Pyramid Way and McCarran Boulevard Intersection Improvement Project

Traffic Report

RTC Project No. 73299

Federal Project No. CM-0191-(063)

Regional Transportation Commission of Washoe County,
Federal Highway Administration,
And
Nevada Department of Transportation

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January 2012
Revised April 2012

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1 INTRODUCTION AND BACKGROUND

1.1 PROJECT INTRODUCTION

The Regional Transportation Commission of Washoe County, (RTC), in cooperation with the Nevada Department of Transportation (NDOT) and the Federal Highway Administration (FHWA), is studying operational improvements to the intersection of McCarran Boulevard (SR 659) and Pyramid Way (SR 445) in Sparks, Nevada. Due to the extended period of time that has elapsed during the project, it is important to understand what has transpired with the RTC travel demand forecasts and the traffic analysis efforts. The following summary is offered to clarify these efforts:

- 2006 Traffic Analysis – Parsons obtained the RTC travel demand forecast that was used to develop the 2004 Regional Transportation Plan (RTP). The forecast was used to do the initial 2030 traffic evaluation for the 13 original improvement concepts. The forecast was also used to do a more detailed traffic analysis of the three build alternatives that came out of the screening of improvement concepts (see Appendix A). This analysis was done for 2012 and 2030 traffic. At the time 2012 was assumed to be the project build out date. The analysis showed the three build alternatives would operate at an acceptable Level of Service (LOS) "D" in 2012 and 2030. The No Build analysis showed the existing intersection would fail with 2012 and 2030 traffic and the existing condition analysis showed the Pyramid/McCarran intersection operated at LOS "F" during the AM and PM peak periods.

- 2008 Traffic Analysis – RTC updated the 2004 Regional Transportation Plan as required by FHWA every four years. This update for the 2008 RTP was accomplished with a new travel demand forecast that reflected adjustments in the population and employment figures due to the 2007 downturn in the economy. The LOS standard in the new RTP was changed from "D" to "E" for the Pyramid/McCarran intersection. Because the Pyramid/McCarran Intersection Improvement Project was still underway, RTC directed Parsons to reanalyze the three build alternatives using future traffic from the new travel demand forecast model for 2018 and 2030 and use the new LOS standard. The year 2012 traffic analysis was not done because it was assumed the project could not be completed by that timeframe. The year 2018 traffic was analyzed because the RTP assumed the U.S. 395 Connection Project would be completed sometime between 2018 and 2030. The traffic analysis showed all three build alternatives would operate with an acceptable LOS "E" or better in 2018 and 2030. The No Build analysis showed the Pyramid/McCarran intersection would fail in 2018 and 2030. During this time period, the Direct Connector (flyover) Alternative was dropped from further consideration due to negative public reaction to the alternative and negative impact to the Catholic Church education building and the Lagomarsino

property on the northwest corner of the intersection. The Pyramid over McCarran Alternative is also dropped from further consideration due to excessive bridge grades between Roberta Way and York Way. The Expanded Intersection Alternative becomes the preferred build alternative.

- 2010 Traffic Analysis – In 2009 the RTC Board directed RTC staff to coordinate with the Truckee Meadows Regional Planning Agency (TMRPA) on developing new demographic data (population and employment) for the travel demand forecast model. Previously, RTC used the demographic data from the individual government agencies (Reno, Sparks, and Washoe County). This effort with TMRPA resulted in an Interim Consensus Forecast that showed a reduction in 2030 traffic due to the adjustments in population and employment. It was also assumed that the freeway connection between US 395 and Pyramid Highway would be in place by 2030. RTC directed Parsons to reanalyze the preferred alternative (Expanded Intersection) for existing conditions using new 2010 traffic counts and for the No Build and Preferred Build Alternative using the 2030 Interim Consensus Forecast traffic. The 2030 analysis showed the Expanded Intersection alternative could be reduced in scope and still meets the LOS "E" standard. The intersection geometry was changed from 8 to 6 lanes on Pyramid Way north of McCarran Boulevard (remained at 6 lanes south of McCarran) and was reduced from 6 to 4 lanes on McCarran Boulevard west of Pyramid Way (remained at 4 lanes east of Pyramid Way). The existing condition analysis showed the intersection operated at LOS "D" in the AM peak and LOS "F" in the PM peak and the No Build analysis showed the intersection would operate at LOS "E" in the AM peak and LOS "F" in the PM peak.

The following is a summary of the information contained in this report:

- Chapter 1 – Project Introduction and Background – Provides information about the project area, links to past projects and studies, agencies involved in the project and a summary of project milestones.
- Chapter 2 – Existing Conditions – Covers land use and demographic information, travel characteristics, Level of Service (LOS) description, peak hour traffic volumes at project initiation and the project crash summary.
- Chapter 3 – Traffic Volume Forecast – Discusses the assumptions made for the travel demand model forecasts for future years, approved land use developments and peak hour volumes used for the initial traffic analysis.
- Chapter 4 – Improvement Concepts – Summarizes the 13 improvement concepts that were evaluated for the project along with the No Build alternative. Shows traffic analysis results for the No Build alternative for 2018 and 2030 and builds the case for improvements to handle future traffic at the Pyramid Way and McCarran Boulevard intersection. The 13 improvement concepts are narrowed to 3 Build Alternatives.
- Chapter 5 – Improvement Alternatives Meeting Evaluation Criteria – Provides a detailed description of the 3 Build Alternatives and shows 2008 traffic analysis results for each alternative at 2018 and 2030 traffic levels.
- Chapter 6 – Selection and Analysis of the Preferred Alternative – Describes the process used to evaluate the 3 Build Alternatives and the selection of the Preferred Build Alternative.
- Chapter 7 – Summary of Findings

Section 1.6 Project Milestones will also be helpful in understanding the chronology of the project

1.2 PROJECT PURPOSE AND NEED

There is a critical need to improve traffic operations at this intersection, principally the morning commuter traffic flow in the southerly, through direction and southerly to westerly direction (Pyramid Way to McCarran Boulevard, U.S. 395 and I-80), as well as the reverse flow from the west to the north in the afternoon peak period. Potential transportation improvement alternatives considered include an elevated direct connection for the eastbound to northbound movements, a widened intersection with multiple left turn lanes on each approach, and a grade separation of Pyramid Way over McCarran Boulevard.

The Pyramid Way/McCarran Boulevard intersection serves the transportation needs of the northern communities in Washoe County and Sparks, Nevada by linking commuters from this area to employment and service centers located within Reno and Sparks. The current and projected traffic congestion and operational characteristics of this intersection necessitate improvement. There is also a need to improve bicycle and pedestrian safety within the project limits. Workshops have been held with residents and businesses in the project area and regional commuters using the intersection to solicit input on the project's purpose and need, range of alternatives to be considered, evaluation methodologies, and the selection of a preferred alternative.

The purpose of the proposed project is to enhance the operational characteristics of the intersection, improve safety for motorists, bicyclists and pedestrians, reduce congestion and meet the LOS standards in the current regional transportation plan and accommodate the increase in future traffic volumes. The Washoe County RTC travel demand model predicts that the county population will reach 577,000 by 2018. As a result of the economic slowdown of 2007-09, the Nevada State Demographer issued revised population estimates in 2008, predicting that Washoe County will not reach this population level until several years after 2028. Based on these revised state estimates, the previous Washoe County RTC model projections for the 2018 population may be reached by 2030; an increase of 92 percent over the 2007 population. Employment in these areas, which was previously projected to increase by 300 percent from 2007 to 2018, may reach that level by 2030.

1.3 PROJECT LIMITS

The project is located at the intersection of Pyramid Way and McCarran Boulevard in Sparks, Nevada. Figure 1-1 shows the project location relative to the Nevada–California border and within the Reno–Sparks area. Figure 1-2 shows the roadway system in the vicinity of the project study limits.

Figure 1-1: Project Location

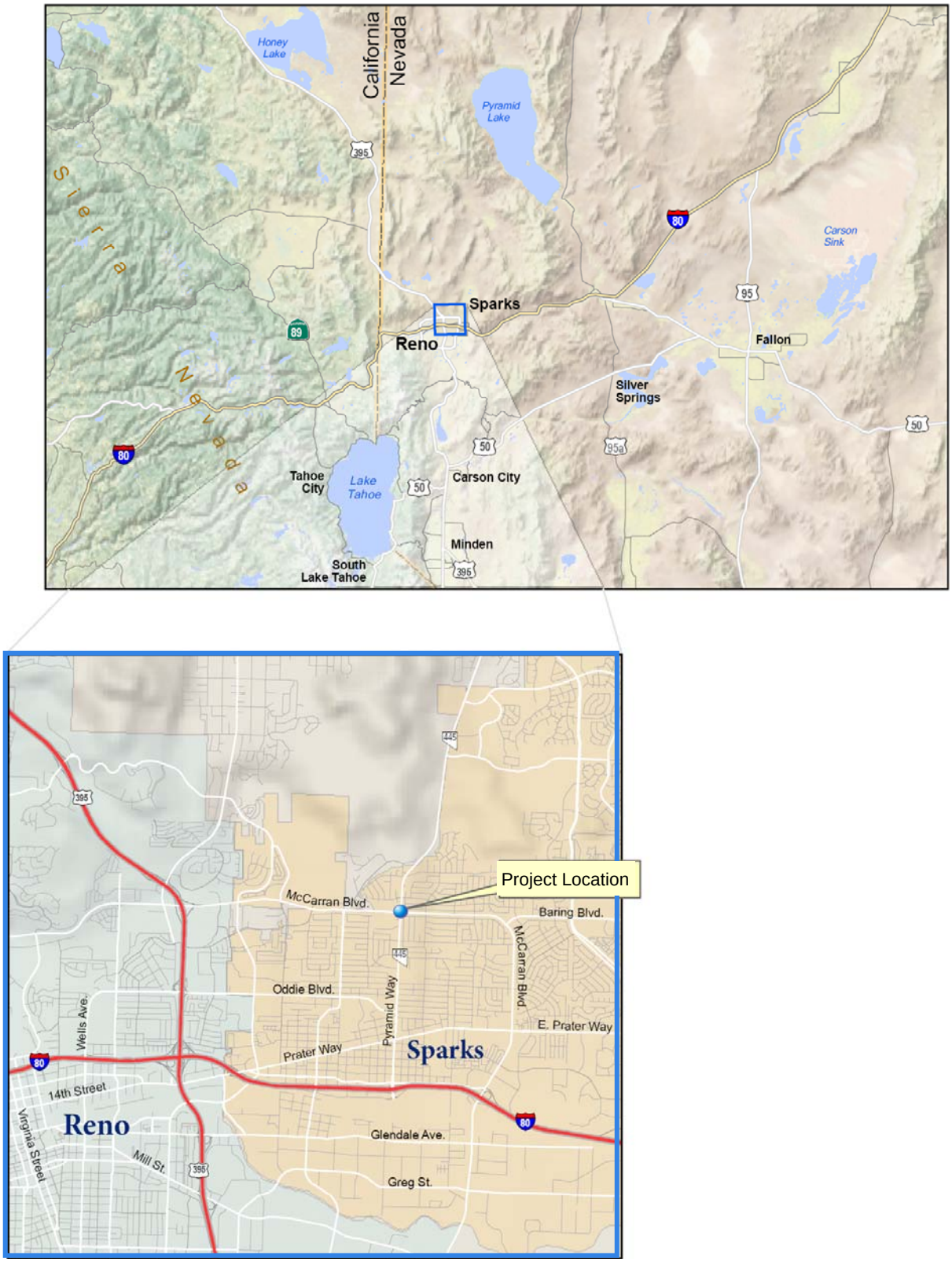


Figure 1-2: Study Limits

The project limits are defined below.

- Pyramid Way from just north of Queen Way to McCarran Boulevard.
- Pyramid Way from McCarran Boulevard to York Way.
- McCarran Boulevard from Rock Boulevard to Fourth Street.

The main north–south roadway in the study area is named Pyramid Way south of Queen Way and Pyramid Highway north of Queen Way. This report refers to the entire Pyramid roadway within the project limits as Pyramid Way.

1.4 PROJECT BACKGROUND

1.4.1 Project History

The intersection of Pyramid Way and McCarran Boulevard lies at the throat of Spanish Springs Valley, a rapidly growing, mixed residential and commercial area lying north and largely within the Sparks sphere of influence. Numerous land developments have been constructed and many additional projects are entitled for development. As noted above, these land developments generate and attract traffic which flows to and from central Sparks and Reno.

Given the concentration of traffic along the Pyramid Highway Corridor, transportation planning efforts have been underway since the mid-1990's to identify long-range needs for the corridor. These needs included widening the roadway to six through traffic lanes, upgrading portions of the road to a freeway, constructing an east–west connector between I-80 and U.S. 395, as a "beltway" to bypass the congested confluence of these two freeways, and enhancing the capacity and operations of McCarran Boulevard, which today serves as an inner beltway around Reno and Sparks. The I-80/U.S. 395 connector concept has evolved to the current Pyramid Highway and U.S. 395 Connection Project that is focusing on the freeway connection between Pyramid Highway and U.S. 395 and upgrading the Pyramid Highway to a freeway level facility.

Transportation investment needs in the Truckee Meadows far outstrip available funding, and the long-range plans to construct the Pyramid Highway/U.S. 395 Connection project which includes the Pyramid Highway Improvements, by themselves, are estimated to cost upwards of $1 billion. As the timing of these ambitious plans is uncertain, the need for improving the existing congestion chokepoint at Pyramid Way and McCarran Boulevard continues to increase with the passage of time. Moreover, given the cost of the long-range solutions, near-term improvements at Pyramid/McCarran are likely to provide benefits for their full 20-year design life.

To provide a frame of reference, Figure 1-3 illustrates the location of the Pyramid Way/Highway corridor relative to McCarran Boulevard, Interstate 80, and U.S. 395, the residential development along Pyramid Highway north of McCarran Boulevard, and the adjacent topography which funnels traffic through the Pyramid Way intersection with McCarran Boulevard. Previous studies which address this overall corridor are briefly summarized below.

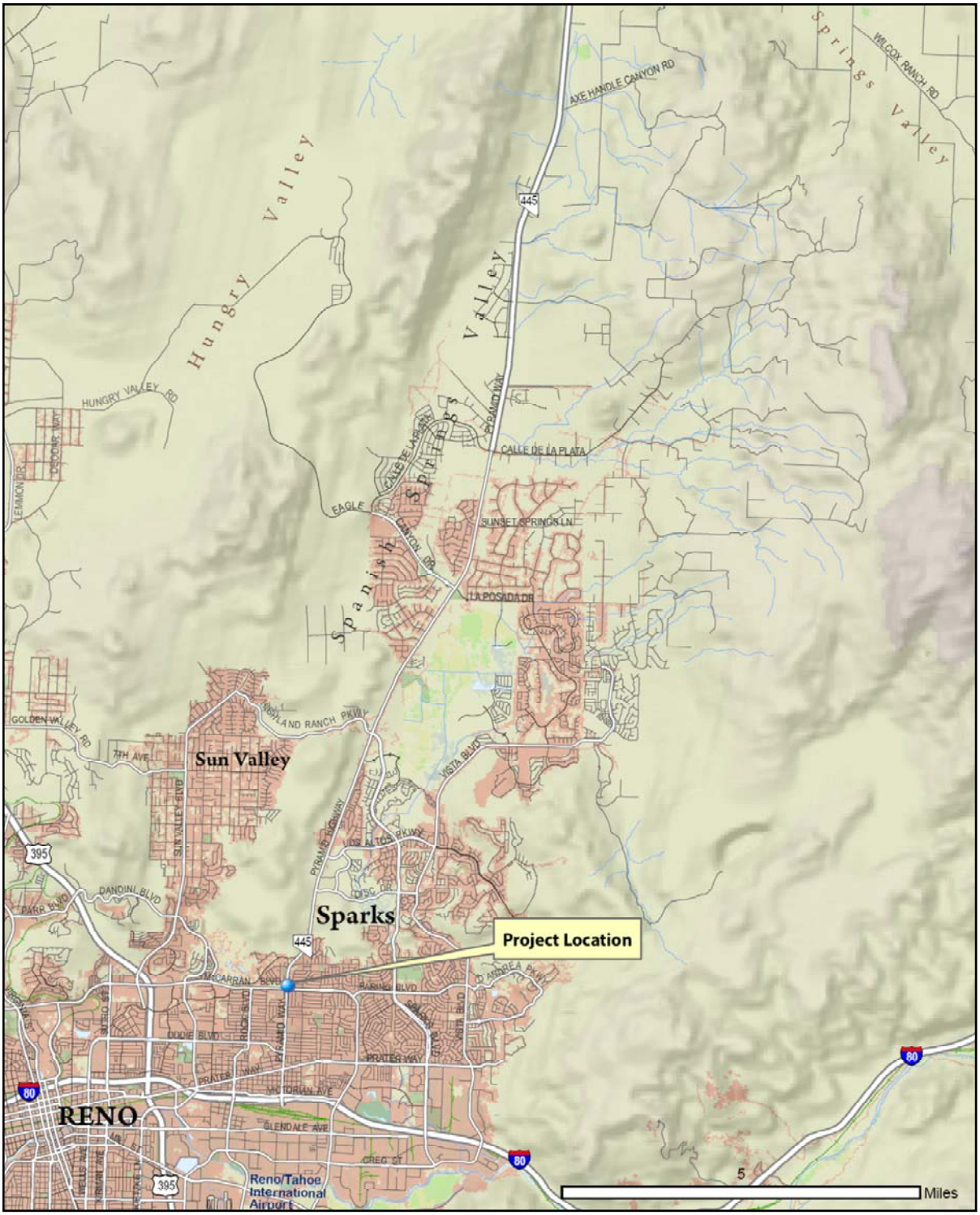
1.4.2 Pyramid Highway Corridor Management Plan

The RTC prepared the Pyramid Highway Corridor Management Plan in collaboration with the Nevada Department of Transportation, the Pyramid Highway Corridor Citizens' Committee, the City of Reno, the City of Sparks, and Washoe County. This planning effort began in 1998 to address the planned growth in Spanish Springs Valley.

The Pyramid Highway Corridor Management Plan studied regional transportation improvement needs in the northeast area of Truckee Meadows, geographically located east of

U.S. 395 and north of I-80. The vision statement was as follows: "Implementation of the plan will maintain and improve the corridor as a viable transportation route for the Sparks urban core and the growing Northeast Truckee Meadows community."

Figure 1-3: Pyramid Highway Corridor



The RTC Board approved the draft plan on October 20, 2000 as the preferred Street/Highway and Transit Plan alternative. The plan was incorporated into the 2030 RTP in August 2001. The RTC Board approved the final Plan Report on November 16, 2001.

Pyramid Highway Corridor Management Plan Refinement

In light of the rapid growth in the Spanish Springs area and in an effort to identify right-of-way preservation needs along the Pyramid Highway corridor, the RTC commissioned CH2M HILL to produce a refinement of the corridor study. This refinement was a coordinated effort between NDOT, the City of Reno, Washoe County RTC, the City of Sparks, Washoe County, and several major developers. The refinement focused on establishing future right-of-way needs along the Pyramid Highway corridor. This planning stage refinement assumed that the existing arterial corridor would be converted to a six-lane freeway to meet future capacity needs.

The refinement was intended to help support the Environmental Impact Statement (EIS) on the Pyramid Highway corridor and a connecting east–west corridor discussed below. The environmental study for this project known as the Pyramid Highway/U.S. 395 Connection project is scheduled to be completed in the summer of 2012.

The refinement of the Pyramid Highway Corridor Management Plan focused on the Pyramid Highway corridor only, not the entire study area of the northeast area of Truckee Meadows. This refinement was a planning level effort to refine and define future right-of-way needs along Pyramid Way/Highway so preservation efforts could be coordinated among the regulating agencies, i.e., NDOT, the City of Reno, RTC, the City of Sparks, and Washoe County.

Several assumptions were made for refining the plan to minimize environmental impacts. These assumptions included using the existing Pyramid Way as the alignment of the freeway, using vertical walls at the edge of right-of-way rather than embankment slopes, and elevating the freeway about 20 feet above Pyramid Way. These assumptions may change during subsequent engineering and environmental studies.

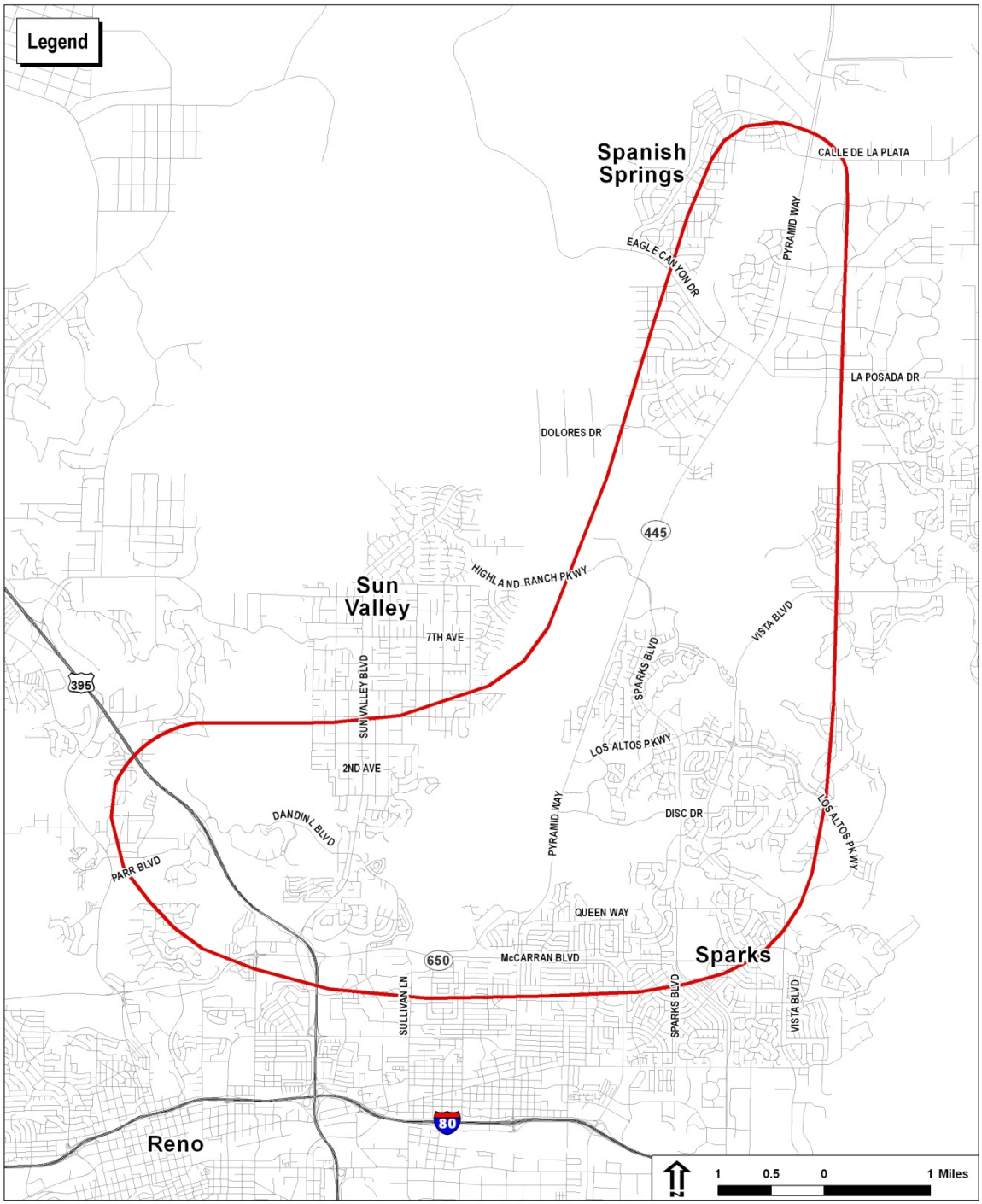
This planning refinement process was conducted as a precursor to the preparation of environmental impact documents, and as such was intended to ensure that viable options were not precluded.

1.4.3 Pyramid Highway/US 395 Connection Project

Several years ago, the RTC commissioned a study to address the ever increasing congestion and safety challenges faced by motorists and pedestrians that travel Pyramid Way to Spanish Springs and Pyramid Lake. The study determined that it was necessary to increase capacity and improve safety along Pyramid Highway, and to find an alternative access to the U.S. 395 freeway system other than traveling on Pyramid Way south of McCarran Boulevard. This study was undertaken by Jacobs Engineering and approved by the RTC.

The alignment for the proposed Pyramid Highway to U.S. 395 Connector remains to be determined as evidenced by Figure 1-4. This graphic illustrates the locations of new road segments included in the *2040 RTP*. The proposed U.S. 395 freeway to Pyramid Freeway is indicated by the outlined area on the graphic.

Figure 1-4: Pyramid Highway/US 395 Connection Project Study Area



Source: Jacobs Engineering

1.4.4 2040 Regional Transportation Plan

Pyramid Way and McCarran Boulevard are both state highways classified as regional system arterials as part of the Regional Road System according to the Washoe County 2040 Regional Transportation Plan (RTP). Arterial roads are defined as those that "…are direct connections between freeways and other arterials, ensure continuity throughout the region and generally accommodate longer trips within the region, especially in the peak periods on high traffic volume corridors."

The plan classifies the entire length of McCarran Boulevard as a "Policy Access Control Level of High Access Control," operating at a moderate access control level. Pyramid Way, from I-80 to Queen Way, is classified as "Policy Access Control Level of Moderate Access Control," operating at a low access control level. Intersections are one of the most important components measured in terms of congestion and safety when analyzing the regional road system.

According to the RTP, the Pyramid Way/McCarran Boulevard intersection ranks as one of the most congested in the area, with traffic level of service in the area ranging from LOS "C", a passing grade, to LOS "F", a failing grade. In addition, the Pyramid Way /McCarran Boulevard intersection experiences a higher than average level of vehicle crashes.

The 2040 RTP includes projects to improve intersections or construct interchanges along the McCarran Boulevard beltway as indicated on Figure 1-3. The intersection at Pyramid Way and McCarran Boulevard is one of the locations identified for improvement.

1.5 AGENCY INVOLVEMENT

The project is located in Sparks, Nevada, which is represented on the Technical Advisory Committee (TAC) by the City of Sparks Public Works. The Sparks City Council receives regular updates on project development from their public works staff and has provided comments on this project.

As the regional transportation agency for Washoe County, the RTC is responsible for project development and funding. RTC and Washoe County Public Works representatives are members of the TAC.

NDOT is the agency responsible for both Nevada SR 659 (McCarran Boulevard) and SR 445 (Pyramid Way/Highway). Any changes in the physical roadway will require NDOT approval. NDOT representatives are members of the TAC.

The Federal Highway Administration (FHWA) is the reviewing and approval agency for the project Environmental Impact Statement. RTC has also identified FHWA funding as the primary source of funds to implement the project. FHWA representatives are members of the TAC.

Under contract with the RTC, Parsons worked with a variety of local and regional agencies to develop the data presented in this traffic study. Meetings with RTC project management staff

and the Technical Advisory Committee (TAC) included representatives from the following agencies and jurisdictions:

- Washoe County Regional Transportation Commission
- Nevada Department of Transportation
- City of Sparks
- Washoe County
- Federal Highway Administration

These committee members provided review and comment on the various technical documents, as well as discussion of the local perspective on project design and development. The consultant team assisted the agency representatives with presentations to local governmental bodies, including the Sparks City Council and the RTC Board of Directors.

1.6 PROJECT MILESTONES

The RTC included this project in the 2030 Regional Transportation Plan, which was adopted in 2004. The RTC contracted with Parsons in 2005 to analyze numerous alternatives for intersection improvements. Below are some of the major milestones in the history of the project:

- January 11, 2006
  Technical Advisory Committee (TAC) meetings began.
- March 14, 2006
  TAC provided an additional evaluation of alternatives.
- May 9, 2006
  RTC held a public information meeting in Sparks, Nevada.
- February 17, 2007
  Workshop held with RTC Board of Directors.
- April 25, 2007
  RTC staff made a presentation to the Sparks City Council about planned transportation projects in the city, including plans for the Pyramid Way and McCarran Boulevard intersection.
- September 4, 2007
  Environment Impact Statement notice was published in the Federal Register; the environmental review and public outreach process began.
- September 2007 – May 2009
  SAFETEA-LU Early Review/Scoping meetings held.
- June 2008 – December 2008
  2040 traffic demand model development completed and the 2040 Regional Transportation plan approved. Parsons directed by RTC to reanalyze the project 2018 and 2030 traffic using 2040 model traffic.

- August - September 2009
  The 2018 and 2030 No Build traffic analysis was completed using traffic data from the 2040 Regional Transportation Plan forecast model.
- May - July 2009
  Environmental field studies for Historical and Cultural Interest properties started.
- September - December 2009
  An evaluation matrix was developed to reduce the number of build alternatives. The Pyramid Grade Separation over McCarran was dropped from further consideration due to excessive grades on the bridge ramp between Roberta Lane and York Way.
- January 22, 2010
  RTC Board expresses concern about the amount of right of way needed for the project and directs staff to hold a series of public meetings to make citizens aware of the project impacts.
- March - April 2010
  RTC Planning develops an Interim Consensus Forecast that reflects a reduction in 2030 population and employment. RTC directs Parsons to reanalyze the 2030 traffic using the traffic data from the Interim Consensus Forecast model. Analysis results show the number of lanes on Pyramid Way can be reduced from 8 to 6 and on McCarran Boulevard from 6 to 4 lanes west of Pyramid Way. The reduction in 2030 traffic allows for the Eastbound to Northbound Direct Connector build alternative to be eliminated from further consideration leaving the Expanded Intersection build alternative as the preferred build alternative.
- March 2010 - April 2011
  RTC holds numerous large group and small group public meetings to discuss a number of issues including project right of way needs, landscaping, impact to public street access and the Pyramid Way/ Queen Way intersection.
- March - May 2011
  Environmental field studies for Noise analysis completed. Technical reports for the Environmental Document are underway.

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2 EXISTING CONDITIONS

2.1 LAND USE AND DEMOGRAPHIC CHARACTERISTICS

2.1.1 Population and Employment

Washoe County has seen consistent growth during the decade prior to 2007 in both population and employment. Between 1990 and 2005, U.S. census data indicated that the county population increased from 254,000 to 396,421. During this same time, employment increased from 132,000 to 216,000. Figure 2-1 illustrates these employment and population increases prior to the 2007 economic downturn.

The Nevada State Demographer estimates the county's population is 418,061 as of 2007, which reflects a slowdown of year-to-year growth in the housing sector. The recently released 2010 Census data show the county population at 421,407 which is a very modest increase over the 2007 population. Table 2-1 indicates the recent history of housing unit permits in Washoe County. After 2007 the growth in housing took a dramatic decline.

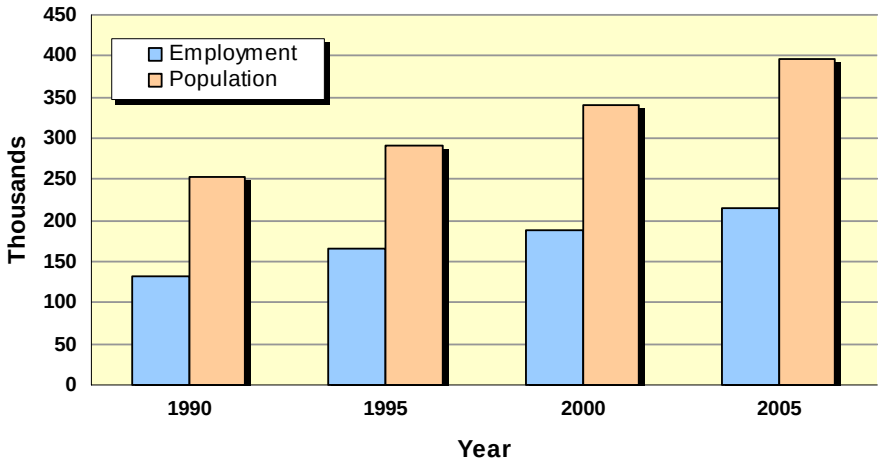
2.1.2 Land Coverage

Figure 2-2 illustrates the coverage of land in the Reno/Sparks metropolitan area. Development is most dense around the city centers and is generally arrayed along transportation corridors, e.g., I-80 running east–west and U.S. 395 running north–south. The graphic illustrates that the Pyramid Highway corridor is not fully developed between the natural topography features which form the valley it serves. The population of Spanish Springs, for example, rose from 9,018 as of the 2000 Census to 12,396 as of 2009—a growth of 33.74 percent. Buildable land is available to support a doubling of population in the northern Sparks and Spanish Springs spheres of influence.

2.2 VEHICLE MILES OF TRAVEL

The growth in population and employment is a major factor in the increase of annual vehicle miles traveled (VMT) in Washoe County. Additionally, much of the residential development prior to the 2007 downturn in the economy has occurred in outlying areas. As a result, trip lengths for all trip purposes have increased. Figure 2-3 shows the estimated annual VMT in Washoe County from 1990 to 2006. In 2006, there was more than 3.5 billion VMT as compared with 2.2 billion in 1990, which equates to a 53 percent increase. Figure 2-4 shows the increase in population and VMT in Washoe County. The data shown in Figures 2-1, 2-2, 2-3, 2-4, 2-6, 2-7 and Table 2-1 are primarily from the 2008 timeframe. Since the 2008 traffic analysis used future traffic from the 2040 RTP travel demand forecast model no attempt was made to update the data in these figures and table.

Figure 2-1: Washoe County Population and Employment



Source: Washoe County 2040 Regional Transportation Plan, Regional Transportation Commission of Washoe County, November 21, 2008

Table 2-1: Permitted Housing Units in Washoe County

YEAR ISSUED	YEAR COMPLETED	UNITS
2000	2001	4,260
2001	2002	3,662
2002	2003	3,576
2003	2004	4,954
2004	2005	5,692
2005	2006	6,108
2006	2007	3,042
2007	2008	1,939
January through April 2008		324
Average permits per year, 2000 to 2006		4,471
Difference of 2007 from average		–2,532
Percent difference from average		–57%

Source: Nevada County Population Projections 2008 to 2028, Nevada Small Business Development Center, dated August 2008

Figure 2-2: Land Coverage Map

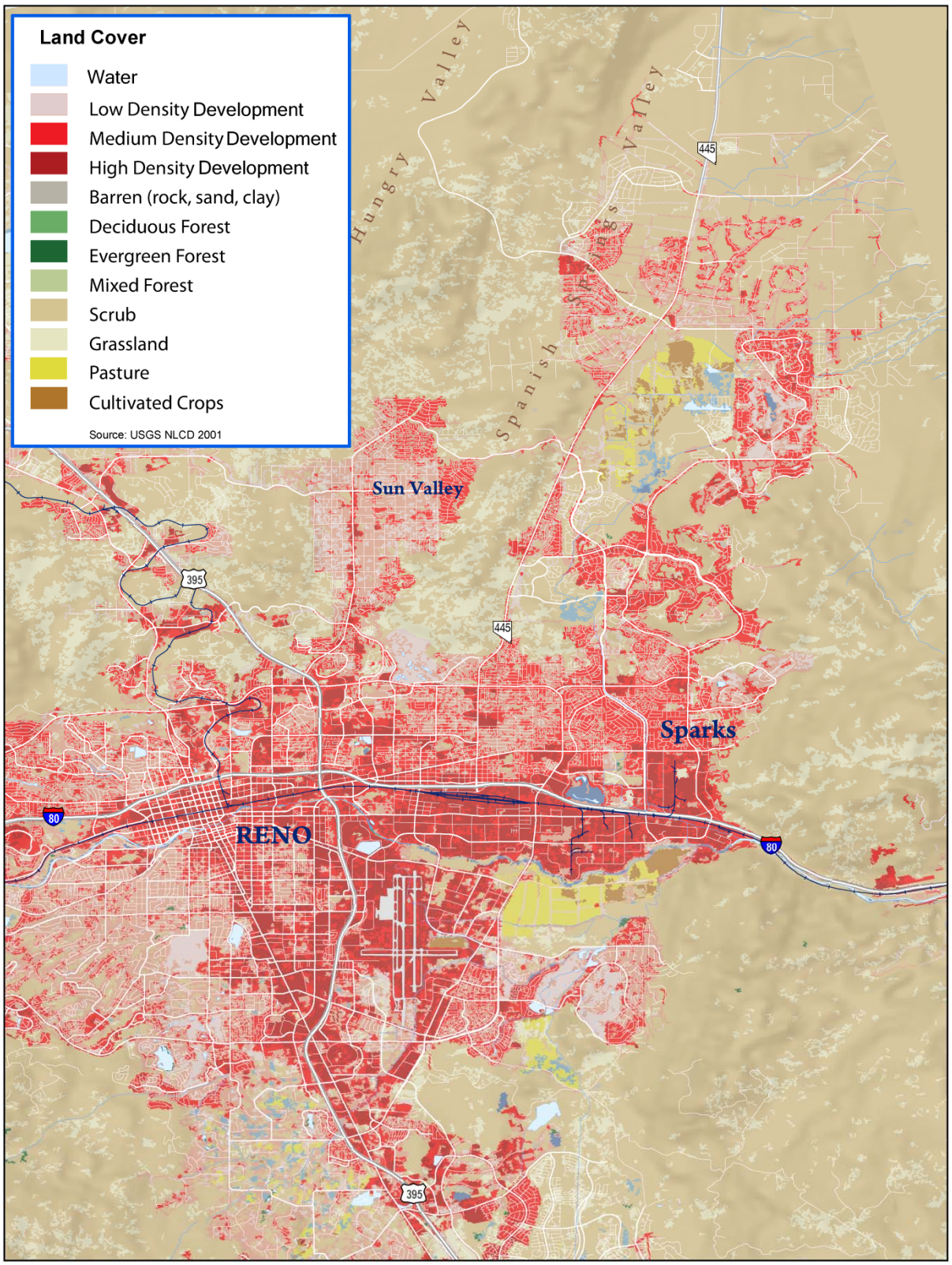
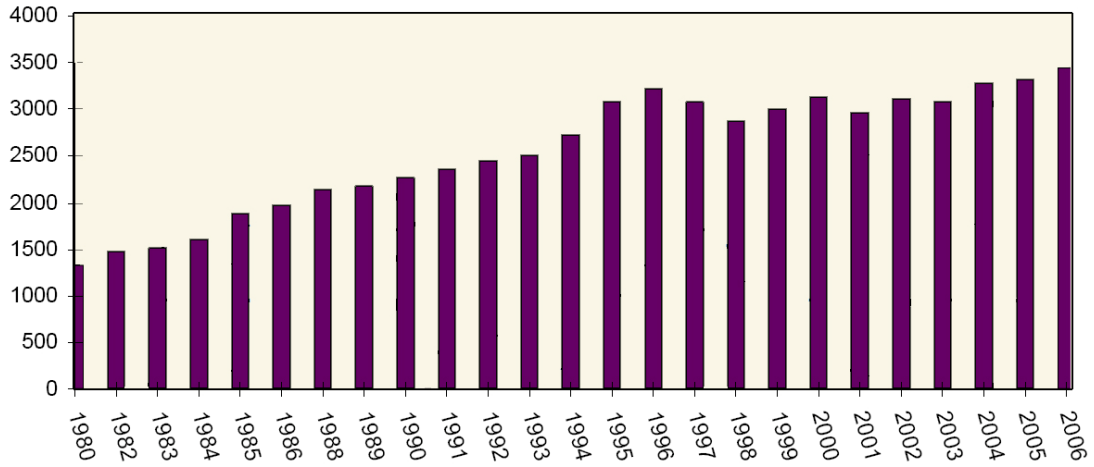
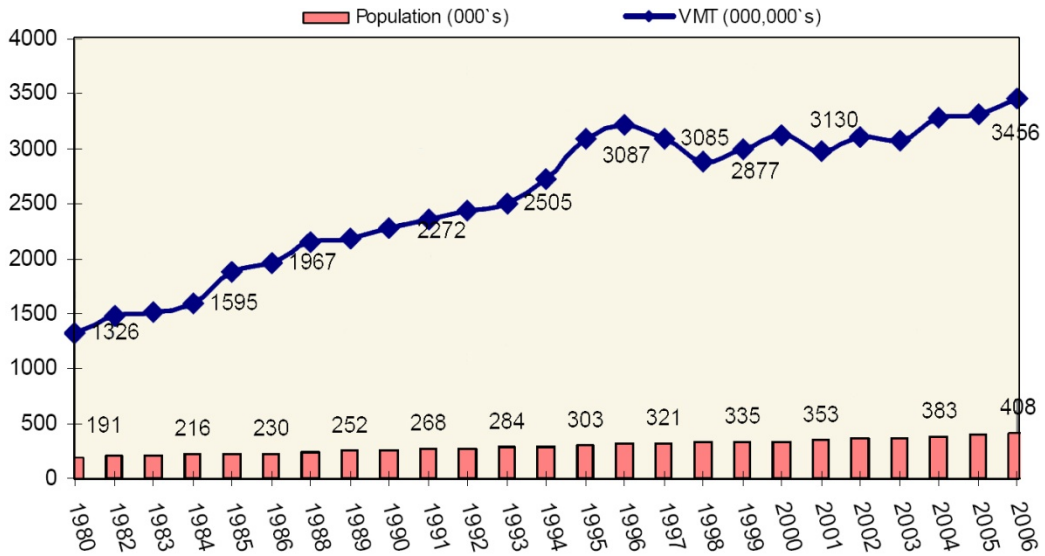


Figure 2-3: Washoe County Annual Vehicle Miles Traveled



Source: Washoe County 2040 Regional Transportation Plan, Regional Transportation Commission of Washoe County, dated November 21, 2008

Figure 2-4: Washoe County Vehicle Miles Traveled and Population Growth



Source: Washoe County 2040 Regional Transportation Plan, Regional Transportation Commission of Washoe County, dated November 21, 2008

2.3 METRO AREA TRAFFIC LEVEL OF SERVICE

Level of Service (LOS) is the term used by traffic engineers to explain how effectively a roadway segment or intersection operates as perceived by the transportation system user. Similar to the grading system used in schools where "A" is the best and "F" is the worst, the six traffic LOS range from LOS "A" (high speed and high residual capacity with minimal delay) to LOS "F" (low speed and no residual capacity with high levels of delay). Figure 2-5 illustrates LOS at an urban intersection and Table 2-2 describes the conditions experienced at different LOS.

Table 2-3 presents level of service thresholds used by RTC to identify congested roadway segments.

Based on these thresholds, Figure 2-6 and 2-7, reproduced from the 2040 RTP; identify congested roadway segments as of 2005. Despite reductions in VMT due to the economic downturn, the sections of roadway shown in Figures 2-6 and 2-7 are still experiencing congestion.

Pyramid Way approaching McCarran Boulevard is identified on Figure 2-7 as being congested along with McCarran Boulevard to the west of Pyramid Way.

Figure 2-5: Traffic Level of Service Illustration

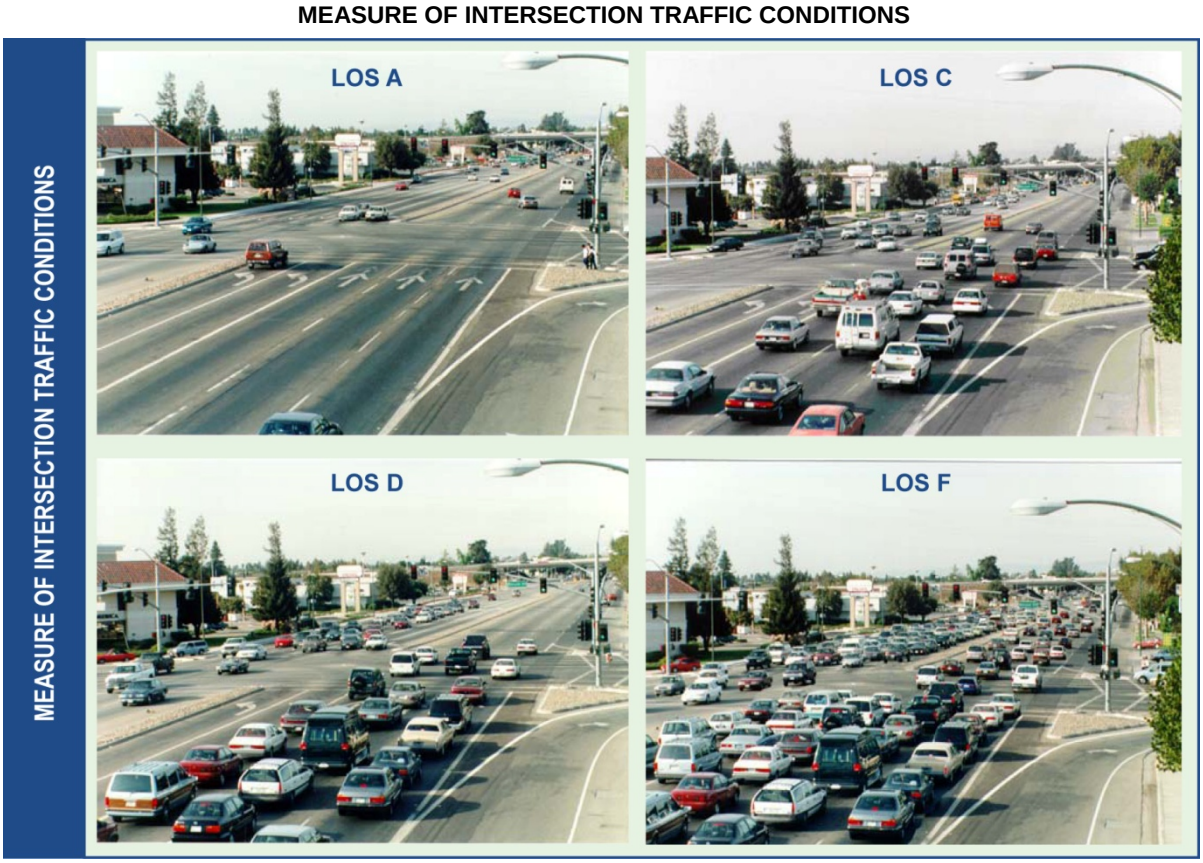


Table 2-2: Level of Service Definitions

LOS	SIGNALIZED INTERSECTION	UNSIGNALIZED INTERSECTION	ROADWAY (Daily)
A	Uncongested operations; all queues clear in a single signal cycle. *Average Delay < 10 sec*	Little or no delay. *Average Delay 0-10 sec*	Free flow. Speed > 35 mph
B	Uncongested operations; all queues clear in a single cycle. *Average Delay > 10-20 sec*	Short traffic delays. *Average Delay > 10-15 sec*	Free flow, presence of other vehicles noticeable. Speed > 28-35 mph
C	Light congestion, occasional backups on critical approaches. *Average Delay > 20-35 sec*	Average traffic delays. *Average Delay > 15-25 sec*	Ability to maneuver and select operating speed affected. Speed > 22-28 mph
D	Significant congestions of critical approaches, but intersection functional. Cars must wait more than one cycle during short peaks. No long queues formed. *Average Delay > 35-55 sec*	Long traffic delays. *Average Delay > 25-35 sec*	Unstable flow, speeds and ability to maneuver restricted. Speed > 17-22 mph
E	Severe congestion; long queues on critical approaches. Blockage of intersection if no protected turning movements. Traffic queue may block nearby intersections upstream of critical approaches. *Average Delay > 55-80 sec*	Very long traffic delays, failure, extreme congestion. *Average Delay >35-50 sec*	At or near capacity, flow quite unstable. Speed > 13-17 mph
F	Total breakdown, stop-and-go operation. *Average Delay > 80 sec*	Intersection blocked by external causes. > 50 sec	Forced flow, breakdown. Speed <or = 13 mph

Source: 2000 Highway Capacity Manual, Chapters 15, 16 and 17

Table 2-3: Average Daily Traffic Level of Service Thresholds by Facility Type for Roadway Planning

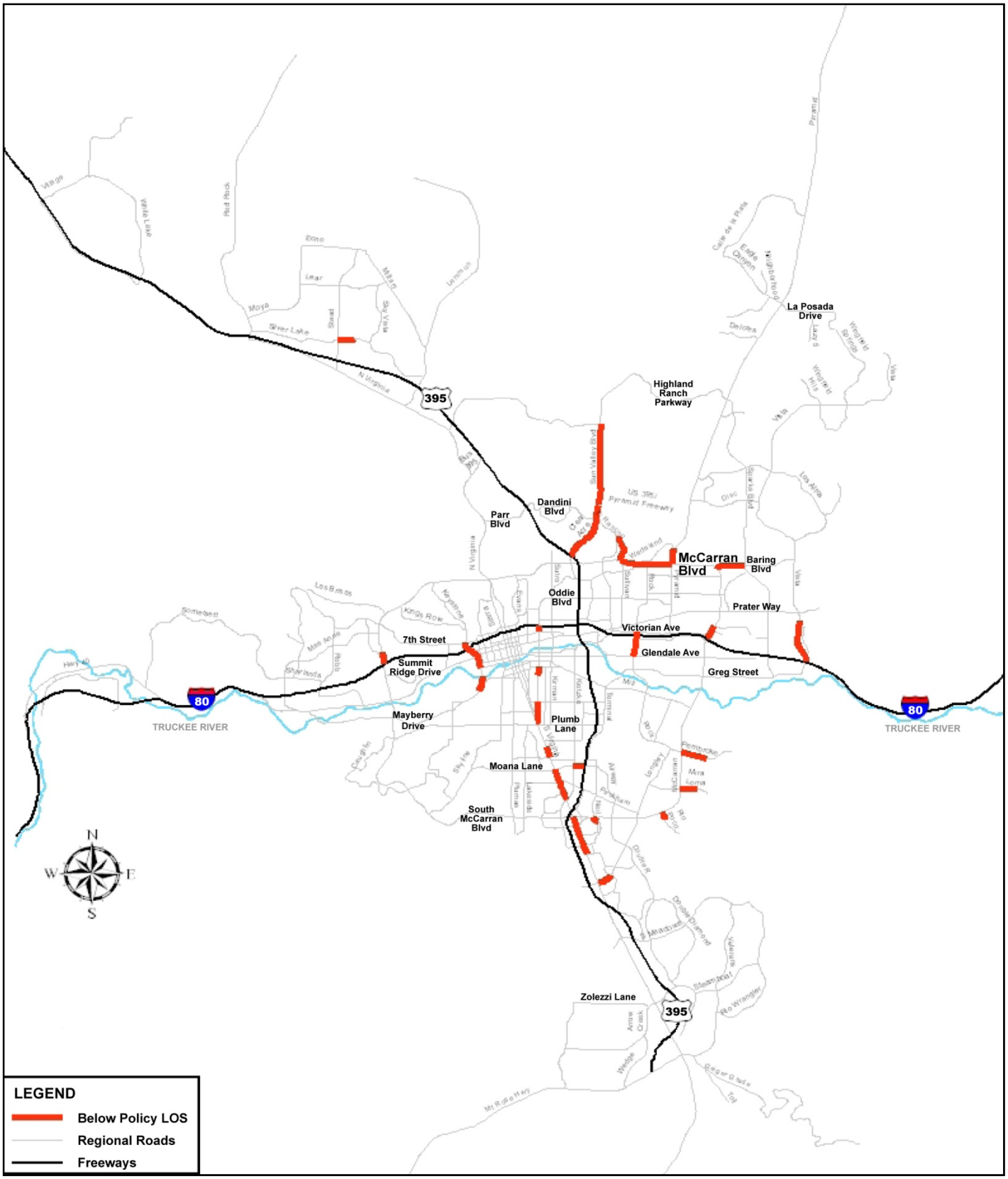
FACILITY TYPE	MAXIMUM SERVICE FLOW RATE (Daily for Given Service Level)				
NUMBER OF LANES	LOS A	LOS B	LOS C	LOS D	LOS E
Freeway					
4	≤28,600	42,700	63,500	80,000	90,200
6	≤28,300	61,200	91,100	114,000	135,300
8	51,100	81,500	121,400	153,200	180,400
10	63,800	101,900	151,800	191,500	225,500
Arterial—High Access Control					
2	N/A	9,400	17,300	19,200	20,300
4	N/A	20,400	36,100	38,400	40,600
6	N/A	31,600	54,700	57,600	60,900
8	N/Z	42,500	73,200	76,800	81,300
Arterial—Moderate Access Control					
2	N/A	5,500	14,800	17,500	18,600
4	N/A	12,000	32,200	35,200	36,900
6	N/A	18,800	49,600	52,900	55,400
8	N/A	25,600	66,800	70,600	73,900
Arterial—Low Access Control					
2	N/A	N/A	6,900	13,400	15,100
4	N/A	N/A	15,700	28,400	30,200
6	N/A	N/A	24,800	43,100	45,400
8	N/A	N/A	34,000	57,600	60,600
Arterial—Ultra-Low Access Control					
2	N/A	N/A	6,500	13,300	14,200
4	N/A	N/A	15,300	27,300	28,600
6	N/A	N/A	24,100	41,200	43,000
8	N/A	N/A	33,300	55,200	57,400
Collector—Ultra-Low Access Control*					
2	N/A	N/A	7,300	8,500	9,100

Source: Washoe County 2040 Regional Transportation Plan, Regional Transportation Commission of Washoe County, dated November 21, 2008.

Figure 2-6: Existing Freeway Congestion—2005 *(below policy level of service)*

Source: Regional Transportation Commission of Washoe County, *Washoe County 2040 Regional Transportation Plan,* dated November 21, 2008.

Figure 2-7: Existing Regional Road Congestion—2005 *(below policy level of service)*



Source: Regional Transportation Commission of Washoe County, *Washoe County 2040 Regional Transportation Plan,* dated November 21, 2008.

2.3.1 Intersection Level of Service

Intersections are one of the most important components to measure in terms of congestion. Insofar as the LOS at the Pyramid Way/McCarran Boulevard project intersections, Figure 2-8 illustrates the 2010 traffic flows approaching and utilizing six key study intersections at or near this location, while Figure 2-9 indicates the number of existing roadway traffic lanes serving the through and turning movement volumes. A comparison of the 2006 and 2010 intersection level of service is summarized on Table 2-4 for these six key study intersections. This comparison was done to show the impact of traffic volume changes that occurred following the economic downturn in 2007. Some of the intersection LOS improved during the AM peak as the result of reduced traffic volumes but degraded during the PM peak because traffic volumes increased during that time period.

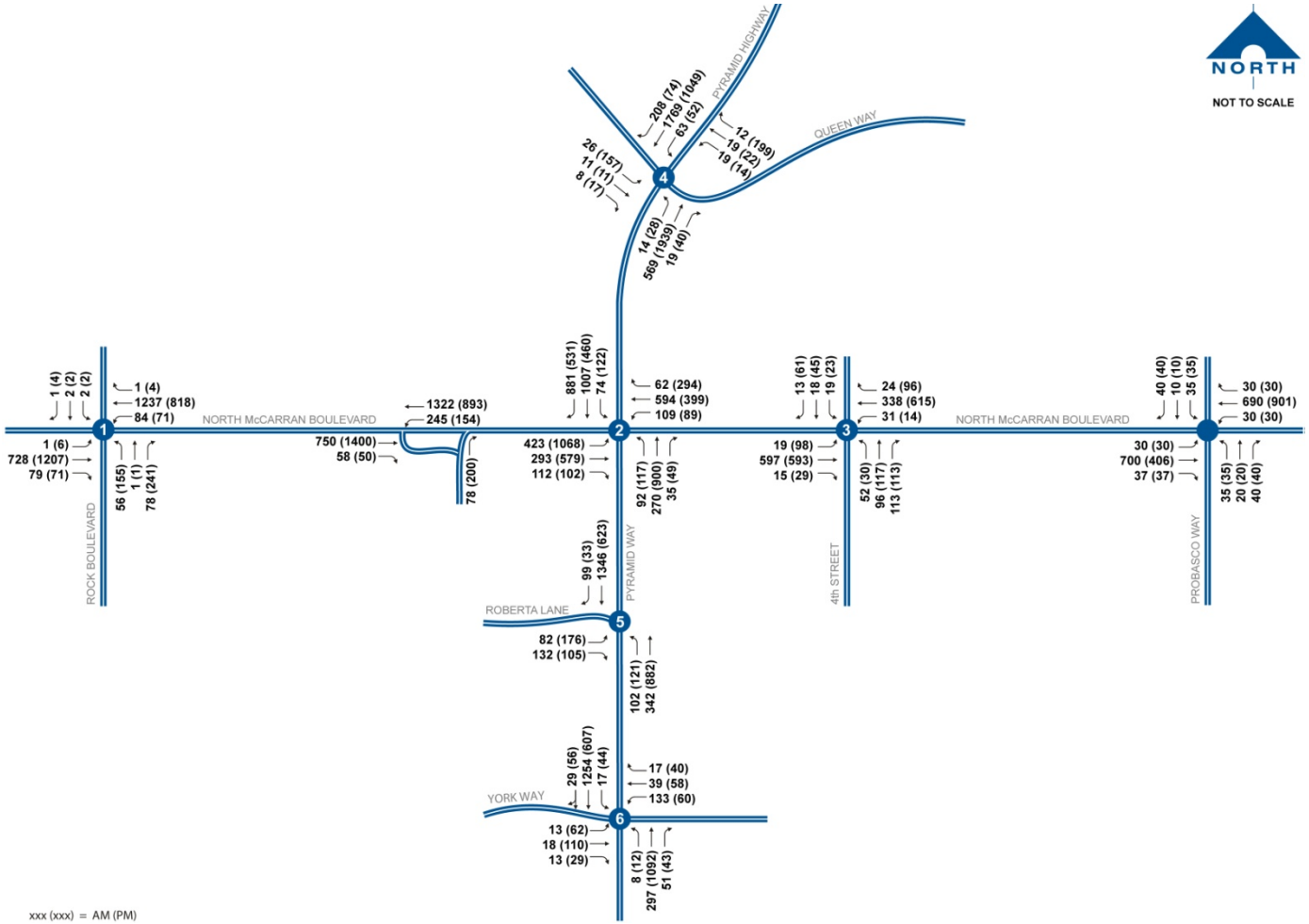
2.4 LOCAL CIRCULATION AND ACCESS

Figure 2-10, Local Traffic Control and Access, shows the signalized intersections, other public street intersections, and driveways near the crossing of Pyramid Way and McCarran Boulevard. McCarran Boulevard was developed as an at-grade expressway facility with two through lanes per direction, separated by a raised median and typically flanked by 8-foot wide outside shoulders. Access is generally limited to intersecting north–south arterials and collector streets. From west to east, the public street intersections along McCarran Boulevard are as follows:

INTERSECTION	CONTROL DEVICE	APPROXIMATE SPACING (FEET)
Rock Boulevard	Signalized	
		2650
Pyramid Way	Signalized	
		1150
Fourth Street	Signalized	
		2250
Probasco Way	Signalized	

There are no sidewalks along McCarran Boulevard except on the south side within about 700 feet west of Pyramid Way. The RTC's Citifare bus service in the area of interest is limited to Route 2, which travels north on Rock Boulevard, east on McCarran Boulevard and south on Pyramid Way without stopping along McCarran Boulevard. Going westbound, Route 2 follows westbound York Way (not westbound McCarran Boulevard). There are no bike lanes along Pyramid Way within Sparks, but the RTP's Bicycle and Pedestrian Element calls for future bike lanes along the full length of McCarran Boulevard and Pyramid Way, within the urban area.

Figure 2-8: 2010 AM (PM) Peak Hour Traffic Volumes



PARSONS

Figure 2-9: 2010 Existing Peak Hour Traffic Volumes and Lane Geometry

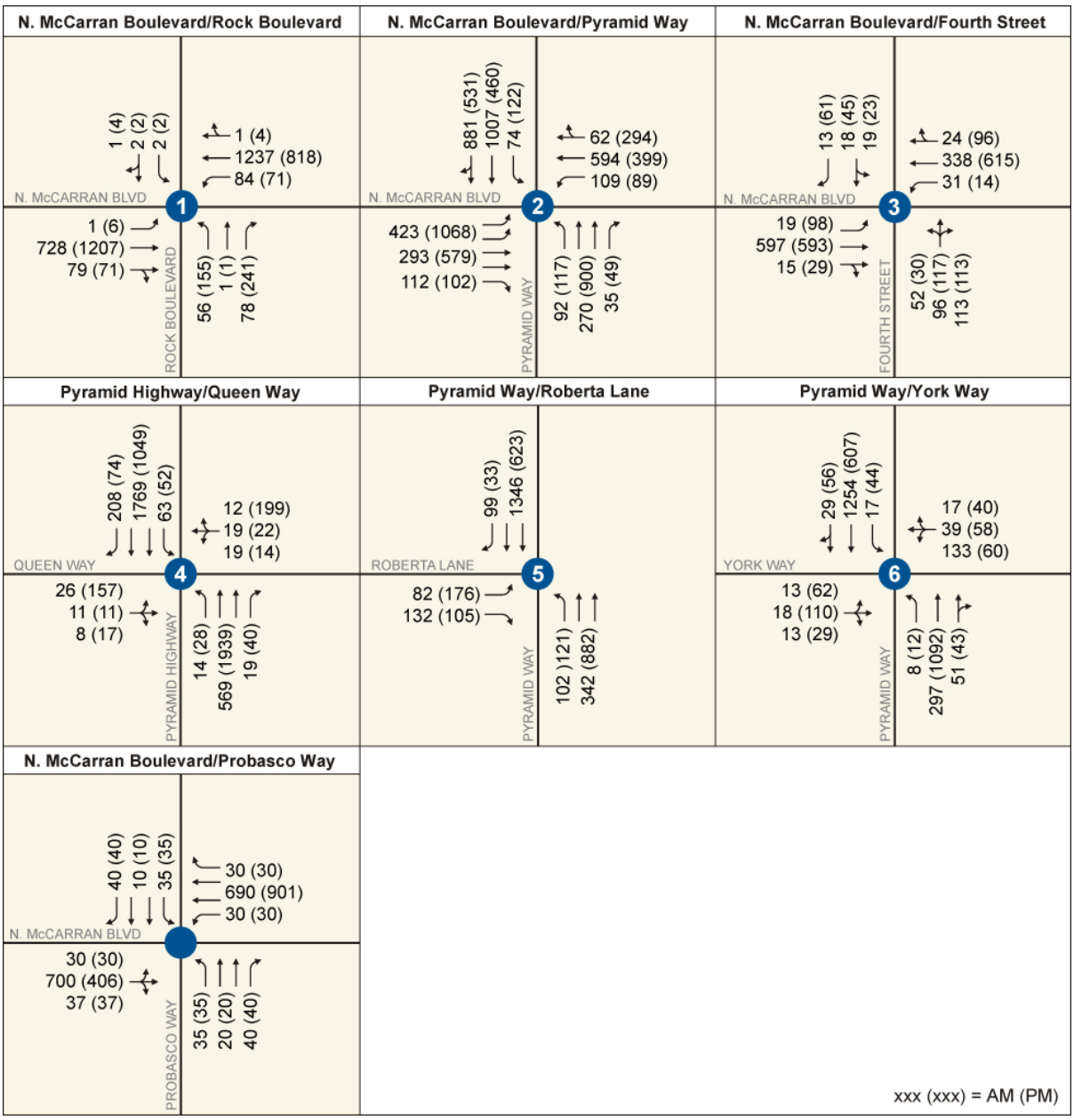
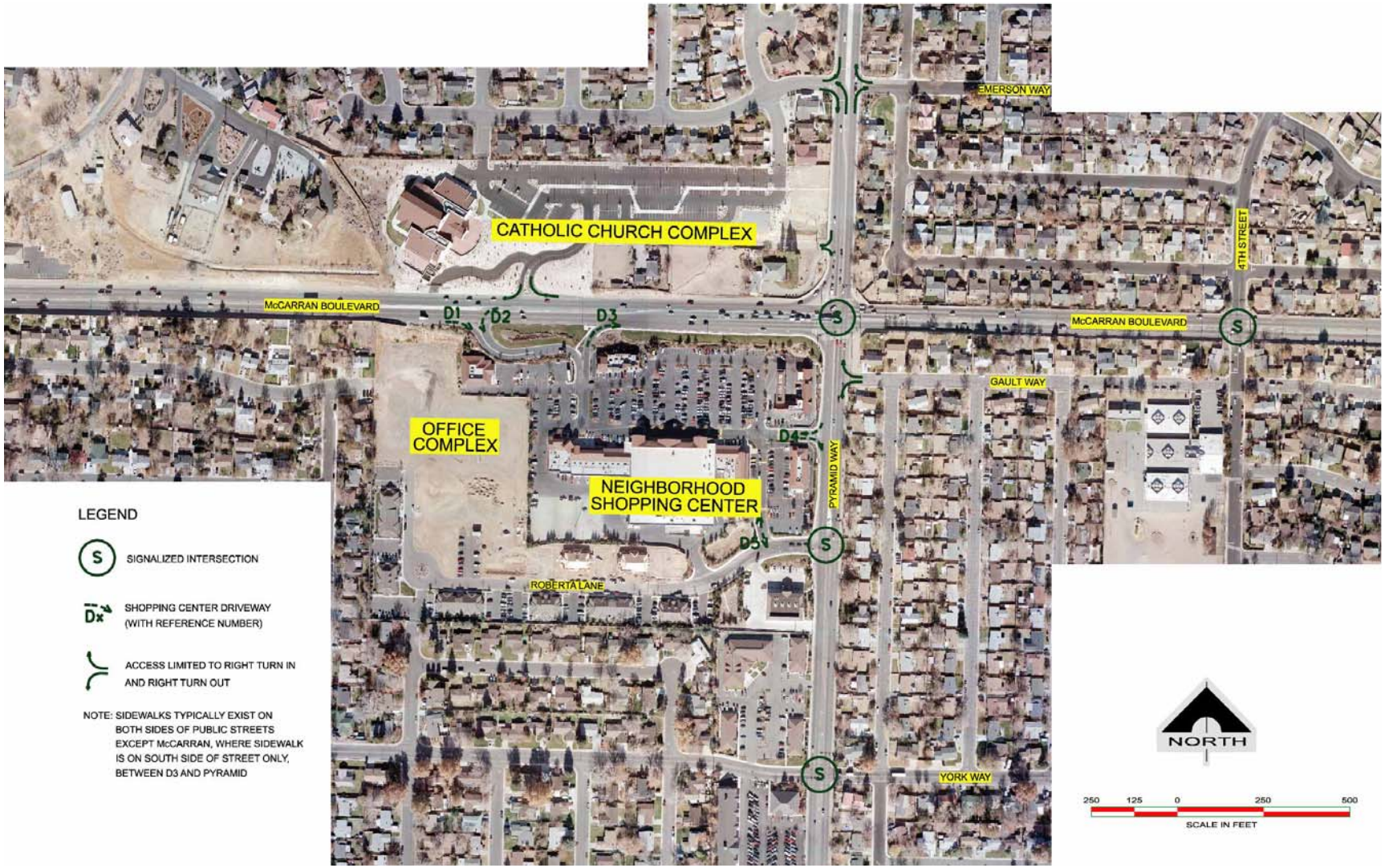


Table 2-4: Existing Intersection Level of Service Summary (Years 2006/2010 Comparison)

NO.	INTERSECTION	AM PEAK		PM PEAK	
		2006	2010	2006	2010
1	N. McCarran Boulevard and Rock Boulevard	C	A	C	E
2	N. McCarran Boulevard and Pyramid Way	F	E	F	F
3	N. McCarran Boulevard and Fourth Street	B	B	B	C
4	Pyramid Way and Queen Way	E	D	C	C
5	Pyramid Way and Roberta Lane	D	B	B	B
6	Pyramid Way and York Way	C	A	B	B

Source: Parsons
Analysis Tool: VISSIM

Figure 2-10: Local Traffic Control and Access



PARSONS

Pyramid Way provides two through lanes in each direction, separated by raised medians near McCarran Boulevard. In some segments, the equivalent of four-foot-wide outer shoulders exists, except near intersections and driveways where right-turn lanes are added. From north to south, the public street intersections along Pyramid Way are shown in the following table:

INTERSECTION	CONTROL DEVICE	APPROXIMATE SPACING (feet)
Wedekind Road/Queen Way	Signalized	
		1050
Emerson Way	Right-in/right-out in both directions, with northbound-to-westbound left turn permitted	
		700
McCarran Boulevard	Signalized	
		650
Roberta Lane	Signalized	
		650
York Way	Signalized	

In addition, Gault Way has right-in/right-out along northbound Pyramid Highway, just south of McCarran Boulevard, and Mercy Court has right-in/right-out along northbound Pyramid Way south of Queen Way.

Pyramid Way and most other public streets in the area, except for McCarran Boulevard, have abutting sidewalks on both sides, with limited outer border areas along the right-of-way limit. There are no existing bicycle facilities or public transit on Pyramid Way (except for Route 2 on the southbound roadway, south of McCarran Boulevard). The RTC Public Transportation Element indicates through bus service may be added along Pyramid Way/Highway in the future.

As noted previously, Figure 2-10 shows existing driveways near the Pyramid Way/ McCarran Boulevard intersection. In the northwest quadrant, two older residences have a driveway along southbound Pyramid Way, with movements limited to right-in/right-out. Along westbound McCarran Boulevard, the Immaculate Conception Catholic Church complex has a driveway limited to right turns in and right turns out. Church-goers also use the Pyramid Way/Emerson Way intersection for ingress to the church. Exiting traffic from Emerson Way must turn right onto southbound Pyramid Way.

The neighborhood shopping center in the southwest quadrant has five driveways, as follows:

DRIVEWAY REF. NO.	LOCATION	ACCESS LIMITATIONS
D1	Along eastbound McCarran Boulevard	Right-turn in only
D2	Along westbound McCarran Boulevard	Left-turn in only
D3	Along eastbound McCarran Boulevard	Right-turn out only
D4	Along southbound Pyramid Way	Right-turn In, right-turn out only
D5	Along Roberta Lane, about 150 feet west of Pyramid Way	Access to/from northbound and southbound Pyramid Way, with signalized Roberta Lane intersection

NDOT staff have advised that driveway D2 (opening in raised median along McCarran Boulevard) was approved with a condition that NDOT could close the driveway in the future, to ensure efficient and safe through traffic operations along McCarran Boulevard. It has been observed that eastbound drivers are using the median opening for the D2 driveway illegally to access the Catholic Church driveway. Given the restrictions on local traffic and access, some motorists make U-turn maneuvers at the Pyramid Way/McCarran Boulevard intersection and adjacent intersections. At the Pyramid Way/McCarran Boulevard intersection, crosswalks are delineated over all legs. Crosswalks are also delineated over Pyramid Way at the Queen Way, Roberta Lane and York Way intersections.

2.5 CRASH SUMMARY AND ANALYSIS

Crash data was obtained from the City of Sparks Police Department and the NDOT Traffic and Safety Division for the Pyramid Way/McCarran Boulevard intersection. During the six-year period from 2005 to 2010, a total of 175 crashes occurred at this intersection. Approximately 130 (74 percent) of these crashes were rear-end collisions. An additional eight percent were sideswipe collisions.

Rear end collisions and sideswipe collisions are associated with congested intersections experiencing heavy turning movements. Table 2-5 shows the annual number of crashes and the corresponding crash rate for the Pyramid Way/McCarran Boulevard intersection. These crash rates are a symptom of the congestion occurring at this intersection and provide a further indication of need for improvement action. The crash rate dropped slightly in 2007 and 2009 because the traffic volumes decreased on Pyramid Way due to the downturn in the economy; however the number of crashes and the crash rate increased slightly in 2010.

Table 2-5: Pyramid Way/McCarran Boulevard Crashes and Crash Rates

	2005	2006	2007	2008	2009	2010
Number of Crashes	18	29	23	38	32	35
Crash Rate*	0.70	1.14	0.85	1.37	1.22	1.33

*Crashes per million vehicles entering the intersection.

2.6 PROGRAMMED IMPROVEMENT PROJECTS

In the *Washoe County 2040 Regional Transportation Plan*, Table 3-6, 2040 Street and Highway System Congested Segments/New Facilities identifies the following planned Regional Road System improvements, which if/when implemented, would affect the Pyramid Way/McCarran Boulevard intersection.

SEGMENT	LIMITS	ESTIMATED TIME OF IMPROVEMENT	NOMINAL IMPROVEMENT	ESTIMATED COST
Pyramid Highway	La Posada Drive to U.S. 395/Pyramid Freeway	2014–2018	Convert to 6-lane freeway	$345,125,000
McCarran Boulevard	Entire length	2014–2018	6 grade separated intersections	$240,000,000
McCarran Boulevard	El Rancho Drive to Pyramid Way/Highway	2014–2018	Widen 4 to 6 lanes	$ 12,750,000
Pyramid Way	U.S. 395/Pyramid Freeway to McCarran Boulevard	2014–2018	Widen 4 to 6 lanes	$ 3,148,000
Pyramid Way	U.S. 395/Pyramid Freeway to McCarran Boulevard	2019–2030	Widen 6 to 8 lanes	$ 22,260,000

No improvements are planned for any other roadways within the study area, including Rock Boulevard, Oddie Boulevard, Wedekind Road, or Greenbrae Drive.

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3 TRAFFIC VOLUME FORECAST

3.1 POPULATION AND EMPLOYMENT ASSUMPTIONS

The projection of future population and employment is a critical part of the transportation planning process because the amount and location of development determines the volume of traffic on each street. Table 3-1 shows population, dwelling, and employment forecasts for Washoe County for the years 2007, 2013, 2018, 2030, and 2040. Planning areas are shown on Figure 3-1. The projections of future growth are based on data received from local governments in early 2007. A new consensus forecast was published and approved in June 2008 and was reflected in the 2040 RTP approved in November 2008. The new population forecasts are somewhat lower than the original forecasts, reflecting the continued slowdown in the housing sector and the overall economy. To reflect this slower pace of development, the 2040 RTP acknowledges the updated population forecasts by identifying a range of years over which population milestones will be reached. These horizons are listed in Table 3-2 alongside estimates published by the Nevada State Demographer.

Table 3-1 highlights growth forecasts for the areas most directly served by the Pyramid Way/Pyramid Highway corridor: Sparks Sphere (Planning Area 13) and Spanish Springs (Planning Area 22). The Washoe County RTC travel demand model predicts that the county population will reach 577,000 by 2018. As a result of the economic slowdown of 2007-09, the Nevada State Demographer issued revised population estimates in 2008, predicting that Washoe County will not reach this population level until several years after 2028.

Based on these revised state estimates, the previous Washoe County RTC model projections for the 2018 population listed in Table 3-1 may be reached by 2030; an increase of 92 percent over the 2007 population. Employment in these areas, also shown in Table 3-1, which was previously projected to increase by 300 percent from 2007 to 2018, may reach that level by 2030.

Figure 3-2 illustrates the location, name, and size of approved land development in the Sparks sphere of influence, which is served by and funnels toward the Pyramid Way/ McCarran Boulevard intersection.

3.2 PEAK HOUR TRAFFIC VOLUMES

Table 3-3 shows the existing 2010 peak hour volumes and the forecasted peak hour volumes for 2030 for the Pyramid Way/McCarran Boulevard intersection. The 2030 forecasted traffic volumes are from the Interim Consensus forecast model that was run in early 2010.

