	6.52		6.07	2.78	4.78	2.25	7.33	5.56	8.24	8.53
	PCT75_mir	13.52	13.28	12.64		13.32	6.93	6.69	3.22	9.1	6.48	10.59	11.08

	PCT15_mir	6.52	5.81	6.24		5.86	2.67	4.62	2.16	7.15	5.42	8.02	8.28
Site H-1	count	5300	26182	5319	16368		16601	491	7030	2037	13115	13264	11261
	mean_min	1.63	0.39	0.84	8.73		5.53	9.72	13.2	19.03	15	18.46	18.83
	min_minut	0.1	0	0.1	4.34		2.48	6.77	6.42	11.33	7.03	11.08	9.95
	max_minu	12.43	29.98	8.42	38.43		29.96	40.52	50.67	65.63	61.52	67.08	68.35
	median_m	1.3	0.06	0.79	6.21		3.57	8.46	9.22	14.2	12.07	15.47	15.92
	PCT25_mir	1.17	0.03	0.69	5.85		3.35	7.9	8.23	13.25	11.43	14.15	14.46
	PCT75_mir	1.47	0.09	0.88	7.28		4.18	9.62	13.46	19.69	14.07	18.62	19.14
	PCT15_mir	1.1	0.02	0.63	5.72		3.26	7.73	8	12.94	11.2	13.82	14.1
Site F	count	11397	20176	7582	35412	22272		1937	15969	4570	27145	26733	23337
	mean_min	6.1	5.02	5.3	3.3	5.07		5.18	6.41	11.85	9.48	12.92	13.32
	min_minut	2.82	2.09	2.29	1.6	2.42		3.73	3.65	8.28	6.22	8.35	8.37
	max_minu	29.9	28.29	28.02	13.43	27.79		12.72	17.81	26.64	26.58	35.9	36.21
	median_m	4.53	3.71	4.17	2.72	3.73		4.97	5.44	10.68	8.58	11.84	12.25
	PCT25_mir	3.99	3.27	3.68	2.51	3.32		4.6	4.87	9.9	8.09	10.8	11.11
	PCT75_mir	6.86	5.42	6.13	3.22	5.47		5.52	7.29	13.32	9.87	14.08	14.6
	PCT15_mir	3.81	3.14	3.52	2.43	3.2		4.47	4.72	9.66	7.91	10.51	10.8
Site E	count	1714	887	87	4398	898	3712		2329	1213	2392	2231	2014
	mean_min	13.81	12.17	14.57	6.4	12.29	7.84		9.82	15.85	12.59	16.15	16.61
	min_minut	6.65	6.38	7.13	2.98	6.55	3.73		4.98	9.55	7.48	9.58	9.8
	max_minu	41.43	40.56	35.25	17.42	40.69	27.97		22.53	31.42	23.83	29.91	33.84
	median_m	10.2	8.91	9.24	4.76	8.96	5.38		8.69	15.55	11.19	14.98	15.43
	PCT25_mir	9	8.11	8.48	4.01	8.2	4.87		6.57	12.02	9.74	12.8	13.09
	PCT75_mir	14.93	11.96	21.87	8.81	12.2	9.17		12.85	18.88	15.26	19.13	19.66
	PCT15_mir	8.63	7.81	8.05	3.84	7.9	4.69		6.25	11.43	9.41	12.22	12.49
Site C	count	5129	11388	4443	26139	12281	25361	1075		3901	15696	14963	13776
	mean_min	13.24	12.45	12.53	2.96	12.42	7.51	9.21		5.54	3.75	7.11	7.56
	min_minut	7	2.87	6.64	1.3	2.77	3.51	5.83		4.07	2.62	3.68	4.79
	max_minu	48.7	43.44	40.98	10.6	43.47	27.78	29.73		10.94	9.85	17.68	18.08
	median_m	9.86	8.97	9.47	2.25	8.94	5.34	7.43		5.25	3.58	6.68	7.09
	PCT25_mir	8.8	8.01	8.48	2.03	8.04	4.79	6.8		5.02	3.37	6.08	6.39
	PCT75_mir	14.74	15.8	14.4	3.03	15.47	9.81	10.53		5.68	3.93	7.52	8.06
	PCT15_mir	8.49	7.76	8.18	1.93	7.8	4.63	6.61		4.9	3.29	5.89	6.18
Site B	count	707	2210	1388	5416	2376	4968	364	4649		663	330	270
	mean_min	21.87	21.86	21.36	11.7	21.8	16.34	17.8	9.08		7.28	11.3	12.12
	min_minut	11.67	11.04	10.73	3.67	9.32	6.27	10.71	1.88		5.6	8.13	8.33
	max_minu	64.36	68.67	65.57	37.91	68.84	49.99	52.85	30.68		17.9	30.54	30.07
	median_m	16.63	15.2	15.38	7.99	15.13	11.42	12.92	5.68		6.94	10.24	10.68
	PCT25_mir	14.35	13.34	13.72	7.22	13.38	10.05	11.95	5.13		6.59	9.49	9.83
	PCT75_mir	26.36	27.89	25.16	13.23	27.45	20.64	20.32	11.72		7.42	12.48	13.23
	PCT15_mir	13.77	12.83	13.3	6.98	12.89	9.73	11.71	4.98		6.44	9.2	9.55
Site A	count	5548	11369	3758	25015	11777	23922	754	18954	430		43096	35347
	mean_min	18.31	17.84	18.09	7.64	17.9	12.66	13.19	5.55	7.49		3.5	3.91
	min_minut	9.43	8.58	3.13	3.9	8.61	6.05	8.56	2.58	3.28		1.89	2.15
	max_minu	70.27	71.16	67.46	33.76	72.1	50.17	40.99	29.99	29.92		18.38	15.16
	median_m	13.99	13.06	13.78	5.96	13.07	9.27	11.2	3.72	6.75		2.88	3.22
	PCT25_mir	12.3	11.53	12.1	5.47	11.57	8.27	10.23	3.45	6.47		2.63	2.92
	PCT75_mir	20.18	20.48	19.68	7	20.45	14.03	13.25	4.32	7.17		3.79	4.37
	PCT15_mir	11.91	11.14	11.64	5.29	11.2	8	9.98	3.35	6.32		2.54	2.82
Site Z-1	count	5557	11365	3807	24958	11916	24110	718	18918	253	28227		47893
	mean_min	21.4	20.7	21.35	11	20.64	15.64	16.62	8.64	10.5	2.94		0.43
	min_minut	11.49	10.56	9.84	5.63	10.61	8.03	10.65	3.73	8.18	1.83		0
	max_minu	85.63	86.99	81.72	49.93	87.03	66.14	57.84	38.05	30.79	28.18		2.58
	median_m	16.83	15.89	16.86	8.75	15.82	12.08	14.16	6.45	9.62	2.69		0.37
	PCT25_mir	14.94	14.1	14.76	8.05	14.14	10.86	12.86	6.02	9.08	2.55		0.27
	PCT75_mir	23.42	23.58	23.18	10.18	23.42	17.15	16.73	7.57	10.4	2.93		0.52
	PCT15_mir	14.44	13.67	14.19	7.82	13.72	10.53	12.49	5.85	8.91	2.47		0.24
Site Z	count	6583	13930	4807	28437	15342	30266	771	22803	262	31526	39988	
	mean_min	21.93	21.21	21.64	11.46	21.11	16.11	16.87	9.13	10.62	3.24	0.3	
	min_minut	11.72	10.77	10.17	5.83	10.79	5.72	10.9	3.93	8.32	2.14	0	
	max_minu	86.78	88.93	85.08	51.12	88.82	66.4	58.3	39.19	32.77	28.38	6.44	
	median_m	17.05	16.12	16.9	9.04	16.02	12.32	14.42	6.73	9.72	2.97	0.28	
	PCT25_mir	15.17	14.37	14.95	8.33	14.4	11.12	13.19	6.28	9.32	2.82	0.22	
	PCT75_mir	24.2	24.16	23.52	10.55	23.75	17.73	17.04	7.92	10.57	3.23	0.36	
	PCT15_mir	14.69	13.95	14.43	8.09	13.98	10.79	12.83	6.12	9.13	2.74	0.2	

TRAVEL TIME DATA

1 HOUR CORRIDOR STATISTICAL SUMMARIES

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 8-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

	Segment Label		DED_C45	DED_EE8	DED_2A5	DED_B58	DED_9A2	DED_D69	DED_BB1	DED_D7C	DED_D35	DED_D6D	DED_2BE	C45_DED	C45_EE8	C45_2A5	C45_B58	C45_9A2	C45_D69	C45_BB1	C45_D7C	C45_D35	C45_D6D	C45_2BE	EE8_DED	EE8_C45
			Site I to Site H	Site I to Site G	Site I to Site D	Site I to Site H-1	Site I to Site F	Site I to Site E	Site I to Site C	Site I to Site B	Site I to Site A	Site I to Site Z-1	Site I to Site Z	Site H to Site I	Site H to Site G	Site H to Site D	Site H to Site H-1	Site H to Site F	Site H to Site E	Site H to Site C	Site H to Site B	Site H to Site A	Site H to Site Z-1	Site H to Site Z	Site G to Site I	Site G to Site H
	Length (miles)		1.001	1.471	6.666	0.983	3.732	7.580	8.840	11.782	12.698	15.599	15.775	1.001	0.858	6.891	0.060	3.909	7.339010836	9.104189489	12.43523739	12.98535085	15.94173031	16.1308518	1.471199888	0.858318554
Time	Begin Time	End Time																								
Midnight	12:00 AM	1:00 AM																								
	1:00 AM	2:00 AM																								
	2:00 AM	3:00 AM																								
	3:00 AM	4:00 AM																								
	4:00 AM	5:00 AM																								
	5:00 AM	6:00 AM																								
	6:00 AM	7:00 AM																								
	7:00 AM	8:00 AM	1.102	1.183	6.343	1.033	3.648	8.243			11.580			1.257	0.823	5.859	0.053	2.981	7.357142874			11.35833329			1.314285734	1.404166678
	8:00 AM	9:00 AM	1.122	1.170	6.469	1.097	3.736	8.277			12.174			1.215	0.828	5.810	0.050	3.177	7.880555531			11.66064356			1.309042554	1.470312477
	9:00 AM	10:00 AM	1.101	1.173	6.505	1.076	3.880	8.359		13.121	11.891	20.916	15.692	1.225	0.820	5.863	0.051	3.233	8.013888923		13.35000001	11.39933038	14.80804597	15.42358491	1.302513251	1.486805594
	10:00 AM	11:00 AM	1.275	1.183	6.842	1.237	3.967	8.715	8.622	13.671	12.404	15.326	15.968	1.262	0.837	5.841	0.054	3.271	8.258333299	8.061666662	13.56875003	11.30553481	14.86774427	15.45925927	1.362777799	1.476851863
	11:00 AM	12:00 PM	1.169	1.143	6.888	1.139	4.214	8.317	9.027	14.156	12.317	15.144	15.484	1.252	0.829	6.141	0.050	3.235	8.136111125	8.004347823	13.21291666	11.76796118	14.02826924	14.37912698	1.32030515	1.489880948
Noon	12:00 PM	1:00 PM	1.219	1.180	6.751	1.161	4.168	8.598	9.084	14.410	12.225	15.081	15.382	1.324	0.842	5.862	0.043	3.419	7.869444452	8.242516999	13.90396823	11.32404373	14.58030334	14.91010638	1.34622397	1.522126435
	1:00 PM	2:00 PM	1.238	1.203	7.070	1.211	4.075	8.798	8.922	14.350	12.425	14.973	15.260	1.301	0.851	5.951	0.055	3.242	7.643749989	7.990634935	13.15217391	11.34514925	14.01647584	14.26682695	1.33324916 2	1.51666668
	2:00 PM	3:00 PM	1.204	1.158	8.650	1.150	4.466	10.629	9.021	14.367	13.956	14.949	15.287	1.300	0.843	5.995	0.049	3.295	7.670833301	8.12305296	13.26972221	11.43794327	13.94596154	14.30343642	1.359883717	1.529301092
	3:00 PM	4:00 PM	1.250	1.172	9.143	1.172	5.899	10.600	10.681	16.020	14.745	16.581	16.727	1.277	0.829	6.092	0.061	3.333	8.066666666	8.138608572	13.22596154	11.56400965	14.04854015	14.25654209	1.321940937	1.534496124
	4:00 PM	5:00 PM	1.235	1.193	10.481	1.204	6.419	12.892	11.360	15.882	16.050	17.486	17.749	1.310	0.836	6.212	0.038	3.417	8.390277727	8.240277776	13.7308642	12.04127297	14.2967816	14.54003114	1.357142853	1.558333336
	5:00 PM	6:00 PM	1.922	1.453	9.923	1.908	7.945	11.539	12.693	17.722	15.966	18.687	19.039	1.321	0.882	6.109	0.052	3.466	7.358333319	8.51103989	13.80092592	11.88948599	14.80498635	15.13356919	1.394649111	1.667948698
	6:00 PM	7:00 PM	1.527	1.291	6.894	1.622	6.954	9.082	12.303	18.527	12.651	18.894	19.158	1.365	0.864	6.032	0.057	3.393	8.606249965	8.465126811	14.01197917	11.5405142	14.65177994	14.83695287	1.397284645	1.593055569
	7:00 PM	8:00 PM	1.185	1.206	6.750	1.135	4.185	9.065	9.099	13.600	12.305	15.381	15.655	1.304	0.850	6.007	0.063	3.332	7.9999999	8.305759789	14.18809522	11.53676976	14.21145833	14.50697917	1.369444449	1.593939405
	8:00 PM	9:00 PM	1.190	1.228	6.571	1.116	4.088	8.836	8.897	14.950	12.067	14.861	15.080	1.292	0.839	5.909	0.048	3.335	10.06250007	8.116558434	13.14916669	11.30539217	14.31958762	14.56071425	1.359305548	1.519871778
	9:00 PM	10:00 PM	1.137	1.212	6.612	1.105	3.984	8.746	8.739	15.745	12.079	14.786	14.951	1.288	0.847	5.857	0.054	3.282	7.897222247	8.029861127	13.22045456	11.27935324	13.98594276	14.24155251	1.347321449	1.496428573
	10:00 PM	11:00 PM	1.168	1.177	6.786	1.144	3.906	9.094	8.831		12.288	14.630	14.827	1.295	0.834	5.756	0.058	3.253		8.128484836	14.04333327	11.13373013	14.02759562	14.18433906	1.370277788	1.585897435
Midnight	11:00 PM	12:00 AM	1.146	1.242	6.650	1.139	3.908	8.545	9.073	26.375	11.949	15.154	15.254	1.405	0.807	6.120	0.057	3.200		7.951754391	12.21666679	11.68194443	13.7840909	14.1742424	1.412698414	1.504545508

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 8-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

		Segment	EE8_2A5	EE8_B58	EE8_9A2	EE8_D69	EE8_BB1	EE8_D7C	EE8_D35	EE8_D6D	EE8_2BE	2A5_DED	2A5_C45	2A5_EE8	2A5_B58	2A5_9A2	2A5_D69	2A5_BB1	2A5_D7C	2A5_D35	2A5_D6D	2A5_2BE	B58_DED	B58_C45	B58_EE8	B58_2A5
		Label	Site G to Site D	Site G to Site H-1	Site G to Site F	Site G to Site E	Site G to Site C	Site G to Site B	Site G to Site A	Site G to Site Z-1	Site G to Site Z	Site D to Site I	Site D to Site H	Site D to Site G	Site D to Site H-1	Site D to Site F	Site D to Site E	Site D to Site C	Site D to Site B	Site D to Site A	Site D to Site Z-1	Site D to Site Z	Site H-1 to Site I	Site H-1 to Site H	Site H-1 to Site G	Site H-1 to Site D
		Length (miles)	6.17533838	0.917848109	3.212067323	6.48333606	8.395202059	11.98787924	12.27608467	15.25676575	15.45263357	6.666285817	6.891207213	6.175338387	6.939498539	2.982705285	3.378388244	2.220192926	6.879833845	6.100850039	9.090498164	9.29274368	0.982646405	0.059718995	0.917848109	6.939498539
Time	Begin Time	End Time																								
Midnight	12:00 AM	1:00 AM																								
	1:00 AM	2:00 AM																								
	2:00 AM	3:00 AM																								
	3:00 AM	4:00 AM																								
	4:00 AM	5:00 AM																								
	5:00 AM	6:00 AM																								
	6:00 AM	7:00 AM																								
	7:00 AM	8:00 AM	6.181818179	1.379166646	3.288888875				12.20185187			6.375757557	5.900000017	6.125362324	5.893010754	2.606431162	4.316666722			5.529878041			1.300000018	0.067757018	0.838333363	5.883333344
	8:00 AM	9:00 AM	6.21328126	1.424999982	3.514516134				11.92948718			6.397348479	5.956402438	6.30759803	5.904761916	2.662239579	4.613636363			5.869691112			1.277430563	0.072520183	0.832083296	5.866823902
	9:00 AM	10:00 AM	6.048387104	1.440740748	3.524137933				11.55492423	15.09876543	15.52115383	6.559803913	5.92064813	6.348170738	5.909057968	2.614067658	4.862500071		7.501282074	5.522426891	8.946836411	9.514876029	1.2654762	0.067857145	0.845833349	5.925735304
	10:00 AM	11:00 AM	6.269833329	1.419444472	3.474324309	7.52499992	8.269907404	14.21666661	11.69411766	14.81439395	15.52083334	6.584591171	5.920061719	6.339375002	5.878978967	2.619058291	4.491666672	2.15684684	7.794583338	5.51903646	8.893236298	9.502101133	1.296250031	0.071134419	0.867647066	5.901851865
	11:00 AM	12:00 PM	6.284188031	1.435784316	3.608687955		8.546396408	14.44666663	11.59930554	14.34348958	14.60864199	6.658712126	5.961441787	6.390416668	5.887748755	2.618374317	4.676666647	2.155011083	7.360925905	5.54692672	8.233306549	8.561378215	1.285952365	0.071317831	0.835465103	6.161390682
Noon	12:00 PM	1:00 PM	6.076000001	1.470225209	3.549999999	7.816666681	8.408035694	14.85833334	11.5	14.47333336	14.86597224	6.69440786	5.994907413	6.405128229	5.957556498	2.646453169	4.507142862	2.188301283	7.661333315	5.483223682	8.294720326	8.618270447	1.351360539	0.069471941	0.863888897	5.93747087
	1:00 PM	2:00 PM	6.176736136	1.445430103	3.513787903	8.616666785	8.23780489	13.20000002	11.49655172	14.11953128	14.40709878	6.75927419	5.874468087	6.395833359	5.86575	2.623030298	4.558333308	2.150355873	7.399382703	5.429476801	8.136896933	8.431680447	1.326700669	0.070347648	0.851587317	6.00288889
	2:00 PM	3:00 PM	6.325537655	1.475505058	3.522962961	25.65000001	8.445698924	13.25681821	11.7914216	14.05229887	14.36630436	6.700490197	5.921491215	6.604427046	5.88444443	2.596340571	4.465277754	2.137858717	7.331691918	5.515186251	8.04885057	8.361475404	1.365476204	0.069095663	0.837634413	6.058128843
	3:00 PM	4:00 PM	6.411442786	1.481249991	3.605508484	8.025000058	8.516666669	13.82380951	11.96967593	14.52187501	14.69351854	6.618005943	6.007456148	6.393518491	5.982616494	2.624597426	4.600000026	2.145370369	7.344576716	5.551493702	8.174614194	8.414910598	1.30694444	0.067681029	0.829999995	6.142777773
	4:00 PM	5:00 PM	6.575555561	1.508878809	3.668827185		8.607843153	13.3797619	12.45141845	14.94467595	15.28854169	7.436764707	6.396891545	7.250245064	6.364679498	2.784407554	4.800000004	2.165005735	7.350320513	5.783333342	8.257288397	8.542717081	1.34047619	0.068329872	0.860476188	6.309684686
	5:00 PM	6:00 PM	6.454296856	1.570959604	3.750595251		8.798809528	14.33464914	12.2739316	15.30995935	15.63210782	6.851257868	6.195170442	6.533012828	6.160175437	2.72686507	4.933333397	2.252999996	7.50778686	5.704109986	8.578734761	8.898836369	1.366463408	0.074054985	0.89320174	6.199173025
	6:00 PM	7:00 PM	6.303333305	1.533352923	3.69412565		8.645325188	14.12611115	11.86565656	14.98706136	15.27177416	6.847695056	6.12446809	6.699958333	6.103741502	2.712799268	4.708333339	2.225461134	7.470673082	5.579891306	8.429089224	8.725843887	1.393421043	0.068201132	0.852678598	6.073784721
	7:00 PM	8:00 PM	6.375520849	1.551282038	3.632291654	32.62500007	8.531904743	14.15104165	12.14791671	14.579798	14.71666669	6.902350432	6.113028176	6.836858952	6.093354424	2.756797015	4.627083298	2.180525363	7.794212988	5.586856059	8.247126443	8.532383431	1.336197904	0.071223195	0.840740719	6.075000004
	8:00 PM	9:00 PM	6.416919174	1.48020832	3.607098771	15.80000013	8.530681846	13.62291662	12.42045457	14.91304349	15.37992427	6.615990976	5.929519782	6.517592613	6.021464642	2.667139482	5.118333299	2.156097559	7.506034512	5.528324921	8.286910033	8.547906202	1.327777773	0.068273429	0.819827573	5.97932488
	9:00 PM	10:00 PM	6.149479161	1.478472236	3.660049013	8.02499989	8.838690461	14.05416667	11.66875002	15.14431817	15.50198413	6.401190505	5.979166668	6.38174603	6.00386474	2.665740747	5.52708332	2.124952656	7.440000013	5.476238743	8.180877617	8.473148148	1.275980413	0.063629621	0.865942026	5.938333339
	10:00 PM	11:00 PM	6.434803907	1.474999962	3.732638889		8.356818159	13.3083334	12.41354166	14.84944442	15.38402779	6.294444404	5.926344101	6.854545449	5.88657408	2.683084566	4.630555641	2.138114757	7.284027804	5.614692983	8.101119399	8.387212638	1.350555584	0.073098724	0.788888913	5.862121221
Midnight	11:00 PM	12:00 AM	6.791666694	1.507638926	3.492187491		8.802083326	16.2749999	12.70694448	15.31666666	15.89583336	6.379999995	6.122580639	6.806944376	6.18583332	2.752124175		2.195312503	8.230555588	5.608506943	8.33797468	8.613809513	1.379861101	0.063888889	0.836666672	6.271180578

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 8-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

		Segment Label	B58_9A2	B58_D69	B58_BB1	B58_D7C	B58_D35	B58_D6D	B58_2BE	9A2_DED	9A2_C45	9A2_EE8	9A2_2A5	9A2_B58	9A2_D69	9A2_BB1	9A2_D7C	9A2_D35	9A2_D6D	9A2_2BE	D69_DED	D69_C45	D69_EE8	D69_2A5	D69_B58	D69_9A2
			Site H-1 to Site F	Site H-1 to Site E	Site H-1 to Site C	Site H-1 to Site B	Site H-1 to Site A	Site H-1 to Site Z-	Site H-1 to Site Z	Site F to Site I	Site F to Site H	Site F to Site G	Site F to Site D	Site F to Site H-1	Site F to Site E	Site F to Site C	Site F to Site B	Site F to Site A	Site F to Site Z-1	Site F to Site Z	Site E to Site I	Site E to Site H	Site E to Site G	Site E to Site D	Site E to Site H-1	Site E to Site F
		Length (miles)	**3.956847186**	**7.398008849**	**9.151655358**	**12.46374762**	**13.03251655**	**15.98695862**	**16.17557533**	**3.731905093**	**3.908745328**	**3.212067323**	**2.982705285**	**3.956847186**	**4.280297558**	**5.19623856**	**9.044906903**	**9.078070426**	**12.04712126**	**12.24150405**	**7.579651662**	**7.339010836**	**6.48333606**	**3.378388244**	**7.398008849**	**4.280297558**
Time	Begin Time	End Time																								
Midnight	12:00 AM	1:00 AM																								
	1:00 AM	2:00 AM																								
	2:00 AM	3:00 AM																								
	3:00 AM	4:00 AM																								
	4:00 AM	5:00 AM																								
	5:00 AM	6:00 AM																								
	6:00 AM	7:00 AM																								
	7:00 AM	8:00 AM	3.058333317	7.48452383			11.3625			3.616666831	3.350595249	3.033333309	2.664035083	3.30135328	4.404629609			8.163793097			8.370833297	7.799999979		3.951282051	7.783333277	4.610555526
	8:00 AM	9:00 AM	3.266979374	7.959722187			11.78200354			3.793493146	3.300284905	3.550333331	2.644025155	3.272115392	4.562280669			8.551357666			8.408333337	7.708333433		3.749166699	7.666666741	4.582352986
	9:00 AM	10:00 AM	3.296471477	8.109722268		13.53333335	11.49754464	15.01006494	15.56266667	3.855789462	3.344784161	3.705681827	2.615539159	3.309829071	4.552678574	10.33703705	8.12151741	11.62096434	12.17509057	8.608333311	8.131250027	8.11666673	3.939523803	8.136458332	4.659374999
	10:00 AM	11:00 AM	3.326531873	8.197222129	8.141087955	13.7038462	11.35659722	14.98340841	15.53678451	3.908762875	3.322094288	3.69684342	2.632787352	3.285949611	4.617361072	4.78227612	10.5022436	8.124963926	11.48744019	12.08439227	8.626470579	7.90833332	7.745833397	3.865123453	7.83194446	4.689644443
	11:00 AM	12:00 PM	3.296705434	8.183333319	8.080793662	13.395	11.7516844	14.13521508	14.49521454	3.981428568	3.372974215	3.788013703	2.695894165	3.319024395	4.578030313	4.807420095	9.979012348	8.206951437	10.86239036	11.21429781	8.818333279	8.491666708		4.038157917	8.123333395	4.744841278
Noon	12:00 PM	1:00 PM	3.465287336	7.922222223	8.267982448	14.01029409	11.34819182	14.58391666	14.85038313	4.077280694	3.417250531	3.76814515	2.654891306	3.38473732	4.61527782	4.875139872	10.64121619	8.099249603	10.97378718	11.29583334	8.87812502	8.063095209	8.302777838	3.998484824	8.049999994	4.749107152
	1:00 PM	2:00 PM	3.312331082	7.718750001	8.064261179	13.3154762	11.39050725	14.04257704	14.2885739	4.07230642	3.374166664	3.75696721	2.666443706	3.357043654	4.552222196	4.794771243	9.774242418	8.101511623	10.75135031	11.03390352	9.145312496	8.253571444		4.032222213	8.201041671	4.828703697
	2:00 PM	3:00 PM	3.34901621	7.733333381	8.160032375	13.25555556	11.48435793	13.96575759	14.33553641	4.16015407	3.394990367	3.884027798	2.691311488	3.352499999	4.540909028	4.804441625	10.00798613	8.173333344	10.67750771	10.99872495	8.807812514	7.930952374	8.816666622	3.928921568	8.044444453	4.756666677
	3:00 PM	4:00 PM	3.38907657	8.049999923	8.196349216	13.29166668	11.60963115	14.12178961	14.31013745	4.11369048	3.414747814	3.88209876	2.704875881	3.401022509	4.797916627	4.845374621	10.1153101	8.266517848	10.79488636	11.06258591	9.004166684	8.368181798		4.112037057	8.353787876	4.828947367
	4:00 PM	5:00 PM	3.479549763	8.463888913	8.319141917	13.8182692A	12.09992691	14.30088799	14.61807018	4.044636951	3.730430718	3.840740733	2.807946856	3.689487162	4.888690483	4.888084116	10.05065788	8.603620225	10.98554033	11.29463652	10.09999994	8.832291705	21.39999993	4.303819451	8.851041645	5.22529762
	5:00 PM	6:00 PM	3.537175323	7.583333272	8.584036711	14.03518521	11.94449687	14.88370871	15.2171147	4.922941158	3.520199997	4.505864199	2.722072069	3.466777777	4.967361116	5.063766668	10.29774773	8.428553927	11.39565827	11.73819777	9.637962952	9.002083372	19.38333331	4.157894754	8.985416712	5.113888874
	6:00 PM	7:00 PM	3.452185799	7.895833421	8.509873188	13.43750002	11.56066668	14.69965987	14.94570958	4.22900845	3.471283783	3.905185189	2.709707897	3.446666673	4.881060633	5.00030541	10.31756757	8.255936823	11.189903	11.46407721	9.042857116	8.631060608		4.07727274	8.678333385	4.927343752
	7:00 PM	8:00 PM	3.386080592	8.052083328	8.357309944	14.40277782	11.57765958	14.15770834	14.49942129	4.17973251	3.458261499	3.958578442	2.685676569	3.424999993	4.835060063	4.89410714	10.72738098	8.207436708	10.91912066	11.22750583	9.044791621	8.929166682		4.179166672	8.773333356	4.947222195
	8:00 PM	9:00 PM	3.399353453	8.215833337	8.215833337	13.31250003	11.42320515	14.32640265	14.57870371	4.160483873	3.399312736	3.917658731	2.655180175	3.388511334	4.64166666	4.809404761	10.13095238	8.183769064	10.88409586	11.1266432	8.802777808	8.052380934		4.04509803	8.055952343	4.825980377
	9:00 PM	10:00 PM	3.329761905	7.938888911	8.080952391	13.38796299	11.29644811	14.10846561	14.43111111	3.951293089	3.36163005	3.784935897	2.645646763	3.34192441	4.776190458	4.781617641	10.25745617	8.103874279	10.84082278	11.16213152	9.472222198	8.012500126	8.749999981	4.01111111	8.000000026	4.706666635
	10:00 PM	11:00 PM	3.343036541		8.244166673	14.15999997	11.52755411	14.14568454	14.32514881	3.948076921	3.420555562	3.725574697	2.694256762	3.370454552	4.997222219	4.80857372	9.784722235	8.38619403	10.74645215	11.03696808	8.283333264	8.654166707		4.156250004	8.695833399	4.57886115
Midnight	11:00 PM	12:00 AM	3.249761904		8.104924271	12.21666662	11.95789477	14.06410258	14.33364198	3.857716005	3.395348853	3.800520807	2.805442184	3.401893958	4.905555546	4.89197533	10.98333333	8.418640352	11.08192488	11.39804687	8.691666629	8.27777775	12.32500004	4.337499859	8.258333355	4.883333361

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 8-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

		Segment Label	D69_BB1	D69_D7C	D69_D35	D69_D6D	D69_2BE	BB1_DED	BB1_C45	BB1_EE8	BB1_2A5	BB1_B58	BB1_9A2	BB1_D69	BB1_D7C	BB1_D35	BB1_D6D	BB1_2BE	D7C_DED	D7C_C45	D7C_EE8	D7C_2A5	D7C_B58	D7C_9A2	D7C_D69	D7C_BB1
			Site E to Site C	Site E to Site B	Site E to Site A	Site E to Site Z-1	Site E to Site Z	Site C to Site I	Site C to Site H	Site C to Site G	Site C to Site D	Site C to Site H-1	Site C to Site F	Site C to Site E	Site C to Site B	Site C to Site A	Site C to Site Z-1	Site C to Site Z	Site B to Site I	Site B to Site H	Site B to Site G	Site B to Site D	Site B to Site H-1	Site B to Site F	Site B to Site E	Site B to Site C
		Length (miles)	4.39752133	9.88827741	7.464864488	10.45589989	10.70788233	8.839934425	9.104189489	8.395202059	2.220192926	9.151655359	5.19623856	4.397752133	5.556916911	3.882054877	6.873999299	7.079935154	11.78233466	12.43523739	11.98787924	6.879833845	12.46374762	9.044906903	9.888277741	5.556916911
Time	Begin Time	End Time																									
Midnight	12:00 AM	1:00 AM																									
	1:00 AM	2:00 AM																									
	2:00 AM	3:00 AM																									
	3:00 AM	4:00 AM																									
	4:00 AM	5:00 AM																									
	5:00 AM	6:00 AM																									
	6:00 AM	7:00 AM																									
	7:00 AM	8:00 AM			9.845238123																						
	8:00 AM	9:00 AM			9.525000019																						
	9:00 AM	10:00 AM			9.382916702	12.41309528	12.54722228															8.144444413		10.11666661			
	10:00 AM	11:00 AM	6.04375	11.1333333	9.281349179	12.7054167	13.36078432	8.581089745	8.054347817	8.452027021	2.118365173	8.023437506	4.707666667	6.466666628	5.290151533	3.357462687	6.399023445	6.905420717	14.3027777	13.22692304	13.99062499	7.469642862	13.28269229	10.10723685	11.30833324	5.058823553
	11:00 AM	12:00 PM	5.987797615	11.30119048	9.531111114	11.9793478	12.28690472	8.787169299	8.121078418	8.545480223	2.202531654	8.080434773	4.819121208	6.636666711	5.29527026	3.365211059	6.08484514	6.43102311	13.8716666	13.31388889	13.81999997	7.551334074	13.39635418	10.09852942	11.88888889	5.305894318
Noon	12:00 PM	1:00 PM	6.151470582	11.59375002	9.476515159	12.27559527	12.57797622	8.700490199	8.088547779	8.568262401	2.106885598	8.05181624	4.743538017	6.625000024	5.436111083	3.394459229	6.162607949	6.512047101	13.73166668	13.7838889	14.17055558	7.440650413	13.52741936	10.2081761	12.12499995	5.448666661
	1:00 PM	2:00 PM	6.18416666	10.85625	9.432812487	12.15138888	12.46874997	8.614007116	8.159709484	8.494379852	2.109062497	8.138976379	4.769676803	6.536904773	5.266111095	3.369514236	6.035677086	6.341761375	13.6013889	13.34222225	14.42777781	7.048333336	13.19010416	10.011875	11.84999997	5.064375007
	2:00 PM	3:00 PM	6.225666627	11.89166665	9.512777768	12.03289473	12.29555556	8.8494152	7.98261217	8.514722239	2.099441962	7.985177591	4.718333328	6.737499959	5.140303035	3.356903357	6.000863557	6.304646467	14.52222227	12.96041665	13.5333333	7.353666618	13.26574069	9.982666627	11.16666662	5.184848472
	3:00 PM	4:00 PM	6.064102568	10.9972222	9.72000017	12.29090908	12.45833335	8.751602559	8.014717737	8.592083308	2.104418108	7.979726363	4.709975213	6.63999996	5.268790859	3.414970506	6.069323666	6.357027024	14.29015151	13.86302087	13.94999997	7.535683761	13.63480394	10.20222773		5.344629638
	4:00 PM	5:00 PM	6.188235326	11.07222224	10.11666666	12.43869048	12.83636366	8.649999998	8.087329945	8.556321819	2.105462527	8.032750004	4.730066085	6.744444463	5.19485818	3.43910255	6.142041661	6.454545446	13.9416666	13.62277777	13.82638891	7.555448718	13.73101852	10.20234375	11.51666673	5.441369044
	5:00 PM	6:00 PM	6.629166659	11.81190468	9.61944446	12.7621795	13.0465278	9.818478245	8.685052919	9.552439008	2.213823523	8.63974359	5.036340848	6.957407426	5.360763883	3.581746032	6.401106195	6.726851849		14.20625003	15.28703703	7.366666708	13.82604167	11.33172046	12.60833334	5.387333362
	6:00 PM	7:00 PM	6.380357153	11.63750008	9.800000014	12.44861112	12.74305562	9.117499996	8.450171806	8.722656249	2.172613063	8.424793384	4.932572453	7.220833311	5.330620142	3.530414311	6.283383841	6.578525639	14.74583336	13.29880957	15.67361115	7.560416684	13.36818187	10.26000001	13.32499998	5.341666695
	7:00 PM	8:00 PM	6.250000019	12.0166667	9.952083332	12.61428574	12.7535715	9.031666652	8.242783502	9.003846145	2.154454017	8.198571423	4.859536079	6.829125012	5.59972252	3.46517242	6.154166672	6.473854968	14.30833334	13.90231478	16.06874997	7.449561389	13.90964908	10.53368051	11.93333331	5.445614002
	8:00 PM	9:00 PM	6.35370037		9.592948705	12.51111109	12.847619	9.104734853	8.308235297	8.978571433	2.168476196	8.266131491	4.910134003	6.706249961	5.237000019	3.447691443	6.145774647	6.426441107	15.48750007	14.73194449	15.89999995	7.742129667	14.58988099	11.01354166		5.814236132
	9:00 PM	10:00 PM	6.132499963	10.92499992	9.869444389	12.2689394	12.56136359	8.760515869	8.305372809	8.87458336	2.129075424	8.263065838	4.815090096	7.605555542	5.338333373	3.443357493	6.080395681	6.375976564		15.1261905	13.97500006	8.088888898	14.92083334	11.23703701		6.161458357
	10:00 PM	11:00 PM	6.040277816	11.23888901		12.35416667	12.775	8.34166666	7.990591402	8.612499998	2.118960238	7.986666654	4.749242421	7.175000031	5.22999998	3.380128211	6.030526313	6.341071426	14.73333322	15.41388885	14.98333345	8.46833335	15.04895833	11.42083336		6.518333349
Midnight	11:00 PM	12:00 AM	6.263888888	10.94166666	9.666666538			8.353787845	7.989285739	9.084722176	2.093502841	8.085185187	4.781392695	6.687500104	5.797222238	3.490123445	6.265895053	6.584666651	15.21666661			9.250000119	14.84999992			6.429166747

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 8-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

		Segment	D7C_D35	D7C_D6D	D7C_2BE	D35_DED	D35_C45	D35_EE8	D35_2A5	D35_B58	D35_9A2	D35_D69	D35_BB1	D35_D7C	D35_D6D	D35_2BE	D6D_DED	D6D_C45	D6D_EE8	D6D_2A5	D6D_B58	D6D_9A2	D6D_D69	D6D_BB1	D6D_D7C	D6D_D35
		Label	Site B to Site A	Site B to Site Z-1	Site B to Site Z	Site A to Site I	Site A to Site H	Site A to Site G	Site A to Site D	Site A to Site H-1	Site A to Site F	Site A to Site E	Site A to Site C	Site A to Site B	Site A to Site Z-1	Site A to Site Z	Site Z-1 to Site I	Site Z-1 to Site H	Site Z-1 to Site G	Site Z-1 to Site D	Site Z-1 to Site H-	Site Z-1 to Site F	Site Z-1 to Site E	Site Z-1 to Site C	Site Z-1 to Site B	Site Z-1 to Site A
		Length (miles)	5.245685037	6.168632565	6.158128703	12.69805498	12.98535085	12.27608467	6.100850039	13.03251655	9.078070426	7.464864488	3.882054877	5.245685037	3.046190422	3.27855103	15.59888021	15.94173031	15.25676575	9.090498164	15.98695862	12.04712126	10.45589989	6.873999299	6.168632565	3.046190422
Time	Begin Time	End Time																								
Midnight	12:00 AM	1:00 AM																								
	1:00 AM	2:00 AM																								
	2:00 AM	3:00 AM																								
	3:00 AM	4:00 AM																								
	4:00 AM	5:00 AM																								
	5:00 AM	6:00 AM																								
	6:00 AM	7:00 AM																								
	7:00 AM	8:00 AM				10.92500009	10.53333328	12.09166663	5.420833343	10.54166665	8.204861116															
	8:00 AM	9:00 AM				12.01395834	11.41796878	12.15771607	5.546882963	11.34044119	8.266721494															
	9:00 AM	10:00 AM				11.87234848	11.54599567	11.79615382	5.505613428	11.45308643	8.070622362	10.09027778		6.466666795	3.064388492	3.48166667	14.66488096	14.03299999	14.90476191	8.076808179	13.89346407	10.86413043	13.03750003		9.508333392	2.576504623
	10:00 AM	11:00 AM	6.700000037	10.45833327	11.02500005	12.41968084	11.77705627	12.25393521	5.792897734	11.71080246	8.432692306	10.12777777	3.385498695	6.511110999	3.349208567	3.924080461	14.575	14.07246836	14.57007575	8.054000007	14.04246034	10.68348304	13.69166672	5.949724529	9.083333351	2.559291197
	11:00 AM	12:00 PM				11.92521368	11.51155913	12.1785714	5.528086422	11.51195286	8.135067439	10.22638894	3.592602992	5.858333241	2.728153168	3.05735295	14.9184026	14.16527778	14.80698925	8.359738388	14.13492063	10.97361112	12.65555562	6.141429927	11.51250008	2.559190484
Noon	12:00 PM	1:00 PM				12.0654762	11.59831349	11.87672416	5.546764174	11.5731685	8.190720716	10.22499994	3.423608078	7.175000142	2.776836158	3.109878583	14.43553923	14.08545918	15.41553028	8.088835423	14.00318629	10.77582847	12.75000008	5.969230775		2.554211472
	1:00 PM	2:00 PM	6.075000074			12.19182692	11.3013158	12.02234853	5.48072917	11.36754902	8.109824555	9.900000047	3.433467743	6.383333243	2.664173788	2.950225996	14.79912282	14.04905302	14.45388888	8.064897567	14.07356902	10.71951871	12.31944446	5.95636448		2.538163706
	2:00 PM	3:00 PM	6.341666635	11.13750002	11.37500008	12.06421568	11.24120878	12.24555552	5.463567076	11.22227891	8.043930036	10.31666662	3.414560931	6.466666628	2.639187911	2.92093939	14.56911765	13.75927082	17.80438599	7.954238913	13.79316477	10.6048835	12.75833337	5.909061923	8.95000007	2.537457902
	3:00 PM	4:00 PM	6.525000064			11.90047619	11.76666667	12.23333332	5.520156259	11.74760417	8.097119344	9.388888869	3.394875779		2.686089401	2.963333325	14.49706332	13.77795138	15.46190475	7.936359127	13.80031445	10.53366104	11.76111108	5.888115532		2.521305843
	4:00 PM	5:00 PM	6.716666613	9.466666784	9.88333337	13.20133333	12.25573477	13.01574074	5.7417091 8	12.20945018	8.562478192	10.95833324	3.407852564	6.899999958	2.704672063	3.00066186	14.50427349	14.09851191	14.76521736	8.099610132	14.29587912	10.68146551	12.76250009	5.941047608	9.499999937	2.557766976
	5:00 PM	6:00 PM	6.591666732	10.96666669	11.28333349	12.44357143	12.05353881	12.14659092	5.678571437	11.99122807	8.42467533	10.57738098	3.561830745		2.793812783	3.094938481	15.69683333	14.86435184	16.11166666	8.375345413	14.83377192	11.25666666	13.21904764	6.22270408		2.649069763
	6:00 PM	7:00 PM	6.605555546	9.3833334	9.691666737	12.41714286	11.70343919	12.14404763	5.668764973	11.7084596	8.314444441	11.2000001	3.530650705		2.743643156	3.021945426	15.07072071	14.81632882	14.76599999	8.338444433	14.76709401	11.09224683	14.08333339	6.160067117		2.646898139
	7:00 PM	8:00 PM	7.200000007	9.233333375	8.900000006	12.63119047	11.83142858	12.88041667	5.731494268	11.82283549	8.490053769	10.27916669	3.486150245		2.670944238	2.954203882	15.08089429	14.3501029	14.88277777	8.284222213	14.27813727	10.92521786	13.01875005	6.120675106		2.6265469
	8:00 PM	9:00 PM				12.17553761	11.42401962	13.31736117	5.571056547	11.56633335	8.215748593	10.41666666	3.543368543		2.679033486	2.955000007	15.36373875	14.41760563	16.89374998	8.354891313	14.41493901	11.08208875	12.41666654	6.150326798	11.20833331	2.642250535
	9:00 PM	10:00 PM	6.583333332			12.00128204	11.54089506	12.31730769	5.600862067	11.53549383	8.280681815	11.04166668	3.46779935		2.668952803	2.945726497	14.92230391	14.01303766	15.65388891	8.170486108	14.14270834	10.87855192	13.83333329	6.066304348		2.626908399
	10:00 PM	11:00 PM		9.491666649	9.649999961	11.65320508	11.52623456	12.87196971	5.576149424	11.67446236	8.25228494	10.67500002	3.48621794		2.635385558	2.927136742	14.33782052	14.03479534	14.58425924	8.119836952	14.04870692	10.66649122	13.33333335	6.043248943		2.612547881
Midnight	11:00 PM	12:00 AM				11.78055547	11.7794872	12.74666663	5.611363653	11.83200003	8.417291672	9.537500069	3.491176451		2.649905301	2.911036045	14.35666661	14.18091399	15.99583336	8.168951604	14.18773148	10.89067163	11.82500007	6.060818696		2.584871794

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 8-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

		Segment Label	**D6D_2BE**	**2BE_DED**	**2BE_C45**	**2BE_EE8**	**2BE_2A5**	**2BE_B58**	**2BE_9A2**	**2BE_D69**	**2BE_BB1**	**2BE_D7C**	**2BE_D35**	**2BE_D6D**
			Site Z-1 to Site Z	**Site Z to Site I**	**Site Z to Site H**	**Site Z to Site G**	**Site Z to Site D**	**Site Z to Site H-1**	**Site Z to Site F**	**Site Z to Site E**	**Site Z to Site C**	**Site Z to Site B**	**Site Z to Site A**	**Site Z to Site Z-1**
		Length (miles)	**0.279723233**	**15.77549156**	**16.1308518**	**15.45263357**	**9.29274368**	**16.17557533**	**12.24150405**	**10.70788233**	**7.079935154**	**6.158128703**	**3.27855103**	**0.279723233**
Time	Begin Time	End Time												
Midnight	12:00 AM	1:00 AM												
	1:00 AM	2:00 AM												
	2:00 AM	3:00 AM												
	3:00 AM	4:00 AM												
	4:00 AM	5:00 AM												
	5:00 AM	6:00 AM												
	6:00 AM	7:00 AM												
	7:00 AM	8:00 AM												
	8:00 AM	9:00 AM												
	9:00 AM	10:00 AM	0.282624995	14.76625	14.33434343	14.91764705	8.415686282	14.20166668	11.14338488	13.60833328		9.641666673	2.884057966	0.287525876
	10:00 AM	11:00 AM	0.490685097	14.88560608	14.36084143	14.69333331	8.355409365	14.41465281	10.97526277	14.01944451	6.213131319		2.839321611	0.300514401
	11:00 AM	12:00 PM	0.335846867	15.09583334	14.5669003	15.12385621	8.628421908	14.40874999	11.238313	13.00277785	6.425836679	11.83749991	2.857202682	0.289801857
Noon	12:00 PM	1:00 PM	0.339983971	14.68988148	14.24539298	15.32809521	8.336403518	14.18504729	11.00122037	13.05416677	6.229744495	11.56666679	2.823239435	0.280905278
	1:00 PM	2:00 PM	0.289583339	15.1022109	14.46816039	14.74250001	8.344227641	14.44583335	11.00411565	12.60972222	6.248319038		2.819941641	0.285480582
	2:00 PM	3:00 PM	0.287444147	14.96888889	14.18641666	16.45277781	8.275253806	14.17926666	10.88170731	13.22916666	6.191334804	9.78749997	2.827348479	0.282259886
	3:00 PM	4:00 PM	0.286384681	14.80436508	14.17391999	16.29194443	8.229541456	14.21103448	10.88706416	12.06944447	6.204613106		2.795281587	0.268837088
	4:00 PM	5:00 PM	0.30980392	14.78441359	14.37415903	15.04967946	8.379708337	14.3805303	10.95462963	13.07083326	6.242561621	9.825000018	2.848032904	0.284745303
	5:00 PM	6:00 PM	0.302083329	16.04799383	15.29481793	15.88680553	8.674367554	15.18883102	11.55267053	13.53809626	6.50345608		2.949329098	0.289164007
	6:00 PM	7:00 PM	0.290857844	15.44166666	15.12233009	15.22838541	8.630480078	15.05086956	11.42045106	14.54166675	6.469336575		2.953416668	0.310303619
	7:00 PM	8:00 PM	0.288055558	15.34655796	14.73391088	15.33985508	8.623050673	14.73985506	11.25109074	13.30625004	6.414698493		2.921535575	0.285408688
	8:00 PM	9:00 PM	0.280868051	15.59539009	14.73505748	15.43437501	8.661605328	14.75416666	11.37793882	12.74166662	6.472495896	11.54583341	2.952638897	0.297989767
	9:00 PM	10:00 PM	0.287013893	15.0596591	14.50162602	15.25611114	8.445104901	14.64728465	11.17722223	14.22499996	6.345430113		2.909317126	0.28226495
	10:00 PM	11:00 PM	0.287411344	14.75392158	14.3221847	14.72826084	8.402850874	14.30703464	10.96761517	12.93333326	6.32579023		2.925898691	0.312500004
Midnight	11:00 PM	12:00 AM	0.282885299	14.62142856	14.33928571	15.38154758	8.490357136	14.35380435	11.14737318	12.2166667	6.380399051		2.883937194	0.293402777

TRAVEL TIME DATA

1 HOUR CORRIDOR STATISTICAL SUMMARIES

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 9-Dec-13
Day of Week: Monday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	DED_C45	DED_EE8	DED_2A5	DED_B58	DED_9A2	DED_D69	DED_BB1	DED_D7C	DED_D35	DED_D6D	DED_28E	C45_DED	C45_EE8	C45_2A5	C45_B58	C45_9A2	C45_D69	C45_BB1	C45_D7C	C45_D35	C45_D6D	C45_28E	EE8_DED
		Segment Label	**Site I to Site H**	**Site I to Site G**	**Site I to Site D**	**Site I to Site H-1**	**Site I to Site F**	**Site I to Site E**	**Site I to Site C**	**Site I to Site B**	**Site I to Site A**	**Site I to Site Z-1**	**Site I to Site Z**	**Site H to Site I**	**Site H to Site G**	**Site H to Site D**	**Site H to Site H-1**	**Site H to Site F**	**Site H to Site E**	**Site H to Site C**	**Site H to Site B**	**Site H to Site A**	**Site H to Site Z-1**	**Site H to Site Z**	**Site G to Site I**
		Length (miles)	**1.201**	**1.471**	**5.656**	**0.983**	**3.722**	**7.505**	**8.800**	**11.792**	**13.698**	**15.589**	**16.775**	**1.000**	**0.859**	**5.801**	**0.969**	**3.909**	**7.326916916**	**9.394185089**	**15.43542726**	**12.98533604**	**15.91172031**	**16.13985218**	**1.471218186**
Midnight	12:00 AM	1:00 AM	1.032	1.159	6.463	1.078	3.984		8.730	15.150	11.699	14.532	14.883	1.322	0.844	6.195	0.066	3.389	9.387499918	8.355165640	13.86566556	12.08944444	14.16792258	14.56285718	1.440104347
	1:00 AM	2:00 AM	1.060	1.247	6.649	0.987	3.655	8.403	8.568	15.592	12.004	14.508	14.674	1.406	0.827	6.239	0.055	3.409	10.27499992	8.582812438	13.29444448	12.46425185	14.62760416	15.01359044	1.398674989
	2:00 AM	3:00 AM	1.200	1.187	8.327	1.102	3.969	8.110	9.197	10.067	11.771	14.407	15.065		0.758	5.905	0.086	3.415	7.063888798	8.908333343	17.53333328	11.33310185	14.93944567	15.36287038	1.555378945
	3:00 AM	4:00 AM	1.108	1.125	9.882	1.147	3.775	9.234	8.599	13.750	14.783	14.175	14.883	1.297	0.815	6.691	0.094	3.237	8.355833391	8.151258518	14.46666657	12.43823188	14.04116158	14.11583333	1.520634860
	4:00 AM	5:00 AM	2.852	1.201	21.933	2.139	6.661	23.417	11.983	16.475	17.488	17.271	17.708	1.185	0.829	18.270	0.047	4.021	28.77666675	8.927499983	34.20833341	23.85253458	35.1857971	15.33048722	1.48915048
	5:00 AM	6:00 AM	2.892	1.309	28.103	2.889	17.660	31.942	35.767	45.671	43.486	30.178	42.729	1.167	0.929	28.009	0.148	31.991	28.07499983	34.24833333	34.99075002	42.19595983	30.53148756	45.53188758	1.438398859
	6:00 AM	7:00 AM	2.510	1.309	28.668	2.343	22.063	39.200	38.993	53.501	44.852	46.326	46.402	1.500	0.998	29.553	0.163	23.295	38.25833359	38.53402777	44.02600012	46.19874602	44.36818831	45.57188754	1.518879553
	7:00 AM	8:00 AM	4.063	4.160	26.056	3.668	22.385	32.260	39.879	51.014	35.659	49.417	50.620	1.572	5.151	17.878	0.197	22.621	23.33750001	36.37729694	43.77230388	26.48087709	45.6936693	43.08777557	1.49972222
	8:00 AM	9:00 AM	2.041	3.038	15.484	1.913	19.815	16.699	31.075	38.306	24.519	38.543	39.526	1.350	3.405	10.740	0.063	12.121	11.70833328	23.39554685	31.00460527	19.07924074	29.6102981	30.32958334	1.446005511
	9:00 AM	10:00 AM	1.851	1.299	21.498	1.805	9.349	24.445	20.779	28.893	26.852	27.876	28.055	1.304	0.859	15.818	0.058	5.234	19.80999997	15.68318968	30.74979237	22.06505526	21.95258523	22.53315415	1.492378028
	10:00 AM	11:00 AM	3.275	1.525	11.387	3.224	16.113	15.339	23.676	26.207	19.353	29.526	29.719	1.344	0.909	7.099	0.054	10.590	9.997222144	18.346789	25.33993328	13.49946237	24.78564425	25.21811225	1.493300643
	11:00 AM	12:00 PM	1.812	1.445	7.530	1.733	7.965	10.061	14.414	20.239	13.627	23.145	23.442	1.360	0.976	6.108	0.052	3.953	12.92333334	9.701923069	14.62944442	12.14318182	17.51841087	17.82800001	1.455950483
Noon	12:00 PM	1:00 PM	1.816	1.469	7.530	1.549	4.731	10.224	10.877	15.692	13.606	16.166	16.505	1.336	0.887	6.044	0.048	3.429	9.93472228	8.522395634	13.35851388	11.72068261	14.56968391	15.10198818	1.462812498
	1:00 PM	2:00 PM	1.477	1.356	7.213	1.427	4.712	10.162	9.756	14.618	12.925	16.027	16.584	1.345	0.860	6.084	0.054	3.450	8.593516692	8.404725608	13.96233335	11.62255747	14.2892973	14.79178582	1.414409715
	2:00 PM	3:00 PM	1.498	1.321	7.118	1.421	4.461	9.531	9.881	14.060	12.783	15.444	15.877	1.319	0.864	5.993	0.048	3.396	8.577777743	8.503333328	13.32651515	11.56719698	14.33215278	14.70454547	1.428253981
	3:00 PM	4:00 PM	1.587	1.299	7.228	1.501	4.422	10.119	9.534	14.715	12.916	15.381	15.926	1.352	0.851	6.060	0.066	3.355	8.749999991	8.466212663	14.12916667	11.70045509	14.14583335	14.53999999	1.448409448
	4:00 PM	5:00 PM	1.586	1.293	7.490	1.501	4.506	9.897	9.625	14.328	13.181	15.961	16.957	1.373	0.882	6.305	0.062	3.440	9.061111163	8.322474797	13.39388889	12.07491955	14.47674803	14.9676442	1.598318714
	5:00 PM	6:00 PM	1.788	1.313	8.901	1.704	4.591	9.225	10.087	15.875	12.485	16.189	16.723	1.445	0.898	6.167	0.069	3.596	9.591666933	8.628662249	13.48536493	11.82499999	15.20182254	15.7780333	1.672271365
	6:00 PM	7:00 PM	1.332	1.252	6.667	1.248	4.211	9.661	9.516	14.486	12.045	15.502	15.922	7.350	0.887	6.128	0.074	3.464		8.567479661	13.32125011	11.87071875	14.52548308	14.98508614	7.642119562
	7:00 PM	8:00 PM	1.239	1.238	6.681	1.176	4.132	9.033	9.300	13.594	12.362	14.560	14.970	2.785	0.869	6.073	0.068	3.459	9.033333287	8.733333342	13.21666666	11.78950471	14.57858518	14.80188699	2.038905755
	8:00 PM	9:00 PM	1.153	1.244	6.743	1.095	4.071	9.831	9.148	15.108	12.550	15.153	15.092	1.338	0.889	6.225	0.085	3.391	8.605555462	8.772499999	12.64722224	12.15130715	14.65015722	15.14735772	1.430955583
	9:00 PM	10:00 PM	1.107	1.245	6.630	1.064	4.072	9.375	8.803	14.262	12.690	15.390	15.435	1.309	0.876	6.269	0.069	3.454	8.033333346	8.611666233	12.77222218	12.20925799	14.57509243	14.97155748	1.384653449
	10:00 PM	11:00 PM	1.137	1.253	6.673	1.081	4.040	10.137	9.381		12.633	15.530	15.658	1.311	0.819	6.369	0.066	3.495		9.086333844		12.51394353	15.02939938	15.64185697	1.377000014
Midnight	11:00 PM	12:00 AM	1.082	1.327	6.472	1.086	4.056		8.765	14.409	11.748	15.015	15.608	1.223	0.792	6.180	0.064	3.586		8.911979225	14.37500015	12.19642857	15.20182299	15.69656097	1.411666654

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 9-Dec-13
Day of Week: Monday
Measure: Mean Travel Time
Units: minutes

		Segment Label	EE8_C45	EE8_2A5	EE8_B58	EE8_9A2	EE8_D69	EE8_BB1	EE8_D7C	EE8_D35	EE8_D6D	EE8_2BE	2A5_D6D	2A5_C45	2A5_EE8	2A5_B58	2A5_9A2	2A5_D69	2A5_BB1	2A5_D7C	2A5_D35	2A5_D6D	2A5_2BE	B58_D6D	B58_C45
		Site G to Site H	Site G to Site D	Site G to Site H-1	Site G to Site F	Site G to Site E	Site G to Site C	Site G to Site B	Site G to Site A	Site G to Site Z-1	Site G to Site Z	Site D to Site I	Site D to Site H	Site D to Site G	Site D to Site H-1	Site D to Site F	Site D to Site E	Site D to Site C	Site D to Site B	Site D to Site A	Site D to Site Z-1	Site D to Site Z	Site H-1 to Site I	Site H-1 to Site H
		Length (miles)	**4.95618854**	**5.17133507**	**5.91784810**	**3.72256732**	**6.4933266**	**8.22532038**	**11.3670764**	**12.7280847**	**15.2563175**	**15.4532167**	**5.66528512**	**6.8910271**	**5.17133507**	**4.92618853**	**2.98270266**	**3.72256732**	**2.22019293**	**5.67381345**	**5.10858038**	**8.09548164**	**9.39214189**	**3.98254640**	**4.95618854**
Time	Begin Time	End Time																							
Midnight	12:00 AM	1:00 AM	1.39666668	6.88000049	1.31111098	3.90416671		9.27708348	13.3750001	13.3708895	16.3007578	17.1138885		6.43666645	6.49344439	6.53633375	2.95857893		2.19771243	7.46270848	5.74216668	8.22201298	8.53371128	1.37255008	0.07233787
	1:00 AM	2:00 AM	1.39999995	6.80358475	1.36666660	3.77199971		9.365000065	12.7807021	16.7375002	17.1116666	6.30499976	6.71484845	6.97022856	6.77575537	2.89527742		2.25711387	7.93333398	5.87455799	8.52201461	8.93015872	1.41000003	0.065667969	
	2:00 AM	3:00 AM	1.43511033	6.39845284	1.45833328	3.84602176		9.333333325	14.2583338	12.1664447	16.0540909	16.5200005	7.203333322	6.80909895	6.25995283	6.77898545	2.88705144	4.35833333	2.30111111	8.18125007	5.55599751	8.60899799	8.97616666		0.08984117
	3:00 AM	4:00 AM	1.53333343	7.39424819	1.48333346	3.73012818	20.11666665	8.795833387		12.9755747	14.7714285	15.3811111	7.26955557	6.30984849	6.69611124	6.26761906	2.95445294	4.24166662	2.14796484	7.94861081	5.89279151	8.09522163	8.43704952	1.29555591	0.070676029
	4:00 AM	5:00 AM	1.60927558	16.5136457	1.65000010	4.67666667		9.423543224	17.4291665	22.5344898	15.6950742	15.3725285	8.763636374	6.24449999	6.61395227	6.22542944	2.95286449	5.26333367	2.33870166	7.75368214	6.57935653	8.57232015	8.83869157	1.20000005	0.07538622
	5:00 AM	6:00 AM	1.92007458	28.5853362	1.95333297	11.7543545	9.733333349	9.432045014	28.9379169	37.6595285	15.6950742	15.3725285	8.763636374	6.11599435	6.92045675	6.11599435	2.92045675	6.03333297	2.45666666	10.7382675	6.92045675	8.57232015	11.4389366	1.93333293	0.131528263
	6:00 AM	7:00 AM	1.92095238	29.7301801	1.95122675	23.7949751	34.65833344	38.24999998	46.3871223	41.6937503	40.5058236	41.4774169	7.227976239	6.159053418	7.079545455	6.084073734	2.81390845	4.782692308	3.875219268	9.507614661	6.422286755	10.87219809	11.2113534	1.518137264	0.098229773
	7:00 AM	8:00 AM	1.64346849	18.01137038	1.59662698	23.6891477		35.58328544	45.4291667	27.5736113	46.1991636	45.4876667	7.16767633	6.198341456	6.72941179	6.146764714	2.83149649	5.119607633	3.154728883	8.152600641	7.02080585	8.398156372	8.835406113	1.653472216	0.088544669
	8:00 AM	9:00 AM	1.628240733	11.36261411	1.565170936	12.59955356	20.64999999	22.6622857	31.0736111	20.22900002	32.3899785	34.6611111	7.366472857	6.398421042	7.053282808	6.366333335	2.945753199	5.16296301	3.831511727	9.57519661	8.444333335	9.906376391	10.3637900	1.401126134	0.074307272
	9:00 AM	10:00 AM	1.605148714	16.60549899	1.533986087	4.842117136	15.58166675	17.2290353	27.4593783	22.8535714	23.1833334	23.8536345	7.797656994	6.794570711	7.344666673	6.779387646	3.148527778	5.353333281	5.093994462	10.7452453	8.315171568	11.15088214	11.4870953	1.349285716	0.070967735
	10:00 AM	11:00 AM	1.639416667	7.142176667	1.574099907	10.69		18.58011906	25.36388889	14.87996455	25.6268332	25.67055556	7.747337956	6.568209861	7.30347224	6.542307684	3.070242783	5.284523812	2.532119741	8.49253468	5.811745794	9.363009948	9.66838379	1.389316273	0.070757931
	11:00 AM	12:00 PM	1.638172032	6.379166544	1.634791563	4.130034735	10.90000005	10.56501174	16.27619097	11.91365777	19.07603996	19.32965529	7.618242405	6.84813871	7.653953333	6.828116543	3.197892759	5.276041673	2.28757811	7.59283563	5.654115652	8.852865974	9.31852517	1.392483997	0.070549148
Noon	12:00 PM	1:00 PM	1.627252522	6.548235468	1.602439201	3.841421548	21.79166662	8.84775639	15.18240741	12.2630523	16.1258718	16.8918793	7.09337907	6.724300248	7.598931002	6.670924573	2.985454488	5.136538455	2.238919082	7.658333318	5.620173744	8.347039078	8.71321429	1.393621027	0.068287036
	1:00 PM	2:00 PM	1.643217057	6.46602778	1.58758663	3.782767269	25.04166675	8.84871923	13.4547619	12.3449653	15.1454166	16.8696697	11.71542289	10.07180058	11.1583081	10.0485363	5.446529676	5.592848595	2.240509322	7.60060749	5.641466666	8.369856973	8.694824562	1.365104171	0.071111115
	2:00 PM	3:00 PM	1.636458355	6.509503154	1.739922478	3.722830416		9.008771937	14.5336148	12.4130576	14.9773335	15.3185274	18.52616958	17.67719298	17.5749998	17.63245572	9.708550227	8.609166674	2.277145222	7.673749994	5.585824111	8.289574189	8.549461212	1.36402778	0.070336653
	3:00 PM	4:00 PM	3.279166665	6.638580044	3.149545455	3.604642774	10.19166671	8.882407404	13.74166664	12.4464751	15.1301975	15.3862188	19.64646762	19.9920735	18.3037414	20.2948588	9.327180236	8.261979165	2.265612153	7.481497158	5.646752452	8.244942744	8.56345798	1.3349702	0.086806111
	4:00 PM	5:00 PM	3.702380973	6.612326391	3.604569996	3.876111118		9.074851858	13.76481483	12.4162553	15.2758064[illegible]	15.7375862	20.39324939	21.5809592	20.40106959	21.6203779[illegible]	9.538002217	9.648809492	2.23402682	7.370368694	5.768320266	8.468745587	8.887696715	1.429251718	0.087988835
	5:00 PM	6:00 PM	4.457764419	6.528928959	4.368889935	3.853378361		8.940315765	13.7995779	12.6317394	15.9590003	16.5387681	23.64288334	14.023374	16.09729727	13.38777324	6.704500837	9.705555579	2.284429879	7.462536137	5.665939989	8.830391190	9.347995135	1.452931162	0.089240360
	6:00 PM	7:00 PM	2.368039411	6.38983313	2.423814827	3.786324864		9.120312537	14.3371961	12.4018393	15.2765873[illegible]	15.7310746	18.52989652	16.2087441[illegible]	17.7587208[illegible]	16.4723587	10.11757951	7.329901992	2.248674238	7.352213537	5.619387755	8.378342351	8.709532376	1.449561363	0.075569967
	7:00 PM	8:00 PM	1.588111103	6.352777782	1.532083340	3.663461583	9.341666792	8.930555579	13.2833327	12.7281993	15.0179197	15.2921029	7.835089449	7.313666852	7.717992433	7.112938514	3.343958249	5.006666534	2.268852462	7.137777785	5.585482502	8.339249449	8.666288898	2.597539893	0.071895209
	8:00 PM	9:00 PM	1.546825421	6.516666645	1.48733338	3.774242427	8.833333369	8.359791678	13.1458333	12.5637552	15.549444[illegible]	15.9433335	6.947979805	6.407213928	7.298666658	6.146381568	2.888651226	4.835416675	2.245024874	6.989339048	5.734359354	8.361837813	8.673146152	1.381608193	0.069937437
	9:00 PM	10:00 PM	1.505547614	6.621428578	1.47235582	3.756746032		8.824999977	13.5666667	12.5503332	15.2492894	15.5513137	6.913346154	6.468934308	6.8944446	6.391195325	2.940434275	4.648333307	2.285451974	7.240151517	5.785092275	8.371183214	8.652278878	1.338546078	0.075172899
	10:00 PM	11:00 PM	1.538538445	6.442928526	1.481111079	3.810897475		9.08543332		12.0702368	15.8241668	16.0430557	6.869518516	6.470476188	6.982051297	6.424780795	2.87956220	5.554148716	2.332018575	7.368332292	5.7497175	8.501041858	8.8316667	1.337254918	0.071316759
Midnight	11:00 PM	12:00 AM	1.541666667	7.129166639	1.464814829	3.742857103		8.945000003	15.7124999[illegible]	12.8833333[illegible]	14.275	14.6197916[illegible]	6.679487147	6.652083333	7.067392554	6.587747718	3.081525809		2.313571424	7.814999999	5.645281427	8.438836355	8.975347214	1.298333333	0.085825688

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 9-Dec-13
Day of Week: Monday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	BS8_EE8	BS8_2A5	BS8_9A2	BS8_D69	BS8_BB1	BS8_D7C	BS8_D35	BS8_D6D	BS8_2BE	9A2_DED	8A2_C45	9A2_EE8	9A2_2A5	9A2_BS8	9A2_D69	9A2_BB1	9A2_D7C	9A2_D35	9A2_D6D	9A2_2BE	D69_DED	D69_C45	D69_EE8
				Site H-1 to Site G	Site H-1 to Site E	Site H-1 to Site F	Site H-1 to Site E	Site H-1 to Site C	Site H-1 to Site B	Site H-1 to Site A	Site H-1 to Site Z-1	Site H-1 to Site Z	Site F to Site I	Site F to Site H	Site F to Site G	Site F to Site D	Site F to Site H-1	Site F to Site E	Site F to Site C	Site F to Site B	Site F to Site A	Site F to Site Z-1	Site F to Site Z	Site E to Site I	Site E to Site H	Site E to Site G
				6.91748333	6.09948833	3.95667167	7.39609833	9.31165333	15.4614767	11.6261667	15.8895833	16.1753333	3.71605833	3.80014333	3.21667333	2.69275333	3.95667167	4.29227333	5.19521667	9.04955833	8.07801833	15.4614167	12.5115833	5.42583167	7.32611833	6.4933333
Midnight	12:00 AM	1:00 AM	0.87083333	6.23253333	3.48068167		8.59649167	13.97916667	12.15833333	14.58134833	14.97783133	14.87583133	3.82708333	3.43044667	3.81466833	2.73314333	3.41468254		5.06416667	10.2354167	8.62060167	10.8667833	11.31666667	6.14899667	7.73666833	
	1:00 AM	2:00 AM	0.80000833	6.32261667	3.47716667	8.89833333	8.62777796	12.38333333	12.46912833	14.79166667	15.12243667	3.93472222	3.63388667	3.58749667	2.79833333	3.47500027	4.90208327	5.04166667	10.16944449	8.62411366	11.37595238	11.75241833	9.10000095	9.75000089	
	2:00 AM	3:00 AM	0.92500833	5.89904794	3.48611131	7.19722233	9.08147099	17.69166667	11.30533333	15.15483457	15.41851455	4.02500024	3.58814016	3.97083337	2.66177833	3.56666833	4.29791666	5.17943333	10.94999999	8.15969313	11.42580753	11.72996033	8.68888666		
	3:00 AM	4:00 AM	0.83500477	6.73405173	3.23767443	8.45250333	6.13576433	14.48333333	12.57122749	13.75119045	13.98656833	3.42435541	3.54727222	2.84756833	3.41399549	4.66916101	4.62511419	10.4133324	8.75730552	10.67089743	11.05307811	8.9563335	7.94791664		
	4:00 AM	5:00 AM	0.92508333	18.23339333	4.03549722	21.48611111	9.01903666	14.08543472	23.0928571	15.18365916	15.46758636	4.13621667	3.42227483	3.77531744	6.04762417	3.38699812	6.52129833	5.19143333	11.8277783	13.47197238	11.4052381	11.73345833	9.86303636	8.97777769	
	5:00 AM	6:00 AM	0.91308333	15.03408333	3.93667238	17.57416667	8.37749999	24.49357436	41.17033333	25.05836333	25.45238333	4.07173333	3.42377833	3.57075333	5.64361833	3.37075333	8.12410667	5.16666667	11.8605556	15.79298333	16.02634333	15.3033333	12.07657433	10.2777783	
	6:00 AM	7:00 AM	1.02878575	29.47413667	23.05803333	37.36555556	38.57479833	42.99579488	38.48533853	43.85159333	45.13438333	4.07727273	3.41546611	3.92053833	5.65921814	3.37527133	7.44852854	11.08334833	17.76461538	12.28137786	18.7839755	19.17925333	15.3033333	12.27083333	
	7:00 AM	8:00 AM	4.69911667	17.89172833	22.61664467	23.33666667	35.41319445	42.67546018	26.10393333	43.02464945	42.38513733	4.33410667	3.42043011	4.38125833	5.09525668	3.38562361	8.35769237	8.82751667	14.7796833	11.9074942	15.19664592	15.58458833	14.19166667	13.21904767	15.4833333
	8:00 AM	9:00 AM	3.26022733	10.8245478	12.16061046	11.44166667	23.39441581	31.20882352	19.12578947	29.10715277	30.27675538	4.30505347	3.51546833	3.96471436	5.30907142	3.48389226	5.75303037	8.78500007	14.68172349	13.24567183	14.79480027	15.30035544	10.59000031	9.09303031	14.62499999
	9:00 AM	10:00 AM	0.85942833	15.70221355	5.17369148	16.8125	15.61262132	20.44924241	22.02599502	21.85401385	22.42184751	4.45041667	3.72386591	4.04481833	6.23850473	3.60033333	8.23030426	5.84166256	15.2249999	13.0084033	15.65858593	15.9635077	10.11791668	9.57618047	8.91666675
	10:00 AM	11:00 AM	0.9229035	7.10839556	10.2082005	9.994444437	18.03788842	25.68611188	13.57967289	24.58908333	25.08899048	4.57271829	3.58948745	4.13257576	2.86321149	3.59515329	5.07447918	8.703398365	15.9567831	8.75884575	16.4753738	16.89065534	10.43492063	8.54999989	
	11:00 AM	12:00 PM	0.83370428	6.19233325	3.90507183	8.39166748	9.70687711	14.49439758	12.12963693	17.64826533	17.9358227	4.58979884	3.69070945	4.23956311	2.7103417	3.53912338	5.2853517	5.17333576	10.5177433	8.56753187	11.89773059	12.38549182	9.91500033	9.69071439	
Noon	12:00 PM	1:00 PM	0.88503789	6.08668324	3.43963414	9.997222258	8.52010882	13.3287618	11.78012819	14.66964832	15.07087782	4.54820056	3.80173829	4.25461924	2.74919729	3.76843617	5.26472758	5.01004045	10.1466924	8.41192439	11.17753267	11.54802083	12.15092595	11.75595237	
	1:00 PM	2:00 PM	0.82745353	6.14539988	3.51872144	8.58650478	8.45285853	13.7557564	11.71549999	14.43559669	15.00398546	4.91071429	5.44517667	4.44371437	2.71846853	5.44605618	5.32361109	5.00789280	10.2271649	8.42169739	11.1175121	11.50711804	19.53749998	13.34999993	15.49166675
	2:00 PM	3:00 PM	0.83351044	6.02788713	3.44948119	8.09999987	8.46792928	13.2877083	11.62933618	14.44887784	14.9585206	6.93408846	8.38479102	6.55614753	2.67716493	8.57433688	4.98273839	5.09779487	10.1809281	8.29742424	11.0320765	11.33240741	24.02361113	23.88166658	
	3:00 PM	4:00 PM	0.80637254	6.16501324	3.41187976	8.53633189	8.35416665	13.50468747	11.7899745	14.2917475	14.62031816	8.52394739	10.6630113	7.92741934	2.71820558	10.94162601	5.10499984	5.04252459	10.1795146	8.38792603	10.8817678	11.25850938	24.47375004	25.85357144	26.09166663
	4:00 PM	5:00 PM	0.88170825	6.36091275	3.50778236	9.033333351	8.46015131	13.3291667	12.20577558	14.45018514	14.98162649	9.72565759	12.2023925	8.1149493	2.82566822	12.01677352	5.36041635	4.99755556	10.0310188	8.63888897	11.1489758	11.61729958	27.54889952	28.67023838	
	5:00 PM	6:00 PM	0.90498322	6.27075201	3.6056829	9.708333131	8.73023610	13.55582736	11.9568379	15.2317895	15.81988597	10.7201805	7.18513177	10.5322223	2.71725278	7.24483923	5.35374985	5.14075548	10.3035358	8.43825565	11.6761626	12.19051959	29.09000005	21.99444439	
	6:00 PM	7:00 PM	0.85364524	6.16806455	3.54773556	8.958333358	8.63394375	13.27592595	11.8566962	14.6320168	14.941378	16.3093365	6.23546869	9.27140148	2.72327273	6.19138742	5.16944453	5.11024156	10.1189565	8.35316665	11.0721948	11.4125	22.52797618	13.62500003	27.14999992
	7:00 PM	8:00 PM	0.8897438	6.17876572	3.50166667	9.025000002	8.74275353	13.3552928	11.8208741	14.5752355	14.87588028	8.83516675	5.66235027	7.37399448	2.68114479	3.83017275	4.96666669	5.13120558	9.84051852	8.34929748	11.0887826	11.4848736	8.47333316	9.25119043	
	8:00 PM	9:00 PM	0.89189078	6.28338623	3.47538203	8.29166667	8.91263673	12.8721675	12.199	14.7587378	15.29491455	4.29841563	3.50393713	4.05133334	2.73973759	3.48639421	4.81389835	5.06453332	9.79037788	8.49394252	11.18283132	11.56644144	8.8287878	8.68833332	
	9:00 PM	10:00 PM	0.81740978	6.3512413	3.53329186	8.108333275	8.96490648	12.8416667	12.3004016	14.6330207	15.03456294	4.07547186	3.47228627	3.9799196	2.78523504	3.46451467	4.97777788	5.1175	9.79428578	8.67201187	11.12508294	11.40372342	9.05059295	8.47870999	8.33333335
	10:00 PM	11:00 PM	0.77152786	6.42345818	3.51223428		9.11388878	14.42500009	12.5664943	15.2323973	15.7734137	4.05734125	3.51524391	3.87547616	2.81455178	3.46748374	5.55416633	5.25388642	10.3749988	8.54029523	11.4558766	11.78042308	8.20277766	9.09000031	7.33333337
Midnight	11:00 PM	12:00 AM	0.74583328	6.36298367	3.63229152		8.90777833	14.42500009	12.3824996	15.1915478	15.6601746	3.93633326	3.58895248	3.88628519	2.73193558	3.57812497		5.19533376	11.3270338	8.46157468	11.3569149	11.68706147	9.36483334	7.5041667	

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 9-Dec-13
Day of Week: Monday
Measure: Mean Travel Time
Units: minutes

		Segment Label	D69_2A5	D65_B58	D69_9A2	D69_BB1	D69_D7C	D69_D35	D69_D6D	D69_2BE	BB1_DED	BB1_C45	BB1_EE8	BB1_2A5	BB1_B58	BB1_9A2	BB1_D69	BB1_D7C	BB1_D35	BB1_D6D	BB1_2BE	D7C_DED	D7C_C45	D7C_EE8	D7C_2A5
			Site E to Site D	Site E to Site H-1	Site E to Site F	Site E to Site C	Site E to Site B	Site E to Site A	Site E to Site Z-1	Site E to Site Z	Site C to Site I	Site C to Site H	Site C to Site G	Site C to Site D	Site C to Site H-1	Site C to Site F	Site C to Site E	Site C to Site B	Site C to Site A	Site C to Site Z-1	Site C to Site Z	Site B to Site I	Site B to Site H	Site B to Site G	Site B to Site D
		Length (miles)	1.3782E-04	7.3890E-04	4.2892E-04	4.7873E-03	3.8527E-03	7.6646E-03	10.4008E-03	10.7239E-03	3.1541E-03	8.3952E-03	2.2101E-03	3.1518E-03	5.1952E-03	4.7977E-03	5.5659E-03	3.8105E-03	6.8739E-03	7.0293E-03	11.2321E-03	12.4251E-03	11.8878E-03	6.6783E-03
Time	Begin Time	End Time																							
Midnight	12:00 AM	1:00 AM	4.30416662	7.63333169	4.87222219	6.70833325		10.73333329	12.39166651	12.64166649	8.39047628	8.27767852	8.76428569	2.1309328	8.28154762	4.86927083		5.35523809	3.47409588	6.07953332	6.41357143	12.87500007	16.39166663		8.81666674
	1:00 AM	2:00 AM	4.48593472	10.10833349	5.45416675	6.99200002		10.23966995				8.553282016	8.66666653	2.18121212	8.647023856	5.272558845		4.91666653	3.58023809	6.32166654	6.790222554		13.20416654		7.05833349
	2:00 AM	3:00 AM	3.89042762		4.89166677	6.83214289		9.731944458	13.48750006	13.7895333	8.9835556	9.247016571	9.267708333	2.2894446	9.352500039	5.024722217		6.418749993	3.69605937	5.45833328	6.814087311			15.43124999	8.544444479
	3:00 AM	4:00 AM	4.02334428	7.45277755	4.67424245	6.28416988	12.64999995	9.794047637	12.64166669	13.07916672	9.318333281	9.244841273	8.466666657	2.224523806	9.127535221	5.170121982	6.499999988	6.020833282	3.50202196	6.06203052	6.403042136			12.38333338	6.729166629
	4:00 AM	5:00 AM	5.98318873	8.90833327	5.49583765	6.33815705	11.75833326	14.34210188	12.22222227	12.41274509	10.8075575	8.584815327	8.866825267	2.343523788	8.610666669	5.182512133	6.555555552	5.58373884	3.80502086	6.46917643	6.785884513			13.47333169	6.988888922
	5:00 AM	6:00 AM	11.59478514	12.41666659	5.54008936	14.26166653	16.07666653	17.12333333	16.25333362	17.15405075	9.153366133	8.3857143	9.966666703	2.342576589	9.353666987	5.188262659	7.339666667	6.136132689	3.89692143	7.75333333	7.755333333	15.50099996	15.50099996	14.08333327
	6:00 AM	7:00 AM	11.37798818	12.24583333	10.59708236	14.26166653	19.9667133	17.99933333	20.40953354	21.10833333	9.853388334	9.288145963	9.162888703	2.242176669	8.281992338	5.06042424	7.385857463	5.75532988	3.66362744	7.45921783	8.052876994	16.95666664	13.43958336	14.76166333	7.748333347
	7:00 AM	8:00 AM	8.71230887	13.17857139	8.94490426	14.51304926	20.86933336	17.51317933	20.86833334	21.5085854	9.429864495	8.28367983	9.272882008	2.218171794	8.209583903	5.068153729	7.071604612	5.74037941	3.54190006	6.51362121	7.660816515	15.32916667	13.58377776	14.90513872	7.549077264
	8:00 AM	9:00 AM	5.47268498	9.138636371	5.58287037	13.82166669	19.57837361	14.43828829	20.23454763	20.87916668	9.393663793	8.384833317	8.935532036	2.277269774	8.328358107	5.048858211	7.438541637	5.393580232	3.95476189	6.49336694	7.021520608	14.68166668	13.64080461	14.33685394	7.604835298
	9:00 AM	10:00 AM	4.37813458571	8.966974665	5.54535758	10.71457361	17.03103723	12.07878783	17.13933622	17.42501149	8.815682771	8.759162087	9.324494844	2.367694568	8.724427631	5.307904689	7.667926526	5.617602026	3.75613883	6.558205548	6.901812368	15.49479165	14.42852876	14.67138027	7.892892212
	10:00 AM	11:00 AM	4.405530552	8.493750009	5.43467435	7.366287852	14.29881106	10.13203891	15.49661959	16.10128204	10.43446615	9.233834585	10.04247314	2.50830076	9.239329218	5.622715417	7.913541659	5.181666649	3.73840879	6.66513059	7.007391143	16.7819048	16.34593696	15.51499997	9.047348449
	11:00 AM	12:00 PM	4.061363606	9.616666665	5.40509523	7.56323131	13.59444447	9.6138892	13.19499988	13.34859533	10.15261904	8.852316379	9.874285701	2.360237833	8.938119413	5.417542572	7.717261889	5.352379293	3.81376185	6.68844858	7.139547433	16.61145833	14.67115379	16.76333329	8.7215882
Noon	12:00 PM	1:00 PM	4.28277785	11.74285714	5.27410256	6.248484848	11.70966664	10.21929928	12.55864863	12.82198975	9.791286543	9.091210936	9.92073642	2.305927976	8.956330768	5.431545885	7.850000025	5.449999994	3.55075388	6.263602146	6.656172841	16.7454763	14.05458913	15.86333332	8.309722224
	1:00 PM	2:00 PM	4.485384656	13.68833333	10.59799999	6.559311726	11.96041663	10.27221428	12.83853848	13.1736783	10.24515504	8.957506352	9.605253627	2.291837801	8.897268526	5.226014352	7.402272705	5.099702363	3.50800741	6.284015507	6.645495366	16.81352049	15.20458332	15.2097222	8.257538177
	2:00 PM	3:00 PM	4.366406251	23.41499997	15.22750001	6.818518527	12.03611109	10.04210527	12.91666668	13.28093399	14.66885995	12.60761325	13.51631845	2.371659448	12.51121032	7.907472817	8.145454514	5.573333345	3.54568727	6.262605043	6.588999336	21.31136365	17.502191	20.77640769	8.237442923
	3:00 PM	4:00 PM	5.125694452	25.79285722	14.94692983	6.660833116	11.70955549	10.41885985	12.7764358	13.1197085	22.4046115	21.14561852	22.41759258	4.549186312	21.54539898	13.9188899	13.1494703	5.544698964	3.52742066	6.3593427 48	6.8019905 4	29.73115365	27.1753472 8	27.8870369 9	11.47042864
	4:00 PM	5:00 PM	8.209277757	28.6940476	18.06433292	7.647727262	12.0472222	13.43063335	13.1387355	13.52083335	25.54583334	24.95272127	24.2802981	5.460638997	25.28210383	14.70897672	14.16333331	5.063157907	3.553216383	6.352575749	6.831535799	33.71249968	34.34077381	33.31372547	18.52238894
	5:00 PM	6:00 PM	5.8642857 1	22.04722222	14.4771145	10.60833331	15.37439549	12.9527777	15.77187503	16.11456331	25.98416667	26.82449875	25.55129636	5.680997773	26.81398027	14.9849016	15.51666664	5.292347229	3.64968514	6.63060772	7.190549517	38.11250009	41.69291198	39.29703708	21.33803065
	6:00 PM	7:00 PM	4.194230728	13.56666674	9.814705887	8.159769232	13.55937503	9.328124988	15.5491667	16.62389552	29.81810572	28.4671782	21.7238571 2	4.242636872	18.4482666 7	11.04663569	15.03424245	5.25681816	3.85160728	6.51835811	6.828666859	54.85999994	35.7092062	40.80833334	19.01545538
	7:00 PM	8:00 PM	4.054166637	9.133333331	5.2227854 1	6.127083292	11.85833339	10.33166652	11.85595241	12.1722222	24.09972678	20.88154763	23.07814813	4.682638556	20.44894498	14.62773764	12.25416667	5.078328283	3.57000228	6.35333343	6.736782855	29.1777777	29.109375	34.5809524	10.27865189
	8:00 PM	9:00 PM	3.978566855	8.611904774	4.992666697	6.387500007	10.25833352	9.874999998	13.3545335	14.24444441	10.54119948	9.9629187 9	10.1930374	2.333447485	9.956275717	5.780612749	7.483333316	4.972934662	3.5336512	6.413475159	6.779651149	15.27738892	18.7952963 2	18.03333331	8.353841159
	9:00 PM	10:00 PM	4.222316644	8.5345238 1	4.985403505	5.702777767	11.47500004	10.11666652	12.75416666	13.03333328	9.230353198	8.74621214	9.691987158	2.271923075	8.720502533	5.230067713	7.062499988	5.146666646	3.62794118	6.281263667	6.705649333	14.54583331	14.22142386	17.53985477	8.310937529
	10:00 PM	11:00 PM	4.47083391	8.983333338	4.66979163	6.983333343		11.19500005	11.71666673	11.99583331	9.153932158	8.751966782	9.28750003	2.276179945	8.656487645	5.259188037	6.703333353	5.199999999	3.72183323	6.57799316	6.949259255		14.65333329	17.19166665	8.963333289
Midnight	11:00 PM	12:00 AM		7.583333409	4.78205561	6.919444645			14.39500004	14.67000008	9.301923082	8.58010753	9.564285733	2.302866488	8.589399007	5.074102555	6.850000013	5.27083341	3.60925545	6.46955173 1	6.809874126	14.04166667		15.27499998	7.944444136

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 9-Dec-12
Day of Week: Monday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	07C_B5B Site B to Site H-1	07C_9A2 Site B to Site F	07C_D49 Site B to Site E	07C_BB1 Site B to Site C	07C_D35 Site B to Site A	07C_D6D Site B to Site Z-1	07C_2BE Site B to Site Z	D35_D6D Site A to Site I	D35_C45 Site A to Site H	D35_EE8 Site A to Site G	D35_2A5 Site A to Site D	D35_B58 Site A to Site H-1	D35_9A2 Site A to Site F	D35_D49 Site A to Site E	D35_BB1 Site A to Site C	D35_07C Site A to Site B	D35_D6D Site A to Site Z-1	D35_2BE Site A to Site Z	D6D_D6D Site Z-1 to Site I	D6D_C45 Site Z-1 to Site H	D6D_EE8 Site Z-1 to Site G	D6D_2A5 Site Z-1 to Site D	D6D_B58 Site Z-1 to Site H-
				12.4617452	8.5949960	8.6832774	5.5661401	3.2568507	6.1082529	5.1812370	12.6985498	12.8853160	12.7450847	6.1008109	13.5323350	9.0780549	7.4589149	8.3825477	5.2568502	3.0419042	7.1783128	15.5888821	15.8417281	15.2767619	9.0961984	15.8995982
Midnight	12:00 AM	1:00 AM		14.85416665	10.69344452		5.39166667				18.27499995	12.72170403	12.31666664	5.757371793	12.53333337	9.377041174		8.512499995	6.545833284	2.616811684	2.915337704	14.43749998	14.52801234	15.35694438	8.323148816	14.53065475
	1:00 AM	2:00 AM		13.23749995	10.03749867		5.104166658				12.17361113	12.9887502	13.88333327	6.185119031	12.83269423	8.892888886		3.691225676		2.718576392	3.086037443	23.40624999	15.1916665	14.68952333	8.30451387	14.67272729
	2:00 AM	3:00 AM			11.47708333		6.127083376				13.34166663	13.24601448	12.43333329	5.971666659	13.13645833	9.156200833		3.782716026		2.795520467	3.099833342	14.94500001	16.32361111	16.7388889	8.83527778	16.39645285
	3:00 AM	4:00 AM			9.566666651		4.804166676				14.22333333	13.31209522	13.34537037	6.293850799	13.18722223	9.301458328	8.716666685	3.711207685		2.621254681	2.992564108	15.62833329	16.11805556	14.8541663	8.762008616	16.07532051
	4:00 AM	5:00 AM			9.903888912	12.08333334	5.395416705				13.38666241	12.19211396	13.0847663	5.883785313	12.18763556	8.918354189	10.04166668	3.941441456		2.709873876	2.979899477	16.94296295	15.26833333	14.78833333	8.239788748	15.64695279
	5:00 AM	6:00 AM	15.19166665	11.37324436	11.93000000	5.833333367	6.333333367				12.76875148	11.58488257	13.12000004	5.875370333	11.90533333	8.668581572	11.37833333	3.663566476	7.066568726	3.802566362	3.251333121	15.5583333	15.5583333	15.5583333	8.577583333	14.81395275
	6:00 AM	7:00 AM	13.30833337	10.31233633	11.98833336	5.335516833	6.859999983	8.993666639	10.47500001	10.47500001	13.19405189	11.54488257	13.12222224	5.875370293	11.90533661	8.668581637	11.20434783	3.633393249	6.449999968	3.555664982	4.149939376	15.2155138	14.62434661	15.54758548	8.577583983	14.81394153
	7:00 AM	8:00 AM	13.57397147	10.38333333	13.18500001	5.301888905	6.737500003	8.95000009	10.375	10.375	13.80416	12.13636816	12.73570517	6.024380718	12.08615197	8.89853208	10.7019231	3.642580645	6.820634925	2.998614846	3.438523614	15.88300001	14.61339394	15.69479168	8.606855778	14.64882859
	8:00 AM	9:00 AM	13.98134408	10.27512626	13.37083334	5.307539674	7.300000079	9.537499985	9.955166854	9.955166854	14.1647436	12.77276423	13.362	6.305804282	12.69688235	9.274764586	11.53981479	3.885115616	6.975769936	2.950556417	3.447372227	16.68446252	14.84874479	17.4826923	8.830166665	14.75721394
	9:00 AM	10:00 AM	14.84722222	10.99278834	15.23444441	5.692307693	7.283333367	10.35000035	11.85166671	14.85353353	13.79528708	14.74305592	6.703332097	13.72295138	9.922723133	13.28756201	3.888243388	7.085606108	2.884309854	3.213021861	17.08791905	15.52466216	16.44079708	9.101205445	15.31624212
	10:00 AM	11:00 AM	16.17673809	12.02970087	13.83749996	6.884957249	9.577777795	10.28333355	10.68333339	14.92738996	13.11951477	13.91614584	6.366825405	13.2122549	9.472001761	12.34333334	4.153299499	6.59166662	2.879282701	3.188683132	17.8356817	16.73240742	17.32976192	9.701433701	16.65578079
	11:00 AM	12:00 PM	18.55555555	11.53854597	11.92500019	6.176353139	8.345999983	9.858333338	10.28750002	14.23351443	13.94186556	14.42769805	6.045723115	14.33451119	9.342702945	12.04047621	3.988056378	6.775833277	3.032747946	3.457329599	19.22459979	16.23109637	17.76566668	9.303993555	15.97385417
Noon	12:00 PM	1:00 PM	14.40833336	11.62165173	14.85694444	5.81287879	8.533958283	8.929000038	9.099999997	14.02119304	12.49859692	13.71953125	6.028333027	12.4680272	8.9448948	11.66250011	3.702479625	6.708333325	2.792104102	3.003868258	16.79291665	16.77869984	18.84166666	9.192946032	17.20163046
	1:00 PM	2:00 PM	15.14642858	10.92002207	12.73888892	5.816879149	7.204166653	10.3166667		18.03374074	16.19620668	17.73361283	6.215985677	16.11453489	11.90951575	10.80383334	3.671416661	7.108333334	2.701648992	3.000791075	16.96914964	15.54930953	16.83053647	8.824917072	16.49955184
	2:00 PM	3:00 PM	17.68690476	13.94497354	20.39861111	5.934523814	6.775757598	10.14833331	10.35208338	25.46145833	25.72461419	26.4520832	9.363483798	25.54768118	18.21814574	12.28240741	4.049710685	7.091666758	2.691714284	2.968845348	20.63445512	19.2082251	19.69047619	8.941000004	19.10200422
	3:00 PM	4:00 PM	27.57884418	20.68177967	25.68333333	6.767123063	7.069854131	9.71354166	9.922222218	32.53660605	32.305219	32.16123188	14.23174322	32.70686408	23.21367523	17.10981817	5.917991304	7.108333251	2.717327232	3.004665125	28.44035066	29.04646532	29.16344998	12.11183699	28.7375364
	4:00 PM	5:00 PM	34.79515385	25.74429824	23.56249994	12.47490941	7.007246387	9.845238123	10.25833335	37.92812499	39.57763192	43.3164144	16.35017007	39.65913978	27.75994745	20.26249995	12.05690476	10.62777774	2.791472887	3.221184372	34.81483741	35.40090068	35.48115842	16.9464673	35.77677469
	5:00 PM	6:00 PM	41.67473121	29.50147059	28.30208338	14.81140351	6.973333319	9.96944433	10.36999994	49.74166665	31.13208221	34.87955557	18.54147058	32.3792171	24.9873423	31.37983329	14.5963867	13.72499997	2.968524594	3.539815959	41.49671051	42.96108699	45.49666665	20.87739016	42.92185752
	6:00 PM	7:00 PM	35.69231738	28.0669753	19.85666665	13.43547	6.872916729	9.210000068	9.452083362	32.45818866	33.38528788	34.4236161	15.35224958	33.63683508	24.57713994	27.51388891	14.7117566	10.9708342	2.7220524	3.004369925	46.53716217	35.36307191	36.7097222	20.89503732	36.60141514
	7:00 PM	8:00 PM	29.66535269	21.40940651		5.838021491	6.924999995	9.355555548	9.541666713	13.92755655	13.63649532	13.75592166	6.335763388	13.83663432	9.610882653	18.63712126	8.327517264		2.685223325	2.958525208	36.15103935	36.88125	37.77878188	15.45599949	36.72418879
	8:00 PM	9:00 PM	17.54235899	11.84753088	11.79166675	6.241025652	6.908333413	9.45000004	9.541666873	13.08117285	12.65093330	13.591687	6.009494543	12.60154319	8.973495813	11.69583335	4.038362088	6.866666637	2.6857672	2.985725318	18.75742754	16.52588254	17.53810079	8.187972983	16.46003932
	9:00 PM	10:00 PM	14.20238088	11.18657409		6.162620526		9.591666608	9.95000001	12.92369422	12.35950708	13.0550259	6.000420183	12.29458365	8.927463772	11.22277781	3.784719831		2.692766218	2.984873872	15.62307691	15.58766249	16.26238098	8.789944483	15.53115363
	10:00 PM	11:00 PM	14.62999997	11.24952501	12.75833329	7.243333308				13.07111111	12.91972225	13.33425928	6.133685452	12.78888892	9.09967424	10.22708335	3.750356306	14.1666666	2.734363932	3.036932676	15.6158731	15.37993496	15.8191667	8.799414983	15.22245959
Midnight	11:00 PM	12:00 AM			10.73041667		6.274999911				12.82954544	12.95107529	13.21041659	6.25424244	12.94298875	9.208602164		3.861436833		2.746223664	3.053594763	15.44278832	15.56408047	16.12121213	8.779929564	15.43671878

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 9-Dec-13
Day of Week: Monday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	D6D_SA2	D6D_D69	D6D_BB1	D6D_D7C	D6D_D35	D6D_2BE	3BE_DED	2BE_C45	3BE_EE8	3BE_2A5	3BE_B58	3BE_9A2	2BE_D69	2BE_BB1	2BE_D7C	2BE_D35	2BE_D6D
				Site Z-1 to Site F	Site Z-1 to Site E	Site Z-1 to Site C	Site Z-1 to Site B	Site Z-1 to Site A	Site Z-1 to Site Z	Site Z to Site I	Site Z to Site H	Site Z to Site G	Site Z to Site D	Site Z to Site H-1	Site Z to Site F	Site Z to Site E	Site Z to Site C	Site Z to Site B	Site Z to Site A	Site Z to Site Z-1
			Length (miles)	15.647121[illegible]	10.4[illegible]	8.8739[illegible]	5.1[illegible]	2.5[illegible]	2.2722[illegible]	15.7[illegible]	16.1[illegible]	15.4[illegible]	3.2[illegible]	16.1[illegible]	12.4[illegible]	10.7[illegible]	7.4[illegible]	4.[illegible]	2.7[illegible]	2.2722[illegible]
Midnight	12:00 AM	1:00 AM		11.13559508		6.111742410		2.644791854	0.317213123	14.30583204	14.53811111	15.72777778	8.648113478	14.75055556	11.37823127		6.466197268		3.054348248	0.305852376
	1:00 AM	2:00 AM		12.15539214		6.365220146		2.723188402	0.314716298	23.74166666	15.45064598	14.59999999	8.653257963	15.3555556	12.63757066		6.707485611		3.126041684	0.342013889
	2:00 AM	3:00 AM		11.47999991		6.516208203		2.811555113	0.300854853	15.06166671	16.57722229	17.14166667	9.2547223	16.58277783	11.85166669		6.873755445		3.225555561	0.383055258
	3:00 AM	4:00 AM		11.83231711	12.28333334	6.505238106		2.752578163	0.272807013	15.99999994	16.24933335	15.21333522	9.08785714	16.244	12.14037041	12.62916665	6.849375002		3.141304361	0.380062588
	4:00 AM	5:00 AM		12.41340153	12.45833348	6.757317080		2.858477283	0.28333333	17.28333334	15.24531125	16.18541666	9.432624134	15.544861	12.35669388	12.75416674	6.96134424		3.170789541	0.395450448
	5:00 AM	6:00 AM		11.59945533	11.67666652	6.391356282	9.858133338	2.787881163	0.328333333	16.37333425	14.45358449	15.04533356	8.998428571	15.55338533	11.85035488	13.39666653	6.639437424		3.076833328	0.337415443
	6:00 AM	7:00 AM		11.33168203	14.19416667	6.315364586	9.954166675	2.687881163	0.551747398	15.31261325	14.99423344	16.24833334	8.998428571	14.96238033	11.85028735	14.38555557	6.535833337	9.552777763	3.06813497	0.316973364
	7:00 AM	8:00 AM		11.29266666	14.78402778	6.304306306	9.784166621	2.752422	0.535252534	16.15880922	14.99666139	15.80701755	8.88810315	14.66815476	11.6157466[illegible]	14.4750000[illegible]	6.639881653	8.883055568	3.046318773	0.367825369
	8:00 AM	9:00 AM		11.72398649	14.46481472	6.437500008	10.21197918	2.791275438	0.510789655	16.98263888	15.15087717	15.85468748	9.16049197	15.10442286	12.06129944	14.84351847	6.721254214	10.06119047	3.086379158	0.315648523
	9:00 AM	10:00 AM		12.08595625	16.65833342	6.697558817	9.866566735	2.834883726	0.351564453	17.97388378	15.16388889	15.57485279	9.417258379	15.71202551	12.31177602	17.15833338	6.902539102	10.02020408	3.148455451	0.324552402
	10:00 AM	11:00 AM		12.96443535	15.57916665	7.108510974	9.333333166	2.884970635	0.328223884	17.92916669	16.90453332	17.71634616	10.0365159	16.77855874	13.17976743	15.99166664	7.338671266	9.499999937	3.209404269	0.317249399
	11:00 AM	12:00 PM		12.47783333	14.67619047	8.863547488		2.946754233	0.433418623	18.16739765	15.34845533	17.02060184	9.547859323	15.91124214	12.5735248[illegible]	15.27023803	7.123554327		3.117837203	0.333554397
Noon	12:00 PM	1:00 PM		12.47891892	14.125	8.552738224		2.838541617	0.284302864	17.71122447	16.31751542	18.6934958	9.277136636	16.1136696	12.54562440	14.56000004	6.728172928		3.11394692	0.314199388
	1:00 PM	2:00 PM		11.87656079	13.58	8.510438598	10.57500014	2.770735676	0.298466393	17.2501644	16.02071863	16.96	9.047291884	16.06384615	12.02197555	13.87166663	6.727568747		3.056217595	0.298656793
	2:00 PM	3:00 PM		14.20358529	14.99955837	6.829807704		2.763058547	0.295244333	20.78668422	19.39904494	20.16111111	9.294384704	19.36681548	14.59028926	15.39687501	7.142928865		3.055199177	0.298710068
	3:00 PM	4:00 PM		21.06061872	19.90984648	9.565500001		2.756769151	0.303047617	28.7464152	28.7784461	29.80187499	12.4377421	28.61311188	21.31691453	20.28712171	8.99594502		3.050415527	0.309356656
	4:00 PM	5:00 PM		25.93107989	23.00416667	14.77810458	10.58333343	2.835487908	0.427950449	35.29313725	35.51707459	35.47473118	17.1780303	35.85935714	26.57959978	23.34583338	15.10534014	14.06666656	3.125028815	0.299067318
	5:00 PM	6:00 PM		35.70521173	36.68749999	17.9839108		2.860915029	0.50863953	42.35268119	43.52067154	45.45479189	21.90429982	44.02032259	31.74008516	36.55166663	19.66529412	17.99999999	3.15103388	0.295148593
	6:00 PM	7:00 PM		27.9718116	36.70972225	18.7840684		3.340736692	0.298834744	49.0968969	37.82950713	39.46354148	22.0355425	38.37953334	29.75510455	36.752381	20.0434737		3.665321732	0.30345118
	7:00 PM	8:00 PM		27.42072223	22.67121215	11.0964047[illegible]		2.858570282	0.273333338	36.97126666	36.61127653	39.00998375	15.92433449	38.72448276	27.79301471	23.02727283	11.64054622		3.16417748	0.298044319
	8:00 PM	9:00 PM		12.4230178	14.71875	8.890012240	10.075	2.793696698	0.282586618	17.07118954	17.64831649	18.93194445	9.499846281	16.8935179	12.7279202	15.18125005	7.254500003		3.198333341	0.331600258
	9:00 PM	10:00 PM		11.7265562	14.02466652	8.564439646		2.825665175	0.295238092	16.03172042	15.78830394	16.44479167	9.112387385	15.72749999	12.09291394	14.40277783	6.878427421		3.122295502	0.30156012
	10:00 PM	11:00 PM		11.77199999	12.78333331	6.517401952		2.769527545	0.296394232	15.86456333	15.44157766	15.94339081	8.052757353	15.33691756	11.9636111	15.08166664	6.778813548		3.086448804	0.305852376
Midnight	11:00 PM	12:00 AM		11.63596485		6.511111108		2.776535073	0.311724607	15.88388887	15.69924244	16.36835556	9.198363637	15.52333334	11.92761156		6.771464838		3.129895626	0.323287893

TRAVEL TIME DATA

1 HOUR CORRIDOR STATISTICAL SUMMARIES

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 10-Dec-13
Day of Week: Tuesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	DED_C45	DED_EE8	DED_2A5	DED_B58	DED_9A2	DED_D69	DED_BB1	DED_D7C	DED_D35	DED_D6D	DED_28E	C45_DED	C45_EE8	C45_2A5	C45_B58	C45_9A2	C45_D69	C45_BB1	C45_D7C	C45_D35	C45_D6D	C45_28E	EE8_DED
			Site I to Site H	Site I to Site G	Site I to Site D	Site I to Site H-1	Site I to Site F	Site I to Site E	Site I to Site C	Site I to Site B	Site I to Site A	Site I to Site Z-1	Site I to Site Z-2	Site I to Site Z	Site H to Site I	Site H to Site G	Site H to Site D	Site H to Site H-1	Site H to Site F	Site H to Site E	Site H to Site C	Site H to Site B	Site H to Site A	Site H to Site Z-1	Site H to Site Z	Site G to Site I
			Length (miles)	1.201	1.471	5.555	0.983	3.722	7.585	8.600	11.793	13.698	15.769	16.775	1.000	0.859	6.801	0.969	3.909	7.339[illegible]	8.1041[illegible]	11.4[illegible]	12.[illegible]	15.[illegible]	16.[illegible]	1.4710[illegible]
Midnight	12:00 AM	1:00 AM		0.992	1.256	7.058	0.981	3.987	22.450	8.641		12.860	14.988	14.612	1.321	0.888	6.791	0.060	3.242		8.594699973	14.4833334	13.61904759	15.07698408	15.58888888	1.538904745
	1:00 AM	2:00 AM		0.980	1.408	7.296	1.023	4.051		9.330		13.258	16.363	16.493	1.296	0.875	6.214	0.084	3.802		9.401111137	12.74444444	12.1337963	16.49145984	16.87444447	1.485937487
	2:00 AM	3:00 AM		1.043	1.244	8.549	1.098	4.042	8.083	9.888		12.818	16.188	16.326	1.058	0.872	5.971	0.075	3.499	10.79166664	9.393599968		11.62947153	15.28823811	15.53333333	1.566666577
	3:00 AM	4:00 AM		1.094	1.319	9.908	1.145	3.875	10.058	9.276		14.438	15.079	15.688	1.267	0.763	6.742	0.094	3.492	8.102777498	8.505072469	13.90000044	12.22721775	14.33581082	14.92161458	1.522275859
	4:00 AM	5:00 AM		2.379	1.213	22.195	2.242	7.033	35.775	12.266	20.308	26.905	17.914	17.426	1.311	0.791	17.823	0.042	4.173	29.84444451	9.213478521	16.66547617	20.07482878	14.68864673	15.13853961	1.473931104
	5:00 AM	6:00 AM		1.393	1.233	30.498	2.568	16.303	33.230	29.797	32.889	38.995	29.214	28.565	1.437	0.966	37.629	0.143	14.718	28.62500313	28.67232142	39.49519287	39.95657897	46.00691616	41.8364393	1.407283169
	6:00 AM	7:00 AM		1.387	1.273	31.818	1.264	23.789	31.846	38.803	45.564	38.665	47.977	48.542	1.447	1.008	28.459	0.135	25.593	34.58333334	36.85374088	42.40465588	37.85599591	44.27898536	44.65940999	1.497958467
	7:00 AM	8:00 AM		1.321	1.264	18.804	1.275	25.815	26.628	35.356	47.688	27.727	42.469	43.450	1.330	0.889	14.070	0.066	21.957	17.88166669	33.60408162	46.07680218	21.51482144	42.6722826	42.66343862	1.459357909
	8:00 AM	9:00 AM		1.272	1.269	10.241	1.256	14.079	13.213	24.607	32.279	17.791	32.230	34.710	1.336	0.874	7.669	0.054	8.743	12.35833334	18.16632418	24.19795626	14.9415459	26.08269971[illegible]	36.7472701	1.473333344
	9:00 AM	10:00 AM		1.386	1.274	10.535	1.357	8.342	12.563	16.817	19.540	16.423	22.139	22.081	1.287	0.886	8.222	0.055	4.130	9.483333334	11.11694852	19.01574073	12.02322406	19.5773224	19.79858108	1.521177365
	10:00 AM	11:00 AM		2.060	1.440	9.951	2.098	7.637	11.950	13.289	18.175	15.008	21.226	21.772	1.342	0.841	6.023	0.053	3.568	9.799999999	9.003935148	13.64676928	11.70358333	16.70313335	17.26401516	1.485962669
	11:00 AM	12:00 PM		1.383	1.281	9.333	1.360	6.166	11.600	12.004	15.546	15.124	18.706	19.421	1.312	0.873	6.042	0.051	3.420	9.524999999	8.838888863	13.62793154	11.70796705	15.09019174	15.82774776	1.464959523
Noon	12:00 PM	1:00 PM		1.726	1.368	10.880	1.696	6.722	13.535	12.616	15.739	16.808	17.775	18.248	1.304	0.878	6.997	0.062	3.468	10.32142858	9.080654758	13.35000005	12.19855072	14.28867806	14.5841672	1.422784811
	1:00 PM	2:00 PM		2.408	1.566	10.698	2.175	8.139	13.863	13.952	19.176	16.524	19.428	19.741	1.303	0.888	6.052	0.055	3.536	10.03750002	9.983535636	13.81875004	11.81111111	14.91565563	15.27552642	1.451250005
	2:00 PM	3:00 PM		2.411	1.559	11.097	2.348	8.183	13.043	13.763	19.169	16.863	19.333	19.883	1.327	0.874	6.083	0.050	3.527	9.453333355	9.29918803	13.27395833	11.89714288	14.4778011[illegible]	14.80468253	1.438589973
	3:00 PM	4:00 PM		2.550	1.593	11.041	2.417	8.466	13.826	14.133	19.295	16.838	19.444	20.241	1.349	0.866	6.287	0.048	3.506		9.000617936	13.63939391	12.16946837	14.48816668	14.76227598	1.463992546
	4:00 PM	5:00 PM		2.250	1.449	9.753	2.218	8.280	12.812	13.038	18.607	14.685	22.066	22.514	2.929	0.894	6.384	0.055	3.571	11.62708134	8.882183601	13.74708333	12.24317458	17.16201922	18.08591958	4.65953331
	5:00 PM	6:00 PM		1.798	1.341	7.127	1.792	5.688	10.752	12.033	15.778	13.093	20.020	21.850	7.131	0.913	6.076	0.066	3.634	8.680555578	8.054404409	13.88249516	11.88923019	17.65992204	18.35434678	7.073404846
	6:00 PM	7:00 PM		1.383	1.261	6.866	1.383	4.399	9.350	9.899	15.140	12.475	15.904	16.081	3.819	0.898	6.195	0.055	3.474	8.320833378	6.581117541	13.69517541	11.03992535	14.57573566	15.3695618	3.994807568
	7:00 PM	8:00 PM		1.244	1.251	6.565	1.225	4.296	9.842	9.423	14.475	11.987	15.265	15.701	1.365	0.834	6.078	0.050	2.489	8.089583317	8.783898249	13.33854165	12.24193987	14.46348685	14.74614427	1.448214289
	8:00 PM	9:00 PM		1.118	1.204	6.573	1.141	4.105	10.198	8.792	21.538	12.766	14.538	14.811	1.302	0.854	6.208	0.080	3.507	9.185000002	6.712318888	13.55555556	12.26965458	14.84338235	15.43168932	1.420263081
	9:00 PM	10:00 PM		1.160	1.278	6.632	1.171	4.110	8.492	9.004	13.333	13.451	15.716	16.546	1.284	0.856	6.332	0.055	3.493	7.469333334	6.667931669	13.3083333	12.36911764	15.01413793	15.39260478	1.432376629
	10:00 PM	11:00 PM		1.186	1.241	6.318	1.143	4.115	9.650	10.062	17.725	12.226	15.768	16.396	1.319	0.875	6.317	0.065	3.549	7.824999999	6.914583327	14.60833322	12.65985984	14.96449405	15.37481698	1.485637529
Midnight	11:00 PM	12:00 AM		1.182	1.290	6.769	1.180	3.906	9.708	9.020	11.658	12.511	14.674	14.454	1.367	0.857	6.483	0.063	3.610	9.149999991	9.558333378	13.31388887	12.69722227	15.24687499	16.19277778	1.427469117

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 10-Dec-13
Day of Week: Tuesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	EE8_C45 Site G to Site H	EE8_2A5 Site G to Site D	EE8_B58 Site G to Site H-1	EE8_9A2 Site G to Site F	EE8_D69 Site G to Site E	EE8_BB1 Site G to Site C	EE8_D7C Site G to Site B	EE8_D35 Site G to Site A	EE8_D6D Site G to Site Z-1	EE8_2BE Site G to Site Z	2A5_DED Site D to Site I	2A5_C45 Site D to Site H	2A5_EE8 Site D to Site G	2A5_B58 Site D to Site H-1	2A5_9A2 Site D to Site F	2A5_D69 Site D to Site E	2A5_BB1 Site D to Site C	2A5_D7C Site D to Site B	2A5_D35 Site D to Site A	2A5_D6D Site D to Site Z-1	2A5_2BE Site D to Site Z	B58_DED Site H-1 to Site I	B58_C45 Site H-1 to Site H
				4.95918854	5.17533007	5.91784109	3.12266242	6.6933206	4.92932099	11.9679704	12.7280917	15.2567617	15.4532367	4.66528917	4.83107212	3.17538107	4.92918519	2.98270268	3.27938348	2.02192291	6.07813245	5.69248164	9.29214189	9.9854648	6.93218886
Midnight	12:00 AM	1:00 AM		1.58527781	6.94687499	1.44642855	4.06875001		9.82499998		13.8222222	15.7229167	16.0208333	6.57738091	6.83301825	7.59821424	6.97053492	3.12455238	4.93333333	2.23455997	6.65000021	6.26104153	8.4907053	8.7396585	1.38125003	0.07664589
	1:00 AM	2:00 AM		1.53898898	6.85239917	1.55833261	4.13750002		9.62833335		13.3645328	16.5562499	16.9152777	7.68333329	6.76319445	6.85257138	6.92187496	3.11518144	5.68749912	2.45059442	7.1805555	5.87754555	9.2594629	9.74791666	1.39833342	0.05277779
	2:00 AM	3:00 AM		1.72053387	6.88904513	1.41666664	4.02166633		9.41666646		12.9297619	16.3555552	16.972619	6.79722253	6.86703949	7.43611104	6.95238452	3.17917509		2.34661452	8.17500049	5.76413978	8.6999974	8.9875943		0.05601853
	3:00 AM	4:00 AM		1.03333316	7.17379546	1.24583281	3.93500014		9.8166673		12.8865174	15.6004602	16.0916666	7.47986178	6.72666676	6.99441707	6.85512918	3.05924136	5.04999934	2.29687748	8.1483336	5.77352412	8.5093133	8.8220835	1.21145978	0.05738099
	4:00 AM	5:00 AM		1.53333365	15.7139947	1.47500022	4.69958437	9.58333321	9.54842709	14.1361109	21.2652894	15.5144238	16.3497984	6.83289474	6.40833328	6.99899999	6.39695713	2.94317217	4.59999999	2.37502437	8.0208377	7.20329531	8.4213964	9.7438835	1.33611128	0.05333334
	5:00 AM	6:00 AM		1.54819935	25.6202869	1.92995479	12.1842639		34.3252598	24.9145833	31.0833375	23.9138231	40.3985987	7.14128241	6.27543328	6.60032272	6.26695222	2.85739174	5.03833337	2.82795168	8.2966666	10.2783826	12.6092936	10.2783826	1.43333318	0.06833359
	6:00 AM	7:00 AM		1.81168721	25.8008833	1.80995468	21.8218285		34.3252598	40.7233833	34.0180972	40.5997224	40.3985985	7.14128241	6.07518189	6.59291658	6.08535881	2.82749978	5.13846153	3.69641169	9.8577651	6.81231303	10.2783826	12.4705532	1.43333318	0.07977779
	7:00 AM	8:00 AM		1.64149241	16.2812573	1.55442174	20.0665177	31.4541667	31.2496278	37.8782407	26.9035643	37.8989336	38.1885932	7.16936647	6.1827845	6.79056198	6.16724521	2.89047924	4.83962641	3.2827947	9.3042749	6.9245974	10.1330838	10.7080747	1.2017337	0.05533729
	8:00 AM	9:00 AM		1.63695951	7.94038414	1.61266667	10.9618587	23.2083335	20.8727562	23.0886907	15.6821293	31.8945238	32.1633362	7.10531401	6.1614376	6.71549999	6.19014421	2.89361376	5.18149351	3.73851246	9.2107064	6.5795637	10.5548491	11.0470438	1.34194443	0.05038707
	9:00 AM	10:00 AM		1.58229166	8.64388149	1.59541665	4.39225528	13.3666659	12.6772658	18.7851515	12.0542178	20.8533334	21.2372969	7.20545354	6.33959484	6.91163197	6.31645273	2.95769142	5.03499538	3.12708588	8.6325075	5.73935497	10.9	11.1142558	1.29900795	0.04736782
	10:00 AM	11:00 AM		1.59145295	6.47162666	1.59562504	3.89931429	10.7833335	8.25961538	15.0571428	12.1945423	17.4454248	18.1537037	7.27835568	6.29583308	6.92761361	6.32642157	2.92521097	5.38749997	2.34928789	7.52833316	5.70227016	10.5608744	11.0054770	1.33555549	0.05181972
	11:00 AM	12:00 PM		1.61541131	6.53097835	1.59254384	3.77393197	10.4249995	8.84926258	13.9714283	13.528703	15.5978235	16.4636389	7.62782787	6.49483441	7.45287861	6.51324249	2.93617647	4.85476193	2.3547031	7.60928038	5.67535392	9.25197235	9.91753262	1.33553949	0.04559723
Noon	12:00 PM	1:00 PM		1.59145295	6.46527787	1.57760148	3.85740428	8.48333344	9.09509214	13.8726004	12.3222687	18.3081998	16.9587284	7.67635688	6.72810248	7.59869547	6.81527777	3.06217104	4.93777792	2.3743068	7.52577169	5.76584432	8.3011847	8.64657626	1.3926193	0.04965824
	1:00 PM	2:00 PM		1.65777786	6.53851854	1.63503409	3.84551281	8.34999977	9.73881481	13.6666669	12.3305955	21.5626000	24.4134035	12.3513501	10.6474457	11.6391157	10.4224695	5.74539694	5.61897423	2.38816287	7.51305399	5.69662937	8.4844969	8.8223187	1.31643507	0.04355605
	2:00 PM	3:00 PM		1.62244898	6.52600001	1.61853454	3.99259214	9.30416668	13.7541666	12.5189816	14.9926824	15.3361111	16.5786949	15.0274237	17.4516666	15.0154843	9.47803489	8.31428566	2.3480622	7.39833309	5.73053437	8.4094370	8.6693703166	1.29846389	0.04909173
	3:00 PM	4:00 PM		1.94779788	6.68583332	1.79563412	3.77445652	8.3000005	9.2666668	13.6833334	12.8133773	15.259699	15.7275463	19.2567766	16.7803603	16.2680763	16.8384155	7.7078737	9.24362447	2.3282222	7.4813171	5.7587545	8.4548753668	8.8000721	1.3449345	0.04983264
	4:00 PM	5:00 PM		1.39737854	6.79893184	1.48317907	3.89937466		9.1619047	13.9141667	12.6601749	18.4468262	18.9983871	25.9046767	20.7634092	20.9054218	21.2015157	9.2009163	13.7034722	2.2964922	7.4314147	5.8088790934	10.8631752	11.5625199	2.9283333	0.06252966
	5:00 PM	6:00 PM		5.31072697	6.55049999	5.25049722	4.0953074	12.3916676	9.3020833333	14.7907479	12.7379543	18.7984847	19.8579169	17.3587943	13.8885333	13.5308107	14.0605074	5.9553679	11.5777778	2.3923942	7.4118055451	5.7553434144	11.2272767	12.0376202	6.9597670	0.06897956
	6:00 PM	7:00 PM		3.60058141	6.508125	3.42821558	3.8540964	17.5833335	9.093859638	14.6573295	12.6590689	15.5840278	15.9365592	9.86383682	8.79618936	9.95392154	8.89619684	4.87986424	6.52738019	2.3375801132	7.6374996681	5.72846144	8.4543936956	8.7806562939	2.8037563	0.05102568
	7:00 PM	8:00 PM		1.48833333	6.52448289	1.58549316	3.78113091		9.0845227931	14.1690554	12.2542593	19.2988392	19.7291667	7.20625002	6.55342182	7.20000007	6.53518687	2.9213734	4.66333332	2.3469793322	7.5393518867	5.7355205916	8.4093836696	8.7223943779	1.3557143	0.04569728
	8:00 PM	9:00 PM		1.55833316	6.27054847	1.53814699	3.78998982		9.1005758	15.7604164	12.2511947	15.1188499	15.3430546	6.66809246	6.40352112	6.61738937	6.41463875	2.9076231	5.09000018	2.3464538983	7.2181111153	5.8153232307	8.3793795477	8.6885416668	1.2958333292	0.05034723
	9:00 PM	10:00 PM		1.57668918	6.58768522	1.54780298	3.68715698		8.5416667	13.7416665	13.2966667	14.7873184	15.1541666	12.4089743	6.631724	10.8080714	6.59642425	2.8384543	4.70833316	2.3283046958	7.2434512276	5.905523271	8.4435463962	8.8040453333	1.2762639192	0.05103883
	10:00 PM	11:00 PM		1.52944464	6.88388872	1.5472227	3.8796297		9.7091666	15.5333332	13.1625001	16.1427778	16.5050004	11.6932979	6.5376765	12.0805556	6.57816903	2.9219961	5.2	2.4163120811	7.3356696348	5.9995370	8.5246031	8.9589995	1.2910984811	0.05049283
Midnight	11:00 PM	12:00 AM		1.54047616	6.83333324	1.51428571	3.91802563		9.8322916667	14.1916667	12.6814814	15.875	16.4833335	11.3243055	8.58406984	11.0984815	6.66293333	2.9585315	5.64999994	2.4847222267	7.3541666667	5.9899988877	8.5998774	8.9316381	1.3258333292	0.05259433

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 10-Dec-13
Day of Week: Tuesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	BS8_EE8 Site H-1 to Site G	BS8_2A5 Site H-1 to Site D	BS8_9A2 Site H-1 to Site F	BS8_D69 Site H-1 to Site E	BS8_BB1 Site H-1 to Site C	BS8_D7C Site H-1 to Site B	BS8_D35 Site H-1 to Site A	BS8_D4D Site H-1 to Site Z-1	BS8_2BE Site H-1 to Site Z	BA2_0ED Site F to Site I	BA2_C45 Site F to Site H	BA2_EE8 Site F to Site G	BA2_2A5 Site F to Site D	BA2_BS8 Site F to Site H-1	BA2_D69 Site F to Site E	BA2_BB1 Site F to Site C	BA2_D7C Site F to Site B	BA2_D35 Site F to Site A	BA2_D4D Site F to Site Z-1	BA2_2BE Site F to Site Z	D69_0ED Site E to Site I	D69_C45 Site E to Site H	D69_EE8 Site E to Site G
				9.9784819	6.5994862	3.9556748	7.3860968	9.3116539	14.4674762	15.8251464	15.8899922	16.1753132	3.7165993	3.8001432	3.2166737	2.6827026	3.9568719	4.3922706	5.1952169	3.9415993	8.0787062	11.5472128	12.5416404	5.2789168	7.2991858	6.6933366
Midnight	12:00 AM	1:00 AM	0.858333305	6.839215678	3.407738112		8.663541856	14.56666678	13.38461537	15.35972219	15.6627778	3.946999971	3.870045053	3.944696998	2.609999993	3.684833038	4.391666651	5.055916667	5.532371788	10.32499995	9.314880626	11.27571431	11.83861113	9.091666638	8.720333305	
	1:00 AM	2:00 AM	0.720714283	6.179999963	3.843333336		9.424388894	13.52916663	12.36156249	16.32135417	16.6888889	3.816666616	3.636522829	4.312499995	2.781481487	3.721064482	5.666666715	5.533271788		12.44652777	12.80312498	8.25333336		8.253333365		
	2:00 AM	3:00 AM	0.939444431	6.033333271	3.555999955	10.94999955	9.485416669		11.74081196	15.07966749	15.61166663	4.072327835	3.649664739	3.750757332	2.6876114	3.685539194	4.955555554	5.288208344		8.450102854	11.46340091	11.92687498	5.355555545	7.758333329	
	3:00 AM	4:00 AM	0.723148137	6.713333893	3.452777817	8.130555544	8.646825403	13.92777773	12.17447917	14.32500004	15.0300198	3.987500009	3.615074817	4.176666677	2.771128339	3.555232057	4.784999893	5.07730125	10.8033333	8.493115953	11.20833333	11.52251242	10.02833336	8.899875003		
	4:00 AM	5:00 AM	0.753421368	17.44318375	4.096511624	19.24166674	9.158947375	15.85416666	15.92037451	14.61785714	15.08698747	4.215952262	3.441389714	3.792054422	5.23333603	3.449231723	6.984666645	5.210499622	11.2558275	11.93446622	11.12248588	11.49269833	5.263333347	8.974999974		
	5:00 AM	6:00 AM	0.852407412	21.14537971	7.427666666		19.65833339	28.13666666	27.57666613	43.43965265	43.00133766	4.098532947	3.943385664	3.7613379388	5.331379388	3.339072903	7.984111125	8.037286216	15.45300312	12.16149999	16.66837182	15.07405149	14.24872222	14.25999967	
	6:00 AM	7:00 AM	0.849444447	28.03621104	25.79666543		36.45327869	42.61499998	37.27442462	43.80833333	43.91934059	4.098532262	3.943385663	3.763636783	5.385797637	3.339027652	6.994999997	10.7842788	17.43210785	12.18059535	18.14301436	18.5693369	14.38240742	13.32333332		
	7:00 AM	8:00 AM	0.823148148	13.39908539	21.42137436	15.59166668	33.61411565	46.38747998	21.80986986	42.27729887	42.75573595	4.18656758	3.359985625	3.760277758	4.32733132	3.370833327	5.987424422	8.870563563	14.90550425	11.21662297	16.81872146	16.45889757	12.58833334	11.19142857		
	8:00 AM	9:00 AM	0.761702126	7.707107842	8.408417933	12.13611114	17.9962037	24.88541666	14.72640001	25.29378819	25.86997248	4.323742133	3.342634414	3.973461532	3.375969526	3.353721163	5.495588247	8.104199306	13.5730891	10.01021092	14.82069794	15.35375537	9.46388891	8.518518489	30.35	
	9:00 AM	10:00 AM	0.840503352	6.398485049	4.068867294	9.475200005	11.03529322	18.15458168	11.60113084	19.13965777	19.5268148	4.147697775	3.45298554	3.971957878	2.719953869	3.454585618	4.818871765	6.549315925	12.05059874	8.587933538	14.27179725	14.69008810	9.678333308	8.415916668		
	10:00 AM	11:00 AM	0.798594914	6.056898899	3.935804199	8.233333439	8.880835166	13.6921875	11.86286659	16.79121469	17.2889439	4.272604172	3.462013879	3.884015145	2.681099029	3.485133852	5.206844393	5.194097222	10.03505749	8.388862932	13.4275641	13.88718766	9.891025612	8.095833283		
	11:00 AM	12:00 PM	0.838148151	6.080378315	3.4317783	9.495333376	8.725202035	13.997545	11.7139599	15.23869553	15.8423871	4.351379389	3.825496685	3.941087807	2.70722633	3.355479164	5.224604733	5.241995983	10.1585397	8.384455548	13.89192317	12.53938516	9.840104134	8.895956699		
Noon	12:00 PM	1:00 PM	0.829457842	6.12095958	3.453821432	9.289583322	8.973166666	13.67916672	11.96955708	14.31566266	14.73898735	4.625985672	3.782952388	4.334009926	2.683066439	3.822569797	5.088111139	5.206418861	10.0272358	8.438936097	11.08228155	11.3913963	10.3954286	10.08833336	32.50000002	
	1:00 PM	2:00 PM	0.834119458	6.024055816	3.521389939	9.624999983	8.754599903	13.96005608	11.66752336	14.64353165	14.93502169	4.79206127	5.3408381	4.531338038	2.666104409	5.195922927	5.171756087	5.258105854	10.18541664	8.360960098	11.18709814	11.5059739	15.98611112	12.81666663	17.30833325	
	2:00 PM	3:00 PM	0.858333325	6.127146639	3.496881621	9.764583344	8.881111137	13.09806088	11.63859223	14.3054706	14.5791238	6.812878794	6.240204672	6.294827537	2.655288052	6.340954771	5.049537076	5.18344609	10.00925828	8.325129948	11.08613973	11.35423488	23.68888885	23.11666667		
	3:00 PM	4:00 PM	0.799074055	6.337247477	3.527552758		9.074074073	13.60499998	12.1847685	14.36169479	14.70731481	7.446694764	9.12856607	7.271568527	2.795960447	9.150109855	5.161904765	5.136280113	10.1293829	8.605802804	11.10062388	11.46822344	29.33472224	29.06666667	20.79166671	
	4:00 PM	5:00 PM	0.889570717	6.393954254	3.587962961	9.500000001	8.957758631	13.67807017	12.26100803	17.18127211	18.21030705	11.1701389	11.8472222	8.154519777	2.784762932	12.49720746	5.569166676	5.138095246	10.2953434	8.621844182	13.69881377	14.45634408	35.58750004	30.99888953	23.60833336	
	5:00 PM	6:00 PM	0.84500001	6.075976039	3.6147498	9.0144667	9.027083339	13.9355557	11.8093334	17.68803194	18.4790703	17.58783329	7.972481675	11.84044117	2.657411867	8.598148149	5.075641091	5.181435635	10.2497479	8.439491971	13.97983985	14.79391969	22.01500005	21.75555551		
	6:00 PM	7:00 PM	0.868540277	6.151626012	3.4996074	8.337499956	8.540773788	13.65833333	11.91379309	14.60619049	14.945182	11.52621125	4.02272742	7.515808931	2.697301136	4.061304013	4.888888914	5.123888896	10.2679884	8.466799988	11.5497837	11.46779761	13.5499988	12.27083333		
	7:00 PM	8:00 PM	0.815585283	6.16018518	3.5162088	8.574999993	8.892039428	13.32222231	12.37916993	14.38789765	14.8875563	5.138333342	3.545983844	4.68701491	2.624118189	3.59958403	5.172916667	5.152821597	10.2368212	8.444339421	11.15948093	11.49266129	10.0470238	8.703125033		
	8:00 PM	9:00 PM	0.795428602	6.229497343	3.565495992	9.002777782	8.758720149	13.24809933	12.44112319	15.03801188	15.5369872	4.19483895	3.439389524	4.0944445	2.637808627	3.452901785	5.353188856	5.117073145	10.2883334	8.543333324	11.11689914	11.50366667	9.421428623	7.990416898		
	9:00 PM	10:00 PM	0.742777772	6.28690294	3.511202188	7.491666765	8.832499981	13.40191673	12.4447916	15.10731263	15.5674653	3.996417914	3.705554752	3.881159416	2.752105624	3.675835762	4.599999995	5.116495469	9.921666663	8.78844477	11.31385757	11.70075757	14.66547618	8.62011889	7.88333332	
	10:00 PM	11:00 PM	0.849404759	6.531094476	3.555141846	7.674999945	8.888888899	13.82500003	12.66293768	14.93242425	15.2619635	0.009770093	3.542750002	8.105701737	2.70045948	3.569719474	5.026166718	5.328750002	11.3281481	8.680028736	11.4839525	11.77294373	15.9833333	8.848333351		
Midnight	11:00 PM	12:00 AM	0.828587286	6.421821637	3.653736519	9.083333351	9.613095244	13.29166668	12.65505953	15.6433333	15.9754166	8.518111143	3.630988868	8.69999998	2.825429736	3.690271752	5.293555434	5.435555555	9.808333298	8.904255334	11.4095238	11.83675477	12.37083337	8.648333266		

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 10-Dec-13
Day of Week: Tuesday
Measure: Mean Travel Time
Units: minutes

		Segment Label	D69_2A5	D65_B58	D69_9A2	D69_BB1	D69_D7C	D69_D35	D69_D6D	D69_2BE	BB1_DED	BB1_C45	BB1_EE8	BB1_2A5	BB1_B58	BB1_9A2	BB1_D69	BB1_D7C	BB1_D35	BB1_D6D	BB1_2BE	D7C_DED	D7C_C45	D7C_EE8	D7C_2A5
			Site E to Site D	Site E to Site H-1	Site E to Site F	Site E to Site C	Site E to Site B	Site E to Site A	Site E to Site Z-1	Site E to Site Z	Site C to Site I	Site C to Site H	Site C to Site G	Site C to Site D	Site C to Site H-1	Site C to Site F	Site C to Site E	Site C to Site B	Site C to Site A	Site C to Site Z-1	Site C to Site Z	Site B to Site I	Site B to Site H	Site B to Site G	Site B to Site D
		Length (miles)	1.178280142	7.369008649	4.269207158	4.587782127	3.935277241	7.664164488	10.40087969	10.7237912	8.209234422	3.154189489	8.305202958	2.220193232	3.191455239	5.195235854	4.787723147	3.555916913	3.992564877	6.872892029	7.229235154	11.73212406	12.42527128	11.88782904	8.678833845
Time	Begin Time	End Time																							
Midnight	12:00 AM	1:00 AM	4.173333128	8.741666777	5.155555533			11.07222228			8.870370369	9.0083333	9.214583309	2.355574724	8.992777764	5.361978158		3.529166653	8.272500003	6.587499993		15.88750003	19.11666675	8.640277827
	1:00 AM	2:00 AM	4.228333365		4.985555587	7.09999993		10.01458333	14.19999992	14.51250007	9.116666059	9.007884473	9.908333282	2.386197926	9.052450996	5.587499997	7.158333348	5.061110985	3.9327389	6.994000011	7.385333134		18.04166671	9.233333293	
	2:00 AM	3:00 AM	4.332291658	7.85833329	4.829166789	6.511666653	13.0866667	10.32083332	13.20555962	13.77499997	10.50833336	9.233666954	9.250000014	2.372916662	9.361363653	5.533149133	8.258333328	6.200000061	3.84666647	5.488833362	6.790714283		11.89166671	13.43333331	8.867222211
	3:00 AM	4:00 AM	4.129924237	8.640000008	5.081249988	6.493055568	21.41666658	10.0977728	13.27813967	13.58929569	8.810714328	9.437121193	10.17958332	2.358750014	9.572222214	5.571458347		5.871666703	3.61052639	6.380092536	6.714336624			21.90000007	4.666666549	
	4:00 AM	5:00 AM	5.398814663	8.945833258	5.254166678	7.20499995	11.80416667	12.03642593	12.30185184	12.58388913	9.933333258	9.122685185	9.351041634	2.27546667	9.057407407	5.348597575		5.048666664	3.935486762	6.322732727	6.623234654	15.59833327	15.99722222	14.31666665	8.365740144
	5:00 AM	6:00 AM	11.35958324	14.25833336		8.520416629	15.89166669	17.56601037	12.30185185	12.72125631	13.33333333	9.337373826	9.007951388	2.221043479	8.953472236	5.195587209	6.533333208	6.846047625	3.984486762	6.313631492	6.622205533	16.20000016	16.40000003	13.83333313	8.684581459
	6:00 AM	7:00 AM	18.75076652	12.94166661	9.983958358	14.34416659	20.71666656	17.67083333	22.2367567	22.84333336	9.233333327	8.233333327	8.867857143	2.180174081	8.339991878	4.985876138	7.333333268	5.861382122	3.88696762	9.315747125	9.968083868	15.43750009	12.99807407	14.38433779	7.498159577
	7:00 AM	8:00 AM	7.603875966	11.18611108	7.643819924	14.31738126	20.13675212	15.24187503	21.18076635	21.7815785	9.34027778	8.153538817	8.754545443	2.151631335	8.159797288	4.885787041	7.24166693	5.924145284	3.587947972	7.18099971	7.92859989	14.28749997	12.99807694	13.5738016	7.155645157
	8:00 AM	9:00 AM	4.318125002	8.693749972	5.171526361	11.64833334	17.39549951	11.56076388	19.11111114	20.03379631	8.456994038	8.406592035	9.127126458	2.16449914	8.385930739	5.075300002	7.099999974	5.481578964	3.677876202	7.583407753	8.336808185	14.03194444	13.0666667	14.53529415	7.390710394
	9:00 AM	10:00 AM	4.125362333	8.270833356	5.153889538	7.890373016	13.67171526	9.750854448	16.16528985	16.77408332	9.578778176	8.298695588	8.910846416	2.168114028	8.214701657	5.066245318	7.562500002	5.250482946	3.672288422	8.199242439	8.835552727	14.77199995	13.4610145	13.7677833	7.391367997
	10:00 AM	11:00 AM	4.124678495	8.838333338	5.242666682	6.449305555	12.59987503	8.549833336	14.73541663	15.05222269	9.299078439	8.598132183	8.909980042	2.167481203	8.584946237	5.144202903	7.131428549	5.39019608	3.984371881	8.278836498	8.591402124	13.87916674	14.31079432	14.57847223	7.758783773
	11:00 AM	12:00 PM	4.112503397	8.881344437	5.178165563	6.428571453	12.57499994	10.1315476	13.45052083	13.90284113	9.479526544	8.494309033	9.198333325	2.198095829	8.46216913	5.147721527	7.23055555	5.562502004	3.933503564	7.323923207	8.146288653	16.38333335	14.66428571	14.09861114	7.875166665
Noon	12:00 PM	1:00 PM	3.992647058	9.102783924	5.281313131	7.141666654	12.76250006	10.44270833	12.89930566	13.32045456	10.08888635	8.754583361	9.898899917	2.198875001	8.8047101	5.160619923	6.958250002	5.533888914	3.678205132	6.558148938	6.937590453	18.36666674	14.21666666	16.53750003	7.839945166
	1:00 PM	2:00 PM	4.007261462	12.85833326	5.090676207	6.377083318	12.8527778	9.583888885	13.17395833	13.45078635	10.15714286	8.92561283	9.9220343	2.202456066	9.026054851	5.325047061	6.93333336	5.194444483	3.655514428	6.568444436	6.922135445	15.73958326	15.68750002	14.61388888	8.0998455
	2:00 PM	3:00 PM	4.669444408	23.67395836	15.75466429	6.131199472	11.74166671	10.5333333	12.252381	12.50416665	14.12278471	13.1255178	13.49427084	2.327197232	13.01506848	8.005698224	7.847222211	5.418696956	3.798462871	6.509803927	6.896376798	23.29000003	17.68174602	28.97361109	8.491666665
	3:00 PM	4:00 PM	7.392566974	29.07916669	16.77416668	6.774999999	12.4375001	13.0986111	13.83574078	14.1881481	21.14595238	19.46000001	21.13541977	4.9064324	19.49100877	13.92771518	12.93571424	5.286979156	3.64257455	6.508888889	6.917926904	30.08712119	25.8429028	29.50185185	12.70998528
	4:00 PM	5:00 PM	8.418611124	31.1440477	18.12135418	9.606666662	14.91527773	14.42384488	18.06481476	18.48879003	24.97392472	22.02689725	21.5026961	5.15145248	22.0191092	12.87828863	14.99952382	5.138585312	3.582369581	6.545726936	6.547453686	35.25277778	34.50889952	32.30992583	19.50208333
	5:00 PM	6:00 PM	5.671535364	22.56666664	11.7349091	10.53028036	15.29920555	11.51597225	19.65833339	20.5066183	31.00714236	26.72607247	27.15080126	5.878442831	27.04771387	15.00799319	18.42647222	5.209999988	3.691363364	8.984511288	9.847641515	47.40208334	42.79994445	41.55064109	24.64927753
	6:00 PM	7:00 PM	3.970833265	12.49041624	7.045987658	8.044444438	14.50277776	9.557407349	14.58181814	15.01296235	22.37021852	18.37589928	17.85641025	4.52295197	18.54329988	10.2528416	16.19419455	5.512152782	3.625	6.435993232	6.777195163	42.66666653	42.11183807	40.60227272	27.11833316
	7:00 PM	8:00 PM	3.943518475	8.752500039	5.0635	6.161666639	11.02500005	9.128166667	12.12703999	12.45111116	12.97916656	11.87556511	12.7489319	2.793922308	11.86239677	7.714388021	13.03611125	5.441666716	3.596666922	6.413936494	6.787320353	30.95994448	25.23616668	23.46152869	31.70395803
	8:00 PM	9:00 PM	3.977777772	8.153333369	4.927976199	6.375000011	10.88333331	9.308333334	11.62833333	11.81466666	8.377777394	8.7864192	9.360864191	2.187993423	8.8410628	5.181006485	7.05000039	5.012500053	3.593571431	6.371715636	6.713953979	15.46190474	15.3285714	15.3777778	7.715064089
	9:00 PM	10:00 PM	4.073939464	8.528333324	4.657407394	5.875000003	10.80833328	10.33125	11.60000001	11.96666664	8.952380956	8.584051726	9.067029882	2.180785914	8.58013523	5.143333342	6.683333205	5.18214284	3.70358952	6.462853868	6.89077237	13.24444447	13.61333336	17.23333332	8.174404575
	10:00 PM	11:00 PM	4.284583378	8.854999948	4.883541666	6.616666684	11.08055552	10.5166654	13.14983332	13.43541663	13.63333331	8.88256294	13.42666663	2.16614081	8.780433048	5.032518121	6.950000028	6.2616666	3.744573682	6.625793658	6.965357139		15.3202381		7.926833313
Midnight	11:00 PM	12:00 AM		8.475000007	4.88205557	6.528833336	11.34583334		13.23333327	13.65833328	12.93452382	8.82514625	14.52833334	2.162500003	8.734809219	5.064238036		4.963888843	3.813522581	6.642777772	6.949404757		14.83333334		7.688583336

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 10-Dec-13
Day of Week: Tuesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	D7C_B5B	D7C_9A2	D7C_D49	D7C_BB1	D7C_D35	D7C_D6D	D7C_2BE	D35_D6D	D35_C45	D35_EE8	D35_2A5	D35_B58	D35_9A2	D35_D49	D35_BB1	D35_D7C	D35_D6D	D35_2BE	D6D_D6D	D6D_C45	D6D_EE8	D6D_2A5	D6D_B58
			Site B to Site H-1	Site B to Site F	Site B to Site E	Site B to Site C	Site B to Site A	Site B to Site Z-1	Site B to Site Z	Site A to Site I	Site A to Site H	Site A to Site G	Site A to Site D	Site A to Site H-1	Site A to Site F	Site A to Site E	Site A to Site C	Site A to Site B	Site A to Site Z-1	Site A to Site Z	Site Z-1 to Site I	Site Z-1 to Site H	Site Z-1 to Site G	Site Z-1 to Site D	Site Z-1 to Site H-
		Length (miles)	12.4617452	8.04995607	3.6937778	5.56618401	3.2468267	6.16852569	5.18128700	12.6985498	13.8853185	12.7409467	6.10081608	13.5323455	9.07825439	7.46091468	3.88245477	5.25689037	3.66189422	3.73853120	15.5888821	15.8417281	15.2762519	9.09618645	15.5869582
Midnight	12:00 AM	1:00 AM		15.15555555	12.02666668		6.181904777				12.60499998	13.20181185	14.3857425	6.541181605	13.67277778	9.649999999	3.695185186	16.95333333	2.698851388	2.966472867	15.57384479	15.79973958	16.27222218	9.074712647	15.7532923
	1:00 AM	2:00 AM		17.36566678	12.17500001		6.699999953				14.92222222	13.33437499	13.34444445	6.924074071	13.55519537	9.501666536	12.36566664	4.047569345	2.989566474	3.398553212	15.02708324	16.24356063	17.38154756	9.319999987	16.3245743
	2:00 AM	3:00 AM		11.80633332	9.004444444		4.841666957				14.19800017	13.19198718	13.33061333	6.346739128	13.40268554	9.531150703	12.51250003	3.985728	2.785416676	2.081339862	17.17500002	16.4719139	16.18888886	9.482722587	16.5387173
	3:00 AM	4:00 AM			17.19166663						13.77113385	13.52645456	13.61212222	6.194871791	12.85541668	9.390958163		4.031481498	2.681510434	2.989084869	16.6166667	16.26203888	16.99062498	9.391856078	16.4201923
	4:00 AM	5:00 AM		16.03266553	11.13333211		5.630555543				12.48211112	12.34939417	13.33552833	5.916437878	12.31764708	8.958451803		3.882333346	2.666666835	2.670921368	2.962098828	16.71987177	16.76930293	16.58263887	9.118798916	15.5999999
	5:00 AM	6:00 AM		15.17592556	10.83600001	11.3458336	5.808333303	8.12499997			12.68254386	11.99205113	12.77777778	5.777777778	11.82764708	8.6505817	9.991666819	3.679350546		2.674461368	2.463132083	16.44830114	15.02833333	16.11666667	8.479999916	15.83000003
	6:00 AM	7:00 AM		13.57083335	10.28487653	13.18666668	5.057017572	6.702777769	11.4416668	12.05000002	13.03253333	11.89209548	12.28484125	5.79238888	11.89724546	8.563846332	11.81111109	3.563613235	9.066666719	5.134566669	5.668874472	15.95249999	14.9069972	15.9012268	8.479227927	14.9898889
	7:00 AM	8:00 AM		13.03666647	9.859979108	12.86833337	5.06666292	6.321428628			13.22547147	11.9497175	13.08785715	5.76867444	11.8375	8.603411307	11.12666663	3.552309691	6.972807035	3.427993086	4.666747054	15.6887117	14.3537352	14.9053368	8.360498161	14.3795232
	8:00 AM	9:00 AM		13.10806453	10.20354841	12.03958333	5.133114498	6.727777719	10.74500002	11.94791669	13.42829861	11.93422621	12.51666668	5.833050853	11.85319767	8.680307532	10.81458331	3.640248227	6.782539647	3.637806838	4.215240743	16.40851064	14.59556604	23.91478496	8.570833335	14.5069744
	9:00 AM	10:00 AM		13.58326472	10.33833335	12.83750002	5.215273604	6.599999982	10.14999999	10.46999658	13.23597895	12.12797231	12.88527131	5.855023729	12.21193535	8.751723798	11.01458331	3.66524428	6.506913368	4.184556497	4.700287354	16.94539853	14.53937601	17.79416668	8.603356011	14.4832304
	10:00 AM	11:00 AM		14.18070174	10.66183794		5.85833329	6.545833368	11.41000007	11.62708334	13.16564625	12.01374458	12.9685744	5.890133652	12.03524	8.761061697	11.16666665	3.891666677	6.555555537	4.99326782	5.398479918	16.20934343	14.85115388	15.67337662	8.617592893	14.8484067
	11:00 AM	12:00 PM		14.79229191	10.84583335	12.1958333	5.779258335	6.361111388	10.12500007	10.80000001	13.83334873	12.4796595	13.53100775	5.854549105	12.8125448	8.891633993	11.83958335	3.681915085	7.137560178	3.532343699	4.113622338	15.88231708	14.68552337	15.93374713	8.685576592	14.7487403
Noon	12:00 PM	1:00 PM		14.40990963	10.77447917	12.62500001	5.363425948	6.6666667	8.995833322	9.183333311	13.39183622	12.74699999	13.85075757	5.856854224	12.72829301	8.859958577	11.54791669	3.760081588		2.626175873	2.873413441	16.48839185	15.61315788	16.28858421	8.652143888	15.5478842
	1:00 PM	2:00 PM		15.70526316	11.20817308	13.6624999	5.593750007	6.600966707	8.725000117		18.03273997	16.85986556	17.32904187	6.005429294	16.56358538	11.70091777	10.5861111	3.710881126	6.295833383	2.724827464	3.023095904	16.3112745	15.44934895	16.77999477	8.594499973	15.4290219
	2:00 PM	3:00 PM		17.48624998	14.35637254	22.04583328	5.973541679	6.528030358			24.6350856	22.96775	25.48666666	9.061297538	22.73388888	17.67958041	11.79537037	3.739573257	6.8777778	2.698021412	3.015460146	20.88074074	19.23948218	19.91448413	8.788313947	19.2237678
	3:00 PM	4:00 PM		25.7297876	21.01349056	28.21305536	7.60742188	6.791267	9.780952398	10.2819445	30.62926355	28.3761107	28.62805556	13.12793816	28.70666076	20.147652	16.3183333	5.589497175	6.454168779	2.7628768	3.111933809	26.84424056	25.84423679	28.09583334	11.79659	25.5975451
	4:00 PM	5:00 PM		34.41274541	25.65761905	36.85333341	14.06725461	7.321499222	12.08571428	12.13250001	39.33469388	37.81389047	40.64687499	14.7273148	38.46182796	25.60397016	24.45624999	10.30057932	7.533333208	5.183799157	5.774935153	34.38695851	31.06984355	32.69569779	15.87541181	31.2402658
	5:00 PM	6:00 PM		43.58379535	33.20212419	35.01666667	18.4579999	7.482499992	11.94666668	11.8416667	34.07333334	29.47633647	28.86666329	14.56094603	29.89293335	20.89025879	24.85666622	12.83979629		5.23207594	6.508854311	41.52572464	40.12613369	46.11342357	17.9638939	40.32448455
	6:00 PM	7:00 PM		42.70208333	35.08930951	20.08750002	21.27509857	6.549999844	10.57222218	10.94270928	23.627451	20.50487238	24.57442525	10.05996455	20.87240897	15.63298756	26.58583328	11.79909612		2.717735547	3.018318988	35.05196969	32.5731132	30.9074042	17.28738668	33.23912652
	7:00 PM	8:00 PM		24.20138892	18.43023256	12.31250002	8.059122461	6.825000029	9.183333311		12.93452923	12.62488428	13.68659422	5.882327844	12.58288438	8.881373488	15.25000003	2.38542087		2.699272521	3.003725498	24.59032978	23.45139812	25.7395182	12.99539954	24.20833334
	8:00 PM	9:00 PM		14.24027776	10.86041665	31.66333332	6.225000008		11.85000001	12.16668872	12.2270116	12.72428	12.65256408	5.850395513	12.75262484	8.741977938	10.43888893	3.711776855		2.680222225	2.979415436	15.58457446	15.30170453	16.37931038	8.575610852	15.2035469
	9:00 PM	10:00 PM		13.60566673	10.91071432		5.775000008	6.658333261			18.04502444	12.66049785	17.14	5.82041668	12.55491965	8.688141048	10.2	3.708926633	6.783333337	2.709400569	3.021271828	14.97500002	15.3623037	15.36063218	8.587782922	15.3482148
	10:00 PM	11:00 PM		14.36481482	10.275		5.481245983		9.29166656	8.524999969	17.56212123	12.68752257	18.99166669	5.917243382	12.72910685	8.946458343	10.86944444	3.712716317		2.744464431	3.067772103	21.52683329	15.46329412	19.96257576	8.426335548	15.3291089
Midnight	11:00 PM	12:00 AM		14.89999999	10.98333327		5.387500011				17.17564105	12.85452298	16.87142857	6.053142878	12.76758653	8.959677419		3.790065374		2.70865789	3.029234869	20.23525639	15.19275279	22.45425607	8.639208138	15.2269118

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 10-Dec-13
Day of Week: Tuesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	D6D_9A2	D6D_D69	D6D_BB1	D6D_D7C	D6D_D35	D6D_2BE	3BE_DED	2BE_C45	3BE_EE8	2BE_2A5	3BE_B58	3BE_9A2	2BE_D69	2BE_BB1	2BE_D7C	2BE_D35	2BE_D6D
				Site Z-1 to Site F	Site Z-1 to Site E	Site Z-1 to Site C	Site Z-1 to Site B	Site Z-1 to Site A	Site Z-1 to Site Z	Site Z to Site I	Site Z to Site H	Site Z to Site G	Site Z to Site D	Site Z to Site H-1	Site Z to Site F	Site Z to Site E	Site Z to Site C	Site Z to Site B	Site Z to Site A	Site Z to Site Z-1
				15.6471216	10.4569969	8.6739899	5.1693296	3.5491856	2.2762232	15.7245104	15.1388519	15.4593122	3.2842468	16.1782353	12.5419495	10.7218723	7.6293154	4.7581276	3.2789188	3.2272242
Midnight	12:00 AM	1:00 AM		12.0863035		6.7273696		2.8735580	0.2998526	15.5613095	16.1329979	16.6431818	9.2719808	16.0747618	12.3355356		6.9540357		3.1711268	3.3141416
	1:00 AM	2:00 AM		12.4787039	15.1499997	6.9425925		2.9712963	0.3063565	15.1364583	16.4768995	17.9173075	9.6164144	17.0484375	12.8335445	15.5833333	7.3120370		3.3357142	3.3452984
	2:00 AM	3:00 AM		12.5510297	15.6249997	6.9957947		2.9404318	0.3278203	17.2145833	16.6984375	18.5583333	9.7197217	16.7697916	12.7259897	16.0749999	7.2513134		3.3039830	3.3691235
	3:00 AM	4:00 AM		12.5060777		7.0416666		2.9720370	0.3135648	16.6099999	16.5013945	16.6316667	9.6815295	16.6435185	12.7395687		7.3970843		3.2974336	3.3481538
	4:00 AM	5:00 AM		12.2752975		6.7968268		2.8892939	0.2975355	17.1256410	16.2457922	16.4338888	9.3226803	15.9277778	12.4756398		6.9778457	8.7833341	3.1921852	3.3356055
	5:00 AM	6:00 AM		11.4025833	12.3958333	6.4966458		2.7395833	0.2799583	15.5272666	15.7351323	15.9351888	8.9053125	15.2455676	11.8254398	12.6791655	6.5664203		3.0459259	3.2980938
	6:00 AM	7:00 AM		11.4208537	14.8555556	6.2745423	9.9875939	2.6435402	0.8270458	15.8721569	14.8981225	15.6115384	8.7118448	14.8541666	11.5354380	15.0638888	6.4609754	10.6811113	2.9281729	3.2917964
	7:00 AM	8:00 AM		11.2216665	13.8850000	6.2174479	9.8354166	2.6739224	0.8107317	15.9636184	14.5245045	15.2204861	8.6473316	14.5364197	11.4707838	14.3133333	6.4454166	9.9997217	2.9418136	3.3009182
	8:00 AM	9:00 AM		11.4465111	13.3708327	6.4834000066	10.1296296	2.7153612	0.5748463	16.3246995	14.9113813	15.9676878	8.7569364	14.7941358	11.5706436	13.7479165	6.6361297	10.3173071	2.9707997	3.3034188
	9:00 AM	10:00 AM		11.4543268	15.3166666	6.3815624	9.4791666	2.7350352	0.5214839	16.4724138	14.8537183	15.3845238	8.8413239	14.8152499	11.5205972	15.0166666	6.6487039	9.9916666	2.9314039	3.3128443
	10:00 AM	11:00 AM		11.3845224	13.8749999	6.4558833336	8.7041666	2.7291032	0.5141772	15.9694301	15.2962617	16.1677872	8.8588827	15.2180076	11.6891529	14.2216666	6.7433195	9.6291666	3.0202599	3.2957889
	11:00 AM	12:00 PM		11.5044013	14.7916675	6.5190033	9.6511112	2.6156418	0.5498569	16.1739361	14.9743559	16.5826745	8.9795098	14.9188095	11.8055171	15.1833333	6.7867213	9.9472222	3.1195923	3.3260118
Noon	12:00 PM	1:00 PM		11.6135883	14.3499998	6.5859792		2.7855228	0.3087752	17.2733983	15.8312728	16.5290002	8.9775411	15.7279488	11.9192373	14.6312508	6.9240673		3.0756313	3.3010408
	1:00 PM	2:00 PM		11.6423537	13.1593704	6.4630002043		2.7602283	0.3011743	16.5495769	15.8247881	16.8797148	8.9335181	15.8320553	11.9866318	13.5052	6.7875791	9.7500000	3.0650269	3.2914856
	2:00 PM	3:00 PM		14.4910586	14.7016185	6.5341111	9.3833334	2.7614517	0.3190468	21.2097012	19.3194443	20.378233	9.0497740	19.3061369	14.7842137	15.0296296	6.8332822	9.7624999	3.0428928	3.2847912
	3:00 PM	4:00 PM		20.5427216	17.8999997	8.4218962		2.7097656	0.3614892	28.1087121	25.8753365	28.0909722	12.1195801	25.7714898	20.8942142	18.2528334	8.8614645		3.0076582	3.2897534
	4:00 PM	5:00 PM		23.0054839	20.0011904	13.1104167		2.7690058	0.7740997	34.9342779	32.0452838	32.6030703	16.2205465	32.2938229	23.6431650	26.3857142	13.7271547		3.0854626	3.2921675
	5:00 PM	6:00 PM		28.4057075	30.4716669	15.5927535	11.9250003	2.7599577	0.6477639	42.6479972	40.9739539	45.3919999	18.5768171	41.7621121	29.1887997	30.9066667	16.6792763	14.9125	3.0394953	3.2864239
	6:00 PM	7:00 PM		23.2167431	29.3329155	14.5362502	12.2416665	2.8010210772	0.3082566837	39.1628764	31.7270561	32.4516348	17.8983028	34.1801282	24.7626448	29.7489587	15.8833357	12.6416666	3.1165770	3.3087566
	7:00 PM	8:00 PM		18.6615428	20.8472223	10.7488369		2.7493155	0.3003457	25.7731435	23.8510582	27.2269842	13.2292387	24.2173365	18.6455173	18.7849999	10.7584299	14.6333333	3.0667092	3.3013507
	8:00 PM	9:00 PM		11.5977573	12.8555555	6.4471664		2.7305397	0.2928703	15.9792147	15.6898482	16.5295667	8.8874803	15.7887687	11.8812323	13.7833333	6.7221668		3.0441971	3.2981654
	9:00 PM	10:00 PM		11.4221788	12.7166666	6.4061094311	8.5138889	2.7140372	0.3158564	15.3083331	15.5478917	15.6713541	8.8075582	15.4673333	11.6667947	13.1666666	6.7140287	9.0833333	3.0207362	3.3035655
	10:00 PM	11:00 PM		11.3569762	13.3026333	6.3860784		2.6972344	0.3187179	21.6473958	15.6953662	19.6999998	8.7391358	15.3813333	11.5815213	13.6041666	6.6568739		3.0245218	3.3087500
Midnight	11:00 PM	12:00 AM		11.4827839		6.5182892		2.7922842	0.2996666	20.5509524	15.5106851	21.8466667	8.9102941	15.5307843	11.8006410		6.7728333		3.1120274	3.2957694

TRAVEL TIME DATA

1 HOUR CORRIDOR STATISTICAL SUMMARIES

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 11-Dec-13
Day of Week: Wednesday
Measure: Mean Travel Time
Units: minutes

Time		Segment Label	DED_C45	DED_EE8	DED_2A5	DED_B58	DED_9A2	DED_D69	DED_BB1	DED_D7C	DED_D35	DED_D6D	DED_28E	C45_DED	C45_EE8	C45_2A5	C45_B58	C45_9A2	C45_D69	C45_BB1	C45_D7C	C45_D35	C45_D6D	C45_28E	EE8_DED
			Site I to Site H	Site I to Site G	Site I to Site D	Site I to Site H-1	Site I to Site F	Site I to Site E	Site I to Site C	Site I to Site B	Site I to Site A	Site I to Site Z-1	Site I to Site Z	Site H to Site I	Site H to Site G	Site H to Site D	Site H to Site H-1	Site H to Site F	Site H to Site E	Site H to Site C	Site H to Site B	Site H to Site A	Site H to Site Z-1	Site H to Site Z	Site G to Site I
		Length (miles)	1.201	1.471	5.555	0.983	3.722	7.585	8.869	11.725	12.698	15.589	15.775	1.000	0.859	6.801	0.969	3.909	7.239999999	9.161250002	12.74999999	13.39519997	15.79803922	16.02787358	1.439987457
Midnight	12:00 AM	1:00 AM	1.127	1.427	7.272	1.078	4.042	8.008	9.653		13.510	15.123	15.306	1.316	0.866	6.769	0.065	3.641		10.43333333	12.74999999	13.39519997	15.79803922	16.02787358	1.439987457
	1:00 AM	2:00 AM	1.085	1.228	7.101	1.103	4.272		10.345		12.658	15.646	15.969	1.413	0.883	6.154	0.070	3.831	10.43333333	9.534259252	15.82083335	12.19374999	16.65666667	16.87555557	1.585954569
	2:00 AM	3:00 AM	1.092	1.383	8.289	1.085	4.180	8.647	9.145		11.906	15.379	15.850	1.231	0.885	6.192	0.072	3.498	34.72499991	8.578645833	13.76666658	12.37187499	14.85208334	15.45055557	1.494908021
	3:00 AM	4:00 AM	1.092	1.268	8.556	1.172	4.091	9.158	8.574	13.600	13.735	14.662	16.033	1.269	0.877	6.638	0.073	3.516	8.608333328	6.788974691	15.78333336	12.18884833	14.85500001	15.29464287	1.469666669
	4:00 AM	5:00 AM	1.469	1.233	20.086	1.379	6.356	21.985	11.000	18.033	16.310	16.474	16.400	1.282	0.862	16.752	0.336	4.100	24.26944445	9.042317716	15.66439394	20.41173333	14.9516	15.12018	1.452391179
	5:00 AM	6:00 AM	1.412	1.251	29.798	1.433	15.849	32.720	18.478	28.110	26.191	26.472	26.407	1.384	0.862	16.051	0.336	15.183		20.06853019	25.95535533	21.39914373	23.92983896	24.53425889	1.466392369
	6:00 AM	7:00 AM	1.322	1.283	22.137	1.328	24.763	38.450	38.379	44.584	45.189	45.860	45.923	1.360	0.896	29.666	0.085	25.639		37.92449499	41.95335931	39.77614459	45.13884878	45.52258615	1.448707867
	7:00 AM	8:00 AM	1.276	1.233	23.337	1.321	25.869	23.819	46.235	45.514	32.159	47.062	47.157	1.366	0.864	18.142	0.074	22.015	20.08583331	35.09045159	41.17949646	24.99776785	43.61632088	44.09273298	1.46294038
	8:00 AM	9:00 AM	2.308	1.300	12.771	1.966	17.832	18.439	27.974	34.274	20.874	37.392	39.098	1.386	0.889	8.637	0.066	11.429	10.21944439	20.43828381	28.25158729	15.84812206	29.44133663	30.82910827	1.439583357
	9:00 AM	10:00 AM	1.597	1.316	10.934	1.588	9.041	13.658	17.382	21.931	16.429	25.922	27.142	1.374	0.892	6.154	0.071	5.111	10.92037633	12.616991 35	18.37222225	12.81580214	20.97154088	21.89735585	1.774925014
	10:00 AM	11:00 AM	2.249	1.391	11.288	2.229	8.222	13.780	13.254	18.521	17.613	20.274	20.866	1.341	0.883	6.100	0.069	3.669	10.99259254	9.150974718	13.92137683	12.39210914	15.64978637	16.4048089	1.500513079
	11:00 AM	12:00 PM	2.306	1.420	8.301	2.272	8.521	11.419	14.820	18.998	14.553	20.389	20.867	1.340	0.889	6.050	0.069	3.566	9.978571443	9.538189538	13.69047617	11.74338489	15.09539474	15.78119279	1.458437905
Noon	12:00 PM	1:00 PM	1.381	1.310	7.191	1.405	5.557	8.815	11.912	17.767	12.992	18.124	18.013	1.339	0.876	6.116	0.066	3.483	9.116666671	9.642045486	13.46666671	12.02846528	14.56853126	15.17898828	1.4147484
	1:00 PM	2:00 PM	1.364	1.308	7.195	1.362	4.610	10.491	11.822	15.232	12.946	15.506	15.862	1.323	0.876	5.959	0.068	3.511	8.972222221	8.791000014	12.43797878	11.61870917	14.87937295	15.43528148	1.406914029
	2:00 PM	3:00 PM	1.377	1.328	7.528	1.591	4.788	10.040	9.810	14.458	13.339	15.498	15.967	1.337	0.909	6.114	0.073	3.478	8.720833389	8.206249989	13.62310656	11.97704678	14.40780303	15.65916667	1.411399372
	3:00 PM	4:00 PM	1.665	1.286	8.797	1.669	4.843	11.691	10.521	15.846	14.427	16.238	16.581	1.573	0.882	6.176	0.074	3.536	10.17916678	8.924275368	13.86388888	11.85416667	14.68701261	15.2160244	2.197016469
	4:00 PM	5:00 PM	1.543	1.288	8.952	1.592	6.340	11.947	11.062	16.025	15.171	16.458	19.263	2.416	0.890	6.482	0.071	3.597	10.38750003	8.929877191	13.81083331	12.385625	15.88745319	16.77409758	4.423293725
	5:00 PM	6:00 PM	1.749	1.359	7.156	1.791	6.164	9.644	11.607	17.200	12.988	20.717	21.101	2.802	0.904	6.302	0.069	3.734	8.508333452	8.945999989	14.19659536	12.35159079	17.69772012	18.57666668	4.511043101
	6:00 PM	7:00 PM	1.370	1.232	6.851	1.402	4.499	8.733	9.851	15.517	12.513	15.548	16.386	1.448	0.869	6.235	0.089	3.672	8.066666668	8.958333348	13.69777785	12.13828829	15.14231481	15.81435187	1.63363363
	7:00 PM	8:00 PM	1.448	1.283	6.735	1.509	4.273	8.514	9.382		12.327	15.308	15.515	1.374	0.867	6.038	0.074	3.590	7.587666917	9.143412379	13.10000001	12.05803027	14.90780385	15.30804599	1.398300535
	8:00 PM	9:00 PM	1.164	1.277	6.728	1.201	4.189	10.775	9.731	14.442	12.374	14.933	15.213	1.297	0.867	6.241	0.064	3.492	7.541666698	9.001851848	13.32957139	12.28263537	14.8002003	15.27103842	1.403016293
	9:00 PM	10:00 PM	1.214	1.275	6.546	1.224	4.086	8.925	8.825	14.462	12.325	15.093	15.330	1.285	0.862	6.318	0.067	3.587		9.320814054	14.15666653	12.49666665	14.65032551	15.29189191	1.338911127
	10:00 PM	11:00 PM	1.140	1.266	6.927	1.164	4.065	9.467	14.125	12.852	15.007	15.532	1.273	0.832	6.365	0.064	3.645			8.652604177	13.7466667	12.53130581	15.11029642	15.73555555	1.411728459
Midnight	11:00 PM	12:00 AM	1.111	1.348	6.458	1.124	4.139	8.975	9.515	13.725	12.328	15.552	15.886	1.256	0.858	6.445	0.076	3.580		9.304395919	14.88333336	12.65166665	15.47301587	15.72093309	1.316666666

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 11-Dec-13
Day of Week: Wednesday
Measure: Mean Travel Time
Units: minutes

		Segment	EE8_C45	EE8_2A5	EE8_B58	EE8_9A2	EE8_D69	EE8_BB1	EE8_D7C	EE8_D35	EE8_D6D	EE8_2BE	2A5_DED
		Label	Site G to Site H	Site G to Site D	Site G to Site H-1	Site G to Site F	Site G to Site E	Site G to Site C	Site G to Site B	Site G to Site A	Site G to Site Z-1	Site G to Site Z	Site D to Site I
		Length (miles)	**0.858318554**	**6.175338387**	**0.917848109**	**3.212067323**	**6.48333606**	**8.395202059**	**11.98787924**	**12.27608467**	**15.25676575**	**15.45263357**	**6.666285817**
Time	Begin Time	End Time											
Midnight	12:00 AM	1:00 AM	1.620000031	7.171969719	1.405208381	3.829761883		9.174074046		13.61770827	15.53333331	16.54499995	12.34761903
	1:00 AM	2:00 AM	1.543750009	7.191145836	1.393749984	4.223484861		9.962037057		13.65046297	16.55520833	16.83055552	10.23666663
	2:00 AM	3:00 AM	1.475000046	6.442948679	1.529166671	4.136111122		9.882777784	17.70833317	12.47666663	17.25781252	17.65104169	6.504166676
	3:00 AM	4:00 AM		6.941964291	0.772222169	3.719642834		8.866666652	16.28333336	12.46990743	14.80486108	15.36583334	7.655392139
	4:00 AM	5:00 AM	1.608333279	15.46107457	1.312121182	4.379444456		9.364285725	20.07083331	22.8121469	14.8903509	15.32254903	6.786507951
	5:00 AM	6:00 AM	1.534649145	28.64506173	1.529347862	10.94525641	14.2916666	19.12008196	23.30750001	38.67005211	24.63487655	24.85923914	6.544623659
	6:00 AM	7:00 AM	1.538020852	29.995	1.543918922	23.71444445	32.92499995	35.73030302	39.64947914	38.59095239	42.83409094	42.977957	7.337499993
	7:00 AM	8:00 AM	1.632070704	18.59535518	1.66952383	24.14319727		34.9452381	42.071875	28.60637253	42.24244791	43.7125	7.10887681
	8:00 AM	9:00 AM	1.563802083	9.030952381	1.61229166	13.50978261	25.08750002	23.29407408	28.08452381	17.39662161	32.67309526	33.29462367	7.12468552
	9:00 AM	10:00 AM	1.784280318	6.775813014	1.836413043	5.498833337		13.04913792	21.64230772	12.39226189	24.00671294	22.54398147	7.262777772
	10:00 AM	11:00 AM	1.589189182	6.524059138	1.637137679	3.992666659	10.83750002	9.551282045	18.5475	12.92376542	15.83252687	16.81858975	7.114259254
	11:00 AM	12:00 PM	1.627688174	6.478418825	1.653186291	3.929918037	11.10277774	9.687037002	14.30833336	12.91633329	15.91249998	16.15213676	7.289629634
Noon	12:00 PM	1:00 PM	1.567803053	6.435582007	1.60561595	3.885714289		9.455952389	14.32666668	12.17456141	15.85684522	16.26474358	7.908333354
	1:00 PM	2:00 PM	1.589957251	6.520289857	1.624122821	3.828125002	9.550000001	9.440833373	14.5346154	12.24567903	15.0177928	15.29802628	12.38194445
	2:00 PM	3:00 PM	1.847972981	6.502000011	1.912195156	3.896099295		9.112121226	13.74791664	12.689693	14.93591954	15.54900002	17.98489583
	3:00 PM	4:00 PM	4.077083329	6.677304974	4.08651964	3.86174244	11.55000005	9.429411788	14.09358974	12.65208337	15.67034314	16.48828125	22.41833333
	4:00 PM	5:00 PM	4.089625855	6.950480769	4.277666652	3.973015877	10.53333336	9.308333337	13.40000001	13.01161618	17.38141026	18.63244048	20.7355903
	5:00 PM	6:00 PM	3.948809515	6.570261419	4.222048614	4.108695651		9.83385422	14.4659091	12.60766667	18.8191667	19.66570514	14.14364407
	6:00 PM	7:00 PM	2.622083352	6.296354161	2.652962979	3.939930552		8.901388887	14.7608333	12.12341269	15.92886906	16.54541668	20.01929824
	7:00 PM	8:00 PM	3.106321829	6.45287357	3.177222228	3.726562487	9.012499982	8.933333326	13.19333329	12.47777779	14.77583334	15.2074074	12.8502907
	8:00 PM	9:00 PM	1.535714258	6.45684524	1.584935882	3.798397446		9.149999991	13.59166676	12.2719298	15.28033332	15.72234845	6.838257556
	9:00 PM	10:00 PM	1.503070158	6.37142857	1.562916663	3.815384605		8.462499948	13.475	12.584375	15.17453705	15.36990738	10.16408045
	10:00 PM	11:00 PM	1.566145836	6.923333354	1.595588308	3.783333328		9.427380972	14.15714285	13.76785718	15.28833333	15.89583333	11.23484846
Midnight	11:00 PM	12:00 AM	1.535416665	6.591666654	1.588888848	3.972222213		9.488095263	15.30416664	13.00208326	16.78833335	17.37407409	11.36071424

		Segment	2A5_C45	2A5_EE8	2A5_B58	2A5_9A2	2A5_D69	2A5_BB1	2A5_D7C	2A5_D35	2A5_D6D	2A5_2BE	B58_DED	B58_C45
		Label	Site D to Site H	Site D to Site G	Site D to Site H-1	Site D to Site F	Site D to Site E	Site D to Site C	Site D to Site B	Site D to Site A	Site D to Site Z-1	Site D to Site Z	Site H-1 to Site I	Site H-1 to Site H
		Length (miles)	**6.891207213**	**6.175338387**	**6.939498539**	**2.982705285**	**3.378388244**	**2.220192926**	**6.879833845**	**6.100850039**	**9.090498164**	**9.29274368**	**0.982646405**	**0.059718995**
Time	Begin Time	End Time												
Midnight	12:00 AM	1:00 AM	6.697142871	11.95833329	6.713095247	3.000657889		2.44142156	7.166666687	6.349774758	8.812212634	9.125340121	1.241666672	0.050797852
	1:00 AM	2:00 AM	6.701881693	11.46666666	6.639062495	2.972857121	6.00833335	2.565833322	8.063888848	6.014150952	9.440476187	9.654947903	1.338333316	0.504964571
	2:00 AM	3:00 AM	7.032539688	7.012878758	7.009782627	3.110912708		2.392857141	9.066666607	5.87377192	8.798666676	9.256589161	1.184374946	0.534567907
	3:00 AM	4:00 AM	6.741190495	6.881666668	6.791904774	3.111728388		2.336235952	8.477083328	5.781129223	8.532302415	8.996443102	1.034722198	0.045495507
	4:00 AM	5:00 AM	6.174826382	6.485156252	6.21106321	2.884313726	5.493333343	2.320566661	8.613257552	7.994034516	8.423117279	8.735641621	1.184444435	0.036590909
	5:00 AM	6:00 AM	6.102164498	6.562310601	6.172718255	2.80560429	5.153333277	4.186041195	9.723406875	7.582992319	11.00189565	11.26610814	1.249561402	0.070138888
	6:00 AM	7:00 AM	5.962173206	6.725000008	5.995286182	2.894080995	4.853571446	3.968543725	9.825459316	6.865137812	11.85605877	12.21637167	1.315441206	0.032799994
	7:00 AM	8:00 AM	5.986170198	6.663586957	6.027020191	2.832589986	5.051190451	3.497123722	9.271717178	6.971488763	10.15939566	10.68531074	1.305714307	0.030376353
	8:00 AM	9:00 AM	6.116421568	6.857716053	6.185338347	2.873193915	4.973333331	3.759839598	9.16936621	6.18869204	10.51333334	11.20330789	1.326767684	0.037426031
	9:00 AM	10:00 AM	6.206213439	6.746739132	6.285251312	2.928133898	4.732291626	2.75753653	8.182974926	5.669686798	10.77891026	11.29614244	1.314024377	0.038010207
	10:00 AM	11:00 AM	6.375362316	6.825968981	6.41843972	2.915863917	5.04333337	2.421360144	7.638112764	5.810577997	9.28940129	9.820224721	1.248252688	0.033986941
	11:00 AM	12:00 PM	6.515137622	6.886486499	6.528591966	2.994047634	5.311666656	2.497761202	7.746022733	5.741185902	8.546678314	8.996659628	1.296052622	0.037301583
Noon	12:00 PM	1:00 PM	7.028052805	8.067572451	7.087268527	3.242628196	5.628125025	2.515151503	7.72412279	5.672096402	8.373605445	8.806558644	1.279006398	0.039890703
	1:00 PM	2:00 PM	10.32086615	11.85208331	10.4224359	6.2371447	5.67395834	2.412179497	7.696666662	5.709306573	8.360318895	8.710116278	1.267105269	0.033377656
	2:00 PM	3:00 PM	17.78716049	17.10992065	18.0949359	9.589435492	8.148484831	2.389480858	7.440625007	5.773715754	8.405836456	8.810825165	1.264890701	0.050041874
	3:00 PM	4:00 PM	20.70285088	19.10581394	21.03197167	9.507928068	9.070833377	2.426025638	7.518939384	5.813620692	8.610461622	9.020903353	1.54326921	0.061603375
	4:00 PM	5:00 PM	20.83976715	19.35697279	20.92630951	8.860677076	13.62115388	2.370666673	7.359374998	5.953966668	10.01805019	10.65836926	2.330392162	0.060143565
	5:00 PM	6:00 PM	14.68988551	14.47210885	14.57276286	5.969179901	8.169444483	2.433212577	7.560729161	5.901722921	11.13373908	12.01756978	2.97516341	0.055567523
	6:00 PM	7:00 PM	20.02808643	19.98281249	20.49426714	10.08617084	9.01666671	2.395502646	7.600256407	5.799787687	8.673561945	9.062626273	1.413999985	0.04362981
	7:00 PM	8:00 PM	11.83283898	11.08004383	12.02162697	6.682958807	5.90499999	2.424999989	7.282183885	5.866950105	8.510154521	8.819241192	1.324462341	0.064620759
	8:00 PM	9:00 PM	6.313267543	7.017824096	6.363419897	2.90467593	5.075000133	2.498989877	7.549583347	5.811449862	8.594876116	8.920703117	1.264761884	0.029855081
	9:00 PM	10:00 PM	6.587232407	9.196078458	6.647549003	2.909662573	5.356249991	2.453750014	7.548214272	5.937020639	8.526162796	8.845913472	1.294047633	0.025647252
	10:00 PM	11:00 PM	6.510582023	12.18750001	6.544651745	2.864513109	5.316666663	2.458333331	7.742261904	6.070781913	8.661250002	9.087706271	1.219771226	0.732611114
Midnight	11:00 PM	12:00 AM	6.616522992	11.65000001	6.696577361	2.983214265	5.578333318	2.543627455	8.182291689	6.05595237	8.777777783	9.166309534	1.233888835	0.043229171

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 11-Dec-13
Day of Week: Wednesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	BS8_EE8 Site H-1 to Site G	BS8_2A5 Site H-1 to Site D	BS8_9A2 Site H-1 to Site F	BS8_D69 Site H-1 to Site E	BS8_8B1 Site H-1 to Site C	BS8_D7C Site H-1 to Site B	BS8_D35 Site H-1 to Site A	BS8_D6D Site H-1 to Site Z-1	BS8_2BE Site H-1 to Site Z	9A2_0ED Site F to Site I	8A2_C45 Site F to Site H	9A2_EE8 Site F to Site G	9A2_2A5 Site F to Site D	9A2_BS8 Site F to Site H-1	9A2_D69 Site F to Site E	9A2_8B1 Site F to Site C	9A2_D7C Site F to Site B	9A2_D35 Site F to Site A	9A2_D6D Site F to Site Z-1	9A2_2BE Site F to Site Z	D69_0ED Site E to Site I	D69_C45 Site E to Site H	D69_EE8 Site E to Site G
				6.917381910	6.694488204	3.956647180	7.398059849	9.331653800	14.45174758	11.50251450	15.38595852	16.17551432	3.710509280	3.800149328	3.210667327	2.992725208	3.956647180	4.398274206	5.195218758	9.944590302	8.078175428	11.54714218	12.74158450	7.398059849	7.328018254	6.694488204
Midnight	12:00 AM	1:00 AM	0.807222231	6.784216513	3.545000011			9.145614008	12.67499998	13.38444441	15.71908853	15.98338268	8.464205584	3.644841277	8.069444443	2.938585604	3.696401502	4.283333400	5.412373750	9.604166825	8.366666668	11.65884354	12.02910853	15.08005845	8.886111137	
	1:00 AM	2:00 AM	0.833372536	6.129385973	3.773632571	10.42499995	9.538975125	14.54444448	12.140625	16.60119044	16.94835896	9.191671364	3.578328843	8.511752587	2.783499996	3.417948751	6.033333248	5.629310345	11.54166893	8.853442021	12.45154322	12.55446715		8.916666674	
	2:00 AM	3:00 AM	0.797499993	6.231816231	3.495476289	34.96666651	8.394999995	13.73333327	12.25729167	14.91184213	15.63012821	7.248333345	3.674362731	8.436664789	2.64833139	3.734791913	4.799999993	5.219767437	13.34166672	8.627995053	11.56739331	12.23834878	11.25	10.26999999	
	3:00 AM	4:00 AM	0.799074024	6.651242514	3.508050962	8.499999593	8.755625118	15.75000007	12.23873897	14.95775166	15.39664488	1.808333343	3.571598651	4.892348870	2.738083025	3.609819952	4.710499971	5.026328874	11.20625007	8.413461536	11.2425077	11.71430954	9.005000006	8.723333293	
	4:00 AM	5:00 AM	0.733756011	16.48445341	4.101425469	25.12083328	8.829952231	15.9849999	22.12964207	14.84824875	15.06109452	4.266079361	3.339952582	3.920547811	5.148837499	3.371181569	6.724999993	5.025888882	11.98714748	12.38723777	11.06298355	11.38835637	9.462037946	8.137500118	
	5:00 AM	6:00 AM	0.821008504	37.97553276	12.60029476		37.81218597	25.34167143	46.45156876	44.73626873	45.08707911	4.008757911	3.806352332	3.437756591	5.930727173	3.252188118	7.345833323	8.120333021	13.92637449	13.58812309	12.58811595	12.44774172	21.02879743	13.49866663	12.35833332	
	6:00 AM	7:00 AM	0.863498402	30.03663439	25.49279273		42.05995238	38.85118884	44.82369994	45.17614378	1.943081772	3.206340588	3.637295082	5.930727128	3.252188118	7.34583323	12.29240186	18.85751365	12.58811595	26.44774172	21.02879743	13.49866663	12.35833332			
	7:00 AM	8:00 AM	0.762345667	15.84583333	21.93888888	19.04999998	34.80770041	41.2033738	23.13001418	43.8237778	44.21111109	4.223084324	3.240289024	3.794149655	4.392424238	3.301373415	6.181666664	8.279037888	15.15365337	11.23110663	16.88933622	16.38813934	12.80745613	11.72083332		
	8:00 AM	9:00 AM	0.817248042	8.609997589	11.67183996	9.808333341	19.80534421	29.19393938	15.3705596	28.51922348	29.848	4.235666668	3.356052635	3.794403004	3.185023347	3.399423757	5.185507254	8.038773402	13.83113164	9.975030298	14.88523707	15.5061683	9.630999991	8.491666708		
	9:00 AM	10:00 AM	0.748253375	6.16549992	5.005859998	10.56504765	12.46144278	17.21832878	12.92564724	20.77124723	21.83505088	4.273929925	3.356517694	3.315023845	2.559584009	3.420838704	5.001190408	6.172905023	11.52804125	8.305223298	14.20786384	14.77303044	9.854249998	8.090533535		
	10:00 AM	11:00 AM	0.801253752	6.047460948	3.568784635	10.43472221	9.822916653	13.99841273	12.05136054	15.57887647	16.27097701	4.286224493	3.47555555	3.824387259	2.643014704	3.514066201	5.255000004	5.236067728	10.41449277	8.579916552	11.91033504	12.54273535	9.864583333	9.398333352	9.200000002	
	11:00 AM	12:00 PM	0.807294317	6.013913899	3.488599394	9.336666651	9.136666651	13.77777778	11.78819923	14.77665555	15.20852402	4.318556577	3.502922076	3.900943401	2.525083723	3.551519047	5.1351235	5.335754274	10.05855565	8.447860667	11.39711111	11.83637499	9.725977188	10.15833331	21.87583333	
Noon	12:00 PM	1:00 PM	0.800992058	6.102283234	3.443181822	8.998333302	9.191342484	11.3466849	12.06205874	14.50852713	14.89129164	4.369265232	3.92974614	3.978719191	2.621148738	3.990999922	5.219090954	5.336370369	10.72233331	8.368640251	11.13917524	11.59296874	13.45882253	14.08	10.47500016	
	1:00 PM	2:00 PM	0.791142788	5.968333334	3.501282058	8.605833313	8.764000013	11.42954546	11.57945455	14.9128731	15.42094296	5.074916673	5.369730151	4.939598861	2.611096125	5.422985351	5.20041669	5.204761851	10.52867644	8.338666678	11.08010665	11.40762626	17.41458336	19.08055561	22.51666665	
	2:00 PM	3:00 PM	0.809374986	6.124469971	3.471546538	8.775000013	8.230055542	13.34722221	11.98958328	14.2733156	16.1695601	6.970189921	9.080842592	6.158589748	2.635706938	9.433333338	5.022777785	5.090873015	10.2037888	8.452833332	11.0877661	11.50182649	23.48854169	19.8166666		
	3:00 PM	4:00 PM	0.7617706	6.163511102	3.525737472	9.995833343	8.872348511	13.8485278	11.91663351	14.7235883	15.19298538	8.902103577	10.5558026	7.962067754	2.69818118	11.0573686	5.206818225	5.280035451	10.4833315	8.488401566	11.3443964	11.66039429	27.08166663	28.63333343		
	4:00 PM	5:00 PM	0.809967318	6.44423078	3.585310722	10.64666663	8.995833332	13.77499998	12.36947288	15.03132184	16.72989584	12.34941175	12.6808642	9.211570917	2.791885003	12.70833333	5.391666658	5.135135211	9.982005475	8.739166669	12.70435011	13.43638344	27.69044442	30.52222234		
	5:00 PM	6:00 PM	0.840740739	6.270370271	3.771600017	8.55000009	8.957539712	14.1809149	12.43604869	17.75277779	18.85497698	13.18140351	7.992066538	10.85347234	2.671396303	8.039054423	5.295005952	5.364285713	10.3653709	8.590351075	13.99455981	14.88751269	17.08979188	19.07485187		
	6:00 PM	7:00 PM	0.777142866	6.235714288	3.651190476	8.108333273	8.354545599	13.94374998	12.13410256	15.25720164	15.84319685	7.467841879	11.43433333	7.534722227	2.622448998	11.66486048	5.150000006	5.188580236	10.42791668	8.488333338	11.3375284	11.78243852	20.38269232	21.43454584	31.99166665	
	7:00 PM	8:00 PM	0.797777758	6.095257152	3.554705872	7.627777752	9.111357669	12.98895848	12.30746878	14.93287185	15.27443110	10.82805513	4.367738933	10.6551282	2.604477521	4.425885953	4.738666624	5.258374988	9.731018497	8.520335984	11.25044248	11.58466667	10.39374998			
	8:00 PM	9:00 PM	0.771153854	6.234129769	3.484846237	7.455555517	8.958295251	14.43890474	12.3765153	14.9539037	15.39777778	5.49550726	3.445045033	4.993562073	2.667285497	3.502733316	4.677083278	5.249642857	10.2979168	8.518953417	11.27097166	11.59343434	8.72023807	17.2	11.07499999	
	9:00 PM	10:00 PM	0.777272725	6.284418564	3.544200436		9.329929243	15.11666663	12.46622031	14.85756668	15.34814917	4.08115166	3.660998018	3.949898352	2.648811103	3.698855579	4.986111006	5.270595690	10.3666667	8.699434088	11.3572658	11.71993094	13.73333336	8.628833324		
	10:00 PM	11:00 PM	0.716525632	6.321245898	3.601694905		9.501562477	13.72499995	12.43547009	15.02354466	15.62222221	7.485624974	3.549906591	6.307575749	2.76257073	3.596898438	4.383333365	5.335752679	10.42013888	8.789895578	11.39012681	11.94081186	13.25833331	8.416666698		
Midnight	11:00 PM	12:00 AM	0.798055515	6.479074075	3.561111111		9.254166668	13.54583333	12.85555556	15.42371294	15.69708855	8.423611084	3.585491472	9.455000303	2.719740734	3.642669193	4.824999815	5.433333356	11.14285715	8.818749981	11.47152777	11.84929159	14.54583333	8.613888825	

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 11-Dec-13
Day of Week: Wednesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	D69_2A5	D69_B58	D69_9A2	D69_BB1	D69_D7C	D69_D35	D69_D6D	D69_2BE	BB1_DED	BB1_C45	BB1_EE8	BB1_2A5	BB1_B58	BB1_9A2	BB1_D69	BB1_D7C	BB1_D35	BB1_D6D	BB1_2BE	D7C_DED	D7C_C45	D7C_EE8	D7C_2A5
			Length (miles)	Site E to Site D	Site E to Site H-1	Site E to Site F	Site E to Site C	Site E to Site B	Site E to Site A	Site E to Site Z-1	Site E to Site Z	Site C to Site I	Site C to Site H	Site C to Site G	Site C to Site D	Site C to Site H-1	Site C to Site F	Site C to Site E	Site C to Site B	Site C to Site A	Site C to Site Z-1	Site C to Site Z	Site B to Site I	Site B to Site H	Site B to Site G	Site B to Site D
				3.378286214	7.369008549	4.269207158	4.597752137	3.935277241	7.664564499	10.40069969	10.7272912	8.8093445	3.154195491	8.305203958	2.221033532	8.191455339	5.195235854	4.367712147	5.556934914	3.881564877	6.873993008	7.229236154	11.73212456	12.43527128	11.8878264	6.678833845
Midnight	12:00 AM	1:00 AM		3.991666641	8.994444389	5.001388863						13.96785713	8.672222213	12.94537038	2.221078425	8.772333343	5.114308179	8.083333243	5.083333254	3.773055553	8.702222208	7.083305554		14.47083333	17.75000000	7.961666652
	1:00 AM	2:00 AM		4.292000092	8.516666674		6.374999965		10.3166667			14.03333327	8.897222215	13.97738595	2.202991445	8.913725481	5.222379629		6.066666616	3.884039946	7.010346164	7.288000005		12.7583347		6.883333361
	2:00 AM	3:00 AM		4.388111125	10.51666663	5.45500002	6.666666716		16.52291623	13.07499999	13.5249999	12.34583335	8.979951845	13.30416667	2.117916663	8.850855449	5.145312477	8.345833328	6.695833309	3.625173621	8.380740147	6.820238351		12.57500002	18.1833334	7.808333313
	3:00 AM	4:00 AM		3.984999999	8.566666637	5.090476204	6.885185148		10.28712124	13.61805562	13.9868889	8.537500016	9.395097803	9.34333334	2.254054947	9.505555534	5.46644145		6.416666652	3.613537503	6.261623389	6.738013715				7.966666759
	4:00 AM	5:00 AM		5.365984623	8.675000015	5.291545223	6.369999963		13.17245174	12.87166655	12.9111111	9.90777756	8.94999964	8.875499192	2.21297468	9.09833216	5.28679433		5.251984119	3.545631368	6.227243836	6.528342459		18.17499999	14.97222228	8.658923862
	5:00 AM	6:00 AM		11.87322532	14.41250003	9.202976193	9.109583334	15.47037039	21.69044761	17.75567871	17.99134617	8.339727314	8.324263126	8.871992192	2.207113847	8.139890703	5.480293524	7.783333335	5.659277648	3.758531369	6.498841603	6.888450769	14.5746999	12.5816666	17.37333368	7.530961263
	6:00 AM	7:00 AM		11.05420422	12.23888893	9.725990196	16.87083377	23.05514769	17.77248147	23.15383253	23.23995729	8.570832597	8.114303862	8.595458548	2.071153847	8.073850572	4.853283574	7.194444453	5.659277648	3.767537879	6.188849403	6.780594778	14.05666673	14.13854188	17.5642593	7.26067703
	7:00 AM	8:00 AM		8.311363633	11.11354167	7.661302084	14.66738397	20.5831973	16.83500002	21.07538876	21.61531533	5.439207656	7.951583339	8.537053503	2.076403877	8.027499998	4.951303968	6.484722218	5.475733334	3.562885153	6.608535488	7.568112243	15.14499999	12.88885507	13.62999997	7.086450629
	8:00 AM	9:00 AM		4.084583331	8.58148152	5.259168673	12.83696273	18.10269937	11.41230158	20.32867648	20.88020635	9.268617015	7.998936163	8.774193024	2.06016146	8.080175923	4.907306284	7.188184417	5.318851129	3.526441639	7.263682777	8.127277136	14.17083333	12.79596764	13.66250006	7.149999996
	9:00 AM	10:00 AM		4.023511304	8.083518522	5.137287708	6.989582504	12.9104187	9.774896993	15.60165867	16.3833334	9.101542222	8.3541752	9.140224268	2.08614535	8.325381848	4.84439716	6.951190488	5.475628947	3.725536329	8.173165527	8.860931904	14.09166667	13.3658854	14.19404764	7.323727273
	10:00 AM	11:00 AM		4.08583331	8.425000042	5.35989582	6.496296283	12.06458334	8.791666674	13.15397032	13.74517541	9.681089748	8.261722485	8.76101191	2.12030464	8.325342454	5.086536522	6.776190483	5.650925897	3.73030337	7.703801161	8.375330045	14.68095233	13.4565476	13.75705124	7.49149573
	11:00 AM	12:00 PM		3.981140347	8.666666659	5.319555555	6.533333334	11.21388885	9.894871795	11.91879002	13.41666655	9.404333978	8.702420554	8.965952721	2.0896581171	8.797210139	5.12983487	6.483333372	5.687222185	4.11945377	7.248825428	7.835773364	15.14833331	13.08520832	14.30379785	7.183611127
Noon	12:00 PM	1:00 PM		4.113604549	11.93333334	5.566397858	6.672333313	10.78333324	9.797499998	12.66444445	12.9013889	9.492419082	8.700000004	9.378793767	2.138829492	8.7154948	5.163321176	7.618333334	5.801851824	3.840409854	6.825193796	7.215310163	14.30555563	14.2724368	14.1083333	7.693103444
	1:00 PM	2:00 PM		4.061231862	20.54166673	5.442857174	6.56458333	11.31666673	10.01410258	12.96071427	13.40416665	10.57442531	9.393559431	10.74404763	2.187229444	9.548499337	5.536215543	8.573916697	5.741666621	3.804004449	6.524645361	6.965088956	16.49166668	14.45476193	15.41305512	7.720833347
	2:00 PM	3:00 PM		4.339444448	20.09000005	14.04395078	6.552777788	11.61833331	10.98541668	12.83974358	13.25897436	14.09567901	12.59205573	15.43766664	2.47889171	12.78767935	8.612867643	8.135416713	5.69933931	3.628598491	6.434722229	6.827291879	20.89500003	18.71999998	19.8711111	8.00088385
	3:00 PM	4:00 PM		4.437954149	29.17083328	14.3951388	6.647619029	11.68124997	16.36666665	12.82916661	13.2361111	22.94730303	22.92005208	21.54985278	5.24960283	23.33611113	14.82724171	12.205303	5.144166643	3.705531367	6.69851821	7.150188414	29.47291667	30.81666667	32.66666666	13.15362866
	4:00 PM	5:00 PM		4.647999988	30.6694445	13.8527957	6.932142832	12.07037039	16.68273813	14.4999958	15.7882523	28.30123458	27.07670968	25.495202	6.031633995	27.35933331	15.04756844	14.89761956	5.011111107	3.629047621	6.190591398	6.170430101	39.89749999	38.40166258	39.23749999	21.83815252
	5:00 PM	6:00 PM		4.267738351	17.54479169	8.898495658	7.11250012	12.2942857	9.954999993	15.98102569	17.57575758	25.21047619	26.2050833	24.75206338	5.945934181	26.25186084	14.3423811	13.13499999	5.144999997	3.686669649	6.02524075	5.974999951	47.57291675	48.34166665	43.5400794	27.67816092
	6:00 PM	7:00 PM		3.99250002	21.3148148	8.944666692	6.449999968	11.76212121	9.631249979	13.39611117	14.03333336	19.12859878	20.1408257	20.2499691	4.825983391	20.15864998	11.13043034	13.59533332	5.25245897	3.715468278	6.801315788	7.220720742	49.07999994	46.40592279	47.87333328	28.09477461
	7:00 PM	8:00 PM		4.248148147	17.5333332	8.733333352	6.243750016	11.13999999	10.29166657	12.22499999	12.58750005	23.99041666	24.52529874	24.81354167	3.874691353	24.88543338	14.33052461	12.3775	4.912499991	3.737407411	6.581173844	6.94647438	39.53388889	37.45754387	39.72166693	13.1952525
	8:00 PM	9:00 PM		4.206250026	17.31874994	8.872549008	6.983333342		10.8604168	13.05119049	13.41666667	16.70763888	15.58568485	16.40984101	2.601883503	15.61952382	10.36326088	8.23085233	5.429333326	3.652160481	6.379851847	6.858333329	20.66547618	17.70592542	19.66416668	8.215517269
	9:00 PM	10:00 PM		4.053571428	8.663541639	4.827976191	6.544444483	15.22499998	10.07291668	13.69374999	13.94166658	8.969399949	8.488725002	9.122222245	2.145530312	8.640965394	5.04488766		5.446666628	3.613560156	6.48188406	6.834129888	14.81666664	14.68333331	16.25166233	8.232916667
	10:00 PM	11:00 PM		4.187500002	8.563095203	5.1009258	5.983333451		10.62499998	13.16611106	13.1722223	12.01064816	8.82595628	11.89527777	2.130465982	8.906840792	5.059680126	7.661111131	6.035416704	3.751767682	6.669852939	7.070068036	16.99666667	15.6187498	21.49583343	7.92878788
Midnight	11:00 PM	12:00 AM		4.223333359	8.783333337	4.727777227	7.541666664	11.66666659	10.48333334	11.22499967	11.5833333	13.4107143	8.83069125	15.16805554	2.13634181	8.776704547	4.996913579	7.416666677	5.527777803	3.79638884	6.774852798	7.180666671	22.18333337	14.41666659	21.11666679	7.748333116