Table 3-1: Washoe County Population and Employment Forecasts *(2007–2040)*

	PLANNING AREAS	POPULATION					EMPLOYMENT				
		2007	2013	2018	2030	2040	2007	2013	2018	2030	2040
1.	Southwest Reno	23,486	25,266	26,808	29,660	31,639	2,337	2,341	2,341	2,341	2,341
2.	Central Reno	38,277	41,972	45,494	53,152	58,748	27,419	29,821	31,533	34,980	37,118
3.	Southeast Reno	41,800	52,398	56,049	64,118	70,800	51,978	55,120	58,481	65,588	71,225
4.	Northwest Reno	38,212	43,821	46,765	54,157	60,729	6,348	8,186	9,356	10,053	10,522
5.	West University	6,328	6,770	7,161	8,205	9,053	4,764	5,136	5,566	6,677	7,609
6.	Northeast Reno	22,548	24,529	26,576	31,525	35,565	11,214	13,008	14,470	17,875	20,313
7.	North Reno	8,727	9,612	10,491	12,909	15,226	3,954	5,195	6,302	8,053	9,125
8.	Stead	11,171	12,404	13,570	16,801	19,574	4,179	5,606	6,486	9,616	10,915
9.	Downtown Reno	12,800	15,496	18,295	25,135	30,131	27,346	29,766	32,261	38,302	41,896
10.	Central Sparks	46,537	47,701	48,753	50,886	56,205	9,655	12,837	13,320	13,755	13,808
11.	Sparks Industrial	1,155	2,587	3,859	4,898	6,789	29,592	32,790	34,768	36,800	37,631
12.	Downtown Sparks	3,274	4,479	5,320	6,482	9,517	5,102	6,054	6,872	8,681	9,012
13.	Sparks Sphere	20,549	40,551	42,532	46,563	51,994	3,529	13,428	17,811	20,092	20,092
14.	Northeast Sparks	22,641	25,583	25,638	25,652	26,676	3,010	3,067	3,090	3,164	3,164
15.	Forest	4,397	5,290	6,510	8,255	9,018	1,080	1,403	1,838	3,498	4,717
16.	Verdi	3,335	4,154	4,975	6,977	8,464	3,630	5,667	7,233	12,462	16,884
17.	North Valleys	14,899	27,410	44,680	60,294	62,678	2,757	8,382	15,695	27,411	30,857
18.	Southwest Truckee Meadows	11,644	16,772	19,219	25,323	27,189	2,097	3,191	4,653	8,046	10,269
19.	Southeast Truckee Meadows	10,299	20,352	42,681	57,188	61,568	1,129	1,336	1,500	1,953	2,301
20.	South Valleys	6,162	7,187	8,088	9,654	10,081	853	1,486	2,047	3,007	3,007
21.	Sun Valley	20,034	21,651	22,825	25,461	27,652	629	629	629	629	629
22.	Spanish Springs	17,028	22,181	29,455	35,842	39,808	2,114	3,536	4,336	4,744	4,819
23.	Tracy/Reno Tahoe Industrial	18	11,050	16,575	33,131	33,131	3,405	26,296	39,062	73,384	73,644
24.	Winnemucca Ranch Road Valley	0	888	4,686	27,886	27,886	0	40	293	2,943	2,943
		385,321	**490,104**	**577,005**	**720,154**	**790,121**	**208,121**	**274,321**	**319,943**	**414,054**	**444,841**

Source: Washoe County 2040 Regional Transportation Plan, dated November 21, 2008. Yellow highlight are planning areas served by Pyramid Highway.

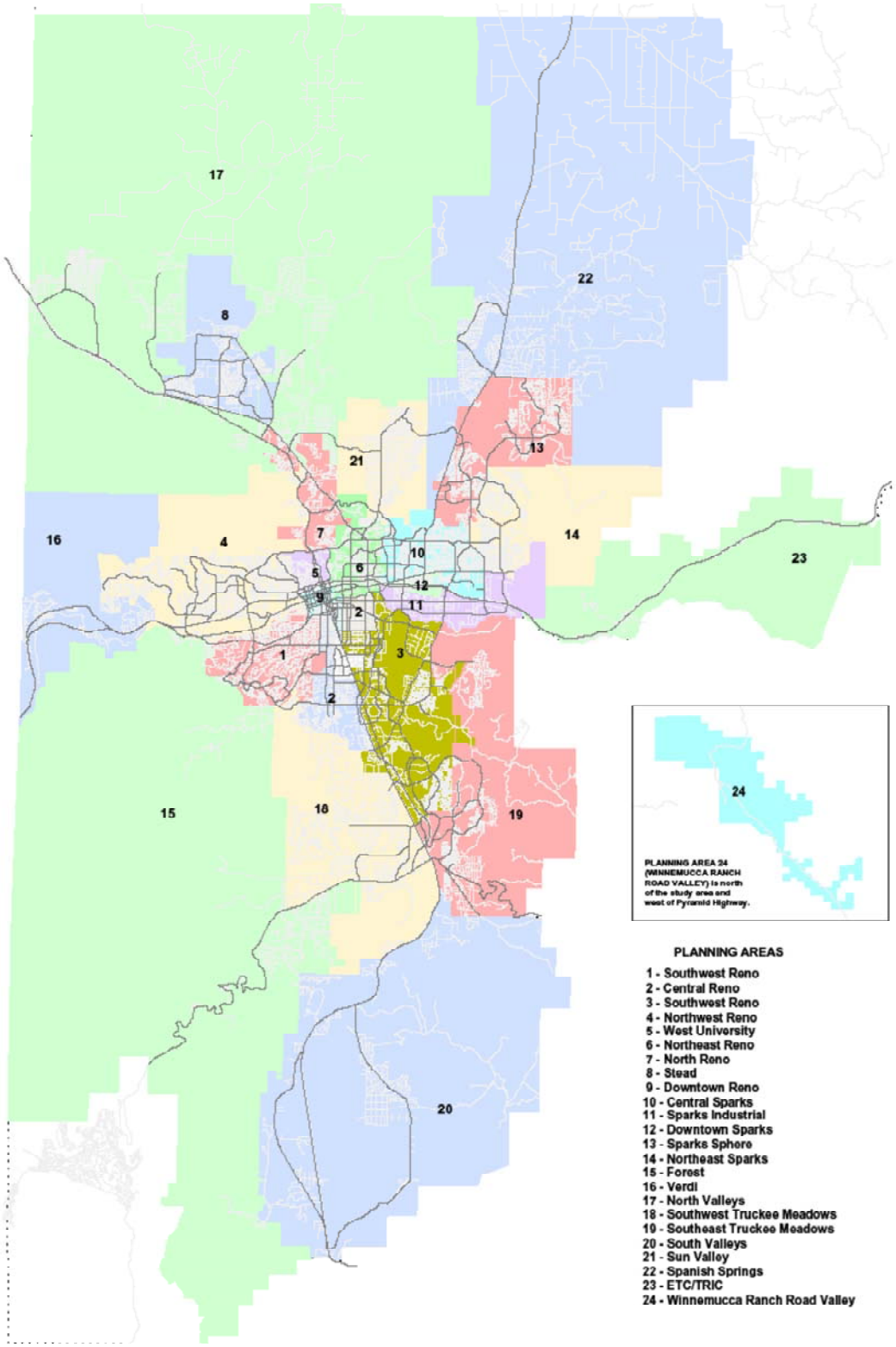

Figure 3-1: Washoe County Planning Areas

Source: Regional Transportation Commission (RTC), *Washoe County 2040 Regional Transportation Plan*, dated November 18, 2008

Table 3-2: Washoe County Population Milestones

Population Milestone	RTC Updated Timeframe[1]	Nevada State Demographer Timeframe[2]
440,000	2009–2010	2009–2010
485,000	2012–2015	2014–2015
550,000	2016–2022	2024–2025
620,000	2022–2030	N/A
730,000	2031–2039	N/A
800,000	2040–2044	N/A

[1]Washoe County 2040 Regional Transportation Plan, dated November 21, 2008
[2]Population Projections for Nevada's Counties 2008 to 2028, dated August 18, 2008

Although significant volumes of traffic will continue to use the Pyramid Way/McCarran Boulevard intersection during daylight and early evening hours throughout the week, the peak flows will be associated with the morning and evening weekday commute. Traffic demands at the intersection are expected to increase through year 2030, then decrease after the completion of the connection between the U.S. 395 freeway and Pyramid Highway, known as the U.S. 395 Connection in northeast and northern Sparks.

Figure 3-2: Approved Land Development Projects in the Sparks Sphere of Influence

DEVELOPMENT	DWELLING UNITS	COMMERCIAL	BUSINESS PARK
Stonebrook	2,135	48 acres	34 acres
Foothills at Wingfield Springs	2,280	—	—
Tierra Del Sol	115	25 acres	—
Pioneer Meadows	2,588	47 acres	109 acres
Kiley Ranch North	4,436	123 acres	143 acres
Spanish Springs Town Centre	—	41 acres	—
Sparks Crossing	—	41 acres	—
Miramonte	986		
Sparks Galleria	175	70 acres	—

Source: City of Sparks, NV

Table 3-3: Existing and Forecasted Peak Hour Volumes (Interim Consensus Forecast RTP model)

PYRAMID WAY AND MCCARRAN BOULEVARD	EXISTING (2010)		Build (2030)	
	AM	PM	AM	PM
Northbound				
Left turn	92	117	158	188
Through	270	900	465	1450
Right turn	35	49	60	79
Southbound				
Left turn	74	122	141	100
Through	1007	460	1925	375
Right turn	881	531	1684	433
Eastbound				
Left turn	423	1068	252	1170
Through	293	579	174	634
Right turn	112	102	67	112
Westbound				
Left turn	109	89	140	79
Through	594	399	766	355
Right turn	62	294	80	262
Total through intersection	**3952**	**4710**	**5912**	**5237**

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4 IMPROVEMENT CONCEPTS

4.1 IDENTIFICATION OF POTENTIAL IMPROVEMENT CONCEPTS

On February 6, 2006, representatives from the RTC, Washoe County, NDOT, the City of Sparks, and Parsons met as the project TAC at the NDOT District 2 Offices in Reno. After reviewing the project scope and schedule, and the existing highways and community backdrop, the basic purpose and need for improvements were discussed and a framework for evaluating improvement concepts was established.

The TAC established in 2006 that the intersection of Pyramid Way and McCarran Boulevard was operating at a poor LOS "F" during AM and PM peak periods, and traffic queues resulting from insufficient capacity at this intersection extend north, thereby negatively impacting operations along southbound Pyramid Way at Queen Way. Similar traffic queuing occurs from insufficient capacity for eastbound to northbound left turning traffic on McCarran Boulevard during the PM peak period. The TAC further agreed that given the population growth in the Spanish Springs Valley and the large number of entitled land development projects, conditions would significantly worsen without major transportation investments at the Pyramid Way/McCarran Boulevard intersection. Additionally, the group's consensus for action took into account that planned traffic relief projects, such as the Pyramid Highway/U.S. 395 Connection project that would provide a freeway connection from U.S. 395 to Pyramid Highway, are relatively expensive to construct and that funding resources are not fully identified for such massive projects. Thus, improvements to the intersection of Pyramid Way and McCarran Boulevard would be needed to address traffic needs for upwards of 20 years.

Given these considerations, 13 improvement concepts were identified for initial study:

1. Single-point urban interchange with McCarran Boulevard over Pyramid Way
2. Single-point urban interchange with Pyramid Way over McCarran Boulevard
3. Free-flowing interchange
4. Modern roundabout
5. Modern roundabout with flyover
6. Narrow, through-lane flyover
7. Elevated left turns
8. Continuous flow intersection
9. Hybrid intersection/interchange
10. Rock Boulevard/Pyramid Way one-way couplet
11. Direct connector (eastbound to northbound flyover ramp)
12. Expanded at-grade intersection
13. Pyramid Way grade separation over McCarran Boulevard

In addition to these concepts, this traffic report analyzed the No-build Alternative with the RTP improvements as the baseline condition, to which all the other alternatives are compared.

4.2 NO-BUILD ALTERNATIVE WITH REGIONAL TRANSPORTATION PLAN IMPROVEMENTS

The Streets and Highways Element of the updated Regional Transportation Plan is based on expanding Pyramid Way to three basic through lanes per direction north of McCarran Boulevard and retaining the two existing lanes of Pyramid Way in each direction south of McCarran Boulevard. McCarran Boulevard would be expanded to three through lanes in each direction west of Pyramid Way and will continue to have two through lanes in each direction east of Pyramid Way. As a long-range transportation management strategy, the RTP suggests that 12 intersections along McCarran Boulevard be grade-separated, including the Pyramid Way intersection.

For the purposes of concept screening and subsequent environmental analyses for design alternatives, it was assumed that if the No Build Alternative were exercised, the Pyramid Way /McCarran Boulevard intersection would not be modified in any way. In particular, it is assumed that in all segments within the project boundary (Pyramid Way from Queen Way to York Way and McCarran Boulevard from Rock Boulevard to Fourth Street), the existing pavement would not be widened and existing pavements and sidewalks would remain as they currently exist. Therefore, no additional right-of-way would be required. Figure 4-1 shows a current aerial view of the intersection area and a schematic view of the lane configuration.

The Pyramid Way/McCarran Boulevard intersection was analyzed using the traffic and land use assumptions that exist within the Regional Transportation Commission travel demand forecast model that was developed for the 2040 Regional Transportation Plan. Beyond the project boundary, the 2018 and 2030 No-build condition analyses assumed that all improvement projects shown in the Nevada Department of Transportation long-range plan were in place.

Traffic operating conditions and their perceptions by motorists are described and compared using LOS. These LOS are designated from “A” to “F”, with LOS “A” representing the best operating conditions (free-flow) and LOS “F” representing the worst (complete gridlock). In 2008 the RTC determined that LOS “E” is acceptable for this intersection; LOS “F” is unacceptable.

Using the VISSIM traffic analysis model, the traffic volumes for the Pyramid Way/ McCarran Boulevard intersection were analyzed in 2008 for the No-build Alternative. The traffic data and analysis results are shown in the **Appendix – 2008 No-Build Alternative Analysis Results**. The 2030 traffic projections show that the Pyramid Way/McCarran Boulevard intersection would operate at LOS “F” in both the morning and evening peak hours under the No-Build scenario. The analysis also shows the Rock Boulevard/McCarran Boulevard and Pyramid Way/Queen Way would operate at LOS “F” in both the morning and evening peak hours.

Figure 4-1: No-Build Alternative with Regional Transportation Plan Improvements Schematic Plan

4.3 INITIAL SCREENING AND CONCEPTS REMOVED FROM FURTHER CONSIDERATION

To insure that no improvement possibility would be dismissed prematurely, the initial screening of concepts did not reject concepts based solely on construction costs, right-of-way (ROW) needs, negative environmental effects, or constructability. It was recognized, however, that each concept should generally be responsive to the RTC's transportation mission. The discussion with the TAC identified the following basic requirements for candidate concepts:

- Provide sufficient capacity to accommodate peak hour vehicular traffic at LOS D or better through a year 2030 planning horizon. For the Pyramid Way/McCarran Boulevard intersection, this LOS criterion was later relaxed to LOS E.
- Be compatible with overall regional transportation planning.
- Maintain local vehicular flows and property access. Accommodate pedestrians and bicyclists.
- Pursue designs achievable without the need for design exceptions. Promote efficient and safe operations via user-friendly features.
- Facilitate winter maintenance.

As a first screening effort, on February 6, 2006, the TAC members reviewed all of the concepts listed above and agreed that six concepts should be dropped from further consideration. The six concepts dropped are the following:

- Single-point urban interchange with McCarran Boulevard over Pyramid Way
- Single-point urban interchange with Pyramid Way over McCarran Boulevard
- Free-flowing interchange
- Modern roundabout
- Modern roundabout with flyover
- Narrow, through-lane flyover.

The reasoning for removing these six concepts from further consideration is documented in the project Design Alternatives Report.

4.4 SECOND SCREENING AND ADDITIONAL CONCEPTS REMOVED FROM FURTHER CONSIDERATION

After the February 6, 2006 screening workshop, Parsons studied the eight remaining improvement concepts. On March 14, 2006, Parsons staff presented the additional evaluation of potential improvement concepts to the project TAC at a meeting held in the NDOT District 2 offices in Reno. It was explained that all seven of the remaining Build concepts could be configured to accommodate the expected through arterial traffic at an acceptable LOS. Also,

with appropriate coordination of nearby traffic signals, all of the concepts would be compatible with the RTP. However, certain of the concepts (i.e., the elevated left turns, the continuous flow intersection, and the hybrid intersection/interchange) would create significant impacts to local traffic movements and access. A Rock Boulevard/Pyramid Way one-way couplet would require making highway improvements at other locations, and existing discontinuities in the local street system would make a couplet impractical, as well as undesirable in terms of potential traffic diversions. As none of the four mentioned concepts have a major advantage in terms of operational performance, magnitude of project costs, ROW needs or minimization of overall impacts, these concepts were not recommended for further consideration.

The schematic development and evaluation of the four concepts not shortlisted for further project development include the following:

- Elevated Left Turns
- Continuous Flow Intersection
- Hybrid Intersection/Interchange
- Rock Boulevard/Pyramid Way One-Way Couplet

These four concepts were removed from further consideration and are documented in the project Design Alternatives Report.

4.5 CONCEPTS SHORTLISTED FOR FURTHER PROJECT DEVELOPMENT

After two screenings of the initial 13 concepts, the following three concepts were chosen to move from the conceptual stage to be more fully developed as build alternatives:

1. Direct connector (eastbound-to-northbound flyover ramp)
2. Expanded at-grade intersection
3. Pyramid Way grade separation over McCarran Boulevard.

These alternatives are briefly described in the following text. A detailed description of these alternatives is provided in Chapter 5, Improvement Alternatives Meeting Evaluation Criteria.

4.5.1 Direct Connector (Eastbound-to-Northbound Flyover Ramp)

The Direct Connector structure alternative would start in the McCarran Boulevard median along the eastbound roadway, rise between retaining walls, and continue on bridge structure over westbound McCarran Boulevard, eventually crossing southbound Pyramid Way on structure, before descending and merging with northbound Pyramid Way. Two independent bridges or a single bridge could be used with this concept. A single bridge could be used to permit potential re-use of lands below the structure. Figure 4-2 illustrates the aerial view, section view, and lane configuration of the Direct Connector option.

4.5.2 Expanded At-Grade Intersection

The Expanded At-grade Intersection alternative would add lanes by widening the existing pavements; respecting all local traffic flows and existing property access. A triple-left turn installation would handle heavy eastbound-to-northbound left-turn volumes at-grade. Four through lanes in each direction would be provided and all four quadrants will require exclusive right-turn lanes. Figure 4-3 illustrates the aerial view and lane configuration of the Expanded At-grade Intersection option.

4.5.3 Pyramid Way Grade Separation over McCarran Boulevard

The Pyramid Way Grade Separation alternative would provide two through lanes in each direction to carry traffic over McCarran Boulevard, while local lanes would handle traffic turning left or right onto or off of McCarran Boulevard and local traffic that could not physically take advantage of the grade separated lanes. The grade separation would begin just north of York Way, rise between retaining walls and then bridge over Roberta Lane and McCarran Boulevard. The southbound left turns from local lanes and southbound right turns from the grade separated through lanes would be prohibited at the York Way intersection. Northbound left turns would be prohibited at the Emerson Way intersection. Figure 4-4 illustrates the aerial view, section view, and lane configuration of the Pyramid Way Grade Separation over McCarran Boulevard option.

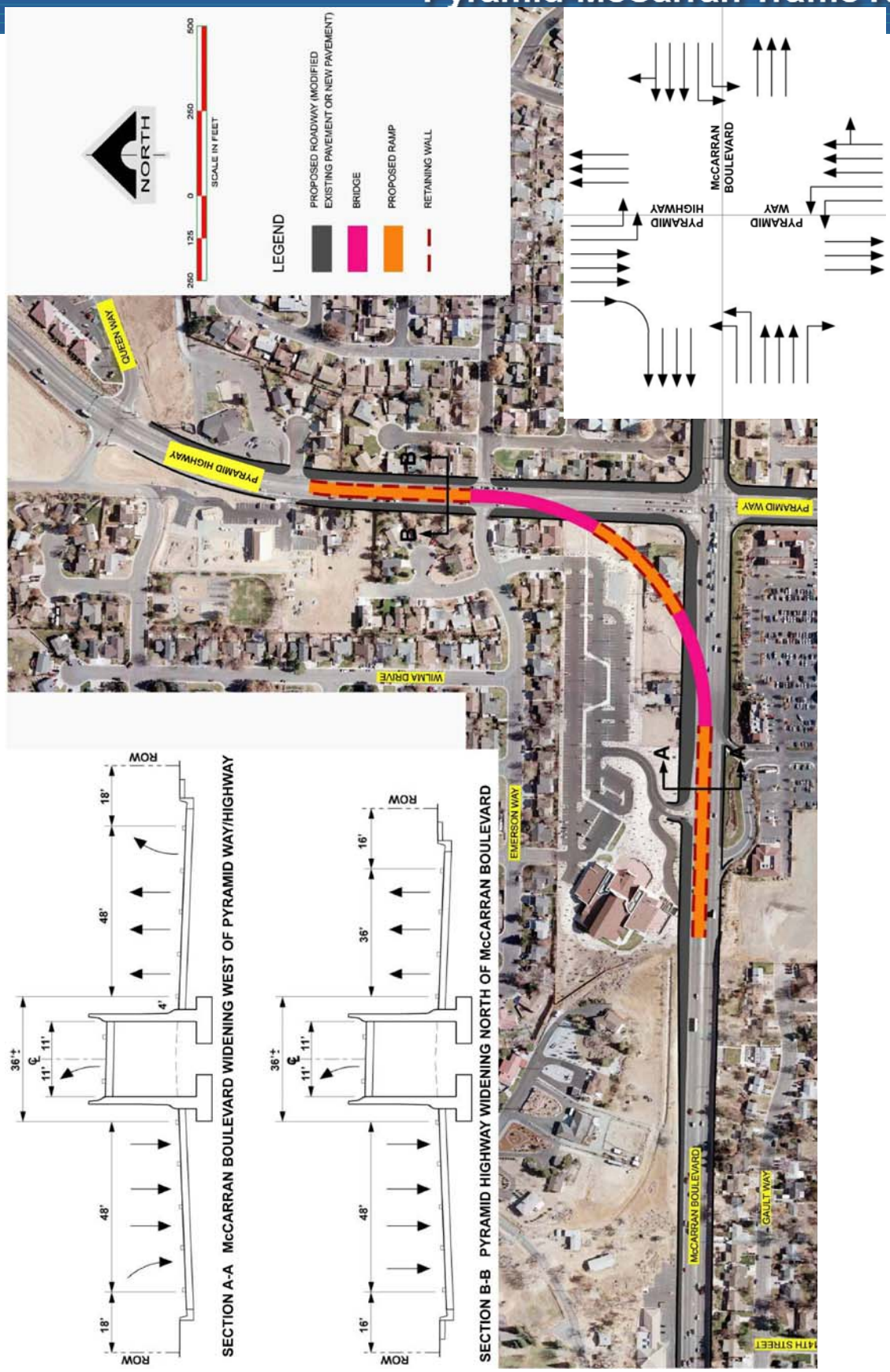


Figure 4-2: Direct Connector (Eastbound-to-northbound Flyover Ramp) Schematic Plan

Figure 4-3: Expanded At-grade Intersection Alternative Schematic Plan

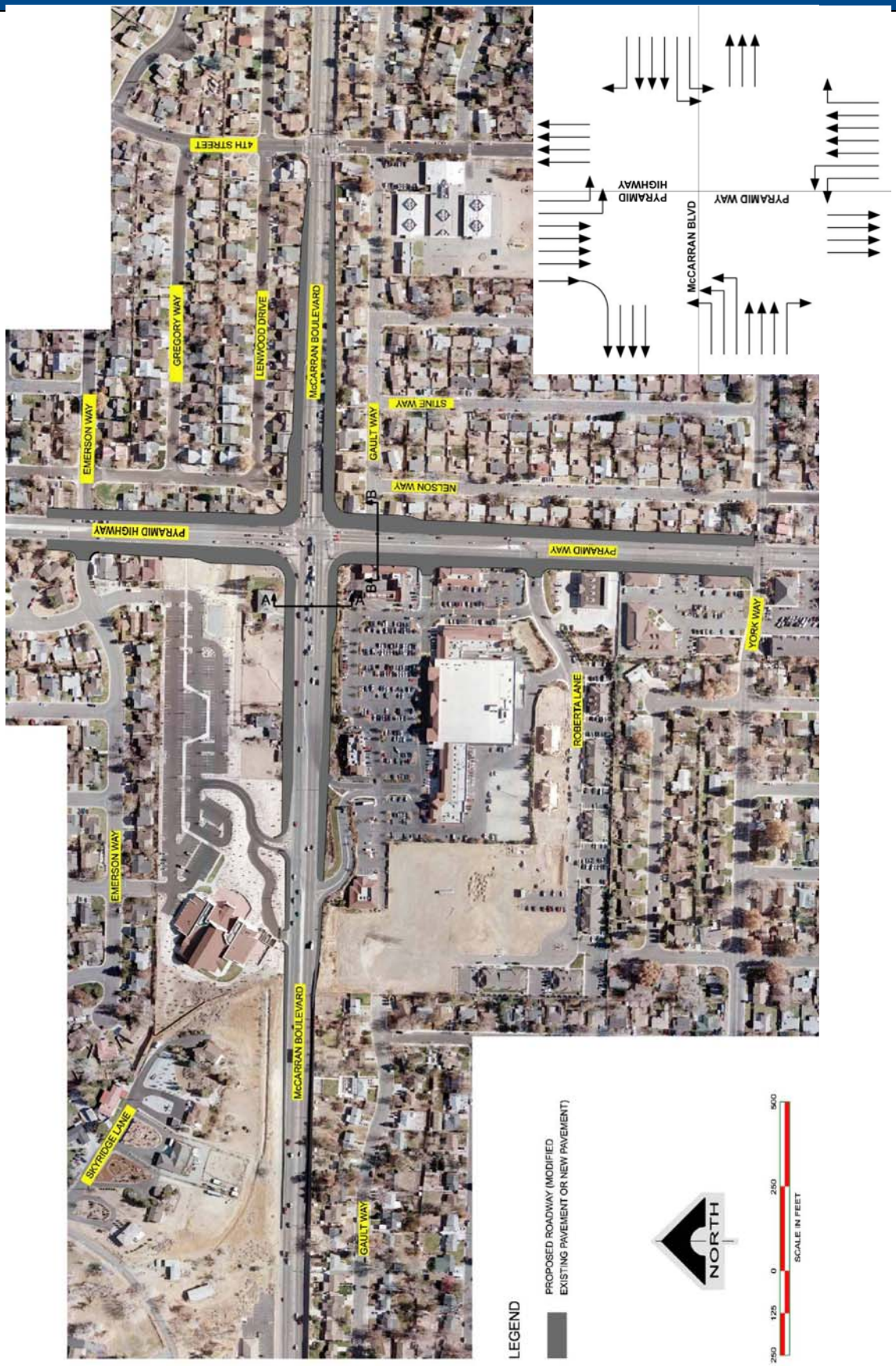
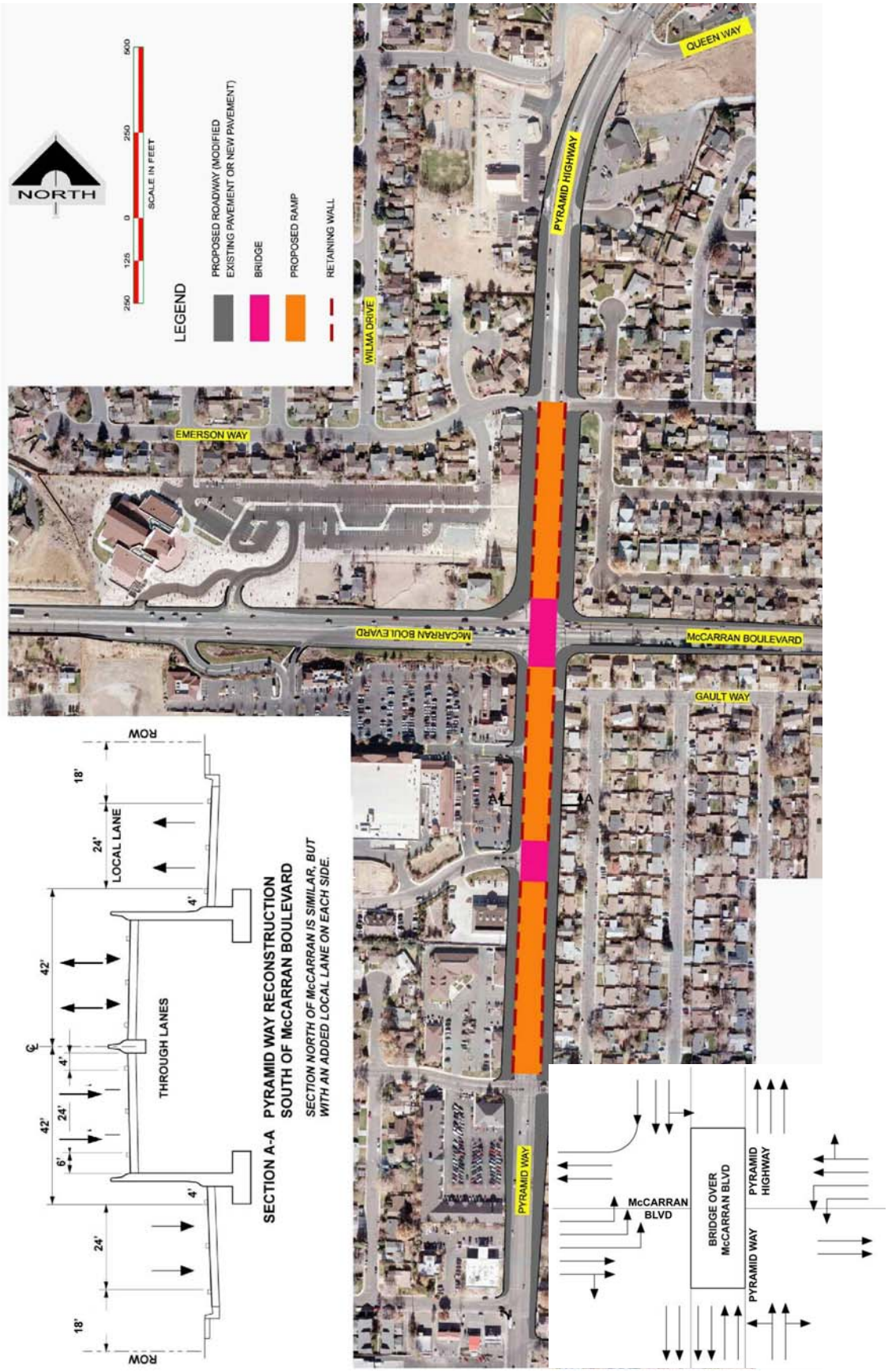


Figure 4-4: Pyramid Way Grade Separation over McCarran Boulevard Alternative Schematic Plan



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5 IMPROVEMENT ALTERNATIVES MEETING EVALUATION CRITERIA

Thirteen potential improvement concepts were initially developed for the Pyramid Way/ McCarran Boulevard intersection. Six of these concepts were eliminated from further consideration in the first round of screening. The remaining seven improvement concepts were then subjected to more detailed definition and evaluation efforts. Based on this second round of evaluation, three build alternatives emerged which were recommended for continued study.

1. Direct connector (eastbound-to-northbound flyover ramp)
2. Expanded at-grade intersection
3. Pyramid Way grade separation over McCarran Boulevard.

These alternatives are discussed in detail in the following sections. The geometry for the three build alternatives, as described in the following sections, was analyzed in 2008 using traffic forecast from the 2040 RTP forecast model. The 2030 traffic volumes and analysis results for the three build alternatives are shown in **Appendix A.**

5.1 ALTERNATIVE 1—DIRECT CONNECTOR (EASTBOUND-TO-NORTHBOUND FLYOVER RAMP)

The direct eastbound-to-northbound connector alternative would provide a single-lane, free-flow flyover ramp for the eastbound-to-northbound traffic and make needed intersection improvements for other traffic. All local traffic movements would be maintained, except for the driveway into the shopping center along westbound McCarran Boulevard. This traffic would divert to the Roberta Lane intersection along Pyramid Way. North of McCarran Boulevard, the direct connector would tie into Pyramid Way south of the Queen Way intersection.

As shown on Figure 5-1, the direct connector would start in the McCarran Boulevard median along the eastbound roadway, about 2,000 feet west of Pyramid Way, rise between retaining walls with a 6 percent grade for about 700 feet, and continue on bridge structure over westbound McCarran Boulevard, eventually crossing southbound Pyramid Way on structure, before descending at 6 percent in the median between walls, and merging with the northbound Pyramid Way travel lanes. A connector radius of about 655 feet and a 22-foot-wide structure would be needed to attain a 35 mph design. Between walls, the section would consist of a 4-foot inside shoulder, 12-foot lane and 6-foot right shoulder. On the structure, the roadway would have about a 5 percent superelevation and the section would provide a 6-foot inside shoulder (for sight distance and snow storage) and 4-foot right shoulder on the high side. A primary concern with the direct connector alternative is the position of the flyover ramp over the northwest corner of the intersection. The ramp would likely require the

acquisition and removal of the home on this corner. The home has been identified as a potential qualifier for the national historical register. Also, the ramp would be in close proximity to the Immaculate Conception Catholic Church education building located near the intersection.

If two independent bridges were used with this concept, the bridge over westbound McCarran Boulevard would be about 360 feet long and the bridge over southbound Pyramid Way would be about 450 feet long. In the 310 foot gap between the bridges, the eastbound-to-northbound connector could be carried on high embankment (about 35 to 40 feet above existing ground) using retaining walls and/or open side slopes. Alternatively, a single bridge approximately 1,120 feet long could be constructed to permit potential re-use of lands below the structure.

Using the Direct Connector alternative, the Pyramid Way/McCarran Boulevard intersection would be improved as illustrated in the lower right corner of Figure 5-1.

The existing intersection has single left-turn lanes on all approaches except for the dual left-turn lanes on the west leg. With the direct connector alternative, medians would be widened up to 12 feet to provide dual left-turn lanes on all approaches except local eastbound-to-northbound movements would continue to be handled by the existing double left-turn facility. Exclusive right-turn lanes would be provided in the northwest and southwest quadrants, with the southbound-to-westbound movement free-flow/yield-to-pedestrians. The through lane improvements would be as follows:

- Along eastbound McCarran Boulevard at the entrance to the shopping center, the existing right-turn lane would continue across the Pyramid Way intersection and then taper to match the two existing lanes.
- Along westbound McCarran Boulevard west of Fourth Street, a third lane would be introduced from the outside. This lane would continue across the Pyramid Way intersection forming the third westbound through lane. The traffic entering from south-bound Pyramid Way would use a fourth lane that tapers past the church entrance to merge with the three through lanes.
- Along northbound Pyramid Way, there would be three through lanes between York Way and north of Emerson Way.
- Along southbound Pyramid Way, a southbound lane would be added on the outside between Queen Way and McCarran Boulevard to serve traffic turning right. Three through lanes would extend through the McCarran Boulevard and York Way intersection and taper down to two lanes north of Tyler Way.

The four illustrations in Figure 5-2 show the design variations for the Direct Connector alternative that would bias the widening to one side or the other of the existing roadway centerline in an effort to reduce overall property acquisition effects.

1. **Figure 5-2A, Pyramid west, McCarran south:** This configuration aligns the widening project to the west side of Pyramid Way and to the south side of McCarran Boulevard.

2. **Figure 5-2B, Pyramid west, McCarran north:** This configuration aligns the widening project to the west side of Pyramid Way and to the north side of McCarran Boulevard.
3. **Figure 5-2C, Pyramid east, McCarran south:** This configuration aligns the widening project to the east side of Pyramid Way and to the south side of McCarran Boulevard.
4. **Figure 5-2D, Pyramid east, McCarran north**: This configuration aligns the widening project to the east side of Pyramid Way and to the north side of McCarran Boulevard.

All figures include the following features: roadway lanes, bike lanes, curb/gutter/sidewalk, landscape buffer, and a sound wall where deemed necessary along residential frontage.

The analysis results shown in **Appendix A** indicate that Alternative 1- Direct Connector (Eastbound-to-Northbound Flyover Ramp) would operate at an acceptable LOS during both the AM and PM peak periods in 2030.

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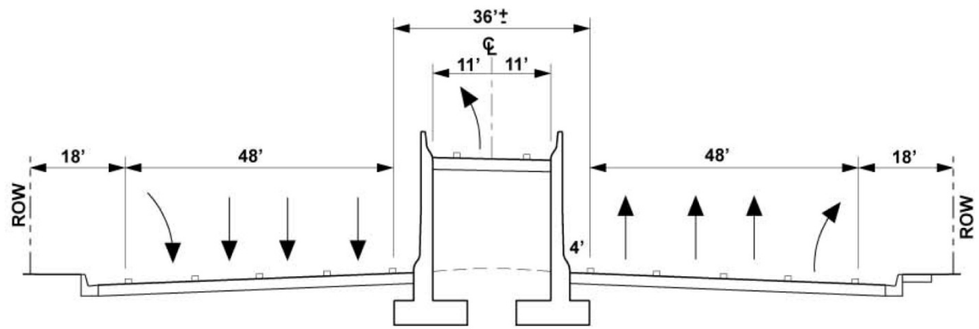
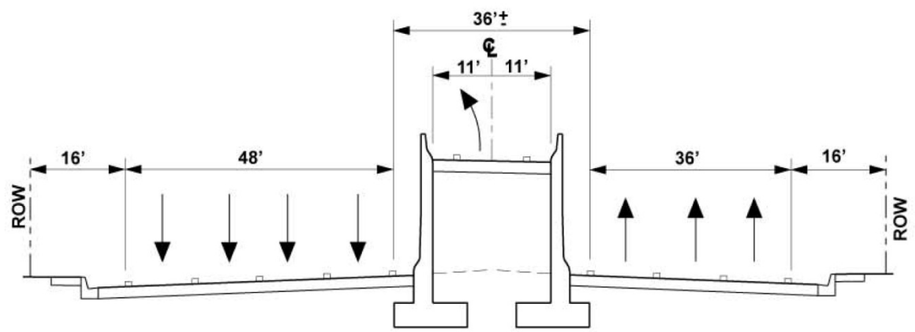
Figure 5-1: Alternative 1—Direct Connector (Eastbound-to-northbound Flyover Ramp) Schematic Plan



SECTION A-A McCARRAN BOULEVARD WIDENING WEST OF PYRAMID WAY/HIGHWAY



SECTION B-B PYRAMID HIGHWAY WIDENING NORTH OF McCARRAN BOULEVARD

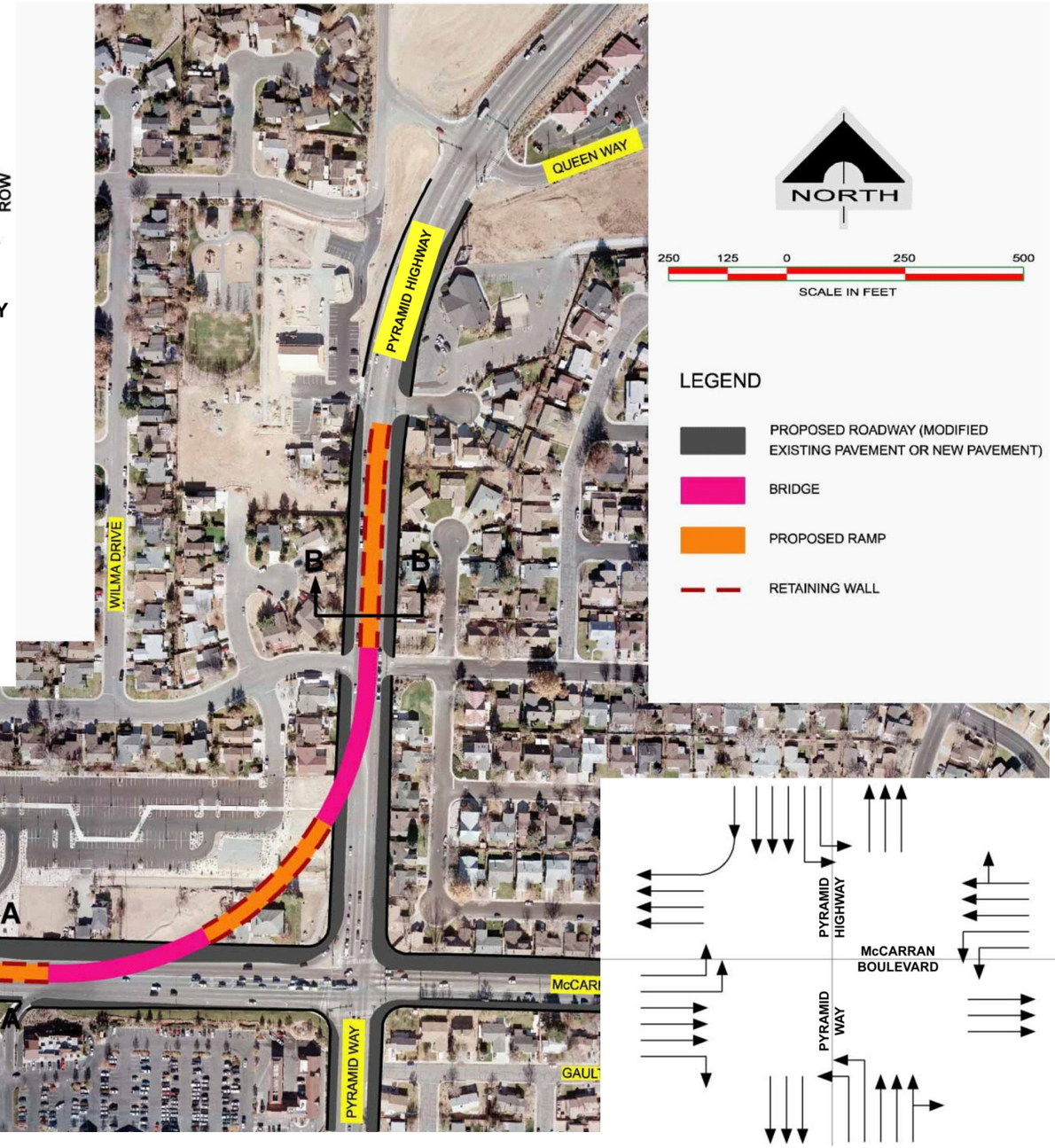


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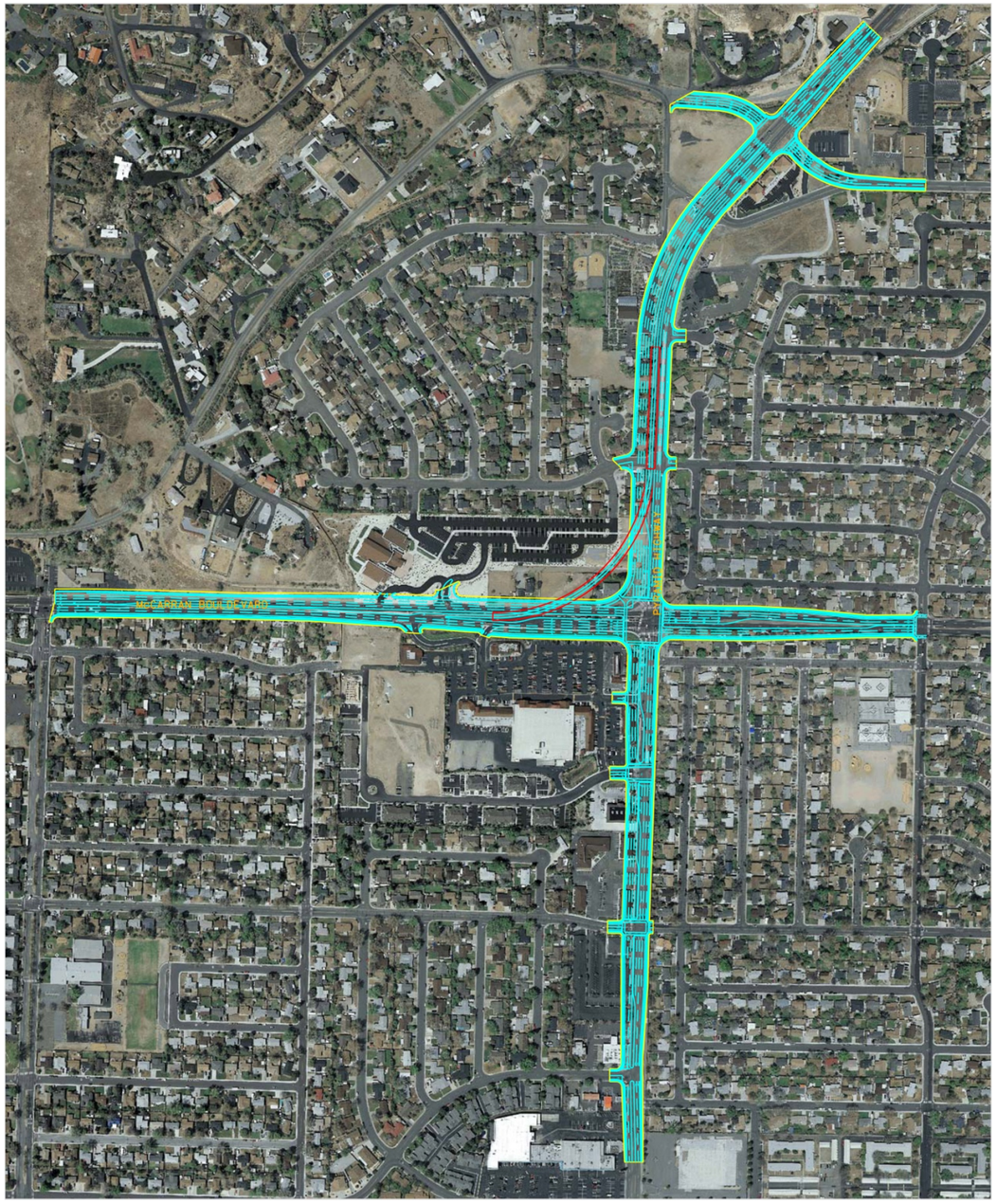
Figure 5-2: Alternative 1—Direct Connector (Eastbound-to-northbound Flyover Ramp) Right-of-way Options



A. Pyramid West—McCarran South

B. Pyramid West–McCarran North

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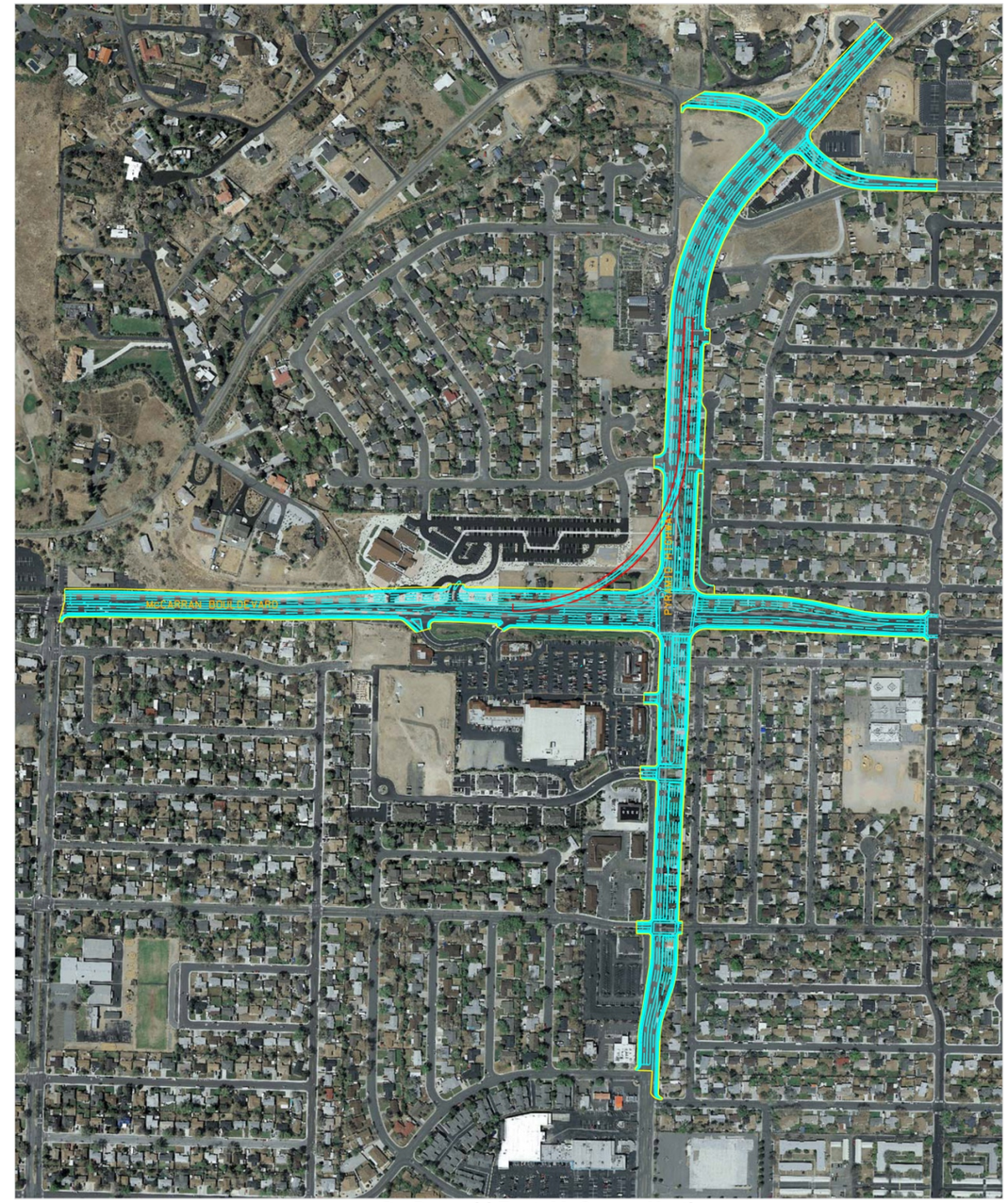
Figure 5-2: Alternative 1—Direct Connector (Eastbound-to-northbound Flyover Ramp) Right-of-way Options *(continued)*

C. Pyramid East—McCarran South



D. Pyramid East–McCarran North

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5.2 ALTERNATIVE 2—EXPANDED AT-GRADE INTERSECTION

The expanded at-grade intersection concept would add lanes by widening the existing pavements, as practical, while respecting essentially all local traffic flows and existing property access. The lane arrangement required to meet the LOS E design criteria for this intersection is shown on Figure 5-3. Because this concept handles the heavy eastbound-to-northbound left-turn volumes at-grade, with a triple left-turn installation, that movement and the other left turns require more than 40 percent of the total available green time in the peak PM hour. This indirectly dictates that four lanes each way should be provided along Pyramid Way through the intersection and three through lanes in each direction along McCarran Boulevard. Exclusive right-turn lanes are also needed in all four quadrants to handle expected design hour volumes at an acceptable level of service.

Figure 5-3 shows a possible plan for an expanded at-grade Pyramid Way/McCarran Boulevard intersection based on widening existing roadways symmetrically. Other design variations could favor widening the roadway on one side of the existing centerline in an effort to reduce overall property acquisition effects. The existing intersection now has single left-turn lanes on all approaches except for the dual left-turn lanes on the west leg. With the expanded intersection, medians would be widened up to 12 feet to provide dual left-turn lanes on all approaches plus a triple left-turn lane for the eastbound-to-northbound movement. Exclusive right-turn lanes would be provided in all quadrants, with the southbound-to-westbound movement free-flow/yield-to-pedestrians. The traffic lane additions are illustrated on Figure 5-3 and are described as follows:

- Along eastbound McCarran Boulevard, at the entrance to the shopping center, the existing right-turn lane would continue across the Pyramid Way intersection and then taper to match the two existing lanes.
- Along westbound McCarran Boulevard west of Fourth Street, a third lane would be introduced on the outside. This lane would continue across the Pyramid Way intersection forming the third westbound through lane. The traffic entering from southbound Pyramid Way would use a fourth lane that tapers past the church entrance to merge with the three through lanes.
- Along northbound Pyramid Way, a third through lane would be introduced south of York Way, and a fourth lane added north of York Way. These two through lanes would continue north through the McCarran Boulevard intersection.
- Along southbound Pyramid Way, a lane would be added on the outside between Emerson Way and Queen Way to serve traffic turning right at McCarran Boulevard. The four through lanes would extend through the McCarran Boulevard and Roberta Lane intersections and then the extra lane would continue and terminate as a drop right-turn lane to York Way.

The four illustrations in Figure 5-4 show the design variations for the Expanded At-grade Intersection alternative that would bias the widening to one side or the other of the existing roadway centerline in an effort to reduce overall property acquisition effects.

1. **Figure 5-4A, Pyramid west, McCarran south:** This configuration aligns the widening project to the west side of Pyramid Way and to the south side of McCarran Boulevard.
2. **Figure 5-4B, Pyramid west, McCarran north:** This configuration aligns the widening project to the west side of Pyramid Way and to the north side of McCarran Boulevard.
3. **Figure 5-4C, Pyramid east, McCarran south:** This configuration aligns the widening project to the east side of Pyramid Way and to the south side of McCarran Boulevard.
4. **Figure 5-4D, Pyramid east, McCarran north**: This configuration aligns the widening project to the east side of Pyramid Way and to the north side of McCarran Boulevard.

All figures include the following features: roadway lanes, bike lanes, curb/gutter/sidewalk, landscape buffer, and a sound wall where deemed necessary along residential frontage.

The analysis results shown in **Appendix A** indicate that Alternative 2- Expanded At-Grade Intersection would operate at an acceptable LOS during both the AM and PM peak periods in 2030.

Figure 5-3: Alternative 2—Expanded At-grade Intersection Schematic Plan

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Figure 5-4: Alternative 2—Expanded At-grade Intersection Right-of-way Options

A. Pyramid West—McCarran South

B. Pyramid West–McCarran North

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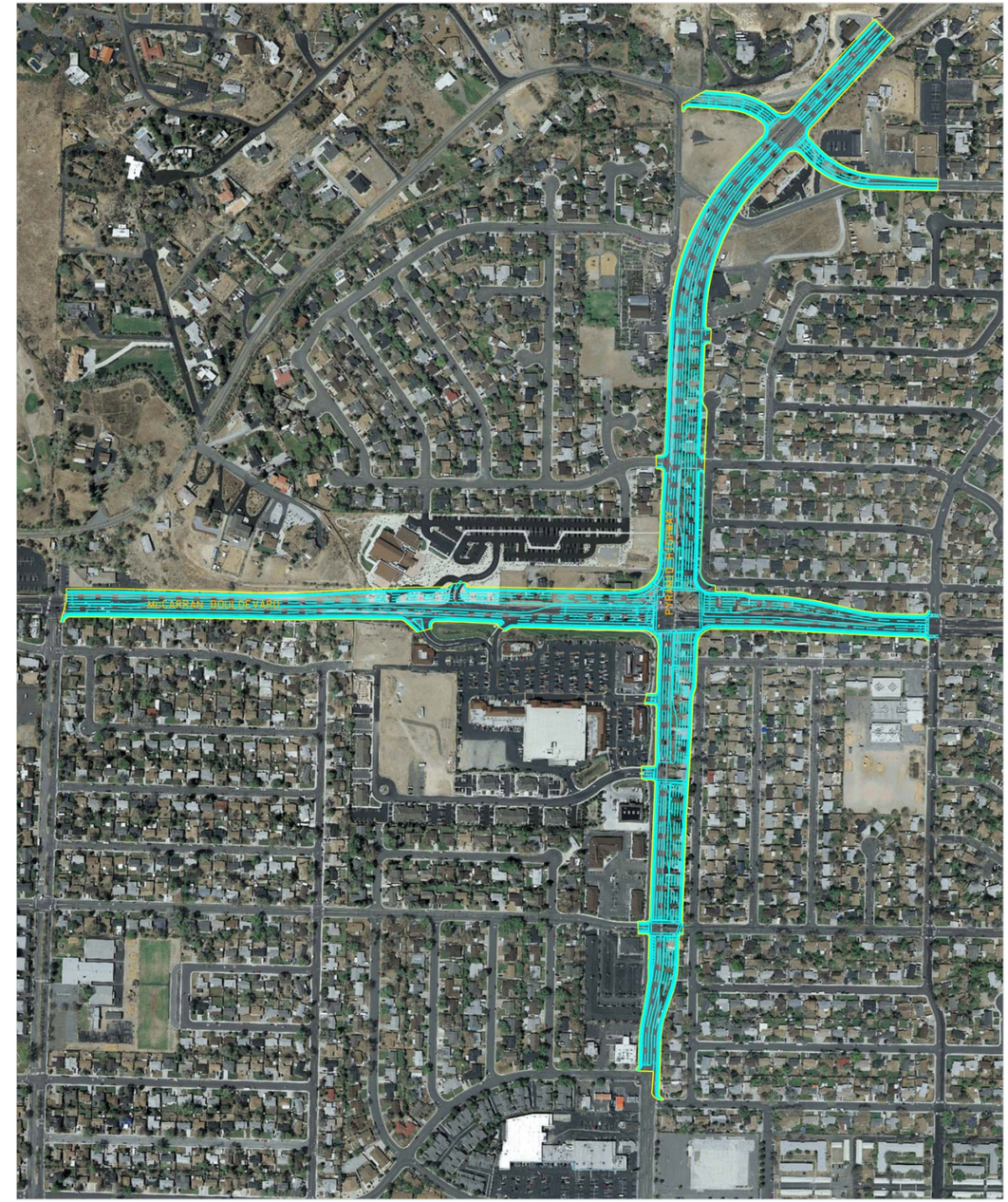
Figure 5-4: Alternative 2—Expanded At-grade Intersection Right-of-way Options *(continued)*

C. Pyramid East—McCarran South



D. Pyramid East–McCarran North

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5.3 ALTERNATIVE 3—PYRAMID WAY GRADE SEPARATION OVER MCCARRAN BOULEVARD

Forecasts based on the earlier, 2030 RTP network of roadway improvements assumed three through lanes per direction on Pyramid Way, from I-80 north to McCarran Boulevard. Through traffic volumes along Pyramid Way were forecast to be significantly higher under this network scenario, giving rise to the notion that a significant proportion of motorists would benefit from a grade separation that carries Pyramid Way over McCarran Boulevard. The new 2040 RTP network maintains the current four lanes on Pyramid Way between I-80 and McCarran Boulevard and changes McCarran Boulevard west of Pyramid from four to six lanes. This change shifted traffic from Pyramid south of McCarran to McCarran west of Pyramid. Figure 5-5 shows a Pyramid Way grade separation in schematic format. Two through lanes in each direction would carry traffic over McCarran Boulevard while local at-grade lanes would handle flows turning left or right onto or off of McCarran Boulevard as well as other local traffic that could not physically take advantage of the grade separated lanes. South of McCarran Boulevard on Pyramid Way, there would be two local lanes in each direction. To the north on Pyramid Way, there would be three lanes in each direction. Outside-to-outside, the sections for a Pyramid Way grade separation would be approximately 20 feet wider than with an at-grade concept along Pyramid Way.

If the shortest possible grade separation were developed, many local traffic movements at the Pyramid Way/Roberta Lane intersection would have to be prohibited. This is impractical given the existing access provisions to and from the adjacent shopping center and the office complex to the west. Also, NDOT would not allow a traffic signal on McCarran Boulevard to replace the Roberta Way traffic signal on Pyramid Way. The grade separation would have to begin just north of York Way, rise between retaining walls and then bridge over Roberta Lane and McCarran Boulevard. At the York Way intersection, two existing movements would have to be prohibited: the southbound left turn from the local lanes and the southbound right turn from the grade separated through lanes. In addition, northbound traffic could no longer turn left at the Pyramid Way/Emerson Way intersection. It should be noted the bridge grade between Roberta Way and York Way would exceed 8%. The NDOT allowable maximum bridge grade is 6%.

The lane arrangement needed at the Pyramid Way/McCarran Boulevard intersection with a grade separation is shown on Figure 5-5.

Along McCarran Boulevard, the modifications would be limited to adding a left-turn lane in each direction. This would provide a triple left-turn facility for the eastbound to northbound traffic and the reciprocal traffic would be handled in a free-flow lane that comes south on Pyramid Way and turns right onto McCarran Boulevard into a through lane that continues toward Rock Boulevard. The optimum phasing arrangement might be to run the north–south moves split, with all the northbound traffic receiving the green indication first, followed by the southbound local traffic (or vice versa).

The four illustrations in Figure 5-6 show the design variations for the Pyramid Way Grade Separation over McCarran Boulevard alternative that would bias the widening to one side or the other of the existing roadway centerline in an effort to reduce overall property acquisition effects.

1. **Figure 5-6A, Pyramid west, McCarran south:** This configuration aligns the widening project to the west side of Pyramid Way and to the south side of McCarran Boulevard.

2. **Figure 5-6B, Pyramid west, McCarran north:** This configuration aligns the widening project to the west side of Pyramid Way and to the north side of McCarran Boulevard.

3. **Figure 5-6C, Pyramid east, McCarran south:** This configuration aligns the widening project to the east side of Pyramid Way and to the south side of McCarran Boulevard.

4. **Figure 5-6D, Pyramid east, McCarran north**: This configuration aligns the widening project to the east side of Pyramid Way and to the north side of McCarran Boulevard.

All figures include the following features: roadway lanes, bike lanes, curb/gutter/sidewalk, landscape buffer, and a sound wall where deemed necessary along residential frontage.

The analysis results shown in **Appendix A** indicate that Alternative 3- Pyramid Way Grade Separation Over McCarran Boulevard would operate at an acceptable LOS during both the AM and PM peak periods in 2030.

Figure 5-5: Alternative 3—Pyramid Way Grade Separation over McCarran Boulevard Schematic Plan

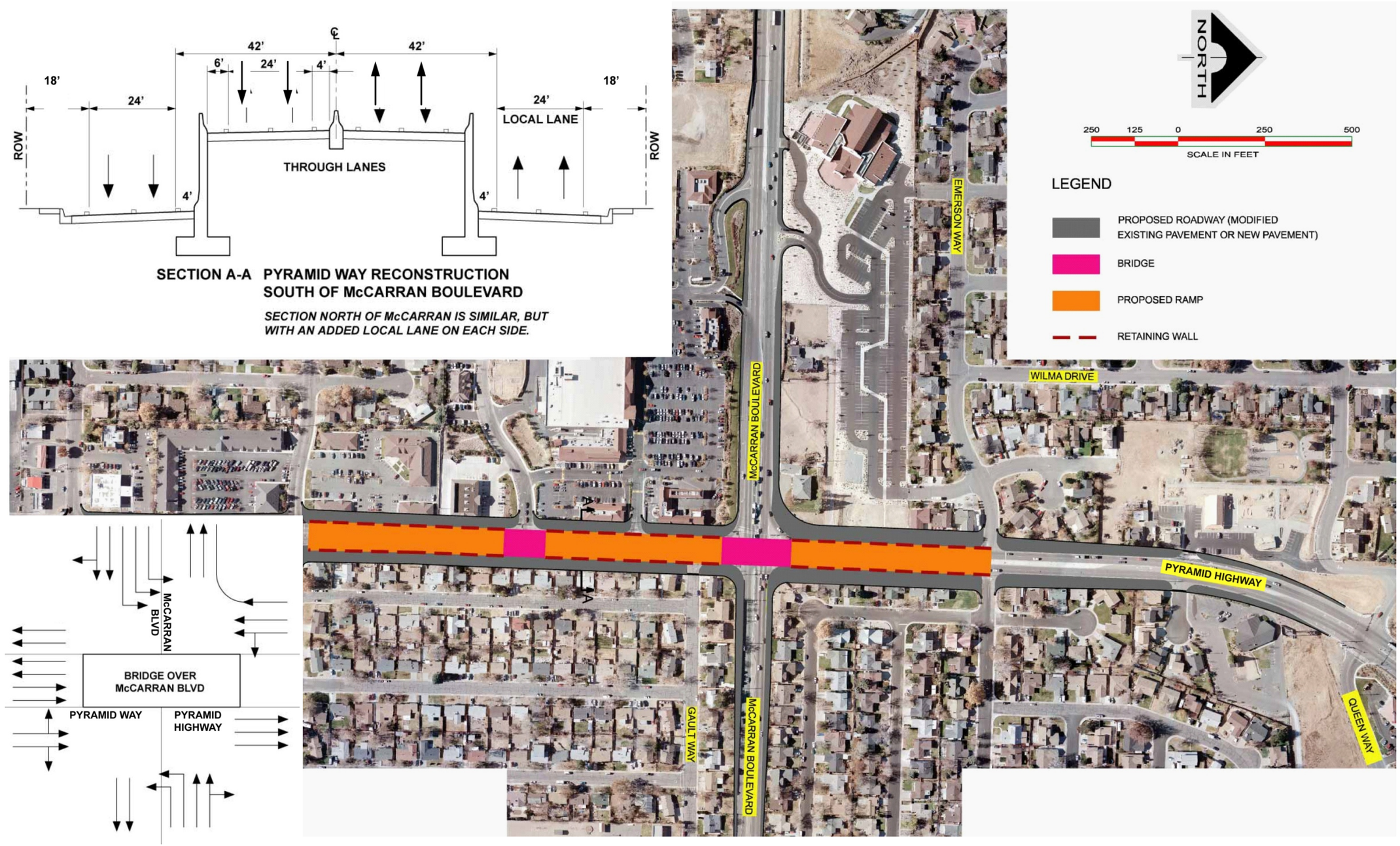

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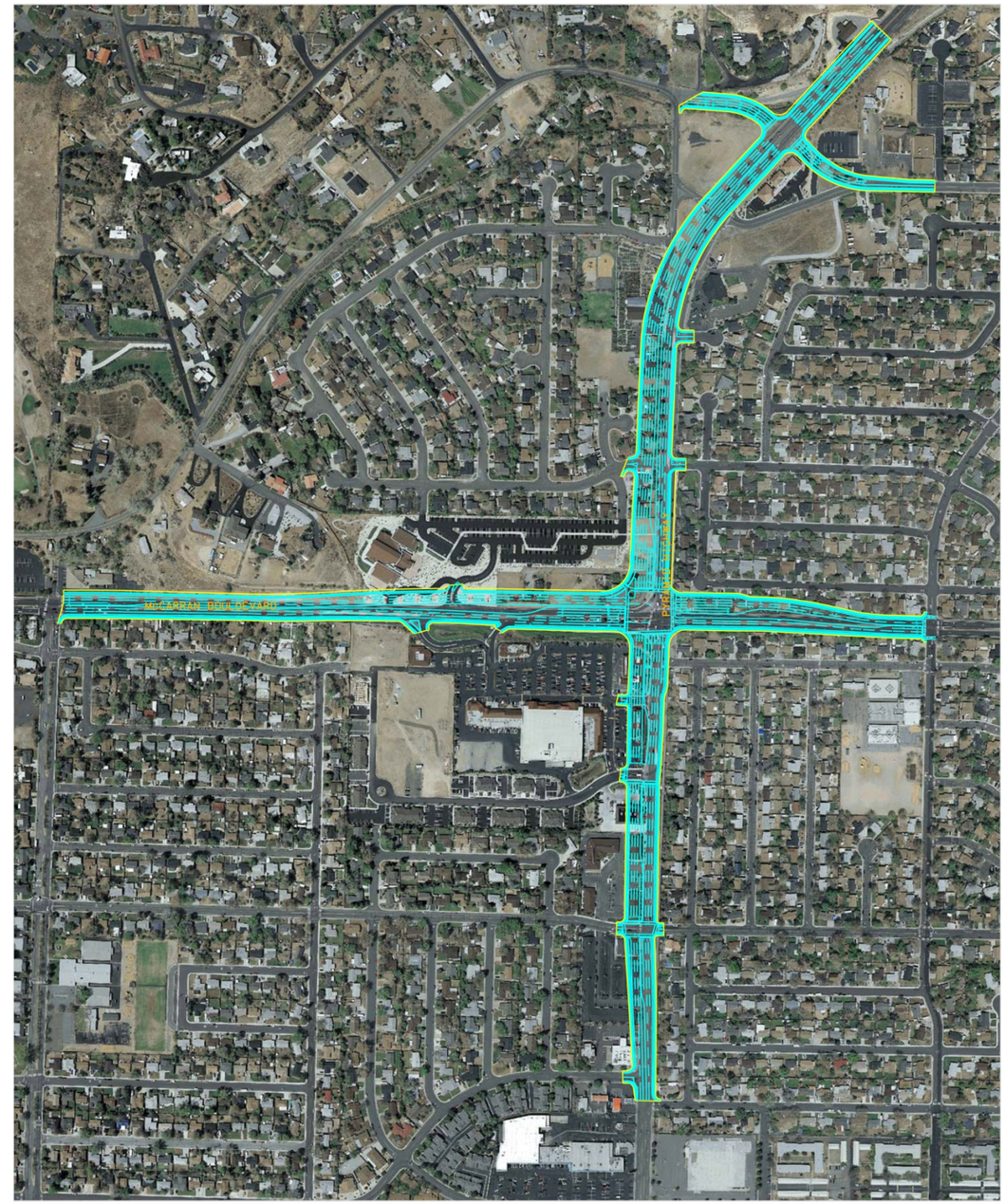
Figure 5-6: Alternative 3—Pyramid Way Grade Separation over McCarran Boulevard Right-of-way Options

A. Pyramid West—McCarran South



B. Pyramid West–McCarran North

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Figure 5-6: Alternative 3—Pyramid Way Grade Separation over McCarran Boulevard Right-of-way Options *(continued)*

C. Pyramid East—McCarran South

D. Pyramid East–McCarran North

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5.1 Alternative 1—Direct Connector (Eastbound-to-Northbound Flyover Ramp) 5-1
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6 SELECTION AND ANALYSIS OF THE PREFERRED BUILD ALTERNATIVE

6.1 SELECTING THE PREFERRED ALTERNATIVE

In Chapter 1, reference is made to the 2008 Traffic Analysis that was done to reflect the traffic forecast numbers for the 2040 RTP. This analysis showed all three build alternatives would operate at an acceptable level of service (LOS E or better) in 2030. In 2009 an evaluation matrix was developed to narrow the choices from the No Build Alternative and the three Build Alternatives to a Preferred Build Alternative. The evaluation matrix is shown in Table 6-1 and shows the Expanded At-Grade Alternative had the highest ranking over the No Build, Direct Connector (flyover ramp), and Grade Separation (Pyramid Bridge over McCarran) Alternatives. The evaluation matrix rankings were discussed and approved by the project Technical Advisory Committee.

In addition to the evaluation matrix rankings the Direct Connector and the Grade Separation Alternatives were dropped from further consideration due to several reasons. The Direct Connector Alternative received negative public reaction because of its close proximity to the Immaculate Conception Catholic Church education building and because it would require acquisition and removal of the Lagomarsino home. Both of these structures are on the northwest corner of the Pyramid/McCarran intersection. The Lagomarsino home is potentially eligible for listing on the National Historic Register. The local residents also perceived the proposed flyover ramp as a negative visual impact to the neighborhood. Following the 2010 traffic analysis (see Section 6.2), it was determined the flyover ramp in the Direct Connector Alternative was no longer justified because the at-grade, triple left lanes for eastbound to northbound movement could accommodate the traffic at an acceptable level of service.

The Grade Separation Alternative was also dropped from further consideration due to excessive bridge grades (over 6%) between Roberta Way and York Way. NDOT typically will not accept new bridge grades that exceed 6% due to maintenance and inspection issues. An attempt was made to reduce the bridge grades by eliminating the traffic signal at Roberta Way; converting it to a right-in, right-out street and providing a traffic signal controlled driveway for the shopping center on McCarran Boulevard. The Roberta Way/Pyramid Way traffic signal is a primary access to the shopping center on the southwest corner of Pyramid Way and McCarran Boulevard. The access control regulations in the Regional Transportation Plan would not allow a traffic signal on McCarran Boulevard between Rock Boulevard and Pyramid Way. NDOT supported these regulations and felt the traffic signal on McCarran Boulevard for the shopping center would exacerbate the queuing and congestion problems on the street. Similar to the Direct Connector Alternative, there was negative public reaction to having a bridge structure so close to the residential properties. This evaluation process resulted in the Expanded Intersection Alternative being selected as the Preferred Build Alternative.

Table 6-1: Pyramid/McCarran Build Alternatives Evaluation

Alternative Options	EVALUATION CRITERIA					OVERALL
	Meets Purpose & Need	Operations/ Maintenance	Access Impacts	Costs	Environmental	
Alt. 1 Direct Connector	***	**	**	**	**	11
Alt. 2 - Expanded At-Grade	***	***	**	**	**	12
Alt. 3 - Grade Separation	***	**	*	**	*	9
No Build	*	*	**	**	**	8

Purpose & Need
***High – Meets Purpose & Need
*Low – Does not meet Purpose & Need
Operations/Maintenance
***High – Meets or exceeds LOS standard at Pyramid/McCarran and adjacent intersections; normal maintenance
**Medium – Meets LOS standard at Pyramid/McCarran but not at all adjacent intersections; high maintenance
*Low – Does not meet LOS standard at Pyramid/McCarran or at adjacent intersections
Access Impacts
***High – Does not impact access points; no queuing blocking access
**Medium – Eliminates some left turn movements at driveways and side streets; minimal queuing blocking access
*Low – Eliminates left turn movements at intersections, driveways and side streets; queuing blocks access
Costs
***High – Little or no right of way costs with no bridge structures; low user-delay cost
**Medium – Major right of way costs with similar footprints; user-delay cost
*Low – Major right of way costs with bridge structures; user-delay cost
Environmental
***High – No visual impact; beneficial to businesses; little relocation; no historic properties; no air quality impact; good bike and pedestrian circulation
**Medium – Some visual impact; some impact to businesses; some impact to historic properties; some relocation; some air quality impact; average bike and pedestrian circulation
*Low – High visual impact; major impact to businesses; major impact to historic properties; major relocation; high air quality impact; poor bike and pedestrian circulation

6.2 ANALYZING THE PREFERRED BUILD ALTERNATIVE

As mentioned in Chapter 1, the RTC directed Parsons in 2010 to analyze the Preferred Build Alternative (Expanded Intersection) using traffic forecast numbers from the Interim Consensus Forecast. This updated forecast was based on revised land use and population projections which showed an overall reduction in 2030 traffic volumes from the original travel forecast that was used for the 2006 traffic analysis. Table 6-2 shows the traffic volumes used for the Existing, 2030 No Build and 2030 Build traffic analysis of the Preferred Build Alternative. The 2030 No Build total traffic through the Pyramid/McCarran intersection in the PM peak is slightly less than the same total for the existing. This is primarily due the presence of the U.S. 395 to Pyramid Highway freeway connection in the forecast model that is drawing more of the PM peak traffic away from the intersection. A comparison of the 2030 No Build and 2030 Build traffic volumes shows the Build scenario traffic volumes exceed the No Build volumes. This is due to the Pyramid/McCarran improvements attracting more traffic in the forecast model because there is more capacity available at the intersection after the improvements are made.

A VISSIM traffic simulation model was developed to determine how well the roadway system is operating within the study area. Before the model application, the VISSIM model was calibrated to ensure its accuracy in simulating existing traffic operations. The calibration parameters consisted of network geometry, general configuration parameters, driver behavior parameters (in the car following and lane-change models), and vehicle characteristics (e.g., desired speed, desired acceleration/deceleration, maximum acceleration/deceleration, and attributes associated with each vehicle type modeled). A trial-and-error approach was adopted by iteratively adjusting these parameters to obtain the best match possible between the modeled traffic volumes and the observed ground counts. In addition, travel time data was used as an independent measurement to validate the model. The model calibration and validation process was terminated when the discrepancy in volumes and speeds were within an acceptable error range recommended by FHWA's document: *Volume III – Guidelines for Applying Traffic Microsimulation Modeling Software* (Federal Highway Administration, August 2003). The model calibration results are shown in Appendix B.

The 2010 analysis included an updated Existing Conditions analysis, Table 6-3, using new counts done in early 2010 and an updated analysis for the 2030 No Build and Build scenarios. The 2010 Existing Conditions analysis showed that most of the intersections were operating at a better LOS in 2010 during the AM peak than they did in 2006 (see Table 2-4 in Chapter 2); however they operated at the same or worse LOS in the PM peak compared to 2006. The LOS comparison for the Pyramid Way and McCarran Boulevard intersection showed an improvement from LOS "F" to LOS "E" in the AM peak, but continued to operate at LOS "F" in the PM peak. This showed the need still existed to provide improvements for this intersection to accommodate future traffic.

The 2030 No Build traffic volumes from the RTC Interim Consensus Forecast travel demand model were based on the assumption that all of the 2040 RTP improvements are in place (including the freeway connection between U.S. 395 and Pyramid Highway) except for the improvements at Pyramid Way and McCarran Boulevard. The 2030 No Build analysis results, Table 6-4, confirmed the need to improve the Pyramid/McCarran intersection, showing the intersection would operate at LOS "F" in both the AM peak and PM peak periods even with the U.S. 395 to Pyramid Highway freeway connection in place by 2030.

The 2030 traffic analyses for the Build condition, Table 6-5, shows the Pyramid/McCarran intersection, during the AM peak, would operate at LOS "D" with a southbound approach configuration of 1 left turn lane, 3 through lanes and 1 right turn lane (1L-3T-1R). The intersection would operate at LOS "E"

during the PM peak. All other intersections would operate at LOS "E" or better during the AM and PM peak periods.

It is expected the 1L-3T-1R southbound lane arrangement at Pyramid/McCarran will operate at an acceptable LOS for a number of years. As volumes increase the weave operation between westbound McCarran Boulevard traffic trying to access the Immaculate Conception Catholic Church and the southbound right turn traffic may become problematic. Furthermore as pedestrian volumes increase over the years there is some concern for the safety of pedestrians crossing the southbound free right turn. To address these potential issues the southbound lane arrangement can be transitioned to the 1L-2T-2R configuration with minimal adjustments to the intersection geometry and without the need for additional right-of-way. This layout will provide a signalized pedestrian crossing of the dual southbound right turn lane. Table 6-6 shows the Pyramid/McCarran intersection, during the AM peak, would operate at LOS "D" with a southbound approach configuration of 1 left turn lane, 2 through lanes and 2 right turn lanes (1L-2T-2R). During the PM peak the intersection would continue to operate at LOS "E". Both layouts for the southbound lane arrangement at Pyramid/McCarran are shown in Figure 6-5, (2 of 7) and (3 of 7). The geometry using the 1L-3T-1R southbound layout should be the design used for opening day operation. This design is referred to as the **Modified Expanded Intersection Alternative**. This became the **Preferred Build Alternative**.

The revised geometry also reflects the changes to the Pyramid Way and Queen Way intersection. The current geometry at this intersection is not conducive to moving traffic efficiently or safely. In 2010 and 2011 the RTC held numerous meetings with the residents in the Village Green and Wedekind Road neighborhoods, the Immaculate Conception Catholic Church and with residents living east of the intersection to develop an intersection plan that would better serve the area. The Pyramid/Queen intersection layout shown on Figure 6-5 (7 of 7) is the result of these meetings with the local residents.

The Preferred Build Alternative geometry shown in Figures 6-4 and 6-5 is the result of rigorous traffic analyses and a strategic public involvement program.

Table 6-2: Existing and Forecasted Peak Hour Volumes (Interim Consensus Forecast RTP model)

PYRAMID WAY AND MCCARRAN BOULEVARD	EXISTING (2010)		No Build (2030)		Build (2030)	
	AM	PM	AM	PM	AM	PM
Northbound						
Left turn	92	117	97	108	85	109
Through	270	900	330	957	357	1050
Right turn	35	49	60	56	50	52
Southbound						
Left turn	74	122	103	160	144	156
Through	1007	460	1311	516	1561	526
Right turn	881	531	750	560	1104	593
Eastbound						
Left turn	423	1068	303	1049	449	1257
Through	293	579	298	615	338	630
Right turn	112	102	106	92	102	98
Westbound						
Left turn	109	89	169	115	141	103
Through	594	399	602	487	622	453
Right turn	62	294	72	412	93	415
Total through intersection	**3952**	**4710**	**4201**	**5127**	**5046**	**5442**

Table 6-3: Existing Conditions Analysis (2010)

NO.	INTERSECTION	APPROACH	AVERAGE DELAY (sec/veh) LEFT	THROUGH	RIGHT	TOTAL APPROACH	APPROACH LOS	INTERSECTION DELAY	INTERSECTION LOS
AM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	76.3	4.4	0.7	4.0	A	7.6	A
		WB	56.2	4.2	8.1	7.4	A		
		NB	56.2	47.4	6.8	27.2	C		
		SB	37.9	37.5	8.6	30.2	C		
2	N. McCarran Boulevard and Pyramid Way	EB	60.2	48.1	11.4	49.4	D	64.5	E
		WB	66.1	48.0	43.1	50.6	D		
		NB	60.3	25.1	5.7	31.0	C		
		SB	96.3	87.8	78.1	84.1	F		
3	N. McCarran Boulevard and Fourth Street	EB	40.1	7.2	4.8	8.8	A	11.6	B
		WB	38.3	6.4	3.6	7.3	A		
		NB	30.3	30.5	17.9	25.3	C		
		SB	31.5	29.3	5.8	23.2	C		
4	Pyramid Way and Queen Way	EB	53.3	62.1	20.9	50.4	D	37.1	**D**
		WB	53.1	46.6	6.1	37.9	D		
		NB	64.7	10.6	3.8	11.2	B		
		SB	86.2	45.4	36.5	40.1	D		
5	Pyramid Way and Roberta Lane	EB	47.6	--	11.5	25.4	C	10.8	B
		WB	--	--	--	--	--		
		NB	8.9	3.7	--	5	A		
		SB	--	10.1	10.1	10.0	B		
6	Pyramid Way and York Way	EB	15.0	59.6	15.1	31.9	C	5.6	A
		WB	21.9	59.1	25.8	29.8	C		
		NB	8.7	3.0	3.5	3.1	A		
		SB	21.9	59.1	25.8	29.8	C		
PM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	82.6	62.7	24.8	49.4	D	55.2	E
		WB	67.7	13.9	8.3	16.9	B		
		NB	115.1	63.5	141.7	109.9	F		
		SB	40.4	20.3	8.1	19.1	B		
2	N. McCarran Boulevard and Pyramid Way	EB	254.3	93.6	94.2	171.8	F	116.8	F
		WB	152.1	160	167.7	153.2	F		
		NB	76.5	62.3	35.7	61.8	E		
		SB	99.6	42.7	16	35.1	D		
3	N. McCarran Boulevard and Fourth Street	EB	55.0	10.2	8.5	16.2	B	20.4	C
		WB	65.9	14.1	10.8	13.5	B		
		NB	49.6	51.2	36.0	44.5	D		
		SB	53.0	47.9	8.6	29.6	C		
4	Pyramid Way and Queen Way	EB	70.4	71.4	39.9	65.9	E	26.4	C
		WB	65.4	69.1	9.9	17.7	B		
		NB	106.2	29.0	27.6	30.1	C		
		SB	92.5	12.5	5.8	15.6	B		
5	Pyramid Way and Roberta Lane	EB	78.8	--	14.9	55.1	E	16.7	B
		WB	--	--	--	--	--		
		NB	9.9	9.5	--	9.2	A		
		SB	--	11.1	9.6	11	B		
6	Pyramid Way and York Way	EB	38.5	40.1	28.7	37.4	D	13.7	B
		WB	13.3	37.0	15.6	22.3	C		
		NB	9.0	9.4	7.9	9.4	A		
		SB	12.0	10.5	10.6	10.6	B		

Source: Parsons
Analysis Tool: VISSIM

Table 6-4: Year 2030 No Build Analysis

NO.	INTERSECTION	APPROACH	AVERAGE DELAY (sec/veh) LEFT	THROUGH	RIGHT	TOTAL APPROACH	APPROACH LOS	INTERSECTION DELAY	INTERSECTION LOS
AM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	54.9	4.0	0.7	3.6	A	7.5	A
		WB	56.2	3.5	8.6	7.1	A		
		NB	57.4	61.8	6.5	28.9	C		
		SB	38.9	34.0	7.0	30.9	C		
2	N. McCarran Boulevard and Pyramid Way	EB	53.1	50.8	11.7	45.5	D	93.0	F
		WB	69.3	58.8	51.7	60.2	E		
		NB	58.9	28.3	6.2	31.2	C		
		SB	137	148.8	133.7	128.6	F		
3	N. McCarran Boulevard and Fourth Street	EB	89.2	2.8	1.7	6.5	A	15.2	B
		WB	60.8	6.9	5.8	8.4	A		
		NB	52.1	52.3	37.0	45.9	D		
		SB	51.9	48.9	6.2	37.3	D		
4	Pyramid Way and Queen Way	EB	157.5	161.4	137.5	148.7	F	182.4	F
		WB	59.5	43.6	7.3	29.4	C		
		NB	57.3	18.5	5.4	19.1	B		
		SB	274.5	255.0	236.2	209.9	F		
5	Pyramid Way and Roberta Lane	EB	48.1	--	13.1	26.6	C	11.9	B
		WB	--	--	--	--	--		
		NB	9.2	4.0	--	5.1	A		
		SB	--	12.0	13.6	12.1	B		
6	Pyramid Way and York Way	EB	15.3	59.6	15.9	32.1	C	5.7	A
		WB	21.7	57.5	25.9	29.5	C		
		NB	10.2	3.3	3.5	3.4	A		
		SB	3.8	2.5	3.0	2.4	A		
PM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	77.2	50.5	21.3	39.5	D	46.6	D
		WB	88.8	13.5	10.8	18.1	B		
		NB	86.7	24.3	100.1	81.2	F		
		SB	21.3	21.8	6.3	12.5	B		
2	N. McCarran Boulevard and Pyramid Way	EB	222.8	105.7	80.0	157.5	F	132.6	F
		WB	264.1	276.7	294.4	263.5	F		
		NB	82.1	61.8	31.7	61.4	E		
		SB	108.0	47.4	21.2	41.8	D		
3	N. McCarran Boulevard and Fourth Street	EB	59.1	10.4	8.2	16.1	B	104.7	F
		WB	204.1	222.9	206.7	175.3	F		
		NB	56.1	49.8	35.6	44.6	D		
		SB	53.3	47.3	16.6	32.7	C		
4	Pyramid Way and Queen Way	EB	289.4	362.2	192.4	261.3	F	48.5	D
		WB	71.2	60.6	12.5	22.0	C		
		NB	108.1	34.4	35.1	35.2	D		
		SB	111.4	15.1	9.9	21.2	C		
5	Pyramid Way and Roberta Lane	EB	80.4	--	15.3	56.1	E	15.7	B
		WB	---	--	--	--	--		
		NB	9.8	7.0	--	7.1	A		
		SB	--	11.9	10.9	11.8	B		
6	Pyramid Way and York Way	EB	44.9	47.4	36.0	44.6	D	14.9	B
		WB	16.2	39.7	16.1	24.7	C		
		NB	11.7	10.4	9.8	10.3	B		
		SB	13.2	10.6	10.8	10.7	B		

Source: Parsons
Analysis Tool: VISSIM

Table 6-5: Year 2030 Build Analysis – Preferred Build Alternative 1L-3T-1R

NO.	INTERSECTION	APPROACH	AVERAGE DELAY (sec/veh) LEFT	THROUGH	RIGHT	TOTAL APPROACH	APPROACH LOS	INTERSECTION DELAY	INTERSECTION LOS
AM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	73.8	4.3	2.1	4.1	A	9.7	A
		WB	55.1	8.5	7.2	10.8	B		
		NB	57.3	34.4	5.6	27.9	C		
		SB	51.3	65.9	19.2	53.3	D		
2	N. McCarran Boulevard and Pyramid Way	EB	49.2	45.1	30.1	45.4	D	38.3	D
		WB	54	55.9	12.5	50.6	D		
		NB	62.9	26.2	4.9	29.8	C		
		SB	103.5	38.7	17.6	33	C		
3	N. McCarran Boulevard and Fourth Street	EB	91	3	2.3	6.1	A	14.3	B
		WB	56.9	6.7	4.5	8.2	A		
		NB	51.5	51.2	36.9	45.4	D		
		SB	51.8	42.9	9.3	22.1	C		
4	Pyramid Way and Queen Way	EB	55.9	--	4.9	37.7	D	17.8	B
		WB	--	--	--	--	--		
		NB	81.6	12.1	--	13.8	B		
		SB	--	19	20.5	18.8	B		
5	Pyramid Way and Roberta Lane	EB	47.4	--	9.1	23.7	C	10.9	B
		WB	--	--	--	--	--		
		NB	9.9	3.5	--	4.7	A		
		SB	--	11	12.5	11	B		
6	Pyramid Way and York Way	EB	53.4	50.3	18.9	43.2	D	7.4	A
		WB	53.9	51.6	39.4	52.7	D		
		NB	10.8	4.1	3.2	4.1	A		
		SB	3.3	2.9	3.1	2.9	A		
PM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	63	14.7	5.6	13.5	B	18.1	B
		WB	128.5	17.8	24.1	25	C		
		NB	35.8	27.8	10.2	17.2	B		
		SB	19.6	22	8.8	13.9	B		
2	N. McCarran Boulevard and Pyramid Way	EB	100.6	58.1	47.7	83.2	F	65.1	E
		WB	95.83	76.81	76.26	79.18	E		
		NB	91.9	49.8	19.2	52.1	D		
		SB	90.6	40.1	5.9	30.4	C		
3	N. McCarran Boulevard and Fourth Street	EB	57.8	11.9	10.9	17	B	21.0	C
		WB	63.2	13.2	9.7	12.6	B		
		NB	50	50.7	34.3	43.3	D		
		SB	55.9	45.1	45.7	46.7	D		
4	Pyramid Way and Queen Way	EB	34.4	--	5	29.2	C	16.4	B
		WB	--	--	--	--	--		
		NB	60.6	17.1	--	17.7	B		
		SB	--	13.6	7.9	12.9	B		
5	Pyramid Way and Roberta Lane	EB	80.4	--	13.7	55.5	E	13.0	B
		WB	--	--	--	--	--		
		NB	7.4	5.5	--	5.7	A		
		SB	--	8.6	4.7	8.3	A		
6	Pyramid Way and York Way	EB	42.2	44.1	29.3	41.2	D	14.0	B
		WB	41.1	40.7	25.5	37	D		
		NB	8.9	9.7	10.6	9.7	A		
		SB	13.3	8.1	9.3	8.2	A		

Source: Parsons

Analysis Tool: VISSIM

Table 6-6: Year 2030 Build Analysis – Preferred Build Alternative 1L-2T-2R

NO.	INTERSECTION	APPROACH	AVERAGE DELAY (sec/veh) LEFT	THROUGH	RIGHT	TOTAL APPROACH	APPROACH LOS	INTERSECTION DELAY	INTERSECTION LOS
AM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	98.2	4.2	2.1	4.0	A	8.9	A
		WB	66.8	6.4	8.9	9.6	A		
		NB	57.3	34.4	5.6	27.9	C		
		SB	51.3	65.9	14.9	52.9	D		
2	N. McCarran Boulevard and Pyramid Way	EB	49.6	45.6	32.4	46.0	D	47.0	D
		WB	55.7	56.5	12.6	51.3	D		
		NB	60.2	26.1	5.0	29.3	C		
		SB	111.3	58.1	28.1	47.9	D		
3	N. McCarran Boulevard and Fourth Street	EB	85.3	3.0	1.9	6.0	A	14.3	B
		WB	58.5	6.8	3.9	8.3	A		
		NB	51.5	51.2	36.8	45.4	D		
		SB	51.8	42.9	9.4	22.1	C		
4	Pyramid Way and Queen Way	EB	55.1	--	4.8	37.1	D	17.3	B
		WB	--	--	--	--	--		
		NB	88.3	12.1	--	13.8	B		
		SB	--	18.3	20.4	18.3	B		
5	Pyramid Way and Roberta Lane	EB	47.4	--	8.0	23.1	C	12.4	B
		WB	--	--	--	--	--		
		NB	10.6	3.4	--	4.8	A		
		SB	--	13.2	12.0	12.8	B		
6	Pyramid Way and York Way	EB	53.4	50.3	18.9	43.2	D	7.8	A
		WB	53.9	51.6	39.4	52.7	D		
		NB	9.8	4.2	3.3	4.2	A		
		SB	4.4	3.5	3.6	3.4	A		
PM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	67.1	14.7	5.6	13.5	B	18.8	B
		WB	117.8	21.1	22.7	27.6	C		
		NB	35.8	27.8	10.2	17.1	B		
		SB	19.6	26.5	8.4	14.5	B		
2	N. McCarran Boulevard and Pyramid Way	EB	96.5	56.0	45.9	80.5	F	67.9	E
		WB	97.4	79.8	74.6	79.4	E		
		NB	95.5	50.2	20.9	52.8	D		
		SB	97.9	41.3	42.6	48.3	D		
3	N. McCarran Boulevard and Fourth Street	EB	57.4	11.2	8.3	16.4	B	20.4	C
		WB	61.3	12.4	9.6	12.0	B		
		NB	50.1	50.9	34.5	43.5	D		
		SB	55.9	45.1	45.5	46.6	D		
4	Pyramid Way and Queen Way	EB	34.4	--	5.0	29.2	C	16.5	B
		WB	--	--	--	--	--		
		NB	63.4	17.2	--	17.8	B		
		SB	--	13.7	7.8	12.9	B		
5	Pyramid Way and Roberta Lane	EB	80.4	--	13.5	55.4	E	13.5	B
		WB	--	--	--	--	--		
		NB	8.2	5.5	--	5.8	A		
		SB	--	9.9	4.5	9.5	A		
6	Pyramid Way and York Way	EB	42.2	44.1	29.3	41.3	D	14.3	B
		WB	41.1	40.7	25.5	37.0	D		
		NB	9.0	9.7	10.6	9.6	A		
		SB	12.7	9.0	8.6	8.8	A		

Source: Parsons
Analysis Tool: VISSIM

Figure 6-1: 2010 AM (PM) Peak Hour Existing Traffic Volumes and Lane Geometry

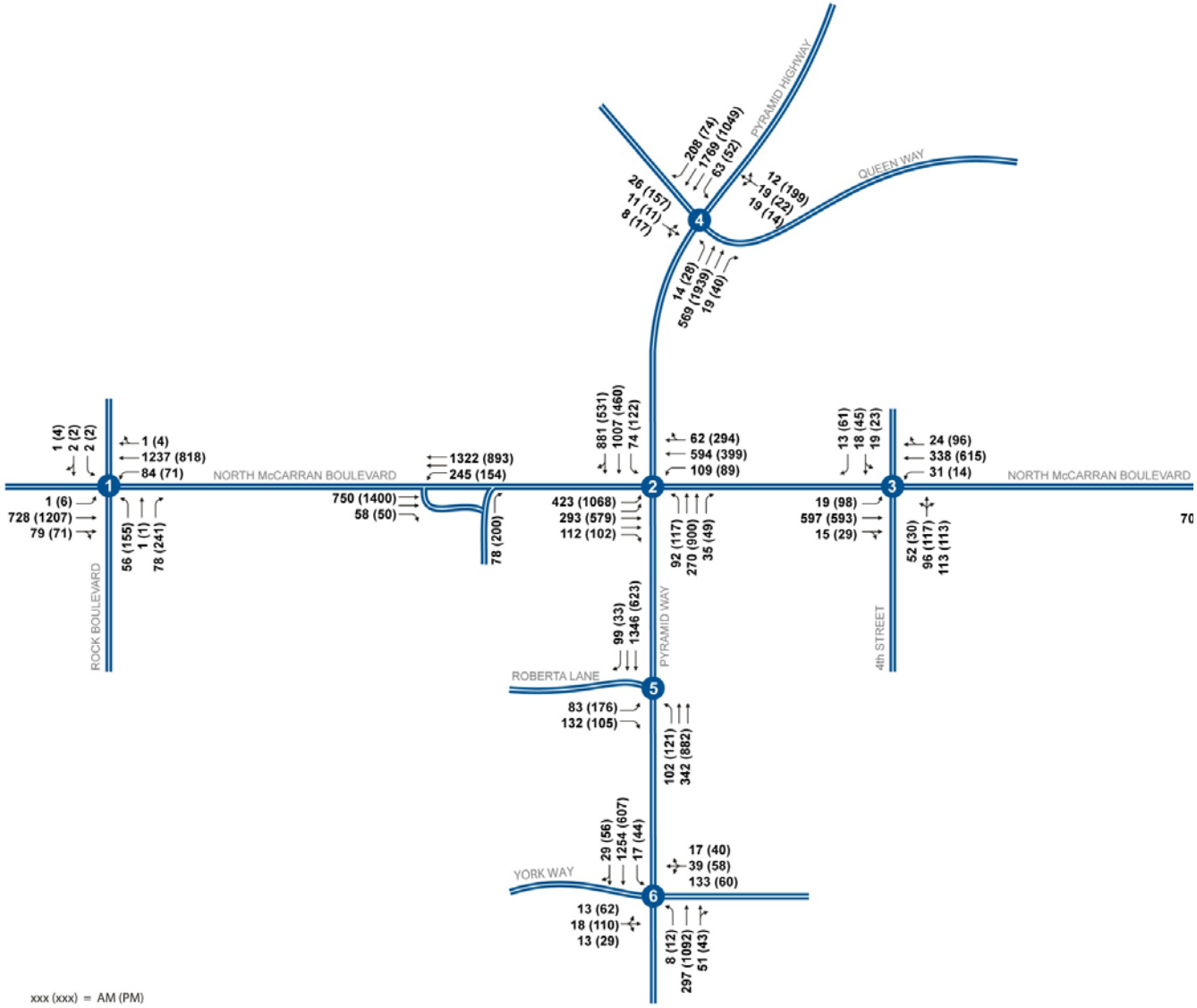


Figure 6-2: 2030 AM (PM) Peak Hour No-Build Traffic Volumes

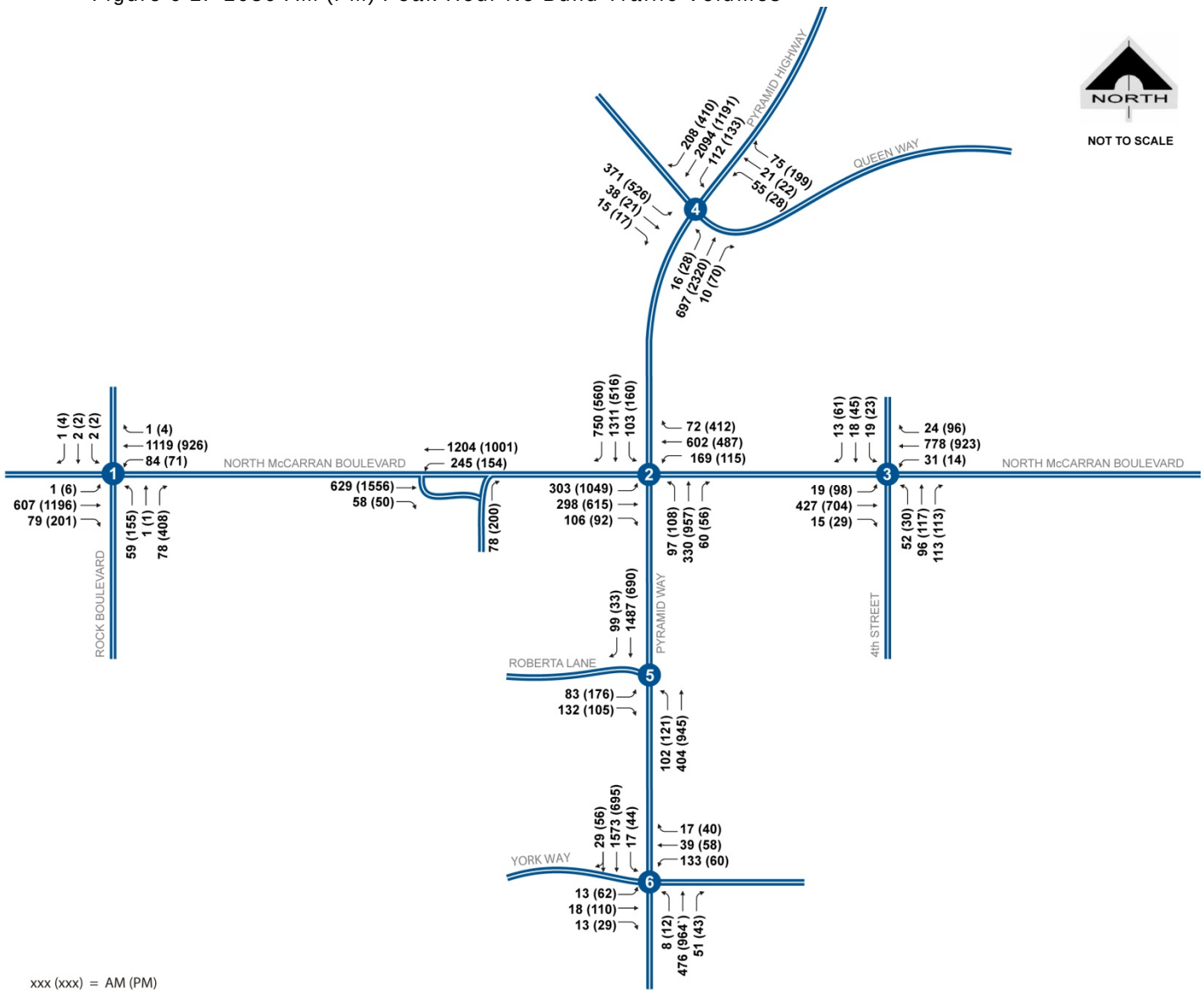
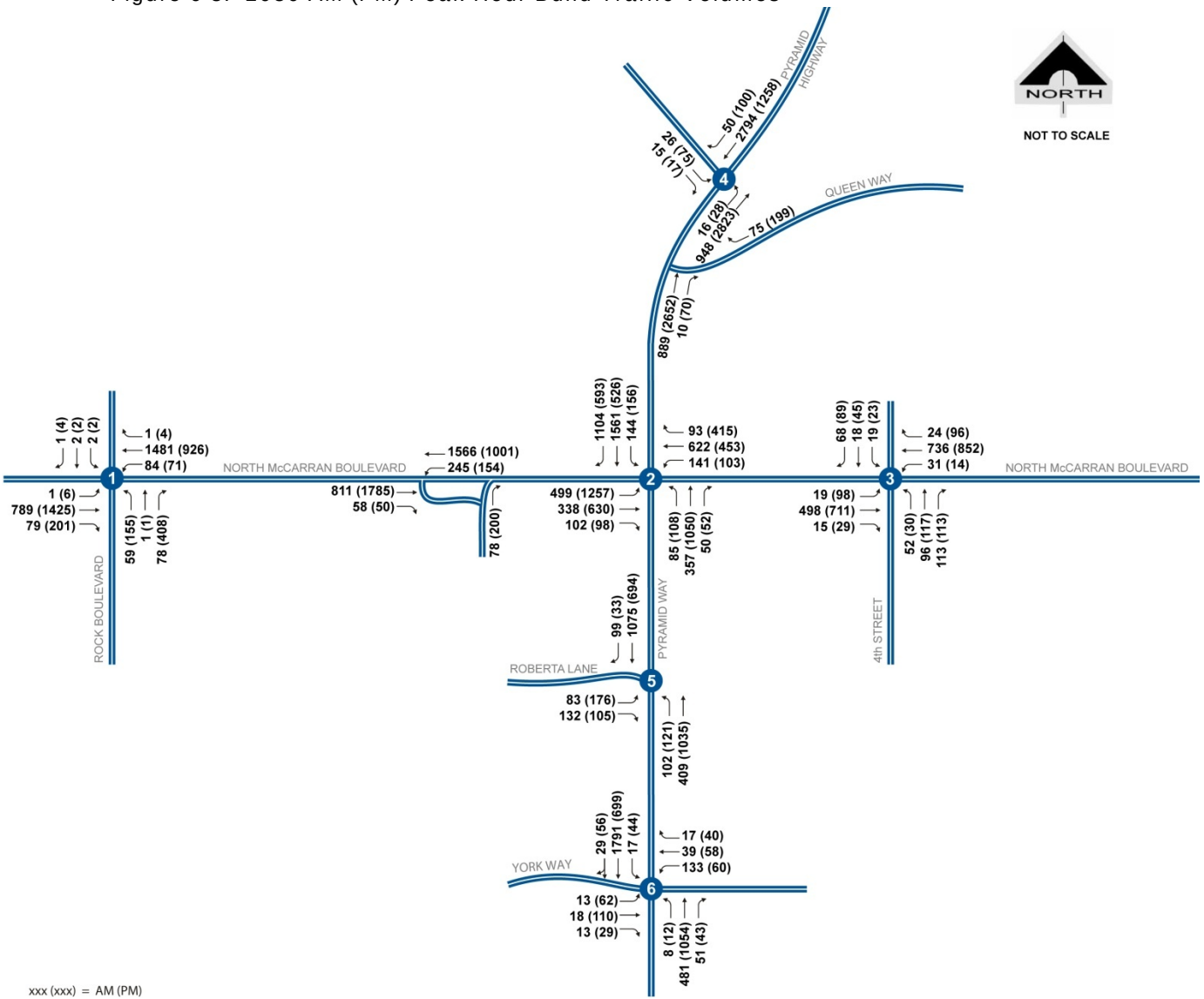
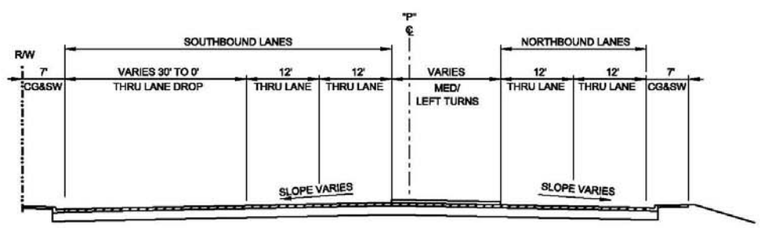
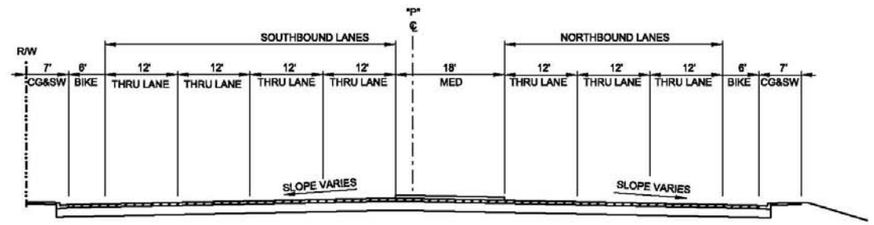


Figure 6-3: 2030 AM (PM) Peak Hour Build Traffic Volumes

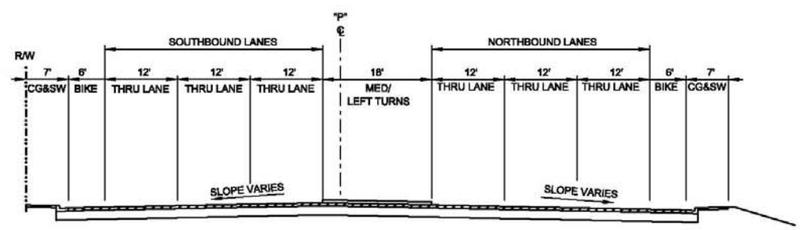




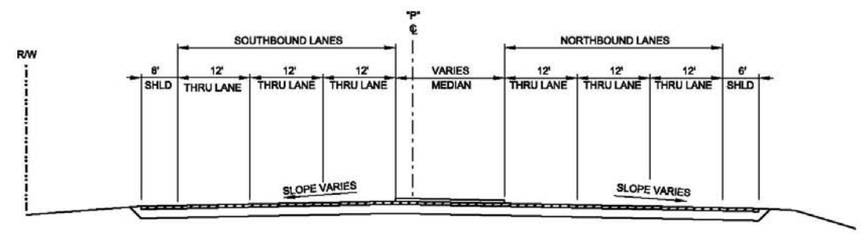
PYRAMID WAY
TYLER TO YORK AVE
SECTION OF IMPROVEMENT



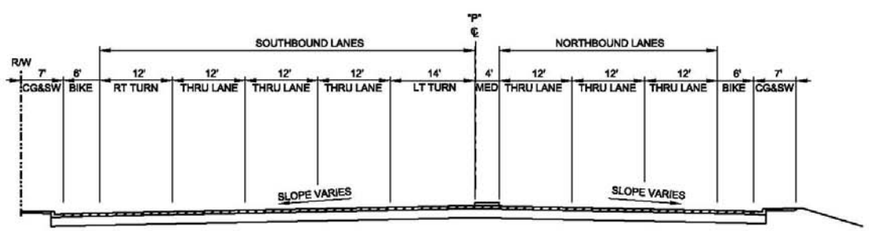
PYRAMID WAY
EMERSON TO QUEEN WAY
SECTION OF IMPROVEMENT



PYRAMID WAY
YORK AVE TO McCARRAN
SECTION OF IMPROVEMENT



PYRAMID WAY
QUEEN WAY TO NORTH PROJECT LIMIT
SECTION OF IMPROVEMENT



PYRAMID WAY
McCARRAN AVE TO EMERSON
SECTION OF IMPROVEMENT

PYRAMID WAY & McCARRAN BOULEVARD INTERSECTION PROJECT

REV. NO.	DATE	DESCRIPTION	APPROVED

RTC

PYRAMID WAY & McCARRAN BOULEVARD
PREFERRED BUILD ALTERNATIVE
TYPICAL SECTIONS - PYRAMID WAY
WASHOE COUNTY REGIONAL TRANSPORTATION COMMISSION

PRELIMINARY SUBMITTAL SUBJECT TO REVISION APRIL, 2011

PROJECT No: 546497 DRAWN BY: SDP
DESIGNED BY: VS CHECKED BY: JBE
APPROVED BY MJS DATE: 06/10/2011

PARSONS
3480 GS Richards Blvd., STE 202.
Carson City, NV 89703
(775) 885-2280 FAX (775) 885-8439

SCALE
HORIZ: 1" = 20'
VERT: NONE
FIELD BOOK

L-XXXX
DRAWING NO.
TS-1
SHT. OF xxx

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Figure 6-4: Preferred Build Alternative Typical Sections (1 of 3)

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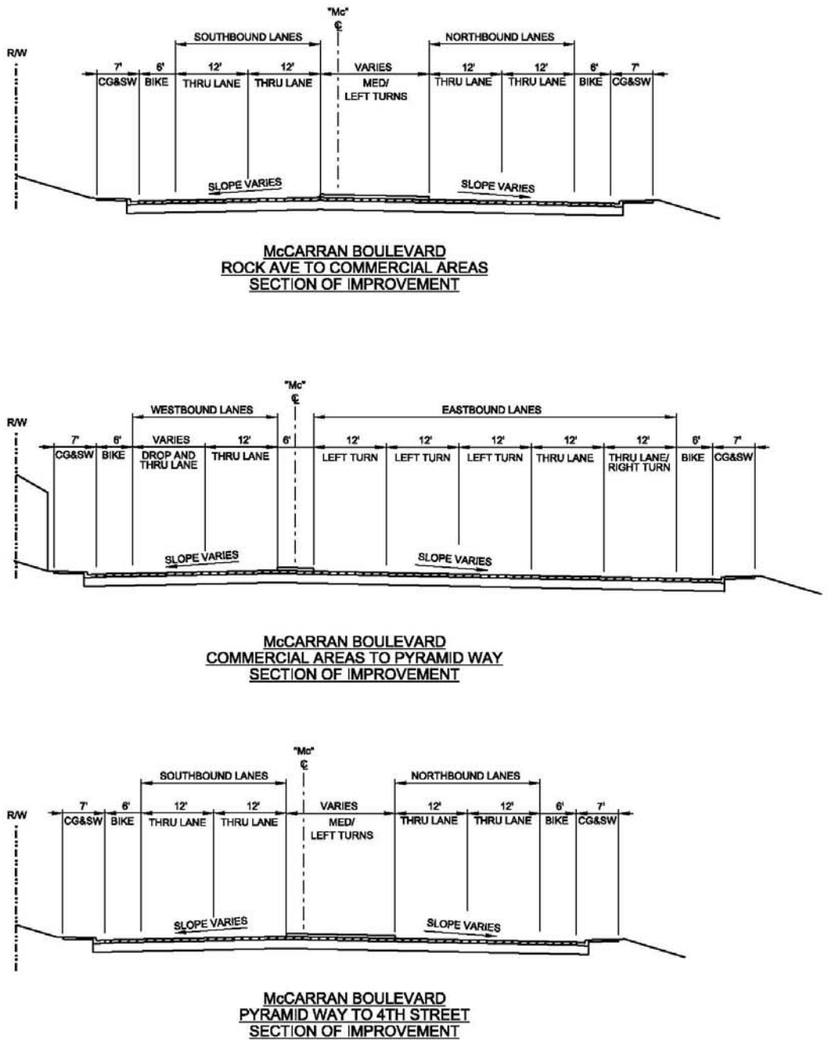

Figure 6-4: Preferred Build Alternative Typical Sections (2 of 3)

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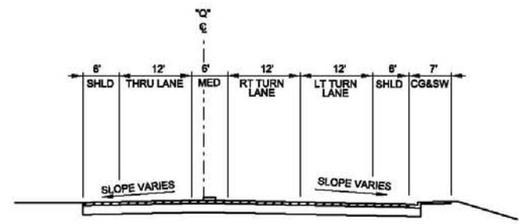
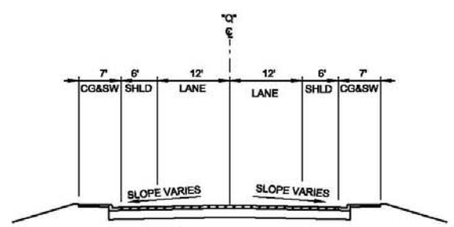
Figure 6-4: Preferred Build Alternative Typical Sections (3 of 3)



QUEEN WAY
WEST OF PYRAMID
SECTION OF IMPROVEMENT



QUEEN WAY
EAST OF PYRAMID
SECTION OF IMPROVEMENT

PYRAMID WAY & McCARRAN BOULEVARD INTERSECTION PROJECT

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REV NO.	DATE	DESCRIPTION	APPROVED

RTC

PYRAMID WAY & McCARRAN BOULEVARD
PREFERRED BUILD ALTERNATIVE
TYPICAL SECTIONS - QUEEN WAY
WASHOE COUNTY REGIONAL TRANSPORTATION COMMISSION

PRELIMINARY SUBMITTAL SUBJECT TO REVISION APRIL, 2011

PROJECT No: 646497 DRAWN BY: SDP
DESIGNED BY: VS CHECKED BY: JSE
APPROVED BY MJS DATE: 08/10/2011

PARSONS
3480 GS Richards Blvd., STE 202.
Carson City, NV 89703
(775) 885-2280 FAX (775) 885-8439

SCALE
HORIZ: 1" = 20'
VERT: NONE
FIELD BOOK

L-XXXX
DRAWING NO.
TS-3
SHT. OF XXX

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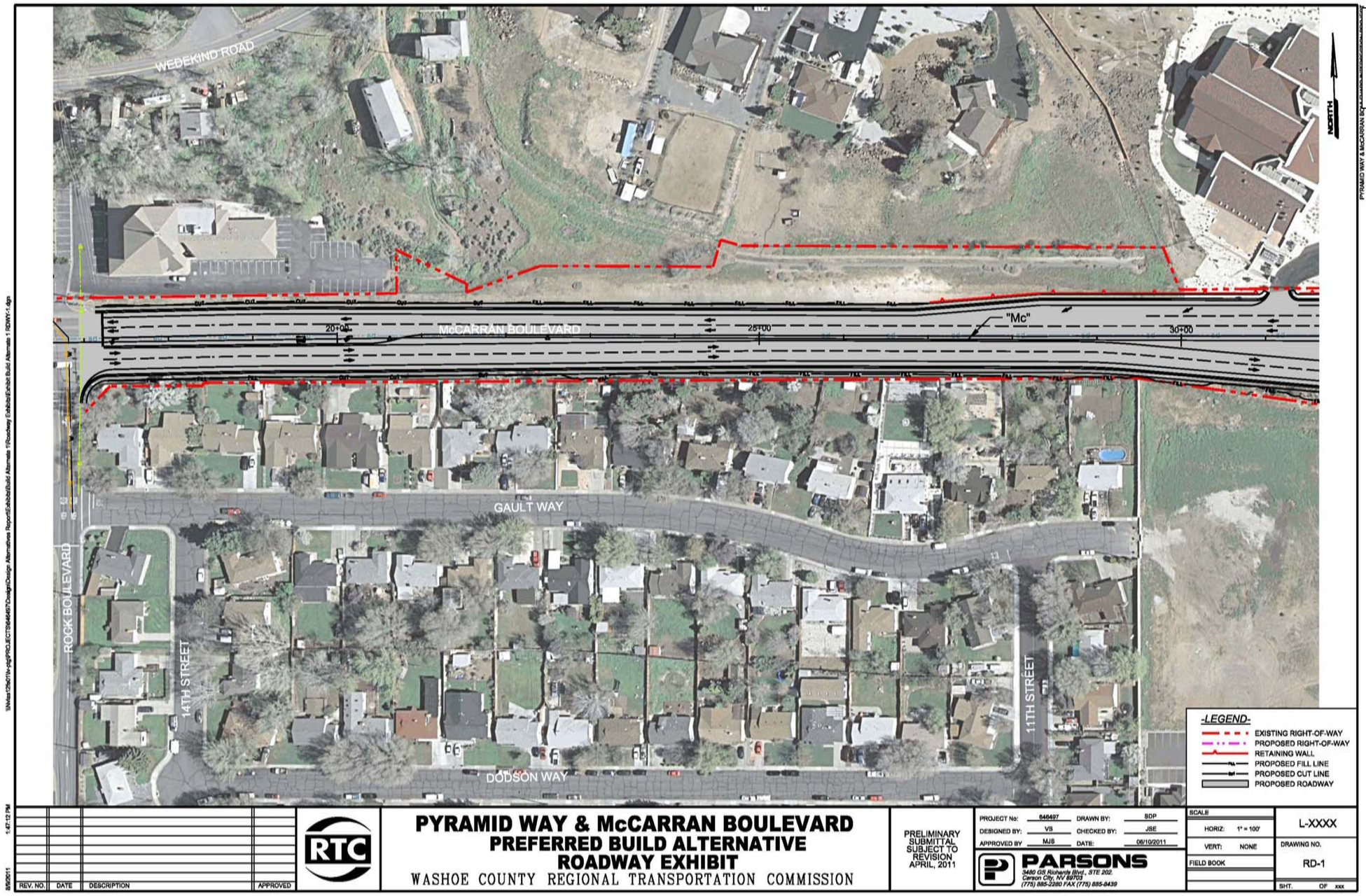

Figure 6-5: Preferred Build Alternative
(1 of 7)

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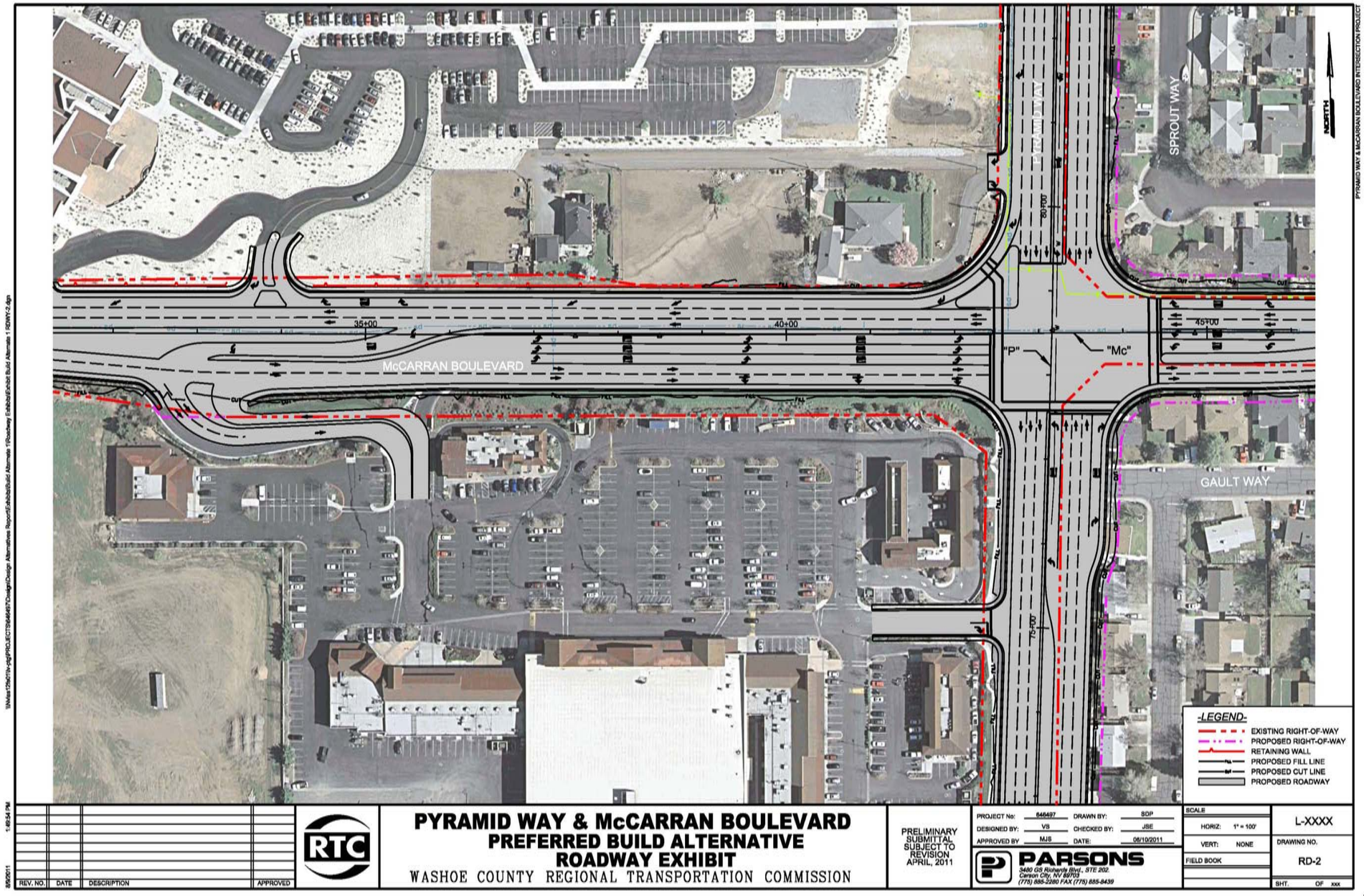

Figure 6-5: Preferred Build Alternative for 1L-3T-2R
(2 of 7)

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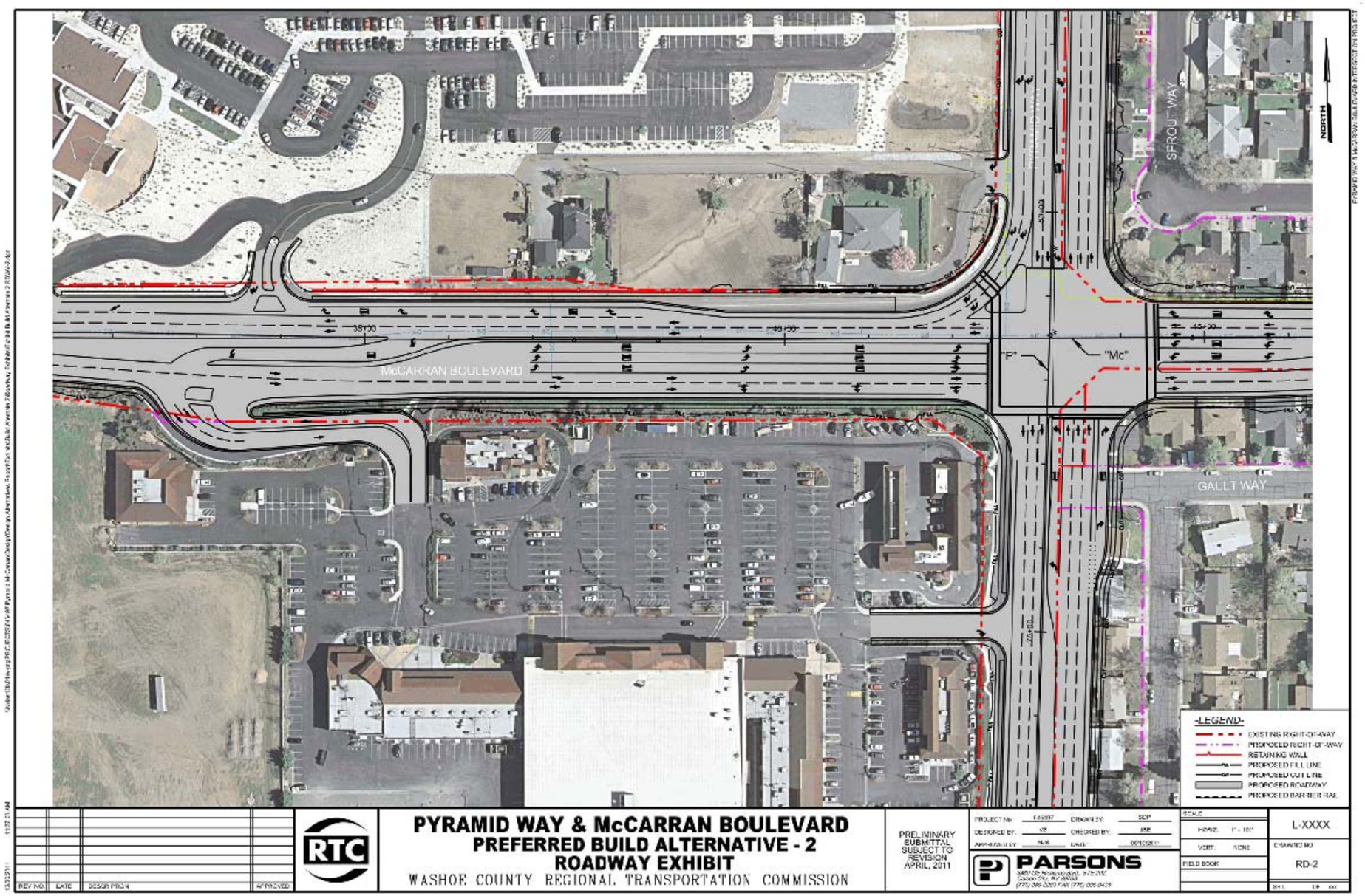

Figure 6-5: Preferred Build Alternative for 1L-2T-2R
(3 of 7)

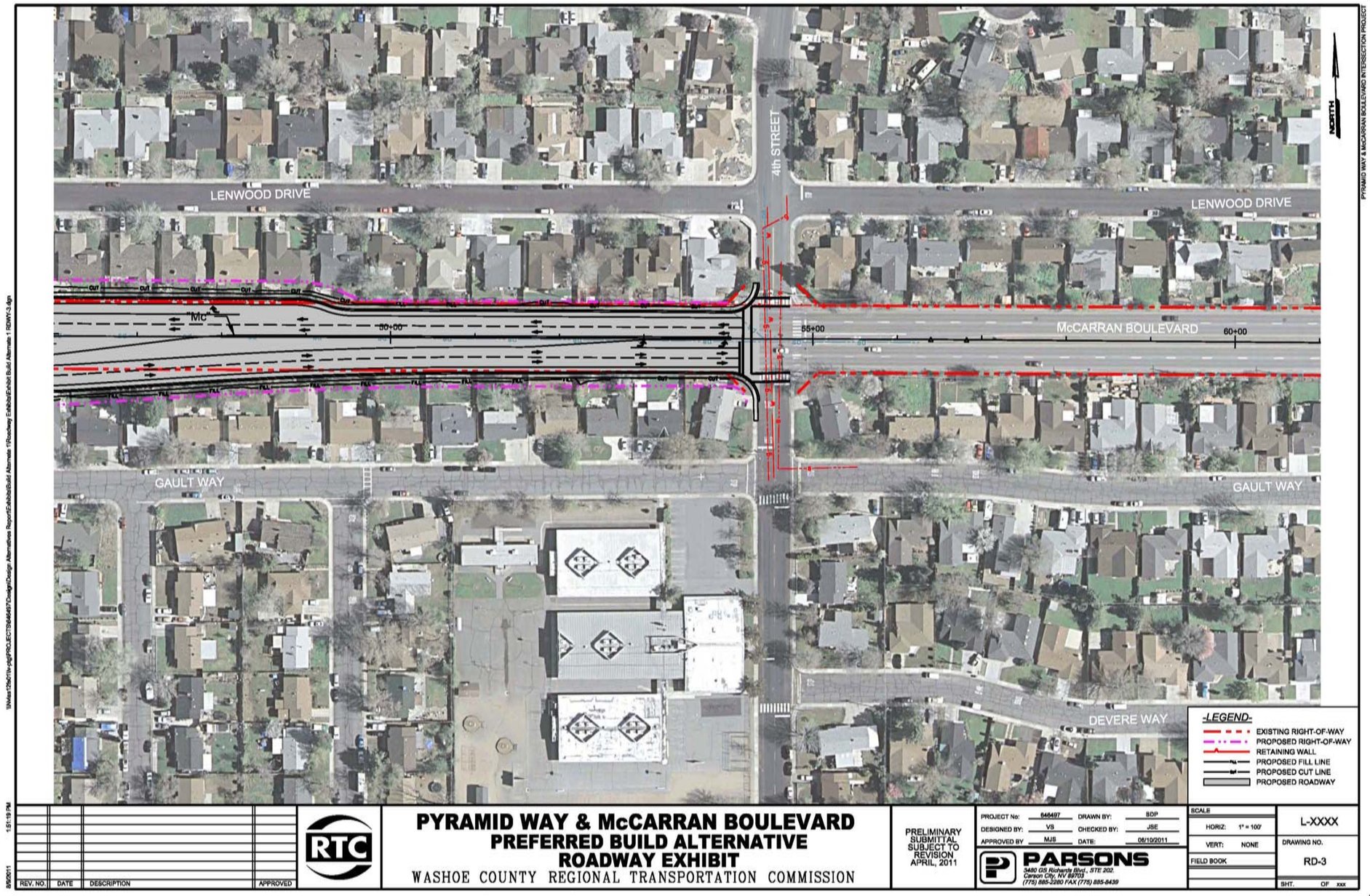

Figure 6-5: Preferred Build Alternative
(4 of 7)

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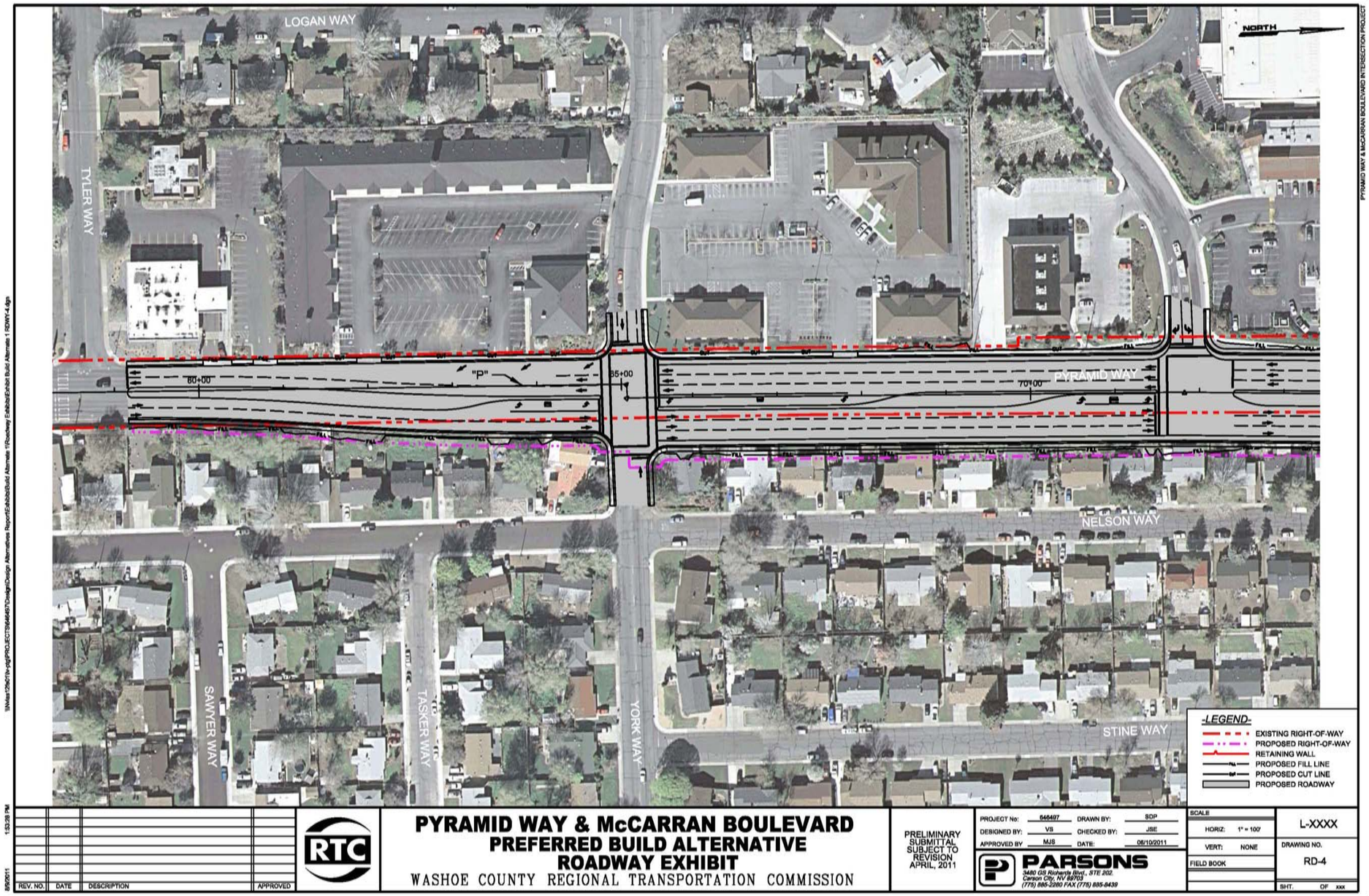

Figure 6-5: Preferred Build Alternative
(5 of 7)

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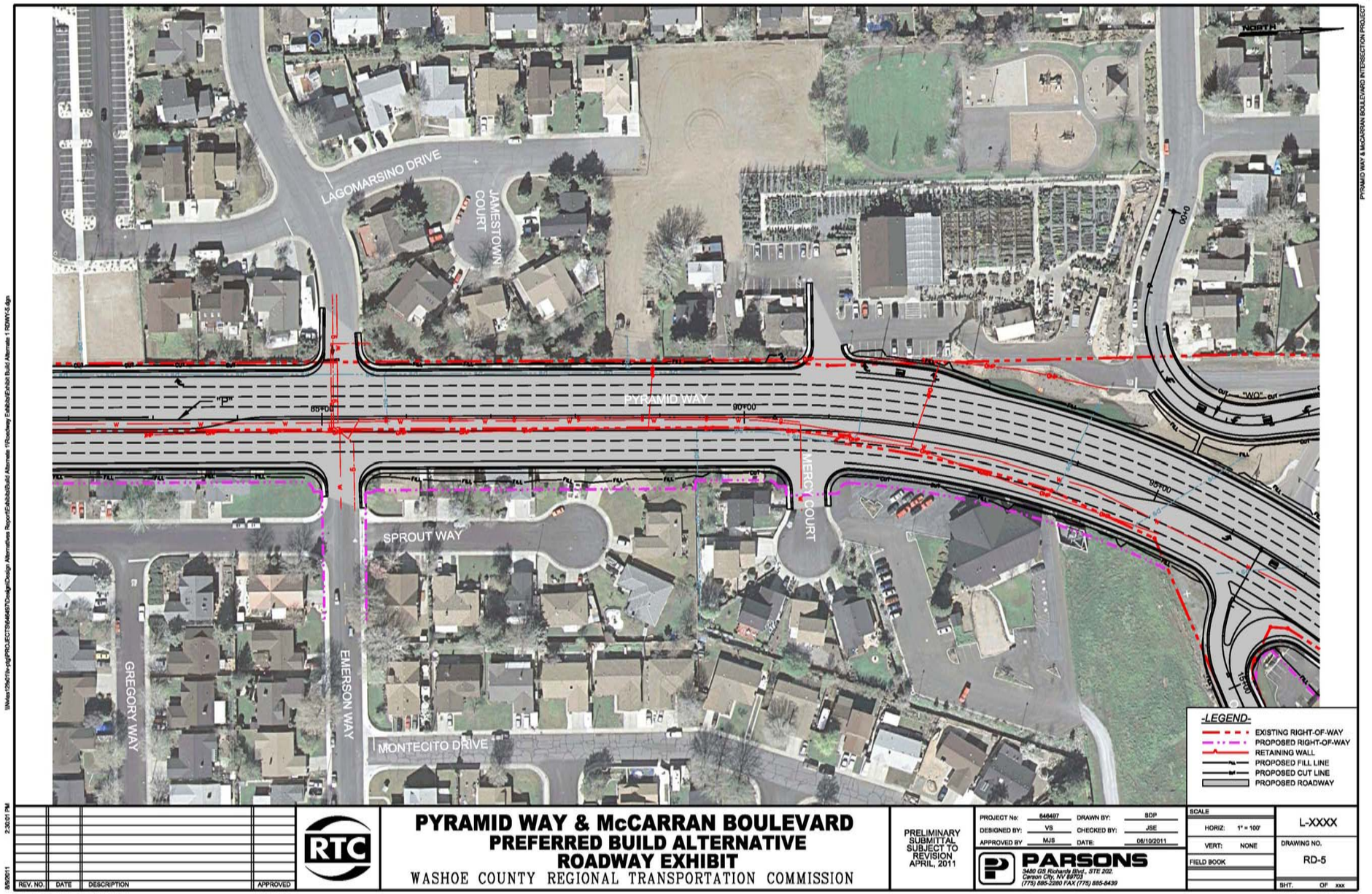

Figure 6-5: Preferred Build Alternative (6 of 7)

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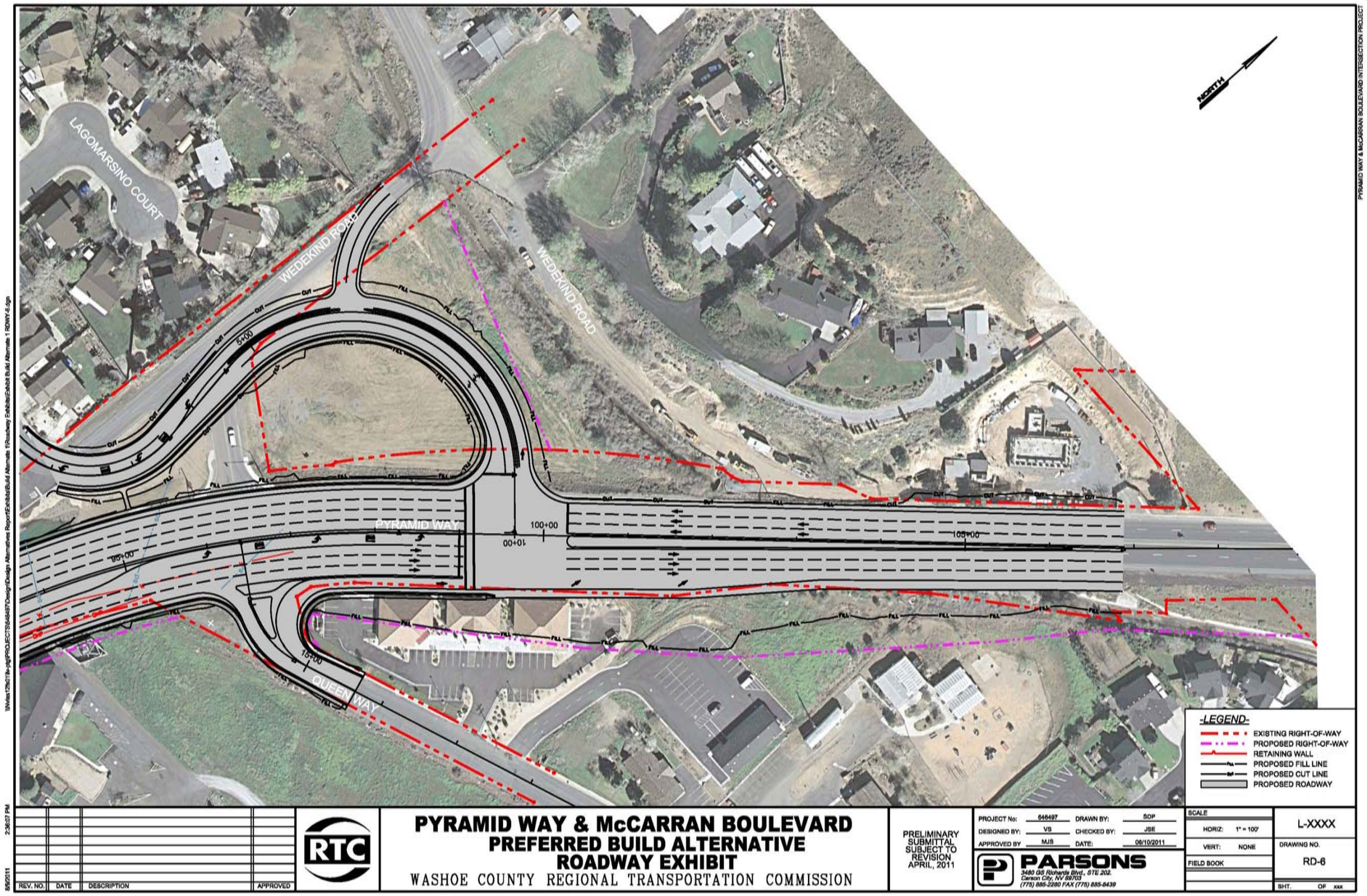

Figure 6-5: Preferred Build Alternative
(7 of 7)

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7 SUMMARY OF FINDINGS

7.1 PROJECT PURPOSE AND NEED

The Regional Transportation Commission of Washoe County, (RTC), in cooperation with the Nevada Department of Transportation (NDOT) and the Federal Highway Administration (FHWA), is studying operational improvements to the intersection of North McCarran Boulevard (State Route 659) and Pyramid Way (State Route 445) in Sparks, Washoe County, Nevada.

There is a critical need to improve traffic operations at this intersection, principally the morning commuter traffic flow in the southerly, through direction and southerly to westerly direction (Pyramid Way to McCarran Boulevard and U.S. 395), as well as the reverse flow from the west to the north in the afternoon peak period. The project started with 13 potential transportation improvement alternatives that were later reduced to three alternatives that included an elevated direct connection for the eastbound to northbound movements, a widened intersection with multiple left turn lanes on each approach, and a grade separation of Pyramid Way over McCarran Boulevard.

The Pyramid Way/McCarran Boulevard intersection serves the transportation needs of the northern communities in Washoe County and Sparks, Nevada. This intersection links commuters from unincorporated Washoe County and Sparks to employment and service centers located within Reno and Sparks. The current and projected traffic congestion and operational characteristics of this intersection necessitate improvement. Workshops have been held with residents and businesses in the project area and regional commuters using the intersection to solicit input on the project's purpose and need, range of alternatives to be considered, evaluation methodologies, and the selection of a preferred alternative.

The purpose of the proposed project is to enhance the operational characteristics of the intersection, improve safety for motorists, pedestrians and bicyclists, reduce congestion, meet the level of service standards shown in the current regional transportation plan and accommodate the increase in future traffic volumes. The RTC travel demand model predicts that the county population will reach 577,000 by 2018. As a result of the economic slowdown of 2007–2009, the Nevada State Demographer issued revised population estimates in 2008, predicting that Washoe County will not reach this population level until several years after 2028. Based on these revised state estimates, the previous RTC model projections for the 2018 population may be reached by 2030; an increase of 92 percent over the 2007 population. Employment in these areas, which was previously projected to increase by 300 percent from 2007 to 2018, may reach that level by 2030.

7.2 FUTURE INTERSECTION CONDITIONS

The traffic analyses for the project improvement alternatives were done on 3 separate occasions in 2006, 2008, and 2010. The 2006 traffic analysis used projections of future growth that were obtained from the RTC travel demand forecast model which was used to develop the 2004 Regional Transportation Plan (RTP). The 2008 traffic analysis used the new consensus forecast that was published and approved in June 2008. This new forecast was used for the 2040 RTP that was approved in November 2008. The population forecasts produced in 2008 were somewhat lower than the original forecasts done in 2004, reflecting the continued slowdown in the housing sector and the overall economy. The 2008 traffic analysis of the three build alternative used the forecasted peak hour volumes for 2030 for the Pyramid Way/McCarran Boulevard intersection. The project Technical Advisory Committee (TAC) considered basing the identification of improvements on achieving LOS "E" or better through year 2030.

Although significant volumes of traffic will continue to use the Pyramid Way/McCarran Boulevard intersection during daylight and early evening hours throughout the week, the peak flows will be associated with the morning and evening weekday commute. Traffic demands at the intersection are expected to increase until the connection between the U.S. 395 freeway and Pyramid Highway, known as the U.S. 395 Connection, is completed in northern Sparks. The 2040 RTP shows the U.S. 395 Connection being completed by 2030. The 2008 traffic analysis showed all three build alternatives would operate at acceptable levels of service in 2030.

The third traffic analysis that was done in 2010 only analyzed the selected Preferred Build Alternative, known as the Modified Expanded Intersection. In early 2010 the RTC developed an Interim Consensus Forecast based on a cooperative effort with the Truckee Meadows Regional Planning Agency. This forecast differed from the 2008 forecast and RTC requested the new 2010 traffic analysis. The geometry for the original Expanded Intersection alternative was reduced from the original concept to reflect the forecasted changes in land use and reduction in future population. This new geometry (Modified Expanded Intersection) also includes modifications to the Pyramid/Queen intersection.

7.3 INTERSECTION IMPROVEMENT CONCEPTS

On February 6, 2006, representatives from the RTC, Washoe County, NDOT, the City of Sparks, and Parsons met at the NDOT District 2 Offices in Reno. After reviewing the project scope and schedule, and the existing highways and community backdrop, the basic purpose and need for improvements were discussed and a framework for evaluating improvement concepts was established.

The project TAC established that the intersection of Pyramid Way with McCarran Boulevard currently operates at poor LOS "F" during the AM peak period and LOS "F" during the PM peak period, and traffic queues resulting from insufficient capacity at this intersection extend north, thereby negatively impacting operations along southbound Pyramid Highway at Queen Way. The TAC further agreed that given recent population growth in the Spanish Springs Valley and the large number of entitled land development projects, conditions would significantly worsen without major transportation investments in the Pyramid Way/Pyramid Highway corridor. Additionally, the group's consensus for action took into account that

planned traffic relief projects, such as the U.S. 395 Connection project that will connect U.S. 395 to Pyramid Highway, are relatively expensive to construct and that funding resources are not fully identified for such massive projects. Therefore, improvements to the intersection of Pyramid Way with McCarran Boulevard would need to address traffic needs for upwards of 20 years.

Given these considerations, 13 improvement concepts were identified for initial study, along with the No-build alternative, which incorporates other area-wide improvements identified in the RTP. Following two screenings of the initial concepts, three build concepts were chosen to move from the conceptual stage to be more fully developed as design alternatives. It was also determined that a no build concept would continue to be evaluated.

7.4 EVALUATION MATRIX

The project Technical Advisory Committee utilized a streamlined evaluation matrix to evaluate the proposed improvement options. The following evaluation categories were selected as being the most important towards meeting the goals and objectives of the project: (1) purpose and need, (2) operations/maintenance, (3) access impacts, (4) costs, and (5) environmental impacts. Each of the following alternatives was ranked based on these categories, with the largest number of stars representing the Alternative that earned the highest ranking:

- Alternative 1—Direct Connector (Eastbound-to-Northbound Flyover Ramp), 11 stars
- Alternative 2—Expanded At-Grade Intersection, 12 stars
- Alternative 3—Grade Separation (Pyramid Way/Highway over McCarran Boulevard), 9 stars
- No Build alternative—No changes to the existing geometry, 8 stars

7.5 RECOMMENDATION

Based on the evaluation results of the Alternatives, it is recommended that the No Build Alternative, Alternative 1-Direct Connector (flyover ramp) and Alternative 3-Grade Separation (Pyramid Way/Highway over McCarran Boulevard) be dropped from further consideration; and that, Alternative 2-Modified Expanded At-Grade Intersection be carried forward as the Preferred Build Alternative.