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 11-Dec-13
Day of Week: Wednesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Length (miles)	D7C_B5B Site B to Site H-1	D7C_9A2 Site B to Site F	D7C_D49 Site B to Site E	D7C_BB1 Site B to Site C	D7C_D35 Site B to Site A	D7C_D6D Site B to Site Z-1	D7C_2BE Site B to Site Z	D35_D6D Site A to Site I	D35_C45 Site A to Site H	D35_EE8 Site A to Site G	D35_2A5 Site A to Site D	D35_B58 Site A to Site H-1	D35_9A2 Site A to Site F	D35_D49 Site A to Site E	D35_BB1 Site A to Site C	D35_D7C Site A to Site B	D35_D6D Site A to Site Z-1	D35_2BE Site A to Site Z	D6D_D6D Site Z-1 to Site I	D6D_C45 Site Z-1 to Site H	D6D_EE8 Site Z-1 to Site G	D6D_2A5 Site Z-1 to Site D	D6D_B58 Site Z-1 to Site H-
				12.4617252	8.5649600	8.6832774	5.5669401	3.2268907	6.6083529	5.1812870	12.6895498	12.8853165	12.7409467	6.1008109	13.5323455	9.0783549	7.4668148	3.8825407	3.4509922	3.6419422	3.7183128	15.5888921	15.8417281	15.2767537	9.0961864	15.5999982
Midnight	12:00 AM	1:00 AM	14.42083336	10.75166669			5.827083305				16.84444439	12.75287305	18.83833325	5.999780703	12.86388889	9.130952388	12.36666664	3.751449285		2.795277779	3.124038858	19.68555555	15.46092889	19.66666663	8.782449506	15.42177752
	1:00 AM	2:00 AM	12.76333334	9.508333392			5.366666643				16.33541662	13.12993825	18.07916665	6.249791898	13.00057472	9.155277788		3.830172408		2.996166986	3.347499998	20.372222222	15.75305527	21.33499996	9.063178308	15.84722209
	2:00 AM	3:00 AM	12.57500002	9.747222223			5.266666653				12.6958333	13.25873016	13.85714285	6.353027	13.08058548	9.356359027	12.54166662	4.00758605		2.739454513	3.139455134	19.10833329	16.18033329	21.01527781	9.204047616	15.88722223
	3:00 AM	4:00 AM	13.55000011				6.216666643				13.89284475	12.9070172	13.58499999	6.051282067	12.84527028	9.248972613		3.93867526		2.701854138	3.057926841	14.72916653	16.47173913	16.12749998	9.008765685	16.42424249
	4:00 AM	5:00 AM	18.13499993	11.49833329	19.90000002	6.695238105	6.583333329				12.88388887	11.99545452	12.29952382	5.760304584	12.6079032	8.654851858		3.754523052		2.656556555	2.955934134	17.01754384	15.73529411	17.02727228	8.943322215	15.78342592
	5:00 AM	6:00 AM	14.30000003	10.925	13.06999998	5.952380952					13.47500555	11.99798752	14.48833325	5.701304542	11.6029032	8.450834327	12.50277791	3.614542438	6.49188666	4.13780889	3.002956329	15.75666455	25.48291171	14.50225228	8.970288232	15.78292329
	6:00 AM	7:00 AM	14.94558823	10.06293899	12.18666673	5.252195473	6.755555514				13.47500003	11.46758751	14.48587362	5.725202034	11.43893211	8.653938878	12.22333332	3.602554744	6.266666565	4.0878589	4.602107987	14.73685497	15.78248383	15.34925231	8.395438619	14.44072232
	7:00 AM	8:00 AM	12.96180554	8.857666672	15.57142855	5.097833333	6.523861107	9.716666922		11.16666652	13.27804149	11.53052776	13.81752117	5.721246008	11.67973213	8.494124469	10.42916668	3.567877688	6.795614003	3.342088353	3.907601178	16.49848486	14.01272522	17.7271528	8.483212707	14.08842242
	8:00 AM	9:00 AM	12.89392714	10.02518939	15.19583336	5.185416655	5.785555556	10.52333335	11.275		13.09654587	12.08692711	13.17329432	5.769898538	12.14263047	8.747283073	10.82291672	3.574097658	6.712345655	3.684725971	4.336084659	16.18238094	14.26430554	17.63057143	8.369748857	14.14778644
	9:00 AM	10:00 AM	13.40357143	10.23939452	14.07500002	5.279457359	6.788111072				13.53323332	12.10747126	12.98333325	5.792879776	11.9795808	8.798224039	12.10995665	3.573571428	6.517424239	4.532364156	4.972988116	16.23293851	15.05941665	15.53412432	8.63503868	15.09665524
	10:00 AM	11:00 AM	13.56333336	10.07965749	11.73333336	5.096969711	6.341666635	11.87500002	12.26944439	13.10861852	12.2226626	12.36291105	5.641936941	12.24315477	8.573076931	8.583333321	3.827941171	7.049999982	3.600433789	4.201703947	16.39109196	14.85844444	15.73785431	8.59299892	14.88892856
	11:00 AM	12:00 PM	13.41833339	10.31953124	13.05833335	5.827777774	7.018750068	9.049999853	9.524999969	13.29529787	12.69183646	12.85867855	5.861083321	12.83227789	8.98807499	11.86458335	3.657826285	6.527777753	2.73135487	1.072223558	15.25888877	15.52083334	14.99136907	8.345433976	15.17693025
Noon	12:00 PM	1:00 PM	14.29615386	10.60459772		5.634313714	7.171000058				13.63387123	12.96071438	16.12068864	5.929539012	12.89411766	9.112226939	11.14166663	3.714417984	6.733333357	2.697399354	3.031971462	15.99612459	15.91179078	15.83720238	8.64544715	15.32418364
	1:00 PM	2:00 PM	14.78928574	11.14166667	14.50833337	5.665277778	6.91500001	10.08611111	10.50000004	18.52124183	16.78394098	17.68958827	6.274707024	16.74058333	12.2845425	11.76273837	3.964453117	7.341666659	2.665425972	3.010555556	16.31490388	15.77333333	18.04138887	8.691912797	15.75463617
	2:00 PM	3:00 PM	18.71833333	14.05381945	18.22083341	5.374128205	6.991666654			9.554166729	26.78496733	28.175	26.10919538	10.27929198	26.55165854	19.23318777	11.77083336	3.986076596	7.045833336	2.721042878	3.078042333	20.94561403	19.63113307	21.25416666	8.962433334	19.72349254
	3:00 PM	4:00 PM	31.56297102	21.17217654	30.45555554	7.738836476	6.899583335	10.12916666	10.63999986	38.03579545	34.29643897	34.8589904	14.50236693	34.2436111	24.38033472	17.95833322	7.36151846	6.833333229	2.88505181	3.354133553	29.53503877	28.65311359	27.8859766	12.7919703	29.18823959
	4:00 PM	5:00 PM	38.6528846	29.64323899	38.90833333	16.44991715	7.458229008	10.51666668	10.72500004	38.67784932	38.99546874	41.90364584	15.29566667	39.06683674	24.88956933	21.3208334	13.18052147	9.408333264	4.307435711	5.012132931	38.55518518	37.04841953	38.28117284	16.95982143	37.55089959
	5:00 PM	6:00 PM	48.53472222	35.58497589	40.39166668	20.74434156	7.648842301	12.8633333	13.42037033	31.25153939	34.59398134	31.78903509	14.08954613	34.44439894	29.49429273	21.378389	14.62404459	11.68333331	5.369155249	6.103013617	42.52530001	40.98585969	44.1909858	20.12116458	41.59970487
	6:00 PM	7:00 PM	46.09583332	38.20226893	22.78333332	20.92788462	6.784545362	10.07916668	10.48416665	32.61746032	34.44739907	35.4560181	12.32353372	34.38003319	25.18949096	18.4358335	14.21396713	8.810885664	3.172691716	35.28437498	37.99032958	35.83014726	19.54855971	37.78634012	
	7:00 PM	8:00 PM	37.85752967	25.29007946	15.39583333	8.988254104		9.546666618	9.796666664	20.21275253	19.32658051	18.04583332	6.373201699	18.4122222	13.88882661	27.35000001	9.95227774	9.26666666	2.71447594	3.018541662	35.50398554	37.52912228	40.60681817	15.50618302	37.34574899
	8:00 PM	9:00 PM	21.58750003	15.13306453		5.279457197				12.4311111	12.16543718	12.80499986	5.773496248	12.1729999	8.617899958	11.63229169	3.787254135	6.15833329	2.702656252	3.029440091	22.54632339	22.51925927	21.03879207	9.203211974	22.53942367
	9:00 PM	10:00 PM	16.62333333	10.83933751	12.44166657	6.028472189				16.66694444	12.43482964	14.87179469	5.787495923	12.4354811	8.644320987		3.68137255	6.583333436	2.686624337	3.011748646	14.94745537	14.81147941	15.61858972	8.39301701	14.83809521
	10:00 PM	11:00 PM	15.97500004	11.70023811		6.281250015	6.183333373			17.05315522	12.62113096	18.53124994	5.757921814	12.47966421	8.659859157	11.61666669	3.707655016	6.608333364	2.749263791	3.1995015	18.36277777	15.28982456	18.20166666	8.473452388	15.13253399
Midnight	11:00 PM	12:00 AM	13.77499997	10.06666669		5.775000025				17.58166669	12.52366669	17.80952387	5.904301074	12.59761905	8.899452769	11.2999999	3.752380949		2.826754377	3.169158276	19.16583335	15.35472227	22.80000002	8.419452958	15.22108465

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 11-Dec-13
Day of Week: Wednesday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	D6D_9A2	D6D_D69	D6D_BB1	D6D_D7C	D6D_D35	D6D_2BE	3BE_DED	2BE_C45	2BE_EE8	2BE_2A5	2BE_B58	2BE_9A2	2BE_D69	2BE_BB1	2BE_D7C	2BE_D35	2BE_D6D
			Site Z-1 to Site F	Site Z-1 to Site E	Site Z-1 to Site C	Site Z-1 to Site B	Site Z-1 to Site A	Site Z-1 to Site Z	Site Z to Site I	Site Z to Site H	Site Z to Site G	Site Z to Site D	Site Z to H-1	Site Z to Site F	Site Z to Site E	Site Z to Site C	Site Z to Site B	Site Z to Site A	Site Z to Site Z-1
			Length (miles)	15.647161258	10.4068904	8.872869198	6.169439062	2.564108452	0.279243233	15.279481047	15.13685119	15.45583252	3.28424383	15.17287534	12.64192455	10.70189210	7.929931154	6.591217202	2.279891883	0.279243233
Midnight	12:00 AM	1:00 AM		11.73515196	15.50833337	6.518148168		2.764583356	0.320564519	20.6098485	15.85808585	19.79416652	9.185487173	15.73376899	11.95563062	16.00166659	6.865032668		3.108597888	0.336757367
	1:00 AM	2:00 AM		12.06590785		6.688095250		2.847522546	0.402560002	21.30357138	16.07815314	21.65277771	9.277713171	16.13456883	12.22390381		6.86861682		3.117792798	0.297618022
	2:00 AM	3:00 AM		11.98103447	15.86666669	6.866666669		2.869793888	0.348666723	18.40833328	16.0147619	20.72262461	9.332291854	15.69866423	12.01202701	16.24583338	7.121250011		3.268023345	0.350755204
	3:00 AM	4:00 AM		12.18109757		6.816641435		2.892777782	0.328528778	15.22333311	16.63266665	16.68703698	9.383749964	16.70766669	12.56801585		7.16911067		3.216318242	0.314965889
	4:00 AM	5:00 AM		12.1521111		6.856178077		2.916111108	0.298128608	17.2833277	16.0286325	17.23452756	9.181543375	16.01783668	12.4064667		6.976872373		3.13361473	0.317517555
	5:00 AM	6:00 AM		11.34641111	15.72500039	6.905238889		2.939444439	0.429333333	15.48833317	14.66833333	15.19433216	8.919339583	14.91939583	11.53635101	16.0833333	6.931042889		2.9333333	0.429333333
	6:00 AM	7:00 AM		11.11396491	16.85666667	6.232439231	10.03166667	2.964525377	0.575305644	14.98013763	14.50710194	15.46342594	8.5995355	14.39177489	11.15631471	17.12499999	6.442712581	9.305555557	2.931306313	0.276859803
	7:00 AM	8:00 AM		11.30473118	12.85833328	6.23685508	9.342592592	2.97311233	0.574156619	16.5464666	14.23801137	16.00297618	8.673756328	14.24936707	11.56759752	13.21666673	6.487708322	8.571296313	2.94314743	0.288253016
	8:00 AM	9:00 AM		11.27797619	15.89041668	6.279394973	9.274404765	2.7114959391	0.661319938	16.39761906	14.59831079	15.44250001	8.63156281	14.68765057	11.35396813	16.23124997	6.496558135	9.289743571	2.972529501	0.285214118
	9:00 AM	10:00 AM		11.62502038	17.54722223	6.41354187	9.024999965	2.729605252	0.55851459[illegible]	15.97125438	15.11238889	15.03859588	8.844554542	15.18366667	11.72242724	15.72708333	6.610774411	9.353125	3.013829274	0.282531437
	10:00 AM	11:00 AM		11.73683851	11.95499998	6.49262638	9.758333378	2.730354345	0.53734432	16.85455495	15.33579932	16.30416696	8.92837937	15.02844627	11.91884556	12.11874998	6.694999997	10.12500007	3.026227268	0.2899298[illegible]
	11:00 AM	12:00 PM		11.30652779	14.59583326	6.441498323	10.34166665	2.717815584	0.322707794	15.58072914	15.23865532	20.80731708	8.585509351	15.33833331	11.53818525	14.95416659	6.714992497	9.649999981	2.9877352[illegible]	0.266767072
Noon	12:00 PM	1:00 PM		11.75223064	15.89833333	6.478994491	9.733333348	2.749341236	0.318835612	16.22920001	15.74752825	16.99596691	8.907273382	15.55651577	11.95759181	16.32166668	6.754292928	9.854166668	3.002499998	0.265758401
	1:00 PM	2:00 PM		11.92699692	15.13472222	6.716858327	8.583333361	2.725365369	0.331438358	16.47107867	16.02569995	18.07428572	8.950602409	15.95002972	12.17545139	15.72333334	7.016671674		2.978892791	0.286211747
	2:00 PM	3:00 PM		14.07243884	14.30416666	6.732014391	9.887499972	2.713132141	0.352446904	21.22333333	19.80539975	21.58761994	9.250370369	19.84415322	15.19594862	14.6833334	6.966884542	10.12916665	2.978895768	0.253524051
	3:00 PM	4:00 PM		22.01501572	20.09476163	9.901299258		2.6938527	0.414413175	30.0954549	28.8646773	29.2263333	13.46343607	29.31527778	22.48902728	21.48794298	10.4844792	9.708000025	2.946598598	0.271226618
	4:00 PM	5:00 PM		26.59339357	22.51111116	15.18582251	12.32499993	2.751672866	0.714334188	38.3172727	37.79190823	38.28761261	17.8897831	37.95434783	27.49647338	22.85277782	16.38833688		3.013030784	0.276879752
	5:00 PM	6:00 PM		28.96741573	28.32583342	19.23609988		2.777992295	0.691714147	42.7488921	42.81943837	43.44722223	20.42297454	43.91829576	29.8587899	28.64861123	20.04741962		3.033948333	0.277077432
	6:00 PM	7:00 PM		27.3750768	20.94791667	18.3726825	12.02499999	2.770942866	0.345376923	36.3552917	39.15117925	37.7027242[illegible]	19.89468084	39.05725809	27.5775492[illegible]	21.38541688	19.35180099		3.058102449	0.279465142
	7:00 PM	8:00 PM		26.25528375	20.45833343	12.8166438		2.751615345	0.312758178	35.2849397	38.54272589	40.54579927	16.01353037	38.49829399	25.8751938	20.8333334	13.06385525		3.007128188	0.271826328
	8:00 PM	9:00 PM		16.698454	14.25833334	8.56039988	8.791666757	2.74574621	0.326875042	22.7812499	23.12874518	21.91142893	9.468462941	23.44807842	16.9293842	14.61770838	8.832305513	8.941666516	3.033372699	0.276065737
	9:00 PM	10:00 PM		11.17231358		6.315038286		2.687351175	0.305856912	15.3846338	15.075	16.00860215	8.757335202	14.92096218	11.51128205		6.646587266		2.967980773	0.28664257
	10:00 PM	11:00 PM		11.27077853	21.56666666	6.475688235		2.697936653	0.333983603	19.00049517	15.5416138	18.52888887	8.749193562	15.35089659	11.50903175	21.92708334	6.716921773		2.976267072	0.276929015
Midnight	11:00 PM	12:00 AM		11.36035715	14.30000005	6.551307178		2.729987526	0.338856593	20.50705127	15.42105263	22.30833327	8.729875884	15.43412698	11.57833333	14.00833334	6.804310342		3.024275308	0.325841115

TRAVEL TIME DATA

1 HOUR CORRIDOR STATISTICAL SUMMARIES

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 12-Dec-13
Day of Week: Thursday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	DED_C45	DED_EE8	DED_2A5	DED_B58	DED_9A2	DED_D69	DED_BB1	DED_D7C	DED_D35	DED_D6D	DED_2BE	C45_DED	C45_EE8	C45_2A5	C45_B58	C45_9A2	C45_D69	C45_BB1	C45_D7C	C45_D35	C45_D6D	C45_2BE	EEB_DED
			Site I to Site H	Site I to Site G	Site I to Site D	Site I to Site H-1	Site I to Site F	Site I to Site E	Site I to Site B	Site I to Site C	Site I to Site B	Site I to Site A	Site I to Site Z-1	Site I to Site Z	Site H to Site I	Site H to Site G	Site H to Site D	Site H to Site H-1	Site H to Site F	Site H to Site E	Site H to Site C	Site H to Site B	Site H to Site A	Site H to Site Z-1	Site H to Site Z	Site G to Site I
			Length (miles)	1.201	1.471	5.555	0.283	3.722	7.505	8.800	11.779	12.698	15.589	16.775	1.000	0.859	6.801	0.000	3.909	7.239999999	9.104199999	12.4342739	12.38532604	15.94172031	16.13985218	1.471239999
Midnight	12:00 AM	1:00 AM		1.134	1.259	6.603	1.167	3.896		8.629		12.221	15.223	15.594	1.313	0.913	6.872	0.080	3.721		9.088888918	12.26666668	13.16304044	15.63916666	16.1272727	1.492156865
	1:00 AM	2:00 AM		1.088	1.284	6.535	1.142	4.046		9.430		12.343	14.975	15.103	1.310	0.918	6.548	0.105	3.749		9.461145918	16.31666576	12.56291663	16.45952376	17.12859876	1.533943129
	2:00 AM	3:00 AM		1.017	1.314	6.494	1.145	4.035	9.333	9.364	13.333	12.145	15.297	15.213	1.421	0.756	6.153	0.112	3.705	8.779166741	9.53055555	13.35000001	12.17074819	15.41125001	15.93132415	1.511111073
	3:00 AM	4:00 AM		1.069	1.228	9.636	1.147	4.050	9.699	8.913	16.683	15.036	14.902	15.089	1.201	0.862	6.853	0.096	3.536	9.481666666	9.239999248	16.09166664	12.76999025	15.05416667	15.52952459	1.505624981
	4:00 AM	5:00 AM		2.033	1.235	21.883	2.111	7.080	20.767	12.965	20.686	26.890	16.961	17.365	1.270	0.850	17.370	0.049	4.274		26.76933182	26.96792253	21.93593704	15.34801667	15.64892027	1.487398236
	5:00 AM	6:00 AM		3.243	1.243	35.518	2.481	16.822		16.977	43.538	38.610	20.350	20.763	1.413	0.899	31.003	0.149	14.198		30.03933333	45.96082753	37.40364655	23.78903401	23.54703007	1.485953359
	6:00 AM	7:00 AM		1.370	1.269	25.668	1.501	23.814	20.534	36.039	47.301	34.662	42.837	43.447	1.348	0.918	22.810	0.188	25.388		34.12793714	48.28005253	31.95963093	41.61349853	42.18208708	1.448563362
	7:00 AM	8:00 AM		1.252	1.277	12.246	1.318	19.724	13.686	36.137	41.485	19.658	38.877	39.177	1.286	0.898	11.038	0.089	17.410	12.29166665	26.8785124	33.47166481	17.85297619	35.4978515	36.41153846	1.404869210
	8:00 AM	9:00 AM		1.306	1.278	10.215	1.404	7.962	12.367	15.607	23.708	16.553	25.115	26.494	1.297	0.886	6.956	0.091	6.880	11.38333328	14.54304262	21.48589566	13.25736434	21.92454127	23.09918561	1.394444462
	9:00 AM	10:00 AM		1.804	1.339	10.411	1.826	7.495	11.913	12.896	19.051	16.609	20.741	21.218	1.431	0.899	6.459	0.093	4.185	8.391666654	9.588779536	15.38511111	12.21951319	17.66057477	18.6051	2.015579708
	10:00 AM	11:00 AM		2.079	1.431	9.544	2.074	7.726	12.861	13.325	18.023	15.681	21.202	21.872	1.294	0.902	6.103	0.094	3.730	10.01111107	9.51889433	14.90131577	11.94427083	16.70071429	17.14561781	1.408615406
	11:00 AM	12:00 PM		1.675	1.365	8.509	1.695	6.964	11.069	12.506	18.800	14.809	19.379	19.795	1.342	0.881	6.237	0.094	3.609	8.462499949	9.324444439	13.70972222	12.30056665	15.47808123	16.13593334	1.438039225
Noon	12:00 PM	1:00 PM		1.666	1.422	7.643	1.712	5.737	10.302	12.341	16.669	13.504	17.828	18.210	1.288	0.888	6.173	0.093	3.657	8.956249952	9.469252873	13.23468648	12.09312498	15.04863845	15.92456232	1.388352266
	1:00 PM	2:00 PM		1.564	1.536	7.622	1.659	4.854	11.216	10.768	15.542	13.705	16.109	16.954	1.345	0.906	6.175	0.095	3.599	9.395833332	8.685325251	13.86217952	12.03566666	14.77354486	15.04856648	1.421848479
	2:00 PM	3:00 PM		1.453	1.366	8.066	1.534	5.257	10.677	10.743	15.773	13.821	16.526	16.950	1.467	0.936	6.231	0.094	3.624	9.580952429	8.957539704	13.5531746	12.03307889	15.12443366	15.73036398	1.398410029
	3:00 PM	4:00 PM		1.760	1.343	10.774	1.761	5.588	14.733	11.021	14.845	16.640	16.427	16.826	1.489	0.929	6.495	0.093	3.676	9.601388862	9.350724644	13.82651515	12.51246557	14.85723844	15.23053894	1.85039441
	4:00 PM	5:00 PM		2.164	1.400	9.877	2.235	7.985	12.874	13.155	20.014	16.188	22.646	22.671	2.775	0.897	6.627	0.095	3.798	9.666666621	9.148958335	14.38690478	12.74231482	17.85777311	18.338	5.128955251
	5:00 PM	6:00 PM		2.234	1.418	7.070	2.189	6.962	9.521	12.872	18.618	13.177	21.207	23.947	6.459	0.948	6.146	0.100	3.828	8.566666517	6.488954485	14.56593748	12.02600429	20.10283333	20.84117648	9.007968914
	6:00 PM	7:00 PM		1.281	1.295	6.812	1.367	4.481	8.573	9.719	14.325	12.733	17.292	17.475	6.882	0.895	6.040	0.095	3.647	8.974999924	8.759952387	14.27727272	11.92892514	15.84563402	16.44492188	11.14702368
	7:00 PM	8:00 PM		1.223	1.277	6.566	1.348	4.375	8.490	9.422	14.997	12.332	15.355	15.800	3.800	0.902	6.168	0.094	3.520	9.029166728	8.760833757	13.84555557	12.04949727	14.72595238	15.31032951	4.038137801
	8:00 PM	9:00 PM		1.152	1.216	6.477	1.243	4.229	10.550	8.975		12.127	14.954	15.024	1.360	0.870	6.135	0.093	3.544	8.913888893	8.611174253	13.14083334	12.24594617	14.7695476	15.09512578	1.387202376
	9:00 PM	10:00 PM		1.138	1.277	6.788	1.252	4.153	9.365	8.597	13.750	12.264	14.976	15.440	1.274	0.857	6.242	0.094	3.598	8.420555481	8.781264154	12.55333341	12.46633333	15.06697895	15.61596544	1.3975
	10:00 PM	11:00 PM		1.113	1.282	6.054	1.191	4.283	10.508	8.905	13.453	12.998	15.009	15.539	1.259	0.833	6.524	0.109	3.648	9.487500088	8.822505664	12.92499997	12.7808527	15.27355768	15.99955283	1.429376309
Midnight	11:00 PM	12:00 AM		1.094	1.342	6.371	1.218	4.169	11.033	9.343		11.873	15.454	16.163	1.336	0.860	6.461	0.092	3.722	7.799999927	9.331504545		12.51338364	15.53423187	15.93571969	1.498146125

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 12-Dec-13
Day of Week: Thursday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	EE8_C45 Site G to Site H 4.95618854	EE8_2A5 Site G to Site D 5.17133507	EE8_B58 Site G to Site H-1 5.91784810	EE8_9A2 Site G to Site F 3.12656237	EE8_D69 Site G to Site E 4.6933205	EE8_BB1 Site G to Site C 9.92520208	EE8_D7C Site G to Site B 11.9679304	EE8_D35 Site G to Site A 12.7280917	EE8_D6D Site G to Site Z-1 15.2967675	EE8_2BE Site G to Site Z 15.4182367	2A5_D6D Site D to Site I 4.66528917	2A5_C45 Site D to Site H 4.85102712	2A5_EE8 Site D to Site G 5.17133507	2A5_B58 Site D to Site H-1 4.92968539	2A5_9A2 Site D to Site F 2.98729268	2A5_D69 Site D to Site E 3.27818548	2A5_BB1 Site D to Site C 7.22019293	2A5_D7C Site D to Site B 8.67813548	2A5_D35 Site D to Site A 9.10858039	2A5_D6D Site D to Site Z-1 5.69548164	2A5_2BE Site D to Site Z 5.23214168	B58_DED Site H-1 to Site I 1.98254640	B58_C45 Site H-1 to Site H 0.93218850
Midnight	12:00 AM	1:00 AM	1.53000033	7.08852960	1.56803335	4.00166667					13.4448719	15.9027778	16.3041667	11.2478190	6.75277747	11.9916667	6.97115386	3.07725556	5.99166667	2.47715303	7.21666667	8.68203204	9.36384546	1.24955116	0.87634411
	1:00 AM	2:00 AM	1.52032304	7.05238968	1.62708337	4.23541666		10.49966994		13.802222	16.5724691	18.5397436	8.73333279	7.17870367	6.89203996	7.25317457	3.13795267	6.60833334	2.64444443	9.50833332	6.15712135	9.17401961	9.84007251	1.15454545	1.83791669
	2:00 AM	3:00 AM	1.54999975	6.78547620	1.29524995	4.17179463		10.01461532		13.2105558	16.8153646	17.49375	7.10041666	6.90334755	6.71333383	6.92061453	3.13372616		2.65361439	8.46944445	5.92574450	8.52842203	5.27349833	0.89833317	2.33833361
	3:00 AM	4:00 AM	1.32916666	7.14038558	1.53999995	3.97125001		9.32363505	14.5833333	11.0954825	16.2750001	16.5935718	7.50833332	6.62377447	6.69761057	6.72999994	3.04035716		2.48856403	6.44270839	5.92521278	8.74004284	9.08134685	0.94444483	0.03125000
	4:00 AM	5:00 AM	1.08287815	15.7142857	1.59842865	4.91666643		9.83324298	17.1847222	21.1533114	23.5799299	16.0516666	8.95345829	6.34217647	6.72072899	6.42582245	2.98444435	5.03888916	2.44619857	8.25403889	7.24407687	8.64036216	9.98141026	1.20019666	0.0481322
	5:00 AM	6:00 AM	1.13637663	20.3514397	1.55357355	11.9072968		18.3254595	34.5663667	31.4288714	33.7728251	24.8752861	7.92367685	6.09204562	6.73958877	6.13506063	2.93950425	5.34583333	2.83302115	12.5569167	7.28925635	10.2315115	10.5415236	1.28892043	0.05397222
	6:00 AM	7:00 AM	1.53622507	20.3501497	1.59829398	20.5702888	33.3166667	38.3983692	36.5663333	31.6287741	37.7323252	38.6779791	7.26636733	6.02156366	6.33555557	6.12517083	2.92429806	5.08888944	3.85122376	9.60019833	6.32853648	12.3399763	12.5365128	1.14833333	0.94056642
	7:00 AM	8:00 AM	1.59513887	11.2105422	1.68083017	15.0352115		24.8608415	32.8761363	18.5780523	35.6057678	37.0106833	6.98541683	6.11280146	6.56180555	6.23035172	2.88712628	5.11944476	2.83810535	8.63099164	6.60768701	9.754093889	10.2387345	1.13478611	0.03005949
	8:00 AM	9:00 AM	1.5825397	7.41884573	1.62568284	6.95277759		14.9747919	21.7296748	14.3178573	24.4209597	26.0810448	7.53183769	6.10083499	6.57635125	6.25623492	2.91051448	5.05888884	3.30001883	6.69300006	6.07514576	10.6789648	11.1795833	1.18971638	0.02711865
	9:00 AM	10:00 AM	2.19335571	6.72916874	2.29017573	4.55925758	11.0499991	16.1850355	15.3683335	12.0731057	18.922043	21.2910342	7.30437853	6.21615602	6.8047616	6.30548532	3.00200488	4.91792574	2.51245807	6.05661541	5.84374699	10.1075737	10.5134694	1.32514125	0.11681035
	10:00 AM	11:00 AM	1.60523812	6.49883033	1.66150000	4.09122805		8.74782629	14.9841665	12.2829648	18.912926	21.1934216	7.42542374	6.34254352	6.84362947	6.43202792	2.88012539	5.52833349	2.43853531	7.89445298	5.78793572	10.3746054	10.8868118	1.17125009	0.35523504
	11:00 AM	12:00 PM	1.58061249	6.47356659	1.66502119	3.93437500	16.5916663	8.90994433	14.8736115	12.4213954	18.1152877	18.7897809	7.52411665	6.3587315	7.05310733	6.46811975	2.98920045	5.14774903	2.47585544	8.39287833	5.94762533	9.19370319	9.77905687	1.22133339	4.04197188
Noon	12:00 PM	1:00 PM	1.4153911	6.66044731	1.70664527	3.88617888	28.45000008	9.32804158	14.1183333	12.8486688	15.6853275	16.0323893	7.77884583	6.85071898	7.22309274	6.95135502	3.09387916	5.42222188	2.60355568	7.47499994	5.83558187	8.88916162	9.06063684	1.18715238	0.45303058
	1:00 PM	2:00 PM	1.55943303	6.49999994	1.67648149	3.98333334	9.80833342	9.56222224	13.7847219	12.4088405	15.4049145	15.8639789	13.6182222	12.3364872	13.1477775	12.3438416	7.42866534	6.58833318	2.52511686	7.71393154	5.7992574	8.47839288	8.82024763	1.24101972	0.02089938
	2:00 PM	3:00 PM	1.69714285	6.59774039	1.77833331	3.92638891		8.90745612	14.3016663	13.0532693	15.3524129	15.6241957	19.5335557	18.7554662	18.3999972	18.7931629	10.4149626	8.71955555	2.42247808	7.56325781	5.88558084	8.55108154	8.92584987	1.37227274	0.12817461
	3:00 PM	4:00 PM	3.14130434	6.84318329	3.19449655	3.95450025	9.06250047	9.38388998	13.9035713	12.9859723	15.7894143	16.3336453	24.1273809	22.1793922	21.2215694	22.2737587	16.1375254	8.06092911	2.50906588	7.52481607	6.0142487	8.71282467	9.06499958	1.36764794	0.06019230
	4:00 PM	5:00 PM	4.42402996	6.9842053	4.53081765	4.21439944		9.14374996	13.4348449	13.2632772	18.8837124	20.5076873	24.025	19.7261187	17.9672221	19.8479903	7.79954758	9.18407409	2.48135437	7.85510475	6.09659992	11.8696182	12.2233471	2.60129631	0.06541996
	5:00 PM	6:00 PM	4.96250005	6.70588235	5.31439944	4.19511499		9.54899973	14.6897093	12.7111111	20.3483642	22.7954184	30.7810345	18.6900167	23.3867169	18.7597223	10.3219824	11.0508058	2.53770331	7.65980395	5.95124199	12.8255	13.6989247	4.49833537	0.05803362
	6:00 PM	7:00 PM	3.42777783	6.38047618	3.63392858	4.15742424		9.53981483	14.3898352	12.5856911	16.4434281	17.0869479	19.5964864	14.570352	16.3091852	14.6275216	8.58461355	8.79016667	2.59430169	7.85995298	5.90653812	9.6985892	10.1953602	7.22590692	0.03411464
	7:00 PM	8:00 PM	1.84068265	6.55217391	1.92454958	3.86670972		9.10000001	14.2854549	12.497778	15.7183939	16.3864879	9.80245982	8.88509455	10.9083334	8.89904777	4.82859446	5.1366667	2.44611033	7.72732565	5.83284724	8.50278522	8.92037958	3.73512032	0.94018519
	8:00 PM	9:00 PM	1.51127497	6.58416663	1.61547619	3.81543262		9.29074073	14.3916664	12.6261938	15.2761112	15.7625193	6.81666645	6.26487178	7.21931888	6.40123872	2.97927938	5.06666622	2.39634837	7.50312528	5.88125026	8.52071799	8.81514938	1.23333232	0.03749999
	9:00 PM	10:00 PM	1.54285714	6.78730157	1.63380026	3.87499994		9.01111112	15.8033335	13.1744761	15.4263478	15.8454265	8.95350011	7.71674175	8.13040135	7.84707577	3.07860184	5.11666668	2.40132445	7.64281561	6.01954274	8.6758772	9.00189702	1.19166652	0.04166675
	10:00 PM	11:00 PM	1.49929814	6.85416663	1.63749990	3.99041667		9.48376512	15.7033328	13.0428719	16.1941765	16.5477778	6.77587188	6.49312868	7.4482784	6.56955803	2.88459316	5.00000037	2.42555168	7.96499983	6.09666662	8.84363184	9.21710276	1.17618045	0.03169210
Midnight	11:00 PM	12:00 AM	1.50000004	7.13571429	1.60488117	4.00787036		9.6185972	16.7166664	13.9132519	16.4125001	17.2462962	6.79635418	6.33730188	6.88589714	6.54693212	2.95324074	5.47500005	2.49353147	8.01666670	6.09143637	8.86982409	9.22621962	1.15153184	0.05087728

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 12-Dec-13
Day of Week: Thursday
Measure: Mean Travel Time
Units: minutes

		Segment Label	BS8_EE8	BS8_2A5	BS8_9A2	BS8_D69	BS8_BB1	BS8_D7C	BS8_D35	BS8_D4D	BS8_2BE	9A2_DED	8A2_C45	9A2_EE8	9A2_2A5	9A2_BS8	9A2_D49	9A2_BB1	9A2_D7C	9A2_D35	9A2_D4D	9A2_2BE	D49_DED	D69_C45	D69_EE8
		Site H-1 to Site G	Site H-1 to Site F	Site H-1 to Site F	Site H-1 to Site E	Site H-1 to Site C	Site H-1 to Site B	Site H-1 to Site A	Site H-1 to Site Z-1	Site H-1 to Site Z	Site H-1 to Site Z	Site F to Site I	Site F to Site H	Site F to Site G	Site F to Site D	Site F to Site H-1	Site F to Site E	Site F to Site C	Site F to Site B	Site F to Site A	Site F to Site Z-1	Site F to Site Z	Site E to Site I	Site E to Site H	Site E to Site G
		Length (miles)	6.917841910	6.699488024	3.956647180	7.399058840	9.331653900	15.46374752	15.82026454	15.88595852	16.17521432	3.710509280	1.300145328	3.210667322	2.992105208	3.956647180	4.299272304	5.195218594	9.944550302	8.078170428	11.54724128	12.14154024	2.429816468	7.329318204	6.693239[illegible]
Time	Begin Time	End Time																							
Midnight	12:00 AM	1:00 AM	0.832214299	0.448333313	3.674603176		9.039583301	12.28333143	12.94208346	15.81587359	16.14761908	9.064285681	3.603391477	8.431750078	2.765246829	3.719246011		5.166666694	9.158333279	8.608583334	11.7066288	12.09226188	12.74166667	8.289583207	
	1:00 AM	2:00 AM	0.636458339	6.419444445	3.654166546		9.336309498	14.99166658	12.50509256	16.05666999	16.90883252	8.612037012	3.771212087	7.733333181	2.700347247	3.860552369		5.497348461	12.19583334	8.779630436	11.94797266	12.39656863	10.50116667		
	2:00 AM	3:00 AM	0.545833300	6.10700218	3.573412686	8.708333373	9.455555576	13.31666658	12.28704545	15.37129634	15.59835557	4.798333276	3.853174603	4.00404543	2.611716178	3.685416647	4.960416625	5.604824561	10.16666669	8.566208837	11.52777781	11.87541669	5.966666744	6.883333181	
	3:00 AM	4:00 AM	0.717857129	6.754460851	3.472765430	9.499999988	9.253157831		12.6344986	15.03446969	15.41258294	4.047616671	3.482313555	3.533703107	2.679545459	3.605930000	5.150575635	5.176922602	11.25238888	8.624371691	11.38876311	11.77736487	9.191666693	8.070833208	
	4:00 AM	5:00 AM	0.736111114	18.77475408	4.175795556		9.340106614	17.47187559	21.52988858	15.15413873	15.52546468	4.12916665	3.302405649	3.72939508	4.515343999	3.363888888	6.389833305	5.166666694	11.30641888	11.19794129	11.34882526	11.88283152	9.966444440	9.649999961	
	5:00 AM	6:00 AM	0.836735143	30.83233176	15.47996556		9.334231317	28.39027776	32.53233865	41.42413047	41.64588593	3.682205519	3.201888743	3.647667631	4.909391575	3.329427928	6.658500219	10.02266996	15.66717565	11.29479261	18.35055256	14.18283306	13.40416676	10.20277761	8.608333329
	6:00 AM	7:00 AM	0.787037048	22.43133859	25.08695652		33.68331247	39.96222224	31.25633769	41.36774195	41.66173878	4.083954765	3.251389852	3.717607526	4.796410232	3.329427579	6.538095293	10.02266996	15.66717565	11.29479261	18.71386744	19.33733869	14.2743958	9.850333665	
	7:00 AM	8:00 AM	0.782388898	10.75240601	17.17265882	12.10625001	26.76009175	32.88976195	17.77445833	35.25877193	36.9430636	4.076464767	3.614354371	3.830779224	3.388953345	5.469972224	7.706397223	13.43064315	10.47290888	14.84922566	15.41912872	10.92445481	13.38166660	
	8:00 AM	9:00 AM	0.774113464	6.979891304	6.693807258		14.2857794	21.87500001	13.41214447	21.89864339	22.37171051	4.093421064	3.276948053	3.718619801	2.822342996	3.40659722	5.35666668	7.067197992	12.43962683	9.027819084	14.52149999	15.07865297	9.343589794	8.359333327	
	9:00 AM	10:00 AM	0.725238335	6.286428578	4.193400447	8.375000045	9.635555559	15.23500004	12.9677777	17.45883934	17.89557923	4.133092312	3.309642869	3.7251.8689	2.633753948	3.397641514	4.763535307	5.378789141	10.97553764	8.483411177	13.18588155	13.60358707	8.479166668	8.177272252	24.26666661
	10:00 AM	11:00 AM	0.770634908	6.013771183	3.644060126	9.655555543	8.390958601	14.40500261	11.87533003	16.3043977	16.83833334	4.238712863	3.372425472	3.831071423	2.595129108	3.49759508	5.318137293	5.181502536	10.21565041	8.302478447	12.88688219	13.38907803	7.900000024	18.66250003	
	11:00 AM	12:00 PM	0.737142858	6.164181277	3.516542403	8.406166599	8.958974355	13.42426244	12.14516129	15.25365073	15.75158732	4.298566113	3.453197061	3.925813663	2.633061123	3.529085225	5.229487338	5.166125531	10.45161291	8.769237667	11.84192609	12.41518884	9.601388889	9.259722237	9.616666641
Noon	12:00 PM	1:00 PM	0.738295288	6.063868648	3.578302262	8.648333363	9.272838952	13.1458334	11.93043131	14.79888316	15.42604182	4.398826188	3.818120821	4.088629292	2.568335569	3.882538755	5.262979187	5.550925926	10.14500001	8.612521588	11.44845491	11.91217228	10.93240742	8.990277828	
	1:00 PM	2:00 PM	0.791856552	6.065202667	3.536073258	9.083333361	8.851874499	13.66806605	11.83918359	14.55560345	14.9495873	4.916145839	5.480095629	4.364527016	3.617.1069	5.556511823	5.177499646	5.334761600	10.2247222	8.424302525	11.12437811	11.46329988	18.75303029	18.64166661	10.02083145
	2:00 PM	3:00 PM	0.788759712	6.164965597	3.548062022	9.086666666	8.888157913	13.61928623	11.97108262	15.07138048	15.78587399	7.086228808	9.123941788	6.884782602	2.618813122	9.325508769	5.290629012	5.131488242	10.10406503	8.473238666	11.17705127	11.5597549	25.5311111	24.31250000	34.10000011
	3:00 PM	4:00 PM	0.755620181	6.431687041	3.604301072	8.439583328	9.229924234	13.67708338	12.42716399	14.79279999	15.19942245	9.224626627	11.69514026	8.418954247	2.740042828	12.36829366	5.161666648	5.273826091	10.1666671	8.758154119	11.1930813	11.67935605	31.23796298	27.15333335	23.71666677
	4:00 PM	5:00 PM	0.778846153	6.550140047	3.743595177	9.572916753	9.080483871	14.24300003	12.72418988	17.65522222	18.13255028	13.26761954	11.58916666	10.0070977	2.813916134	11.72732558	5.5466667	5.243589749	10.76685188	8.927669538	14.44102183	14.9.58	33.95833336	28.41805558	
	5:00 PM	6:00 PM	0.815337398	6.066273079	3.770560751	8.619444519	9.421739134	14.4017543[illegible]	11.92353375	19.79925	20.96428573	16.86037556	8.95976431	10.7938192	2.589974628	9.028231149	5.111904792	5.507327921	10.5337131	8.547480629	15.74571931	16.52487109	37.68055533	23.70277778	
	6:00 PM	7:00 PM	0.753911577	6.000729155	3.564583328		8.858383357	14.22579363	11.86695907	15.80754903	16.32833385	23.12266867	5.837892077	14.7470314	2.562391779	5.8838725[illegible]	5.219999967	5.182882872	10.3842138[illegible]	8.581352459	12.3491942	12.6752193	25.77986112	19.10476188	
	7:00 PM	8:00 PM	0.770228093	6.113963858	3.486890241	8.945833426	8.943859562	14.47156852	11.81	14.66569723	15.17123212	10.88028874	3.99582783	8.388284322	2.563296559	4.09573379	4.963333408	5.422618903	10.34543535	8.394498397	11.29439855	11.64947752	11.30833332	10.35476188	25.35833340
	8:00 PM	9:00 PM	0.743209869	6.043345653	3.523417723	7.741666753	8.574031008	13.1283334	12.10969865	14.73093231	15.00938716	5.040044243	3.329444442	4.9127725	2.565873018	3.421800569	5.158333135	5.031666655	10.21855562	8.417667531	11.13621212	11.46639788	11.29166673	8.035714282	8.216666693
	9:00 PM	10:00 PM	0.707003218	6.29683334	3.5217833	7.938888911	8.670166652	12.88194448	12.40283333	14.99909926	15.43440959	3.30968888	4.758201854	3.854814524	2.648102317	4.905222113	4.941666641	4.971884134	10.43585744	8.691761284	11.3427214	11.58874888	12.00000008	10.31666665	7.920833288
	10:00 PM	11:00 PM	0.659444466	6.451744185	3.583764356		8.770156532	12.88055557	12.61979166	15.30361121	15.99955281	5.974396133	3.466333333	6.106250005	2.662651274	3.539583329	5.711111208	5.100095796	10.42569523	8.684513887	11.5454124	12.01036325	8.941666698	8.433333188	
Midnight	11:00 PM	12:00 AM	0.619791858	6.403186274	3.650000000	7.808333397	9.264864849		12.38722224	15.37385717	15.79875569	4.012954338	3.355028747	4.022222235	2.739464784	3.483201068	4.508333188	5.215492948	10.3633331	8.812500007	11.92644445	11.9472977	9.114683348	8.226666704	

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 12-Dec-13
Day of Week: Thursday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	D69_2A5	D69_B58	D69_9A2	D69_BB1	D69_D7C	D69_D35	D69_D6D	D69_2BE	BB1_D6D	BB1_C45	BB1_EE8	BB1_2A5	BB1_B58	BB1_9A2	BB1_D69	BB1_D7C	BB1_D35	BB1_D6D	BB1_2BE	D7C_DED	D7C_C45	D7C_EE8	D7C_2A5
		Segment Label	Site E to Site D	Site E to Site H-1	Site E to Site F	Site E to Site C	Site E to Site B	Site E to Site A	Site E to Site Z-1	Site E to Site Z	Site C to Site I	Site C to Site H	Site C to Site G	Site C to Site D	Site C to Site H-1	Site C to Site F	Site C to Site E	Site C to Site B	Site C to Site A	Site C to Site Z-1	Site C to Site Z	Site B to Site I	Site B to Site H	Site B to Site G	Site B to Site D
		Length (miles)	1.37138214	7.3499999	4.28920758	4.59778212	3.95527724	7.66466488	10.4069969	10.7278912	8.20934425	3.19418489	4.35532999	2.21019326	3.19145139	5.18625856	4.38772124	3.55591919	3.88156477	6.87399209	7.07953154	11.7212456	12.4262128	11.8878264	6.47983345
Midnight	12:00 AM	1:00 AM	4.352380934	9.249999993	5.099999998	7.144444473		16.74722223	13.71500001	14.15333334	13.22833328	8.62142886	14.76500005	2.114814818	8.832175904	5.076870731	8.922222218		3.783225365	8.804999976	7.19291662		12.93333328		7.95166672
	1:00 AM	2:00 AM	4.308333378		5.251666714	6.986666657		11.15277786	13.67361115	14.04583331	15.34583332	8.12447917	13.00416652	2.259166705	9.288995223	5.279166665	8.349999972	6.416666731	3.81701384	6.901135391	7.267045479				
	2:00 AM	3:00 AM	3.977083345	6.908333412	5.12500003	7.225000039	12.71666676	10.09375002	14.06666673	14.43750026	10.23333332	8.434027723	8.523545334	2.189772729	9.353333338	5.247272746			3.874452765	6.814855106	7.192089932			12.13333334	8.26666657
	3:00 AM	4:00 AM	3.940555573	7.619444388	4.723958317	6.588888858		10.1342908	13.27166663	13.62666665	8.979629651	8.899306922	8.759999994	2.141010465	8.9995238	5.127827942		6.164583362	3.713260243	6.539149636	6.932333232	16.29999993		15.90416658	8.07083333
	4:00 AM	5:00 AM	4.452397563	8.279166672	5.242666288	6.518277782	16.38333345	12.23125134	12.45416667	12.91875	8.882051262	8.85709671	8.52833334	2.094299562	9.045232309	5.117796614		6.461309956	3.968362155	6.488478142	6.275827421	16.19999997		15.12666662	8.31944447
	5:00 AM	6:00 AM	4.352397563	11.29166651	5.242666288	5.583333342	14.76428578	12.20601634	12.35999997	15.55938703	8.880555262	8.180104965	8.529817633	2.08509326	9.273232708	4.937597727	8.141667707	6.546432056	3.976565351	6.475882923	6.379883273	15.02833336	15.92111102	8.69345573
	6:00 AM	7:00 AM	10.33738316		10.02142857	13.54138889	19.40956788	18.98838898	21.20993356	21.70416665	8.096705418	8.055555563	8.751341017	2.05509326	8.189152133	4.937597727	7.534583331	5.495037456	3.791155254	6.665744739	9.305947527	17.01666662	12.94629628	13.42583333	6.998456773
	7:00 AM	8:00 AM	5.557227926	9.673611084	6.553888891	13.26562188	19.24300003	12.83456759	20.34888363	20.91171189	9.298089418	7.970524867	8.261366306	2.016869378	8.080043859	4.913954634	7.066666674	5.614666635	3.585536822	6.997832042	7.603070172	13.87037041	12.76844448	13.40537834	7.072369428
	8:00 AM	9:00 AM	3.956666669	8.514166662	4.983333342	8.995666649	15.62333333	10.34423072	17.28024692	18.72533336	9.004432634	8.056574093	8.577777774	2.022369871	8.179999997	4.87458677	7.197222218	5.345942035	3.544262937	7.679553654	8.32403426	14.01515153	13.00588236	13.59983391	7.056730774
	9:00 AM	10:00 AM	4.025297609	8.288333338	5.028797925	6.419444425	12.08861109	9.955746772	13.67129629	14.13333333	9.585118043	8.165611963	8.470891793	2.052642028	8.207546363	4.950597077	7.058333298	5.299578044	3.692051461	7.781908863	8.2255141	15.67083333	13.05952788	14.14999999	7.191211213
	10:00 AM	11:00 AM	4.235526326	8.004166712	5.078944444	6.477222215	11.74166664	10.14880955	14.4854167	14.09955142	9.218439725	8.322151898	8.860416662	2.064293294	8.40622937	5.05045045	6.872222214	5.297499988	3.639720199	8.429999999	8.096808514	14.49027775	13.1259941	14.3883337	7.576325749
	11:00 AM	12:00 PM	4.031254883	8.551190458	5.111455785	6.985277784	12.92765133	10.14750093	13.1971795	13.9434523	9.731997249	8.497067895	8.827031474	2.065	8.618631049	5.066945079	7.113889	5.545355936	3.603988886	7.038444442	7.72211538	14.23055549	13.55470592	13.93911107	7.389473685
Noon	12:00 PM	1:00 PM	4.100452962	9.056944433	5.560483875	6.889583303	11.90625	10.11277774	12.97920001	13.77500008	9.681628892	8.331018522	9.146428577	2.069541278	8.457046222	5.080997882	7.218749999	5.556276001	3.872424242	6.984551272	7.366593472	14.73333334	15.00722223	14.47592592	7.498811136
	1:00 PM	2:00 PM	4.071052617	18.75166651	11.49484129	6.587499997	12.25833345	9.690833345	12.92142854	13.24666667	9.504629628	9.101125007	9.300000000	2.1001700591	8.254289128	5.249408986	7.376666634	5.7628719	3.756640625	6.608543505	7.034562839	20.49285711	15.01666607	15.05833333	7.867231632
	2:00 PM	3:00 PM	5.170977006	26.68333344	15.82666664	6.633333312	11.92380949	11.1872549	12.90512822	13.35555555	15.72049551	14.3821748	17.32988413	2.568171732	14.45652171	9.607029296	9.18888893	5.271428557	3.537017034	6.400833333	6.798581208	23.70641026	19.37833333	20.07833338	8.459615385
	3:00 PM	4:00 PM	5.600000012	28.58999999	15.8008143	8.258333299	12.1716667	11.39440785	14.17892159	14.65528334	24.9706597	24.16822926	23.61587303	5.656633642	23.78452361	15.69720833	14.38488889	5.453703646	3.7117866418	6.651744176	7.1094915	33.32420633	32.38305555	32.40749994	15.33364841
	4:00 PM	5:00 PM	7.668790848	29.3	17.33582796	8.120555542	13.14499999	14.00069447	17.96428573	19.03630935	31.31087708	29.18277242	28.063125	6.840472509	29.22778718	16.95614857	14.82628235	5.534057954	3.699259724	10.09953379	10.84509324	45.98541964	45.12909985	41.48035716	26.43702381
	5:00 PM	6:00 PM	5.192628197	23.78333339	15.97142858	10.24607931	15.34166667	12.01666657	21.43804349	22.41666657	30.28851352	25.70391739	24.49566577	5.535549549	25.97857143	15.49048936	14.82107936	5.446111108	3.777868897	10.78895429	11.79996667	54.38333339	52.0859797	49.93240749	27.19700
	6:00 PM	7:00 PM	4.071296295	18.69285715	10.58730158	8.412037063	14.11583335	10.72619047	15.75729168	16.375	39.35064185	24.8758731	28.51637932	5.587956812	24.83967236	15.7076639	15.50937555	5.528790002	3.63464912	6.968194448	7.433615823	63.05	52.45952869	52.11666668	27.31666666
	7:00 PM	8:00 PM	4.296666653	10.5107143	6.007575732	6.632407362	11.71666669	10.13166663	13.45220832	13.7347619	24.84559745	19.70406563	21.54681818	4.27854788	18.75293703	13.08818717	14.18545837	5.4558278	3.672008538	6.468444437	6.81642857	44.82333328	41.19709889	40.33333335	19.93300595
	8:00 PM	9:00 PM	4.061904762	8.195252629	4.936904762	6.594999993	17.90833328	9.899428585	11.84166664		12.45333383	11.34522398	12.9686699	2.417958703	11.45882786	7.405200777	7.364583327	5.340315507	3.35530364	6.267419936	6.614617484	18.36428568	18.7814706	20.26190476	7.814999987
	9:00 PM	10:00 PM	3.883333302	10.92222227	4.799476191	6.117166665		10.52381114	13.19583336	13.73611109	8.892291293	8.33879922	8.992171631	2.148897555	8.405922698	5.060335669	7.262499841	5.865555581	3.585613218	6.423998647	6.75899151	13.84666663	14.78074072	16.36833333	7.788958849
	10:00 PM	11:00 PM	3.758333274	8.616666701	5.187499998	6.147916723			13.60375003	14.10416669	11.58641305	9.948789178	11.49969303	2.225272575	10.09575502	5.369933814	7.293333308	5.697777741	3.628100743	6.458053423	6.840529741	17.13333336	15.19166669	17.39791664	7.551515149
Midnight	11:00 PM	12:00 AM	4.333333299	8.279166667	4.771794819	6.027777717	10.64166667	10.98874997	13.96166665	14.19999997	8.60156248	8.552462539	9.245978889	2.032122719	8.578333329	4.988351851	6.767499993	5.861111144	3.72566327	6.573903523	6.912528888		14.66288887		7.912499997

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 12-Dec-13
Day of Week: Thursday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	D7C_B5B	D7C_9A2	D7C_D49	D7C_BB1	D7C_D35	D7C_D6D	D7C_2BE	D35_D6D	D35_C45	D35_EE8	D35_2A5	D35_B58	D35_9A2	D35_D49	D35_BB1	D35_D7C	D35_D6D	D35_2BE	D6D_D6D	D6D_C45	D6D_EE8	D6D_2A5	D6D_B58
			Site B to Site H-1	Site B to Site F	Site B to Site E	Site B to Site C	Site B to Site A	Site B to Site Z-1	Site B to Site Z	Site A to Site I	Site A to Site H	Site A to Site G	Site A to Site D	Site A to Site H-1	Site A to Site F	Site A to Site E	Site A to Site C	Site A to Site B	Site A to Site Z-1	Site A to Site Z	Site Z-1 to Site I	Site Z-1 to Site H	Site Z-1 to Site G	Site Z-1 to Site D	Site Z-1 to Site H-
		Length (miles)	12.4617252	8.5449960	3.6832777	5.5661841	3.2568527	6.1683250	5.1812700	12.6385049	18.0380525	12.9391054	18.6166953	6.1008772	13.0135416	9.2463541	9.7782548	7.4569148	3.8825467	3.4568922	3.7383128	15.5888811	15.8417281	23.2762170	9.0961854	15.3905882
	Midnight	12:00 AM	1:00 AM	12.93333326	11.49166661		5.21666666				18.03805125	12.93910254	18.61666953	6.10087772	13.01354166	9.24634169	12.80833335	3.74761904		2.81850489	3.17030301	20.02083331	15.3662298	20.70416670	8.72135416	15.35706355
		1:00 AM	2:00 AM								14.61458331	13.69561492	12.92142851	6.09692162	13.70719606	9.13964549	12.56566657	4.11157409		2.92503003	3.31969586	23.35937455	15.96454761	23.99166666	9.01825395	16.04165669
		2:00 AM	3:00 AM		9.00666667		6.18750035				12.97777779	12.96029416	12.92500004	6.11864005	12.91249999	9.22016667	13.37499987	3.94692836		2.78756375	3.12783681	17.45416658	16.62749999	15.59548111	9.03318535	16.65833334
		3:00 AM	4:00 AM		11.99388887		5.43555548				13.71923076	12.55638888	12.79333333	5.88975189	12.81752876	8.08902547		3.8892753		2.73185838	3.041362[illegible]	15.2761095	15.75049016	15.6566667	8.93350385	15.68333331
		4:00 AM	5:00 AM		10.39920004		5.12499995				12.63538036	11.84462964	12.40059944	5.80524531	12.08514466	8.54682542		3.79477601		2.73088515	3.02225748	16.36944443	15.69999998	15.31458333	8.70181168	15.88048679
		5:00 AM	6:00 AM	14.79166661	11.75208334		5.32416658				13.69666702	11.94551574	12.20255277	5.5728946	11.57249993	8.17734993	12.98511108	3.65460245	6.35833337[illegible]	2.78991158	3.28385592	15.34916666	15.29791667	8.57181168	14.82958869
		6:00 AM	7:00 AM	12.76333326	9.85585475[illegible]	12.81041671	5.03642854	6.34999999			13.37065972	11.46838936	12.11176473	5.64708763	11.58249998	8.53834354	12.45277768	3.72880765	6.54833336	4.75635358	5.36241658	15.74452381	14.83143833	16.05962958	8.64761111	14.87201462
		7:00 AM	8:00 AM	12.92631578	8.81906010		5.10397435	6.51145834[illegible]	9.92499811[illegible]	11.03333317	13.0485177[illegible]	11.74541094	12.11458333	5.64814814	11.87786666	8.49133667	10.88888888	3.61643928	6.58431708	3.37716169	3.91566652	16.20139274	14.1615942	14.44365076	8.36871126	14.0845239
		8:00 AM	9:00 AM	13.30476192	9.84583336	12.48749994	5.06732626	7.26333347[illegible]	11.52500002[illegible]	12.10000006	14.03101204	12.01401959	12.06166665	5.79028823	12.13948886	8.7504604	10.98125003	3.59117057	6.55791254[illegible]	4.06275248	4.67242428	16.2669192	14.2513021	14.66388889	8.33718365	14.43731861
		9:00 AM	10:00 AM	13.14236124	10.11002401	12.11666658	5.14622640[illegible]	6.57500044[illegible]	10.16666678	10.90833351	13.1353333[illegible]	12.42143357	12.61633335	5.71061539[illegible]	12.11534001	8.78978148	11.10833331	3.77316967	6.54791925	4.07275417[illegible]	4.92145151	16.77065974	14.63545833	14.94079848	8.43300365	14.79927844
		10:00 AM	11:00 AM	13.43233336	10.35813008	11.41388889	5.51397849	6.6638888[illegible]			13.20592949	12.1432017[illegible]	12.7666992	5.70529015[illegible]	12.1182747	8.69542573[illegible]	10.57783534	3.85208339	10.3666674	4.59034772	5.12739491[illegible]	15.84820262	15.07872765	15.1583334	8.42835185	15.19801136
		11:00 AM	12:00 PM	13.3277778	10.25000001		5.59702376	6.97708333[illegible]	9.29285714[illegible]	9.70416664	13.37421875	12.07149124	12.98456173	5.72581058	12.18055555	8.71362963	12.73750003	3.67533333		3.29740325	3.85861943	15.78652085	14.85454545	15.68933054	8.45814179[illegible]	14.8767158
	Noon	12:00 PM	1:00 PM	14.78066819	10.80892964	13.7166667	5.37028608	6.50000006	12.78666442	12.95355667	13.61569661	12.52561932	13.09562849	5.71880056	12.57525448	8.80441178[illegible]	10.88333335	3.88727546	6.69375002[illegible]	2.73827165	3.06345664	16.17447088	14.69655968	16.45235257	8.44340425[illegible]	14.7618942
		1:00 PM	2:00 PM	15.1421875	10.85405641	20.33333327	5.77327587[illegible]	7.15104164[illegible]	9.36666656	9.59999985	19.50257352	18.09838771	20.44583334	6.13952611[illegible]	18.15164211	13.2365472[illegible]	11.7166665	3.68259876	6.80000006[illegible]	2.71580861	3.01120072[illegible]	16.29488306	15.20833332	15.63854165	8.44242589[illegible]	15.2761462[illegible]
		2:00 PM	3:00 PM	19.00719699	15.60385574	19.10624993	5.87604166[illegible]	8.07135417[illegible]	18.7999998	9.78333324[illegible]	27.70465739	26.83754208	27.67654322	10.64298616	27.37138847	19.91678572	12.9597221[illegible]	3.74122518[illegible]	12.04166673	2.79426767	3.13605072[illegible]	21.60780423	20.76842105	22.87763158	8.81140187	20.90790812
		3:00 PM	4:00 PM	32.57083332	24.65873016	31.7194445	10.15361169	9.50166664[illegible]	12.88583336	15.4591667	40.4491452[illegible]	37.77670008	41.5999999[illegible]	15.16992709	38.1341887	28.35596666	21.61060601	7.4041209[illegible]	13.6472221[illegible]	2.84492985	3.35441008[illegible]	30.7354611[illegible]	29.791400[illegible]	30.52678572	13.2586187	29.99315749
		4:00 PM	5:00 PM	45.59812502	35.9724058	27.52333334	19.93533752	9.83194475	15.78541671	18.58796267	41.10645164	43.0413888	41.32142856	8.35785745	41.92125853	25.78770327	27.30277785	13.1927941[illegible]	21.49166677	5.86805524	6.38046712[illegible]	43.81476189	40.76814213	45.73809555	22.21155038	41.25999999
		5:00 PM	6:00 PM	51.91057691	37.28924092	34.47499995	21.06418301	9.03809795[illegible]	16.46666658	18.02833331	42.45940851	41.39797414	44.98563489	10.24456452	42.08524499	29.35935583	18.35312501	8.41371723	21.96875003	6.85736451	7.64389996	48.84919355	45.46666119	44.54494125	23.15998218	44.1536766[illegible]
		6:00 PM	7:00 PM	53.496875	39.64999999	29.5642857	21.72833332	6.68571428[illegible]	12.30958334	15.90777777	40.98251639	38.27053973	37.42291666	15.93043982	38.11015874	28.27451892	16.07777774	14.29864583		3.71273043[illegible]	4.11097208[illegible]	56.5132114	46.10521977	53.85509952	22.32217453	46.88811584
		7:00 PM	8:00 PM	41.30572918	29.82100699	11.47499995	13.17274429	7.13233189	8.49833338	14.41875	22.75561033	22.60802468	23.72207987	10.3765969	22.80105455	16.44419999	15.60232343	15.63017953	13.92500008	2.71569431	3.03885417[illegible]	45.49238781	40.5964028[illegible]	46.33409091	22.11804318	41.74882247
		8:00 PM	9:00 PM	19.17916665	12.8991667	13.43333329	5.40933173[illegible]				13.16119546	12.9179487	13.12862315	6.31283783[illegible]	13.11027132	9.39180556[illegible]	13.80833343	8.22177287[illegible]		2.69270833[illegible]	2.98353018[illegible]	28.19429962	28.85218927	28.59192707	16.60212498	28.43097745
		9:00 PM	10:00 PM	14.4222222	11.02427539	12.39166666	5.74912278[illegible]				15.43818627	14.49137459	15.65329261	6.45478920[illegible]	14.53189461	9.62688739[illegible]	11.32499993	3.99897305[illegible]		2.77703734[illegible]	3.09649147[illegible]	24.11874988	26.98916666	23.81811581	18.65014497	26.82132769
		10:00 PM	11:00 PM	15.95000002	11.10833335		5.71993750[illegible]				17.17115387	12.24131946	13.15676923	5.7346573[illegible]	12.16959476	6.79235473[illegible]	12.26541663	4.26962851[illegible]	6.91249997[illegible]	2.78590785[illegible]	3.12929043[illegible]	23.19297387	20.57204051	22.80948276	11.02562870	20.60595257
	Midnight	11:00 PM	12:00 AM	14.29958334	10.76249999		5.52619041[illegible]	7.21250002[illegible]			12.69684449	12.19613386	12.6582279	5.74775136[illegible]	12.28312499	8.69734945[illegible]	10.77083333	3.67829676[illegible]		2.78904766[illegible]	3.12919757[illegible]	14.52666669	14.32833208	15.87833333	8.50875076[illegible]	14.9050256[illegible]

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 12-Dec-13
Day of Week: Thursday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	D6D_SA2	D6D_D69	D6D_BB1	D6D_D7C	D6D_D35	D6D_2BE	3BE_DED	3BE_C45	3BE_EE8	3BE_2A5	3BE_B58	3BE_9A2	3BE_D69	3BE_BB1	3BE_D7C	3BE_D35	3BE_D6D
				Site Z-1 to Site F	Site Z-1 to Site E	Site Z-1 to Site C	Site Z-1 to Site B	Site Z-1 to Site A	Site Z-1 to Site Z	Site Z to Site I	Site Z to Site H	Site Z to Site G	Site Z to Site D	Site Z to Site H-1	Site Z to Site F	Site Z to Site E	Site Z to Site C	Site Z to Site B	Site Z to Site A	Site Z to Site Z-1
			Length (miles)	16.6471219	16.4098664	8.6739699	6.1693296	3.5491958	2.2762232	15.7258104	15.1388519	15.4583122	3.2827468	15.1728253	12.6419245	16.7078123	7.6299215	6.7591275	3.2789418	3.2272232
	Midnight	12:00 AM	1:00 AM	11.6977513	15.7854169	6.516239332		2.7825867	0.341137554	21.7854166	15.45551282	21.08214288	8.951995305	15.46166667	11.80039504	17.23811113	6.765259259		3.675386418	3.321185989
		1:00 AM	2:00 AM	12.225		6.837500000		2.843589747	0.353283332	23.87499998	16.42924573	24.28333333	9.311243313	16.59999999	12.51471635		7.087179487		3.214999996	0.332516335
		2:00 AM	3:00 AM	11.85000005	16.41666664	6.877083346		2.812063004	0.304696651	24.27639981	17.07875435	15.88703703	9.301754362	16.90999443	12.09955042	16.94166664	7.141666669		3.232575794	0.339104435
		3:00 AM	4:00 AM	11.8217948		6.600233334		2.864258273	0.310747661	15.56537039	15.82833331	15.56111116	9.248125012	15.90320283	12.05034721		6.891309222		3.21901709	0.332791681
		4:00 AM	5:00 AM	11.69409663		6.577988177		2.799971963	0.289472334	16.98583354	16.04166666	15.34666662	8.881956663	15.87209684	11.92777656		6.806189213		3.318317569	0.332760418
		5:00 AM	6:00 AM	11.35435643	16.03611116	6.460339201		2.768295653	0.288463334	15.42527776	14.68416666	15.43333331	8.639393921	15.60285684	11.62076924	16.39722226	6.636349213		3.255787707	0.332760419
		6:00 AM	7:00 AM	11.57956621	15.27777772	6.486732456	10.05833330	2.764295667	0.585601265	15.9344093	15.19787637	15.80833331	8.9293362	15.00918568	11.62076924	15.99999998	6.636349214	9.49166669	3.055758977	0.332761421
		7:00 AM	8:00 AM	11.20818302	13.62916661	6.271546046	9.440499965	2.646117424	0.599398425	16.3529083	14.69372031	14.65133196	8.572031258	14.53865556	11.5213122	14.01800552	6.563813956	8.89527773	2.947994503	0.360957951
		8:00 AM	9:00 AM	11.06749408	15.22000003	6.271284498	9.534375044	2.694887728	0.595003778	17.08928572	14.70287492	14.94730394	8.642714289	14.77277132	11.4153409	15.99333344	6.536392971	9.887037072	2.965007285	0.387326773
		9:00 AM	10:00 AM	11.39521179	13.83545833	6.450000005	9.871428577	2.705438811	0.531735798	17.12999337	14.88102582	15.54104038	8.74471235	14.97084286	11.50534435	14.19374998	6.689714403	9.973053302	3.002118054	0.3057158
		10:00 AM	11:00 AM	11.35426356	12.76666671	6.365999999	11.42916667	2.703445513	0.509013551	16.08035475	15.26105074	18.95215767	8.74727917	15.18251634	11.82952815	13.15277778	6.670833331	11.68749997	2.996979167	0.300201932
		11:00 AM	12:00 PM	11.49624277	15.50994453	6.410259254		2.739513888	0.527041948	16.15345833	15.32385415	16.21486487	8.7163212	15.11857576	11.6972477	15.9597223	6.648425184		3.020988929	0.295362518
	Noon	12:00 PM	1:00 PM	11.4118261	13.53333322	6.423678144	8.924999954	2.729963227	0.314156122	16.95225581	15.12815534	17.1925	8.715893934	15.11495412	11.7166664	13.89166667	6.72451268	9.174999938	3.021631617	0.295559934
		1:00 PM	2:00 PM	11.44485407	15.2066666	6.442207684	9.258333407	2.706381563	0.31064339	16.75511417	15.48719985	15.96333333	8.702958339	15.52469603	11.77981771	15.2375	6.714743604	9.54166668	2.989641526	0.285546862
		2:00 PM	3:00 PM	15.63606259	15.70333328	6.438569162	12.52499998	2.675957895	0.350886071	22.23892857	20.87976192	22.89531915	9.14844298	20.94968848	15.9301358	16.05499997	6.6997412	14.94166658	2.968111456	0.290862857
		3:00 PM	4:00 PM	22.36645061	23.21833332	10.68752538	18.01666662	2.702012582	0.360558358	30.52680771	30.37557763	31.78886961	13.55224253	30.36242088	22.46430708	23.56818178	10.21718024	17.52291665	2.971346666	0.28188401
		4:00 PM	5:00 PM	31.97816892	29.24499998	17.7863188	15.9416667	3.579714466	0.675753422	44.75293522	41.05997151	44.69976632	22.72843365	42.38373017	32.9929362	29.62166667	18.90418699	24.47083346	3.858236727	0.289238583
		5:00 PM	6:00 PM	33.36181833	24.1997917	16.8731058	30.79166663	6.614563329	0.715024136	51.72748213	49.5452769	49.49809559	26.47669367	48.98139098	36.79418694	25.21456139	21.70983454	31.02500003	7.443318913	0.484482292
		6:00 PM	7:00 PM	34.88727422	22.68888893	18.4708338		6.026179042	0.366146131	55.77123916	49.6838843	55.31908691	24.9972816	50.35761155	38.08784861	23.48955548	22.6788977		6.581432299	0.448709248
		7:00 PM	8:00 PM	33.85225554	18.28333343	20.42546666	21.03749997	5.53929487	0.303837723	47.96989045	43.54872619	49.88832111	23.37375328	42.91385969	35.48894051	18.46166672	22.39799197	17.3666668	5.973403018	0.277551327
		8:00 PM	9:00 PM	22.73555797	20.71388897	14.93272472		6.672248428	0.315350881	28.71883119	30.7393957	29.49243567	16.98135463	29.79854762	23.66339303	20.88611113	16.12753524		7.007879151	0.287209303
		9:00 PM	10:00 PM	22.85639024	22.37500001	14.9792112		12.08013821	0.311203598	25.24919466	26.82989936	25.59999566	20.63354102	26.69203432	23.99020557	23.44583332	17.78113569	23.1833331	13.12474419	0.08145277
		10:00 PM	11:00 PM	15.2371633	20.9458333	8.12107584		2.974521068	0.318240094	25.02916667	21.40715278	25.52404766	12.04061487	21.69230767	16.22661527	21.39999999	8.359037033		3.459773115	0.298640164
	Midnight	11:00 PM	12:00 AM	11.3861862	13.49999997	6.430208345		2.711429254	0.321021014	15.01909054	15.31379624	16.14583333	8.76864435	15.26544444	11.68124436	13.98833319	6.704646926		3.026855074	0.316277778

TRAVEL TIME DATA

1 HOUR CORRIDOR STATISTICAL SUMMARIES

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 13-Dec-13
Day of Week: Friday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Length (miles)	DED_C45 Site I to Site H 1.201	DED_EE8 Site I to Site G 1.471	DED_2A5 Site I to Site D 5.555	DED_B58 Site I to Site H-1 0.983	DED_9A2 Site I to Site F 3.722	DED_D69 Site I to Site E 7.555	DED_BB1 Site I to Site C 8.900	DED_D7C Site I to Site B 11.729	DED_D35 Site I to Site A 13.698	DED_D6D Site I to Site Z-1 15.589	DED_28E Site I to Site Z 16.775	C45_DED Site H to Site I 1.000	C45_EE8 Site H to Site G 0.859	C45_2A5 Site H to Site D 5.881	C45_B58 Site H to Site H-1 0.909	C45_9A2 Site H to Site F 3.909	C45_D69 Site H to Site E 7.339916892	C45_BB1 Site H to Site C 9.104156969	C45_D7C Site H to Site B 11.452427736	C45_D35 Site H to Site A 12.98539262	C45_D6D Site H to Site Z-1 15.91172031	C45_28E Site H to Site Z 16.13982618	EEB_DED Site G to Site I 1.471218186
Midnight	12:00 AM	1:00 AM		1.056	1.302	7.262	1.187	3.981		8.751		13.950	14.801	15.058	1.169	0.810	6.431	0.114	3.722	7.850000003	8.948275661	18.21249995	12.88281244	15.27777778	15.61235633	1.436764713
	1:00 AM	2:00 AM		1.053	1.273	6.517	1.188	4.483	9.925	10.446	13.683	12.706	16.539	16.912	1.198	0.796	6.249	0.141	3.654		9.057291595	18.65833338	12.62249995	15.57916661	18.0355555	1.540625267
	2:00 AM	3:00 AM		1.287	1.333	8.766	1.218	4.217	9.945	9.295		12.371	15.126	15.558	1.179	0.879	6.182	0.130	3.628	9.552777875	9.006952724		11.87428633	15.30034917	15.9297037	1.533198942
	3:00 AM	4:00 AM		0.986	1.273	7.829	1.162	4.270	10.373	8.931	13.621	13.247	14.895	15.405	1.261	0.785	6.661	0.153	3.642	11.29166661	8.719017106	15.24166661	12.54196515	14.65873015	14.98819448	1.431790119
	4:00 AM	5:00 AM		1.183	1.194	16.882	1.337	5.489	17.706	10.342	10.730	23.045	25.815	26.096	1.251	0.860	14.154	0.128	4.065	14.31666667	9.160364547	26.71398716	19.50971159	25.11035316	25.59833333	1.494125333
	5:00 AM	6:00 AM		1.393	1.262	13.543	1.370	13.302	26.726	26.464	30.265	32.640	37.863	38.886	1.373	0.881	24.264	0.138	10.571		26.07356548	39.56557569	30.30921428	36.92633333	37.92833333	1.629529189
	6:00 AM	7:00 AM		1.233	1.253	13.723	1.395	16.657	18.469	26.464	32.632	34.550	37.419	37.298	1.358	0.906	11.313	0.138	14.559	11.87966667	23.97066438	29.42152773	21.31949561	34.69412203	34.72538461	1.568956889
	7:00 AM	8:00 AM		1.282	1.261	7.321	1.426	8.303	9.931	16.407	25.302	13.780	29.068	28.820	1.313	0.876	6.297	0.139	4.711	8.515666294	15.74116333	22.21843435	12.38837535	26.93483457	27.3826	1.403244889
	8:00 AM	9:00 AM		1.319	1.282	7.879	1.423	4.717	9.931	9.925	14.476	13.838	17.307	18.134	1.278	0.882	6.252	0.130	3.693	8.67555555	8.86037414	14.47142858	12.15826306	16.19886365	16.64558814	1.437272597
	9:00 AM	10:00 AM		1.370	1.314	10.326	1.455	5.381	12.259	10.423	14.838	16.491	18.460	19.050	1.355	0.886	6.514	0.135	3.664	9.00104439	8.711057587	14.43429488	12.79318841	16.46239668	16.95897436	1.64455555
	10:00 AM	11:00 AM		2.068	1.437	8.273	2.161	7.440	12.313	13.051	19.102	14.612	21.536	22.558	1.300	0.919	6.192	0.130	3.725	8.329411749	9.853734377	13.67750002	12.24564676	18.12633829	18.74462203	1.438988117
	11:00 AM	12:00 PM		1.654	1.543	7.914	1.779	5.687	11.035	11.431	16.225	14.134	20.354	21.159	1.329	0.998	6.175	0.128	3.630	8.562500334	9.356666666	13.9535714	12.03375757	18.54524449	18.03795151	1.412905585
Noon	12:00 PM	1:00 PM		1.517	1.406	7.883	1.662	5.286	10.734	11.091	14.361	13.524	17.178	17.832	1.356	0.920	6.097	0.128	3.623	9.213888841	9.233602166	13.73181818	11.90919048	15.20169617	15.83101174	1.488285724
	1:00 PM	2:00 PM		1.397	1.343	7.624	1.564	5.262	11.297	10.821	15.502	13.469	17.286	16.661	1.362	0.911	6.224	0.132	3.602	9.193332291	8.773805522	13.70231481	12.13755674	14.64753623	15.03200797	1.412312312
	2:00 PM	3:00 PM		1.625	1.369	7.954	1.745	5.124	10.697	10.716	16.906	13.568	17.880	16.530	1.351	0.873	6.194	0.126	3.746	9.29166858	9.243055587	13.52051285	12.07019223	14.94551282	15.34659947	1.414335669
	3:00 PM	4:00 PM		1.671	1.321	11.094	1.775	5.454	12.629	10.593	15.722	16.975	16.166	16.459	2.061	0.897	6.471	0.134	3.687	10.31000007	9.173853658	13.50166667	12.23170104	14.86490385	15.25376747	3.930075128
	4:00 PM	5:00 PM		2.179	1.464	11.803	2.292	8.365	14.001	13.885	18.195	17.736	22.644	23.220	3.116	0.897	6.884	0.135	3.887	10.49444441	9.527777831	13.88888097	12.8736413	18.71563462	18.923	7.990303029
	5:00 PM	6:00 PM		2.125	1.636	8.611	2.337	9.047	10.872	15.738	19.117	15.257	24.610	26.179	4.743	0.997	6.383	0.130	4.131	8.024999959	8.757027709	15.01166666	12.53446279	19.39616161	19.95023234	8.759466665
	6:00 PM	7:00 PM		1.573	1.254	6.843	1.625	5.838	8.742	12.310	16.630	12.798	19.024	19.917	5.337	0.933	6.003	0.130	3.736	8.375000004	9.290333321	14.72541666	11.80881877	16.03653273	16.7453984	6.088951262
	7:00 PM	8:00 PM		1.355	1.282	6.753	1.491	4.434	10.158	8.419	16.858	12.515	15.425	15.723	1.562	0.889	6.033	0.128	3.559	7.966666705	8.489481481	13.06385222	11.03804435	14.52249428	14.88229745	1.648630149
	8:00 PM	9:00 PM		1.220	1.280	6.565	1.361	4.351	9.172	9.568	13.784	12.151	15.145	15.444	1.290	0.838	6.009	0.141	3.567	8.566666745	8.618140163	13.79513887	11.95530363	14.47952381	14.91369048	1.411714989
	9:00 PM	10:00 PM		1.188	1.270	6.764	1.327	4.263	8.972	8.888	14.170	12.509	14.675	15.157	1.317	0.878	6.005	0.135	3.587	8.144444459	8.454802288	14.36999998	12.00106059	14.71268656	15.16233975	1.38365636
	10:00 PM	11:00 PM		1.148	1.269	6.486	1.274	4.281	8.817	9.086	11.958	15.209	15.493	15.271	1.271	0.870	6.084	0.134	3.531	8.948333312	8.479844669	14.05833336	11.84351849	14.61669822	15.19649718	1.365955539
Midnight	11:00 PM	12:00 AM		1.145	1.278	6.386	1.274	4.124	8.790	8.619	14.248	11.892	14.483	14.771	1.214	0.904	6.038	0.133	3.551	8.928833334	8.615123625	11.58999995	12.34456557	14.60645519	14.88878167	1.388888889

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 13-Dec-13
Day of Week: Friday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	EE8_C45 Site G to Site H	EE8_2A5 Site G to Site D	EE8_B58 Site G to Site H-1	EE8_9A2 Site G to Site F	EE8_D69 Site G to Site E	EE8_BB1 Site G to Site C	EE8_D7C Site G to Site B	EE8_D35 Site G to Site A	EE8_D6D Site G to Site Z-1	EE8_2BE Site G to Site Z	2A5_D6D Site D to Site I	2A5_C45 Site D to Site H	2A5_EE8 Site D to Site G	2A5_B58 Site D to Site H-1	2A5_9A2 Site D to Site F	2A5_D69 Site D to Site E	2A5_BB1 Site D to Site C	2A5_D7C Site D to Site B	2A5_D35 Site D to Site A	2A5_D6D Site D to Site Z-1	2A5_2BE Site D to Site Z	B58_DED Site H-1 to Site I	B58_C45 Site H-1 to Site H
				4.95618854	5.13133007	5.91736189	3.12265242	6.0612306	9.22532039	11.8070304	12.2726937	15.2567317	15.4532367	4.66528917	4.88102717	5.17238107	6.02658533	2.88270245	3.72783234	2.22319231	5.87813540	6.10930937	8.85437817	9.2874189	3.98254640	4.99218886
Midnight	12:00 AM	1:00 AM		1.58666618	7.43833359	1.55520035	4.19583308		9.77777777	14.5166667	14.23749997	16.67708338	16.9535357	6.63690475	6.40791618	6.78257583	6.41485006	3.00511924		2.48445588	9.25666618	6.48238053	8.85437817	9.16721312	1.14855967	0.77870355
	1:00 AM	2:00 AM		1.08874998	6.93055545	1.24333362	4.35370370		10.32562593	20.20000007	13.33923747	17.4231481	17.7601851	6.77916667	6.70066138	7.17791214	6.89887655	3.17075716	5.10416726	2.64821269	10.84791671	6.07923799	9.32545041	9.75023147	0.83541875	0.03333333
	2:00 AM	3:00 AM		1.03904748	6.79409016	1.22500005	4.05144351		9.65138873		12.79492754	16.28333532	16.60502488	6.56071428	6.61111283	6.68055572	6.77728545	3.07861524	5.09166542	2.48234425	9.67833348	5.93441398	8.83472219	9.1883541	1.11666673	0.02783333
	3:00 AM	4:00 AM		1.34333289	6.63750015	1.72916700	4.02234849		9.49311938	22.60416652	12.73333336	15.62575756	15.82412283	7.38458345	6.89262928	6.59244447	7.10538558	3.22652170	5.99166522	2.49809318	8.30527772	6.0145	8.62352368	9.00379074	1.09583324	1.25666659
	4:00 AM	5:00 AM		1.34791671	13.85434702	1.46448716	4.50845298		8.88833334	18.25000058	20.32638912	15.57812501	15.8449277	6.96333333	6.24792777	6.69272222	6.39979745	2.98441747	5.80833403	2.53333344	8.35583333	7.69899083	8.35798245	8.99119237	0.98148693	4.77277777
	5:00 AM	6:00 AM		1.54166666	11.85984101	1.56453105	6.62623730		7.61333486	23.42916111	21.48027736	15.34166666	15.5645333	7.10370108	6.47783333	6.81125583	6.25025472	2.96952648	5.83333403	2.83333333	8.99983333	8.23183583	8.9976245	14.6017125	1.19666693	2.79374999
	6:00 AM	7:00 AM		1.54166666	11.89972223	1.85753257	15.65722218	25.65333333	25.54679485	32.42783333	23.4607143	35.49476192	35.5545333	7.10272108	6.7833333	6.53945578	6.17591667	2.8339875	4.90511111	3.84211038	8.89966333	8.76854991	14.98566664	14.8377015	1.22783333	2.79374999
	7:00 AM	8:00 AM		1.56197916	6.57142883	1.70528426	7.50000000	15.21666666	14.96130288	24.83333337	16.2774999	32.11176811	30.9700776	7.33951999	6.07936538	6.60150333	6.23018169	2.9698252	4.88333338	3.3457425	6.90254849	6.07116724	13.05096555	13.1867254	1.16201333	6.89971267
	8:00 AM	9:00 AM		1.62777766	6.76319473	1.76099298	3.99810812	8.60833329	3.34797972	14.86999966	13.01436782	21.23073915	21.4037499	7.35078839	6.26169926	6.9454918	6.34288729	3.00498154	4.89648497	2.59844744	7.76534215	5.90611871	9.75725523	10.2913510	1.19010416	7.60676294
	9:00 AM	10:00 AM		1.56842169	6.64342166	1.70250000	4.04954536	9.60000000	9.48803524	15.15984666	13.2364138	17.8518026	18.5605987	7.38105477	6.22023802	6.95441743	6.31527369	3.02110808	5.02792791	2.47234473	7.8517541	6.15974282	10.3021782	10.8983271	1.20277273	5.51499997
	10:00 AM	11:00 AM		1.56704545	6.47371869	1.71335326	4.00432939	12.52666662	8.54401408	14.86966669	12.4477777	18.24504504	19.4999999	7.54957258	6.44009450	7.08560528	6.50032523	2.99326909	5.50416664	2.7573181	7.80777778	5.93213927	11.52419978	11.8857381	1.17554463	6.92083314
	11:00 AM	12:00 PM		1.56751954	6.46813899	1.68895462	3.91595339	8.88333323	9.2985119	14.62314813	12.5645273	18.052451	18.8395237	8.28791665x	6.62399079	8.07092499	6.8275641	3.07485339	5.26333317	2.53568189	7.75254538	5.88242513	11.53297876	12.0840147	1.20181169	8.16546998
Noon	12:00 PM	1:00 PM		1.70818731	6.54909124	1.81722212	3.95572618	10.29999998	9.39444448	13.64166666	12.7195769	15.7984984	16.1825889	12.16928898	10.992	11.90454542	11.12182939	6.00885178	6.63958332	2.61158092	7.56419891	5.84268523	8.83262098	9.50807838	1.24227848	2.63828833
	1:00 PM	2:00 PM		1.81273917	6.6247222	1.71081611	3.96666668	9.77916666	9.52916663	14.25025927	12.6178571	15.4702381	16.1116167	16.83125	14.73196661	15.88750553	14.81374008	6.67487307	7.46018519	2.53138889	7.77127970	5.88642407	8.54988017	8.89693209	1.18107637	8.78735543
	2:00 PM	3:00 PM		1.74593022	6.73015154	1.90325208	4.04213879	8.60833345	9.41730769	14.73039214	13.0164926	15.3981818	15.9499997	18.83812555	16.9147976	16.30294118	16.9830214	9.27581301x	7.43030368	2.56095235	7.83893091	5.90840149	8.62933618	9.00356931	1.20324077	7.88216166
	3:00 PM	4:00 PM		3.09865157	6.88757819	3.1389561	4.1154211	10.61750005	9.43434361	14.5027776	13.8930853	15.6355417	16.5002884	22.78643791	18.04661766	17.33316668	18.29503084	9.57106719	7.91555555	2.54750004	7.80603862	5.94546143	8.64260314	9.06272767	1.60642791	2.74391058
	4:00 PM	5:00 PM		4.03944428	7.56893977	4.11790770	4.19345132	12.20416666	9.54000021	14.30053564	14.0745833	18.2502451	19.0060656	25.83617886	17.9502778	19.0848797	18.1055907	8.32334936	11.9454167	2.5017857	7.42512543	6.10499532	11.54222392	12.2239582	2.86930678	0.0649299
	5:00 PM	6:00 PM		4.19382949	6.87553739	4.37012938	4.68673457	10.87083339	10.5568181	15.53377192	13.1302451	20.56291695	21.2253369	20.03970588	15.3814147	15.0975773	15.2532145	6.92574970	8.14428761	2.64485291	7.87891525	6.05207483	12.68103774	13.3089985	4.56708317	0.0687169
	6:00 PM	7:00 PM		3.55797102	6.53211805	3.80957157	4.07228667		9.46499993	14.67301305	12.7279543	16.5466668	17.1617287	11.87886569	11.3070425	11.4749999	11.3663333	5.78156341	7.11111116	2.53071945	8.12852943	5.87955798	9.38993062	9.97337311	5.22472208	6.23975419
	7:00 PM	8:00 PM		2.47150851	5.35270304	2.5953597	3.95284922		9.05093973	14.6935524	12.4562497	15.5278545	15.8522027	7.11023819	6.3857755	7.20581133	6.53752501	3.05181371	4.9499999	2.41702785	7.49223895	5.82675188	8.53233333	8.82620875	1.32965203	0.05763889
	8:00 PM	9:00 PM		1.52916578	6.53611115	1.67066668	3.77808641		8.75499977	12.9533333	12.8557972	15.2348667	15.5955991	7.05049018	6.31447367	6.9444444	6.48567492	3.02585835	4.92500008	2.42541847	7.3982464	5.81860776	8.45102435	8.79552726	1.15999998	9.79916673
	9:00 PM	10:00 PM		1.61533333	6.70667429	1.72755229	3.95285699		9.95482457	14.5291667	12.6873335	15.6743057	15.9829216	6.87678104	6.34410655	6.85171568	6.48688813	3.00166248	4.60509540	2.41755411	7.64228397	5.91656667	8.46145048	8.81361671	1.15666667	8.42589539
	10:00 PM	11:00 PM		1.57623456	6.46916655	1.70241932	4.05267858		9.21284729	15.6569444	12.8888882	15.4765116	15.7306183	7.32941177	6.34299442	7.1348451	6.47027361	3.01818181	4.62564103	2.43181584	8.24999985	5.84661481	8.56789047	8.89947906	1.14944174	14.60092589
Midnight	11:00 PM	12:00 AM		1.52623361	6.64287167	1.72983331	4.03657436	9.2875	9.08888889	14.72500001	13.2962894	15.4952963	15.9875033	6.76984126x	6.04473685	6.90416666	6.17528432	2.99553872	4.89809859	2.43013937	7.55833333	5.95896656	8.53973164	8.85870647	1.09666666	4.88214287

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 13-Dec-13
Day of Week: Friday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	BS8_EE8	BS8_2A5	BS8_9A2	BS8_D69	BS8_BB1	BS8_D7C	BS8_D35	BS8_D4D	BS8_2BE	9A2_DED	8A2_C45	9A2_EE8	9A2_2A5	9A2_BS8	9A2_D49	9A2_BB1	9A2_D7C	9A2_D35	9A2_D4D	9A2_2BE	D49_DED	D69_C45	D69_EE8
			Site H-1 to Site G	Site H-1 to Site F	Site H-1 to Site F	Site H-1 to Site E	Site H-1 to Site C	Site H-1 to Site B	Site H-1 to Site A	Site H-1 to Site Z-1	Site H-1 to Site Z	Site H-1 to Site Z	Site F to Site I	Site F to Site H	Site F to Site G	Site F to Site D	Site F to Site H-1	Site F to Site E	Site F to Site C	Site F to Site B	Site F to Site A	Site F to Site Z-1	Site F to Site Z	Site E to Site I	Site E to Site H	Site E to Site G
			Length (miles)	6.917849169	6.559498524	3.959647189	7.399059857	9.331659390	15.46374752	11.50261464	15.88599812	16.17551323	3.710509280	3.800145328	3.210667327	2.993705208	3.956847165	4.293272304	5.195218863	9.041950351	9.078175026	15.44714128	12.54154404	5.278816450	7.329318254	6.433235[illegible]
	Midnight	12:00 AM	1:00 AM	0.833333333	6.408796832	3.628333333		8.806333333	18.24583333	13.35000000	15.11612903	15.43785433	3.937333388	3.382758833	3.820588223	2.778809953	3.462878791		5.272881360	12.03333333	9.308333333	15.55833333	11.88052288	6.287499970	7.605555988	
		1:00 AM	2:00 AM	0.691596519	6.087999875	3.588111114		9.217307692	18.44166672	12.33458331	15.78154761	16.26410126	3.588194442	3.399074087	3.707638925	2.584929246	3.348637422	5.327083307	5.486858931	15.23333335	8.770010243	11.96249998	12.44722223	7.774999986	7.813898883	
		2:00 AM	3:00 AM	0.408333331	6.127962839	3.554583332	9.391666669	8.753921519		12.13287031	15.13524999	15.75658274	3.794607861	3.437286663	3.841666669	2.586749691	3.58083613	5.438332407	5.223531454		8.529500198	11.50583332	11.88704862	10.89583332		
		3:00 AM	4:00 AM	0.618333366	6.514885948	3.561944442	11.17499998	6.686574864	15.08333333	12.40146714	14.77407407	15.19559092	3.723565314	3.523330227	3.438541666	2.646428569	3.682532071	4.878571431	5.081944448	11.59761682	8.607611832	11.25474805	11.62146118	9.152777808	7.703833345	7.333333287
		4:00 AM	5:00 AM	0.690583322	14.85452898	3.029075598	14.03541665	9.005833335	26.56595238	19.57833258	15.00914178	15.38448513	4.068280825	3.318469224	3.534166651	4.272721570	3.314301312	5.861669674	5.108498564	11.20487182	11.13974633	11.26423766	11.60183072	9.092722256	9.366666810	
		5:00 AM	6:00 AM	0.699583322	13.85420509	3.035425924		23.79333319	29.34037028	28.57666284	22.67357202	21.67134898	4.091429973	3.197486668	3.540070581	4.272429338	3.335183229	5.804533599	14.79763593	15.78245665	11.13842437	21.87102761	11.43955678	13.33333331	7.974999950
		6:00 AM	7:00 AM	0.736666508	10.83966409	13.58898156	13.38661111	23.76292739	29.48246033	26.57669383	24.64811272	24.41522633	4.024479752	3.244444442	3.650525241	4.252338739	3.376182799	6.03291669	9.944433468	15.79035647	13.13864567	21.54672822	21.47437310	9.803205088	9.831139948	
		7:00 AM	8:00 AM	0.708818181	6.183418079	6.43721695	9.296153862	15.04024823	21.74885059	12.13423424	26.32860317	26.88773704	4.044679713	3.224040764	3.476168837	2.642988984	3.3574964	4.908139648	7.567852563	13.46355722	8.638746114	17.53298731	17.80584112	8.441319468	8.455833318	8.220833320
		8:00 AM	9:00 AM	0.706981985	6.089943394	3.570229677	8.271428538	8.725614031	14.19679488	11.80811782	16.05412913	16.48647059	4.220158739	3.291551732	3.66194442	2.637685764	3.451678528	4.953835596	5.227110619	10.36884057	8.561805546	12.34885457	12.89804445	9.239351861	8.047727238	15.63333336
		9:00 AM	10:00 AM	0.606818176	6.240908994	3.531318181	8.713168487	8.517553196	11.83550035	12.46388889	16.13482705	16.71477556	4.210763884	3.323857142	3.893502111	2.812545498	3.446361365	4.946397116	5.192316954	10.64842344	8.991666858	12.98014956	13.53979975	9.518217028	8.281372548	9.425555555
		10:00 AM	11:00 AM	0.728773995	6.004331142	3.570863754	8.27692311	9.131214674	13.39311594	12.12983871	17.74607938	18.1421147	4.269598761	3.506353162	3.898268396	2.563208057	3.603030716	4.969861459	5.683297824	10.32037037	8.523958343	14.12835497	14.72059522	9.743005543	8.928703722	8.595833313
		11:00 AM	12:00 PM	0.747348512	6.058350225	3.505287799	8.625005322	9.109666666	13.67500001	11.88241665	18.48283333	17.91133837	4.57017942	3.88754734	4.131130078	2.545366911	3.598892329	5.180000022	5.327322365	10.25333333	8.481674385	14.06210563	14.62804187	11.01777781	9.655844699	
	Noon	12:00 PM	1:00 PM	0.707539993	5.963936544	3.505639084	8.803333361	9.924674668	13.6240196	11.74579125	15.22552681	15.67453182	5.238950799	5.212183888	4.854164381	2.544604091	5.387277304	5.035419654	5.418491038	10.13716218	8.450757881	11.95495247	12.07952127	16.54899996	11.36944447	
		1:00 PM	2:00 PM	0.709090913	6.107902284	3.448184083	9.896666598	8.553076157	13.65535259	11.88950539	14.75616987	14.93943797	7.287018228	5.589900554	6.484409844	2.599637678	5.769935902	5.001923839	5.232525267	10.24327617	8.55779667	11.14678819	11.44606056	27.10192306	25.45555556	
		2:00 PM	3:00 PM	0.735416675	6.022953716	3.631489078	9.091666639	9.072076938	13.58277778	11.86094962	14.85561594	15.17422223	7.305851074	7.319498399	6.536580097	2.563058035	7.497591744	5.488333327	5.340138883	10.66235632	8.466136652	11.23570833	11.61612745	30.92135416	29.97916667	
		3:00 PM	4:00 PM	0.744871812	6.353346462	3.554310348	9.691666655	9.012499999	13.31874998	12.11613468	14.70333334	15.13626007	8.913565886	9.902509233	6.73758037	2.663414104	10.15433334	5.314705609	5.303658517	10.16452361	8.5969782	11.30139666	11.66395573	34.92604168	29.3056476	
		4:00 PM	5:00 PM	0.741319429	6.802803041	3.764275369	10.16944444	9.443538978	13.7555556	12.84802083	17.63529412	18.65364584	14.55903558	9.436261255	8.90479756	2.825648503	8.792885261	5.691956653	5.295977222	10.1862843	8.914851018	14.40867742	15.13784561	35.87499999	28.76190476	
		5:00 PM	6:00 PM	0.848135018	6.267660057	4.019864473	8.141666676	9.633796309	14.71233333	12.3833333	19.32968302	20.01859549	16.98779339	8.533646043	10.3993548	2.650799749	8.799147394	5.071974852	5.627976183	10.90225893	8.76866377	15.33379064	16.24934869	31.59974034	27.54166669	
		6:00 PM	7:00 PM	0.753787882	5.872582844	3.61740412	8.474999787	9.354145273	14.42480317	11.78513971	15.98187288	16.55208333	13.0838282	5.26271187	8.396491224	2.499708344	5.43035477	5.009723161	5.247705317	10.7250752	8.33456608	12.17219048	12.69530954	17.58749999	18.19523812	
		7:00 PM	8:00 PM	0.719908967	5.881547518	3.439814608	7.783333345	8.351742427	12.94821428	11.71284031	14.4237655	14.74789100	9.722275842	3.415985287	5.319297875	2.486333333	3.55633331	4.95357143	4.976595757	10.04333332	8.32010736	11.01538838	11.33333333	10.49521288	12.89499999	
		8:00 PM	9:00 PM	0.644037256	5.883449879	3.450578707	9.41666672	8.499518512	13.80000003	11.85393195	14.41413341	14.77954545	4.186197815	3.342361103	4.032449484	2.495083928	3.499987348	4.926388878	4.966497724	8.71944442	8.321481413	11.01851594	11.37953973	9.13936048	16.35625000	9.450000088
		9:00 PM	10:00 PM	0.720138887	5.942761074	3.472435694	8.030555564	8.366224487	13.86501648	12.04168664	14.62708334	15.14594034	4.054870136	3.3503008	3.786402488	2.559567102	3.477987084	4.605555625	5.015369143	10.53177681	8.532417528	10.97942177	11.45154167	9.295033271	8.441666644	8.766666725
		10:00 PM	11:00 PM	0.65388887	5.993955571	3.414855074	8.522916581	8.374424757	14.02777774	11.8486111	14.68805224	15.06158871	4.026666658	3.321413492	3.715503386	2.519999999	3.411819735	4.80645298	5.017469881	11.0768611	8.36871347	11.18908334	11.51984397	8.712603528	8.338333368	8.437499910
	Midnight	11:00 PM	12:00 AM	0.663333323	5.994996968	3.441287899	8.795833401	8.466975298	11.88749988	12.31625	14.47338714	14.74642858	3.883611116	3.223521517	3.847916678	2.526767584	3.386111126	4.091666691	4.985028724	9.840476196	8.611904767	11.11708039	11.41484849	8.948611102	8.199999999	

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 13-Dec-13
Day of Week: Friday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	D69_2A5	D69_B58	D69_9A2	D69_BB1	D69_D7C	D69_D35	D69_D6D	D69_2BE	BB1_DED	BB1_C45	BB1_EE8	BB1_2A5	BB1_B58	BB1_9A2	BB1_D69	BB1_D7C	BB1_D35	BB1_D6D	BB1_2BE	D7C_DED	D7C_C45	D7C_EE8	D7C_2A5
				Site E to Site D	Site E to Site H-1	Site E to Site F	Site E to Site C	Site E to Site B	Site E to Site A	Site E to Site Z-1	Site E to Site Z	Site C to Site I	Site C to Site H	Site C to Site G	Site C to Site D	Site C to Site H-1	Site C to Site F	Site C to Site E	Site C to Site B	Site C to Site A	Site C to Site Z-1	Site C to Site Z	Site B to Site I	Site B to Site H	Site B to Site G	Site B to Site D
				1.37328214	7.3690894	4.26920758	4.58778212	3.85627741	7.66464488	10.4069864	10.7239522	8.20923425	3.15418489	8.395203958	2.21019326	8.191455709	5.19502856	4.3677124	3.55634918	3.88156477	6.87399209	7.02982154	11.7212106	10.4707129	11.8878264	6.87883845
Midnight	12:00 AM	1:00 AM		4.04791667	7.81250033	4.26000008	7.09874998	13.1416666	15.7472223	13.9976164	14.4333333	8.75611149	8.30757581	8.97179462	2.04858368	8.49745704	4.99001755	7.65833345	6.66250000	3.65481187	8.47571838	6.80705128		13.2916666	7.72499952
	1:00 AM	2:00 AM		4.08583321	8.05833312	4.62291612	6.87777746		9.76249938	14.2666667	14.0611111	8.89404735	8.56607147	8.69750004	1.99227447	6.48872835	4.95157657		8.99722216	3.8653845	6.90178571	7.27797619		12.7750011	15.0000031	6.69166579
	2:00 AM	3:00 AM		4.19528267		5.12166715	6.63958353	13.9041667	20.7694444	12.8541859	13.0499998	8.10693533	8.79895327	9.124597783	2.06000721	8.94139472	5.24574673	7.06666728	6.93333363	3.69836244	6.53820135	6.91059924		12.4833343	6.51666669
	3:00 AM	4:00 AM		3.94444444	7.79666573	4.56874994	7.01458134	12.6666666	10.7083333	14.0800005	14.8476164	8.45092546	8.48131112	9.28472251	2.03134076	6.69245978	5.02410148	7.17833331	5.95416667	3.59377588	6.20078232	6.64357116	13.5416666	17.1833339	8.24166663	
	4:00 AM	5:00 AM		4.50954473	7.46833346	4.83833346	4.75	10.7799999	12.3845844	12.8833333	13.3472222	11.2499744	9.81734236	9.04812562	2.86527787	10.8988893	6.20583016	8.10833325	5.80119846	3.44999992	5.37943347	6.67834166		13.6750000	13.2809544	6.74722222	
	5:00 AM	6:00 AM		6.35234566	12.0874999	7.84667033	8.36213232	14.9754833	18.1499999	17.3333333	13.3472222	9.18194431	8.57566829	8.979323664	2.98579286	9.76781039	6.42098278	8.12222219	7.47999992	4.24799992	5.93622207	6.26422207	14.5722223	13.8145833	7.37279722	
	6:00 AM	7:00 AM		5.15328383	10.0197916	5.64583346	12.3931623	18.7518833	14.8188593	21.9847345	22.2740476	9.08224875	8.05763156	8.766812664	2.06373809	8.24174839	4.94299473	7.47499971	5.73548910	3.87889784	12.2403762	12.3378043	14.5444445	12.7541667	13.3530359	7.37279722	
	7:00 AM	8:00 AM		4.04048143	8.45185164	5.14229777	8.57308532	15.0227778	16.1454553	19.9483333	20.3802857	9.02409611	8.03656168	8.436335918	1.85464807	8.14320149	4.84693127	6.74017854	5.53562767	5.51253472	10.0371764	10.4008207	13.7283334	12.7886274	13.4943334	6.96038419	
	8:00 AM	9:00 AM		3.99857142	8.15378733	5.11357736	6.75513411	11.8375201	9.82916662	14.1216436	14.7241793	9.49193129	8.04563622	8.580902761	1.98582756	8.141598349	4.96436871	6.92061295	5.15287686	3.53633539	7.44519239	8.01809269	14.2291666	13.2349998	13.6256407	7.16145871	
	9:00 AM	10:00 AM		4.08168578	8.50697716	5.15504947	6.52514451	11.8249999	10.4895138	14.3642677	15.2047221	9.27248558	8.14507748	8.955002001	1.99070172	8.339525082	4.94542387	7.01531518	5.34120197	3.57945755	8.00479853	8.65079475	16.2381481	13.5993994	14.9016665	7.19795113	
	10:00 AM	11:00 AM		3.92660926	8.76166665	5.15181191	6.83728729	12.3270833	9.98795432	15.7312501	16.2995833	9.53621876	8.21820332	8.891263424	2.01410789	8.281267217	5.02331221	7.10995974	5.27407645	3.58156587	8.71453613	8.47305472	14.4444447	13.3543478	14.1027778	7.36599443	
	11:00 AM	12:00 PM		3.84131798	9.64236155	5.35479777	6.24499999	12.1794873	10.0127778	15.4534332	15.7951853	9.79267616	8.53337942	9.549879202	2.0105732	8.639489839	5.03772608	7.39472203	4.94927409	3.89476697	9.34181818	10.2478701	15.5614583	13.5052385	14.6499421	7.45251313	
Noon	12:00 PM	1:00 PM		4.28333337	11.2184649	10.2419666	6.96249994	10.8249998	9.69826492	13.0727778	14.2286458	10.0920431	8.60902449	10.02886515	1.95139894	8.735138888	5.09288164	7.39999938	5.21885562	4.03968293	7.42131496	8.09925808	16.6041668	14.0624998	17.1569441	7.45348458	
	1:00 PM	2:00 PM		8.75833346	24.4416667	20.0267610	7.25333353	15.2030553	13.9833888	12.1617969	12.5246417	14.1973116	13.7832265	13.918031939	2.29852837	13.32301587	8.06638094	8.90625014	5.18568651	3.61170636	6.47854545	6.86130951	25.7904762	18.2242063	20.1766669	7.78571428	
	2:00 PM	3:00 PM		10.4797087	30.8333331	21.8632812	11.3374999	16.0811108	16.5349998	16.2923107	17.2283334	20.2204505	18.5704901	19.74784849	3.94434278	18.6053698	13.6662371	11.1952962	5.57803099	3.98045781	6.52847725	6.91320763	29.5916667	25.4551285	27.5152499	10.6987105	
	3:00 PM	4:00 PM		9.05490192	29.7111111	19.0624031	12.8199701	18.1762839	15.2588887	19.2214361	19.6353887	23.9752345	22.7395687	21.47972973	5.25797464	22.7773938	14.4909498	12.2500003	5.14607695	3.71321136	6.52581304	6.92398743	36.5898155	34.5684278	32.4622222	19.2391478	
	4:00 PM	5:00 PM		6.08817783	29.0462962	18.4877654	12.0708334	16.6818215	15.3484848	20.9505766	22.2571428	27.7713147	23.2026836	22.42129677	5.17392662	23.9249475	13.3005258	12.9104446	4.99439895	3.68547057	9.68821893	10.6589744	50.2208333	42.6110239	44.1875463	27.5375527	
	5:00 PM	6:00 PM		6.84298251	27.6145833	17.7123332	11.8649333	17.0379629	13.2667	22.0925755	23.2001375	30.9854938	22.9840001	24.45390476	5.69749141	23.2852751	13.4614509	17.5455999	5.23615975	3.88357142	10.7560002	11.5479981	48.4950000	45.1379798	49.7975	27.6313958	
	6:00 PM	7:00 PM		3.99848416	18.5880952	10.0179625	8.48333263	15.61	10.1053034	16.9899478	17.8497936	24.9764113	20.5883335	20.71414143	4.37983992	20.7666667	11.4099751	13.735	5.20083337	3.64685423	6.86605468	7.5468085	44.8499992	40.3101498	35.4953783	19.6906566	
	7:00 PM	8:00 PM		3.87812500	13.0966666	5.33925586	6.31600554	11.4233334	9.93750003	12.7813334	12.9782333	14.5879454	14.0500556	13.62349483	2.30422722	14.14746694	8.33120741	10.0138883	5.14037407	3.49779144	6.23077778	6.58293253	19.8781249	18.9910291	20.2128788	7.78126305	
	8:00 PM	9:00 PM		4.10104163	16.4395833	5.12572436	6.33333303	11.0833334	10.0904723	12.5966666	12.8611112	9.18873495	8.46243487	9.301356594	2.0597452	8.605198023	5.14048165	6.91944466	5.30520832	3.55991125	6.31990148	6.63371213	14.4291667	13.5425000	15.1999999	7.42553763	
	9:00 PM	10:00 PM		3.90333353	8.60833337	4.97733312	6.57638897		9.91071434	12.7345238	13.0488931	8.09072217	8.33501369	8.841866647	2.02013054	8.554340282	5.03472228	6.03611108	5.61728244	3.56994445	6.25493627	6.67460148	14.8361109	13.2666661	16.1365925	7.57675438	
	10:00 PM	11:00 PM		3.97037086	8.42222165	4.89600005	6.27925516	11.2583328	10.3545834	12.7194446	12.8599998	8.74027791	8.32499974	8.809325412	2.0149816	8.511019833	5.02722587	6.54881047	5.51127451	3.55741767	6.29424992	6.57574682	14.3033333	14.6899829	14.5883338	7.7833333
Midnight	11:00 PM	12:00 AM		3.85277769	8.36666603	4.79582519	6.69333327	10.5833334	9.48888888	12.8611111	13.1000002	8.76470588	8.29486106	9.204761614	2.06473927	8.367018788	4.99561408	6.84861109	5.25833368	3.52726259	6.27088709	6.58209238		13.1166666	15.5783338	7.45555545

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 13-Dec-13
Day of Week: Friday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	D7C_B5B Site B to Site H-1	D7C_9A2 Site B to Site F	D7C_D49 Site B to Site E	D7C_BB1 Site B to Site C	D7C_D35 Site B to Site A	D7C_D6D Site B to Site Z-1	D7C_2BE Site B to Site Z	D35_D6D Site A to Site I	D35_C45 Site A to Site H	D35_EE8 Site A to Site G	D35_2A5 Site A to Site D	D35_B58 Site A to Site H-1	D35_9A2 Site A to Site F	D35_D49 Site A to Site E	D35_BB1 Site A to Site C	D35_D7C Site A to Site B	D35_D6D Site A to Site Z-1	D35_2BE Site A to Site Z	D6D_D6D Site Z-1 to Site I	D6D_C45 Site Z-1 to Site H	D6D_EE8 Site Z-1 to Site G	D6D_2A5 Site Z-1 to Site D	D6D_B58 Site Z-1 to Site H-1
		Length (miles)	**11.4617452**	**8.5449960**	**8.6832774**	**5.5669201**	**3.2568507**	**6.6882529**	**5.1812870**	**12.6895498**	**11.8253633**	**12.7409467**	**6.1008109**	**13.5323450**	**9.0787549**	**7.4569148**	**3.8825477**	**5.6508503**	**3.0819242**	**3.7353128**	**15.5888821**	**15.5417281**	**15.2767539**	**9.0991984**	**15.5869586**
Midnight	12:00 AM	1:00 AM	13.5500001	9.9833333333		5.8333332000				12.8904758	11.8520833	12.8541667	5.6553126199	11.8647058	8.7166854	11.8250000	3.6910666600	6.7000000037	2.8242424649	3.1243589971	15.3883946	14.7766079	15.2942308	8.4159420169	14.9470852
	1:00 AM	2:00 AM		10.6208333333		6.8250000000				13.1416666666	12.8041666666	13.3738888877	5.9397323132	12.9871667	9.2353260715		3.6726562135		2.9904791933	3.3333333227	15.6250000000	15.4801852	15.8574074747	8.6040604057	15.4230769
	2:00 AM	3:00 AM		9.3333333333		4.7833333272				12.0583333333	12.4283333400	11.7395416667	5.8118217148	12.5150000	8.7433374418	10.7124999999	3.6726562135		2.7792592927	3.1279238889	14.9531250000	15.7299242424	16.4244791616	8.8204022594	15.8879189
	3:00 AM	4:00 AM		11.0111111111		6.3604166667				16.3041666666	13.6515151515	13.2861111000	6.9430894277	14.1164210893	10.3950231414	10.6874999995	3.7310727300		2.7006818181	3.0354466602	14.1864583333	15.0631024615	14.3641666666	8.4924401893	15.2017679
	4:00 AM	5:00 AM	13.8083333377	10.0666666667	13.5000000000	5.1791666667				12.8166714444	11.8952833333	12.3416666667	5.5827193932	12.9578636363	8.6243023236	12.0916666633	4.0589566676		2.7132275556	3.0639818175	16.1812500000	16.8379629629	16.2583333333	8.9827166585	17.1446464
	5:00 AM	6:00 AM	13.7533333377	10.0995428571	10.8616667	5.2916666667	6.2499999667			13.2400000000	11.7978666667	12.3428666667	5.4812778519	11.5353750000	8.5230000000	11.8566166727	4.0085566676	6.6833333333	5.2879166667	5.7069930116	15.9431000	14.8148796296	15.9652666667	9.3522688202	14.6998423
	6:00 AM	7:00 AM	12.9583333377	10.0477966611	12.1833333333	5.2916666667			29.3333333333	13.4833296333	11.4999666666	12.1426666667	5.4212778519	11.5353750000	8.4098591160	11.5441666667	4.0411666667	8.2150000000	5.2879166667	5.5079733649	16.9853499999	14.4148796296	15.7372666667	8.9592183333	14.9993468
	7:00 AM	8:00 AM	12.9894027778	9.7164083056	11.9937083333	4.8973611000	6.5597722269	12.9999999	13.3639988889	13.0534038383	11.5660555556	12.7641975317	5.7260338777	11.6303182424	8.7087121127	10.1268518518	3.5444252268	6.7773148833	4.3843737216	4.7083180047	16.3135858889	14.0636472196	14.7115940	8.2398575	14.2537978
	8:00 AM	9:00 AM	13.3289682222	10.2443039333	12.0437500001	5.3830400925	7.0381111169	9.6083331185	17.5374999953	13.2252873737	11.7811999318	12.4617621215	5.5837264118	12.0762835556	8.6352819323	10.3705126178	3.8834515508	6.6307091761	3.8184816156	4.3578904552	16.5455192424	14.6824849491	16.1194444444	8.3998484848	14.3453714
	9:00 AM	10:00 AM	13.6953922778	10.1392857222	12.7183333333	5.2231818125	6.7020833333	10.3	10.8633333333	13.5751894444	11.7790455111	13.1854166667	5.8558503833	11.8464047033	8.6525222963	10.533875	3.9357416133	7.0833333333	4.4178854555	4.9597027878	16.1655377273	14.3835648671	15.1859649587	8.1854798654	14.4183555
	10:00 AM	11:00 AM	13.8930555556	10.1549370375	11.8083333333	5.2528931159	6.8416666773	12.0375000000	14.9166666773	13.4648333333	11.8568666666	14.1770000001	5.5729761992	11.9595709907	8.5488095234	10.3254903233	3.6430555557	6.7000000037	5.4189117621	5.8777925542	16.3340909	14.7042639394	16.9281851818	8.4346498898	14.6297549
	11:00 AM	12:00 PM	13.5494629630	10.2897500000	11.1466666668	5.5115383846	6.8791666833	12.5283333333	12.8666666669	13.9413194778	12.2338666333	13.5801533333	5.5059329756	12.4131466667	8.6019111323	11.2138787878	3.6470995987	7.0050556111	5.8645725397	6.1780119779	16.5001984	14.8549835	16.6556292792	8.3076703093	14.9239935
Noon	12:00 PM	1:00 PM	14.1621428571	10.5126028571	14.0124999994	5.7100499972	6.4527777824			17.4447555321	17.4258238888	17.3456819119	5.8273745631	17.6183333333	11.5600767	11.3145833333	3.5599999998	7.4166666756	3.0741338888	3.5596066664	16.7222222223	15.0884313888	23.3626262627	8.1833333333	15.2209325
	1:00 PM	2:00 PM	16.4185555553	13.9334487777	18.6729166	5.3873737236	6.4133333333	9.2729166667	9.6875000000	23.9455797	21.9661229722	21.9438675116	8.4770276204	22.1796783333	17.3811853333	13.2500000133	3.6874194444	8.2916666619	2.7053888444	3.0260735118	20.2623030303	19.5187543939	19.5501933779	8.5520016448	19.8675533
	2:00 PM	3:00 PM	25.3760000002	20.5635416667	29.9958333333	6.9988363861	6.5977777888	9.3916666632	9.9666666587	31.1601010102	29.0703703636	31.4007142857	13.6356018182	29.3061475556	23.0671783636	16.9861111122	5.6500511126	7.1527777611	2.7570723803	3.1178527796	26.4883720930	24.8153913175	24.7230388888	11.2919646012	24.9093364
	3:00 PM	4:00 PM	34.3249999997	27.0454166667	39.0749999998	14.5805233333	7.1387826048	9.7358333333	10.0476190000	41.8598833773	35.4442529722	38.1004761904	15.0246364242	35.2437333333	26.8778333251	24.3073916777	11.9794033336	10.9527778333	2.7665142211	3.1394927485	34.1545238333	31.9129444422	34.5861904545	16.1090240411	32.0094827
	4:00 PM	5:00 PM	42.5414414145	34.5373456667	38.7479166667	21.5317873232	7.1979166655	12.8972221177	14.0194444455	43.3195233333	39.7116189999	38.7304687878	16.8987179555	40.0274553536	27.8747767576	19.4155666722	16.7663555555		5.6479501117	6.4164118833	44.8951121984	39.4091655028	41.3747548888	22.9045658888	38.7723333
	5:00 PM	6:00 PM	49.1930171111	37.2452029222	39.7966666668	21.4347040000	6.9916666667	14.4055555511	15.0314389999	34.6984583333	32.4479813636	33.0007575556	13.7307120555	33.4643985555	22.6279172333	24.1416666668	16.7052955555	12.8833333333	6.8529059910	7.5161669529	49.9779427225	43.7956876767	40.9341398888	23.7565052222	44.0836734
	6:00 PM	7:00 PM	40.0182692222	28.4131415914		13.9472647	6.4399999972	10.2694444	10.7263888222	20.2606666667	20.7006114333	22.7447536777	6.8276882212	20.6450724848	13.4207561818	23.9944439	12.4891666666		3.3956596617	3.9582245518	41.9835470333	37.3630739333	36.2285714142	18.2526448333	37.6825362222
	7:00 PM	8:00 PM	26.0203333343	13.7931475411	12.2333333333	5.4431432222	6.8083333285	9.0388888888	9.3984444418	12.6398611122	12.1354417575	15.4854791818	3.6582528333	12.2458878525	8.7208796323	17.6202835434	4.5622511181	6.8166666667	2.6791025411	2.9810205611	24.1640909	23.5355849455	25.5775941111	8.4275783888	23.0074257575
	8:00 PM	9:00 PM	13.8310899744	10.4046911113	11.9361110B	5.2079546464		8.1333333307	8.3250000307	12.4143434343	12.025	12.6541887	5.6585123	12.1016666667	8.6813322888	10.1583333333	3.6289107316	6.9291666634	2.6831288828	2.9507287875	15.3713450333	14.8543288	17.0267543B	8.3959513362	15.1123376
	9:00 PM	10:00 PM	13.6854166667	10.3574073B	11.5333333333	5.7307692224	6.6291666667			12.3543555577	11.9402434333	12.6301701	5.6398650	12.1464444477	8.5050182211	10.5494444455	3.6466916182	7.2749999651	2.6910225551	2.9588243172	15.0288333333	14.6868944477	15.5136363434	8.3879453234	14.9295751
	10:00 PM	11:00 PM	14.7857407444	11.0339374333	11.6305555556	6.0233374283		9.2458333291	9.5500000001	12.4172077711	12.0386904B	13.1229988333	5.6323529533	12.1907552222	8.6508807594	8.9916666619	3.5957711145	7.4166666522	2.6821154616	2.9719334573	15.1153588B	14.6325640B	15.7866666666	8.3252554833	14.7991667
Midnight	11:00 PM	12:00 AM	13.5124999977	10.7097221B		5.6246746079				12.0511111111	11.6476499B	12.9767857576	5.8107295518	11.8502532533	8.7900882414	10.4166666633	3.9052573	6.5288333336	2.6828361186	2.9598285513	14.9363636365	14.8114942474	15.9693972	8.3466617238	14.8666677

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 13-Dec-13
Day of Week: Friday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	D6D_9A2	D6D_D69	D6D_BB1	D6D_D7C	D6D_D35	D6D_2BE	2BE_DED	2BE_C45	2BE_EE8	2BE_2A5
	Label		Site Z-1 to Site F	Site Z-1 to Site E	Site Z-1 to Site C	Site Z-1 to Site B	Site Z-1 to Site A	Site Z-1 to Site Z	Site Z to Site I	Site Z to Site H	Site Z to Site G	Site Z to Site D
	Length (miles)		12.04712126	10.45589989	6.873999299	6.168632565	3.046190422	0.279723233	15.77549156	16.1308518	15.45263357	9.29274368
Midnight	12:00 AM	1:00 AM	11.39049478	14.79583346	6.451271177	9.291666728	2.707894742	0.330633806	15.60572917	15.23945579	15.52555558	8.821222231
	1:00 AM	2:00 AM	11.77333335		6.451576583		2.858974391	0.338888895	15.9125	15.54479168	15.8787879	8.776736129
	2:00 AM	3:00 AM	12.05016665	19.52083323	6.777923979		2.884119482	0.325769241	15.07727276	16.02916671	16.6343137	9.154166681
	3:00 AM	4:00 AM	11.38349359	13.69166667	6.440674597		2.793000009	0.314026404	14.65185188	15.35023146	15.25208332	8.868840583
	4:00 AM	5:00 AM	13.27921939	15.18333329	7.146759236		2.909313699	0.293461543	19.62149125	17.39679489	15.99078947	10.30527777
	5:00 AM	6:00 AM	11.2784127	14.80624999	6.336245949		2.712954543	0.356567461	15.89285712	14.73611111	15.16451615	8.606270625
	6:00 AM	7:00 AM	11.826294	14.55083333	6.833022787	11.69444444	2.729754269	0.334236265	16.20351852	14.4807843	15.74905303	9.079535863
	7:00 AM	8:00 AM	11.18098291	12.58333331	6.262141269	9.71354164	2.714757909	0.454148469	16.59166667	14.64738371	15.09523811	8.563412213
	8:00 AM	9:00 AM	11.47541929	12.98333332	6.3937004	9.197500002	2.687844032	0.588624624	16.64375	14.97416666	15.64191915	8.623272881
	9:00 AM	10:00 AM	11.39991135	13.14254386	6.277598577	9.65333331	2.723617514	0.583704881	16.30519127	14.70316667	15.53254717	8.530225989
	10:00 AM	11:00 AM	11.52222223	12.86607145	6.496167886	9.57222227	2.747388635	0.741150284	16.49068629	14.80723685	16.72905983	8.725628149
	11:00 AM	12:00 PM	11.34961341	14.22878789	6.459957633	11.08333323	2.738049639	0.560412025	16.51599999	15.06474357	16.23157051	8.599547508
Noon	12:00 PM	1:00 PM	11.31079448	14.1729167	6.254810999		2.686264821	0.453490715	16.93694968	15.16984848	16.25484496	8.472943724
	1:00 PM	2:00 PM	14.2291847	15.79166668	6.357261916	13.15	2.691638707	0.324290785	20.71024589	20.15273223	20.30707545	8.8370081
	2:00 PM	3:00 PM	20.05226574	19.79166672	8.322955011	9.758333378	2.639115647	0.349731849	26.43701923	24.98987602	25.47174796	11.49109195
	3:00 PM	4:00 PM	25.7618741	26.477381	13.91529355	14.06666664	2.750954594	0.374886774	34.68114036	32.82133838	34.91647288	17.1255489
	4:00 PM	5:00 PM	30.79405902	22.19583328	21.99724062	21.95833325	4.022007714	0.711118368	45.85833333	39.84939693	40.55486108	22.88098291
	5:00 PM	6:00 PM	32.9699678	48.86666662	22.46147902	16.99999999	4.478901518	0.669814319	50.3496212	45.61651918	46.55218255	24.86487422
	6:00 PM	7:00 PM	26.35267379	29.45999997	15.82906626		3.127672947	0.470601857	43.59575759	38.98662935	40.77309523	19.62644927
	7:00 PM	8:00 PM	16.16989112	21.39404761	7.304907966	9.533333257	2.712229935	0.303875285	24.83909313	24.25968836	23.56742424	9.806497796
	8:00 PM	9:00 PM	11.46017094	12.67499998	6.355619043		2.727912972	0.283944957	15.80285715	15.10121358	16.06841086	8.66931059
	9:00 PM	10:00 PM	11.38577661	13.27777779	6.3358539		2.705138166	0.308158802	15.31100628	14.9119152	15.63442027	8.658500833
	10:00 PM	11:00 PM	11.2567623	12.43541665	6.318827168	10.64166661	2.720000005	0.300778396	15.58863634	14.79968354	15.62880953	8.595382162
Midnight	11:00 PM	12:00 AM	11.29761029	13.08452377	6.259974742		2.699129331	0.302152785	15.10115741	15.04641203	16.12896829	8.647552452

Time	Begin Time	End Time	2BE_B58	2BE_9A2	2BE_D69	2BE_BB1	2BE_D7C	2BE_D35	2BE_D6D
	Label		Site Z to Site H-1	Site Z to Site F	Site Z to Site E	Site Z to Site C	Site Z to Site B	Site Z to Site A	Site Z to Site Z-1
	Length (miles)		16.17557533	12.24150405	10.70788233	7.079935154	6.158128703	3.27855103	0.279723233
Midnight	12:00 AM	1:00 AM	15.30442177	11.71993671	15.35833343	6.788383843	9.633333385	3.016056927	0.34481294
	1:00 AM	2:00 AM	15.47756413	11.96847826		6.670930236		3.183739864	0.323587571
	2:00 AM	3:00 AM	16.16149431	12.31551725	19.82500001	7.100956303		3.234322039	0.345333349
	3:00 AM	4:00 AM	15.38596491	11.72943549	14.11250006	6.714052281		3.135303038	0.336202179
	4:00 AM	5:00 AM	17.73353659	13.61831395	15.74166661	7.524157288		3.24578543	0.334587039
	5:00 AM	6:00 AM	14.86062092	11.44973118	15.2208333	6.586467231		2.997507118	0.306405896
	6:00 AM	7:00 AM	14.99798245	11.91203704	14.90749998	6.92250907	12.47500006	3.033581339	0.300529654
	7:00 AM	8:00 AM	14.45566343	11.45737018	13.01428575	6.42363387	10.86500001	2.98708981	0.29012776
	8:00 AM	9:00 AM	14.70283882	11.63269231	13.51136361	6.59909591	9.394444469	2.987715799	0.303427025
	9:00 AM	10:00 AM	15.09512712	11.50657714	13.63478263	6.524571811	9.970000036	3.039974457	0.300630008
	10:00 AM	11:00 AM	14.82843138	11.75725678	13.57824076	6.771086566	9.643750037	3.041634364	0.311409394
	11:00 AM	12:00 PM	15.13789173	11.6137378	14.75476187	6.717463231	11.26666658	2.995118146	0.291332297
Noon	12:00 PM	1:00 PM	15.34589946	11.53346995	14.52708333	6.551994303	10.37500005	2.961768021	0.294904621
	1:00 PM	2:00 PM	20.23723957	14.52221292	16.08333344	6.625099788	9.258333324	2.961647443	0.283511468
	2:00 PM	3:00 PM	25.65264084	20.30989782	20.12777774	8.643314507	9.600000065	2.916902515	0.270468871
	3:00 PM	4:00 PM	33.23562208	26.86071428	24.48095241	15.56647376	14.31666663	3.028808869	0.280466975
	4:00 PM	5:00 PM	39.94838541	32.17844612	22.56527779	22.78627451		4.325928877	0.373163457
	5:00 PM	6:00 PM	45.72850141	34.34018182	49.45499991	23.69513889	15.75833336	4.95079365	0.338011243
	6:00 PM	7:00 PM	39.77603447	28.15546559	30.15555549	17.28939043		3.39207317	0.279816019
	7:00 PM	8:00 PM	23.25669936	16.84698986	20.70625001	7.638668422	9.766666666	2.98650137	0.287131521
	8:00 PM	9:00 PM	15.36139601	11.7225569	13.04166662	6.65585271	10.10833332	2.991537968	0.282331228
	9:00 PM	10:00 PM	15.1947832	11.59654762	13.56388891	6.630675667		3.004871177	0.292685862
	10:00 PM	11:00 PM	14.96439395	11.55690928	12.7229166	6.591473986	10.89999989	3.013361268	0.289196309
Midnight	11:00 PM	12:00 AM	15.07500001	11.57741618	13.55249998	6.549479169		2.998601777	0.297827815

TRAVEL TIME DATA

1 HOUR CORRIDOR STATISTICAL SUMMARIES

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 14-Dec-13
Day of Week: Saturday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	DED_C45	DED_EE8	DED_2A5	DED_B58	DED_9A2	DED_D69	DED_BB1	DED_D7C	DED_D35	DED_D6D	DED_2BE	C45_DED	C45_EE8	C45_2A5	C45_B58	C45_9A2	C45_D69	C45_BB1	C45_D7C	C45_D35	C45_D6D	C45_2BE	EEB_DED
		Segment Label	Site I to Site H	Site I to Site G	Site I to Site D	Site I to Site H-1	Site I to Site F	Site I to Site E	Site I to Site C	Site I to Site B	Site I to Site A	Site I to Site Z-1	Site I to Site Z	Site H to Site I	Site H to Site G	Site H to Site D	Site H to Site H-1	Site H to Site F	Site H to Site E	Site H to Site C	Site H to Site B	Site H to Site A	Site H to Site Z-1	Site H to Site Z	Site G to Site I
		Length (miles)	1.201	1.471	5.555	0.983	3.722	7.585	8.849	11.728	13.838	15.589	16.775	1.000	0.859	5.851	0.999	3.909	7.339999999	9.104999999	11.45527778	12.88333333	15.51173333	16.13666667	1.471666667
Midnight	12:00 AM	1:00 AM	1.119	1.270	6.395	1.219	4.059	8.758	8.644	11.828	14.511	14.876	1.195	0.877	5.798	0.149	3.618	10.54166667	8.711842126	13.03568327	11.44930556	15.19999667	15.95324667	1.392253575
	1:00 AM	2:00 AM	1.071	1.300	6.729	1.307	4.054	8.557	9.031	12.569	14.445	14.767	1.226	0.845	5.639	0.192	3.506		8.544999667	13.39999991	11.86666667	14.03333334	14.60053434	1.431060560
	2:00 AM	3:00 AM	1.137	1.364	6.528	1.355	4.211	8.253	10.508	13.750	12.690	15.195	15.449	1.231	0.840	6.052	0.205	3.385	10.3466667	7.952749976	14.42788337	12.00950556	14.4409722	14.78914278	1.381250000
	3:00 AM	4:00 AM	1.108	1.207	6.501	1.282	4.069	8.697	10.392		12.260	15.281	15.298	1.178	0.840	5.915	0.199	3.704	8.022916684	6.704761906	14.08333222	11.98382355	14.7540762	15.06875003	1.510416710
	4:00 AM	5:00 AM	1.064	1.207	6.667	1.214	4.089	9.953	9.910	13.999	12.572	14.890	15.474	1.245	0.853	5.841	0.181	3.589	7.795549443	8.949956704	12.78333334	11.56080105	14.72261904	15.2006937	1.458055556
	5:00 AM	6:00 AM	1.260	1.204	6.543	1.403	4.379	8.846	9.930	14.397	12.599	14.893	15.818	1.242	0.893	5.841	0.184	3.468	8.031666643	8.999999998	13.88472234	11.58153416	14.42266906	15.23955272	1.453999999
	6:00 AM	7:00 AM	1.179	1.235	7.168	1.379	4.152	9.376	9.355	16.856	15.360	18.369	18.878	1.214	0.948	6.308	0.178	3.539	8.353333267	9.123437953	15.86428294	14.18318884	16.25402916	16.53472223	1.453999169
	7:00 AM	8:00 AM	1.208	1.234	9.318	1.362	4.386	9.026	13.401	18.924	19.589	17.791	17.632	1.232	0.948	8.604	0.183	3.559	8.339174999	11.63023613	15.425936	19.17214389	16.55107263	16.80313316	1.3704169
	8:00 AM	9:00 AM	1.230	1.226	7.212	1.417	4.367	9.417	16.454	20.998	14.300	23.863	24.860	1.255	0.866	6.405	0.186	3.535	8.269814787	14.49799999	20.79429624	13.73526119	23.72238597	24.11519989	1.379279259
	9:00 AM	10:00 AM	1.274	1.276	9.503	1.468	4.581	11.548	11.864	16.250	15.200	21.380	21.637	1.281	0.874	6.696	0.185	3.564	8.411111115	10.44107142	16.78124988	11.94211195	20.94495985	20.94825366	1.365821748
	10:00 AM	11:00 AM	1.301	1.310	10.106	1.716	7.149	12.193	11.719	17.950	16.023	19.895	20.304	1.292	0.873	6.090	0.186	3.665	7.738888878	9.139916702	14.98876472	12.18888888	17.51372563	17.88558742	1.389277561
	11:00 AM	12:00 PM	1.827	1.357	9.066	1.955	7.711	12.642	13.729	17.829	14.948	20.964	21.199	1.291	0.882	6.008	0.183	3.648	11.85833322	9.278750029	13.64135398	11.81405882	17.08511377	17.58555555	1.356666665
Noon	12:00 PM	1:00 PM	1.818	1.409	8.879	1.777	6.649	13.172	12.995	17.667	14.800	19.529	19.978	1.296	0.889	6.935	0.179	3.621	10.23958924	8.803041623	13.4653846	11.84456214	16.42078613	16.7833928	1.358166674
	1:00 PM	2:00 PM	1.528	1.522	8.703	1.764	6.484	10.915	11.879	17.684	14.506	17.965	18.500	1.310	0.873	5.986	0.181	3.622	9.197722181	8.992627463	13.57341272	11.77369751	15.07713334	15.49982975	1.499666655
	2:00 PM	3:00 PM	1.510	1.280	9.613	1.665	6.246	11.790	11.215	15.988	15.353	17.817	18.095	1.344	0.874	6.138	0.183	3.585	8.958333414	8.924166662	13.58588527	11.94601437	15.41119791	15.77499999	1.528266887
	3:00 PM	4:00 PM	1.767	1.314	11.756	1.912	7.202	13.526	13.049	17.619	17.855	19.854	20.065	1.722	0.886	7.018	0.175	3.673	9.141666535	8.805882357	14.33412686	13.18319559	16.65995237	17.10738441	2.351860756
	4:00 PM	5:00 PM	2.346	1.470	14.897	2.660	8.931	16.421	18.977	19.573	20.710	23.961	24.631	1.916	0.895	8.539	0.175	4.111	10.93166672	10.01519638	14.69107143	15.44247513	19.97212542	20.6838653	3.385929899
	5:00 PM	6:00 PM	2.937	1.663	17.994	3.027	12.141	20.605	18.559	20.837	25.053	26.682	26.635	2.127	0.926	10.793	0.174	6.129	14.34166693	11.99531251	17.27532051	17.23350959	21.58425533	22.06773938	3.622953715
	6:00 PM	7:00 PM	3.357	1.726	10.037	3.401	13.609	11.574	21.750	24.993	16.515	30.009	30.037	1.461	0.908	6.149	0.185	6.621	9.649999961	14.13008236	18.8160001	12.44122897	22.30803782	22.64520648	1.848917748
	7:00 PM	8:00 PM	1.879	1.354	8.703	1.818	8.857	8.661	13.533	18.758	12.498	19.998	20.524	1.365	0.889	5.964	0.181	2.621	8.487499993	9.210897432	14.75052085	11.89302301	15.60825169	15.90270371	1.395288882
	8:00 PM	9:00 PM	1.185	1.234	6.779	1.371	4.299		9.099	14.920	12.527	15.165	15.402	1.357	0.865	5.879	0.185	3.568	8.158333392	8.557736126	13.3833333	11.76376601	14.45267858	14.73619048	1.38048285
	9:00 PM	10:00 PM	1.232	1.250	6.745	1.418	4.380	12.483	9.525	14.858	12.629	15.265	15.494	1.357	0.865	5.915	0.179	3.536	8.4349999	8.447999979	13.82569448	11.67992593	14.3035684	14.55986783	1.358873787
	10:00 PM	11:00 PM	1.214	1.213	6.657	1.403	4.303	9.780	9.146	14.396	12.455	15.100	15.560	1.304	0.879	5.844	0.191	3.551	9.625000097	8.47333339	13.83981479	11.54414083	14.45223606	14.58218858	1.33295814
Midnight	11:00 PM	12:00 AM	1.170	1.234	6.585	1.348	4.245	8.853	9.012	14.515	12.438	15.111	15.267	1.282	0.872	5.799	0.184	3.509	8.179166643	8.291666667	13.97499999	11.58396555	14.17847221	14.39181548	1.340364548

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 14-Dec-13
Day of Week: Saturday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	EEB_C45 Site G to Site H	EEB_2A5 Site G to Site D	EEB_B58 Site G to Site H-1	EEB_9A2 Site G to Site F	EEB_D69 Site G to Site E	EEB_BB1 Site G to Site C	EEB_D7C Site G to Site B	EEB_D35 Site G to Site A	EEB_D6D Site G to Site Z-1	EEB_2BE Site G to Site Z	2A5_DED Site D to Site I	2A5_C45 Site D to Site H	2A5_EEB Site D to Site G	2A5_B58 Site D to Site H-1	2A5_9A2 Site D to Site F	2A5_D69 Site D to Site E	2A5_BB1 Site D to Site C	2A5_D7C Site D to Site B	2A5_D35 Site D to Site A	2A5_D6D Site D to Site Z-1	2A5_2BE Site D to Site Z	B58_DED Site H-1 to Site I	B58_C45 Site H-1 to Site H
				4.95613854	5.13133607	5.91784810	3.12265232	6.6933305	9.29552039	11.86787904	12.7280947	15.2963625	15.4526267	4.66628917	4.85102712	5.17138107	6.02968539	2.98270285	3.27938548	2.22019224	5.67431345	9.10858039	9.59648164	9.2974169	9.9854640	9.6941886
Midnight	12:00 AM	1:00 AM		1.49999951	7.21195812	1.65586458	3.95113788		9.26553287	14.43690477	14.14303842	16.4494445	16.7605543	6.43933704	6.45071428	8.67575759	6.65138876	3.06413998	5.21166666	2.42908334	7.60833331	5.94613387	8.81814273	9.2275757	1.09629630	0.34015149
	1:00 AM	2:00 AM		1.51190752	6.89277797	1.65566595	4.18250963	9.350000316	10.25740739	12.11956666	13.72500304	17.18939394	17.6310665	6.42051283	6.40309445	6.76000000	6.65054107	3.07237074	4.49999732	2.61199988	7.80833331	6.12814466	8.62738037	9.11594205	1.09666870	11.81527770
	2:00 AM	3:00 AM		1.27923128	6.50196578	1.67666658	4.18247463		10.08211114	17.90833306	13.19800931	17.13333336	17.55254415	6.86776616	6.37291675	6.96666654	6.63888918	3.08475128	4.86111139	2.48742889	8.23611114	6.01237489	8.81814494	9.31455281	1.09833329	11.42833333
	3:00 AM	4:00 AM		1.26666711	6.74037346	1.60972208	4.25763888		10.08333337		12.92463118	15.66539456	15.98111114	6.69511054	6.47756498	6.58833329	6.58124998	3.15295236	4.61333289	2.72243522	8.79944432	5.93361348	8.78656188	9.15809811	1.09500008	14.45694437
	4:00 AM	5:00 AM		1.72500053	6.89541674	1.88883639	3.88833217	10.41666645	10.25625037		12.83937153	16.5627778	16.08125980	6.57435524	5.99401233	6.97138202	6.17873564	3.38105945	4.94423862	2.58858972	7.22777781	5.85870646	8.49658717	9.06384308	1.10666648	8.72222222
	5:00 AM	6:00 AM		1.99520555	6.98296547	1.78035528	3.18746387	9.599999897	10.23955599		14.33942754	15.83562298	15.24809962	6.35007242	6.03507241	6.92538288	6.17427472	2.96452189	5.07932653	2.54735337	6.49222188	5.31470574	8.67198703	7.07436308	1.02466748	7.97222222
	6:00 AM	7:00 AM		1.49555555	6.78374999	1.85338928	3.75248371		8.810416593	14.30937502	14.3392775	15.0348738	15.24809962	6.87083339	6.08187242	6.56448118	6.29874428	2.9898419	5.02916667	2.54716337	6.49023188	5.11917047	10.18894581	7.08133284	8.69166666
	7:00 AM	8:00 AM		1.44754898	8.88108645	1.65795544	3.82291806	9.766666833	11.0638298	16.94333338	19.3863095	16.6149999	16.3645494	7.01372078	6.17186149	6.66036049	6.41487884	3.16349615	4.99643898	4.77766699	9.89294498	10.3909511	10.60990278	10.6795495	1.04974748	9.38240740
	8:00 AM	9:00 AM		1.59624995	6.66450004	1.67324293	3.85390629	8.395833392	15.69461538	20.86388891	14.23311967	23.1554871	23.6586355	6.88967153	6.23592325	6.59833338	6.38906727	2.96181434	4.93649769	6.3349623	12.11669926	7.17588457	14.7966013	15.2963854	1.06263415	14.75324074
	9:00 AM	10:00 AM		1.54156216	6.37426809	1.69889268	3.89801961	8.450000036	10.61785719	15.72972228	12.23628319	21.0700598	21.7971945	7.58176559	6.34589763	6.97243728	6.52587362	3.01129724	4.91702604	3.31888877	9.00971919	5.82431362	13.81175809	13.8662832	1.09337507	14.63722222
	10:00 AM	11:00 AM		1.57317958	6.31989974	1.76289392	3.93666681	9.170833298	9.271537808	17.07013893	12.3115079	17.7914935	18.6045832	8.48138891	7.06071429	8.2034722	7.31621212	3.10544873	5.12333372	2.51407487	6.42443132	5.8442871	11.23673709	11.6783688	1.09147289	15.34305556
	11:00 AM	12:00 PM		1.54999999	6.29532715	1.74671758	3.85495783		9.46574073	13.94545459	12.01101943	17.2871791	17.7265153	11.61829268	10.0564273	12.0497358	10.3938349	4.45157388	5.02222195	2.52445535	7.63787863	5.79294715	10.93233995	11.9740740	1.0898344	16.55166665
Noon	12:00 PM	1:00 PM		1.60648471	6.22145391	1.73904184	3.79148392	9.402777883	9.46458294	13.91944441	12.07928849	16.7817129	17.2180107	11.49252533	9.74462598	11.2582279	9.88690426	5.18726673	5.35559508	2.52181123	7.48872317	5.82871362	10.23136984	10.5826533	1.09248718	12.99772728
	1:00 PM	2:00 PM		1.64611117	6.25898025	1.79985788	3.86597394	11.82499999	8.89149872	13.58750002	11.99395237	15.1603607	15.7129035	13.37154649	11.6476287	13.3285303	11.9401339	6.4049602	5.3925920	2.5587394	7.58055592	5.79474818	8.87013883	9.4542429	1.12777769	13.50851851
	2:00 PM	3:00 PM		1.57896247	6.52986661	1.75364584	3.87405651		8.45894447	13.67583322	12.5636439	15.5104166	15.9750003	18.1496016	15.5362198	16.7287878	15.7612416	10.2406349	8.62777807	2.49999999	7.74927103	5.86798309	9.28450497	9.6368996	1.19666667	14.97999196
	3:00 PM	4:00 PM		1.62416667	7.11428769	1.77933348	4.00965981		9.25972226	14.11277776	13.3820724	17.4039216	17.8333333	17.6107777	15.1453433	15.7780417	15.3690391	9.39953309	7.42708303	2.48111165	7.94311105	6.20416667	10.66371766	11.1166666	1.49126665	17.39444443
	4:00 PM	5:00 PM		1.36944438	9.21132812	1.43770497	4.22923976		9.570833347	14.6877776	15.03808813	20.3343137	20.8119791	21.3705844	17.2823158	18.9204742	17.4771442	10.1743872	8.29524999	2.51542523	7.94178293	6.26814423	13.02447166	13.3606652	1.73661645	8.07720869
	5:00 PM	6:00 PM		2.77581995	10.01956021	3.03489978	5.95167818		11.65833332	17.2933659	18.79171523	20.7115835	20.8791904	16.29980938	13.7997279	15.0224428	14.0015829	8.17820365	7.27187433	2.64551524	8.12446850	6.24781504	12.98052961	13.0118658	1.89021039	5.97449400
	6:00 PM	7:00 PM		1.64531487	6.42261935	1.81813724	6.08742935		12.65357143	18.3844446	12.9232428	21.7633334	22.2611946	8.51335279	8.95434274	8.16666672	7.16896401	3.12529166	5.33166715	2.69870358	6.01475278	6.02861421	11.10078339	11.4994585	1.23833333	9.35158726
	7:00 PM	8:00 PM		1.53845045	6.36258598	1.71666659	3.90347222	8.341666684	9.62407403	15.2998485	12.4142235	16.0893197	16.4778887	7.22903783	6.42129305	7.21388892	6.58972811	3.0919895	4.92033361	2.61288934	7.81287481	5.88075275	8.87446599	9.2417071	1.15372899	5.45222222
	8:00 PM	9:00 PM		1.54708337	6.21944439	1.72966652	3.99950943		9.20238097	12.8027779	12.03072916	15.1482758	15.4894443	7.17540489	6.34411106	7.15114937	6.57017531	3.13558876	5.07499998	2.49404762	7.83793223	5.82543979	8.50929868	8.8234195	1.12311825	11.82797619
	9:00 PM	10:00 PM		1.55078953	6.2595281	1.72733325	3.81790231	8.466666676	8.67133328	14.50833335	12.08922728	14.6277459	15.0450144	7.14928522	6.39662016	7.02604168	6.55017917	3.13018143	5.66666667	2.44791667	7.07303211	5.85450017	8.49982898	8.7346525	1.13755455	15.7231147
	10:00 PM	11:00 PM		1.53954576	6.40032511	1.71602531	3.89166665		8.88166673	12.7833334	12.59027775	14.7482636	15.0245833	6.97642788	6.10449337	6.63363859	6.32833321	3.08791538	5.07500003	2.43966666	7.67344663	5.86388884	8.52674511	8.7826955	1.08047138	14.1583333
Midnight	11:00 PM	12:00 AM		1.53962865	6.41582509	1.69791665	3.88293525		9.96666587	14.1347229	12.46904764	16.1441178	16.53	6.87800023	6.16487188	6.77013833	6.36490799	3.01384057	4.91458333	2.47166665	7.75079366	5.84264175	8.69383903	8.7562786	1.08833333	8.96791667

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 14-Dec-13
Day of Week: Saturday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	BS8_EE8 Site H-1 to Site G	BS8_2A5 Site H-1 to Site E	BS8_9A2 Site H-1 to Site F	BS8_D69 Site H-1 to Site E	BS8_BB1 Site H-1 to Site C	BS8_D7C Site H-1 to Site B	BS8_D35 Site H-1 to Site A	BS8_D4D Site H-1 to Site Z-1	BS8_2BE Site H-1 to Site Z	9A2_0ED Site F to Site I	8A2_C45 Site F to Site H	9A2_EE8 Site F to Site G	9A2_2A5 Site F to Site D	8A2_BS8 Site F to Site H-1	9A2_D69 Site F to Site E	9A2_BB1 Site F to Site C	9A2_D7C Site F to Site B	9A2_D35 Site F to Site A	9A2_D4D Site F to Site Z-1	9A2_2BE Site F to Site Z	D69_0ED Site E to Site I	D69_C45 Site E to Site H	D69_EE8 Site E to Site G
				9.917841910	6.09948924	3.95964718	7.38609849	9.31165390	14.45374762	11.60261464	15.88995812	16.17531432	3.77405993	3.80014328	3.21067322	2.99370208	3.95847718	4.28827904	5.19028684	3.94495931	8.07801628	11.54724128	12.14154404	5.47881468	7.32911834	6.4933365
Midnight	12:00 AM	1:00 AM	0.458333333	5.798333333	3.500666666	10.32499999	8.60784314	12.96666667	12.05595240	15.15795453	15.85138888	3.810815613	3.312291667	3.621333352	2.555041654	3.53787877	5.185416663	5.020166681	10.38756284	8.633024711	11.47514619	11.98322469	8.144444410	7.627777907	
	1:00 AM	2:00 AM	0.619444493	5.897952615	3.276333346	8.802777808	13.18333341	11.87499995	14.47129631	14.6333332	3.488889942	3.184846662	3.618518487	2.57821988	3.366919997	4.466665747	5.677777752	9.708333313	6.726422740	11.35527779	11.72253087	8.965999994	7.462500008	
	2:00 AM	3:00 AM	0.513888923	5.917241372	3.275925927	10.16555931	8.24444443	13.03916674	11.96923078	14.5852933	14.87838048	3.653249971	3.189824868	3.41718751	2.482633953	3.452389946	5.172916685	5.507639863	10.71833333	8.500764277	11.58032405	11.82598028	8.578333374		7.8666665
	3:00 AM	4:00 AM	0.533333333	5.717021283	3.538888892	7.872916753	9.476109543	13.91666652	11.89495667	14.72442529	15.01527770	3.638695473	3.378125621	3.502083348	2.343558702	3.46845057	4.675000008	5.638461543	10.94999985	8.293172251	11.20128255	11.59857408	9.033332422	8.492000004	
	4:00 AM	5:00 AM	0.679999965	5.545614601	3.408833286	7.68888857	8.83000003	12.66666653	11.42827758	14.5881528	15.03688178	3.884401465	3.187222234	3.320761837	2.469781166	3.355923053	4.48525635	5.179166701	9.750500995	8.282831148	10.79596637	11.32833333	9.133216228	8.910714281	
	5:00 AM	6:00 AM	0.829799955	5.693746694	3.305314707	7.874166721	8.500000013	11.73944443	11.14993753	14.2354189	15.03583298	3.708493922	3.107275493	3.229553201	2.414957142	3.370732354	4.685666519	5.035152988	9.203214132	8.057700421	10.29270292	11.07222223	9.392166677	8.602779204	
	6:00 AM	7:00 AM	0.825000022	6.103867693	3.379263564	8.266666521	9.020555567	13.23861482	14.07993899	16.2259375	16.23263898	3.698895349	3.148995669	3.426032201	2.798875268	3.335574235	4.826466119	5.146332537	11.16971479	10.7108767	12.85794701	12.86913767	8.938836373	8.902777925	8.133333474
	7:00 AM	8:00 AM	0.610007513	8.341083616	3.376364454	8.088888901	10.9919643	20.62333337	19.20706597	16.38365305	16.73746998	3.807704367	3.064035665	3.496833322	4.974790794	3.280341903	4.669691188	7.245370368	12.25401226	15.51844569	13.11004602	13.24285713	8.681182777	7.745033341	
	8:00 AM	9:00 AM	0.628769851	6.292556509	3.356399048	7.96715689	14.16941667	20.2774511	13.79223865	23.55456141	23.8918889	3.737215889	3.245021655	3.537318373	2.803177456	3.435491967	4.758851088	11.17291667	16.77187499	10.01878671	18.96647059	20.48364428	8.782142873	8.123685198	
	9:00 AM	10:00 AM	0.662501622	5.339775999	3.388895188	8.311655511	10.65202538	17.06438579	11.76995374	20.62458978	21.00108208	4.004362173	3.448180167	3.696013342	2.448247131	3.625145348	4.785376083	8.801562499	12.26825387	8.35327593	16.84579825	17.64337606	9.23835953	8.308334455	6.438888825
	10:00 AM	11:00 AM	0.633159718	5.944031532	3.92004866	7.775000073	8.961666707	15.03604169	11.9577381	17.18488727	17.64827588	4.43783067	4.018967288	4.07397438	2.469373962	4.239713362	4.652976158	5.094512206	11.29772228	8.339334866	13.35674119	14.05810397	11.05530303	10.8199999	9.41250014
	11:00 AM	12:00 PM	0.643785319	5.855482443	3.479699538	11.28333333	8.731178888	13.63452777	11.68022876	18.79394583	17.37979297	5.539729735	5.89755905	5.271428569	2.409329478	6.035501957	5.118518539	5.170833326	10.03045541	8.184575318	13.27399987	13.6691239	14.52541594	13.08452382	
Noon	12:00 PM	1:00 PM	0.65576029	5.918435493	3.456625671	8.008333388	8.662499974	13.23008768	11.86866667	16.09408728	16.45193931	7.668523931	4.7349967	7.665345149	2.454287661	4.908243724	5.077564198	5.148484755	10.02777777	8.309987323	12.63890269	13.09265673	17.65709127	14.2733333	
	1:00 PM	2:00 PM	0.6691666671	5.825299753	3.448806112	9.119444378	8.825000008	13.40952394	11.80528273	14.93707165	15.45404449	6.39956894	5.362771526	5.885236168	2.419504627	5.559798986	4.913791657	5.21027777	10.08290599	8.191047455	11.44443215	11.95804019	22.50984615	24.32000002	32.70833345
	2:00 PM	3:00 PM	0.646621644	5.955689647	3.422395838	8.733333348	8.28916257	13.62555557	11.80404761	15.11505849	15.54890575	7.178851824	5.514662928	6.849261602	2.512772338	5.73885327	4.777777791	4.8688889	9.886538468	8.38446791	11.6180284	12.09153298	27.43154761	24.13333328	
	3:00 PM	4:00 PM	0.666801858	6.024600079	3.503892931	9.075000065	8.566145798	14.05219294	12.9365909	16.35494089	16.89307116	8.111790108	6.414453335	6.60050001	2.928611111	6.570188079	5.028999875	5.061342604	10.5057632	8.143338695	12.92110168	13.56344248	27.28875002	24.8944442	23.73333336
	4:00 PM	5:00 PM	0.668188974	5.307586207	3.954529252	10.80833333	9.831770835	14.42502084	15.25455605	19.8926676	20.49176992	8.423169246	7.531587313	6.401992758	3.400455061	7.719406914	5.508333373	5.538583326	10.9716668	9.484678643	15.68491083	16.08615024	30.43409990	25.81145833	23.93333348
	5:00 PM	6:00 PM	0.694074094	10.66344449	5.983429258	14.09166669	11.99648149	18.9531783	17.01681419	21.20463797	21.56215277	11.7047715	5.147408524	8.692498337	3.860952563	5.370124122	5.774074029	6.088333364	11.34508547	10.13108849	15.8977907	16.01180959	24.23666685	19.78333310	20.89999966
	6:00 PM	7:00 PM	0.678288114	5.961491242	6.494195847	7.733333297	14.01966784	19.37333335	12.27487106	22.0452574	22.49438946	7.492763152	3.882038301	6.529938877	2.526500005	4.143655921	4.818181775	6.596789489	11.81823	8.728459132	14.8564284	15.42983355	14.99166662	10.40528833	20.90833342
	7:00 PM	8:00 PM	0.673223224	5.851111112	3.446947156	8.408333324	9.077564113	14.49555537	11.35733332	15.25118149	15.69657536	5.383333332	3.337885149	4.938814725	2.413249995	3.550068616	4.783333285	5.336389627	10.78845237	8.313996581	11.74133334	12.12383016	8.334522782	8.494166659	8.833333317
	8:00 PM	9:00 PM	0.616666664	5.730158743	3.443364485	7.888111101	8.399999988	13.72499994	11.58369999	14.39111111	14.69614427	4.134907408	3.332448379	3.916668872	2.415938088	3.518157169	4.750000053	5.041379331	10.0121527	8.209887738	10.92832208	11.24798178	9.479166688	8.691666797	8.725000113
	9:00 PM	10:00 PM	0.631609174	5.749754888	3.361788607	8.291666619	8.182541888	13.55984652	11.60003207	14.12312207	14.3757622	4.07033333	3.268208256	3.880083336	2.397222208	3.449010078	4.829999954	4.873287444	10.4794671	8.28034721	10.82361112	11.11321619	9.443333282	8.292500000	9.091666898
	10:00 PM	11:00 PM	0.644202874	5.695476187	3.404564513	9.375000115	8.341667	13.64722218	11.43124998	14.44409165	14.5671031	4.004114648	3.1745704	3.766145846	2.411358453	3.401935752	4.976666693	4.693939412	10.3701388	8.264676502	10.88658737	11.16394557	9.138888912	8.573333368	
Midnight	11:00 PM	12:00 AM	0.680952364	5.626388909	3.314154136	8.141666679	8.187500022	13.87187499	11.28400002	14.0505995	14.2812499	3.882762577	3.149828188	3.629238897	2.398222214	3.372553532	4.587261167	4.953545808	10.40937	8.237021841	10.94988737	11.14587378	9.078151208	8.027499997	

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 14-Dec-13
Day of Week: Saturday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Length (miles)	D69_2A5 Site E to Site D	D65_BS8 Site E to Site H-1	D69_9A2 Site E to Site F	D69_BB1 Site E to Site C	D69_D7C Site E to Site B	D69_D35 Site E to Site A	D69_D6D Site E to Site Z-1	D69_2BE Site E to Site Z	BB1_DED Site C to Site I	BB1_C45 Site C to Site H	BB1_E8B Site C to Site G	BB1_2A5 Site C to Site D	BB1_BS8 Site C to Site H-1	BB1_9A2 Site C to Site F	BB1_D69 Site C to Site E	BB1_D7C Site C to Site B	BB1_D35 Site C to Site A	BB1_D6D Site C to Site Z-1	BB1_2BE Site C to Site Z	D7C_DED Site B to Site I	D7C_C45 Site B to Site H	D7C_E8B Site B to Site G	D7C_2A5 Site B to Site D
				1.37138214	7.999999999	4.280027158	4.587782127	3.395277241	7.664664487	10.40089964	10.72189212	8.209234422	3.154189489	4.395202958	7.210192928	8.191455239	5.195218954	4.387712147	5.555916916	3.88156477	6.873993029	7.029235154	11.73212405	10.47527128	11.88782404	8.678833845
Midnight	12:00 AM	1:00 AM		4.292085716	7.899999999	4.680769205	5.595583034	11.65000001	10.14047627	12.36388889	12.62222216	8.753125020	8.104891308	8.828174614	2.036244971	8.214682539	5.037179482	6.883333331	5.816666633	3.637833329	6.555272992	6.912209283	20.62500011		13.72550008	8.186333327
	1:00 AM	2:00 AM		3.711111108	7.649999997	4.848333296	7.133333365	10.0624999	10.09249998	12.95139954	13.3154762	8.564583272	8.459469723	8.821666611	2.077131175	8.694313767	5.121396409	7.413888908	5.978833302	3.738250014	6.620000029	7.014911294	14.79983313	13.19166655	14.92500008	8.3541667
	2:00 AM	3:00 AM		4.028714287		4.705000022	5.891666729	12.0866666	10.41200003	12.55410953	13.32705329	8.704166667	8.423611121	8.708944408	2.072834489	8.651851853	5.180833345		5.741666704	3.875666447	7.011666639	7.46583334		13.43749995		7.498999988
	3:00 AM	4:00 AM		4.466566732	8.310000011	5.204999995	6.805555522	12.7083333	11.14666668	13.56351335	13.95249999	8.370833118	8.542277807	8.7033333	1.98750002	8.8654762	5.06166666	6.825000028		3.787777771	6.650523782	7.23539525				7.337499993
	4:00 AM	5:00 AM		3.932333366	9.022222208	5.147619039	7.338333294	10.37999995	10.09741999	13.27181456	13.38452989	8.243055515	8.630416993	9.018749993	2.020953176	8.579999993	5.109374975	6.166666576	4.65833338	3.738333335	6.587833899	6.923184412		11.38333345		
	5:00 AM	6:00 AM		3.737333336	8.833333319	4.764666635	7.237833297	12.29533337	12.37756235	13.13849375	13.13849375	8.534166661	8.542631125	8.952379963	2.012436887	8.121666687	4.955321477	6.608571428		3.742333348	6.769923889	6.973942948	14.12916673	12.66166673	13.89166988	7.428703737
	6:00 AM	7:00 AM		3.339629412	9.050000059	4.933853389	6.440740769	12.2611111	11.53708138	12.9147059	13.42444449	8.761111107	8.076785762	8.373333343	1.962938961	8.194531207	4.885717765	6.968666694	5.094444418	3.854411749	6.509938879	6.717966972	14.8166669	13.75575753	13.03166674	7.409833905
	7:00 AM	8:00 AM		5.114499729	7.940277705	4.71215278	9.185185315	13.89537037	14.97933334	13.9280703	14.0376042	9.112777803	7.908333319	8.49698667[illegible]	1.957051199	8.105128198	4.926294297	7.041666668	5.818518531	3.62963962	6.379461992	6.729461961	16.44166667	13.5761666[illegible]	14.09722205	7.361404249
	8:00 AM	9:00 AM		3.932455297	8.324444465	4.772376558	11.48194444	16.10763892	11.15222522	19.28051556	19.56620371	8.877588194	8.248837207	8.675575533	2.004068542	8.448836559	5.13704678	7.099999998	5.876923116	3.77562499	7.423095237	8.083095245	15.68888889	13.71979166	13.95256411	7.761089754
	9:00 AM	10:00 AM		3.752078204	8.583333353	5.022222438	7.28508238	12.1135417	9.558494279	17.65072044	18.03152174	9.012387288	8.087241387	8.479587329	1.966554055	8.232470588	4.905336954	6.948529428	5.177500013	3.827053051	10.03413173	10.53450851	13.46250007	11.46375	14.04999999	7.614484212
	10:00 AM	11:00 AM		3.857870372	10.92708328	5.190972195	6.270833293	10.91944453	9.63202888	14.6952778	14.80643938	9.638320833	8.409487161	8.85345586	1.99955127	8.692475489	5.039417988	7.039538439	6.523511071	3.576470589	9.136321189	8.82557489[illegible]	15.44583335	15.31249998	14.79444446	8.022348449
	11:00 AM	12:00 PM		3.745555507	13.8976135	8.427430583	6.225000031	11.62916673	9.511904754	15.18888889	15.7372221	10.57258202	9.188929472	10.03398514	2.047751324	9.385956783	5.170304218	7.966666708	5.290277777	3.978921551	8.579849539	9.174999967	15.18166665	14.44034842	15.52738095	7.378919438
Noon	12:00 PM	1:00 PM		4.163596468	14.49499999	10.2995908	6.227777712	10.83611107	10.09555552	13.66541667	14.13788891	13.41006946	12.3635126	13.44087303	1.986497598	12.5490908	6.394038458	6.972222208	5.150000028	3.526041668	8.077020212	8.774218752	10.89983328	18.2958375	19.19166667	7.4265256
	1:00 PM	2:00 PM		6.213460057	24.36388889	15.43803031	4.679166649	11.53333331	11.79583336	13.36947916	13.96779833	13.29392856	11.86022725	12.9634504	2.031382028	12.00452989	7.285333336	7.475000034	5.398958323	3.699355974	6.825347226	7.595512803	21.17361107	18.29666663	19.91422868	7.971634619
	2:00 PM	3:00 PM		8.466228064	24.28518515	18.50402298	8.964583282	14.32777774	14.70277777	14.93409989	15.58333332	15.82053571	14.21432274	15.52456141	2.378437591	14.59576502	9.257481758	7.583333373	5.127083352	3.46822813	6.799604726	7.467539516	22.06547618	19.08893056	24.44242424	8.002026142
	3:00 PM	4:00 PM		7.809090904	25.06666666	18.0989957	9.796666666	15.90952142	13.9763889[illegible]	19.24015149	19.63333333	21.23423421	18.6001804	19.90440293	3.218497198	18.80166916	13.6170045	11.88833333	5.805555568	3.514236091	7.695075798	8.65793502	29.71166673	23.34847915	27.93703703	8.431735536
	4:00 PM	5:00 PM		6.971759228	25.7675926	16.81145833	10.05595237	15.46145829	13.83333333	20.32624076	20.84583333	21.30395833	18.73866666	19.92303923	3.155225228	19.1921818	12.78971735	10.33583336	5.333333295	3.793564824	10.76360952	11.63229295	27.31547617	25.61111108	26.90138888	8.629457356
	5:00 PM	6:00 PM		5.404824565	19.96666655	14.93416667	9.983333247	15.33541665	11.59166667	19.77027031	20.29229165	24.82649534	21.00026882	22.35968178	3.571753142	21.19409724	13.86932234	11.11666675	5.886666689	3.78544742	10.41875002	11.17173681	30.49270834	27.18566628	31.20002778	9.970999504
	6:00 PM	7:00 PM		4.262745201	10.58958333	6.132083272	7.661111131	13.9166667	10.69166665	16.14998976	16.53000001	20.43887521	16.8964445	18.71182798	2.600098885	17.1732512	11.1085241	9.878761841	5.128205154	3.6622224	8.620806392	9.349679455	28.77316956	23.33370035	25.05600063	8.970994461
	7:00 PM	8:00 PM		3.972033313	8.591666659	5.093333340	7.525000032	12.30833335	9.856770798	13.5365364	13.985	10.33815451	9.296804608	10.41602563	2.048484485	9.5323811	5.222552171	7.365555539	5.177777782	3.590277767	6.408054524	6.86988247	18.78249999	15.95833337	23.60833339	7.677245809
	8:00 PM	9:00 PM		3.888111113	9.166666735	5.132222228	6.576388892	11.96666672	10.15000003	12.5786458	12.83277775	9.319825575	8.405424435	9.272807004	2.072424428	8.708854162	5.212495553	7.058333438	5.119444449	3.571999981	6.295153823	6.597656948	14.24999989	14.14166668	14.39374998	7.858244453
	9:00 PM	10:00 PM		3.833333313	8.466874992	5.156666542	6.531249994	11.3958333	9.552777818	12.845	12.77499998	9.356696573	8.4541666	9.301041674	2.089110045	8.636294713	5.243712124	7.466666652	6.056666639	3.49791665	6.147345641	6.46694127	14.07291667	13.38194446	16.76666653	7.72073811
	10:00 PM	11:00 PM		3.990000002	8.800000045	5.126333336	6.524999986		9.988888884	11.75833326	12.17500001	9.152777746	8.568493818	9.910294137	2.082180887	8.701666657	5.24240196	6.416666688	3.51999986	6.196666642	6.499537056	15.73214285	14.23055554	14.3011905	7.850701169
Midnight	11:00 PM	12:00 AM		3.873333313	8.266666657	4.949891358	6.766666677		9.780208343	12.78722226	13.26999994	8.998052681	8.208760981	8.516666663	2.044318188	8.398061997	5.142171713	6.885416653	5.825000011	3.471111149	6.179444466	6.525555577	14.21041674	13.96428572	13.72500001	7.858018517

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 14-Dec-13
Day of Week: Saturday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label / Length (miles)	D7C_B5B Site B to Site H-1	D7C_9A2 Site B to Site F	D7C_D49 Site B to Site E	D7C_BB1 Site B to Site C	D7C_D35 Site B to Site A	D7C_D6D Site B to Site Z-1	D7C_2BE Site B to Site Z	D35_D6D Site A to Site I	D35_C45 Site A to Site H	D35_EE8 Site A to Site G	D35_2A5 Site A to Site D	D35_B58 Site A to Site H-1	D35_9A2 Site A to Site F	D35_D49 Site A to Site E	D35_BB1 Site A to Site C	D35_D7C Site A to Site B	D35_D6D Site A to Site Z-1	D35_2BE Site A to Site Z	D6D_D6D Site Z-1 to Site I	D6D_C45 Site Z-1 to Site H	D6D_EE8 Site Z-1 to Site G	D6D_2A5 Site Z-1 to Site D	D6D_B58 Site Z-1 to Site H-1
				12.4617452	8.5649960	8.6922778	5.5691691	3.2268924	6.1682520	5.1812870	12.6985498	12.8853486	12.7409467	6.1008109	13.5323456	8.7787549	7.4569148	8.8835467	5.4508922	3.0819642	3.7383128	15.5888921	15.8417281	15.2762123	9.0961954	15.5899582
Midnight	12:00 AM	1:00 AM			11.1809523		5.8616667				12.3433333	12.6586419	12.8202386	5.8710992	12.8973958	8.9713675	10.1599442	3.7735353		2.8056897	3.3038722	14.9758722	14.2043858	16.1872222	8.4855554	14.4539357
	1:00 AM	2:00 AM	13.3583333	8.8499998		5.2499985					12.1681851	12.2814148	12.5553301	5.6423588	12.4888888	8.8696534	11.5499999	3.8131182		2.7032513	3.0804347	14.9533334	15.2997475	15.3844445	8.6027779	15.4148149
	2:00 AM	3:00 AM	13.7083333	10.1055556		5.7194444					12.3979166	12.9726389	13.0944444	5.7699528	12.2506410	8.7677774	10.0583333	3.7852564	7.9749999	2.7815581	3.1128472	14.9354163	15.0853031	15.3757757	8.6930912	15.3543299
	3:00 AM	4:00 AM				5.5499994					12.5635148	12.9611108	11.8901549	5.7693148	12.3955208	8.6985042	11.0708336	3.7595237		2.7347782	3.0802083	15.2333333	15.0533334	16.0027761	8.5308642	15.7844447
	4:00 AM	5:00 AM			8.7916659	11.7333340		6.6000005			11.8945278	11.4859432	12.7213333	5.8386737	11.7175391	8.6877138	8.8361115	3.6230769		2.6842018	2.9875888	14.9841481	14.9832032	14.4966667	8.3888889	14.8145122
	5:00 AM	6:00 AM	12.8499997	10.2499998		5.0187500	6.7633333				12.1635185	11.4253125	12.3889583	5.4948697	12.3267188	8.3390870	10.5220222	3.5324675	6.9416666	2.6504255	2.7874137	14.8335185	14.6833333	15.4337612	8.3709999	15.0333333
	6:00 AM	7:00 AM	13.8358974	10.4383333	12.6583332	5.5935897	6.4166667	9.6694437	9.6527778		12.3528463	11.4678126	12.8895833	5.4692355	11.8513816	8.3928373	10.7452039	3.5283333		4.2948539	4.6179556	15.3983033	13.9536691	15.6072618	8.2554168	14.2963532
	7:00 AM	8:00 AM	13.6498718	10.5972144	13.6483335	5.1888888	6.2708333				12.2107143	11.7537604	12.1444444	5.5423529	11.9654104	8.6071053	10.8166665	3.5416666	6.4777778	2.6374033	2.9497136	15.1960451	14.3681218	14.5541668	8.1274888	14.4799950
	8:00 AM	9:00 AM	13.5666667	10.6766669	12.2667500	5.9726825	5.9266667	11.3416667	11.8000003		12.4402438	11.9019953	12.0722222	5.4817883	11.8251116	8.4952979	10.4591665	3.5787210		4.0978190	4.3538807	14.3228889	14.8491072	8.1407346	14.4572914
	9:00 AM	10:00 AM	13.6004165	10.2059210	12.3652778	5.5934579	6.6854167				12.0564147	12.0118137	12.4766667	5.5208116	12.2352402	8.4648257	10.5379821	3.5192941	6.0833333	5.3075547	4.4588014	15.1808585	14.3795833	15.0266298	8.1905555	14.5832379
	10:00 AM	11:00 AM	14.8714912	11.1481119		5.7768119	6.8750000	12.1750001	12.7125003		14.2877492	12.7198122	14.1395833	5.6569725	12.9718275	8.7479810	10.4333333	3.9362745	7.1000000	5.4492723	5.9541128	15.6715737	14.7206338	15.1125002	8.1294128	14.9100174
	11:00 AM	12:00 PM	14.6778464	10.5331665	13.2333322	5.1916669	8.3666667				17.0200453	15.1897592	16.8195532	5.4162711	15.2147132	9.6962593	10.975	3.9553730		5.5645449	5.4580470	17.2298667	15.8524230	17.4028755	8.5301488	15.9581417
Noon	12:00 PM	1:00 PM	18.4238334	12.2702832		5.2564192	6.4337499	17.9916664			18.8526578	15.5332193	16.9136112	6.0624358	15.6664599	10.9656429	10.2388895	3.4989099	6.9355834	6.4927032	6.8122753	18.2315029	18.1537548	19.8366252	8.0274816	18.3924436
	1:00 PM	2:00 PM	16.4671847	13.7426870		12.7208345	5.7158546	6.5416666			20.3995503	18.7573054	20.3391304	6.8203125	18.8772298	13.8058549	11.8499993	4.1851988	7.1972221	3.1358499	3.6486601	18.8918573	18.0580364	19.4128472	8.6784488	18.2497685
	2:00 PM	3:00 PM	19.2746667	14.8217054			5.5389594	7.8666667	9.4749995	9.8666662	24.7120677	22.1020627	23.7287691	7.0435267	22.5335001	17.0816119	12.2374999	4.6596278	6.4333333	3.4710234	3.9095458	23.4123809	21.4187239	23.2016666	9.5957847	21.5069254
	3:00 PM	4:00 PM	24.4466476	19.9721642	17.1333327	5.6555561	6.6016667	11.9194166	12.8833332		26.7525193	24.6466666	25.4146253	9.2872969	24.8969833	18.4847577	14.7194444	4.3614255	6.7833333	4.7876712	5.2988942	27.0323645	24.6375333	25.4245238	9.6940860	25.3415648
	4:00 PM	5:00 PM	25.5241277	19.2637501		6.2523819	6.7533335	12.8811108	13.8125001		29.4724637	25.9345833	26.9206175	8.1834148	26.1368333	18.7639648	15.4791665	6.5484543	6.5708333	6.9972034	7.4489212	29.3623184	27.2379629	28.7829167	11.8147653	27.4473270
	5:00 PM	6:00 PM	27.3637921	20.2056356		6.4106770	6.3555555	13.345	13.5777779		23.5305003	20.5615903	21.8127692	6.4523836	20.8443182	14.5986439	15.8233323	4.7753281	7.0444443	6.8449515	7.3729167	32.1761112	28.5846467	29.6647275	11.0228093	28.8515510
	6:00 PM	7:00 PM	24.1579454	18.1188718	11.4833342	6.1621212	6.4972218	11.3499996	11.7249994		14.3464999	12.5119983	13.8642198	5.6311764	12.7492515	8.7362683	14.2383332	3.9190754	8.7666662	4.8463816	5.2893196	25.8319149	23.4039634	24.8226622	9.1011343	23.6081378
	7:00 PM	8:00 PM	15.5899955	12.1278824	12.7416660	5.3454545	7.6129032				13.2950253	12.1853976	12.9271476	5.6788897	12.1475305	8.7748004	11.8166669	3.6395284	6.5166668	2.8815236	3.2287597	18.8413132	15.2581953	16.8301111	8.3014922	15.4329085
	8:00 PM	9:00 PM	14.3552028	10.5703763		5.5962963		8.7166666			12.8617883	12.1516334	12.9778887	5.7910504	12.1197222	8.9088545	9.9666674	3.6747777		2.6587932	2.9579472	15.7491319	14.8816565	15.5705558	8.3811494	15.0637681
	9:00 PM	10:00 PM	13.6179491	10.7563334	15.2666667	5.8333333					12.7505951	12.1668188	12.8543894	5.8262232	12.3684198	8.9508333	10.8833333	3.6701047	6.8291666	2.6524434	2.9523398	15.5227933	14.8161455	15.7398056	8.5260593	14.9685857
	10:00 PM	11:00 PM	14.3191672	11.2845238		5.6375000	7.3583328				12.7123662	11.7299997	12.3184443	5.6377312	11.9904586	8.7453245		3.7267884		2.6561667	2.9651067	15.2509595	14.9591911	15.7833334	8.5112318	15.1214139
Midnight	11:00 PM	12:00 AM	14.1814583	11.2492635	12.2250000	5.3416669	8.5083328	10.6666665			12.3114583	11.7972758	12.0604166	5.5570270	12.0176470	8.5279812	10.7930552	3.6293235		2.6305619	2.9257092	15.3143187	14.3587878	14.8324211	8.3818661	14.6477156

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 14-Dec-13
Day of Week: Saturday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	D6D_9A2	D6D_D69	D6D_BB1	D6D_D7C	D6D_D35	D6D_2BE	3BE_DED	2BE_C45	3BE_EE8	3BE_2A5	3BE_B58	3BE_9A2	2BE_D69	2BE_BB1	2BE_D7C	2BE_D35	2BE_D6D
				Site Z-1 to Site F	Site Z-1 to Site E	Site Z-1 to Site C	Site Z-1 to Site B	Site Z-1 to Site A	Site Z-1 to Site Z	Site Z to Site I	Site Z to Site H	Site Z to Site G	Site Z to Site D	Site Z to Site H-1	Site Z to Site F	Site Z to Site E	Site Z to Site C	Site Z to Site B	Site Z to Site A	Site Z to Site Z-1
			Length (miles)	14.6471218	16.4068904	8.6739919	5.1693296	3.5491955	2.2762323	15.7245154	15.1395119	15.4583122	3.2827438	16.1728253	12.5419495	16.7078123	7.6293154	4.7312370	3.2789108	3.2272323
Midnight	12:00 AM	1:00 AM		11.4295977	12.7428572	6.4183734B		2.6530528	0.3353523	15.4696866	14.5132755	15.9083338	8.7252082	14.6753191	11.5944444	13.3009725	6.6743464		2.9170303	0.2770182
	1:00 AM	2:00 AM		11.6231061	14.3453135	6.5591667		2.7496527	0.3377118	14.9464869	15.5234569	16.2308331	8.8073511	15.7098214	11.7759436	14.5541664	6.8362907		2.9980072	0.2713798
	2:00 AM	3:00 AM		11.5830581	15.8416674	6.6887925	10.6791675	2.8396393	0.3351955	15.0345236	15.7267547	15.3066667	8.8643975	15.6184047	11.6948305	15.3566667	6.9478915	11.1583333	3.1225894	0.3196152
	3:00 AM	4:00 AM		11.5841668	18.6722225	6.6363632		2.7207071	0.3372809	15.2529292	15.5431726	16.0047618	8.7648148	15.7058275	11.7671266	19.0666666	6.8791665		2.9967929	0.2766535
	4:00 AM	5:00 AM		11.5898468	13.7380952	6.6387609		2.7304763	0.3400614	15.3679821	15.1139694	14.5476195	8.6001587	16.0566667	11.5853846	14.0749998	6.8899205		3.0773128	0.3128659
	5:00 AM	6:00 AM		11.3305757	13.4222223	6.3363636	9.3999999	2.7224763	0.3365055	15.4696866	14.4376769	15.5626667	8.5008334	14.9579583	11.5853846	13.7933333	6.6864769	9.6666665	3.0152415	0.3090573
	6:00 AM	7:00 AM		11.1212523	13.4216667	6.2308736		2.6978333	0.3067803	15.5829885	14.1457969	15.4012501	8.5205546	14.3548333	11.2589988	13.9868333	6.4669666		2.9650757	0.2963413
	7:00 AM	8:00 AM		11.0327464	13.6976167	6.2511415		2.6739972	0.3038000	15.3706879	14.538111	14.8445218	8.4428478	14.6207863	11.3278778	13.9242424	6.5418619		2.9696190	0.2939887
	8:00 AM	9:00 AM		11.2091758	13.0138889	6.2013888		2.6440277	0.4755478	15.1992352	14.5237831	15.2416666	8.4597205	14.7096296	11.5207317	13.6255553	6.5323697		2.9348314	0.2735771
	9:00 AM	10:00 AM		11.1598765	13.4011111	6.2365128		2.6838775	0.5221005	15.3039967	14.3892583	15.2053334	8.3842878	14.7135483	11.2669556	13.6326335	6.4599743		2.9293752	0.2708643
	10:00 AM	11:00 AM		11.1726996	13.2269608	6.2765017	10.1208334	2.6494634	0.5174431	15.8652412	14.8696263	15.7168035	8.3964287	15.0549587	11.4043742	13.0360183	6.5356780	10.1583336	2.8173645	0.2772854
	11:00 AM	12:00 PM		11.6528937	13.8375005	6.5852198	28.6416667	2.8742235	0.4788187	17.4345052	15.7031943	17.8813036	8.7671393	15.9539214	11.7915379	14.1791667	6.8072430	8.3166667	3.5845038	0.2760416
Noon	12:00 PM	1:00 PM		12.3642029	12.8611108	6.1212029	10.0333334	2.6253285	0.4858142	19.6664667	18.0747499	20.0743696	8.3102652	18.172692	12.6548786	12.7458336	6.3533974	10.2816666	2.8835306	0.2664528
	1:00 PM	2:00 PM		13.638526	14.5972221	6.8465624B5	11.7499997	2.6214975B3	0.4872387B8	19.7737378	18.4497477	20.1888888	8.9794494	18.5785358	13.9306661	15.0555553	7.1563676		2.9142396	0.2968514
	2:00 PM	3:00 PM		16.2835875	15.2499997	7.3918412	9.3250000	2.6173386	0.4696256	25.5394443	21.8096468	23.3811994	9.8624463	21.9399515	16.7842469	15.5895835	7.6562804	9.2333333	2.8872331	0.2623869
	3:00 PM	4:00 PM		19.7656781	15.7333341	7.0096854	16.4833334	2.6246739	0.5079112	27.5623765	25.3384953	25.8802469	10.0830233	25.9039596	20.1060575	17.7166668	7.3195819		2.9153033	0.2739429
	4:00 PM	5:00 PM		21.6787234	18.8124997	9.3274853B5		2.7690454	0.6248259	30.1438735	27.8542984	28.1758118	12.3914571	28.1387966	21.6795152	18.675	9.9334656	10.8708333	3.1083971	0.2893013
	5:00 PM	6:00 PM		21.4445899	18.5898897	7.8000966B	9.8361111	2.6247767B6	0.5132899	32.7779757	28.9592925	30.1234749	11.4031769	29.2666667	21.8777677	18.9285553	8.0063401	10.0638889	3.0881971	0.2771958
	6:00 PM	7:00 PM		17.2847438	16.5722222	6.6122741B	9.4833333	2.7595725	0.5143934	28.4958764	23.5576218	25.0602839	9.4696519	23.9095749	17.7018555	17.0383333	6.9585447	10.1749995	3.0131439	0.2875988
	7:00 PM	8:00 PM		11.4373815	14.7916665	5.3715482	8.4541667	2.7585209	0.3798810	17.0484688	15.5336459	18.939473	8.6452846	15.8070799	11.7864551	15.3541667	6.6705382	8.3333334	3.0175223	0.2867597
	8:00 PM	9:00 PM		11.4923474		6.4759124B		2.7189552	0.3085759	16.3350929	15.231249	15.7593571	8.6907013	15.3358333	11.7629329		6.8914062		2.8978056	0.2735069
	9:00 PM	10:00 PM		11.5824874	13.4437500	6.4364583B	17.8916666	2.7182532	0.3061327	15.8361667	15.0834444	15.8955572	8.8580535	15.2507138	11.9730670	13.7979166	6.7527108		2.9028733	0.2772124
	10:00 PM	11:00 PM		11.6538724		6.4479567B		2.6866707	0.3036324	15.9035851	15.2401544	16.1923738	8.8357595	15.4782399	12.0076525		6.8511290		2.9664373	0.2689153
Midnight	11:00 PM	12:00 AM		11.4619581	13.6299997	6.3470000	9.6500001	2.7211583	0.2892963	15.6764229	14.7317255	15.1288194	8.6357565	14.9572916	11.7439455	13.8749999	6.6176456	9.9666667	3.0082286	0.2846613

TRAVEL TIME DATA

1 HOUR CORRIDOR STATISTICAL SUMMARIES

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 15-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

Time		Segment Label	DED_C45	DED_EE8	DED_2A5	DED_B58	DED_9A2	DED_D69	DED_BB1	DED_D7C	DED_D35	DED_D6D	DED_2BE	C45_DED	C45_EE8	C45_2A5	C45_B58	C45_9A2	C45_D69	C45_BB1	C45_D7C	C45_D35	C45_D6D	C45_2BE	EE8_DED
			Site I to Site H	Site I to Site G	Site I to Site D	Site I to Site H-1	Site I to Site F	Site I to Site E	Site I to Site C	Site I to Site B	Site I to Site A	Site I to Site Z-1	Site I to Site Z	Site H to Site I	Site H to Site G	Site H to Site D	Site H to Site H-1	Site H to Site F	Site H to Site E	Site H to Site C	Site H to Site B	Site H to Site A	Site H to Site Z-1	Site H to Site Z	Site G to Site I
		Length (miles)	1.201	1.471	6.566	0.983	3.722	7.585	8.849	11.752	13.698	15.369	15.273	1.093	0.859	5.851	0.065	3.909	7.326916232	9.104185669	11.43527728	12.98535604	15.54172015	15.13595134	1.471419186
Time	Begin Time	End Time																							
Midnight	12:00 AM	1:00 AM	1.181	1.214	6.320	1.258	4.200	8.965	9.350	14.667	12.073	15.369	15.494	1.187	0.846	5.850	0.185	3.459	8.277777778	8.075000000	13.95833128	11.57888889	14.3854167	14.67653135	1.396833300
	1:00 AM	2:00 AM	1.061	1.238	6.475	1.268	4.130	9.054	8.560	15.450	12.116	14.724	14.867	1.296	0.785	5.800	0.237	3.547	8.783333333	8.683333333	12.51666659	11.18846153	14.41666666	14.62388888	1.418749999
	2:00 AM	3:00 AM	1.085	1.256	6.446	1.346	4.171	10.136	9.211	15.187	12.280	14.961	15.153	1.362	0.852	5.967	0.213	3.568		8.804166667	12.89375004	11.86742429	14.281255	14.90488999	1.437925541
	3:00 AM	4:00 AM	1.083	1.212	6.316	1.400	4.261	8.725	8.851	14.283	12.048	15.020	14.929	1.079	1.004	5.781	0.214	3.596		8.545166648		11.63958333	14.77812502	15.10694448	1.551666699
	4:00 AM	5:00 AM	1.030	1.222	6.258	1.273	4.337		8.869		11.932	14.906	15.340	1.333	0.870	6.138	0.235	3.508		8.145458548	12.69166659	11.79583215	14.43333333	15.27166666	1.398666642
	5:00 AM	6:00 AM	1.060	1.211	6.168	1.182	4.040		8.569		12.012	14.997	15.299	1.200	0.899	5.870	0.239	3.540	8.175000083	8.501139663	12.95	11.69950268	14.42166664	15.23666598	1.448955560
	6:00 AM	7:00 AM	1.091	1.244		1.380	4.002		8.803	14.250		14.761	15.262	1.090	0.798	5.722	0.228	3.441		8.508333333	13.08	11.26730764	14.61755960	14.92666258	1.428851863
	7:00 AM	8:00 AM													0.712			3.339		7.491666758	16.15833336		14.11999999	14.2213131	
	8:00 AM	9:00 AM																							
	9:00 AM	10:00 AM																							
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	10:00 PM	11:00 PM																							
Midnight	11:00 PM	12:00 AM																							

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 15-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

Time			Segment Label	EE8_C45	EE8_2A5	EE8_B58	EE8_9A2	EE8_D69	EE8_BB1	EE8_D7C	EE8_D35	EE8_D6D	EE8_2BE	2A5_D6D	2A5_C45	2A5_EE8	2A5_B58	2A5_9A2	2A5_D69	2A5_BB1	2A5_D7C	2A5_D35	2A5_D6D	2A5_2BE	B58_D6D	B58_C45
			Site G to Site H	Site G to Site D	Site G to Site H-1	Site G to Site F	Site G to Site E	Site G to Site C	Site G to Site B	Site G to Site A	Site G to Site Z-1	Site G to Site Z	Site D to Site I	Site D to Site H	Site D to Site G	Site D to Site H-1	Site D to Site F	Site D to Site E	Site D to Site C	Site D to Site B	Site D to Site A	Site D to Site Z-1	Site D to Site Z	Site H-1 to Site I	Site H-1 to Site H
		Length (miles)	6.95618854	5.17533607	5.91784199	3.12265232	6.4933305	8.29552039	11.8679764	12.2780457	15.2563175	15.4523267	5.66238917	6.85192715	6.17238107	6.52968533	3.78288248	2.98770248	3.78288248	2.22919293	6.97813248	5.10959039	6.69648164	9.29214189	1.98254642	6.95618854
		Begin Time	End Time																							
	Midnight	12:00 AM	1:00 AM	1.447222166	6.210000018	1.628124999	4.094298283		9.769444484	13.53250000	12.57916667	15.16764708	15.72202381	6.600000024	8.051352956	6.598039174	6.278205131	3.013854455	5.387499998	2.496212888	8.038333338	5.788878207	8.638453814	8.948333331	1.543519521	7.540476215
		1:00 AM	2:00 AM	1.473148149	6.700378783	1.742361116	3.886111089		9.519444443	13.40833336	13.30985416	14.7375	15.07166672	6.435833294	5.753571376	6.583333332	6.046294246	2.902898546	5.341666695	2.5416666	7.95416659	5.98596538	8.604464269	8.857037050	1.111904742	19.39166659
		2:00 AM	3:00 AM	1.469333333	6.547727543	1.704166643	4.172619038		9.983538953	15.15208333	12.52803034	16.41794707	14.9125	6.229166659	6.572222348	6.5699997	6.833888922	3.080661627	5.375000015	2.638462389	8.545454554	5.968714511	8.790756029	9.22808061	1.183332369	12.89166665
		3:00 AM	4:00 AM	1.436666653	5.556666703	1.783333342	3.831547638		9.700000029		11.42166671	15.40416668	15.7725	6.8777778	6.220238076	6.284722192	6.431666628	3.075220588		2.570572903	8.791666757	5.79218751	8.741269833	9.025992061	1.204166678	11.44166659
		4:00 AM	5:00 AM	1.477333369	6.331666653	1.681250059	3.539333372		8.204166756	13.21666673	11.78488894	14.05500001	14.33000002	6.860740763	6.027976208	7.142181443	6.326785751	3.15813465	4.770833344	2.417592597	7.485833343	5.923341775	8.537429213	8.925826656	1.095666682	8.058666642
		5:00 AM	6:00 AM	1.395333369	6.231666653	1.651249979	3.892333309		8.223333454	14.43333333	11.92430556	14.43500001	14.75000002	6.459722243	5.890777769	6.132935633	6.119753104	2.929120772	5.147916696	2.433845284	7.465833343	6.085833215	8.921674955	9.956666583	1.450333333
		6:00 AM	7:00 AM	1.378833316	5.853571434	1.628333319	3.892249889		10.47916657	14.39999983	11.46666668	14.72	15.05833333		6.233333386	6.298333313	2.906140577	5.756333448	2.555952383	8.157051123	5.95926618	8.701368864	8.922260270	0.788333262	15.02777779
		7:00 AM	8:00 AM				3.708333336		7.758333329			13.81250001	14.00619048						2.44666666	8.398111113	5.50260415	8.216803529	8.4839431369			14.21666667
		8:00 AM	9:00 AM																2.449999955	9.266666585		7.974166583	8.373529294			
		9:00 AM	10:00 AM																							
		10:00 AM	11:00 AM																							
		11:00 AM	12:00 PM																							
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		10:00 PM	11:00 PM																							
	Midnight	11:00 PM	12:00 AM																							