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7 SUMMARY OF FINDINGS 7-1
7.1 Project Purpose and Need 7-1
7.2 Future Intersection Conditions 7-1
7.3 Intersection Improvement Concepts 7-2
7.4 Evaluation Matrix 7-3
7.5 Recommendation 7-3

APPENDIX A

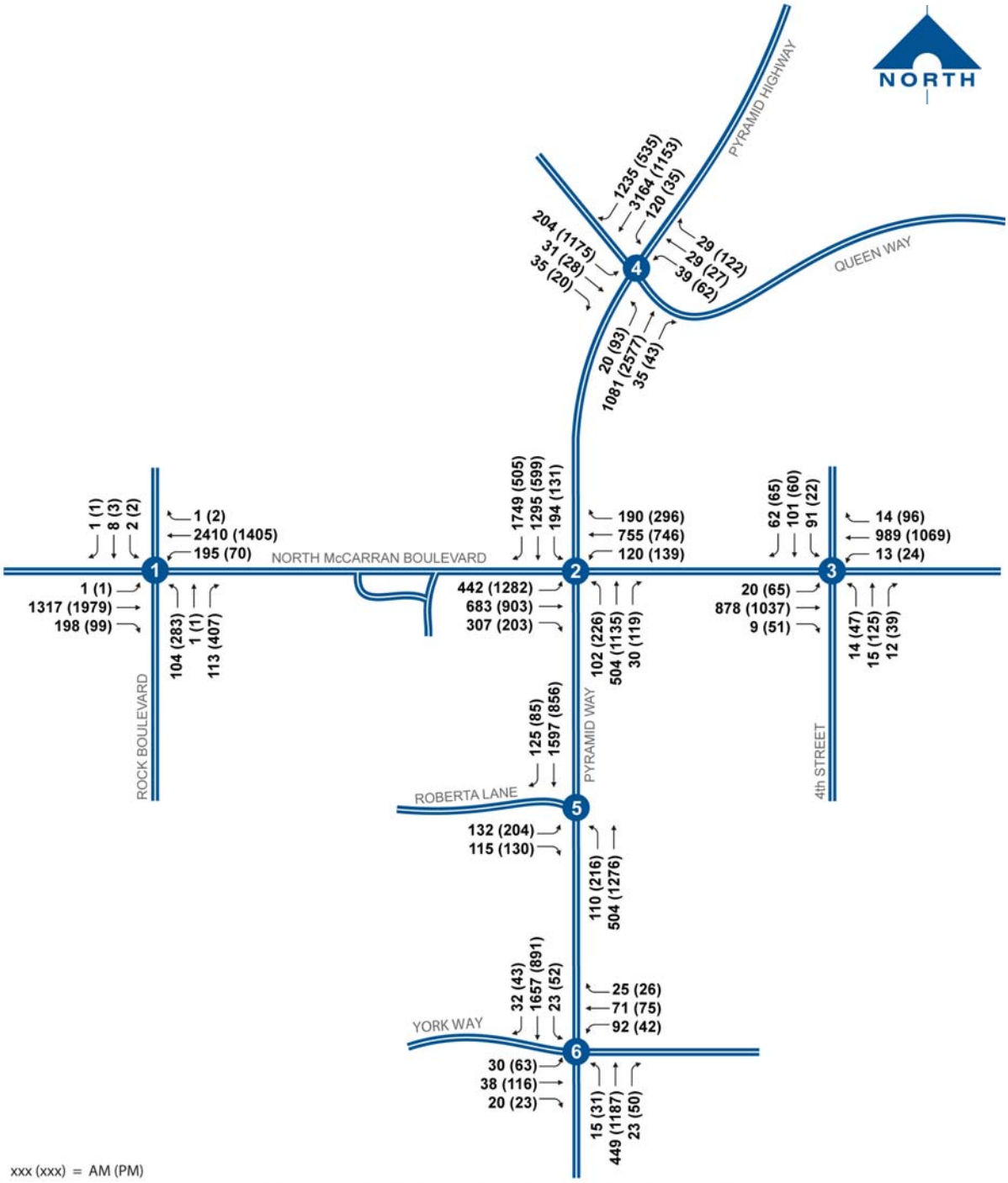
2008 ANALYSIS RESULTS

CHAPTER 4 – 2030 NO BUILD

CHAPTER 5 – 2030 BUILD

APPENDIX A

Chapter 4: Year 2030 AM/PM Peak Hour Traffic Volumes for the No-build Alternative with RTP Improvements (2008 Analysis)

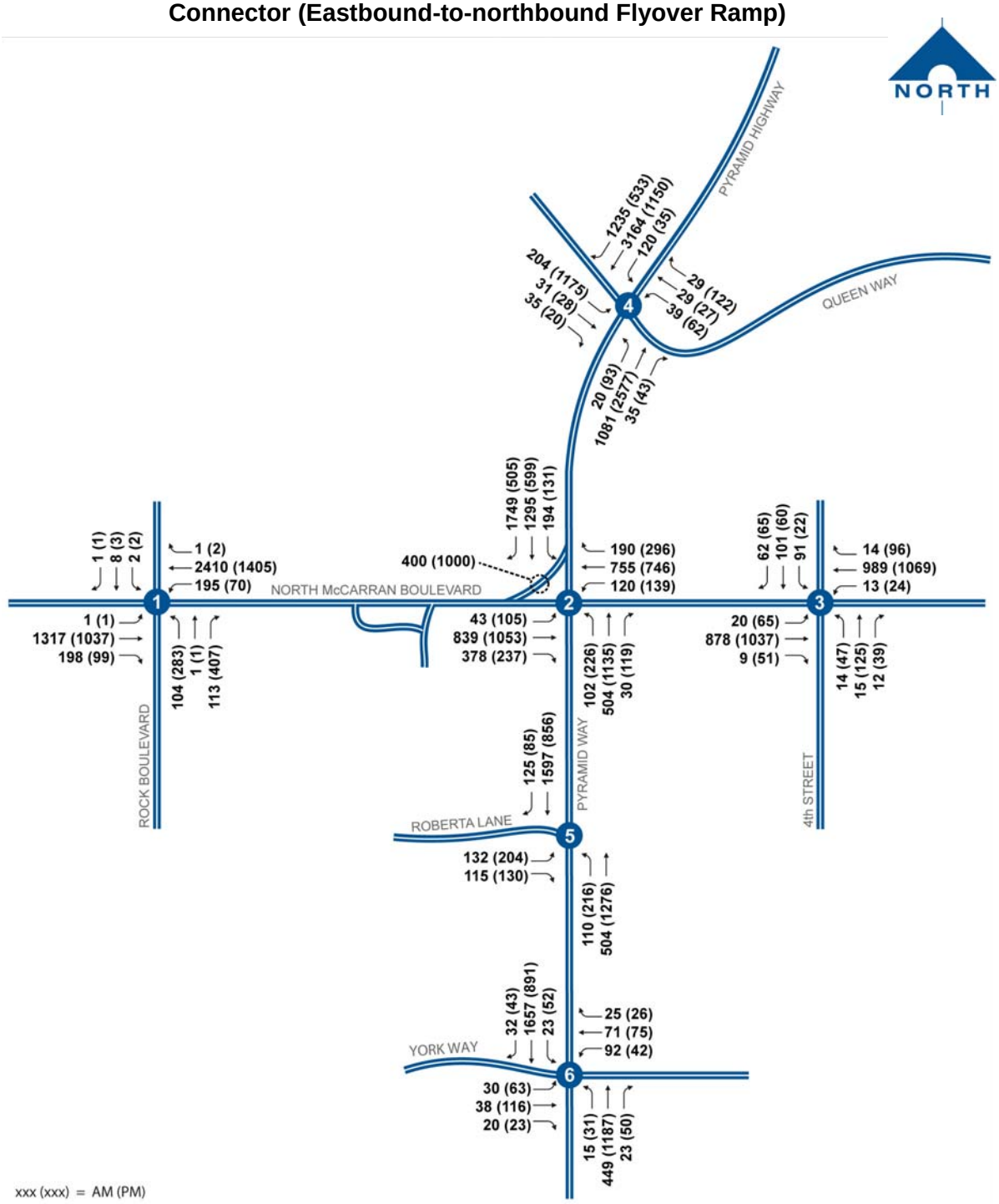


Chapter 4: Year 2030 Level of Service for the No-build Alternative with Regional Transportation Plan Improvements (2008 Analysis)

NO.	INTERSECTION	APPROACH	AVERAGE DELAY (sec/veh) LEFT	THROUGH	RIGHT	TOTAL APPROACH	APPROACH LOS	INTERSECTION DELAY	INTERSECTION LOS
AM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	69.1	172.4	142.9	168.5	**F**	59.9	**F**
		WB	35.5	5.4	9.9	7.6	A		
		NB	30.3	0.0	6.2	16.6	C		
		SB	2.6	26.6	0.0	24.2	C		
2	N. McCarran Boulevard and Pyramid Way	EB	132.3	41.2	8.6	60.9	**F**	74.3	**F**
		WB	63.8	84.1	81.3	81.5	**F**		
		NB	23.3	12.9	6.0	14.4	B		
		SB	43.0	73.9	122.5	98.6	**F**		
3	N. McCarran Boulevard and Fourth Street	EB	34.7	8.1	7.3	8.7	A	10.3	B
		WB	36.9	7.3	7.4	7.7	A		
		NB	34.2	29.0	8.7	23.1	C		
		SB	26.4	25.9	8.0	22.0	C		
4	Pyramid Way and Queen Way	EB	45.1	50.5	33.9	44.2	**E**	53.7	**F**
		WB	48.5	47.0	14.6	38.4	**E**		
		NB	73.6	14.4	1.3	14.6	B		
		SB	114.8	70.3	59.8	68.2	**F**		
5	Pyramid Way and Roberta Lane	EB	57.9	—	13.4	36.6	**E**	8.3	A
		WB	—	—	—	—	—		
		NB	23.1	1.3	—	6.6	A		
		SB	—	2.5	2.3	2.5	A		
6	Pyramid Way and York Way	EB	58.4	50.4	35.4	48.4	**E**	15.3	C
		WB	56.0	61.0	43.3	56.4	**F**		
		NB	52.9	11.6	3.1	12.5	B		
		SB	71.3	6.5	5.4	7.4	A		
PM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	251.4	199.7	150.5	197.3	**F**	78.1	**F**
		WB	35.6	7.8	13.4	9.0	A		
		NB	26.8	17.7	23.7	25.0	C		
		SB	0.0	11.8	2.7	8.8	A		
2	N. McCarran Boulevard and Pyramid Way	EB	391.0	156.1	133.8	278.3	**F**	143.0	**F**
		WB	110.0	159.5	146.7	151.1	**F**		
		NB	56.9	76.2	73.5	73.2	**F**		
		SB	55.6	49.3	43.9	47.7	**E**		
3	N. McCarran Boulevard and Fourth Street	EB	42.6	8.3	6.8	11.4	B	15.6	C
		WB	42.2	15.6	13.5	16.1	C		
		NB	28.9	25.8	14.7	25.1	D		
		SB	36.6	28.0	12.6	21.8	C		
4	Pyramid Way and Queen Way	EB	38.0	44.6	20.3	37.7	**E**	60.2	**F**
		WB	33.9	30.9	12.2	19.9	C		
		NB	160.3	102.2	85.2	103.7	**F**		
		SB	65.2	26.4	6.7	21.3	C		
5	Pyramid Way and Roberta Lane	EB	56.1	—	13.6	39.4	**E**	10.9	B
		WB	—	—	—	—	—		
		NB	20.7	8.0	—	10.2	B		
		SB	—	0.5	1.7	0.6	A		
6	Pyramid Way and York Way	EB	75.3	73.1	73.7	73.9	**F**	23.9	C
		WB	56.4	58.4	39.8	54.2	**F**		
		NB	76.1	18.6	12.0	19.5	C		
		SB	54.4	11.6	6.5	13.3	B		

Source: Parsons
Analysis Tool: VISSIM

Chapter 5: Year 2030 AM/PM Peak Hour Traffic Volumes for Alternative 1—Direct Connector (Eastbound-to-northbound Flyover Ramp)

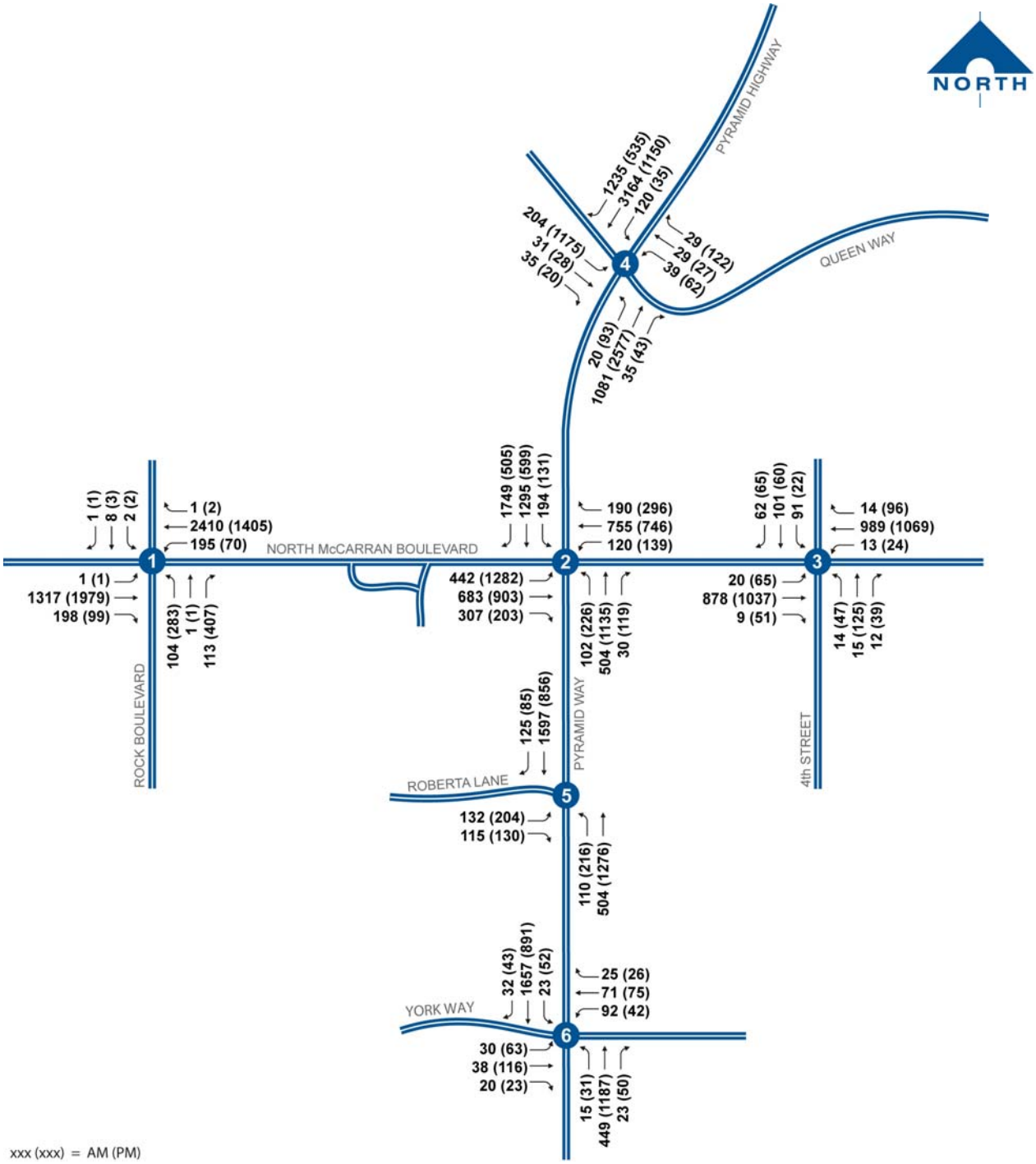


Chapter 5: Year 2030 Level of Service for Alternative 1—Direct Connector (Eastbound-to-northbound Flyover Ramp)

NO.	INTERSECTION	APPROACH	AVERAGE DELAY (sec/veh) LEFT	THROUGH	RIGHT	TOTAL APPROACH	APPROACH LOS	INTERSECTION DELAY	INTERSECTION LOS
AM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	16.3	6.6	4.3	6.3	A	7.6	A
		WB	23.3	6.4	1.5	7.6	A		
		NB	30.2	0.0	5.7	16.3	B		
		SB	0.0	14.9	0.0	13.6	B		
2	N. McCarran Boulevard and Pyramid Way	EB	72.9	61.5	16.5	49.7	D	29.4	C
		WB	59.8	44.1	28.2	43.0	D		
		NB	65.7	12.2	11.1	20.0	B		
		SB	52.1	15.0	9.5	14.3	B		
3	N. McCarran Boulevard and Fourth Street	EB	7.2	21.6	20.2	21.1	C	14.5	B
		WB	35.0	6.3	1.9	6.6	A		
		NB	34.7	25.6	7.6	21.5	C		
		SB	26.1	25.8	8.9	22.0	C		
4	Pyramid Way and Queen Way	EB	72.6	82.8	60.2	71.9	E	313.1	**F**
		WB	46.5	48.0	15.7	38.4	D		
		NB	62.8	10.4	3.8	11.6	B		
		SB	228.9	465.0	498.8	467.6	**F**		
5	Pyramid Way and Roberta Lane	EB	56.2	—	56.2	56.2	E	21.0	C
		WB	—	—	—	—	—		
		NB	171.6	3.7	—	43.2	D		
		SB	—	4.2	2.8	4.1	A		
6	Pyramid Way and York Way	EB	56.3	55.8	26.6	51.0	D	14.4	B
		WB	54.2	55.5	35.1	52.2	D		
		NB	59.4	10.0	5.3	11.1	B		
		SB	52.3	7.9	3.4	8.2	A		
PM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	0.4	8.5	7.6	8.4	A	10.0	A
		WB	15.6	8.4	13.8	8.7	A		
		NB	25.0	40.9	9.0	15.5	B		
		SB	0.0	0.0	6.4	1.2	A		
2	N. McCarran Boulevard and Pyramid Way	EB	54.9	42.1	9.1	40.5	D	33.8	C
		WB	50.3	44.2	21.2	39.1	D		
		NB	45.7	30.2	25.8	32.1	C		
		SB	38.9	39.4	6.1	25.8	C		
3	N. McCarran Boulevard and Fourth Street	EB	12.4	5.3	3.3	5.8	A	9.0	A
		WB	40.2	6.9	5.4	7.6	A		
		NB	26.5	25.8	15.3	24.7	C		
		SB	25.6	23.6	7.3	16.1	B		
4	Pyramid Way and Queen Way	EB	38.0	35.8	32.6	37.8	D	23.6	C
		WB	29.4	29.9	6.3	14.9	B		
		NB	70.8	15.7	9.9	17.6	B		
		SB	65.4	23.6	19.7	23.3	C		
5	Pyramid Way and Roberta Lane	EB	57.0	—	48.8	53.8	D	23.6	C
		WB	—	—	—	—	—		
		NB	81.7	3.4	—	18.1	B		
		SB	—	20.5	11.4	19.8	B		
6	Pyramid Way and York Way	EB	61.8	57.7	49.9	58.0	E	22.4	C
		WB	49.0	58.1	37.0	51.3	D		
		NB	68.6	18.2	15.8	19.3	B		
		SB	51.5	12.5	9.6	14.0	B		

Source: Parsons
Analysis Tool: VISSIM

Chapter 5: Year 2030 AM/PM Peak Hour Traffic Volumes for Alternative 2—Expanded At-grade Intersection

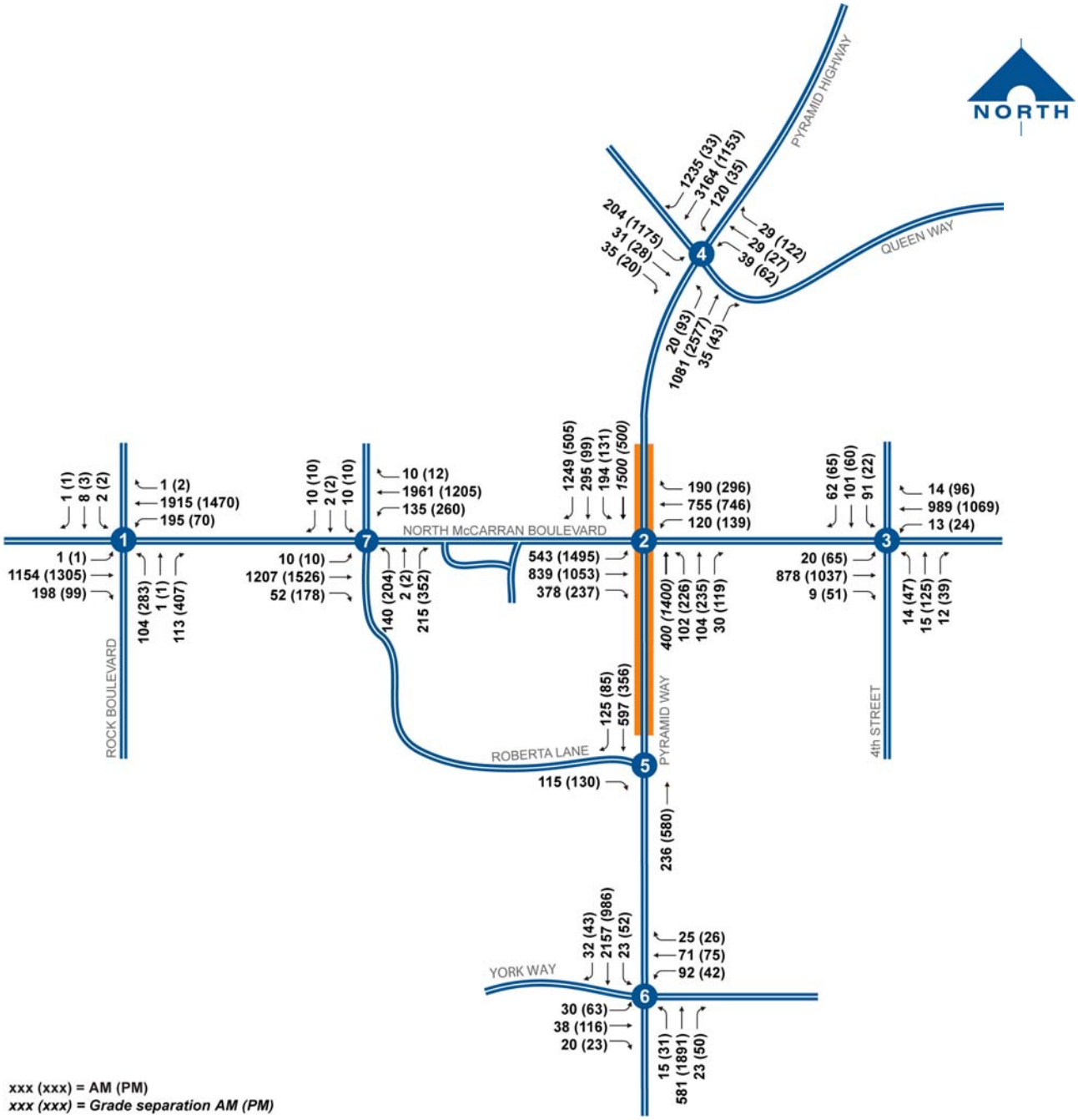


Chapter 5: Year 2030 Level of Service for Alternative 2—Expanded At-grade Intersection

NO.	INTERSECTION	APPROACH	AVERAGE DELAY (sec/veh) LEFT	THROUGH	RIGHT	TOTAL APPROACH	APPROACH LOS	INTERSECTION DELAY	INTERSECTION LOS
AM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	17.3	8.2	6.7	8.1	A	12.3	B
		WB	29.0	13.4	27.3	14.5	B		
		NB	29.4	0.0	5.3	15.7	B		
		SB	6.2	29.2	0.0	27.3	C		
2	N. McCarran Boulevard and Pyramid Way	EB	67.1	35.6	9.9	39.6	D	71.4	E
		WB	57.0	50.6	37.8	48.8	D		
		NB	19.7	16.1	22.1	17.0	B		
		SB	93.3	55.3	146.7	107.3	**F**		
3	N. McCarran Boulevard and Fourth Street	EB	44.7	5.8	4.7	6.8	A	9.6	A
		WB	31.7	8.2	7.9	8.5	A		
		NB	38.8	31.4	10.4	25.8	C		
		SB	24.4	25.9	7.9	21.2	C		
4	Pyramid Way and Queen Way	EB	144.3	174.4	93.5	140.4	**F**	84.1	**F**
		WB	52.6	49.2	13.5	40.3	D		
		NB	58.8	7.3	6.3	7.9	A		
		SB	118.2	69.0	207.5	103.3	**F**		
5	Pyramid Way and Roberta Lane	EB	58.2	—	49.5	54.1	D	7.6	A
		WB	—	—	—	—	—		
		NB	1.1	1.1	—	1.1	A		
		SB	—	2.6	3.8	2.7	A		
6	Pyramid Way and York Way	EB	42.2	56.0	15.6	42.1	D	13.5	B
		WB	51.1	56.5	17.6	48.4	D		
		NB	68.0	10.1	5.7	11.5	B		
		SB	67.0	7.7	7.2	8.7	A		
PM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	51.5	8.3	4.3	8.0	A	10.9	B
		WB	18.2	10.7	0.0	11.0	B		
		NB	25.1	40.8	8.5	15.2	B		
		SB	0.0	0.0	7.4	1.6	A		
2	N. McCarran Boulevard and Pyramid Way	EB	40.8	33.2	8.4	35.1	D	38.7	D
		WB	51.6	56.4	41.9	51.9	D		
		NB	35.3	43.4	46.5	42.5	D		
		SB	38.8	40.9	7.5	27.0	C		
3	N. McCarran Boulevard and Fourth Street	EB	73.6	3.4	2.4	8.0	A	14.5	B
		WB	58.6	9.4	8.9	10.6	B		
		NB	59.2	53.3	32.9	52.1	D		
		SB	57.2	50.8	8.9	31.8	C		
4	Pyramid Way and Queen Way	EB	34.9	29.9	31.5	34.7	C	22.9	C
		WB	34.4	30.5	7.1	16.5	B		
		NB	69.1	17.1	11.3	18.6	B		
		SB	62.3	21.5	19.5	21.8	C		
5	Pyramid Way and Roberta Lane	EB	56.2	—	49.3	53.6	D	14.0	B
		WB	—	—	—	—	—		
		NB	2.5	3.7	—	3.5	A		
		SB	—	14.9	10.9	14.5	B		
6	Pyramid Way and York Way	EB	62.9	53.0	45.3	55.5	E	20.8	C
		WB	55.2	54.2	16.4	47.6	D		
		NB	57.9	15.3	11.0	16.2	B		
		SB	100.5	8.9	6.3	14.8	B		

Source: Parsons
Analysis Tool: VISSIM

Chapter 4: Year 2030 AM/PM Peak Hour Traffic Volumes for Alternative 3—Pyramid Way Grade Separation over McCarran Boulevard



Chapter 5: Year 2030 Level of Service for Alternative 3—Pyramid Way over McCarran Boulevard Grade Separation

NO.	INTERSECTION	APPROACH	AVERAGE DELAY (sec/veh) LEFT	THROUGH	RIGHT	TOTAL APPROACH	APPROACH LOS	INTERSECTION DELAY	INTERSECTION LOS
AM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	42.5	8.4	4.7	7.9	A	11.5	B
		WB	46.7	9.8	0.0	13.2	B		
		NB	32.0	0.0	5.2	16.7	B		
		SB	0.0	30.1	0.0	30.1	C		
2	N. McCarran Boulevard and Pyramid Way	EB	57.8	33.2	25.1	39.5	D	37.9	D
		WB	70.4	52.4	48.9	53.6	D		
		NB	57.5	59.4	42.0	56.1	E		
		SB	51.4	45.4	14.1	23.8	C		
3	N. McCarran Boulevard and Fourth Street	EB	42.1	5.1	3.5	6.0	A	9.2	A
		WB	47.2	7.7	6.8	8.2	A		
		NB	37.7	28.4	8.8	23.8	C		
		SB	24.5	27.2	8.7	22.0	C		
4	Pyramid Way and Queen Way	EB	56.1	64.3	42.2	55.0	D	18.6	B
		WB	63.2	65.0	22.8	51.8	D		
		NB	55.4	13.0	12.1	13.2	B		
		SB	11.7	15.2	22.1	17.0	B		
5	Pyramid Way and Roberta Lane	EB	—	—	6.7	6.7	A	0.4	A
		WB	—	—	—	—	—		
		NB	—	0.5	—	—	—		
		SB	—	0.0	0.9	0.0	A		
6	Pyramid Way and York Way	EB	53.6	61.6	27.9	51.7	D	21.9	C
		WB	54.1	54.7	35.5	52.3	D		
		NB	0.0	12.2	9.1	11.8	B		
		SB	20.2	14.2	0.1	14.1	B		
7	N. McCarran Boulevard and Roberta Lane	EB	24.4	5.2	1.5	5.1	A	7.2	A
		WB	33.7	5.3	3.7	7.1	A		
		NB	21.7	0.0	10.5	14.8	B		
		SB	4.3	32.9	0.0	3.8	A		
PM Peak									
1	N. McCarran Boulevard and Rock Boulevard	EB	15.0	9.0	4.8	8.7	A	10.9	B
		WB	8.3	8.9	0.0	8.9	A		
		NB	35.9	32.6	8.7	19.7	B		
		SB	57.8	65.9	0.0	64.3	E		
2	N. McCarran Boulevard and Pyramid Way	EB	74.7	22.5	20.2	44.2	D	44.6	D
		WB	103.5	39.6	31.4	44.3	D		
		NB	73.6	91.0	86.2	83.4	**F**		
		SB	68.9	67.9	5.7	25.6	C		
3	N. McCarran Boulevard and Fourth Street	EB	44.1	15.8	11.8	17.8	B	17.0	B
		WB	47.0	12.0	10.1	12.8	B		
		NB	34.0	36.3	23.3	34.1	C		
		SB	34.5	31.3	8.3	20.9	C		
4	Pyramid Way and Queen Way	EB	69.5	92.6	62.7	69.9	E	19.9	B
		WB	102.2	156.9	70.4	89.3	**F**		
		NB	23.4	8.1	5.7	8.4	A		
		SB	30.9	10.1	6.3	10.4	B		
5	Pyramid Way and Roberta Lane	EB	—	—	3.5	3.5	A	0.3	A
		WB	—	—	—	—	—		
		NB	—	0.9	—	—	—		
		SB	—	0.0	0.6	0.0	A		
6	Pyramid Way and York Way	EB	55.4	56.9	43.7	54.9	D	22.9	C
		WB	52.4	49.4	38.9	48.8	D		
		NB	0.0	15.4	0.0	15.4	B		
		SB	21.5	8.0	6.5	8.4	A		
7	N. McCarran Boulevard and Roberta Lane	EB	47.5	9.9	2.5	9.3	A	14.0	B
		WB	42.2	5.7	7.3	11.8	B		
		NB	59.5	81.3	23.1	35.9	D		
		SB	4.5	0.0	0.0	1.6	A		

Source: Parsons
Analysis Tool: VISSIM

APPENDIX B
VISSIM ANALYSIS RESULTS (2010)

2010 AM Intersection Volume, Delay and LOS

Intersection	Approach	Movement	Run 1		Run 2		Run 3		Run 4		Run 5		Run 6		Run 7		Run 8		Run 9		Run 10		Average(s)	LOS
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume		
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	58.6	44	55.7	59	61.6	62	57.2	55	61.2	51	51	58	48.3	65	49.8	60	60.5	59	60.4	51	56.2	E
		Through	0.5	1	20.8	1	1.9	1	99.6	1	18.8	1	91.9	1	44.6	1	61.4	1	0	0	87.1	1	47.4	D
		Right 2	6.5	94	8	78	6.8	70	6.5	71	6.4	87	6.2	72	6.9	78	7.1	74	6.8	74	7	79	6.8	A
		Total	22.9	139	28.5	138	32.3	133	29.2	127	26.6	139	26.7	131	25.8	144	26.5	135	30.6	133	28.4	131	27.7	C
	EB	Left 2	45.5	1	101.3	1	32.4	1	98.9	2	0	0	123	1	76.4	2	0	0	66.9	1	43.1	1	76.3	E
		Through	3.4	701	4.2	724	5	757	4.3	712	4.8	736	3.9	705	4.9	726	4.6	726	4.3	760	4.9	739	4.4	A
		Right 2	0.7	80	0.7	74	0.6	79	0.7	88	0.6	87	0.6	93	0.7	78	0.6	81	0.7	77	0.8	74	0.7	A
		Total	3.2	782	4	799	4.6	837	4.1	802	4.4	823	3.7	799	4.7	806	4.2	807	4	838	4.6	814	4	A
	SB	Left 2	0	1	49.3	4	49.1	2	58.1	2	0	2	9.1	2	0	1	28.4	3	67.6	4	44.7	2	37.9	D
		Through	0.1	2	0	0	63.3	3	0	1	0.5	1	47.6	2	69.9	2	64.9	2	0	1	27.2	3	37.5	D
		Right 2	15.4	2	10.7	1	0	0	0	0	4.1	2	0	0	2.1	1	0	0	0	0	0	0	8.6	A
		Total	6.2	5	41.6	5	57.6	5	38.7	3	1.7	5	28.4	4	35.5	4	43	5	54.1	5	34.2	5	30.2	C
	WB	Left 2	56.2	77	56.8	83	56.9	76	62.1	94	52.2	78	54.6	80	53.2	88	61.6	81	54.9	75	52.9	94	56.2	E
		Through	4.1	1256	4	1165	4.5	1251	4	1199	3.7	1217	4.3	1235	6.1	1158	4.2	1258	3.5	1230	3.9	1227	4.2	A
		Right 2	5.1	2	3.9	2	0	0	1.5	2	0	0	0	0	54.3	1	0	0	1.4	2	2.8	1	8.1	A
		Total	7.1	1335	7.5	1250	7.5	1327	8.2	1295	6.6	1295	7.4	1315	9.5	1247	7.7	1339	6.4	1307	7.4	1322	7.4	A
	Total		6.7	2261	7.6	2192	8	2302	8	2227	7	2262	7.2	2249	8.9	2201	7.7	2286	7	2283	7.7	2272	7.6	A
N. McCarran Boulevard and Pyramid Way	NB	Left 2	62.3	97	64.6	84	61.5	89	66	85	54.7	103	59.2	87	59.5	101	59.9	91	60.1	89	56.9	90	60.3	E
		Through	26	243	24.1	280	24.1	277	24.4	251	25.7	271	25.6	276	24.5	253	25.1	268	25.1	277	26	280	25.1	C
		Right 2	5.4	43	6	38	5.8	30	4.8	30	5.9	36	6.3	43	5.4	33	5.7	35	5.5	40	6.7	33	5.7	A
		Total	32.9	383	30.9	402	31.1	396	32.5	366	31.2	410	30.8	406	32	387	31.4	394	30.8	406	31.3	403	31	C
	EB	Left 2	55.9	398	60	398	65.4	427	68.9	394	64.4	433	59.4	431	57.7	429	60.1	400	55.4	432	55.5	425	60.2	E
		Through	45.9	307	46.7	294	48.4	284	47.9	300	46.6	298	44.2	262	51	302	50.1	316	47.7	316	51.5	321	48.1	D
		Right 2	10.3	99	11.8	116	11.9	121	10.7	106	9.3	101	10	109	13.6	104	13.8	100	9.9	109	12.8	105	11.4	B
		Total	46.5	804	48.2	808	51.8	832	53.3	800	51.3	832	47.7	802	49.8	835	50.6	816	46.8	857	48.7	851	49.4	D
	SB	Left 2	75.7	72	73.6	62	99.1	71	105.1	72	129.4	68	89.1	78	84.4	68	105.2	76	86.6	56	110	77	96.3	F
		Through	62.6	973	37.3	1021	97.9	991	110.7	913	140.7	936	77.5	906	69.8	1013	102.6	941	72.2	992	115.5	909	87.8	F
		Right 2	51.2	898	28.6	829	87.6	934	100.5	847	128.5	846	66.8	878	57.8	813	91.4	881	62.9	882	104.3	866	78.1	E
		Total	57.8	1943	34.7	1912	93.1	1996	105.8	1832	134.7	1850	72.9	1862	65.2	1894	97.5	1898	68.4	1930	110	1852	84.1	F
	WB	Left 2	62.9	112	65	119	80.6	109	69.4	107	54.3	106	59.7	122	72.9	106	59	117	65.1	108	72.9	118	66.1	E
		Through	48.9	594	50	569	47.9	569	48.6	607	43.5	593	47.9	581	46.5	597	47.9	615	47.4	592	52	610	48	D
		Right 2	44.7	59	45.9	58	44.1	58	42.9	62	43.2	59	43.1	67	42	77	38.8	65	40.4	57	46.5	57	43.1	D
		Total	50.6	765	52.1	746	52.4	736	51	776	45	758	49.4	770	49.6	780	48.8	797	49.4	757	54.7	785	50.6	D
	Total		51.6	3895	40.5	3868	70.7	3960	76.3	3774	88	3850	58.5	3840	55.5	3896	71.1	3905	56.2	3950	77.3	3891	64.5	E
N. McCarran Boulevard and Fourth Street	NB	Left 2	29.5	48	34.8	56	31.4	44	26.5	57	27.7	49	25.9	58	39	44	31.1	62	29.1	48	29.5	63	30.3	C
		Through	30.5	113	32.1	116	31.8	98	32.3	85	28.3	88	26.9	98	32.4	103	26.8	88	31.6	108	31.3	109	30.5	C
		Right 2	17.3	92	20	115	16.7	112	16.7	125	17.9	120	15.8	118	19.9	113	17	113	19.3	107	18.8	86	17.9	B
		Total	25.5	253	27.8	287	25.1	254	23.8	267	23.3	257	21.9	274	28.1	260	23.6	263	26.1	263	26.7	258	25.3	C
	EB	Left 2	36	29	29.5	25	46	23	47.7	24	36.7	19	44.9	19	31.6	14	44.3	24	42.1	17	41.3	18	40.1	D
		Through	7.9	378	8.6	356	6.4	347	8.1	365	5.7	374	5.4	358	8.3	383	7	390	6.9	384	7.3	399	7.2	A
		Right 2	5	17	7.5	17	4.6	15	8.2	12	2.1	12	3.3	10	6.9	9	2.1	11	3.7	7	3.2	12	4.8	A
		Total	9.7	424	9.9	398	8.7	385	10.5	401	7	405	7.3	387	9.1	406	9	425	8.3	408	8.6	429	8.8	A
	SB	Left 2	31.7	23	32.8	24	23.9	17	35.4	16	28.9	19	25.8	17	35.8	21	34.3	20	24.8	12	36.9	21	31.5	C
		Through	29.1	11	26.5	15	27.5	19	21.9	18	26.6	14	26.9	21	23.1	15	43.6	18	38.2	18	27.8	17	29.3	C
		Right 2	5.6	13	4.9	9	6.2	9	6.4	18	5.4	11	4.5	15	5	13	6.2	13	5.9	15	7.5	13	5.8	A
		Total	23.9	47	25.6	48	21.9	45	20.7	52	22.3	44	20.2	53	23.7	49	30.4	51	23.9	45	26.4	51	23.2	C
	WB	Left 2	36.4	27	40.1	34	35.1	35	44.8	31	39.6	26	33.1	23	36.8	27	37.2	33	40.7	30	37.8	31	38.3	D
		Through	6.8	692	6.6	672	5.8	679	7.8	697	5.6	707	6.9	699	5.6	718	6.9	725	5.8	705	6.5	722	6.4	A
		Right 2	5.2	21	4.9	25	2.7	30	4.2	18	2.3	32	2	28	2.9	23	3.5	17	4.4	24	5.2	18	3.6	A
		Total	7.8	740	8.1	731	7.1	744	9.3	746	6.6	765	7.5	750	6.6	768	8.1	775	7.1	759	7.7	771	7.3	A
	Total		11.9	1464	13	1464	11.2	1428	12.7	1466	10.1	1471	10.6	1464	11.6	1483	11.8	1514	11.3	1475	11.8	1509	11.6	B
Pyramid Way and Queen Way	NEB	Left 2	56.6	9	53.3	11	68.3	15	61.6	11	64.7	18	70.5	10	80	10	71.3	14	72.7	17	46.1	14	64.7	E
		Through	9.7	676	11	716	11.9	728	9.4	683	9.5	728	11.3	756	10.6	728	10.3	690	10	707	11.6	725	10.6	B
		Right 2	4.6	21	1.8	17	4.7	22	2.8	23	3.7	21	4	12	3.6	19	3.3	21	4.1	28	4.8	23	3.8	A
		Total	10.1	706	11.4	744	12.8	765	10	717	10.6	767	11.9	778	11.3	757	11.3	725	11.2	752	12	762	11.2	B
	SEB	Left 2	54.7	29	61.8	29	39.6	24	61.6	23	47.3	28	56.4	25	52.1	23	56.7	27	56.9	27	44.1	22	53.3	D
		Through	71.1	13	63.4	8	66.8	10	66.2	8	46.9	9	61.2	8	79.1	13	52.4	12	50.9	7	53.5	10	62.1	E
		Right 2	31.4	7	20.1	7	8.2	8	7.2	12	27.3	6	32.2	9	26.5	7	15.7	6	32.1	9	16.7	12	20.9	C
		Total	55.7	49	55.5	44	40.1	42	47.3	43	44.4	43	52.1	42	56.1	43	50.1	45	50.7	43	38.8	44	50.4	D
	SWB	Left 2	66.6	54	67.8	69	66.2	68	81.2	64	152.4	54	65	50	79.2	64	94.9	62	68.1	56	132.3	52	86.2	F
		Through	15.3	1939	13.1	1929	25	2005	57.8	1849	138.6	1846	16.4	1857	14.1	1928	61.9	1914	14.2	1894	103	1871	45.4	D
		Right 2	11.4	221	11.3	237	15.6	198	47	224	126.9	190	12.2	207	11.5	220	53.2	178	10.1	227	88.8	187	36.5	D
		Total	16.2	2214	14.6	2235	25.4	2271	57.4	2137	137.9	2090	17.1	2114	15.7	2212	62.1	2154	15.2	2177	102.5	2110	40.1	D
	WB	Left 1	42.5	15	49	21	55.5	20	59.5	16	62.6	25	61.4	19	75.4	11	48.7	26	30.1	16	49.6	19	53.1	D
		Right 1	40.2	25	46.7	17	44.9	11	57.2	20	43.1	18	50.2	21	48	23	44.4	20	44.6	17	46	17	46.6	D
		Right 3	6.1	12	5.6	12	6.6	18	5.6	16	6.4	10	5.5	11	7	14	5.1	4	5.6	15	6.2	15	6.1	A
		Total	33	52	37.8	50	35.2	49	42	52	45.4	53	44.7	51	42.3	48	43.5	50	27.6	48	35.6	51	37.9	D
	Total		15.7	3021	14.8	3073	22.7	3127	45.5	2949	101.8	2953	16.7	2985	15.6	3060	49.2	2974	14.9	3020	77.2	2967	37.1	D
Pyramid Way and Roberta Lane	NB	Left 2	8	112	8.5	98	10	101	8.7	99	8.4	99	9.7	94	10.1	110	9.3	100	8.3	106	7.6	91	8.9	A
		Through	4	303	3.3	316	4	317	3.5	302	3.7	319	3.4	325	3.2	310	3.7	309	4.3	317	3.7	318	3.7	A
		Total	5.1	415	4.5	414	5.4	418	4.8	401	4.8	418	4.8	419	5	420	5.1	409	5.3	423	4.6	409	5	A
	EB	Left 2	53.7	82	44.8	92	49.3	81	43.8	75	49.4	88	38.1	84	49.8	79	53.2	82	48.1	89	45.7	86	47.6	D
		Right 2	12.2	135	11.1	129	11.9	131	12.4	145	10.9	125	10.4	127	11.2	136	11.8	135	11.6	134	11.1	132	11.5	B
		Total	27.9	217	25.1	221	26.2	212	23.1	220	26.8	213	21.4	211	25.4	215	27.4	217	26.2	223	24.7	218	25.4	C
	SB	Through	11.4	1120	11.1	1147	10.3	1138	9.1	1053	10.9	1062	10.2	1039	10.1	1146	10	1069	8.6	1117	9.7	1077	10.1	B
		Right 2	11.8	67	11	94	10.1	79	10.8	84	12.9	79	7	83	11.1	79	9	86	9.9	86	7.2	59	10.1	B
		Total	11.4	1187	11.1	1241	10.3	1217	9.2	1137	11	1141	10	1122	10.2	1225	9.9	1155	8.7	1203	9.6	1136	10	B
	Total		11.9	1819	11.3	1876	11	1847	9.9	1758	11.4	1772	10.1	1752	10.8	1860	10.9	1781	10	1849	10.3	1763	10.8	B
Pyramid Way and York Way	NB	Left 2	9.8	9	9.1	7	7.5	10	11.6	4	5.8	10	17.8	7	7.4	8	8.2	4	10.6	7	3.6	9	8.7	A
		Through	2.2	392	2.8	381	3.4	386	3.5	375	2.6	385	3.6	391	3.1	387	2.7	385	2.8	394	3.3	378	3	A
		Right 2	2.5	46	3.1	53	5.2	47	4.6	57	3.8	43	4	51	2.5	57	2.5	56	2.9	50	3.7	52	3.5	A
		Total	2.4	447	2.9	441	3.7	443	3.7	436	2.8	438	3.9	449	3.1	452	2.7	445	2.9	451	3.4	439	3.1	A
	EB	Left 2	21	11	22.5	14	10.1	16	7.1	9	22.3	13	11.7	10	13.3	13	0.5	11	33.4	16	3.6	17	15	B
		Through	76.3	14	56	16	63.5	18	49.9	22	77.6	14	46	17	65.3	11	55.2	24	61.1	22	55.9	12	59.6	E
		Right 2	18.2	14	16.9	16	17.5	8	20.9	16	18.8	17	12.4	19	11.5	15	16.9	10	7.6	8	7.1	13	15.1	B
		Total	39.8	39	32.2	46	34.4	42	31.8	47	38.5	44	24.7	46	27.3	39	33.3	45	42.2	46	19.6	42	31.9	C
	SB	Left 2	3.1	11	3.5	22	3.3	20	4.4	21	1.8	12	2.1	16	4.8	18	3	18	5.8	20	4	18	3.7	A
		Through	1.4	1208	1.9	1242	1.4	1229	1.7	1140	1.8	1141	2.1	1126	1.8	1230	1.9	1164	2.4	1202	2.1	1164	1.8	A
		Right 2	1.4	28	1.5	26	1.6	21	1.7	30	2.2	24	2.8	30	1.5	33	2.1	19	0.8	29	3.9	29	2	A
		Total	1.4	1247	1.9	1290	1.4	1270	1.7	1191	1.8	1177	2.1	1172	1.8	1281	1.9	1201	2.4	1251	2.2	1211	1.8	A
	WB	Left 2	23.2	130	19.1	140	23.7	130	22.2	140	19.5	134	19.4	134	24.4	126	18.2	138	21.3	146	28.1	140	21.9	C
		Through	60.2	40	59.4	35	54.6	42	67.8	41	58	31	52.9	39	58.1	47	59.2	35	54.6	31	65.3	36	59.1	E
		Right 2	23.6	11	30.1	19	27.1	17	32.1	17	12.1	20	22.3	15	42.2	18	19.4	14	28.3	13	18.7	15	25.8	C
		Total	31.4	181	27.4	194	30.9	189	32.5	198	25.2	185	26.6	188	34.4	191	26	187	27.2	190	34.4	191	29.8	C
	Total		5.3	1914	5.3	1971	5.5	1944	6.2	1872	5.3	1844	5.6	1855	5.8	1963	5.2	1878	5.9	1938	6.1	1883	5.6	A
NETWORK TOTAL			21.8	14374	18.7	14444	28.5	14608	34.7	14046	49.5	14152	23.6	14145	23	14463	34.1	14338	22.7	14515	41.6	14285	29.7	C

2010 AM Existing Intersection Queue Lengths

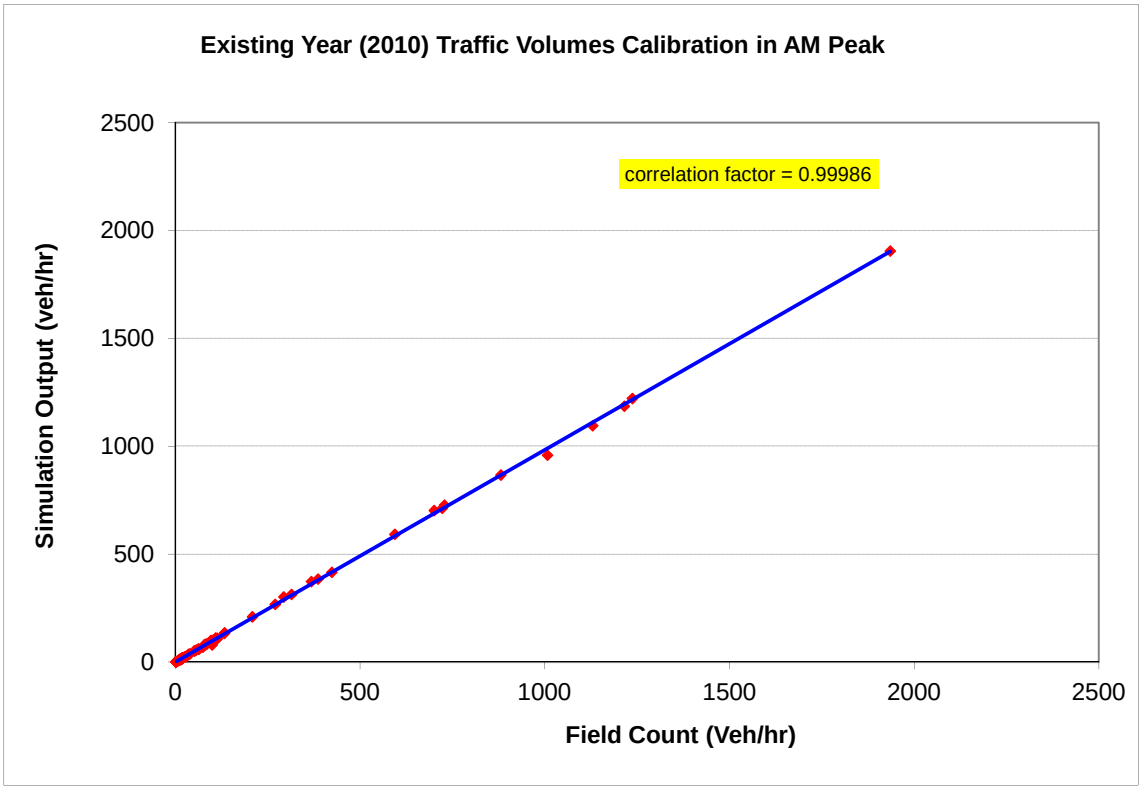
Intersection	Approach	Movement	95% Queues per Run										Max	95%	Median	Average	Standard Deviation
			1	2	3	4	5	6	7	8	9	10					
			42	47	52	57	62	67	72	77	82	87					
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	39.3	58	43.3	42.5	39.5	40.4	49.9	44.5	53.2	41.7	136.5	43.7	0	11.7	17.5
		Through	39.3	58	43.3	42.5	39.5	40.4	49.9	44.5	53.2	41.7	136.5	43.7	0	11.7	17.5
		Right 2	85.9	103.7	89.1	88.3	85.2	86.1	95.6	90.3	98.9	88.1	182.2	89.7	0	31.8	37.8
	EB	Left 2	0	0	0	0	0	0	0	0	0	0	20.6	0	0	0.2	1.8
		Through	42.5	60.6	43.3	57.3	60	60.4	62.4	62.7	59.2	61	164.6	59.7	0	8.7	20.8
		Right 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SB	Left 2	0	0	0	0	0	0	0	0	0	17.2	42.4	0	0	0.5	3
		Through	0	0	0	0	0	0	0	0	0	17.2	42.4	0	0	0.5	3
		Right 2	0	0	0	0	0	0	0	0	0	0	56.3	0	0	0	0.9
	WB	Left 2	60.9	60.5	54.7	66.3	64.6	64	63.8	64.7	68.1	82.2	217.2	63.6	0	17.7	24.5
		Through	60.9	60.5	54.7	66.3	64.6	64	63.8	64.7	68.1	82.2	217.2	63.6	0	17.7	24.5
		Right 2	0	70.5	70.1	0	66.6	70.4	87.4	0	69	68.2	249	69.5	0	5.2	23.1
N. McCarran Boulevard and Pyramid Way	NB	Left 2	82.1	103.4	85.2	64.9	104.3	87.1	83.9	76.8	79.5	81.9	154	84.2	16.9	23.3	29.6
		Through	64.9	66.9	71.7	68.9	65.4	65.6	79.3	79	64.4	65.1	157.8	65.9	0	18.4	25.4
		Right 2	0	0	0	0	0	0	0	0	0	0	69.6	0	0	0.1	1.8
	EB	Left 2	137.6	145.6	169.3	148.6	173.3	153.9	169.4	148.9	164.1	163.3	289.5	162.9	59.8	63.2	52.2
		Through	95.5	87	81.4	84.3	84.2	78.3	83.9	84.3	99.3	100.5	172	84.8	17.4	28.1	31.8
		Right 2	0	0	0	0	0	0	0	0	0	0	71.7	0	0	0.4	3.4
	SB	Left 2	62	58.8	58.3	62.9	60.1	60.7	59	61.3	39.7	64.9	127.8	60.5	0	13.3	21
		Through	1801.5	1802.9	1802	1803.4	1803.3	1803.9	1802	1802.9	1803	1799.8	1838.3	1802.8	1556.8	1387.7	451.4
		Right 2	1784.7	1786.1	1783.9	1786.9	1786.5	1787	1785.2	1786.1	1786.1	1782.3	1821.5	1785.8	1513.4	1298.7	547.1
	WB	Left 2	112.1	87.2	107.7	105	86	104.3	102.7	123.3	84.4	125.2	174.7	104.3	18.9	30.7	35.1
		Through	209.3	222.8	192.6	193.1	196	206.9	197.9	216.4	209.9	212.6	432.6	207.4	63.1	77	70.9
		Right 2	209.9	223.4	193.2	193.8	196.6	207.5	198.5	217	210.5	213.3	433.2	208.1	63.7	75.9	72.5
N. McCarran Boulevard and Fourth Street	NB	Left 2	64.3	64.9	62	63.3	60.6	61.7	61.2	60.6	63.4	83.2	237.9	62.8	0	12.4	24.1
		Through	64.3	64.9	62	63.3	60.6	61.7	61.2	60.6	63.4	83.2	237.9	62.8	0	12.4	24.1
		Right 2	85.3	85.9	81.9	84.3	81.6	82.7	82.2	81.5	83.7	104.2	258.9	83.7	0	14.6	31.4
	EB	Left 2	18.1	18.9	19.7	19.5	18.2	19	15.9	18.1	17.3	16.8	77.8	18.4	0	1.9	6.9
		Through	20.5	38.5	38.5	42.7	42.4	41.1	38.1	41.6	40.4	42.4	175.4	40.7	0	5.9	17.1
		Right 2	0	65.3	65.3	68.2	68.6	67.9	64.9	67.6	67.2	69.2	202.2	67.2	0	6	22.9
	SB	Left 2	19	18.2	17.7	18.5	17.3	17.4	17.5	18.9	15.7	18.5	67.2	18.1	0	1.8	6.4
		Through	19	18.2	17.7	18.5	17.3	17.4	17.5	18.9	15.7	18.5	67.2	18.1	0	1.8	6.4
		Right 2	0	0	0	0	0	0	0	0	0	0	85.1	0	0	0.8	6.5
	WB	Left 2	18.5	17.7	18.2	18.6	18.2	19.1	18.3	18.5	19.6	19.9	63.4	18.8	0	2.4	7.4
		Through	53.1	51.1	47.7	35.8	34.2	42.2	36.2	52.9	54	51.8	160.5	49.2	0	6.6	17.7
		Right 2	77.3	75.4	72	60	58.5	67.4	59.8	77.1	78.3	76.1	184.7	73.4	0	10	25.5
Pyramid Way and Queen Way	NEB	Left 2	19.1	19.5	39.5	20.1	20.3	19.2	19.5	20.3	38.5	19.7	72.1	19.7	0	4.5	10
		Through	125.8	100.9	132.1	106.8	66.1	149.5	148.9	128.8	123.5	126	338.4	127.6	0	20.9	44.2
		Right 2	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0.5
	SEB	Left 2	42.2	22.3	19.2	20.1	19	18.4	20.5	22.3	21.2	20.1	94.9	20.5	0	4.5	9.2
		Through	42.2	22.3	19.2	20.1	19	18.4	20.5	22.3	21.2	20.1	94.9	20.5	0	4.5	9.2
		Right 2	42.2	22.3	19.2	20.1	19	18.4	20.5	22.3	21.2	20.1	94.9	20.5	0	4.5	9.2
	SWB	Left 2	58.6	62.6	85.2	62.4	57.9	57.8	76.3	60.4	58.8	61.3	165.3	62.6	0	15.8	23.6
		Through	5137.4	5159.1	5167.6	5160.1	5167.2	5168	5162	5167	4455.3	5162.6	5217.6	5163.2	3300.2	2858.6	1947.6
		Right 2	0	0	0	0	0	0	0	0	0	0	81.4	0	0	0.3	3.5
	WB	Left 1	36.8	40	19.8	40.6	42.1	40.4	21.2	51.4	20.5	39.4	164.8	40	0	7.3	14.6
		Right 1	36.8	40	19.8	40.6	42.1	40.4	21.2	51.4	20.5	39.4	164.8	40	0	7.3	14.6
		Right 3	34.9	38.1	0	38.8	40.2	38.5	0	40.5	0	37.5	162.9	38	0	3.4	13.1
Pyramid Way and Roberta Lane	NB	Left 2	20.1	28.6	20.1	16.7	18.6	19.6	22.7	16.8	16.8	0	114.6	18.7	0	2.3	9.4
		Through	20.8	19.4	31.7	31.3	20.4	39.2	37.1	18.5	19.4	20	149.2	20.5	0	3.4	11.7
	EB	Left 2	64.8	79.4	79	77.6	64.1	74.7	62.8	76.5	64.7	61.9	180.5	66.6	16.2	20.1	25.2
		Right 2	67.2	81.8	81.5	80.1	66.6	77.1	65.3	79	67.1	64.3	182.9	69.1	0	18.5	27.2
	SB	Through	148.6	166.8	185.4	149.6	168.8	170.6	243.9	148.9	219	147.8	488.2	183.1	0	26.3	65
		Right 2	164.4	182.6	201.2	165.4	184.6	186.4	259.7	164.7	234.9	163.6	504	198.9	0	28.7	70.2
Pyramid Way and York Way	NB	Left 2	0	0	0	0	0	0	0	0	0	0	57.8	0	0	0.2	2.3
		Through	22.5	31.8	20	30.5	19.9	38.1	21.3	21.9	19.7	20.3	123.8	20.8	0	4	11.2
		Right 2	22.5	31.8	20	30.5	19.9	38.1	21.3	21.9	19.7	20.3	123.8	20.8	0	4	11.2
	EB	Left 2	0	0	0	0	0	0	0	0	0	0	25.4	0	0	0	0.4
		Through	19	18.5	18.7	19	18.2	18.2	16.4	18.2	21.1	16	76.5	18.5	0	2	7.5
		Right 2	0	0	0	0	0	0	0	0	0	0	25.4	0	0	0	0.4
	SB	Left 2	0	0	0	0	0	0	0	0	0	0	47.6	0	0	0.1	1.8
		Through	42.2	54.7	45.2	80.9	40.4	41.7	45.7	49.8	36.8	19.7	396	43.5	0	8	31.4
		Right 2	42.2	54.7	45.2	80.9	40.4	41.7	45.7	49.8	36.8	19.7	396	43.5	0	8	31.4
	WB	Left 2	0	30.1	0	0	0	27.1	26.9	23.5	0	24.5	218.9	0	0	2.1	11.1
		Through	38.1	63.9	41.3	43.9	39.4	60.9	60.7	57.3	43.3	58.3	252.7	44.5	0	7.5	19.7
		Right 2	0	30.1	0	0	0	27.1	26.9	23.5	0	24.5	218.9	0	0	2.1	11.1

2010 AM Volumes Comparison between Field Counts and Model Output

Intersection	Approach	Movement	Field Count	Model 10-Run Ave	Diff. (Ave-Count)	%Diff. (Ave-Count)
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	56	56	0	0.7%
		Through	1	1	0	-10.0%
		Right 2	78	78	0	-0.4%
		Total	**135**	**135**	**0**	**0.0%**
	EB	Left 2	1	1	0	0.0%
		Through	728	729	1	0.1%
		Right 2	79	81	2	2.7%
		Total	**808**	**811**	**3**	**0.3%**
	SB	Left 2	2	2	0	15.0%
		Through	2	2	0	-15.0%
		Right 2	1	1	0	-40.0%
		Total	**5**	**5**	**0**	**-8.0%**
	WB	Left 2	84	83	-1	-1.7%
		Through	1237	1220	-17	-1.4%
		Right 2	1	1	0	0.0%
		Total	**1322**	**1303**	**-19**	**-1.4%**
	Total		**2270**	**2254**	**-17**	**-0.7%**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	92	92	0	-0.4%
		Through	270	268	-2	-0.9%
		Right 2	35	36	1	3.1%
		Total	**397**	**395**	**-2**	**-0.4%**
	EB	Left 2	423	417	-6	-1.5%
		Through	293	300	7	2.4%
		Right 2	112	107	-5	-4.5%
		Total	**828**	**824**	**-4**	**-0.5%**
	SB	Left 2	74	70	-4	-5.4%
		Through	1007	960	-48	-4.7%
		Right 2	881	867	-14	-1.5%
		Total	**1962**	**1897**	**-65**	**-3.3%**
	WB	Left 2	109	112	3	3.1%
		Through	594	593	-1	-0.2%
		Right 2	62	62	0	-0.2%
		Total	**765**	**767**	**2**	**0.3%**
	Total		**3952**	**3883**	**-69**	**-1.7%**
N. McCarran Boulevard and Fourth Street	NB	Left 2	52	53	1	1.7%
		Through	96	101	5	4.8%
		Right 2	113	110	-3	-2.6%
		Total	**261**	**264**	**3**	**1.0%**
	EB	Left 2	19	21	2	11.6%
		Through	368	373	5	1.5%
		Right 2	15	12	-3	-18.7%
		Total	**402**	**407**	**5**	**1.2%**
	SB	Left 2	19	19	0	0.0%
		Through	18	17	-1	-7.8%
		Right 2	13	13	0	-0.8%
		Total	**50**	**49**	**-2**	**-3.0%**
	WB	Left 2	31	30	-1	-4.2%
		Through	700	702	2	0.2%
		Right 2	24	24	0	-1.7%
		Total	**755**	**755**	**0**	**0.0%**
	Total		**1468**	**1474**	**6**	**0.4%**
Pyramid Way and Queen Way	NEB	Left 2	14	13	-1	-7.9%
		Through	722	714	-8	-1.1%
		Right 2	19	21	2	8.9%
		Total	**755**	**747**	**-8**	**-1.0%**
	SEB	Left 2	26	26	0	-1.2%
		Through	11	10	-1	-10.9%
		Right 2	8	8	0	3.8%
		Total	**45**	**44**	**-1**	**-2.7%**
	SWB	Left 2	63	59	-4	-5.9%
		Through	1935	1903	-32	-1.6%
		Right 2	208	209	1	0.4%
		Total	**2206**	**2171**	**-35**	**-1.6%**
	WB	Left 1	19	19	0	-1.1%
		Right 1	19	19	0	-0.5%
		Right 3	12	13	1	5.8%
		Total	**50**	**50**	**0**	**0.8%**
	Total		**3056**	**3013**	**-43**	**-1.4%**
Pyramid Way and Roberta Lane	NB	Left 2	102	101	-1	-1.0%
		Through	314	314	0	-0.1%
		Total	**416**	**415**	**-1**	**-0.3%**
	EB	Left 2	83	84	1	1.0%
		Right 2	132	133	1	0.7%
		Total	**215**	**217**	**2**	**0.8%**
	SB	Through	1129	1097	-32	-2.9%
		Right 2	99	80	-19	-19.6%
		Total	**1228**	**1176**	**-52**	**-4.2%**
	Total		**1859**	**1808**	**-51**	**-2.8%**
Pyramid Way and York Way	NB	Left 2	8	8	-1	-6.3%
		Through	386	385	-1	-0.2%
		Right 2	51	51	0	0.4%
		Total	**445**	**444**	**-1**	**-0.2%**
	EB	Left 2	13	13	0	0.0%
		Through	18	17	-1	-5.6%
		Right 2	13	14	1	4.6%
		Total	**44**	**44**	**0**	**-0.9%**
	SB	Left 2	17	18	1	3.5%
		Through	1215	1185	-30	-2.5%
		Right 2	29	27	-2	-7.2%
		Total	**1261**	**1229**	**-32**	**-2.5%**
	WB	Left 2	133	136	3	2.1%
		Through	39	38	-1	-3.3%
		Right 2	17	16	-1	-6.5%
		Total	**189**	**189**	**0**	**0.2%**
	Total		**1939**	**1906**	**-33**	**-1.7%**
NETWORK TOTAL			**14544**	**14337**	**-207**	**-1.4%**

Pyramid and MacCarran Project 6-IntersectionTurn-movement Calibration Results

Intersection	Approach	Movement	Existing Year (2010) Traffic Volumes Calibration by Turn-movement in AM Peak				
			Field Counts	Simulation Output	Difference	% Difference	GEH
			AM Peak	AM Peak	AM Peak	AM Peak	AM Peak
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	56	56	0	0.7%	0.1
		Through	1	1	0	-10.0%	0.1
		Right 2	78	78	0	-0.3%	0.0
	EB	Left 2	1	1	0	0.0%	0.0
		Through	728	728	0	0.0%	0.0
		Right 2	79	81	2	2.9%	0.3
	SB	Left 2	2	2	0	15.0%	0.2
		Through	2	2	0	-20.0%	0.3
		Right 2	1	1	0	-40.0%	0.4
	WB	Left 2	84	83	-1	-1.5%	0.1
		Through	1237	1222	-15	-1.2%	0.4
		Right 2	1	1	0	-10.0%	0.1
N. McCarran Boulevard and Pyramid Way	NB	Left 2	92	92	0	-0.4%	0.0
		Through	270	267	-3	-1.0%	0.2
		Right 2	35	37	2	4.3%	0.3
	EB	Left 2	423	416	-7	-1.6%	0.3
		Through	293	302	9	3.1%	0.5
		Right 2	112	107	-5	-4.3%	0.5
	SB	Left 2	74	70	-4	-5.9%	0.5
		Through	1007	959	-48	-4.8%	1.5
		Right 2	881	867	-14	-1.6%	0.5
	WB	Left 2	109	112	3	2.6%	0.3
		Through	594	592	-2	-0.3%	0.1
		Right 2	62	62	0	0.0%	0.0
N. McCarran Boulevard and Fourth Street	NB	Left 2	52	53	1	1.9%	0.1
		Through	96	100	4	4.6%	0.4
		Right 2	113	111	-3	-2.2%	0.2
	EB	Left 2	19	21	2	7.9%	0.3
		Through	368	374	6	1.5%	0.3
		Right 2	15	12	-3	-18.7%	0.8
	SB	Left 2	19	19	0	1.1%	0.0
		Through	18	16	-2	-8.9%	0.4
		Right 2	13	13	0	-0.8%	0.0
	WB	Left 2	31	30	-1	-4.5%	0.3
		Through	700	702	2	0.3%	0.1
		Right 2	24	24	0	-0.8%	0.0
Pyramid Way and Queen Way	NEB	Left 2	14	13	-1	-8.6%	0.3
		Through	722	713	-9	-1.2%	0.3
		Right 2	19	21	2	8.4%	0.4
	SEB	Left 2	26	25	-1	-2.3%	0.1
		Through	11	10	-1	-11.8%	0.4
		Right 2	8	8	0	3.8%	0.1
	SWB	Left 2	63	60	-3	-5.4%	0.4
		Through	1935	1905	-30	-1.6%	0.7
		Right 2	208	210	2	0.8%	0.1
	WB	Left 1	19	19	0	-2.1%	0.1
		Right 1	19	19	0	-1.1%	0.0
		Right 3	12	13	1	5.8%	0.2
Pyramid Way and Roberta Lane	NB	Left 2	102	101	-1	-0.8%	0.1
		Through	314	313	-1	-0.2%	0.0
	EB	Left 2	83	84	1	0.8%	0.1
		Right 2	132	133	1	0.8%	0.1
	SB	Through	1129	1096	-33	-2.9%	1.0
		Right 2	99	80	-19	-19.2%	2.0
Pyramid Way and York Way	NB	Left 2	8	8	-1	-6.3%	0.2
		Through	386	385	-1	-0.2%	0.0
		Right 2	51	51	0	0.4%	0.0
	EB	Left 2	13	13	0	0.0%	0.0
		Through	18	17	-1	-5.6%	0.2
		Right 2	13	14	1	4.6%	0.2
	SB	Left 2	17	18	1	5.9%	0.2
		Through	1215	1186	-29	-2.4%	0.8
		Right 2	29	27	-2	-7.6%	0.4
	WB	Left 2	133	136	3	2.3%	0.3
		Through	39	38	-1	-3.3%	0.2
		Right 2	17	16	-1	-5.9%	0.2


Existing Year (2010) Traffic Volumes Calibration in AM Peak
correlation factor = 0.99986
Simulation Output (veh/hr)
Field Count (Veh/hr)
0
500
1000
1500
2000
2500

2010 PM Intersection Volume, Delay and LOS

Intersection	Approach	Movement	Run 1		Run 2		Run 3		Run 4		Run 5		Run 6		Run 7		Run 8		Run 9		Run 10		Average(s)	LOS
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume		
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	285.5	136	122.5	137	55.8	167	94	159	67.6	161	86.2	139	68.8	156	202.4	100	50.5	180	193.6	138	115.1	F
		Through	0	0	99.8	2	45.4	1	0	0	0	0	60.3	2	0	0	0	0	16.3	1	63.2	2	63.5	E
		Right 2	375.9	231	158.4	222	29.6	216	147.5	216	60.9	218	88.6	227	67.3	234	228.7	127	24.7	215	264.5	214	141.7	F
		Total	342.4	367	144.5	361	41	384	124.8	375	63.7	379	87.5	368	67.9	390	217.1	227	36.4	396	235.7	354	109.9	F
	EB	Left 2	63.8	8	94.5	6	69.2	4	89.2	10	45.8	6	82.4	6	90.7	6	121.6	3	69.5	5	109.5	7	82.6	F
		Through	58.8	1161	92.4	1132	25.2	1193	64.7	1122	54.5	1149	45.8	1108	47.6	1126	135.6	778	16.1	1217	116.5	1085	62.7	E
		Right 2	15.2	74	48.5	59	8.6	68	22.5	73	14.2	63	19.9	77	23	65	45.5	47	4.7	61	54.4	68	24.8	C
		Total	56.2	1243	90.2	1197	24.4	1265	62.3	1205	52.4	1218	44.3	1191	46.5	1197	130.4	828	15.8	1283	112.8	1160	49.4	D
	SB	Left 2	0	0	8.4	1	12	2	57.9	4	11.4	2	47.1	2	0	1	35.6	2	46.3	2	66.2	4	40.4	D
		Through	15	2	0.1	2	92.3	1	0	0	15	3	23.7	3	28.5	3	25.6	2	0	2	14.9	2	20.3	C
		Right 2	6.5	6	6.7	4	20.3	5	4.1	3	4.8	4	5.5	2	5.3	3	7.7	2	5.6	3	8.2	3	8.1	A
		Total	8.6	8	5.1	7	27.2	8	34.8	7	9.7	9	25.2	7	14.5	7	23	6	15.6	7	35.5	9	19.1	B
	WB	Left 2	66	56	64	68	75.6	53	66.1	76	65.6	70	79	75	69.9	80	72.7	69	64.9	62	54.7	74	67.7	E
		Through	10.3	848	18.2	820	12.7	823	8.7	815	19.8	833	19.1	837	11.2	800	17	839	14.1	816	8	805	13.9	B
		Right 2	6.9	7	14.3	4	4	4	3.4	5	10.7	4	31	2	0	0	3.8	2	9.3	5	4.6	6	8.3	A
		Total	13.7	911	21.7	892	16.4	880	13.5	896	23.3	907	24	914	16.5	880	21.2	910	17.6	883	11.9	885	16.9	B
	Total		82.3	2529	73.1	2457	24.1	2537	54.1	2483	43.4	2513	43.2	2480	39.1	2474	89.6	1971	19.6	2569	93.5	2408	55.2	E
N. McCarran Boulevard and Pyramid Way	NB	Left 2	74.5	124	68.9	108	79.8	101	78.5	115	74.7	124	68.3	117	74.3	128	80	111	89.6	109	78.1	107	76.5	E
		Through	66.5	894	63.4	899	62.9	911	62.4	928	60.3	857	63.6	949	62.8	914	50.5	934	67.3	922	62.9	879	62.3	E
		Right 2	47.4	48	41.1	60	28.7	49	35.6	39	35.1	56	38.6	45	29.9	56	34.1	49	31.4	48	35.6	58	35.7	D
		Total	66.6	1066	62.7	1067	62.9	1061	63.1	1082	60.7	1037	63.1	1111	62.5	1098	52.8	1094	68	1079	62.9	1044	61.8	E
	EB	Left 2	267.5	988	270.2	968	239.2	967	280.7	926	248.4	979	249.5	957	241.9	984	321.9	616	172.2	995	279.7	957	254.3	F
		Through	97.1	590	95.6	567	86.7	572	100.9	577	83.9	539	81.3	534	84.4	553	196.1	280	61.6	586	100.4	553	93.6	F
		Right 2	116.9	93	112.2	79	85.3	91	113	98	94.4	109	91.3	100	89.4	100	15.4	9	38.3	90	116.6	86	94.2	F
		Total	199	1671	201.1	1614	177.1	1630	205.6	1601	183.6	1627	183.1	1591	179.4	1637	279.9	905	126.2	1671	208.8	1596	171.8	F
	SB	Left 2	104.7	126	98.6	116	98.6	104	99.6	122	96.2	114	94.8	110	97.3	116	103.7	126	106.4	114	95.7	123	99.6	F
		Through	45.6	464	44.3	488	45.6	452	44.4	438	41.7	426	41.9	445	42.3	484	34	442	39.6	453	47	451	42.7	D
		Right 2	16.5	551	16.9	540	18.2	548	14.9	545	13.2	555	15.3	545	15	509	15.8	543	12	547	21.7	554	16.0	B
		Total	38.1	1141	36.9	1144	37	1104	35.9	1105	32.9	1095	34	1100	35.5	1109	33	1111	32.9	1114	39.9	1128	35.1	D
	WB	Left 2	245	88	142.7	79	104	91	160.7	78	109.1	95	160	73	168.5	88	119.6	81	216.5	77	109.4	93	152.1	F
		Through	257.5	390	157.6	396	117.4	371	170.7	397	111.4	388	158.8	399	172.6	405	109.8	404	231.4	389	111.2	382	160.0	F
		Right 2	262.5	302	174.7	282	130.4	294	170	285	107.4	301	160.1	293	201	281	109.6	302	251.4	277	120.5	315	167.7	F
		Total	258	780	162.4	757	120.8	756	169.4	760	109.6	784	159.4	765	182.4	774	110.7	787	237.3	743	114.7	790	153.2	F
	Total		139.2	4658	121.5	4582	107.1	4551	124.4	4548	106.5	4543	114	4567	117.6	4618	111.6	3897	107.9	4607	117.3	4558	116.8	F
N. McCarran Boulevard and Fourth Street	NB	Left 2	49	27	45.6	32	41.6	19	47.9	31	50.9	32	56.9	32	53.7	30	53.5	35	48.6	28	45.3	39	49.6	D
		Through	53.8	130	49.6	140	51.9	121	52	112	49	107	54.4	123	53	117	49.3	114	46.8	127	52	133	51.2	D
		Right 2	33.4	89	38.2	114	32.7	113	37.9	127	32	120	34.6	117	40.9	112	35.7	113	36.4	109	38.2	85	36.0	D
		Total	45.9	246	44.6	286	42.6	253	44.9	270	41.4	259	46.2	272	47.8	259	44	262	42.7	264	46.4	257	44.5	D
	EB	Left 2	51.3	122	49.4	104	57	108	58.2	100	58.3	96	55.3	89	54	93	53.7	66	54.6	93	59.1	95	55.0	E
		Through	10.4	610	10.9	610	9.6	582	8.2	614	8.8	591	10.9	583	10.1	600	10	385	11.5	623	11.3	613	10.2	B
		Right 2	9	32	11.8	26	6.3	36	5.7	22	8.2	23	10.8	23	5.8	23	4.4	12	12.8	26	8.7	26	8.5	A
		Total	16.9	764	16.3	740	16.5	726	14.9	736	15.5	710	16.6	695	15.7	716	16.1	463	16.9	742	17.4	734	16.2	B
	SB	Left 2	36.9	22	66.4	26	45.7	15	50.3	25	61.4	16	51	26	57.3	26	50	23	56.4	20	52.9	28	53.0	D
		Through	48.1	41	48.1	46	47.1	50	47.1	35	60.9	53	50.1	43	48.5	48	39	51	35.8	38	51.5	46	47.9	D
		Right 2	10.2	70	8.2	56	8.4	56	6.4	70	8.7	58	7.5	71	7.8	55	7.2	55	11.6	68	9.8	60	8.6	A
		Total	26.3	133	34.4	128	29	121	25.8	130	37.1	127	28.7	140	32.9	129	27.4	129	26	126	33.1	134	29.6	C
	WB	Left 2	59.9	17	43.4	11	93.4	12	93.2	8	69.4	13	54.2	8	70.9	17	64.5	16	56.9	17	59.6	10	65.9	E
		Through	23.7	670	12.6	674	12	677	13.2	691	12.2	692	11	688	11.4	704	11.3	707	19.5	693	14.6	702	14.1	B
		Right 2	21.1	104	9.3	91	7.8	106	10.5	89	8.8	104	9.5	92	11.8	100	7.2	95	12.3	82	9.8	99	10.8	B
		Total	24.1	791	12.6	776	12.7	795	13.7	788	12.7	809	11.3	788	12.7	821	11.9	818	19.6	792	14.6	811	13.5	B
	Total		24.2	1934	20.2	1930	19.2	1895	19.4	1924	19.3	1905	19.5	1895	19.9	1925	19.3	1672	22.1	1924	21.2	1936	20.4	C
Pyramid Way and Queen Way	NEB	Left 2	104	24	128.6	29	110.8	33	111.5	31	103.1	21	118	31	107.7	27	85.2	21	97.2	28	82.8	24	106.2	F
		Through	30.2	2146	29.4	2096	28.9	2124	27.4	2073	31.1	2078	28.9	2116	29.6	2132	24.5	1824	29.7	2132	29.3	2074	29.0	C
		Right 2	34.6	24	32	21	25.3	21	21.5	21	32.3	27	20.7	38	25	23	24.5	28	32.9	28	29.5	25	27.6	C
		Total	31.1	2194	30.8	2146	30.1	2178	28.6	2125	31.8	2126	30	2185	30.5	2182	25.2	1873	30.6	2188	29.9	2123	30.1	C
	SEB	Left 2	71.7	148	73.3	150	72.8	152	74.7	154	72.4	160	65.2	144	68.3	160	64	140	76.1	143	65.1	147	70.4	E
		Through	74.3	8	83.8	11	36.9	11	59.6	12	78.9	7	62.6	9	65	13	73.8	18	75.9	16	98.7	13	71.4	E
		Right 2	51.8	13	40.6	17	28.2	13	40.3	23	28.8	14	38.3	20	51.2	11	35.7	21	37.5	16	51.6	15	39.9	D
		Total	70.3	169	70.8	178	67.3	176	69.6	189	69.3	181	62	173	67	184	61.7	179	72.6	175	66.4	175	65.9	E
	SWB	Left 2	87.3	60	92.7	58	88.8	51	97.5	47	89.4	59	96.6	57	105.2	44	91	55	94.8	55	86.3	61	92.5	F
		Through	12.1	1090	13.3	1098	12.5	1085	12.3	1065	12.3	1065	13.1	1079	15.8	1098	10.3	1063	12.7	1082	10.8	1111	12.5	B
		Right 2	4.8	77	5.8	84	7	65	5.1	90	4.8	69	5	56	8.1	81	4.1	71	7.8	68	5.8	65	5.8	A
		Total	15.3	1227	16.5	1240	15.4	1201	15.1	1202	15.7	1193	16.7	1192	18.5	1223	13.7	1189	16.2	1205	14.3	1237	15.6	B
	NWB	Left 2	67.7	24	80.4	17	93.1	12	59.1	11	61.4	11	46	12	46.6	12	52.3	12	73.9	6	68.4	13	65.4	E
		Through	63.7	28	72.2	28	67.9	22	73.3	27	66.9	24	73.9	15	80.7	21	54.7	23	80.4	16	61.4	18	69.1	E
		Right 2	10.9	204	12.8	183	10.5	206	13.5	193	9.5	210	9	176	8.4	202	9.3	203	8	215	7.8	196	9.9	A
		Total	22	256	25.1	228	19.9	240	22.7	231	17.5	245	16	203	16.8	235	15.9	238	14.6	237	15.5	227	17.7	B
	Total		27.2	3846	27.7	3792	26.5	3795	26	3747	27.5	3745	26.5	3753	27.6	3824	22.5	3479	27	3805	25.6	3762	26.4	C
Pyramid Way and Roberta Lane	NB	Left 2	10.6	120	8.7	112	9.7	117	10.7	114	10.5	133	10.5	105	9.4	103	8.4	124	9.7	131	10.3	147	9.9	A
		Through	9.5	883	9.8	886	9.6	888	8.3	901	9.8	879	8.9	937	10.6	921	7.5	892	13.4	911	7.3	853	9.5	A
		Total	9.6	1003	9.7	998	9.6	1005	8.6	1015	9.9	1012	9.1	1042	10.5	1024	7.6	1016	12.9	1042	7.7	1000	9.2	A
	EB	Left 2	81.1	188	83.4	185	75.8	184	79.9	173	79	183	79.9	163	73.7	187	78.2	164	78	180	79	174	78.8	E
		Right 2	22	94	14.5	96	10.3	94	17	103	11.6	101	9.9	108	15.7	94	12.9	117	14.4	105	21.6	104	14.9	B
		Total	61.4	282	59.9	281	53.7	278	56.4	276	55	284	52	271	54.3	281	51	281	54.6	285	57.5	278	55.1	E
	SB	Through	12.4	600	12.3	605	9.8	612	10.9	585	12	597	9	596	11.9	643	9.5	506	12.2	586	10.5	600	11.1	B
		Right 2	13.7	35	12.7	34	5.7	23	7.7	30	9.4	28	6.5	28	11.2	37	7.8	33	12.6	32	5.9	26	9.6	A
		Total	12.5	635	12.3	639	9.7	635	10.7	615	11.9	625	8.9	624	11.9	680	9.4	539	12.2	618	10.3	626	11.0	B
	Total		18.2	1920	17.9	1918	16	1918	16.2	1906	17.2	1921	15	1937	17.2	1985	14.8	1836	18.8	1945	15.8	1904	16.7	B
Pyramid Way and York Way	NB	Left 2	12.1	14	10	10	13.1	9	8.4	11	5.4	13	7.2	14	10.1	12	9.1	13	6.5	9	9.1	6	9.0	A
		Through	8.3	897	8.8	901	10	901	9.6	918	8.9	904	9.2	933	9.3	930	10.3	915	10.4	935	9.6	902	9.4	A
		Right 2	9.8	41	7.5	37	6.7	41	11	38	6.3	33	6.2	39	9.2	41	9.6	39	5.4	33	7	36	7.9	A
		Total	8.4	952	8.8	948	9.9	951	9.6	967	8.8	950	9.1	986	9.3	983	10.3	967	10.2	977	9.5	944	9.4	A
	EB	Left 2	37.1	62	34.3	58	38.6	62	39.9	60	37.7	65	38.6	65	43.4	63	41.3	66	38.7	66	34.1	57	38.5	D
		Through	40.2	114	40.5	112	37.9	107	40.3	107	35.3	107	40	110	43.2	112	43.8	106	40.4	103	39.5	123	40.1	D
		Right 2	31.4	24	29.7	33	26.6	28	26.5	31	27.4	29	24.5	29	27.8	33	35	31	29.7	33	28.2	26	28.7	C
		Total	38.2	200	37	203	36.5	197	38	198	34.9	201	37.4	204	40.8	208	41.6	203	38.1	202	36.6	206	37.4	D
	SB	Left 2	10	39	12.3	34	12.3	37	12.6	46	10.3	43	11.3	38	13.8	51	12.1	46	12.2	50	12.3	47	12.0	B
		Through	11.1	596	9.9	615	8.7	609	11.5	592	10.9	597	9.1	619	11.6	631	10.3	523	10.7	589	11.1	615	10.5	B
		Right 2	9.8	62	11.9	53	9.8	60	11.9	52	12	55	7.8	47	11.7	56	12.8	51	9.1	52	9.1	45	10.6	B
		Total	10.9	697	10.2	702	9	706	11.6	690	10.9	695	9.1	704	11.8	738	10.6	620	10.7	691	11.1	707	10.6	B
	WB	Left 2	12.1	60	15.8	55	13.7	67	16.8	56	10.4	60	7	53	14.7	56	14.6	62	15.7	67	11.5	57	13.3	B
		Through	35.8	55	36	59	36.2	57	39.7	57	40.7	56	29.6	62	37	77	41.2	64	38.7	54	35.6	56	37.0	D
		Right 2	14.1	47	12.9	38	15.7	40	20.6	39	15.5	42	14.1	44	20.6	28	17.2	37	10.4	35	16.2	41	15.6	B
		Total	20.7	162	22.9	152	22	164	26.4	152	22.5	158	17.8	159	26.4	161	25.6	163	22.5	156	21.5	154	22.3	C
	Total		13.2	2011	13.2	2005	13.2	2018	14.4	2007	13.2	2004	12.6	2053	14.6	2090	14.9	1953	14.1	2026	13.8	2011	13.7	B
NETWORK TOTAL			63.3	16898	56.4	16684	44.4	16714	53.8	16615	47.6	16631	49.1	16685	50.1	16916	52.6	14808	44.9	16876	57.6	16579	52.0	D

2010 PM Existing Intersection Queue Lengths

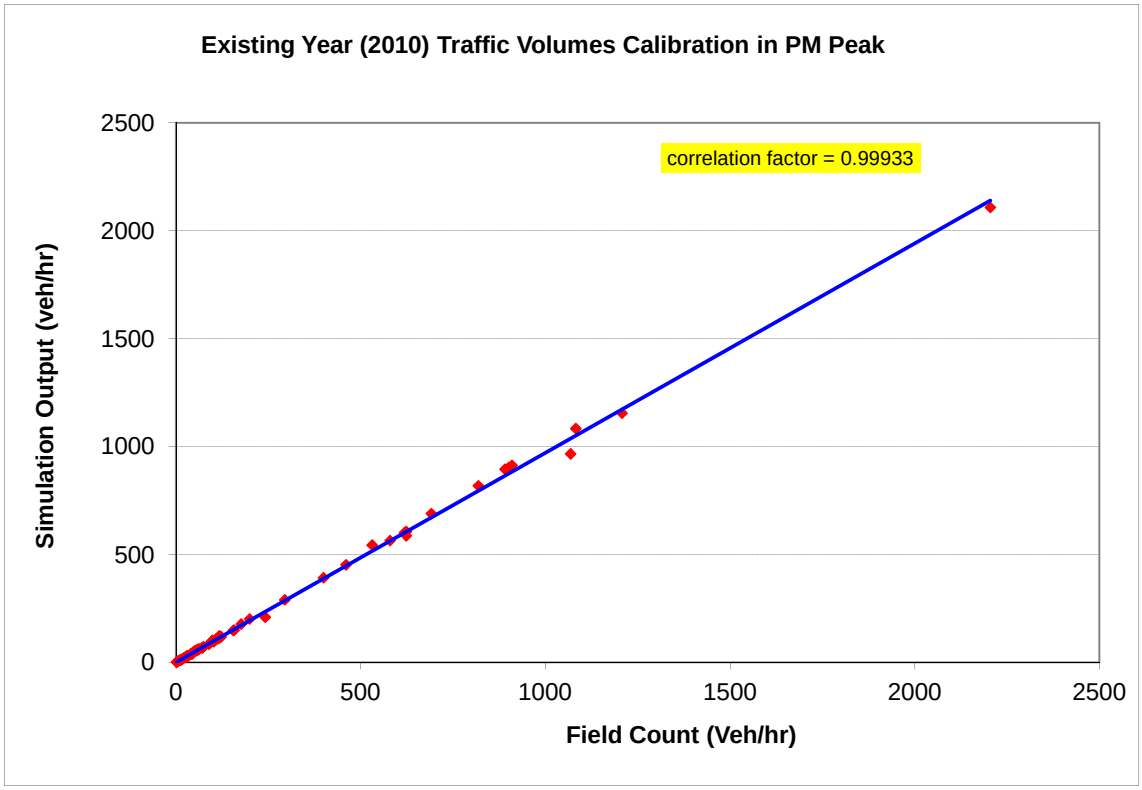
Intersection	Approach	Movement	95% Queues per Run 1 (42)	2 (47)	3 (52)	4 (57)	5 (62)	6 (67)	7 (72)	8 (77)	9 (82)	10 (87)	Max	95%	Median	Average	Standard Deviation
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	103.5	421.1	116	108.5	211.3	1124.2	128.3	184.3	120.9	325.7	1134.8	428.8	40.7	108.9	219.9
		Through	103.5	421.1	116	108.5	211.3	1124.2	128.3	184.3	120.9	325.7	1134.8	428.8	40.7	108.9	219.9
		Right 2	140.4	458.1	152.9	145.5	248.2	1161.2	165.3	221.3	157.8	362.7	1171.8	465.7	77.6	138	224.3
	EB	Left 2	16.5	19.5	15.8	19.4	17.7	0	18.5	19.1	17	18.6	62.7	17.7	0	1.6	5.7
		Through	110.7	280	124.6	139.5	661.1	1019.3	156.8	182	162.6	1012.3	1065.5	1007.1	0	132.5	281
		Right 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SB	Left 2	0	0	0	0	0	0	0	0	0	0	40.3	0	0	0.5	3.6
		Through	0	0	0	0	0	0	0	0	0	0	40.3	0	0	0.5	3.6
		Right 2	0	0	0	0	0	0	0	0	0	0	54.3	0	0	0.3	3.5
	WB	Left 2	58.8	80.3	59.5	64.2	67.1	93.4	61.7	78.7	80.2	64.4	229.8	72.1	0	17.9	26.7
		Through	57.3	81	61.9	64.6	60.7	79.9	73.5	62.4	44.4	64.6	288.4	63.4	0	9.6	27.5
		Right 2	89.4	113.1	94	96.6	92.8	112	105.5	94.4	76.4	96.7	320.5	95.4	0	12.1	36.6
N. McCarran Boulevard and Pyramid Way	NB	Left 2	179.2	160.6	127.4	146.9	155.7	128.6	147.4	157.9	134	148.6	300.5	149.7	39.8	51.8	51
		Through	434.6	442.5	460.5	474.9	393.8	655.2	480.6	484.7	477	460.8	676	606.2	168.4	199.4	186.4
		Right 2	0	0	0	0	0	642.8	0	0	0	0	663.7	426.4	0	34.1	137.5
	EB	Left 2	2437.8	2625.1	1364.4	2103.7	2623.7	2631.5	2227.1	2616.2	2370.1	2626.3	2669	2623.1	1547.2	1457.4	868.6
		Through	206.6	193.4	201	193.8	174.3	2626	189.8	212.2	202.2	189.9	2630.5	297.8	39.2	120	361.2
		Right 2	0	17.4	0	20.6	20.7	2631.4	18.8	19	18.8	0	2644.1	2612.1	0	195.8	656.4
	SB	Left 2	197	164.1	145	167.3	129.6	140.2	151.4	204.7	193.2	148.8	310.9	167.3	41.1	56.7	55.1
		Through	412.9	453.5	447.2	439.6	500.8	289.2	508.7	444.5	346.1	347.5	708.1	440.7	60.2	113.8	142.9
		Right 2	249.4	384.8	331.4	89.5	282	0	353.8	83.3	269.1	173.6	658.9	244.6	0	24.7	91.6
	WB	Left 2	108.5	172	128.2	116.8	123	83.1	145.3	127.3	110.1	156.1	725.1	126.9	19.6	42.3	62.7
		Through	480.8	701.4	394.5	524.2	425.4	317.2	509.7	564	438.2	464.6	800.1	487.4	212.6	224.4	152.1
		Right 2	484.2	704.9	398	527.7	428.9	320.6	513.2	567.4	441.6	468	803.6	490.8	216	227.2	152.9
N. McCarran Boulevard and Fourth Street	NB	Left 2	143.7	145.2	118.4	142.9	126.4	127.6	142.7	127.4	126.5	164.9	331.7	135.8	18.4	37.7	48.4
		Through	143.7	145.2	118.4	142.9	126.4	127.6	142.7	127.4	126.5	164.9	331.7	135.8	18.4	37.7	48.4
		Right 2	164.7	166.2	139.4	163.8	147.4	148.5	163.6	148.3	147.4	185.9	352.7	156.8	0	45.4	57.8
	EB	Left 2	125.8	107.8	102.2	104.9	84.8	56.9	80.7	81.4	85.1	84.9	213	91.7	0	20.6	32.7
		Through	107.3	63.8	49.4	37	111.2	16.9	80.6	140.9	62.1	104.8	414	81.2	0	11.8	36
		Right 2	134.2	90.7	71.5	63.9	138.1	0	107.5	167.8	89	131.7	440.9	108.1	0	13.7	43.4
	SB	Left 2	41	41.2	40.8	54.6	40.8	50.1	44.1	54.1	42.6	41.6	186.8	42.1	0	10.2	17.6
		Through	41	41.2	40.8	54.6	40.8	50.1	44.1	54.1	42.6	41.6	186.8	42.1	0	10.2	17.6
		Right 2	58.9	59	58.6	72.4	58.2	67.9	61.9	72	60.5	59.4	204.7	59.8	0	9.7	23.3
	WB	Left 2	20.3	18.5	18.8	19.1	19.8	16.1	20.3	19.1	22	19.8	78.6	19.2	0	3.1	8.8
		Through	104.4	103.9	96	106.9	98.5	75.1	96.2	109.7	96.2	113.8	262.8	99.2	0	19.9	36.8
		Right 2	129.8	129.3	121.5	132.3	123.9	100.5	121.6	135.1	121.7	139.2	288.2	124.7	0	27.5	46.8
Pyramid Way and Queen Way	NEB	Left 2	40	60.1	63.9	77.6	40	45.1	41.4	60	42.8	62	129.1	59.7	0	13.5	20
		Through	712.3	1096.5	719.2	685	782	729.7	821	890.5	1019.1	834.3	1453.6	882.3	0	198.9	304.8
		Right 2	0	0	0	0	0	0	0	0	0	0	35.3	0	0	0.2	2.2
	SEB	Left 2	113.3	111.5	189.4	119.6	119.8	114.7	115.8	119.4	114.5	114.4	358.3	117.4	49.3	49	46.3
		Through	113.3	111.5	189.4	119.6	119.8	114.7	115.8	119.4	114.5	114.4	358.3	117.4	49.3	49	46.3
		Right 2	136.5	134.7	212.6	142.8	143	137.9	139	142.6	137.7	137.6	381.5	140.6	72.5	65.6	53.8
	SWB	Left 2	103.3	83.2	77	65.7	89.8	103.9	85	101.9	82.3	97.8	172.5	85.7	18.6	27.3	30.4
		Through	224.3	216.1	218.3	171.4	190.9	183.4	205.3	171.3	199.9	236.2	547.2	204.5	0	38.8	73.5
		Right 2	0	0	0	0	0	0	0	0	0	0	60.7	0	0	0.4	3
	NWB	Left 2	112.1	77.6	119.1	59.4	76.9	43.2	53.3	56.2	38.1	41.4	293	61	0	15.9	31.8
		Through	112.1	77.6	119.1	59.4	76.9	43.2	53.3	56.2	38.1	41.4	293	61	0	15.9	31.8
		Right 2	111.8	77.2	118.7	59.1	76.5	42.8	50.9	56.3	37.8	41.1	292.7	60.7	0	12.9	32.1
Pyramid Way and Roberta Lane	NB	Left 2	19.7	18.8	20.2	18.6	20.1	0	18.9	18.3	19.7	39.6	121.4	19.4	0	2.8	11
		Through	63.3	62.8	90.3	67	104.4	679.6	64.2	59.4	83.9	81.2	682.6	176.1	0	36.2	126.3
	EB	Left 2	234.4	281.6	230.4	186.9	198.3	714.4	192.4	167.8	223	196.6	766.2	289.7	76.9	98.8	115.8
		Right 2	234.9	282.1	230.9	187.4	198.8	714.9	192.9	168.3	223.5	197.1	766.7	290.2	77.4	98	116.8
	SB	Through	97.2	41.5	47.9	101.8	16.7	124.3	40.1	85.2	103.2	62.5	296.8	79.8	0	10.6	32.3
		Right 2	112	56.4	57.1	116.6	0	139.2	54.9	100.1	118.1	77.3	311.7	94.6	0	11.4	36.4
Pyramid Way and York Way	NB	Left 2	0	0	0	0	0	0	0	0	0	0	70.1	0	0	0.4	3.1
		Through	86.3	86.8	81.8	110.7	107.7	1497.8	104.8	104.9	85.3	85.4	2030.3	144.4	0	61	223.5
		Right 2	86.3	86.8	81.8	110.7	107.7	1497.8	104.8	104.9	85.3	85.4	2030.3	144.4	0	61	223.5
	EB	Left 2	81.4	81.3	63.2	79.6	81.7	106.5	87.1	77.8	63.8	87.1	228.8	81.8	0	18.7	29
		Through	81.4	81.3	63.2	79.6	81.7	106.5	87.1	77.8	63.8	87.1	228.8	81.8	0	18.7	29
		Right 2	15.3	17.3	0	15.6	17.7	42.4	23.1	0	0	23.1	164.8	17.7	0	2.3	10.9
	SB	Left 2	0	0	0	16.5	15.9	13.8	13.6	13.7	16.6	0	89.9	13.8	0	1.3	6.4
		Through	109.9	65.6	96.2	85.5	67	80.9	76.2	83.2	78.9	43.3	326	82.6	0	12.9	33.7
		Right 2	109.9	65.6	96.2	85.5	67	80.9	76.2	83.2	78.9	43.3	326	82.6	0	12.9	33.7
	WB	Left 2	0	0	0	0	0	0	0	0	0	0	122.7	0	0	0.8	7.2
		Through	57.6	56.2	37.8	43.5	39.7	64	54.7	41.2	41.7	41.6	175.2	42.8	0	7.7	19
		Right 2	0	0	0	0	0	0	0	0	0	0	122.7	0	0	0.8	7.2

2010 PM Volumes Comparison between Field Counts and Model Output

Intersection	Approach	Movement	From Link	Field Count	Model 10-Run Ave	Diff. (Ave-Count)	%Diff. (Ave-Count)
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	8	155	147	-8	-5.0%
		Through	8	1	1	0	-20.0%
		Right 2	8	241	212	-29	-12.0%
		Total		**397**	**360**	**-37**	**-9.3%**
	EB	Left 2	96	6	6	0	1.7%
		Through	5	1207	1107	-100	-8.3%
		Right 2	97	71	66	-6	-7.7%
		Total		**1284**	**1179**	**-105**	**-8.2%**
	SB	Left 2	11	2	2	0	0.0%
		Through	11	2	2	0	0.0%
		Right 2	11	4	4	-1	-12.5%
		Total		**8**	**8**	**-1**	**-6.3%**
	WB	Left 2	98	71	68	-3	-3.8%
		Through	12	818	824	6	0.7%
		Right 2	12	4	4	0	-2.5%
		Total		**893**	**896**	**3**	**0.3%**
	Total			**2582**	**2442**	**-140**	**-5.4%**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	86	117	114	-3	-2.2%
		Through	55	900	909	9	1.0%
		Right 2	87	49	51	2	3.7%
		Total		**1066**	**1074**	**8**	**0.7%**
	EB	Left 2	88	1068	934	-134	-12.6%
		Through	19	579	535	-44	-7.6%
		Right 2	89	102	86	-17	-16.2%
		Total		**1749**	**1554**	**-195**	**-11.1%**
	SB	Left 2	85	122	117	-5	-4.0%
		Through	22	460	454	-6	-1.2%
		Right 2	22	531	544	13	2.4%
		Total		**1113**	**1115**	**2**	**0.2%**
	WB	Left 2	84	89	84	-5	-5.3%
		Through	1	399	392	-7	-1.7%
		Right 2	1	294	293	-1	-0.3%
		Total		**782**	**770**	**-12**	**-1.6%**
	Total			**4710**	**4513**	**-197**	**-4.2%**
N. McCarran Boulevard and Fourth Street	NB	Left 2	53	30	31	1	1.7%
		Through	53	117	122	5	4.6%
		Right 2	53	113	110	-3	-2.7%
		Total		**260**	**263**	**3**	**1.1%**
	EB	Left 2	100	98	97	-1	-1.4%
		Through	48	623	581	-42	-6.7%
		Right 2	48	29	25	-4	-14.1%
		Total		**750**	**703**	**-47**	**-6.3%**
	SB	Left 2	50	23	23	0	-1.3%
		Through	50	45	45	0	0.2%
		Right 2	50	61	62	1	1.5%
		Total		**129**	**130**	**1**	**0.5%**
	WB	Left 2	99	14	13	-1	-7.9%
		Through	3	691	690	-1	-0.2%
		Right 2	3	96	96	0	0.2%
		Total		**801**	**799**	**-2**	**-0.3%**
	Total			**1940**	**1894**	**-46**	**-2.4%**
Pyramid Way and Queen Way	NEB	Left 2	80	28	27	-1	-3.9%
		Through	37	2204	2080	-125	-5.6%
		Right 2	81	30	26	-4	-14.7%
		Total		**2262**	**2132**	**-130**	**-5.7%**
	SEB	Left 2	40	157	150	-7	-4.6%
		Through	40	11	12	1	7.3%
		Right 2	40	17	16	-1	-4.1%
		Total		**185**	**178**	**-7**	**-3.8%**
	SWB	Left 2	82	52	55	3	5.2%
		Through	45	1082	1084	2	0.1%
		Right 2	83	74	73	-1	-1.9%
		Total		**1208**	**1211**	**3**	**0.2%**
	NWB	Left 2	67	14	13	-1	-7.1%
		Through	67	22	22	0	0.9%
		Right 2	67	199	199	0	-0.1%
		Total		**235**	**234**	**-1**	**-0.4%**
	Total			**3890**	**3755**	**-135**	**-3.5%**
Pyramid Way and Roberta Lane	NB	Left 2	95	121	121	0	-0.3%
		Through	59	890	895	5	0.6%
		Total		**1011**	**1016**	**5**	**0.5%**
	EB	Left 2	57	176	178	2	1.2%
		Right 2	57	105	102	-3	-3.2%
		Total		**281**	**280**	**-1**	**-0.5%**
	SB	Through	56	618	593	-25	-4.0%
		Right 2	56	33	31	-2	-7.3%
		Total		**651**	**624**	**-27**	**-4.2%**
	Total			**1943**	**1919**	**-24**	**-1.2%**
Pyramid Way and York Way	NB	Left 2	78	12	11	-1	-7.5%
		Through	92	909	914	5	0.5%
		Right 2	92	43	38	-5	-12.1%
		Total		**964**	**963**	**-2**	**-0.2%**
	EB	Left 2	74	62	62	0	0.6%
		Through	74	110	110	0	0.1%
		Right 2	74	29	30	1	2.4%
		Total		**201**	**202**	**1**	**0.6%**
	SB	Left 2	79	44	43	-1	-2.0%
		Through	60	623	599	-24	-3.9%
		Right 2	60	56	53	-3	-4.8%
		Total		**723**	**695**	**-28**	**-3.9%**
	WB	Left 2	75	60	59	-1	-1.2%
		Through	75	58	60	2	2.9%
		Right 2	75	40	39	-1	-2.3%
		Total		**158**	**158**	**0**	**0.1%**
	Total			**2046**	**2018**	**-28**	**-1.4%**
NETWORK TOTAL				**17111**	**16541**	**-570**	**-3.3%**

Pyramid and MacCarran Project 6-Intersection Turn-movement Calibration Results

Intersection	Approach	Movement	Existing Year (2010) Traffic Volumes Calibration by Turn-movement in PM Peak				
			Field Counts	Simulation Output	Difference	% Difference	GEH
			PM Peak	PM Peak	PM Peak	PM Peak	PM Peak
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	155	147	-8	-4.9%	0.6
		Through	1	1	0	-10.0%	0.1
		Right 2	241	210	-32	-13.1%	2.1
	EB	Left 2	6	6	0	5.0%	0.1
		Through	1207	1155	-52	-4.3%	1.5
		Right 2	71	68	-3	-4.6%	0.4
	SB	Left 2	2	2	0	0.0%	0.0
		Through	2	2	0	0.0%	0.0
		Right 2	4	4	-1	-12.5%	0.3
	WB	Left 2	71	68	-3	-3.8%	0.3
		Through	818	819	1	0.1%	0.0
		Right 2	4	4	0	0.0%	0.0
N. McCarran Boulevard and Pyramid Way	NB	Left 2	117	114	-3	-2.2%	0.2
		Through	900	903	3	0.3%	0.1
		Right 2	49	51	2	3.7%	0.3
	EB	Left 2	1068	967	-101	-9.5%	3.2
		Through	579	564	-15	-2.5%	0.6
		Right 2	102	96	-6	-6.0%	0.6
	SB	Left 2	122	119	-4	-2.9%	0.3
		Through	460	452	-8	-1.7%	0.4
		Right 2	531	543	12	2.3%	0.5
	WB	Left 2	89	85	-4	-4.9%	0.5
		Through	399	392	-7	-1.8%	0.4
		Right 2	294	290	-4	-1.5%	0.3
N. McCarran Boulevard and Fourth Street	NB	Left 2	30	31	1	1.7%	0.1
		Through	117	122	5	4.6%	0.5
		Right 2	113	110	-3	-2.7%	0.3
	EB	Left 2	98	101	3	3.4%	0.3
		Through	623	606	-17	-2.7%	0.7
		Right 2	29	26	-4	-12.1%	0.7
	SB	Left 2	23	23	0	-0.9%	0.0
		Through	45	45	0	0.2%	0.0
		Right 2	61	62	1	1.3%	0.1
	WB	Left 2	14	13	-1	-7.1%	0.3
		Through	691	690	-1	-0.2%	0.1
		Right 2	96	96	0	0.3%	0.0
Pyramid Way and Queen Way	NEB	Left 2	28	28	-1	-1.8%	0.1
		Through	2204	2108	-96	-4.3%	2.1
		Right 2	30	26	-4	-13.3%	0.8
	SEB	Left 2	157	150	-7	-4.7%	0.6
		Through	11	12	1	8.2%	0.3
		Right 2	17	16	-1	-4.7%	0.2
	SWB	Left 2	52	55	3	4.8%	0.3
		Through	1082	1083	1	0.1%	0.0
		Right 2	74	72	-2	-2.3%	0.2
	WB	Left 1	14	13	-1	-5.7%	0.2
		Right 1	22	23	1	2.3%	0.1
		Right 3	199	201	2	1.1%	0.2
Pyramid Way and Roberta Lane	NB	Left 2	121	120	-1	-0.5%	0.1
		Through	890	895	5	0.6%	0.2
	EB	Left 2	176	178	2	1.1%	0.2
		Right 2	105	102	-4	-3.3%	0.3
	SB	Through	618	601	-17	-2.8%	0.7
		Right 2	33	31	-2	-7.0%	0.4
Pyramid Way and York Way	NB	Left 2	12	11	-1	-7.5%	0.3
		Through	909	914	5	0.5%	0.2
		Right 2	43	38	-5	-12.3%	0.8
	EB	Left 2	62	62	0	0.6%	0.1
		Through	110	110	0	0.1%	0.0
		Right 2	29	30	1	2.4%	0.1
	SB	Left 2	44	42	-2	-3.9%	0.3
		Through	623	587	-36	-5.8%	1.5
		Right 2	56	54	-2	-3.2%	0.2
	WB	Left 2	60	59	-1	-1.2%	0.1
		Through	58	60	2	2.9%	0.2
		Right 2	40	39	-1	-2.3%	0.1


Existing Year (2010) Traffic Volumes Calibration in PM Peak
correlation factor = 0.99933
Simulation Output (veh/hr)
Field Count (Veh/hr)
0
500
1000
1500
2000
2500

2030 AM No Build Intersection Volume, Delay and LOS

Intersection	Approach	Movement	Run 1		Run 2		Run 3		Run 4		Run 5		Run 6		Run 7		Run 8		Run 9		Run 10		Average(s)	LOS
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume		
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	62.2	47	58.4	65	58.3	65	60	58	55.5	56	52.7	64	56.8	68	53.2	63	55.2	60	63.4	56	**57.4**	**E**
		Through	0	0	0	0	59.1	1	0	0	0	0	76.3	1	0	0	30.2	1	71.7	2	0	0	**61.8**	**E**
		Right 2	6.5	95	7.1	77	6.7	70	6	73	6.4	86	6.4	70	6.7	80	6.2	74	6.1	75	6.7	78	**6.5**	**A**
		Total	24.9	142	30.6	142	31.7	136	29.9	131	25.8	142	28.9	135	29.7	148	27.8	138	28.6	137	30.4	134	**28.9**	**C**
	EB	Left 2	19.1	1	62.4	1	48.1	1	27.9	2	0	0	86.5	1	53	2	0	0	0	0	116.1	1	**54.9**	**D**
		Through	3.3	577	4.1	597	4.6	642	4.1	586	4.1	624	3.6	587	4.1	616	4.2	612	4	637	3.9	616	**4**	**A**
		Right 2	0.7	76	0.7	82	0.7	65	0.6	90	0.6	74	0.6	90	0.7	77	0.9	85	0.6	77	0.6	78	**0.7**	**A**
		Total	3	654	3.8	680	4.3	708	3.7	678	3.7	698	3.3	678	3.9	695	3.8	697	3.6	714	3.7	695	**3.6**	**A**
	SB	Left 2	2.3	1	49.3	4	92	2	58.1	2	0	2	9	2	0	1	28.4	3	42	4	63.3	2	**38.9**	**D**
		Through	0	2	0	0	30.3	3	0.7	1	0	1	47.7	2	69.9	2	64.9	2	0	1	40.3	3	**34**	**C**
		Right 2	15.7	2	1.6	1	0	0	0	0	3.9	2	0	0	1.6	1	0	0	0	0	0	0	**7**	**A**
		Total	6.7	5	39.8	5	55	5	39	3	1.6	5	28.4	4	35.4	4	43	5	33.6	5	49.5	5	**30.9**	**C**
	WB	Left 2	55.6	71	54.5	75	62.7	66	58.1	79	59.2	80	57.2	76	56.7	79	49.2	78	52.4	67	57.2	85	**56.2**	**E**
		Through	3.8	1070	3.2	992	3.3	996	3.4	986	3.5	1065	3.6	1054	3.2	986	3.7	1064	3.7	1047	3.6	1034	**3.5**	**A**
		Right 2	22.6	2	0.5	2	0	0	0	0	0	0	0	0	0	0	0	0	2.7	2	0	0	**8.6**	**A**
		Total	7.1	1143	6.8	1069	7	1062	7.5	1065	7.4	1145	7.2	1130	7.2	1065	6.8	1142	6.6	1116	7.7	1119	**7.1**	**A**
	Total		7	1944	7.6	1896	7.9	1911	7.7	1877	7.4	1990	7.4	1947	7.8	1912	7.3	1982	7.1	1972	7.9	1953	**7.5**	**A**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	57.8	98	53.9	92	56.3	83	59.3	98	60.1	104	60	89	57.7	106	61.8	97	60.8	90	60.7	99	**58.9**	**E**
		Through	27.8	299	28.6	335	26.5	343	28.6	304	31.6	338	28.1	332	26.9	324	26.9	332	27.2	335	30.8	333	**28.3**	**C**
		Right 2	5.6	67	6.2	68	6.6	63	5.8	50	6	63	6.3	72	6.3	59	7	64	6	74	6.3	52	**6.2**	**A**
		Total	30.9	464	30.2	495	29	489	32.7	452	34.3	505	30.7	493	31.1	489	31.2	493	30.1	499	34.3	484	**31.2**	**C**
	EB	Left 2	57.4	285	53.5	278	54.1	307	53.8	283	53.6	306	51.5	303	52.5	304	55	279	49.9	299	50.3	290	**53.1**	**D**
		Through	49.5	292	46.2	306	53.4	293	50.1	291	48.8	313	48.6	281	51.5	312	55.6	314	51	312	53	328	**50.8**	**D**
		Right 2	10.9	103	11.1	106	13.1	118	11	102	11.7	96	11.3	110	10.4	106	12.5	99	12.3	107	13.1	102	**11.7**	**B**
		Total	47	680	43.7	690	47.1	718	45.7	676	45.9	715	44	694	45.9	722	49.2	692	44.8	718	46.3	720	**45.5**	**D**
	SB	Left 2	132.3	84	140.6	86	127.8	80	144.4	86	139.5	89	142.6	97	142.6	81	133.6	86	142.1	69	125.5	97	**137**	**F**
		Through	139.6	1091	149.9	1111	139.9	1070	163.9	1051	148.5	1088	145	1095	154.5	1126	148.4	1094	151.4	1094	147	1085	**148.8**	**F**
		Right 2	126.3	670	136.4	611	125.4	663	148.4	599	129.7	679	128.2	676	141.3	572	131.9	657	139.5	652	133.2	636	**133.7**	**F**
		Total	134.4	1845	144.9	1808	134.1	1813	157.6	1736	141.2	1856	138.8	1868	149.7	1779	141.8	1837	146.8	1815	141	1818	**128.6**	**F**
	WB	Left 2	64.6	163	64.6	176	89.5	172	60.3	172	64.6	170	55.2	169	78.5	159	75.3	182	74.3	164	66.2	184	**69.3**	**E**
		Through	60	617	58.5	584	57.8	563	57.8	619	58.1	613	58.9	580	57.1	606	61	614	60.6	610	58	623	**58.8**	**E**
		Right 2	50.1	67	46.8	69	45.5	75	53.8	71	52.2	70	60	83	52.1	90	54.7	77	50.7	66	48.7	58	**51.7**	**D**
		Total	60.1	847	58.8	829	63.4	810	58	862	58.9	853	58.3	832	60.6	855	63.4	873	62.5	840	59.1	865	**60.2**	**E**
	Total		90	3836	93.1	3822	89.4	3830	99.1	3726	92.2	3929	90.9	3887	95.3	3845	93.8	3895	94.6	3872	91.9	3887	**93**	**F**
N. McCarran Boulevard and Fourth Street	NB	Left 2	50.5	46	45.8	56	52.6	44	45	57	49.8	50	59.2	59	55.6	44	51.6	62	50.2	48	59.6	63	**52.1**	**D**
		Through	49.4	111	51.1	116	51.4	98	57.5	87	49.1	90	60.7	96	54.4	103	50.3	88	47.6	107	53.1	110	**52.3**	**D**
		Right 2	31.9	90	37.2	115	33.1	112	38.4	127	32.8	120	37.5	117	40.8	113	37.9	113	37.1	107	43.4	86	**37**	**D**
		Total	43.2	247	44.5	287	43.5	254	45.9	271	41.7	260	50.4	272	48.7	260	45.3	263	43.8	262	51.5	259	**45.9**	**D**
	EB	Left 2	83.6	21	96.3	22	91.6	22	86.8	23	84.5	20	92	23	93.9	13	94.4	22	81.9	19	86.5	18	**89.2**	**F**
		Through	2.5	413	3.4	420	2.4	400	3.2	390	2.6	442	2.2	418	2.6	429	2.5	433	3.7	434	3.1	447	**2.8**	**A**
		Right 2	1.3	13	3.3	15	1.2	14	1.2	12	1.3	12	4.1	10	1.1	8	1	10	0.7	5	0.9	13	**1.7**	**A**
		Total	6.3	447	7.9	457	6.9	436	7.7	425	6	474	6.8	451	5.2	450	6.8	465	6.9	458	6.2	478	**6.5**	**A**
	SB	Left 2	53.1	24	49.6	24	53.1	16	28.4	15	57.8	22	65.8	18	53.5	21	54.4	20	54.2	12	45.1	21	**51.9**	**D**
		Through	49.9	11	55.7	15	50.4	19	43.8	18	60.9	14	41.1	21	46.6	15	39.8	18	50.2	18	56.1	17	**48.9**	**D**
		Right 2	5.9	13	5.7	9	6.3	9	6.2	18	5.9	11	6.9	15	6.8	13	6.3	13	6.7	15	4.8	14	**6.2**	**A**
		Total	39.6	48	43.3	48	42.4	44	26	51	46.6	47	39.8	54	39	49	37	51	36.8	45	37.8	52	**37.3**	**D**
	WB	Left 2	69.8	32	61.5	30	56.2	30	58.6	30	61.1	26	59.8	22	57.2	30	62.7	34	49.8	29	69.2	31	**60.8**	**E**
		Through	6	771	7.2	752	6.7	755	8.1	775	6.8	790	6.7	773	5.8	798	7.4	804	6.8	787	7.9	789	**6.9**	**A**
		Right 2	5.5	21	7.5	24	5	38	4.1	18	2.3	26	7.2	33	6.8	25	6.5	16	4.7	25	8.4	22	**5.8**	**A**
		Total	8.5	824	9.2	806	8.4	823	9.9	823	8.3	842	8.1	828	7.6	853	9.6	854	8.2	841	10.2	842	**8.4**	**A**
	Total		14.3	1566	16.2	1598	14.7	1557	16	1570	14.1	1623	16	1605	14.5	1612	15.4	1633	14.4	1606	16.5	1631	**15.2**	**B**
Pyramid Way and Queen Way	NEB	Left 2	70.8	7	67.3	13	59	21	39.7	12	42.5	20	51.4	2	64.1	12	69	18	54.2	24	60.9	13	**57.3**	**E**
		Through	18.8	638	19	664	21.1	694	15.5	642	16.4	679	17.9	696	16.7	694	20.2	651	20.1	655	19	653	**18.5**	**B**
		Right 2	7.2	15	6.3	10	8	12	4.9	11	5.7	7	4.2	11	3.9	13	4.8	10	4	13	5.4	14	**5.4**	**A**
		Total	19.1	660	19.7	687	22	727	15.8	665	17	706	17.8	709	17.3	719	21.3	679	21	692	19.5	680	**19.1**	**B**
	SEB	Left 2	144	337	206.7	286	115.2	360	181	317	201.2	303	168.6	327	125	343	163.8	357	136.3	374	152.1	337	**157.5**	**F**
		Through	140.2	38	178.8	33	131.4	33	204	25	250.7	29	136.3	43	134.2	33	168.5	30	159.5	44	149.1	49	**161.4**	**F**
		Right 2	120.3	12	140.4	11	102.2	8	182.8	14	157	15	150.9	17	62.4	14	176.6	18	116.6	17	138	12	**137.5**	**F**
		Total	142.9	387	201.7	330	116.3	401	182.7	356	203.4	347	164.2	387	123.5	390	164.7	405	137.9	435	151.3	398	**148.7**	**F**
	SWB	Left 2	245.9	101	255.3	96	279.8	102	288.6	96	297.8	88	288.8	88	268.7	90	279.8	95	300.1	88	240.5	80	**274.5**	**F**
		Through	228.9	1803	219.6	1777	240.7	1768	283.6	1676	269.1	1775	259.4	1781	265.3	1750	261.5	1764	278.8	1735	245.7	1762	**255**	**F**
		Right 2	217.3	204	203.6	196	213.3	153	248.6	194	257.5	167	236.9	178	240.6	180	248.4	150	265.9	194	231.8	161	**236.2**	**F**
		Total	228.6	2108	219.7	2069	240.6	2023	280.4	1966	269.4	2030	258.7	2047	263.3	2020	261.4	2009	278.5	2017	244.4	2003	**209.9**	**F**
	WB	Left 1	56	46	59.6	46	60.7	61	62.5	53	67	57	70.1	62	58.4	54	52.2	67	61	54	47.2	58	**59.5**	**E**
		Right 1	32.9	26	37.9	26	48.6	21	69.5	21	52	24	35.8	16	41	21	47.5	14	32.2	12	35.2	19	**43.6**	**D**
		Right 3	7.6	89	7.8	74	6.9	70	7.6	74	7.3	79	7.4	72	7	76	6.9	76	6.9	87	7.2	72	**7.3**	**A**
		Total	25.5	161	29.5	146	34.3	152	36	148	35.3	160	36.3	150	30.1	151	29.9	157	28	153	26.3	149	**29.4**	**C**
	Total		167	3316	166.8	3232	167.9	3303	201.6	3135	195.8	3243	185.6	3293	182	3280	188	3250	194.3	3297	175.5	3230	**182.4**	**F**
Pyramid Way and Roberta Lane	NB	Left 2	8.7	113	9.8	102	10.8	97	8.1	99	10.2	93	9.3	97	10.1	107	8.6	98	7.3	99	8.8	102	**9.2**	**A**
		Through	3.6	383	4.2	411	3.5	412	4.1	382	4.2	410	4.6	416	3.8	414	4	408	3.7	412	4.3	395	**4**	**A**
		Total	4.8	496	5.3	513	4.9	509	4.9	481	5.3	503	5.5	513	5.1	521	4.9	506	4.4	511	5.2	497	**5.1**	**A**
	EB	Left 2	53.7	82	47.7	91	49.3	81	45.1	76	52.1	89	38.1	84	49.8	79	52.1	82	49.5	89	43	86	**48.1**	**D**
		Right 2	13.9	135	12.3	130	13.9	131	13.1	145	13.3	124	11.4	128	11.7	136	14.7	135	13.1	134	13.6	133	**13.1**	**B**
		Total	28.9	217	26.9	221	27.4	212	24.1	221	29.5	213	22	212	25.7	215	28.8	217	27.6	223	25.1	219	**26.6**	**C**
	SB	Through	12.5	1296	12	1275	12.3	1275	11.2	1234	13.8	1272	11.9	1291	12.8	1283	12.1	1270	10.5	1263	11.1	1308	**12**	**B**
		Right 2	12.6	70	14	91	14.9	81	11.7	87	13.7	91	12.8	83	17	91	13.7	96	11.4	93	13.8	63	**13.6**	**B**
		Total	12.5	1366	12.1	1366	12.5	1356	11.2	1321	13.8	1363	12	1374	13.1	1374	12.2	1366	10.6	1356	11.2	1371	**12.1**	**B**
	Total		12.4	2079	12	2100	12.2	2077	11.1	2023	13.4	2079	11.4	2099	12.4	2110	12.2	2089	10.9	2090	11.2	2087	**11.9**	**B**
Pyramid Way and York Way	NB	Left 2	9.1	12	18.5	7	8.4	9	16.5	3	10.1	10	7.9	7	14.7	8	13.5	4	1.3	6	7.2	9	**10.2**	**B**
		Through	2.6	474	3.3	479	3.8	477	3.4	453	2.9	468	3.8	486	2.8	489	3.2	482	3.1	482	3.8	465	**3.3**	**A**
		Right 2	2.8	50	3.4	55	3.3	46	4	64	4.4	39	4.1	43	3.7	52	2.1	57	3.8	46	3.7	53	**3.5**	**A**
		Total	2.8	536	3.5	541	3.8	532	3.5	520	3.2	517	3.9	536	3.1	549	3.2	543	3.1	534	3.8	527	**3.4**	**A**
	EB	Left 2	21.8	11	22.2	14	10.6	16	8	9	22.3	13	11.7	10	14.7	13	0.7	11	33.4	16	3.7	17	**15.3**	**B**
		Through	76.3	14	56	16	63.6	18	49.9	22	77.6	14	45.9	17	65.3	11	55.2	24	61	22	55.9	12	**59.6**	**E**
		Right 2	18.6	14	18.9	16	18.2	8	19.9	16	20.6	17	10.7	19	13.6	15	18.7	10	11.3	8	7.8	13	**15.9**	**B**
		Total	40.2	39	32.8	46	34.8	42	31.7	47	39.2	44	23.9	46	28.5	39	33.8	45	42.8	46	19.9	42	**32.1**	**C**
	SB	Left 2	5.7	9	5.6	19	4.5	19	2.3	19	2.5	14	2.3	17	3.2	14	2.4	14	6.1	18	3.8	13	**3.8**	**A**
		Through	2.4	1395	3.4	1379	2.1	1370	2.1	1345	1.9	1349	2.4	1381	2.4	1383	2.4	1371	2.7	1353	3.1	1404	**2.5**	**A**
		Right 2	2.2	27	4.8	22	3.7	18	2.5	22	1.4	19	2.9	29	2	35	3.7	23	3.3	25	4	33	**3**	**A**
		Total	2.4	1431	3.5	1420	2.2	1407	2.1	1386	1.9	1382	2.4	1427	2.4	1432	2.4	1408	2.8	1396	3.1	1450	**2.4**	**A**
	WB	Left 2	23.6	130	19.9	140	24.2	130	22.2	140	19.8	134	18	136	25.3	126	18.5	138	21.7	146	23.8	140	**21.7**	**C**
		Through	60.2	40	56.2	35	54.6	42	67.8	41	58	31	46.7	39	58.1	47	55.8	35	54.6	31	62.1	36	**57.5**	**E**
		Right 2	24.1	11	29.9	19	27.6	17	31.5	17	11	20	22.2	16	42.1	18	20.8	14	28.3	13	21.2	15	**25.9**	**C**
		Total	31.7	181	27.4	194	31.3	189	32.4	198	25.2	185	24.2	191	35	191	25.7	187	27.5	190	30.8	191	**29.5**	**C**
	Total		5.6	2187	6.2	2201	5.8	2170	5.9	2151	5	2128	5.1	2200	5.9	2211	5.2	2183	5.9	2166	6	2210	**5.7**	**A**
NETWORK TOTAL			**65.2**	**14928**	**65.6**	**14849**	**65.5**	**14848**	**74.3**	**14482**	**71.6**	**14992**	**69.2**	**15031**	**69.5**	**14970**	**70**	**15032**	**72**	**15003**	**66.9**	**14998**	**69**	**E**

2030AM No Build Intersection Queue Lengths

Intersection	Approach	Movement	95% Queues per Run										Max	95%	Median	Average	Standard Deviation
			1	2	3	4	5	6	7	8	9	10					
			42	47	52	57	62	67	72	77	82	87					
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	57.1	40.4	67.1	62.8	60.6	61.6	62	59.3	60.1	43.1	130.9	61	16	16.3	21.1
		Through	57.1	40.4	67.1	62.8	60.6	61.6	62	59.3	60.1	43.1	130.9	61	16	16.3	21.1
		Right 2	102.8	86.2	112.9	108.5	106.3	107.3	107.7	105.1	105.8	88.9	176.6	106.8	61.8	40.3	41
	EB	Left 2	0	0	0	0	0	0	0	0	0	0	21.5	0	0	0.1	1.6
		Through	38.9	42.3	41	40.6	42	41.1	40.5	61.9	41.9	43.3	186.8	42	0	6.5	16.9
		Right 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SB	Left 2	0	0	0	0	0	0	0	18.2	0	0	39.1	0	0	0.5	3
		Through	0	0	0	0	0	0	0	18.2	0	0	39.1	0	0	0.5	3
		Right 2	0	0	0	0	0	0	0	0	0	0	53	0	0	0	1.2
	WB	Left 2	59.6	63.8	63.4	77.2	85.6	83.2	81.8	66.1	62.7	83.3	209.1	78.7	16.4	20.4	26.5
		Through	59.6	63.8	63.4	77.2	85.6	83.2	81.8	66.1	62.7	83.3	209.1	78.7	16.4	20.4	26.5
		Right 2	0	0	69.8	0	0	70.2	71.5	72.3	0	70.3	240.8	0	0	4.8	21.9
N. McCarran Boulevard and Pyramid Way	NB	Left 2	86.5	82.9	99.8	118.9	104.6	83.1	105.5	80.9	86.4	87.1	212.4	91.1	18.4	28	32.7
		Through	84.2	83.5	101.4	79.5	92.9	88.7	101.7	87.7	78.3	101.2	221.8	87.2	0	24.6	32.4
		Right 2	0	0	0	0	0	0	0	0	0	0	52.7	0	0	0.1	1.9
	EB	Left 2	107.9	108.6	125.1	123.8	125.5	121	125.4	120.5	107.7	107.9	217.8	122.1	40	46.7	39.3
		Through	86.4	107.6	78.8	92.5	102.8	86.9	100.1	118.8	103.1	125.2	198.5	102.6	18.3	31.7	34.7
		Right 2	0	0	0	0	0	0	0	0	0	0	90.8	0	0	0.4	3.9
	SB	Left 2	59.7	64.9	74.7	84.1	73.4	69.6	61	63	68.2	67.2	146.9	67.9	0	16.4	25
		Through	1804.3	1803.6	1803.1	1803.6	1802.8	1804.3	1802.5	1803.1	1801.9	1802	1844.4	1803.1	1614.2	1468.6	356.9
		Right 2	1787.5	1786.8	1786.3	1786.8	1786	1786.6	1785.6	1786.3	1785.1	1785.2	1827.6	1786.2	1592.4	1427	406.6
	WB	Left 2	128.5	168.4	143.7	149.6	128.3	193.9	153.5	195.4	166.4	170.9	376.7	167.8	41.3	56.8	56.1
		Through	213.8	218.5	213.8	236.9	203.1	216.4	211.4	252.7	215.4	220.8	504	217.5	62.8	81	76.7
		Right 2	214.4	219.2	214.4	237.5	203.7	217	212	253.3	216	221.4	504.6	218.1	63.4	79.7	78.5
N. McCarran Boulevard and Fourth Street	NB	Left 2	152.2	158.8	127.5	145.6	163.6	154	150.6	131.4	181.6	152.4	356.9	150.8	20.4	45	54.2
		Through	152.2	158.8	127.5	145.6	163.6	154	150.6	131.4	181.6	152.4	356.9	150.8	20.4	45	54.2
		Right 2	173.2	179.8	141.1	166.6	184.5	175	171.5	152.3	202.6	173.4	377.9	171.3	36.9	53.4	63.4
	EB	Left 2	20	38.8	37.6	20	36.4	19.6	17.6	19.9	20	18.6	84.7	20	0	4.6	10.7
		Through	40.2	55.4	41.2	61	56.9	77.9	60.7	62.2	59.7	65.5	209.7	60.4	0	8.1	23.7
		Right 2	67	82.2	68	87.8	70.2	104.7	87.5	89	85.6	92.3	236.5	87.2	0	9.2	30.7
	SB	Left 2	20.6	32.7	39.6	19.8	20.2	39.5	35.5	19.9	20.7	39.3	84	34.8	0	5.8	11.7
		Through	20.6	32.7	39.6	19.8	20.2	39.5	35.5	19.9	20.7	39.3	84	34.8	0	5.8	11.7
		Right 2	34.4	50.5	54.6	31.7	0	57.4	0	0	31.7	57.1	101.8	37.4	0	3.4	13.8
	WB	Left 2	38.8	39.7	41	40.5	38	19.7	20.8	40	38.3	40.1	85.1	38.5	0	6.9	13
		Through	75.3	75.3	77.3	76.5	68.3	57.9	69.2	74.8	70.8	56.6	210.7	72.9	0	10.3	25.7
		Right 2	99.6	99.6	101.5	100.7	92.6	82.1	93.5	99	95.1	80.8	234.9	97.1	0	14.4	34
Pyramid Way and Queen Way	NEB	Left 2	18.8	19.8	37.6	36.5	35.1	16.3	18.4	19.8	20.8	19.4	77	19.8	0	4.6	9.9
		Through	128.1	142.3	129.3	105.7	124.7	126.7	146.1	126	131.9	130	313.4	128.8	0	26.6	46
		Right 2	0	0	0	0	0	0	0	0	0	0	17.9	0	0	0	0.2
	SEB	Left 2	389.4	388.7	346.1	435	391.9	434.5	344.9	409.6	365.7	430.6	508.3	392.9	274.5	259.1	98.3
		Through	389.4	388.7	346.1	435	391.9	434.5	344.9	409.6	365.7	430.6	508.3	392.9	274.5	259.1	98.3
		Right 2	389.4	388.7	346.1	435	391.9	434.5	344.9	409.6	365.7	430.6	508.3	392.9	274.5	259.1	98.3
	SWB	Left 2	117.1	95.8	123	125.7	85.5	123.3	108.7	92.1	83.3	100.8	200.8	104.2	18.5	30.5	37
		Through	5170.5	5170	5170.9	5168.7	5169.8	5171.3	5168.3	5167.9	5168.5	5168.3	5212.2	5169.6	4888	4297	1298.7
		Right 2	0	0	0	0	0	0	0	0	0	0	79.6	0	0	0.2	3.2
	WB	Left 1	63.3	61.2	82.3	60.7	59.8	59.7	62.6	61.6	58.9	80.2	156	62.1	0	15	23.1
		Right 1	63.3	61.2	82.3	60.7	59.8	59.7	62.6	61.6	58.9	80.2	156	62.1	0	15	23.1
		Right 3	61.4	59.3	80.4	58.8	57.9	57.8	60.7	59.8	57	78.3	154.1	60.3	0	10.7	23
Pyramid Way and Roberta Lane	NB	Left 2	18	19.1	18.1	19	25.9	19.4	19.3	19.9	18.9	17	101.2	18.9	0	2.3	9
		Through	20.6	38.7	40.4	37.9	39.9	41.3	39.8	38.2	19.5	37.8	151.8	38.3	0	4.3	13.5
	EB	Left 2	65.1	68	65.8	79.7	62.8	80.5	62.7	81.7	80.6	61.1	177.7	71.4	16.3	21.2	25.8
		Right 2	66.8	70.5	68.3	82.2	65.3	82.9	65.2	84.2	83.1	63.6	180.2	71.4	0	19.5	27.5
	SB	Through	230	236.4	58.4	184	150.8	243	305.7	183.6	103.8	247.1	512.8	210.5	0	30	73.3
		Right 2	245.9	252.2	74.2	199.8	166.7	258.9	321.5	199.4	119.6	263	528.6	226.4	0	32.6	78.6
Pyramid Way and York Way	NB	Left 2	0	0	0	0	0	0	0	0	0	0	20.7	0	0	0.1	1.2
		Through	21.7	37.3	40.4	39.8	38.4	39.1	40.2	39.3	40.1	38.6	151.5	39.2	0	5.2	13.6
		Right 2	21.7	37.3	40.4	39.8	38.4	39.1	40.2	39.3	40.1	38.6	151.5	39.2	0	5.2	13.6
	EB	Left 2	0	0	0	0	0	0	0	0	0	0	30.3	0	0	0	0.8
		Through	17.5	18.5	18.7	18.9	18.1	18.3	16.4	18.2	19.4	0	81.4	18.5	0	2.1	7.8
		Right 2	0	0	0	0	0	0	0	0	0	0	30.3	0	0	0	0.8
	SB	Left 2	0	0	0	0	0	0	0	0	0	0	57.6	0	0	0.2	1.9
		Through	41.5	78	52.8	97.7	44.1	117.8	103.4	43.7	58.9	85.7	462.2	66	0	11.5	41.3
		Right 2	41.5	78	52.8	97.7	44.1	117.8	103.4	43.7	58.9	85.7	462.2	66	0	11.5	41.3
	WB	Left 2	24.7	27.6	22.2	25.3	21.6	0	29.7	0	0	0	127.3	21.3	0	2.3	11
		Through	59.3	61.3	56	59.1	55.4	43.3	63.5	43.5	43.3	40.1	161.1	56.3	0	7.5	19.8
		Right 2	24.7	27.6	22.2	25.3	21.6	0	29.7	0	0	0	127.3	21.3	0	2.3	11

2030 AM No Build Intersection 10-Run Average Volumes

Intersection	Approach	Movement	Run 1	2	3	4	5	6	7	8	9	10	10-Run Ave	Standard Deviation
			42	47	52	57	62	67	72	77	82	87		
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	47	65	65	58	56	64	68	63	60	56	**60**	**6.2**
		Through	0	0	1	0	0	1	0	1	2	0	**1**	**0.7**
		Right 2	95	77	70	73	86	70	80	74	75	78	**78**	**7.7**
		Total	142	142	136	131	142	135	148	138	137	134	**139**	**5**
	EB	Left 2	1	1	1	2	0	1	2	0	0	1	**1**	**0.7**
		Through	577	597	642	586	624	587	616	612	637	616	**609**	**22.1**
		Right 2	76	82	65	90	74	90	77	85	77	78	**79**	**7.6**
		Total	654	680	708	678	698	678	695	697	714	695	**690**	**17.5**
	SB	Left 2	1	4	2	2	2	2	1	3	4	2	**2**	**1.1**
		Through	2	0	3	1	1	2	2	2	1	3	**2**	**0.9**
		Right 2	2	1	0	0	2	0	1	0	0	0	**1**	**0.8**
		Total	5	5	5	3	5	4	4	5	5	5	**5**	**0.7**
	WB	Left 2	71	75	66	79	80	76	79	78	67	85	**76**	**6**
		Through	1070	992	996	986	1065	1054	986	1064	1047	1034	**1029**	**35.5**
		Right 2	2	2	0	0	0	0	0	0	2	0	**1**	**1**
		Total	1143	1069	1062	1065	1145	1130	1065	1142	1116	1119	**1106**	**36**
	Total		1944	1896	1911	1877	1990	1947	1912	1982	1972	1953	**1938**	**38**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	98	92	83	98	104	89	106	97	90	99	**96**	**7.1**
		Through	299	335	343	304	338	332	324	332	335	333	**328**	**14.6**
		Right 2	67	68	63	50	63	72	59	64	74	52	**63**	**7.8**
		Total	464	495	489	452	505	493	489	493	499	484	**486**	**16.2**
	EB	Left 2	285	278	307	283	306	303	304	279	299	290	**293**	**11.6**
		Through	292	306	293	291	313	281	312	314	312	328	**304**	**14.3**
		Right 2	103	106	118	102	96	110	106	99	107	102	**105**	**6.1**
		Total	680	690	718	676	715	694	722	692	718	720	**703**	**17.9**
	SB	Left 2	84	86	80	86	89	97	81	86	69	97	**86**	**8.2**
		Through	1091	1111	1070	1051	1088	1095	1126	1094	1094	1085	**1091**	**20.4**
		Right 2	670	611	663	599	679	676	572	657	652	636	**642**	**36.2**
		Total	1845	1808	1813	1736	1856	1868	1779	1837	1815	1818	**1818**	**38.6**
	WB	Left 2	163	176	172	172	170	169	159	182	164	184	**171**	**8**
		Through	617	584	563	619	613	580	606	614	610	623	**603**	**20.1**
		Right 2	67	69	75	71	70	83	90	77	66	58	**73**	**9.1**
		Total	847	829	810	862	853	832	855	873	840	865	**847**	**19.1**
	Total		3836	3822	3830	3726	3929	3887	3845	3895	3872	3887	**3853**	**56**
N. McCarran Boulevard and Fourth Street	NB	Left 2	46	56	44	57	50	59	44	62	48	63	**53**	**7.4**
		Through	111	116	98	87	90	96	103	88	107	110	**101**	**10.4**
		Right 2	90	115	112	127	120	117	113	113	107	86	**110**	**12.8**
		Total	247	287	254	271	260	272	260	263	262	259	**264**	**11**
	EB	Left 2	21	22	22	23	20	23	13	22	19	18	**20**	**3.1**
		Through	413	420	400	390	442	418	429	433	434	447	**423**	**18.1**
		Right 2	13	15	14	12	12	10	8	10	5	13	**11**	**3**
		Total	447	457	436	425	474	451	450	465	458	478	**454**	**16.2**
	SB	Left 2	24	24	16	15	22	18	21	20	12	21	**19**	**4**
		Through	11	15	19	18	14	21	15	18	18	17	**17**	**2.9**
		Right 2	13	9	9	18	11	15	13	13	15	14	**13**	**2.8**
		Total	48	48	44	51	47	54	49	51	45	52	**49**	**3.1**
	WB	Left 2	32	30	30	30	26	22	30	34	29	31	**29**	**3.3**
		Through	771	752	755	775	790	773	798	804	787	789	**779**	**17.3**
		Right 2	21	24	38	18	26	33	25	16	25	22	**25**	**6.6**
		Total	824	806	823	823	842	828	853	854	841	842	**834**	**15.3**
	Total		1566	1598	1557	1570	1623	1605	1612	1633	1606	1631	**1600**	**27.3**
Pyramid Way and Queen Way	NEB	Left 2	7	13	21	12	20	2	12	18	24	13	**14**	**6.7**
		Through	638	664	694	642	679	696	694	651	655	653	**667**	**22.4**
		Right 2	15	10	12	11	7	11	13	10	13	14	**12**	**2.3**
		Total	660	687	727	665	706	709	719	679	692	680	**692**	**22.4**
	SEB	Left 2	337	286	360	317	303	327	343	357	374	337	**334**	**26.9**
		Through	38	33	33	25	29	43	33	30	44	49	**36**	**7.6**
		Right 2	12	11	8	14	15	17	14	18	17	12	**14**	**3.1**
		Total	387	330	401	356	347	387	390	405	435	398	**384**	**31**
	SWB	Left 2	101	96	102	96	88	88	90	95	88	80	**92**	**6.8**
		Through	1803	1777	1768	1676	1775	1781	1750	1764	1735	1762	**1759**	**34.4**
		Right 2	204	196	153	194	167	178	180	150	194	161	**178**	**19.2**
		Total	2108	2069	2023	1966	2030	2047	2020	2009	2017	2003	**2029**	**38.7**
	WB	Left 1	46	46	61	53	57	62	54	67	54	58	**56**	**6.7**
		Right 1	26	26	21	21	24	16	21	14	12	19	**20**	**4.8**
		Right 3	89	74	70	74	79	72	76	76	87	72	**77**	**6.4**
		Total	161	146	152	148	160	150	151	157	153	149	**153**	**5.1**
	Total		3316	3232	3303	3135	3243	3293	3280	3250	3297	3230	**3258**	**53.2**
Pyramid Way and Roberta Lane	NB	Left 2	113	102	97	99	93	97	107	98	99	102	**101**	**5.7**
		Through	383	411	412	382	410	416	414	408	412	395	**404**	**12.8**
		Total	496	513	509	481	503	513	521	506	511	497	**505**	**11.4**
	EB	Left 2	82	91	81	76	89	84	79	82	89	86	**84**	**4.8**
		Right 2	135	130	131	145	124	128	136	135	134	133	**133**	**5.6**
		Total	217	221	212	221	213	212	215	217	223	219	**217**	**4**
	SB	Through	1296	1275	1275	1234	1272	1291	1283	1270	1263	1308	**1277**	**20.2**
		Right 2	70	91	81	87	91	83	91	96	93	63	**85**	**10.7**
		Total	1366	1366	1356	1321	1363	1374	1374	1366	1356	1371	**1361**	**15.5**
	Total		2079	2100	2077	2023	2079	2099	2110	2089	2090	2087	**2083**	**23.7**
Pyramid Way and York Way	NB	Left 2	12	7	9	3	10	7	8	4	6	9	**8**	**2.7**
		Through	474	479	477	453	468	486	489	482	482	465	**476**	**10.9**
		Right 2	50	55	46	64	39	43	52	57	46	53	**51**	**7.3**
		Total	536	541	532	520	517	536	549	543	534	527	**534**	**10**
	EB	Left 2	11	14	16	9	13	10	13	11	16	17	**13**	**2.7**
		Through	14	16	18	22	14	17	11	24	22	12	**17**	**4.5**
		Right 2	14	16	8	16	17	19	15	10	8	13	**14**	**3.8**
		Total	39	46	42	47	44	46	39	45	46	42	**44**	**3**
	SB	Left 2	9	19	19	19	14	17	14	14	18	13	**16**	**3.3**
		Through	1395	1379	1370	1345	1349	1381	1383	1371	1353	1404	**1373**	**19.5**
		Right 2	27	22	18	22	19	29	35	23	25	33	**25**	**5.7**
		Total	1431	1420	1407	1386	1382	1427	1432	1408	1396	1450	**1414**	**21.9**
	WB	Left 2	130	140	130	140	134	136	126	138	146	140	**136**	**6**
		Through	40	35	42	41	31	39	47	35	31	36	**38**	**5.1**
		Right 2	11	19	17	17	20	16	18	14	13	15	**16**	**2.8**
		Total	181	194	189	198	185	191	191	187	190	191	**190**	**4.7**
	Total		2187	2201	2170	2151	2128	2200	2211	2183	2166	2210	**2181**	**27.1**
NETWORK TOTAL			**14928**	**14849**	**14848**	**14482**	**14992**	**15031**	**14970**	**15032**	**15003**	**14998**	**14913**	**165.7**

2030 PM No Build Intersection Volume, Delay and LOS

Intersection	Approach	Movement	Run 1		Run 2		Run 3		Run 4		Run 5		Run 6		Run 7		Run 8		Run 9		Run 10		Average(s)	LOS
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume		
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	243.4	124	189.8	125	40.7	152	63	135	60.6	159	83.9	127	37.1	165	53.1	148	46	175	107.5	126	86.7	F
		Through	0	0	0	0	0	0	47.6	1	0	0	13.4	1	0	0	12	1	0	0	0	0	24.3	C
		Right 2	289.7	365	259.4	345	18.1	389	51.7	382	68.9	364	91.8	386	28.1	411	52.5	389	43.4	383	128.3	382	100.1	F
		Total	278	489	240.9	470	24.4	541	54.6	518	66.4	523	89.7	514	30.7	576	52.6	538	44.2	558	123.1	508	81.2	F
	EB	Left 2	79.1	7	114.8	4	44.1	4	67.2	9	78.7	8	93.4	7	49.2	5	93.4	4	76.6	5	79	6	77.2	E
		Through	74.5	1141	117.7	1087	18.6	1224	27.3	1153	51.7	1167	38	1146	28.4	1135	35.8	1177	23.9	1193	97.3	1119	50.5	D
		Right 2	28.4	196	65	181	5.8	199	6.9	210	22.7	190	12.2	198	8	201	12.9	174	7.9	207	52.1	170	21.3	C
		Total	67.8	1344	110.2	1272	16.9	1427	24.4	1372	47.8	1365	34.5	1351	25.4	1341	33	1355	21.7	1405	91.3	1295	39.5	D
	SB	Left 2	0	0	7.8	1	7.4	2	27	4	12.3	2	46.2	2	0	1	1.4	2	0	2	44.6	4	21.3	C
		Through	15	2	29.8	2	40.5	2	0	0	37.2	3	24	3	0	3	36.5	2	0.6	2	15	2	21.8	C
		Right 2	7.7	6	4.9	4	8	5	3.2	3	10.2	4	4.3	2	4.1	3	5.4	2	3	3	7.3	3	6.3	A
		Total	9.5	8	12.4	7	15.1	9	16.8	7	19.7	9	24.7	7	1.8	7	14.4	6	1.5	7	25.6	9	12.5	B
	WB	Left 2	78.6	49	79.5	66	66.5	54	78.4	66	97.8	63	92.4	64	80.9	71	100.4	66	107.3	60	102.5	66	88.8	F
		Through	16.1	876	16.1	844	10.1	865	14.1	833	13.7	861	11	864	11.7	830	12.3	866	12.4	838	17.4	839	13.5	B
		Right 2	6.5	7	13.6	3	5.4	4	20	5	2.7	1	5.4	2	0	0	6	4	14	3	14.8	6	10.8	B
		Total	19.3	932	20.7	913	13.4	923	18.8	904	19.4	925	16.6	930	17.2	901	18.5	936	18.7	901	23.5	911	18.1	B
	Total		88.4	2773	102.3	2662	17.2	2900	28.2	2801	41.8	2822	38.7	2802	23.8	2825	31.9	2835	25.1	2871	74.3	2723	46.6	D
N. McCarran Boulevard and Pyramid Way	NB	Left 2	85.2	106	93.3	90	78.8	93	73	112	72.6	113	96	104	83.3	111	81.7	105	80.8	91	79	100	82.1	F
		Through	59.9	957	60.7	968	64	973	57.5	973	60.3	913	62.1	1016	63.7	961	62	944	66	989	61.3	926	61.8	E
		Right 2	29.4	54	26.8	64	38.6	53	34.4	43	31.7	62	34.8	48	35.4	62	22.7	54	39.8	52	25.7	61	31.7	C
		Total	60.8	1117	61.4	1122	64	1119	58.2	1128	59.9	1088	64	1168	64.1	1134	62	1103	66	1132	60.9	1087	61.4	E
	EB	Left 2	254.1	968	279.8	908	190.2	989	217.9	919	247.8	951	227.7	953	224.9	983	197.9	943	159.2	965	232.2	950	222.8	F
		Through	125.5	592	136.6	562	89.1	629	104.5	639	119.3	591	106.2	564	106.1	597	91	630	76.4	601	106	599	105.7	F
		Right 2	103.3	79	112.3	74	53.5	83	68.8	91	108.6	92	87.5	90	85.5	83	60.4	87	38.1	86	87.4	74	80	F
		Total	200.4	1639	219.6	1544	146.1	1701	165.7	1649	193.5	1634	177.2	1607	175.3	1663	150.1	1660	122.8	1652	179	1623	157.5	F
	SB	Left 2	107.8	154	95.7	164	121.2	135	95.5	152	134.7	158	106.3	145	109.7	151	104	164	102.7	148	104	167	108	F
		Through	48.9	513	41.6	536	53.3	499	42.1	489	45.4	499	50.3	497	49.2	541	49.5	500	47.5	503	46	500	47.4	D
		Right 2	23.5	580	17.5	549	28.7	585	17	570	18.3	580	23.2	563	22.6	525	25.9	588	17.4	568	18	584	21.2	C
		Total	44.4	1247	38.1	1249	49	1219	37	1211	44.1	1237	44.4	1205	45.2	1217	45.6	1252	40.2	1219	40.7	1251	41.8	D
	WB	Left 2	264.1	96	271.2	94	262.2	89	272	91	240.8	101	274	75	267.9	89	270.4	91	269.9	97	253.9	108	264.1	F
		Through	279.7	391	283.5	412	278.9	394	277	396	266.7	390	296.7	398	280.8	420	273.9	396	273.8	397	254.9	389	276.7	F
		Right 2	291.2	344	280.2	334	283.8	352	304.3	322	291.5	358	311.1	323	294.7	332	316.8	316	293.6	329	280.1	342	294.4	F
		Total	282.7	831	280.8	840	279.2	835	287.3	809	274.1	849	300.4	796	284.9	841	290.4	803	281.3	823	265	839	263.5	F
	Total		142	4834	145.4	4755	125.8	4874	128.4	4797	139.1	4808	136.5	4776	135.7	4855	126.2	4818	115.6	4826	131.2	4800	132.6	F
N. McCarran Boulevard and Fourth Street	NB	Left 2	54.5	27	56	32	44	19	59.1	32	53.3	33	65	32	59.1	30	58.6	35	55.3	28	51.9	38	56.1	E
		Through	52.1	130	45.1	140	51.9	121	48.3	112	49	107	53.3	123	52.1	117	49.4	114	45.5	127	51.3	133	49.8	D
		Right 2	33.2	89	38.9	114	33.1	113	35.5	127	32.2	120	35.2	117	39.7	112	36	113	33.8	109	38.7	85	35.6	D
		Total	45.5	246	43.8	286	42.9	253	43.6	271	41.8	260	46.9	272	47.5	259	44.8	262	41.7	264	47.2	256	44.6	D
	EB	Left 2	58.2	121	53	98	56.4	112	67.5	106	54.1	101	62.6	92	53.3	95	63.2	106	61.9	98	60.4	94	59.1	E
		Through	9.2	648	9.7	664	8.4	676	11.9	706	10.5	689	11.6	653	9.4	686	11.6	722	10.3	674	10.9	700	10.4	B
		Right 2	5.5	33	8.7	27	4.4	34	9.1	22	3.8	23	13.7	27	9	23	8.5	20	9.3	28	10.9	27	8.2	A
		Total	16.4	802	15	789	14.8	822	18.9	834	15.7	813	17.8	772	14.6	804	18	848	16.6	800	16.6	821	16.1	B
	SB	Left 2	36.6	22	62.6	26	45.7	15	56.9	25	60.6	16	51.7	26	57	26	49.8	23	56.3	20	53.2	28	53.3	D
		Through	45.6	41	45.4	46	47.1	50	47.9	35	61	53	50.1	43	46.3	48	39	51	35.8	38	51.5	46	47.3	D
		Right 2	18.1	69	14.4	56	12.7	56	18.3	71	14.2	57	18.2	71	14.8	52	17.2	54	21.1	68	15.3	60	16.6	B
		Total	29.7	132	35.3	128	31	121	33.6	131	39.8	126	34.2	140	35.5	126	31.7	128	31.1	126	35.6	134	32.7	C
	WB	Left 2	227.9	11	189.2	10	197	11	210.1	7	189.6	11	197.1	8	145.1	10	213.6	13	221.3	11	250.5	9	204.1	F
		Through	240.1	739	203.6	762	224.2	771	234.7	714	210.3	765	234.4	697	217.7	751	234.4	723	234.2	729	198.4	762	222.9	F
		Right 2	210.6	77	180.6	72	201.1	90	218.1	72	208.9	87	240.6	74	191.9	83	208.6	68	218.9	70	193.6	89	206.7	F
		Total	237.2	827	201.5	844	221.5	872	233	793	209.9	863	234.6	779	214.3	844	231.9	804	232.7	810	198.4	860	175.3	F
	Total		111.8	2007	97.2	2047	106.3	2068	106.8	2029	101.7	2062	109	1963	103	2033	106.5	2042	108.3	2000	97.1	2071	104.7	F
Pyramid Way and Queen Way	NEB	Left 2	102	24	111.3	25	98.6	31	109.3	28	108	21	112.2	28	111.7	26	92.2	21	134.5	28	95.2	22	108.1	F
		Through	35.3	2178	35	2121	36.3	2217	33.7	2137	34.5	2147	34	2175	35.7	2203	32.4	2133	34.2	2186	33.1	2116	34.4	C
		Right 2	31.9	67	31.2	61	38.9	57	39.6	59	39.5	55	36.3	83	35.9	59	31.2	59	30.7	60	36.3	72	35.1	D
		Total	35.9	2269	35.8	2207	37.2	2305	34.8	2224	35.3	2223	35	2286	36.6	2288	32.9	2213	35.3	2274	33.8	2210	35.2	D
	SEB	Left 2	293	314	298.9	313	278.7	327	321.3	303	290.1	328	269.5	335	286	338	282.4	317	285.1	328	292.5	323	289.4	F
		Through	378.7	11	400.5	9	301.7	9	424.8	9	368.2	10	340	16	378.4	13	344.7	15	326.7	10	375.8	12	362.2	F
		Right 2	210.6	19	173	13	169.3	18	245.7	10	188.5	15	161.5	22	200	13	214.3	12	195	18	200.2	15	192.4	F
		Total	291.2	344	296.7	335	273.7	354	321.8	322	288	353	266.2	373	286.2	364	282.7	344	281.7	356	291.4	350	261.3	F
	SWB	Left 2	114.4	140	101.5	138	118.9	147	100.5	137	101.8	127	183.9	134	94.5	131	87	111	102	121	102.5	127	111.4	F
		Through	14.5	1186	15.3	1191	16.2	1182	14.8	1173	13.5	1182	16.8	1177	17.3	1205	13.2	1199	15.3	1165	14	1206	15.1	B
		Right 2	9.1	417	9.6	441	9.6	411	10.4	403	9	404	11.1	413	12	404	9.3	394	10	426	8.9	419	9.9	A
		Total	21.2	1743	20.6	1770	23.3	1740	20.6	1713	19	1713	28.4	1724	21.9	1740	17.1	1704	20.1	1712	19.2	1752	21.2	C
	WB	Left 2	80.7	32	82.3	32	74.2	21	57.5	23	74.8	30	60.9	28	65.3	26	74.9	29	55.8	14	72	26	71.2	E
		Through	71.2	27	69.5	24	85.1	25	49.6	26	57.3	24	58	17	54.7	20	45.7	21	48.9	16	56.3	19	60.6	E
		Right 2	18	213	17	185	12.1	211	8.7	198	13.7	207	11.3	201	11.3	202	13.6	203	9.2	218	10.3	199	12.5	B
		Total	30.7	272	30.9	241	24.3	257	17.5	247	24.7	261	20.2	246	20.5	248	23.3	253	14.4	248	20.5	244	22	C
	Total		49	4628	48.8	4553	49.3	4656	49	4506	48.2	4550	50.4	4629	49.8	4640	45.4	4514	47.6	4590	47.3	4556	48.5	D
Pyramid Way and Roberta Lane	NB	Left 2	9.9	123	7.8	113	8.9	118	10.7	113	11.3	133	10.3	99	10.8	104	10.3	120	10.2	126	8.2	144	9.8	A
		Through	5.9	927	5.7	922	6.4	932	5.6	947	7.8	926	6.3	992	8.9	970	6	932	11.4	967	6.2	904	7	A
		Total	6.4	1050	5.9	1035	6.7	1050	6.1	1060	8.2	1059	6.7	1091	9.1	1074	6.5	1052	11.3	1093	6.5	1048	7.1	A
	EB	Left 2	81.5	188	90.1	187	79	184	80.3	173	78.6	181	80.7	163	73.8	187	78.7	164	80.7	179	80.1	173	80.4	F
		Right 2	22.4	93	15.7	93	11.6	94	16.8	103	12.6	102	9.6	108	16	94	13.5	117	13.1	105	23	104	15.3	B
		Total	61.9	281	65.4	280	56.2	278	56.6	276	54.8	283	52.4	271	54.5	281	51.6	281	55.7	284	58.7	277	56.1	E
	SB	Through	12.6	655	11.4	674	11.2	649	11.1	643	13.1	658	9.8	633	13.3	668	12.4	658	13.2	647	11	659	11.9	B
		Right 2	9.4	35	12.8	30	11.8	23	8.8	34	12.1	30	10.5	29	14.2	39	7.9	30	14.4	31	5.4	25	10.9	B
		Total	12.4	690	11.5	704	11.2	672	11	677	13.1	688	9.8	662	13.3	707	12.2	688	13.3	678	10.8	684	11.8	B
	Total		16.2	2021	16.1	2019	15.1	2000	14.7	2013	16.4	2030	13.8	2024	16.7	2062	14.7	2021	18.1	2055	15.2	2009	15.7	B
Pyramid Way and York Way	NB	Left 2	13.7	14	7.1	12	7.4	9	14.2	15	12	12	13.9	15	10.6	13	8.5	18	11.2	12	18.2	11	11.7	B
		Through	11.6	943	9.7	946	9.9	942	10	959	10.7	959	10	977	10.5	981	10.7	957	9.9	990	11	954	10.4	B
		Right 2	10.8	51	9.3	45	8.4	50	9.7	44	9.9	40	12.7	46	9.6	48	9.8	45	7.4	39	9.4	40	9.8	A
		Total	11.6	1008	9.7	1003	9.8	1001	10	1018	10.7	1011	10.2	1038	10.5	1042	10.6	1020	9.8	1041	11	1005	10.3	B
	EB	Left 2	44.1	60	44	58	40.6	64	46	58	44.6	66	44.6	63	45.6	64	47.1	67	45.5	69	46.6	57	44.9	D
		Through	47.7	116	50.9	113	41.9	109	47.7	107	42.6	107	50.5	111	44.2	110	47.1	110	51.9	103	49.3	122	47.4	D
		Right 2	36.7	23	34.6	33	32.5	28	38	31	29	29	41.9	30	34.4	34	31	30	36.8	32	46.3	26	36	D
		Total	45.3	199	46.3	204	40.2	201	45.7	196	41.3	202	47.4	204	43	208	44.8	207	47.4	204	48.2	205	44.6	D
	SB	Left 2	13.7	38	13.4	32	13.8	34	11.5	43	12.1	40	11.1	40	12.7	45	13.1	52	12.3	49	18.2	46	13.2	B
		Through	11.3	658	7.4	672	12.1	654	10.1	652	10.4	664	9	646	11	674	10.1	661	11.6	654	12.9	675	10.6	B
		Right 2	12.6	57	7.1	55	14.8	56	8.4	56	10.9	54	10.7	52	10.7	53	11.5	62	11.4	50	9.7	43	10.8	B
		Total	11.5	753	7.6	759	12.4	744	10.1	751	10.5	758	9.2	738	11.1	772	10.4	775	11.6	753	13	764	10.7	B
	WB	Left 2	20.3	60	17.6	55	13.2	67	20.6	56	14	59	12.9	53	22.2	57	12.8	62	13.7	67	15.3	58	16.2	B
		Through	40.4	53	40.9	61	38	58	37.4	58	40.8	55	33.2	62	43.8	77	44.3	65	35.1	56	42	55	39.7	D
		Right 2	14.3	47	11.7	38	15.4	40	21.2	39	19.5	42	11	44	17.6	30	16.3	37	15.1	38	19.6	41	16.1	B
		Total	25.2	160	25.4	154	22.5	165	27.1	153	24.9	156	20.3	159	31.5	164	26.1	164	21.5	161	26	154	24.7	C
	Total		15.8	2120	13.6	2120	14.6	2111	14.6	2118	14.6	2127	14.2	2139	15.4	2186	15	2166	14.9	2159	16.4	2128	14.9	B
NETWORK TOTAL			78.8	18383	79.7	18156	63.1	18609	65.3	18264	69.6	18399	69.1	18333	66.4	18601	64.3	18396	61.3	18501	71.9	18287	68.9	E