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 15-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	Segment Label	BS8_EE8	BS8_2A5	BS8_9A2	BS8_D69	BS8_BB1	BS8_D7C	BS8_D35	BS8_D6D	BS8_2BE	9A2_0ED	8A2_C45	9A2_EE8	9A2_2A5	8A2_BS8	9A2_D69	8A2_BB1	9A2_D7C	9A2_D35	8A2_D6D	9A2_2BE	D69_0ED	D69_C45	D69_EE8
			Site H-1 to Site G	Site H-1 to Site F	Site H-1 to Site F	Site H-1 to Site E	Site H-1 to Site E	Site H-1 to Site C	Site H-1 to Site B	Site H-1 to Site A	Site H-1 to Site Z-1	Site H-1 to Site Z	Site F to Site I	Site F to Site H	Site F to Site G	Site F to Site D	Site F to Site H-1	Site F to Site E	Site F to Site C	Site F to Site B	Site F to Site A	Site F to Site Z-1	Site F to Site Z	Site E to Site I	Site E to Site H	Site E to Site G
			Length (miles)	9.917381918	6.509485024	3.555647180	7.388059922	9.331653300	15.45174752	11.05251450	15.88995952	16.17524152	3.710450350	3.800149328	3.210677122	2.992705208	3.395847165	4.398227008	5.195218858	9.944590302	9.078870628	10.54712126	12.54154404	5.478863468	7.328918258	6.493338865
Midnight	12:00 AM	1:00 AM		0.662820459	5.680555555	3.312500000	7.800000000	7.954333306	13.80000000	11.28871794	13.99351859	14.297	3.808948501	3.093128659	3.580729192	2.353166664	3.348280433	4.678851738	5.006481485	10.30584442	8.196846828	10.99555555	11.41574072	8.161666688	8.18555555	9.366666855
	1:00 AM	2:00 AM		0.479166666	5.680555525	3.351562541		9.353333368	12.30833329	11.54398615	14.24607845	14.30527777	3.529166665	3.05137857	3.564259816	2.438357841	3.291203878	4.749999945	4.910145169	10.23750064	8.463055246	10.96103904	11.18975493	8.908333406		29.61666663
	2:00 AM	3:00 AM		0.497916732	5.813636347	3.459627481		9.012500024	13.59999999	11.75500002	14.3337863	14.80833330	3.48999999	3.116666649	3.227500042	2.403431359	3.372384411	5.378166743	5.228448276	11.01666673	8.358444434	11.36394188	11.79329711			
	3:00 AM	4:00 AM		0.716666635	5.510984483	3.427314823		8.337878754		11.3263889	14.72301589	14.99950981	3.479338864	3.133854173	3.344296248	2.243154774	3.221862720	4.854166498	4.998814908	10.10833341	8.13243898	11.06241496	11.3658108			
	4:00 AM	5:00 AM		0.594375036	5.81515152	3.37733336		7.97916666	12.40166666	11.48944443	13.98425517	14.5068277	3.536666662	2.958854169	3.243333342	2.380756975	3.305902791		4.739951168	9.833333285	8.133333336	10.91283333	11.36585455	7.716666552	10.26666664	
	5:00 AM	6:00 AM		0.556666515	5.510953775	3.337499995	8.016666777	8.365258573	12.78750004	11.65703124	14.2735209	14.54259237	3.72291666	2.953835149	3.213333342	2.293855348	3.179951164	5.120833347	4.239950919	10.02222223	8.202819649	10.79133333	11.19146553			
	6:00 AM	7:00 AM		0.545370363		3.287195120		8.361904717	12.45288336	10.65166663	14.01756974	14.65333335	3.352500305	3.035416673	3.181666769	2.239102558		4.60208335	5.075000016	10.52499997	7.947844819	10.80322533	11.85933303			
	7:00 AM	8:00 AM									14.03645834	14.8736111			3.220618002				4.636842092	9.565476179		10.55117185	10.73757861			
	8:00 AM	9:00 AM																								
	9:00 AM	10:00 AM																								
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Midnight	11:00 PM	12:00 AM																								

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 15-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	D69_2A5	D69_B58	D69_9A2	D69_BB1	D69_D7C	D69_D35	D69_D6D	D69_2BE	BB1_DED	BB1_C45	BB1_EE8	BB1_2A5	BB1_B58	BB1_9A2	BB1_D69	BB1_D7C	BB1_D35	BB1_D6D	BB1_2BE	D7C_DED	D7C_C45	D7C_EE8	D7C_2A5
	Segment Label		Site E to Site D	Site E to Site H-1	Site E to Site F	Site E to Site C	Site E to Site B	Site E to Site A	Site E to Site Z-1	Site E to Site Z	Site C to Site I	Site C to Site H	Site C to Site G	Site C to Site D	Site C to Site H-1	Site C to Site F	Site C to Site E	Site C to Site B	Site C to Site A	Site C to Site Z-1	Site C to Site Z	Site B to Site I	Site B to Site H	Site B to Site G	Site B to Site D
	Length (miles)		1.378286141	7.369999649	4.280097548	4.587782121	3.395277341	7.664664489	10.46089969	10.70789212	8.209834425	3.194195483	8.395269904	2.220192935	8.191455288	5.19521856	4.387732134	8.556191911	3.86156477	4.873892099	7.229828154	11.73212404	12.42527238	11.86787404	4.278613845
Midnight	12:00 AM	1:00 AM	4.130556559	8.411111143	4.805595245	7.333333333	11.67083333	9.591666666	12.74888042	13.0777777	8.779487183	8.138793111	8.321666524	1.961324492	8.314444459	4.930333328	6.888111033		3.543333343	6.498806905	6.883333309	15.73333316	13.59999999	14.73333333	7.77
	1:00 AM	2:00 AM	3.73749997		4.941666727	8.008333147	10.83333333	10.83333333	12.46666661	12.77499994	8.240000032	7.855072452	8.320833337	1.843287946	8.242530389	4.856756746	6.875000049	5.545833344	3.547222285	6.381250006	6.729166713	22.86666669		14.23333341	7.438888869
	2:00 AM	3:00 AM	4.477777785			6.194444429	11.52500002	11.30555531	13.37499997	14.34444427	8.509994431	7.822916664	7.58333344	1.886505581	8.066953261	4.789888912	6.918666701	5.363888894	3.737962485	6.702899651	7.054791921			7.250000031
	3:00 AM	4:00 AM	3.697222285		4.674999956	7.499999888		9.445833396	14.64166664	15.12083329	7.908333287	8.308333308	2.004166681	8.526388938	4.882564425	7.033333238	7.283333391	3.513536813	6.369543202	6.743840466		12.35833336	13.90000164	7.108333419
	4:00 AM	5:00 AM	4.259722166	10.32499999	6.068666616	6.13750037		11.08833336	12.38944453	12.41666714	9.365555549	8.398833329	8.168333352	1.858823528	8.618466917	5.001754405		5.206166686	3.425800998	6.239951003	6.936317566		13.38333333		7.733333267
	5:00 AM	6:00 AM	3.384722164		4.544444332	6.202000002		10.84305556	12.35555602	12.56666672	8.712033548	7.963833829	8.041666659	1.785458333	8.394166672	5.064231249	6.999999928	4.976533277	3.443840341	6.140333339	6.930333566			13.66666598	7.122666379
	6:00 AM	7:00 AM	3.672222309		4.314583316	6.041666754	10.94999999	10.07916679	11.95416665	13.54804761	7.961111099	7.797901893	7.943181873	1.785458333	8.014444459	4.746171185	6.277083323	5.066666631	3.543758881	6.040515339	6.337037649	14.15800003	13.64761902	13.19537039	7.164563372
	7:00 AM	8:00 AM				6.658333344	12.57500002		11.76166675	12.13333339		8.112499813	8.141666599	1.766005638		4.847042989	7.818666693	7.177777769	3.371388892	6.320937668	6.240617296			13.43333336	6.781250002
	8:00 AM	9:00 AM												1.620833343				6.195833338	3.429166686	5.991666648	6.485199087				
	9:00 AM	10:00 AM																4.891666521							
	10:00 AM	11:00 AM																							
	11:00 AM	12:00 PM																							
Noon	12:00 PM	1:00 PM																							
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	9:00 PM	10:00 PM																							
	10:00 PM	11:00 PM																							
Midnight	11:00 PM	12:00 AM																							

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 15-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

Time	Begin Time	End Time	D7C_B58	D7C_9A2	D7C_D49	D7C_BB1	D7C_D35	D7C_D6D	D7C_2BE	D35_D6D	D35_C45	D35_EE8	D35_2A5	D35_B58	D35_9A2	D35_D49	D35_BB1	D35_D7C	D35_D6D	D35_2BE	D6D_D6D	D6D_C45	D6D_EE8	D6D_2A5	D6D_B58
	Segment Label		Site B to Site H-1	Site B to Site F	Site B to Site E	Site B to Site C	Site B to Site A	Site B to Site Z-1	Site B to Site Z	Site A to Site I	Site A to Site H	Site A to Site G	Site A to Site D	Site A to Site H-1	Site A to Site F	Site A to Site E	Site A to Site C	Site A to Site B	Site A to Site Z-1	Site A to Site Z	Site Z-1 to Site I	Site Z-1 to Site H	Site Z-1 to Site G	Site Z-1 to Site D	Site Z-1 to Site H-
	Length (miles)		12.4617452	9.5049960	8.6892774	5.5974995	3.2458507	6.1682325	5.1881870	12.6395249	11.4853165	11.7705467	6.1008109	13.5325345	9.0783754	7.4569148	3.8825477	5.2458507	3.0461642	3.7383128	15.5888921	15.5417281	15.2767615	9.2991916	15.5889921
Midnight	12:00 AM	1:00 AM	13.8874994	11.1202383	14.3833334	5.5974995		10.5333335	11.6166666	11.9538889	11.4283556	12.3475	5.4208333	11.6270334	8.4200833	10.4805557	3.5513157	10.1999999	2.7816666	3.0628704	14.8676666	14.5275287	14.8334443	8.2736666	14.7102455
	1:00 AM	2:00 AM		10.3583335		5.3166666				11.7396833	11.0725166	10.3416666	5.3421666	11.3631246	8.0750000	11.3583325	3.5027777		2.7755000	3.0629167	14.5056556	14.1348446	14.9902777	8.0276923	14.3376349
	2:00 AM	3:00 AM				5.4000000				11.2549997	10.8874995	12.2916665	5.5691304	12.0333333	8.3888889	11.4083348	3.4955128		2.8005243	3.1138249	14.2429257	13.9988055	13.8250000	7.9825000	14.5825
	3:00 AM	4:00 AM	12.6500012	9.5000001		4.9666667				12.3976166	11.5611111	11.0116666	5.2358333	12.0162566	8.4465277	10.5833326	3.7571428		2.8376488	3.1170833	13.6138892	14.7091667	16.3395833	8.3429487	14.8902778
	4:00 AM	5:00 AM	13.5333319	10.5166667	10.8166666					12.4314388	11.2533333	13.5257573	5.5083637	11.8262308	8.8533333		3.4775148		2.7378775	3.0138116	15.3473222	14.3448476	14.0183334	8.0333334	15.0625000
	5:00 AM	6:00 AM	13.3666659	10.7999999		5.2883333	6.3499999			11.7466667	11.5433333	11.4801333	5.5333666	12.2575833	8.3500751	10.0499994	3.6075145		2.7492728	3.0492167	14.9907667	14.1390911	14.3383333	7.9366667	14.4927778
	6:00 AM	7:00 AM	13.8041667	10.0999833		5.2124999	6.4749999	8.9499999	9.1999999		11.3361109	10.8708333	5.1133666		8.0011904	11.2899833	3.4278833		2.5494272	2.9488095	14.36	14.3844777	14.3250333	7.9455455	14.7941765
	7:00 AM	8:00 AM		8.9190476		5.0380952							5.2966667			12.4416667	3.3921369		2.5919428	2.8613636		13.8041664	13.2800546	7.6613636	
	8:00 AM	9:00 AM				5.4369047			10.075								3.4995613		2.5705248	2.8349206				7.5222222	
	9:00 AM	10:00 AM				4.6694445																			
	10:00 AM	11:00 AM																							
	11:00 AM	12:00 PM																							
Noon	12:00 PM	1:00 PM																							
	1:00 PM	2:00 PM																							
	2:00 PM	3:00 PM																							
	3:00 PM	4:00 PM																							
	4:00 PM	5:00 PM																							
	5:00 PM	6:00 PM																							
	6:00 PM	7:00 PM																							
	7:00 PM	8:00 PM																							
	8:00 PM	9:00 PM																							
	9:00 PM	10:00 PM																							
	10:00 PM	11:00 PM																							
Midnight	11:00 PM	12:00 AM																							

TRAVEL TIME DATA

ROUTE INFORMATION
Name / Number:
Direction:

Project Name: CH2M Hill
Date: 15-Dec-13
Day of Week: Sunday
Measure: Mean Travel Time
Units: minutes

		Segment Label	D5D_9A2	D5D_D69	D5D_BB1	D5D_D7C	D5D_D35	D5D_28E	28E_DED	28E_C45	28E_EE8	28E_2A5	28E_B58	28E_9A2	28E_D69	28E_BB1	28E_D7C	28E_D35	28E_D6D
		Site Z-1 to Site F	Site Z-1 to Site E	Site Z-1 to Site C	Site Z-1 to Site B	Site Z-1 to Site A	Site Z-1 to Site Z	Site Z to Site I	Site Z to Site H	Site Z to Site G	Site Z to Site D	Site Z to Site H-1	Site Z to Site F	Site Z to Site E	Site Z to Site C	Site Z to Site B	Site Z to Site A	Site Z to Site Z-1
		Length (miles)	12.6471216	16.4068968	6.8726892	5.1693296	3.5491958	0.2782232	15.7258154	15.1368510	15.4583152	9.2827438	16.1730253	12.5419345	16.7078622	7.6299154	6.5912820	3.2789183	0.2782232
Time	Begin Time	End Time																	
Midnight	12:00 AM	1:00 AM	11.20595298	13.2246998	6.252462152		2.707312924	0.295746527	15.11153966	14.7969697	15.32630515	8.544420905	14.91900407	11.44693489	13.61368685	6.558510636	13.14999995	2.981178162	0.277114424
	1:00 AM	2:00 AM	11.04398997		6.102011550		2.619135624	0.285196009	14.75777833	14.47651514	14.95964909	8.315753415	14.89113475	11.38932956	14.29583341	6.484375017		2.912134521	0.310869575
	2:00 AM	3:00 AM	10.67620033	14.29166676	6.14583333		2.63534483	0.318239668	14.40757575	13.8156931	14.03888596	8.237931048	14.22111113	10.88682903	14.63333342	6.439705852		2.934853573	0.304550001
	3:00 AM	4:00 AM	11.33784725	13.15833321	6.538020868		2.717601282	0.294545451	13.61333326	14.6722222	15.64305556	8.682716042	14.83694775	11.3736111	13.43333323	6.826562489		3.042261898	0.331623887
	4:00 AM	5:00 AM	11.3241972		6.102345314		2.683345266	0.279947147	15.3583333	14.65807145	14.33166665	8.29952774	15.34856864	11.8259524		6.381018534		2.8398122	0.335854297
	5:00 AM	6:00 AM	11.70555556	12.21666652	6.145945537		2.679012754	0.278947148	15.35148693	14.65807439	14.5208333	8.305674489	14.295	11.51139515	12.56666657	6.377218534		2.859312126	0.346021297
	6:00 AM	7:00 AM	10.97636054	14.91388891	6.165876913		2.55921053	0.289914722	14.40476192	14.35289658	14.53388747	8.269964472	14.7373538	11.16013511	15.29999998	6.271813739		2.879232236	0.296753351
	7:00 AM	8:00 AM	10.45480807	15.57500003	5.985798614		2.563152836	0.276562277		14.47499998	13.57281666	7.938495105		10.8201852	16.01666671	6.245481804		2.843762528	0.268893201
	8:00 AM	9:00 AM			5.985523806		2.631798826	0.269173437			8.148809533					6.366111008		2.878240738	0.262625782
	9:00 AM	10:00 AM																	
	10:00 AM	11:00 AM																	
	11:00 AM	12:00 PM																	
Noon	12:00 PM	1:00 PM																	
	1:00 PM	2:00 PM																	
	2:00 PM	3:00 PM																	
	3:00 PM	4:00 PM																	
	4:00 PM	5:00 PM																	
	5:00 PM	6:00 PM																	
	6:00 PM	7:00 PM																	
	7:00 PM	8:00 PM																	
	8:00 PM	9:00 PM																	
	9:00 PM	10:00 PM																	
	10:00 PM	11:00 PM																	
Midnight	11:00 PM	12:00 AM																	

Appendix B

VISSIM Summary of Results
Existing Conditions

Vissim Model Calibration Results (FHWA Criteria)

FHWA Performance Criteria and Measures	Calibration Acceptance Target
Individual link flows	
Flow < 700 veh/h, Within 100 veh/h	> 85% of cases
700 veh/h < Flow < 2700 veh/h, Within 15%	> 85% of cases
Flow > 2700 veh/h, Within 400 veh/h	> 85% of cases
Difference in sum of all link flows	Within 5%
GEH Statistic Value	
GEH Statistic Value < 5, for individual link flows	> 85% cases
GEH Statistic Value for Sum of All Link Flows	< 4

Freeway Volume Calibration (FHWA Link Flow Criteria)

Lane Type	Eastbound					Westbound				
	Total Links	Calibration Results Achieved				Total Links	Calibration Results Achieved			
		6-7 AM	7-8 AM	8-9 AM			6-7 AM	7-8 AM	8-9 AM	
Mainline	21	100%	86%	86%		18	78%	94%	94%	
Ramps	14	100%	93%	100%		14	100%	93%	93%	
All Links	35	100%	89%	91%		32	88%	94%	94%	
Total Link Flow % Difference		-2%	3%	3%			4%	1%	3%	

Freeway Volume Calibration (GEH Criteria)

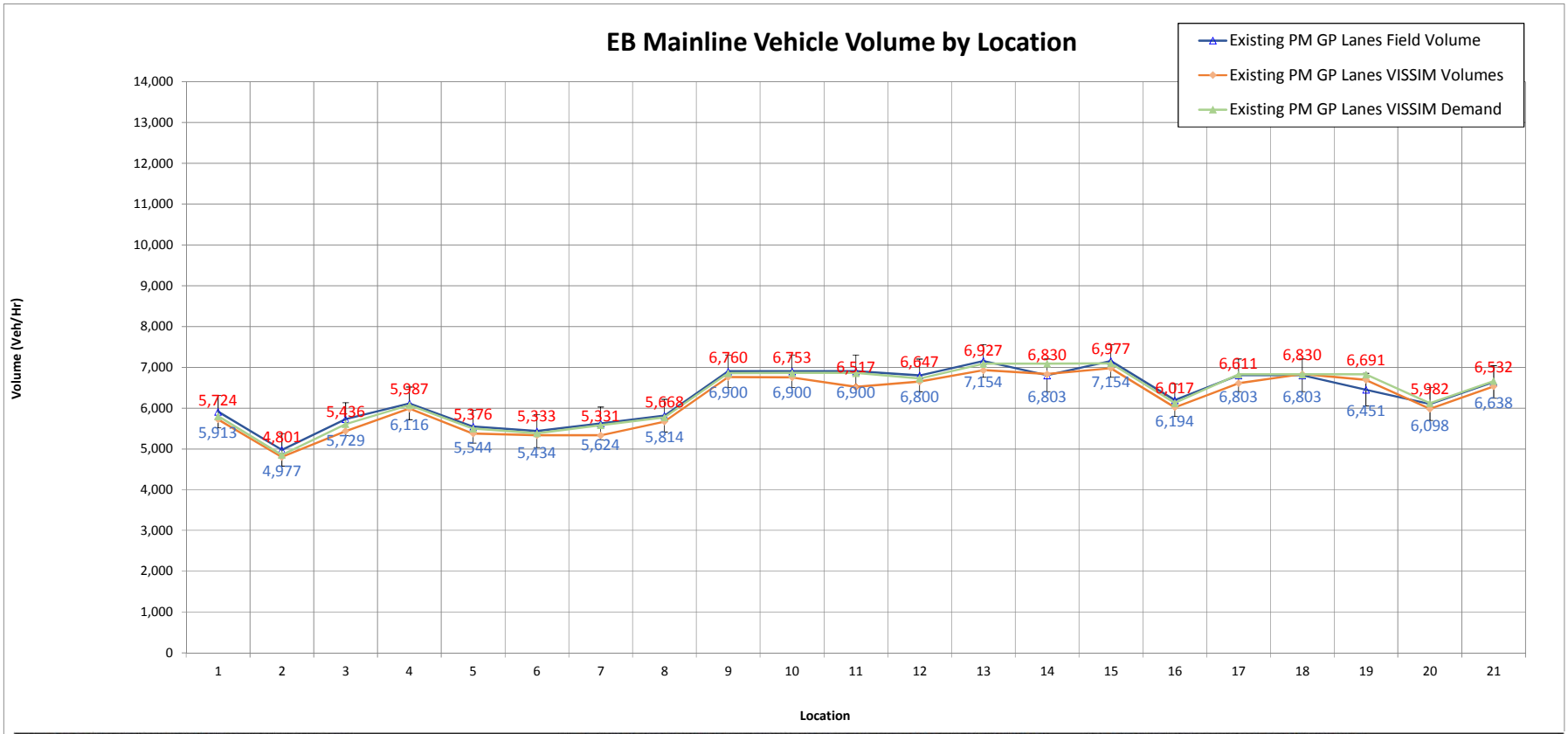
Lane Type	Eastbound					Westbound				
	Total Links	Calibration Results Achieved				Total Links	Calibration Results Achieved			
		6-7 AM	7-8 AM	8-9 AM			6-7 AM	7-8 AM	8-9 AM	
Mainline	21	100%	95%	95%		18	94%	100%	100%	
Ramps	14	100%	93%	100%		14	93%	93%	86%	
All Links	35	100%	94%	97%		32	94%	97%	94%	
Total Link Flow GEH		8.3	11.3	10.6			14.9	4.2	12.9	

Network Travel Time calibration: PM Peak Period

Corridor	Field Travel Time (Minutes)				VISSIM Travel Time (Minutes)				Diff.%			
	6-7 AM	7-8 AM	8-9 AM		6-7 AM	7-8 AM	8-9 AM		6-7 AM	7-8 AM	8-9 AM	
Eastbound SR-91	8.8	8.8	8.9		8.6	8.7	8.7		-3%	-1%	-2%	
Westbound SR-91	14.3	12.1	11.3		11.1	11.5	10.4		-22%	-5%	-8%	

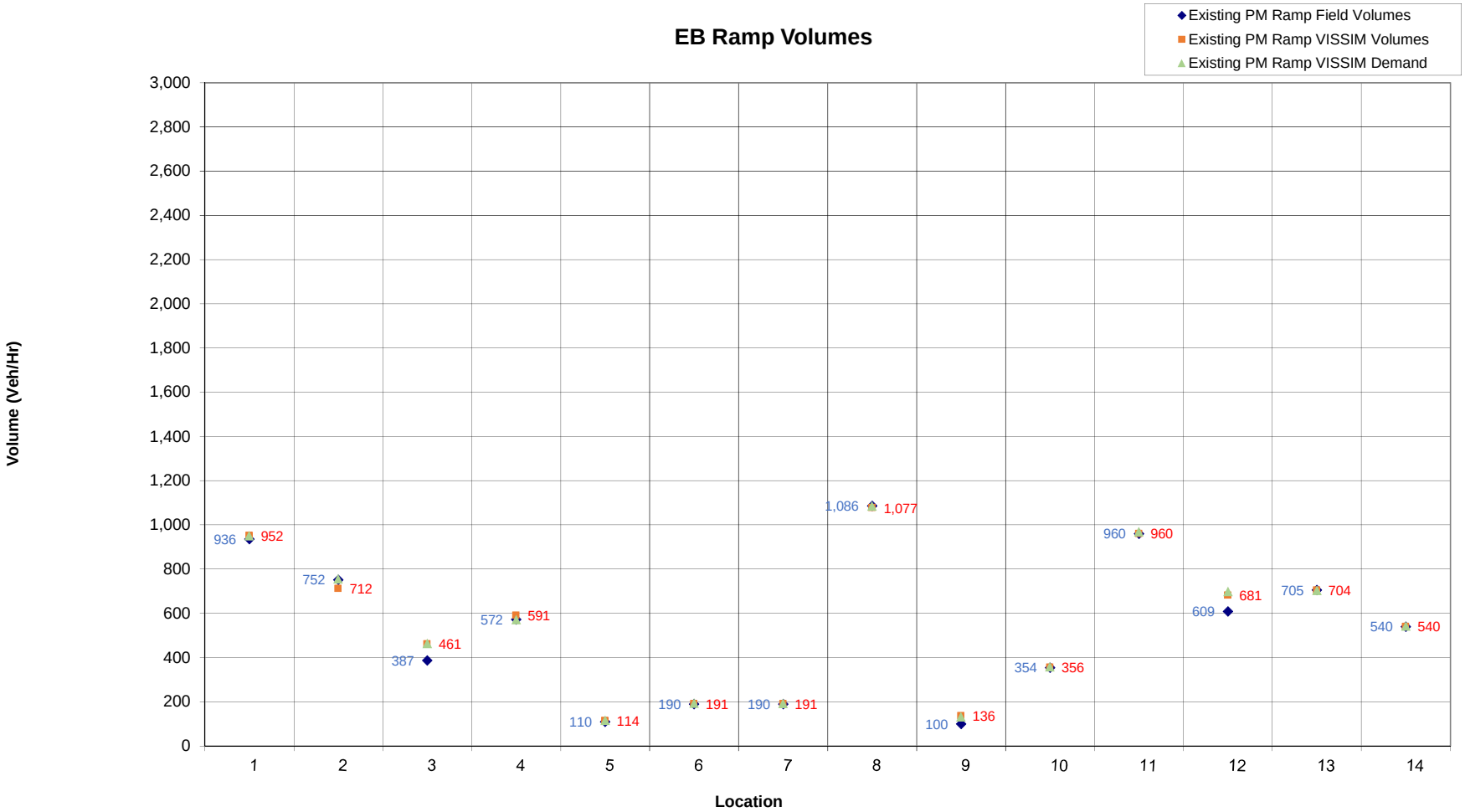
Table 5
Segment Travel Time Calibration: PM Peak Period

Corridor	Segment	Location	Distance	Field Speed				VISSIM Speed				Field Travel Time (Minutes)				VISSIM Travel Time (Minutes)				Diff.%			
				6-7 AM	7-8 AM	8-9 AM		6-7 AM	7-8 AM	8-9 AM		6-7 AM	7-8 AM	8-9 AM		6-7 AM	7-8 AM	8-9 AM		6-7 AM	7-8 AM	8-9 AM	
Eastbound SR-91	Site A to Site C	1002	20751	63	63	63		68	67	67		3.8	3.7	3.8		3.5	3.5	3.5		-8%	-6%	-7%	
	Site C to Site D	1003	13681	71	71	70		68	67	67		2.2	2.2	2.2		2.3	2.3	2.3		4%	6%	5%	
	Site D to Site F	1005	16332	64	65	64		67	65	65		2.9	2.9	2.9		2.8	2.8	2.8		-3%	-1%	-2%	
	Site B to Site C	1007	32177	71	72	71		63	63	63		5.1	5.1	5.1		5.8	5.8	5.8		12%	13%	12%	
	Site E to Site F	1008	28639	33	44	63		30	38	59		9.9	7.4	5.1		10.9	8.6	5.5		9%	14%	7%	
	Site A to Site B	1001	40145	63	67	68		64	64	64		7.3	6.8	6.7		7.1	7.2	7.2		-2%	5%	7%	
	Site D to Site E	1004	27065	58	58	57		61	60	60		5.3	5.3	5.4		5.0	5.1	5.1		-6%	-4%	-7%	
Westbound SR-91	Site F to Site D	1011	16460	31	39	53		38	37	45		6.0	4.8	3.5		4.9	5.1	4.2		-23%	5%	17%	
	Site D to Site C	1012	13628	36	43	38		57	52	58		4.3	3.6	4.1		2.7	3.0	2.7		-57%	-22%	-54%	
	Site C to Site A	1014	20820	60	64	64		67	67	68		4.0	3.7	3.7		3.5	3.5	3.5		-12%	-5%	-6%	
	Site E to Site D	1009	23283	25	37	64		24	31	56		10.7	7.2	4.1		10.9	8.5	4.8		1%	15%	14%	
	Site B to Site A	1006	40738	70	72	66		64	64	64		6.6	6.5	7.0		7.2	7.2	7.2		9%	11%	3%	



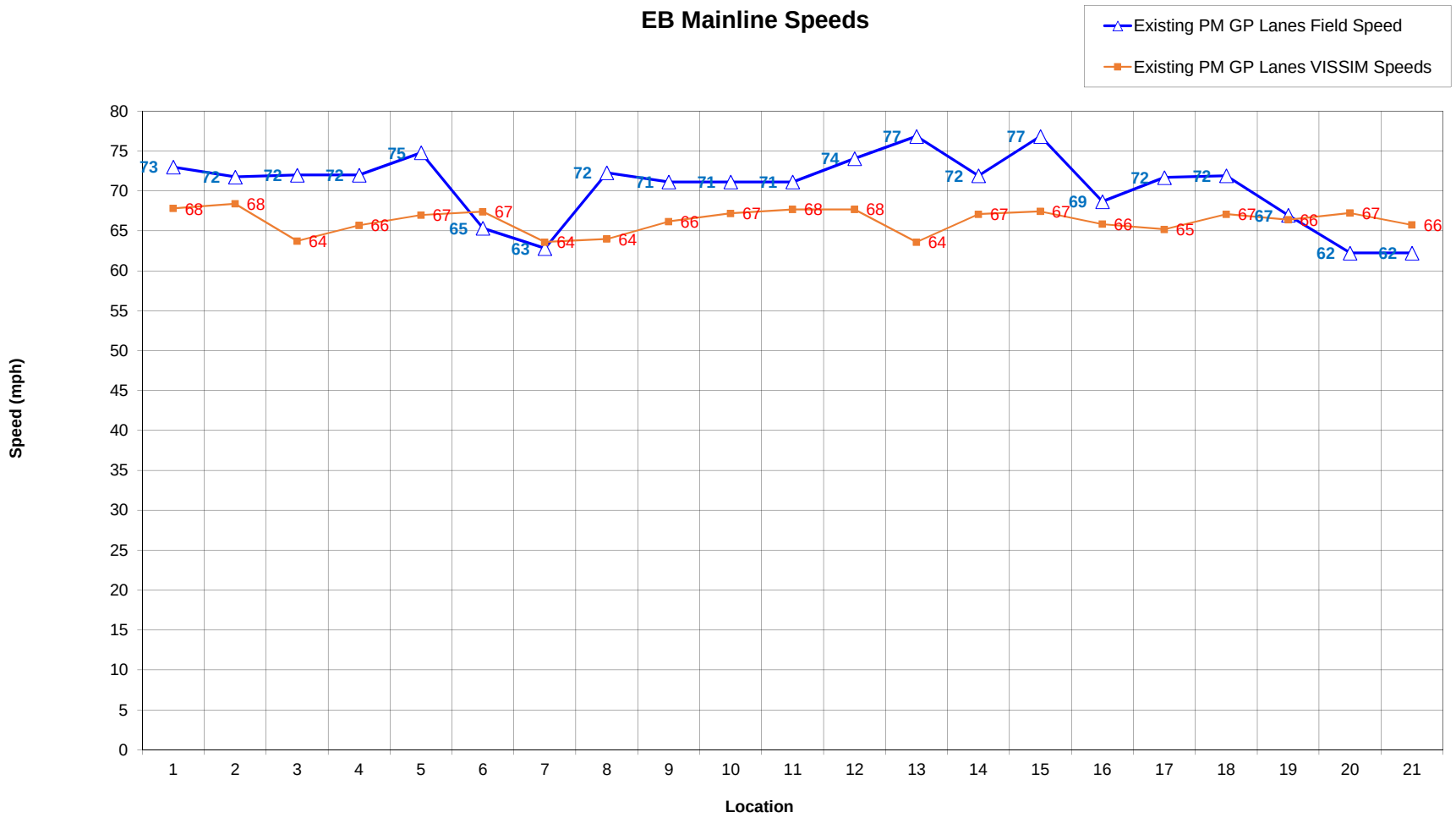
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 6-7 AM-Calibration



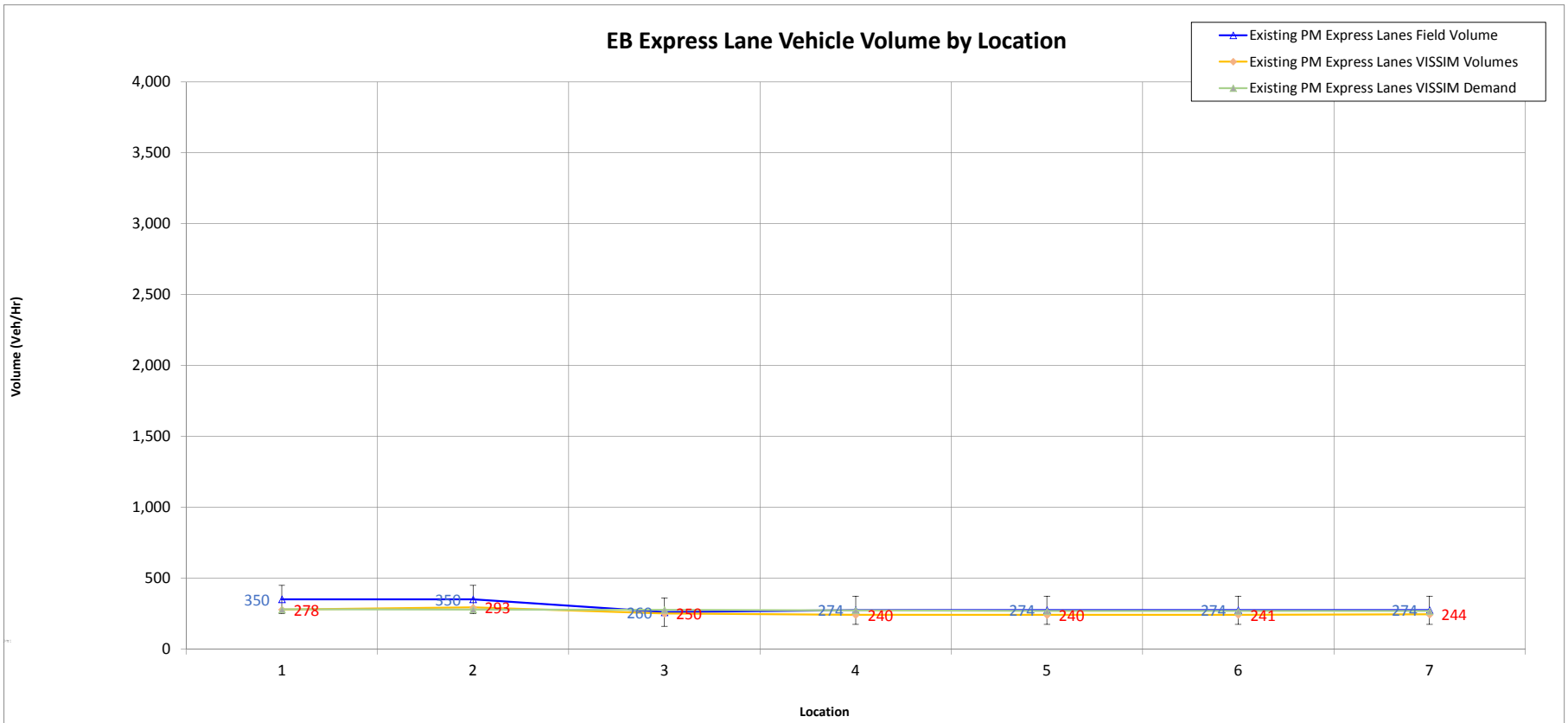
1	Off Ramp to Weir Canyon	6	On Ramp from SB Gypsum Canyon	11	Off Ramp to NB SR 71
2	On Ramp from SB Weir Canyon	7	On Ramp from NB Gypsum Canyon	12	On Ramp from SB SR 71
3	On Ramp from NB Weir Canyon	8	On Ramp from NB SR 241 GP	13	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	9	Off Ramp to Green River	14	On Ramp from Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	10	On Ramp From Green River		

Charts 6-7 AM-Calibration



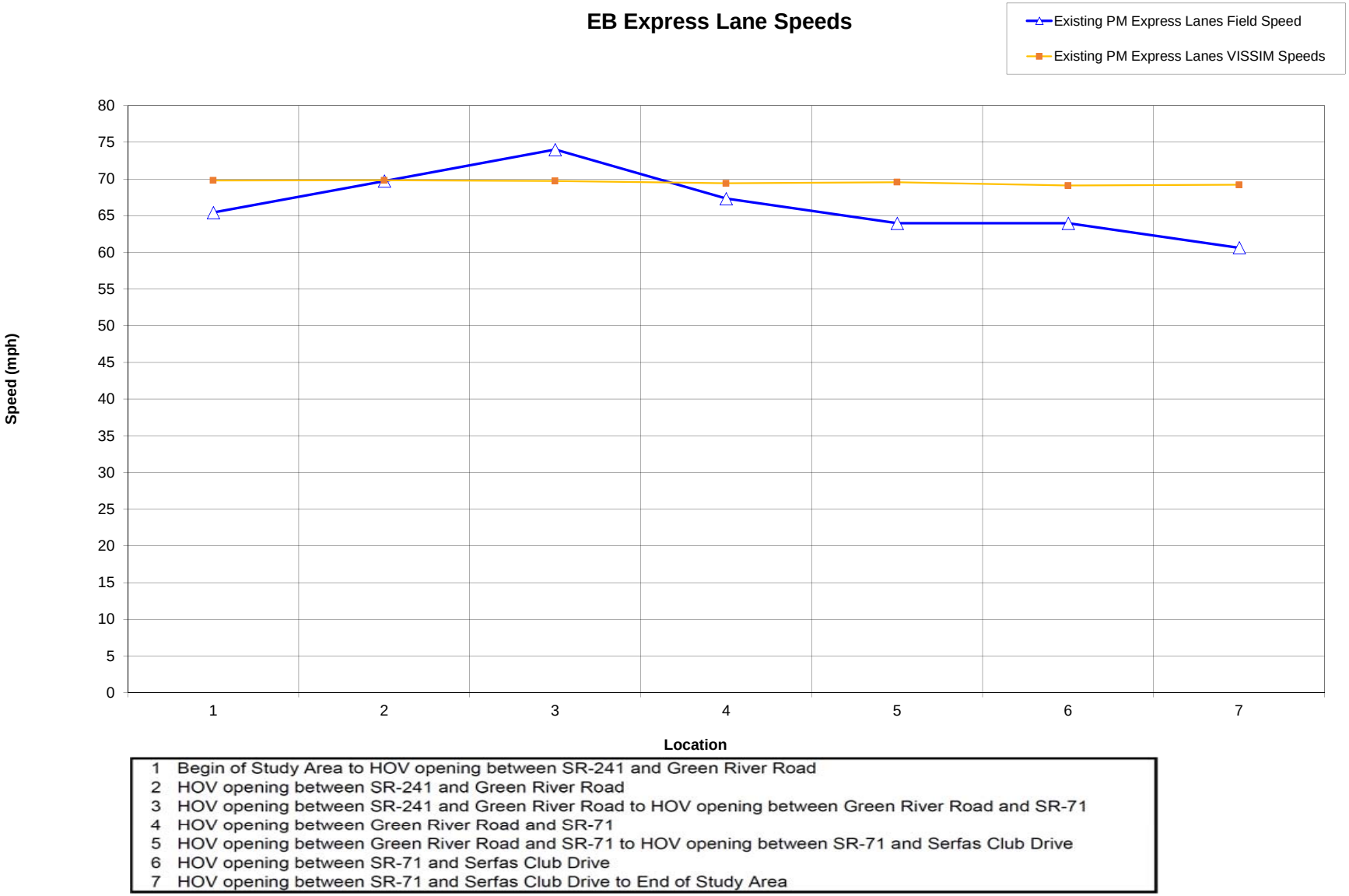
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 6-7 AM-Calibration

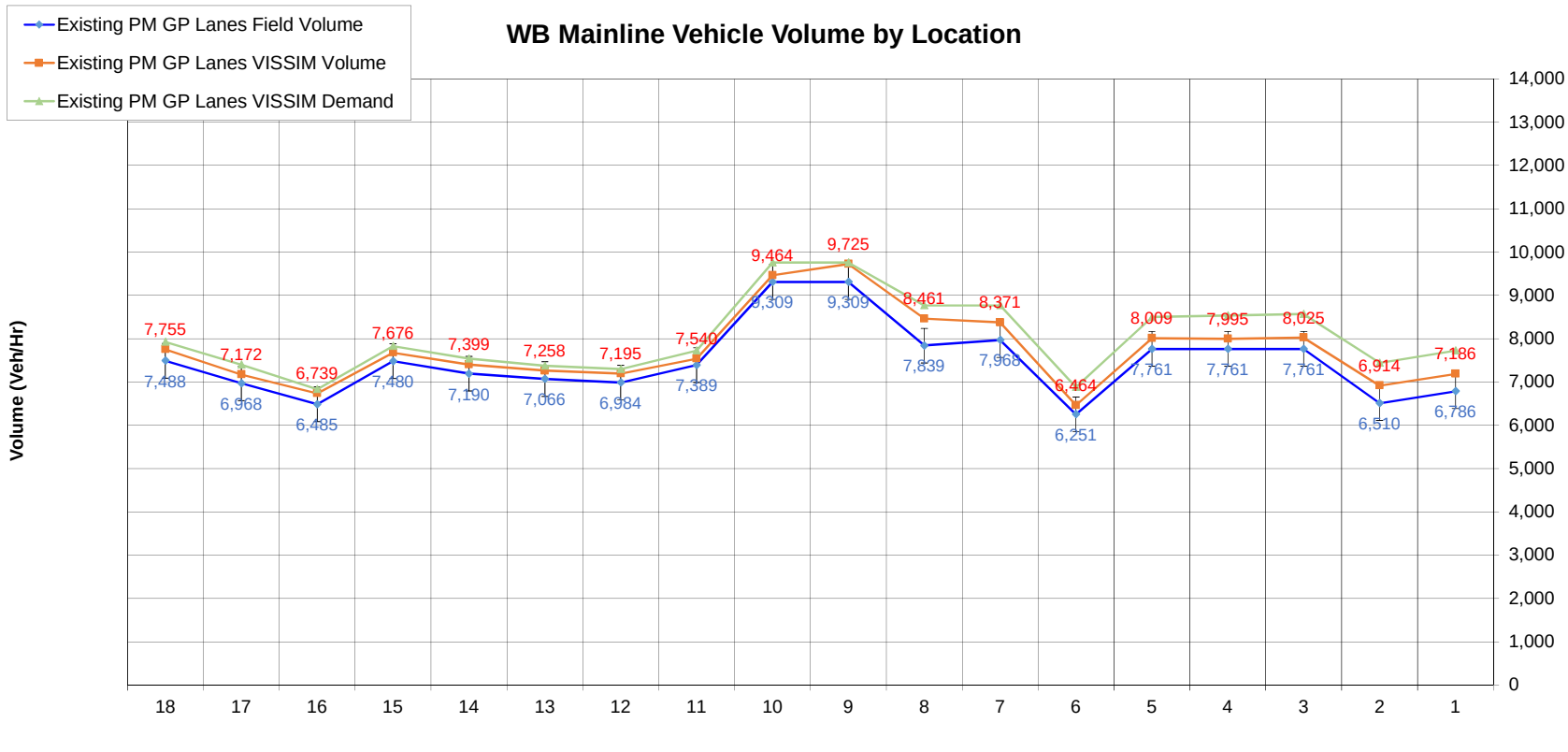


1	Begin of Study Area to HOV opening between SR-241 and Green River Road
2	HOV opening between SR-241 and Green River Road
3	HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4	HOV opening between Green River Road and SR-71
5	HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6	HOV opening between SR-71 and Serfas Club Drive
7	HOV opening between SR-71 and Serfas Club Drive to End of Study Area

Charts 6-7 AM-Calibration

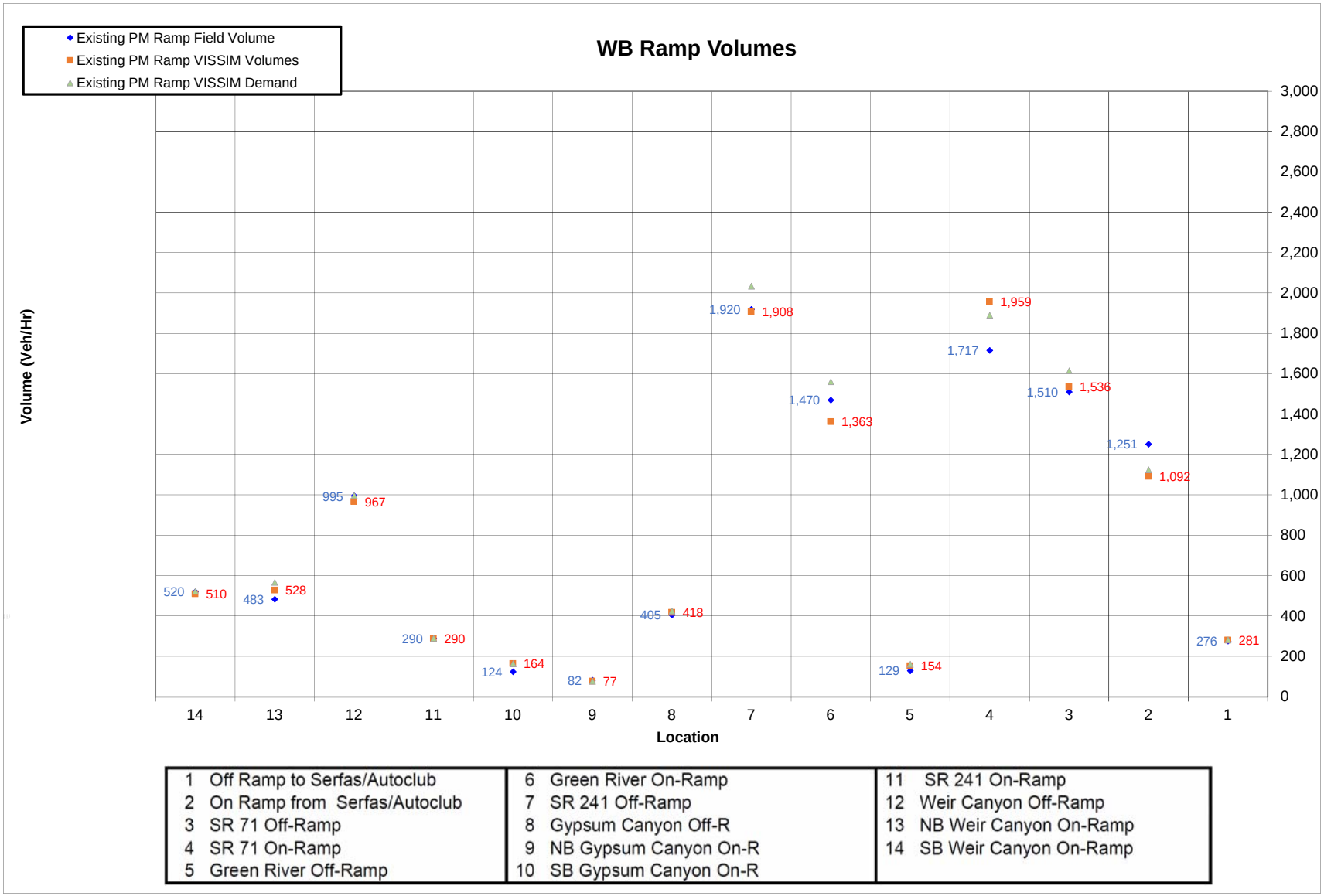


1 Begin of Study Area to HOV opening between SR-241 and Green River Road
2 HOV opening between SR-241 and Green River Road
3 HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4 HOV opening between Green River Road and SR-71
5 HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6 HOV opening between SR-71 and Serfas Club Drive
7 HOV opening between SR-71 and Serfas Club Drive to End of Study Area

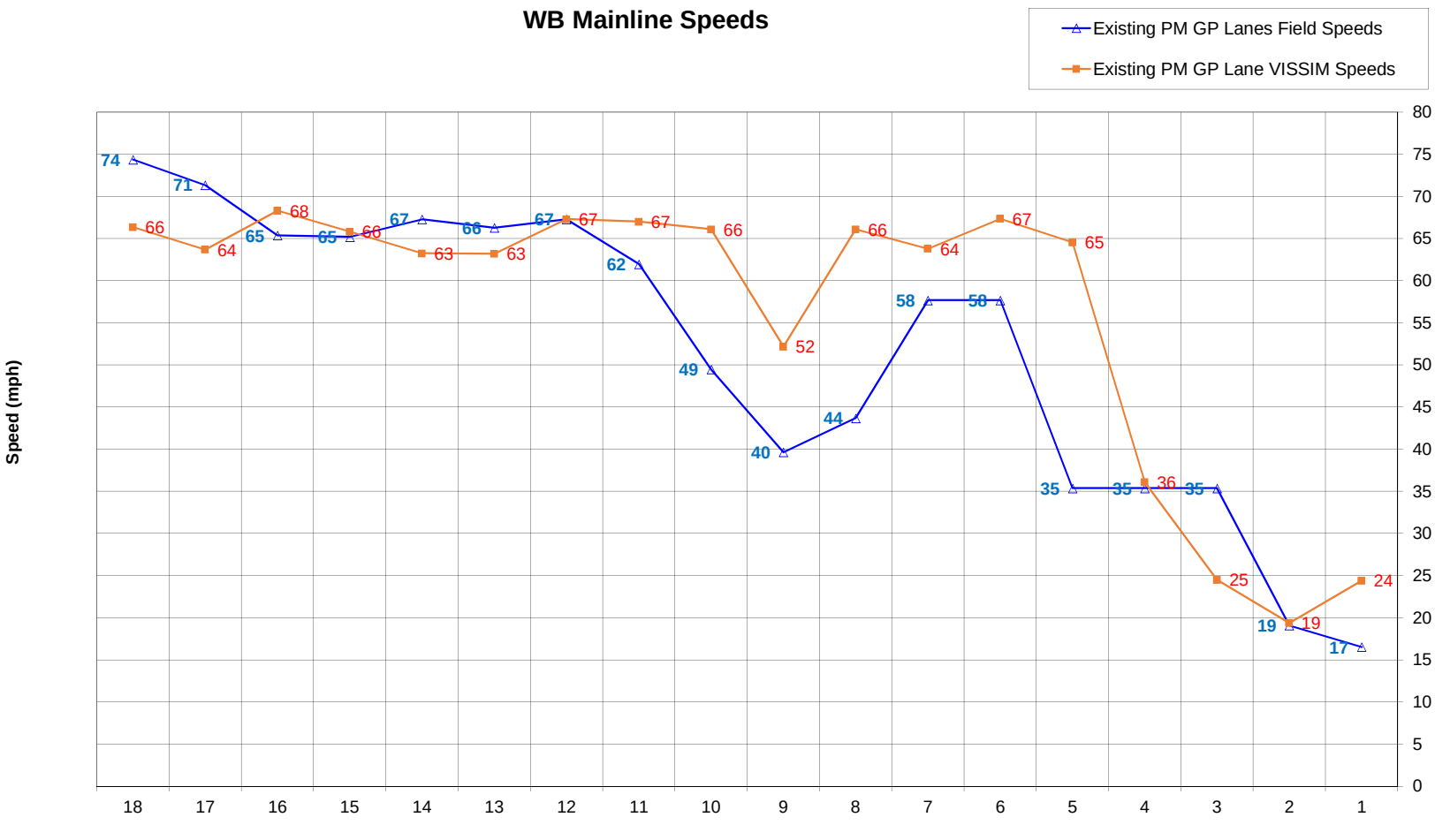


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area

Charts 6-7 AM-Calibration

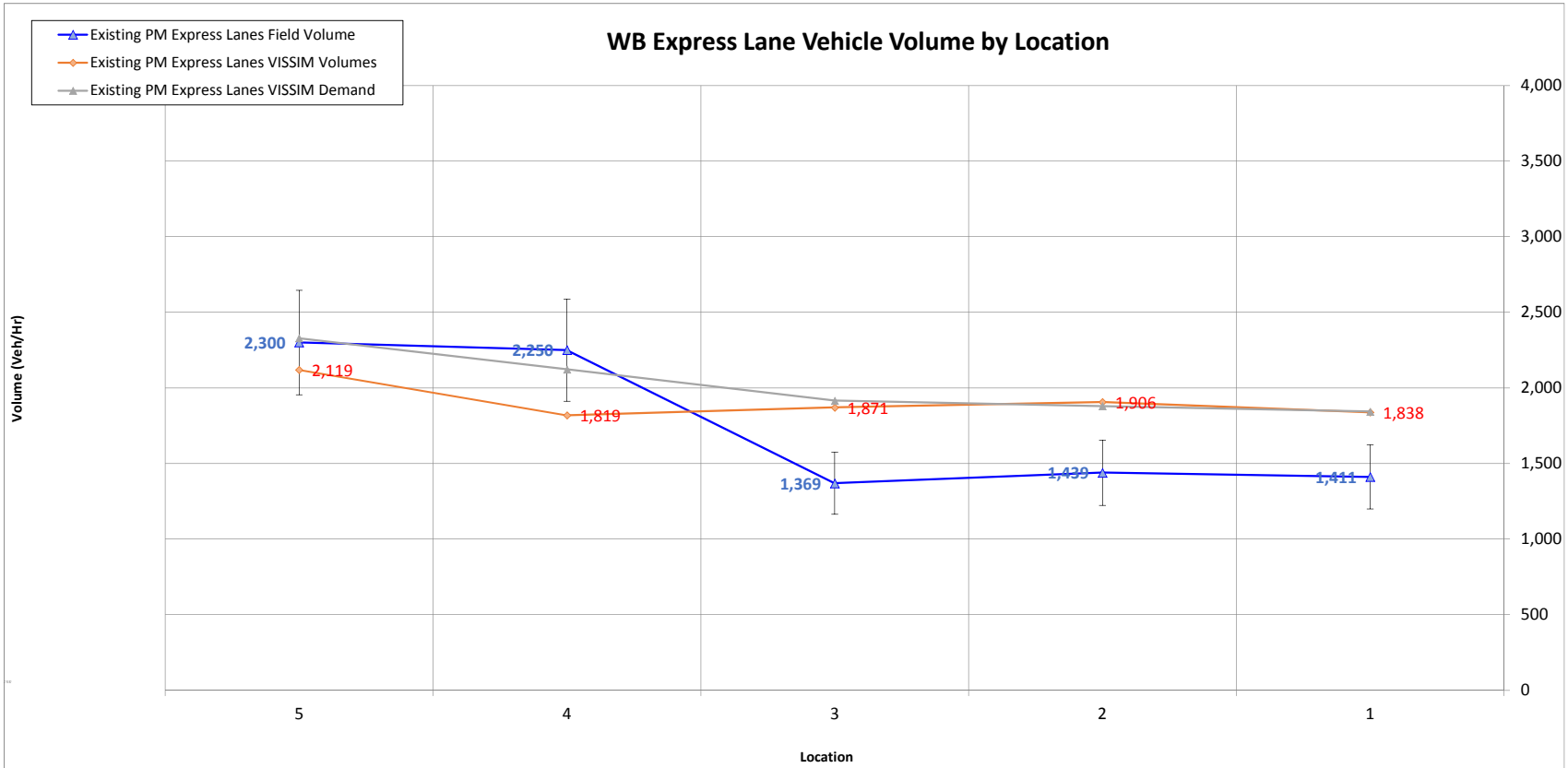


1	Off Ramp to Serfas/Autoclub	6	Green River On-Ramp	11	SR 241 On-Ramp
2	On Ramp from Serfas/Autoclub	7	SR 241 Off-Ramp	12	Weir Canyon Off-Ramp
3	SR 71 Off-Ramp	8	Gypsum Canyon Off-R	13	NB Weir Canyon On-Ramp
4	SR 71 On-Ramp	9	NB Gypsum Canyon On-R	14	SB Weir Canyon On-Ramp
5	Green River Off-Ramp	10	SB Gypsum Canyon On-R		



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area

Charts 6-7 AM-Calibration

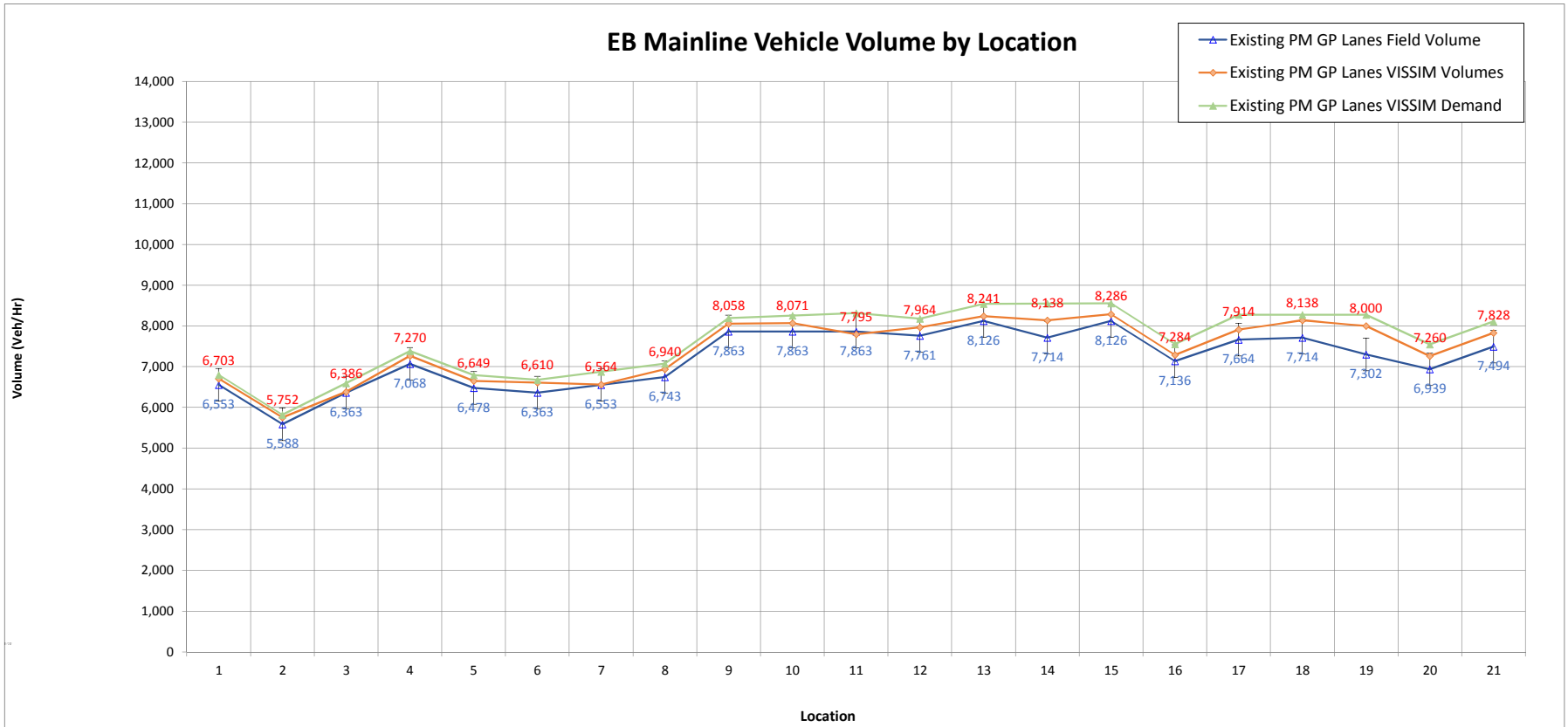


1	Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2	HOV opening between Serfas/Autoclub and SR-71
3	HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4	HOV opening between Green River Road and SR-241
5	HOV opening between Green River Road and SR-241 to End of Study area

Charts 6-7 AM-Calibration

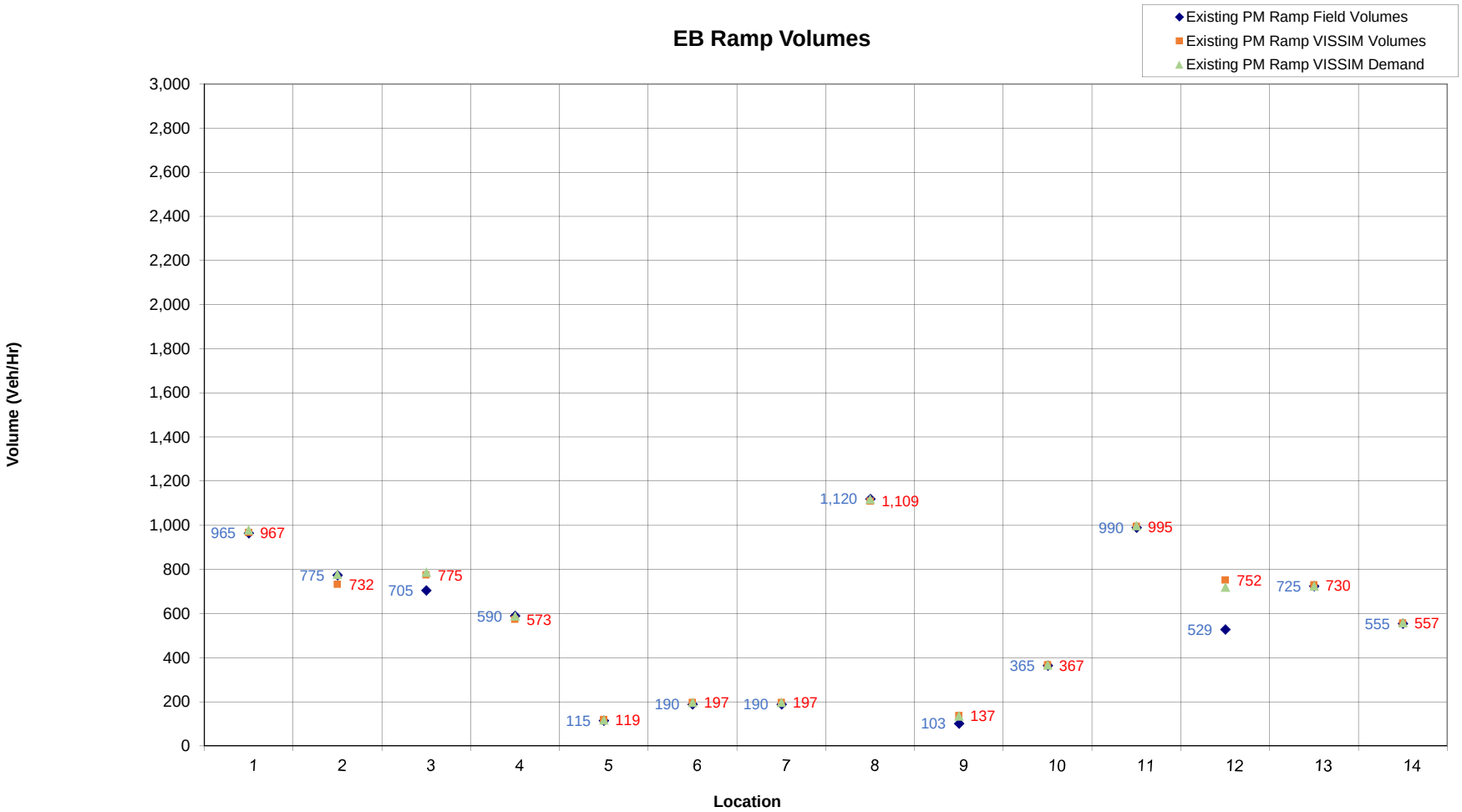
1	Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2	HOV opening between Serfas/Autoclub and SR-71
3	HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4	HOV opening between Green River Road and SR-241
5	HOV opening between Green River Road and SR-241 to End of Study area

Charts 6-7 AM-Calibration



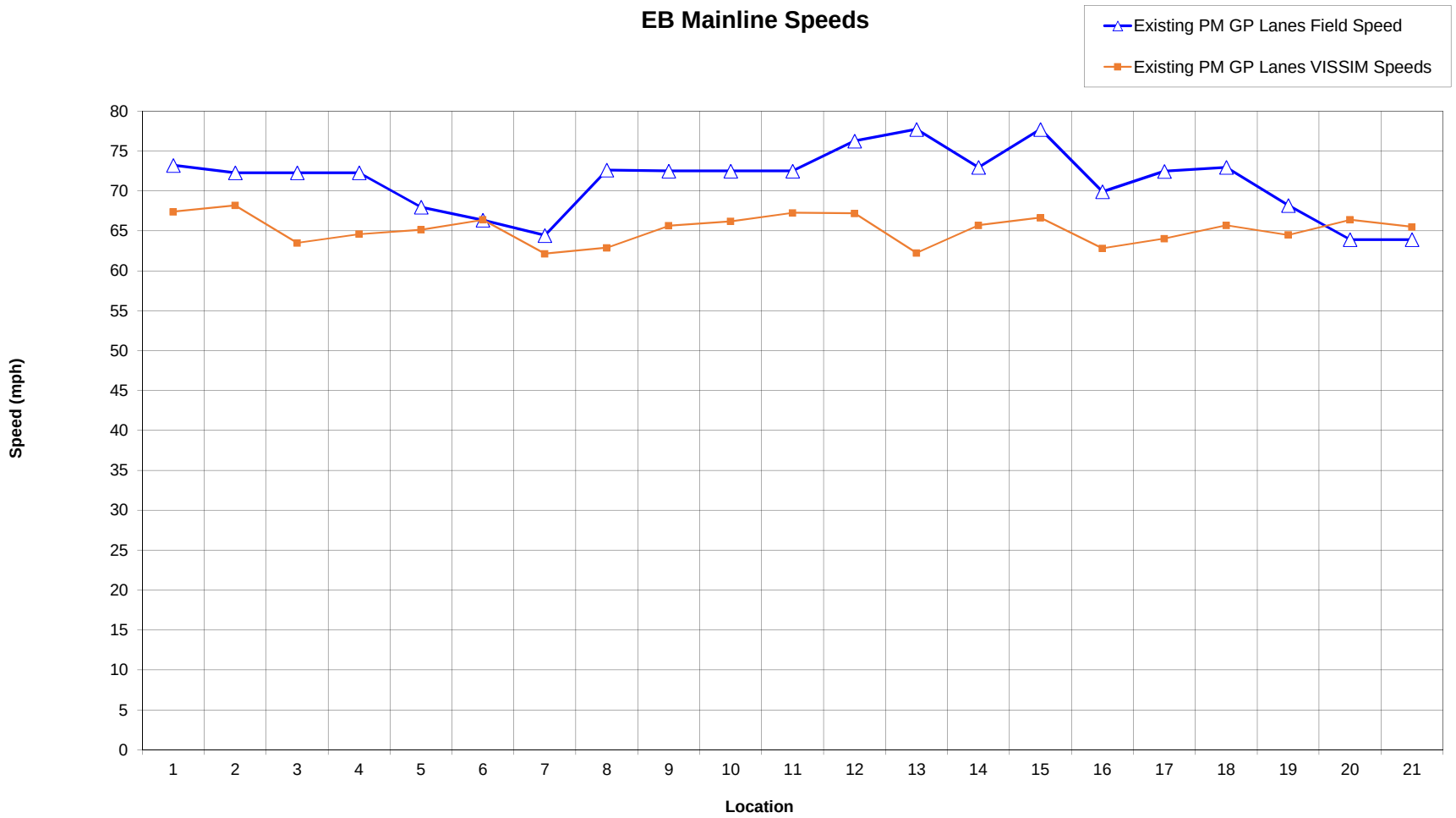
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 7-8 AM-Calibration

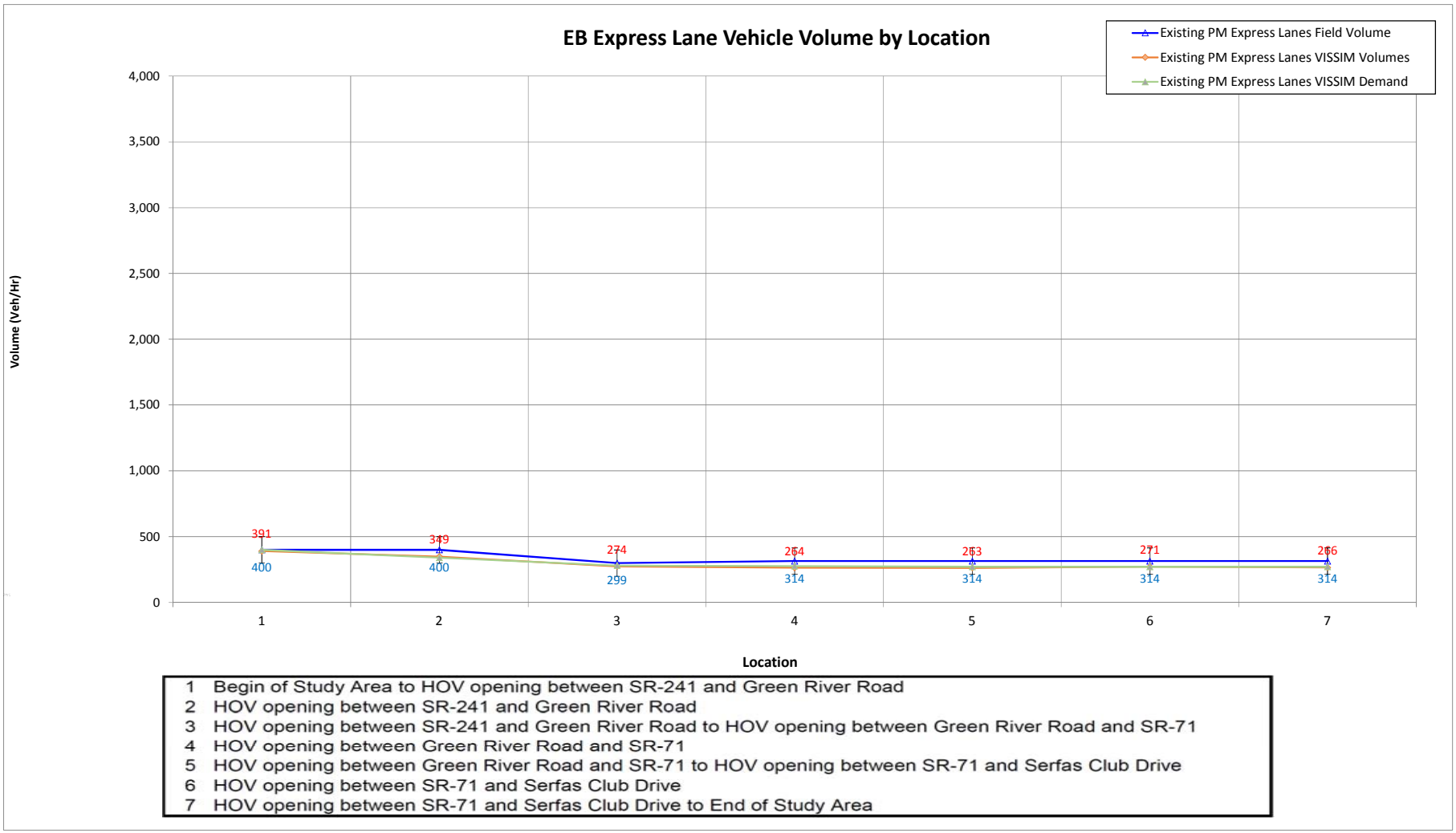


1	Off Ramp to Weir Canyon	6	On Ramp from SB Gypsum Canyon	11	Off Ramp to NB SR 71
2	On Ramp from SB Weir Canyon	7	On Ramp from NB Gypsum Canyon	12	On Ramp from SB SR 71
3	On Ramp from NB Weir Canyon	8	On Ramp from NB SR 241 GP	13	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	9	Off Ramp to Green River	14	On Ramp from Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	10	On Ramp From Green River		

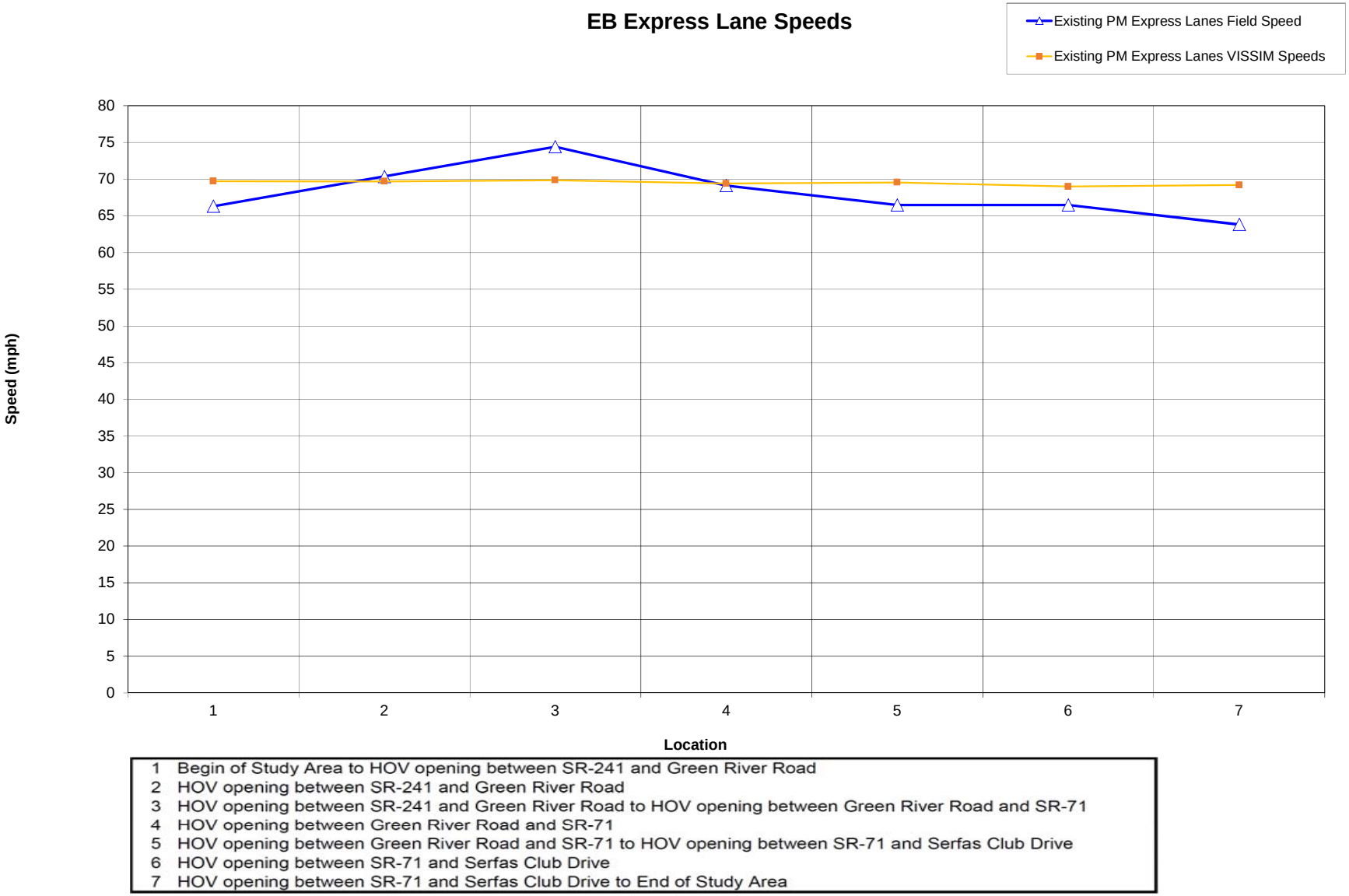
Charts 7-8 AM-Calibration



1 Begin Study Area to Off Ramp to Weir Canyon	8 On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15 End of HOV weave to SR 71 Off-Ramp
2 Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9 On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16 SR 71 Off-Ramp to On Ramp from SB SR 71
3 On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10 Start Managed Lanes Weave to End Managed Lanes Weave	17 On Ramp from SB SR 71 to Start of HOV Weave
4 On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11 End Managed Lanes Weave to Off Ramp to Green River	18 Start of HOV weave to End of HOV weave
5 Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12 Off Ramp to Green River to On Ramp From Green River	19 End of HOV weave to Off Ramp to Serfas/Autoclub
6 Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13 On Ramp From Green River to Start of HOV Weave	20 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7 On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14 Start of HOV weave to End of HOV weave	21 On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

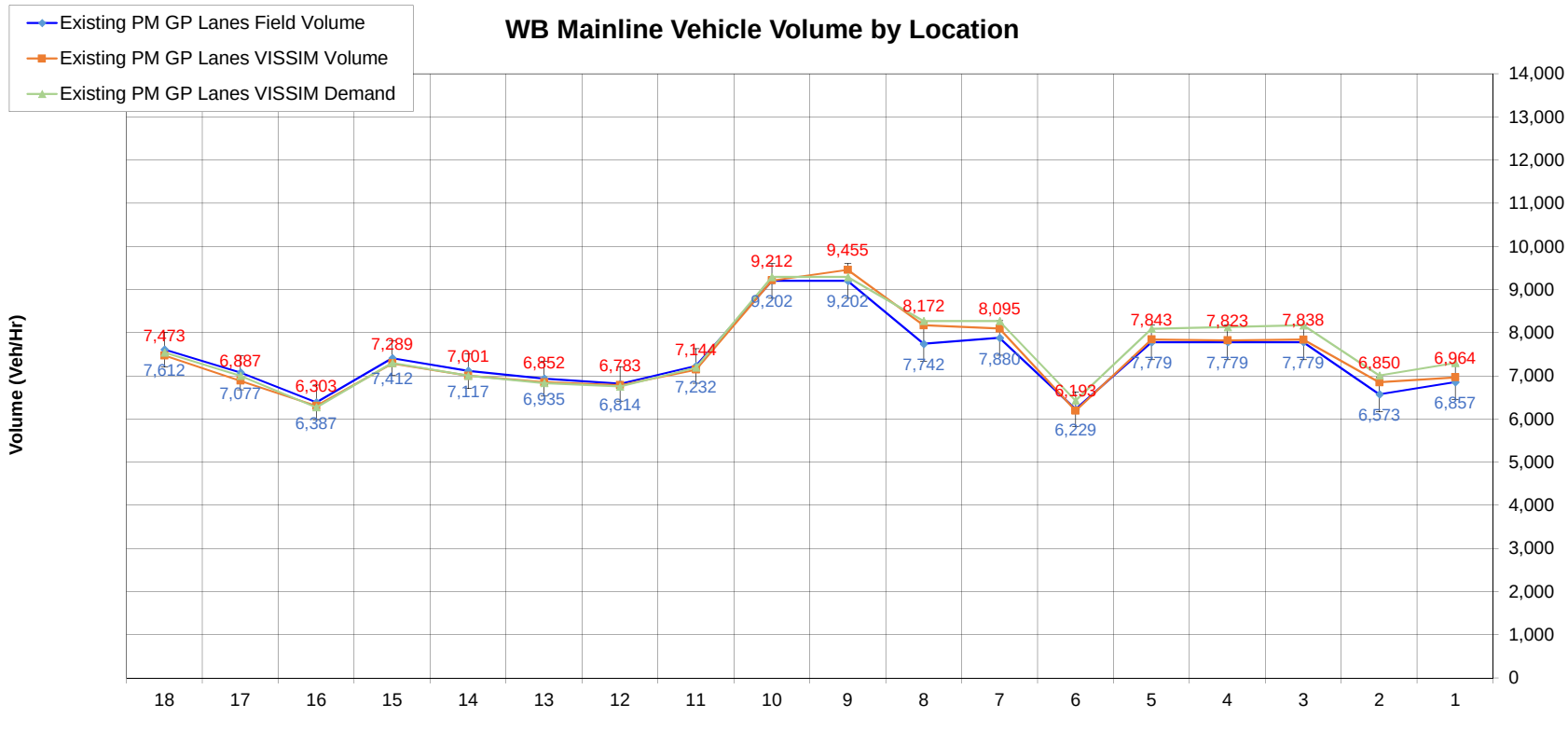


1 Begin of Study Area to HOV opening between SR-241 and Green River Road
2 HOV opening between SR-241 and Green River Road
3 HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4 HOV opening between Green River Road and SR-71
5 HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6 HOV opening between SR-71 and Serfas Club Drive
7 HOV opening between SR-71 and Serfas Club Drive to End of Study Area

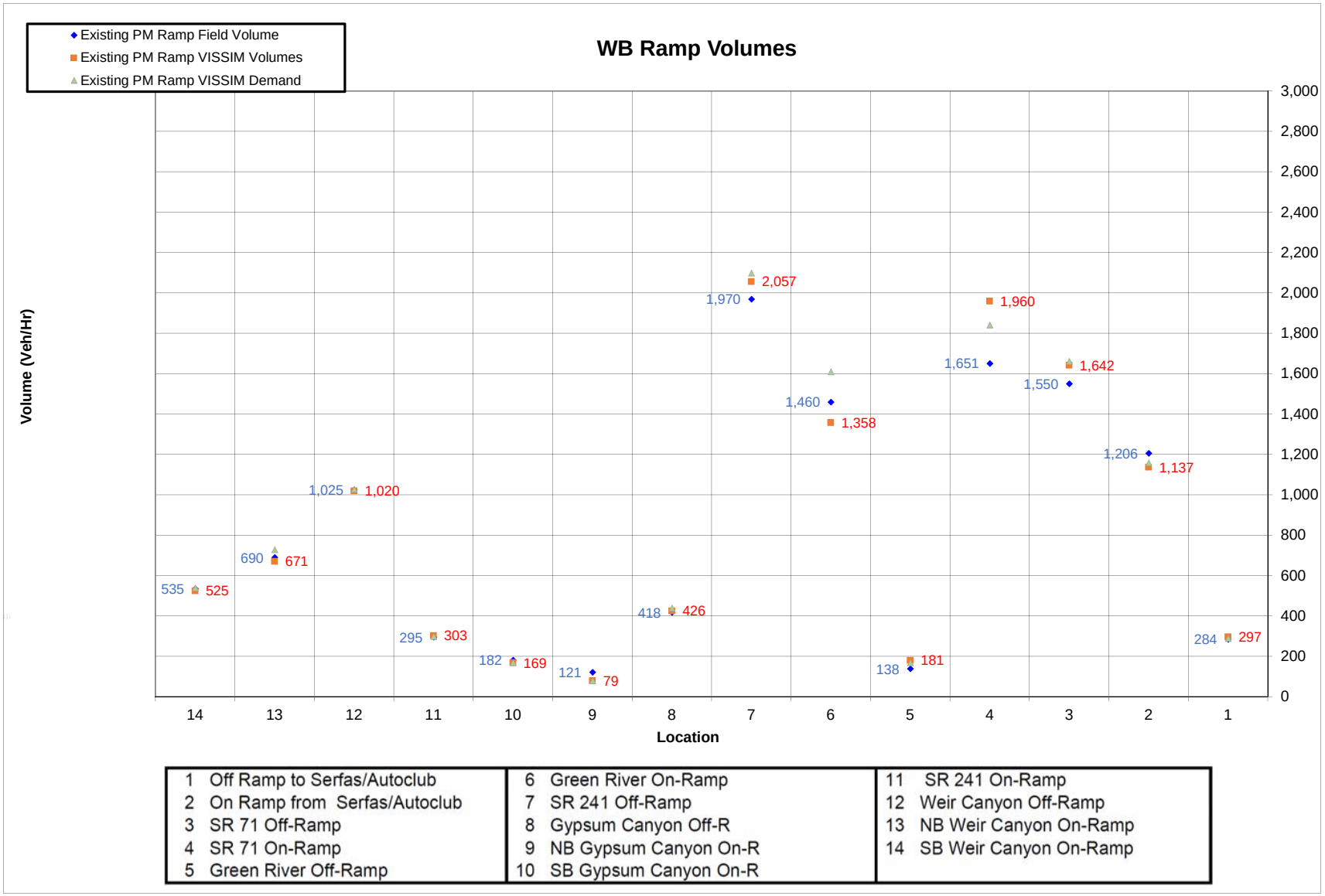


1 Begin of Study Area to HOV opening between SR-241 and Green River Road
2 HOV opening between SR-241 and Green River Road
3 HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4 HOV opening between Green River Road and SR-71
5 HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6 HOV opening between SR-71 and Serfas Club Drive
7 HOV opening between SR-71 and Serfas Club Drive to End of Study Area

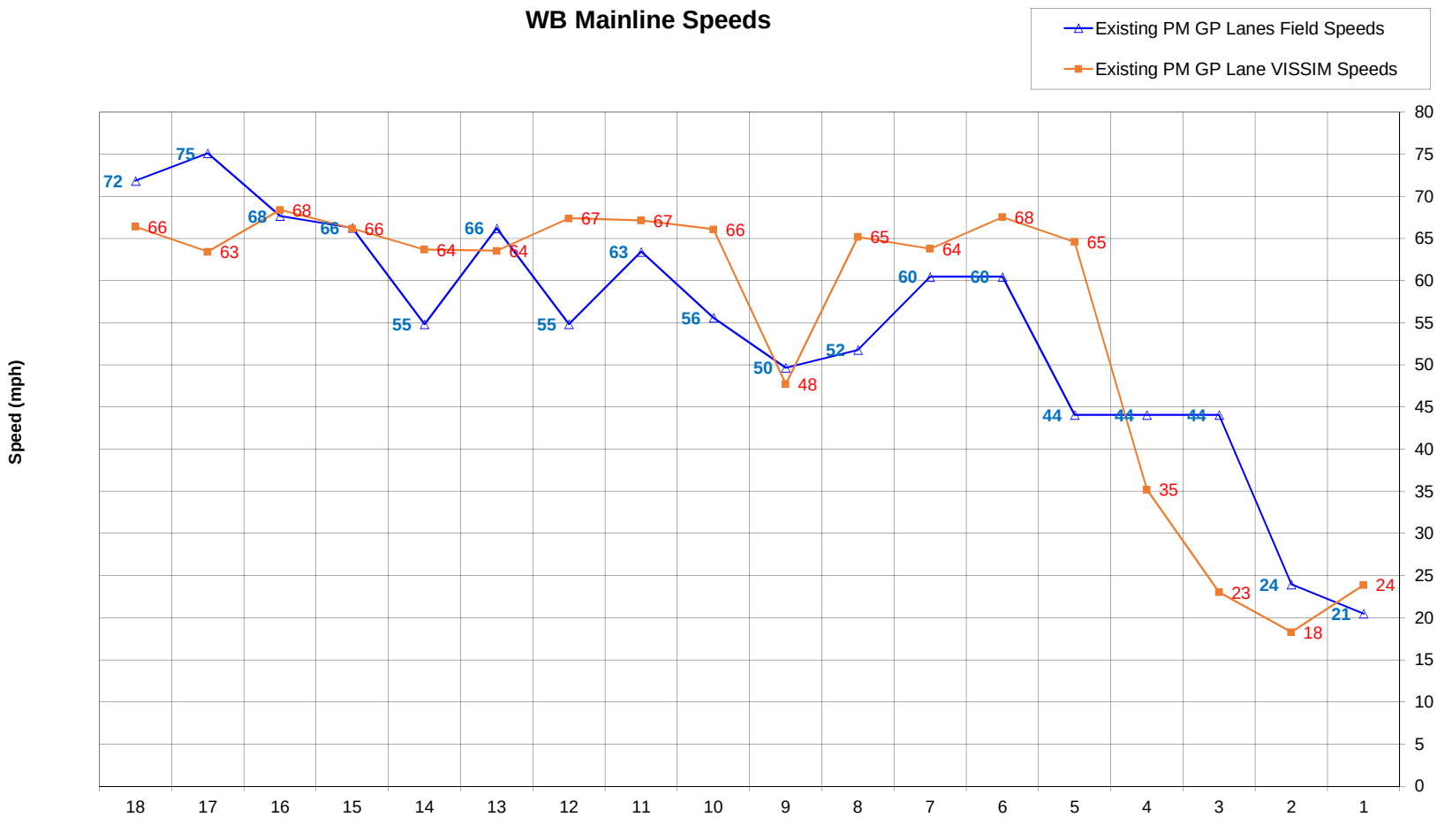
Charts 7-8 AM-Calibration



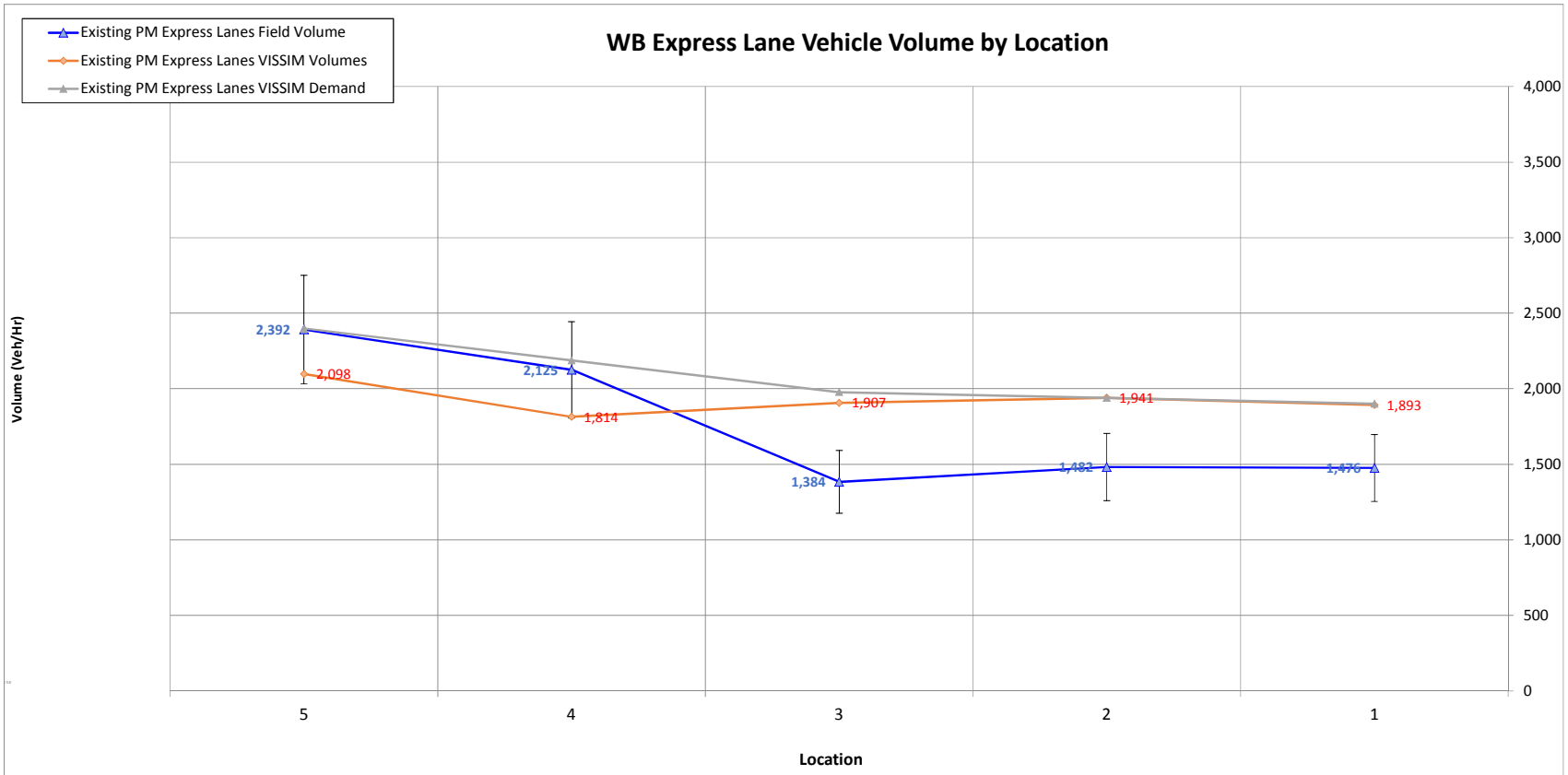
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area



Charts 7-8 AM-Calibration

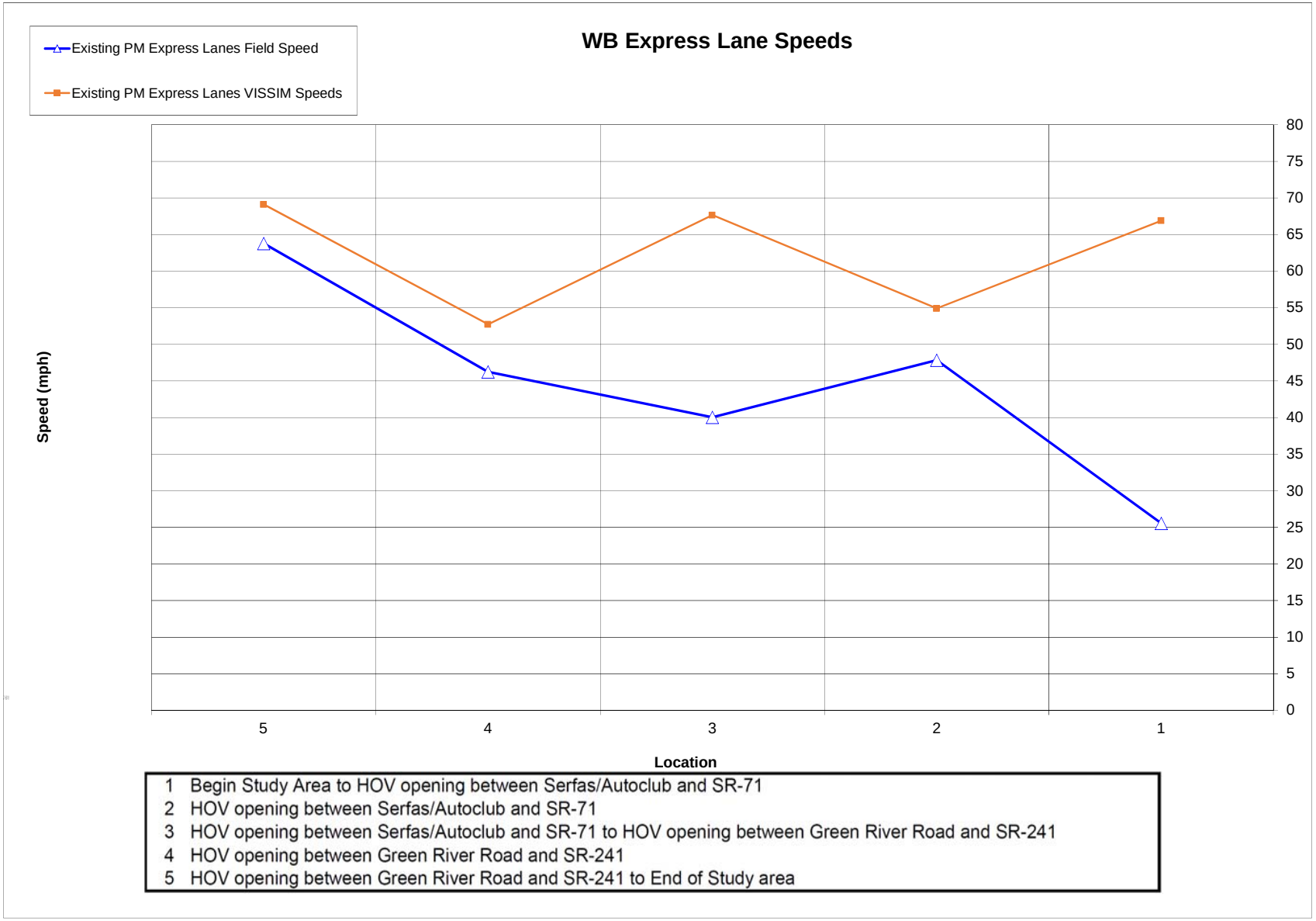


1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13	NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14	SB Gypsum Canyon On-R to SR 241 On-Ramp
3	On Ramp from Serfas/Autoclub to Start of HOV Weave	9	Green River On-Ramp to End of HOV Weave	15	SR 241 On-Ramp to Weir Canyon Off-Ramp
4	Start of HOV Weave to end of HOV Weave	10	End of HOV Weave to SR 241 Off-Ramp	16	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5	End of HOV Weave to SR 71 Off-Ramp	11	SR 241 Off-Ramp to Gypsum Canyon Off-R	17	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6	SR 71 Off-Ramp to SR 71 On-Ramp	12	Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18	SB Weir Canyon On-Ramp to End of study area

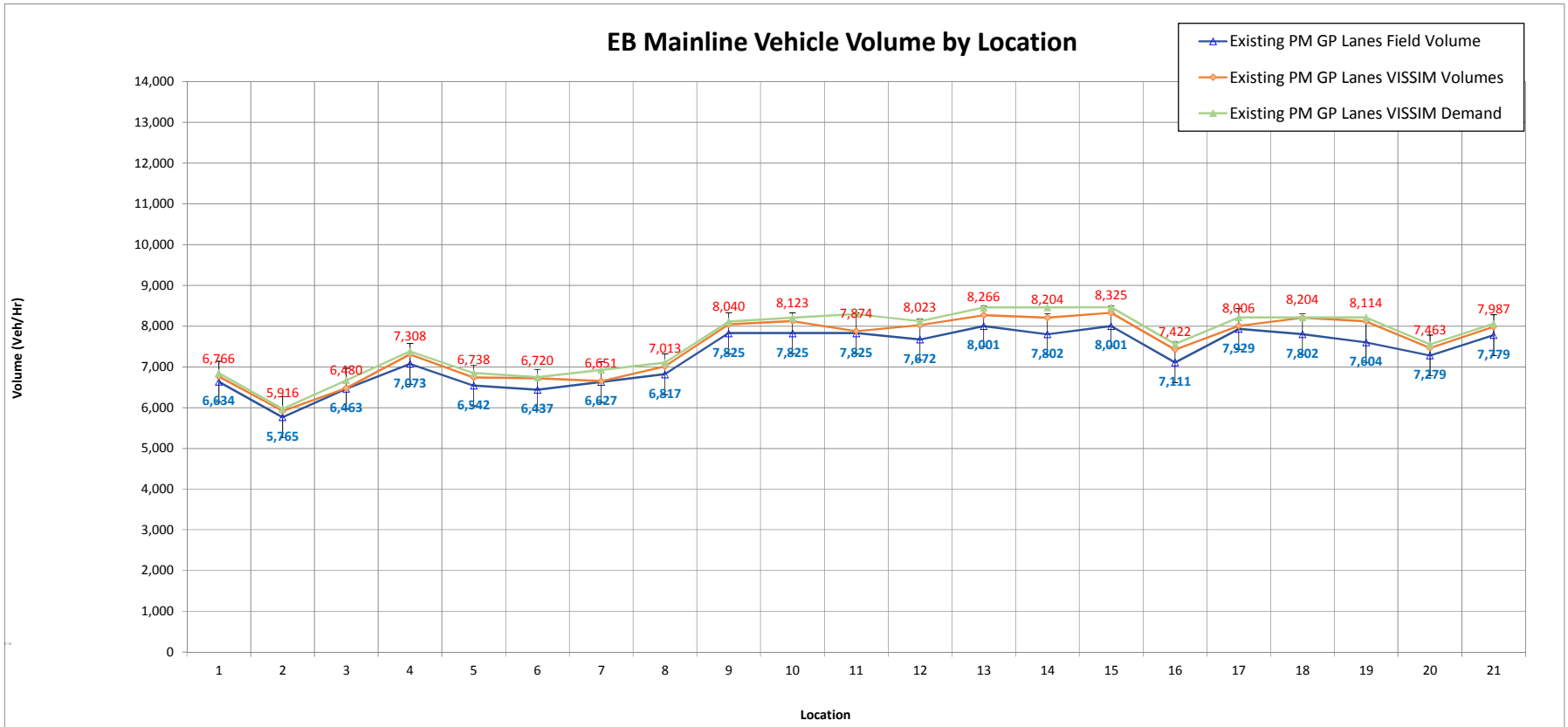


1	Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2	HOV opening between Serfas/Autoclub and SR-71
3	HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4	HOV opening between Green River Road and SR-241
5	HOV opening between Green River Road and SR-241 to End of Study area

Charts 7-8 AM-Calibration

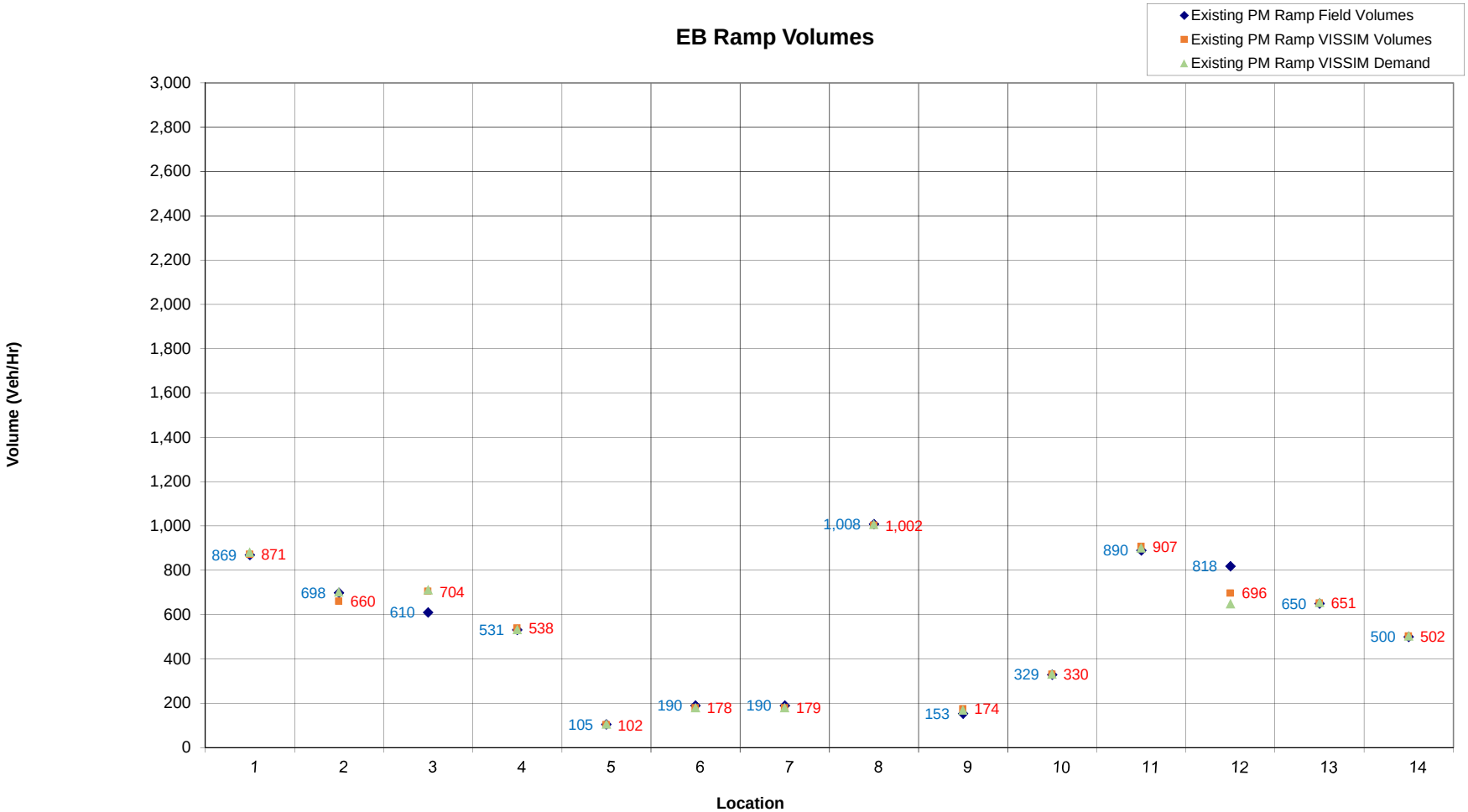


Charts 7-8 AM-Calibration



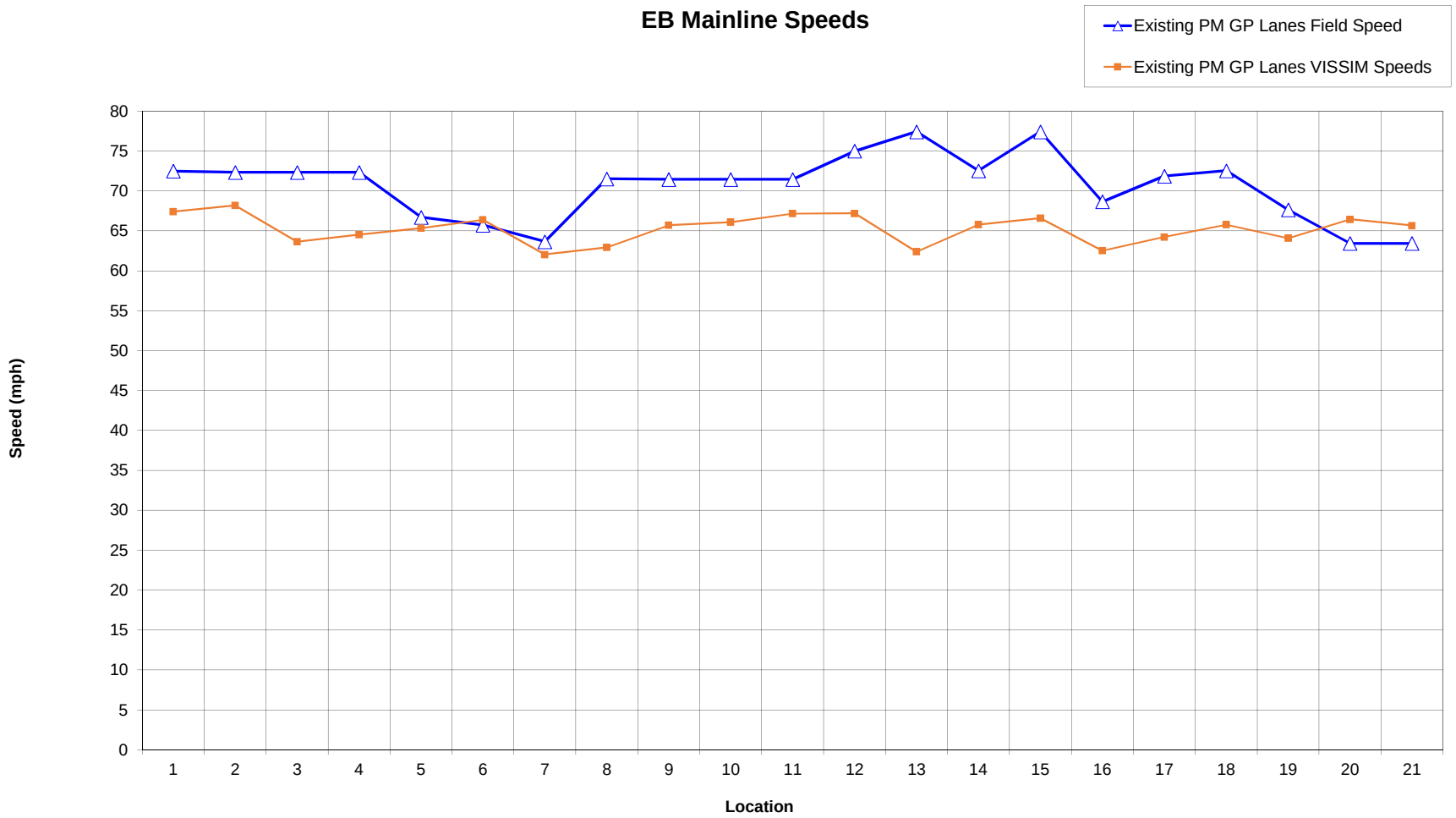
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 8-9 AM-Calibration



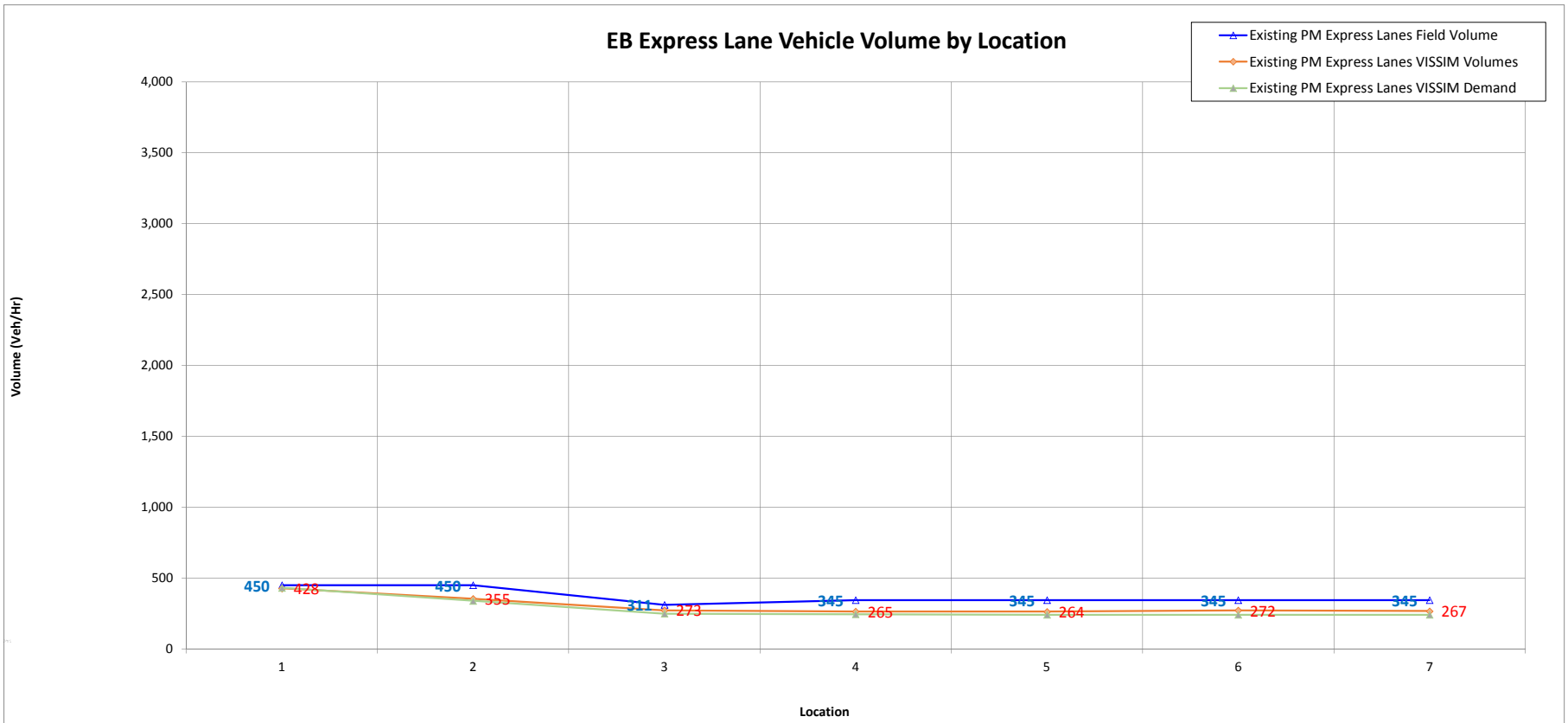
1	Off Ramp to Weir Canyon	6	On Ramp from SB Gypsum Canyon	11	Off Ramp to NB SR 71
2	On Ramp from SB Weir Canyon	7	On Ramp from NB Gypsum Canyon	12	On Ramp from SB SR 71
3	On Ramp from NB Weir Canyon	8	On Ramp from NB SR 241 GP	13	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	9	Off Ramp to Green River	14	On Ramp from Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	10	On Ramp From Green River		

Charts 8-9 AM-Calibration



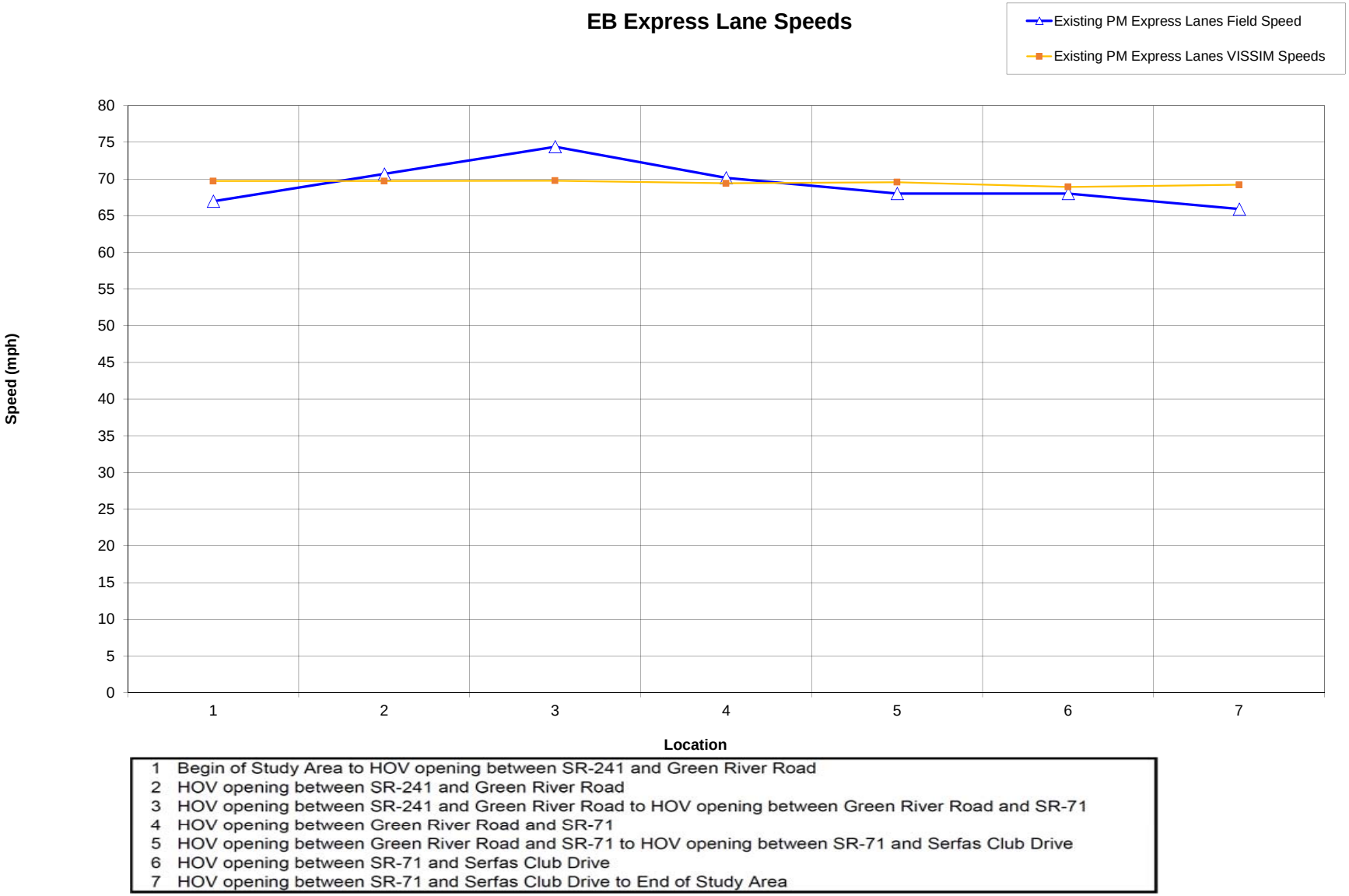
1 Begin Study Area to Off Ramp to Weir Canyon	8 On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15 End of HOV weave to SR 71 Off-Ramp
2 Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9 On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16 SR 71 Off-Ramp to On Ramp from SB SR 71
3 On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10 Start Managed Lanes Weave to End Managed Lanes Weave	17 On Ramp from SB SR 71 to Start of HOV Weave
4 On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11 End Managed Lanes Weave to Off Ramp to Green River	18 Start of HOV weave to End of HOV weave
5 Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12 Off Ramp to Green River to On Ramp From Green River	19 End of HOV weave to Off Ramp to Serfas/Autoclub
6 Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13 On Ramp From Green River to Start of HOV Weave	20 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7 On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14 Start of HOV weave to End of HOV weave	21 On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 8-9 AM-Calibration



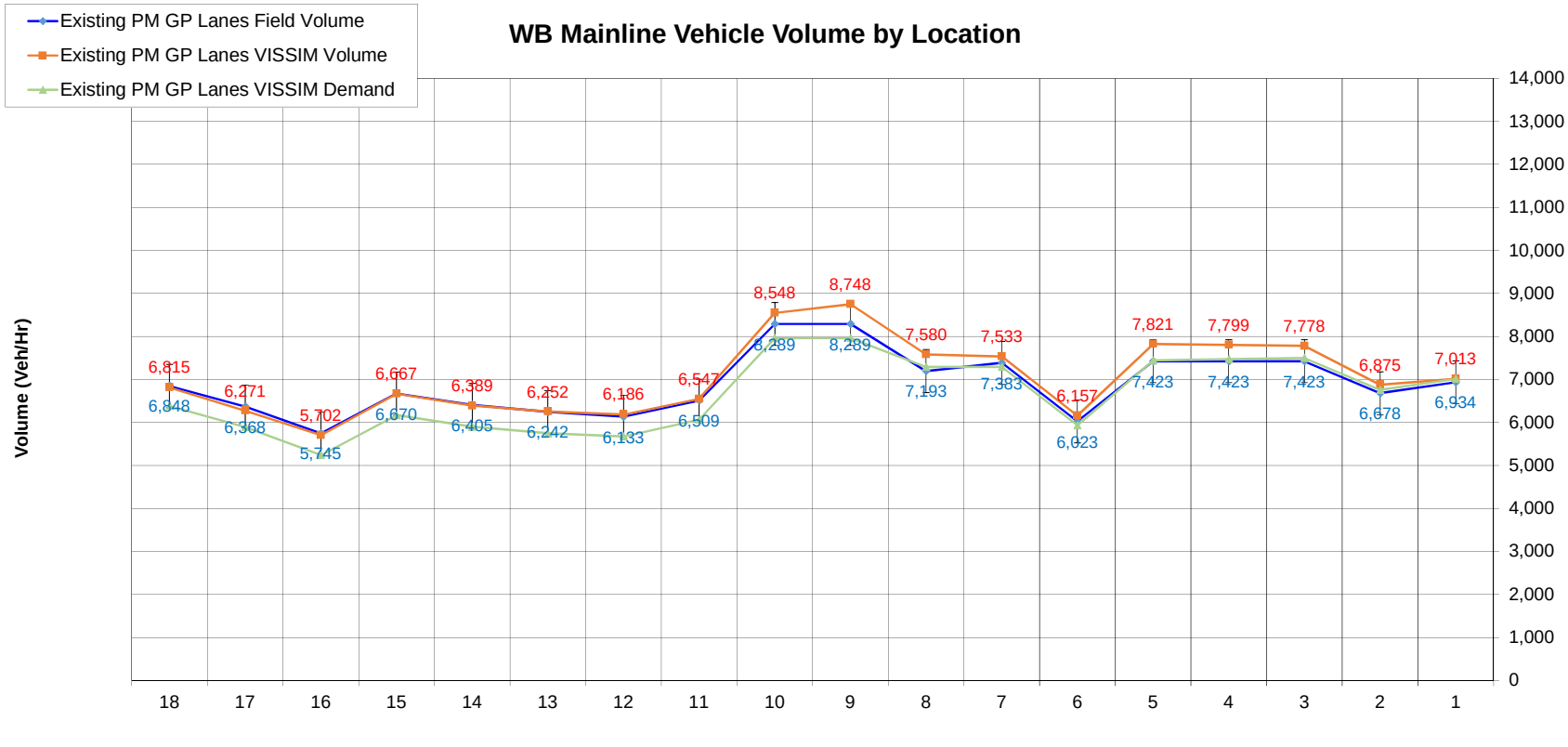
1 Begin of Study Area to HOV opening between SR-241 and Green River Road
2 HOV opening between SR-241 and Green River Road
3 HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4 HOV opening between Green River Road and SR-71
5 HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6 HOV opening between SR-71 and Serfas Club Drive
7 HOV opening between SR-71 and Serfas Club Drive to End of Study Area

Charts 8-9 AM-Calibration

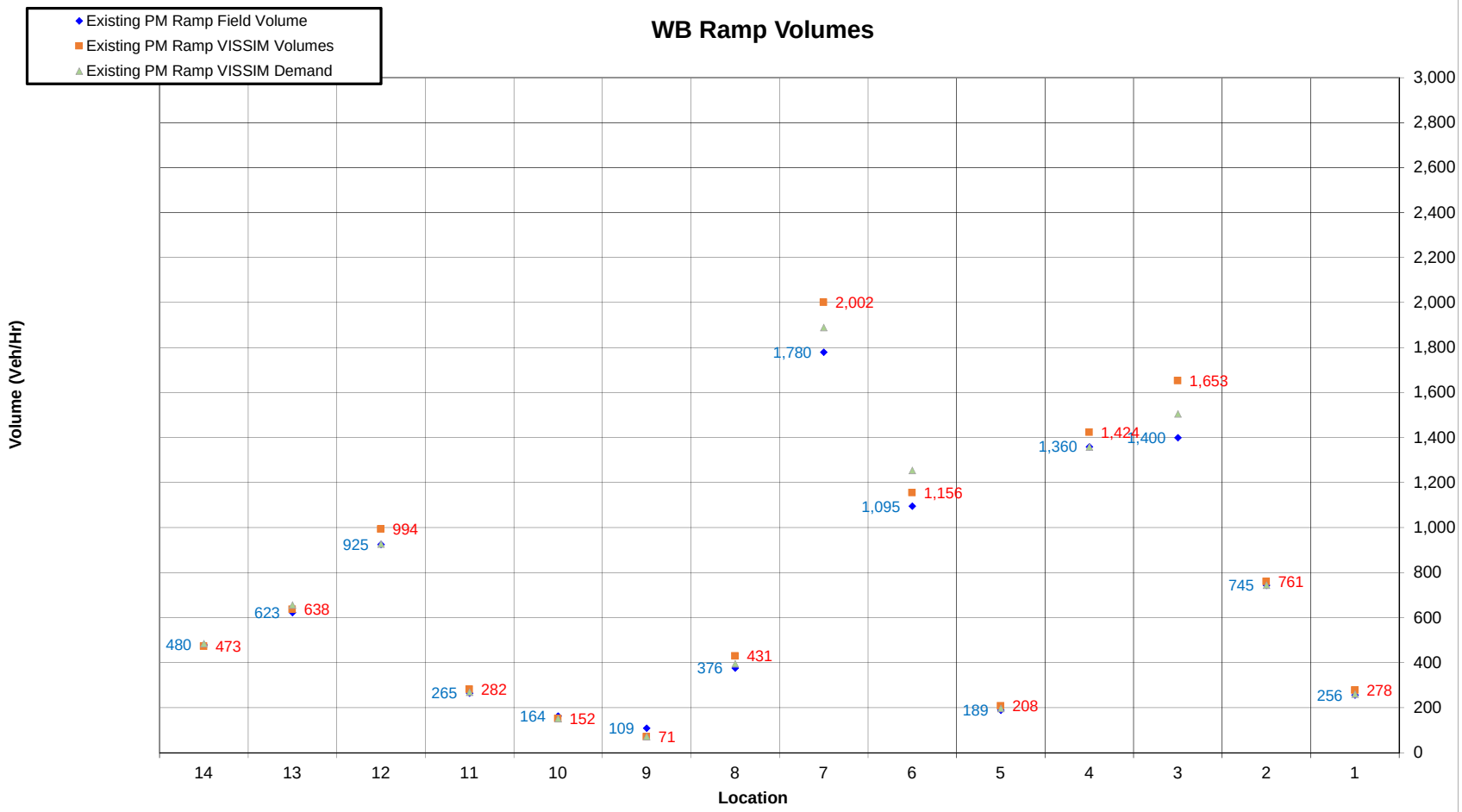


1 Begin of Study Area to HOV opening between SR-241 and Green River Road
2 HOV opening between SR-241 and Green River Road
3 HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4 HOV opening between Green River Road and SR-71
5 HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6 HOV opening between SR-71 and Serfas Club Drive
7 HOV opening between SR-71 and Serfas Club Drive to End of Study Area

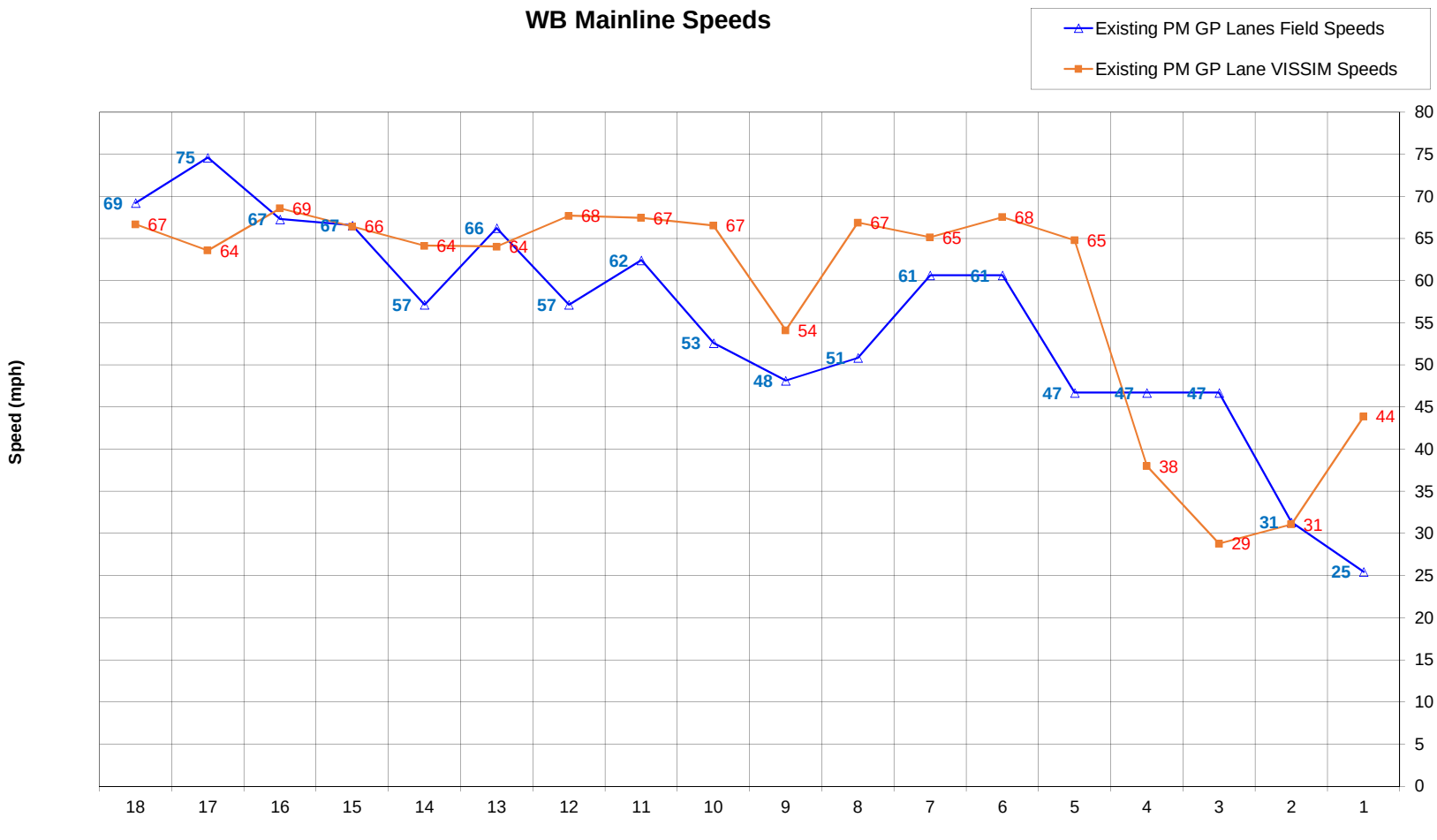
Charts 8-9 AM-Calibration



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area

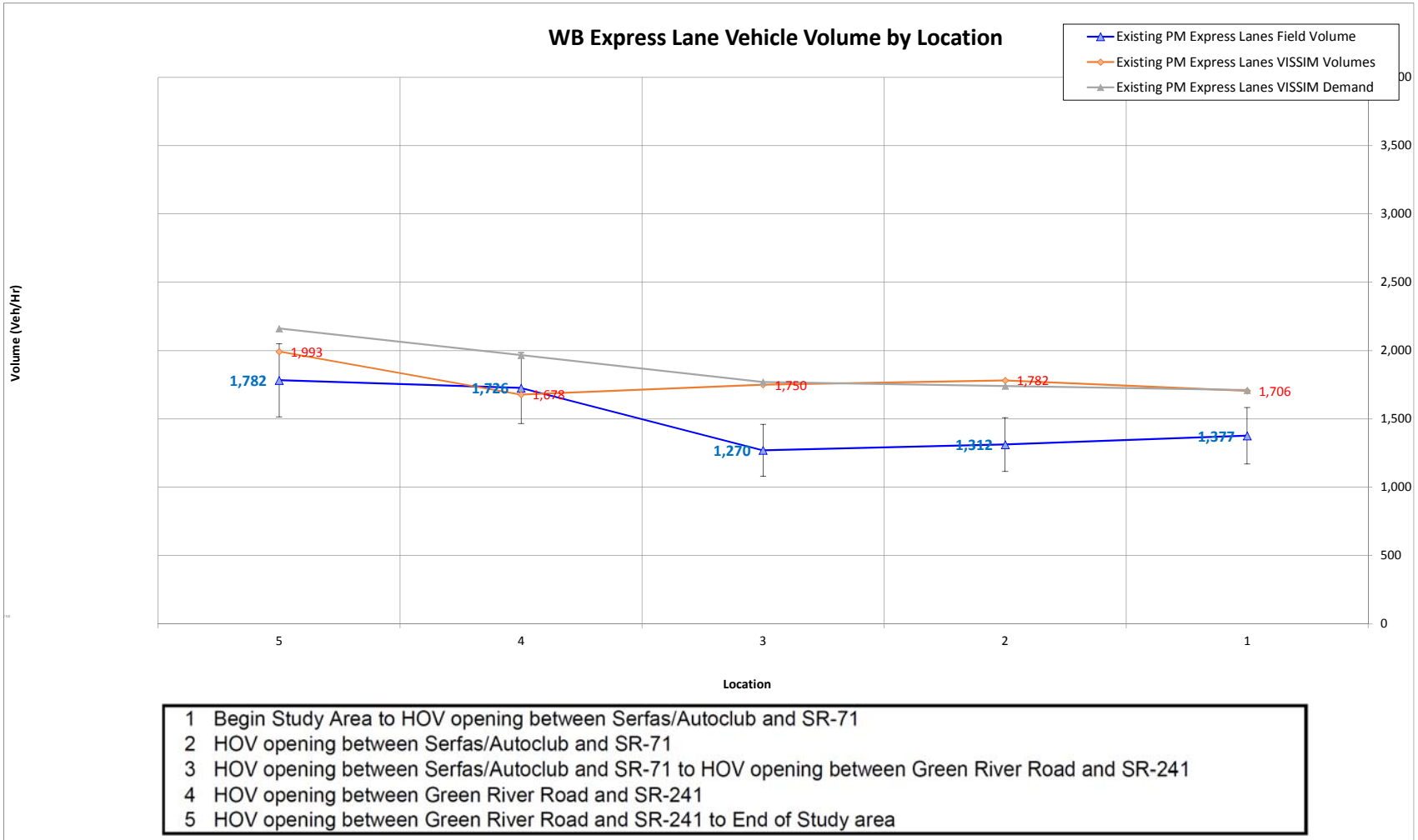


1	Off Ramp to Serfas/Autoclub	6	Green River On-Ramp	11	SR 241 On-Ramp
2	On Ramp from Serfas/Autoclub	7	SR 241 Off-Ramp	12	Weir Canyon Off-Ramp
3	SR 71 Off-Ramp	8	Gypsum Canyon Off-R	13	NB Weir Canyon On-Ramp
4	SR 71 On-Ramp	9	NB Gypsum Canyon On-R	14	SB Weir Canyon On-Ramp
5	Green River Off-Ramp	10	SB Gypsum Canyon On-R		



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area

Charts 8-9 AM-Calibration



1	Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2	HOV opening between Serfas/Autoclub and SR-71
3	HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4	HOV opening between Green River Road and SR-241
5	HOV opening between Green River Road and SR-241 to End of Study area

Charts 8-9 AM-Calibration

Charts 8-9 AM-Calibration

Vissim Model Calibration Results (FHWA Criteria)

FHWA Performance Criteria and Measures	Calibration Acceptance Target
Individual link flows	
Flow < 700 veh/h, Within 100 veh/h	> 85% of cases
700 veh/h < Flow < 2700 veh/h, Within 15%	> 85% of cases
Flow > 2700 veh/h, Within 400 veh/h	> 85% of cases
Difference in sum of all link flows	Within 5%
GEH Statistic Value	
GEH Statistic Value < 5, for individual link flows	> 85% cases
GEH Statistic Value for Sum of All Link Flows	< 4

Freeway Volume Calibration (FHWA Link Flow Criteria)

Lane Type	Eastbound					Westbound				
	Total Links	Calibration Results Achieved				Total Links	Calibration Results Achieved			
		3-4 PM	4-5 PM	5-6 PM	6-7 PM		3-4 PM	4-5 PM	5-6 PM	6-7 PM
Mainline	21	62%	81%	67%	62%	18	94%	100%	94%	100%
Ramps	14	93%	93%	100%	86%	14	93%	93%	86%	93%
All Links	35	74%	86%	80%	71%	32	94%	97%	91%	97%
Total Link Flow % Difference		-1%	2%	-2%	-2%		-2%	0%	-3%	1%

Freeway Volume Calibration (GEH Criteria)

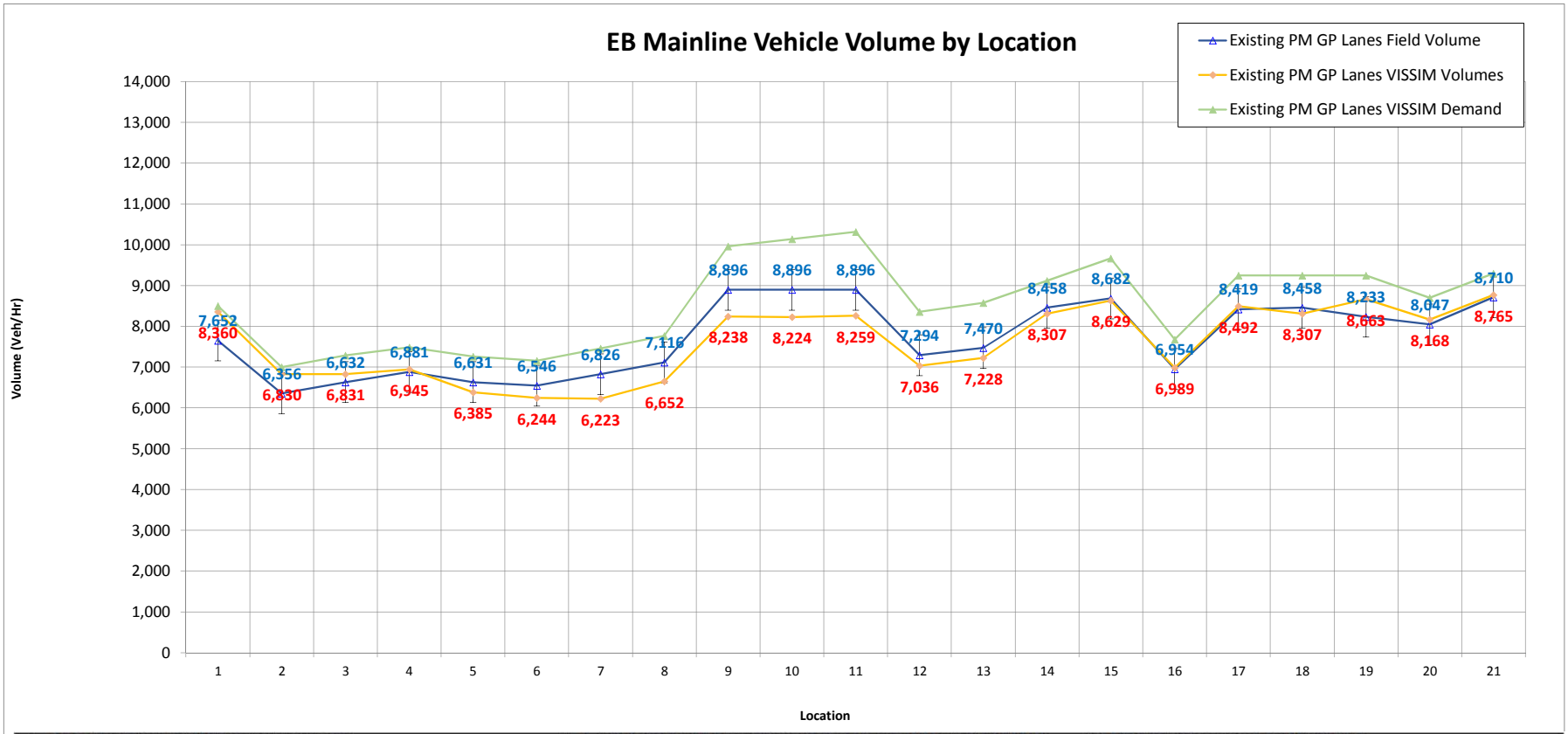
Lane Type	Eastbound					Westbound				
	Total Links	Calibration Results Achieved				Total Links	Calibration Results Achieved			
		3-4 PM	4-5 PM	5-6 PM	6-7 PM		3-4 PM	4-5 PM	5-6 PM	6-7 PM
Mainline	21	67%	86%	71%	62%	18	89%	100%	94%	100%
Ramps	14	93%	93%	93%	86%	14	93%	100%	86%	93%
All Links	35	77%	89%	80%	71%	32	91%	100%	91%	97%
Total Link Flow GEH		3.0	9.4	10.5	9.6		7.9	0.7	10.7	3.3

Network Travel Time calibration: PM Peak Period

Corridor		Field Travel Time (Minutes)				VISSIM Travel Time (Minutes)				Diff.%			
		3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
Eastbound SR-91		24.5	35.2	34.6	35.3	27.8	31.3	35.6	31.3	13%	-11%	3%	-11%
Westbound SR-91		9.3	9.1	9.1	9.0	8.9	9.0	9.0	9.0	-3%	-2%	-2%	-1%

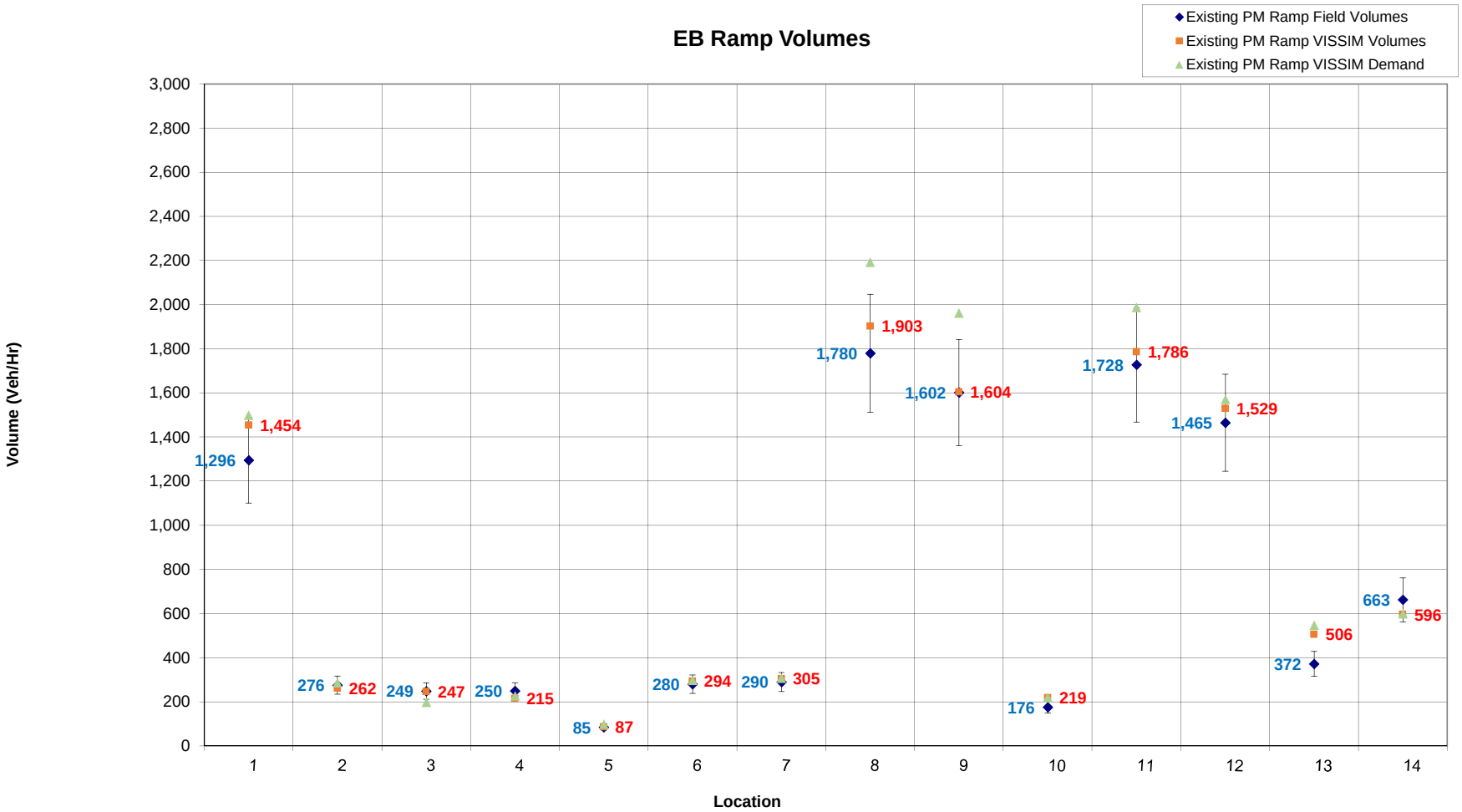
Table 5
Segment Travel Time Calibration: PM Peak Period

Corridor	Segment	Location	Distance	Field Speed				VISSIM Speed				Field Travel Time (Minutes)				VISSIM Travel Time (Minutes)				Diff.%			
				3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM	3-4 PM	4-5 PM	5-6 PM	6-7 PM
Eastbound SR-91	Site A to Site C	1002	20751	26	12	11	11	28	16	13	13	9.1	19.6	20.5	21.4	8.5	15.0	18.6	18.0	-7%	-31%	-10%	-19%
	Site C to Site D	1003	13681	25	22	23	26	18	21	20	22	6.3	7.0	6.7	6.0	8.7	7.5	7.9	7.0	28%	7%	15%	14%
	Site D to Site F	1005	16332	20	22	25	24	18	21	20	29	9.1	8.6	7.4	7.9	10.5	8.8	9.1	6.4	13%	2%	19%	-23%
	Site B to Site C	1007	32177	43	22	18	17	29	20	16	14	8.5	16.8	20.1	21.3	12.8	17.9	22.5	26.7	34%	6%	11%	20%
	Site E to Site F	1008	28639	21	20	27	37	29	27	24	34	15.7	16.4	12.2	8.9	11.3	12.1	13.6	9.4	-39%	-36%	10%	6%
	Site A to Site B	1001	40145	51	36	27	19	56	30	25	26	9.0	12.8	16.8	23.5	8.1	15.4	18.4	17.6	-11%	17%	9%	-33%
	Site D to Site E	1004	27065	31	19	26	34	29	34	32	31	9.8	16.2	11.9	9.1	10.7	9.0	9.5	9.8	8%	-80%	-25%	7%
Westbound SR-91	Site F to Site D	1011	16460	69	67	71	71	68	67	67	68	2.7	2.8	2.6	2.6	2.8	2.8	2.8	2.7	2%	-1%	5%	4%
	Site D to Site C	1012	13628	60	62	60	61	62	62	61	61	2.6	2.5	2.6	2.5	2.5	2.5	2.5	2.5	-3%	1%	-2%	0%
	Site C to Site A	1014	20820	59	61	61	61	64	65	65	64	4.0	3.9	3.9	3.9	3.7	3.7	3.7	3.7	-8%	-5%	-7%	-4%
	Site E to Site D	1009	23283	46	38	52	66	53	45	37	46	5.8	7.0	5.0	4.0	5.0	5.9	7.1	5.7	-15%	-18%	29%	30%
	Site B to Site A	1006	40738	60	57	57	69	64	60	48	36	7.7	8.2	8.1	6.7	7.2	7.7	9.7	12.9	-7%	-6%	17%	48%



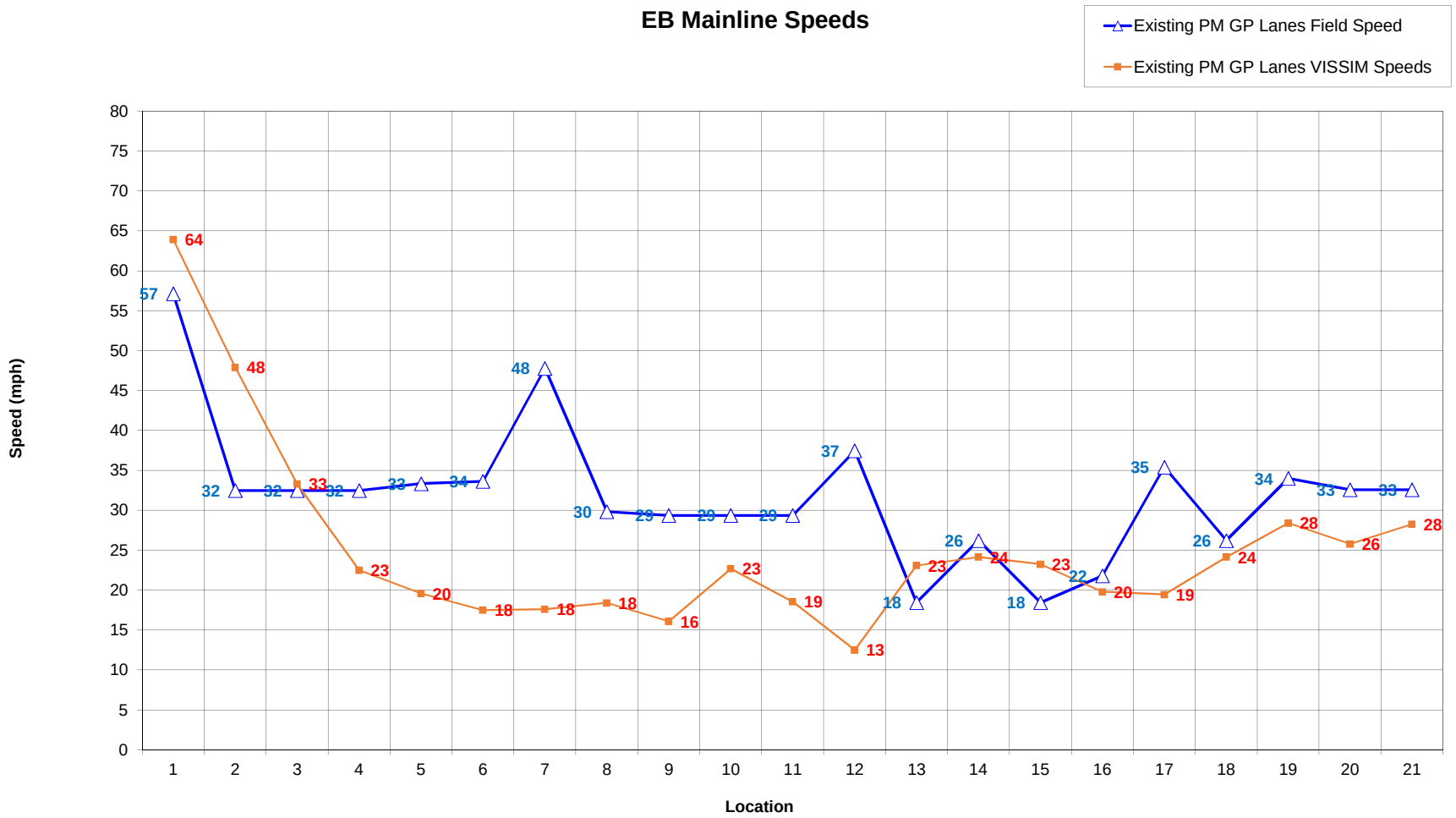
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 3-4 PM-Calibration



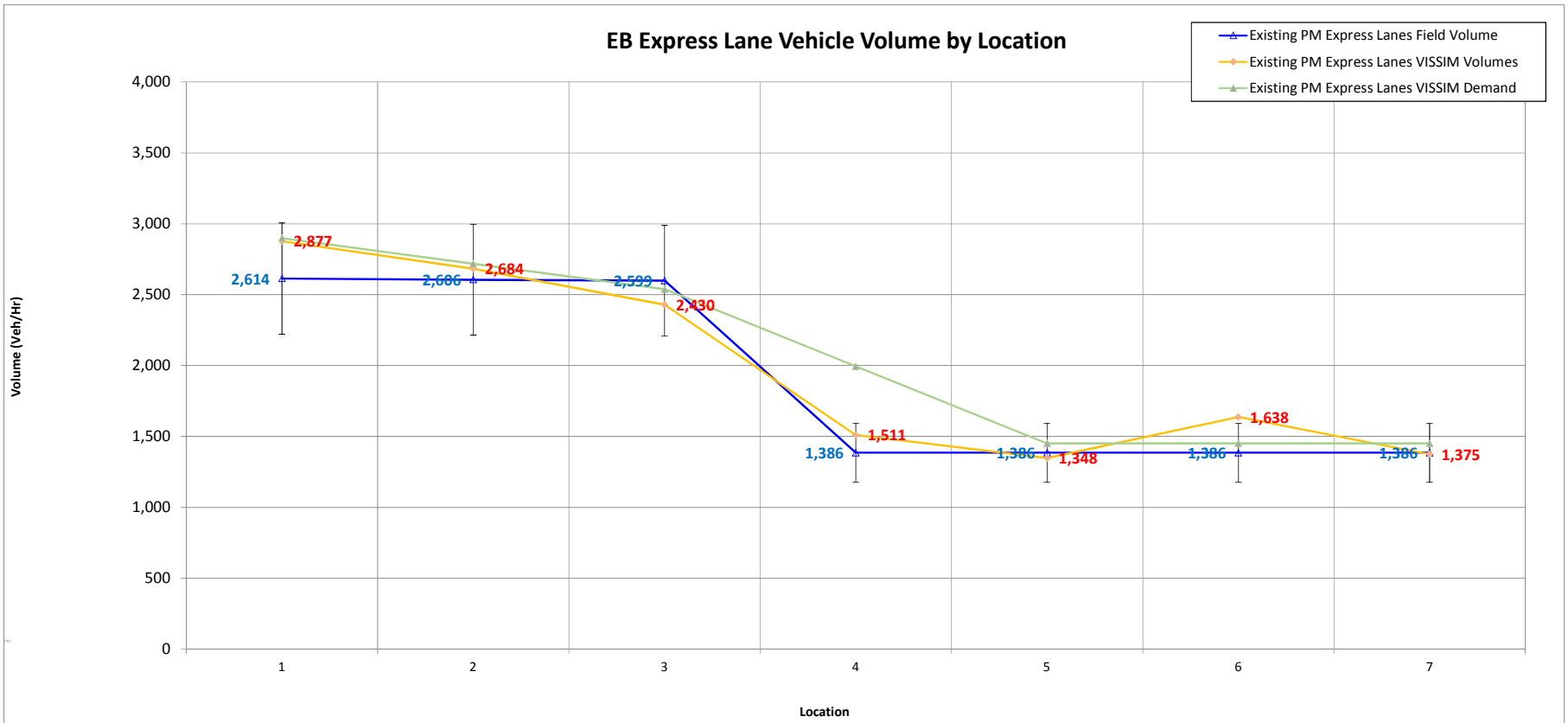
1	Off Ramp to Weir Canyon	6	On Ramp from SB Gypsum Canyon	11	Off Ramp to NB SR 71
2	On Ramp from SB Weir Canyon	7	On Ramp from NB Gypsum Canyon	12	On Ramp from SB SR 71
3	On Ramp from NB Weir Canyon	8	On Ramp from NB SR 241 GP	13	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	9	Off Ramp to Green River	14	On Ramp from Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	10	On Ramp From Green River		

Charts 3-4 PM-Calibration

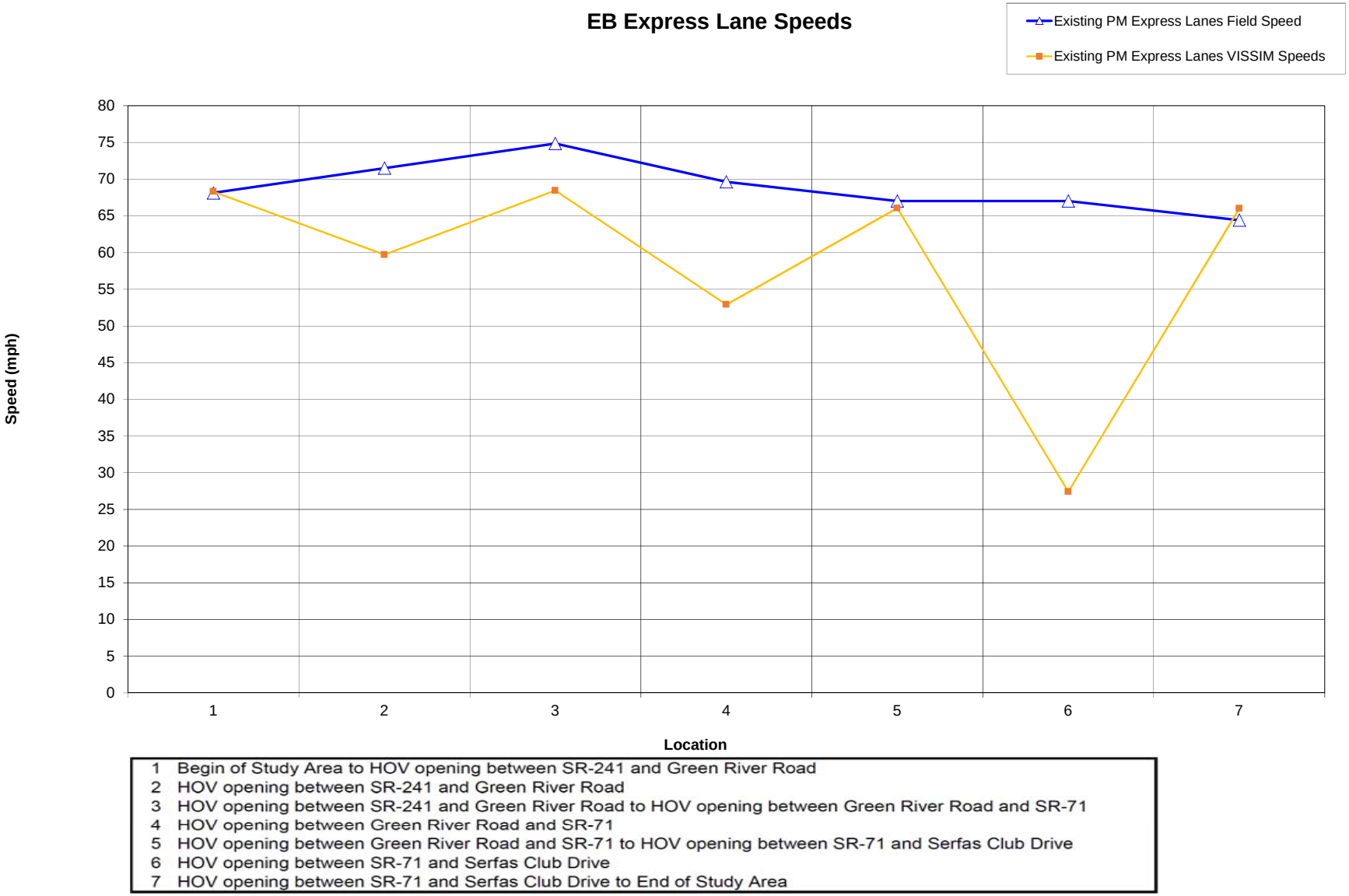


1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 3-4 PM-Calibration

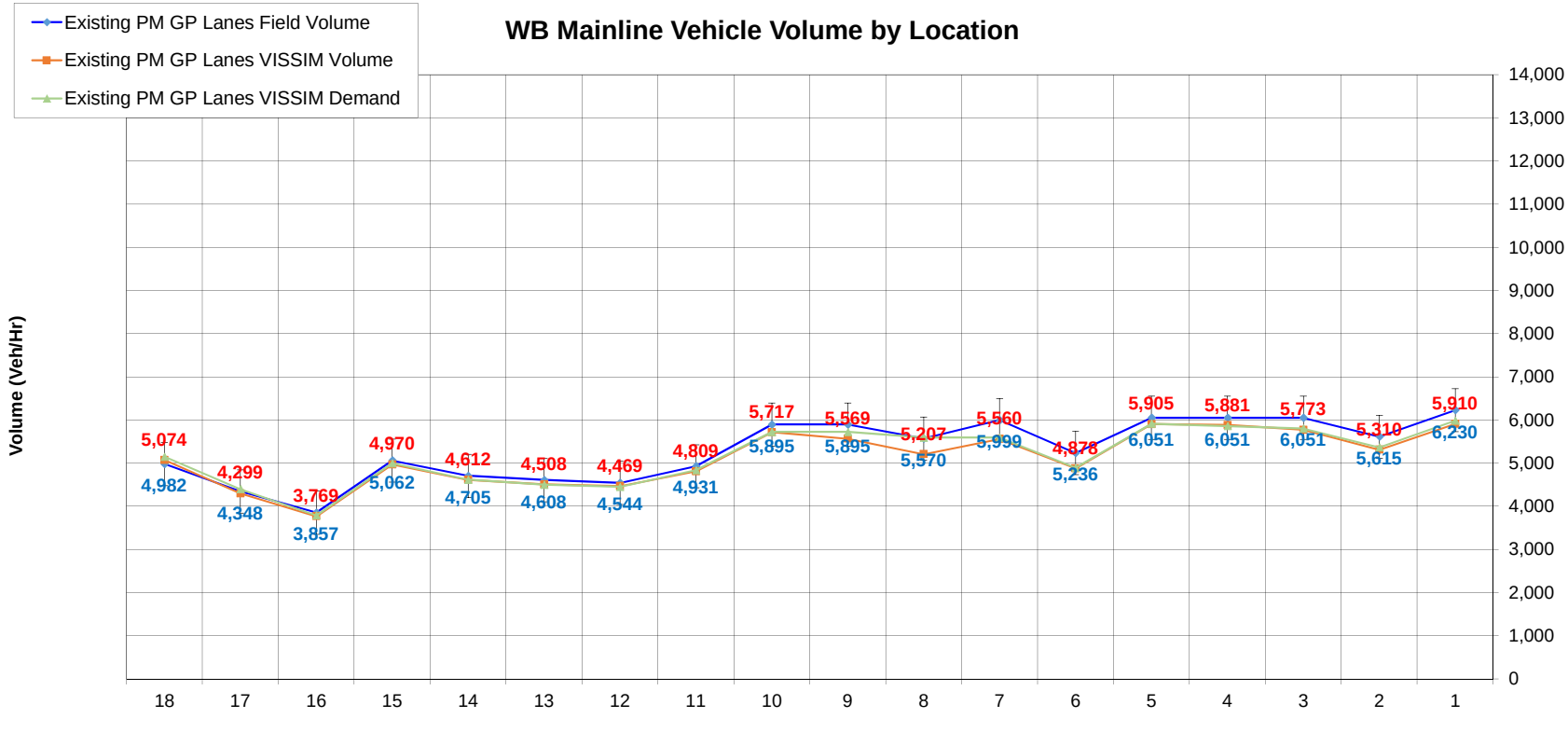


1	Begin of Study Area to HOV opening between SR-241 and Green River Road
2	HOV opening between SR-241 and Green River Road
3	HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4	HOV opening between Green River Road and SR-71
5	HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6	HOV opening between SR-71 and Serfas Club Drive
7	HOV opening between SR-71 and Serfas Club Drive to End of Study Area

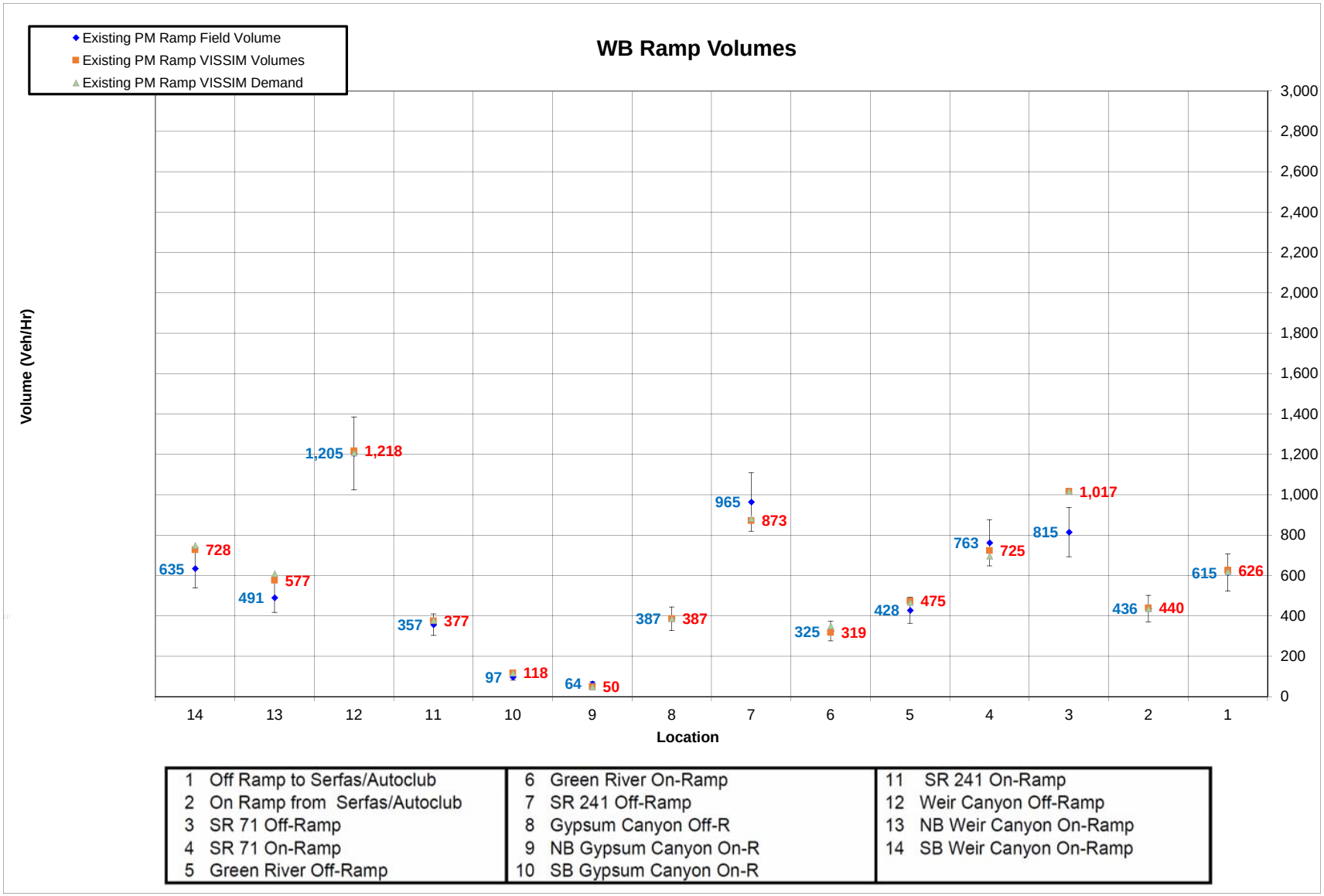


1 Begin of Study Area to HOV opening between SR-241 and Green River Road
2 HOV opening between SR-241 and Green River Road
3 HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4 HOV opening between Green River Road and SR-71
5 HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6 HOV opening between SR-71 and Serfas Club Drive
7 HOV opening between SR-71 and Serfas Club Drive to End of Study Area

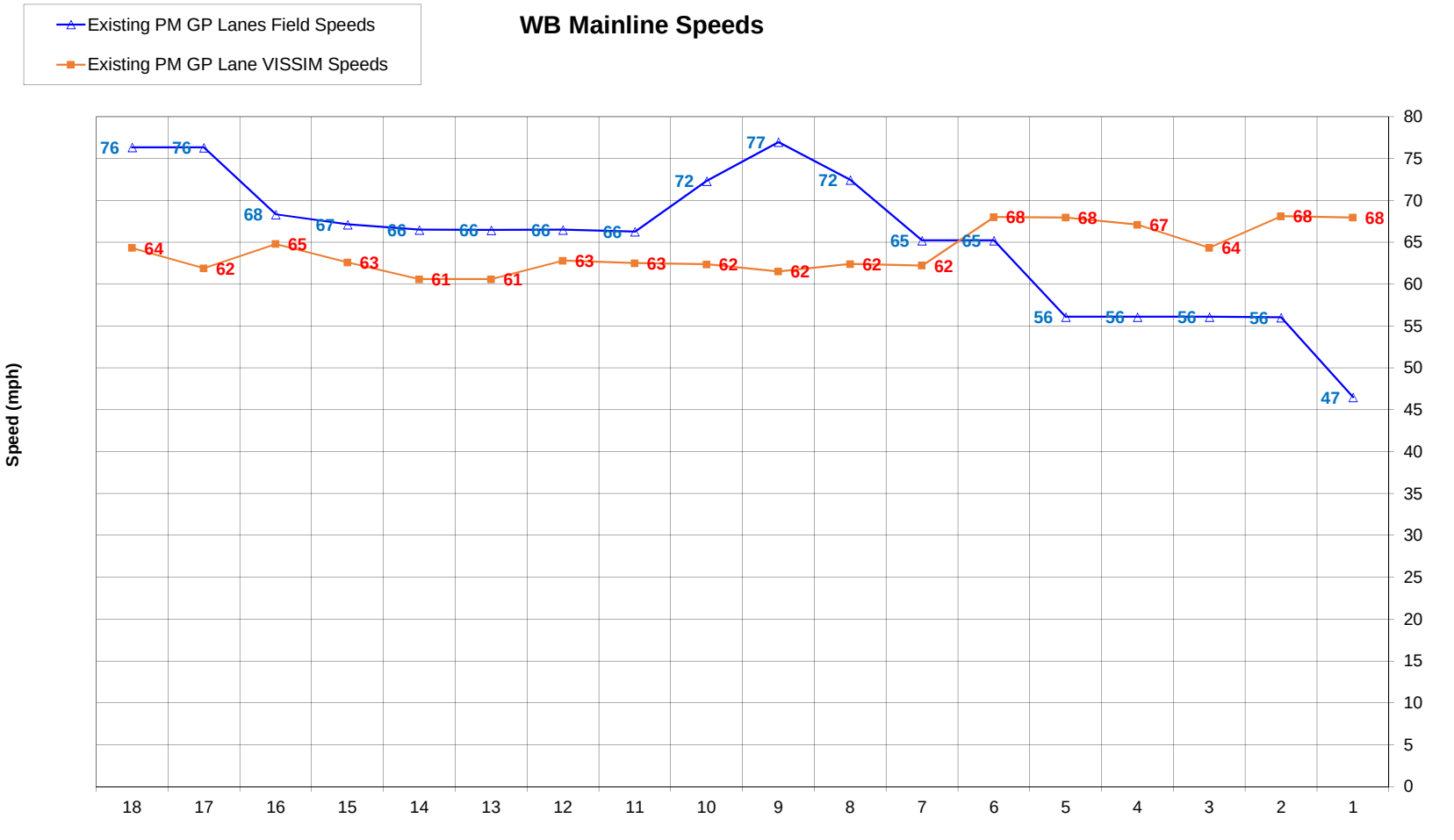
Charts 3-4 PM-Calibration



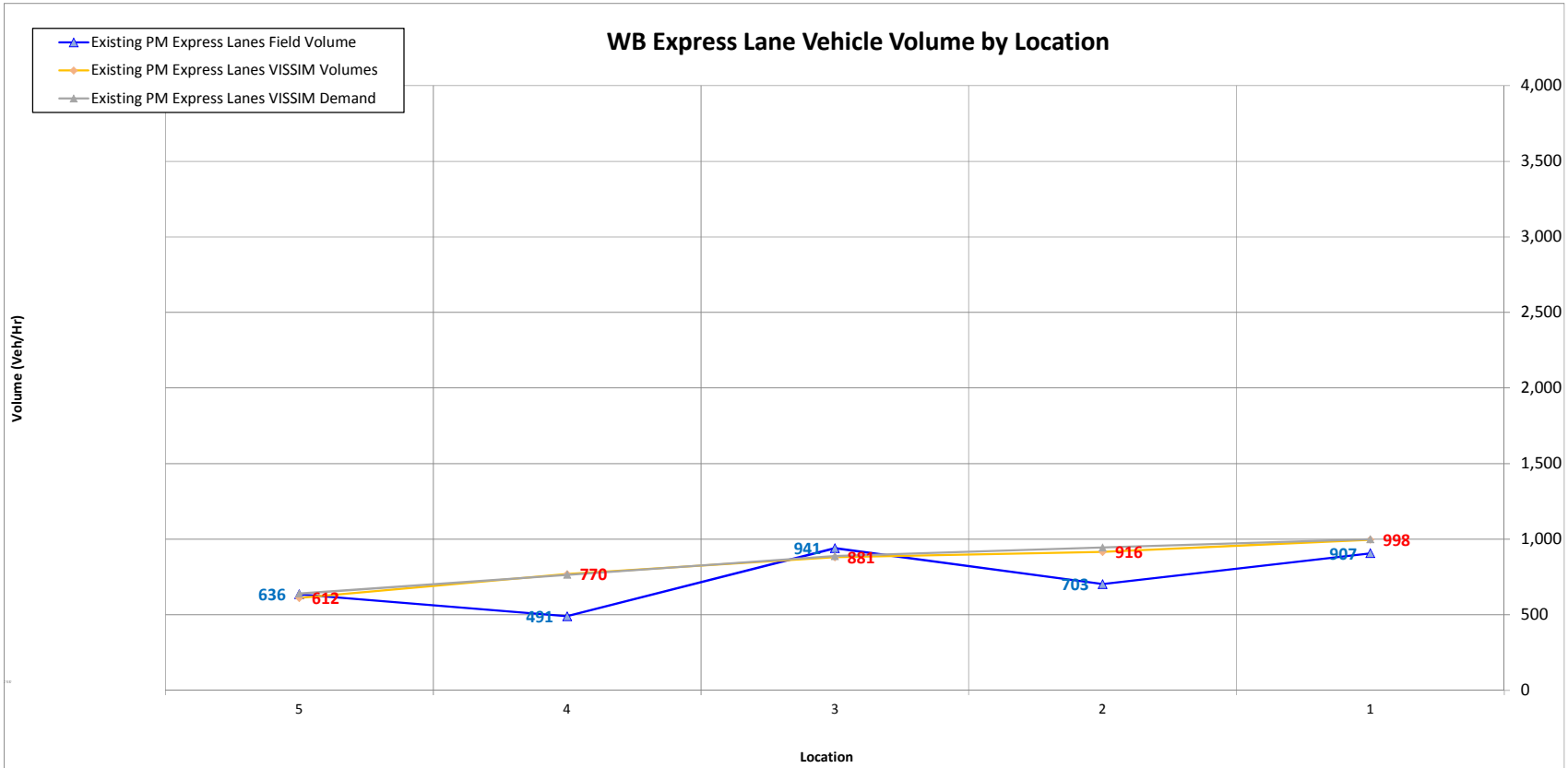
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area



1	Off Ramp to Serfas/Autoclub	6	Green River On-Ramp	11	SR 241 On-Ramp
2	On Ramp from Serfas/Autoclub	7	SR 241 Off-Ramp	12	Weir Canyon Off-Ramp
3	SR 71 Off-Ramp	8	Gypsum Canyon Off-R	13	NB Weir Canyon On-Ramp
4	SR 71 On-Ramp	9	NB Gypsum Canyon On-R	14	SB Weir Canyon On-Ramp
5	Green River Off-Ramp	10	SB Gypsum Canyon On-R		

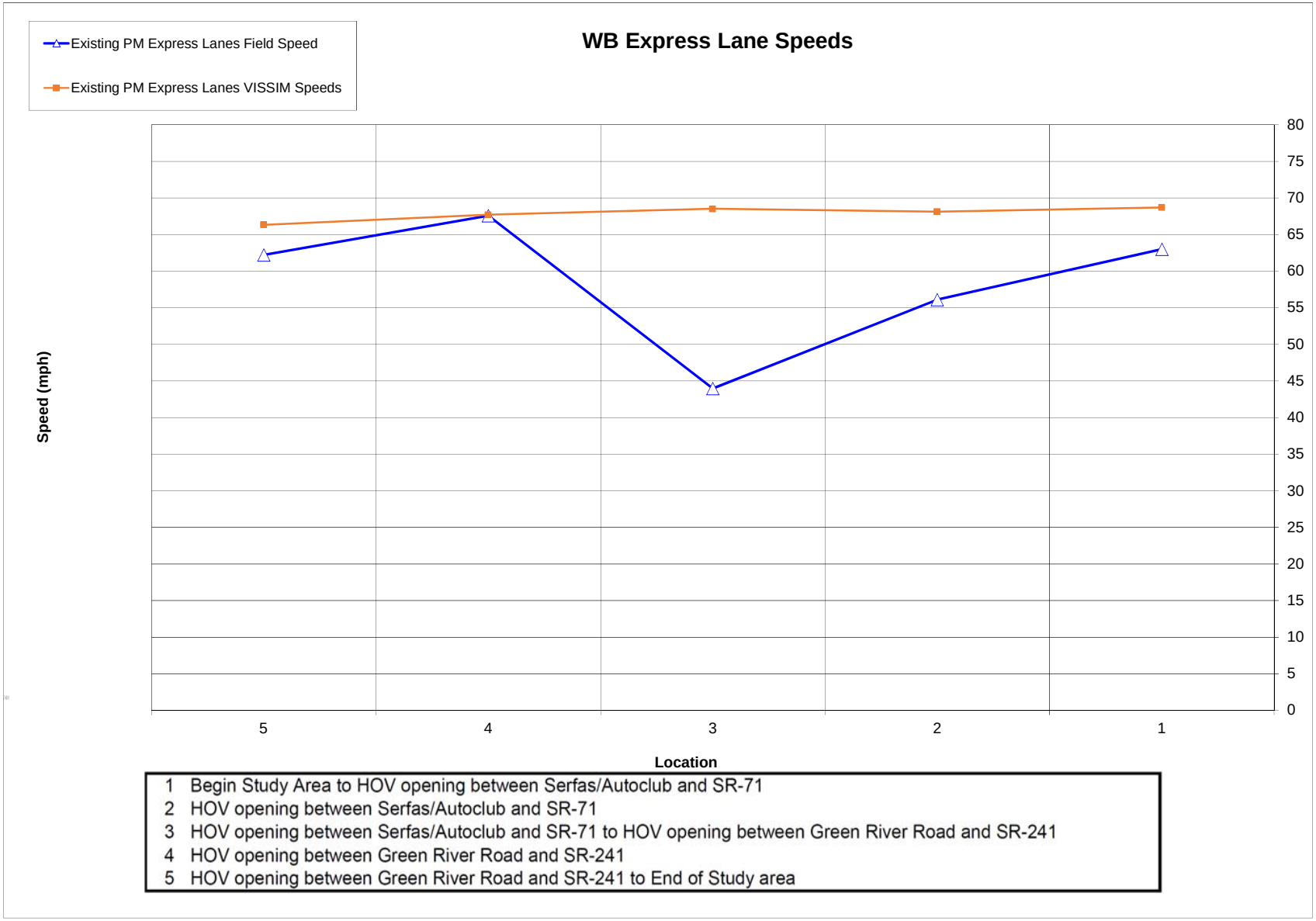


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area

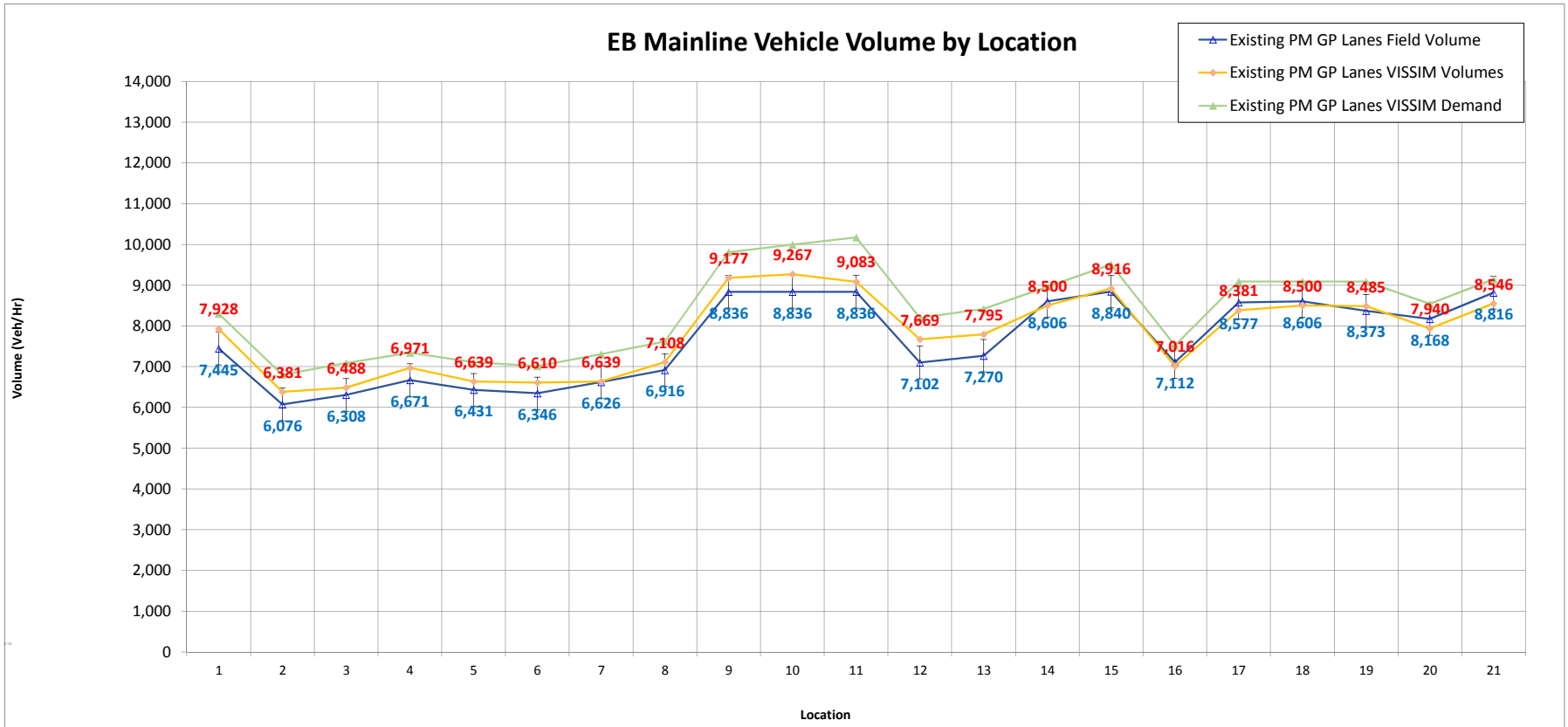


1 Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2 HOV opening between Serfas/Autoclub and SR-71
3 HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4 HOV opening between Green River Road and SR-241
5 HOV opening between Green River Road and SR-241 to End of Study area

Charts 3-4 PM-Calibration

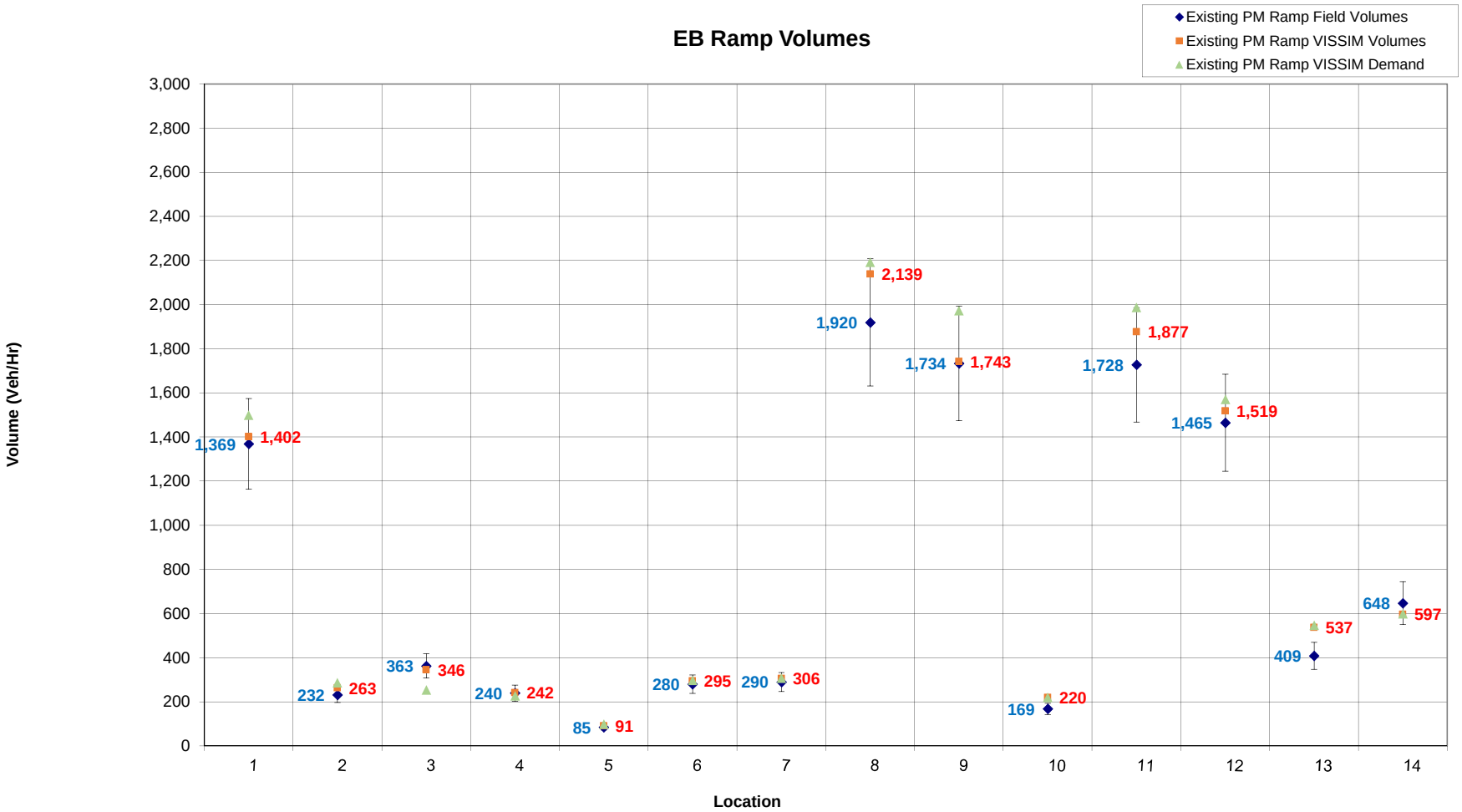


Charts 3-4 PM-Calibration

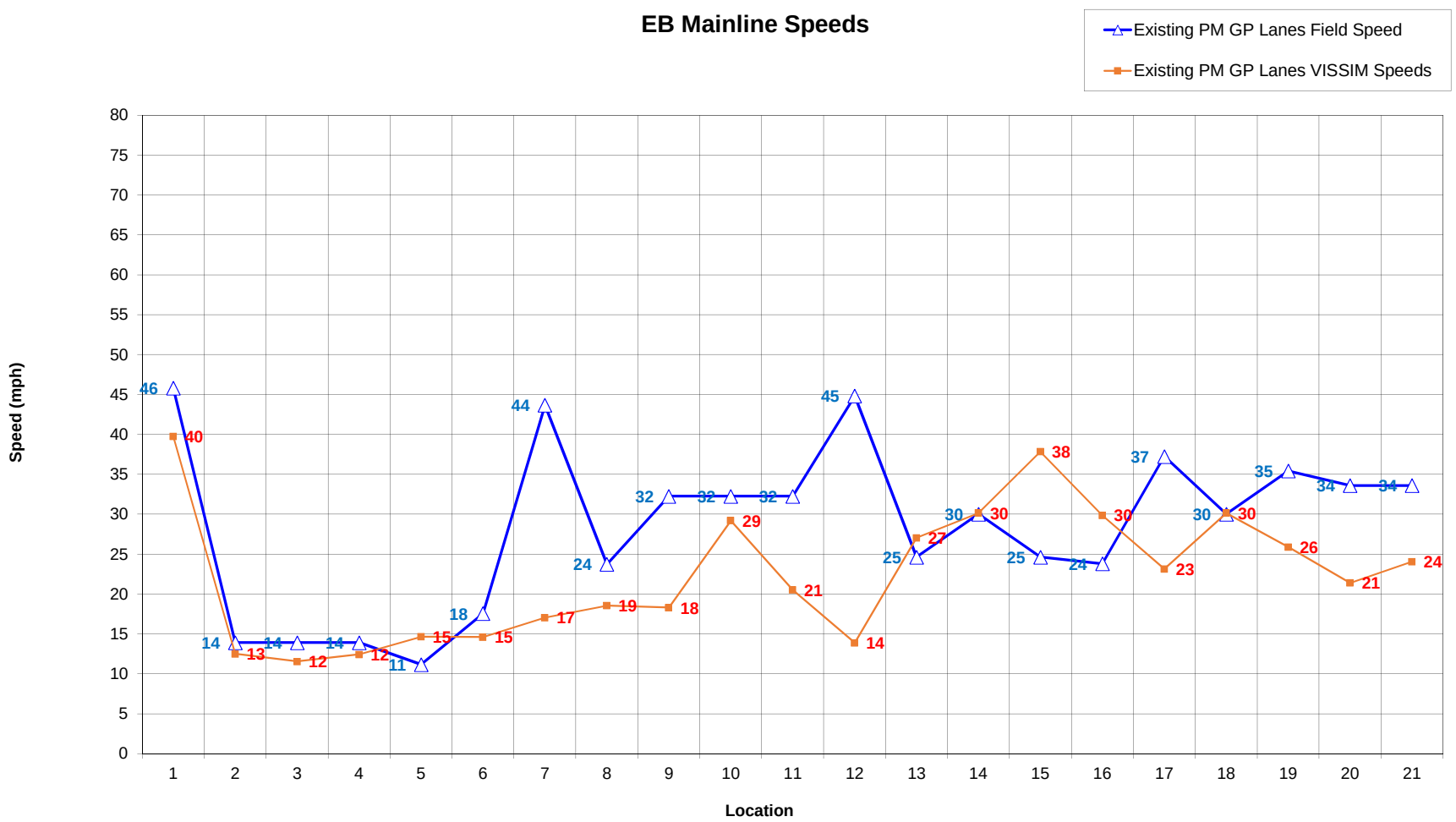


1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 4-5 PM-Calibration

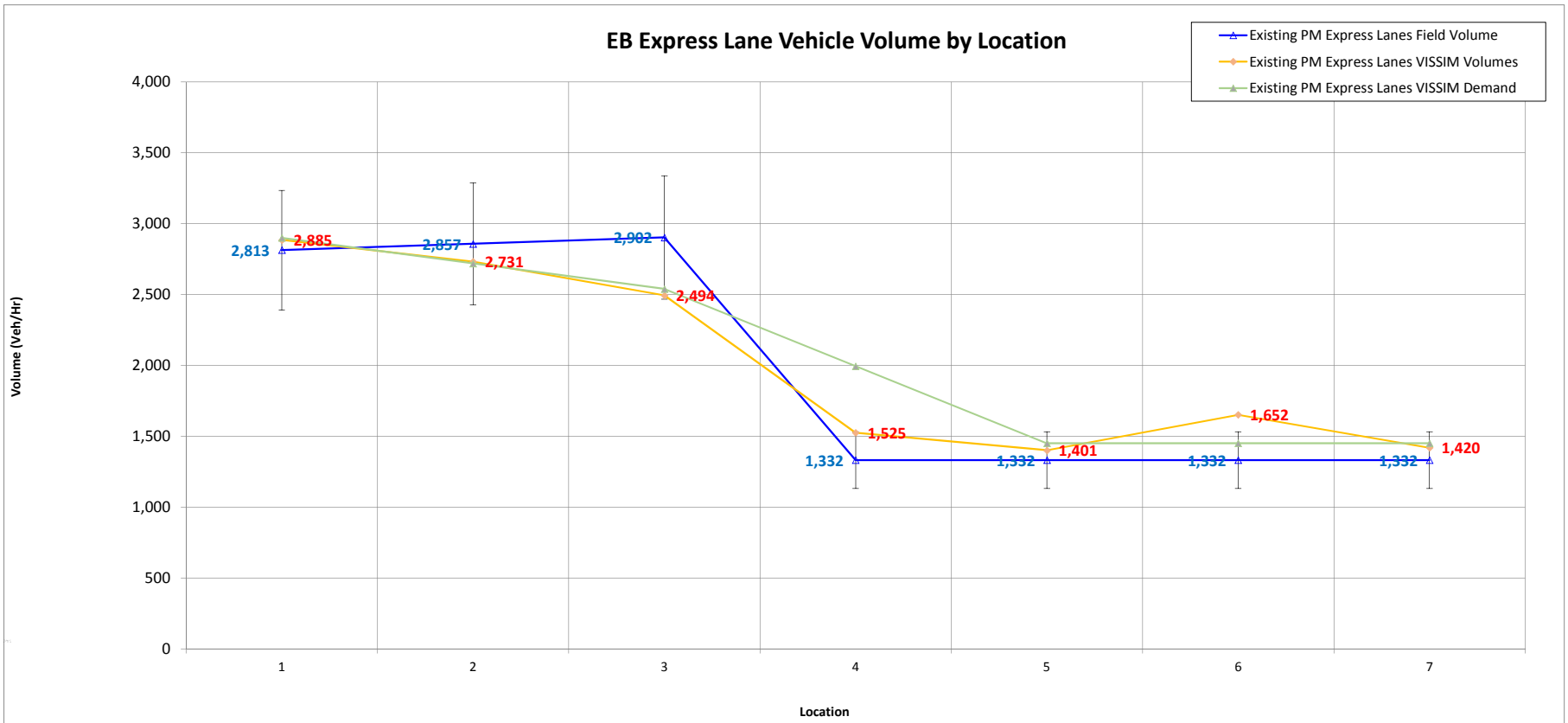


1	Off Ramp to Weir Canyon	6	On Ramp from SB Gypsum Canyon	11	Off Ramp to NB SR 71
2	On Ramp from SB Weir Canyon	7	On Ramp from NB Gypsum Canyon	12	On Ramp from SB SR 71
3	On Ramp from NB Weir Canyon	8	On Ramp from NB SR 241 GP	13	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	9	Off Ramp to Green River	14	On Ramp from Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	10	On Ramp From Green River		



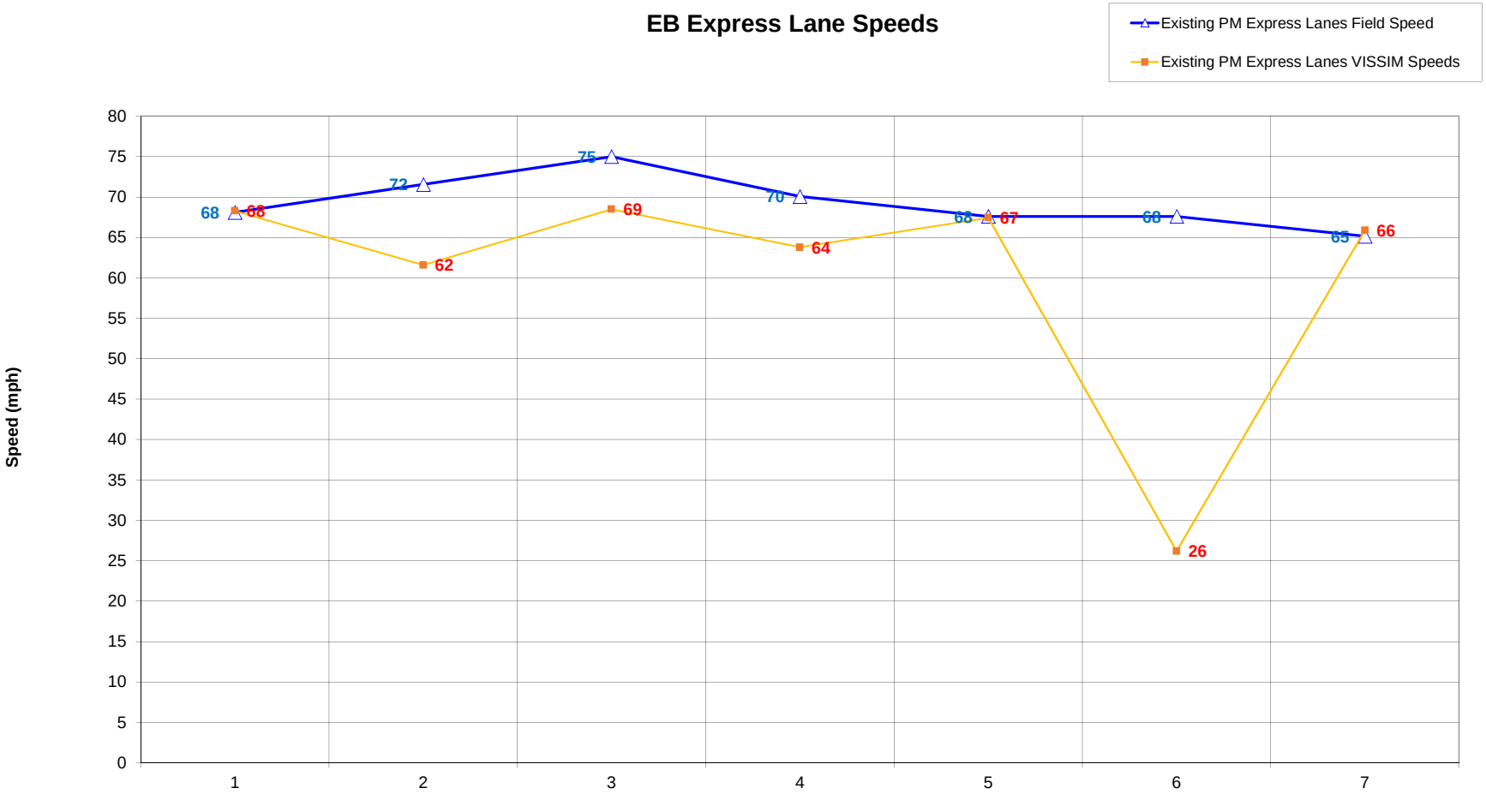
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 4-5 PM-Calibration



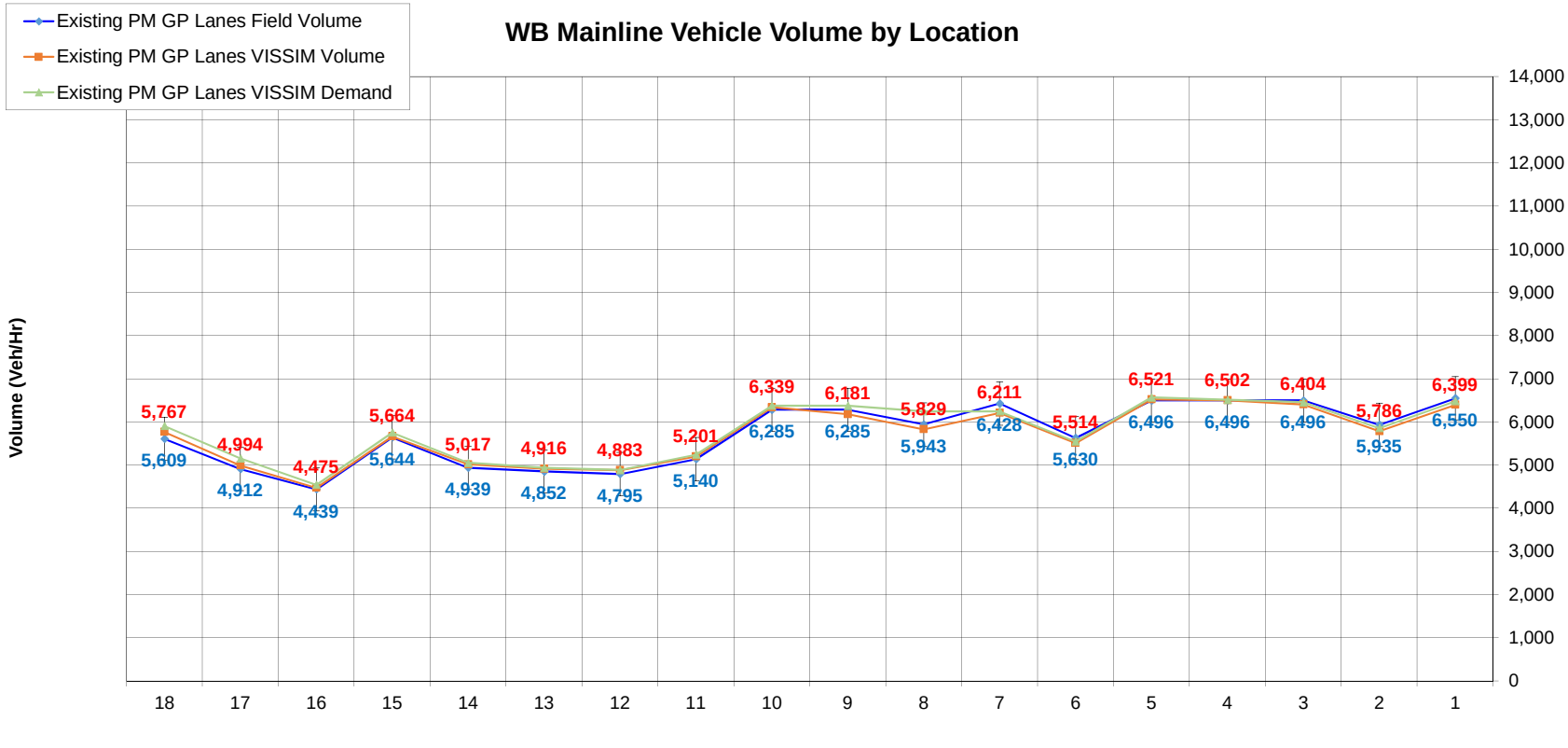
1	Begin of Study Area to HOV opening between SR-241 and Green River Road
2	HOV opening between SR-241 and Green River Road
3	HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4	HOV opening between Green River Road and SR-71
5	HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6	HOV opening between SR-71 and Serfas Club Drive
7	HOV opening between SR-71 and Serfas Club Drive to End of Study Area

Charts 4-5 PM-Calibration

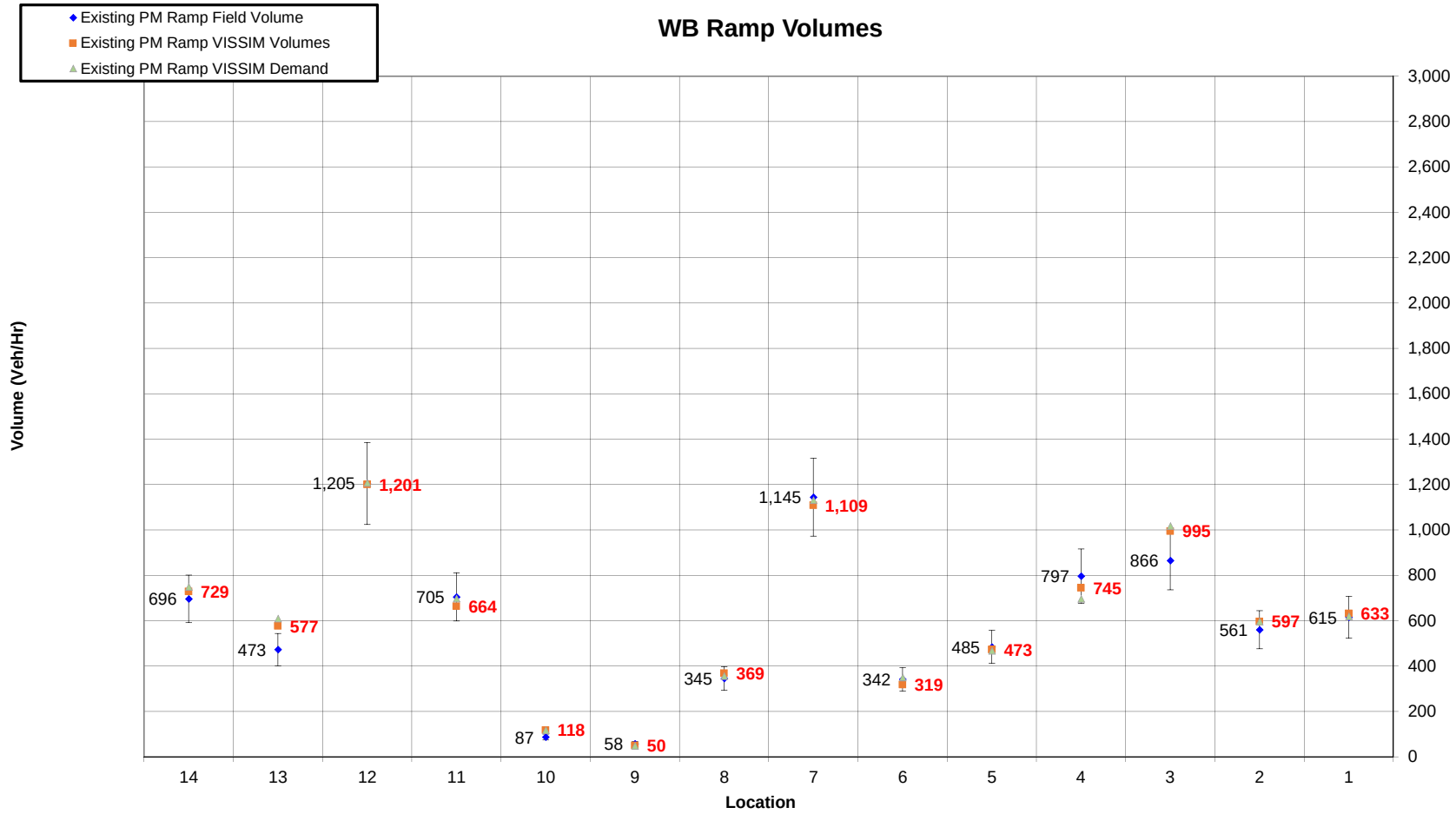


1 Begin of Study Area to HOV opening between SR-241 and Green River Road
2 HOV opening between SR-241 and Green River Road
3 HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4 HOV opening between Green River Road and SR-71
5 HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6 HOV opening between SR-71 and Serfas Club Drive
7 HOV opening between SR-71 and Serfas Club Drive to End of Study Area

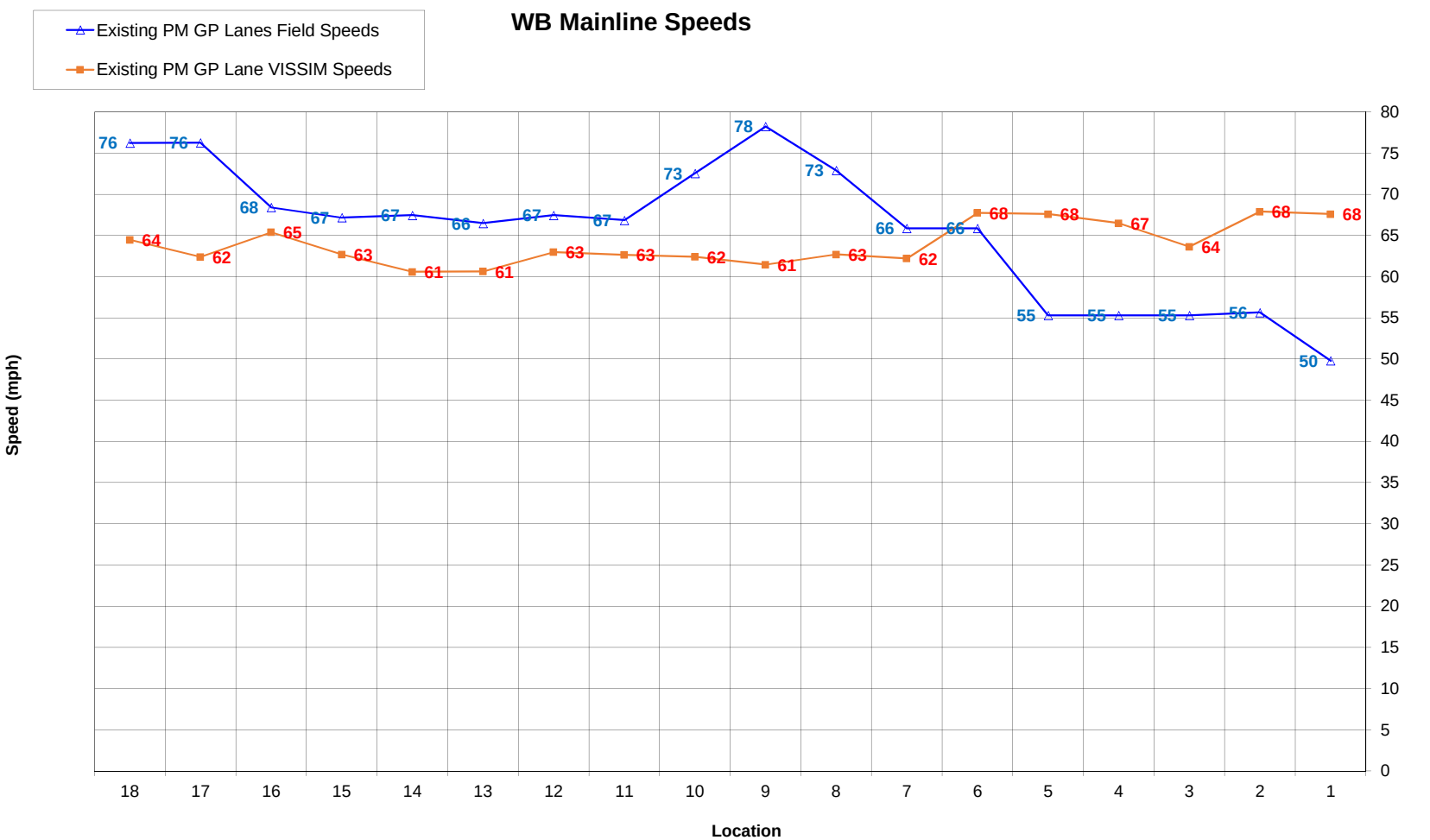
Charts 4-5 PM-Calibration



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area



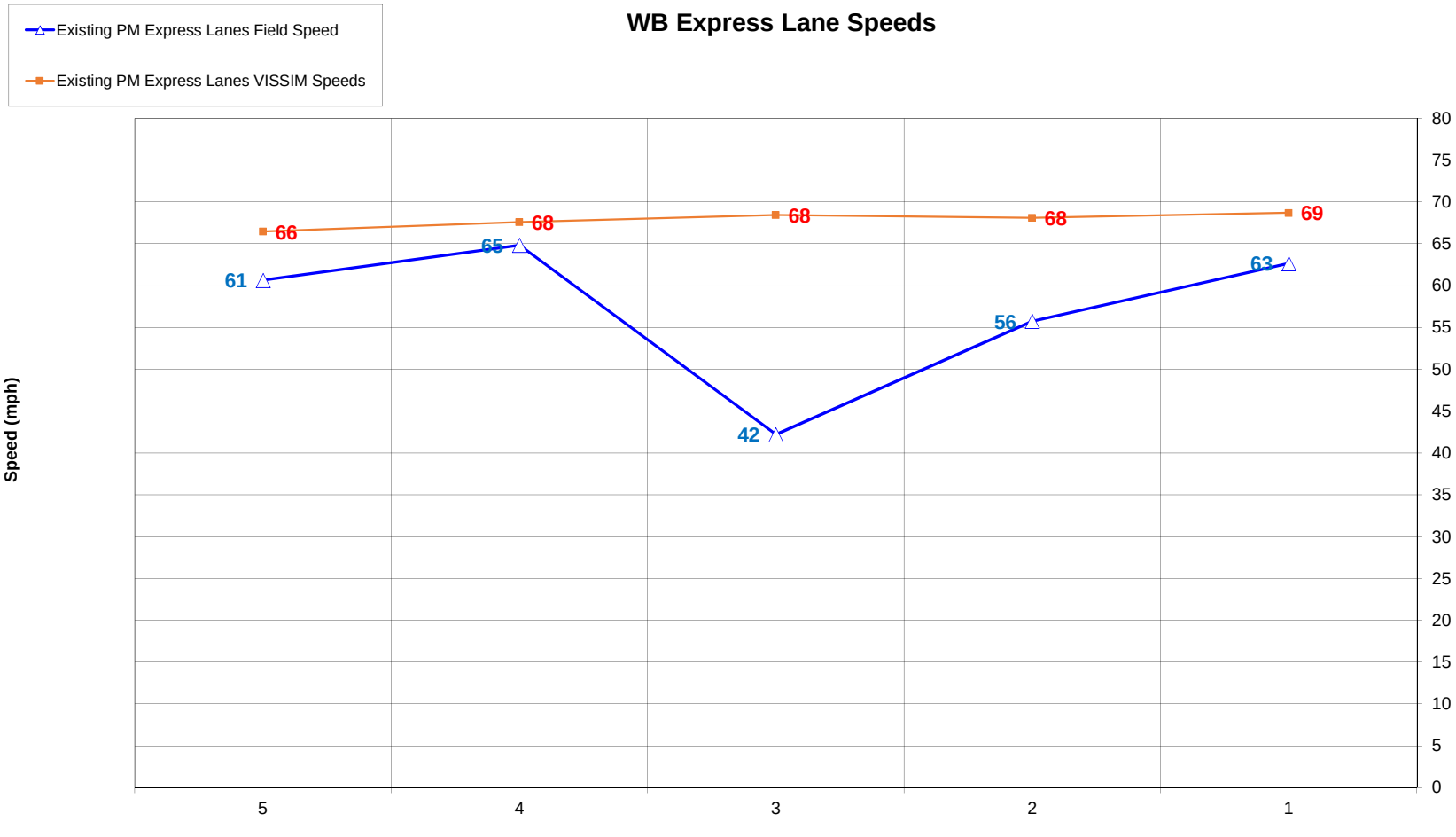
1	Off Ramp to Serfas/Autoclub	6	Green River On-Ramp	11	SR 241 On-Ramp
2	On Ramp from Serfas/Autoclub	7	SR 241 Off-Ramp	12	Weir Canyon Off-Ramp
3	SR 71 Off-Ramp	8	Gypsum Canyon Off-R	13	NB Weir Canyon On-Ramp
4	SR 71 On-Ramp	9	NB Gypsum Canyon On-R	14	SB Weir Canyon On-Ramp
5	Green River Off-Ramp	10	SB Gypsum Canyon On-R		



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area

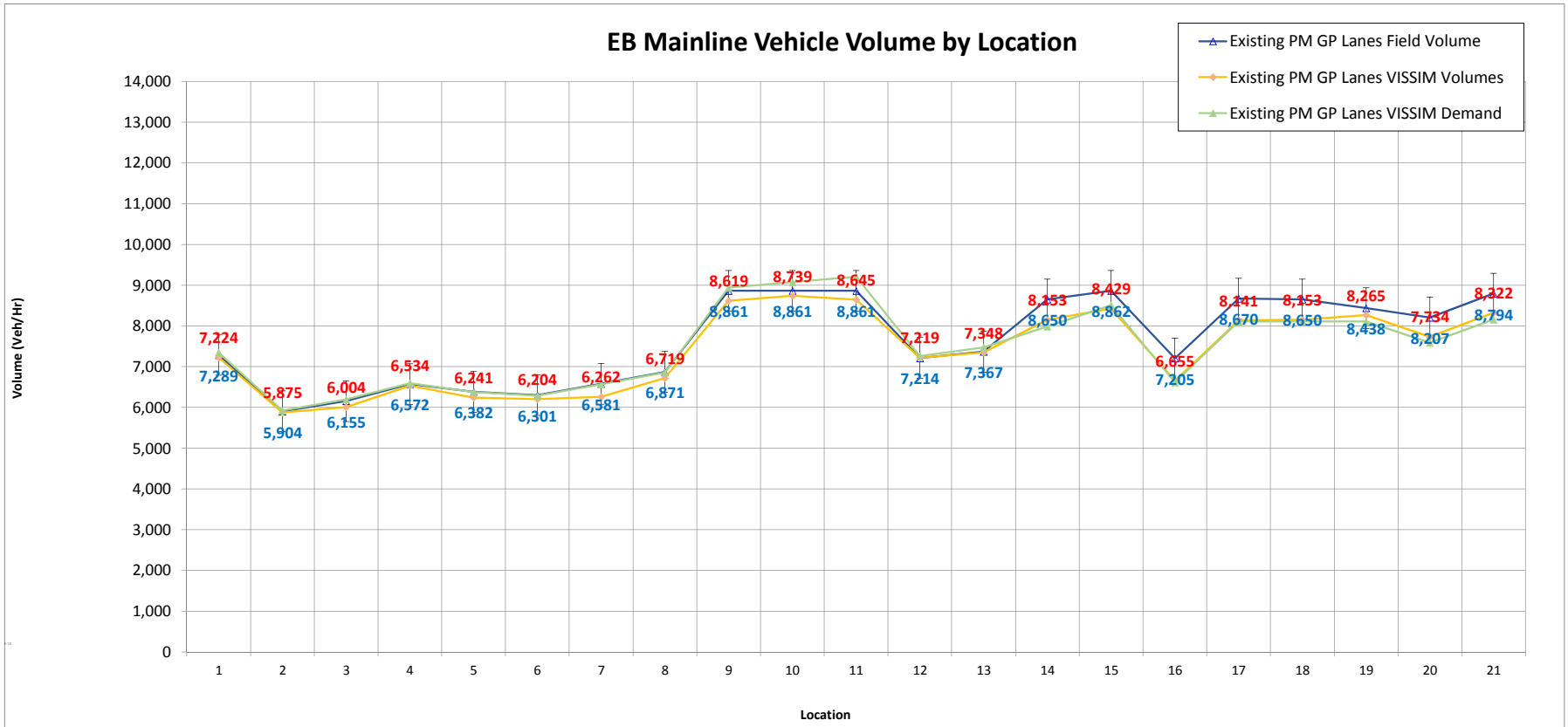
1	Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2	HOV opening between Serfas/Autoclub and SR-71
3	HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4	HOV opening between Green River Road and SR-241
5	HOV opening between Green River Road and SR-241 to End of Study area

Charts 4-5 PM-Calibration



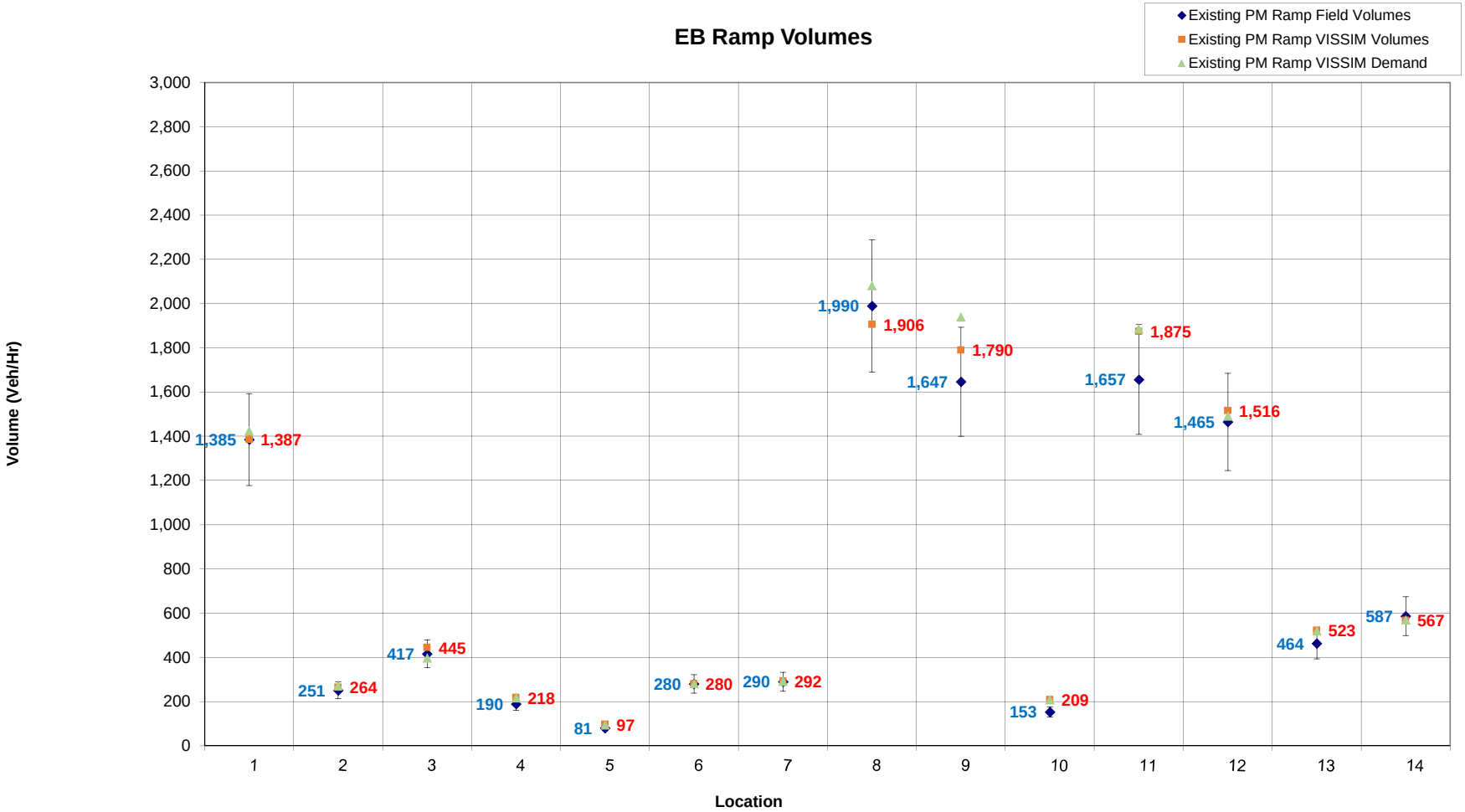
1	Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2	HOV opening between Serfas/Autoclub and SR-71
3	HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4	HOV opening between Green River Road and SR-241
5	HOV opening between Green River Road and SR-241 to End of Study area

Charts 4-5 PM-Calibration



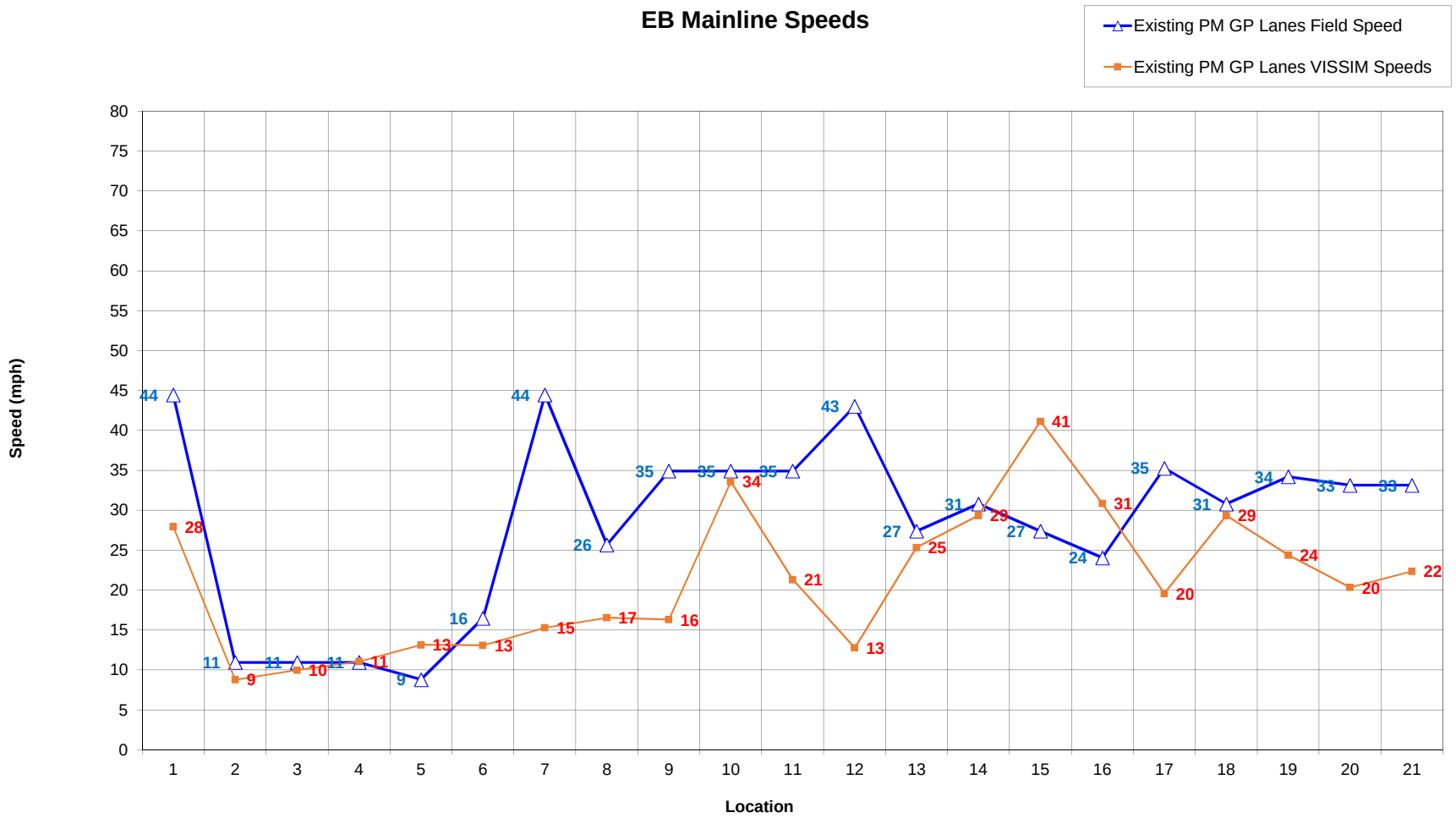
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 5-6 PM-Calibration



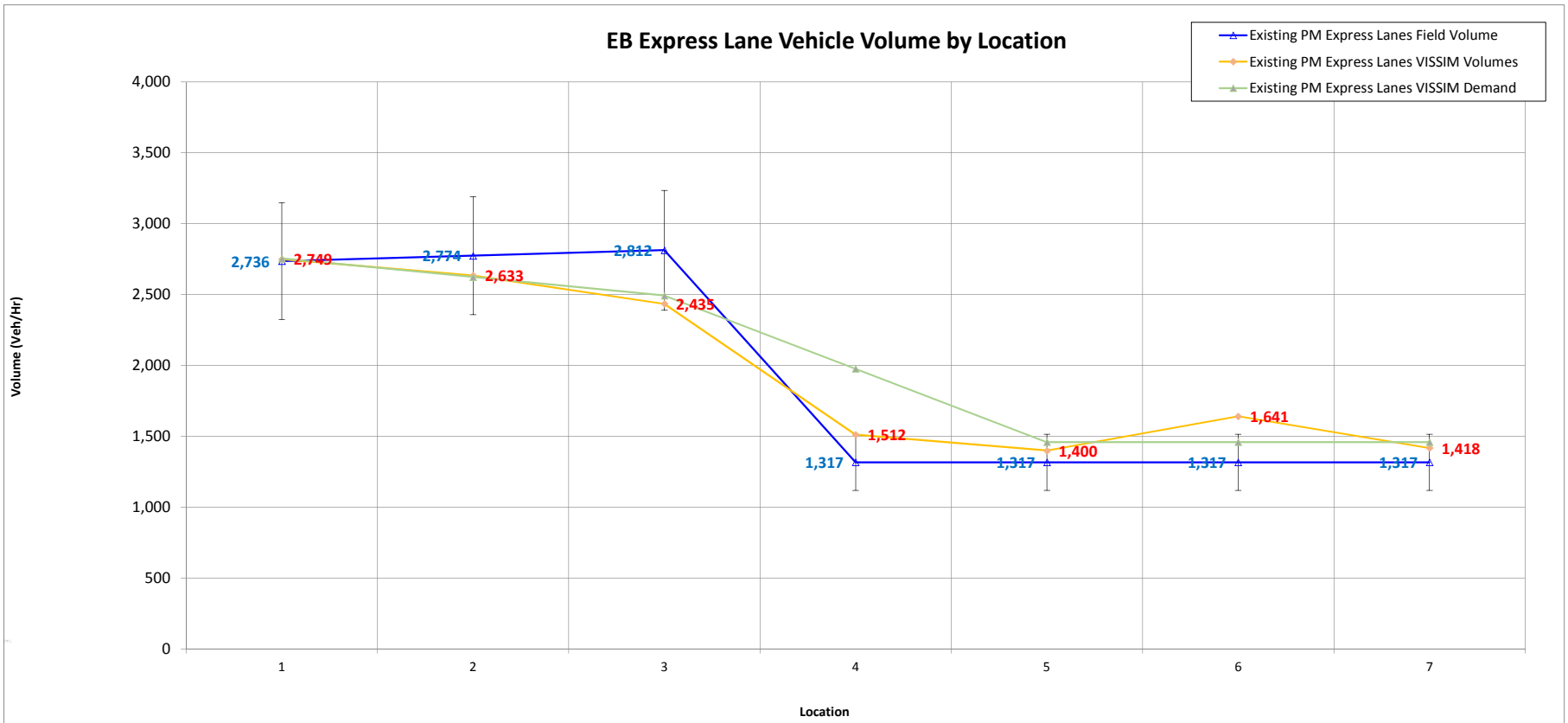
1	Off Ramp to Weir Canyon	6	On Ramp from SB Gypsum Canyon	11	Off Ramp to NB SR 71
2	On Ramp from SB Weir Canyon	7	On Ramp from NB Gypsum Canyon	12	On Ramp from SB SR 71
3	On Ramp from NB Weir Canyon	8	On Ramp from NB SR 241 GP	13	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	9	Off Ramp to Green River	14	On Ramp from Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	10	On Ramp From Green River		

Charts 5-6 PM-Calibration



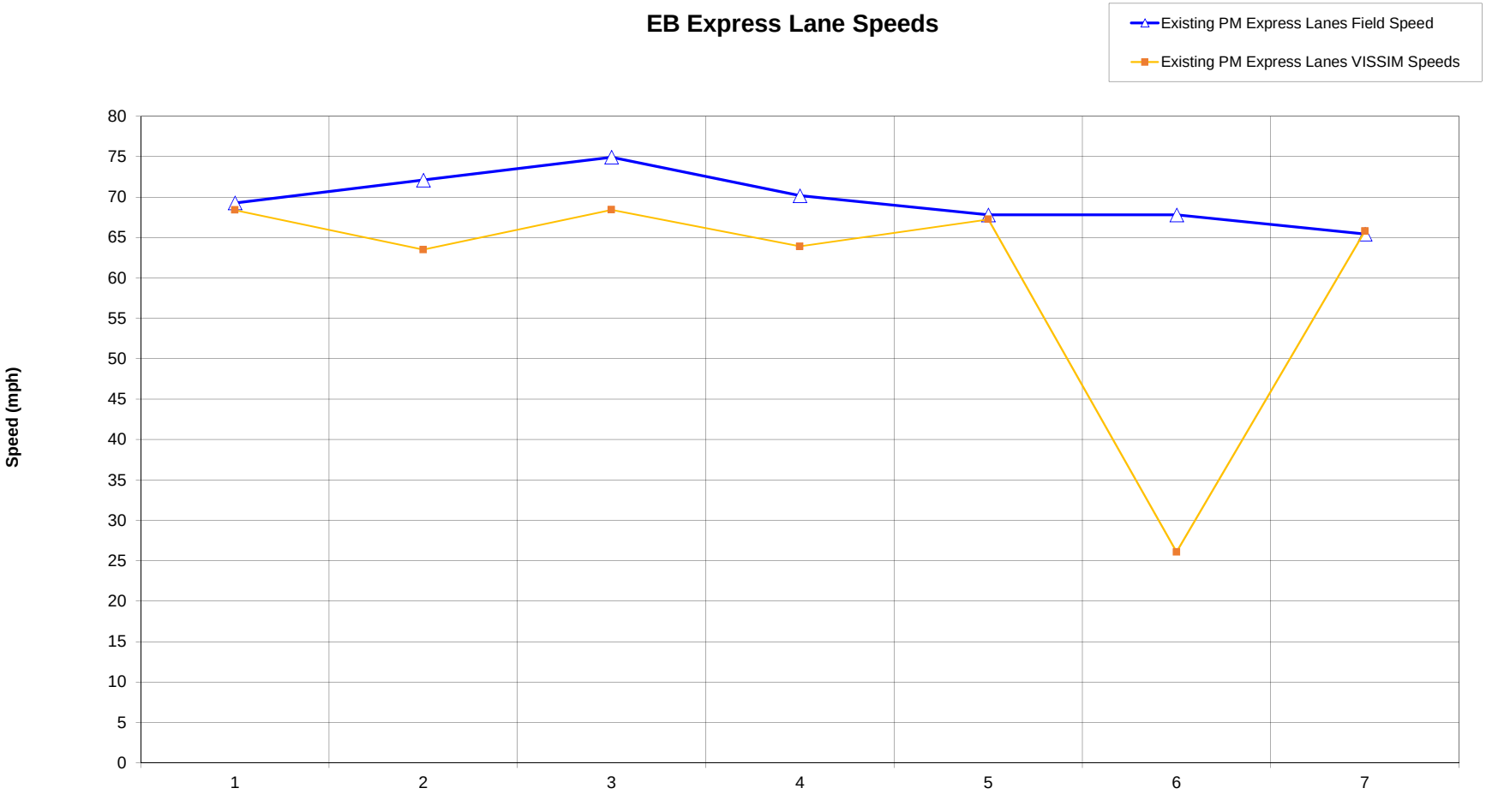
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 5-6 PM-Calibration



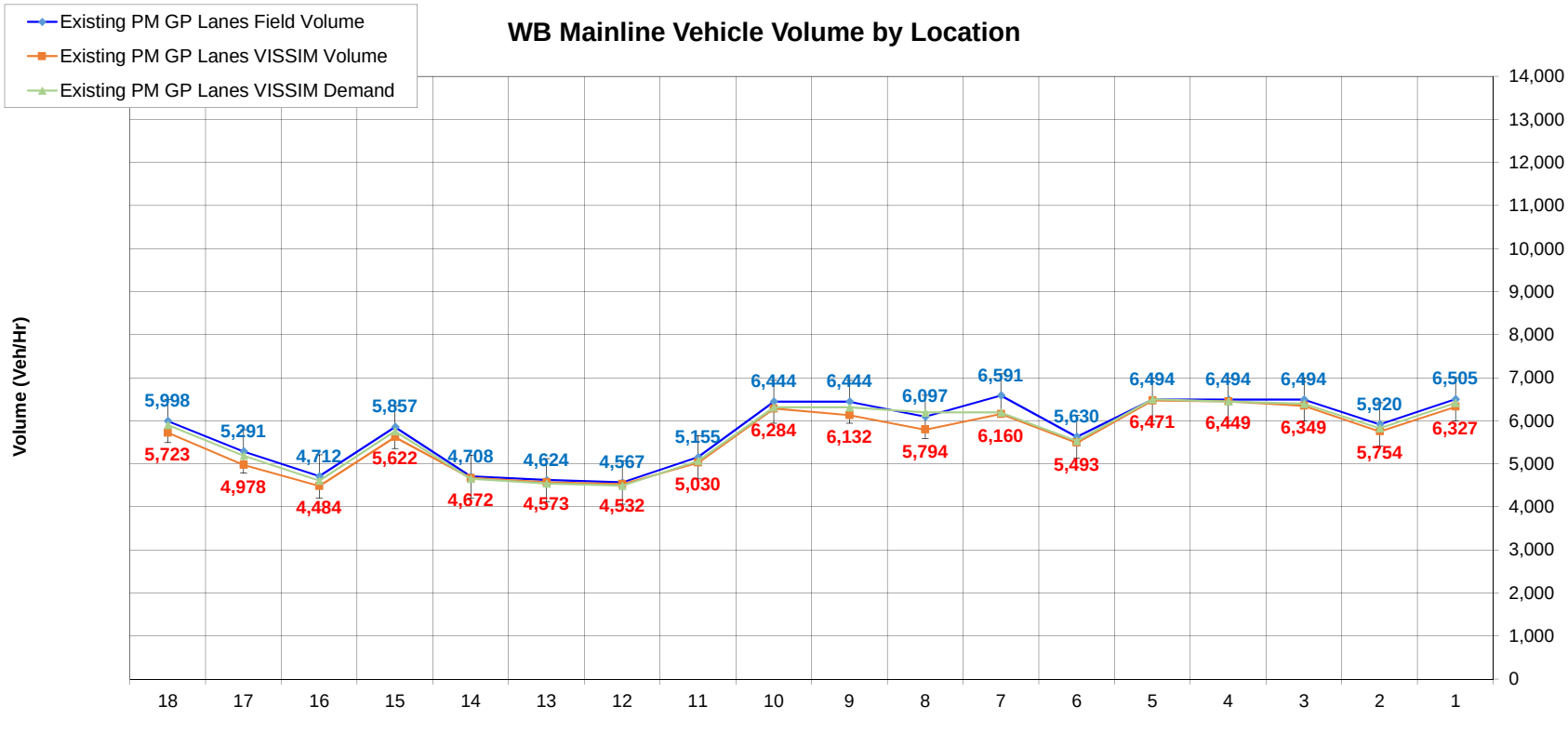
1	Begin of Study Area to HOV opening between SR-241 and Green River Road
2	HOV opening between SR-241 and Green River Road
3	HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4	HOV opening between Green River Road and SR-71
5	HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6	HOV opening between SR-71 and Serfas Club Drive
7	HOV opening between SR-71 and Serfas Club Drive to End of Study Area

Charts 5-6 PM-Calibration



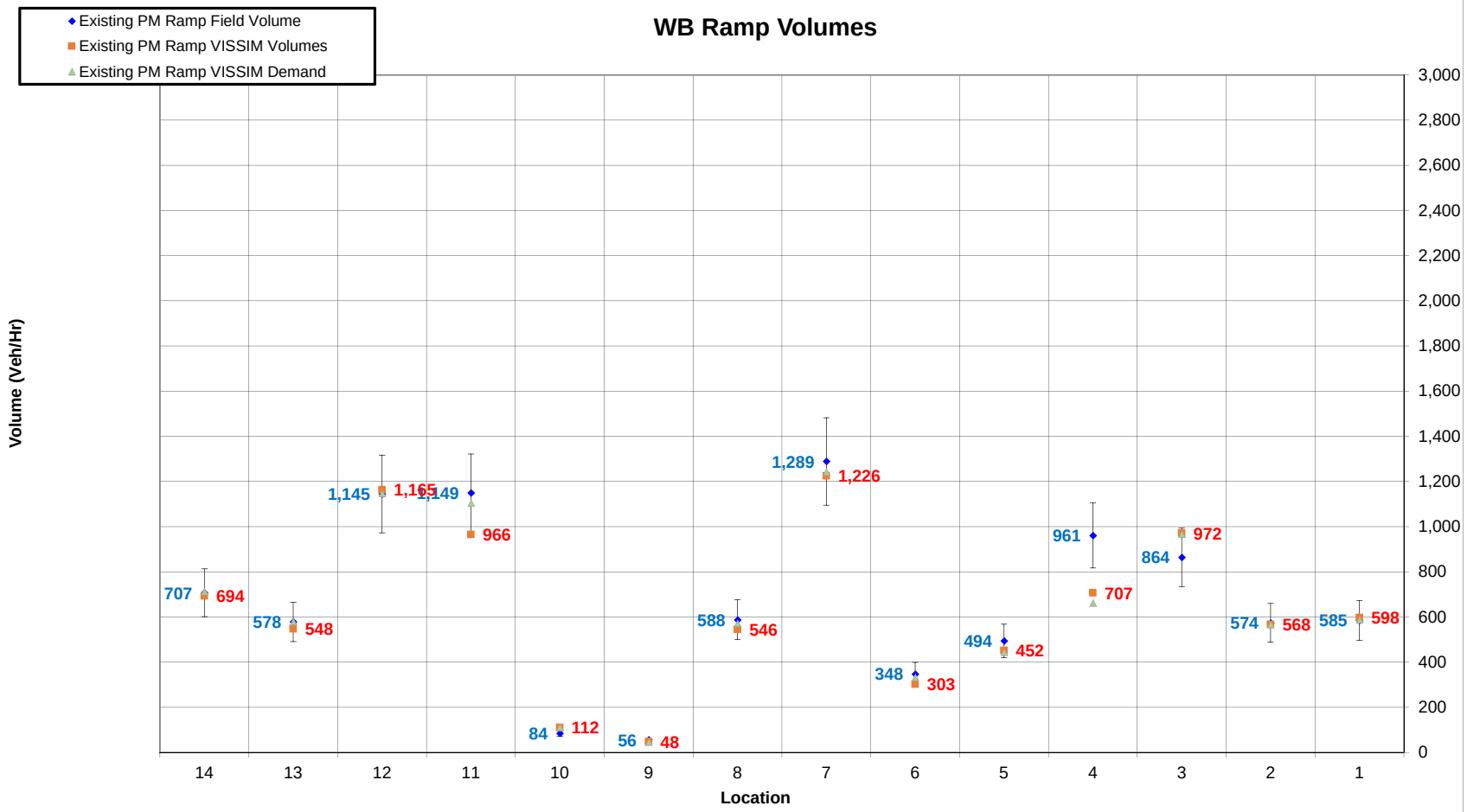
1	Begin of Study Area to HOV opening between SR-241 and Green River Road
2	HOV opening between SR-241 and Green River Road
3	HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4	HOV opening between Green River Road and SR-71
5	HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6	HOV opening between SR-71 and Serfas Club Drive
7	HOV opening between SR-71 and Serfas Club Drive to End of Study Area

Charts 5-6 PM-Calibration

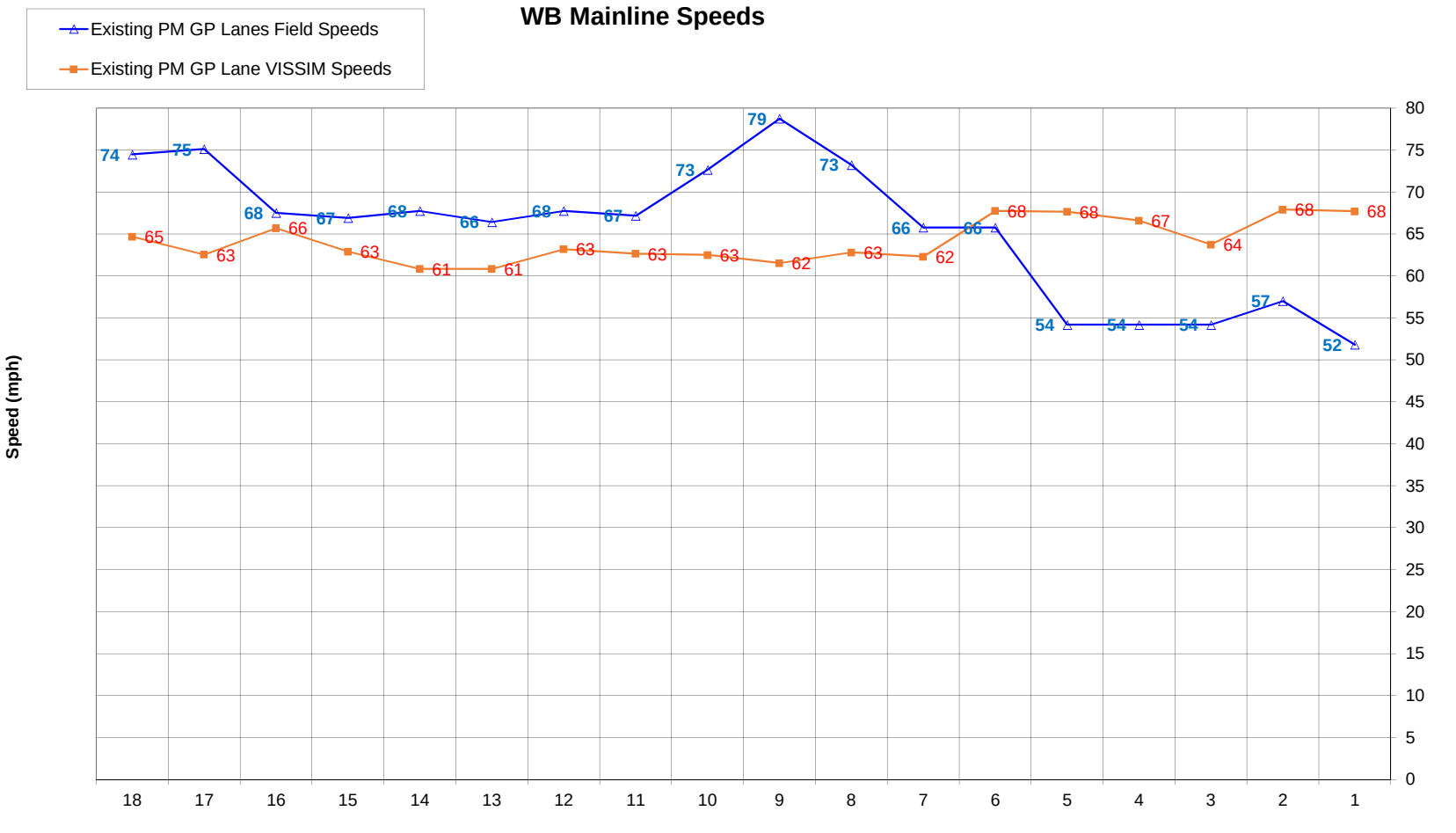


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area

Charts 5-6 PM-Calibration

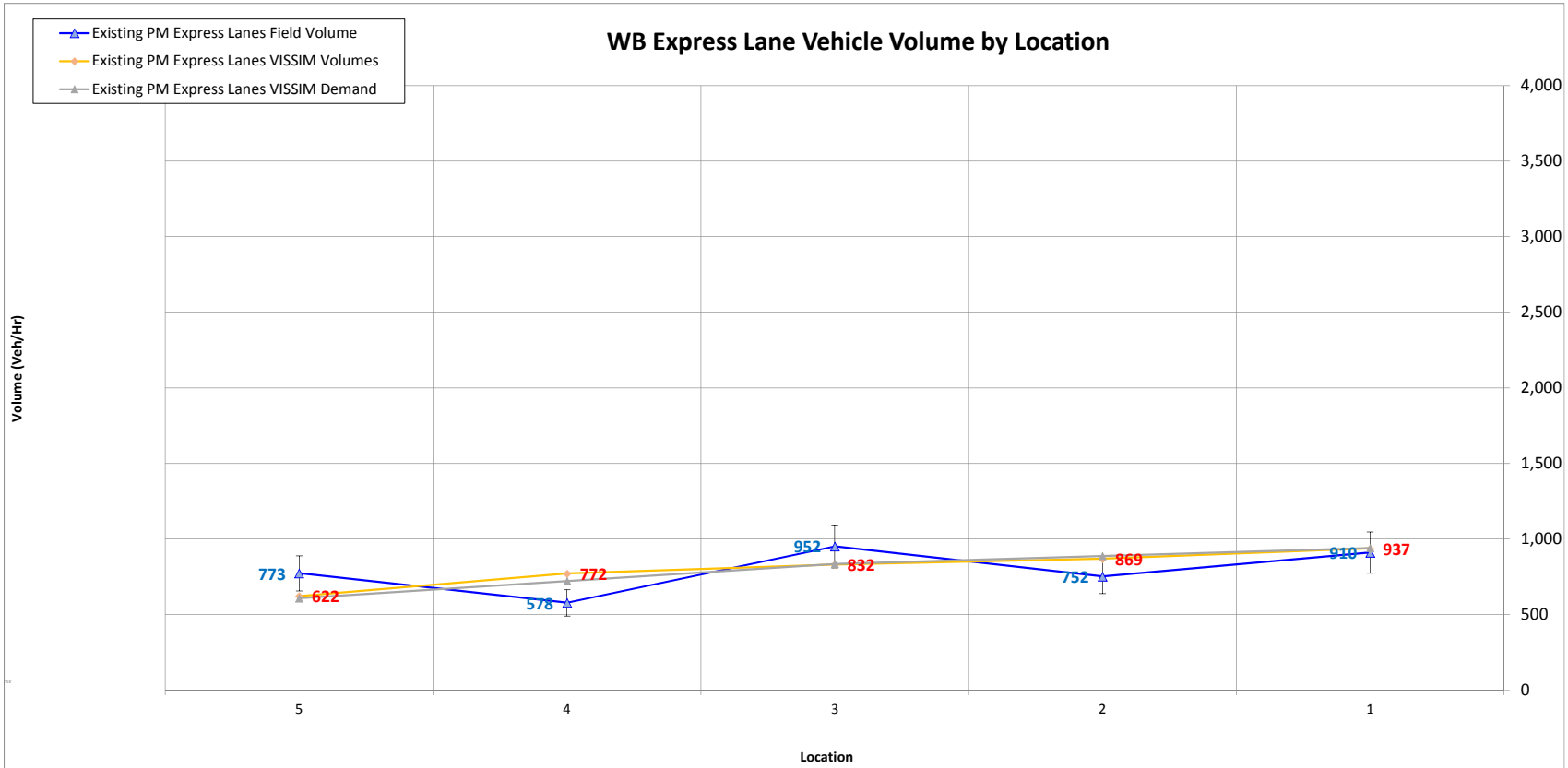


1	Off Ramp to Serfas/Autoclub	6	Green River On-Ramp	11	SR 241 On-Ramp
2	On Ramp from Serfas/Autoclub	7	SR 241 Off-Ramp	12	Weir Canyon Off-Ramp
3	SR 71 Off-Ramp	8	Gypsum Canyon Off-R	13	NB Weir Canyon On-Ramp
4	SR 71 On-Ramp	9	NB Gypsum Canyon On-R	14	SB Weir Canyon On-Ramp
5	Green River Off-Ramp	10	SB Gypsum Canyon On-R		



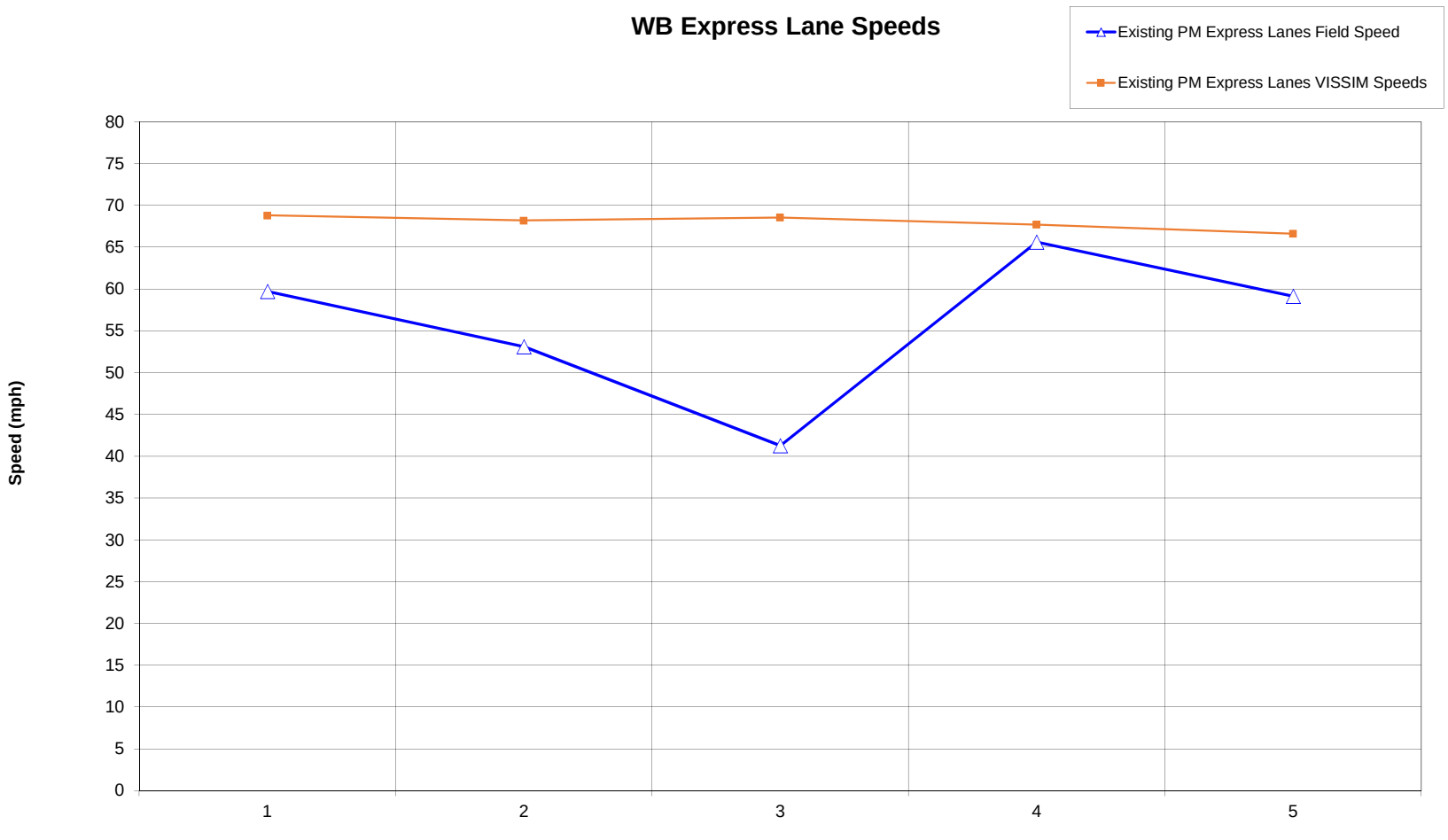
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area

Charts 5-6 PM-Calibration



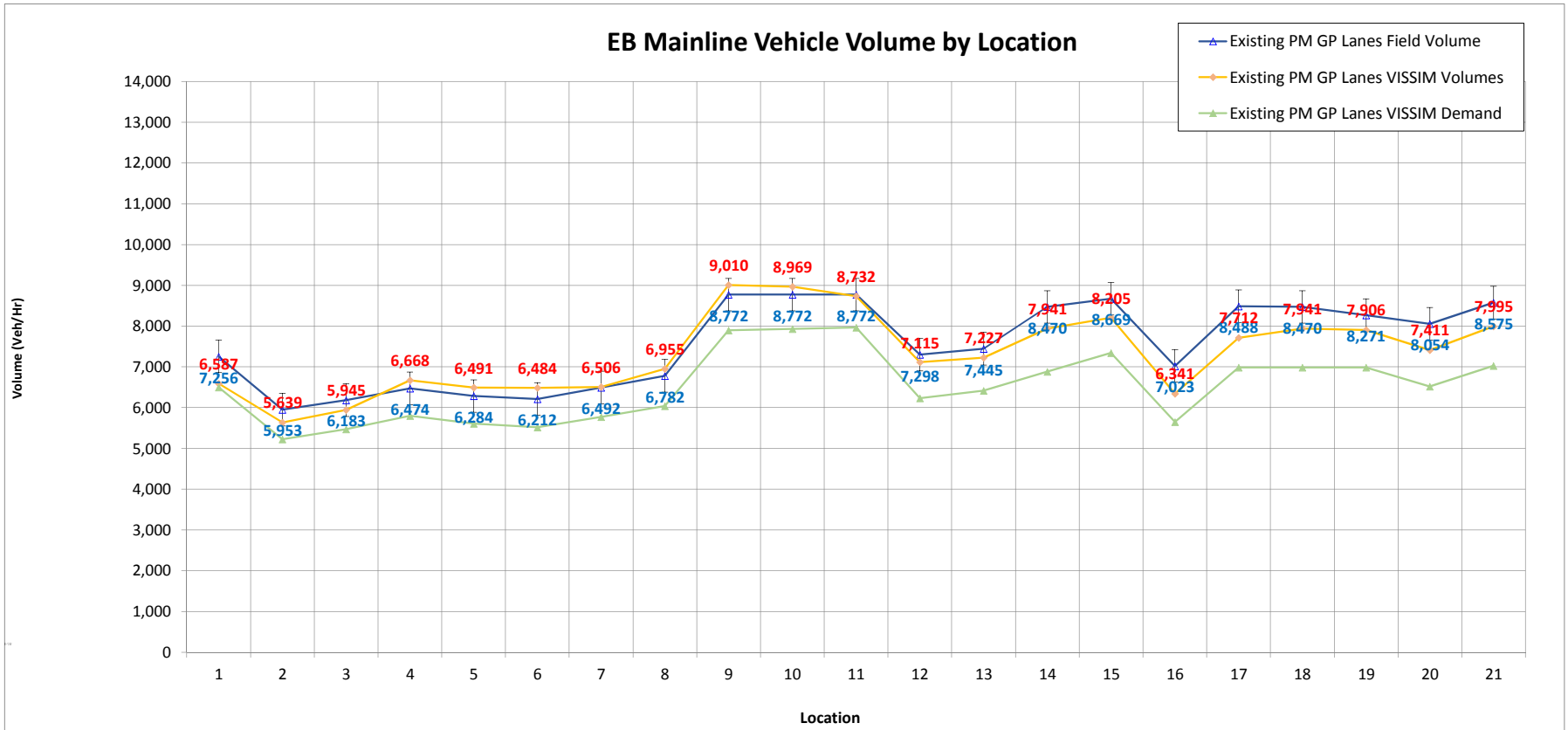
1	Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2	HOV opening between Serfas/Autoclub and SR-71
3	HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4	HOV opening between Green River Road and SR-241
5	HOV opening between Green River Road and SR-241 to End of Study area

Charts 5-6 PM-Calibration



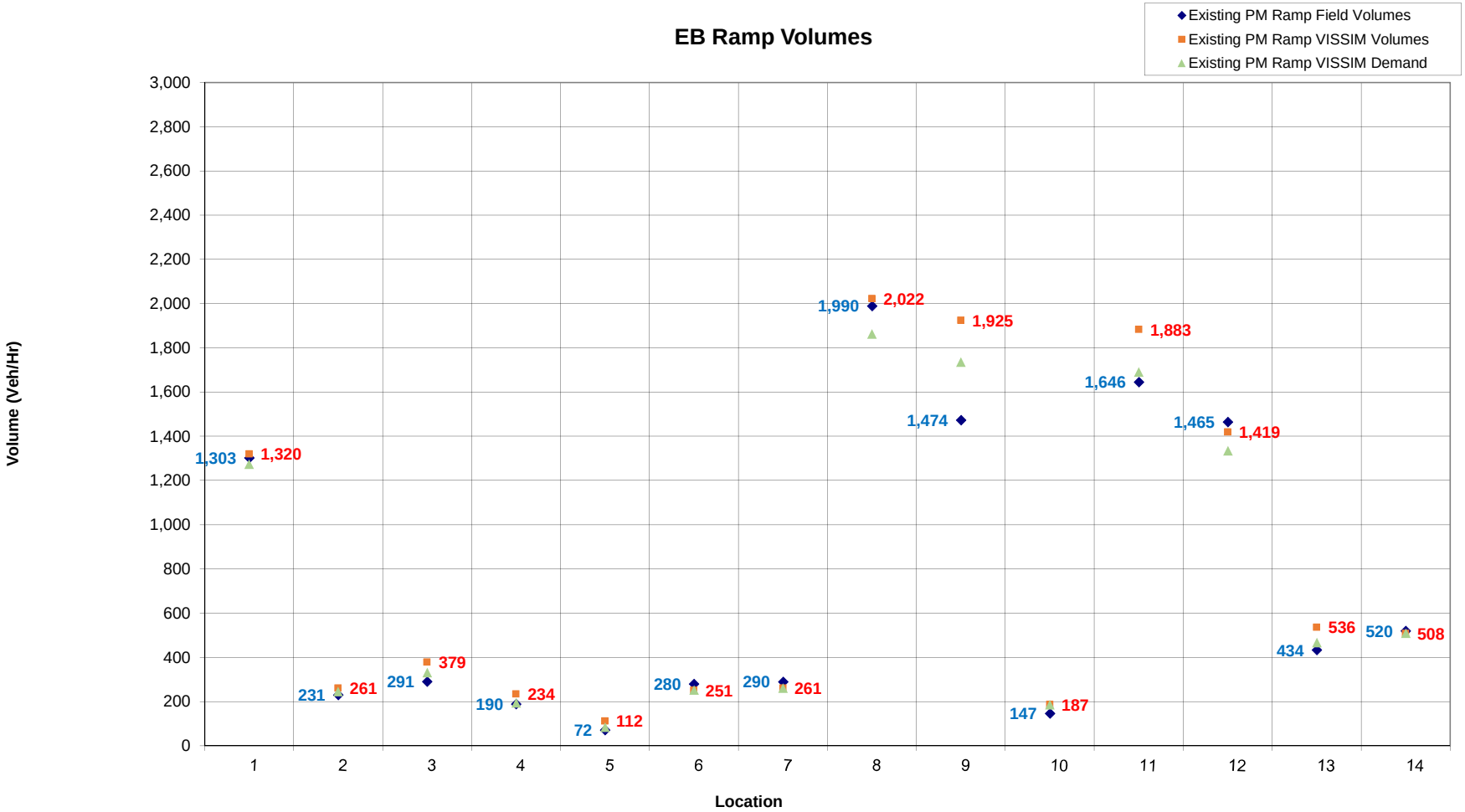
1 Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2 HOV opening between Serfas/Autoclub and SR-71
3 HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4 HOV opening between Green River Road and SR-241
5 HOV opening between Green River Road and SR-241 to End of Study area

Charts 5-6 PM-Calibration



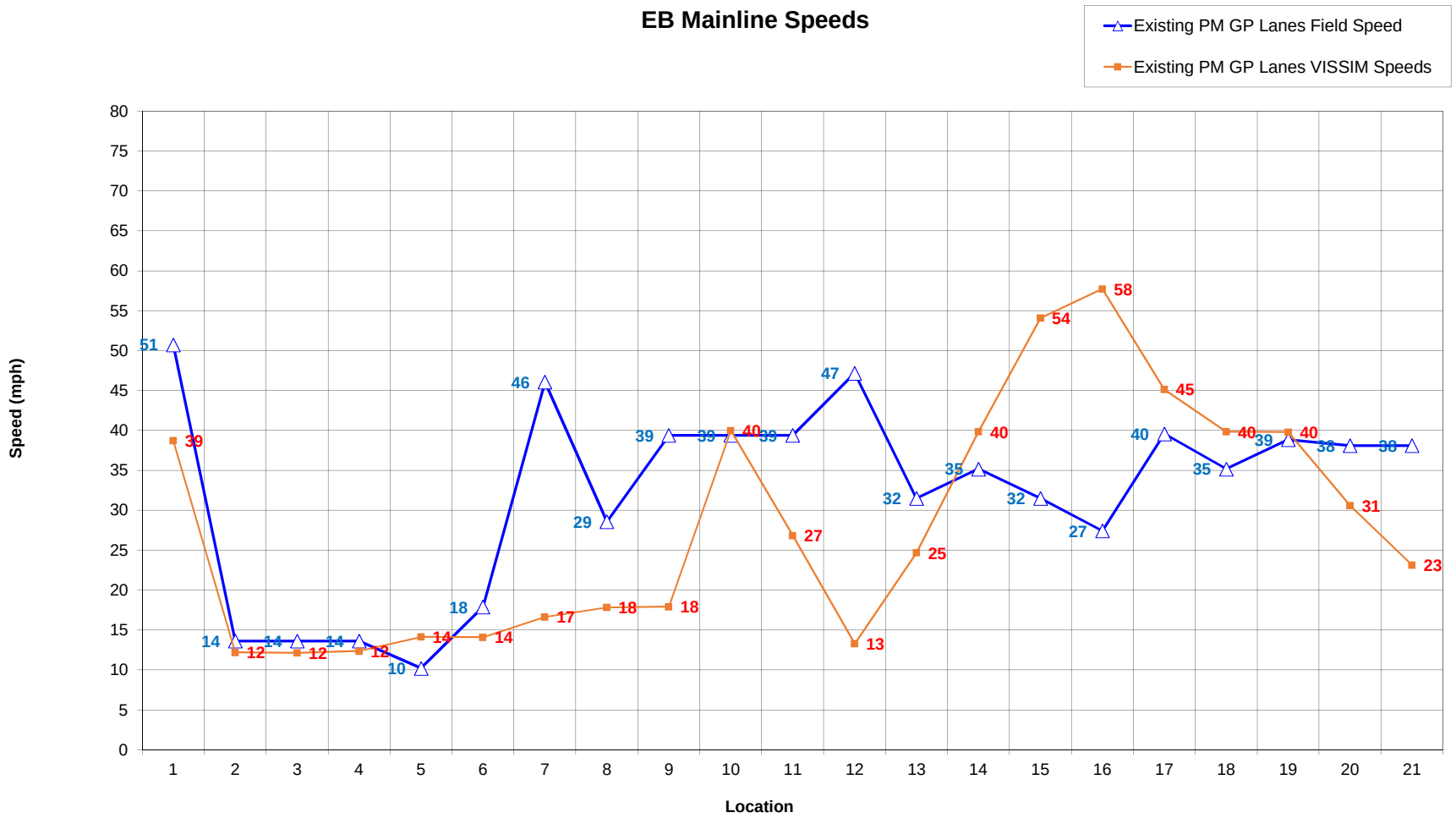
1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

Charts 6-7 PM-Calibration



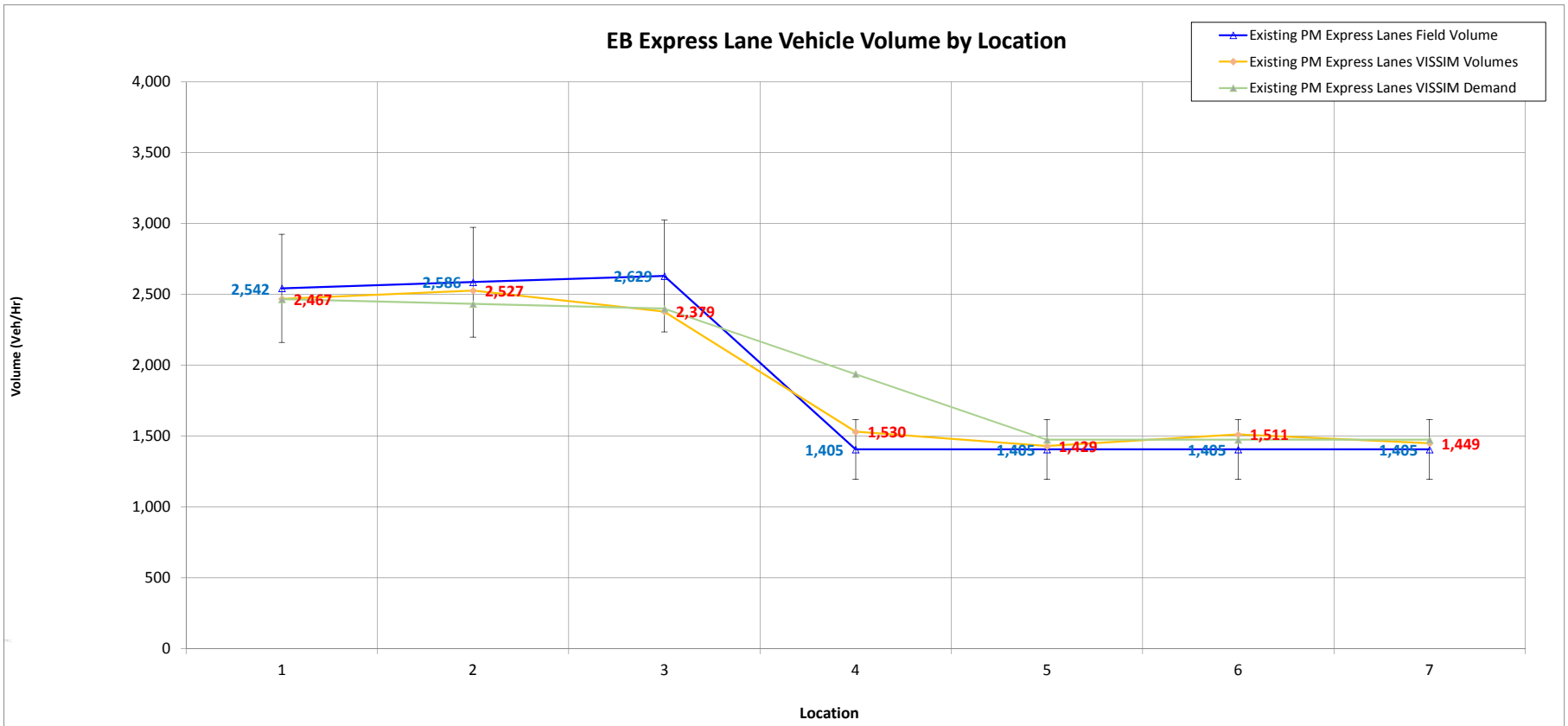
1	Off Ramp to Weir Canyon	6	On Ramp from SB Gypsum Canyon	11	Off Ramp to NB SR 71
2	On Ramp from SB Weir Canyon	7	On Ramp from NB Gypsum Canyon	12	On Ramp from SB SR 71
3	On Ramp from NB Weir Canyon	8	On Ramp from NB SR 241 GP	13	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	9	Off Ramp to Green River	14	On Ramp from Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	10	On Ramp From Green River		

Charts 6-7 PM-Calibration

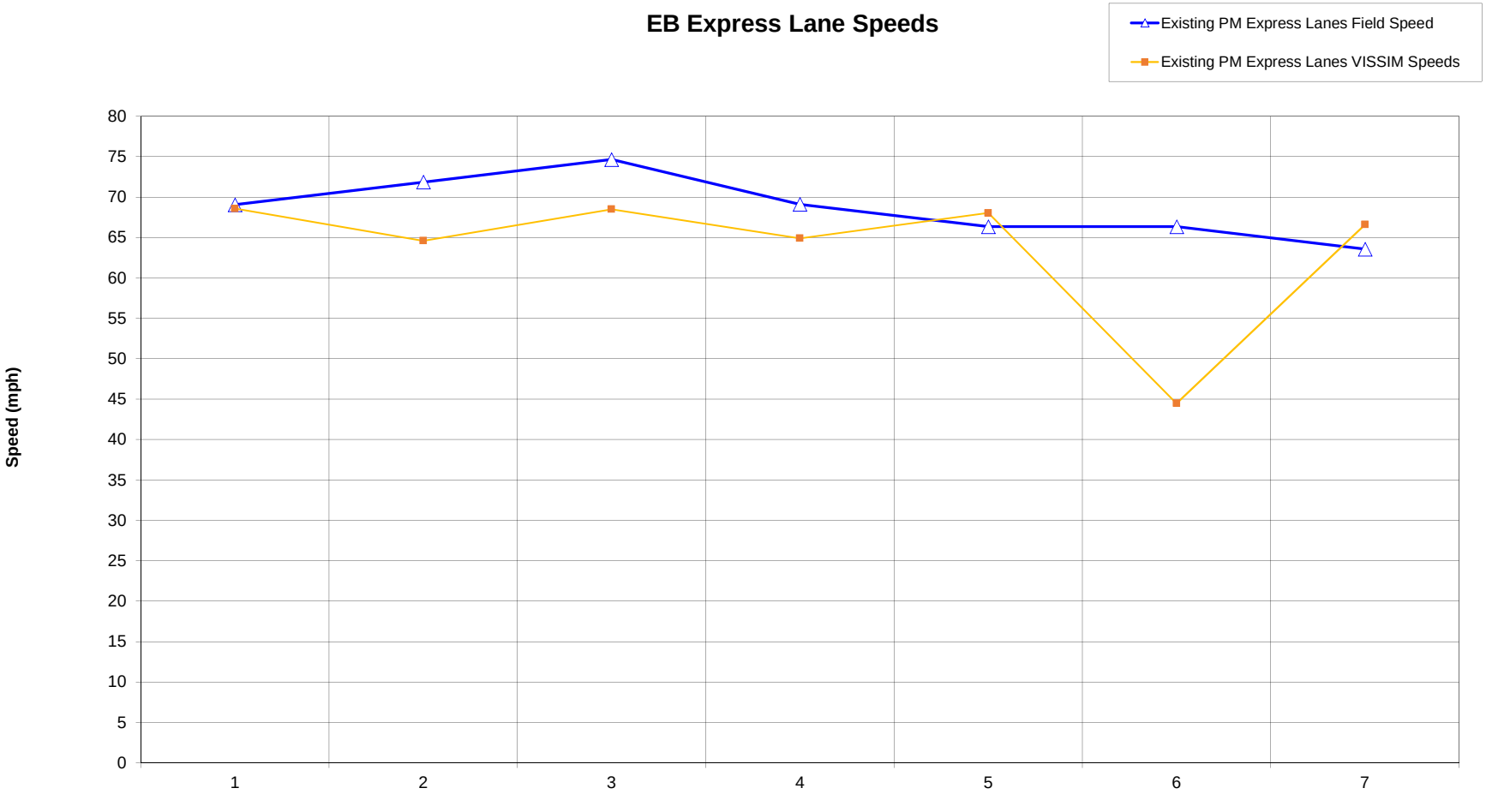


1	Begin Study Area to Off Ramp to Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	15	End of HOV weave to SR 71 Off-Ramp
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	16	SR 71 Off-Ramp to On Ramp from SB SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	10	Start Managed Lanes Weave to End Managed Lanes Weave	17	On Ramp from SB SR 71 to Start of HOV Weave
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	11	End Managed Lanes Weave to Off Ramp to Green River	18	Start of HOV weave to End of HOV weave
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	19	End of HOV weave to Off Ramp to Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	13	On Ramp From Green River to Start of HOV Weave	20	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub
7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	14	Start of HOV weave to End of HOV weave	21	On Ramp from Serfas/Autoclub to Off Ramp to EB Maple

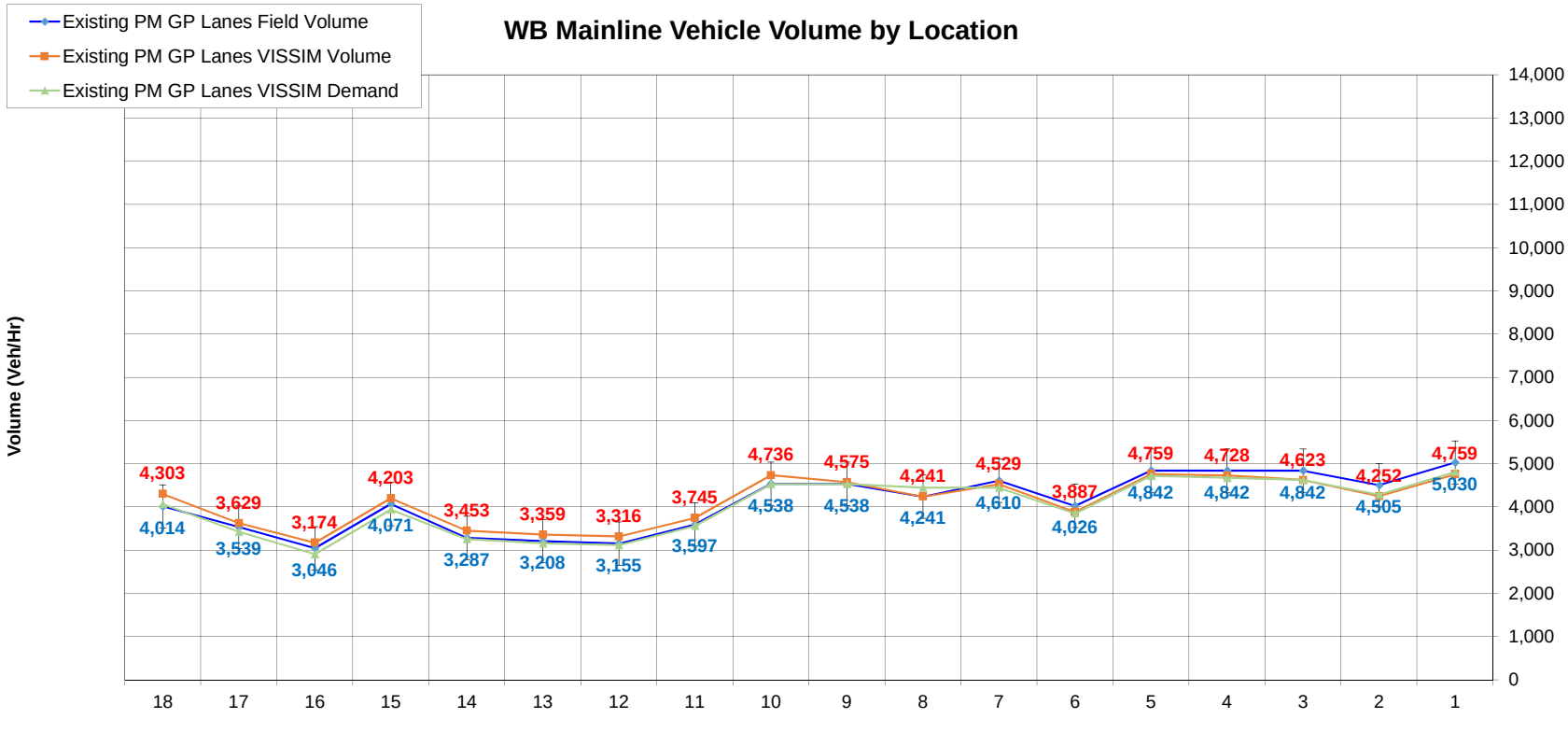
Charts 6-7 PM-Calibration



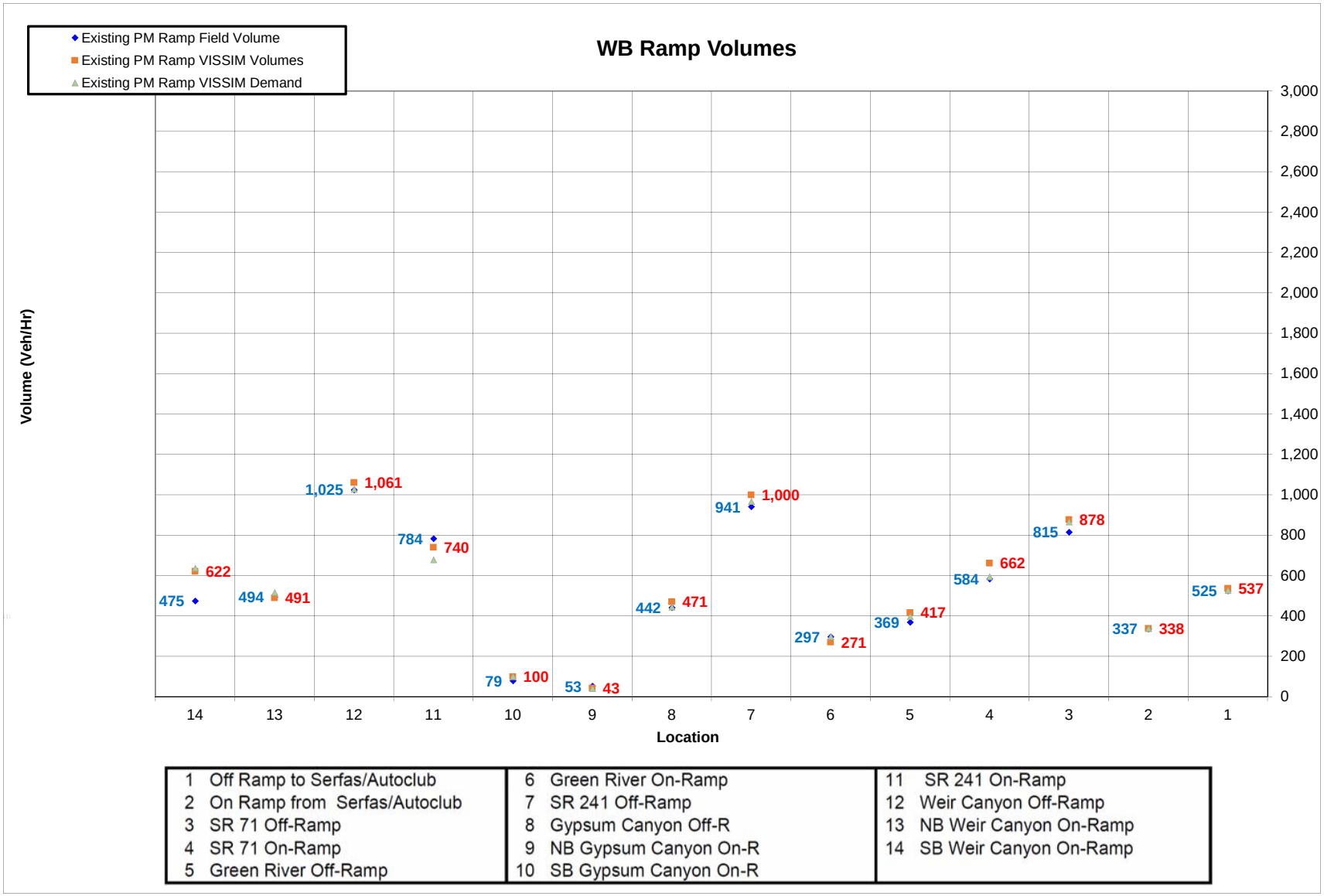
1	Begin of Study Area to HOV opening between SR-241 and Green River Road
2	HOV opening between SR-241 and Green River Road
3	HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4	HOV opening between Green River Road and SR-71
5	HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6	HOV opening between SR-71 and Serfas Club Drive
7	HOV opening between SR-71 and Serfas Club Drive to End of Study Area



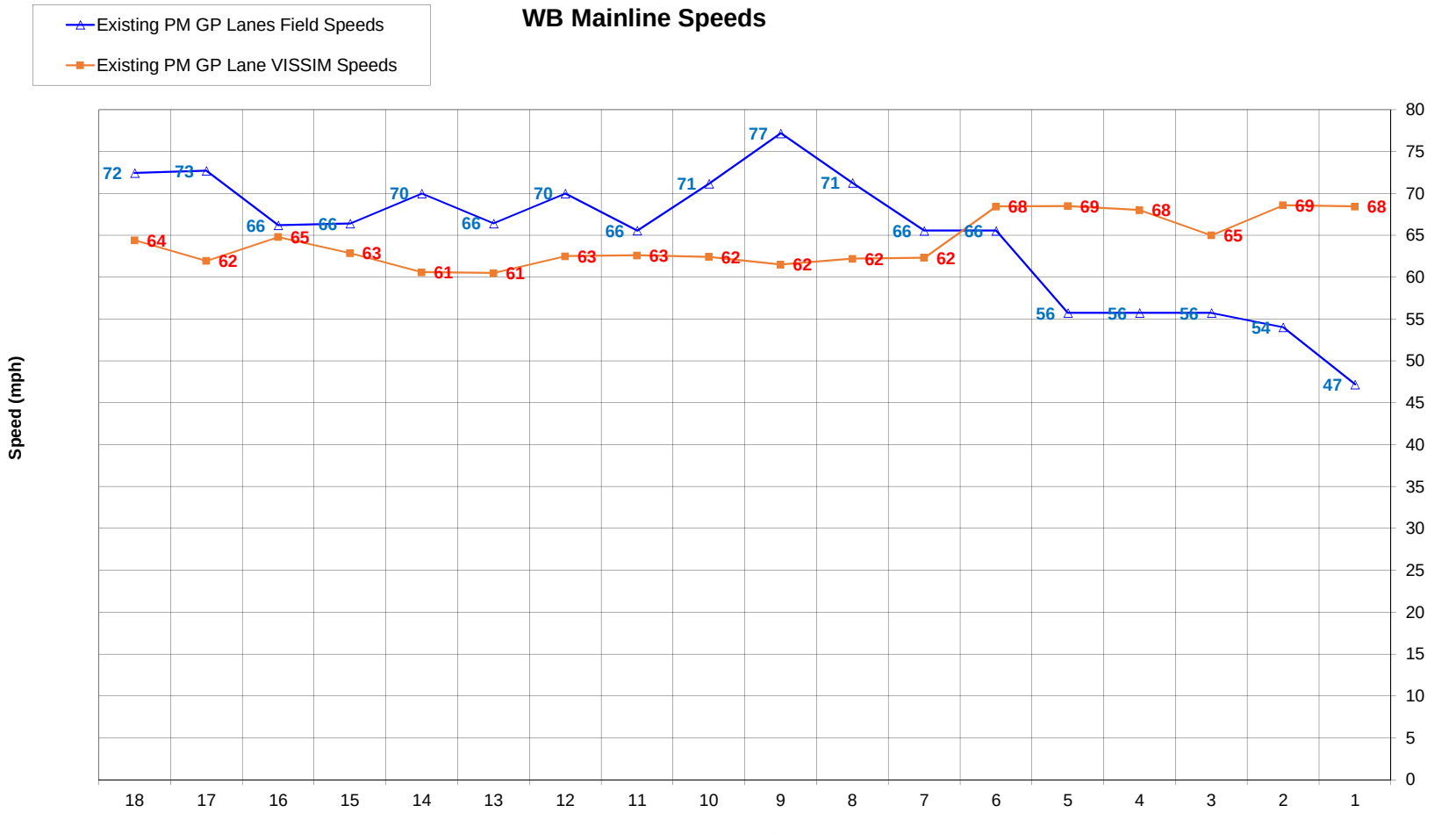
1 Begin of Study Area to HOV opening between SR-241 and Green River Road
2 HOV opening between SR-241 and Green River Road
3 HOV opening between SR-241 and Green River Road to HOV opening between Green River Road and SR-71
4 HOV opening between Green River Road and SR-71
5 HOV opening between Green River Road and SR-71 to HOV opening between SR-71 and Serfas Club Drive
6 HOV opening between SR-71 and Serfas Club Drive
7 HOV opening between SR-71 and Serfas Club Drive to End of Study Area



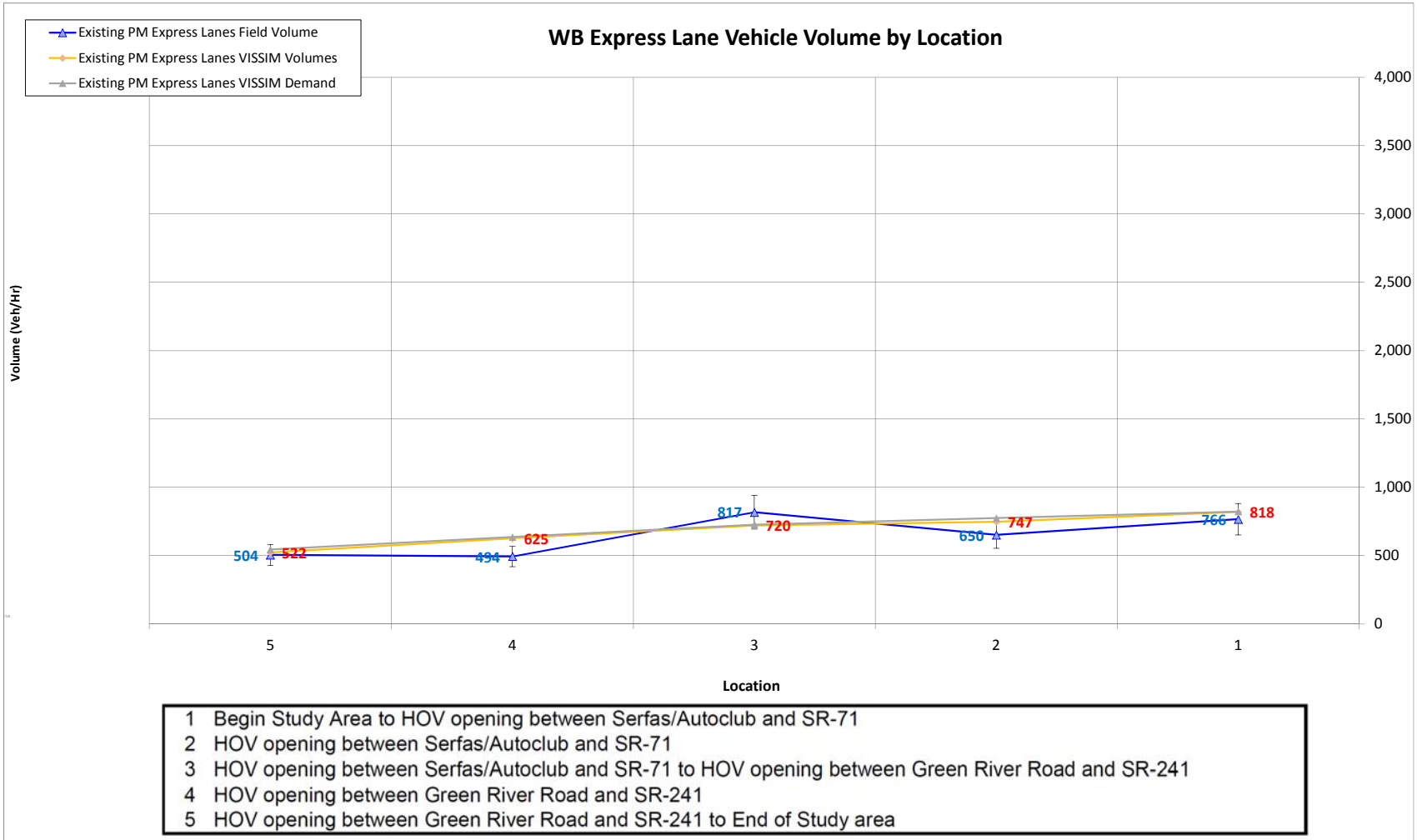
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area



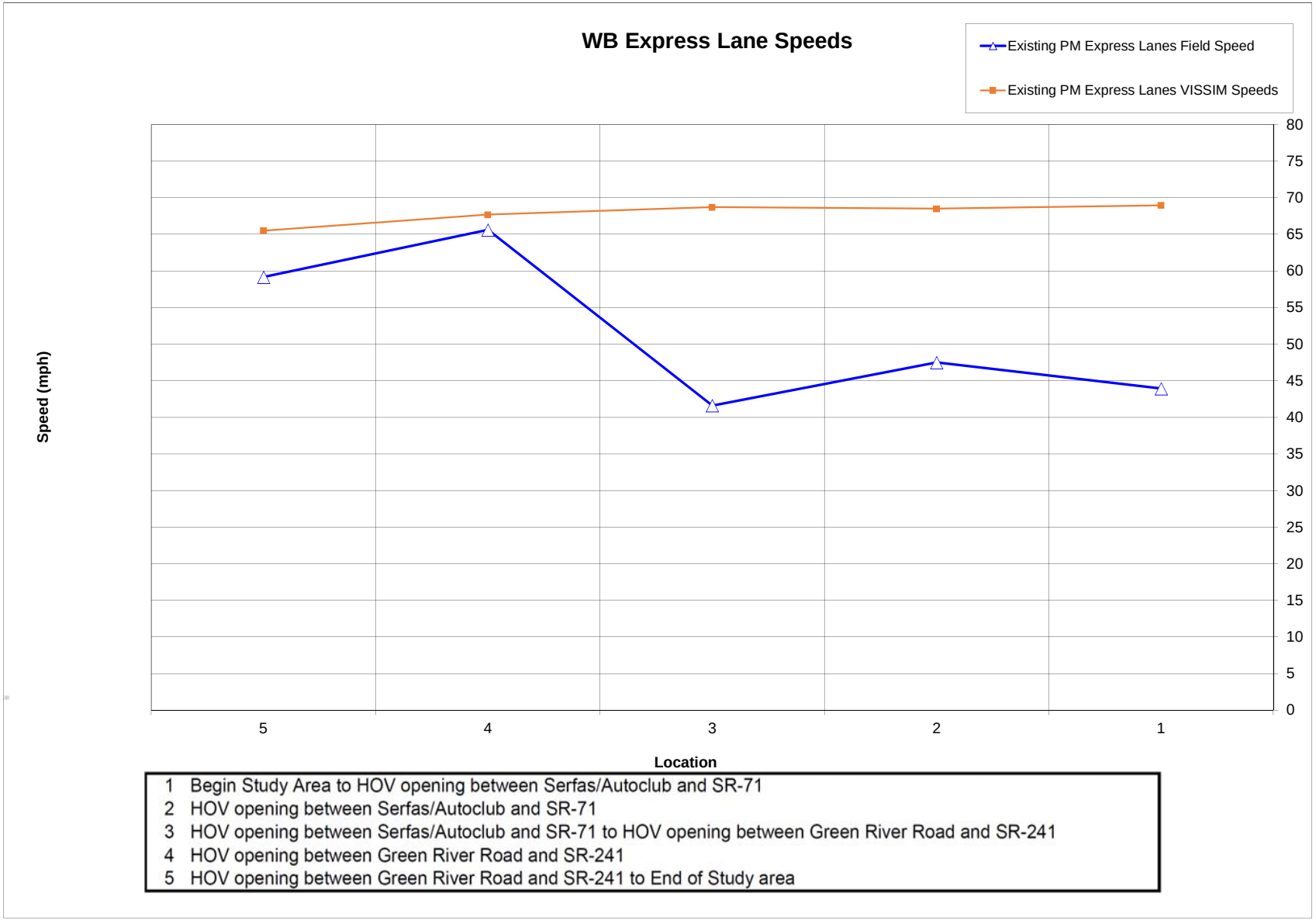
1	Off Ramp to Serfas/Autoclub	6	Green River On-Ramp	11	SR 241 On-Ramp
2	On Ramp from Serfas/Autoclub	7	SR 241 Off-Ramp	12	Weir Canyon Off-Ramp
3	SR 71 Off-Ramp	8	Gypsum Canyon Off-R	13	NB Weir Canyon On-Ramp
4	SR 71 On-Ramp	9	NB Gypsum Canyon On-R	14	SB Weir Canyon On-Ramp
5	Green River Off-Ramp	10	SB Gypsum Canyon On-R		



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 SR 71 On-Ramp to Green River Off-Ramp (Start of HOV Weave)	13 NB Gypsum Canyon On-R to SB Gypsum Canyon On-R
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 Green River Off-Ramp (Start of HOV Weave) to Green River On-Ramp	14 SB Gypsum Canyon On-R to SR 241 On-Ramp
3 On Ramp from Serfas/Autoclub to Start of HOV Weave	9 Green River On-Ramp to End of HOV Weave	15 SR 241 On-Ramp to Weir Canyon Off-Ramp
4 Start of HOV Weave to end of HOV Weave	10 End of HOV Weave to SR 241 Off-Ramp	16 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
5 End of HOV Weave to SR 71 Off-Ramp	11 SR 241 Off-Ramp to Gypsum Canyon Off-R	17 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
6 SR 71 Off-Ramp to SR 71 On-Ramp	12 Gypsum Canyon Off-R to NB Gypsum Canyon On-R	18 SB Weir Canyon On-Ramp to End of study area



1 Begin Study Area to HOV opening between Serfas/Autoclub and SR-71
2 HOV opening between Serfas/Autoclub and SR-71
3 HOV opening between Serfas/Autoclub and SR-71 to HOV opening between Green River Road and SR-241
4 HOV opening between Green River Road and SR-241
5 HOV opening between Green River Road and SR-241 to End of Study area



Charts 6-7 PM-Calibration

Appendix C

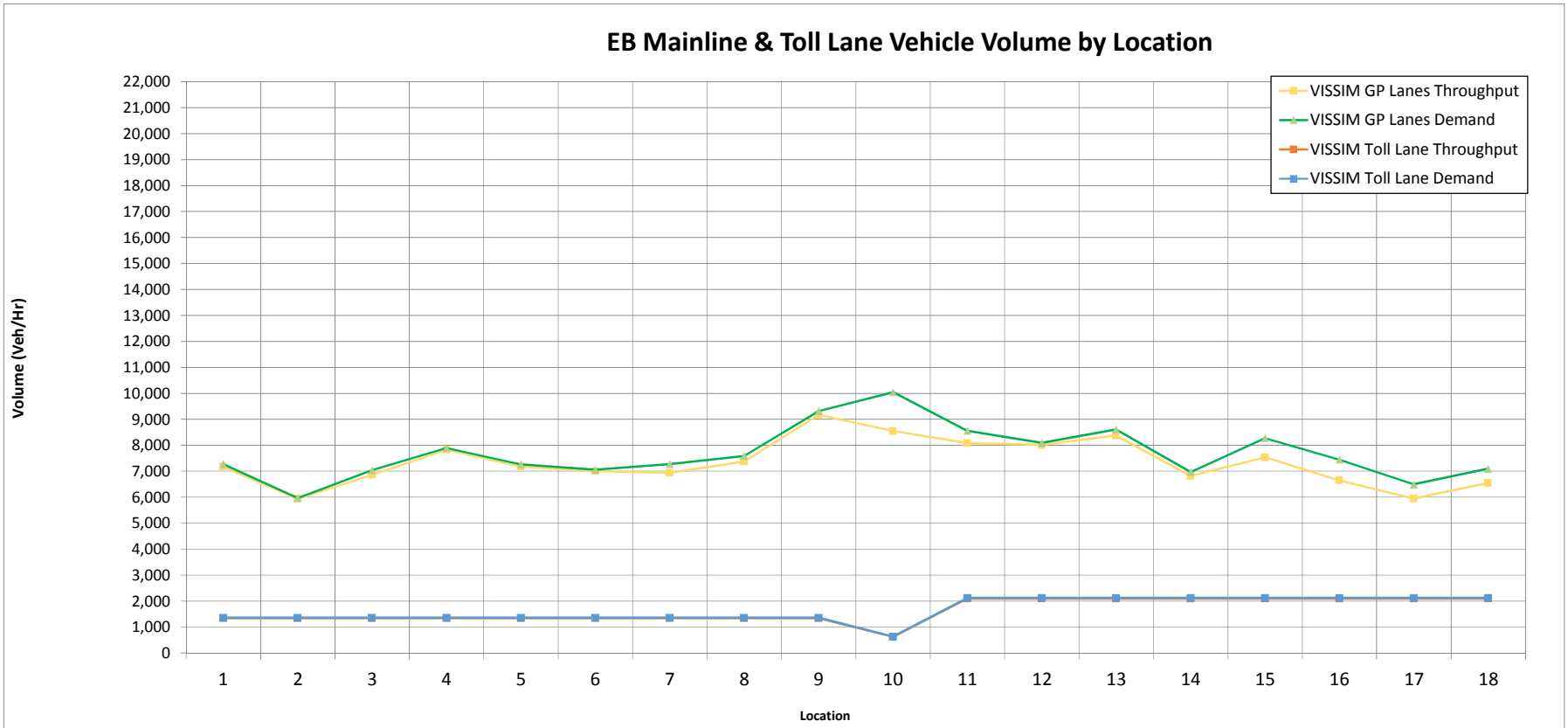
VISSIM Summary of Results
2017 No Build Conditions

SR-91/241
Vissim Model Summary - 2017 No Build - AM Peak Period
Network Summary Statistics

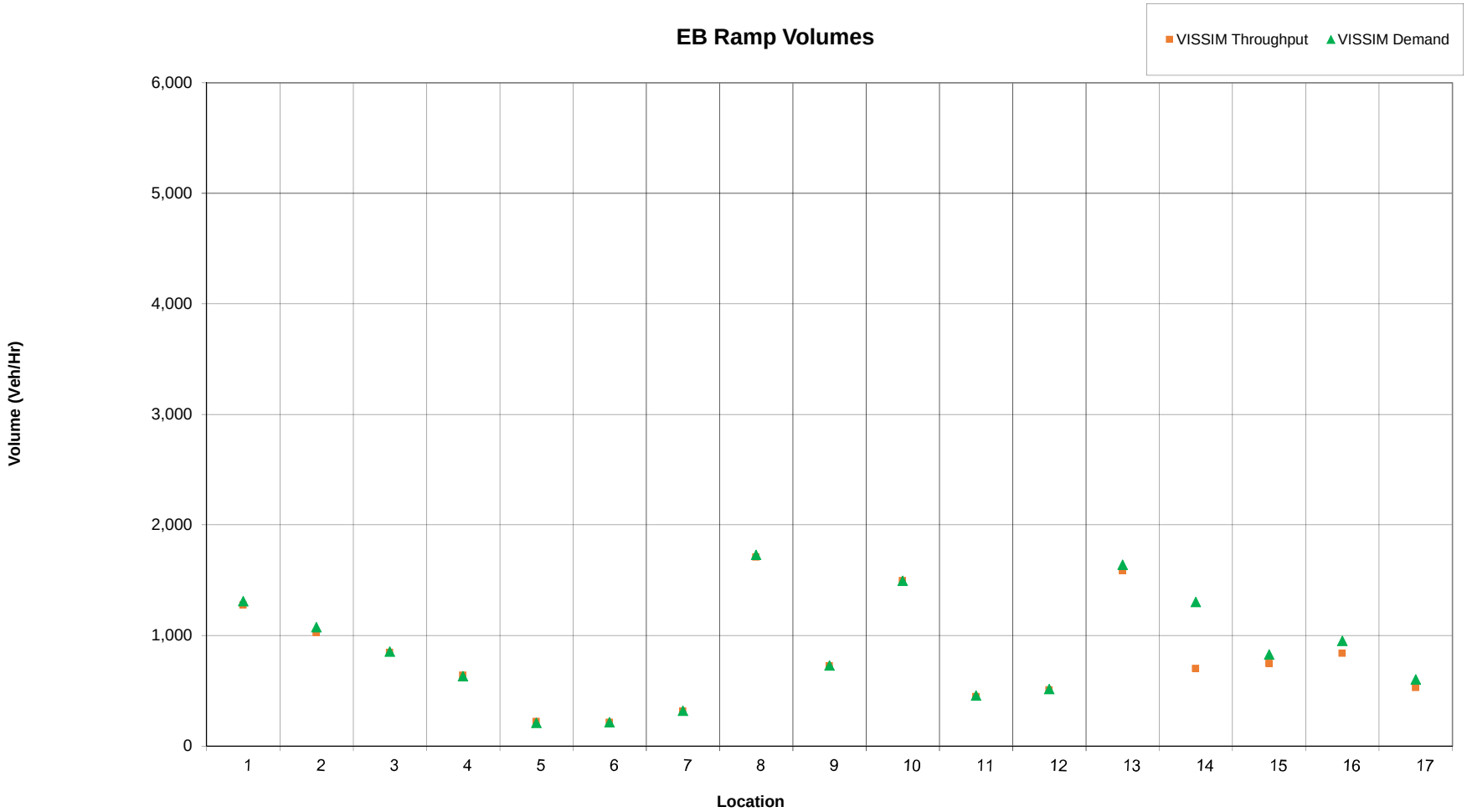
Parameter			2017 No Project		Difference
Total Vehicle Demand (4 Hr)			100,741		
Total number of vehicles that did not reach their desitination			9,016		
Totla number of vehicles that have reached their destination			91,725		
Total vehicle-miles traveled (VMT)			796,551		
Total travel time, All Vehicle Types (VHT)			23,068		
Average speed [mph], All Vehicle Types			34.5		
Average delay time per vehicle [mins], All Vehicle Types			6.83		

SR-91/241
Vissim Model Summary - 2017 No Build - AM Peak Period
Travel Time Results

#	Origin	#	Destination	p Key	Hide Travel Time Seg 1	Seg 2	Seg 3	2017 AM No Build VISSIM Travel Time 6-7 AM	7-8 AM	7-9 AM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	1	1002	1003	1005	8.6	8.7	8.6
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	2	1002	1003	2005	8.6	8.6	8.6
		5	SR 241 SB south of SR 91	3	1001			7.1	7.2	7.2
		7	SR 71 NB north of SR 91	4	1002	1003	1004	11.0	11.1	11.0
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	5	2002	1003	1005	8.5	8.5	8.5
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	6	2002	2003	2005	8.4	8.4	8.4
		7	SR 71 NB north of SR 91	7	2002	1003	1004	10.9	10.9	10.9
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8	1011	1012	1014	23.1	24.8	24.1
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9	1011	1012	2014	23.0	24.7	24.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10	1011	1012	1013	25.4	27.1	26.5
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	11	1011	1012	2013	n/a	n/a	n/a
		7	SR 71 NB north of SR 91	12	1010			12.4	13.3	12.0
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	13	2011	1012	1014	12.0	12.4	12.6
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	14	2011	2012	2014	8.4	8.4	8.4
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15	2011	1012	1013	14.4	14.8	15.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	16	2011	2012	2013	n/a	n/a	n/a
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	17	1006			7.2	7.2	7.2
		3	SR 91 EB GP Lanes east of Serfas Club Rd	18	1007	1003	1005	11.0	11.0	11.0
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19	1007	1003	2005	10.9	10.9	10.9
		7	SR 71 NB north of SR 91	20	1007	1003	1004	13.4	13.4	13.4
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	21	2007	1003	1005	n/a	n/a	n/a
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	22	2007	2003	2005	n/a	n/a	n/a
		7	SR 71 NB north of SR 91	23	2007	1003	1004	n/a	n/a	n/a
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	24	1009	1012	1014	43.0	54.1	55.9
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	25	1009	1012	2014	42.9	54.0	55.8
		3	SR 91 EB GP Lanes east of Serfas Club Rd	26	1008			28.7	37.2	38.3
		5	SR 241 SB south of SR 91 (Via GP Ramp)	27	1009	1012	1013	45.3	56.4	58.3
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	28	1009	1012	2013	n/a	n/a	n/a

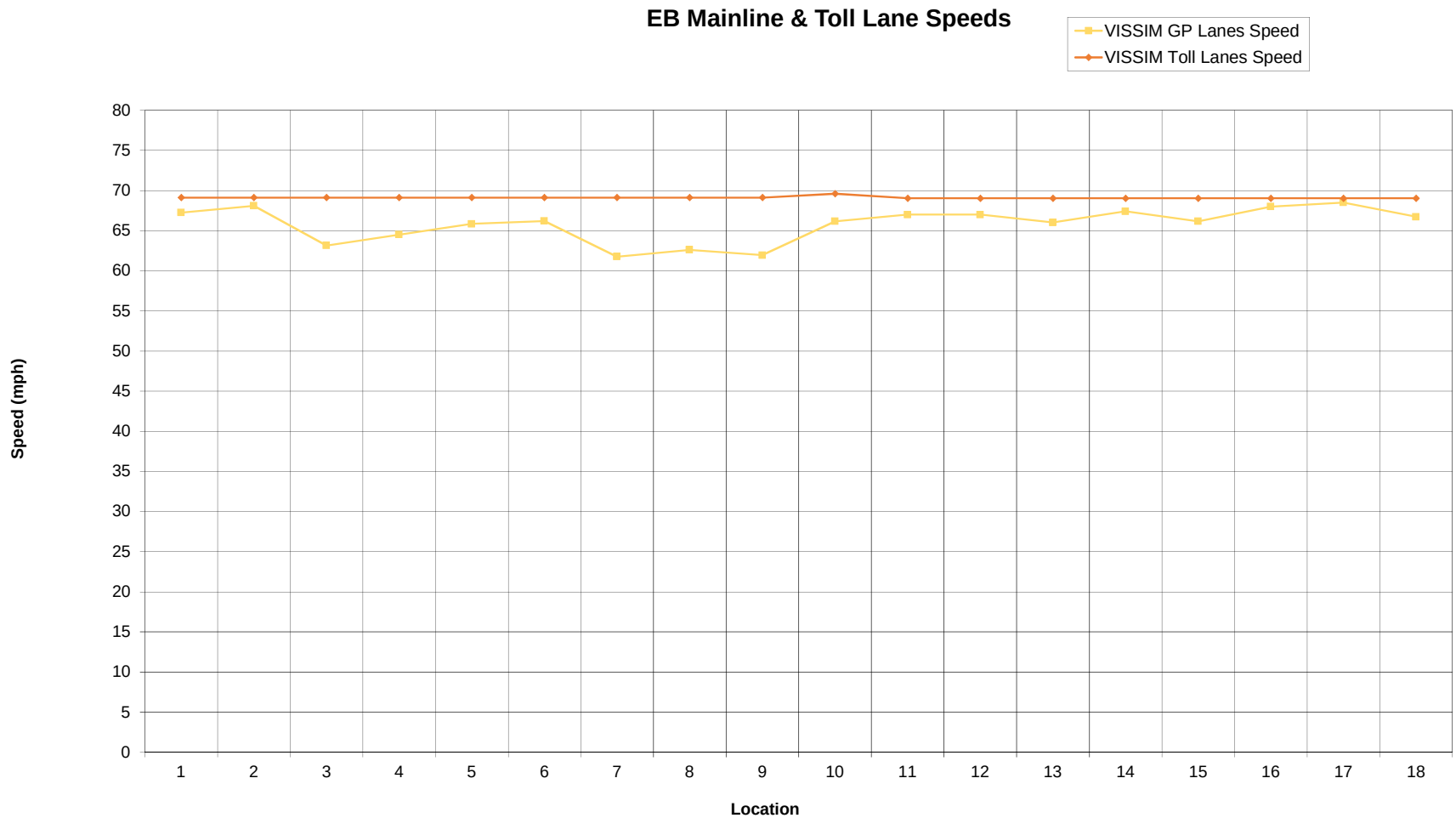


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

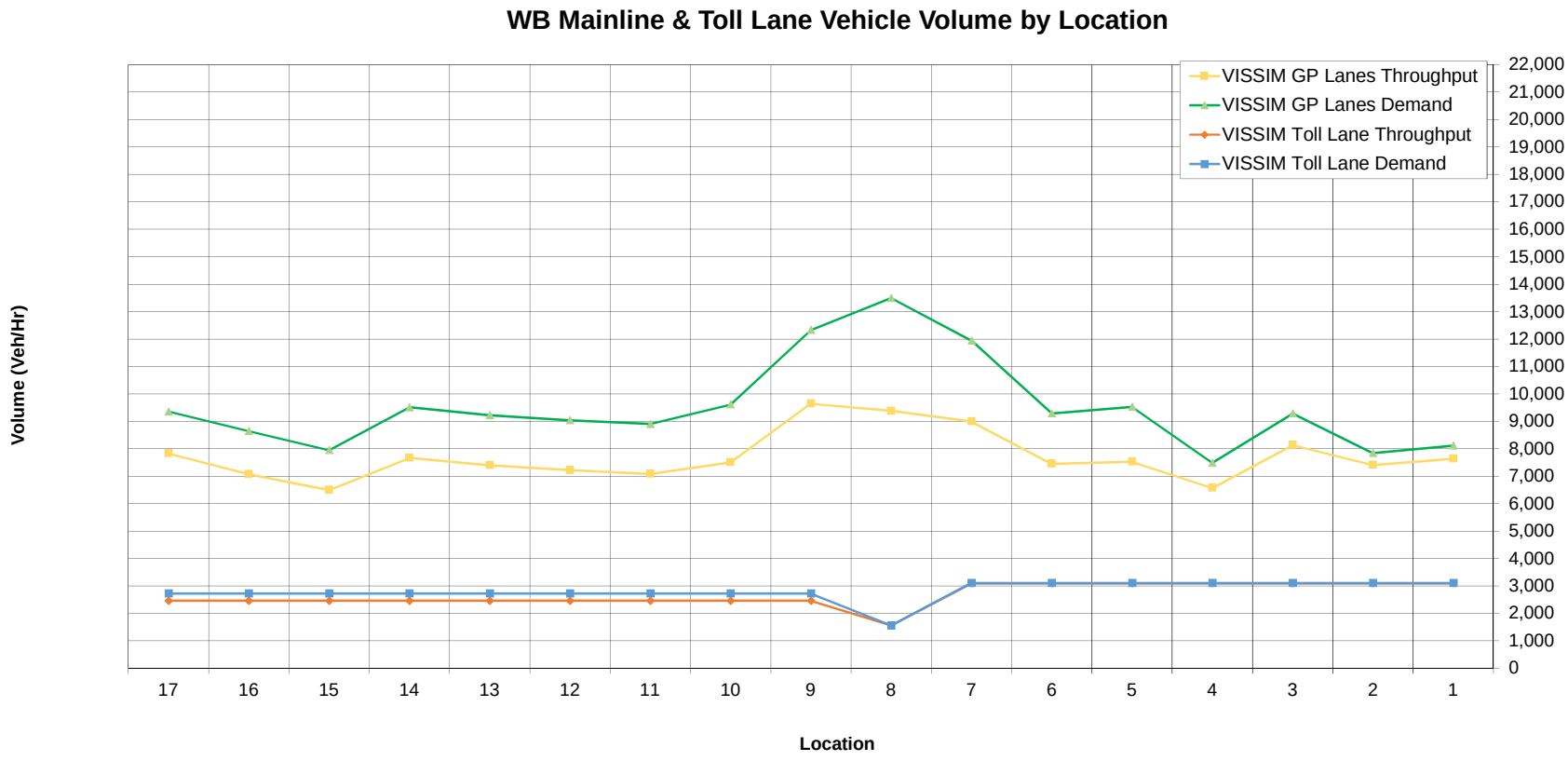


1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 NB
2	On Ramp from SB Weir Canyon	8	On Ramp from NB SR 241 GP	14	On Ramp from SR 71 NB
3	On Ramp from NB Weir Canyon	9	On Ramp from HOT Exit (east of SR 241)	15	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	10	Off Ramp to HOT Entrance (west of Green River Rd)	16	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	11	Off Ramp to Green River	17	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	12	On Ramp From Green River		

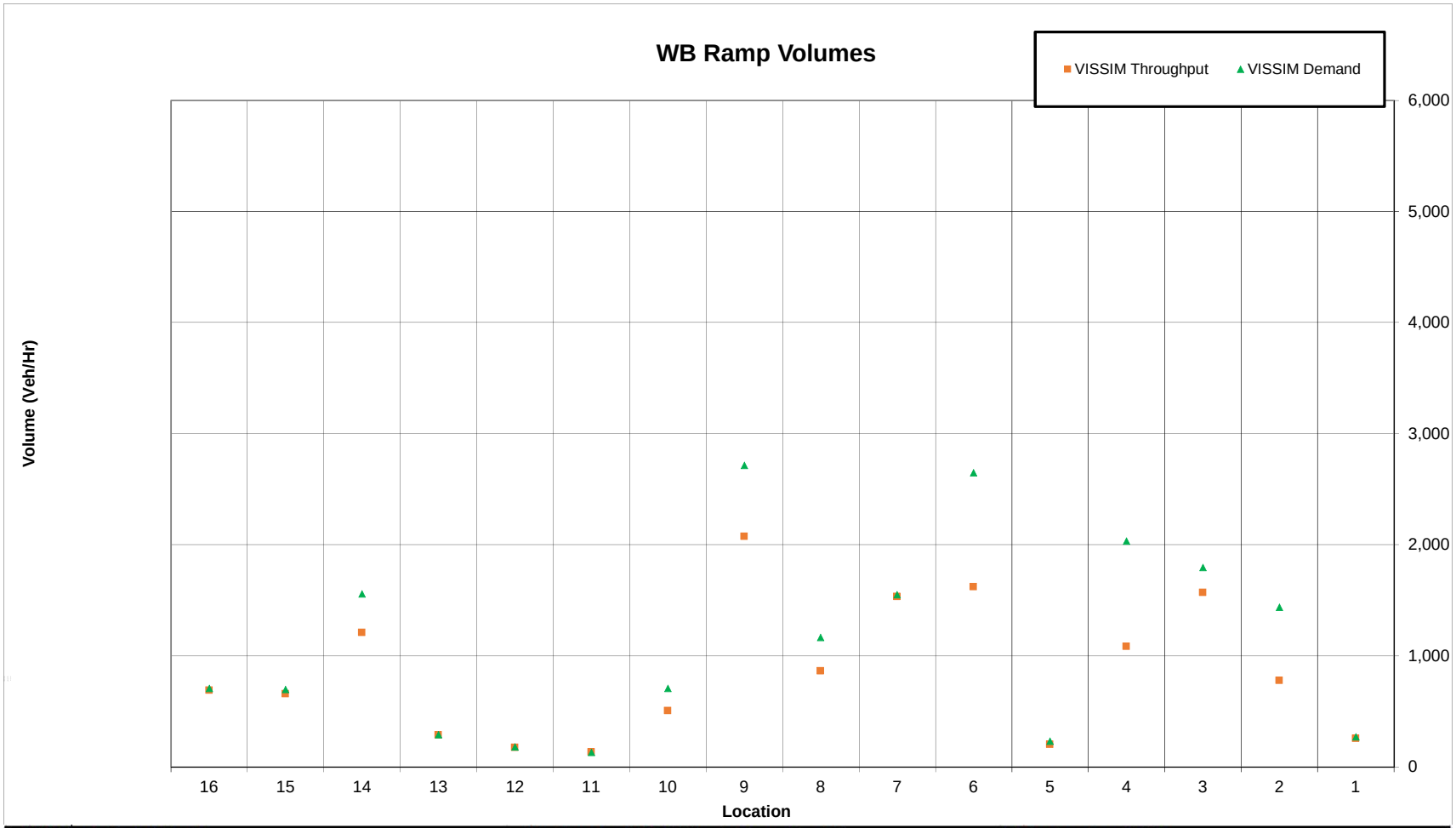
Charts 6-7 AM



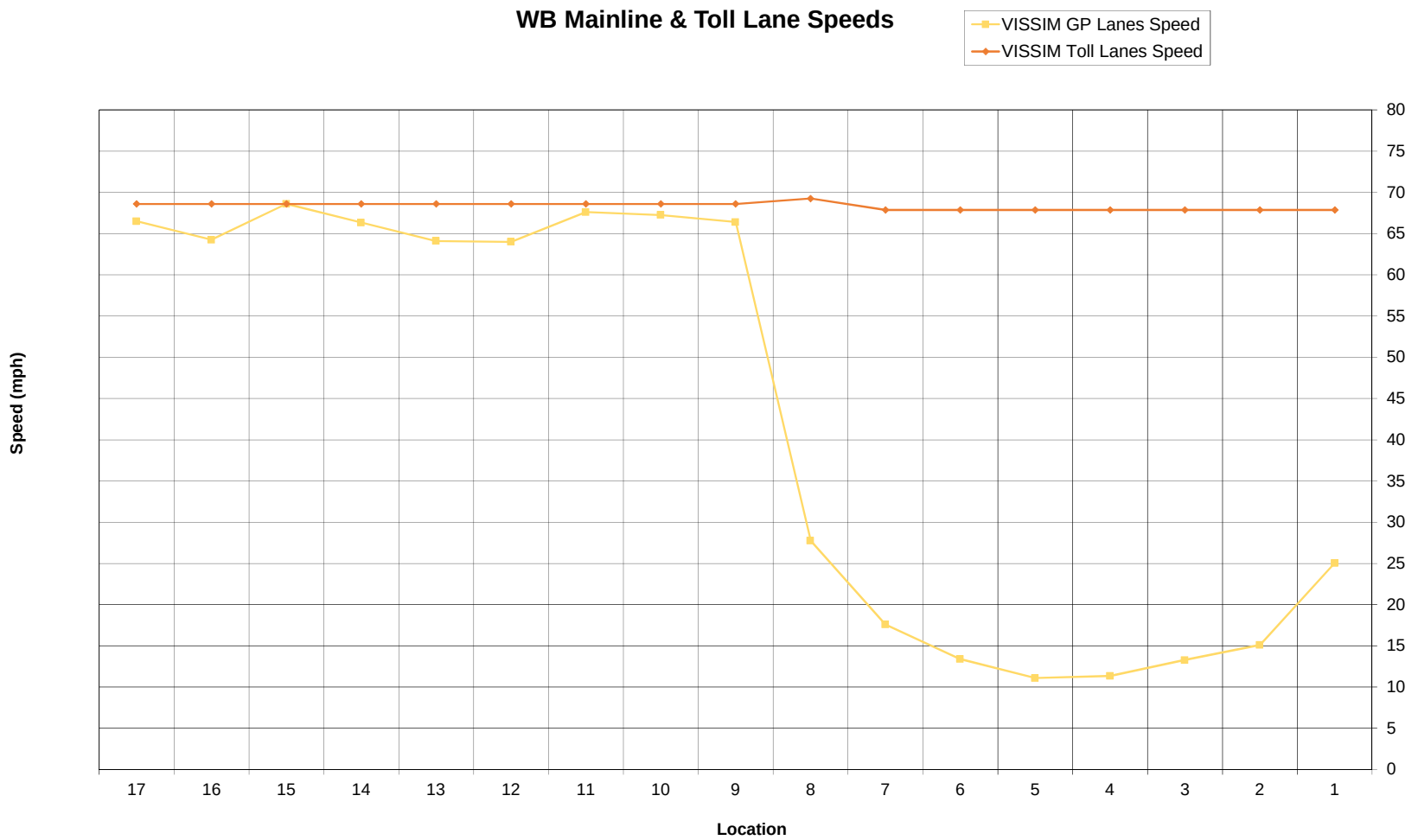
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



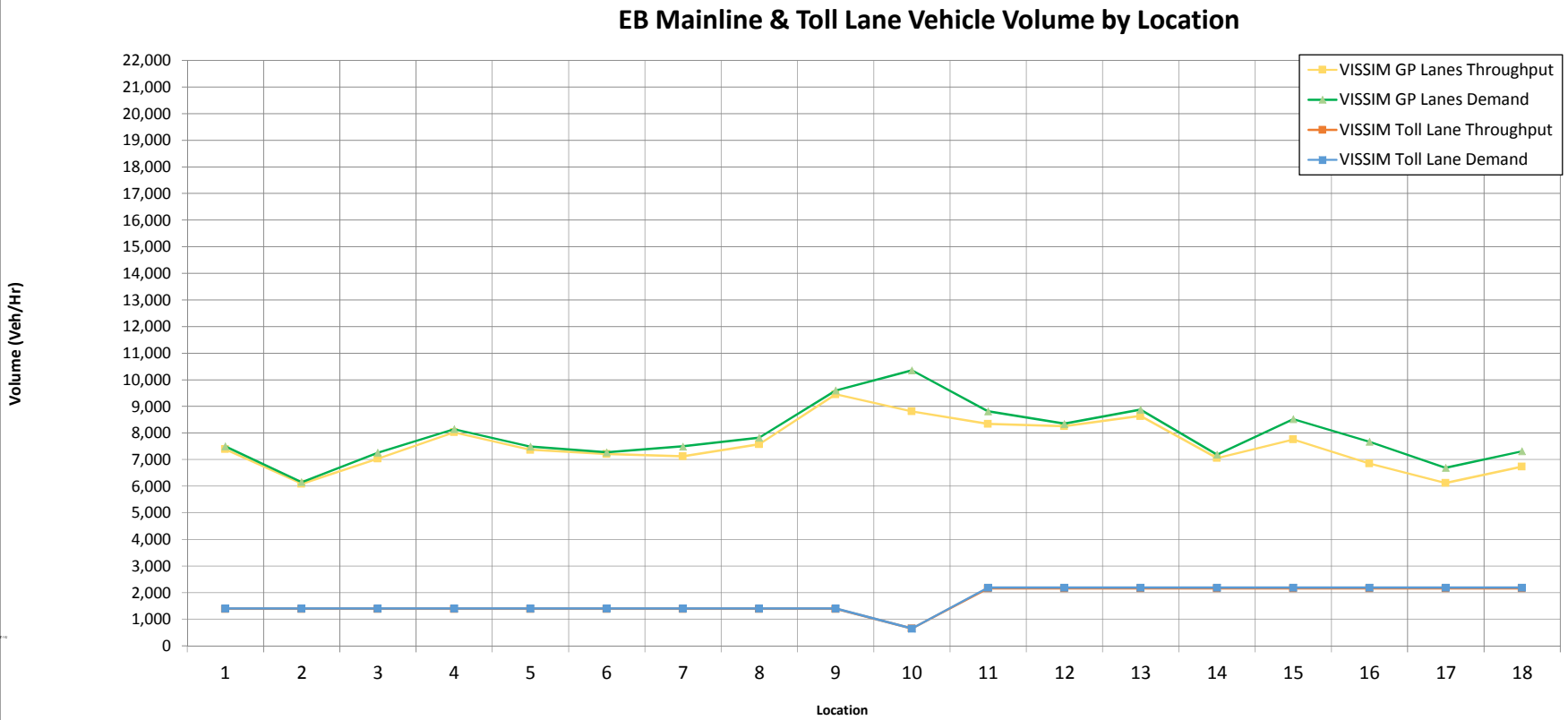
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



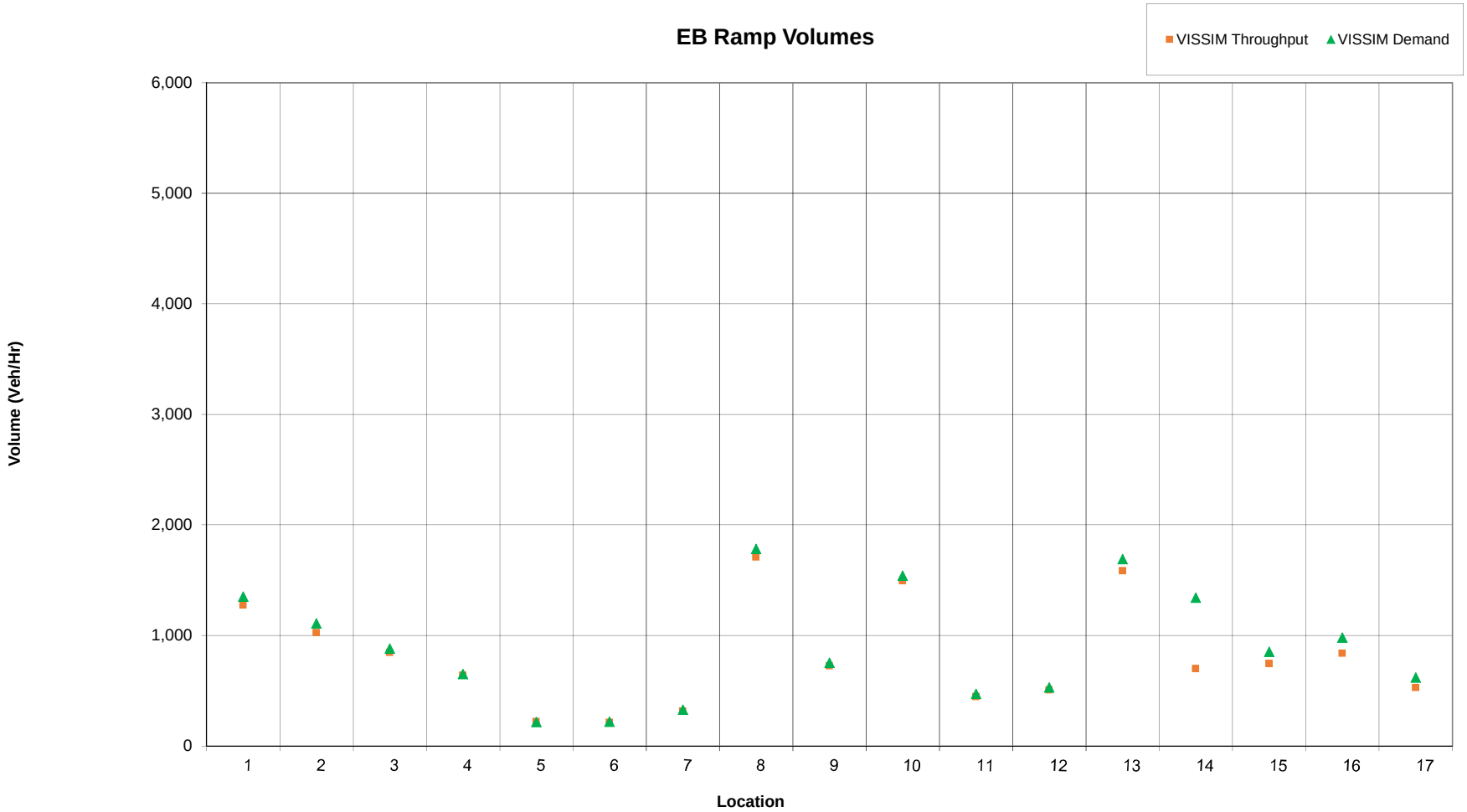
1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SR 241
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	Off Ramp to Weir Canyon Rd
3	Off Ramp to SR 71	9	Off Ramp to SR 241	15	On Ramp from NB Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to Gypsum Canyon Rd	16	On Ramp from SB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	On Ramp from NB Gypsum Canyon Rd		
6	On Ramp from Green River Rd	12	On Ramp from SB Gypsum Canyon Rd		



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

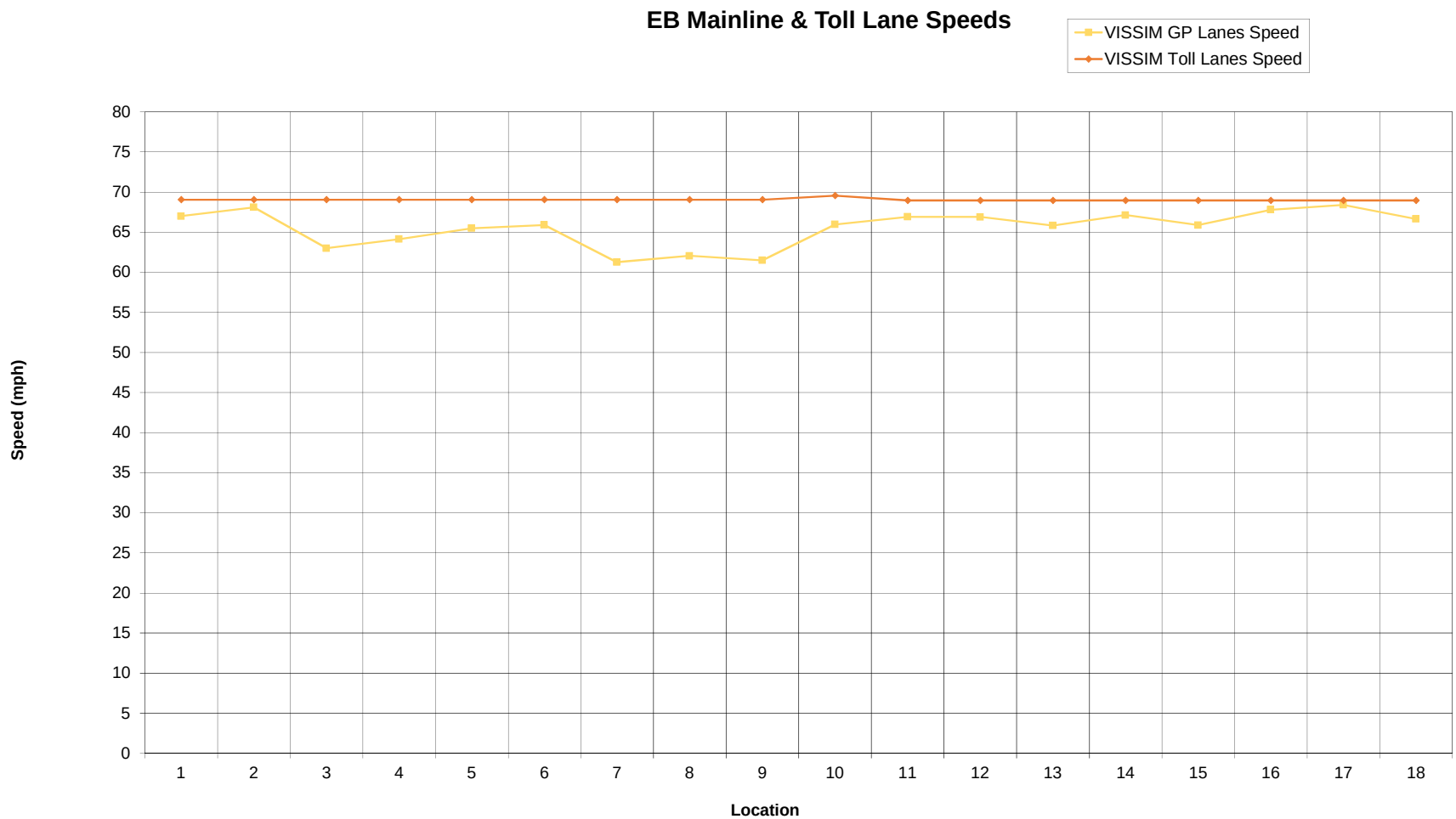


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

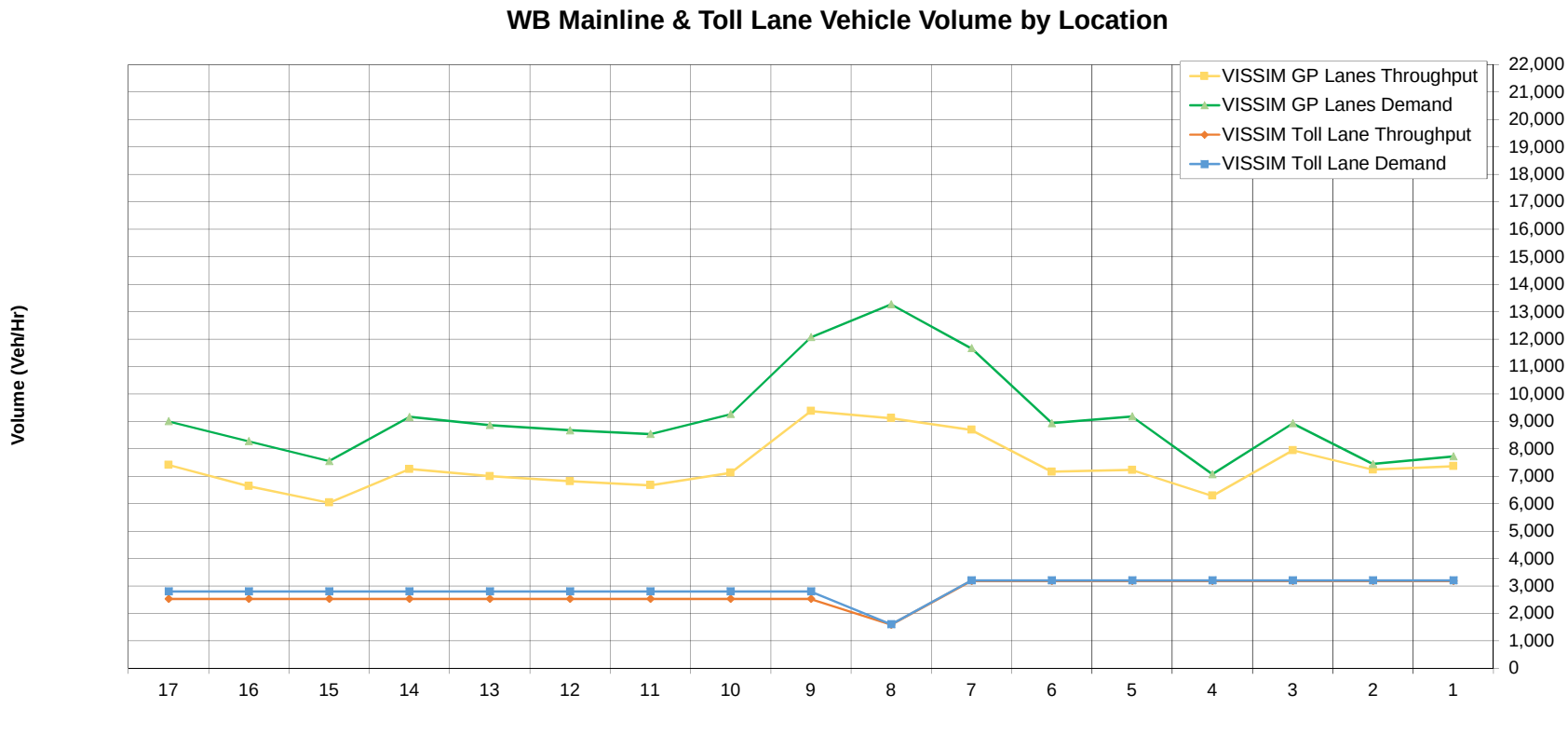


1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 NB
2	On Ramp from SB Weir Canyon	8	On Ramp from NB SR 241 GP	14	On Ramp from SR 71 NB
3	On Ramp from NB Weir Canyon	9	On Ramp from HOT Exit (east of SR 241)	15	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	10	Off Ramp to HOT Entrance (west of Green River Rd)	16	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	11	Off Ramp to Green River	17	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	12	On Ramp From Green River		

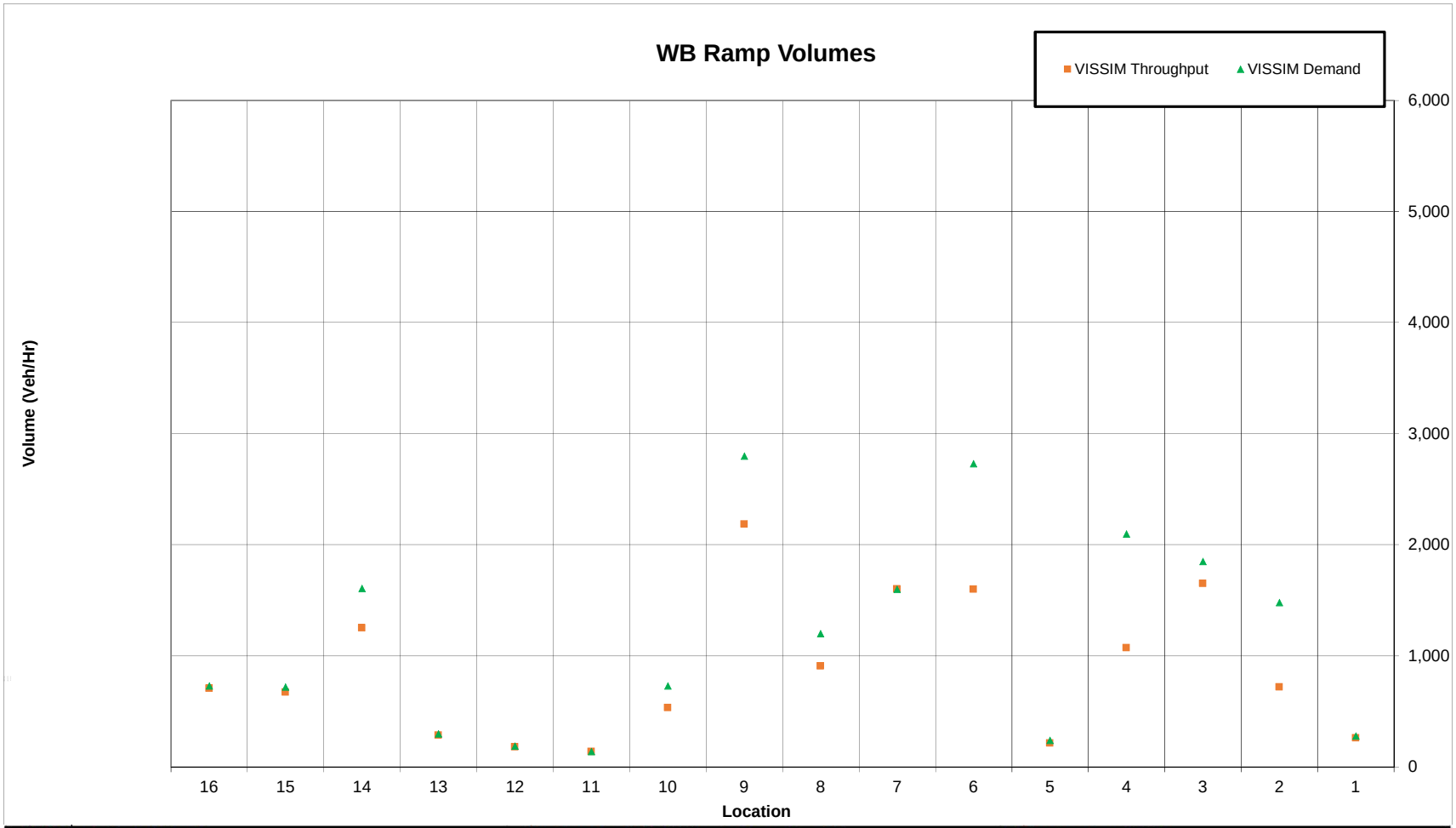
Charts 7-8 AM



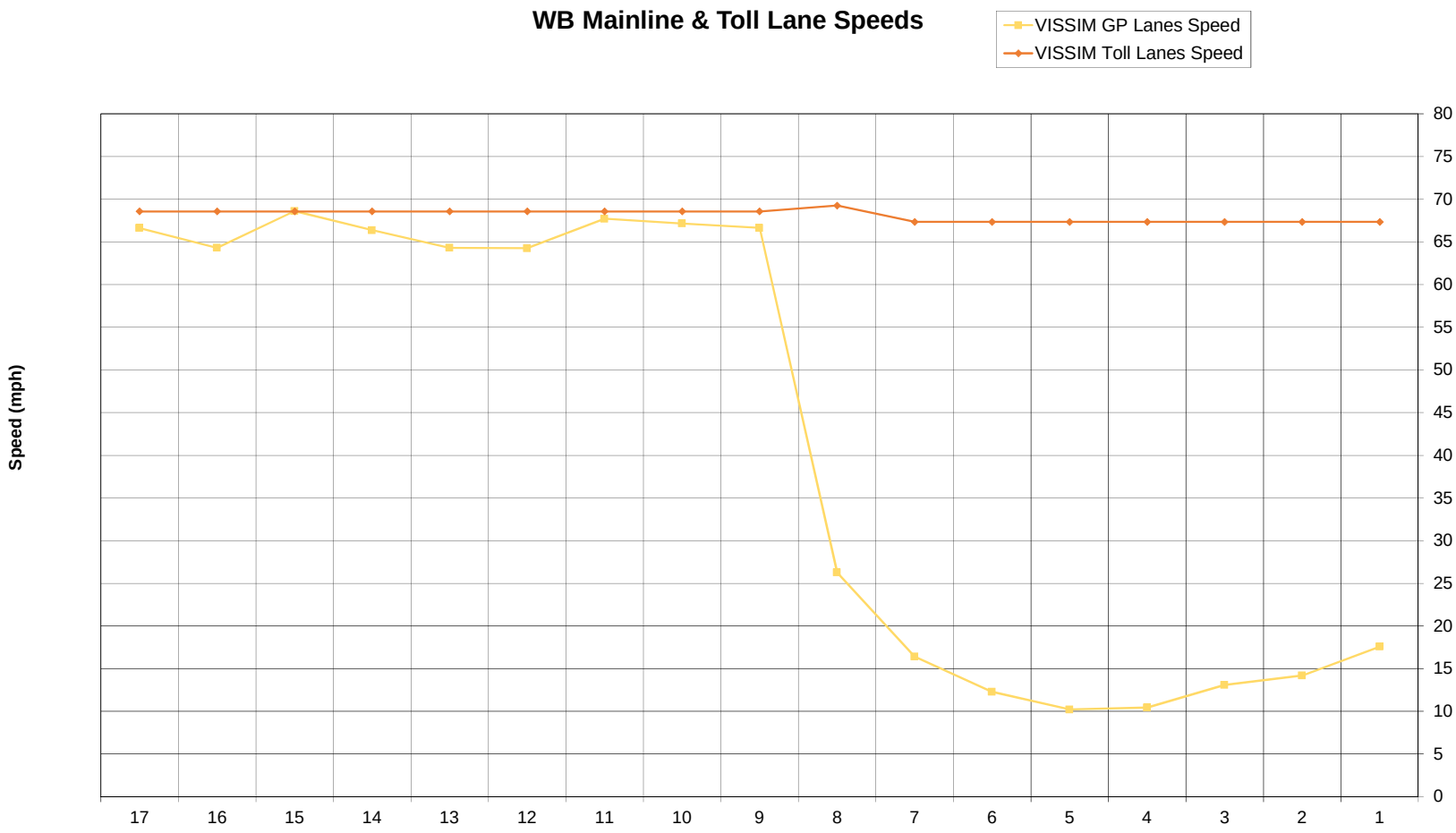
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



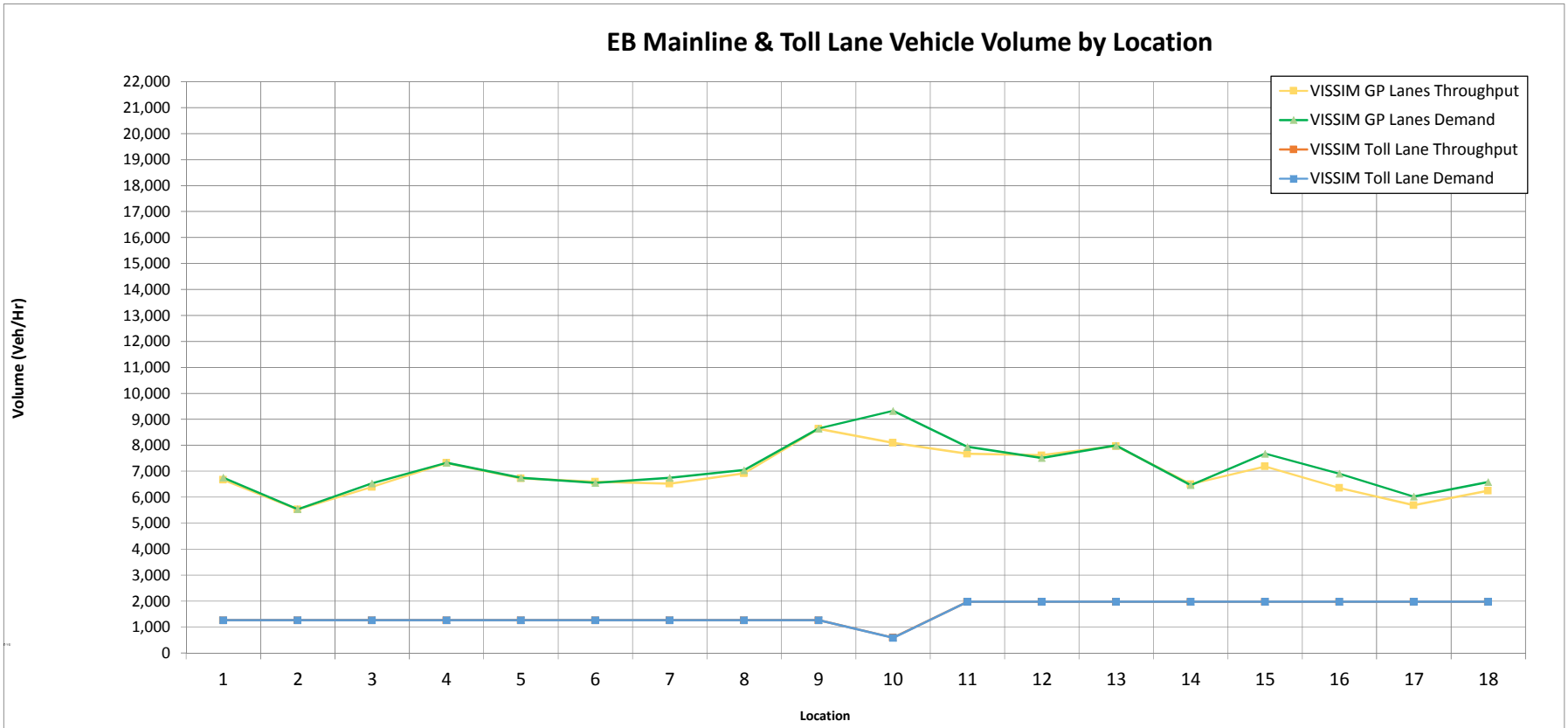
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		



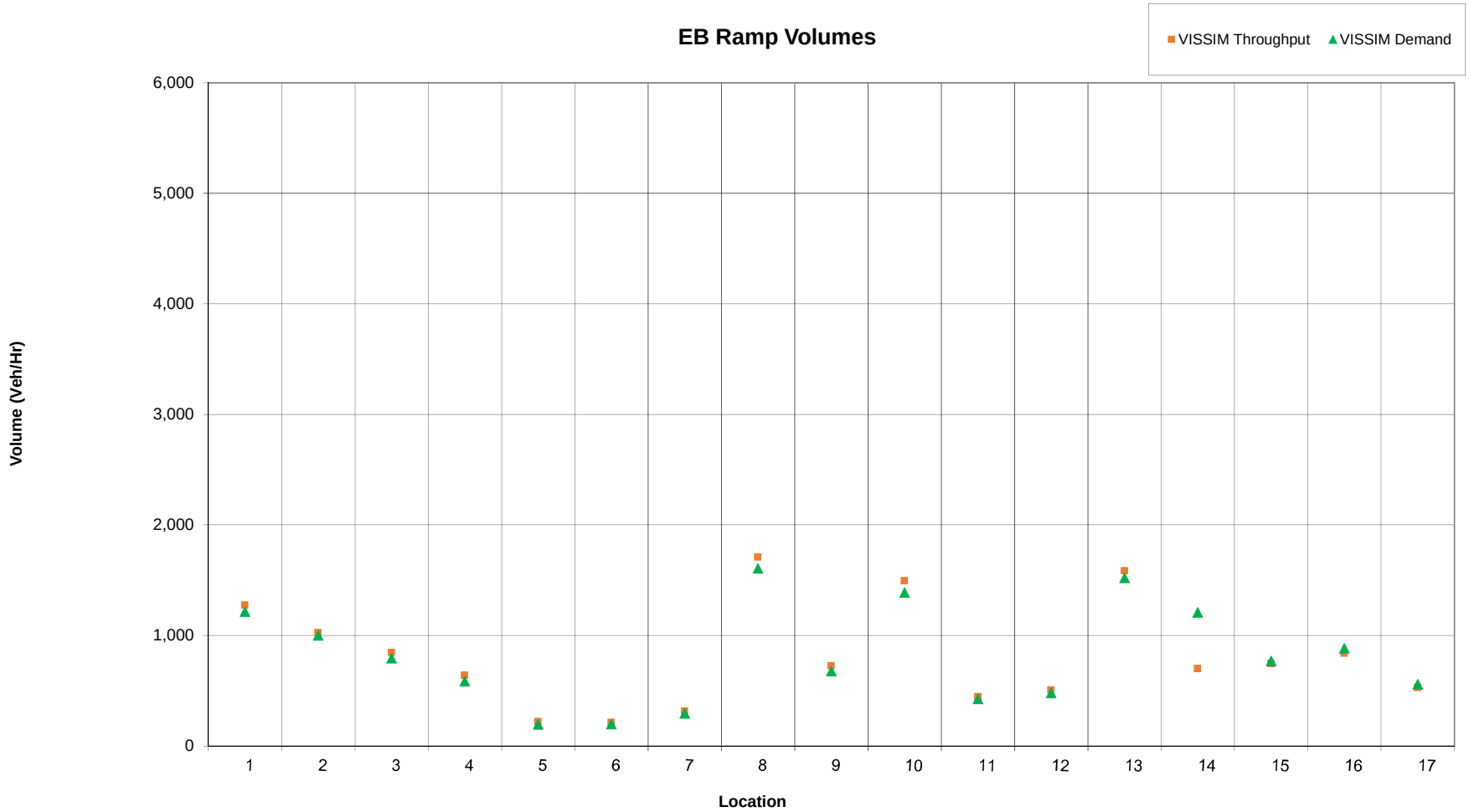
1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SR 241
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	Off Ramp to Weir Canyon Rd
3	Off Ramp to SR 71	9	Off Ramp to SR 241	15	On Ramp from NB Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to Gypsum Canyon Rd	16	On Ramp from SB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	On Ramp from NB Gypsum Canyon Rd		
6	On Ramp from Green River Rd	12	On Ramp from SB Gypsum Canyon Rd		



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		

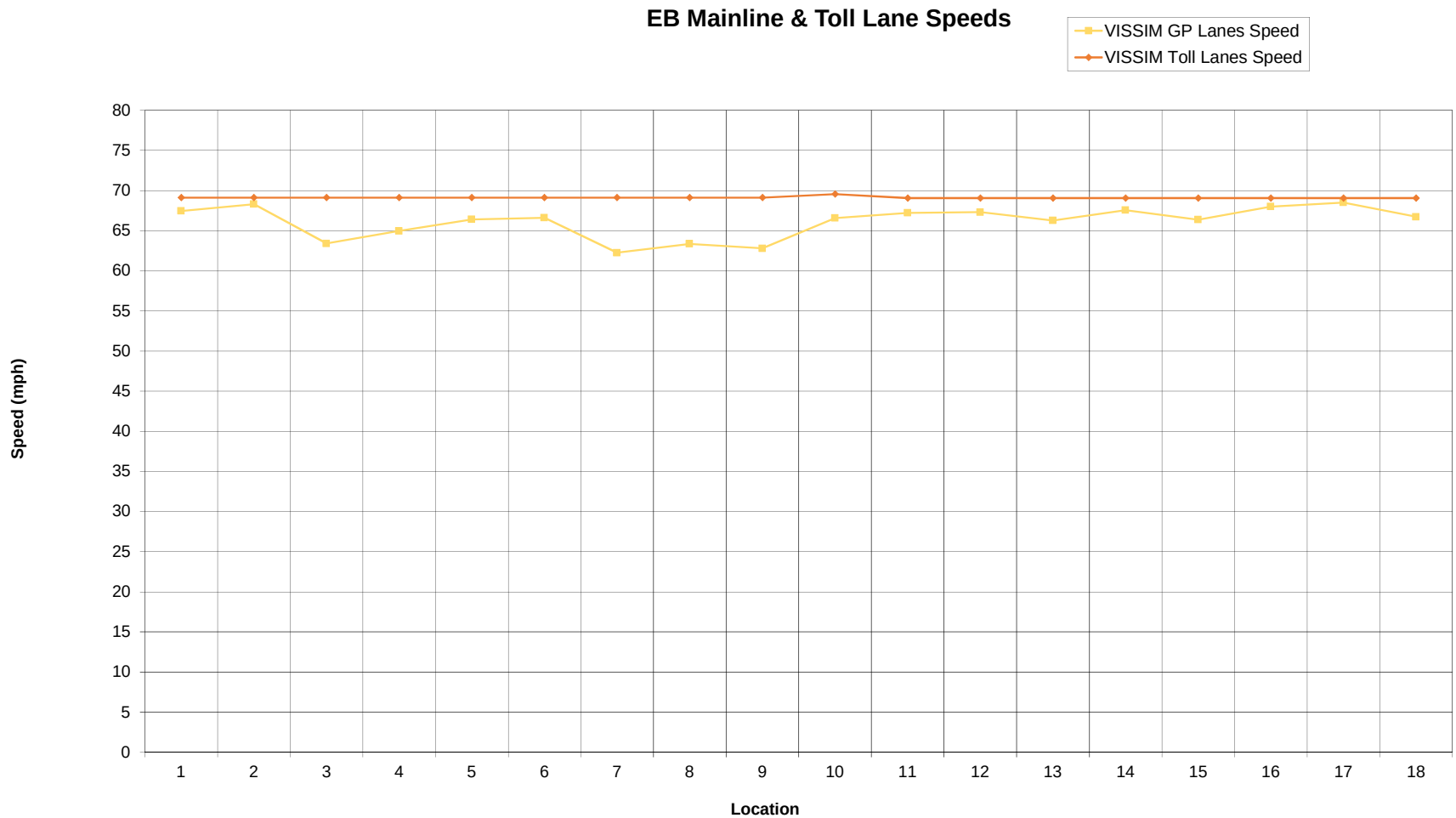


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

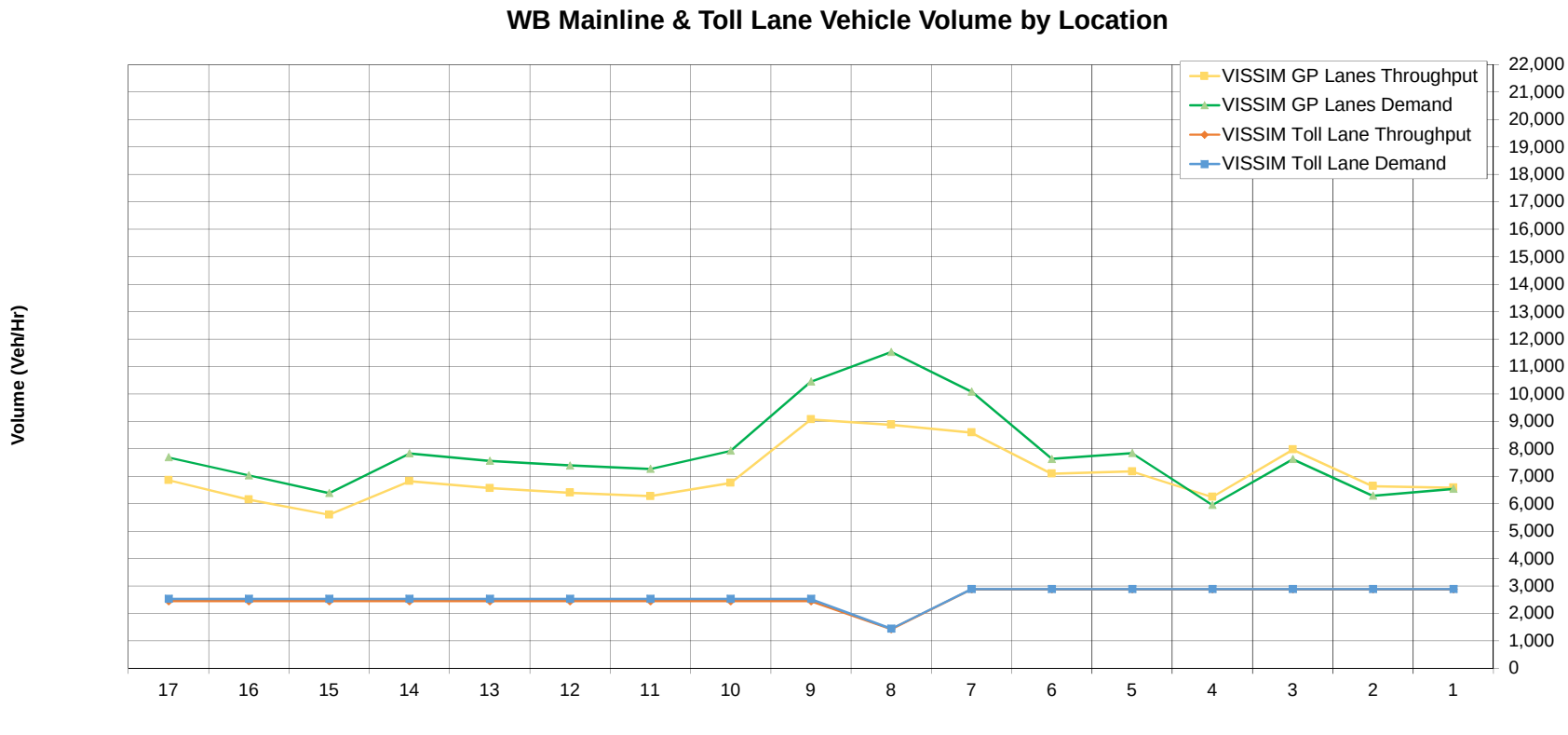


1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 NB
2	On Ramp from SB Weir Canyon	8	On Ramp from NB SR 241 GP	14	On Ramp from SR 71 NB
3	On Ramp from NB Weir Canyon	9	On Ramp from HOT Exit (east of SR 241)	15	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	10	Off Ramp to HOT Entrance (west of Green River Rd)	16	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	11	Off Ramp to Green River	17	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	12	On Ramp From Green River		

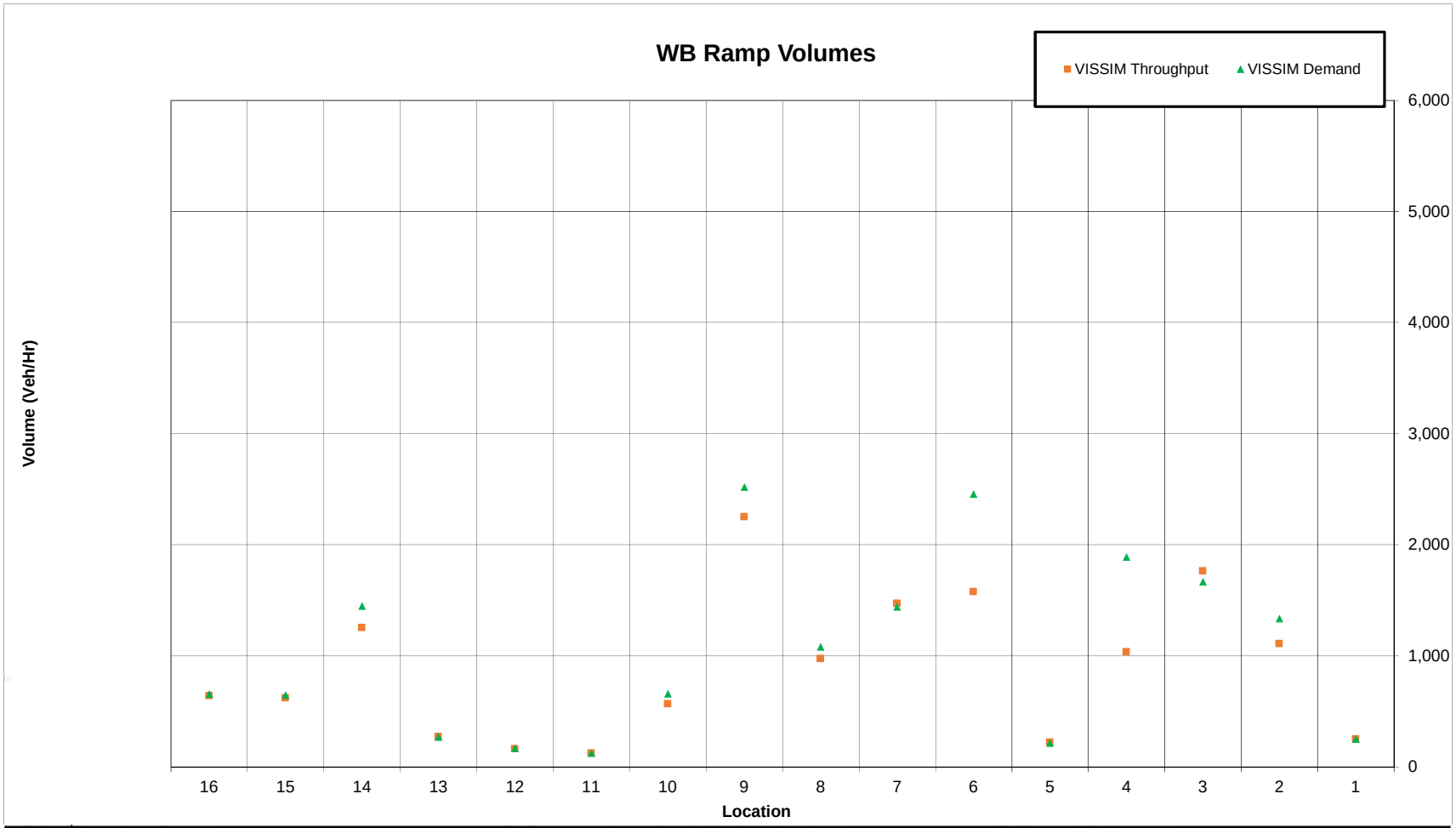
Charts 8-9 AM



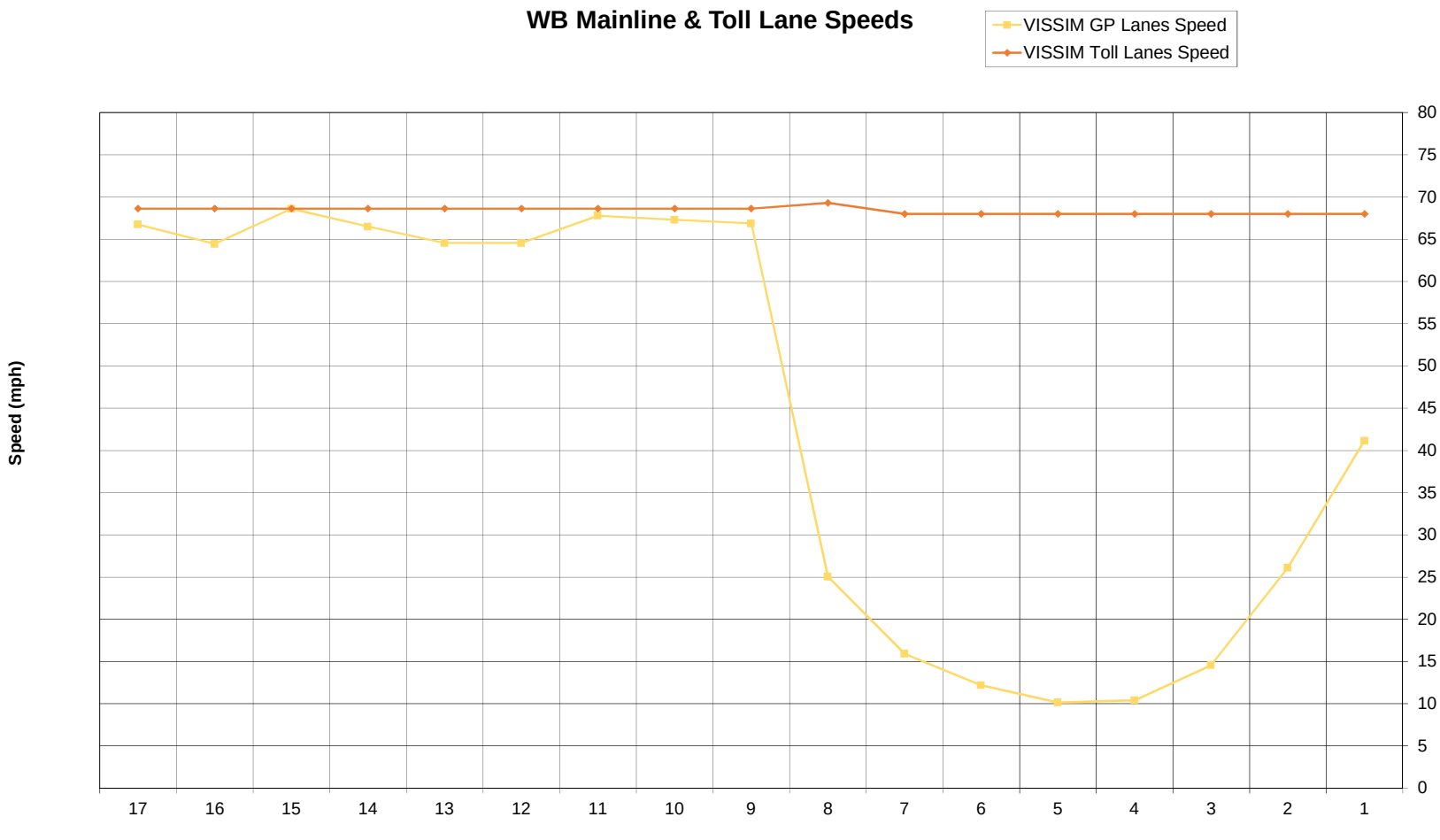
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 Green River On-Ramp to Start of HOV Weave	13 SB Gypsum Canyon On Ramp to SR 241 On Ramp
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 HOV Weave between Green River Rd and SR 241	14 SR 241 On Ramp to Weir Canyon Off Ramp
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 End of HOV Weave to SR 241 Off-Ramp	15 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4 SR 71 Off-Ramp to SR 71 On-Ramp	10 SR 241 Off Ramp to Gypsum Canyon Off Ramp	16 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5 SR 71 On-Ramp to Green River Off-Ramp	11 Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17 SB Weir Canyon On-Ramp to End of study area
6 Green River Off-Ramp to Green River On-Ramp	12 NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp	



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SR 241
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	Off Ramp to Weir Canyon Rd
3	Off Ramp to SR 71	9	Off Ramp to SR 241	15	On Ramp from NB Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to Gypsum Canyon Rd	16	On Ramp from SB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	On Ramp from NB Gypsum Canyon Rd		
6	On Ramp from Green River Rd	12	On Ramp from SB Gypsum Canyon Rd		



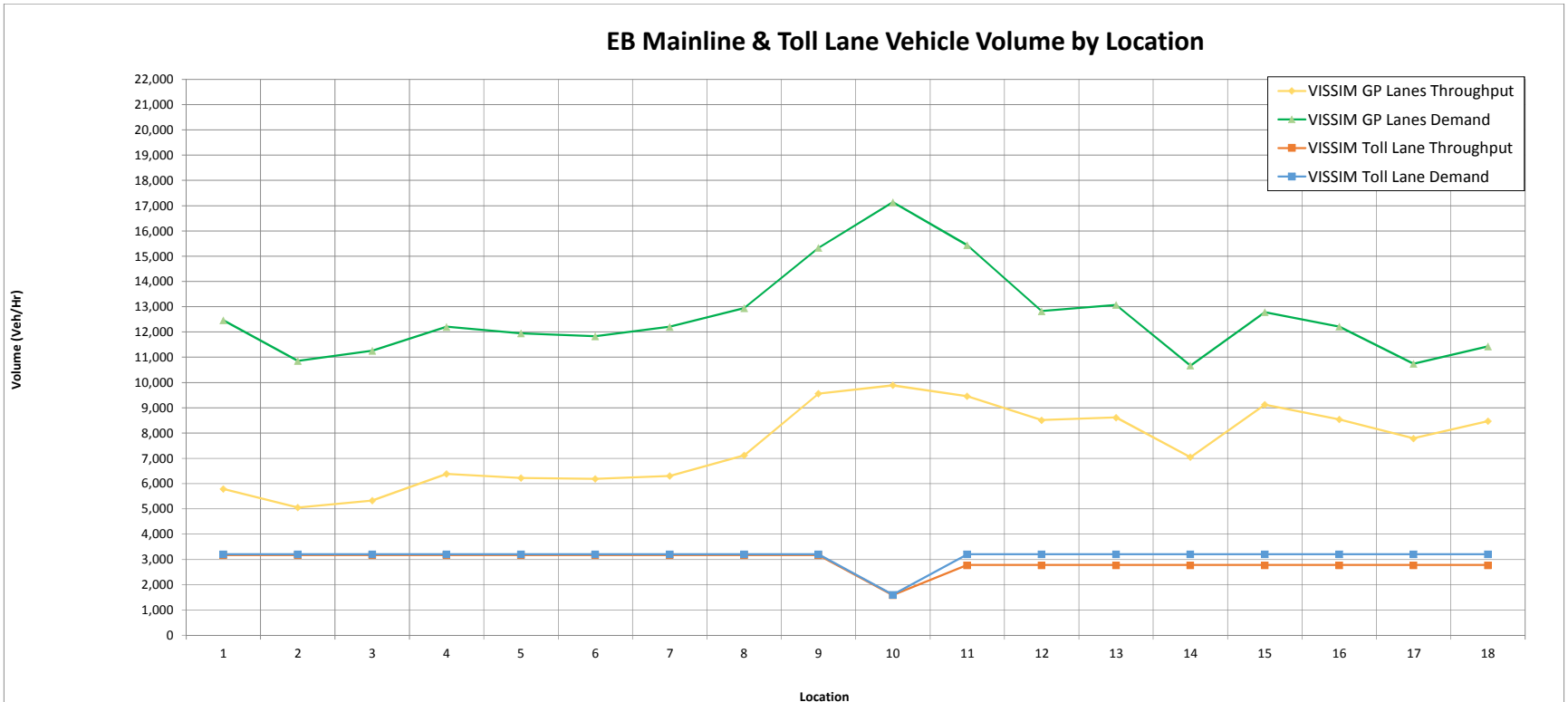
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		

VISSIM Model Summary - 2017 No Build - PM Peak Period
Network Summary Statistics

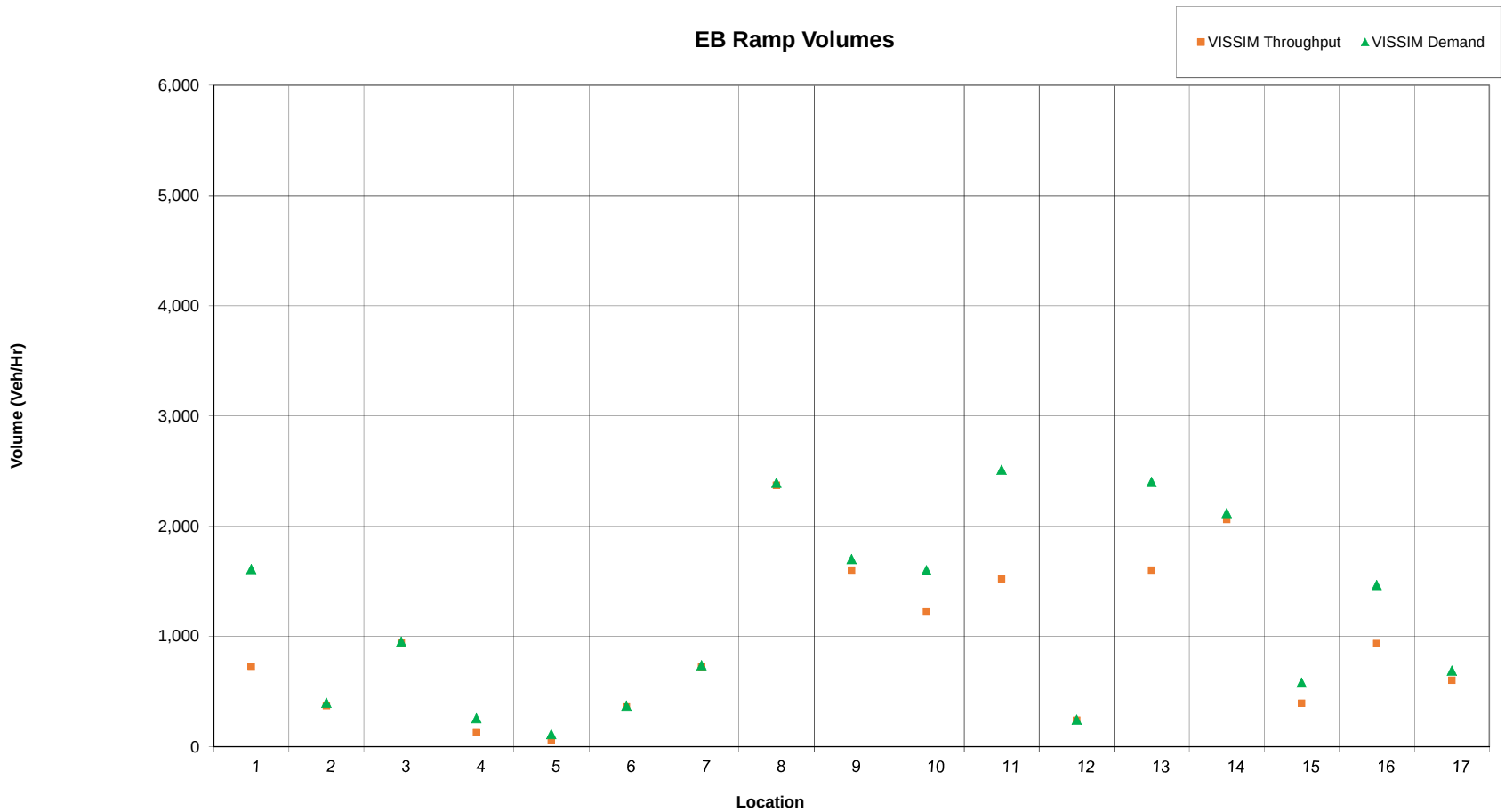
Parameter			2017 No Project		Difference
Total Vehicle Demand (4 Hr)			141,937		
Total number of vehicles that did not reach their desitination			20,812		
Totla number of vehicles that have reached their destination			121,125		
Total vehicle-miles traveled (VMT)			1,014,001		
Total travel time, All Vehicle Types (VHT)			26,278		
Average speed [mph], All Vehicle Types			38.6		
Average delay time per vehicle [mins], All Vehicle Types			5.27		

VISSIM Model Summary - 2017 No Build - PM Peak Period
Network Summary Statistics

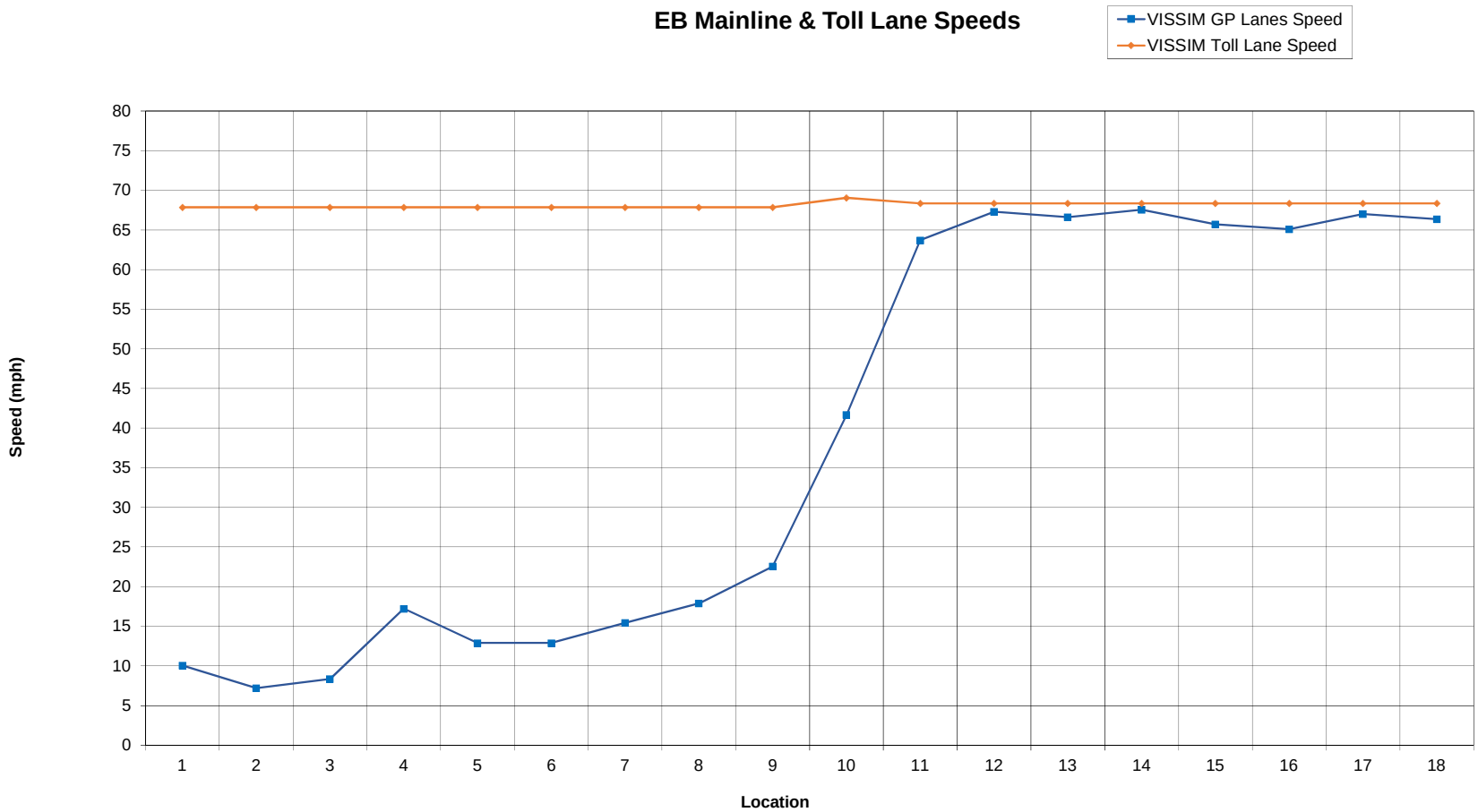
#	Origin	#	Destination	p Ke	Hide Travel Time Segments Seg 1	Seg 2	Seg 3	2017 PM No Build VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	1	1002	1003	1005	28.3	29.6	29.4	27.6
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	2	1002	1003	2005	28.3	29.5	29.4	27.6
		5	SR 241 SB south of SR 91	3	1001			18.4	19.1	19.0	17.7
		7	SR 71 NB north of SR 91	4	1002	1003	1004	30.6	31.9	31.8	30.0
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	5	2002	1003	1005	10.4	10.5	10.5	10.5
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	6	2002	2003	2005	8.4	8.4	8.4	8.4
		7	SR 71 NB north of SR 91	7	2002	1003	1004	12.7	12.8	12.9	12.9
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8	1011	1012	1014	8.5	8.5	8.5	8.5
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9	1011	1012	2014	8.5	8.5	8.5	8.4
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10	1011	1012	1013	10.9	11.0	10.9	10.9
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	11	1011	1012	2013	n/a	n/a	n/a	n/a
		7	SR 71 NB north of SR 91	12	1010			5.0	5.0	5.0	5.0
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	13	2011	1012	1014	8.5	8.5	8.5	8.5
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	14	2011	2012	2014	8.4	8.4	8.4	8.4
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15	2011	1012	1013	10.9	10.9	10.9	10.9
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	16	2011	2012	2013	n/a	n/a	n/a	n/a
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	17	1006			7.2	7.2	7.2	7.2
		3	SR 91 EB GP Lanes east of Serfas Club Rd	18	1007	1003	1005	13.4	13.5	13.6	13.6
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19	1007	1003	2005	13.4	13.4	13.5	13.5
		7	SR 71 NB north of SR 91	20	1007	1003	1004	15.7	15.8	15.9	15.9
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	21	2007	1003	1005	n/a	n/a	n/a	n/a
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	22	2007	2003	2005	n/a	n/a	n/a	n/a
		7	SR 71 NB north of SR 91	23	2007	1003	1004	n/a	n/a	n/a	n/a
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	24	1009	1012	1014	10.2	10.2	10.1	9.9
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	25	1009	1012	2014	10.2	10.2	10.0	9.9
		3	SR 91 EB GP Lanes east of Serfas Club Rd	26	1008			6.4	6.7	6.2	5.8
		5	SR 241 SB south of SR 91 (Via GP Ramp)	27	1009	1012	1013	12.6	12.7	12.5	12.3
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	28	1009	1012	2013	n/a	n/a	n/a	n/a



1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

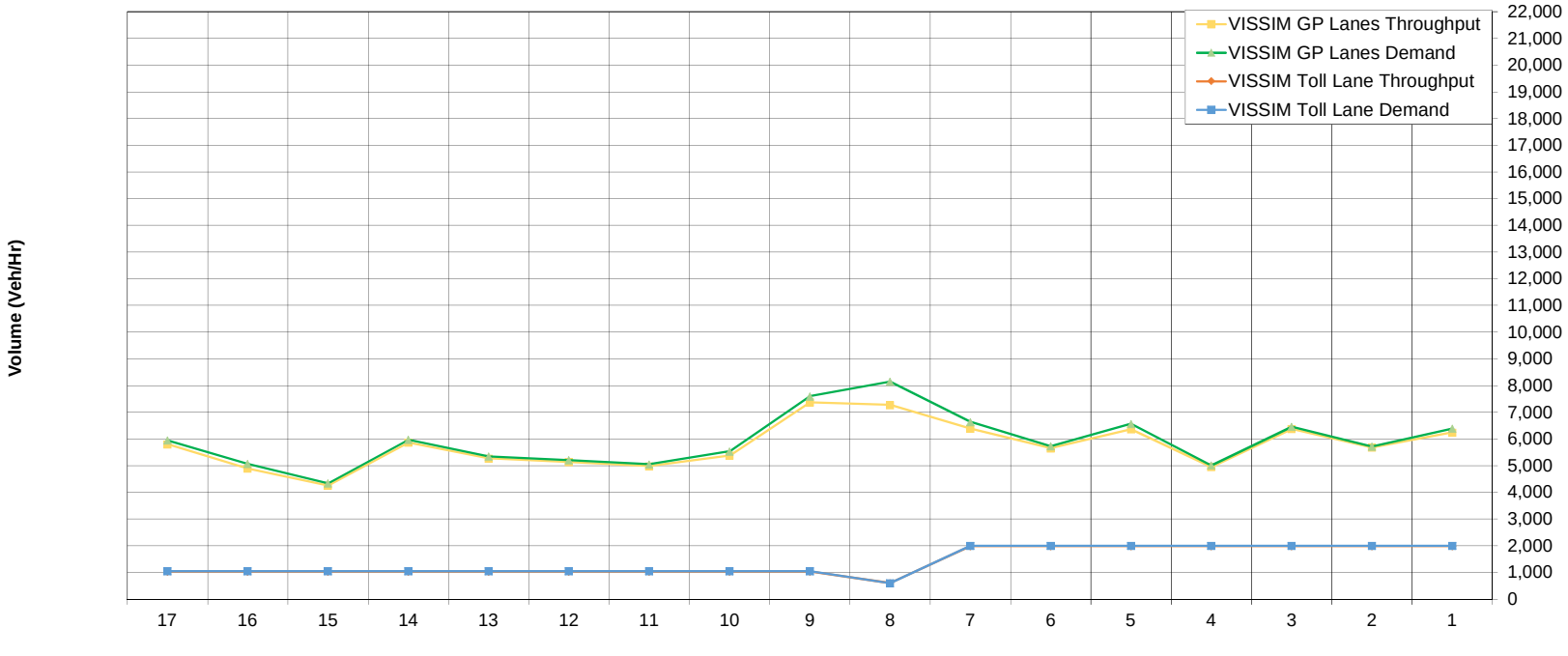


1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 NB
2	On Ramp from SB Weir Canyon	8	On Ramp from NB SR 241 GP	14	On Ramp from SR 71 NB
3	On Ramp from NB Weir Canyon	9	On Ramp from HOT Exit (east of SR 241)	15	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	10	Off Ramp to HOT Entrance (west of Green River Rd)	16	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	11	Off Ramp to Green River	17	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	12	On Ramp From Green River		

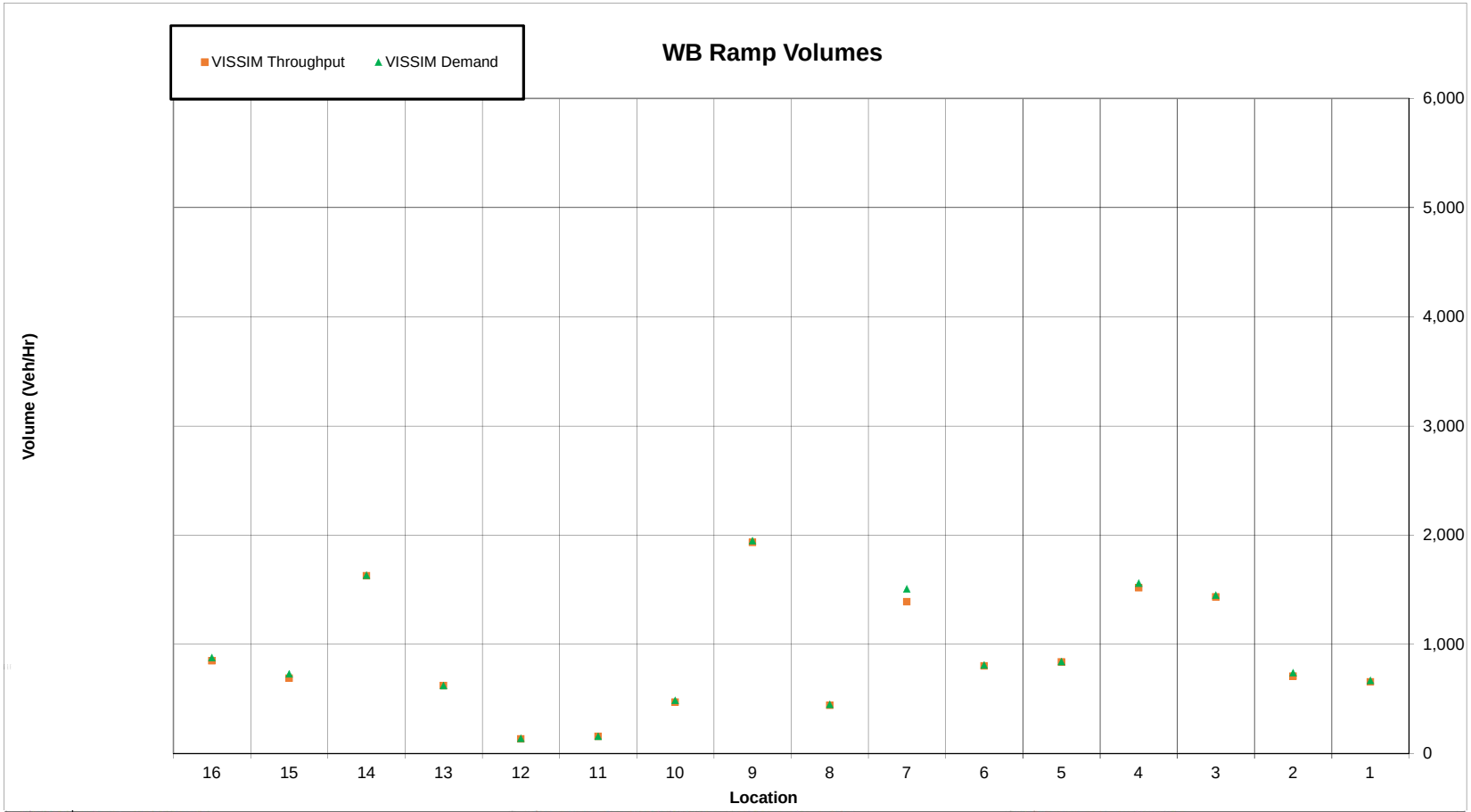


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

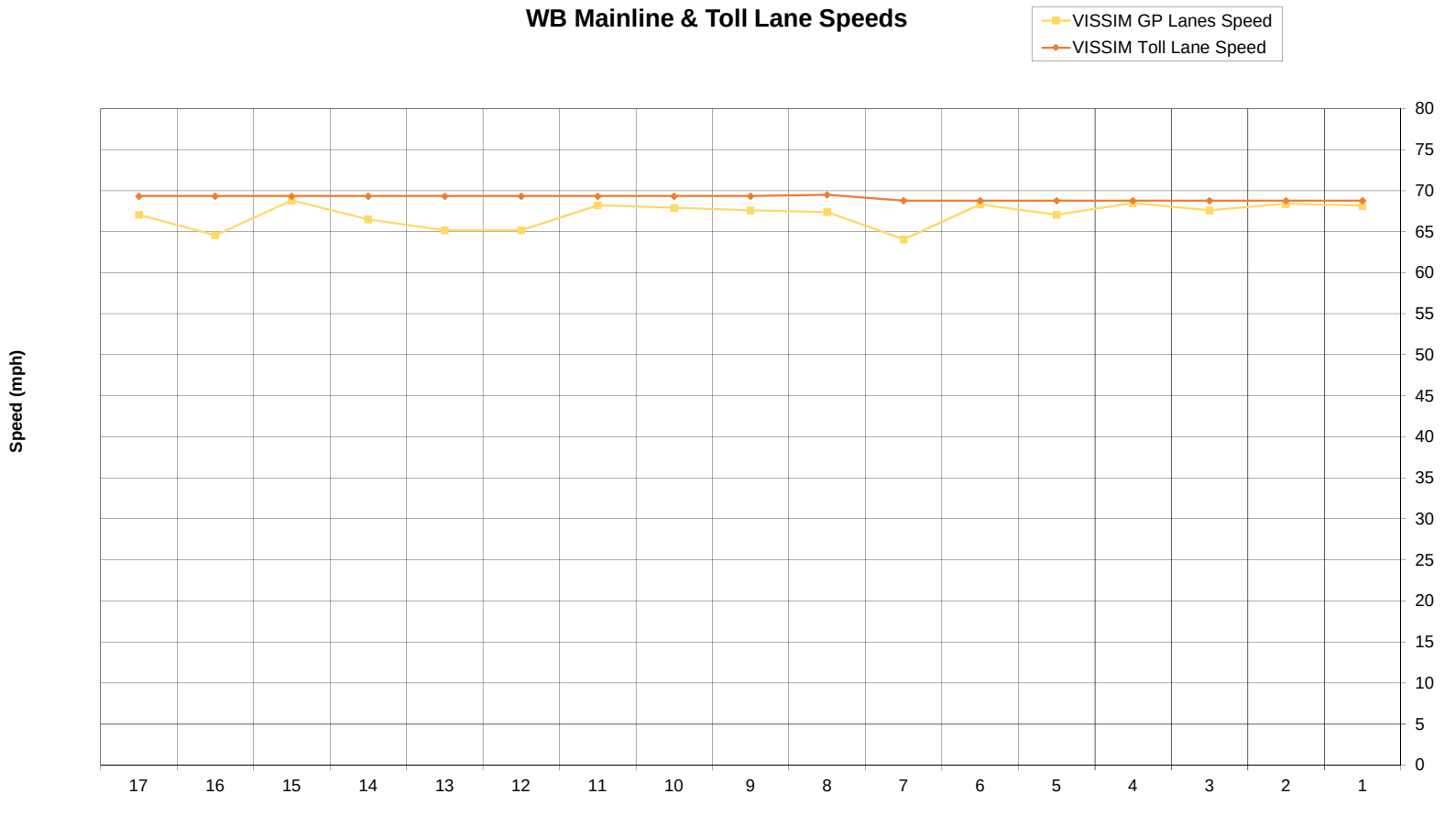
WB Mainline & Toll Lane Vehicle Volume by Location