2030 PM No Build Intersection Queue Lengths

Intersection	Approach	Movement	95% Queues per Run										Max	95%	Median	Average	Standard Deviation
			1	2	3	4	5	6	7	8	9	10					
			42	47	52	57	62	67	72	77	82	87					
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	116.9	150.5	105.8	1119.6	104.4	115.3	108.5	111.4	145.1	466.1	1125.8	748.6	28.2	113.8	249.4
		Through	116.9	150.5	105.8	1119.6	104.4	115.3	108.5	111.4	145.1	466.1	1125.8	748.6	28.2	113.8	249.4
		Right 2	153.8	187.5	142.8	1156.5	141.3	152.2	145.4	148.3	182.1	503.1	1162.7	785.5	64.9	138.6	255.5
	EB	Left 2	16.7	16.1	16.1	19	18.9	19.4	16.4	16.4	17.5	16.5	65.5	17	0	1.6	5.9
		Through	198.2	204.6	202.4	1018.1	215.6	213.5	209.4	224.7	221.4	1018	1052.1	1014.7	37.8	154.8	289.4
		Right 2	0	0	0	0	0	0	0	0	0	0	83	0	0	0	1.4
	SB	Left 2	0	0	0	0	0	0	0	0	0	0	38.8	0	0	0.4	2.8
		Through	0	0	0	0	0	0	0	0	0	0	38.8	0	0	0.4	2.8
		Right 2	0	0	0	0	0	0	0	0	0	0	52.8	0	0	0.2	2.3
	WB	Left 2	57.5	87.5	80.4	81.1	83.1	102.4	65.8	81.8	64.1	123.3	214.5	83.7	17.2	23.9	28.7
		Through	153.5	127.1	147.2	145.9	132.2	131.3	107.6	129	121.5	170.4	390.9	139.5	0	26.8	50.6
		Right 2	185.6	159.2	179.2	178	164.2	163.4	139.7	161	153.6	202.4	423	171.5	0	34.1	63.2
N. McCarran Boulevard and Pyramid Way	NB	Left 2	133.9	168.6	147.1	106.3	140.8	148.1	141.8	123.9	127.9	124.8	277.8	141.6	37.1	46.2	48.3
		Through	488.9	531.2	524.9	654	601.5	556.3	585.7	549.5	584.5	535.4	676.7	637.1	234.6	247.1	200.8
		Right 2	0	0	0	641.6	0	0	0	0	0	0	651.3	416	0	34.1	139.1
	EB	Left 2	2526.9	2510.8	1960.4	2643	1447.3	2307.1	1879.7	2114.4	2530.3	2620.9	2670.2	2625.8	1051.2	1207.2	846.1
		Through	218.5	243.5	251.2	2640.9	253.5	232.1	241	231.8	219.1	234.2	2668.1	2610.6	43.5	212.2	583.5
		Right 2	19	0	18.1	2640.7	20.5	20.2	0	20.9	18.4	0	2667.9	2612.4	0	197.3	666.4
	SB	Left 2	197.9	225.9	141.5	169.6	328.1	219	192.9	442.9	191.8	214.7	544.4	226.2	62.3	82.1	83.7
		Through	430.8	504.5	452.4	1803.5	546.7	565.5	540.9	579.2	433.1	536.9	1807.8	555.9	88.1	189.3	291.4
		Right 2	323.8	128.6	324.5	1786.9	217.5	323.8	307.6	371.7	278.6	287	1790.7	456.7	0	84.1	303.1
	WB	Left 2	1000.4	520.7	1025	846.2	1073.2	124.5	1067.7	1073.4	974.7	1073.4	1177.7	1051.3	64.8	294.4	400.6
		Through	1077.9	1066.2	1069.7	1072.5	1072.2	1071	1071.4	1084.5	1068.6	1072.5	1176.7	1072.3	909.5	825.8	246.4
		Right 2	1081.3	1069.6	1073.2	1076	1075.7	1074.4	1074.9	1088	1072.1	1075.9	1180.1	1075.7	913	829.2	246.5
N. McCarran Boulevard and Fourth Street	NB	Left 2	126.8	146.7	138	104.3	127.2	151.8	127.5	132.8	145.9	146.7	325.1	135.3	17.8	36.3	47.9
		Through	126.8	146.7	138	104.3	127.2	151.8	127.5	132.8	145.9	146.7	325.1	135.3	17.8	36.3	47.9
		Right 2	147.8	167.6	146	125.3	148.2	172.8	148.5	148.6	166.9	157.1	346	152.1	0	42.6	56.8
	EB	Left 2	101.6	88.3	82.7	39.3	100.9	83.2	83	84.3	86	82.3	209	84.1	0	20.6	30.1
		Through	147.8	69.2	63.3	39.6	182.9	81	122.3	131.5	83.6	38.5	385.1	88.4	0	13.9	41.7
		Right 2	174.8	96.1	90.2	66.5	209.8	107.9	149.2	158.4	110.5	65.4	412	115.3	0	15.8	49.1
	SB	Left 2	40.9	39.6	42.3	41.1	42.3	41.3	39.8	56.4	42.6	43	148.2	42	0	9.7	17.3
		Through	40.9	39.6	42.3	41.1	42.3	41.3	39.8	56.4	42.6	43	148.2	42	0	9.7	17.3
		Right 2	57.3	57.4	60.1	58.9	58.1	59.1	57.7	74.2	60.5	60.8	166	59.3	0	9.7	22.9
	WB	Left 2	19.6	17.1	17.2	17	17.9	17.5	18.6	18.5	18.7	18.4	66	17.6	0	1.9	6
		Through	893.1	891.4	890.9	882.9	891.3	892.1	890.6	899.1	891	890.8	938.9	891.6	688.5	538.9	360.6
		Right 2	918.6	916.8	916.3	908.3	916.8	917.6	916.1	924.5	916.4	916.2	964.3	917	713.9	560.5	366.3
Pyramid Way and Queen Way	NEB	Left 2	42.1	43	60.5	41.5	38.6	56.4	40.3	39.1	63.2	44.4	125.9	43	0	12.4	17.9
		Through	1027	1110.2	1201.2	548.7	1101.2	1208.1	1072	1043.3	1131.3	1088.4	1822	1088.5	58.9	261.7	361.3
		Right 2	27.9	0	0	0	0	0	0	27.9	0	0	77.4	0	0	1	6.2
	SEB	Left 2	502.2	501.4	500.4	500.3	499	501.2	499.1	500	501.8	497.8	511.3	500.3	488.2	464.5	84.1
		Through	502.2	501.4	500.4	500.3	499	501.2	499.1	500	501.8	497.8	511.3	500.3	488.2	464.5	84.1
		Right 2	525.4	524.6	523.6	523.5	522.2	524.4	522.3	523.2	525	521	534.5	523.5	511.4	487.5	85.1
	SWB	Left 2	208.7	217.4	293.1	224.6	312.9	490.4	201.4	145.1	241.8	191.2	804.8	290.2	83.7	102.6	97.8
		Through	227.5	255.8	223	3260.3	214.1	432.3	301.7	239.5	288.3	220.2	4365.1	324.4	0	97.3	369.8
		Right 2	21.4	0	0	0	0	28.1	25.3	0	0	31.9	218.9	0	0	2.4	13.2
	WB	Left 2	141.4	182.9	111	104.4	123	122.4	62.2	177.3	52.1	58.8	327.1	102.5	0	22.4	42.3
		Through	141.4	182.9	111	104.4	123	122.4	62.2	177.3	52.1	58.8	327.1	102.5	0	22.4	42.3
		Right 2	141.1	182.5	110.6	104	122.7	122	61.9	176.9	51.7	49.3	326.8	102.1	0	19.5	42.9
Pyramid Way and Roberta Lane	NB	Left 2	18.9	15.4	17.7	13.8	18.5	16.3	17.7	17.1	17.4	19	118.8	17.7	0	2.1	9.2
		Through	98.7	123.1	80.6	681	123.6	119	122.8	110.9	151.7	132.1	683.9	241.3	0	42	133.5
	EB	Left 2	213.4	327.7	217.1	900.8	196.3	171.1	192.4	184.3	223.1	213.1	904.1	307	78.4	109.7	152.2
		Right 2	213.9	328.2	217.6	901.3	196.8	171.6	192.9	184.8	223.6	213.6	904.6	307.5	78.9	109.1	153
	SB	Through	214.6	295.5	83.5	48.8	146.4	173.3	80.1	208.5	186.4	124.4	423.4	166.7	0	23.1	60.5
		Right 2	229.5	310.3	98.4	58.4	161.3	188.1	95	223.4	201.3	139.2	438.2	181.5	0	25	65.2
Pyramid Way and York Way	NB	Left 2	0	0	0	0	0	15.9	0	0	0	0	58.7	0	0	0.7	3.8
		Through	164.1	168.4	155.5	2861	163.2	161.1	173.1	155.7	175.1	154.1	3296.2	214.8	40.4	121.4	391.1
		Right 2	164.1	168.4	155.5	2861	163.2	161.1	173.1	155.7	175.1	154.1	3296.2	214.8	40.4	121.4	391.1
	EB	Left 2	45.7	55.1	57.8	100.2	58.2	57.3	59.1	62.5	55.9	59.8	166.2	61.1	0	10.2	22
		Through	45.7	55.1	57.8	100.2	58.2	57.3	59.1	62.5	55.9	59.8	166.2	61.1	0	10.2	22
		Right 2	0	0	0	36.2	0	0	0	0	0	0	102.2	0	0	1	6.9
	SB	Left 2	19.7	19	18.2	17.5	19	19.8	20.7	19.3	33	18.3	177.9	19	0	2.8	9.5
		Through	192.3	297	155.1	115.2	185	159.6	149.5	139.4	224.1	128.8	546.7	171.6	0	32	65.7
		Right 2	192.3	297	155.1	115.2	185	159.6	149.5	139.4	224.1	128.8	546.7	171.6	0	32	65.7
	WB	Left 2	0	0	0	27.7	0	0	0	0	0	0	123.1	0	0	0.5	6.3
		Through	19.6	38.1	17.6	80.1	19.9	20.1	19.5	38.7	17.1	18.6	175.6	37.1	0	4.2	15.1
		Right 2	0	0	0	27.7	0	0	0	0	0	0	123.1	0	0	0.5	6.3

2030 PM No Build Intersection 10-Run Average Volumes

Intersection	Approach	Movement	Run 1	2	3	4	5	6	7	8	9	10	10-Run	Standard Deviation
			42	47	52	57	62	67	72	77	82	87	Ave	
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	124	125	152	135	159	127	165	148	175	126	**144**	**18.7**
		Through	0	0	0	1	0	1	0	1	0	0	**0**	**0.5**
		Right 2	365	345	389	382	364	386	411	389	383	382	**380**	**17.9**
		Total	489	470	541	518	523	514	576	538	558	508	**524**	**31.4**
	EB	Left 2	7	4	4	9	8	7	5	4	5	6	**6**	**1.8**
		Through	1141	1087	1224	1153	1167	1146	1135	1177	1193	1119	**1154**	**38.6**
		Right 2	196	181	199	210	190	198	201	174	207	170	**193**	**13.6**
		Total	1344	1272	1427	1372	1365	1351	1341	1355	1405	1295	**1353**	**45.8**
	SB	Left 2	0	1	2	4	2	2	1	2	2	4	**2**	**1.2**
		Through	2	2	2	0	3	3	3	2	2	2	**2**	**0.9**
		Right 2	6	4	5	3	4	2	3	2	3	3	**4**	**1.3**
		Total	8	7	9	7	9	7	7	6	7	9	**8**	**1.1**
	WB	Left 2	49	66	54	66	63	64	71	66	60	66	**63**	**6.5**
		Through	876	844	865	833	861	864	830	866	838	839	**852**	**16.5**
		Right 2	7	3	4	5	1	2	0	4	3	6	**4**	**2.2**
		Total	932	913	923	904	925	930	901	936	901	911	**918**	**13.3**
	Total		2773	2662	2900	2801	2822	2802	2825	2835	2871	2723	**2801**	**69.2**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	106	90	93	112	113	104	111	105	91	100	**103**	**8.7**
		Through	957	968	973	973	913	1016	961	944	989	926	**962**	**29.8**
		Right 2	54	64	53	43	62	48	62	54	52	61	**55**	**6.8**
		Total	1117	1122	1119	1128	1088	1168	1134	1103	1132	1087	**1120**	**23.9**
	EB	Left 2	968	908	989	919	951	953	983	943	965	950	**953**	**25.5**
		Through	592	562	629	639	591	564	597	630	601	599	**600**	**26.2**
		Right 2	79	74	83	91	92	90	83	87	86	74	**84**	**6.6**
		Total	1639	1544	1701	1649	1634	1607	1663	1660	1652	1623	**1637**	**41.4**
	SB	Left 2	154	164	135	152	158	145	151	164	148	167	**154**	**9.9**
		Through	513	536	499	489	499	497	541	500	503	500	**508**	**17.3**
		Right 2	580	549	585	570	580	563	525	588	568	584	**569**	**19.6**
		Total	1247	1249	1219	1211	1237	1205	1217	1252	1219	1251	**1231**	**18.3**
	WB	Left 2	96	94	89	91	101	75	89	91	97	108	**93**	**8.7**
		Through	391	412	394	396	390	398	420	396	397	389	**398**	**10**
		Right 2	344	334	352	322	358	323	332	316	329	342	**335**	**13.6**
		Total	831	840	835	809	849	796	841	803	823	839	**827**	**18.1**
	Total		4834	4755	4874	4797	4808	4776	4855	4818	4826	4800	**4814**	**35.4**
N. McCarran Boulevard and Fourth Street	NB	Left 2	27	32	19	32	33	32	30	35	28	38	**31**	**5.2**
		Through	130	140	121	112	107	123	117	114	127	133	**122**	**10.3**
		Right 2	89	114	113	127	120	117	112	113	109	85	**110**	**13.1**
		Total	246	286	253	271	260	272	259	262	264	256	**263**	**11.2**
	EB	Left 2	121	98	112	106	101	92	95	106	98	94	**102**	**9.1**
		Through	648	664	676	706	689	653	686	722	674	700	**682**	**23.5**
		Right 2	33	27	34	22	23	27	23	20	28	27	**26**	**4.6**
		Total	802	789	822	834	813	772	804	848	800	821	**811**	**22.1**
	SB	Left 2	22	26	15	25	16	26	26	23	20	28	**23**	**4.4**
		Through	41	46	50	35	53	43	48	51	38	46	**45**	**5.8**
		Right 2	69	56	56	71	57	71	52	54	68	60	**61**	**7.5**
		Total	132	128	121	131	126	140	126	128	126	134	**129**	**5.3**
	WB	Left 2	11	10	11	7	11	8	10	13	11	9	**10**	**1.7**
		Through	739	762	771	714	765	697	751	723	729	762	**741**	**24.9**
		Right 2	77	72	90	72	87	74	83	68	70	89	**78**	**8.3**
		Total	827	844	872	793	863	779	844	804	810	860	**830**	**32**
	Total		2007	2047	2068	2029	2062	1963	2033	2042	2000	2071	**2032**	**34.1**
Pyramid Way and Queen Way	NEB	Left 2	24	25	31	28	21	28	26	21	28	22	**25**	**3.4**
		Through	2178	2121	2217	2137	2147	2175	2203	2133	2186	2116	**2161**	**35.3**
		Right 2	67	61	57	59	55	83	59	59	60	72	**63**	**8.5**
		Total	2269	2207	2305	2224	2223	2286	2288	2213	2274	2210	**2250**	**37.9**
	SEB	Left 2	314	313	327	303	328	335	338	317	328	323	**323**	**10.8**
		Through	11	9	9	9	10	16	13	15	10	12	**11**	**2.5**
		Right 2	19	13	18	10	15	22	13	12	18	15	**16**	**3.7**
		Total	344	335	354	322	353	373	364	344	356	350	**350**	**14.4**
	SWB	Left 2	140	138	147	137	127	134	131	111	121	127	**131**	**10.3**
		Through	1186	1191	1182	1173	1182	1177	1205	1199	1165	1206	**1187**	**13.6**
		Right 2	417	441	411	403	404	413	404	394	426	419	**413**	**13.5**
		Total	1743	1770	1740	1713	1713	1724	1740	1704	1712	1752	**1731**	**21.2**
	WB	Left 2	32	32	21	23	30	28	26	29	14	26	**26**	**5.6**
		Through	27	24	25	26	24	17	20	21	16	19	**22**	**3.8**
		Right 2	213	185	211	198	207	201	202	203	218	199	**204**	**9.3**
		Total	272	241	257	247	261	246	248	253	248	244	**252**	**9.3**
	Total		4628	4553	4656	4506	4550	4629	4640	4514	4590	4556	**4582**	**53.9**
Pyramid Way and Roberta Lane	NB	Left 2	123	113	118	113	133	99	104	120	126	144	**119**	**13.3**
		Through	927	922	932	947	926	992	970	932	967	904	**942**	**26.8**
		Total	1050	1035	1050	1060	1059	1091	1074	1052	1093	1048	**1061**	**19**
	EB	Left 2	188	187	184	173	181	163	187	164	179	173	**178**	**9.3**
		Right 2	93	93	94	103	102	108	94	117	105	104	**101**	**7.9**
		Total	281	280	278	276	283	271	281	281	284	277	**279**	**3.8**
	SB	Through	655	674	649	643	658	633	668	658	647	659	**654**	**12**
		Right 2	35	30	23	34	30	29	39	30	31	25	**31**	**4.6**
		Total	690	704	672	677	688	662	707	688	678	684	**685**	**13.7**
	Total		2021	2019	2000	2013	2030	2024	2062	2021	2055	2009	**2025**	**19.4**
Pyramid Way and York Way	NB	Left 2	14	12	9	15	12	15	13	18	12	11	**13**	**2.5**
		Through	943	946	942	959	959	977	981	957	990	954	**961**	**16.6**
		Right 2	51	45	50	44	40	46	48	45	39	40	**45**	**4.2**
		Total	1008	1003	1001	1018	1011	1038	1042	1020	1041	1005	**1019**	**16.1**
	EB	Left 2	60	58	64	58	66	63	64	67	69	57	**63**	**4.2**
		Through	116	113	109	107	107	111	110	110	103	122	**111**	**5.3**
		Right 2	23	33	28	31	29	30	34	30	32	26	**30**	**3.3**
		Total	199	204	201	196	202	204	208	207	204	205	**203**	**3.6**
	SB	Left 2	38	32	34	43	40	40	45	52	49	46	**42**	**6.3**
		Through	658	672	654	652	664	646	674	661	654	675	**661**	**10**
		Right 2	57	55	56	56	54	52	53	62	50	43	**54**	**5**
		Total	753	759	744	751	758	738	772	775	753	764	**757**	**11.5**
	WB	Left 2	60	55	67	56	59	53	57	62	67	58	**59**	**4.7**
		Through	53	61	58	58	55	62	77	65	56	55	**60**	**7**
		Right 2	47	38	40	39	42	44	30	37	38	41	**40**	**4.6**
		Total	160	154	165	153	156	159	164	164	161	154	**159**	**4.5**
	Total		2120	2120	2111	2118	2127	2139	2186	2166	2159	2128	**2137**	**24.8**
NETWORK TOTAL			**18383**	**18156**	**18609**	**18264**	**18399**	**18333**	**18601**	**18396**	**18501**	**18287**	**18393**	**145.1**

2030 AM Build (SB 1-RT Lane FREE) Intersection Volume, Delay and LOS

Intersection	Approach	Movement	Run 1		Run 2		Run 3		Run 4		Run 5		Run 6		Run 7		Run 8		Run 9		Run 10			
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Average(s)	LOS
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	55.2	50	52.1	62	62.1	67	56.7	58	60.4	58	54.9	61	58.4	67	54.8	63	63.8	61	53.5	56	57.3	E
		Through	17.4	1	0	0	57.2	1	0	0	0	0	19.1	2	0	0	23.3	1	52.2	2	0	0	34.4	C
		Right 2	5.7	91	5.9	80	5.6	70	5.7	74	5.4	83	5.2	72	5.8	82	6	74	5.3	74	5.7	78	5.6	A
		Total	23.2	142	26.1	142	33.4	138	28.1	132	28	141	27.9	135	29.5	149	28.4	138	32	137	25.7	134	27.9	C
	EB	Left 2	55.9	1	0	0	19.1	1	84.2	2	0	0	88.6	1	104.1	2	0	0	91.4	1	53.1	2	73.8	E
		Through	2.9	773	4.2	788	4.9	819	4.5	769	4.7	800	4.2	771	4.5	777	4	795	4.2	824	4.8	805	4.3	A
		Right 2	1.7	75	2	71	2	78	2.2	88	2.1	82	2.7	92	2	82	1.9	79	2	72	1.7	76	2.1	A
		Total	2.9	849	4	859	4.7	898	4.4	859	4.5	882	4.1	864	4.5	861	3.8	874	4.1	897	4.6	883	4.1	A
	SB	Left 2	0.2	1	53.5	4	91.7	2	57.4	2	9.4	2	41.5	2	91.1	1	28.5	3	65.6	4	63.2	2	51.3	D
		Through	97.4	2	0	0	94.7	3	52.1	1	51.7	1	51.5	2	67	2	62	2	63.1	1	37.7	3	65.9	E
		Right 2	35.4	2	4.8	1	0	0	0	0	12	2	0	0	15.6	1	0	0	0	0	0	0	19.2	B
		Total	53.2	5	43.8	5	93.5	5	55.6	3	18.9	5	46.5	4	60.2	4	41.9	5	65.1	5	47.9	5	53.3	D
	WB	Left 2	45.2	77	60.4	80	48.1	83	62.7	99	51.3	77	55.2	82	51.3	81	56.7	86	62.9	68	56.5	93	55.1	E
		Through	7.6	1511	7.6	1499	7.9	1431	11.3	1510	8.5	1514	8.5	1499	9.3	1515	7.2	1511	8.8	1447	8.4	1534	8.5	A
		Right 2	1.9	2	5.9	1	1.2	1	8.6	1	0	0	0.3	1	36.4	1	0	0	4.4	2	0	0	7.2	A
		Total	9.4	1590	10.3	1580	10.1	1515	14.5	1610	10.6	1591	10.9	1582	11.4	1597	9.9	1597	11.2	1517	11.1	1627	10.8	B
	Total		8.1	2586	9.1	2586	9.6	2556	11.9	2604	9.5	2619	9.6	2585	10.2	2611	8.9	2614	9.9	2556	9.7	2649	9.7	A
N. McCarran Boulevard and Pyramid Way	NB	Left 2	59	85	63.8	91	75.2	91	58.1	84	63.8	92	67.6	76	56.7	91	59	81	64.9	62	61.1	82	62.9	E
		Through	25.4	338	27.2	366	24.9	368	23.6	338	28.3	380	28.9	357	25.5	355	26.3	362	25.7	376	25.5	358	26.2	C
		Right 2	5.8	57	5.6	40	5	44	4.2	40	5.3	55	4.4	58	5.2	66	3.9	38	5.3	59	4.4	48	4.9	A
		Total	29	480	32.2	497	32.3	503	28.2	462	32.1	527	32	491	28.4	512	30	481	28.2	497	29.4	488	29.8	C
	EB	Left 2	48.1	414	50.4	424	50.3	446	47.2	400	49.1	457	48.5	467	50	449	46.4	434	50.7	468	50.7	459	49.2	D
		Through	41.7	355	42.8	346	47.4	321	50.8	354	43.4	338	45.8	296	46.7	347	42.4	365	42.9	355	47.5	361	45.1	D
		Right 2	27.5	93	31.5	109	34.3	111	32.4	100	32.3	88	24.2	93	28.5	96	31.3	96	27.8	93	30.3	93	30.1	C
		Total	43.2	862	45.1	879	47.2	878	47	854	45.2	883	44.9	856	46.4	892	43.1	895	45.4	916	47.4	913	45.4	D
	SB	Left 2	122.6	150	114.5	150	148	159	105.1	150	85.5	153	122.9	161	82.8	132	88.3	143	84.6	137	66.7	128	103.5	F
		Through	40.2	1543	40.8	1543	41.2	1572	37.4	1538	39.4	1517	37.6	1502	39.6	1553	40.2	1561	32.6	1557	37.5	1528	38.7	D
		Right 2	18.6	1117	19.4	1140	14.2	1075	19.5	1117	18.2	1137	15.3	1133	16.9	1144	18.6	1107	15.9	1083	19.1	1145	17.6	B
		Total	36	2810	36.1	2833	36.9	2806	33.9	2805	33.3	2807	33.5	2796	32.4	2829	34.1	2811	28.7	2777	31.3	2801	33	C
	WB	Left 2	55.2	132	50.4	147	51.5	145	59.8	143	52.5	144	56.1	149	49.8	137	58.6	145	52	139	54.2	154	54	D
		Through	59	639	56.1	597	54.8	584	56.5	641	56.4	625	54.5	615	54.4	615	58	629	54.7	623	54.3	640	55.9	E
		Right 2	11.1	79	12.5	95	13.5	108	11.7	91	13.9	95	13	97	12.4	114	11.6	102	12.9	85	11.9	87	12.5	B
		Total	54	850	50.2	839	48.9	837	52.4	875	51.1	864	50.1	861	48.1	866	52.7	876	50.1	847	50.1	881	50.6	D
	Total		39.6	5002	39.6	5048	40.2	5024	38.9	4996	38.3	5081	38.2	5004	37.1	5099	38.5	5063	35.3	5037	37.3	5083	38.3	D
N. McCarran Boulevard and Fourth Street	NB	Left 2	50.2	46	44.5	56	50.1	44	45.2	57	49.3	50	57.8	59	50.4	44	53.7	62	53.2	48	58.3	63	51.5	D
		Through	48.5	111	47.5	116	51.6	98	54.8	86	48.2	89	55.9	96	50.5	103	49.4	88	50.6	107	55.3	109	51.2	D
		Right 2	30.1	90	36.5	115	34.2	112	38.7	127	32.3	120	34.1	117	37.6	113	40.3	113	39.3	107	46.9	86	36.9	D
		Total	42.1	247	42.5	287	43.7	254	45.2	270	41	259	46.9	272	44.9	260	46.5	263	46.5	262	53.2	258	45.4	D
	EB	Left 2	90.6	25	98	20	84.2	25	93.3	20	81.2	23	96.2	19	106.1	14	87.2	20	94.3	16	86.4	14	91	F
		Through	2.5	524	2.8	496	2.2	488	3.6	512	1.7	516	3.6	494	3.4	520	2.9	511	3.5	526	3.4	512	3	A
		Right 2	2.2	14	1.4	15	2.5	14	2.8	11	0.6	11	4.4	11	2.3	12	2	12	1.2	11	4	12	2.3	A
		Total	6.4	563	6.3	531	6.1	527	6.9	543	5	550	7	524	6	546	6	543	6.1	553	5.6	538	6.1	A
	SB	Left 2	57.5	22	47.5	20	50.6	14	45.8	19	62.1	13	57.7	20	49.1	25	54.8	17	44.5	13	49.9	23	51.8	D
		Through	43.9	17	37.9	16	28.7	22	16.6	10	41	16	46.7	20	47.9	20	57.5	22	45.6	18	50.8	16	42.9	D
		Right 2	9.8	68	9.6	68	9.9	66	8.3	78	9.6	74	9.2	73	8.3	60	8.6	63	9.7	73	10	71	9.3	A
		Total	25	107	21.2	104	19.5	102	15.7	107	21.1	103	24.4	113	25.6	105	26.8	102	20.3	104	24.3	110	22.1	C
	WB	Left 2	49.9	30	66.9	31	51.3	32	57.1	32	65.8	26	59.3	24	57.4	27	51.2	31	60.1	30	51.5	29	56.9	E
		Through	6.8	730	6.4	704	6.8	721	7	730	6.4	746	6.9	731	6.4	757	6.6	757	6.6	746	7.2	750	6.7	A
		Right 2	3.7	21	3.3	24	4.9	33	4.8	18	6.3	29	4.2	29	4	25	6.1	18	3.9	25	4	21	4.5	A
		Total	8.4	781	8.8	759	8.5	786	9	780	8.3	801	8.4	784	8	809	8.3	806	8.5	801	8.7	800	8.2	A
	Total		13.7	1698	14.5	1681	13.8	1669	14.5	1700	13	1713	15.2	1693	14	1720	14.5	1714	14.2	1720	15.5	1706	14.3	B
Pyramid Way and Queen Way	NEB	Left 2	60.3	16	92.6	16	82.4	17	65.9	15	88.3	14	75.5	12	87	14	81.1	21	95.8	19	83.7	19	81.6	F
		Through	11.4	892	10.6	948	11.6	972	11.8	887	13.3	996	12	987	13.5	958	11.7	930	11.9	963	12.5	958	12.1	B
		Total	12.3	908	12	964	12.8	989	12.7	902	14.3	1010	12.8	999	14.6	972	13.2	951	13.5	982	13.9	977	13.8	B
	SEB	Left 2	70	23	50.6	28	46.9	28	54.5	29	47	28	54.5	29	53.7	24	61.2	26	72.3	27	51.1	23	55.9	E
		Right 2	5.4	18	4.7	10	5	14	5.5	15	4.1	13	3.4	12	5.8	18	4.8	12	5.2	11	4.4	21	4.9	A
		Total	41.6	41	38.5	38	32.9	42	37.8	44	33.4	41	39.5	41	33.2	42	43.4	38	52.9	38	28.8	44	37.7	D
	SWB	Through	20.5	2812	19.3	2805	18.9	2812	18.8	2789	16.5	2789	15.4	2783	19.5	2814	19.2	2812	18.3	2754	23.8	2808	19	B
		Right 2	20	58	20.8	43	19.4	47	22.6	58	19.2	39	15.8	44	22.9	56	17.9	38	19.3	51	24.9	50	20.5	C
		Total	20.5	2870	19.3	2848	18.9	2859	18.9	2847	16.5	2828	15.4	2827	19.6	2870	19.2	2850	18.3	2805	23.8	2858	18.8	B
	Total		18.8	3819	17.7	3850	17.5	3890	17.6	3793	16.1	3879	15	3867	18.5	3884	18	3839	17.4	3825	21.4	3879	17.8	B
Pyramid Way and Roberta Lane	NB	Left 2	9.1	99	10.4	100	9.1	94	8.1	93	9.7	77	9.4	103	11.4	93	10.2	109	11.8	108	9.6	106	9.9	A
		Through	3.8	396	2.9	415	3.4	418	3.7	387	3.4	433	3.8	407	4	432	3.4	402	3.1	411	3.4	399	3.5	A
		Total	4.9	495	4.4	515	4.4	512	4.6	480	4.4	510	4.9	510	5.3	525	4.9	511	4.9	519	4.7	505	4.7	A
	EB	Left 2	50.9	81	53.9	89	45.4	83	50.7	76	49.8	88	47	84	37.1	78	45.4	81	47.4	87	45.9	91	47.4	D
		Right 2	10.1	136	10.5	132	8.3	128	9.4	144	8	125	8.4	126	8.5	137	9.2	133	9.7	135	8.2	129	9.1	A
		Total	25.3	217	28	221	22.9	211	23.7	220	25.3	213	23.8	210	18.9	215	22.9	214	24.5	222	23.8	220	23.7	C
	SB	Through	11.6	1678	11.2	1685	11.9	1698	10.6	1688	11.4	1675	10.3	1617	10.7	1679	12.1	1714	10.7	1691	9.9	1710	11	B
		Right 2	11.8	86	13.1	103	12.6	87	13.3	100	10.1	98	13.7	98	14	106	12.8	115	11.3	99	12	77	12.5	B
		Total	11.6	1764	11.3	1788	11.9	1785	10.8	1788	11.3	1773	10.5	1715	10.9	1785	12.1	1829	10.7	1790	10	1787	11	B
	Total		11.5	2476	11.4	2524	11.3	2508	10.7	2488	11.1	2496	10.5	2435	10.4	2525	11.6	2554	10.7	2531	10.1	2512	10.9	B
Pyramid Way and York Way	NB	Left 2	12.1	12	7.2	7	9.8	10	9.5	3	8.6	10	24.3	7	14.3	8	9	6	6.5	6	5.9	9	10.8	B
		Through	3.8	474	3.6	479	4.7	482	4.4	455	4.3	476	3.7	482	4.1	493	4.2	488	4.1	490	3.8	473	4.1	A
		Right 2	3.5	49	2.9	57	4.5	44	2.5	63	5.1	43	2.4	47	3.1	52	2.7	56	2.5	46	3.9	53	3.2	A
		Total	4	535	3.6	543	4.8	536	4.2	521	4.4	529	3.9	536	4.2	553	4.1	550	4	542	3.8	535	4.1	A
	EB	Left 2	52.4	11	70.3	14	45.8	15	39.5	9	54.6	13	43.3	10	42	12	61.2	11	57.1	16	58.8	16	53.4	D
		Through	57.7	15	42	16	58	18	37.6	22	61.3	15	45.9	17	49.9	11	49.3	24	55.3	22	49.5	12	50.3	D
		Right 2	21.8	14	20.9	16	17.1	8	12.6	16	25	18	14.7	19	14.3	15	26.9	10	17.1	8	20	12	18.9	B
		Total	43.7	40	43.3	46	45.6	41	29.5	47	45.2	46	32.4	46	33.4	38	47.2	45	49.3	46	44.4	40	43.2	D
	SB	Left 2	2.5	12	3	22	4.6	19	3.5	24	6.4	8	2.1	18	2.9	19	3.6	15	2.5	16	2.8	12	3.3	A
		Through	2.1	1767	2.6	1777	3.9	1792	2.3	1774	3.7	1758	2.6	1716	3.2	1743	3.3	1782	2.8	1770	2.8	1801	2.9	A
		Right 2	3.6	35	3.3	24	5.4	29	1.4	27	2.8	27	3.3	32	3.9	31	2.1	28	2.1	27	2.7	31	3.1	A
		Total	2.1	1814	2.6	1823	3.9	1840	2.3	1825	3.7	1793	2.6	1766	3.2	1793	3.3	1825	2.8	1813	2.8	1844	2.9	A
	WB	Left 2	56.4	129	53.6	141	58.2	128	56	140	54.8	135	55.6	134	49.9	126	49.5	138	52.4	147	52.9	140	53.9	D
		Through	53.2	39	53.8	35	51.5	41	62.4	41	56.4	31	39.3	39	46.3	47	49.7	35	48.5	32	55.8	36	51.6	D
		Right 2	40.6	11	54.6	20	42.8	17	42	17	40.3	20	28.9	16	23	18	45.6	14	33.2	13	40.8	15	39.4	D
		Total	54.7	179	53.7	196	55.3	186	56.1	198	53.5	186	50	189	46.5	191	49.2	187	50.4	192	52.5	191	52.7	D
	Total		6.8	2568	7.4	2608	8.4	2603	7.3	2591	8.2	2554	6.9	2537	7.1	2575	7.5	2607	7.4	2593	7.3	2610	7.4	A
NETWORK TOTAL			19.8	18149	19.9	18297	20.2	18250	19.9	18172	19.2	18342	18.9	18121	19.3	18414	19.6	18391	18.6	18262	20	18439	19.6	B

2030 AM Build (SB 1-RT Lane FREE) Intersection Queue Lengths

Intersection	Approach	Movement	95% Queues per Run										Max	95%	Median	Average	Standard Deviation
			1	2	3	4	5	6	7	8	9	10					
			42	47	52	57	62	67	72	77	82	87					
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	59.5	69.4	70.2	63	62.8	65.8	77.8	61.8	80	58.9	141.4	64.2	16.3	18.8	23.6
		Through	59.5	69.4	70.2	63	62.8	65.8	77.8	61.8	80	58.9	141.4	64.2	16.3	18.8	23.6
		Right 2	53.8	63	64.5	57.3	57.1	60.1	72.1	56.1	74.3	53.3	135.7	58.5	0	11.9	22.6
	EB	Left 2	0	0	0	0	0	0	16.4	0	0	0	23.9	0	0	0.3	2.5
		Through	39.1	53.2	61.1	59.9	59.3	43.4	59.7	42.4	59.1	61.6	166.3	57.9	0	7.2	19
		Right 2	0	0	0	0	0	0	0	0	0	0	37.3	0	0	0	0.6
	SB	Left 2	16.1	0	16.9	0	0	0	16.9	18.4	17.9	0	52.3	16.6	0	1.2	5.1
		Through	16.1	0	16.9	0	0	0	16.9	18.4	17.9	0	52.3	16.6	0	1.2	5.1
		Right 2	0	0	0	0	0	0	0	0	0	0	59	0	0	0.3	3.7
	WB	Left 2	62.3	86.1	84.4	87.3	63.9	79.6	63.7	80.3	68.8	104.5	236.4	81.7	16.8	21.7	28.4
		Through	43	42.1	48.9	68.4	56.6	61.2	61.8	43.3	59.2	55.3	431.7	57.8	0	6.7	25.3
		Right 2	73.5	73.8	75.2	100.2	88.4	92.9	93.7	75	91.1	79.6	463.6	88.7	0	8.8	32.8
N. McCarran Boulevard and Pyramid Way	NB	Left 2	82.8	104.2	128	87.1	99.1	85.7	81.4	86.8	79.8	100.2	198.5	87	18.5	28.3	32.2
		Through	63.5	76.5	63.9	69.6	85.4	71.8	72.2	80.4	71	70.6	139.2	71.8	17	22.9	27
		Right 2	0	0	0	0	0	0	0	0	0	0	76.8	0	0	0.3	2.5
	EB	Left 2	120.5	126.2	132.4	110.7	125.2	134.1	128.5	125.9	140.4	125.2	213.4	127.5	42.3	51.8	43.2
		Through	145.8	142.7	181	170.2	160.7	133.2	160.2	149.9	144.2	150.8	253	152	41.2	54	53.8
		Right 2	119.2	116.2	154.4	143.6	134.1	106.7	133.7	123.3	117.6	124.2	226.5	125.4	0	35.5	46.2
	SB	Left 2	261.3	302	343.7	259.8	177.6	252.9	181.8	282.2	202	138.5	423.1	257.4	61.3	86.9	85.2
		Through	370.6	339.3	397.4	401.9	398.4	371.2	367	355.2	298.3	299.7	1113.2	362.7	44.1	107.9	135.2
		Right 2	0	0	0	205.9	0	0	0	161.4	0	0	1077.7	0	0	9.2	63.1
	WB	Left 2	77.5	86.3	81.2	80.6	83	86.4	64.6	85.6	88.4	84	147.5	83	19.7	28.4	27.1
		Through	255.6	235.7	226.4	253.9	254.6	238.7	222	265.5	254.8	252.4	488.1	248.5	102.6	103.3	84.7
		Right 2	0	0	0	0	0	0	0	0	0	0	51	0	0	0.1	1.1
N. McCarran Boulevard and Fourth Street	NB	Left 2	187	212.1	200.6	249.6	191.3	231.1	211.7	210.4	219	259.8	461.8	217.2	41.8	68.7	74.9
		Through	187	212.1	200.6	249.6	191.3	231.1	211.7	210.4	219	259.8	461.8	217.2	41.8	68.7	74.9
		Right 2	208	233.1	221.6	270.6	212.3	252.1	232.7	231.4	240	280.8	482.8	238.2	62.4	79.1	83.9
	EB	Left 2	60	44.5	41.4	20.1	41.4	37	39	31.3	42.1	36.9	125.7	40.4	0	9.1	14.7
		Through	0	0	0	0	0	16.6	18	16	18.6	0	232.8	0	0	1.9	11.1
		Right 2	0	0	0	0	0	0	0	0	0	0	258.5	0	0	1.8	14
	SB	Left 2	58	38.2	38.5	30	38.6	41	40.4	57.2	42.9	40.7	153.2	40.6	0	8.2	16.4
		Through	58	38.2	38.5	30	38.6	41	40.4	57.2	42.9	40.7	153.2	40.6	0	8.2	16.4
		Right 2	75.5	35.1	33.6	35	34.2	34.9	33.9	39.1	34	32.7	155.1	34.9	0	4.5	15.2
	WB	Left 2	41.1	43.3	41.4	40.7	43.1	40.9	39.5	20.7	36.5	39.9	106.5	40.2	0	8.8	14.6
		Through	83	67.1	69.4	81.4	76.3	82.6	79	80.7	79.5	83.5	230.4	80	0	11.9	27.9
		Right 2	101.3	85.4	87.8	99.8	94.7	101	97.3	99	97.8	101.8	248.8	98.3	0	13.3	33.9
Pyramid Way and Queen Way	NEB	Left 2	106.8	103.2	108.1	104.2	125.4	124	105.6	120	136.4	128.8	236.2	120.7	0	17	38
		Through	100.9	85.8	103.5	84.7	111.8	102.9	107.3	102.7	107.4	107.3	235.7	103.7	0	11	34
	SEB	Left 2	36.6	39.9	38.1	41.1	39.2	39.3	38.3	54.8	42.8	20.5	113	39.2	0	7.6	14.8
		Right 2	0	0	0	0	0	0	0	0	0	0	74.4	0	0	0.3	4.2
	SWB	Through	552.8	481.9	486.5	446.7	357.2	360.9	490.7	482.1	480.6	612.2	1015.8	479.2	0	102.5	170.5
		Right 2	552.8	481.9	486.5	446.7	357.2	360.9	490.7	482.1	480.6	612.2	1015.8	479.2	0	102.5	170.5
Pyramid Way and Roberta Lane	NB	Left 2	21.2	20	18.9	16.9	18.6	20.2	27.2	28.5	28.2	19.9	99.6	19.9	0	2.6	9.2
		Through	19.6	20.5	21.7	20.1	36.1	39.8	38.7	20.3	20.4	20	85.9	20.6	0	3.5	10.3
	EB	Left 2	84.9	83.9	65.7	78.3	87.5	66.9	63.1	63.5	84.8	83.7	152.8	82.3	16.8	22	27.4
		Right 2	105.5	106.1	87.8	100.5	109.7	86.9	85.2	85.6	107	105.9	175	104	0	27.1	37.5
	SB	Through	218.6	221.5	288.4	224.4	211	223.1	243.1	243.9	198.9	170.8	421.3	220.8	0	41	77.7
		Right 2	222.9	225.8	292.7	228.7	215.3	227.4	247.4	248.2	203.2	175.1	425.6	225.1	0	41.3	79.6
Pyramid Way and York Way	NB	Left 2	0	0	0	0	0	0	0	0	0	0	23.6	0	0	0.1	1.2
		Through	39.4	20.7	40.6	38.4	40.8	34.4	20	37.7	38	33.7	138.6	38.4	0	4.2	13
		Right 2	0	0	0	0	0	0	0	0	0	0	86.8	0	0	0.2	3
	EB	Left 2	57.9	41.4	40.3	37.6	60.3	39.3	34.7	40.7	60.9	41.5	106.6	41.6	0	9	16.9
		Through	57.9	41.4	40.3	37.6	60.3	39.3	34.7	40.7	60.9	41.5	106.6	41.6	0	9	16.9
		Right 2	0	0	0	0	32.8	0	0	0	33.3	0	79	0	0	1.5	8.2
	SB	Left 2	0	0	0	0	0	0	0	0	0	0	45.1	0	0	0.1	1.2
		Through	19.9	33.7	70.4	20.2	65.9	35.5	65.1	58	37.4	19.9	419.5	41.4	0	7.5	34
		Right 2	0	0	46.7	0	36	0	37.2	16.8	0	0	391.6	0	0	4.9	29
	WB	Left 2	152.3	193.6	164	166.4	173.3	155.2	159.8	151.8	188.9	170.6	343.9	167.6	40.2	56.3	57.2
		Through	152.3	193.6	164	166.4	173.3	155.2	159.8	151.8	188.9	170.6	343.9	167.6	40.2	56.3	57.2
		Right 2	126	167.3	137.8	140.1	147.1	129	133.6	125.5	162.7	144.4	317.7	141.3	0	36.7	51.2

2030 AM Build (SB 1-RT Lane FREE) Intersection 10-Run Average Volumes

Intersection	Approach	Movement	Run 1	2	3	4	5	6	7	8	9	10	10-Run	Standard Deviation
			42	47	52	57	62	67	72	77	82	87	Ave	
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	50	62	67	58	58	61	67	63	61	56	**60**	**5.1**
		Through	1	0	1	0	0	2	0	1	2	0	**1**	**0.8**
		Right 2	91	80	70	74	83	72	82	74	74	78	**78**	**6.3**
		Total	142	142	138	132	141	135	149	138	137	134	**139**	**4.9**
	EB	Left 2	1	0	1	2	0	1	2	0	1	2	**1**	**0.8**
		Through	773	788	819	769	800	771	777	795	824	805	**792**	**19.9**
		Right 2	75	71	78	88	82	92	82	79	72	76	**80**	**6.7**
		Total	849	859	898	859	882	864	861	874	897	883	**873**	**16.9**
	SB	Left 2	1	4	2	2	2	2	1	3	4	2	**2**	**1.1**
		Through	2	0	3	1	1	2	2	2	1	3	**2**	**0.9**
		Right 2	2	1	0	0	2	0	1	0	0	0	**1**	**0.8**
		Total	5	5	5	3	5	4	4	5	5	5	**5**	**0.7**
	WB	Left 2	77	80	83	99	77	82	81	86	68	93	**83**	**8.7**
		Through	1511	1499	1431	1510	1514	1499	1515	1511	1447	1534	**1497**	**32.3**
		Right 2	2	1	1	1	0	1	1	0	2	0	**1**	**0.7**
		Total	1590	1580	1515	1610	1591	1582	1597	1597	1517	1627	**1581**	**36.7**
	Total		2586	2586	2556	2604	2619	2585	2611	2614	2556	2649	**2597**	**28.8**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	85	91	91	84	92	76	91	81	62	82	**84**	**9.3**
		Through	338	366	368	338	380	357	355	362	376	358	**360**	**14**
		Right 2	57	40	44	40	55	58	66	38	59	48	**51**	**9.8**
		Total	480	497	503	462	527	491	512	481	497	488	**494**	**18.1**
	EB	Left 2	414	424	446	400	457	467	449	434	468	459	**442**	**23.1**
		Through	355	346	321	354	338	296	347	365	355	361	**344**	**21**
		Right 2	93	109	111	100	88	93	96	96	93	93	**97**	**7.4**
		Total	862	879	878	854	883	856	892	895	916	913	**883**	**21.8**
	SB	Left 2	150	150	159	150	153	161	132	143	137	128	**146**	**11.1**
		Through	1543	1543	1572	1538	1517	1502	1553	1561	1557	1528	**1541**	**21.2**
		Right 2	1117	1140	1075	1117	1137	1133	1144	1107	1083	1145	**1120**	**25**
		Total	2810	2833	2806	2805	2807	2796	2829	2811	2777	2801	**2808**	**15.8**
	WB	Left 2	132	147	145	143	144	149	137	145	139	154	**144**	**6.3**
		Through	639	597	584	641	625	615	615	629	623	640	**621**	**18.8**
		Right 2	79	95	108	91	95	97	114	102	85	87	**95**	**10.6**
		Total	850	839	837	875	864	861	866	876	847	881	**860**	**15.7**
	Total		5002	5048	5024	4996	5081	5004	5099	5063	5037	5083	**5044**	**37.1**
N. McCarran Boulevard and Fourth Street	NB	Left 2	46	56	44	57	50	59	44	62	48	63	**53**	**7.4**
		Through	111	116	98	86	89	96	103	88	107	109	**100**	**10.5**
		Right 2	90	115	112	127	120	117	113	113	107	86	**110**	**12.8**
		Total	247	287	254	270	259	272	260	263	262	258	**263**	**11**
	EB	Left 2	25	20	25	20	23	19	14	20	16	14	**20**	**4**
		Through	524	496	488	512	516	494	520	511	526	512	**510**	**13.1**
		Right 2	14	15	14	11	11	11	12	12	11	12	**12**	**1.5**
		Total	563	531	527	543	550	524	546	543	553	538	**542**	**12.2**
	SB	Left 2	22	20	14	19	13	20	25	17	13	23	**19**	**4.2**
		Through	17	16	22	10	16	20	20	22	18	16	**18**	**3.6**
		Right 2	68	68	66	78	74	73	60	63	73	71	**69**	**5.5**
		Total	107	104	102	107	103	113	105	102	104	110	**106**	**3.6**
	WB	Left 2	30	31	32	32	26	24	27	31	30	29	**29**	**2.7**
		Through	730	704	721	730	746	731	757	757	746	750	**737**	**17**
		Right 2	21	24	33	18	29	29	25	18	25	21	**24**	**5**
		Total	781	759	786	780	801	784	809	806	801	800	**791**	**15.4**
	Total		1698	1681	1669	1700	1713	1693	1720	1714	1720	1706	**1701**	**16.9**
Pyramid Way and Queen Way	NEB	Left 2	16	16	17	15	14	12	14	21	19	19	**16**	**2.8**
		Through	892	948	972	887	996	987	958	930	963	958	**949**	**36.5**
		Total	908	964	989	902	1010	999	972	951	982	977	**965**	**36**
	SEB	Left 2	23	28	28	29	28	29	24	26	27	23	**27**	**2.4**
		Right 2	18	10	14	15	13	12	18	12	11	21	**14**	**3.6**
		Total	41	38	42	44	41	41	42	38	38	44	**41**	**2.3**
	SWB	Through	2812	2805	2812	2789	2789	2783	2814	2812	2754	2808	**2798**	**19.2**
		Right 2	58	43	47	58	39	44	56	38	51	50	**48**	**7.4**
		Total	2870	2848	2859	2847	2828	2827	2870	2850	2805	2858	**2846**	**20.7**
	Total		3819	3850	3890	3793	3879	3867	3884	3839	3825	3879	**3853**	**32.7**
Pyramid Way and Roberta Lane	NB	Left 2	99	100	94	93	77	103	93	109	108	106	**98**	**9.6**
		Through	396	415	418	387	433	407	432	402	411	399	**410**	**15**
		Total	495	515	512	480	510	510	525	511	519	505	**508**	**12.7**
	EB	Left 2	81	89	83	76	88	84	78	81	87	91	**84**	**4.9**
		Right 2	136	132	128	144	125	126	137	133	135	129	**133**	**5.8**
		Total	217	221	211	220	213	210	215	214	222	220	**216**	**4.3**
	SB	Through	1678	1685	1698	1688	1675	1617	1679	1714	1691	1710	**1684**	**26.8**
		Right 2	86	103	87	100	98	98	106	115	99	77	**97**	**10.9**
		Total	1764	1788	1785	1788	1773	1715	1785	1829	1790	1787	**1780**	**28.4**
	Total		2476	2524	2508	2488	2496	2435	2525	2554	2531	2512	**2505**	**33.3**
Pyramid Way and York Way	NB	Left 2	12	7	10	3	10	7	8	6	6	9	**8**	**2.6**
		Through	474	479	482	455	476	482	493	488	490	473	**479**	**10.9**
		Right 2	49	57	44	63	43	47	52	56	46	53	**51**	**6.4**
		Total	535	543	536	521	529	536	553	550	542	535	**538**	**9.5**
	EB	Left 2	11	14	15	9	13	10	12	11	16	16	**13**	**2.5**
		Through	15	16	18	22	15	17	11	24	22	12	**17**	**4.3**
		Right 2	14	16	8	16	18	19	15	10	8	12	**14**	**3.9**
		Total	40	46	41	47	46	46	38	45	46	40	**44**	**3.3**
	SB	Left 2	12	22	19	24	8	18	19	15	16	12	**17**	**4.9**
		Through	1767	1777	1792	1774	1758	1716	1743	1782	1770	1801	**1768**	**24.5**
		Right 2	35	24	29	27	27	32	31	28	27	31	**29**	**3.2**
		Total	1814	1823	1840	1825	1793	1766	1793	1825	1813	1844	**1814**	**23.8**
	WB	Left 2	129	141	128	140	135	134	126	138	147	140	**136**	**6.7**
		Through	39	35	41	41	31	39	47	35	32	36	**38**	**4.8**
		Right 2	11	20	17	17	20	16	18	14	13	15	**16**	**2.9**
		Total	179	196	186	198	186	189	191	187	192	191	**190**	**5.4**
	Total		2568	2608	2603	2591	2554	2537	2575	2607	2593	2610	**2585**	**25.2**
NETWORK TOTAL			18149	18297	18250	18172	18342	18121	18414	18391	18262	18439	**18284**	**113**

2030 PM Build (SB 1-RT Lane FREE) Intersection Volume, Delay and LOS

Intersection	Approach	Movement	Run 1		Run 2		Run 3		Run 4		Run 5		Run 6		Run 7		Run 8		Run 9		Run 10			
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Average(s)	LOS
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	34.4	140	38	157	35.4	160	35.6	150	34.4	162	33.2	143	34	162	35.2	152	38.8	171	39.4	135	**35.8**	**D**
		Through	25.1	1	0	0	0	0	47.3	2	46.5	2	11.5	2	0	0	7.5	2	0	0	0	0	**27.8**	**C**
		Right 2	10.4	432	11.7	408	9.9	408	10.9	411	9.4	397	10.5	438	10.9	427	8.8	407	8.6	395	10.4	426	**10.2**	**B**
		Total	16.3	573	19	565	17.1	568	17.6	563	16.8	561	16.1	583	17.3	589	15.9	561	17.7	566	17.4	561	**17.2**	**B**
	EB	Left 2	76.6	5	19.1	4	73.1	4	63.8	7	43.6	7	85	8	71.5	5	100.4	3	33.8	4	60.2	6	**63**	**E**
		Through	14.5	1402	14	1408	15.8	1462	14.9	1422	14.3	1427	13.1	1412	14.4	1402	15.2	1448	14.4	1462	16.1	1471	**14.7**	**B**
		Right 2	5.5	191	5.2	192	6.7	201	5.6	207	5.4	193	4.7	193	5.2	202	5.9	201	5.2	213	7.2	181	**5.6**	**A**
		Total	13.6	1598	13	1604	14.8	1667	13.9	1636	13.4	1627	12.5	1613	13.4	1609	14.2	1652	13.3	1679	15.3	1658	**13.5**	**B**
	SB	Left 2	0	0	7.7	1	3.2	2	19.9	4	0	2	41.5	2	0	1	0	2	1.7	2	53.7	4	**19.6**	**B**
		Through	15.1	2	0	2	40.5	2	0	0	37.1	3	17.4	3	28.2	3	36.5	2	0.2	2	15.3	2	**22**	**C**
		Right 2	8.6	6	11.2	4	9.7	5	8.4	3	10.7	4	3.7	2	11	3	3.4	2	5.6	3	10.6	3	**8.8**	**A**
		Total	10.2	8	7.5	7	15.1	9	15	7	17.1	9	20.4	7	16.8	7	13.3	6	2.9	7	30.8	9	**13.9**	**B**
	WB	Left 2	108.4	62	111.9	80	124.8	69	135	74	107.5	73	98.4	61	145.6	75	102.3	71	82.9	66	239.3	84	**128.5**	**F**
		Through	20.9	931	18.8	934	16	920	14.4	881	13.3	934	11.8	890	31.2	916	21.5	958	13.2	885	16.9	930	**17.8**	**B**
		Right 2	23.4	4	13.2	5	15.8	1	1.6	4	34.6	2	5.1	3	270.7	1	14.6	4	60.5	2	1.4	4	**24.1**	**C**
		Total	26.4	997	26.1	1019	23.6	990	23.7	959	20.2	1009	17.3	954	40.1	992	27	1033	18.1	953	35.2	1018	**25**	**C**
	Total		18.1	3176	18.2	3195	17.9	3234	17.5	3165	16.1	3206	14.6	3157	22.4	3197	18.6	3252	15.5	3205	21.9	3246	**18.1**	**B**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	89.7	113	85	112	95.2	113	100.5	100	90.9	109	88.7	111	95.6	114	97	111	88.2	103	88.9	111	**91.9**	**F**
		Through	50.1	1024	53.5	1056	51.7	1063	48	1042	51.8	1012	45.9	1057	50.2	1062	49	1020	49.5	1049	48.7	1002	**49.8**	**D**
		Right 2	18.5	56	21.8	53	19.1	53	21.6	56	19	48	18.1	54	19.4	61	21	44	13.6	58	20.5	43	**19.2**	**B**
		Total	52.4	1193	55	1221	54.3	1229	51.1	1198	54.1	1169	48.6	1222	52.9	1237	52.5	1175	51.1	1210	51.5	1156	**52.1**	**D**
	EB	Left 2	93.9	1251	102.5	1258	91.6	1203	99.5	1199	91.7	1248	110.6	1261	94.5	1231	94.8	1221	102.4	1241	123.4	1291	**100.6**	**F**
		Through	56	659	54.7	651	59.5	658	59.7	677	51.7	627	63.4	636	54	629	53.9	661	53.6	642	73.8	669	**58.1**	**E**
		Right 2	48.2	89	45.6	91	51.7	107	49	125	42.9	118	52.5	99	41.3	106	41.2	105	43.9	94	60.2	107	**47.7**	**D**
		Total	79.4	1999	84.4	2000	78.7	1968	82.9	2001	76.2	1993	92.7	1996	78.7	1966	78.4	1987	83.8	1977	104.1	2067	**83.2**	**F**
	SB	Left 2	81.1	156	86.8	173	91.9	156	99.2	169	91.9	168	89.5	144	96.8	175	99.9	147	76.3	134	89.4	148	**90.6**	**F**
		Through	39.8	545	42.5	524	38.1	529	38.5	557	44	520	39.7	530	35.1	484	43.6	513	36.7	509	42.3	542	**40.1**	**D**
		Right 2	5.1	597	5.9	591	5.8	588	5.4	549	5.6	586	6.1	568	7.3	624	5.6	587	6	597	6	591	**5.9**	**A**
		Total	28.8	1298	31.7	1288	29.8	1273	32.3	1275	32.7	1274	30.1	1242	30	1283	32.3	1247	26.2	1240	31	1281	**30.4**	**C**
	WB	Left 2	102.5	93	100.9	110	94.8	101	109.6	96	102.8	102	104	107	70.1	107	85.5	106	92.8	107	95.3	111	**95.8**	**F**
		Through	78.7	439	77.8	439	78.7	435	77.7	454	88.1	463	73.1	422	65.2	442	78.1	456	73.1	457	77.6	477	**76.8**	**E**
		Right 2	88.4	436	67.2	408	58.9	390	69.2	417	74.8	407	83.9	420	76	425	97.7	432	72.9	423	73.6	398	**76.3**	**E**
		Total	85.4	968	75.9	957	72.1	926	77.2	967	84.1	972	81.4	949	75.2	974	87.4	994	75.1	987	78	986	**79.2**	**E**
	Total		62.5	5458	63.9	5466	60.5	5396	63	5441	62.6	5408	66.4	5409	75.1	5460	63.8	5403	61.7	5414	71.3	5490	**65.1**	**E**
N. McCarran Boulevard and Fourth Street	NB	Left 2	48.3	27	46.2	32	40.9	19	48.1	31	44.9	32	53.8	32	49.2	30	54.1	35	53.8	28	55.3	39	**50**	**D**
		Through	52.7	130	46.1	140	50.3	121	51.6	112	49.3	107	54.6	123	49.1	117	50.2	115	49.8	127	53.7	134	**50.7**	**D**
		Right 2	31.4	89	35.9	114	28.4	113	38.2	126	28.9	120	33.8	117	38.5	112	34.6	113	36.1	107	37.4	87	**34.3**	**C**
		Total	44.5	246	42	286	39.8	253	44.9	269	39.3	259	45.6	272	44.5	259	44	263	44.6	262	48.5	260	**43.3**	**D**
	EB	Left 2	55.8	126	57.2	104	65.7	114	63.1	113	53.3	104	57.9	97	53.6	100	56.7	102	55.6	99	58.2	104	**57.8**	**E**
		Through	9.2	710	12.4	743	10.9	727	12.3	762	10.7	717	11.9	705	12.8	738	14.5	723	13.6	707	10.6	731	**11.9**	**B**
		Right 2	8.1	35	11.4	28	11.2	34	9.6	27	5	26	16.1	29	8.5	24	11.1	19	14.8	28	12.6	29	**10.9**	**B**
		Total	15.9	871	17.7	875	18.1	875	18.6	902	15.8	847	17.4	831	17.4	862	19.5	844	18.6	834	16.4	864	**17**	**B**
	SB	Left 2	52.2	21	57.8	25	61.3	25	53.2	23	54.6	20	69.8	25	53.3	29	56.9	22	45.7	24	52.8	24	**55.9**	**E**
		Through	45.6	45	47.8	43	43.8	53	36.7	42	52.3	45	40.2	42	49	49	39.2	45	44.5	35	51	41	**45.1**	**D**
		Right 2	46.8	96	46.3	91	46.5	74	45.2	88	47.9	93	45.7	99	49	76	38.9	88	42.2	94	49.1	97	**45.7**	**D**
		Total	47.2	162	48.5	159	48	152	44.1	153	50	158	47.9	166	49.8	154	41.5	155	43.3	153	50.1	162	**46.7**	**D**
	WB	Left 2	66.2	14	59.8	15	45.4	13	78.4	11	54.2	13	51.8	12	58.3	13	80.9	15	67.1	16	68.8	12	**63.2**	**E**
		Through	12	840	12.9	845	11.3	827	13.3	836	11.6	847	12	846	20.3	867	12.4	884	12.7	866	13.3	868	**13.2**	**B**
		Right 2	9.5	99	8.4	83	8.3	107	11.2	100	8.1	100	8.9	92	13.2	106	9.3	86	10	93	9.2	99	**9.7**	**A**
		Total	12.5	953	13.2	943	11.4	947	13.8	947	11.8	960	12.2	950	20	986	13.2	985	13.3	975	13.6	979	**12.6**	**B**
	Total		19.9	2232	21.1	2263	19.8	2227	21.4	2271	19.2	2224	20.9	2219	23.8	2261	21.1	2247	21	2224	21.3	2265	**21**	**C**
Pyramid Way and Queen Way	NEB	Left 2	64.9	22	60.8	33	47.5	32	60.8	33	63.2	19	62.2	30	57.6	31	58.8	22	60.4	30	76	23	**60.6**	**E**
		Through	15	2843	15.5	2818	17.6	2744	17.4	2777	19	2807	17.1	2827	17.5	2827	16.9	2795	16.8	2838	18.6	2818	**17.1**	**B**
		Total	15.4	2865	16	2851	17.9	2776	17.9	2810	19.3	2826	17.6	2857	17.9	2858	17.2	2817	17.3	2868	19.1	2841	**17.7**	**B**
	SEB	Left 2	35	69	34	83	42.4	77	32	70	33	76	38.6	80	39	75	24.3	78	34.3	78	31.2	72	**34.4**	**C**
		Right 2	3.2	23	5.3	7	5.5	21	4.5	19	4.5	18	7.1	13	4.8	14	5.9	19	5.2	21	4.8	20	**5**	**A**
		Total	27	92	31.8	90	34.5	98	26.1	89	27.5	94	34.2	93	33.6	89	20.7	97	28.1	99	25.5	92	**29.2**	**C**
	SWB	Through	13.2	1272	13.6	1284	12.1	1246	14.4	1247	13.8	1248	13.5	1242	13.3	1286	14.1	1240	13.8	1234	14.5	1271	**13.6**	**B**
		Right 2	7.4	98	8.7	103	7.5	109	7.9	91	7.6	91	7.8	102	7.5	98	7.9	90	8.4	112	8.5	104	**7.9**	**A**
		Total	12.8	1370	13.2	1387	11.7	1355	14	1338	13.4	1339	13.1	1344	12.9	1384	13.7	1330	13.4	1346	14	1375	**12.9**	**B**
	Total		14.8	4327	15.4	4328	16.3	4229	16.8	4237	17.6	4259	16.6	4294	16.6	4331	16.2	4244	16.3	4313	17.6	4308	**16.4**	**B**
Pyramid Way and Roberta Lane	NB	Left 2	7	122	7.4	115	7.6	118	8.3	111	8.1	135	6.6	108	7.2	107	8.1	121	6.6	129	7	139	**7.4**	**A**
		Through	5.2	1044	6	1023	5.9	1034	4.4	1058	6.6	1042	4.4	1088	6.1	1074	5.5	1047	5	1063	5.8	1010	**5.5**	**A**
		Total	5.4	1166	6.1	1138	6.1	1152	4.8	1169	6.8	1177	4.6	1196	6.2	1181	5.8	1168	5.2	1192	5.9	1149	**5.7**	**A**
	EB	Left 2	82.8	187	90.5	183	74.8	184	77.8	173	82.5	182	78.3	163	75.7	187	79.4	164	80.9	179	80.8	173	**80.4**	**F**
		Right 2	19.1	93	20.1	94	8.8	94	14	102	9.7	102	8	108	14.1	94	12.5	117	10.7	105	21.1	105	**13.7**	**B**
		Total	61.6	280	66.6	277	52.5	278	54.1	275	56.4	284	50.3	271	55.1	281	51.5	281	54.9	284	58.3	278	**55.5**	**E**
	SB	Through	9.2	702	7.5	718	8.9	719	9.3	746	9.8	713	7.7	705	7.4	693	11.3	702	9	700	6.2	741	**8.6**	**A**
		Right 2	2.6	33	4.3	32	7.3	32	6.2	29	6.2	29	5	33	4.5	32	5.1	35	3.7	29	2	28	**4.7**	**A**
		Total	8.9	735	7.4	750	8.8	751	9.2	775	9.7	742	7.6	738	7.3	725	11	737	8.8	729	6	769	**8.3**	**A**
	Total		13.8	2181	14.3	2165	12.9	2181	12.4	2219	14.2	2203	11.2	2205	12.8	2187	13.4	2186	12.8	2205	12.6	2196	**13**	**B**
Pyramid Way and York Way	NB	Left 2	10.7	15	6.2	16	8.7	12	9.5	12	9.3	14	7.4	16	10	14	11.3	15	4	12	13.8	7	**8.9**	**A**
		Through	9.6	1043	8.7	1032	10	1035	9.8	1062	9.5	1054	9.4	1072	10.1	1073	9.8	1047	10.3	1070	9.5	1036	**9.7**	**A**
		Right 2	11.2	50	12.9	48	7.9	48	9.4	42	7.7	38	7.7	45	9.3	46	10.8	45	12.5	40	16.4	44	**10.6**	**B**
		Total	9.7	1108	8.8	1096	9.9	1095	9.8	1116	9.4	1106	9.3	1133	10.1	1133	9.9	1107	10.3	1122	9.8	1087	**9.7**	**A**
	EB	Left 2	43.1	61	41.6	58	37.7	64	41.2	57	41.7	66	44	63	43.8	64	46.3	66	42.9	70	38.7	57	**42.2**	**D**
		Through	45.7	116	44.5	113	40.7	109	44.1	107	42.3	107	48.1	111	41.6	110	43.4	110	47.2	103	44.1	122	**44.1**	**D**
		Right 2	31.4	23	28.2	33	28.1	28	30	31	25.5	29	37	30	27.6	34	24.7	30	26.4	32	35.3	26	**29.3**	**C**
		Total	43.3	200	41	204	38	201	41	195	39.7	202	45.2	204	40	208	41.6	206	42.5	205	41.5	205	**41.2**	**D**
	SB	Left 2	14.5	39	12.4	36	9.2	42	13.8	52	11.4	57	12.5	42	14.5	53	14.7	41	11.8	51	18.4	42	**13.3**	**B**
		Through	8.6	694	8.4	710	8.6	693	7.5	732	8.5	705	8.1	720	7.8	670	7.8	689	6.4	699	9	744	**8.1**	**A**
		Right 2	8.3	54	8.3	42	9.2	55	8.4	65	9.1	50	8.1	50	11.6	50	10.1	70	9.6	57	10.1	59	**9.3**	**A**
		Total	8.9	787	8.6	788	8.7	790	8	849	8.7	812	8.3	812	8.5	773	8.4	800	7	807	9.5	845	**8.2**	**A**
	WB	Left 2	42	62	39.7	54	32.9	66	39.9	55	51.3	59	39.2	53	42.7	58	41.4	61	40.9	67	41.9	59	**41.1**	**D**
		Through	41.8	53	42.2	61	38.9	58	38.6	58	41.4	56	34.6	62	43.5	77	45.4	65	36.2	56	43.4	55	**40.7**	**D**
		Right 2	23.1	47	19.4	38	20.7	40	24.1	39	31.3	42	27.3	46	20.5	30	23.4	36	36.4	38	27.7	42	**25.5**	**C**
		Total	36.5	162	35.7	153	32	164	35.4	152	42.4	157	34	161	39	165	39	162	38.2	161	38.6	156	**37**	**D**
	Total		14.3	2257	13.5	2241	13.6	2250	13.5	2312	14.1	2277	13.8	2310	14.4	2279	14.3	2275	14	2295	14.5	2293	**14**	**B**
NETWORK TOTAL			**29**	**19631**	**29.7**	**19658**	**28.5**	**19517**	**29.4**	**19645**	**29.2**	**19577**	**29.6**	**19594**	**33.9**	**19715**	**29.7**	**19607**	**28.5**	**19656**	**32.7**	**19798**	**30**	**C**

2030 PM Build (SB 1-RT Lane FREE) Intersection Queue Lengths

Intersection	Approach	Movement	95% Queues per Run										Max	95%	Median	Average	Standard Deviation
			1	2	3	4	5	6	7	8	9	10					
			42	47	52	57	62	67	72	77	82	87					
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	102.6	104.6	110	110.4	107.4	101.8	93.2	89.5	103.4	99.2	335	103.7	16.6	27.9	37.9
		Through	102.6	104.6	110	110.4	107.4	101.8	93.2	89.5	103.4	99.2	335	103.7	16.6	27.9	37.9
		Right 2	77.8	79.7	85.1	85.5	82.5	77	68.4	64.7	78.5	74.3	310.1	78.9	0	14.9	30.2
	EB	Left 2	17	17.7	17.6	18.5	18.3	17.9	18.1	15.2	0	18.2	44	17.7	0	1.6	5.4
		Through	274.2	257.4	289.1	269.1	250.5	256.5	257.7	266.5	237.7	284.4	602.7	264.6	18	71.1	95.9
		Right 2	0	0	0	0	0	0	0	0	0	0	82.9	0	0	0.1	1.8
	SB	Left 2	0	0	0	0	0	0	0	0	0	0	44.7	0	0	0.3	2.8
		Through	0	0	0	0	0	0	0	0	0	0	44.7	0	0	0.3	2.8
		Right 2	0	0	0	0	0	0	0	0	0	0	58.7	0	0	0.2	2.8
	WB	Left 2	114.9	130.3	85.2	108.1	105.7	71.8	145.6	85.9	99.4	151.4	824.4	108.1	18.5	32.5	44.5
		Through	179.9	214.5	170.9	146	198	175.4	240.8	193.1	203.1	172	825.2	182.8	0	33.1	69.5
		Right 2	211.3	245.9	202.3	177.4	229.4	206.8	272.2	224.4	234.5	203.4	856.6	214.2	0	40.2	80.9
N. McCarran Boulevard and Pyramid Way	NB	Left 2	143.9	109	123.8	126.5	129.6	158.2	133.1	151.6	129.3	141.2	324	133.5	39.2	47.6	47.3
		Through	307.1	336.5	287.5	296.7	344.4	321.6	335.2	300.5	322.5	319.5	525.9	319.5	83.7	107.7	109.2
		Right 2	0	0	0	0	0	0	0	0	0	0	62.4	0	0	0.4	2.9
	EB	Left 2	375.9	373.8	369.9	352.5	361.6	517.7	386.7	373.1	489.2	806.3	2235.3	396.8	151.3	172.2	172.7
		Through	249.9	226.5	265.7	274.6	247.2	256.2	252.6	258.2	231.6	245.4	466.4	251.5	39.8	78.6	90.8
		Right 2	237	213.6	252.8	261.7	234.3	243.2	239.7	245.3	218.7	232.5	453.5	238.6	0	70.1	86.8
	SB	Left 2	170.6	194.4	177.6	207.7	229.8	190.9	207.7	204.8	195	194.7	340.8	195.1	62.1	72.3	67.1
		Through	162.8	151.6	129.6	147.7	145.8	168.1	148.5	151.2	143.4	162.3	517.5	152.1	20	48.2	56.9
		Right 2	18.8	0	0	0	0	0	0	0	0	0	381	0	0	2.8	21.7
	WB	Left 2	81.1	81.7	80.2	63.7	63.6	64.5	83.4	81.7	84.9	79.9	173.8	79.9	36.4	31.2	26.1
		Through	226.1	233.8	241	218.8	216.5	178.9	220.3	209.5	218.3	228.4	415.2	219.1	82.5	87.2	74
		Right 2	580.7	699.1	314.9	344.2	420.6	549.2	669.8	606.3	432.8	391.6	969.4	536.7	141.1	187	177.7
N. McCarran Boulevard and Fourth Street	NB	Left 2	147.6	149.7	126.2	125.7	131.6	141.3	126.4	130.3	149.1	146.4	305.4	141.7	17.2	36.3	48.5
		Through	147.6	149.7	126.2	125.7	131.6	141.3	126.4	130.3	149.1	146.4	305.4	141.7	17.2	36.3	48.5
		Right 2	158.1	160.1	131.3	135.5	142	151.8	136.9	140.8	159.6	156.8	315.9	150.5	0	38.7	53.4
	EB	Left 2	105.1	107.8	116.1	103.8	79.7	82.4	83.6	107.5	104.9	100.4	212.2	103.3	0	24.2	35.3
		Through	129.3	68.2	103.6	85.7	102.7	64.6	85.7	107.5	56.8	69.7	343.4	85.5	0	13.5	38.9
		Right 2	156.1	95	130.4	112.6	129.5	91.4	112.5	134.4	83.6	96.6	370.2	112.3	0	15.9	46.7
	SB	Left 2	65.2	61.9	61.5	63.3	59.2	69.7	59.4	63.6	58	52.5	176.4	61.5	16.3	17.9	22.4
		Through	65.2	61.9	61.5	63.3	59.2	69.7	59.4	63.6	58	52.5	176.4	61.5	16.3	17.9	22.4
		Right 2	65.2	61.9	61.5	63.3	59.2	69.7	59.4	63.6	58	52.5	176.4	61.5	16.3	17.9	22.4
	WB	Left 2	19.3	17.1	19	16.2	19	17.3	19.4	19.2	19	19.2	58.5	19	0	2.7	7.2
		Through	150.9	124.2	143.9	144.4	127	131.7	152.1	148.2	144.6	143.7	316.8	142.4	0	30.5	49.1
		Right 2	169.2	142.5	162.2	162.7	145.3	150.2	170.4	166.5	162.9	162	335.1	160.8	0	35.1	57
Pyramid Way and Queen Way	NEB	Left 2	40.8	40.7	38.3	41.6	39.2	41.5	39.8	39.7	37.7	20.1	91.9	39.7	0	8.6	14.6
		Through	358.4	258.7	281.5	342.7	344.9	329.9	343.1	269.2	287.3	281	903.9	309.9	0	47.3	108.6
	SEB	Left 2	0	0	0	0	25.8	0	0	0	0	23.1	73.9	0	0	1.3	6.5
		Right 2	0	0	0	0	25.8	0	0	0	0	23.1	73.9	0	0	1.3	6.5
	SWB	Through	133.9	154.9	151.5	159	148.8	170.2	174.1	148.8	164.2	177.4	319.7	159.2	0	38.2	56.3
		Right 2	14.9	121.4	0	100.2	0	0	0	114.1	46.2	0	317.7	44.6	0	6.1	28.5
Pyramid Way and Roberta Lane	NB	Left 2	19.8	18.5	19.7	38.8	21.3	20.1	19.3	19.7	20	16.6	201.5	19.6	0	3	12.7
		Through	43.9	55.3	40.4	57.9	26.7	32	40.7	26.4	24.5	26.6	341.7	39.2	0	8	22.4
	EB	Left 2	205.1	252.4	211	218.6	183.7	194	206.8	167.8	212.5	202.2	358.7	210.6	64.5	78.6	67.5
		Right 2	205.1	252.4	211	218.6	183.7	194	206.8	167.8	212.5	202.2	358.7	210.6	64.5	78.6	67.5
	SB	Through	19.3	16.8	20	38.1	58.3	38.8	41.1	39.6	23	41.9	371.4	37.9	0	6.6	22.9
		Right 2	67.6	45.6	66.3	67.1	89.6	66.5	103.3	74.3	64.8	90.9	377.6	70.9	0	9.2	33
Pyramid Way and York Way	NB	Left 2	0	16.8	0	0	0	16.6	0	16	0	0	54	0	0	0.8	4
		Through	173	163.8	162.4	170.7	196.5	179.3	184.5	192.5	191.6	173.9	415.2	179.1	41.3	59.4	64.1
		Right 2	173	163.8	162.4	170.7	196.5	179.3	184.5	192.5	191.6	173.9	415.2	179.1	41.3	59.4	64.1
	EB	Left 2	58	62.2	41.5	42.1	58.3	59.1	43.4	58.7	57.2	41	200.4	55.2	0	9.2	20.1
		Through	58	62.2	41.5	42.1	58.3	59.1	43.4	58.7	57.2	41	200.4	55.2	0	9.2	20.1
		Right 2	0	16.3	0	0	0	0	0	0	0	0	154.5	0	0	1.4	8.7
	SB	Left 2	18.6	18.6	18.5	18.7	18.6	19.1	18.7	19	19.8	16.2	72.6	18.9	0	2.2	7.7
		Through	104.1	108.7	131.5	123.6	88	128.3	118.4	133.5	100.6	86.4	411.8	113.6	0	22.3	42.4
		Right 2	104.1	108.7	131.5	123.6	88	128.3	118.4	133.5	100.6	86.4	411.8	113.6	0	22.3	42.4
	WB	Left 2	38.6	40.5	37.2	38.5	39.2	41.9	43.2	40.9	39.6	39.4	124.6	40.5	0	6.2	15.4
		Through	38.6	40.5	37.2	38.5	39.2	41.9	43.2	40.9	39.6	39.4	124.6	40.5	0	6.2	15.4
		Right 2	0	0	0	0	0	0	0	0	0	0	79.9	0	0	0.7	4.9

2030 PM Build (SB 1-RT Lane FREE) Intersection 10-Run Average Volumes

Intersection	Approach	Movement	Run 1	2	3	4	5	6	7	8	9	10	10-Run Ave	Standard Deviation
			42	47	52	57	62	67	72	77	82	87		
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	140	157	160	150	162	143	162	152	171	135	**153**	**11.3**
		Through	1	0	0	2	2	2	0	2	0	0	**1**	**1**
		Right 2	432	408	408	411	397	438	427	407	395	426	**415**	**14.9**
		Total	573	565	568	563	561	583	589	561	566	561	**569**	**9.8**
	EB	Left 2	5	4	4	7	7	8	5	3	4	6	**5**	**1.6**
		Through	1402	1408	1462	1422	1427	1412	1402	1448	1462	1471	**1432**	**26.8**
		Right 2	191	192	201	207	193	193	202	201	213	181	**197**	**9.2**
		Total	1598	1604	1667	1636	1627	1613	1609	1652	1679	1658	**1634**	**28.5**
	SB	Left 2	0	1	2	4	2	2	1	2	2	4	**2**	**1.2**
		Through	2	2	2	0	3	3	3	2	2	2	**2**	**0.9**
		Right 2	6	4	5	3	4	2	3	2	3	3	**4**	**1.3**
		Total	8	7	9	7	9	7	7	6	7	9	**8**	**1.1**
	WB	Left 2	62	80	69	74	73	61	75	71	66	84	**72**	**7.4**
		Through	931	934	920	881	934	890	916	958	885	930	**918**	**25.1**
		Right 2	4	5	1	4	2	3	1	4	2	4	**3**	**1.4**
		Total	997	1019	990	959	1009	954	992	1033	953	1018	**992**	**28.8**
	Total		3176	3195	3234	3165	3206	3157	3197	3252	3205	3246	**3203**	**32.7**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	113	112	113	100	109	111	114	111	103	111	**110**	**4.6**
		Through	1024	1056	1063	1042	1012	1057	1062	1020	1049	1002	**1039**	**22.4**
		Right 2	56	53	53	56	48	54	61	44	58	43	**53**	**5.9**
		Total	1193	1221	1229	1198	1169	1222	1237	1175	1210	1156	**1201**	**27.5**
	EB	Left 2	1251	1258	1203	1199	1248	1261	1231	1221	1241	1291	**1240**	**28**
		Through	659	651	658	677	627	636	629	661	642	669	**651**	**16.9**
		Right 2	89	91	107	125	118	99	106	105	94	107	**104**	**11.4**
		Total	1999	2000	1968	2001	1993	1996	1966	1987	1977	2067	**1995**	**28.3**
	SB	Left 2	156	173	156	169	168	144	175	147	134	148	**157**	**13.8**
		Through	545	524	529	557	520	530	484	513	509	542	**525**	**20.7**
		Right 2	597	591	588	549	586	568	624	587	597	591	**588**	**19.4**
		Total	1298	1288	1273	1275	1274	1242	1283	1247	1240	1281	**1270**	**20.2**
	WB	Left 2	93	110	101	96	102	107	107	106	107	111	**104**	**5.9**
		Through	439	439	435	454	463	422	442	456	457	477	**448**	**15.9**
		Right 2	436	408	390	417	407	420	425	432	423	398	**416**	**14.7**
		Total	968	957	926	967	972	949	974	994	987	986	**968**	**20.2**
	Total		5458	5466	5396	5441	5408	5409	5460	5403	5414	5490	**5435**	**32.6**
N. McCarran Boulevard and Fourth Street	NB	Left 2	27	32	19	31	32	32	30	35	28	39	**31**	**5.3**
		Through	130	140	121	112	107	123	117	115	127	134	**123**	**10.3**
		Right 2	89	114	113	126	120	117	112	113	107	87	**110**	**12.6**
		Total	246	286	253	269	259	272	259	263	262	260	**263**	**10.9**
	EB	Left 2	126	104	114	113	104	97	100	102	99	104	**106**	**8.9**
		Through	710	743	727	762	717	705	738	723	707	731	**726**	**18**
		Right 2	35	28	34	27	26	29	24	19	28	29	**28**	**4.6**
		Total	871	875	875	902	847	831	862	844	834	864	**861**	**21.8**
	SB	Left 2	21	25	25	23	20	25	29	22	24	24	**24**	**2.5**
		Through	45	43	53	42	45	42	49	45	35	41	**44**	**4.8**
		Right 2	96	91	74	88	93	99	76	88	94	97	**90**	**8.5**
		Total	162	159	152	153	158	166	154	155	153	162	**157**	**4.8**
	WB	Left 2	14	15	13	11	13	12	13	15	16	12	**13**	**1.6**
		Through	840	845	827	836	847	846	867	884	866	868	**853**	**17.7**
		Right 2	99	83	107	100	100	92	106	86	93	99	**97**	**7.9**
		Total	953	943	947	947	960	950	986	985	975	979	**963**	**17**
	Total		2232	2263	2227	2271	2224	2219	2261	2247	2224	2265	**2243**	**20.2**
Pyramid Way and Queen Way	NEB	Left 2	22	33	32	33	19	30	31	22	30	23	**28**	**5.4**
		Through	2843	2818	2744	2777	2807	2827	2827	2795	2838	2818	**2809**	**30.3**
		Total	2865	2851	2776	2810	2826	2857	2858	2817	2868	2841	**2837**	**29.4**
	SEB	Left 2	69	83	77	70	76	80	75	78	78	72	**76**	**4.4**
		Right 2	23	7	21	19	18	13	14	19	21	20	**18**	**4.8**
		Total	92	90	98	89	94	93	89	97	99	92	**93**	**3.7**
	SWB	Through	1272	1284	1246	1247	1248	1242	1286	1240	1234	1271	**1257**	**19.3**
		Right 2	98	103	109	91	91	102	98	90	112	104	**100**	**7.6**
		Total	1370	1387	1355	1338	1339	1344	1384	1330	1346	1375	**1357**	**20.6**
	Total		4327	4328	4229	4237	4259	4294	4331	4244	4313	4308	**4287**	**40.7**
Pyramid Way and Roberta Lane	NB	Left 2	122	115	118	111	135	108	107	121	129	139	**121**	**11**
		Through	1044	1023	1034	1058	1042	1088	1074	1047	1063	1010	**1048**	**23.4**
		Total	1166	1138	1152	1169	1177	1196	1181	1168	1192	1149	**1169**	**18.6**
	EB	Left 2	187	183	184	173	182	163	187	164	179	173	**178**	**8.9**
		Right 2	93	94	94	102	102	108	94	117	105	105	**101**	**7.8**
		Total	280	277	278	275	284	271	281	281	284	278	**279**	**4**
	SB	Through	702	718	719	746	713	705	693	702	700	741	**714**	**17.6**
		Right 2	33	32	32	29	29	33	32	35	29	28	**31**	**2.3**
		Total	735	750	751	775	742	738	725	737	729	769	**745**	**16.4**
	Total		2181	2165	2181	2219	2203	2205	2187	2186	2205	2196	**2193**	**15.7**
Pyramid Way and York Way	NB	Left 2	15	16	12	12	14	16	14	15	12	7	**13**	**2.7**
		Through	1043	1032	1035	1062	1054	1072	1073	1047	1070	1036	**1052**	**16**
		Right 2	50	48	48	42	38	45	46	45	40	44	**45**	**3.7**
		Total	1108	1096	1095	1116	1106	1133	1133	1107	1122	1087	**1110**	**15.7**
	EB	Left 2	61	58	64	57	66	63	64	66	70	57	**63**	**4.3**
		Through	116	113	109	107	107	111	110	110	103	122	**111**	**5.3**
		Right 2	23	33	28	31	29	30	34	30	32	26	**30**	**3.3**
		Total	200	204	201	195	202	204	208	206	205	205	**203**	**3.7**
	SB	Left 2	39	36	42	52	57	42	53	41	51	42	**46**	**7.1**
		Through	694	710	693	732	705	720	670	689	699	744	**706**	**21.8**
		Right 2	54	42	55	65	50	50	50	70	57	59	**55**	**8.1**
		Total	787	788	790	849	812	812	773	800	807	845	**806**	**24.7**
	WB	Left 2	62	54	66	55	59	53	58	61	67	59	**59**	**4.7**
		Through	53	61	58	58	56	62	77	65	56	55	**60**	**6.9**
		Right 2	47	38	40	39	42	46	30	36	38	42	**40**	**4.9**
		Total	162	153	164	152	157	161	165	162	161	156	**159**	**4.5**
	Total		2257	2241	2250	2312	2277	2310	2279	2275	2295	2293	**2279**	**24.2**
NETWORK TOTAL			19631	19658	19517	19645	19577	19594	19715	19607	19656	19798	**19640**	**77.2**

2030 AM Build (SB 2-RT Lane) Intersection Volume, Delay and LOS

Intersection	Approach	Movement	Run 1		Run 2		Run 3		Run 4		Run 5		Run 6		Run 7		Run 8		Run 9		Run 10		Average(s)	LOS
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume		
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	55.2	50	52.1	62	62.1	67	56.7	58	60.4	58	54.9	61	58.4	67	54.8	63	63.8	61	53.5	56	**57.3**	**E**
		Through	17.4	1	0	0	57.2	1	0	0	0	0	19.1	2	0	0	23.3	1	52.2	2	0	0	**34.4**	**C**
		Right 2	5.7	91	5.9	80	5.6	70	5.7	74	5.4	83	5.2	72	5.8	82	6	74	5.3	74	5.7	78	**5.6**	**A**
		Total	23.2	142	26.1	142	33.4	138	28.1	132	28	141	27.9	135	29.5	149	28.4	138	32	137	25.7	134	**27.9**	**C**
	EB	Left 2	113.8	1	0	0	125.5	1	78.4	2	0	0	88.6	1	106.4	2	0	0	101	1	91.6	2	**98.2**	**F**
		Through	3.5	772	4.3	787	4.5	819	4.3	769	4.4	800	4	771	4.4	778	4.5	794	4.2	824	4.3	804	**4.2**	**A**
		Right 2	1.6	76	2	72	2.1	78	2.1	88	1.9	82	2.6	92	2.4	81	1.8	79	2.1	72	2	77	**2.1**	**A**
		Total	3.5	849	4.1	859	4.4	898	4.2	859	4.2	882	3.9	864	4.4	861	4.3	873	4.1	897	4.3	883	**4**	**A**
	SB	Left 2	0.2	1	53.5	4	91.7	2	57.4	2	9.4	2	41.5	2	91.1	1	28.5	3	65.6	4	63.2	2	**51.3**	**D**
		Through	97.4	2	0	0	94.7	3	52.1	1	51.7	1	51.5	2	67	2	62	2	63.1	1	37.7	3	**65.9**	**E**
		Right 2	31.8	2	8.3	1	0	0	0	0	5.1	2	0	0	7.3	1	0	0	0	0	0	0	**14.9**	**B**
		Total	51.7	5	44.5	5	93.5	5	55.6	3	16.1	5	46.5	4	58.1	4	41.9	5	65.1	5	47.9	5	**52.9**	**D**
	WB	Left 2	70.2	81	67.4	82	63.8	77	70.8	99	67.6	79	64.4	77	70	81	56.2	91	69.1	73	68.7	90	**66.8**	**E**
		Through	5.6	1467	5.2	1495	8.1	1419	7.8	1515	7.6	1515	5.8	1502	4.7	1523	6.1	1503	6.5	1429	7.1	1533	**6.4**	**A**
		Right 2	10.1	1	6.1	1	10.1	1	16.9	1	0	0	4.4	1	5.5	1	0	0	9.1	1	0	0	**8.9**	**A**
		Total	9	1549	8.4	1578	11	1497	11.7	1615	10.6	1594	8.7	1580	8	1605	9	1594	9.5	1503	10.5	1623	**9.6**	**A**
	Total		8	2545	8	2584	10	2538	10.1	2609	9.4	2622	8.2	2583	8.1	2619	8.5	2610	8.9	2542	9.3	2645	**8.9**	**A**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	61.8	84	62.7	92	61.2	89	61.4	85	61.3	89	54.9	75	59.8	90	59.7	81	60.5	64	57.2	82	**60.2**	**E**
		Through	25.3	338	27.4	366	23.1	369	24.1	339	28.2	383	26.9	361	26.3	356	26.8	362	26.2	374	26	359	**26.1**	**C**
		Right 2	5.4	58	5.8	40	4.4	44	3.8	39	5.2	54	5.1	57	5.7	66	4.6	40	4.9	60	4.5	48	**5**	**A**
		Total	29.3	480	32.2	498	28.2	502	29.2	463	31.4	526	28.6	493	29.5	512	30.5	483	28	498	29.1	489	**29.3**	**C**
	EB	Left 2	46.8	413	50.2	426	50.1	444	50.1	398	50.9	455	49.8	468	50.2	450	49.2	431	50.1	468	48.8	458	**49.6**	**D**
		Through	40.9	359	45.3	345	47.1	328	47.9	355	44.7	343	49.1	299	47.1	349	45.2	362	43.1	350	46.4	363	**45.6**	**D**
		Right 2	30.1	93	35.5	109	34.2	110	32.5	99	31.4	88	30.7	93	30.7	97	32.8	96	27.5	93	37.9	93	**32.4**	**C**
		Total	42.6	865	46.5	880	47	882	47.1	852	46.6	886	47.5	860	46.9	896	45.8	889	45.1	911	46.7	914	**46**	**D**
	SB	Left 2	164.3	156	92.3	153	138.8	160	175.6	147	89.9	155	121.1	164	88.1	137	78.7	152	71.5	139	81.6	127	**111.3**	**F**
		Through	55.9	1537	64.2	1557	64.3	1560	60.5	1513	54.4	1519	65.9	1530	50.7	1537	58.5	1567	50.1	1562	56.2	1526	**58.1**	**E**
		Right 2	29.4	1121	29.7	1130	28.4	1075	29.7	1120	28.6	1167	26.8	1131	27	1141	29.3	1093	23.4	1076	28.8	1155	**28.1**	**C**
		Total	51.4	2814	52	2840	54.8	2795	54.2	2780	45.7	2841	53.5	2825	42.9	2815	48.2	2812	40.8	2777	46.1	2808	**47.9**	**D**
	WB	Left 2	54.2	131	55.8	147	53.1	144	58.4	142	53.1	142	56.9	148	51.9	135	60.4	145	57.5	138	55.8	153	**55.7**	**E**
		Through	58.6	638	56.7	593	56.7	583	56.6	646	58.5	622	55.6	611	55.9	615	58.1	629	53.2	625	55.2	641	**56.5**	**E**
		Right 2	12	79	11.2	95	13.8	108	11.5	92	13.7	96	12.6	98	12.8	114	12.5	102	13.4	87	12.4	87	**12.6**	**B**
		Total	53.6	848	51.4	835	50.5	835	52.2	880	52.6	860	50.9	857	49.6	864	53.2	876	49.8	850	51.1	881	**51.3**	**D**
	Total		48.1	5007	49	5053	50	5014	50.3	4975	45.5	5113	49.6	5035	43.4	5087	47	5060	41.8	5036	45.4	5092	**47**	**D**
N. McCarran Boulevd and Fourth Street	NB	Left 2	50.1	46	44.5	56	50.1	44	45.2	57	49.3	50	57.8	59	50.4	44	53.7	62	53.2	48	58.3	63	**51.5**	**D**
		Through	48.5	111	47.5	116	51.6	98	54.8	86	48.2	89	55.9	96	50.5	103	49.4	88	50.6	107	55.3	109	**51.2**	**D**
		Right 2	30.1	90	36.3	115	34	112	38.7	127	32.1	120	34	117	37.7	113	40.3	113	39.3	107	46.9	86	**36.8**	**D**
		Total	42.1	247	42.4	287	43.6	254	45.2	270	41	259	46.9	272	44.9	260	46.5	263	46.5	262	53.2	258	**45.4**	**D**
	EB	Left 2	74.1	26	83.7	20	82.7	25	81.6	20	88.8	23	86.4	19	92.3	15	90.1	20	94	17	86	14	**85.3**	**F**
		Through	2.6	531	3.1	498	2.5	493	2.9	507	1.8	515	3.6	493	3.5	525	2.8	520	3.4	524	3.4	511	**3**	**A**
		Right 2	1.8	14	2.3	15	1.3	14	3.7	11	1.1	12	3.5	11	1.6	12	0.7	12	0.7	12	2.6	12	**1.9**	**A**
		Total	5.8	571	6.1	533	6.2	532	5.8	538	5.4	550	6.6	523	5.9	552	5.9	552	6.1	553	5.5	537	**6**	**A**
	SB	Left 2	57.5	22	47.5	20	50.6	14	45.8	19	62.1	13	57.7	20	49.1	25	54.8	17	44.5	13	49.9	23	**51.8**	**D**
		Through	43.9	17	37.9	16	28.7	22	16.6	10	41	16	46.7	20	47.9	20	57.5	22	45.6	18	50.8	16	**42.9**	**D**
		Right 2	10	68	9.7	68	10.3	66	8.2	78	9.7	74	9.4	73	8.7	60	8.3	63	9.6	73	9.7	71	**9.4**	**A**
		Total	25.2	107	21.3	104	19.8	102	15.7	107	21.2	103	24.6	113	25.8	105	26.7	102	20.2	104	24.1	110	**22.1**	**C**
	WB	Left 2	58.5	30	62.9	32	46.5	32	65.7	32	64.5	26	59.3	24	58.7	26	53.5	31	62	30	54.8	29	**58.5**	**E**
		Through	7.1	730	6.3	705	7	722	7.4	732	6.5	744	6.9	731	6.3	758	6.4	757	6.8	740	7.1	750	**6.8**	**A**
		Right 2	3.2	21	2.4	24	4.1	32	3.9	17	6	29	4.2	29	2.9	25	4.8	18	2.5	25	4.3	21	**3.9**	**A**
		Total	9	781	8.6	761	8.5	786	9.7	781	8.4	799	8.4	784	7.9	809	8.2	806	8.7	795	8.8	800	**8.3**	**A**
	Total		13.7	1706	14.4	1685	13.8	1674	14.5	1696	13.1	1711	15.1	1692	13.9	1726	14.4	1723	14.3	1714	15.5	1705	**14.3**	**B**
Pyramid Way and Queen Way	NEB	Left 2	55.3	15	86.8	17	100.4	17	100.3	15	62.6	13	75.8	12	87.4	14	105.9	21	83	20	108.9	18	**88.3**	**F**
		Through	11	890	11.1	947	11	967	12.2	888	12.7	998	12.7	990	13.3	960	11.9	927	11.6	963	13	961	**12.1**	**B**
		Total	11.7	905	12.4	964	12.5	984	13.7	903	13.3	1011	13.5	1002	14.4	974	14	948	13.1	983	14.8	979	**13.8**	**B**
	SEB	Left 2	65.1	23	50.5	29	55.5	28	46.7	29	47.5	28	46.2	29	58.8	24	47.3	25	76.7	27	61.3	23	**55.1**	**E**
		Right 2	5	18	4.7	10	5.1	14	5.6	15	4	13	3.4	12	5.8	18	4	13	5.4	11	4.5	21	**4.8**	**A**
		Total	38.7	41	38.8	39	38.7	42	32.7	44	33.7	41	33.7	41	36.1	42	32.5	38	56.1	38	34.2	44	**37.1**	**D**
	SWB	Through	20.3	2811	19.7	2799	17	2812	19.6	2789	15.8	2817	15.4	2783	18.7	2813	18.9	2797	18.9	2754	18.6	2807	**18.3**	**B**
		Right 2	21.7	59	22.9	43	16.1	47	23.4	58	18.7	39	16.4	43	19.9	56	19.1	37	20.3	51	23.4	50	**20.4**	**C**
		Total	20.3	2870	19.7	2842	17	2859	19.7	2847	15.8	2856	15.4	2826	18.7	2869	18.9	2834	18.9	2805	18.7	2857	**18.3**	**B**
	Total		18.5	3816	18.1	3845	16.1	3885	18.4	3794	15.3	3908	15.1	3869	17.8	3885	17.8	3820	17.8	3826	17.9	3880	**17.3**	**B**
Pyramid Way and Roberta Lane	NB	Left 2	9.6	99	9.1	98	10.8	94	10.3	95	9.2	77	11	102	11.6	93	10.5	109	12.1	109	11.6	106	**10.6**	**B**
		Through	3.8	397	3	417	3.4	418	3.4	386	3.4	433	3.8	407	3.8	432	3.3	403	3.1	408	3.5	399	**3.4**	**A**
		Total	5	496	4.2	515	4.8	512	4.8	481	4.3	510	5.2	509	5.2	525	4.8	512	5	517	5.2	505	**4.8**	**A**
	EB	Left 2	50.9	81	53.9	89	45.4	83	50.7	76	49.8	88	47	84	37.1	78	45.4	81	47.4	87	45.9	91	**47.4**	**D**
		Right 2	8.8	136	9.1	132	7.2	128	7.8	144	7.2	125	7.5	127	7.4	137	7.5	132	8.2	134	8.9	130	**8**	**A**
		Total	24.5	217	27.1	221	22.2	211	22.6	220	24.8	213	23.2	211	18.2	215	21.9	213	23.6	221	24.1	221	**23.1**	**C**
	SB	Through	13.4	1674	13.3	1707	12.7	1700	14.1	1661	12.6	1665	12.3	1647	13.5	1688	13.4	1701	13.7	1686	13.5	1685	**13.2**	**B**
		Right 2	12.5	84	10.3	108	12.5	92	13.1	100	11.4	105	10.8	96	10.4	86	13.5	118	12.6	102	13.2	81	**12**	**B**
		Total	13.4	1758	13.1	1815	12.7	1792	14	1761	12.5	1770	12.2	1743	13.3	1774	13.4	1819	13.6	1788	13.5	1766	**12.8**	**B**
	Total		12.7	2471	12.5	2551	11.9	2515	13	2462	11.9	2493	11.7	2463	12	2514	12.4	2544	12.7	2526	12.8	2492	**12.4**	**B**
Pyramid Way and York Way	NB	Left 2	10.3	12	8.1	7	10.4	10	7.8	3	8.2	10	20.5	7	10.3	8	8.8	6	7.6	6	5.7	9	**9.8**	**A**
		Through	3.9	474	3.7	479	4.8	482	4.5	455	4.3	476	3.8	482	4.1	493	4.1	488	4.4	490	3.9	473	**4.2**	**A**
		Right 2	3.5	49	2.8	57	4.5	44	2.4	63	5.1	43	2.4	47	3.1	52	2.7	56	2.7	46	4.1	53	**3.3**	**A**
		Total	4	535	3.7	543	4.9	536	4.3	521	4.4	529	3.9	536	4.1	553	4	550	4.3	542	4	535	**4.2**	**A**
	EB	Left 2	52.4	11	70.3	14	45.8	15	39.5	9	54.6	13	43.3	10	42	12	61.2	11	57.1	16	58.8	16	**53.4**	**D**
		Through	57.7	15	42	16	58	18	37.6	22	61.3	15	45.9	17	49.9	11	49.3	24	55.3	22	49.5	12	**50.3**	**D**
		Right 2	22.3	14	20.3	16	18.1	8	13.4	16	25.6	18	15	19	14.5	15	25.4	10	18.4	8	17.7	12	**18.9**	**B**
		Total	43.9	40	43.1	46	45.8	41	29.7	47	45.4	46	32.6	46	33.4	38	46.9	45	49.5	46	43.7	40	**43.2**	**D**
	SB	Left 2	6.9	10	2.5	21	3.4	18	3.9	22	7.5	5	4.7	16	5	23	3.2	15	4.8	17	6.4	15	**4.4**	**A**
		Through	2.8	1763	3.4	1792	4.2	1797	2.3	1751	4.3	1749	4	1756	3.1	1755	3.4	1768	3.5	1770	3.6	1770	**3.5**	**A**
		Right 2	3.6	36	4.4	28	4.5	30	4	26	3.8	32	3.9	28	3.2	32	2.4	23	2.4	28	3.7	33	**3.6**	**A**
		Total	2.8	1809	3.4	1841	4.2	1845	2.3	1799	4.3	1786	4	1800	3.1	1810	3.4	1806	3.5	1815	3.6	1818	**3.4**	**A**
	WB	Left 2	56.4	129	53.6	141	58.2	128	56	140	54.8	135	55.6	134	49.9	126	49.5	138	52.4	147	52.9	140	**53.9**	**D**
		Through	53.2	39	53.8	35	51.5	41	62.4	41	56.4	31	39.4	39	46.3	47	49.7	35	48.5	32	55.8	36	**51.6**	**D**
		Right 2	40.6	11	54.6	20	42.8	17	42	17	40.3	20	29	16	23	18	46.3	14	32.5	13	40.8	15	**39.4**	**D**
		Total	54.7	179	53.7	196	55.3	186	56.1	198	53.5	186	50	189	46.5	191	49.3	187	50.4	192	52.5	191	**52.7**	**D**
	Total		7.3	2563	7.9	2626	8.6	2608	7.4	2565	8.7	2547	7.9	2571	7	2592	7.6	2588	8	2595	7.9	2584	**7.8**	**A**
NETWORK TOTAL			**22.4**	**18108**	**22.6**	**18344**	**22.7**	**18234**	**23.3**	**18101**	**21.3**	**18394**	**22.2**	**18213**	**20.8**	**18423**	**22**	**18345**	**20.8**	**18239**	**22**	**18398**	**22**	**C**

2030 AM Build Intersection Queue Lengths

Intersection	Approach	Movement	95% Queues per Run										Max	95%	Median	Average	Standard Deviation
			1	2	3	4	5	6	7	8	9	10					
			42	47	52	57	62	67	72	77	82	87					
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	58.1	63.2	68.1	61.4	62.6	63.1	82.5	64.1	61.3	43.9	171.2	63	0	17.2	23.7
		Through	58.1	63.2	68.1	61.4	62.6	63.1	82.5	64.1	61.3	43.9	171.2	63	0	17.2	23.7
		Right 2	52.4	57.5	62.4	55.8	56.9	57.4	76.8	58.4	55.7	38.2	165.5	57.3	0	10.8	22.5
	EB	Left 2	0	0	0	0	0	0	16.8	0	0	0	20.1	0	0	0.4	2.5
		Through	60	44.7	62.4	66	59.7	62.4	61.9	57.9	61.6	59.4	193.4	60.8	0	8.8	21.5
		Right 2	0	0	0	0	0	0	0	0	0	0	28	0	0	0	0.5
	SB	Left 2	0	19.9	0	18.7	0	0	0	18.4	0	0	48.5	0	0	0.9	4.2
		Through	0	19.9	0	18.7	0	0	0	18.4	0	0	48.5	0	0	0.9	4.2
		Right 2	0	0	0	0	0	0	0	0	0	0	56.6	0	0	0.1	2.3
	WB	Left 2	88.7	83.6	82.9	83.6	79.4	65.5	81.9	95.9	62.8	83.3	169.1	83.6	17.1	23.1	28.3
		Through	40.8	42	60.9	40.3	49.5	40.3	62.3	41.9	43.4	37.7	323.2	43	0	6.3	23.8
		Right 2	72.7	73.8	92.8	71.6	77.3	72.2	94.2	73.7	74.5	68.4	355.1	74.8	0	8	31.1
N. McCarran Boulevard and Pyramid Way	NB	Left 2	81.1	79.8	88.5	64	83.3	65.2	81	82.7	43.2	63.5	211.5	81.2	17	23.1	27.1
		Through	75	88.5	80.6	82.1	77	76.5	84.6	79.1	81	82.8	165.2	81.1	17.7	24.8	28.6
		Right 2	0	0	0	0	0	0	0	0	0	0	49.8	0	0	0.3	2.6
	EB	Left 2	124.5	126.7	126.5	107.6	127	131.4	116.3	109.9	131.1	125.5	187.4	126.2	58.4	54.5	41.5
		Through	127.5	124.8	125.5	134.3	135	107.3	125.7	110.3	121.8	127.7	237	126.1	19.4	37.3	43.7
		Right 2	101	98.2	99	107.8	108.4	80.7	99.2	83.8	95.3	101.1	210.5	99.6	0	20.6	35.7
	SB	Left 2	228.3	127.7	177.9	187.5	149.6	284.5	126.8	161	124.1	142.3	327.5	182.7	37.8	54.3	63.6
		Through	1576.5	1848.3	1833.9	975.8	1907.1	1858.3	1760.4	1740.4	1322.5	1163.3	2040.8	1781	884.5	903	508.3
		Right 2	1538.2	1810	1801.6	930	1868.8	1820	1722.1	1702.1	1284.2	1125	2002.5	1742.8	845	838.2	541.3
	WB	Left 2	65.6	78.5	82.9	80.3	81.8	62.5	77.7	82.5	65.4	83.3	181.4	79.1	20.1	28.5	26.1
		Through	208.6	189.4	205.1	193.6	188.2	209.2	175.8	215.6	213.8	195.5	330.8	196.5	60.7	72.4	67.4
		Right 2	0	0	0	0	0	0	0	0	0	0	27.6	0	0	0	0.7
N. McCarran Boulevd and Fourth Street	NB	Left 2	145.3	162.1	129.7	182.2	130.8	170	164.5	147.8	175.3	133.6	304.9	152.7	19.9	45.1	54.1
		Through	145.3	162.1	129.7	182.2	130.8	170	164.5	147.8	175.3	133.6	304.9	152.7	19.9	45.1	54.1
		Right 2	166.3	183.1	150.7	203.2	151.8	191	185.4	168.8	196.3	154.6	325.9	173.7	36.6	53.9	63.5
	EB	Left 2	39.4	20.1	41.2	19.7	20.6	18.9	19.7	19.7	19.4	19.9	83.7	20.6	0	4.6	10.7
		Through	60.2	64.3	61.9	66.3	58.9	82.1	62.7	85.7	47.2	81.2	204.8	64.4	0	9.3	25.9
		Right 2	85.8	90	87.5	92	84.6	107.7	88.3	111.4	72.9	106.8	230.4	90	0	11.2	33.3
	SB	Left 2	37	37	19.3	20.2	19.3	40.5	38.5	40.4	37.6	20.2	133.7	36.5	0	5.9	12.8
		Through	37	37	19.3	20.2	19.3	40.5	38.5	40.4	37.6	20.2	133.7	36.5	0	5.9	12.8
		Right 2	35.5	33.9	33.3	33.4	32.3	34.7	31.5	34.1	34.4	33.7	151.4	33.8	0	3.8	13.1
	WB	Left 2	40.6	39.2	49.3	36	19.4	38	39.6	36.8	40.1	21.8	102.3	39.2	0	7.2	13.4
		Through	77.4	66.2	66.2	81	68.5	64.3	64	81.1	67.3	64.5	203.4	68.1	0	12	26.2
		Right 2	95.8	84.6	84.5	99.3	86.8	82.6	82.3	99.4	85.7	82.8	221.7	86.5	0	13.3	32.4
Pyramid Way and Queen Way	NEB	Left 2	82.5	84.5	39.3	39.6	39.1	38.1	85	74.1	59.9	61.1	213.7	49	0	10.3	25.5
		Through	61.8	62.8	41.6	41.7	46.2	59.9	69.1	62.2	62.8	63.9	213.1	60.7	0	6.8	23.6
	SEB	Left 2	35.6	38.9	36.2	19.6	39.8	20.3	20.6	41.7	20.1	19.8	64.4	35.6	0	5.6	11.6
		Right 2	0	0	0	0	0	0	0	0	0	0	19.1	0	0	0	0.3
	SWB	Through	716.9	1201.6	648.6	489.7	1266.1	459.5	1350.9	610.4	558.9	446.7	2332.7	873.2	63.4	206.7	320.2
		Right 2	716.9	1201.6	648.6	489.7	1266.1	459.5	1350.9	610.4	558.9	446.7	2332.7	873.2	63.4	206.7	320.2
Pyramid Way and Roberta Lane	NB	Left 2	20.1	38.5	24.9	26.3	30.1	26.6	29.6	46.2	42.6	42.1	114.1	31.4	0	4.1	12.7
		Through	20.2	37.9	20.1	20	20	38.2	21.7	19.3	20.2	39.6	91	20.6	0	3.3	10.6
	EB	Left 2	80.9	84.8	82.9	62.1	83.1	81.3	60	65.1	85.4	64.3	153.5	80.5	16.4	20.5	26.6
		Right 2	103.1	107	105	84.3	105.3	103.5	82.1	87.3	107.6	86.4	175.7	102.4	0	24.9	36.7
	SB	Through	217.5	263.6	259.6	290.4	61.7	333.7	252.3	103.9	313.8	173.3	466	262.5	0	40.8	86.3
		Right 2	221.8	267.9	263.9	294.7	66	338	256.6	108.1	318	177.5	470.3	266.8	0	40.7	88.1
Pyramid Way and York Way	NB	Left 2	0	0	0	0	0	0	0	0	0	0	38.6	0	0	0.1	1.3
		Through	40.8	42.9	40.7	44.3	41.9	43.2	41.3	41.2	41	41.1	135.5	41.6	0	7.1	15.7
		Right 2	0	0	0	0	0	0	0	0	0	0	83.7	0	0	0.3	3.3
	EB	Left 2	18.1	19.5	19.9	37.6	19.8	19.3	18.9	20.3	19.5	20.1	81.7	19.7	0	3.4	9.3
		Through	18.1	19.5	19.9	37.6	19.8	19.3	18.9	20.3	19.5	20.1	81.7	19.7	0	3.4	9.3
		Right 2	0	0	0	0	0	0	0	0	0	0	54.1	0	0	0.2	2.6
	SB	Left 2	0	0	0	0	0	0	0	0	0	0	48.8	0	0	0.1	1.6
		Through	61	115.3	113.1	171.8	76.1	101.4	78.9	82.2	63	88.4	480.2	96.3	0	15.8	50.1
		Right 2	33.1	87.4	85.1	145.1	48.2	73.5	51	54.3	35.1	66.6	452.2	70	0	10.4	43.9
	WB	Left 2	82.3	103.8	81.5	85.9	84.6	84.2	83.5	119.4	84.2	87.7	264.8	87	15.9	22.4	32
		Through	82.3	103.8	81.5	85.9	84.6	84.2	83.5	119.4	84.2	87.7	264.8	87	15.9	22.4	32
		Right 2	56.1	77.5	55.2	59.7	58.3	57.9	57.3	93.1	57.9	61.4	238.5	60.7	0	9.6	23.9

2030 AM Build (SB 2-RT Lane) 10-run AverageThroughput														
			Run											
Intersection	Approach	Movement	1	2	3	4	5	6	7	8	9	10	10-Run	Standard Deviation
			42	47	52	57	62	67	72	77	82	87	Ave	
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	50	62	67	58	58	61	67	63	61	56	**61**	**5.1**
		Through	1	0	1	0	0	2	0	1	2	0	**1**	**0.8**
		Right 2	91	80	70	74	83	72	82	74	74	78	**78**	**6.3**
		Total	142	142	138	132	141	135	149	138	137	134	**139**	**4.9**
	EB	Left 2	1	0	1	2	0	1	2	0	1	2	**1**	**0.8**
		Through	772	787	819	769	800	771	778	794	824	804	**792**	**19.9**
		Right 2	76	72	78	88	82	92	81	79	72	77	**80**	**6.4**
		Total	849	859	898	859	882	864	861	873	897	883	**873**	**16.9**
	SB	Left 2	1	4	2	2	2	2	1	3	4	2	**2**	**1.1**
		Through	2	0	3	1	1	2	2	2	1	3	**2**	**0.9**
		Right 2	2	1	0	0	2	0	1	0	0	0	**1**	**0.8**
		Total	5	5	5	3	5	4	4	5	5	5	**5**	**0.7**
	WB	Left 2	81	82	77	99	79	77	81	91	73	90	**83**	**7.9**
		Through	1467	1495	1419	1515	1515	1502	1523	1503	1429	1533	**1490**	**39.2**
		Right 2	1	1	1	1	0	1	1	0	1	0	**1**	**0.5**
		Total	1549	1578	1497	1615	1594	1580	1605	1594	1503	1623	**1574**	**44.1**
	Total		2545	2584	2538	2609	2622	2583	2619	2610	2542	2645	**2590**	**37.7**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	84	92	89	85	89	75	90	81	64	82	**83**	**8.4**
		Through	338	366	369	339	383	361	356	362	374	359	**361**	**14.1**
		Right 2	58	40	44	39	54	57	66	40	60	48	**51**	**9.7**
		Total	480	498	502	463	526	493	512	483	498	489	**494**	**17.5**
	EB	Left 2	413	426	444	398	455	468	450	431	468	458	**441**	**23.5**
		Through	359	345	328	355	343	299	349	362	350	363	**345**	**19.3**
		Right 2	93	109	110	99	88	93	97	96	93	93	**97**	**7.2**
		Total	865	880	882	852	886	860	896	889	911	914	**884**	**20.5**
	SB	Left 2	156	153	160	147	155	164	137	152	139	127	**149**	**11.5**
		Through	1537	1557	1560	1513	1519	1530	1537	1567	1562	1526	**1541**	**19.4**
		Right 2	1121	1130	1075	1120	1167	1131	1141	1093	1076	1155	**1121**	**31.2**
		Total	2814	2840	2795	2780	2841	2825	2815	2812	2777	2808	**2811**	**22**
	WB	Left 2	131	147	144	142	142	148	135	145	138	153	**143**	**6.5**
		Through	638	593	583	646	622	611	615	629	625	641	**620**	**20.4**
		Right 2	79	95	108	92	96	98	114	102	87	87	**96**	**10.4**
		Total	848	835	835	880	860	857	864	876	850	881	**859**	**17**
	Total		5007	5053	5014	4975	5113	5035	5087	5060	5036	5092	**5047**	**42.6**
N. McCarran Boulevd and Fourth Street	NB	Left 2	46	56	44	57	50	59	44	62	48	63	**53**	**7.4**
		Through	111	116	98	86	89	96	103	88	107	109	**100**	**10.5**
		Right 2	90	115	112	127	120	117	113	113	107	86	**110**	**12.8**
		Total	247	287	254	270	259	272	260	263	262	258	**263**	**11**
	EB	Left 2	26	20	25	20	23	19	15	20	17	14	**20**	**4**
		Through	531	498	493	507	515	493	525	520	524	511	**512**	**13.7**
		Right 2	14	15	14	11	12	11	12	12	12	12	**13**	**1.4**
		Total	571	533	532	538	550	523	552	552	553	537	**544**	**14**
	SB	Left 2	22	20	14	19	13	20	25	17	13	23	**19**	**4.2**
		Through	17	16	22	10	16	20	20	22	18	16	**18**	**3.6**
		Right 2	68	68	66	78	74	73	60	63	73	71	**69**	**5.5**
		Total	107	104	102	107	103	113	105	102	104	110	**106**	**3.6**
	WB	Left 2	30	32	32	32	26	24	26	31	30	29	**29**	**2.9**
		Through	730	705	722	732	744	731	758	757	740	750	**737**	**16.4**
		Right 2	21	24	32	17	29	29	25	18	25	21	**24**	**4.9**
		Total	781	761	786	781	799	784	809	806	795	800	**790**	**14.4**
	Total		1706	1685	1674	1696	1711	1692	1726	1723	1714	1705	**1703**	**16.5**
Pyramid Way and Queen Way	NEB	Left 2	15	17	17	15	13	12	14	21	20	18	**16**	**2.9**
		Through	890	947	967	888	998	990	960	927	963	961	**949**	**37.4**
		Total	905	964	984	903	1011	1002	974	948	983	979	**965**	**36.8**
	SEB	Left 2	23	29	28	29	28	29	24	25	27	23	**27**	**2.5**
		Right 2	18	10	14	15	13	12	18	13	11	21	**15**	**3.5**
		Total	41	39	42	44	41	41	42	38	38	44	**41**	**2.2**
	SWB	Through	2811	2799	2812	2789	2817	2783	2813	2797	2754	2807	**2798**	**19.1**
		Right 2	59	43	47	58	39	43	56	37	51	50	**48**	**7.8**
		Total	2870	2842	2859	2847	2856	2826	2869	2834	2805	2857	**2847**	**20.4**
	Total		3816	3845	3885	3794	3908	3869	3885	3820	3826	3880	**3853**	**37.7**
Pyramid Way and Roberta Lane	NB	Left 2	99	98	94	95	77	102	93	109	109	106	**98**	**9.5**
		Through	397	417	418	386	433	407	432	403	408	399	**410**	**15.1**
		Total	496	515	512	481	510	509	525	512	517	505	**508**	**12.2**
	EB	Left 2	81	89	83	76	88	84	78	81	87	91	**84**	**4.9**
		Right 2	136	132	128	144	125	127	137	132	134	130	**133**	**5.6**
		Total	217	221	211	220	213	211	215	213	221	221	**216**	**4.2**
	SB	Through	1674	1707	1700	1661	1665	1647	1688	1701	1686	1685	**1681**	**19.4**
		Right 2	84	108	92	100	105	96	86	118	102	81	**97**	**11.7**
		Total	1758	1815	1792	1761	1770	1743	1774	1819	1788	1766	**1779**	**24.7**
	Total		2471	2551	2515	2462	2493	2463	2514	2544	2526	2492	**2503**	**32.2**
Pyramid Way and York Way	NB	Left 2	12	7	10	3	10	7	8	6	6	9	**8**	**2.6**
		Through	474	479	482	455	476	482	493	488	490	473	**479**	**10.9**
		Right 2	49	57	44	63	43	47	52	56	46	53	**51**	**6.4**
		Total	535	543	536	521	529	536	553	550	542	535	**538**	**9.5**
	EB	Left 2	11	14	15	9	13	10	12	11	16	16	**13**	**2.5**
		Through	15	16	18	22	15	17	11	24	22	12	**17**	**4.3**
		Right 2	14	16	8	16	18	19	15	10	8	12	**14**	**3.9**
		Total	40	46	41	47	46	46	38	45	46	40	**44**	**3.3**
	SB	Left 2	10	21	18	22	5	16	23	15	17	15	**16**	**5.5**
		Through	1763	1792	1797	1751	1749	1756	1755	1768	1770	1770	**1767**	**16.3**
		Right 2	36	28	30	26	32	28	32	23	28	33	**30**	**3.8**
		Total	1809	1841	1845	1799	1786	1800	1810	1806	1815	1818	**1813**	**18.3**
	WB	Left 2	129	141	128	140	135	134	126	138	147	140	**136**	**6.7**
		Through	39	35	41	41	31	39	47	35	32	36	**38**	**4.8**
		Right 2	11	20	17	17	20	16	18	14	13	15	**16**	**2.9**
		Total	179	196	186	198	186	189	191	187	192	191	**190**	**5.4**
	Total		2563	2626	2608	2565	2547	2571	2592	2588	2595	2584	**2584**	**23.3**
NETWORK TOTAL			**18108**	**18344**	**18234**	**18101**	**18394**	**18213**	**18423**	**18345**	**18239**	**18398**	**18280**	**118.1**

2030 PM Build (SB 2-RT Lane) Volume, Delay and LOS

Intersection	Approach	Movement	Run 1		Run 2		Run 3		Run 4		Run 5		Run 6		Run 7		Run 8		Run 9		Run 10			
			Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Delay(s)	Volume	Average(s)	LOS
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	34.4	140	38	157	35.4	160	35.6	150	34.4	162	33.2	143	34.1	162	35.1	152	38.8	171	39.3	135	35.8	D
		Through	25.1	1	0	0	0	0	47.3	2	46.5	2	11.5	2	0	0	7.5	2	0	0	0	0	27.8	C
		Right 2	10.4	432	11.7	408	9.9	408	10.9	411	9.4	397	10.5	438	10.9	427	8.8	407	8.6	395	10.3	426	10.2	B
		Total	16.3	573	19	565	17.1	568	17.6	563	16.8	561	16.1	583	17.3	589	15.9	561	17.7	566	17.3	561	17.1	B
	EB	Left 2	69.6	5	19.1	4	73.1	4	73	7	44	7	75.5	8	73.3	5	97.1	3	64.1	4	81.5	7	67.1	E
		Through	15	1403	14.3	1405	16.1	1462	14.6	1420	13.6	1427	13.7	1427	14.5	1417	15	1435	14.1	1449	15.9	1468	14.7	B
		Right 2	5.5	191	5.1	192	6.7	201	5.2	207	5	193	5	194	5.8	202	5.8	201	5.2	214	6.3	179	5.6	A
		Total	14	1599	13.2	1601	15.1	1667	13.7	1634	12.7	1627	13	1629	13.6	1624	14	1639	13.1	1667	15.1	1654	13.5	B
	SB	Left 2	0	0	7.7	1	3.2	2	19.9	4	4.6	2	41.5	2	0	1	0	2	0	2	52.4	4	19.6	B
		Through	14.9	2	0	2	40.5	2	0	0	37.4	3	36.5	3	28.3	3	36.5	2	9.6	2	23.7	2	26.5	C
		Right 2	12.7	6	10.1	4	5.9	5	2.8	3	12.3	4	5.5	2	7.1	3	7.4	2	3.5	3	10.4	3	8.4	A
		Total	13.2	8	6.9	7	13	9	12.6	7	19	9	29.1	7	15.2	7	14.6	6	4.2	7	32	9	14.5	B
	WB	Left 2	115.7	66	142.1	79	97.5	67	134.1	76	135.3	68	85.1	61	78.5	66	91.5	74	85.4	65	187.7	83	117.8	F
		Through	19.1	938	23.3	947	18.8	920	17.5	876	21.3	936	17.8	895	18.6	919	18.6	937	31.9	906	24.3	928	21.1	C
		Right 2	25.8	2	17.9	5	37.8	1	34.4	4	28.1	1	25.1	3	5.5	2	7.5	4	46.9	3	13.8	4	22.7	C
		Total	25.5	1006	32.4	1031	24.2	988	26.8	956	29	1005	22.1	959	22.6	987	23.9	1015	35.5	974	37.6	1015	27.6	C
	Total		18	3186	20.4	3204	18.2	3232	18.4	3160	18.6	3202	16.4	3178	17.1	3207	17.5	3221	20.7	3214	22.6	3239	18.8	B
N. McCarran Boulevard and Pyramid Way	NB	Left 2	97.2	114	85.6	112	101.9	113	95.3	102	96.6	110	92.6	110	101.7	112	94.1	109	92.5	103	97.1	108	95.5	F
		Through	51	1046	52.5	1050	51.5	1017	49.7	1045	51	1029	47.6	1087	51.5	1051	47.1	1042	48.2	1042	52.6	984	50.2	D
		Right 2	20.9	53	20.8	53	24.4	52	21.4	55	24.3	48	18.3	54	24	60	18.3	43	16.1	58	20.3	44	20.9	C
		Total	54	1213	54.2	1215	55.1	1182	52.3	1202	54.1	1187	50.3	1251	54.7	1223	50.4	1194	50.4	1203	55.6	1136	52.8	D
	EB	Left 2	88.8	1260	95.7	1259	91.4	1216	93.1	1207	104	1238	84.9	1256	103.1	1230	90.6	1214	101.2	1244	111.9	1297	96.5	F
		Through	57.2	659	52.2	652	58.8	662	55	680	55.4	624	51.3	633	58.2	632	56.4	652	54.5	639	61	680	56	E
		Right 2	46.8	89	42.9	92	47.6	107	46.1	125	42.1	117	39.4	97	48.3	106	45.8	105	44.7	94	54.8	107	45.9	D
		Total	76.6	2008	79.1	2003	78.2	1985	77.3	2012	85	1979	72	1986	85.7	1968	76.9	1971	83.4	1977	92.4	2084	80.5	F
	SB	Left 2	99.8	157	83.7	170	88.5	158	96	169	109.2	167	112	141	92.5	175	126.4	143	82.7	136	90.6	148	97.9	F
		Through	37.5	547	42	514	39.2	528	42.4	543	44.8	521	42.3	540	38.6	498	44.2	511	36.5	506	45.1	546	41.3	D
		Right 2	44.3	601	43.2	583	45.2	600	37.6	528	40.5	589	44.2	571	42	604	42.4	591	42.3	578	43.8	581	42.6	D
		Total	48.1	1305	48.1	1267	48.1	1286	47.7	1240	51.2	1277	51	1252	47.6	1277	52.8	1245	44.4	1220	49.8	1275	48.3	D
	WB	Left 2	118.5	92	95	111	94.2	101	106.9	95	90.6	102	97.6	106	100.3	107	92.7	113	96.5	107	85.4	109	97.4	F
		Through	90.6	440	77.6	440	76.9	440	73	456	77	460	75.2	422	87.3	439	88.7	451	77.2	458	75	478	79.8	E
		Right 2	83.9	427	72.8	410	69.8	394	68.2	418	57.7	404	80.8	421	80.9	439	85.7	420	77.6	423	68.2	405	74.6	E
		Total	117	959	77.6	961	75.8	935	74.3	969	70.4	966	80.2	949	94.8	985	94.5	984	79.5	988	73.4	992	79.4	E
	Total		71.9	5485	66.1	5446	65.5	5388	64.5	5423	67.6	5409	63.6	5438	71.5	5453	70.5	5394	66.5	5388	71.4	5487	67.9	E
N. McCarran Boulevard and Fourth Street	NB	Left 2	48.6	27	46.2	32	40.9	19	48.1	31	45.2	32	53.8	32	49	30	54.4	35	53.8	28	55.4	39	50.1	D
		Through	52.7	130	46	140	50.3	121	51.6	112	48.3	107	54.5	123	51.7	117	50.3	115	49.8	127	53.9	134	50.9	D
		Right 2	31.2	89	36.8	114	28.8	113	38	126	28.8	120	33.2	117	39.6	112	34.8	113	36.1	107	37.6	87	34.5	C
		Total	44.5	246	42.4	286	40	253	44.8	269	38.9	259	45.3	272	46.2	259	44.2	263	44.6	262	48.7	260	43.5	D
	EB	Left 2	60.3	123	54.1	106	56.1	117	59.4	114	59	101	63.5	102	51.2	98	56.9	97	50.7	99	61.6	102	57.4	E
		Through	10.1	711	10.4	745	10.1	728	11.4	763	9.6	711	10.7	709	11.7	743	13.8	725	12.6	709	11.2	737	11.2	B
		Right 2	9.7	34	6.7	29	5.4	34	6.1	27	5.8	25	9.5	29	10.6	24	9.5	19	7.6	28	12.2	27	8.3	A
		Total	17.2	868	15.5	880	16	879	17.3	904	15.4	837	17.1	840	16.1	865	18.7	841	16.9	836	17.2	866	16.4	B
	SB	Left 2	52.1	21	57.7	25	61.3	25	53.2	23	54.6	20	69.7	25	53.4	29	56.9	22	45.9	24	52.8	24	55.9	E
		Through	45.6	45	47.8	43	43.8	53	36.7	42	52.3	45	40.2	42	49	49	39.2	45	44.4	35	51	41	45.1	D
		Right 2	46	96	46.3	91	46.5	74	45.2	88	47.9	93	45.7	99	47	76	38.9	88	42.3	94	49.1	97	45.5	D
		Total	46.7	162	48.5	159	48	152	44.1	153	50	158	47.9	166	48.8	154	41.5	155	43.3	153	50.1	162	46.6	D
	WB	Left 2	54.9	14	64.3	15	68.3	13	68.4	11	61.8	13	59.1	11	49.5	13	74.6	15	62.1	16	47.1	12	61.3	E
		Through	12.2	841	12.7	844	12	826	13	836	11.5	845	12.3	847	12.5	867	12.8	883	12.3	867	12.8	867	12.4	B
		Right 2	10.1	97	7.5	84	9	107	9.9	100	8.1	102	10.4	91	9.4	106	8.7	87	11.8	92	10.7	98	9.6	A
		Total	12.6	952	13.1	943	12.4	946	13.3	947	11.8	960	12.7	949	12.7	986	13.4	985	13.1	975	13	977	12	B
	Total		20.4	2228	20.2	2268	19.4	2230	20.7	2273	19.1	2214	21	2227	20.3	2264	20.9	2244	20.3	2226	21.4	2265	20.4	C
Pyramid Way and Queen Way	NEB	Left 2	62.3	23	68.8	33	68.2	32	57.8	33	57.7	19	64.9	30	64.7	31	60.8	23	61.1	30	64.5	23	63.4	E
		Through	17.1	2855	15.4	2811	17	2747	18.2	2782	17.3	2813	17.6	2826	18	2841	17.1	2781	17.3	2839	16.8	2834	17.2	B
		Total	17.5	2878	16	2844	17.6	2779	18.7	2815	17.6	2832	18.1	2856	18.5	2872	17.5	2804	17.8	2869	17.2	2857	17.8	B
	SEB	Left 2	35	69	34	83	42	77	32	70	33	76	38.6	80	39	75	24.3	78	34.4	79	31.2	72	34.4	C
		Right 2	3.1	23	5.3	7	5.6	21	4.5	19	4.4	18	7.1	13	5	14	5.9	19	5.2	20	4.8	20	5	A
		Total	27	92	31.8	90	34.2	98	26.1	89	27.5	94	34.2	93	33.7	89	20.7	97	28.5	99	25.5	92	29.2	C
	SWB	Through	13.4	1272	13.8	1284	11.8	1246	14.5	1247	13.7	1248	13.5	1242	13.4	1286	14.2	1240	13.5	1234	14.9	1271	13.7	B
		Right 2	6.6	98	8.6	103	7.2	109	8.1	91	7.2	91	8	102	7.6	98	7.7	90	8.5	112	8.4	104	7.8	A
		Total	12.9	1370	13.4	1387	11.4	1355	14.1	1338	13.3	1339	13.1	1344	13	1384	13.8	1330	13.1	1346	14.4	1375	12.9	B
	Total		16.2	4340	15.5	4321	16	4232	17.4	4242	16.5	4265	16.9	4293	17.1	4345	16.4	4231	16.6	4314	16.5	4324	16.5	B
Pyramid Way and Roberta Lane	NB	Left 2	11.1	122	7.7	115	8.7	118	8.5	111	9.7	136	6.7	106	6.6	108	9.6	121	6.5	130	6.7	139	8.2	A
		Through	4.8	1044	5.8	1023	6.2	1034	4.3	1057	6.4	1041	4.6	1092	6.2	1073	5.7	1047	5	1063	6.4	1010	5.5	A
		Total	5.5	1166	6	1138	6.5	1152	4.7	1168	6.8	1177	4.8	1198	6.2	1181	6.1	1168	5.2	1193	6.4	1149	5.8	A
	EB	Left 2	82.8	187	90.5	183	74.8	184	77.8	173	82.5	182	78.3	163	75.7	187	79.4	164	80.9	179	80.8	173	80.4	F
		Right 2	18.8	94	19.8	94	9	94	13.5	102	9.3	102	7.8	108	13.9	94	12.4	117	10.1	105	21.2	105	13.5	B
		Total	61.4	281	66.5	277	52.6	278	54	275	56.2	284	50.2	271	55	281	51.5	281	54.7	284	58.3	278	55.4	E
	SB	Through	10.8	718	7.9	708	10.3	708	9.9	742	11.9	718	8.8	722	7.5	683	12.8	702	9.3	697	9.8	738	9.9	A
		Right 2	3.3	28	3.1	31	2.5	29	4.2	31	3.2	33	5.2	38	7.9	32	4.3	44	5.4	35	5.5	30	4.5	A
		Total	10.5	746	7.7	739	10	737	9.7	773	11.5	751	8.6	760	7.5	715	12.3	746	9.1	732	9.6	768	9.5	A
	Total		14.4	2193	14.4	2154	13.6	2167	12.6	2216	14.7	2212	11.6	2229	12.9	2177	14	2195	12.9	2209	14.1	2195	13.5	B
Pyramid Way and York Way	NB	Left 2	10.3	15	6.2	16	9.5	12	9	12	9.5	14	8.5	16	8.6	14	12	15	4.7	12	13	7	9	A
		Through	9.8	1043	8.7	1032	10.5	1035	10.1	1062	9.2	1054	9.6	1072	9.7	1073	10.1	1047	10.5	1070	9.1	1036	9.7	A
		Right 2	11.2	50	12.7	48	8.4	48	9.5	42	7.9	38	7.9	45	9.2	46	11.6	45	12.7	40	14.4	44	10.6	B
		Total	9.9	1108	8.8	1096	10.4	1095	10.1	1116	9.2	1106	9.5	1133	9.7	1133	10.2	1107	10.5	1122	9.3	1087	9.6	A
	EB	Left 2	43.1	61	41.6	58	37.7	64	41.2	57	41.7	66	44	63	43.8	64	46.3	66	42.9	70	38.7	57	42.2	D
		Through	45.7	116	44.5	113	40.7	109	44.1	107	42.3	107	48	111	41.6	110	43.4	110	47.2	103	44.1	122	44.1	D
		Right 2	31.5	23	28.3	33	28.1	28	29.7	31	25.9	29	37.1	30	27.4	34	24.8	30	26.4	32	35.5	26	29.3	C
		Total	43.3	200	41.1	204	38	201	41	195	39.7	202	45.2	204	40	208	41.6	206	42.5	205	41.5	205	41.3	D
	SB	Left 2	14.3	37	12.5	38	11.1	41	19.3	52	12.1	53	12.3	42	13.2	50	12.5	39	9.9	51	9.6	44	12.7	B
		Through	10	709	9.7	715	8.7	689	8.6	724	8.6	705	8.2	712	8.2	669	8.5	710	8	695	10.9	735	9	A
		Right 2	11.2	51	9.2	38	7.8	61	6.3	65	8.1	50	7	53	7.8	53	8.8	66	7.6	56	12.5	58	8.6	A
		Total	10.3	797	9.8	791	8.8	791	9.1	841	8.8	808	8.3	807	8.5	772	8.7	815	8.1	802	10.9	837	8.8	A
	WB	Left 2	42	62	39.7	54	33	66	39.9	55	51.2	59	39.2	53	42.7	58	41.4	61	40.9	67	41.9	59	41.1	D
		Through	41.8	53	42.2	61	39	58	38.6	58	41.4	56	34.6	62	43.6	77	45.4	65	36.2	56	43.4	55	40.7	D
		Right 2	23.1	47	19.4	38	20.7	40	24.1	39	31.3	42	27.3	46	20.5	30	23.4	36	36.5	38	27.6	42	25.5	C
		Total	36.5	162	35.7	153	32.1	164	35.4	152	42.4	157	34	161	39.1	165	39	162	38.2	161	38.6	156	37	D
	Total		14.9	2267	13.9	2244	13.9	2251	14	2304	14.1	2273	14	2305	14.2	2278	14.5	2290	14.5	2290	14.8	2285	14.3	B
NETWORK TOTAL			32.1	19699	30.6	19637	29.9	19500	30	19618	30.8	19575	29.3	19670	31.7	19724	31.5	19575	30.7	19641	32.8	19795	30.9	C

2030 PM Build (SB 2-RT Lane) Intersection Queue Lengths

Intersection	Approach	Movement	95% Queues per Run										Max	95%	Median	Average	Standard Deviation
			1	2	3	4	5	6	7	8	9	10					
			42	47	52	57	62	67	72	77	82	87					
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	98.9	107.2	107	107.2	107.9	84.5	105.5	101.8	103.4	102.3	**279.3**	**103.6**	**16.7**	**28.1**	**37.8**
		Through	98.9	107.2	107	107.2	107.9	84.5	105.5	101.8	103.4	102.3	**279.3**	**103.6**	**16.7**	**28.1**	**37.8**
		Right 2	74	82.3	82.2	82.4	83.1	59.6	80.7	77	78.5	77.4	**254.5**	**78.7**	**0**	**14.8**	**30.1**
	EB	Left 2	0	18.8	0	36.2	18.4	16.1	18.3	0	16.8	19.7	**87.6**	**18.3**	**0**	**1.6**	**6.2**
		Through	267.1	233.3	253.3	235.2	258.1	265.3	236.6	306.8	234.8	289.4	**673.1**	**257.2**	**17.5**	**69.2**	**94.7**
		Right 2	0	0	0	0	0	0	0	0	0	0	**72.9**	**0**	**0**	**0.1**	**1.7**
	SB	Left 2	0	0	0	0	17.9	0	0	0	0	0	**40.2**	**0**	**0**	**0.4**	**3.2**
		Through	0	0	0	0	17.9	0	0	0	0	0	**40.2**	**0**	**0**	**0.4**	**3.2**
		Right 2	0	0	0	0	0	0	0	0	0	0	**54.2**	**0**	**0**	**0.3**	**3.4**
	WB	Left 2	85.4	106.7	81.2	86.2	104.1	62.9	77.7	85.4	86	111.5	**280.6**	**85.4**	**18.2**	**26**	**31.1**
		Through	166.6	135.8	161.6	172.1	177.6	170.5	153.6	189.3	203	169.3	**418.6**	**171.1**	**0**	**29.9**	**60.2**
		Right 2	198	163.1	193	203.5	208.9	201.9	185	220.7	234.4	200.7	**450**	**202.5**	**0**	**36.7**	**72**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	188.6	149.4	149.3	141.6	144.2	128.5	126.6	133.6	132	136.1	**324.4**	**144.8**	**39.1**	**48.9**	**49.1**
		Through	283.8	330.1	310.8	268	303.1	298.6	319.8	318.7	346.5	314.2	**515.5**	**312.1**	**85.4**	**109.5**	**109.2**
		Right 2	0	0	0	0	0	0	0	0	0	0	**60.5**	**0**	**0**	**0.4**	**2.8**
	EB	Left 2	416.7	376.8	382.1	391.4	386.3	514.5	379.3	350.1	385.9	436.7	**1797.4**	**391**	**151.5**	**170.9**	**167**
		Through	257	245.4	256.7	318.3	246.3	248.7	260.8	268.8	229	238.2	**513.1**	**257**	**36.1**	**78.3**	**92.9**
		Right 2	244.1	232.5	243.8	305.4	233.4	235.7	247.9	255.9	216.1	225.3	**500.1**	**244.1**	**0**	**69.9**	**89**
	SB	Left 2	182.3	214.7	208	203	205.1	233.8	230.3	278.6	192.5	205	**475.3**	**211.1**	**62**	**76.8**	**72.6**
		Through	280	269.4	289.1	235.2	274.4	279.2	310.3	279.1	293.3	287	**570.1**	**281.6**	**41.1**	**87.2**	**104**
		Right 2	248.5	251.7	257.6	203.7	246.3	259.5	278.8	247.6	261.8	255.5	**538.6**	**251.3**	**42.4**	**83.3**	**93.4**
	WB	Left 2	82.1	84	81	61.5	64.9	67.7	96.5	81.2	78.3	77.6	**183.9**	**80**	**36.6**	**30.8**	**26.4**
		Through	235.9	209.7	232	194.5	212.3	198.1	209.7	214.2	208.7	247.7	**513.2**	**215**	**80.4**	**86.1**	**73.7**
		Right 2	504	346.4	349.7	336.5	424.5	515.2	804.7	391.3	459.2	608.9	**901.8**	**481**	**126.6**	**166.9**	**166.2**
N. McCarran Boulevard and Fourth Street	NB	Left 2	124.9	146.3	118.5	138.6	130.6	129.1	124.8	151	137	128.3	**303.5**	**131.6**	**17.4**	**36**	**47.2**
		Through	124.9	146.3	118.5	138.6	130.6	129.1	124.8	151	137	128.3	**303.5**	**131.6**	**17.4**	**36**	**47.2**
		Right 2	135.4	156.8	129	149.1	141.1	139.5	135.3	161.5	147.4	137.7	**314**	**141.1**	**0**	**38.4**	**52.3**
	EB	Left 2	105.5	104.3	102.7	109.5	91.2	105.7	65.8	143	87.5	121.7	**201.7**	**102.7**	**0**	**23.8**	**35.1**
		Through	65.9	65.2	155.9	76.3	77.3	76.5	88	98.6	77.5	105.7	**389.1**	**85.2**	**0**	**13.7**	**40.7**
		Right 2	92.7	92	182.7	103.1	104.1	103.3	114.8	125.4	104.3	132.5	**415.9**	**112.1**	**0**	**15.9**	**48.2**
	SB	Left 2	60	57.8	64.6	63.3	59	59.3	60	63.6	57.9	53.5	**188.4**	**60.3**	**16.4**	**17.9**	**22**
		Through	60	57.8	64.6	63.3	59	59.3	60	63.6	57.9	53.5	**188.4**	**60.3**	**16.4**	**17.9**	**22**
		Right 2	60	57.8	64.6	63.3	59	59.3	60	63.6	57.9	53.5	**188.4**	**60.3**	**16.4**	**17.9**	**22**
	WB	Left 2	20.3	19.3	19.1	17.1	18.6	20	18.1	19.1	19	18.7	**79**	**19**	**0**	**2.9**	**7.7**
		Through	143.9	124.2	124.9	133.3	109.3	147.6	141.2	134.7	135.8	126.7	**315.5**	**130.7**	**0**	**29.5**	**47.2**
		Right 2	162.2	142.5	143.2	151.7	127.6	166	159.6	153	154.1	145	**333.8**	**149**	**0**	**34.2**	**55.1**
Pyramid Way and Queen Way	NEB	Left 2	19.2	42.8	39.9	43.1	19.9	39.2	42.8	38.9	42.8	19.8	**87.8**	**39.9**	**0**	**8.1**	**14**
		Through	328.9	364.1	265.1	370.4	311.2	338.8	331.6	276.2	303	303.6	**910.9**	**322.6**	**0**	**48.1**	**112.8**
	SEB	Left 2	0	0	0	0	25.8	0	0	0	0	25.1	**69**	**0**	**0**	**1.4**	**6.7**
		Right 2	0	0	0	0	25.8	0	0	0	0	25.1	**69**	**0**	**0**	**1.4**	**6.7**
	SWB	Through	133.5	152.4	148.9	154.9	150.3	165.1	172.5	148.1	159.8	167.3	**319**	**154.3**	**0**	**38**	**55.8**
		Right 2	0	119.8	0	98.6	0	0	0	102.7	46.2	0	**282.6**	**43**	**0**	**5.6**	**26.9**
Pyramid Way and Roberta Lane	NB	Left 2	19.4	19.2	18.4	37.6	47.7	18.4	16.7	18.6	19.9	27.8	**185.4**	**19.8**	**0**	**3.1**	**12.9**
		Through	42.2	24.9	23.6	25.1	37.7	38.7	25.8	25	22.1	26.6	**287.5**	**26.5**	**0**	**7.2**	**20.8**
	EB	Left 2	202	243.3	211.5	218.6	183.7	194	191.7	168.3	212.6	211.9	**355.7**	**208.3**	**64.9**	**78.8**	**67**
		Right 2	202	243.3	211.5	218.6	183.7	194	191.7	168.3	212.6	211.9	**355.7**	**208.3**	**64.9**	**78.8**	**67**
	SB	Through	15.5	20.7	60.1	43	39.9	20.3	18.8	40.8	38.8	56.6	**255.4**	**38.9**	**0**	**6.9**	**22.9**
		Right 2	0	113.7	109.9	87	89.6	67.9	48.4	114.8	89.6	111.7	**261.6**	**89.5**	**0**	**9.8**	**33.1**
Pyramid Way and York Way	NB	Left 2	0	17.7	0	0	0	0	0	0	0	0	**72.3**	**0**	**0**	**0.7**	**4**
		Through	174.4	171.5	207.6	168.5	194.1	189.7	208.2	175.8	185.7	177.2	**414.2**	**187.1**	**42.3**	**61.4**	**64.5**
		Right 2	174.4	171.5	207.6	168.5	194.1	189.7	208.2	175.8	185.7	177.2	**414.2**	**187.1**	**42.3**	**61.4**	**64.5**
	EB	Left 2	41.3	42.7	42.7	39.7	41.8	59.3	61.3	62	58.5	42.3	**195.6**	**45.9**	**0**	**8.6**	**19.3**
		Through	41.3	42.7	42.7	39.7	41.8	59.3	61.3	62	58.5	42.3	**195.6**	**45.9**	**0**	**8.6**	**19.3**
		Right 2	0	0	0	0	0	0	13.4	16.1	0	0	**149.7**	**0**	**0**	**1.3**	**8.2**
	SB	Left 2	18.1	18.8	17.8	19.9	19.6	19.5	19.5	18.8	20.6	18.3	**100.5**	**19.1**	**0**	**2.5**	**8.7**
		Through	151.4	117	105.4	129	105	94.3	125.6	111.7	82.3	129.2	**294.6**	**116**	**0**	**22.4**	**41**
		Right 2	151.4	117	105.4	129	105	94.3	125.6	111.7	82.3	129.2	**294.6**	**116**	**0**	**22.4**	**41**
	WB	Left 2	41.5	40.1	40	19.5	39.2	37.3	42.2	38.1	38.1	40	**124.7**	**39.9**	**0**	**5.6**	**14.2**
		Through	41.5	40.1	40	19.5	39.2	37.3	42.2	38.1	38.1	40	**124.7**	**39.9**	**0**	**5.6**	**14.2**
		Right 2	0	0	0	0	0	0	0	0	0	0	**93**	**0**	**0**	**0.5**	**4.2**

2030 PM Build (SB 2-RT Lane) Intersection 10-Run Average Volumes

Intersection	Approach	Movement	Run 1	2	3	4	5	6	7	8	9	10	10-Run Ave	Standard Deviation
			42	47	52	57	62	67	72	77	82	87		
N. McCarran Boulevard and Rock Boulevard	NB	Left 2	140	157	160	150	162	143	162	152	171	135	**153**	**11.3**
		Through	1	0	0	2	2	2	0	2	0	0	**1**	**1**
		Right 2	432	408	408	411	397	438	427	407	395	426	**415**	**14.9**
		Total	573	565	568	563	561	583	589	561	566	561	**569**	**9.8**
	EB	Left 2	5	4	4	7	7	8	5	3	4	7	**5**	**1.7**
		Through	1403	1405	1462	1420	1427	1427	1417	1435	1449	1468	**1431**	**22.3**
		Right 2	191	192	201	207	193	194	202	201	214	179	**197**	**9.7**
		Total	1599	1601	1667	1634	1627	1629	1624	1639	1667	1654	**1634**	**23.8**
	SB	Left 2	0	1	2	4	2	2	1	2	2	4	**2**	**1.2**
		Through	2	2	2	0	3	3	3	2	2	2	**2**	**0.9**
		Right 2	6	4	5	3	4	2	3	2	3	3	**4**	**1.3**
		Total	8	7	9	7	9	7	7	6	7	9	**8**	**1.1**
	WB	Left 2	66	79	67	76	68	61	66	74	65	83	**71**	**7.1**
		Through	938	947	920	876	936	895	919	937	906	928	**920**	**22.2**
		Right 2	2	5	1	4	1	3	2	4	3	4	**3**	**1.4**
		Total	1006	1031	988	956	1005	959	987	1015	974	1015	**994**	**25.1**
	Total		3186	3204	3232	3160	3202	3178	3207	3221	3214	3239	**3204**	**24.4**
N. McCarran Boulevard and Pyramid Way	NB	Left 2	114	112	113	102	110	110	112	109	103	108	**109**	**4**
		Through	1046	1050	1017	1045	1029	1087	1051	1042	1042	984	**1039**	**26.4**
		Right 2	53	53	52	55	48	54	60	43	58	44	**52**	**5.5**
		Total	1213	1215	1182	1202	1187	1251	1223	1194	1203	1136	**1201**	**30.1**
	EB	Left 2	1260	1259	1216	1207	1238	1256	1230	1214	1244	1297	**1242**	**27.2**
		Through	659	652	662	680	624	633	632	652	639	680	**651**	**19.5**
		Right 2	89	92	107	125	117	97	106	105	94	107	**104**	**11.3**
		Total	2008	2003	1985	2012	1979	1986	1968	1971	1977	2084	**1997**	**34.1**
	SB	Left 2	157	170	158	169	167	141	175	143	136	148	**156**	**13.8**
		Through	547	514	528	543	521	540	498	511	506	546	**525**	**18**
		Right 2	601	583	600	528	589	571	604	591	578	581	**583**	**22**
		Total	1305	1267	1286	1240	1277	1252	1277	1245	1220	1275	**1264**	**25.1**
	WB	Left 2	92	111	101	95	102	106	107	113	107	109	**104**	**6.8**
		Through	440	440	440	456	460	422	439	451	458	478	**448**	**15.5**
		Right 2	427	410	394	418	404	421	439	420	423	405	**416**	**13**
		Total	959	961	935	969	966	949	985	984	988	992	**969**	**18.6**
	Total		5485	5446	5388	5423	5409	5438	5453	5394	5388	5487	**5431**	**37.2**
N. McCarran Boulevard and Fourth Street	NB	Left 2	27	32	19	31	32	32	30	35	28	39	**31**	**5.3**
		Through	130	140	121	112	107	123	117	115	127	134	**123**	**10.3**
		Right 2	89	114	113	126	120	117	112	113	107	87	**110**	**12.6**
		Total	246	286	253	269	259	272	259	263	262	260	**263**	**10.9**
	EB	Left 2	123	106	117	114	101	102	98	97	99	102	**106**	**9**
		Through	711	745	728	763	711	709	743	725	709	737	**728**	**18.6**
		Right 2	34	29	34	27	25	29	24	19	28	27	**28**	**4.5**
		Total	868	880	879	904	837	840	865	841	836	866	**862**	**22.8**
	SB	Left 2	21	25	25	23	20	25	29	22	24	24	**24**	**2.5**
		Through	45	43	53	42	45	42	49	45	35	41	**44**	**4.8**
		Right 2	96	91	74	88	93	99	76	88	94	97	**90**	**8.5**
		Total	162	159	152	153	158	166	154	155	153	162	**157**	**4.8**
	WB	Left 2	14	15	13	11	13	11	13	15	16	12	**13**	**1.7**
		Through	841	844	826	836	845	847	867	883	867	867	**852**	**17.7**
		Right 2	97	84	107	100	102	91	106	87	92	98	**96**	**7.8**
		Total	952	943	946	947	960	949	986	985	975	977	**962**	**17**
	Total		2228	2268	2230	2273	2214	2227	2264	2244	2226	2265	**2244**	**21.7**
Pyramid Way and Queen Way	NEB	Left 2	23	33	32	33	19	30	31	23	30	23	**28**	**5.1**
		Through	2855	2811	2747	2782	2813	2826	2841	2781	2839	2834	**2813**	**33.6**
		Total	2878	2844	2779	2815	2832	2856	2872	2804	2869	2857	**2841**	**32.6**
	SEB	Left 2	69	83	77	70	76	80	75	78	79	72	**76**	**4.5**
		Right 2	23	7	21	19	18	13	14	19	20	20	**17**	**4.7**
		Total	92	90	98	89	94	93	89	97	99	92	**93**	**3.7**
	SWB	Through	1272	1284	1246	1247	1248	1242	1286	1240	1234	1271	**1257**	**19.3**
		Right 2	98	103	109	91	91	102	98	90	112	104	**100**	**7.6**
		Total	1370	1387	1355	1338	1339	1344	1384	1330	1346	1375	**1357**	**20.6**
	Total		4340	4321	4232	4242	4265	4293	4345	4231	4314	4324	**4291**	**44.7**
Pyramid Way and Roberta Lane	NB	Left 2	122	115	118	111	136	106	108	121	130	139	**121**	**11.4**
		Through	1044	1023	1034	1057	1041	1092	1073	1047	1063	1010	**1048**	**24**
		Total	1166	1138	1152	1168	1177	1198	1181	1168	1193	1149	**1169**	**19.1**
	EB	Left 2	187	183	184	173	182	163	187	164	179	173	**178**	**8.9**
		Right 2	94	94	94	102	102	108	94	117	105	105	**102**	**7.7**
		Total	281	277	278	275	284	271	281	281	284	278	**279**	**4.1**
	SB	Through	718	708	708	742	718	722	683	702	697	738	**714**	**18**
		Right 2	28	31	29	31	33	38	32	44	35	30	**33**	**4.8**
		Total	746	739	737	773	751	760	715	746	732	768	**747**	**17.4**
	Total		2193	2154	2167	2216	2212	2229	2177	2195	2209	2195	**2195**	**23.3**
Pyramid Way and York Way	NB	Left 2	15	16	12	12	14	16	14	15	12	7	**13**	**2.7**
		Through	1043	1032	1035	1062	1054	1072	1073	1047	1070	1036	**1052**	**16**
		Right 2	50	48	48	42	38	45	46	45	40	44	**45**	**3.7**
		Total	1108	1096	1095	1116	1106	1133	1133	1107	1122	1087	**1110**	**15.7**
	EB	Left 2	61	58	64	57	66	63	64	66	70	57	**63**	**4.3**
		Through	116	113	109	107	107	111	110	110	103	122	**111**	**5.3**
		Right 2	23	33	28	31	29	30	34	30	32	26	**30**	**3.3**
		Total	200	204	201	195	202	204	208	206	205	205	**203**	**3.7**
	SB	Left 2	37	38	41	52	53	42	50	39	51	44	**45**	**6.2**
		Through	709	715	689	724	705	712	669	710	695	735	**706**	**18.5**
		Right 2	51	38	61	65	50	53	53	66	56	58	**55**	**8.2**
		Total	797	791	791	841	808	807	772	815	802	837	**806**	**21**
	WB	Left 2	62	54	66	55	59	53	58	61	67	59	**59**	**4.7**
		Through	53	61	58	58	56	62	77	65	56	55	**60**	**6.9**
		Right 2	47	38	40	39	42	46	30	36	38	42	**40**	**4.9**
		Total	162	153	164	152	157	161	165	162	161	156	**159**	**4.5**
	Total		2267	2244	2251	2304	2273	2305	2278	2290	2290	2285	**2279**	**20.5**
NETWORK TOTAL			**19699**	**19637**	**19500**	**19618**	**19575**	**19670**	**19724**	**19575**	**19641**	**19795**	**19643**	**84.3**

Erb, Jon

From: Travis, Randy D [rtravis@dot.state.nv.us]
Sent: Friday, December 16, 2011 12:10 PM
To: Erb, Jon; Tom Greco; Wang, Xuan
Cc: Scott Gibson; Kiser, Paul D
Subject: RE: Approval Needed for RTC Model Adjustments (Pyramdid/McCarran Project)

Jon,

After our discussion, I agree with the methodology and traffic numbers used. Please let me know if you need anything else.