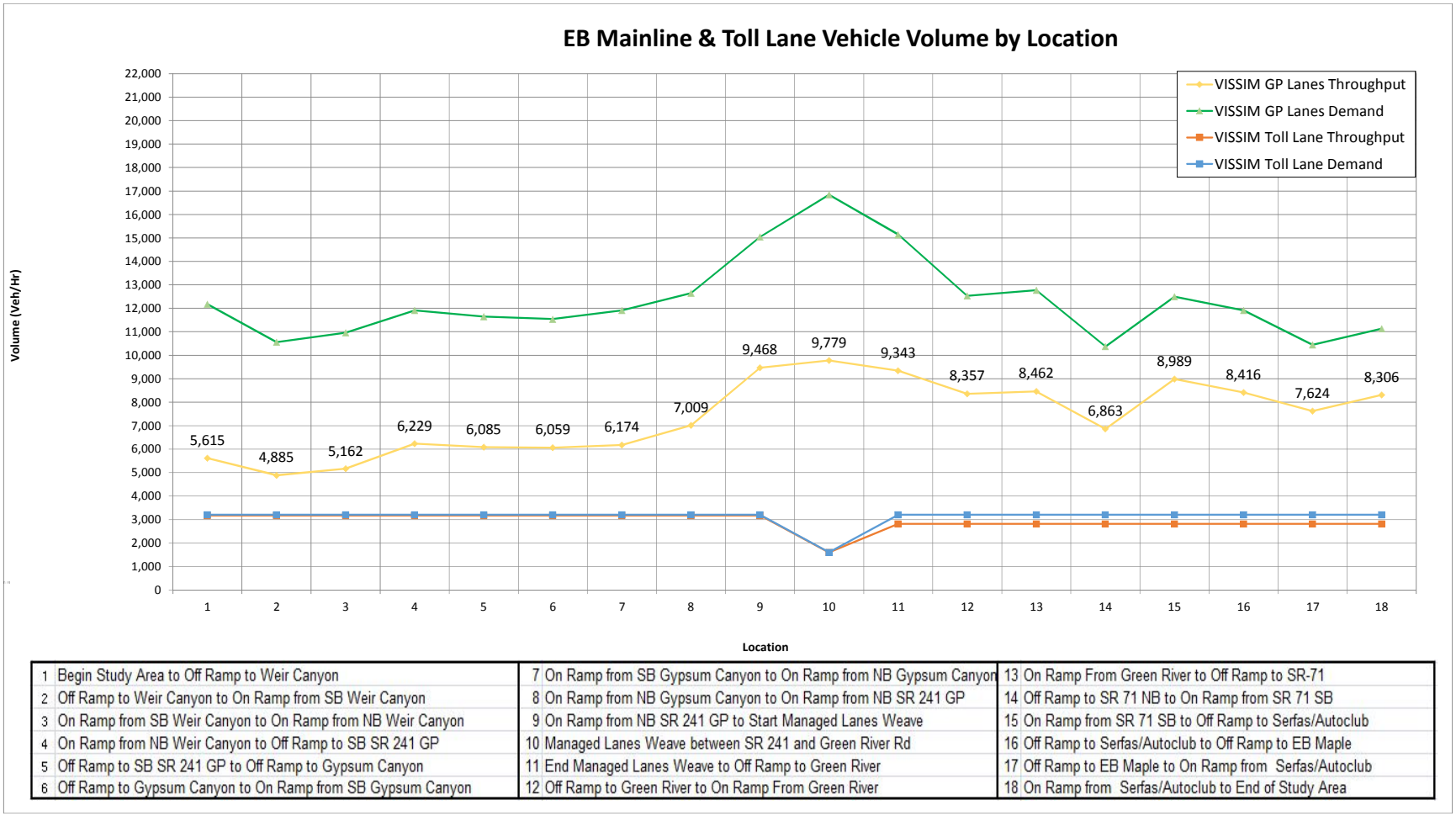
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 Green River On-Ramp to Start of HOV Weave	13 SB Gypsum Canyon On Ramp to SR 241 On Ramp
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 HOV Weave between Green River Rd and SR 241	14 SR 241 On Ramp to Weir Canyon Off Ramp
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 End of HOV Weave to SR 241 Off-Ramp	15 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4 SR 71 Off-Ramp to SR 71 On-Ramp	10 SR 241 Off Ramp to Gypsum Canyon Off Ramp	16 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5 SR 71 On-Ramp to Green River Off-Ramp	11 Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17 SB Weir Canyon On-Ramp to End of study area
6 Green River Off-Ramp to Green River On-Ramp	12 NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp	



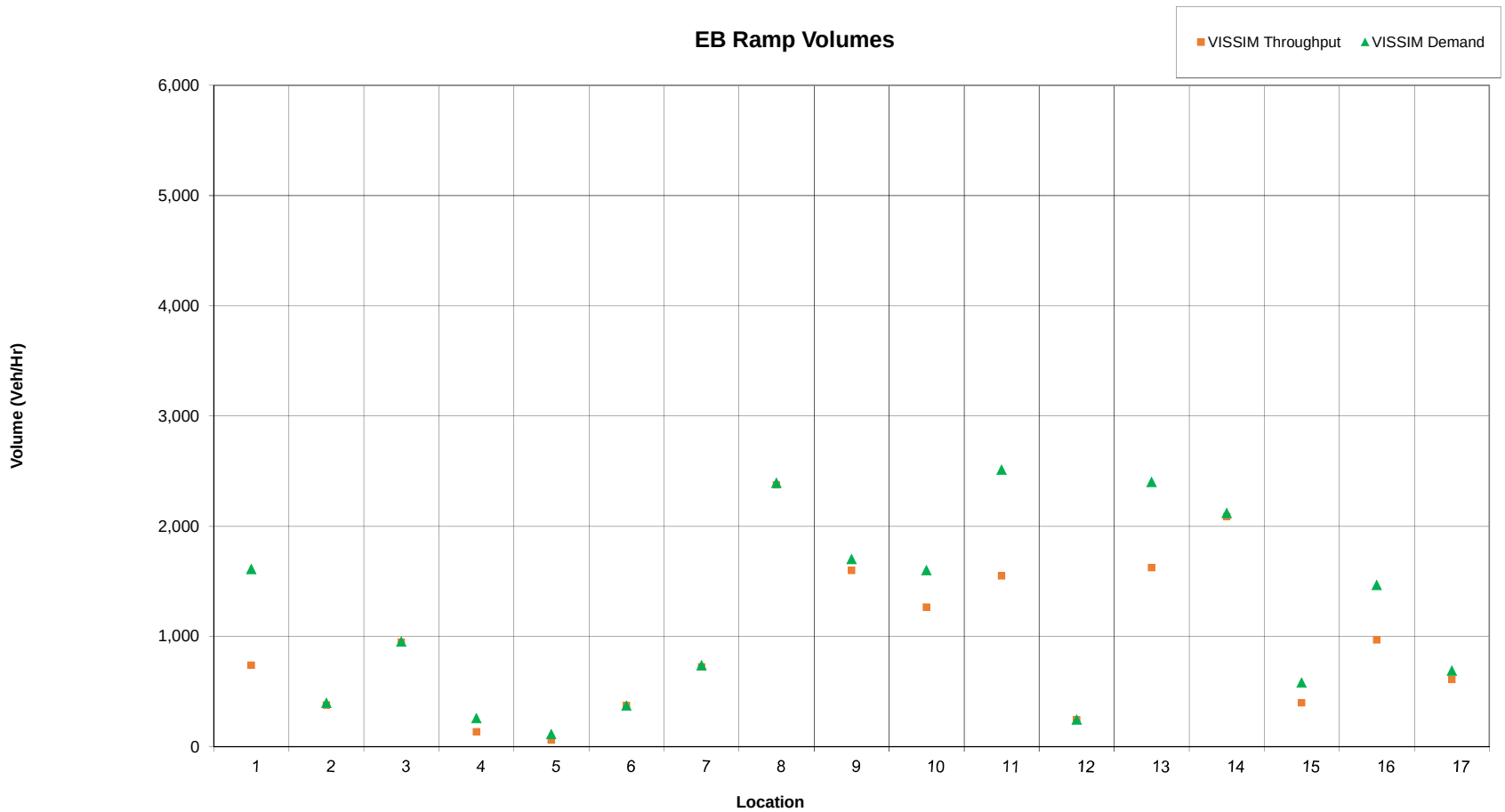
1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SR 241
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	Off Ramp to Weir Canyon Rd
3	Off Ramp to SR 71	9	Off Ramp to SR 241	15	On Ramp from NB Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to Gypsum Canyon Rd	16	On Ramp from SB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	On Ramp from NB Gypsum Canyon Rd		
6	On Ramp from Green River Rd	12	On Ramp from SB Gypsum Canyon Rd		



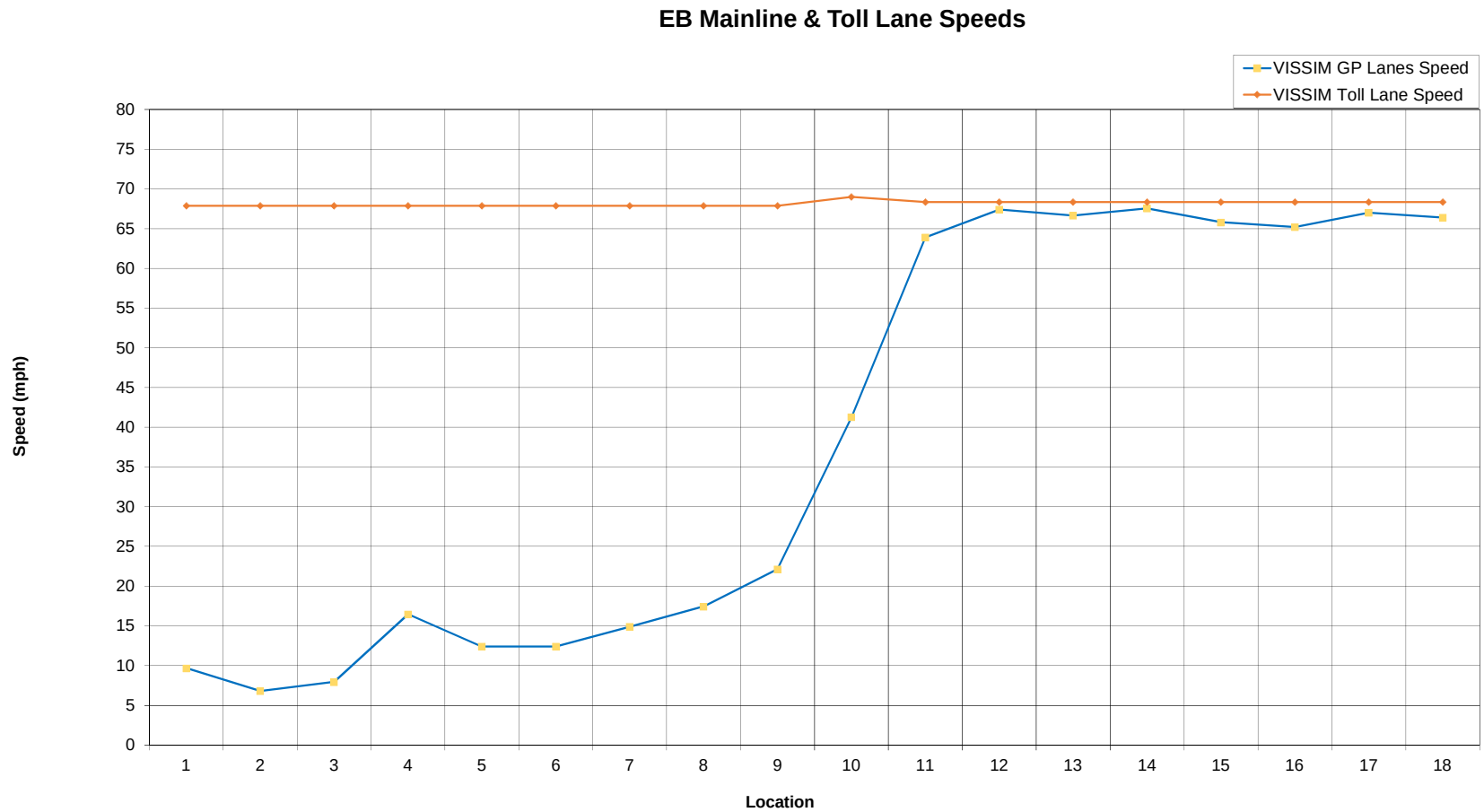
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		



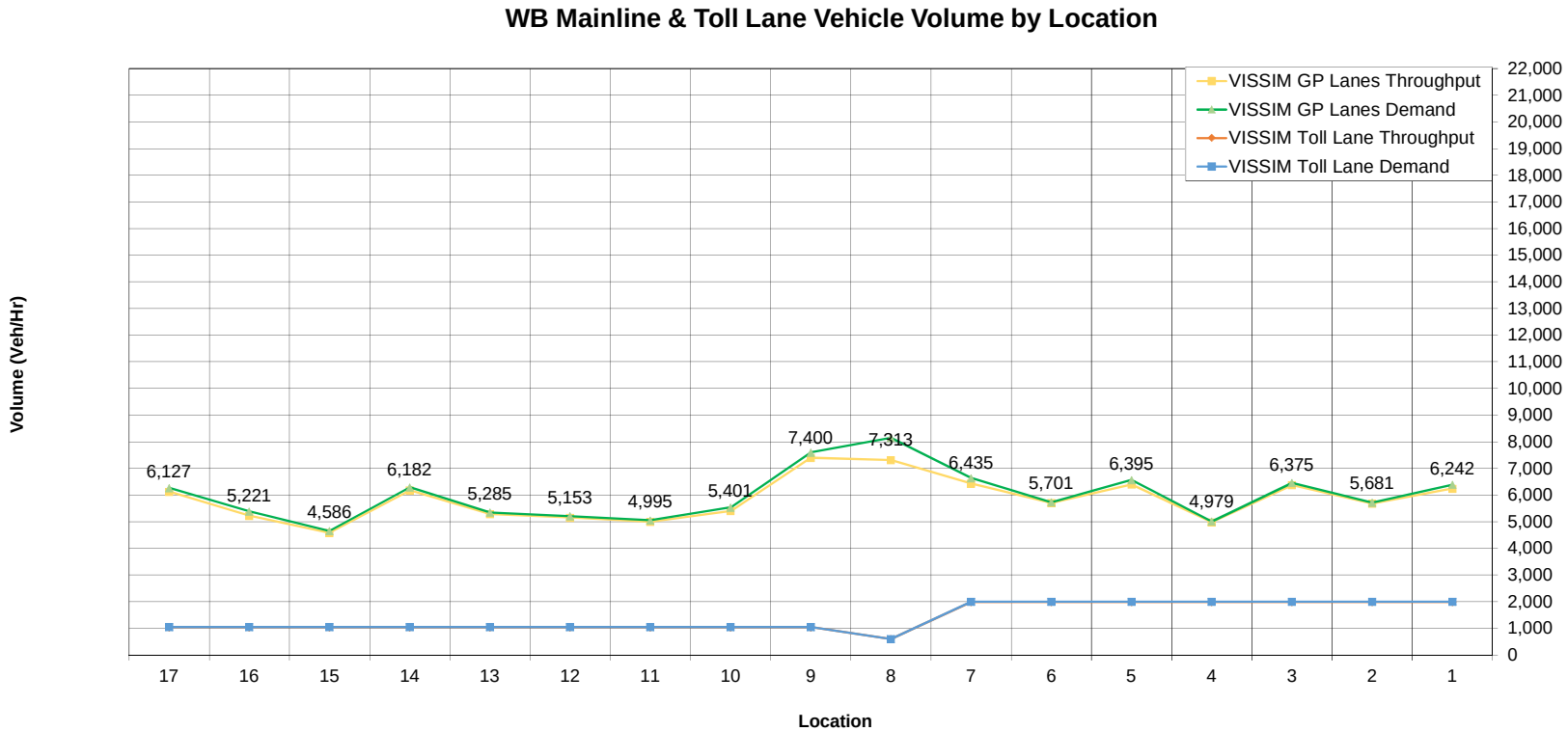
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



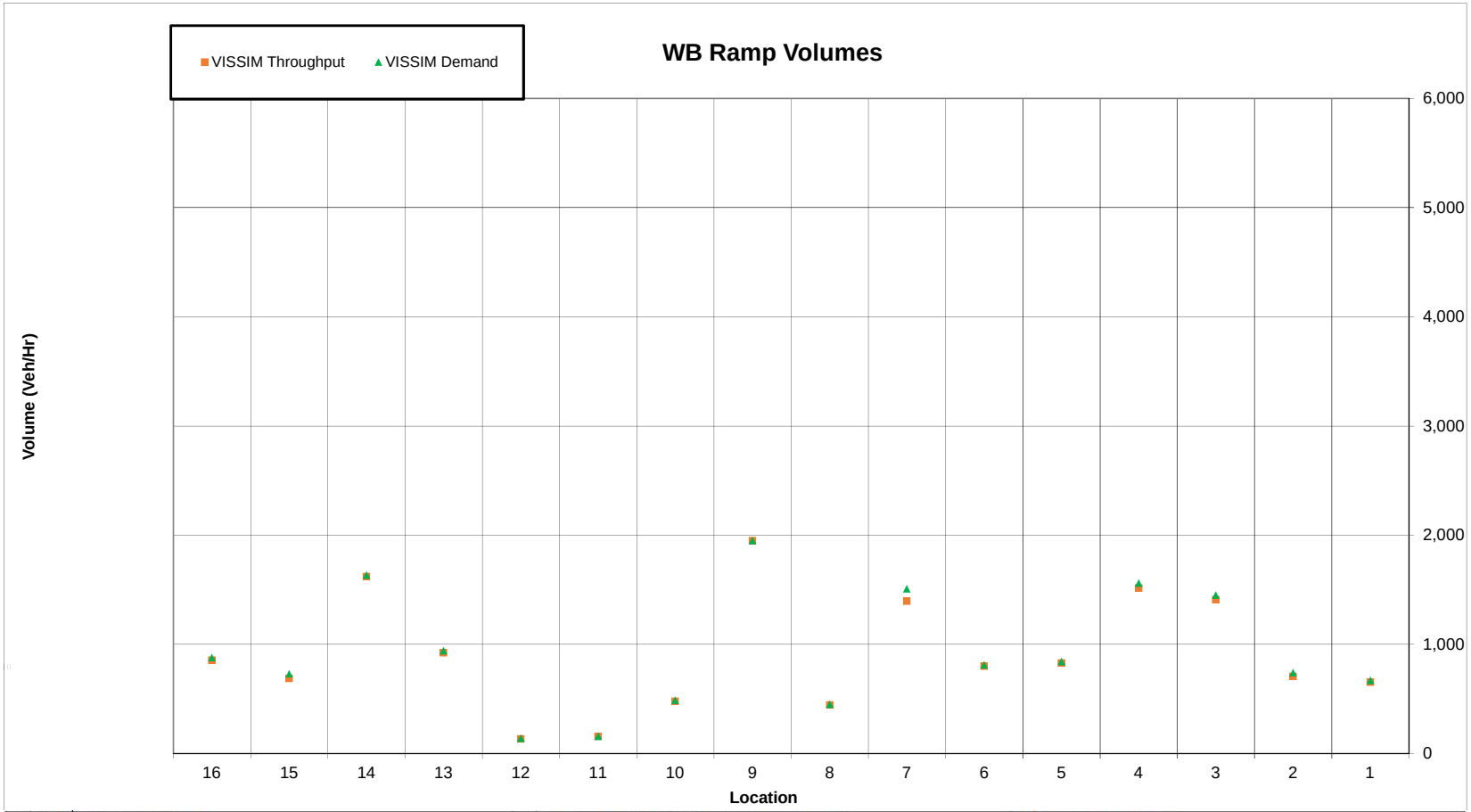
1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 NB
2	On Ramp from SB Weir Canyon	8	On Ramp from NB SR 241 GP	14	On Ramp from SR 71 NB
3	On Ramp from NB Weir Canyon	9	On Ramp from HOT Exit (east of SR 241)	15	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	10	Off Ramp to HOT Entrance (west of Green River Rd)	16	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	11	Off Ramp to Green River	17	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	12	On Ramp From Green River		



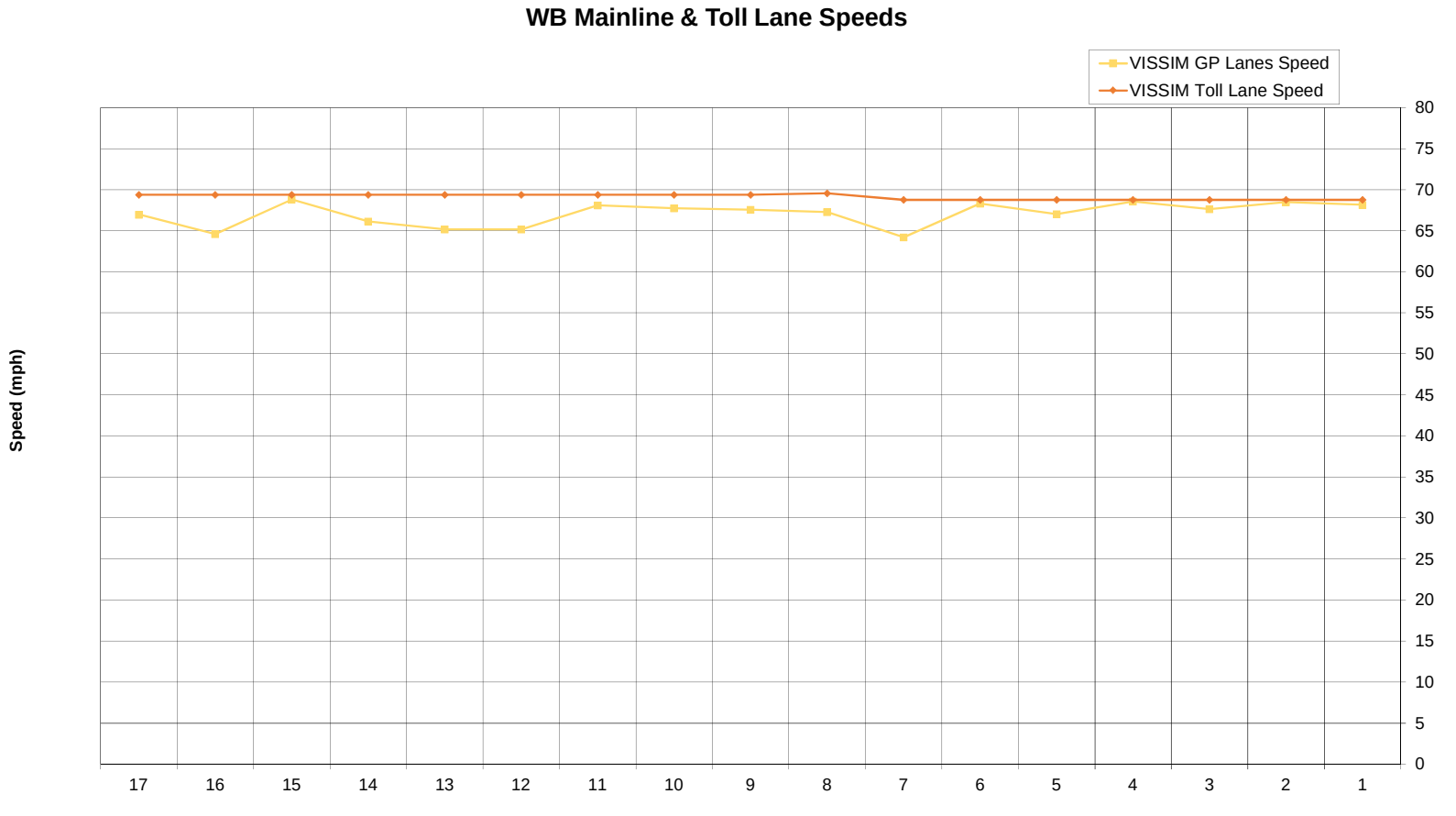
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



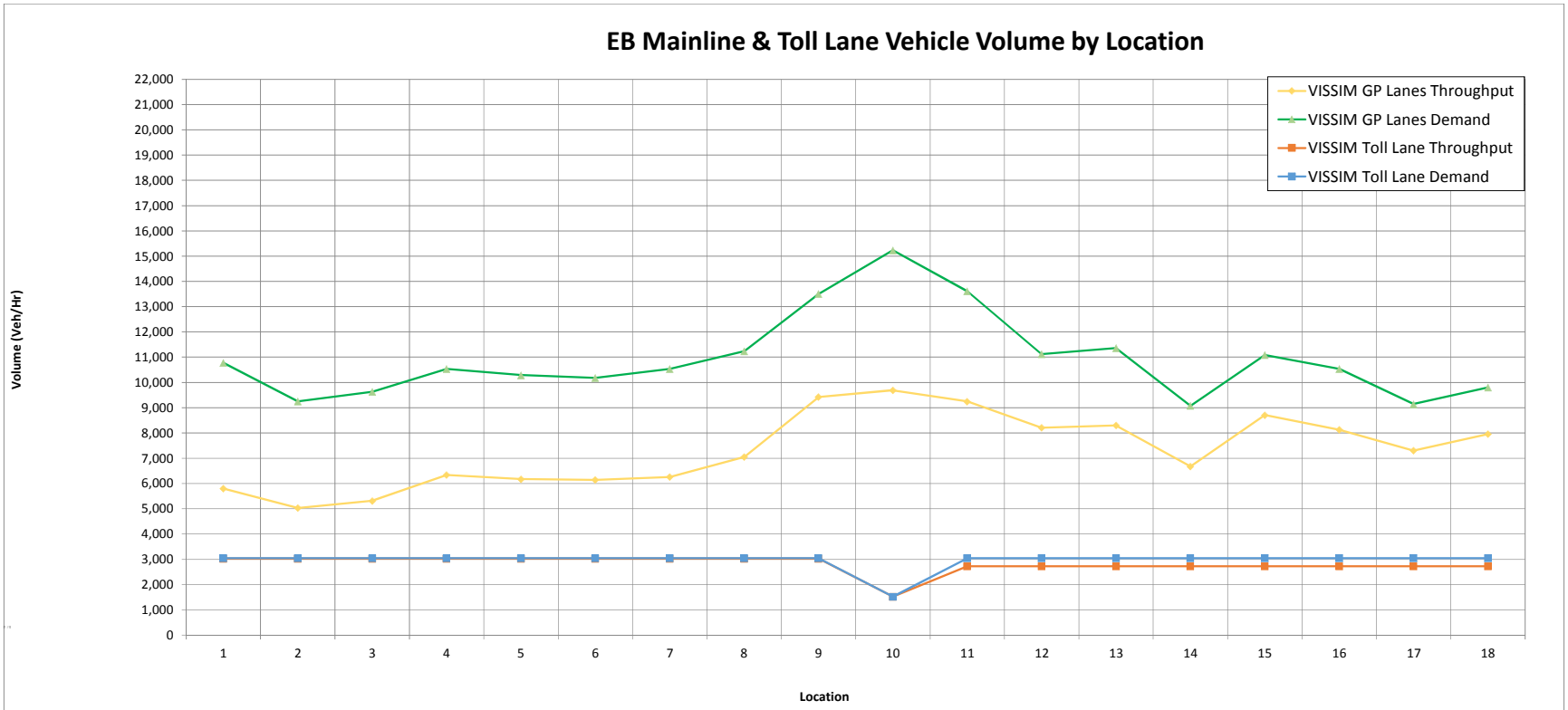
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		



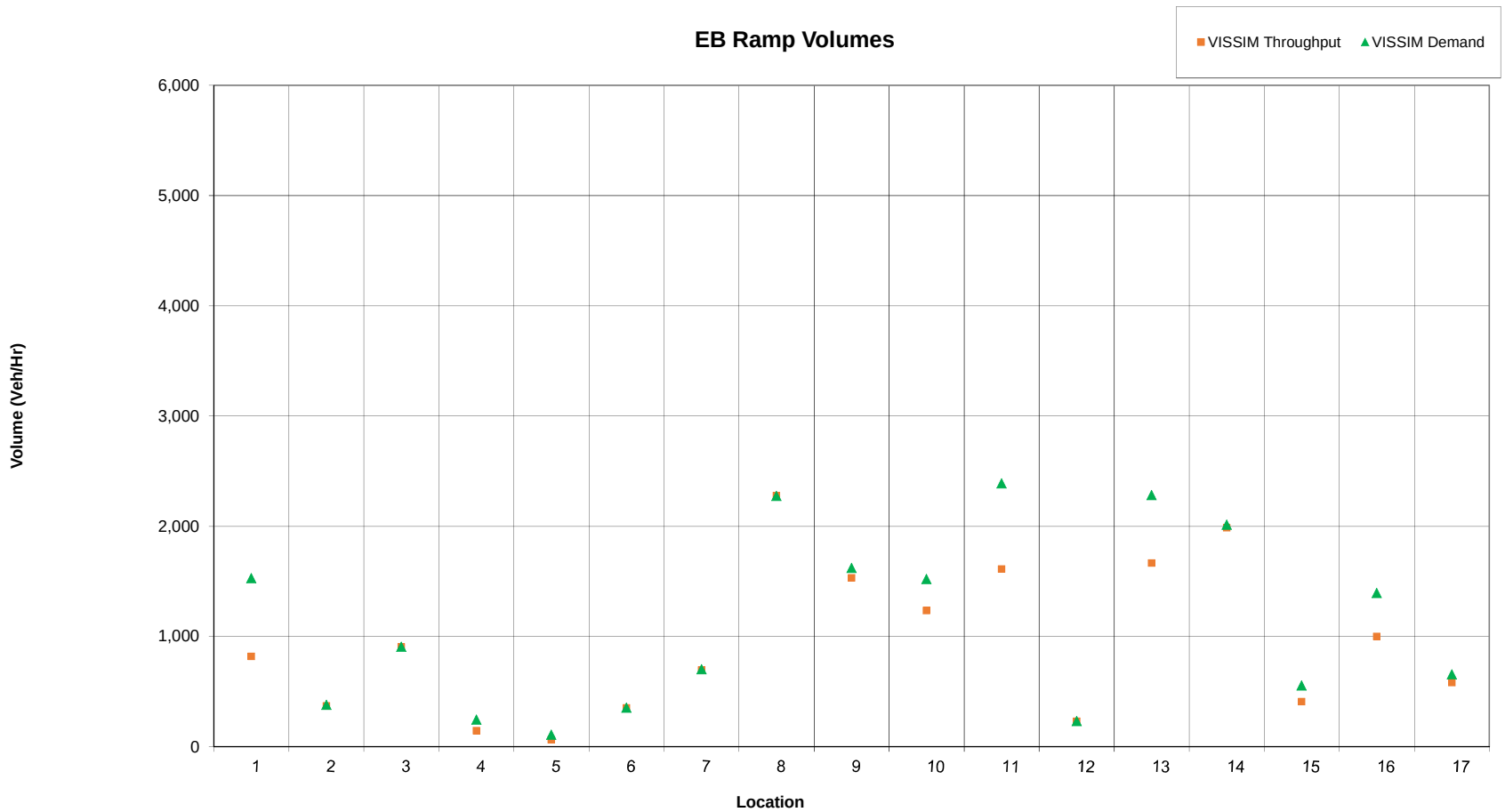
1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SR 241
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	Off Ramp to Weir Canyon Rd
3	Off Ramp to SR 71	9	Off Ramp to SR 241	15	On Ramp from NB Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to Gypsum Canyon Rd	16	On Ramp from SB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	On Ramp from NB Gypsum Canyon Rd		
6	On Ramp from Green River Rd	12	On Ramp from SB Gypsum Canyon Rd		



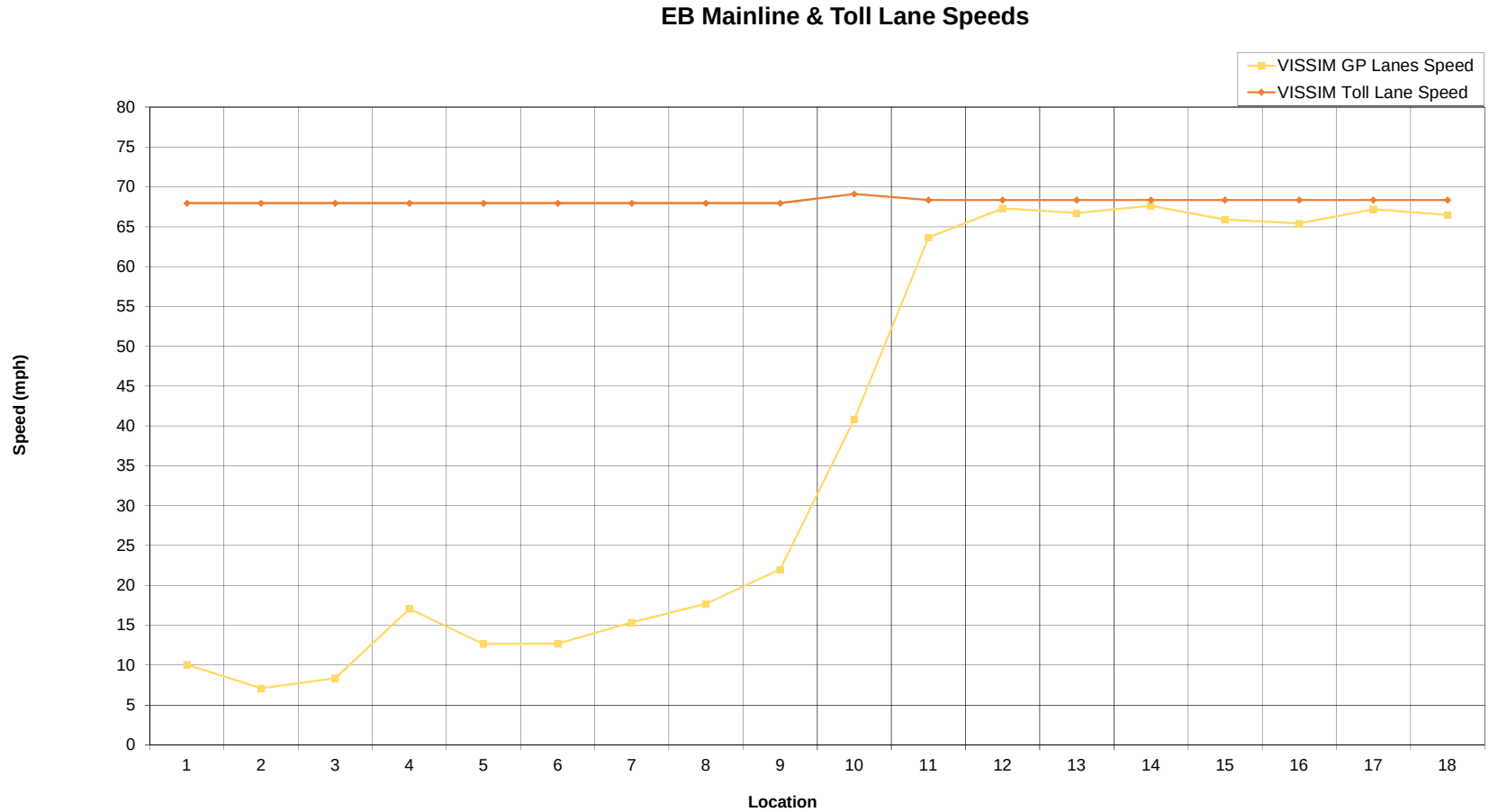
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		



1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

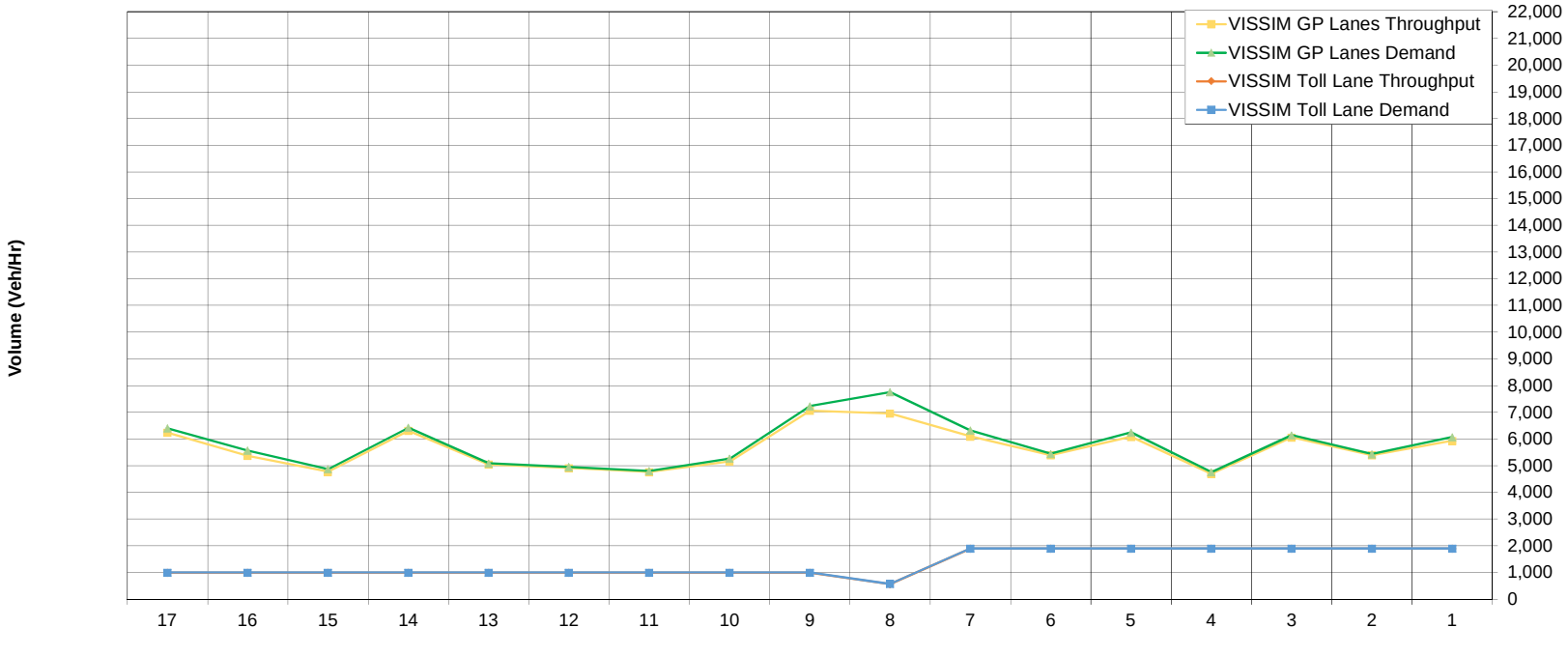


1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 NB
2	On Ramp from SB Weir Canyon	8	On Ramp from NB SR 241 GP	14	On Ramp from SR 71 NB
3	On Ramp from NB Weir Canyon	9	On Ramp from HOT Exit (east of SR 241)	15	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	10	Off Ramp to HOT Entrance (west of Green River Rd)	16	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	11	Off Ramp to Green River	17	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	12	On Ramp From Green River		

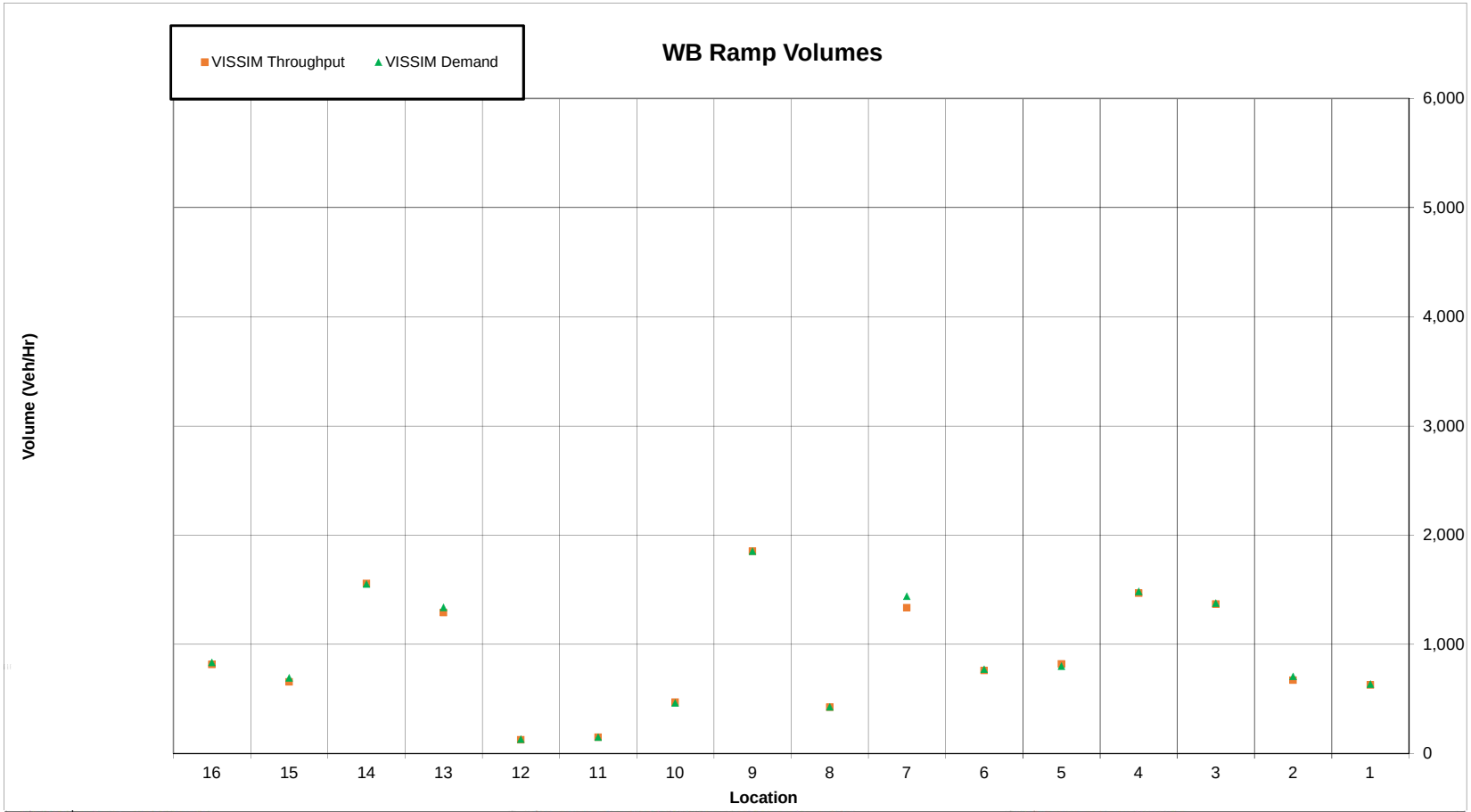


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

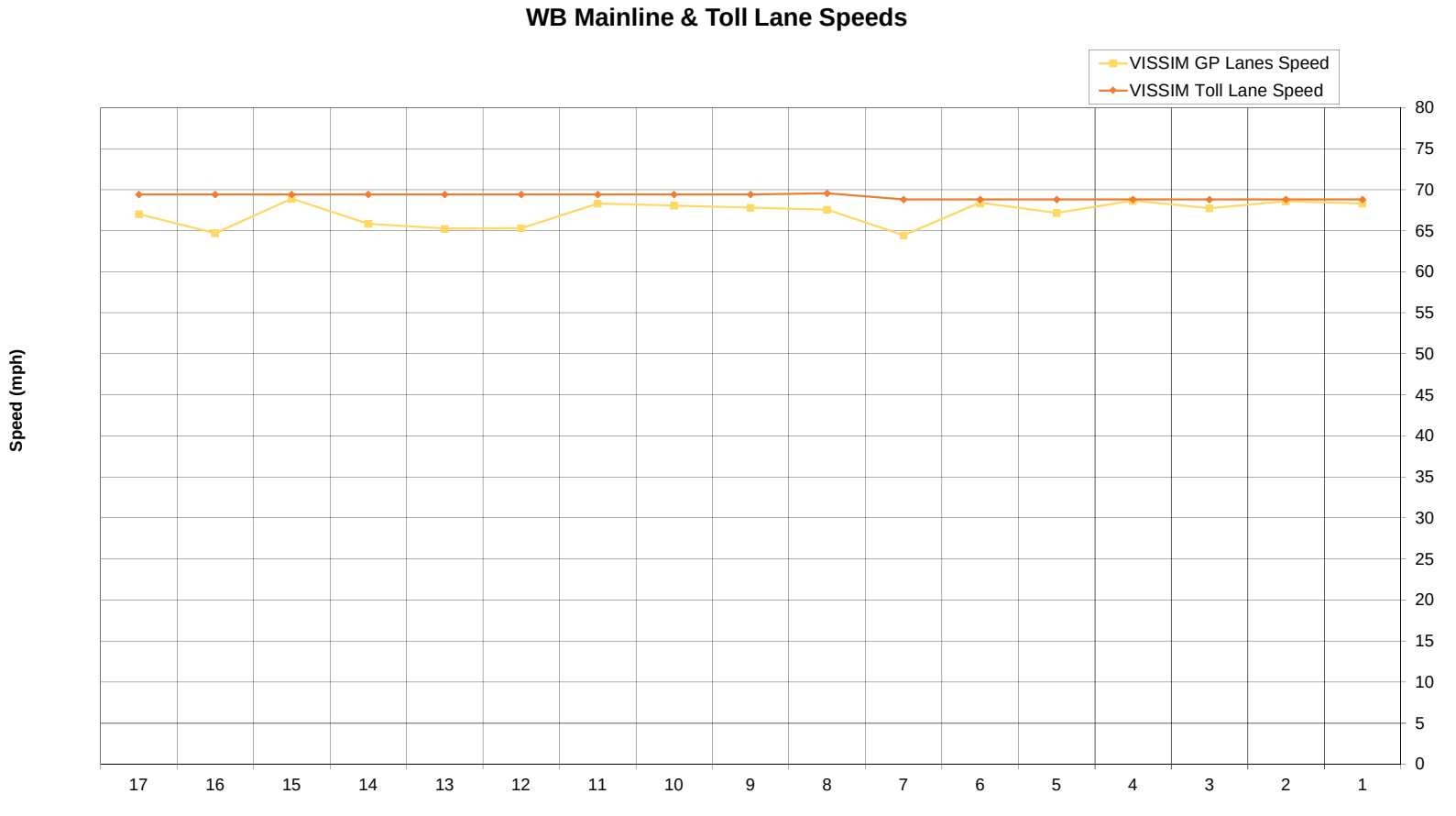
WB Mainline & Toll Lane Vehicle Volume by Location



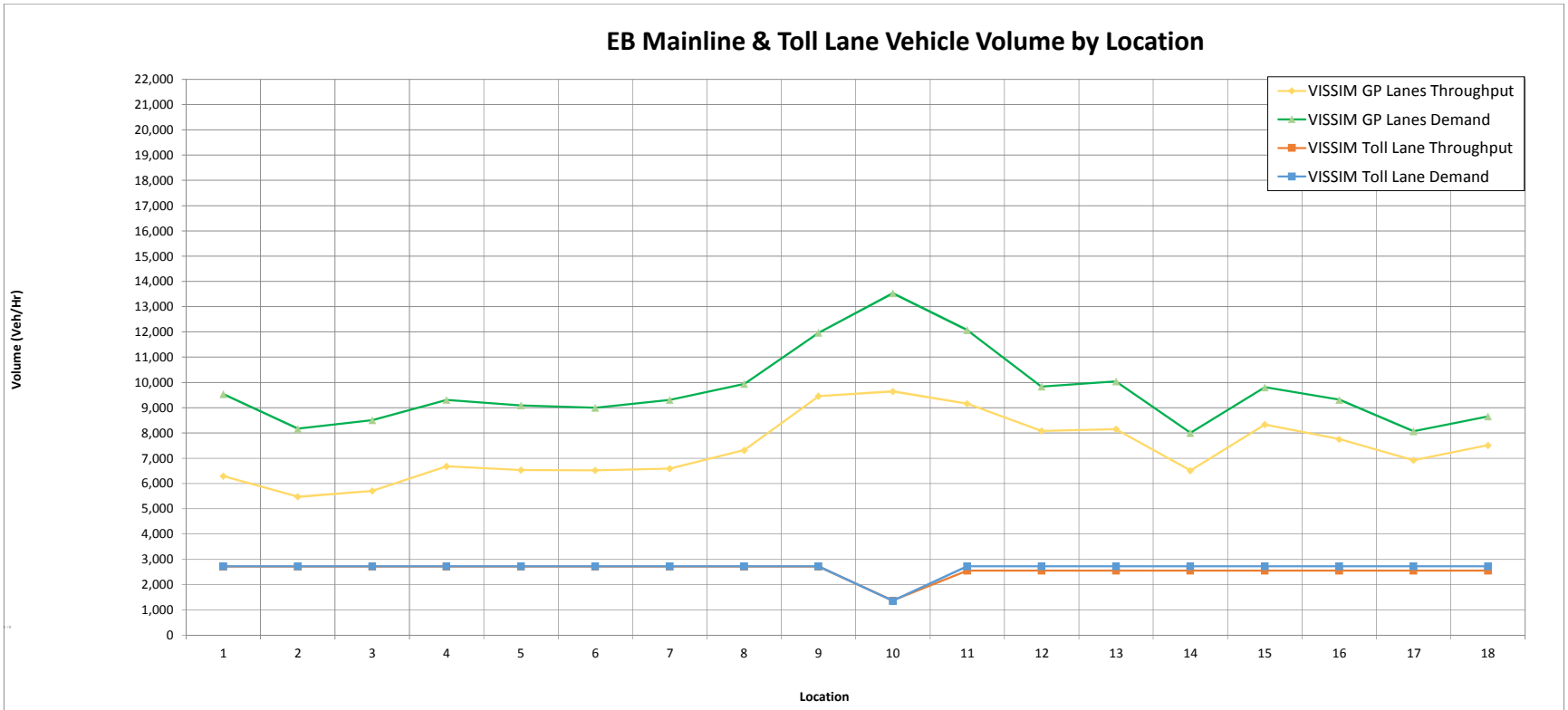
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 Green River On-Ramp to Start of HOV Weave	13 SB Gypsum Canyon On Ramp to SR 241 On Ramp
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 HOV Weave between Green River Rd and SR 241	14 SR 241 On Ramp to Weir Canyon Off Ramp
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 End of HOV Weave to SR 241 Off-Ramp	15 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4 SR 71 Off-Ramp to SR 71 On-Ramp	10 SR 241 Off Ramp to Gypsum Canyon Off Ramp	16 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5 SR 71 On-Ramp to Green River Off-Ramp	11 Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17 SB Weir Canyon On-Ramp to End of study area
6 Green River Off-Ramp to Green River On-Ramp	12 NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp	



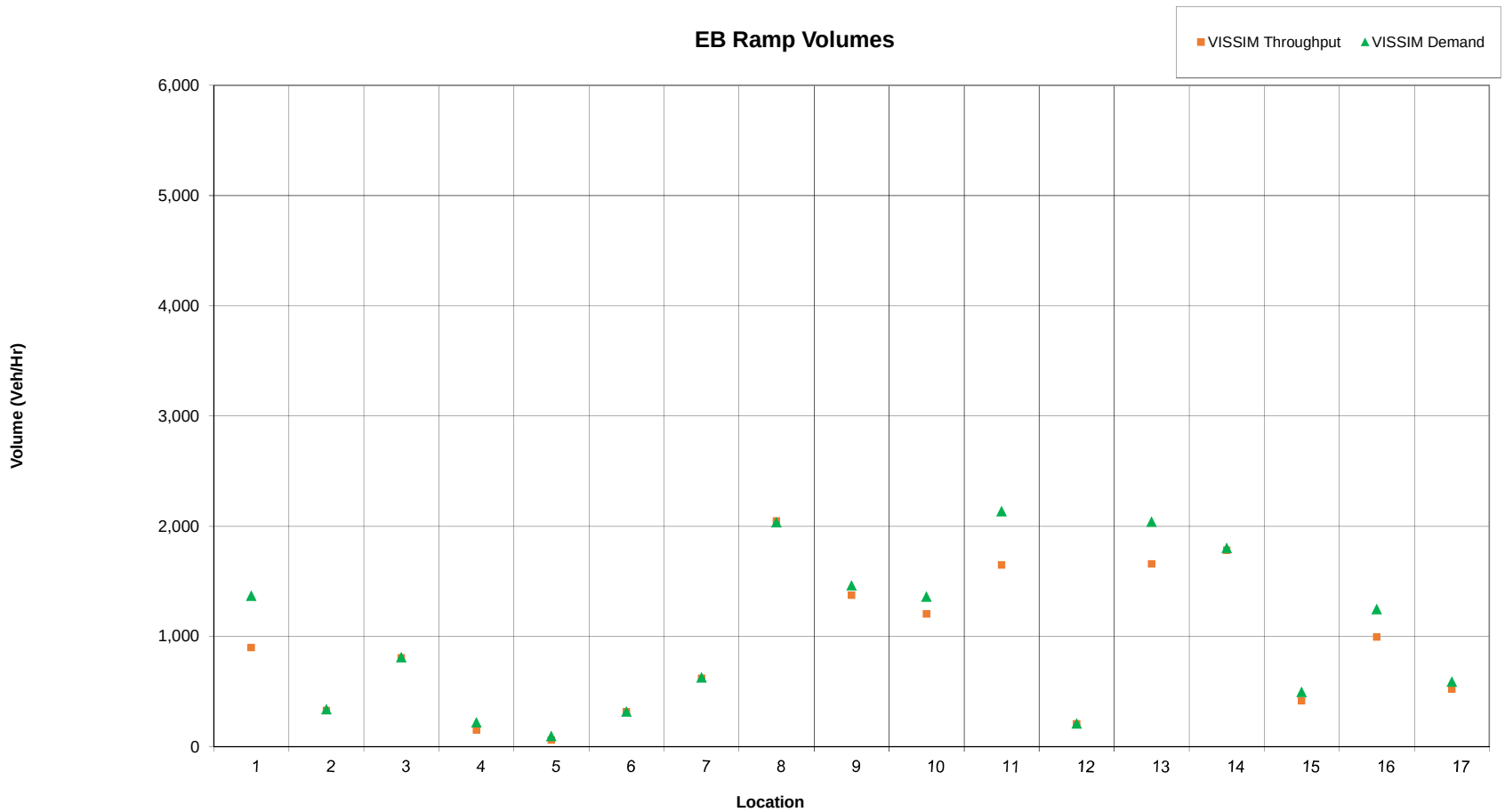
1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SR 241
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	Off Ramp to Weir Canyon Rd
3	Off Ramp to SR 71	9	Off Ramp to SR 241	15	On Ramp from NB Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to Gypsum Canyon Rd	16	On Ramp from SB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	On Ramp from NB Gypsum Canyon Rd		
6	On Ramp from Green River Rd	12	On Ramp from SB Gypsum Canyon Rd		



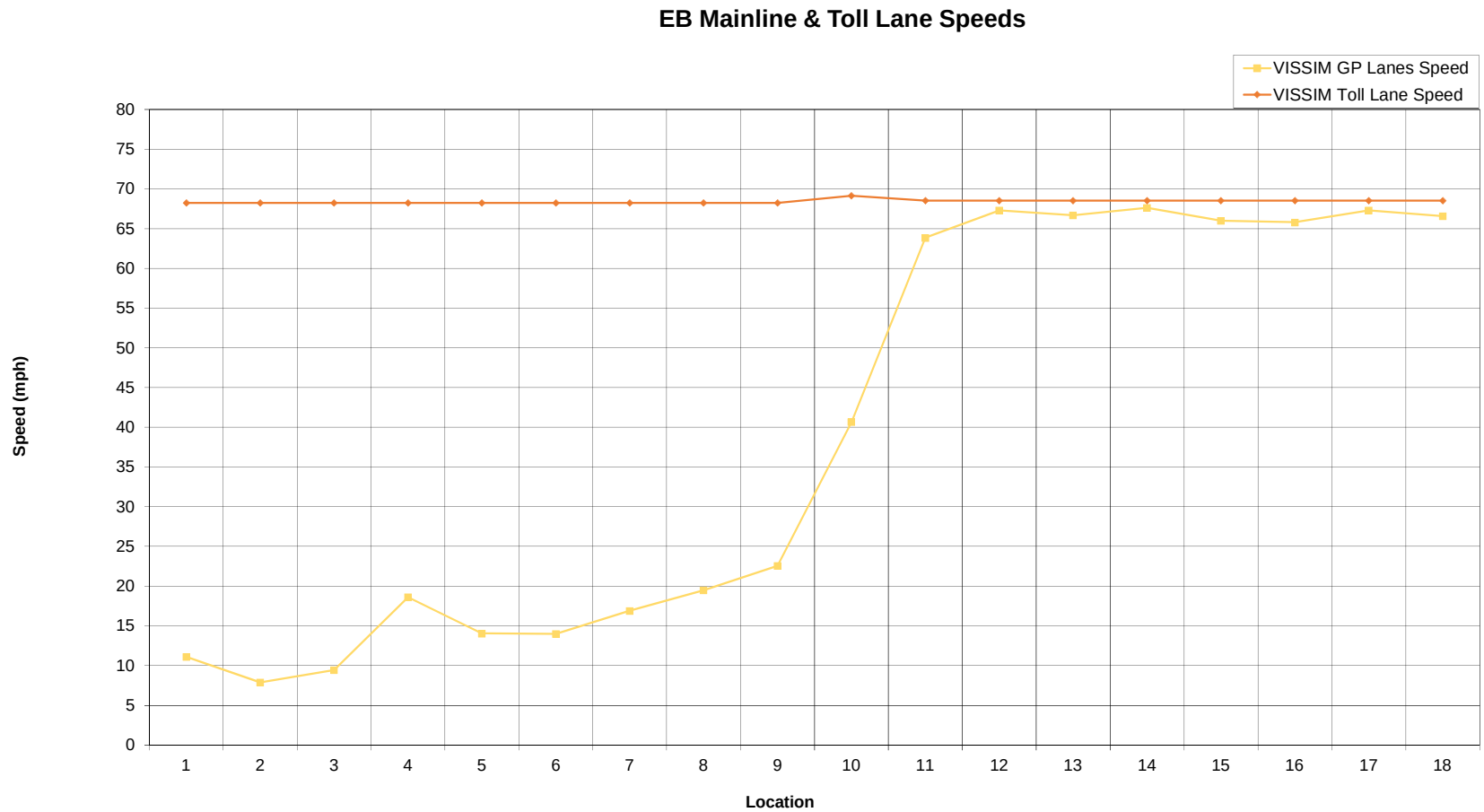
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		



1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

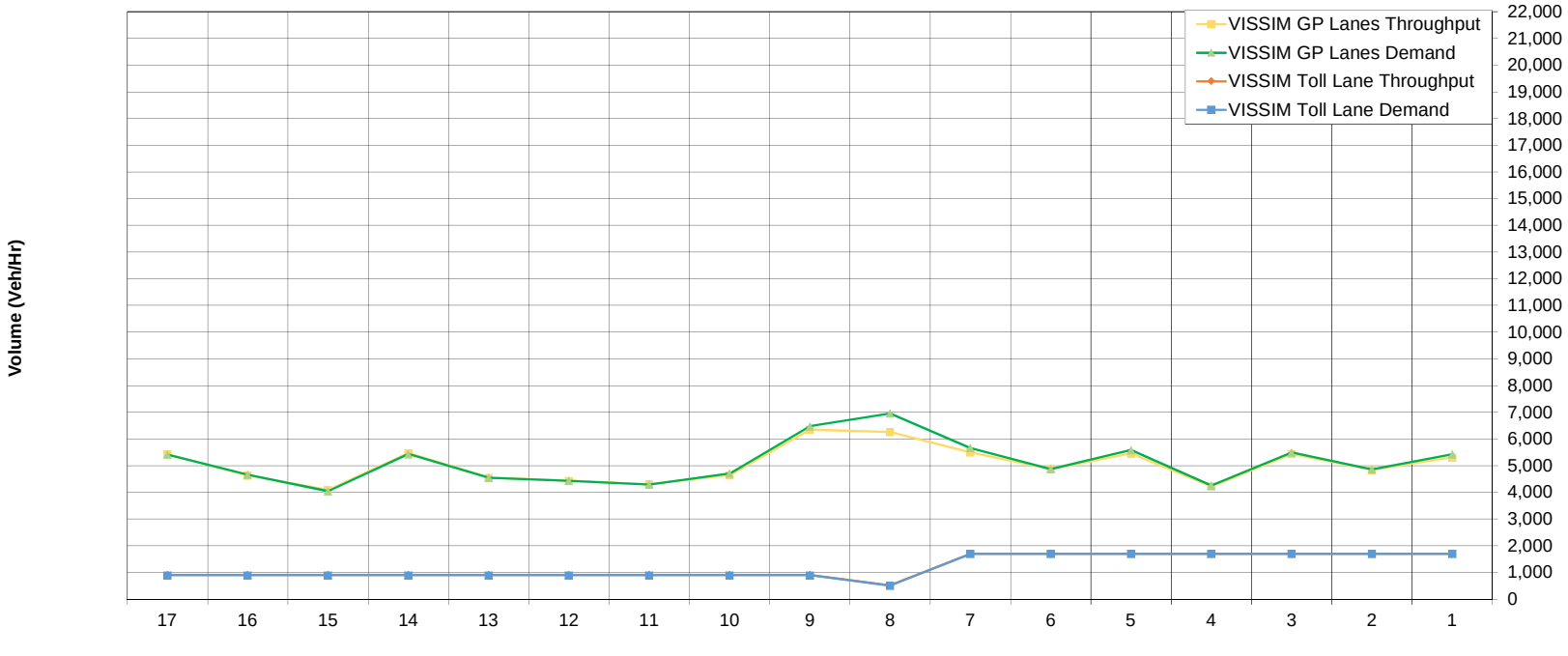


1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 NB
2	On Ramp from SB Weir Canyon	8	On Ramp from NB SR 241 GP	14	On Ramp from SR 71 NB
3	On Ramp from NB Weir Canyon	9	On Ramp from HOT Exit (east of SR 241)	15	Off Ramp to Serfas/Autoclub
4	Off Ramp to SB SR 241 GP	10	Off Ramp to HOT Entrance (west of Green River Rd)	16	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	11	Off Ramp to Green River	17	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	12	On Ramp From Green River		

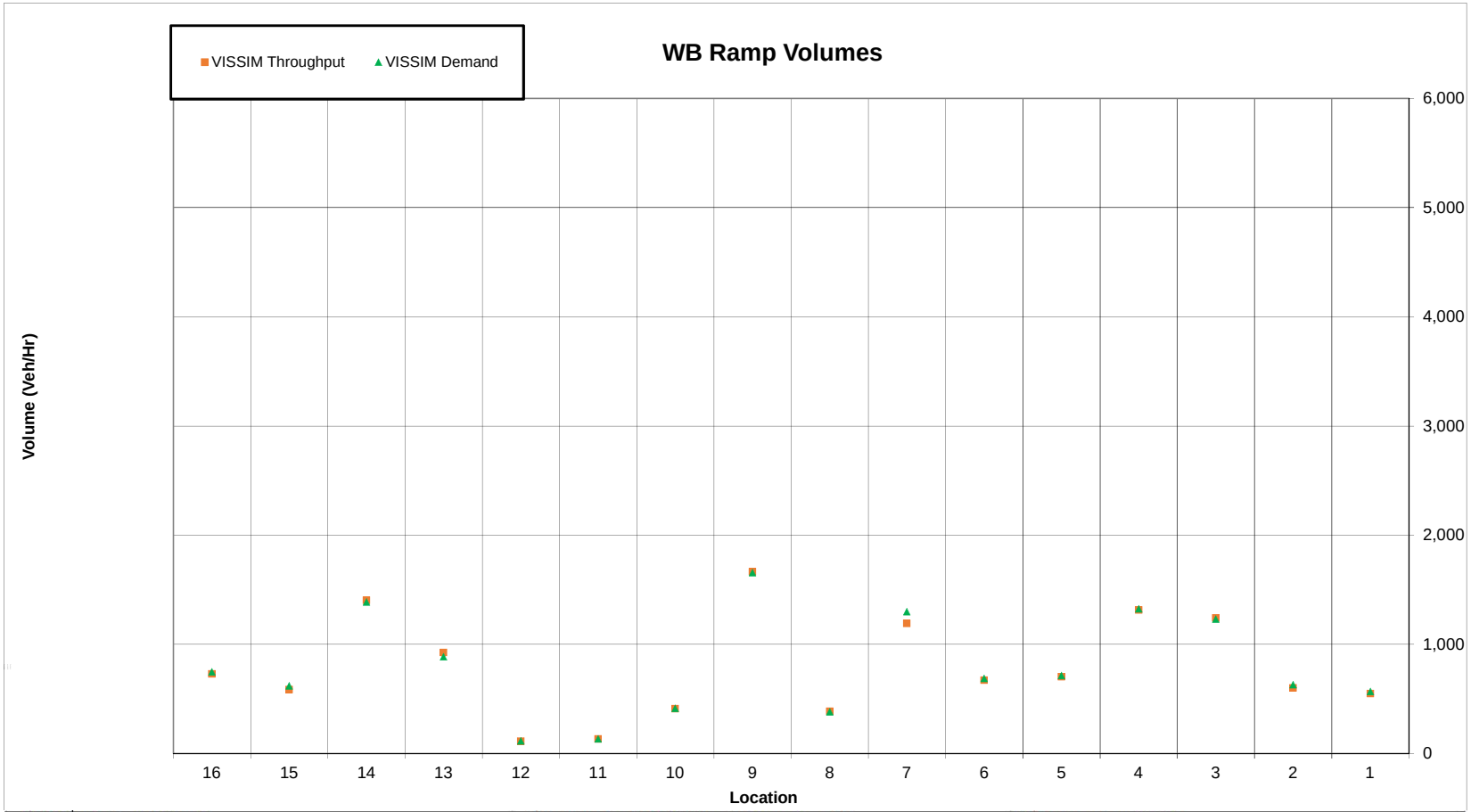


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

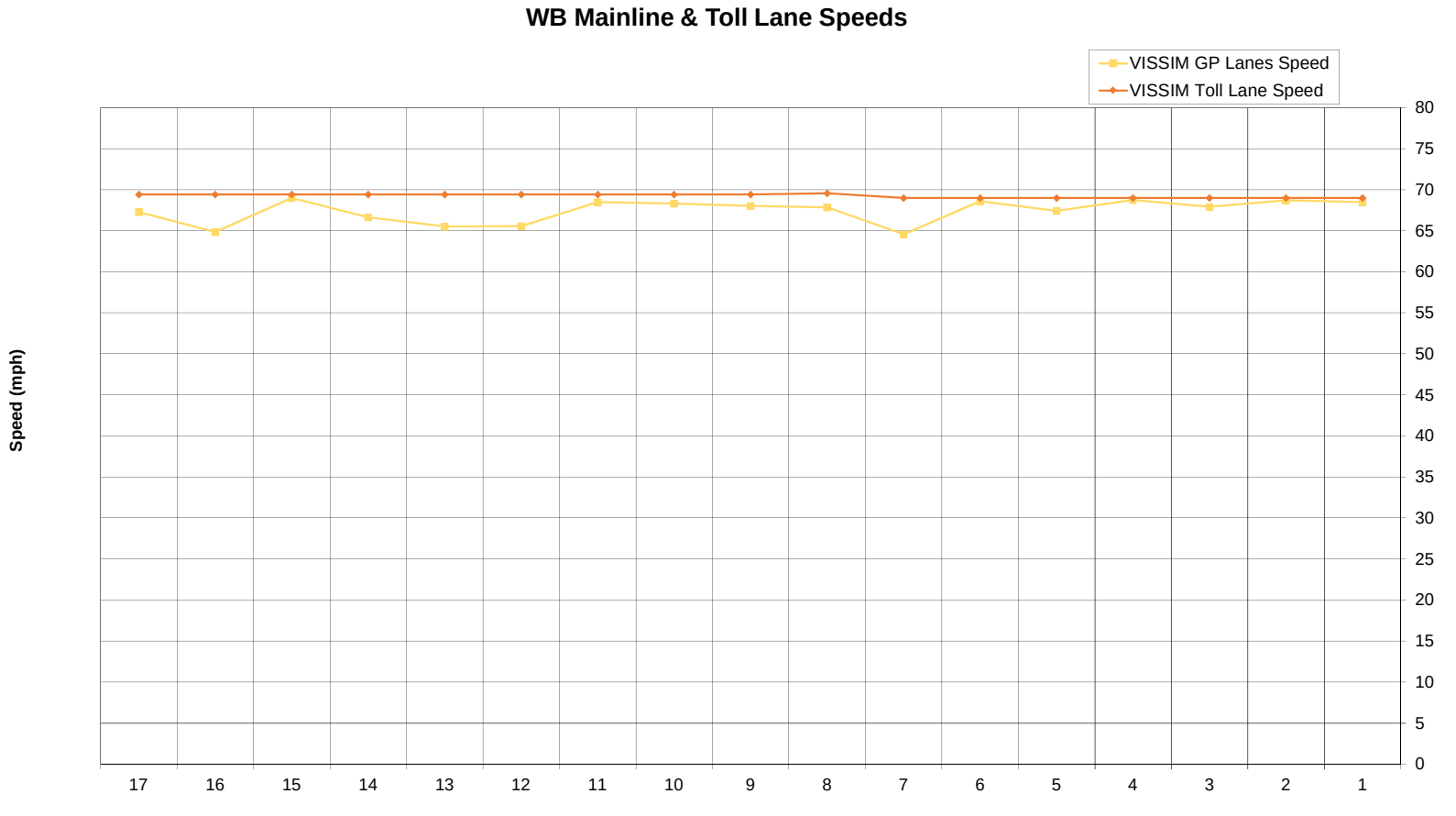
WB Mainline & Toll Lane Vehicle Volume by Location



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 Green River On-Ramp to Start of HOV Weave	13 SB Gypsum Canyon On Ramp to SR 241 On Ramp
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 HOV Weave between Green River Rd and SR 241	14 SR 241 On Ramp to Weir Canyon Off Ramp
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 End of HOV Weave to SR 241 Off-Ramp	15 Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4 SR 71 Off-Ramp to SR 71 On-Ramp	10 SR 241 Off Ramp to Gypsum Canyon Off Ramp	16 NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5 SR 71 On-Ramp to Green River Off-Ramp	11 Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17 SB Weir Canyon On-Ramp to End of study area
6 Green River Off-Ramp to Green River On-Ramp	12 NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp	



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SR 241
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	Off Ramp to Weir Canyon Rd
3	Off Ramp to SR 71	9	Off Ramp to SR 241	15	On Ramp from NB Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to Gypsum Canyon Rd	16	On Ramp from SB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	On Ramp from NB Gypsum Canyon Rd		
6	On Ramp from Green River Rd	12	On Ramp from SB Gypsum Canyon Rd		



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		

Appendix D

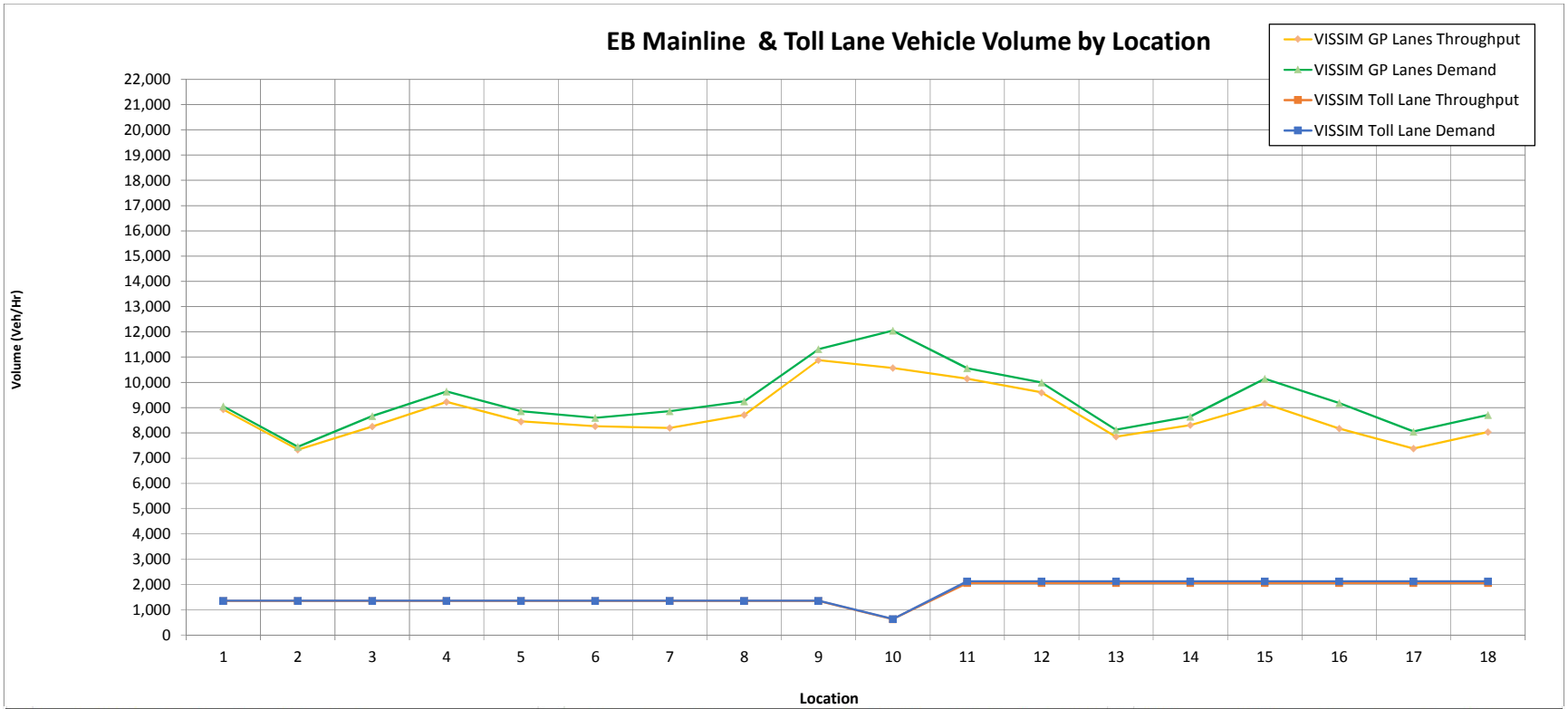
VISSIM Summary of Results
2040 No Build Conditions

VISSIM Model Summary - 2040 No Build - AM
Network Summary Statistics

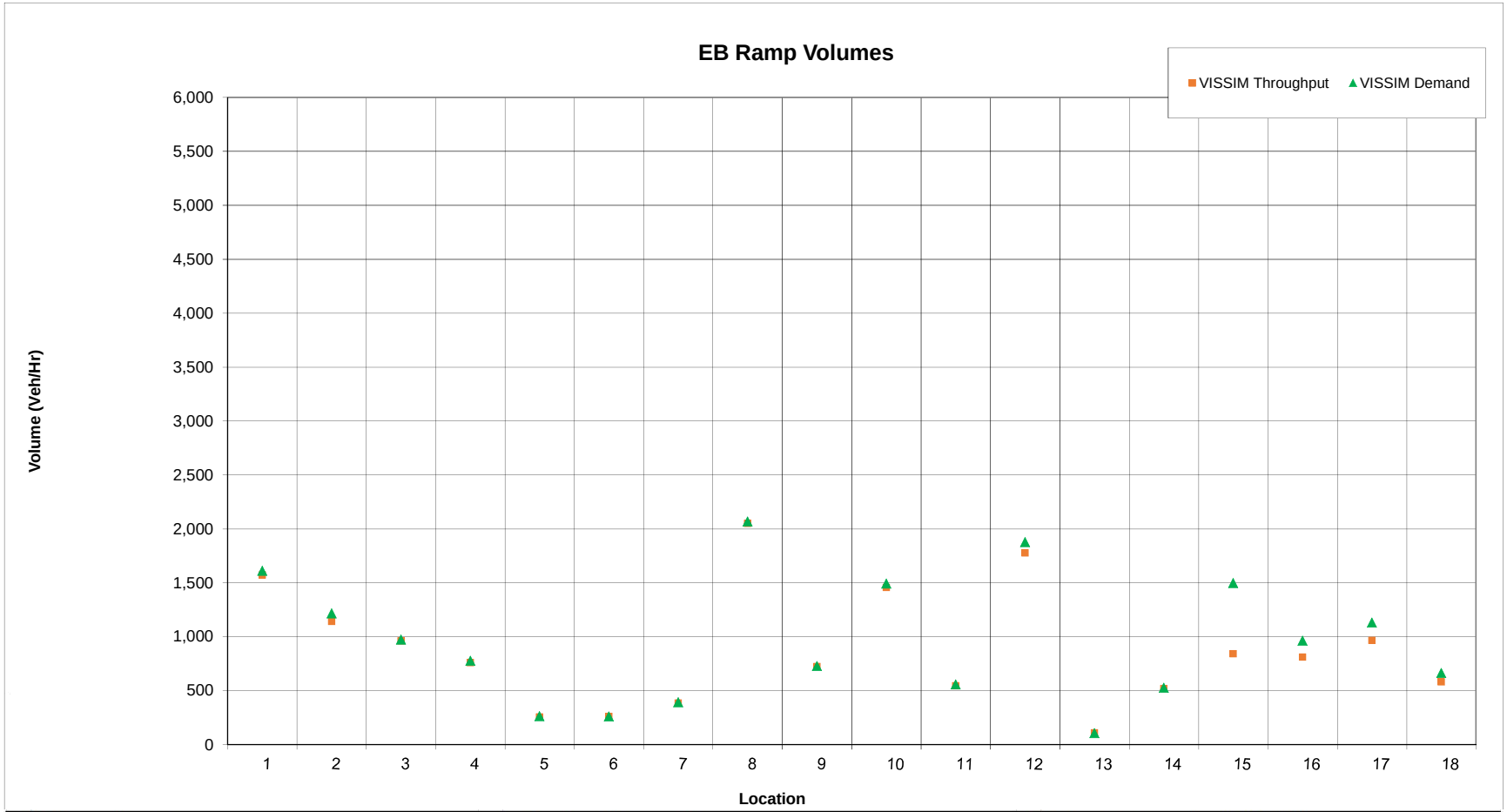
Parameter			2040 No Project	2017 No Project	Difference
Total Vehicle Demand (3 Hr)			119,605	100,741	18,864
Total number of vehicles that did not reach their desitination			10,264	9,016	1,247
Totla number of vehicles that have reached their destination			109,342	91,725	17,617
Total vehicle-miles traveled (VMT)			939,671	796,551	143,120
Total travel time, All Vehicle Types (VHT)			27,641	23,068	4,572
Average speed [mph], All Vehicle Types			34.0	34.5	-0.5
Average delay time per vehicle [mins], All Vehicle Types			7.00	6.83	0.17

VISSIM Model Summary - 2040 No Build - AM
Travel Time Results

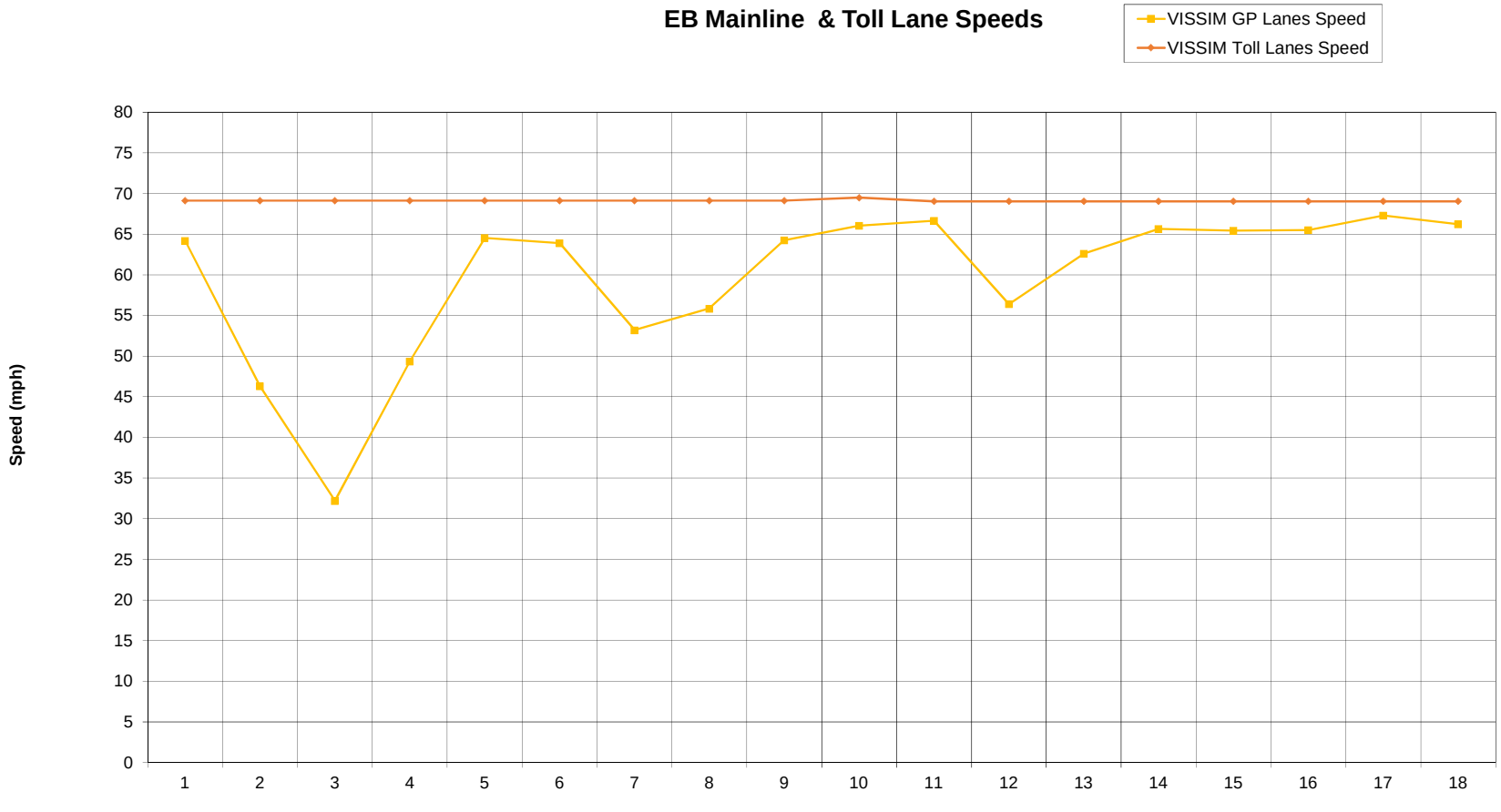
#	Origin	#	Destination	p Ke	Hide Travel Time Segments Seg 1	Seg 2	Seg 3	2017 AM No Build VISSIM Travel Time (Minutes) 6-7 AM	7-8 AM	7-9 AM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	1	1002	1003	1005	9.7	12.6	13.7
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	2	1002	1003	2005	9.5	12.4	13.5
		5	SR 241 SB south of SR 91	3	1001			7.9	10.7	12.0
		7	SR 71 NB north of SR 91	4	1002	1003	1004	11.0	13.9	15.0
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	5	2002	1003	1005	8.7	8.7	8.6
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	6	2002	2003	2005	8.3	8.3	8.3
		7	SR 71 NB north of SR 91	7	2002	1003	1004	10.0	10.0	9.9
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8	1011	1012	1014	22.8	21.2	16.3
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9	1011	1012	2014	20.8	19.3	15.4
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10	1011	1012	1013	23.2	21.8	17.8
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	11	1011	1012	2013	n/a	n/a	n/a
		7	SR 71 NB north of SR 91	12	1010			8.5	8.0	5.7
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	13	2011	1012	1014	15.0	14.5	13.2
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	14	2011	2012	2014	8.4	8.4	8.4
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15	2011	1012	1013	15.5	15.0	14.7
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	16	2011	2012	2013	n/a	n/a	n/a
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	17	1006			7.3	7.3	7.3
		3	SR 91 EB GP Lanes east of Serfas Club Rd	18	1007	1003	1005	11.1	11.1	11.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19	1007	1003	2005	10.9	10.9	10.9
		7	SR 71 NB north of SR 91	20	1007	1003	1004	12.4	12.4	12.4
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	21	2007	1003	1005	n/a	n/a	n/a
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	22	2007	2003	2005	n/a	n/a	n/a
		7	SR 71 NB north of SR 91	23	2007	1003	1004	n/a	n/a	n/a
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	24	1009	1012	1014	39.6	56.0	59.3
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	25	1009	1012	2014	37.6	54.2	58.4
		3	SR 91 EB GP Lanes east of Serfas Club Rd	26	1008			23.5	38.6	44.5
		5	SR 241 SB south of SR 91 (Via GP Ramp)	27	1009	1012	1013	40.1	56.6	60.9
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	28	1009	1012	2013	n/a	n/a	n/a



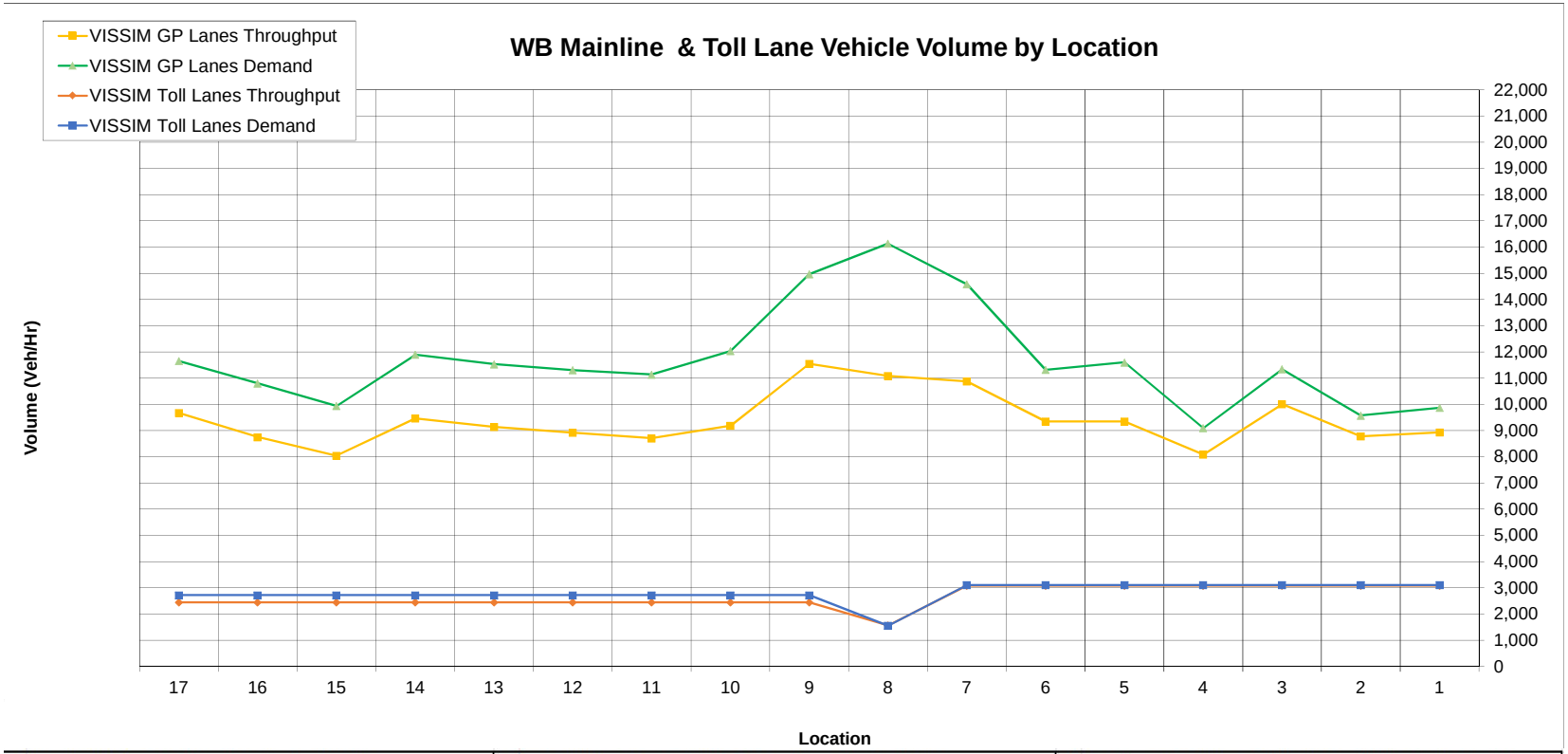
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR-71 to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	On Ramp from Green River to On Ramp from SR-71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to On Ramp from Managed Lanes	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	On Ramp from Managed Lanes to Off Ramp to Managed Lanes	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	Off Ramp to Managed Lanes to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71	18	On Ramp from Serfas/Autoclub to End of Study Area



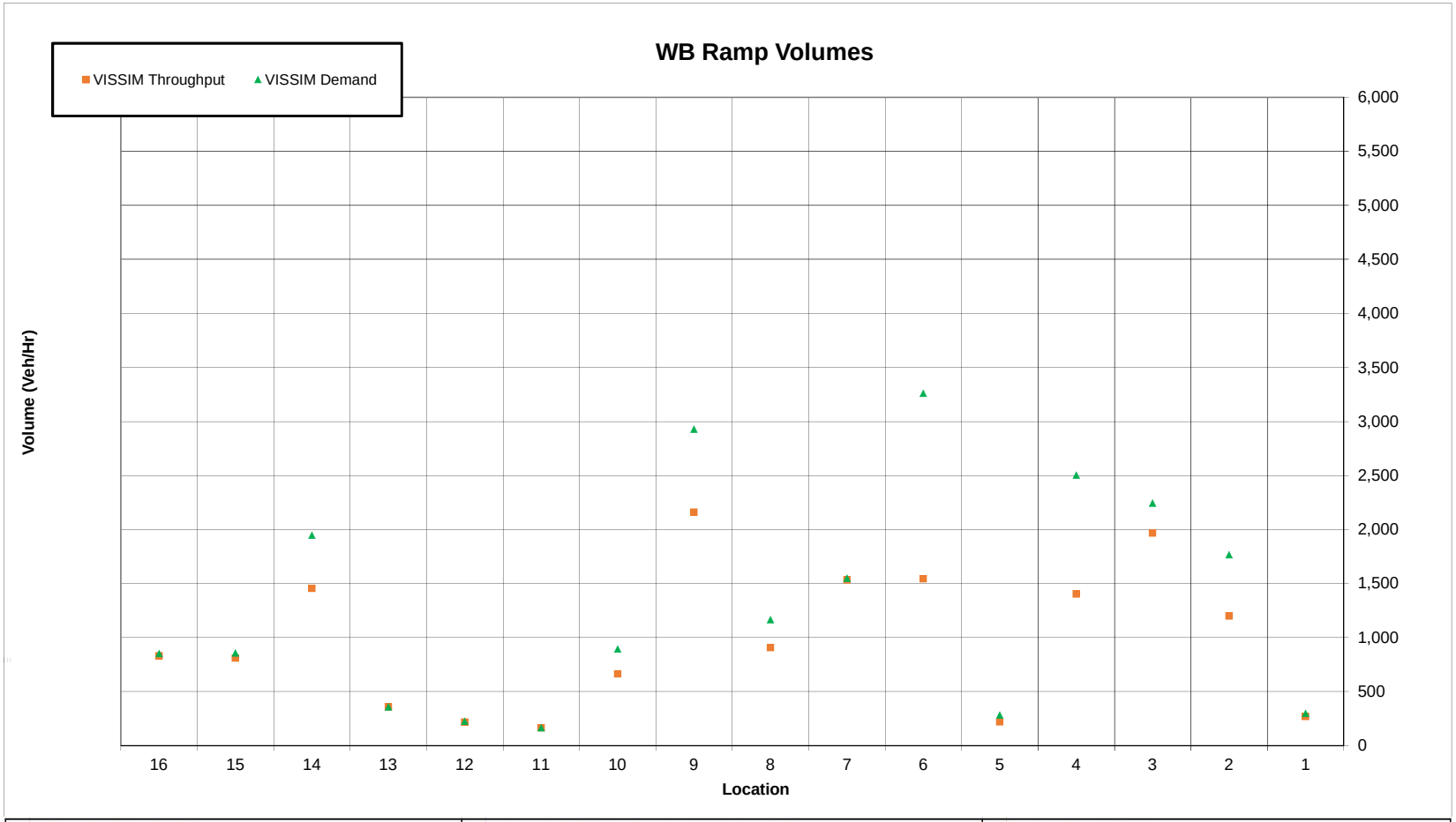
1 Off Ramp to Weir Canyon	7 On Ramp from NB Gypsum Canyon	13 On Ramp from Green River (to SR 71 NB)
2 On Ramp from SB Weir Canyon	8 On Ramp from NB SR 241 GP	14 On Ramp from Green River (to SR 91 EB)
3 On Ramp from NB Weir Canyon	9 On Ramp from HOT Exit (east of SR 241)	15 On Ramp from SR 71 SB
4 Off Ramp to SB SR 241 GP	10 Off Ramp to HOT Entrance (west of Green River Rd)	16 Off Ramp to Serfas/Autoclub
5 Off Ramp to Gypsum Canyon	11 Off Ramp to Green River	17 Off Ramp to EB Maple
6 On Ramp from SB Gypsum Canyon	12 Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub



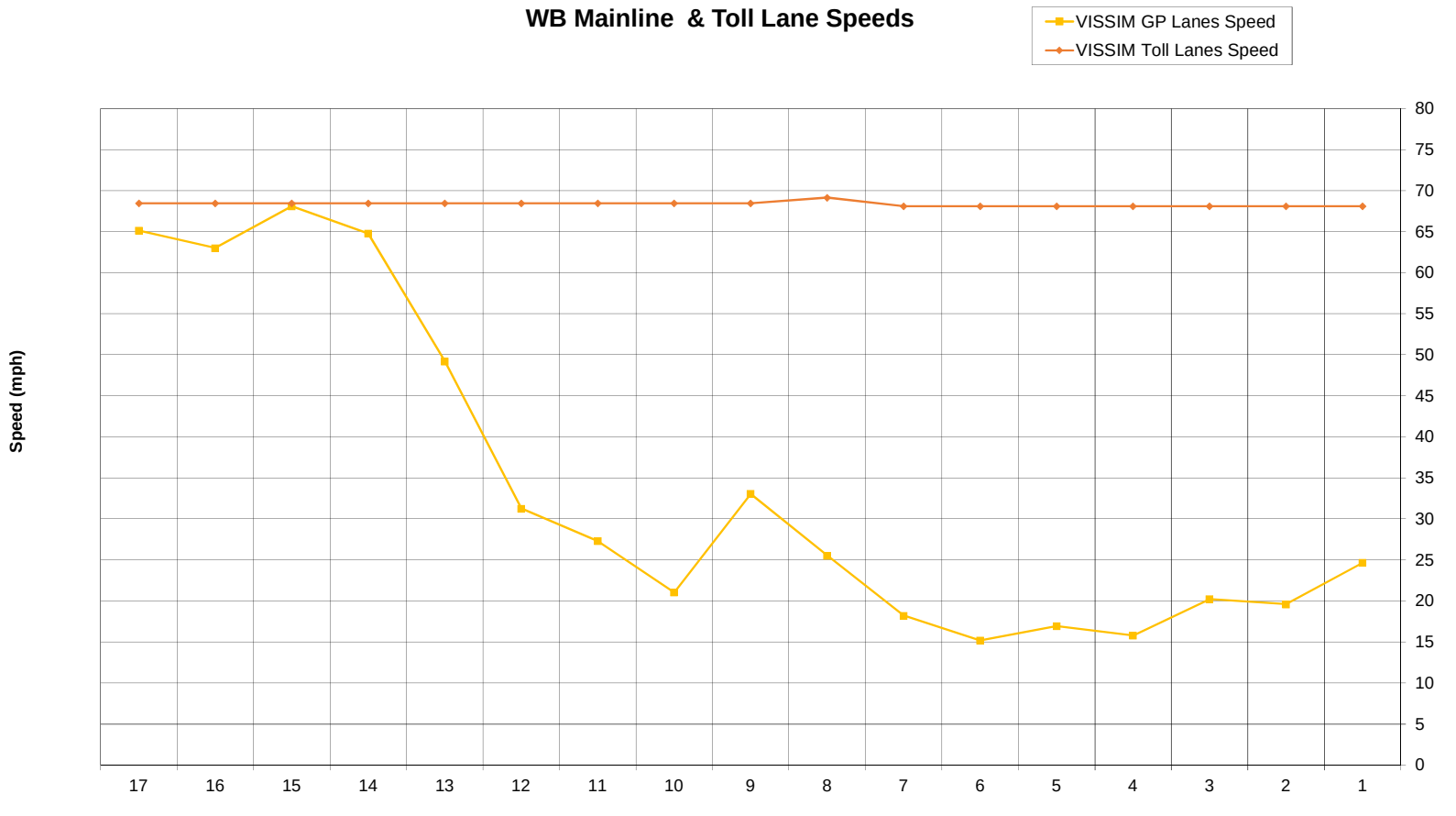
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



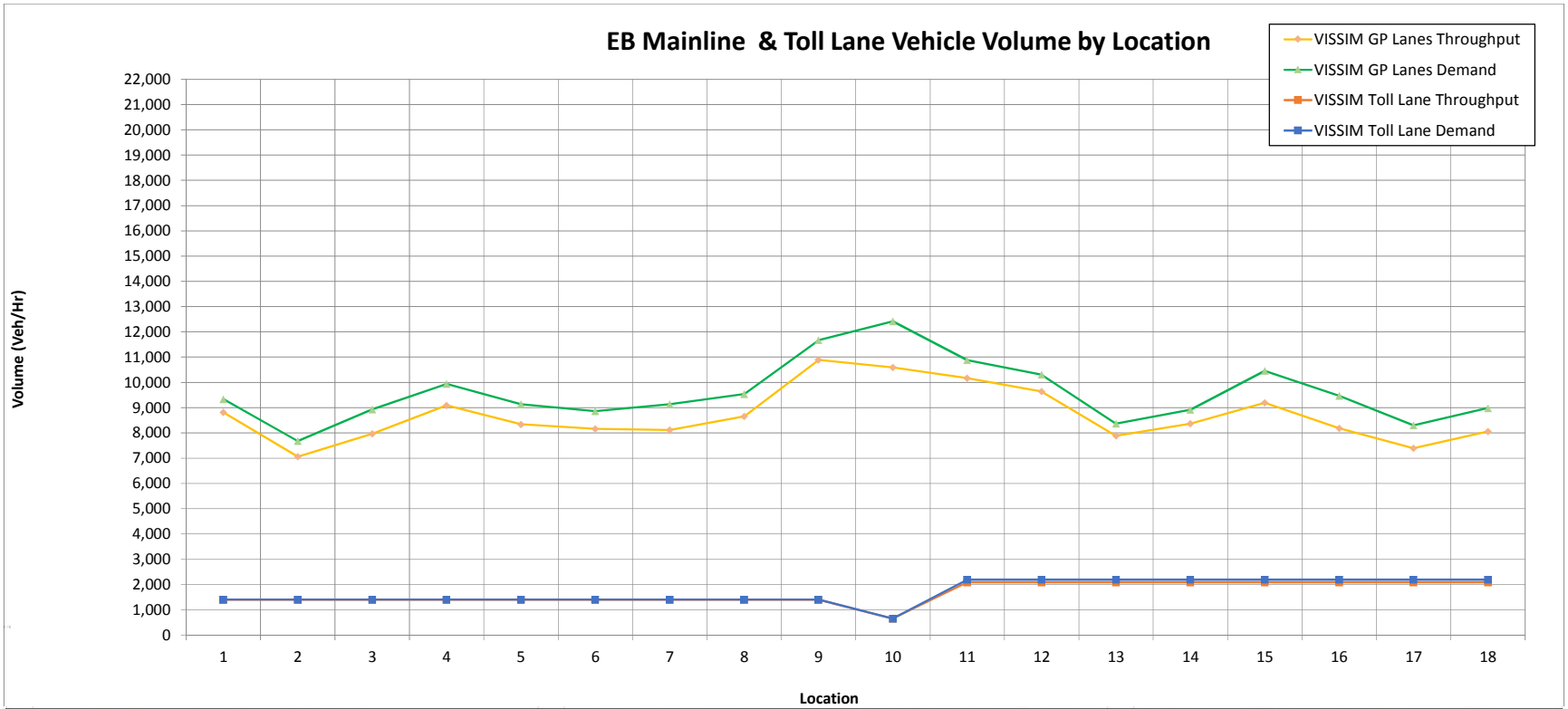
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from Managed Lanes	13 On Ramp from Gypsum Canyon SB to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from Managed Lanes to Off Ramp to Managed Lanes	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 Off Ramp to Managed Lanes to Off Ramp to SR 241	15 Off Ramp to Weir Canyon to On Ramp from Weir Canyon NB
4 Off Ramp to SR 71 to On Ramp from SR 71	10 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	16 On Ramp from Weir Canyon NB to On Ramp from Weir Canyon SB
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On Ramp from NB Gypsum Canyon (loop)	17 On Ramp from Weir Canyon SB to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from Gypsum Canyon NB to On Ramp from Gypsum Canyon SB	



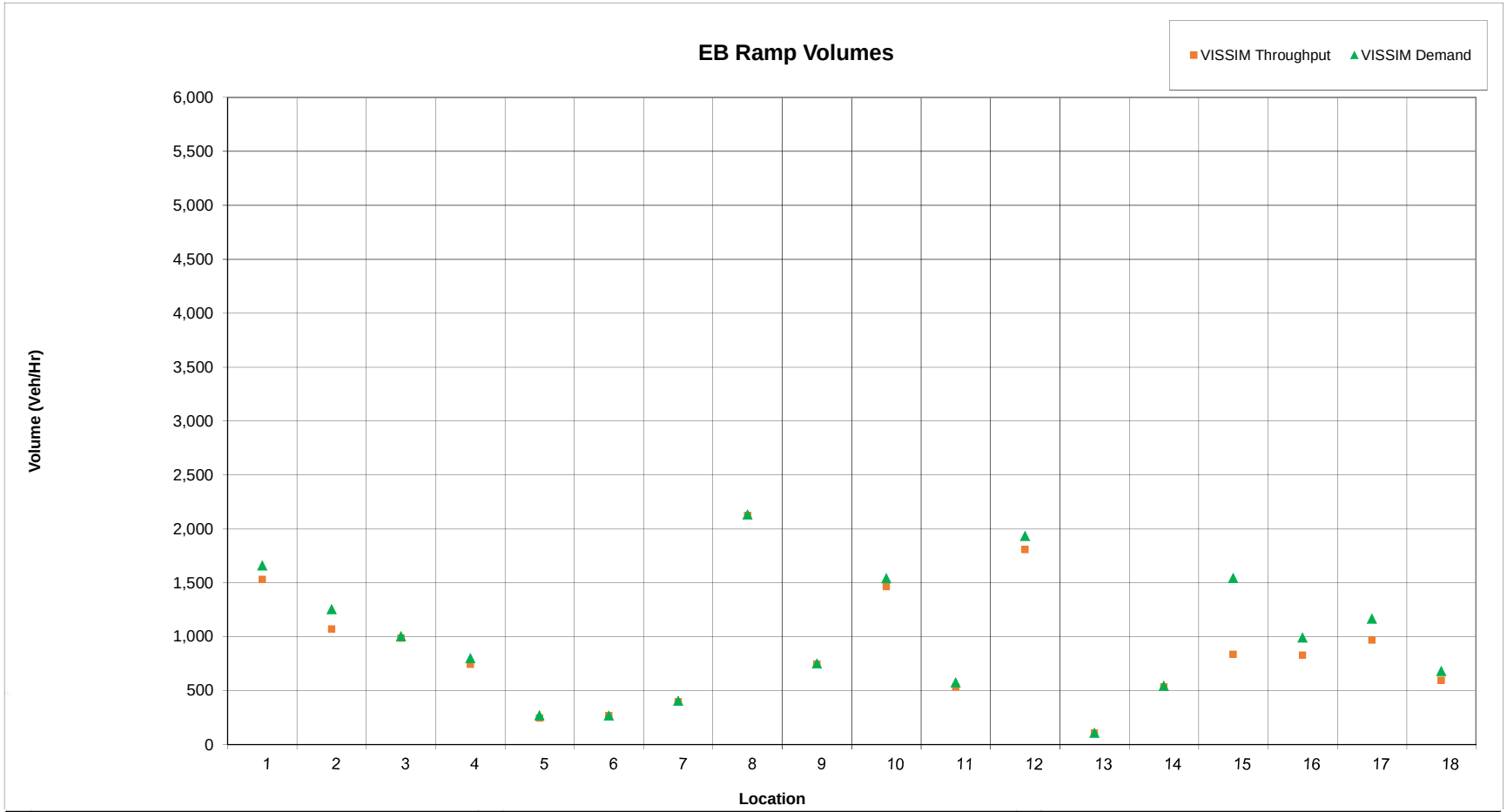
1 Off Ramp to Serfas/Autoclub	7 On Ramp from HOV Exit (west of Green River Rd)	13 On Ramp from SR 241
2 On Ramp from Serfas/Autoclub	8 Off Ramp to HOV Entrance (east of SR 241)	14 Off Ramp to Weir Canyon Rd
3 Off Ramp to SR 71	9 Off Ramp to SR 241	15 On Ramp from NB Weir Canyon Rd
4 On Ramp from SR 71	10 Off Ramp to Gypsum Canyon Rd	16 On Ramp from SB Weir Canyon Rd
5 Off Ramp to Green River Rd	11 On Ramp from NB Gypsum Canyon Rd	
6 On Ramp from Green River Rd	12 On Ramp from SB Gypsum Canyon Rd	



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		

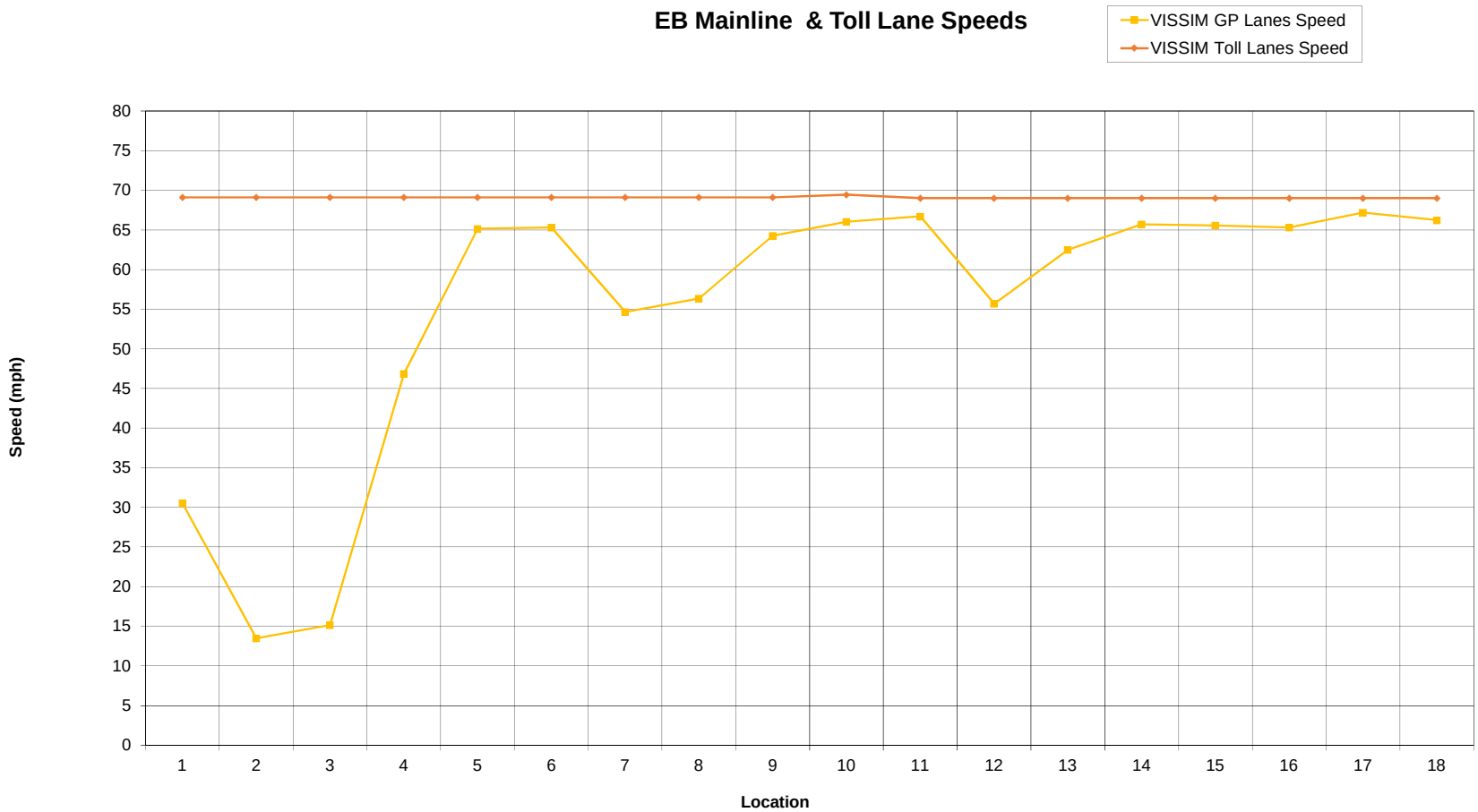


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR-71 to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	On Ramp from Green River to On Ramp from SR-71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to On Ramp from Managed Lanes	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	On Ramp from Managed Lanes to Off Ramp to Managed Lanes	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	Off Ramp to Managed Lanes to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71	18	On Ramp from Serfas/Autoclub to End of Study Area



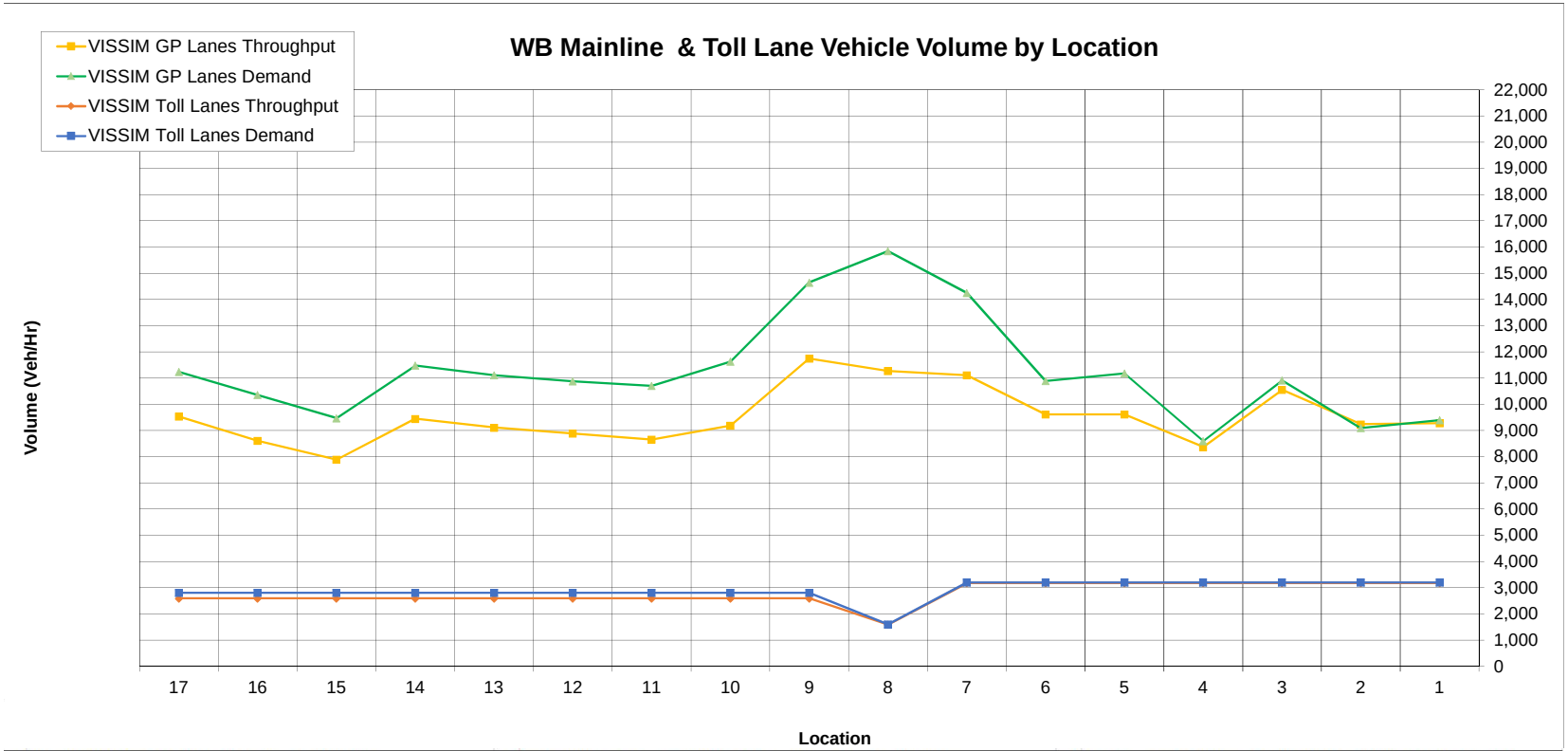
1 Off Ramp to Weir Canyon	7 On Ramp from NB Gypsum Canyon	13 On Ramp from Green River (to SR 71 NB)
2 On Ramp from SB Weir Canyon	8 On Ramp from NB SR 241 GP	14 On Ramp from Green River (to SR 91 EB)
3 On Ramp from NB Weir Canyon	9 On Ramp from HOT Exit (east of SR 241)	15 On Ramp from SR 71 SB
4 Off Ramp to SB SR 241 GP	10 Off Ramp to HOT Entrance (west of Green River Rd)	16 Off Ramp to Serfas/Autoclub
5 Off Ramp to Gypsum Canyon	11 Off Ramp to Green River	17 Off Ramp to EB Maple
6 On Ramp from SB Gypsum Canyon	12 Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub

Charts 7-8 AM

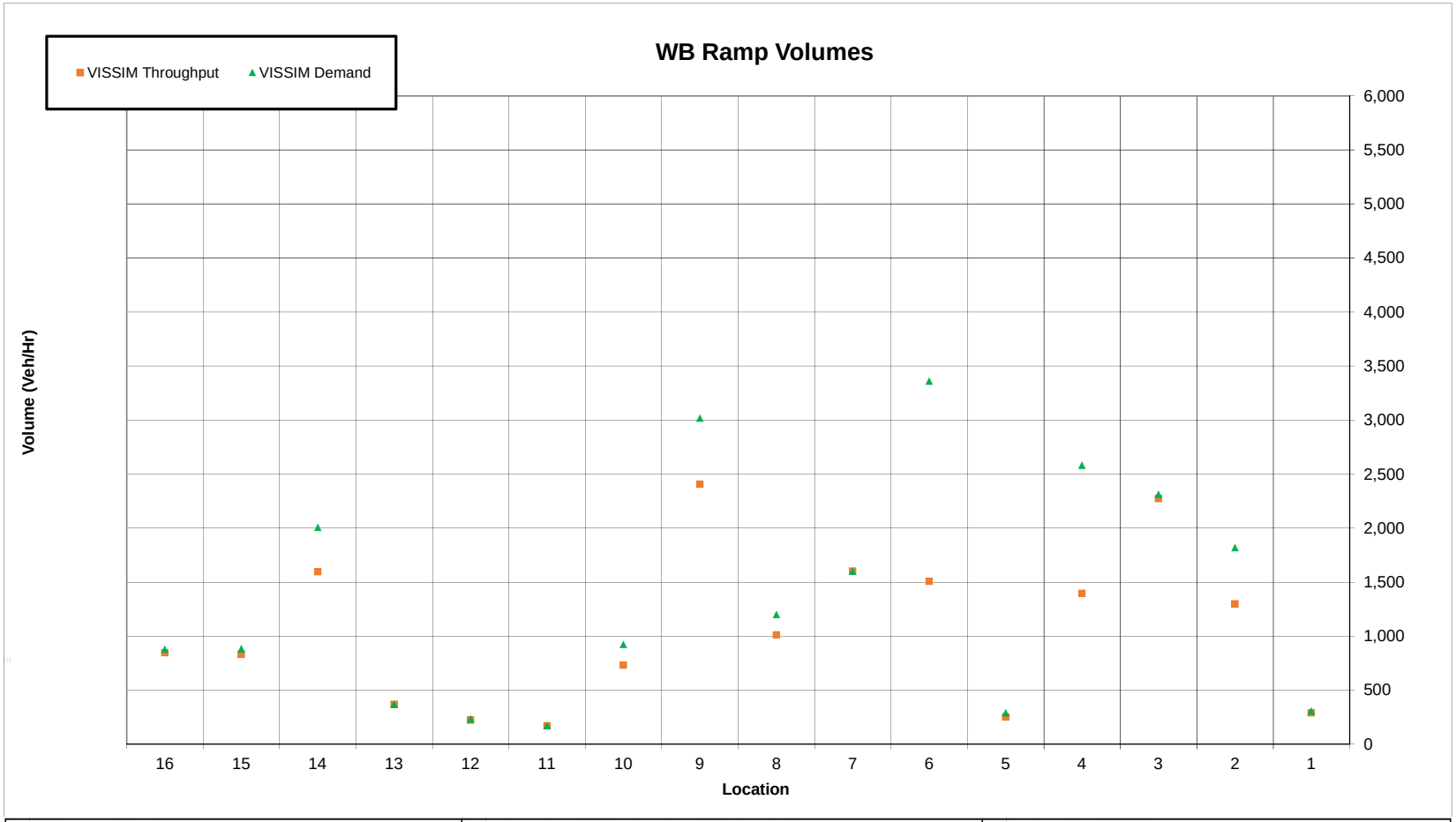


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

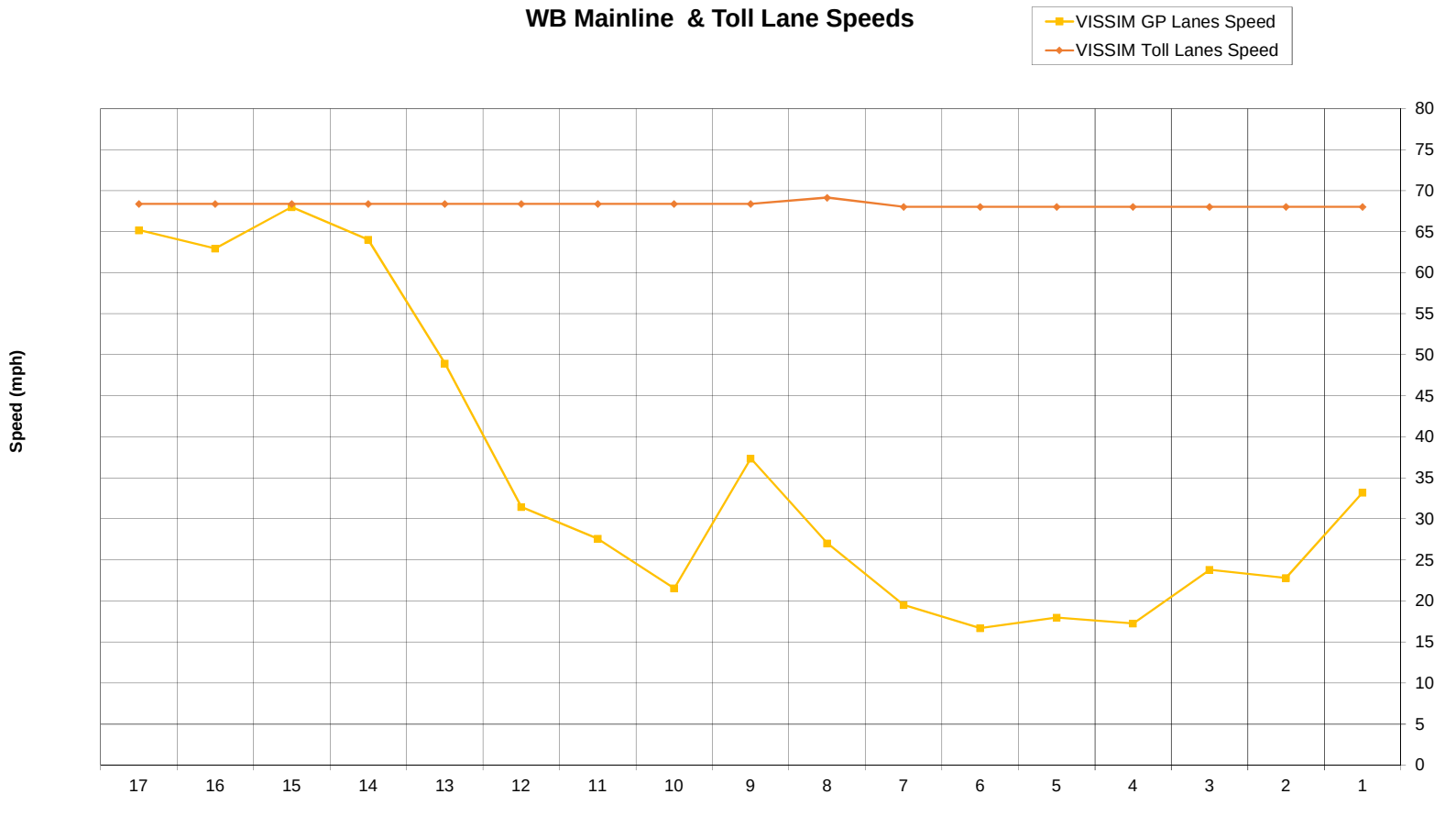
Charts 7-8 AM



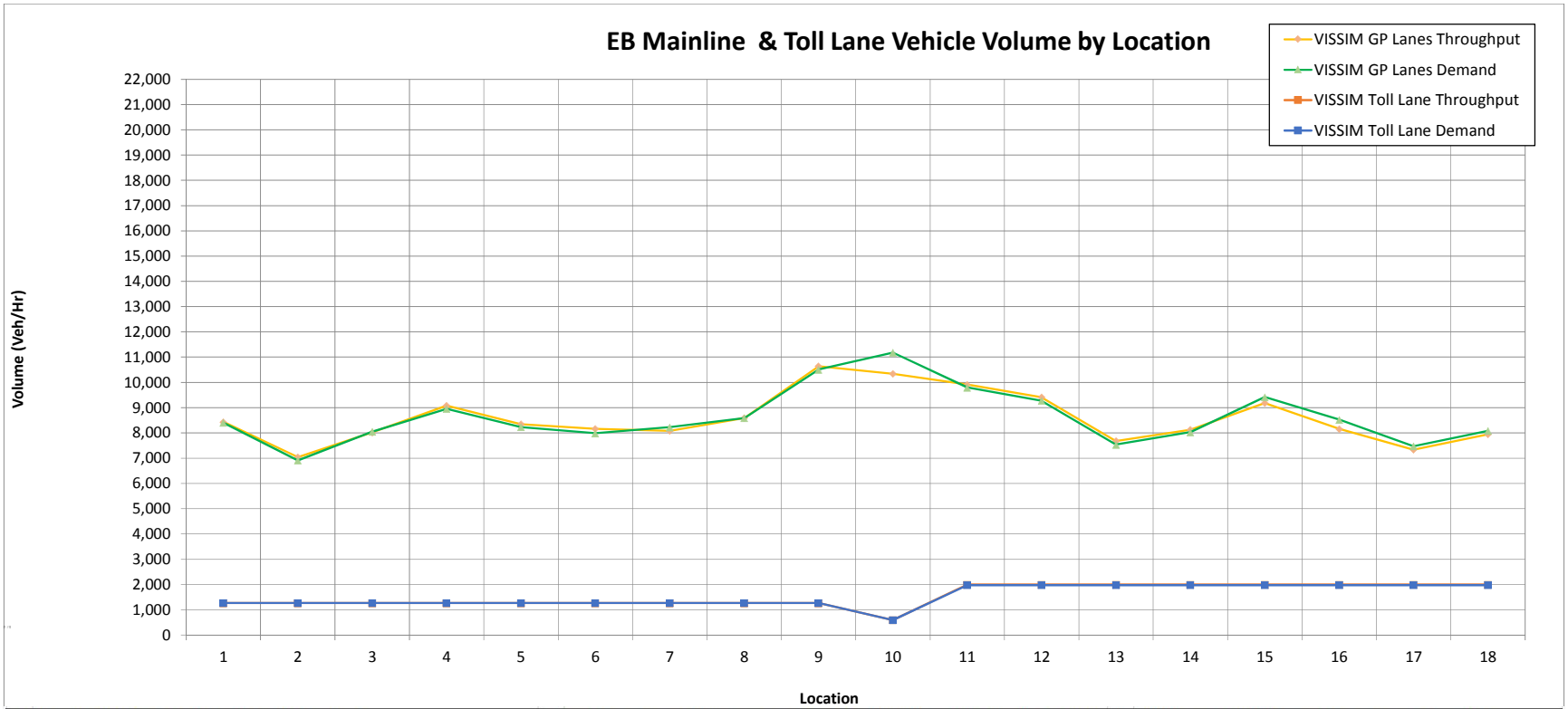
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from Managed Lanes	13 On Ramp from Gypsum Canyon SB to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from Managed Lanes to Off Ramp to Managed Lanes	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 Off Ramp to Managed Lanes to Off Ramp to SR 241	15 Off Ramp to Weir Canyon to On Ramp from Weir Canyon NB
4 Off Ramp to SR 71 to On Ramp from SR 71	10 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	16 On Ramp from Weir Canyon NB to On Ramp from Weir Canyon SB
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On Ramp from NB Gypsum Canyon (loop)	17 On Ramp from Weir Canyon SB to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from Gypsum Canyon NB to On Ramp from Gypsum Canyon SB	



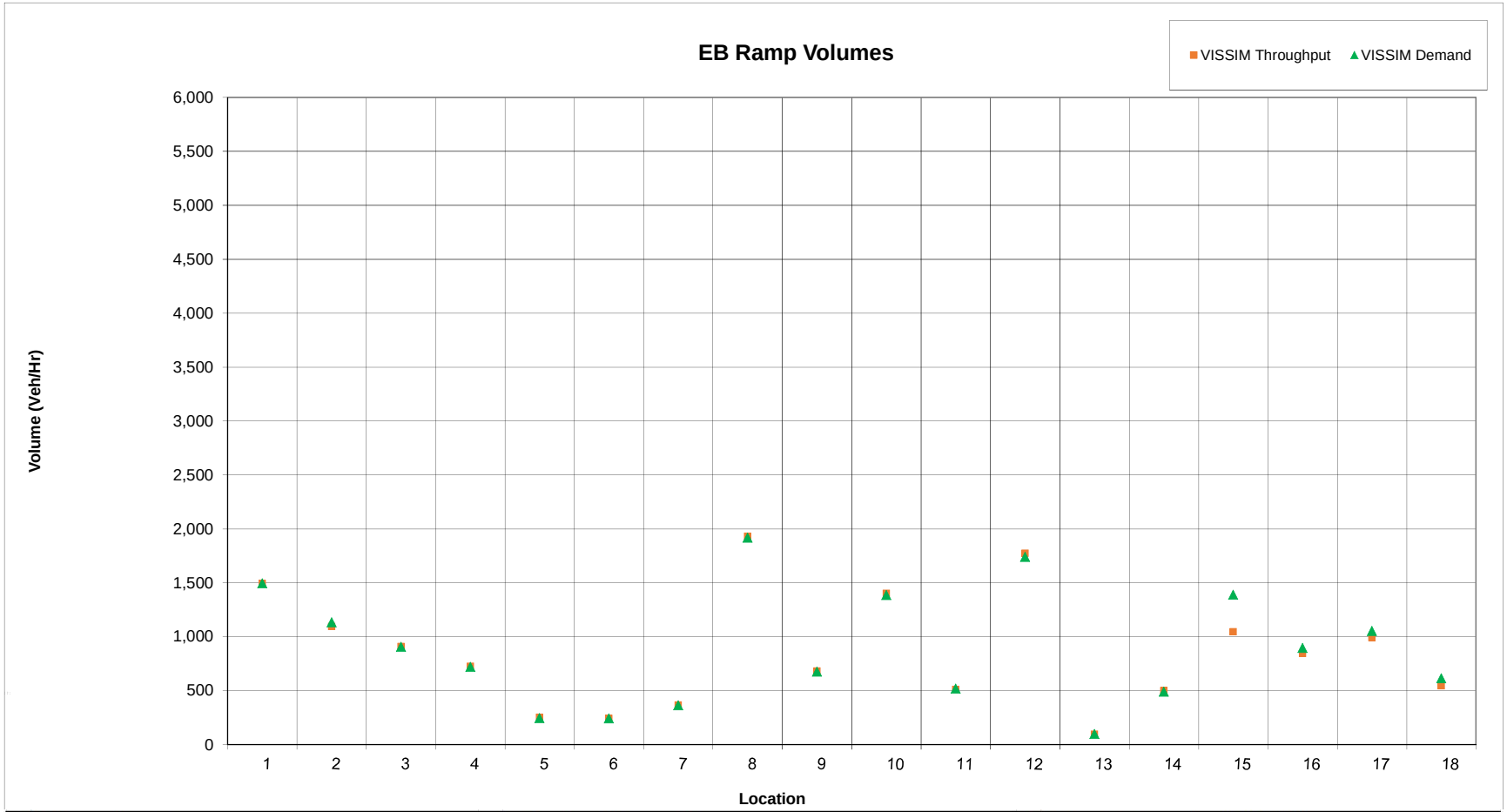
1 Off Ramp to Serfas/Autoclub	7 On Ramp from HOV Exit (west of Green River Rd)	13 On Ramp from SR 241
2 On Ramp from Serfas/Autoclub	8 Off Ramp to HOV Entrance (east of SR 241)	14 Off Ramp to Weir Canyon Rd
3 Off Ramp to SR 71	9 Off Ramp to SR 241	15 On Ramp from NB Weir Canyon Rd
4 On Ramp from SR 71	10 Off Ramp to Gypsum Canyon Rd	16 On Ramp from SB Weir Canyon Rd
5 Off Ramp to Green River Rd	11 On Ramp from NB Gypsum Canyon Rd	
6 On Ramp from Green River Rd	12 On Ramp from SB Gypsum Canyon Rd	



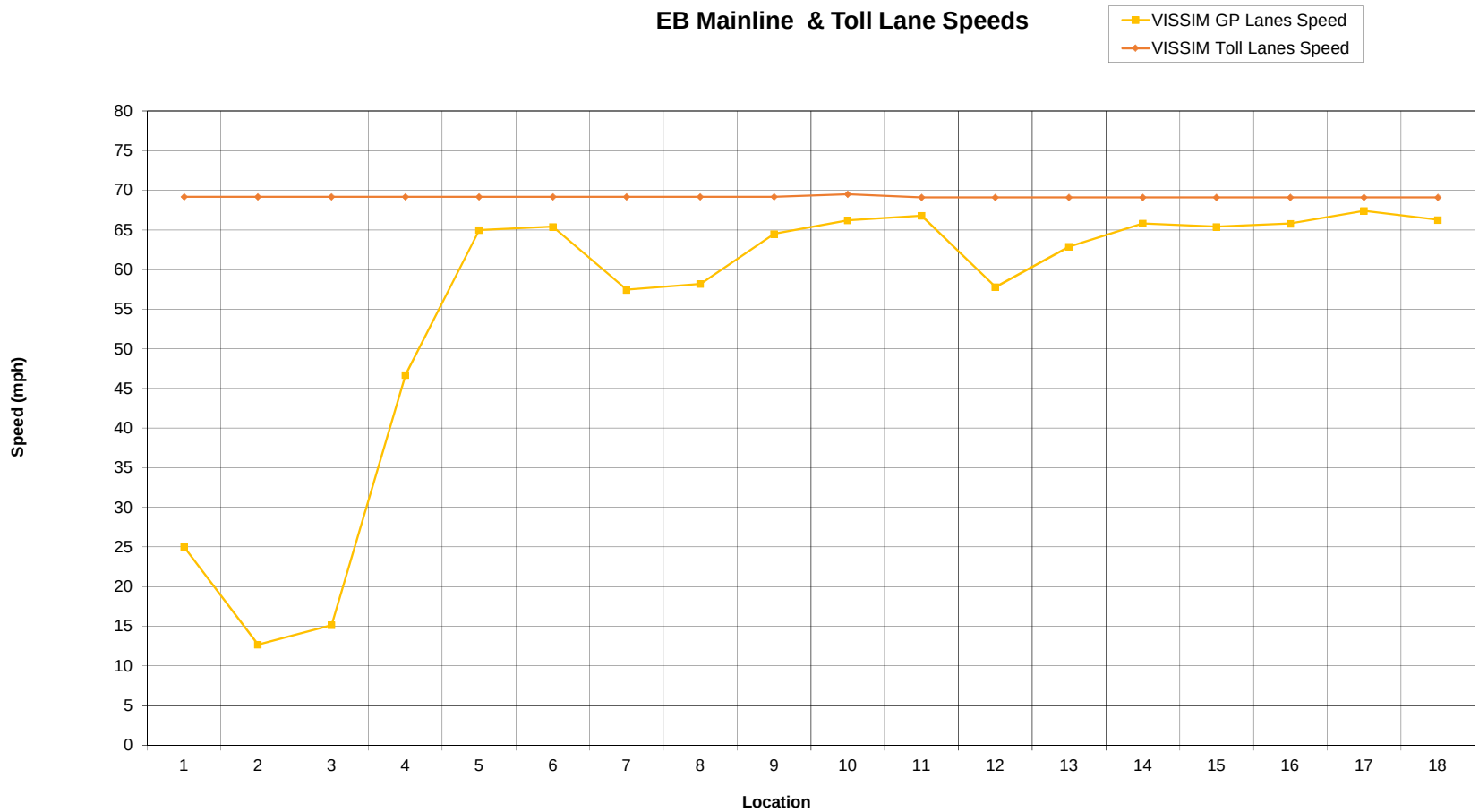
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		



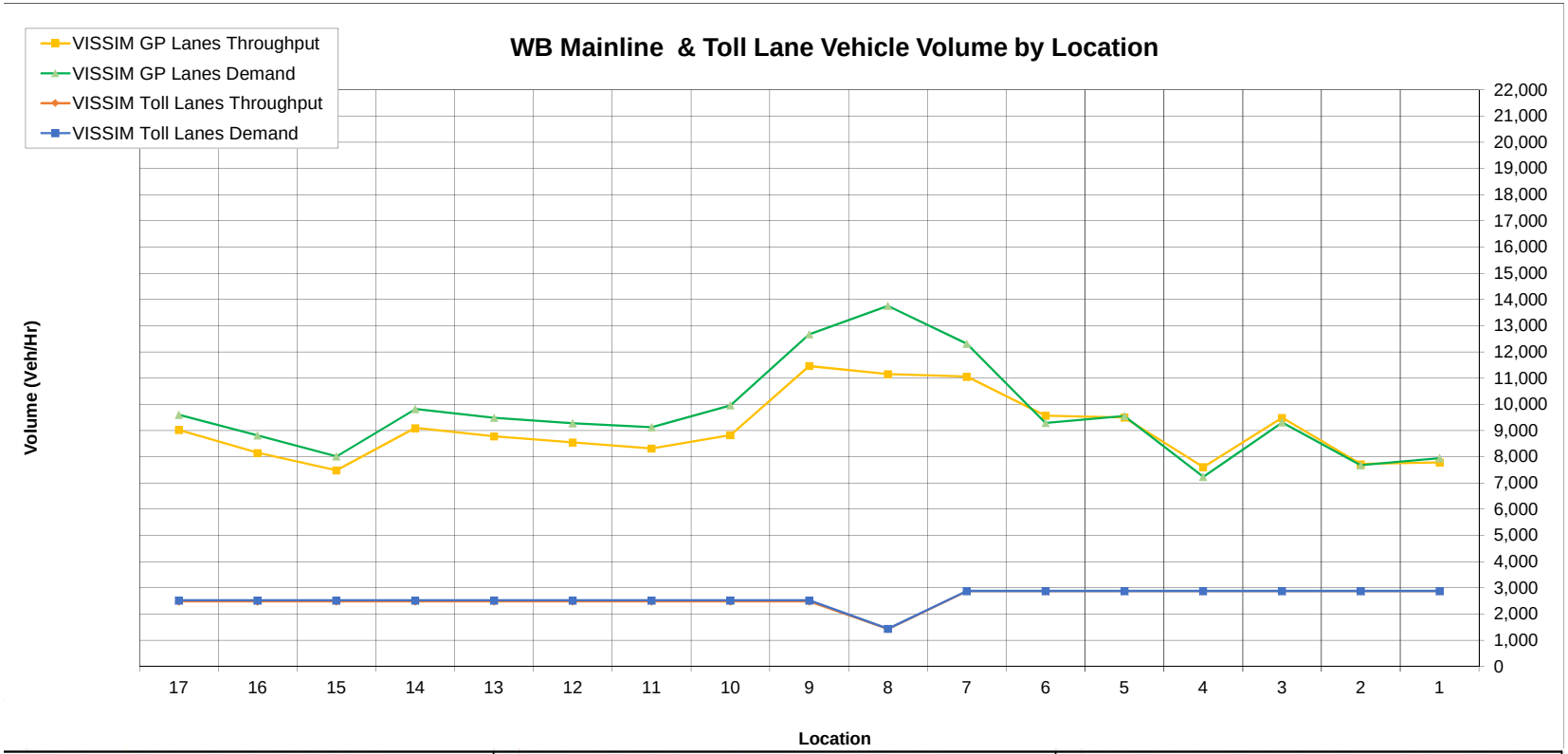
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR-71 to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	On Ramp from Green River to On Ramp from SR-71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to On Ramp from Managed Lanes	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	On Ramp from Managed Lanes to Off Ramp to Managed Lanes	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	Off Ramp to Managed Lanes to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71	18	On Ramp from Serfas/Autoclub to End of Study Area



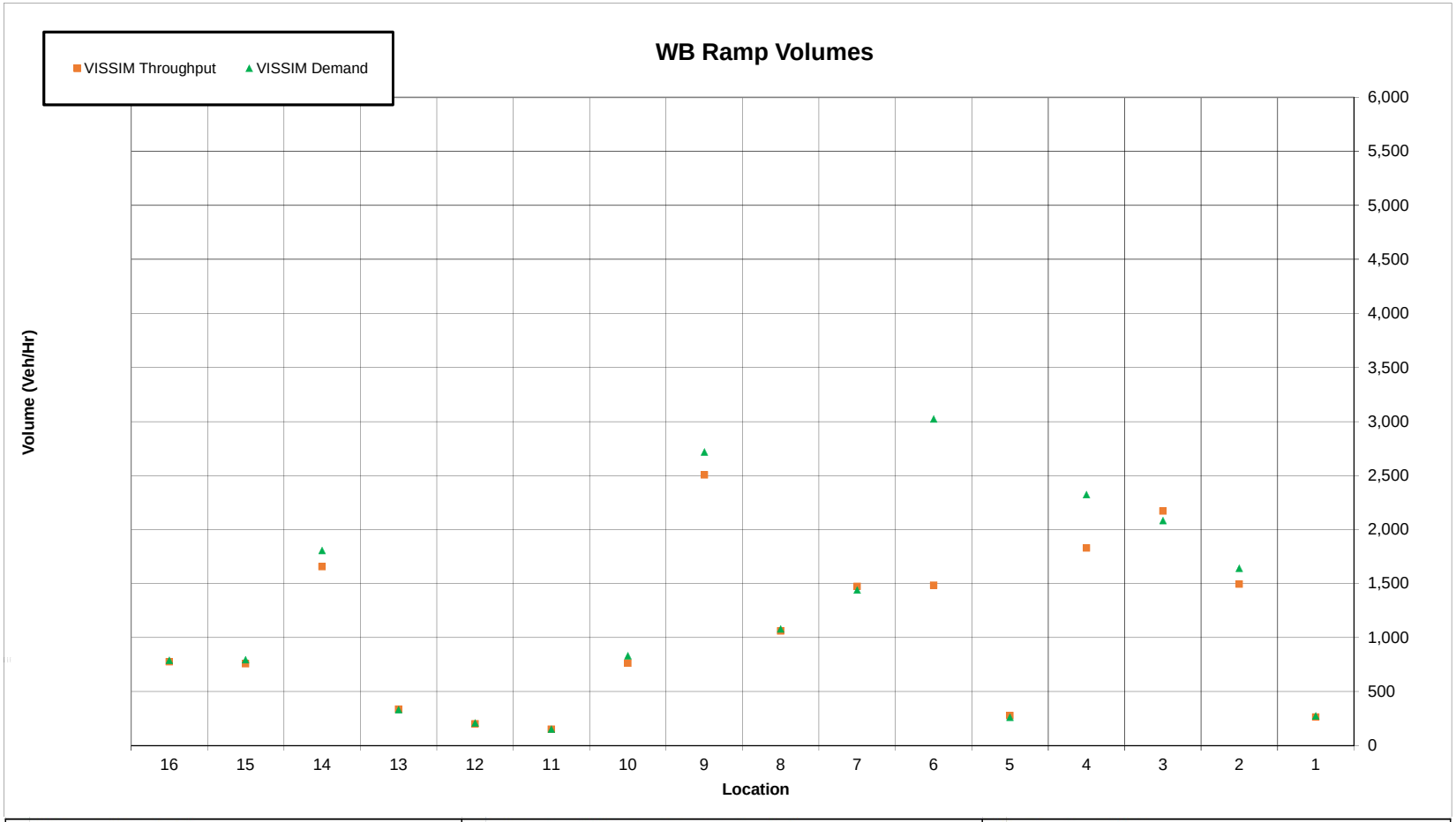
1 Off Ramp to Weir Canyon	7 On Ramp from NB Gypsum Canyon	13 On Ramp from Green River (to SR 71 NB)
2 On Ramp from SB Weir Canyon	8 On Ramp from NB SR 241 GP	14 On Ramp from Green River (to SR 91 EB)
3 On Ramp from NB Weir Canyon	9 On Ramp from HOT Exit (east of SR 241)	15 On Ramp from SR 71 SB
4 Off Ramp to SB SR 241 GP	10 Off Ramp to HOT Entrance (west of Green River Rd)	16 Off Ramp to Serfas/Autoclub
5 Off Ramp to Gypsum Canyon	11 Off Ramp to Green River	17 Off Ramp to EB Maple
6 On Ramp from SB Gypsum Canyon	12 Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub



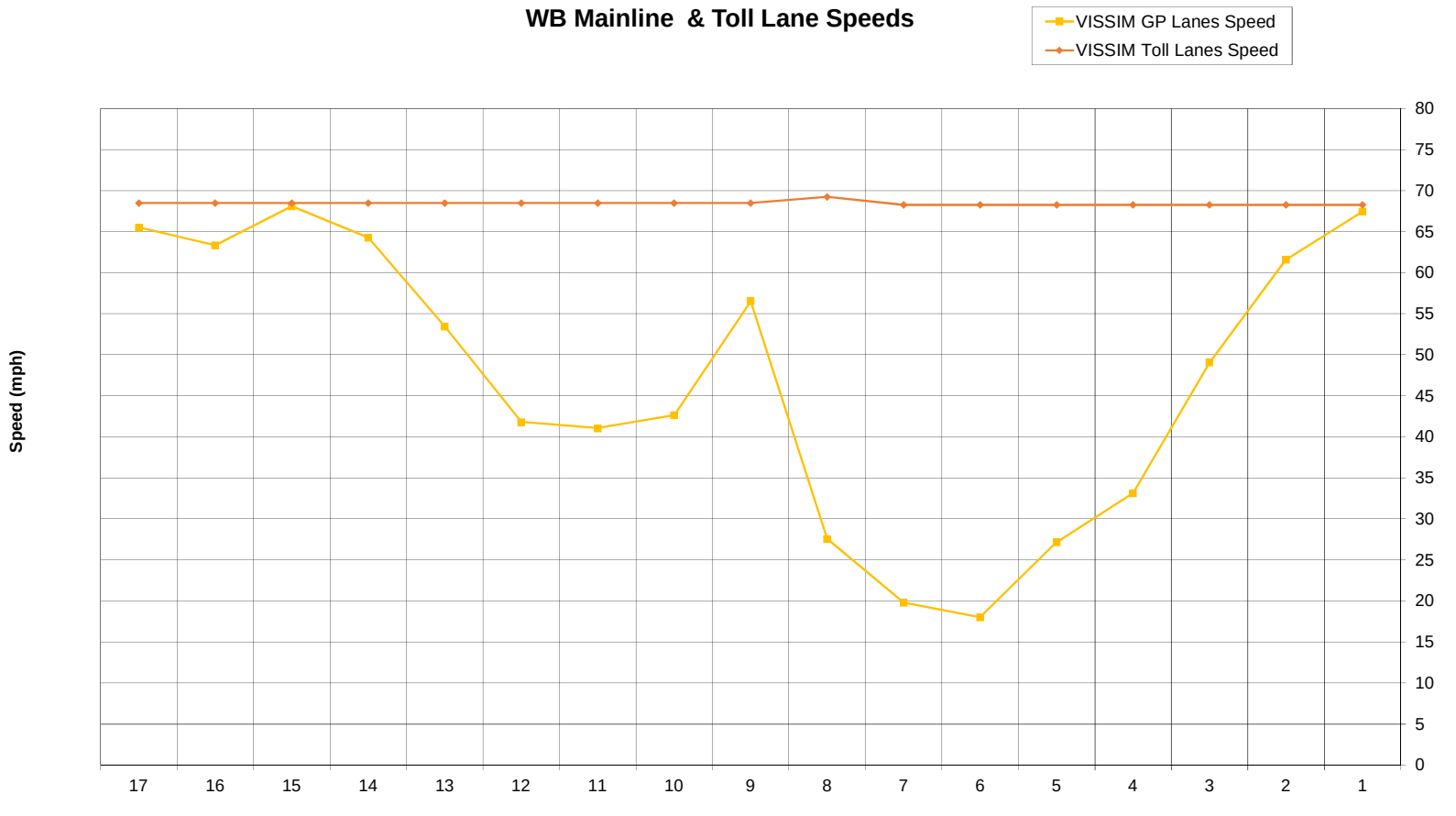
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from Managed Lanes	13 On Ramp from Gypsum Canyon SB to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from Managed Lanes to Off Ramp to Managed Lanes	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 Off Ramp to Managed Lanes to Off Ramp to SR 241	15 Off Ramp to Weir Canyon to On Ramp from Weir Canyon NB
4 Off Ramp to SR 71 to On Ramp from SR 71	10 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	16 On Ramp from Weir Canyon NB to On Ramp from Weir Canyon SB
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On Ramp from NB Gypsum Canyon (loop)	17 On Ramp from Weir Canyon SB to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from Gypsum Canyon NB to On Ramp from Gypsum Canyon SB	



1 Off Ramp to Serfas/Autoclub	7 On Ramp from HOV Exit (west of Green River Rd)	13 On Ramp from SR 241
2 On Ramp from Serfas/Autoclub	8 Off Ramp to HOV Entrance (east of SR 241)	14 Off Ramp to Weir Canyon Rd
3 Off Ramp to SR 71	9 Off Ramp to SR 241	15 On Ramp from NB Weir Canyon Rd
4 On Ramp from SR 71	10 Off Ramp to Gypsum Canyon Rd	16 On Ramp from SB Weir Canyon Rd
5 Off Ramp to Green River Rd	11 On Ramp from NB Gypsum Canyon Rd	
6 On Ramp from Green River Rd	12 On Ramp from SB Gypsum Canyon Rd	



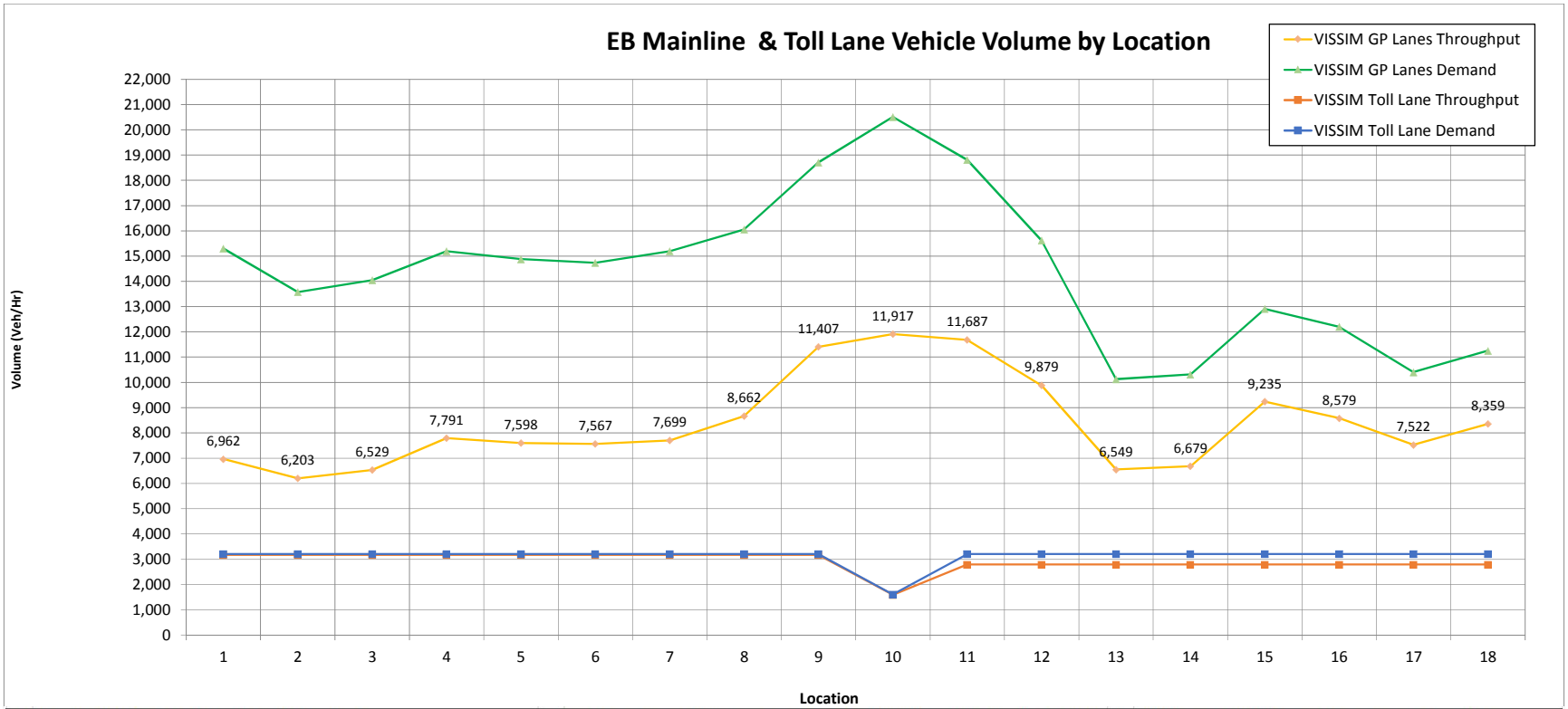
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		

VISSIM Model Summary - 2040 No Build - PM Peak Period
Network Summary Statistics

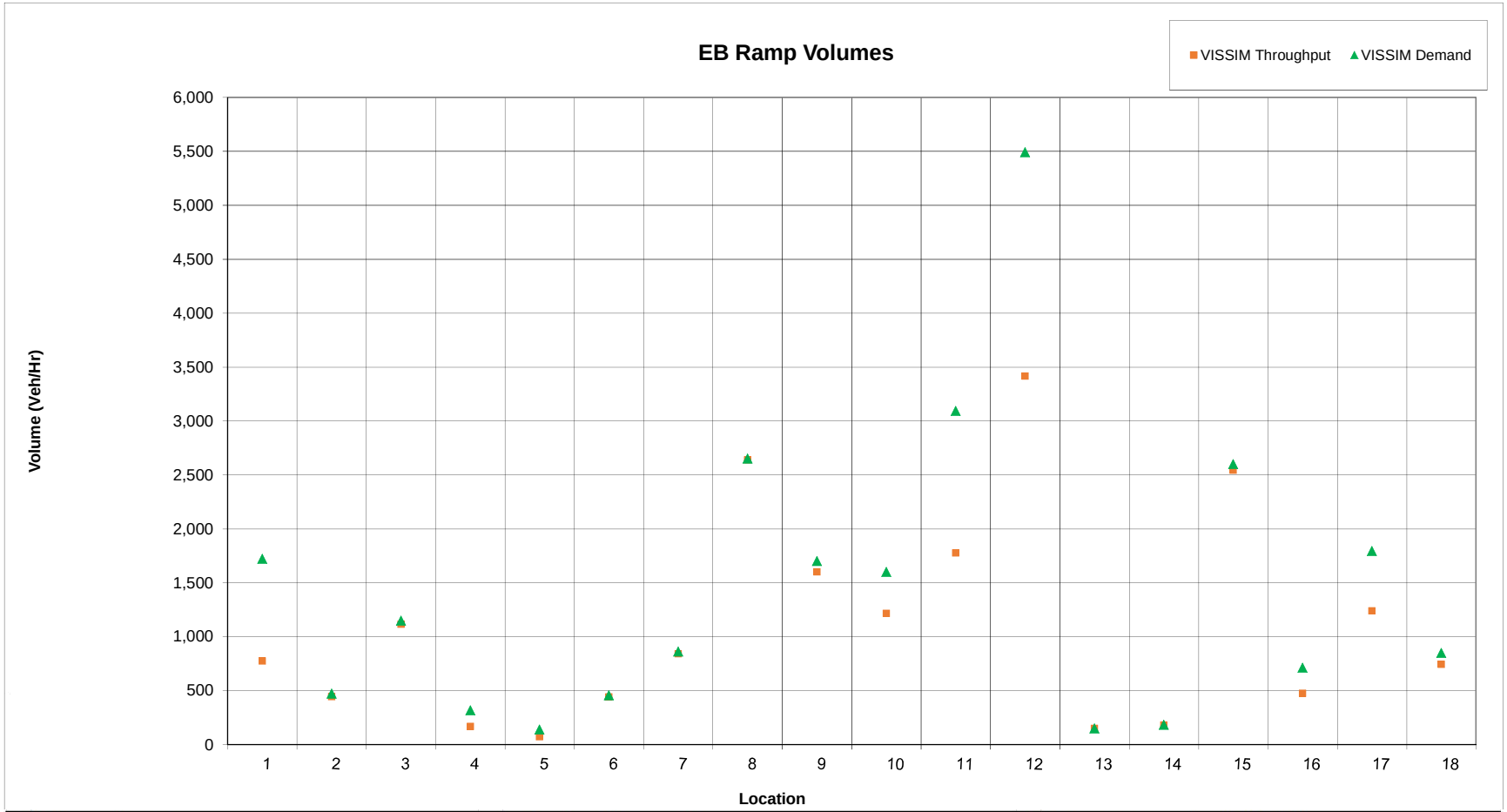
Parameter			2040 No Project	2017 No Project	Difference
Total Vehicle Demand (4 Hr)			168,494	141,937	26,557
Total number of vehicles that did not reach their desitination			26,918	20,812	6,106
Totla number of vehicles that have reached their destination			141,576	121,125	20,451
Total vehicle-miles traveled (VMT)			1,173,727	1,014,001	159,725
Total travel time, All Vehicle Types (VHT)			26,063	26,278	-215
Average speed [mph], All Vehicle Types			45.1	38.6	6.5
Average delay time per vehicle [mins], All Vehicle Types			3.45	5.27	-1.82

VISSIM Model Summary - 2040 No Build - PM Peak Period
Network Summary Statistics

#	Origin	#	Destination	) Ke	Hide Travel Time Seg 1	Seg 2	Seg 3	2040 PM No Build VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	1	1002	1003	1005	19.8	20.3	20.9	20.5
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	2	1002	1003	2005	19.7	20.3	20.8	20.5
		5	SR 241 SB south of SR 91	3	1001			14.7	14.7	14.6	14.3
		7	SR 71 NB north of SR 91	4	1002	1003	1004	21.2	21.8	22.3	22.0
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	5	2002	1003	1005	8.8	9.2	9.7	9.9
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	6	2002	2003	2005	8.4	8.4	8.4	8.4
		7	SR 71 NB north of SR 91	7	2002	1003	1004	10.2	10.6	11.2	11.4
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8	1011	1012	1014	8.7	8.7	8.7	8.5
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9	1011	1012	2014	8.6	8.6	8.6	8.5
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10	1011	1012	1013	11.0	11.1	11.0	10.9
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	11	1011	1012	2013	n/a	n/a	n/a	n/a
		7	SR 71 NB north of SR 91	12	1010			5.0	5.0	5.0	5.0
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	13	2011	1012	1014	8.6	8.7	8.6	8.5
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	14	2011	2012	2014	8.4	8.4	8.4	8.3
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15	2011	1012	1013	11.0	11.0	11.0	10.9
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	16	2011	2012	2013	n/a	n/a	n/a	n/a
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	17	1006			7.2	7.2	7.5	7.3
		3	SR 91 EB GP Lanes east of Serfas Club Rd	18	1007	1003	1005	11.2	11.6	12.7	12.6
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19	1007	1003	2005	11.2	11.6	12.7	12.5
		7	SR 71 NB north of SR 91	20	1007	1003	1004	12.6	13.1	14.2	14.0
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	21	2007	1003	1005	n/a	n/a	n/a	n/a
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	22	2007	2003	2005	n/a	n/a	n/a	n/a
		7	SR 71 NB north of SR 91	23	2007	1003	1004	n/a	n/a	n/a	n/a
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	24	1009	1012	1014	10.0	10.1	10.0	9.8
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	25	1009	1012	2014	9.9	10.0	9.9	9.8
		3	SR 91 EB GP Lanes east of Serfas Club Rd	26	1008			5.7	5.7	5.6	5.4
		5	SR 241 SB south of SR 91 (Via GP Ramp)	27	1009	1012	1013	12.4	12.5	12.4	12.2
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	28	1009	1012	2013	n/a	n/a	n/a	n/a

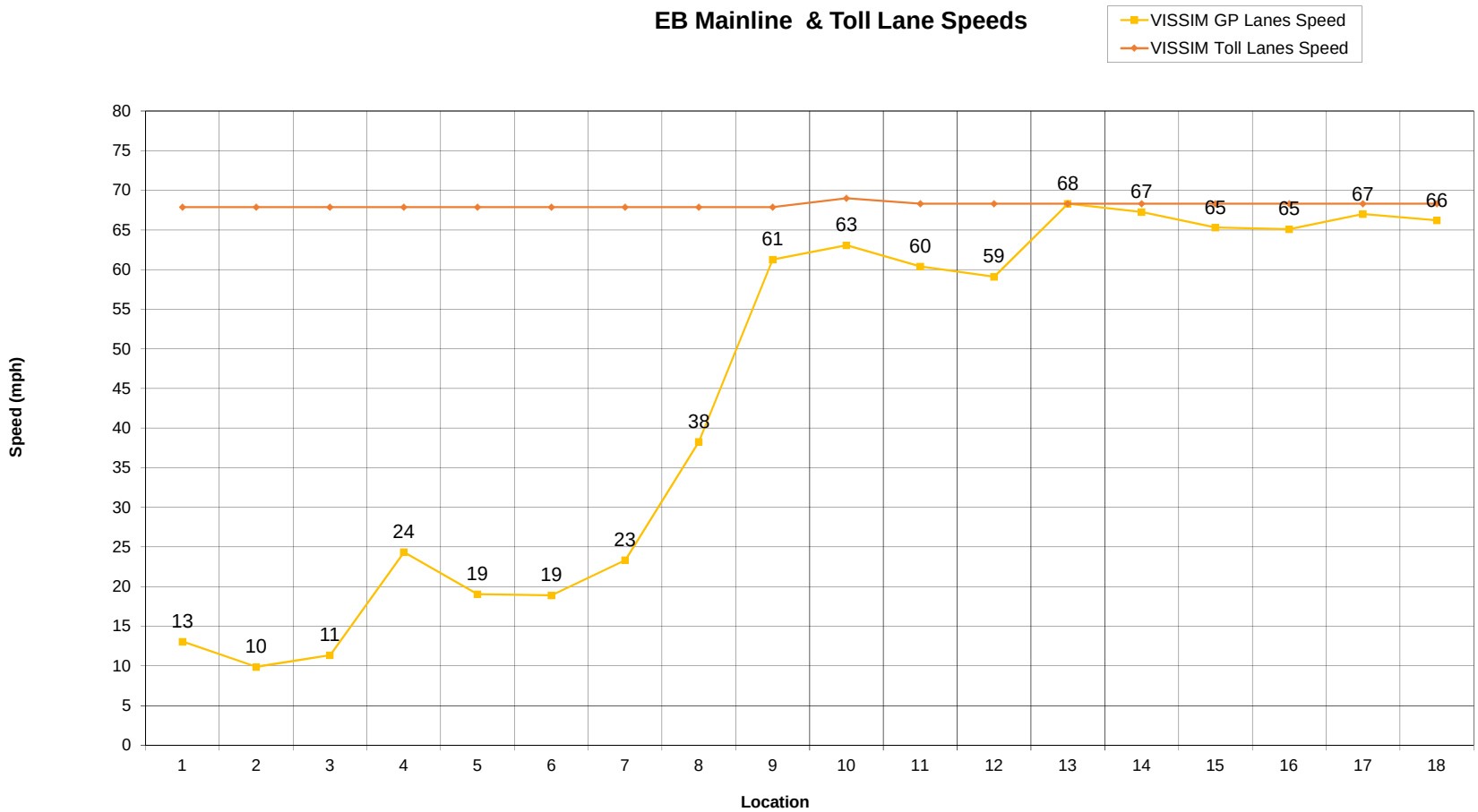


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR-71 to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	On Ramp from Green River to On Ramp from SR-71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to On Ramp from Managed Lanes	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	On Ramp from Managed Lanes to Off Ramp to Managed Lanes	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	Off Ramp to Managed Lanes to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71	18	On Ramp from Serfas/Autoclub to End of Study Area

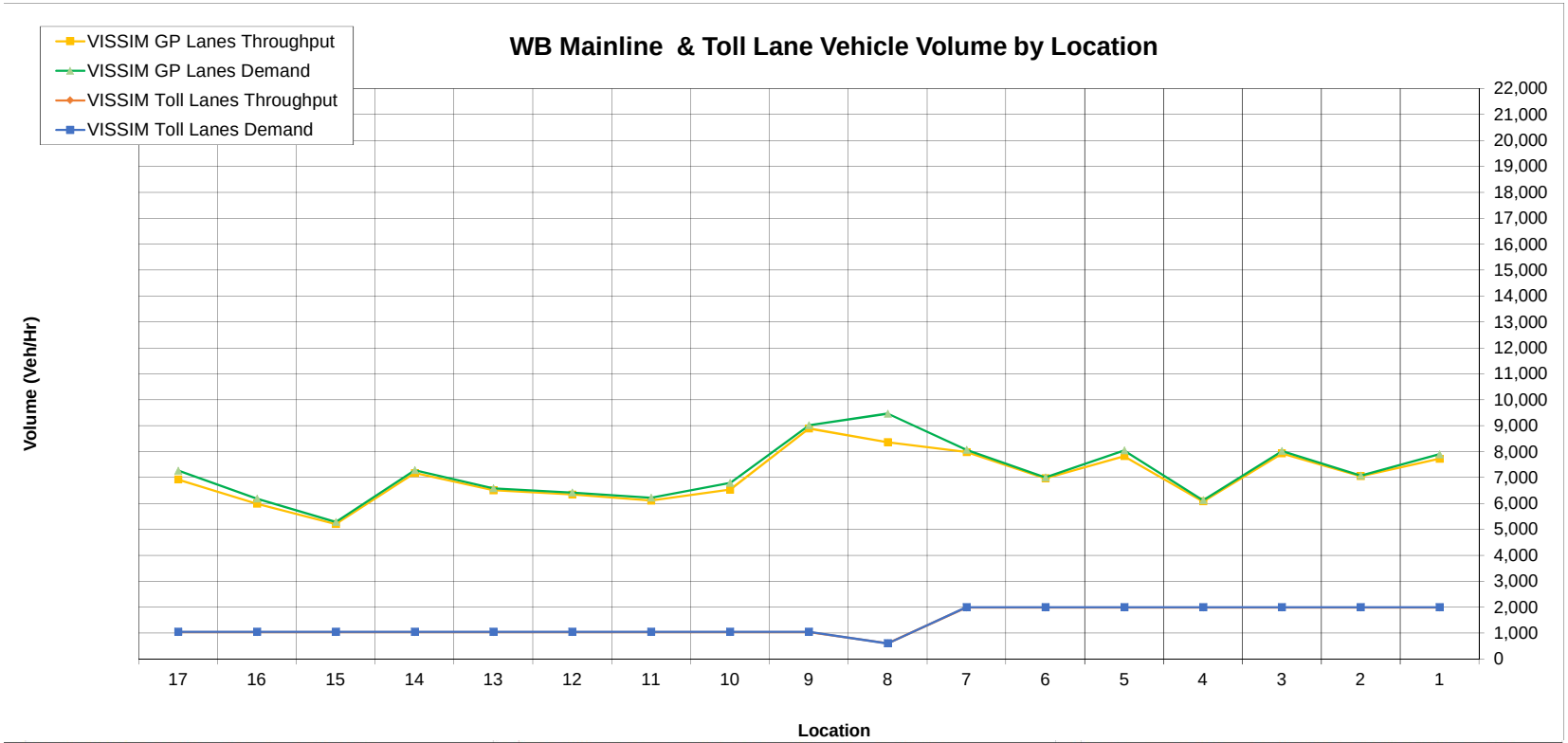


1 Off Ramp to Weir Canyon	7 On Ramp from NB Gypsum Canyon	13 On Ramp from Green River (to SR 71 NB)
2 On Ramp from SB Weir Canyon	8 On Ramp from NB SR 241 GP	14 On Ramp from Green River (to SR 91 EB)
3 On Ramp from NB Weir Canyon	9 On Ramp from HOT Exit (east of SR 241)	15 On Ramp from SR 71 SB
4 Off Ramp to SB SR 241 GP	10 Off Ramp to HOT Entrance (west of Green River Rd)	16 Off Ramp to Serfas/Autoclub
5 Off Ramp to Gypsum Canyon	11 Off Ramp to Green River	17 Off Ramp to EB Maple
6 On Ramp from SB Gypsum Canyon	12 Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub

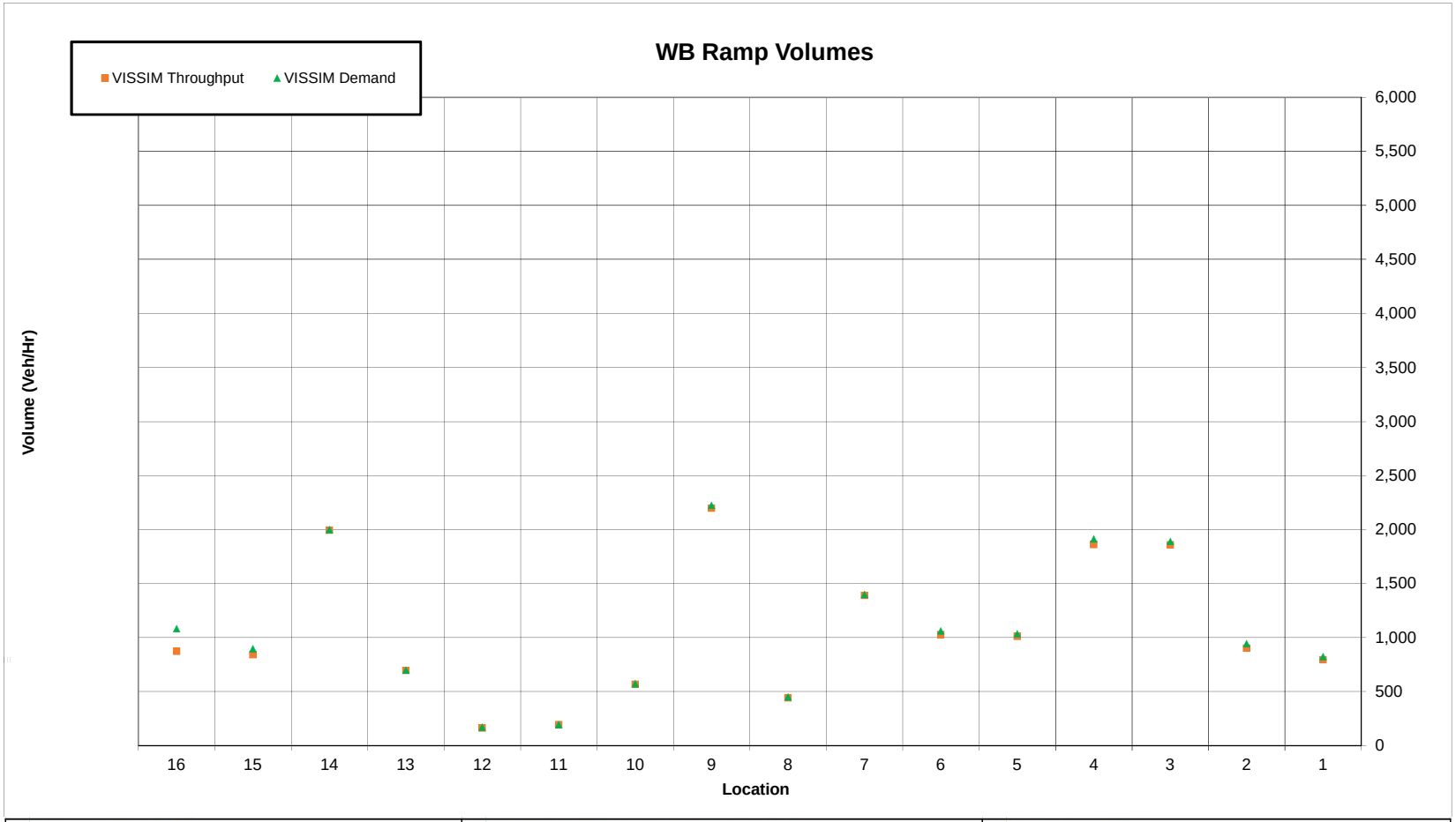
Charts 3-4 PM



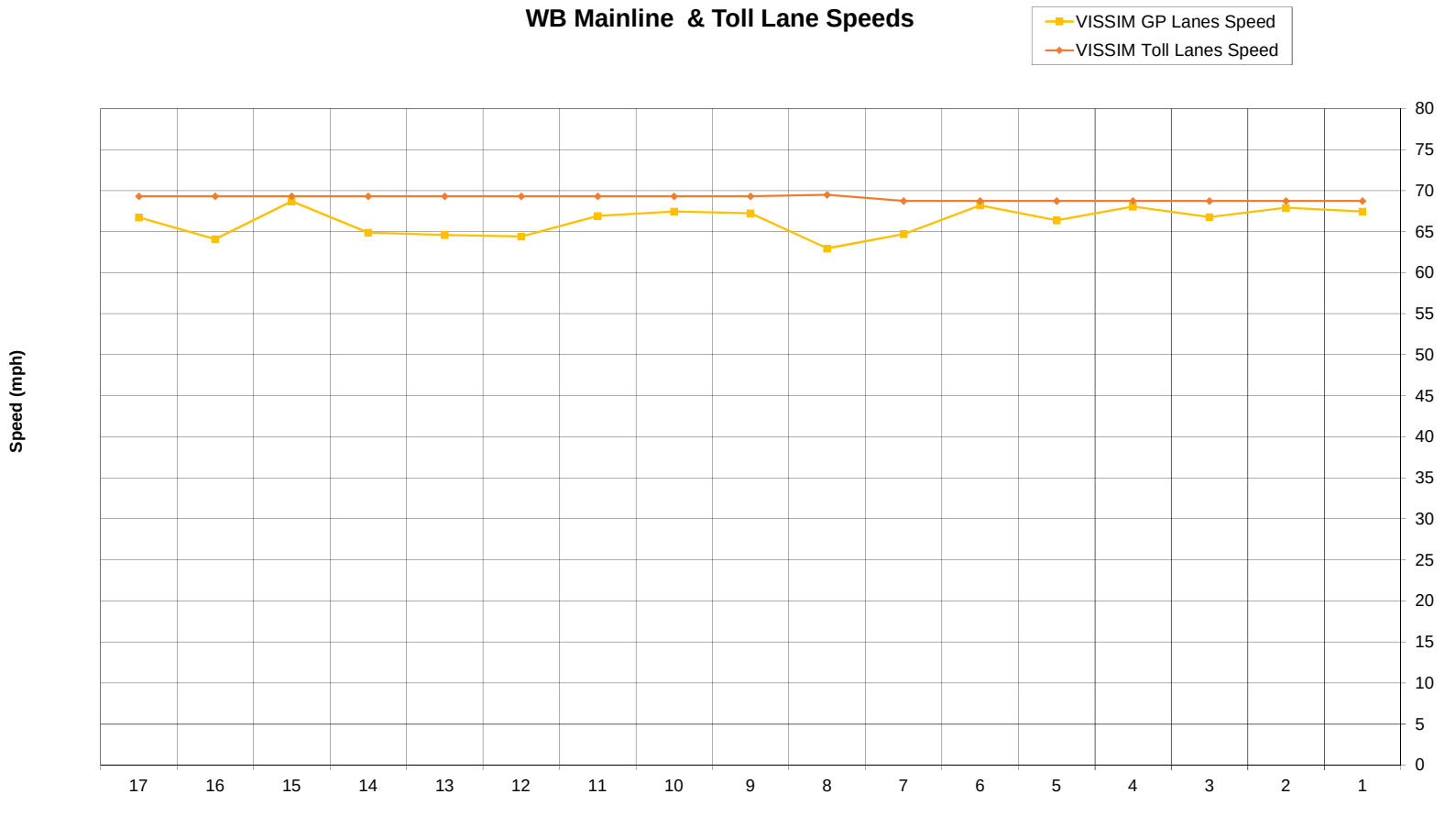
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



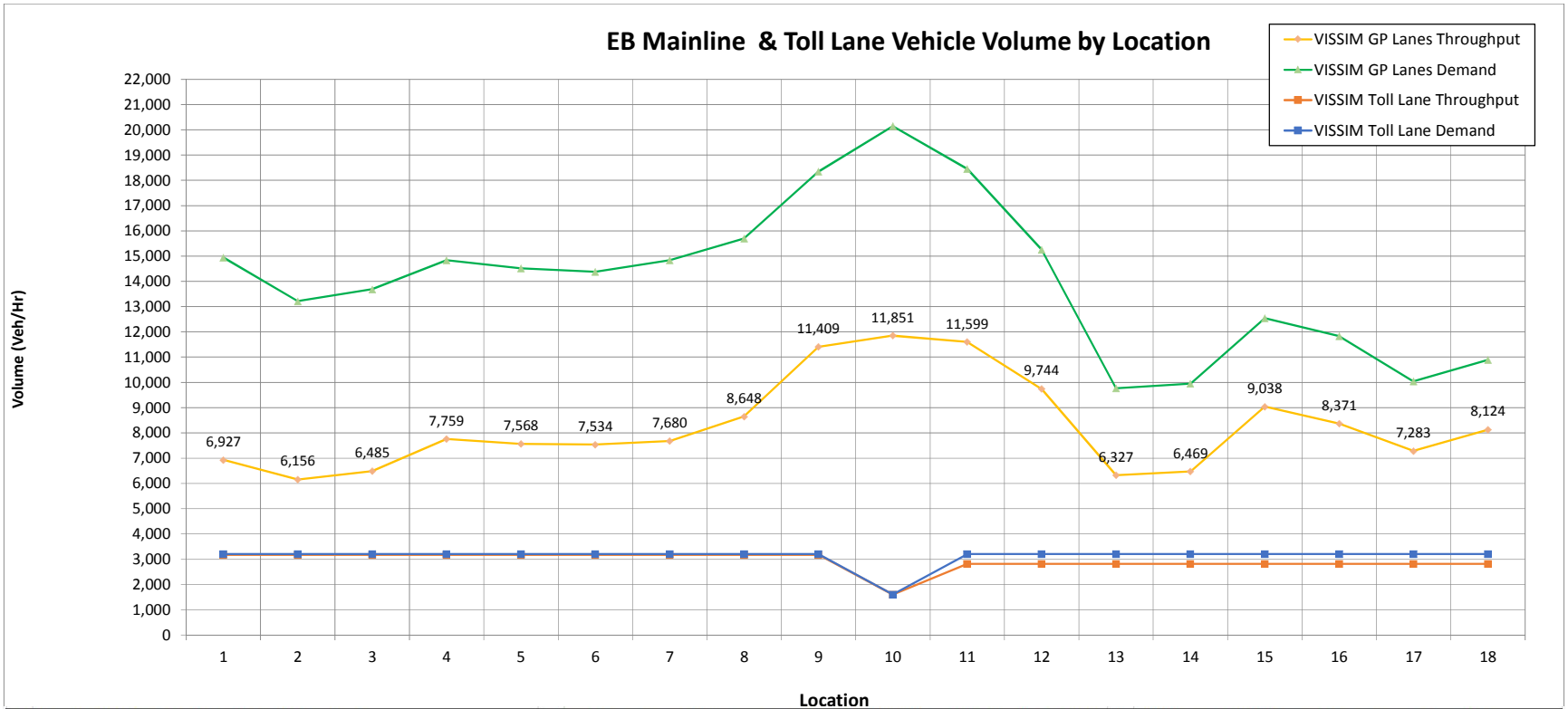
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from Managed Lanes	13 On Ramp from Gypsum Canyon SB to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from Managed Lanes to Off Ramp to Managed Lanes	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 Off Ramp to Managed Lanes to Off Ramp to SR 241	15 Off Ramp to Weir Canyon to On Ramp from Weir Canyon NB
4 Off Ramp to SR 71 to On Ramp from SR 71	10 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	16 On Ramp from Weir Canyon NB to On Ramp from Weir Canyon SB
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On Ramp from NB Gypsum Canyon (loop)	17 On Ramp from Weir Canyon SB to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from Gypsum Canyon NB to On Ramp from Gypsum Canyon SB	



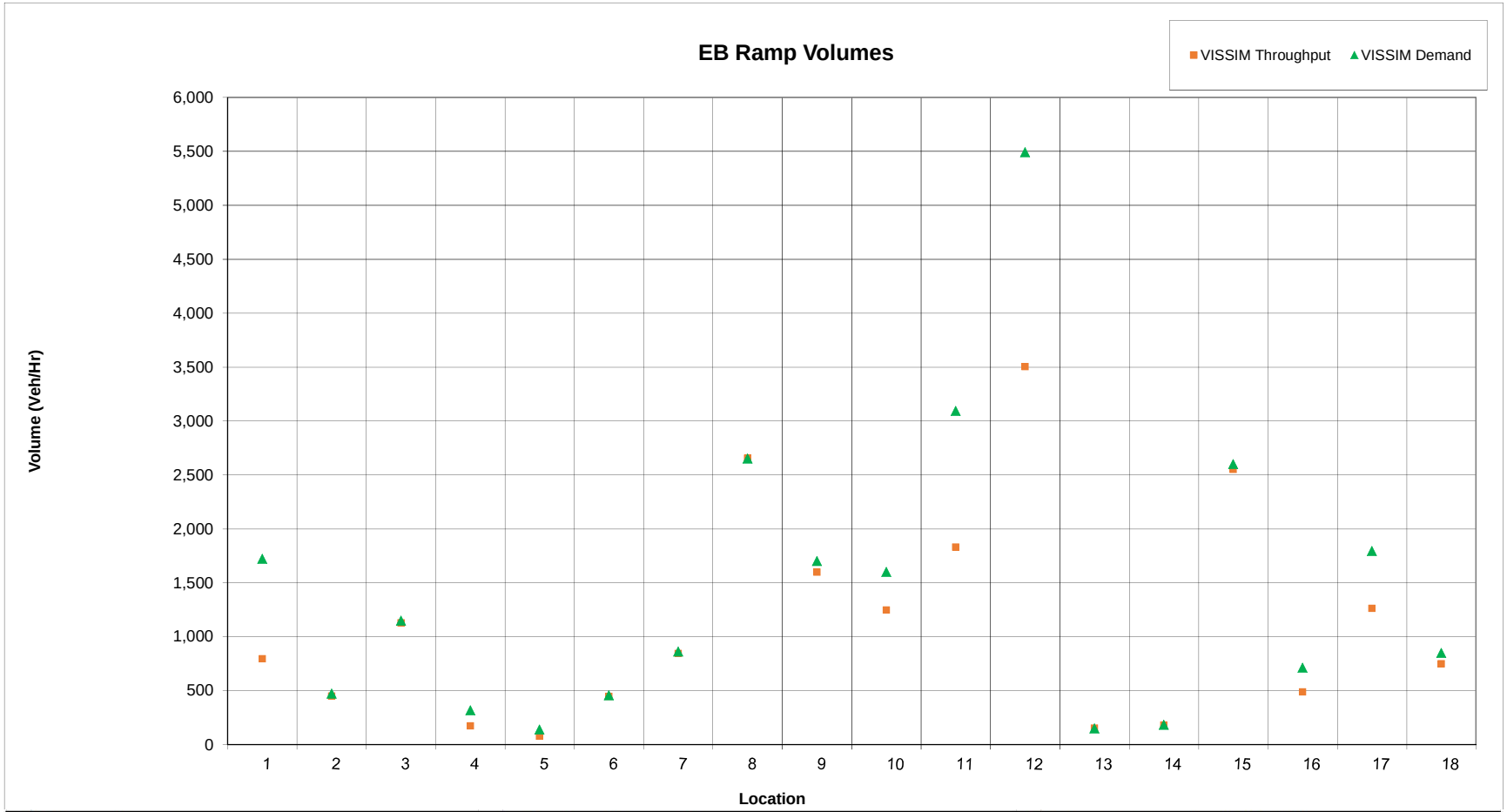
1 Off Ramp to Serfas/Autoclub	7 On Ramp from HOV Exit (west of Green River Rd)	13 On Ramp from SR 241
2 On Ramp from Serfas/Autoclub	8 Off Ramp to HOV Entrance (east of SR 241)	14 Off Ramp to Weir Canyon Rd
3 Off Ramp to SR 71	9 Off Ramp to SR 241	15 On Ramp from NB Weir Canyon Rd
4 On Ramp from SR 71	10 Off Ramp to Gypsum Canyon Rd	16 On Ramp from SB Weir Canyon Rd
5 Off Ramp to Green River Rd	11 On Ramp from NB Gypsum Canyon Rd	
6 On Ramp from Green River Rd	12 On Ramp from SB Gypsum Canyon Rd	



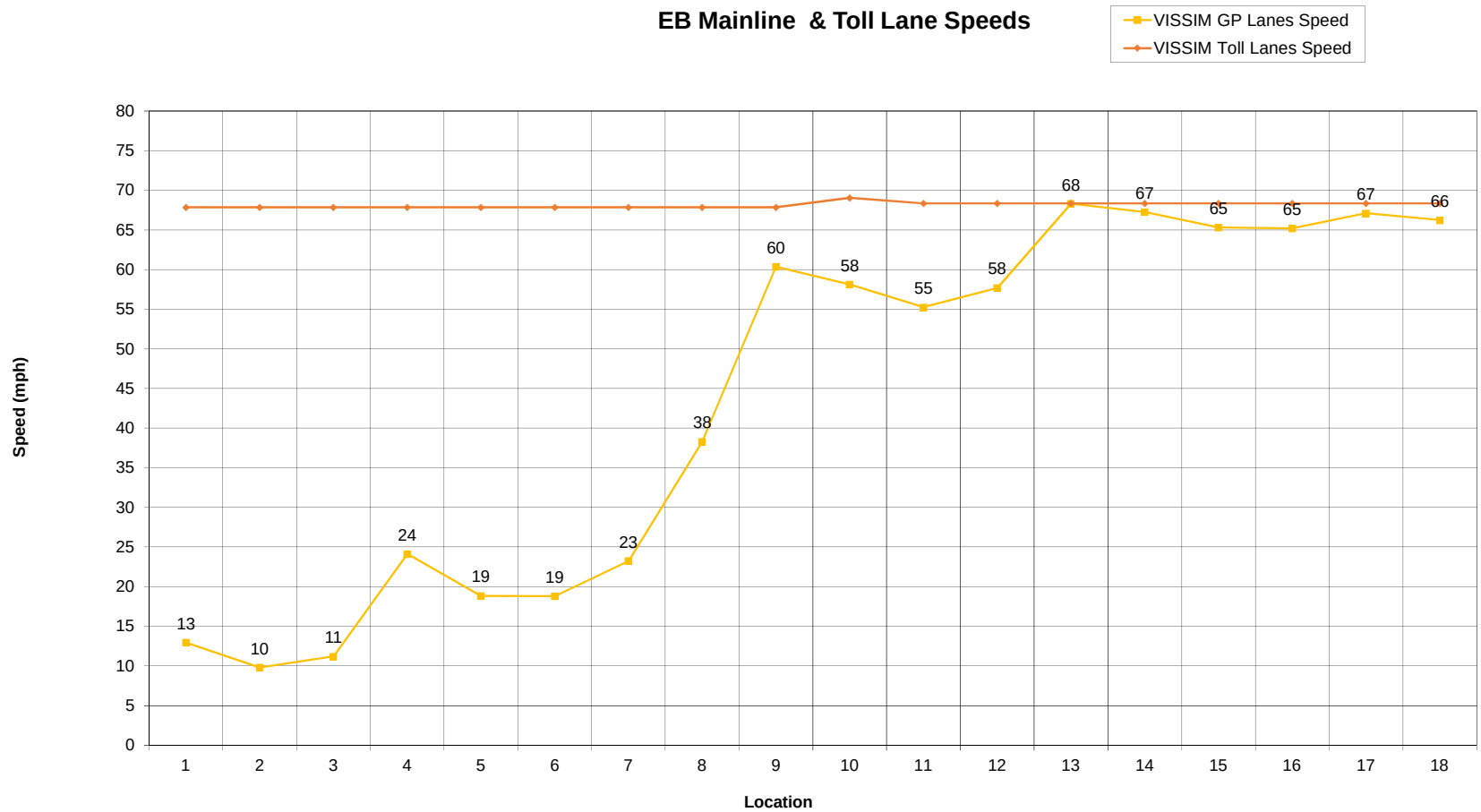
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		



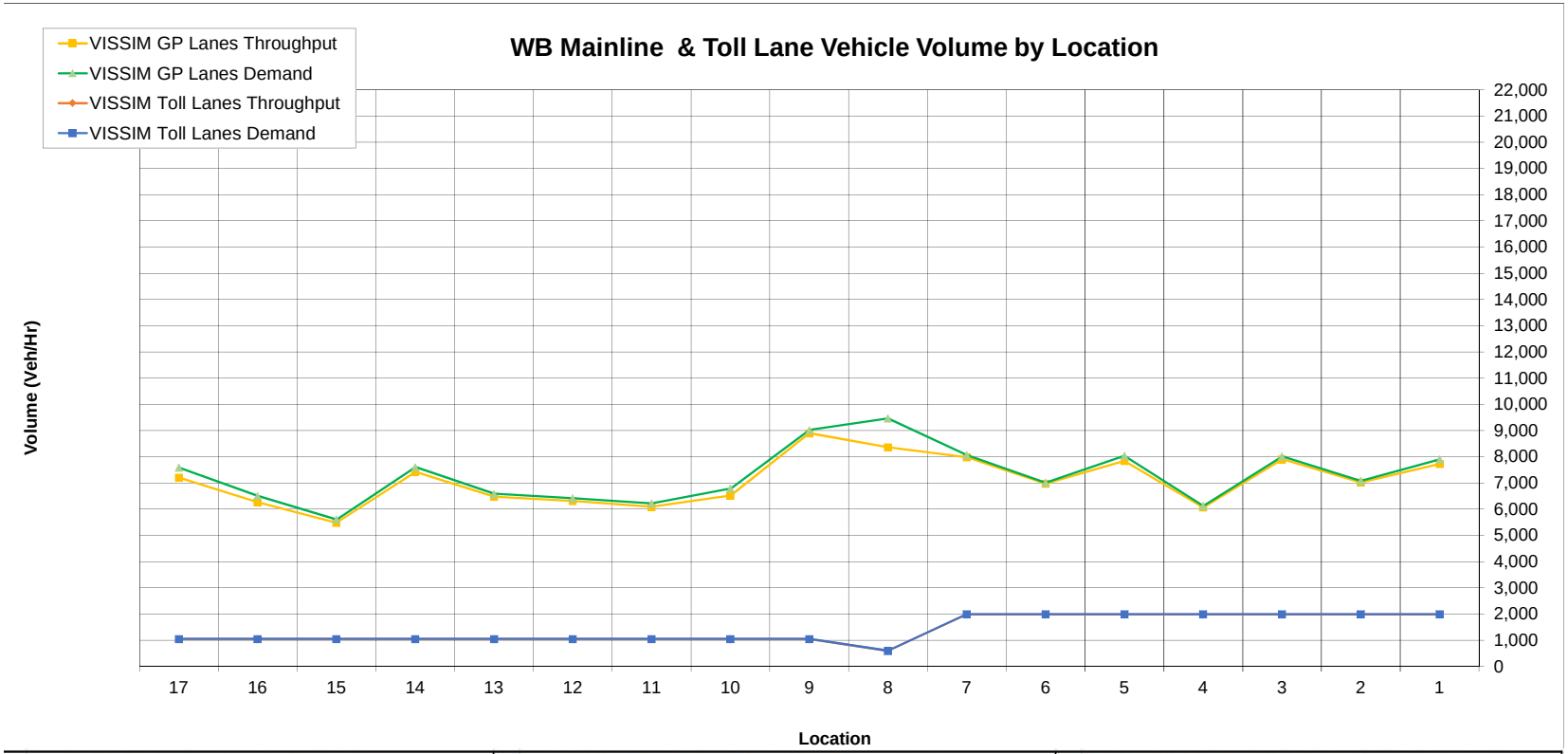
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR-71 to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	On Ramp from Green River to On Ramp from SR-71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to On Ramp from Managed Lanes	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	On Ramp from Managed Lanes to Off Ramp to Managed Lanes	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	Off Ramp to Managed Lanes to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71	18	On Ramp from Serfas/Autoclub to End of Study Area



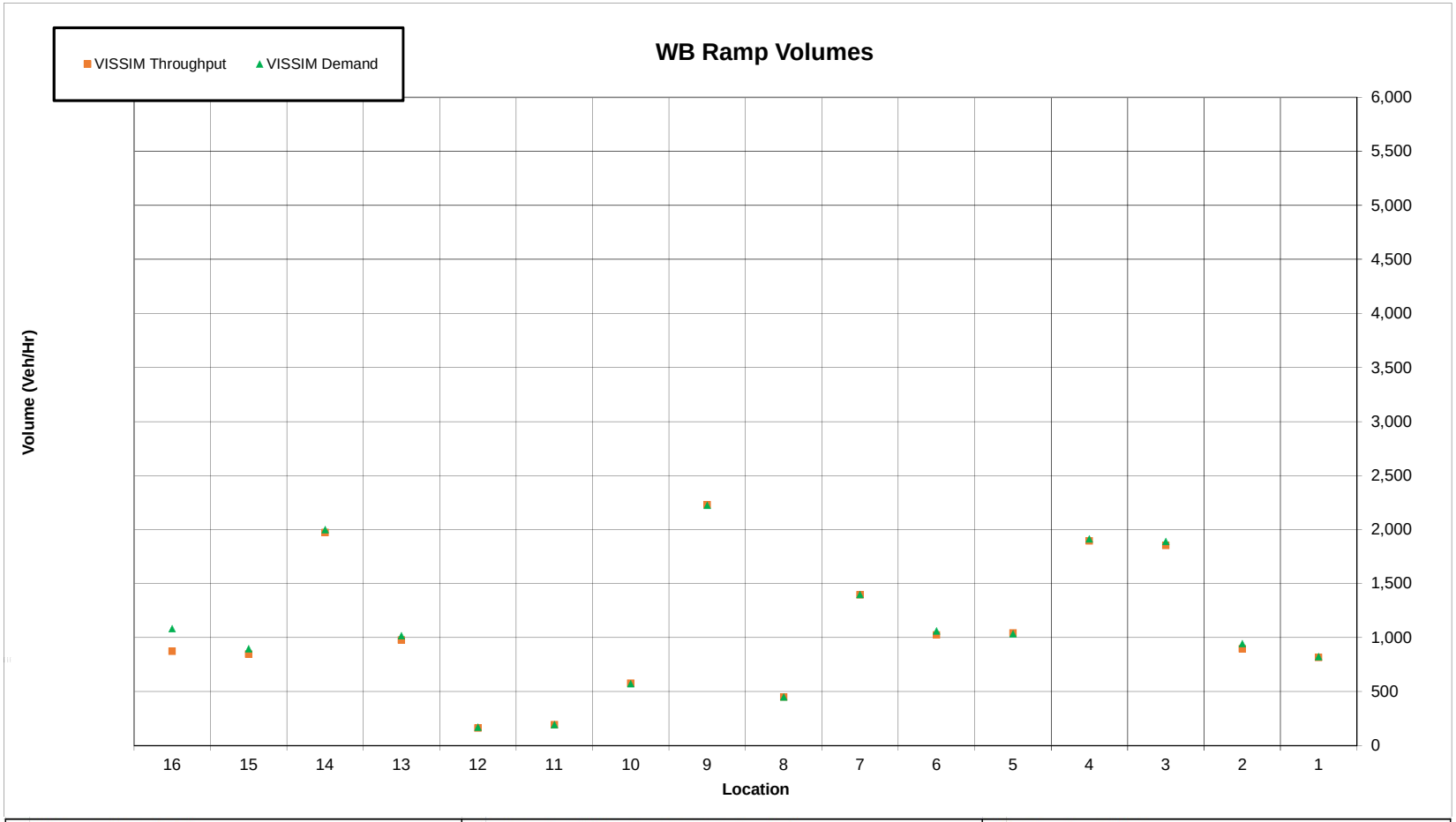
1 Off Ramp to Weir Canyon	7 On Ramp from NB Gypsum Canyon	13 On Ramp from Green River (to SR 71 NB)
2 On Ramp from SB Weir Canyon	8 On Ramp from NB SR 241 GP	14 On Ramp from Green River (to SR 91 EB)
3 On Ramp from NB Weir Canyon	9 On Ramp from HOT Exit (east of SR 241)	15 On Ramp from SR 71 SB
4 Off Ramp to SB SR 241 GP	10 Off Ramp to HOT Entrance (west of Green River Rd)	16 Off Ramp to Serfas/Autoclub
5 Off Ramp to Gypsum Canyon	11 Off Ramp to Green River	17 Off Ramp to EB Maple
6 On Ramp from SB Gypsum Canyon	12 Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub



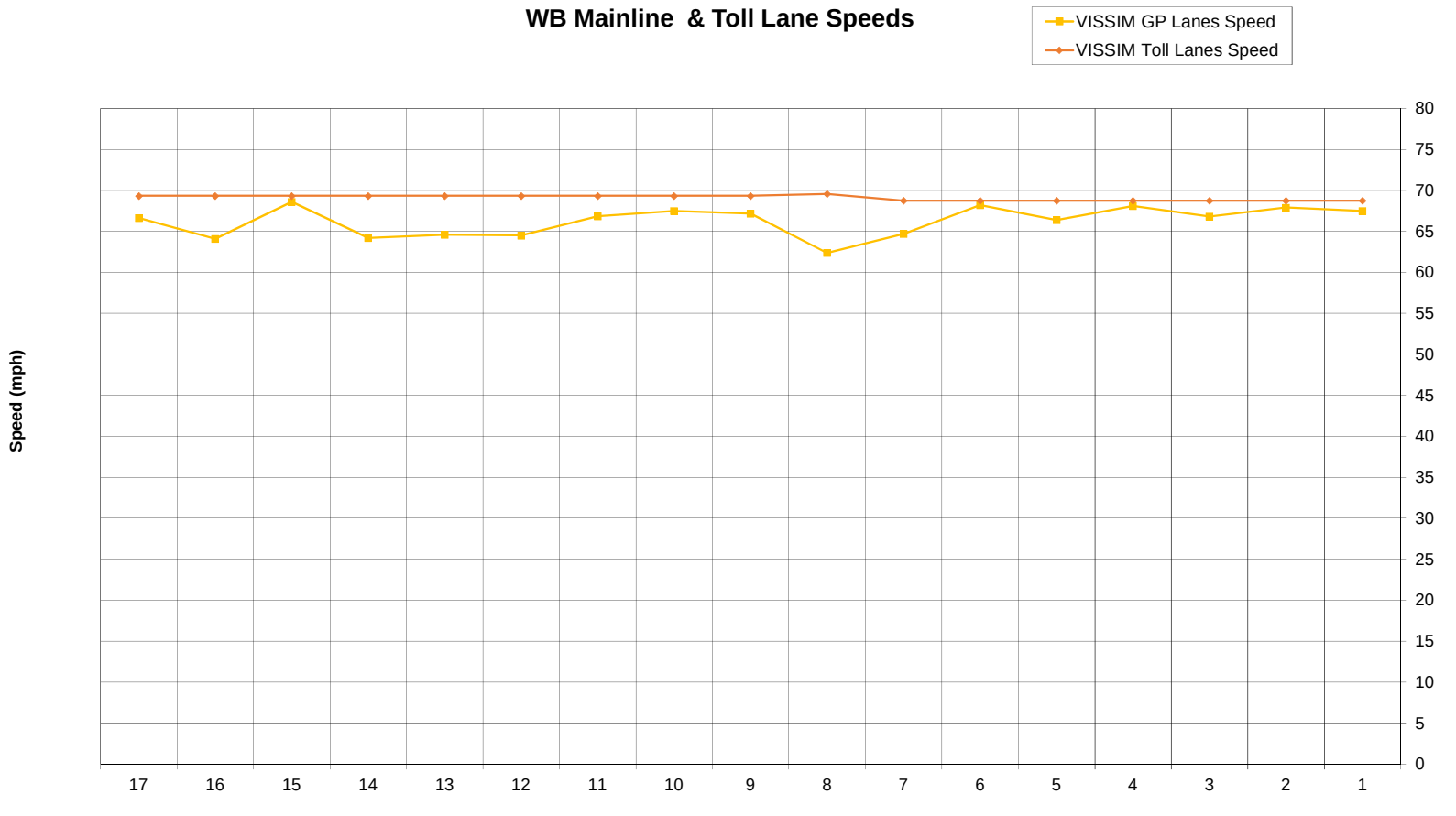
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



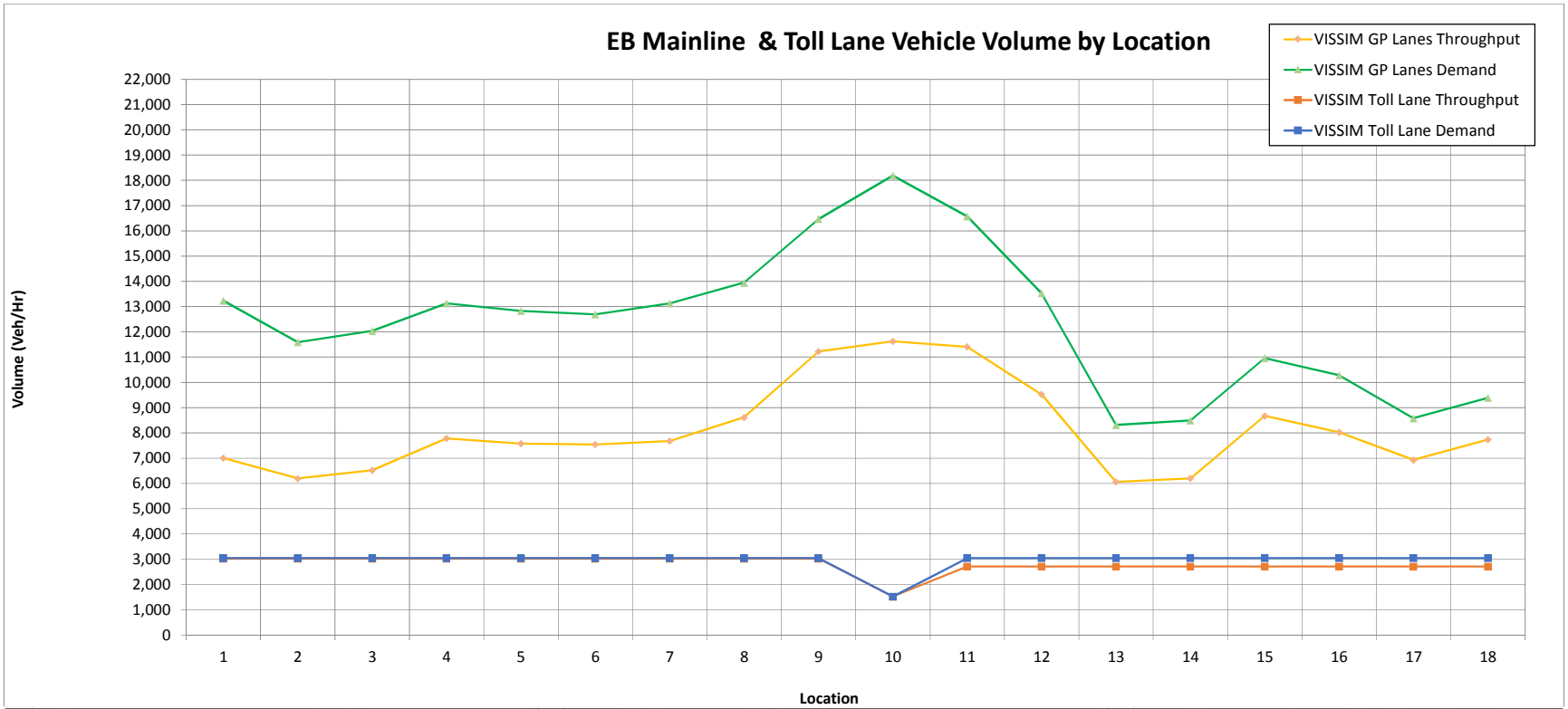
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from Managed Lanes	13 On Ramp from Gypsum Canyon SB to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from Managed Lanes to Off Ramp to Managed Lanes	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 Off Ramp to Managed Lanes to Off Ramp to SR 241	15 Off Ramp to Weir Canyon to On Ramp from Weir Canyon NB
4 Off Ramp to SR 71 to On Ramp from SR 71	10 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	16 On Ramp from Weir Canyon NB to On Ramp from Weir Canyon SB
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On Ramp from NB Gypsum Canyon (loop)	17 On Ramp from Weir Canyon SB to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from Gypsum Canyon NB to On Ramp from Gypsum Canyon SB	



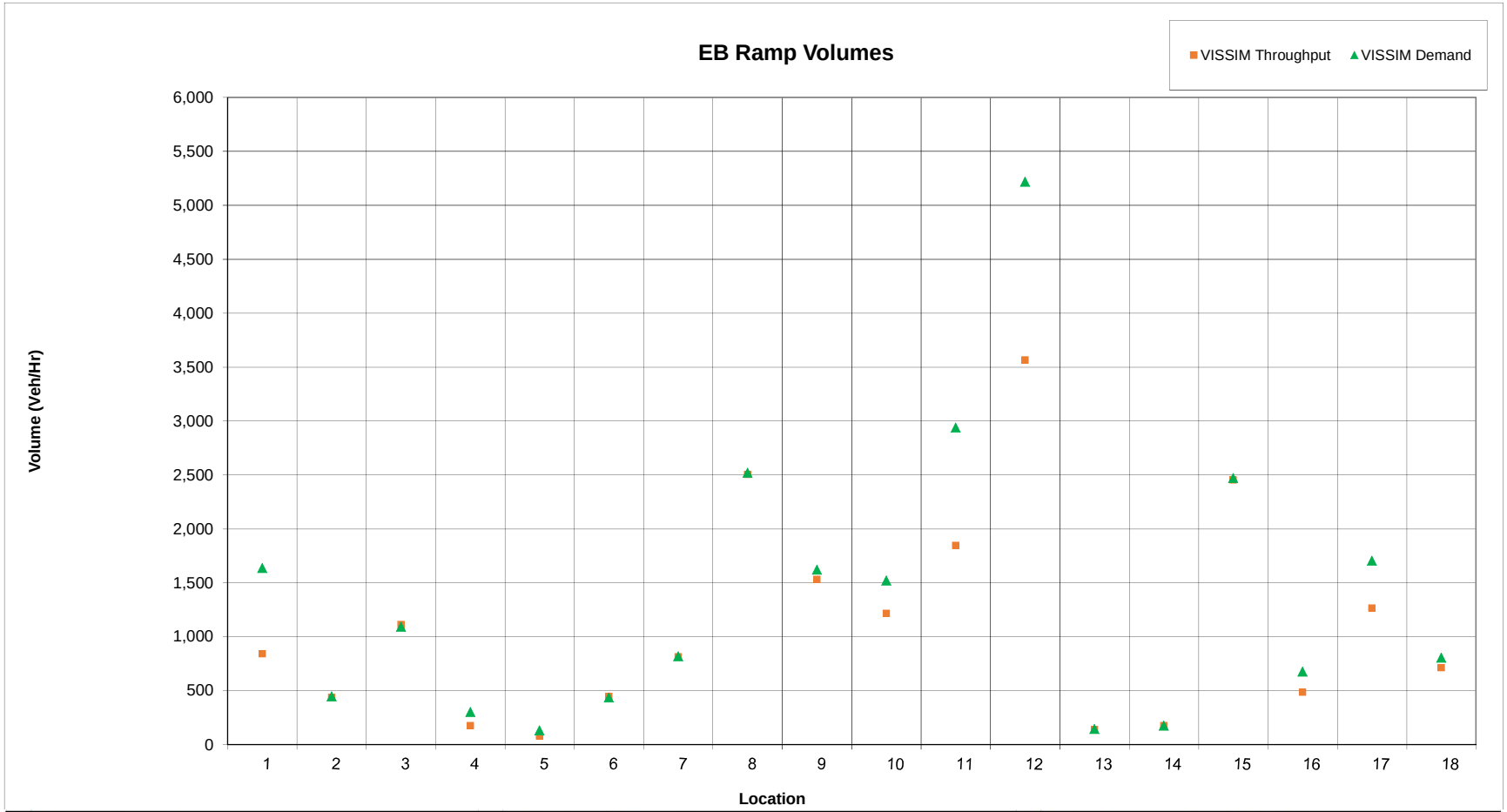
1 Off Ramp to Serfas/Autoclub	7 On Ramp from HOV Exit (west of Green River Rd)	13 On Ramp from SR 241
2 On Ramp from Serfas/Autoclub	8 Off Ramp to HOV Entrance (east of SR 241)	14 Off Ramp to Weir Canyon Rd
3 Off Ramp to SR 71	9 Off Ramp to SR 241	15 On Ramp from NB Weir Canyon Rd
4 On Ramp from SR 71	10 Off Ramp to Gypsum Canyon Rd	16 On Ramp from SB Weir Canyon Rd
5 Off Ramp to Green River Rd	11 On Ramp from NB Gypsum Canyon Rd	
6 On Ramp from Green River Rd	12 On Ramp from SB Gypsum Canyon Rd	



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		

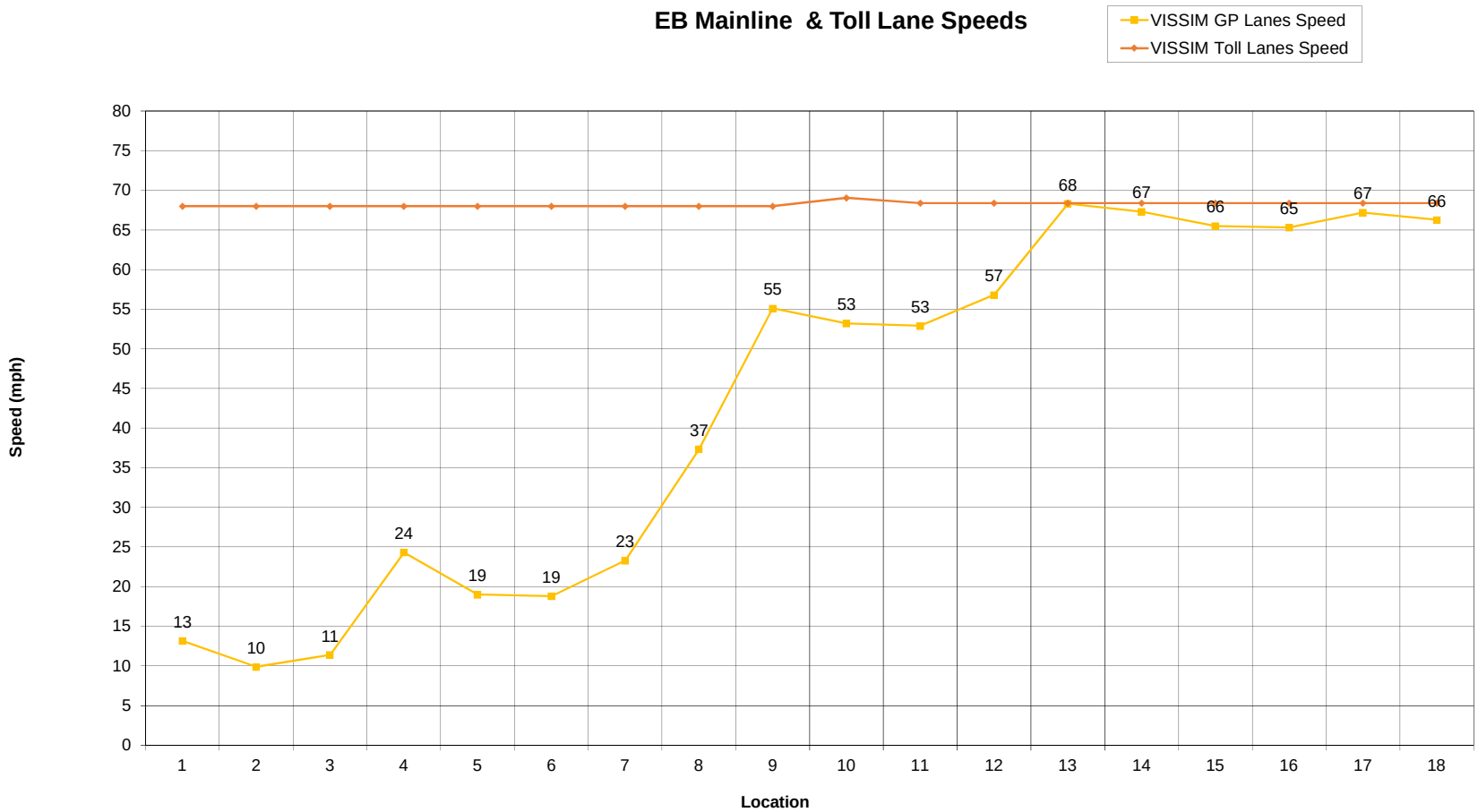


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR-71 to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	On Ramp from Green River to On Ramp from SR-71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to On Ramp from Managed Lanes	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	On Ramp from Managed Lanes to Off Ramp to Managed Lanes	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	Off Ramp to Managed Lanes to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71	18	On Ramp from Serfas/Autoclub to End of Study Area

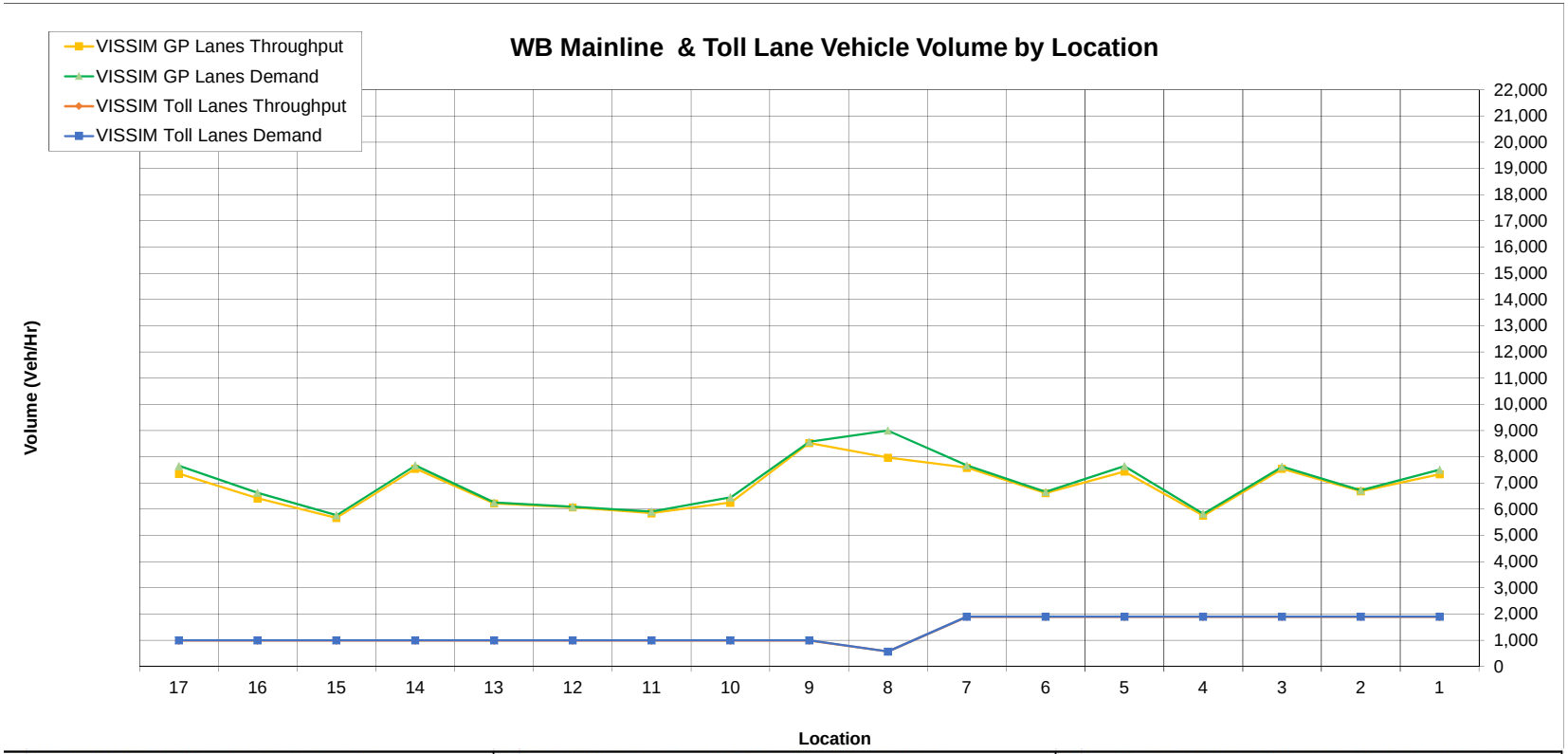


1 Off Ramp to Weir Canyon	7 On Ramp from NB Gypsum Canyon	13 On Ramp from Green River (to SR 71 NB)
2 On Ramp from SB Weir Canyon	8 On Ramp from NB SR 241 GP	14 On Ramp from Green River (to SR 91 EB)
3 On Ramp from NB Weir Canyon	9 On Ramp from HOT Exit (east of SR 241)	15 On Ramp from SR 71 SB
4 Off Ramp to SB SR 241 GP	10 Off Ramp to HOT Entrance (west of Green River Rd)	16 Off Ramp to Serfas/Autoclub
5 Off Ramp to Gypsum Canyon	11 Off Ramp to Green River	17 Off Ramp to EB Maple
6 On Ramp from SB Gypsum Canyon	12 Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub

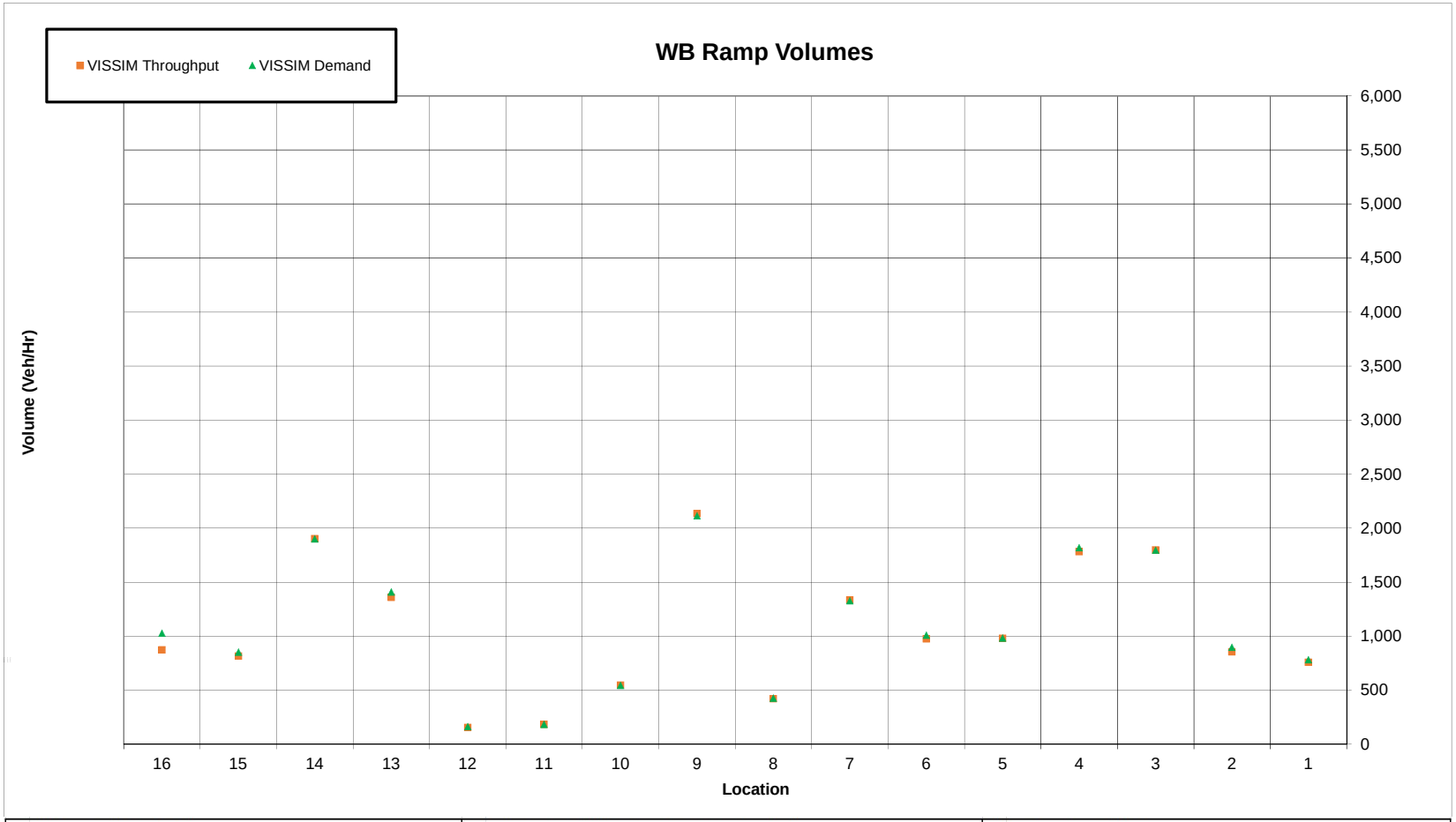
Charts 5-6 PM



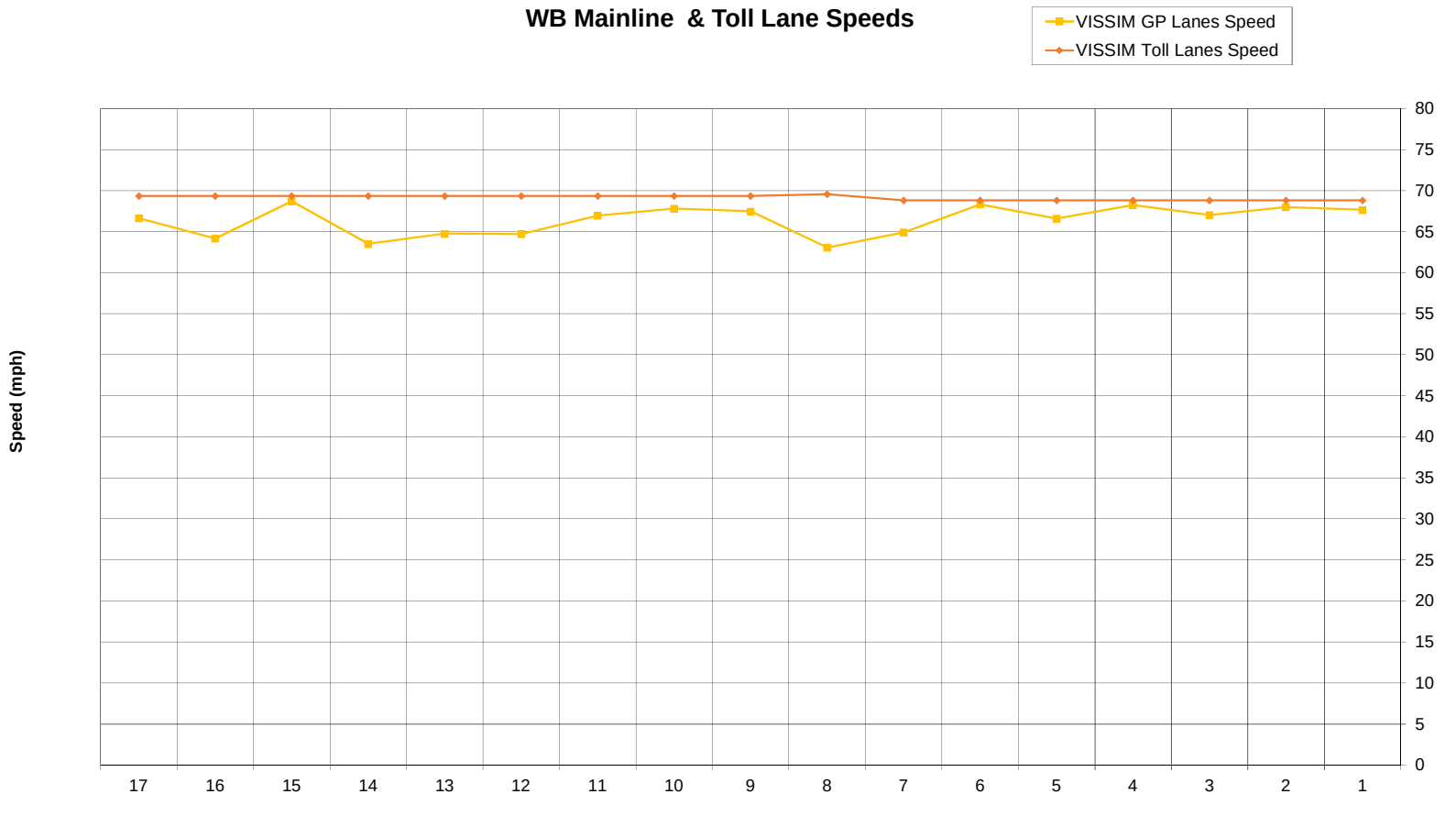
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



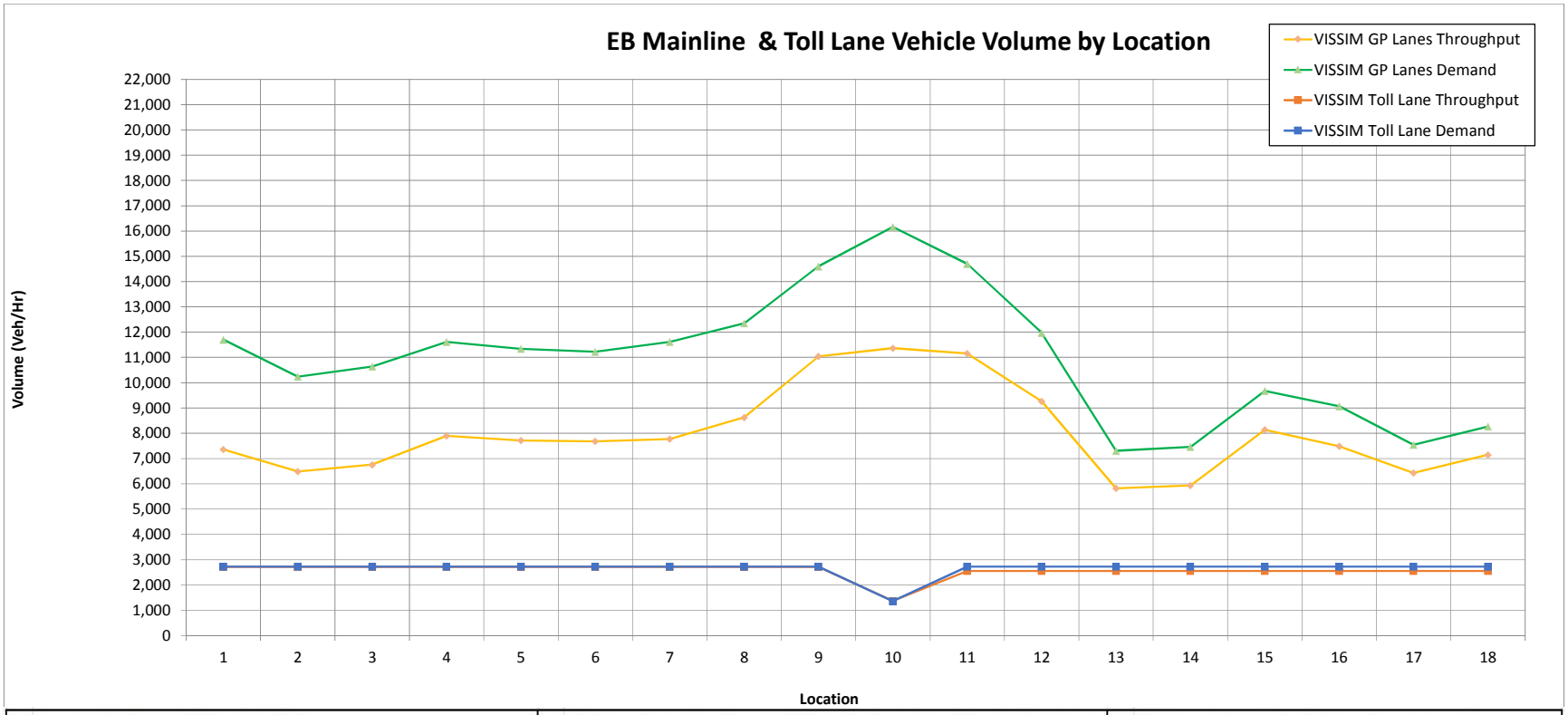
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from Managed Lanes	13 On Ramp from Gypsum Canyon SB to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from Managed Lanes to Off Ramp to Managed Lanes	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 Off Ramp to Managed Lanes to Off Ramp to SR 241	15 Off Ramp to Weir Canyon to On Ramp from Weir Canyon NB
4 Off Ramp to SR 71 to On Ramp from SR 71	10 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	16 On Ramp from Weir Canyon NB to On Ramp from Weir Canyon SB
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On Ramp from NB Gypsum Canyon (loop)	17 On Ramp from Weir Canyon SB to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from Gypsum Canyon NB to On Ramp from Gypsum Canyon SB	



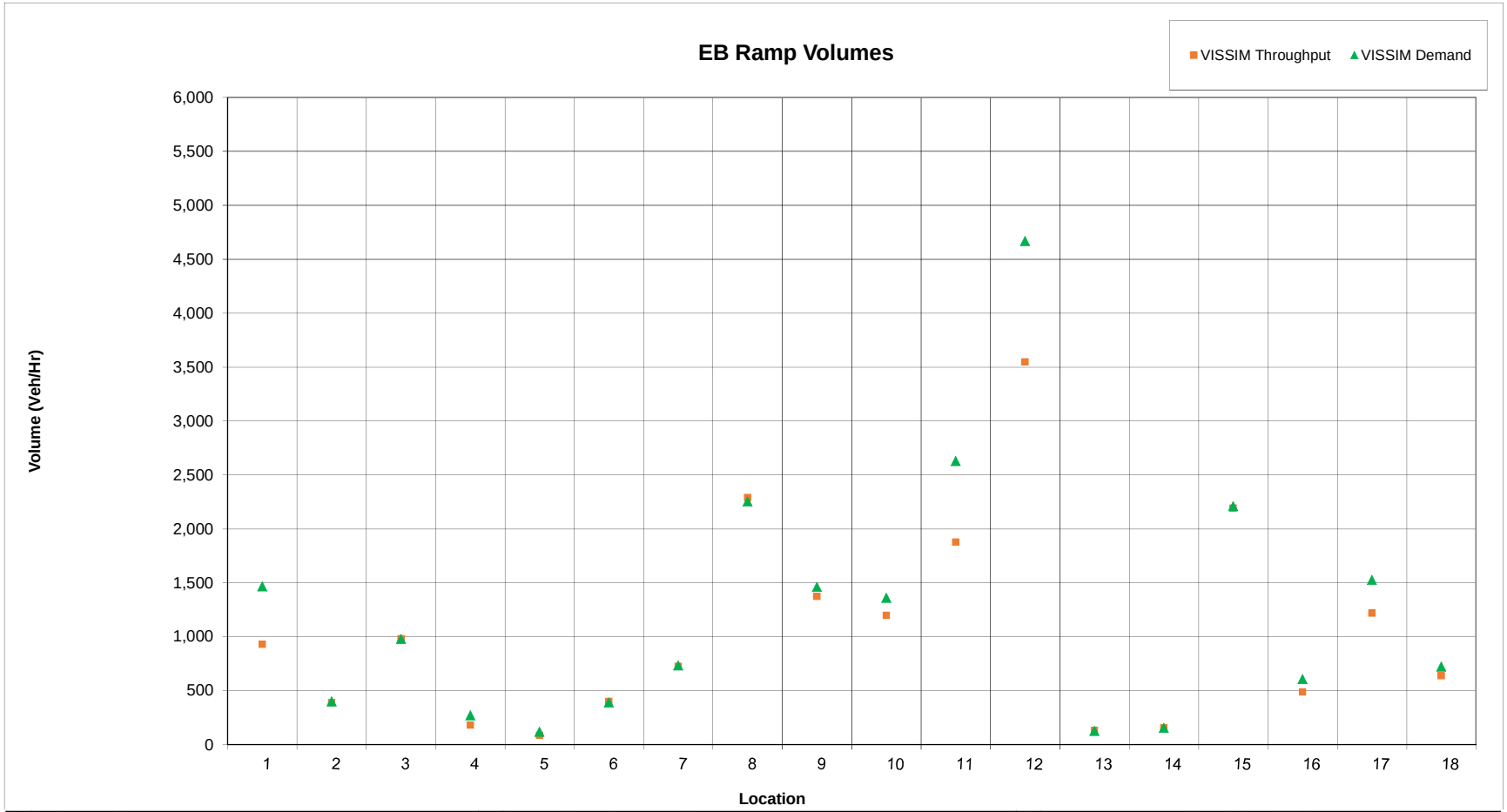
1 Off Ramp to Serfas/Autoclub	7 On Ramp from HOV Exit (west of Green River Rd)	13 On Ramp from SR 241
2 On Ramp from Serfas/Autoclub	8 Off Ramp to HOV Entrance (east of SR 241)	14 Off Ramp to Weir Canyon Rd
3 Off Ramp to SR 71	9 Off Ramp to SR 241	15 On Ramp from NB Weir Canyon Rd
4 On Ramp from SR 71	10 Off Ramp to Gypsum Canyon Rd	16 On Ramp from SB Weir Canyon Rd
5 Off Ramp to Green River Rd	11 On Ramp from NB Gypsum Canyon Rd	
6 On Ramp from Green River Rd	12 On Ramp from SB Gypsum Canyon Rd	



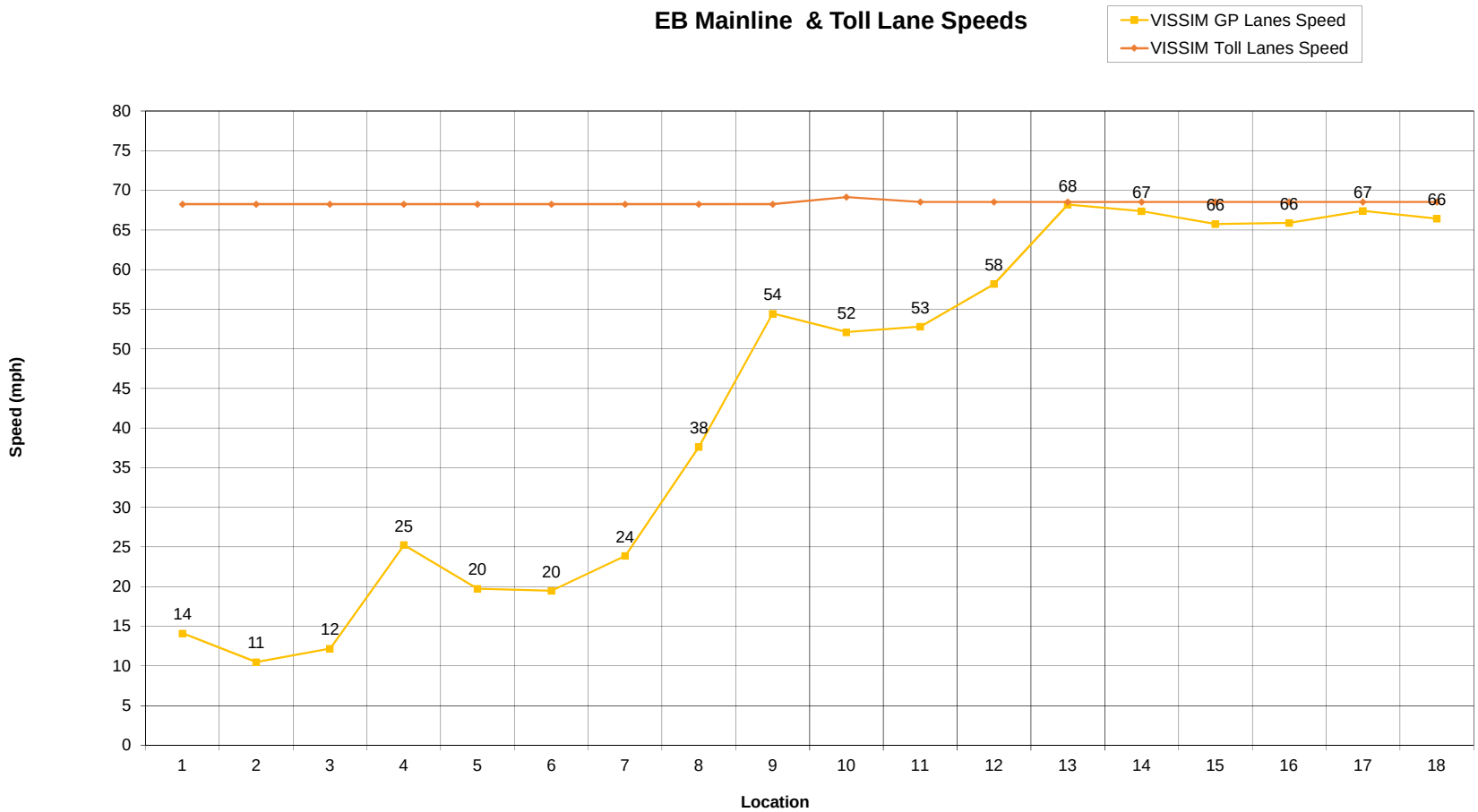
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		



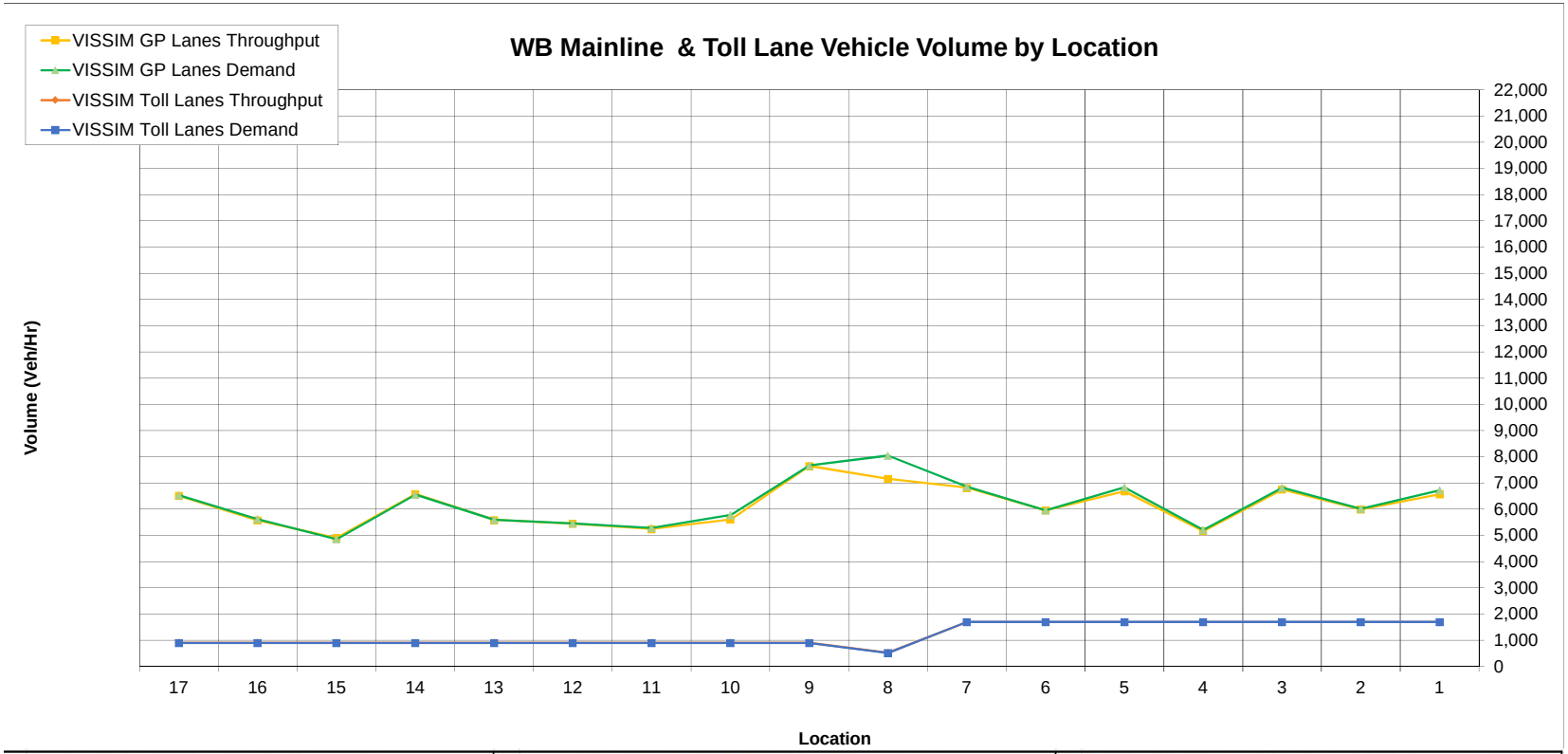
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR-71 to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	On Ramp from Green River to On Ramp from SR-71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to On Ramp from Managed Lanes	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	On Ramp from Managed Lanes to Off Ramp to Managed Lanes	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	Off Ramp to Managed Lanes to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71	18	On Ramp from Serfas/Autoclub to End of Study Area



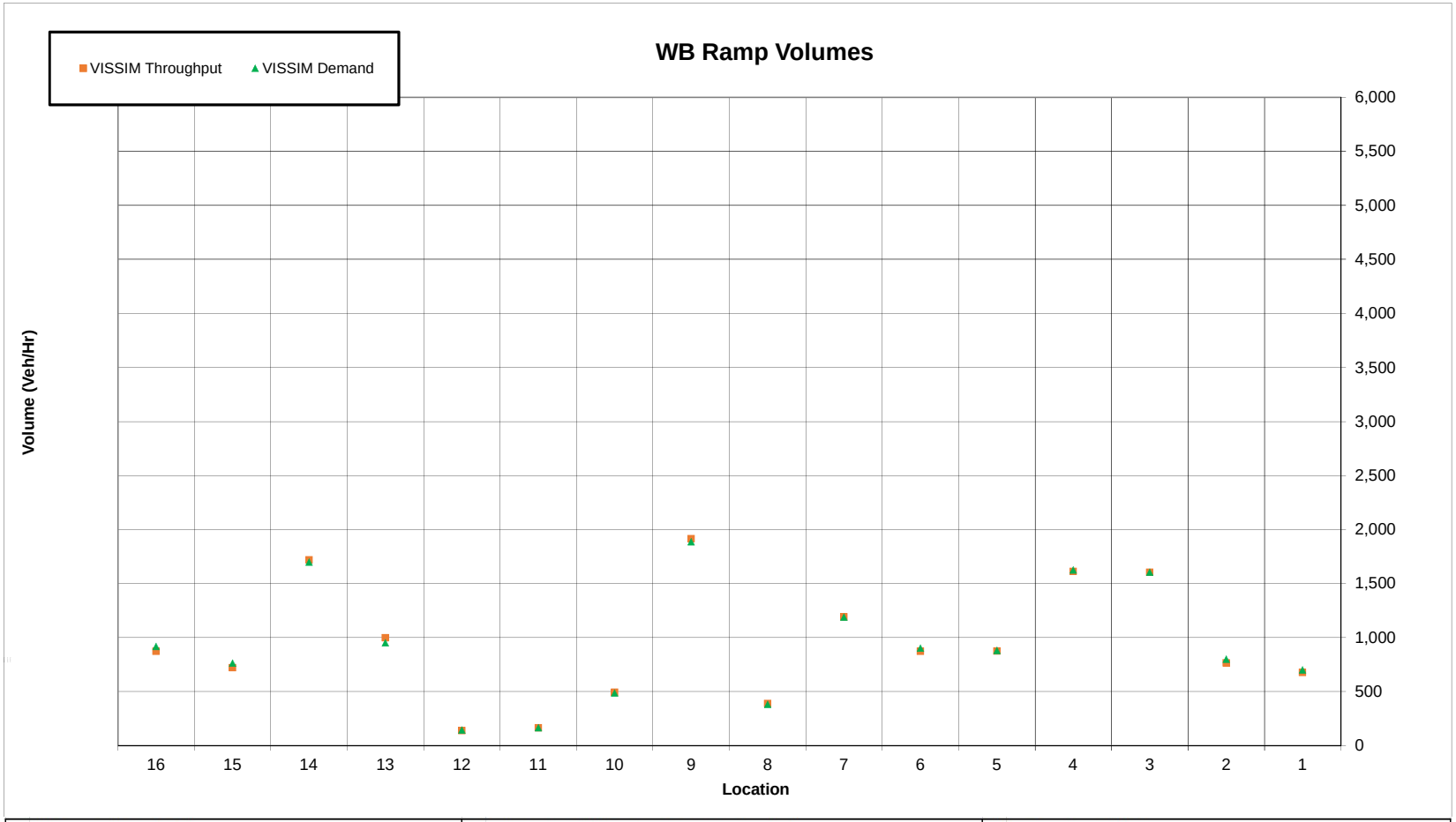
1 Off Ramp to Weir Canyon	7 On Ramp from NB Gypsum Canyon	13 On Ramp from Green River (to SR 71 NB)
2 On Ramp from SB Weir Canyon	8 On Ramp from NB SR 241 GP	14 On Ramp from Green River (to SR 91 EB)
3 On Ramp from NB Weir Canyon	9 On Ramp from HOT Exit (east of SR 241)	15 On Ramp from SR 71 SB
4 Off Ramp to SB SR 241 GP	10 Off Ramp to HOT Entrance (west of Green River Rd)	16 Off Ramp to Serfas/Autoclub
5 Off Ramp to Gypsum Canyon	11 Off Ramp to Green River	17 Off Ramp to EB Maple
6 On Ramp from SB Gypsum Canyon	12 Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub



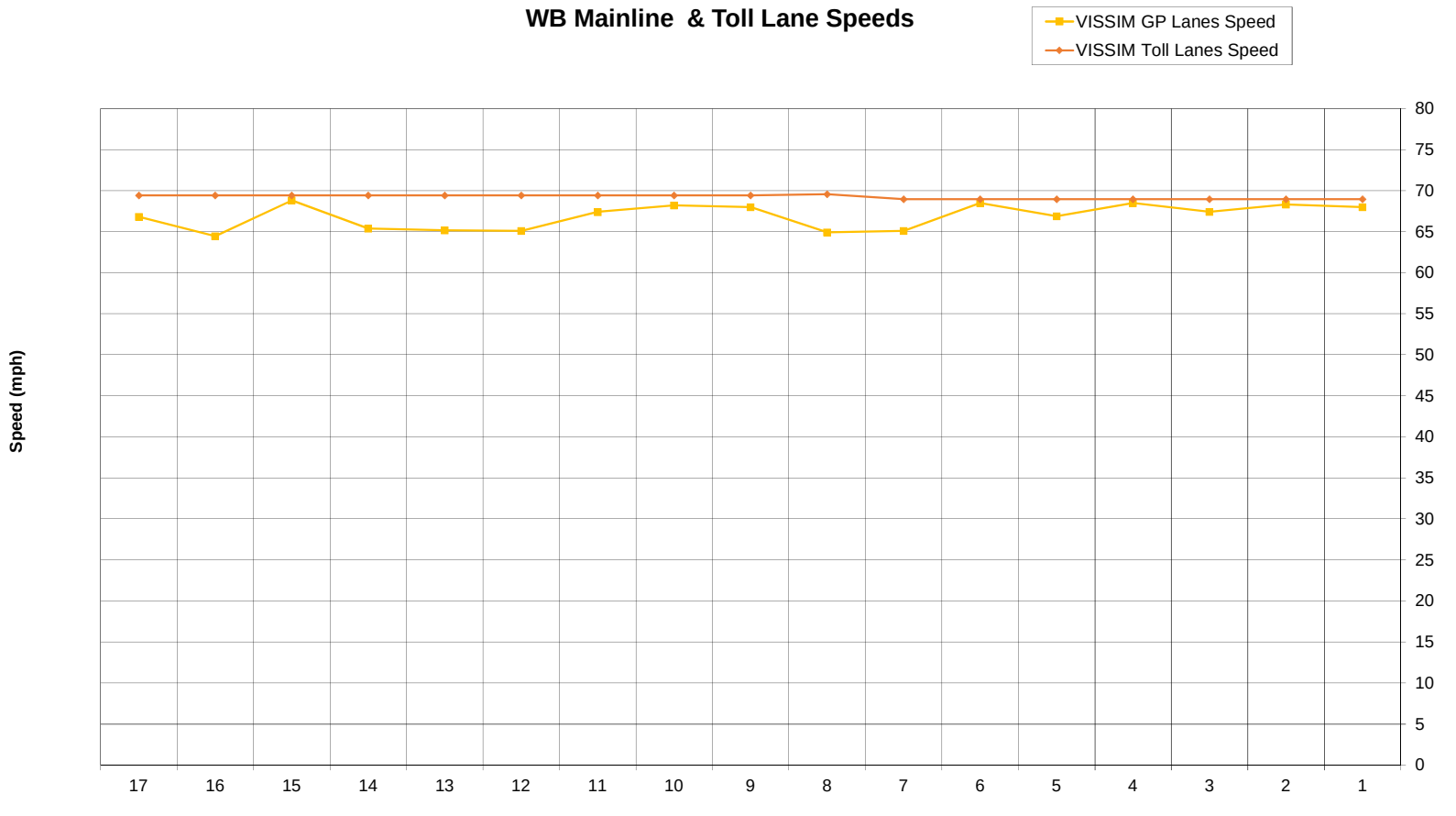
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR-71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from NB SR 241 GP	14	Off Ramp to SR 71 NB to On Ramp from SR 71 SB
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from NB SR 241 GP to Start Managed Lanes Weave	15	On Ramp from SR 71 SB to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SB SR 241 GP	10	Managed Lanes Weave between SR 241 and Green River Rd	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SB SR 241 GP to Off Ramp to Gypsum Canyon	11	End Managed Lanes Weave to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from Managed Lanes	13 On Ramp from Gypsum Canyon SB to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from Managed Lanes to Off Ramp to Managed Lanes	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9 Off Ramp to Managed Lanes to Off Ramp to SR 241	15 Off Ramp to Weir Canyon to On Ramp from Weir Canyon NB
4 Off Ramp to SR 71 to On Ramp from SR 71	10 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	16 On Ramp from Weir Canyon NB to On Ramp from Weir Canyon SB
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On Ramp from NB Gypsum Canyon (loop)	17 On Ramp from Weir Canyon SB to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from Gypsum Canyon NB to On Ramp from Gypsum Canyon SB	



1 Off Ramp to Serfas/Autoclub	7 On Ramp from HOV Exit (west of Green River Rd)	13 On Ramp from SR 241
2 On Ramp from Serfas/Autoclub	8 Off Ramp to HOV Entrance (east of SR 241)	14 Off Ramp to Weir Canyon Rd
3 Off Ramp to SR 71	9 Off Ramp to SR 241	15 On Ramp from NB Weir Canyon Rd
4 On Ramp from SR 71	10 Off Ramp to Gypsum Canyon Rd	16 On Ramp from SB Weir Canyon Rd
5 Off Ramp to Green River Rd	11 On Ramp from NB Gypsum Canyon Rd	
6 On Ramp from Green River Rd	12 On Ramp from SB Gypsum Canyon Rd	



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	Green River On-Ramp to Start of HOV Weave	13	SB Gypsum Canyon On Ramp to SR 241 On Ramp
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	HOV Weave between Green River Rd and SR 241	14	SR 241 On Ramp to Weir Canyon Off Ramp
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71 NB	9	End of HOV Weave to SR 241 Off-Ramp	15	Weir Canyon Off-Ramp to NB Weir Canyon On-Ramp
4	SR 71 Off-Ramp to SR 71 On-Ramp	10	SR 241 Off Ramp to Gypsum Canyon Off Ramp	16	NB Weir Canyon On-Ramp to SB Weir Canyon On-Ramp
5	SR 71 On-Ramp to Green River Off-Ramp	11	Gypsum Canyon Off Ramp to NB Gypsum Canyon On Ramp	17	SB Weir Canyon On-Ramp to End of study area
6	Green River Off-Ramp to Green River On-Ramp	12	NB Gypsum Canyon On Ramp to SB Gypsum Canyon On Ramp		

Appendix E

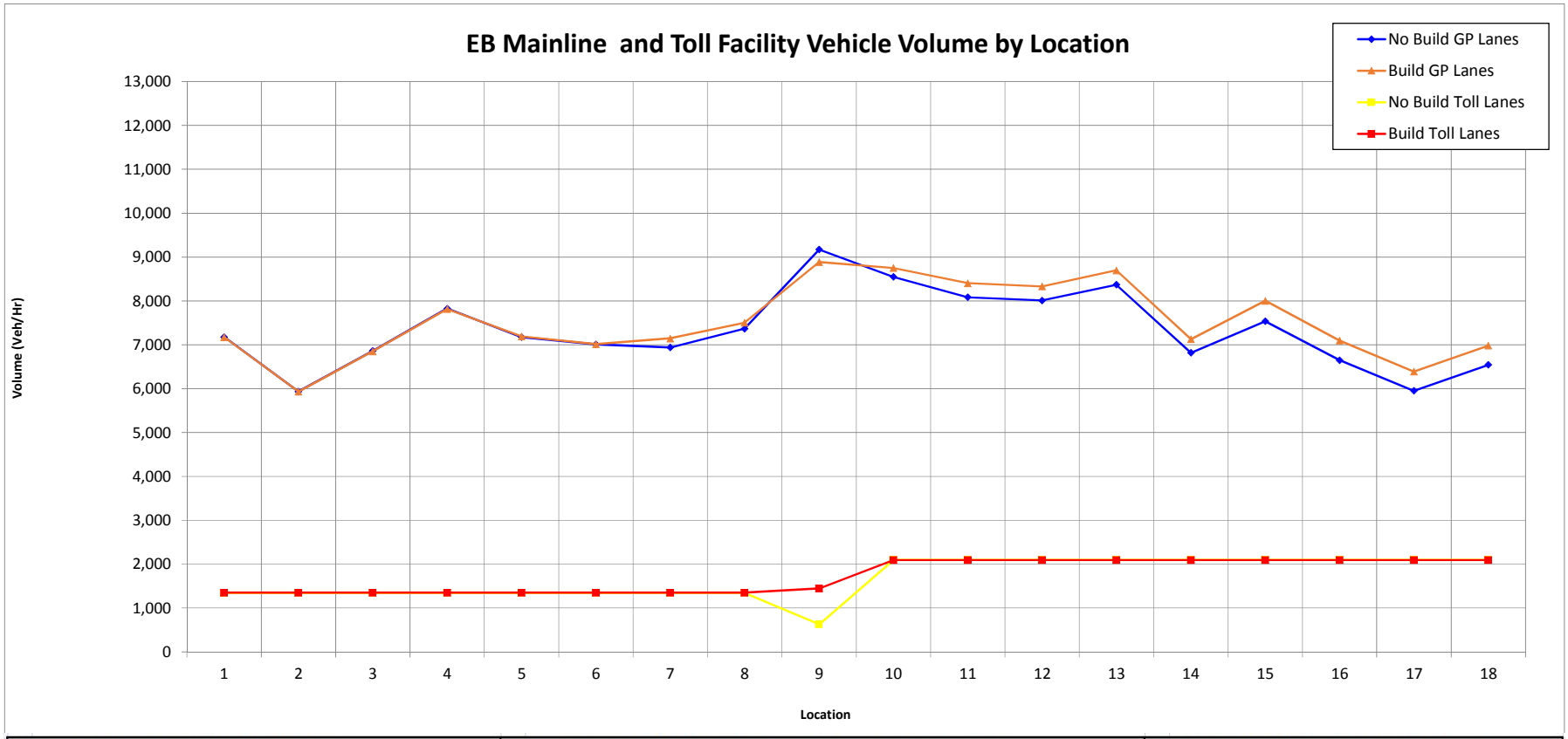
VISSIM Summary of Results
2017 Build Conditions

SR-91
Vissim Model Summary - 2017 Build Option 2 - AM
Network Summary Statistics

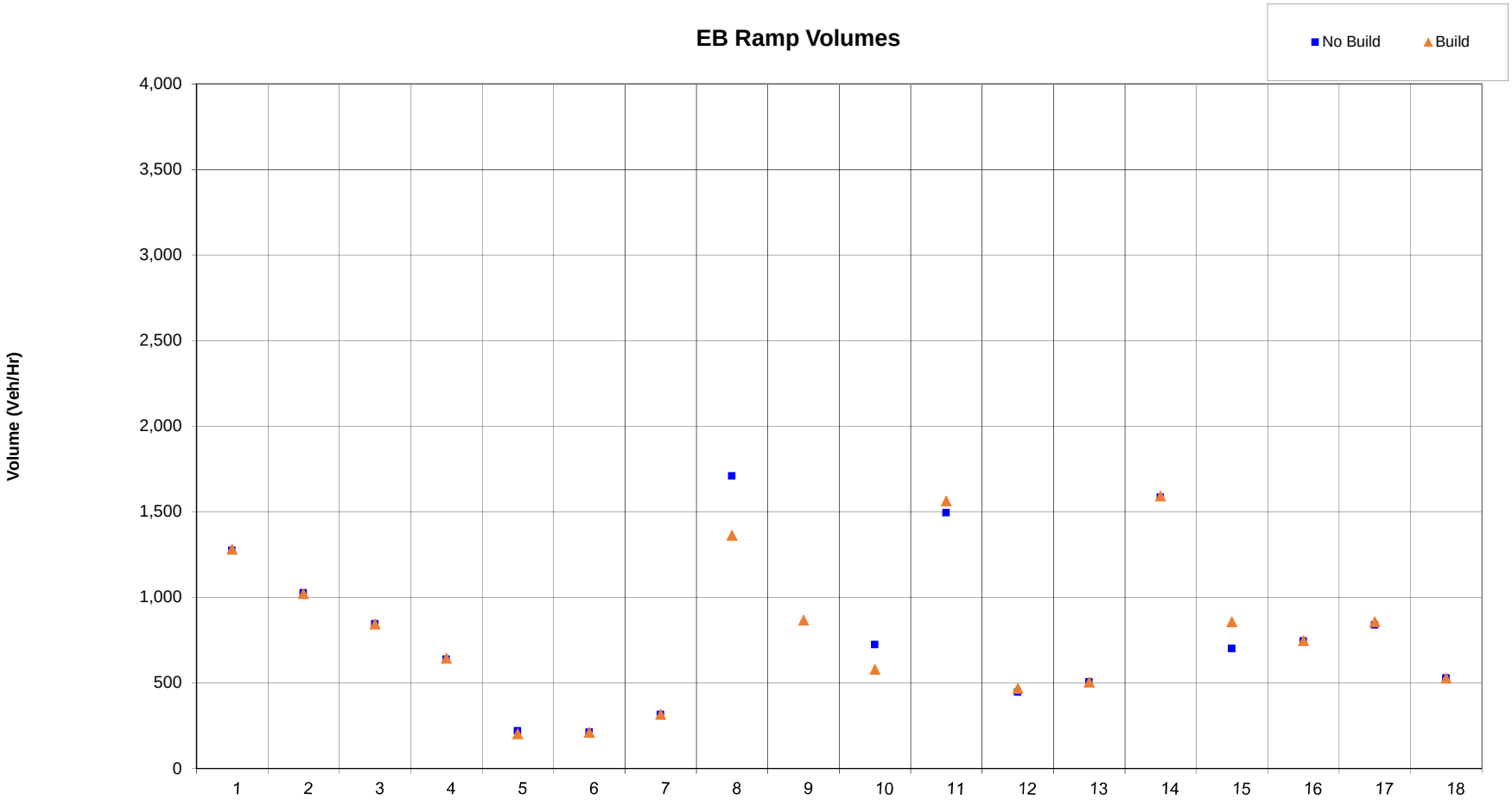
Parameter	2017 AM No Build	2017 AM Build Option 2	Difference
Total Vehicle Demand (3 Hr)	100,741	101,682	941
Total number of vehicles that did not reach their desitination	9,016	5,420	-3,597
Total number of vehicles that have reached their destination	91,725	96,262	4,538
Total vehicle-miles traveled (VMT)	796,551	845,966	49,415
Total travel time, All Vehicle Types (VHT)	23,068	21,012	-2,056
Average speed [mph], All Vehicle Types	34.5	40.3	5.7
Average delay time per vehicle [mins], All Vehicle Types	6.83	4.93	-1.90

SR-91
Vissim Model Summary - 2017 Build Option 2 - AM
Travel Time Table

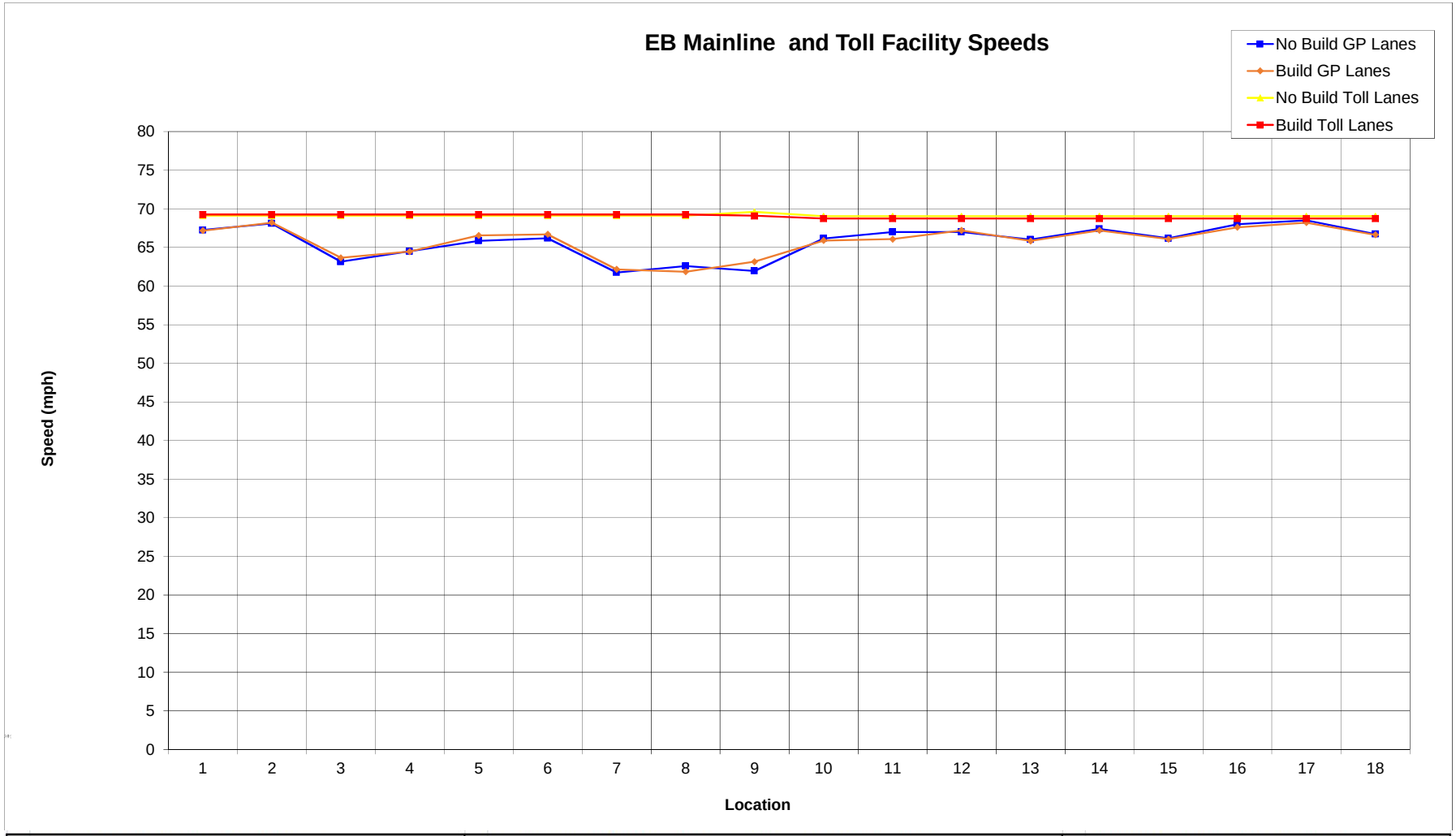
#	Origin	#	Destination	p Key	Hide Travel Time Segments Seg 1	Seg 2	Seg 3	2017 AM No Build VISSIM Travel Time 6-7 AM	7-8 AM	7-9 AM	2017 AM Build Option 2 VISSIM Travel Time 6-7 AM	7-8 AM	7-9 AM	Change VISSIM Travel Time 6-7 AM	7-8 AM	7-9 AM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	1	1002	1003	1005	8.6	8.7	8.6	8.7	8.7	8.6	0.0	0.0	0.0
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	2	1002	1003	2005	8.6	8.6	8.6	8.6	8.6	8.6	0.0	0.0	0.0
		5	SR 241 SB south of SR 91	3	1001			7.1	7.2	7.2	7.2	7.2	7.2	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	4	1002	1003	1004	11.0	11.1	11.0	11.1	11.1	11.0	0.0	0.0	0.0
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	5	2002	1003	1005	8.5	8.5	8.5	8.5	8.5	8.5	0.0	0.0	0.0
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	6	2002	2003	2005	8.4	8.4	8.4	8.4	8.4	8.4	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	7	2002	1003	1004	10.9	10.9	10.9	10.9	11.0	10.9	0.0	0.0	0.0
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8	1011	1012	1014	23.1	24.8	24.1	18.7	20.4	19.5	-4.4	-4.4	-4.6
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9	1011	1012	2014	23.0	24.7	24.0	18.6	20.3	19.5	-4.4	-4.4	-4.6
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10	1011	1012	1013	25.4	27.1	26.5	21.1	22.8	22.0	-4.3	-4.3	-4.4
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	11	1011	1012	2013	n/a	n/a	n/a	21.0	22.7	21.9	-4.4	-4.4	-4.6
		7	SR 71 NB north of SR 91	12	1010			12.4	13.3	12.0	9.0	10.1	7.7	-3.4	-3.2	-4.3
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	13	2011	1012	1014	12.0	12.4	12.6	11.1	11.4	11.9	-0.9	-1.0	-0.7
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	14	2011	2012	2014	8.4	8.4	8.4	8.5	8.5	8.4	0.0	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15	2011	1012	1013	14.4	14.8	15.0	13.6	13.9	14.4	-0.8	-0.9	-0.6
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	16	2011	2012	2013	n/a	n/a	n/a	10.8	10.9	10.8	-3.6	-3.9	-4.1
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	17	1006			7.2	7.2	7.2	7.2	7.2	7.2	0.0	0.0	0.0
		3	SR 91 EB GP Lanes east of Serfas Club Rd	18	1007	1003	1005	11.0	11.0	11.0	11.0	11.0	10.9	0.0	0.0	0.0
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19	1007	1003	2005	10.9	10.9	10.9	10.9	10.9	10.9	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	20	1007	1003	1004	13.4	13.4	13.4	13.4	13.4	13.3	0.0	0.0	0.0
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	21	2007	1003	1005	n/a	n/a	n/a	10.9	10.9	10.9	-0.1	-0.1	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	22	2007	2003	2005	n/a	n/a	n/a	10.8	10.8	10.8	-0.2	-0.2	-0.1
		7	SR 71 NB north of SR 91	23	2007	1003	1004	n/a	n/a	n/a	13.3	13.4	13.3	0.0	-0.1	0.0
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	24	1009	1012	1014	43.0	54.1	55.9	32.0	39.5	40.5	-11.0	-14.6	-15.3
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	25	1009	1012	2014	42.9	54.0	55.8	31.9	39.4	40.5	-11.0	-14.6	-15.3
		3	SR 91 EB GP Lanes east of Serfas Club Rd	26	1008			28.7	37.2	38.3	20.5	26.7	27.0	-8.2	-10.5	-11.3
		5	SR 241 SB south of SR 91 (Via GP Ramp)	27	1009	1012	1013	45.3	56.4	58.3	34.4	42.0	43.1	-10.9	-14.4	-15.2
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	28	1009	1012	2013	n/a	n/a	n/a	34.3	41.8	42.9	-11.0	-14.6	-15.4



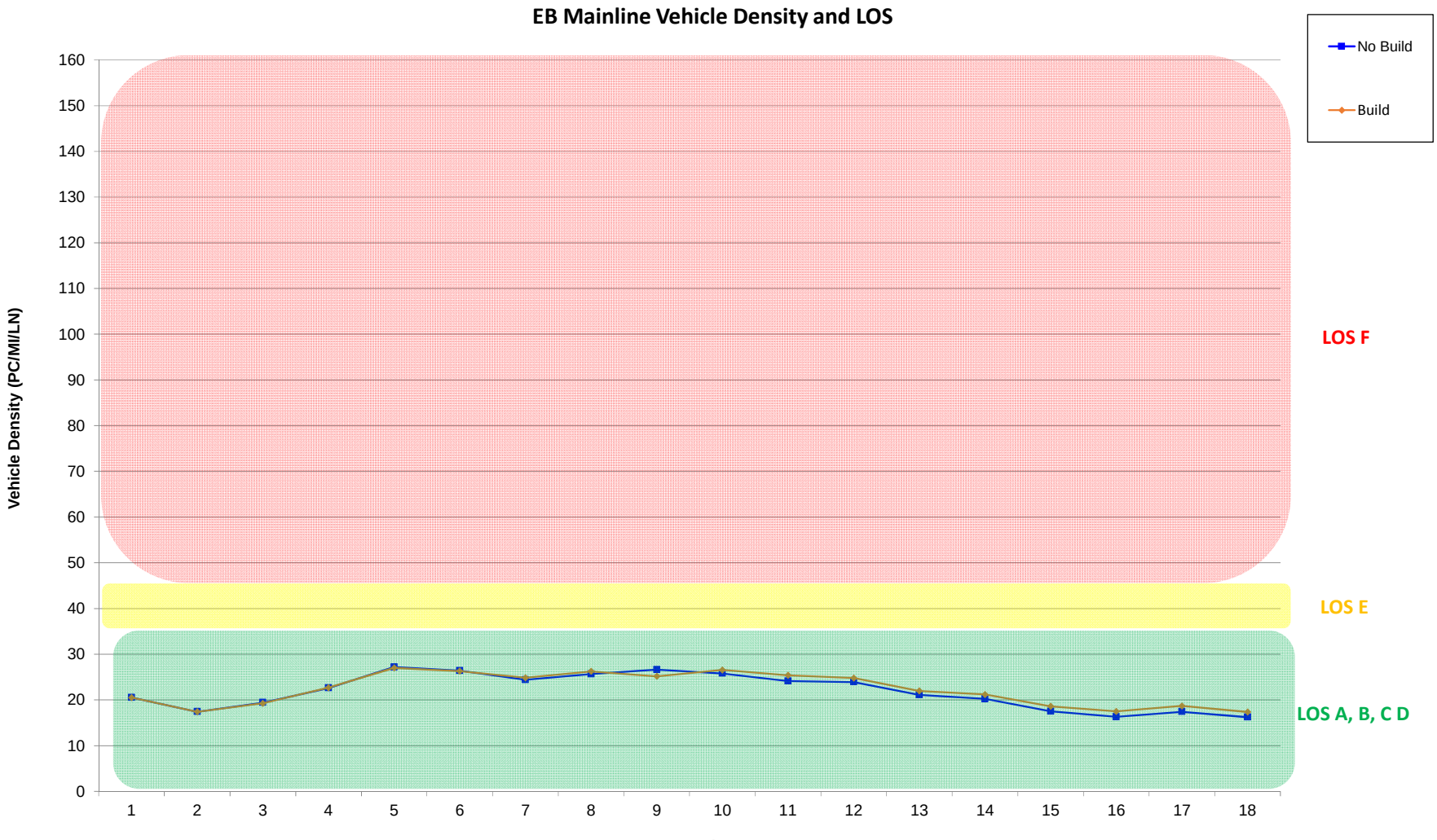
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



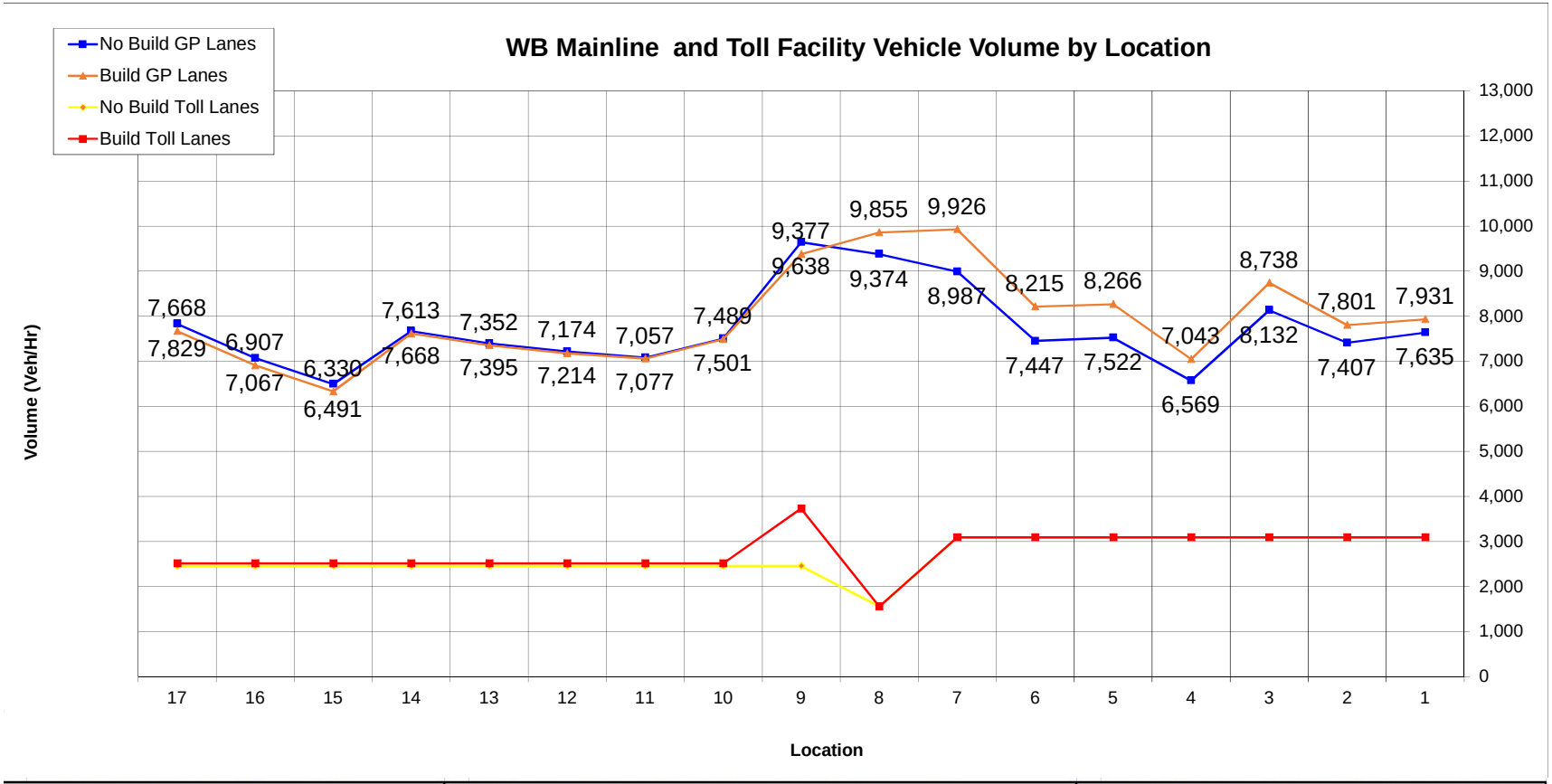
1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	On Ramp From Green River
2	On Ramp from SB Weir Canyon	8	On Ramp from SR 241 GP	14	Off Ramp to SR 71
3	On Ramp from NB Weir Canyon	9	On Ramp from SR 241 HOV	15	On Ramp from SR 71
4	Off Ramp to SR 241	10	On Ramp from HOT Lanes Exit (east of SR 241)	16	Off Ramp to Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	17	Off Ramp to EB Maple
6	On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River	18	On Ramp from Serfas/Autoclub



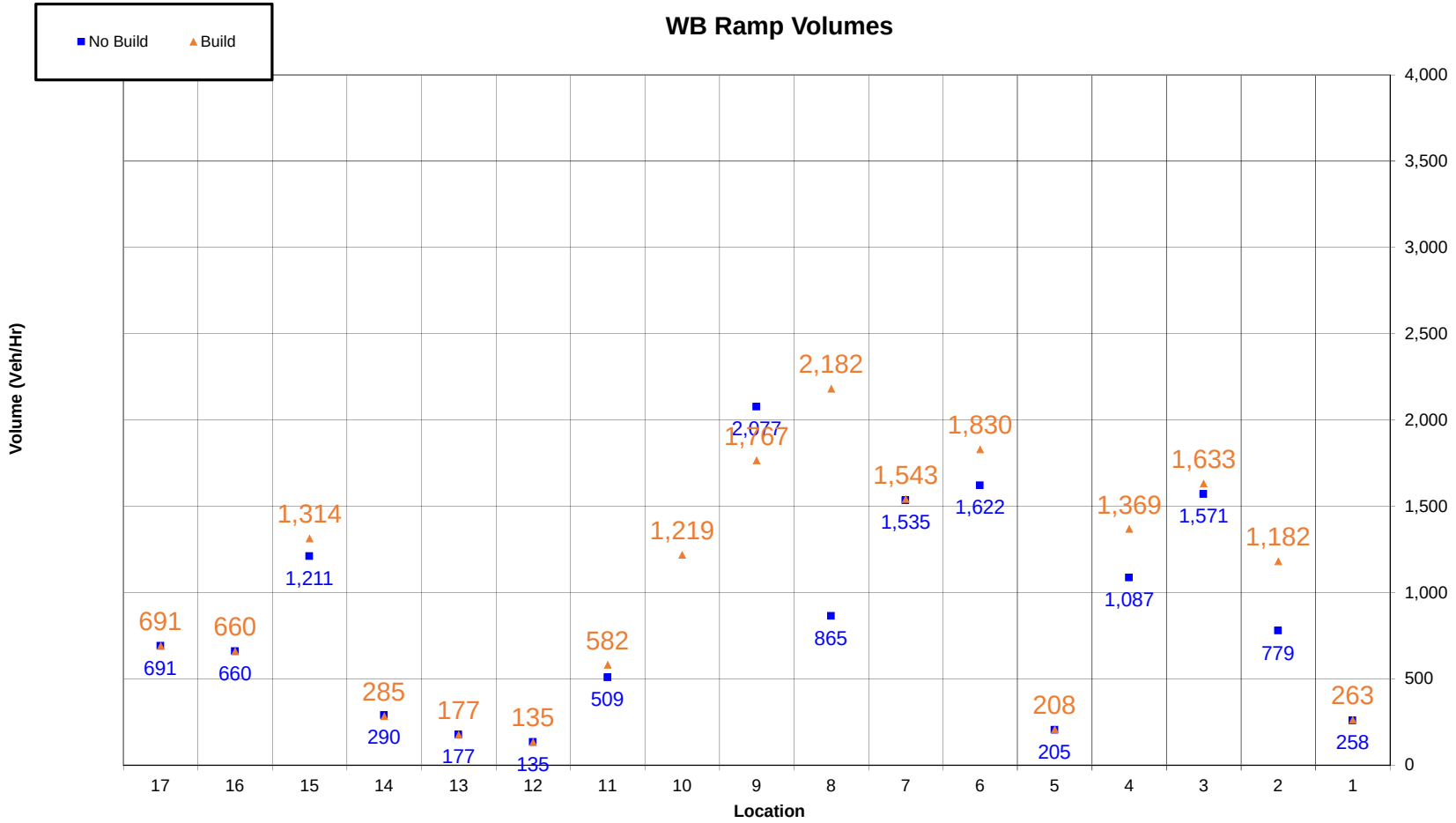
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



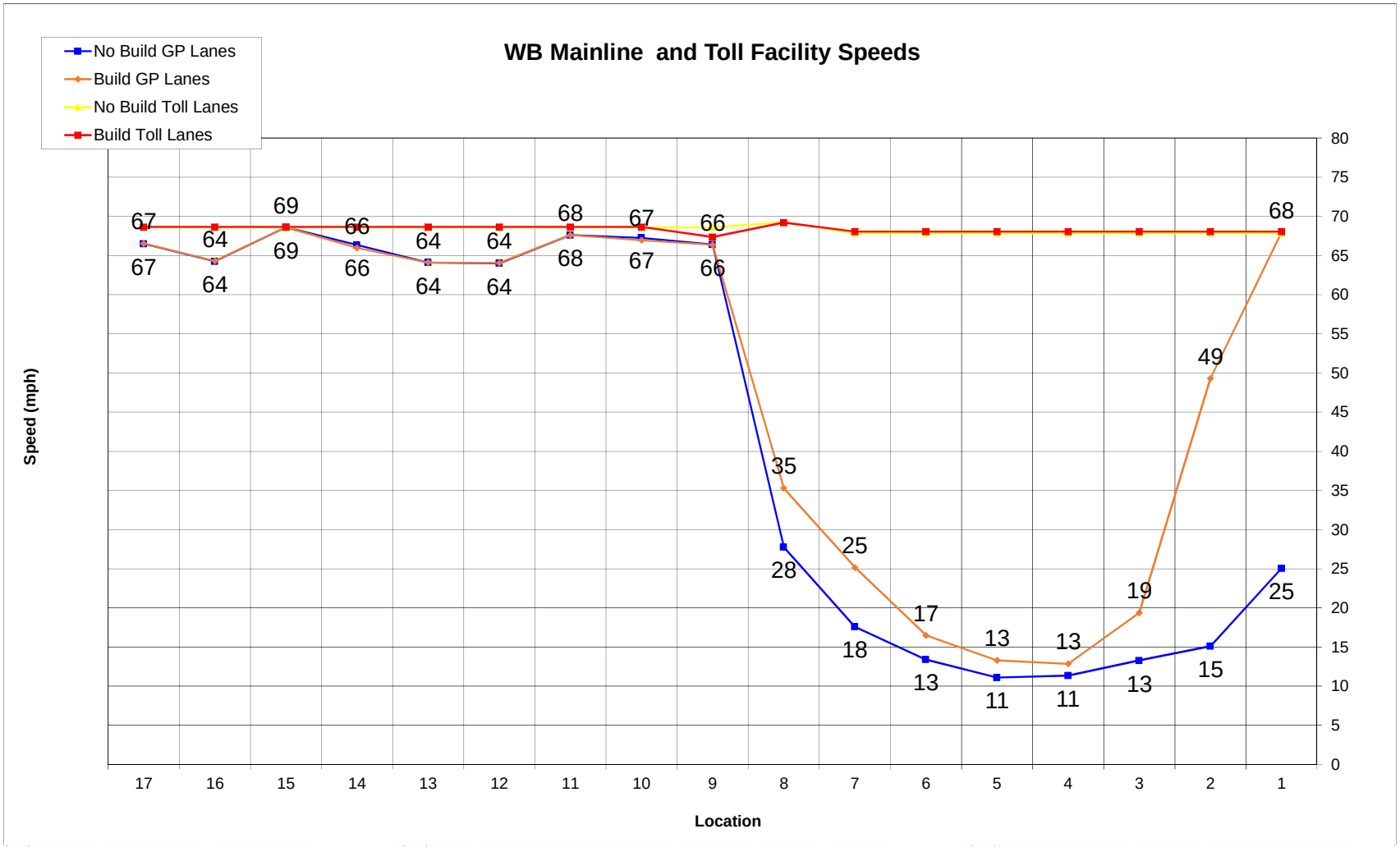
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



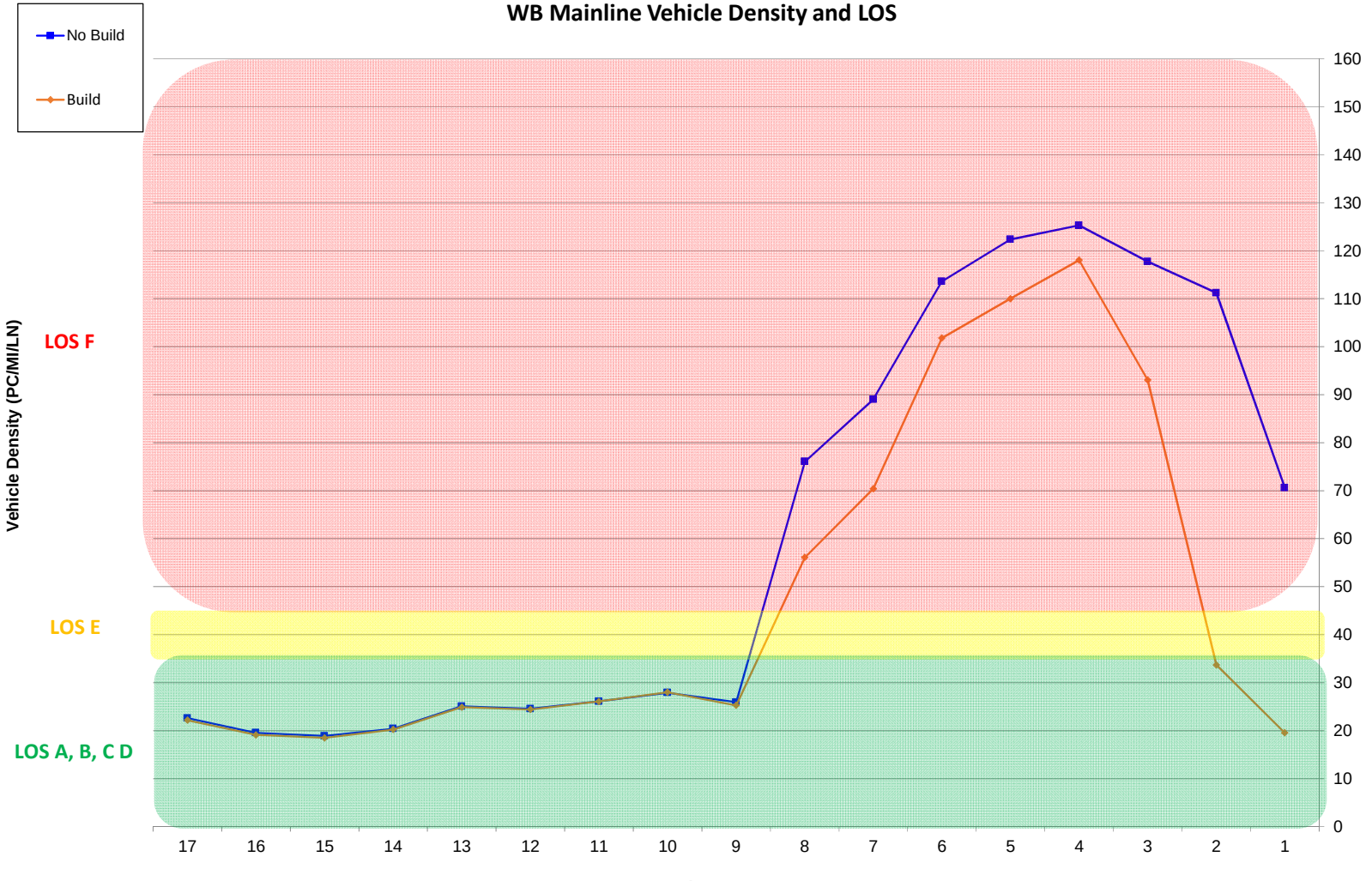
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOT Lanes Exit (west of Green River)	13	On Ramp from SB Gypsum Canyon
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOT Lanes Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon
4	On Ramp from SR 71	10	Off Ramp to SR 241 HOV	16	On Ramp from NB Weir Canyon
5	Off Ramp to Green River	11	Off Ramp to Gypsum Canyon	17	On Ramp from SB Weir Canyon
6	On Ramp from Green River	12	On Ramp from NB Gypsum Canyon		

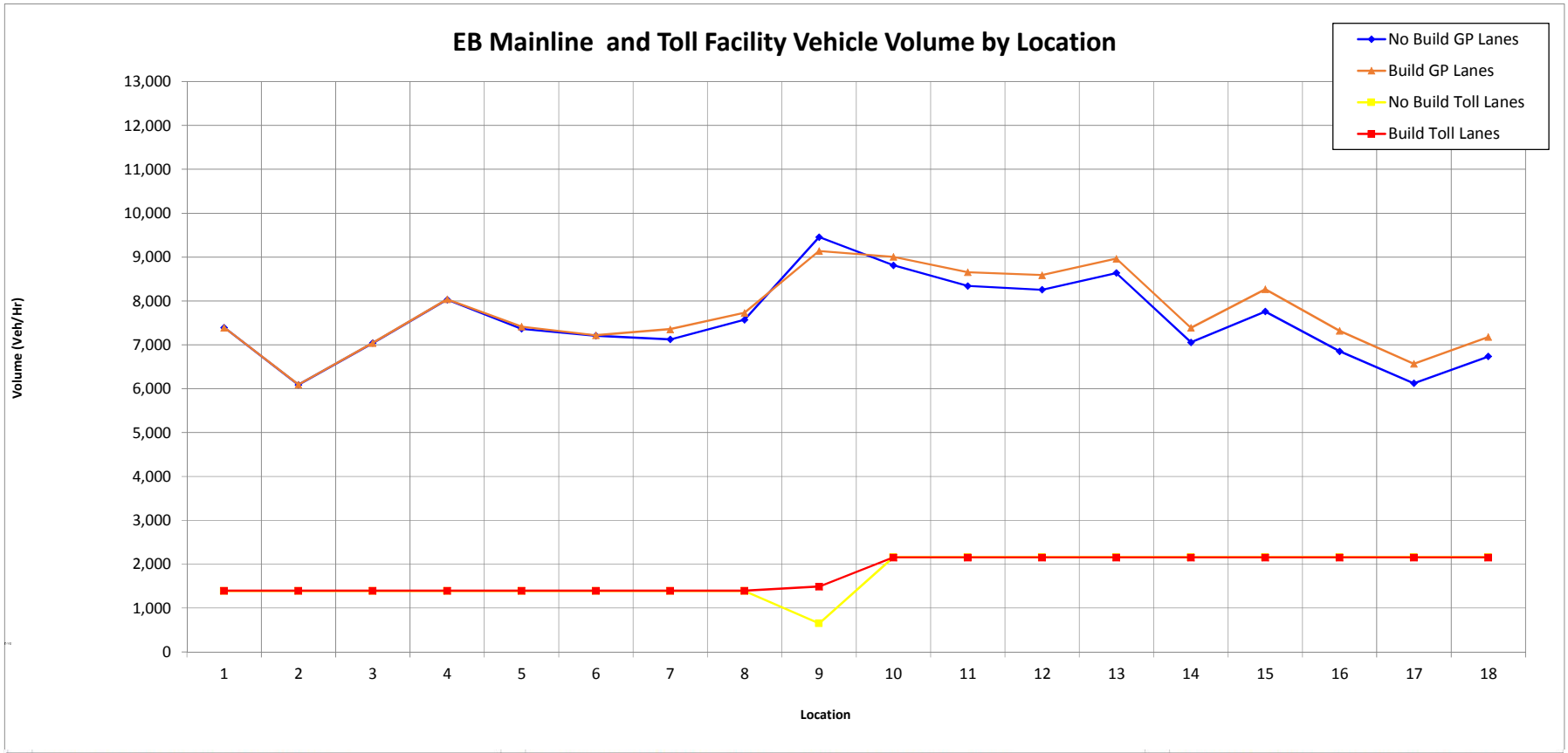


1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

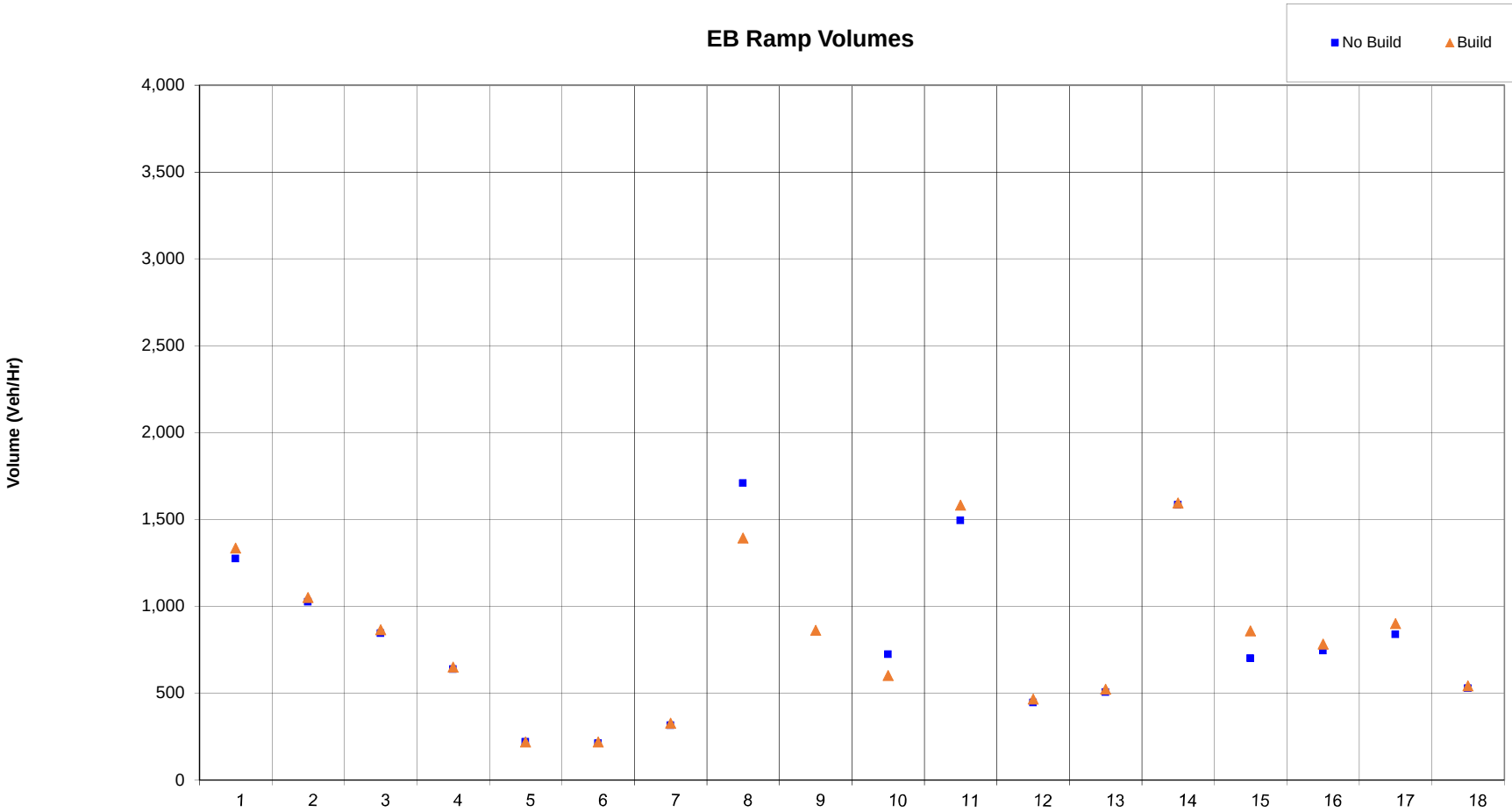


1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

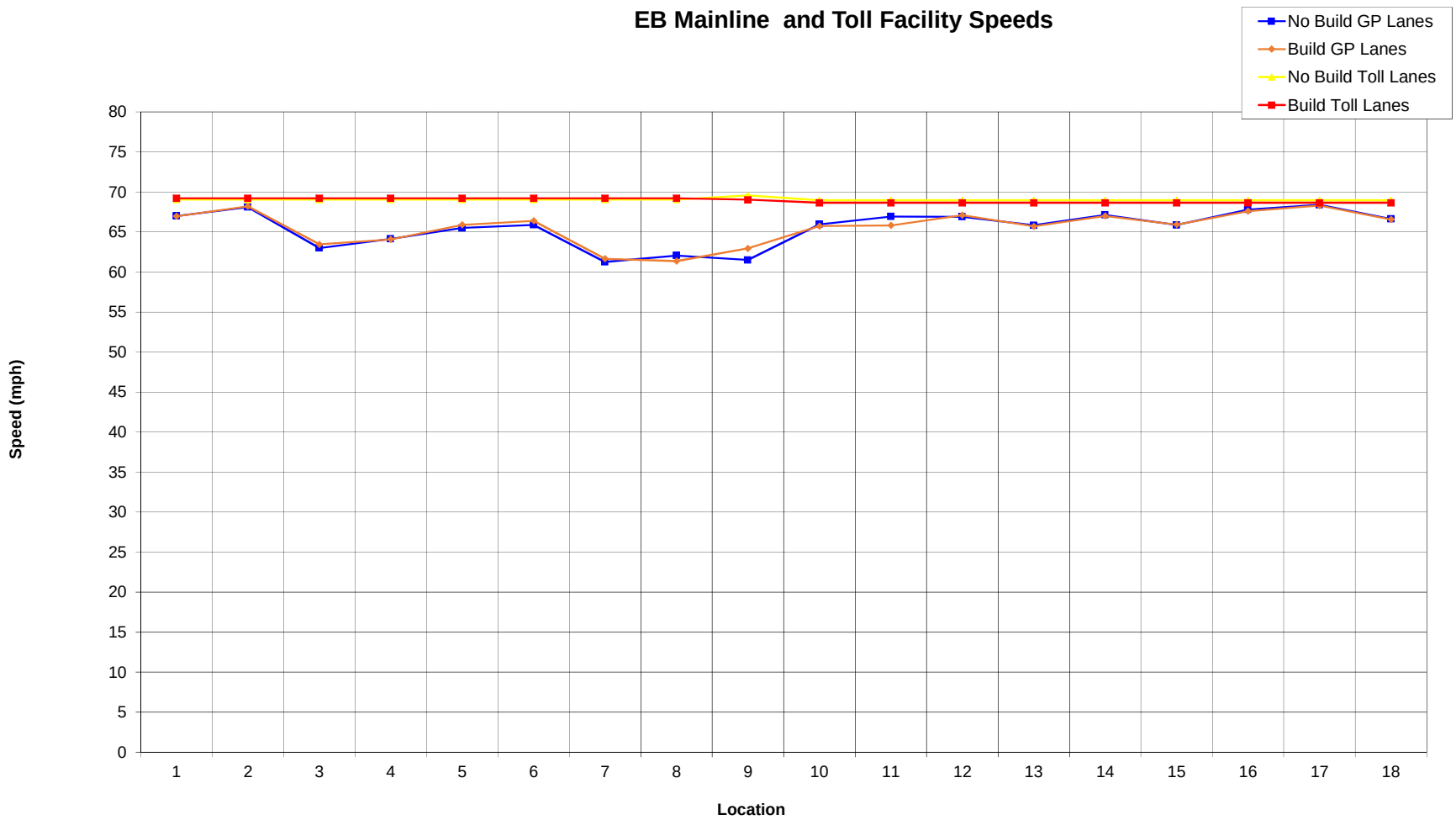
Charts 6-7 AM



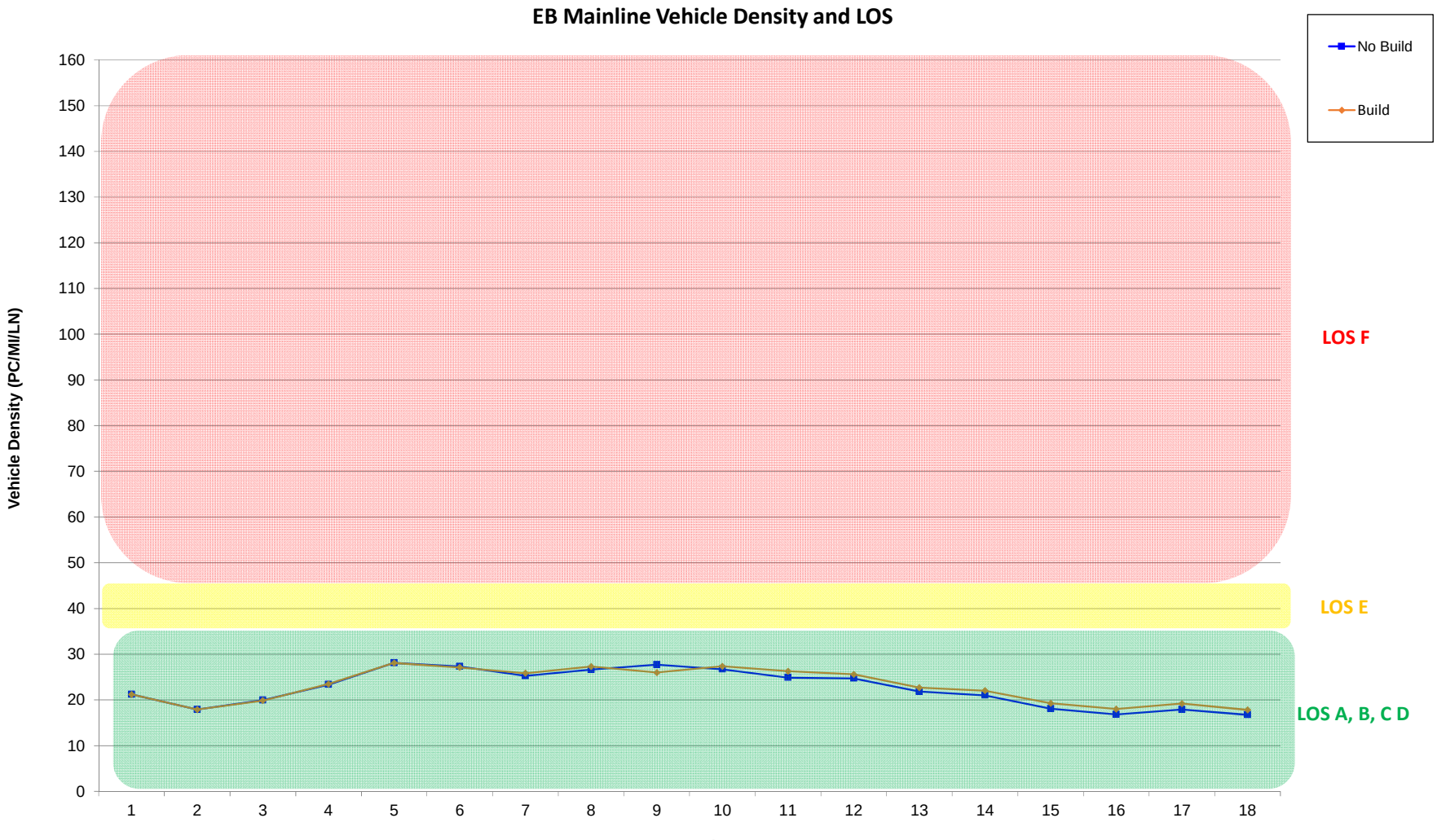
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



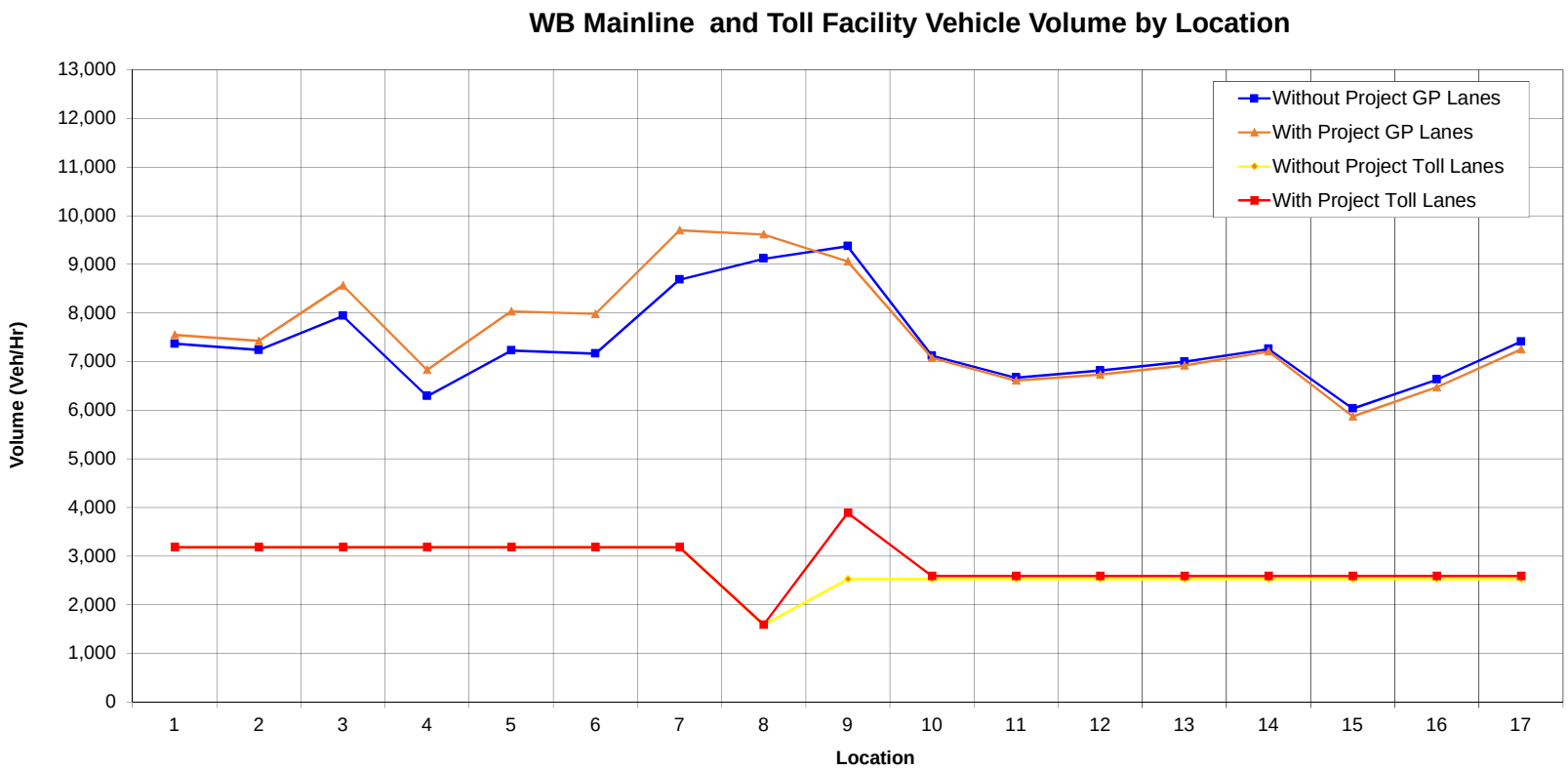
1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	On Ramp From Green River
2	On Ramp from SB Weir Canyon	8	On Ramp from SR 241 GP	14	Off Ramp to SR 71
3	On Ramp from NB Weir Canyon	9	On Ramp from SR 241 HOV	15	On Ramp from SR 71
4	Off Ramp to SR 241	10	On Ramp from HOT Lanes Exit (east of SR 241)	16	Off Ramp to Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	17	Off Ramp to EB Maple
6	On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River	18	On Ramp from Serfas/Autoclub



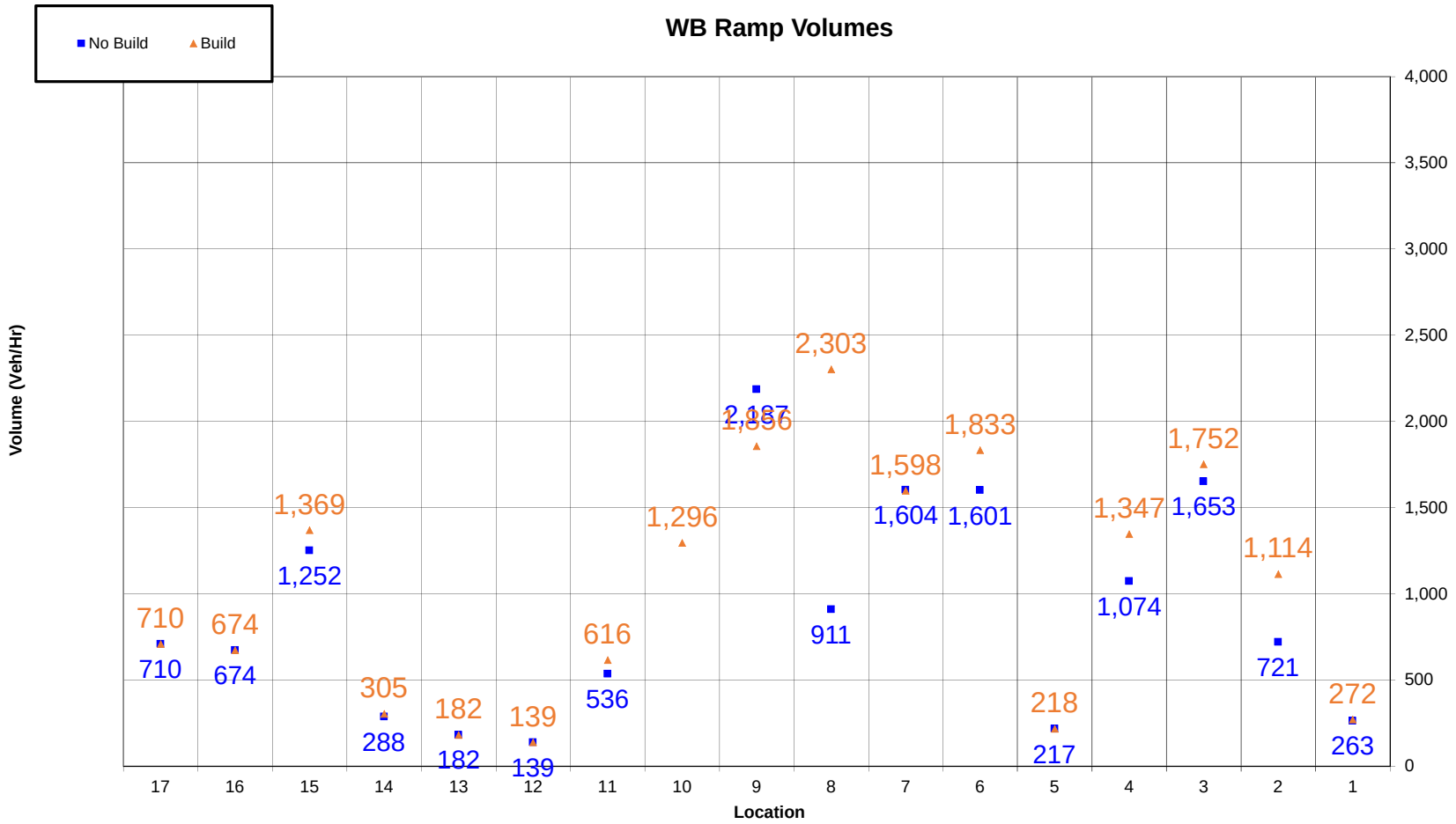
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



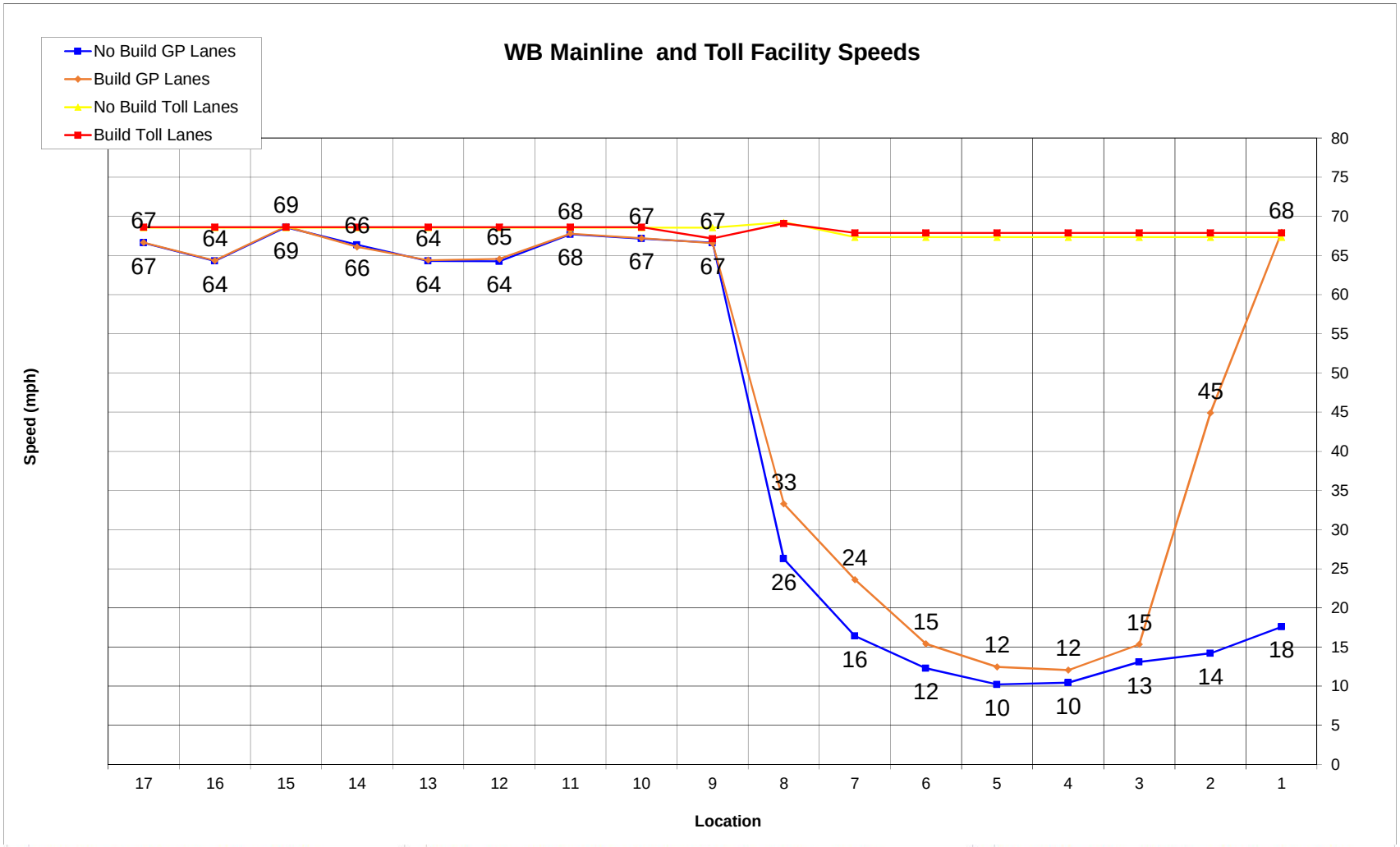
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



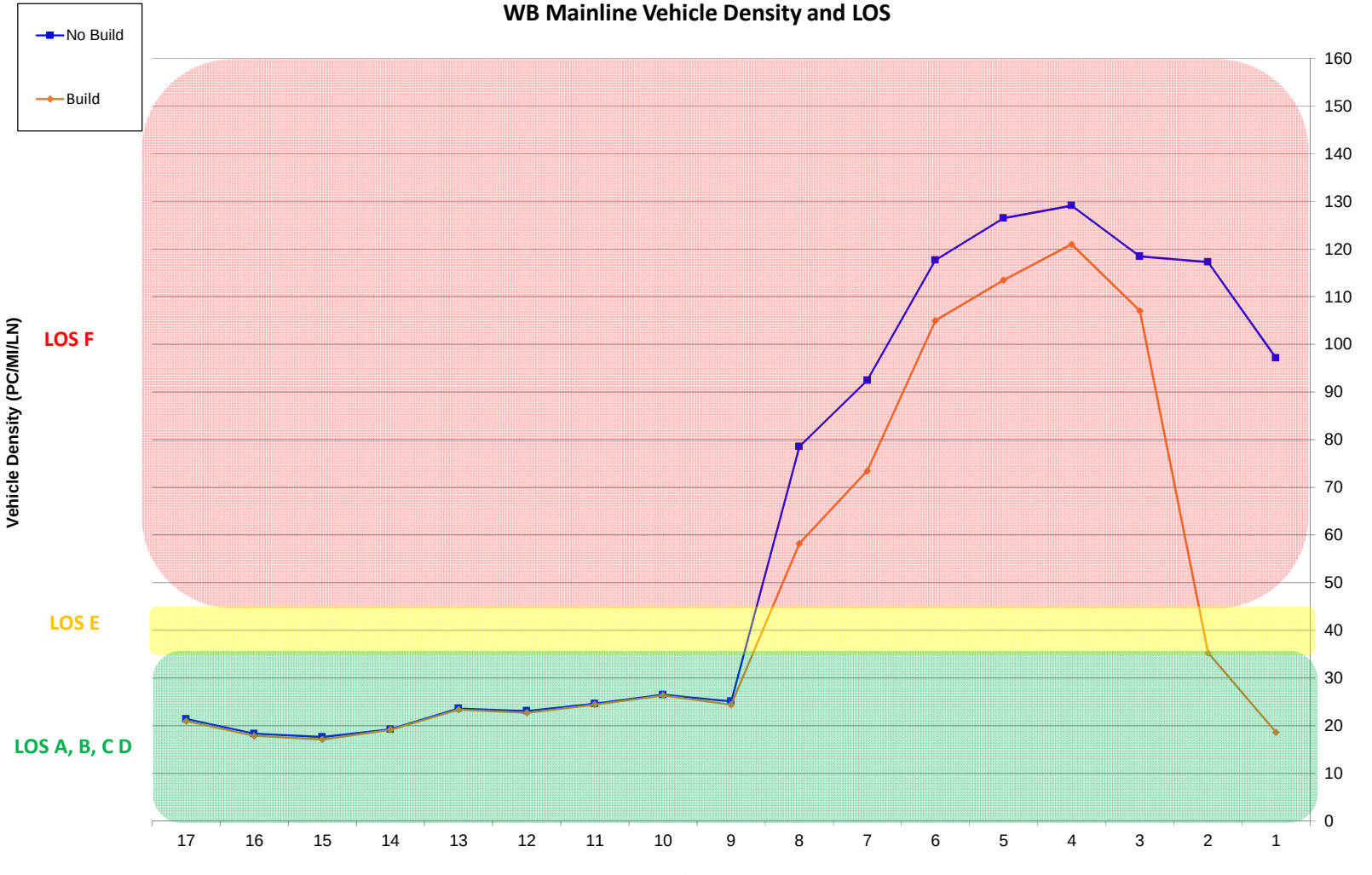
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOT Lanes Exit (west of Green River)	13	On Ramp from SB Gypsum Canyon
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOT Lanes Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon
4	On Ramp from SR 71	10	Off Ramp to SR 241 HOV	16	On Ramp from NB Weir Canyon
5	Off Ramp to Green River	11	Off Ramp to Gypsum Canyon	17	On Ramp from SB Weir Canyon
6	On Ramp from Green River	12	On Ramp from NB Gypsum Canyon		

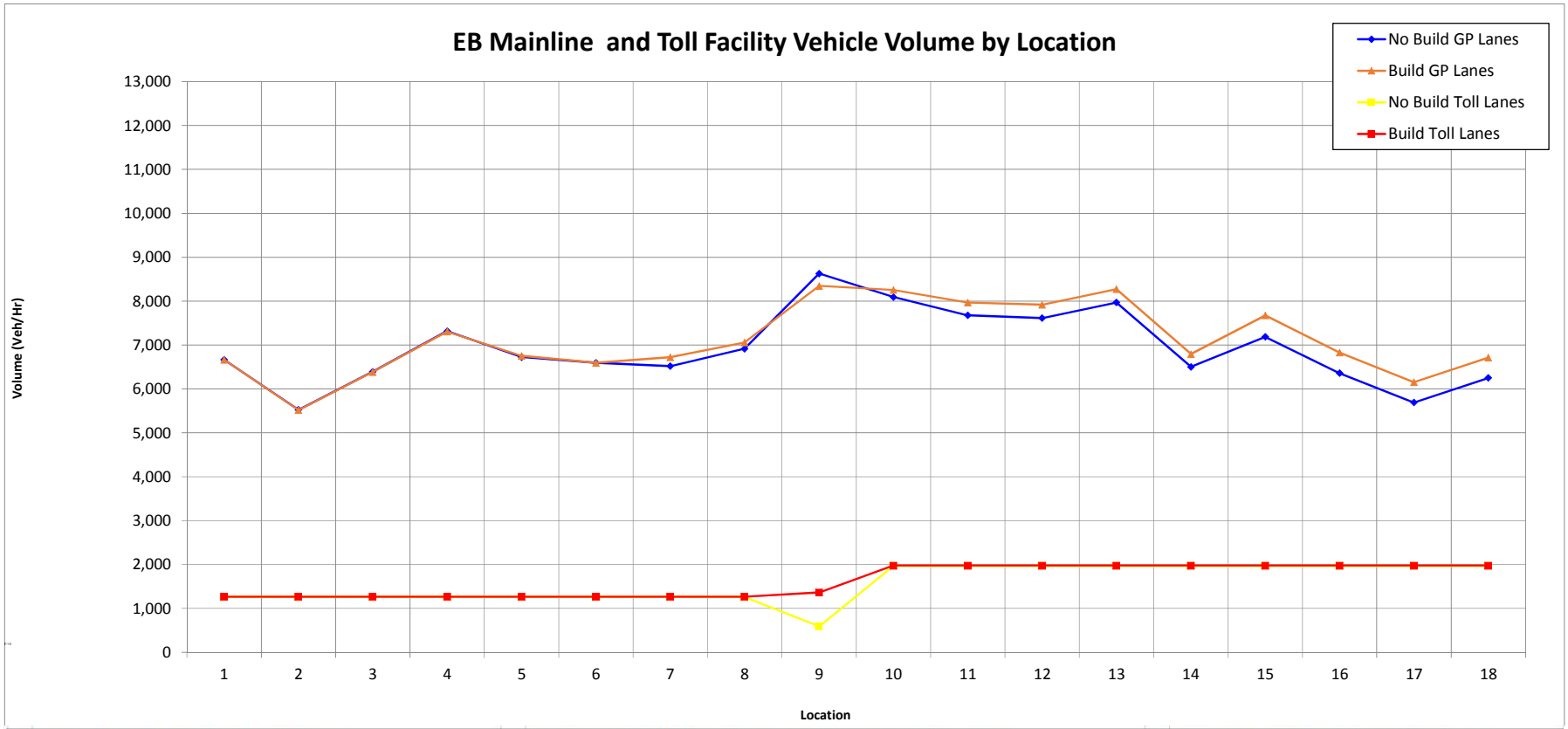


1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

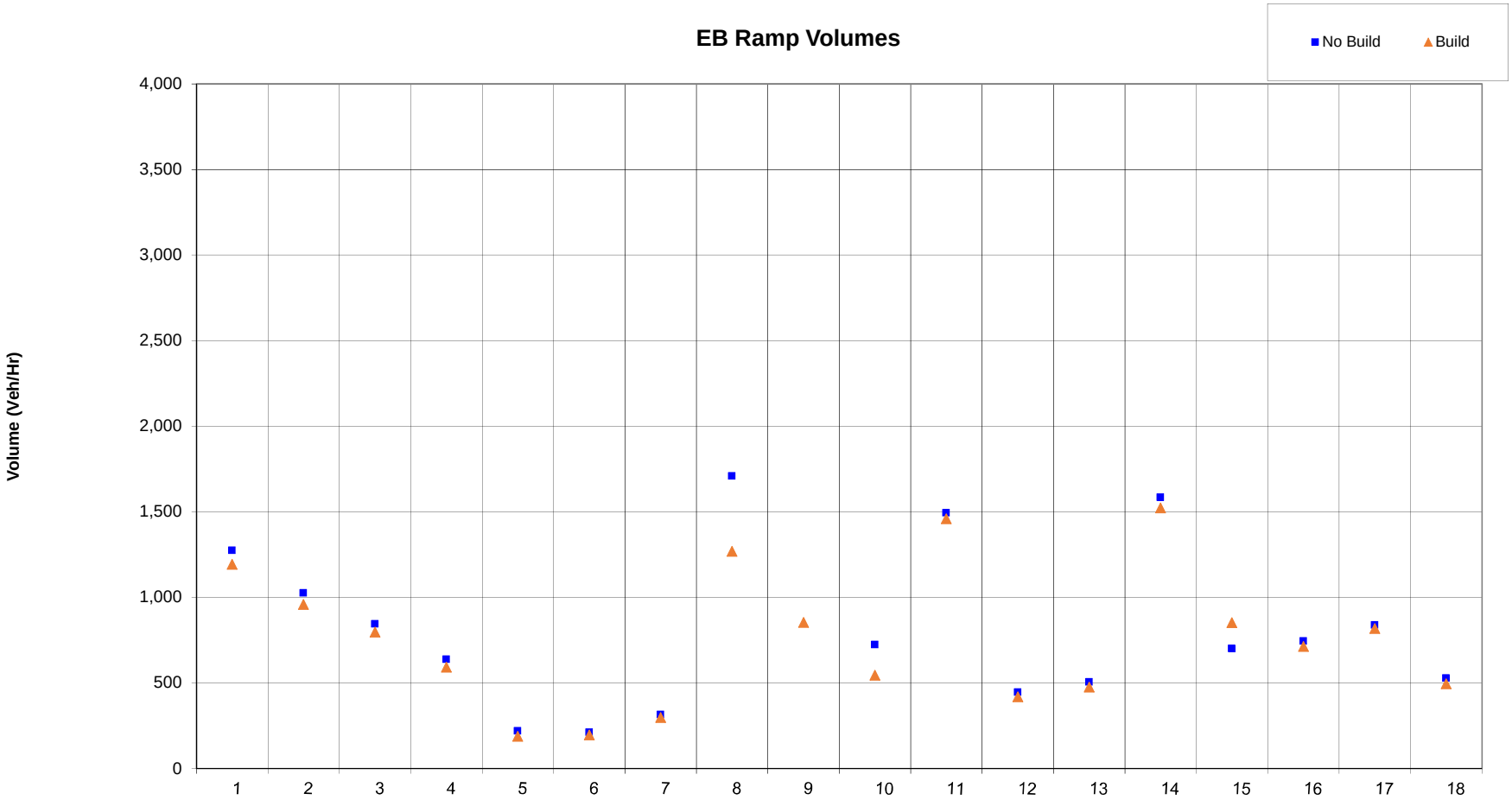


1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

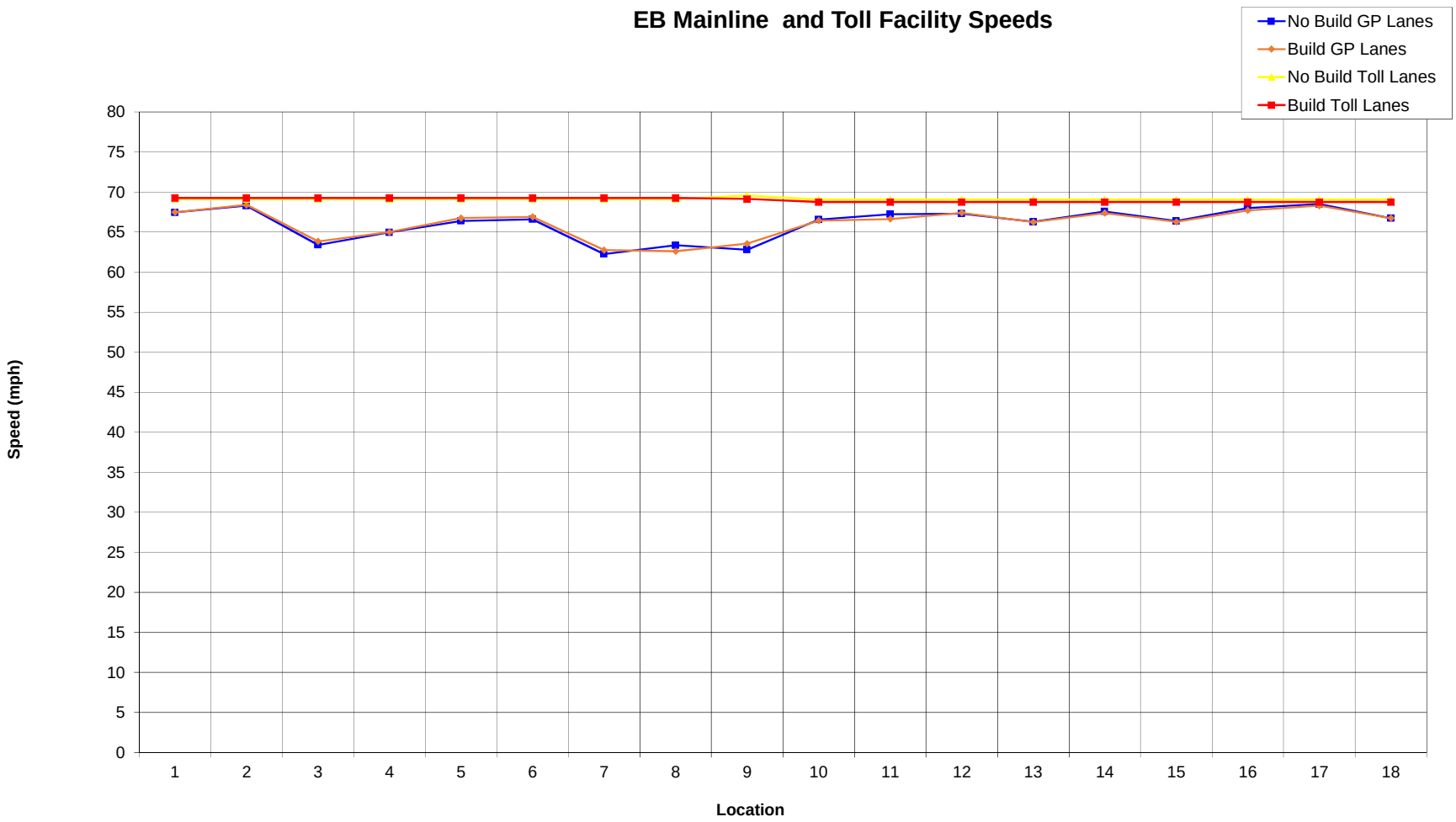
Charts 7-8 AM



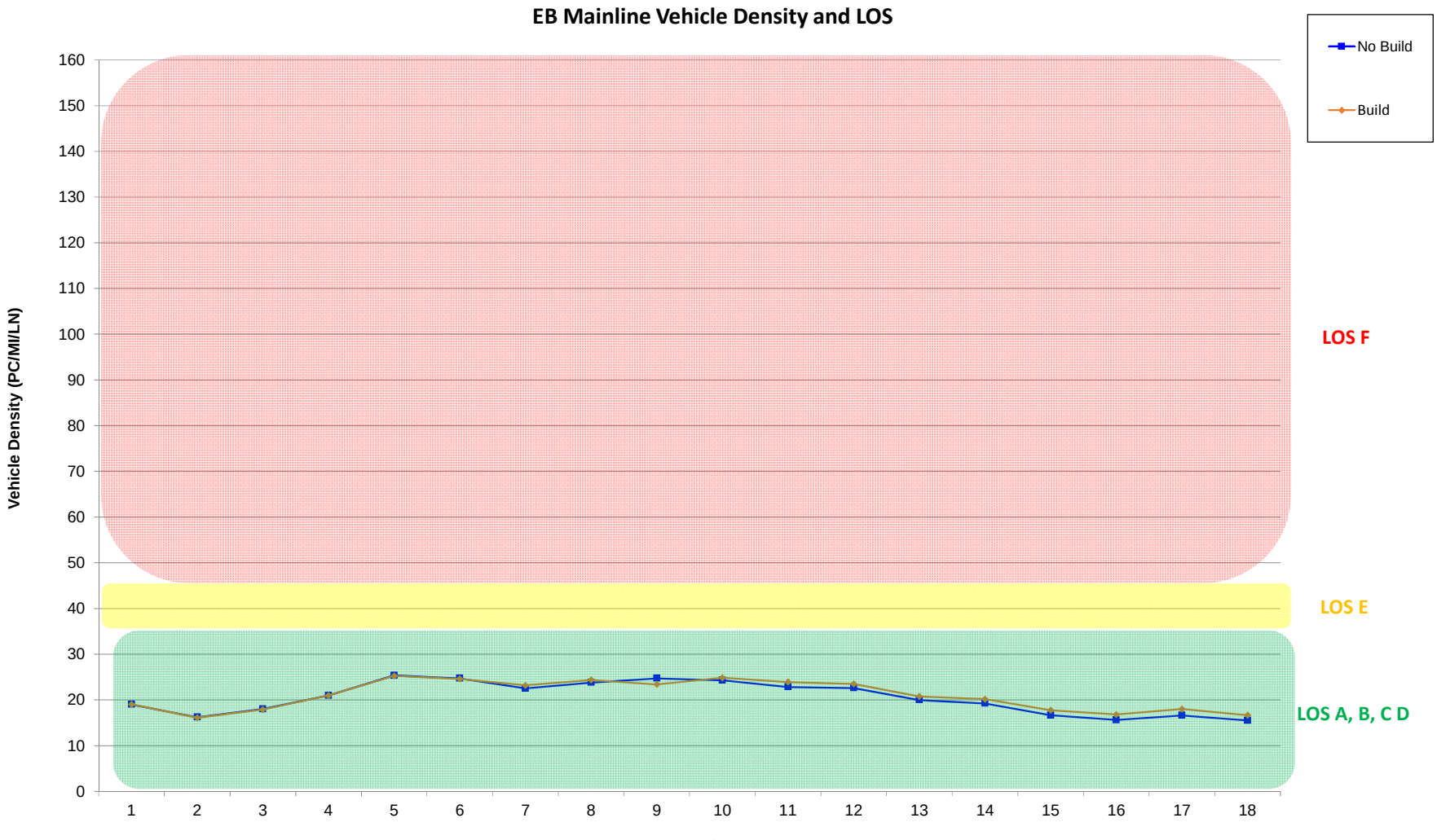
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



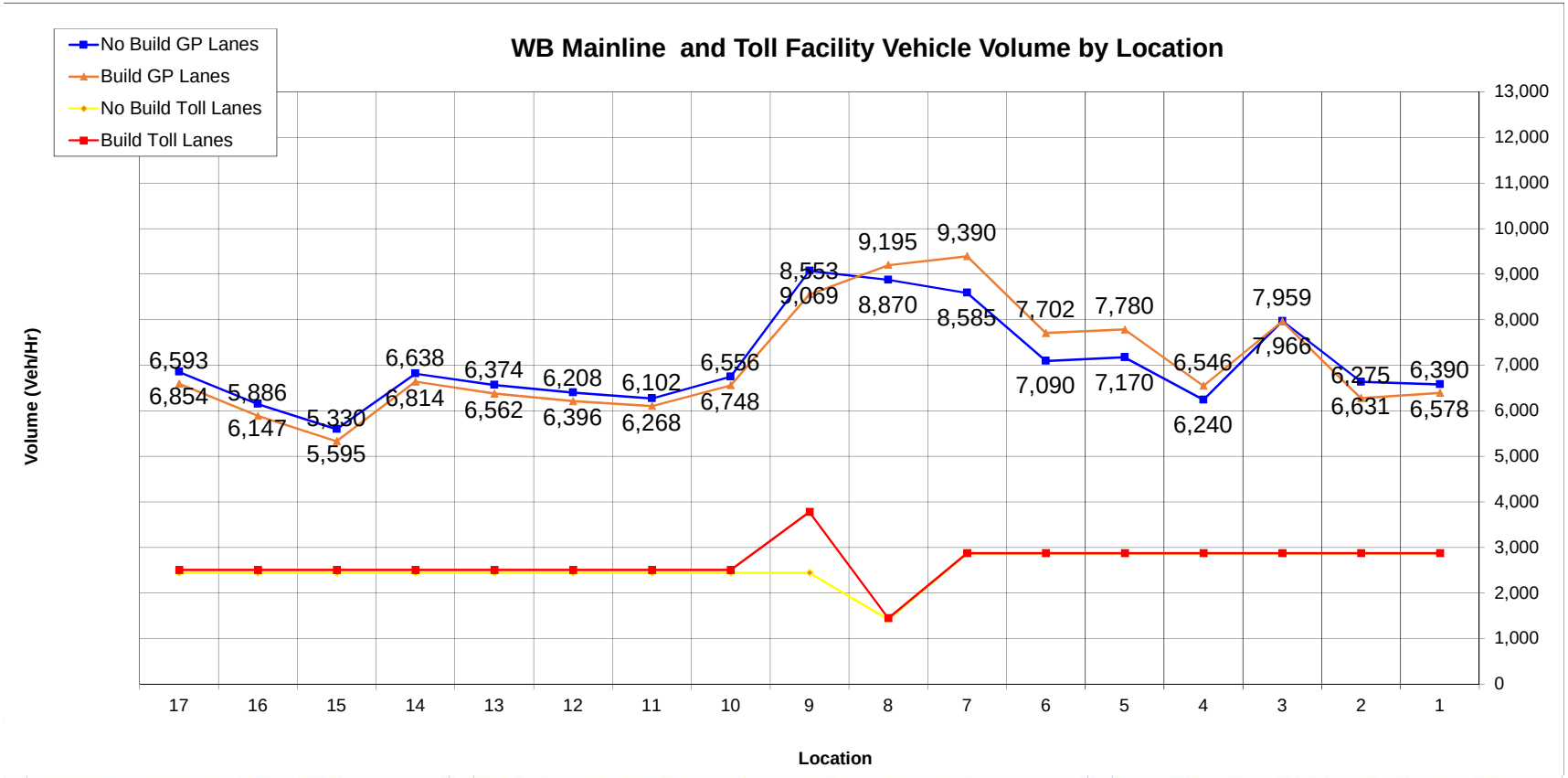
1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	On Ramp From Green River
2	On Ramp from SB Weir Canyon	8	On Ramp from SR 241 GP	14	Off Ramp to SR 71
3	On Ramp from NB Weir Canyon	9	On Ramp from SR 241 HOV	15	On Ramp from SR 71
4	Off Ramp to SR 241	10	On Ramp from HOT Lanes Exit (east of SR 241)	16	Off Ramp to Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	17	Off Ramp to EB Maple
6	On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River	18	On Ramp from Serfas/Autoclub



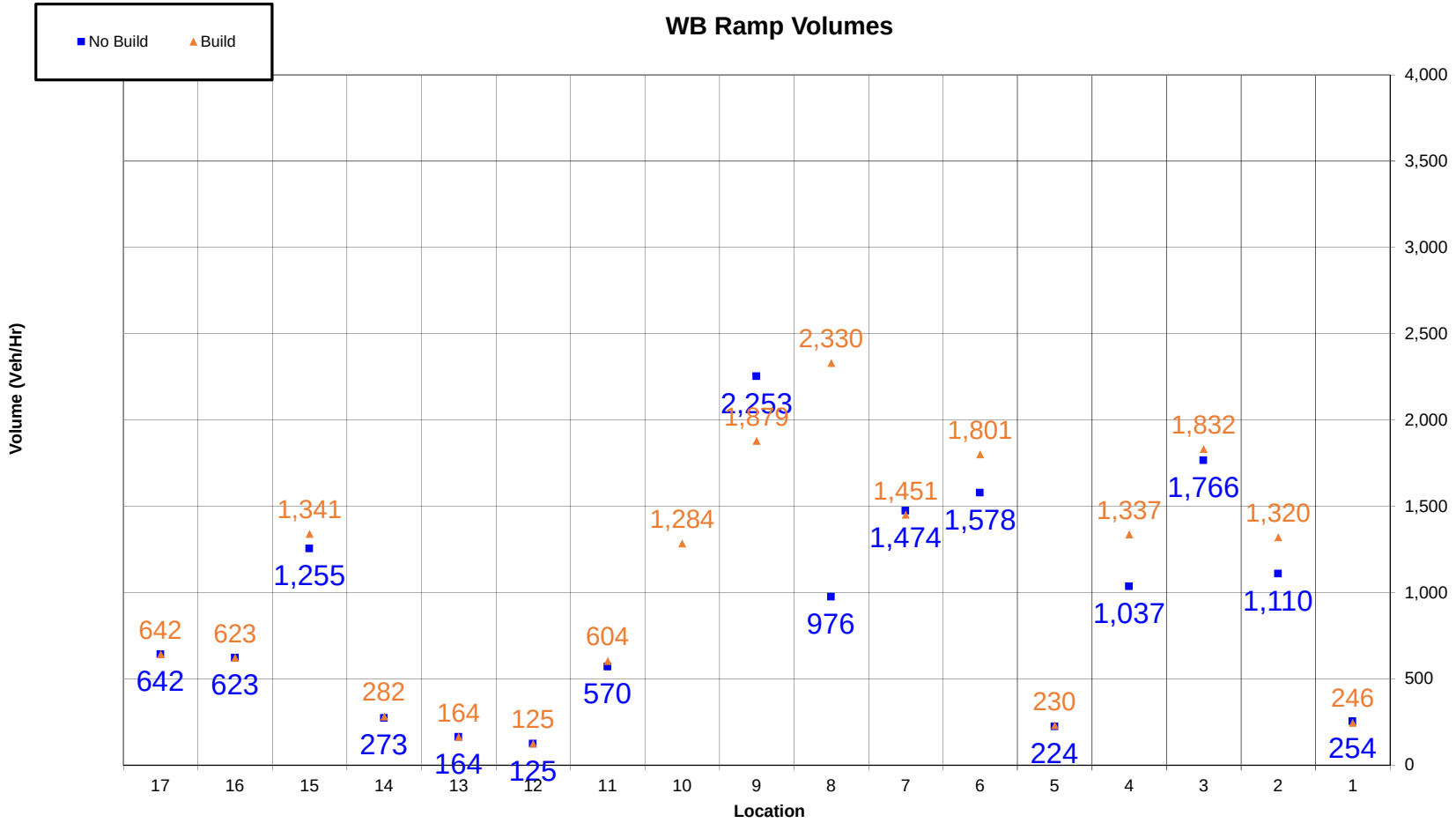
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



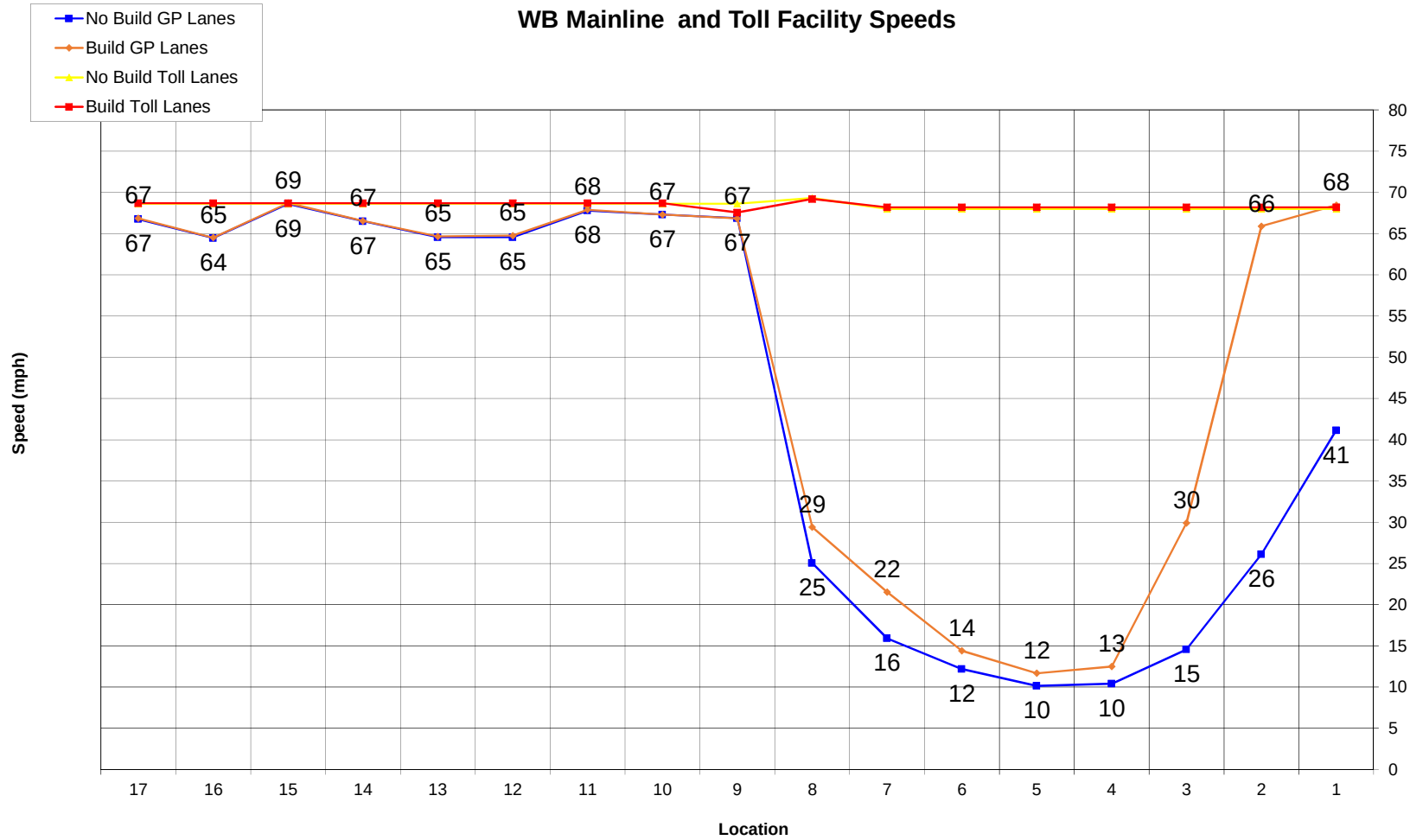
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



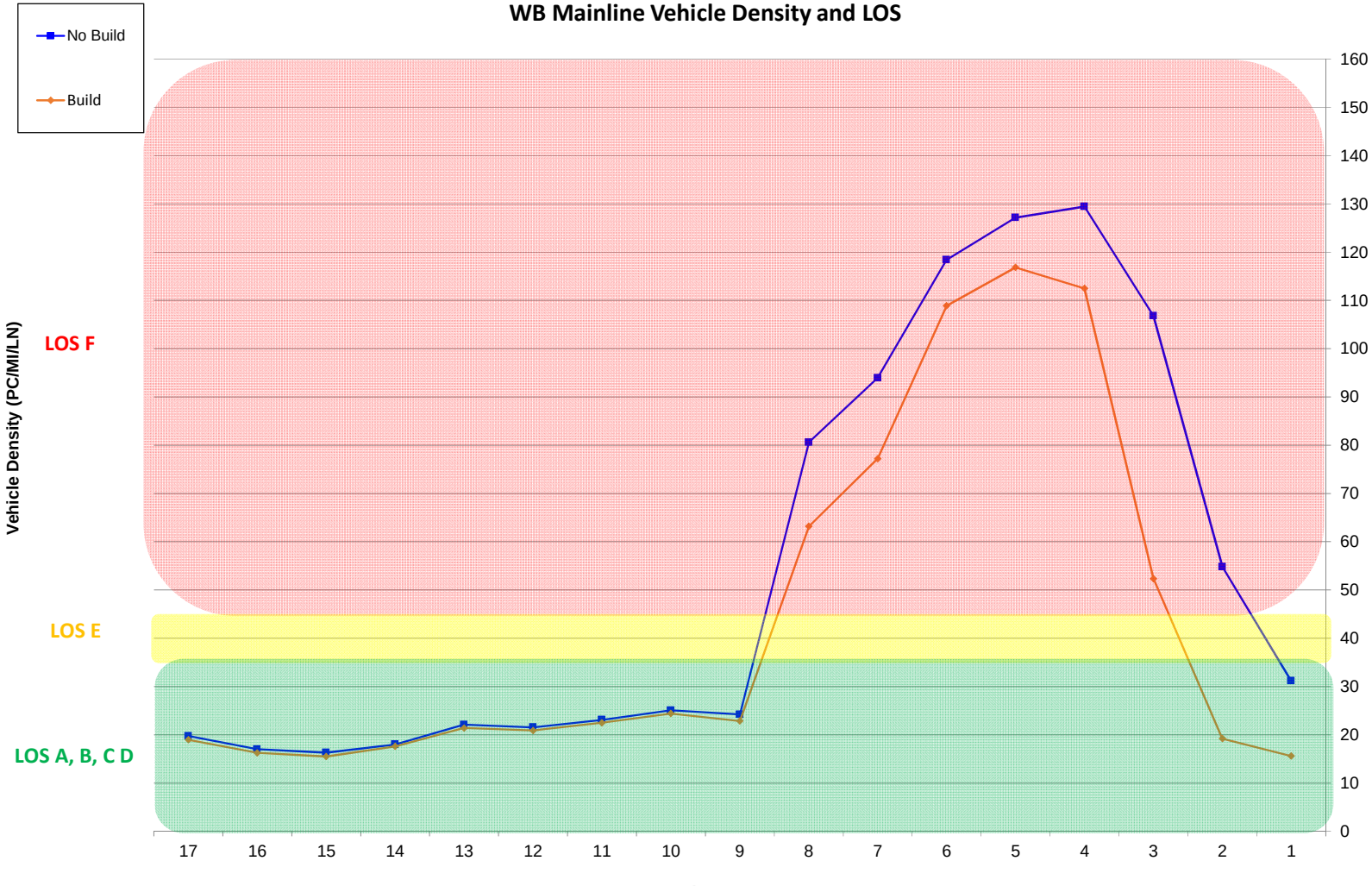
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOT Lanes Exit (west of Green River)	13	On Ramp from SB Gypsum Canyon
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOT Lanes Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon
4	On Ramp from SR 71	10	Off Ramp to SR 241 HOV	16	On Ramp from NB Weir Canyon
5	Off Ramp to Green River	11	Off Ramp to Gypsum Canyon	17	On Ramp from SB Weir Canyon
6	On Ramp from Green River	12	On Ramp from NB Gypsum Canyon		



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



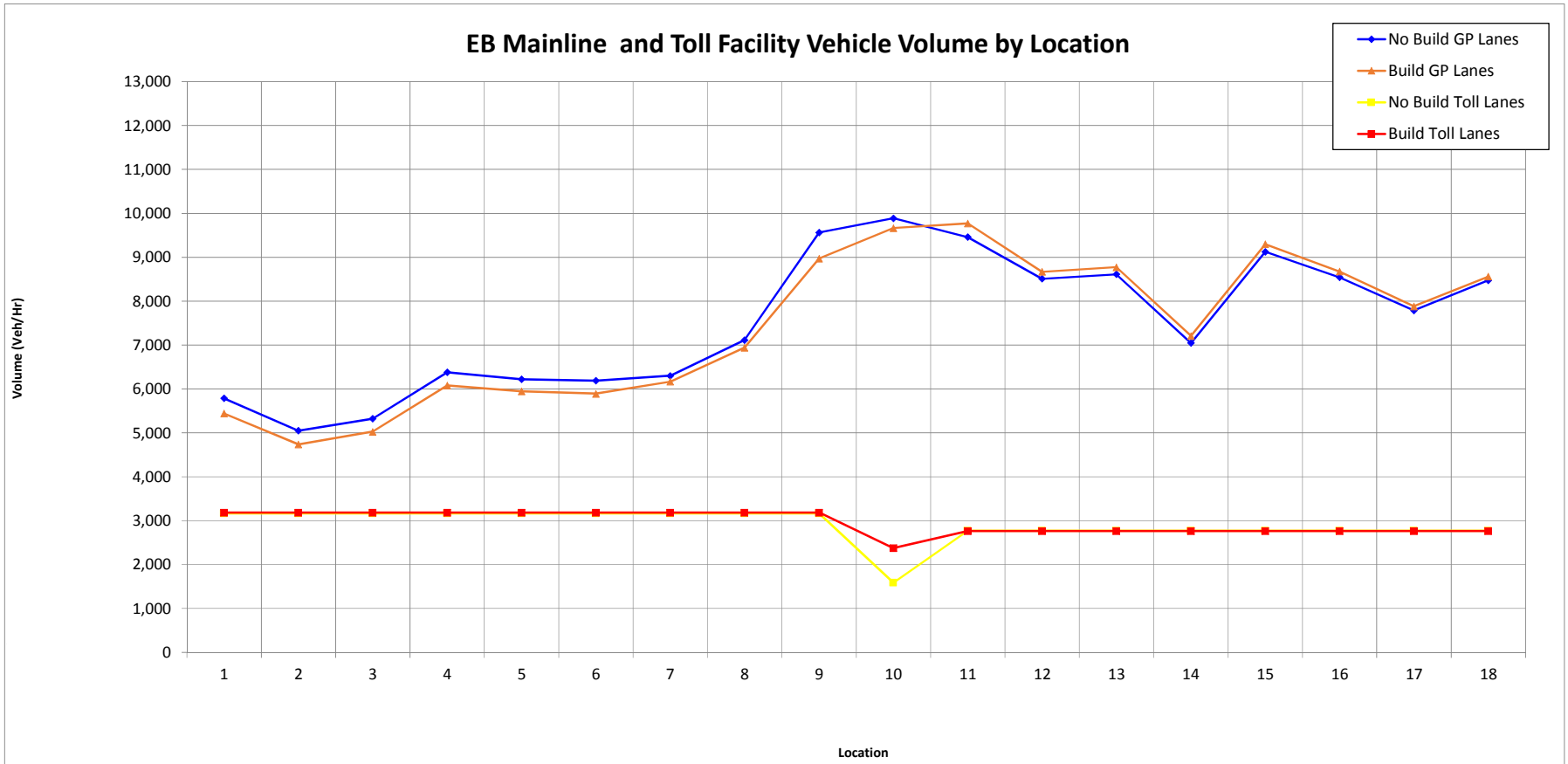
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

SR-91
Vissim Model Summary - 2017 Build Option 2 - PM Peak Period
Network Summary Statistics

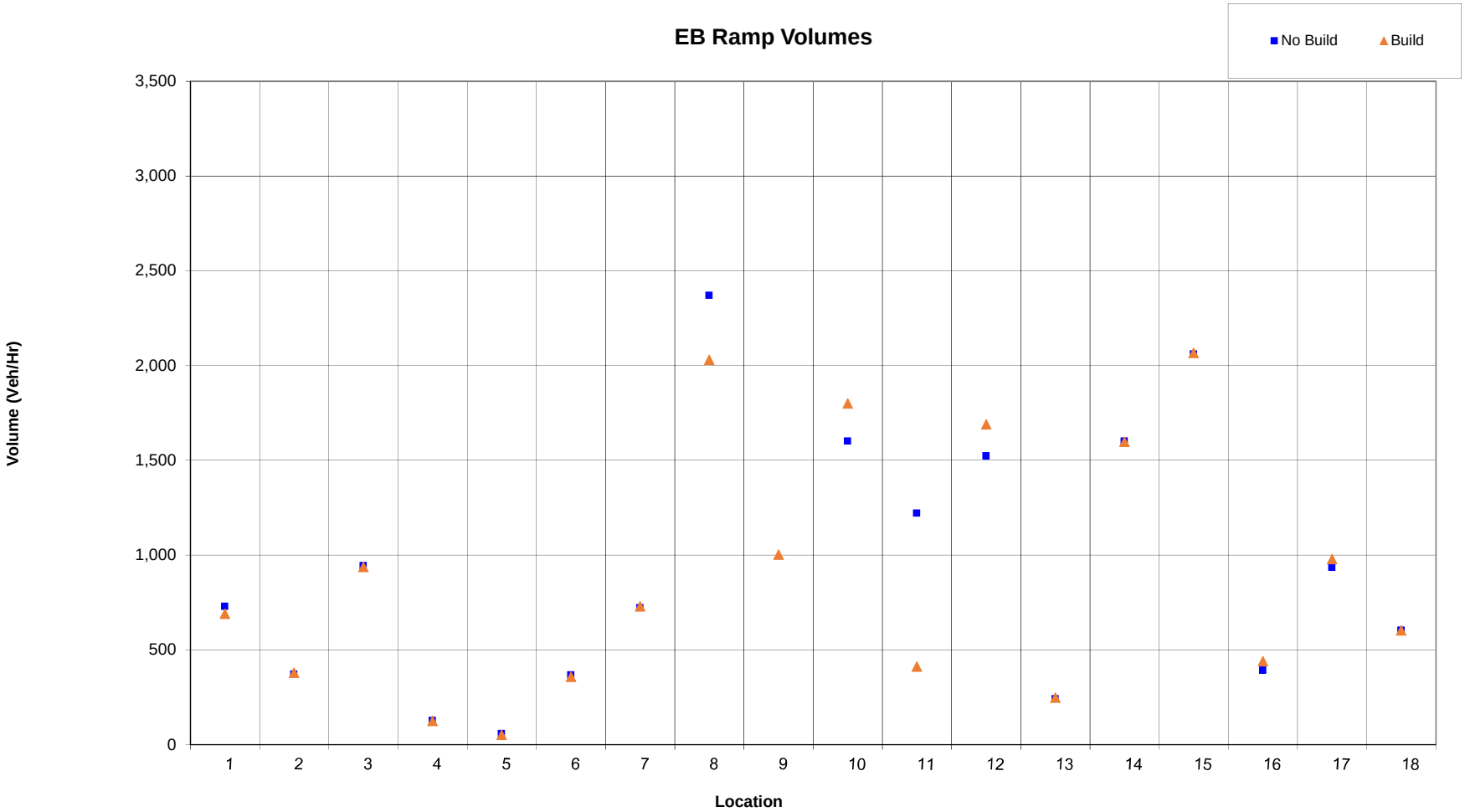
Parameter	2017 No Build	2017 Option 2	Difference
Total Vehicle Demand (4 Hr)	141,937	144,727	2,790
Total number of vehicles that did not reach their desitination	20,812	22,405	1,593
Total number of vehicles that have reached their destination	121,125	122,322	1,197
Total vehicle-miles traveled (VMT)	1,014,001	1,036,967	22,965
Total travel time, All Vehicle Types (VHT)	26,278	27,608	1,331
Average speed [mph], All Vehicle Types	38.6	37.6	-1.0
Average delay time per vehicle [mins], All Vehicle Types	5.27	5.68	0.41

SR-91
Vissim Model Summary - 2017 Build Option 2 - PM Peak Period
Travel Time Results

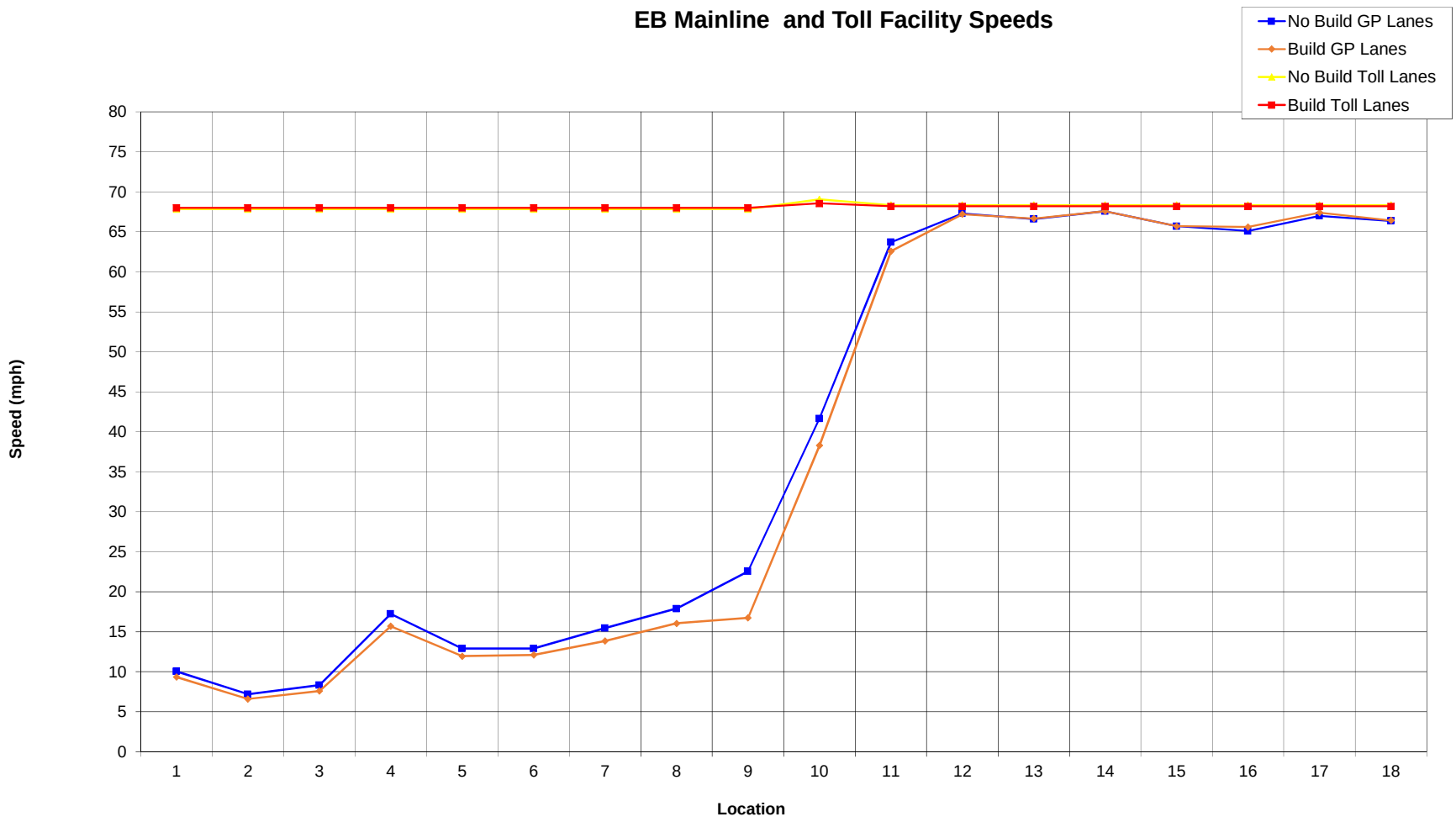
#	Origin	#	Destination	ıp Key	Hide Travel Time Seg 1	Seg 2	Seg 3	2017 PM No Build VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM	2017 PM Build VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM	Change VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	1	1002	1003	1005	28.3	29.6	29.4	27.6	30.3	31.9	32.0	29.4	2.0	2.4	2.6	1.8
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	2	1002	1003	2005	28.3	29.5	29.4	27.6	30.3	31.9	31.9	29.4	2.0	2.4	2.6	1.8
		5	SR 241 SB south of SR 91	3	1001			18.4	19.1	19.0	17.7	19.3	20.8	20.6	18.7	1.0	1.7	1.5	1.0
		7	SR 71 NB north of SR 91	4	1002	1003	1004	30.6	31.9	31.8	30.0	32.7	34.3	34.3	31.7	2.0	2.4	2.6	1.8
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	5	2002	1003	1005	10.4	10.5	10.5	10.5	11.2	11.3	11.3	11.2	0.8	0.8	0.8	0.6
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	6	2002	2003	2005	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.4	0.0	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	7	2002	1003	1004	12.7	12.8	12.9	12.9	13.6	13.6	13.7	13.5	0.8	0.8	0.8	0.6
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8	1011	1012	1014	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	0.0	0.0	0.0	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9	1011	1012	2014	8.5	8.5	8.5	8.4	8.5	8.5	8.5	8.4	0.0	0.0	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10	1011	1012	1013	10.9	11.0	10.9	10.9	10.9	10.9	10.9	10.9	0.0	0.0	0.0	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	11	1011	1012	2013	n/a	n/a	n/a	n/a	10.9	10.8	10.8	10.8	-0.1	-0.1	-0.1	-0.1
		7	SR 71 NB north of SR 91	12	1010			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	13	2011	1012	1014	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.4	0.0	0.0	0.0	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	14	2011	2012	2014	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	0.0	0.0	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15	2011	1012	1013	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	0.0	0.0	0.0	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	16	2011	2012	2013	n/a	n/a	n/a	n/a	10.8	10.8	10.8	10.7	-0.1	-0.2	-0.1	-0.1
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	17	1006			7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	0.0	0.0	0.0	0.0
		3	SR 91 EB GP Lanes east of Serfas Club Rd	18	1007	1003	1005	13.4	13.5	13.6	13.6	15.0	15.2	15.1	14.9	1.6	1.7	1.5	1.3
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19	1007	1003	2005	13.4	13.4	13.5	13.5	15.0	15.2	15.1	14.8	1.6	1.8	1.5	1.3
		7	SR 71 NB north of SR 91	20	1007	1003	1004	15.7	15.8	15.9	15.9	17.3	17.5	17.5	17.2	1.6	1.7	1.5	1.3
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	21	2007	1003	1005	n/a	n/a	n/a	n/a	13.6	13.7	13.7	13.6	0.2	0.2	0.1	0.0
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	22	2007	2003	2005	n/a	n/a	n/a	n/a	10.8	10.8	10.8	10.8	-2.5	-2.6	-2.7	-2.7
		7	SR 71 NB north of SR 91	23	2007	1003	1004	n/a	n/a	n/a	n/a	15.9	16.0	16.0	15.9	0.2	0.2	0.1	0.0
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	24	1009	1012	1014	10.2	10.2	10.1	9.9	10.2	10.2	10.1	9.9	0.0	0.0	0.0	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	25	1009	1012	2014	10.2	10.2	10.0	9.9	10.2	10.2	10.0	9.8	0.0	0.0	0.0	0.0
		3	SR 91 EB GP Lanes east of Serfas Club Rd	26	1008			6.4	6.7	6.2	5.8	6.5	6.6	6.2	5.8	0.1	-0.1	0.1	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	27	1009	1012	1013	12.6	12.7	12.5	12.3	12.7	12.6	12.5	12.3	0.0	0.0	0.0	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	28	1009	1012	2013	n/a	n/a	n/a	n/a	12.6	12.6	12.4	12.2	-0.1	-0.1	-0.1	-0.1



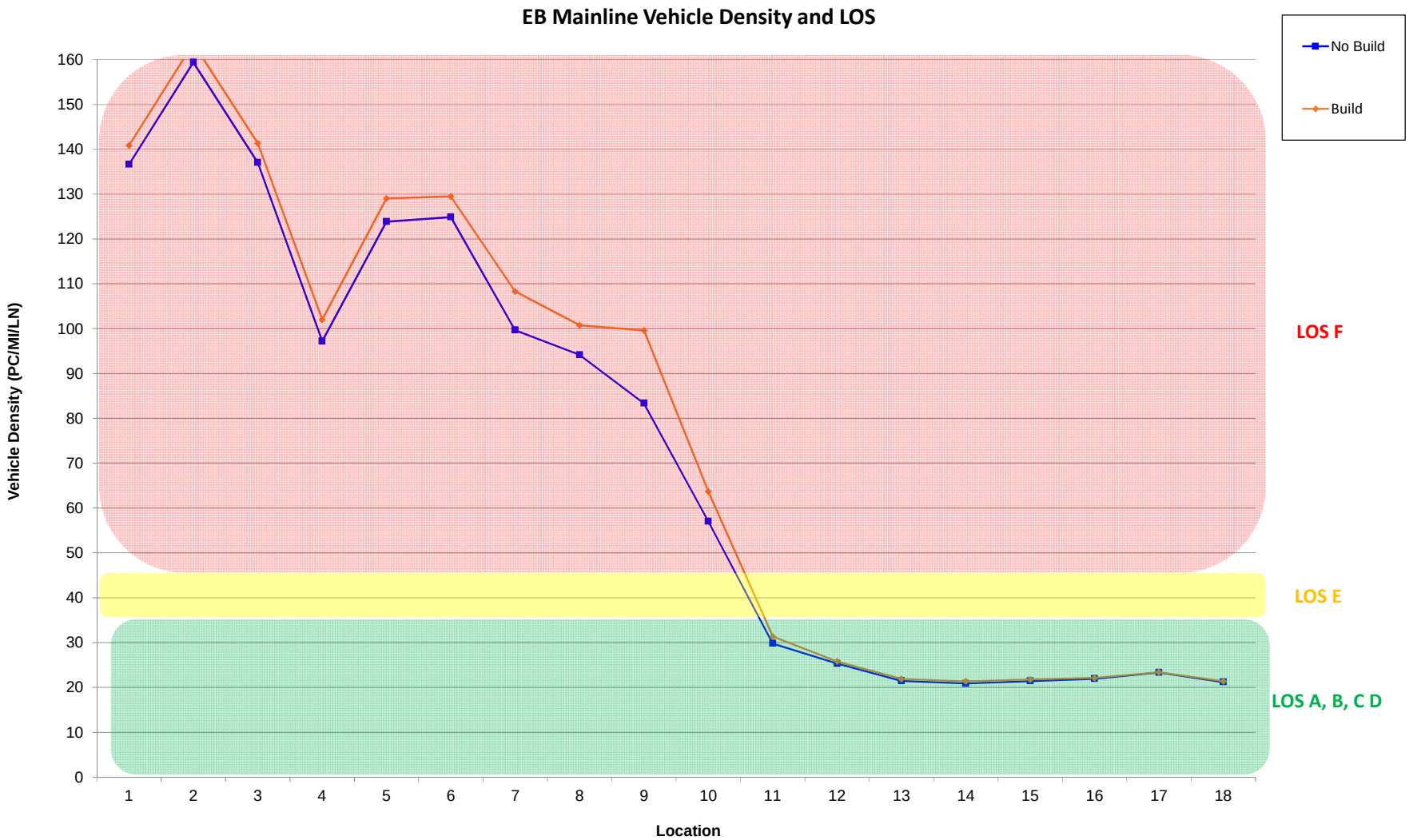
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	On Ramp From Green River
2	On Ramp from SB Weir Canyon	8	On Ramp from SR 241 GP	14	Off Ramp to SR 71
3	On Ramp from NB Weir Canyon	9	On Ramp from SR 241 HOV	15	On Ramp from SR 71
4	Off Ramp to SR 241	10	On Ramp from HOT Lanes Exit (east of SR 241)	16	Off Ramp to Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	17	Off Ramp to EB Maple
6	On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River	18	On Ramp from Serfas/Autoclub

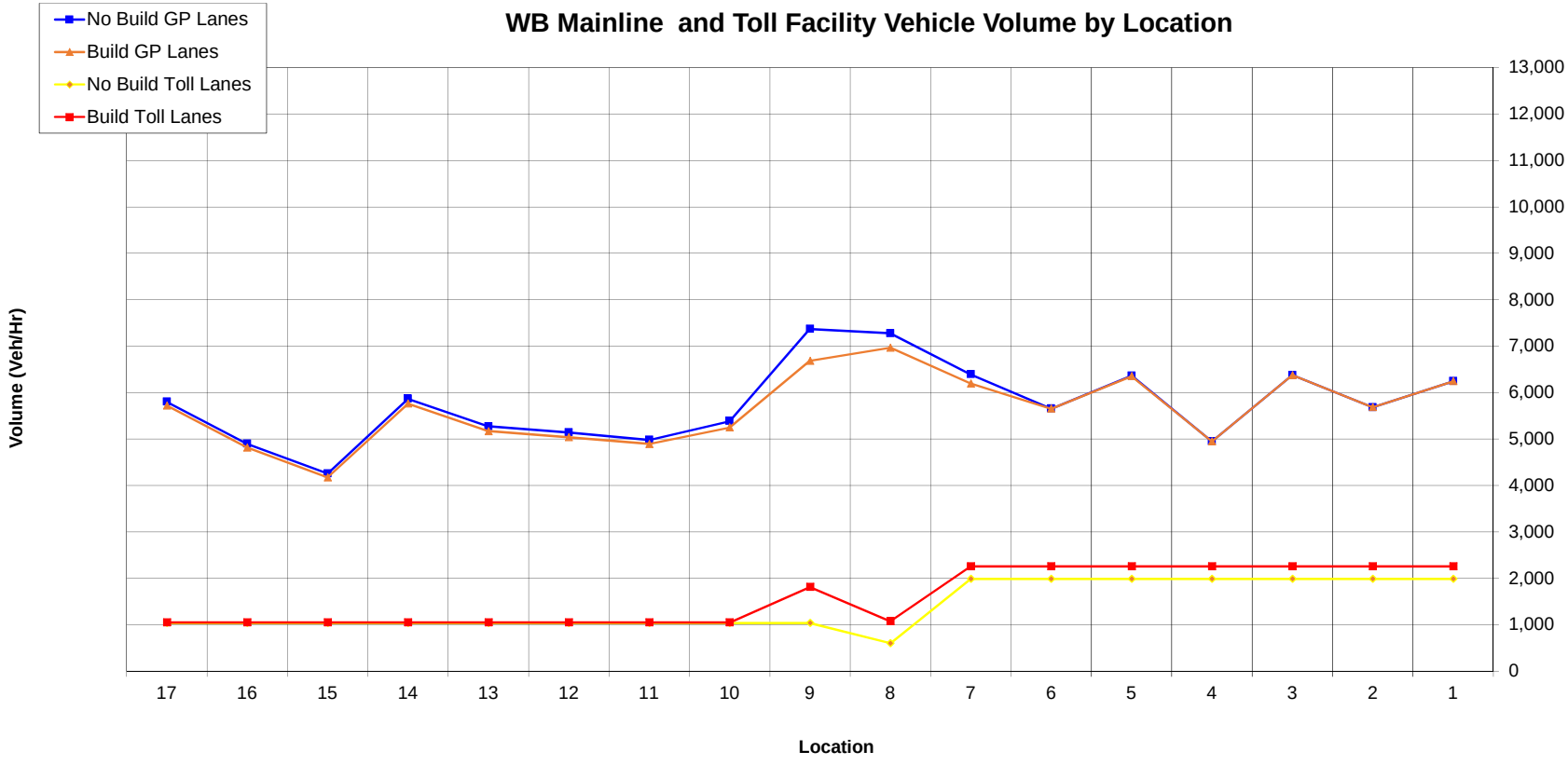


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

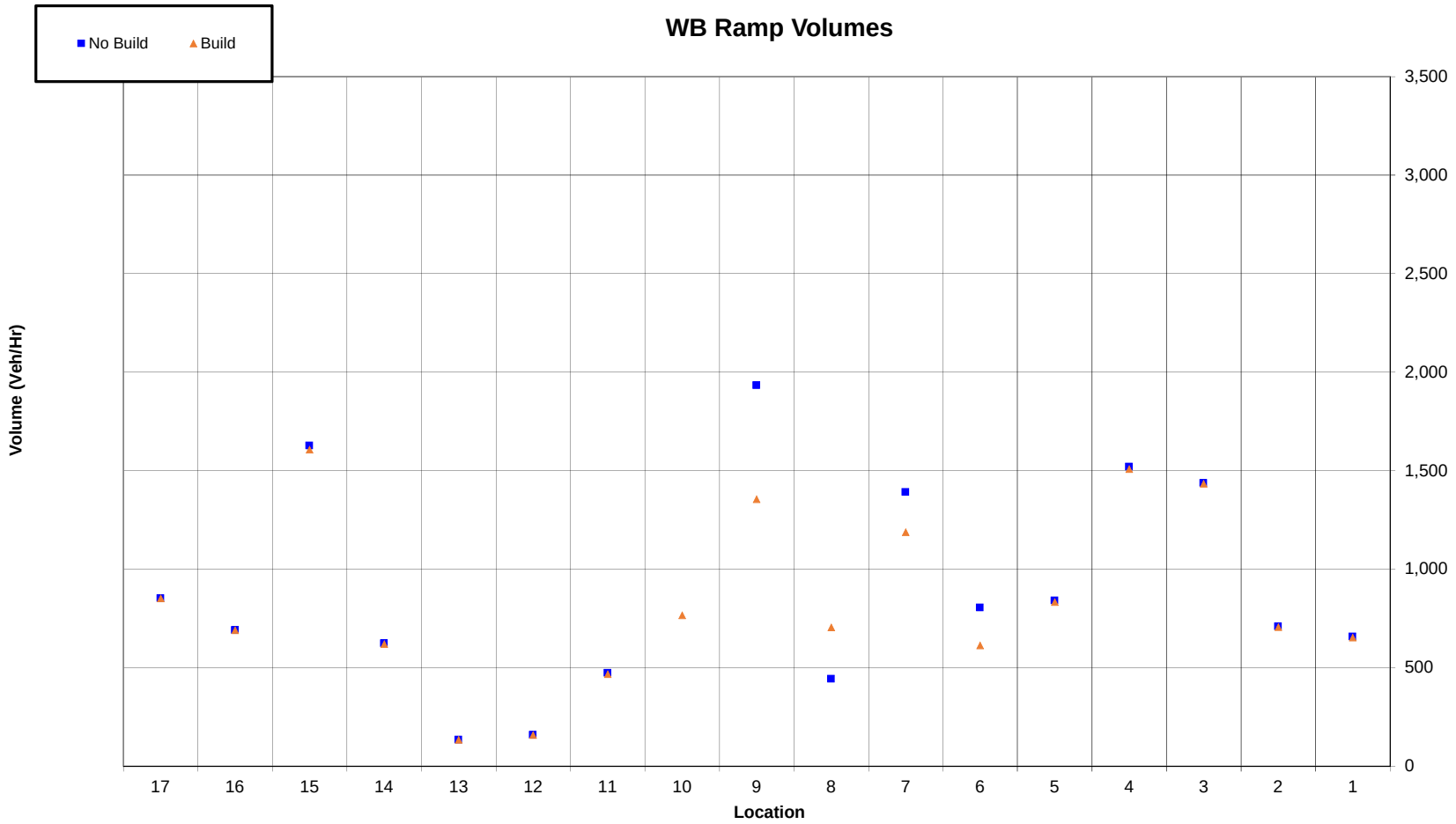


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

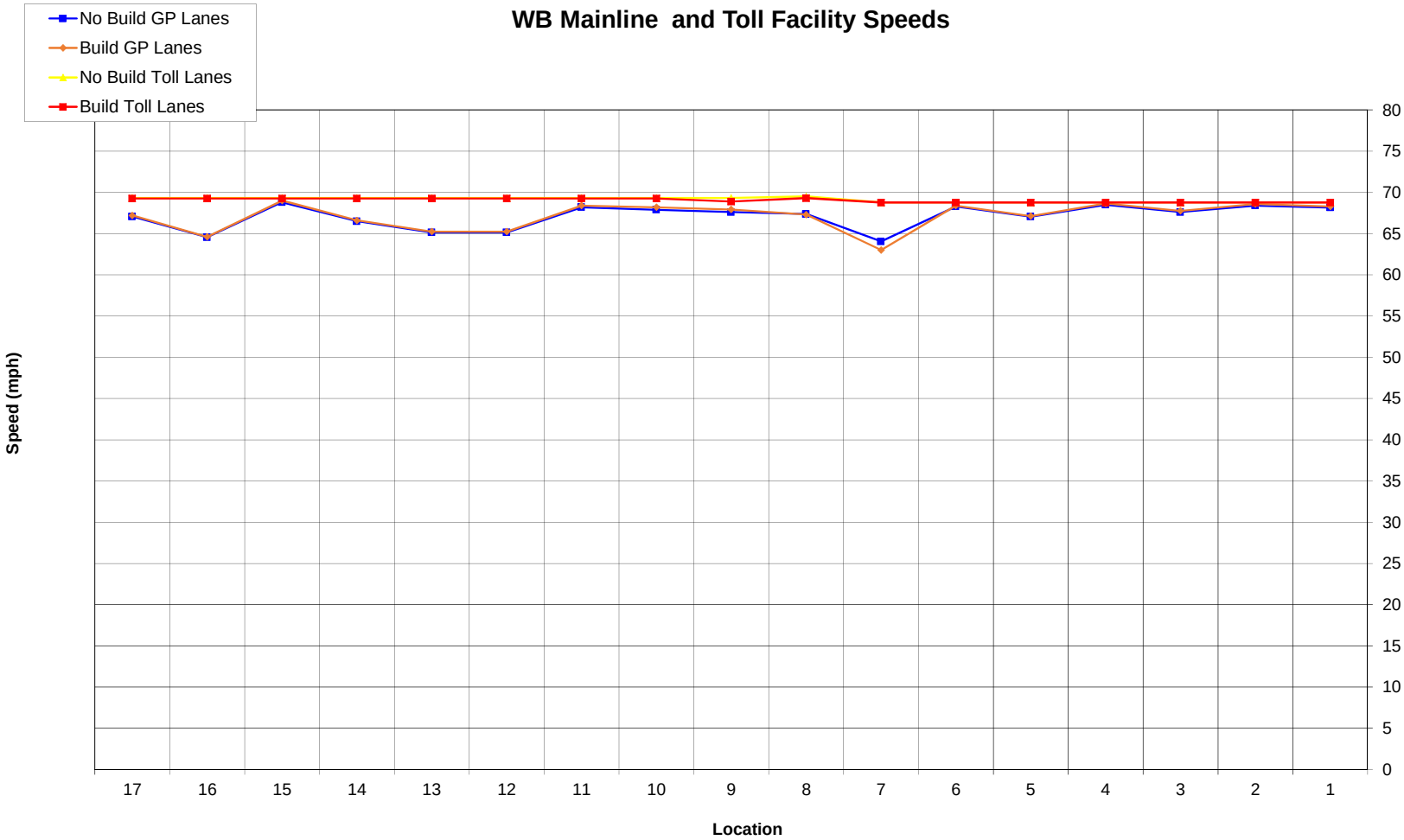
Charts 3-4 PM



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

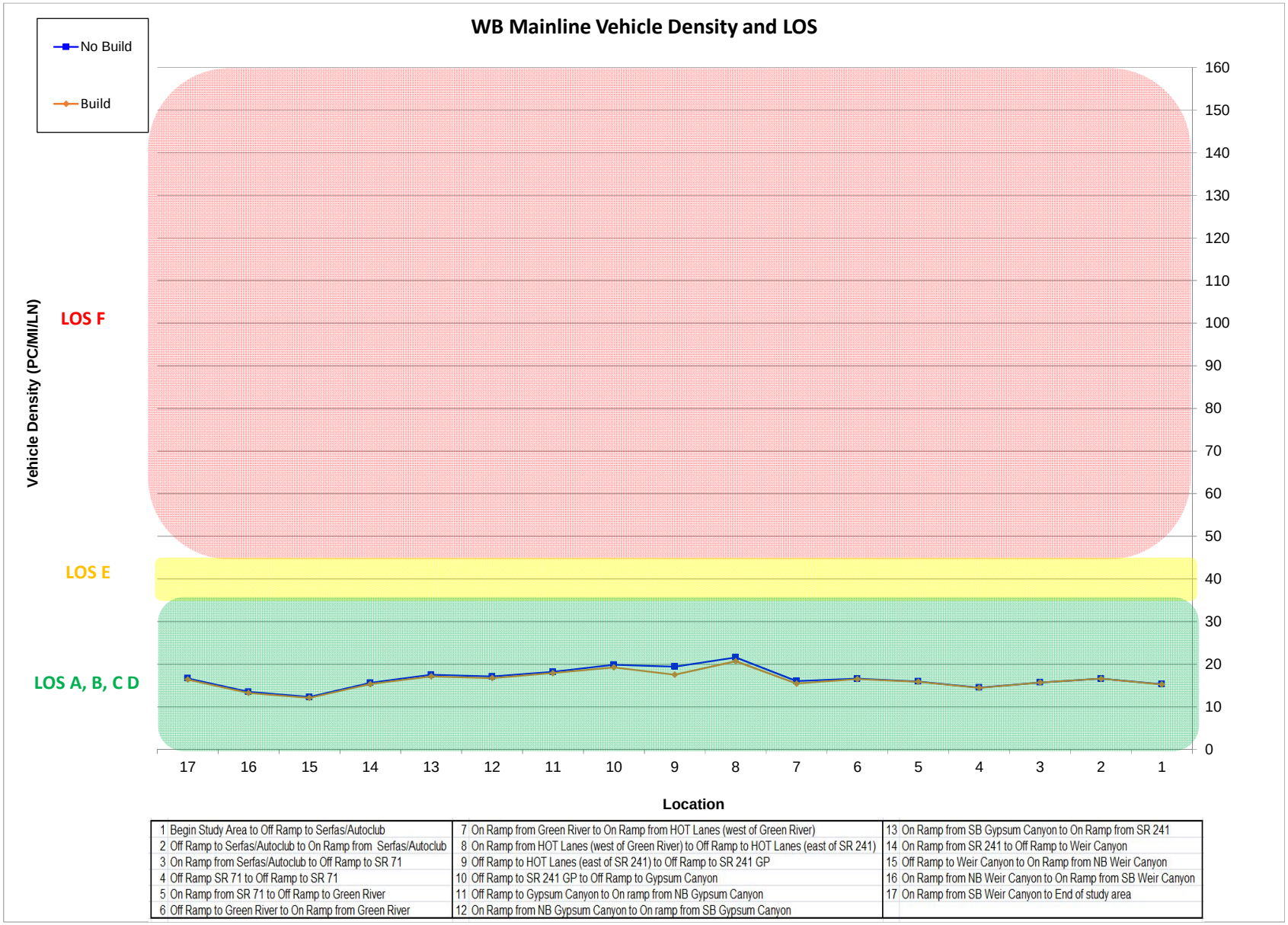


1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOT Lanes Exit (west of Green River)	13	On Ramp from SB Gypsum Canyon
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOT Lanes Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon
4	On Ramp from SR 71	10	Off Ramp to SR 241 HOV	16	On Ramp from NB Weir Canyon
5	Off Ramp to Green River	11	Off Ramp to Gypsum Canyon	17	On Ramp from SB Weir Canyon
6	On Ramp from Green River	12	On Ramp from NB Gypsum Canyon		

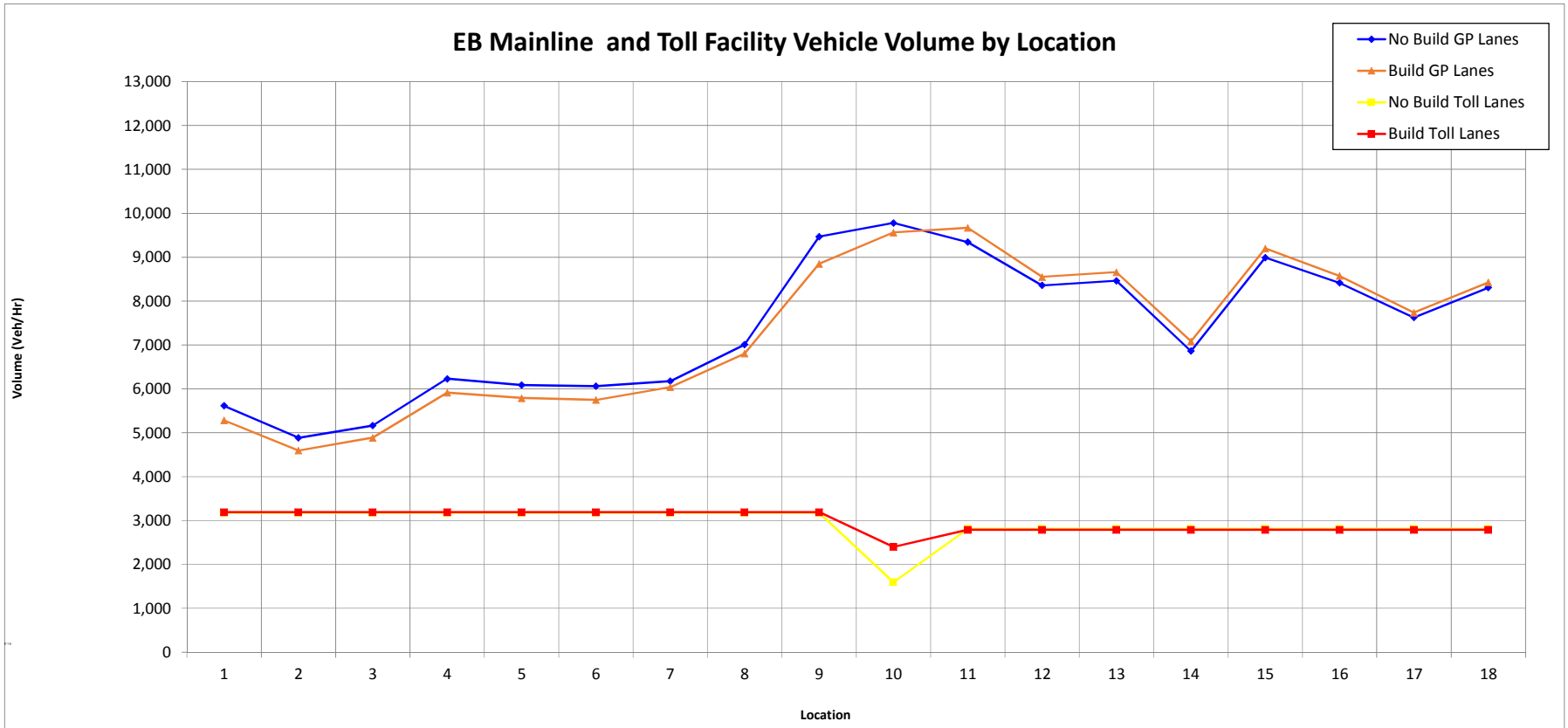


1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

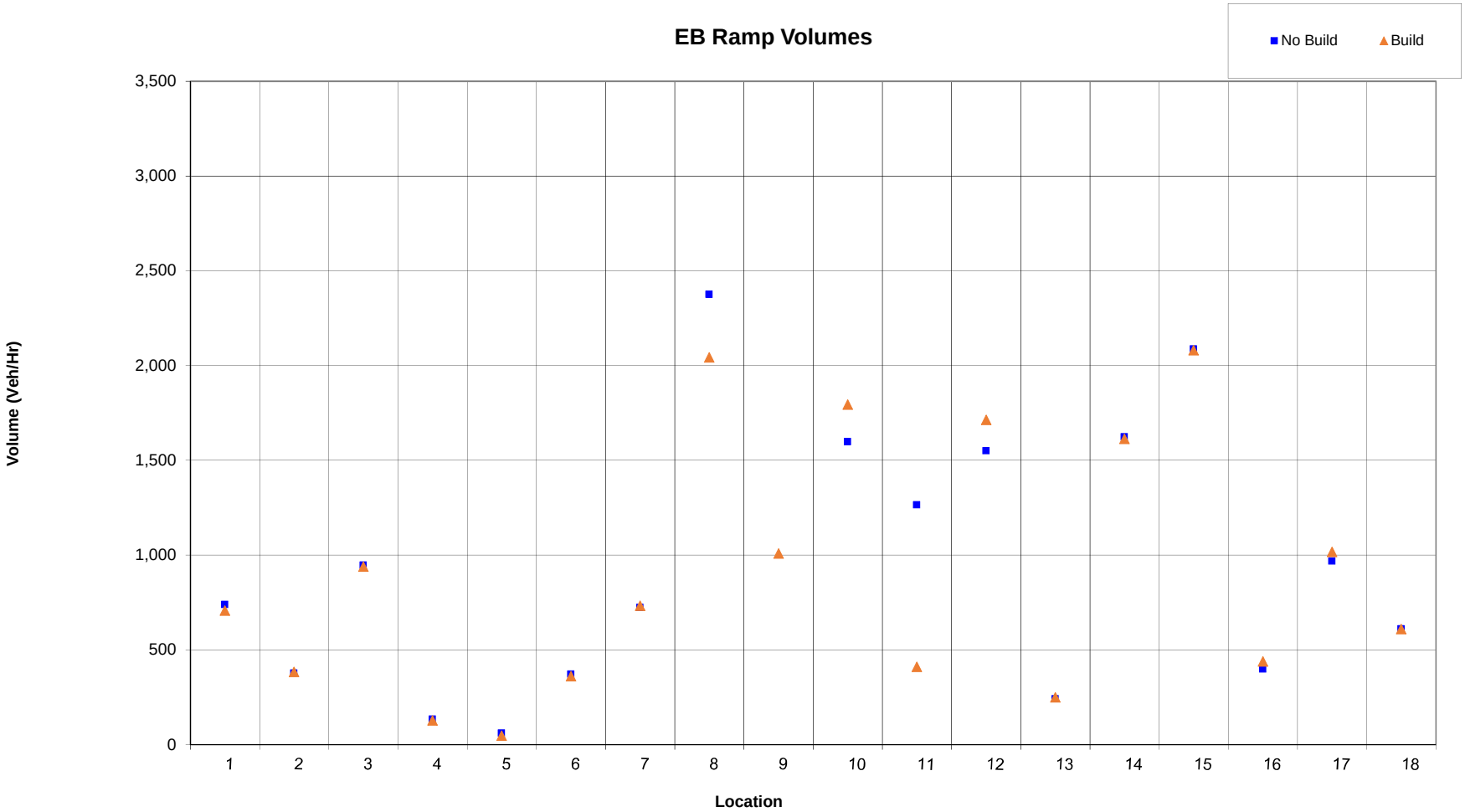
Charts 3-4 PM



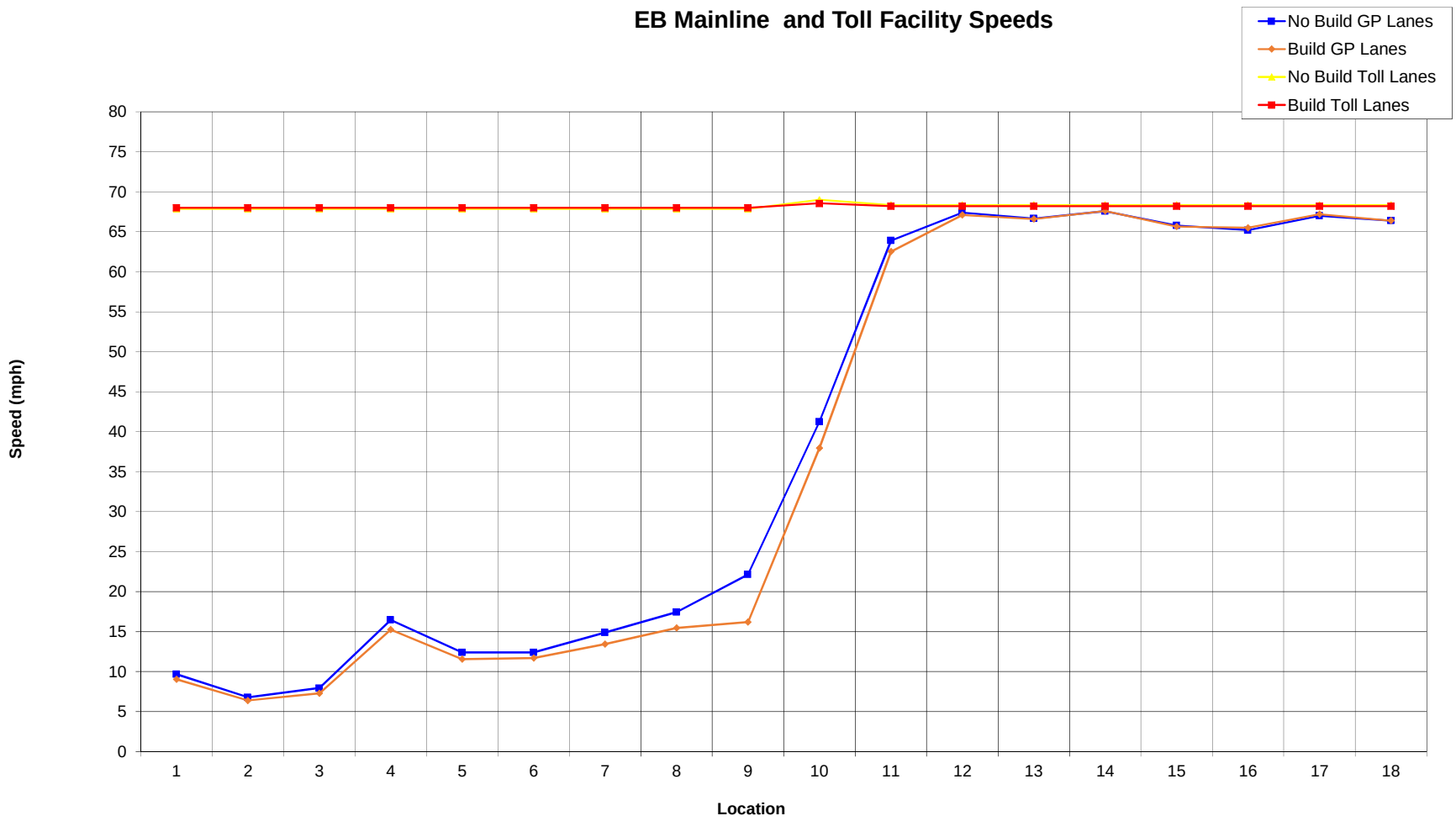
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



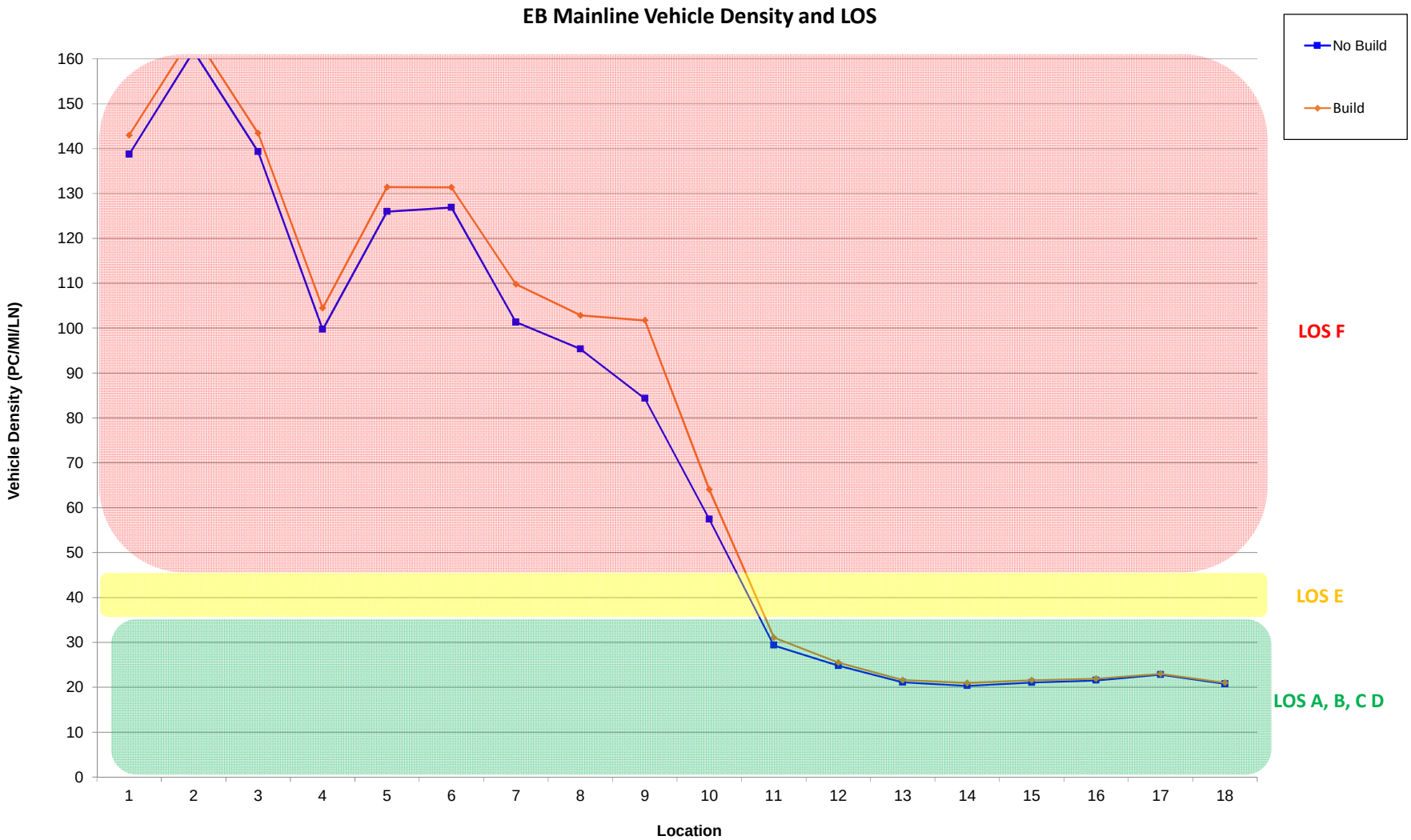
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



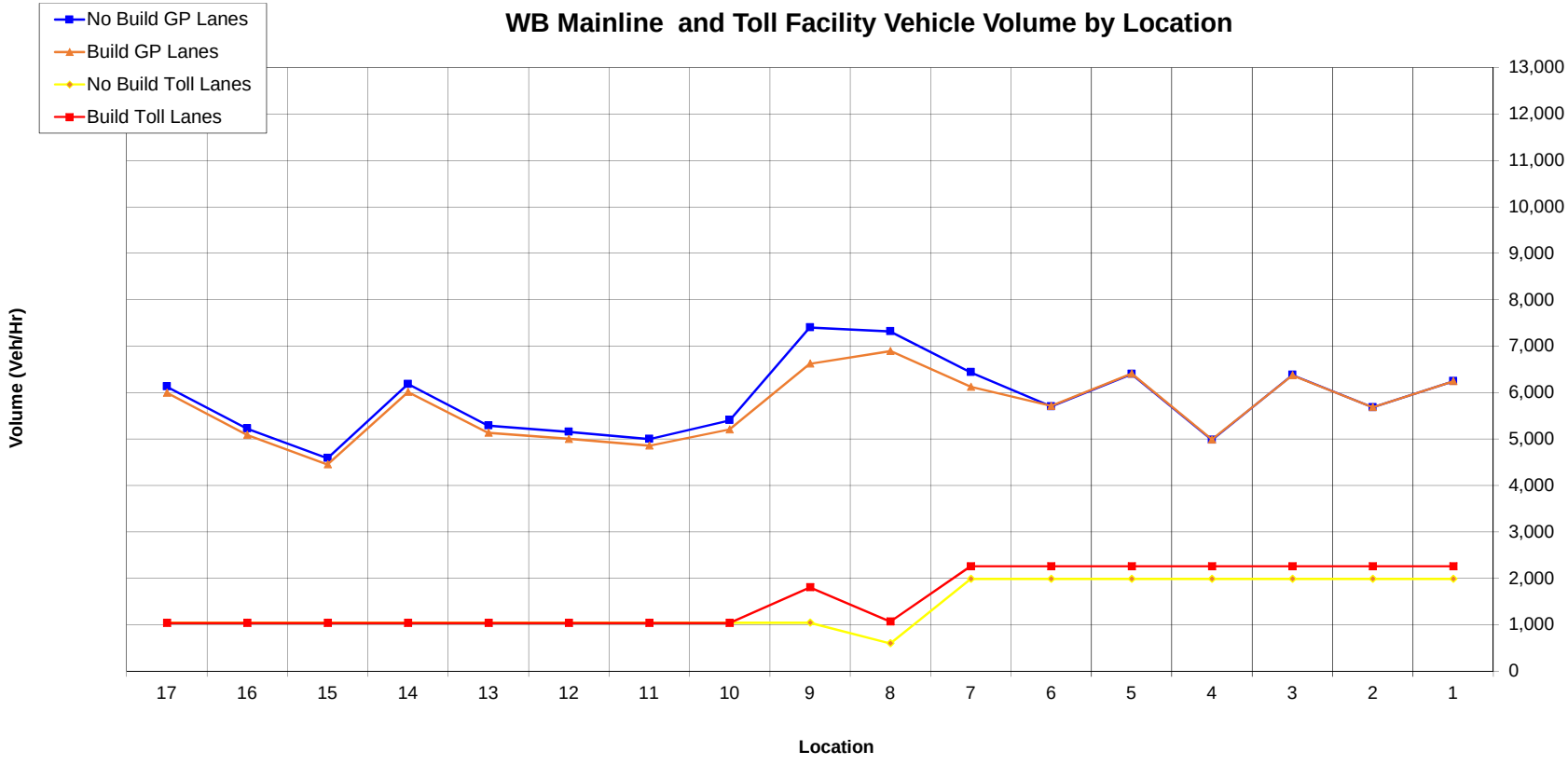
1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	On Ramp From Green River
2	On Ramp from SB Weir Canyon	8	On Ramp from SR 241 GP	14	Off Ramp to SR 71
3	On Ramp from NB Weir Canyon	9	On Ramp from SR 241 HOV	15	On Ramp from SR 71
4	Off Ramp to SR 241	10	On Ramp from HOT Lanes Exit (east of SR 241)	16	Off Ramp to Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	17	Off Ramp to EB Maple
6	On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River	18	On Ramp from Serfas/Autoclub



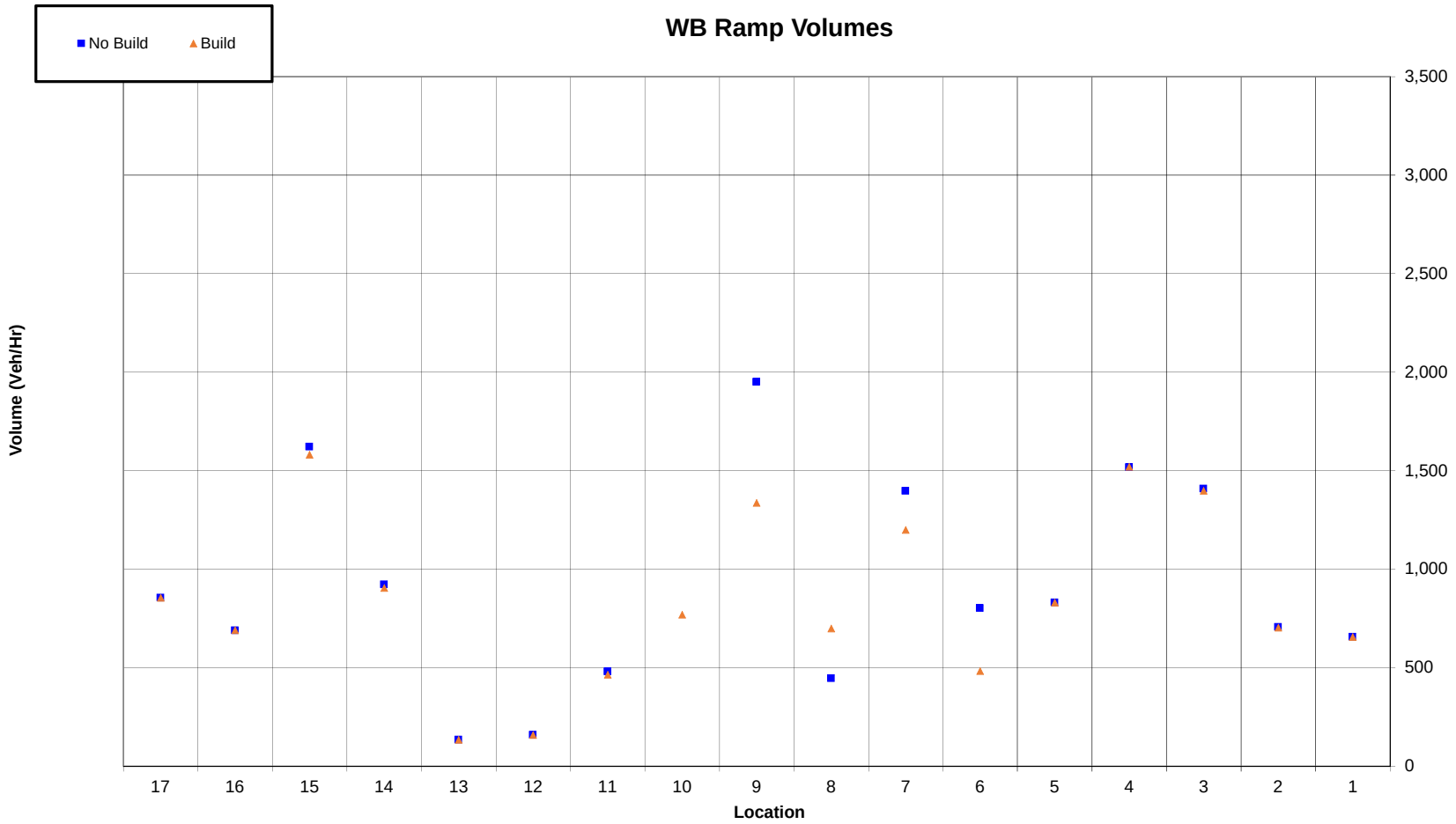
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



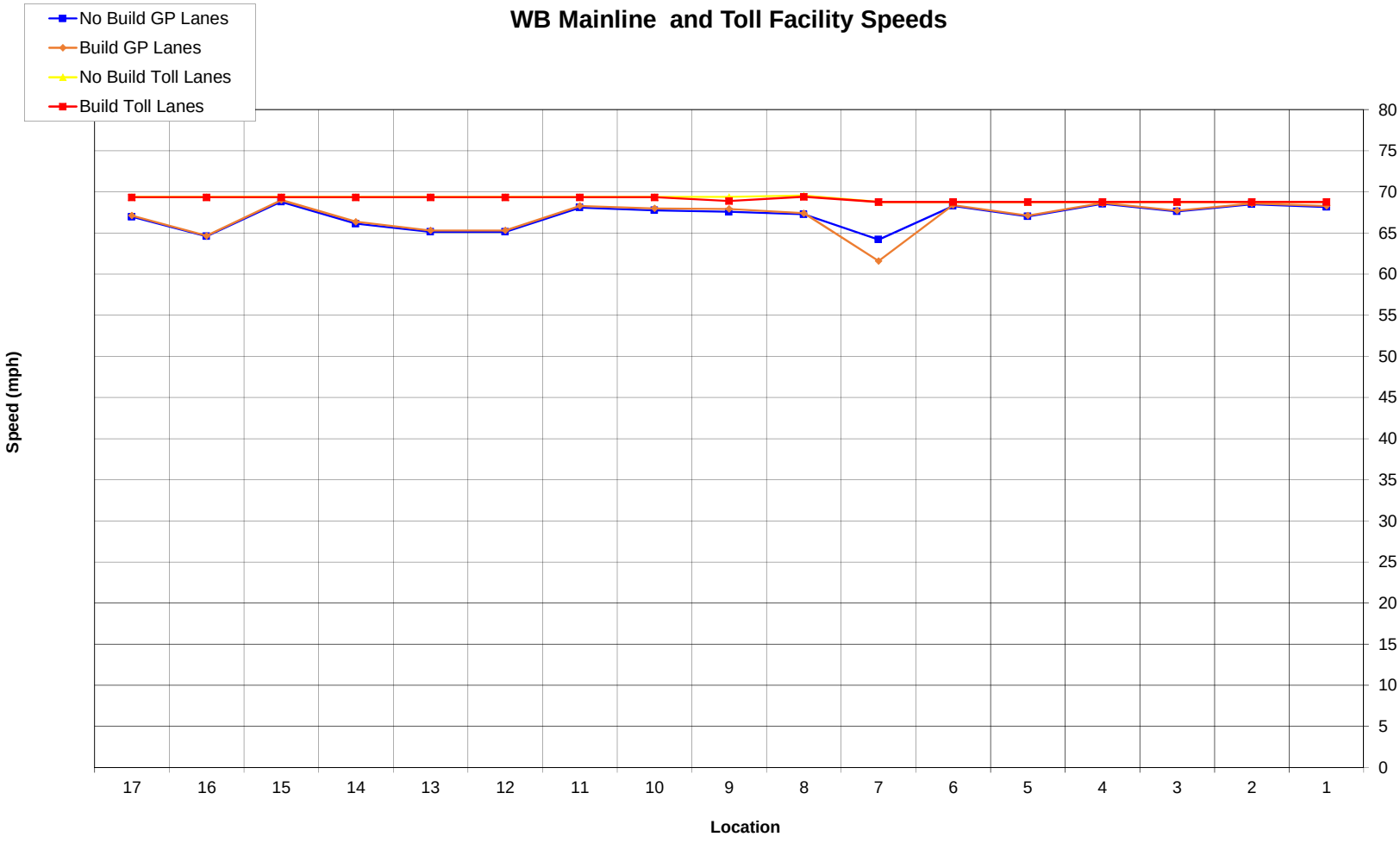
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



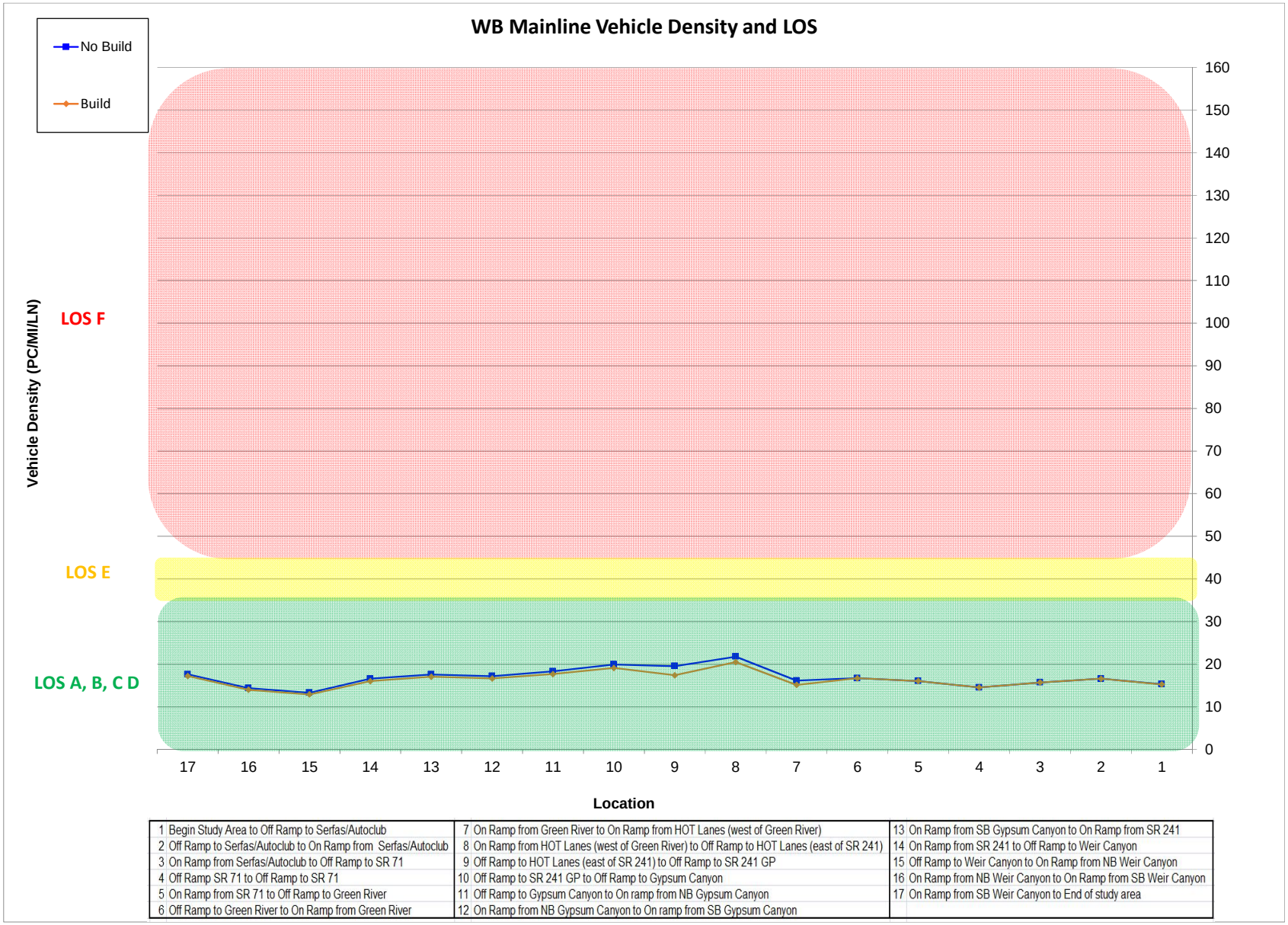
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



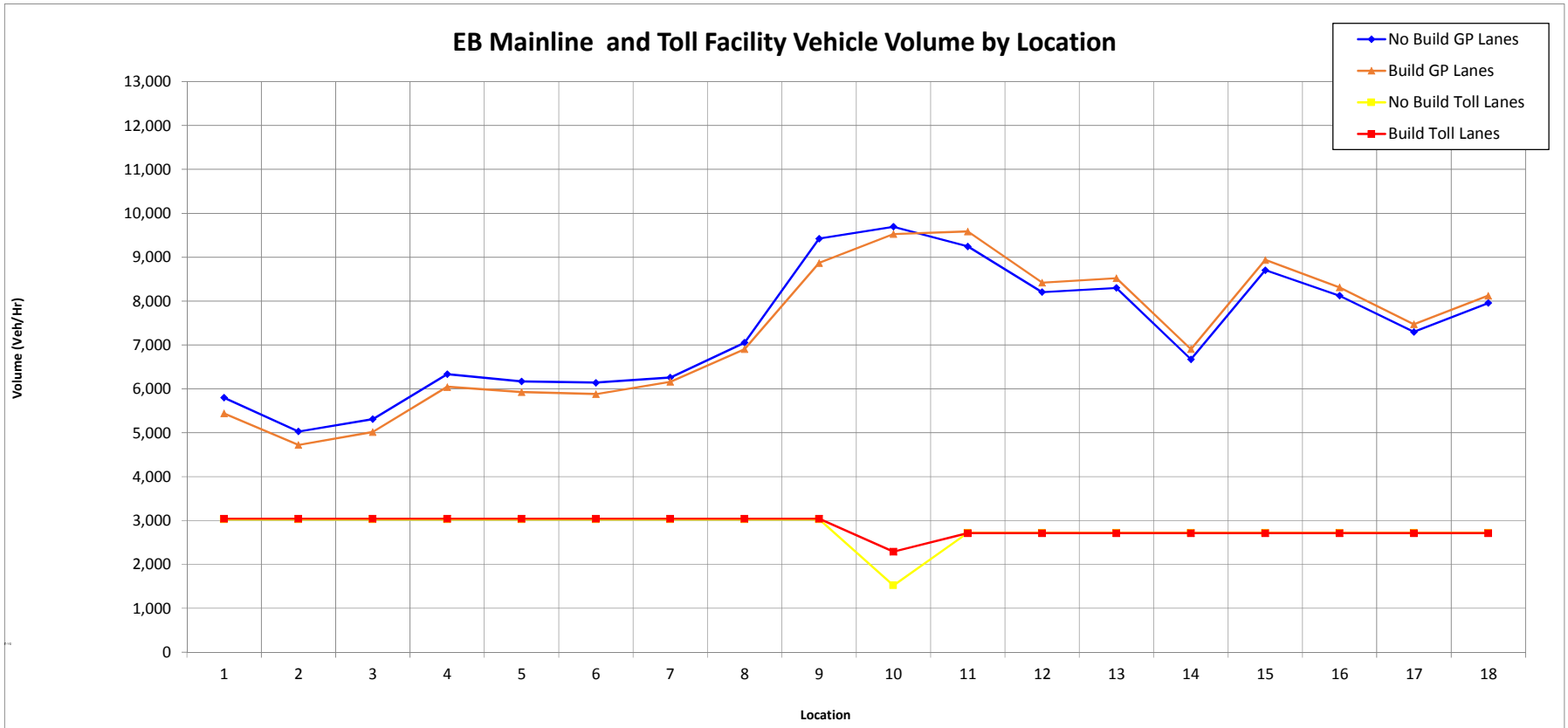
1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOT Lanes Exit (west of Green River)	13	On Ramp from SB Gypsum Canyon
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOT Lanes Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon
4	On Ramp from SR 71	10	Off Ramp to SR 241 HOV	16	On Ramp from NB Weir Canyon
5	Off Ramp to Green River	11	Off Ramp to Gypsum Canyon	17	On Ramp from SB Weir Canyon
6	On Ramp from Green River	12	On Ramp from NB Gypsum Canyon		



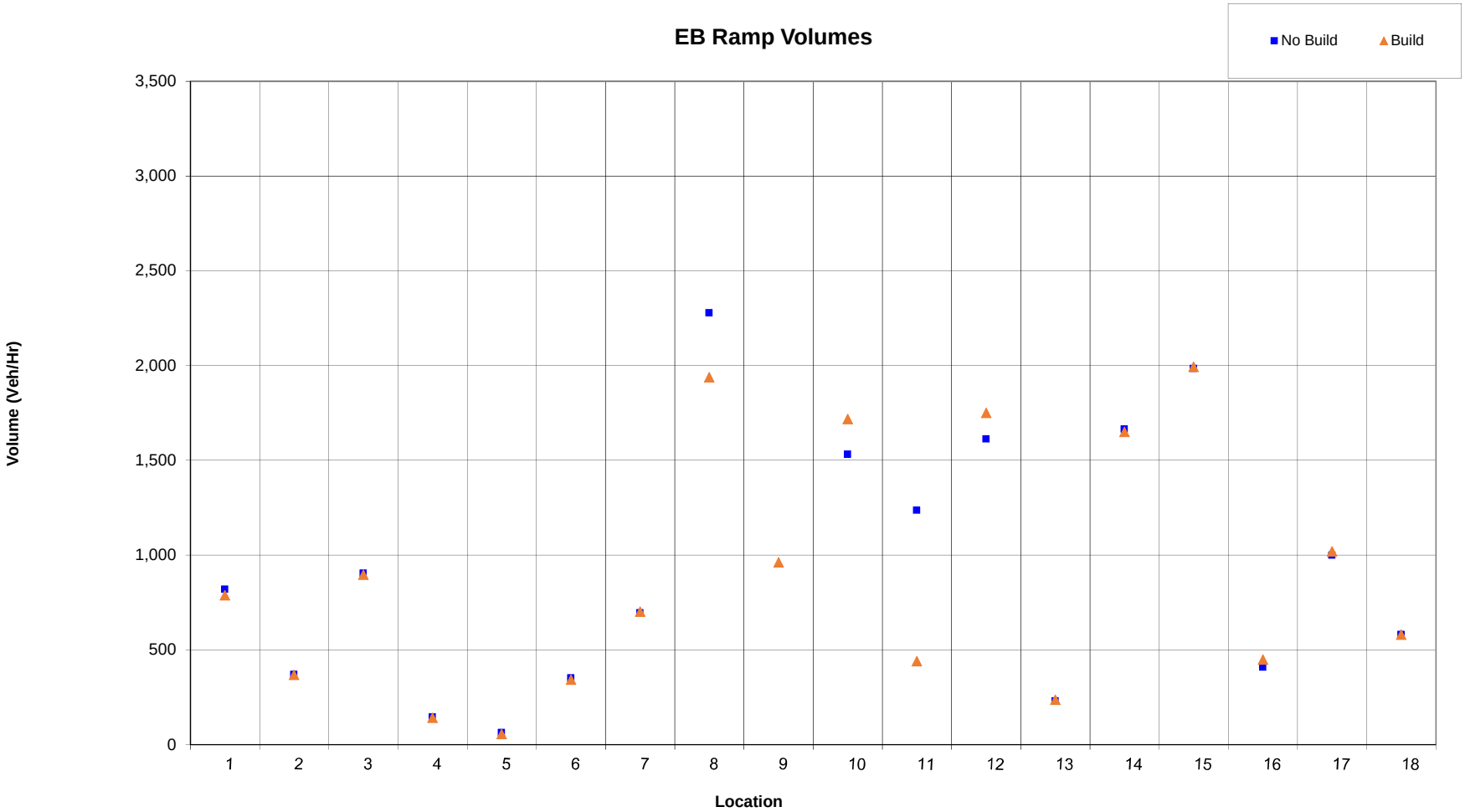
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



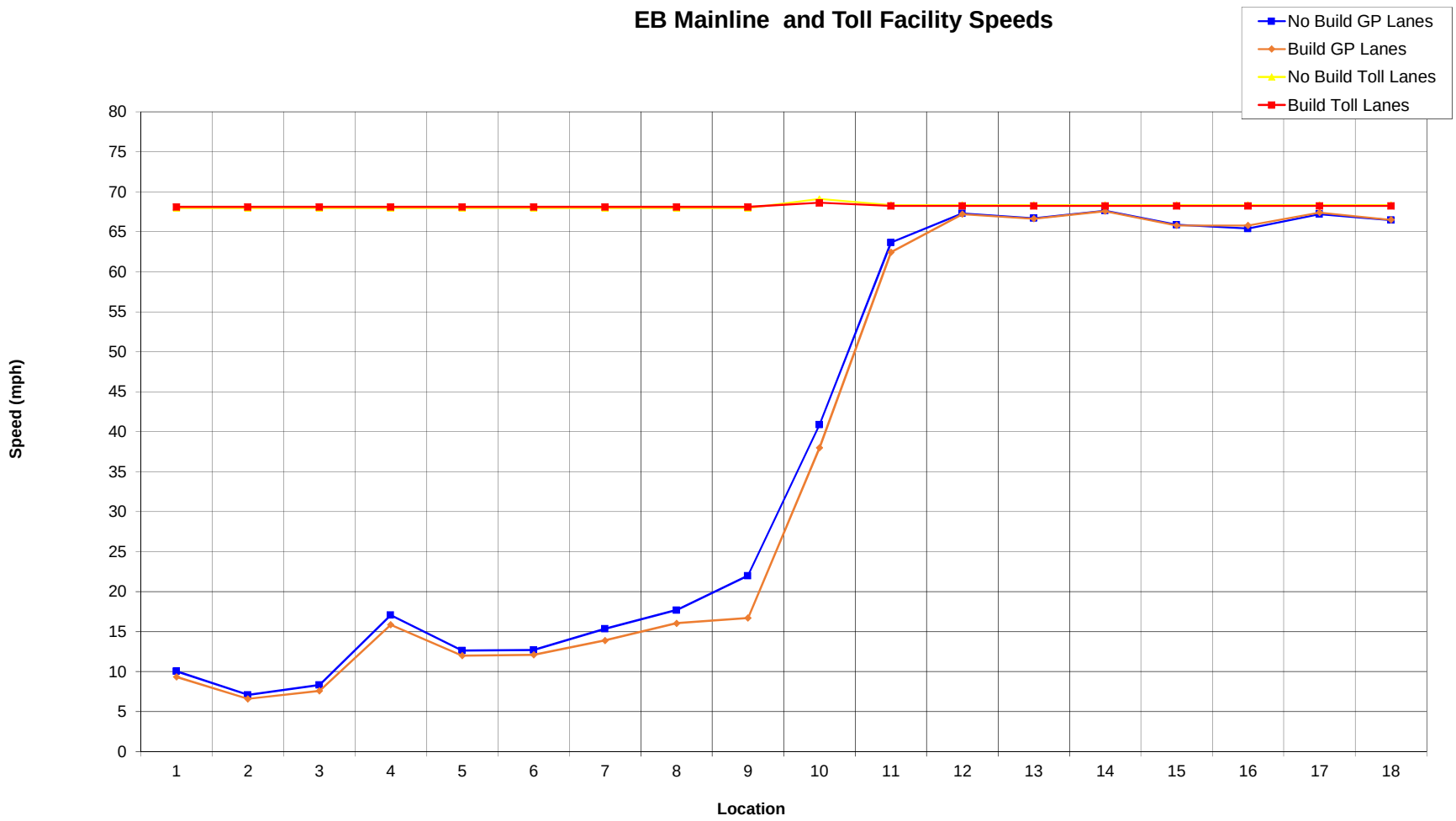
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



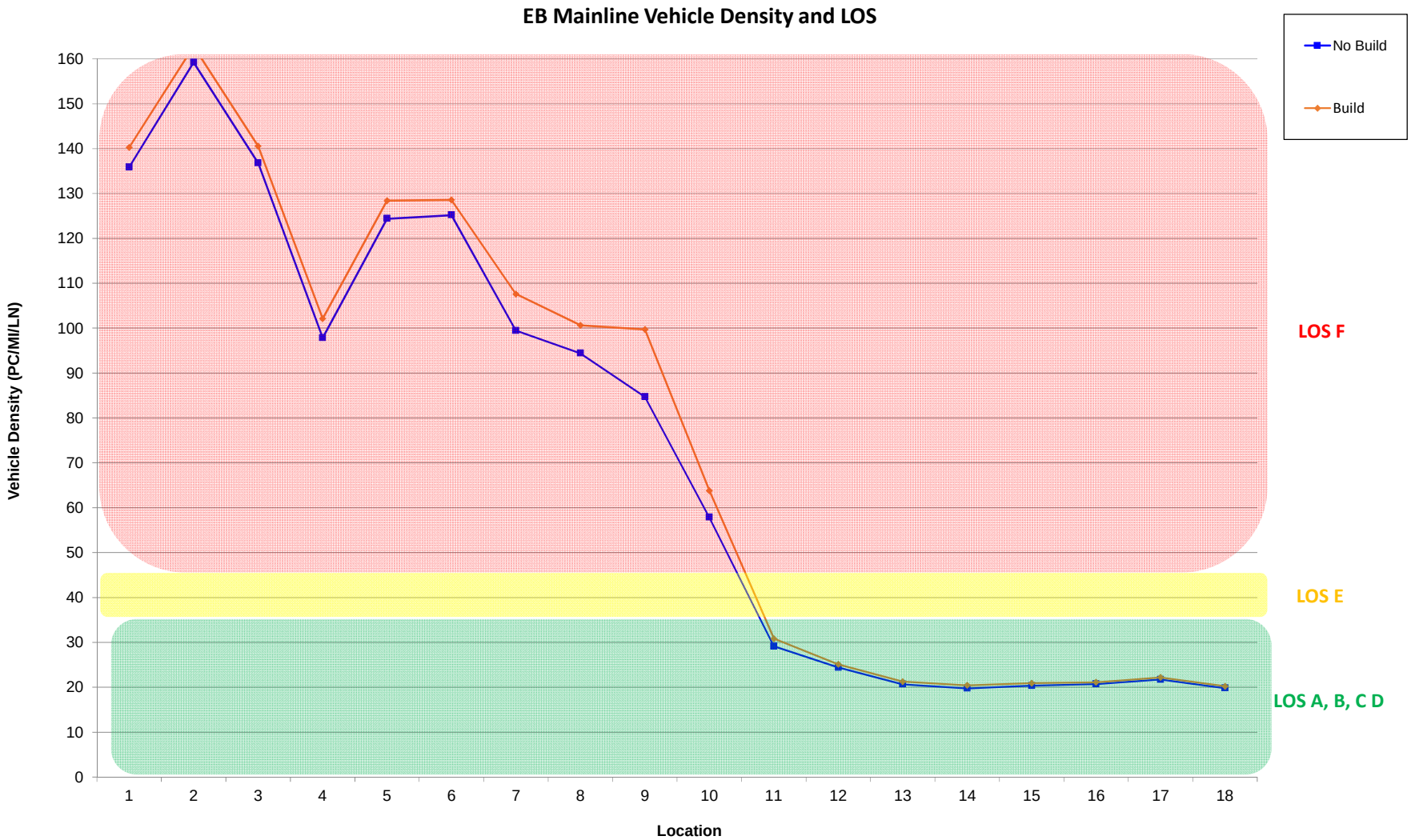
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



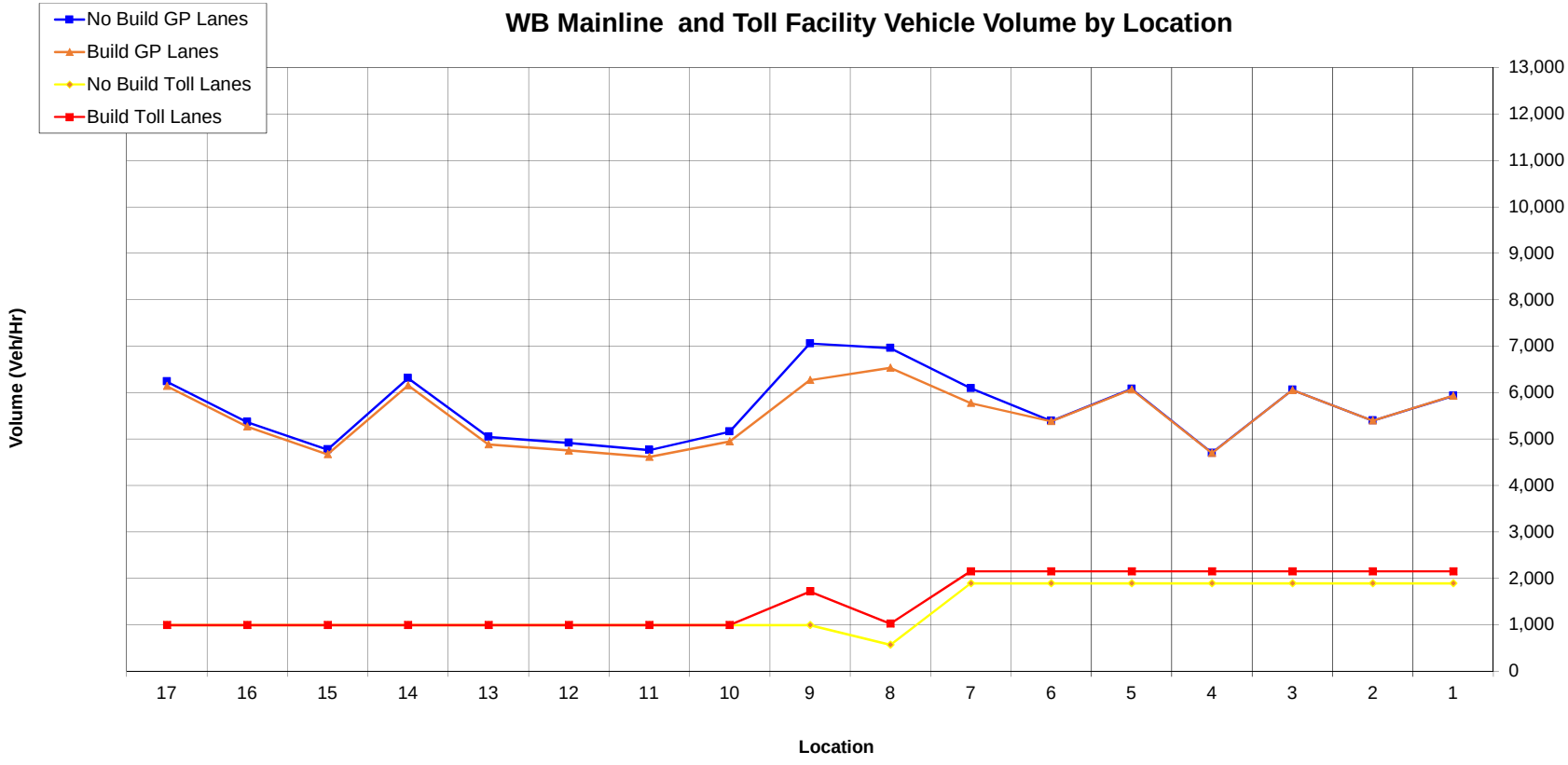
1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	On Ramp From Green River
2	On Ramp from SB Weir Canyon	8	On Ramp from SR 241 GP	14	Off Ramp to SR 71
3	On Ramp from NB Weir Canyon	9	On Ramp from SR 241 HOV	15	On Ramp from SR 71
4	Off Ramp to SR 241	10	On Ramp from HOT Lanes Exit (east of SR 241)	16	Off Ramp to Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	17	Off Ramp to EB Maple
6	On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River	18	On Ramp from Serfas/Autoclub



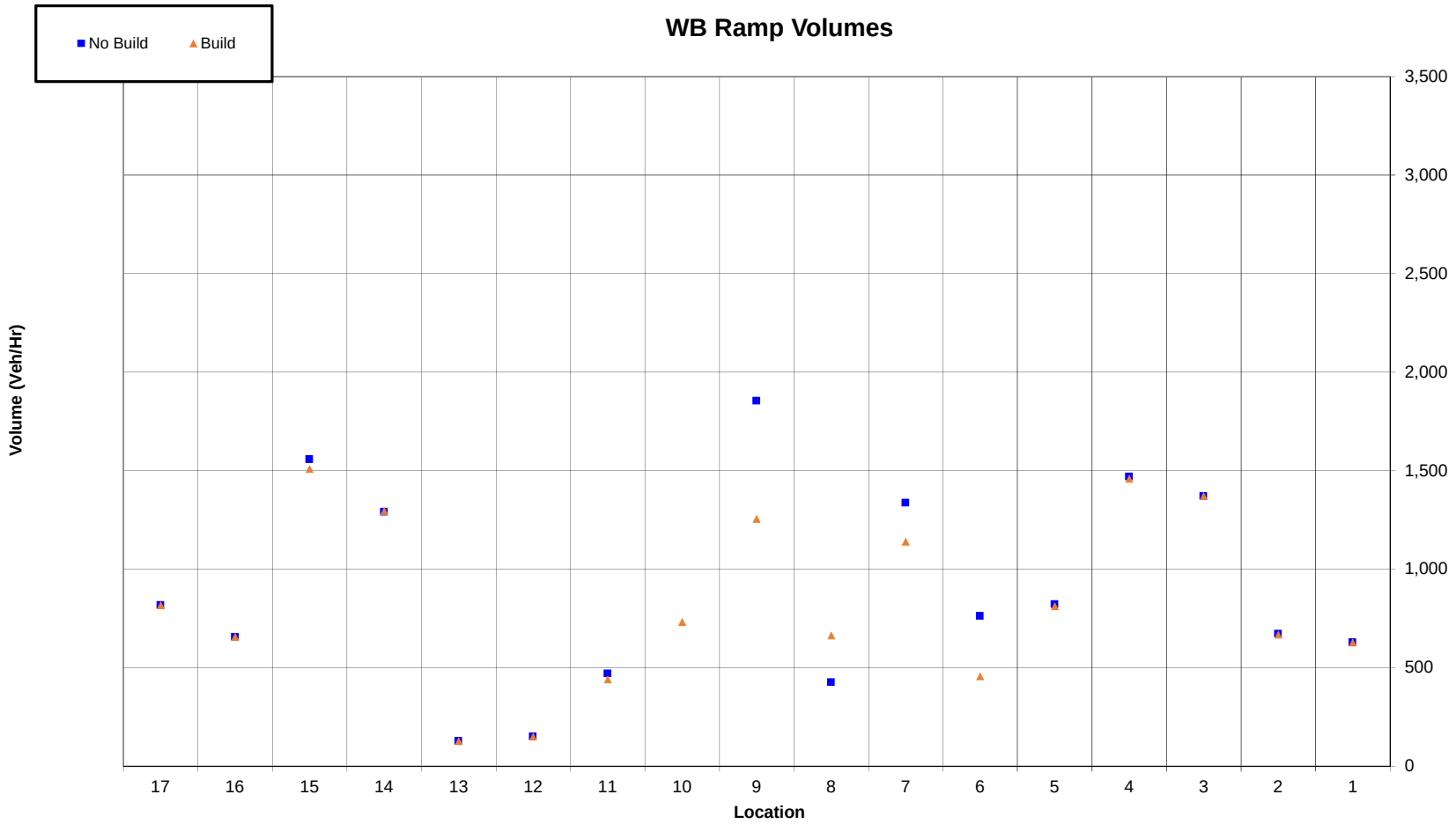
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



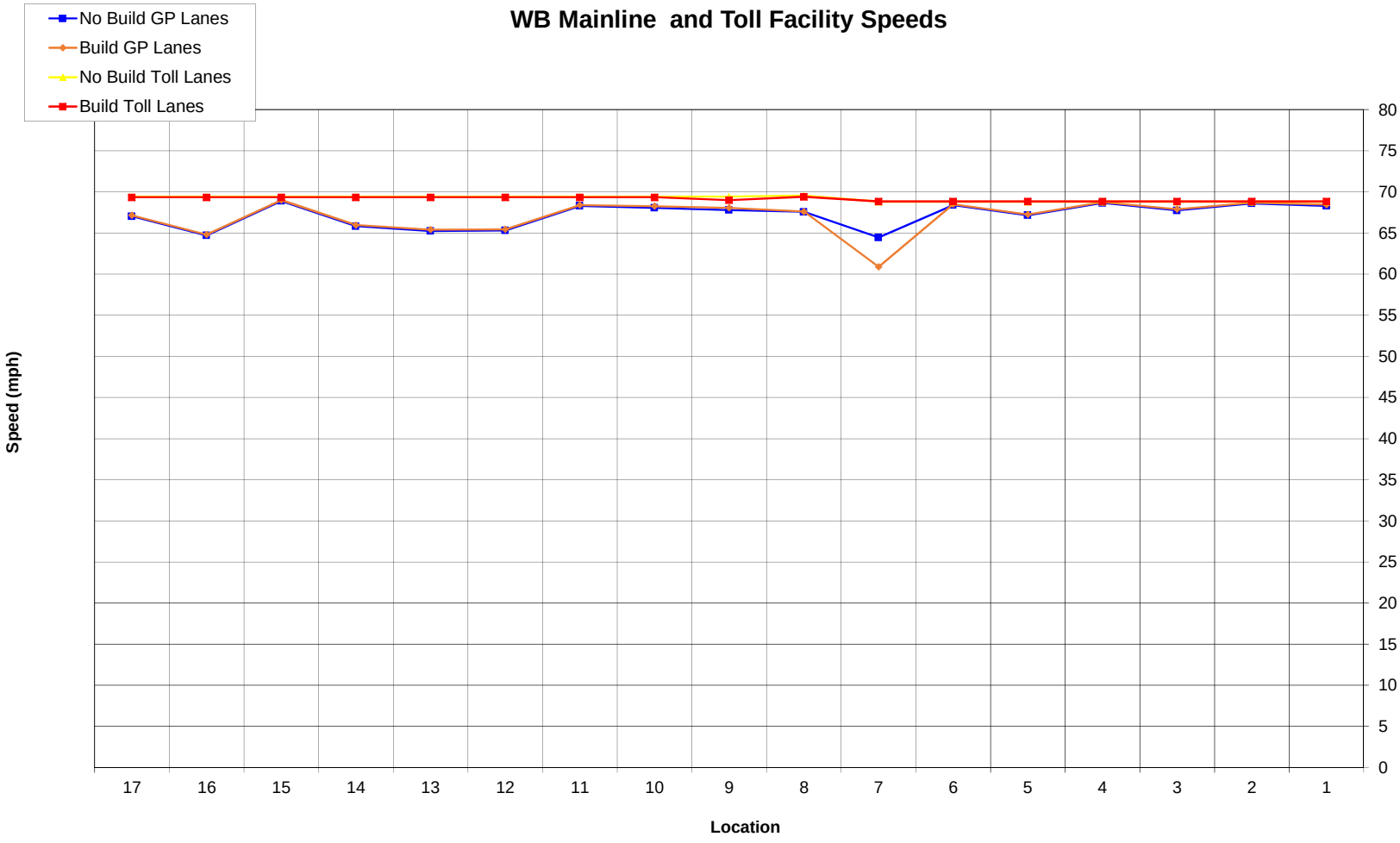
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

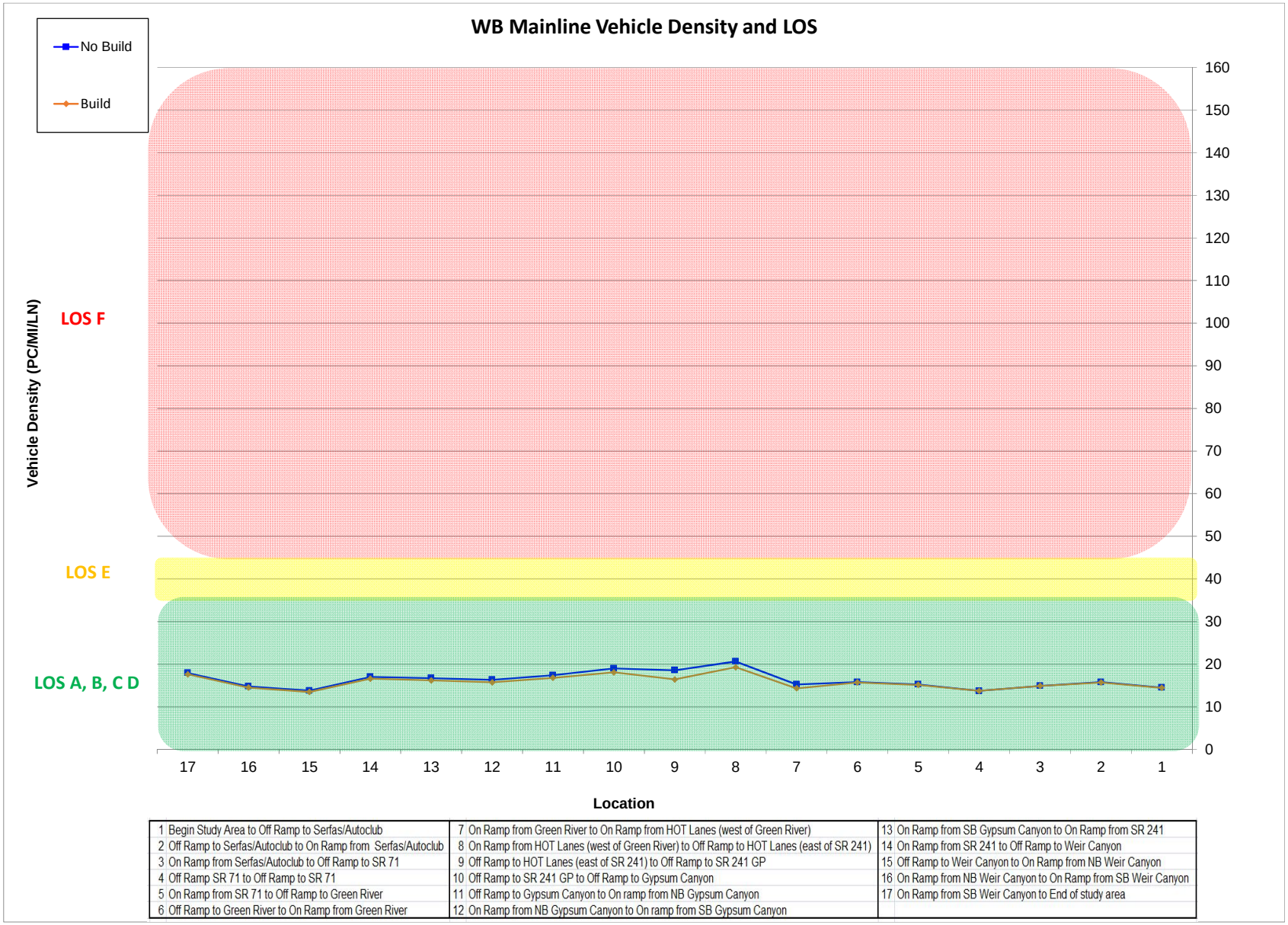


1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOT Lanes Exit (west of Green River)	13	On Ramp from SB Gypsum Canyon
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOT Lanes Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon
4	On Ramp from SR 71	10	Off Ramp to SR 241 HOV	16	On Ramp from NB Weir Canyon
5	Off Ramp to Green River	11	Off Ramp to Gypsum Canyon	17	On Ramp from SB Weir Canyon
6	On Ramp from Green River	12	On Ramp from NB Gypsum Canyon		

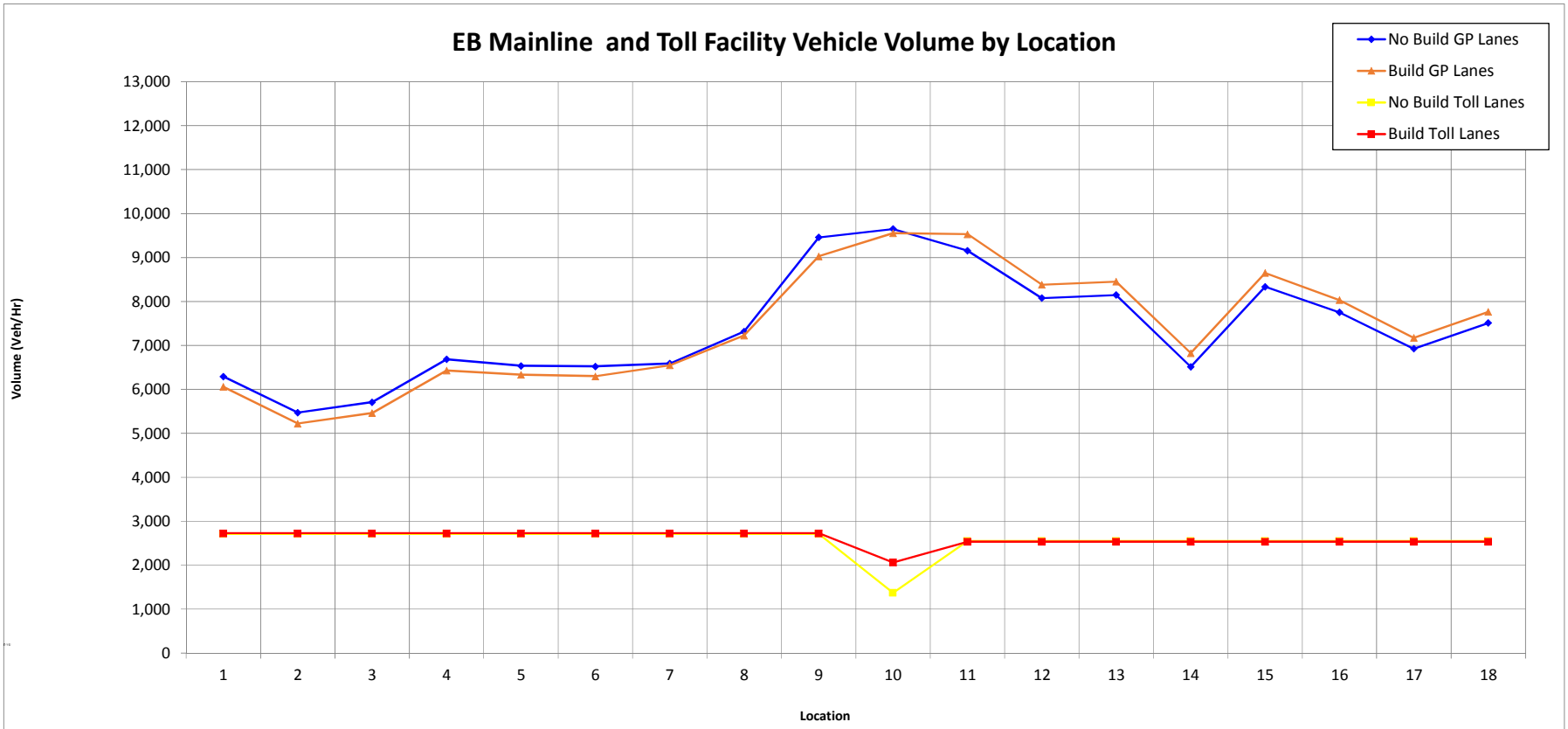


1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

Charts 5-6 PM

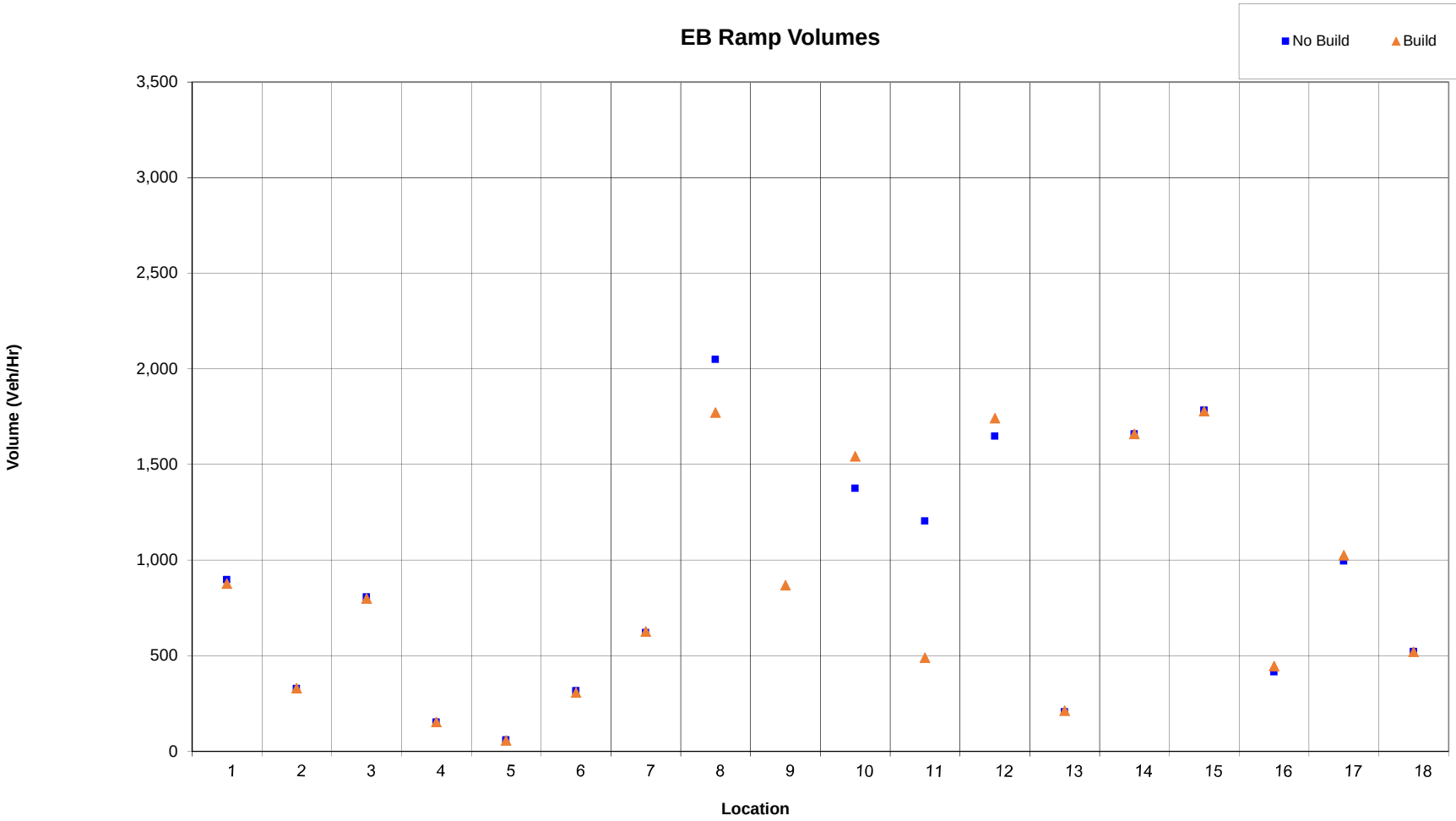


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

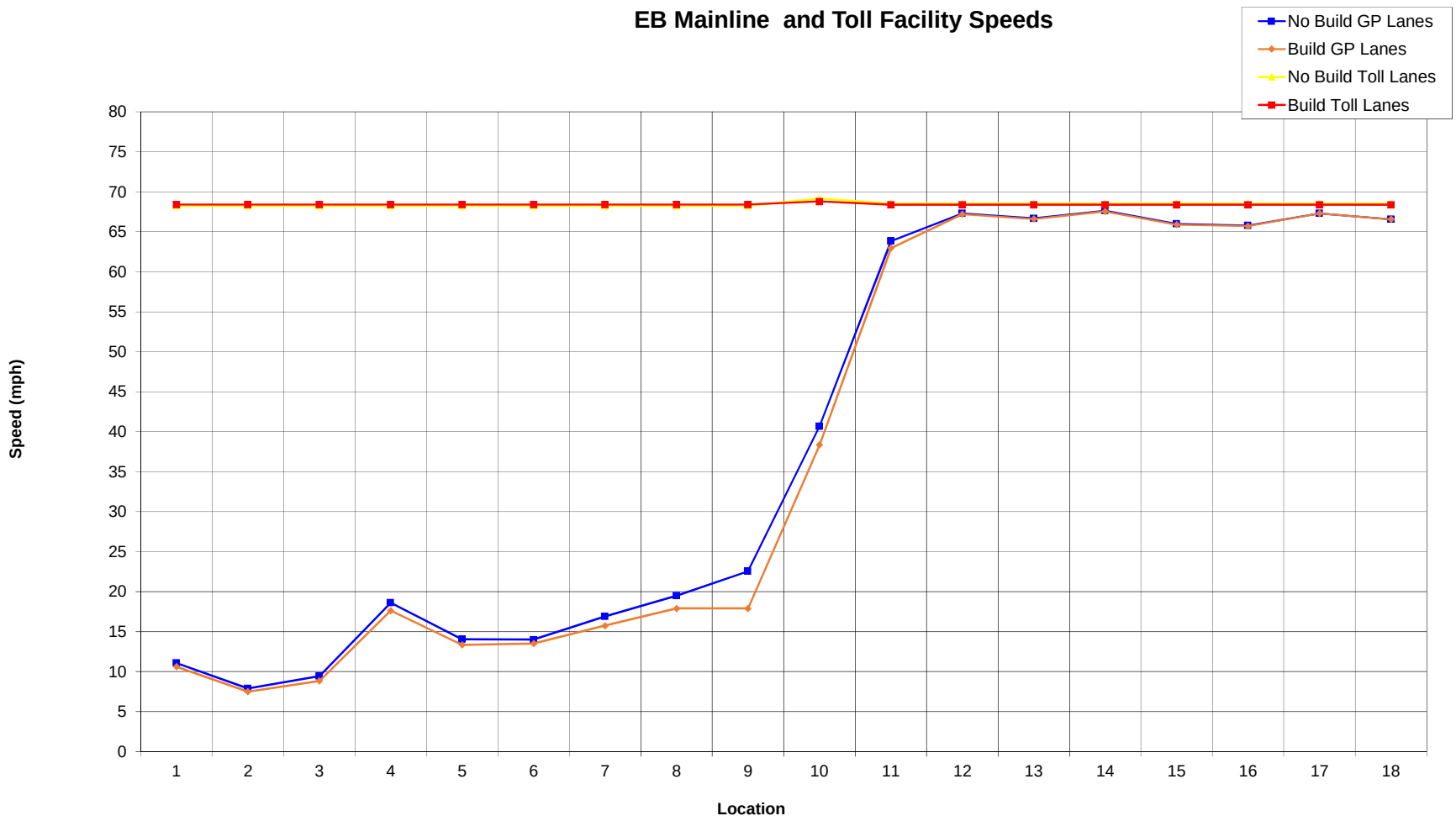


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area

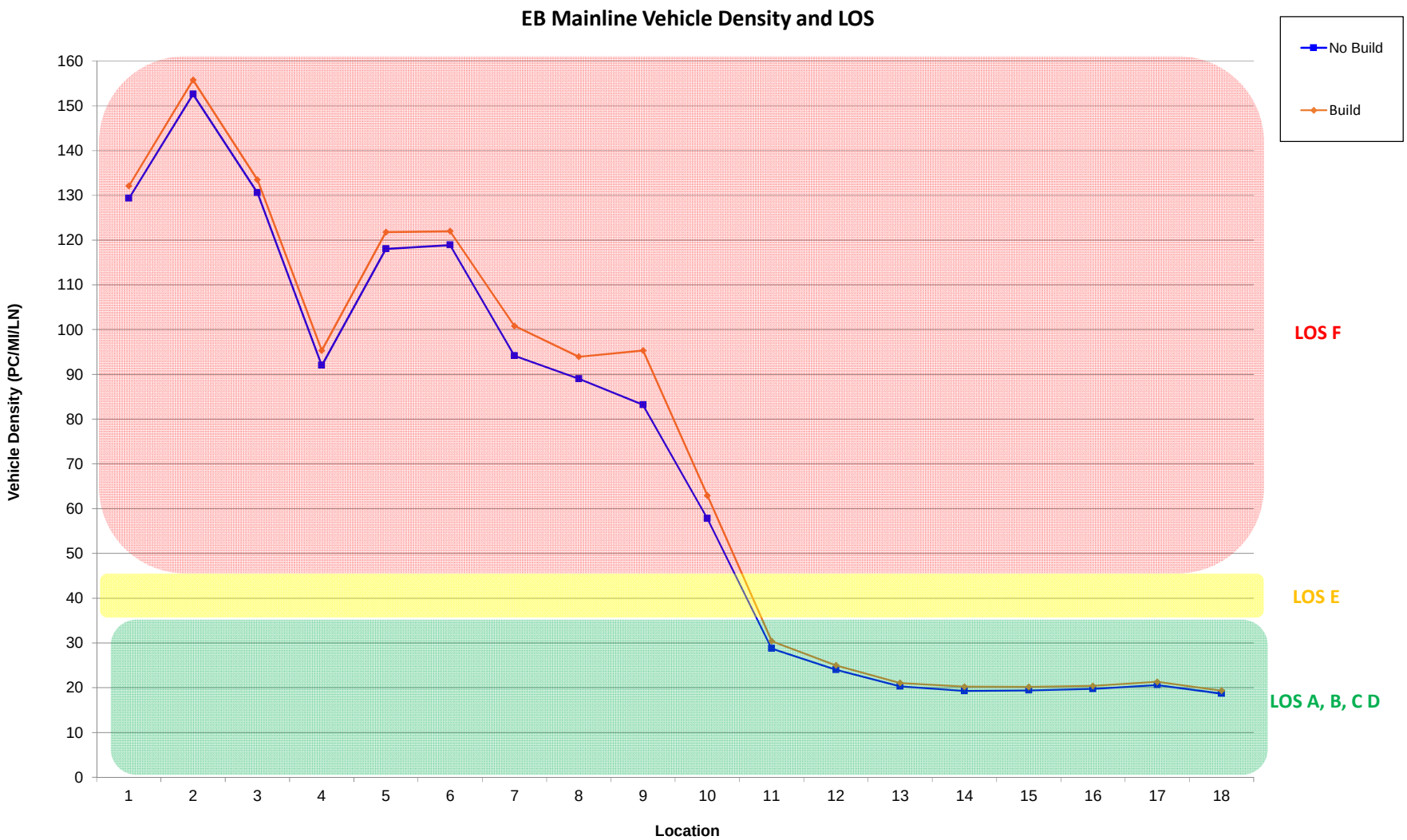
Charts 6-7 PM



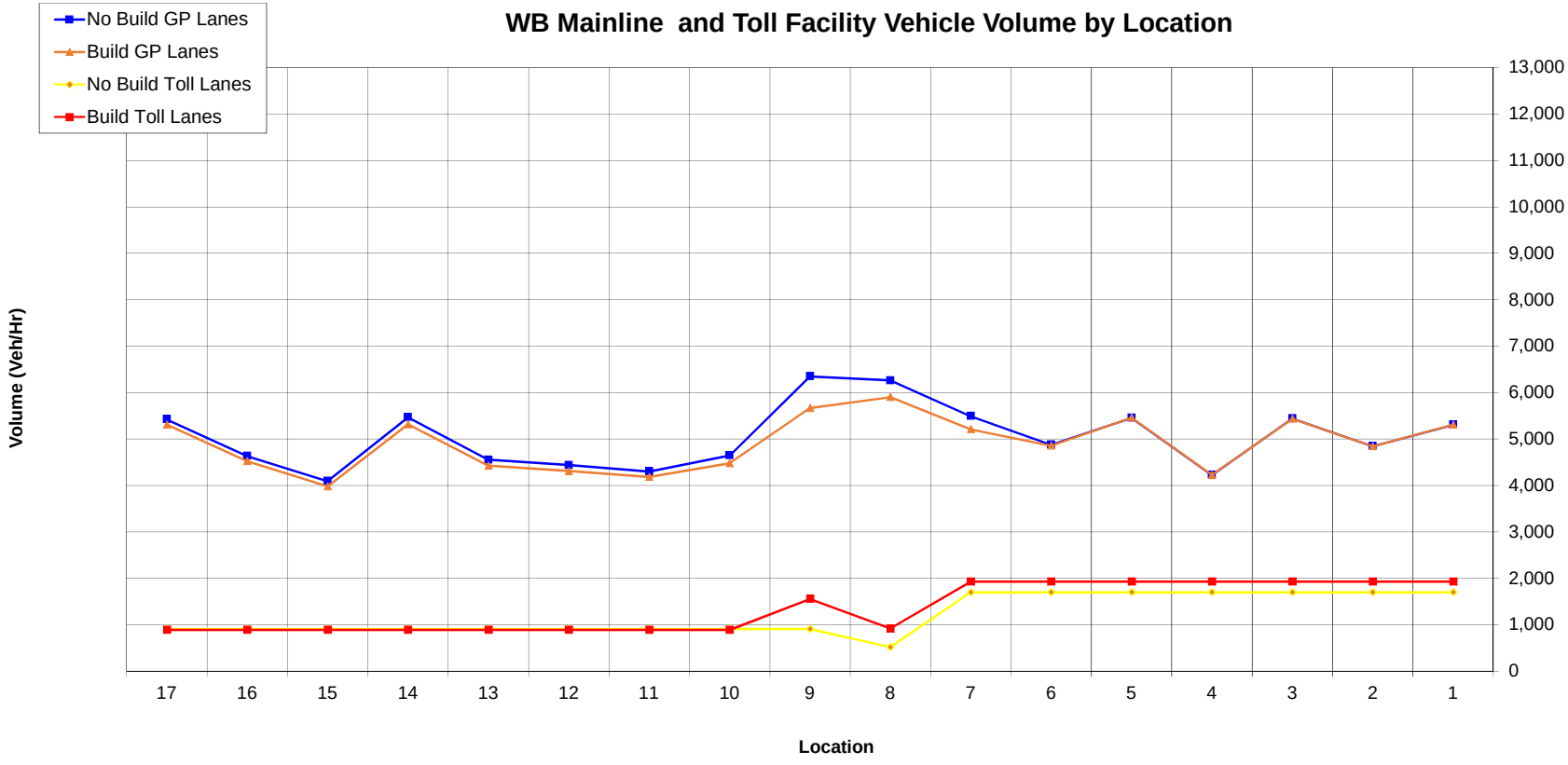
1	Off Ramp to Weir Canyon	7	On Ramp from NB Gypsum Canyon	13	On Ramp From Green River
2	On Ramp from SB Weir Canyon	8	On Ramp from SR 241 GP	14	Off Ramp to SR 71
3	On Ramp from NB Weir Canyon	9	On Ramp from SR 241 HOV	15	On Ramp from SR 71
4	Off Ramp to SR 241	10	On Ramp from HOT Lanes Exit (east of SR 241)	16	Off Ramp to Serfas/Autoclub
5	Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	17	Off Ramp to EB Maple
6	On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River	18	On Ramp from Serfas/Autoclub



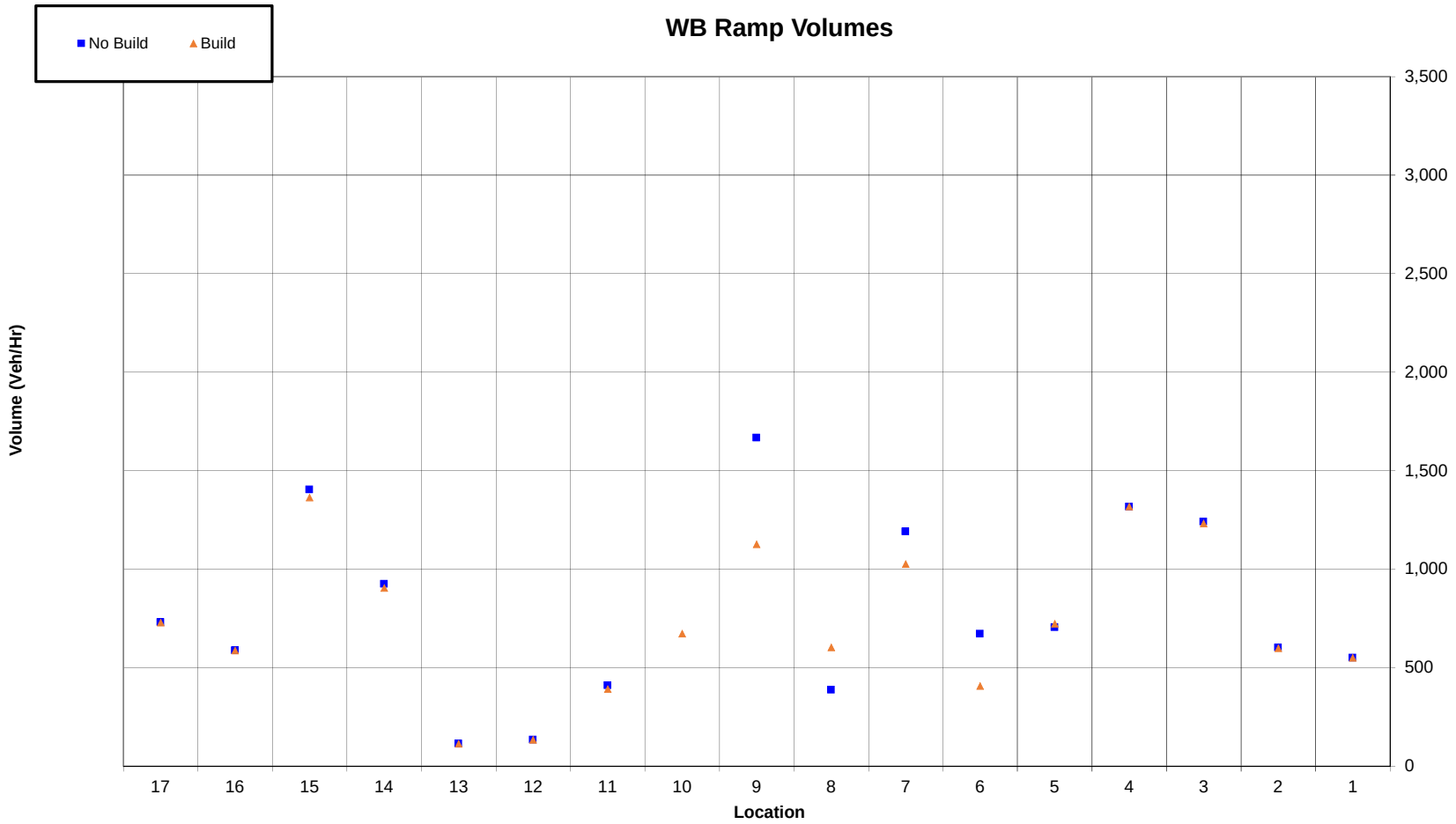
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



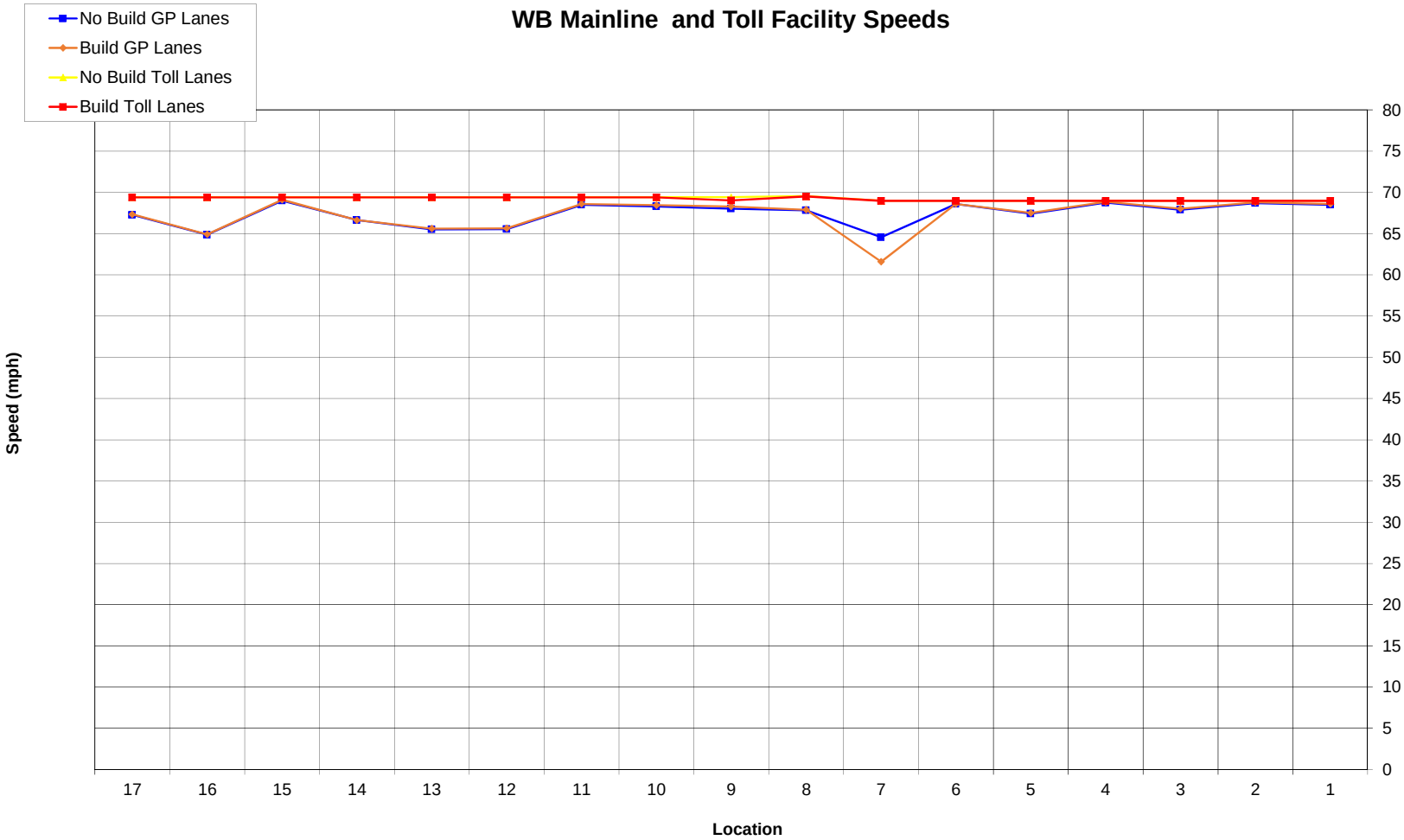
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	On Ramp From Green River to Off Ramp to SR 71
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	Off Ramp to SR 71 to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to On Ramp From Green River	18	On Ramp from Serfas/Autoclub to End of Study Area



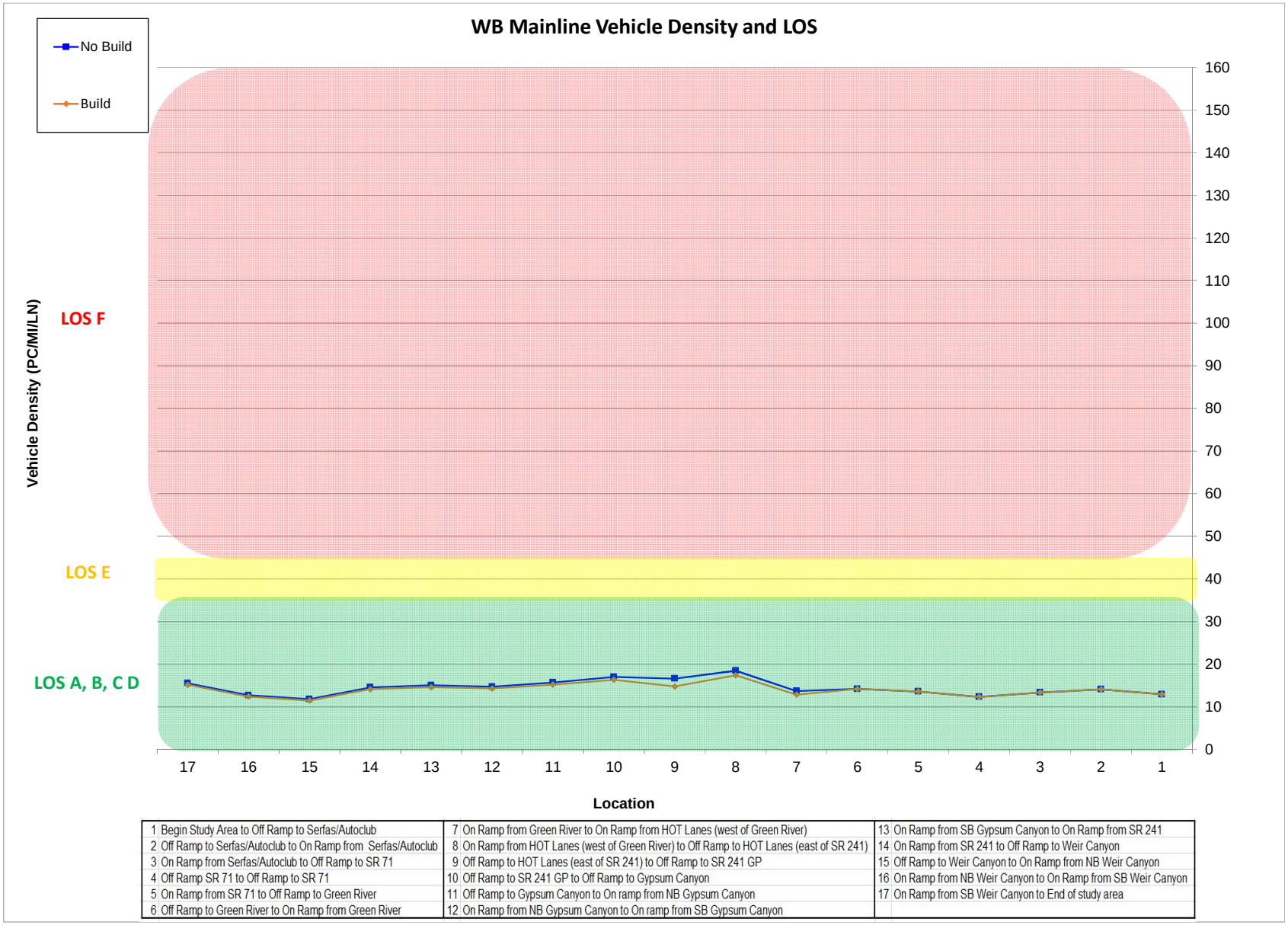
1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOT Lanes Exit (west of Green River)	13	On Ramp from SB Gypsum Canyon
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOT Lanes Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon
4	On Ramp from SR 71	10	Off Ramp to SR 241 HOV	16	On Ramp from NB Weir Canyon
5	Off Ramp to Green River	11	Off Ramp to Gypsum Canyon	17	On Ramp from SB Weir Canyon
6	On Ramp from Green River	12	On Ramp from NB Gypsum Canyon		



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		



1	Begin Study Area to Off Ramp to Serfas/Autoclub	7	On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13	On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2	Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8	On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14	On Ramp from SR 241 to Off Ramp to Weir Canyon
3	On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9	Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4	Off Ramp SR 71 to Off Ramp to SR 71	10	Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16	On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5	On Ramp from SR 71 to Off Ramp to Green River	11	Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17	On Ramp from SB Weir Canyon to End of study area
6	Off Ramp to Green River to On Ramp from Green River	12	On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon		

Charts 6-7 PM

Appendix F

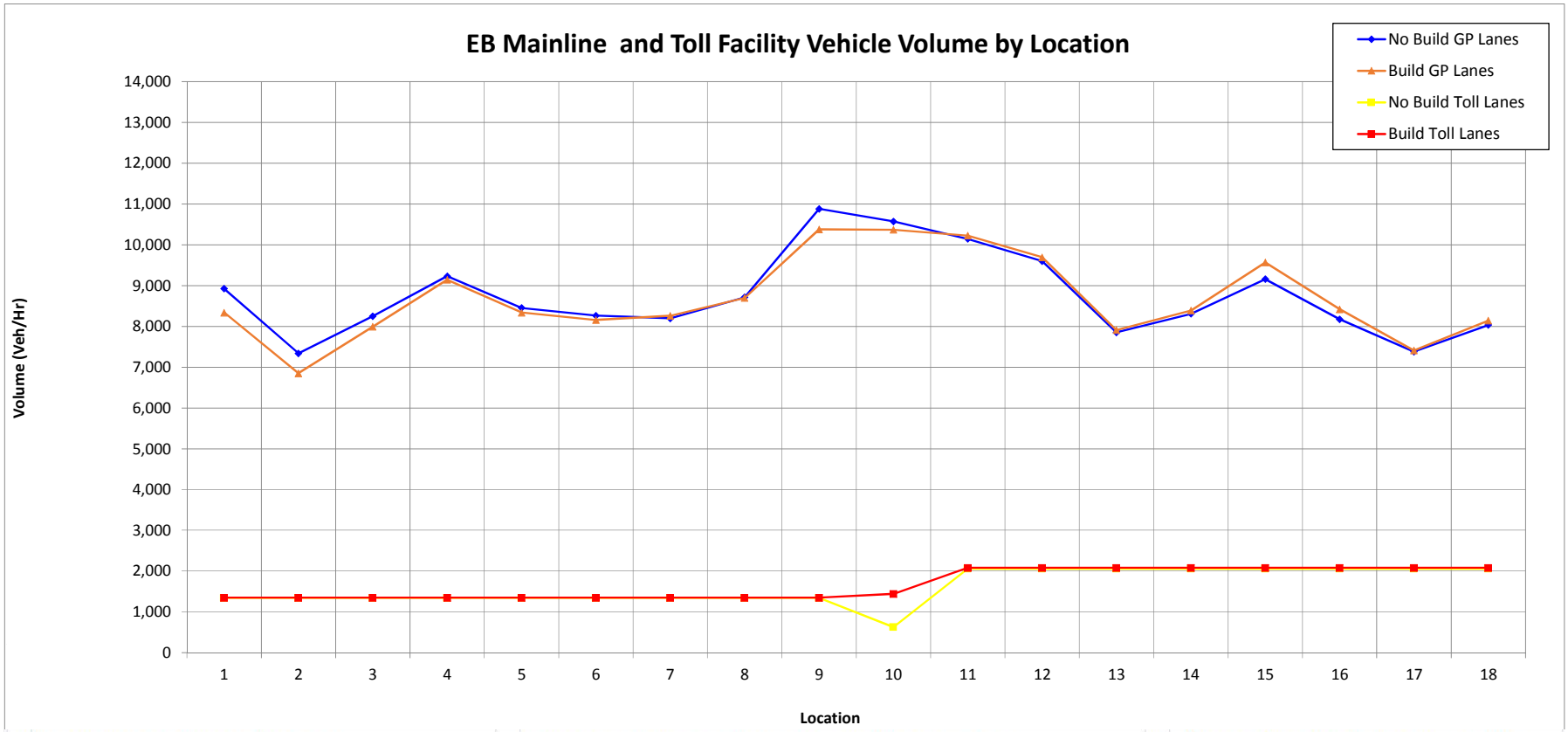
VISSIM Summary of Results
2040 Build Conditions

SR-91
Vissim Model Summary - 2040 Build Option 2 - AM
Network Summary Statistics

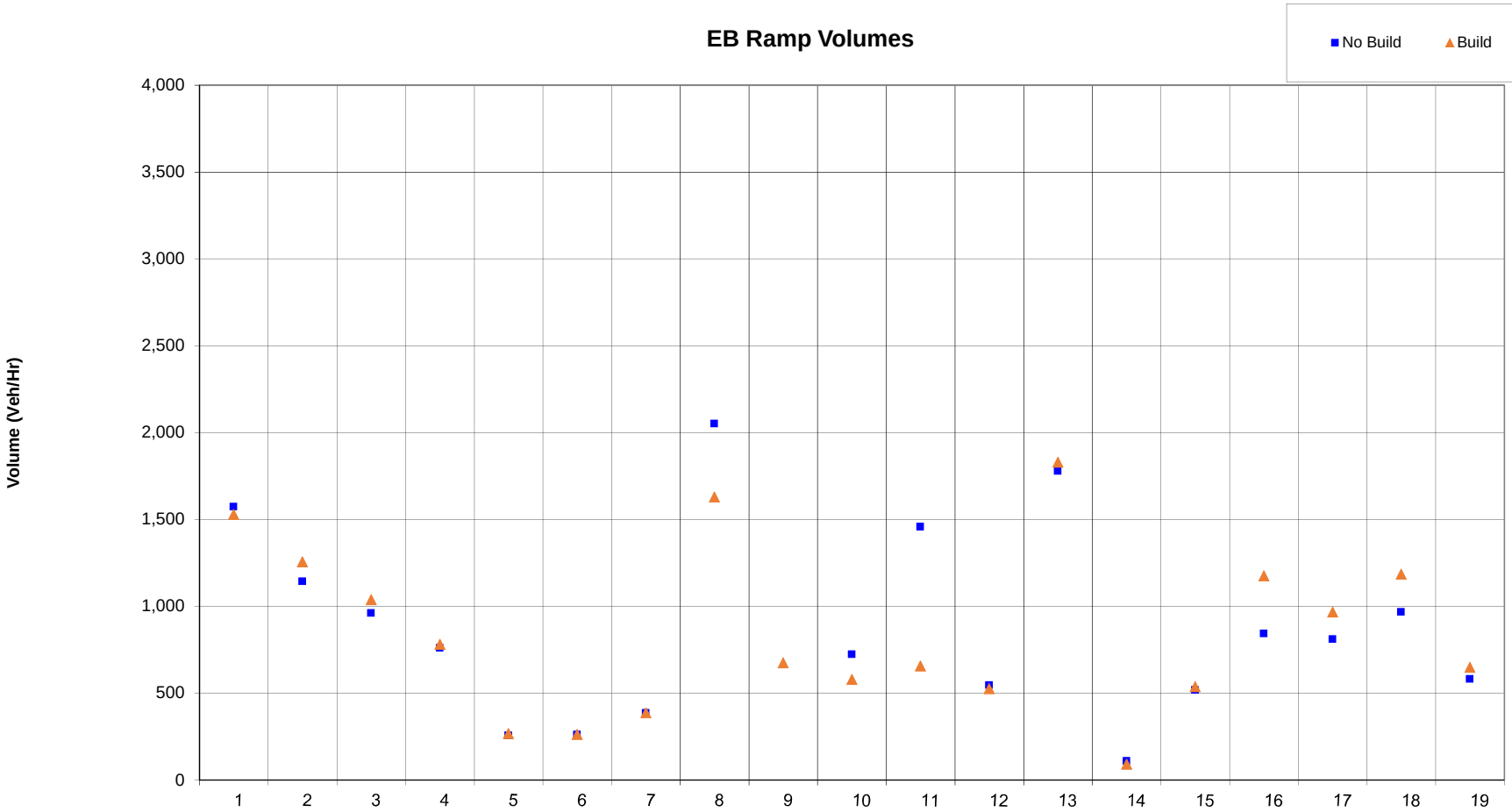
Parameter	2040 AM No Build	2040 AM Build Option 2	Difference
Total Vehicle Demand (4 Hr)	119,605	120,167	562
Total number of vehicles that did not reach their desitination	10,264	9,895	-369
Totla number of vehicles that have reached their destination	109,342	110,273	931
Total vehicle-miles traveled (VMT)	939,671	953,732	14,061
Total travel time, All Vehicle Types (VHT)	27,641	25,219	-2,422
Average speed [mph], All Vehicle Types	34.0	37.8	3.8
Average delay time per vehicle [mins], All Vehicle Types	7.00	5.57	-1.43

SR-91
Vissim Model Summary - 2040 Build Option 2 - AM
Travel Time Results

#	Origin	#	Destination	p Ke	Hide Travel Time Seg 1	Seg 2	Seg 3	2040 AM No Build VISSIM Travel Time 6-7 AM	7-8 AM	7-9 AM	2040 AM Build VISSIM Travel Time 6-7 AM	7-8 AM	7-9 AM	Change VISSIM Travel Time 6-7 AM	7-8 AM	7-9 AM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	1	1002	1003	1005	9.7	12.6	13.7	8.9	9.5	9.4	-0.8	-3.1	-4.3
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	2	1002	1003	2005	9.5	12.4	13.5	8.8	9.4	9.3	-0.7	-3.0	-4.2
		5	SR 241 SB south of SR 91	3	1001			7.9	10.7	12.0	7.3	7.7	7.9	-0.6	-3.0	-4.2
		7	SR 71 NB north of SR 91	4	1002	1003	1004	11.0	13.9	15.0	10.2	10.8	10.7	-0.8	-3.1	-4.2
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	5	2002	1003	1005	8.7	8.7	8.6	8.6	8.6	8.5	-0.1	-0.1	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	6	2002	2003	2005	8.3	8.3	8.3	8.4	8.4	8.4	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	7	2002	1003	1004	10.0	10.0	9.9	9.9	9.9	9.9	-0.1	-0.1	-0.1
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8	1011	1012	1014	22.8	21.2	16.3	18.1	19.4	20.0	-4.7	-1.8	3.7
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9	1011	1012	2014	20.8	19.3	15.4	16.4	19.2	19.9	-4.4	-0.1	4.5
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10	1011	1012	1013	23.2	21.8	17.8	18.9	21.7	22.4	-4.4	-0.1	4.6
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	11	1011	1012	2013	n/a	n/a	n/a	18.8	21.6	22.3	-4.5	-0.2	4.5
		7	SR 71 NB north of SR 91	12	1010			8.5	8.0	5.7	6.2	8.2	7.8	-2.4	0.2	2.1
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	13	2011	1012	1014	15.0	14.5	13.2	14.1	12.9	13.5	-1.0	-1.5	0.3
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	14	2011	2012	2014	8.4	8.4	8.4	8.4	8.4	8.4	0.0	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15	2011	1012	1013	15.5	15.0	14.7	14.8	15.2	15.9	-0.6	0.2	1.2
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	16	2011	2012	2013	n/a	n/a	n/a	10.8	10.8	10.8	-4.6	-4.2	-3.9
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	17	1006			7.3	7.3	7.3	7.3	7.3	7.2	0.0	0.0	0.0
		3	SR 91 EB GP Lanes east of Serfas Club Rd	18	1007	1003	1005	11.1	11.1	11.1	11.0	11.0	11.0	-0.1	-0.1	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19	1007	1003	2005	10.9	10.9	10.9	10.9	10.9	10.9	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	20	1007	1003	1004	12.4	12.4	12.4	12.3	12.3	12.3	-0.1	-0.1	-0.1
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	21	2007	1003	1005	n/a	n/a	n/a	11.0	11.0	11.0	-0.1	-0.1	-0.1
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	22	2007	2003	2005	n/a	n/a	n/a	10.8	10.8	10.8	-0.1	-0.1	-0.1
		7	SR 71 NB north of SR 91	23	2007	1003	1004	n/a	n/a	n/a	12.3	12.3	12.3	-0.1	-0.1	-0.1
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	24	1009	1012	1014	39.6	56.0	59.3	29.5	44.1	54.6	-10.1	-11.9	-4.7
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	25	1009	1012	2014	37.6	54.2	58.4	27.8	44.0	54.5	-9.8	-10.2	-3.9
		3	SR 91 EB GP Lanes east of Serfas Club Rd	26	1008			23.5	38.6	44.5	15.2	28.8	35.5	-8.3	-9.8	-9.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	27	1009	1012	1013	40.1	56.6	60.9	30.2	46.4	57.0	-9.8	-10.2	-3.9
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	28	1009	1012	2013	n/a	n/a	n/a	30.2	46.3	56.9	-9.9	-10.3	-4.0

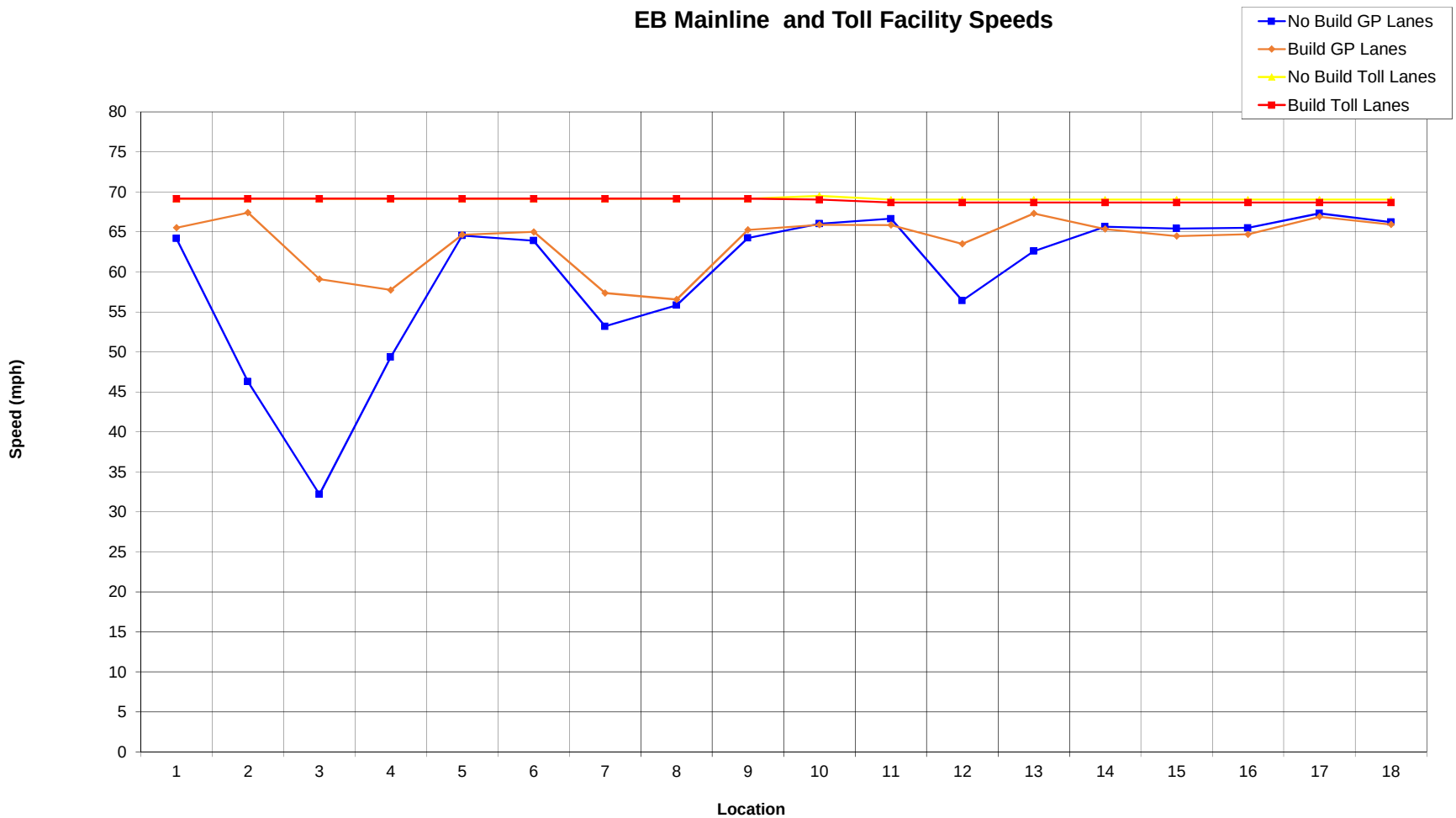


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area

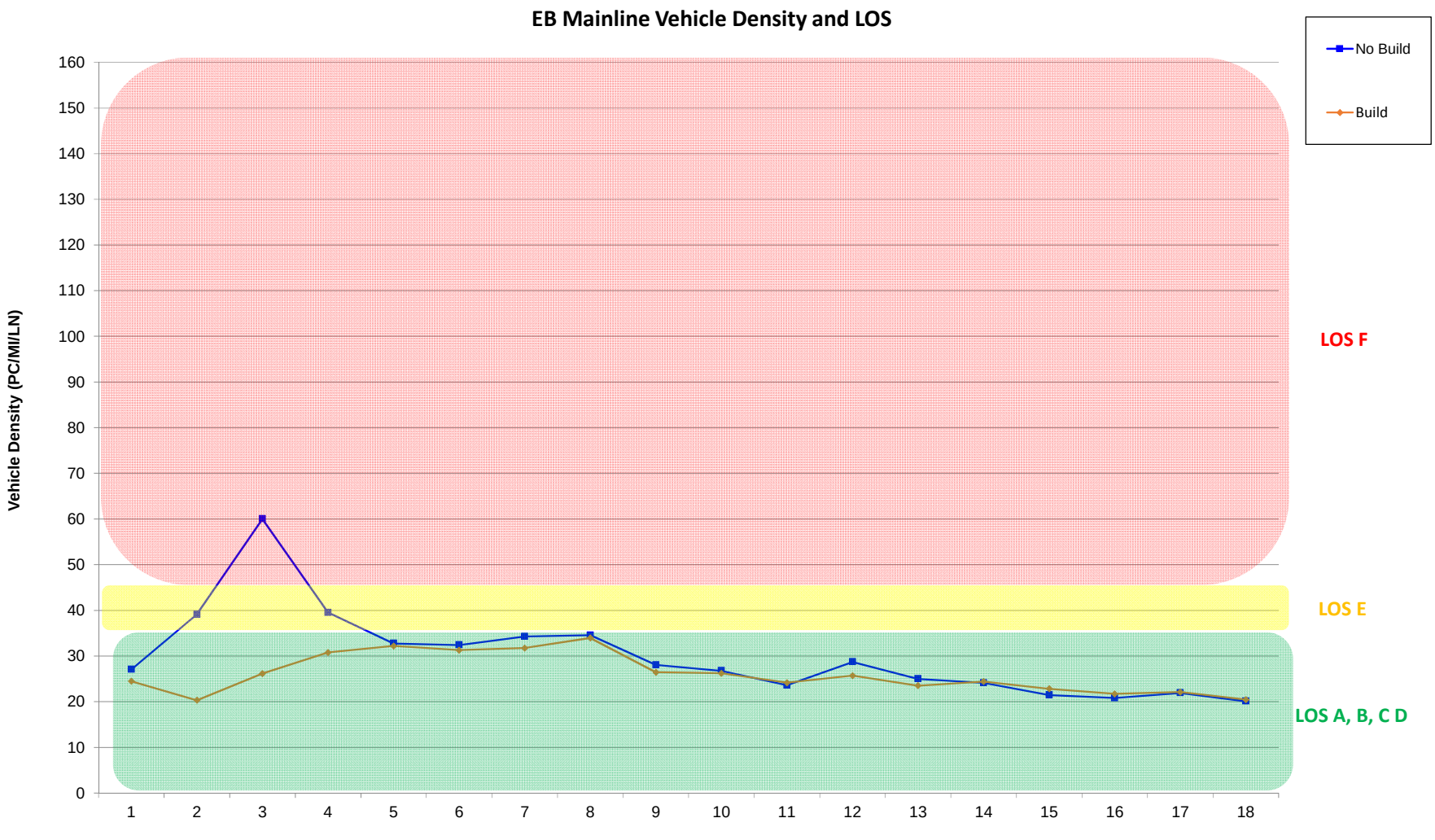


1	Off Ramp to Weir Canyon	8	On Ramp from SR 241 GP	15	On Ramp from Green River (to SR 91 EB)
2	On Ramp from SB Weir Canyon	9	On Ramp from SR 241 HOV	16	On Ramp from SR 71
3	On Ramp from NB Weir Canyon	10	On Ramp from HOT Lanes Exit (east of SR 241)	17	Off Ramp to Serfas/Autoclub
4	Off Ramp to SR 241	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	18	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	12	Off Ramp to Green River	19	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	13	Off Ramp to SR 71 CD		
7	On Ramp from NB Gypsum Canyon	14	On Ramp from Green River (to SR 71 NB)		

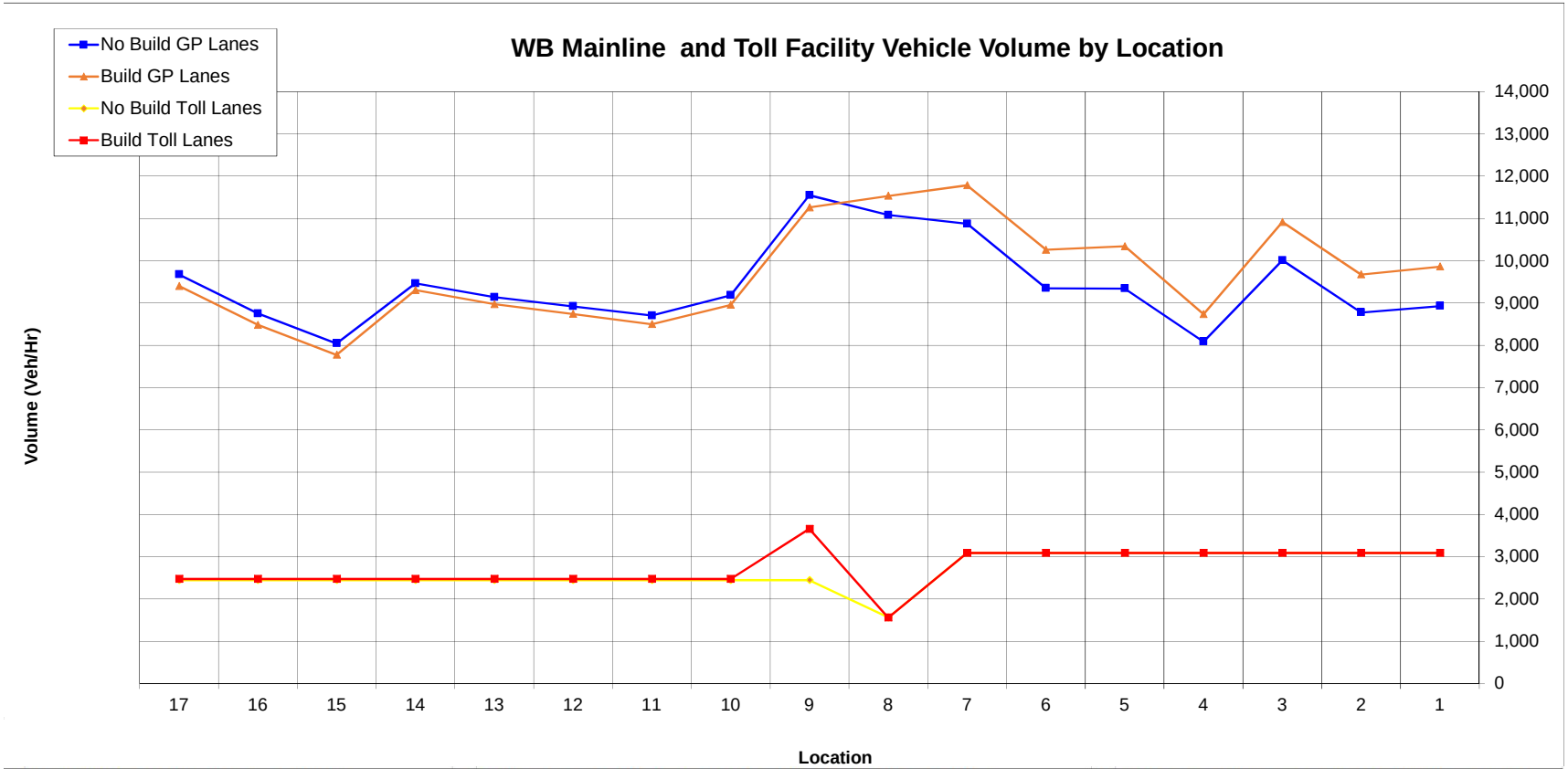
Charts 6-7 AM



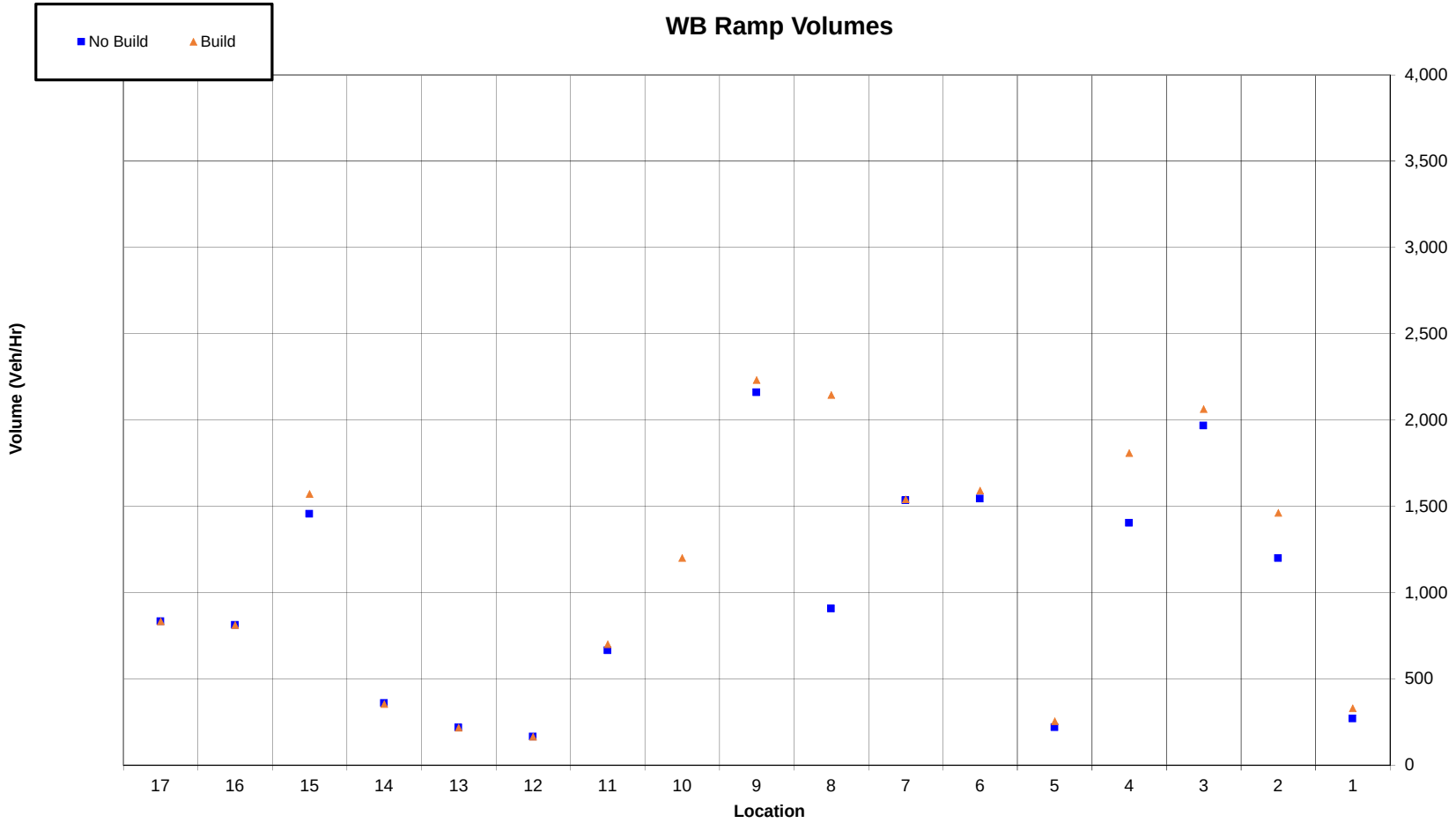
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



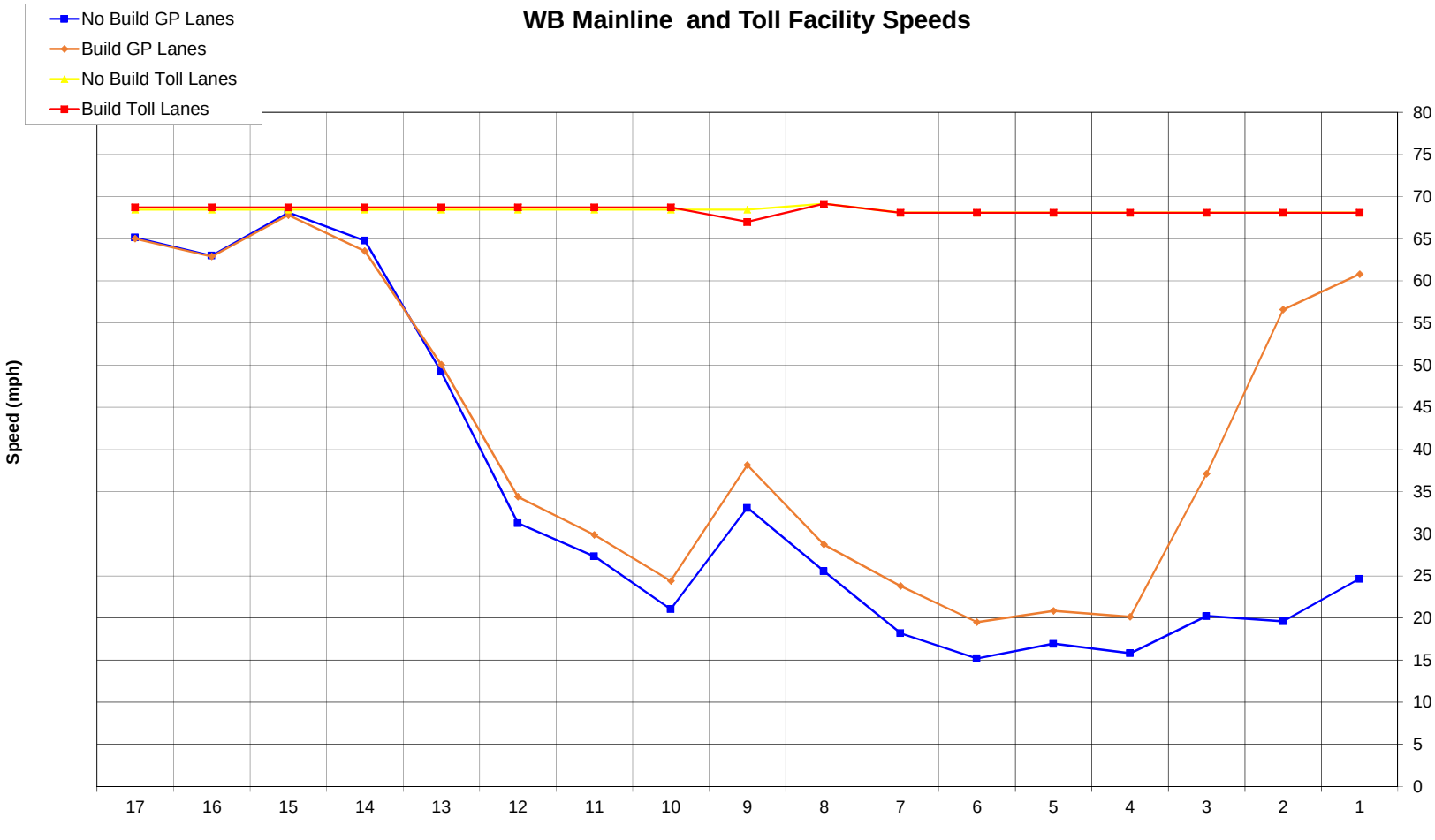
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



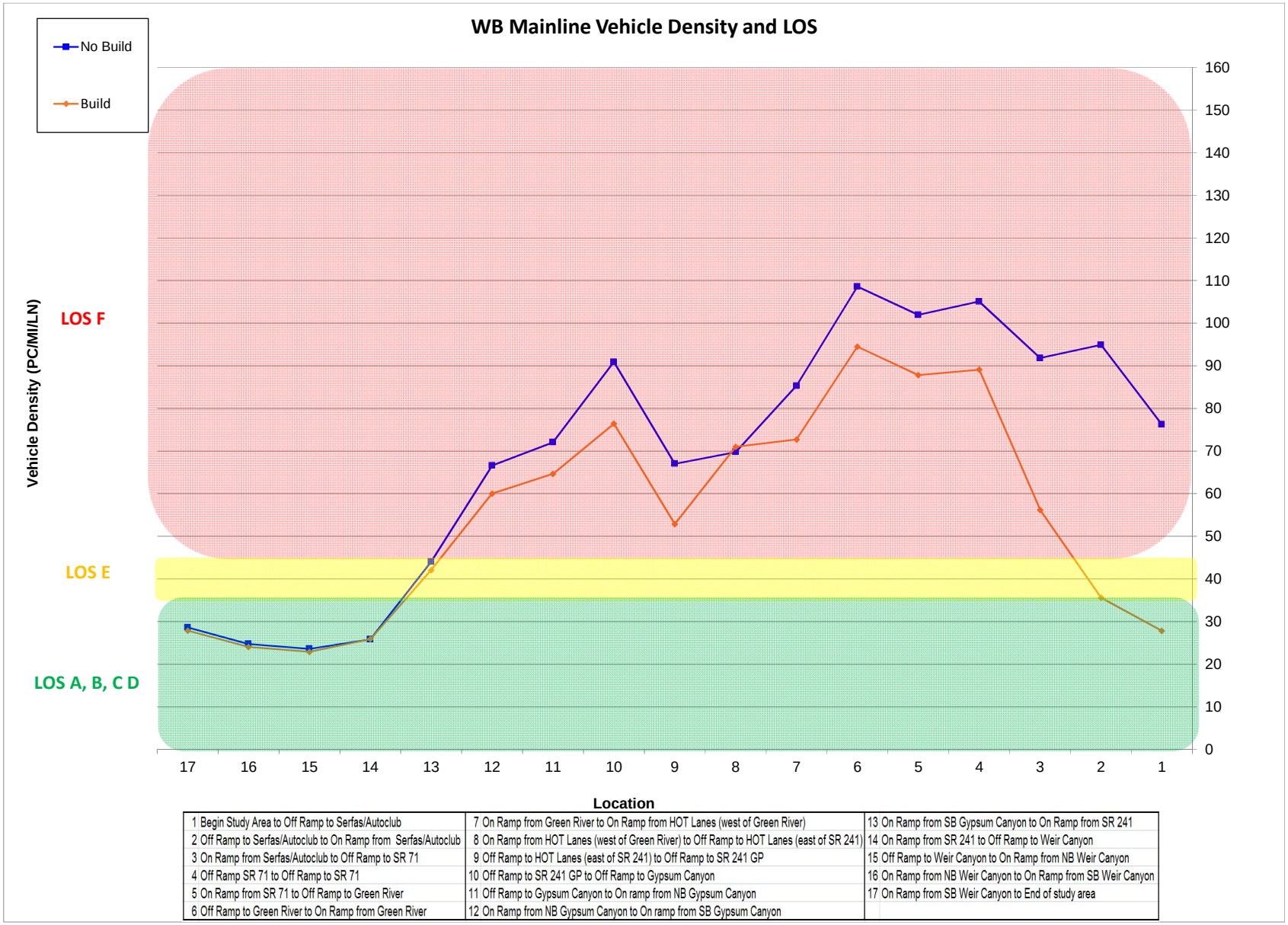
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



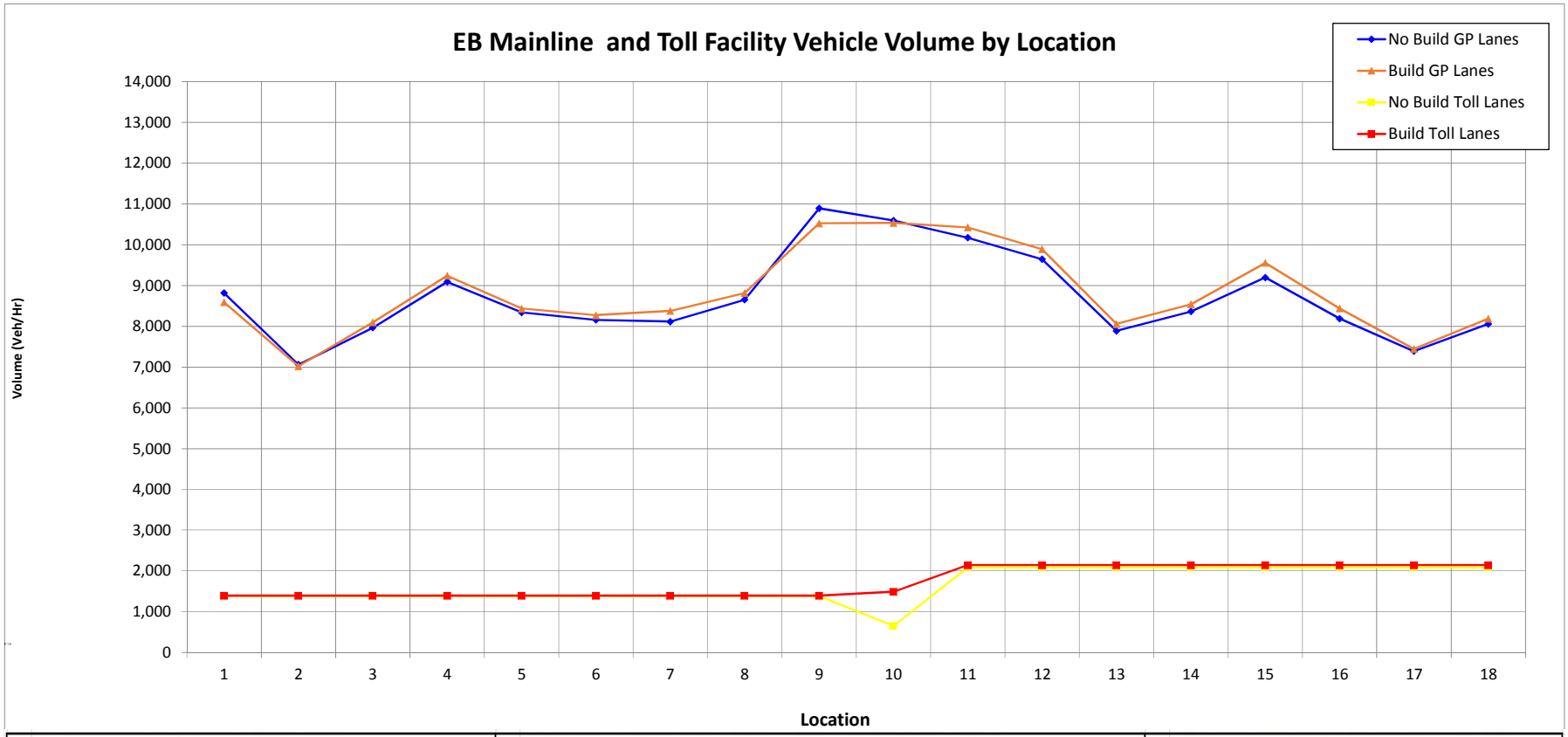
1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SB Gypsum Canyon Rd
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to SR 241 SB HOV	16	On Ramp from NB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	Off Ramp to Gypsum Canyon Rd	17	On Ramp from SB Weir Canyon Rd
6	On Ramp from Green River Rd	12	On Ramp from NB Gypsum Canyon Rd		



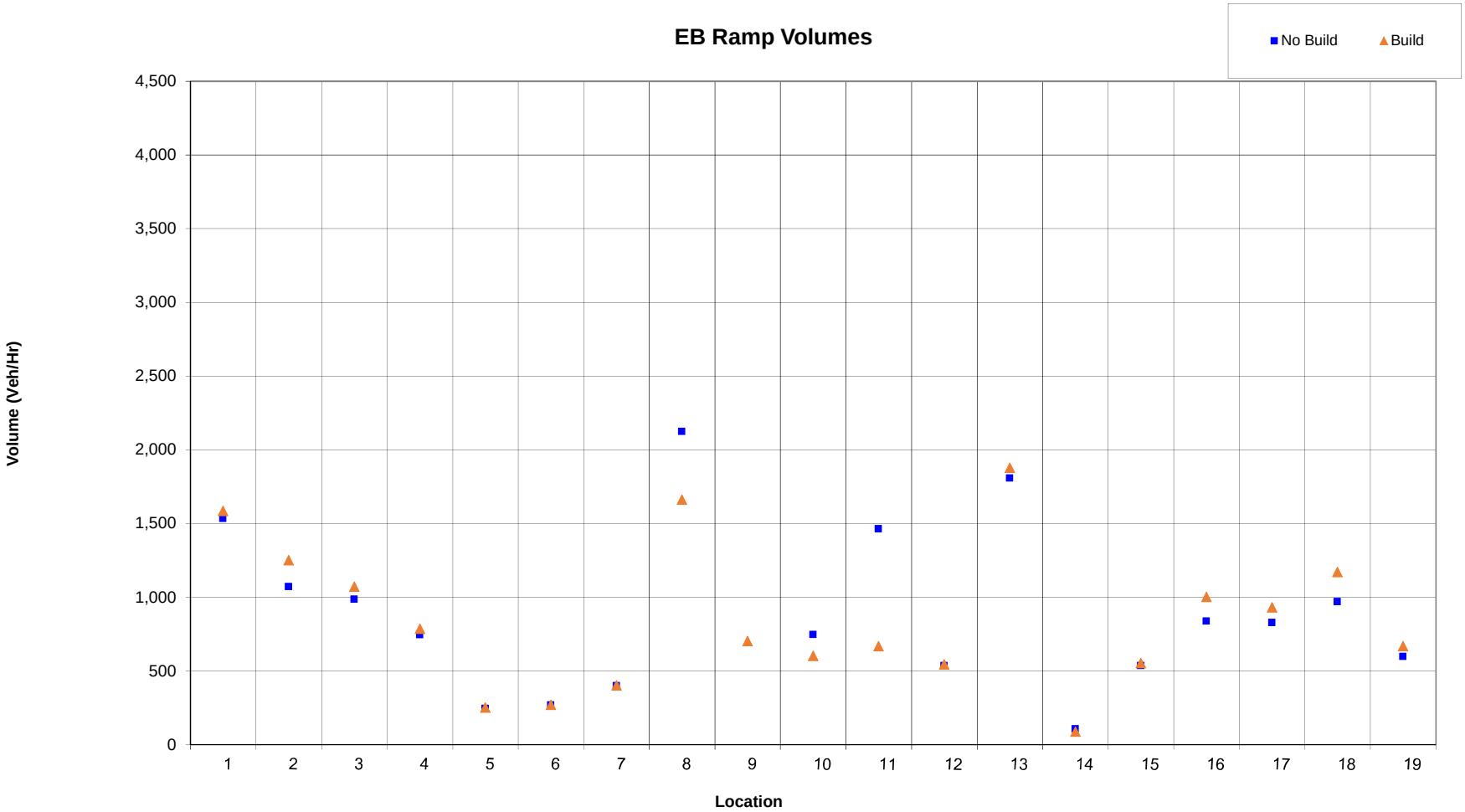
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

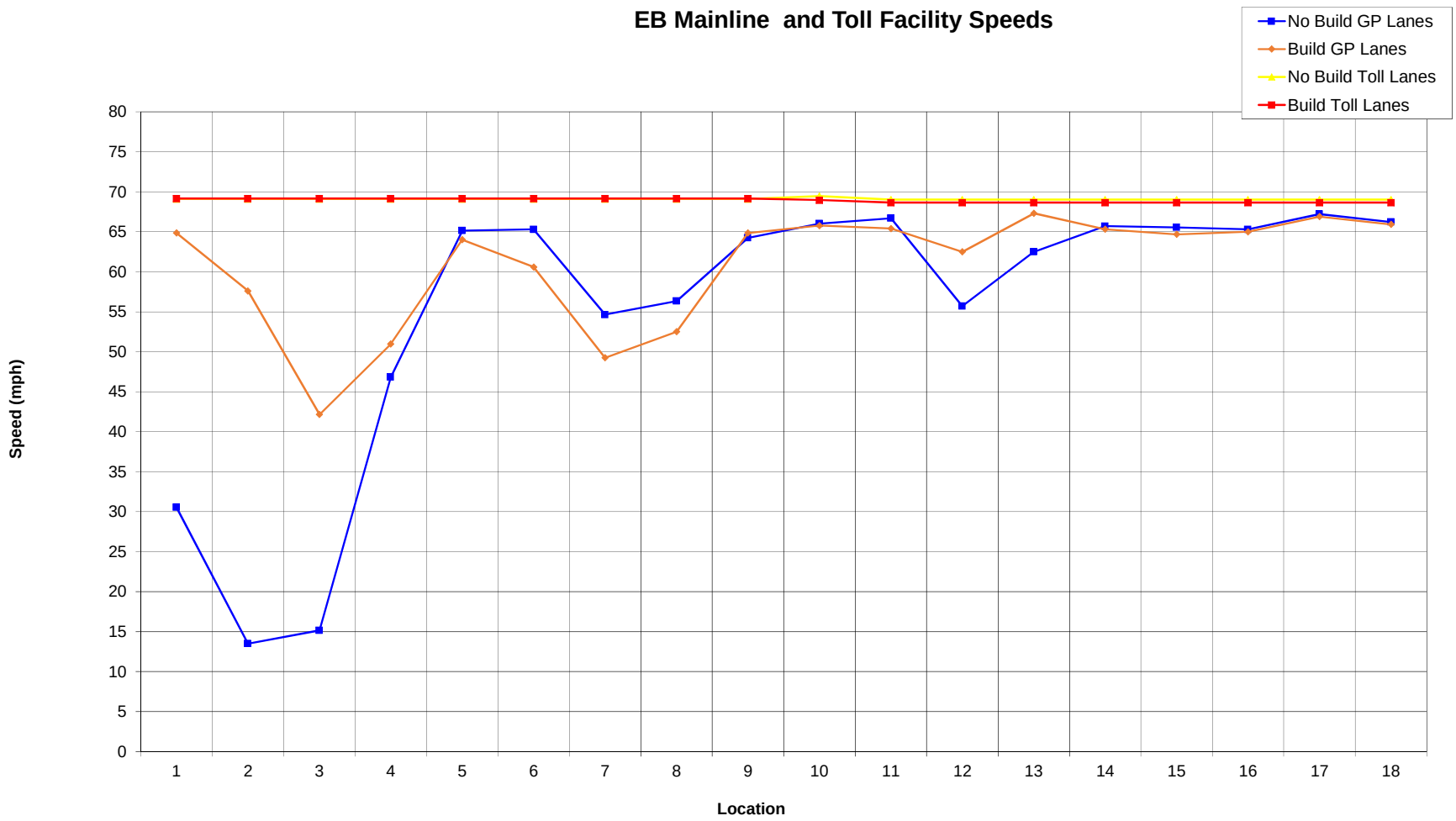


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area

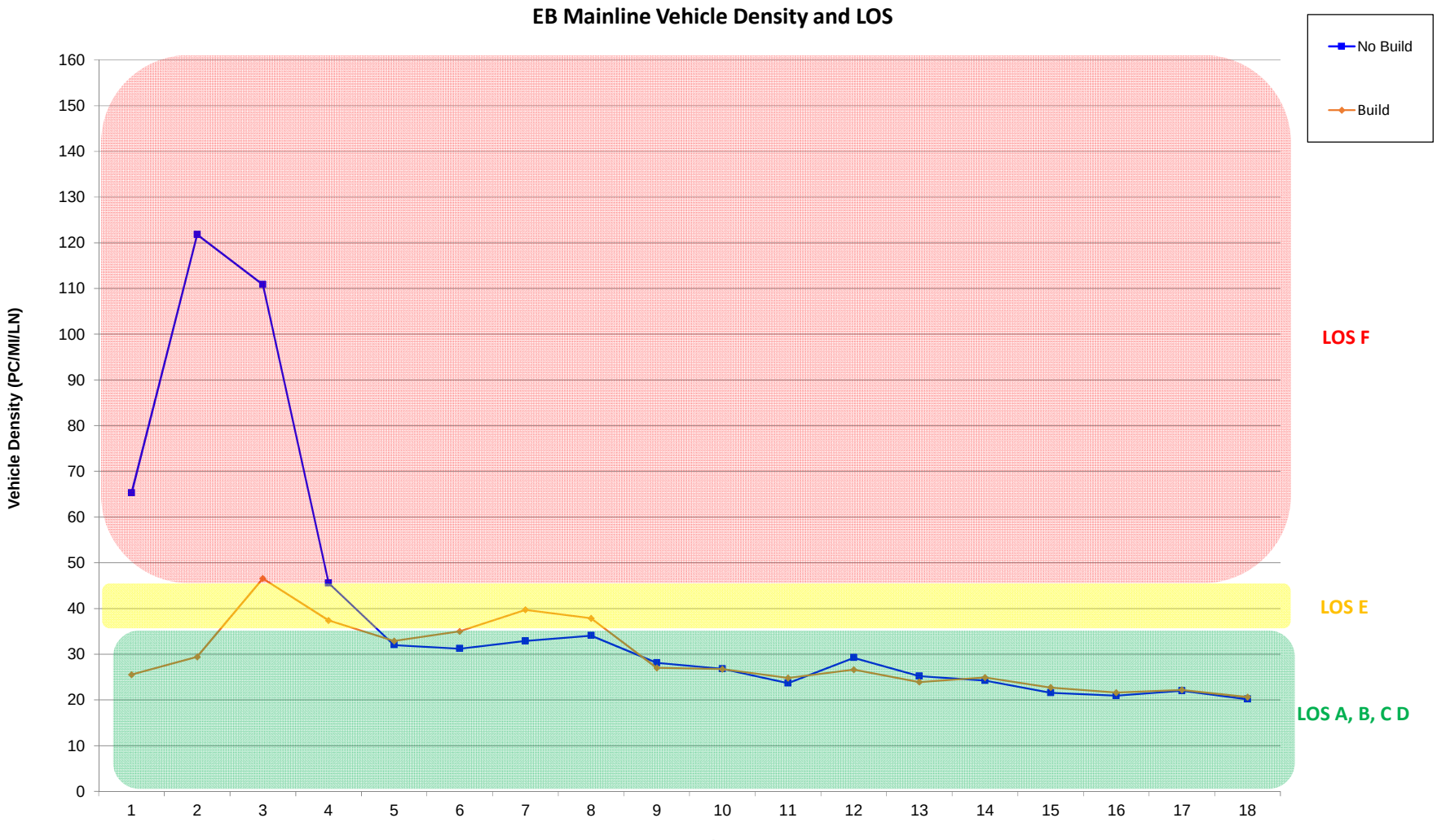


1	Off Ramp to Weir Canyon	8	On Ramp from SR 241 GP	15	On Ramp from Green River (to SR 91 EB)
2	On Ramp from SB Weir Canyon	9	On Ramp from SR 241 HOV	16	On Ramp from SR 71
3	On Ramp from NB Weir Canyon	10	On Ramp from HOT Lanes Exit (east of SR 241)	17	Off Ramp to Serfas/Autoclub
4	Off Ramp to SR 241	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	18	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	12	Off Ramp to Green River	19	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	13	Off Ramp to SR 71 CD		
7	On Ramp from NB Gypsum Canyon	14	On Ramp from Green River (to SR 71 NB)		

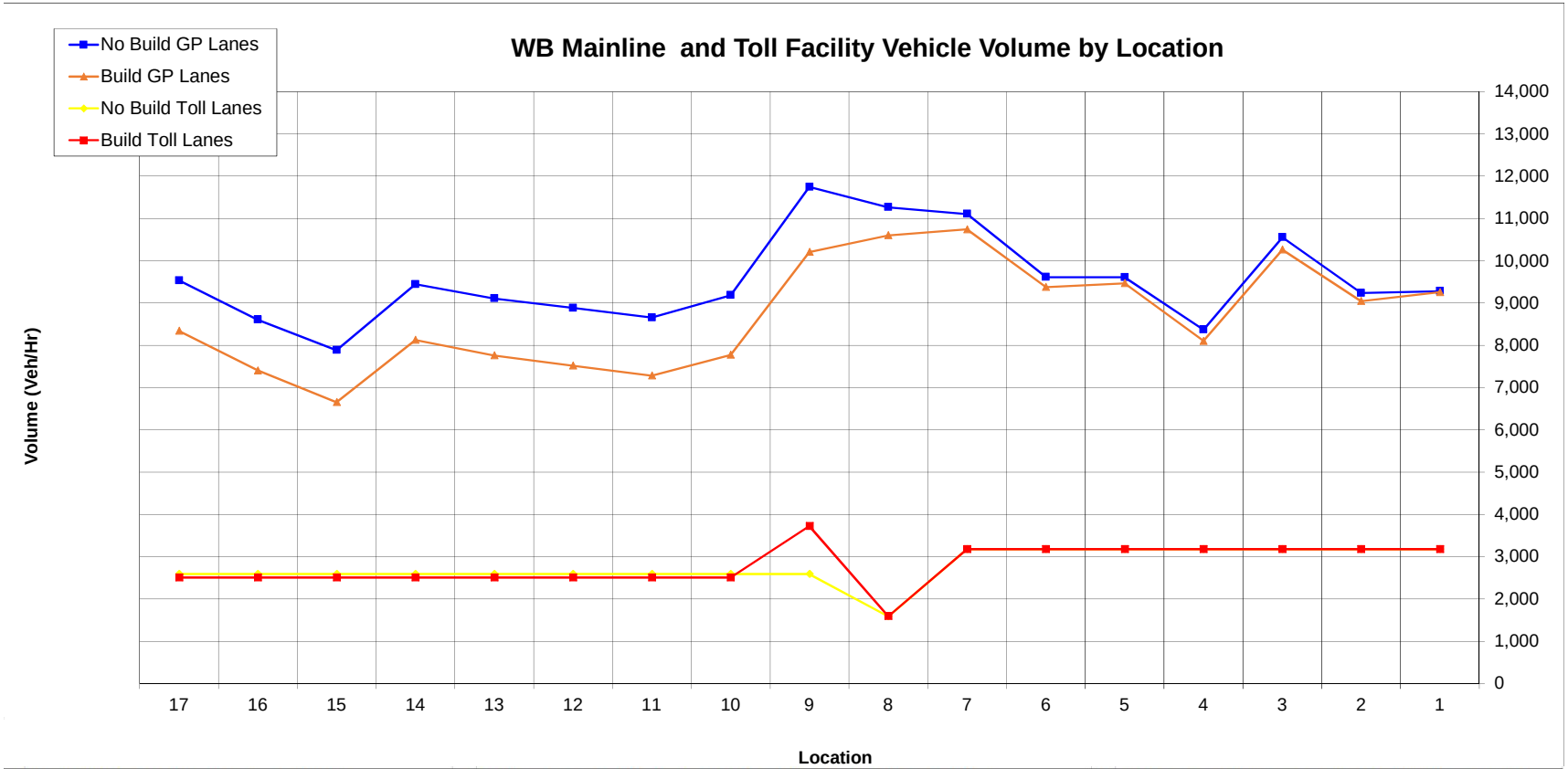
Charts 7-8 AM



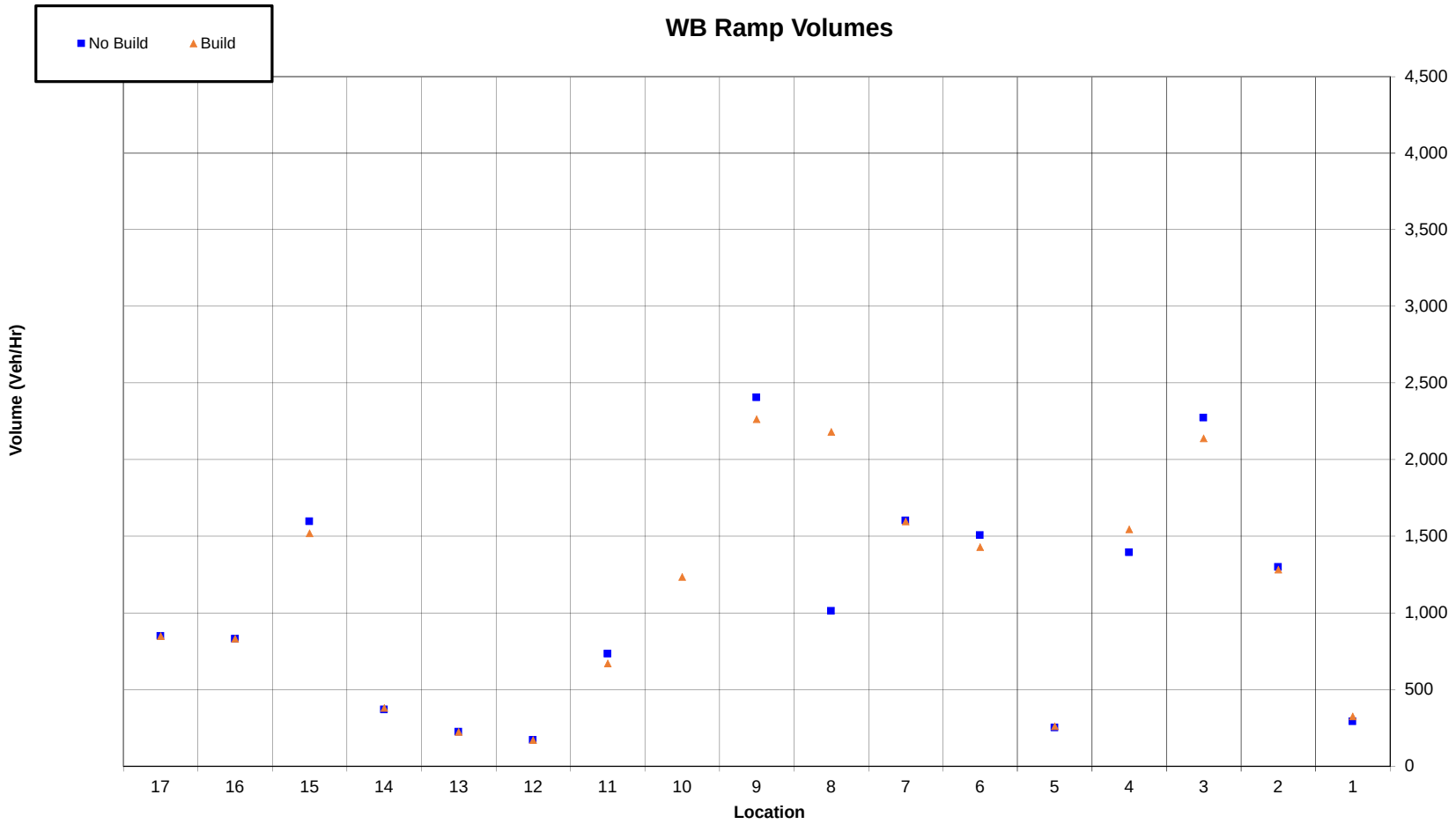
1 Begin Study Area to Off Ramp to Weir Canyon	7 On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13 Off Ramp to SR 71 CD to On Ramp from Green River
2 Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8 On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14 On Ramp from Green River to On Ramp from SR 71
3 On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9 On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15 On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4 On Ramp from NB Weir Canyon to Off Ramp to SR 241	10 On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16 Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5 Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11 Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17 Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6 Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12 Off Ramp to Green River to Off Ramp to SR 71 CD	18 On Ramp from Serfas/Autoclub to End of Study Area



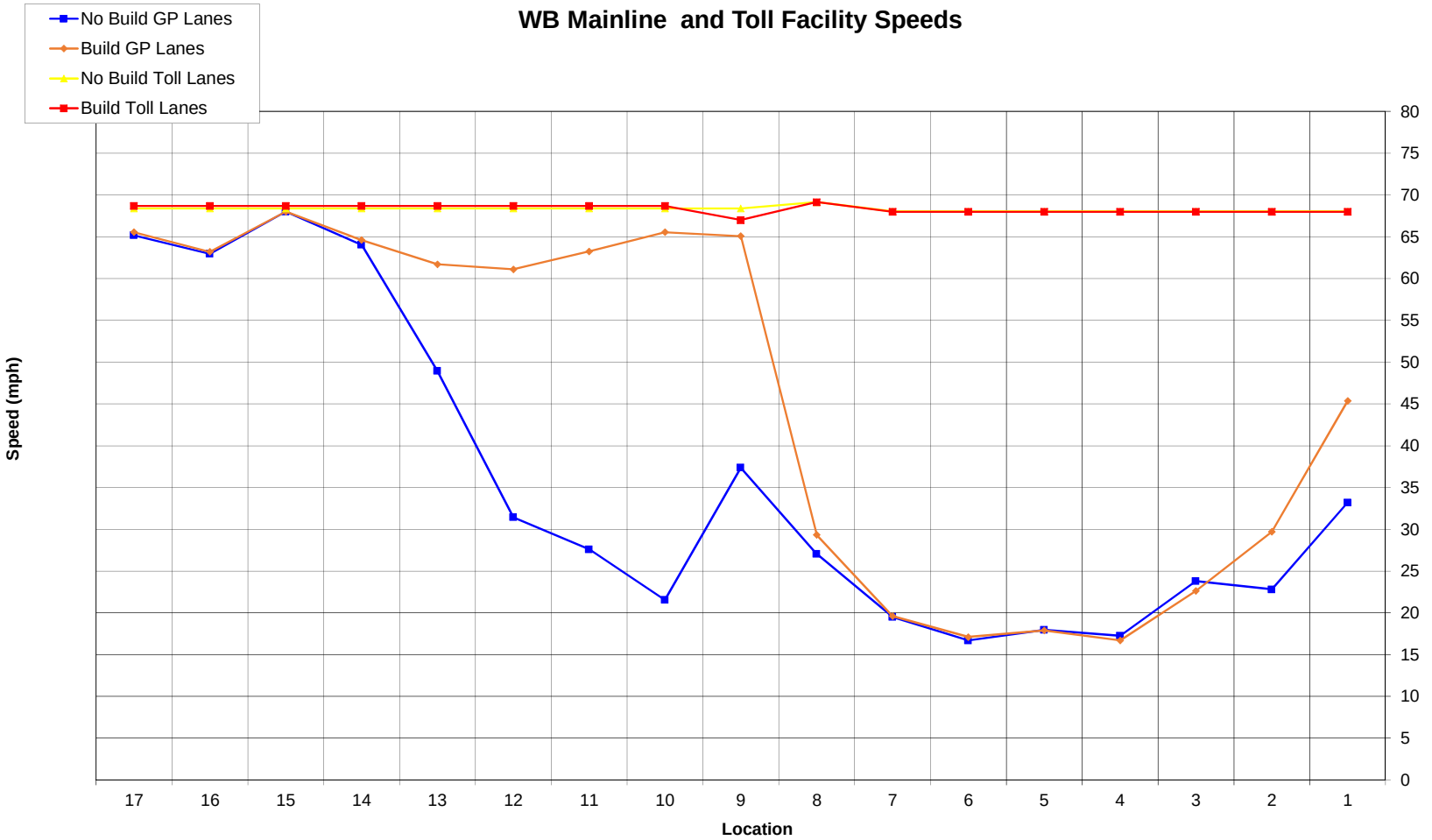
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



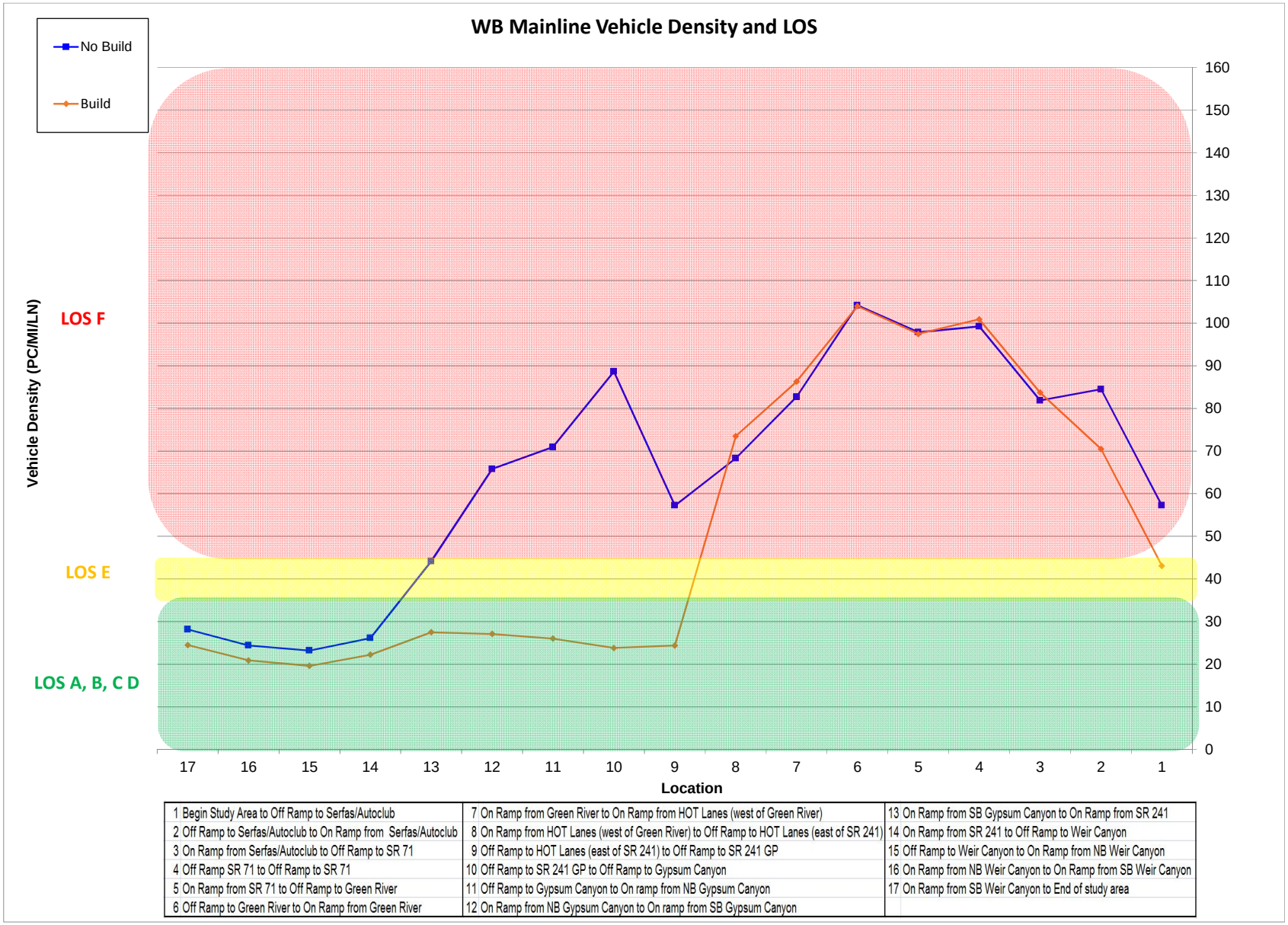
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SB Gypsum Canyon Rd
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to SR 241 SB HOV	16	On Ramp from NB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	Off Ramp to Gypsum Canyon Rd	17	On Ramp from SB Weir Canyon Rd
6	On Ramp from Green River Rd	12	On Ramp from NB Gypsum Canyon Rd		

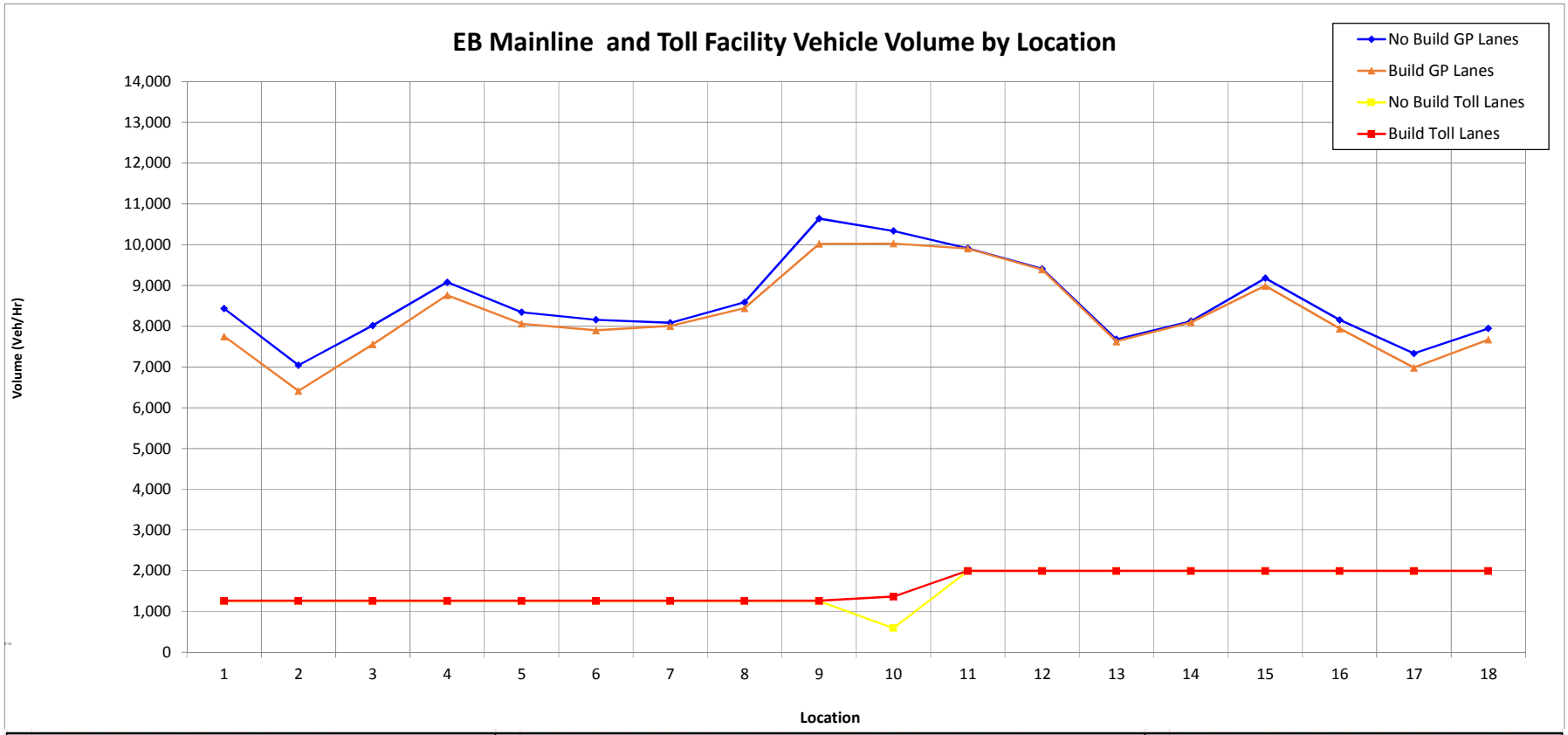


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

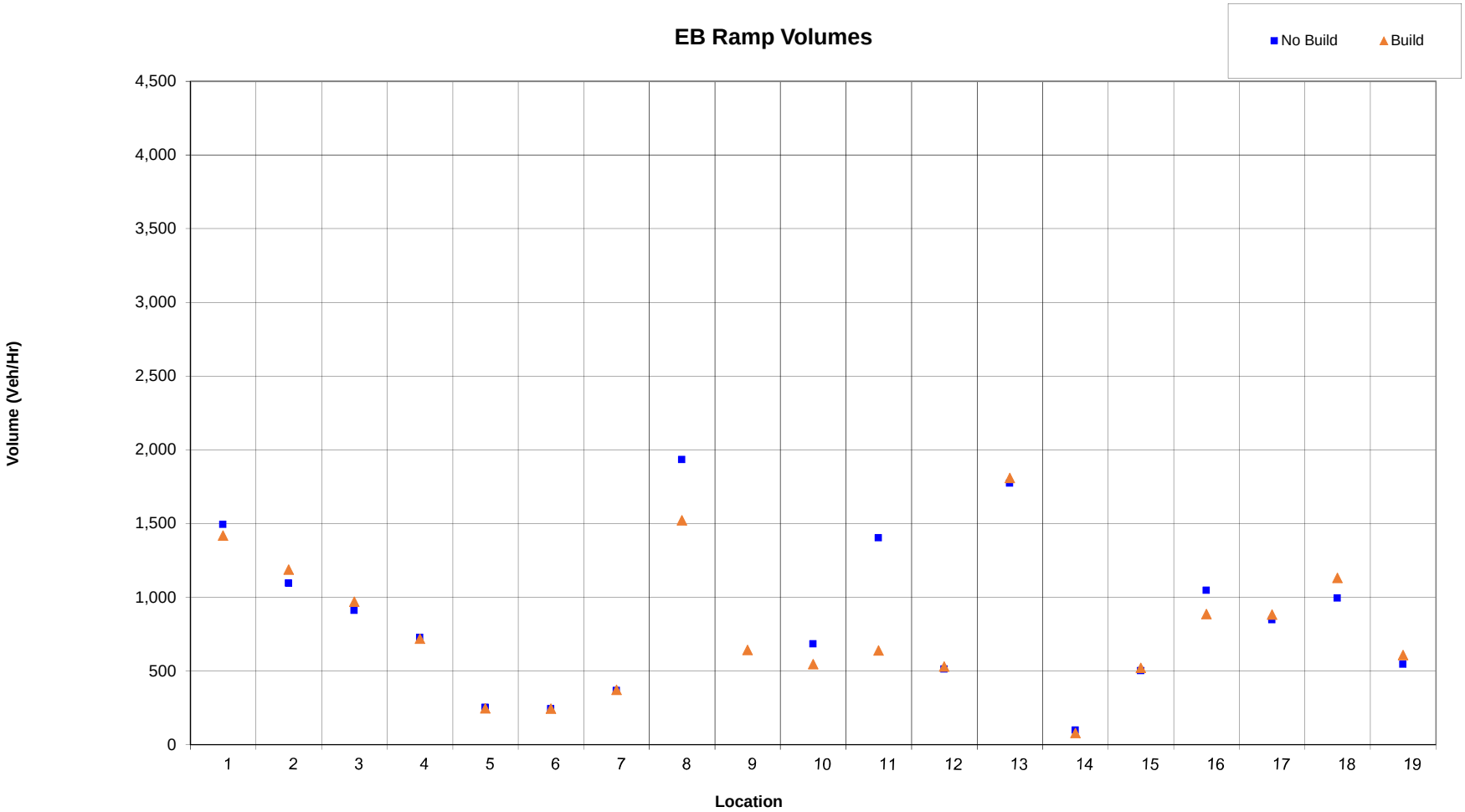


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

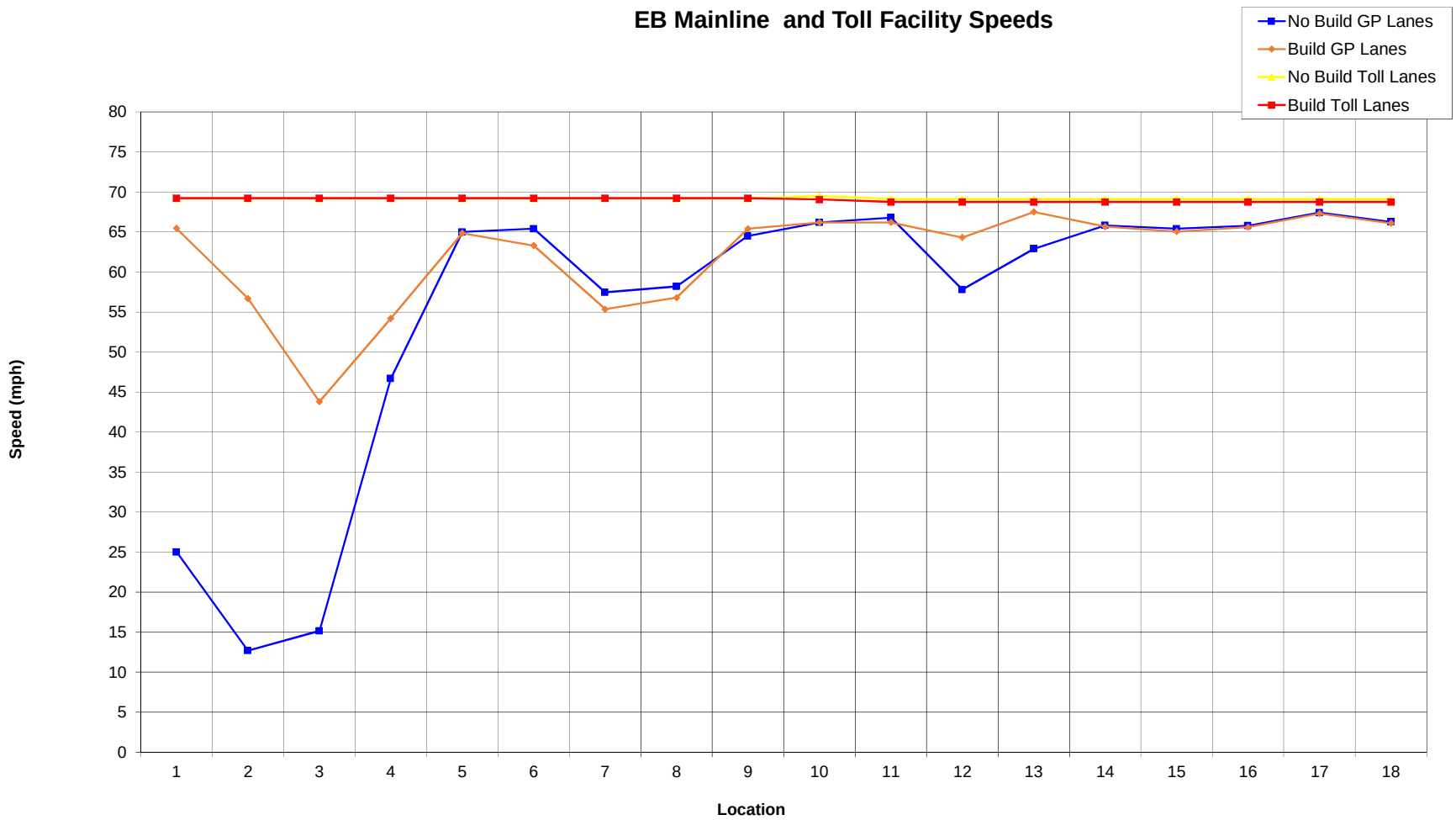
Charts 7-8 AM



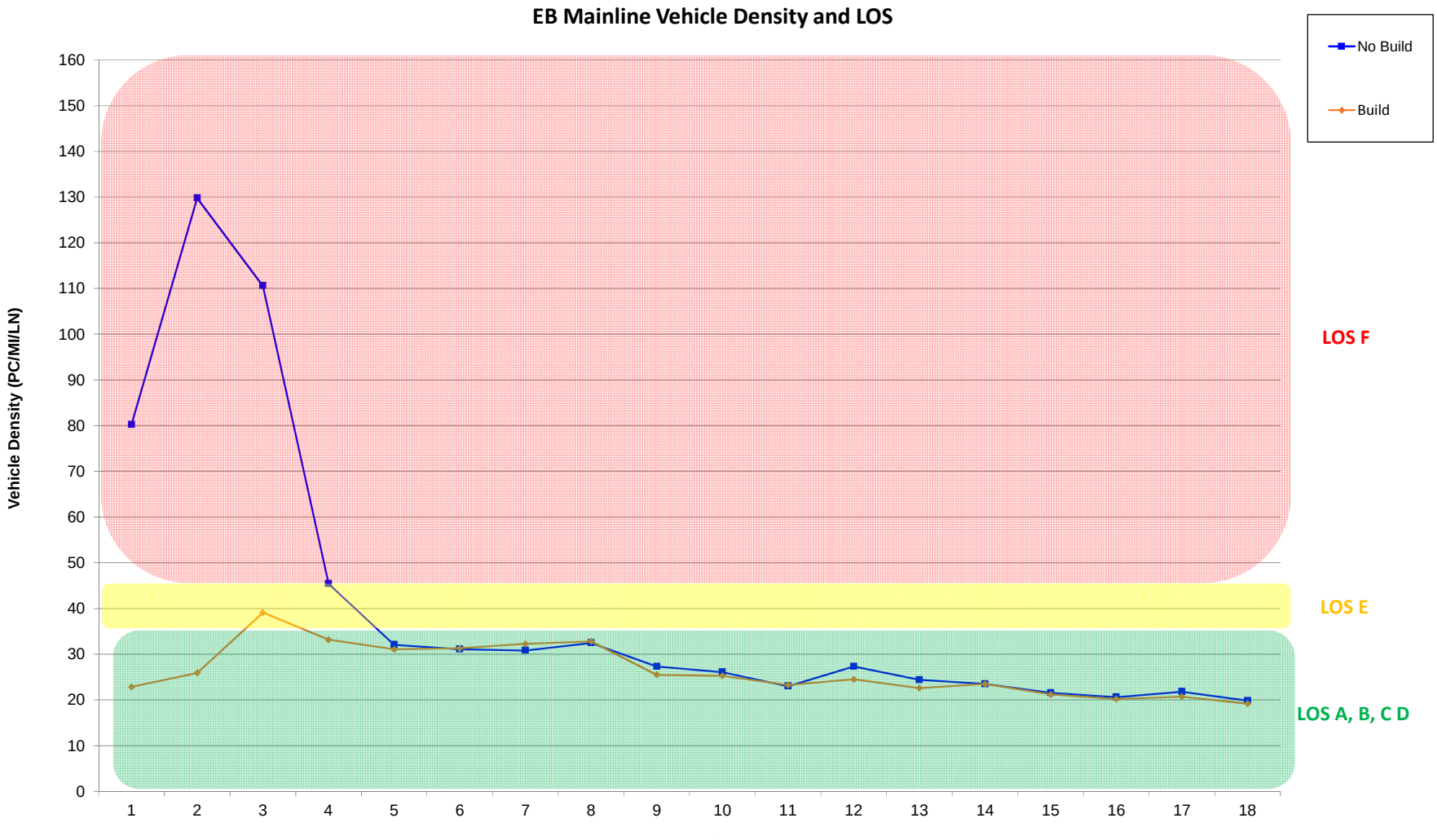
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



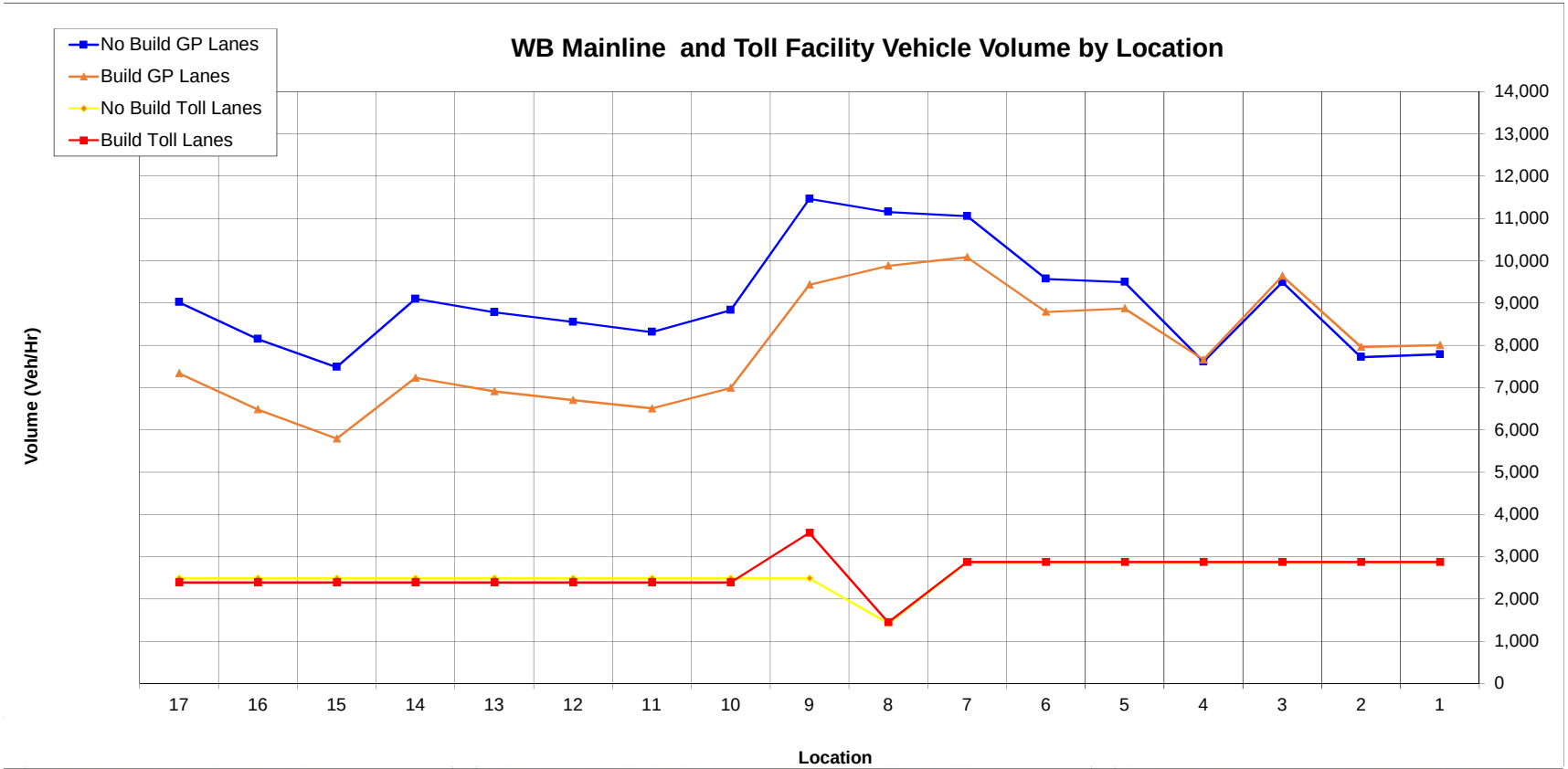
1	Off Ramp to Weir Canyon	8	On Ramp from SR 241 GP	15	On Ramp from Green River (to SR 91 EB)
2	On Ramp from SB Weir Canyon	9	On Ramp from SR 241 HOV	16	On Ramp from SR 71
3	On Ramp from NB Weir Canyon	10	On Ramp from HOT Lanes Exit (east of SR 241)	17	Off Ramp to Serfas/Autoclub
4	Off Ramp to SR 241	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	18	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	12	Off Ramp to Green River	19	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	13	Off Ramp to SR 71 CD		
7	On Ramp from NB Gypsum Canyon	14	On Ramp from Green River (to SR 71 NB)		



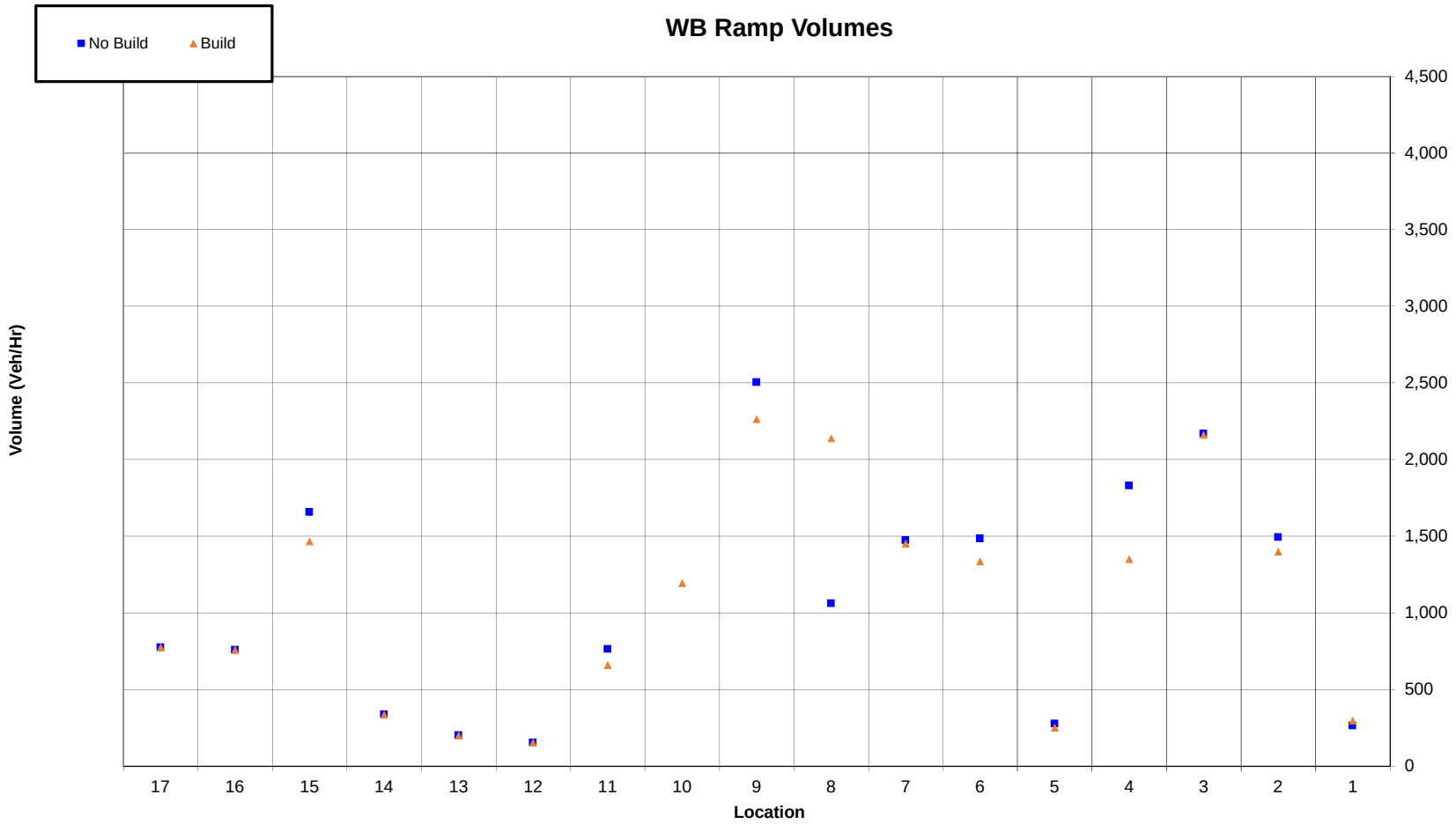
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



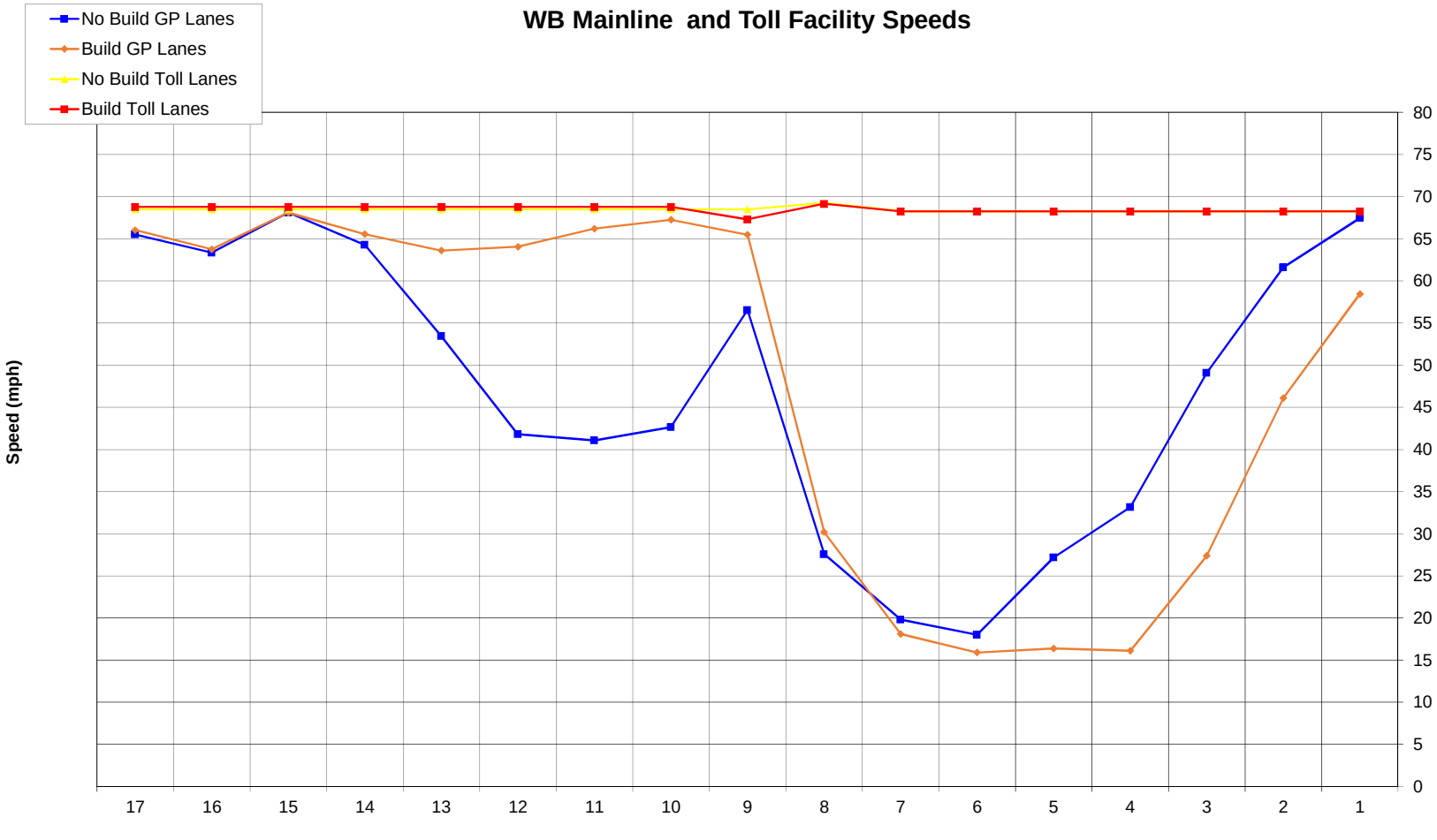
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

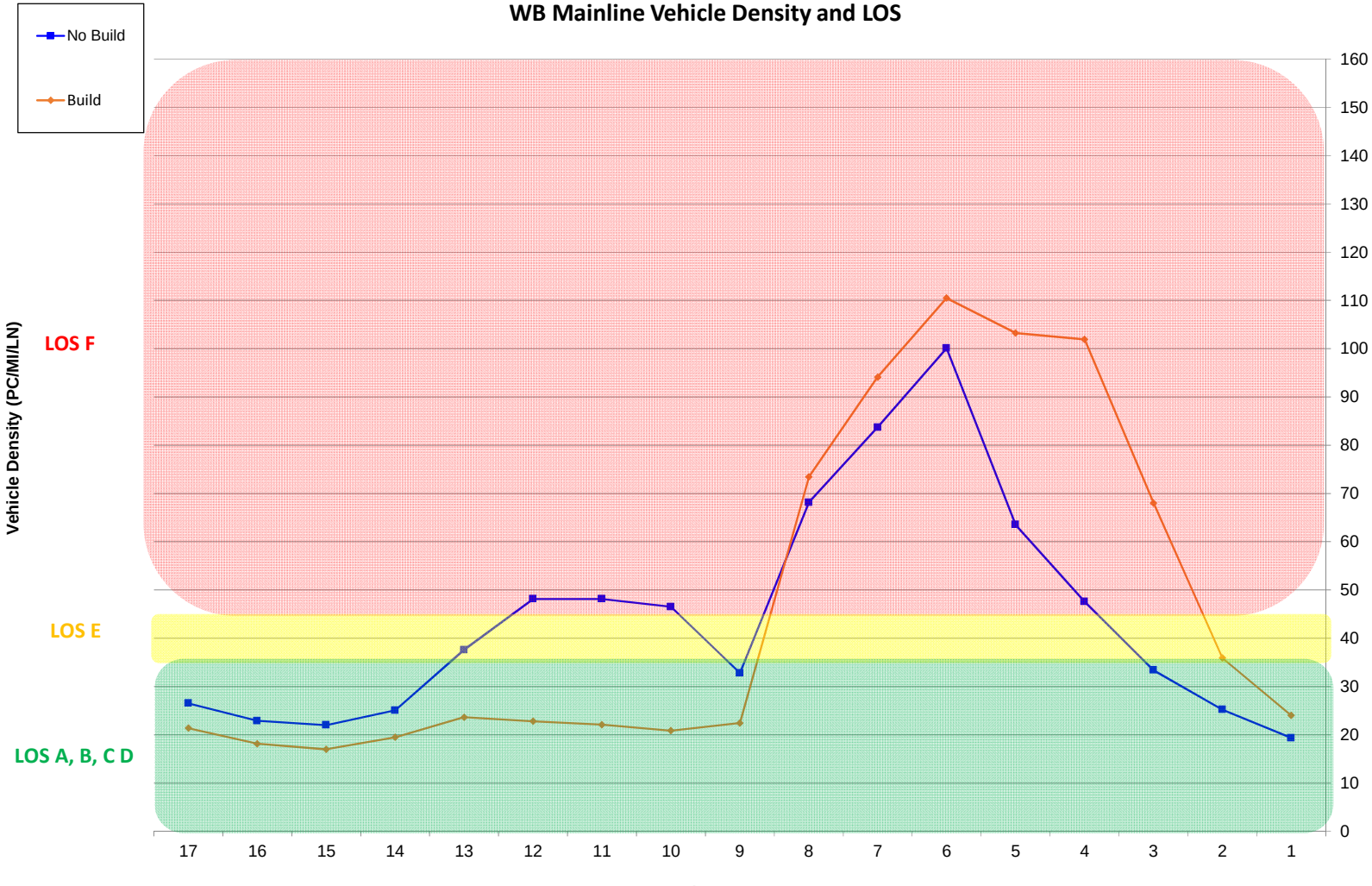


1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SB Gypsum Canyon Rd
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to SR 241 SB HOV	16	On Ramp from NB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	Off Ramp to Gypsum Canyon Rd	17	On Ramp from SB Weir Canyon Rd
6	On Ramp from Green River Rd	12	On Ramp from NB Gypsum Canyon Rd		



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

Charts 8-9 AM



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

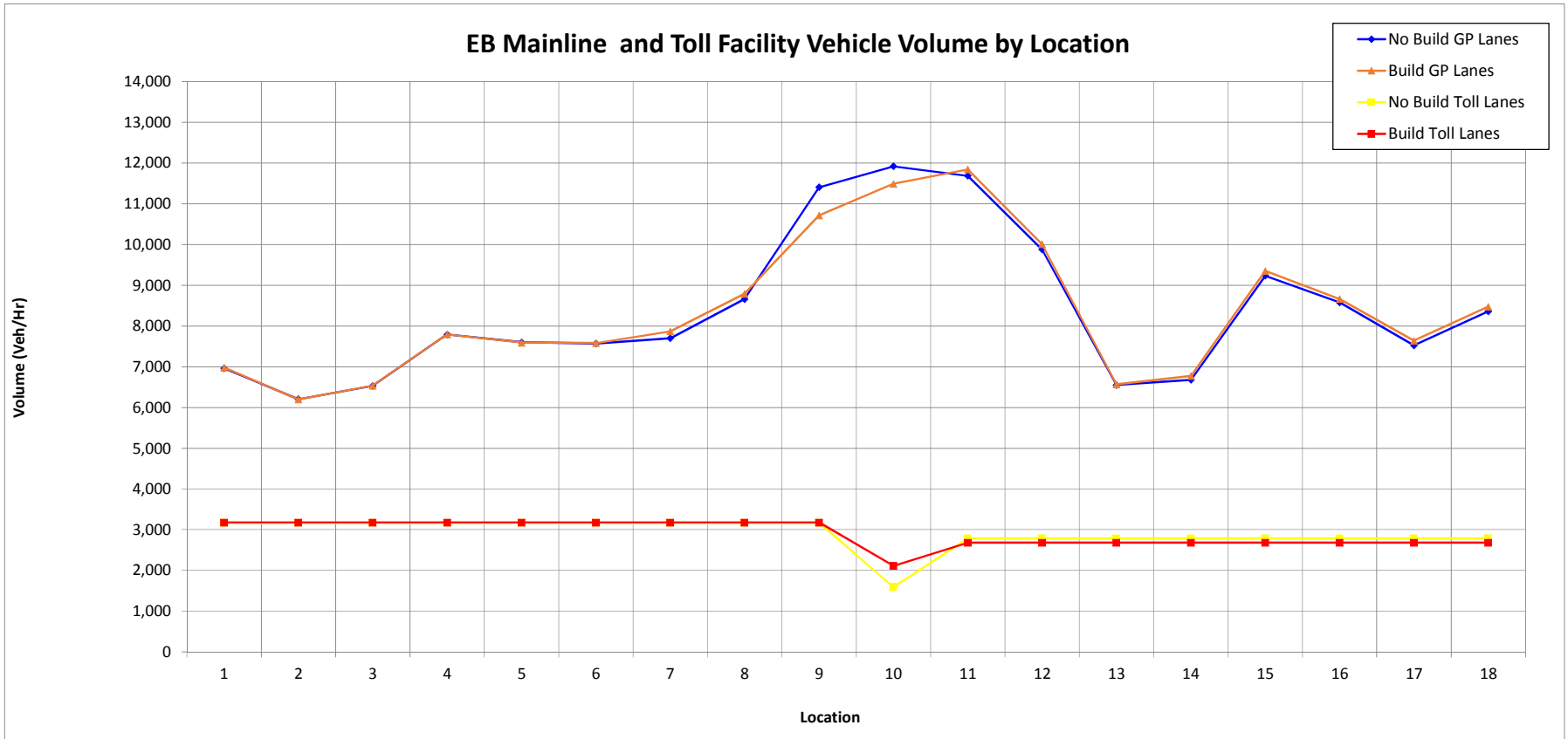
Charts 8-9 AM

SR-91
Vissim Model Summary - 2040 Build Option 2 - PM Peak Period
Network Summary Statistics

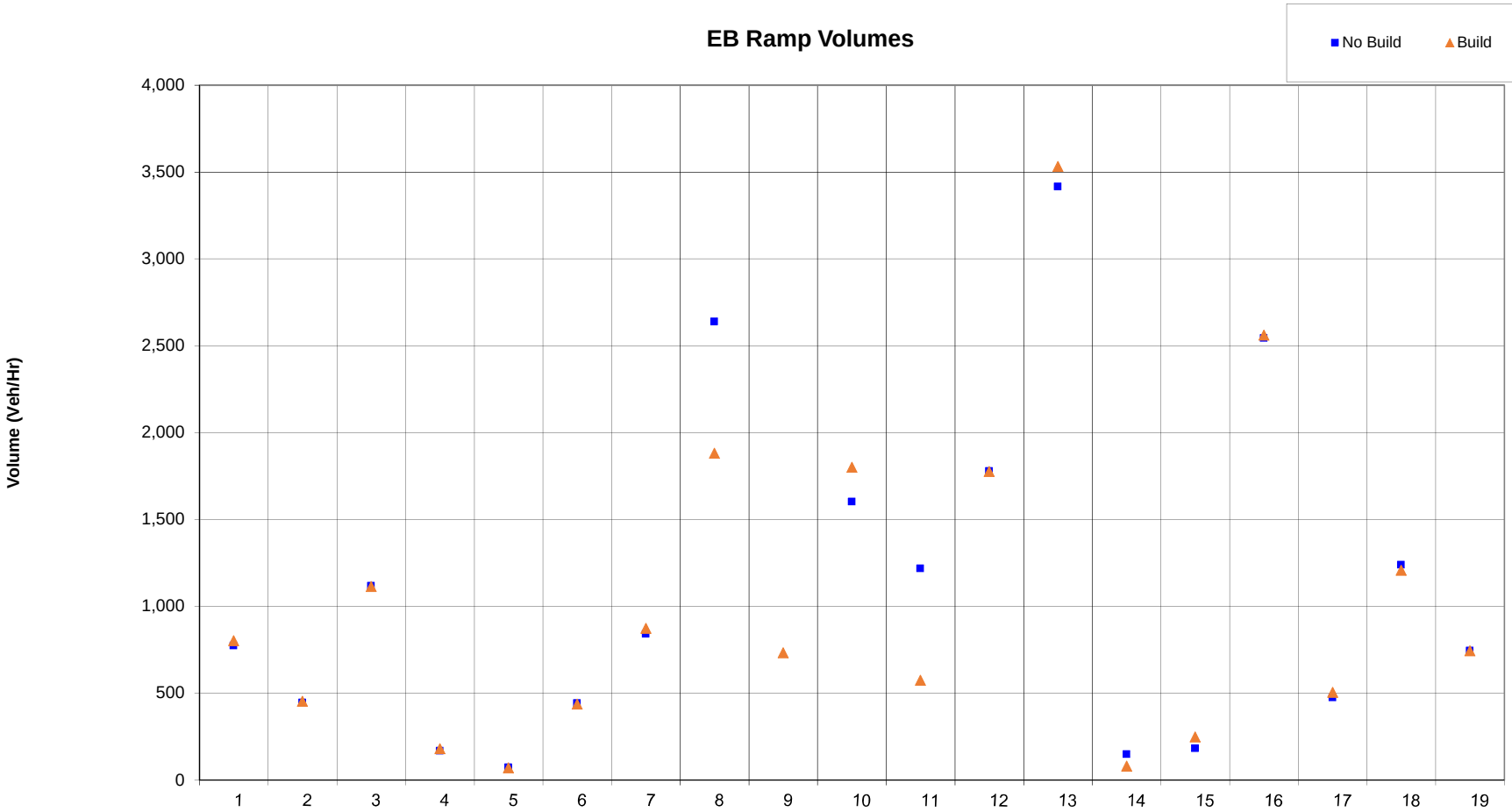
Parameter	2040 No Build	2040 Build Option 2	Difference
Total Vehicle Demand (4 Hr)	168,494	168,944	450
Total number of vehicles that did not reach their desitination	26,918	25,914	-1,004
Totla number of vehicles that have reached their destination	141,576	143,030	1,454
Total vehicle-miles traveled (VMT)	1,173,727	1,193,635	19,909
Total travel time, All Vehicle Types (VHT)	26,063	25,477	-586
Average speed [mph], All Vehicle Types	45.1	46.9	1.8
Average delay time per vehicle [mins], All Vehicle Types	3.45	3.08	-0.37

SR-91
Vissim Model Summary - 2040 Build Option 2 - PM Peak Period
Travel Time Results