Thank you and have a great weekend.

Randy Travis
Traffic Information Chief
Nevada Department of Transportation
1263 S. Stewart St.
Carson City, NV 89712
(775) 888-7158
(775) 720-2708 cell
(775) 888-7267 fax

From: Erb, Jon [mailto:Jon.Erb@parsons.com]
Sent: Thursday, December 15, 2011 3:07 PM
To: Tom Greco; Travis, Randy D; Wang, Xuan
Cc: Scott Gibson; Kiser, Paul D
Subject: Approval Needed for RTC Model Adjustments (Pyramdid/McCarran Project)

As a result of meeting with RTC in regards to coordination between the Pyramid/McCarran project and the Pyramid Highway Connector project it was decided that Parsons needed to provide a model adjustment for the forecast year 2030 for No-Build and Build model runs. The previous numbers used were not adjusted in volumes but by turning ratio only as directed by staff at that time. Since we now have two projects that connect, adjustments to the volumes are needed. Please review these numbers and respond to me a quickly as you can.

Thanks you,

Jon S. Erb, P.E.
Project Manager
PARSONS
3480 GS Richards Blvd, Suite 202
Carson City, NV 89703
(775) 885-2249
jon.erb@parsons.com
www.parsons.com

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Erb, Jon

From: Tom Greco [tgreco@rtcwashoe.com]
Sent: Thursday, December 15, 2011 4:20 PM
To: Erb, Jon; Travis, Randy D; Wang, Xuan
Cc: Scott Gibson; Kiser, Paul D; Amy Cummings; Karachepone, John S.
Subject: RE: Approval Needed for RTC Model Adjustments (Pyramid/McCarran Project)

Hi Jon, thanks for your diligent work on this traffic forecast refinement process.
After this morning's meeting, and agreed assumptions, and review of the 17 attached sheets,
I am totally in support of your methods and results to refine the RTC travel demand forecast numbers to match project specific conditions for the McCarran / Pyramid intersection project.

To document a couple of clarifications we just talked about on the phone:

1. Page 1, concerning the note in orange at the bottom of the page, the 2.5% (and 0%) volume count change on Pyramid is not based on the NDOT count stations shown on sheet 10, but based on actual directional count data you have from 2010 and 2008.
2. You will be adding two more notes to the bottom of sheet 1; one note to explain in a little more detail about the adjustments made in the white 2030 No-Build Adjusted columns, and a second note to explain the adjustments made in the last two columns, also titled 2030 No-Build Adjusted, shown in blue.

Thanks again Jon, feel free to reach me with any additional needs.

Tom Greco, P.E., F. ASCE
Sr. Transportation Planner, RTC of Washoe County
tgreco@rtcwashoe.com O. 775-335-1907 C. 544-7819

zero Fatalities
Drive Safe Nevada

www.ZeroFatalitiesNV.com

From: Erb, Jon [mailto:Jon.Erb@parsons.com]
Sent: Thursday, December 15, 2011 3:07 PM
To: Tom Greco; Travis, Randy D; Wang, Xuan
Cc: Scott Gibson; Kiser, Paul D
Subject: Approval Needed for RTC Model Adjustments (Pyramdid/McCarran Project)

As a result of meeting with RTC in regards to coordination between the Pyramid/McCarran project and the Pyramid Highway Connector project it was decided that Parsons needed to provide a model adjustment for the forecast year 2030 for No-Build and Build model runs. The previous numbers used were not adjusted in volumes but by turning ratio only as directed by staff at that time. Since we now have two projects that connect, adjustments to the volumes are needed. Please review these numbers and respond to me a quickly as you can.

Thanks you,

Jon S. Erb, P.E.
Project Manager
PARSONS
3480 GS Richards Blvd, Suite 202

Carson City, NV 89703
(775) 885-2249
jon.erb@parsons.com
www.parsons.com

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Pyramid / McCarran
Model Adjustment

2030 No-Build

	2010 Existing Count		2008 Existing Count		Model 2008 OutPut		Difference		2030 No-Build		2030 No-Build Adjusted		2030 No-Build Adjusted		entering intersection		leaving intersection	
Pyramid/McCarran Blvd	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm				
Northbound Left Turn	92	117	96	122	60	6	36	116	60	13	96	129	96	129				
Northbound Through	270	900	270	946	572	1501	-302	-555	656	1493	354	938	354	938	488	1121	706	2419
Northbound Right Turn	35	49	36	51	17	122	19	-71	19	66	38	-5	38	54				
Southbound Left Turn	74	122	77	122	33	86	44	36	257	102	301	138	101	138				
Southbound Through	1007	460	1048	460	1517	392	-469	68	1736	448	1267	516	1367	516	2167	1241	1587	725
Southbound Right Turn	881	531	917	531	1319	1003	-402	-472	1001	79	599	-393	699	587				
Eastbound Left Turn	423	1068	423	1122	182	855	241	267	42	737	283	1004	283	1004				
Eastbound Through	293	579	284	562	709	1149	-425	-587	417	918	-8	331	324	640	707	1755	463	832
Eastbound Right Turn	112	102	109	99	68	28	41	71	59	40	100	111	100	111				
Westbound Left Turn	109	89	106	86	188	38	-82	48	97	36	15	84	120	98				
Westbound Through	594	399	576	387	668	538	-92	-151	670	391	578	240	656	441	845	1016	1451	1156
Westbound Right Turn	62	294	62	309	136	70	-74	239	97	238	23	477	69	477				
Total Through Intersection	3952	4710	4003	4796	5469	5788	-1466	-992	5111	4561	3645	3569	4207	5132	4207	5132	4207	5132

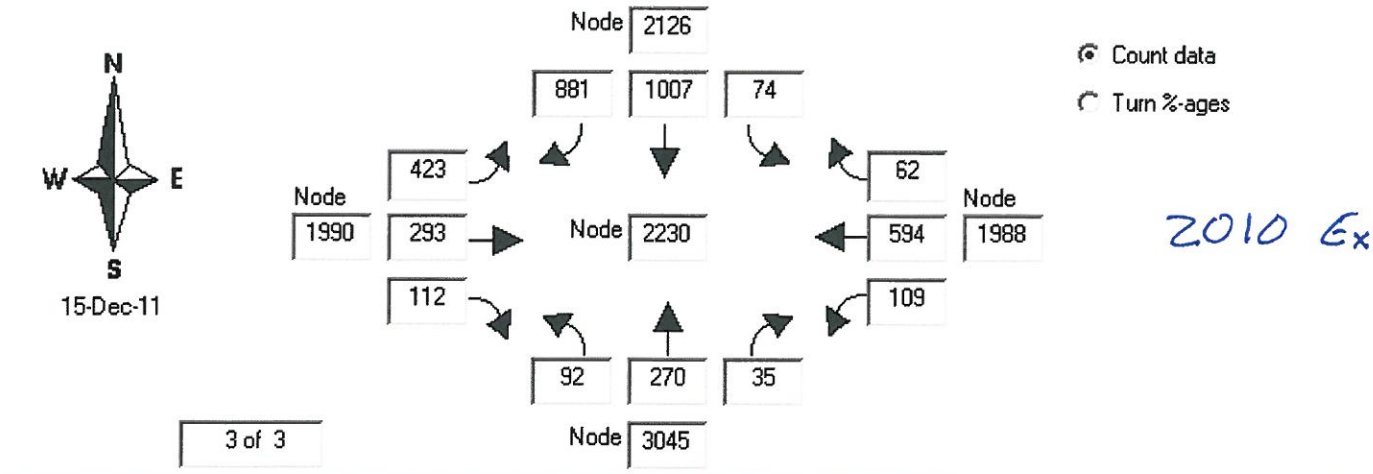
Model Output
Manual Counts
Adjustments to Model

Manual adjustments

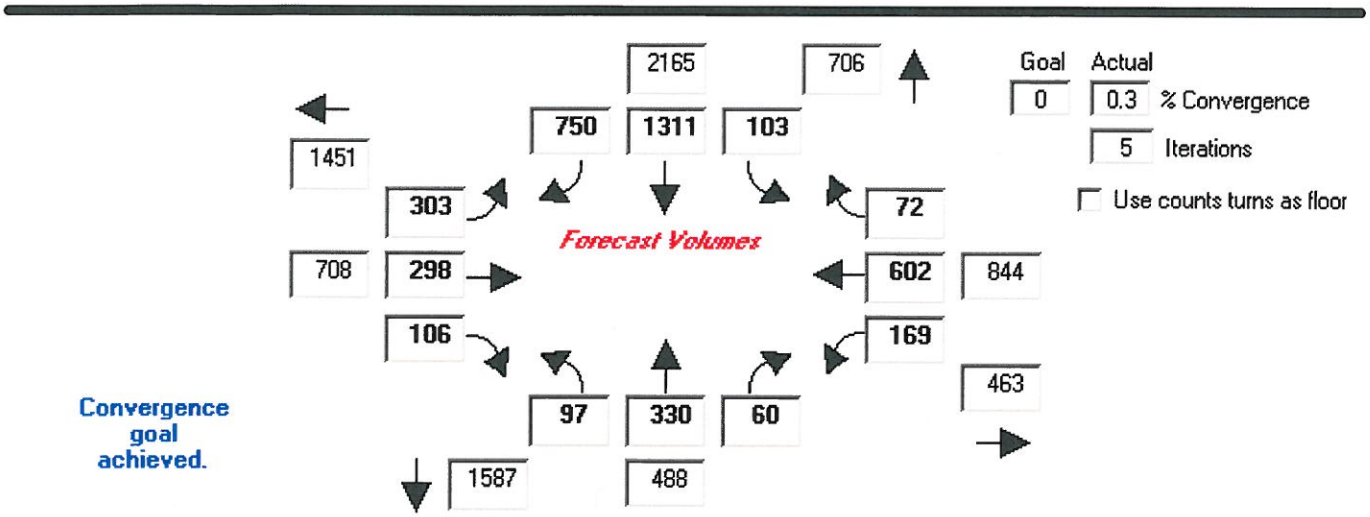
Traffic counts show a 2.5% reduction in traffic between 2008 and 20010 on Pyramid Highway Southbound a.m. but did not change pm,
Traffic counts show that traffic on McCarran going East and West grew at 1.5% a year.

Adjustment by redistrabution of approach volume

Adjustment by .005 percent growth from 2010 counts due to assumed attractions not changing over the years.

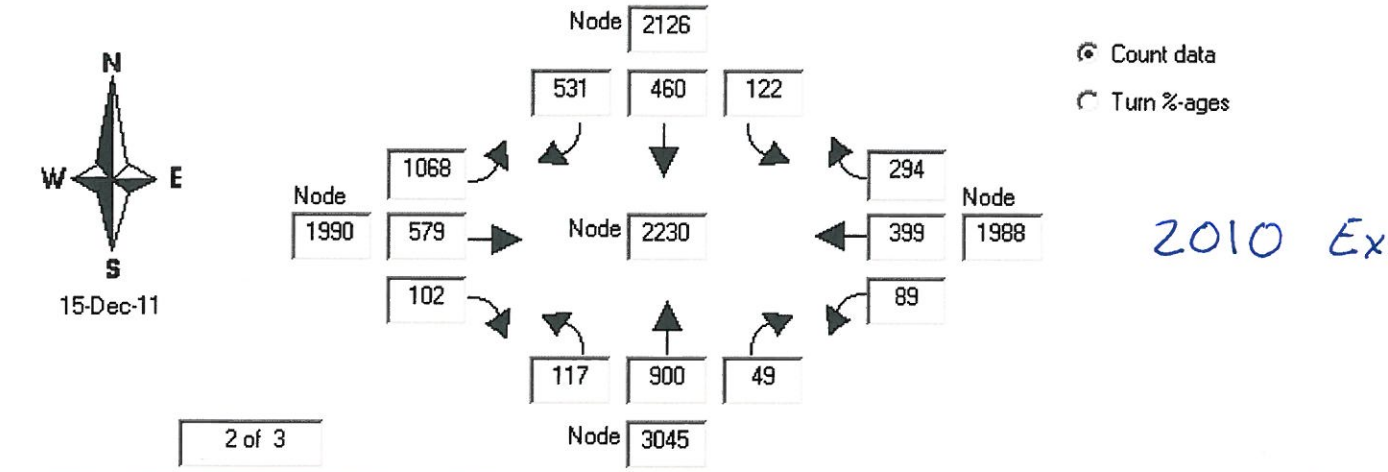


2010 Existing

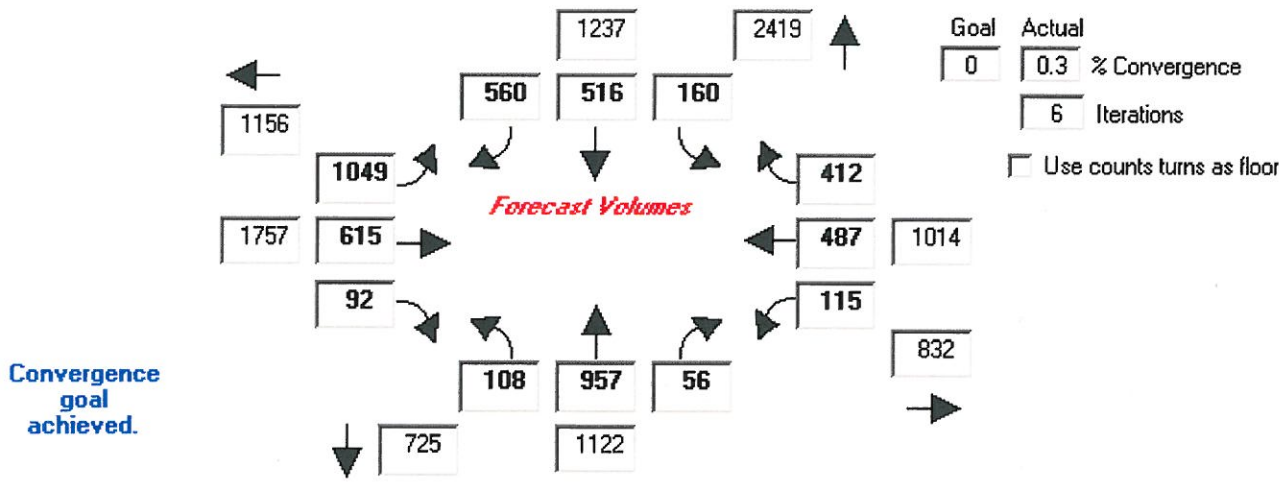


Input file name: [none]

2030 No-Build A.M.



2010 Existing



Input file name: [none]

2030 No-Build P.M.

Pyramid / McCarran
Model Adjustment

2030 Build

	2010 Existing Count		2008 Existing Count		Model 2008 OutPut		Difference		Model Run 2030 P322		2030 P322 Adjusted		2030 P322 Adjusted		entering intersection		leaving intersection	
Pyramid/McCarran Blvd	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm	am	pm				
Northbound Left Turn	92	117	96	122	60	6	36	116	60	14	96	130	96	130				
Northbound Through	270	900	270	946	572	1501	-302	-555	660	1583	358	1028	358	1028	492	1212	901	2724
Northbound Right Turn	35	49	36	51	17	122	19	-71	19	61	38	-10	38	54				
Southbound Left Turn	74	122	77	122	33	86	44	36	528	110	572	146	172	146				
Southbound Through	1007	460	1048	460	1517	392	-469	68	1856	479	1387	547	1587	547	2814	1280	1805	729
Southbound Right Turn	881	531	917	531	1319	1003	-402	-472	1257	251	855	-221	1055	587				
Eastbound Left Turn	423	1068	423	1122	182	855	241	267	44	980	285	1247	467	1247				
Eastbound Through	293	579	284	562	709	1149	-425	-587	371	801	-54	214	324	640	889	1985	534	840
Eastbound Right Turn	112	102	109	99	68	28	41	71	57	27	98	98	98	98				
Westbound Left Turn	109	89	106	86	188	38	-82	48	97	36	15	84	120	84				
Westbound Through	594	399	576	387	668	538	-92	-151	711	466	619	315	661	441	857	974	1812	1157
Westbound Right Turn	62	294	62	309	136	70	-74	239	150	213	76	452	76	449				
Total Through Intersection	3952	4710	4003	4796	5469	5788	-1466	-992	5810	5021	4344	4029	5053	5450	5053	5450	5053	5450

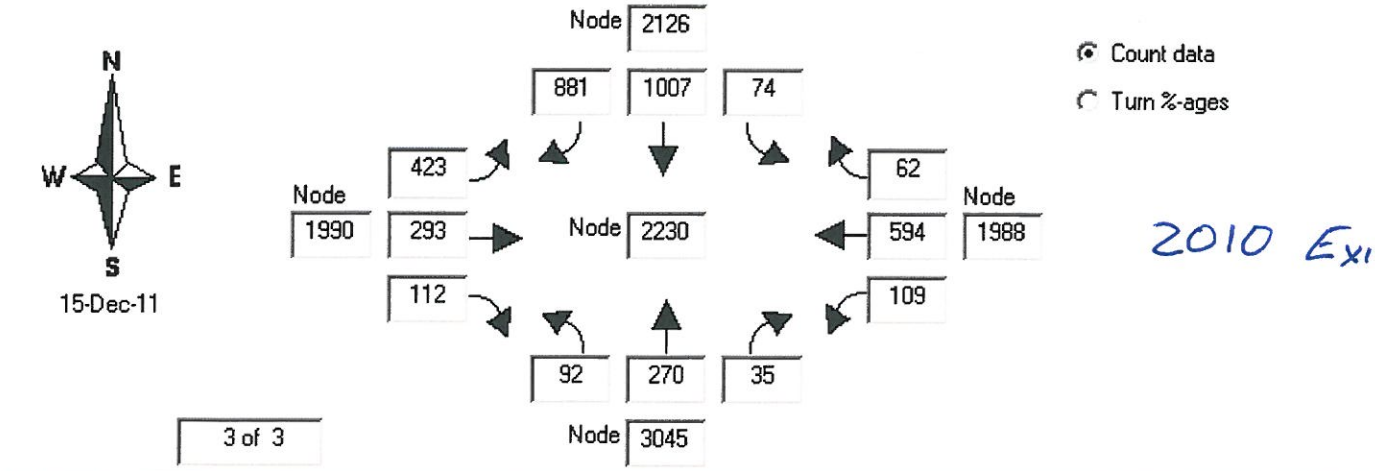
Model Output
Manual Counts
Adjustments to Model

Manual adjustments

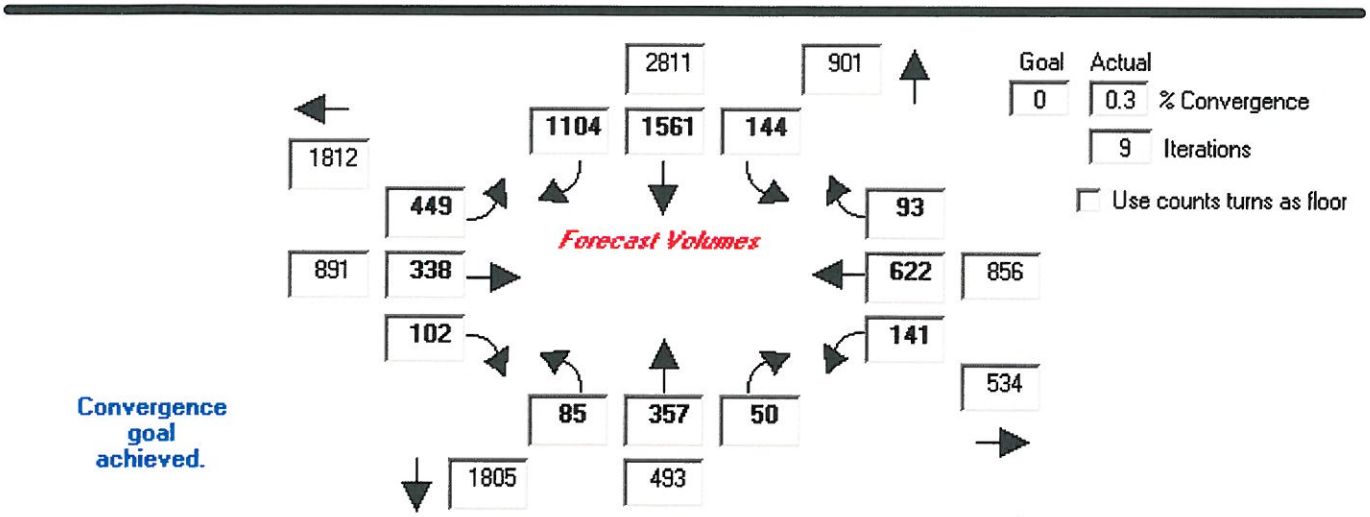
Traffic counts show a 2.5% reduction in traffic between 2008 and 20010 on Pyramid Highway Southbound a.m. but did not change pm.
Traffic counts show that traffic on McCarran going East and West grew at 1.5% a year.

Adjustment by redistrabution of approach volume

Adjustment by .005 percent growth from 2010 counts due to assumed attractions not changing over the years.

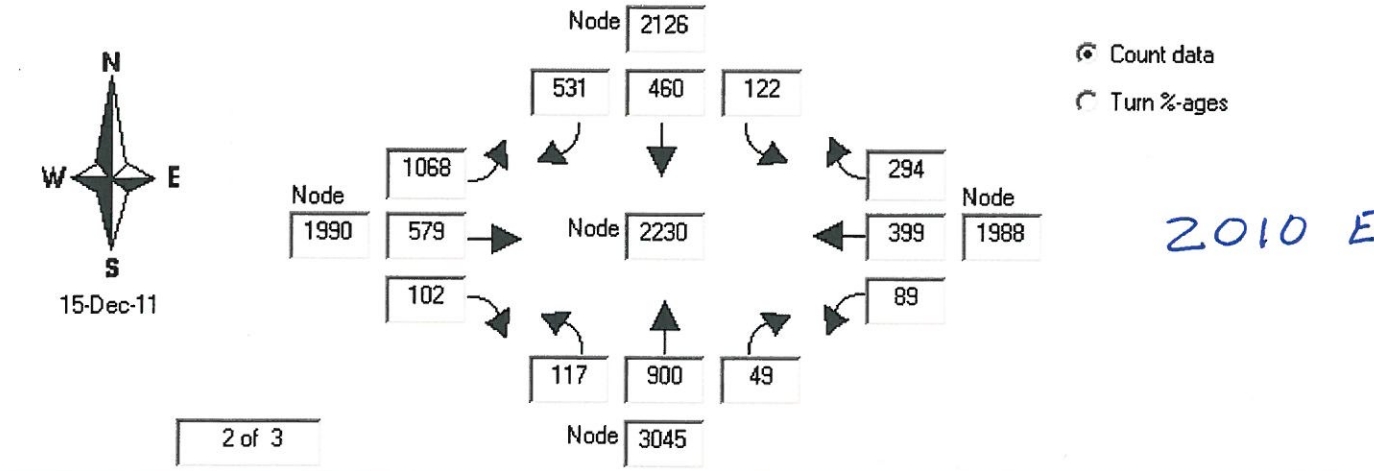


2010 Existing

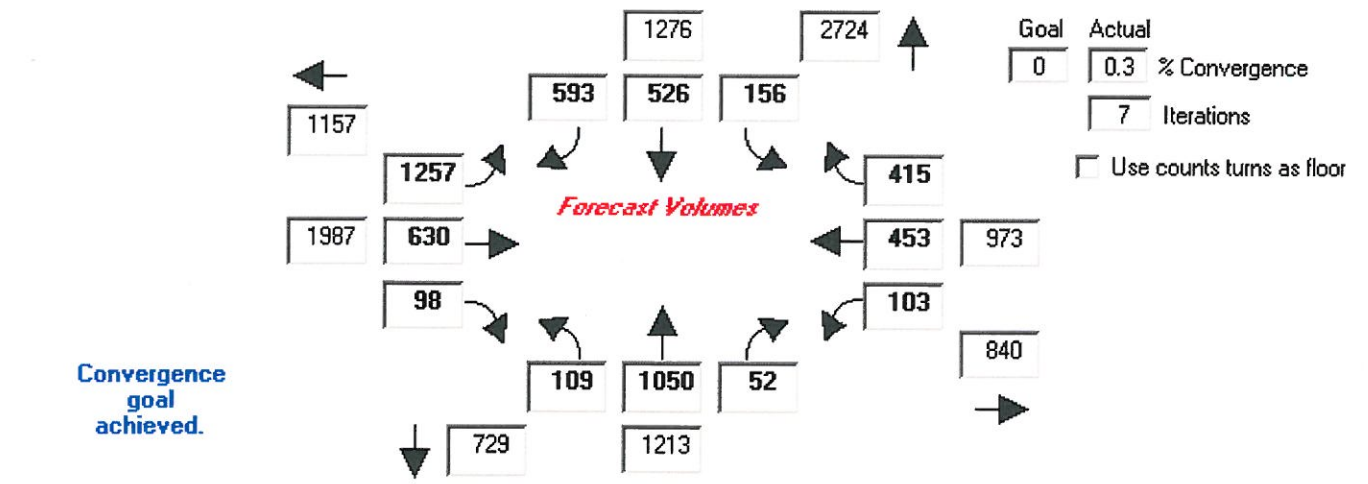


Input file name: [none]

2030 Build A.M.



2010 Existing



Input file name: [none]

2030 Build P.M.

The turns program will compute forecast turning volumes using the techniques described in NCHRP 255, "HIGHWAY TRAFFIC DATA FOR URBANIZED AREA PROJECT PLANNING AND DESIGN", Chapter 8. This is often referred to as the Furness process of estimating turning movements. It derives forecast turning movements using an iterative approach which alternately balances the approach flows and departure flows until the results converge (up to a user-specified maximum number of row and column iterations).

TMC PYRAMID & QUEEN 7-16-08.xls
AM SUMMARY PYRAMID & QUEEN

Sierra Transportation Engineers, Inc.
Transportation Engineering, Information Management
Reno, Las Vegas, Scottsdale

Date: 07/16/2008
Start Time: 06:00

	SOUTHBOUND			WESTBOUND			NORTHBOUND			EASTBOUND				
Street Name	PYRAMID HIGHWAY			QUEEN WAY			PYRAMID HIGHWAY			QUEEN WAY			INTSECTION	HOUR
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL	TOTAL
6:00 AM	1	346	3	3	0	1	1	95	1	5	0	2	458	
6:15 AM	7	468	0	1	3	1	4	126	2	3	3	6	624	
6:30 AM	39	556	1	5	4	7	4	201	1	6	1	3	828	
6:45 AM	63	462	6	5	2	2	2	183	6	3	2	2	738	2,648
7:00 AM	78	503	13	1	5	2	4	147	7	3	2	1	766	2,956
7:15 AM	79	479	6	3	4	1	7	187	4	1	5	6	782	3,114
7:30 AM	81	480	7	7	4	7	9	156	4	3	4	4	766	3,052
7:45 AM	75	396	5	7	6	4	8	158	9	4	2	12	686	3,000
8:00 AM	92	498	15	2	2	2	4	163	1	1	1	4	785	3,019
8:15 AM	73	427	13	3	4	4	11	188	7	9	2	11	752	2,989
8:30 AM	31	473	7	8	4	5	4	200	6	4	1	9	752	2,975
8:45 AM	25	425	9	9	2	4	11	203	4	3	0	7	702	2,991
Approach Total	6242			134			2128			135			8,639	
Grand Total	644	5513	85	54	40	40	69	2007	52	45	23	67	8,639	
Approach %	10.3%	88.3%	1.4%	40.3%	29.9%	29.9%	3.2%	94.3%	2.4%	33.3%	17.0%	49.6%		
Total %	7.5%	63.8%	1.0%	0.6%	0.5%	0.5%	0.8%	23.2%	0.6%	0.5%	0.3%	0.8%		
Begin Peak Hour:	6:30													
Peak Interval:	6:30													
Peak Hour Vol:	259	2,000	26	14	15	12	17	718	18	13	10	12	3,114	
Percent:	8.3%	64.2%	0.8%	0.4%	0.5%	0.4%	0.5%	23.1%	0.6%	0.4%	0.3%	0.4%		
Peak Intvl Vol:	39	556	1	5	4	7	4	201	1	6	1	3	828	
Peak Factor:													0.9402	
High Interval:	6:30			6:30			6:30			7:15				
High Intvl Vol:	39	556	1	5	4	7	4	201	1	1	5	6		
Peak Factor:			0.9585			0.6406			0.9138			0.7292		

2000 + 12 + 13

SB to McCarron
2025

718 + 17 + 18

NB from McCarron
753

TMC PYRAMID & QUEEN 7-16-08.xls
PM SUMMARY PYRAMID & QUEEN

Sierra Transportation Engineers, Inc.
Transportation Engineering, Information Management
Reno, Las Vegas, Scottsdale

Date: 07/16/2008
Start Time: 15:00

	SOUTHBOUND			WESTBOUND			NORTHBOUND			EASTBOUND				
Street Name	PYRAMID HIGHWAY			QUEEN WAY			PYRAMID HIGHWAY			QUEEN WAY			INTSECTION	HOUR
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL	TOTAL
3:00 PM	11	279	6	22	2	6	8	395	11	6	7	14	767	
3:15 PM	18	358	9	17	1	5	8	452	9	2	1	12	892	
3:30 PM	18	344	14	25	0	6	7	401	9	5	2	19	850	
3:45 PM	8	332	17	14	2	4	12	568	5	0	3	17	982	3,491
4:00 PM	18	280	9	16	3	0	11	555	9	1	1	19	922	3,646
4:15 PM	19	269	9	23	3	6	13	537	10	7	2	18	916	3,670
4:30 PM	14	259	11	33	4	6	6	529	10	2	4	36	914	3,734
4:45 PM	20	264	9	42	1	7	5	581	7	4	2	27	969	3,721
5:00 PM	15	269	8	40	7	5	7	560	3	3	2	27	946	3,745
5:15 PM	21	258	18	53	7	4	12	592	4	3	7	37	1,016	3,845
5:30 PM	11	256	15	44	3	6	7	607	6	1	1	28	985	3,916
5:45 PM	21	285	11	53	4	6	6	567	3	3	4	24	987	3,934
Approach Total	3,783			480			6,532			351			11,146	
Grand Total	194	3,453	136	382	37	61	102	6,344	86	37	36	278	11,146	
Approach %	5.1%	91.3%	3.6%	79.6%	7.7%	12.7%	1.6%	97.1%	1.3%	10.5%	10.3%	79.2%		
Total %	1.7%	31.0%	1.2%	3.4%	0.3%	0.5%	0.9%	56.9%	0.8%	0.3%	0.3%	2.5%		
Begin Peak Hour:	17:00													
Peak Interval:	17:15													
Peak Hour Vol:	68	1,068	52	190	21	21	32	2,326	16	10	14	116	3,934	
Percent:	1.7%	27.1%	1.3%	4.8%	0.5%	0.5%	0.8%	59.1%	0.4%	0.3%	0.4%	2.9%		
Peak Intvl Vol:	21	258	18	53	7	4	12	592	4	3	7	37	1,016	
Peak Factor:													0.9680	
High Interval:	17:45			17:15			17:30			17:15				
High Intvl Vol:	21	285	11	53	7	4	7	607	6	3	7	37		
Peak Factor:			0.9369			0.9063			0.9573			0.7447		

1,068 + 21 + 10
SB to McCarron
1,099

32 + 2,326 + 16
NB from McCarron
2,374

Date: 17-JUN-11

State of Nevada Department of Transportation

Annual Average Daily Traffic Count Stations

County Name WASHOE

.025 reduction Per/Year

Station	Route / Location	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT	2007 AADT	2008 AADT	2009 AADT	2010 AADT
0310337	SR445, 250' S of Roberta Wy.	18,000	17,700*	19,300	22,700	24,900	27,000	29,000*	25,000	23,000	24,000
0310338	SR445, Pyramid Wy, 220' N of Emerson Wy.	26,000	27,400	27,400	32,500	33,000	36,500	40,000	42,000	38,000	40,000
0310340	SR445, Pyramid Hw, .8 mi N of Queens Wy.	24,300	25,700	25,700*	28,800	35,000	39,000	44,000	44,000	44,000	43,000
0310341	SR880, Wedekind Rd, .15 mi W of SR-445 (Pyramid Wy).	1,200	1,200	1,200	1,600	1,800	2,500	2,700	2,500	2,700	2,400
0310344	SR443, Clear Acre Ln, 420' S of El Rancho Dr.	22,000	23,700	24,300	23,300	22,000*	20,200*	20,000*	23,000	22,000	22,000
0310345	SR443, Sun Valley Dr, .1 mi N of El Rancho Dr.	32,700	35,200*	33,500	33,500	33,500	33,000	33,000	32,000	32,000	32,000*
0310346	SR443, Sun Valley Dr, 405' S of 7th Av.	16,000	17,100	18,100	16,700	17,900	17,500	18,000	17,000	17,000	17,000*
0310348	SR445, Pyramid Rd, 1.2 mi S of SR-446 to Nixon & .1 mi N of mp-31.	1,050*	930	930*	1,300	1,150	890	1,000	900	880	980
0310349	SR446, .4 mi E of SR-445 (Pyramid Rd).	540	640	640*	810	740	600	620	490	560	710
0310350	SR445, Sutcliffe Rd, 1.1 mi N of SR-446 to Nixon.	1,100	1,000	1,000*	1,100	970	630	890	770	750	900
0310351	SR445, Sutcliffe Rd, .2 mi N of mp 36.	460	390	390*	560	540	400	500	410	370	410
0310352	SR447, Nixon Rd, 8.7 mi N of Freemont St in Nixon & .4 mi S of mp 25.	530	690	690*	700*	760	660	630	520	510	440
0310353	SR447, Gerlach Rd, .2 mi N of SR-446 to Sutcliffe.	1,250	1,550	1,600	1,650	1,650	1,500	1,300	1,100*	1,400	1,400
0310355	SR447, Gerlach Rd, .85 mi N of SR-427 in Wadsworth.	1,200	1,600	1,650	1,800	1,700	1,450	1,800	1,400	1,600	1,800
0310356	US395, btwn the Oddie Bl Intch 'Exit 69' and the McCarran Bl Intch 'Exit 70'	83,985*	88,100*	90,600*	91,000*	92,000*	92,000	93,000*	94,000*	96,000	98,000
0310357	US395, S/B on-ramp of the Parr Bl Int 'Exit 72'	3,700	4,400	4,850	5,150	5,800*	5,300*	5,700	5,800	5,500	5,500
0310358	US395, N/B off-ramp of the Parr Bl Int 'Exit 72'	4,200	4,350	4,680	5,350	6,000*	4,550*	5,000	6,200	5,900	6,800
0310359	Dandini Bl, 219' E of the N/B ramps of the Parr Intch 'Exit 72'.	6,000	6,800	7,050	7,100*	9,600	8,650	9,000*	8,700	8,000	8,000*
0310360	US395, N/B on-ramp of the Parr Bl Int 'Exit 72'	1,140	1,200	1,250	1,550	1,800	2,150	1,600	1,600	1,500	1,400
0310361	US395, S/B off-ramp of the Parr Bl Int 'Exit 72'	1,140	1,200	1,300	1,650	1,800	1,800	1,600	1,700	1,600	1,300*
0310362	Parr Bl, 100' W of the S/B ramps of the Parr Bl Intch 'Exit 72'.	8,700	8,700*	8,500	10,300	12,300	11,600	13,000	13,000	12,000	12,000*
0310364	US395, S/B off-ramp of the Panther Valley Int 'Exit 72 A'	4,600	5,050	5,050*	6,400	7,200	7,100	6,200	5,600	5,200	5,000

* Data Adjusted or Estimated

Date: 17-JUN-11

State of Nevada Department of Transportation

Annual Average Daily Traffic Count Stations

County Name WASHOE

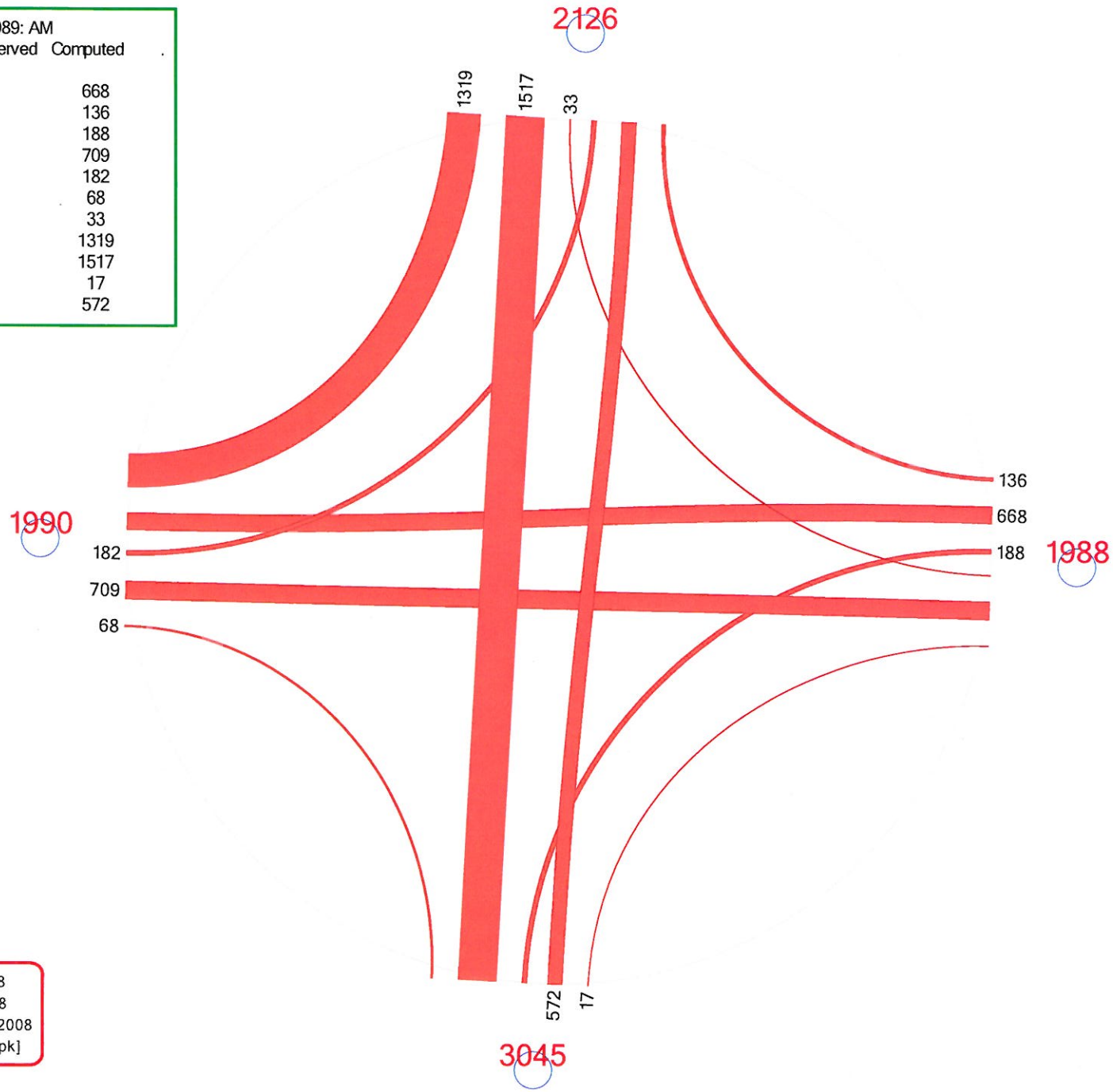
Station	Route / Location	2001 AADT	2002 AADT	2003 AADT	2004 AADT	2005 AADT	2006 AADT	2007 AADT	2008 AADT	2009 AADT	2010 AADT
0310650	US395, N/B on-ramp of the Moana Intch 'Exit 64'	15,000	15,000*	15,700	15,300	13,700	13,700	15,000	14,000	13,000	14,000
0310651	IR580, 291' S of Moana In btwn S/B off & on-ramps of Fire Creek 'Exit 63" and Moana intch "exit 64"	97,710	108,380*	112,700*	116,000*	115,000*	122,000*	122,000	116,000	114,000	114,000*
0310652	SR659, S McCarran Bl, .1 mi E of Neil Rd.	17,000	16,700*	17,200	18,200	19,100	18,100	16,000*	15,000	16,000	15,000
0310653	SR659, S McCarran Bl, .1 mi W of Neil Rd.	19,000	18,800*	20,600	21,200	21,900	20,700	19,000	18,000	18,000	16,000
0310654	SR659, S McCarran Bl, E of S Virginia St./300' W of Smithridge Dr.	29,000	29,000*	30,000	27,700	29,700	27,600	25,000	26,000	27,000	24,000
0310656	SR659, McCarran Bl, 335' S of E/B off-ramp at W McCarran Bl Intch 'Exit 10'.	35,000*	33,000	41,000	44,000	40,000	41,500	40,000	37,000	36,000	35,000*
0310657	IR80, E/B off-ramp of the W McCarran Bl Intch 'Exit 10'.	3,300	4,000	4,050	5,050	5,150	5,100	4,800	4,400	4,600	4,400
0310658	IR80, E/B on-ramp of the W McCarran Bl Intch 'Exit 10'.	13,000	14,300	13,800	14,300	14,000*	13,400*	14,000	13,000	13,000	14,000
0310660	IR80, W/B on-ramp of the W McCarran Bl Intch 'Exit 10'.	3,400	4,000	4,050*	4,750	4,950	5,050	4,900	4,500	4,800	4,200
0310661	IR80, W/B off-ramp of the W McCarran Bl Intch 'Exit 10'.	13,000	14,000	14,000	15,200	13,000*	13,100*	15,000	14,000	14,000	14,000*
0310662	SR659, McCarran Bl, 545' N of I-80 W/B ramps of the W McCarran Intch 'Exit 10'.	37,000	34,800*	36,000	41,000	41,000*	39,500*	41,000	38,000	38,000	37,000*
0310663	SR659, McCarran Bl, 364' N of W 7th St.	20,000	21,400	20,900	22,000*	22,000*	21,100*	21,000*	24,000	23,000	22,000*
0310664	SR659, McCarran Bl, 638' W of SR-430 (N Virginia St).	18,000	19,200	19,600	22,600	23,300	22,100	23,000*	22,000	21,000	20,000
0310666	SR659, S McCarran Bl, .1 mi N of Rio Poco Rd.	19,000	19,600	23,600	25,000*	24,800	23,600	22,000	21,000	22,000	20,000
0310671	IR80, Between the East Verdi Intch 'Exit 5' and the Mogul Intch 'Exit 7'.	35,730	36,530	34,800*	37,000	35,500	37,000	39,000	35,000	35,000	36,000
0310672	SR430, South Virginia St, 200' N of McCarran Bl (add 31-0774 to N/B).	35,800	48,000	52,000	48,500	43,000	41,500	39,000*	37,000	34,000	34,000*
0310673	US395, .6 mi N of the Bellevue Intch 'Exit 46'.	29,390	30,640	31,000	30,500	31,000	30,500	31,000	29,000	29,000	28,000
0310674	SR659, McCarran Bl, .3 mi E of El Rancho Dr.	26,000	27,200	27,200*	31,000	32,000*	28,100*	28,000	28,000	31,000	29,000
0310675	SR659, N McCarran Bl, .2 mi E of Sullivan Ln.	29,000	32,000	35,500	36,500	38,000*	32,500*	33,000	33,000	36,000	34,000
0310677	SR659, McCarran Bl, .2 mi E of SR-668 (Rock Bl).	30,000	31,500	34,600*	37,500	37,500	33,500	34,000*	34,000	34,000	35,000

1.5% growth

* Data Adjusted or Estimated

Intersection node 1989: AM

From	To	Observed	Computed
1988	1990 :		668
1988	2126 :		136
1988	3045 :		188
1990	1988 :		709
1990	2126 :		182
1990	3045 :		68
2126	1988 :		33
2126	1990 :		1319
2126	3045 :		1517
3045	1988 :		17
3045	2126 :		572



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L4C110412J for 2008
2008 ; L4C110412J for 2008
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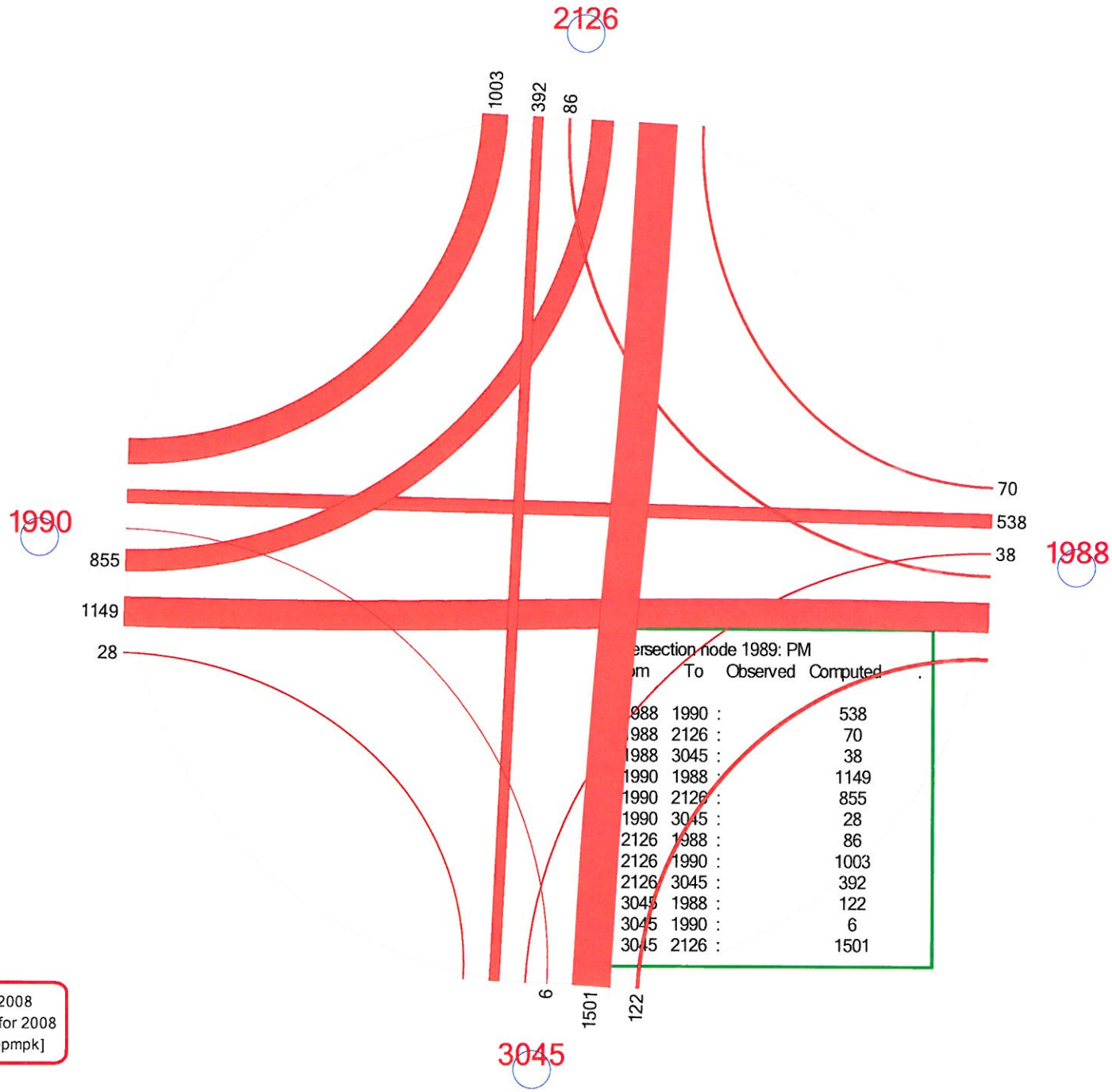


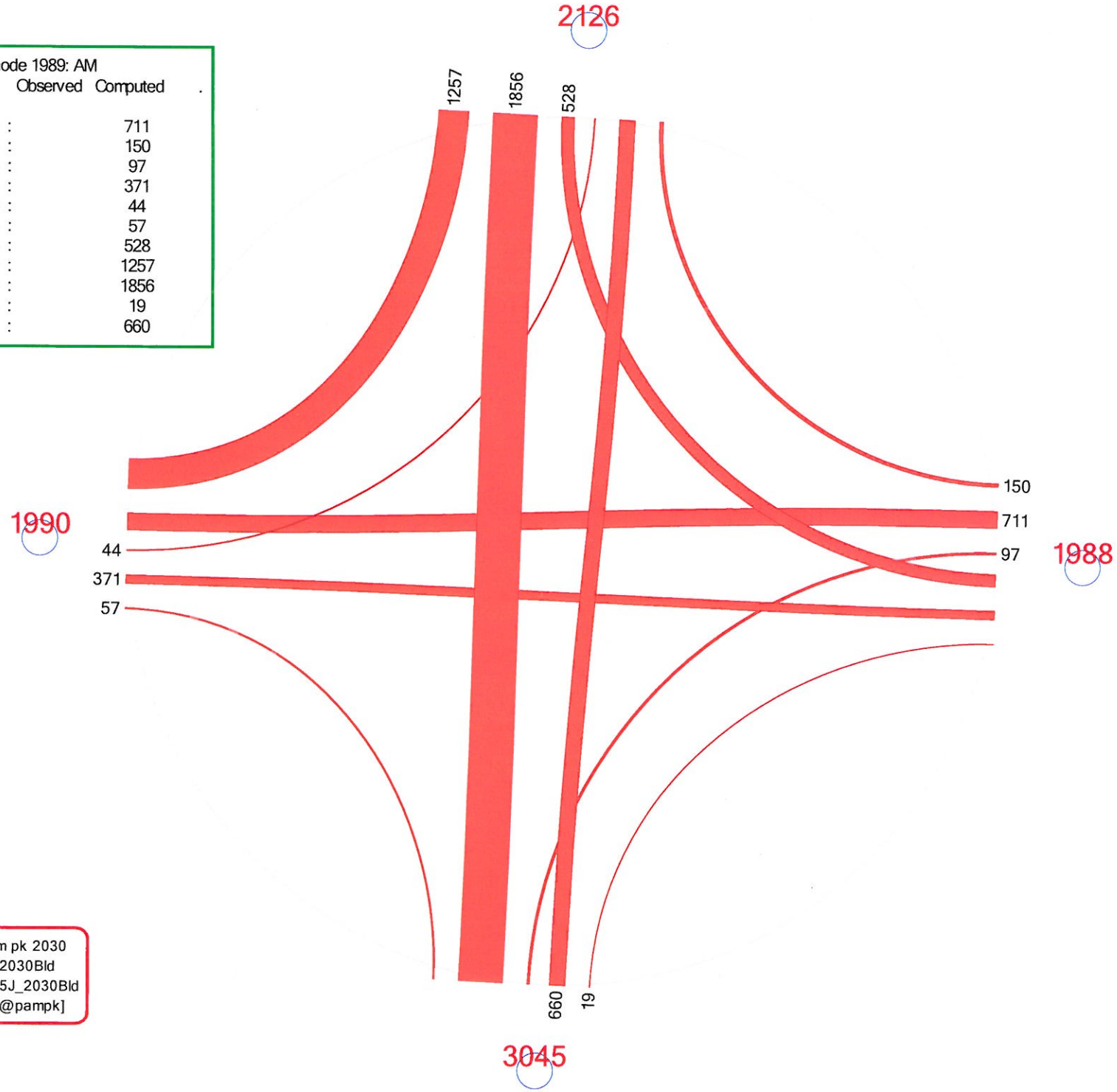
ersection node 1989: PM

om	To	Observed	Computed
988	1990 :		538
988	2126 :		70
988	3045 :		38
1990	1988 :		1149
1990	2126 :		855
1990	3045 :		28
2126	1988 :		86
2126	1990 :		1003
2126	3045 :		392
3045	1988 :		122
3045	1990 :		6
3045	2126 :		1501

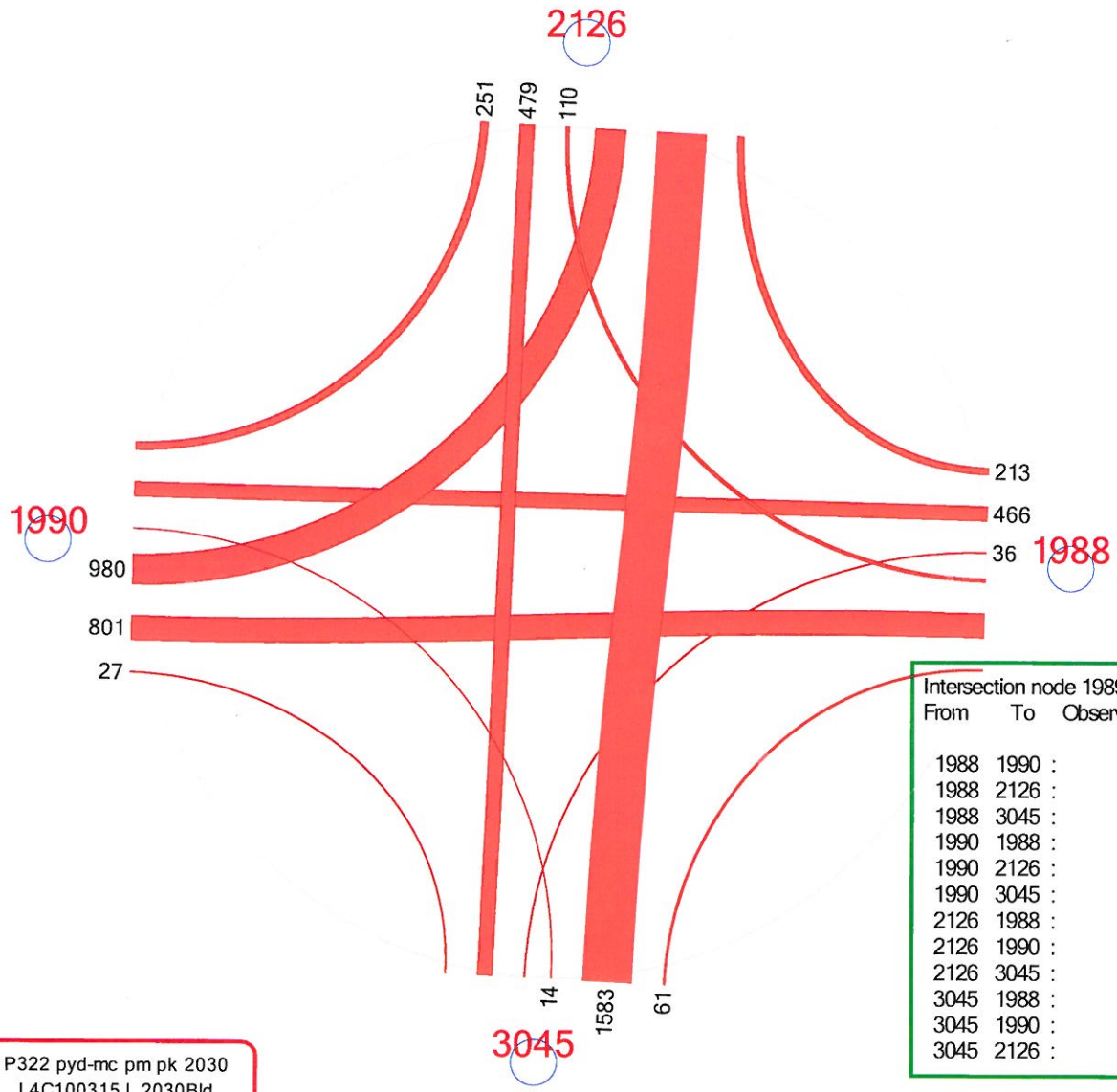
Pyd@Mc pm pk 2008
2008 ; L4C110412J for 2008
intersection_PM [@ppmpk]

Intersection node 1989: AM

From	To	Observed	Computed
1988	1990 :		711
1988	2126 :		150
1988	3045 :		97
1990	1988 :		371
1990	2126 :		44
1990	3045 :		57
2126	1988 :		528
2126	1990 :		1257
2126	3045 :		1856
3045	1988 :		19
3045	2126 :		660



P322 pyd-mc am pk 2030
L4C100315J_2030Bld
2230 ; L4C100315J_2030Bld
intersection_AM [@pampk]



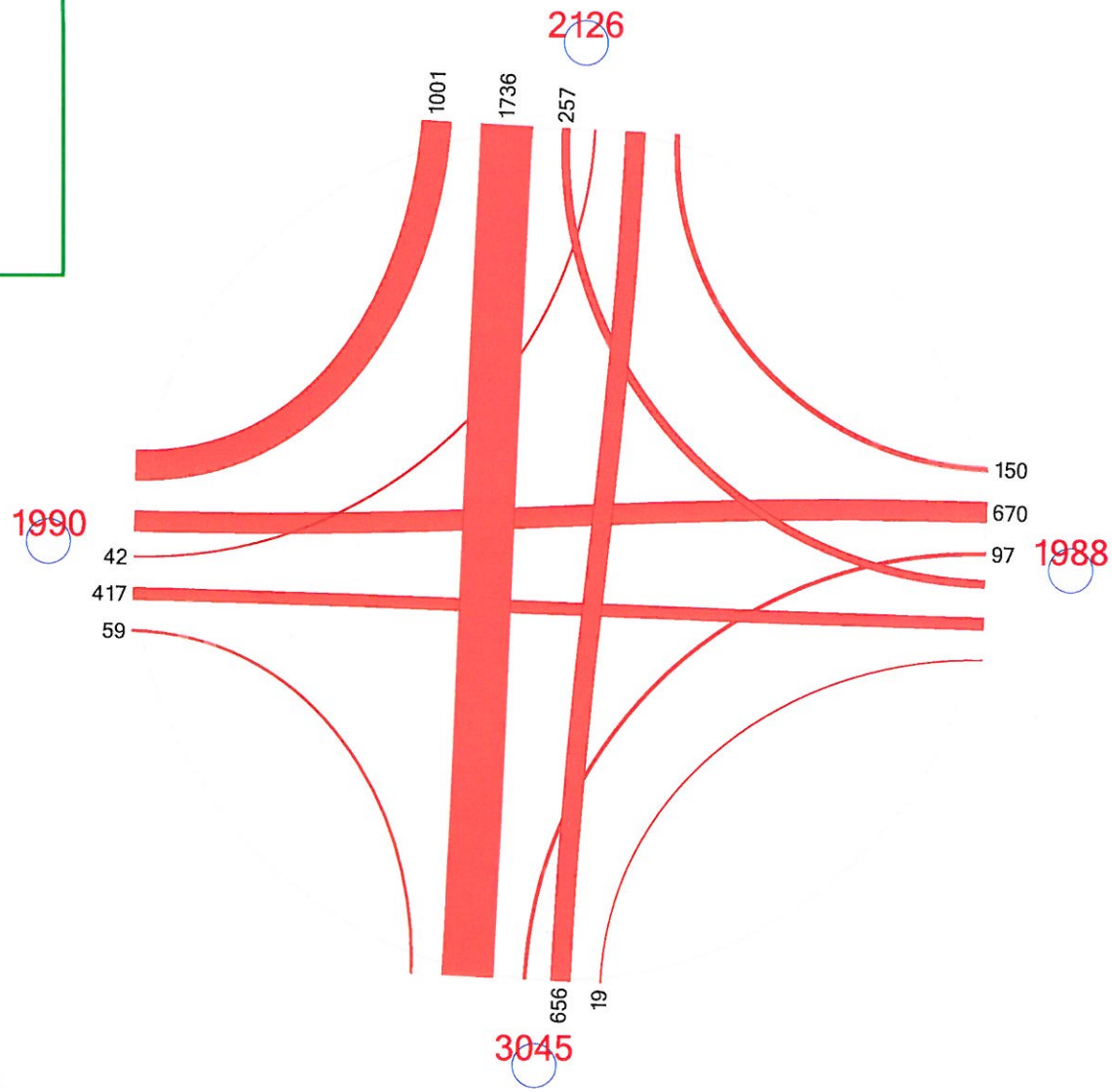
Intersection node 1989: PM

From	To	Observed	Computed
1988	1990 :		466
1988	2126 :		213
1988	3045 :		36
1990	1988 :		801
1990	2126 :		980
1990	3045 :		27
2126	1988 :		110
2126	1990 :		251
2126	3045 :		479
3045	1988 :		61
3045	1990 :		14
3045	2126 :		1583

P322 pyd-mc pm pk 2030
L4C100315J_2030Bld
2230 ; L4C100315J_2030Bld
intersection_PM [@ppmpk]

Intersection node 1989: AM

From	To	Observed	Computed
1988	1990	:	670
1988	2126	:	150
1988	3045	:	97
1990	1988	:	417
1990	2126	:	42
1990	3045	:	59
2126	1988	:	257
2126	1990	:	1001
2126	3045	:	1736
3045	1988	:	19
3045	1990	:	0
3045	2126	:	656



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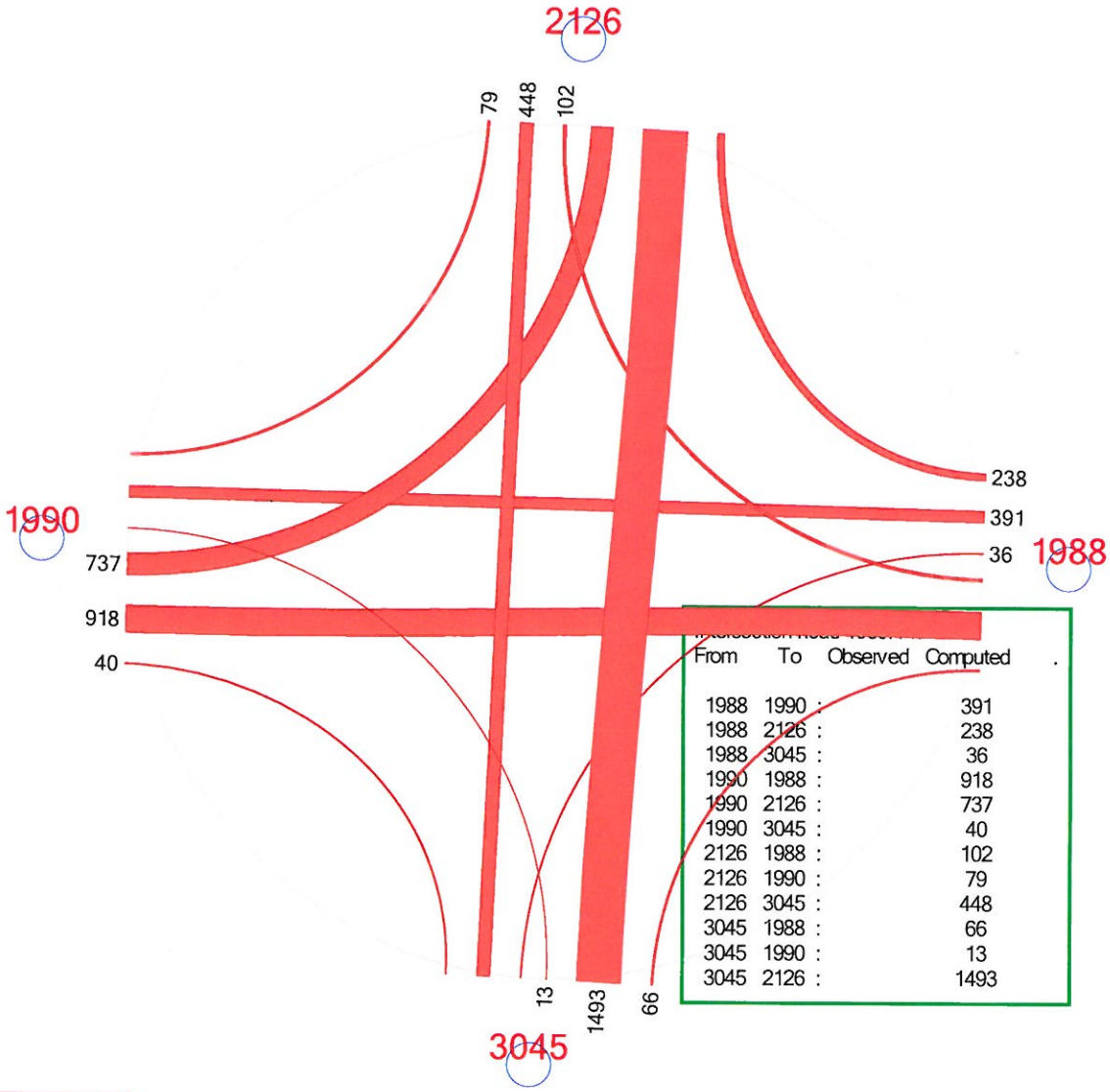

From	To	Observed	Computed
1988	1990 :		391
1988	2126 :		238
1988	3045 :		36
1990	1988 :		918
1990	2126 :		737
1990	3045 :		40
2126	1988 :		102
2126	1990 :		79
2126	3045 :		448
3045	1988 :		66
3045	1990 :		13
3045	2126 :		1493

PM pk mc-pyd NO B 2030 icf
2030 ; L4C110412J_NB_PYD for 2030
intersection_PM [@ppmpk]