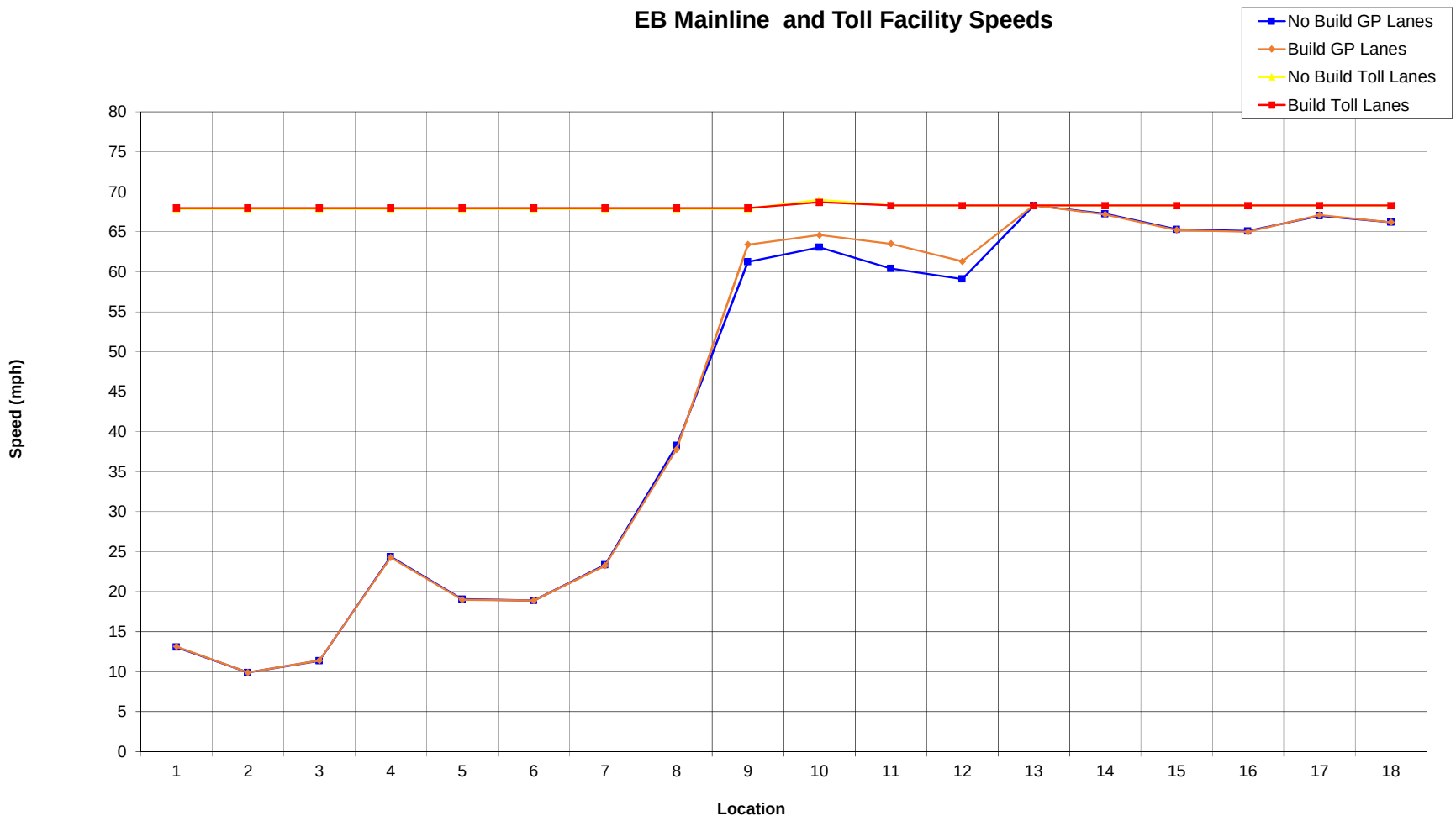
#	Origin	#	Destination	p Ke	Hide Travel Time Seg 1	Seg 2	Seg 3	2040 PM No Build VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM	2040 PM Build VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM	Change VISSIM Travel Time (Minutes) 3-4 PM	4-5 PM	5-6 PM	6-7 PM
1	SR 91 EB GP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	1	1002	1003	1005	19.8	20.3	20.9	20.5	19.6	19.7	19.6	18.7	-0.2	-0.6	-1.3	-1.8
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	2	1002	1003	2005	19.7	20.3	20.8	20.5	19.5	19.7	19.6	18.7	-0.2	-0.6	-1.3	-1.8
		5	SR 241 SB south of SR 91	3	1001			14.7	14.7	14.6	14.3	14.5	14.7	14.6	14.0	-0.2	0.0	0.0	-0.3
		7	SR 71 NB north of SR 91	4	1002	1003	1004	21.2	21.8	22.3	22.0	21.0	21.2	21.1	20.2	-0.2	-0.6	-1.3	-1.8
2	SR 91 EB EXP Lanes west of Weir Canyon Rd	3	SR 91 EB GP Lanes east of Serfas Club Rd	5	2002	1003	1005	8.8	9.2	9.7	9.9	8.7	8.7	8.7	8.6	-0.1	-0.5	-1.0	-1.3
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	6	2002	2003	2005	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.4	0.0	0.0	0.0	0.0
		7	SR 71 NB north of SR 91	7	2002	1003	1004	10.2	10.6	11.2	11.4	10.1	10.2	10.2	10.1	-0.1	-0.5	-1.0	-1.3
3	SR 91 WB GP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	8	1011	1012	1014	8.7	8.7	8.7	8.5	8.5	8.5	8.5	8.5	-0.1	-0.2	-0.1	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	9	1011	1012	2014	8.6	8.6	8.6	8.5	8.5	8.5	8.5	8.4	-0.1	-0.1	-0.1	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	10	1011	1012	1013	11.0	11.1	11.0	10.9	10.9	11.0	10.9	10.9	-0.1	-0.1	-0.1	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	11	1011	1012	2013	n/a	n/a	n/a	n/a	10.9	10.9	10.8	10.8	-0.2	-0.2	-0.2	-0.1
		7	SR 71 NB north of SR 91	12	1010			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	0.0	0.0	0.0
4	SR 91 WB EXP Lanes east of Serfas Club Rd	1	SR 91 WB GP Lanes west of Weir Canyon Rd	13	2011	1012	1014	8.6	8.7	8.6	8.5	8.5	8.5	8.5	8.5	-0.1	-0.1	-0.1	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	14	2011	2012	2014	8.4	8.4	8.4	8.3	8.4	8.4	8.4	8.4	0.0	0.0	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	15	2011	1012	1013	11.0	11.0	11.0	10.9	10.9	10.9	10.9	10.9	-0.1	-0.1	-0.1	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	16	2011	2012	2013	n/a	n/a	n/a	n/a	10.8	10.8	10.7	10.7	-0.2	-0.3	-0.3	-0.2
5	SR 241 NB south of SR 91 (via GP Ramp)	1	SR 91 WB GP Lanes west of Weir Canyon Rd	17	1006			7.2	7.2	7.5	7.3	7.2	7.2	7.3	7.2	0.0	0.0	-0.2	-0.1
		3	SR 91 EB GP Lanes east of Serfas Club Rd	18	1007	1003	1005	11.2	11.6	12.7	12.6	11.0	11.1	11.1	11.0	-0.2	-0.6	-1.6	-1.5
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	19	1007	1003	2005	11.2	11.6	12.7	12.5	11.0	11.0	11.0	11.0	-0.2	-0.5	-1.6	-1.5
		7	SR 71 NB north of SR 91	20	1007	1003	1004	12.6	13.1	14.2	14.0	12.5	12.5	12.5	12.5	-0.2	-0.5	-1.6	-1.5
6	SR 241 NB south of SR 91 (via EXP Ramp)	3	SR 91 EB GP Lanes east of Serfas Club Rd	21	2007	1003	1005	n/a	n/a	n/a	n/a	11.0	11.0	11.1	11.0	-0.2	-0.6	-1.6	-1.5
		4	SR 91 EB EXP Lanes east of Serfas Club Rd	22	2007	2003	2005	n/a	n/a	n/a	n/a	10.8	10.8	10.8	10.8	-0.3	-0.7	-1.8	-1.7
		7	SR 71 NB north of SR 91	23	2007	1003	1004	n/a	n/a	n/a	n/a	12.5	12.5	12.5	12.5	-0.2	-0.6	-1.6	-1.6
7	SR 71 SB north of SR 91	1	SR 91 WB GP Lanes west of Weir Canyon Rd	24	1009	1012	1014	10.0	10.1	10.0	9.8	9.9	9.9	9.9	9.8	-0.1	-0.2	-0.1	0.0
		2	SR 91 WB EXP Lanes west of Weir Canyon Rd	25	1009	1012	2014	9.9	10.0	9.9	9.8	9.8	9.8	9.8	9.7	-0.1	-0.2	-0.1	0.0
		3	SR 91 EB GP Lanes east of Serfas Club Rd	26	1008			5.7	5.7	5.6	5.4	5.8	5.9	5.6	5.4	0.0	0.1	0.0	0.0
		5	SR 241 SB south of SR 91 (Via GP Ramp)	27	1009	1012	1013	12.4	12.5	12.4	12.2	12.3	12.3	12.3	12.2	-0.1	-0.2	-0.1	0.0
		6	SR 241 SB south of SR 91 (Via EXP Ramp)	28	1009	1012	2013	n/a	n/a	n/a	n/a	12.2	12.2	12.2	12.1	-0.2	-0.2	-0.2	-0.1



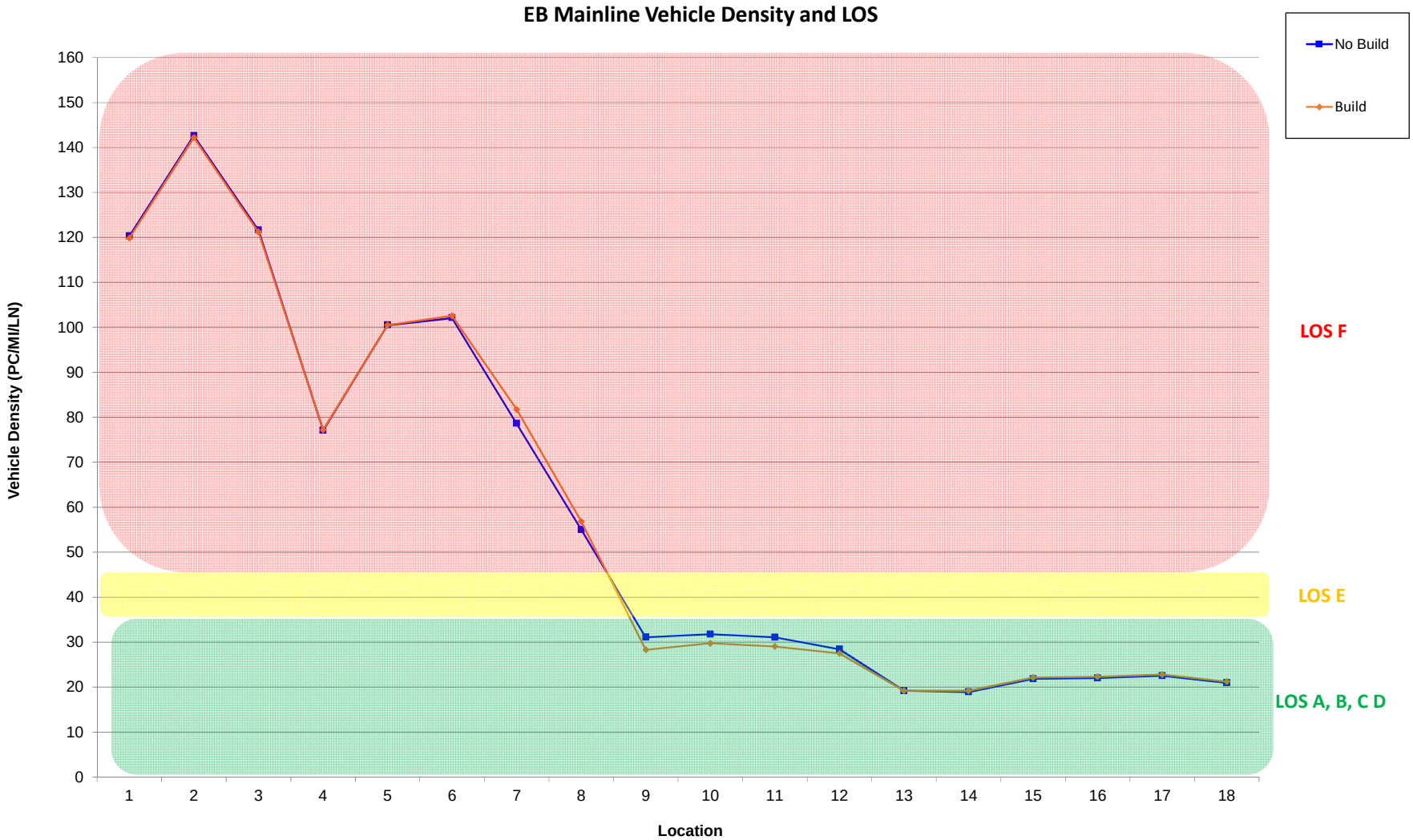
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



1	Off Ramp to Weir Canyon	8	On Ramp from SR 241 GP	15	On Ramp from Green River (to SR 91 EB)
2	On Ramp from SB Weir Canyon	9	On Ramp from SR 241 HOV	16	On Ramp from SR 71
3	On Ramp from NB Weir Canyon	10	On Ramp from HOT Lanes Exit (east of SR 241)	17	Off Ramp to Serfas/Autoclub
4	Off Ramp to SR 241	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	18	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	12	Off Ramp to Green River	19	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	13	Off Ramp to SR 71 CD		
7	On Ramp from NB Gypsum Canyon	14	On Ramp from Green River (to SR 71 NB)		

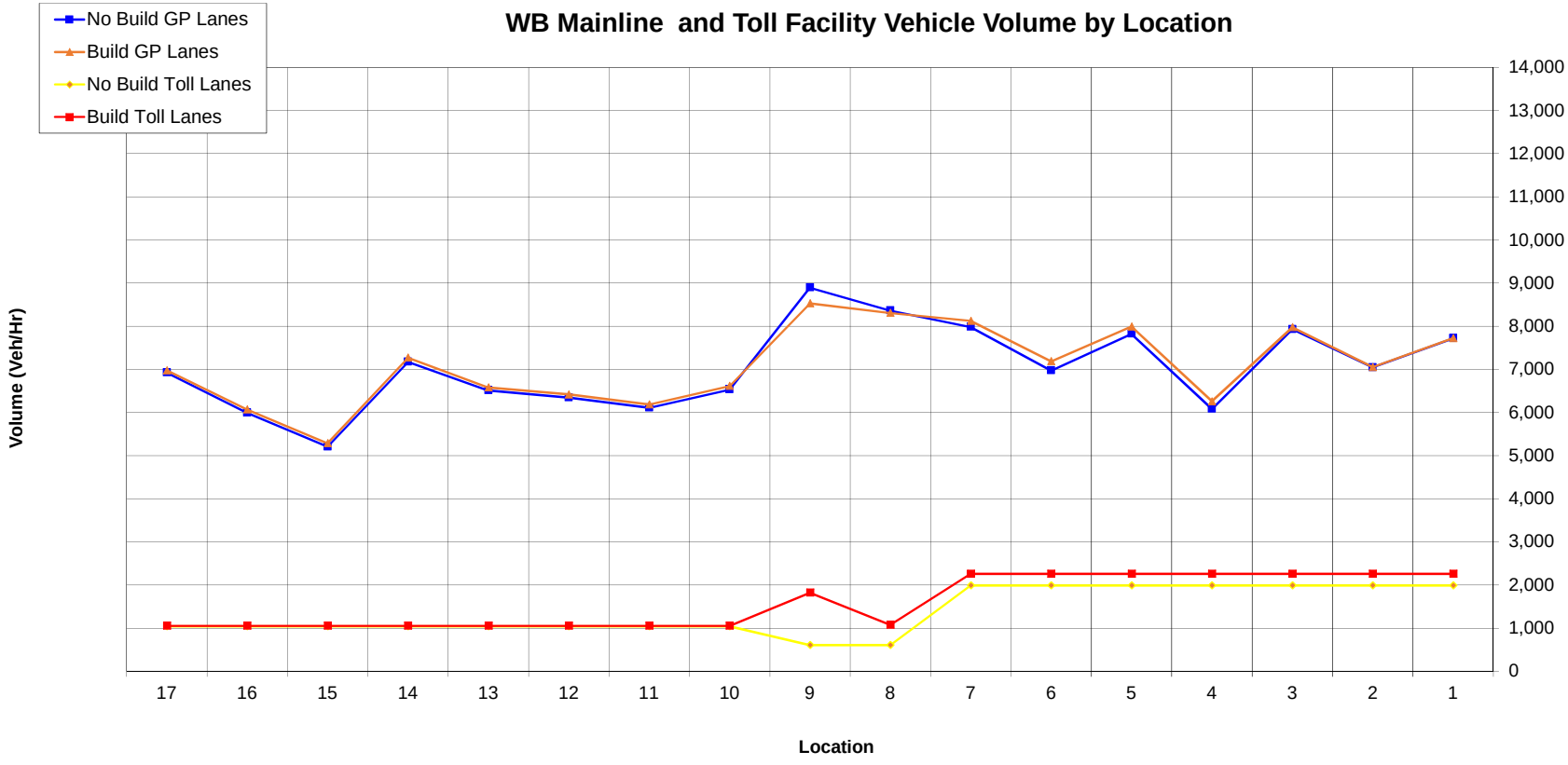


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area

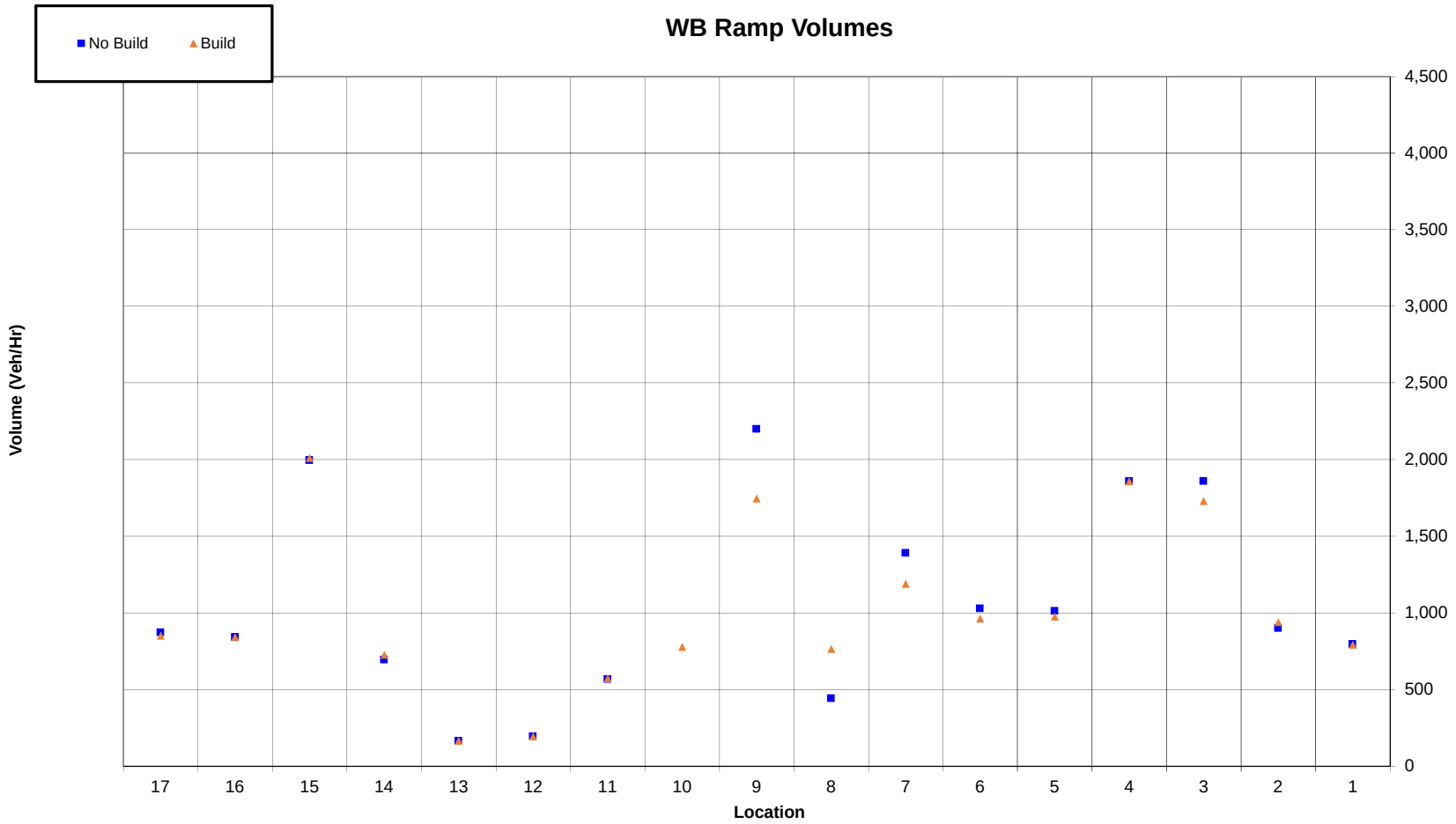


1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area

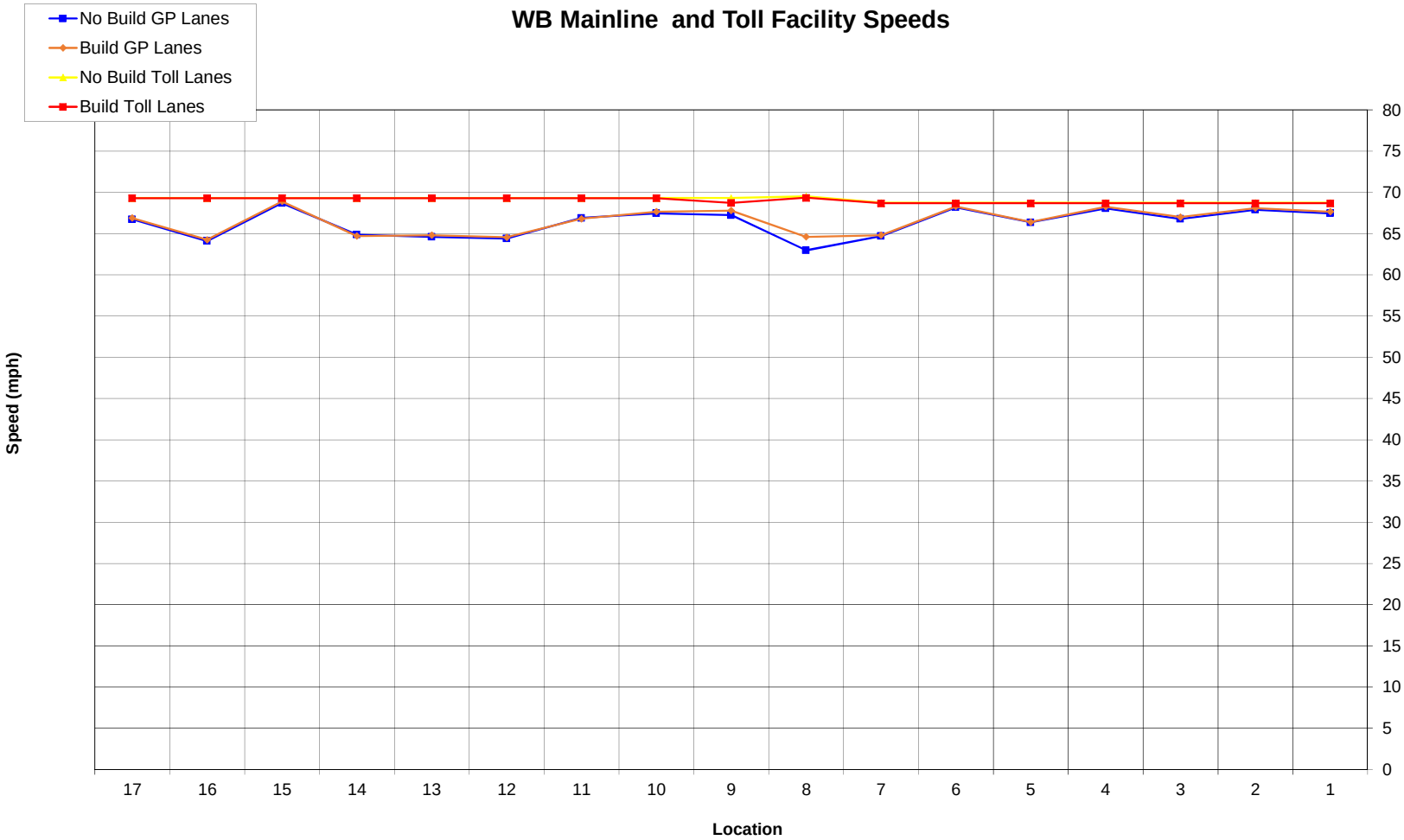
Charts 3-4 PM



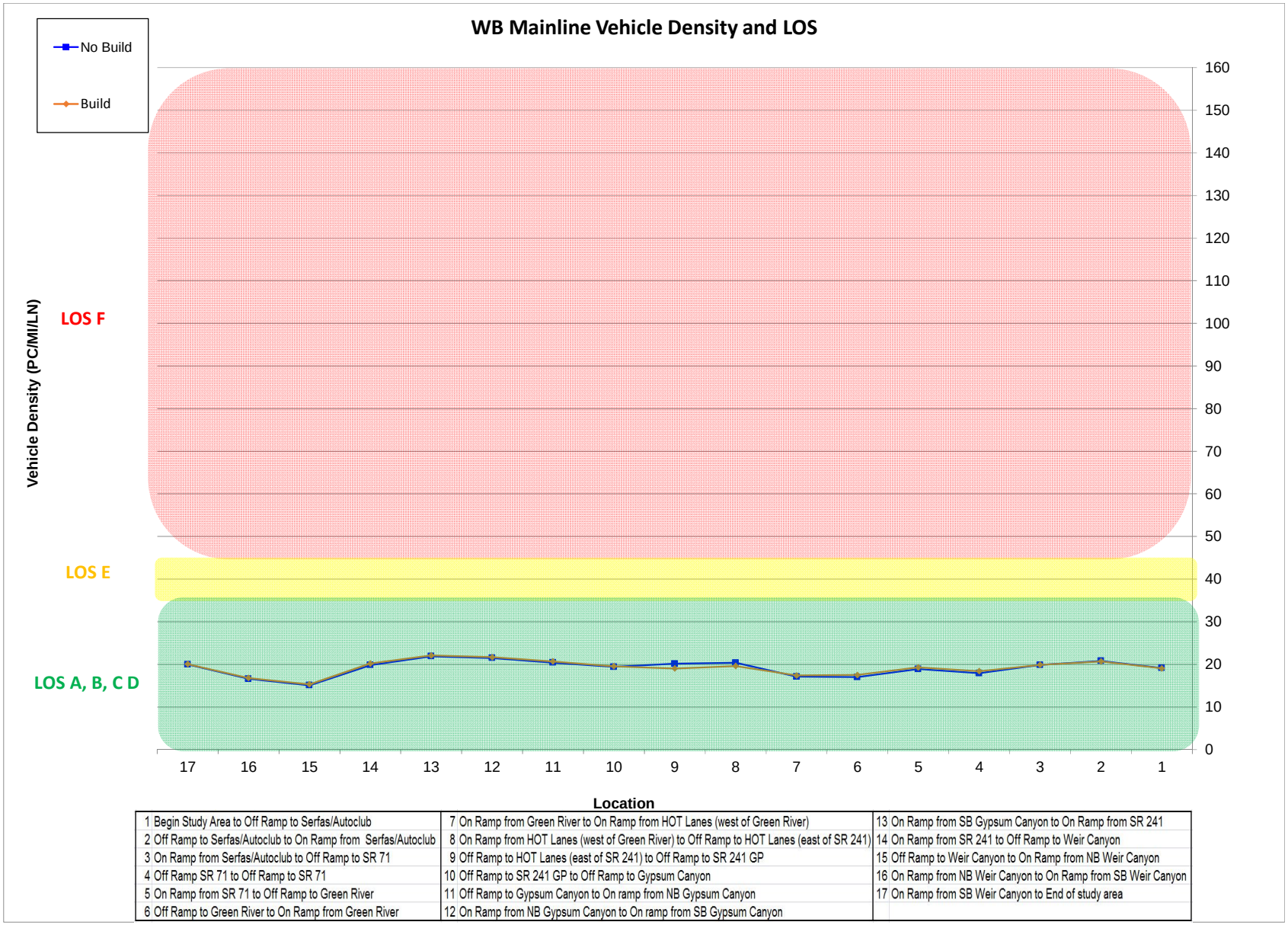
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



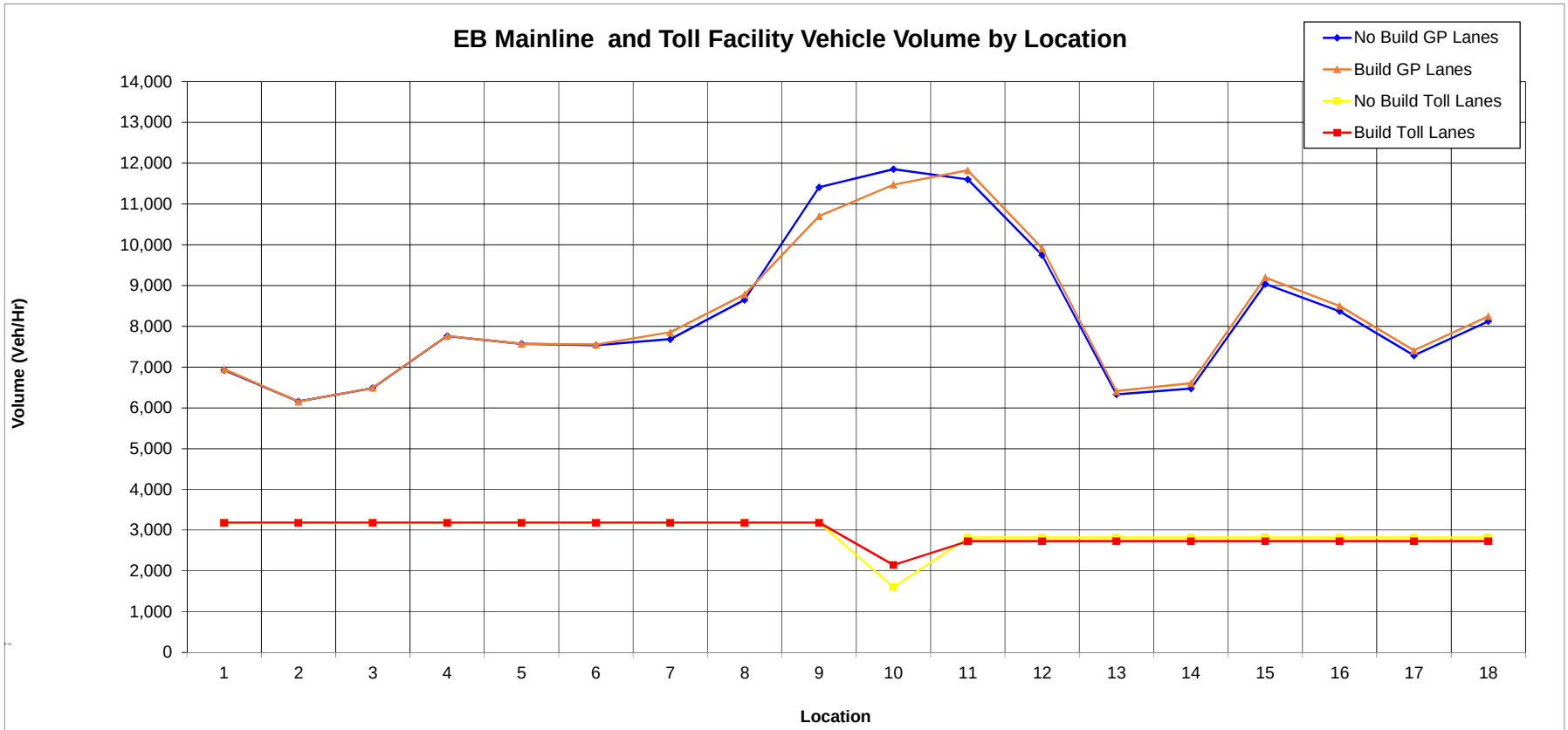
1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SB Gypsum Canyon Rd
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to SR 241 SB HOV	16	On Ramp from NB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	Off Ramp to Gypsum Canyon Rd	17	On Ramp from SB Weir Canyon Rd
6	On Ramp from Green River Rd	12	On Ramp from NB Gypsum Canyon Rd		



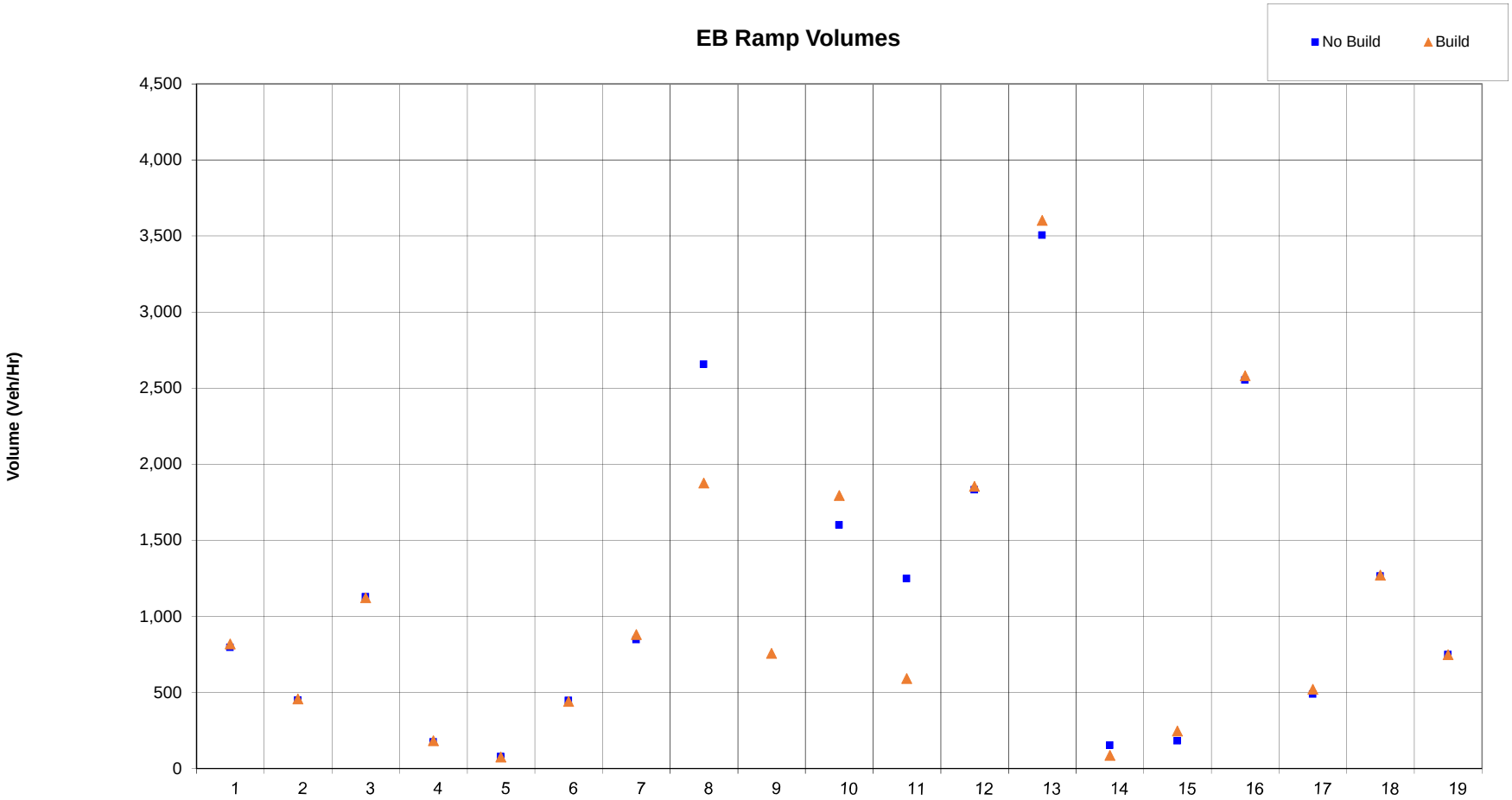
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



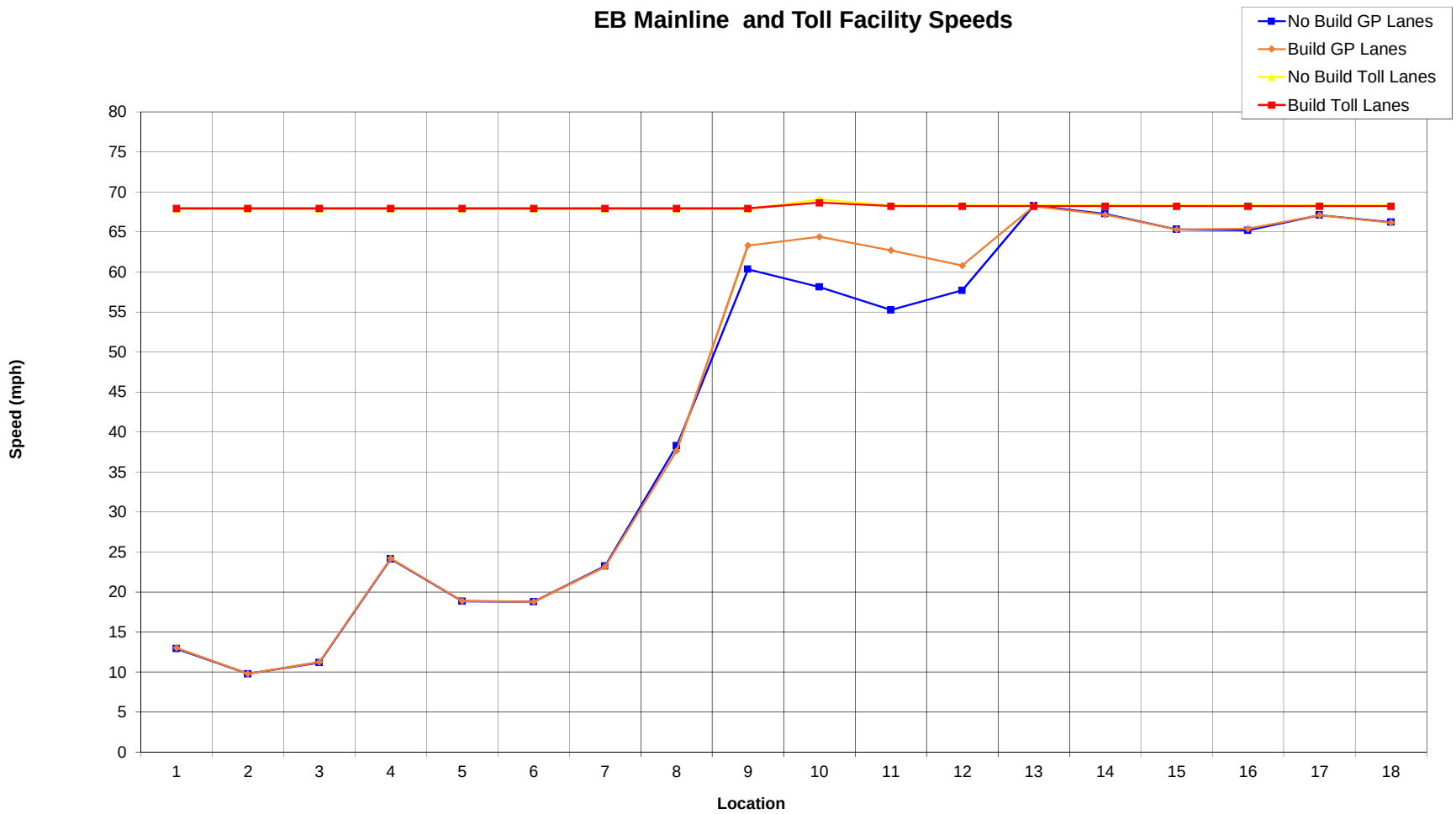
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



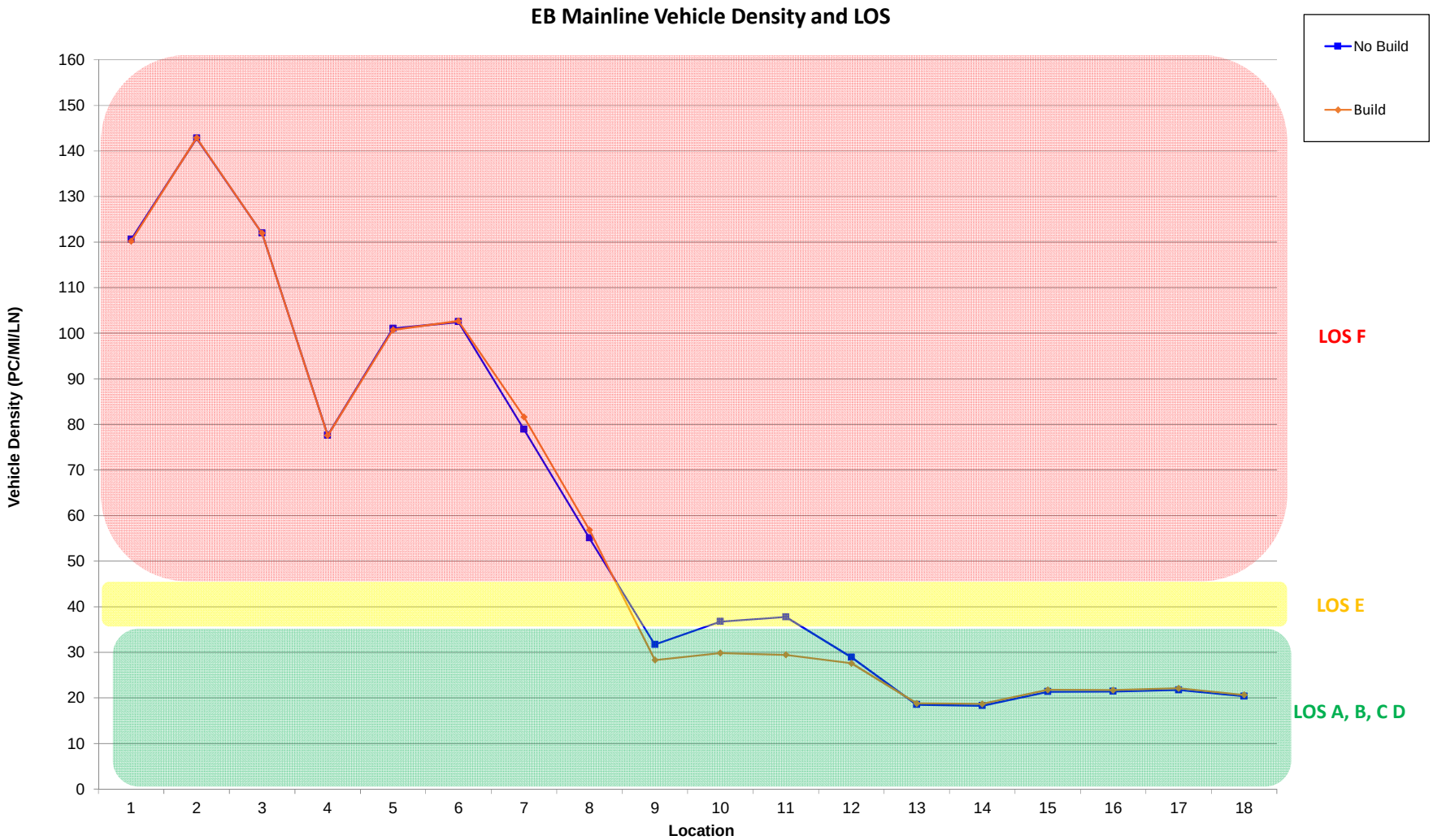
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



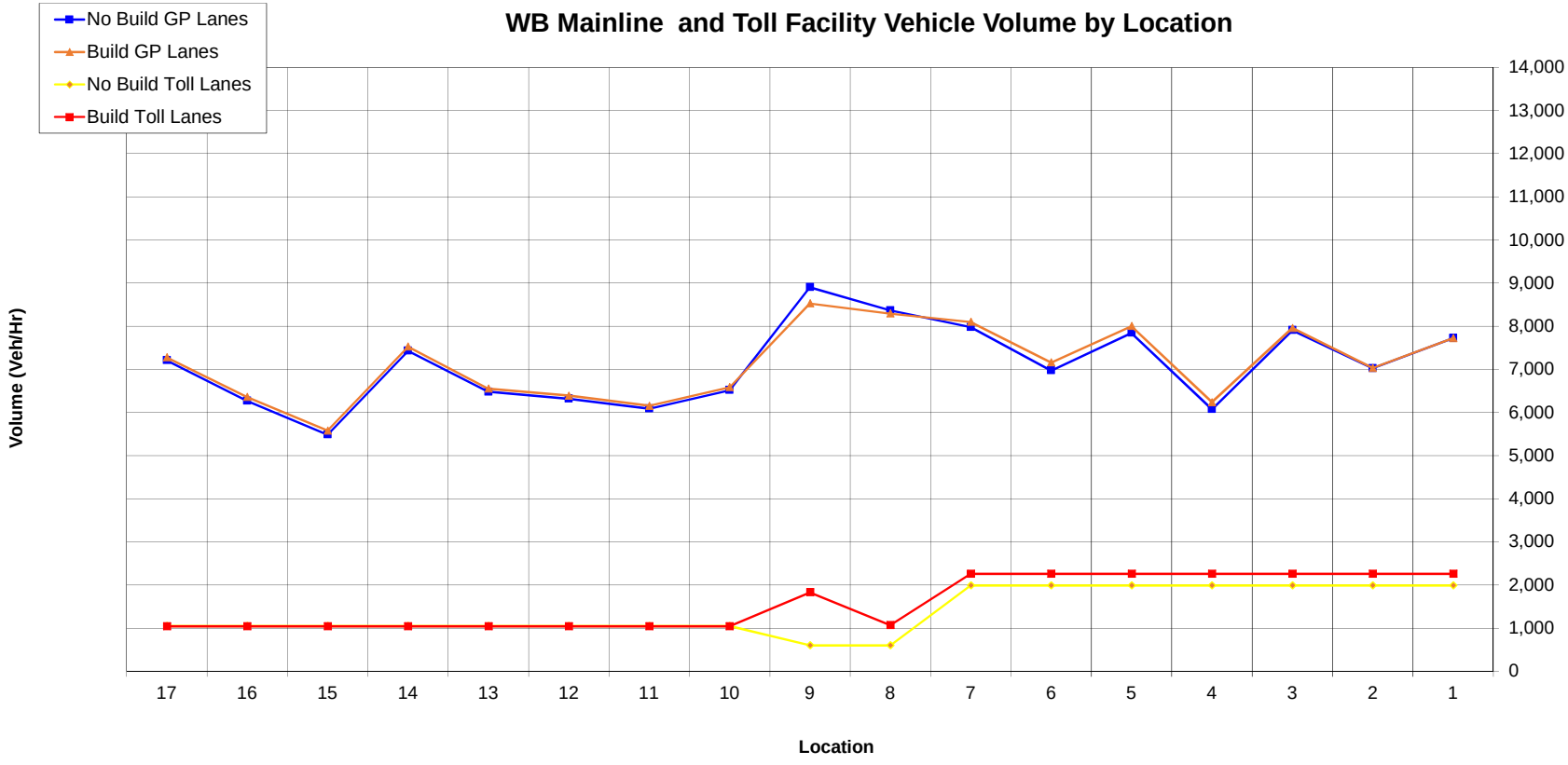
1	Off Ramp to Weir Canyon	8	On Ramp from SR 241 GP	15	On Ramp from Green River (to SR 91 EB)
2	On Ramp from SB Weir Canyon	9	On Ramp from SR 241 HOV	16	On Ramp from SR 71
3	On Ramp from NB Weir Canyon	10	On Ramp from HOT Lanes Exit (east of SR 241)	17	Off Ramp to Serfas/Autoclub
4	Off Ramp to SR 241	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	18	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	12	Off Ramp to Green River	19	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	13	Off Ramp to SR 71 CD		
7	On Ramp from NB Gypsum Canyon	14	On Ramp from Green River (to SR 71 NB)		



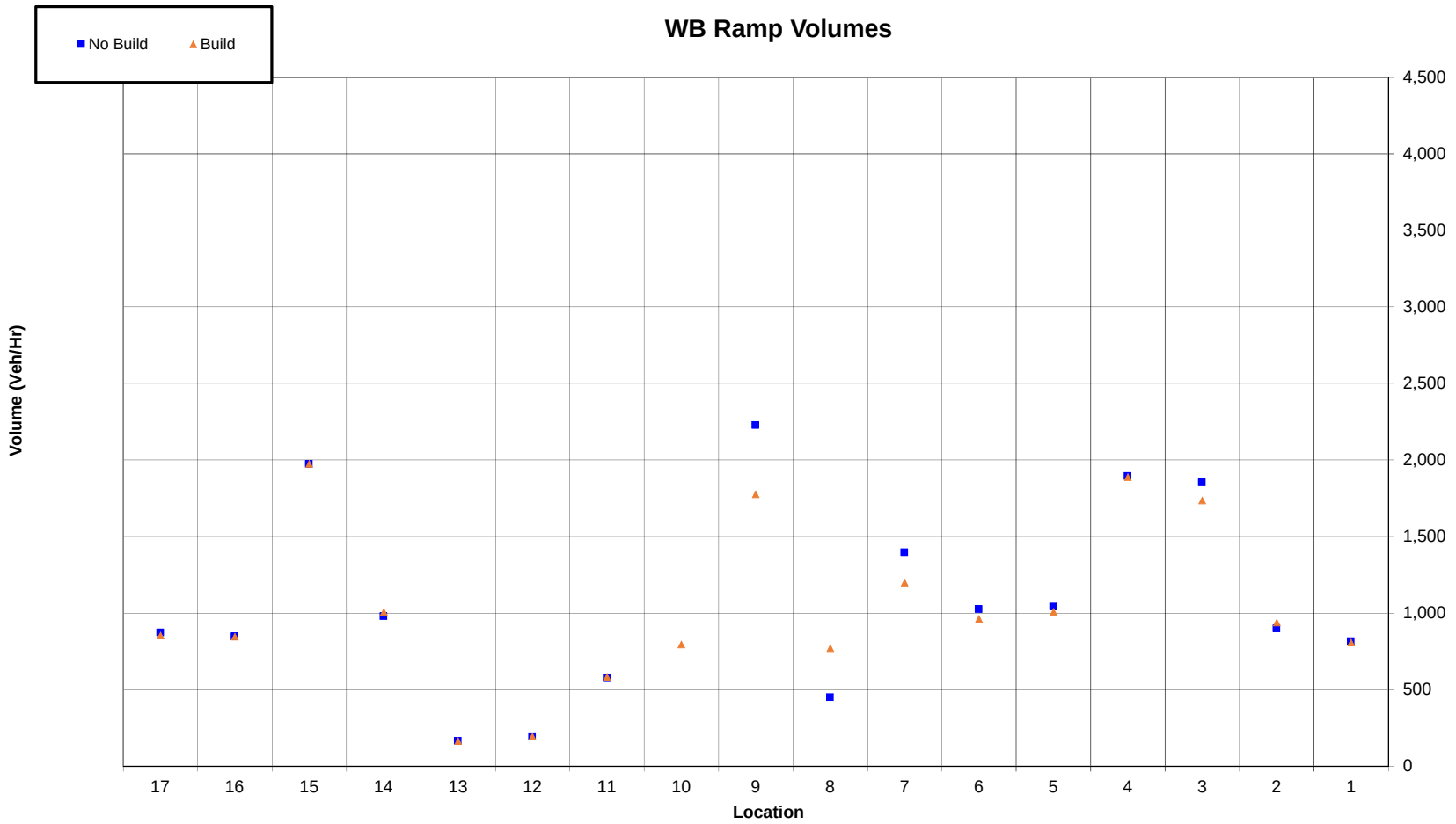
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



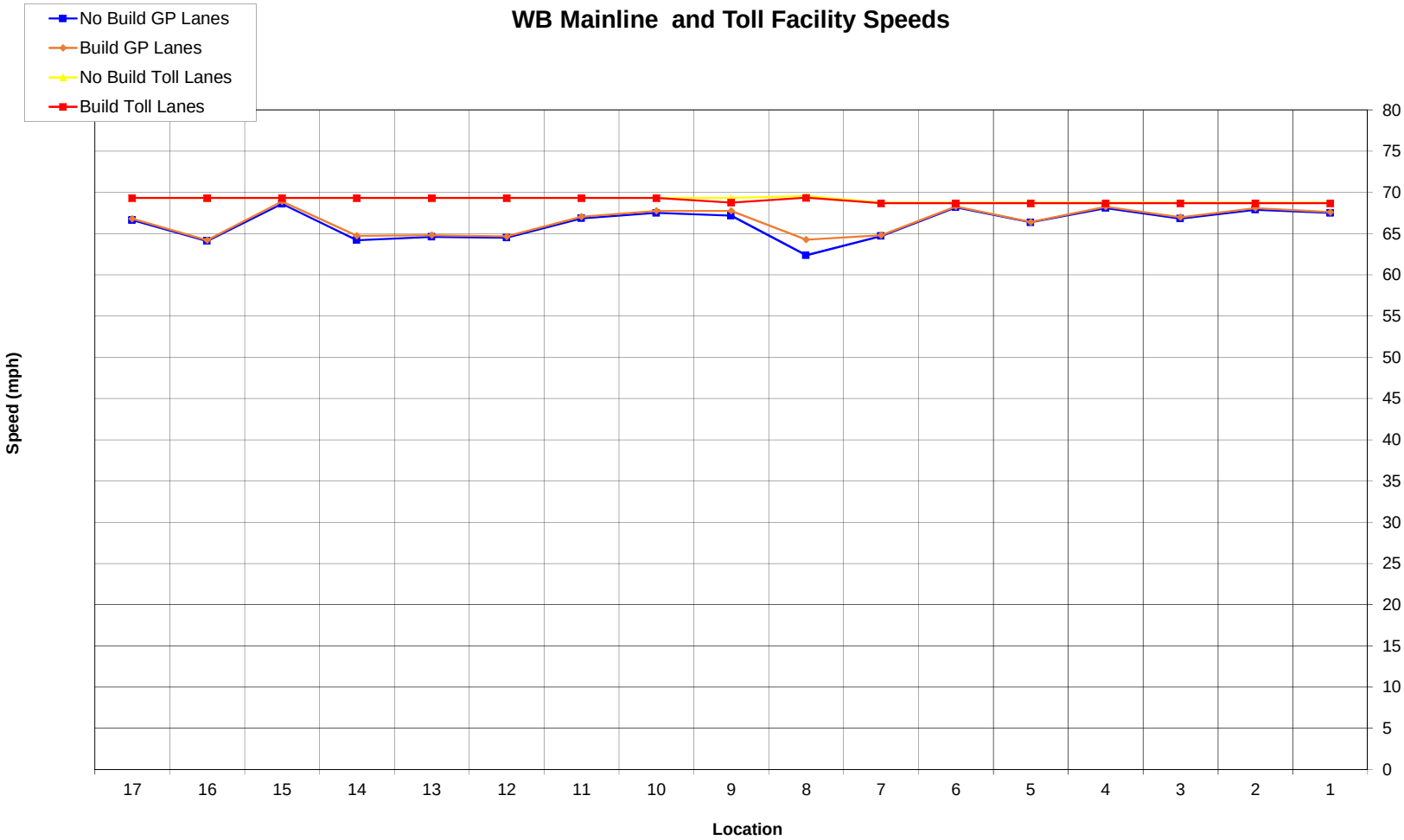
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



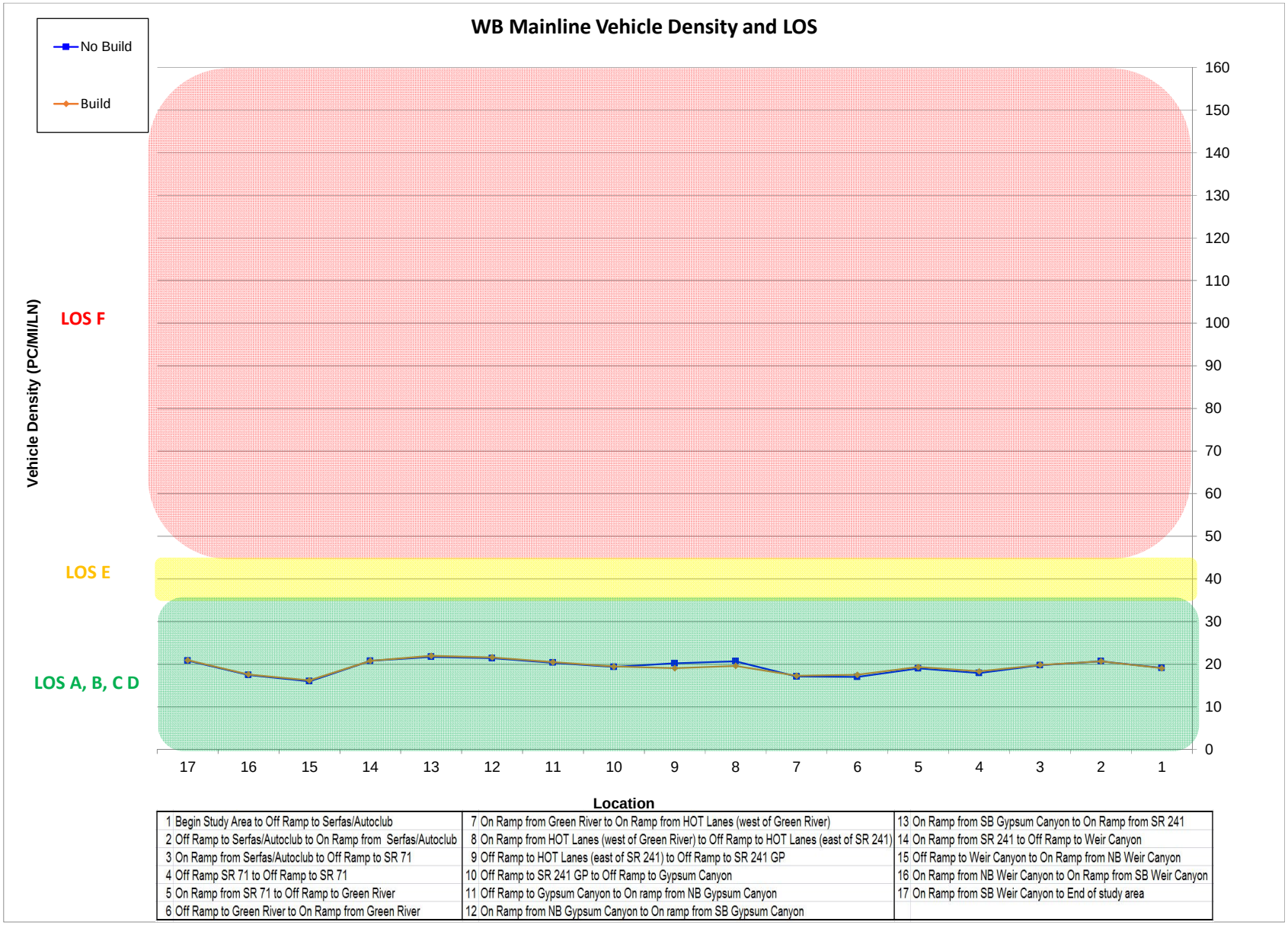
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SB Gypsum Canyon Rd
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to SR 241 SB HOV	16	On Ramp from NB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	Off Ramp to Gypsum Canyon Rd	17	On Ramp from SB Weir Canyon Rd
6	On Ramp from Green River Rd	12	On Ramp from NB Gypsum Canyon Rd		

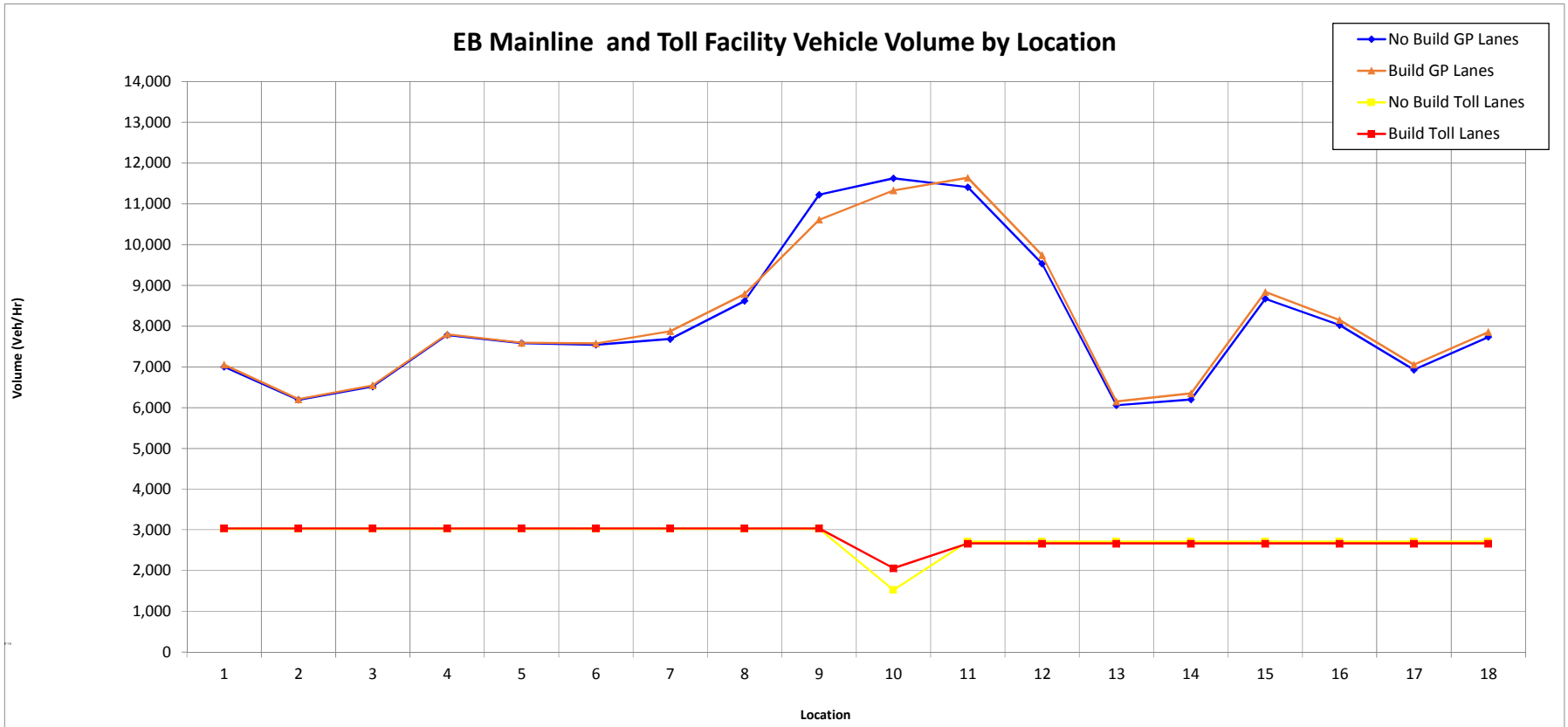


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



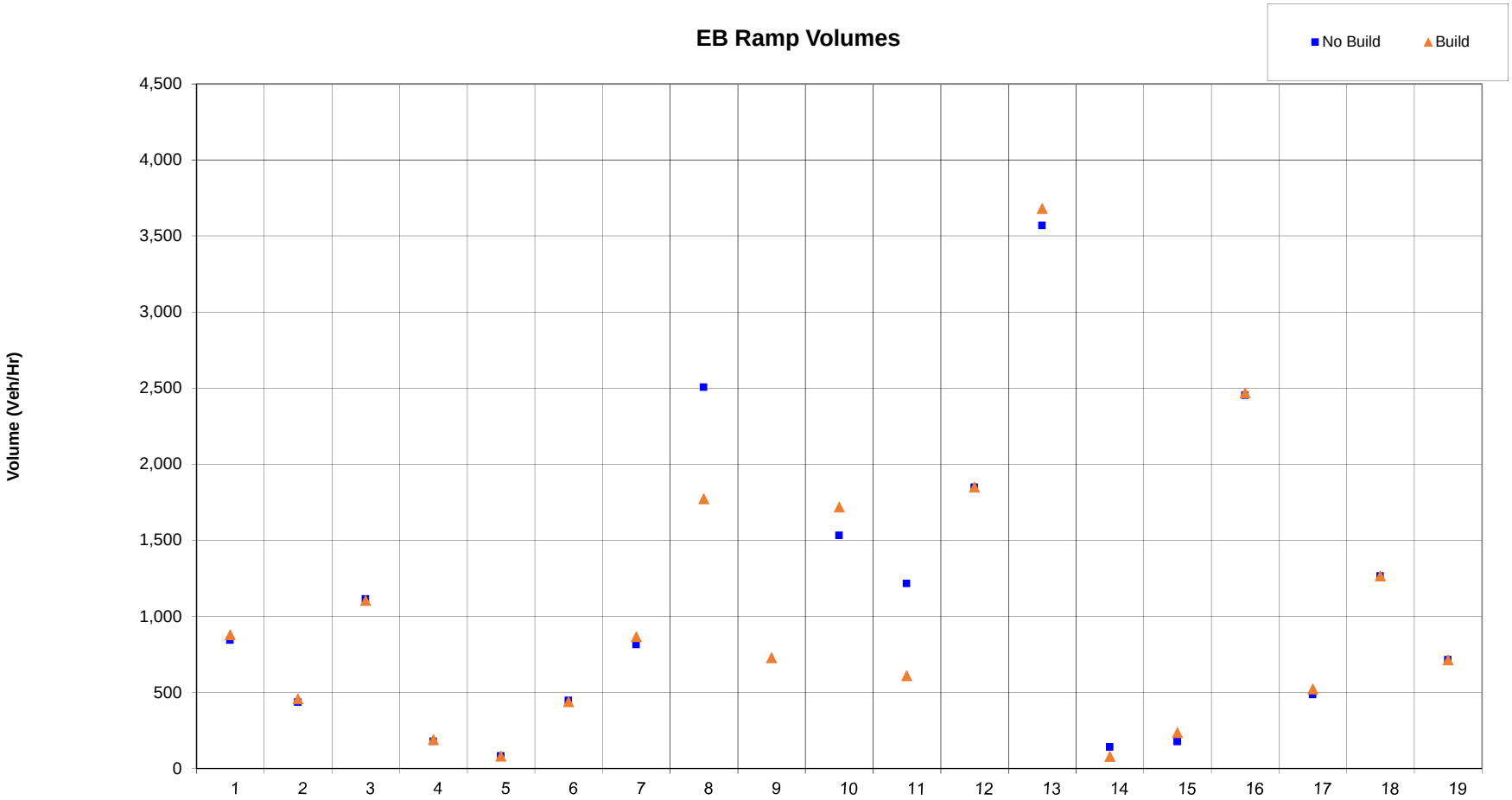
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

Charts 4-5 PM



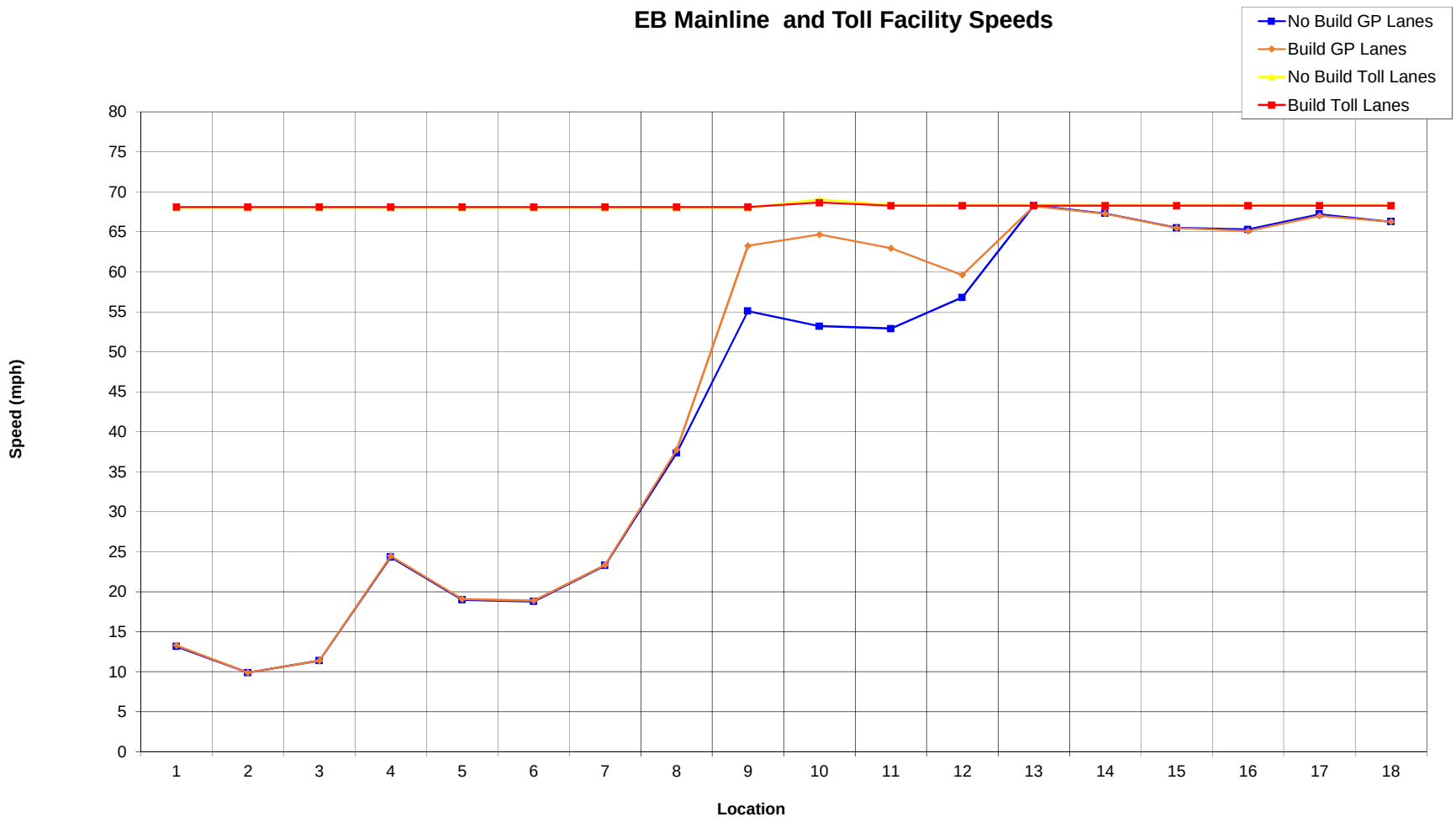
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area

Charts 5-6 PM

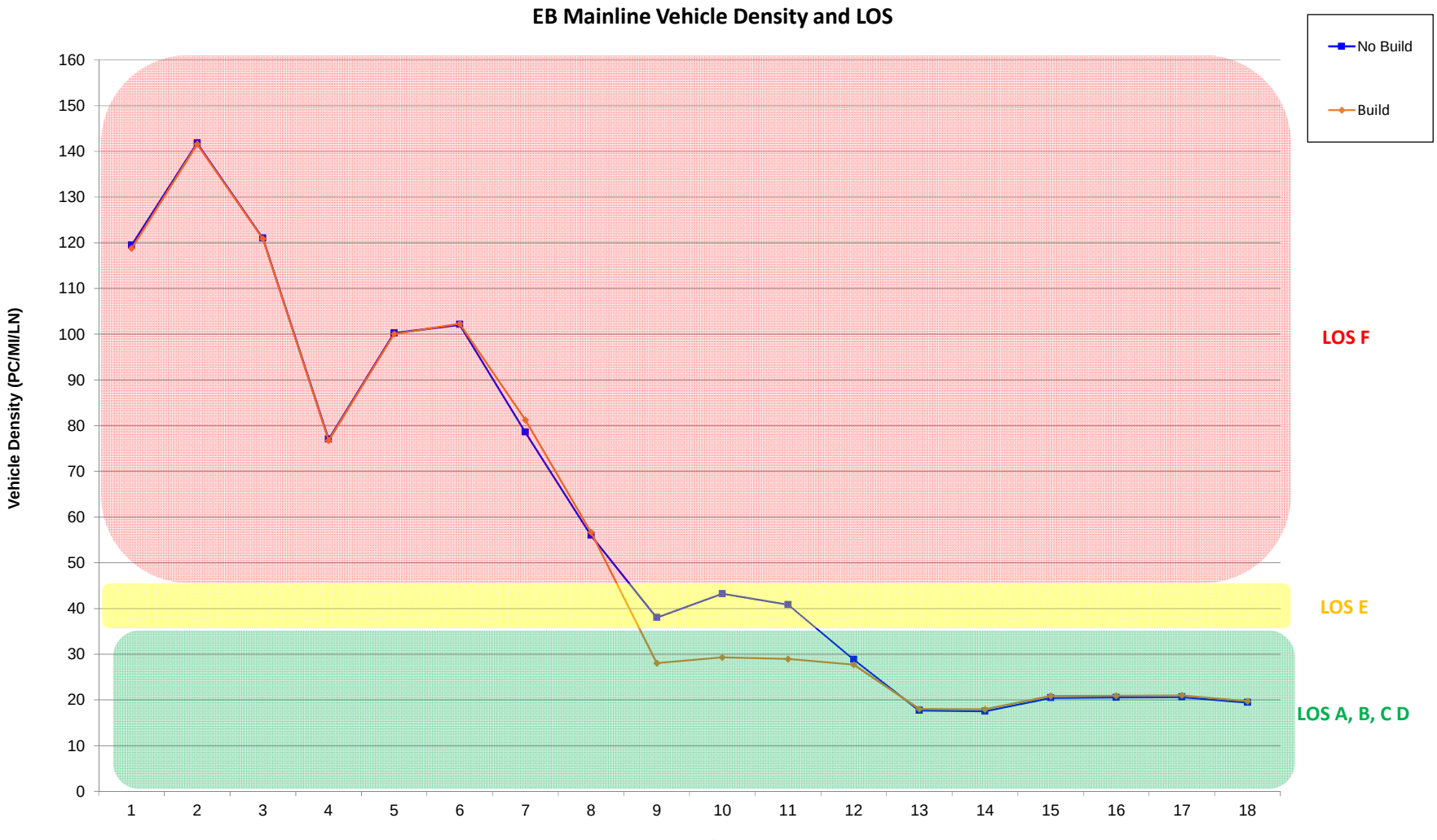


1	Off Ramp to Weir Canyon	8	On Ramp from SR 241 GP	15	On Ramp from Green River (to SR 91 EB)
2	On Ramp from SB Weir Canyon	9	On Ramp from SR 241 HOV	16	On Ramp from SR 71
3	On Ramp from NB Weir Canyon	10	On Ramp from HOT Lanes Exit (east of SR 241)	17	Off Ramp to Serfas/Autoclub
4	Off Ramp to SR 241	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	18	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	12	Off Ramp to Green River	19	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	13	Off Ramp to SR 71 CD		
7	On Ramp from NB Gypsum Canyon	14	On Ramp from Green River (to SR 71 NB)		

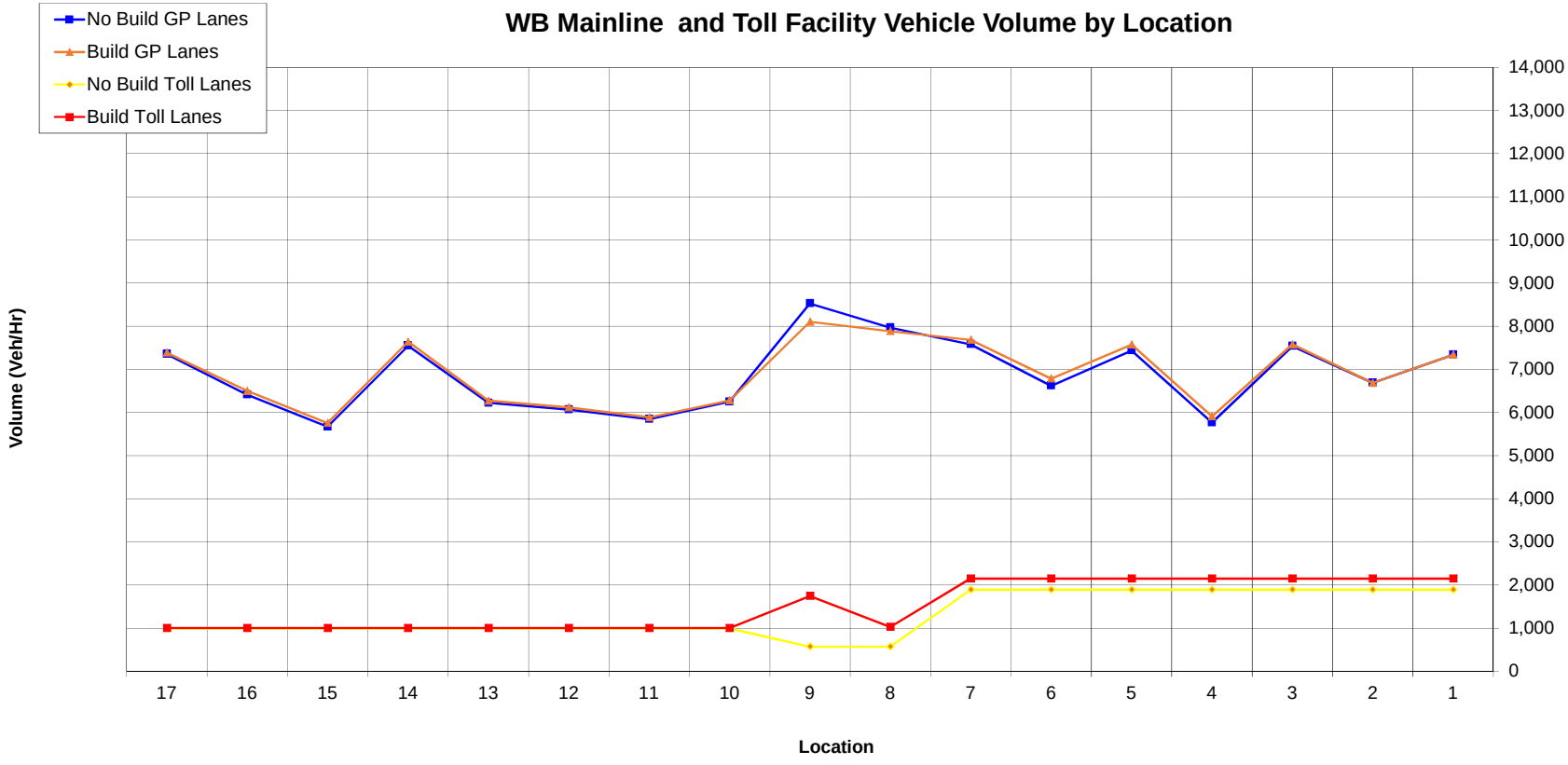
Charts 5-6 PM



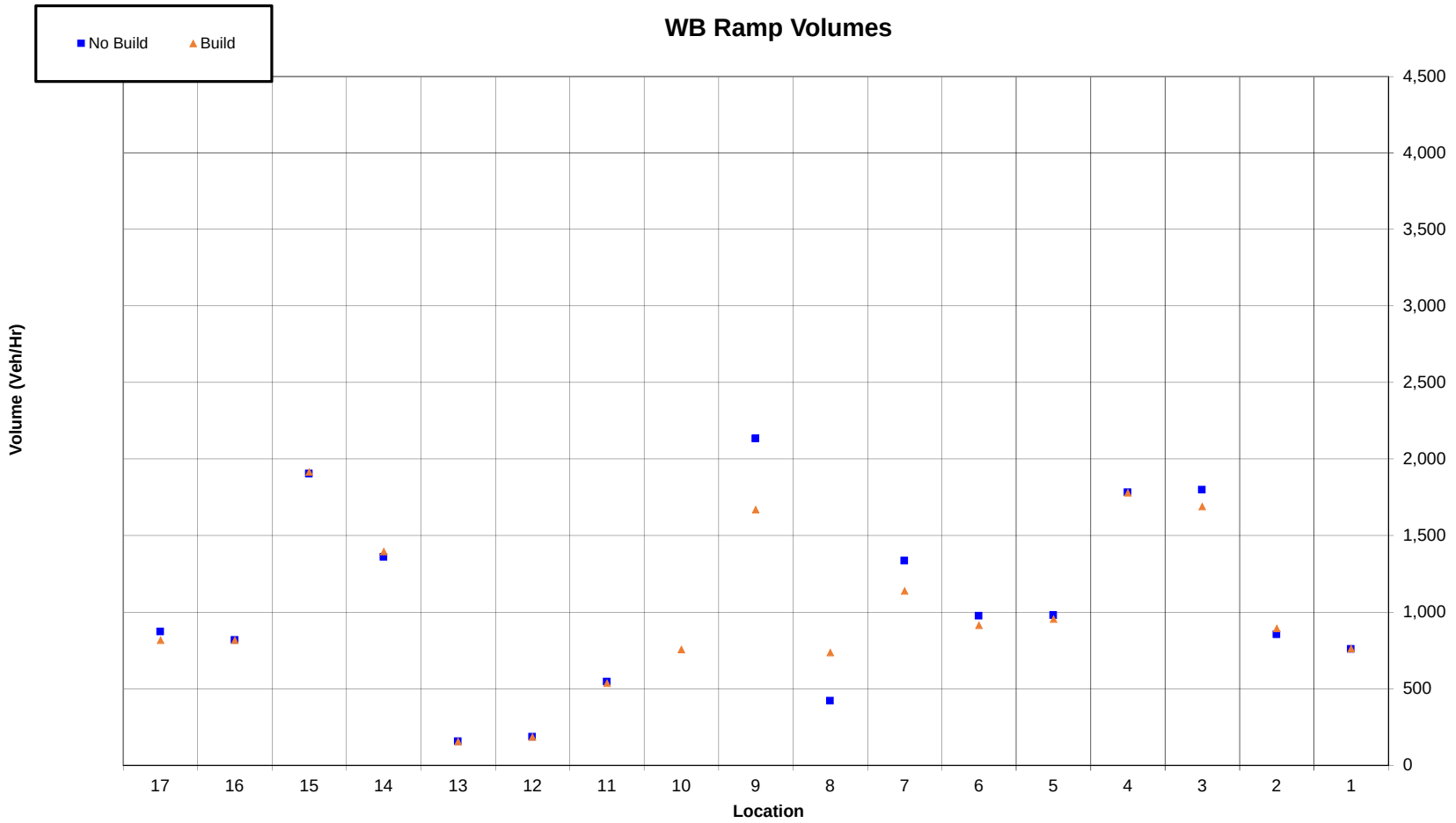
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



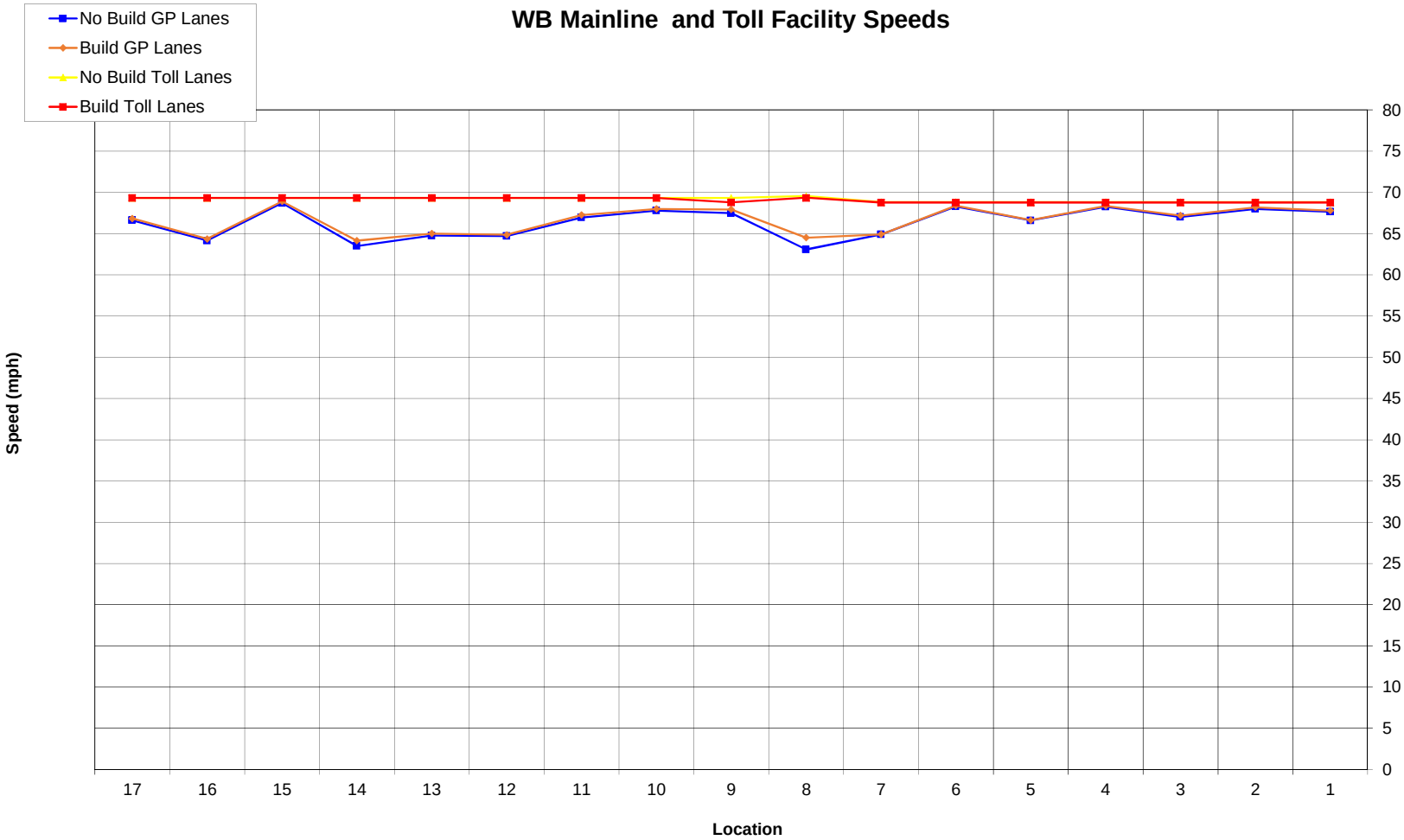
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



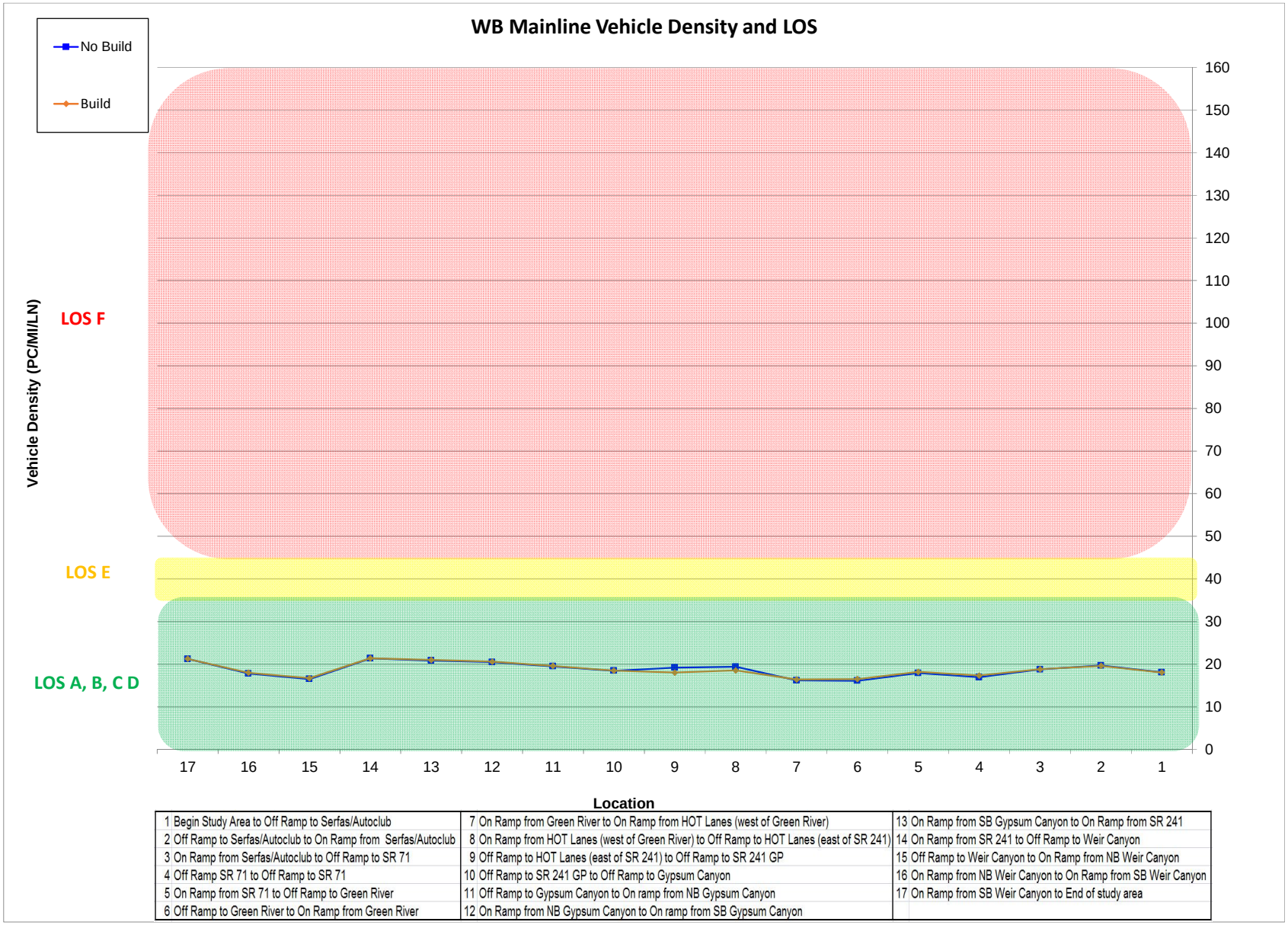
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SB Gypsum Canyon Rd
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to SR 241 SB HOV	16	On Ramp from NB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	Off Ramp to Gypsum Canyon Rd	17	On Ramp from SB Weir Canyon Rd
6	On Ramp from Green River Rd	12	On Ramp from NB Gypsum Canyon Rd		

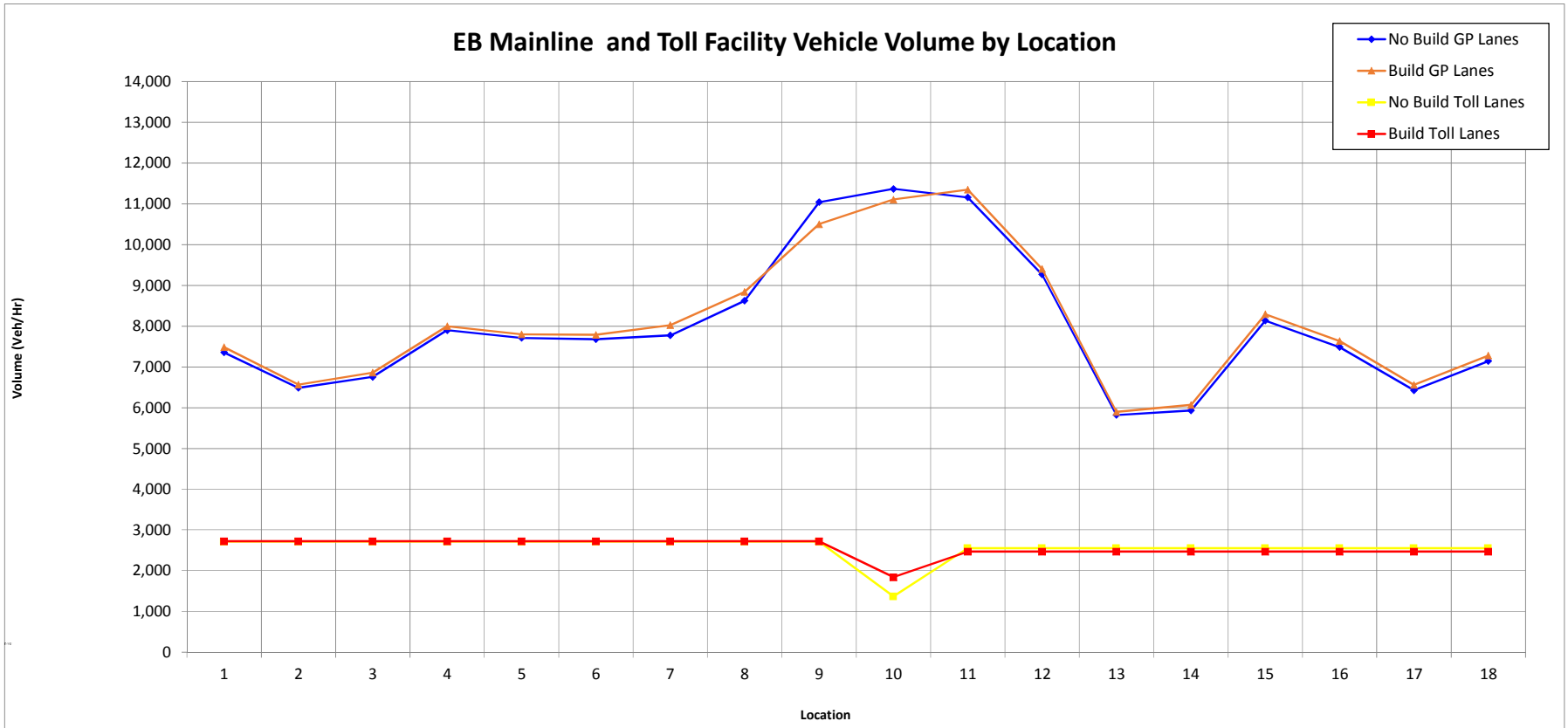


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

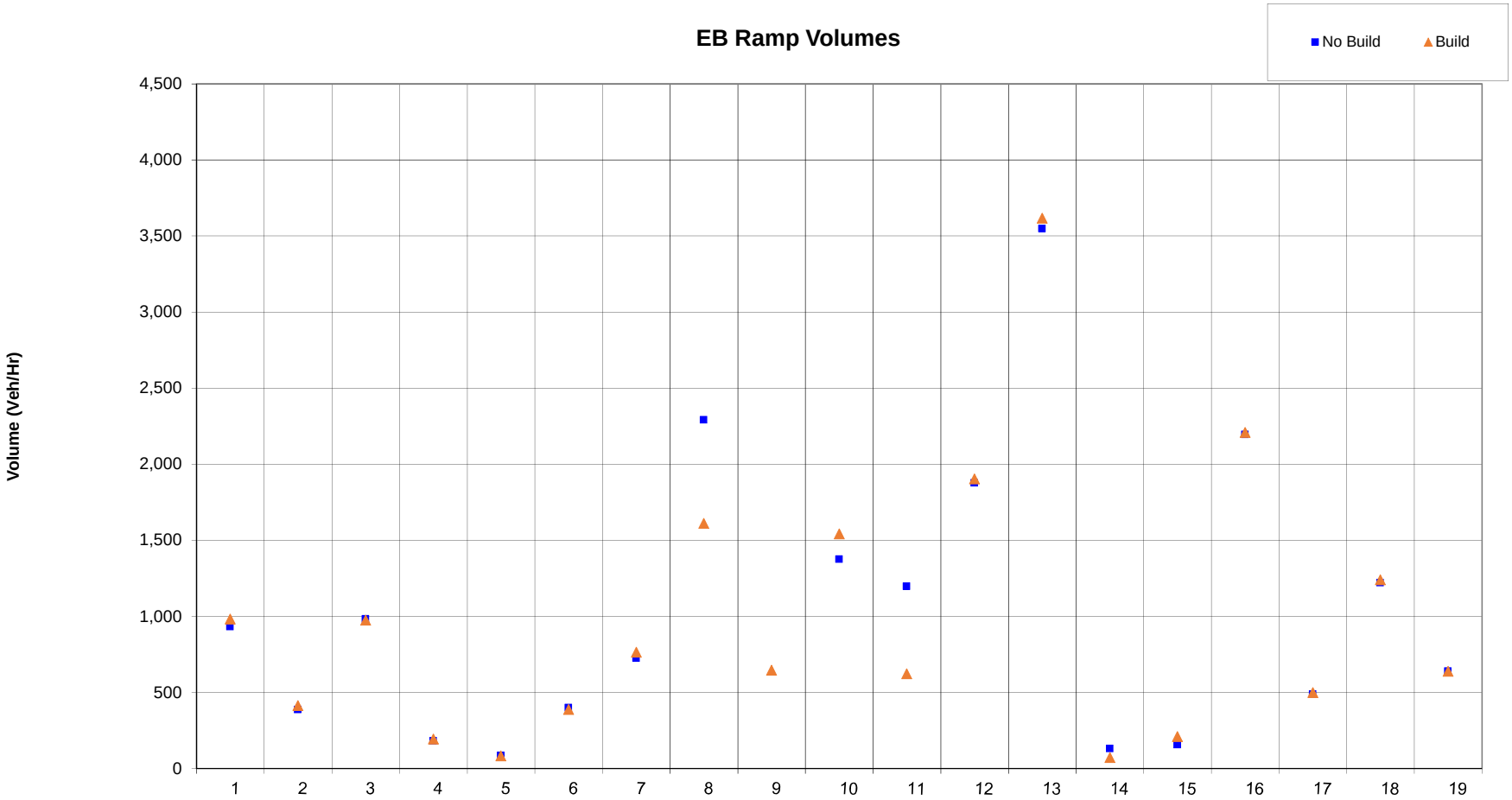


1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

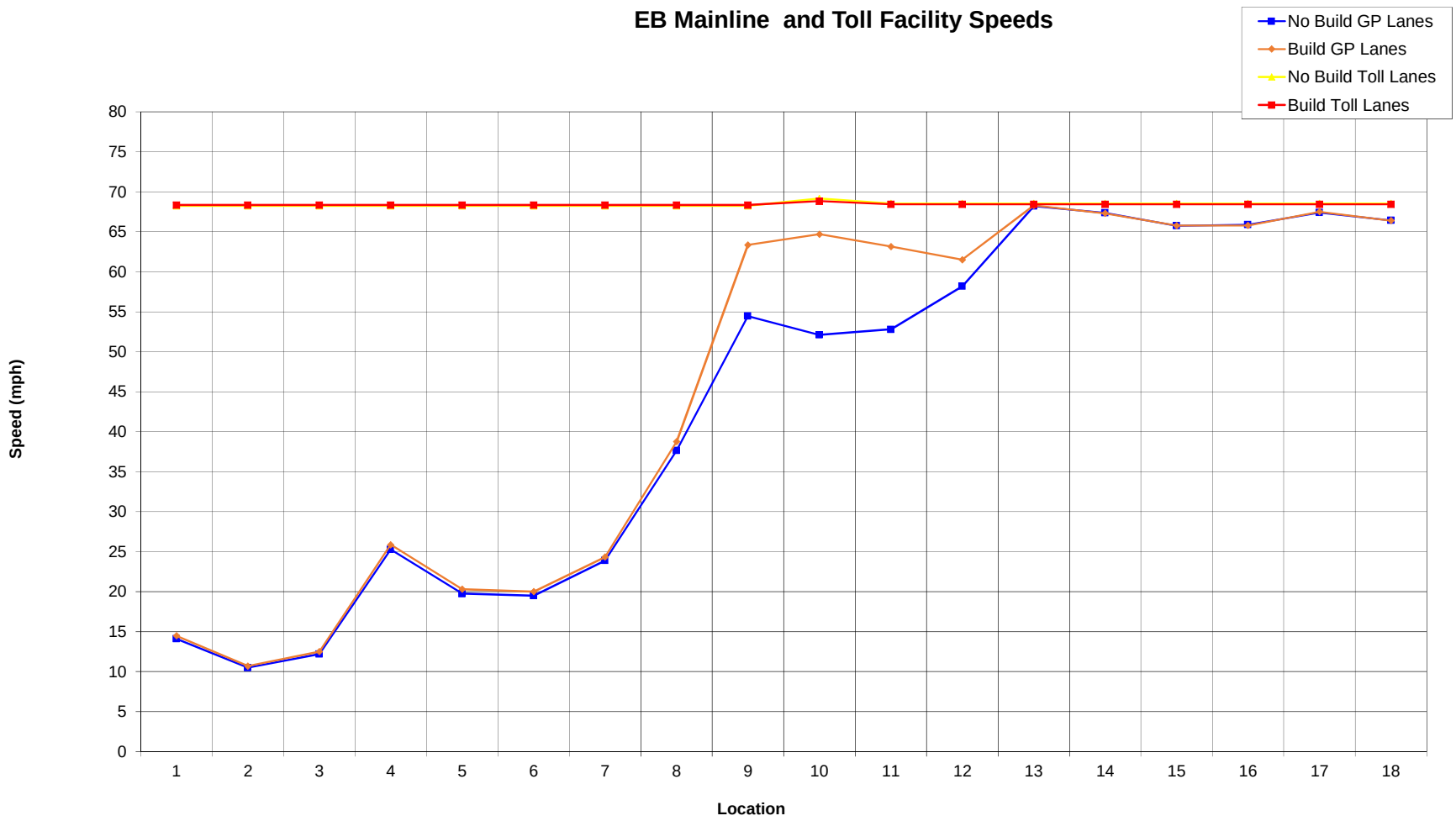
Charts 5-6 PM



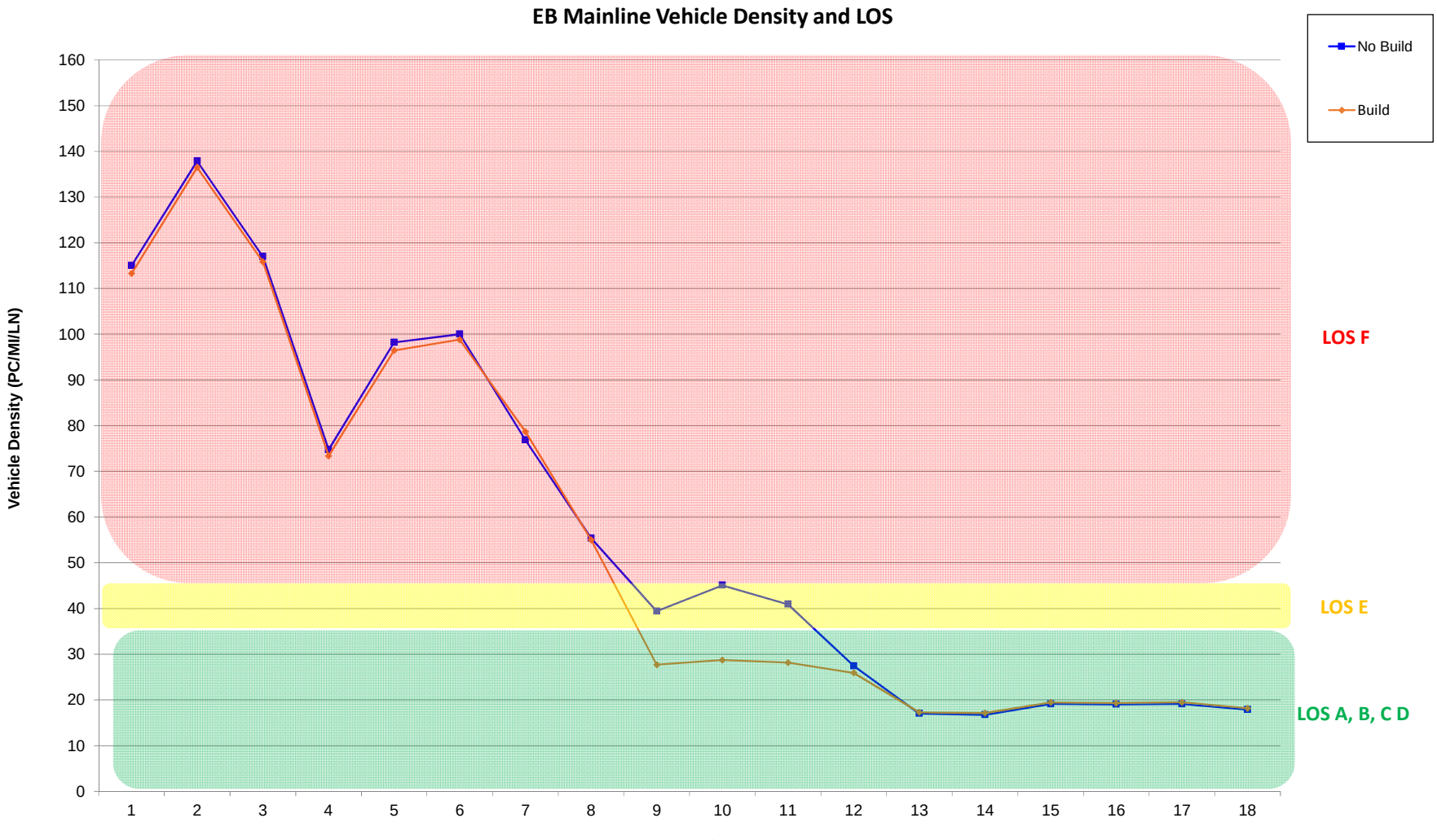
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



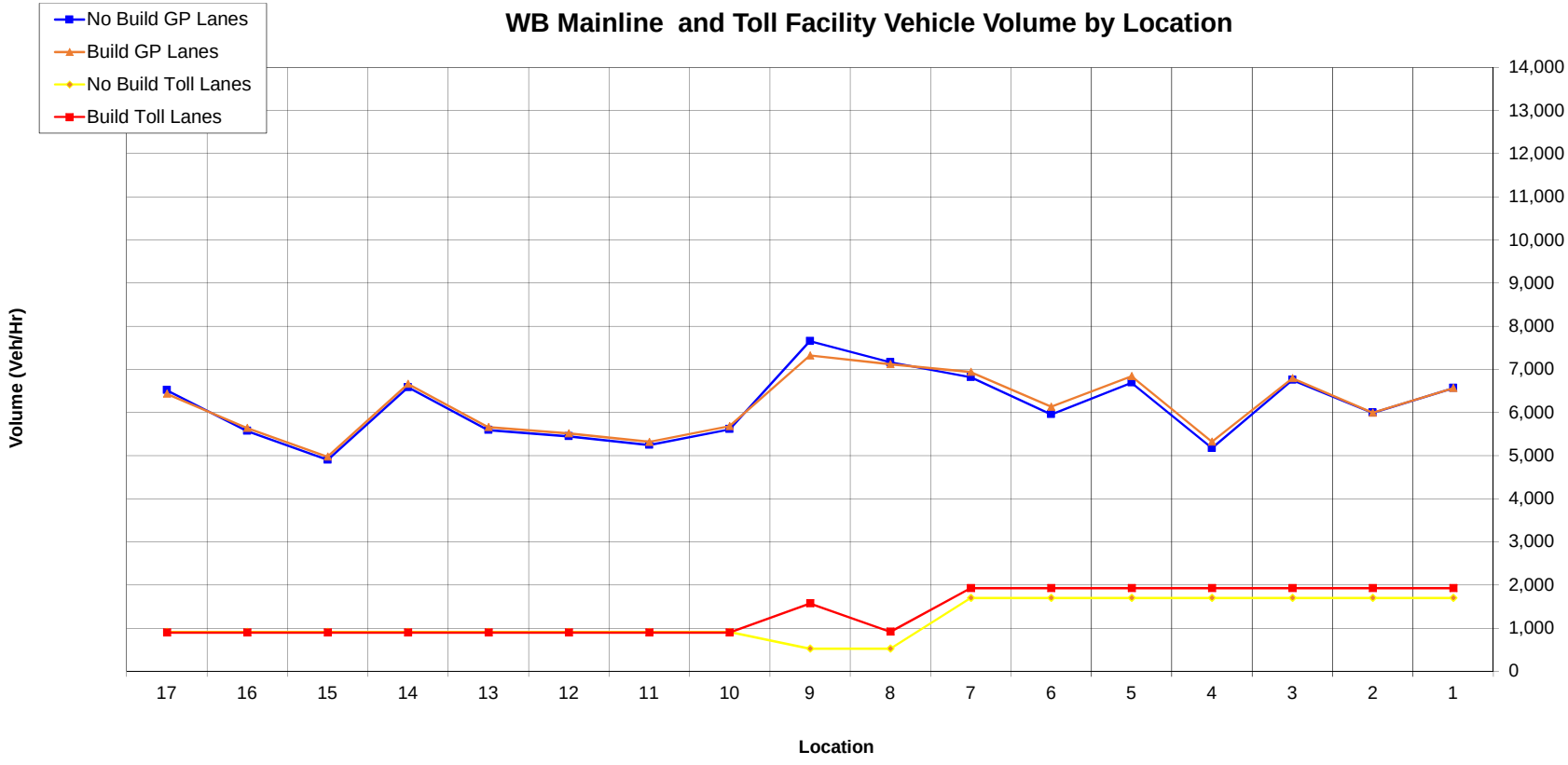
1	Off Ramp to Weir Canyon	8	On Ramp from SR 241 GP	15	On Ramp from Green River (to SR 91 EB)
2	On Ramp from SB Weir Canyon	9	On Ramp from SR 241 HOV	16	On Ramp from SR 71
3	On Ramp from NB Weir Canyon	10	On Ramp from HOT Lanes Exit (east of SR 241)	17	Off Ramp to Serfas/Autoclub
4	Off Ramp to SR 241	11	Off Ramp to HOT Lanes Entrance (west of Green River Rd)	18	Off Ramp to EB Maple
5	Off Ramp to Gypsum Canyon	12	Off Ramp to Green River	19	On Ramp from Serfas/Autoclub
6	On Ramp from SB Gypsum Canyon	13	Off Ramp to SR 71 CD		
7	On Ramp from NB Gypsum Canyon	14	On Ramp from Green River (to SR 71 NB)		



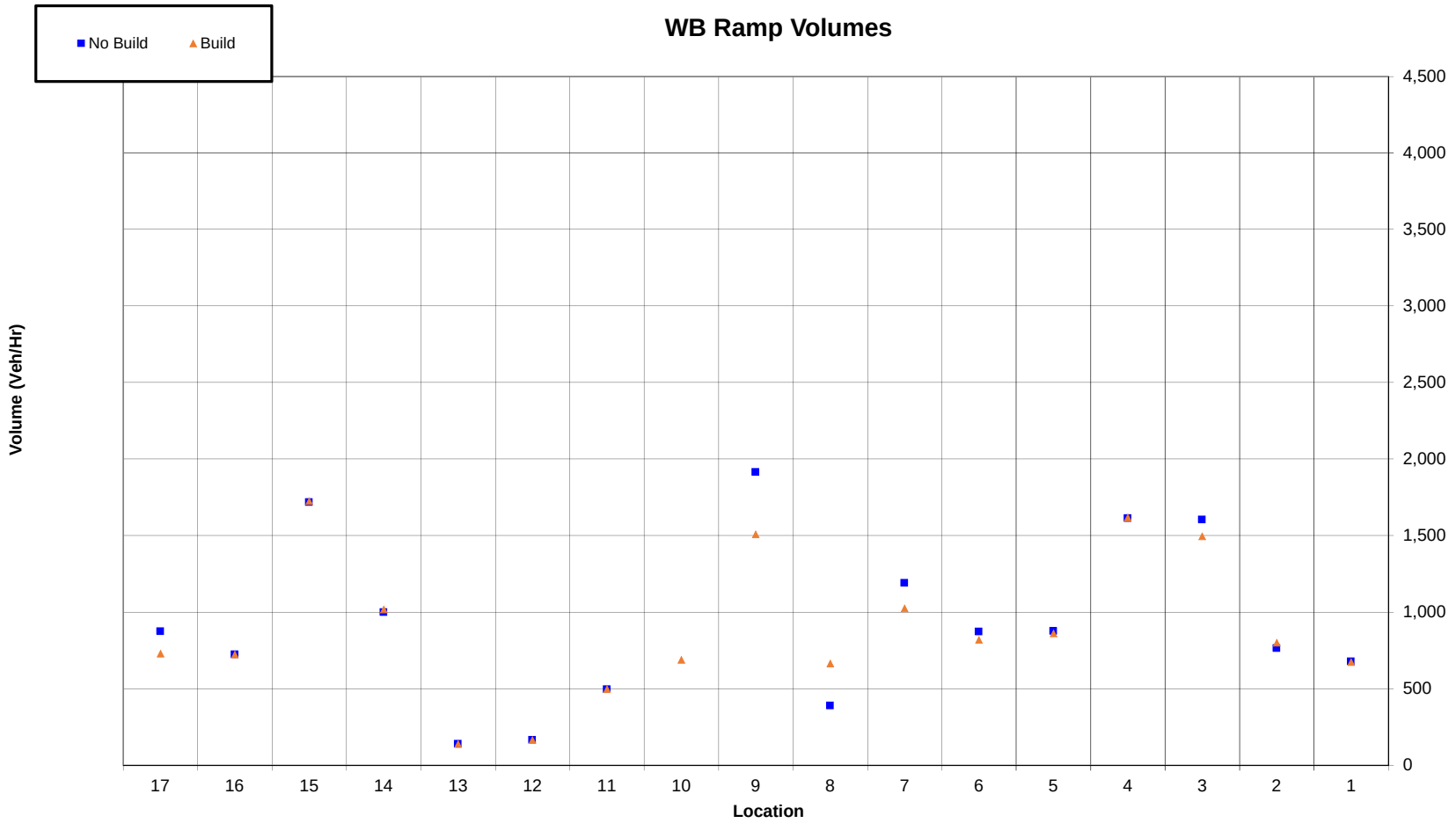
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



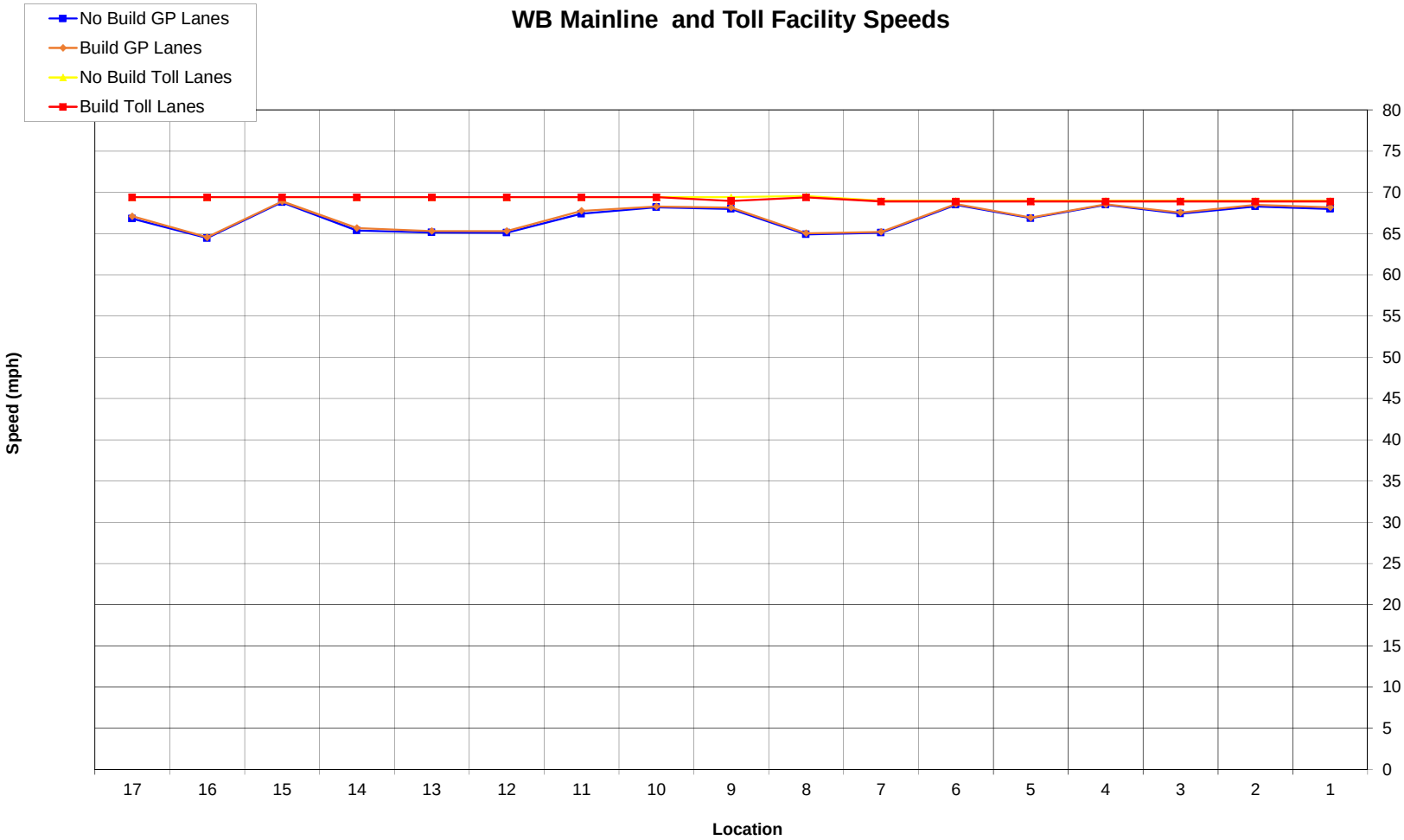
1	Begin Study Area to Off Ramp to Weir Canyon	7	On Ramp from SB Gypsum Canyon to On Ramp from NB Gypsum Canyon	13	Off Ramp to SR 71 CD to On Ramp from Green River
2	Off Ramp to Weir Canyon to On Ramp from SB Weir Canyon	8	On Ramp from NB Gypsum Canyon to On Ramp from SR 241 GP	14	On Ramp from Green River to On Ramp from SR 71
3	On Ramp from SB Weir Canyon to On Ramp from NB Weir Canyon	9	On Ramp from SR 241 GP to On Ramp from HOT Lanes (east of SR 241)	15	On Ramp from SR 71 to Off Ramp to Serfas/Autoclub
4	On Ramp from NB Weir Canyon to Off Ramp to SR 241	10	On Ramp from HOT Lanes (east of SR 241) to Off Ramp to HOT Lanes (west of Green River)	16	Off Ramp to Serfas/Autoclub to Off Ramp to EB Maple
5	Off Ramp to SR 241 to Off Ramp to Gypsum Canyon	11	Off Ramp to HOT Lanes (west of Green River) to Off Ramp to Green River	17	Off Ramp to EB Maple to On Ramp from Serfas/Autoclub
6	Off Ramp to Gypsum Canyon to On Ramp from SB Gypsum Canyon	12	Off Ramp to Green River to Off Ramp to SR 71 CD	18	On Ramp from Serfas/Autoclub to End of Study Area



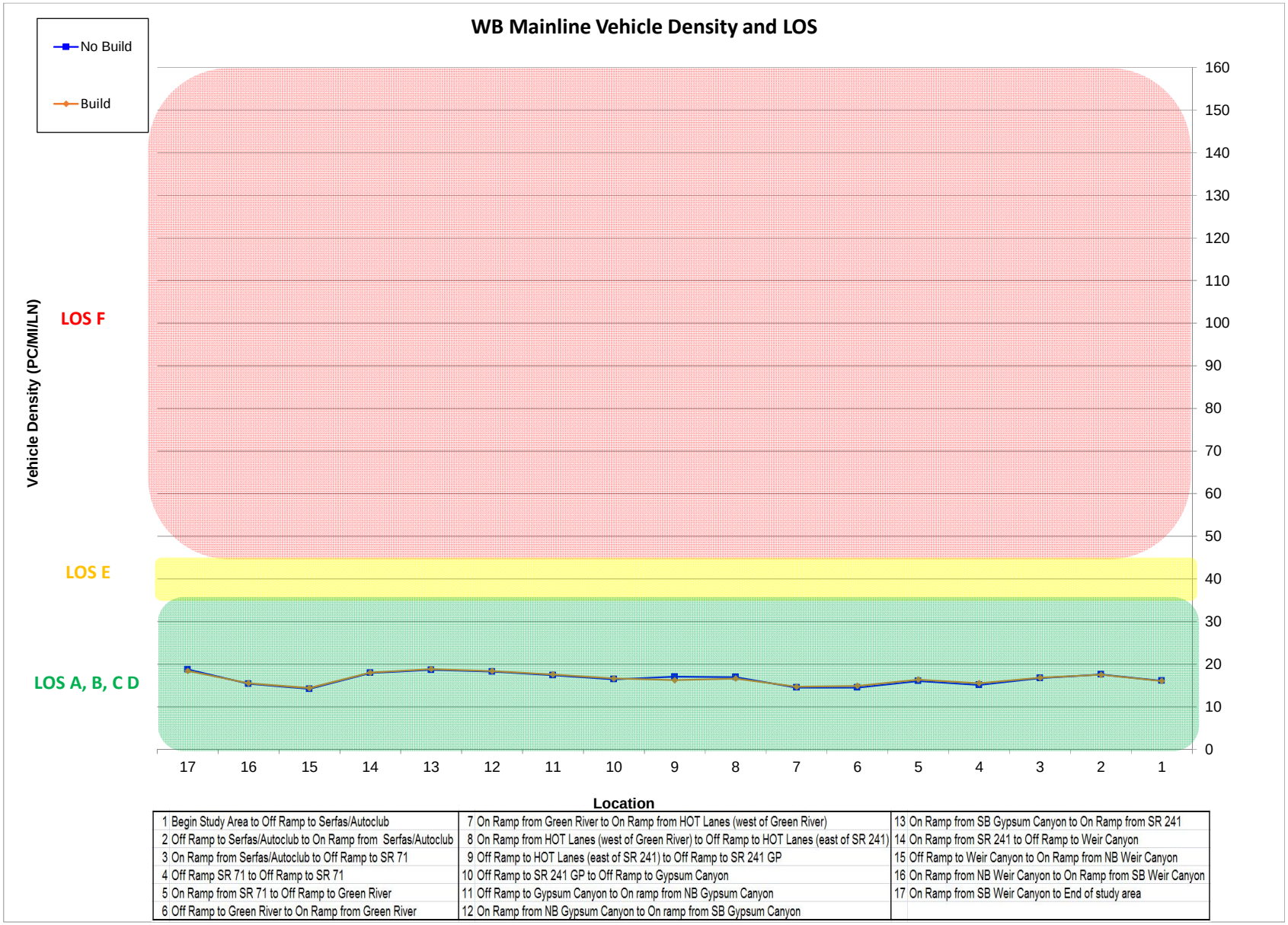
1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



1	Off Ramp to Serfas/Autoclub	7	On Ramp from HOV Exit (west of Green River Rd)	13	On Ramp from SB Gypsum Canyon Rd
2	On Ramp from Serfas/Autoclub	8	Off Ramp to HOV Entrance (east of SR 241)	14	On Ramp from SR 241
3	Off Ramp to SR 71	9	Off Ramp to SR 241 GP	15	Off Ramp to Weir Canyon Rd
4	On Ramp from SR 71	10	Off Ramp to SR 241 SB HOV	16	On Ramp from NB Weir Canyon Rd
5	Off Ramp to Green River Rd	11	Off Ramp to Gypsum Canyon Rd	17	On Ramp from SB Weir Canyon Rd
6	On Ramp from Green River Rd	12	On Ramp from NB Gypsum Canyon Rd		



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	



1 Begin Study Area to Off Ramp to Serfas/Autoclub	7 On Ramp from Green River to On Ramp from HOT Lanes (west of Green River)	13 On Ramp from SB Gypsum Canyon to On Ramp from SR 241
2 Off Ramp to Serfas/Autoclub to On Ramp from Serfas/Autoclub	8 On Ramp from HOT Lanes (west of Green River) to Off Ramp to HOT Lanes (east of SR 241)	14 On Ramp from SR 241 to Off Ramp to Weir Canyon
3 On Ramp from Serfas/Autoclub to Off Ramp to SR 71	9 Off Ramp to HOT Lanes (east of SR 241) to Off Ramp to SR 241 GP	15 Off Ramp to Weir Canyon to On Ramp from NB Weir Canyon
4 Off Ramp SR 71 to Off Ramp to SR 71	10 Off Ramp to SR 241 GP to Off Ramp to Gypsum Canyon	16 On Ramp from NB Weir Canyon to On Ramp from SB Weir Canyon
5 On Ramp from SR 71 to Off Ramp to Green River	11 Off Ramp to Gypsum Canyon to On ramp from NB Gypsum Canyon	17 On Ramp from SB Weir Canyon to End of study area
6 Off Ramp to Green River to On Ramp from Green River	12 On Ramp from NB Gypsum Canyon to On ramp from SB Gypsum Canyon	

Appendix G
Project Layout Plan

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

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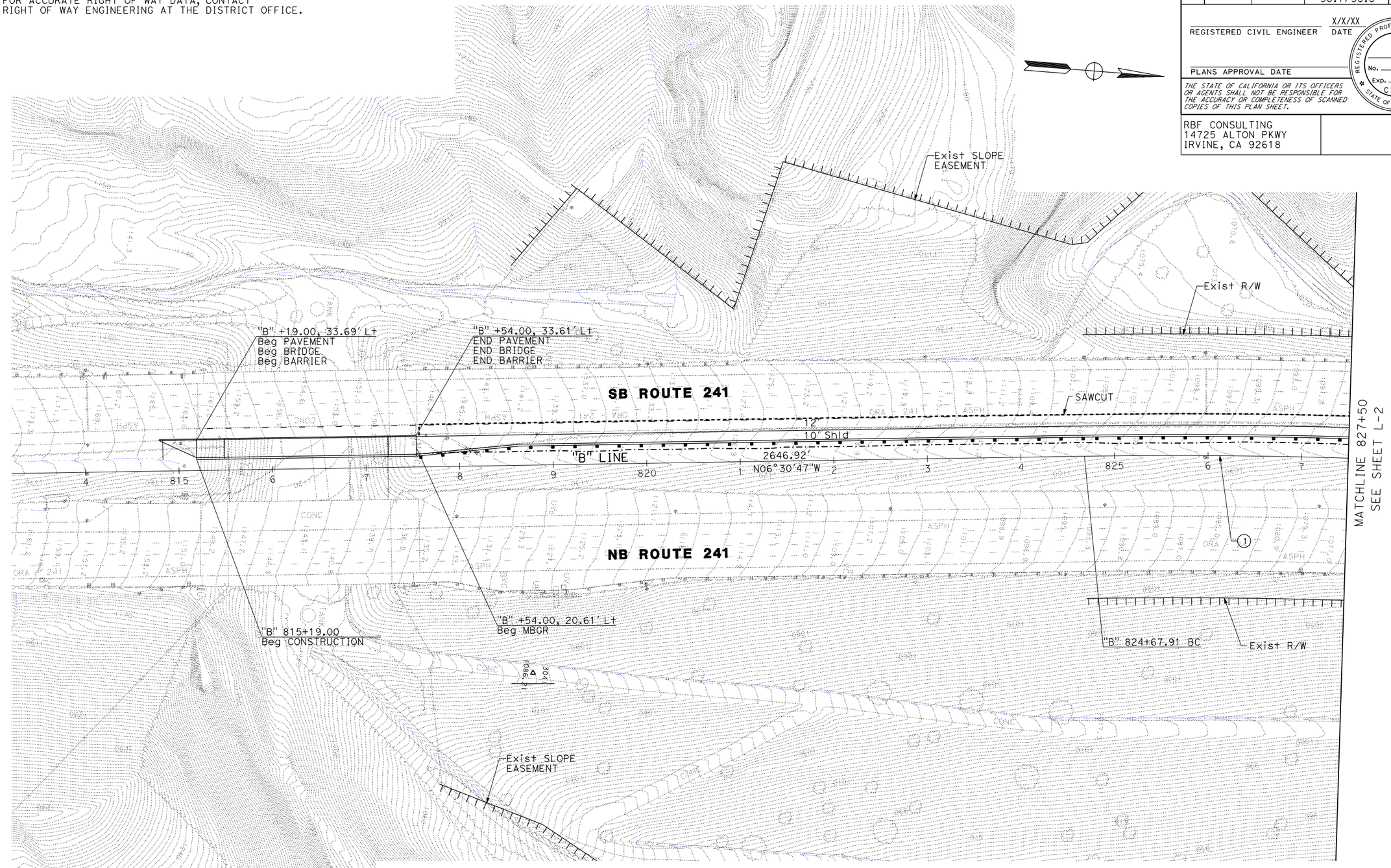

CURVE DATA

No.	R	Δ	T	L
1	6000.00	16°15'43"	857.23	1702.94

LAYOUT

SCALE: 1" = 50'

DRAFT

L-1

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: MIKE CHESNEY

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H:\pdata\10107774\CADD\TransPW\Div\Layout\7774-ST-001.dgn

mohamed.ghonim 05-JUN-2015 18:38

LAST REVISION 00-00-14 | DATE PLOTTED => 05-JUN-2015 | TIME PLOTTED => 18:38

BORDER LAST REVISED 7/2/2010 | USERNAME => mohamed.ghonim | DGN FILE => 7774-ST-001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 12000000000

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

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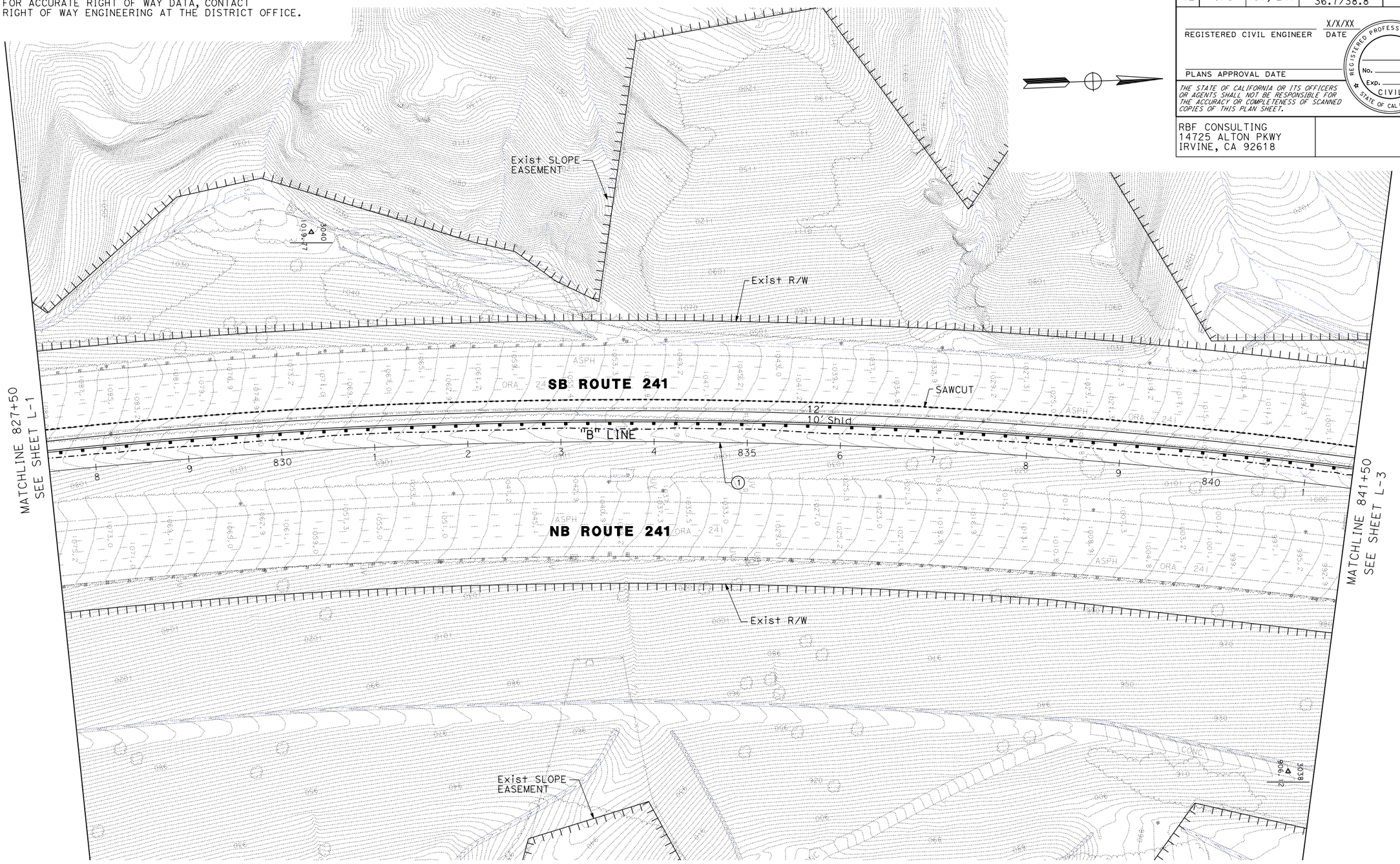

CURVE DATA

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LAYOUT
SCALE: 1" = 50'

DRAFT

L-2

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DATE PLOTTED => 05-JUN-2015
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USERNAME => mohamed.ghonim
DGN FILE => 7774-ST-002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0000
PROJECT NUMBER & PHASE 12000000000

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

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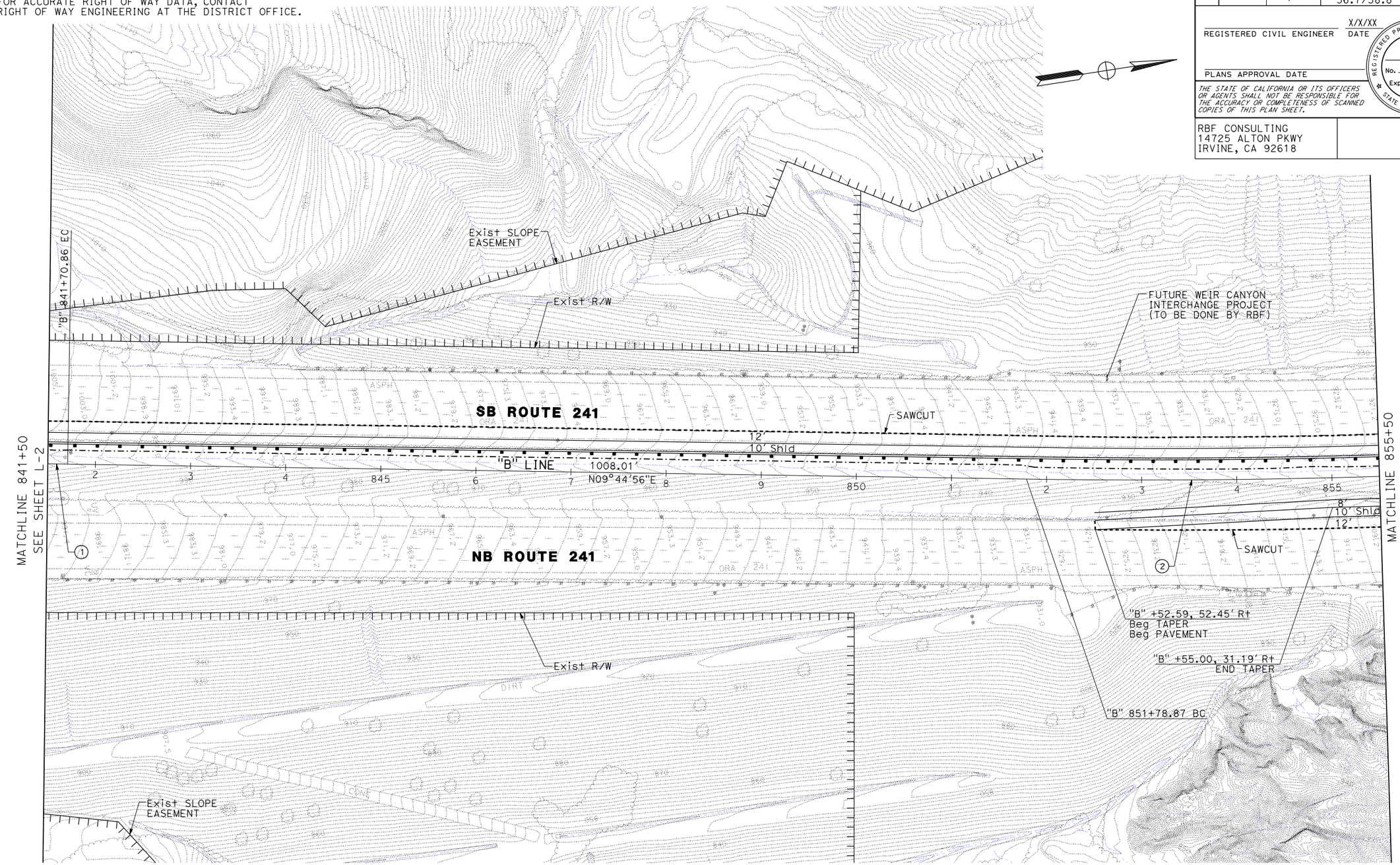

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2	8000.00	09°18'59"	651.85	1300.83

DRAFT

LAYOUT

SCALE: 1" = 50'

L-3

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mohamed.ghonim 05-JUN-2015 18:38

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NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

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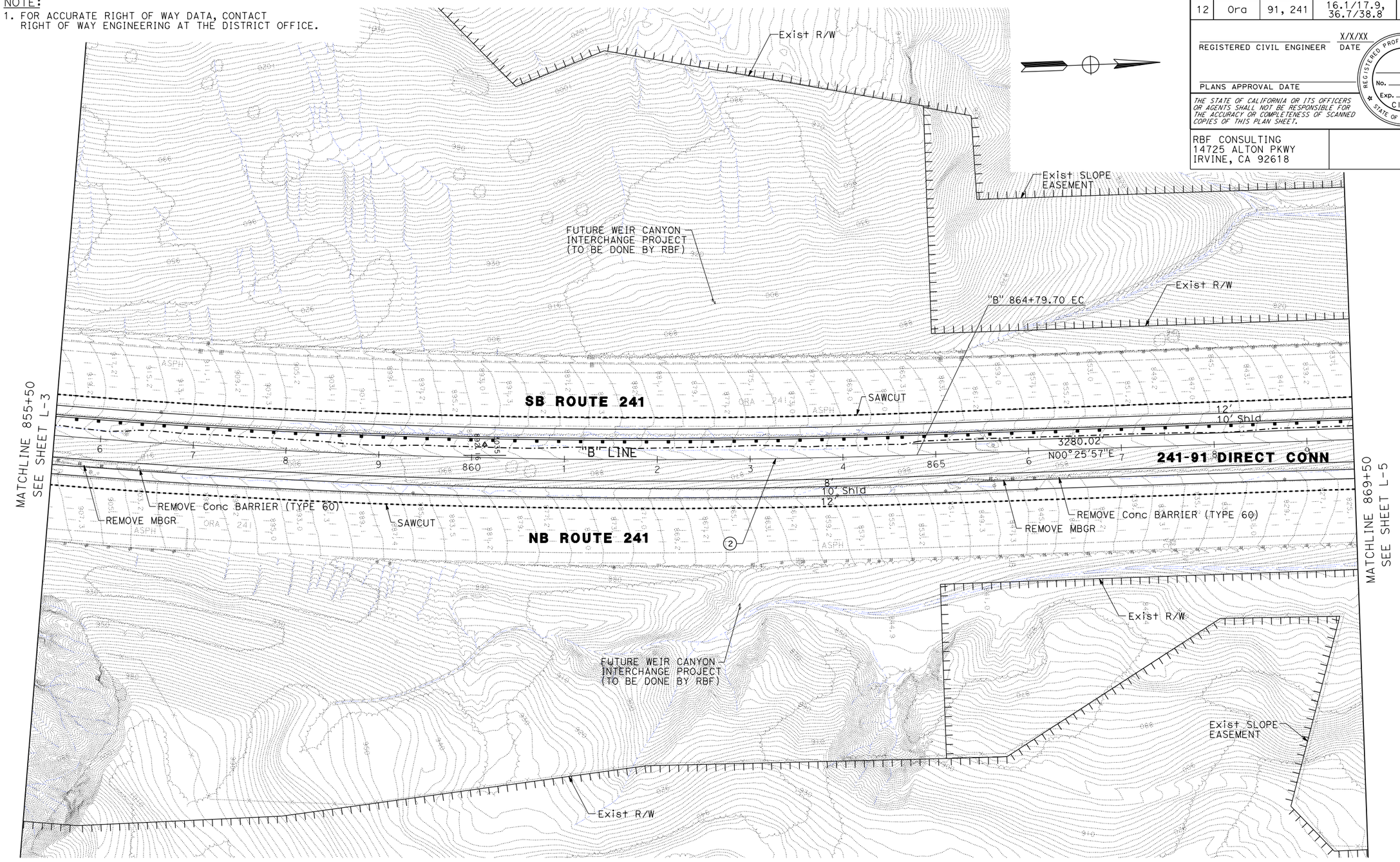

CURVE DATA

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LAYOUT
SCALE: 1" = 50'

DRAFT

L-4

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NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

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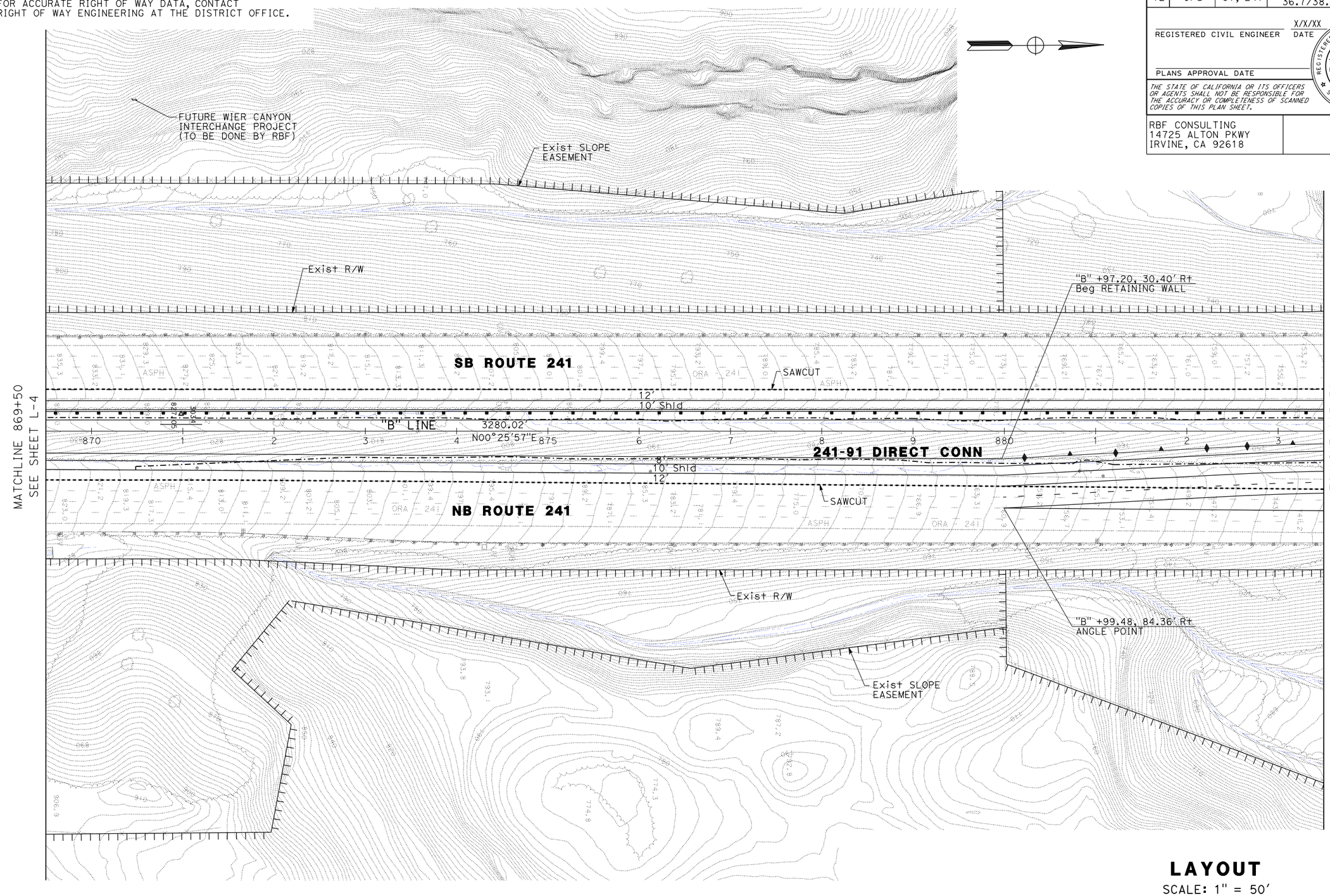

LAYOUT
SCALE: 1" = 50'

DRAFT

L-5

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UNIT 0000
PROJECT NUMBER & PHASE 12000000000

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

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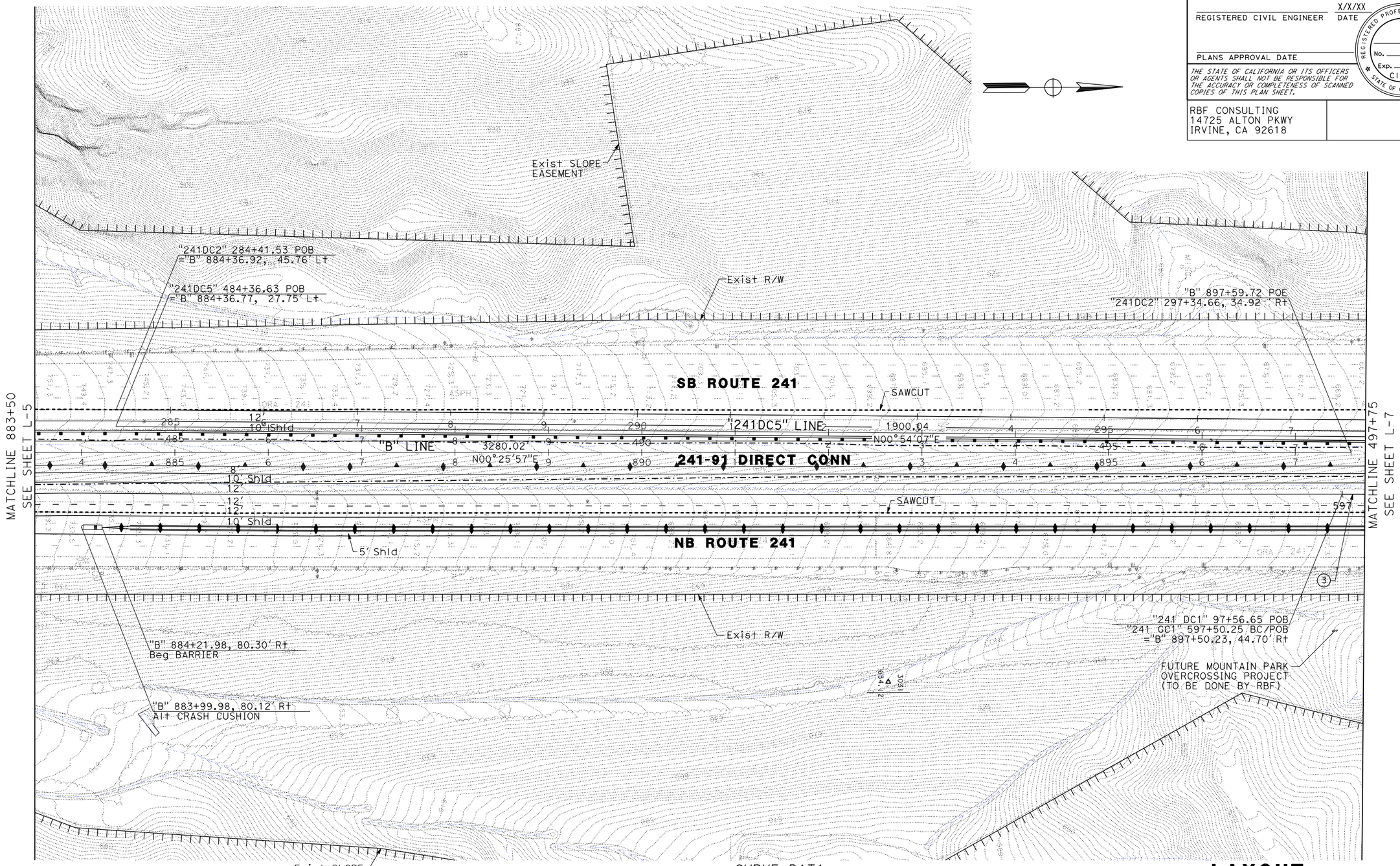

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LAYOUT
SCALE: 1" = 50'

DRAFT

L-6

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

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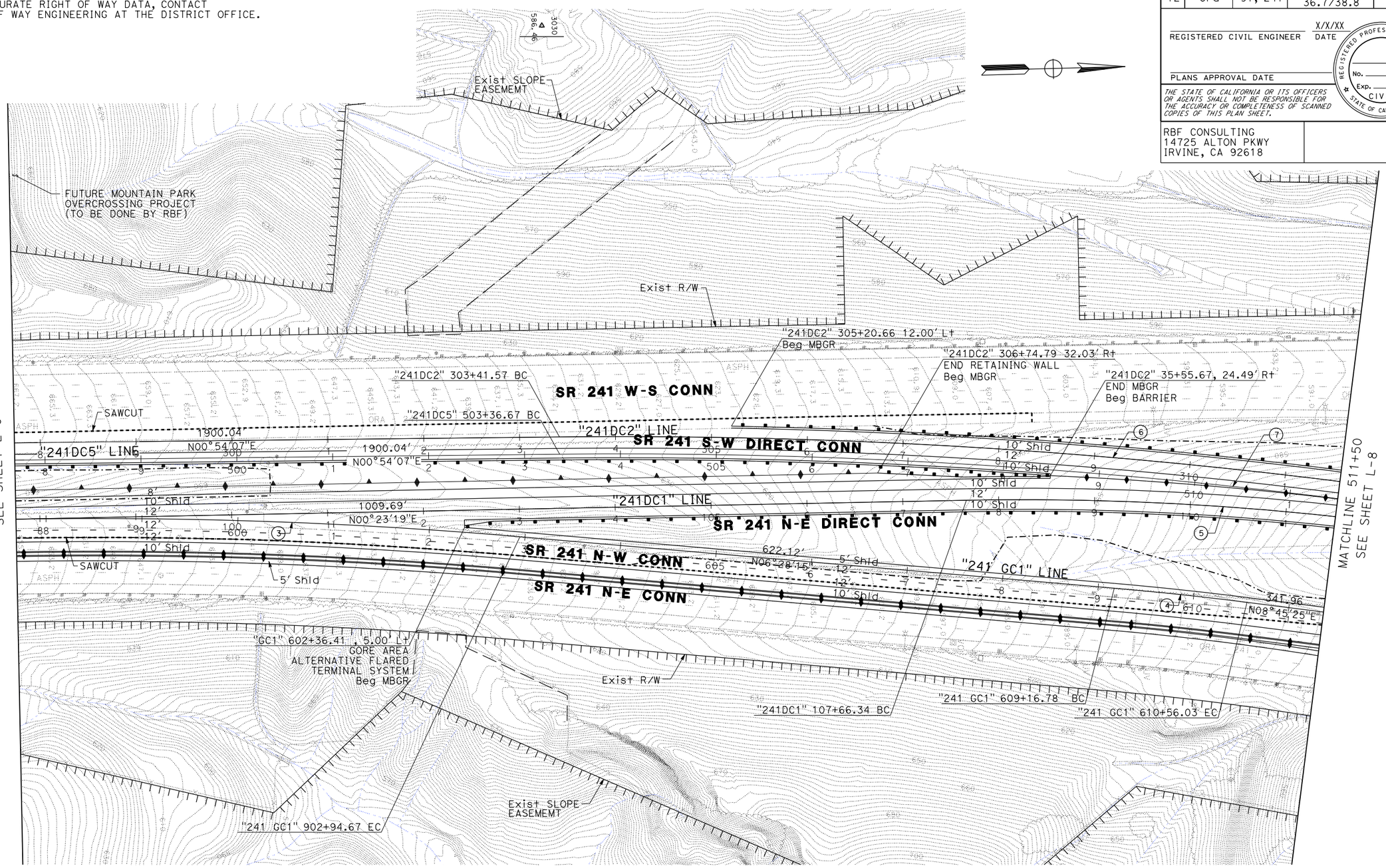

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5	3000.00	12°05'51"	317.90	633.43
6	6000.00	08°40'00"	454.65	907.57
7	5982.00	08°40'00"	453.29	904.85

LAYOUT
SCALE: 1" = 50'

L-7

DRAFT

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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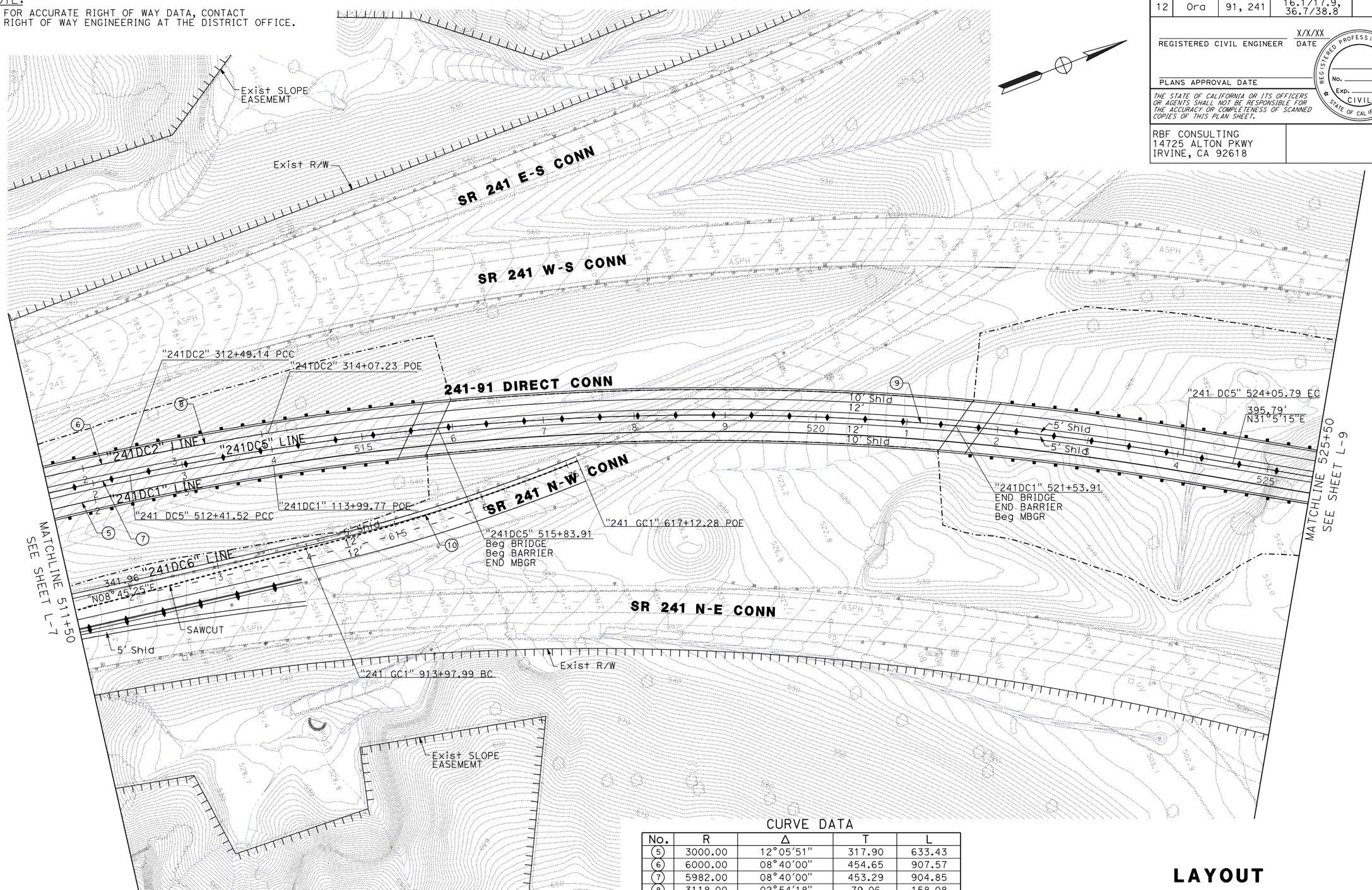
14725 ALTON PKWY
IRVINE, CA 92618



CURVE DATA

No.	R	Δ	T	L
5	3000.00	12°05'51"	317.90	633.43
6	6000.00	08°40'00"	454.65	907.57
7	5982.00	08°40'00"	453.29	904.85
8	3118.00	02°54'18"	79.06	158.08
9	3100.00	21°31'07"	589.08	1164.28
10	1900.00	09°28'39"	157.5	314.29

LAYOUT
SCALE: 1" = 50'

DRAFT

L-8

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: mohamed.ghonim 05-JUN-2015 18:38
CHECKED BY

SUPERVISOR: MIKE CHESNEY
CONSULTANT FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

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LAST REVISION 00-00-14
DATE PLOTTED => 05-JUN-2015
TIME PLOTTED => 18:38

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER — X/X/XX DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

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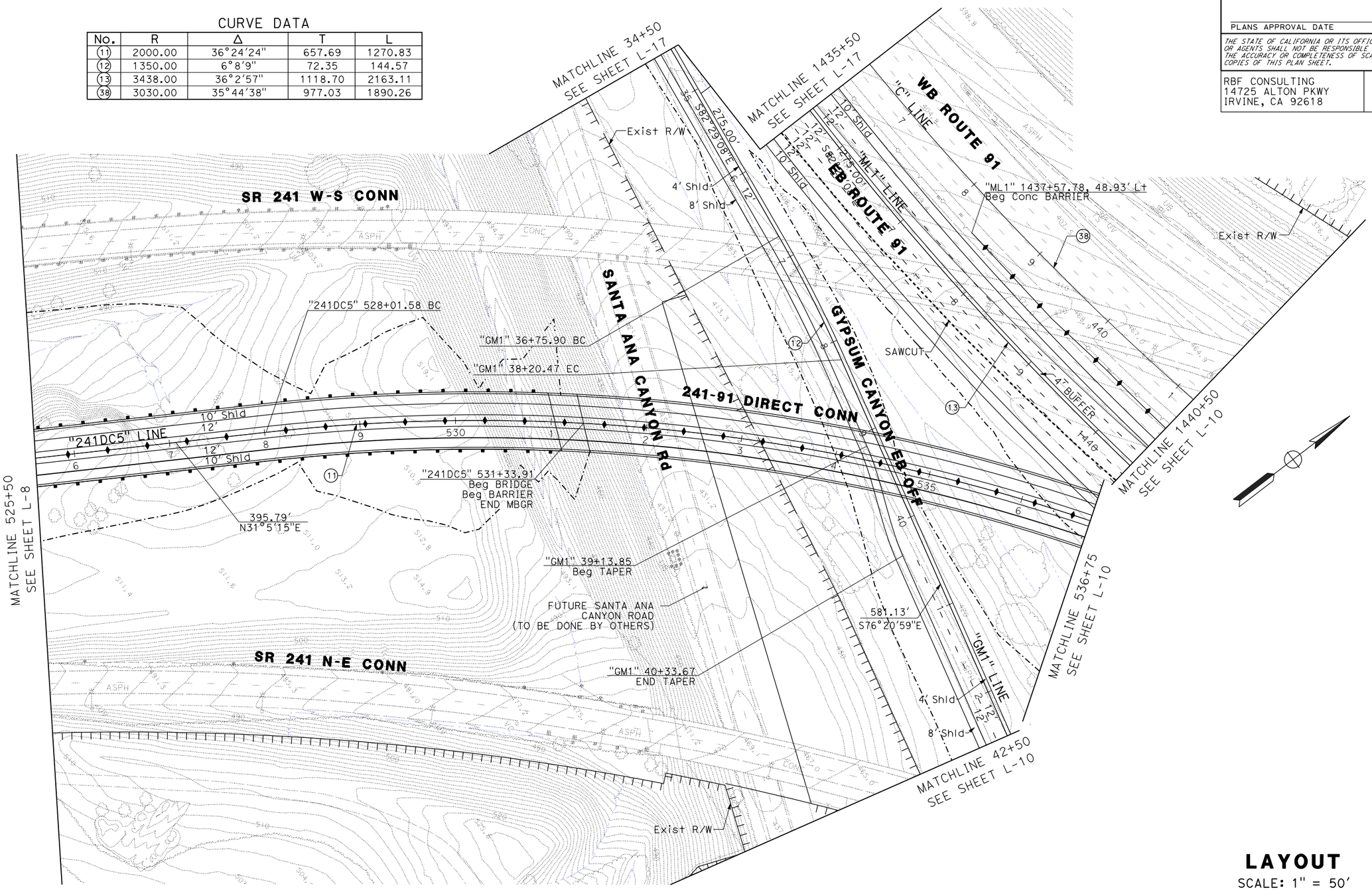
IRVINE, CA 92618

CURVE DATA

No.	R	Δ	T	L
11	2000.00	36°24'24"	657.69	1270.83
12	1350.00	6°8'9"	72.35	144.57
13	3438.00	36°2'57"	1118.70	2163.11
38	3030.00	35°44'38"	977.03	1890.26



LAYOUT
SCALE: 1" = 50'

DRAFT

L-9

REVISED BY	DATE REVISED

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CONSULTANT FUNCTIONAL SUPERVISOR: MIKE CHESNEY

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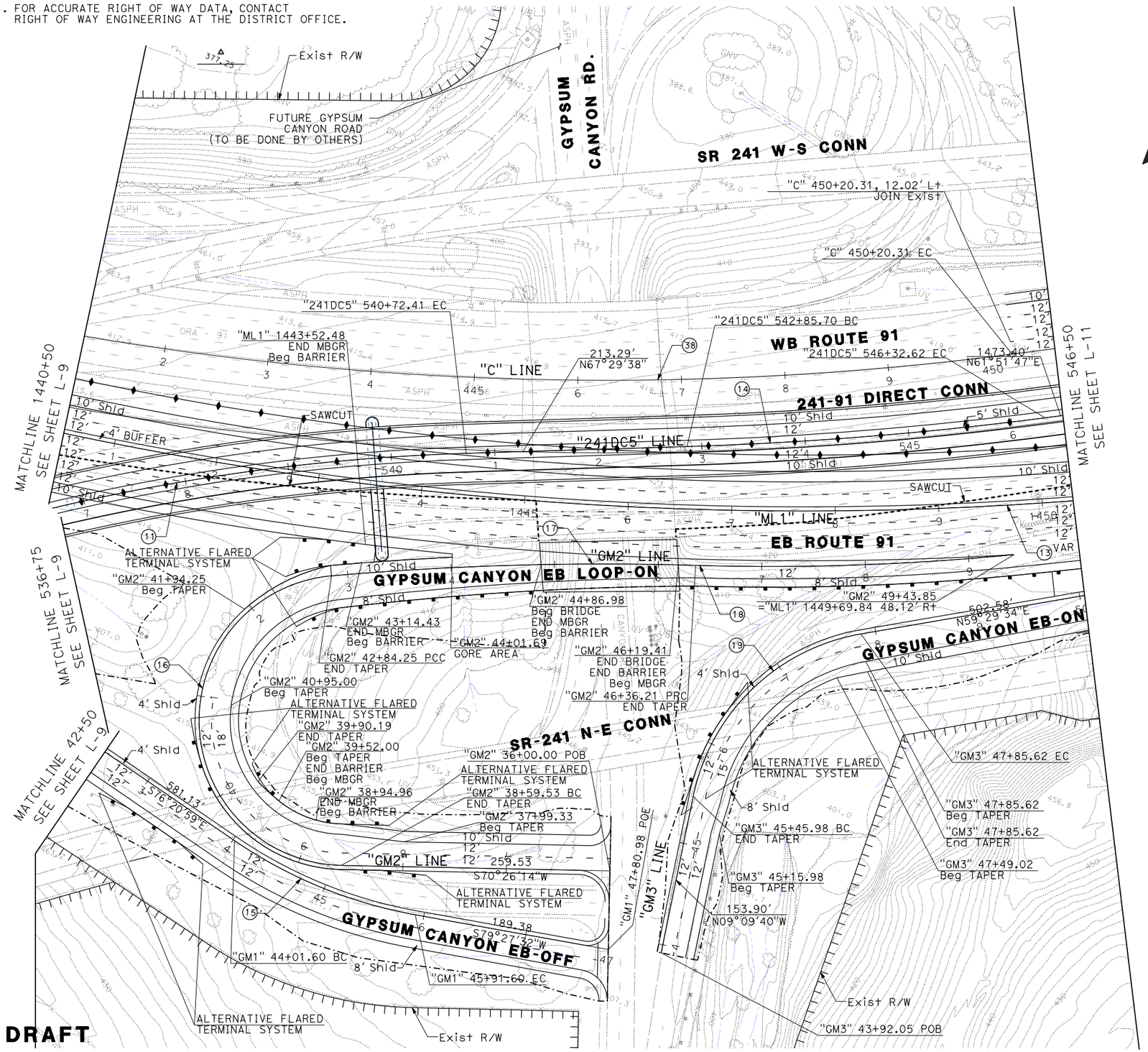
LAST REVISION 00-00-14
DATE PLOTTED => 05-JUN-2015
TIME PLOTTED => 18:38

BORDER LAST REVISED 7/2/2010
USERNAME => mohamed.ghonim
DGN FILE => 7774-ST-009.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0000
PROJECT NUMBER & PHASE 12000000000

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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CURVE DATA

No.	R	Δ	T	L
11	2000.00	36°24'24"	657.69	1270.83
13	3438.00	36°2'57"	1118.70	2163.11
14	3530.00	5°37'51"	173.60	346.92
15	450.00	24°11'30"	96.44	190.00
15	140.00	173°49'1"	2592.11	424.71
17	3000.00	6°43'20"	176.19	351.97
18	2420.00	7°17'1"	154.03	307.64
19	200.00	68°39'14"	136.57	239.65
38	3030.00	35°44'38"	977.03	1890.26

LAYOUT

SCALE: 1" = 50'

L-10

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BORDER LAST REVISED 7/2/2010 | USERNAME => mohamed.ghonim | DGN FILE => 7774-ST-010.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 12000000000

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

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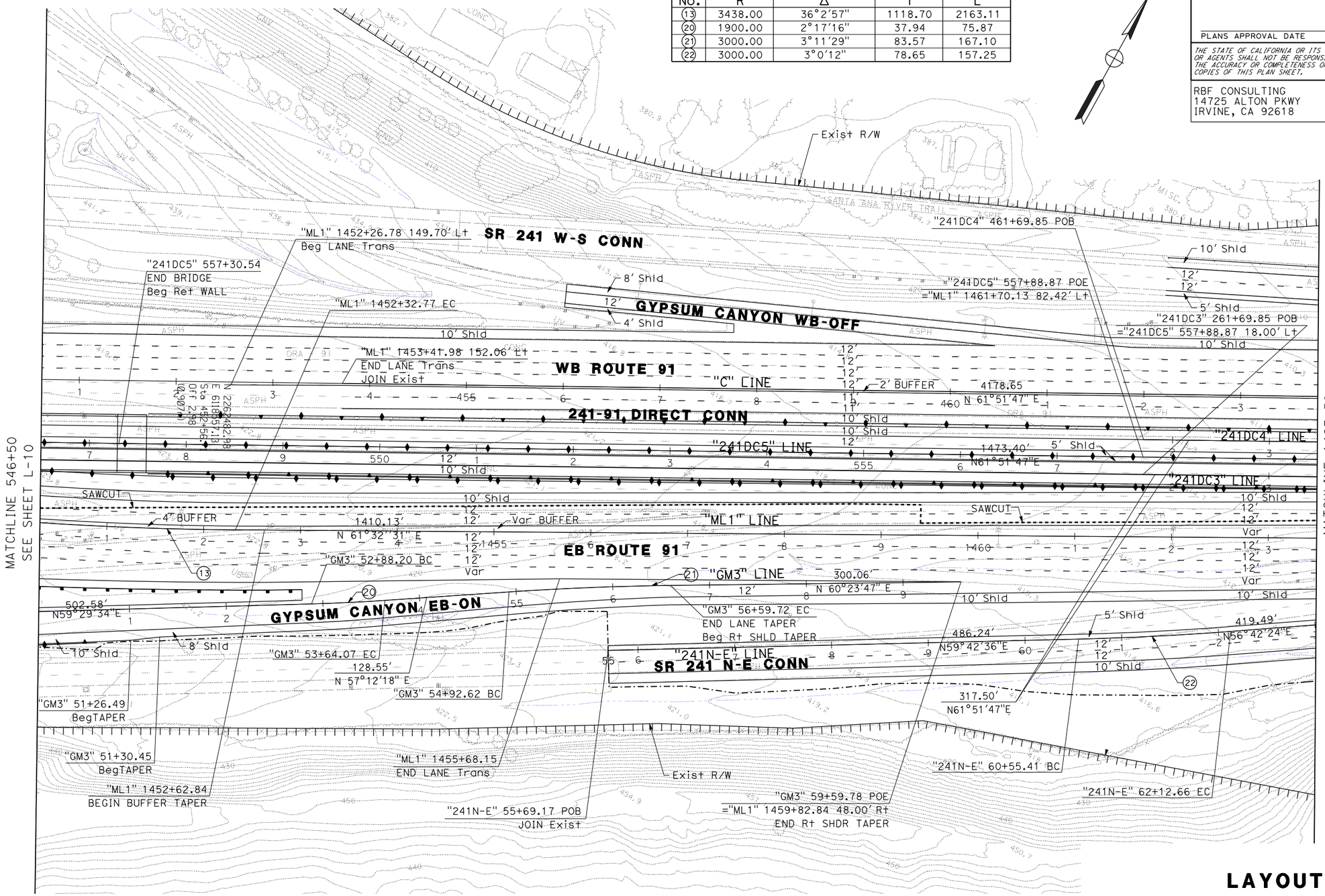
CURVE DATA

No.	R	Δ	T	L
13	3438.00	36°2'57"	1118.70	2163.11
20	1900.00	2°17'16"	37.94	75.87
21	3000.00	3°11'29"	83.57	167.10
22	3000.00	3°0'12"	78.65	157.25



LAYOUT
SCALE: 1" = 50'

DRAFT

L-11

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BORDER LAST REVISED 7/2/2010 | USERNAME => mohamed.ghonim DGN FILE => 7774-ST-011.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 12000000000

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

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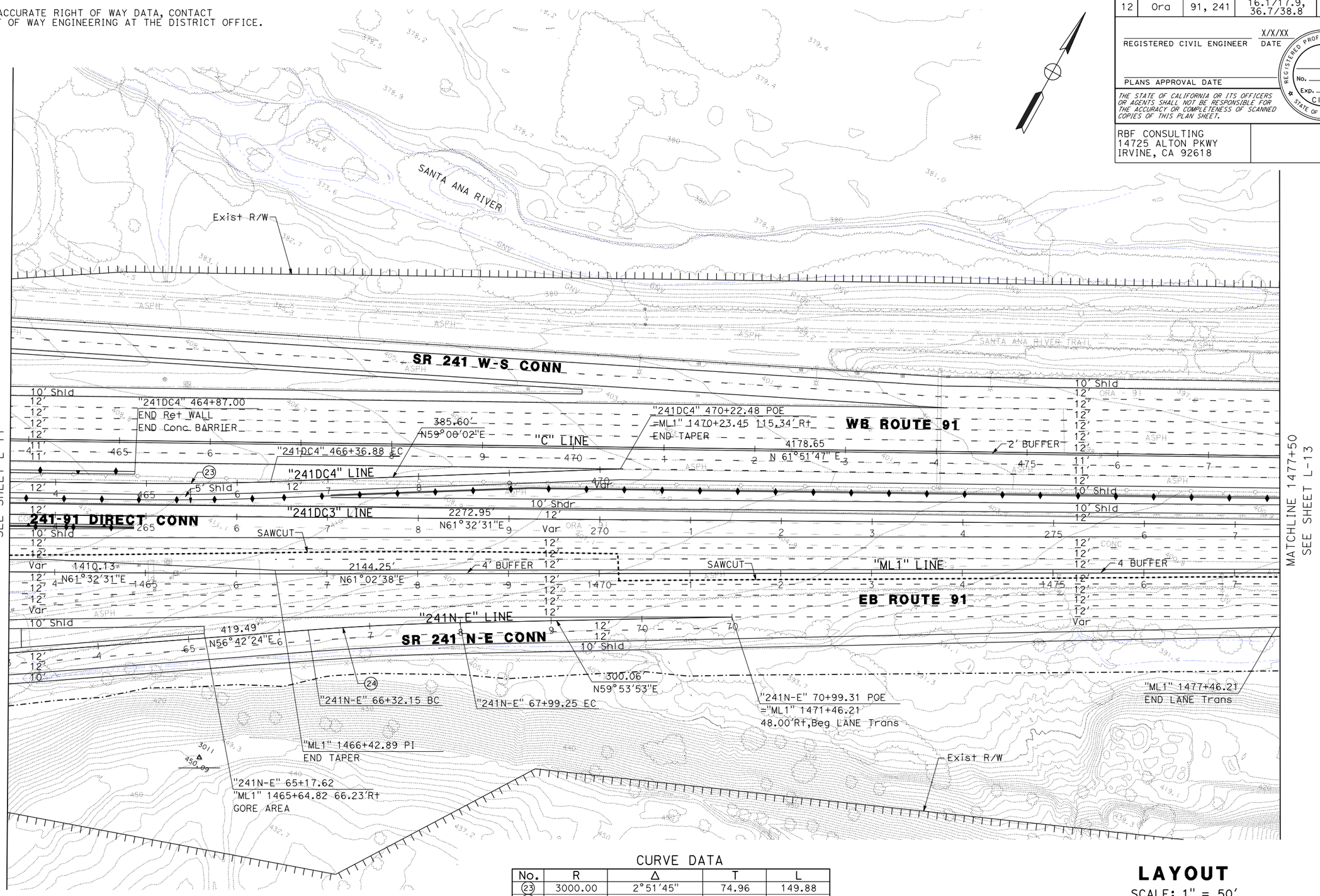

CURVE DATA

No.	R	Δ	T	L
23	3000.00	2°51'45"	74.96	149.88
24	3000.00	3°11'29"	83.57	167.10

LAYOUT
SCALE: 1" = 50'

DRAFT

L-12

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BORDER LAST REVISED 7/2/2010 | USERNAME => mohamed.ghonim | DGN FILE => 7774-ST-012.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 12000000000

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	T	L
25	3232.00	03°05'12"	87.08	174.12
26	3276.00	03°05'33"	88.43	176.81
27	25.00	65°27'12"	16.07	28.56
28	26.00	157°22'06"	129.99	71.42
29	25.00	94°29'19"	27.04	41.23
30	25.00	96°34'33"	28.05	42.14
31	100.00	08°30'10"	7.43	14.84
32	50.00	24°19'44"	10.78	21.23
33	120.00	40°02'14"	43.72	83.85
34	450.00	16°44'18"	66.20	131.46

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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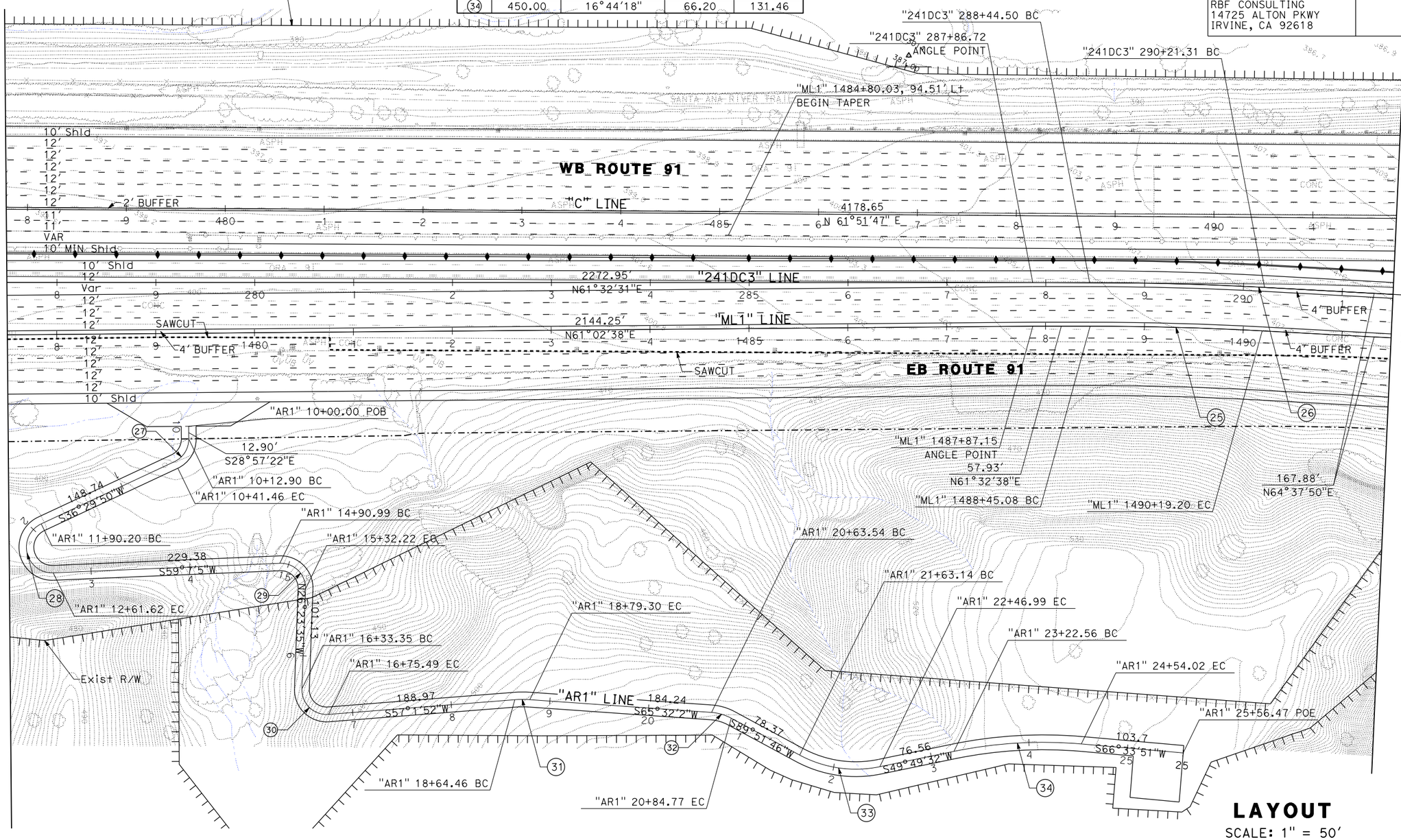

LAYOUT
SCALE: 1" = 50'

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L-13

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NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	T	L
35	3000.00	51°52′00″	1458.88	2715.74
36	3044.00	32°20′29″	882.67	1718.22
39	3000.00	57°24′04″	1642.49	3005.52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

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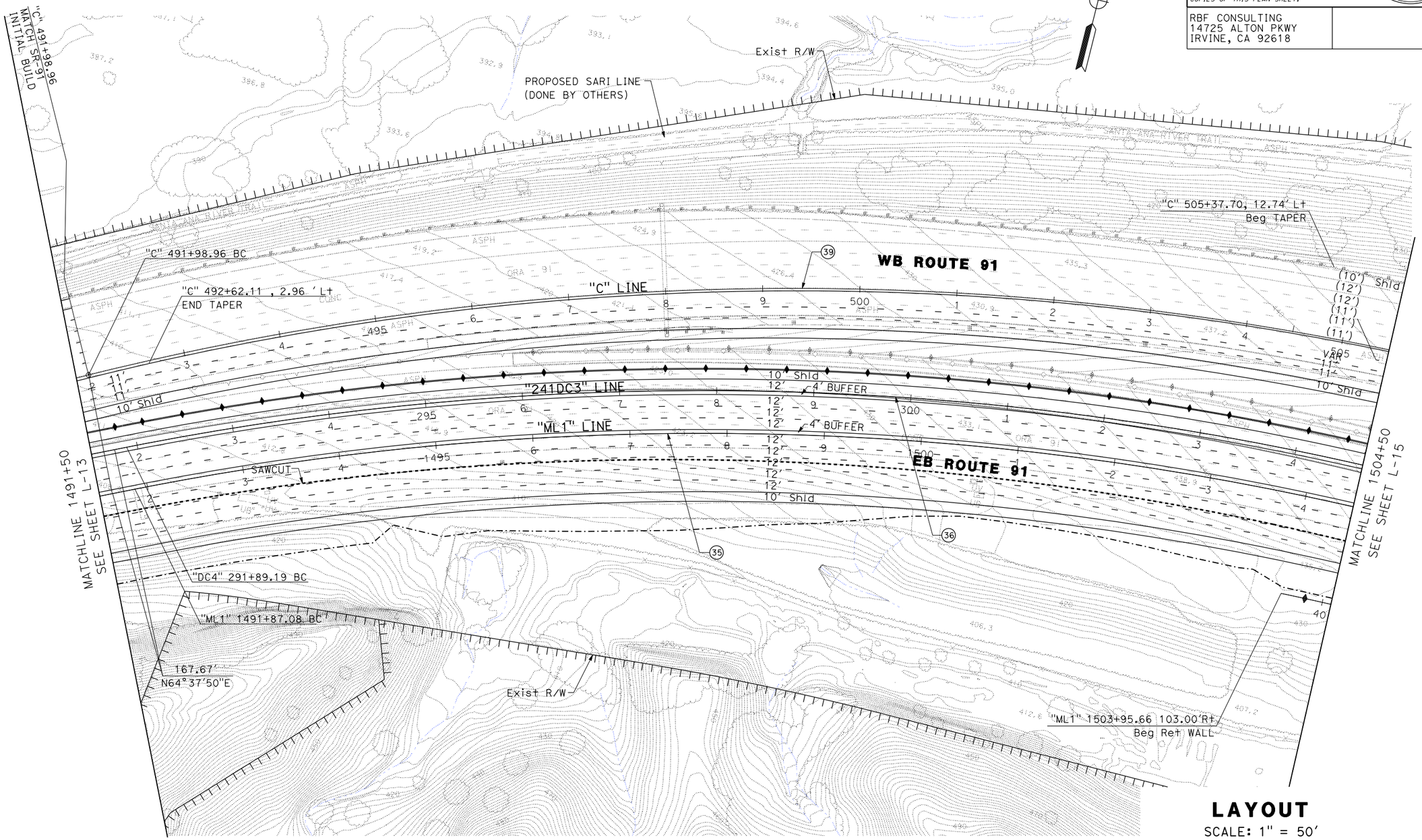

LAYOUT
SCALE: 1" = 50′

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L-14

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NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

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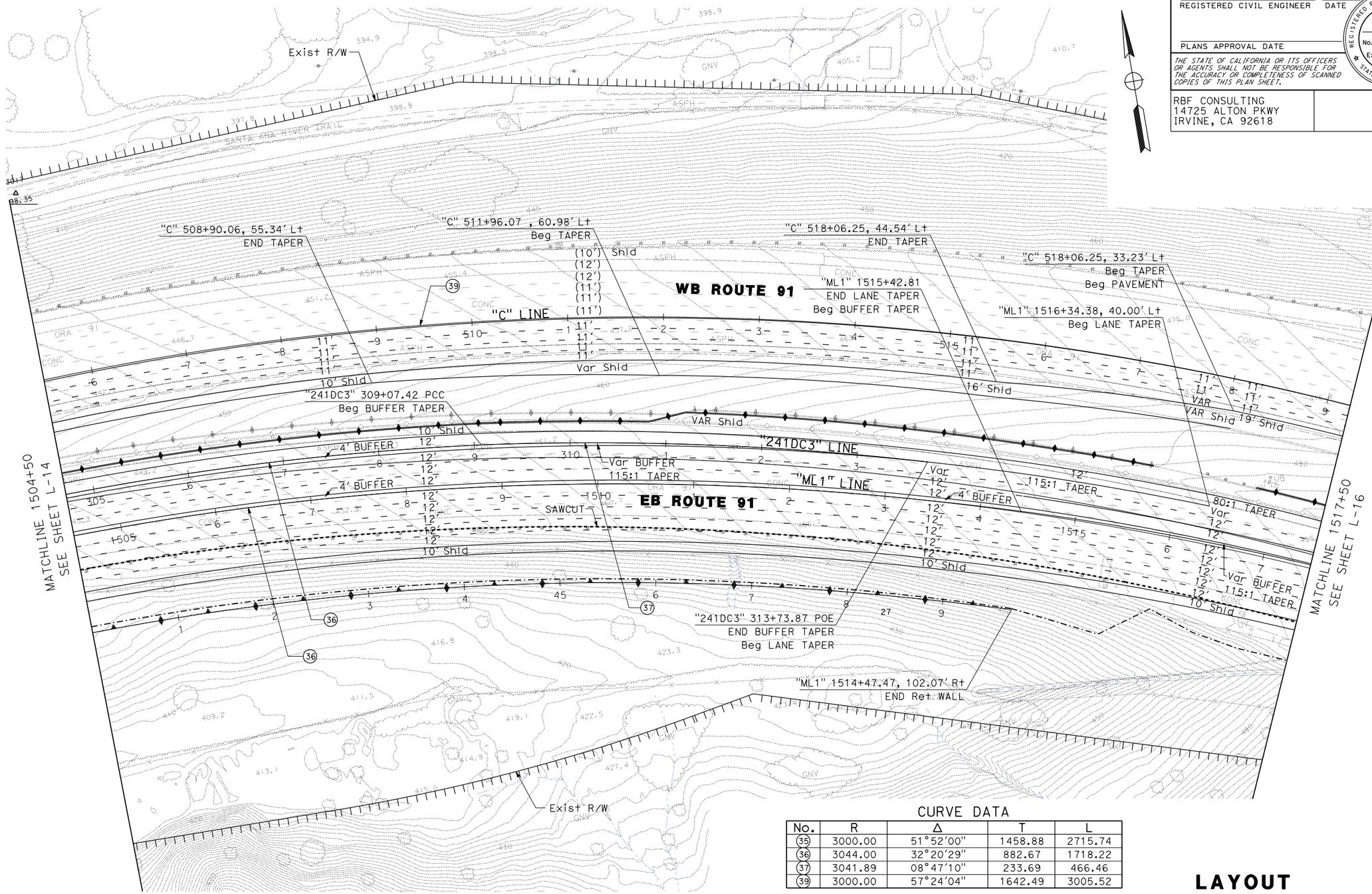

CURVE DATA

No.	R	Δ	T	L
35	3000.00	51°52'00"	1458.88	2715.74
36	3044.00	32°20'29"	882.67	1718.22
37	3041.89	08°47'10"	233.69	466.46
39	3000.00	57°24'04"	1642.49	3005.52

LAYOUT
SCALE: 1" = 50'

DRAFT

L-15

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CONSULTANT FUNCTIONAL SUPERVISOR: MIKE CHESNEY

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DATE PLOTTED => 05-JUN-2015
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NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CURVE DATA

No.	R	Δ	T	L
35	3000.00	51°52'00"	1458.88	2715.74
39	3000.00	57°24'04"	1642.49	3005.52

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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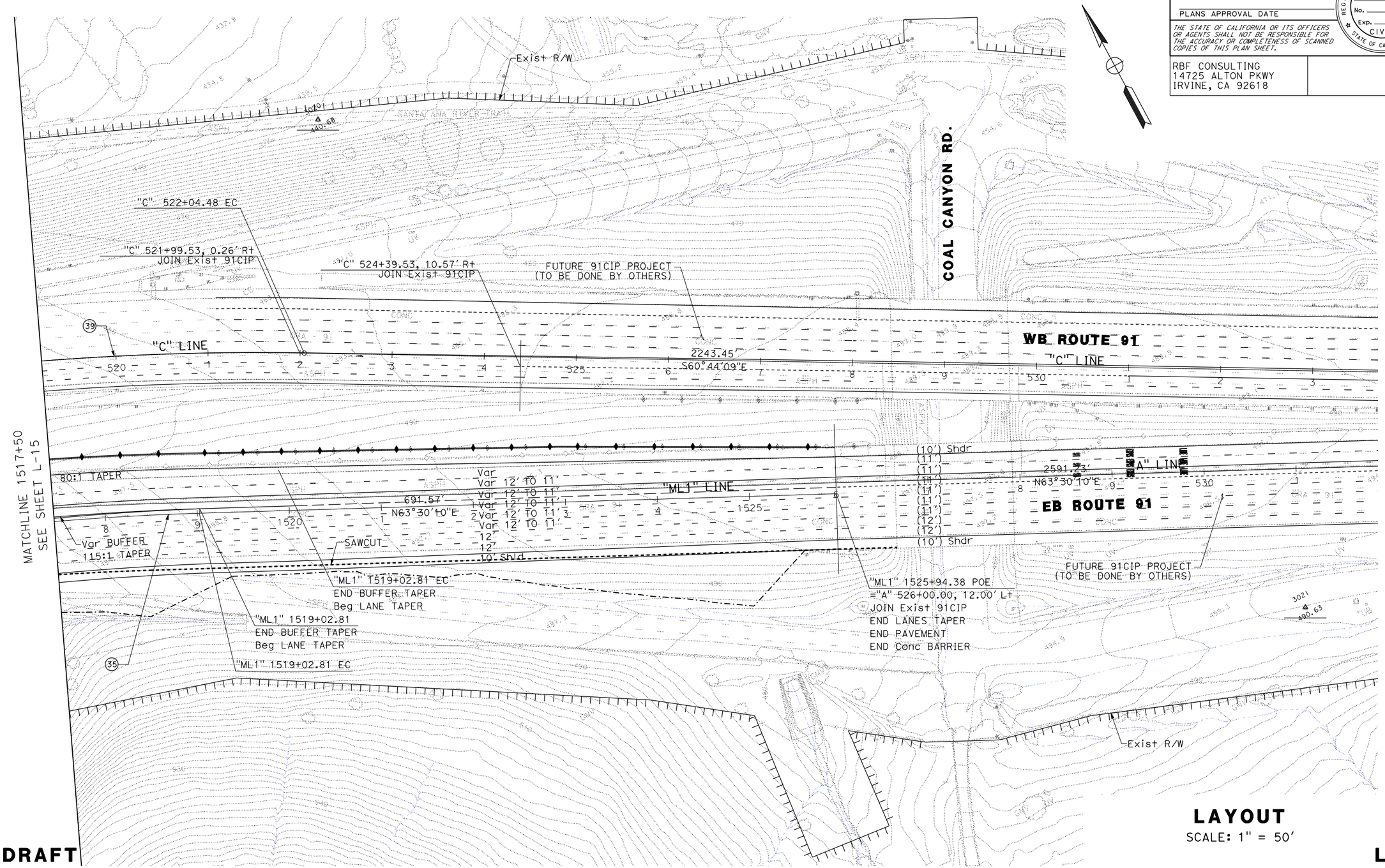

LAYOUT
SCALE: 1" = 50'

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L-16

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MIKE CHESNEY

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BORDER LAST REVISED 7/2/2010 | USERNAME => mohamed.ghonim | DGN FILE => 7774-ST-016.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 12000000000

NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
12	Ora	91, 241	16.1/17.9, 36.7/38.8		

REGISTERED CIVIL ENGINEER X/X/XX DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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RBF CONSULTING
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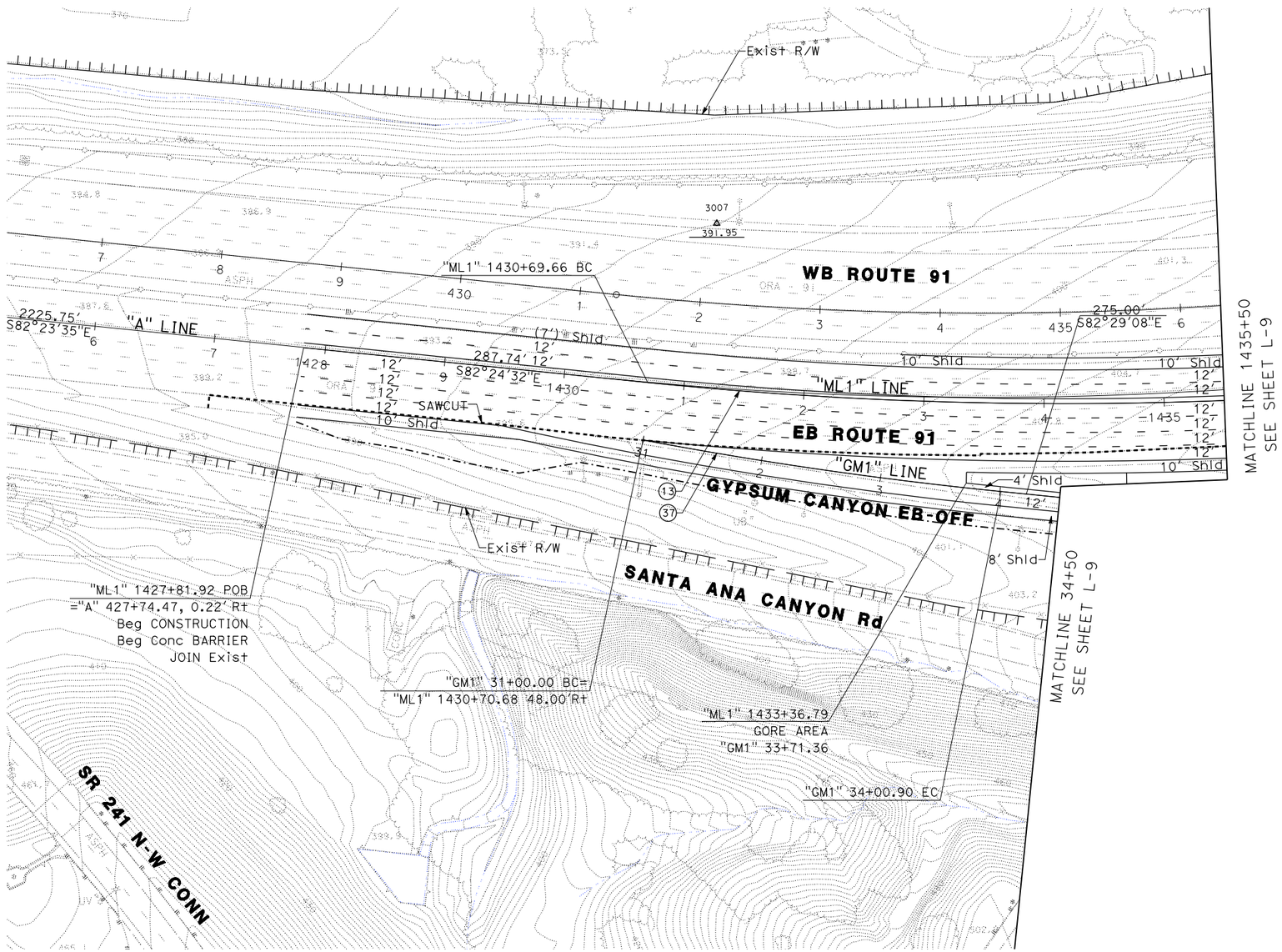
IRVINE, CA 92618

CURVE DATA

No.	R	Δ	T	L
13	3438.00	36°02'57"	1118.70	2163.11
37	3486.00	4°56'44"	150.54	300.90



LAYOUT
SCALE: 1" = 50'

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L-17

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SUPERVISOR | CONSULTANT FUNCTIONAL SUPERVISOR

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BORDER LAST REVISED 7/2/2010 | USERNAME => mohamed.ghonim | DGN FILE => 7774-ST-017.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER & PHASE 12000000000